

December 2, 2020

City of Detroit Department of Public Works
Coleman A. Young Municipal Center
2 Woodward Avenue – Suite 611
Detroit, MI 48226

RE: Public Highway Institutional Controls
Knight #311
11694 Greenfield Road, City of Detroit, MI
Facility ID No: 00012305
EGLE Reference Number: PHIC-RRD-213-19-009

To Whom it May Concern:

An application for utilizing institutional controls for soil corrective action is being submitted for the Knight Enterprises, Inc. Site K-311, located at 11694 Greenfield Road, City of Detroit, Wayne County, Michigan (Site). The Site is utilized as a gasoline station with a convenience store. BLDI, Inc. is currently retained as the environmental consultant for the Site.

The soil contamination remaining at this Site exists at concentrations that exceeds the applicable Part 213 Risk-Based Screening Levels (RBSLs) and/or Site-Specific Target Levels (SSTLs) in locations beyond the Site property boundary along and beneath the eastern adjacent alleyway owned by the City of Detroit.

The application for institutional control includes the completed Public Highway Institutional Control form. Upon your review, you will note that the Site conditions may present an exposure risk to employees or subcontractors working within the eastern adjacent alleyway. If potential construction activities would require removal of contaminated soil, the contaminated media will need to be characterized and disposed of properly, and additional precautions should be taken to prevent workers from the exposure to contaminated soil. Funding for disposal of contaminated media associated with a refined petroleum underground storage tank release and located within a public right of way is available from the State of Michigan through the Michigan Underground Storage Tank Authority (MUSTA), public highway cleanup fund if this form is properly signed and submitted.

Regards,



Renée L. Pewitt, EP
Project Manager

Attachment

cc: Mr. John Denton Knight Enterprises, Inc. (via email)

Corporate Office
150 Fountain Street NE
Grand Rapids, MI 49503
616.459.3737

PUBLIC HIGHWAY INSTITUTIONAL CONTROL

When environmental contamination is proposed to remain in place within a public highway owned or controlled by a county road commission or local unit of government, the "Public Highway Institutional Control" may be used to satisfy all of the requirements under Section 21310a(3)(c) of Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). In addition, the "Public Highway Institutional Control" may serve as an alternative instrument, with department approval, pursuant to Section 20121(9) of Part 201, Environmental Remediation, of the NREPA. The party proposing this Institutional Control (IC) shall submit the completed form and all attachments with a Closure Report pursuant to Part 213 or a No Further Action Report pursuant to Part 201 to the appropriate [District Office](#). Multiple signature pages may be necessary if there is more than one authority that owns or controls the public highway. The EGLE Reference Number can be obtained by contacting the Remediation and Redevelopment Division at deq-rrd@michigan.gov, or by calling 517-284-5153.

| | | | |
|--|--|--|-------------------------|
| SECTION 1. FACILITY INFORMATION: | | EGLE REF. NUMBER.: PHIC-RRD-213-19-009 | |
| SITE OR FACILITY NAME: K-311 | | SITE OR FACILITY ID NUMBER: 00012305 | |
| STREET ADDRESS: 11694 Greenfield Road | | | |
| CITY: Detroit | | ZIP: 48227 | COUNTY: Wayne |
| NAME OF PARTY PROPOSING PUBLIC HIGHWAY IC: Knight Enterprises, Inc. | | EMAIL ADDRESS: jdenton@knightenterprisesinc.com | |
| STREET ADDRESS: 47705 West Road, Suite B-102 | | CITY: Wixom | STATE: MI ZIP: 48393 |
| CONTACT PERSON: John Denton | | PHONE: 248-478-3651 | FAX: [REDACTED] |
| EGLE District Office: <input type="checkbox"/> Cadillac <input type="checkbox"/> Gaylord <input type="checkbox"/> Grand Rapids <input type="checkbox"/> Jackson <input type="checkbox"/> Kalamazoo <input type="checkbox"/> Lansing <input type="checkbox"/> Saginaw Bay <input checked="" type="checkbox"/> SE Michigan <input type="checkbox"/> Upper Peninsula | | | |

SECTION 2. AFFECTED PUBLIC HIGHWAY INFORMATION:

| | |
|--|--|
| 1. Name of affected public highway(s) and nearest intersection: Alley located along the eastern boundary of 11694 Greenfield Road, south of Wadsworth Avenue intersection | |
| 2. Known or suspected contaminant(s) type (Check all that apply): <input checked="" type="checkbox"/> Petroleum <input checked="" type="checkbox"/> Volatile organic compounds <input type="checkbox"/> Metals <input type="checkbox"/> Other [REDACTED] | |
| 3. Is residual/mobile nonaqueous-phase liquid present in the affected public highway: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | |
| 4. Media contaminated: a. <input checked="" type="checkbox"/> Soil Depth to contaminated soil: ~1.5 to 27.5 feet below ground surface (bgs); depth of contaminated soil depends on the location within the alleyway b. <input type="checkbox"/> Groundwater Depth to contaminated groundwater: Groundwater not encountered at the site to a depth of 28 feet bgs | |
| 5. Provide a scaled drawing of the portion of the public highway subject to the institutional control that depicts the area impacted by regulated substances and the location of utilities in the impacted area, including storm water systems and municipal separate storm water systems. At a minimum, the scaled drawing should include: a. A north arrow. b. A graphical scale bar and scale statement (e.g. 1"=50'). c. The limits of the source property plotted, to scale, showing the relationship to the county road commission or local unit of government and other affected parcels. d. The public highway(s) name identified. e. A statement identifying the Township, Range, Section, and Quarter Section where the parcel is located. f. The limits of the affected public highway plotted to scale. This area should be hatched and labeled appropriately. g. The location of significant site features such as buildings, drives, parking lots, and road surface. h. Cross section illustrating affected public highway, media, utilities, and location and depth of contaminated media. i. Most recent analytical data illustrating contaminant compounds and concentrations within the contaminated media. | |

6. Provide a complete list that identifies all parties with ownership and possessory or use property interests related to the public highway (including owners of real property, easement holders, utility franchise holders, and owners or operators of public utilities):

Consumers Energy, DTE Energy, City of Detroit, Detroit Petroleum Properties III, LLC (11676 Greenfield Road and 11670 Greenfield Road, Detroit, MI)

a. Are any of the parties listed above affected by the contamination: YES NO

b. Have all of the parties above affected by the contamination received notification of the existing conditions as part of a corrective action plan or pursuant to the due care requirements: YES NO

7. Exposure risks:

a. Due to groundwater contamination (Check all that apply):

Drinking water Indoor air inhalation Surface water

b. Due to soil contamination (Check all that apply):

Direct contact Ambient air Inhalation Indoor air inhalation Leaching from soil to groundwater

Direct transport to surface water Soil excavation/relocation

Soil contamination was documented to be present in the eastern adjoining alleyway at 11694 Greenfield Road, resulting from a confirmed release of gasoline from the underground storage tank (UST) system, that occurred in October 2017 (C-0249-17). Groundwater was not encountered during the on-site or alleyway investigations. Risks due to the soil contamination include direct contact and soil excavation/relocation. The soil in the eastern adjoining alleyway is assumed to contain concentrations of residual non-aqueous phase liquid (NAPL) based on detections of gasoline range organics in soil samples collected from locations adjacent to the alleyway. In addition, based on the concentration of GRO adjacent to the alleyway, the direct contact exposure pathway is relevant. Any soil excavation deeper than 1.5 feet below ground surface may encounter contaminated soils. Any contaminated soil encountered should be handled and disposed of properly. Workers should be notified about the potential to encountered contaminated soils.

SECTION 3. STORM SEWER SYSTEM CERTIFICATION:

Is contamination present in or does the contamination have the potential to enter the storm sewer system (including separate storm sewer systems and combined sewers) as a result of the release from the underground storage tank system:

YES NO

If yes, please provide information below and attach any drawings, tables, etc. that clearly identifies the nature and extent of the contamination that enters or has the potential to enter the storm sewer system.

