

NORTHERN AVENUE / PIER 4 BLVD ELECTRIC PIPE-TYPE RELOCATION

Boston, Massachusetts

SUBMITTED TO **Boston Conservation Commission**
1 City Hall Square, Room 709
Boston, MA 02201-2031

PROPONENT **NSTAR d.b.a Eversource Energy**
247 Station Drive, SE 2122
Westwood, MA 02090

PREPARED BY **VHB**
99 High Street, 10th Floor
Boston, MA 02110

February 5, 2020

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Table of Contents

Request for Determination of Applicability

- WPA Form 1

Request for Determination of Applicability Figures

- Figure 1 – Project Location Map
- Figure 2 – Wetland Resources Map

Attachment A – Request for Determination of Applicability Narrative

- Introduction
- Site Description
- Wetland Resource Areas
- Work Description
- Mitigation Measures
- Regulatory Compliance
- Climate Change Impacts
- Summary

Attachment B – Project Plans

- Northern Avenue/Pier 4 Blvd Electric Pipe-Type Relocation, Drawing Nos. 001-005; 011-014; 016; 018-019

Attachment C – Abutter Notification

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Request for Determination of Applicability Form

- WPA Form 1

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WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

NSTAR d.b.a. Eversource Energy matthew.waldrip@eversource.com
Name E-Mail Address

247 Station Drive, SE 2122
Mailing Address

Westwood MA 02090
City/Town State Zip Code

781-441-8247
Phone Number

Fax Number (if applicable)

2. Representative (if any):

VHB
Firm

Stephanie Krueel skrueel@vhb.com
Contact Name E-Mail Address

99 High Street, 10th Floor
Mailing Address

Boston MA 02110
City/Town State Zip Code

617-607-2972
Phone Number

Fax Number (if applicable)

B. Determinations

1. I request the Boston Conservation Commission make the following determination(s). Check any that apply:

- a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

City of Boston
Name of Municipality

- e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

Northern Avenue/Pier Four Boulevard/142 Northern Avenue	Boston
_____	City/Town
Assessors Map/Plat Number	0602641051
_____	Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

Existing paved right-of-way within Northern Avenue at its intersection with Harbor Shore Drive; extending east to the intersection with Pier Four Boulevard; extending south within Pier Four Boulevard; and extending east into an existing easement within the hardscaped front setback at 142 Northern Avenue.

c. Plan and/or Map Reference(s):

Northern Avenue/Pier 4 Blvd Electric Pipe-Type Relocation, Drawing Nos. 001-005; 011-014; 016; 018-019.	12/19/19
_____	Date
Title	_____
_____	Date
Title	_____
_____	Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

The proposed underground replacement service electricity line will consist of two cables each within an eight-inch coated steel pipe encased in fluidized thermal backfill. These pipes will be placed within a trench. A pipe tie-in manhole will be installed within the easement on 142 Northern Avenue. A temporary freeze pit will be installed underground to the east of the manhole for cable splicing purposes. It will be topped with a temporary above-grade access shed. Following installation all surfaces will be restored to a condition as good as or better than the pre-construction condition and the Project will not result in any permanent impacts to jurisdictional resource areas. See attachment A for details.



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

Under 310 CMR 10.02(2)(b)2.i, the proposed installation of underground utilities within existing paved areas is considered a "minor activity" that is temporary in nature and has negligible impacts. Per 310 CMR 10.02(2)(a) and (b), the proposed activity is not subject to regulation when it falls within the 100-foot Buffer Zone or Riverfront Area. However, the Project Site is located within LSCSF, for which there are no performance standards contained in 310 CMR 10. Because the Project otherwise meets the criteria for a minor activity, the Proponent respectfully requests that the Boston Conservation Commission issue a Negative Determination of Applicability.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- Single family house on a lot recorded on or before 8/1/96
- Single family house on a lot recorded after 8/1/96
- Expansion of an existing structure on a lot recorded after 8/1/96
- Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
- New agriculture or aquaculture project
- Public project where funds were appropriated prior to 8/7/96
- Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- Residential subdivision; institutional, industrial, or commercial project
- Municipal project
- District, county, state, or federal government project
- Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)



WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

City of Boston

Name

1 City Hall Square

Mailing Address

Boston

City/Town

MA

State

02201

Zip Code

Signatures:

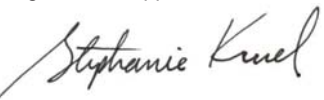
I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.



Signature of Applicant

02/03/2020

Date



Signature of Representative (if any)

02/03/20

Date

Request for Determination of Applicability Figures

- Figure 1 – Project Location Map
- Figure 2 – Wetland Resources Map

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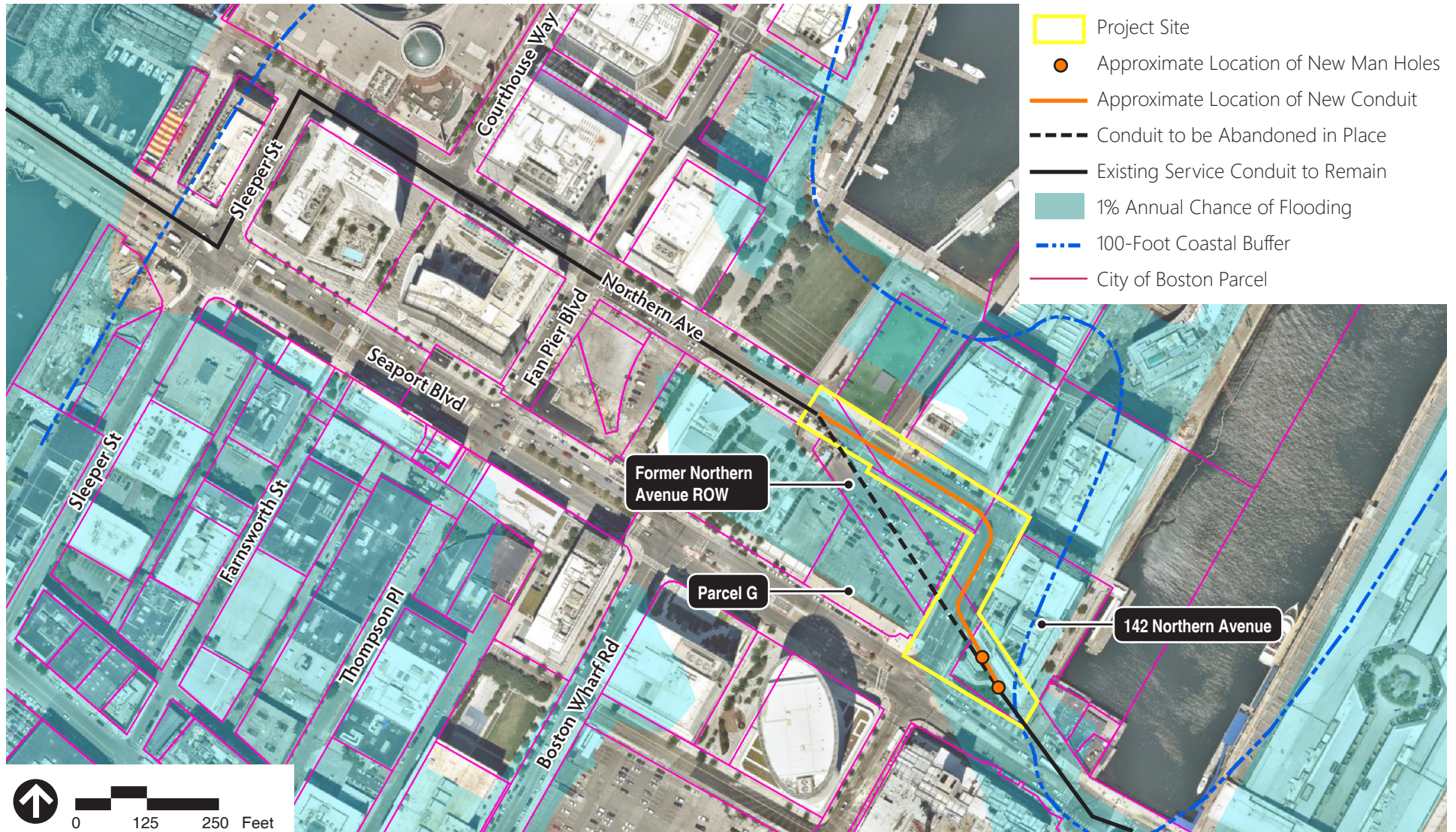


Source: Nearmap Aerial



Figure 1
Project Location Map

**Northern Avenue/Pier 4 Blvd Electric
Pipe-Type Relocation Project
Boston, Massachusetts**



Source: MassGIS, Nearmap Aerial



Figure 2

Wetland Resources Map

**Northern Avenue/Pier 4 Blvd Electric Pipe-Type Relocation Project
Boston, Massachusetts**

Attachment A

Request for Determination of Applicability Narrative

- Introduction
- Site Description
- Wetland Resource Areas
- Work Description
- Mitigation
- Regulatory Compliance
- Climate Change Impacts
- Summary

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Attachment A

Request for Determination of Applicability Narrative

This Request for Determination of Applicability (RDA) is submitted pursuant to the requirements of the Massachusetts Wetlands Protection Act (WPA) (MGL Chapter 131, Section 40) and its implementing regulations (310 CMR 10.00), as well as the Boston Wetlands Ordinance.

1.1 Introduction

NSTAR Electric Company d.b.a. Eversource Energy (the “Proponent”) is overseeing the relocation of an approximate 700 linear-foot underground electric line, as well as a pipe tie-in manhole and a temporary freeze pit, within the Northern Avenue and Pier Four Boulevard public rights-of-way and 142 Northern Avenue in Boston’s Seaport district (the “Project”)(Figure 1). This infrastructure will replace service that is currently provided within the former Northern Avenue right-of-way that is now located within Parcel G, a surface parking lot bounded by Northern Avenue, Pier Four Boulevard, Seaport Boulevard, and the property at 75-85 Northern Avenue. The existing infrastructure will be abandoned in place and removed at a later date in connection with the future redevelopment of Parcel G.

The entirety of the Project Site is within Land Subject to Coastal Storm Flowage (LSCSF) as depicted on FEMA Flood Insurance Rate Map panel 25025C0081J, effective March 16, 2016 (Figure 2). The Project will temporarily impact approximately 5,250 sf of LSCSF during installation of the new pipe, manhole and temporary freeze pit. All proposed work will take place within existing paved rights-of-way and easements; appropriate erosion and sedimentation controls will be implemented during construction; all surfaces will be restored to their original condition; and the Project will not result in any permanent impacts to jurisdictional resource areas.

Under 310 CMR 10.02(2)(b)2.i, the proposed installation of underground utilities within existing paved areas is considered a “minor activity” that is temporary in nature and has negligible impacts. Per 310 CMR 10.02(2)(a) and (b), the proposed activity is not subject to regulation when it falls within the 100-foot Buffer Zone or Riverfront Area. However, the Project Site is located within LSCSF, for which there are no performance standards contained in 310 CMR 10. Because the Project otherwise meets the criteria for a minor activity, the Proponent respectfully requests that the Boston Conservation Commission issue a Negative Determination of Applicability.

1.2 Site Description

The approximately 700 linear-foot underground electric line will be installed within the existing paved right-of-way connecting to existing service within Northern Avenue at its intersection with Harbor Shore Drive (approximately elevation 16 feet BCB); extending east to the intersection with Pier Four Boulevard (approximately elevation 17 feet BCB); and extending south within Pier Four Boulevard (approximately elevation 16 feet BCB). The pipes will then extend east into an existing easement (granted to NSTAR Electric Company for this purpose on May 2, 2012) within the hardscaped front setback at 142 Northern Avenue (approximately elevation 17 feet BCB). It will then reconnect to existing service that extends into Seaport Boulevard to the east.

1.3 Wetland Resource Areas

According to 310 CMR 10.04, LSCSF means land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater. It is coterminous with the Special Flood Hazard Area defined in the currently effective or preliminary Federal Emergency Management Agency (FEMA) Flood Insurance Study or Rate Map. As per FIRM panel 25025C0018J, effective March 16, 2016, the Project Site is located within an AE zone, with base flood elevations of 10 and 11 feet NAVD88 (16.46 and 17.46 feet BCB). The Project will temporarily impact approximately 5,250 sf of LSCSF during installation of the new pipes, manhole and freeze pit.

The Project Site is not within any other jurisdiction resource areas or buffer zones to resource areas. The most recently issued Massachusetts Natural Heritage & Endangered Species Atlas indicates that there are no Priority Habitats of Rare Species, Estimated Habitats of Rare Wildlife or Certified Vernal Pools on or near the Site. This mapping also indicates there are no potential vernal pools near the Site. Additionally, there are no Outstanding Resource Waters in the area based on a survey produced by MassDEP and mapping maintained by MassGIS.

1.4 Work Description

The proposed underground electric line will consist of two cables, each within an eight-inch coated steel pipe encased in fluidized thermal backfill (FTB). These pipes will be placed within a trench approximately seven feet wide and nine feet deep. A pipe tie-in manhole ("Manhole #01") measuring 9 feet, 4 inches wide; 8 feet, 2 inches high; and 23 feet, 4 inches long will be installed underground within the easement on 142 Northern Avenue. A temporary freeze pit measuring 8 feet wide, 9 feet high and 14 feet long will be installed underground to the east of the manhole for cable splicing purposes. It will be topped with an above-grade temporary access shed measuring 8 feet wide; 6 feet, 3 inches high; and 14 feet long. After all work is complete, the temporary access shed will be removed, and the ground surface will be restored to its original elevation and condition.

The proposed work will be done in coordination with the City of Boston Public Improvements Commission (PIC), the City of Boston Public Works Department (BPWD), the City of Boston Transportation Department (BTD), and the Boston Water & Sewer Commission (BWSC) to obtain the required Grants of Location (GOL) necessary to construct the underground facilities.

Generally, there are five principal phases of construction for an underground cable project within streets:

- Installation of BMPs and erosion control measures (see Section 1.5);
- Temporary manhole/freeze pit installation;
- Trenching and pipe installation (see Section 1.4.1);
- Cable pulling, splicing, and testing (see Section 1.4.2); and
- Final pavement/surface restoration (see Section 1.4.3).

1.4.1 Trenching and Pipe Installation

The method for underground electric line installation is open-cut trenching. The width of the trench will be marked on the street, Dig Safe will be contacted, and the location of the existing utilities will be marked. The pavement will be saw cut, which provides a clean break in the pavement and defines the trench for the next activity.

