

July 17, 2020

Melanie A. Bachman, Esq.  
Executive Director/Staff Attorney  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Re: Docket No. 483 - The United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the Pequonnock Substation Rebuild Project that Entails Construction, Maintenance, and Operation of a 115/13.8-kilovolt (kV) Gas Insulated Replacement Substation Facility Located 700 Feet Southwest of UI's Existing Pequonnock Substation on an Approximately 3.7 Acre Parcel Owned by PSEG Power Connecticut, LLC at 1 Kiefer Street, Bridgeport, Connecticut, and Related Transmission Structure and Interconnection Improvements

Dear Ms. Bachman:

Pursuant to Condition 1 of the Connecticut Siting Council's October 11, 2018 Decision and Order, The United Illuminating Company hereby submits to the Council its Development and Management Plan ("D&M Plan") which has been prepared in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies.

Given the Council's modifications to its hard copy filing requirements as part of its response to the COVID-19 pandemic, by this letter, UI submits to the Council an electronic copy of the D&M Plan and one hard copy of the Plan will be mailed to the Council's office.

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July 17, 2020  
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Should the Council have any questions regarding this filing, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "Bruce L. McDermott", is centered on the page. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Bruce L. McDermott

cc: Jon Urquidi, City Engineer, City of Bridgeport  
Thomas F. Gill, Director of OPED, City of Bridgeport  
Leilani M. Holgado, Esq., PSEG Services Corporation  
Franca L. DeRosa, Esq., Brown Rudnick LLP  
Philip M. Small, Esq. Brown Rudnick LLP

Enclosure

# **The United Illuminating Company**



## **Development and Management Plan for the Pequonnock Substation Rebuild Project**

**Bridgeport, Connecticut**

**Docket No. 483**

**July 17, 2020**

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- Aerial-based Map Sheets of Project Facilities (New Pequonnock Substation Site, Transmission Line ROWs, Existing Substation Site), showing access roads and workspaces, property owners (Line List)
- Substation Site Plans and Drawings

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## 1. INTRODUCTION

### 1.1 PROJECT OVERVIEW AND PURPOSE OF THE PLAN

#### **Project Summary**

The United Illuminating Company (UI or the Company) will construct, operate, and maintain the new 115 kilovolt (kV) / 13.8 kV gas-insulated Pequonnock Substation, located on an approximately 3.7-acre site at 1 Kiefer Street in the City of Bridgeport, Fairfield County, Connecticut. Referred to as the Pequonnock Substation Rebuild Project (Project), the new substation will replace UI's existing Pequonnock Substation, an air-insulated substation that is located at 1 Atlantic Street, also in the City of Bridgeport, adjacent to Bridgeport Harbor. The existing substation, which is approximately 700 feet northeast of the new substation site, is categorized as a Northeast Power Coordination Council Bulk Power Substation. In addition, as part of the Project, the eight transmission lines and various distribution circuits that presently connect to the existing substation will be relocated to the new substation. After the new substation is placed into service, the existing Pequonnock Substation will be decommissioned.

The new substation is needed to mitigate coastal flood risks and asset condition issues at the existing substation. It also will improve the reliability of service to customers in the Bridgeport area (service area) and to the New England power grid.

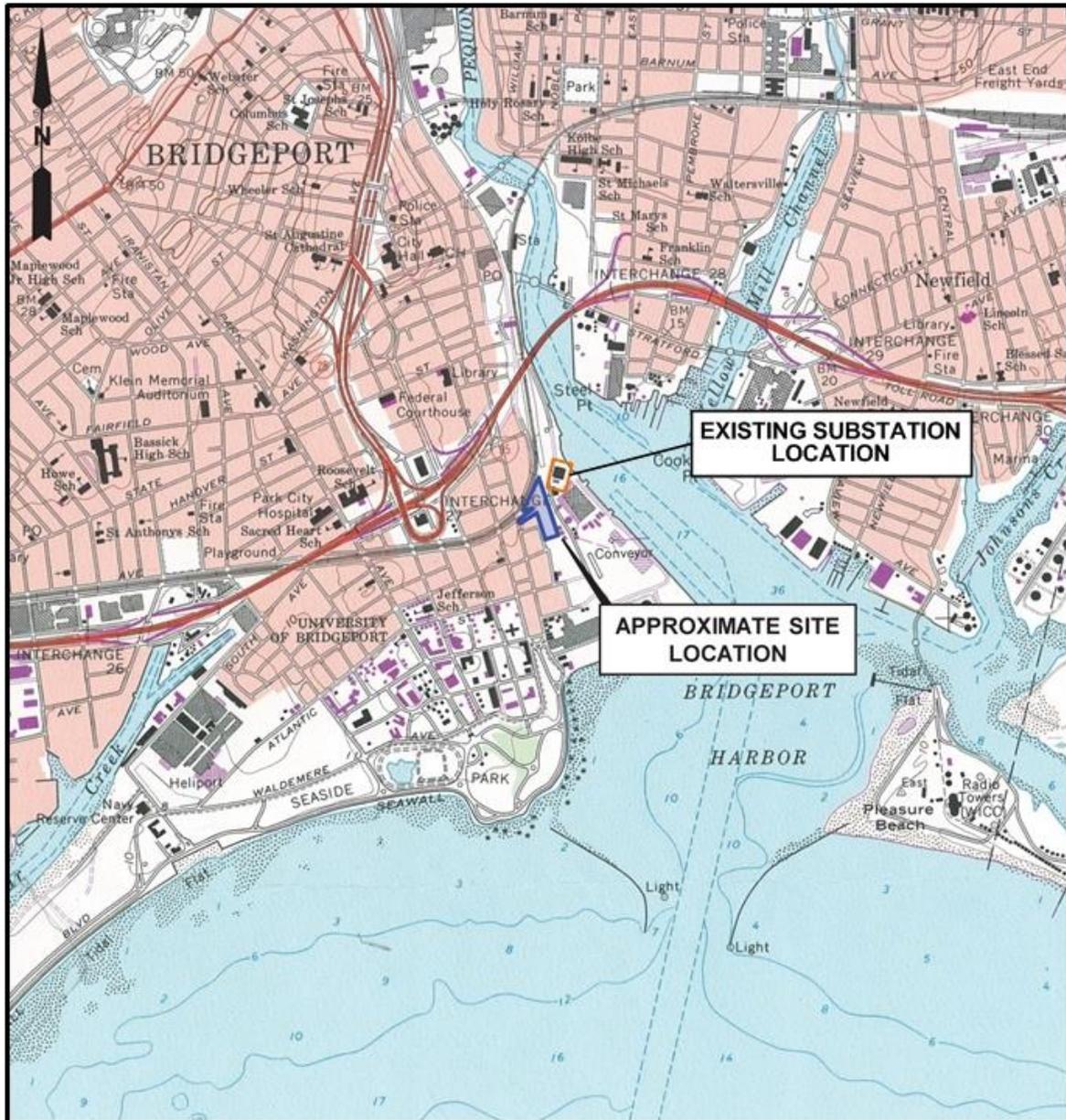
The existing Pequonnock Substation, which occupies a 1.5-acre UI property, was placed into service in 1956 and is situated entirely within Bridgeport Harbor's 100-year floodplain as identified by the Federal Emergency Management Agency (FEMA). Due to this proximity to Bridgeport Harbor, the substation has in the past been adversely affected by coastal flooding and storm damage. Further, although the existing substation has been modified and expanded over the years, the substation facilities suffer from various non-flood related deficiencies, leaving it with limited capacity to meet certain contingencies.

The new Pequonnock Substation, which will be situated inland from Bridgeport Harbor, is designed to place critical substation facilities above the FEMA 100-year flood level and to upgrade all substation facilities. Figure 1-1 identifies the general Project location, illustrating the existing and new Pequonnock Substation sites.

#### **Purpose of the D&M Plan**

On April 26, 2018, UI submitted to the Connecticut Siting Council (Council, CSC) an Application for a Certificate of Environmental Compatibility and Public Need for the Project (Council Docket No. 483). After public meetings and evidentiary hearings, the Council approved the Project via a Decision and Order issued on October 11, 2018. The Decision and Order includes 12 Project-specific conditions.

**Figure 1-1: General Location of Existing Pequonnock Substation and New Substation Site**



(For a more detailed Key Map of the Project area, refer to Appendix A, Drawing 25247-0002-004 SH 001).

Condition No. 1 of the Council's Decision and Order approving the Project requires that UI prepare a Development and Management (D&M) Plan, in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies (RCSA). Condition No. 1 also included five specific items (1.a - 1.e) to be included in the Project D&M Plan.

Accordingly, this D&M Plan addresses all construction activities for the Project, pursuant to both RCSA Sections 16-50j-60 through 16-50j-62 and the conditions of the Council's Decision and Order. Specifically, the D&M Plan describes the following Project elements:

- Construction of the new 115 kV transmission / 13.8 kV bulk distribution substation.

- Relocation of the eight existing 115 kV transmission lines from the existing Pequonnock Substation to connect to the new Pequonnock Substation. These include five overhead transmission lines (four of which are aligned along the Connecticut Department of Transportation's [CT DOT's] Metro-North Railroad [MNR] New Haven line rail corridor) and three underground transmission cables. The transmission line relocations will involve construction of new line connections to the new substation, as well as the removal of the line connections to the existing Pequonnock Substation.
- Decommissioning of the existing Pequonnock Substation.

## **1.2 ORGANIZATION OF THE D&M PLAN**

The D&M Plan consists of text and supporting appendices, as follows:

- Section 2: Provides details regarding the Project, including the new substation facilities and specifics regarding the transmission line relocations.
- Section 3: Describes the construction procedures and plans for the new Pequonnock Substation, including construction sequencing, laydown/staging areas, site preparation, equipment installation, testing and commissioning, cleanup and restoration, and site security.
- Section 4: Discusses the construction procedures and details for the 115 kV transmission line relocations, including methods, workspace, and access for constructing the overhead and underground line connections to the new substation, as required pursuant to the Council's Decision and Order Condition No. 1.d.
- Section 5: Provides a decommissioning plan for the existing Pequonnock Substation, as required pursuant to the Council's Decision and Order, Condition No. 1.e.
- Section 6: Describes the construction procedures that are common to all components of the Project, including construction management methods, the soil erosion and sedimentation control plan (pursuant to the Council's Decision and Order Condition 1.b), spill prevention and countermeasures plan (pursuant to the Council's Decision and Order Condition 1.c), traffic control measures, endangered species monitoring / protection, etc.
- Section 7: Presents the Project schedule and work hours.
- Section 8: Identifies the permits and approvals for the Project.
- Section 9: Identifies the notices and reports to be provided to the Council and summarizes UI's approach regarding municipal and public outreach during Project construction.

The D&M Plan appendices consist of the following:

- Appendix A: Project Drawings, including the final Pequonnock Substation site plan showing the placement of all substation equipment, structures, buildings, access, and fencing (pursuant to Condition No. 1.a of the Council's Decision and Order), as well as cross-sections of the relocated transmission lines and map sheets depicting the rights-of-way (ROWs), workspace, and access for the transmission line relocations.
- Appendix B: Erosion and Sedimentation Control Plan, pursuant to the Condition 1.b of the Council's Decision and Order.
- Appendix C: Spill Prevention and Countermeasures Plan, pursuant to the Condition 1.c of the Council's Decision and Order.
- Appendix D: Decommissioning Plan Drawing for the Existing Pequonnock Substation, included pursuant to the Condition 1.e of the Council's Decision and Order.
- Appendix E: CT DEEP Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots.
- Appendix F: Project Team Contact Information.
- Appendix G: D&M Plan Checklist for the Project (identifying the sections of the D&M Plan that address each of the applicable requirements of RCOSA Sections 16-50j-60 through 16-50j-62 and the conditions of the Council's Decision and Order in Docket No. 483).

## 2. DESCRIPTION OF PROJECT FACILITIES

The Project will entail the construction and operation of a new Pequonnock Substation, which will be a gas-insulated substation (GIS) design. The substation will be built at an elevation of 19 feet North American Vertical Datum 1988 (NAVD88), or 5 feet above the current FEMA Base Flood Elevation (BFE) and will accommodate the transmission and distribution lines that presently connect to the existing station. The Project will include the relocation of such lines, as well as the decommissioning of the existing Pequonnock Substation. Appendix A includes detailed maps and drawings of the Project facilities.

### 2.1 SUBSTATION LOCATION AND FACILITIES

The new Pequonnock Substation will be built on approximately 2 vacant acres of a 3.7-acre property, located at 1 Kiefer Street, that UI recently acquired from PSEG Power Connecticut, LLC. The 3.7-acre property extends both north and south of Ferry Access Road (refer to Figure 2-1 [located at the end of this section] and the Appendix A maps and drawings).

Within the 3.7 acres of UI property, the 2-acre substation site is located south of Ferry Access Road, at the intersection of Kiefer Street and Singer Avenue. The site is bordered to the east by PSEG's Bridgeport Harbor Station (BHS); to the north by Ferry Access Road, to the west by commercial/industrial facilities, and to the south by Cogentrix' (formerly Emera's) gas-fired Bridgeport Energy facility. Within the 2-acre site, the substation will occupy a 1.8-acre fenced area.

The new substation will consist of the following outdoor air-insulated and gas insulated switchgear enclosed components:

- One pre-engineered GIS enclosure (approximately 87 feet wide, 94 feet-6 inches long, and 33 feet-4 inches high) with 115 kV GIS and attached control room (approximately 72 feet wide, 33 feet – 6 inches long, and 14 feet high) with two battery rooms and one restroom.
- Five GIS diameters with 15 115 kV breakers in a standard breaker-and-one-half arrangement. Space for a sixth future GIS diameter (3 circuit breakers / 2 terminal positions) is provided.
- One 13.8 kV medium voltage switchgear enclosure (approximately 32 feet wide, 75 feet long, and 16 feet high) containing four medium voltage (MV) GIS rooms and one room for protection and control equipment. This enclosure will include a basement for arrangement and entrance/exit of underground 13.8kV circuits.
- Two 30/40/50 MVA 115 kV /13.8 kV power transformers.
- Two double H-Frame structures (approximately 45 feet and 55 feet in height) to support 115 kV strain bus from the 115 kV GIS equipment to power transformers.
- Two 115 kV disconnect switches.
- One 90-foot-tall communications pole.
- One diesel backup generator.
- Two 13.8 kV / 480 V station service transformers.
- Three support structures for underground 115 kV circuits.
- Two support structures for 13.8 kV cable bus and mobile substation interconnection.

- A 14-foot-high security fence, topped by 1 foot of barbed wire, surrounding the substation.
- An engineered block retaining wall along the east and south sides of the substation. The retaining wall will vary in height from 4 feet 6 inches to 7 feet 6 inches above the lower grade, with variations depending on existing grade at each location. The 14-foot tall security fence will be installed at the upper elevation of the retaining wall.
- One underground station service duct bank.
- Transmission line connections, consisting of:
  - Two underground 13.8 kV distribution duct banks exiting the station to the west.
  - Two underground high-pressure gas-filled (HPGF) 115 kV transmission circuits.
  - One underground cross-linked polyethylene (XLPE) 115 kV transmission circuit.
  - Five overhead 115 kV transmission circuits, supported by five monopole structures within the substation fence and 12 monopoles to be located outside the fence (refer also to the transmission line discussion in Section 2.2).

Access to the substation will be via three gates: one off Ferry Access Road (the primary entrance gate); one off Singer Avenue; and one off an existing PSEG access road. Appendix A includes detailed drawings of the substation facilities, including the site boundaries, fence location, and access gates.

## **2.2 TRANSMISSION LINE CONNECTIONS AND REMOVALS**

UI will redirect the eight 115 kV transmission lines (five overhead lines and three underground cables) that presently feed the existing Pequonnock Substation to connect to the new substation. These transmission lines will feed the new Pequonnock Substation in a similar configuration as at the existing substation.

Table 2-1 summarizes information (i.e., length of line connection; property ownership; structure design, height, and foundation type) regarding both the overhead line connections to the new substation and the removal of the existing overhead line connections to the current Pequonnock Substation. The new overhead line connections will all consist of double-circuit (DC) monopoles on drilled shaft foundations.

Table 2-2 provides similar information for each of the three underground cable segments.

The planned new transmission line connections are illustrated on Figure 2-1. The transmission line connections to the existing Pequonnock Substation, which will be removed as part of the Project, are shown in Figure 2-2.

**Table 2-1: Summary of 115 kV Overhead Transmission Line Relocations: New Connections and Lines to be Removed**

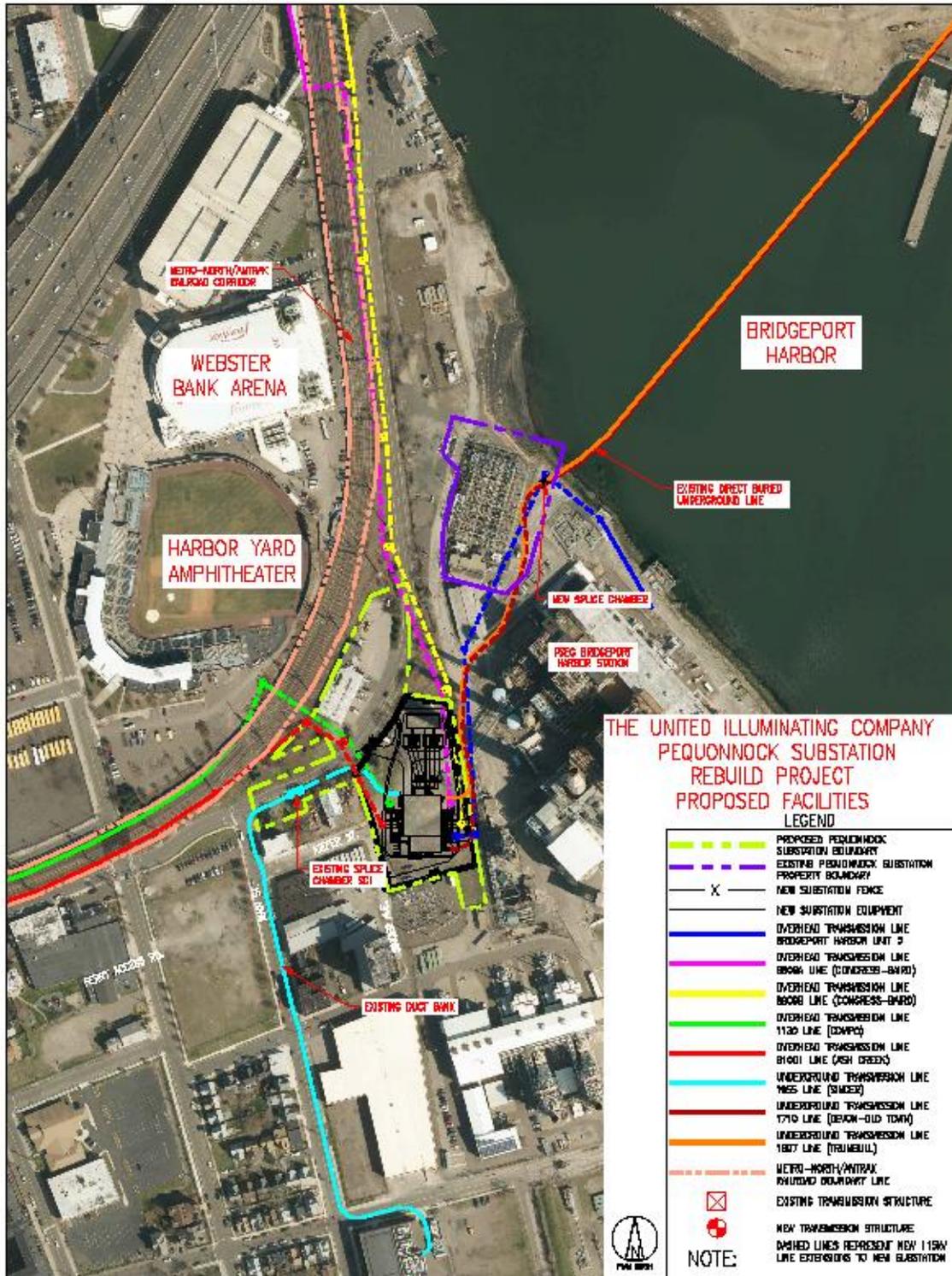
115-kV Line No. and Connection(s) to Other Substations	New Transmission Line Structures					Existing Structures to be Removed			
	ROW Length / Width	No. of New Structures		Structure Design / Foundation Type	Average Structure Height	Length of Line Segment	No. Structures to be Removed	Structure Type / Average Height	Property Ownership
Within New Substation	Outside New Substation*								
8809A (Congress to Baird substations)	1750 feet	1	6 (MNR, PSEG)	DC Monopoles; Drilled pier foundations	110 feet	1150 feet	7	Steel Bonnet/ 66.5 feet	MNR, PSEG, UI
8909B (Congress to Baird substations)	1700 feet	1	5 (MNR, UI)	DC Monopoles; Drilled pier foundations	110 feet	1150 feet	5	Steel Bonnet/ 66.5 feet	MNR, PSEG, UI
1130 (Compo Substation)	400 feet	1	2 (UI, MNR. Bridgeport)	DC Monopoles; Drilled pier foundations	100 feet	700 feet	4	Steel Bonnet & Monopoles/ 75 feet	MNR, PSEG, UI
91001 (Ash Creek Substation)	325 feet	1	2 (UI, MNR)	DC Monopoles; Drilled pier foundations	90 feet	850 feet	5		MNR, PSEG, UI
BHS Unit 3	1,050 feet	1	4 (BHS)	Monopoles; Drilled pier foundations	100 feet		N/A		BHS
<b>TOTAL</b>		<b>5</b>	<b>12</b>				<b>21</b>		

Note: \*Lists ownership of property on which new structures will be located. Refer to the map sheets in Appendix A for Line List information and the specific location of each structure.

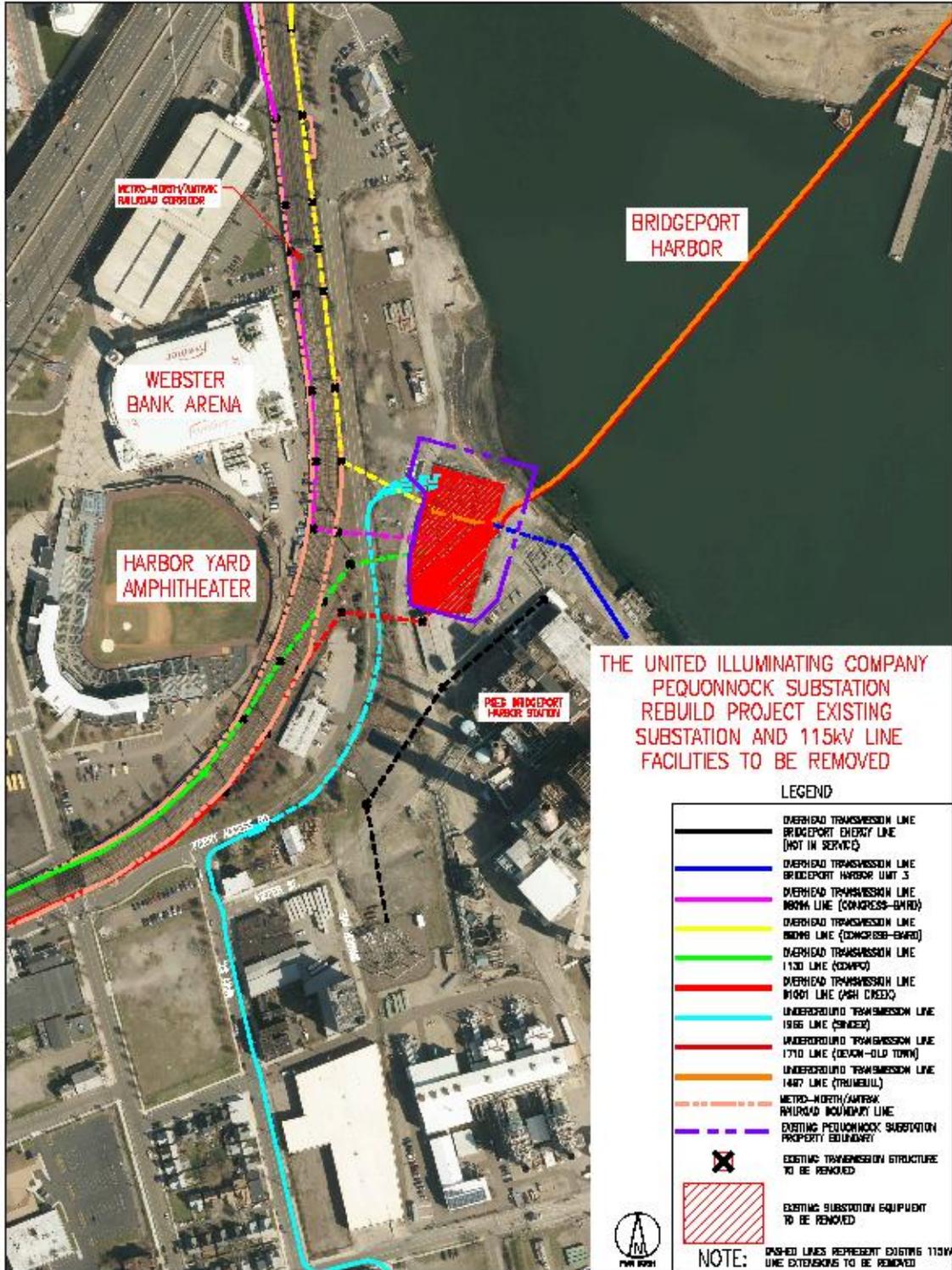
**Table 2-2: Summary of 115 kV Underground Transmission Line Relocations: New Connections and Lines to be Removed**

115-kV Line No. and Connection(s) to Other Substations	Line Type	New Underground Cable Segments			Existing Cable Segments to be Removed	
		Segment Length	Property Ownership along ROW	New Splice Chamber	Length of Removal	Property Ownership
1955 (Singer Substation)	XLPE	300 feet	PSEG, UI	No	960 feet	PSEG, UI
1710 (Devon – Old Town substations)	HPGF (Nitrogen gas)	875 feet	PSEG, UI	Yes (for 1710 and 1697 lines - on UI property at existing Pequonnock Substation site)	100 feet	UI
1697 (Trumbull Substation)	HPGF (Nitrogen gas)	775 feet	PSEG, UI		50 feet	UI

Figure 2-1: Aerial View of New Pequonnock Substation Site and Transmission Line Connections



**Figure 2-2: Aerial View of Existing Pequonnock Substation and Transmission Line Connections to be Removed**



### 3. SUBSTATION CONSTRUCTION PROCEDURES

The construction of the new Pequonnock Substation will involve two primary phases, each involving a series of sequential activities, as summarized in this section. These phases are:

- **Site preparation.** This phase will consist of initial limited soil remediation, vegetation removal, demolishing of existing structures, utility relocation, the installation of an underground infiltration chamber, and restoration of disturbed areas. The site contractor will then demobilize until general construction begins.
- **Substation construction.** This phase will include fill placement, grading, installation of the remaining stormwater conveyance system, and overall substation construction activities.

Appendix A includes detailed drawings that illustrate the site grading plan, planned locations of temporary erosion and sedimentation controls, drainage plan, and locations of substation equipment, enclosures, retaining wall, security fence, and gates / access points.

#### 3.1 SITE PREPARATION

As part of site preparation, UI will establish access points to the substation, perform soil removal for remediation purposes, clear on-site vegetation, mark and relocate existing utilities, install security fencing, and establish on-site construction office trailers / material staging areas. Traffic signs indicating a construction work zone also will be installed, as needed. In addition, temporary erosion and sedimentation controls will be established around the site or around areas of disturbed soils, and to protect catch basins, as needed.

##### 3.1.1 Vegetation and Debris Removal, Soils/Materials Handling, and Erosion / Sedimentation Controls

The substation site was historically used for industrial purposes, but currently consists mostly of open areas with minimal vegetation. The site also includes old concrete and asphalt materials, as well as fencing.

##### **Initial Site Work**

Initially, the area within the substation site will be cleared of all vegetation, debris, and pavement. Vegetation consists mostly of low-growing grass-type species.

Clearing and grubbing will be accomplished by conventional methods, using mechanized equipment. Other debris also will be generated during this phase, as initial site work will involve the removal of old concrete, asphalt, chain link fencing, rock, etc. All cut vegetative materials and other debris will be removed from the site and disposed of properly.

### **Soils and Materials Handling**

Given the past industrial use and regulatory status of the site, UI retained a Licensed Environmental Professional (LEP) to oversee the evaluation of on-site environmental conditions, including extensive analyses to assess site soils. The site investigation and remediation activities are subject to the Connecticut Department of Energy and Environmental Protection's (CT DEEP's) review pursuant to the Connecticut Transfer Act, as well as the U.S. Environmental Protection Agency's (EPA's) review of certain requirements under federal law.

Based on current plans, certain small areas of historically-impacted fill/soil material will be removed from the substation site and disposed of at an approved facility in accordance with the Project's Remedial Action Plan (RAP) and Materials Handling Plan (MHP) that have been approved by CT DEEP and EPA.

Excess earth materials not suitable for re-use may be temporarily stockpiled on-site prior to being transported off-site for disposal. Excess spoils will be contained by temporary erosion and sedimentation controls (e.g., silt fence, hay or straw bales, wattles) and covered as needed with 10-mil polyethylene sheeting. Excess spoils will be managed and disposed in accordance with applicable regulations and the Project's MHP.

As described in the RAP and MHP, historically impacted soil/fill remaining at the site following construction will be rendered inaccessible beneath pavement/concrete, structures, utility trenches, and/or engineered controls to comply with the Connecticut Remediation Standard Regulations. Additionally, an Environmental Land Use Restriction (ELUR) will be recorded to restrict the site from future residential use and to prohibit unauthorized disturbance of the site cover.

### **Erosion and Sediment Control Plan**

Erosion and sedimentation control measures for the Project as a whole will be consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and in accordance with the CT DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities* (General Permit). Erosion and sediment control measures for the substation site are depicted on the Erosion Control Site Plan (refer to Appendix B, Drawings (25247-0003-005 SH 001 and 25247-0003-005 SH 002); these drawings contain detailed information regarding the location, type, and design of erosion and sediment control measures that will be employed during construction.

For erosion and sediment control purposes, silt fencing will be installed downstream of the substation work site. The erosion and sediment control Best Management Practices (BMPs) will be inspected daily during work activities and will be repaired or replaced as necessary until the site is stabilized with gravel, vegetation, or pavement. The BMPs will remain in place until all earthwork is complete.

Anti-tracking pads typically will be installed as needed at the construction access points to prevent sediment from being tracked offsite by construction vehicles. Dust suppressant (water or equivalent) will be used to control dust as needed during earth-moving activities.

### **3.1.2 Existing Underground Utilities and Utility Relocations**

The public streets surrounding the site contain several underground utilities that provide water, sanitary sewer, stormwater, and natural gas service to nearby areas.

On the substation site, a 4-inch diameter force sewer main that serves PSEG's BHS Unit #5 will be uncovered during construction; however, this line will not be relocated and service to BHS will not be disrupted.

In addition, a sanitary sewer and a water line currently extend across the substation site. Both utilities enter the site from Kiefer Street and provide service to PSEG's BHS Unit #3. The water line bisects the site and continues east, while the sanitary line traverses to the center of the site and turns north where it exits the property toward Ferry Access Road. As part of the Project, UI will relocate these lines (refer to Appendix A, Demolition Drawing 25247-0003-001 Demo). The sanitary sewer and water lines will be rerouted below the 4-inch sewer main as shown on the Utility Relocation Drawing (25247-0003-001 SH 006) in Appendix A.

### **3.1.3 Site Access and Security during Construction**

During site preparation, UI will install temporary, approximately 9-foot-tall, security fencing around the substation area. This temporary construction fence will include gates that will be locked to secure the Project site. Construction access to the substation site will be via Ferry Access Road, PSE&G's existing access, Kiefer Street, and Singer Ave.

## **3.2 SUBSTATION CONSTRUCTION**

As described in the following subsections, the construction of the new Pequonnock Substation will involve additional earthwork, as well as the installation of foundations and electrical equipment, transformers / transformer spill containment, permanent site drainage facilities, lighting, and permanent access gates and security fencing. The work also will include transmission line (refer to Section 4) and distribution line connections to the new substation.

### **3.2.1 Earthwork**

Excavation will be required for grounding, conduit, equipment foundations, and cable trenches. Mechanical equipment and hand digging will be used for excavating. Stability will be provided by sheeting, shoring, and bracing techniques. Excavations will be kept dry using appropriate dewatering equipment and temporary surface diversions to prevent surface water and runoff from entering the excavated areas.

Adequate clean fill, as defined in the Project-specific MHP, will be required as backfill for foundations and trenches. Materials from Project excavation work that are deemed not suitable for on-site reuse will not be used as fill. Clean fill will be mechanically compacted.

In the trenches excavated for conduit and pipe, clean fill (e.g., sand) and will typically be spread on the trench bottom, compacted by vibration and, after conduit or pipe installation, deposited and compacted under and around each side of the conduit or pipe. Deposition and compaction will be performed to prevent lateral displacement of the pipe or conduit. Backfill will consist of clean stone backfill furnished by the construction contractor.

### **3.2.2 Grading Plan**

Currently, the topography at the new substation site is characterized by elevations of between approximately 7 and 11 feet (NAVD88) above sea level. The site crests at 11 feet near the eastern boundary and slopes downward in all directions from there.

UI will grade and fill the site to raise the elevation to 15 feet along the east, gradually decreasing to an elevation of 10 feet on the west.<sup>1</sup> A retaining wall will be installed in sections along the southern and eastern boundaries of the site to allow for this increase in elevation. The retaining wall will be installed in conjunction with the cut and fill activities.

Clean fill will be imported and deposited as depicted on the *Grading and Drainage Site Plan* (refer to Appendix A, Drawing (25247-0003-004 SH 001), which shows the existing and proposed site contours in 1-foot intervals.

The Grading Plan will be used in conjunction with the Project's erosion control site plan drawings (refer to Appendix B) and the Project's MHP, which provides guidance and oversight regarding the management of soil leaving the property as well as fill material being imported to the site.

All critical substation facilities will be built above the Design Flood Elevation (DFE). For the new substation, the DFE is 19 feet (NAVD88). The DFE is 5 feet higher than the 2013 FEMA BFE of 14 feet. Thus, critical substation facilities will be protected from a 100-year flood.

### **3.2.3 Foundations and Equipment Installation**

The new Pequonnock Substation will consist of the equipment listed in Section 2.1. This phase of the substation construction will commence with the installation of below grade construction, including the installation of foundations, duct banks for control cables, and grounding system. The work will entail excavation, concrete form work, use of steel reinforcement, and concrete placement.

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<sup>1</sup> Based on current information about the depth to bedrock at the substation site, blasting is not expected to be required during construction. If blasting is deemed necessary, UI would prepare and submit a blasting plan for the Council's approval and would work with the City of Bridgeport regarding specific blasting protocols.

After the foundations and other below-grade work are completed, steel structures to support bus and electrical equipment will be erected on the foundations. Major equipment such as the transformers, GIS enclosure, and distribution switchgear enclosure will typically be installed first, followed by lightning arrestors, insulators, disconnect switches, etc. Large cranes, forklifts, excavators, and other heavy equipment will be used during these construction activities.

The delivery of large equipment, such as the transformers and enclosures, will be subject to CT DOT travel restrictions. Further, after being installed on site, the transformers must be filled with insulating oil, which involves a continuous 24/7 operation. As a result, the delivery and installation of these components will require construction shifts more than the typical daily work hours (refer to Section 7).

The following summarizes the foundation and equipment installation:

- **Foundations.** The foundations will be spread footings and pier foundation type. Sheeting and shoring will be used to stabilize the sides of the foundation trenches where required. Forms will be constructed on-site, incorporating rebar, followed by concrete installation. For the foundations, concrete will be poured once all the forms and rebar for that foundation have been installed. The concrete will be delivered to the Project by truck; numerous deliveries will be required. The location and type of support structures and their corresponding foundations are shown on the drawings in Appendix A (refer to Drawing 25247-0002-004 SH 001).
- **Below Grade Facilities** – The below grade facilities will consist of the grounding grid (grounding conductors and rods), PVC conduit, and cable trench.
- **Switchyard Structures, Bus, and Equipment** – After the below grade facilities have been installed, the substation equipment will be installed on the foundations. Insulators, bus, jumpers, and hardware will be installed to interconnect the equipment in a 115-kV tie bus configuration. Control wiring will be installed between the GIS/control enclosure, distribution switchgear enclosure, and yard equipment. Cameras and motion detectors will be installed in the substation for providing physical security.
- **Transformer Oil Containment** – The two 115 kV / 13.8 kV transformers will be surrounded by oil containment basins. Clean water collected in the basins will drain into the inlet pipe and flow to the pump. The clean water will be discharged to the infiltration basin located inside the site fence. In the unlikely event of oil spillage during an equipment failure, liquid will drain into an inlet pipe containing an oil filter. The liquid will then travel to an oil smart sensor. The sensor will disable the pump if oil is detected. The transformers will have separate containment systems and will drain to the same oil smart sensor. Each containment pit will be sized to contain 130% of the equipment oil volume plus a 500-gallons per minute (gpm) fire hose for 20 minutes. The location of each oil containment basin is shown on Drawing 25247-0003-001 SH 001 in Appendix A. UI personnel will periodically perform a visual inspection of each containment basin to determine the presence of oil. If oil is

present, the oil will be removed by a licensed contractor and disposed of according to state and federal regulations. Consistent with other UI substations, a Site-specific SPCC Plan will be prepared and implemented prior to operating the substation in accordance with the requirements contained in Title 40 of the Code of Federal Regulations Part 112 (40 CFR Part 112).

- **Enclosures** – A new high voltage (HV) GIS enclosure with attached control enclosure and a distribution switchgear enclosure will be constructed at the substation. The HV GIS enclosure is approximately 87 feet wide, 94 feet 6 inches long, and 33 feet 4 inches in height. The attached control enclosure is approximately 72 feet wide, 33 feet 6 inches long, and 14 feet tall. The MV GIS enclosure is approximately 32 feet wide, 75 feet long, and 16 feet in height. (Refer to Appendix A, Drawing 25247-002-001 SH 001). The enclosures will consist of a pre-engineered design that will be erected on site on a concrete foundation. The enclosures will be windowless and will have several access doors. All required electrical equipment, heating, ventilating, and air conditioning equipment in the enclosures will be installed at the site. Enclosure exterior walls will be light gray in color to match the color of the other substation equipment.

### 3.2.4 Permanent Site Drainage

The permanent drainage plan for the substation will include a new on-site stormwater system, consisting of catch basins, stormwater piping, and an underground infiltration chamber. Runoff from the site will enter the catchment stormwater system at various points and be routed to the underground infiltration chamber. The underground infiltration chamber will have an outlet control structure with a discharge pipe that will tie into the CT DOT's existing stormwater piping along Ferry Access Road.

The underground infiltration chamber meets the following stormwater requirements from City of Bridgeport:

- Quality: treats the first 1 inch of rain.
- Quantity: for 50-year storm, the post-development runoff volume is less than or equal to 90% of pre-development runoff volume.

The underground infiltration chamber is designed to infiltrate the first 1 inch of rainfall, have detention storage, and to pass the remaining quantity into the CT DOT stormwater system.

### 3.2.5 Site Security (Permanent Fencing, Lighting, and Access Gates)

For permanent security, a 14-foot-tall chain-link fence, topped by 1 foot of barbed wire, will be erected around the substation. Along the portions of the substation perimeter where the retaining wall is present, the security fence will be located adjacent to and inside the wall. A 20-foot-wide slide gate on Singer Avenue and a 24-foot-wide slide gate on Ferry Access Road will be installed to provide access to authorized personnel. Personnel gates will be installed, as needed. The fencing will be equipped with opaque winged slats to provide increased physical security and visual screening.

LED lights will be installed at different heights on the fence posts, enclosure walls, and equipment. The lights will be designed to focus illumination toward the substation and minimize light pollution to neighboring properties. Lighting will include both task lights (switched on manually) and security lights (automatic dusk-to-dawn).

For added security, cameras and motion detectors will monitor the substation fence line and the equipment inside the station.

### **3.2.6 Testing and Commissioning**

The substation equipment will be tested as part of the standard commissioning process, prior to connection to the electrical grid.

### **3.2.7 Final Grading, Cleanup, and Site Stabilization**

As one of the final steps in the construction process, all construction debris will be removed from the site and disposed of properly. Final grading will leave the substation site surface matching the contours and elevations as shown on the Grading and Drainage-Site Plan drawing (refer to Appendix A, Drawing 25247-0003-004-SH 001). The area within the substation fence will be covered with a 6-inch layer of crushed rock (i.e., aggregate). Compaction will be accomplished by at least two passes of road type vibratory compactor or pneumatic-tired roller. Areas on the substation site, outside the fence also will be paved, stabilized with aggregate, or revegetated, as appropriate.

## **3.3 OPERATION AND MAINTENANCE**

To operate and maintain the new Pequonnock Substation, UI will implement its standard Operations/Maintenance Program for substations. The site will be periodically inspected for weed control and rodent damage to equipment. Snow will be removed from driveways as needed. Debris will be removed from the substation yard during inspections. The installed engineered controls will also be periodically inspected as required by CT DEEP. Areas surrounding the fenced substation will be maintained as appropriate.

## 4. TRANSMISSION LINE CONNECTIONS AND REMOVALS

Different procedures will be used to install the new overhead and underground line connections to the new Pequonnock Substation, as well as to remove the existing line connections to the existing Pequonnock Substation. The construction and removal procedures for the overhead 115 kV transmission lines are discussed in Section 4.1, while those for the underground lines are described in Section 4.2. Section 6 presents the protocols common to all Project work (including the 115 kV line activities). The aerial-based map sheets in Appendix A illustrate the locations of the planned workspace and access for the construction along each transmission line connection.

### 4.1 OVERHEAD TRANSMISSION LINES

#### 4.1.1 New Line Connections

The typical sequence of activities involved in the construction of the short, new 115 kV line connections will be to:

- Survey and stake the ROW boundaries (where necessary), vegetation clearing locations, and new structure locations.
- Perform vegetation clearing and install erosion and sedimentation controls as needed.
- Construct or improve existing access, if necessary. Prepare level work pads as necessary at new structure sites and conductor pulling sites.
- Construct foundations and erect/assemble new structures.
- Install shield wires and conductors.
- Install structure grounding systems, including counterpoise (if needed).
- Remove temporary roads and construction debris and restore disturbed sites.
- Maintain temporary erosion and sediment controls until vegetation is re-established or disturbed areas are otherwise stabilized.

Work on the MNR corridor and across Ferry Access Road will be coordinated with CT DOT Rails, as well as the City of Bridgeport and the Bridgeport Port Authority, respectively. The following describes the primary steps in the overhead line connection construction process.

#### **Vegetation Clearing**

Existing vegetation will be removed around new overhead transmission structure locations and along the ROW segments, as needed. Clearing and grubbing will be accomplished by conventional methods, using a combination of chain saws, hand labor, and mechanized equipment. All cut vegetative materials will be removed from the site and disposed of properly.

#### **Erosion and Sediment Controls**

The transmission line work will be performed in accordance with the procedures of the General Permit and the Project-specific SWPCP submitted to CT DEEP, and will be consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. The erosion and sediment controls will be inspected and repaired or replaced as necessary until the transmission line ROWs are stabilized. Anti-tracking pads will be installed at the construction access points with public roads and paved areas to prevent sediment from being tracked offsite by construction vehicles.

### **Access and Work Pads**

Access to new structures will be via existing MNR access points and the local roads that are near structure locations. Work pads will be required at each transmission line structure, as well as at conductor and optical ground wire (OPGW) pulling sites. Each work pad, which will be matted if needed, will be centered at the pole location and will be approximately 100 feet x 100 feet. No grading is expected to be required to establish the work pads. The work pads will be used to stage structure components for final on-site assembly, to provide a safe, level base for the construction equipment used to install foundations, and to erect the structures. Access and work pad information is depicted on the Plan Drawings in Appendix A.

### **Concrete Foundation and Structure Installation**

Auger drilling will be used to perform the excavations for pier foundations. The size of each excavation typically will be 6-8 feet in diameter and will vary in depth from 20 to 50 feet. Temporary casings may be used to provide soil support as needed to complete the excavation work and place concrete. The temporary casing will be removed from the pier foundations as concrete is placed or soon thereafter.

Once the excavation is complete, steel reinforcing bars and an anchor bolt cage will be placed in the excavation encased in concrete. The concrete will be conveyed from the mixer to the place of the final deposit by methods that will prevent the separation or loss of material.

Field tests of the concrete will be conducted regularly. In general, as an indication of other physical properties, the quality of the concrete being produced will be judged by the compressive strength developed within a given period.

Once a foundation is in place and cured, the steel transmission structure will be assembled and erected. Structures will not be erected on the concrete piers for a minimum of seven calendar days after the concrete has been poured and the compressive strength of the concrete has reached 4,000 pounds per square inch (psi).

The galvanized steel structures may be assembled on the ground and erected as a complete unit or assembled in pieces with a crane. Once the structure is erected and framed with the support insulators and hardware, it will be ready for installation of the overhead lines.

Insulators and connector hardware and conductor pulling blocks will also typically be installed at this time.

### **Structure Grounding**

In addition to the natural grounding of the transmission line structures that is provided by the foundation contacts with earth, a ground ring and ground rods will be buried around each foundation (refer to Appendix A). The ground ring will be installed after the completion of the foundation and the installation of the structure, but before shield wires are installed. The need for and location of additional ground rods and conductor (forms of supplemental grounding for transmission line structures) will be determined based on soil resistivity and/or footing resistance testing, which will be performed as part of the construction process.

