



Questions and Answers Addendum 1
Engineering Services for
Soil Management
May 2024

1. Has the Philadelphia Industrial Development Corporation (PIDC) contacted the Pennsylvania Department of Environmental Protection (PADEP) regarding the planned project to mobilize and use regulated fill materials at the two planned Biotech Campus sites?

No. All permitting and regulatory agency coordination is within the scope of RFP.

2. If the PIDC has contacted the PADEP regarding the planned project to mobilize and use regulated fill materials at the two planned Biotech Campus sites what regional office was contacted and what was the nature of the discussions.

N/A.

3. The placement or regulated fill materials on either of the two planned Biotech Campus sites will require the acquisition of a general permit WMGR096 under the residual waste regulations. So, has the City of Philadelphia approved a preliminary or final subdivision and land development plan for construction of the two planned Biotech Campus sites?

No. All permitting and regulatory agency coordination is within the scope of RFP.

4. If the PIDC has not yet prepared a preliminary or final subdivision and land development plan for the two planned Biotech Campus sites, is the development of such a plan to be included in the scope of services for the contract?

No.

5. If the two planned Biotech Campus sites are not already zoned for commercial and industrial uses is the PIDC looking for the contractor to include the necessary zoning change with the City of Philadelphia?

No.

6. Will the PIDC please furnish maps showing: 1) the location of properties for the two planned Biotech Campus sites; 2) the property boundaries of the two sites showing the preliminary planned limits of the regulated fill materials; and 3) additional information regarding wetlands and flood plain boundaries on the two properties?

See attached location drawings including floodplain information. Determining the limits of fill and avoiding wetlands impact (if possible, if wetlands are present) are within the scope of work of this RFP.

7. Will the PIDC please furnish a copy of the environmental covenants placed on the deeds of the two planned Biotech Campus sites?

See attached.

8. Will the placement of regulated fill materials at either of the two planned Biotech Campus sites require compaction and testing?

The selected consultant will be responsible for determining how the fill should be handled once on-site.

9. Are there existing geotechnical data for the site? Have any borings been completed on the site? If so, can we obtain copies of these logs and/or any related information?

See attached geotechnical report.

10. What is the environmental regulatory status of both of the properties? Does only one property have an EC?

See question 7 above.

11. Can copies of the Act 2 reports be provided?

Several environmental reports have been conducted over the years, which will be provided to the selected consultant.

12. Will the placement of the fill serve as a soil cap or engineering control under the EC?

Determining where fill will be placed is within the scope of work of this RFP.

13. Please clarify if the permits anticipated are related to the transport and placement of the fill or if Chapter 105 and Chapter 102 permits will also be required for the placement of fill in the floodplain?

All permitting (including which permitting is required) and regulatory agency coordination is within the scope of RFP.

14. Will placement of fill be required in the tidal zone? If so, has there been coordination with USACE?

The location of fill placement and associated agency coordination will be determined by the selected consultant, as will any required coordination with all regulatory agencies.

15. Has an E&S plan been developed for the site for implementation during the anticipated 3-year fill placement period?

No. Developing an E&S plan is within the scope of work of this RFP.

16. Has a Post Construction Stormwater Management Plan (PCSM) been developed for the period following fill placement, prior to development?

No. Developing a PCSM plan, if required, is within the scope of work of this RFP.

17. Can you provide a copy of *Appendix E. Environmental Covenant* that was referenced in the RFP?

See question 7 above

18. Has there been a site survey?

Yes.

19. Has there been a natural resources investigation/wetland delineation?

No.

20. Do you anticipate impacts to wetlands in the area (approximate acreage)?

See question 6 above.

21. Are we required to obtain the fill or is the fill material being provided by PIDC?

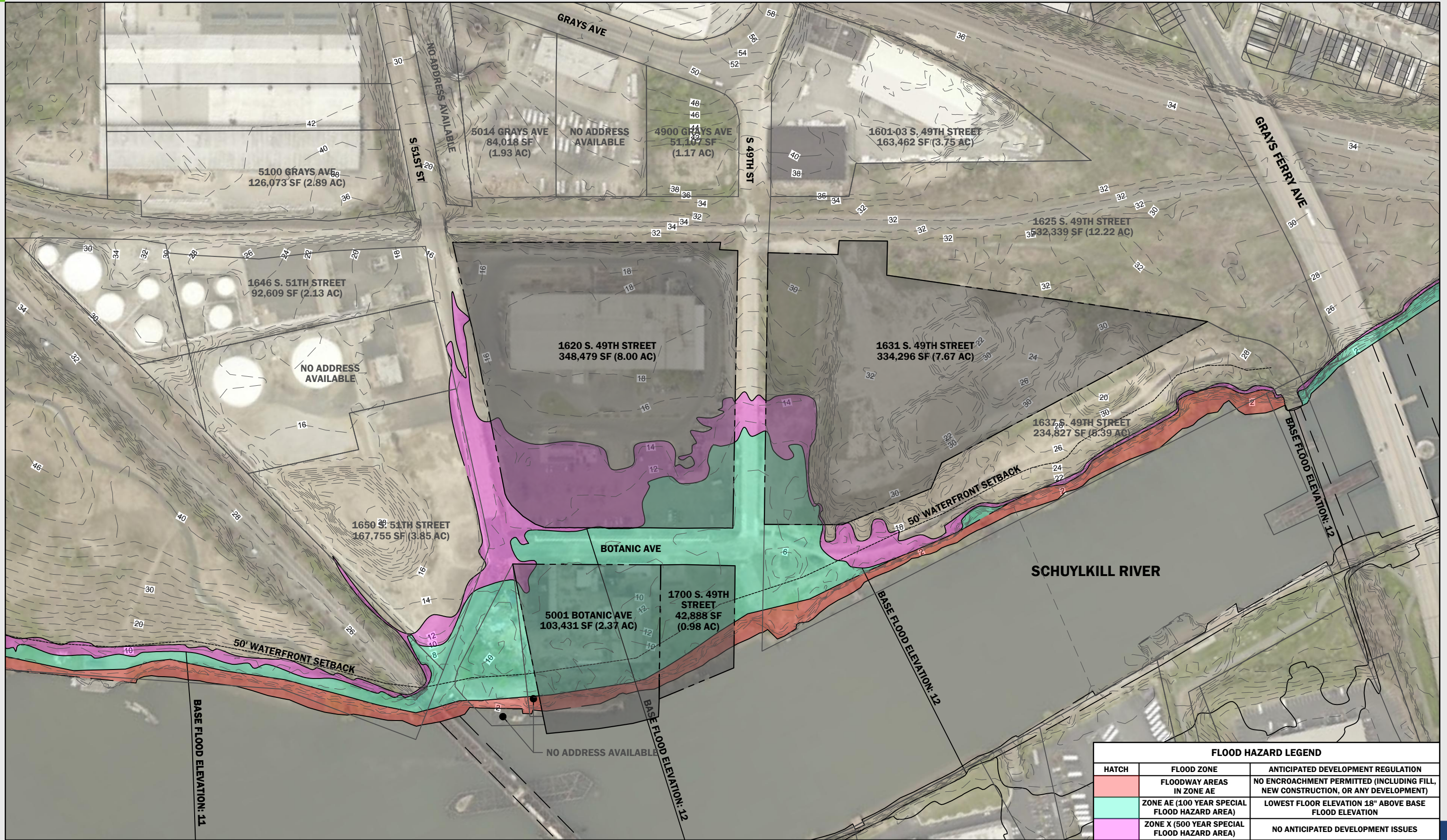
The selected consultant is not required to obtain the fill.

22. What is the most recent data of topographic survey for Bartram North and Bartram South that is available for use?

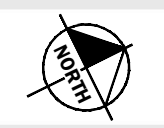
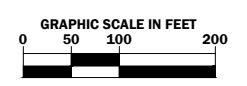
We do not have updated topographic data available.

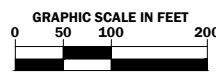
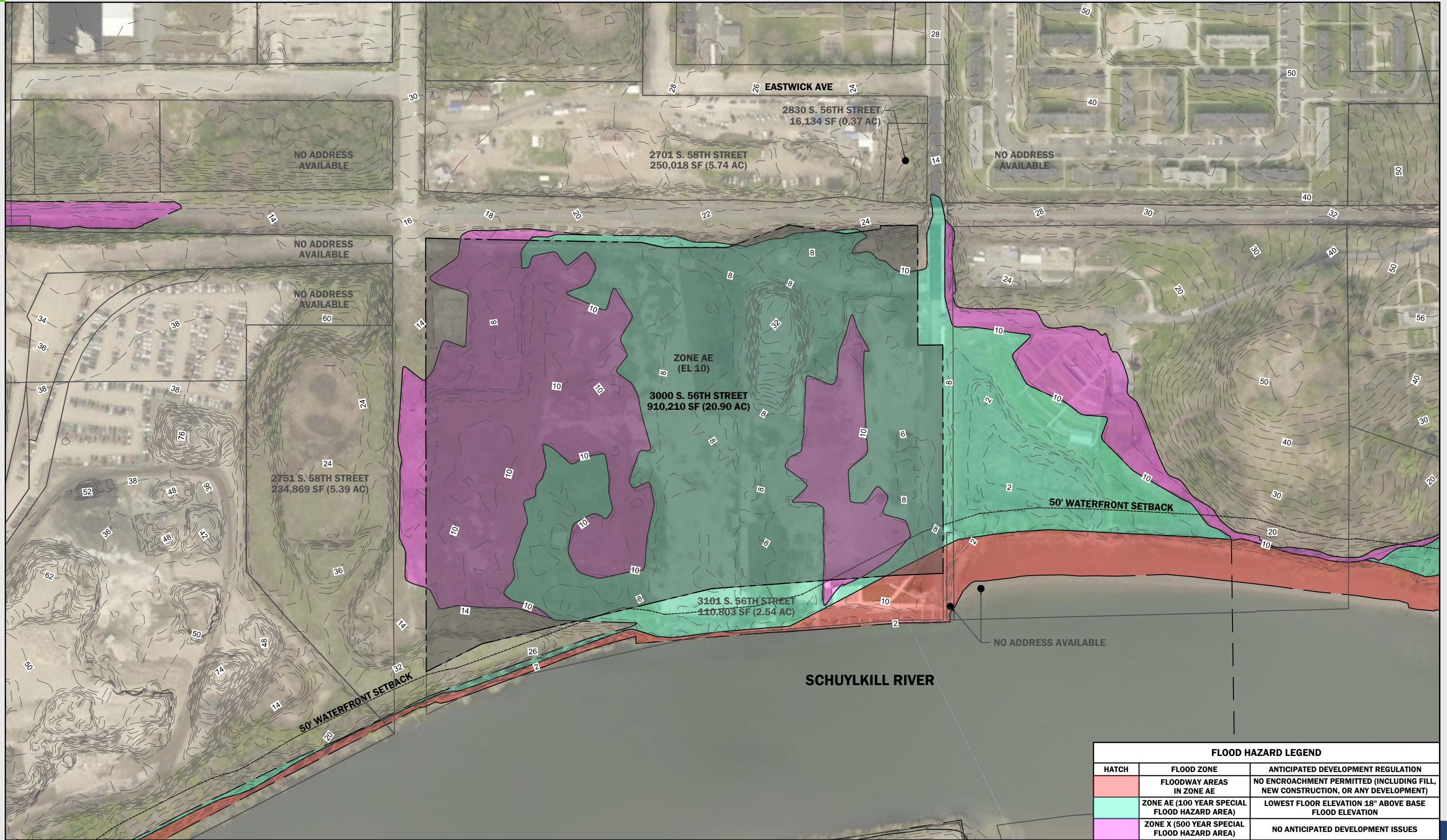
23. Is the portion of Bartram South that is south of the paper street S 58th Street considered part of the redevelopment?

Yes.



FLOOD HAZARD LEGEND		
HATCH	FLOOD ZONE	ANTICIPATED DEVELOPMENT REGULATION
[Red Hatch]	FLOODWAY AREAS IN ZONE AE	NO ENCROACHMENT PERMITTED (INCLUDING FILL, NEW CONSTRUCTION, OR ANY DEVELOPMENT)
[Green Hatch]	ZONE AE (100 YEAR SPECIAL FLOOD HAZARD AREA)	LOWEST FLOOR ELEVATION 18" ABOVE BASE FLOOD ELEVATION
[Pink Hatch]	ZONE X (500 YEAR SPECIAL FLOOD HAZARD AREA)	NO ANTICIPATED DEVELOPMENT ISSUES





This Document Recorded Doc Id: 53643010 Doc Code: DM
03/10/2020 03:10 PM Receipt #: 20-26892
Rec Fee: \$256.75
Records Department, City of Philadelphia IP

When recorded, return to:

Ilene Burak, Esq.
Philadelphia Authority for Industrial Development
1500 Market Street
Suite 2600 West
Philadelphia, PA 19102

The County Parcel Identification No. of the Property is: 88-5-8916-40

GRANTOR: Philadelphia Authority for Industrial Development

PROPERTY ADDRESS: 1631 South 49th Street, Philadelphia, PA 19143

ENVIRONMENTAL COVENANT

This Environmental Covenant is executed pursuant to the Pennsylvania Uniform Environmental Covenants Act, Act No. 68 of 2007, 27 Pa. C.S. §§ 6501 – 6517 (“UECA”). This Environmental Covenant subjects the Property identified in Paragraph 1 to the activity and/or use limitations in this document. As indicated later in this document, this Environmental Covenant has been approved by the Pennsylvania Department of Environmental Protection (“Department”).

1. **Property affected.** The property affected (“Property”) by this Environmental Covenant is located in the city of Philadelphia, Philadelphia County.

The postal street address of the Property is: 1631 South 49th Street, Philadelphia PA 19143.¹

The latitude and longitude of the center of the Property affected by this Environmental Covenant is at 39°56’20” (in degrees-minutes-seconds) north latitude and 75°12’25” west longitude.

The Property has been known by the following names: the Former National Heat and Power Site, and Bartram North.¹ The DEP Primary Facility ID No. is 763476.

A complete description of the Property is attached to this Environmental Covenant as Exhibit “A.” A map of the Property is attached to this Environmental Covenant as Exhibit “B.”

¹ The Property was formerly part of the former National Heat and Power Site (“the Site”) identified as Tax Parcel No. 88-4-100001, with an address of 1633 South 49th Street, Philadelphia PA 19143. However, as a result of re-zoning of the area following the soil remediation activities, the Site was subdivided into two parcels with the address of 1637 South 49th Street, Philadelphia, PA 19143, which is owned by the City of Philadelphia and is identified as Parcel No. 88-5-8915-20, and the Property at 1631 South 49th Street, Philadelphia, PA 19143, referenced above.