Following saw cutting, the existing pavement will be removed and loaded into a dump truck with a backhoe. Pavement will be handled separately from soil, and will be recycled at an asphalt batching plant. Subsequently, a backhoe will excavate the trench to the required depth. A “clean trench” or “live loading” method will be used for removal of excavated soils, where soil will be loaded directly into a dump truck for temporary off-site stockpiling or hauling to an off-site facility for recycling, re-use or disposal. The soil will not be stockpiled along the edge of the roadway, thus reducing the size of the required work area and reducing the potential for sedimentation and nuisance dust. Rock encountered during excavation will be removed by mechanical means and brought to an off-site facility for recycling, re-use or disposal. Once excavated, the trench will be shored as required by soil conditions, Occupational Safety and Health Administration (OSHA) safety rules, and local and state regulations. Shoring is designed to permit passage of traffic adjacent to the trench and will allow for the trench to be covered with a steel plate to allow traffic over the trench during non-working hours.

Once the open trench is prepared, the pipes will be assembled and lowered into the trench. The area around the pipes will be filled with FTB, and a temporary pavement patch will be installed. Trenches will remain open for approximately two months but will be covered by a secure steel plate at the end of each day.

1.4.2 Cable Installation and Testing

Prior to cable installation, each pipe will be tested and cleaned by pulling a mandrel (a close-fitting cylinder designed to confirm a pipe's shape and size) and swab through the pipe. When the swab and mandrel have been pulled successfully, the pipe is ready for cable installation.

Three cables will be installed in each pipe. To install each cable section, a cable reel will be set up at the "pull-in" manhole and a cable puller will be set up at the "pull-out" manhole. Following the initial pulling of the mandrel and pulling line through each pipe, a hydraulic cable pulling winch and tensioner will be used to individually pull cable from the pull-in to the pull-out manhole. Once the complete cable system is installed, it will be field-tested from the substations. At the completion of successful testing, the line will be energized.

1.4.3 Pavement Restoration

Following installation of the underground electric line, roadway surfaces will be restored to a condition as good as or better than the pre-construction condition in accordance with the Department of Public Utilities "Standards to be Employed by Public Utility Operators When Restoring and of the Streets, Lanes and Highways in Municipalities" (D.T.E. 98-22) ("Repaving Standards") and municipal standards. The surface treatment at 142 Northern Avenue will also be restored.

1.4.4 Schedule

Construction is anticipated to begin in April 2020, as soon as all required permits and approvals are obtained. Trenching and backfilling is expected to be complete within six months. A service outage will be scheduled for 145 days to complete the cable pulling and splicing.

1.5 Mitigation Measures

Potential impacts to resource areas would be due to excavation spillage, excavate pile runoff or trench washout during significant rain conditions. These concerns will be addressed using various work procedures and the placement of protective barriers as follows:

- Catch basins will be protected as needed with filter fabric to ensure that sediments do not enter the drainage system;
- Erosion controls will be inspected on a regular basis and maintained in working condition until all disturbed areas are stabilized;
- If appropriate, the contractor will seek authorization for dewatering discharges through a Remediation General Permit, and will manage any contaminated soil that may be found within the urban fill in accordance with MassDEP regulations;
- All trenches will be closed by a secure steel plate at the end of each day; and

- No work will be performed within or adjacent to resource areas during significant rain conditions to minimize runoff and washout situations.

1.6 Regulatory Compliance

The proposed Project complies with the WPA and its implementing regulations. The wetlands regulations at 310 CMR 10.00 do not contain performance standards for work in LSCSF. The Project also complies with the Boston Local Wetlands Ordinance. Regulations related to LSCSF have not yet been adopted.

The Project Site lies entirely within filled Commonwealth tidelands, therefore activities within the Site are subject to the Massachusetts Public Waterfront Act ("c.91") and its accompanying regulations at 310 CMR 9.00. In accordance with Section 9.22(3), a new utility installation within an existing licensed right of way is treated as a minor modification to an existing project. On August 1, 2006 a Consolidated Written Determination was issued for the Pier 4 redevelopment project, within which the Project Site lies. This was followed by the issuance of Waterways License No. 13204 on March 2, 2012, which authorized Phase 1 of the Pier 4 redevelopment including the relocation of a portion of Northern Avenue and the creation of Pier Four Boulevard. As such, the Proponent intends to request a minor modification to License No. 13204 to accommodate the proposed Project.

1.7 Climate Change Impacts

In the absence of any shore-based district scale flood protection measures, sea level rise will result in more frequent inundation of the Project Site. The Site consists of paved rights-of-way and a hardscaped open space area does not currently protect the interests of storm damage prevention or flood control in the same manner that LSCSF with natural soil and vegetation characteristics may protect those interests. The Project will not change the characteristics of the Site, and work will be completed prior to any anticipated increase in the duration or intensity of flooding events due to climate change.

1.8 Summary

The proposed underground electric line installation work will take place within an existing paved right-of-way and easement; appropriate erosion and sedimentation controls will be implemented during construction; and the Project will not result in any permanent impacts to jurisdictional resource areas. Therefore, the Proponent respectfully requests that the Boston Conservation Commission issue a Negative Determination of Applicability.

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Attachment B

Project Plans

- Northern Avenue/Pier 4 Blvd Electric Pipe-Type Cable Relocation, Drawing Nos. 001-005; 011-014; 016; 018-019

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EVERSOURCE

SEAPORT G TITLE HOLDER LLC NORTHERN AVENUE AND PIER-4 BLVD ELECTRIC PIPE-TYPE CABLE RELOCATION

ISSUED FOR PERMIT



BLACK & VEATCH CORPORATION
BURLINGTON, MASSACHUSETTS
PROJECT NO. 197804
JANUARY 27, 2020



Justin Bardwell
Digitally signed by
Bardwell, Justin
Date: 2020.01.29
10:30:35-06'00'

NOT APPROVED
FOR CONSTRUCTION

N.O.	DESCRIPTION	BY	DATE	APP.R.
7	ISSUED FOR PERMIT	JHW	1/27/2020	AB
6	ISSUED FOR 95% DESIGN	KEM	12/19/2019	AB
5	ISSUED FOR EVERSOURCE REVIEW	SLH	11/21/2019	DM

REVISION	
EVERSOURCE	
SEAPORT G TITLE HOLDER LLC	
115KV UNDERGROUND PIPE-TYPE CABLE RELOCATION	
COVER PAGE	
BOSTON, MA	
SCALE: unless noted NOT TO SCALE	DATE DRAWN C'H'K D. APP.R. 12/16/19 KEM XXX XXX
DRAWING NO. 001	REV. 7

SURVEY LEGEND

- AREA DRAIN
- CATCH BASIN
- CABLE TELEVISION MANHOLE
- DRAIN MANHOLE
- ELECTRIC MANHOLE
- MISCELLANEOUS MANHOLE
- SEWER MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- GSD ○ GAS SHUT-OFF
- WSD ○ WATER SHUT-OFF
- GG ○ GAS GATE
- WG ○ WATER GATE
- ICV ○ IRRIGATION CONTROL VALVE
- CLEANOUT ○ CLEANOUT
- BWW □ BOSTON WATER WORKS
- Fire Hydrant Fire HYDRANT
- DS ○ DOWN SPOUT
- UP □ UTILITY POLE
- UP W/ UE □ UTILITY POLE WITH CONDUIT LINE TO GROUND
- Light Pole LIGHT POLE
- LB □ LIGHT BOLLARD
- LL □ LANDSCAPE LIGHT
- HH □ HAND HOLE
- TC ○ TRASH CAN
- FACB □ FIRE ALARM CALL BOX
- MP ● METAL POST
- CP ● CONCRETE POST
- PM ● PARKING METER
- S ● SIGN POST
- TMA ○ TRAFFIC MAST ARM
- TRSG ○ TRAFFIC SIGNAL
- PED ○ PEDESTRIAN SIGNAL
- 12" ○ DECIDUOUS TREE WITH TRUNK DIAMETER
- 12" ○ CONIFEROUS TREE WITH TRUNK DIAMETER
- CLF HANDICAP PARKING
- 17.x00 SPOT ELEVATION
- CLF CHAIN LINK FENCE
- WCR WHEELCHAIR RAMP
- LST LANDSCAPE TIMBER
- R= RIM ELEVATION EQUALS
- I= INVERT ELEVATION EQUALS
- TOH= TOP OF HOOD ELEVATION EQUALS
- NPV NO PIPES VISIBLE
- TOW= TOP OF WATER
- CNO CANNOT OPEN
- BC BOTTOM CHANNEL
- TCB TRAFFIC CONTROL BOX
- ULG UNDERGROUND LOOP DETECTOR
- DWP DETECTABLE WARNING PANEL
- 17.x00 TOP OF WALL ELEVATION

DESIGN LEGEND

- CATV UNDERGROUND CABLE TELEVISION LINE
- TC UNDERGROUND TELE. COMMUNICATIONS LINE
- D UNDERGROUND DRAIN LINE
- E UNDERGROUND ELECTRIC LINE
- G UNDERGROUND GAS LINE
- S UNDERGROUND SEWER LINE
- T UNDERGROUND TELEPHONE LINE
- UNDERGROUND WATER LINE
- OHW OVERHEAD WIRES
- MONITORING WELL
- BENCH MARK
- EXISTING PIPE-TYPE CABLE (X2)
- NEW TO BE INSTALLED PIPE-TYPE CABLE (X2)
- EXISTING TO BE REMOVED PIPE-TYPE CABLE (X2)

- MATERIAL LIST OR ORIENTATION POINT CALLOUTS
- SECTION CUTS AND DETAIL CALLOUTS

NOT APPROVED
FOR CONSTRUCTION

N O.	DESCRIPTION	B Y	D A T E	A P P R.
7	ISSUED FOR PERMIT	JHW	1/27/2020	AB
6	ISSUED FOR 95% DESIGN	KEM	12/19/2019	AB
5	ISSUED FOR EVERSOURCE REVIEW	SLH	11/21/2019	DM



Digitally signed by
Bardwell, Justin
Date: 2020.01.29
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EVERSOURCE	
SEAPORT G TITLE HOLDER LLC	
115KV UNDERGROUND PIPE-TYPE CABLE RELOCATION	
LEGEND	
BOSTON, MA	
SCALE: unless noted NOT TO SCALE	D A T E 12/16/19
D R A W N KEM	C H'K D. XXX
A P P R. XXX	DRAWING NO. 002
REV. 7	

GENERAL NOTES & REQUIREMENTS

1. DEFINITIONS

UTILITY OWNER - EVERSOURCE, PROPRIETOR AND OPERATOR OF THE UTILITY THAT DOES NOT BELONG TO THE DEVELOPER
 DEVELOPER - WS DEVELOPMENT
 MAIN CONTRACTOR - WA CHESTER
 SUBCONTRACTOR - PARTY HIRED BY THE MAIN CONTRACTOR TO PERFORM THE SCOPE OF WORK DEFINED WITHIN THIS CONSTRUCTION WORK PACKAGE.
 ENGINEERING COMPANY - BLACK AND VEATCH
 TECHNICAL SPECIFICATION - A DOCUMENT THAT FORMS AN INTEGRAL PART OF THIS CONSTRUCTION WORK PACKAGE.
 OWNER'S REPRESENTATIVE - INDIVIDUAL ASSIGNED BY THE OWNER FOR THIS PROJECT TO MAKE DECISIONS ON THE OWNER'S BEHALF

2. GENERAL

- 2.1. THE GENERAL NOTES AND REQUIREMENTS SHALL BE APPLIED TOGETHER WITH THE CONTRACT SPECIFICATIONS AND CONTRACT DOCUMENTS.
- 2.2. THE SUBCONTRACTOR SHALL FAMILIARIZE HIMSELF WITH AND FOLLOW ALL OF THE INSTRUCTIONS AND REQUIREMENTS OUTLINED IN THE CONTRACT DOCUMENTS AND THE TECHNICAL SPECIFICATION.

WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES, ALL PRECAUTIONS SHALL BE TAKEN TO ENSURE THE INTEGRITY OF THESE UTILITIES. THIS SHALL INCLUDE MECHANICAL PROTECTION OF DIRECT BURIED CABLES OR OTHER UTILITIES LACKING INHERENT MECHANICAL PROTECTION. FOR ENERGIZED UNDERGROUND UTILITIES WITHIN DUCT BANKS, CABLE PIPE, CONDUIT OR OTHER FORMS OF SECONDARY PROTECTION, THE SUBCONTRACTOR SHALL MAINTAIN THE FOLLOWING MINIMUM CONSTRUCTION EQUIPMENT CLEARANCES. FOR DIRECT BURIED ENERGIZED UNDERGROUND UTILITIES, THE FOLLOWING CLEARANCES SHALL BE DOUBLED.

15 kV AND UNDER	-	10 FEET
72 kV	-	15 FEET
240 kV	-	20 FEET

THE SUBCONTRACTOR'S INSTALLATION SHALL ENSURE THAT THE FOLLOWING MINIMUM CLEARANCES ARE MAINTAINED FOR THE CABLE PIPE INSTALLATION.

	PARALLEL	CROSSING
STORM SEWER	5 FT	1 FT
WATER LINE	5 FT	1 FT
GAS LINE	3 FT	1 FT
ELECTRICAL DUCT BANK	3 FT	1 FT
TELEPHONE DUCT BANK 0.3M	1 FT	1 FT

- 2.4. ALTHOUGH THE OWNER'S DRAWINGS MAY SHOW THE PRESENCE OF UNDERGROUND INSTALLATIONS AND OBSTRUCTIONS OF OTHER UTILITIES, THE OWNER DOES NOT REPRESENT THAT SUCH INSTALLATIONS AND OBSTRUCTIONS ARE IN THE SPECIFIC LOCATIONS SHOWN, NOR THAT ALL SUCH INSTALLATIONS AND OBSTRUCTIONS ARE SHOWN THEREON. BEFORE COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT AND ARRANGE TO MEET ON THE JOB SITE WITH THE REPRESENTATIVE OF THE OTHER UTILITIES OF ANY TYPICAL OR OBVIOUS UNDERGROUND UTILITY SERVICES FOR THE PURPOSE OF LOCATING AND PROPERLY MARKING SUCH INSTALLATIONS OR OBSTRUCTIONS. THE SUBCONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO ALL SUCH UNDERGROUND INSTALLATIONS AND OBSTRUCTIONS; HOWEVER, IN THE EVENT SUCH DAMAGE DOES OCCUR, IT SHALL BE REPORTED IMMEDIATELY TO THE MAIN CONTRACTOR OR OWNER'S FIELD REPRESENTATIVE. IF REQUESTED BY THE OWNER, THE SUBCONTRACTOR SHALL REPAIR THE DAMAGE WITHOUT DELAY AND IN SUBSTANTIAL AND WORKMANLIKE MANNER SUBJECT TO ACCEPTANCE BY MAIN CONTRACTOR'S FIELD REPRESENTATIVE. ALL REPAIR WORK SHALL BE AT THE SUBCONTRACTOR'S EXPENSE.

