Environmental Management Plan

Location:

Bulls Head Plaza
835-855 West Main Street
Rochester, New York 14611

Prepared For:

Division of Environmental Quality
City of Rochester
30 Church Street, Room 300-B
Rochester, New York 14614

LaBella Project No. 2201137

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1.0 INTRODUCTION

This Environmental Management Plan (EMP) was developed to address regulated materials (e.g. urban fill, contaminated soil and groundwater, etc.), that are or may be present in the subsurface at the Bulls Head Plaza located at 835-855 West Main Street, City of Rochester, Monroe County, New York, hereinafter referred to as the "Site." A Site Location Map is attached as Figure 1.

This EMP is intended to be implemented during future ground-intrusive work at the Site. This EMP is not intended to provide guidance on aboveground regulated building materials (e.g., asbestos). This EMP was developed for use during demolition of the southern portion of the Site Building ("subject building"); however, it should be implemented during any ground-intrusive work at the Site. This EMP applies to any activity that uncovers and/or disturbs the surface soil or subsurface at the Site, including but not limited to the following:

- Removal of foundations, footers, floor slabs.
- Removal/ backfilling of the basement or other subgrade features.
- Removal of below ground utilities, including those that are beneath the floor slab.
- Installation of utilities or other infrastructure below ground.
- Subsurface excavation, including beneath the existing building's floor slab or beneath the existing asphalt pavement.

This EMP may be modified as additional environmental testing becomes available and/or if applicable regulations are updated.

2.0 SITE DESCRIPTION AND BACKGROUND

2.1 Site Description

The Site is located on West Main Street in the City of Rochester within an urban area. The Site consists of generally level land with the nearest water body, the Genesee River, located approximately 6,000 feet east of the Site.

The Site comprises approximately 4.2 acres of land and is currently developed with one (1) 85,899-square-foot (sq-ft) building utilized for commercial (retail and office) purposes. Currently, the building contains four (4) tenants occupying three (3) different locations in the building with the remaining portions vacant. The subject building was constructed in 1951 and includes a partial basement with a sump. The Site is located southeast of the intersection of West Main Street and Genesee Street.

The subject building is planned to be demolished (refer to Figure 2). The other portions of the existing building will remain in place. The current tenants are all located in the portion of the Site Building to remain in place.

2.2 Site History

Based on the review of historical information, it appears that the Site has been developed since at least 1875 and has been utilized/occupied for the following environmentally relevant operations:

- 1875 – 1941: St. Mary's Orphan Asylum
- 1892: A "nursery" depicted on the northwestern corner of the Site. It should be noted that it is unknown if the nursery was associated with children or plants.

- 1892: A lumber yard, laundry and bakery located on the central portion of the Site.
- 1892: Residential dwellings located on the southwestern portion of the Site until at least 1941 and northeastern portion of the Site until at least 1994.
- 1912: A "vegetable house" located on the northern portion of the Site.
- 1912 – 1938: A laundry facility located on the western portion of the Site.
- 1912 – 1938: A machine shop is located on the southwestern portion of the Site. One (1) gasoline tank was depicted located next to the machine shop on the 1912 Sanborn Map.
- 1926: Commercial structures including a laundry facility on the southwestern portion of the Site.
- 1950: A structure utilized for used automotive sales located on the western portion of the Site.
- 1950: The northern portion of the Site appears undeveloped; however, it is labeled as "used car sales". It is unclear if automotive repair operations occurred as part of the automotive sales business.
- 1951 – Present day: Developed with Bullshead Plaza and included the following:
    - The 2009 Environmental Screen prepared by Day Environmental, Inc. (Day) stated that the portion of the Site addressed as 6 Genesee Street was occupied by Beck Cleaners from at least 1953 until at least 1958.
    - 1955: Pratt & Whitney machine manufacturers (845 West Main Street)
    - 1960 – 1985 Bullshead Laundromat self-serve laundry (36 and 38 Genesee Street)
    - 1965: Westinghouse Dry Cleaners (18 Genesee Street)
    - 1971 – 1984: Cadet Cleaners (847 West Main Street)

2.3 Summary of Previous Studies

The following environmental reports exist for the Site.

- Environmental Screen – September 2009 – Day Environmental, Inc.
- Limited Subsurface Investigation Report – April 28, 2015 – Bock and Clark Environmental, LLC
- Phase I Environmental Site Assessment Update – September 30, 2016 – B&C
- Environmental Screen Report – October 31, 2016 – LaBella
- Phase I Environmental Site Assessment – September 1, 2017 – LaBella
- Phase II Environmental Site Assessment – April 2018, LaBella
- Soil Vapor Intrusion Assessment – April 2018, LaBella
- Post-Mitigation Indoor Air Quality Results – August 2018, LaBella
- Asbestos Survey Report – January 2019, Lu Engineers
- Asbestos Survey Report – September 2019, Lu Engineers
- Bulk Sample Asbestos Analytical Report – May 2018, LaBella
- Sub-Slab Soil Sampling – January 2020, LaBella

The most recent investigation, Sub-Slab Soil Sampling, was completed to assist with development of this EMP by determining the nature of the material beneath the northwestern portion of the subject building, particularly associated with the chlorinated volatile organic compound (CVOC) impacts found at the immediately adjacent 68—92 Genesee Street property, which is a NYS Superfund Site (Site #828196). This investigation provides the most representative data of the material that is likely to be encountered during demolition of the subject building. The results of this investigation are summarized below:

Sub-Slab Soil Sampling Letter

Seven (7) borings were advanced beneath the subject building to depths ranging from 2.0 to 5.66 feet (ft) bgs. Refer to Figure 2 for testing locations. Refusal appeared to be due to bedrock in all

borings except GP-05 where concrete was encountered at 2-ft bgs. This concrete could be associated with a historical building footer.

Fill materials consisting of asphalt millings, ash, cinders, and brick were observed in borings GP-02 (1.5-1.7 ft bgs), GP-03 (0.5-1.0 and 2.6-4.0 ft bgs), GP-04 (0.5-5.5 ft bgs), GP-05 (0.5-0.7 and 1.5-2.0 ft bgs), and GP-07 (0.5-3.6 ft bgs). Fill materials were observed from just below the concrete down to 5.5-ft bgs and were generally intermixed with soil. Where fill material was encountered in soil borings, it comprised less than 20% of the soil boring. Fill material was also encountered during the 2018 Phase II ESA in soil borings advanced in this portion of the building including SB-13 (0.4-1.4 ft bgs), SB-14 (0.5-2.5 ft bgs), SB-17 (1.1-1.8 ft bgs), and SB-18. Refer to Appendix 1for locations where urban fill material has been identified at the Site. Several PID readings below 1 ppm were detected with the highest reading of 0.423 ppm detected in soil boring GP-06 at 4.25-ft.

Seven (7) soil samples (one from each boring) were collected for analysis of Target Compound List (TCL) and Commissioner Policy 51 (CP-51) VOCs via USEPA Method 8260. VOCs were detected in each of the seven (7) soil samples above laboratory method detection limits (MDLs); however, concentrations were below New York Codes, Rules, and Regulations (NYCRR) Unrestricted, Commercial and Protection of Groundwater Soil Cleanup Objectives (SCOs). Although not detected above the appropriate SCOs, it should be noted that tetrachloroethene (PCE) was detected above laboratory MDLs in each of the soil samples collected. PCE was detected at concentrations ranging from 0.0017 milligrams per kilogram (mg/kg) or parts per million (ppm) (GP-03) to 0.037 ppm (GP-02).

This report concluded the following:

- Source material (i.e., high concentrations of CVOCs) does not appear to be present beneath the subject building, adjacent to the 68-92 Genesee Street NYS Superfund Site. Retention of the floor slab following demolition to inhibit migration of CVOCs does not appear to be warranted based on the existing data and known conditions at the Site. If signs of impacts are identified during demolition (e.g., strong chemical odors, staining, etc.) such should be handled in accordance with applicable regulations and additional measures may be warranted to prevent migration of such impacts.
- VOC (PCE) contamination is likely present in bedrock groundwater in at least the western portion of the site and potentially beneath the subject building. Any demolition activities that have the potential to disturb bedrock or groundwater within bedrock (e.g., removal of building footers, removal of the limited basement, or utilities present in bedrock) may be impacted with VOC contamination, and appropriate precautions should be taken to manage, characterize and dispose of such materials.
- Due to the low-levels of PCE in soil, soils beneath the floor slab within the subject building would be considered a hazardous waste (F-List), if disturbed. Disturbance of soil should be limited as much as possible during demolition including removal of foundations and footers. Additionally, residual soils should be removed from foundations and footers as much as possible as they are removed from the ground. Concrete chip samples should be collected from building materials in contact with subsurface soils (e.g., footers, foundations, floor slab) for analysis of VOCs. A Contained-In Determination would be required for disposal of any soil and/or concrete containing PCE (or other listed wastes) as non-hazardous material.
- It is recommended an EMP be developed and implemented by a qualified environmental monitor during portions of the demolition that involve subsurface disturbance (e.g., removal of foundations, footers, utilities, etc.).

Refer to Appendix 1 for a copy of this report. If this EMP is utilized during demolition of other parts of the Site Building other than the subject building, additional pre-characterization sampling similar to that completed for the subject building may be warranted.

A summary of previous investigations conducted across the Site, while not specific to the location of the subject building, is provided below:

> Based on previous testing completed, the main contaminant of concern is PCE which is a chlorinated solvent historically utilized in dry cleaning operations. There appear to be two (2) separate sources of PCE in groundwater on-Site; 1) the former Westinghouse Dry Cleaner which was located in the northern portion of the Site building, and 2) the former United Cleaners at the southern adjacent property addressed as 68-92 Genesee Street. The former United Dry Cleaner site at 68-92 Genesee Street is immediately adjacent to the subject building and thus has a greater potential to impact subsurface media beneath the subject building compared to the PCE source area associated with the former Westinghouse Dry Cleaner located on the northwestern portion of the Bulls Head Plaza site. 68-92 Genesee Street was also historically used as an automobile sales and repair facility, prior to its use as a dry cleaning facility. Refer to Figure 2 for locations of former dry cleaners.
>
> Concentrations of PCE in groundwater have been detected up to 12,000 micrograms per liter (ug/L) or parts per billion (ppb) in bedrock groundwater in the northern portion of the Site (BWB-08) and 5,000 ppb in the southern portion of the Site (BWB-01). BWB-01 is located to the south of the subject building. Groundwater is present in this well at a depth of approximately 9.6 bgs or approximately 4.6 feet beneath the top of rock, which was encountered at approximately 5 feet below grade in this well location. VOCs have not been detected in soil above applicable NYCRR Part 375 Unrestricted, Commercial or Protection of Groundwater SCOs at the Site. In addition, urban fill material has been encountered across the Site including beneath the subject building, as summarized in the January 2020 Sub-Slab Sampling report. Some samples collected in areas with urban fill material contain elevated levels of metals and semi-volatile organic compounds (SVOCs).

Excerpts from the Phase II ESA by LaBella dated April 2018 are included as Appendix 2.

2.4 Site Geology and Hydrology

Site geology and hydrology was interpreted as part of the following methods of investigation during the Phase II ESA fieldwork conducted between October 31 and December 5, 2017:

- Seven (7) test pits designated TP-01 through TP-07
- Twenty-seven (27) soil borings designated SB-01 through SB-27
- Nine (9) bedrock borings designated BWB-01 through BWB-09

Soil borings extended to depths ranging from 2.5 to 7.4-ft bgs. Test pits extended to depths ranging from 3.5 to 5.7-ft bgs. Top of bedrock was generally encountered between 5.0-ft and 6.5-ft throughout the Site, with a few sporadic exceptions.

Soils at the Site consisted generally of gray to brown sand and gravel underlain by red-brown to brown silt with sand and gravel. Trace amounts of clay were generally seen outside of the Site structure footprint.

Fill materials consisting of a combination of bricks, concrete, asphalt, glass, wood, plastic, coal, ash, coke, and/or cinders were observed in most testing locations (TP-01, TP-02, TP-05, TP-06, TP-07, SB-02, SB-03, SB-06, SB-08, SB-11, SB-13, SB-14, SB-16, SB-17, SB-18, SB-21, SB-22, SB-23, SB-24, SB-25, SB-27, BWB-02, BWB-03, BWB-04, BWB-05, BWB-07) throughout the Site (refer to Figure 2). Thickness of fill material at the Site ranges from approximately 0.1-ft to 4-ft. Broken shale pieces mixed with silt and sand were found immediately underlying asphalt in all seven (7) test pits and appear to have been used for parking lot construction.

Bedrock was cored in two (2) bedrock well locations (BWB-01 and BWB-05) to observe bedrock and for geotechnical purposes. A roller-bit was used at all other bedrock well locations (BWB-02, BWB-03, BWB-04, BWB-06, BWB-07, BWB-08, and BWB-09) to reach the desired depth for well construction. The top of bedrock was encountered during the bedrock drilling at depths ranging from 4.9 to 6.5-ft bgs, with the exception of bedrock at BWB-06. Highly weathered bedrock was encountered in BWB-06 at 7.5-ft to 8-ft followed by silt with broken bedrock and trace sand to 10.5-ft bgs where bedrock became more competent. As such, the auger was advanced from 10.5-ft to 11.5-ft bgs in bedrock and the steel casing was set at 11.5-ft bgs. Based on known regional geology and observations made at the Site, Decew Dolostone appears to have been encountered immediately below overburden soils in wells BWB-01 and BWB-05. Mineralization (apparent calcite) and several vugs were observed in the dolostone recovered from rock cores at the Site. The dolostone appeared gray and sandy in composition. According to the United States geological Survey (USGS), Decew Dolostone was formed in the Early Silurian Period.

Bedrock wells extended to depths ranging from 16 to 21.5-ft bgs. Based on Foundation Design's report, RQD values ranged from 37% to 68% which indicates poor rock quality and corresponds with the heavily fractured rock.

PID readings above 1.0 ppm were observed in four (4) soil borings (SB-10, SB-19, BWB-04, and BWB-09). No elevated PID readings were encountered during the test pitting study. Areas of elevated PID readings include to the west, east, and southeast of the former on-Site Westinghouse Dry Cleaners, to the northeast of the 68-92 Genesee Street property, and to the southeast of the Site building, immediately adjacent to Clifton Street. The highest PID reading (3,053 ppb) was encountered in BWB-04 at 0.7-1.5-ft bgs. BWB-04 was advanced approximately 125-ft east of the former Westinghouse Dry Cleaners, in the center of the Site parking lot. Additional evidence of impairment (i.e., staining, odors, etc.) was not noted in these borings.

Bedrock groundwater was encountered at the Site from depths ranging from 6.71 to 9.29-ft below top of PVC casing (measured on December 19, 2017) which is within bedrock. Bedrock wells were surveyed utilizing a GPS unit capable of capturing elevation, and groundwater elevations were calculated from the December 19, 2017 static water level measurements ranging from 532.87 to 535.67 feet above mean sea level (fmsl). Bedrock groundwater elevations were also measured in wells BW-01 through BW-05 at the adjacent 68-92 Genesee Street property and used to determine groundwater flow direction. Groundwater flow direction was modeled and groundwater flow at the Site appears to vary substantially based on location and proximity to hydraulic controlling features. Potential hydraulic controlling features which *may* be influencing groundwater flow at the Site include the following:

- Sewers located beneath surrounding streets.
- A catch basin located in the northwestern portion of the Site which appears to be built into bedrock. Although piping was observed entering this catch basin, the purpose of the basin is unknown and it was not identified on any available utility mapping.
- A sump located within the basement in the southern portion of the Site building. Note that this sump was observed by LaBella in August 2017 and did not appear to be operating at that time.

- An underground parking structure at the eastern adjacent property (160 Clifton Street) with a sump in the southeastern corner of the lowest level. The parking structure is likely built into bedrock.

It should be noted that groundwater flow direction can change seasonally and due to precipitation events. Groundwater was only encountered in bedrock wells; no recoverable groundwater was encountered during overburden soil borings or during test pitting activities. Groundwater flow direction is depicted in the report included as Appendix 1.

3.0 OBJECTIVE

This EMP is intended to provide guidance for the identification and management of regulated materials that may be encountered during construction-related excavations and ground intrusive work (e.g. subsurface utility work, excavation, grading, etc.) on the Site. The development of this EMP was generated based on the identification of urban fill on the Site, which is a regulated solid waste under NYSDEC Part 360, and the presence of chlorinated volatile organic compounds (CVOCs) including PCE in soil and groundwater which are considered to be an F-listed hazardous waste.

This EMP has been prepared in general accordance with current United States Environmental Protection Agency (USEPA) and NYSDEC waste disposal regulations. Any changes made to applicable standards or guidelines subsequent to the date of this EMP may result in portions of this EMP becoming obsolete.

The Owner of the Site at the time of subsurface disturbance shall be primarily responsible for implementation of this EMP and third-parties conducting the subsurface work shall also have an obligation to conduct the work in conformance with this EMP and all federal, state, and local regulations. This EMP should be provided to future Owners, contractors, and other third-parties whose activities may disturb the subsurface at the Site. Additional parties to which the EMP has been distributed are listed in Section 3.2.

3.1 Applicability of Plan

This EMP applies to any activity that uncovers and/or disturbs the surface soil or subsurface at the Site, including but not limited to the following:

- Removal of foundations, footers, floor slabs.
- Removal/ backfilling of the basement or other subgrade features.
- Removal of below ground utilities, including those that are beneath the floor slab.
- Installation of utilities or other infrastructure below ground.
- Subsurface excavation, including beneath the existing building's floor slab or beneath the existing asphalt pavement.

3.2 Distribution

One (1) electronic and one (1) hardcopy of this EMP have been distributed to the following parties:

Current Property Owner:

City of Rochester
c/o Mr. Paul Scuderi
Director of Real Estate
30 Church Street, Room 300-B
Rochester, New York 14604

Local Municipality:

Division of Environmental Quality
c/o Mr. Joseph Biondolillo
City of Rochester
30 Church Street, Room 300-B
Rochester, New York 14614

4.0 ENVIRONMENTAL MANAGEMENT PLAN

This section of the EMP details sampling requirements and the classification system to be used to segregate and dispose of excavated soil and regulated materials during future subsurface work at the Site. The method to sample soil will depend on the disposal facility. The Site owner should consider engaging an Environmental Professional to assist with the management of any materials derived from subsurface excavations at the Site.

Due to the presence of chlorinated VOCs including PCE in soil and groundwater and the known historical use of the Site and adjacent property as a dry cleaning facility, soils beneath the floor slab within the subject building would be considered a hazardous waste (F-List), if disturbed. **All subsurface material is considered to be hazardous as soon as it is disturbed, unless analytical testing is completed and a contained-in determination which determines that the material may be characterized as non-hazardous is approved by the NYSDEC.**

As noted above, both the Owner of the Site and the parties conducting the subsurface work have responsibility for compliance with this EMP. Any regulated materials, USTs, dry wells or other subsurface structures of environmental concern encountered must be managed in accordance with this EMP and all applicable Federal, State, and Local laws/regulations. The following is general guidance for the handling, reuse and/or disposal of impacted materials that may be encountered during future work at the Site.

4.1 Determination of Characteristic Hazardous Waste

By definition, all soils at the Site once disturbed are considered a listed hazardous waste (F-listed) due to the known chlorinated solvent contamination associated with historical dry cleaning operations. Soil may be graded and left in place as long as it is in a location with soil of similar composition (refer to Section 4.3 for further details). Soil that requires off-Site disposal must be tested prior to disposal to determine if the material is a characteristic hazardous waste. To determine if material is a characteristic hazardous waste, representative samples should be analyzed for the following:

- Ignitability via USPEA Method 1010;
- Corrosivity via USEPA Method 9040C/9045D;
- Reactivity via USEPA Method 7.3; and
- Toxicity (toxicity characteristic leaching procedures (TCLP)) VOCs via USEPA Method 8260C.
    - If requesting a "contained-in determination" (see Section 4.2) a sample should also be collected for total target compound list (TCL) VOCs via USEPA Method 8260C.

TCLP limits for chlorinated solvents know to be present, or potentially present in soil are listed below.

Table 1 – TCLP Maximum Concentration of Contaminants for Toxicity Characteristic

EPA HW No.	Contaminant	Regulated Level (mg/L)
D039	Tetrachloroethylene (PCE)	0.7
D040	Trichloroethylene (TCE)	0.5
D043	Vinyl chloride	0.2

Additional waste characterization analytical testing may be required by the disposal facility. Waste characterization analytical parameters will be dependent upon the accepting waste disposal facility. The above parameters are only for the purpose of determining whether or not the soil can be characterized as non-hazardous.

4.2 Contained-In Determination for Non-Hazardous Disposal

If the soil meets the regulatory limit for TCLP VOCs, a "contained-in" determination may be submitted to NYSDEC for approval to dispose of soil as non-hazardous. All requests to dispose of soil or subsurface materials that are intermixed with soil (e.g., gravel subbase, etc.) as non-hazardous must be made via email or in writing to:

NYSDEC:
Henry Wilkie
Assistant Engineer
NYSDEC Division of Materials Management
625 Broadway
Albany, New York 12233-7256
henry.wilkie@dec.ny.gov
518-402-9611

Soil/ fill material or other subsurface materials that are intermixed with soil cannot be disposed of as non-hazardous prior to testing and NYSDEC approval. If soils are approved for non-hazardous disposal, the soil must be disposed of at a NYS Part 360 permitted landfill and not reused at another Site. Soils may be disposed of as hazardous, without NYSDEC approval. NYSDEC approvals shall be provided to the Owner.

4.3 Development of Screening Procedures

Upon encountering potentially impacted soil, on-Site contractors should follow their own company's Health and Safety Plan (HASP) to provide for worker protection. Refer to Section 7.0 for Health and Safety requirements.

Although urban fill material is present which is subject to 6NYCRR Part 360 Regulations, all subsurface material is by definition a listed hazardous waste once removed from the ground and must be tested in accordance with Section 4.1 and 4.2 prior to disposal, regardless of the presence of fill material.

The classes of material are described in the below table. It is recommended soils are screened with a PID capable of reading total VOCs in parts per billion (ppb) to determine the potential for soils to contain hazardous levels of CVOCs; however, all subsurface soil is considered hazardous once it is disturbed (i.e., removed from the ground). Construction and demolition (C&D) debris (e.g., footers, floor slabs, foundation walls, etc.) will also be screened with a PID and classified accordingly as noted in Table 2. C&D is not considered to be hazardous unless it is intermixed with soil.

Table 2 - Material Classifications

Class of Material	Description	Disposal Requirements	On-Site Reuse Requirements
Class 1	Soil/ fill material that is not disturbed, and remains in place.	N/A (leave in place) If material is disturbed (i.e., removed from the ground) refer to Class 3 and Class 4 disposal requirements.	Leave in place, cover with 1-ft clean material or impervious surface.
Class 2	C&D debris from above grade (including floor slabs) that; A. Can be cleaned of any subsurface material; AND B. Has no PID readings above 0 ppm, does not exhibit chemical odors or staining.	C&D landfill or NYS Part 360 landfill.	Only if suitable for reuse. Cover with minimum 1-ft clean material or impervious surface. Must be used in areas of similar physical composition.
Class 3	All subsurface soil/ fill material at the Site, once disturbed exhibiting PID readings less than 10 ppm.	NYS Part 360 non-hazardous landfill **only if tested AND approved by NYSDEC (refer to Section 4.1 and 4.2).** OR Hazardous waste landfill (no NYSDEC contained-in approval required).	Only if suitable for reuse. Cover with minimum 1-ft clean material or impervious surface. Must be used in areas of similar physical composition.
Class 4	Any C&D debris from below grade that has been in direct contact with subsurface soil and/or exhibits PID readings greater than 0 ppm. OR All subsurface soil/ fill material at the Site, once disturbed exhibiting PID readings greater than 10 ppm.	NYS Part 360 non-hazardous landfill **only if tested AND approved by NYSDEC (refer to Section 4.1 and 4.2).** OR Hazardous waste landfill (no NYSDEC contained-in approval required).	Collect soil or concrete chip samples for TCL VOCs at a frequency consistent with DER-10 table 5.4(e)10. On-Site reuse only if material meets 6NYCRR Part 375-6.8(b) Commercial Use SCOs. If material meets Commercial Use SCOs, it: A. Must be covered with 1-ft clean material or impervious surface, B. Must be used in areas of similar physical composition, AND C. Cannot be placed within 2 feet of groundwater table. If material does not meet Commercial Use SCOs, off-Site disposal is required.

Notes:

- In the event that petroleum impacts are encountered a spill should be called in to NYSDEC (refer to Section 4.9).
- C&D can only be reused if it meets the criteria listed above and is suitable for reuse based on geotechnical requirements. If C&D is unsuitable for reuse it still must be screened and if PID readings are encountered, treated as Class 4 material.

Refer to Figure 3 for a flow chart representing the material classifications detailed in Table 2.

4.4 Material Reuse/ Import Procedures

Soils may be reused on-Site, pending PID screening results. Any soil/ fill material exhibiting PID readings greater than 10 ppm will require sampling prior to reuse on-Site. Soil/ fill material that does not meet 6NYCRR Part 375-6.8(b) Commercial Use SCOs for VOCs may not be reused on-Site.

Any soil/ fill material exhibiting PID readings less than 10 ppm may be reused on-Site without testing. Soil that is tested and meets 6NYCRR Part 375-6.8(b) Commercial Use SCOs may also be reused on-Site. All soil reused on-Site much be placed beneath a cover or cap. The cover or cap shall consist of a minimum of 1-ft clean material (i.e., crushed stone, or soil that meets Commercial Use SCOs) or an imperious surface (e.g., asphalt). Any material proposed to be imported to the Site for use as cover or backfill should be provided to the owner for approval.

C&D can only be reused if it meets the criteria listed in Table 2 and is suitable for reuse based on geotechnical requirements. If C&D is unsuitable for reuse it still must be screened and if PID readings are encountered, it should be disposed of at a landfill pending a contained-in determination (refer to Section 4.1 and 4.2).

4.5 Excavated Soil Management Procedures

The three (3) classes of soil described in Section 4.1 shall be managed on-site as follows:

- *Class 1 Materials* will not be disturbed.

- *Class 2 Materials* will be staged, in accordance with stormwater regulations prior to being transported off-Site. C&D containing soil that may be cleaned to be free of soil should be staged on and covered with 6-mil polyethylene sheeting pending cleaning.

- *Class 3 and Class 4 Materials* will be staged on and covered with 6-mil polyethylene sheeting until removed from Site for disposal after waste characterization and waste profiling (soil samples or concrete chip samples in accordance with the disposal facility requirements). The location of the designated staging area will be selected at the time of the excavation work.

Covers should be present during any non-working hours as noted above and will be anchored or weighted at the edges to prevent stormwater and/or wind-borne erosion.

4.6 Waste Disposal Tracking

All Treatment, Storage, and Disposal (TSD) facilities and waste transporters must provide evidence of applicable NYSDEC permits prior to handling, transporting, and/or receiving impacted media.

All operators responsible for the removal and disposal of contaminated media shall comply with the

applicable Federal, State, and local laws and regulations and policies. The Contractor shall provide the owner with documentation that the receiving facility is permitted to receive the accepted waste and the waste transporter is permitted to haul such wastes.

4.7 Waste Disposal Documentation

Documentation of proper disposal, including copies of all waste disposal manifests and disposal facility receipts shall be provided to the Site owner within 48-hours of receipt.

4.8 Encountering Orphan Underground Storage Tanks or Other Subsurface Structures of Environmental Concern

Should orphan UST(s) be encountered during subsurface activities at the Site, a specialty tank removal contractor (licensed to remove tanks within the City of Rochester) should be retained to decommission any tanks in accordance with applicable regulations. Removal of certain types of petroleum storage tanks is regulated by NYSDEC under 6 NYCRR Part 613, which requires that tanks out of use for 12 months or longer be closed in place or removed. Impacted soil shall be managed in accordance with Section 4.3.

4.9 NYSDEC Notification

Upon discovery of any petroleum-impacted media the NYSDEC Spills Hotline (1-800-457-7362 as of March 2020) must be notified within two (2) hours of discovery. Notification to the NYSDEC will be the responsibility of the Owner of the Site at the time when the petroleum-impacted media is discovered, but notification may be made by third-party representatives of the Owner (such as the contractor who encountered the contamination, the Owner's legal counsel and/or an environmental consultant who has been retained by the Owner).

4.10 Water Management

Based on the Phase II ESA testing, chlorinated VOCs are present in groundwater at the Site. The overburden is unsaturated and groundwater is present in bedrock. Based on this, groundwater and/or water that enters excavations or basements will require proper management and disposal. In the event that groundwater is encountered during intrusive activities, the water should be pumped to a holding tank and waste characterization testing completed. Waste characterization analysis parameters will be dependent upon the accepting waste disposal facility or municipal sewer discharge requirements. Treatment via carbon or other methods may be required. Upon characterization and disposal facility/municipal approval, this water will be managed in one of the following ways:

1. Disposal to sanitary sewer under permit with Monroe County Pure Waters; or
2. Transportation off-Site for disposal at an approved facility.

5.0 DECONTAMINATION OF EQUIPMENT

It is recommended that all equipment used on the work site and that comes in contact with soil be decontaminated using manual methods to scrape off residual soil from construction activities. Impacted soil removed from equipment should be collected and staged with any impacted soil that has been excavated and is being managed as part of this plan. Persistent residue may require steam cleaning or other methods. Any soil removed from equipment must be treated as hazardous, or tested and approved

by NYSDEC to be characterized as non-hazardous (refer to Section 4.1 and 4.2).

6.0 WORK ZONE AIR MONITORING

Work zone air monitoring is recommended 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. Refer to the HASP included in Appendix 3 for a description of personal protective equipment (PPE).

The Air Monitor will utilize a PID to screen the ambient air in the work areas for total VOCs. Work area ambient air will generally be monitored in the work area and downwind of the work area.

7.0 HEALTH AND SAFETY

This EMP contains a Site Specific HASP for the Site. The included HASP has been developed by LaBella Associates, D.P.C. is designated for ***LaBella personnel only*** should they be involved in future intrusive site work. A copy of this HASP is included in Appendix 3.

The LaBella Associates, D.P.C. HASP is included as an example. The Contactor(s) will need to develop and rely on their own HASP to manage health and safety issues associated with potential exposure to site chemicals of concern and any other potential issues. LaBella Associates, D.P.C. assumes no liability for the health and safety of personnel not employed or subcontracted by LaBella Associates, D.P.C.

Due to the presence of soil that is classified as an F-listed hazardous waste once disturbed, all workers handling subsurface soil/ fill material (i.e., any material beneath the building slab, footers, foundation walls, etc.) shall be Occupational Safety and Health Administration (OSHA) 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) trained with current refresher certifications. Certifications should be available upon request.

8.0 COMMUNITY AIR MONITORING PLAN (CAMP)

Based on the previous work, there are some low-level concentrations of SVOCs and metals that have been detected in soil at the Site and low-level VOCs in soil and groundwater at the Site. As such, it is recommended that community air monitoring be implemented whenever regulated materials are encountered (i.e., anytime this EMP is applicable as indicated in Section 3.1).

A qualified environmental monitor is recommended to perform particulate and VOC ambient air monitoring during ground intrusive activities. It is recommended that the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan included as Appendix 1A in the NYSDEC Department of Environmental Remediation DER-10 guidance document be utilized. A copy of this plan is included in Appendix 4.

The CAMP will be implemented during all subsurface work. It should be noted that the air monitoring may identify elevated levels of VOCs or fugitive dust that may require mitigation. In this event the Contractor will be required to implement dust and VOC suppression measures as directed by the environmental professional that may include the following methods:

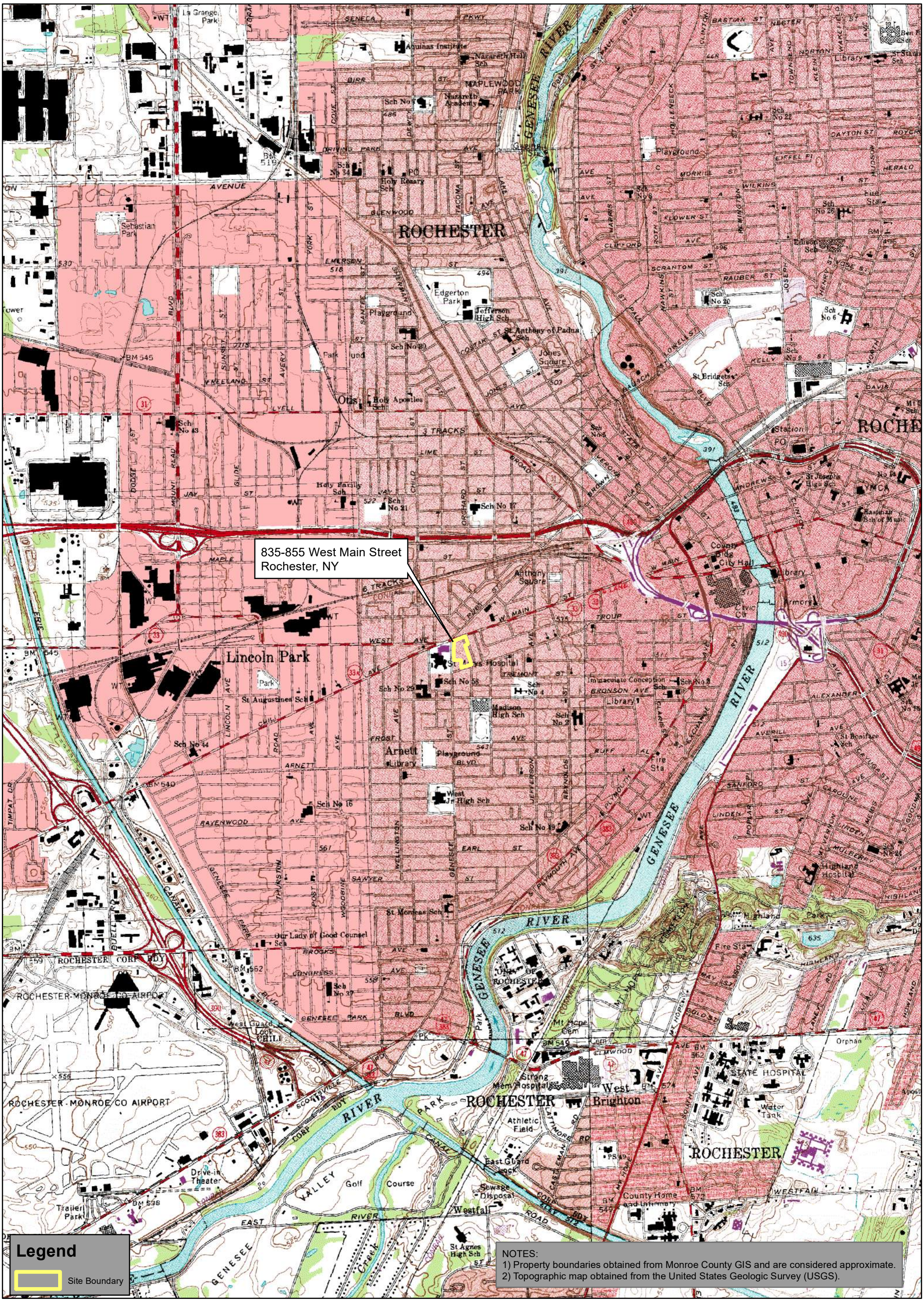
- Application of water on haul roads;

- Wetting equipment and excavation faces;
- Restricting vehicle speeds to 10 mph;
- Hauling material in properly tarped containers;
- Spraying water in buckets during excavation and dumping;
- Reducing excavation size and/or number of excavations.

