# SCS ENGINEERS

January 20, 2022 File No. 25220157.00

Mr. Steve Ales Wisconsin Department of Natural Resources 3911 Fish Hatchery Road Fitchburg, WI 53711

Subject: Documentation of Material Management

PDM Warehouse Project, 2517 Bowman Street, Madison

BRRTS # 02-13-584472

Dear Mr. Ales:

This letter documents management of contaminated soil and groundwater during the construction of a new warehouse facility at 2517 Bowman Street at the Dane County Regional Airport in Madison, Wisconsin as required by the Wisconsin Department of Natural Resources (WDNR) in their Soil Materials Management Plan (MMP) approval letter dated January 25, 2021. SCS Engineers (SCS) understands that dewatering and earth moving activities are now complete and the final construction details are being completed.

## Background

SCS submitted an MMP to WDNR on behalf of Preferred Development Madison (PDM) on January 11, 2021. The MMP described contamination identified on the property, the planned redevelopment of the property with a 27,200-foot distribution center, and the proposed approach for handling contaminated media displaced by the redevelopment project. The site location is shown on **Figure 1** and the site and surrounding areas of the airport are shown on **Figure 2**.

#### **Soil Contamination**

The primary contaminants of concern identified in soil samples collected prior to the start of redevelopment activities are per- and polyfluoroalkyl substances (PFAS). The initial Phase 2 environmental site assessment sampling included analysis of six soil samples for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals. VOCs were not detected; low level PAHs detected in one of the samples were much less than the residual contaminant levels (RCLs) for non-industrial direct contact and groundwater protection; and detected metals concentrations were less than background threshold values (BTVs).

Documented use of PFAS-contaminated materials on site was not identified by the Phase 1 Environmental Site Assessment (ESA) and the potential for PFAS contamination in soil was not addressed by the Phase 2 ESA. Soil sampling and analysis completed by SCS prior to the preparation of the MMP did not detect PFAS contamination (other than PFBA attributable to lab contamination) in the area of the largest planned excavation in the central portion of the site. Relatively low concentrations of PFAS were detected in soil in areas adjacent to the tarmac at the northeast edge of the project site and along the alignment of the new storm sewer. None of the detected PFAS concentrations exceeded NR 720 RCLs based direct contact with contaminated soil.



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#### **Groundwater Contamination**

Analyses of two groundwater samples collected during the Phase 2 ESA detected traces of toluene and several PAHs, at a concentration less than the corresponding NR 140 preventive action limits (PALs). Elevated concentrations of metals, exceeding one or more Wisconsin groundwater enforcement standards, were detected in both unfiltered groundwater samples. A combined concentration of 51 nanograms per liter (ng/l) PFOS and PFOA was detected in the one groundwater sample analyzed for PFAS during the Phase 2 ESA.

The combined concentrations of PFOA and PFOS in five groundwater samples SCS collected from groundwater monitoring wells prior to submitting the MMP ranged from 14.6 to 246 ng/l. These concentrations straddled the U.S. Environmental Protection Agency drinking water advisory level of 70 ng/l and generally exceed the proposed WDNR enforcement standards of 20 ng/l for PFOA and PFOS.

#### Redevelopment

The re-development of the site included the construction of an approximately 27,200-square-foot distribution center building. Most of the balance of the site has been paved with asphalt or concrete, with some landscaped areas northwest of the building and along the southwest side of the site, along Bowman Street. Copies of the site, utility, and landscaping plans showing the area of the building, infrastructure improvements, and other ground cover materials are provided in **Attachment A.** 

Preliminary earth balance calculations by the construction team indicated a net cut of approximately 7,400 cubic yards of soil. The most significant cut areas include the depressed loading dock ramps adjacent to the truck docks on the southwest side of the building and areas around the edges of the site to accommodate sloping for drainage. In addition to the construction work on site, the project included installation of an improved storm drain pipe extending from the north corner of the site for approximately 650 feet along the edge of the airport tarmac.

#### Construction

Initial site work was started by PSG, Inc. (PSG), the general contractor, for the project in early spring 2021. When SCS inspected the site on December 15, 2021, construction activities were substantially completed aside from some interior finishing work and exterior details. Photos from SCS's site visits are provided in **Attachment B**.

#### **Dewatering**

Griffin Dewatering (Griffin) set up and operated the groundwater dewatering and treatment system. SCS visited the site weekly while dewatering activities were in progress to collect discharge samples as required by the February 4, 2021 letter from the WDNR which approved coverage under Wisconsin Pollutant Discharge Elimination System general permit WI-0046566-07-0.