- 2.5. THE SUBCONTRACTOR SHALL FAMILIARIZE HIMSELF WITH AND COMPLY WITH ALL APPLICABLE SAFETY PROCEDURES AND REQUIREMENTS.
- 2.6. THE SUBCONTRACTOR SHALL SUBMIT TO THE OWNER FOR ACCEPTANCE, A COMPREHENSIVE SAFETY PLAN FOR ALL ASPECTS OF THE WORK. PARTICULAR ATTENTION SHALL BE GIVEN TO HAZARDS RESULTING IN NITROGEN ASPHYXIATION AND TRANSFER OF POTENTIAL FROM SUBSTATION TO ADJACENT OR REMOTE WORK SITES.
- 2.7. ALL EXPLOSIVE AND FLAMMABLE MATERIAL NECESSARY FOR THE PERFORMANCE OF THE WORK SHALL BE TRANSPORTED, STORED, AND HANDLED IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
- 2.8. ALL VEHICLES AND WHEELED EQUIPMENT SHALL BE EQUIPPED WITH RUBBER OR PNEUMATIC TIRES; TRACKED EQUIPMENT SHALL BE EQUIPPED WITH PADS, EXCEPT AS OTHERWISE ACCEPTED BY THE OWNER.
- 2.9. ALL EXCAVATIONS SHALL BE PROTECTED BY SHORING, BRACING, OR BY OTHER METHODS, AS REQUIRED TO PREVENT CAVE-INS OR LOOSE DIRT FROM FALLING INTO THE EXCAVATION. THE SUBCONTRACTOR SHALL ENSURE ALL EXCAVATIONS MEET APPLICABLE SAFETY REQUIREMENTS. THE SUBCONTRACTOR SHALL PROVIDE PROTECTION TO ENSURE NO DAMAGE TO EXISTING FACILITIES, STRUCTURES, UTILITIES AND EQUIPMENT SITUATED THROUGHOUT THE SITE. THE SUBCONTRACTOR SHALL MAINTAIN ADEQUATE BARRIERS AND CONSTRUCTION SIGNS TO PREVENT INJURY TO THE PUBLIC.
- 2.10. ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST EDITION OF ALL INDUSTRY STANDARDS, REGULATIONS AND BUILDING CODES.

- 2.11. ALL COORDINATES, ELEVATIONS AND DIMENSIONS ARE IN IMPERIAL UNITS.
- 2.12. ELEVATIONS ARE DERIVED FROM LOCAL SURVEY AND TEST PITS.

3. MATERIALS

- 3.1. THE MAIN CONTRACTOR SHALL PROVIDE THE CABLE AND THE CABLE SPLICE KITS. ALL OTHER MATERIAL REQUIRED TO COMPLETE THE PROJECT SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
- 3.2. THE MATERIAL FURNISHED BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.

4. ROUTE

- 4.1. THE CABLE CARRIER PIPE SYSTEM WILL BE BUILT ON PUBLIC PROPERTY AND/OR RIGHT-OF-WAY ACQUIRED BY THE OWNER. THE LIMITS OF THE WORK SITE OR RIGHT-OF-WAY WILL BE STAKED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONTAIN HIS OPERATION WITHIN THE STAKED RIGHT-OF-WAY OR DESIGNATED PUBLIC PROPERTY WORK AREAS.
- 4.2. THE SUBCONTRACTOR SHALL AVOID OR MINIMIZE ANNOYANCE OR DISTURBANCE TO THE PUBLIC. THE SUBCONTRACTOR SHALL COMPLY WITH THE CITY OF BOSTON NOISE BYLAW.

THE SUBCONTRACTOR SHALL PROVIDE AND MAINTAIN ALL BRIDGES OR EXCAVATION COVERING WHICH MAY BE NECESSARY FOR THE MAINTENANCE OF TRAVEL ON STREETS IN WHICH EXCAVATIONS ARE MADE, AND FOR MAINTAINING ACCESS TO THE BUILDINGS OF ADJUTING PROPERTY OWNERS.

ACCESS TO ALL PRIVATE PARKING (GARAGES OR UNDERGROUND PARKING) SHALL REMAIN OPEN AND ACCESSIBLE AT ALL TIMES.

DISTURBED SIDEWALKS, DRIVEWAYS, AND CURBS SHALL BE MAINTAINED UNTIL PERMANENT REPLACEMENTS ARE MADE.

STORM SEWER DRAINS AND CATCH BASIN DRAINS AT CURBS SHALL BE KEPT FREE OF DIRT AT ALL TIMES.

ALL EXCAVATED MATERIAL, CONSTRUCTION MATERIAL, AND EQUIPMENT SHALL BE DEPOSITED AND STORED TO MINIMIZE INTERFERENCE WITH THE PUBLIC AND WITH USE OF STREETS AND SIDEWALKS, AND MUST NOT BE PLACED TO PREVENT FREE ACCESS TO FIRE HYDRANTS, CATCH BASIN, ETC., OR TO INTERFERE WITH ACCESS TO MANHOLES OF OTHER UTILITIES OR MUNICIPALITIES.

ALL OPENINGS IN PAVED AREAS SHALL BE TEMPORARILY RESURFACED WITH ASPHALT AND MAINTAINED TO CARRY ALL NORMAL TRAFFIC UNTIL PERMANENT REPLACEMENT IS MADE.

- 4.3. THE SUBCONTRACTOR SHALL MAINTAIN THE EXISTING GRADE ON THE OWNER'S RIGHT-OF-WAY, ON PUBLIC OR PRIVATE ROADWAYS AND ON ADJACENT PROPERTY SO THAT NORMAL DRAINAGE IS NOT AFFECTED. THE USE OF FILL TO FACILITATE THE MOVEMENT OF EQUIPMENT ACROSS WATERWAYS, INCLUDING ROAD DITCHES, WILL NOT BE PERMITTED. ANY CULVERT OR BRIDGING INSTALLED BY THE SUBCONTRACTOR SHALL BE REMOVED IMMEDIATELY AT THE SUBCONTRACTOR'S EXPENSE IF IN THE OPINION OF THE OWNER'S REPRESENTATIVE, NORMAL DRAINAGE IS AFFECTED.

- 4.4. WHERE SUBCONTRACTOR'S WORK HAS AFFECTED THE CONDITION OF FENCES, THE SUBCONTRACTOR SHALL MAINTAIN SUCH FENCES IN GOOD REPAIR. ALL GATES AND TEMPORARY OPENINGS SHALL BE KEPT CLOSED EXCEPT WHEN IN ACTUAL USE. ALL FENCES AND TEMPORARY OPENINGS INSTALLED BY THE SUBCONTRACTOR SHALL BE SUBJECT TO ACCEPTANCE BY THE MAIN CONTRACTOR'S REPRESENTATIVE. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR LOSS CAUSED BY SUBCONTRACTOR'S FAILURE TO KEEP FENCES IN GOOD REPAIR OR TEMPORARY OPENINGS CLOSED. WHEN THE WORK IS COMPLETED, THE SUBCONTRACTOR SHALL RESTORE ALL FENCES THAT HAVE BEEN DAMAGED OR ALTERED DURING CONSTRUCTION OPERATIONS TO THEIR PREVIOUS CONDITION. THIS INCLUDES THE REMOVAL OF GATES INSTALLED BY THE CONTRACTOR.

5. PERMITS AND AGREEMENTS

- 5.1. THE SUBCONTRACTOR SHALL NOTIFY THE MAIN CONTRACTOR'S REPRESENTATIVE AT LEAST 72 HOURS IN ADVANCE OF ANY WORK UPON, OVER, OR ACROSS CITY STREETS. ANY DELAY RESULTING FROM LACK OF ADEQUATE NOTIFICATION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 5.2. THE SUBCONTRACTOR WILL OBTAIN AT HIS EXPENSE ALL PERMITS FOR CLOSURE OF STREETS, ALLEYS, OR ACCESS TO PRIVATE PROPERTY.
- 5.3. THE SUBCONTRACTOR SHALL FAMILIARIZE HIMSELF AND CONDUCT HIS OPERATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL AGREEMENTS AND PERMITS. HE SHALL OBTAIN AND COMPLY WITH THE PERMIT SPECIFICATIONS OF THE CITY OF BOSTON.
- 5.4. CERTAIN LOCATIONS MAY HAVE RESTRICTIONS OR LIMITATIONS ON WORKING TIMES AND CONDITIONS. THE CONTRACTOR IS REQUIRED TO COMPLY WITH THESE RESTRICTIONS.
- 5.5. THE SUBCONTRACTOR SHALL CONTAIN HIS OPERATIONS WITHIN THE ALLOWED WORKING SPACE AND THE OWNER'S RIGHT-OF-WAY, AS SHOWN IN THE DRAWINGS.

6. INSTALLATION

6.1. GENERAL

- 6.1.1. THE SUBCONTRACTOR SHALL AT HIS EXPENSE, ESTABLISH ALL LINES AND GRADES FOR THE CABLE PIPE. IN THE EVENT STAKES ARE DESTROYED OR MOVED IN ANY WAY BY THE CONTRACTOR'S OPERATIONS PRIOR TO THE INSTALLATION, THE SUBCONTRACTOR SHALL RE-ESTABLISH THESE STAKES AT HIS EXPENSE.
- 6.1.2. EXCAVATION SHALL, IN ADDITION TO DIGGING, INCLUDE THE REMOVAL AND DISPOSAL OF EXCESS EXCAVATED MATERIAL, PUMPING OF WATER, SHEETING, SHORING, AND ANY OTHER OPERATION NECESSARY TO PROVIDE A TRENCH, PIT, OR HORIZONTAL BORES TO INSTALL THE CABLE PIPE SYSTEM. NO SHORING OR SHEETING INSTALLED IN CONNECTION WITH THE EXCAVATION SHALL BE LEFT IN PLACE.
- 6.1.3. THE CABLE TRENCH SHALL BE BACKFILLED ACCORDING TO THE DETAIL IN THE DRAWINGS.

6.2. CABLE PIPE

- 6.2.1. THE LOCATION, TYPE AND SIZE OF CABLE PIPES, AND SPLICING VAULTS ARE SHOWN ON THE APPLICABLE CONSTRUCTION DRAWINGS.
- 6.2.2. THE CABLE PIPE SHALL NOT BE BENT WITH A RADIUS LESS THAN THE BENDING RADII SHOWN IN THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS. ALL CABLE PIPE BENDING RADII SHOWN IN THE DRAWINGS SHALL BE CONSIDERED TO BE THE MINIMUM BENDING RADII AT THE INDICATED LOCATION.

- 6.2.3. THE CABLE PIPE SHALL BE LOWERED INTO THE TRENCH IN A MANNER THAT WILL NOT CAUSE DAMAGE TO IT OR ITS COATING. SAND BAGS, ROLLERS, OR OTHER ACCEPTED MEANS SHALL BE UTILIZED WHEN IT IS NECESSARY TO PULL THE CABLE PIPE ALONG THE TRENCH BOTTOM.

- 6.2.4. BEFORE ANY TWO LENGTHS OR SECTIONS OF CABLE PIPE ARE WELDED TOGETHER, THE INTERIOR OF EACH LENGTH OR SECTION SHALL BE INSPECTED. IF THIS INSPECTION REVEALS ANY CONDITION OTHER THAN CLEAN, THE CABLE PIPE SHALL BE SWABBED CLEAN UNTIL IT IS ACCEPTABLE TO THE MAIN CONTRACTOR'S REPRESENTATIVE.

- 6.2.5. CABLE PIPE SHALL BE INSPECTED JOINTLY BY THE CONTRACTOR AND THE OWNER'S REPRESENTATIVE. IF END CAPS ARE LOOSE OR MISSING, THE INTERIOR COATING SHALL BE INSPECTED FOR DAMAGE. ANY DAMAGE FOUND ON THIS INSPECTION TO EITHER THE CABLE PIPE OR THE COATING RESULTING FROM SHIPMENT OR STORAGE SHALL BE CLEARLY MARKED FOR REPAIR AT THE TIME OF INSTALLATION AT THE OWNER'S EXPENSE. ANY DAMAGE TO THE CABLE PIPE OR COATING THAT OCCURS BETWEEN THE TIME OF LOADING AND THE TIME OF INSTALLATION INSPECTION SHALL BE REPAIRED AT THE SUBCONTRACTOR'S EXPENSE.

- 6.2.6. THE SUBCONTRACTOR SHALL FURNISH ALL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION EXCEPT THAT SPECIFIED AS FURNISHED BY THE OWNER.

- 6.2.7. COATED STEEL CABLE PIPES SHALL BE TESTED IN ACCORDANCE WITH THE PROJECT TECHNICAL SPECIFICATIONS AND THE FOLLOWING:

6.2.7.1. CABLE PIPE COATING ELECTRICAL TESTING

AN ACCEPTED ELECTRIC HOLIDAY DETECTOR, WITH A VOLTAGE SETTING AND VOLTAGE MEASURING MEANS SHALL BE USED TO DETECT CABLE PIPE COATING FAULTS.

PRITEC (OR OWNER ACCEPTED EQUIVALENT) COATED CABLE PIPES SHALL BE TESTED WITH A MINIMUM VOLTAGE OF 10,000 VOLTS, AND A MAXIMUM VOLTAGE OF 12,000 VOLTS. FUSION BONDED EPOXY AND POLYMER CONCRETE COATINGS SHALL BE TESTED AT A VOLTAGE BETWEEN 2,000 AND 2,400 VOLTS. THE ELECTRODE FOR APPLYING THE TEST SHALL BE A ROLLING SPRING THAT SHALL COMPLETELY ENIRCLE THE CABLE PIPE, SO ARRANGED THAT IT SHALL CONTACT THE CABLE PIPE COATING THROUGHOUT ITS CIRCUMFERENCE. ANY HOLIDAYS SHALL BE REPAIRED AS PER THE TECHNICAL SPECIFICATION.

6.2.7.2. CABLE PIPE WELD TESTING

IF THE CABLE PIPE ENDS ARE FLARED AND FITTED WITH BACKING (CHILL) RINGS, TESTING OF THE CABLE PIPE WELDS SHALL BE IN ACCORDANCE WITH THE API SPECIFICATION, STANDARD 1104 "STANDARD FOR FIELD WELDING OF PIPE LINES". TESTING OF THE WELDS SHALL BE PERFORMED AND INTERPRETED BY A LABORATORY CHOSEN BY AND PAID BY THE SUBCONTRACTOR AND ACCEPTED BY THE OWNER. WELD X-RAY FILMS SHALL BE KEPT AVAILABLE AT THE WORK SITE BY THE SUBCONTRACTOR FOR INSPECTION AT ANY TIME BY THE OWNER.

IF THE CABLE PIPE ENDS ARE WELDED USING SLEEVE COUPLINGS ONE OF THE TWO FOLLOWING WELD TESTS SHALL BE PERFORMED

- 6.2.7.2.1. LIQUID DYE PENETRANT TESTING SHALL BE PERFORMED TO COMPLY WITH THE RECOMMENDATIONS IN ASTM E1417, STANDARD PRACTICE FOR LIQUID PENETRANT TESTING.