According to a representative of the City of Detroit, the municipal sanitary sewer and storm sewer are combined sewer systems. A sanitary sewer utility is present within the City of Detroit alleyway, adjoining east of the Site property. Two stormwater catchments drains are present on the central portion of the station property. These two drains appear to have no connection to the combined sewer system, and act as a water catchment for the runoff collected on the station canopy. Based on information provided by the City of Detroit, the sanitary sewer is located at a depth of approximately 10-15 feet bgs within the alleyway and is approximately 18 inches in diameter. No groundwater is present at this Site other than that observed within OW-1; however, vertical contamination is anticipated to range from approximately 1.5 to 27.5 feet bgs in and adjacent to the alleyway itself. Therefore, it is possible that there may be soil contamination in contact with or in close proximity to the sanitary sewer.

SECTION 4. SUBMITTER INFORMATION:

I, as the submitter identified in Section 1, or the qualified consultant authorized to complete this document on the submitter's behalf, hereby attest to the accuracy of the statements in this document and all attachments and have provided this document to the county road commission or local unit of government.

| Signature | Print | Date |
|---------------------------------|--|--|
| | Renée L. Pewitt, EP | 12/2/2020 |
| Name of Company (if applicable) | Address, City, State, Zip | |
| BLDI, Inc. | 150 Fountain St NE, Grand Rapids, MI 49503 | |
| Phone Number | Fax Number | Email Address |
| 616-459-3737 | 616-459-5357 | reneep@bldi.com |

SECTION 5. COUNTY ROAD COMMISSION OR LOCAL UNIT OF GOVERNMENT CONFIRMATION:

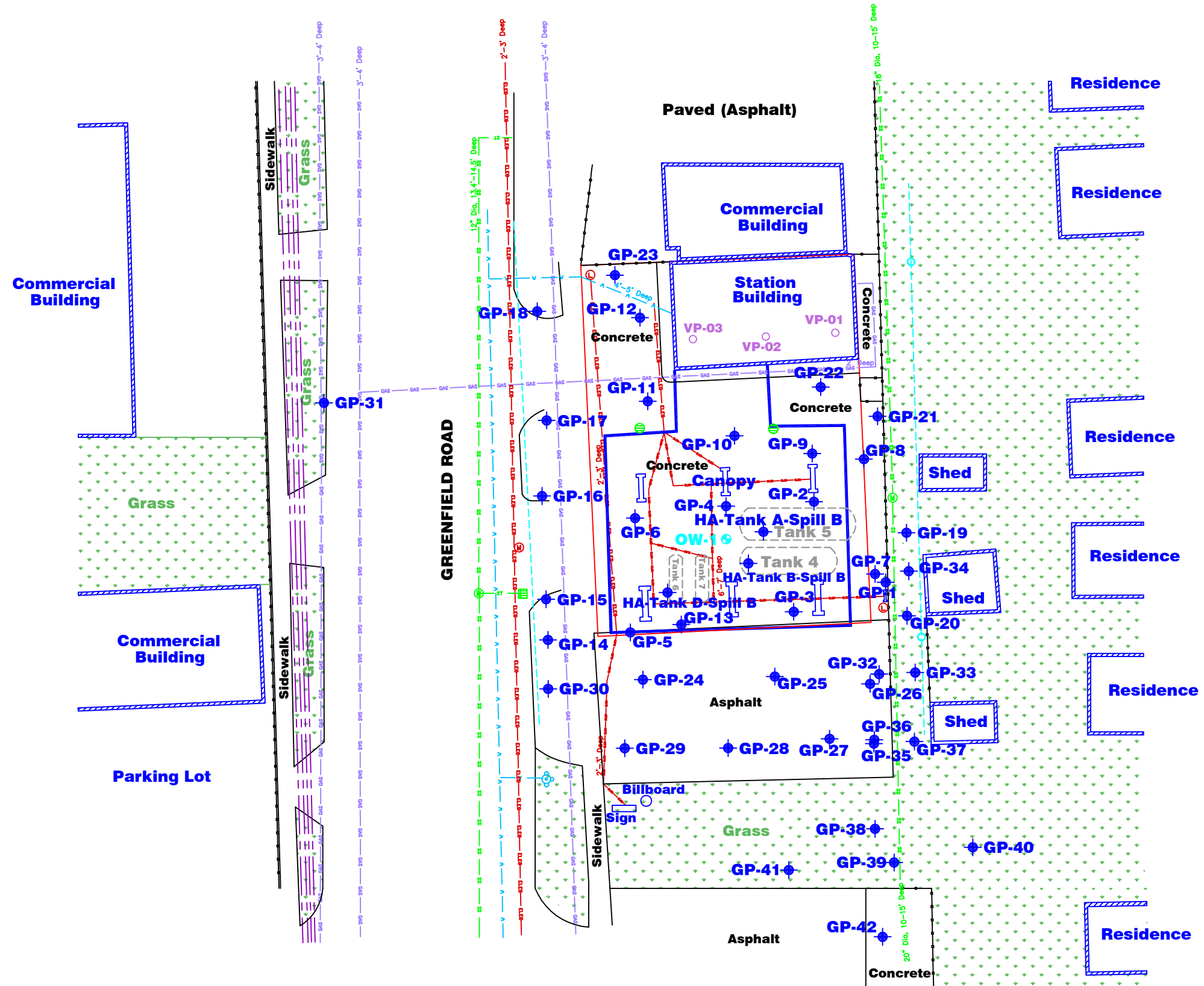
Name of county road commission or local unit of government: **City of Detroit Department of Public Works**

The aforementioned **City of Detroit Department of Public Works** hereby confirms that there are no current plans to relocate, vacate, or abandon the public highway. With my signature below, I certify that I am legally authorized to sign on behalf of the **City of Detroit Department of Public Works**.

| Signature of Authorized Official | | Print Authorized Official | |
|--|------------|---------------------------|---------------|
| [Redacted] | | [Redacted] | |
| Title of Authorized Official | | Date | |
| [Redacted] | | [Redacted] | |
| Name of county road commission or local unit of government | | Address, City, State, Zip | |
| [Redacted] | | [Redacted] | |
| Phone Number | | Fax Number | Email Address |
| [Redacted] | [Redacted] | [Redacted] | [Redacted] |

BLDI

Public Highway Institutional Control



LEGEND

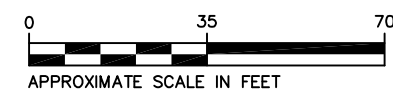
- ⊕ MONITORING WELL LOCATION
- ⊕ OPERATING WELL LOCATION
- ⊕ SOIL BORING LOCATION
- SOIL GAS VAPOR PIN
- CATCH BASIN
- ⊗ UTILITY MANHOLE
- UTILITY POLE
- ⊙ LIGHT POLE
- DISPENSER ISLAND
- FENCE
- — — COMBINED UNDERGROUND STORM & SANITARY SEWER LINE
- — — UNDERGROUND WATER LINE
- — — UNDERGROUND GAS LINE
- - - - OVERHEAD UTILITIES
- - - - UNDERGROUND ELECTRIC
- - - - UNDERGROUND FIBEROPTIC
- — — PROPERTY BOUNDARIES

* Please note utility locations are approximate

VS/SJ

**FIGURE 1
SITE LAYOUT MAP**

Knight Station K-311
11694 Greenfield Road
Detroit, Michigan



December 2020

154018.311

LEGEND

- MONITORING WELL LOCATION
- OPERATING WELL LOCATION
- ◆ SOIL BORING LOCATION
- SOIL GAS VAPOR PIN
- CATCH BASIN
- ⊙ UTILITY MANHOLE
- UTILITY POLE
- ⊙ LIGHT POLE
- ▭ DISPENSER ISLAND
- FENCE
- COMBINED UNDERGROUND STORM & SANITARY SEWER LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- OVERHEAD UTILITIES
- UNDERGROUND ELECTRIC
- UNDERGROUND FIBEROPTIC
- PROPERTY BOUNDARIES