Dewatering commenced on March 30, 2021, and then continued until May 26, 2021. The pumped groundwater was treated in a settling tank to remove suspended sediment and then pumped through carbon vessels to reduce the concentrations of PFAS. SCS reported discharge volumes and sample results to WDNR via the online reporting portal.

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Following completion of the discharge treatment activities, Griffin sent the spent carbon to Evoqua Water Technologies in Darlington, Pennsylvania for regeneration. A certificate of reactivation provided by Evoqua is included in **Attachment C**.

#### Soil Management

SCS did not observe unusual or unexpected soil conditions during weekly inspection visits to the site as excavation work proceeded in April and May 2021. Cylindrical steel pilings for the former building(s) on the site were present in some of the footing excavations. These pilings were cut off at depth as necessary.

Consistent with the approved MMP, soil excavated for the construction of the building, grading, and installation of associated underground infrastructure was transported to the designated soil relocation area located approximately 700 feet east of the development site, as shown on **Figure 2**. Prior to the placement of soil, the earthwork contractor, Integrity Grading and Excavating, Inc. (IGE), scraped off and stockpiled the topsoil in the replacement area.

Based on the volumes that IGE reported to PSG, approximately 8,052 cubic yards of soil excavated during construction activities were relocated to the soil replacement area. SCS inspected the site on December 15, 2021. Photos are included in **Attachment B**. The soil replacement area had been seeded and mulched with straw. SCS manually excavated seven test pits with a spade to confirm the thickness of topsoil. The topsoil thickness ranged from more than 16 inches to 5 inches but was generally approximately 6 inches in the soil replacement area. **Figure 3** shows the silt fence, and the contractor-reported limits of replaced soil within the soil replacement area.

#### Conclusion

Based on SCS's observations during excavation activities and site inspection in December 2021, SCS believes that soil displaced by the construction of the warehouse facility and associated infrastructure improvements has been managed in a manner consistent with the MMP and the conditions of the January 25, 2021 WDNR approval letter.

Please contact Eric Oelkers at (608) 216-7341 or <a href="mailto:eoelkers@scsengineers.com">eoelkers@scsengineers.com</a> if you have any questions regarding this report.

Sincerely,

Eric Oelkers, PG

Senior Project Manager / Hydrogeologist

SCS Engineers

EO/REO\_jsn/KRG

cc: Richie Speno, PDM John Fleischman, PSG Keith Gilkey, PE Senior Civil Engineer SCS Engineers Mr. Steve Ales January 20, 2022 Page 4