- 6.2.7.2.2. MAGNETIC PARTICLE INSPECTION TESTING SHALL BE PERFORMED TO COMPLY WITH THE RECOMMENDATIONS IN ASTM E1444, STANDARD PRACTICE FOR MAGNETIC PARTICLE TESTING.

ANY WELDS DEEMED UNACCEPTABLE BY OWNER SHALL BE REMOVED, REWELDED, AND REINSPECTED.

6.2.7.3. PRESSURE AND VACUUM TEST

THE SUBCONTRACTOR WILL FURNISH ALL MATERIALS, LABOUR AND EQUIPMENT FOR PERFORMING THE CABLE PIPE VACUUM AND PRESSURE TESTS AS PER THE TECHNICAL SPECIFICATION.

- 6.2.8. CABLE PIPE ENDS SHALL NOT BE LEFT OPEN IN THE CABLE TRENCH UNLESS WORK IS IN PROGRESS. ALL OPEN ENDS SHALL BE SEALED WITH AN AIR-TIGHT CAP AND PRESSURIZED TO 5 PSIG WITH COMPRESSED DRY AIR OR COMPRESSED DRY NITROGEN.

- 6.2.9. ALL COMPLETED SECTIONS OF CABLE PIPE TO CONTAIN NEW CABLE SHALL BE MANDRELLED BY THE CONTRACTOR. THE CABLE PIPE SECTIONS SHALL PERMIT THE PASSAGE OF A MANDREL 8.5 INCHES LONG HAVING AN OUTSIDE DIAMETER OFF 5.78 INCHES AND A 1 INCH MINIMUM RADIUS ON EACH END.

6.2.10. CABLE AND CABLE SPLICES.

- 6.2.10.1. CABLE AND CABLE SPLICES SHALL BE INSTALLED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS INSTRUCTIONS.

7. RESTORATION AND PAVING

7.1. CLEAN-UP

- 7.1.1. THE SUBCONTRACTOR SHALL DISPOSE OF ALL SURPLUS SOIL AND MATERIAL, AND ABIDE BY THE OWNER'S ENVIRONMENTAL PROCEDURES. ALL EXCESS EXCAVATED MATERIAL SHALL BE REMOVED WITHIN 24 HOURS AFTER BACKFILLING IS COMPLETED. THE OWNER WILL HAVE STREETS CLEARED AND CLEANED AT THE CONTRACTOR'S EXPENSE IF NOT DONE WITHIN THREE HOURS AFTER NOTICE HAS BEEN GIVEN TO THE SUBCONTRACTOR BY THE MAIN CONTRACTOR.
- 7.1.2. ALL DEBRIS WHICH COLLECTS AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE REMOVED IMMEDIATELY. THE COST OF REMOVAL OF FOREIGN MATERIAL SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE AS STATED IN THE CONTRACT.

7.2. RESTORATION

THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF LAWNS, BUSHES AND DAMAGED TREES.

7.3. PAVING

- 7.3.1. AFTER CONSTRUCTION IS COMPLETE, THE SUBCONTRACTOR SHALL MAKE PERMANENT REPLACEMENT OF ALL SIDEWALKS, DRIVEWAYS, CURBS, GUTTERS AND PAVEMENT BROKEN OR REMOVED AS A RESULT OF THE WORK. THE PERMANENT REPLACEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE APPROPRIATE AUTHORITIES.

THE RESTORATION OF PAVEMENT INCLUDES THE REMOVAL OF ANY TEMPORARY PAVEMENT INSTALLED IN ACCORDANCE WITH THE OWNER'S SPECIFICATIONS ATTACHED IN THE CONTRACT.

- 7.3.2. ALL RESTORATION SHALL CONFORM TO THE CITY OF BOSTON, DESIGN AND CONSTRUCTION STANDARDS.

OTHER CONSTRUCTION NOTES

- 1. CLEAR AREA WITH DIGSAFE, PHONE 811 or (888) 344-7233.
- 2. UTILITY LOCATIONS SHOWN HAVE NOT BEEN VERIFIED. HYDRO-EXCAVATE AND EXPOSE ALL UTILITIES:
 - (A) THAT ARE IN CLOSE PROXIMITY TO ENSURE THAT MINIMUM CLEARANCES ARE MAINTAINED AND
 - (B) AT CROSSOVERS TO ENSURE MINIMUM VERTICAL CLEARANCES ARE MAINTAINED.
- 3. ANY SIGNIFICANT CHANGES TO ALIGNMENT OR DEPTH OF BURY MUST BE APPROVED BY APPLICABLE PARTIES.
- 4. ONCE WORK IS COMPLETE, RESTORE ALL DISTURBED AREAS TO ORIGINAL STATE.
- 5. RECORD AS-BUILT INFORMATION ON ATTACHED PLANS AND RETURN TO APPLICABLE PARTIES FOR FINAL REVIEW AND APPROVAL.

NOT APPROVED FOR CONSTRUCTION

7	ISSUED FOR PERMIT	JHW	1/27/2020	AB
6	ISSUED FOR 95% DESIGN	KEM	12/19/2019	AB
5	ISSUED FOR EVERSOURCE REVIEW	SLH	11/21/2019	DM
N.O.	DESCRIPTION	BY	DATE	APP.R.

REVISION

EVSOURCE

SEAPORT G TITLE HOLDER LLC

115KV UNDERGROUND PIPE-TYPE CABLE RELOCATION

GENERAL NOTES

BOSTON, MA

SCALE: unless noted
NOT TO SCALE

DATE DRAWN
12/16/19 KEM

CHK'D
XXX

APP.R.
XXX

DRAWING NO.
003

REV.
7



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DRAWING INDEX			
NUMBER	REV	ISSUE	DESCRIPTION
001	7	1/23/2020	COVER PAGE
002	7	1/23/2020	LEGEND
003	7	1/23/2020	GENERAL NOTES
004	7	1/23/2020	DRAWING INDEX
005	5	1/23/2020	KEY MAP
010	4	1/23/2020	PLAN & PROFILE SH. 1 OF 5
011	6	1/23/2020	PLAN & PROFILE SH. 2 OF 5
012	6	1/23/2020	PLAN & PROFILE SH. 3 OF 5
013	7	1/23/2020	PLAN & PROFILE SH. 4 OF 5
014	7	1/23/2020	PLAN & PROFILE SH. 5 OF 5
016	2	1/23/2020	MANHOLE #01 FOR TRIANGULAR PARK
017	2	1/23/2020	MANHOLE #02 FOR FRONT OF COURTHOUSE
018	2	1/23/2020	FREEZE PIT DETAIL
019	2	1/23/2020	CROSS SECTION DETAIL
020	7	1/23/2020	CABLE PULLING PARAMETERS
022	3	1/23/2020	PIPE COUPLING DETAILS
REFERENCE DRAWING LIST			
NUMBER	REV	ISSUE	DESCRIPTION
R01	1	N/A	EXISTING MANHOLE 25081 DETAILS
R02	1	1/27/1966	EXISTING AL OKONITE PIPE TYPE CABLE

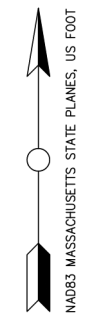
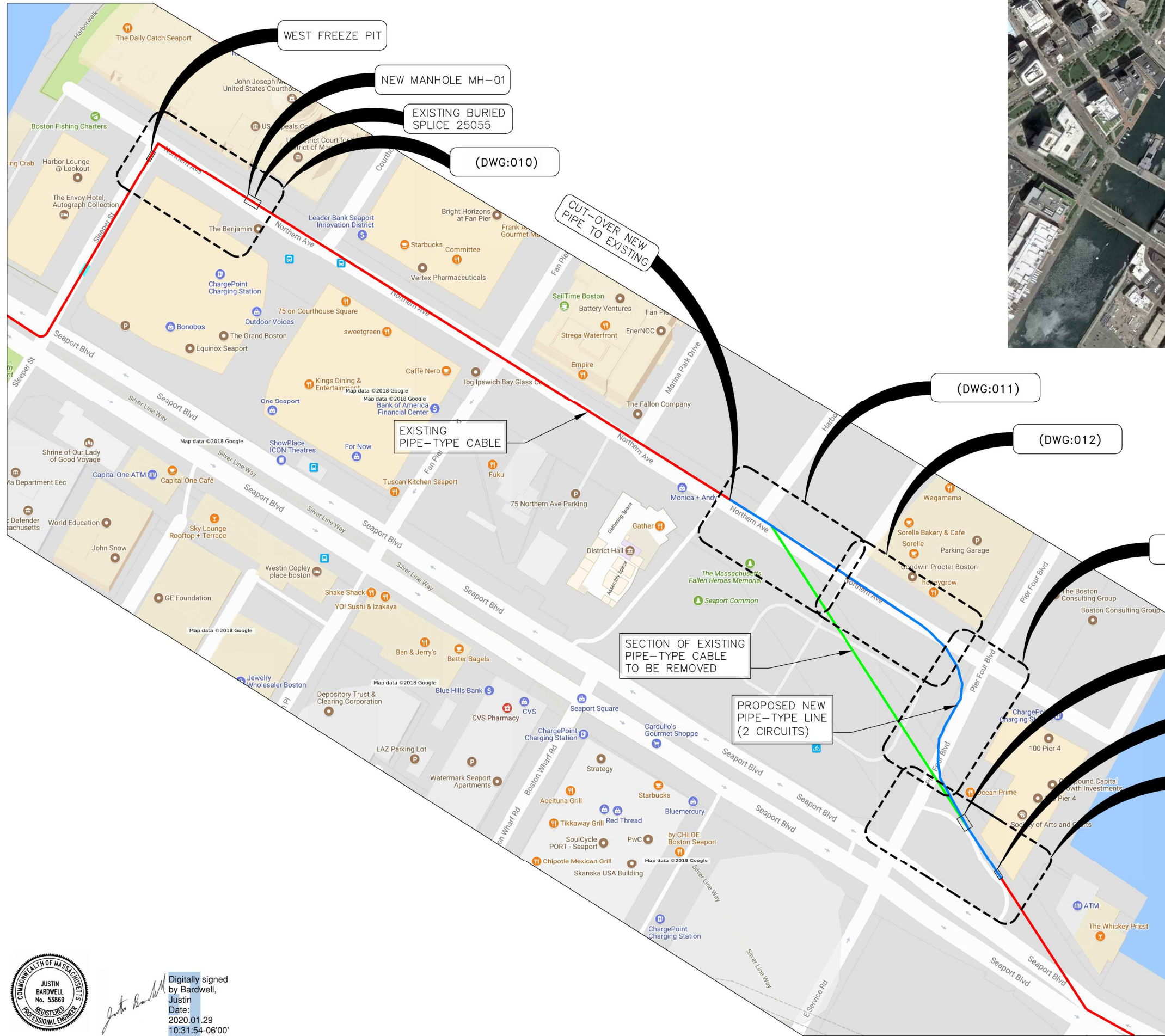
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FOR CONSTRUCTION



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Date: 2020.01.29
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5	ISSUED FOR EVERSOURCE REVIEW	SLH	11/21/2019	DM

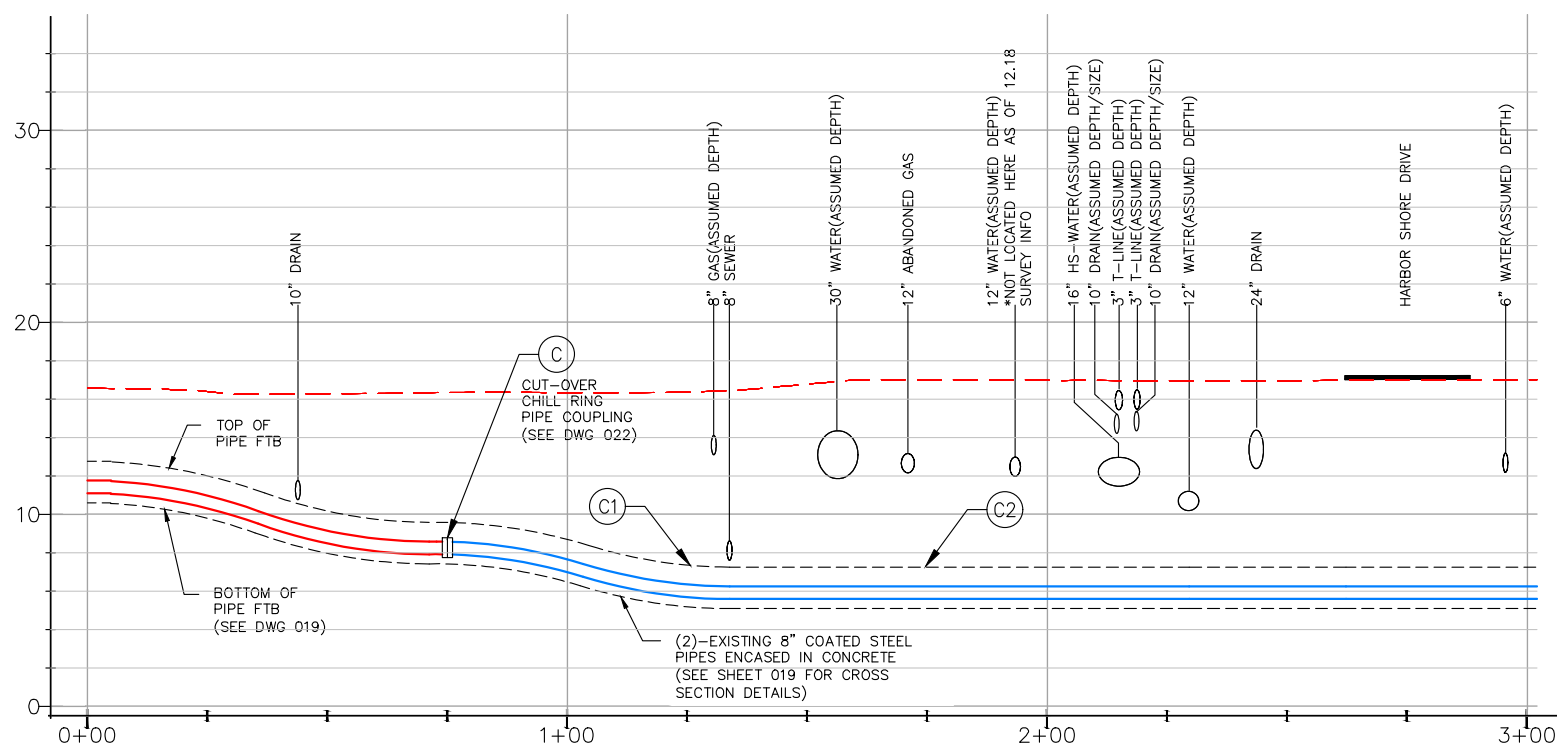
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EVERSOURCE	
SEAPORT G TITLE HOLDER LLC	
115KV UNDERGROUND PIPE-TYPE CABLE RELOCATION	
DRAWING INDEX	
BOSTON, MA	
SCALE: unless noted NOT TO SCALE	D A T E 12/16/19
D R A W N KEM	C H'K D. XXX
A P P R. XXX	DRAWING NO. 004
REV. 7	