* Please note utility locations are approximate

- | | |
|--------|-----------------------------------|
| B | Benzene |
| n-BB | n-Butylbenzene |
| sec-BB | sec-Butylbenzene |
| E | Ethylbenzene |
| I | Isopropylbenzene |
| N | Naphthalene |
| n-PB | n-Propylbenzene |
| T | Toluene |
| 1,2,3 | 1,2,3-Trimethylbenzene |
| 1,2,4 | 1,2,4-Trimethylbenzene |
| 1,3,5 | 1,3,5-Trimethylbenzene |
| X | Total Xylenes |
| ACE | Acenaphthene |
| ACY | Acenaphthylene |
| ANTH | Anthracene |
| BaA | Benzo[a]anthracene |
| BaP | Benzo[a]pyrene |
| BbF | Benzo[b]fluoranthene |
| BPYL | Benzo[g,h,i]perylene |
| BkACY | Benzo[k]fluoranthene |
| CH | Chrysene |
| DahA | Dibenzo[a,h]anthracene |
| FLU | Fluoranthene |
| FN | Fluorene |
| IDNPY | Indeno[1,2,3-cd]pyrene |
| 2-MN | 2-Methylnaphthalene |
| PH | Phenanthrene |
| PY | Pyrene |
| PNAs | Polynuclear Aromatic Hydrocarbons |
| VOCs | Volatile Organic Compounds |
| DRO | Diesel Range Organics |
| GRO | Gasoline Range Organics |
| RL | Reporting Limit |
- BOLD VALUES EXCEED APPLICABLE CRITERIA

| |
|----------------------------|
| Sample Location |
| Sample Media/Sample Depth |
| Sample Date/Collected By |
| Analytical Results (ug/kg) |

| | |
|------------------|--------------|
| GP-9 | |
| Soil/0.5'-1.0' | 4-24-18/BLDI |
| T | 100 |
| 1,3,5 | 130 |
| X | 410 |
| other VOCs | < RL |
| GRO | 7,800 |
| Soil/7.0'-7.5' | |
| 4-24-18/BLDI | |
| B | 860 |
| E | 14,000 |
| 2-MN | 8,800 |
| N | 6,200 |
| 1,2,3 | 12,000 |
| 1,2,4 | 24,000 |
| 1,3,5 | 8,000 |
| X | 4,600 |
| Other VOCs | < RL |
| GRO | 720,000 |
| Soil/9.5'-10.0' | |
| 4-24-18/BLDI | |
| B | 400 |
| E | 260 |
| 2-MN | 1,300 |
| 1,2,3 | 120 |
| other VOCs | < RL |
| GRO | 69,000 |
| Soil/12.0'-12.5' | |
| 4-24-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |

| | |
|------------------|--------------|
| GP-22 | |
| Soil/2.0'-2.5' | 7-27-18/BLDI |
| VOCs | < RL |
| GRO | < RL |
| Soil/7.5'-8.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/11.5'-12.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/15.5'-16.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |

| | |
|------------------|---------------|
| GP-2 | |
| Soil/5.0'-5.5' | 12-12-17/BLDI |
| B | 440 |
| 1,2,3 | 110 |
| 1,2,4 | 1,200 |
| 1,3,5 | 110 |
| X | 340 |
| Other VOCs | < RL |
| PNAs | < RL |
| Soil/9.5'-10.0' | |
| 12-12-17/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/15.0'-15.5' | |
| 12-12-17/BLDI | |
| VOCs | < RL |
| GRO | < RL |

| | |
|------------------|--------------|
| GP-8 | |
| Soil/5.0'-5.5' | 4-24-18/BLDI |
| VOCs | < RL |
| GRO | < RL |
| Soil/10.5'-11.0' | |
| 4-24-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |

| | |
|------------------|--------------|
| GP-21 | |
| Soil/2.0'-2.5' | 7-27-18/BLDI |
| VOCs | < RL |
| GRO | < RL |
| Soil/7.5'-8.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/11.5'-12.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/15.5'-16.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |

| | |
|------------------|--------------|
| GP-19 | |
| Soil/2.5'-3.0' | 7-27-18/BLDI |
| VOCs | < RL |
| GRO | < RL |
| Soil/7.5'-8.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/11.5'-12.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/15.5'-16.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |

| | |
|------------------|---------------|
| GP-1 | |
| Soil/3.5'-4.0' | 12-12-17/BLDI |
| VOCs | < RL |
| PNAs | < RL |
| Soil/6.0'-6.5' | |
| 12-12-17/BLDI | |
| VOCs | < RL |
| PNAs | < RL |
| Soil/12.0'-12.5' | |
| 12-12-17/BLDI | |
| E | 1,300 |
| N | 720 |
| T | 160 |
| 1,2,3 | 810 |
| 1,2,4 | 7,800 |
| 1,3,5 | 940 |
| X | 2,600 |
| other VOCs | < RL |
| PNAs | < RL |

| | |
|------------------|--------------|
| GP-34 | |
| Soil/12.0'-12.5' | 2-26-19/BLDI |
| VOCs | < RL |
| GRO | < RL |
| Soil/16.0'-16.5' | |
| 2-26-19/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/19.5'-20.0' | |
| 2-26-19/BLDI | |
| VOCs | < RL |
| GRO | < RL |

| | |
|------------------|--------------|
| GP-20 | |
| Soil/2.5'-3.0' | 7-27-18/BLDI |
| VOCs | < RL |
| GRO | < RL |
| Soil/7.5'-8.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/11.5'-12.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |
| Soil/15.5'-16.0' | |
| 7-27-18/BLDI | |
| VOCs | < RL |
| GRO | < RL |