2. **Property Owner / GRANTOR / GRANTEE.** The Philadelphia Authority for Industrial Development (“PAID”) is the owner of the Property and the GRANTOR and GRANTEE of this Environmental Covenant.

3. The mailing address of the Owner is:

Philadelphia Authority for Industrial Development
1500 Market Street
Suite 3500 West
Philadelphia, PA 19102

4. **Description of Contamination & Remedy.** As is more fully described in the final report entitled the “Final Report for Soil”, dated January 2017, and prepared by Duffield Associates, Inc., (the “Final Report”), the soil at the Property has been impacted by various compounds relating to petroleum products that had been stored onsite, including gasoline, number 2 and number 6 fuel oil and as more completely listed in Table 10 of the Final Report.² The remedy involved removing the storage tank infrastructure along with approximately 2,470 tons of contaminated soil and approximately 7,700 gallons of contaminated groundwater mixed with light non-aqueous phase liquid (LNAPL). The property was also regraded with clean fill that provided at least two feet of clean material over areas of concern. An LNAPL plume remains localized in one area of concern at former monitoring well MW4. The Final Report demonstrates that the Property has achieved a Site-Specific Standard for soil through pathway identification and elimination, and through the implementation of institutional controls, in accordance with the Pennsylvania Land Recycling and Remediation Standards Act (“Act 2”), which attainment has received approval from the Department.³

The Final Report and other information concerning environmental conditions at the Property are on file and may be reviewed at the Department’s Southeast Regional Office located at 2 East Main Street, Norristown, PA 19401.

5. **Activity & Use Limitations.** The Property is subject to the following activity and use limitations, including a requirement that at least once per calendar year, the then current owner of the Property shall perform an inspection to ensure that the capping remains in place and that any observed damage to the cap shall be promptly repaired. A record of each annual cap inspection and documentation of any repairs during that year shall be maintained by the then current owner of the Property. In addition, the then current owner of the Property, and its tenants, agents, employees and other persons under its control, shall abide by:

² The Final Report for Soil details remedial activities and site conditions at the two parcels that comprise the former National Heat and Power Site (the “Site”), which, as stated above, have addresses of 1631 South 49th Street, Philadelphia, PA 19143, and the Property at 1637 South 49th Street, Philadelphia, PA 19143, referenced above.

³ The Department’s approval letter for the Final Report for Soil, dated May 8, 2017 is attached hereto as Exhibit “C.”

(a) a restriction on the use of the Property, such that the use is limited to commercial or industrial activity, excluding schools, daycare facilities, playgrounds, nursing homes and other residential-style facilities and recreational areas as defined in Act 2 and its regulations;

(b) a restriction on any future development at the Property such that any excavation, construction, or other activity that may result in contact with impacted soils shall be done under a subsequent Cleanup Plan and Department-approved Final Report, with changes to this Environmental Covenant as appropriate, which shall, at minimum, include provisions for management of Light Non-Aqueous Phase Liquid (“LNAPL”), and vapor intrusion where redevelopment plans include enclosed structures, a Health and Safety Plan (HASP), as well as the development of Soil Management and Post-Remediation Care Plans, to be approved by the Department as well; and

(c) a restriction that groundwater beneath the property shall not be used for any purpose.

6. **Notice of Limitations in Future Conveyances.** Each instrument hereafter conveying any interest in the Property subject to this Environmental Covenant shall contain a notice of the activity and use limitations set forth in this Environmental Covenant and shall provide the recorded location of this Environmental Covenant.

7. **Compliance Reporting.** After written request by the Department, the then current owners of the Property shall submit to the Department written documentation stating whether or not the activity and use limitations in this Environmental Covenant are being abided by. In addition, within one (1) month after any of the following events, the then current owner of the Property shall submit, to the Department written documentation of: noncompliance with the activity and use limitations in this Environmental Covenant; transfer of the Property; changes in use of the Property; or filing of applications for building permits for the Property and any proposals for any site work, if the building or proposed site work will affect the contamination on the Property subject to this Environmental Covenant.

8. **Access by the Department.** In addition to any rights already possessed by the Department, this Environmental Covenant grants to the Department a right of reasonable access of the Property in connection with implementation or enforcement of this Environmental Covenant.

9. **Recording & Proof of Notification.** Within 30 days after the date of the Department’s approval of this Environmental Covenant, PAID shall file this Environmental Covenant with the Recorder of Deeds for each County in which the Property is located, and send a file-stamped copy of this Environmental Covenant to the Department within 60 days of recording. Within that time period, PAID also shall send a file-stamped copy to the County of Philadelphia

10. **Termination or Modification.**

(a) This Environmental Covenant may only be terminated or modified in accordance with 27 Pa. C.S. §§ 6509 or 6510, or in accordance with this paragraph.

(b) This Environmental Covenant may be amended or terminated as to any portion of the Property that is acquired for use as state highway right-of-way by the Commonwealth provided that: (1) the Department waives the requirements for an environmental covenant and for conversion pursuant to 27 Pa. C.S. §6517 to the same extent that this Environmental Covenant is amended or terminated; (2) the Department determines that termination or modification of this Environmental Covenant will not adversely affect human health or the environment; and (3) the Department provides 30-days advance written notice to the current property owner, and, as practicable, each person that originally signed the Environmental Covenant or successors in interest to such persons.

(c) This Environmental Covenant shall terminate upon attainment, in accordance with 35 P.S. §§ 6026.101 – 6026.908, with an unrestricted use remediation standard for the above-described contamination at the Property. The Department must approve, in writing, of such termination.

(d) In accordance with 27 Pa. C.S. § 6510(a)(3)(i), Grantor hereby waives the right to consent to any amendment or termination of the Environmental Covenant by consent; it being intended that any amendment to or termination of this Environmental Covenant by consent in accordance with this Paragraph requires only the following signatures on the instrument amending or terminating this Environmental Covenant: (i) the then current owner of the Property and (ii) the Department.

11. **Department's address.** Communications with the Department regarding this Environmental Covenant shall be sent to:

Ragesh Patel
Regional Manager
Environmental Cleanup and Brownfields
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401

12. **Severability.** The paragraphs of this Environmental Covenant shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.

ACKNOWLEDGMENTS by Owners, in the following form:

Philadelphia Authority for Industrial Development
Grantor/Grantee

Date: 12/30/2019

By: Evelyn F. Smalls

Name: Evelyn F. Smalls

Title: Chairperson

APPROVED, by Commonwealth of Pennsylvania,
Department of Environmental Protection

Date: 01/27/2020

By: Ragesh R. Patel

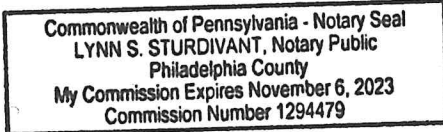
Name: Ragesh R. Patel

Title: Manager, SERO Environmental Cleanup and
Brownfields Program

COMMONWEALTH OF PENNSYLVANIA)
)
COUNTY OF Philadelphia) SS:

On this 30th day of December, 2019, before me, the undersigned officer, personally appeared Evelyn F. Smalls [Grantor/Grantee] who acknowledged himself/herself to be the person whose name is subscribed to this Environmental Covenant, and acknowledged that s/he executed same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.



Lynn S. Sturdivant
Notary Public

COMMONWEALTH OF PENNSYLVANIA)
)
COUNTY OF MONTGOMERY) SS:

On this 27th day of JANUARY, 2020 before me, the undersigned officer, personally appeared Ragesh Patel, who acknowledged himself to be the Manager of the Environmental Cleanup and Brownfields Program of the Commonwealth of Pennsylvania, Department of Environmental Protection, Southeast Regional Office, whose name is subscribed to this Environmental Covenant, and acknowledged that s/he executed same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Judy Lashley
Notary Public

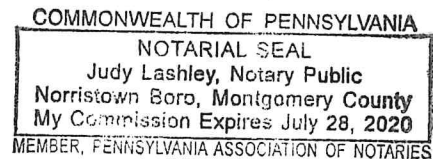


EXHIBIT A

PROPERTY DESCRIPTION
1631 and 1637 South 49th Street, Philadelphia, PA 19143

The Property is approximately 12.6 acres in size and is zoned I-2 Industrial. The approximate center of the Property is at 39°56'20" (degrees-minutes-seconds) north latitude and 75°12'25" west longitude. A map showing the location of the Property is depicted in Exhibit "B".

The Property is comprised of two adjoining tax parcels located in the City of Philadelphia as noted below:

Account Number	Address	Owner
88 5 8916 40	1631 South 49th Street	Philadelphia Authority for Industrial Development
88 5 8915 20	1637 South 49th Street	City of Philadelphia

The PAID parcel is on the upland portion of the Property and the City of Philadelphia parcel is a portion of Bartram's Mile, a multi-use trail located along the western bank of the Schuylkill River (herein referred to as "Bartram's Trail"). Access to the Property is at the intersection of 49th Street and Botanic Avenue.

The Property is bound by the Grays Ferry Avenue Bridge to the north, the Schuylkill River to the east, Philadelphia Waste Services, Inc. (recycling center) to the south, and the former Keystone Dita Corporation site (Dita Oil) and freight railroad tracks to the west.

The elevation of the ground surface at the Property ranges from approximately 10 to 50 feet above mean sea level, gently sloping towards the Schuylkill River. The upper terrace of the site is approximately 25 feet above the Schuylkill River water level. From the center of the Property, elevation drops nearly 10 feet toward the river at the lower terrace.

As part of remedial activities during the period of December 10, 2014 through June 30, 2015, structures that once were used to support oil terminal operations (e.g., concrete tank pads and foundations, and outbuildings) were demolished and removed from the site. Site restoration included importing and placing approximately 12,000 cubic yards of clean fill.

The riverfront portion of the Property was redeveloped for a multi-use trail. "Bartram's Trail" is a 1.1-mile running, walking, and biking trail that opened in April 2017. A portion of the trail is located on the Property along the west bank of the Schuylkill River and is constructed of a 12-foot wide asphalt-paved roadway.

EXHIBIT B

[Insert Property Map Figures]

Legend
 Property Boundary
 Areas of Concern requiring Post-Remediation Care (Cap Maintenance)

BASEMAP: VAS
 DRAWN BY: VAS
 CHECKED BY: JLG
 FILE: 5579_EC_1216_ProgBoundary.mxd

PHILADELPHIA-PHILADELPHIA COUNTY-PENNSYLVANIA
 PHILADELPHIA, PENNSYLVANIA
 FORMER NATIONAL HEAT AND POWER

DATE: DECEMBER 2018
 SCALE: AS SHOWN
 DUFFIELD PROJECT NO.: 9579 EC
 SHEET: 1 OF 1



N

CONRAIL RAILLINE

1631 SOUTH 49TH STREET
 (Acct. No.: 885891640)

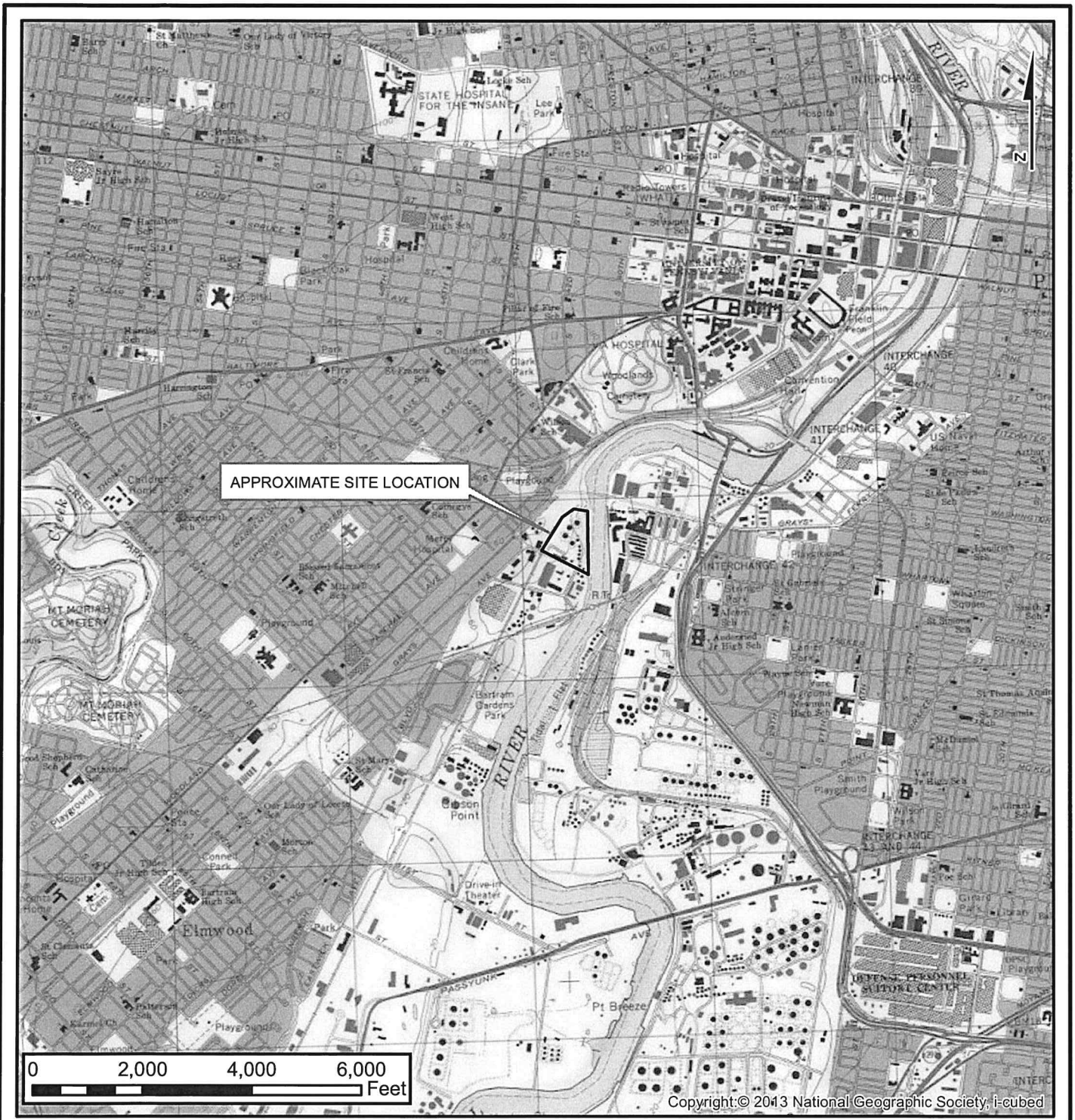
AREA WHERE LNAPL REMAINS

"BARTRAM'S TRAIL"
 1637 SOUTH 49TH STREET
 (Acct. No.: 885891520)

49TH STREET

BOTANIC AVENUE

SCHUYLKILL RIVER



Date:
08/2018

SCALE:
AS SHOWN

PROJECT NO.
9579.ED

SHEET:
FIGURE 1

FIGURE 1 - SITE LOCATION SKETCH

**FORMER NATIONAL HEAT & POWER SITE
PHILADELPHIA, PENNSYLVANIA
E-FACTS SITE ID NO. 586862**

PHILADELPHIA-PHILADELPHIA COUNTY-PENNSYLVANIA

DESIGNED BY: VAS

DRAWN BY: VAS

CHECKED BY: JLG

FILE:
9579.ED.0818.Site.mxp

DUFFIELD ASSOCIATES
Soil, Water & the Environment

5400 LIMESTONE ROAD
WILMINGTON, DE 19808-1232
TEL. (302)239-6634
FAX (302)239-8485

OFFICES IN PENNSYLVANIA,
SOUTHERN DELAWARE,
MARYLAND AND NEW JERSEY

EMAIL: DUFFIELD@DUFFNET.COM

EXHIBIT C



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

May 8, 2017

Ms. Monica Trudeau, P.E.
Philadelphia Authority for Industrial Development
2600 Canter Square West
1500 Market Street
Philadelphia, PA 19102

Re: Site-Specific Final Report Approval
National Heat & Power
eFACTS PF No. 763476
1633 South 49th Street
City of Philadelphia

Dear Ms. Trudeau:

The Department of Environmental Protection (DEP) reviewed the document titled "Final Report for Soil" (report), for the property located at 1633 South 49th Street Philadelphia, Pennsylvania. The report was prepared by Duffield Associates and submitted to DEP in accordance with the Land Recycling and Environmental Remediation Standards Act (Act 2) and constitutes a Final Report as defined in Chapter 3 of Act 2.