Encl. Figure 1 – Site Location Map

Figure 2 – Detailed Site Map

Figure 3 – Soil Replacement Area

Attachment A – Site Drawings

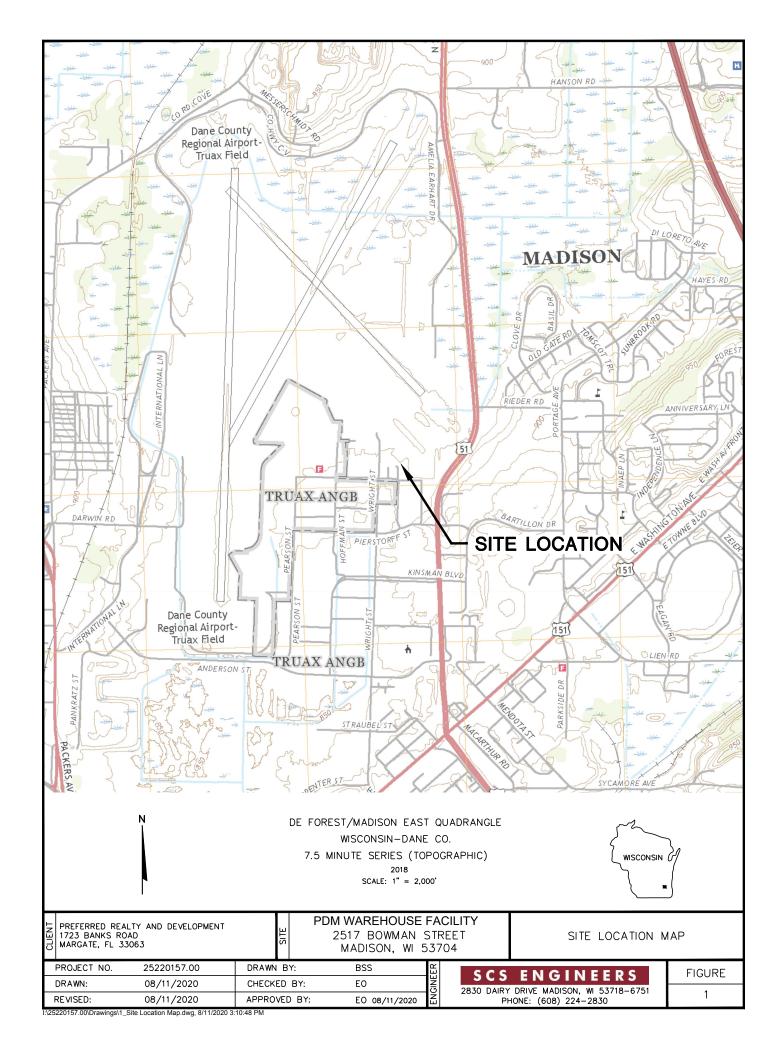
Attachment B - Photos

Attachment C - Carbon Regeneration Certificate

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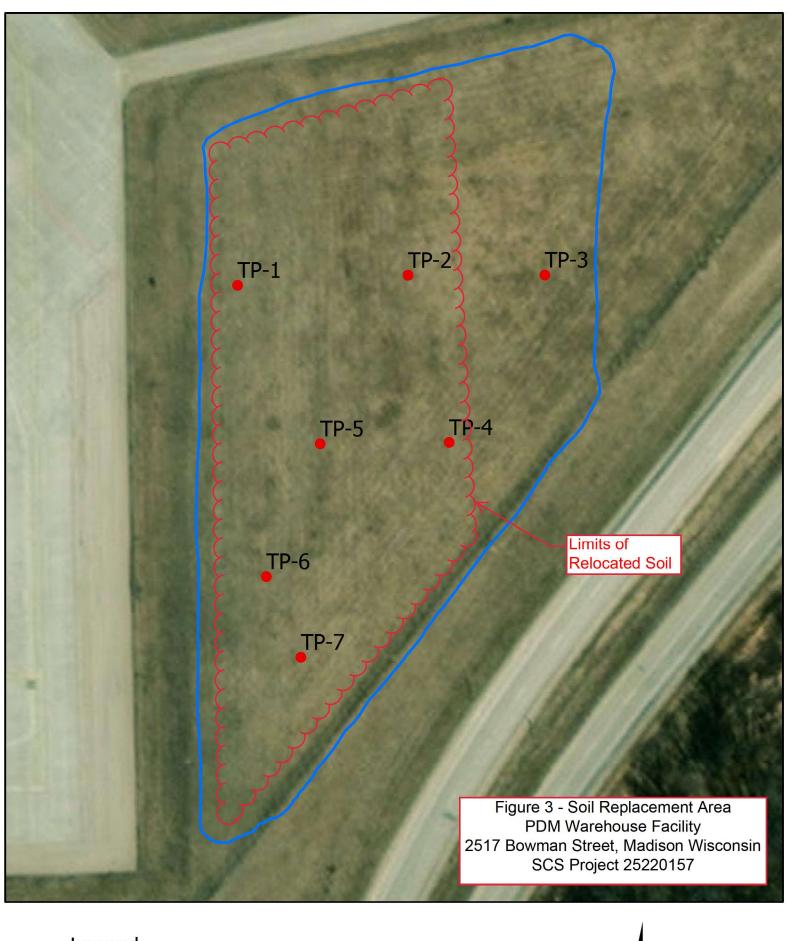
# Figures