The Contractor shall have an on-Site designated water truck or other dust suppression system. The Contractor shall obtain any necessary permits for hydrant usage, etc.

\\Projects2\ProjectsNZ-2\Rochester, City\2200137 - Bulls Head Plaza EMP\Reports\DRAFT V2 2201137 - Bulls Head Plaza EMP.docx

FIGURES



PROJECT/DRAWING NUMBER:

2201137

FIGURE 1

PROJECT:

ENVIRONMENTAL MANAGEMENT PLAN
835-855 WEST MAIN STREET
ROCHESTER, NEW YORK

DRAWING NAME:

SITE LOCATION

CLIENT:

CITY OF ROCHESTER

N
W E
S

0 1,000 2,000
Feet

1 inch = 2,000 feet

INTENDED TO PRINT AS: 11" X 17"

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Path: \\Projects2\ProjectsNZ-2\Rochester, City\2200137 - Bulls Head Plaza EMP\Drawings\FIGURE 1 Site Location.mxd

PROJECT/DRAWING NUMBER:

2201137

FIGURE 2

PROJECT:

ENVIRONMENTAL MANAGEMENT PLAN
835-855 WEST MAIN STREET
ROCHESTER, NEW YORK

DRAWING NAME:

PREVIOUS TESTING LOCATIONS

CLIENT:

CITY OF ROCHESTER

N
W E
S

0 30 60
Feet
1 inch = 60 feet
INTENDED TO PRINT AS: 11" X 17"

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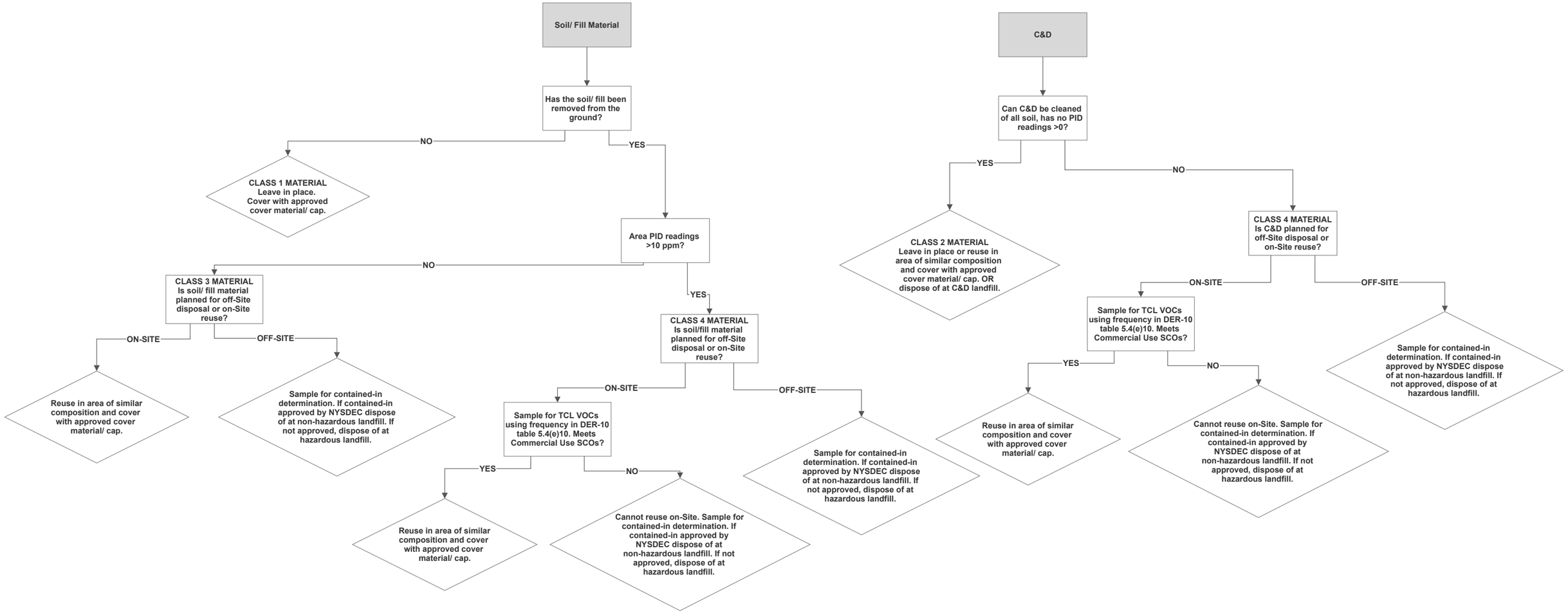
Path: \\Projects2\ProjectsNZ-2\Rochester, City\2200137 - Bulls Head Plaza EMP\Drawings\FIGURE 2 Testing Locations.mxd

Figure 3 - Material Classifications



APPENDIX 1

Sub-Slab Soil Sampling Letter, LaBella, January 2020

January 3, 2020

Mr. Joseph Biondolillo
City of Rochester
30 Church Street, Room 300-B
Rochester, New York 14614

Re: Bulls Head Plaza
Sub-Slab Soil Sampling
835-855 West Main Street, Rochester, New York 14611
LaBella Project Number 2200179

Dear Mr. Biondolillo,

LaBella Associates D.P.C. (LaBella) is pleased to submit this letter summarizing the results of sub-slab soil sampling conducted for the Bulls Head Plaza located at 835-855 West Main Street, City of Rochester, Monroe County, New York, hereinafter referred to as the "Site." LaBella was retained by the City of Rochester (the City) to conduct soil sampling beneath the southeastern portion of the building to assess for impacts beneath the slab. The objective of this assessment was to determine if any portion of the floor slab should remain in place following demolition to prevent potential migration of impacts from precipitation infiltration once the building slab is removed. Refer to Figure 1 for the location of the Bulls Head Plaza building included in this assessment (hereinafter referred to as the "subject building"). The impacts in this portion of the Site appear to be associated with the adjacent former United Cleaners at 68-92 Genesee Street (NYS State Superfund #828196).

PROJECT BACKGROUND

The following environmental reports exist for the Site.

- Environmental Screen – September 2009 – Day Environmental, Inc
- Limited Subsurface Investigation Report – April 28, 2015 – Bock and Clark Environmental, LLC
- Phase I Environmental Site Assessment Update – September 30, 2016 – B&C
- Environmental Screen Report – October 31, 2016 – LaBella
- Phase I Environmental Site Assessment – September 1, 2017 – LaBella
- Phase II Environmental Site Assessment – April 2018, LaBella
- Soil Vapor Intrusion Assessment – April 2018, LaBella
- Post-Mitigation Indoor Air Quality Results – August 2018, LaBella
- Asbestos Survey Report – January 2019, Lu Engineers
- Asbestos Survey Report – September 2019, Lu Engineers
- Bulk Sample Asbestos Analytical Report – May 2018, LaBella

Based on previous testing completed, the main contaminant of concern is tetrachloroethylene (tetrachlorotehene, PCE or PERC) which is a chlorinated solvent historically utilized in dry cleaning operations. There appear to be two (2) separate sources of PCE in groundwater on-Site; 1) the former Westinghouse Dry Cleaner located in the northern portion of the Site building, and 2) the former United Cleaners at the southern adjacent property addressed as 68-92 Genesee Street. The former

United Dry Cleaner site at 68-92 Genesee Street is immediately adjacent and located in closer proximity to subject building, and has a greater potential to impact subsurface media beneath the subject building compared to the PCE source area associated with the former Westinghouse Dry Cleaner located on the northwestern portion of the Bulls Head Plaza site. Refer to Figure 2 for locations of former dry cleaners and groundwater flow direction determined during the April 2018 Phase II ESA.

Concentrations of PCE in groundwater have been detected up to 12,000 micrograms per liter (ug/L) or parts per billion (ppb) in bedrock groundwater in the northern portion of the Site (BWB-08) and 5,000 ppb in the southern portion of the Site (BWB-01). BWB-01 is located on the Site, outside of the footprint of the subject building. Groundwater is present in this well at a depth of approximately 9.6 feet below ground surface (bgs) or approximately 4.6 feet beneath the top of rock, which was encountered at approximately 5 feet below grade in this well location. VOCs have not been detected in soil above applicable New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted, Commercial or Protection of Groundwater Soil Cleanup Objectives (SCOs). In addition, urban fill material has been encountered across the Site. Some samples collected in areas with urban fill material contain elevated levels of metals and semi-volatile organic compounds (SVOCs).

SOIL SAMPLING PROCEDURES & RESULTS

A total of seven (7) borings were advanced at the Site to depths ranging from 2.0 to 5.66 feet (ft) bgs. Refer to Figure 1 for testing locations. All soil borings were advanced until equipment refusal. Refusal appeared to be due to bedrock in all borings except GP-05 where concrete was encountered at 2-ft bgs. For future demolition purposes, the City should be aware that this concrete could be associated with a historical building footer. Refer to Attachment 1 for soil boring logs for all soil borings advanced in the subject building.

To advance each boring, a hole was cored in the concrete building slab in each location and a 4-foot MacroCore® sampler with disposable sleeves was advanced using a jackhammer to retrieve overburden soil cores. Soils at the Site generally consisted of brown silty sand with varying amounts of gravel underlain by varying percentages of silt and sand. Fill materials consisting of asphalt millings, ash, cinders, and brick were observed in borings GP-02 (1.5-1.7 ft bgs), GP-03 (0.5-1.0 and 2.6-4.0 ft bgs), GP-04 (0.5-5.5 ft bgs), GP-05 (0.5-0.7 and 1.5-2.0 ft bgs), and GP-07 (0.5-3.6 ft bgs). Fill materials were observed from just below the concrete down to 5.5-ft bgs and were generally intermixed with soil. Where fill material was encountered in soil borings, it comprised less than 20% of the soil boring. Fill material was also encountered during the 2018 Phase II ESA in soil borings advanced in this portion of the building including SB-13 (0.4-1.4 ft bgs), SB-14 (0.5-2.5 ft bgs), SB-17 (1.1-1.8 ft bgs), and SB-18. Refer to Figure 3 for locations where urban fill material has been identified at the Site.

Soils from borings were continuously assessed by a LaBella Environmental Engineer for soil type and for visible impairment, olfactory indications of impairment, and/or indication of detectable volatile organic compounds (VOCs) with a photo-ionization detector (PID). Several PID readings below 1 ppm were detected with the highest reading of 0.423 ppm detected in soil boring GP-06 at 4.25-ft.

Seven (7) soil samples (one from each boring) were collected via the 5035 sampling methodology and submitted to Alpha Analytical Laboratory in Westborough, Massachusetts for analysis of Target Compound List (TCL) and Commissioner Policy 51 (CP-51) VOCs via USEPA Method 8260. Results were compared to NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives (SCOs), NYCRR

Part 375-6.8(b) Restricted Use Commercial SCOs and, NYCRR Part 375-6.8(b) Protection of Groundwater SCOs

VOCs:
VOCs were detected in each of the seven (7) soil samples above laboratory MDLs; however, concentrations were below NYCRR Unrestricted, Commercial and Protection of Groundwater SCOs. Although not detected above the appropriate SCOs, it should be noted that tetrachloroethene (PCE) was detected above laboratory MDLs in each of the soil samples collected. PCE was detected at concentrations ranging from 0.0017 ppm (GP-03) to 0.037 ppm (GP-02).

Soil boring locations are depicted on Figure 1 and a summary of analytical data is provided in Table 1. Refer to Attachment 1 for soil borings logs. Soil boring logs from the April 2018 Phase II ESA that were advanced in the subject building are also included in Attachment 1. Refer to Attachment 2 for the full laboratory analytical report.

CONCLUSIONS

Based on the lack of detected compounds in soil above NYCRR Part 375 Unrestricted Use, Commercial Use and Protection of Groundwater SCOs beneath the building, source material does not appear to be present beneath the southeastern portion of the Site building, adjacent to the 68-92 Genesee Street NYS Superfund Site. Retention of the floor slab following demolition does not appear to be warranted based on the existing data and known conditions at the Site. If signs of impacts are identified during demolition (e.g., strong chemical odors, staining, etc.) such should be handled in accordance with applicable regulations and additional measures may be warranted to prevent migration of such impacts.

VOC (PCE) contamination is likely present in bedrock groundwater in at least the western portion of the site and potentially beneath the subject building. Any demolition activities that have the potential to disturb bedrock or groundwater within bedrock (e.g., removal of building footers, removal of the limited basement, or utilities present in bedrock) may be impacted with VOC contamination, and appropriate precautions should be taken to manage, characterize and dispose of such materials.

Due to the low-levels of PCE in soil, soils beneath the floor slab within the subject building would be considered a hazardous waste (F-List), if disturbed. Disturbance of soil should be limited as much as possible during demolition including removal of foundations and footers. Additionally, soils should be removed from foundations and footers as much as possible as they are removed from the ground. Concrete chip samples should be collected from building materials in contact with subsurface soils (e.g., footers, foundations, floor slab) for analysis of TCL VOCs. A Contained-In Determination would be required for disposal of any soil and/or concrete containing PCE (or other listed wastes) as non-hazardous material.

It is recommended an Environmental Management Plan (EMP) be developed and implemented by a qualified environmental monitor during portions of the demolition that involve subsurface disturbance (e.g., removal of foundations, footers, utilities, etc.).

If you have any questions, please do not hesitate to contact me at (585) 295-6289.

Sincerely,

LABELLA ASSOCIATES, D.P.C.

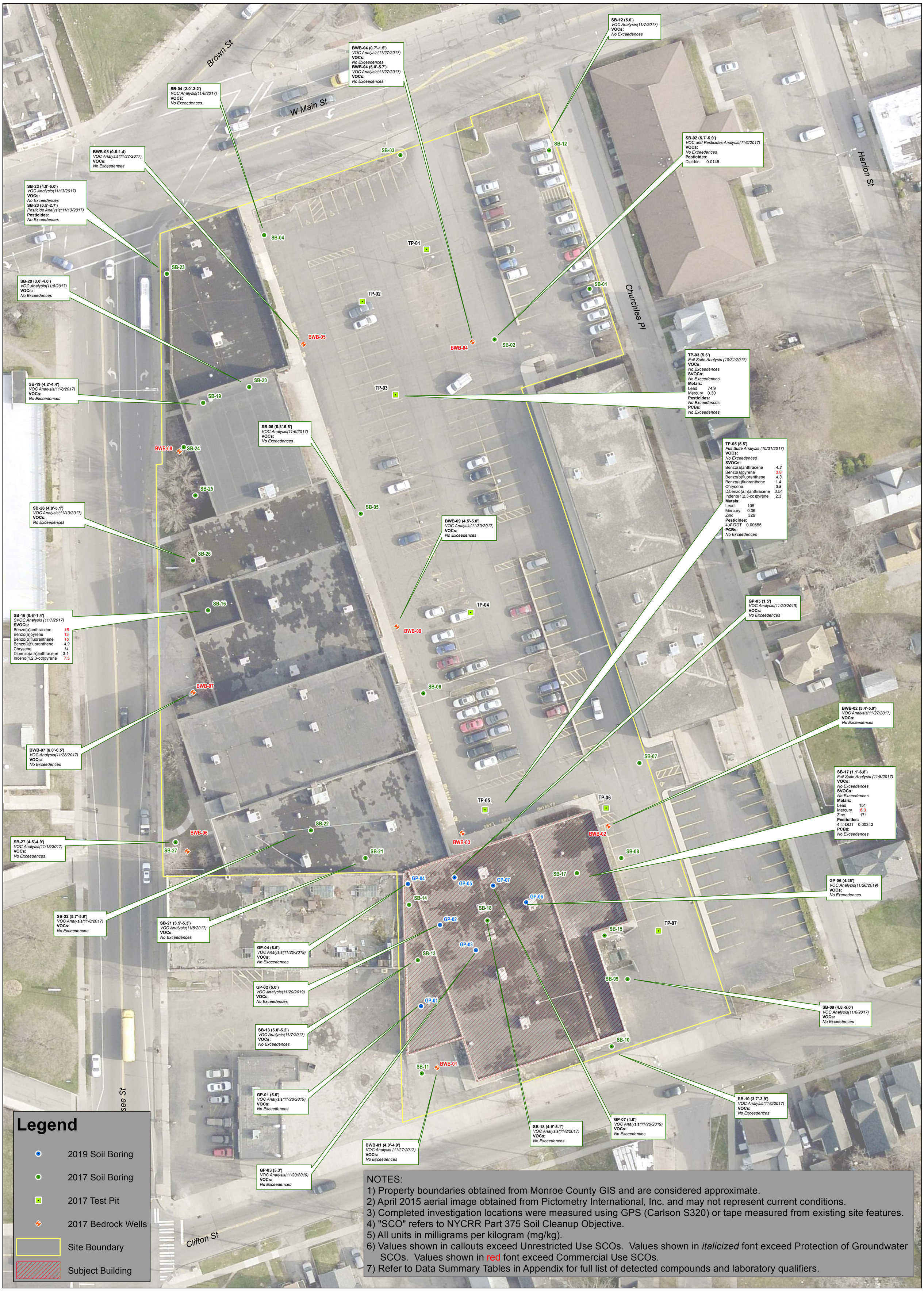
Ann Aquilina, PE
Environmental Engineer

Attachments:

Figure 1:	Testing Locations
Figure 2:	Bedrock Groundwater Elevations December 2017
Figure 3:	Areas of Apparent Urban Fill
Table 1:	Summary of Detected Compounds in Soil
Attachment 1:	Boring Logs
Attachment 2:	Laboratory Report

\\Projects2\ProjectsNZ-2\Rochester, City\2200179 - Bulls Head Plaza\Reports\Soil Testing Letter\Bulls Head Plaza Soil Sample Results December 2019.V2.doc

FIGURES



PROJECT/DRAWING NUMBER:

2200179

FIGURE 1

PROJECT:

OPINION OF PROBABLE COST
835-855 WEST MAIN STREET
ROCHESTER, NEW YORK

DRAWING NAME:

SUMMARY OF SOIL TESTING LOCATIONS AND ANALYTICAL DATA

CLIENT:

CITY OF ROCHESTER

N
W E
S

0 30 60
Feet

1 inch = 30 feet

INTENDED TO PRINT AS: ANSI D

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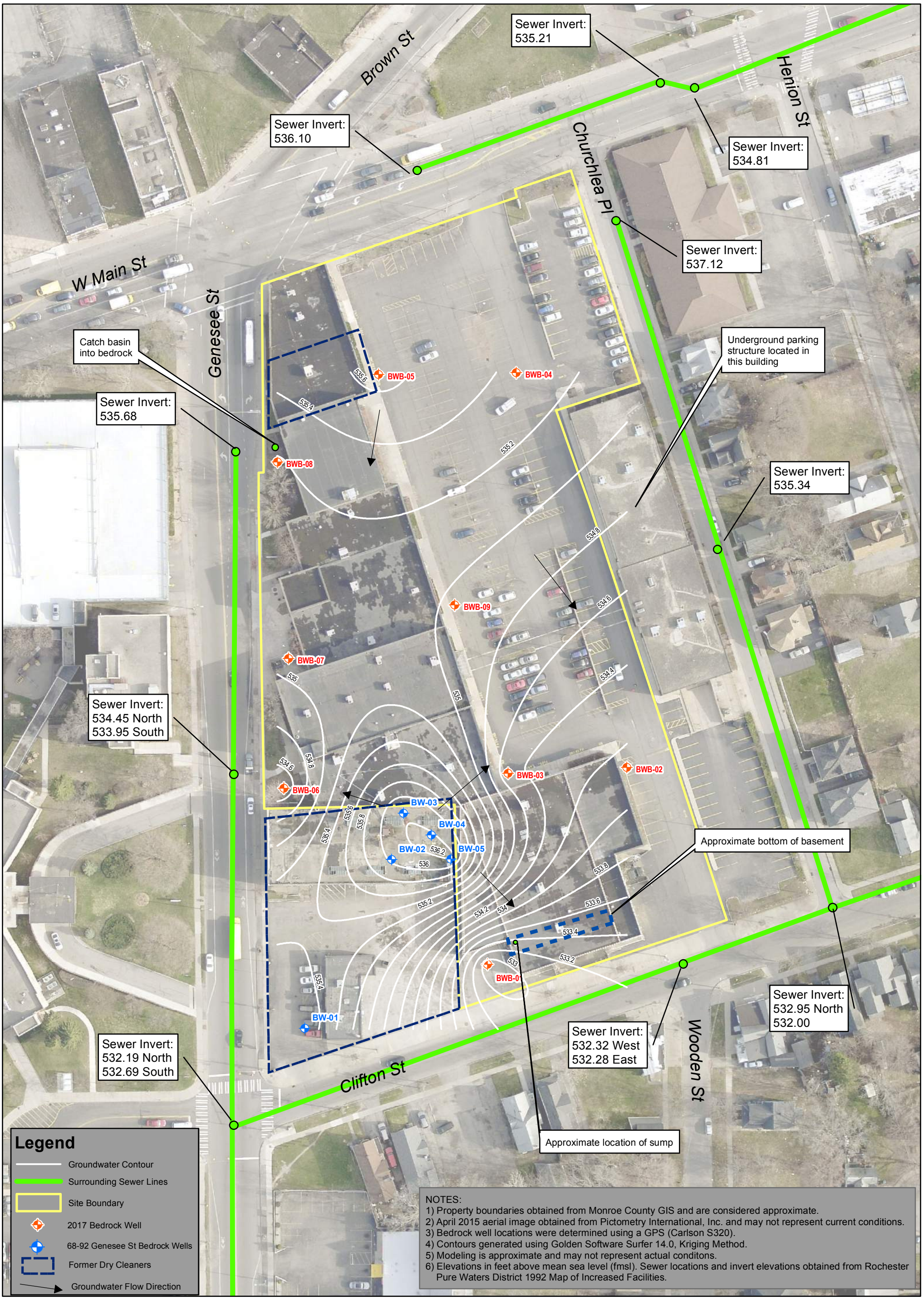
Path: \\Projects2\ProjectsNZ-2\Rochester, City\2200179 - Bulls Head Plaza\Drawings\Letter\FIGURE 1 Soil Data Summary.mxd



PROJECT/DRAWING NUMBER:

2200179

FIGURE 2

PROJECT:

OPINION OF PROBABLE COST
835-855 WEST MAIN STREET
ROCHESTER, NEW YORK

DRAWING NAME:

BEDROCK GROUNDWATER ELEVATIONS
DECEMBER 2017

CLIENT:

CITY OF ROCHESTER

N W E S

0 75 150 Feet

1 inch = 75 feet

INTENDED TO PRINT AS: 11" X 17"

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Path: \\Projects2\ProjectsNZ-2\Rochester, City\2200179 - Bulls Head Plaza\Drawings\Letter\FIGURE 2 GW Elevations Contour.mxd

PROJECT/DRAWING NUMBER:

2200179

FIGURE 3

PROJECT:

OPINION OF PROBABLE COST
835-855 WEST MAIN STREET
ROCHESTER, NEW YORK

DRAWING NAME:

AREAS OF APPARENT URBAN FILL

CLIENT:

CITY OF ROCHESTER

N
W E
S

0 30 60
Feet
1 inch = 60 feet
INTENDED TO PRINT AS: 11" X 17"

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Path: \\Projects2\ProjectsNZ-2\Rochester, City\2200179 - Bulls Head Plaza\Drawings\Letter\FIGURE 3 Fill Locations.mxd

TABLE

Table 1
Summary of Detected Compounds in Soil
Sub-Slab Soil Sampling
Bullshead Plaza
855 West Main Street
Rochester, New York

SAMPLE ID:	NYCRR Part 375-6.8(a) Unrestricted Use SCOs	NYCRR Part 375-6.8(b) Commercial Use SCOs	NYCRR Part 375-6.8(b) Protection of Groundwater SCOs	GP-01	GP-02	GP-03	GP-04	GP-05	GP-06	GP-07
COLLECTION DATE:				11/20/2019	11/20/2019	11/20/2019	11/20/2019	11/20/2019	11/20/2019	11/20/2019
SAMPLE DEPTH:				5.5-ft bgs	5.0-ft bgs	5.3-ft bgs	5.5-ft bgs	1.5-ft bgs	4.25-ft bgs	4.0-ft bgs
ANALYTE				Result	Result	Result	Result	Result	Result	Result
Volatile Organics by EPA 5035										
1,2,4-Trimethylbenzene	3.6	190	3.6	**0.00038** J	0.00035 U	0.00036 U	0.00036 U	0.00035 U	**0.00047** J	0.00036 U
1,3,5-Trimethylbenzene	8.4	190	8.4	0.00018 U	0.0002 U	0.0002 U	0.00021 U	0.0002 U	**0.00022** J	0.00021 U
2-Butanone	0.12	500	0.12	0.0021 U	0.0023 U	0.0024 U	0.0024 U	0.0023 U	0.0022 U	**0.0025** J
Acetone	0.05	500	0.05	**0.011**	0.0051 U	0.0051 U	0.0052 U	**0.012**	0.0049 U	**0.022**
Benzene	0.06	44	0.06	**0.00034** J	0.00018 U	0.00018 U	0.00018 U	0.00018 U	**0.00017** J	0.00018 U
o-Xylene	0.26	500	1.6	0.00028 U	0.00031 U	0.00031 U	0.00031 U	0.00031 U	**0.00033** J	0.00031 U
p/m-Xylene				**0.00054** J	0.00059 U	0.0006 U	0.0006 U	0.00059 U	**0.00085** J	0.0006 U
Tetrachloroethene	1.3	150	1.3	**0.011**	**0.037**	**0.0017**	**0.0033**	**0.0041**	**0.0018**	**0.0056**
Toluene	0.7	500	0.7	**0.00072** J	0.00057 U	0.00058 U	0.00058 U	0.00057 U	**0.00085** J	0.00059 U
Trichloroethene	0.47	200	0.47	**0.0005**	0.00014 U	0.00014 U	0.00015 U	0.00014 U	0.00014 U	0.00015 U
Total VOCs	NA	NA	NA	**0.02448**	**0.037**	**0.0017**	**0.0033**	**0.0161**	**0.00469**	**0.0301**

Notes:
Results displayed in milligrams per kilogram (mg/kg) or parts per million (ppm)
Samples collected via method 5035 and analyzed for VOCs using USEPA method 8260
Bold values indicate the compound was detected above the laboratory method detection limit (MDL)
Red values indicate the detected concentration exceeds the NYCRR Part 375 Unrestricted Use SCO for that analyte
Underlined values indicate the detected concentration exceeds the NYCRR Part 375 Commercial Use SCO for that analyte
Yellow highlighted values indicate the detected concentration exceeds the NYCRR Part 375 Protection of Groundwater SCO for that analyte
U indicates the compound was not detected above the laboratory MDL with the MDL shown
J indicates the compound is considered estimated as it was detected above the MDL but below the laboratory reporting limit (RL)
NA indicates no applicable regulatory standard

APPENDIX 1

Boring Logs

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Bullshead Plaza
855 West Main Street
Rochester, NY
City of Rochester

BORING: GP-01
SHEET 1 of 1
JOB: 2200179
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: Armon & KT
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 11/20/19 END DATE: 11/20/19
TIME: 0820 TO 0856
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	27	S1 0.0-4.0-ft	0.0'	Concrete		
			0.5'	Brown silty sand, little coarse to fine subrounded to subangular gravel, moist, no odor	0	
1					0	
2					0	
3					0	
4	12	S2 4.0-5.5-ft	4.0'	Brown silt and fine sand, moist, no odor.	0	
5				weathered bedrock in macrocore at bottom.	7	
6				**5.5' - Refusal**		
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	
NA	NA	NA	NA	5.5'	NA	

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: GP-01

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Bullshead Plaza
855 West Main Street
Rochester, NY
City of Rochester

BORING: GP-02
SHEET 1 of 1
JOB: 2200179
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: Armon & KT
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 11/20/19 END DATE: 11/20/19
TIME: 0856 TO 0930
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	45.5	S1 0.0-4.0-ft	0.0'	Concrete		
			0.5'	Brown silt and fine sand, little coarse to fine subangular to subrounded gravel, moist to dry.	0	
1						
			1.5'	Red brick, dry, no odor.	0	
2			1.7'	Brown silt, little coarse to fine angular gravel, trace ash and cinders, moist, no odor.		
			2.3'	Brown tightly packed silt and sand, little coarse to fine gravel, moist to dry, no odor.	0	
3						
					0	
4	12	S2 4.0-5.0-ft	4.0'	Brown silt, little coarse to fine sand, moist, no odor.		
					0	
5				**5.0' - Refusal**	0	
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	
NA	NA	NA	NA	5.0'	NA	

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: GP-02

LaBella
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Bullshead Plaza
855 West Main Street
Rochester, NY
City of Rochester

BORING: GP-03
SHEET 1 of 1
JOB: 2200179
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: Armon & KT
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 11/20/19 END DATE: 11/20/19
TIME: 0930 TO 1030
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	43	S1 0.0-4.0-ft	0.0'	Concrete		
			0.5'	Dark brown and black asphalt millings, moist to dry, no odor.	0	
1			1.0'	Light brown silt and sand, litte coarse to fine gravel, moist, no odor.		
					0	
2						
			2.6'	Black asphalt millings, little silt, little ash, little crushed brick, moist, no odor.	0	
3						
					0	
4	13	S2 4.0-5.3-ft	4.0'	Brown silt, little to trace sand, trace clay, moist, no odor.		
					0	
5						
				5.33' - Refusal	0	
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	
NA	NA	NA	NA	5.33'	NA	

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: GP-03

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Bullshead Plaza
855 West Main Street
Rochester, NY
City of Rochester

BORING: GP-04
SHEET 1 of 1
JOB: 2200179
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: Armon & KT
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 11/20/19 END DATE: 11/20/19
TIME: 1040 TO 1120
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	28	S1 0.0-4.0-ft	0.0'	Concrete		
			0.5'	Brown silty sand, little asphalt, moist, no odor.	0	
1			0.9'	Brown silty sand, little debris and ash, little asphalt, moist, no odor.		
					0	
2						
					0	
3						
					0	
4	13	S2 4.0-5.5'	4.0'	Similar to above, little brick, gray at bottom.		
					0	
5						
				Refusal - 5.5'	0	
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	
NA	NA	NA	NA	5.5'	NA	

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: GP-04

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Bullshead Plaza
855 West Main Street
Rochester, NY
City of Rochester

BORING: GP-05
SHEET 1 of 1
JOB: 2200179
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: Armon & KT
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 11/20/19 END DATE: 11/20/19
TIME: 1120 TO 1150
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	24	S1 0.0-2.0-ft	0.0'	Concrete		
			0.5'	Brown and black silty sand, trace cinders, moist, no odor.	23	
1			0.7'	Brown silit, little sand, little gravel, moist, no odor.		
			1.5'	Brown silty sand, little gravel, little brick and debris	36	
2				**Refusal - 2.0'**	0	Refusal appears to be on concrete.
3						
4						
5						
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	
NA	NA	NA	NA	2.0'	NA	

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: GP-05

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Bullshead Plaza
855 West Main Street
Rochester, NY
City of Rochester

BORING: GP-06
SHEET 1 of 1
JOB: 2200179
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: Armon & KT
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 11/20/19 END DATE: 11/20/19
TIME: 1150 TO 1220
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	30	S1 0.0-4.0-ft	0.0'	Concrete		
			0.5'	Brown silt, little fine sand, moist, no odor.	0	
1						
			1.5'	Gray coarse gravel, dry, no odor	0	
2			1.9'	Gray brown to brown medium sand, moist, no odor.	78	
3					196	
4	3	S2 4.0-4.2-ft			317	
				Refusal - 4.25'	423	
5						
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	
NA	NA	NA	NA	4.25'	NA	

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
Bullshead Plaza
855 West Main Street
Rochester, NY
City of Rochester