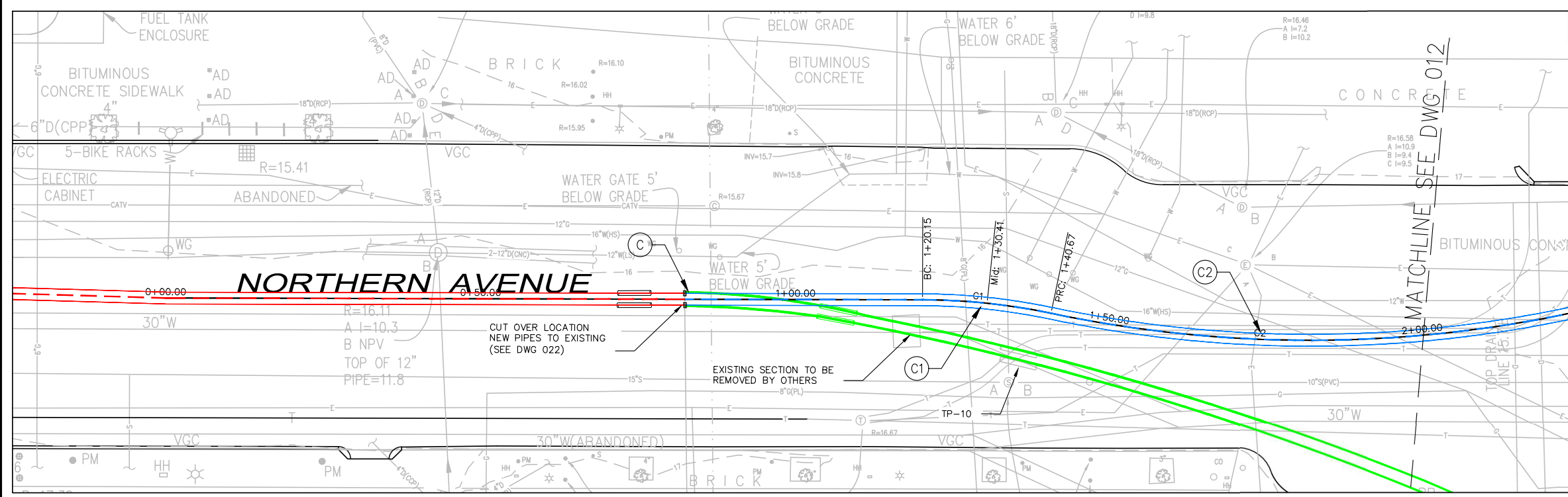
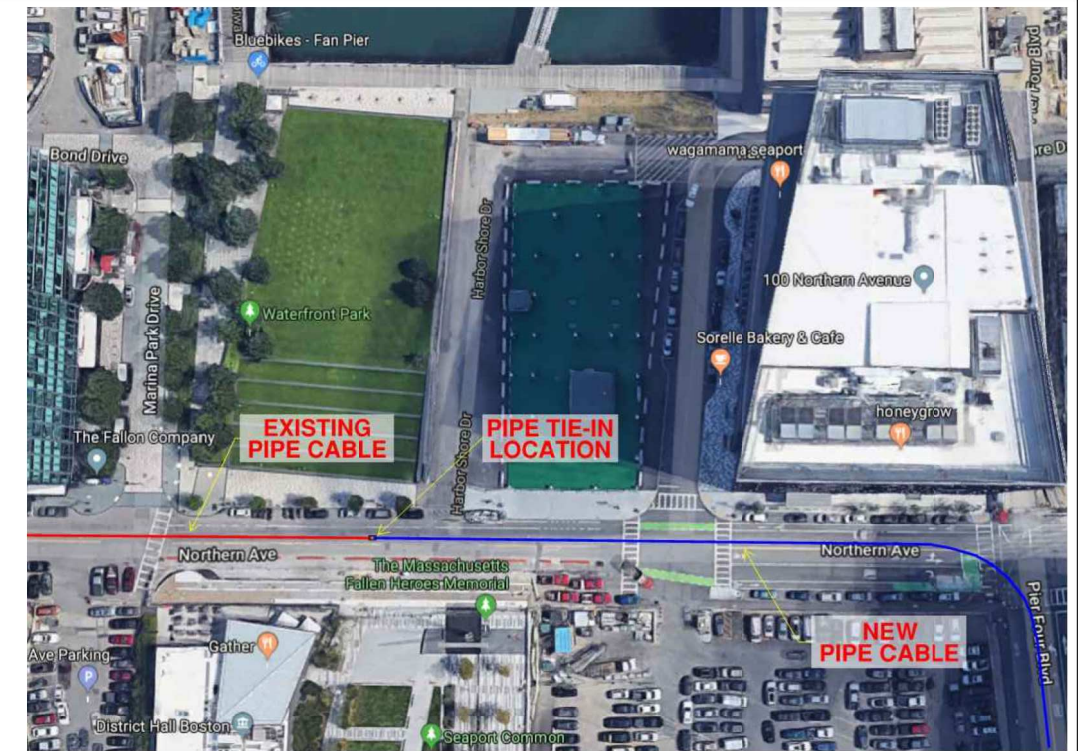
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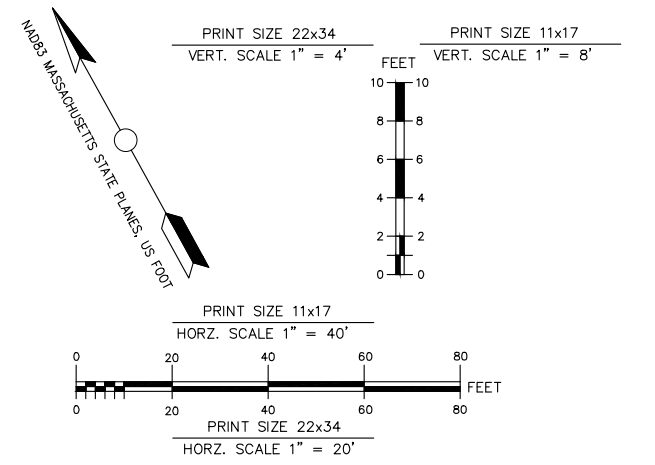
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REVISION				
EVERSOURCE				
SEAPORT G TITLE HOLDER LLC				
115KV UNDERGROUND PIPE-TYPE CABLE RELOCATION				
KEY PLAN				
BOSTON, MA				
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DRAWING NO.	REV.			
005	5			



PROFILE VIEW



PLAN VIEW



- CONSTRUCTION NOTES:**
- 400' RADIUS TYPICAL FOR ALL VERTICAL BENDS UNLESS OTHERWISE NOTED.
 - SEPARATION BETWEEN UTILITIES AND 115 KV LINES SHALL FOLLOW EVERSOURCE STANDARD NO. UGTL-PTC-00.

NOT APPROVED FOR CONSTRUCTION

CURVE TABLE				
CURVE #	LENGTH (ft)	DELTA	RADIUS (ft)	TANGENT
C1	20.52	11° 45' 29"	100.00	10.297
C2	112.15	32° 07' 38"	200.00	57.59
C3	35.33	20° 14' 37"	100.00	17.852
C4	18.40	14° 03' 13"	75.00	9.245
C5	64.14	73° 29' 36"	50.00	37.332
C6	54.93	62° 56' 46"	50.00	30.608

POINT	NORTHING	EASTING	ELEVATION		REMARKS
			FIN. GRADE	TOP OF PIPE	
			A	2954260.04	
B	2954263.19	778477.89	17.70	12.00	MANHOLE MH-01
C	2953789.89	779230.24	16.05	9.20	CUTOVER TO NEW PIPE
D	2953344.90	779558.91	16.00	11.26	MANHOLE MH-02
E	2953290.78	779593.67	16.00	11.30	EAST FREEZE PIT



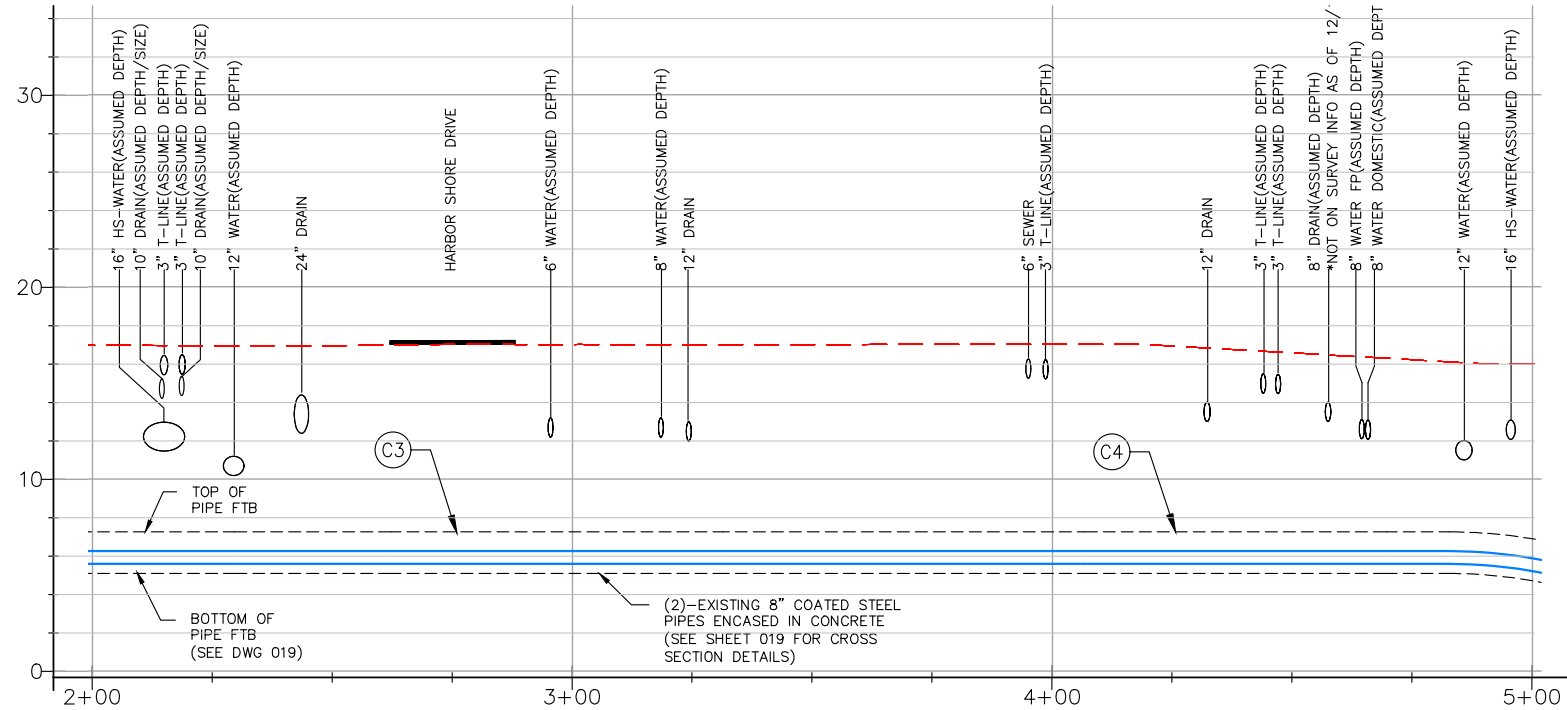
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5	ISSUED FOR 95% DESIGN	JHW	12/18/2019	AB
4	ISSUED FOR 70% DESIGN	SLH	01/18/2019	DM
N.O.	DESCRIPTION	BY	DATE	APP.R.

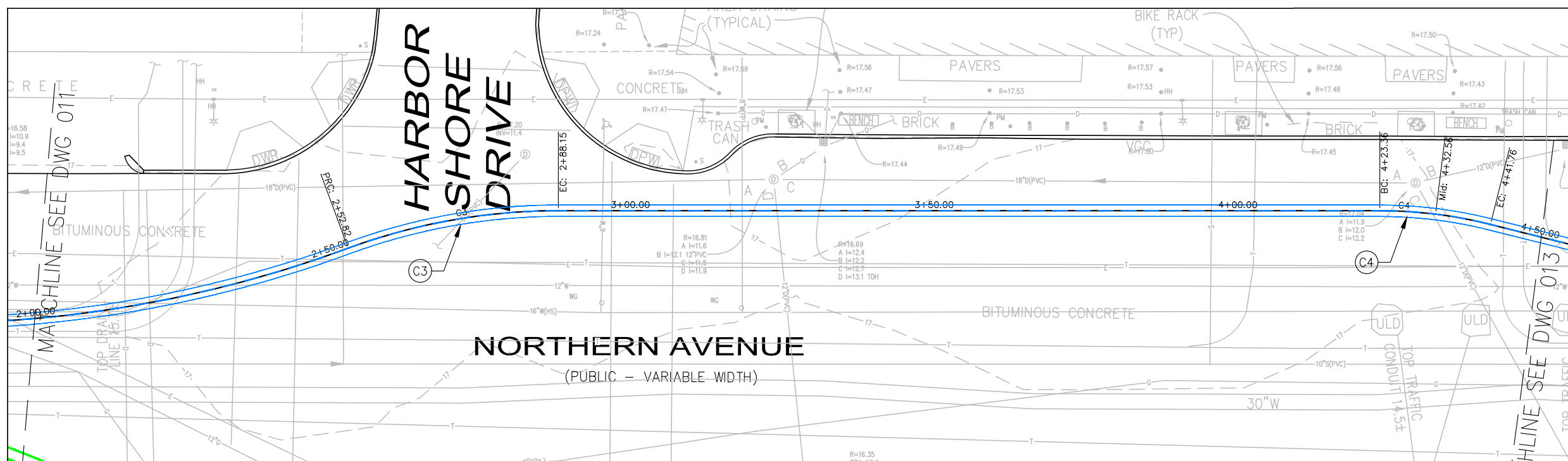
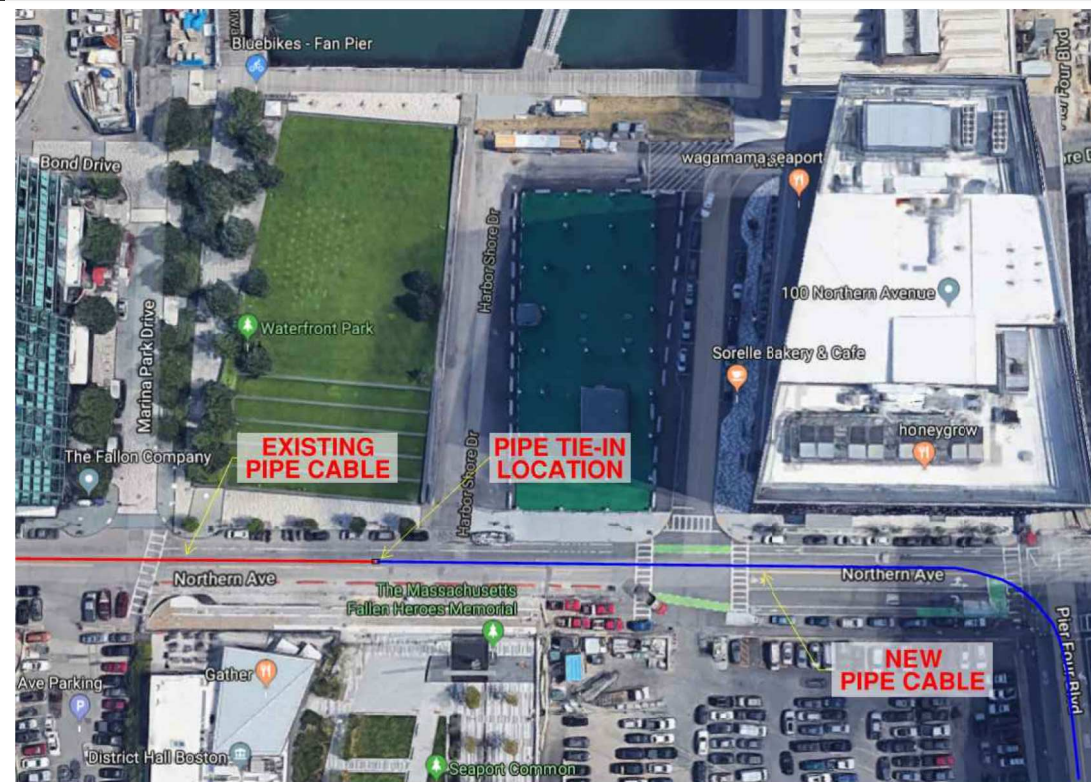
EVERSOURCE