NOT A LEGAL SURVEY

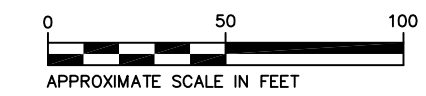
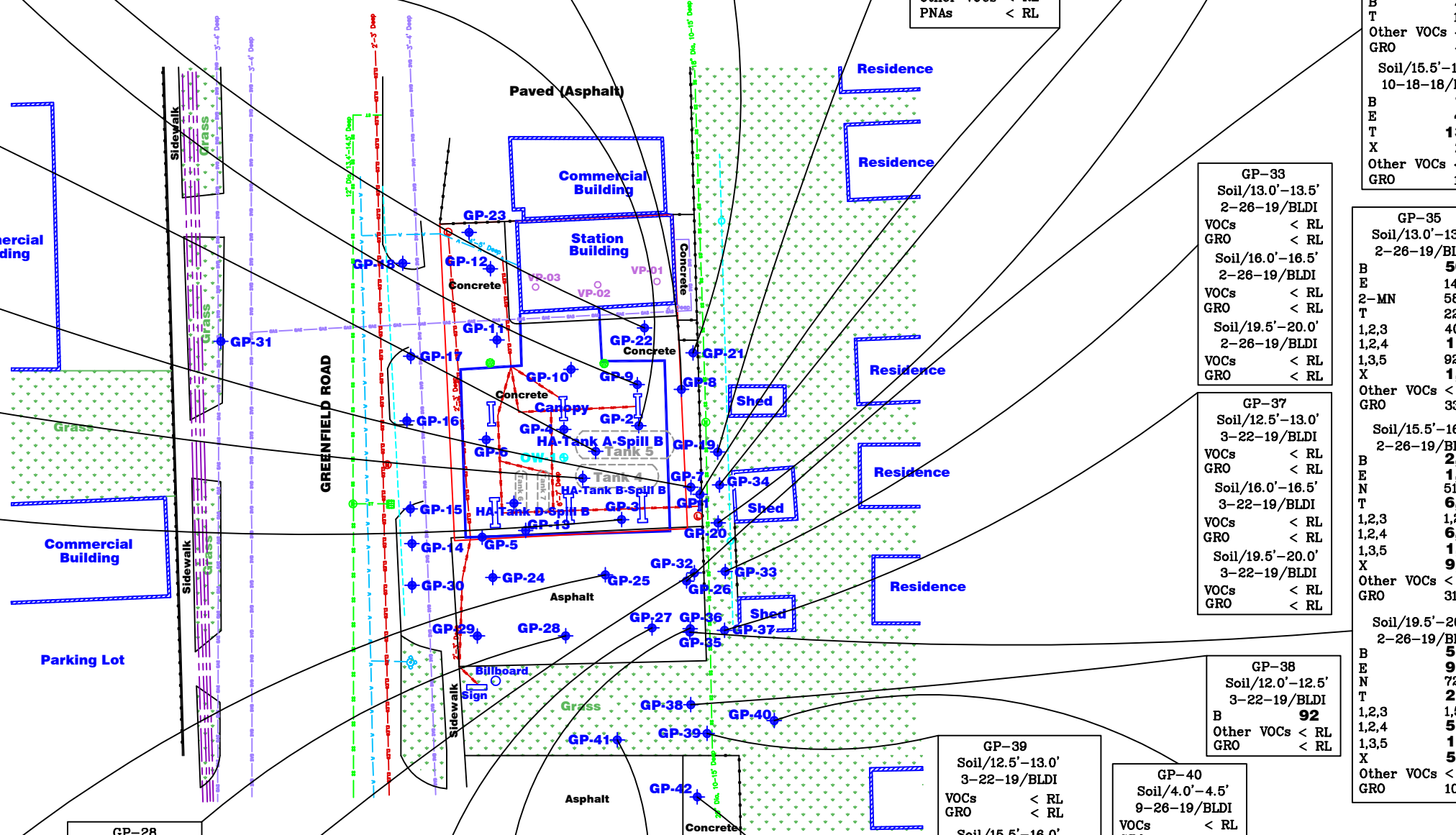
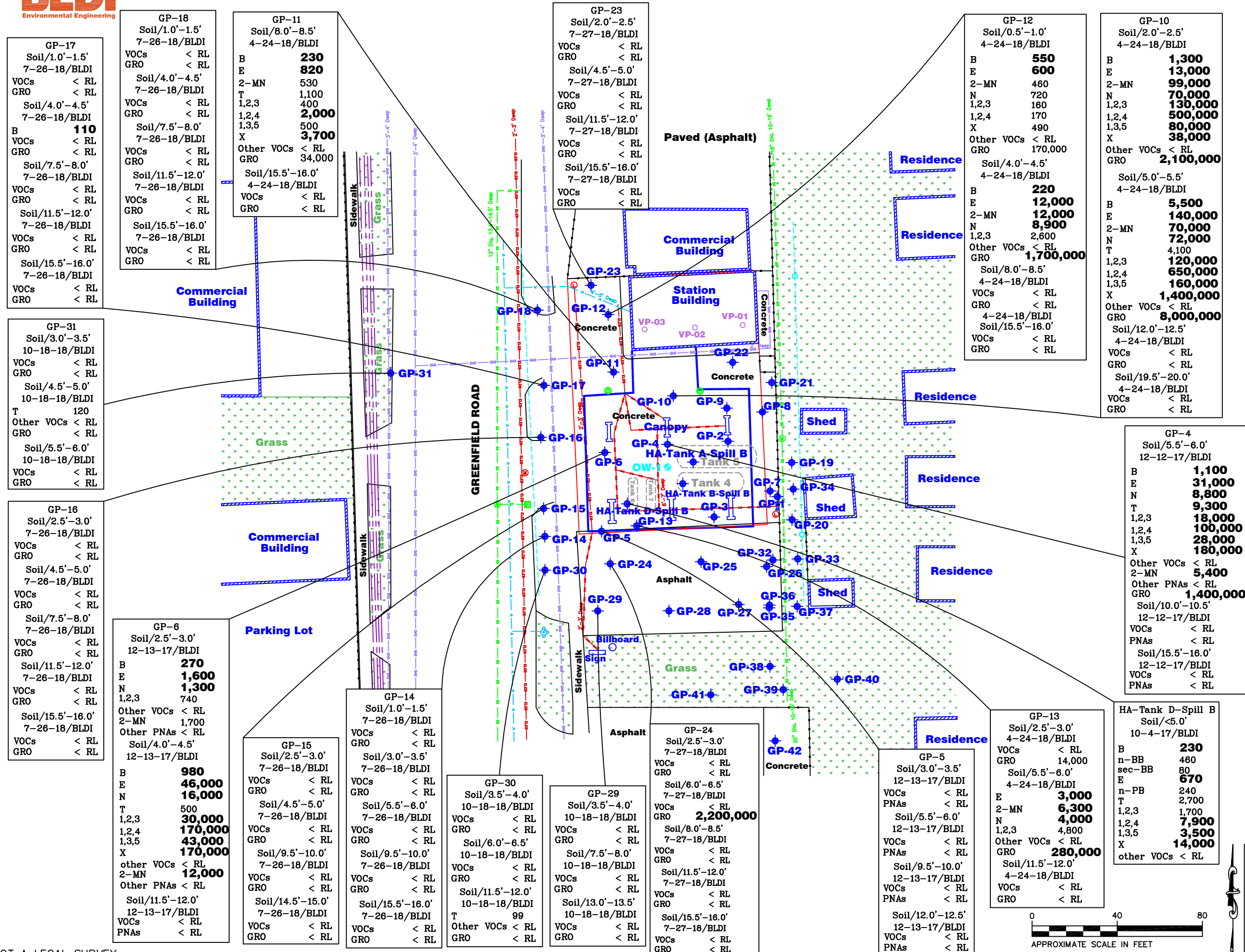


FIGURE 2A
SOIL ANALYTICAL RESULTS
East of Site
Knight Station K-311
11694 Greenfield Road
Detroit, Michigan
December 2020 154018.311



- LEGEND**
- MONITORING WELL LOCATION
 - OPERATING WELL LOCATION
 - ◆ SOIL BORING LOCATION
 - SOIL GAS VAPOR PIN
 - CATCH BASIN
 - ⊙ UTILITY MANHOLE
 - UTILITY POLE
 - LIGHT POLE
 - ⌈⌋ DISPENSER ISLAND
 - FENCE
 - COMBINED UNDERGROUND STORM & SANITARY SEWER LINE
 - UNDERGROUND WATER LINE
 - UNDERGROUND GAS LINE
 - OVERHEAD UTILITIES
 - UNDERGROUND ELECTRIC
 - UNDERGROUND FIBEROPTIC
 - PROPERTY BOUNDARIES
- * Please note utility locations are approximate
- B Benzene
 - n-BB n-Butylbenzene
 - sec-BB sec-Butylbenzene
 - E Ethylbenzene
 - I Isopropylbenzene
 - N Naphthalene
 - n-PB n-Propylbenzene
 - T Toluene
 - 1,2,3 1,2,3-Trimethylbenzene
 - 1,2,4 1,2,4-Trimethylbenzene
 - 1,3,5 1,3,5-Trimethylbenzene
 - X Total Xylenes
 - ACE Acenaphthene
 - ACY Acenaphthylene
 - ANTH Anthracene
 - BaA Benzo[a]anthracene
 - BaP Benzo[a]pyrene
 - BbF Benzo[b]fluoranthene
 - BPYL Benzo[g,h,i]perylene
 - BkACY Benzo[k]fluoranthene
 - CH Chrysene
 - DahA Dibenzo(a,h)anthracene
 - FLU Fluoranthene
 - FN Fluorene
 - IDNPY Indeno[1,2,3-cd]pyrene
 - 2-MN 2-Methylnaphthalene
 - PH Phenanthrene
 - PY Pyrene
 - PNAs Polynuclear Aromatic Hydrocarbons
 - VOCs Volatile Organic Compounds
 - DRO Diesel Range Organics
 - GRO Gasoline Range Organics
 - RL Reporting Limit
- BOLD VALUES EXCEED APPLICABLE CRITERIA**
- Sample Location
Sample Media/Sample Depth
Sample Date/Collected By
Analytical Results (ug/kg)