BORING: GP-07
SHEET 1 of 1
JOB: 2200179
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: Armon & KT
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 11/20/19 END DATE: 11/20/19
TIME: 1240 TO 1315
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)			
0	21	S1 0-4-ft	0.0'	Concrete		
			0.5'	Black asphalt millings, trace cinders.	0	
1			0.7'	Brown sandy silt, little coarse to fine gravel, little brick, moist, no odor.		
					0	
2						
					6	
3						
			3.6'	Gray coarse to fine gravel and sand, moist, no odor.	29	
4			3.9'	Dark brown silt, moist, no odor.	138	
			4.0'	Brown sandy silt, little coarse to fine gravel, moist, no odor.		
5			5.0'	Similar to above but primarily silt.	0	
				Refusal - 5.66'	0	
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	
NA	NA	NA	NA	5.66'	NA	

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: GP-07

LaBella
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300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-13

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/7/2017 END DATE 11/7/2017

TYPE OF DRILL RIG: Geoprobe 54LT

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE			
0	0.0-5.2'	S1 31%	0.0'	Concrete		
			0.4'	Bricks	0	
			0.5'	Brown coarse to fine SAND, little silt, trace ash material, moist, no odor. (FILL)	0	
			1.4'	Brown SILT, some coarse to fine Sand, moist, no odor		
2					0	
					0	
					0	
4					0	
				End Boring - 5.2-ft - Refusal	0	
6						
8						
10						
12						
14						
16						

DEPTH (FT)			NOTES:
BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
5.2'	5.2'	NA	

WATER LEVEL DATA

DATE	TIME	ELASPED TIME
NA	NA	NA

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-13

LaBella
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300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-14

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/7/2017 END DATE 11/7/2017

TYPE OF DRILL RIG: Geoprobe 6620DT

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE			
0	0.0-2.5'	S1 60%	0.0'	Concrete		
			0.5'	Brown SAND and GRAVEL, little cinders, moist, no odor. (FILL)	0	
			0.6'	Brown coarse to fine SAND, little silt, little coarse to fine gravel, trace ash material, moist, no odor. (FILL)	0	
2					0	
				End Boring - 2.5' - End Boring	0	
4						
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	2.5'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-14

LaBella
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-17
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-6.8'	S1 47%	0.0'	Concrete		
			0.4'	Brown fine to medium SAND, little Silt, trace coarse sand, trace gravel, moist, no odor.	0	
					0	
			1.1'	Brown SILT and coarse to fine SAND, little concrete, trace ash, trace glass moist, no odor. (FILL)	0	
2			1.8'	Dark brown SILT, trace fine sand, moist, no odor.		
			1.9'	Similar to above, light brown.	0	
4					0	
					0	
6					0	
				End Boring - 6.8-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	6.8'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-17

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-18
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.2'	S1 44%	0.0'	Concrete		
			0.4'	Black gravel, trace cinders, moist, no odor.	0	
			0.8'	Brown Silt and coarse to fine SAND, little building materials, wood/ash, moist, no odor. (FILL)	0	
2					0	
					0	
					0	
4					9	
			5.1'	Broken weathered bedrock.		
				End Boring - 5.2-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	NA	5.2'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-18

APPENDIX 2

Laboratory Report

ANALYTICAL REPORT

Lab Number:	L1956587
Client:	LaBella Associates, P.C. 300 State Street Suite 201 Rochester, NY 14614
ATTN:	Ann Aquilina
Phone:	(585) 454-6110
Project Name:	BULLSHEAD PLAZA
Project Number:	2200179
Report Date:	12/02/19

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Project Name: BULLSHEAD PLAZA
Project Number: 2200179

Lab Number: L1956587
Report Date: 12/02/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1956587-01	GP-01 (5.5)	SOIL	ROCHESTER, NY	11/20/19 08:58	11/22/19
L1956587-02	GP-02 (5.0)	SOIL	ROCHESTER, NY	11/20/19 09:30	11/22/19
L1956587-03	GP-03 (5.3)	SOIL	ROCHESTER, NY	11/20/19 10:50	11/22/19
L1956587-04	GP-04 (5.5)	SOIL	ROCHESTER, NY	11/20/19 11:20	11/22/19
L1956587-05	GP-05 (1.5)	SOIL	ROCHESTER, NY	11/20/19 11:50	11/22/19
L1956587-06	GP-06 (4.25)	SOIL	ROCHESTER, NY	11/20/19 12:20	11/22/19
L1956587-07	GP-07 (4.0)	SOIL	ROCHESTER, NY	11/20/19 13:15	11/22/19

Project Name:	BULLSHEAD PLAZA	**Lab Number:**	L1956587
Project Number:	2200179	**Report Date:**	12/02/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BULLSHEAD PLAZA	**Lab Number:**	L1956587
Project Number:	2200179	**Report Date:**	12/02/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 12/02/19

ORGANICS

VOLATILES

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-01
Client ID: GP-01 (5.5)
Sample Location: ROCHESTER, NY

Date Collected: 11/20/19 08:58
Date Received: 11/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 11/30/19 14:24
Analyst: KJD
Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.8	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.96	0.14	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.96	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.96	0.12	1
Dibromochloromethane	ND		ug/kg	0.96	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.96	0.26	1
Tetrachloroethene	11		ug/kg	0.48	0.19	1
Chlorobenzene	ND		ug/kg	0.48	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.8	0.67	1
1,2-Dichloroethane	ND		ug/kg	0.96	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Bromodichloromethane	ND		ug/kg	0.48	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.96	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.48	0.15	1
Bromoform	ND		ug/kg	3.8	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.48	0.16	1
Benzene	0.34	J	ug/kg	0.48	0.16	1
Toluene	0.72	J	ug/kg	0.96	0.52	1
Ethylbenzene	ND		ug/kg	0.96	0.14	1
Chloromethane	ND		ug/kg	3.8	0.90	1
Bromomethane	ND		ug/kg	1.9	0.56	1
Vinyl chloride	ND		ug/kg	0.96	0.32	1
Chloroethane	ND		ug/kg	1.9	0.44	1
1,1-Dichloroethene	ND		ug/kg	0.96	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1
Trichloroethene	0.50		ug/kg	0.48	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-01 Date Collected: 11/20/19 08:58

Client ID: GP-01 (5.5) Date Received: 11/22/19

Sample Location: ROCHESTER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.19	1
p/m-Xylene	0.54	J	ug/kg	1.9	0.54	1
o-Xylene	ND		ug/kg	0.96	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.96	0.17	1
Styrene	ND		ug/kg	0.96	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.6	0.88	1
Acetone	11		ug/kg	9.6	4.6	1
Carbon disulfide	ND		ug/kg	9.6	4.4	1
2-Butanone	ND		ug/kg	9.6	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.6	1.2	1
2-Hexanone	ND		ug/kg	9.6	1.1	1
1,2-Dibromoethane	ND		ug/kg	0.96	0.27	1
n-Butylbenzene	ND		ug/kg	0.96	0.16	1
sec-Butylbenzene	ND		ug/kg	0.96	0.14	1
tert-Butylbenzene	ND		ug/kg	1.9	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.96	1
Isopropylbenzene	ND		ug/kg	0.96	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.96	0.10	1
Naphthalene	ND		ug/kg	3.8	0.62	1
n-Propylbenzene	ND		ug/kg	0.96	0.16	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.18	1
1,2,4-Trimethylbenzene	0.38	J	ug/kg	1.9	0.32	1
Methyl Acetate	ND		ug/kg	3.8	0.91	1
Cyclohexane	ND		ug/kg	9.6	0.52	1
Freon-113	ND		ug/kg	3.8	0.67	1
Methyl cyclohexane	ND		ug/kg	3.8	0.58	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	130		70-130
Dibromofluoromethane	110		70-130

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-02
Client ID: GP-02 (5.0)
Sample Location: ROCHESTER, NY

Date Collected: 11/20/19 09:30
Date Received: 11/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 11/30/19 14:48
Analyst: KJD
Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.28	1
Tetrachloroethene	37		ug/kg	0.53	0.21	1
Chlorobenzene	ND		ug/kg	0.53	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.2	0.73	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Bromodichloromethane	ND		ug/kg	0.53	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	0.17	1
Bromoform	ND		ug/kg	4.2	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	0.18	1
Benzene	ND		ug/kg	0.53	0.18	1
Toluene	ND		ug/kg	1.0	0.57	1
Ethylbenzene	ND		ug/kg	1.0	0.15	1
Chloromethane	ND		ug/kg	4.2	0.98	1
Bromomethane	ND		ug/kg	2.1	0.61	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
Chloroethane	ND		ug/kg	2.1	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1
Trichloroethene	ND		ug/kg	0.53	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-02 Date Collected: 11/20/19 09:30

Client ID: GP-02 (5.0) Date Received: 11/22/19

Sample Location: ROCHESTER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	ND		ug/kg	2.1	0.59	1
o-Xylene	ND		ug/kg	1.0	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
Styrene	ND		ug/kg	1.0	0.21	1
Dichlorodifluoromethane	ND		ug/kg	10	0.96	1
Acetone	ND		ug/kg	10	5.1	1
Carbon disulfide	ND		ug/kg	10	4.8	1
2-Butanone	ND		ug/kg	10	2.3	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
2-Hexanone	ND		ug/kg	10	1.2	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.29	1
n-Butylbenzene	ND		ug/kg	1.0	0.18	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.1	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.0	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.2	0.68	1
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	0.35	1
Methyl Acetate	ND		ug/kg	4.2	1.0	1
Cyclohexane	ND		ug/kg	10	0.57	1
Freon-113	ND		ug/kg	4.2	0.73	1
Methyl cyclohexane	ND		ug/kg	4.2	0.64	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	109		70-130

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-03
Client ID: GP-03 (5.3)
Sample Location: ROCHESTER, NY

Date Collected: 11/20/19 10:50
Date Received: 11/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 11/30/19 15:12
Analyst: KJD
Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.15	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.1	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.13	1
Dibromochloromethane	ND		ug/kg	1.1	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.28	1
Tetrachloroethene	1.7		ug/kg	0.53	0.21	1
Chlorobenzene	ND		ug/kg	0.53	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.2	0.74	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Bromodichloromethane	ND		ug/kg	0.53	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	0.17	1
Bromoform	ND		ug/kg	4.2	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	0.18	1
Benzene	ND		ug/kg	0.53	0.18	1
Toluene	ND		ug/kg	1.1	0.58	1
Ethylbenzene	ND		ug/kg	1.1	0.15	1
Chloromethane	ND		ug/kg	4.2	0.99	1
Bromomethane	ND		ug/kg	2.1	0.62	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
Chloroethane	ND		ug/kg	2.1	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1
Trichloroethene	ND		ug/kg	0.53	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-03 Date Collected: 11/20/19 10:50

Client ID: GP-03 (5.3) Date Received: 11/22/19

Sample Location: ROCHESTER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	ND		ug/kg	2.1	0.60	1
o-Xylene	ND		ug/kg	1.1	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
Styrene	ND		ug/kg	1.1	0.21	1
Dichlorodifluoromethane	ND		ug/kg	11	0.97	1
Acetone	ND		ug/kg	11	5.1	1
Carbon disulfide	ND		ug/kg	11	4.8	1
2-Butanone	ND		ug/kg	11	2.4	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
2-Hexanone	ND		ug/kg	11	1.2	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.30	1
n-Butylbenzene	ND		ug/kg	1.1	0.18	1
sec-Butylbenzene	ND		ug/kg	1.1	0.16	1
tert-Butylbenzene	ND		ug/kg	2.1	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.1	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
Naphthalene	ND		ug/kg	4.2	0.69	1
n-Propylbenzene	ND		ug/kg	1.1	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	0.36	1
Methyl Acetate	ND		ug/kg	4.2	1.0	1
Cyclohexane	ND		ug/kg	11	0.58	1
Freon-113	ND		ug/kg	4.2	0.74	1
Methyl cyclohexane	ND		ug/kg	4.2	0.64	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	108		70-130

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-04
Client ID: GP-04 (5.5)
Sample Location: ROCHESTER, NY

Date Collected: 11/20/19 11:20
Date Received: 11/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 11/30/19 15:36
Analyst: KJD
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.4	2.5	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.1	0.25	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.13	1
Dibromochloromethane	ND		ug/kg	1.1	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.29	1
Tetrachloroethene	3.3		ug/kg	0.54	0.21	1
Chlorobenzene	ND		ug/kg	0.54	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.3	0.75	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.28	1
1,1,1-Trichloroethane	ND		ug/kg	0.54	0.18	1
Bromodichloromethane	ND		ug/kg	0.54	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.54	0.17	1
Bromoform	ND		ug/kg	4.3	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.54	0.18	1
Benzene	ND		ug/kg	0.54	0.18	1
Toluene	ND		ug/kg	1.1	0.58	1
Ethylbenzene	ND		ug/kg	1.1	0.15	1
Chloromethane	ND		ug/kg	4.3	1.0	1
Bromomethane	ND		ug/kg	2.2	0.62	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
Chloroethane	ND		ug/kg	2.2	0.49	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.26	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	ND		ug/kg	0.54	0.15	1
1,2-Dichlorobenzene	ND		ug/kg	2.2	0.16	1

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-04 Date Collected: 11/20/19 11:20

Client ID: GP-04 (5.5) Date Received: 11/22/19

Sample Location: ROCHESTER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.2	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.2	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.22	1
p/m-Xylene	ND		ug/kg	2.2	0.60	1
o-Xylene	ND		ug/kg	1.1	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
Styrene	ND		ug/kg	1.1	0.21	1
Dichlorodifluoromethane	ND		ug/kg	11	0.98	1
Acetone	ND		ug/kg	11	5.2	1
Carbon disulfide	ND		ug/kg	11	4.9	1
2-Butanone	ND		ug/kg	11	2.4	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
2-Hexanone	ND		ug/kg	11	1.3	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.30	1
n-Butylbenzene	ND		ug/kg	1.1	0.18	1
sec-Butylbenzene	ND		ug/kg	1.1	0.16	1
tert-Butylbenzene	ND		ug/kg	2.2	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.1	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
Naphthalene	ND		ug/kg	4.3	0.70	1
n-Propylbenzene	ND		ug/kg	1.1	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.2	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.2	0.21	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.2	0.36	1
Methyl Acetate	ND		ug/kg	4.3	1.0	1
Cyclohexane	ND		ug/kg	11	0.58	1
Freon-113	ND		ug/kg	4.3	0.75	1
Methyl cyclohexane	ND		ug/kg	4.3	0.65	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	109		70-130

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-05
Client ID: GP-05 (1.5)
Sample Location: ROCHESTER, NY

Date Collected: 11/20/19 11:50
Date Received: 11/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 11/30/19 16:00
Analyst: KJD
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.28	1
Tetrachloroethene	4.1		ug/kg	0.53	0.21	1
Chlorobenzene	ND		ug/kg	0.53	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.2	0.73	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Bromodichloromethane	ND		ug/kg	0.53	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	0.17	1
Bromoform	ND		ug/kg	4.2	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	0.18	1
Benzene	ND		ug/kg	0.53	0.18	1
Toluene	ND		ug/kg	1.0	0.57	1
Ethylbenzene	ND		ug/kg	1.0	0.15	1
Chloromethane	ND		ug/kg	4.2	0.98	1
Bromomethane	ND		ug/kg	2.1	0.61	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
Chloroethane	ND		ug/kg	2.1	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1
Trichloroethene	ND		ug/kg	0.53	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-05 Date Collected: 11/20/19 11:50

Client ID: GP-05 (1.5) Date Received: 11/22/19

Sample Location: ROCHESTER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	ND		ug/kg	2.1	0.59	1
o-Xylene	ND		ug/kg	1.0	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
Styrene	ND		ug/kg	1.0	0.21	1
Dichlorodifluoromethane	ND		ug/kg	10	0.97	1
Acetone	12		ug/kg	10	5.1	1
Carbon disulfide	ND		ug/kg	10	4.8	1
2-Butanone	ND		ug/kg	10	2.3	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.4	1
2-Hexanone	ND		ug/kg	10	1.2	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.29	1
n-Butylbenzene	ND		ug/kg	1.0	0.18	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.1	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.0	1
Isopropylbenzene	ND		ug/kg	1.0	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.12	1
Naphthalene	ND		ug/kg	4.2	0.69	1
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	0.35	1
Methyl Acetate	ND		ug/kg	4.2	1.0	1
Cyclohexane	ND		ug/kg	10	0.57	1
Freon-113	ND		ug/kg	4.2	0.73	1
Methyl cyclohexane	ND		ug/kg	4.2	0.64	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	111		70-130

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-06
Client ID: GP-06 (4.25)
Sample Location: ROCHESTER, NY

Date Collected: 11/20/19 12:20
Date Received: 11/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 11/30/19 16:25
Analyst: KJD
Percent Solids: 92%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.0	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.23	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27	1
Tetrachloroethene	1.8		ug/kg	0.50	0.20	1
Chlorobenzene	ND		ug/kg	0.50	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.0	0.70	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.26	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17	1
Bromodichloromethane	ND		ug/kg	0.50	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.28	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16	1
Bromoform	ND		ug/kg	4.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17	1
Benzene	0.17	J	ug/kg	0.50	0.17	1
Toluene	0.85	J	ug/kg	1.0	0.55	1
Ethylbenzene	ND		ug/kg	1.0	0.14	1
Chloromethane	ND		ug/kg	4.0	0.94	1
Bromomethane	ND		ug/kg	2.0	0.59	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
Chloroethane	ND		ug/kg	2.0	0.46	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	ND		ug/kg	0.50	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-06 Date Collected: 11/20/19 12:20

Client ID: GP-06 (4.25) Date Received: 11/22/19

Sample Location: ROCHESTER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	0.85	J	ug/kg	2.0	0.57	1
o-Xylene	0.33	J	ug/kg	1.0	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.92	1
Acetone	ND		ug/kg	10	4.9	1
Carbon disulfide	ND		ug/kg	10	4.6	1
2-Butanone	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
2-Hexanone	ND		ug/kg	10	1.2	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.28	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.0	0.66	1
n-Propylbenzene	ND		ug/kg	1.0	0.17	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.28	1
1,3,5-Trimethylbenzene	0.22	J	ug/kg	2.0	0.20	1
1,2,4-Trimethylbenzene	0.47	J	ug/kg	2.0	0.34	1
Methyl Acetate	ND		ug/kg	4.0	0.96	1
Cyclohexane	ND		ug/kg	10	0.55	1
Freon-113	ND		ug/kg	4.0	0.70	1
Methyl cyclohexane	ND		ug/kg	4.0	0.61	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	109		70-130

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-07
Client ID: GP-07 (4.0)
Sample Location: ROCHESTER, NY

Date Collected: 11/20/19 13:15
Date Received: 11/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 11/30/19 16:49
Analyst: KJD
Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.4	2.5	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.1	0.25	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.14	1
Dibromochloromethane	ND		ug/kg	1.1	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.29	1
Tetrachloroethene	5.6		ug/kg	0.54	0.21	1
Chlorobenzene	ND		ug/kg	0.54	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.3	0.75	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.28	1
1,1,1-Trichloroethane	ND		ug/kg	0.54	0.18	1
Bromodichloromethane	ND		ug/kg	0.54	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.54	0.17	1
Bromoform	ND		ug/kg	4.3	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.54	0.18	1
Benzene	ND		ug/kg	0.54	0.18	1
Toluene	ND		ug/kg	1.1	0.59	1
Ethylbenzene	ND		ug/kg	1.1	0.15	1
Chloromethane	ND		ug/kg	4.3	1.0	1
Bromomethane	ND		ug/kg	2.2	0.63	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
Chloroethane	ND		ug/kg	2.2	0.49	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.26	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	ND		ug/kg	0.54	0.15	1
1,2-Dichlorobenzene	ND		ug/kg	2.2	0.16	1

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-07 Date Collected: 11/20/19 13:15

Client ID: GP-07 (4.0) Date Received: 11/22/19

Sample Location: ROCHESTER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.2	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.2	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.22	1
p/m-Xylene	ND		ug/kg	2.2	0.60	1
o-Xylene	ND		ug/kg	1.1	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
Styrene	ND		ug/kg	1.1	0.21	1
Dichlorodifluoromethane	ND		ug/kg	11	0.99	1
Acetone	22		ug/kg	11	5.2	1
Carbon disulfide	ND		ug/kg	11	4.9	1
2-Butanone	2.5	J	ug/kg	11	2.4	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
2-Hexanone	ND		ug/kg	11	1.3	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.30	1
n-Butylbenzene	ND		ug/kg	1.1	0.18	1
sec-Butylbenzene	ND		ug/kg	1.1	0.16	1
tert-Butylbenzene	ND		ug/kg	2.2	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.1	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
Naphthalene	ND		ug/kg	4.3	0.70	1
n-Propylbenzene	ND		ug/kg	1.1	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.2	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.2	0.21	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.2	0.36	1
Methyl Acetate	ND		ug/kg	4.3	1.0	1
Cyclohexane	ND		ug/kg	11	0.59	1
Freon-113	ND		ug/kg	4.3	0.75	1
Methyl cyclohexane	ND		ug/kg	4.3	0.65	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	89		70-130

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/30/19 09:58
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-07 Batch: WG1315346-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: BULLSHEAD PLAZA **Lab Number:** L1956587

Project Number: 2200179 **Report Date:** 12/02/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/30/19 09:58
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-07 Batch: WG1315346-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/30/19 09:58
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-07 Batch: WG1315346-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	104		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-07 Batch: WG1315346-3 WG1315346-4								
Methylene chloride	84		83		70-130	1		30
1,1-Dichloroethane	99		99		70-130	0		30
Chloroform	100		99		70-130	1		30
Carbon tetrachloride	114		113		70-130	1		30
1,2-Dichloropropane	94		95		70-130	1		30
Dibromochloromethane	112		113		70-130	1		30
1,1,2-Trichloroethane	96		96		70-130	0		30
Tetrachloroethene	111		111		70-130	0		30
Chlorobenzene	100		102		70-130	2		30
Trichlorofluoromethane	**69**	Q	**69**	Q	70-139	0		30
1,2-Dichloroethane	100		102		70-130	2		30
1,1,1-Trichloroethane	109		109		70-130	0		30
Bromodichloromethane	104		106		70-130	2		30
trans-1,3-Dichloropropene	105		108		70-130	3		30
cis-1,3-Dichloropropene	99		100		70-130	1		30
Bromoform	106		109		70-130	3		30
1,1,2,2-Tetrachloroethane	92		93		70-130	1		30
Benzene	93		93		70-130	0		30
Toluene	100		99		70-130	1		30
Ethylbenzene	102		103		70-130	1		30
Chloromethane	98		96		52-130	2		30
Bromomethane	**43**	Q	**45**	Q	57-147	5		30
Vinyl chloride	**60**	Q	**58**	Q	67-130	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BULLSHEAD PLAZA
Project Number: 2200179

Lab Number: L1956587
Report Date: 12/02/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-07 Batch: WG1315346-3 WG1315346-4								
Chloroethane	**38**	Q	**38**	Q	50-151	0		30
1,1-Dichloroethene	94		93		65-135	1		30
trans-1,2-Dichloroethene	95		94		70-130	1		30
Trichloroethene	99		99		70-130	0		30
1,2-Dichlorobenzene	98		99		70-130	1		30
1,3-Dichlorobenzene	102		102		70-130	0		30
1,4-Dichlorobenzene	100		101		70-130	1		30
Methyl tert butyl ether	94		94		66-130	0		30
p/m-Xylene	102		103		70-130	1		30
o-Xylene	98		99		70-130	1		30
cis-1,2-Dichloroethene	92		92		70-130	0		30
Styrene	100		101		70-130	1		30
Dichlorodifluoromethane	71		69		30-146	3		30
Acetone	**147**	Q	140		54-140	5		30
Carbon disulfide	85		83		59-130	2		30
2-Butanone	122		123		70-130	1		30
4-Methyl-2-pentanone	105		103		70-130	2		30
2-Hexanone	129		128		70-130	1		30
1,2-Dibromoethane	101		103		70-130	2		30
n-Butylbenzene	103		103		70-130	0		30
sec-Butylbenzene	102		102		70-130	0		30
tert-Butylbenzene	103		102		70-130	1		30
1,2-Dibromo-3-chloropropane	100		100		68-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: BULLSHEAD PLAZA
Project Number: 2200179

Lab Number: L1956587
Report Date: 12/02/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-07 Batch: WG1315346-3 WG1315346-4								
Isopropylbenzene	101		102		70-130	1		30
p-Isopropyltoluene	105		104		70-130	1		30
Naphthalene	90		91		70-130	1		30
n-Propylbenzene	102		103		70-130	1		30
1,2,4-Trichlorobenzene	109		111		70-130	2		30
1,3,5-Trimethylbenzene	102		102		70-130	0		30
1,2,4-Trimethylbenzene	102		102		70-130	0		30
Methyl Acetate	145		143		51-146	1		30
Cyclohexane	106		105		59-142	1		30
Freon-113	102		100		50-139	2		30
Methyl cyclohexane	94		94		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		111		70-130
Toluene-d8	107		108		70-130
4-Bromofluorobenzene	98		102		70-130
Dibromofluoromethane	108		108		70-130

INORGANICS
&
MISCELLANEOUS

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-01
Client ID: GP-01 (5.5)
Sample Location: ROCHESTER, NY
Sample Depth:
Matrix: Soil

Date Collected: 11/20/19 08:58
Date Received: 11/22/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.3		%	0.100	NA	1	-	11/25/19 10:56	121,2540G	PR

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-02
Client ID: GP-02 (5.0)
Sample Location: ROCHESTER, NY
Sample Depth:
Matrix: Soil

Date Collected: 11/20/19 09:30
Date Received: 11/22/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.9		%	0.100	NA	1	-	11/25/19 10:56	121,2540G	PR

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-03
Client ID: GP-03 (5.3)
Sample Location: ROCHESTER, NY
Sample Depth:
Matrix: Soil

Date Collected: 11/20/19 10:50
Date Received: 11/22/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.6		%	0.100	NA	1	-	11/25/19 10:56	121,2540G	PR

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-04
Client ID: GP-04 (5.5)
Sample Location: ROCHESTER, NY
Sample Depth:
Matrix: Soil
Date Collected: 11/20/19 11:20
Date Received: 11/22/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.9		%	0.100	NA	1	-	11/25/19 10:56	121,2540G	PR

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-05
Client ID: GP-05 (1.5)
Sample Location: ROCHESTER, NY
Sample Depth:
Matrix: Soil
Date Collected: 11/20/19 11:50
Date Received: 11/22/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.1		%	0.100	NA	1	-	11/25/19 10:56	121,2540G	PR

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-06
Client ID: GP-06 (4.25)
Sample Location: ROCHESTER, NY
Sample Depth:
Matrix: Soil
Date Collected: 11/20/19 12:20
Date Received: 11/22/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.5		%	0.100	NA	1	-	11/25/19 10:56	121,2540G	PR

Project Name: BULLSHEAD PLAZA
Project Number: 2200179
Lab Number: L1956587
Report Date: 12/02/19

SAMPLE RESULTS

Lab ID: L1956587-07
Client ID: GP-07 (4.0)
Sample Location: ROCHESTER, NY
Sample Depth:
Matrix: Soil
Date Collected: 11/20/19 13:15
Date Received: 11/22/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.7		%	0.100	NA	1	-	11/25/19 10:56	121,2540G	PR

Lab Duplicate Analysis

Batch Quality Control

Project Name: BULLSHEAD PLAZA

Project Number: 2200179

Lab Number: L1956587

Report Date: 12/02/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG1313510-1 QC Sample: L1956587-01 Client ID: GP-01 (5.5)						
Solids, Total	81.3	81.3	%	0		20

Project Name: BULLSHEAD PLAZA
Project Number: 2200179

Lab Number: L1956587
Report Date: 12/02/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1956587-01A	Vial MeOH preserved	A	NA		3.6	Y	Absent		NYTCL-8260HLW-R2(14)
L1956587-01B	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-01C	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-01D	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1956587-02A	Vial MeOH preserved	A	NA		3.6	Y	Absent		NYTCL-8260HLW-R2(14)
L1956587-02B	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-02C	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-02D	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1956587-03A	Vial MeOH preserved	A	NA		3.6	Y	Absent		NYTCL-8260HLW-R2(14)
L1956587-03B	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-03C	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-03D	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1956587-04A	Vial MeOH preserved	A	NA		3.6	Y	Absent		NYTCL-8260HLW-R2(14)
L1956587-04B	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-04C	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-04D	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1956587-05A	Vial MeOH preserved	A	NA		3.6	Y	Absent		NYTCL-8260HLW-R2(14)
L1956587-05B	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-05C	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-05D	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1956587-06A	Vial MeOH preserved	A	NA		3.6	Y	Absent		NYTCL-8260HLW-R2(14)
L1956587-06B	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-06C	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)

*Values in parentheses indicate holding time in days

Project Name: BULLSHEAD PLAZA
Project Number: 2200179

Lab Number: L1956587
Report Date: 12/02/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1956587-06D	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1956587-07A	Vial MeOH preserved	A	NA		3.6	Y	Absent		NYTCL-8260HLW-R2(14)
L1956587-07B	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-07C	Vial water preserved	A	NA		3.6	Y	Absent	20-NOV-19 14:30	NYTCL-8260HLW-R2(14)
L1956587-07D	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)

*Values in parentheses indicate holding time in days

Project Name:	BULLSHEAD PLAZA	**Lab Number:**	L1956587
Project Number:	2200179	**Report Date:**	12/02/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BULLSHEAD PLAZA	**Lab Number:**	L1956587
Project Number:	2200179	**Report Date:**	12/02/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

Report Format: DU Report with 'J' Qualifiers

Project Name:	BULLSHEAD PLAZA	**Lab Number:**	L1956587
Project Number:	2200179	**Report Date:**	12/02/19

Data Qualifiers

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BULLSHEAD PLAZA	**Lab Number:**	L1956587
Project Number:	2200179	**Report Date:**	12/02/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 11/23/19

ALPHA Job #: L1986587

Client Information
Client: LaBella Associates
Address: 300 State Street, Rochester, NY 14614
Phone: 585-454-6110
Fax:
Email: ABeth@LaBellaPC.com

Project Information
Project Name: Bullshead Plaza
Project Location: Rochester, NY
Project # 2200179
(Use Project name as Project #) ☐
Project Manager: Ann Aquilina
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
~~Project Specific~~ Samples frozen day of collection.

Please specify Metals or TAL.

ANALYSIS
TCL+CP-51 VOCs via 8260

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL+CP-51 VOCs via 8260	Sample Specific Comments	Total Bottle
L1986587-01	GP-01 (5.5)	11/20/19	0858	SO:1	AG3	X	Frozen on 11/20/19	4
02	GP-02 (5.0)	11/20/19	0930	SO:1	AG3	X	(2) 1430	4
03	GP-03 (5.3)	11/20/19	1050	SO:1	AG3	X		4
04	GP-04 (5.5)	11/20/19	1120	SO:1	AG3	X		4
05	GP-05 (1.5)	11/20/19	1150	SO:1	AG3	X		4
06	GP-06 (4.25)	11/20/19	1220	SO:1	AG3	X		4
07	GP-07 (4.0)	11/20/19	1315	SO:1	AG3	X		4

Container Type: V
Preservative: F

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	11/22/19 1806		11/22/19 18:19
	11/22/19 18:19		11/23/19 00:50

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX 2

Tables and Field Logs from Phase II ESA, LaBella, April 2018

TABLES

Table 1A - Page 1 of 3
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Volatile Organic Compounds in Soil Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 375-6 Protection of Groundwater (ppm)	NYCRR Part 375-6 Unrestricted Use (ppm)	NYCRR Part 375-6 Commerical Use (ppm)	TP-03	Blind Duplicate (TP-03)	TP-05	SB-02	SB-04	SB-05	SB-09	SB-10	SB-12	SB-13	SB-17
Sample Depth (feet below ground surface)				5.5	5.5	5.5	5.7-5.9	2.0-2.2	6.3-6.5	4.8-5.0	3.7-3.9	5.0	5.0-5.2	1.1-6.8
Date Collected				10/31/2017	10/31/2017	10/31/2017	11/6/2017	11/6/2017	11/6/2017	11/6/2017	11/6/2017	11/7/2017	11/7/2017	11/8/2017
Acetone	500	0.05	0.05	<0.012	<0.01	**0.0026** J	<0.69	**0.002** J	**0.0052** J	**0.014**	**0.0068** J	**0.025**	**0.0029** J	**0.0095** J
Tetrachloroethene	1.3	1.3	150	<0.0012	<0.001	0.015	**0.048** J	<0.00082	<0.00081	<0.00089	<0.00091	<0.00093	<0.00097	**0.0006** J
Trichloroethene	0.47	0.47	200	<0.0012	<0.0012	<0.0012	<0.069	<0.00082	<0.00081	<0.00089	<0.00091	<0.00093	<0.00097	<0.0011
Benzene	0.06	0.06	44	<0.0012	<0.0012	<0.0012	<0.069	<0.00082	**0.00044** J	<0.00089	**0.00038** J	<0.00093	**0.00037** J	<0.0011
o-Xylene	NA	NA	NA	<0.0024	<0.0024	<0.0024	<0.14	<0.0016	**0.00037** J	<0.0018	**0.00032** J	<0.0018	**0.00051** J	<0.0022
m/p-Xylene				<0.0024	<0.0024	<0.0024	<0.14	**0.00044** J	**0.0016**	**0.00032** J	**0.0011** J	<0.0018	**0.0022**	<0.0022
Total Xylenes	1.6	0.26	500	<0.0024	<0.0024	<0.0024	<0.14	**0.00044** J	**0.00197** J	**0.00032** J	**0.00142** J	<0.0018	**0.00271** J	<0.0022
Ethylbenzene	1	1	390	<0.0012	<0.0012	<0.0012	<0.069	**0.00022** J	**0.0006** J	<0.00089	**0.00028** J	<0.00093	**0.00069** J	<0.0011
Toluene	0.7	0.7	500	**0.00029** J	**0.00022** J	**0.00019** J	**0.015** J	**0.00052** J	**0.0019**	**0.00056** J	**0.0012** J	<0.0014	**0.0018**	**0.0005** J
Naphthalene	12	12	500	<0.0059	<0.0052	**0.0007** J	**4.0**	<0.0041	<0.004	<0.0045	**0.00023** J	<0.0046	**0.00055** J	<0.0055
1,3,5 Trimethylbenzene	8.4	8.4	190	<0.0059	<0.0059	<0.0059	**0.017** J	<0.0041	**0.0003** J	<0.0045	**0.00048** J	<0.0046	**0.00074** J	<0.0055
1,2,4-Trimethylbenzene	3.6	3.6	190	<0.0059	**0.00029** J	**0.00022** J	**0.024** J	**0.00028** J	**0.00085** J	**0.00032** J	**0.0018** J	**0.00023** J	**0.0028** J	**0.00022** J
n-Propylbenzene	3.9	3.9	500	<0.0012	<0.0012	<0.0012	<0.069	<0.00082	**0.00018** J	<0.00089	**0.00034** J	<0.00093	**0.00051** J	<0.0011
Cyclohexane	NL	NL	NL	<0.024	<0.024	<0.024	<1.4	<0.016	**0.00037** J	<0.018	**0.00056** J	<0.018	**0.00049** J	<0.022
Methyl cyclohexane	NL	NL	NL	<0.0047	<0.0047	<0.0047	<0.28	<0.0033	**0.00072** J	<0.0036	**0.00095** J	<0.0037	**0.00094** J	<0.0044
1,4-Dichlorobenzene	1.8	1.8	130	<0.01	<0.01	<0.01	**0.02** J	<0.0041	<0.0040	<0.0045	<0.0045	<0.0046	<0.0048	<0.0055
Methyl tert butyl ether	0.93	0.93	500	<0.01	<0.01	<0.01	**0.012** J	<0.0016	<0.0016	<0.0018	<0.0018	<0.0018	<0.0019	<0.0022
TOTAL VOCs	*NA*	*NA*	*NA*	*0.00029*	*0.00051*	*0.01871*	*4.10400*	*0.0039*	*0.0145*	*0.01552*	*0.01586*	*0.02523*	*0.01721*	*0.01082*

Notes:

Samples collected by United States Environmental Protection Agency (USEPA) Method 5035.