### **Conductor Installation**

The installation of the overhead line conductors and shield wires will require the use of pulling and tensioning equipment, as well as reels of conductor, which will be positioned at temporary pulling work pads along the ROW segments. Helicopters may be used to install pulling ropes at the commencement of the conductor/shield-wire pulling process. To maintain clearance at road and the MNR crossings during conductor and OPGW installation, temporary guard structures or boom trucks will be positioned adjacent to the crossings. Temporary pulling work pad and guard structure pads are illustrated on the Appendix A maps.

The conductors will be pulled under tension to avoid contacting the ground and other objects. The remaining insulators and hardware will then be installed at angle and dead-end structures. Finally, in accordance with industry standards and design specifications, the conductors and shield wires will be pulled to their design tensions and attached to the hardware. Linemen in bucket trucks will perform this operation.

### **Cleanup and Restoration**

ROW cleanup and restoration activities will include the removal of construction debris, signs, flagging, fencing, and temporary work pads. Areas affected by construction will be stabilized as appropriate to approximate pre-construction conditions (e.g., seeded, graveled).

Materials used in work pad construction, as well as other construction debris, will be removed from the ROWs. Such materials will either be properly disposed of or otherwise re-purposed. Temporary erosion and sedimentation controls will remain in place until permanent stabilization is achieved, pursuant to the requirements of the CT DEEP General Permit.

#### **4.1.2 Removal of Existing 115 kV Line Segments**

To remove the five existing overhead line connections to the existing Pequonnock Substation, UI will coordinate with MNR and PSEG and will perform, as necessary, vegetation clearing to access existing structures. Work pads also will be installed (as

described for the new 115 kV line connections in Section 4.1.10) as needed. Subsequently, the existing 115 kV structures and overhead lines will be removed.

In general, the conductors and OPGW will be removed first, followed by the removal of the steel structures or railroad bonnets. Steel pole foundations will be left in place and typically cut flush to the ground surface. UI expects to recycle all the steel materials and to properly repurpose, recycle, or dispose of other miscellaneous hardware and materials from the existing structures.

## **4.2 UNDERGROUND LINE SEGMENTS**

The three underground line connections to the new Pequonnock Substation will involve similar construction procedures, although the XLPE cable connection work will differ slightly from the activities required to install the HPGF line connections. The new XLPE line segment will connect to the new substation from an existing splice chamber located in Ferry Access Road, whereas a new splice chamber, located on UI property at the existing Pequonnock Substation, will be installed for the two HPGF lines.

The following summarizes the general construction procedures for the underground line segments, indicating (as appropriate) the differences in the XLPE and HPGF lines. The drawings in Appendix A include details regarding the underground 115 kV line connection routes, workspaces, and access.

### **4.2.1 New Line Connections**

The following typical activities will be involved in the construction of the underground 115 kV cable connections to the new Pequonnock Substation:

- Conduct pre-construction surveys to identify the locations of existing underground facilities along the cable connection routes, as well as to characterize soil and groundwater conditions.
- Survey and mark the cable system connection routes.
- Establish erosion and sedimentation controls, if necessary, where earth will be disturbed, or spoil will be temporarily stored.
- Excavate a trench. In the case of the XLPE line, the trench will be for the cable duct bank; for the HPGF lines, the trench will be for the gas piping.
- Install the duct bank (XLPE) and piping (HPGF).
- For the XLPE cables, encase the duct bank in concrete and backfill the trench with a concrete-like substance (fluidized thermal backfill [FTB] or equivalent) and restore disturbed areas. Pull the 115 kV cables into the conduits, splice the cables in the existing splice chamber beneath Ferry Access Road, and terminate the cables at the new substation.
- For the HPGF lines, backfill the trench with FTB or thermal sand and restore the disturbed areas. Pull the 115 kV cables into the new pipe and then splice the cables in the new splice chamber located near the existing Pequonnock Substation. Terminate the cables at the new station and pressurize the pipes with nitrogen gas.

- Test both XLPE and HPGF cable connections and then energize the new line segments.
- Stabilize areas affected by construction, using gravel (within the substation) or paving or revegetation (outside the substation), as necessary.

The sequence in which some of these construction activities will be performed will depend on construction scheduling. The following provides a summary of the XLPE and HPGF construction measures.

### **XLPE Cable Connection**

The 115 kV XLPE cable (1955 Line), which extends from Singer Substation along Ferry Access Road to the existing Pequonnock Substation, will be intercepted at an existing transmission splice chamber (referred to as SC1) located beneath Ferry Access Road and, from there, redirected to the new substation (refer to the Appendix A maps). Approximately 500 feet of new concrete-encased PVC duct bank will be constructed. The XLPE line relocation will shorten the existing circuit length by approximately 460 feet.

The 1955 Line consists of XLPE cables that are installed in 6-inch Schedule 40 PVC conduits, encased in concrete. UI will establish a new duct bank connection between the new substation GIS enclosure and the existing splice chamber (SC1) on Ferry Access Road. Table 4-1 summarizes the planned construction sequence for the XLPE cable connection to the new Pequonnock Substation.

For the XLPE cable connection, a trench will be excavated a minimum depth of 6.75 feet along Ferry Access Road, and 5.25 feet at the new Pequonnock Substation, with greater depths at utility crossings. The trench width will typically be approximately 3.5 to 5.25 feet to allow installation of the cable conduits. After the trench is excavated, a layer of bedding material will be placed in the bottom of the trench to ensure a stable and level subsurface. PVC conduits with a specified diameter and thickness will be assembled and placed in the trench at a predetermined depth and configuration. Conduit spacers will be used to ensure the exact designed configuration and spacing between conduits.

The trench will then be filled with high strength concrete to protect the conduits and facilitate the heat dissipation from the cables. This concrete will extend from the bottom of the trench to cover the conduits, conduit fittings, and reinforcement. The reinforcement, where required, will be designed to meet the performance requirements such as high load pressure and ground vertical and/or lateral deformation. An additional layer of FTB will typically be placed on top of the high-strength concrete to further facilitate heat transfer.

The topmost layer of cover for the duct bank will consist of either pavement over compacted road base (where the cable is installed beneath Ferry Access Road) or soil / gravel (where the duct bank is aligned beneath un-paved areas). This final cover layer will match the surrounding elevations. After the duct bank is installed, one cable per conduit will be pulled

through the duct bank, from the termination at the new substation to the existing splice chamber beneath Ferry Access Road.

**Table 4-1: Construction Sequence for XLPE Cable Connection**

<b>TYPICAL XLPE CABLE CONSTRUCTION ACTIVITIES</b>
<ul style="list-style-type: none"> <li>Construct the duct bank from the new Pequonnock Substation toward existing splicing chamber SC1, located along the existing 115-kV XLPE cable route in Ferry Access Road. The south traffic lane of Ferry Access road will likely have to be closed during duct bank construction on Ferry Access Road.</li> </ul>
<ul style="list-style-type: none"> <li>In SC1, connect the existing XLPE cable from Singer Substation to the new XLPE segment that will extend to the new Pequonnock Substation.</li> </ul>
<ul style="list-style-type: none"> <li>Pull cable from termination to splicing chamber SC1 after conduits are swabbed and mandrel proofed.</li> </ul>
<ul style="list-style-type: none"> <li>Terminate the XLPE cables at the GIS terminations and splice the new cables to the existing XLPE line from Singer Substation at SC1.</li> </ul>
<ul style="list-style-type: none"> <li>Remove the existing XLPE cable segment that extends from SC1 to the existing Pequonnock Substation. Working from SC1, the cable will be pulled out of the PVC conduits. The empty conduits, which are embedded within the concrete duct bank and buried beneath Ferry Access Road and on UI and PSEG property, will be plugged at both ends and abandoned in place. The cable section that is removed will be disposed of properly, off site.</li> </ul>
<ul style="list-style-type: none"> <li>Perform necessary commissioning tests on the system upon completion of installation.</li> </ul>

**HPGF Line Connections**

The two pipe-type HPGF underground lines (the 1697 and 1710 lines) will connect to the new substation from the east by extending the existing steel pipes for approximately 730 feet to the southwest, crossing both PSEG and UI property. A new buried splice chamber for the HPGF lines will be installed on UI property near the existing Pequonnock Substation. This splice chamber will have an outer dimension of approximately 20 feet by 10 feet by 11 feet.

The HPGF cable extensions will consist of the same materials as the rest of the 1697 and 1710 underground circuits (i.e., three paper-insulated cables installed in an 8-inch diameter steel pipe filled with nitrogen gas at 200 psi). New pipe and cable will be installed between the new splice chamber and the new Pequonnock Substation GIS enclosure. Table 4-2 summarizes the typical construction sequence for the HPGF cable extensions.

**Table 4-2: Construction Sequence for HPGF Cable Extensions**

<b>TYPICAL HPGF CABLE CONSTRUCTION ACTIVITIES</b>
<ul style="list-style-type: none"> <li>Excavate trench from the new Pequonnock Substation to 20 feet outside of the new splice chamber near the existing substation (open excavations may be steel-plated as needed).</li> </ul>
<ul style="list-style-type: none"> <li>Lay new pipes in the trench.</li> </ul>
<ul style="list-style-type: none"> <li>Install new splicing chamber around the two existing pipes at a relatively flat section outside of the existing Pequonnock Substation fence.</li> </ul>
<ul style="list-style-type: none"> <li>De-gas the transmission lines from Seaview Tap to the existing Pequonnock Substation.</li> </ul>
<ul style="list-style-type: none"> <li>During cutover, cut existing steel pipe outside of existing splicing chamber (removing the connection between the new splice chamber and the terminations at the existing Pequonnock Substation).</li> </ul>
<ul style="list-style-type: none"> <li>Bring down the pipe to horizontal position. The splicing chamber side wall will be slotted to allow such movement of the pipe.</li> </ul>
<ul style="list-style-type: none"> <li>Secure existing pipe to splicing chamber floor with supports.</li> </ul>
<ul style="list-style-type: none"> <li>Cut existing pipe at splicing location without damaging cables inside.</li> </ul>
<ul style="list-style-type: none"> <li>Cut and remove the existing cables back to terminations at the existing Pequonnock Substation.</li> </ul>
<ul style="list-style-type: none"> <li>Connect the new pipe with the existing pipe if the condition of existing pipe allows. Pull out existing pipe and insert new pipe into splicing chamber if existing pipes are not fit for reuse.</li> </ul>
<ul style="list-style-type: none"> <li>Cable installation will commence after the last section of pipe has been successfully swabbed, mandreled, and proofed.</li> </ul>
<ul style="list-style-type: none"> <li>Splice the new cable to existing cable at new splicing chamber and terminate the new cable at the new GIS enclosure.</li> </ul>
<ul style="list-style-type: none"> <li>When the cable and piping systems are complete from termination to manhole, the circuit will be ready for final evacuation and pressurization. Draw vacuum at new Pequonnock Substation and new splicing chamber.</li> </ul>
<ul style="list-style-type: none"> <li>Start filling nitrogen gas to the system upon successful evacuation and final pressurization of the cable and piping system.</li> </ul>
<ul style="list-style-type: none"> <li>Perform commission tests on the system upon completion of installation.</li> </ul>

After the trench for the HPGF cables is excavated, a thin layer of FTB or equivalent bedding material will be placed on the bottom of the trench. The cable system will be laid on top of the bedding material and then the trench will be backfilled with additional bedding material. The steel pipe will be installed in the trench in lengths of 30 to 40 feet, welded, and x-rayed at the connection to detect any welding defects.

After the pipe is installed, swabbed, and tested, the new cables will be pulled through pipes and spliced to the existing section of cable in the splice chamber. Thereafter, the pipe system will be vacuum-tested to detect any system leaks and moisture ingress. The pipe then will be pressurized with nitrogen gas, after which commissioning tests will be completed on the cable system.

#### **4.2.2 Underground Lines: Removal / Abandonment in Place**

A section of the existing XLPE cable that extends from SC1 to the existing Pequonnock Substation under Ferry Access Road and small sections of the two HPGF cable into existing Pequonnock substation will be removed. The existing cables will be pulled out of the PVC conduits (XLPE) or steel pipe (HPGF) and the empty conduit/pipe will be plugged at both ends and abandoned in place. For the HPGF lines, the nitrogen gas within the HPGF pipes will be removed in accordance with applicable requirements. The cable sections that are removed will be either recycled or disposed of properly off site.

## 5. DECOMMISSIONING PLAN: EXISTING PEQUONNOCK SUBSTATION

After the new Pequonnock Substation is placed into service, the existing Pequonnock Substation will be decommissioned<sup>2</sup>. The decommissioning work will be performed on UI property, using established access roads. The primary steps in the decommissioning process will include:

- De-energize the substation.
- Decommission electrical components within the substation ((e.g., remove sulfur-hexafluoride [SF6] gas from circuit breakers and dielectric fluid from transformers);
- Remove metal clad switchgear, panels, racking, steel structures, conductors, high voltage equipment, transformers, capacitor bank and circuit breakers;
- Dismantle and remove above-ground structural components at the substation, including the control enclosure, etc.
- Remove foundations, generally to approximately 6 inches below grade; and
- Resurface the property with crushed stone.

UI anticipates that most of the substation materials, such as the electrical components, steel structures, panels, and conductors will be recycled.

The substation decommissioning will follow all applicable regulatory requirements.

A plan detail regarding the substation decommissioning, illustrating the equipment, structures, and materials that will be removed is provided in Appendix D (refer to Drawing 25247-001 DEMO).

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<sup>2</sup> The procedures for the removal of the transmission line connections to the existing substation are discussed in Section 4.

## **6. PROJECT-WIDE CONSTRUCTION PROCEDURES AND PLANS**

The following plans apply to all Project components (e.g., new substation, overhead and underground transmission line reconnections, decommissioning of the existing Pequonnock Substation).

### **6.1 CONSTRUCTION MANAGEMENT, CONTACT INFORMATION, AND STAGING AREAS**

#### **Construction Management and Contact Information**

UI, and/or its designated consultants, will oversee Project construction, monitoring work activities for conformance to this D&M Plan, as well as to safety, engineering, and environmental requirements. Appendix F identifies and provides contact information for UI's key Project personnel.

Prior to the commencement of Project construction, UI will provide to the Council the contact information for its prime project construction contractor(s). This information will include the contractor's name, manager assigned to the Project, corporate address, telephone number, and e-mail.

#### **Staging Areas and Contractor Yards**

To support Project construction, staging areas will be required for material laydown and staging, parking for vehicles and equipment, and temporary construction field trailers. The primary Project staging and laydown area for the Project will be located on UI's 3.7-acre Project site (i.e., the substation site and the land north of Ferry Access Road) property, which is large enough to accommodate office trailers, small material storage trailers, construction equipment, and substation materials and equipment.

The Appendix A maps identify the potential staging / laydown areas currently planned for the Project. If necessary, UI will secure access to additional locations needed for material laydown areas. UI will work with contractors to identify needs and acquire space.

The Project construction contractor(s) will be responsible for establishing the construction support staging area / laydown yard(s). If it is determined that additional staging / laydown areas are needed to support construction, UI will seek the review and approval of the Council prior to use.

### **6.2 SOIL EROSION AND SEDIMENT CONTROL PLAN**

To minimize the potential for off-site erosion and sedimentation resulting from Project activities, temporary erosion and sedimentation control measures will be installed prior to or in conjunction with construction activities that disturb soils. These measures will comply with the *2002 Connecticut Guideline for Erosion and Sediment Control* and with UI's soil erosion and sediment control measures, as depicted in Appendix B.

Temporary erosion and sedimentation controls will be maintained and modified as necessary during Project construction. Such measures will remain in place until the areas disturbed by construction activities are permanently stabilized, as appropriate to the Project work sites. For example, areas within the new substation fence, at the site of the decommissioned existing substation, and along the underground cable line segments will typically be permanently stabilized by surfacing with gravel or pavement. Areas along the overhead transmission line segments that are presently vegetated will be stabilized by reseeding. After final stabilization is achieved, all temporary erosion and sedimentation controls will be removed and disposed of properly.

In addition, in accordance with CGS Section 22a-430b, construction activities, such as the Project, that will result in the disturbance of 1 or more total acres of land area must comply with the CT DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities* (General Permit). Pursuant to the requirements of this General Permit, UI submitted to CT DEEP both a Registration Form and a Project-specific *Stormwater Pollution Control Plan* and has obtained from CT DEEP a stormwater General Permit (No. GSN003559) for the Project.

### **6.3 SPILL PREVENTION AND COUNTERMEASURES PLAN**

Appendix C presents UI's Spill Prevention and Countermeasures Plan for the Project. Construction contractors working on the Project will be required to adhere to this plan.

### **6.4 ENDANGERED SPECIES MONITORING AND PROTECTION PROTOCOLS**

Consistent with requirements specified in the Decision and Order received from the CSC for the Project, and the recommendations of the CT DEEP Natural Diversity Data Base (NDDDB) staff, UI will implement the following best management practices to protect the peregrine falcon (a State-listed Threatened species) during construction, should it be determined that the bird species is nesting on or near the Project site:

- Between April 1<sup>st</sup> and July 31<sup>st</sup>, UI will utilize an ornithologist to perform (at minimum) weekly inspections to monitor the nesting and behavioral activity of nesting peregrine falcons. The Project construction schedule and specific construction activities will dictate when inspections by the ornithologist will occur. For example, more frequent inspections may be needed during the drilling of the piers/foundations versus when electrical work is occurring.
- The ornithologist will provide training to all construction personnel prior to the commencement of their on-site work. The training will consist of a review of construction limitations outlined by CT DEEP NDDDB staff / UI Environmental, visual identification methods of the peregrine falcon (i.e., Species Identification Sheets), and a communication plan. If a peregrine falcon is identified in the Project area, the communication plan will require the construction contractor to contact UI Environmental personnel, who in turn will contact the ornithologist. The ornithologist and UI Environmental then will immediately perform a site inspection and will work with on-site personnel to avoid or minimize activities that would disturb the peregrine falcon.

- Construction activities conducted within 500 feet of a peregrine falcon nest during the active breeding season (April 1<sup>st</sup> through July 31<sup>st</sup>) will minimize noise impacts by using sound suppressing equipment.

## **6.5 TRAFFIC CONTROLS AND MANAGEMENT**

During construction, workers and equipment will generally enter and exit the new substation site from Ferry Access Road and Kiefer Street. Equipment and material deliveries will be made by truck from Ferry Access Road.

Access to the transmission line ROWs (for the new line connection work and existing line removals) will be via Ferry Access Road, other existing local roads, and CT DOT's MNR corridor. Certain line work also will be performed on PSEG and UI property. In addition, access to decommission the existing Pequonnock Substation will be via local roads and previously established substation access points.

Project construction will not typically affect traffic on local roads leading to the site, except during the delivery of large substation equipment (e.g., transformers, enclosures), when traffic may be delayed or access to the substation may have to be temporarily halted while the large equipment maneuvers into the substation. However, the overhead transmission line connection and removal activities may affect traffic on Ferry Access Road on a temporary and localized basis, if traffic must be temporarily paused when the new 115 kV overhead line conductors and OPGW are pulled over the road and the old 115 kV lines are removed. In addition, the connection of the XLPE cables from the existing splice chamber (SC1) in Ferry Access Road will require the temporary closure of one lane of the road.

## **6.6 NOISE MITIGATION AND LIGHTING**

### **Noise**

The Project is in an industrial area, where the ambient sound environment is affected by trains on the MNR corridor, traffic on Interstate 95, the operation of BHS, and traffic on Ferry Access Road, among other activities. The Project development will cause short-term and localized increases in sounds typical of construction activities, particularly because of heavy equipment operation. However, such sound will attenuate with distance.

The operation of the substation will generate noise due to sound propagated from the 115 kV / 13.8 kV power transformers. However, the results of the noise study commissioned for the Project (refer to the Project Application to the Council) demonstrate that the sound from the substation is predicted to be below allowable state and municipal sound limits.

### **Lighting**

Because some of the Project construction will occur in the winter (when certain tasks may extend after nightfall) and during the night (e.g., along the railroad corridor as required by MNR), temporary lighting will be required at certain times. However, such temporary lighting will be focused solely on work sites.

At the new Pequonnock Substation, low-level lighting will be installed for safety and security purposes. The illumination from these lights will be visible in the immediate vicinity of the substation; however, the lighting will be consistent with the illumination of other industrial facilities in the vicinity. UI will use additional lighting only for work at night under abnormal or emergency conditions. The lights at the new substation will incorporate UI's standard design for illumination of substation yards (i.e., the use of area lights mounted on equipment support structures, perimeter fence posts, and enclosures).

## **6.7 AIR QUALITY**

### **Idling Requirements**

To minimize emissions from construction equipment and vehicles, UI will require Project contractors to properly maintain equipment and to adhere to Connecticut's anti-idling requirements (RCSA § 22a-174-18). Per Connecticut requirements, the allowable idling time for vehicles of all kinds, including diesel construction equipment, is 3 minutes. However, under winter work conditions (when the ambient temperature is below 20 degrees Fahrenheit) the following apply:

- Construction equipment may require longer periods to warm up after overnight shut down or other extended periods of inactivity. Such "warm up" periods, as required to bring the equipment up to a safe operating temperature (as defined by the equipment manufacturer), are exempt from the idling time limit. However, most diesel engines take 3 minutes or less to warm up (contractors should consult the engine manufacturer's recommendations).
- Construction equipment may have to idle for longer periods to operate defrosting or heating equipment to ensure the safety or health of the driver.

### **Dust Minimization**

Dust emissions will be controlled by applying water or equivalent substances to exposed soils on Project work site, as necessary, per guidance provided in the SWPCP. To minimize tracking of dirt from Project construction areas onto Ferry Access Road (and other paved roads, when used for construction access), crushed stone anti-tracking pads (or equivalent) will be installed as necessary.

## **6.8 CONSTRUCTION EQUIPMENT AND VEHICLE WASHING / WASH-OUT AREAS**

Washout areas for concrete trucks (which will be required to supply concrete for the substation, new overhead transmission line structure foundations, and backfill [concrete, FTB] for the new underground line connections) will only be allowed, as needed, in specified locations on the Project site. Such areas will be selected by UI to minimize the potential for

off-site run-off and will incorporate methods for collecting and controlling the wash-out for off-site disposal, as well as appropriate erosion and sedimentation controls.

## **6.9 WINTER WORK PROTOCOLS**

Because Project construction will require several years to complete (refer to the Project schedule in Section 7), various work activities will be conducted during the winter months. The removal of snow and ice from construction sites is critical to maintain a safe work environment. Snow removal and the use of de-icing procedures at the new substation, existing Pequonnock Substation (to be decommissioned) and along the Project's transmission line ROWs will be performed to protect work safety and in accordance with the CT DEEP's *Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots* (refer to Appendix E).

## **6.10 WORKSITE HEALTH AND SAFETY**

A worksite Health and Safety Plan will be developed in consultation with the Project contractor(s); UI will require that contractors strictly adhere to the plan protocols. UI employees and each contractor will be responsible for the safety and protection of all workers on-site, as well as the public. During construction, UI employees and each contractor will protect all existing structures, features, utilities, and equipment designated to remain in place within or adjacent to the Project area.

## 7. PROJECT SCHEDULE AND CONSTRUCTION WORK HOURS

### 7.1 PROJECT SCHEDULE

The overall Project schedule is presented in the following table:

**Table 7-1: Project Schedule**

Activity	Estimated Start Date	Estimated Finish Date
Site Preparation Construction	Sep 2020	Oct 2020
Mobilization of Construction Contractors	Sep. 2021	Sep. 2021
Site Clearing and Grading	Sep. 2021	Sep. 2022
Installation of T-line foundations	Jun. 2022	Aug. 2022
Foundation Installation	Jun. 2022	Jan. 2023
Substation Equipment Construction	May. 2022	Oct 2023
Testing and Commissioning	Mar. 2023	Aug. 2023
Outage Sequence	Aug. 2023	Jun. 2024
Substation Energized	Jun. 2024	Jun. 2024
Construction Complete (including restoration)	Aug. 2024	Aug. 2024

### 7.2 CONSTRUCTION WORK HOURS

Project construction activities will typically be from 7 AM to 7 PM, Monday through Saturday. Construction personnel may arrive and leave the Project site outside of these hours (e.g., for meeting in office trailers, holding safety tailboards). However, except as noted below for work on / near the MNR ROW, no noise-generating construction equipment will be routinely operated after 7 PM or before 7 AM, Monday-Saturday, or on Sunday, unless approved by the Council.

Certain specific construction tasks will require work on Sundays or beyond standard daily work shifts, particularly when outages are required. For example, to connect the 115 kV lines, substation terminal structures, and distribution lines, certain transmission and/or distribution equipment will have to be taken temporarily out of service. UI will coordinate this work with the Connecticut Valley Exchange (CONVEX) to obtain specific outage times. To complete such tasks as efficiently as possible with minimal service disruptions, work may have to be performed continuously (24/7). Similarly, the delivery and installation of large substation equipment (e.g., transformers, control enclosure) may require work outside of typical times and in some cases may require 24/7 work (e.g., transformer filling).

In addition, overhead transmission line construction activities (new structure installation and existing structure removal) involving MNR outages will require specific work hours and restrictions, as defined by MNR. Such work, which will be subject to MNR conditions, may

have to be performed seven days/week. The specific work hours that will apply to activities on the MNR ROW involve night-time construction and are as follows:

- Any work requiring MNR distribution outages will typically be performed between 9:30 AM and 3:30 PM or between 10:00 PM and 4:00 AM.
- Any work requiring high rail access will typically be performed between 10:00 PM and 4:00 AM.
- Work requiring the crossing of all railroad tracks will typically be performed between 10:00 PM and 5:00 AM, Friday through Sunday (actual working time is typically 2:00 AM to 4:00 AM).

## **8. PERMITS AND APPROVALS**

During the preparation of this D&M Plan and as part of the overall Project planning, UI coordinated with various regulatory agencies, including with the City of Bridgeport, CT DEEP, US EPA, and MNR. In addition, in accordance with the Council's requirements, UI provided a copy of the D&M Plan to the City of Bridgeport.

Table 8-1 identifies and lists the status of the Project permits and/or approvals.

As specified in the Council's Decision and Order (Condition No. 3), prior to the commencement of construction, UI will provide the Council with a copy of necessary permits received for the Project from any other state or federal agency with concurrent jurisdiction.

**Table 8-1: Project Permits and Approvals**

Agency	Potential Permit/Approval Required	Application Submitted or Consultation (Date)	Status
<b>STATE</b>			
<b>CONNECTICUT SITING COUNCIL</b>	Municipal Consultation Filing	MCF – February 23, 2018	Complete
	Certificate of Environmental Compatibility and Public Need under C.G.S. § 16-50(a)(1)	April 26, 2018	CSC Approved October 11, 2018
	Development and Management Plan (after issuance of certificate and prior to Council's approval to start construction)	June 2020	Pending
<b>CT DEEP</b>	• NDDB	Threatened and endangered species review	Submittals and consultations 2016-2020
	• Stormwater	General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (DEEP-WAPED-GP-015)	March 9, 2020
	• Groundwater	General Permit for Discharge of Groundwater Remediation Wastewater Directly to Surface Water (DEP-PED-GP-020) / General Permit for the Discharge of Remediation Wastewaters to Sanitary Sewer (DEP-PED-GP-007)	Pending
	• Remediation	Engineered Control Variance	May 11, 2020
<b>CT DOT</b>	Coordination, via existing lease agreement, for work on MNR corridor	February 28, 2020; response to CT DOT comments submitted June 9, 2020	Pending
	Encroachment Permit / Right of Access		
<b>CT SHPO</b>	Cultural Resource Consultation under C.G.S. § 16-50(e)	Review form submitted to SHPO May 2017; July 2017 SHPO determination of no adverse effect	Complete
<b>CITY OF BRIDGEPORT</b>			
	Coastal Site Plan Review	Coastal Area Management Permit Application submitted January 21, 2020	City of Bridgeport Planning & Zoning Commission Approved February 24, 2020
	Consultations in conjunction with MCF process	February 23, 2018 to April 23, 2018	Complete
<b>METRO-NORTH RAILROAD</b>			
	Right of Entry Permit	Pending	Pending
<b>FEDERAL</b>			
US EPA	Notification/Application of Self-Implementing and Risk-Based On-Site Cleanup and Disposal of Polychlorinated Biphenyl Remediation Waste Under 40 CFR §761.61(a) & (c)	June 11, 2020	US EPA Approval June 30, 2020

## 9. NOTICES AND REPORTS TO THE CSC AND MUNICIPAL OUTREACH

### 9.1 NOTICES AND REPORTS TO THE COUNCIL

In accordance with RSCA Section 16-50j-62 and Condition 4 of the Council's Decision and Order regarding the Project, UI will submit the following notices and reports to the Council:

- **Advance Notice Prior to the Commencement of Construction Activities** – UI will provide the CSC with written advance notice two weeks before the commencement of Project construction.
- **Provision of Permits from Other State and Federal Agencies** – Pursuant to Condition No. 3 of the Council's Decision and Order, UI will provide to the Council, prior to the commencement of construction, copies of necessary permits from any other state or federal agency with concurrent jurisdiction.
- **Notice of the Location and Size of Staging Areas** – Pursuant to RSCA Section 16-50j-62(a), UI will provide, for the CSC's approval, written notice of the location and size of all areas to be accessed or used for Project staging that are not otherwise identified in this D&M Plan.
- **Monthly Progress Report** – Pursuant to RSCA Section 16-50j-62(b)(3), UI will provide to the CSC a monthly progress report or a construction progress report at intervals determined by the CSC, indicating (minor) changes and deviations from the approved D&M Plan.
- **Notice of Completion of Construction and Commencement of Substation Operation** – Pursuant to Condition 4 of the CSC Decision and Order for the Project, UI will provide the CSC with written notice of completion of Project construction activities and the commencement of substation operation.
- **Final Report** – Pursuant to RSCA Section 16-50j-62(c)(1-5), within 180 days after completion of all Project construction and site rehabilitation, UI will provide the CSC with a final report that will include any agreements with abutters or other property owners regarding special maintenance precautions; significant changes to the D&M Plan; the location of construction materials left in place; the locations of special planting and reseeding; and the actual construction cost of the facility. (Refer to the D&M Plan Directory in Appendix G for a list of information to be included in the Final Report.

### 9.2 MODIFICATIONS TO THE D&M PLAN

Pursuant to RSCA Section 16-50j-62(b)(2), the Council must approve any significant changes to this D&M Plan. Accordingly, If any significant changes to the D&M Plan are required, UI will submit such proposed changes, in advance, to the CSC in writing. If advance written notice is impractical, verbal notice will be provided to the CSC immediately, followed up by written notice not less than 48 hours after the verbal notice. Significant D&M Plan changes, as defined in the RSCA, may include but not be limited to changes in a structure or equipment type or location, use of additional mitigation measures or elimination of mitigation measures, etc.

### 9.3 MUNICIPAL CONSULTATIONS

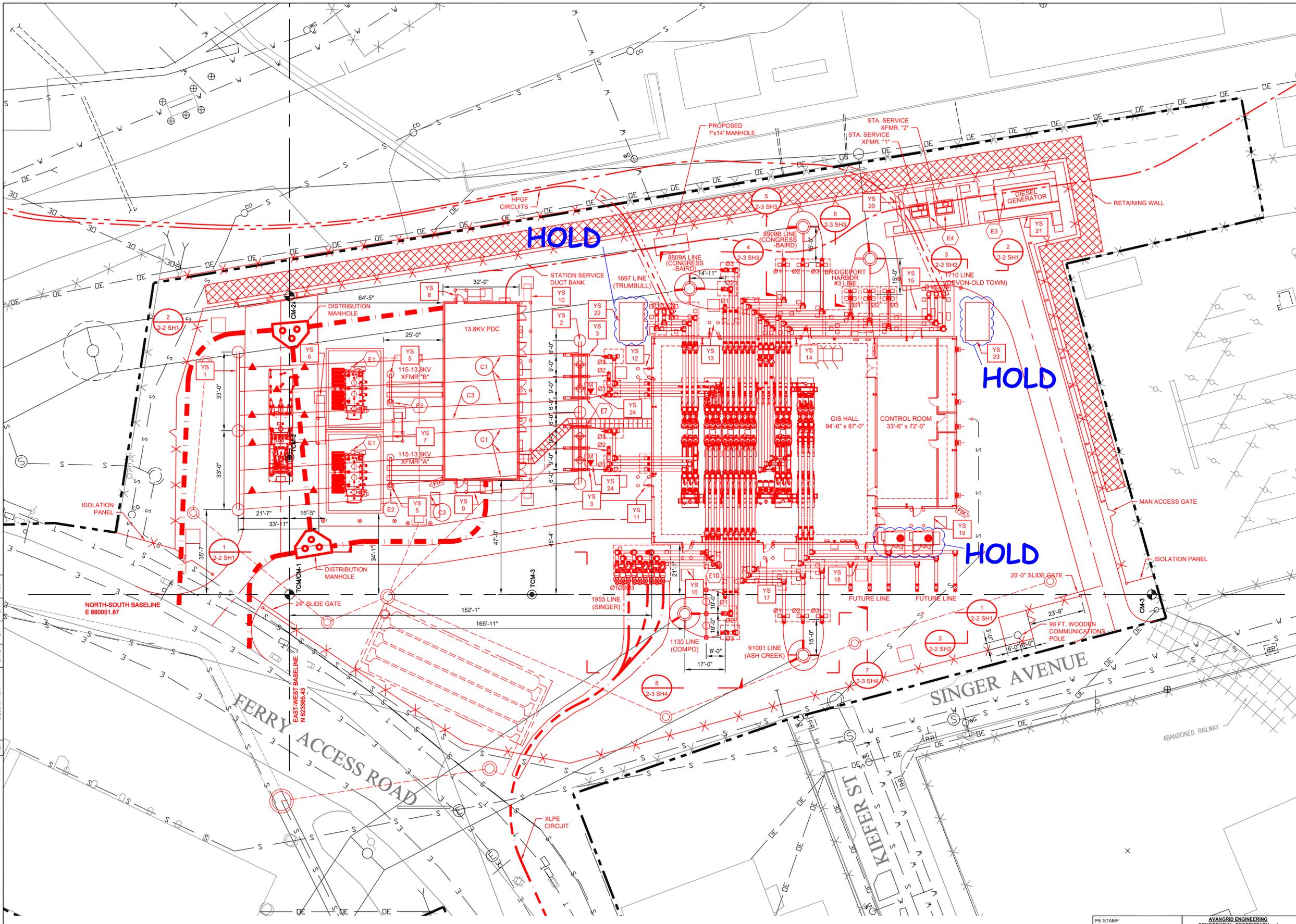
As part of the Project planning and CSC Application process, UI coordinated with City of Bridgeport officials, as well as with involved property owners, including PSEG and MNR. During Project construction, UI will continue to coordinate with the City, as well as with PSEG and MNR (as landowners). UI will provide the following notifications:

- ***Municipal Notification*** – UI will provide the City of Bridgeport, in writing, with a minimum of one week advance notice of the beginning of construction activities at the Project site.
- ***Landowner Notification*** – UI will notify each adjacent landowner, in writing, with a minimum of one week advance notice of the beginning of construction activities at the Project site.

## **APPENDICES**

**APPENDIX A-1  
SUBSTATION DRAWINGS**

DRAWING NUMBER	DRAWING TITLE
25247-0002-001	GENERAL ARRANGEMENT PLAN
25247-0002-004 SH 001	KEY PLAN
25247-0003-001 SH 001 DEMO	DEMOLITION PLAN
25247-0003-001 SH 001	SITE PLAN
25247-0003-001 SH 002	ROAD PLAN
25247-0003-001 SH 003	SURFACING AND FENCING PLAN
25247-0003-001 SH 004	SURFACING AND FENCING DETAILS
25247-0003-001 SH 005	SURFACING AND FENCING DETAILS
25247-0003-001 SH 006	UTILITY RELOCATION PLAN
25247-0003-001 SH 007	UTILITY RELOCATION DETAILS
25247-0003-004 SH 001	GRADING AND DRAINAGE PLAN
25247-0003-004 SH 002	GRADING AND DRAINAGE DETAILS
25247-0003-004 SH 003	GRADING AND DRAINAGE DETAILS
25247-0003-004 SH 004	GRADING AND DRAINAGE DETAILS
25247-0003-004 SH 005	RETAINING WALL DETAILS
25247-0003-004 SH 006	GRADING SECTIONS
25247-0003-005 SH 001	EROSION CONTROL PLAN
25247-0003-005 SH 002	EROSION CONTROL DETAILS
25247-001 DEMO	ELECTRICAL SITE PLAN DECOMMISSIONING PLAN



**NOTES**

- LEGEND**
- NEW EQUIPMENT
  - - - PROPOSED UNDERGROUND DISTRIBUTION ROUTE
  - · - · - PROPOSED UNDERGROUND HPG Fa TRANSMISSION ROUTE
  - - - PROPOSED UNDERGROUND XLPE ROUTE
  - X NEW SECURITY FENCE
  - - - PROPERTY BOUNDARY
  - - - FUTURE
  - ▶ MOBILE TRANSFORMER TAP
  - CABLE TRENCH
  - ▶ DISCONNECT SWITCH MOTOR OPERATOR
  - E# SUBSTATION ELECTRIC OPERATIONS EQUIPMENT. E# INDICATES ITEM NO. ON THE SUBSTATION BILL OF MATERIALS.
  - YS# MAJOR SUBSTATION STRUCTURAL COMPONENTS OR ASSEMBLY. YS# INDICATES ITEM NO. ON THE SUBSTATION BILL OF MATERIALS.
  - C# C# INDICATES ITEM NO. ON THE SUBSTATION BILL OF MATERIALS
  - SECURITY CAMERA FOUNDATION
  - PTZ PANTILT/zoom CAMERA
  - FIX FIXED CAMERA

**REFERENCE DRAWINGS**

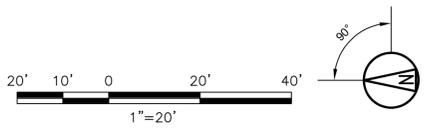
PDC EQUIPMENT LAYOUT	25247-0005-010
115KV GIS HALL EQUIPMENT LAYOUT	25247-0005-003 SH 001
GIS CONTROL ROOM LAYOUT	25247-0005-003 SH 002
GIS AND CONTROL ROOM GROUNDING PLAN	25247-0005-007 SH 001
YARD GROUNDING PLAN	25247-0006-001
TRENCH AND CONDUIT PLAN	25247-0006-004
YARD LIGHTING AND SECURITY PLAN	25247-0006-009 SH 001
GIS AND CONTROL ROOM LIGHTING PLAN	25247-0005-006 SH 003
LIGHTNING PROTECTION PLAN 12KV	25247-0006-009 SH1
LIGHTNING PROTECTION PLAN 115KV	25247-0006-009 SH2

REV	DESCRIPTION	DATE	BY	CK	APP
D-06	ISSUED FOR 10% REVIEW	09/11/2020	JRH	AP	BRH
D-04	ISSUED FOR U30% REVIEW	03/08/2019	JRH	MRH	BRH
D-04	ISSUED FOR U30% REVIEW	03/08/2019	JRH	MRH	BRH

ANSI D 611/2020

LOGO

**BLACK & VEATCH**  
Sustaining a world of difference

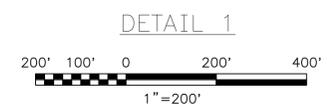
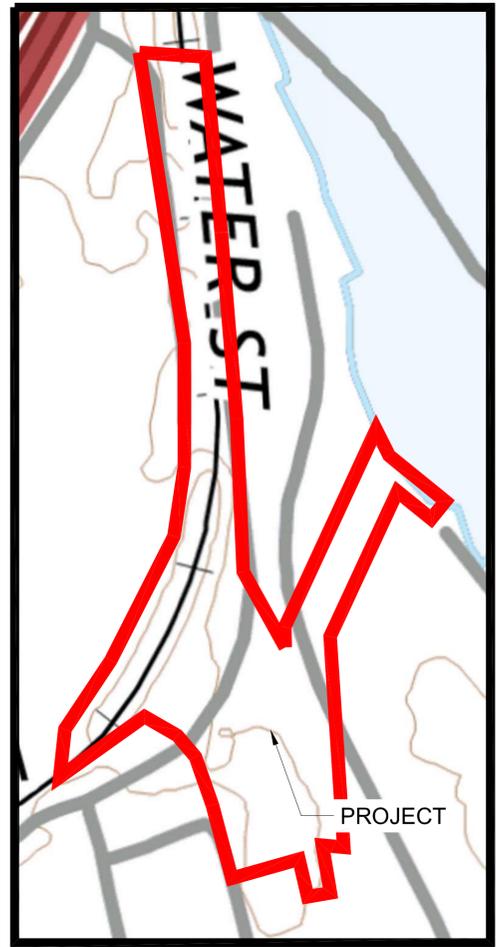
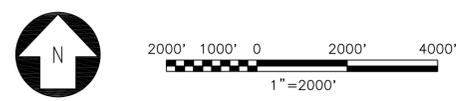


INSTALL  
PRELIMINARY  
NOT TO BE USED FOR CONSTRUCTION

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						PEQUONNOCK BRIDGEPORT	
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CK	JLPBV	NO.					
APP	JRH	DATE	01/28/2019				
REV	DESCRIPTION	DATE	BY	CK	APP	NO.	25247-0002-001

REV	DATE	DESCRIPTION	BY	CK	APP
0-0A	04/16/2020	ISSUE FOR LIREVIEW	BH/BV	JDA/BV	ELE/BV

LOGO  
**BLACK & VEATCH**  
*a* **Stoltman & World of Infrastructure**  
 ANSID 7/9/2020



SEE DETAIL 1 ON THIS DRAWING

NOTES

- BACKGROUND IMAGE IS USGS QUAD MAP BRIDGEPORT QUADRANGLE

LEGEND

- PROJECT

REFERENCE DRAWINGS

SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
GRADING AND DRAINAGE	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002

**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

PE STAMP

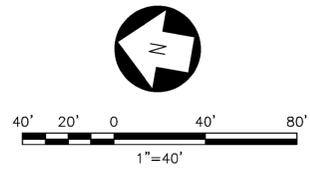
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BY	BH/BV	DATE	04/2020	APP	ELE/BV
CK	JDA/BV	DATE	04/16/2020	APP	ELE/BV



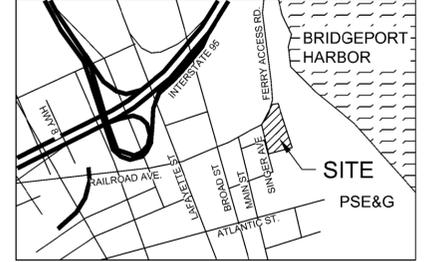
KEY MAP

PEQUONNOCK		BRIDGEPORT	
NO.	25247-0002-004 SH 001.dwg	NO.	25247-0002-004 SH 001
REV		REV	0-0A

CONTROL MONUMENTS - SEE NOTE 2				
CONTROL MONUMENT NO.	STATE PLANE COORDINATES		ELEVATION	REMARKS
	NORTH	EAST		
TCM-1	623365.43	880051.87	11	TEMPORARY CONTROL MONUMENT SHALL BE RESTORED AS NEEDED FOR THE PERMANENT CONTROL MONUMENT
TCM-2	623365.43	880109.31	12	TEMPORARY CONTROL MONUMENT
TCM-3	623263.63	880051.87	14	TEMPORARY CONTROL MONUMENT
CM-1	623365.43	880051.87	11	-
CM-2	623365.43	880176.84	12	-
CM-3	623003.41	880051.87	9	-



- GENERAL NOTES**
- HORIZONTAL DATUM IS BASED ON CONNECTICUT STATE PLANE COORDINATE SYSTEM, ZONE 3526, NAD 83, US FEET. VERTICAL DATUM IS BASED ON NAVD 88.
  - CONTROL MONUMENTS ARE 12 INCH DIAMETER X 5 FT DEEP CONCRETE MONUMENT WITH BRASS DISC IN THE TOP. BRASS DISC SHALL BE STAMPED WITH CONTROL MONUMENT NUMBER, NORTHING, EASTING, AND ELEVATION. SEE NOTE 1 FOR HORIZONTAL AND VERTICAL DATUMS.



