



March 31, 2020

Ms. Jennifer Borski
Wisconsin Department of Natural Resources
625 East County Road Y, Suite No. 700
Oshkosh, WI 54901-9731

Re: **Work Scope for Additional CVOC Investigations**
Appleton Wire (Former)
908 N. Lawe Street
Appleton, Wisconsin 54911
BRRTS# 02-45-000015

Dear Ms. Borski:

EnviroForensics, LLC (EnviroForensics) has prepared this work scope for the Appleton Wire (former), Albany International Chrome Plant located at 908 North Lawe Street in Appleton, Wisconsin. This work scope is in response to the Wisconsin Department of Natural Resources (WDNR) requirements to define the extent of chlorinated volatile organic compounds (CVOCs) and determine if the impacts extend off-site.

Soil and Groundwater Sampling for CVOCs

Past investigations have resulted in the identification of CVOCs in soil and groundwater. The extent of these impacts appears limited as shown on attached **Figures 1** and **2**. In addition, the impacts discovered do not represent a health risk due to direct contact exposure, and are completely capped with pavement to limit infiltration of precipitation and subsequent movement of the impacts. However additional data points are needed to determine if the impacts extend onto adjacent properties; therefore, EnviroForensics proposes the following additional investigative actions to be performed in May or June of 2020:

1. Access will be gained from Luvata Appleton LLC and Appvion LLC for further investigations on their property;
2. Five (5) soil borings are recommended at the locations shown on **Figure 3**;
3. A private locate service will be utilized to ensure no utilities are in the way of the planned soil borings;
4. Soil samples will be collected continuously to a depth of 15 feet below grade to determine soil type;



5. A soil sample will be collected every 2-feet of unsaturated soil core. The sample will be split and placed in plastic zip lock bags. One of the bags will be placed on ice for possible future laboratory analysis. The other bag of sample will be screened using a photoionization detector (PID) instrument. Individual samples will be selected for laboratory analysis based on the relative PID readings. At least one (1) sample will be collected from the upper 4-feet of soil. The samples will be preserved with methanol and sent to a laboratory for analysis of CVOCs by EPA Method 8260;
6. A grab water sample will be collected at each soil boring location by setting a 2-inch diameter polyvinyl chloride (PVC) well screen with solid riser into the borehole. Sand filter pack material will be placed around the screen and groundwater allowed to recharge. Groundwater recharge to site wells is typically very slow and can take 1-3 days to recharge enough to collect samples. We will be performing other site work that will require three days and the temporary wells will not be unattended. The five (5) groundwater samples will be preserved with hydrochloric acid, placed on ice, and sent to a laboratory for analysis of CVOCs by EPA Method 8260;
7. Immediately upon collecting the water samples, the temporary wells will be abandoned according to the standards set forth in Chapter NR 141 of the Wisconsin Administrative Code;
8. Existing groundwater monitoring wells MW-19R, MW-22, MW-25, MW-26R, and MW-31 will be sampled. Some of these wells were newly installed following chromium remedial efforts and are shown on attached **Figure 4**. Low-flow sampling methods have been utilized in the past where accurate field measured parameters are needed, but the wells do not sustain adequate recharge for collecting both field measured parameters and samples for laboratory analysis using low-flow methods. Therefore, disposable polyethylene bailers will be utilized to collect all analytical samples from these wells. The samples will be preserved with hydrochloric acid, placed on ice, and then analyzed for CVOCs by EPA Method 8260; and
9. One (1) field duplicate each will be collected from the temporary wells and permanent wells for QA/QC purposes. In addition, one (1) trip blank will accompany the cooler.

High Purge Volume Sub-slab Vapor Sampling

Sub-slab vapor sampling for CVOC vapor will be performed during this mobilization. It is likely that a full day will be needed to perform this work. The high purge volume vapor sampling will be performed according to our previously submitted work scope titled: *Work Scope for Additional Sampling*, dated November 7, 2018.