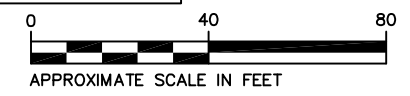
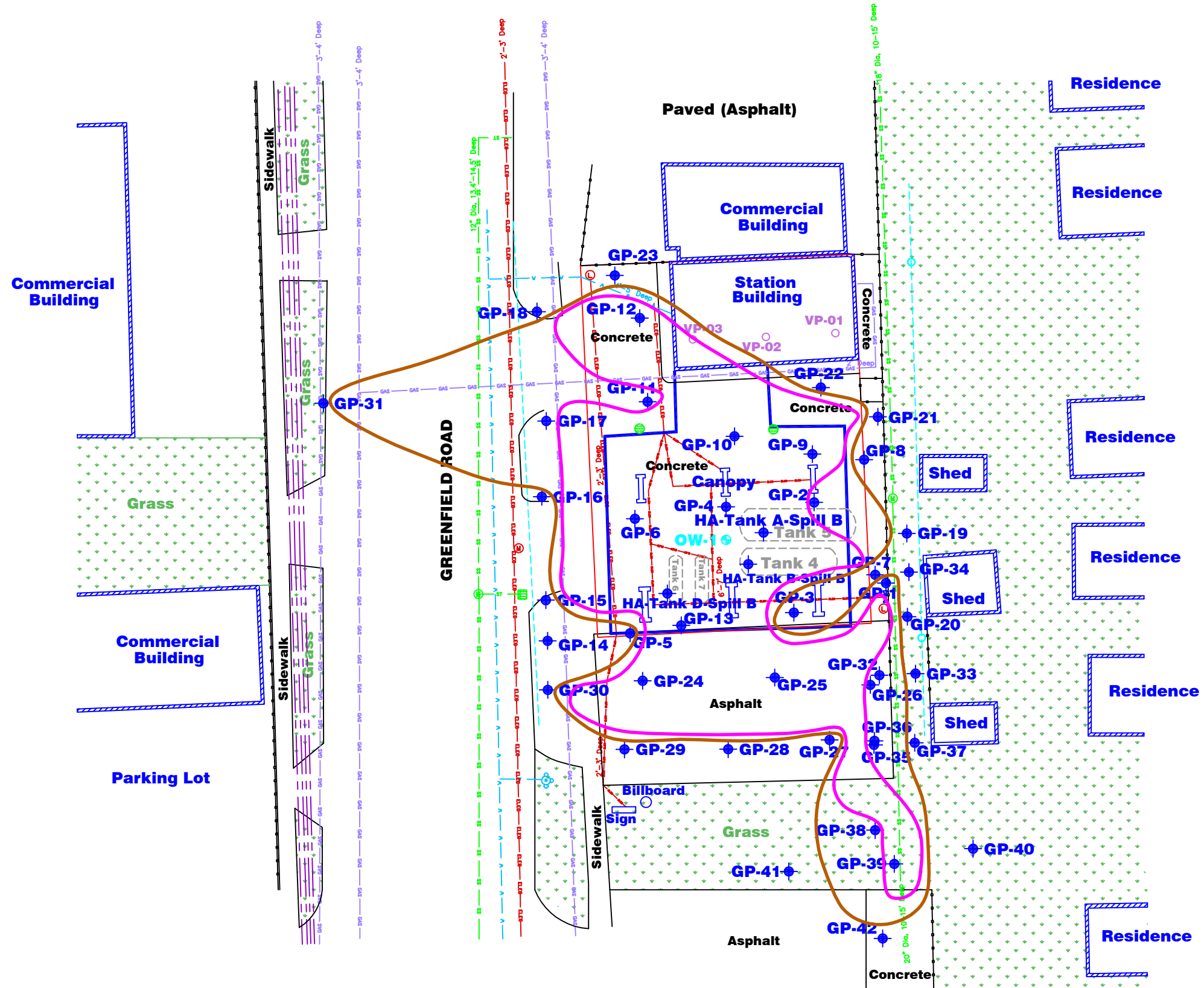


FIGURE 2B
SOIL ANALYTICAL RESULTS
East of Site
Knight Station K-311
11694 Greenfield Road
Detroit, Michigan
December 2020 154018.311

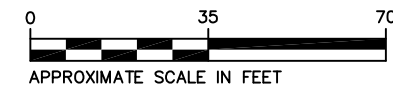


LEGEND

- ⊕ MONITORING WELL LOCATION
- ⊕ OPERATING WELL LOCATION
- ⊕ SOIL BORING LOCATION
- SOIL GAS VAPOR PIN
- CATCH BASIN
- ⊗ UTILITY MANHOLE
- UTILITY POLE
- ⊙ LIGHT POLE
- ⌈⌋ DISPENSER ISLAND
- FENCE
- COMBINED UNDERGROUND STORM & SANITARY SEWER LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- OVERHEAD UTILITIES
- UNDERGROUND ELECTRIC
- UNDERGROUND FIBEROPTIC
- PROPERTY BOUNDARIES
- * Please note utility locations are approximate
- LATERAL EXTENT OF SOIL CONTAMINATION
- LATERAL EXTENT OF RESIDUAL LNAPL

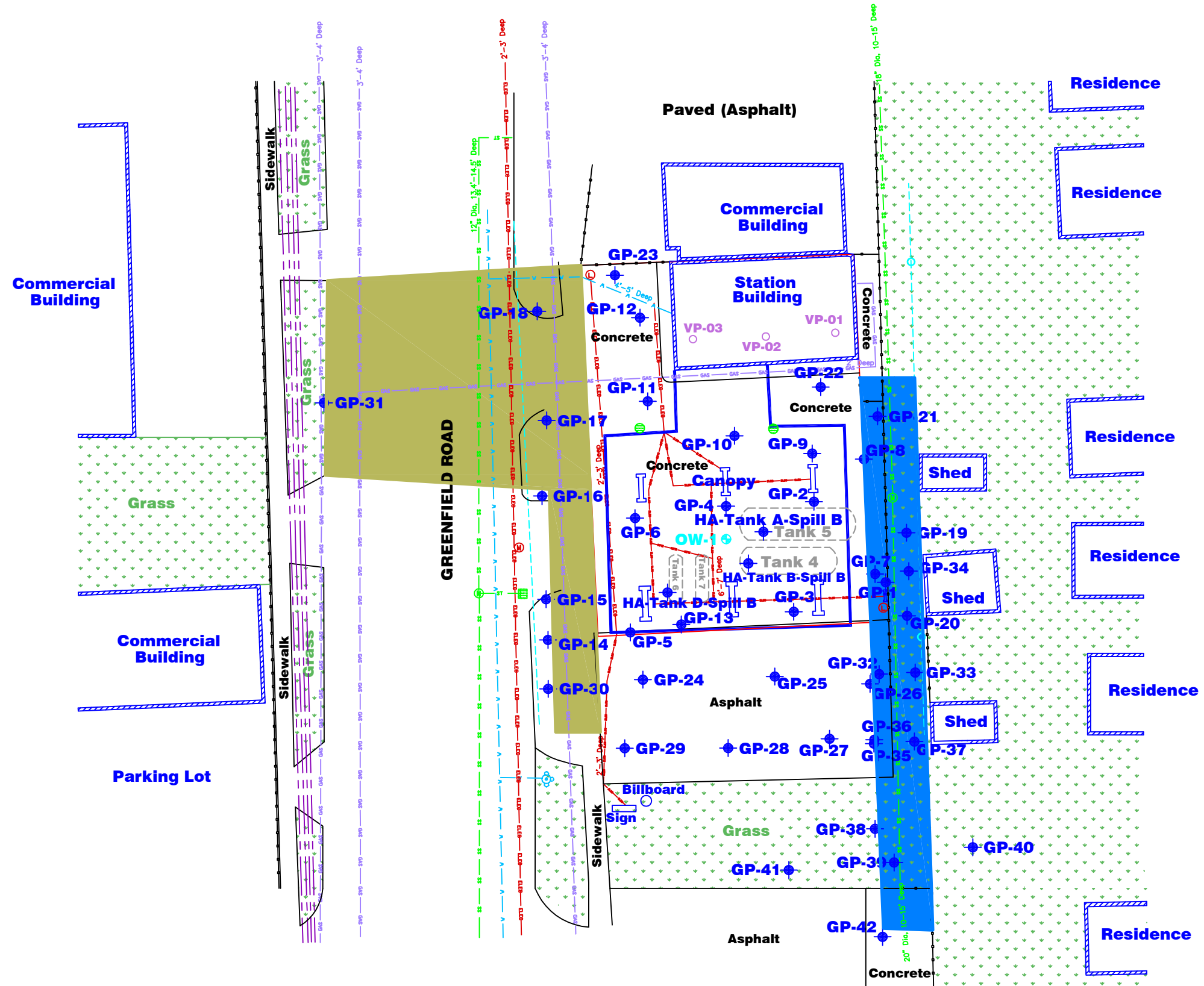
VS/SJ

FIGURE 2C
ESTIMATED LATERAL EXTENT
OF SOIL CONTAMINATION
Knight Station K-311
11694 Greenfield Road
Detroit, Michigan