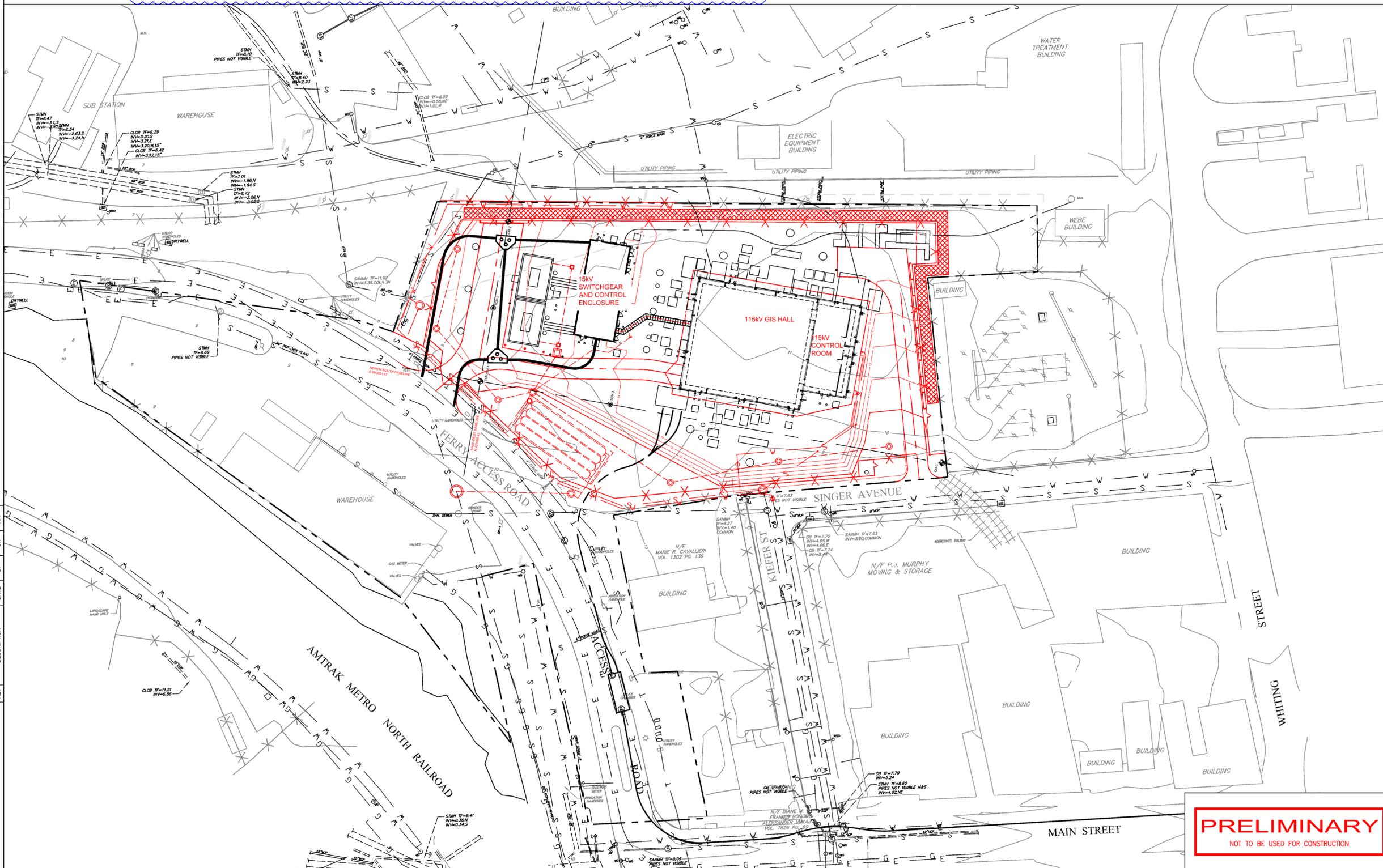
**VICINITY MAP**  
 NTS  
 1 KIEFFER STREET,  
 BRIDGEPORT, CT, USA  
 LAT. = 41.170596  
 LONG. = -73.185378

**LEGEND**

	PROPERTY LINE
	NEW CONTOUR
	EXISTING CONTOUR
	NEW SUBSTATION FENCE
	EXISTING FENCE
	EXISTING WATER
	EXISTING ELECTRIC
	EXISTING GAS
	EXISTING SEWER
	EXISTING TELEPHONE
	OVERHEAD ELECTRIC LINE
	TO BE INSTALLED
	EXISTING STRUCTURES
	NEW RETAINING WALL
	NEW STORMWATER SYSTEM
	CONCRETE ENCASED DUCTLINES
	UNDERGROUND DISTRIBUTION LINE
	TEMPORARY SURVEY CONTROL MONUMENT
	PERMANENT SURVEY CONTROL MONUMENT

**REFERENCE DRAWINGS**

DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003



**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

**INSTALL**

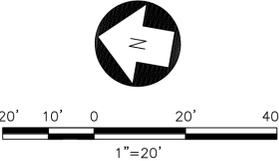
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12/20/2019	ISSUE FOR BID	GOV	BRH	
08/11/2020	ISSUE FOR REVIEW	BHJ	JDA	
08/04/2020	APPROVED FOR CONSTRUCTION	BHJ	JDA	

ANSI D 610/2020

PE STAMP		AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID		UI AVANGRID		<b>SITE PLAN</b>	
						SH 001 OF 009	
						BRIDGEPORT	
						PEQUONNOCK	
BY	DATE	BY	DATE	BY	DATE	FILE	NO
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REV	DESCRIPTION	DATE	BY	CK	APP	DATE	REV
						25247-0003-001 SH 001	0-1A

NOTES

- CONTRACTOR IS TO PLACE ASPHALT ON FERRY ACCESS ROAD WHERE THE GUARD SHACK WAS REMOVED AND REPAIR ANY DAMAGE DONE TO EXISTING ASPHALT FROM REMOVAL OF GUARD SHACK. REFER TO 25247-0003-001 SH 005 FOR CITY OF BRIDGEPORT PAVEMENT DETAILS AND SPECIFICATIONS.
- REFER TO 25247-0003-001 SH 004 FOR SUBSTATION ASPHALT DETAILS AND SPECIFICATIONS.
- APRON ELEVATION TO MATCH EDGE OF PAVEMENT. SAW CUT PAVEMENT TO MAKE STRAIGHT AND CLEAN EDGE.
- GUIDERAIL SHALL BE INSTALLED PER CTDOT STANDARD SHEET HW-910-02 - METAL BEAM RAIL (TYPE R-B 350) GUIDERAIL. SEE DRAWING 25247-0003-001 SH 009 FOR GUIDERAIL DETAILS.



LEGEND

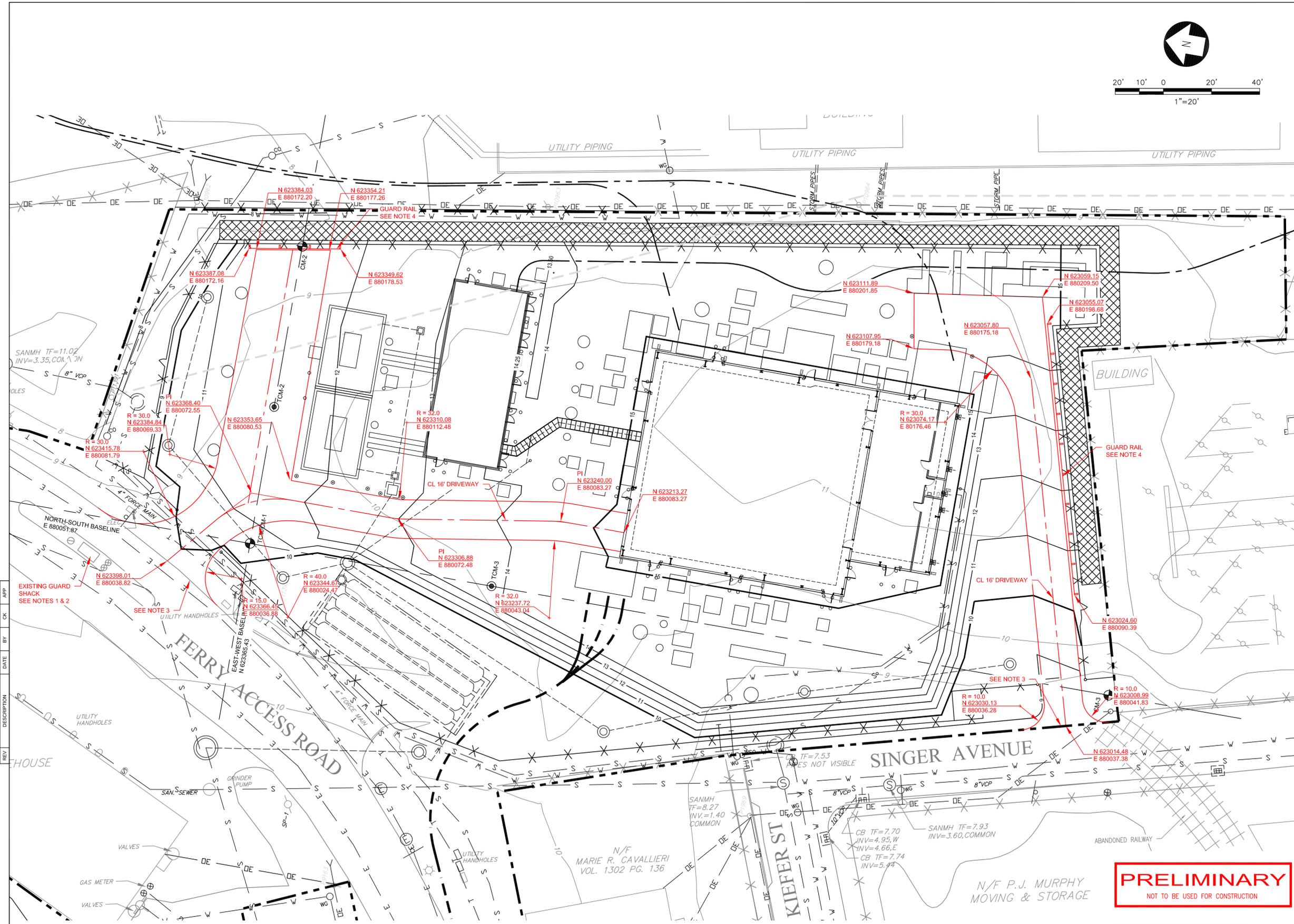
- PROPERTY LINE
- NEW CONTOUR
- EXISTING CONTOUR
- NEW SUBSTATION FENCE
- EXISTING FENCE
- NEW ROAD
- NEW BOLLARD
- EXISTING WATER
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING SEWER
- EXISTING TELEPHONE
- OVERHEAD ELECTRIC LINE
- EXISTING STRUCTURES
- NEW RETAINING WALL
- NEW STORMWATER SYSTEM
- TEMPORARY SURVEY CONTROL MONUMENT
- PERMANENT SURVEY CONTROL MONUMENT

REFERENCE DRAWINGS

DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
SITE PLAN	25247-0003-001 SH 001
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

INSTALL



NO.	ISSUE FOR 70% UI REVIEW	DATE	BY	CHK	APP
1	ISSUE FOR 70% UI REVIEW	08/11/2020	BHJ		
2	ISSUE FOR 70% UI REVIEW	03/17/2021	DA		
3	ISSUE FOR 70% UI REVIEW	03/01/2021	DA		
4	ISSUE FOR 70% UI REVIEW	03/09/2021	MR		

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LOGO

ANSI D 6/10/2020

PE STAMP		AVANGRID ENGINEERING CONFIDENTIAL PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID				<b>ROAD PLAN</b>  SH 002 OF 009	
BY: MRM/AV		SCALE: 1"=20'		NO.		BRIDGEPORT	
DATE: 01/28/2019		FILE: 25247-0003-001 SH 002.dwg		REV			
00	PEQUONNOCK REBUILD	03/2019	MRM/AV	DMH/AV	MAP/AV		
01	DESCRIPTION	DATE	BY	CK	APP	25247-0003-001 SH 002	0-00

NOTES

- THE SURFACE COURSE IS 2" OF CRUSHER RUN TRAP ROCK UNIFORMLY GRADED FROM 3/4" TO CRUSHER FINES. THE BASE COURSE IS 4" OF TRAP ROCK THAT PASSES A 1 1/2" SIEVE AND IS RETAINED ON A 1" SIEVE.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE OF SUBSTATION FENCE TO PRE-EXISTING SURFACE CONDITIONS.
- ENTIRE SITE SHALL BE CRUSHED ROCK SURFACING EXTENDED 4' BEYOND SUBSTATION FENCE, EXCEPT FOR THE AREAS INDICATED AS ASPHALT SHOWN ON THIS DRAWING.
- CONTRACTOR SHALL ENSURE THAT INSTALLATION OF FENCE POSTS DO NOT INTERFERE WITH EXISTING FORCE MAIN LINE.
- REFER TO 25247-0003-001 SH 004 AND SH 005 FOR SURFACING AND FENCING DETAILS.
- SEE FENCE ISOLATION JOINT DETAIL ON DRAWING 25246-0003-001 SH 004.
- CONTRACTOR SHALL INSTALL 183 LF OF PROPERTY LINE FENCE. NEW FENCE SHALL MATCH EXISTING PROPERTY LINE FENCE.
- CONTRACTOR SHALL PRESERVE EXISTING PROPERTY LINE FENCE DURING CONSTRUCTION. ANY DAMAGE TO PROPERTY LINE FENCE SHALL BE REPAIRED AT THE END OF CONSTRUCTION.

POST-CONSTRUCTION IMPERVIOUS/PERVIOUS AREAS

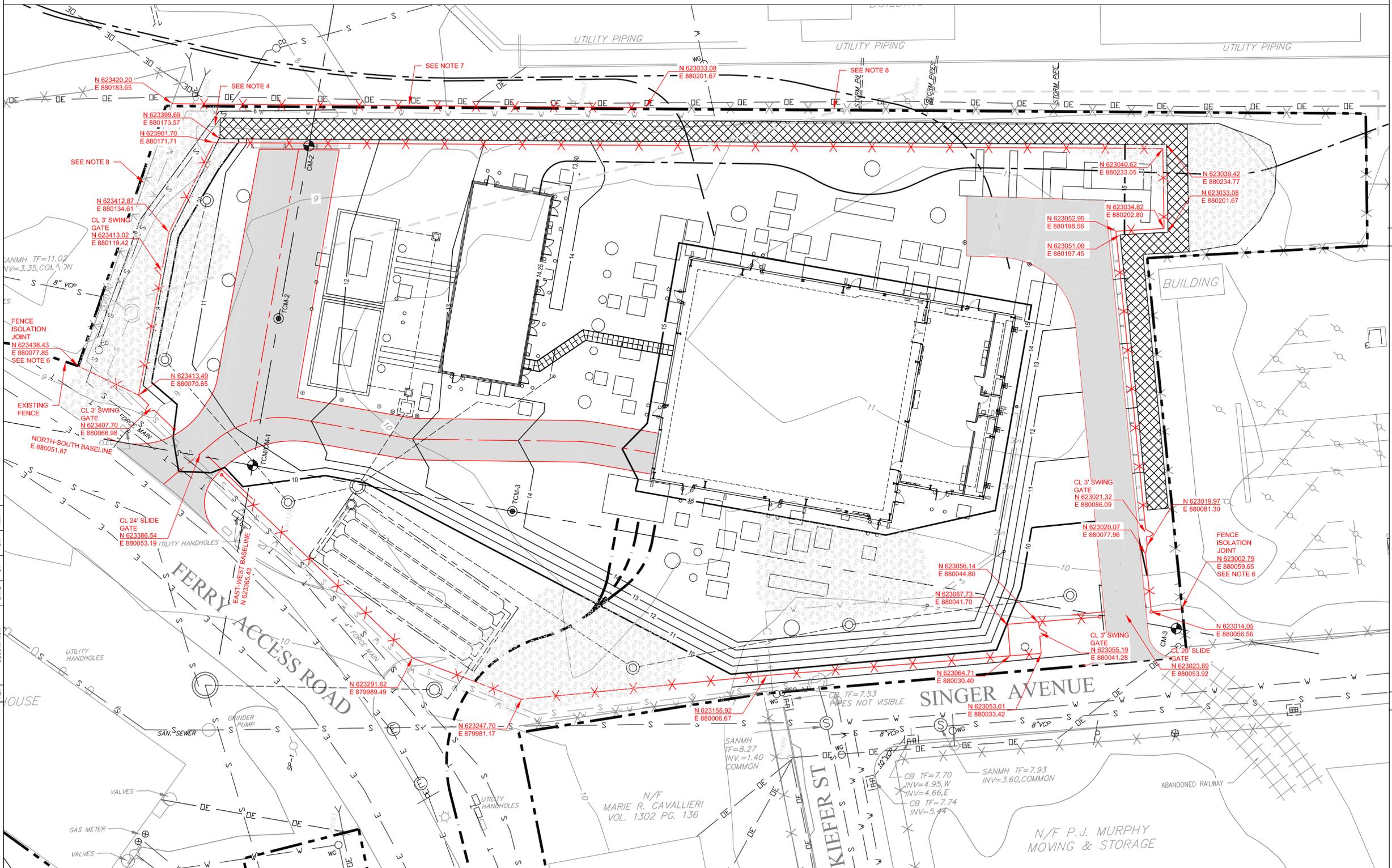
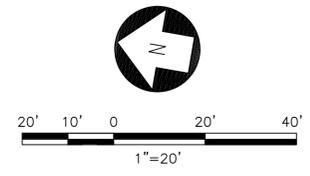
DESCRIPTION	SQUARE FEET	REMARKS
STRUCTURES, PAVEMENT, AND FOUNDATIONS	23,146 SF	-
TRAP ROCK	60,025 SF	-

LEGEND

- PROPERTY LINE
- NEW CONTOUR
- EXISTING CONTOUR
- NEW SUBSTATION FENCE
- EXISTING FENCE
- EXISTING WATER
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING SEWER
- EXISTING TELEPHONE
- OVERHEAD ELECTRIC LINE
- EXISTING STRUCTURES
- NEW RETAINING WALL
- NEW STORMWATER SYSTEM
- AGGREGATE
- ASPHALT
- GRASS
- TEMPORARY SURVEY CONTROL MONUMENT
- PERMANENT SURVEY CONTROL MONUMENT

REFERENCE DRAWINGS

DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
SITE PLAN	25247-0003-001 SH 001
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003



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**SURFACING AND FENCING PLAN**  
SH 003 OF 009

PEQUONNOCK BRIDGEPORT

REV	DESCRIPTION	DATE	BY	CK	APP	DATE
0-0	PEQUONNOCK REBUILD	03/2019	MRMBV	DMHVB	MAPBV	01/28/2019

NO.	ISSUE FOR 70% REVIEW	DATE	BY	CK	APP
D-0	ISSUE FOR 70% REVIEW	03/11/2020	MRMBV	JDA	ELE
D-0	ISSUE FOR 70% REVIEW	03/17/2020	JDA	SMR	BRI
D-0	ISSUE FOR 70% REVIEW	03/07/2019	MRMBV	DMH	MPP
D-0	ISSUE FOR 70% REVIEW	03/08/2019	MRMBV	DMH	MPP
D-0	ISSUE FOR 70% REVIEW	03/08/2019	MRMBV	DMH	MPP

ANSI D 610/2020  
BLACK & VEATCH  
LOGO

**SUBSTATION FENCE SPECIFICATION**

**SCOPE:**  
THE WORK DETAILED IN THE FOLLOWING SPECIFICATIONS INCLUDES LABOR, EQUIPMENT, TRANSPORTATION, AND MATERIAL REQUIRED FOR THE INSTALLATION AND/OR ERECTION OF FENCES, GATES, AND RELATED ITEMS.

**FENCE/GATE FABRIC:**  
9 GAUGE; 2 INCH (50 mm) MESH; ALUMINUM COATED STEEL ASTM A491; KNUCKLED SELVAGE TOP AND BOTTOM OR TWISTED SELVAGE ON TOP, KNUCKLED SELVAGE ON BOTTOM.

**TENSION BARS:**  
TENSION BARS FOR FASTENING FABRIC TO GALVANIZED STEEL PIPE TERMINAL AND GATE POST SHALL BE A MINIMUM OF 1/4"x 3/8" GALVANIZED STEEL BAR COMPLYING WITH THE LATEST VERSION OF ASTM A153. TENSION BANDS (WIRE TIES) SHALL COMPLY WITH THE LATEST VERSION OF ASTM A392-11 (2.0 OZ/FT)

**BARBED WIRE AND BARB ARMS:**  
ALUMINUM BARBED WIRE WITH (3) 12.5 GAUGE MAIN WIRES, 4 POINT ROUND 14 GAUGE, BARBS SPACED 5 INCHES APART AT 45 DEGREE ANGLE. MAIN WIRE OF 5052 H38 OR 5056 H32 ALUMINUM BARBS OF 5052 H38, 50556 H32 OR 6091 T94 ALUMINUM.

**CORNER, TERMINAL, AND PULL POST:**  
HOT-DIPPED, ZINC-COATED STEEL PIPE, 8 5/8" (TRADE SIZE) CONFORMING TO THE LATEST VERSION OF ASTM F1043 GROUP IA, ASTM F1083 HIGH STRENGTH GRADE (50,000 PSI YIELD STRENGTH)

**GATE POST:**  
HOT-DIPPED, ZINC-COATED STEEL PIPE, CONFORMING TO THE LATEST VERSION OF ASTM F1043 GROUP IA, ASTM F1083 HIGH STRENGTH GRADE (50,000 PSI YIELD STRENGTH)

WIDTH OF GATE	TRADE SIZE (INCH)
UP TO 12'	8 5/8"
12'-18'	N/A

**LINE POST:**  
HOT-DIPPED, ZINC-COATED STEEL PIPE, 6 5/8" (TRADE SIZE) CONFORMING TO THE LATEST VERSION OF ASTM F1043 GROUP IA, ASTM F1083 HIGH STRENGTH GRADE (50,000 PSI YIELD STRENGTH)

**POST TOP:**  
ALL POSTS SHALL HAVE PRESSED GALVANIZED STEEL POST TOPS THAT CONFORM TO THE LATEST VERSION \*). OF ASTM F626 (1.20 OZ/FT)

**POST FITTINGS:**  
ALL HOT-DIPPED GALVANIZED FITTINGS TO COMPLY WITH THE LATEST VERSION OF ASTM 153A. ALL STEEL \*). TERMINAL POST FITTINGS SHALL COMPLY WITH THE LATEST VERSION OF ASTM A392-11 (2.0 OZ/FT FITTINGS, INCLUDING 1" WIDE TENSION BANDS, SHALL BE SPACED AT 14" INTERVALS. TOP, BOTTOM AND BRACE RAIL WIRE TIES SHALL BE #9 GAUGE OR LARGER STEEL WIRE SPACED AT 24" INTERVALS. LINE POST WIRE TIES SHALL BE #9 GAUGE OR LARGER STEEL WIRE SPACED AT 14" INTERVALS.

**TOP RAIL, BOTTOM RAIL AND MIDDLE BRACE RAIL (WHERE APPLICABLE):**  
HOT-DIPPED, ZINC-COATED STEEL PIPE, 2 3/8" (TRADE SIZE) CONFORMING TO THE LATEST VERSION OF ASTM F1043. TOP RAILS SHALL BE TERMINATED WITH 6" RAIL SLEEVE COUPLINGS COMPLYING WITH THE LATEST VERSION OF ASTM F626.

**TRUSS ROD:**  
HOT-DIPPED, ZINC-COATED, STEEL TRUSS ROD, 3/8" DIAMETER, COMPLETE WITH TRUSS TIGHTENER CONFORMING TO THE LATEST VERSION OF ASTM F626. THERE SHOULD BE ONE BRACE PER GATE POST AND TERMINAL POST, TWO BRACES PER CORNER POST OR INTERMEDIATE PULL POST.

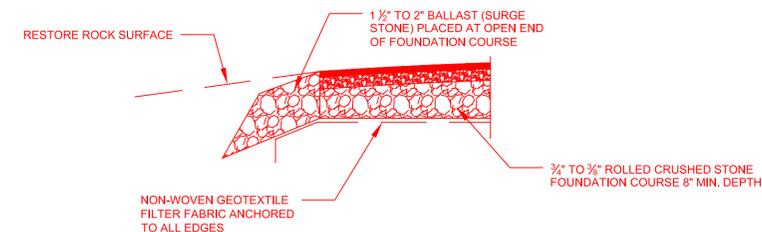
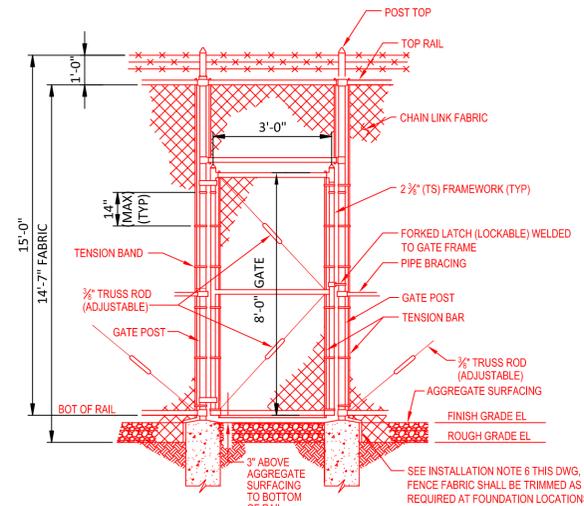
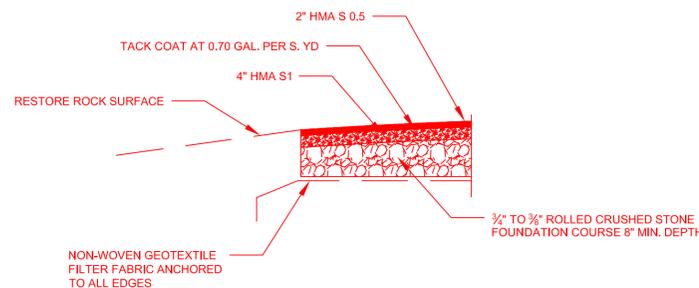
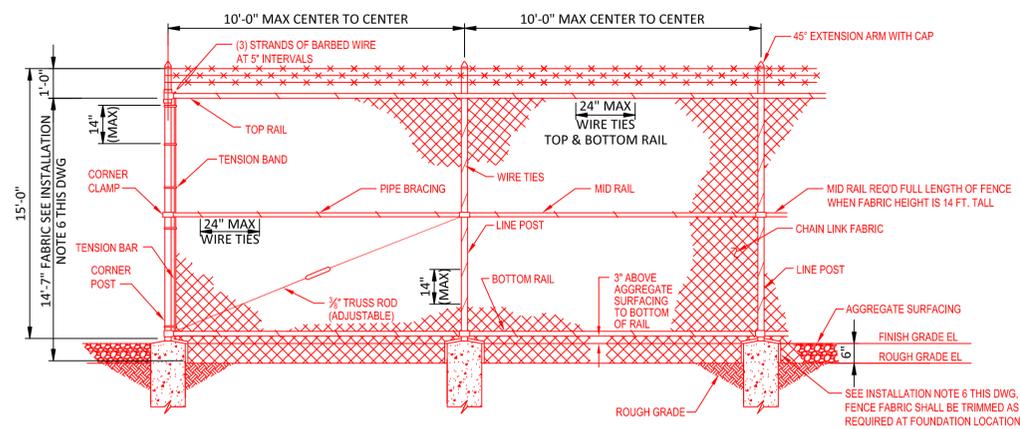
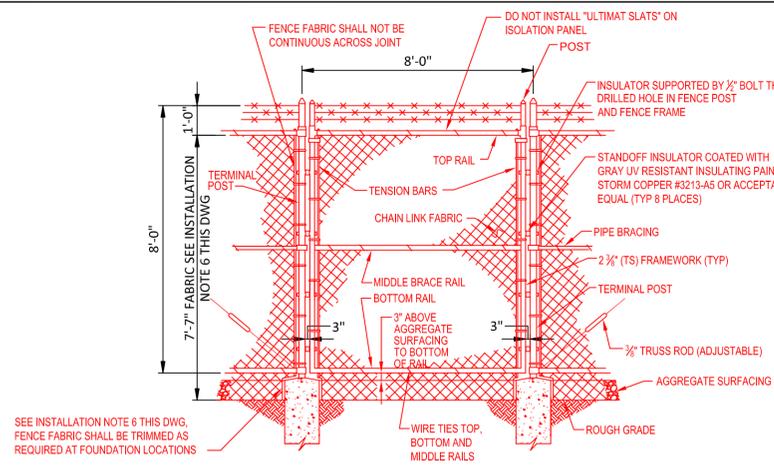
**RAIL COUPLINGS:**  
HOT-DIPPED GALVANIZED SLEEVE TYPE CONFORMING TO THE LATEST VERSION OF ASTM F626, 6 INCHES LONG, EXPANSION SPRING IN EVERY FIFTH COUPLING.

**INSTALLATION NOTES:**

1. THE TOP 6" OF ALL POST FOUNDATIONS SHALL EXTEND ABOVE GRADE AT A CONSTANT DIAMETER (TO LIMIT FROST HEAVING) AND THEN TAPER UPWARD ANOTHER 1" TO THE POST.
2. CONCRETE COMPRESSIVE STRENGTH = 4,000 PSI MINIMUM AT 28 DAYS.
3. IF SOLID ROCK IS ENCOUNTERED DURING POST EXCAVATION, EXCAVATION SHALL CONTINUE TO THE REQUIRED DEPTH OR 18" INTO THE ROCK, WHICHEVER IS LESS. POST HOLES IN SOLID ROCK SHALL BE 6" LARGER IN DIAMETER THAN POST. TOP OF CONCRETE TO BE CROWNED TO SHED WATER.
4. POST SPACING INTERVALS TO BE NOT MORE THAN 10' ON CENTERS, ASSUMING FLAT TERRAIN. PULL POSTS (SAME AS CORNER, TERMINAL POST) TO BE PROVIDED IN CENTERS OF ALL RUNS EXCEEDING 500' IN LENGTH. PULL POSTS MAY BE REQUIRED MORE OFTEN FOR UNDULATING TERRAIN.
5. NOTHING SHALL BE ATTACHED TO ANY FENCE OR GATE POST FOR A MINIMUM OF 24 HOURS AFTER THE POST HAS BEEN SET IN CONCRETE.
6. TYPICAL SUBSTATION YARDS CONTAIN 6" OF AGGREGATE SURFACE MATERIAL (ROCK). FENCE FABRIC TO BE INSTALLED SUCH THAT THE BOTTOM OF THE FABRIC IS 6" BELOW THE FINISH ROCK GRADE. BOTTOM OF FABRIC AT GATES SHALL BE 1" ABOVE FINISH ROCK GRADE.
7. THE BARBED WIRE EXTENSION ARMS MAY BE ANGLED OUT AWAY FROM THE SUBSTATION YARD WHEN THE FENCE IS LOCATED A MINIMUM OF 3' INSIDE THE PROPERTY LINE. WHEN THE FENCE IS LOCATED ON OR WITHIN 8' 2' OF THE PROPERTY LINE, THE BARBED WIRE EXTENSION ARMS SHALL BE ANGLED INTO THE SUBSTATION YARD.
8. UNLESS NOTED OTHERWISE, ALL FENCING SHALL HAVE "ULTIMAT SLATS" BY PRIVACYLINK OR EQUAL. COLOR GRAY, THRU THE CHAIN LINK FENCING FABRIC. ULTIMAT SLATS SHALL NOT BE INSTALLED ON FENCE ISOLATION PANEL.

**POST FOUNDATION NOTES:**

1. FOR POST FOUNDATION DETAILS, SEE DRAWING 25247-0003-007.



1. ALL EXISTING PAVEMENT AND UNDERLYING SOILS SHALL BE REMOVED TO THE DEPTHS REQUIRED TO PRODUCE THE PROFILES SHOWN. REMAINING SOILS DETERMINED TO BE UNYIELDING TO VEHICLE WHEEL LOADS WITH UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH FOUNDATION COURSE MATERIAL AS SPECIFIED ON THE SECTION ABOVE.
2. THE SITE MAY REQUIRE A COMPETENTLY DRAINED OPEN-GRADED FOUNDATION COURSE PROTECTED FROM THE INCURSION OF FINES. IN THIS CASE, A NON-WOVEN GEOTEXTILE FILTER FABRIC SHALL BE EMPLOYED TO COMPLETELY AND CONTINUOUSLY ENCLOSE AN 8" MIN. FOUNDATION COURSE OF 3/4" TO 3/8" CRUSHED STONE WHICH IS TO BE DRAINED THROUGH BALLAST (SURGE) STONE UPON ITS LOWER SIDE AS SHOWN ON OR DETERMINED FROM THE PLANS.
3. TRAFFIC DIRECTLY UPON THE COMPACTED FOUNDATION COURSE SHALL BE AVOIDED.
4. WHERE PAVEMENT IS TO EXTEND TO EXISTING STRUCTURES, GEOTEXTILE FILTER FABRIC SHALL BE ANCHORED BACK OVER THE FOUNDATION COURSE AND ANCHORED INTO IT.
5. THE SUB-BASE NATIVE MATERIAL SHALL BE SLOPED TO PROMOTE DRAINAGE WITHIN THE FOUNDATION COURSE MATERIAL TO DAYLIGHT UPON THE LOWEST EDGE OF THE PAVEMENT AREA.
6. HMA MATERIALS INCLUDING TACK COAT AND THEIR PLACEMENT SHALL STRICTLY CONFORM TO THE REQUIREMENTS OF CTDOT.
7. SURFACE DRAINAGE PATTERNING AS SHOWN ON THE PLANS SHALL BE ACCOMPLISHED THROUGH THE ADJUSTMENT OF THE FOUNDATION COURSE DEPTH WHICH SHALL IN NO CASE BE LESS THAN 8" DEEP.
8. THE SITE IS UNDERLAIN BY NUMEROUS SUBSURFACE UTILITY LINES AND STRUCTURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY CBYD FOR DELIMITATION OF SUCH UTILITIES PRIOR TO COMMENCING THE WORK.
9. TO THE EXTENT POSSIBLE, NEW PAVING SHOULD BE GRADED TO PRESERVE EXISTING MANHOLE COVER ELEVATIONS. WHERE THIS IS NOT POSSIBLE, ADJUSTMENTS TO THE FRAMES AND COVERS SHALL BE INCORPORATED AS PART OF THE WORK.
10. THE SEQUENCING OF WORK SHALL BE PLANNED SO AS TO PERMIT UI ACCESS TO THE SUBSTATION AS REQUIRED THROUGHOUT THE GRADING AND PAVING PROCESS. PAVING OPERATIONS SHALL BE COORDINATED WITH THE TRANSMISSION AND SUBSTATION DEPARTMENT OF UNITED ILLUMINATING TO PROVIDE AN UNINTERRUPTED PLACEMENT, COMPACTION, AND CURING OF ASPHALT MATERIALS PRIOR TO THE IMPOSITION OF VEHICLE LOADS.
11. THE CONTRACTOR SHALL NOTIFY THE [SYSTEM MAINTENANCE DEPARTMENT CIVIL ENGINEER AT (203) 926-4881] AT LEAST 24 HOURS IN ADVANCE OF THE NEED FOR INSPECTIONS WHICH SHALL BE PERFORMED UPON COMPLETION OF GRUBBING AND THE EXPOSURE OF SUB-BASE SITE SOILS, PLACEMENT, SHAPING, AND COMPACTION OF THE FOUNDATION COURSE, AND PLACEMENT OF BINDER AND WEARING COURSES OF ASPHALT.

**INSTALL**  
**PRELIMINARY**  
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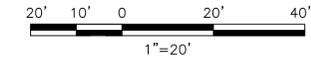
REFERENCE DRAWINGS	
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
SITE PLAN	25247-0003-001 SH 001
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

PE STAMP	<b>AVANGRID ENGINEERING</b> CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID			<b>SURFACING AND FENCING DETAILS</b> SH 004 OF 009	
	PEQUONNOCK BRIDGEPORT			SCALE: NONE FILE: 25247-0003-001 SH 004.dwg	
0-0 PEQUONNOCK REBUILD REV DESCRIPTION DATE BY CK APP	03/2019 MRMBV DMHVB MAPPV	03/2019 MRMBV DMHVB MAPPV	03/2019 MRMBV DMHVB MAPPV	03/2019 MRMBV DMHVB MAPPV	03/2019 MRMBV DMHVB MAPPV

ISSUE FOR 70% UTI REVIEW	DATE	BY	CK	APP
08/11/2020	JDA	SMR	DHM	MPP
03/17/2020	JDA	SMR	DHM	MPP
08/07/2019	MRM	MRM	DHM	MPP
03/08/2019	MRM	MRM	DHM	MPP

INFO  
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 ANS I D 01/10/2020





NOTES

1. LOCATION OF UTILITIES SHOWN ARE APPROXIMATE, IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND DETERMINE THE DEPTH, LOCATION, ELEVATION, ALIGNMENT AND EXISTENCE OF ALL SURFACE OR UNDERGROUND UTILITIES AND STRUCTURES IN AND AROUND THE VICINITY OF THE WORK TO BE PERFORMED.
2. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING WITHIN EASEMENTS.
3. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA RULES AND REGULATIONS.
4. THE CONTRACTOR SHALL CONTACT CONNECTICUT ONE CALL 48 HOURS (MINIMUM) PRIOR TO EXCAVATION.
5. THE CONTRACTOR SHALL ADEQUATELY PROTECT EXISTING STRUCTURES, UTILITIES, AND OTHER OBJECTS.
6. CONTRACTOR SHALL COMPLETELY REMOVE SANITARY SEWER AND WATER LINES AFTER INSTALLATION OF THE NEW LINES.
7. CONTRACTOR SHALL TIE NEW LINE EXTENSIONS INTO EXISTING LINES AND MAINTAIN EXISTING SLOPES TO THE MAXIMUM EXTENT POSSIBLE. NEW CONNECTIONS SHALL BE ADEQUATELY SEALED TO PREVENT EXPOSURE TO OUTSIDE ELEMENTS.
8. POTABLE WATER SUPPLY MUST BE PROTECTED BY EITHER AN ATMOSPHERIC OR PRESSURE VACUUM BREAKER, OR TESTABLE DOUBLE CHECK VALVE ASSEMBLY, AND INSTALLED AS PER CITY ORDINANCE. METER INSTALL SHALL BE PLACED IN PIT APPROVED BY AQUARIUM WATER COMPANY OF CONNECTICUT. SEE STANDARD 1" METER PIT DWG BY AQUARIUM WATER COMPANY ON DRAWING 25247-0003-001 SH 007.
9. CONTRACTOR SHALL STUB OUT WATER AND SANITARY CONNECTIONS FOR THE CONTROL BUILDING RESTROOM. CONTRACTOR SHALL PROVIDE ABOVE GRADE MARKER FOR STUB OUT LOCATIONS.
10. CONTRACTOR SHALL CORE DRILL INTO CATCH BASIN AND GROUT TO PROVIDE ADEQUATE WATER SEALANT.
11. CONTRACTOR SHALL FIELD VERIFY/LOCATE THE ORIGIN OF THE EXISTING SANITARY PVC PIPE AND INFORM ENGINEER BEFORE REROUTING THE PIPE (SEE DRAWING 25247-0003-001 SH001 DEMO FOR LIMITED EXISTING PIPE LAYOUT). IF ORIGIN IS AN ACTIVE FACILITY OR PIPE LINE, THEN CONTRACTOR SHALL REROUTE PIPE TO NEW SANITARY MANHOLE MH-101 AT NORTH SIDE OF PROPERTY. PIPE REROUTE SHALL AVOID ANY BELOW GRADE OBSTRUCTIONS AND ENSURE PROPER DRAINAGE. PIPE REROUTE SHALL ALSO REROUTE AROUND NEW SUBSTATION CONSTRUCTION, IF ORIGIN IS INACTIVE AND UPON ENGINEER'S APPROVAL, THEN CONTRACTOR SHALL DEMO AND REMOVE PIPE.
12. CONTRACTOR SHALL USE THE APPROPRIATE THRUST BLOCK AT EACH FITTING ON THE WATER LINE RE-ROUTE. REFER TO DWG 25247-0003-001 SH 007 FOR AQUARIUM WATER COMPANY THRUST BLOCK DETAILS.
13. FOR SANITARY MANHOLE INFO, SEE DRAWING 25247-0003-001 SH 007.
14. ALL WORK ON THIS DRAWING IS PHASE 1, UNLESS NOTED OTHERWISE.
15. CONTRACTOR SHALL COMPLY WITH ALL LOCAL BUILDING CODES/CITY REGULATIONS FOR THE ROUTING AND SEPARATION REQUIREMENTS FOR POTABLE WATER AND SANITARY PIPELINES. THIS INCLUDES TIE IN REQUIREMENTS.