Post-remedial Groundwater Sampling (Chromium)

Also during this mobilization, remedial monitoring wells will be sampled during a second quarterly event. The post-remedial groundwater monitoring plan is presented in the document titled: *Remedial Action Plan*, dated April 11, 2019. The sampling of these wells will likely require another partial day to complete.

It is anticipated that upon completing this sampling along with the sub-slab sampling that there will be enough time for groundwater to recharge to the temporary wells allowing samples to be collected for CVOC analysis.

Results reports will be prepared for the property owners within 10-days of receiving the analytical results and a separate, more comprehensive, report will be provided to the WDNR.

If you have any questions regarding this submittal, feel free to contact me at 414-982-3988 or by email at wfassbender@enviroforensics.com.

Sincerely,

EnviroForensics, LLC

A handwritten signature in black ink, reading "Wayne P. Fassbender". The signature is written in a cursive style.

Wayne Fassbender, PG, PMP
Senior Project Manager

Attachments:

NR 712 Certification

Figure 1- Detected CVOCs in Soil

Figure 2- Detected CVOCs in Groundwater

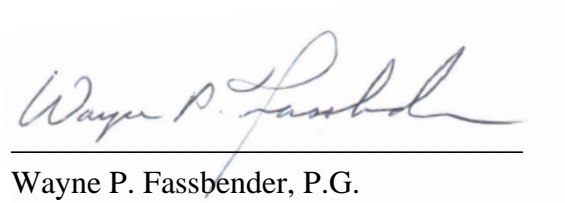
Figure 3- Additional Proposed CVOC Data Points

Figure 4- Post-remediation Groundwater Monitoring Well Network

cc: Joe Gaug, Albany International
Michael Boozer, ChemReport

HYDROGEOLOGIST CERTIFICATION

“I, Wayne P. Fassbender, certify I am a Hydrogeologist as that term is defined in s NR 712.03 (1) Wisconsin Administrative Code; and that to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements of chs. NR 700 to 726, Wisconsin Administrative Code.”

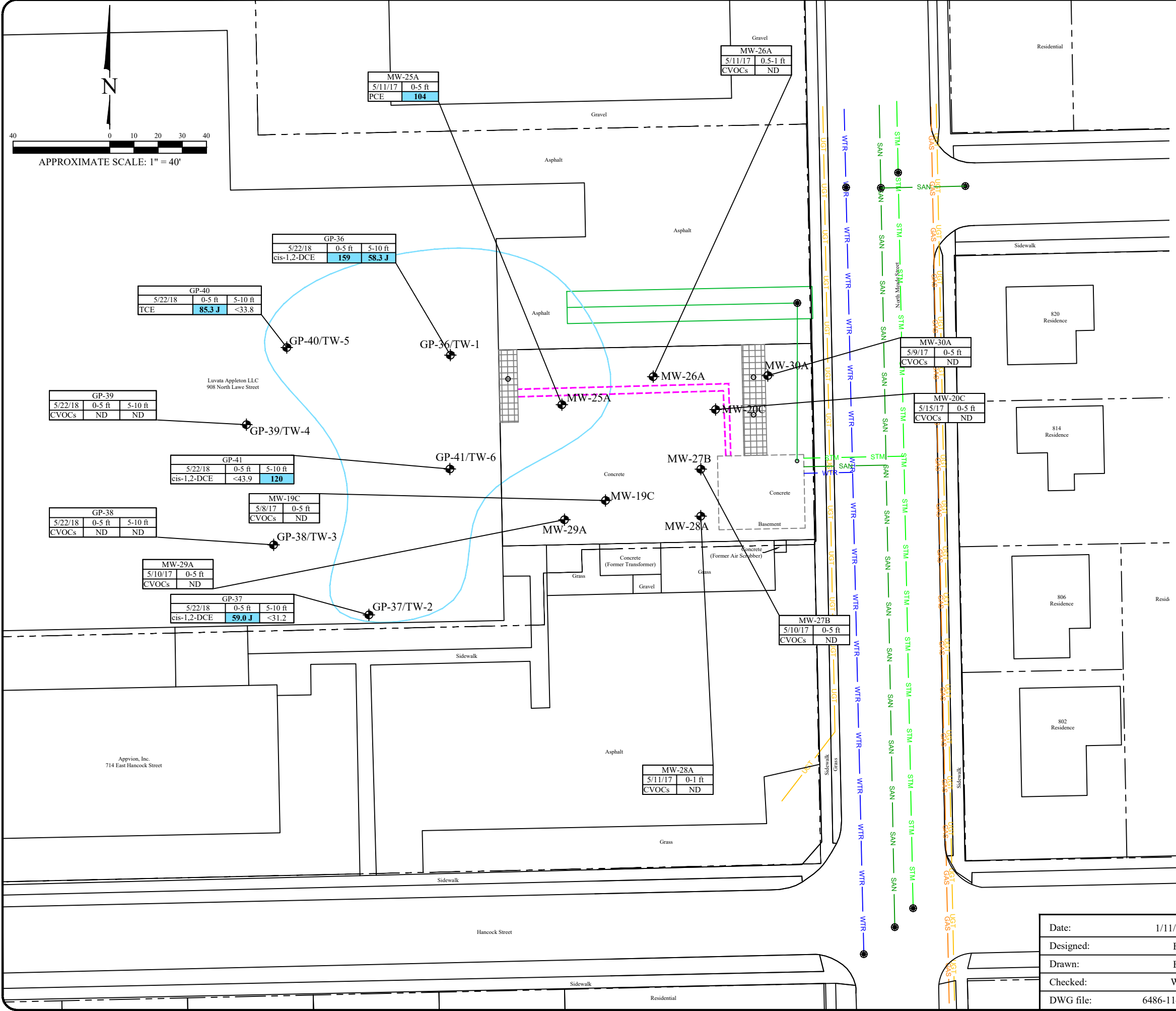
A handwritten signature in cursive script, reading "Wayne P. Fassbender", written over a horizontal line.