December 2020

154018.311



LEGEND

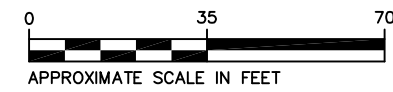
- ⊕ MONITORING WELL LOCATION
- ⊕ OPERATING WELL LOCATION
- ⊕ SOIL BORING LOCATION
- SOIL GAS VAPOR PIN
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- ⊗ UTILITY MANHOLE
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- — — UNDERGROUND GAS LINE
- - - - OVERHEAD UTILITIES
- - - - UNDERGROUND ELECTRIC
- - - - UNDERGROUND FIBEROPTIC
- — — PROPERTY BOUNDARIES

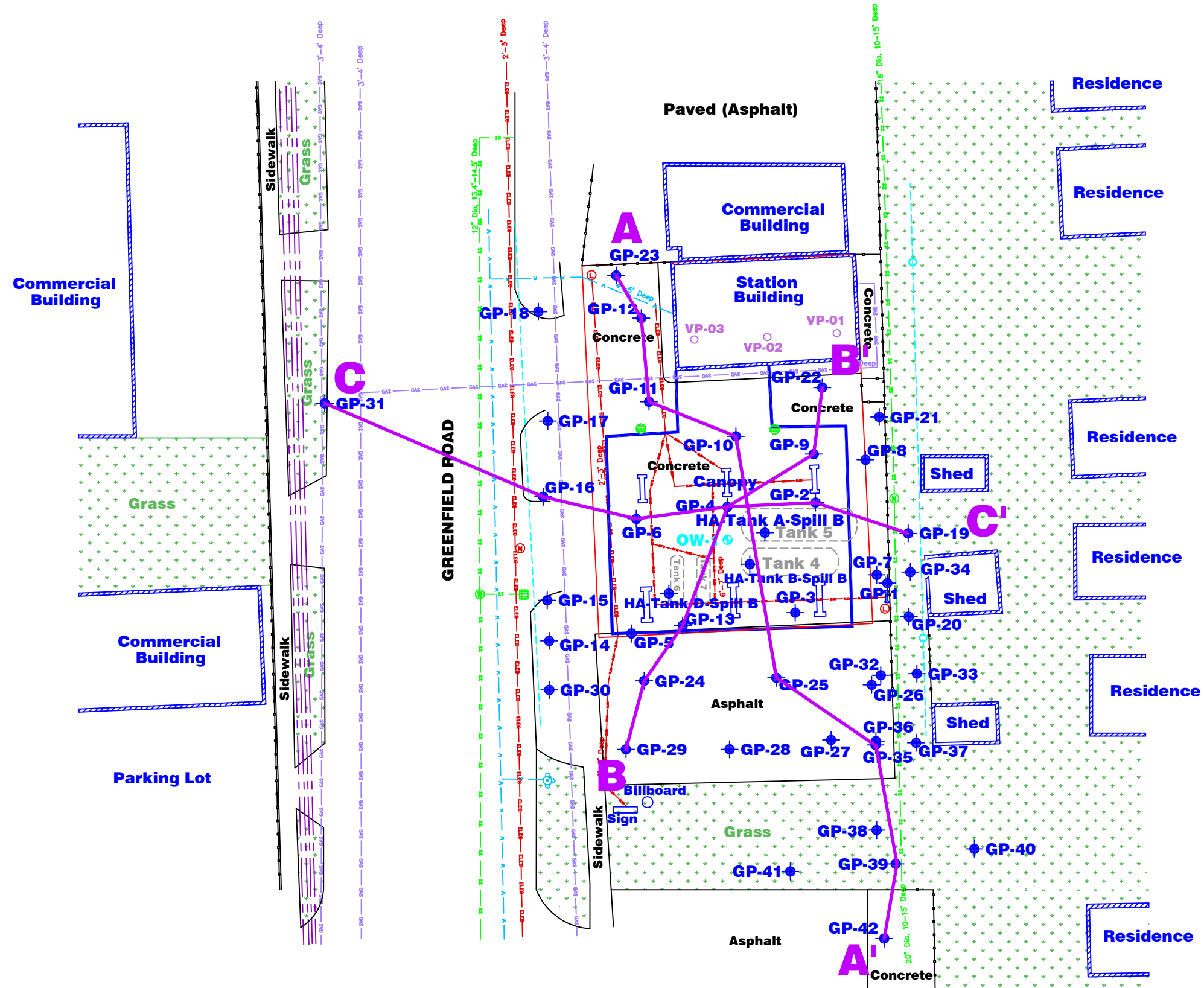
* Please note utility locations are approximate

- AREA SUBJECT TO PUBLIC HIGHWAY INSTITUTIONAL CONTROL FOR WAYNE COUNTY GREENFIELD ROAD
- AREA SUBJECT TO PUBLIC HIGHWAY INSTITUTIONAL CONTROL FOR CITY OF DETROIT ALLEY

VS/SJ

FIGURE 3
AREAS SUBJECT TO
INSTITUTIONAL CONTROLS
Knight Station K-311
11694 Greenfield Road
Detroit, Michigan





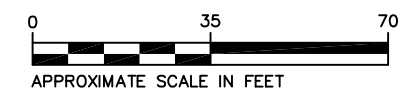
LEGEND

- ⊕ MONITORING WELL LOCATION
- ⊕ OPERATING WELL LOCATION
- ⊕ SOIL BORING LOCATION
- SOIL GAS VAPOR PIN
- CATCH BASIN
- ⊕ UTILITY MANHOLE
- UTILITY POLE
- ⊕ LIGHT POLE
- DISPENSER ISLAND
- FENCE
- — — — — COMBINED UNDERGROUND STORM & SANITARY SEWER LINE
- — — — — UNDERGROUND WATER LINE
- — — — — UNDERGROUND GAS LINE
- — — — — OVERHEAD UTILITIES
- — — — — UNDERGROUND ELECTRIC
- — — — — UNDERGROUND FIBEROPTIC
- — — — — PROPERTY BOUNDARIES