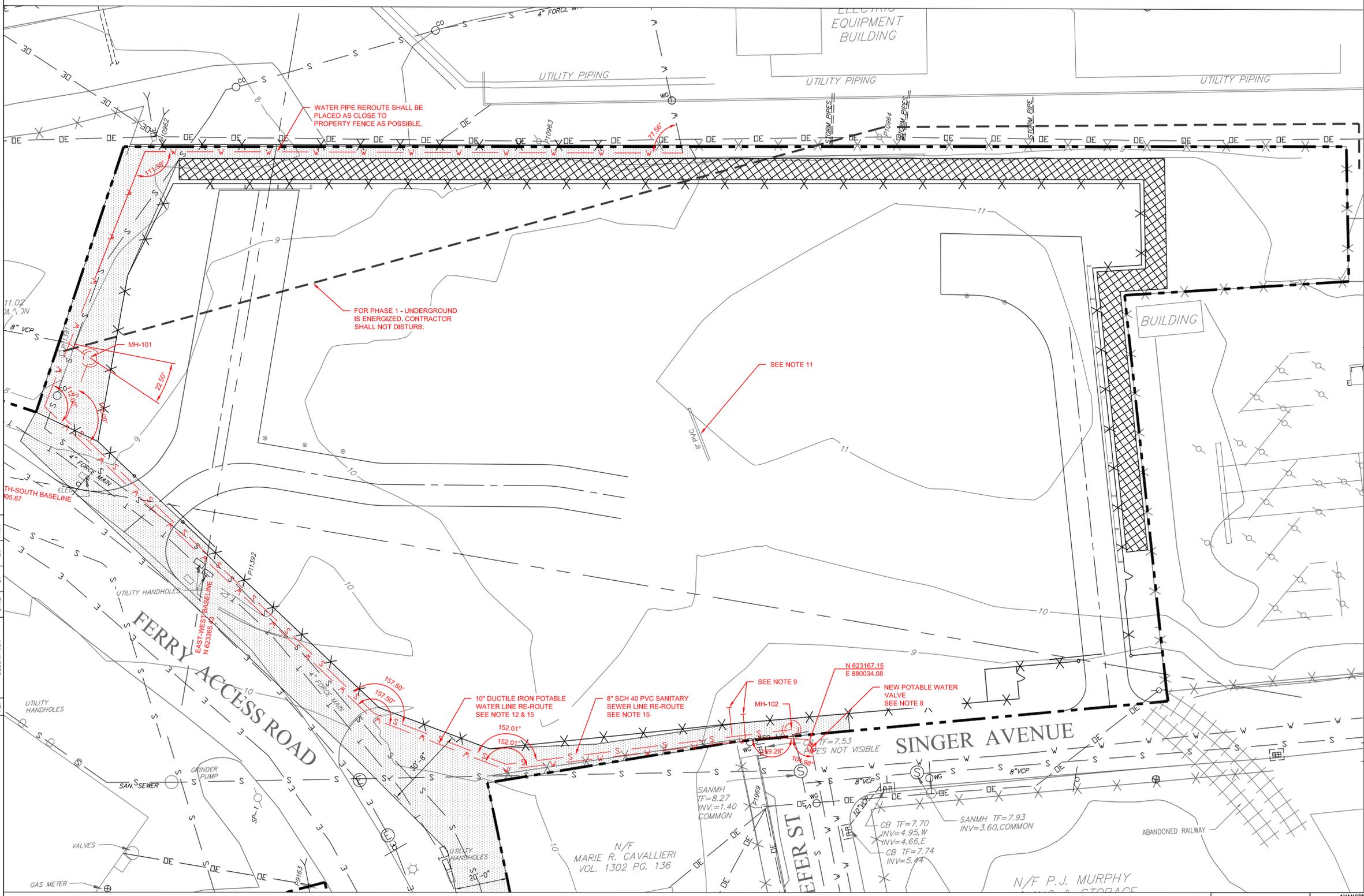
LEGEND

- PROPERTY LINE
- TO BE INSTALLED
- PROPOSED FENCE
- EXISTING FENCE
- EXISTING WATER
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING SEWER
- EXISTING TELEPHONE
- OVERHEAD ELECTRIC LINE
- EXISTING STRUCTURES
- NEW RETAINING WALL
- REROUTED UTILITY EASEMENT
- EXISTING POTABLE WATER VALVE

REFERENCE DRAWINGS

SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
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GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-005 SH 006
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002

SEQUENCE # XXXXXX



REV	DESCRIPTION	DATE	BY	CK	APP
D-0	ISSUE FOR PERM REVIEW	01/17/2020	JDA	SMR	BRH
D-0C	ISSUE FOR BID	12/20/2019	GOV	SMR	BRH
D-0B	ISSUE FOR PERM REVIEW	08/07/2019	MRM	DMH	MMP
D-0E	APPROVED FOR CONSTRUCTION	08/08/2020	BRH	JDA	BRH
D-0F					

LOGO: **BLACK & VEATCH**  
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**APPROVED FOR CONSTRUCTION**  
 THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

INSTALL

PE STAMP

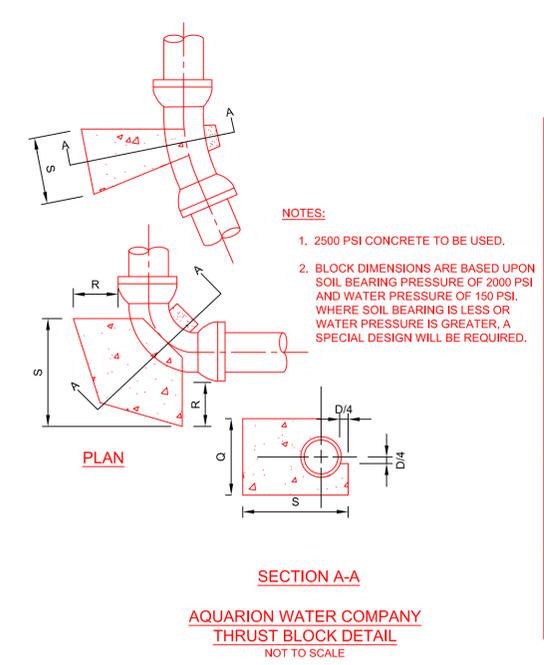
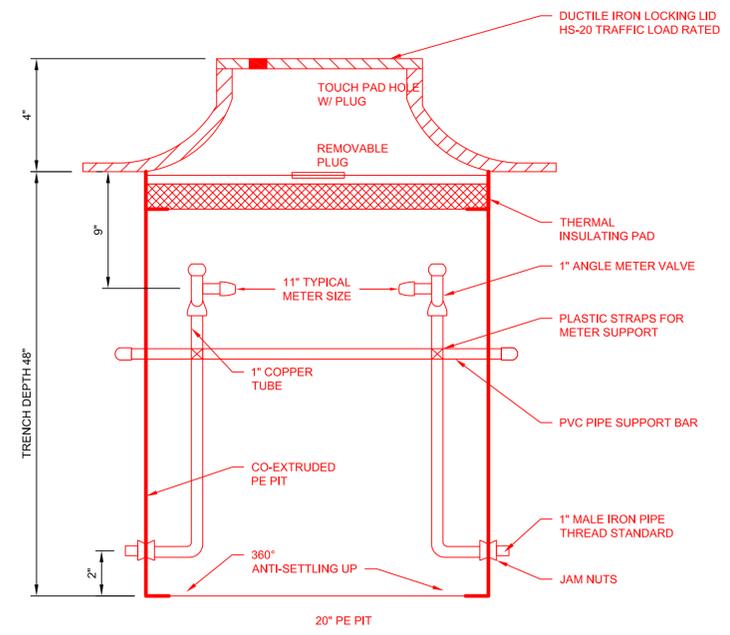
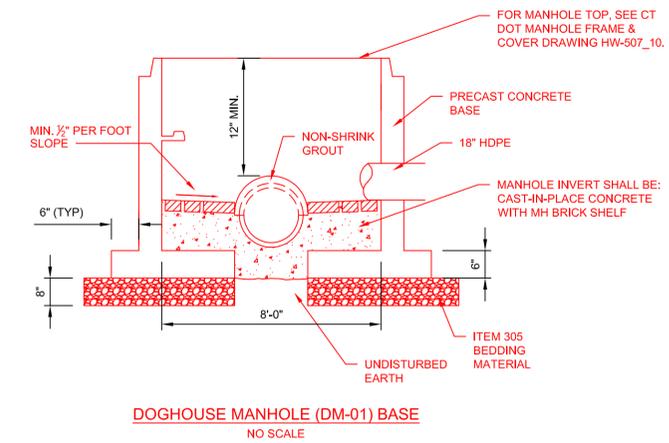
AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID	
BY: NRM/BV	SCALE: 1"=20'
CK: DMH/BV	FILE: 25247-0003-001 SH 006.dwg
BRH/BV	NO.
APP: BRH/BV	REV: 0-0
DATE: 01/28/2019	25247-0003-001 SH 006

<b>UTILITY RELOCATION PLAN</b>	
SH 006 OF 008	
PEQUONNOCK	BRIDGEPORT

ANSI D 58/2020

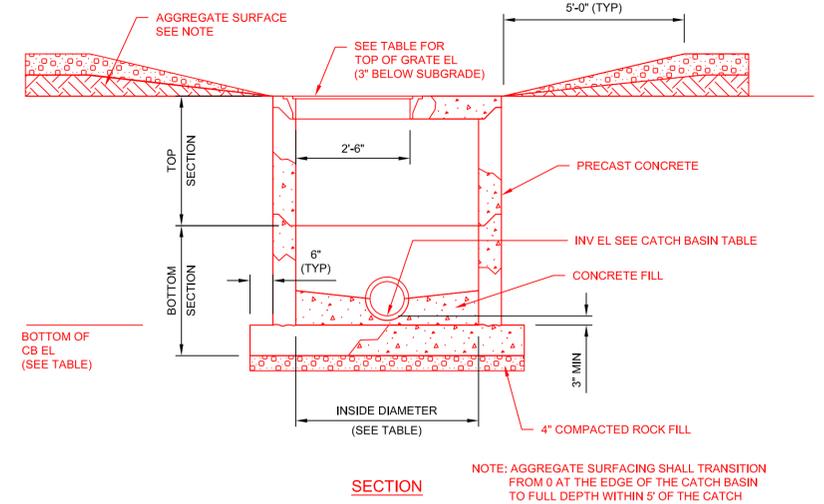
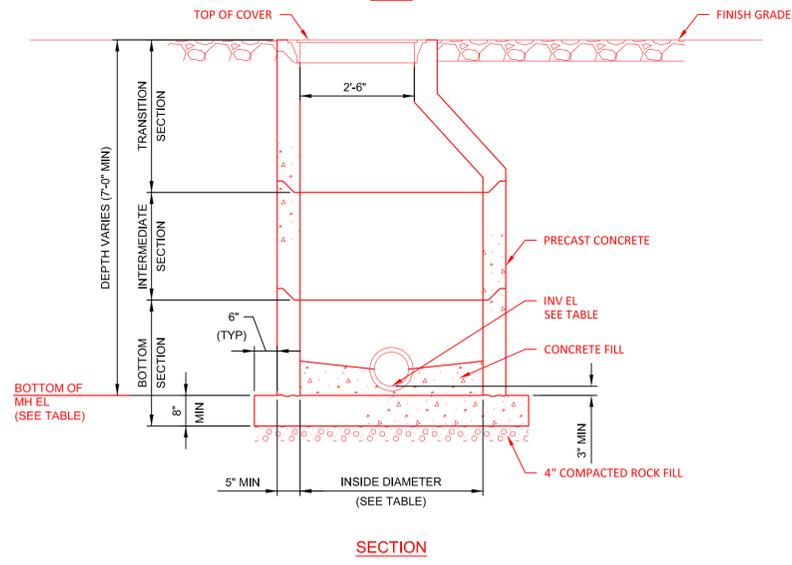
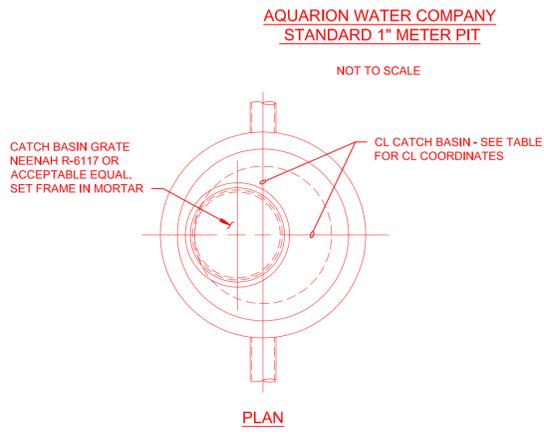
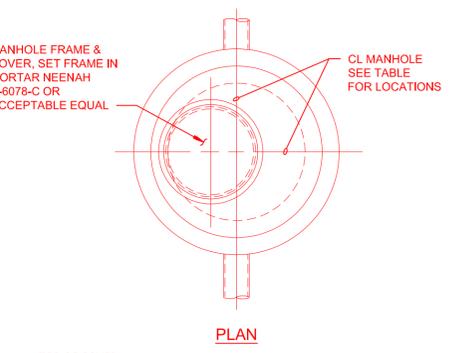
0-0	APPROVED FOR CONSTRUCTION	03/26/2020	JJA	BRH	APP
0-1	ISSUE FOR PERM REVIEW	03/17/2020	JJA	SMR	APP
0-2	ISSUE FOR BID	12/02/2019	GOV	SMR	APP
0-3	ISSUE FOR PERM REVIEW	08/01/2019	MRM	DHJ	APP
0-4	DESCRIPTION	DATE	BY	CK	APP
REV					

LOGO: **BLACK & VEATCH**  
 11000 N. WILSON AVENUE, SUITE 100  
 DENVER, CO 80201  
 PHONE: 303.750.8000  
 FAX: 303.750.8001  
 WWW.BLACKANDVEATCH.COM



PIPE DIAM. IN	BLOCK DIMENSIONS				CONCRETE VOLUME CU. FT.
	BEND	S IN.	Q IN.	R IN.	
16	90	48	48	48	640
	45	48	34	20	189
	22 1/2	42	20	18	88
12	90	36	36	36	270
	45	36	24	18	90
	22 1/2	28	18	12	35
10	90	30	30	30	156
	45	30	18	18	63
	22 1/2	22	12	12	24
8	90	24	24	24	80
	45	16	12	12	27
	22 1/2	12	12	12	15
6	90	18	18	18	34
	45	12	12	12	15
	22 1/2	12	12	12	10

NOTES:  
 1. 2500 PSI CONCRETE TO BE USED.  
 2. BLOCK DIMENSIONS ARE BASED UPON SOIL BEARING PRESSURE OF 2000 PSI AND WATER PRESSURE OF 150 PSI. WHERE SOIL BEARING IS LESS OR WATER PRESSURE IS GREATER, A SPECIAL DESIGN WILL BE REQUIRED.



NOTES  
 1. ALL WORK ON THIS DRAWING IS PHASE 1, UNLESS NOTED OTHERWISE.  
 2. FOR SANITARY MANHOLES AND DM-01, CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS WORK WITH THIS MANHOLE. CONTRACTOR SHALL FIELD VERIFY EXISTING GRADE IS FLUSH WITH TOP OF COVER ELEVATION. IF NOT FLUSH, THEN TOP OF COVER ELEVATION SHALL BE LOWERED. CONTRACTOR SHALL FIELD VERIFY UNDERGROUND PIPE ELEVATIONS AND MODIFY PIPE OPENINGS/BOTTOM OF MANHOLE ELEVATION/PIPE DEGREES, ACCORDINGLY.

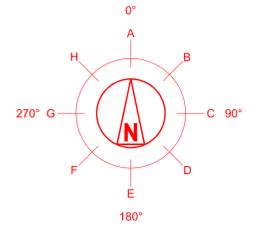
REFERENCE DRAWINGS

SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

**APPROVED FOR CONSTRUCTION**  
 THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

**INSTALL**  
 SEQUENCE # XXXXXX

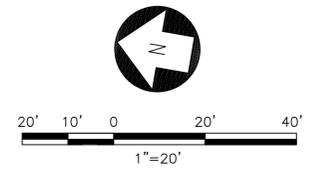
STRUCTURE NO.	SCOPE	DRAWING	CENTERLINE COORDINATES		STRUCTURE SIZE ID	TOP OF COVER ELEVATION	BOTTOM OF MANHOLE ELEVATION	INLET & OUTLET PIPE INFORMATION																REMARKS	
			NORTH	EAST				A		B		C		D		E		F		G		H			
								INV EL	DIA	APPROX DEG	INV EL	DIA	APPROX DEG	INV EL	DIA	APPROX DEG	INV EL	DIA	APPROX DEG	INV EL	DIA	APPROX DEG	INV EL		DIA
MH-101	PHASE 1	25247-0003-001-SH-006	623421.69	880101.48	5'-0"	8.75	2.25	3.05	8	23.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE NOTE 2
MH-102	PHASE 1	25247-0003-001-SH-006	623136.14	880007.52	5'-0"	9.00	1.00	1.50	8	343.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE NOTE 2
MH-02	PHASE 1	25247-0003-004-SH-001	623325.37	880043.64	3'-0"	10.50	3.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE NOTE 2
MH-03	PHASE 1	25247-0003-004-SH-001	623281.40	879978.93	4'-0"	10.50	5.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE DRAWING 25247-0003-004 SH 003 FOR INTERIOR WALL
DM-01	PHASE 1	25247-0003-004-SH-001	623368.81	879965.31	8'-0"	10.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE NOTE 2



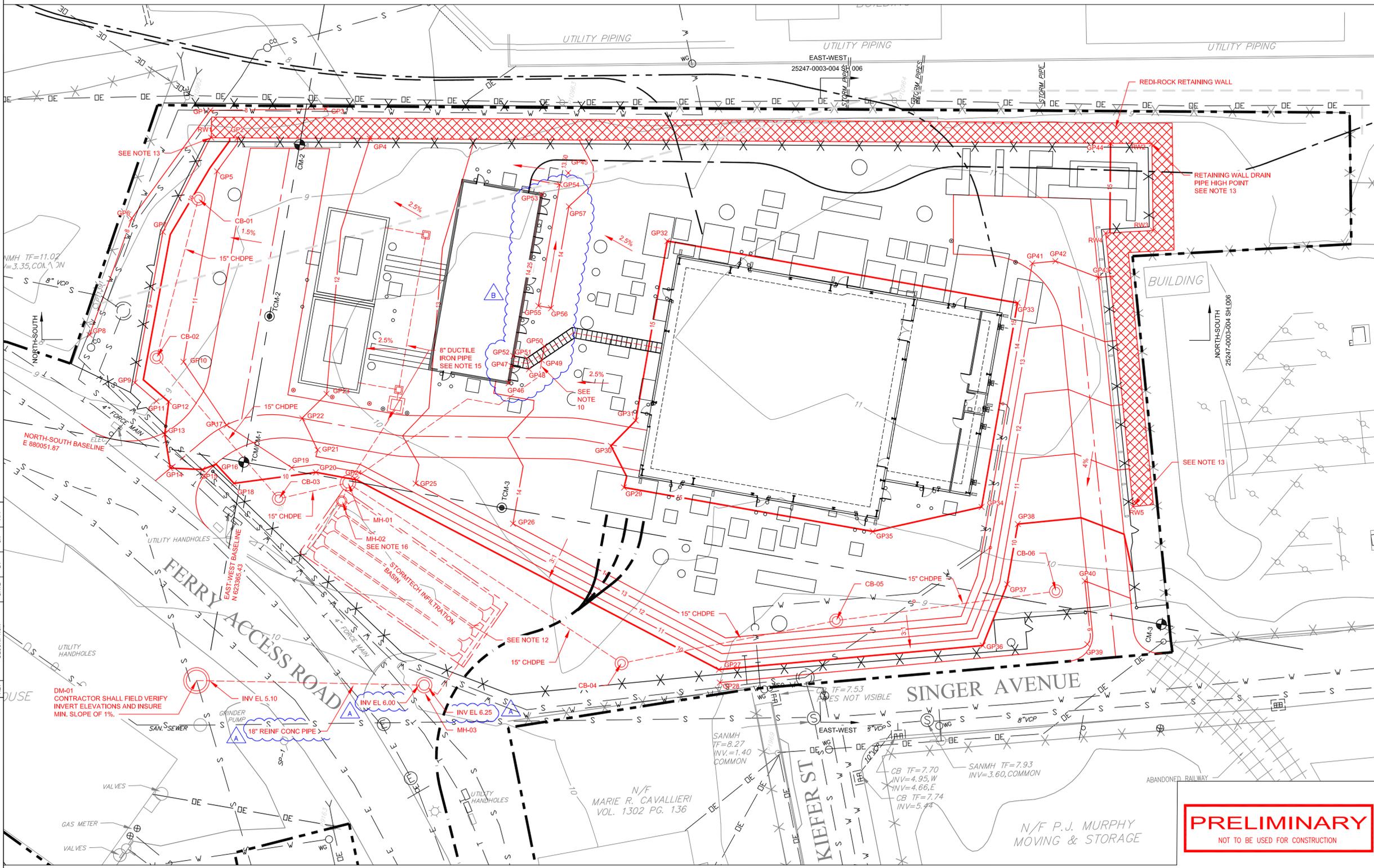
ALL DIMENSIONS ARE IN FEET, EXCEPT DIAMETER, WHICH IS IN INCHES

PE STAMP		AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID		UI AVANGRID		UTILITY RELOCATION DETAILS SH 007 OF 008	
						PEQUONNOCK BRIDGEPORT	
BY	MRMBV	SCALE	NONE	FILE	25247-0003-001 SH 007.dwg	REV	
0-0	PEQUONNOCK REBUILD	05/2020	MRMBV	DMHVB	BRHVB	NO.	
REV	DESCRIPTION	DATE	BY	CK	APP	DATE	25247-0003-001 SH 007 0-00

# FOR SCOPE SPLITS, SEE NOTE 16



- ### NOTES
- SEE DRAWING 25247-0003-004 SH 002 FOR CATCH BASIN DETAILS AND COORDINATE TABLES.
  - GRADE SHALL SLOPE UNIFORMLY BETWEEN ALL CONTOURS SHOWN ON THE PLAN.
  - SLOPES SHALL BE 3(H):1(V) UNLESS NOTED OTHERWISE.
  - THE CONTRACTOR IS RESPONSIBLE FOR TYING FINISH CONTOURS INTO EXISTING CONTOURS IN AREAS WHERE THERE IS INSUFFICIENT SURVEY DATA OF THE EXISTING GRADE.
  - EXISTING CONTOURS ARE BASED ON THE FUSS & O'NEILL PROPERTY/TOPOGRAPHIC SURVEY.
  - CONTOURS ARE TOP OF FINISHED GRADE. SUBTRACT FINISH SURFACING MATERIAL THICKNESS TO OBTAIN TOP OF SUBGRADE.
  - THE CONTRACTOR SHALL INSTALL A STORMTECH MC-3500 CHAMBER PER MANUFACTURER'S SPECIFICATION, OR APPROVED EQUAL.
  - ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITIONS AND STABILIZED, UNLESS NOTED OTHERWISE. CONTRACTOR SHALL TAKE CARE TO AVOID SOIL COMPACTION TO AREAS THAT SHALL BE RESTORED TO PRE-DEVELOPMENT VEGETATED CONDITIONS.
  - CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES BEFORE STARTING CONSTRUCTION. CONTRACTOR TO CALL 811 A MINIMUM OF 48 HOURS PRIOR TO EARTHWORK ACTIVITIES.
  - CONTRACTOR SHALL TIE CABLE TRENCH UNDER DRAIN TO DRAIN PIPE. SEE DRAWING 25247-0003-004 SH 002.
  - NOT USED
  - FOR INFILTRATION BASIN, CONTRACTOR SHALL EXCAVATE 8' BELOW EXISTING GRADE. SUBGRADE SHALL BE BACKFILLED TO BOTTOM OF INFILTRATION BASIN ROCK BED WITH SANDY, LOAMY SAND, OR SANDY LOAM SOIL. SEE DRAWING 25247-0003-004 SH 003 FOR INFILTRATION BASIN DETAILS.
  - CONTRACTOR SHALL INSTALL RETAINING WALL FOOTING DRAIN ACCORDING TO SECTION 1 ON DRAWING 25247-0003-004 SH 005. FOOTING DRAIN SHALL START AT THE HIGH POINT NOTED ON THIS DRAWING. THE DRAIN IS TO TIE INTO CB-01 ON THE EAST WALL AND DAYLIGHT AT THE END OF THE SOUTH WALL.
  - SEE DRAWING 25247-0003-004 SH 004 FOR BELL UP AND CLEAN OUT DETAILS.
  - SEE DRAWING 25247-0003-008 SH 001 FOR CONTAINMENT DRAIN PIPING.
  - ALL WORK ON THIS DRAWING IS PHASE 2, UNLESS NOTED OTHERWISE. ALL WORK FROM MH-02 TO DM-01 (INCLUDING THE STORMTECH INFILTRATION BASIN) IS PHASE 1.



### LEGEND

	PROPERTY LINE
	NEW CONTOUR
	EXISTING CONTOUR
	NEW SUBSTATION FENCE
	EXISTING FENCE
	EXISTING WATER
	EXISTING ELECTRIC
	EXISTING GAS
	EXISTING SEWER
	EXISTING TELEPHONE
	EXISTING STRUCTURES
	NEW RETAINING WALL
	NEW STORMWATER SYSTEM
	FLOW INDICATOR
	SPOT ELEVATION
	TEMPORARY SURVEY CONTROL MONUMENT
	PERMANENT SURVEY CONTROL MONUMENT

### REFERENCE DRAWINGS

SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

INSTALL

REV	DESCRIPTION	DATE	BY	CK	APP
0-0	ISSUED FOR 90% IN REVIEW	02/17/2020	JDA		BRH
0-1B	ISSUED FOR 75% IN REVIEW	08/11/2020	JDA		BRH
0-1A	ISSUED FOR TECHNICAL REVIEW	08/02/2020	BKH		BRH
0-0E	APPROVED FOR CONSTRUCTION	08/08/2020	BRH		BRH

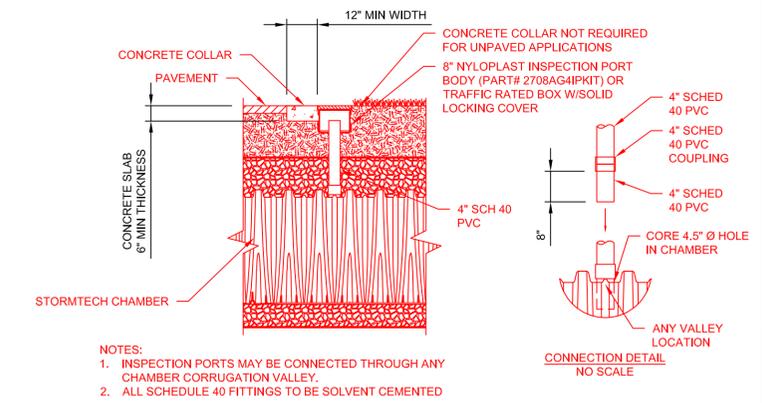
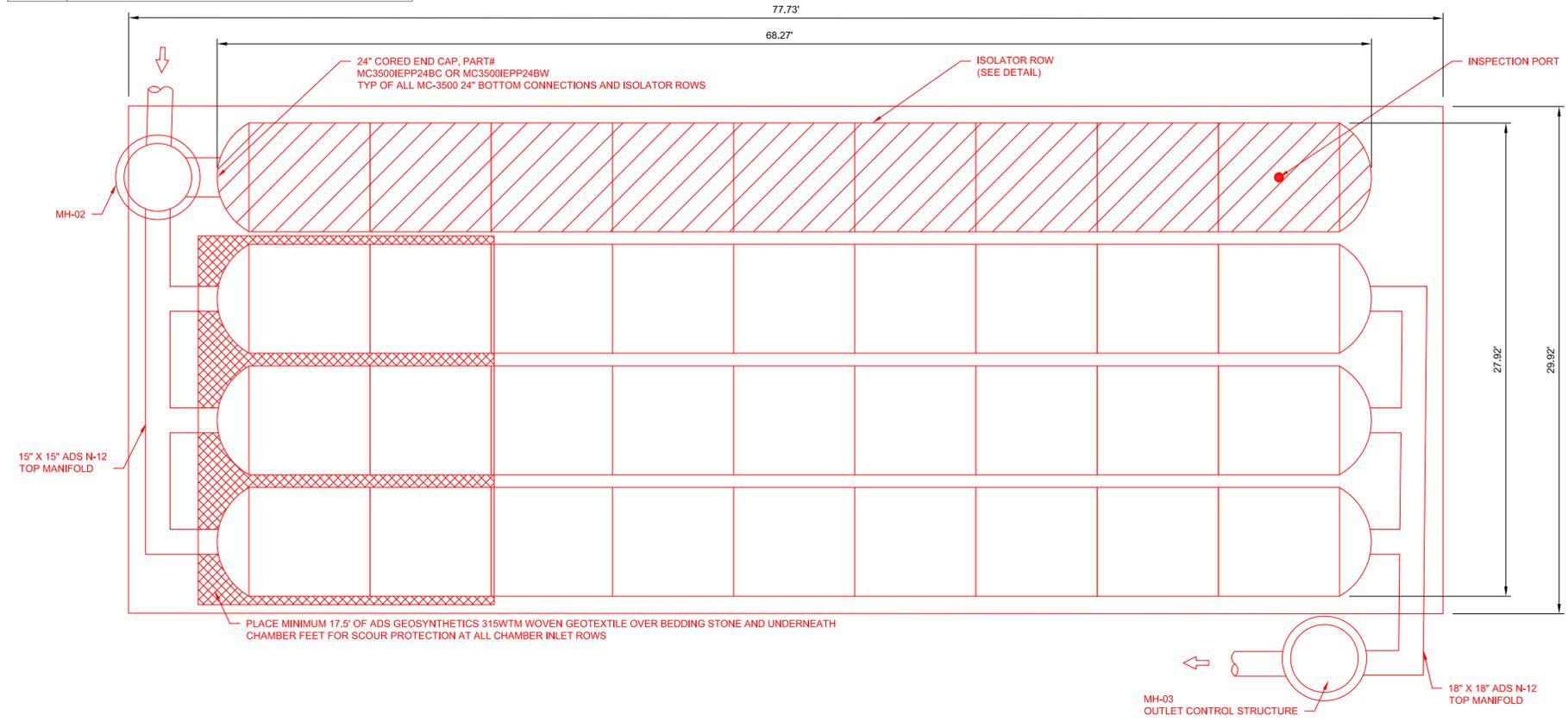
LOGO: **BLACK & VEATCH**  
ANSI D 610/2020

PE STAMP	AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID	UI AVANGRID
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<b>GRADING AND DRAINAGE PLAN</b>	
SH 001 OF 007	
PEQUONNOCK	BRIDGEPORT
BY: NRM/BJV	SCALE: 1"=20'
CK: DMH/BJV	FILE: 25247-0003-004 SH 001.dwg
APP: BRH/BJV	NO.
DATE: 01/28/2019	25247-0003-004 SH 001
REV	0-1B

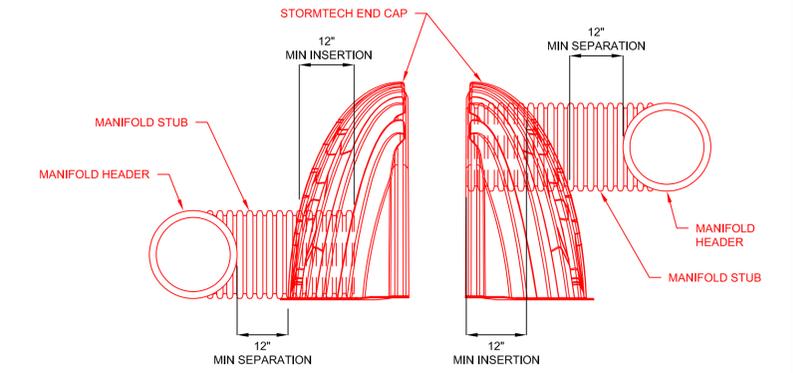


CONCEPTUAL LAYOUT	
36	STORMTECH MC-3500 CHAMBERS
8	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
9	STONE BELOW (in)
40	% STONE VOID
7,562	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
2,325	SYSTEM AREA (ft <sup>2</sup> )
215	SYSTEM PERIMETER (ft)



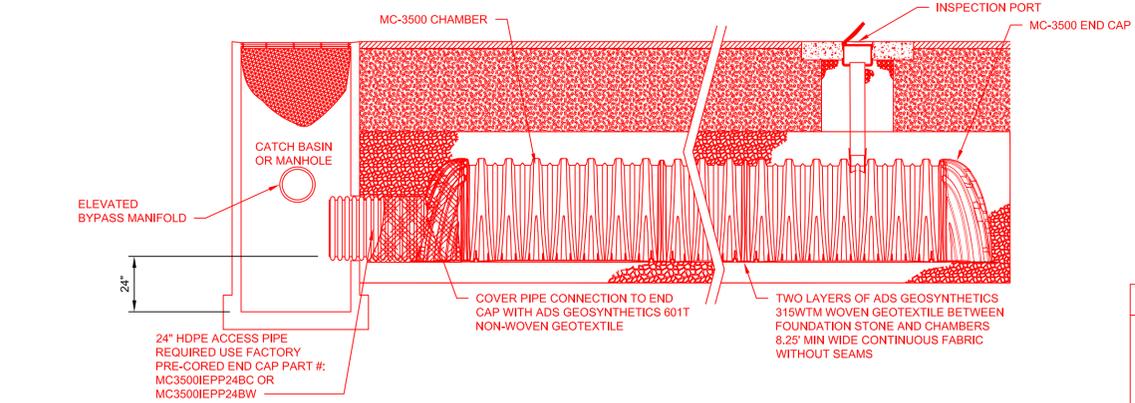
NOTES:  
 1. INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.  
 2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED

4" PVC INSPECTION PORT DETAIL  
NO SCALE

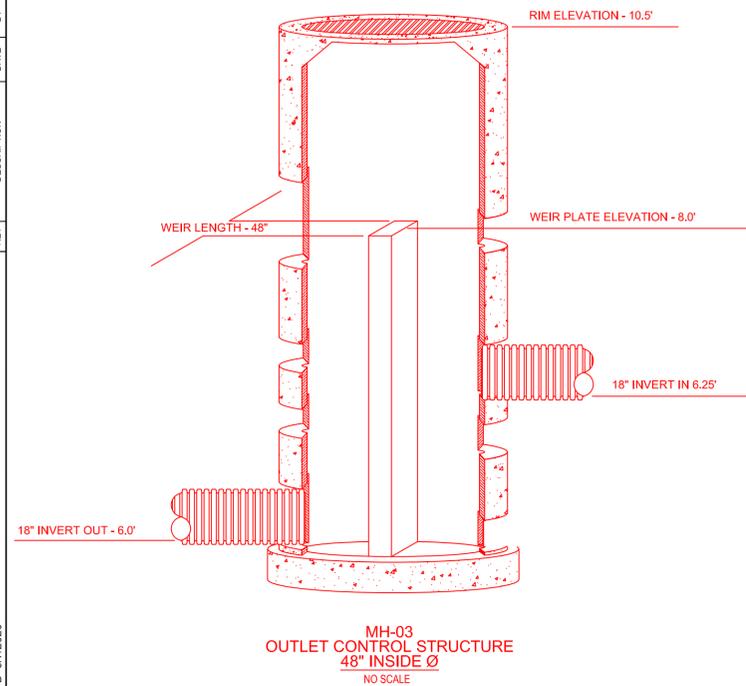


NOTE:  
 MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

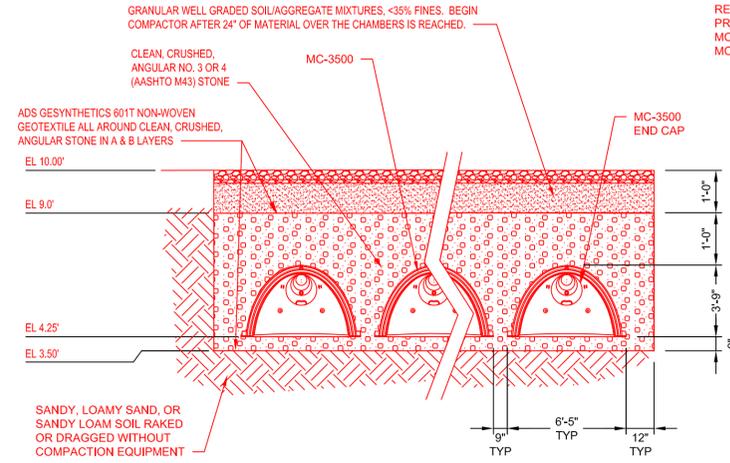
MC-SERIES END CAP INSERTION DETAIL  
NO SCALE  
SEE THIS DWG



MC-3500 ISOLATOR ROW DETAIL  
NO SCALE



MH-03  
OUTLET CONTROL STRUCTURE  
48" INSIDE Ø  
NO SCALE



INFILTRATION BED CROSS SECTION  
NO SCALE

- NOTES**
- ALL WORK ON THIS DRAWING IS PHASE 1, UNLESS NOTED OTHERWISE.
  - THIS DRAWING IS A CONCEPTUAL LAYOUT FOR STORMTECH CHAMBERS. CONTRACTOR SHALL PROVIDE THIS DRAWING TO STORMTECH AND STORMTECH SHALL PROVIDE FINAL LAYOUT/FABRICATION DRAWINGS FOR ENGINEER REVIEW AND APPROVAL.

**REFERENCE DRAWINGS**

SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

**APPROVED FOR CONSTRUCTION**  
 THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

**INSTALL**  
 SEQUENCE # XXXXXX

PE QUONNOCK		BRIDGEPORT	
BY	MM/BV	SCALE	NONE
CK	DMH/BV	FILE	25247-0003-004 SH 003.dwg
APP	BRH/BV	NO.	
REV	DESCRIPTION	DATE	BY
0-0	PEQUONNOCK REBUILD	05/2020	MM/BV DMH/BV BRH/BV
REV	DESCRIPTION	DATE	BY

DATE	APPROVED FOR CONSTRUCTION	DATE	DESCRIPTION
03/08/2020	JDA	03/17/2020	JDA
04/01/2020	SMR	04/01/2020	SMR
04/01/2020	DMH	04/01/2020	DMH
04/01/2020	APP	04/01/2020	APP

LOGO  
 INFO  
 BLACK & VEATCH  
 OVERLAND PARK, KS 66201  
 ANS I D 5/7/2020

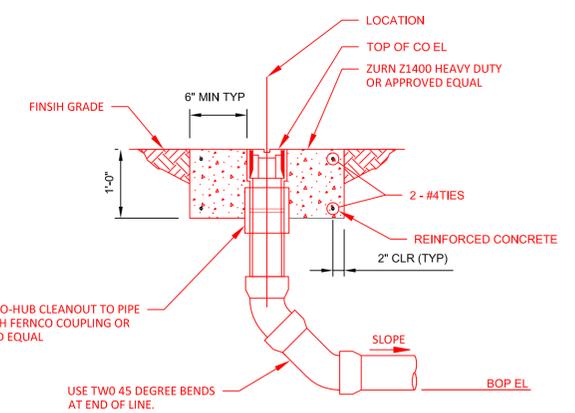
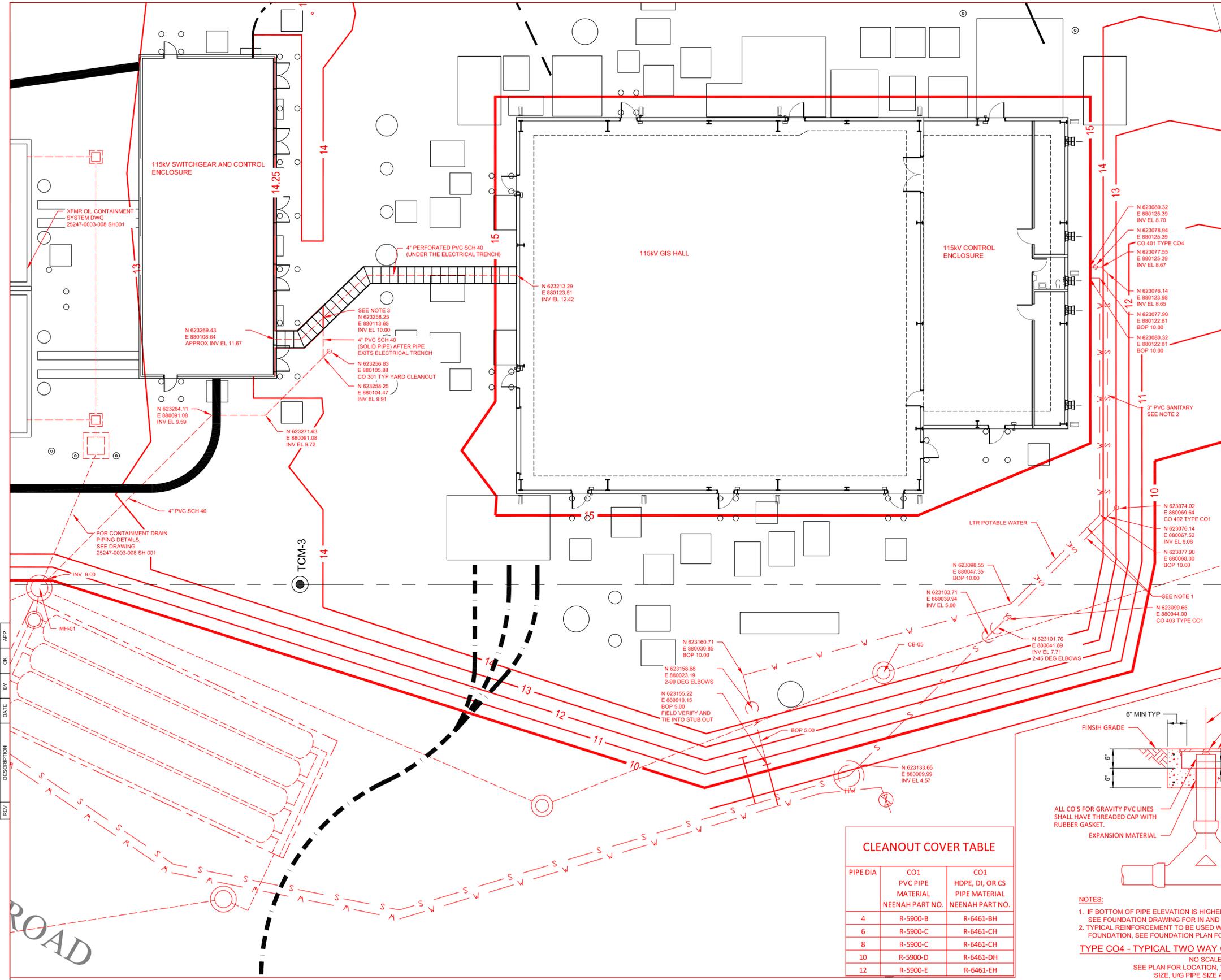
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1	04/11/2020	ISSUE FOR TLU REVIEW	MRM	DMH	APP
2	03/17/2020	ISSUE FOR PAVL REVIEW	JDA	DMH	APP
3	03/07/2019	ISSUE FOR TLU REVIEW	MRM	DMH	APP

ANSI D 6/10/2020

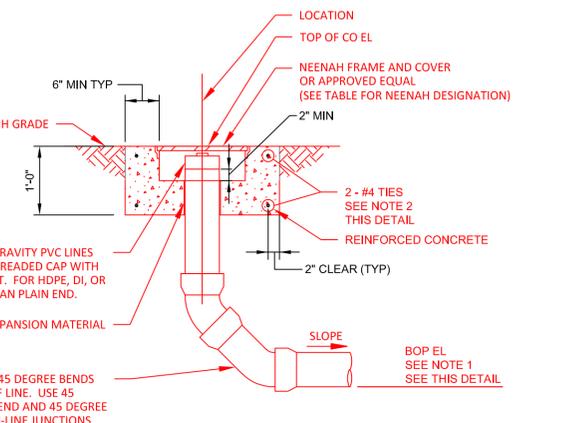
LOGO

BLACK & VEATCH

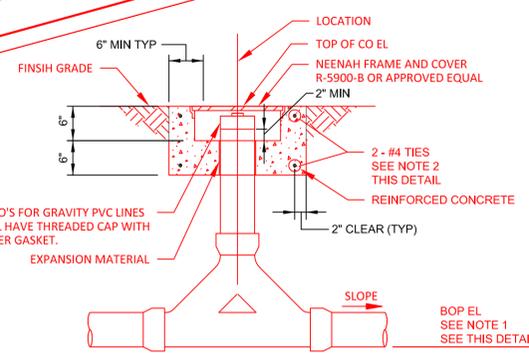
1500 W. WYOMING  
SALT LAKE CITY, UT 84119  
OVERLAND PARK, KS 66211



**TYPICAL YARD CLEANOUT**  
NO SCALE  
SEE PLAN FOR LOCATION, TOP OF CO EL, CO SIZE, U/G PIPE SIZE AND BOP EL



**TYPE CO1 - TYPICAL CLEANOUT**  
NO SCALE  
SEE PLAN FOR LOCATION, TOP OF CO EL, CO SIZE, U/G PIPE SIZE AND BOP EL



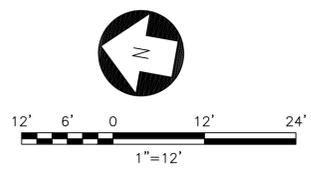
**TYPE CO4 - TYPICAL TWO WAY GRAVITY PVC CLEANOUT**  
NO SCALE  
SEE PLAN FOR LOCATION, TOP OF CO EL, CO SIZE, U/G PIPE SIZE AND BOP EL

PIPE DIA	CO1 PVC PIPE MATERIAL NEENAH PART NO.	CO1 HDPE, DI, OR CS PIPE MATERIAL NEENAH PART NO.
4	R-5900-B	R-6461-BH
6	R-5900-C	R-6461-CH
8	R-5900-C	R-6461-CH
10	R-5900-D	R-6461-DH
12	R-5900-E	R-6461-EH

- NOTES:**
- IF BOTTOM OF PIPE ELEVATION IS HIGHER THAN BOTTOM OF FOUNDATION, SEE FOUNDATION DRAWING FOR IN AND UNDERSLAB PIPING DETAILS.
  - TYPICAL REINFORCEMENT TO BE USED WITH CO'S IN THE YARD ONLY. FOR CO'S, IN A FOUNDATION, SEE FOUNDATION PLAN FOR REINFORCEMENT DETAILS.

- NOTES**
- THE REQUIRED VERTICAL SEPARATION BETWEEN POTABLE WATER AND SANITARY PIPE IS 12 INCHES MINIMUM (CLEAR FROM TOP OF SANITARY PIPE TO BOTTOM OF POTABLE WATER) OR REQUIRED HORIZONTAL SEPARATION IS 5 FT MINIMUM (CLEAR FROM OUTER DIAMETER TO OUTER DIAMETER). TOP OF PIPE SHALL BE ROUTED BELOW FROST DEPTH.
  - FOR SANITARY PIPING, MAXIMUM SPACING OF CLEANOUTS IS 100 FT. ALSO, CLEANOUT IS NEEDED AT EACH CHANGE OF DIRECTION GREATER THAN 45 DEGREES. IF THERE ARE A SERIES OF DIRECTION CHANGES, THEN ONE CLEANOUT IS REQUIRED EVERY 40 FT.
  - WHEN NOTED, CONTRACTOR SHALL TIE DRAIN PIPE WITH CABLE TRENCH. SEE DRAWING 25247-0003-004 SH 002 FOR DETAILS.