Wayne P. Fassbender, P.G.

3/31/2020

Date

Document Reference: Work Scope for Additional CVOC Investigations; Appleton Wire (former); 908 N. Lawe Street, Appleton, Wisconsin; March 31, 2020.



Legend

- Property boundary
- GAS - Underground gas utility line
- WTR - Underground water utility line
- SAN - Underground sanitary utility line
- UGT - Fiber optics line
- STM - Underground storm utility line
- Pipe chase
- French drain and associated piping
- Sump
- Former Sump
- Floor drain
- Manhole
- MW-4 - Monitoring well
- GP-36/TW-1 - Soil boring/1-inch diameter well
- Dairy tile floor

Analyte	Soil to Groundwater Residual Contaminant Level	Non-Industrial Direct Contact RCL	Industrial Direct Contact RCL
PCE	4.5	33,000	145,000
TCE	3.6	1,300	8,410
cis-1,2-DCE	41.2	156,000	2,340,000

- Note:
- Bold shaded blue values exceed WDNR Soil to Groundwater Residual Contaminant Level
 - Results are reported in micrograms per kilogram (µg/kg)
 - PCE = Tetrachloroethene
 - TCE = Trichloroethene
 - cis-1,2-DCE = cis-1,2-Dichloroethene
 - CVOCs = Chlorinated Volatile Organic Compounds
 - RCL = Residual Contaminant Level
 - ND = Not detected above laboratory detection limits

Extent of CVOC concentrations in soil exceeding a Soil to Groundwater Residual Contaminant Level

DETECTED CVOCs IN SOIL

Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

Date: 1/11/17		Figure
Designed: EB		1
Drawn: EB		Project
Checked: WF		6486
DWG file: 6486-1142		<small>825 North Capitol Avenue • Indianapolis, IN 46204 EnviroForensics.com</small>

Legend

- Property boundary
- GAS Underground gas utility line
- WTR Underground water utility line
- SAN Underground sanitary utility line
- UGT Fiber optics line
- STM Underground storm utility line
- Pipe chase
- French drain and associated piping
- Sump
- Floor drain
- Manhole
- MW-1 Monitoring well
- MW-5C Abandoned monitoring well
- TW-1 New temporary groundwater monitoring well
- Dairy tile floor