DEP hereby approves this Final Report for the substances identified and remediated to an Act 2 standard within the sites specified. Chapter 5, Section 501 of Act 2, provides the liability protection where attainment of Act 2 cleanup standards is demonstrated. The cleanup liability protection provided by this chapter applies to the current and future owner or any other person who participated in the remediation; a person who develops or occupies the property; successor or assign of any person to whom liability protection applies; and a public utility to the extent the public utility performs activities on the identified property.

This project attained a site-specific standard for soil. The attainment sampling for groundwater is on-going and a final post remediation care plan (PRCP) will be implemented upon approval of the Final Report for Groundwater.

The Uniform Environmental Covenants Act (Act 68 of 2007), Title 27, Pa. C.S. Chapter 65 (UECA) and accompanying regulations provided a standardized process for creating, documenting and assuring the enforceability of activity and use limitations on contaminated properties involving most engineering and institutional controls used to achieve Act 2 standards. Since the report utilizes activity and use limitations or will have post remedial care obligations to meet and or attain the site-specific, an environmental covenant is required to be submitted within 30 days of the receipt of the approval letter.

May 8, 2017

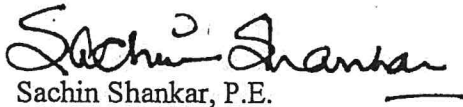
Thank you for your cooperation in working with the department in the remediation of this site. If you have any questions or need further information regarding this matter, please contact Mr. J. Michael Penzone, P.G. by email at jpenzone@pa.gov or by telephone at 484.250.5786.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

If you want to challenge this action, your appeal must reach the Board within 30 days. You do not need a lawyer to file an appeal with the Board.

Important legal rights are at stake, however, so you should show this document to a lawyer at once. If you cannot afford a lawyer, you may qualify for free pro bono representation. Call the secretary to the Board (717.787.3483) for more information.

Sincerely,



Sachin Shankar, P.E.
Assistant Regional Director
Southeast Regional Office

cc: Ms. Gresh, P.G. - Duffield
City of Philadelphia Department of Health
Ms. Warren
Ms. Bass
Ms. Kennedy, P.G.
Re 30 (rc17ecb) 128.2



May 29, 2019

Elizabeth Gabor
Real Estate Manager
Philadelphia Authority for Industrial Development
2600 Centre Square West
1500 Market Street
Philadelphia, PA 19102

Re: Statewide Health Standard, Final Report Approval
National Heat & Power
eFACTS PF No. 763476
eFACTS Activity No. 45024
1627-35 S. 49th Street
City of Philadelphia
Philadelphia County

Dear Ms. Gabor:

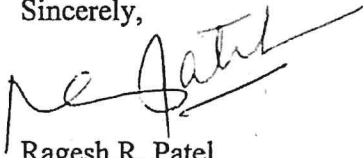
The Department of Environmental Protection (DEP) reviewed the February 2019 document titled "Final Report for Groundwater," (report), May 20, 2019 documents titled "Addendum to Final Report for Groundwater" and "Detailed Site Evaluation" and the February 21, 2013 document titled "Preliminary Wetland Delineation and Habitat Assessment Results" for the property referenced above. The report as amended was prepared by Duffield Associates, Inc. and submitted to DEP in accordance with the Land Recycling and Environmental Remediation Standards Act (Act 2), and it constitutes a final report as defined in Chapter 3 of Act 2.

DEP hereby approves this final report for the substances identified and remediated to an Act 2 standard within the site(s) specified. Chapter 5, Section 501 of Act 2, provides the liability protection where attainment of Act 2 cleanup standards is demonstrated. The cleanup liability protection provided by this chapter applies to the current and future owner or any other person who participated in the remediation; a person who develops or occupies the property; successor or assign of any person to whom liability protection applies; and a public utility to the extent the public utility performs activities on the identified property(ies).

This project attained a residential Statewide Health Standard for benzene, toluene, ethylbenzene, cumene, methyl tertiary butyl ether (MTBE), naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and dissolved lead in groundwater.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

Sincerely,



Ragesh R. Patel
Regional Manager
Environmental Cleanup and Brownfields

Enclosure: Standard Attachment

cc: Ms. Gresh, P.G., Duffield Associates, Inc.
Philadelphia County
City of Philadelphia
Mr. Brown, P.G., DEP
Ms. Mapleton, DEP
Ms. Bass, DEP
Re 30 (hmw19ecb) 149



When recorded, return to:

Monica Trudeau, P.E.

Philadelphia Industrial Development Corporation

1500 Market Street

Suite 2600 West

Philadelphia, PA 19102

The County Parcel Identification No. of the Property is: 402026700

GRANTOR: Philadelphia Authority for Industrial Development

PROPERTY ADDRESS: 2700 South 58th Street, Philadelphia, PA

ENVIRONMENTAL COVENANT

This Environmental Covenant is executed pursuant to the Pennsylvania Uniform Environmental Covenants Act, Act No. 68 of 2007, 27 Pa. C.S. §§ 6501 – 6517 (“UECA”). This Environmental Covenant subjects the Property identified in Paragraph 1 to the activity and/or use limitations set forth in this document. As indicated later in this document, this Environmental Covenant has been approved by the Pennsylvania Department of Environmental Protection (“Department”).

1. **Property Affected.** The property affected (“Property”) by this Environmental Covenant is located in Philadelphia County.

The postal street address of the Property is: 2700 South 58th Street, Philadelphia, PA.

The latitude and longitude of the center of the Property affected by this Environmental Covenant is: Latitude: 39°55’38.86” Longitude: -75°12’52.14’

The Property has been known by the following name(s): former Transmontaigne and US Gypsum Sites. The Department’s tracking numbers are PF 738660; 51-42832; 51-43224.

A complete description of the Property is attached to this Environmental Covenant as Exhibit “A.” A map of the Property is attached to this Environmental Covenant as Exhibit “B.”

2. **Property Owner / GRANTOR / GRANTEE.** The Philadelphia Authority for Industrial Development is the owner of the Property and the GRANTOR and GRANTEE of this Environmental Covenant.

3. The mailing address of the owner is 1500 Market Street, Suite 2600 West, Philadelphia, PA 19102.

4. **Description of Contamination & Remedy.** As is more fully described in the final report entitled "Final Report for Groundwater" prepared by Duffield Associates and dated October 14, 2016 (the Final Report") and the Department's approval of the Final Report dated January 5, 2017, (the Department's letter attached hereto as Exhibit "C"), the groundwater at the Property had been impacted by: benzene, 1,2-dichloroethane, ethylbenzene, isopropylbenzene, methyl tert butyl ether, naphthalene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, xylenes (total), chrysene, phenanthrene, pyrene and Hexachlorobutadiene. The Final Report demonstrates that the Property has achieved a site-specific remediation of groundwater in accordance with the Pennsylvania Land Recycling and Remediation Standards Act (Act 2), which has received the approval of the Department. The Final Report and other information concerning environmental conditions at the Property is on file and may be reviewed at the Department's Southeast Regional office located at 2 East Main Street, Norristown, PA 19401.

5. **Activity & Use Limitations.** The Property is subject to the following activity and use limitations, which the then current owner of the Property, and its tenants, agents, employees and other persons under its control, shall abide:

- (a) restriction on the use of groundwater at the Property;
- (b) existing soil conditions, along with the potential for vapor intrusion, shall be addressed during future redevelopment of the Property under a Department approved Remedial Investigation Report/Cleanup Plan (RIR/CP). The RIR/CP shall also include provisions for management of LNAPL at the Property during and after construction; and
- (c) a Post-Remediation Care Plan for soil shall be prepared by the site developer of the Property after site development plans have been finalized and a Final Report for Soil has been approved by the Department.

6. **Notice of Limitations in Future Conveyances.** Each instrument hereafter conveying any interest in the Property subject to this Environmental Covenant shall contain a notice of the activity and use limitations set forth in this Environmental Covenant and shall provide the recorded location of this Environmental Covenant.

7. **Compliance Reporting.** After written request by the Department, the then current owner of the Property shall submit, to the Department and any Holder listed in Paragraph 3, written documentation stating whether or not the activity and use limitations in this Environmental Covenant are being abided by. In addition, within 1 month after any of the following events, the then current owner of the Property shall submit, to the Department and any Holder listed in Paragraph 3, written documentation regarding the following: noncompliance with the activity and use limitations in this Environmental Covenant; transfer of the Property; changes in use of the Property; or filing of applications for building permits for the Property and any proposals for any site work, if the building or proposed site work will affect the contamination on the Property subject to this Environmental Covenant.

8. **Access by the Department.** In addition to any rights already possessed by the Department, this Environmental Covenant grants to the Department a right of

reasonable access of the Property in connection with implementation or enforcement of this Environmental Covenant.

9. **Recording & Proof & Notification.** Within 30 days after the date of the Department's approval of this Environmental Covenant, the Philadelphia Authority for Industrial Development shall file this Environmental Covenant with the Recorder of Deeds for Philadelphia County and send a file-stamped copy of this Environmental Covenant to the Department within 60 days of recording.

10. **Termination or Modification.**

(a) This Environmental Covenant may only be terminated or modified in accordance with 27 Pa. C.S. §§ 6509 or 6510, or in accordance with this paragraph.

(b) This Environmental Covenant may be amended or terminated as to any portion of the Property that is acquired for use as state highway right-of-way by the Commonwealth provided that: (1) the Department waives the requirements for an environmental covenant and for conversion pursuant to 27 Pa. C.S. §6517 to the same extent that this Environmental Covenant is amended or terminated; (2) the Department determines that termination or modification of this Environmental Covenant will not adversely affect human health or the environment; and (3) the Department provides 30-days advance written notice to the current Property owner, each holder, and, as practicable, each person that originally signed the Environmental Covenant or successors in interest to such persons.

(c) This Environmental Covenant shall terminate upon attainment, in accordance with 35 P.S. §§ 6026. 101 – 6026.908, with an unrestricted use remediation standard for the above-described contamination at the Property. The Department must approve, in writing, of such termination.

(d) In accordance with 27 Pa. C.S. § 6510(a)(3)(i), Grantor hereby waives the right to consent to any amendment or termination of the Environmental Covenant by consent; it being intended that any amendment to or termination of this Environmental Covenant by consent in accordance with this Paragraph requires only the following signatures on the instrument amending or terminating this Environmental Covenant: (i) the Holder at the time of such amendment or termination; (ii) the then current owner of the Property and (iii) the Department.

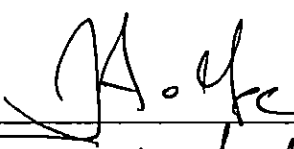
11. **Department's Address.** Communications with the Department regarding this Environmental Covenant shall be sent to:

Regional Manager
Environmental Cleanup and Brownfields
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401


12. **Severability.** The paragraphs of this Environmental Covenant shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.

ACKNOWLEDGMENTS by Owner, in the following form:

Grantor/Grantee - Philadelphia Authority for Industrial Development

Date: 9-28-2017 By: 
Name: Joseph A. Lofe
Title: Assistant Secretary

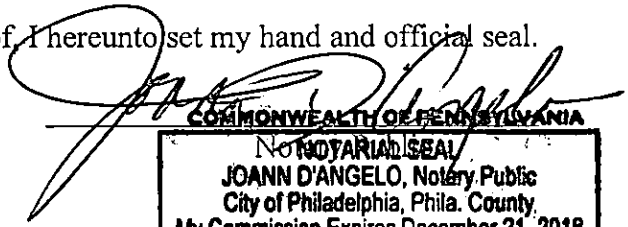
APPROVED, by Commonwealth of Pennsylvania,
Department of Environmental Protection

Date: 10-27-2017 By: 
Name: ^R Ragesh Patel
Title: Manager, SERO's Environmental Cleanup and Brownfields Program

COMMONWEALTH OF PENNSYLVANIA)
COUNTY OF Philadelphia) SS:

On this 28 day of September, 2017, before me, the undersigned officer, personally appeared Joseph A. Mee [Grantor] who acknowledged himself to be the person whose name is subscribed to this Environmental Covenant, and acknowledged that s/he executed same for the purposes therein contained.

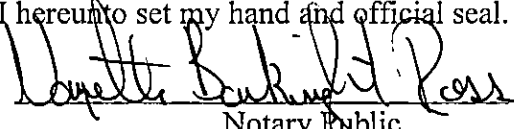
In witness whereof, I hereunto set my hand and official seal.


COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
JOANN D'ANGELO, Notary Public
City of Philadelphia, Phila. County
My Commission Expires December 21, 2018

COMMONWEALTH OF PENNSYLVANIA)
COUNTY OF Montgomery) SS:

On this 27th day of October, 2017, before me, the undersigned officer, personally appeared Ragesh Patel, who acknowledged himself to be the Manager of the Environmental Cleanup and Brownfields Program of the Commonwealth of Pennsylvania, Department of Environmental Protection, Southeastern Regional Office, whose name is subscribed to this Environmental Covenant, and acknowledged that he executed same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.


Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Vanetta Bouknight Ross, Notary Public
Norristown Boro, Montgomery County
My Commission Expires Dec. 1, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Exhibit A

Prepared by and Return to:

Ilene Burak, Esq.
PIDC
1500 Market Street
Suite 2600 West Tower
Philadelphia, PA 19102

Old OPA Numbers:

88-4158510 (3000 South 56th Street);

88-159000 (5736 Eastwick Ave); and

88-4156550 (2731 South 58th Street)

New OPA Numbers (after consolidation and subdivision):

88-4-1585-15 (3000 S. 56th Street) and

78-3-7643-00 (3101 S. 56th Street)

DEED OF CONSOLIDATION AND SUBDIVISION

THIS INDENTURE made the 22nd day of November, 2016 between **PHILADELPHIA AUTHORITY FOR INDUSTRIAL DEVELOPMENT**, a body corporate and politic existing under the laws of the Commonwealth of Pennsylvania, hereinafter called the Grantor, of the one part,

AND

PHILADELPHIA AUTHORITY FOR INDUSTRIAL DEVELOPMENT, a body corporate and politic existing under the laws of the Commonwealth of Pennsylvania hereinafter called the Grantee, of the other part,

WITNESSETH, That the said Grantor, for and in consideration of the sum of One Dollar (\$1.00) lawful money of the United States of America, unto it well and truly paid by the said Grantee, at or before the sealing and delivery, hereof, the receipt whereof is hereby acknowledged, has granted, bargained and sold, released and confirmed, and by these presents does grant, bargain and sell, release and confirm unto the said Grantee, its successors and assigns,

ALL THOSE CERTAIN PARCELS OF LAND as described on Exhibit "A" attached hereto,

TOGETHER with all and singular the structures, improvements, ways, streets, alleys, passages, waters, water-courses, liberties, privileges, hereditaments and appurtenances, whatsoever thereunto belonging, or in any wise appertaining, and the reversions and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, property, claim and demand whatsoever of it the said Grantor in law as in equity, or otherwise howsoever, of, in, and to the same and every part thereof.

TO HAVE AND TO HOLD the said parcels of land above described, with the improvements and structures thereon erected and the hereditaments and premises hereby granted, or mentioned and intended so to be, with the appurtenances, unto the said Grantee, its successors and assigns, to and for the only proper use and behoof of the said Grantee, its successors and assigns forever.

AND the said Grantor, for itself and its successors, does by these presents, covenant, grant and agree, to and with the said Grantee, its successors and assigns, that it, the said Grantor and its successors, all and singular the hereditaments and premises herein above described and granted, or mentioned and intended so to be, with appurtenances, unto the said Grantee, its successors and assigns, against the said Grantor and its successors, and against all and every person or persons whomsoever lawfully claiming or to claim the same or any part thereof, by, from or under Grantor, or any of them, shall and will, UNDER AND SUBJECT as aforesaid, WARRANT and forever DEFEND.

This is a Deed of Consolidation for the purpose of combining several parcels of land into two consolidated legal descriptions. There is no change in the ownership of the property.

The parcels being combined were previously identified as follows:

The legal descriptions for the parcels being combined are set forth on Exhibit "A".

The consolidated parcel is being subdivided pursuant to that certain Plan of Property Made for Parks and Recreation (2012/27SK/D4953-CP#247Sheet 2 of 2), dated June 11, 2012 and July 6, 2012, done by Allen Bomentre, Jr. P.L.S. Surveyor and Regulator for the 7th Survey District for the City of Philadelphia a copy of which is attached as Exhibit "B". The legal descriptions for the subdivided parcels are attached hereto as Exhibit "C".

One of the subdivided parcels is intended to be conveyed by Philadelphia Authority for Industrial Development as described in Exhibit "C" and the other subdivided will be conveyed to the City of Philadelphia.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the said Grantor has caused this Deed of Consolidation and subdivision to be executed and dated the day and year first above written.

PHILADELPHIA AUTHORITY FOR INDUSTRIAL DEVELOPMENT

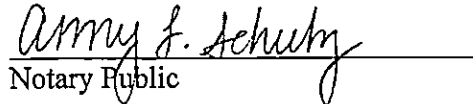


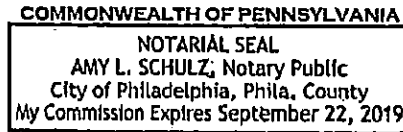
By: Name: Thomas A.K. Queenan
Title: Chairman

STATE OF PENNSYLVANIA :
:
: ss.
:
COUNTY OF PHILADELPHIA :

On this, the 22nd day of November, 2016, before me, a Notary Public, the undersigned officer personally appeared, Thomas A.K. Queenan, known to me (or satisfactorily proven) to be the Chairman of the PHILADELPHIA AUTHORITY FOR INDUSTRIAL DEVELOPMENT, a body corporate and politic existing under the laws of the Commonwealth of Pennsylvania, acknowledged that he as such Chairman, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the Authority as such Chairman

IN WITNESS WHEREOF, I hereunto set my hand and seal.


Notary Public



I hereby certify that the address of the above Grantee is:

c/o Philadelphia Industrial Development Corporation
1500 Market Street, Suite 2600 West
Philadelphia, PA 19102

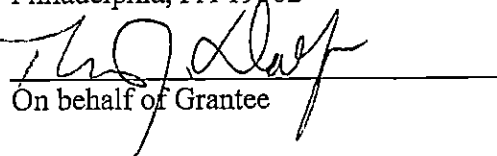

On behalf of Grantee

EXHIBIT "A"

ALL THAT CERTAIN lot or piece of ground, SITUATE in the 51st Ward of the City of Philadelphia described in accordance with an ALTA/ACSM Land Title Survey prepared by Rodriguez Consulting Engineers, Philadelphia, PA dated 11/8/2011 last revised 11/21/2011, as follows to wit:

BEGINNING at a point on the Northeasterly side of 58th Street (70 feet wide) at the distance of 1152.936 feet measured South 60 degrees 14 minutes 08 seconds East from the Southeasterly side of Lindberg Blvd. (108 feet wide & L.R. #67309); thence extending from said beginning point North 29 degrees 49 minutes 52 seconds East the distance of 210 feet to a point; thence extending North 60 degrees 14 minutes 08 seconds West partly crossing a 30 feet wide right-of-way or road the distance of 326.576 feet to a point on the southeasterly right-of-way line of the Chester Branch Reading Railroad; thence extending North 31 degrees 02 minutes 06 seconds East along the said side of the right-of-way line of the Chester Branch Reading Railroad the distance of 266.939 feet to a point; thence continuing along the said side of the right-of-way line of said railroad North 40 degrees 59 minutes 05 seconds East the distance of 55.068 feet to a point on the Westerly side of said 30 feet wide right-of-way or road; thence extending North 29 degrees 42 minutes 54 seconds East still along the said side of the right-of-way line of said railroad the distance of 55.744 feet to a point; thence extending North 72 degrees 37 minutes 05 seconds East the distance of 134.194 feet to a point in the bed of the aforementioned 30 feet wide right-of-way or road; thence extending, leaving said bed of 30 feet wide right-of-way or road South 60 degrees 14 minutes 08 seconds East the distance of 759.825 feet to a point on the Bulkhead and Pierhead Line of the Schuylkill River (approved by the Secretary of War – September 4, 1908); thence extending the following 3 courses and distances along the said Bulkhead and Pierhead Line (1) South 25 degrees 16 minutes 26 seconds West the distance of 43.725 feet (2) South 16 degrees 45 minutes 50 seconds West the distance of 647.616 feet (3) South 02 degrees 34 minutes 35 seconds West the distance of 163.003 feet to a point on the Northeasterly side of said 58th Street; thence extending North 60 degrees 14 minutes 08 seconds West along the said side of 58th Street the distance of 733.647 feet to the first mentioned point and place of beginning.

BEING PARCEL "E" on said plan and containing in area 13.08733 acres.

Tax Parcel No. 88-4159000; being known as 5736 Eastwick Avenue.

EXHIBIT "A" (CONTINUED)**PREMISES B****TRACT 1**

ALL THOSE CERTAIN tracts or pieces of land with the buildings and improvements thereon SITUATE in the 40th Ward of the City of Philadelphia, described as follows:

BEGINNING at a point on the Southwesterly side of 56th Street (70 feet wide) at the distance of nine hundred and eighty four and three hundred and eighty two one thousandths feet Southeastwardly from the Southeasterly side of Eastwick Avenue; thence extending South 60 degrees 14 minutes 08 seconds East along the Southwesterly side of 56th Street one hundred and sixty and seven hundred eighty nine one thousandths feet to a point in the Pierhead and Bulkhead Line of the Schuylkill River, approved by the Secretary of War, 9/4/1908; thence along the same South 29 degrees 07 minutes 43 seconds West thirty seven and two hundred and ninety seven one thousandths feet and South 25 degrees 16 minutes 26 seconds West three hundred and sixty three and eight hundred twenty two one thousandths feet to a point; thence North 60 degrees 14 minutes 08 seconds West on a line parallel with and 400 feet Southwestward from the Southwesterly side of 56th Street eight hundred and fifty nine and eight hundred twenty five one thousandths feet to a point on the Southeasterly right of way line of the Chester Branch of the Philadelphia and Reading Railway; thence along the same the 3 following courses and distances: North 08 degrees 33 minutes 15 seconds East one hundred and eighteen and one hundred and eighty five one thousandths feet to a point; North 39 degrees 16 minutes 01 second East one hundred thirty three and six hundred twenty four one thousandths feet to a point; and North 21 degrees 49 minutes 48 seconds East seventy five and eight hundred fifty four one thousandths feet to a point; thence South 55 degrees 28 minutes 46 seconds East four hundred sixty five and five hundred twelve one thousandths feet to a point thence South 38 degrees 28 minutes 46 seconds East 247 feet to a point; thence South 72 degrees 28 minutes 46 seconds East twenty and three hundred eighty one thousandths feet to a point in the Southwesterly side of 56th Street and place of beginning.

TRACT 2

BEGINNING at a point in the Southwesterly line of the first above described lot or piece of ground said point being seven hundred fifty nine and eight hundred twenty five one thousandths feet on said line, bearing North 60 degrees 14 minutes 8 seconds West from a point on the Pierhead and Bulkhead of the Schuylkill River, approved by the Secretary of War on 9/4/1908; thence South 72 degrees 37 minutes 5 seconds West one hundred thirty four and one hundred ninety four one thousandths feet to a point in the Southeasterly right of way of the Chester Branch of the Philadelphia and Reading Railway; thence, along the same North 29 degrees 42 minutes 54 seconds East seventy six and forty six one thousandths feet and North 8 degrees 33 minutes 15 seconds East twenty three and nine hundred fifty four one thousandths feet to the said Southwesterly line of the first above described premises; thence South 60 degrees 14 minutes 8 seconds East along same 100 feet to the place of beginning.

TRACT 3

ALL THAT CERTAIN lot or piece of ground, SITUATE in the City of Philadelphia, Commonwealth of Pennsylvania, bounded and described according to a Plan of Property prepared by Paul Lone PLS, Rodriquez Consulting Engineers, dated 7/10/2011, as follows, to wit:

BEGINNING at the point of intersection of the Southwest side of 56th Street (70' wide, legally open) with the Southeast right of way line of the Chester Branch of the Philadelphia and Reading Railroad Company; THENCE extending along the Southwest side of 56th Street, South 60 degrees 14 minutes 8 seconds East 708.978 feet to a point, said point also being North 60 degrees 14 minutes 8 seconds West 160.789 feet from the intersection of the said Southwest side of 56th Street with the approved Pierhead and Bulkhead line of the Schuylkill River; THENCE extending North 72 degrees 28 minutes 46 seconds West 20.380 feet to a point; THENCE extending North 88 degrees 28 minutes 46 seconds West 247.00 feet to a point; THENCE extending North 55 degrees 28 minutes 46 seconds West 473.098 feet to a point in the Southeast side of right of way line of the Chester Branch of the Philadelphia and Reading Railway Company; THENCE extending along said right of way line North 29 degrees 45 minutes 52 seconds East the distance of 81.982 feet to the first mentioned point and PLACE OF BEGINNING.

TRACT 4

ALL THAT CERTAIN lot or piece of ground, SITUATE in the 51st Ward of the City of Philadelphia and described in accordance with a Plan thereof made by Maurice H. Goldich Surveyor and Regulator of the 10th District on 01/20/64 as follows:

BEGINNING at a point on the Northeasterly side of 56th Street (on City Plan 40 feet wide and legally open) at the distance of two hundred eighty eight and thirty four one thousandths feet as measured South 60 degrees 14 minutes 8 seconds East along the said side of 56th Street from its intersection with the center line of the Philadelphia and Chester Branch of the Reading Company; thence extending along the Northeasterly side of former 56th Street (40 feet wide) South 60 degrees 14 minutes 8 seconds East a distance of six hundred six and four hundred sixty two one thousandths feet to a point on the Pierhead and Bulkhead line of Westerly side of Schuylkill River as approved by the Secretary of War, 9/4/1908; thence extending along said land of same South 29 degrees 7 minutes 43 seconds West a distance of twenty and one one thousandths feet to a point in the middle of former 56th Street; thence extending along said middle of former 56th Street North 60 degrees 14 minutes 8 seconds West a distance of six hundred six and six hundred eighty four one thousandths feet to a point in the line of 56th Street; thence crossing the bed of 56th Street North 29 degrees 45 minutes 52 seconds East a distance of 20 feet to the first mentioned point and place of beginning.

BEING the Northeasterly half of the bed of former 56th Street (40 feet wide); said 56th Street having been stricken from City Plan and vacated, but reserved as a right of way for drainage and water main purposes.

TRACT 5

ALL THAT CERTAIN lot or piece of ground, SITUATE in the 51st Ward of the City of Philadelphia.

BEGINNING at a point on the Southwesterly side of 56th Street (70 feet wide) at the distance of 288.034 feet more or less measured Southeastwardly from its intersection with the center line of the Philadelphia and Chester Branch of the Reading Company; thence extending from said point of beginning, Northeastwardly 35 feet more or less to a point in the center line of a 40 feet wide drainage and water main easement; thence extending Southeastward along the said center line of the drainage and water main easement 606 feet more or less to a point on the Pierhead and Bulkhead line of the Westerly side of the Schuylkill River as approved by the Secretary of War ,9/4/1908; thence extending Southwestwardly along said land of same 35 feet more or less to a point on the Southwesterly side of 56th Street; thence extending Northwestwardly along the Southwesterly side of 56th Street 606 feet more or less to a point being the first mentioned point and place of beginning.