REFERENCE DRAWINGS	
SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

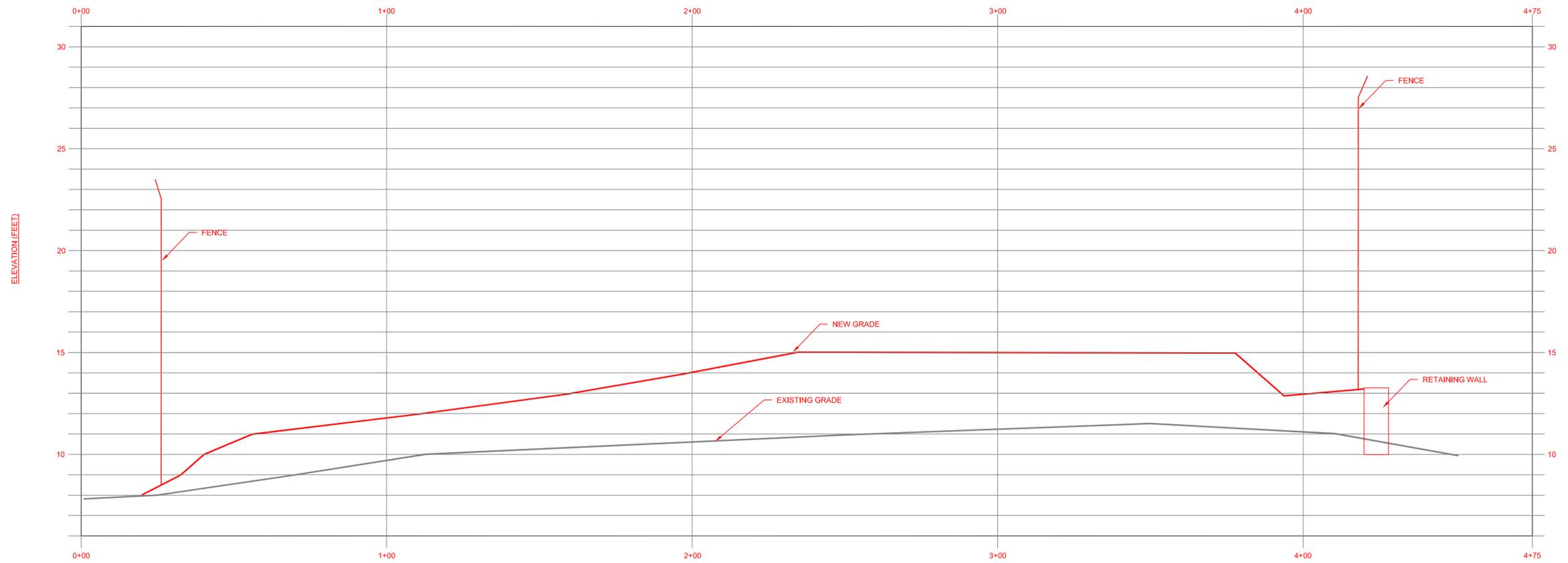


**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

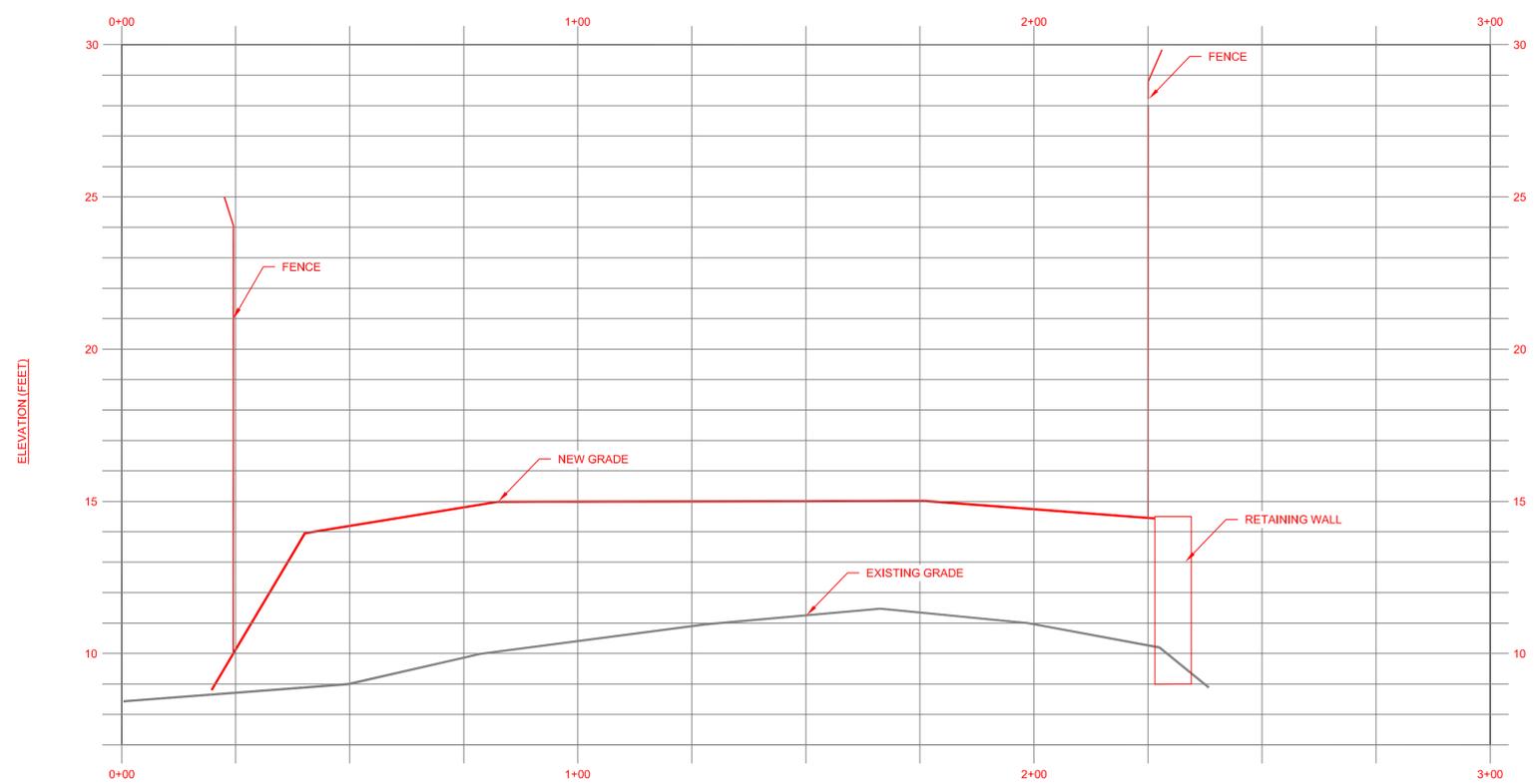
**INSTALL**

PE STAMP		AVANGRID ENGINEERING CONFIDENTIAL PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID		UI AVANGRID		<b>GRADING AND DRAINAGE DETAILS</b> SH 004 OF 007	
BY	MRMBV	SCALE	NONE	FILE	25247-0003-004 SH 004.dwg	NO.	
CK	DMHBV	NO.		REV			
APP	MAPBV	NO.		25247-0003-004 SH 004	0-0C		
DATE	07/12/19						





**SECTION A**  
**NORTH-SOUTH STATION**  
 SCALE  
 HORIZONTAL = 1:20  
 VERTICAL = 1:3



**SECTION B**  
**EAST-WEST STATION**  
 SCALE  
 HORIZONTAL = 1:20  
 VERTICAL = 1:3

REFERENCE DRAWINGS	
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
SITE PLAN	25247-0003-001 SH 001
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
UTILITY RELOCATION PLAN	25247-0003-001 SH 005
UTILITY RELOCATION DETAILS	25247-0003-001 SH 006
GUIDE RAIL DETAILS	25247-0003-001 SH 007
GRADING AND DRAINAGE PLAN	25247-0003-001 SH 008
GRADING AND DRAINAGE DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
RETAINING WALL DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
RETAINING WALL DETAILS	25247-0003-004 SH 006
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

**INSTALL**

**GRADING SECTIONS**

SH 006 OF 007

PEQUONNOCK BRIDGEPORT

AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID				PEQUONNOCK BRIDGEPORT SH 006 OF 007 FILE: 25247-0003-004 SH 006.dwg	
BY	MRMBV	SCALE	NONE	NO.	
CK	DMHVB	DATE	01/28/2019	REV	
APP	MAPBV	DATE	01/28/2019	REV	
REV	DESCRIPTION	DATE	BY	CK	APP
0-0	PEQUONNOCK REBUILD	03/2019	MRMBV	DMHVB	MAPBV
REV	DESCRIPTION	DATE	BY	CK	APP

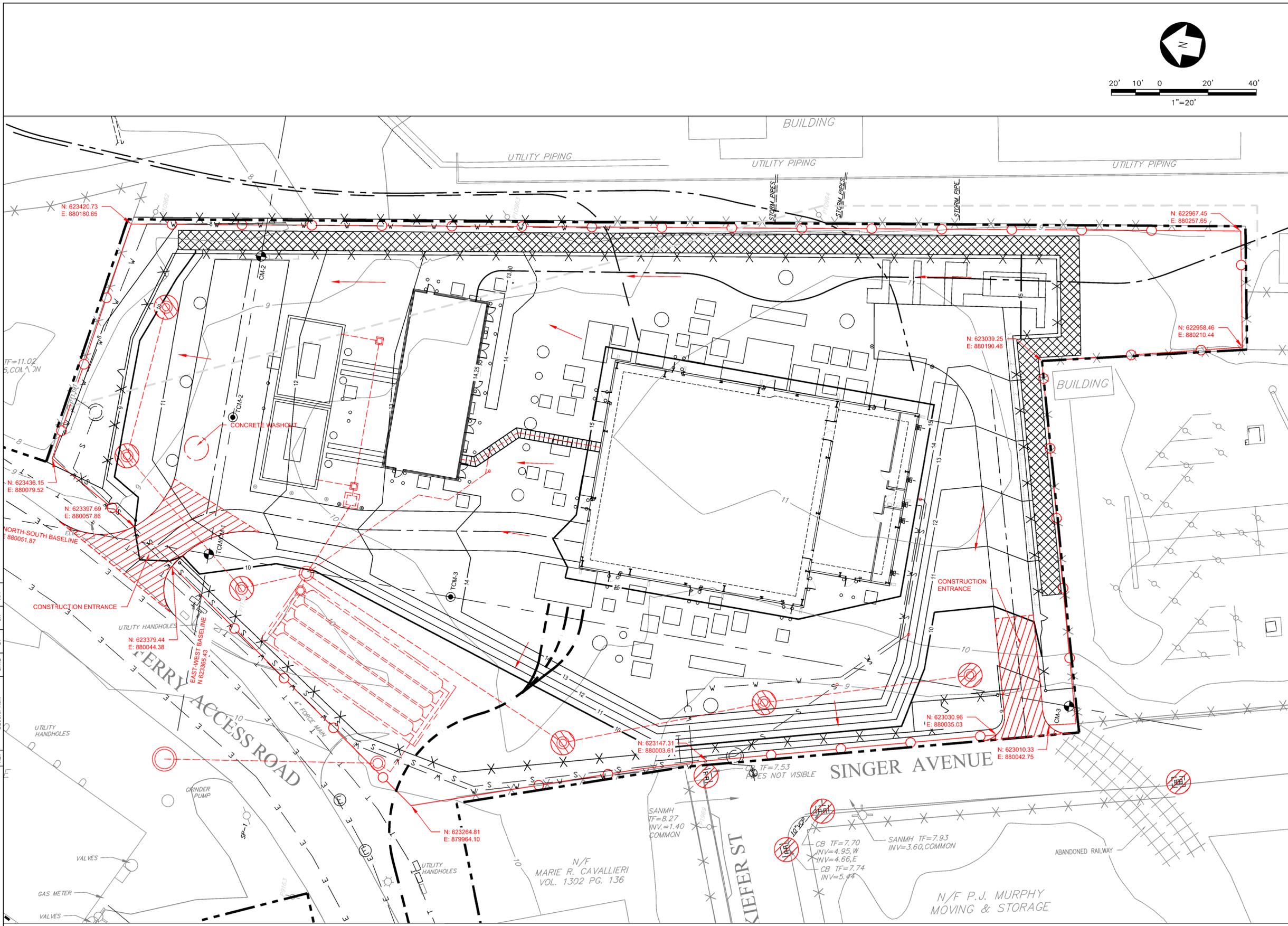
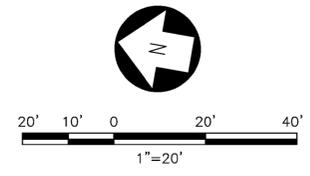
REV	DESCRIPTION	DATE	BY	CK	APP
0-0	ISSUE FOR 7% UI REVIEW	08/11/2020	BMH	JJA	ELE
0-01	ISSUE FOR 8% UI REVIEW	03/17/2020	JJA	SMR	BRI
0-02	ISSUE FOR 7% UI REVIEW	08/01/2019	MRM	DHM	MMP
0-03	ISSUE FOR 3% UI REVIEW	03/20/2019	MRM	DHM	MMP

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 OVERLAND PARK, KS 66201

NOTES

- SEE DRAWING 25247-0003-005-002 FOR EROSION CONTROL DETAILS.
- ALL EROSION AND SEDIMENT CONTROL WORK, SILT FENCE, AND OTHER BMPs SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SITE EROSION CONTROL PLAN.
- LOCATION OF CONCRETE WASHOUT, SOIL STOCKPILE, AND PERMIT REQUIREMENTS TO BE CONFIRMED BY THE CONTRACTOR.
- IF TEMPORARY STOCKPILES ARE ESTABLISHED, SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER AND RUNOFF DIVERTED AROUND THE STOCKPILE, WHERE PRACTICAL.
- SUBSTATION AND CONSTRUCTION FACILITIES DISTURBED AREA IS 98,000 SF.
- BMPs SHALL BE INSPECTED ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.
- EROSION CONTROL FOR THE PROJECT PERIMETER (SILT FENCE) SHALL BE INSTALLED IN ADVANCE OF CLEARING AND GRUBBING ACTIVITIES.
- SEE STORMWATER POLLUTION PREVENTION PLAN DEVELOPED BY FUSS & O'NEILL FOR ADDITIONAL INFORMATION.



LEGEND

- PROPERTY LINE
- NEW CONTOUR
- EXISTING CONTOUR
- NEW SUBSTATION FENCE
- EXISTING FENCE
- EXISTING WATER
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING SEWER
- EXISTING TELEPHONE
- OVERHEAD ELECTRIC LINE
- EXISTING STRUCTURES
- NEW RETAINING WALL
- NEW STORMWATER SYSTEM
- FLOW INDICATOR
- SILT FENCE
- INLET PROTECTION
- TEMPORARY SURVEY CONTROL MONUMENT
- PERMANENT SURVEY CONTROL MONUMENT

REFERENCE DRAWINGS

DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
SITE PLAN	25247-0003-001 SH 001
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING DETAILS	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
UTILITY RELOCATION PLAN	25247-0003-001 SH 005
UTILITY RELOCATION DETAILS	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
GUIDE RAIL DETAILS	25247-0003-001 SH 008
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 009
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
RETAINING WALL DETAILS	25247-0003-004 SH 006
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

NO.	DATE	DESCRIPTION	BY	CHK	APP.
0-0	08/10/2020	ISSUE FOR PERM REVIEW	JDA	SMR	BRH
0-0	12/20/2019	ISSUE FOR PERM REVIEW	GOV	SMR	BRH
0-0	08/07/2019	ISSUE FOR PERM REVIEW	MRM	DHM	IMP
0-0	08/11/2020	ISSUE FOR PERM REVIEW	BRH	JDA	ELE

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LOGO

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OVERLAND PARK, KS 66201

**PRELIMINARY**  
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**INSTALL**

PE STAMP

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UI  
AVANGRID

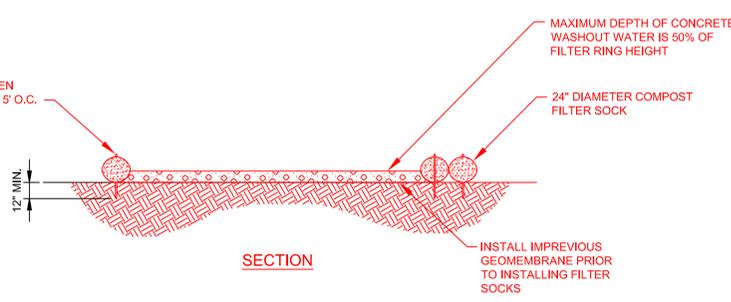
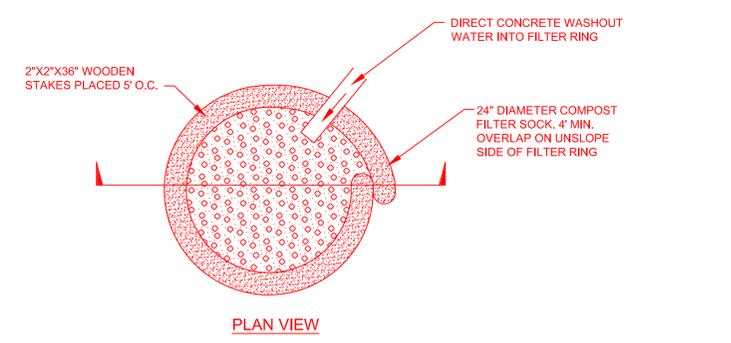
**EROSION CONTROL PLAN**  
SH 001 OF 003

PEQUONNOCK BRIDGEPORT

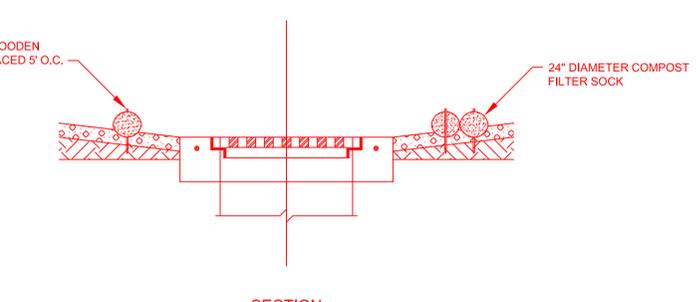
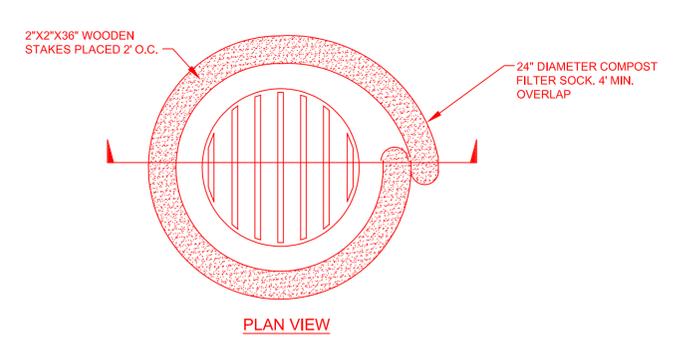
BY	MRMBV	SCALE: 1"=20'	FILE: 25247-0003-005 SH 001.dwg	REV					
CK	DMH/V								
APP	MAPBV								
0-0	PEQUONNOCK REBUILD	03/23/19	MRMBV	DMH/V	MAPBV				
REV	DESCRIPTION	DATE	BY	CK	APP	DATE	01/28/2019	25247-0003-005 SH 001	0-0

**NOTES**

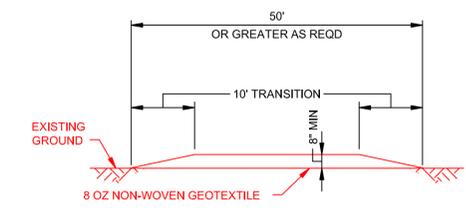
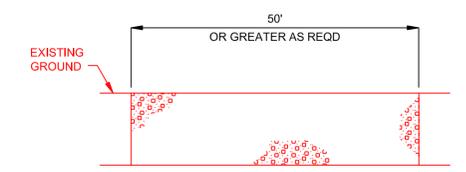
- COMPOST SOCK CONCRETE WASHOUT:**
1. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
  2. INSTALL CONCRETE WASHOUT ON FLAT GRADE FOR OPTIMAL PERFORMANCE.
  3. CONCRETE WASHOUT FACILITY SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.
  4. REMOVE AND DISPOSE OF SEDIMENT FROM WASHOUT FACILITY WHEN ACCUMULATED MATERIALS REACH 50% OF THE FACILITY'S CAPACITY.
  5. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
  6. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
- STABILIZED CONSTRUCTION ENTRANCE:**
7. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY.
  8. DESIGN CRITERIA FOR STABILIZED CONSTRUCTION ENTRANCE:
    - A. STONE SIZE - USE ASSHTO #1
    - B. THICKNESS - NOT LESS THAN 8 INCHES
    - C. WIDTH - NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS OR EGRESS
    - D. LENGTH - 50 FEET MINIMUM WHERE THE SOILS ARE SANDS OR GRAVELS OR 100 FEET MINIMUM WHERE SOILS ARE CLAYS OR SILTS, EXCEPT WHERE THE TRAVELED LENGTH IS LESS THAN 50 OR 100 FEET, RESPECTIVELY. THESE LENGTHS MAY BE INCREASED WHERE FIELD CONDITIONS DICTATE.
    - E. GEOTEXTILE - SHALL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE.
    - F. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC RIGHT OF WAY.
  9. THE CONTRACTOR SHALL CUT AND REMOVE EXISTING ASPHALT PAVEMENT TO INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- SILT FENCE:**
10. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
  11. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF FENCE OR FABRIC STARTS TO BULGE.
  12. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
  13. TURN END OF SILT FENCE UP SLOPE TO PREVENT BYPASS FLOW AND ALLOW FOR PONDING.



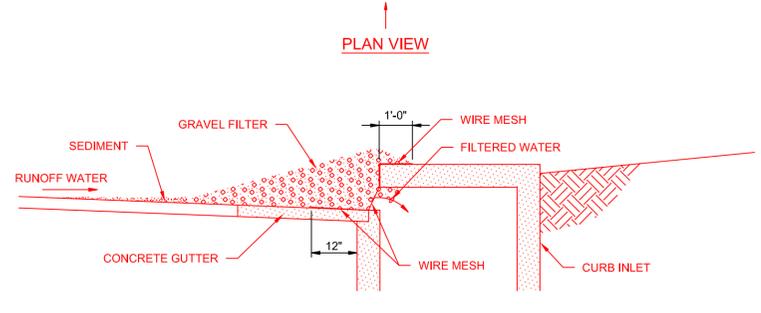
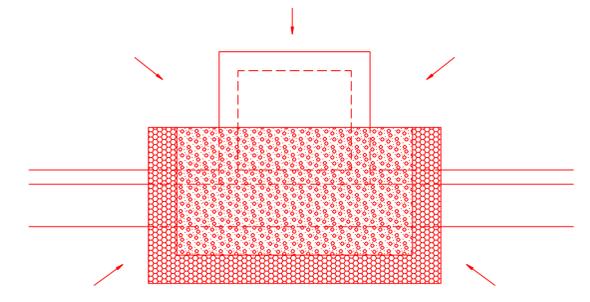
**TYPICAL COMPOST SOCK CONCRETE WASHOUT INSTALLATION**  
NO SCALE  
SEE NOTES 1-6



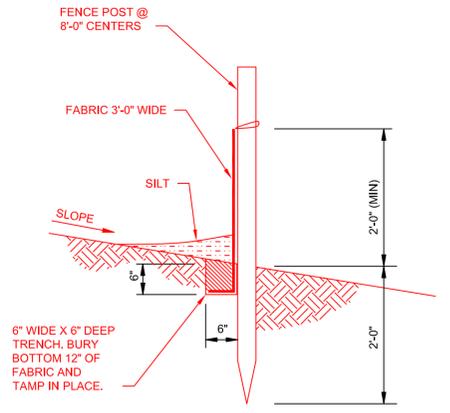
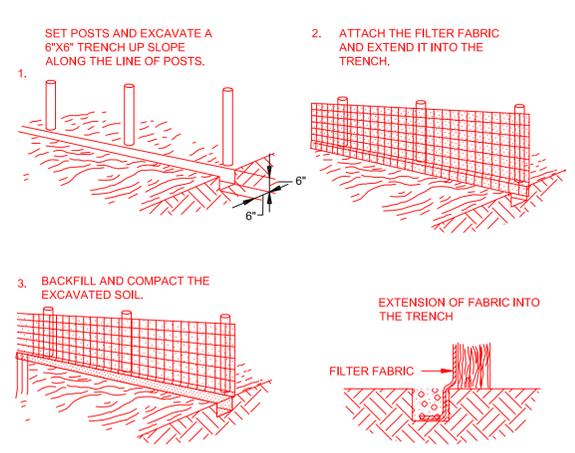
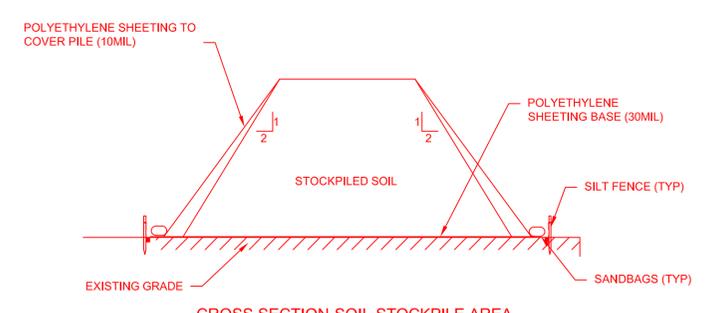
**COMPOST SOCK INLET SEDIMENT FILTER**  
NO SCALE



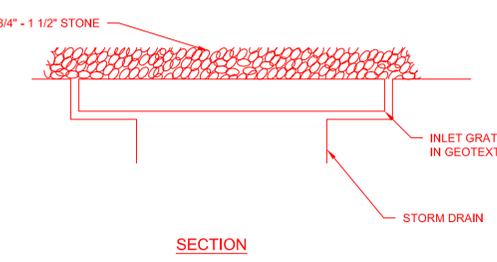
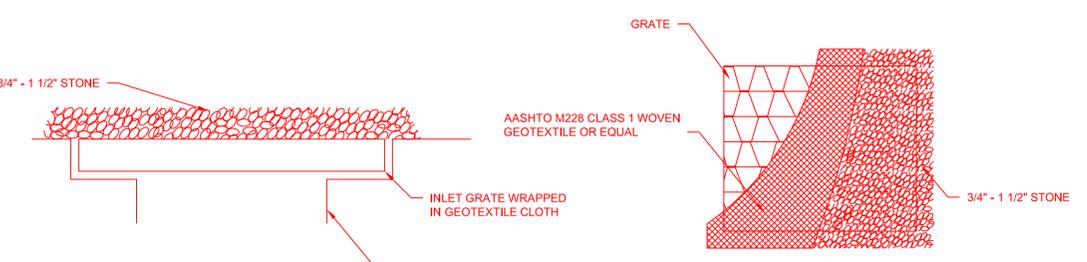
**TYPICAL STABILIZED CONSTRUCTION ENTRANCE**  
NO SCALE  
SEE NOTES 7-9



**GRAVEL CURB INLET SEDIMENT FILTER**  
NO SCALE



**SILT FENCE DETAIL**  
NO SCALE  
SEE NOTES 10-13



**GRATE INLET PROTECTION DETAIL**  
NO SCALE

**APPROVED FOR CONSTRUCTION**  
THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

**INSTALL**

**REFERENCE DRAWINGS**

SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 003

**EROSION CONTROL DETAILS**  
SH 002 OF 003

PE STAMP	AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID	UI AVANGRID	<b>EROSION CONTROL DETAILS</b> SH 002 OF 003	
			PEQUONNOCK	BRIDGEPORT
			BY: NRM/BV	SCALE: NONE
			DATE: 01/28/2019	FILE: 25247-0003-005 SH 002.dwg
			NO.	REV
0-0	PEQUONNOCK REBUILD	05/2020	M/RM/BV	DMH/BV
REV	DESCRIPTION	DATE	BY	CK
			APP	BRH/BV
			DATE	01/28/2019
				25247-0003-005 SH 002
				0-0E

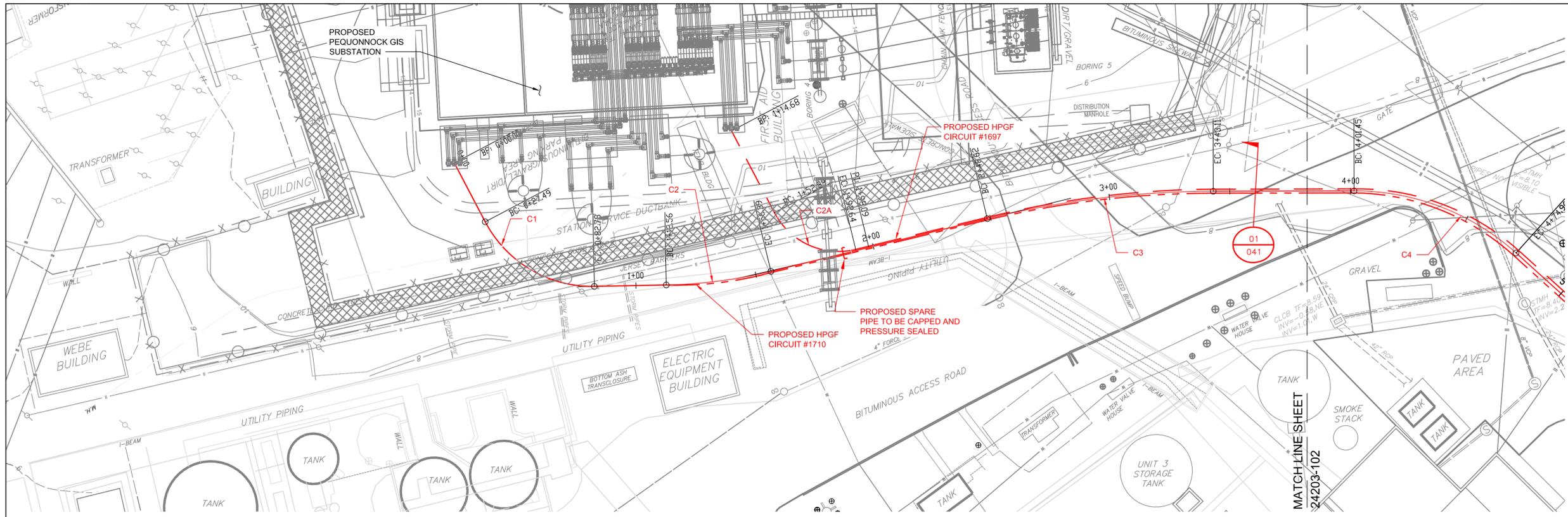
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0-01	12/20/2019	GOV		
0-02	08/01/2019	MRM		
0-03	08/08/2020	BRH	JDA	
0-04				
DESCRIPTION	DATE	BY	CK	APP

LOGO: **BLACK & VEATCH**  
BLACK & VEATCH  
OVERLAND PARK, KS 66201

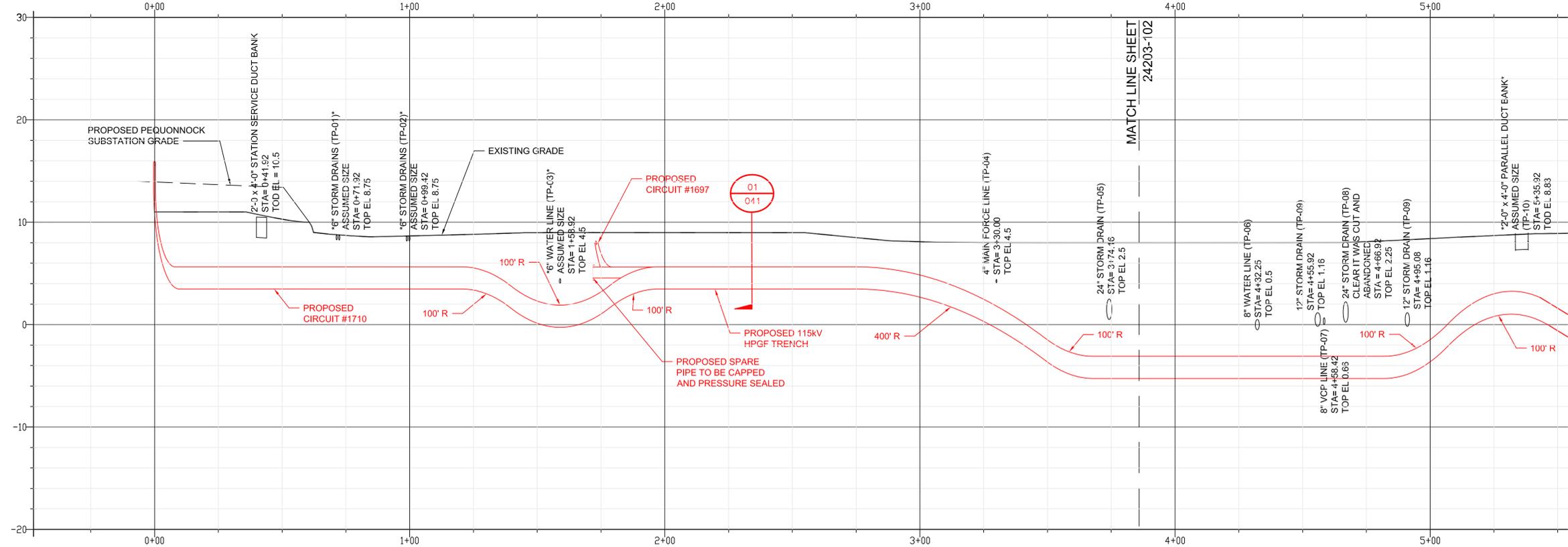
ANSI D 610/2020

**APPENDIX A-2  
TRANSMISSION LINE AND UNDERGROUND DRAWINGS**

DRAWING NUMBER	DRAWING TITLE
24203-101	115kV UG TRANSMISSION LINE HPGF CIRCUITS #1697 & #1710 PLAN & PROFILE
24203-102	115kV UG TRANSMISSION LINE HPGF CIRCUITS #1697 & #1710 PLAN & PROFILE
24203-800	115kV UG TRANSMISSION LINE ROUTE MAP PRIMARY SITE STANDARD LAYOUT
24214-130	115KV UG TRANSMISSION LINE XLPE CIRCUITS #1955 PLAN & PROFILE
24203-801	115kV UG TRANSMISSION LINE DEVELOPMENT & MANAGEMENT PLAN HPGF & XLPE ROUTES
24208-100	115kV LINE/PSEG PSEG UNIT #3 TO PEQUONNOCK PLAN & PROFILE
24223-100	115kV LINE/8809A PEQUONNOCK TO CONGRESS PLAN & PROFILE
24224-100	115kV LINE/8909B PEQUONNOCK TO CONGRESS PLAN & PROFILE
24225-100	115kV LINE/1130 PEQUONNOCK TO COMPO PLAN & PROFILE
24226-100	115kV LINE/91001-1 PEQUONNOCK TO ASH CREEK PLAN & PROFILE
24208-801	PEQUONNOCK TO PSEG UNIT #3 GENERAL ACCESS PLAN PEQUONNOCK TO TOWER 3
24223-801	PEQUONNOCK REBUILD GENERAL ACCESS PLAN
24223-802	PEQUONNOCK REBUILD GENERAL ACCESS PLAN 770DC TO 775AN

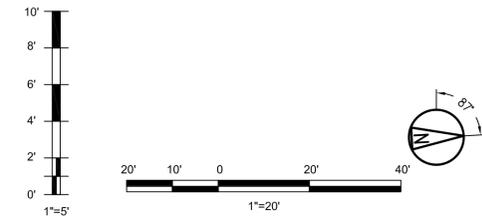
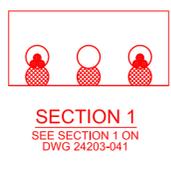


PLAN VIEW



PROFILE VIEW

CURVE TABLE												
CURVE #	BEGIN CURVE	END CURVE	LENGTH	ANGLE	RADIUS	TANGENT	P.I. NORTHING	P.I. EASTING	B.C. NORTHING	B.C. EASTING	E.C. NORTHING	E.C. EASTING
C1	STA 0+27.49	STA 0+82.78	55.29	63° 21' 25"	50.00	30.855	623115.29	880231.06	623102.36	880203.04	623146.13	880232.07
C2	STA 1+12.56	STA 1+56.39	43.83	12° 33' 18"	200.00	22.001	623197.88	880233.76	623175.89	880233.04	623219.50	880229.68
C2A	STA 1+52.89	STA 1+92.64	39.75	75° 54' 44"	30.00	23.402	623232.04	880226.79	623222.23	880205.54	623255.03	880222.45
C3	STA 2+48.62	STA 3+43.11	94.50	13° 32' 08"	400.00	47.469	623356.78	880203.78	623310.13	880212.58	623404.19	880206.14
C4	STA 4+01.45	STA 4+74.96	73.51	42° 07' 12"	100.00	38.507	623500.91	880210.96	623462.46	880209.04	623528.16	880238.18



- NOTES**
1. FOR GENERAL NOTES SEE DWG 24203-045.
  2. UTILITIES LABEL WITH "\*" DID NOT HAVE SUFFICIENT POT HOLE INFORMATION. SIZE AND DEPTH ARE ASSUMED.
  3. VERTICAL BENDS SHALL BE 400'R UNLESS NOTED OTHERWISE.
  4. SEE DWG 24203-041 FOR TRENCH SECTION DETAILS.
  5. FOR RISER PIPE INTERFACE SEE DWG 24203-042.
  6. ELEVATIONS ON UTILITY CALLOUTS ARE TO TOP OF UTILITY.

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

**INSTALL**  
SEQUENCE # XXXXXX

- LEGEND**
- HPGF CIRCUIT #1697
  - HPGF CIRCUIT #1710

- REFERENCE DRAWINGS**
- 24203-000 - COVER SHEET
  - 24203-001 - LEGEND, ABBREVIATION & GENERAL NOTES
  - 24203-800 - PRIMARY SITES STANDARD LAYOUT
  - 24203-102 - HPGF CIRCUITS #1697 & #1710 PLAN & PROFILE
  - 24203-041 - TRENCH SECTIONS & DETAILS
  - 24203-043 - HPGF SPLICE MANHOLE

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Property of AVANGRID

115kV UG TRANSMISSION LINE  
HPGF CIRCUITS #1697 & #1710  
PLAN & PROFILE

PEQUONNOCK BRIDGEPORT

BY: KDMBV SCALE: 1"=20' FILE: 24203-101.dwg  
 CK: LSMBV NO:  
 APP: BRHVV  
 DATE: 02/22/2019

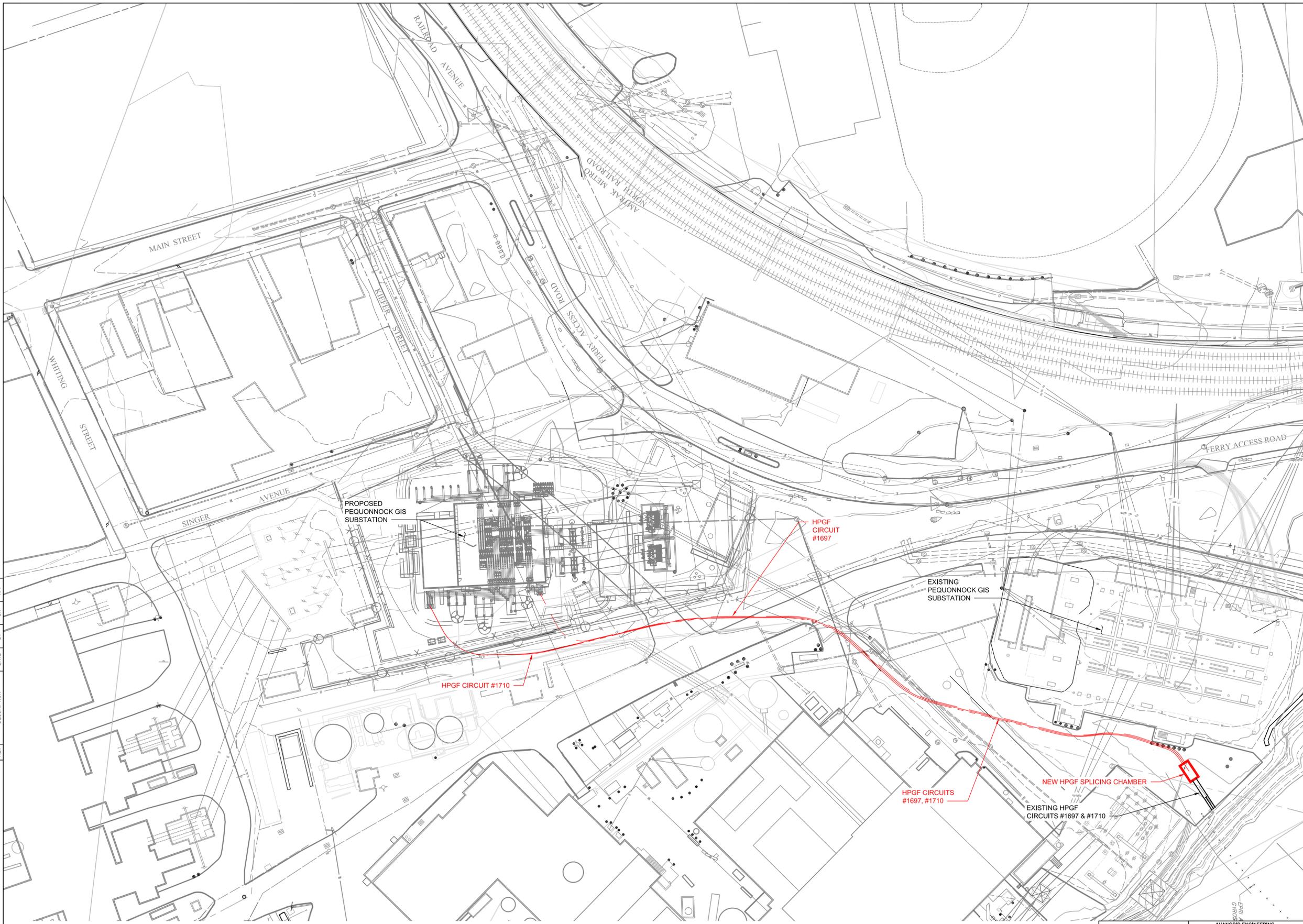
24203-101 0-0B

REV	DESCRIPTION	DATE	BY	CK	APP
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D-04	ISSUED FOR 30% M REVIEW	03/20/2020	KDM	LSM	BRH

ANSI D 5/18/2020

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Engineering & World Construction





**NOTES**

1. FOR GENERAL NOTES SEE DWG 24203-045.

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

**INSTALL**

SEQUENCE # XXXXXX

**LEGEND**

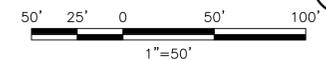
- HPGF CIRCUIT #1697
- HPGF CIRCUIT #1710
- EXISTING HPGF CIRCUIT #1697
- EXISTING HPGF CIRCUIT #1710

**REFERENCE DRAWINGS**

- 24203-000 - COVER SHEET
- 24203-001 - LEGEND, ABBREVIATION & GENERAL NOTES
- 24203-101 - HPGF CIRCUITS #1697 & #1710 PLAN & PROFILE
- 24203-102 - HPGF CIRCUITS #1697 & #1710 PLAN & PROFILE
- 24203-041 - TRENCH SECTIONS & DETAILS
- 24203-043 - HPGF SPLICE MANHOLE

REV	DESCRIPTION	DATE	BY	CK	APP
0-0	ISSUED FOR 10% IN REVIEW	02/22/2019	LSM	LSM	BRH
0-0	ISSUED FOR 30% IN REVIEW	02/22/2019	KCM	KCM	BRH

INFO: **BLACK & VEATCH**  
 Consulting Engineers  
 OVERLAND PARK, KS 66211  
 ANSIS ID: 5119/2020



PE STAMP

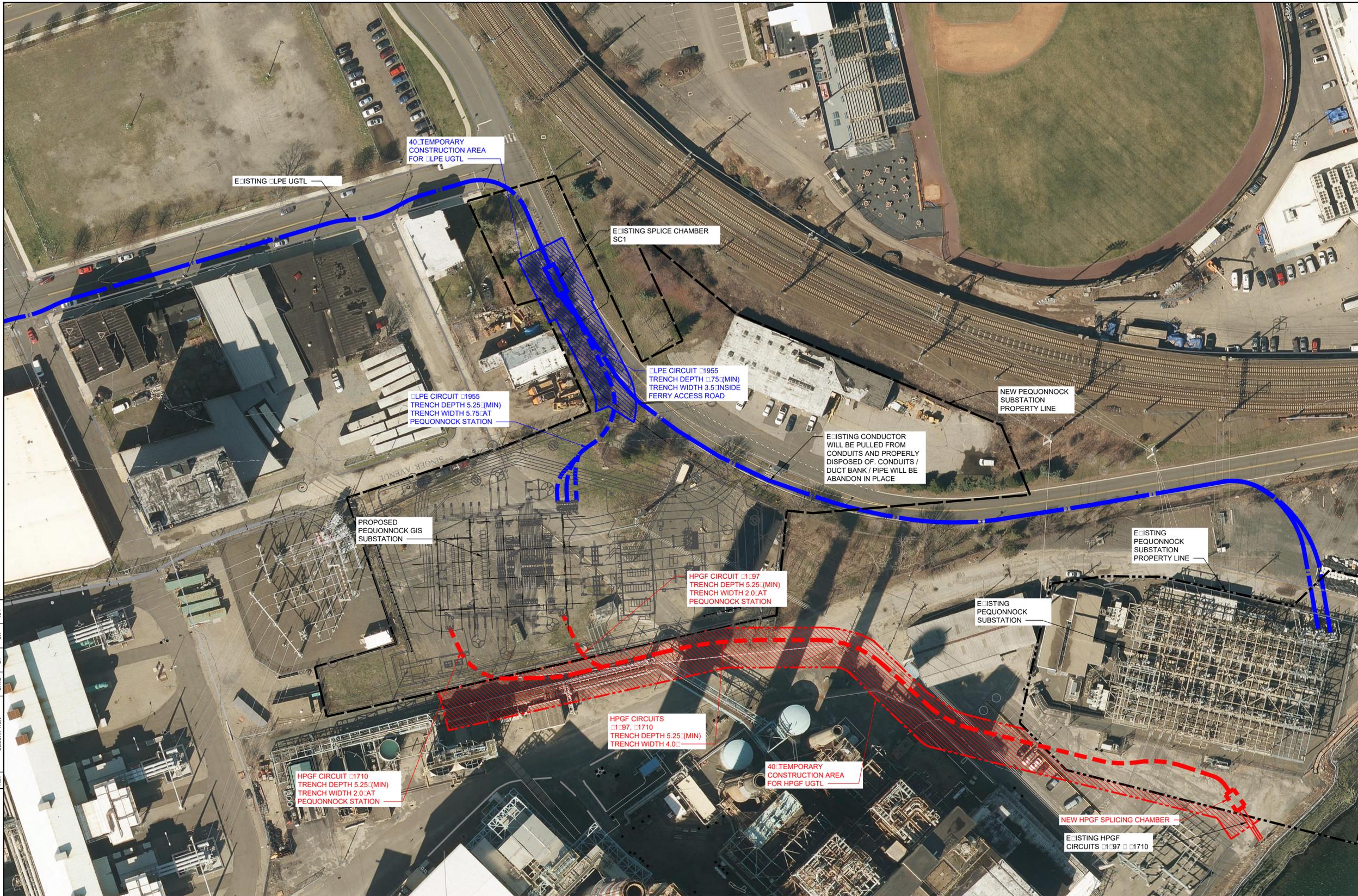
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**115kV UG TRANSMISSION LINE  
ROUTE MAP**  
PRIMARY SITE STANDARD LAYOUT

PEQUONNOCK				BRIDGEPORT			
BY	DATE	SCALE	FILE	NO.	REV	DATE	NO.
0-0	PEQUONNOCK REBUILD	02/2020	KD/MBV	LSM/MBV	BRH/MBV	CK	LSM/MBV
REV	DESCRIPTION	DATE	BY	CK	APP	DATE	24203-800

24203-800 0-0B



40' TEMPORARY CONSTRUCTION AREA FOR LPE UGTL

EXISTING LPE UGTL

EXISTING SPLICE CHAMBER SC1

LPE CIRCUIT 1955  
TRENCH DEPTH 5.25' (MIN)  
TRENCH WIDTH 5.75' AT PEQUONNOCK STATION

LPE CIRCUIT 1955  
TRENCH DEPTH 3.75' (MIN)  
TRENCH WIDTH 3.5' INSIDE FERRY ACCESS ROAD

NEW PEQUONNOCK SUBSTATION PROPERTY LINE

EXISTING CONDUCTOR WILL BE PULLED FROM CONDUITS AND PROPERLY DISPOSED OF. CONDUITS / DUCT BANK / PIPE WILL BE ABANDON IN PLACE

PROPOSED PEQUONNOCK GIS SUBSTATION

EXISTING PEQUONNOCK SUBSTATION PROPERTY LINE

HPGF CIRCUIT 1197  
TRENCH DEPTH 5.25' (MIN)  
TRENCH WIDTH 2.0' AT PEQUONNOCK STATION

EXISTING PEQUONNOCK SUBSTATION

HPGF CIRCUITS 1197, 1710  
TRENCH DEPTH 5.25' (MIN)  
TRENCH WIDTH 4.0'

40' TEMPORARY CONSTRUCTION AREA FOR HPGF UGTL

HPGF CIRCUIT 1710  
TRENCH DEPTH 5.25' (MIN)  
TRENCH WIDTH 2.0' AT PEQUONNOCK STATION

NEW HPGF SPLICING CHAMBER

EXISTING HPGF CIRCUITS 1197, 1710

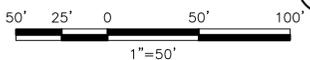
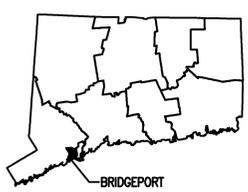
**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