Analyte	Public Health Preventive Action Limit	Public Health Enforcement Standard
Chloromethane	3	30
1,1-DCA	85	850
cis-1,2-DCE	7	70
trans-1,2-DCE	10	100
PCE	0.5	5
1,1,1-TCA	20	200
TCE	0.5	5
Vinyl Chloride	0.02	0.2
MC	0.5	5

- Note:
- Bolded and orange shaded values exceed the Public Health Enforcement Standard
 - Bolded and blue shaded values exceed the Public Health Preventive Action Limit
 - Bolded values are above detection limits
 - J = Analyte concentration less than laboratory detection limits
 - Samples analyzed using EPA SW-846 Method 8260
 - All results reported in units of micrograms per liter (µg/L)
 - PCE = Tetrachloroethene
 - TCE = Trichloroethene
 - 1,1-DCA = 1,1-Dichloroethane
 - cis-1,2-DCE = cis-1,2-Dichloroethene
 - trans-1,2-DCE = trans-1,2-Dichloroethene
 - 1,1,1-TCA = 1,1,1-Trichloroethane
 - MC = Methylene Chloride
 - CVOCs = Chlorinated Volatile Organic Compounds
 - ND = Not detected above laboratory detection limits

- MW-19 Water table observation well (with 10 foot screen length)
- MW-19A Piezometer (with 5 foot screen length set within the 30-40' depth interval)
- MW-1B Piezometer (with 5 foot screen length set within the 40-50' depth interval)
- Extent of CVOCs exceeding the groundwater enforcement standard

DETECTED CVOCs IN GROUNDWATER

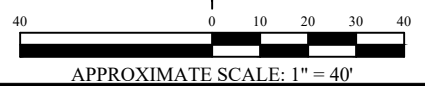
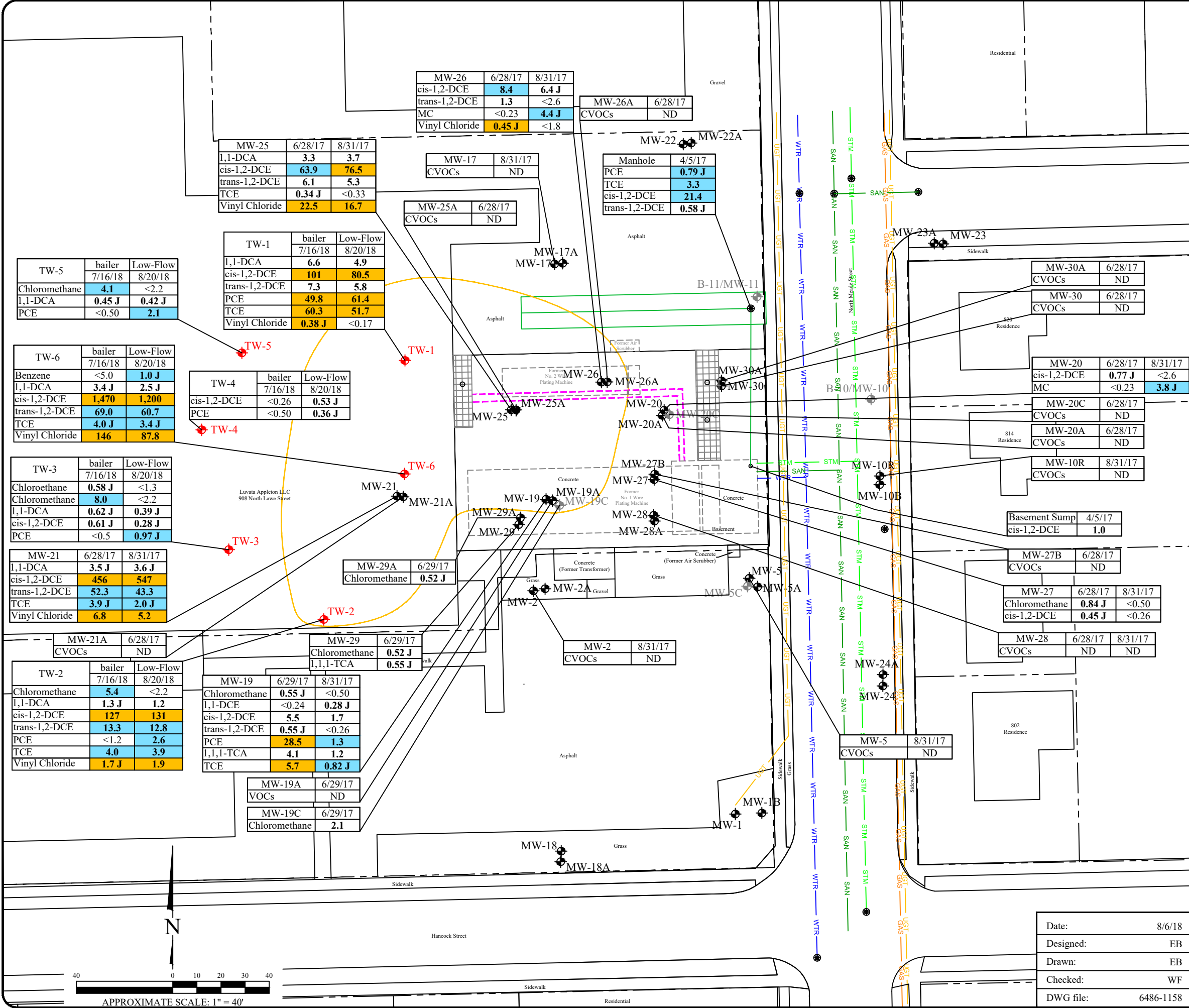
Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

