

Gas Main Replacement Project
9 – 35 India Street
Boston, Massachusetts

REQUEST FOR DETERMINATION OF APPLICABILITY

National Grid
40 Sylvan Road
Waltham, Massachusetts

October 2022

Tighe&Bond

WO# 1474472
N-5068-206-02
October 25, 2022

Boston Conservation Commission
1 City Hall Square
Room 709
Boston, Massachusetts 02201

Re: **Request for Determination of Applicability
Gas Main Replacement Project
9 – 35 India Street, Boston, Massachusetts**

Dear Executive Director Moreno and Members of the Boston Conservation Commission:

On behalf of the Boston Gas Company, Tighe & Bond respectfully submits this Request for Determination of Applicability (RDA) for a proposed gas main replacement project within a portion of India Street in Boston, Massachusetts.

This RDA is being filed because the proposed work will occur within Land Subject to Coastal Storm Flowage (LSCSF). This area is regulated under the Massachusetts Wetlands Protection Act (WPA, M.G.L. c. 131 § 40) and the City of Boston Wetlands Protection Ordinance (Chapter VII) and their implementing Regulations. The Commission has previously determined that changes in the proposed replacement gas main diameter renders the work ineligible for exempt maintenance status. All proposed work will be within previously paved areas with no anticipated impacts to nearby wetland resource areas.

Tighe & Bond respectfully requests that the Conservation Commission issue a Negative Determination confirming that the proposed work does not require the filing of a Notice of Intent.

This RDA application includes the following items:

- Attachment A – WPA Form 1 (certified digital signatures) and Filing Fee
- Attachment B – Figures and Site Plans
- Attachment C – Photographic Log
- Attachment D – Abutter Notification Information
- Attachment E – National Grid Best Management Practices

The following text discusses the wetland resource areas, proposed activities, and proposed protective measures.

Wetland Resource Areas

Wetland resource areas were reviewed by a Tighe & Bond wetland scientist using publicly available data, including the Massachusetts Department of Environmental Protection (MassDEP) Online Map Viewer. Please refer to Figure 3 in Attachment B for the locations of the resource areas.

Land Subject to Coastal Storm Flowage

The Federal Emergency Management Agency (FEMA) flood map (Panel No. 25025C0081J, revised March 16, 2016) was consulted to evaluate the presence of jurisdictional Land Subject to Coastal Storm Flowage (LSCSF) within the project area. The entire project area falls within areas subject to flooding and/or inundation by a 100-year flood (Zone AE, Base Flood Elevation of 10 feet). Therefore, the project area is regulated as LSCSF. LSCSF is associated with the Boston Harbor, located approximately 565 feet east of the project area.

Rare Species

The project area does not fall within *Priority Habitats of Rare Species* or *Estimated Habitats of Rare Wildlife* based on a review of the Massachusetts Natural Heritage and Endangered Species Program (NHESP) Atlas (15th edition; August 1, 2021) and NHESP data available on MassGIS online (August 2021), as shown on Figure 2.

Proposed Activities

The existing gas main within India Street is comprised of the following:

- 355 linear feet (lf) of 12-inch diameter low pressure (LP) cast iron (CI) (1849) piping
- 60 lf of 12-inch diameter LP coated steel (CS) (1986, 1987, and 1988) piping
- 10 lf of 6-inch diameter LP CI (1924) piping

A breakdown of the proposed gas main replacement activities is provided in Table 1 below. A total of 425 linear feet (lf) of replacement gas main is proposed within the project area. The locations of the proposed gas main alignment are depicted on Figures 1 through 3 and in the Project Drawings provided in Attachment B. As noted above, all the proposed work within India Street is within the mapped extent of LSCSF.

Work Methodology

In general, the gas main replacement activities will entail the excavation of an approximately two-foot-wide trench for safe installation. The trench bottom will be excavated and graded such that the pipe will be supported for its entire length on undisturbed bottom at a depth of approximately three feet below surface grade. The trench will be excavated within the paved roadway footprint of India Street, with the precise locations of the gas lines to be determined in the field so that existing utilities can be avoided. The existing gas mains will be abandoned in place. Upon installation of the replacement mains, the trenches will be backfilled and restored in kind. Refer to the Project Drawings in Attachment B.

Equipment scheduled for use during the proposed construction and restoration of the trench include an excavator and dump truck. Excavated material will be placed in the dump truck for removal to an off-site National Grid processing facility. Suitable soils and bedding materials are utilized in accordance with current gas pipe standards and the City of Boston requirements.