- 1 Site Location Map
- 2
- Detailed Site Map Soil Replacement Area 3

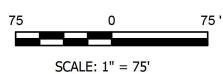




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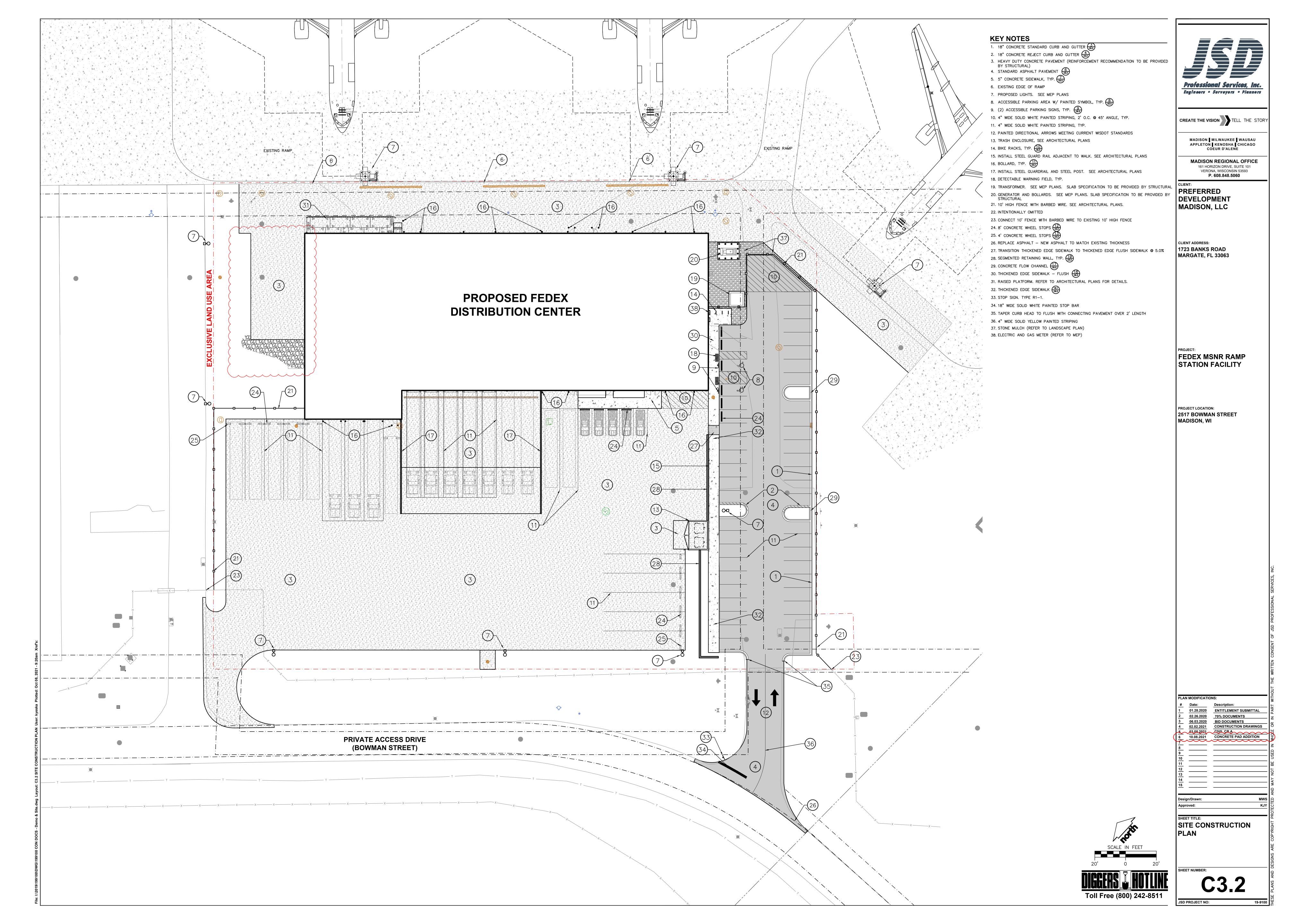