INSTALL

LEGEND

- EXISTING PROPERTY LINE
- NEW PROPERTY LINE
- LPE CIRCUIT 1955
- HPGF CIRCUIT 1197
- HPGF CIRCUIT 1710
- EXISTING CONDUIT / DUCT BANK
- EXISTING HPGF CIRCUIT 1197
- EXISTING HPGF CIRCUIT 1710
- EXISTING LPE CIRCUIT 1955
- 40' TEMPORARY CONSTRUCTION AREA FOR HPGF UGTL
- 40' TEMPORARY CONSTRUCTION AREA FOR LPE UGTL

CONTEXT MAP



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115V UG TRANSMISSION LINE  
DEVELOPMENT & MANAGEMENT  
PLAN HPGF & LPE ROUTES

PEQUONNOCK BRIDGEPORT

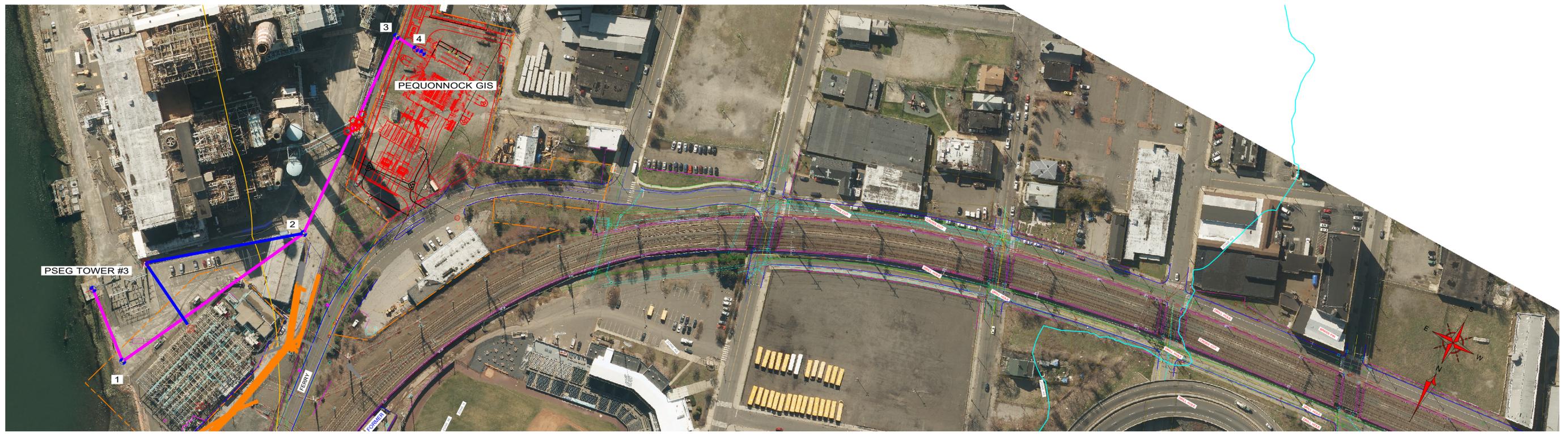
REV	DESCRIPTION	DATE	BY	CK	APP	DATE	NO.	FILE	REV
0-0	PEQUONNOCK REBUILD	07/2020	KDMBV	LSMBV	BRHVB			24203-801.dwg	0-0

REV	DESCRIPTION	DATE	BY	CK	APP
0-0A	ISSUED FOR 10% REVIEW	07/08/2020			

ANSI D 79/2020  
BLACK & VEATCH  
Engineering World of Difference

PLAN	SURVEYED	DATE
NOTEBOOK NO.	REVIEWED	
	ROW CHGD	

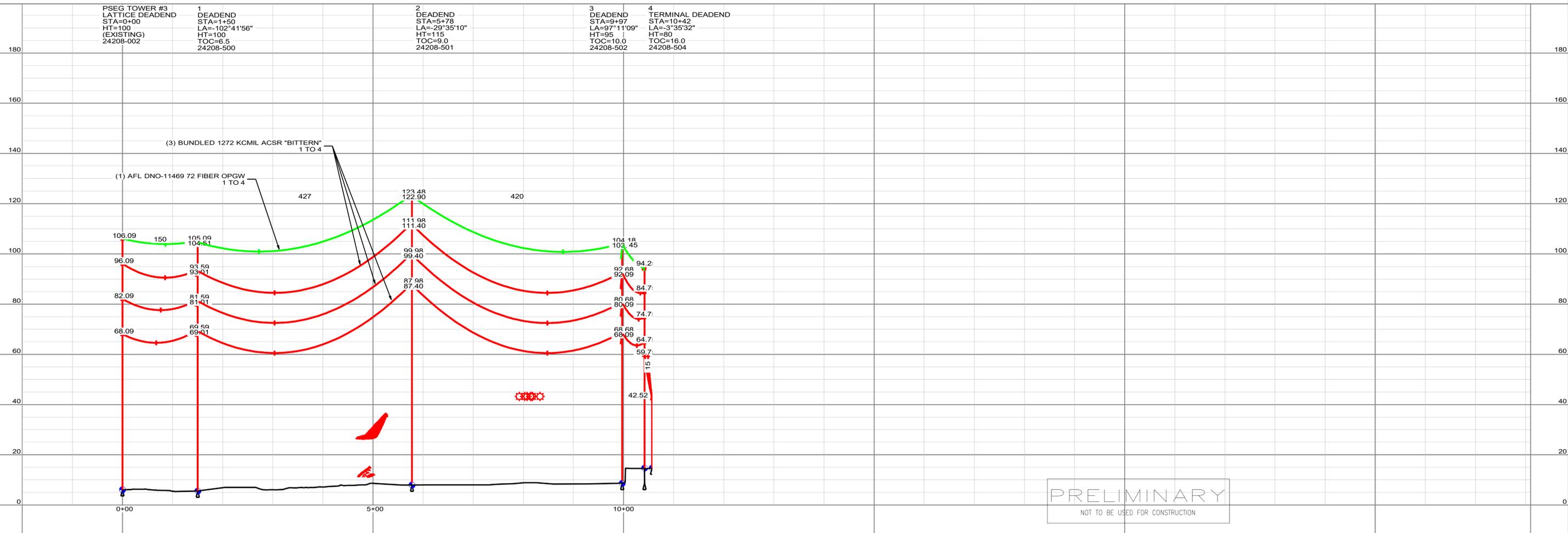
PLAN SCALE:  
1" = 100'



PSEG TOWER #3 LATTICE DEADEND STA=0+00 HT=100 (EXISTING) 24208-002	1 DEADEND STA=1+50 LA=-102°41'56" HT=100 TOC=6.5 24208-500	2 DEADEND STA=5+78 LA=-29°35'10" HT=115 TOC=9.0 24208-501	3 DEADEND STA=9+97 LA=97°11'09" HT=95 TOC=10.0 24208-502	4 TERMINAL DEADEND STA=10+42 LA=-3°35'32" HT=80 TOC=16.0 24208-504
-----------------------------------------------------------------------------------	---------------------------------------------------------------------------	--------------------------------------------------------------------------	-------------------------------------------------------------------------	-----------------------------------------------------------------------------------

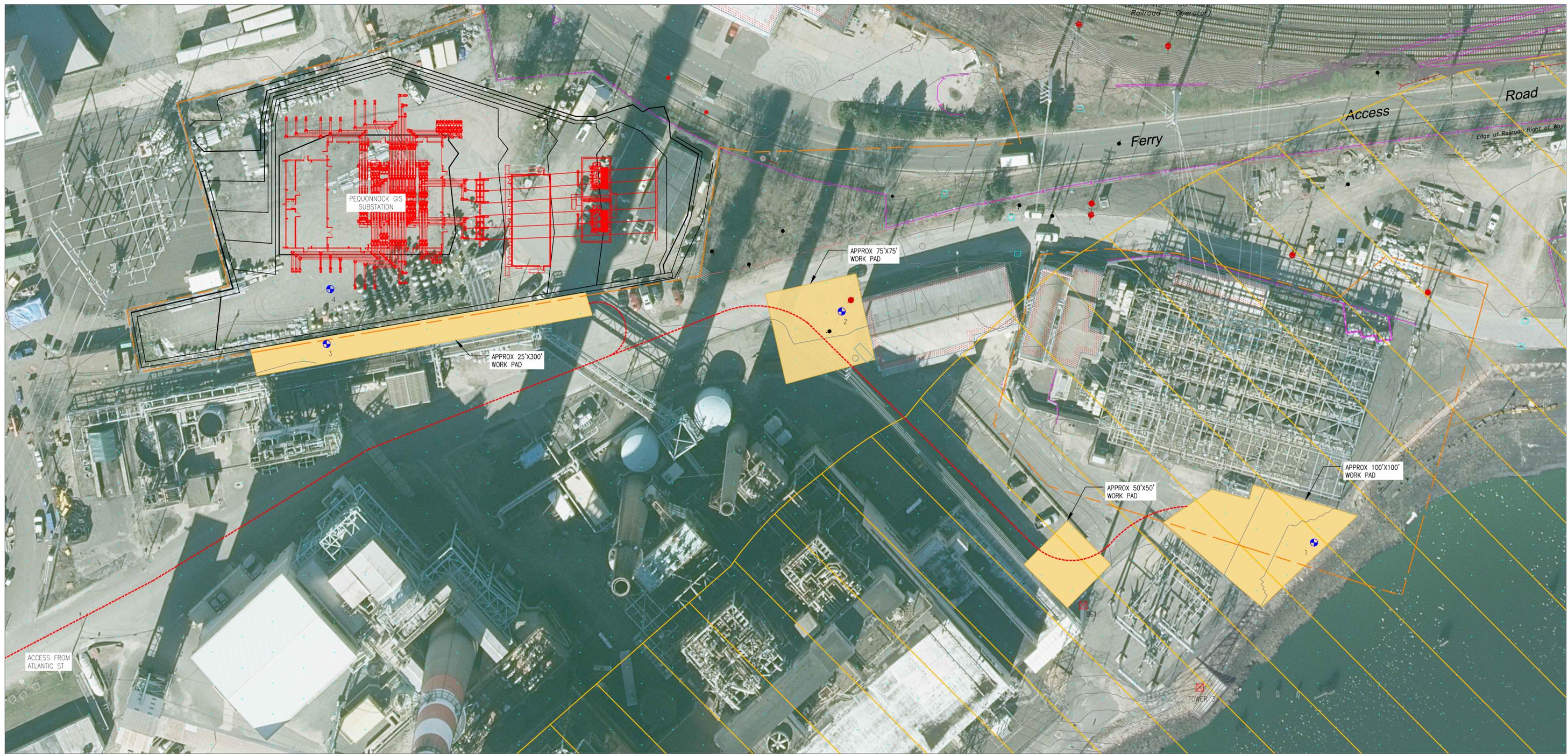
PROFILE	SURVEYED	DATE
NOTEBOOK NO.	REVIEWED	
	NOTES REDUCED	

PROFILE SCALE:  
HORIZ. 1" = 100'  
VERT. 1" = 20'



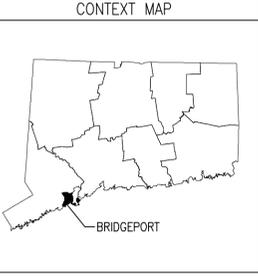
PRELIMINARY  
NOT TO BE USED FOR CONSTRUCTION

<p>BLACK &amp; VEATCH 11401 LAMAR AVE OVERLAND PARK, KS 66211 913-459-2000</p>	UNDERBUILD CONSTRUCTION TYPE  TENSION  DESIGN TEMP.		NEUTRAL CONDUCTOR TYPE  TENSION  DESIGN TEMP.		OHSW TYPE AFL DNO-11469 72 FIBER OPGW  TENSION SEE DWG 24208-010  DESIGN TEMP. NESC HEAVY INITIAL		CONDUCTOR TYPE BUNDLED 1272 KCMIL ACSR "BITTERN"  TENSION SEE DWG 24208-010  DESIGN TEMP. NESC HEAVY INITIAL		YR. CONST. W/O 400978  NOTES: NOTES	PE STAMP	AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY AND TRADE SECRET INFORMATION PROPERTY OF AVANGRID		115 KV LINE/PSEG PSEG UNIT #3 TO PEQUONNOCK PLAN & PROFILE BRIDGEPORT																																				
	<table border="1"> <tr> <td>0-06</td> <td>ISSUE FOR 70% UI REVIEW</td> <td>06/30/2020</td> <td>MEH</td> <td>DLC</td> <td>MAP</td> </tr> <tr> <td>0-0A</td> <td>ISSUE FOR 30% UI REVIEW</td> <td>03/08/2019</td> <td>MEH</td> <td>MAP</td> <td>MAP</td> </tr> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> <th>CK</th> <th>APP</th> </tr> </table>	0-06	ISSUE FOR 70% UI REVIEW	06/30/2020	MEH	DLC	MAP	0-0A	ISSUE FOR 30% UI REVIEW	03/08/2019	MEH	MAP	MAP	REV	DESCRIPTION	DATE	BY	CK	APP	<table border="1"> <tr> <th>BY</th> <th>MILE</th> <th>FILE</th> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	BY	MILE	FILE				<table border="1"> <tr> <th>0-0</th> <th>PEQUONNOCK REBUILD</th> <th>06/2020</th> <th>MEH/BV</th> <th>DLC/BV</th> <th>MAP/BV</th> <th>CK</th> <th>APP</th> <th>DATE</th> </tr> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> <th>CK</th> <th>APP</th> <th>DATE</th> <td></td> <td></td> </tr> </table>	0-0	PEQUONNOCK REBUILD	06/2020	MEH/BV	DLC/BV	MAP/BV	CK	APP	DATE	REV	DESCRIPTION	DATE	BY	CK	APP	DATE			<table border="1"> <tr> <th>NO.</th> <th>REV</th> </tr> <tr> <td>24208-100</td> <td>0-0B</td> </tr> </table>	NO.	REV	24208-100
0-06	ISSUE FOR 70% UI REVIEW	06/30/2020	MEH	DLC	MAP																																												
0-0A	ISSUE FOR 30% UI REVIEW	03/08/2019	MEH	MAP	MAP																																												
REV	DESCRIPTION	DATE	BY	CK	APP																																												
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0-0	PEQUONNOCK REBUILD	06/2020	MEH/BV	DLC/BV	MAP/BV	CK	APP	DATE																																									
REV	DESCRIPTION	DATE	BY	CK	APP	DATE																																											
NO.	REV																																																
24208-100	0-0B																																																



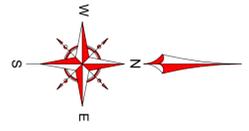
REV	DESCRIPTION	DATE	BY	CK	APP
0-0A	ISSUED FOR 10% UI REVIEW	06/26/2019	MEHV		

LOGO  
**BLACK & VEATCH**  
*Building a world of difference*  
 ANS/D 7/8/2020



**LEGEND:**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li><span style="color: red;">- - - - -</span> ALL CONSTRUCTION TRAFFIC</li> <li><span style="color: blue;">- - - - -</span> TOWN LINE</li> <li><span style="color: orange;">- - - - -</span> UI PROPERTY LINE</li> <li><span style="color: yellow;">- - - - -</span> PROPERTY LINE</li> <li><span style="color: red;">- - - - -</span> RAILROAD EDGE OF RIGHT-OF-WAY</li> <li><span style="color: green;">- - - - -</span> EASEMENT</li> <li><span style="color: red;">●</span> DISTRIBUTION POLE</li> <li><span style="color: red;">⊠</span> EXISTING STRUCTURE</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: red;">-E-E-</span> UNDERGROUND ELECTRIC LINE</li> <li><span style="color: yellow;">-G-G-</span> GAS LINE</li> <li><span style="color: green;">-S-S-</span> SANITARY SEWER</li> <li><span style="color: cyan;">-SS-SS-</span> STORM SEWER</li> <li><span style="color: red;">-FO-FO-</span> FIBER OPTIC TELECOMMUNICATIONS LINE</li> <li><span style="color: blue;">-W-W-</span> WATER LINE</li> <li><span style="color: blue;">⊕</span> SURVEY CONTROL POINT</li> <li><span style="color: blue;">⊕</span> NEW STRUCTURE</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: red;">-CL-CL-</span> COASTAL JURISDICTION LINE</li> <li><span style="color: blue;">- - - - -</span> WATERCOURSE</li> <li><span style="color: purple;">- - - - -</span> LIMIT OF WETLANDS</li> <li><span style="color: yellow;">-MHW-MHW-</span> MEAN HIGH WATER</li> <li><span style="color: cyan;">- - - - -</span> FEMA 100 YEAR</li> <li><span style="color: purple;">[Wetlands Symbol]</span> WETLANDS/MARSH</li> <li><span style="color: cyan;">[Vernal Pool Symbol]</span> VERNAL POOL</li> </ul> | <ul style="list-style-type: none"> <li><span style="background-color: cyan; border: 1px solid black;">[Pattern]</span> FEMA SPECIAL FLOOD HAZARD AREAS</li> <li><span style="background-color: yellow; border: 1px solid black;">[Pattern]</span> NATURAL DIVERSITY DATABASE (NDDb) AREA</li> <li><span style="background-color: green; border: 1px solid black;">[Pattern]</span> EXISTING ACCESS ROAD</li> <li><span style="background-color: orange; border: 1px solid black;">[Pattern]</span> TEMPORARY CONSTRUCTION AREA (TIMBER MATTING AS REQUIRED)</li> <li><span style="background-color: red; border: 1px solid black;">[Pattern]</span> REMOVAL ONLY CONSTRUCTION AREA (TIMBER MATTING AS REQUIRED)</li> <li><span style="background-color: red; border: 1px solid black;">[Pattern]</span> VEGETATION CLEARING AREA (SEE NOTE 1)</li> <li><span style="background-color: red; border: 1px solid black;">[Pattern]</span> RETAINING WALL</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

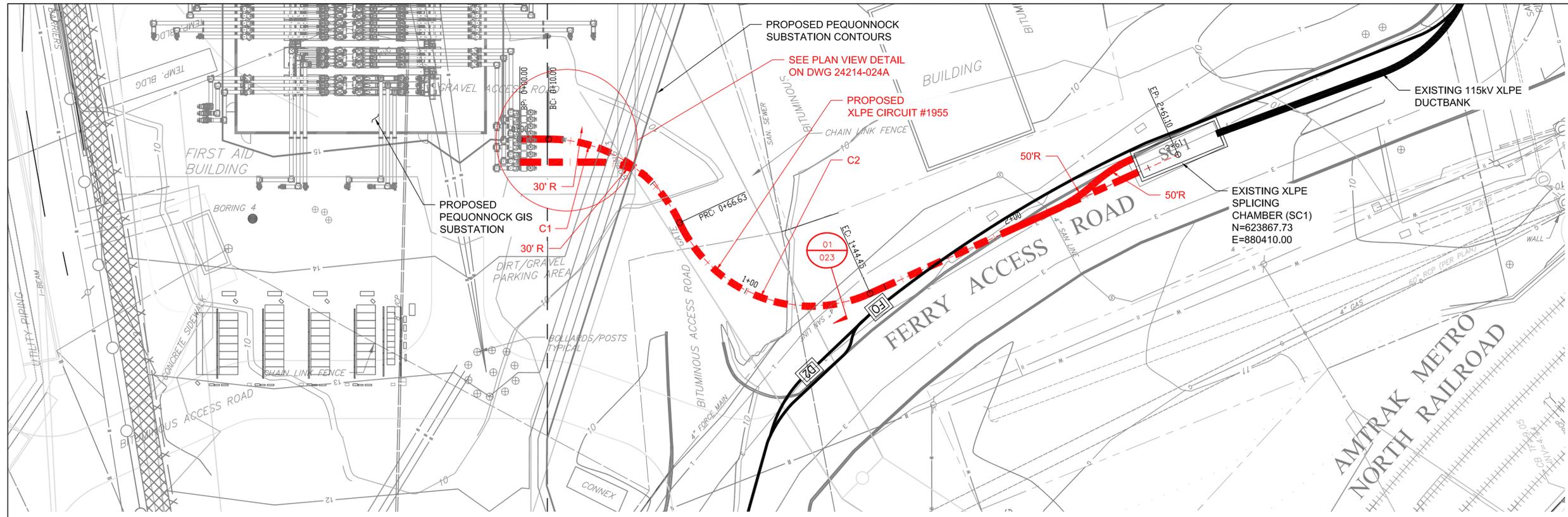


REFERENCE DRAWINGS:  
 DRAWING INDEX: 24208-010

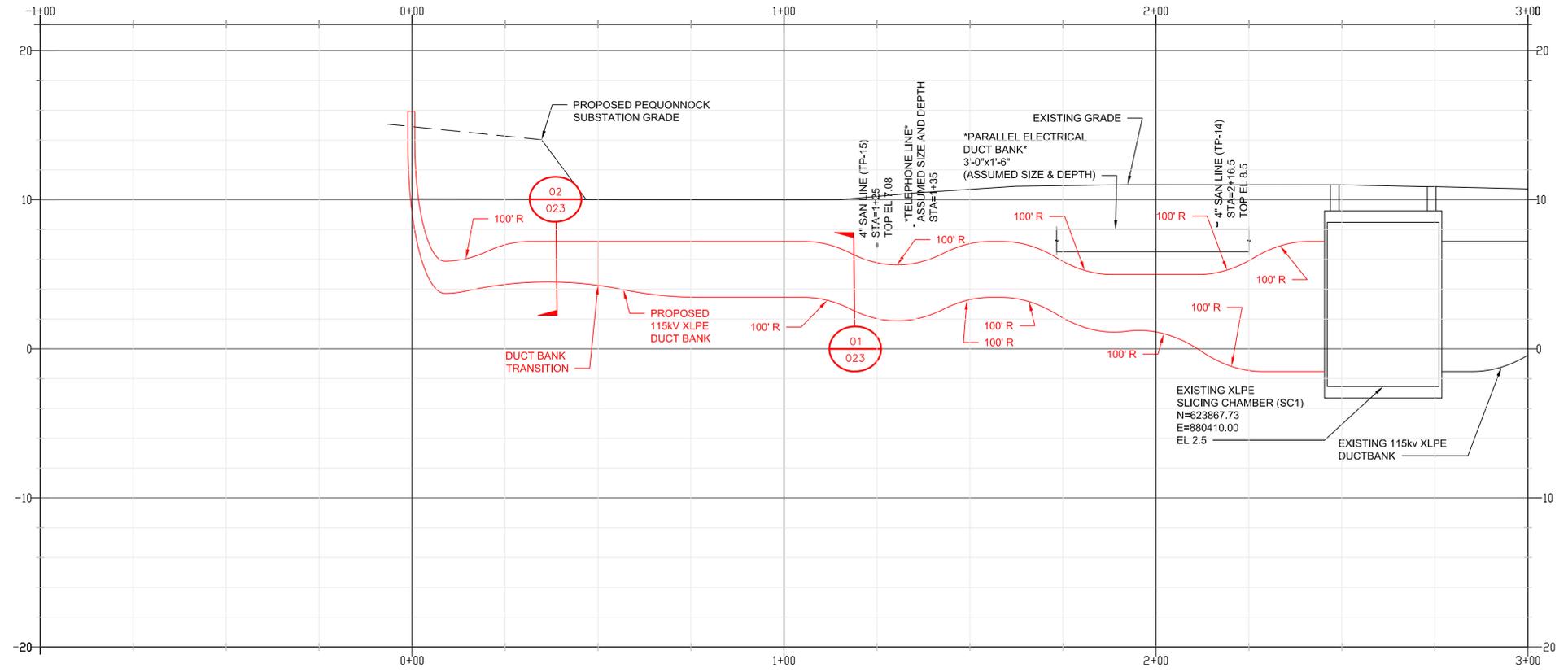
**NEW DRAWING**

**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

PE STAMP		AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID				<b>PEQUONNOCK TO PSEG UNIT #3 GENERAL ACCESS PLAN</b> PEQUONNOCK TO TOWER 3	
BY	MEHV	SCALE:	1"=40'	FILE:	24208-801.dwg	PSEG UNIT #3 BRIDGEPORT, CT	
CK	DLCBV	NO.					
APP	MAPBV	NO.					
REV	DESCRIPTION	DATE	BY	CK	APP	DATE	24208-801-0-0A



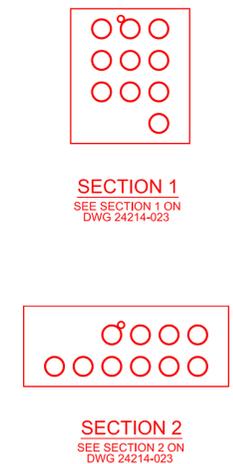
PLAN VIEW



PROFILE VIEW

CURVE TABLE												
CURVE #	BEGIN CURVE	END CURVE	LENGTH	ANGLE	RADIUS	TANGENT	P.I. NORTHING	P.I. EASTING	B.C. NORTHING	B.C. EASTING	E.C. NORTHING	E.C. EASTING
C1	STA 0+10.00	STA 0+66.63	56.63	64° 53' 47"	50.00	31.790	623215.06	880019.63	623215.06	880051.42	623243.85	880006.14
C2	STA 1+44.45	STA 1+44.45	77.82	89° 10' 47"	50.00	49.289	623288.48	879985.23	623243.85	880006.14	623268.21	879940.30

- NOTES**
1. FOR GENERAL NOTES SEE DWG 24214-005.
  2. UTILITIES LABEL WITH "\*" DID NOT HAVE SUFFICIENT POT HOLE INFORMATION. SIZE AND DEPTH ARE ASSUMED.
  3. VERTICAL BENDS SHALL BE 400'R UNLESS NOTED OTHERWISE.
  4. SEE DWG 24214-023 FOR TRENCH SECTION DETAILS.
  5. FOR RISER PIPE INTERFACE SEE DWG 24214-024A.
  6. ELEVATIONS ON UTILITY CALLOUTS ARE TO TOP OF UTILITY.



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

**INSTALL** SEQUENCE # XXXXXX

**LEGEND**

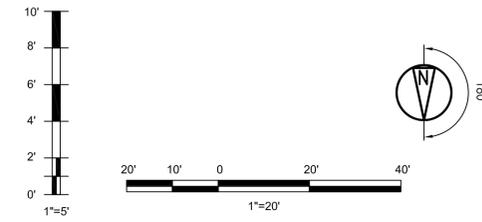
- EXISTING XLPE CIRCUIT #1955
- XLPE CIRCUIT #1955

**REFERENCE DRAWINGS**

- 24214-000 - COVER SHEET
- 24214-005 - LEGEND, ABBREVIATION & GENERAL NOTES
- 24214-130 - XLPE CIRCUIT #1955 PLAN & PROFILE
- 24214-800 - PRIMARY SITE STANDARD LAYOUT
- 24214-022 - XLPE SPLICE MANHOLE
- 24214-023 - TRENCH SECTIONS & DETAILS

NO.	DATE	DESCRIPTION	BY	CK	APP.
001	04/03/2020	ISSUED FOR 10% MILE REVIEW	LSM	LSM	BRH
002	03/08/2020	ISSUED FOR 30% MILE REVIEW	KCM	KCM	BRH
003	03/08/2020	ISSUED FOR 30% MILE REVIEW	LSM	LSM	BRH

ANSI D 5/18/2020  
BLACK & VEATCH  
Engineering & Construction



PE STAMP

AVANGRID ENGINEERING  
CONFIDENTIAL, PROPRIETARY and  
TRADE SECRET INFORMATION  
Property of AVANGRID

UI  
AVANGRID

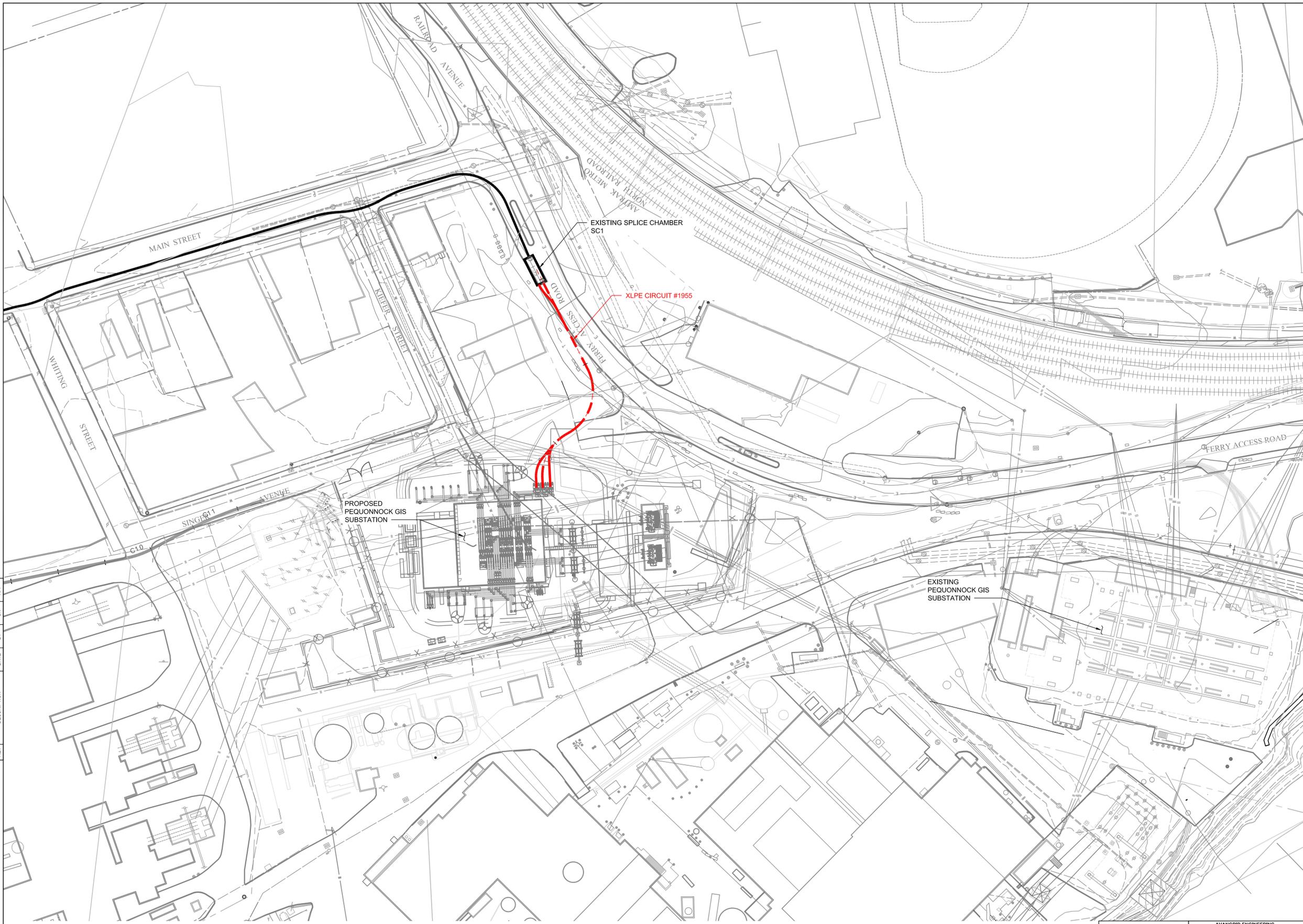
**115kV UG TRANSMISSION LINE  
XLPE CIRCUIT #1955  
PLAN & PROFILE**

PEQUONNOCK BRIDGEPORT

BY	KDMBV	SCALE	1"=20'	FILE	24214-130.dwg	REV	
CK	LSMBV	NO.					
APP	BRHVB						
DATE	02/22/2019						

REV	DESCRIPTION	DATE	BY	CK	APP
0-0	PEQUONNOCK REBUILD	02/2020	KDMBV	LSMBV	BRHVB
0-1					

24214-130 0-0B



**NOTES**

1. FOR GENERAL NOTES SEE DWG 24214-005.

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

INSTALL

SEQUENCE # XXXXXX

**LEGEND**

- EXISTING XLPE CIRCUIT #1955
- XLPE CIRCUIT #1955

**REFERENCE DRAWINGS**

- 24214-000 - COVER SHEET
- 24214-005 - LEGEND, ABBREVIATION & GENERAL NOTES
- 24214-130 - XLPE CIRCUIT #1955 PLAN & PROFILE
- 24214-900 - CABLE SHEATH BONDING DETAILS
- 24214-022 - XLPE SPLICE MANHOLE
- 24214-023 - TRENCH SECTIONS & DETAILS

**115kV UG TRANSMISSION LINE  
ROUTE MAP**

PRIMARY SITE STANDARD LAYOUT

PEQUONNOCK BRIDGEPORT

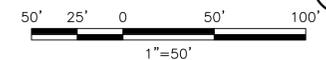
AVANGRID ENGINEERING  
CONFIDENTIAL, PROPRIETARY and  
TRADE SECRET INFORMATION  
Property of AVANGRID



PE STAMP

BY: KDMBV	SCALE: 1"=50'	FILE: 24214-800.dwg	REV
CK: LSMBV			
BRHVB			
APP: BRHVB			
DATE: 02/22/2020			

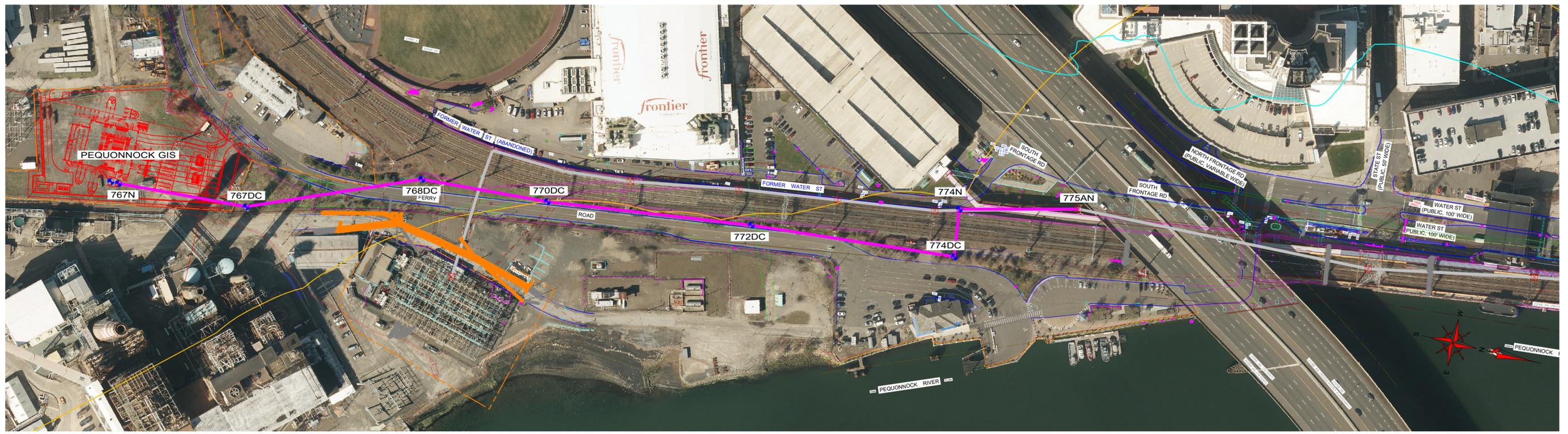
0-0	PEQUONNOCK REBUILD	02/2020	KDMBV	LSMBV	BRHVB	APP	BRHVB	NO.	24214-800	0-0B
REV	DESCRIPTION	DATE	BY	CK	APP	DATE				



REV	DATE	BY	CK	APP	DESCRIPTION
0-0	02/22/2020	KDMBV	LSMBV	BRHVB	ISSUED FOR 10% IN REVIEW
0-0A	03/08/2020	KDMBV	LSMBV	BRHVB	ISSUED FOR 30% IN REVIEW

ANSI D 5/19/2020

BLACK & VEATCH  
Engineering & World Construction

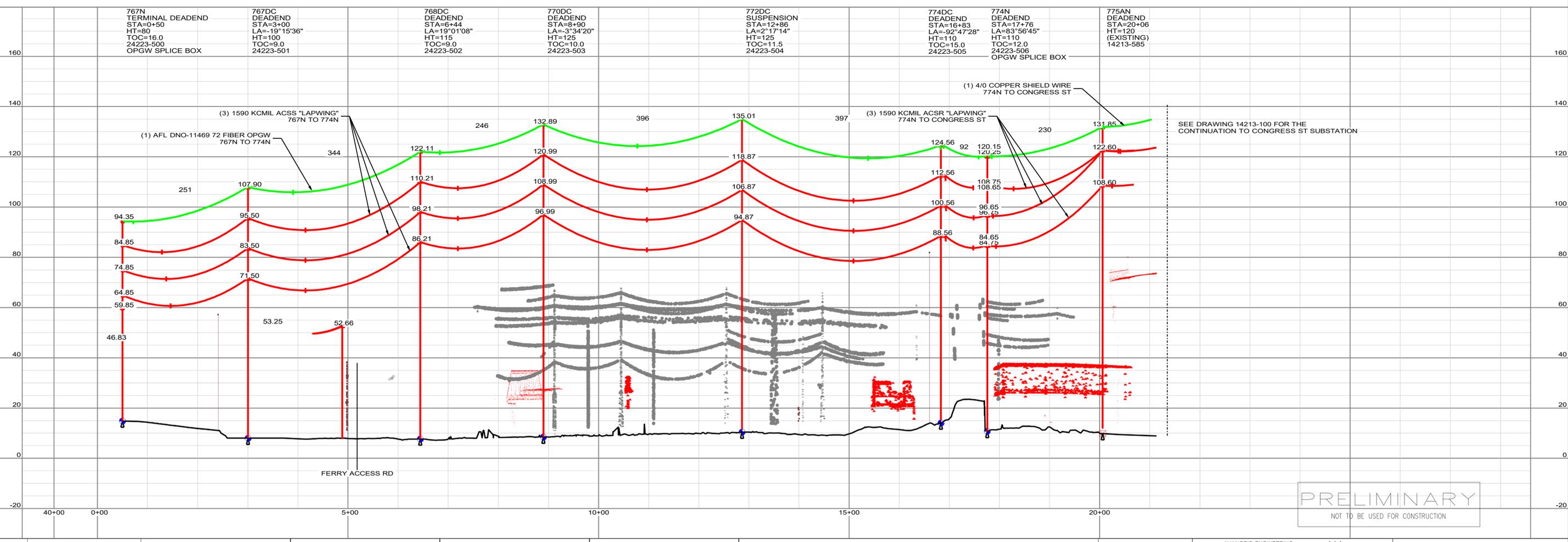


PLAN	DATE
SURVEYED	
REVIEWED	
NOTEBOOK NO.	
ROW CHD	

PLAN SCALE:  
1" = 100'

PROFILE	DATE
SURVEYED	
REVIEWED	
NOTEBOOK NO.	
NOTES REDUCED	

PROFILE SCALE:  
HORIZ. 1" = 100'  
VERT. 1" = 20'



<b>BLACK &amp; VEATCH</b> Building a world of difference		BLACK & VEATCH 11401 LAMAR AVE OVERLAND PARK, KS 66211 913-459-2000	
0-06	ISSUE FOR 70% UI REVIEW	06/30/2020	MEH DCL MAP
0-0A	ISSUE FOR 30% UI REVIEW	03/08/2019	MEH MAP
REV	DESCRIPTION	DATE	BY CK APP

UNDERBUILD CONSTRUCTION TYPE	NEUTRAL CONDUCTOR TYPE
TENSION	TENSION
DESIGN TEMP.	DESIGN TEMP.

OHSW TYPE	CONDUCTOR TYPE
AFL DNO-11469 72 FIBER OPGW	1590 KCMIL ACSR "LAPWING"
TENSION	TENSION
SEE DWG 24223-002	SEE DWG 24223-002
DESIGN TEMP.	DESIGN TEMP.
NESC HEAVY INITIAL	NESC HEAVY INITIAL

YR. CONST.	W/O 400978
NOTES:	
1. TOP 6 FEET OF COMMUNICATION WOOD POLE NEAR 774DC SHALL BE REMOVED PRIOR TO ENERGIZATION.	

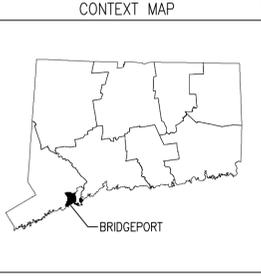
PE STAMP	
AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY AND TRADE SECRET INFORMATION PROPERTY OF AVANGRID	UI AVANGRID
115 KV LINE/8809A PEQUONNOCK TO CONGRESS PLAN & PROFILE BRIDGEPORT	
BY	FILE
CK	NO.
APP	DATE
REV	DESCRIPTION
DATE	BY CK APP
DATE	DATE
24223-100	0-0B

PRELIMINARY  
NOT TO BE USED FOR CONSTRUCTION

SEE DRAWING 14213-100 FOR THE CONTINUATION TO CONGRESS ST SUBSTATION

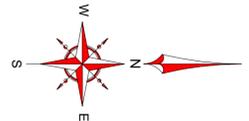


REV	DESCRIPTION	DATE	BY	CK	APP
0-0A	ISSUED FOR TOWN REVIEW	06/26/2019	MEHV		



**LEGEND:**

- ALL CONSTRUCTION TRAFFIC
- TOWN LINE
- UI PROPERTY LINE
- PROPERTY LINE
- RAILROAD EDGE OF RIGHT-OF-WAY
- EASEMENT
- DISTRIBUTION POLE
- ⊠ EXISTING STRUCTURE
- UNDERGROUND ELECTRIC LINE
- GAS LINE
- SANITARY SEWER
- STORM SEWER
- FIBER OPTIC TELECOMMUNICATIONS LINE
- WATER LINE
- ▲ SURVEY CONTROL POINT
- NEW STRUCTURE
- COASTAL JURISDICTION LINE
- WATERCOURSE
- LIMIT OF WETLANDS
- MEAN HIGH WATER
- FEMA 100 YEAR
- WETLANDS/MARSH
- VERNAL POOL
- FEMA SPECIAL FLOOD HAZARD AREAS
- NATURAL DIVERSITY DATABASE (NDDB) AREA
- EXISTING ACCESS ROAD
- TEMPORARY CONSTRUCTION AREA (TIMBER MATTING AS REQUIRED)
- REMOVAL ONLY CONSTRUCTION AREA (TIMBER MATTING AS REQUIRED)
- VEGETATION CLEARING AREA (SEE NOTE 1)
- RETAINING WALL



**NOTES:**  
 1. TREES WITH A DIAMETER GREATER THAN 6 INCHES SHALL NOT BE REMOVED. TREES TALLER THAN 30 FEET FROM GRADE SHALL BE TRIMMED TO 30 FEET ABOVE GRADE.

**REFERENCE DRAWINGS:**

DRAWING INDEX: 24223-002

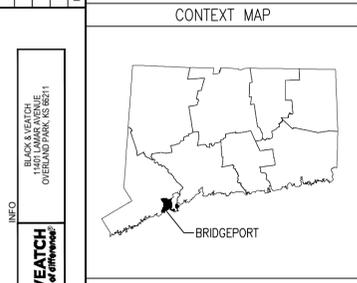
**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

PE STAMP		AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID		UI AVANGRID		PEQUONNOCK REBUILD GENERAL ACCESS PLAN	
BY: MEHV	SCALE: T=40'	8809A/8909B/1130/91001	BRIDGEPORT, CT				
CK: DLGBV	NO.	FILE: 24223-801-802.dwg					
APP: MAPBV							
REV: DATE	DESCRIPTION	DATE	BY	CK	APP	DATE	REV
0-0	PEQUONNOCK REBUILD	06/2019	MEHV	DLGBV	MAPBV	03/08/2019	0-0A

INFO: BLACK & VEATCH CONSULTANTS, INC. ANS/D 7/10/2020



REV	DESCRIPTION	DATE	BY	CK	APP
0-0A	ISSUED FOR 10% UI REVIEW	06/26/2019	MEHV		



**LEGEND:**

ALL CONSTRUCTION TRAFFIC	UNDERGROUND ELECTRIC LINE	COASTAL JURISDICTION LINE	FEMA SPECIAL FLOOD HAZARD AREAS
TOWN LINE	GAS LINE	WATERCOURSE	NATURAL DIVERSITY DATABASE (NDDb) AREA
UI PROPERTY LINE	SANITARY SEWER	LIMIT OF WETLANDS	EXISTING ACCESS ROAD
PROPERTY LINE	STORM SEWER	MEAN HIGH WATER	TEMPORARY CONSTRUCTION AREA (TIMBER MATTING AS REQUIRED)
RAILROAD EDGE OF RIGHT-OF-WAY	FIBER OPTIC TELECOMMUNICATIONS LINE	FEMA 100 YEAR	REMOVAL ONLY CONSTRUCTION AREA (TIMBER MATTING AS REQUIRED)
EASEMENT	WATER LINE	WETLANDS/MARSH	VEGETATION CLEARING AREA (SEE NOTE 1)
DISTRIBUTION POLE	SURVEY CONTROL POINT	VERNAL POOL	RETAINING WALL
EXISTING STRUCTURE	NEW STRUCTURE		

**NOTES:**  
 1. TREES WITH A DIAMETER GREATER THAN 6 INCHES SHALL NOT BE REMOVED. TREES TALLER THAN 30 FEET FROM GRADE SHALL BE TRIMMED TO 30 FEET ABOVE GRADE.