Samples analysed for Target Compound list VOCs by USEPA Method 8260.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

"J" - Indicates value is an estimation by the laboratory.

"NA" - Not Available

"NL" - Not Listed

Bolded values were detected above laboratory MDL.

Underlined values were detected above NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective.

Yellow-highlighted values were detected above NYCRR Part 375 Unrestricted Use Soil Cleanup Objective.

Orange-highlighted values were detected above NYCRR Part 375 Commercial Use Soil Cleanup Objective.

Table 1A - Page 2 of 3
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Volatile Organic Compounds in Soil Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 375-6 Protection of Groundwater (ppm)	NYCRR Part 375-6 Unrestricted Use (ppm)	NYCRR Part 375-6 Commerical Use (ppm)	SB-18	SB-19	SB-20	SB-21	SB-22	SB-23	SB-24	Blind Duplicate (SB-24)	SB-26	SB-27
Sample Depth (feet below ground surface)				4.9-5.1	4.2-4.4	3.0-4.0	3.5-5.3	5.7-5.9	4.8-5.0	4.5-5.0	4.5-5.0	4.8-5.1	4.5-4.9
Date Collected				11/8/2017	11/8/2017	11/8/2017	11/8/2017	11/8/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017
Acetone	500	0.05	0.05	**0.0044** J	**0.012**	**0.02**	**0.0064** J	**0.006** J	**0.0069** J	**0.012**	**0.0072** J	**0.0035** J	**0.0071** J
Tetrachloroethene	1.3	1.3	150	**0.004**	**0.00037** J	**0.0011**	**0.041**	**0.28**	**0.00046** J	**0.0028**	**0.0043**	<0.00085	**0.0014**
Trichloroethene	0.47	0.47	200	<0.00089	<0.0011	<0.00095	<0.001	**0.00057** J	<0.00090	<0.00090	<0.00094	<0.00085	<0.00087
Benzene	0.06	0.06	44	<0.00089	<0.0011	<0.00095	<0.001	<0.001	<0.00090	<0.00090	<0.00094	<0.00085	**0.00020** J
o-Xylene	NA	NA	NA	<0.0018	<0.0023	<0.0019	<0.002	<0.0021	<0.0018	<0.0018	<0.019	<0.0017	<0.0017
m/p-Xylene				**0.00032** J	**0.001** J	<0.0019	<0.002	<0.0021	<0.0018	<0.0018	<0.019	<0.0017	<0.0017
Total Xylenes	1.6	0.26	500	**0.00032** J	**0.001** J	<0.0019	<0.002	<0.0021	<0.0018	<0.0018	<0.019	<0.0017	<0.0017
Ethylbenzene	1	1	390	**0.00017** J	**0.00044** J	<0.00095	<0.001	<0.001	<0.00090	<0.00090	<0.00094	<0.00085	<0.00087
Toluene	0.7	0.7	500	**0.00036** J	**0.0011** J	**0.00056** J	<0.0015	<0.0015	**0.00036** J	**0.00056** J	**0.00060** J	**0.00018** J	**0.00037** J
Naphthalene	12	12	500	**0.00012** J	**0.0078**	**0.0013** J	**0.0011** J	<0.0052	**0.00018** J	<0.0045	<0.0047	**0.00056** J	**0.00049** J
1,3,5 Trimethylbenzene	8.4	8.4	190	**0.00015** J	**0.00034** J	<0.0048	<0.005	<0.0052	**0.00018** J	<0.0045	<0.0047	<0.00042	<0.00043
1,2,4-Trimethylbenzene	3.6	3.6	190	**0.0007** J	**0.0015** J	<0.00018	**0.00059** J	<0.0004	<0.0045	<0.0045	**0.00037** J	**0.00042** J	**0.00030** J
n-Propylbenzene	3.9	3.9	500	<0.00089	**0.00031** J	<0.00095	<0.001	<0.001	**0.00021** J	<0.00090	<0.00094	<0.00085	<0.00087
Cyclohexane	NL	NL	NL	<0.018	<0.023	<0.019	<0.02	<0.021	<0.018	<0.018	<0.019	<0.017	<0.017
Methyl cyclohexane	NL	NL	NL	<0.0036	<0.0045	<0.0038	<0.004	<0.0041	<0.0036	<0.0036	<0.0038	<0.034	**0.00090** J
1,4-Dichlorobenzene	1.8	1.8	130	<0.0044	<0.0057	<0.0048	<0.0050	<0.0052	<0.0045	<0.0045	<0.0047	<0.0042	<0.0043
Methyl tert butyl ether	0.93	0.93	500	<0.0018	<0.0023	<0.0019	<0.0020	<0.0021	<0.0018	<0.0018	<0.0019	<0.0017	<0.017
TOTAL VOCs	*NA*	*NA*	*NA*	*0.01054*	*0.02586*	*0.02296*	*0.04909*	*0.28657*	*0.00829*	*0.01536*	*0.0125*	*0.00466*	*0.0108*

Notes:

Samples collected by United States Environmental Protection Agency (USEPA) Method 5035.

Samples analysed for Target Compound list VOCs by USEPA Method 8260.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

"J" - Indicates value is an estimation by the laboratory.

"NA" - Not Available

"NL" - Not Listed

Bolded values were detected above laboratory MDL.

Underlined values were detected above NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective.

Yellow-highlighted values were detected above NYCRR Part 375 Unrestricted Use Soil Cleanup Objective.

Orange-highlighted values were detected above NYCRR Part 375 Commercial Use Soil Cleanup Objective.

Table 1A - Page 3 of 3
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Volatile Organic Compounds in Soil Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 375-6 Protection of Groundwater (ppm)	NYCRR Part 375-6 Unrestricted Use (ppm)	NYCRR Part 375-6 Commerical Use (ppm)	BWB-01	BWB-02	BWB-04	BWB-04	BWB-05	BWB-07	BWB-09
Sample Depth (feet below ground surface)				4.0-4.9	5.4-5.9	0.7-1.5	5.0-5.7	0.8-1.4	6.0-6.5	4.5-5.0
Date Collected				11/27/2017	11/27/2017	11/27/2017	11/27/2017	11/27/2017	11/28/2017	11/30/2017
Acetone	500	0.05	0.05	**0.0028** J	<0.6 U	**0.035**	**0.018**	**0.012**	**0.025**	**0.0083** J
Tetrachloroethene	1.3	1.3	150	<0.00082	**0.032** J	<0.00089 U	<0.00089 U	<0.00088 U	<0.00086 U	<0.00086 U
Trichloroethene	0.47	0.47	200	<0.00082	<0.06 U	<0.00089 U	<0.00089 U	<0.00088 U	<0.00086 U	<0.00086 U
1,2-Dichlorobenzene	1,100	1,100	500,000	<0.00082	<0.3 U	<0.0045 U	<0.0045 U	<0.0044 U	<0.0043 U	<0.0043 U
1,4-Dichlorobenzene	1,800	1,800	130,000	<0.00082	<0.3 U	<0.0045 U	<0.0045 U	<0.0044 U	<0.0043 U	<0.0043 U
Benzene	0.06	0.06	44	<0.00082	<0.06 U	**0.00059** J	<0.00089 U	**0.0002** J	<0.00086 U	0.0017
Chlorobenzene	1,100	1,100	500,000	<0.00082	<0.06 U	<0.00089 U	<0.00089 U	<0.00088 U	<0.00086 U	<0.00086 U
o-Xylene	NA	NA	NA	<0.0016	<0.12 U	**0.0017** J	**0.00043** J	**0.0004** J	<0.0017 U	**0.0019**
m/p-Xylene				**0.0008** J	<0.12 U	**0.0053**	**0.0015** J	**0.0015** J	**0.00077** J	**0.0066**
Total Xylenes	1.6	0.26	500	**0.0008** J	<0.12 U	**0.007** J	**0.00193** J	**0.0019** J	**0.00077** J	**0.0085**
n-Butylbenzene	NA	12,000	NA	<0.00082	<0.06 U	<0.00089 U	<0.00089 U	<0.00088 U	<0.00086 U	<0.00086 U
sec-Butylbenzene	11,000	11,000	500,000	<0.00082	<0.06 U	**0.00064** J	<0.00089 U	<0.00088 U	<0.00086 U	<0.00086 U
Ethylbenzene	1	1	390	**0.00021** J	<0.06 U	**0.0016**	**0.00039** J	**0.00042** J	**0.0002** J	**0.0012**
Toluene	0.7	0.7	500	**0.00067** J	**0.014** J	**0.0048**	**0.0013**	**0.0016**	**0.00089** J	**0.0064**
Naphthalene	12	12	500	<0.0041	**2.6**	**0.001** J	**0.00034** J	<0.0044 U	<0.0043 U	**0.0002** J
1,3,5 Trimethylbenzene	8.4	8.4	190	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	3.6	3.6	190	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	3.9	3.9	500	<0.00082	<0.06 U	**0.00068** J	<0.00089 U	<0.00088 U	<0.00086 U	**0.00039** J
Isopropylbenzene	NA	NA	NA	<0.00082	<0.06 U	**0.00046** J	<0.00089 U	<0.00088 U	<0.00086 U	<0.00086 U
4-Isopropyltoluene	NA	NA	NA	<0.00082	<0.06 U	<0.00089 U	<0.00089 U	<0.00088 U	<0.00086 U	<0.00086 U
Cyclohexane	NL	NL	NL	<0.016	<1.2 U	**0.0012** J	<0.018 U	<0.018 U	<0.017 U	**0.0033** J
Methyl cyclohexane	NL	NL	NL	<0.0033	<0.24 U	**0.0039**	<0.0036 U	<0.0035 U	**0.00021** J	**0.0059**
1,4-Dichlorobenzene	1.8	1.8	130	<0.0041	<0.3 U	<0.0045 U	<0.0045 U	<0.0044 U	<0.0043 U	<0.0043 U
Methyl tert butyl ether	0.93	0.93	500	<0.016	**0.012** J	<0.0018 U	<0.0018 U	<0.0018 U	<0.0017 U	<0.0017 U
2-Butanone	0.12	0.12	500	<0.0082	<0.6 U	<0.0089 U	<0.0089 U	<0.0088 U	<0.0086 U	**0.0044** J
Carbon Disulfide	NA	NA	NA	<0.0082	<0.6 U	**0.0016** J	<0.0089 U	<0.0088 U	**0.0012** J	<0.0086 U
TOTAL VOCs	*NA*	*NA*	*NA*	*0.00528*	*2.65800*	*0.06547*	*0.02389*	*0.00602*	*0.02904*	*0.0488*

Notes:

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

Samples collected by United States Environmental Protection Agency (USEPA) Method 5035.

Samples analysed for Target Compound list VOCs by USEPA Method 8260.

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

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

"J" - Indicates value is an estimation by the laboratory.

"NA" - Not Available

"NL" - Not Listed

Bolded values were detected above laboratory MDL.

Underlined values were detected above NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective.

Yellow-highlighted values were detected above NYCRR Part 375 Unrestricted Use Soil Cleanup Objective.

Orange-highlighted values were detected above NYCRR Part 375 Commercial Use Soil Cleanup Objective.

Table 1B
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Semi-Volatile Organic Compounds in Soil Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 375-6 Protection of Groundwater (ppm)	NYCRR Part 375-6 Unrestricted Use (ppm)	NYCRR Part 375-6 Commerical Use (ppm)	TP-03		Blind Duplicate (TP-03)		TP-05		SB-16		SB-17	SB-24		Blind Duplicate (SB-24)	
Sample Depth (feet below ground surface)				5.5		5.5		5.5		0.6-1.4		1.1-6.8	1.4-5.0		1.4-5.0	
Date Collected				10/31/2017		10/31/2017		10/31/2017		11/7/2017		11/8/2017	11/13/2017		11/13/2017	
Acenaphthene	98	20	500	<0.150		<0.150		**0.77**		**3.2**		<0.150	<0.160		<0.160	
Fluoranthene	1,000	100	500	**0.095**	J	**0.078**	J	**10**	D	**35**	D	<0.110	**0.033**	J	**0.050**	J
Naphthalene	12	12	500	**0.190**	J	<0.190		**0.35**		**1.6**		<0.190	<0.200		<0.190	
Benzo(a)anthracene	1	1	5.6	**0.053**	J	**0.043**	J	**4.3**		**16**	D	<0.110	**0.031**	J	**0.036**	J
Benzo(a)pyrene	22	1	1	**0.054**	J	<0.15		**3.8**		**13**	D	<0.150	**0.062**	J	**0.058**	J
Benzo(b)fluoranthene	1.7	1	5.6	**0.074**	J	**0.05**	J	**4.8**		**16**	D	<0.110	**0.072**	J	**0.070**	J
Benzo(k)fluoranthene	2	0.8	56	<0.120		<0.120		**1.4**		**4.9**		<0.110	<0.120		<0.120	
Chrysene	1	1	56	**0.052**	J	**0.038**	J	**3.8**		**14**	D	<0.110	**0.032**	J	**0.036**	J
Acenaphthylene	107	100	500	<0.150		<0.150		**0.11**	J	**2.4**		<0.150	<0.160		<0.160	
Anthracene	1,000	100	500	<0.120		<0.120		**1.9**		**8.4**	D	<0.110	<0.120		<0.120	
Benzo(ghi)perylene	1,000	100	500	**0.04**	J	**0.027**	J	**2.0**		**7.3**		<0.150	**0.054**	J	**0.051**	J
Fluorene	386	30	500	<0.190		<0.190		**0.75**		**3.7**		<0.190	<0.200		<0.190	
Phenanthrene	1,000	100	500	**0.039**	J	**0.048**	J	**7.2**		**30**		<0.110	<0.120		**0.030**	J
Dibenzo(a,h)anthracene	1,000	0.33	5.6	<0.120		<0.120		**0.54**		**3.1**		<0.110	<0.120		<0.120	
Indeno(1,2,3-cd)pyrene	8	0.5	5.6	**0.04**	J	**0.029**	J	**2.3**		**7.5**		<0.150	**0.056**	J	**0.055**	J
Pyrene	1,000	100	500	**0.08**	J	**0.064**	J	**9.1**	D	**30**		<0.110	**0.032**	J	**0.045**	J
Biphenyl	NL	NL	NL	<0.440		<0.440		**0.063**	J	**0.320**	J	<0.440	<0.450		<0.440	
Dibenzofuran	6.2	NL	NL	<0.190		<0.190		**0.42**		**2.4**		<0.190	<0.200		<0.190	
2-Methylnaphthalene	36	NL	NL	<0.230		<0.230		**0.22**		**1.0**		<0.230	<0.240		<0.230	
Acetophenone	NL	NL	NL	<0.190		<0.190		<0.190		**0.026**	J	<0.190	<0.200		<0.190	
Phenol	0.33	0.33	500	<0.190		<0.190		<0.190		**0.067**	J	<0.190	<0.200		<0.190	
2-Methylphenol	0.33	NL	NL	<0.190		<0.190		<0.190		**0.036**	J	<0.190	<0.200		<0.190	
3-Methylphenol/4-Methylphenol	0.33	NL	NL	<0.280		<0.280		<0.280		**0.120**	J	<0.280	<0.280		<0.280	
Carbazole	NL	NL	NL	<0.190		<0.190		**0.74**		**3.5**		<0.190	<0.200		<0.190	
TOTAL SVOCs	*NA*	*NA*	*NA*	*0.717*		*0.377*		*54.563*		*203.569*		*None Detected*	*0.372*		*0.43*	

Notes:

Samples analyzed for Target Compound List SVOCs by USEPA Method 8270.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

"D" - Indicates concentration of analyte was quantified from dilution analysis

"J" - Indicates value is an estimation by the laboratory.

"NA" - Not Available

"NL" - Not Listed

Bolded values were detected above laboratory MDL.

Underlined values were detected above NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective.

Yellow-highlighted values were detected above NYCRR Part 375 Unrestricted Use Soil Cleanup Objective.

Orange-highlighted values were detected above NYCRR Part 375 Commercial Use Soil Cleanup Objective.

Table 1C
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Metals in Soil Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 375-6 Protection of Groundwater (ppm)	NYCRR Part 375-6 Unrestricted Use (ppm)	NYCRR Part 375-6 Commerical Use (ppm)	TP-03	Blind Duplicate (TP-03)	TP-05	SB-17	SB-24	Blind Duplicate (SB-24)
Sample Depth (feet below ground surface)				5.5	5.5	5.5	1.1-6.8	1.4-5.0	1.4-5.0
Date Collected				10/31/2017	10/31/2017	10/31/2017	11/8/2017	11/13/2017	11/13/2017
Aluminum	10,000[A]	10,000[A]	10,000[A]	**7510**	**8450**	**5260**	**6460**	**7310**	**6910**
Antimony	12[A]	12[A]	12[A]	<4.58	<4.67	<4.33	**1.5** J	**0.814** J	**0.826** J
Arsenic	16	13	16	**6.29**	**5.35**	**6.51**	**9.24**	**4.52**	**3.53**
Barium	820	350	400.0	**56.3**	**44**	**98.4**	**68.5**	**64.5**	**43.4**
Beryllium	47	7.2	590	**0.275** J	**0.271** J	**0.251** J	**0.387** J	**0.297** J	**0.260** J
Cadmium	7.5	2.5	9.3	**0.404** J	**0.392** J	**0.71** J	**0.600** J	**0.680** J	**0.501** J
Calcium	10,000[A]	10,000[A]	10,000[A]	***18900***	***13600***	***62600***	***33000***	***18,400***	***11900***
Chromium	NL	30	1,500	**8.59**	**9.6**	**8.53**	**9.48**	**9.31**	**8.79**
Cobalt	20[A]	20[A]	20[A]	**3.47**	**3.94**	**3.31**	**4.73**	**4.41**	**3.47**
Copper	1,720	50	270	**13.8**	**11.6**	**25.6**	**42.1**	**13.3**	**8.88**
Iron	2,000[B]	2,000[B]	2,000[B]	***12400***	***12600***	***10300***	***12800***	***11600***	***10400***
Lead	450	63	1,000	**74.9**	**53.8**	**108**	**151**	**130**	**83.8**
Magnesium	NL	NL	NL	**6310**	**4930**	**11400**	**7840**	**9170**	**6720**
Manganese	2,000	1,600	10,000	**223**	**228**	**367**	**379**	**474**	**242**
Mercury	0.73	0.18	2.8	**0.30**	**0.23**	**0.36**	**6.3**	**0.57**	**0.39**
Nickel	130	30	310	**8.19**	**7.94**	**7.79**	**10.4**	**7.43**	**7.16**
Potassium	NL	NL	NL	**471**	**474**	**693**	**571**	**458**	**409**
Selenium	4.0	3.9	1,500	**0.550** J	**0.327** J	**0.338** J	**0.507** J	<1.92	<1.89
Sodium	NL	NL	NL	**880**	**783**	**1050**	**189**	**105** J	**104** J
Vanadium	39[A]	39[A]	39[A]	**16**	**19**	**18.4**	**17.9**	**16.2**	**15.1**
Zinc	2,480	109	10,000	**79.8**	**64.5**	**329**	**171**	**215**	**133**
Cyanide	40	27	27	<0.19	<0.19	<0.19	**0.44** J	<1.1	<1.2

Notes:

Samples analyzed for Target Analyte List Metals and Cyanide by USEPA Method 6010C/7471B/9010C.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

"J" - Indicates value is an estimation by the laboratory.

"NA" - Not Available

"NL" - Not Listed

[A]Part 375 Soil Cleanup Objective not listed. Values compared to Commissioner Policy 51 Supplemental Soil Cleanup Objective for Protection of Ecological Resources.

[B]Part 375 Soil Cleanup Objective not listed. Values compared to Commissioner Policy 51 Supplemental Soil Cleanup Objective for Residential Use.

Bolded values were detected above laboratory MDL.

Underlined values were detected above NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective.

Yellow-highlighted values were detected above NYCRR Part 375 Unrestricted Use Soil Cleanup Objective.

Orange-highlighted values were detected above NYCRR Part 375 Commercial Use Soil Cleanup Objective.

Italicized values were detected above Commissioner Policy 51 Supplemental Soil Cleanup Objective.

Table 1D
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Pesticides in Soil Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 375-6 Protection of Groundwater (ppm)	NYCRR Part 375-6 Unrestricted Use (ppm)	NYCRR Part 375-6 Commerical Use (ppm)	TP-03	Blind Duplicate (TP-03)	TP-05	SB-02	SB-17	SB-23	SB-24	Blind Duplicate (SB-24)
Sample Depth (feet below ground surface)				5.5	5.5	5.5	5.7-5.9	1.1-6.8	0.5-2.7	1.4-5.0	1.4-5.0
Date Collected				10/31/2017	10/31/2017	10/31/2017	11/6/2017	11/8/2017	11/13/2017	11/13/2017	11/13/2017
Endrin	0.06	0.014	89	<0.000745	<0.000755	**0.00444** PI	<0.00390	<0.000784	<0.000789	<0.000770	<0.000785
4,4'-DDT	136	0.0033	47	<0.00335	<0.0034	**0.00655** PI	<0.00175	**0.00342** J	<0.00355 PI	<0.00346	<0.00353
4,4'-DDE	17	0.0033	62	<0.00179	<0.00181	<0.00173	**0.00327** J	<0.00188	<0.00189	<0.00185	<0.00188
Dieldrin	0.1	0.005	1.4	<0.00112	<0.00113	<0.00108	**0.0148** PI	<0.00118	<0.00118	<0.00115	<0.00118
Endosulfan II	102	2.4	200	<0.00179	<0.00181	<0.00173	**0.0111** PI	<0.00188	<0.00189	<0.00185	<0.00188

Notes:

Samples analyzed for Pesticides by USEPA Method 8081.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

"P" - Indicates the RPD between the results for the two columns exceeds the method-specified criteria

"I" - Indicates the lower value for thee two columns has been reported due to obvious interface

"J" - Indicates value is an estimation by the laboratory.

"NA" - Not Available

"NL" - Not Listed

Bolded values were detected above laboratory MDL.

Underlined values were detected above NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective.

Yellow-highlighted values were detected above NYCRR Part 375 Unrestricted Use Soil Cleanup Objective.

Orange-highlighted values were detected above NYCRR Part 375 Commercial Use Soil Cleanup Objective.

Table 1E
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Polychlorinated Biphenyls (PCBs) in Soil Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 375-6 Protection of Groundwater (ppm)	NYCRR Part 375-6 Unrestricted Use (ppm)	NYCRR Part 375-6 Commerical Use (ppm)	TP-03	Blind Duplicate (TP-03)	TP-05	SB-17	SB-24	Blind Duplicate (SB-24)
Sample Depth (feet below ground surface)				**5.5**	**5.5**	**5.5**	**1.1-6.8**	**1.4-5.0**	**1.4-5.0**
Date Collected				**10/31/2017**	**10/31/2017**	**10/31/2017**	**11/8/2017**	**11/13/2017**	**11/13/2017**
Aroclor 1016	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Aroclor 1221	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Aroclor 1232	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Aroclor 1242	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Aroclor 1248	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	**0.00476** J
Aroclor 1254	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Aroclor 1260	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Aroclor 1262	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Aroclor 1268	Not Listed			<0.039	<0.0371	<0.0368	<0.0375	<0.0398	<0.0397
Total PCBs	3.2	0.1	1	None Detected	None Detected	None Detected	None Detected	None Detected	**0.00476**

Notes:

Samples analyzed for PCBs by USEPA Method 8082.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

"P" - Indicates the RPD between the results for the two columns exceeds the method-specified criteria

"I" - Indicates the lower value for thee two columns has been reported due to obvious interface

"J" - Indicates value is an estimation by the laboratory.

"NA" - Not Available

"NL" - Not Listed

Bolded values were detected above laboratory MDL.

Underlined values were detected above NYCRR Part 375 Protection of Groundwater Soil Cleanup Objective.

Yellow-highlighted values were detected above NYCRR Part 375 Unrestricted Use Soil Cleanup Objective.

Orange-highlighted values were detected above NYCRR Part 375 Commercial Use Soil Cleanup Objective.

Table 2A
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Volatile Organic Compounds in Groundwater Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 703 Groundwater Quality Standards	BWB-01	BWB-02	DUPE (BWB-02)	BWB-03	BWB-04	BWB-05	BWB-06	BWB-07	BWB-08	BWB-09
Date Collected		12/6/2017	12/6/2017	12/6/2017	12/4/2017	12/4/2017	12/4/2017	12/5/2017	12/6/2017	12/5/2017	12/5/2017
Screened Interval (feet below ground surface)		6-16	7-17	7-17	7-17	6-16	7-17	11.5-21.5	7.5-17.5	6.5-16.5	7-17
Tetrachloroethene	5	**5000**	**0.37** J	**0.25** J	**0.9**	**0.68**	**2.6**	**36**	<0.5 U	**12000**	**1.8**
Benzene	1	<20 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	<0.5 U	**0.68**	<50 U	**0.69**
Toluene	5	<100 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	**1.2** J	<250 U	**1.2** J
Vinyl chloride	2	<40 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	**130**	<1 U
Trichloroethene	5	**64**	<0.5 U	<0.5 U	<0.5 U	**0.21** J	**0.3** J	**0.82**	**0.29** J	**550**	**0.18** J
p/m-Xylene	5	<100 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	**1** J	<250 U	**1** J
cis-1,2-Dichloroethene	5	**86** J	<2.5 U	<2.5 U	<2.5 U	<2.5 U	<2.5 U	**0.74** J	<2.5 U	**1400**	<2.5 U
Acetone	50*	<200 U	<5 U	<5 U	**170**	**72**	**22**	**31**	**410** D	<500 U	**33**
Cyclohexane	NL	<400 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**0.5** J	<1000 U	**0.49** J
Methyl cyclohexane	NL	<400 U	<10 U	<10 U	<10 U	<10 U	<10 U	<10 U	**0.56** J	<1000 U	**0.65** J
Total VOCs	*NA*	*5150*	*0.37*	*0.25*	*170.9*	*72.89*	*24.9*	*68.56*	*414.23*	*14080*	*39.01*

Notes:
Samples analysed for Target Compound list VOCs by USEPA Method 8260.
NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY
All values displayed in micrograms per liter (µg/L) or parts per billion (ppb)
< - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).
J - Indicates value is an estimation by the laboratory.
D - Indicates concentration of analyte was quantified from dilution analysis
NA - Not Available
NL - Not Listed
Bolded values were detected above laboratory MDL.
Yellow-highlighted values were detected above NYCRR Part 703 Groundwater Standards.
* Indicates no Part 703 Groundwater Quality Standard listed; Guidance Value displayed.

Table 2B
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected Semi-Volatile Organic Compounds in Groundwater Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 703 Groundwater Quality Standards	BWB-02	DUPE (BWB-02)	BWB-07
Date Collected		12/6/2017	12/6/2017	12/6/2017
Screened Interval (feet below ground surface)		7-17	7-17	7.5-17.5
Fluoranthene	50*	<0.1	**0.04** J	<0.1
Benzo(ghi)perylene	NL	<0.1	<0.1	**0.04** J
Fluorene	50*	**0.06** J	**0.07** J	**0.02** J
Pyrene	50*	<0.1	<0.1	**0.05** J
Total SVOCs	*NA*	*0.06*	*0.11*	*0.11 J*

Notes:

Samples analysed for Target Compound list SVOCs by USEPA Method 8270.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

< - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

J - Indicates value is an estimation by the laboratory.

D - Indicates concentration of analyte was quantified from dilution analysis

NA - Not Available

NL - Not Listed

Bolded values were detected above laboratory MDL.

Yellow-highlighted values were detected above NYCRR Part 703 Groundwater Standards.

* Indicates no Part 703 Groundwater Quality Standard listed; Guidance Value displayed.

Table 2C
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Detected TAL Metals, Cyanide and Inorganic Compounds in Groundwater Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 703 Groundwater Quality Standards	BWB-01	BWB-02	DUPE (BWB-02)	BWB-06	BWB-07
Date Collected		12/6/2017	12/6/2017	12/6/2017	12/5/2017	12/6/2017
Screened Interval (feet below ground surface)		6-16	7-17	7-17	11.5-21.5	7.5-17.5
Aluminum, Total	100*	NA	**115**	**120**	NA	**205**
Antimony, Total	3	NA	**2.04** J	**1.69** J	NA	<4
Arsenic, Total	25	NA	**2.58**	**2.48**	NA	**1.1**
Barium, Total	1,000	NA	**135.1**	**134**	NA	**123.6**
Cadmium, Total	5	NA	**0.36**	**0.38**	NA	**0.07** J
Calcium, Total	NL	NA	**127000**	**131000**	NA	**197000**
Chromium, Total	50	NA	**14.49**	**11.47**	NA	**8.79**
Cobalt, Total	5*	NA	**0.19** J	**0.34** J	NA	**0.45** J
Copper, Total	200	NA	**2.2**	**2.23**	NA	**1.73**
Iron, Total	300	**40.1** J	**156**	**135**	**89.2**	**273**
Lead, Total	25	NA	<10	<5	NA	**0.72** J
Magnesium, Total	35,000*	NA	**34300**	**34700**	NA	**55100**
Manganese, Total	300	**26.94**	**14.76**	**12.12**	**17.12**	**59.07**
Nickel, Total	100	NA	**4.86**	**3.8**	NA	**6.17**
Potassium, Total	NL	NA	**25700**	**26900**	NA	**24000**
Selenium, Total	10	NA	**2.23** J	**2.1** J	NA	**2.76** J
Sodium, Total	20,000	NA	**1750000**	**1750000**	NA	**515000**
Thallium, Total	0.5*	NA	<5	<2.5	NA	**0.68**
Vanadium, Total	NL	NA	**14.38**	**11.28**	NA	**6.08**
Zinc, Total	2,000*	NA	**69.76**	**128.1**	NA	**71.55**
Cyanide	200	NA	<0.005	<0.005	NA	<0.005
Nitrate	10,000	**1800**	NA	NA	**5100**	NA
Sulfate	250,000	**227000**	NA	NA	**126000**	NA

Notes:

Samples analysed for TAL Metals and Cyanide by USEPA Methods 6010, 7470 and 9060.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

< - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

J - Indicates value is an estimation by the laboratory.

D - Indicates concentration of analyte was quantified from dilution analysis

NA - Not Available or Not Analyzed

NL - Not Listed

Bolded values were detected above laboratory MDL.

Yellow-highlighted values were detected above NYCRR Part 703 Groundwater Standards.

* Indicates no Part 703 Groundwater Quality Standard listed; Guidance Value displayed.

Table 2D
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Polychlorinated Biphenyls (PCBs) and Detected Pesticides in Groundwater Samples
LaBella Project No. 2172414

Sample ID	NYCRR Part 703 Groundwater Quality Standards	BWB-02	DUPE (BWB-02)	BWB-07
Date Collected		12/6/2017	12/6/2017	12/6/2017
Screened Interval (feet below ground surface)		7-17	7-17	7.5-17.5
PCBs				
Aroclor 1016	NA	<0.083	<0.083	<0.083
Aroclor 1221	NA	<0.083	<0.083	<0.083
Aroclor 1232	NA	<0.083	<0.083	<0.083
Aroclor 1242	NA	<0.083	<0.083	<0.083
Aroclor 1248	NA	<0.083	<0.083	<0.083
Aroclor 1254	NA	<0.083	<0.083	<0.083
Aroclor 1260	NA	<0.083	<0.083	<0.083
Aroclor 1262	NA	<0.083	<0.083	<0.083
Aroclor 1268	NA	<0.083	<0.083	<0.083
Total PCBs:	0.09	*None Detected*	*None Detected*	*None Detected*
Pesticides	NA	*None Detected*	*None Detected*	*None Detected*

Notes:

Samples analysed for PCBs via USEPA Method 8082 and pesticides via USEPA Method 8081.

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

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

< - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

NA - Not Available or Not Analyzed

NL - Not Listed

Bolded values were detected above laboratory MDL.