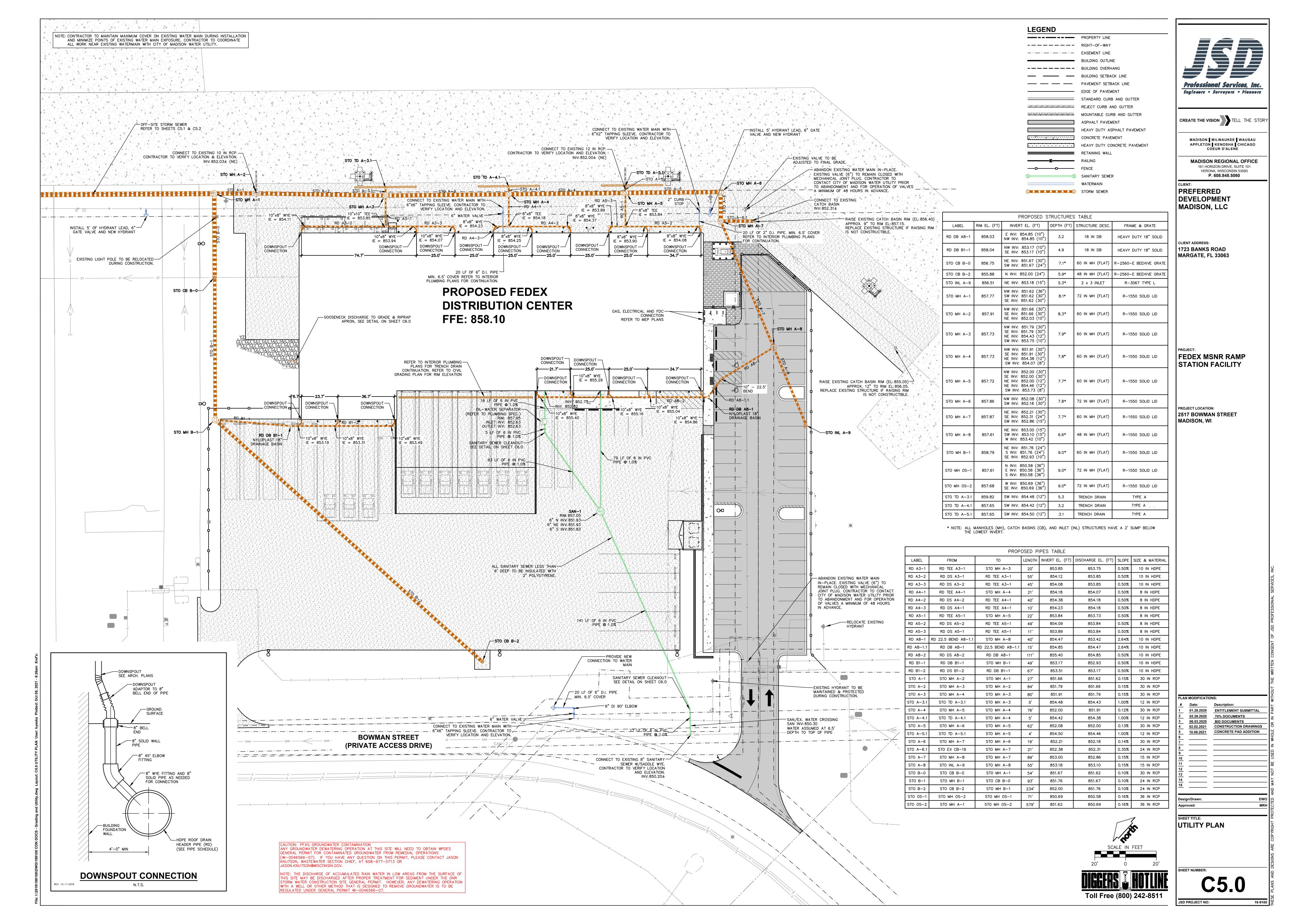


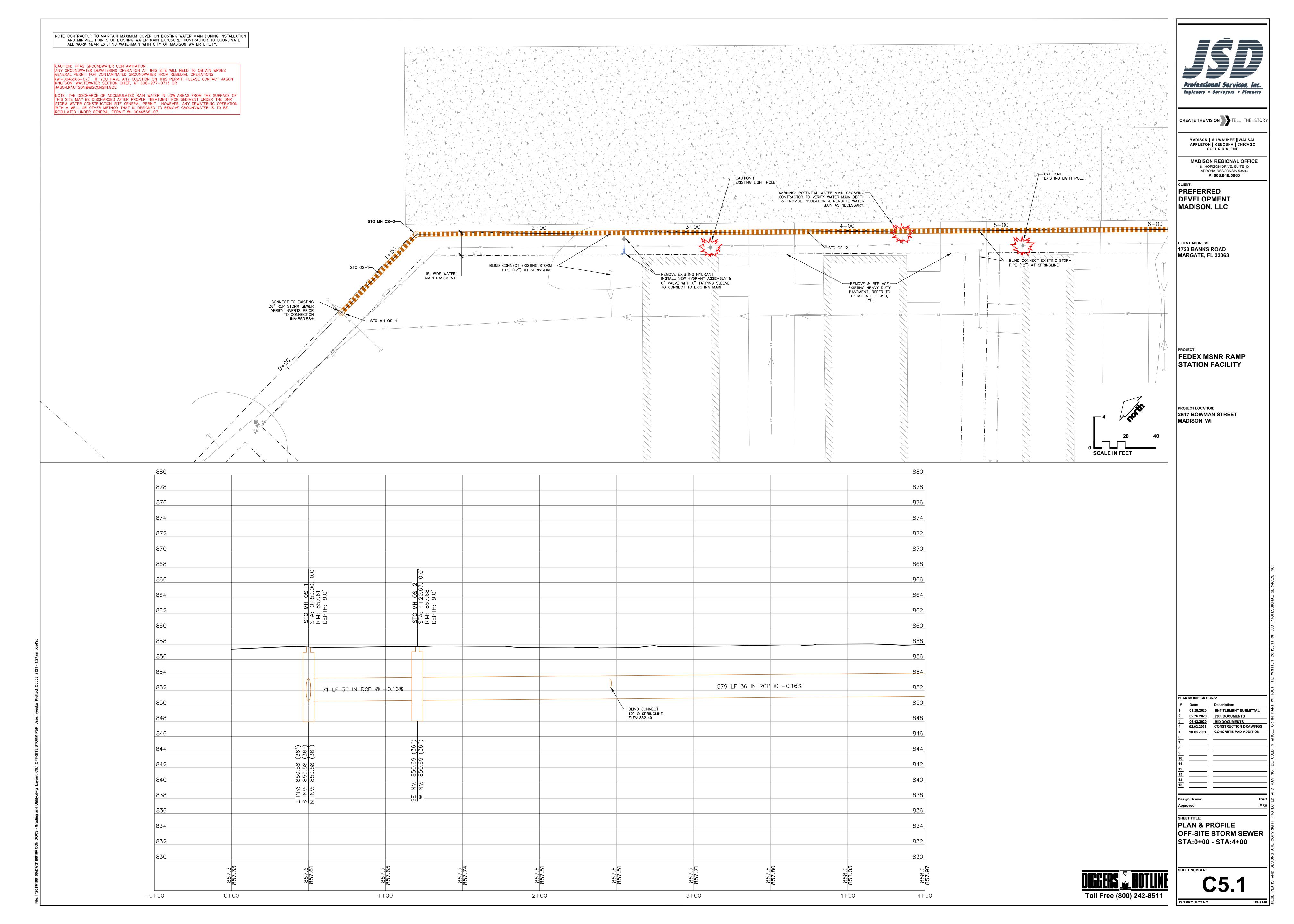