**REFERENCE DRAWINGS:**  
 DRAWING INDEX: 24223-002

**NEW DRAWING** **PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

PE STAMP		<b>AVANGRID ENGINEERING</b> CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID				<b>PEQUONNOCK TO CONGRESS GENERAL ACCESS PLAN</b> 770DC TO 775AN	
8809A		BRIDGEPORT, CT		BY: MEHVBY		SCALE: 1"=40'	
0-0 PEQUONNOCK REBUILD		06/2019		MEHVBY		FILE: 24223-801_802.dwg	
REV		DESCRIPTION		DATE		REV	
				03/08/2019		24223-802 0-0A	

ANSI D 7/10/2020





PLAN	SURVEYED	DATE
NOTEBOOK NO.	REVIEWED	BY
	ROW CHD	

PLAN SCALE:  
1" = 100'

PROFILE	SURVEYED	DATE
NOTEBOOK NO.	REVIEWED	BY
	NOTES REDUCED	

PROFILE SCALE:  
HORIZ. 1" = 100'  
VERT. 1" = 20'

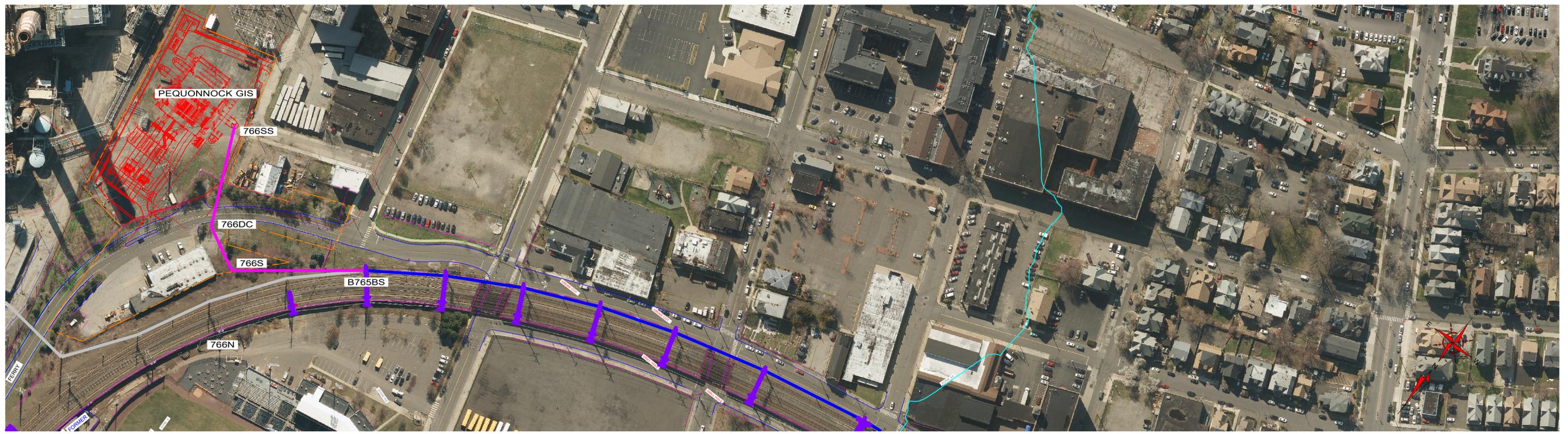


**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

<b>BLACK &amp; VEATCH</b> Building a world of difference® 11401 LAMAR AVE OVERLAND PARK, KS 66211 913-459-2000	UNDERBUILD CONSTRUCTION TYPE  TENSION  DESIGN TEMP.	NEUTRAL CONDUCTOR TYPE  TENSION  DESIGN TEMP.	OHSW TYPE AFL DNO-11469 72 FIBER OPGW  TENSION SEE DWG 24225-002  DESIGN TEMP. NESC HEAVY INITIAL	CONDUCTOR TYPE 1590 KCMIL ACSS "LAPWING"  TENSION SEE DWG 24225-002  DESIGN TEMP. NESC HEAVY INITIAL	YR. CONST. W/O 400978  NOTES: 1. AT EXISTING STRUCTURE B765CN, THE OPGW ATTACHMENT SHALL BE CHANGED TO A DOUBLE DEADEND.	PE STAMP  AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY AND TRADE SECRET INFORMATION PROPERTY OF AVANGRID 	115 KV LINE/1130 PEQUONNOCK TO COMPO  PLAN & PROFILE BRIDGEPORT																																
								<table border="1"> <tr> <td>0-06</td> <td>ISSUE FOR 70% UI REVIEW</td> <td>06/30/2020</td> <td>MEH</td> <td>DLC</td> <td>MAP</td> </tr> <tr> <td>0-0A</td> <td>ISSUE FOR 30% UI REVIEW</td> <td>03/08/2019</td> <td>MEH</td> <td>MAP</td> <td></td> </tr> <tr> <td>REV</td> <td>DESCRIPTION</td> <td>DATE</td> <td>BY</td> <td>CK</td> <td>APP</td> </tr> </table>	0-06	ISSUE FOR 70% UI REVIEW	06/30/2020	MEH	DLC	MAP	0-0A	ISSUE FOR 30% UI REVIEW	03/08/2019	MEH	MAP		REV	DESCRIPTION	DATE	BY	CK	APP	<table border="1"> <tr> <td>BY</td> <td>DATE</td> <td>FILE</td> <td>NO.</td> <td>REV</td> </tr> <tr> <td>CK</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>APP</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DATE</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	BY	DATE	FILE	NO.	REV	CK					APP	
0-06	ISSUE FOR 70% UI REVIEW	06/30/2020	MEH	DLC	MAP																																		
0-0A	ISSUE FOR 30% UI REVIEW	03/08/2019	MEH	MAP																																			
REV	DESCRIPTION	DATE	BY	CK	APP																																		
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APP																																							
DATE																																							

ANSI D

24225-100 0-0B



PLAN	SURVEYED	DATE
NOTEBOOK NO.	REVIEWED	
	ROW CHGD	

PLAN SCALE:  
1" = 100'

PROFILE	SURVEYED	DATE
NOTEBOOK NO.	REVIEWED	
	NOTES REDUCED	

PROFILE SCALE:  
HORZ. 1" = 100'  
VERT. 1" = 20'

766SS TERMINAL DEADEND STA=0+00 HT=80 TOC=16.0 24226-500 OPGW SLPICE BOX	766DC DEADEND STA=2+00 LA=-38°16'52" HT=105 TOC=12.0 24226-501	766S DEADEND STA=2+94 LA=-64°53'38" HT=85 TOC=13.0 24226-502
--------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------	--------------------------------------------------------------------------------



**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

<b>BLACK &amp; VEATCH</b> Building a world of difference		BLACK & VEATCH 11401 LAMAR AVE OVERLAND PARK, KS 66211 913-459-2000	
0-06	ISSUE FOR 70% UI REVIEW	06/30/2020	MEH DCLC MAP
0-0A	ISSUE FOR 30% UI REVIEW	03/08/2019	MEH MAP
REV	DESCRIPTION	DATE	BY CK APP

UNDERBUILD CONSTRUCTION TYPE	NEUTRAL CONDUCTOR TYPE
TENSION	TENSION
DESIGN TEMP.	DESIGN TEMP.

OHSW TYPE	CONDUCTOR TYPE
AFL DNO-11469 72 FIBER OPGW	1590 KCMIL ACSS "LAPWING"
TENSION	TENSION
SEE DWG 24226-002	SEE DWG 24226-002
DESIGN TEMP.	DESIGN TEMP.
NESC HEAVY INITIAL	NESC HEAVY INITIAL

YR. CONST.	W/O 400978
NOTES:	
1. OPGW CROSSES TRACK TO 766N AND SHALL BE COILED AT THE SPLICE BOX FOR FUTURE CONNECTION.	

AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY AND TRADE SECRET INFORMATION PROPERTY OF AVANGRID		<b>UI</b> AVANGRID	
BY	DATE	CK	APP

<b>115 KV LINE/91001-1</b>	
PEQUONNOCK TO ASH CREEK	
BRIDGEPORT	
REV	DESCRIPTION
0-0	PEQUONNOCK REBUILD
0-0A	ISSUE FOR 30% UI REVIEW
DATE	BY
06/30/2020	MEH
03/08/2019	MEH
DATE	BY

## **APPENDIX B**

### **EROSION AND SEDIMENTATION CONTROL PLAN**

**EROSION & SEDIMENT CONTROL NOTES**

1. CONSTRUCTION STANDARDS - CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT EDITION OF THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (CT DEP BULLETIN 34). ALL MEASURES SHALL BE MAINTAINED AND UPGRADED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION.
2. PLAN IMPLEMENTATION - IMPLEMENT THIS EROSION AND SEDIMENT CONTROL PLAN. THIS IMPLEMENTATION INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES UNTIL PERMANENT STABILIZATION IS ACHIEVED. INFORMING ALL SUBCONTRACTORS OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, AND NOTIFYING THE PROPER MUNICIPAL AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY, THE OWNER SHALL BE RESPONSIBLE FOR CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN TO THE NEW OWNER IF THE TITLE OF THE LAND IS TRANSFERRED PRIOR TO ACHIEVING PERMANENT STABILIZATION.
3. INSTALLATION SCHEDULE - INSTALL THE CONSTRUCTION ENTRANCE BEFORE CONSTRUCTION TRAFFIC INTO AND OUT OF THE PROJECT AREA BEGINS. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO STUMP REMOVAL AND CONSTRUCTION. INSTALL ADDITIONAL CONTROL MEASURES DURING THE CONSTRUCTION PERIOD, IF DEEMED NECESSARY BY THE OWNER, HIS AGENTS OR AGENTS OF THE MUNICIPALITY.
4. FUGITIVE DUST - CONTROL FUGITIVE DUST USING WATER SPRAYS OR CALCIUM CHLORIDE ON SOIL SURFACES, SWEEPING PAVED AREAS, TEMPORARY WINDBREAKS OR NON-ASPHALTIC SOIL TAGGERS.
5. HAY BALE LIFE SPAN - INSTALL HAY BALES WHERE PROTECTION AND EFFECTIVENESS IS REQUIRED FOR LESS THAN 90 DAYS. OTHERWISE, INSTALL SILT FENCE.
6. CATCH BASINS - PROTECT CATCH BASINS WITH PROPER CONTROLS THROUGHOUT THE CONSTRUCTION PERIOD UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
7. STOCKPILES - ENCLOSE STOCKPILES OF ERODIBLE SOIL WITH A HAY BALE OR SILT FENCE BARRIER. THE SIDE SLOPES OF ERODIBLE STOCKPILED MATERIAL SHALL BE NO STEEPER THAN 2:1. STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE FORMED.
8. TOE OF SLOPE - ESTABLISH AN EROSION CONTROL BARRIER (SILT FENCE OR HAY BALE BARRIER) APPROXIMATELY 5 TO 10 FEET FROM THE PROPOSED TOE OF THE CUT OR FILL AREA PRIOR TO BEGINNING EARTHWORK.
9. SEDIMENT REMOVAL - SEDIMENT REACHING 1/2 THE HEIGHT OF THE EROSION CONTROL BARRIER SHALL BE REMOVED. REMOVE AND DISPOSE OF SEDIMENT IN A MANNER CONSISTENT WITH THE INTENT OF THE PLAN.
10. SOIL STABILIZATION SCHEDULE - APPLY PERMANENT SOIL STABILIZATION MEASURES TO ALL GRADED AREAS WITHIN 7 DAYS OF ESTABLISHING FINAL GRADE. APPLY TEMPORARY SOIL STABILIZATION MEASURES IF FINAL GRADING IS TO BE DELAYED MORE THAN 30 DAYS.
11. TEMPORARY SEEDING - TEMPORARILY SEED ERODIBLE SOILS THAT WILL BE EXPOSED GREATER THAN 1 BUT LESS THAN 12 MONTHS WITHIN THE FIRST 7 DAYS OF SUSPENDING GRADING OPERATIONS. APPLY LIME AT A RATE OF 80 LBS/1000 SQ. FT. APPLY 10-10-10 FERTILIZER AT A RATE OF 7 1/2 LBS/1000 SQ. FT. APPLY PERENNIAL RYE GRASS AT A RATE OF 2 LBS/1000 SQ. FT. TO A DEPTH OF 1/2 INCH. OPTIMUM SEEDING DATES ARE MARCH 15 TO JULY 1 AND AUGUST 1 TO OCTOBER 15. MULCH FOR SEED APPLIED WITHIN THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 80%-90% SOIL COVERAGE. MULCH FOR SEED APPLIED OUTSIDE OF THE OPTIMUM SEEDING DATES SHALL BE APPLIED EVENLY SUCH THAT IT PROVIDES 95%-100% COVERAGE.
12. PERMANENT SEEDING - SEED PERMANENT LAWN AREAS IN ACCORDANCE WITH THE SPECIFICATIONS.
13. INSPECTION - THE OWNER SHALL SECURE THE SERVICES OF A SOIL SCIENTIST OR PROFESSIONAL ENGINEER TO VERIFY IN THE FIELD THAT THE CONTROLS REQUIRED BY THIS PLAN ARE PROPERLY INSTALLED AND MAINTAINED. THESE INSPECTIONS SHALL BE NOT LESS FREQUENTLY THAN WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM HAVING A RAINFALL AMOUNT OF 0.1 INCH OR GREATER. FOLLOWING THESE INSPECTIONS, A WRITTEN REPORT SHALL BE PREPARED, INFORMING THE OWNER OR HIS AGENT NOT LESS FREQUENTLY THAN WEEKLY AND THE MUNICIPALITY NOT LESS FREQUENTLY THAN MONTHLY OF OBSERVATIONS, MAINTENANCE, AND CORRECTIVE ACTIVITIES UNDERTAKEN.

**LEGEND**

- XX APPROXIMATE LOCATION OF PROPOSED MONOPOLE
- SF PROPOSED SILT FENCE BARRIER
- PROPOSED STRAW BALE/WATTLE BARRIER
- PROPOSED CONCRETE WASHOUT
- PROPOSED SILT-SACK CB PROTECTION
- SP-XX PROPOSED SAMPLING LOCATION

**PLAN IMPLEMENTATION NOTE**

PROPOSED EROSION & SEDIMENTATION CONTROL MEASURES SHOWN ON THIS PLAN DEPICT THE GENERAL INTENT OF CONTROL MEASURES AND THE TYPES OF CONTROLS TO BE UTILIZED. EXTENTS AND LOCATIONS OF CONTROL MEASURES SHALL BE ADJUSTED AS REQUIRED PER FIELD CONDITIONS TO EFFECTIVELY PREVENT THE TRANSPORT OF SEDIMENT FROM THE WORK AREAS. BARRIER CONTROLS SHALL BE PROVIDED ALONG ALL DOWNGRADIENT AREAS WHERE SOIL DISTURBANCE IS PRESENT. CONTROLS SHALL BE MAINTAINED AND ADJUSTED AS REQUIRED THROUGHOUT THE COURSE OF THE PROJECT.

**MAP REFERENCES**

EXISTING CONDITIONS SHOWN ON THE PLAN CONSIST OF PLANS OF RECORD FROM ACTUAL FIELD SURVEY AND FROM AERIAL IMAGERY OBTAINED FROM THE CT-ECO ONLINE IMAGERY DATABASE. THE PROPOSED MONOPOLE LOCATIONS, WORK PADS, AND CONSTRUCTION ENTRANCES ARE APPROXIMATE, AND SHALL NOT BE CONSIDERED TO BE THE ACTUAL LOCATION OR DIMENSIONS. REFER TO DESIGN PLANS BY OTHERS FOR ALL PROPOSED CONSTRUCTION.



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 LAYER STATE:

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SEAL	SEAL
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SCALE:

HORIZ. 1" = 50'
VERT.

DATUM:

HORIZ.
VERT.

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GRAPHIC SCALE

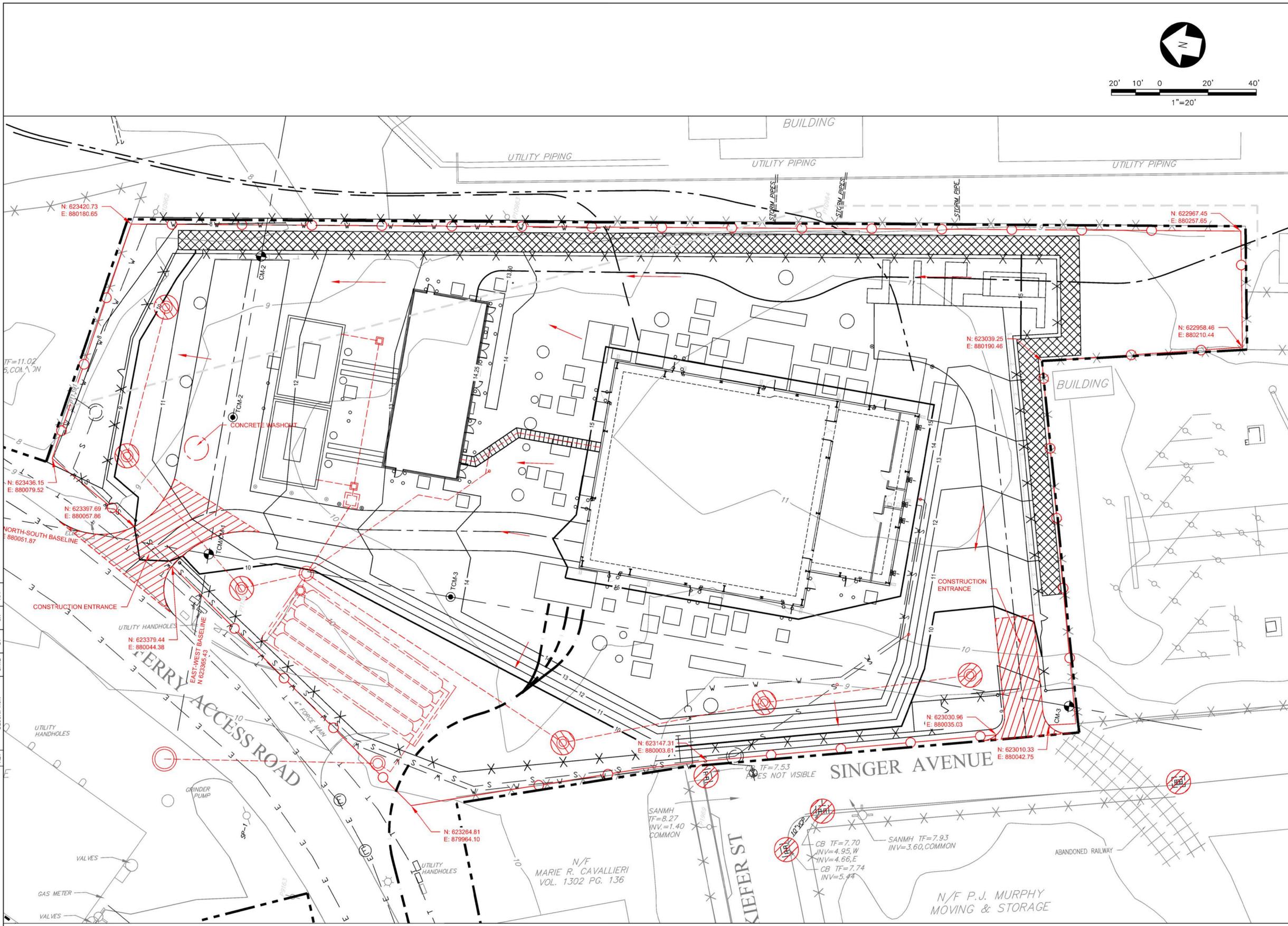
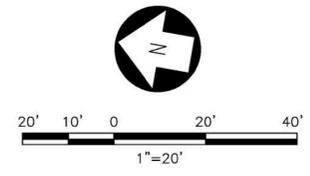
**FUSS & O'NEILL**  
 56 QUARRY ROAD  
 TRUMBULL, CONNECTICUT 06611  
 203.374.3748  
 www.fando.com

THE UNITED ILLUMINATING COMPANY  
**EROSION & SEDIMENTATION CONTROL PLAN**  
 NEW PEQUONNOCK SUBSTATION PROJECT  
 1 KIEFER STREET BRIDGEPORT, CONNECTICUT

PROJ. No. 20121454.B10  
 DATE: 1/22/2020  
**CE-101**

NOTES

- SEE DRAWING 25247-0003-005-002 FOR EROSION CONTROL DETAILS.
- ALL EROSION AND SEDIMENT CONTROL WORK, SILT FENCE, AND OTHER BMPs SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SITE EROSION CONTROL PLAN.
- LOCATION OF CONCRETE WASHOUT, SOIL STOCKPILE, AND PERMIT REQUIREMENTS TO BE CONFIRMED BY THE CONTRACTOR.
- IF TEMPORARY STOCKPILES ARE ESTABLISHED, SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER AND RUNOFF DIVERTED AROUND THE STOCKPILE, WHERE PRACTICAL.
- SUBSTATION AND CONSTRUCTION FACILITIES DISTURBED AREA IS 98,000 SF.
- BMPs SHALL BE INSPECTED ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.
- EROSION CONTROL FOR THE PROJECT PERIMETER (SILT FENCE) SHALL BE INSTALLED IN ADVANCE OF CLEARING AND GRUBBING ACTIVITIES.
- SEE STORMWATER POLLUTION PREVENTION PLAN DEVELOPED BY FUSS & O'NEILL FOR ADDITIONAL INFORMATION.



LEGEND

- PROPERTY LINE
- NEW CONTOUR
- EXISTING CONTOUR
- NEW SUBSTATION FENCE
- EXISTING FENCE
- EXISTING WATER
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING SEWER
- EXISTING TELEPHONE
- OVERHEAD ELECTRIC LINE
- EXISTING STRUCTURES
- NEW RETAINING WALL
- NEW STORMWATER SYSTEM
- FLOW INDICATOR
- SILT FENCE
- INLET PROTECTION
- TEMPORARY SURVEY CONTROL MONUMENT
- PERMANENT SURVEY CONTROL MONUMENT

REFERENCE DRAWINGS

DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
SITE PLAN	25247-0003-001 SH 001
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
RETAINING WALL DETAILS	25247-0003-004 SH 006
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

REV	DATE	BY	CHK	APP	DESCRIPTION
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D-02	12/20/2019	GOV	SMK	BRH	ISSUE FOR BID
D-03	08/07/2019	MRM	DHM	IMP	ISSUE FOR PERM REVIEW
D-04	08/11/2020	MRM	BRH	JDA	ISSUE FOR PERM REVIEW

ANSI D 610/2020

LOGO

BLACK & VEATCH

OVERLAND PARK, KS 66201

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

**INSTALL**

PE STAMP

AVANGRID ENGINEERING  
CONFIDENTIAL, PROPRIETARY and  
TRADE SECRET INFORMATION  
Property of AVANGRID

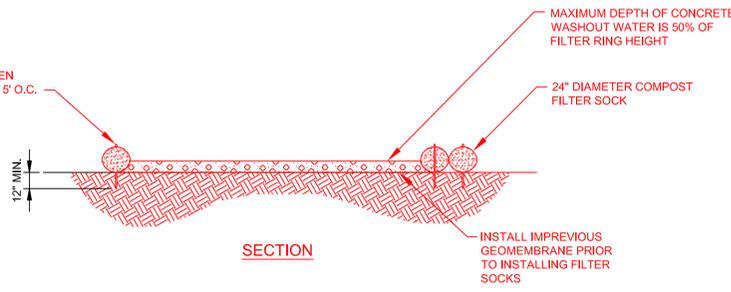
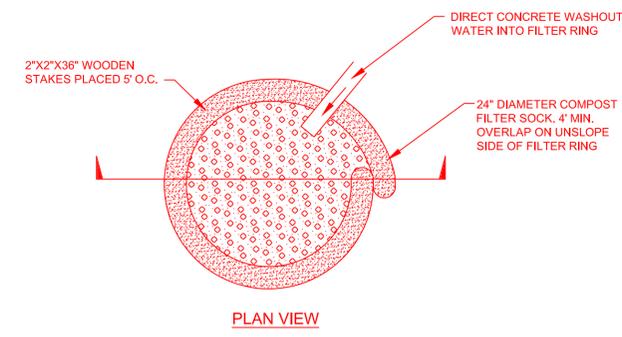


**EROSION CONTROL PLAN**  
SH 001 OF 003

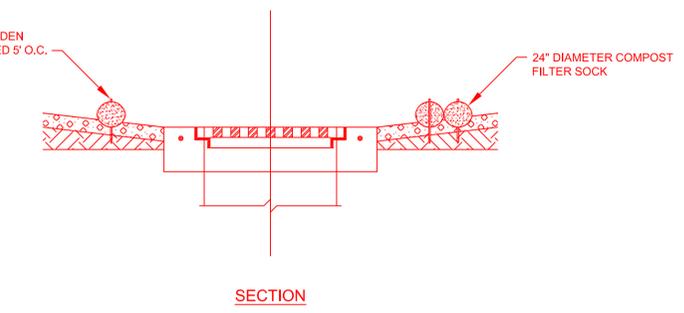
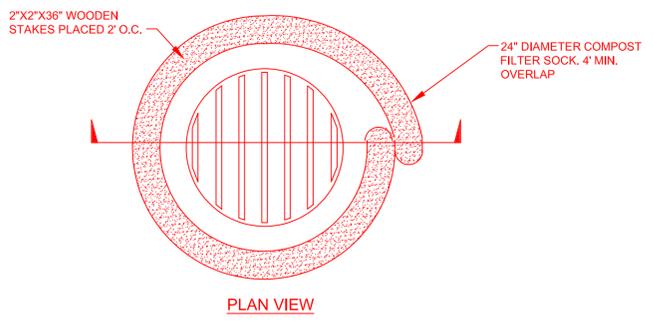
PEQUONNOCK		BRIDGEPORT	
BY	DATE	BY	DATE
D-01	03/23/19	MRM/BJ	01/28/2019
REV	DESCRIPTION	DATE	BY

**NOTES**

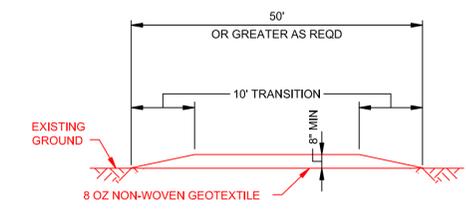
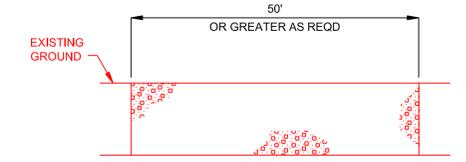
- COMPOST SOCK CONCRETE WASHOUT:**
1. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
  2. INSTALL CONCRETE WASHOUT ON FLAT GRADE FOR OPTIMAL PERFORMANCE.
  3. CONCRETE WASHOUT FACILITY SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.
  4. REMOVE AND DISPOSE OF SEDIMENT FROM WASHOUT FACILITY WHEN ACCUMULATED MATERIALS REACH 50% OF THE FACILITY'S CAPACITY.
  5. TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
  6. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
- STABILIZED CONSTRUCTION ENTRANCE:**
7. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY.
  8. DESIGN CRITERIA FOR STABILIZED CONSTRUCTION ENTRANCE:
    - A. STONE SIZE - USE ASSHTO #1
    - B. THICKNESS - NOT LESS THAN 8 INCHES
    - C. WIDTH - NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS OR EGRESS
    - D. LENGTH - 50 FEET MINIMUM WHERE THE SOILS ARE SANDS OR GRAVELS OR 100 FEET MINIMUM WHERE SOILS ARE CLAYS OR SILTS, EXCEPT WHERE THE TRAVELED LENGTH IS LESS THAN 50 OR 100 FEET, RESPECTIVELY. THESE LENGTHS MAY BE INCREASED WHERE FIELD CONDITIONS DICTATE.
    - E. GEOTEXTILE - SHALL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE.
    - F. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC RIGHT OF WAY.
  9. THE CONTRACTOR SHALL CUT AND REMOVE EXISTING ASPHALT PAVEMENT TO INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- SILT FENCE:**
10. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
  11. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF FENCE OR FABRIC STARTS TO BULGE.
  12. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
  13. TURN END OF SILT FENCE UP SLOPE TO PREVENT BYPASS FLOW AND ALLOW FOR PONDING.



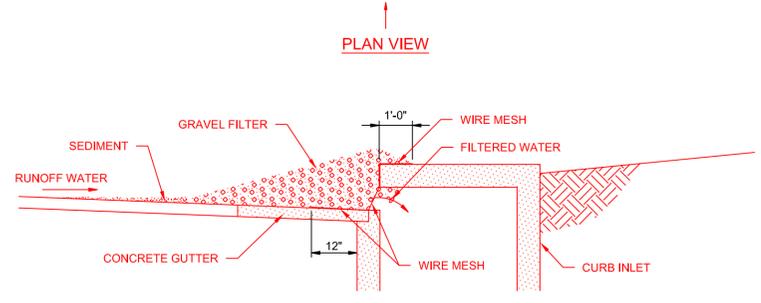
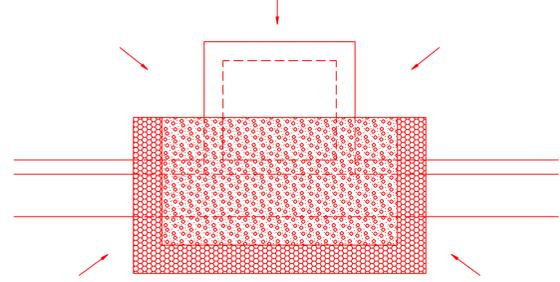
**TYPICAL COMPOST SOCK CONCRETE WASHOUT INSTALLATION**  
NO SCALE  
SEE NOTES 1-6



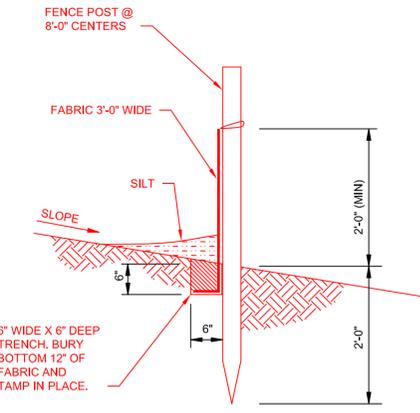
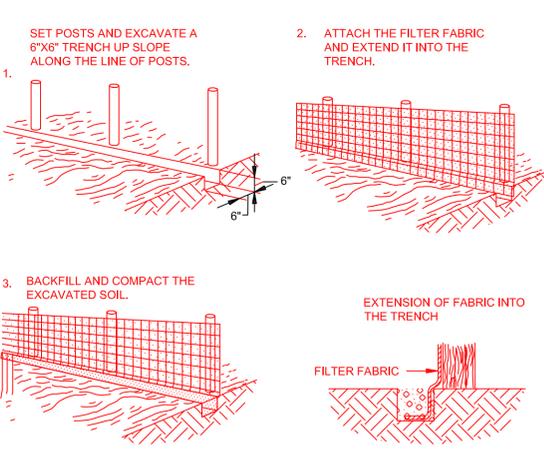
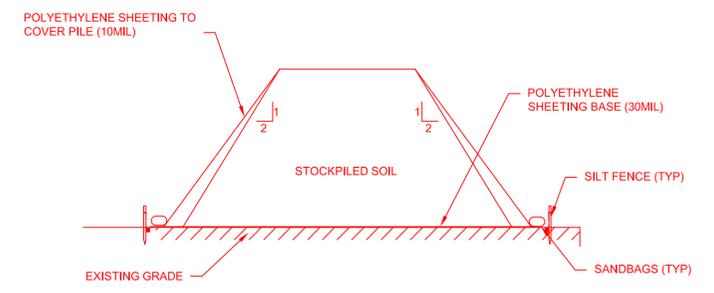
**COMPOST SOCK INLET SEDIMENT FILTER**  
NO SCALE



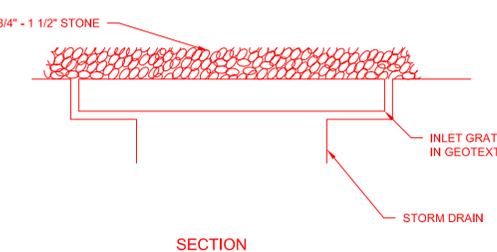
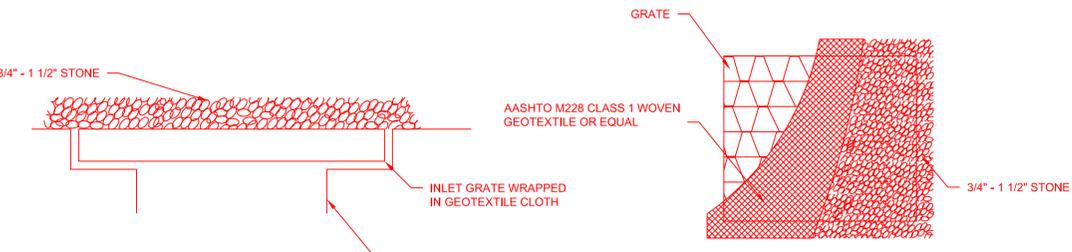
**TYPICAL STABILIZED CONSTRUCTION ENTRANCE**  
NO SCALE  
SEE NOTES 7-9



**GRAVEL CURB INLET SEDIMENT FILTER**  
NO SCALE



**SILT FENCE DETAIL**  
NO SCALE  
SEE NOTES 10-13



**GRATE INLET PROTECTION DETAIL**  
NO SCALE

**APPROVED FOR CONSTRUCTION**  
THE DISTRIBUTION AND USE OF THE NATIVE FORMAT CAD FILE OF THIS DRAWING IS UNCONTROLLED. THE USER SHALL VERIFY TRACEABILITY OF THIS DRAWING TO THE LATEST CONTROLLED VERSION.

**INSTALL**

SEQUENCE # XXXXXX

**REFERENCE DRAWINGS**

SITE PLAN	25247-0003-001 SH 001
DEMOLITION PLAN	25247-0003-001 SH 001 DEMO
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 003

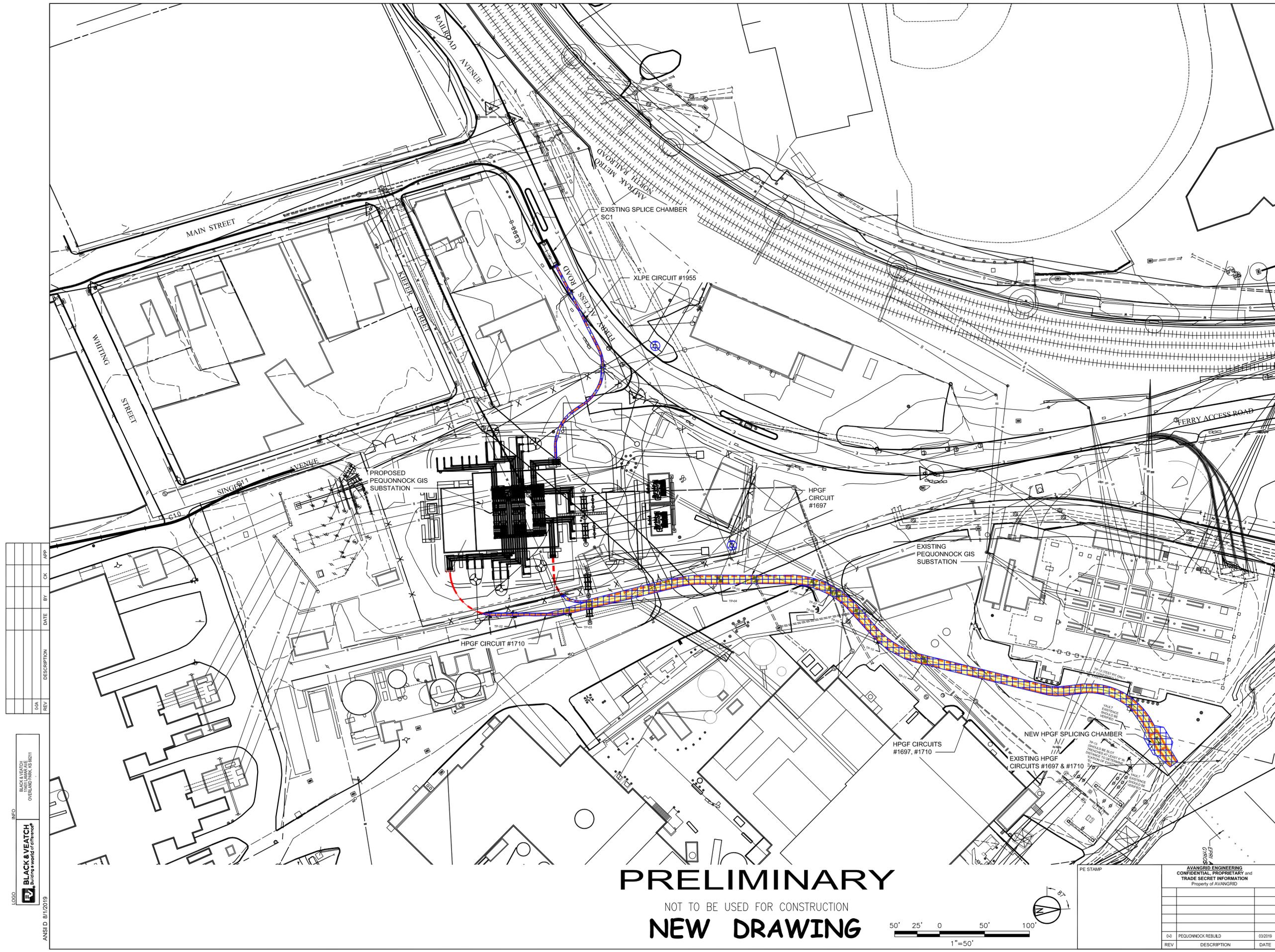
**EROSION CONTROL DETAILS**  
SH 002 OF 003

PE STAMP		AVANGRID ENGINEERING CONFIDENTIAL, PROPRIETARY and TRADE SECRET INFORMATION Property of AVANGRID		UI AVANGRID		EROSION CONTROL SH 002 OF 003	
PEQUONNOCK		BRIDGEPORT		SCALE: NONE		FILE: 25247-0003-005 SH 002.dwg	
BY	MRMBV	DATE	05/2020	NO.	25247-0003-005 SH 002	REV	0-0E
APP	BRHVB	DATE	01/28/2019				

REV	DESCRIPTION	DATE	BY	CK	APP
D-0	ISSUE FOR PERM REVIEW	02/17/2020	JDA	SMR	BRH
D-0C	ISSUED FOR BID	12/20/2019	GOV	SMR	BRH
D-0B	ISSUE FOR PERM REVIEW	08/07/2019	MM	DH	MIP
D-0E	APPROVED FOR CONSTRUCTION	08/08/2020	BRH	JDA	BRH

LOGO: **BLACK & VEATCH**  
ANSI D 610/2020





**NOTES**

1. ALL QUANTITIES, VOLUMES AND HATCHED AREAS ARE SUBJECT TO CHANGE DURING DESIGN PROCESS.

**CUT & EXCAVATION SUMMARY:**

EXCAVATION VOLUMES (OHTL) = 200 CY

EXCAVATION VOLUMES (UGTL) = 500 CY

**FILL SUMMARY:**

OUTSIDE SUBSTATION FILL VOLUME = 100 CY

 FILL AREA

 CUT & EXCAVATION AREA

**LEGEND**

	EXISTING XLPE CIRCUIT #1955
	XLPE CIRCUIT #1955
	HPGF CIRCUIT #1697
	HPGF CIRCUIT #1710
	EXISTING HPGF CIRCUIT #1697
	EXISTING HPGF CIRCUIT #1710

**REFERENCE DRAWINGS**

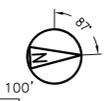
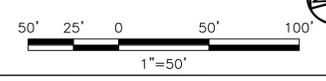
400978-SK-00	- COVER SHEET
400978-SK-01	- LEGEND, ABBREVIATION & GENERAL NOTES
400978-SK-03	- HPGF CIRCUITS #1697 & #1710 PLAN & PROFILE
400978-SK-04	- HPGF CIRCUITS #1697 & #1710 PLAN & PROFILE
400978-SK-05	- XLPE CIRCUIT #1955 PLAN & PROFILE
400978-SK-06	- CABLE SHEATH BONDING DETAILS
400978-SK-07	- TRENCH SECTIONS & DETAILS
400978-SK-08	- HPGF SPLICE MANHOLE
400978-SK-09	- XLPE SPLICE MANHOLE

REV	DATE	BY	CK	APP

ANSI D 8/1/2019

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**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION  
**NEW DRAWING**



PE STAMP

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TRADE SECRET INFORMATION  
Property of AVANGRID



BY	KDM/BAV	SCALE:	1"=50'	FILE:	400978-SKETCH-21
CK	DSM/BAV	NO.			
APP	RJE/BAV				
DATE	02/22/2019				

**OUTSIDE SUBSTATION  
CUT & FILL VOLUMES**

PEQUONNOCK		BRIDGEPORT	

## APPENDIX C

# SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

*Note:* UI does not anticipate on-site bulk storage of petroleum or other regulated substances during Project construction. However, if a construction contractor elects to maintain large quantities of petroleum products at a Project staging area, then requirements in addition to this SPCC Plan may apply. Specifically, pursuant to Title 40, Section 112 of the Code of Federal Regulations (CFR), a Spill Prevention, Control, and Countermeasure (SPCC) Plan must be prepared if the construction site will have 1,320 gallons of aggregate above-ground storage capacity or more in 55-gallon (or larger) containers, or 42,000 gallons in underground storage not regulated by underground storage tank (UST) rules. Any temporary tanks or fueling trucks parked on site and used to "store" petroleum are subject to the SPCC Plan requirements. If, at any time, a Project construction contractor's cumulative storage capacity exceeds 1,320 gallons on-site, the contractor must prepare a SPCC Plan, signed by a registered professional engineer, in accordance with 40 CFR 112. Copies of the SPCC Plan do not need to be filed with any regulatory agencies, but must be maintained at the contractor's Project office and also be provided to UI. Consistent with other UI substations, a Site-specific SPCC Plan will be prepared and implemented for the operation of the substation in accordance with the requirements contained 40 CFR Part 112.

# SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

## 1. INTRODUCTION

### **Purpose of the Plan**

This Spill Prevention, Control, and Countermeasures Plan (SPCCP) describes measures to minimize the potential for a spill of petroleum products or a hazardous or toxic substance and, in the event that a spill does occur, to contain and control the release to minimize the effects. UI will require construction contractors to adhere to the procedures presented in this SPCCP during the construction of the Project.

### **Materials Subject to this SPCP**

The principal materials used during Project construction will be petroleum products, such as fuels, lubricants, fluids, and related materials used for the operation of construction vehicles and equipment. Other substances classified as hazardous or toxic may be used during construction or in the operation of the new substation or decommissioning of the existing substation.

Each construction contractor will compile and maintain a list of the petroleum products and hazardous / toxic substances used in the performance of Project work, along with a Safety Data Sheet (SDS) for each such material. The SDSs will be kept on-site (e.g., at the construction contractor's office trailer at the Project construction staging area/yard) or will otherwise be available electronically for the duration of construction. The contractor(s) will make the list of products and associated SDSs available for audit by UI upon request.

### **Designation of Connecticut-Licensed Spill Response and Cleanup Contractor**

Prior to the start of construction, each primary Project construction contractor must identify a licensed spill response contractor who can respond promptly, if required, during construction as detailed in Section 3.4 of this SPCCP.

## 2. SPILL PREVENTION AND MANAGEMENT PRACTICES

Key measures to avoid or minimize the potential for spills during construction include the training of construction personnel in spill prevention techniques, the proper maintenance of construction equipment, the deployment of spill kits on equipment or at work sites, and effective management regarding the storage and use of petroleum and hazardous/toxic substances. If a spill does occur, construction personnel will be trained in the techniques to contain, clean up, and report the spill.

Project contractors will be required to implement procedures aimed at minimizing the potential for spills and for promptly responding to and reporting spills, should they occur. Examples of such procedures are:

- a. Inspect, operate, and maintain equipment to minimize the potential for the accidental discharge or release of fuel, oil, or lubricants to the environment.
- b. Implement employee training / awareness regarding the handling of fuels and, as applicable, hazardous or toxic materials.
- c. Perform refueling to minimize the potential for a release to the environment.

## **SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN**

- d. Maintain adequate supplies of spill response equipment, materials, and supplies in accessible locations for cleanup of a release.
- e. Conform to regulatory requirements and Project specifications regarding equipment operation, refueling, and the use of petroleum products near water resources.
- f. In the event of a spill, promptly respond and follow required reporting procedures.

To minimize the potential for a spill due to equipment failure, Project construction contractors will be responsible for:

- a. Routinely inspecting and maintaining construction equipment, including hydraulic lines, valves, and other hoses;
- b. Promptly repairing any equipment leaks or faulty equipment components;
- c. Routinely inspecting and maintaining in good condition all containers, valves, pipes, hoses, and other components of storage areas for fuels and lubricants;
- d. Providing appropriately sized and provisioned spill containment kits to construction crews and replenishing such supplies as needed; and,
- e. Maintaining stockpiles of spill cleanup materials at easily accessible locations.

In addition, the Project contractors will be responsible for providing portable toilets at construction sites. The construction contractor will be responsible for properly locating portable toilets in upland areas, away from any water resources, sensitive environmental resources, or other restricted areas, and for arranging for routine cleaning and maintenance of these facilities.

Contractors will be required to implement the following procedures when storing fuels and hazardous / toxic substances. These procedures are intended to limit the potential for spills and to minimize the impact of releases that may accidentally occur:

- a. No bulk quantities of hazardous substances, toxic materials, or petroleum products will be stored, unless approved by UI, within 25 feet of any waterbody, wetland, water supply well, spring, or other water resource. Such materials typically will be stored in upland areas;
- b. At Project staging and support sites, contractors will make efforts to store only enough products required to complete the job;
- c. Materials will be stored in a neat, orderly manner, in appropriate containers, and, if possible, under a roof or enclosure;
- d. Chemical and/or petroleum products will be kept in original containers with the original manufacturer's label. Fuels that need to be kept in portable containers will be stored in tightly sealed containers designed to hold such fuels and will be clearly labeled. Preferably, the containers will be stored in a covered truck or trailer that provides secondary containment for the products;
- e. Substances will not be mixed unless approved by the manufacturer;
- f. Whenever possible, all of a product will be used before disposing of the container;

## **SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN**

- g. Manufacturer's recommendations for proper use and disposal of a product will be followed; and
- h. If surplus product must be disposed, the manufacturer's or state-recommended methods for proper disposal will be followed.