Yellow-highlighted values were detected above NYCRR Part 703 Groundwater Standards.

Table 3
Phase II Environmental Site Assessment
Bullshead Plaza: 835-855 West Main Street, Rochester, New York
Well Survey/Static Water Levels
LaBella Project No: 2172414

GPS SURVEY and WELL CONSTRUCTION INFORMATION							Date 12/4-12/5/2017		Date 12/19/17	
Well ID	NORTHING	EASTING	GROUND SURFACE ELEVATION	PVC ELEVATION	DEPTH STEEL CASING SET TO (ft bgs)	SCREENED INTERVAL (ft bgs)	DEPTH TO WATER (ft btoc)	WATER ELEVATION	DEPTH TO WATER (ft btoc)	WATER ELEVATION
BWB-01	1148644.98	1401301.51	542.6106	542.1641	6	6-16	9.62	532.5441	9.29	532.8741
BWB-02	1148814.59	1401421.52	542.9791	542.5971	7	7-17	8.9	533.6971	8.45	534.1471
BWB-03	1148809.68	1401319.17	543.3241	542.8583	7	7-17	8.78	534.0783	8.41	534.4483
BWB-04	1149154.82	1401326	542.4855	542.0674	7	6-16	6.83	535.2374	6.71	535.3574
BWB-05	1149152.93	1401208.29	543.1176	542.8113	7	7-17	7.4	535.4113	7.14	535.6713
BWB-06	1148797.09	1401126.14	542.1276	541.6906	11.5	11.5-21.5	7.44	534.2506	7.23	534.4606
BWB-07	1148908.66	1401130.14	542.8133	542.3921	7.5	7.5-17.5	7.34	535.0521	7.32	535.0721
BWB-08	1149077.69	1401120.56	542.7806	542.4582	6.5	6.5-16.5	7.42	535.0382	7.28	535.1782
BWB-09	1148954.81	1401273.18	543.0778	542.5829	6.5	7-17	7.69	534.8929	7.62	534.9629

Notes:

-bgs = below ground surface

-btoc = below top of well casing

-Elevations in feet above mean sea level (fmsl)

-Refer to Figure 7 for groundwater flow direction model.

-All wells are dedicated bedrock wells; overburden not encountered as part of this Phase II ESA.

Table 4
Phase II Environmental Site Assessment
Bullshead Plaza: 835- 855 West Main Street, Rochester, New York
Summary of Total Organic Carbon (TOC) in Soil Samples
LaBella Project No. 2172414

Sample ID	SB-17	SB-21
Sample Depth (feet below ground surface)	1.1-6.8	3.5-5.3
Date Collected	11/8/2017	11/8/2017
Total Organic Carbon (Rep1)*	0.935	6.23
Total Organic Carbon (Rep2)*	0.95	7.5

Notes:

Samples analyzed for TOC by USEPA Method 9060

NOTE: DATA NOT VALIDATED AND SHOULD BE CONSIDERED PRELIMINARY

All values displayed in percentages (%).

Collected for remedial design purposes.

*Two repetitions are analyzed as standard lab practice due to the non-homogenous nature of soil. Results can vary based on what portion of soil is analyzed from the sample jar submitted.

APPENDIX 1

Field Logs

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST PIT LOG

Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

Test Pit: TP-01
SHEET 1 OF 1
JOB #: 2172414
CHKD BY:

CONTRACTOR:	LaBella Env, LLC	TEST PIT LOCATION: See Figure	TIME:	0920 TO	1100
EXCAVATOR:	P. Spagnola	GROUND SURFACE ELEVATION: NA	DATUM:	NA	
GEOLOGIST:	A. Brett	DATE: 10/31/17			

WEATHER: Low 40's, cloudy, gusts of wind.

DEPTH	SAMPLE NO. AND DEPTH		STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Remarks
0	S1 0.0-4.9'		0.0'	Asphalt		
			0.5'	Gray broken shale pieces (FILL), little Silt, little Sand, moist, no odor.	0.0	
					0.0	
2			2.1'	Brown and gray coarse to fine SAND, little Silt, trace fine gravel, large brick pieces (FILL), moist, no odor.	0.0	
					0.0	
4			3.9'	Concrete Slab		
			4.3'	Brown coarse to fine SAND, little fine Gravel, trace silt, moist, no odor.	0.0	
				End Test Pit - 4.9-ft - Refusal		
6						
8						
10						
12						

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF PIT	GROUNDWATER ENCOUNTERED
DATE	TIME	ELAPSED TIME			
NA	NA	NA	NA	4.9-Ft.	NA

NOTES:
Test pit backfilled with soils and tamped, leaving ten inches prior to addition of stone. Approximately 3-inches of space after stone added for asphalt.

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.
3) ABBREVIATIONS:

and = 35 to 50 %	c = coarse	
some = 20 to 35%	m = medium	BGS = Below the Ground Surface
little = 10 to 20%	f = fine	NA = Not Applicable
trace = 1 to 10%	vf = very fine	

Test Pit: TP-01

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST PIT LOG

Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

Test Pit: TP-02
SHEET 1 OF 1
JOB #: 2172414
CHKD BY:

CONTRACTOR:	LaBella Env, LLC	TEST PIT LOCATION: See Figure	TIME:	1110 TO	1155
EXCAVATOR:	P. Spagnola	GROUND SURFACE ELEVATION: NA	DATUM:	NA	
GEOLOGIST:	A. Brett	DATE: 10/31/17			

WEATHER: Low 40's, cloudy, gusts of wind.

DEPTH	SAMPLE NO. AND DEPTH		STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Remarks
0	S1 0.0-5.3'		0.0'	Asphalt		
			0.5'	Gray broken shale pieces (FILL), little Silt, trace clay, brick pieces (FILL), moist, no odor.	0.0	Bricks predominantly on W. Main St. end of test pit excavation
					0.0	
2			2.0'	Red-brown SILT, little coarse to fine Sand, little cobbles, trace clay, moist, no odor.	0.0	
					0.0	
4					0.0	
			5.0'	Similar to above, slab rock.	0.0	
6				End Test Pit - 5.3-ft - Refusal		
8						
10						
12						

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF PIT	GROUNDWATER ENCOUNTERED
DATE	TIME	ELAPSED TIME			
NA	NA	NA	NA	5.3-Ft.	NA

NOTES:
Test pit backfilled with soils and tamped, leaving ten inches prior to addition of stone. Approximately 3-inches of space after stone added for asphalt.

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.

3) ABBREVIATIONS:

and = 35 to 50 %	c = coarse	
some = 20 to 35%	m = medium	BGS = Below the Ground Surface
little = 10 to 20%	f = fine	NA = Not Applicable
trace = 1 to 10%	vf = very fine	

Test Pit: TP-02

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST PIT LOG

Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

Test Pit: TP-03
SHEET 1 OF 1
JOB #: 2172414
CHKD BY:

CONTRACTOR:	LaBella Env, LLC	TEST PIT LOCATION: See Figure	TIME:	1210 TO	1327
EXCAVATOR:	P. Spagnola	GROUND SURFACE ELEVATION: NA	DATUM:	NA	
GEOLOGIST:	A. Brett	DATE: 10/31/17			

WEATHER: Low 40's, cloudy, gusts of wind.

DEPTH	SAMPLE NO. AND DEPTH		STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Remarks
0	S1 0.0-5.5'		0.0'	Asphalt		
			0.5'	Gray broken shale pieces (FILL), some Silt, little sand, moist.	0.0	
2			2.7'	Red-brown and gray-brown SILT, little Sand, little angular cobbles, trace clay, moist, no odor.	0.0	
					0.0	
4					0.0	4.5-5.5 Environmental Sample Collected Full Suite including MS/MSD/Duplicate
					0.0	
6				End Test Pit - 5.5-ft - Refusal		
8						
10						
12						

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF PIT	GROUNDWATER ENCOUNTERED
DATE	TIME	ELAPSED TIME			
NA	NA	NA	NA	5.5-Ft.	NA

NOTES:
Test pit backfilled with soils and tamped, leaving ten inches prior to addition of stone. Approximately 3-inches of space after stone added for asphalt.

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.
3) ABBREVIATIONS:

and = 35 to 50 %	c = coarse	
some = 20 to 35%	m = medium	BGS = Below the Ground Surface
little = 10 to 20%	f = fine	NA = Not Applicable
trace = 1 to 10%	vf = very fine	

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST PIT LOG

Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

Test Pit: TP-04
SHEET 1 OF 1
JOB #: 2172414
CHKD BY:

CONTRACTOR:	LaBella Env, LLC	TEST PIT LOCATION: See Figure	TIME:	1400 TO	1500
EXCAVATOR:	P. Spagnola	GROUND SURFACE ELEVATION: NA	DATUM:	NA	
GEOLOGIST:	A. Brett	DATE: 10/31/17			

WEATHER: Low 40's, overcast, gusts of wind.

DEPTH	SAMPLE NO. AND DEPTH		STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Remarks
0	S1 0.0-4.85'		0.0'	Asphalt		
			0.6'	Gray broken shale pieces (FILL), some to little Silt, trace Sand, moist, no odor.	0.0	
2			2.0'	Brown SILT, little coarse to fine Sand, little gravel, trace cobbles, moist, no odor	0.0	
			2.8'	Dark brown to black SILT, trace sand, roots, moist, organic odor (former topsoil)	0.0	
4			4.5'	Red-brown SILT, some Sand, little gravel, trace clay, moist, no odor.	0.0	
				End Test Pit - 4.85-ft - Refusal		
6						
8						
10						
12						

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF PIT	GROUNDWATER ENCOUNTERED
DATE	TIME	ELAPSED TIME			
NA	NA	NA	NA	4.85-Ft.	NA

NOTES:
Test pit backfilled with soils and tamped, leaving ten inches prior to addition of stone. Approximately 3-inches of space after stone added for asphalt.

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.
3) ABBREVIATIONS:

and = 35 to 50 %	c = coarse	
some = 20 to 35%	m = medium	BGS = Below the Ground Surface
little = 10 to 20%	f = fine	NA = Not Applicable
trace = 1 to 10%	vf = very fine	

Test Pit: TP-04

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST PIT LOG

Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

Test Pit: TP-05
SHEET 1 OF 1
JOB #: 2172414
CHKD BY:

CONTRACTOR:	LaBella Env, LLC	TEST PIT LOCATION: See Figure	TIME:	1100 TO	1210
EXCAVATOR:	P. Spagnola	GROUND SURFACE ELEVATION: NA	DATUM:	NA	
GEOLOGIST:	A. Brett	DATE: 11/1/17			

WEATHER: 44°F, overcast.

DEPTH	SAMPLE NO. AND DEPTH		STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Remarks
0	S1 0.0-5.7'		0.0'	Asphalt		
			0.7'	Gray broken shale pieces (FILL), little Silt and Sand, moist, no odor.	0.0	
2			1.8'	Fill materials consisting of bricks, concrete blocks, metal and metal springs, wood, slab rock, little sand and silt, little ash, moist, no odor. (FILL)	0.0	
					0.0	
4					0.0	
					0.0	
					0.3	5.0-5.6 Environmental Sample Collected Full Suite
6				End Test Pit - 5.7-ft - Refusal		
8						
10						
12						

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF PIT	GROUNDWATER ENCOUNTERED
DATE	TIME	ELAPSED TIME			
NA	NA	NA	NA	5.7-Ft.	NA

NOTES:
Test pit backfilled with soils and tamped, leaving ten inches prior to addition of stone. Approximately 3-inches of space after stone added for asphalt.

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.
3) ABBREVIATIONS:

and = 35 to 50 %	c = coarse	
some = 20 to 35%	m = medium	BGS = Below the Ground Surface
little = 10 to 20%	f = fine	NA = Not Applicable
trace = 1 to 10%	vf = very fine	

Test Pit: TP-05

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TEST PIT LOG

Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

Test Pit: TP-06
SHEET 1 OF 1
JOB #: 2172414
CHKD BY:

CONTRACTOR:	LaBella Env, LLC	TEST PIT LOCATION: See Figure	TIME:	1220 TO	1310
EXCAVATOR:	P. Spagnola	GROUND SURFACE ELEVATION: NA	DATUM:	NA	
GEOLOGIST:	A. Brett	DATE: 11/1/17			

WEATHER: 45°F, overcast

DEPTH	SAMPLE NO. AND DEPTH		STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Remarks
0	S1 0.0-3.5'		0.0'	Asphalt		
			0.75'	Gray boken shale pieces (FILL), little Silt and Sand, moist, no odor.	0.0	
2			1.8'	Fill consisting of bricks, concrete, wood, little sand and silt, trace ash, moist, no odor. (FILL)	0.0	
					0.0	
4				End Test Pit - 3.5-ft - Refusal		
6						
8						
10						
12						

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF PIT	GROUNDWATER ENCOUNTERED
DATE	TIME	ELAPSED TIME			
NA	NA	NA	NA	3.5-Ft.	NA

NOTES:
Test pit backfilled with soils and tamped, leaving ten inches prior to addition of stone. Approximately 3-inches of space after stone added for asphalt.

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.
3) ABBREVIATIONS:
and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c = coarse
m = medium
f = fine
vf = very fine
BGS = Below the Ground Surface
NA = Not Applicable

Test Pit: TP-06

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST PIT LOG

Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

Test Pit: TP-07
SHEET 1 OF 1
JOB #: 2172414
CHKD BY:

CONTRACTOR:	LaBella Env, LLC	TEST PIT LOCATION: See Figure	TIME:	1320 TO	1420
EXCAVATOR:	P. Spagnola	GROUND SURFACE ELEVATION: NA	DATUM:	NA	
GEOLOGIST:	A. Brett	DATE: 11/1/17			

WEATHER: 45°F Overcast

DEPTH	SAMPLE NO. AND DEPTH		STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	Remarks
0	S1 0.0-5.5'		0.0'	Asphalt		
			0.7'	Gray broken shale pieces (FILL), little Silt and Sand, moist, no odor.	0.0	
2			1.6'	Fill consisting of bricks, concrete, wood, little silt, little sand, trace ash, trace coke, moist, no odor. (FILL)	0.0	Predominatly bricks
					0.0	
4					0.0	
					0.0	
6				End Test Pit - 5.5-ft - Refusal	0.0	
8						
10						
12						

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF PIT	GROUNDWATER ENCOUNTERED
DATE	TIME	ELAPSED TIME			
NA	NA	NA	NA	5.5-Ft.	NA

NOTES:
Test pit backfilled with soils and tamped, leaving ten inches prior to addition of stone. Approximately 3-inches of space after stone added for asphalt.

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.
3) ABBREVIATIONS:

and = 35 to 50 %	c = coarse	
some = 20 to 35%	m = medium	BGS = Below the Ground Surface
little = 10 to 20%	f = fine	NA = Not Applicable
trace = 1 to 10%	vf = very fine	

Test Pit: TP-07

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-01
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 52%	0.0'	Asphalt		
			0.5'	Gray-brown SILT and SAND, little coarse to fine subangular to angular gravel, moist, no odor.	0	
			1.7'	Red-brown SILT, little sand, trace clay, moist, no odor.		
2					0	
					0	
4					0	
	5.0-6.1'	S2 91%	5.0'	Similar to above	0	
6			6.0'	Weathered bedrock	0	
				End Boring - 6.1-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	6.1'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-01

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-02
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.9'	S1 59%	0.0'	Asphalt		
			0.5'	Gray-brown SILT and SAND, dry, no odor.	0	
			1.0'	Black, tan, and gray coarse to fine SAND, some coarse to fine gravel, little brick pieces, trace white fibrous material, moist, no odor. (FILL)	0	
2					0	
			2.5'	Red-brown SILT, little sand, trace clay, moist, no odor.		
					0	
4					0	
					0	
			5.3'	Light brown fine SAND, dry to moist, no odor.		
6				End Boring - 5.9-ft - Refusal	20	
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	5.9'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-02

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-03
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-4.8'	S1 58%	0.0'	Brown to dark brown SILT, little fine sand, trace clay and roots, moist, organic odor (topsoil)	0	
			0.9'	Concrete (FILL)		
			1.0'	Red-Brown SILT, little fine sand, trace clay, moist, no odor	0	
2					0	
					0	
4					0	
			4.7'	Weathered bedrock	0	
				End Boring - 4.8-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	NA	4.8'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-03

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300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-04

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE			
0	0.0-4.8'	S1 48%	0.0'	Asphalt		
			0.5'	Red-brown SILT, some fine to medium Sand, little to trace coarse to fine subrounded to subangular gravel, trace clay, moist, no odor.	0	
					0	
2			2.0'	Brown coarse to fine SAND and GRAVEL, trace silt, moist, no odor.	0	
					0	
4					0	
				End Boring - 4.8-ft - Refusal	0	
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	4.8'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-04

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-05

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-6.7'	S1 49%	0.0'	Asphalt		
			0.5'	Brown coarse to fine SAND, little gravel, trace silt, moist, no odor	130	
			1.1'	Red-Brown SILT, little fine sand, little clay, trace gravel, moist, no odor.	72	
2					25	
					78	
4						
					90	
6			6.0'	Broken weathered bedrock, little fine to medium sand, moist, no odor.	518	
				End Boring - 6.7-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	NA	6.7'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-05

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-06
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-6.5'	S1 46%	0.0'	Asphalt		
			0.6'	Brown coarse to fine SAND, little coarse to fine gravel, moist, no odor.	132	
			1.0'	Brown SILT, little coarse to fine brown to black sand, trace clay, moist, no odor.		
2					12	
			2.5'	Brown SILT, little fine sand, little coke, trace building materials, trace gravel, trace clay, moist, no odor. (FILL)		
					10	
4						
					7	
					131	
6						
			6.4'	Weathered bedrock	417	
				End Boring - 6.5-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	6.5'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-06

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-07
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-4.2'	S1 76%	0.0'	Asphalt		
			0.7'	Gray-brown coarse to fine SAND and subangular to angular GRAVEL, moist to dry, no odor.	325	
					811	
2			1.3'	Brown to dark brown SILT, little coarse to fine gravel, trace fine sand, trace clay, moist, no odor.	72	
					10	
4			3.9'	Weathered bedrock.	182	
				End Boring - 4.2-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	4.2'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-07

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300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-08

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE			
0	0.0-4.0'	S1 48%	0.0'	Asphalt		
			0.6'	Gray-brown coarse to fine SAND and subangular to angular GRAVEL, moist, no odor.	122	
					302	
			1.2'	Brown SILT, little coarse to fine subangular to angular gravel, little brick pieces, trace sand, trace silt, moist, no odor. (FILL)		
2					422	
					202	
					48	
4				End Boring - 4.0-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	4.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-08

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-09
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 66%	0.0'	Asphalt		
			0.6'	Red-brown to brown SAND and SILT, moist, no odor.	0	
					0	
2			2.0'	Light brown SILT, some fine Sand, moist, no odor.	0	
					0	
4					0	
				End Boring - 5.0-ft - Refusal	12	
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	5.0'	5.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-09

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-10
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-3.9'	S1 41%	0.0'	Asphalt		
			0.6'	Gray-brown coarse to fine SAND, some coarse to fine Gravel, moist to dry, no odor.	185	
			0.9'	Brown SILT, little coarse to fine sand, little coarse to fine subangular to angular gravel, moist, no odor.	132	
2					75	
			3.4'	Brown fine SAND, trace silt, wet at bottom, no odor.	45	
4				End Boring - 3.9-ft - Refusal	2192	
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	3.9'	3.9'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-10

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-11
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/6/2017 END DATE 11/6/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-4.7'	S1 53%	0.0'	Asphalt		
			0.3'	Gray coarse to fine angular GRAVEL, dry, no odor.	0	
			0.7'	Dark brown SILT, little coarse to fine sand, trace clay, little to trace coke and wood, moist no odor. (FILL)	0 23	
			1.4'	Similar to above, fill only consisting of wood, organic odor.		
2					25	
			2.5'	Light brown SILT, little coarse to fine sand, little clay, moist, no odor.		
					12	
					0	
4						
				End Boring - 4.7-ft - Refusal	0	
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	4.7'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-11

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-12
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/7/2017 END DATE 11/7/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 50%	0.0'	Asphalt		
			0.5'	Gray GRAVEL, little silt and sand, moist, no odor.	0	
			1.0'	Gray-brown SILT and coarse to fine SAND, some coarse to fine Gravel, moist, no odor.	0	
2			2.0'	Red-brown SILT, little to trace fine sand, trace coarse to fine gravel, moist, no odor.	0	
					0	
4					0	
					4	
6				End Boring - 5.0-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	5.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-12

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300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-13

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/7/2017 END DATE 11/7/2017

TYPE OF DRILL RIG: Geoprobe 54LT

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE			
0	0.0-5.2'	S1 31%	0.0'	Concrete		
			0.4'	Bricks	0	
			0.5'	Brown coarse to fine SAND, little silt, trace ash material, moist, no odor. (FILL)	0	
			1.4'	Brown SILT, some coarse to fine Sand, moist, no odor		
2					0	
					0	
					0	
4					0	
				End Boring - 5.2-ft - Refusal	0	
6						
8						
10						
12						
14						
16						

DEPTH (FT)			NOTES:
BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
5.2'	5.2'	NA	

WATER LEVEL DATA

DATE	TIME	ELASPED TIME
NA	NA	NA

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-13

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-14
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/7/2017 END DATE 11/7/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-2.5'	S1 60%	0.0'	Concrete		
			0.5'	Brown SAND and GRAVEL, little cinders, moist, no odor. (FILL)	0	
			0.6'	Brown coarse to fine SAND, little silt, little coarse to fine gravel, trace ash material, moist, no odor. (FILL)	0	
2					0	
				End Boring - 2.5' - End Boring	0	
4						
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	NA	2.5'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-14

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300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-15

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/7/2017 END DATE 11/7/2017

TYPE OF DRILL RIG: Geoprobe 6620DT

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-7.4'	S1 18%	0.0'	Concrete		
			0.5	Brown SILT, little coarse to fine sand and gravel, moist, no odor.	0	
					0	
2					0	
					0	
					0	
4					0	
					90	
6					98	
				Refusal - 7.4-ft - End Boring	0	
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	7.4'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-15

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-16
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/7/2017 END DATE 11/7/2017

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-6.0'	S1 58%	0.0'	Concrete		
			0.5'	Brown SAND, little asphalt, little silt, moist, no odor.	0	
			0.6'	Brown SILT and fine SAND, trace subrounded gravel, trace white shards/ pieces, moist, no odor. (FILL)	0	
			1.0'	Brown fine to medium SAND, little silt, trace gravel, moist, no odor.	0	
2			1.4'	Dark Brown SILT, some fine Sand, trace gravel, moist, no odor.	0	
			2.5'	Tan-brown to brown SILT, little clay, moist, no odor.	5	
4					5	
					5	
					5	
6				End Boring - 6.0-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	NA	6.0'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-16

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-17
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-6.8'	S1 47%	0.0'	Concrete		
			0.4'	Brown fine to medium SAND, little Silt, trace coarse sand, trace gravel, moist, no odor.	0	
					0	
			1.1'	Brown SILT and coarse to fine SAND, little concrete, trace ash, trace glass moist, no odor. (FILL)	0	
2			1.8'	Dark brown SILT, trace fine sand, moist, no odor.		
			1.9'	Similar to above, light brown.	0	
4					0	
					0	
6					0	
				End Boring - 6.8-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	NA	6.8'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-17

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-18
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.2'	S1 44%	0.0'	Concrete		
			0.4'	Black gravel, trace cinders, moist, no odor.	0	
			0.8'	Brown Silt and coarse to fine SAND, little building materials, wood/ash, moist, no odor. (FILL)	0	
2					0	
					0	
					0	
4					9	
			5.1'	Broken weathered bedrock.		
				End Boring - 5.2-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	NA	5.2'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-18

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-19
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-4.7'	S1 53%	0.0'	Concrete		
			0.5'	Brown-gray coarse to fine subrounded to angular GRAVEL and SAND, little silt, moist, no odor.	352	
			1.2'	Brown coarse to fine SAND, some pieces of concrete, moist, no odor.	389	
2					416	
			2.2'	Light tan GRAVEL, little concrete, little dark brown silt, dry, no odor.	1167	
					190	
4				End Boring - 4.7-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	4.7'	4.7'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-19

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-20
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-4.0'	S1 55%	0.0'	Concrete		
			0.5'	Brown-gray coarse to fine subrounded to angular GRAVEL and SAND, little silt, moist, no odor.	106	
					149	
			1.8'	Brown and black coarse to fine SAND and GRAVEL, moist, no odor.		
2					264	
					100	
					65	
4				End Boring - 4.0-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	4.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-20

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300 STATE STREET, ROCHESTER, NY

ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT

Bullshead Plaza Phase II ESA

835-855 West Main Street

Rochester, NY

City of Rochester

BORING: SB-21

SHEET 1 OF 1

JOB: 2172414

CHKD BY:

CONTRACTOR: LaBella Env. LLC

DRILLER: M. Pepe

LABELLA REPRESENTATIVE: A.Brett

BORING LOCATION: See Figure

GROUND SURFACE ELEVATION: NA DATUM: NA

START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Jackhammer

AUGER SIZE AND TYPE: NA

OVERBURDEN SAMPING METHOD: Macrocore

DRIVE SAMPLER TYPE: Direct push

INSIDE DIAMETER: 2"

OTHER:

DEPTH	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE			
0	0.0-2.0'	S1 63%	0.0'	Concrete		
			0.5'	Brown coarse to fine SAND and GRAVEL, little silt, trace brick, trace crushed concrete or ash, moist, no odor. (FILL)	102	
					305	
2	2.0-5.5'	S2 14%	2.0'	Similar to above, no brick, concrete or ash.	468	
					329	
					239	
4					102	
			5.4'	Bedrock fragments		
				End Boring - 5.5' - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	5.5'	5.5'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-21

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-22
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/8/2017 END DATE 11/8/2017

TYPE OF DRILL RIG: Jackhammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-2.0'	S1 55%	0.0'	Concrete		
			0.5'	Brown and black coarse to fine SAND, little gravel, trace concrete, trace coal, trace brick, moist, no odor. (FILL)	92	
			0.9'	Brown SILT, some coarse to fine SAND, trace coarse to fine gravel, moist, no odor.	128	
2	2.0-6.0'	S2 51%				
			2.2'	Dark brown SILT, moist, no odor.	115	
4			4.0'	Similar to above, trace sand and gravel.	185	
6				End Boring - 6.0-ft - Refusal	264	
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	6.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-22

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-23
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: J. Constantino
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/13/2017 END DATE 11/13/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 64%	0.0'	Dark brown SILT and SAND, roots, moist, organic odor (topsoil).	0	
			0.5'	Similar to above, brown.		
			0.7'	Brown SILT, some coarse to fine Sand, little coarse to fine subrounded to subangular gravel, trace fill consisting of brick, coal, plastic, and asphalt, moist, no odor. (FILL)	0	
2					0	
			2.7'	Brown SILT, little sand, trace clay, moist to wet, no odor.	0	
4					0	
				End Boring - 5.0-ft - Refusal	0	
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	5.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-23

LaBella
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-24
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: J. Constantino
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/13/2017 END DATE 11/13/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 98%	0.0'	Dark brown SILT, little coarse to fine sand, moist, organic odor (topsoil).	0	
			0.4'	Gray brown coarse to fine SAND and coarse to fine angular GRAVEL, moist, no odor.	0	
2			1.4'	Brown SILT, little brick and coal/coke, trace coarse to fine sand, trace coarse to fine gravel, moist, no odor. (FILL)	0	
			2.2'	Broken cobble/gravel.	0	
			2.4'	Brown SILT, little coal/coke with ash and brick pieces, trace sand, moist, no odor. (FILL)	46	
4			3.7'	Brown SILT, moist to wet, no odor.	573	
					468	
6				End Boring - 5.0-ft - Refusal		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	5.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-24

LaBella
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-25
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: J. Constantino
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/13/2017 END DATE 11/13/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 80%	0.0'	Dark to light tan SILT, little coarse to fine sand, roots, moist, organic odor (topsoil).	0	
			0.2'	Broken Cobble.	0	
			0.3'	Black and gray coarse to fine GRAVEL and SAND, moist, no odor.	48	
			0.6'	Brown to red-brown coarse to fine SAND, little silt, trace pockets of clay, white fill material, moist, no odor. (FILL)	34	
2					0	
			2.0'	Brown to light brown fine SAND and SILT, dry, no odor.		
					0	
4					0	
					0	
				End Boring - 5.0-ft - Refusal	0	
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	NA	5.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-25

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-26
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: J. Constantino
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/13/2017 END DATE 11/13/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 80%	0.0'	Dark brown SILT, little coarse to fine sand, little coarse to fine gravel, roots, organic odor (topsoil).	0	
			1.3'	Similar to above, brown, no roots.	0	
2					0	
					0	
			3.1'	Brown SILT, little sand, little clay, moist, no odor.	0	
4					0	
					0	
				End Boring - 5.0-ft - Refusal		
6						
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA	5.0'	5.0'	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-26

LaBella
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: SB-27
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: J. Constantino
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/13/2017 END DATE 11/13/2017

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Macrocore
DRIVE SAMPLER TYPE: Direct push
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0.0-5.0'	S1 80%	0.0'	Brown SILT, little coarse to fine sand, little to trace clay, roots, moist, organic odor (topsoil).	0	
			0.8'	Brown SILT, some coarse to fine Sand, little gravel, trace asphalt, moist, no odor. (FILL)	0	
			1.5'	Brown SILT, little coarse to fine gravel, little coarse to fine sand, moist, no odor.	0	
2					0	
					0	
			3.5'	Similar to above, trace asphalt.		
4					12	
			4.9'	Gray rock	6	
				End Boring - 5.0-ft - Refusal		
6						
8						
10						
12						
14						
16						

DEPTH (FT)

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
DATE	TIME	ELASPED TIME			
NA	NA	NA	NA	5.0'	NA

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: SB-27

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-01
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/27/2017 END DATE 11/27/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0'0"-2'0"	S1 15"	0'0"	Asphalt.	0	
			0'5"	Firm gray damp to moist CRUSHER-RUN STONE.		
			0'11"	FILL: Firm red-brown-black mottled moist SILT, little organic cmf sand, trace fine brick.	0	
2	2'0"-4'0"	S2 16"		S-2: Same, loose, red-brown, moist, trace clay.	0	
					0	
			3'10"	Loose tan-brown moist SILT, little fine sand, trace organic and fine gravel	0	
4	4'0"-4'11"	S3 5"		S-3: Same, very dense, red-brown, moist, little clay from 4'10" to 4'11" no organic noted.	0	
			4'11"	Bedrock encountered.	0	
				Augering into rock to set steel casing.	0	
6				End Boring - 6'0"		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	6'0"	6'0"	NA

NOTES:
On 11/29/17 bedrock at BWB-01 was cored to 16-ft bgs for observation and monitoring well installation.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-01

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-02
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/27/2017 END DATE 11/27/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0'0"-2'0"	S1 18"	0'0"	Asphalt.	0	
			0'9"	Compact gray dry CRUSHER-RUN STONE, little silt.	0	
			1'5"	FILL: Compact brown coarse to fine SAND, damp, trace Silt, trace fine Gravel, trace brick, trace cinder, moist.	0	
2	2'0"-4'0"	S2 12"		S-2: same, firm.		
			2'5"	FILL: firm red BRICK, little coke.	0	
			2'10"	FILL: firm coarse to fine SAND, moist, little coke, cinders and ash.	0	
4	4'0"-5'11"	S3 9"		S-3 Same, firm, no coke noted, some coarse to fine Gravel.	0	
					0	
			5'5"	Tan coarse to fine SAND and GRAVEL, moist, little silt.	127	
6			5'11"	Bedrock encountered.	356 211	
				Augering into rock to set steel casing.	0	
				End Boring - 7'0"		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	On 11/29/2017 Rollerbit used at location to drill through bedrock to a depth of 17-ft bgs for monitoring well installation.
NA	NA	NA	7'0"	7'0"	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-02

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-03
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/27/2017 END DATE 11/27/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0'0"-2'0"	S1 13"	0'0"	Asphalt	0	
			0'7"	S-1 Gray-brown loose SILT and coarse to fine SAND, moist, little coarse to fine gravel, trace glass, trace brick.	0	
					0	
2	2'0"-4'0"	S2 9"	2'0"	S-2 Firm coarse gray-brown GRAVEL, moist, some silt, little sand.	0	
			2'5"	FILL: Firm red BRICK, dry.	0	
4	4'0"-5'11"	S3 0"	4'0"	No Recovery	0	
					0	
			5'11"	Bedrock encountered	0	
6				Augering into rock to set steel casing.		
				End Boring - 7'0"		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	On 11/30/2017 Rollerbit used at location to drill through bedrock to a depth of 17-ft bgs for monitoring well installation
NA	NA	NA	7'0"	7'0"	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-03

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-04
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/27/2017 END DATE 11/27/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0'0"-2'0"	S1 23"	0'0"	Asphalt		
			0'6"	S-1 FILL: Black and brown dense coarse to fine SAND and angular GRAVEL, damp, trace silt.	1012	
			1'0"	FILL: Very dense gray coarse to fine angular GRAVEL, dry, some silt.	3053	@ 1'3"
			1'8"	FILL: Very dense brown SILT, damp, some coarse to fine sand, trace gravel,	31	
2	2'0"-4'0"	S2 9"		trace brick.	34	
			2.0'	S-2 Fill: Firm red BRICK, dry.	33	
					31	
4	4'0"-5'7"	S3 10"	4'0"	S-3 FILL: Loose tan fine to medium SAND, damp, trace brick.	33	
			4'2"	Very soft brown SILT, moist, trace fine to medium sand, trace clay, trace coarse to fine gravel		
					31	
			5'7"	Bedrock encountered		
6						
				Augering into rock to set steel casing.		
				End Boring - 7'0"		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	7'0"	7'0"	NA