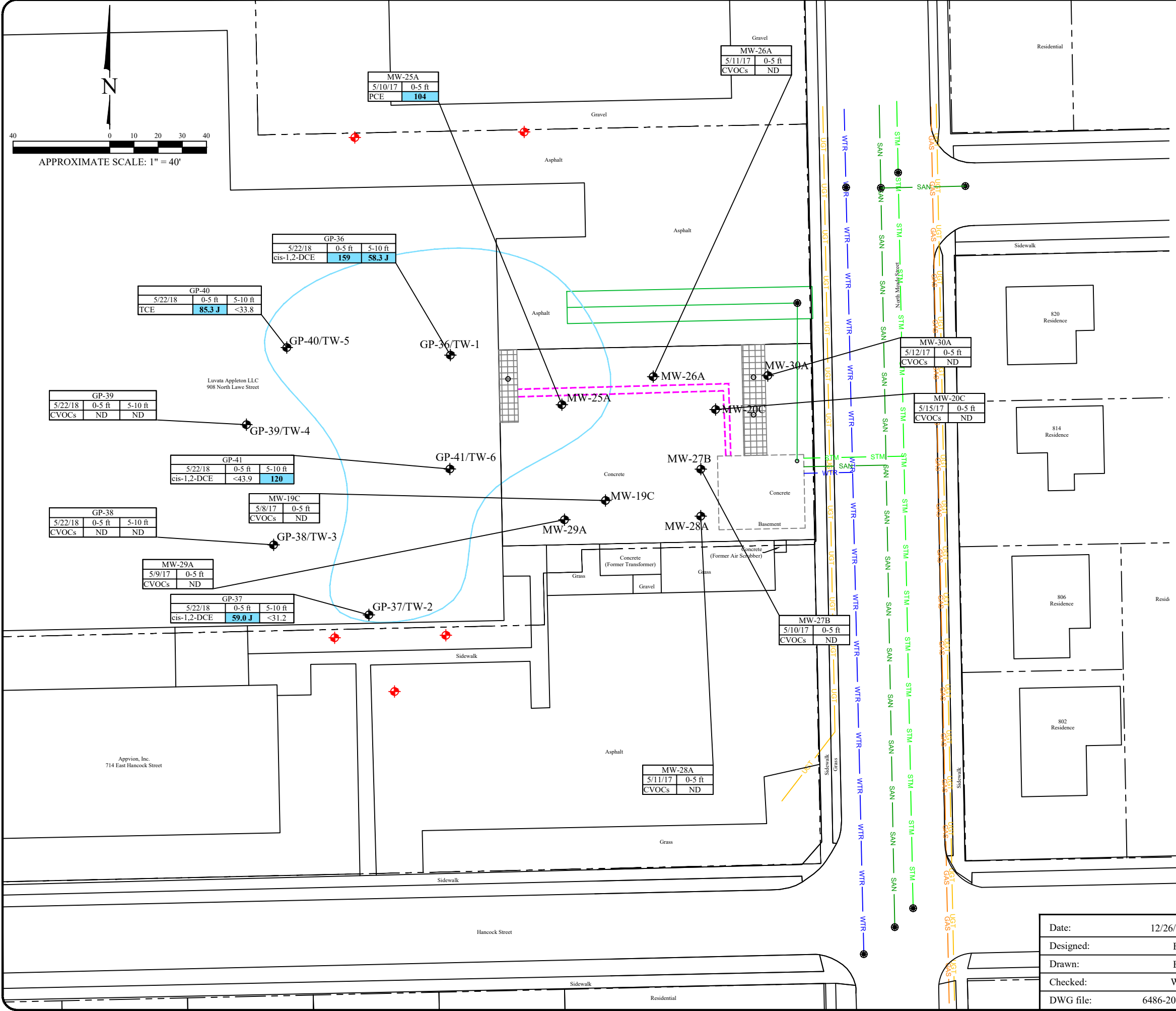
Date:	8/6/18
Designed:	EB
Drawn:	EB
Checked:	WF
DWG file:	6486-1158