Any containment area for the storage of petroleum products will have a minimum capacity of 110% the combined maximum volume of all containers within the containment area. The containment must have sufficient freeboard to accommodate the maximum precipitation from a 25-year 24-hour storm event.

Storage areas will not have drains unless such drains lead to a containment area or vessel of sufficient size to contain and recover a full release of all stored products. A berm, or other suitable containment device, will be installed around any storage shed housing materials that are potentially hazardous to the environment. Bulk storage tanks having a capacity of more than 55 gallons will be provided with secondary containment consisting of a temporary earthen berm or other means.

After each rainfall, the contractor will inspect all containment areas for excess water.

- If no sheen is visible, the contractor can pump the collected water to the ground in a manner that does not cause scouring.
- If present, any sheen must be cleaned up prior to discharging the water.
- Otherwise, the contaminated water must be transported and disposed of off-site in accordance with local, state, and federal requirements.

### **Equipment Refueling and Parking**

Contractors will implement the following measures when refueling and parking equipment on Project sites:

- a. Generally, refueling will be via local gas stations or fuel will be stored at the Project contractor yard and certain construction equipment will be refueled there.
- b. Refueling equipment will be manned throughout the refueling operation.
- c. Spill kits will be on hand during all refueling operations.
- d. Refueling will not be performed within 25 feet of any waterbody or wetland unless temporary containment is provided.
- e. During refueling, precautions will be taken to avoid or minimize the potential for an accidental spill. Appropriate spill kits / absorbent materials will be available at all refueling sites.

# SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

## 3. SPILL EQUIPMENT, RESPONSE, CONTROL, AND CLEANUP

### 3.1 Spill Containment and Cleanup Equipment

Contractors are required to provide appropriate spill containment and cleanup equipment for use as needed during Project construction. Table 1 provides a general list of the basic types of spill containment and cleanup materials to be kept on-hand during construction activities in uplands, near water resources, and at refueling and product storage sites. In response to a spill, the contractor will use equipment and control/cleanup measures appropriate to contain and clean up the spilled material, taking into consideration the environmental characteristics of the area affected by the release.

### 3.2 Spill Response and Control

If a spill occurs, containment and control of the release are the immediate priorities. Project construction contractor(s) will take immediate action to minimize the impact of the spill (containment) and to implement appropriate cleanup action. Cleanup procedures will begin immediately after a release is contained. In the event of a spill, the contractor will typically take the following actions:

- Stop the spill at the source.
- If the spill impacts a water resource, the spill will be contained through the use of appropriately deployed containment materials (e.g., sorbent booms, absorbent pads, constructing dikes) and then will be collected with sorbent materials, skimmed off water surfaces with booms, and/or the contaminated soil will be excavated.
- If the spill occurs in uplands, the contaminated soil will be excavated.
- The waste materials will be properly disposed of by the contractor's designated and pre-approved spill response firm.
- The affected areas will be restored as closely as possible to previous condition.

### 3.3 Spill Notifications

#### ***Notifications to Federal, State, and Local Agencies***

In Connecticut, a spill, as defined in Connecticut General Statutes (CGS) Section 22a-450, means the discharge, spillage, uncontrolled loss, seepage, or filtrations of oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous waste that poses a potential threat to human health or the environment. **All such spills are reportable.**

**Project construction contractors are responsible for reporting spills of any amount to CT DEEP. Spills must be reported immediately (24/7) to:**

**CT DEEP Emergency Response and Spill Prevention Division  
860-424-3338 or toll free at 866-337-7745 (866-DEPSIL)**

**If the above numbers are unavailable for any reason, call 860-424-3333**

# SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

**Table 1**  
**Typical Spill Containment and Cleanup Equipment and Supplies**

**For General Construction in Upland Areas:**

- Sorbents (e.g., pillows, socks, and wipe sheets) for containment and pick-up of spilled liquids;
- Pre-packaged, self-contained spill kits containing a variety of sorbents for small to large releases (e.g., kits that can be stored on equipment with the capacity of absorbing up to 5 gallons);
- Structures such as gutters, culverts, and dikes for immediate spill containment;
- Shovels, backhoes, etc., for excavating contaminated materials;
- Sumps and collection system; and
- Drums, barrels, and temporary storage bags to clean up and transport contaminated materials.

**For Storage of Products and Equipment Refueling:**

- Sorbent pads and/or mats, containment equipment, or equivalent protective measures (e.g., kiddie pools or basins to be placed on the ground beneath equipment before refueling or maintenance activities). (The quantity and capabilities of the mats will be sufficient to capture the largest foreseeable spill given workspace characteristics, crankcase size, and other fuel vessel capacities.)
- Dedicated sorbent / spill response kits or functional equivalent to be kept on major pieces of construction equipment (e.g., pumps, cranes, drill rigs, hydraulic lifts) that must be routinely refueled or maintained on Project sites because movement of such equipment to designated refueling or maintenance yards is impractical or inefficient.

# SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

When notifying CT DEEP, obtain the CT DEEP representative's badge number and record the Spill Identification Number assigned to the incident by CT DEEP. Provide the following information:

- Location of spill;
- Quantity and type of substance, material, or waste released;
- Date and cause of the incident;
- Name and address of the owner;
- Name and address of the person making the report, and their relationship to the owner.

In addition to the notification to CT DEEP, some spills may be reportable to the Federal government. An oil spill must be reported to the Federal government if the spill is to a navigable waterbody, such as Bridgeport Harbor; water quality standards could be violated; the spill causes a sheen or discoloration; or the spill causes a sludge or emulsion. Spills of hazardous chemicals must also be reported to the Federal government, depending on the quantity of the material spilled and if the release could threaten human health. The Federal reportable spill quantities for hazardous materials are listed in 40 CFR, Part 302.4 (refer to the table entitled "List of Hazardous Substances and Reportable Quantities")<sup>1</sup>. Incidents that are required to be reported under the Federal Emergency Planning and Community Right-to-Know Act or other prevailing/applicable Federal law are reportable to:

- The State Emergency Response Commission (CT DEEP at 860-424-3338);
- The National Response Center at 800-424-8802; and,
- The local community emergency coordinator.

A report by the Project construction contractor to the local fire department is also recommended (911 throughout Connecticut).

## ***Notification and Reporting***

In addition to notifying the CT DEEP, the construction contractor or other Project personnel who first observe a spill will provide immediate verbal notification to the designated UI or Project representative<sup>2</sup>. Within 24 hours of a spill, the construction contractor will prepare and submit to UI a *Spill Report Form* (refer to Attachment 1 or similar Form). This form must include the following information regarding the spill, along with any relevant supporting information (such as maps) and representative photographs:

- Date, time, and location of the spill;
- The quantity and type of the substance, material, or waste spilled;
- Circumstances that caused the spill;
- List of water resources affected or potentially affected by the release (if applicable);
- Statement verifying whether a sheen is present;

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<sup>1</sup> Available online at: <http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol27/pdf/CFR-2010-title40-vol27-sec302-4.pdf>

# SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

- Size of the affected area;
- Estimate of the depth that the material has reached in water or in soil;
- Determination of whether the release has or will migrate off Project work areas;
- Determination of whether the release is under control;
- Status of the cleanup effort and a description of the methods used (or to be used) to clean up the release;
- Name(s), company affiliation(s), and address(es) of the personnel who identified the release;
- List of any soil and water samples taken;
- Names of contacts made to federal, state, and local agencies, as applicable, and time of report (include, at minimum, CT DEEP representative's badge number and the CT DEEP-assigned spill identification number); and
- Name, address, and company affiliation of the person who completed the *Spill Report Form*.

## 3.4 Spill Cleanup

The Project construction contractors will clean up all spills promptly using appropriate containment and cleanup measures. Spill containment equipment will not be used for storing wastes resulting from cleanup efforts or other contaminated material.

Small spills may be contained and cleaned up by Project construction crews using the on-site spill containment and cleanup materials. In such cases, all contaminated materials will be properly handled, contained, and transported in secure containment to a staging area for pick-up and ultimate disposal by the construction contractor's designated and pre-approved spill response firm.

***In no case will spills or contaminated materials (including waste oils) be buried or otherwise disposed of on Project sites.***

If the Project construction contractor determines that a release cannot be adequately excavated and disposed of by its construction crews alone, or if required by CT DEEP, the contractor will contact the designated spill response firm. Any cleanup must be performed by a licensed spill response contractor, as required by CGS Section 22a-454. The Project construction contractor will work with the spill response contractor(s) and will verify that all excavated wastes are transported to a licensed disposal facility.

## 3.5 Penalties for Non-Reporting

Any person who fails to report incidents as required by CGS Section 22a-450 may be fined by CT DEEP not more than \$5,000 and the employer of such person not more than \$10,000. Failure to report incidents, as required by the Project, can result in removal from the Project or termination.

# SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN

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**Attachment 1**  
**Spill Report Form**

## SPILL REPORT FORM

**Date:** \_\_\_\_\_ **Time of Spill Occurrence:** \_\_\_\_\_

**Name/Title of the first observer:** \_\_\_\_\_

**Regulatory Agencies Notified / Time & Date of Notification** (include CT DEEP representative badge number and CT DEEP-assigned spill identification number): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Location of Spill:** Parcel No. \_\_\_\_\_ Municipality City of Bridgeport

Nearest Public Road: \_\_\_\_\_ Closest Transmission Structure No.: \_\_\_\_\_

Nearest Street Address or landmark: \_\_\_\_\_

Attachments (circle all that apply):            map            photographs            other \_\_\_\_\_

**Type of material spilled:** \_\_\_\_\_

Quantity spilled (circle one):            10 gals. or less            10 - 1,000 gals.            Over 1,000 gals.

Specify approximate amount spilled: \_\_\_\_\_

**Circumstances causing spill:** \_\_\_\_\_  
\_\_\_\_\_

Size of area affected by spill: \_\_\_\_\_ Estimate depth of spilled material on water or soil: \_\_\_\_\_

If spill is into water, is a sheen present? (circle one):            YES            NO

Has spill left Company property or ROW? (circle one):            YES            NO

Is spill under control? (circle one):            YES            NO\*

\*If not, is there a potential for the spill to leave the

ROW or staging area? (circle one):            YES            NO

Has spill cleanup begun? (circle one):            YES\*\*            NO

\*\*If so, what methods are being or will be used?: \_\_\_\_\_  
\_\_\_\_\_

Have soil and/or water samples been taken? (circle one)            YES\*\*\*            NO

\*\*\*If yes, list sample types: \_\_\_\_\_

**Signature of Contractor Representative/Date:** \_\_\_\_\_

**Signature of Designated Project Representative/Date:** \_\_\_\_\_

Print Name/Title: \_\_\_\_\_

Print Name/Title: \_\_\_\_\_

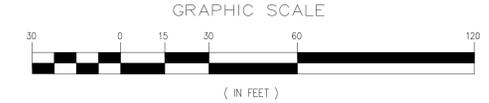
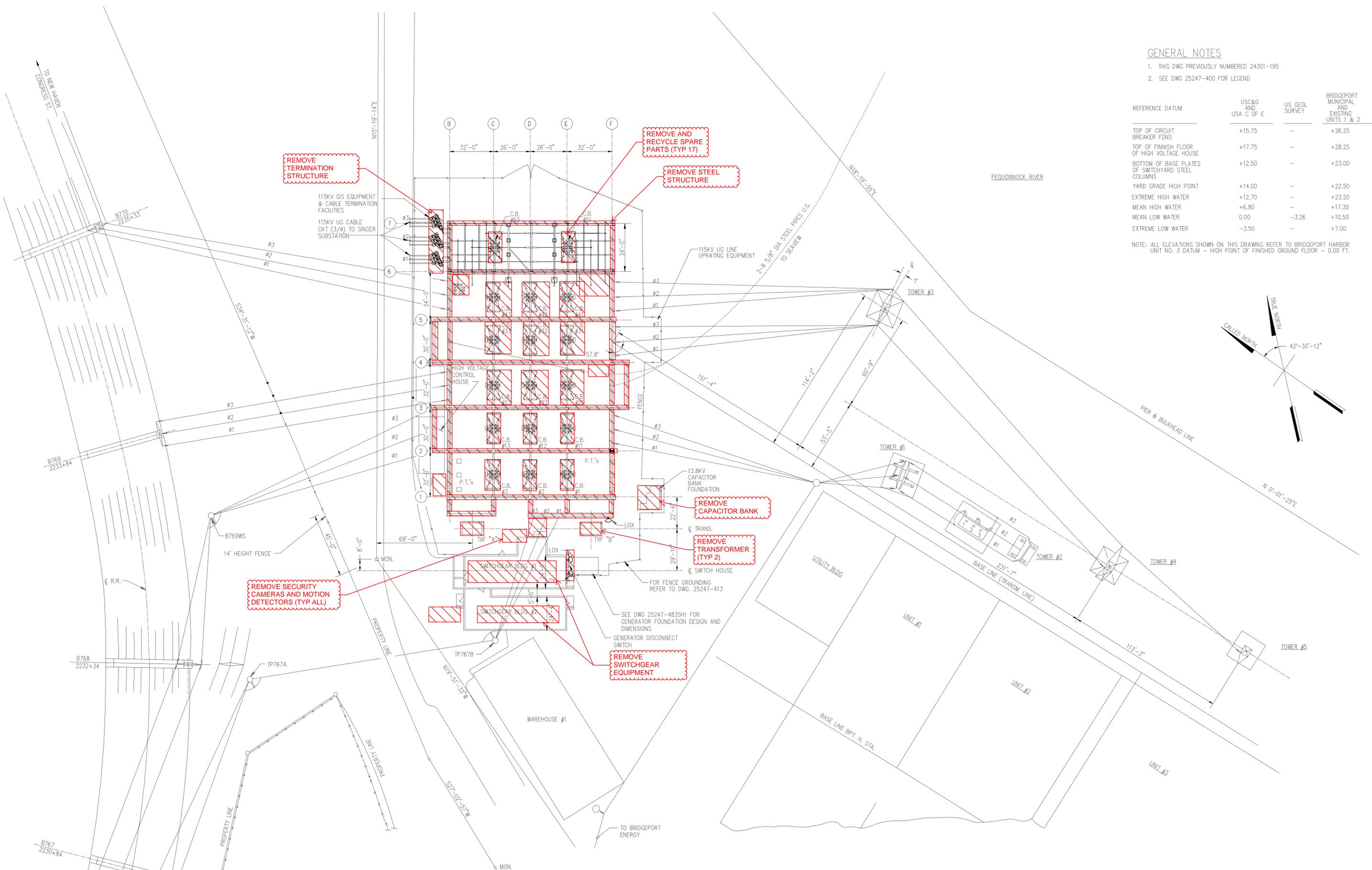
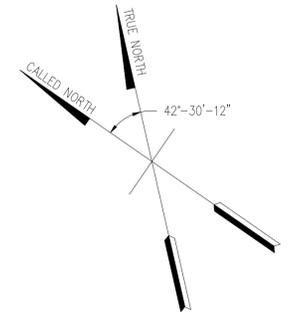
**APPENDIX D  
DECOMMISSIONING PLAN DRAWING: EXISTING PEQUONNOCK  
SUBSTATION**

**GENERAL NOTES**

- THIS DWG PREVIOUSLY NUMBERED 24301-195
- SEE DWG 25247-400 FOR LEGEND

REFERENCE DATUM	USC&G AND USA C OF E	US GEOL SURVEY	BRIDGEPORT MUNICIPAL AND EXISTING UNITS 1 & 2
TOP OF CIRCUIT BREAKER FDNS	+15.75	-	+26.25
TOP OF FINISH FLOOR OF HIGH VOLTAGE HOUSE	+17.75	-	+28.25
BOTTOM OF BASE PLATES OF SWITCHYARD STEEL COLUMNS	+12.50	-	+23.00
YARD GRADE HIGH POINT	+14.00	-	+22.50
EXTREME HIGH WATER	+12.70	-	+23.20
MEAN HIGH WATER	+6.80	-	+17.30
MEAN LOW WATER	0.00	-3.26	+10.50
EXTREME LOW WATER	-3.50	-	+7.00

NOTE: ALL ELEVATIONS SHOWN ON THIS DRAWING REFER TO BRIDGEPORT HARBOR  
UNIT NO. 3 DATUM - HIGH POINT OF FINISHED FLOOR - 0.00 FT.



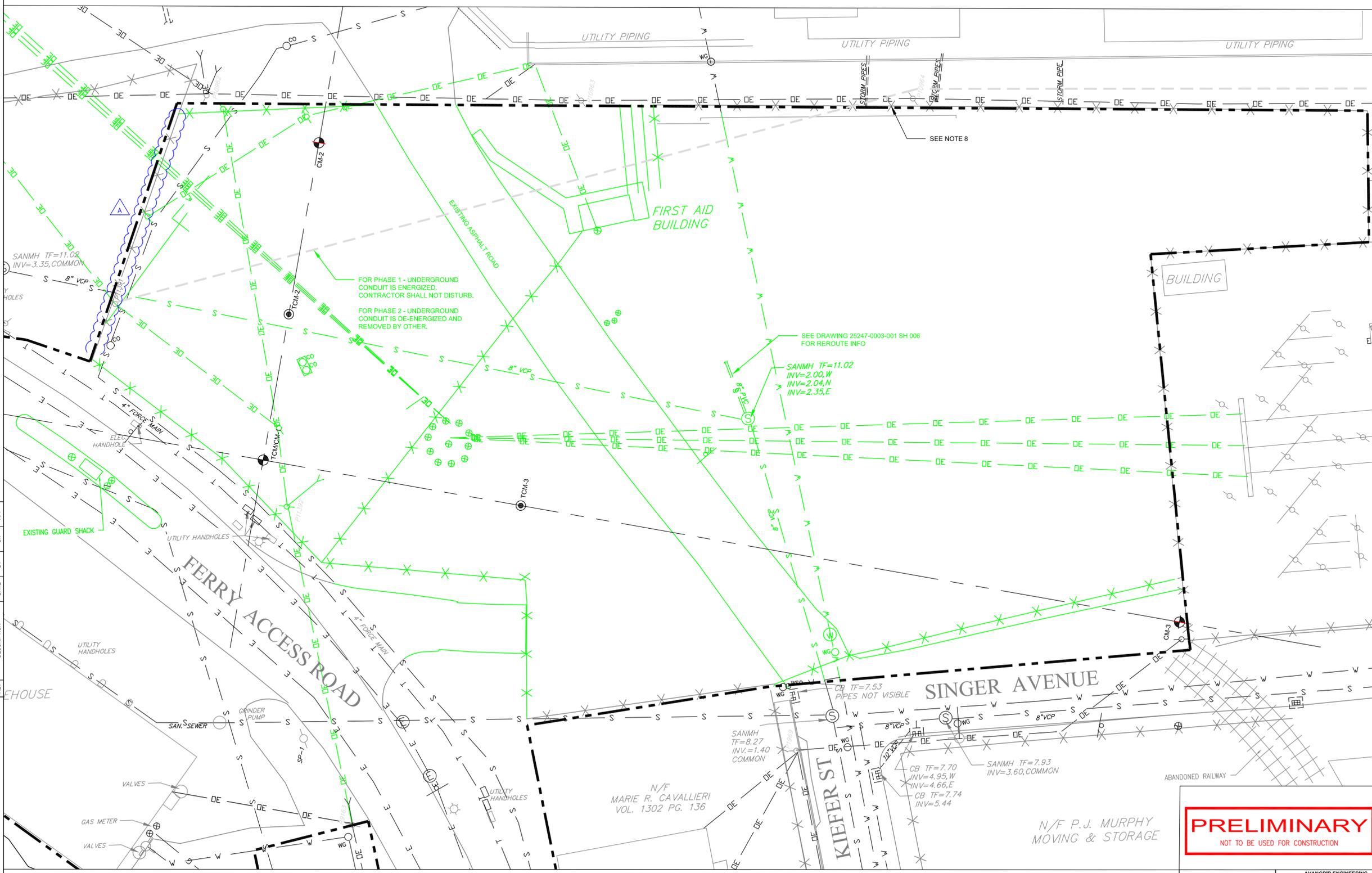
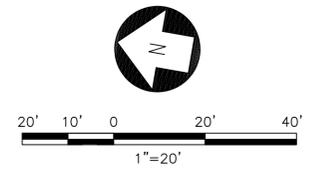
<b>BLACK &amp; VEATCH</b> Building a world of difference <sup>®</sup>		23 01/09/2015	CTCR - PROJECT 182561 - DISC SW. & BUS UPGRADES	SLC	SBA	KAK	MAV
DESIGNER	TVP	DRAWN	CAD	WDS	JBS	PN	ALL
CHECKED	TJJ	DATE	4/2/87	21 2/21/2012	AS-BUILT DRAWINGS FOR CYBER SECURITY PROJECT	TMP/LST	CS/LST
PROJECT #	1634			20 5/1/2009	CONFORMED TO CONSTRUCTION RECORD	MJZ	TN
				19 1/23/2006	SUBSTATION SECURITY CAMERA ADDITION	L.S.T.	M.M.M.
				18 4/11/2005	BAY 50 EXTENSION	CC	JDG
				17 7/24/98	BRIDGEPORT ENERGY (AS BUILT)	W.J.	K.L.K.
				16 11-21-97	ISSUED FOR CONSTRUCTION	MDO	BJK
				15 08-31-93	CONFORMED TO CONSTRUCTION RECORDS	CAD	DJK
No	Date	Revision		By	Chkd.	Engr.	Supv.

Drawn	Date	4/2/87	Scale:	1"=30'-0"
Chkd.	Design Engr.		Design Supv.	

<b>ELECTRICAL SITE PLAN DECOMMISSIONING PLAN</b>		
PEQUONNOCK SUBSTATION		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
	047780	25247-001

NOTES

1. LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND DETERMINE THE DEPTH, LOCATION, ELEVATION, ALIGNMENT AND EXISTENCE OF ALL SURFACE OR UNDERGROUND UTILITIES AND STRUCTURES IN AND AROUND THE VICINITY OF THE WORK TO BE PERFORMED.
2. CONTRACTOR SHALL REMOVE EXISTING PAVEMENT. DISPOSAL OF PAVEMENT SHALL BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
3. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING WITHIN EASEMENTS.
4. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA RULES AND REGULATIONS.
5. THE CONTRACTOR SHALL CONTACT CONNECTICUT ONE CALL 48 HOURS (MINIMUM) PRIOR TO EXCAVATION.
6. THE CONTRACTOR SHALL ADEQUATELY PROTECT EXISTING STRUCTURES, UTILITIES, AND OTHER OBJECTS.
7. CONTRACTOR SHALL COMPLETELY REMOVE SANITARY SEWER AND WATER LINES AFTER INSTALLATION OF THE NEW LINES.
8. CONTRACTOR SHALL PRESERVE EXISTING EAST PROPERTY FENCE DURING CONSTRUCTION.
9. ALL WORK ON THIS DRAWING IS PHASE 1. UNLESS NOTED OTHERWISE, PERMANENT REMOVAL AND/OR RELOCATION OF THE OVERHEAD LINES, TRAILERS, AND BUILDINGS ARE BY OTHERS. PERMANENT REMOVAL OF FENCE IS BY PHASE 2. TEMPORARY FENCE REMOVAL AND REINSTALLATION (REQUIRED FOR FOR INSTALL OF UNDERGROUND UTILITY REROUTES AND STORMTECH INFILTRATION BASIN) IS PHASE 1 SCOPE.



LEGEND

- PROPERTY LINE
- TO BE REMOVED
- EXISTING FENCE TO REMAIN
- EXISTING WATER
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING SEWER
- EXISTING TELEPHONE
- OVERHEAD ELECTRIC LINE
- EXISTING STRUCTURES

REFERENCE DRAWINGS

SITE PLAN	25247-0003-001 SH 001
ROAD PLAN	25247-0003-001 SH 002
SURFACING AND FENCING PLAN	25247-0003-001 SH 003
SURFACING AND FENCING DETAILS	25247-0003-001 SH 004
SURFACING AND FENCING DETAILS	25247-0003-001 SH 005
UTILITY RELOCATION PLAN	25247-0003-001 SH 006
UTILITY RELOCATION DETAILS	25247-0003-001 SH 007
UTILITY RELOCATION DETAILS	25247-0003-001 SH 008
GUIDE RAIL DETAILS	25247-0003-001 SH 009
GRADING AND DRAINAGE PLAN	25247-0003-004 SH 001
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 002
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 003
GRADING AND DRAINAGE DETAILS	25247-0003-004 SH 004
RETAINING WALL DETAILS	25247-0003-004 SH 005
GRADING SECTIONS	25247-0003-004 SH 006
RETAINING WALL DETAILS	25247-0003-004 SH 007
EROSION CONTROL PLAN	25247-0003-005 SH 001
EROSION CONTROL DETAILS	25247-0003-005 SH 002
EROSION CONTROL DETAILS	25247-0003-005 SH 003

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

REMOVAL

SEQUENCE # XXXXXX

PE STAMP

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DEMOLITION PLAN

PEQUONNOCK BRIDGEPORT

BY	MRMBV	SCALE:	1"=20'	FILE:	25247-0003-001 SH 001 DEMO.dwg	REV	
CK	DMHBY	NO.					
APP	BRHBY	DATE	01/28/2019				

0-0	PEQUONNOCK REBUILD	05/2020	MRMBV	DMHBY	BRHBY	APP	BRHBY	DATE	01/28/2019	25247-0003-001 SH 001 DEMO	0-1A
REV	DESCRIPTION	DATE	BY	CK	APP	DATE					

ISSUED FOR	DATE	BY	APP
ISSUED FOR 90% REVIEW	02/17/2020	JDA	SMR
ISSUED FOR BID	12/20/2019	GOV	SMR
ISSUE FOR FINAL REVIEW	08/11/2020	MRM	DMH
APPROVED FOR CONSTRUCTION	08/08/2020	BRH	JDA

BLACK & VEATCH  
OVERLAND PARK, KS 66201

ANSI D 610/2020

## APPENDIX E

### CT DEEP BEST MANAGEMENT PRACTICES FOR DISPOSAL OF SNOW ACCUMULATIONS FROM ROADWAYS AND PARKING LOTS

#### Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots

**Purpose:** These guidelines have been developed to clarify DEEP recommendations to state and municipal officials, and others regarding the removal and disposal of snow accumulations from roadways and parking lots. For purposes of this guidance snow accumulations refers to snow banks and snowpiles that are removed by front-end loader or by loading on trucks for disposal. This guidance does not apply to normal snow plowing operations that must, inevitably, discharge some snow into wetlands and watercourses.

**Implementation:** While following these guidelines does not constitute a permit or authorization, the Department recognizes there is a considerable need for flexibility in implementation of this policy, particularly in emergency situations. There is no intent to interfere with snow plowing operations. Where trucking and snow dumping operations are undertaken the Department recommends these guidelines be followed.

**Problem:** Current road maintenance activities include removal of snow accumulations from bridges, roads and parking areas for the purpose of providing more space for subsequent snow storms and for ease of travel and parking. Sometimes this snow is moved by truck or with a front-end loader and deposited directly into surface waters of the state including streams, wetlands and Long Island Sound. This practice is not recommended due to the presence of dirt, salt, litter and other debris, which are routinely mixed in the accumulated snow.

Under normal conditions of snowmelt, the majority of these contaminants remains on or next to the paved surface or may be captured in stormwater catch basins. These contaminants can then be swept from streets and bridges or vacuumed from catch basin sumps. However, when accumulated snow is collected and dumped into surface waters, this mixture of snow, sand and debris may smother aquatic life in the bottom of streams and rivers and degrade the aesthetics of the surface water with silt plumes and litter. Large quantities of snow (and the sand and debris) may also cause blockage of storm drainage systems, resulting in increased chance for localized flooding.

**Recommended Management Practice:** Snow accumulations removed from roadways, bridges, and parking lots should be placed in upland areas only, where sand and other debris will remain after snowmelt for later removal. Care must be exercised not to deposit snow in the following areas:

- freshwater or tidal wetlands or in areas immediately adjacent to such areas where sand and debris may be flushed during rainstorms;
- on top of storm drain catch basins;
- in storm drainage swales;
- on stream or river banks which slope toward the water, where sand and debris can get into the watercourse; and
- in areas immediately adjacent (within at least 100 feet) of private or public drinking water well supplies (due to the possible presence of road salt).

**For Governmental Entities:** In normal winter conditions, governmental entities should follow the recommended management practices outlined above. In extraordinary winter conditions, the commissioner may, upon public notification, offer governmental entities the flexibility of limited in-water disposal. When such flexibility is offered, governmental entities who have determined that extraordinary circumstances exist where all upland, land-based disposal options have been fully exhausted (i.e., disposal capacity is not available) and snow needs to be removed to meet public safety demands (i.e., clear access ways for police, emergency medical and fire responders), may use certain waterways for snow disposal in accordance with the following conditions:

- Upland storage and disposal of snow (i.e., athletic fields, parks and other flat, open-field sites) and other snow management methods (i.e., snow melting equipment) must be the first alternatives explored and exhausted. Environmentally sensitive areas must be avoided;
- This guidance applies only to snow and ice which is not visibly contaminated with material other than salt and sand from road clearing activities;
- For coastal communities, preference should be given to snow disposal in salt water where available;
- Disposal in rivers or streams must be limited to those water bodies that have adequate flow and mixing and are not prone to ice jams;
- The disposal must occur only in open water in areas that will not interfere with navigation;
- Disposal must be conducted in a manner so as to prevent ice dam formation or damage to bridges, docks or other structures;
- Disposal in ponds and lakes is discouraged;
- There shall be no disposal in coastal or freshwater wetlands, eelgrass beds, vegetated shallows, vernal pools, shellfish beds mudflats, public water supply reservoirs and their tributaries, or others areas designated as being environmentally sensitive;
- The activity must comply with local laws and requirements;
- Precautions must be taken to avoid shoreline or stream bank damage or erosion from truck/equipment activity; and
- Governmental entities must notify the Department by email (address email to [dahlia.gordon@ct.gov](mailto:dahlia.gordon@ct.gov)) prior to disposing of snow and ice in waterways or, if advance notification is not possible, then the Department must be contacted as soon as possible after snow disposal has begun.

**Notification:** Notification can be made by addressing an email to Dahlia Gordon at: [dahlia.gordon@ct.gov](mailto:dahlia.gordon@ct.gov). The notification must include the following: (1) the name of the governmental entity making the notification; (2) contact information for the governmental entity including name, email address and phone number; (3) the street address where the snow disposal activity will occur; (4) the name of the waterbody where the snow will be disposed; (5) the estimated quantity of snow to be disposed; (6) the dates during which the disposal activity will occur; and (7) a statement that the governmental entity has exhausted all disposal alternatives and snow management methods and will make best efforts to adhere to these snow disposal guidelines.

**Information:** For further information please call the Water Permitting and Enforcement Division Engineer of the Day at 860-424-3025.

## APPENDIX F

### PROJECT TEAM CONTACT INFORMATION

Name	Role	Organization	Office Phone	Cell Phone	E-mail
Richard Pinto	Senior Project Manager	UI	203-499-3734	203-314-6121	<a href="mailto:Rich.Pinto@uinet.com">Rich.Pinto@uinet.com</a>
Benito Acampora	Construction Manager	UI	203-499-3432	203-535-7432	<a href="mailto:Benito.Acampora@uinet.com">Benito.Acampora@uinet.com</a>
Todd Berman	Manager of Environmental Programs & Projects	UI	203-499-3545	860-395-8297	<a href="mailto:Todd.Berman@uinet.com">Todd.Berman@uinet.com</a>
Kate Brennan	Permitting & Compliance Specialist	UI	203-499-2944	973-670-3314	<a href="mailto:Kate.Brennan@uinet.com">Kate.Brennan@uinet.com</a>
William Burgess	Project Manager Remediation	UI	203-499-3171	203-361-7648	<a href="mailto:William.Burgess@uinet.com">William.Burgess@uinet.com</a>
Robert Sazanowicz	Lead Engineer - Substation	UI	203-926-4537	203-506-3051	<a href="mailto:Robert.Sazanowicz@uinet.com">Robert.Sazanowicz@uinet.com</a>
MeeNa Sazanowicz	Lead Engineer - Transmission	UI	203-926-5264		<a href="mailto:MeeNa.Sazanowicz@uinet.com">MeeNa.Sazanowicz@uinet.com</a>
Scott Butwill	Principal Engineer – Protection & Control	UI	203-926-4570		<a href="mailto:Scott.butwill@uinet.com">Scott.butwill@uinet.com</a>
Joseph Lenahan	Stormwater Management Engineer	Fuss & O'Neill	203-374-3748 x 3509	203-444-3966	<a href="mailto:JLenahan@fando.com">JLenahan@fando.com</a>
Caleb Scheetz	LEP of Record	Fuss & O'Neill	203-374-3748 x 3522	203-644-6911	<a href="mailto:cscheetz@fando.com">cscheetz@fando.com</a>
Brent Haag	Project Manager	Black & Veatch	913-458-8718	913-486-5418	<a href="mailto:HaagBR@bv.com">HaagBR@bv.com</a>

## APPENDIX G

**Table G-1: D&M PLAN CHECKLIST FOR PEQUONNOCK SUBSTATION REBUILD PROJECT  
(Regulations of Connecticut State Agencies Sections 16-50j-60, -61 and -62)**

RCSA SECTION	DESCRIPTION	LOCATION ADDRESSED IN D&M PLAN (SECTION NO.)
<b>16-50j-60</b>	<b>Requirements for a D&amp;M Plan</b>	
<b>(a)</b>	<b>Purpose.</b> The Council may require the preparation of full or partial D&M Plans for proposed energy facilities, modifications to existing energy facilities, or where the preparation of such a plan would help significantly in balancing the need for adequate and reliable utility services at the lowest reasonable cost to consumers with the need to protect the environment and the ecology of the state.	<b>D&amp;M Plan (all)</b>
<b>(b)</b>	<b>When required.</b> A partial or full D&M plan shall be prepared in accordance with this regulation and shall include the information described in Sections 16-50j-61 to 16-50j-62, inclusive, of the Regulations of Connecticut State Agencies, for any proposed energy facility for which the Council issues a certificate of environmental compatibility and public need, except where the Council provides otherwise at the time it issues the certificate. Relevant information in the Council's record may be referenced.	<b>D&amp;M Plan (all)</b>
<b>(c)</b>	<b>Procedure for preparation.</b> The D&M plan shall be prepared by the certificate holder or the owner or operator of the proposed facility or modification to an existing facility. The preparer may consult with the staff of the Council to prepare the D&M plan.	<b>D&amp;M Plan (all)</b>
<b>(d)</b>	<b>Timing of plan.</b> The D&M plan shall be submitted to the Council in one or more sections, and the Council shall approve, modify, or disapprove each section of the plan not later than 60 days after receipt of it. If the Council does not act to approve, modify, or disapprove the plan or a section thereof within 60 days after receipt of it, the plan shall be deemed approved. Except as otherwise authorized by the Council, no clearing or construction shall begin prior to approval of applicable sections of the D&M plan by the Council.	<b>D&amp;M Plan (all)</b>
<b>16-50j-61</b>	<b>Elements of D&amp;M Plan</b>	
<b>(a)</b>	<b>Key map.</b> The D&M plan shall include a key map for the entire line that is a reproduction at a scale of 1" in = 2,000 ft of the most recent USGS topographic maps for its route	<b>Section 1; Appendix A</b>
<b>(b)</b>	<b>Plan Drawings, 1"=100' or larger, and supporting documents, which shall contain the following information:</b>	<b>Appendix A</b>
<b>1.</b>	Edges of the proposed site and any existing site contiguous to or crossing the site, portions of the site owned by the company in fee, and the identity of property owners of record of the portions of the site not owned by the company in fee	<b>Appendix A</b>
<b>2.</b>	Public roads and public land crossings or adjoining the site	<b>Appendix A</b>

RCSA SECTION	DESCRIPTION	LOCATION ADDRESSED IN D&M PLAN (SECTION NO.)
3.	Location of 50' contours along the site	Appendix A
4.	Probable location, type, and height of the proposed facility and components (including each new transmission structure, position of guys, description of foundations, and locations of any utility or other structures to remain on the site or to be removed)	Sections 2 and 3; Appendix A
5.	Probable points of access to the site, and the route and likely nature of accessways, including alternatives	Sections 3 and 4, Appendix A
6.	Edges of existing and proposed clearing areas, the type of proposed clearing along each part of the site, and the location and species identification of vegetation that would remain for aesthetic and wildlife value	Appendix A, Sections 3 and 4
7.	Identification of sensitive areas and conditions within and adjoining the site, including but not limited to:	Sections 1 to 6
	A. Wetland and watercourse areas regulated under C.G.S. Chapter 440 and any locations where construction may create drainage problems	N/A (refer to Sections 3 and 4)
	B. Areas of high erosion potential	N/A
	C. Critical habitats or areas identified as having rare, endangered, or threatened, or special concern plant or animal species listed by the state or federal government	Section 6
	D. Location of known underground utilities or resources to be crossed (electric lines, fuel lines, drainage systems and natural or artificial public or private water resources)	Sections 3 and 4, Appendix A
	E. Residences or businesses within or adjoining the site that may be disrupted during construction	Appendix A
	F. Significant environmental, historic and ecological features (significantly large or old trees, buildings, monuments, stone walls or features of local interest)	N/A
<b>(c)</b>	<b>Supplemental Information</b>	
1.	Plans (if any) to salvage marketable timber, restore habitat and maintain snag trees within or adjoining the site	N/A
2.	All construction and rehabilitation procedures with reasonable mitigation that shall be taken to protect areas and conditions identified in 7(b), above, including but not limited to:	Sections 3,4, 5 and 6
	A. Construction techniques at wetland and watercourse crossings	N/A
	B. S & E control and rehabilitation procedures, consistent with the CT Guidelines for Soil Erosion and Sediment Control, as updated and amended for areas of high erosion potential	Appendix B
	C. Precautions and all reasonable mitigation measures to be taken in areas within or adjoining the site to minimize any	Section 6

RCSA SECTION	DESCRIPTION	LOCATION ADDRESSED IN D&M PLAN (SECTION NO.)
	adverse impacts of such actions or modifications on endangered, threatened, or special concern plant or animal species listed by federal or state agencies and critical habitats that are in compliance with federal and state recommended standards and guidelines, as amended	
	D. Plans for modification and rehabilitation of surface, drainage, and other hydrologic features	Appendix A
	E. Plans for watercourse bank restoration in accordance with Chapter 440 of the C.G.S.	N/A
	F. Plans for the protection of historic and archaeological resources with review and comment from a state historic preservation officer of the CT DECD or its successor agency	N/A
3.	Plans for the method and type of vegetation clearing and maintenance to be used within or adjacent to the site	Sections 3 and 4
4.	Location of public recreation areas or activities known to exist or being proposed in or adjacent to the site, together with copies of agreements between the company and public agencies authorizing the public recreation use of the site to the extent of the company's rights thereto	N/A
5.	Plans for ultimate disposal of excess excavated material, stump removal, and periodic maintenance of the site	Sections 3 and 4
6.	Locations of areas where blasting is anticipated	N/A
7.	Rehabilitation plans, including but not limited to reseeding and topsoil restoration	Sections 3, 4, and 5
8.	Contact information for the personnel of the contractor assigned to the project	Appendix F (UI Project personnel); contractor contacts to be provided to the CSC after contract(s) award
9.	Such site-specific information as the CSC may require	Sections 1-9; Appendices
(d)	<b>Notice</b> A copy, or notice of the filing, of the D&M Plan, or a copy, or notice of the filing of any changes to the D&M Plan, or any section thereof, shall be provided to the service list and the property owner of record, if applicable, at the same time the plan, or any section thereof, is submitted to the CSC	N/A
(e)	<b>Changes to the Plan</b> The CSC may order changes to the D&M plan, including but not limited to vegetative screening, paint color, or fence design at any time during the preparation of the plan	N/A
16-50j-62	<b>Supplemental Reporting Requirements</b>	
(a)	<b>Site Testing and Staging Areas</b>	Section 6, Appendix A

RCSA SECTION	DESCRIPTION	LOCATION ADDRESSED IN D&M PLAN (SECTION NO.)
	The certificate holder, or facility owner or operator, shall provide the CSC with written notice of the location and size of all areas to be accessed or used for site testing or staging areas. If such an area is to be used prior to approval of the D&M plan, the CSC may approve such use on terms as it deems appropriate.	
<b>(b)</b>	<b>Notice</b>	<b>Section 9</b>
1.	The certificate holder, or facility owner or operator, shall provide the CSC, in writing with a minimum of two weeks advance notice of the beginning of:	
	A. Clearing and access work in each successive portion of the site, and	
	B. Facility construction in that same portion	
2.	The certificate holder, or facility owner or operator, shall provide the CSC with advance written notice whenever a significant change of the approved D&M plan is necessary. If advance written notice is impractical, verbal notice shall be provided to the CSC immediately and shall be followed by written notice not later than 48 hours after the verbal notice. Significant changes to the approved D&M plan shall include, but not be limited to, the following:	
	A. The location of wetland or watercourse crossing	
	B. The location of an accessway or structure in a regulated wetland or watercourse area	
	C. The construction or placement of any temporary structures or equipment	
	D. A change in structure type or location including, but not limited to, towers, guy wires, associated equipment or other facility structures	
	E. Utilization of additional mitigation measure, or elimination of mitigation measures. The CSC or its designee shall promptly review the changes and shall approve, modify, or disapprove the changes in accordance with subsection (d) of Section 16-50j-60 of the RCSA	
3.	The certificate holder, or facility owner or operator, shall provide the CSC with a monthly construction progress report or a construction progress report at intervals determined by the CSC or its designee, indicating changes and deviations from the approved D&M Plan. The CSC may approve changes and deviations, request corrections, or require mitigation measures.	
4.	The certificate holder, or facility owner or operator, shall provide the CSC with written notice of completion of construction and site rehabilitation.	
<b>(c)</b>	<b>Final Report</b> The certificate holder, or facility owner or operator, shall provide the CSC with a final report for the facility not later than 180 days after completion of all site construction and site rehabilitation. The report shall identify:	

RCSA SECTION	DESCRIPTION	LOCATION ADDRESSED IN D&M PLAN (SECTION NO.)
1.	All agreements with abutters or other property owners regarding special maintenance precautions	
2.	Significant changes of the D&M plan that were required because of property rights of underlying and adjoining owners for other reasons	
3.	The location of construction materials which have been left in place including, but not limited to, culverts, erosion control structures along watercourses and steep slopes, and corduroy roads in regulated wetlands	
4.	The location of areas where special planting and reseeding have been done	
5.	The actual construction cost of the facility, including but not limited to the following costs:	
	A. Clearing and access	
	B. Construction of the facility and associated equipment	
	C. Rehabilitation; and	
	D. Property acquisition for the site or access to the site	
<b>(d)</b>	<b>Protective Order</b> The certificate holder, or facility owner or operator, may file a motion for protective order pertaining to commercial or financial information related to the site or access to the site.	<b>N/A</b>

**Table G-2: D&M Plan Directory of Docket No. 483 Decision and Order Conditions**

Condition or Page Number	Decision and Order Condition Description	D&M Plan (Section Reference, as Applicable)
(1)	The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-60 through 16-50j-62 of the RCSA. The D&M Plan shall be served on the City of Bridgeport for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:	D&M Plan
	a. A final site plan showing the placement of all substation equipment, structures, and buildings within the substation perimeter based on a design flood elevation of 19 feet NAVD88, temporary and permanent tap structures, access, and fencing;	Appendix A
	b. An erosion and sedimentation control plan, consistent with the <i>2002 Connecticut Guidelines for Soil Erosion and Sediment Control</i> ;	Sections 3-6; Appendix B
	c. A spill prevention, control, and countermeasure plan;	Appendix C
	d. Details of the transmission interconnections; and	Sections 1-4, 5; Appendix A
	e. A decommissioning plan for the existing Pequonnock Substation with or without the removal of the foundations.	Section 5, Appendix D
(2)	The Certificate Holder shall comply with all future electric and magnetic field standards promulgated by state or federal regulatory agencies. Upon the establishment of any new standards, the facilities granted in this Decision and Order shall be brought into compliance with such standards as soon as practical.	Acknowledged
(3)	The Certificate Holder shall provide the Council with a copy of necessary permits from any other state or federal agency with concurrent jurisdiction prior to the commencement of construction.'	Section 8, Acknowledged
(4)	In accordance with Section 16-50j-62 of the RCSA, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of substation operation.	Section 9
(5)	The Certificate Holder shall notify the Council no less than 60 days prior to when the substation operations terminate.	Acknowledged
(6)	Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within five years of the effective date of the Decision and Order, or within five years after all appeals to this Decision and Order have been resolved. Authority to monitor or modify the schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as practicable.	Section 9

Condition or Page Number	Decision and Order Condition Description	D&M Plan (Section Reference, as Applicable)
(7)	Any request for extension of the time period referred to in Condition 6 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the City of Bridgeport. Any proposed modifications to this Decision and Order shall likewise be so served.	Acknowledged
(8)	The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under CGS §16-50v.	Acknowledged
(9)	This Certificate may be transferred in accordance with CGS §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under CGS §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide to the Council a written agreement as to the entity responsible for any quarterly assessment charges under CGS §16-50v(b)2 that may be associated with this facility.	Acknowledged
(10)	The Certificate Holder shall maintain the facility, substation components, landscaping, and drainage features, in a reasonable physical and operational condition that is consistent with this Decision and Order and the Development and Management Plan to be approved by the Council.	Acknowledged
(11)	If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and / or transfer.	Acknowledged
(12)	This Certificate may be surrendered by the Certificate Holder upon written notification to the Council.	Acknowledged