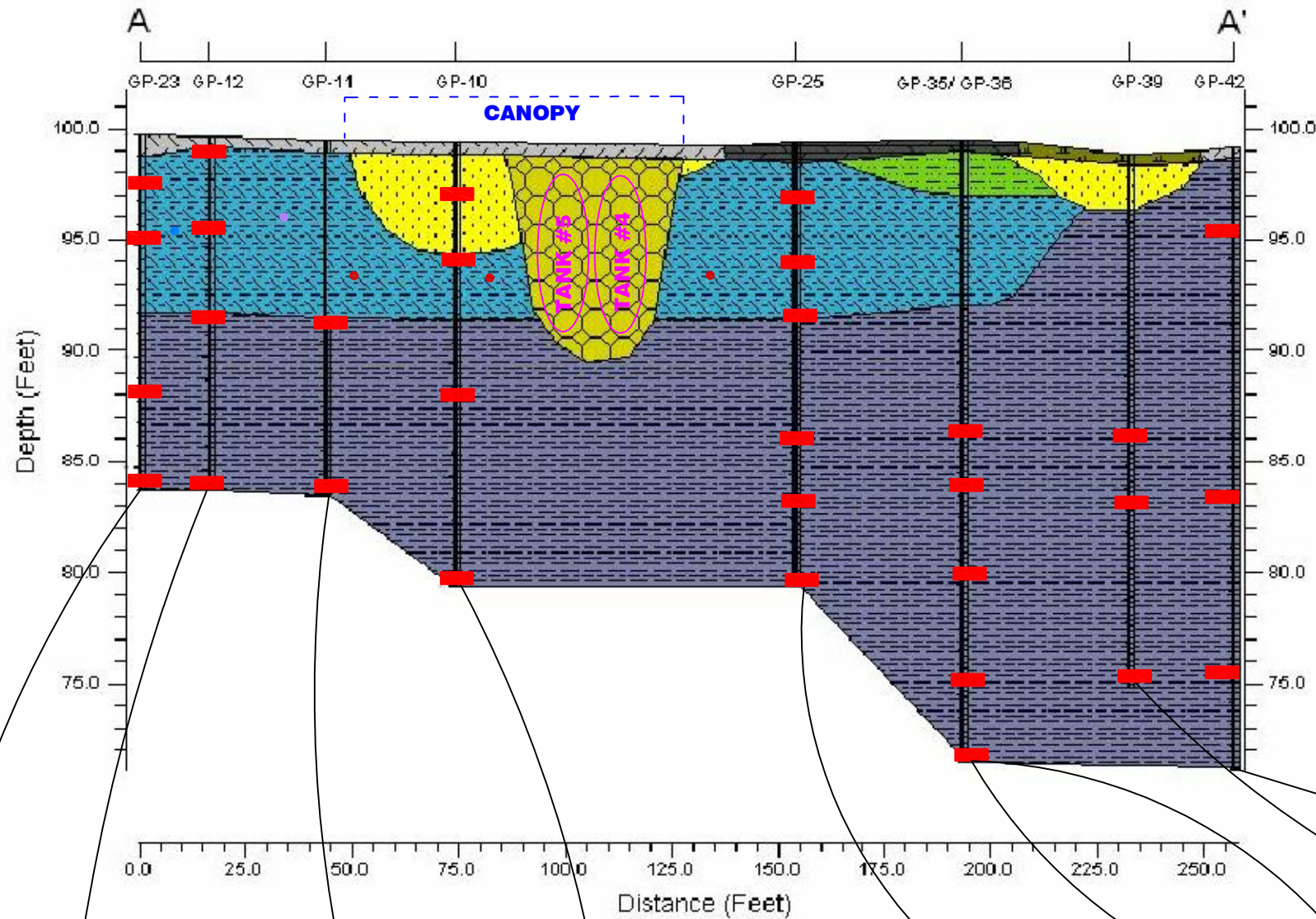
* Please note utility locations are approximate

VS/SJ

FIGURE 4A
CROSS SECTION TRACE MAP
Knight Station K-311
11694 Greenfield Road
Detroit, Michigan
December 2020 154018.311



Cross-Section A-A'



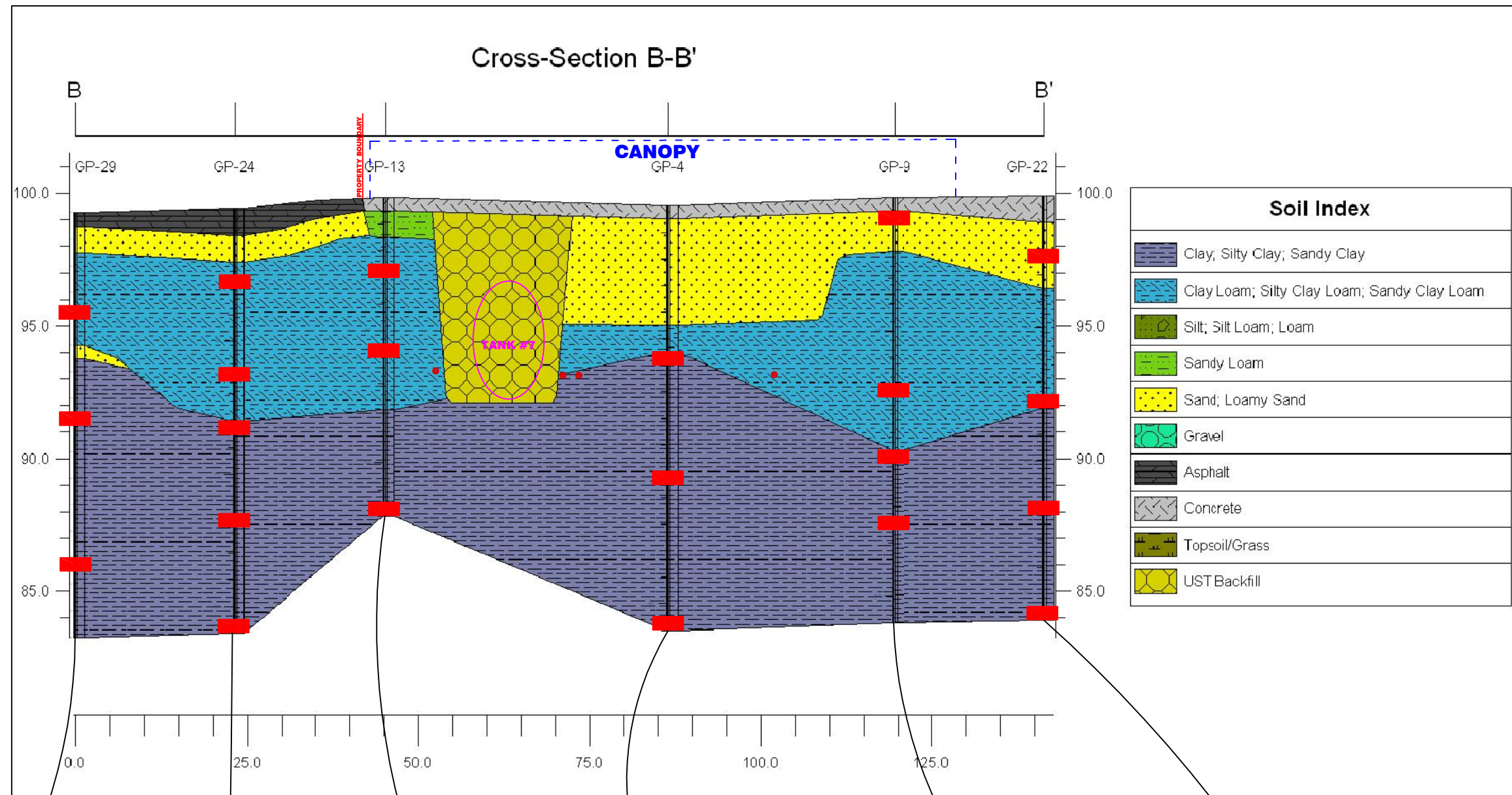
| Soil Index | |
|------------|---|
| [Pattern] | Clay; Silty Clay; Sandy Clay |
| [Pattern] | Clay Loam; Silty Clay Loam; Sandy Clay Loam |
| [Pattern] | Silt; Silt Loam; Loam |
| [Pattern] | Sandy Loam |
| [Pattern] | Sand; Loamy Sand |
| [Pattern] | Gravel |
| [Pattern] | Asphalt |
| [Pattern] | Concrete |
| [Pattern] | Topsoil/Grass |
| [Pattern] | UST Backfill |