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Figure	2
Project	6486





Legend

- Property boundary
- GAS - Underground gas utility line
- WTR - Underground water utility line
- SAN - Underground sanitary utility line
- UGT - Fiber optics line
- STM - Underground storm utility line
- Pipe chase
- French drain and associated piping
- Sump
- Former Sump
- Floor drain
- Manhole
- MW-4 - Monitoring well
- GP-36/TW-1 - Soil boring/1-inch diameter well
- Dairy tile floor

Analyte	Soil to Groundwater Residual Contaminant Level	Non-Industrial Residual Contaminant Level	Industrial Residual Contaminant Level
PCE	4.5	33,000	145,000
TCE	3.6	1,300	8,410
cis-1,2-DCE	41.2	156,000	2,340,000

- Note:
- Bold shaded blue values exceed WDNR Soil to Groundwater Residual Contaminant Level
 - Results are reported in micrograms per kilogram (µg/kg)
 - PCE = Tetrachloroethene
 - TCE = Trichloroethene
 - cis-1,2-DCE = cis-1,2-Dichloroethene
 - CVOCs = Chlorinated Volatile Organic Compounds
 - ND = Not detected above laboratory detection limits

Extent of CVOC concentrations in soil exceeding a Soil to Groundwater Residual Contaminant Level

Proposed soil boring/grab groundwater sample location

PAST SOIL DATA WITH PROPOSED ADDITIONAL DATA COLLECTION POINTS
 Albany International - Luvata Site
 908 North Lawe Street
 Appleton, Wisconsin