Work Within Resource Areas

The proposed work will result in approximately 850 (sf) of temporary impacts to LSCSF. The areas where the work is proposed consist entirely of paved roadways. The proposed work will not change the general characteristics of the area, as the entire project is contained within previously developed areas and will be subsurface. The site will be restored to pre-existing elevations.

Protective Measures

Work will be conducted in accordance with National Grid's EG-303NE Best Management Practices document. Please refer to Attachment D for further details. During the gas line construction, erosion control measures (*e.g.*, straw bales, silt fence, straw wattles, catch basin silt sack inserts) will be installed as deemed necessary.

Climate Resiliency

The City of Boston has established an Ordinance Protecting Local Wetlands and Promoting Climate Change Adaptation in the City of Boston (Boston Wetlands Ordinance; City of Boston Code, Ordinances, Chapter 7-1.4) regarding activities within their jurisdiction, as well as administrative procedures relative to proposed projects. Of the current regulations, the following are pertinent to the proposed activities. The Ordinance directs the Boston Conservation Commission to consider future climate impacts such as rising sea levels in applications for construction and is stricter than statewide standards.

According to the Climate Ready Boston Mapper, underground structures in the project area are within the 1% and 10% Annual Coastal Flood Risk areas for the 2030s, 2050s, and 2070s. The project area is also within near-, medium-, and long-term stormwater flooding areas.

The underground infrastructure is designed in consideration of groundwater. Conduit ends are sealed watertight with a manufacturer-recommended material compatible with the gas main. Additionally, the pipes are manufactured to withstand extreme environments inclusive of water penetration. In this manner, the below ground infrastructure is designed and capable of withstanding potential climate change and future climate impacts.

Application Requirements

As required under the City of Boston Wetlands Protection Ordinance, abutters to the project area have been notified via USPS Certificate of Mailing in accordance with abutter notification requirements. Copies of the abutter notification forms (English and Chinese with translation certification), the list of abutters, and Affidavit of Service are enclosed in Attachment C.

As the project will be conducted entirely within public roadway rights-of-way (ROW) in existing Boston Gas Company easements, property owner notification is not warranted.

Summary

We look forward to having the opportunity to discuss this project with the City of Boston Conservation Commission during the public hearing scheduled for November 16, 2022. We anticipate these materials are sufficient for the Commission to issue a Negative Determination, confirming that a Notice of Intent (NOI) will not be required for the proposed work to proceed. Should you have any questions regarding this application or require any additional information, please do not hesitate to contact Julia Novotny at (203) 841-8960 or via email at JNovotny@tighebond.com, or me at (413) 572-3224 or via email at MPCoady@tighebond.com.

Sincerely,

TIGHE & BOND, INC.



Melissa P. Coady
Project Manager

Enclosures

Copy: MassDEP NERO, Division of Wetlands and Waterways
Jaime Walker, National Grid

**Table 1
Boston Gas Company
Gas Main Replacement
Boston, Massachusetts**

Street	Gas Main Maintenance	Work within LSCSF
India Street from State Street to Milk Street	Relay of approximately 415 lf of 12-inch diameter LP CI and CS pipe with 415 lf of 12-inch diameter LP steel	Yes
At the intersection of India Street and Milk Street	Relay of approximately 10 lf of 6-inch diameter LP CI pipe with 10 lf of 8-inch diameter LP steel	Yes



ATTACHMENT A

WPA FORM 1

FILING FEE



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Boston
City/Town

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:

Boston Gas Company (c/o Jaime Walker) Name jaime.walker@nationalgrid.com E-Mail Address
40 Sylvan Road Mailing Address
Waltham City/Town MA State 02451 Zip Code
(978) 551-1156 Phone Number
Fax Number (if applicable)

2. Representative (if any):

Tighe & Bond, Inc. Firm
Melissa Coady Contact Name MPCoady@tighebond.com E-Mail Address
53 Southampton Road Mailing Address
Westfield City/Town MA State 01085 Zip Code
(413) 572-3224 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:

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):

<u>9 - 35 India Street</u>	<u>Boston</u>
Street Address	City/Town
<u>Not applicable, roadway right-of-way</u>	
Assessors Map/Plat Number	Parcel/Lot Number

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

India Street is a paved roadway right-of-way that serves residential, commercial, and municipal properties. The project site is located less than 600 feet west of Boston Harbor and less than 200 feet south of Faneuil Hall in downtown Boston.