SEAPORT G TITLE HOLDER LLC
115KV UNDERGROUND PIPELINE
PLAN AND PROFILE
BOSTON, MA

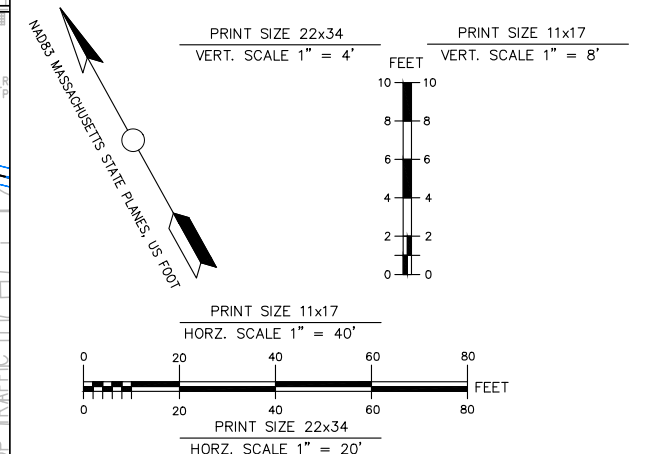
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PROFILE VIEW



PLAN VIEW



CONSTRUCTION NOTES:

- 400' RADIUS TYPICAL FOR ALL VERTICAL BENDS UNLESS OTHERWISE NOTED.
- SEPARATION BETWEEN UTILITIES AND 115 KV LINES SHALL FOLLOW EVERSOURCE STANDARD NO. UGTL-PTC-00.

NOT APPROVED FOR CONSTRUCTION

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C5	64.14	73° 29' 36"	50.00	37.332
C6	54.93	62° 56' 46"	50.00	30.608

COORDINATES					
POINT	NORTHING	EASTING	ELEVATION		REMARKS
			FIN. GRADE	TOP OF PIPE	
A	2954260.04	778477.89	17.45	11.50	WEST FREEZE PIT
B	2954263.19	778477.89	17.70	12.00	MANHOLE MH-01
C	2953789.89	779230.24	16.05	9.20	CUTOVER TO NEW PIPE
D	2953344.90	779558.91	16.00	11.26	MANHOLE MH-02
E	2953290.78	779593.67	16.00	11.30	EAST FREEZE PIT

N. O.	DESCRIPTION	BY	DATE	APP. R.
6	ISSUED FOR PERMIT	JHW	1/27/2020	AB
5	ISSUED FOR 95% DESIGN	JHW	12/18/2019	AB
4	ISSUED FOR 70% DESIGN	SLH	01/18/2019	DM



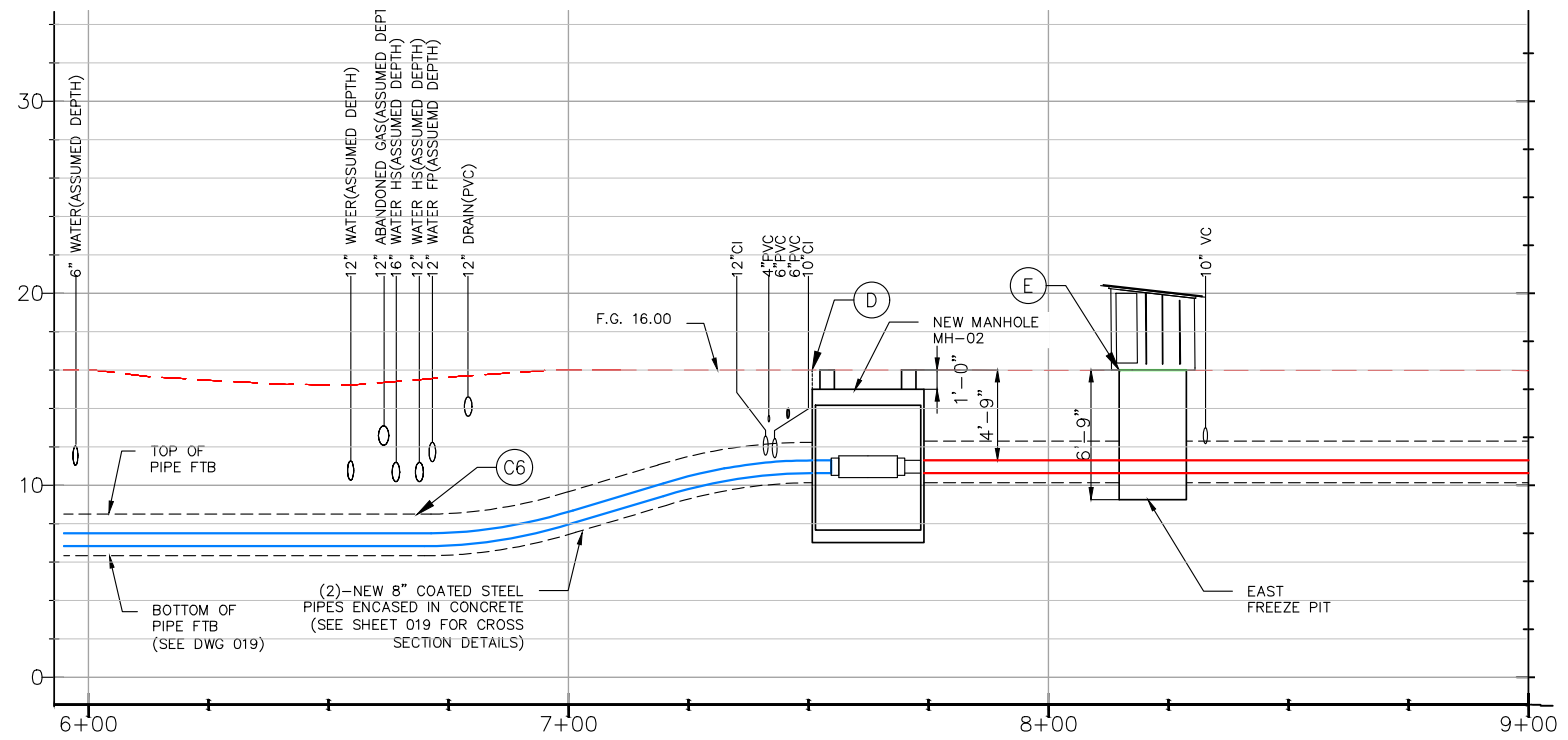
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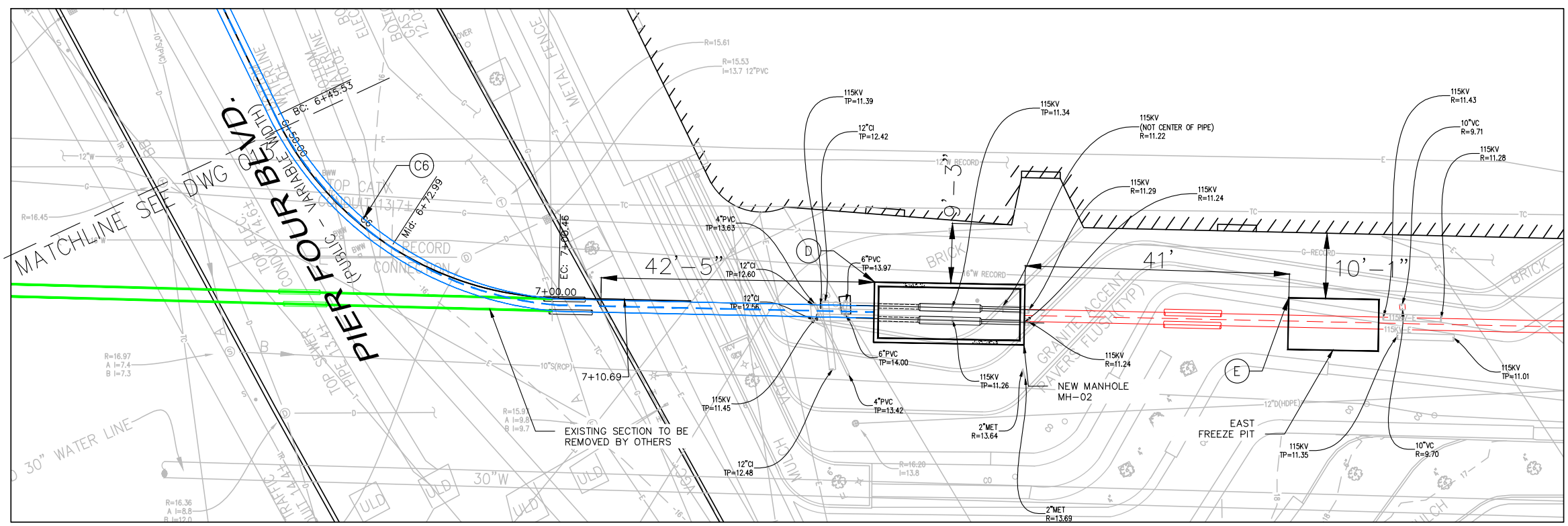
EVERSOURCE

SEAPORT G TITLE HOLDER LLC
115KV UNDERGROUND PIPELINE
PLAN AND PROFILE
BOSTON, MA

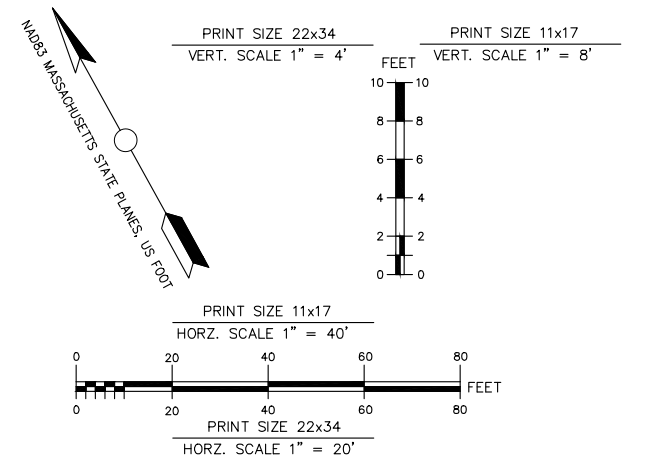
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PROFILE VIEW



PLAN VIEW



- CONSTRUCTION NOTES:**
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POINT	NORTHING	EASTING	ELEVATION		REMARKS
			FIN. GRADE	TOP OF PIPE	
			A	2954260.04	
B	2954263.19	778477.89	17.70	12.00	MANHOLE MH-01
C	2953789.89	779230.24	16.05	9.20	CUTOVER TO NEW PIPE
D	2953344.90	779558.91	16.00	11.26	MANHOLE MH-02
E	2953290.78	779593.67	16.00	11.30	EAST FREEZE PIT



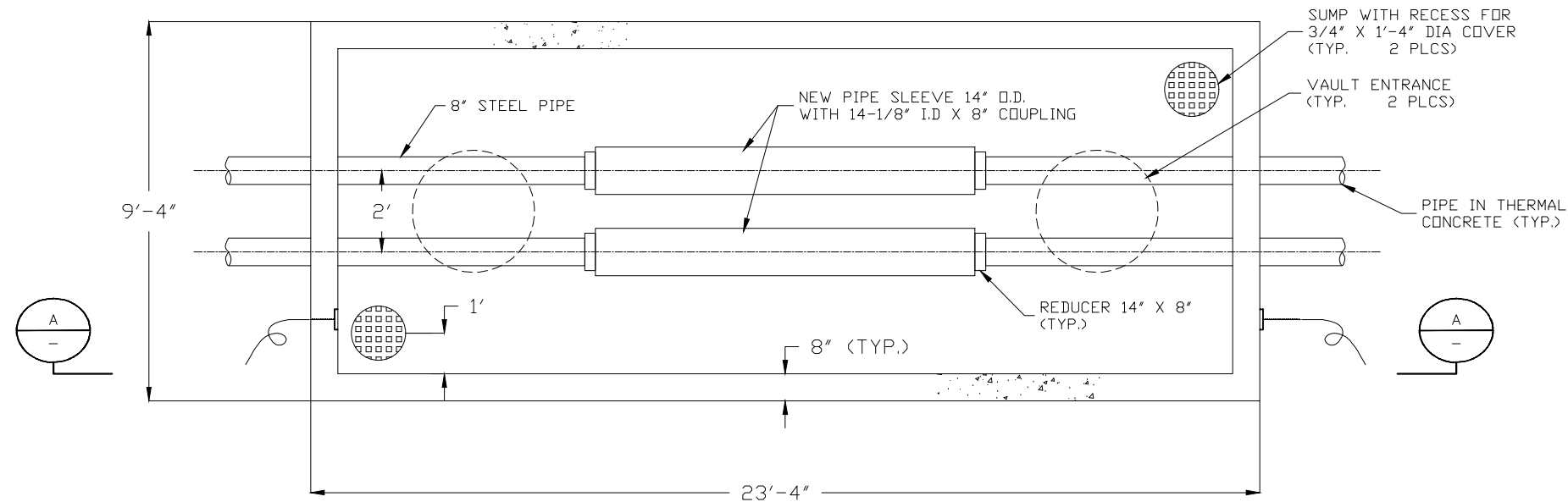
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Date: 2020.01.29 10:35:03-06'00'

7	ISSUED FOR PERMIT	JHW	1/27/2020	AB
6	ISSUED FOR 95% DESIGN	JHW	12/18/2019	AB
5	ISSUED FOR EVERSOURCE REVIEW	SLH	11/21/2019	DM
N.O.	DESCRIPTION	BY	DATE	APP.R.