NOTES:
On 11/30/2017 Rollerbit used at location to drill through bedrock to a depth of 17-ft bgs for monitoring well installation.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-04

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-05
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/27/2017 END DATE 11/27/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0'0"-2'0"	S1 23"	0'0"	Asphalt		
			0'6"	S-1 FILL: Compact black and gray coarse to fine GRAVEL, damp, some coarse to fine sand, subbase.	130 190	
			0'9"	FILL: Compact gray-brown angular GRAVEL (shale), dry, some silt.	115	
			1'3"	FILL: Compact brown coarse to fine SAND, moist, some silt, little coarse to	230	
2	2'0"-4'0"	S2 9"		fine gravel, trace brick, trace coke.	130	
			2'0"	S-2 FILL: Firm brown SILT, moist, little coarse to fine sand, little coarse to fine gravel, trace brick.	94 101	
			3'0"	Same, no brick.		
4	4'0"-5'9"	S3 4"		S-3 Same, loose, trace sand.	107 98	
			5'9"	Bedrock encountered		
6				Augering into rock to set steel casing.		
				End Boring - 7'0"		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA	7'0"	7'0"	NA

NOTES:
On 12/1/17 bedrock at BWB-05 was cored to 17-ft bgs for observation and monitoring well installation.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-05

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-06
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/28/2017 END DATE 11/28/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0				Location of well in location of previously completed boring. See boring log. for SB-27 for description of overburden soils.		
2						
4						
6			7'6"	Augered down to apparent bedrock at 7.5-ft bgs. Broke through the rock at 8.0-ft bgs and drilling became easy. Split spoon sampled from 9'0" to 10'6".		
8	9'0" - 10'6"	S1 6"	9'0"	Brown SILT, trace sand, wet.	0	Blow counts 9 for first 6" 50 over the next 12"
					0	
10			10'0"	Gray broken rock, trace coarse to fine sand.	0	
			10'6"	Bedrock encountered.		
					0	
				Augering into rock to set steel casing.		
12				End Boring - 11'6"		
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	On 12/4/2017 Rollerbit used at location to drill through bedrock to a depth of 21.5-ft bgs for monitoring well installation.
NA	NA	NA	11'6"	11'6"	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-06

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-07
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/28/2017 END DATE 11/28/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0'0"-2'0"	S1 0"	0'0"	Concrete.		
			0'6"	No recovery.	0	
					0	
2	2'0"-4'0"	S2 7"	2'0"	S-2 FILL: Brown SILT, moist, little coarse to fine sand, trace gravel, trace brick.	0	
					0	
					0	
4	4'0"-6'0"	S3 1"		S-3: Same, no brick.	0	
					0	
					0	
6	6'0"-6'6"	S4 4"	6'0"	S-4: Brown SILT, moist, trace coarse to fine sand, trace fine gravel.	0	
			6'6"	Bedrock encountered.		
				Augering into rock to set steel casing.		
8				End Boring - 7'6"		
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	On 12/4/2017 Rollerbit used at location to drill through bedrock to a depth of 17.5-ft bgs for monitoring well installation.
NA	NA	NA	7'6"	7'6"	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-07

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-08
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/28/2017 END DATE 11/28/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE			
0				Location of well in location of previously completed boring. See boring log for SB-24 for description of overburden soil.		
2						
4						
			5'6"	Bedrock encountered.		
6				Augering into rock to set steel casing.		
				End Boring - 6'6"		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	On 12/5/2017 Rollerbit used at location to drill through bedrock to a depth of 16.5-ft bgs for monitoring well installation.
NA	NA	NA	6'6"	6'6"	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-08

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street
Rochester, NY
City of Rochester

BORING: BWB-09
SHEET 1 OF 1
JOB: 2172414
CHKD BY:

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
LABELLA REPRESENTATIVE: A.Brett
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 11/30/2017 END DATE 11/30/2017

TYPE OF DRILL RIG: CME 75
AUGER SIZE AND TYPE: Hollow -stem
OVERBURDEN SAMPING METHOD: Split-spoon
DRIVE SAMPLER TYPE: Hydraulic Hammer
INSIDE DIAMETER: 2"
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPB)	REMARKS
0	0'0"-2'0"	S1 18"	0'0"	Asphalt.		
			0'7"	S-1 FILL: Black and gray coarse to fine GRAVEL, dry, little coarse to fine sand, little silt.	73 268	
			1'5"	Brown SILT, damp, some coarse to fine sand, trace coarse to fine gravel.	599 632	
2	2'0"-4'0"	S2 15"	2'0"	S-2: Similar to above.		
			2'6"	Tan coarse to fine SAND, moist, little fine gravel, trace silt.	621 1367	
			2'10"	FILL: Gray coarse to fine GRAVEL and SAND, dry, little concrete.	1201	
			3'1"	Brown SILT, moist, some fine sand.		
4	4'0"-5'1"	S3 12"		S-3: Same.	2492	
			4'6"	Brown SILT, moist, some coarse to fine gravel, little coarse to fine sand.	2390	
			5'1"	Bedrock encountered.		
6				Augering into rock to set steel casing.		
				End Boring - 6'6"		
8						
10						
12						
14						
16						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	On 12/1/2017 Rollerbit used at location to drill through bedrock to a depth of 17-ft bgs for monitoring well installation.
NA	NA	NA	6'6"	6'6"	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE 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 OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: BWB-09

LaBella
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300 STATE STREET, ROCHESTER, NY

ROCK CORE LOG

PROJECT:
Bullshead Plaza Phase II
835-855 West Main Street, Rochester, New York
City of Rochester

BORING NO: BW-01
SHEET 1 OF 1
PROJECT NO: 2172124

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
RIG TYPE: CME 75
CSG TYPE/DIAM:
BORING LOCATION: BWB-01 See Figure
GRD SURF ELEVATION: 542.6106
DATUM: North American 1983
CORE BARREL TYPE / DIAMETER: H
START DATE: 11/29/17
FINISH DATE: 11/29/17
LABELLA REP: A. Brett

Depth (ft.)	Drill Rate (min per ft)	Core Run No. / Depth	Recovery (ft / %)	RQD (1) (in / %)	Fractures (depth ft / width in)	Strata Change (Depth in ft)	Visual Classification and Remarks	PID Data (ppb)
6	10	C1 6-9'	2'1" / 97.2%	(A)	6'6.5"/0.5"	6.0'	Dolomite, calcified nodules	
					6'9"/0.25"			0
7	10				7'3"/0.5"			
					7'11"/0.5"			0
8	10				8'7"/0.25"			
					8'10"/0.25"			0
9	7	C2 9-14'	4'10" / 96.6%	(A)	9'1"/0.25"			
					9'3"/0.25"			0
10	8				9'7"/0.25"			
					10'/0.25"			0
11	8				10'2"/0.5"			
					11'1"/0.5"			0
12	8							
								0
13	8							
					13'5"/0.25"			0
14	6	C3 14-16'	2'0" / 100%	(A)	14'1"/0.25"		Dolomite, very calcified	
					14'3"/0.25"			0
15	6				15'10"/0.5"			
								0
16	6						End Rock Core - 16' bgs	

WATER LEVEL DATA

DATE	TIME	ELAPSED TIME	DEPTH (FT) BOTTOM OF CASING	DEPTH (FT) BOTTOM OF BORING	DEPTH (FT) WATER LEVEL
NA	NA	NA	16	16	NA

OTHER REMARKS
Dust supression system set up, periodically checking dust monitors,

dust supression system altered to prevent water/dust from expelling.

GENERAL NOTES
1) For runs with greater than 100% recovery, RQD is computed using total core recovered.
2) Measured water levels may not represent actual groundwater levels.
(A) Refer to Foundation Design, P.C. Report in Appendix 2

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300 STATE STREET, ROCHESTER, NY

ROCK CORE LOG

PROJECT:
Bullshead Plaza Phase II
835-855 West Main Street, Rochester, New York
City of Rochester

BORING NO: BW-05
SHEET 1 OF 1
PROJECT NO: 2172124

CONTRACTOR: Nothnagle Drilling Inc
DRILLER: N. Short
RIG TYPE: CME 75
CSG TYPE/DIAM:
BORING LOCATION: BWB-05 See Figure
GRD SURF ELEVATION: 543.1176
DATUM: North American 1983
CORE BARREL TYPE / DIAMETER: H
START DATE: 12/1/17
FINISH DATE: 12/1/17
LABELLA REP: A. Brett

Depth (ft.)	Drill Rate (min per ft)	Core Run No. / Depth	Recovery (ft / %)	RQD (1) (in / %)	Fractures (depth ft / width in)	Strata Change (Depth in ft)	Visual Classification and Remarks	PID Data (ppb)
7	6	C1 7-10'	3' / 100%	(A)	7'3"/0.25"	7.0'	Dolomite	249
8	8				8'2"/1"			280
					8'6"/0.25"			
9	6				8'7"/0.125"			321
					9'5"/1"			
10	6	C2 10-15'	5' / 100%	(A)	9'10"/0.25"			69
					10'8"/1"			
11	6				11'3"/0.125"			137
					11'7"/0.125"			
12	6				11'9"/0.125"			238
					12'/0.125"			
13	5				12'4"/0.125"			60
					12'9"/0.125"			
14	5				13'/1"			128
					14'6"/0.25"			
15	11	C3 15-17'	2' / 100%	(A)	15'8"/0.125"		Dolomite, vugs	60
					15'11"/0.25"			
16	11							60
					16'7"/0.25"			
17	11						End Rock Core - 17' bgs	60

WATER LEVEL DATA

DATE	TIME	ELAPSED TIME	DEPTH (FT) BOTTOM OF CASING	DEPTH (FT) BOTTOM OF BORING	DEPTH (FT) WATER LEVEL
	-				

OTHER REMARKS

Background PID readings were generally around 100 ppb but fluctuated throughout the drilling process.

GENERAL NOTES

1) For runs with greater than 100% recovery, RQD is computed using total core recovered.

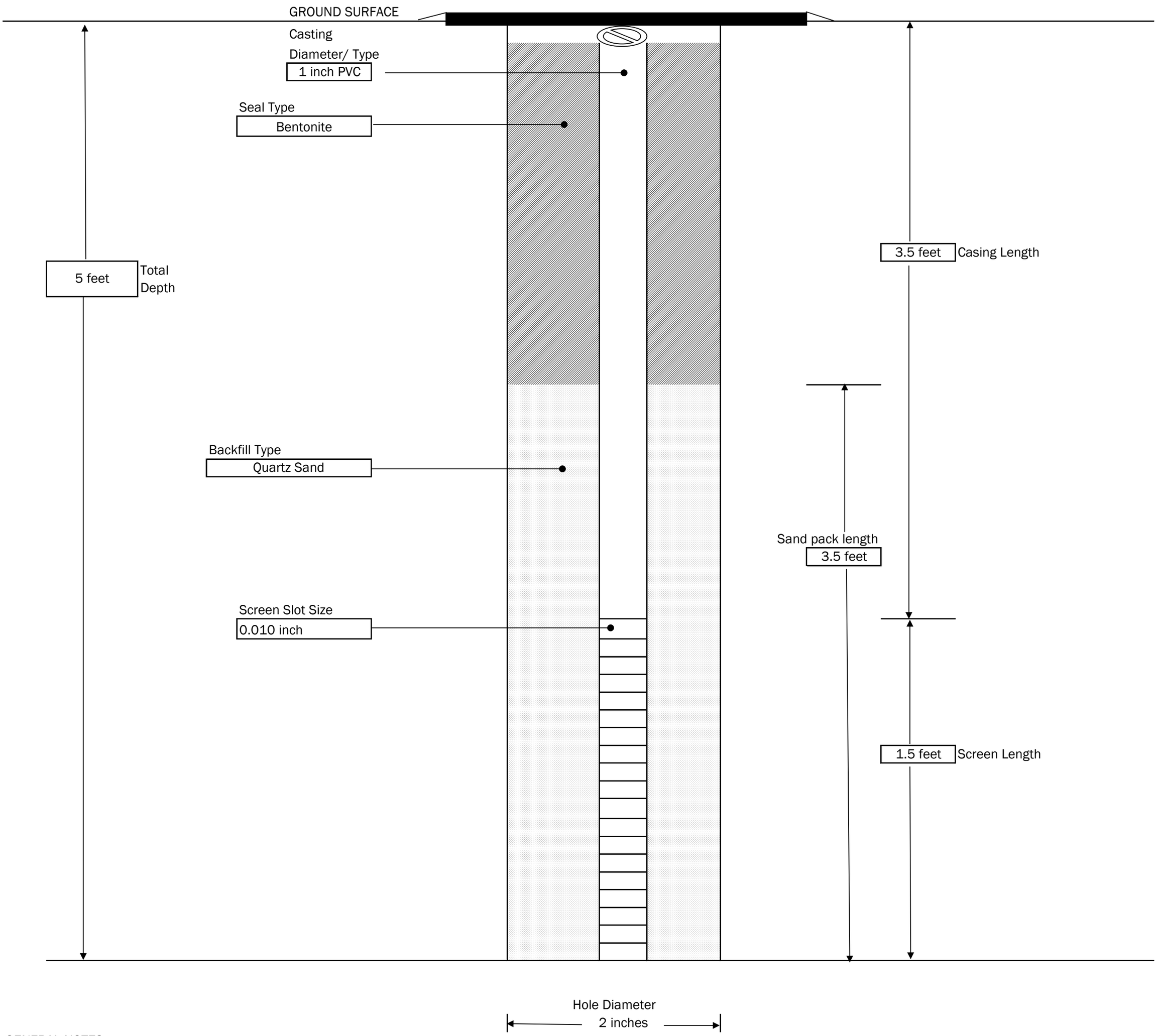
2) Measured water levels may not represent actual groundwater levels.

(A) Refer to Foundation Design, P.C. Report in Appendix 2

BORING NO: BW-01

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Bullshead Plaza Phase II ESA 835-855 West Main Street Rochester, NY	**MONITORING WELL :** **MW-01** **SHEET** 1 OF 1 **JOB #** 2172714

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:	SB-09			TYPE OF DRILL RIG:	Geoprobe 6620DT
DRILLER:	M. Pepe	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	AGB	START DATE:	11/6/2017	END DATE:	11/6/2017	OVERBURDEN SAMPLING METHOD:	Macrocore

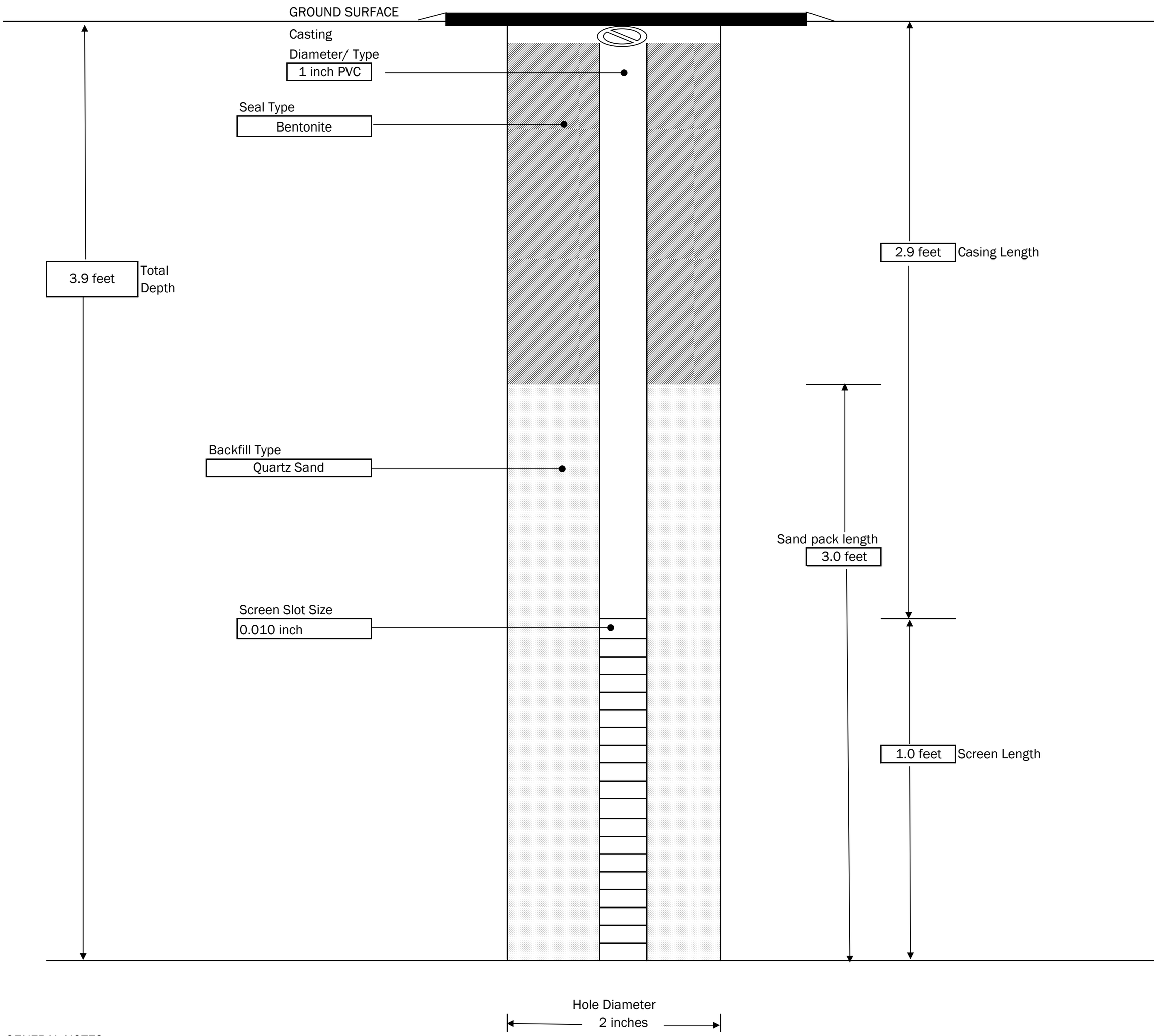


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Bullshead Plaza Phase II ESA 835-855 West Main Street Rochester, NY	**MONITORING WELL :** **MW-02** **SHEET** 1 OF 1 **JOB #** 2172414

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:	SB-10			TYPE OF DRILL RIG:	Geoprobe 6620DT
DRILLER:	M. Pepe	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	AGB	START DATE:	11/6/2017	END DATE:	11/6/2017	OVERBURDEN SAMPLING METHOD:	Macrocore

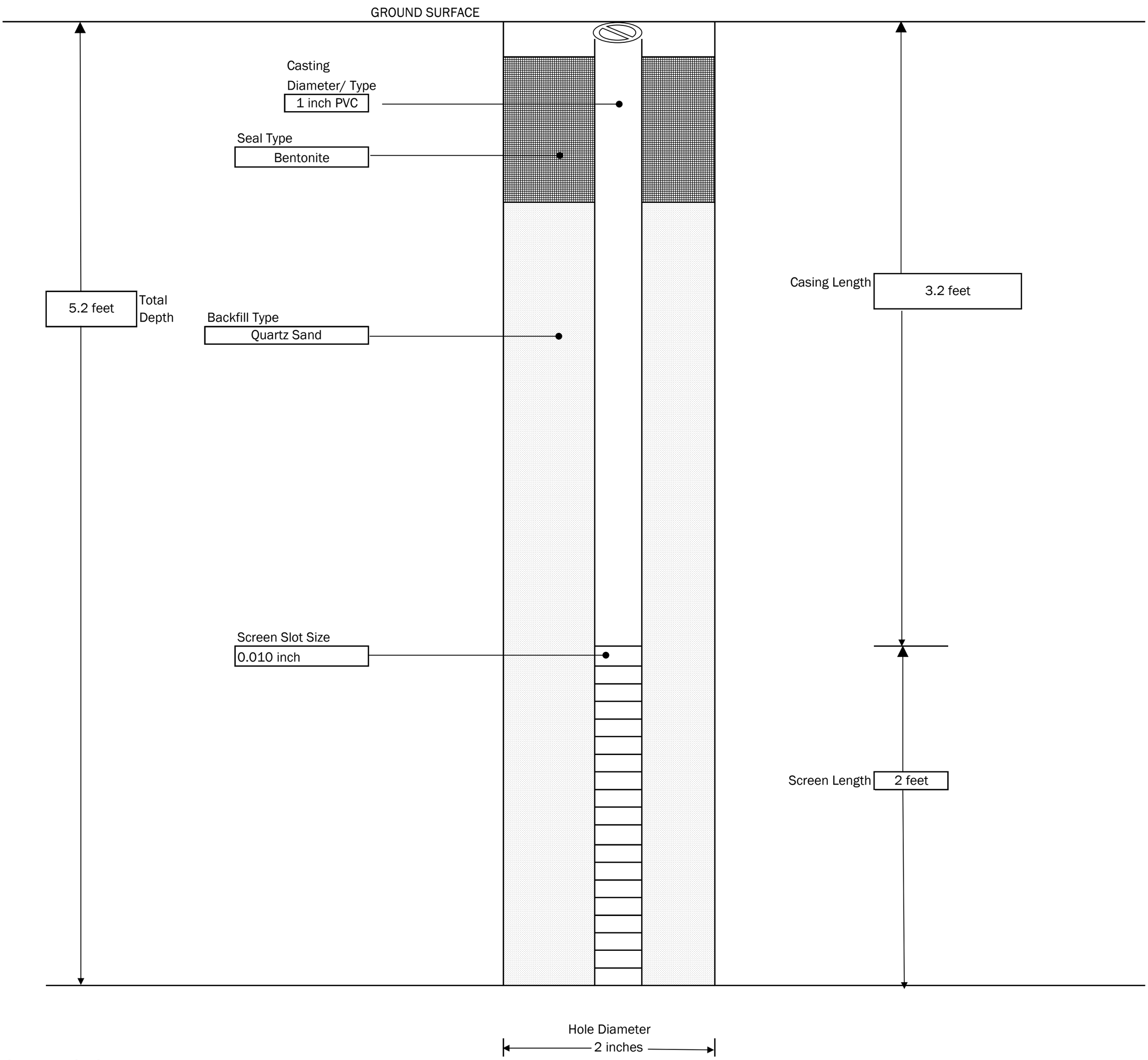


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Bullshead Plaza Phase II ESA 835-855 West Main Street Rochester, NY	**MONITORING WELL :** **MW-03** **SHEET** 1 OF 1 **JOB #** 2172414

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:	SB-13			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	M. Pepe	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	AGB	START DATE:	11/7/2017	END DATE:	11/7/2017	OVERBURDEN SAMPLING METHOD:	Macrocore

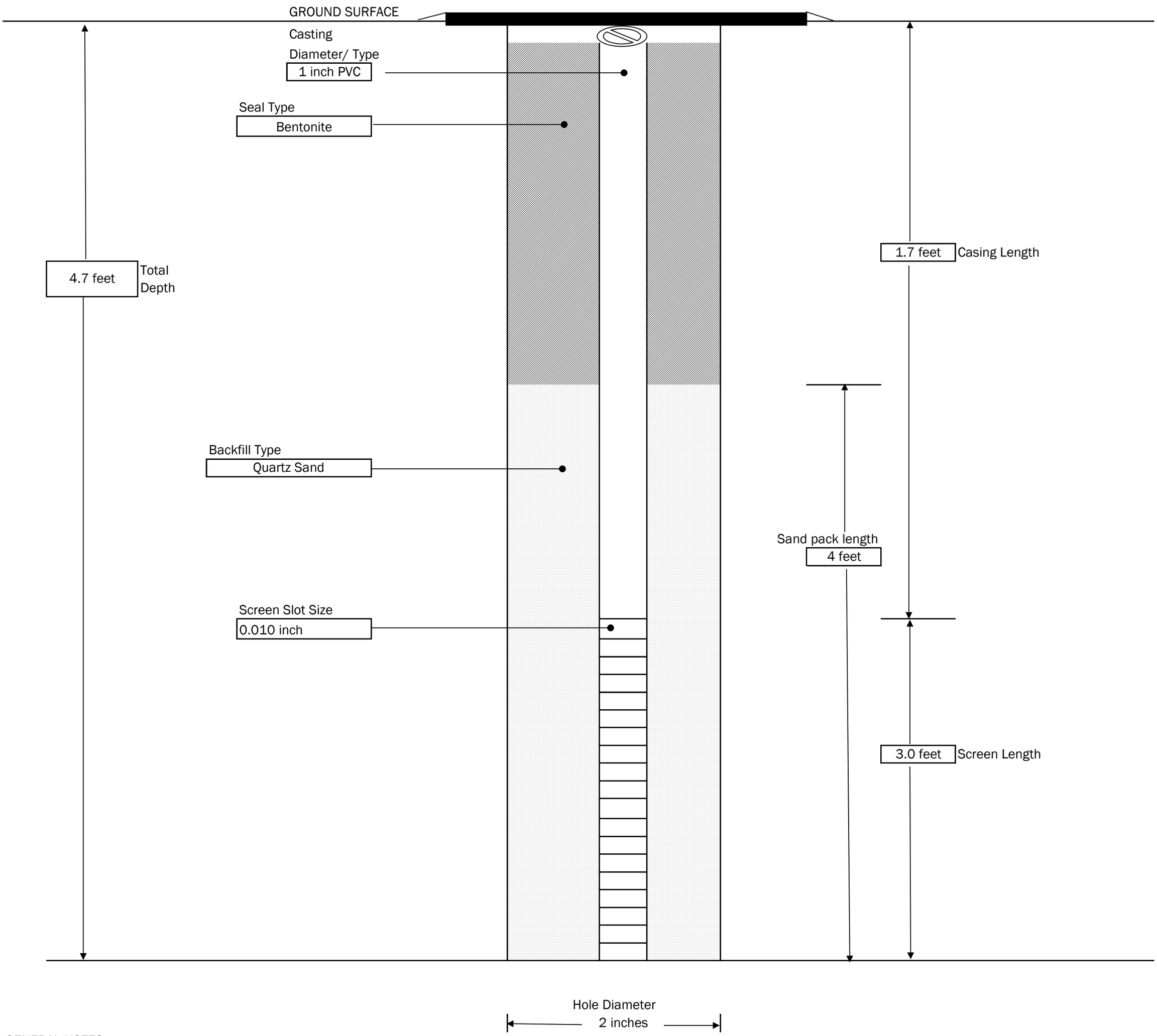


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Bullshead Plaza Phase II ESA 835-855 West Main Street Rochester, NY	**MONITORING WELL :** **MW-04** **SHEET** 1 OF 1 **JOB #** 2172414

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:	SB-19			TYPE OF DRILL RIG:	Geoprobe 6620DT
DRILLER:	M. Pepe	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	AGB	START DATE:	11/8/2017	END DATE:	11/8/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

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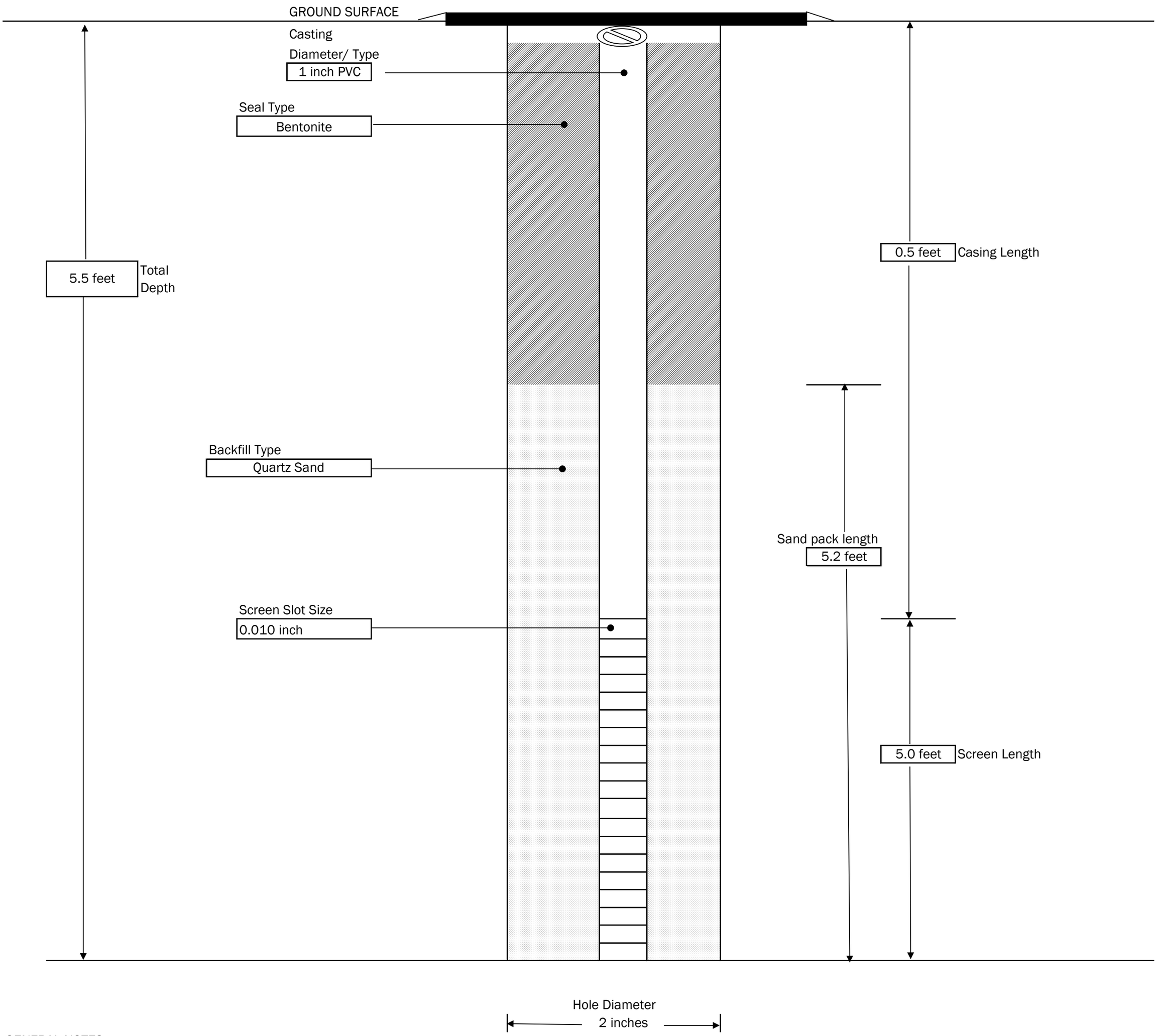
CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:	SB-21			TYPE OF DRILL RIG:	Geoprobe 6620DT
DRILLER:	M. Pepe	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	AGB	START DATE:	11/8/2017	END DATE:	11/8/2017	OVERBURDEN SAMPLING METHOD:	Macrocore

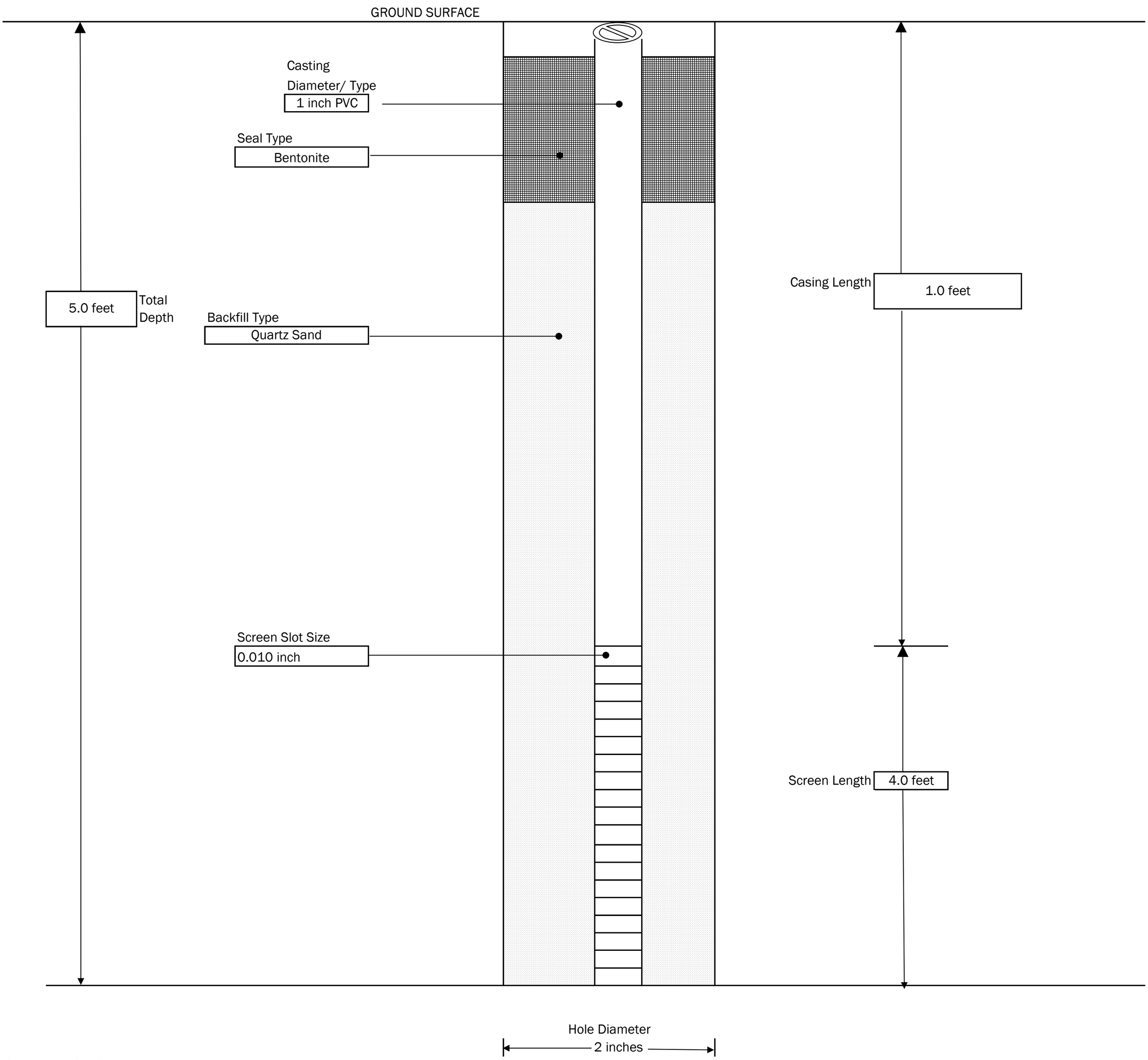


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Bullshead Plaza Phase II ESA 835-855 West Main Street Rochester, NY	**MONITORING WELL :** **MW-06** **SHEET** 1 OF 1 **JOB #** 2172414

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:	SB-26			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	J. Constantino	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	AGB	START DATE:	11/13/2017	END DATE:	11/13/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

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ENVIRONMENTAL ENGINEERING CONSULTANTS

WELL CONSTRUCTION LOG

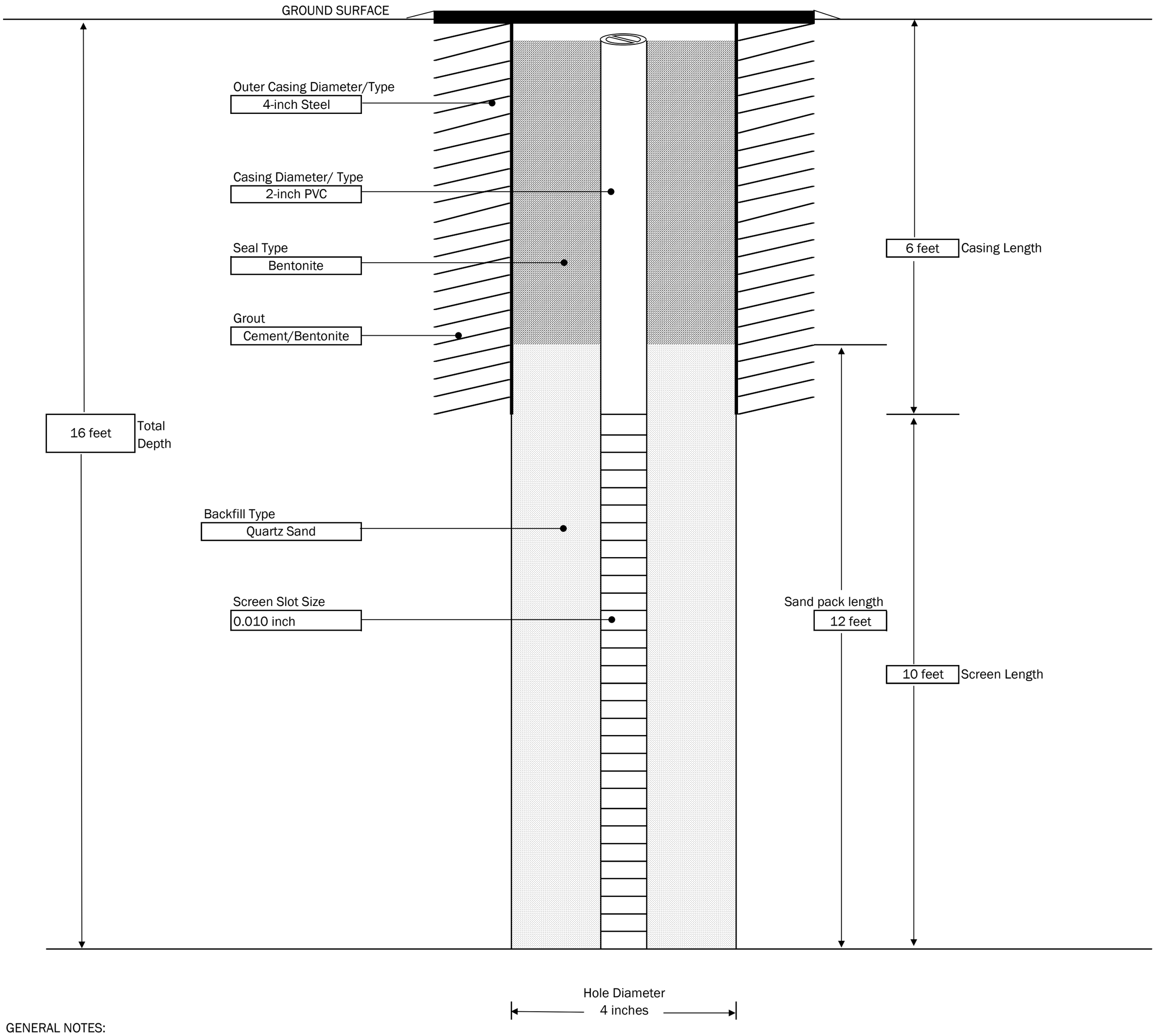
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-01

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-01 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	542.6106	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/27/2018	END DATE: 11/29/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 4'11" bgs. Auger was advanced to 6' bgs and steel casing set.