- LEGEND**
- SOIL SAMPLE INTERVAL
 - UST
 - UNDERGROUND ELECTRIC LINE
 - UNDERGROUND WATER LINE
 - UNDERGROUND GAS LINE
- B** Benzene
n-BB n-Butylbenzene
sec-BB sec-Butylbenzene
E Ethylbenzene
I Isopropylbenzene
N Naphthalene
n-PB n-Propylbenzene
T Toluene
1,2,3 1,2,3-Trimethylbenzene
1,2,4 1,2,4-Trimethylbenzene
1,3,5 1,3,5-Trimethylbenzene
X Total Xylenes
ACE Acenaphthene
ACY Acenaphthylene
ANTH Anthracene
BaA Benzo[a]anthracene
BaP Benzo[a]pyrene
BbF Benzo[b]fluoranthene
BPYL Benzo[g,h,i]perylene
BkACY Benzo[k]fluoranthene
CH Chrysene
DahA Dibenzo(a,h)anthracene
FLU Fluoranthene
FN Fluorene
IDNPY Indeno[1,2,3-cd]pyrene
2-MN 2-Methylnaphthalene
PH Phenanthrene
PY Pyrene
PNAs Polynuclear Aromatic Hydrocarbons
VOCs Volatile Organic Compounds
DRO Diesel Range Organics
GRO Gasoline Range Organics
RL Reporting Limit
- BOLD VALUES EXCEED APPLICABLE CRITERIA**

| Sample Location | Sample Media/Sample Depth | Sample Date/Collected By | Analytical Results (ug/kg) |
|-----------------|----------------------------------|--------------------------|--|
| GP-23 | Soil/2.0'-2.5' 7-27-18/BLDI | | VOCs < RL GRO < RL |
| GP-12 | Soil/0.5'-1.0' 4-24-18/BLDI | | B 550 E 600 2-MN 460 N 720 1,2,3 160 1,2,4 170 X 490 Other VOCs < RL GRO 170,000 |
| GP-11 | Soil/8.0'-8.5' 4-24-18/BLDI | | B 230 E 820 2-MN 530 T 1,100 1,2,3 400 1,2,4 2,000 1,3,5 500 X 3,700 Other VOCs < RL GRO 34,000 |
| GP-10 | Soil/2.0'-2.5' 4-24-18/BLDI | | B 1,300 E 13,000 2-MN 99,000 N 70,000 1,2,3 130,000 1,2,4 500,000 1,3,5 80,000 X 38,000 Other VOCs < RL GRO 2,100,000 |
| GP-10 | Soil/12.0'-12.5' 4-24-18/BLDI | | VOCs < RL GRO < RL |
| GP-10 | Soil/19.5'-20.0' 4-24-18/BLDI | | VOCs < RL GRO < RL |
| GP-25 | Soil/2.0'-2.5' 7-27-18/BLDI | | VOCs < RL GRO < RL |
| GP-25 | Soil/5.0'-5.5' 7-27-18/BLDI | | VOCs < RL GRO < RL |
| GP-25 | Soil/7.5'-8.0' 7-27-18/BLDI | | B 7,600 E 91,000 2-MN 18,000 N 22,000 T 310,000 1,2,3 36,000 1,2,4 200,000 1,3,5 55,000 X 530,000 Other VOCs < RL GRO 3,700,000 |
| GP-25 | Soil/13.0'-13.5' 7-27-18/BLDI | | B 620 E 2,000 2-MN 1,000 N 960 T 1,700 1,2,3 1,500 1,2,4 11,000 1,3,5 2,200 X 9,300 Other VOCs < RL GRO 150,000 |
| GP-35 | Soil/13.0'-13.5' 2-26-19/BLDI | | B 56 E 140 2-MN 580 T 220 1,2,3 400 1,2,4 1,900 1,3,5 920 X 1,000 Other VOCs < RL GRO 33,000 |
| GP-35 | Soil/15.5'-16.0' 2-26-19/BLDI | | B 2,500 E 1,500 N 510 T 6,100 1,2,3 1,200 1,2,4 6,000 1,3,5 1,700 X 9,200 Other VOCs < RL GRO 31,000 |
| GP-35 | Soil/16.0'-16.5' 7-27-18/BLDI | | VOCs < RL GRO < RL |
| GP-35 | Soil/19.5'-20.0' 7-27-18/BLDI | | VOCs < RL GRO < RL |
| GP-36 | Soil/23.5'-24.0' 3-22-19/BLDI | | B 350 E 180 T 1,800 1,2,4 220 X 910 Other VOCs < RL GRO 5,300 |
| GP-36 | Soil/27.5'-28.0' 3-22-19/BLDI | | VOCs < RL GRO < RL |
| GP-39 | Soil/12.5'-13.0' 3-22-19/BLDI | | VOCs < RL GRO < RL |
| GP-39 | Soil/15.5'-16.0' 3-22-19/BLDI | | B 6,900 E 250,000 2-MN 74,000 N 75,000 T 88,000 1,2,3 150,000 1,2,4 840,000 1,3,5 240,000 X 1,800,000 Other VOCs < RL GRO 12,000,000 |
| GP-39 | Soil/23.5'-24.0' 3-22-19/BLDI | | VOCs < RL GRO < RL |
| GP-42 | Soil/3.5'-4.0' 8-19-20/BLDI | | VOCs < RL GRO < RL |
| GP-42 | Soil/15.5'-16.0' 8-19-20/BLDI | | VOCs < RL GRO < RL |
| GP-42 | Soil/23.5'-24.0' 8-19-20/BLDI | | VOCs < RL GRO < RL |

Sample Location
 Sample Media/Sample Depth
 Sample Date/Collected By
 Analytical Results (ug/kg)

FIGURE 4B
CROSS SECTION A-A'
 Knight Station K-311
 11694 Greenfield Road
 Detroit, Michigan
 December 2020 154018.311



GP-29
Soil/3.5'-4.0'
10-18-18/BLDI
VOCs < RL
GRO < RL

Soil/7.5'-8.0'
10-18-18/BLDI
VOCs < RL
GRO < RL

Soil/13.0'-13.5'
10-18-18/BLDI
VOCs < RL
GRO < RL

GP-24
Soil/2.5'-3.0'
7-27-18/BLDI
VOCs < RL
GRO < RL

Soil/6.0'-6.5'
7-27-18/BLDI
VOCs < RL
GRO **2,200,000**

Soil/8.0'-8.5'
7-27-18/BLDI
VOCs < RL
GRO < RL

Soil/11.5'-12.0'
7-27-18/BLDI
VOCs < RL
GRO < RL

Soil/15.5'-16.0'
7-27-18/BLDI
VOCs < RL
GRO < RL

GP-13
Soil/2.5'-3.0'
4-24-18/BLDI
VOCs < RL
GRO 14,000

Soil/5.5'-6.0'
4-24-18/BLDI
E **3,000**
2-MN **6,300**
N **4,000**
1,2,3 **4,800**
Other VOCs < RL
GRO **280,000**

Soil/11.5'-12.0'
4-24-18/BLDI
VOCs < RL
GRO < RL

GP-4
Soil/5.5'-6.0'
12-12-17/BLDI

B **1,100**
E **31,000**
N **8,800**
T **9,300**
1,2,3 **18,000**
1,2,4 **100,000**
1,3,5 **28,000**
X **180,000**
Other VOCs < RL
2-MN **5,400**
Other PNAs < RL
GRO **1,400,000**

Soil/10.0'-10.5'
12-12-17/BLDI
VOCs < RL
PNAs < RL

Soil/15.5'-16.0'
12-12-17/BLDI
VOCs < RL
PNAs < RL

GP-9
Soil/0.5'-1.0'
4-24-18/BLDI

T 100
1,3,5 130
X 410
other VOCs < RL
GRO 7,800

Soil/7.0'-7.5'
4-24-18/BLDI

B **860**
E **14,000**
2-MN **8,800**
N **6,200**
1,2,3 **12,000**
1,2,4 **24,000**
1,3,5 **8,000**
X 4,600
Other VOCs < RL
GRO **720,000**

GP-9
Soil/9.5'-10.0'
4-24-18/BLDI

B **400**
E 260
2-MN 1,300
1,2,3 120
other VOCs < RL
GRO 69,000

Soil/12.0'-12.5'
4-24-18/BLDI
VOCs < RL
GRO < RL

GP-22
Soil/2.0'-2.5'
7-27-18/BLDI
VOCs < RL
GRO < RL

Soil/7.5'-8.0'
7-27-18/BLDI
VOCs < RL
GRO < RL

Soil/11.5'-12.0'
7-27-18/BLDI
VOCs < RL
GRO < RL

Soil/15.5'-16.0'
7-27-18/BLDI
VOCs < RL
GRO < RL

FIGURE 4C
CROSS SECTION B-B'
Knight Station K-311
11694 Greenfield Road
Detroit, Michigan