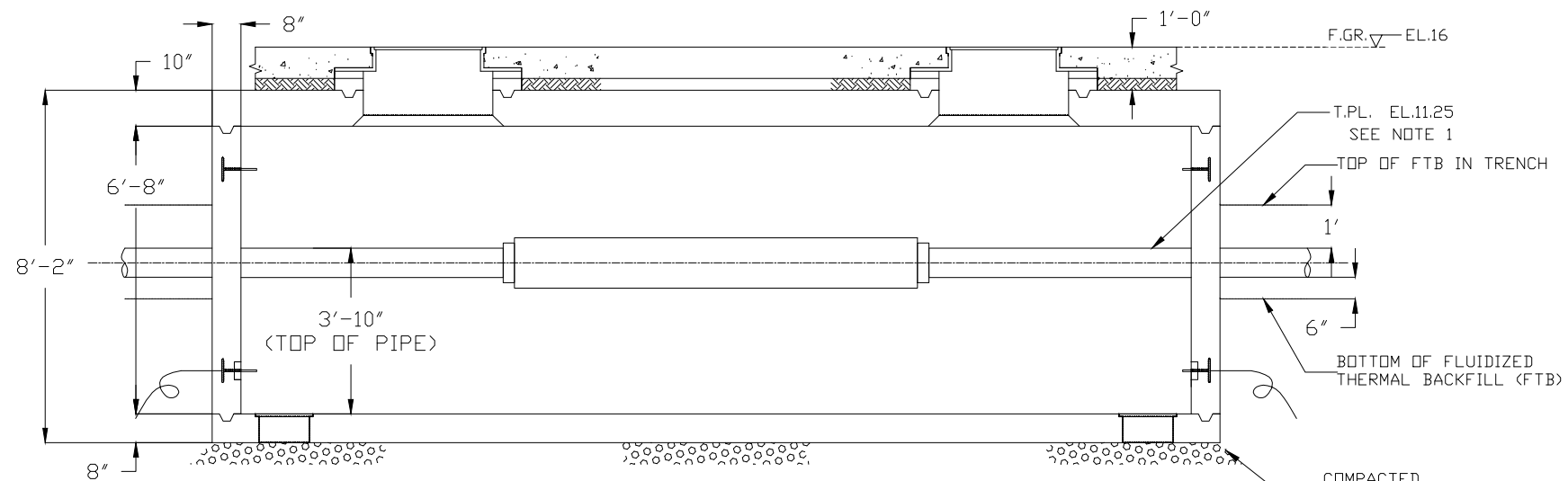
EVERSOURCE

SEAPORT G TITLE HOLDER LLC
115KV UNDERGROUND PIPELINE
PLAN AND PROFILE
BOSTON, MA

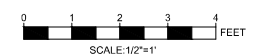
SCALE: unless noted NOT TO SCALE	DATE 01/18/19	DRAWN SLH	CHK'D. DSM	APP.R. BVT	DRAWING NO. 014	REV. 7
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PLAN VIEW
SCALE: 1/2"=1'



SECTION A-A
SCALE: 1/2"=1'



NOTES:
1. THE ELEVATION TO THE TOP OF THE PIPE IS PROVIDED BY THE SURVEYOR AFTER THE TEST PIT.

MANHOLE #01
AT TRIANGULAR PARK

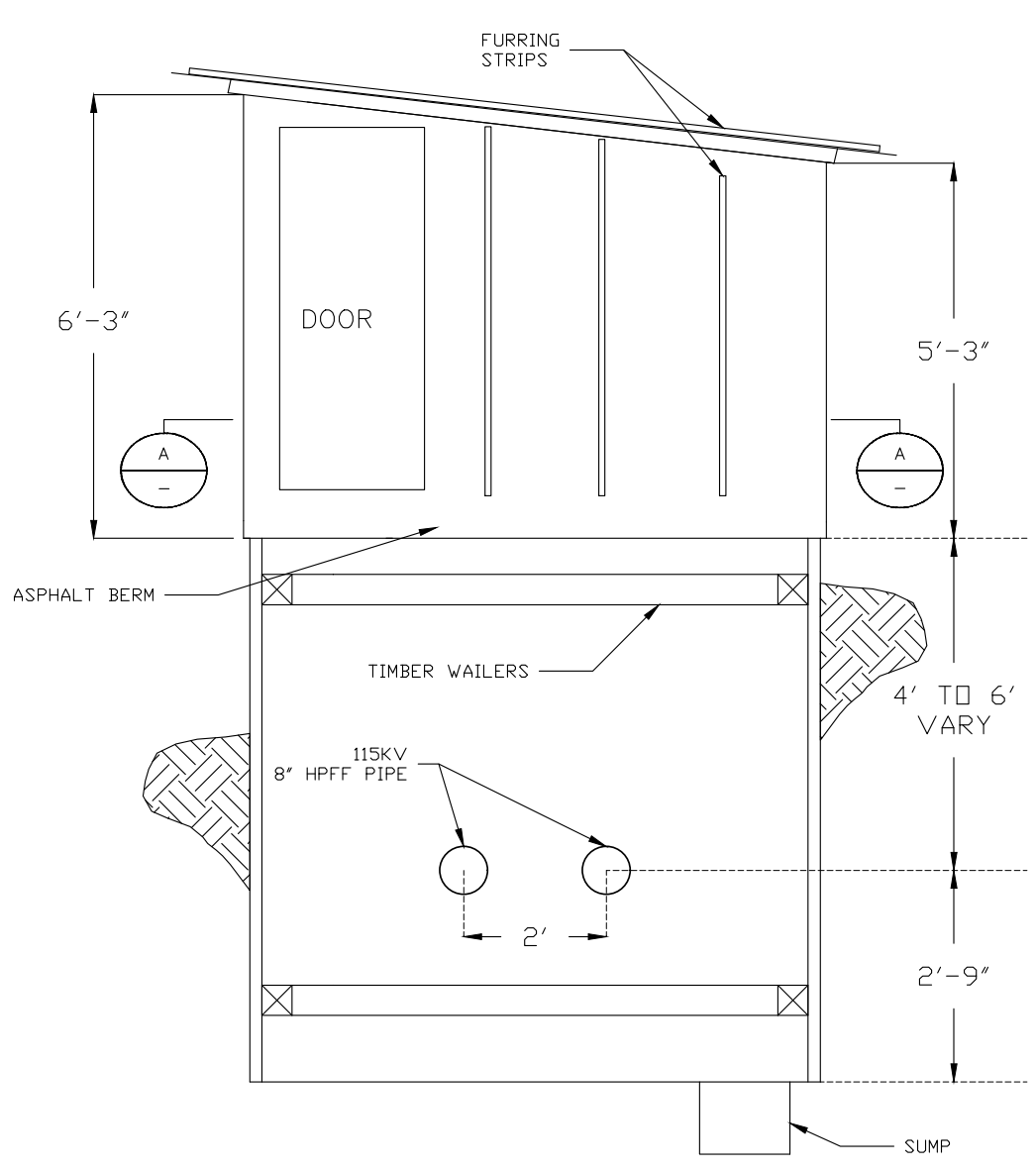
NOT APPROVED
FOR CONSTRUCTION



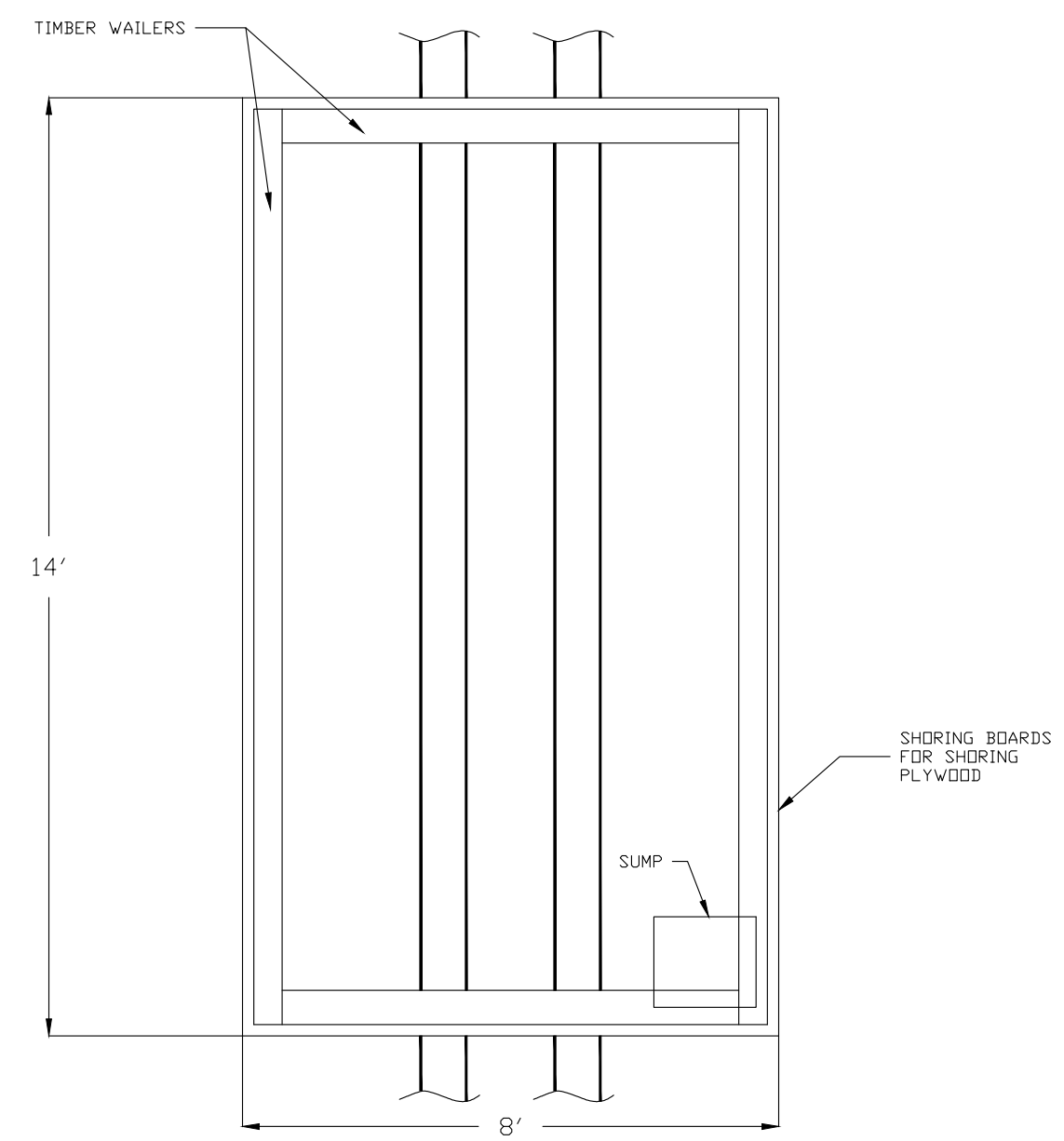
Digitally signed by
Bardwell, Justin
Date: 2020.01.29
10:35:19-06'00'

N.O.	DESCRIPTION	BY	DATE	APP.R.
2	ISSUED FOR PERMIT	JHW	1/27/2020	AB
1	ISSUED FOR 95% DESIGN	KEM	12/19/2019	AB

REVISION	
EVERSOURCE	
SEAPORT G TITLE HOLDER LLC	
115KV UNDERGROUND PIPE-TYPE CABLE RELOCATION	
MANHOLE #01 FOR TRIANGULAR PARK	
BOSTON, MA	
SCALE: unless noted 1/2"=1'	DATE DRAWN C'H'K D. APP.R. 12/16/19 KEM XXX XXX
DRAWING NO. 016	REV. 2

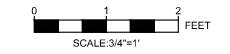


FREEZE PIT PROFILE VIEW



SECTION A-A
PLAN VIEW

- NOTES:
1. ALL DIMENSIONS ARE IN FEET AND INCHES.
 2. PIT WALL SHALL BE SECURED WITH SHORING PLYWOOD OR SHORING BOARDS & BRACED WITH TIMBERS. A TRENCH BOX MAY BE USED FOR TWO SIDES. CLEAR SPACE INSIDE SHORING TO BE 8' X 14'.
 3. PIT FLOOR TO HAVE 6" OF GRAVEL. SUMP IN FLOOR TO BE 12" DEEP.
 4. HOUSE TO BE PLYWOOD AND 2X4 STRUCTURE. HOUSE MUST BE WATER TIGHT, COVER WITH VISQUEEN AND SECURE USING FURRING STRIPS. COMPARABLE PREFAB BUILDING MAY BE USED AS ALTERNATIVE.
 5. ASPHALT BERM SHALL PREVENT ANY INFLOW OF SURFACE WATER. HOUSE ROOF SHALL EXTEND BEYOND ASPHALT BERM.
 6. DOOR SHALL BE 24" X 60" AND HAVE A LOCKABLE HASP.