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

WELL CONSTRUCTION LOG

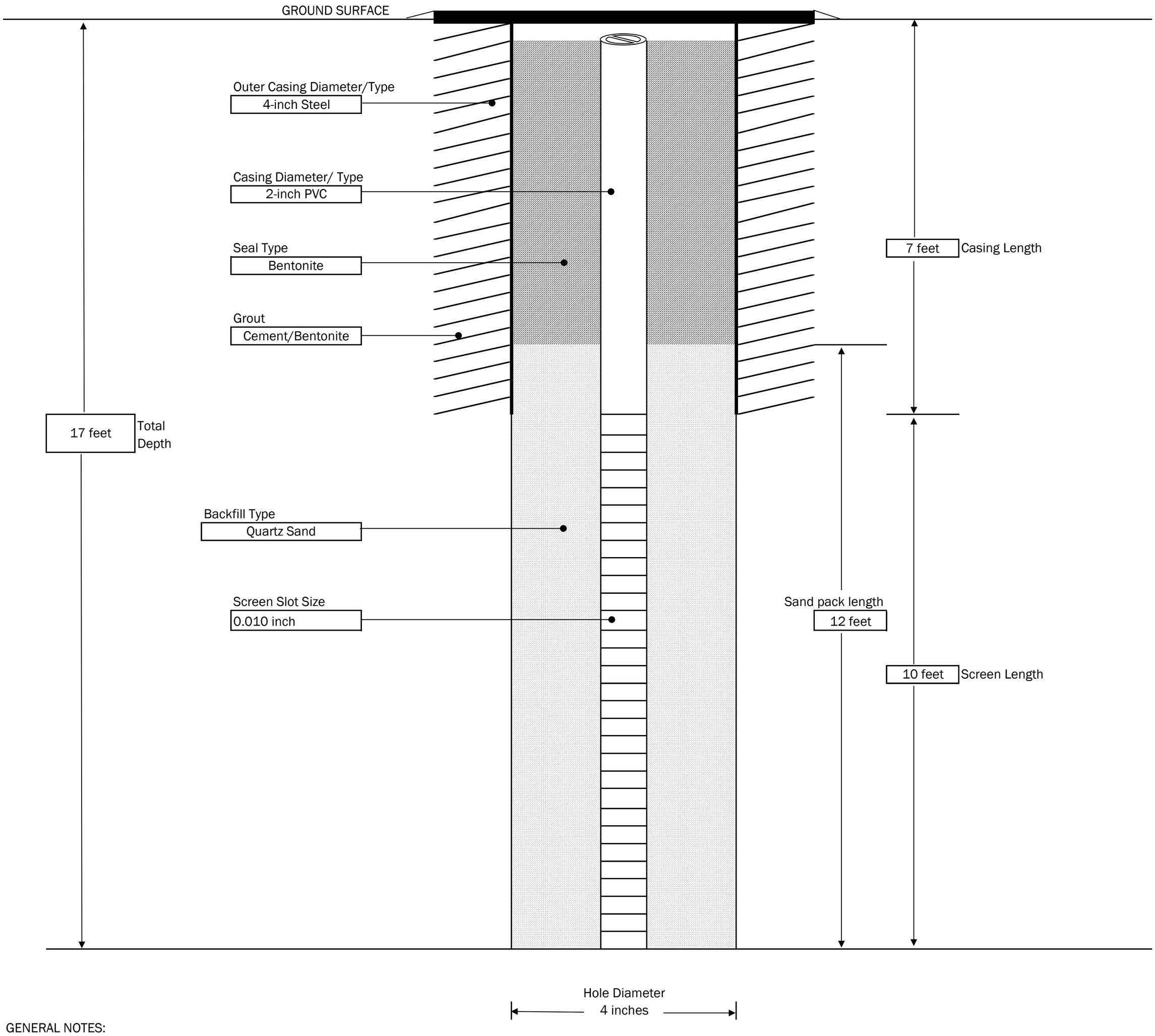
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-02

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-02 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	542.9791	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/27/2018	END DATE: 11/29/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 5'11" bgs. Auger was advanced to 7' bgs and steel casing set.

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WELL CONSTRUCTION LOG

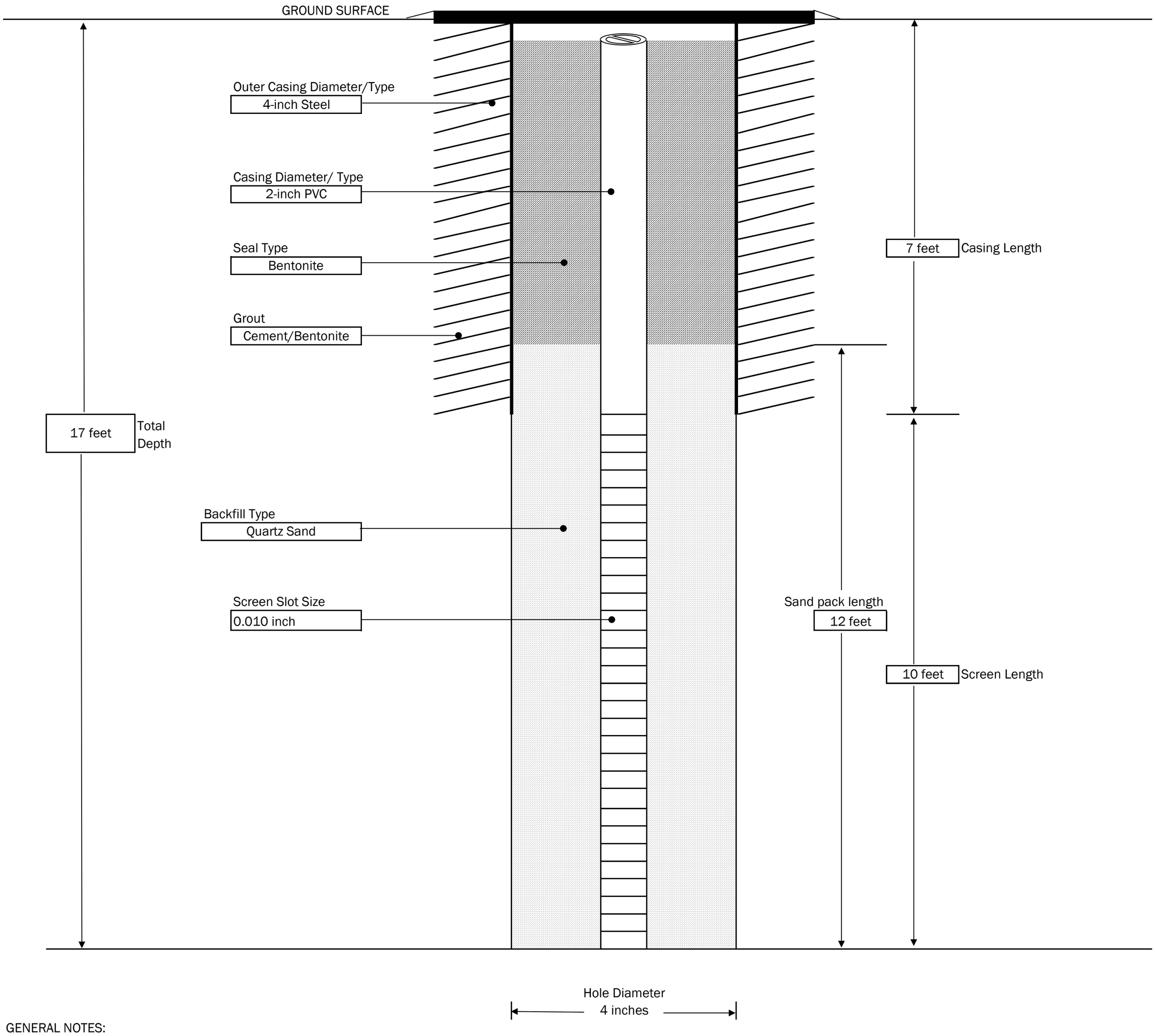
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-03

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-03 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	543.3241	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/27/2018	END DATE: 11/30/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 5'11" bgs. Auger was advanced to 7' bgs and steel casing set.

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WELL CONSTRUCTION LOG

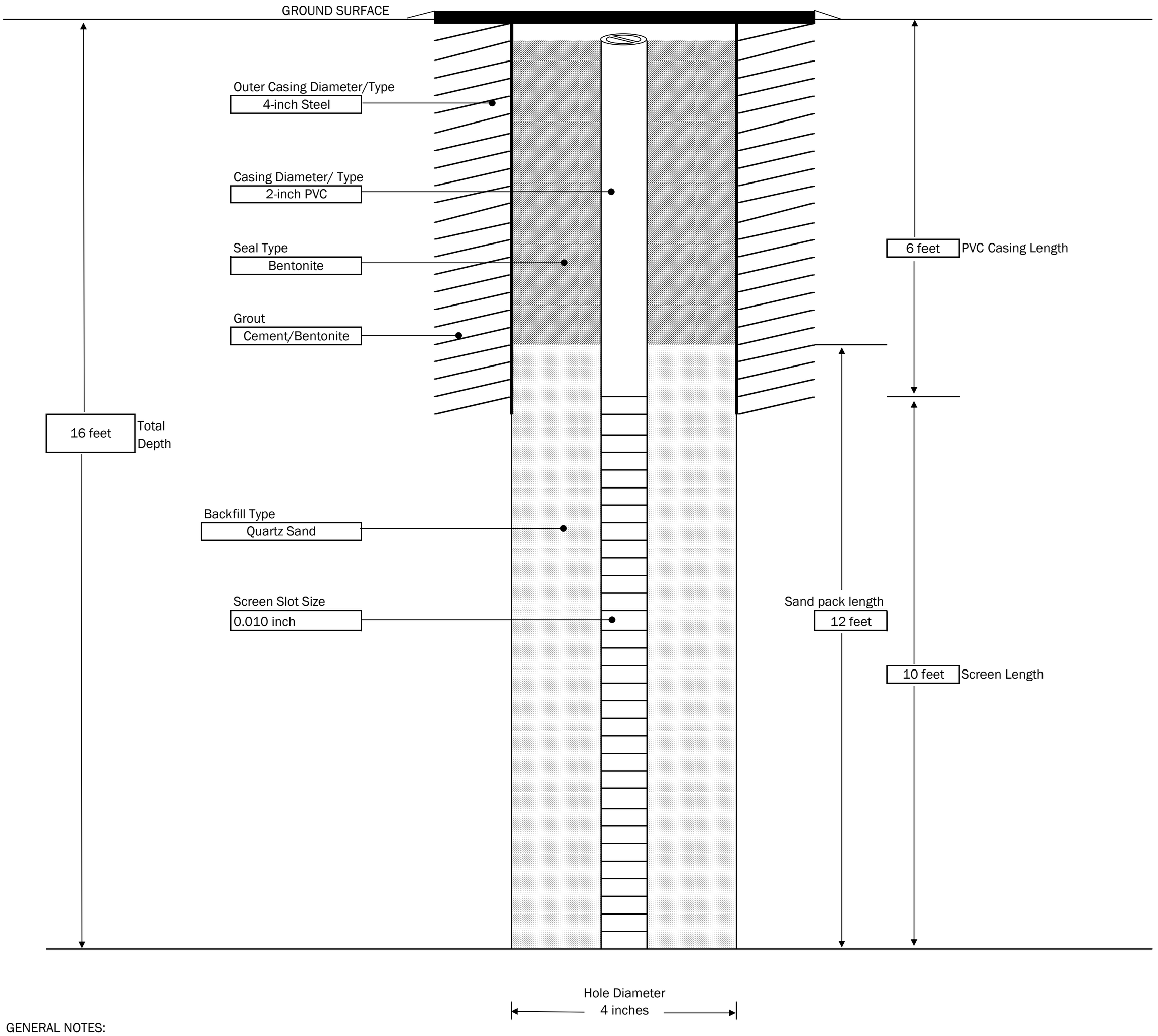
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-04

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-04 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	542.4855	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/27/2018	END DATE: 11/30/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 5'7" bgs. Auger was advanced to 7' bgs and steel casing set.

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WELL CONSTRUCTION LOG

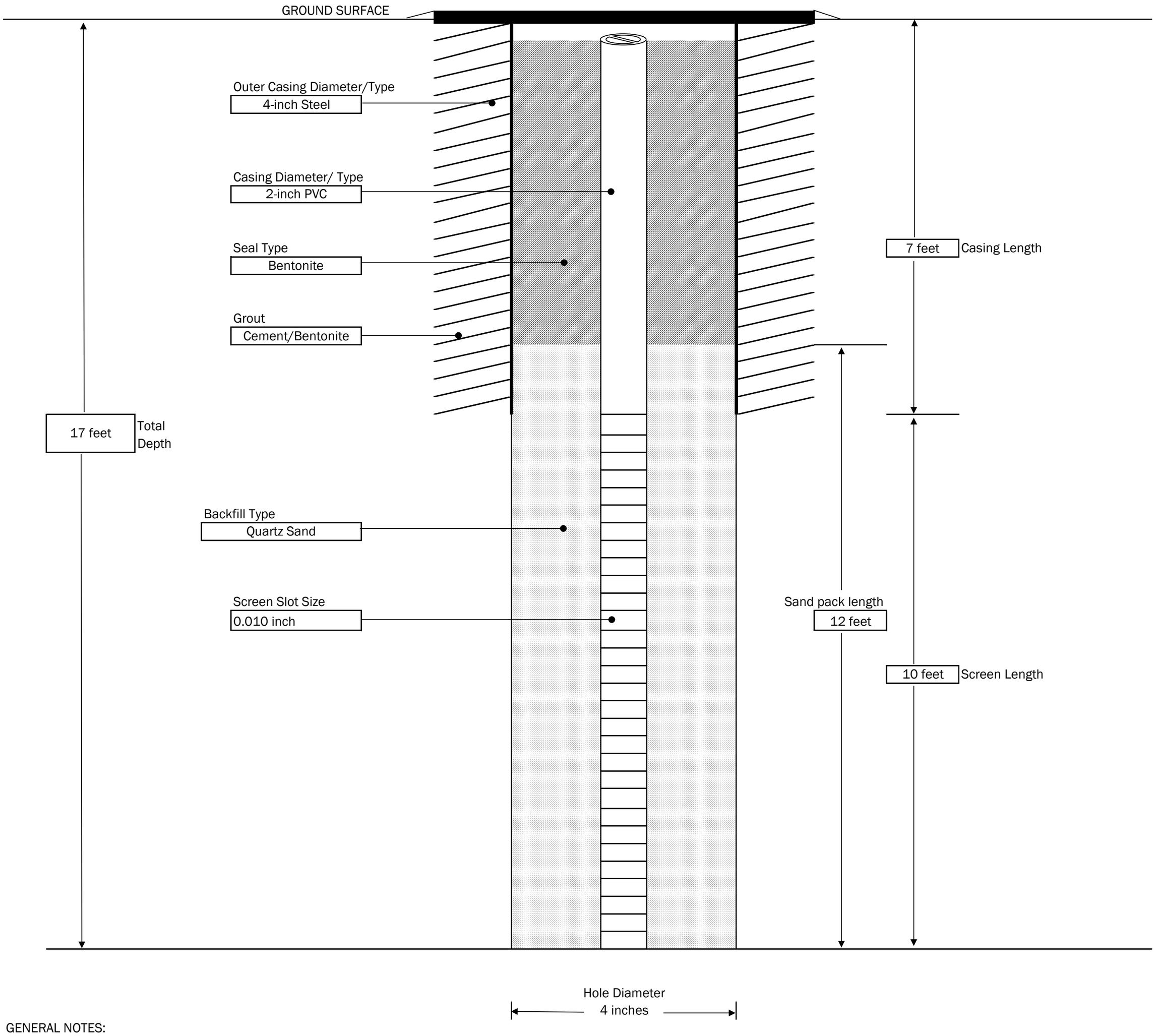
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-05

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-05 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	543.1176	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/27/2018	END DATE: 12/1/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 5'9" bgs. Auger was advanced to 7' bgs and steel casing set.

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WELL CONSTRUCTION LOG

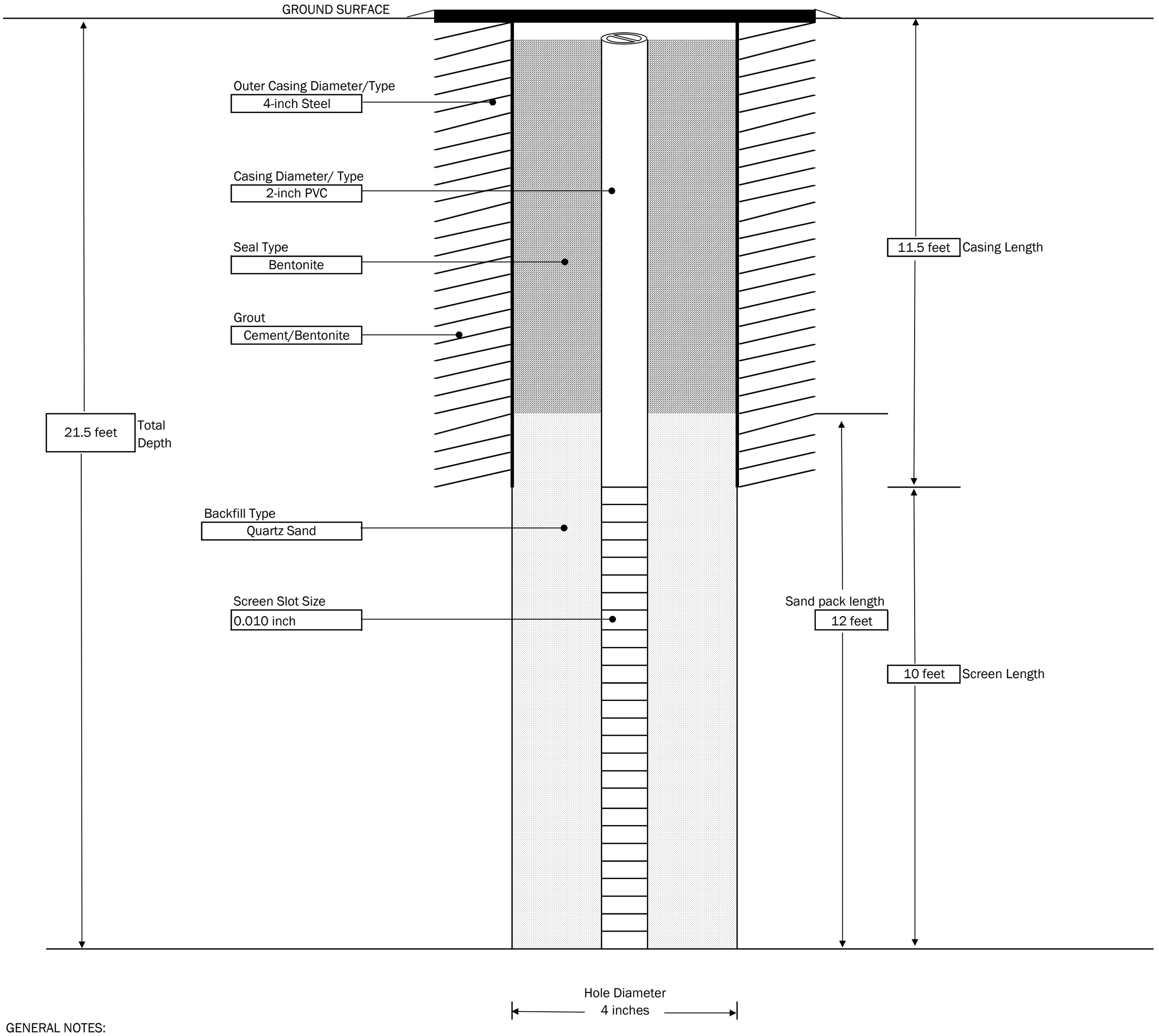
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-06

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-06 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	542.1276	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/28/2018	END DATE: 12/4/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Weathered bdrock encountered at 7'6" bgs, broke through at 8' bgs. Bedrock at 10'6" bgs and augered to 11'6" bgs to set steal casing.

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WELL CONSTRUCTION LOG

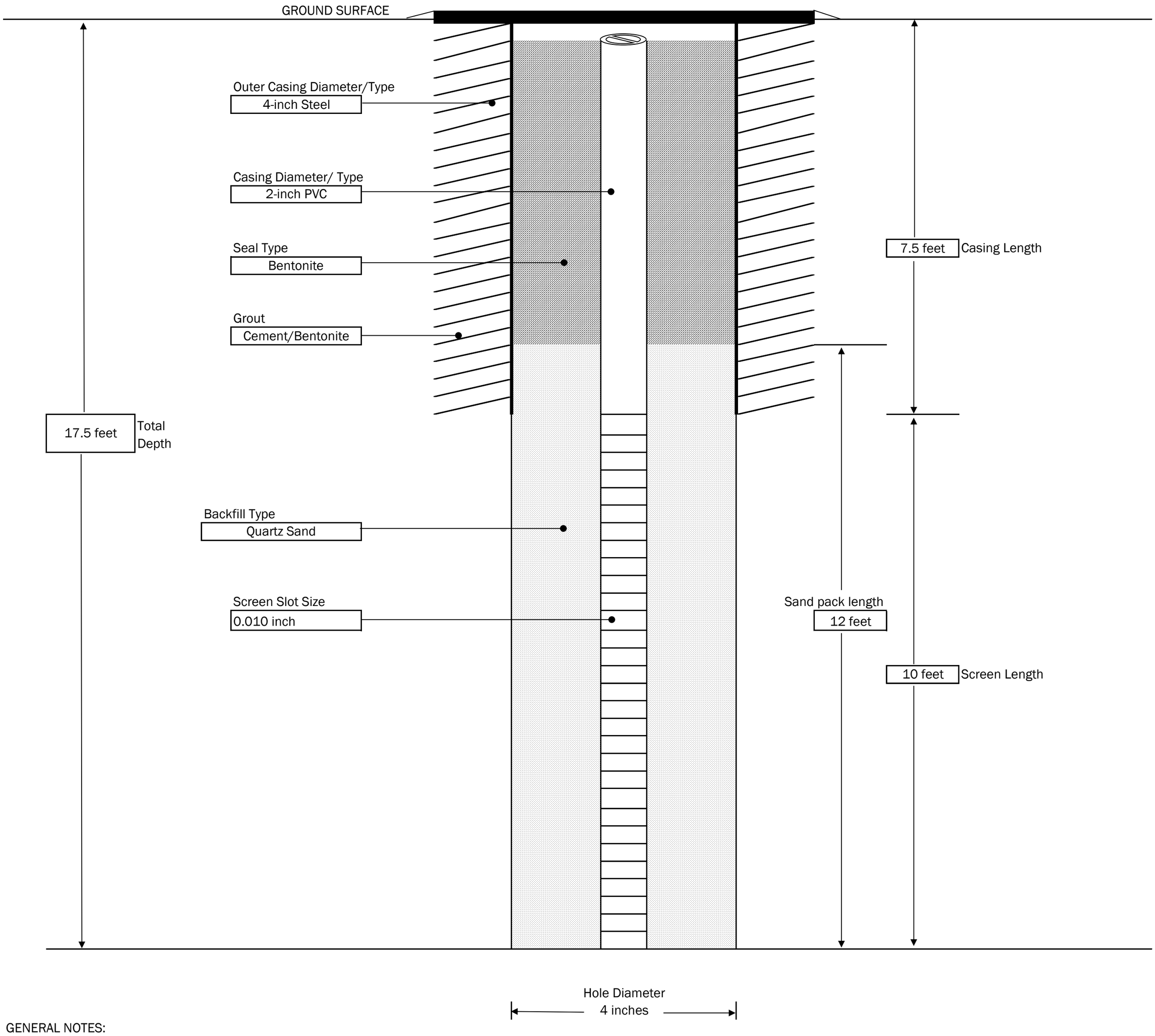
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-07

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-07 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	542.8133	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/28/2018	END DATE: 12/4/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 6'6" bgs. Auger was advanced to 7'6" bgs and steel casing set.

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WELL CONSTRUCTION LOG

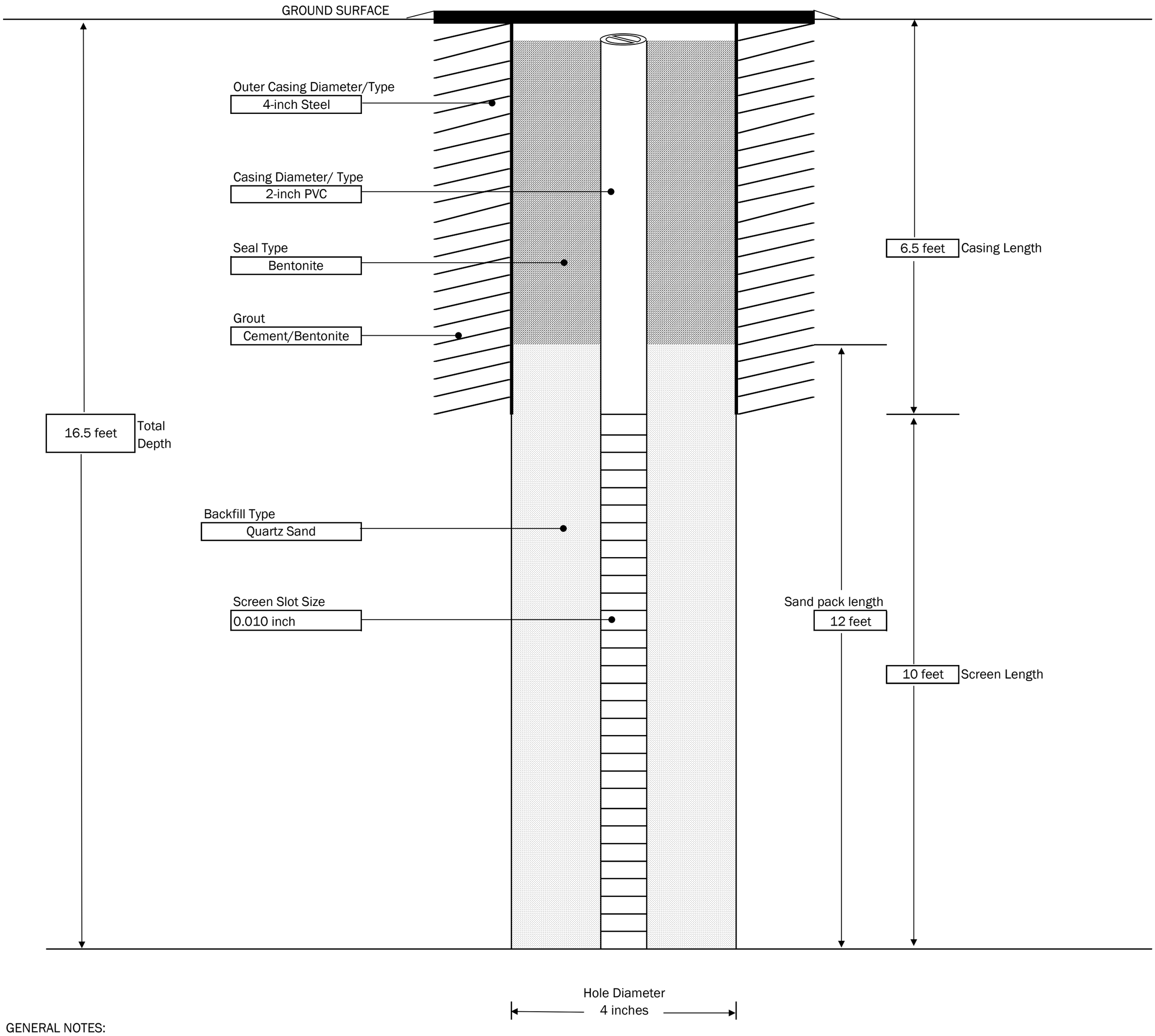
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-08

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-08 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	542.7806	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/28/2018	END DATE: 12/5/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 5'6" bgs. Auger was advanced to 6'6" bgs and steel casing set.