TAX Parcel No. 88-4158510; being known as 3000 South 56th Street.

EXHIBIT "A" (CONTINUED)

BEGINNING at a point on the Northeasterly side of 58th Street (70 feet wide), a corner of the Chester Branch of the Reading Railroad, which point is measured along 58th Street, Southeasterly 821.702 feet from its point of intersection with the Southeasterly side of Lindberg Boulevard (108 feet wide); thence from said beginning point, leaving 58th Street and extending along the Chester Branch of the Reading Railroad, North 27 degrees 32 minutes 10 seconds East 210.000 feet to a point, a corner of lands now or formerly of Louis Dreyfuss Energy Corp. on said plan; thence extending along said lands, the two (2) following courses and distances, viz.: (1) South 63 degrees 44 minutes 07 seconds East, 326.576 feet to a point; thence (2) South 26 degrees 19 minutes 53 seconds West 210.000 feet to a point on the said Northeasterly side of 5th Street aforesaid; thence extending along 58th Street, North 63 degrees 44 minutes 07 seconds West 331.234 feet to the first mentioned point and place of beginning.

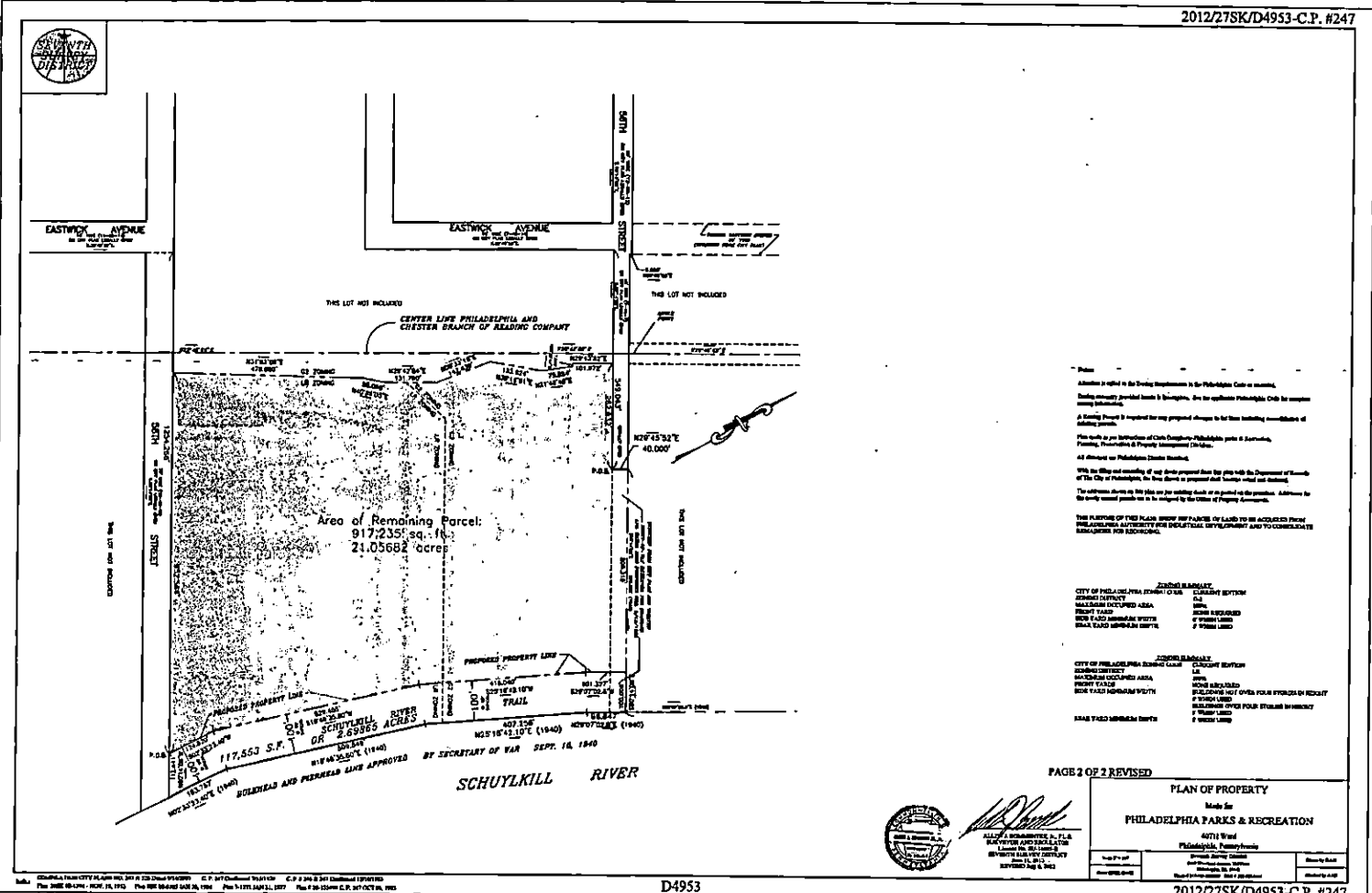
Tax Parcel No. 88-4156550

BEING Known as 2731 South 58th Street.

EXHIBIT "B"

COPY OF SUBDIVISION PLAN

2012/27SK/D4953-C.P. #247



Notes:
 Attention is called to the Deed Recorders in the Philadelphia City or County.
 Deeds are not provided herein to be complete, but to explain the boundaries of the property.
 A Survey Report is required for any proposed changes to the boundaries of the property.
 The work is the responsibility of the City of Philadelphia. Philadelphia is not responsible for the accuracy of the data shown on this map or for any errors in the data shown on this map.
 The City of Philadelphia is not responsible for the accuracy of the data shown on this map or for any errors in the data shown on this map.
 The City of Philadelphia is not responsible for the accuracy of the data shown on this map or for any errors in the data shown on this map.

JORDAN BARNETT
 CITY OF PHILADELPHIA STREETS & PORTS DEPARTMENT
 ADDRESS: 1515 MARKET STREET, PHILADELPHIA, PA 19102
 PHONE: 215-686-1500
 FAX: 215-686-1500
 EMAIL: jordan.barnett@phila.gov

PAGE 2 OF 2 REVISED



PLAN OF PROPERTY Made for PHILADELPHIA PARKS & RECREATION 4074 West Philadelphia, Pennsylvania	
Date of Survey 11/02/2017	Date of Plan 11/02/2017
Surveyor Jordan Barnett	Recorder Jordan Barnett

D4953

2012/27SK/D4953-C.P. #247

EXHIBIT "C"**DESCRIPTION OF PROPOSED PARCEL
"SCHUYLKILL RIVER TRAIL"**

100 FOOT STRIP OF GROUND LOCATED ON THE NORTHEASTERLY SIDE OF 58TH STREET AT A DISTANCE OF 112.441 FEET NORTHWESTWARDLY FROM THE INTERSECTION OF THE NORTHEASTERLY SIDE OF 58TH STREET AND THE BULKHEAD AND PIERHEAD LINE OF THE SCHUYLKILL RIVER APPROVED BY THE SECRETARY OF WAR SEPTEMBER 10, 1940

ALL THAT CERTAIN vacant lot or piece of ground

SITUATE in the 40th Ward of the City of Philadelphia, and described according to a Plan of Property (2012/27SK/D4953-CP#247 sheet 2 of 2 revised) made by Allen J. Bommentre Jr. P.L.S., Surveyor & Regulator of the Seventh Survey District, dated June 11, 2012 and revised July 6, 2012:

BEGINNING AT A POINT on the northeasterly side of 58th Street 70 feet wide, legally open, on City Plan, at the distance of 1254.266 feet southeastwardly from the intersection of the northeasterly side of said 58th Street and the southeasterly side of Eastwick Avenue projected out, (on City Plan & Legally Open 80' wide) said point being 112.441 feet northwestwardly from the intersection of the Pierhead and Bulkhead Line of the Schuylkill River approved by the Secretary of War September 10, 1940 and the said northeasterly side of 58th Street:

Thence extending along the westerly side of the Schuylkill River Trail N.02°33'23.40"E. the distance of 124.820 feet to an angle point;

Thence extending along the westerly side of the Schuylkill River Trail N.16°46'35.60"E. the distance of 529.455 feet to an angle point;

Thence extending along the westerly side of the Schuylkill River Trail N.25°16'42.10"E. the distance of 418.040 feet to an angle point;

Thence extending along the westerly side of the Schuylkill River Trail N.29°07'02.8"E. partly crossing the bed of former 56th Street (40' wide) Stricken from the City Plan and Vacated the distance of 101.327 feet to a point on the northerly side of said former 56th Street;

Thence extending along the same S.60°14'08"E. the distance of 100.006 feet to a point on the Pierhead and Bulkhead Line of the Schuylkill River approved by the Secretary of War September 10, 1940;

Thence extending along the said Pierhead and Bulkhead Line S.29°07'02.8"W. the distance of 96.847 feet to an angle point;

Thence extending along the said Pierhead and Bulkhead Line S.25°16'42.10"W. the distance of 407.256 feet to an angle point;

Thence extending along the said Pierhead and Bulkhead Line S.16°46'35.60"W. the distance of 509.549 feet to an angle point;

Thence extending along the said Pierhead and Bulkhead Line S.02°33'23.40"W. the distance of 163.757 feet to a point on the said northerly side of 58th Street;

Thence extending along the said northerly side of 58th Street N.60°14'08"W. the distance of 112.441 feet to a point; said point being **the first mentioned point and place of beginning.**

CONTAINING IN TOTAL AREA 117,553 Sq. Ft. or 2.69865 acres.

To be conveyed to the City of Philadelphia.

Tax Parcel No.:78-3-7643-00

Being known as 3101 S. 56th Street

**DESCRIPTION OF REMAINING PARCEL
LOCATED AT 549.043 SOUTHEAST FROM THE SOUTHEAST SIDE OF EASTWICK
AVENUE**

ALL THAT CERTAIN vacant lot or piece of ground **SITUATE** in the 40th Ward of the City of Philadelphia, and described according to a Plan of Property (2012/27SK/D4953-CP#247 sheet 2 of 2 revised) made by Allen J. Bommentre Jr. P.L.S., Surveyor & Regulator of the Seventh Survey District, dated June 11, 2012 and revised July 6, 2012:

BEGINNING at a point on the southwest side of 56th Street, on City Plan 40' wide, legally open at the distance of 549.043' southeast from the southeast side of Eastwick Avenue, on City Plan 69' wide, legally open;

THENCE extending and crossing the said southeasternmost terminus of 56th Street N.29°45'52"E. the distance of 40.000' to a point on the northeast side of said 56th Street;

THENCE extending along the northeast side of 56th Street, stricken from City Plan and vacated and being reserved as a right-of-way for drainage and water main purposes, S.60°14'08"E. the distance of 506.319' to a point on the westerly side of the Schuylkill River Trail;

THENCE extending and partly recrossing the said stricken 56th Street and also along the said westerly side of the Schuylkill River Trail S.29°07'02.8"W. the distance of 101.327' to an angle point;

THENCE extending along the same S.25°16'42.10"W. the distance of 418.040' to an angle point;

THENCE extending along the same S.16°46'35.6"W. the distance of 529.455' to an angle point;

THENCE extending the same S.02°33'23.4"W. the distance of 124.820' to a point on the northeast side of 58th Street, on City Plan 70' wide, legally open;

THENCE extending along the same N.60°14'08"W. the distance of 952.564' to a point on the southeast side of the Philadelphia and Chester Branch of Reading Company right-of-way;

THENCE extending along the same N.31°02'06"E. the distance of 476.990' to an angle point;

THENCE extending along the same N.40°59'05"E. the distance of 55.068' to an angle point;

THENCE extending along the same N.29°42'54"E. the distance of 131.790' to an angle point;

THENCE extending along the same N.08°33'15"E. the distance of 142.439' to an angle point;

THENCE extending along the same N.39°16'01"E. the distance of 133.624' to an angle point;

THENCE extending along the same N.21°49'48"E. the distance of 75.854' to a point;

THENCE extending along the same N.55°28'43"W. the distance of 7.586' to a point;

THENCE extending along the same N.29°42'52"E. the distance of 101.972' to a point on the said southwest side of 56th Street;

THENCE extending along the same S.60°14'08"E. the distance of 262.632' to the first mentioned point and place of beginning.