Date:	12/26/19
Designed:	EB
Drawn:	EB
Checked:	WF
DWG file:	6486-2063

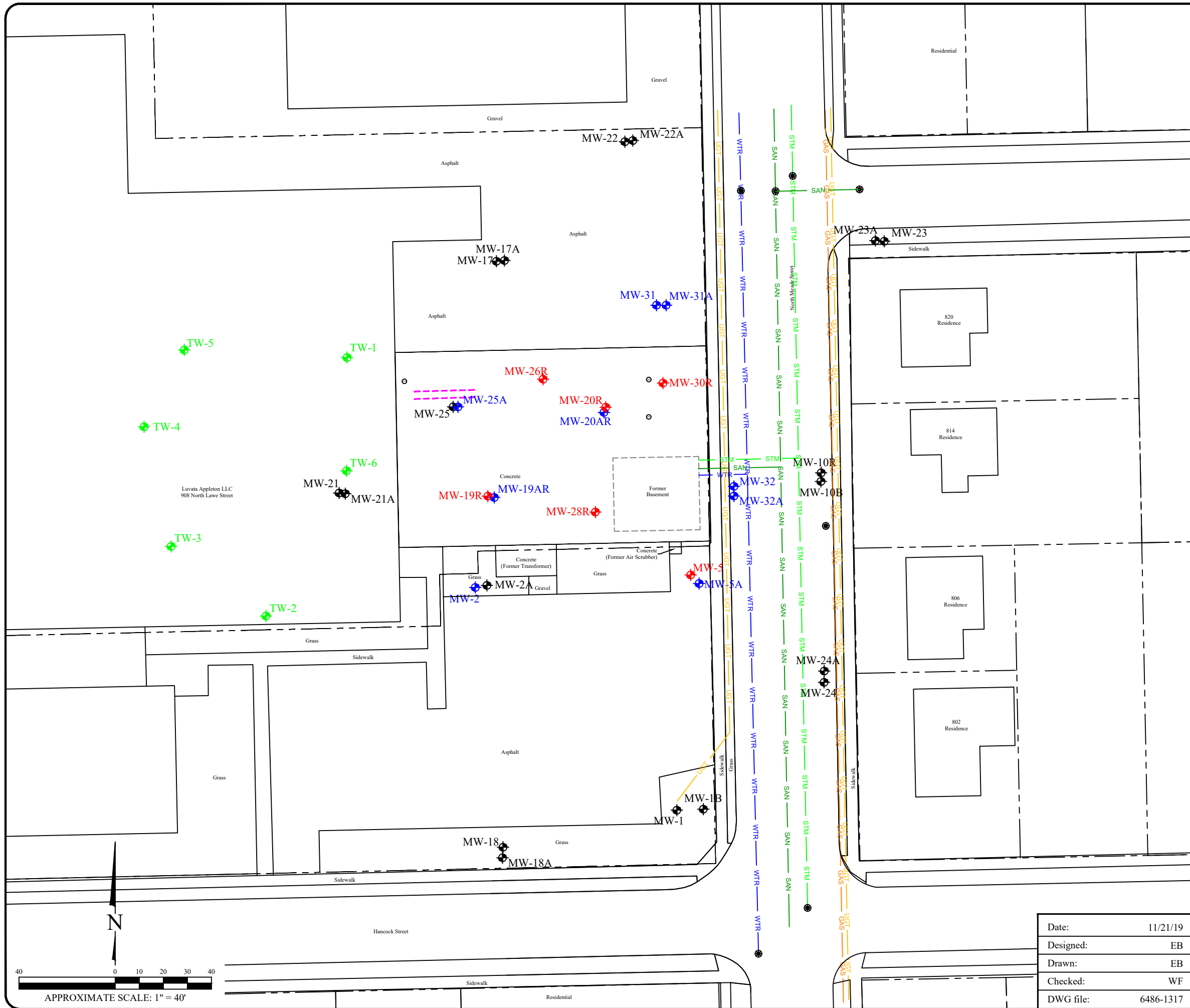


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Figure	3
Project	6486

Legend

-  Property boundary
-  GAS Underground gas utility line
-  WTR Underground water utility line
-  SAN Underground sanitary utility line
-  UGT Fiber optics line
-  STM Underground storm utility line
-  Pipe chase
-  Floor drain
-  Manhole
-  TW-1 1-inch diameter groundwater monitoring well for sampling of chlorinated compounds
-  Monitoring well designated for remediation performance monitoring
-  Monitoring well designated for plume distribution evaluation
-  Monitoring well designated to be sampled once pre-closure



**POST-REMEDIATION GROUNDWATER MONITORING
WELL NETWORK**

Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

Date:	11/21/19
Designed:	EB
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DWG file:	6486-1317



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Figure	4
Project	6486