NOT APPROVED
FOR CONSTRUCTION



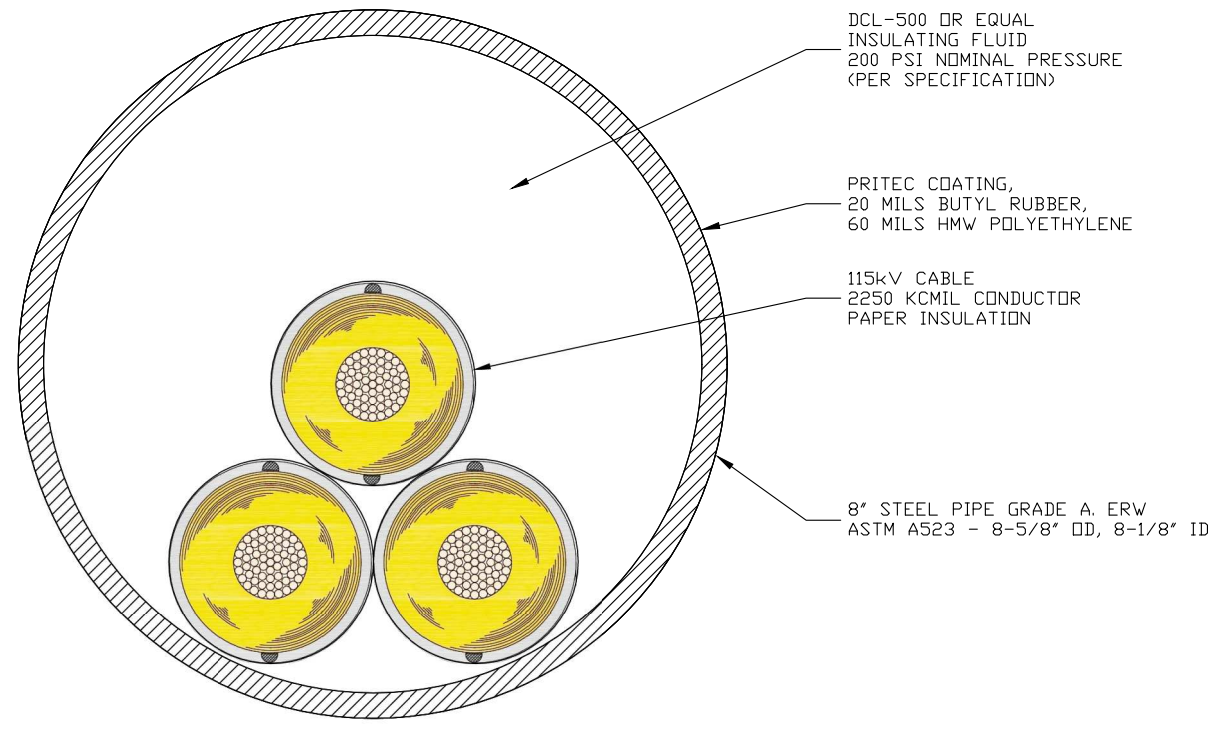
Digitally signed by
Bardwell, Justin
Date: 2020.01.29
10:35:49-06'00'

REVISION		BY		DATE		APP R.	
2	ISSUED FOR PERMIT	JHW	1/27/2020	AB			
1	ISSUED FOR 95% DESIGN	KEM	12/19/2019	AB			
N O.	DESCRIPTION	B Y	D A T E	A P P R.			

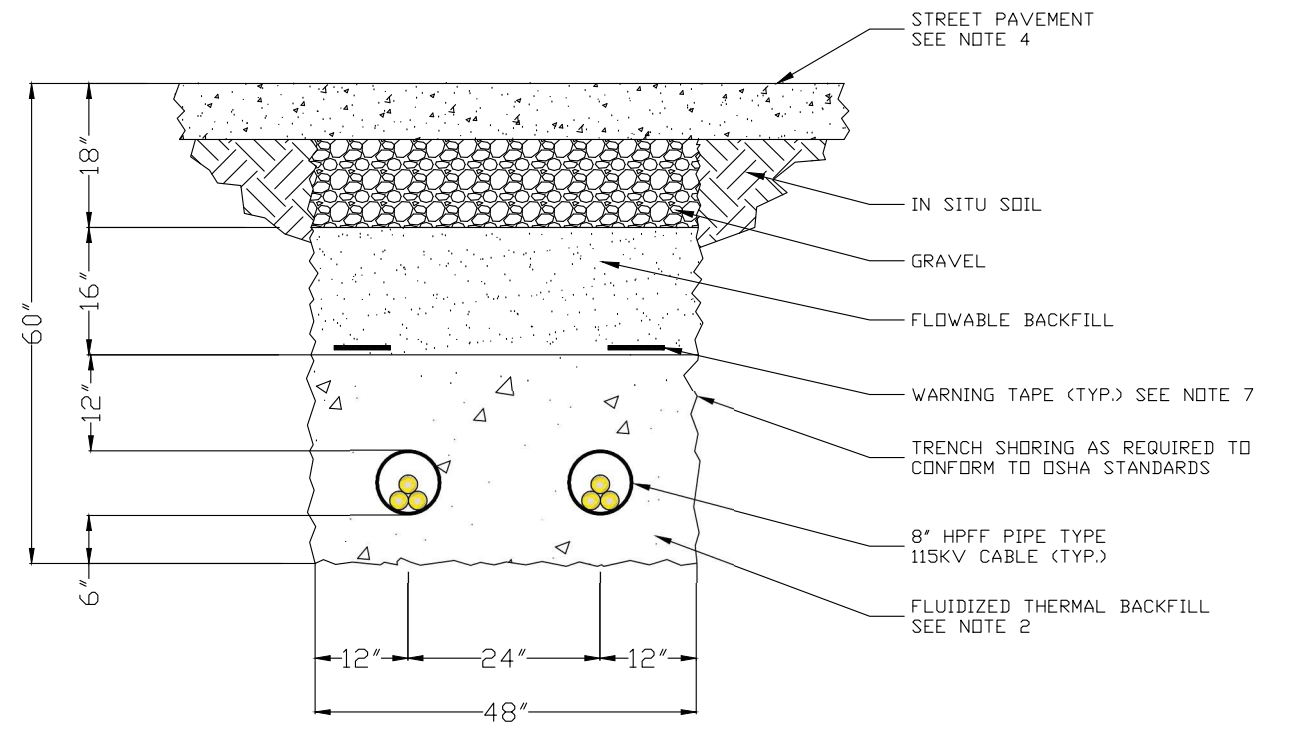
EVERSOURCE

SEAPORT G TITLE HOLDER LLC
115KV UNDERGROUND PIPELINE
FREEZE PIT DETAIL
BOSTON, MA

SCALE: unless noted 3/4" = 1'	D A T E 12/16/19	D R A W N KEM	C H'K D. XXX	A P P R. XXX	DRAWING NO. 018	REV. 2
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DETAIL A
 8" HPFF 115KV PIPE-TYPE CABLE
 SCALE: 1"=1"



PIPE TYPE CABLE INSTALLATION
 CROSS SECTION
 SCALE: 1/2"=1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE DWG 003.
2. FLUIDIZED THERMAL BACKFILL (FTB) SHALL BE USED FOR CABLE PIPE FILL MATERIAL. FTB AND FLOWABLE BACKFILL SHALL BE AS SPECIFIED IN THE CONSTRUCTION SPECIFICATIONS.
3. THE FINISH GRADE/PAVEMENT TO MATCH ORIGINAL CONDITION.
4. COMPLETED ROAD BASE, SUCH AS CRUSHED ROCK, SHALL BE USED UNDER ALL PAVEMENT AND SHALL BE ACCEPTABLE TO THE CITY OF BOSTON DESIGN AND CONSTRUCTION STANDARDS.
5. PIPE CLASS AND COATINGS SHALL BE AS INDICATED IN THE SPECIFICATIONS.
6. SEE PLAN AND PROFILE DRAWINGS FOR CABLE PIPE ELEVATIONS.
7. WARNING TAPE TO READ "HIGH VOLTAGE ELECTRIC TRANSMISSION LINE 250-5168517"
8. TRENCH WIDTH MAY INCREASE FOR DEEPER EXCAVATIONS OR CURVED EXCAVATIONS.
9. REFER TO EVERSOURCE STANDARD NO. UGTL-PTC-00, APPENDIX 02 FOR SHALLOW TRENCH AND UTILITY CROSSING DETAILS.

NOT APPROVED
 FOR CONSTRUCTION

REVISION				
N.O.	DESCRIPTION	BY	DATE	APP.R.
2	ISSUED FOR PERMIT	JHW	1/27/2020	AB
1	ISSUED FOR 95% DESIGN	KEM	12/19/2019	AB



Digitally signed by
 Bardwell, Justin
 Date: 2020.01.29
 10:36:09-06'00'

EVSOURCE

SEAPORT G TITLE HOLDER LLC
 115KV UNDERGROUND PIPE-TYPE CABLE RELOCATION
 CROSS SECTION DETAIL
 BOSTON, MA

SCALE: unless noted AS NOTED	DATE DRAWN: 12/16/19	CHK'D: KEM	APP.R: XXX	DRAWING NO.: 019	REV.: 2
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Attachment C

Abutter Notification



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**NOTIFICATION TO ABUTTERS
BOSTON CONSERVATION COMMISSION**

In accordance with the Massachusetts Wetlands Protection Act, Massachusetts General Laws Chapter 131, Section 40, and the Boston Wetlands Ordinance, you are hereby notified as an abutter to a project filed with the Boston Conservation Commission.

A. **Eversource Energy** has filed a Request for Determination of Applicability with the Boston Conservation Commission to determine whether the proposed work is subject to the Wetlands Protection Act (General Laws Chapter 131, section 40) and/or the Boston Wetlands Ordinance.

B. The address of the lot where the activity is proposed is **within the existing paved right-of-way within Northern Avenue from Harbor Shore Drive to Pier Four Boulevard, and from Pier Four Boulevard to 142 Northern Avenue.**

C. The project involves **installation of an underground replacement service electricity line to be placed within a trench within the Northern Avenue right-of-way and an easement on 142 Northern Avenue. A pipe tie-in manhole and a temporary freeze pit will be installed underground within the easement. Following installation all surfaces will be restored to a condition as good as or better than the pre-construction condition and the Project will not result in any permanent impacts to jurisdictional resource areas.**

D. Copies of the Request for Determination of Applicability may be examined at **Boston City Hall** between the hours of **9 AM and 5 PM, Monday through Friday**. For more information, contact the Boston Conservation Commission at CC@boston.gov or (617) 635-3850.

E. Copies of the Request for Determination of Applicability may be obtained from **Stephanie Krueel, 617.607.2972, skrueel@vhb.com** between the hours of **9am and 4pm Monday through Friday.**

F. The public meeting will take place at Boston City Hall, Piemonte Room, 5th Floor, Boston, MA 02201.

G. Information regarding the date and time of the public meeting may be obtained from the **Boston Conservation Commission** by emailing CC@boston.gov or calling (617) 635-4416 between the hours of **9 AM to 5 PM, Monday through Friday**.

NOTE: Notice of the public meeting, including its date, time, and place, will be published at least five (5) days in advance in the **Boston Herald**.

NOTE: Notice of the public meeting, including its date, time, and place, will be posted on www.boston.gov/public-notices and in Boston City Hall not less than forty-eight (48) hours in advance.

NOTE: If you would like to provide comments, you may attend the public meeting or send written comments to CC@boston.gov or Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201

NOTE: You also may contact the Boston Conservation Commission or the Department of Environmental Protection Northeast Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP call the Northeast Region Office: (978) 694-3200.

PID	OWNER	MLG_ADDRESS	MLG_CITYSTATE	MLG_ZIPCODE
602641030	SEAPORT G TITLE HOLDER LLC	33 BOYLSTON ST STE 3000	CHESTNUT HILL MA	2467
602641040	SEAPORT G TITLE HOLDER LLC	33 BOYLSTON ST STE 3000	CHESTNUT HILL MA	2467
602641041	BOSTON REDEVELOPMENT AUTH	EAST SERVICE RD	BOSTON MA	2110
602641042	BOSTON REDEVELOPMENT	NORTHERN AV	BOSTON MA	2110
602641050	PIER 4 LLC	1745 SHEA CENTER DR STE#200	HIGHLANDS RANCH CO	80129
602641051	PIER 4 LLC	1745 SHEA CENTER DR SUITE 20	HIGHLANDS RANCH CO	80129
602641060	SEAPORT G TITLE HOLDER	33 BOYLSTON ST SUITE #3000	CHESTNUT HILL MA	2467
602641070	SEAPORT F RETAIL OWNER	33 BOYLSTON ST STE 3000	CHESTNUT HILL MA	2467
602641071	BOSTON REDEVELOPMENT	ONE BROADWAY 14TH FLR	CAMBRIDGE MA	2142
602641072	NORTHERN AVE HOSPITALITY	311 WASHINGTON ST	BRIGHTON MA	2135
602642000	BOSTON SEAPORT M1&2 LAND	101 SEAPORT BLVD STE 602	BOSTON MA	2210
602642003	BOSTON SEAPORT M1&2 LAND	101 SEAPORT BLVD SUITE 602	BOSTON MA	2210
602642007	BOSTON SEAPORT M1&2 LAND	101 SEAPORT BLVD STE 602	BOSTON MA	2210
602643025	SEAPORT SQUARE DEVELOPMENT	33 BOYLSTON ST SUITE 3000	CHESTNUT HILL MA	2467
602643040	SCD L2 SEAPORT SQUARE LLC	101 SEAPORT BLVD #200	BOSTON MA	2210
602671025	FAN PIER DEVELOPMENT LLC	ONE MARINA PARK DRIVE	BOSTON MA	2210
602671026	FAN PIER OWNERS CORPORATION	ONE MARINA PARK DR	BOSTON MA	2210
602671037	ONE HARBOR SHORE LLC	ONE MARINA PARK DR	BOSTON MA	2210
602671039	100 NORTHERN AVENUE LLC	321 SUMMER ST 4TH FLR	BOSTON MA	2210
602671041	INSTITUTE OF CONTEMPORARY	70 NORTHERN AV	BOSTON MA	2110
602671042	INSTITUTE OF CONTEMPORARY	100 NORTHERN AV	BOSTON MA	2110
602671105	CRONIN HOLDINGS LP	250 NORTHERN AVE #400	BOSTON MA	2210
602671115	CRONIN HOLDINGS LP	250 NORTHERN AVE #400	BOSTON MA	2210
602671120	CRONIN HOLDINGS LP	250 NORTHERN AVE #400	BOSTON MA	2210
602671125	BOSTON REDEVELOPMENT	250 NORTHERN AVE SUITE #400	BOSTON MA	2210
602671125	BOSTON REDEVELOPMENT	250 NORTHERN AVE SUITE #400	BOSTON MA	2210
602672000	MASS PORT AUTHORITY	1 HARBORSIDE DR #200S	EAST BOSTON MA	2128
602672020	WATER SHEET LLC	250 NORTHERN AV STE 400	BOSTON MA	2210
602672025	PIER 4 MARINA OWNER LLC	125 HIGH ST 8TH FLOOR	BOSTON MA	2110
602672030	130 NORTHERN AVENUE LLC	515 S FLOWER ST 32ND FLOOR	LOS ANGELES CA	90071
602672045	PIER 4 MARINA OWNER LLC	125 HIGH ST 8TH FLOOR	BOSTON MA	2110
602672052	WORLD TRADE CENTER	200 SEAPORT BL SUITE 75	BOSTON MA	2210
602672060	140 NORTHERN AVENUE LLC	125 HIGH ST 8TH FLOOR	BOSTON MA	2110
602677001	MASS PORT AUTHORITY	1 HARBORSIDE DR #200S	EAST BOSTON MA	2128
602677010	COMMONWEALTH FLATS WEST	155 SEAPORT BLVD	S BOSTON MA	2210