CONTAINING in area 917,235 sq. ft. or 21.05682 acres

Tax Parcel No.: 88-4-1585-15

Being known as 3000 South 56th Street

Exhibit B

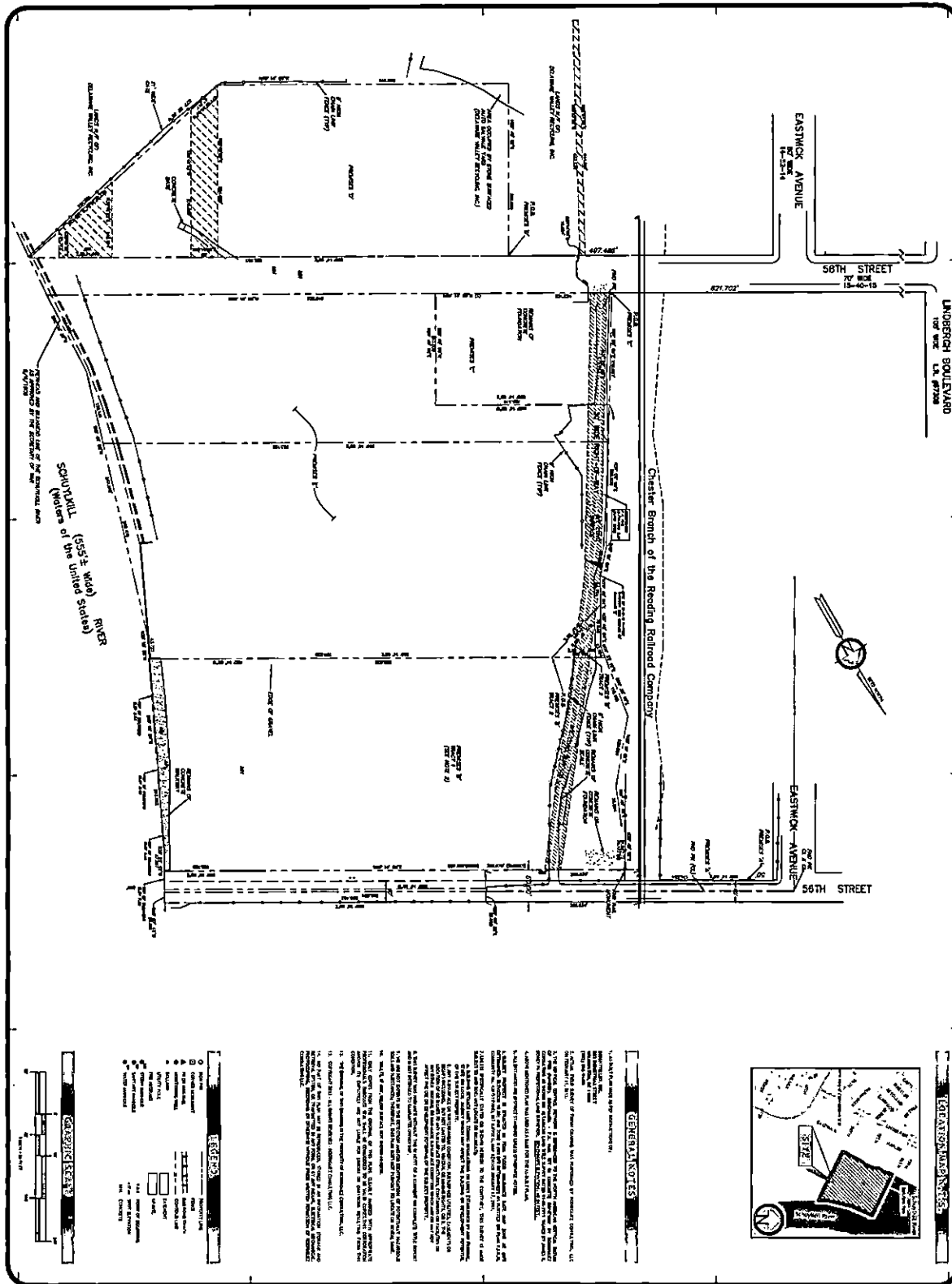


EXHIBIT B 2700 South 58th Street Philadelphia, PA FORMER TRANSMONTAIGNE SITE 58TH STREET & THE SCHUYLKILL RIVER PHILADELPHIA-PHILADELPHIA COUNTY-PENNSYLVANIA	DATE: 11/02/17 SCALE: 1"=100' PROJECT: ON	OWNER:	REVISION:	DESIGNED BY: R.D. DRAWN BY: MBE CHECKED BY:	FILE NAME:	DURFIELD ASSOCIATES 37 WEST 4TH STREET, SUITE 201 PHILADELPHIA, PA 19104 TEL: (215) 252-8754 FAX: (215) 252-8754 WWW.DURFIELDASSOCIATES.COM PHILADELPHIA-PA/PHILADELPHIA COUNTY, PA
	GENERAL NOTES:			LOCATION MAP:		

Exhibit C

Report of Geotechnical Investigation

**Bartram's North Assemblages and Bartram's
South Assemblages**

3000 South 56 Street;

1620 South 49th Street

1631 South 49th Street;

1700 South 49th Street; and

4910 Botanic Avenue

Philadelphia

Philadelphia County, Pennsylvania

Prepared For:

Kimley-Horn

Two Liberty Place

20 South 16th Street, Suite 1650

Philadelphia, PA 19102

Submitted: July 26, 2019

N&W #1905EC156





Report of Geotechnical Investigation

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2.3 Generalized Subsurface Conditions 3

2.4 Groundwater Conditions 5

3. Preliminary Recommendations and Earthwork Conditions 5

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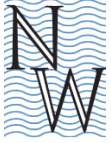
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- Appendix A: Boring Location Plan
- Appendix B: Drilling Logs (Test Boring)



Report of Geotechnical Investigation

1. Introduction

Navarro & Wright Consulting Engineers, Inc. (NWCE) has prepared this Geotechnical Investigation Report to document the background, methodology and conclusions regarding the subsurface conditions at properties located at properties defined as “Bartram’s North and Bartram’s South”. In general, the properties are located east of Lindeburgh Boulevard in the City of Philadelphia, Philadelphia County, Pennsylvania. The purpose of the investigation is to evaluate the subsurface conditions at the site in order to determine if the site can be developed or otherwise not.

1.1 Site Description

We understand that there are five sites which comprise two distinct development areas referred to as “Bartram’s North and Bartram’s South”.

Bartram’s North consists of about 18.8 acres and includes four properties as follows:

- 1620 South 49th Street;
- 1631 South 49th Street;
- 1700 South 49th Street; and
- 4910 Botanic Avenue

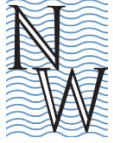
Bartram’s South comprises approximately 21.1 acres and consists of a single property addressed as 3000 South 56 Street.

In general, the subject properties are located east of Lindeburgh Boulevard in the City of Philadelphia, Philadelphia County, Pennsylvania. The sites are bound by the Schuylkill River to the east; bound by commercial and industrial properties to the north and south; and bound by railroad tracks and commercial and residential properties to the west. The site of the proposed construction/development is shown on the attached *Boring Location Plans* in Appendix A.

At the time of study, both sites were previously developed but were abandoned and relatively cleared. The topography of the site was relatively flat.

1.2 Project Description

At the time of this report, only preliminary conceptual plans were available for review and consisted of several industrial/manufacturing structures on both sites. At this time, final site layout, structural loading conditions and final grading schemes were not available. Therefore, based on the anticipated concepts,



Report of Geotechnical Investigation

N&W has assumed structural loading to be rather significant and due to the proximity of the Schuylkill River, site grades will likely be raised by several feet to get out of flood levels.

2. Field Investigation

2.1 Subsurface Investigation

A total of 12 geotechnical borings (referenced as B-01 through B-12) and one offset boring (referenced as B-05) were completed with six borings performed on each site by NWCE. The borings were advanced using a track-mounted drill rig using hollow stem augers and split spoons. The borings were advanced to termination depths ranging from approximately 20.5 feet to 47.0 feet below existing grades. The boring locations were field located based on existing land marks/features as references.

Soil borings and standard penetration tests (SPTs) were conducted in general accordance with ASTM designation D 1586. The SPT resistance value (N) can be used as an indicator of the consistency of fine-grained soils and the relative density of coarse-grained soils. The N-value for various soil types can be correlated with the engineering behavior of earthworks and foundations.

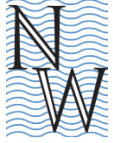
Groundwater level observations, when encountered, were recorded during and immediately after the completion of field operations prior to backfilling the borings. Seasonal variations, temperature effects, man-made effects, and recent rainfall conditions may influence the levels of the groundwater, and the observed levels will depend on the permeability of the soils. Groundwater elevations derived from sources other than seasonally observed groundwater monitor wells may not be representative of true groundwater levels.

2.2 Mapped Site Geology

The *Geologic Map of Pennsylvania* prepared by the Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Topographic and Geologic Survey dated 1980 indicates that the subject property is situated within the Atlantic Coastal Plain Province of Southeastern Pennsylvania. Specifically, the subject property is situated within the Trenton Gravel Formation. This formation generally consists of gray or pale-reddish-brown, very gravelly sand interstratified with cross-bedded sand and clayey silt beds of the Quaternary Age.

2.3 Generalized Subsurface Conditions

During the investigation, soil samples were obtained, visually examined and classified on site. The project site may be described below, in order of increasing depth:



Report of Geotechnical Investigation

- **Surface Cover Materials:** At the surface of borings B-03 and B-04, an approximately two feet thick layer of bituminous concrete was present. At the surface of B-09, an approximately two feet thick layer of concrete was present.
- **Existing Fill/Possible Fill Materials:** Either at or beneath the surficial materials at every boring, existing fill/possible fill materials were encountered to boring depths ranging from approximately five feet to 32 feet below the ground surface. The existing fill/possible fill materials generally consisted of sand and gravel with variable amounts of silt and construction debris such as concrete and brick fragments.
- **Cohesive Natural Soils:** Beneath the existing fill/possible fill materials at B-01 through B-05 and B-09, cohesive natural soils were encountered to boring depths ranging from approximately 30 feet to 40 feet below the ground surface. The cohesive natural soils generally consisted of silt (USCS: ML) and clay (USCS: CL) with variable amounts of silt and gravel. SPT N-values within this stratum ranged between the weight of the hammer over 24 inches (WOH/24") to split spoon sampler refusal (greater than 50 blows per foot (bpf)), generally indicating very soft to hard consistencies.
- **Granular Natural Soils:** Beneath the existing fill/possible fill materials at B-03 and B-07 through B-12, granular natural soils were encountered to boring depths ranging from approximately 38.4 feet to 40 feet below the ground surface. The granular natural soils generally consisted of sand (USCS: SM) and gravel (USCS: GP) with variable amounts of silt. This stratum is saprolitic, which means the underlying weathered rock has undergone advanced decomposition while maintaining its foliation and structure as a weathered rock. SPT N-values within this stratum ranged between the weight of the hammer over 24 inches (WOH/24") to split spoon sampler refusal (greater than 50 blows per foot (bpf)), generally indicating very soft to hard consistencies.
- **Bedrock:** Beneath the granular and cohesive natural soils at B-05 and B-06, auger refusal on the bedrock surface was encountered from approximately 9.5 feet to 30.1 feet below existing grades. The underlying rock at these locations was cored to evaluate the structural integrity and geologic properties. The following table summarizes the results of the rock coring activities.



Report of Geotechnical Investigation

Rock Coring Summary Table				
Boring	Depth (feet)	Run	Recovery	Rock Quality Designation (RQD)
B-05	30.1-32.1	1	95%	85%
	32.1-37.1	2	88%	38%
	37.1-40.1	3	100%	83%
B-06	9.5-11.5	1	100%	100%
	11.5-16.5	2	100%	88%
	16.5-20.5	3	100%	92%

The rock coring yielded recoveries ranging from 88% to 100% and rock quality designations (RQD) ranging from 38% to 100%. The RQD indicates that the underlying rock encountered varies from very poor to excellent.

The *Boring Logs* are located in Appendix B.

Each sample was visually classified in accordance with ASTM 2488. The soil strata tested were classified by the Unified Soil Classification System (USCS) and results of the laboratory testing are summarized in the following table.

2.4 Groundwater Conditions

Static groundwater was not recorded within any of the borings performed during this investigation. However, due to the proximity of the sites to the Schuylkill River, in our experience groundwater is anticipated to be encountered between five and 10 feet below existing grades.

It should be noted that fluctuations in the groundwater level can occur due to several factors, including variations in precipitation, seasonal changes, and site development activities.

3. Preliminary Recommendations and Earthwork Conditions

Based on the results of the subsurface investigation, heterogeneous fill materials with erratic densities underlain by compressible cohesive soils are present at each site. Conventional foundation and slab-on-grade construction is not feasible as direct contact on either of these materials will likely result in intolerable total and differential settlements leading to cracking of slabs and foundations as well as longitudinal distortion. In order to adequately support the proposed industrial developments at the subject sites, N&W has considered several foundation and ground improvement methods. Additionally, consolidation settlement will need to be considered should fills be laced on site.



Report of Geotechnical Investigation

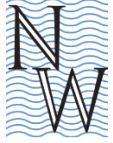
3.1 Foundation Support Options

As previously mentioned, the subsurface soils are not capable of providing adequate support without causing distress to future proposed construction. In order to bypass the unsuitable materials, deep foundations can be used. Several forms of deep foundations can be utilized on these sites including but not limited to timber or steel driven displacement piles, drilled shafts or caissons, ductile iron pipe piles and helical piers. Each deep foundation alternative has its pros and cons ranging from structural limitations and length to spoils control and removal from the site. For this site and anticipated construction, driven displacement piles may be the best option to eliminate the potential of spoils control, especially if contaminated. The structural loads are likely going to be significant, therefore, steel H section piles or open-ended pipe piles driven to refusal on the bedrock surface may need to be considered. Bedrock was encountered only within B-05 and B-06; it is recommended that additional drilling be performed to identify the depth to rock should this alternative be selected. Once final structural loads have been established, proper H pile selections can be determined. Steel deep foundations can sometimes be cost prohibitive, however, may be the best option for the proposed construction.

Another option considered is ground improvement which can be significantly more cost effective than steel deep foundations. Several alternatives were considered including but not limited to deep dynamic compaction (DDC), stone columns, rammed aggregate piers and controlled modulus columns. Due to the anticipated shallow groundwater depths and presence of cohesive materials, DDC, stone columns and rammed aggregate piers are not expected to provide adequate support as the materials will squeeze and bulge into the weak zones under loading. Controlled Modulus Columns, or CMCs, typically consist of aggregate vibrated to a design depth and compacted where zones of the CMC are treated with cementitious grout or concrete to stiffen the element through the weak subsurface zones. As previously mentioned, CMCs can be more cost effective than steel deep foundations. However, design of CMCs will require intimate detail and input from the proprietary designer/installer. Final design loading and site grades will be critical to determine if CMCs can actually be implemented.

3.2 Consolidation Settlement

At the time of this report, final site grading is unknown. It is anticipated that fill will be required to raise site grades to avoid flooding concerns. Due to the presence of soft, compressible soils at both sites, any fills placed will result in consolidation settlement. For the purposes of this investigation, one dimensional consolidation was not performed. However, once final site grading has been determined, supplemental test borings should be performed not only to define the top of rock surface at both sites, but obtain undisturbed Shelby tubes of the cohesive soils and have one dimensional consolidation tests conducted.



Report of Geotechnical Investigation

This will determine the time-rate settlement of the soils as well as the estimated amount of primary and secondary consolidation settlement due to the fills placed.

Other factors to consider include construction schedule; surcharging of the sites to increase the time-rate settlement may be necessary prior to foundation support to meet project schedules. Additionally, wick drains may be considered to help accelerate the time rate settlement in addition to any surcharge, but will require the input of the wick drain designer/installer.

3.3 Floor Slab

In the event that deep foundations are selected, due to the compressible underlying soils a structural slab supported on spanning grade beams and deep foundations would be designed. In the event that ground improvement is selected, typically a load transfer platform (if needed) along with the CMCs can support conventional foundation and slab-on-grade construction, which his more cost effective than deep foundations and structural slabs.

4 Recommendations

As previously mentioned herein, additional information will be critical in order to determine the most feasible and cost-effective foundation and slab support option. Once final structure layout, site grading and structural loading have been determined, a supplemental geotechnical investigation will be necessary to identify depth to rock as well as one dimensional consolidation testing.