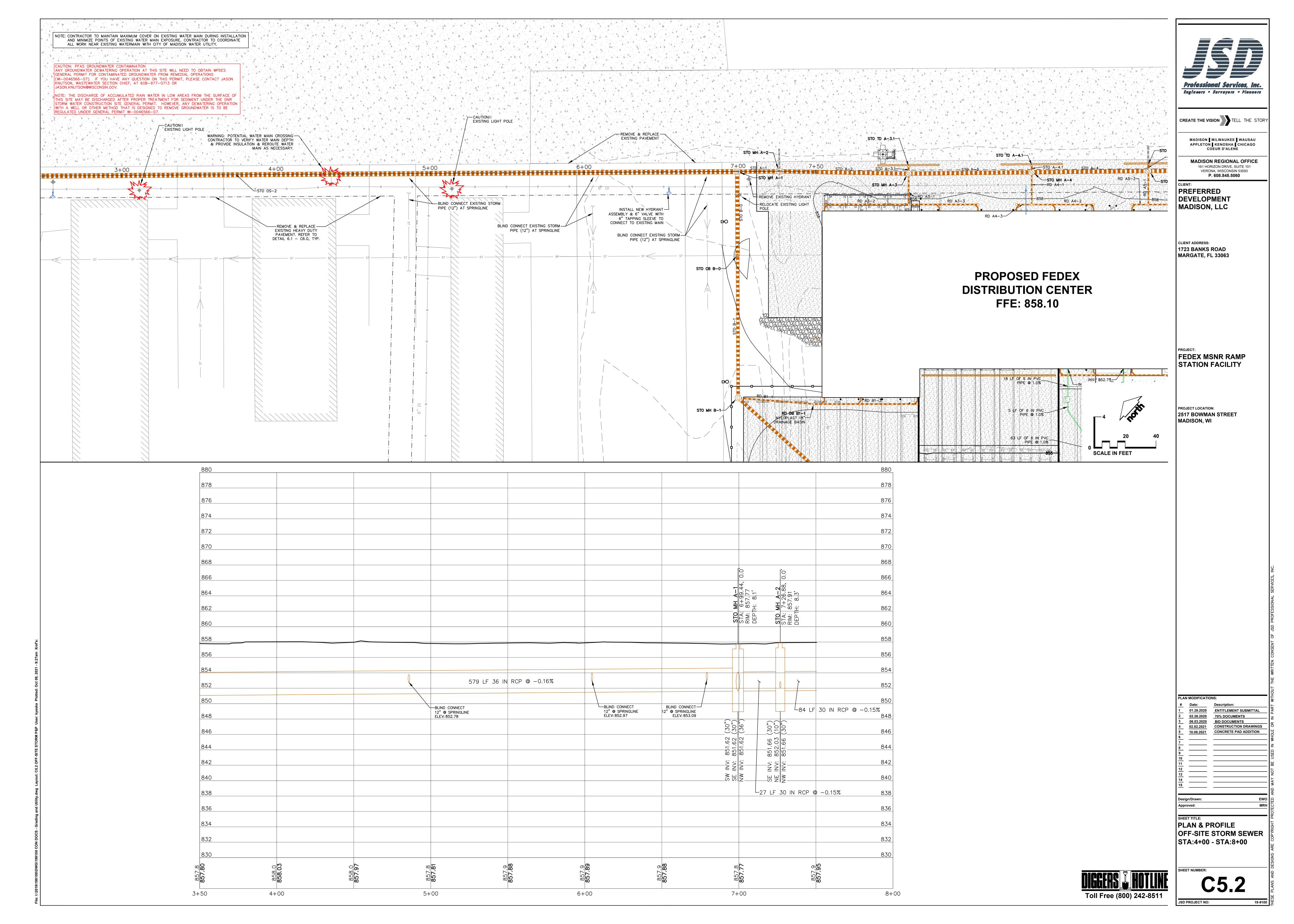
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