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

<u>Figure 1-Site Location</u>	<u>October 2022</u>
Title	Date
<u>Figure 2- Priority Resources</u>	<u>October 2022</u>
Title	Date
<u>Figure 3 - Site Plan</u>	<u>October 2022</u>
Title	Date

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

Boston Gas Company proposes to replace a portion of existing gas main within India Street. Please refer to the attached cover letter for additional 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).

310 CMR 10.02(2)(a)(2) - Activities conducted to maintain, repair or replace, but not substantially change or enlarge an existing and lawfully located structure or facility used in the service of the public and used to provide electric, gas, water, sewer, telephone, telegraph and other communication services, provided said work utilizes the best practical measures to avoid or minimize impacts to wetland resource areas outside the footprint of said structure or facility.

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.

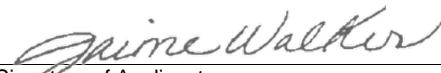

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Boston Gas Company (c/o Jaime Walker)	
Name	
40 Sylvan Road	
Mailing Address	
Waltham	
City/Town	
MA	02451
State	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.

	10/24/2022
Signature of Applicant	Date
	10/21/2022
Signature of Representative (if any)	Date

Tighe & Bond, Inc.
53 Southampton Road
Westfield, MA 01085

This is a Deluxe eCheck. The PAY TO THE ORDER OF line designates the Payee. For questions call Deluxe Payment Exchange customer support at 877-373-6964. Ref: 8F93-35AE

6194

Date 10/20/2022
Void after 90 days

PAY TO THE ORDER OF Boston Conservation Commision

\$ 100.00

One hundred and 00/100

Dollars

TD Bank, NA

Memo _____



Verify check at <https://echecks.com/verify>

FILE COPY

Account numbers are concealed for your security

FILE COPY

Check Details

Check issued: 10/20/2022

Check number: 6194

From: Tighe & Bond, Inc.

Amount: \$100.00

Payable to: Boston Conservation Commision

Delivered to: jnovotny@tighebond.com

Documents: Yes - see Remittance below

Message from sender: Hi, attached is your Tighe & Bond electronic check. Any questions please email AP@tighebond.com.

Notes

Activity

ACTIVITY TYPE	TIME	DATE
Tracy Houle issued check 6194	13:18 PM EDT	10/20/2022
Check 6194 file copy printed by Julia Novotny	16:25 PM EDT	10/20/2022

Remittance

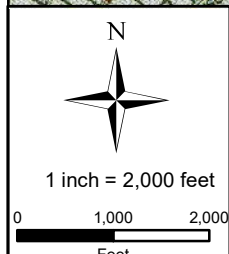
INVOICE DATE	INVOICE
10/20/2022	10192022JN