4.1 Limitations

The recommendations contained in this report are considered preliminary in nature, based upon subsurface data collected from the site investigation. The borings were taken to a maximum depth of 47 feet. If conditions arise that differ from those that are specifically stated herein, NWCE should be notified immediately, so that our recommendations can be reviewed and revised, if necessary.

NWCE is not responsible for any claims, damages or liability associated with interpretation of subsurface data. The recommendations given in this report are unique to the locations of the proposed development on the property, and are not transferable to other areas not specifically stated above.

APPENDIX A:
BORING LOCATION PLAN



Boring Location Plan

Bartram's North
Philadelphia, Pennsylvania

Figure:
1

Source: Aerial Images obtained from Earth Explorer website.
Images taken 6/11/2017

Scale:
1"=300'

NA:1905ECL156



Navarro & Wright Consulting Engineers, Inc.
151 Reno Avenue, New Cumberland, PA 17070
(717) 441-2216 (Telephone) (717) 441-6408 (Fax)

Date:
7/24/2019



Boring Location Plan

Bartram's South
Philadelphia, Pennsylvania

Figure:
2

Source: Aerial Images obtained from Earth Explorer website.
Images taken 6/11/2017

Scale:
1"=300'



NAVARRO & WRIGHT
CONSULTING ENGINEERS, INC.
Navarro & Wright Consulting Engineers, Inc.
151 Reno Avenue, New Cumberland, PA 17070
(717) 441-2216 (Telephone) (717) 441-6408 (Fax)

Date:
7/24/2019

APPENDIX B:
DRILLING LOGS

ENGINEER'S LOG

Boring **B-01** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇		
										⊙ Soil/Rock Rec. % ⊙	⊙	
										▲ SPT (N ₆₀) ▲		
		10	20	30	40							
		Sandy SILT , with Gravel, trace Clay, dark gray. <i>(Layer continued from the previous page.)</i>			S-8	3-2-3-3		1.6	80			
					16.0							
						S-9	1-2-2-2		2.0	100		
					18.0							
						S-10	1-1-1-1		2.0	100		
-20					20.0							
						S-11	WOH-WOH- WOH-WOH		1.0	50		
					22.0							
						S-12	WOH-WOH- WOH-WOH		2.0	100		
					24.0							
-25						S-13	1-2-2-3		2.0	100		
					26.0							
						S-14	1-1-2-4		1.7	85		
					28.0							
						S-15	1-1-1-2		1.8	90		
-30					30.0							
						S-16	1-2-2-2		1.8	90		
				32.0								
					S-17	2-2-3-4		2.0	100			
				34.0								

PENNDOT ENGINEER'S LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-01** ECMS

District: 6 County: Philadelphia

Sheet 3 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

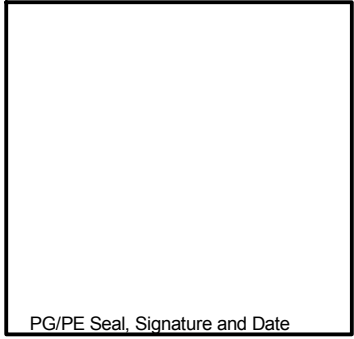
ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇	
										Soil/Rock Rec. %	Rec. %
-40		Sandy SILT , with Gravel, trace Clay, dark gray. <i>(Layer continued from the previous page.)</i>		36.0	S-18	5-4-4-4		1.3	65		
				38.0	S-19	4-4-8-16		1.8	90		
		40.0'/El. -40.0			S-20	16-32-18-15		2.0	100		
-45		Bottom of boring.									
-50											

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES - PHILADELPHIA PA\GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-02** ECMS
 District: 6 County: Philadelphia
 SR _____ Section _____
 Baseline: _____
 Sta. _____ Offset _____
 Segment _____ Offset _____
 Coordinates:
 Lat. _____ Long. _____
 E _____ N _____
 Ground Elev. 0.0 ft.
 Water Level Elev./Elapsed Time:
 ∇ Initial NR Elapsed NR
 ▼ Final NR Elapsed NR
 Driller: Erin Schlabach
 Company: N & W

Drilling Start: 06/27/2019 12:00 am
 Drilling Complete: 06/27/2019 12:00 am
 Grouting Complete: _____
 Rig: No Rig On Record
 Hammer Type: _____
 SPT Hammer Efficiency:
 Assumed _____ Measured _____
 Hammer Calibration Date: _____
 Hole Type: _____
 Casing Type: _____
 Casing I.D.: _____ Casing Depth: _____
 Rock Core Method: _____
 Inspector: **No Inspector on Record**
 Inspector Cert. No. **No Cert. # on Record**



Final Log Checked and Approved
 By: _____
 Date: _____

NOTE: N values and all graphical plots are for information only.

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	Soil/Rock Rec. %	
										◇ RQD % ◇	⊙
	OTH	FILL/CONCRETE AND BRICK.									
	OTH				S-1	2-3-4-4		2.0	100		
	OTH				2.0						
	OTH				S-2	4-6-5-6		1.7	85		
	OTH				4.0						
-5	OTH				S-3	3-6-5-4		0.7	35		
	OTH				6.0						
	OTH				S-4	3-3-2-2		1.1	55		
	OTH				8.0						
	OTH				S-5	2-2-3-4		0.6	30		
-10	OTH				10.0						
	OTH				S-6	15-50/.4'	>	0.9	100		
	OTH				10.9						
	OTH				A-1						
	OTH			12.0							
	OTH			S-7	1-2-5-8		1.5	75			
	OTH			14.0							
		CLAY , dark gray.		14.0'/El. -14.0							

ENGINEER'S LOG

Boring **B-02** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

NOTE: N values and all graphical plots are for information only.

Sta. _____ Offset _____

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇ ◎ Soil/Rock Rec. % ◎	
										▲ SPT (N ₆₀) ▲ 10 20 30 40	20 40 60 80
	CLAY, dark gray. <i>(Layer continued from the previous page.)</i>				S-8	12-16-18-8		1.5	75		
				16.0	S-9	8-7-4-4		0.8	40		
				18.0	S-10	3-4-3-3		1.0	50		
-20				20.0	S-11	3-50/.3'	>	0.8	100		
				20.8	A-2						
				22.0	S-12	26-15-8-6		0.6	30		
				24.0	S-13	4-3-3-2		0.0	0		
-25				26.0	S-14	1-2-2-2		1.8	90		
				28.0	S-15	1-1-1-1		2.0	100		
-30				30.0	S-16	1-1-1-2		2.0	100		
				32.0	S-17	1-1-1-1		2.0	100		
				34.0							

PENNDOT ENGINEER'S LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-02** ECMS

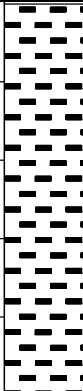
District: 6 County: Philadelphia

Sheet 3 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇				
										Soil/Rock Rec. %	20	40	60	80
-40		CLAY , dark gray. <i>(Layer continued from the previous page.)</i> 40.0'/El. -40.0		36.0	S-18	2-1-3-4		2.0	100	○	○	○	○	
					38.0	S-19	4-2-2-3		2.0	100	○	○	○	○
						S-20	2-3-4-4		2.0	100	○	○	○	○
-45		Bottom of boring.												
-50														

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES - PHILADELPHIA PA\GT\BORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-03** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	Soil/Rock Rec. %		
										◇ RQD % ◇	▲ SPT (N ₆₀) ▲	
		Silty CLAY , some Gravel, dark gray.			S-7	2-2-2-2		0.8	40	◇	▲	
					16.0	S-8	1-1-WOH-1		1.4	70	◇	▲
					18.0	S-9	1-WOH-WOH-WOH		0.0	0	◇	▲
-20					20.0	S-10	1-1-WOH-1		2.0	100	◇	▲
					22.0	S-11	WOH-WOH-2-3		2.0	100	◇	▲
					24.0	S-12	1-1-2-3		2.0	100	◇	▲
-25					26.0	S-13	WOH-WOH-WOH-WOH		0.1	5	◇	▲
					28.0	S-14	WOH-WOH-3-5		2.0	100	◇	▲
					30.0	S-15	WOH-WOH-2-2		2.0	100	◇	▲
-30					32.0	S-16	2-2-2-2		2.0	100	◇	▲
			34.0'/El. -34.0		34.0						◇	▲
			SILT and GRAVEL , saprolite, banded gray.								◇	▲

PENNDOT ENGINEER'S LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-03** ECMS

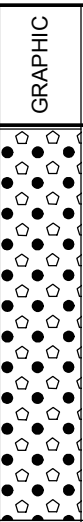
District: 6 County: Philadelphia

Sheet 3 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇		
										Soil/Rock Rec. %	Rec. %	
-40		<p>SILT and GRAVEL, saprolite, banded gray. <i>(Layer continued from the previous page.)</i></p> <p style="text-align: right;">40.0'/El. -40.0</p>		36.0	S-17	2-5-5-9		2.0	100	◇ 20 ◇ ◇ 40 ◇ ◇ 60 ◇ ◇ 80 ◇	◎ ◎ ◎ ◎	
				38.0	S-18	9-12-15-17		1.7	85		▲ 10 ▲ ▲ 20 ▲ ▲ 30 ▲ ▲ 40 ▲	◎ ◎ ◎ ◎
					S-19	10-13-17-14		0.4	20			◎ ◎ ◎ ◎
-45		Bottom of boring.										◎ ◎ ◎ ◎
-50												◎ ◎ ◎ ◎

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES - PHILADELPHIA PA\GT\BORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-04** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	Soil/Rock Rec. %		
										◇ RQD % ◇	▲ SPT (N ₆₀) ▲	
		Silty CLAY , some Sand, some Gravel, dark gray.			S-7	2-2-1-1		0.5	25	◇	▲	
					16.0						◇	▲
						S-8	1-1-1-WOH		0.8	40	◇	▲
					18.0						◇	▲
						S-9	WOH-WOH- WOH-WOH		1.7	85	◇	▲
-20					20.0						◇	▲
						S-10	2-2-1-WOH		1.6	80	◇	▲
					22.0						◇	▲
						S-11	WOH-WOH- 1-1		1.0	50	◇	▲
-25					24.0						◇	▲
						S-12	WOH-WOH- WOH-2		1.2	60	◇	▲
					26.0						◇	▲
						S-13	WOH-WOH- 3-2		1.9	95	◇	▲
					28.0						◇	▲
						S-14	WOH-WOH- 1-2		1.4	70	◇	▲
-30					30.0						◇	▲
					S-15	WOH-WOH- WOH-1		1.0	50	◇	▲	
				32.0						◇	▲	
					S-16	WOH-WOH- 1-1		1.8	90	◇	▲	
				34.0						◇	▲	

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-04** ECMS

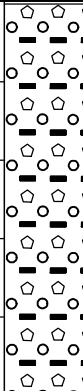



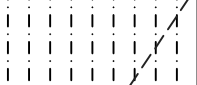
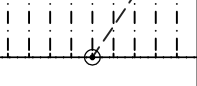
District: 6 County: Philadelphia

Sheet 3 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

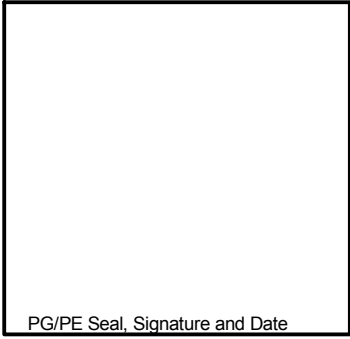
ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇	
										Soil/Rock Rec. %	Rec. %
-40		<p>Silty CLAY, some Sand, some Gravel, dark gray. <i>(Layer continued from the previous page.)</i></p> <p style="text-align: center;">40.0'/El. -40.0</p>		36.0	S-17	WOH-1-2-2		1.7	85		
				38.0	S-18	WOH-2-3-2		2.0	100		
					S-19	2-3-4-4		1.0	50		
-45		<p>Bottom of boring.</p>									
-50											

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-05** ECMS
 District: 6 County: Philadelphia
 SR _____ Section _____
 Baseline: _____
 Sta. _____ Offset _____
 Segment _____ Offset _____
 Coordinates:
 Lat. _____ Long. _____
 E _____ N _____
 Ground Elev. 0.0 ft.
 Water Level Elev./Elapsed Time:
 ∇ Initial NR Elapsed NR
 ▼ Final NR Elapsed NR
 Driller: Erin Schlabach
 Company: N & W

Drilling Start: 06/26/2019 12:00 am
 Drilling Complete: 06/26/2019 12:00 am
 Grouting Complete: _____
 Rig: No Rig On Record
 Hammer Type: _____
 SPT Hammer Efficiency:
 Assumed _____ Measured _____
 Hammer Calibration Date: _____
 Hole Type: _____
 Casing Type: _____
 Casing I.D.: _____ Casing Depth: _____
 Rock Core Method: _____
 Inspector: **No Inspector on Record**
 Inspector Cert. No. **No Cert. # on Record**



Final Log Checked and Approved
 By: _____
 Date: _____

NOTE: N values and all graphical plots are for information only.

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC156 PIDC DEVELOPMENT SITES - PHILADELPHIA PA\GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	Soil/Rock Rec. %	
										◇ RQD % ◇	⊙
-5		Sandy SILT , some Gravel.			S-1	5-8-5-6		0.3	15		
				2.0	S-2	9-5-6-8		0.1	5		
				4.0	S-3	3-3-4-6		1.4	70		
		6.0'/El. -6.0		6.0	S-4	3-4-4-5		2.0	100		
		CLAY, dark gray.		8.0	S-5	3-1-1-1		2.0	100		
				10.0	S-6	WOH-WOH- WOH-3		2.0	100		
				12.0	S-7	WOH-WOH- WOH-WOH		0.2	10		
				14.0		WOH-WOH-					

ENGINEER'S LOG

Boring **B-05** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇			
										Soil/Rock Rec. %	Soil/Rock Rec. %		
		CLAY, dark gray. <i>(Layer continued from the previous page.)</i>		16.0	S-8	WOH-WOH		1.6	80				
					18.0	S-9	WOH-1-1-1		2.0	100			
					20.0	S-10	1-2-2-1		2.0	100			
					22.0	S-11	WOH-WOH-WOH-WOH		2.0	100			
					24.0	S-12	WOH-WOH-WOH-WOH		2.0	100			
					26.0	S-13	WOH-WOH-WOH-WOH		2.0	100			
					28.0	S-14	WOH-1-3-4		2.0	100			
					30.0	S-15	2-15-22-42		2.0	100			
			30.1'/El. -30.1		30.0	S-16	50/.1'	>	0.1	100			
			SANDSTONE, gray.		30.1	R-1		85%	1.9	95			
						32.1	R-2		46%	4.4	88		

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-05** ECMS

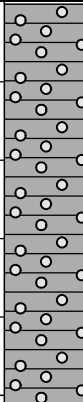
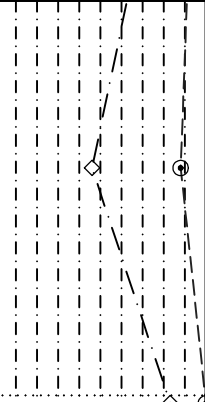
District: 6 County: Philadelphia

Sheet 3 of 3

SR _____ Section _____

NOTE: N values and all graphical plots are for information only.