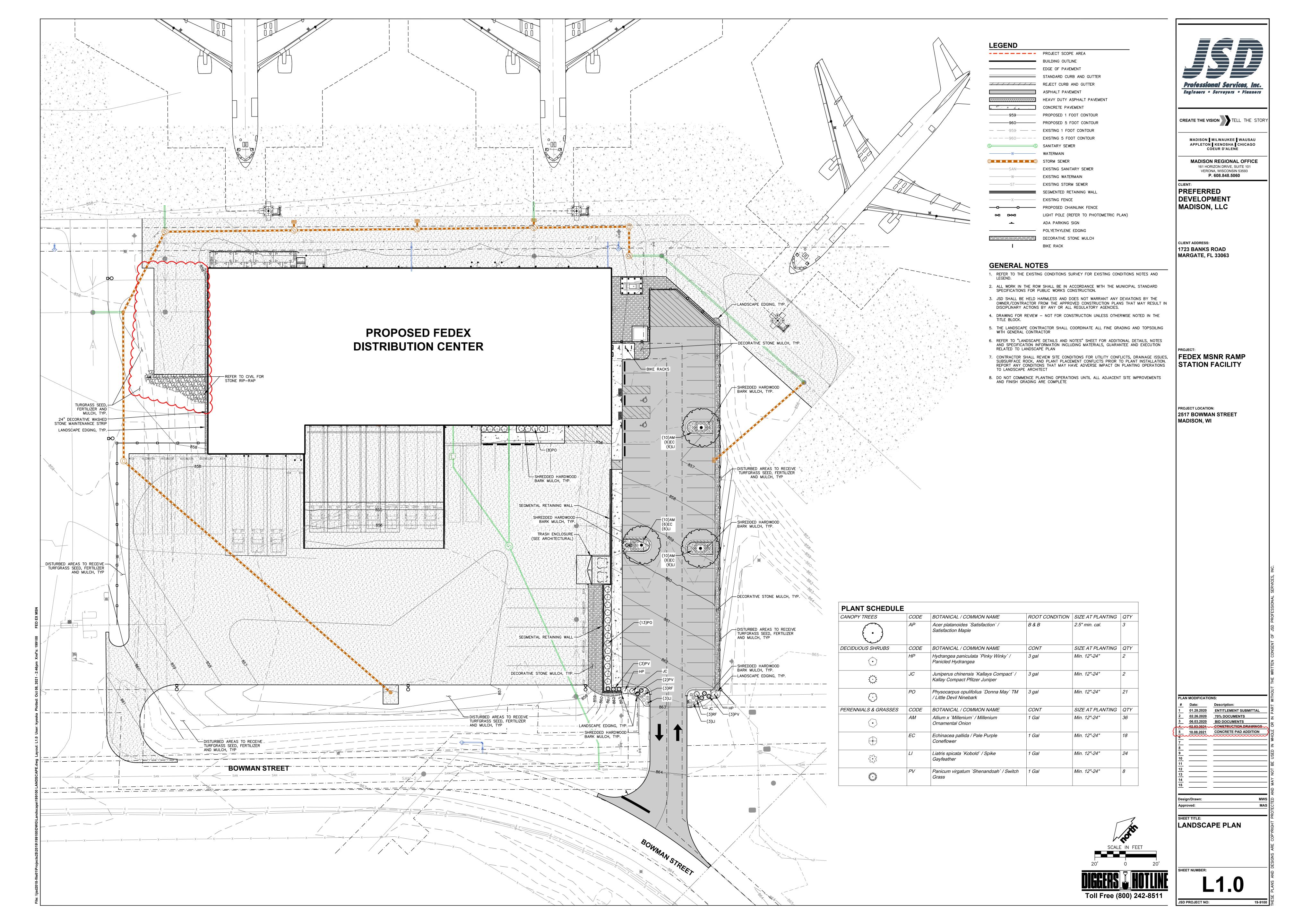
# Attachment A Site Drawings