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ENVIRONMENTAL ENGINEERING CONSULTANTS

WELL CONSTRUCTION LOG

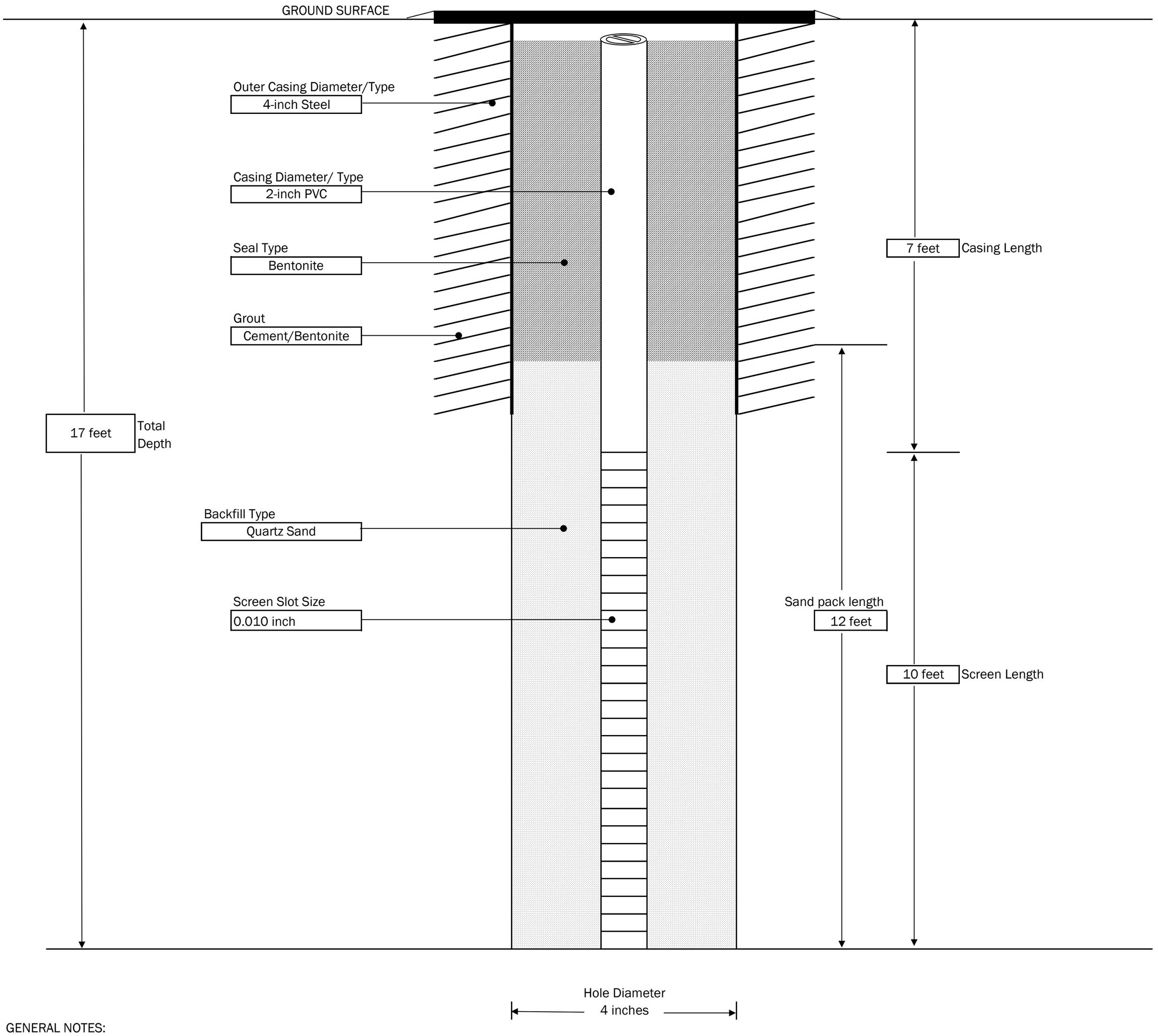
PROJECT
Bullshead Plaza Phase II ESA
835-855 West Main Street, Rochester, NY
City of Rochester

MONITORING WELL : BWB-09

SHEET : 1 OF 1

JOB # : 2172414

CONTRACTOR: Nothnagle Drilling Inc.	BORING LOCATION:	BWB-09 - See Figure		TYPE OF DRILL RIG:	CME 75
DRILLER: N. Short	GROUND SURFACE ELEVATION:	543.0778	DATUM: North American 1983	AUGER SIZE AND TYPE:	Hollow-Stem
LABELLA REPRESENTATIVE: A. Brett	START DATE:	11/30/2017	END DATE: 12/1/2017	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Bedrock encountered at 5'1" bgs. Auger was advanced to 6'6" bgs and steel casing set.

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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-01

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 11/30/2017
Weather: 40's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 9.28 -Feet
Depth of Well: 15.62 -Feet
Single Well Volume: 1.03 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1600	0	-	-	-	-	11/30/2017	Color = Clear to gray-brown
1630	5	-	-	-	-	11/30/2017	LNAPL or DNAPL observed = No
1630	5	-	-	-	-	12/1/2017	Odor: NO
1700	9	-	-	-	-	12/1/2017	Sheen: NO

Total 9.00 Gallons Purged Purge Start Time: 1600 on 11/30/17 Purge End Time: 1700 on 12/1/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity increased as development continued, gray to gray brown in color. Well produced a good amount of water upfront but drew down with time.

Approximately 2.5 gallons of water lost after drilling when cooling the metal casing after cutting it down to surface level. (During well installation).

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-02

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 11/30/2017
Weather: 40's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 8.34 -Feet
Depth of Well: 16.40 -Feet
Single Well Volume: 1.31 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1645	0	-	-	-	-	11/30/2017	Color = Clear to gray-brown
1710	4	-	-	-	-	11/30/2017	LNAPL or DNAPL observed = No
1200	4	-	-	-	-	12/1/2017	Odor: NO
1215	7	-	-	-	-	12/1/2017	Sheen: NO
1600	7	-	-	-	-	12/1/2017	
1625	9	-	-	-	-	12/1/2017	

Total 9.00 Gallons Purged Purge Start Time: 1645 on 11/30/17 Purge End Time: 1625 on 12/1/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity increased as development continued, gray to gray brown in color.
Drew down with time.
Approximately 2 gallons of water lost after drilling when cooling the metal casing after cutting it down to surface level. (During well installation).

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-03

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 12/1/2017
Weather: 40's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 8.29 -Feet
Depth of Well: 16.71 -Feet
Single Well Volume: 1.37 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1500	0.0	-	-	-	-	12/1/2017	Color = Clear to gray-brown
1550	11.5	-	-	-	-	12/1/2017	LNAPL or DNAPL observed = No
							Odor: NO
							Sheen: NO

Total 11.50 Gallons Purged Purge Start Time: 1500 on 12/1/17 Purge End Time: 1550 on 12/1/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity increased as development continued, gray to gray brown in color.
Produced a good amount of water for continued bailing.
Approximately 2 gallons of water lost to cool metal casing after cutting casing down, approximately 2.5 gallons lost when installing sandpack. (During well installation)

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-04

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 12/4/2017
Weather: 40's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 7.45 -Feet
Depth of Well: 15.45 -Feet
Single Well Volume: 1.30 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1120	0.0	-	-	-	-	12/4/2017	Color = Clear to gray-brown
1220	10	-	-	-	-	12/4/2017	LNAPL or DNAPL observed = No
							Odor: NO
							Sheen: NO

Total 10.00 Gallons Purged Purge Start Time: 1120 on 12/4/17 Purge End Time: 1220 on 12/4/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity increased as development continued, gray to gray brown in color.
Drew down with time but produced water for continued bailing.
Approximately 1 gallon of water lost to cool metal casing after cutting casing down, approximately 2.5 gallons lost when installing sandpack. (During well installation)

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-05

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 12/4/2017
Weather: 40's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 7.03 -Feet
Depth of Well: 17.00 -Feet
Single Well Volume: 1.63 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1320	0.0	-	-	-	-	12/4/2017	Color = Clear to gray-brown
1425	10	-	-	-	-	12/4/2017	LNAPL or DNAPL observed = No
							Odor: NO
							Sheen: NO

Total 10.00 Gallons Purged Purge Start Time: 1120 on 12/4/17 Purge End Time: 1220 on 12/4/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity increased as development continued, gray to gray brown in color.
Drew down with time but produced water for continued bailing.
Approximately 1 gallon of water lost to cool metal casing after cutting casing down (During well installation)

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-06

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 12/5/2017
Weather: 50's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 7.44 -Feet
Depth of Well: 21.35 -Feet
Single Well Volume: 2.27 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1110	0.0	-	-	-	-	12/5/2017	Color = Clear to gray-brown
1125	8.0	-	-	-	-	12/5/2017	LNAPL or DNAPL observed = No
1330	8.0	-	-	-	-	12/5/2017	Odor: NO
1350	16.5	-	-	-	-	12/5/2017	Sheen: NO

Total 16.50 Gallons Purged Purge Start Time: 1110 on 12/5/17 Purge End Time: 1350 on 12/5/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity during development gray to gray brown in color.
Produced a lot of water.
Approximately 5 gallons of water lost to get sand down during sandpacking of well (During well installation)

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-07

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 12/5/2017
Weather: 50's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 7.34 -Feet
Depth of Well: 17.16 -Feet
Single Well Volume: 1.60 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1120	0.0	-	-	-	-	12/5/2017	Color = Clear to gray-brown
1125	2.5	-	-	-	-	12/5/2017	LNAPL or DNAPL observed = No
1130	2.5	-	-	-	-	12/5/2017	Odor: NO
1230	6.5	-	-	-	-	12/5/2017	Sheen: NO
1400	6.5	-	-	-	-	12/5/2017	
1410	8.5	-	-	-	-	12/5/2017	
1455	8.5	-	-	-	-	12/5/2017	
1508	10.5	-	-	-	-	12/5/2017	
1630	10.5	-	-	-	-	12/5/2017	
1640	12.0	-	-	-	-	12/5/2017	

Total 12.00 Gallons Purged Purge Start Time: 1120 on 12/5/17 Purge End Time: 1640 on 12/5/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity during development gray to gray brown in color.
Drew down quickly, moderate recovery rate.
Approximately 5 gallons of water lost to get sand down during sandpacking of well (During well installation)

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-08

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Engelbert
Date: 12/5/2017
Weather: 50's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 6.05 -Feet
Depth of Well: 16.33 -Feet
Single Well Volume: 1.68 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1105	0.0	-	-	-	-	12/5/2017	Color = Clear to gray-brown
1115	5	-	-	-	-	12/5/2017	LNAPL or DNAPL observed = No
1130	5	-	-	-	-	12/5/2017	Odor: NO
1145	12.00	-	-	-	-	12/5/2017	Sheen: NO

Total 12.00 Gallons Purged Purge Start Time: 1105 on 12/5/17 Purge End Time: 1145 on 12/5/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity during development gray to gray brown in color.
Drew down with time but produced water for continued bailing.
Approximately 5 gallons of water lost to get sand down during sandpacking of well (During well installation)

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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GROUNDWATER DEVELOPMENT FORM

WELL I.D. BWB-09

Project Name: Bullshead Plaza Phase II
Project No.: 2172414
Location: 835-855 West Main Street, Rochester, NY
Development By: A. Brett
Date: 12/4/2017
Weather: 40's, overcast

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 7.53 -Feet
Depth of Well: 16.86 -Feet
Single Well Volume: 1.52 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: Polyethylene, 1.5" diameter
[ ] Pump - Type NA
Sampling Device: NA
Pump Rate: NA

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)	Date	Comments
1600	0.0	-	-	-	-	12/4/2017	Color = Clear to gray-brown
1700	10	-	-	-	-	12/4/2017	LNAPL or DNAPL observed = No
							Odor: NO
							Sheen: NO

Total 10.00 Gallons Purged Purge Start Time: 1120 on 12/4/17 Purge End Time: 1220 on 12/4/17

OBSERVATIONS:

Initially Clear, low turbidity. Turbidity increased as development continued, gray to gray brown in color.
Drew down with time but produced water for continued bailing.
Approximately 2 gallons of water lost to get sand down during sandpacking of well (During well installation)

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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WELL I.D.: BWB-01

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/6/17
Weather:	Overcast, 40°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	9.40’
Depth of Well:	15.62’	Length of Well Screen:	10’
Measuring Point:	Top of PVC	Depth to Top of Pump:	12.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1625	100	0.0	6.48	13.5	1.74	20.5	2.68	172	9.45	
1630	100	0.1	6.81	14.2	1.72	13.4	2.33	168	9.55	
1635	100	0.2	6.63	14.4	1.69	12.15	2.18	164	9.60	
1640	100	0.3	5.73	14.8	1.70	8.54	2.07	162	9.64	
1645	100	0.4	5.68	14.7	1.70	5.67	1.81	161	9.63	
1650	100	0.5	5.60	14.7	1.70	5.48	1.82	160	9.63	
1655	100	0.6	5.64	14.8	1.70	5.51	1.84	159	9.63	

Total 0.6 Gallons Purged

Purge Time Start: 1625 Purge Time End: 1655 Final Static Water Level: 9.63’

OBSERVATIONS

Notes: Sampled for VOCs, Nitrate, Sulfate, Mn and Fe at 1655. pH appears to be malfunctioning.

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WELL I.D.: BWB-02

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/6/17
Weather:	Overcast, 35°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	8.55’
Depth of Well:	16.4’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	13.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1310	100	0.0	8.46	13.1	6.01	61.1	6.24	192	8.69	
1315	100	0.1	8.54	13.7	5.96	93.2	5.96	176	8.86	
1320	100	0.2	8.62	14.2	6.18	85.7	5.96	179	8.88	
1325	100	0.3	8.56	14.1	6.30	78.4	5.35	183	8.88	
1330	100	0.4	8.56	14.2	6.54	65.4	5.02	201	8.84	
1335	100	0.5	8.48	14.4	6.76	52.9	4.68	202	8.88	
1340	100	0.6	8.05	14.3	6.97	48.6	4.44	200	8.82	
1345	100	0.7	8.24	14.2	7.29	39.2	3.66	203	8.88	
1350	100	0.8	8.15	14.4	7.38	30.0	3.44	203	8.84	
1355	100	0.9	8.77	14.3	7.55	27.2	3.30	203	8.93	
1400	100	1.0	8.21	14.3	7.64	28.2	3.99	203	8.90	
1405	100	1.1	8.50	14.2	7.77	29.7	4.20	204	8.81	
1410	100	1.2	8.31	14.1	7.85	28.2	4.15	204	8.82	
1415	100	1.3	8.30	14.1	7.91	28.7	4.07	204	8.84	
1420	100	1.4	8.28	14.2	7.93	26.4	4.18	205	8.82	

Total 1.4 Gallons Purged

Purge Time Start: 1310 Purge Time End: 1420 Final Static Water Level: 8.82’

OBSERVATIONS

Notes: Sampled at 1420 for Full Suite. MS/MSD and Duplicate collected.

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WELL I.D.: BWB-03

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/4/17
Weather:	Overcast, 45°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	9.35’
Depth of Well:	16.81’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	15.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1140	200	0.0	7.23	14.9	12.16	151	5.88	208	9.50	
1145	200	0.25	7.24	15.2	12.22	86.0	6.99	33	9.55	
1150	200	0.50	7.82	15.5	12.53	75.2	8.05	113	9.65	
1155	200	0.75	7.29	15.5	12.55	54.1	7.05	143	9.68	
1200	200	1.00	7.10	15.5	12.55	45.8	7.03	155	9.69	
1205	200	1.25	7.10	15.6	12.56	42.7	7.24	164	9.65	
1210	200	1.50	7.10	15.6	12.52	28.4	7.20	172	9.68	
1215	200	2.0	7.09	15.6	12.55	26.4	7.29	171	9.68	
1220	200	2.5	7.09	15.6	12.54	22.4	7.08	180	9.68	
1225	200	3.0	7.08	15.6	12.55	17.5	7.05	183	9.67	
1230	200	3.25	7.08	15.5	12.50	16.5	4.50	185	9.67	-bubbles built-up in D.O. Sensor,
1235	200	3.75	7.07	15.6	12.49	13.7	5.02	185	9.67	after clearing, D.O. dropped
1240	200	4.0	7.06	15.5	12.50	12.10	5.14	185	9.67	
1245	200	4.25	7.07	15.5	12.51	12.0	5.20	165	9.67	-Sampled

Total 4.25 Gallons Purged

Purge Time Start: 1140 Purge Time End: 1245 Final Static Water Level: 9.67’

OBSERVATIONS

Notes: Sampled for VOC at 1245.

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WELL I.D.: BWB-04

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/4/17
Weather:	Overcast, 45-50°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	8.02’
Depth of Well:	15.44’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	14.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1330	200	0	7.98	15.9	7.35	OVER	4.29	183	8.02	
1335	200	0.1	8.10	16.2	7.20	OVER	3.52	176	8.35	
1340	200	0.25	8.40	16.2	6.98	OVER	4.89	169	8.62	
1345	200	0.50	8.52	16.3	6.92	OVER	6.45	165	8.69	
1350	200	1.0	8.49	16.4	6.92	211	7.46	164	8.75	
1355	200	1.75	8.43	16.4	6.91	116	7.53	164	8.91	
1400	200	2.0	8.36	16.4	6.90	129	6.46	165	8.85	
1405	200	2.25	8.25	16.4	6.93	107.3	7.23	167	8.87	
1410	200	2.50	8.13	16.5	6.92	99.1	7.57	171	8.89	
1415	200	2.50	8.10	16.5	6.91	94.1	3.46	171	8.90	- bubbles built up on D.O. sensor.
1420	200	3.0	8.03	16.6	6.92	82.0	4.50	171	8.95	D.O. sensor cleared and reset
1425	200	3.0	7.97	16.4	6.96	60.0	4.46	171	9.02	
1430	200	3.5	7.92	16.5	6.95	55.7	4.79	172	9.06	
1435	200	4.0	7.87	16.5	6.97	51.4	4.40	173	9.10	
1440	200	4.25	7.86	16.5	6.93	40.4	4.69	174	9.11	
1445	200	4.5	7.84	16.4	6.97	36.5	4.40	174	9.11	
1450	200	4.75	7.79	16.5	6.96	35.9	4.64	174	9.14	- Sampled

Total 4.75 Gallons Purged

Purge Time Start: 1330 Purge Time End: 1450 Final Static Water Level: 9.14’

OBSERVATIONS

Notes: Sampled at 1450 for VOCs.

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WELL I.D.: BWB-05

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/4/17
Weather:	Overcast, 40°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	8.10’
Depth of Well:	17.10’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	15.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1555	200	0.0	7.2	15.4	12.49	OVER	5.27	213	8.16	
1600	200	0.25	7.18	15.6	12.49	OVER	4.97	214	8.30	
1605	200	0.50	7.18	15.6	12.26	OVER	4.91	215	8.33	
1610	200	0.75	7.20	15.6	11.96	OVER	4.61	216	8.38	
1615	200	1.25	7.20	15.6	11.91	OVER	4.68	216	8.42	
1620	200	1.5	7.19	15.5	11.96	120	4.70	217	8.42	
1625	200	1.75	7.18	15.6	11.99	73	4.56	217	8.42	
1630	200	2.25	7.17	15.6	12.04	72	4.66	218	8.44	
1635	200	2.75	7.15	15.6	12.12	119	4.67	219	8.43	
1640	200	2.75	7.14	15.6	12.18	94.9	4.56	220	8.43	
1645	200	3.0	7.16	15.5	12.27	77.2	4.59	221	8.43	
1650	200	3.25	7.12	15.6	12.26	57.7	4.60	222	8.43	
1655	200	3.75	7.12	15.6	12.26	53.8	4.74	224	8.43	
1700	200	4.00	7.10	15.6	12.17	50.1	4.66	225	8.43	
1705	200	4.50	7.10	15.6	12.17	48.4	4.77	226	8.43	

Total 4.25 Gallons Purged

Purge Time Start: 1555 Purge Time End: 1705 Final Static Water Level: 8.43’

OBSERVATIONS

Notes: Sampled at 1705 for VOCs

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WELL I.D.: BWB-06

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/5/17
Weather:	Overcast, 50°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	7.65’
Depth of Well:	21.35’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	16.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1405	100	0.0	8.16	14.2	1.36	72.1	3.47	125	7.74	
1410	100	0.1	8.16	14.6	1.35	96.4	2.38	127	7.82	
1415	100	0.25	8.15	14.7	1.36	53.6	1.98	126	7.84	
1420	100	0.40	8.17	14.7	1.36	41.8	1.86	126	7.81	
1425	100	0.50	8.21	14.7	1.36	31.6	1.82	125	7.85	
1430	100	0.65	8.26	14.8	1.34	24.4	1.97	125	7.82	
1435	100	0.75	8.31	14.8	1.31	18.3	1.87	125	7.79	
1440	100	0.85	8.33	14.8	1.31	12.8	1.97	124	7.85	
1445	100	1.0	8.36	14.8	1.30	12.10	1.90	124	7.75	
1450	100	1.0	8.37	14.8	1.31	10.22	1.95	123	7.85	

Total 1.1 Gallons Purged

Purge Time Start: 1405 Purge Time End: 1450 Final Static Water Level: 7.85’

OBSERVATIONS

Notes: Sampled on 12/5/17 at 1450 for VOCs
Sample on 12/6/17 at 0900 for Mn, Sulfate, Fe, and Nitrate. 0.25-gallons purged prior to sampling on 12/6/17.

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WELL I.D.: BWB-07

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/6/17
Weather:	Overcast, 40°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	7.61’
Depth of Well:	17.16’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	14.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1005	100	0.0	7.38	13.7	3.49	72.8	5.78	205	7.61	
1010	100	0.1	7.48	13.9	3.69	67.7	5.46	200	7.88	
1015	100	0.2	7.53	14.1	3.65	89.4	5.20	197	8.19	
1020	100	0.3	7.55	14.3	3.61	99.1	5.24	197	8.36	
1025	100	0.4	7.58	13.8	3.53	125	5.41	196	8.51	
1030	100	0.5	7.58	14.2	3.49	142	5.24	196	8.70	
1035	100	0.6	7.58	14.2	3.47	125	5.05	195	8.86	
1040	100	0.7	7.57	14.2	3.48	113	4.69	195	8.91	
1045	100	0.8	7.57	14.2	3.49	100.1	4.68	194	9.02	
1050	100	0.9	7.57	14.3	3.49	97.0	4.77	194	9.11	
1055	100	1.0	7.56	14.2	3.50	77.9	4.88	194	9.22	
1100	100	1.10	7.55	14.2	3.53	72.6	4.96	193	9.42	
1105	100	1.20	7.54	14.3	3.53	62.7	4.93	192	9.48	
1110	100	1.30	7.53	14.2	3.57	59.9	4.88	193	9.62	
1115	100	1.40	7.52	14.2	3.60	46.4	4.85	193	9.64	

Total 1.40 Gallons Purged

Purge Time Start: 1005 Purge Time End: 1115 Final Static Water Level: 9.64’

OBSERVATIONS

Notes: Sampled at 1115 for full suite.

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300 State Street
Rochester, New York 14614
Telephone: (585) 454-6110
Facsimile: (585) 454-3066

WELL I.D.: BWB-08

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/5/17
Weather:	Overcast, 50°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	7.42’
Depth of Well:	16.33’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	13.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
1225	200	0.0	7.85	14.4	1.67	85.5	2.94	145	7.42	
1230	200	0.25	7.74	14.7	1.59	59.1	3.08	142	7.59	
1235	200	0.35	7.63	14.6	1.69	107.0	3.09	141	7.62	
1240	100	0.45	7.57	14.5	1.75	75.8	2.90	143	7.45	
1245	100	0.50	7.53	14.5	1.78	75.6	3.02	143	7.45	
1250	100	0.55	7.50	14.5	1.81	60.2	3.00	143	7.45	
1255	100	0.65	7.49	14.5	1.82	47.1	2.97	142	7.45	
1300	100	0.80	7.45	14.5	1.86	31.5	3.13	141	7.45	
1305	100	1.0	7.44	14.6	1.86	26.9	3.04	140	7.47	
1310	100	1.5	7.42	14.5	1.87	21.8	2.96	139	7.47	
1315	100	1.75	7.42	14.5	1.87	18.5	2.89	138	7.47	
1320	100	2.0	7.41	14.5	1.88	11.8	2.96	138	7.48	
1325	100	2.25	7.41	14.5	1.88	10.81	2.91	137	7.48	
1330	100	2.50	7.41	14.5	1.87	10.32	2.87	136	7.48	

Total 2.5 Gallons Purged

Purge Time Start: 1225 Purge Time End: 1330 Final Static Water Level: 7.48’

OBSERVATIONS

Notes: Sampled at 1330 for VOCs

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300 State Street
Rochester, New York 14614
Telephone: (585) 454-6110
Facsimile: (585) 454-3066

WELL I.D.: BWB-09

Project Name:	Bulls Head Plaza Phase II ESA
Location:	835-855 West Main Street, Rochester, NY
Project No.:	2172124
Sampled By:	AJ Engelbert
Date:	12/5/17
Weather:	Rain, 47°F

WELL SAMPLING INFORMATION

Well Diameter:	2”	Static Water Level:	7.60’
Depth of Well:	16.85’	Length of Well Screen:	10.0’
Measuring Point:	Top of PVC	Depth to Top of Pump:	15.0’
Pump Type:	Bladder	Tubing Type:	LDPE ¼”

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Depth to Water	Comments
			+/- 0.1	+/-3%	+/- 3%	<50, +/- 10%	+ 10%	+/- 10 mV	+/-0.3’	
0815	200	0.0	7.37	14.2	10.65	OVER	7.36	242	7.43	
0820	200	0.25	7.36	14.9	10.71	OVER	6.04	228	8.33	
0825	200	0.50	7.31	15.0	10.7	OVER	5.95	210	8.52	
0830	200	0.75	7.26	15.1	10.69	OVER	5.88	199	8.75	
0835	200	1.0	7.21	15.1	10.68	OVER	5.65	193	8.80	
0840						OVER			8.98	-YSI water quality meter stopped working.
0940	200	1.1	6.95	15.5	10.57	OVER	6.16	197	8.29	Went to ECO for new sensor.
0945	200	1.5	6.97	15.6	10.56	OVER	6.32	197	8.60	
0950	200	2.0	6.95	15.5	10.60	153	6.01	196	8.95	
0955	200	2.5	6.95	15.5	10.55	144	6.16	196	8.96	
1000	200	3.7	6.89	15.5	10.54	130	5.97	195	9.02	
1005	200	4.0	6.87	15.5	10.52	123	5.61	194	9.10	
1010	200	4.5	6.85	15.6	10.50	135	5.72	193	9.12	

Total 4.5 Gallons Purged

Purge Time Start: 0815 Purge Time End: 1010 Final Static Water Level: 9.12’

OBSERVATIONS

Notes: Sampled at 1010 for VOCs

APPENDIX 3

Health and Safety Plan

Site Health and Safety Plan

Location:

Bulls Head Plaza
835-855 West Main Street
Rochester, New York 14611

Prepared for:

City of Rochester
Division of Environmental Quality
Room 300-B
Rochester, New York 14614

LaBella Proposal No. 2201137

March 2020

Table of Contents

SITE HEALTH AND SAFETY PLAN

Project Title:	Bulls Head Plaza
Project Number:	2201137
Project Location (Site):	835-855 West Main Street
Environmental Director:	Gregory Senecal, CHMM
Site Safety Manager:	David Engert, CHMM
Site Control Provided By:	TBD
Project Manager:	Ann Barber, PE
Site Conditions:	4.2-acre commercial land
Site Environmental Information Provided By:	• Environmental Screen – September 2009 – Day Environmental, Inc. • Limited Subsurface Investigation Report – April 28, 2015 – Bock and Clark Environmental, LLC • Phase I Environmental Site Assessment Update – September 30, 2016 – B&C • Environmental Screen Report – October 31, 2016 – LaBella • Phase I Environmental Site Assessment – September 1, 2017 – LaBella • Phase II Environmental Site Assessment – April 2018, LaBella • Soil Vapor Intrusion Assessment – April 2018, LaBella • Post-Mitigation Indoor Air Quality Results – August 2018, LaBella • Asbestos Survey Report – January 2019, Lu Engineers • Asbestos Survey Report – September 2019, Lu Engineers • Bulk Sample Asbestos Analytical Report – May 2018, LaBella • Sub-Slab Soil Sampling – January 2020, LaBella
Air Monitoring Provided By:	LaBella Associates, D.P.C.
Site Control Provided By:	Contractor(s) TBD

EMERGENCY CONTACTS

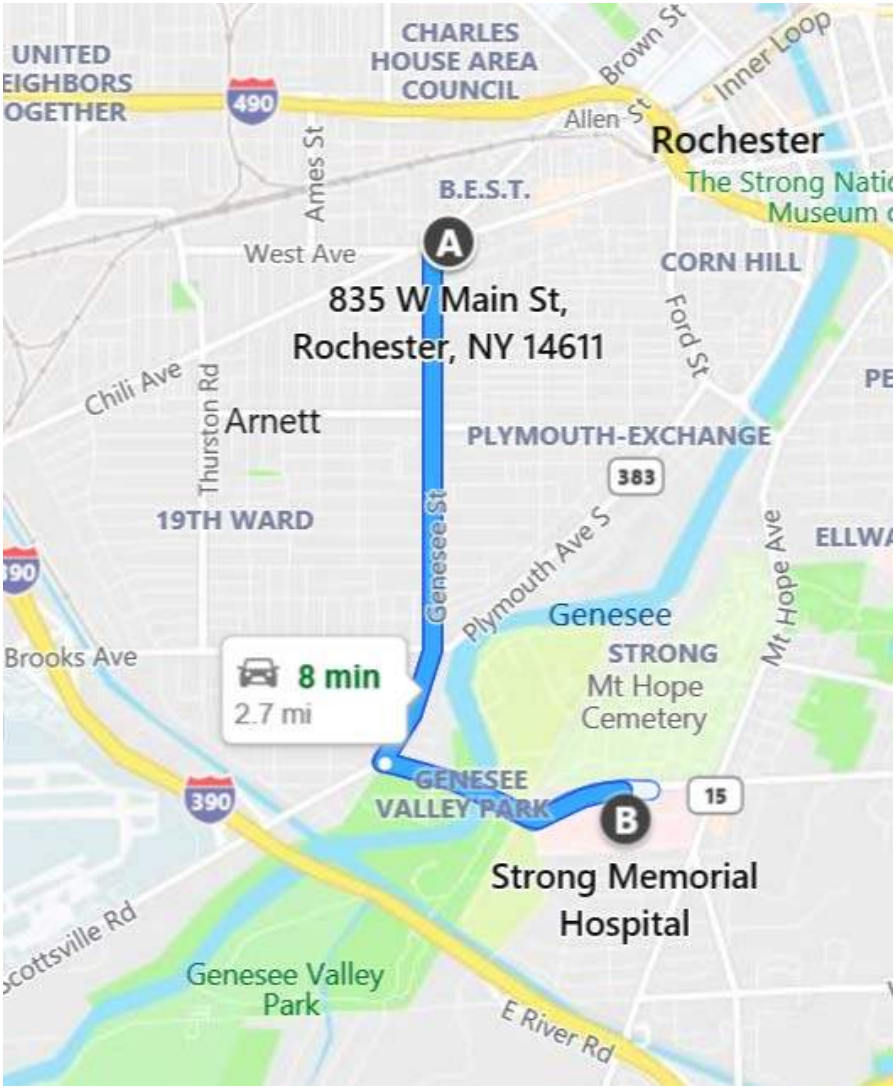
	Name	Phone Number
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	Highland Hospital	585-473-2200
Poison Control Center:	Finger Lakes Poison Control	585-273-4621
Police (local, state):	Rochester Police Department	911
Fire Department:	Rochester Fire Department	911
Owner Site Contact:	Joseph Biondolillo, City of Rochester DEQ	585-428-6649
LaBella Project Manager	Ann Barber, PE	585-295-6289
LaBella Site Safety Manager:	David Engert, CHMM	585-295-6630

MAP AND DIRECTIONS TO THE MEDICAL FACILITY
STRONG MEMORIAL HOSPITAL

Address: 601 Elmwood Ave, Rochester, NY

1. Head west on W Main St towards Genesee St
2. Turn left onto Elmwood Ave
3. Arrive at hospital on right.

Total travel distance: 2.7 miles
Approximate travel time: 8 minutes



1.0 Introduction

The purpose of this Health and Safety Plan (HASP) it to provide guidelines for responding to potential health and safety issues that may be encountered during the field activities relating to the implementation of the Environmental Management Plan at the Bulls Head Plaza located at 835-855 West Main Street, Monroe County, City of Rochester, New York (the 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. 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.

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
- 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 personnel has responsibility for site safety and his or her instructions must be followed.

5.1 Hazards Due to Heavy Machinery

Potential Hazard:
Heavy machinery including trucks, excavators, backhoes, 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. Tasks 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, and may require additional training. Subsequently, approved personnel are to receive authorization for entry from the Site personnel. Approved personnel are not to enter excavations over 4 feet in depth unless excavations are adequately sloped, shored or otherwise protected. 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.

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 or 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:
Serious injuries are to be reported immediately to the Project Manager. The Project Manager is responsible for making First Aid supplies available at the work site to treat minor injuries. Do not move seriously injured workers. All injuries requiring treatment are to be reported to the Project Manager.

5.4 Injury Due to Exposure of Chemical Hazards

Potential Hazards:
Volatile organic vapors from petroleum products, chlorinated solvents or other chemicals may be encountered during excavation activities at the project work site. Inhalation of high concentrations of 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 is 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 5.4), 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 procedures described below. Site perimeter and community air monitoring and appropriate response actions will be implemented as described in the New York State Department of Health (NYSDOH) Generic Community Air Monitoring guidance.

The Air Monitor will utilize a photoionization Detector (PID) to screen the ambient air in the work areas for total Volatile Organic Compounds (VOCs) and a DustTrak tm Model 8520 aerosol monitor or equivalent for measuring particulates. Air monitoring of the work areas and EZ, if established, will be performed at least every 60 minutes or more often using a PID, and the DustTrak meter.

If sustained PID readings of greater than 25 ppm are recorded in the breathing zone in the work area or EZ, work should be temporarily ceased and personnel are to leave the work area until satisfactory readings are obtained, the source of vapors identified and addressed through corrective actions 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-hours of 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 dust concentrations exceed the upwind concentration by 150 µg/m^3 (0.15 mg/m^3) consistently for a 10 minute period within the work area or at the downwind location, then LaBella personnel may not re-enter the work area until dust concentrations in the work area decrease below 150 µg/m^3

(0.15 mg/m^3), which may be accomplished by the construction manager implementing dust control or suppression measures.

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 personnel.

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 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.

APPENDIX 4

Community Air Monitoring Plan

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.

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