ATTACHMENT B

FIGURES AND SITE PLANS



Legend
Proposed Gas Main Alignment

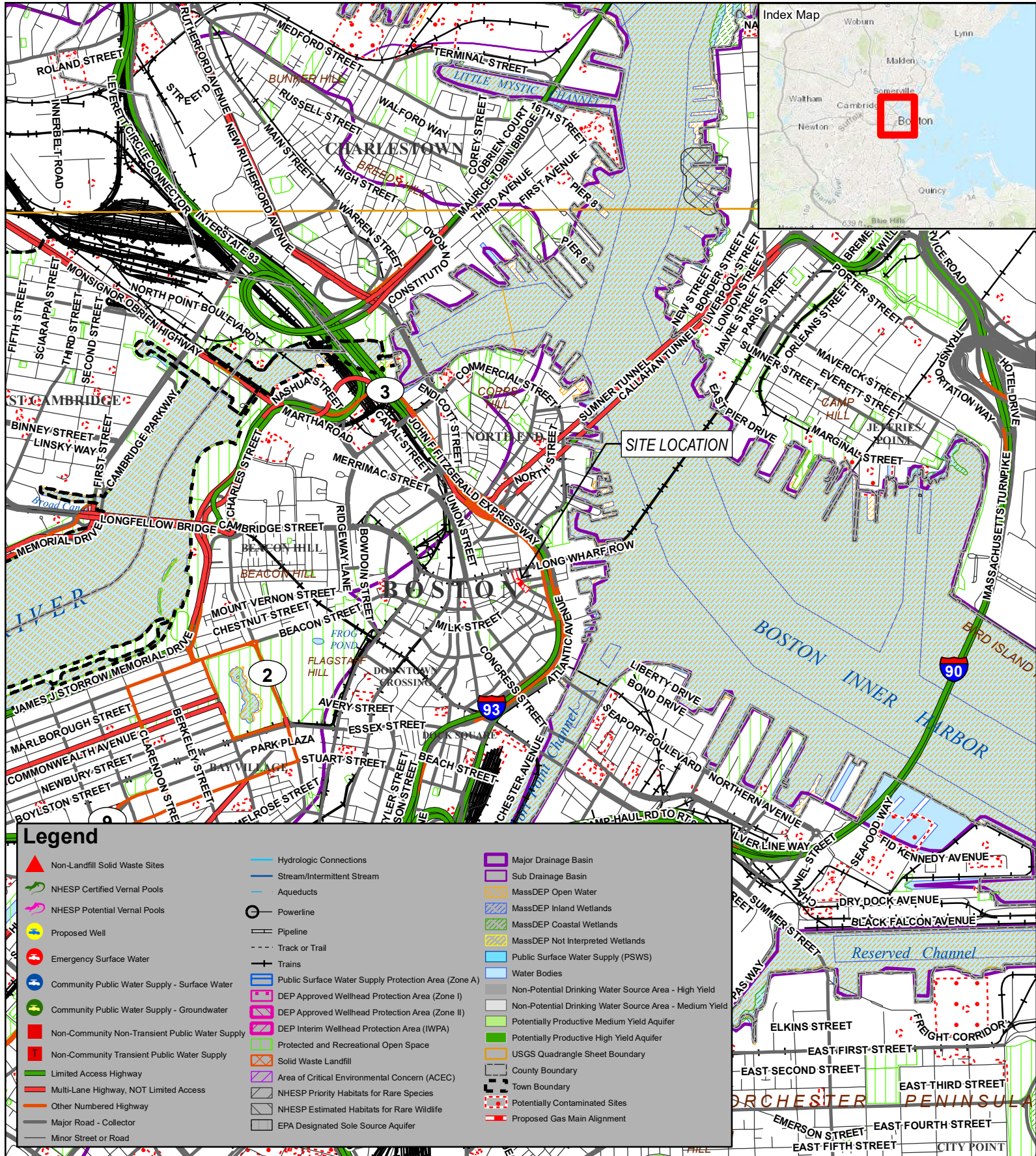


PROPOSED GAS MAIN REPLACEMENT

Site Location
9 - 35 India Street
Boston, Massachusetts
Figure 1

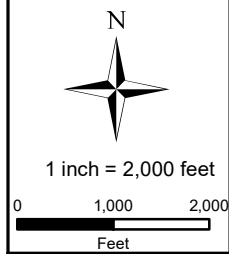
Based on USGS Topographic Map for Worcester South, MA Revised 1983. Contour Interval Equals Meters.





Legend

- | | | |
|---|--|---|
| Non-Landfill Solid Waste Sites | Hydrologic Connections | Major Drainage Basin |
| NHESP Certified Vernal Pools | Stream/Intermittent Stream | Sub Drainage Basin |
| NHESP Potential Vernal Pools | Aqueducts | MassDEP Open Water |
| Proposed Well | Powerline | MassDEP Inland Wetlands |
| Emergency Surface Water | Pipeline | MassDEP Coastal Wetlands |
| Community Public Water Supply - Surface Water | Track or Trail | MassDEP Not Interpreted Wetlands |
| Community Public Water Supply - Groundwater | Trains | Public Surface Water Supply (PSWS) |
| Non-Community Non-Transient Public Water Supply | Public Surface Water Supply Protection Area (Zone A) | Non-Potential Drinking Water Source Area - High Yield |
| Non-Community Transient Public Water Supply | DEP Approved Wellhead Protection Area (Zone I) | Non-Potential Drinking Water Source Area - Medium Yield |
| Limited Access Highway | DEP Approved Wellhead Protection Area (Zone II) | Potentially Productive Medium Yield Aquifer |
| Multi-Lane Highway, NOT Limited Access | DEP Interim Wellhead Protection Area (IWPA) | Potentially Productive High Yield Aquifer |
| Other Numbered Highway | Protected and Recreational Open Space | USGS Quadrangle Sheet Boundary |
| Major Road - Collector | Solid Waste Landfill | County Boundary |
| Minor Street or Road | Area of Critical Environmental Concern (ACEC) | Town Boundary |
| | NHESP Priority Habitats for Rare Species | Potentially Contaminated Sites |
| | NHESP Estimated Habitats for Rare Wildlife | Proposed Gas Main Alignment |
| | EPA Designated Sole Source Aquifer | |



PROPOSED GAS MAIN REPLACEMENT

Priority Resources
 9 - 35 India Street
 Boston, Massachusetts
 Figure 2

Data source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology
 Circles indicate 500-foot and half-mile radii.
 Data valid as of October 2022.