Sta. _____ Offset _____

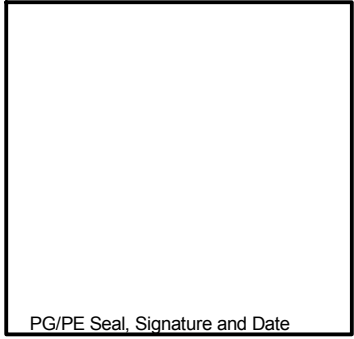
ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇ ◎ Soil/Rock Rec. % ◎	
										10	20
-40		SANDSTONE, gray. <i>(Layer continued from the previous page.)</i>		37.1							
		40.1'/El. -40.1			R-3		83%	3.0	100		
		Bottom of boring.									
-45											
-50											

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-06** ECMS
 District: 6 County: Philadelphia
 SR _____ Section _____
 Baseline: _____
 Sta. _____ Offset _____
 Segment _____ Offset _____
 Coordinates:
 Lat. _____ Long. _____
 E _____ N _____
 Ground Elev. 0.0 ft.
 Water Level Elev./Elapsed Time:
 ▽ Initial NR Elapsed NR
 ▼ Final NR Elapsed NR
 Driller: Erin Schlabach
 Company: N & W

Drilling Start: 06/26/2019 12:00 am
 Drilling Complete: 06/26/2019 12:00 am
 Grouting Complete: _____
 Rig: No Rig On Record
 Hammer Type: _____
 SPT Hammer Efficiency:
 Assumed _____ Measured _____
 Hammer Calibration Date: _____
 Hole Type: _____
 Casing Type: _____
 Casing I.D.: _____ Casing Depth: _____
 Rock Core Method: _____
 Inspector: **No Inspector on Record**
 Inspector Cert. No. **No Cert. # on Record**



PG/PE Seal, Signature and Date

Final Log Checked and Approved

By: _____

Date: _____

NOTE: N values and all graphical plots are for information only.

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇			
										⊙ Soil/Rock Rec. % ⊙			
										▲ SPT (N ₆₀) ▲			
										10	20	30	40
		Sandy SILT , some Gravel.			S-1	14-16-12-14		2.0	100				
				2.0									
					S-2	15-7-4-4		0.1	5				
				4.0									
-5					S-3	3-4-4-8		1.6	80				
				6.0									
					S-4	10-18-5-8		0.6	30				
				8.0									
				8.2	S-5	50/.2'	>	0.2	100				
					A-1								
-10		9.5'/El. -9.5		9.5									
		SANDSTONE , gray.			R-1		100%	2.0	100				
				11.5									
					R-2		88%	5.0	100				

ENGINEER'S LOG

Boring **B-06** ECMS

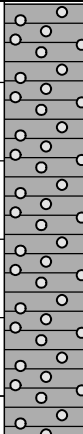
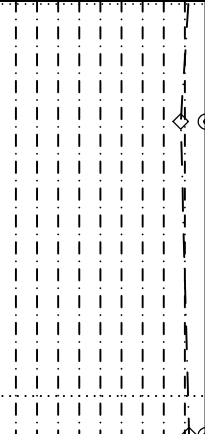
District: 6 County: Philadelphia

Sheet 2 of 2

SR _____ Section _____

NOTE: N values and all graphical plots are for information only.

Sta. _____ Offset _____

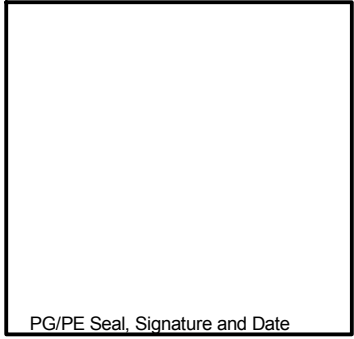
ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇	
										Soil/Rock Rec. %	%
-20		SANDSTONE, gray. <i>(Layer continued from the previous page.)</i>		16.5							
		20.5'/El. -20.5			R-3		92%	4.0	100		
		Bottom of boring.									
-25											
-30											

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-07** ECMS
 District: 6 County: Philadelphia
 SR _____ Section _____
 Baseline: _____
 Sta. _____ Offset _____
 Segment _____ Offset _____
 Coordinates:
 Lat. _____ Long. _____
 E _____ N _____
 Ground Elev. 0.0 ft.
 Water Level Elev./Elapsed Time:
 ∇ Initial NR Elapsed NR
 ▼ Final NR Elapsed NR
 Driller: K. Bassett
 Company: N & W

Drilling Start: 06/24/2019 12:00 am
 Drilling Complete: 06/24/2019 12:00 am
 Grouting Complete: _____
 Rig: No Rig On Record
 Hammer Type: _____
 SPT Hammer Efficiency:
 Assumed _____ Measured _____
 Hammer Calibration Date: _____
 Hole Type: _____
 Casing Type: _____
 Casing I.D.: _____ Casing Depth: _____
 Rock Core Method: _____
 Inspector: **No Inspector on Record**
 Inspector Cert. No. **No Cert. # on Record**



Final Log Checked and Approved
 By: _____
 Date: _____

NOTE: N values and all graphical plots are for information only.

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDOLOGS.GPJ

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇			
										Soil/Rock Rec. %	Soil/Rock Rec. %		
										▲ SPT (N ₆₀) ▲			
										10	20	30	40
		SAND and GRAVEL , contains brick fragments, dark brown.			S-1	1-3-6-11		1.3	65				
			2.0		S-2	6-18-26-12		0.2	10				
-5			4.0		S-3	5-10-6-5		1.7	85				
			6.0		S-4	4-4-4-4		1.3	65				
			8.0		S-5	4-4-5-18		1.0	50				
-10			10.0		S-6	5-9-15-21		0.8	40				
			12.0		S-7	18-33-29-35		1.8	90				
			14.0		S-8	29-50/.4'		>	0.4	44			
				14.9									

ENGINEER'S LOG

Boring **B-07** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇		
										⊙ Soil/Rock Rec. % ⊙	⊙	
										▲ SPT (N ₆₀) ▲		
		SAND and GRAVEL , contains brick fragments, dark brown. <i>(Layer continued from the previous page.)</i>			A-1							
					16.0							
						S-9	6-9-18-12		1.7	85		
					18.0							
						S-10	7-12-24-19		1.6	80		
-20					20.0							
						S-11	6-10-12-9		2.0	100		
					22.0							
						S-12	8-13-13-15		2.0	100		
					24.0							
-25						S-13	8-10-8-8		1.2	60		
					26.0							
						S-14	6-9-11-21		0.8	40		
					28.0							
						S-15	10-12-12-14		0.9	45		
-30					30.0							
						S-16	8-15-18-31		2.0	100		
		32.0'/El. -32.0		32.0								
		Silty SAND , brown.			S-17	17-10-13-13		1.0	50			
					34.0							

PENNDOT ENGINEER'S LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-07** ECMS

District: 6 County: Philadelphia

Sheet 3 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇	
										Soil/Rock Rec. %	Rec. %
-40		Silty SAND , brown. <i>(Layer continued from the previous page.)</i> 36.0'/El. -36.0		36.0	S-18	5-7-11-13		1.2	60		
		SAND and SILT , little Gravel, saprolite, green brown.		38.0	S-19	5-9-14-28		1.1	55		
		40.0'/El. -40.0			S-20	7-10-18-31		0.5	25		
-40		Bottom of boring.									
-45											
-50											

PENNDOT ENGINEERS LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES - PHILADELPHIA PA\GT\BORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-09** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇ ◎ Soil/Rock Rec. % ◎			
										▲ SPT (N ₆₀) ▲	◎		
		Silty CLAY , some Sand, some Gravel, contains organics, dark gray. <i>(Layer continued from the previous page.)</i>			S-7	2-2-2-2		0.5	25				
						16.0	S-8	2-2-2-2		1.6	80		
						18.0	S-9	2-3-3-3		1.2	60		
-20						20.0	S-10	3-3-3-3		1.8	90		
						22.0	S-11	2-2-3-3		2.0	100		
-25						24.0	S-12	WOH-WOH- WOH-WOH		1.4	70		
						26.0	S-13	2-3-2-3		1.7	85		
						28.0	S-14	2-3-4-6		1.5	75		
-30						30.0	S-15	3-6-6-8		1.4	70		
				32.0'/El. -32.0		32.0	S-16	7-10-14-39		0.7	35		
				SILT and SAND , some Gravel, saprolite, light gray.									
								34.0					

PENNDOT ENGINEER'S LOG - PENNDOT_GINT_VERSION_1.2.2.3_9-21-2016.GDT - 7/25/19 09:43 - N:\2019\1905EC\156 PIDC DEVELOPMENT SITES_Philadelphia PAI_GTBORING LOGS\PIDC_TYPEDLOGS.GPJ

ENGINEER'S LOG

Boring **B-10** ECMS

District: 6 County: Philadelphia

Sheet 2 of 3

SR _____ Section _____

Sta. _____ Offset _____

NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	Soil/Rock Rec. %		
										Soil (N ₆₀)	Rock	
		SAND and coarse GRAVEL , black. <i>(Layer continued from the previous page.)</i>		16.0	S-7	2-5-5-5		0.4	20			
				18.0	S-8	8-6-5-5		0.6	30			
-20				20.0	S-9	10-10-7-11		0.7	35			
				22.0	S-10	4-6-9-11		1.0	50			
			22.0' / El. -22.0		22.0	S-11	9-12-19-16		1.1	55		
-25				24.0	S-12	11-15-14-20		0.7	35			
			26.0' / El. -26.0		26.0	S-13	4-7-11-12		0.9	45		
				28.0	S-14	10-9-21-42		1.2	60			
-30				30.0	S-15	18-33-50/.4'		0.4	29			
				31.4	A-2							
		32.0' / El. -32.0		32.0	S-16	20-14-15-24		1.1	55			
			34.0									
		34.0' / El. -34.0										
		SILT and SAND , saprolite, brown.										

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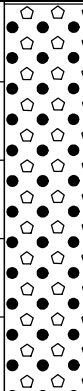

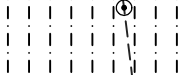



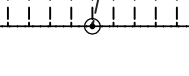
District: 6 County: Philadelphia

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NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇	
										Soil/Rock Rec. %	Rec. %
-40		<p>SILT and SAND, saprolite, brown. <i>(Layer continued from the previous page.)</i></p> <p style="text-align: right;">40.0'/El. -40.0</p>		36.0	S-17	21-28-32-41		1.3	65		
				37.4	S-18	17-33-50/.4'		1.0	71		
				38.0	A-3						
					S-19	21-31-40-50		1.0	50		
-45		Bottom of boring.									
-50											

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NOTE: N values and all graphical plots are for information only.

ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	Soil/Rock Rec. %		
										◇ RQD % ◇	▲ SPT (N ₆₀) ▲	
		GRAVEL and fine SAND , some Silt, black.			S-8	11-13-18-26		0.3	15			
					16.0							
						S-9	11-11-9-11		0.1	5		
					18.0							
						S-10	6-6-7-7		1.4	70		
-20					20.0							
						S-11	5-5-6-5		1.2	60		
					22.0							
						S-12	7-9-10-10		0.7	35		
					24.0							
-25						S-13	7-7-5-6		1.1	55		
					26.0							
						S-14	6-11-13-11		0.7	35		
					28.0							
						S-15	8-13-17-22		1.5	75		
-30					30.0							
						S-16	10-14-17-15		1.0	50		
				32.0								
					S-17	12-18-16-27		0.8	40			
				34.0								
		34.0'/El. -34.0										
		SILT and SAND , saprolite, brown.										

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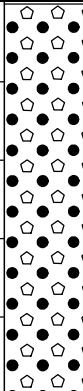



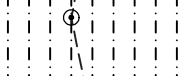
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ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇	
										Soil/Rock Rec. %	Rec. %
-40		<p>SILT and SAND, saprolite, brown. <i>(Layer continued from the previous page.)</i></p> <p style="text-align: right;">40.0'/El. -40.0</p>		36.0	S-18	21-28-32-25		1.1	55		
				38.0	S-19	10-11-11-9		0.8	40		
					S-20	7-15-21-41		1.1	55		
-45		Bottom of boring.									
-50											

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ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	Soil/Rock Rec. %		
										◇ RQD % ◇	▲ SPT (N ₆₀) ▲	
		GRAVEL and SILT , some Sand, Cobbles, black, <i>Coal-wash</i> . (Layer continued from the previous page.)		16.0	S-8	19-23-33-32		2.0	100	20	20	
				18.0	S-9	24-32-39-41		1.4	70	20	20	
				20.0	S-10	35-36-45-48		2.0	100	20	20	
				22.0	S-11	5-16-39-44		1.1	55	20	20	
				23.4	S-12	23-47-50/.4'		0.6	43	20	20	
				24.0	A-1					20	20	
			25.0'/El. -25.0		26.0	S-13	7-16-22-37		1.0	50	20	20
			SAND and SILT , orange brown to yellow brown.		28.0	S-14	19-11-11-7		1.1	55	20	20
					30.0	S-15	9-10-13-12		1.7	85	20	20
					32.0	S-16	17-21-21-34		1.4	70	20	20
				34.0	S-17	3-8-8-9		0.2	10	20	20	
										20	20	
										20	20	
										20	20	

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ELEV.	GRAPHIC	MATERIAL DESCRIPTION COMMENTS - OBSERVATIONS	AASHTO / USCS	SAMPLE DEPTH	SAMPLE No.	BLOW COUNTS (Blows/ 0.5ft)	N ₆₀ --- RQD %	REC (ft.)	REC (%)	◇ RQD % ◇	
										Soil/Rock Rec. %	Rec. %
-40		SAND and SILT , orange brown to yellow brown. <i>(Layer continued from the previous page.)</i> 36.0'/El. -36.0'		36.0	S-18	4-5-7-9		0.8	40		
		SAND and SILT , saprolite, yellow brown. 40.0'/El. -40.0'		38.0	S-19	8-10-26-48		1.1	55		
		Bottom of boring.			S-20	12-17-38-44					
-45											
-50											

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