# Attachment B Photos



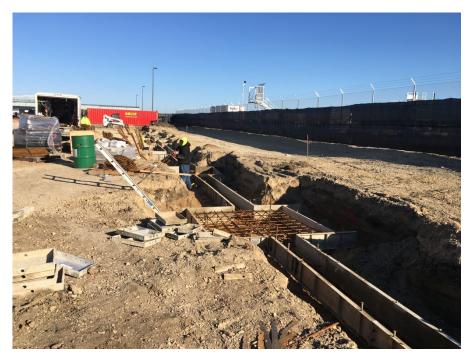
**Photo 1:** Initial groundwater treatment system setup, looking southeast (3/16/21; 13:21)



**Photo 2:** Dewatering system header pipes around dock excavation area, looking southwest (3/26/21; 13:27)



**Photo 3:** Soil replacement area with partially stripped topsoil, looking northwest (3/26/21; 13:39)



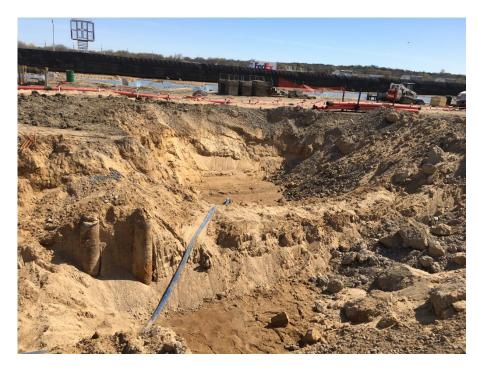
**Photo 4:** Building footing trench looking north (4/1/21; 08:44)



**Photo 5:** Footing trench looking east (4/7/21; 09:03)



**Photo 6:** Soil replacement area looking north (4/7/21; 09:18)



**Photo 7:** Excavation in loading dock area, looking east - pilings from former building are visible in the left center of photo (4/16/21; 11:06)



**Photo 8:** General site conditions, looking northeast (5/26/21; 10:26)



**Photo 9:** View of the completed building looking southeast from Bowman Street (12/15/21; 10:42)



**Photo 10:** Landscaped area on the north side of the building looking east (12/15/21; 10.43)



**Photo 11:** Loading dock area looking south (12/15/21; 10:44)



**Photo 12:** Parking area on south side of site, looking west toward Bowman Street (12/15/21; 10:48)



**Photo 13:** Test pit #1 in soil replacement area, looking northwest (12/15/21; 11:09)



**Photo 14:** Soil replacement area looking north (12/15/21; 11:19)



**Photo 15:** Soil replacement area looking west at new building (12/15/21; 11:19)



**Photo 16:** Soil replacement area looking south (12/15/21; 11:33).

# Attachment C Carbon Regeneration Certificate



Wednesday, September 08, 2021

PDM Warehouse Project 2517 Bowman Street Madison WI 53704

#### Dear Sir/Madam:

Evoqua Water Technologies' carbon reactivation process involves segregated thermal treatment of spent activated carbon for the removal of organic contaminants. Organic contaminants are driven from activated carbon in rotary kilns at temperatures up to 1750 degrees Fahrenheit. Desorbed organic contaminants are combusted in high temperature excess air afterburners at measured destruction and removal efficiencies of at least 99.99%. Exit gases from the afterburners are passed through a scrubbing system for particulate removal and acid gas neutralization before being released to the atmosphere.

This document certifies that Evoqua Water Technologies has reactivated the spent adsorbent noted below in accordance with all applicable Federal, Pennsylvania state laws, ordinances, permits and regulations.

Tel: (724) 728-0790

PO NUMBER:	
LOT NUMBER:	EWT-PDMMWI-GW
DATE RECEIVED:	9/1/2021
MANIFEST NUMBER:	
QUANTITY RECEIVED (lbs):	36085
SPENT APPARENT DENSITY (g/ml):	0.962
DATE COMPLETED:	9/4/2021
AMOUNT RETURNED:	18,455
REACT APPARENT DENSITY (g/ml):	0.58
CCL4:	
lodine:	

Sincerely,

Linda Willard

Administrative Assistant

Linda Willard