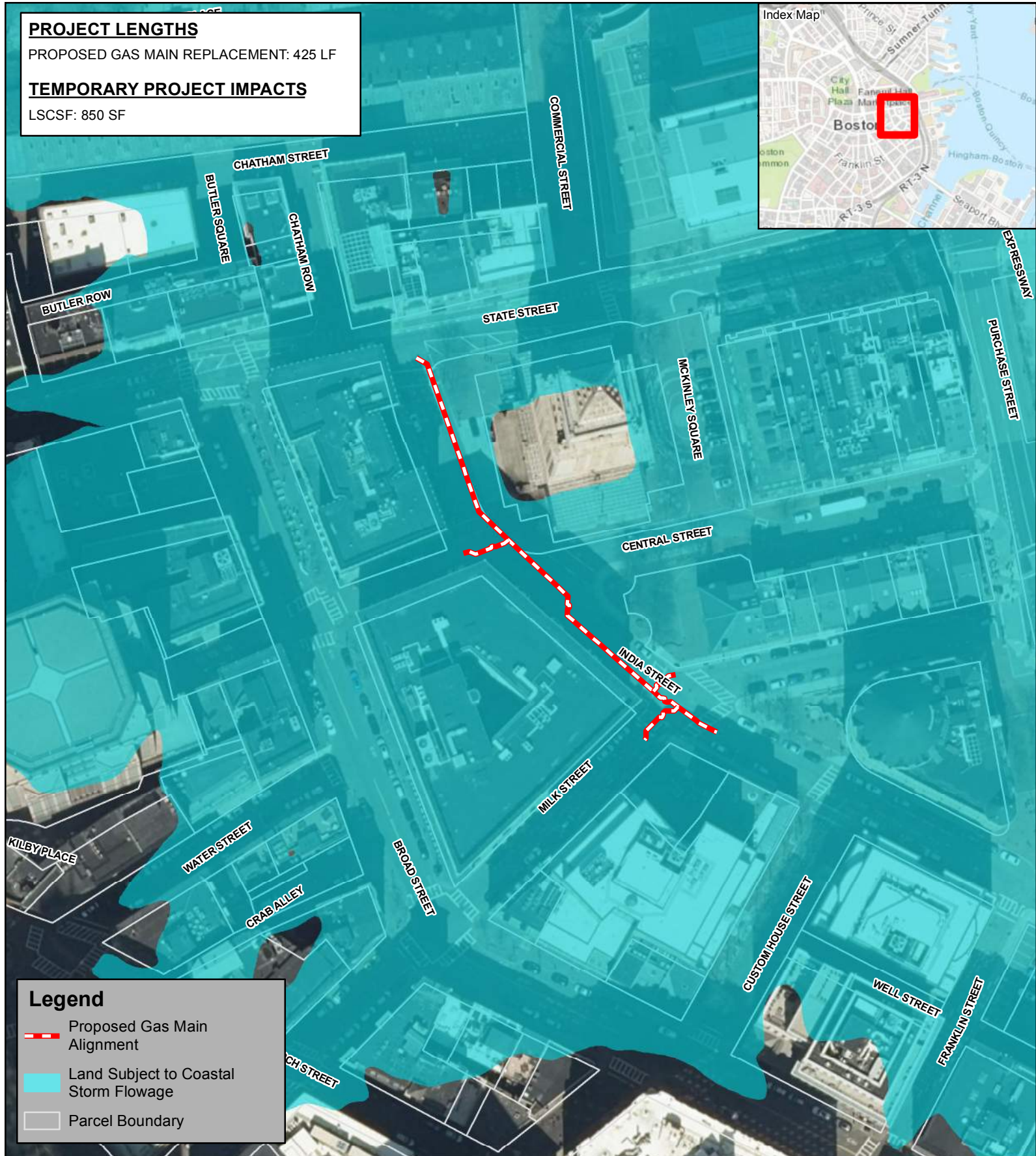


PROJECT LENGTHS




PROPOSED GAS MAIN REPLACEMENT: 425 LF

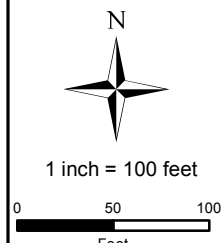
TEMPORARY PROJECT IMPACTS

LSCSF: 850 SF



Legend

-  Proposed Gas Main Alignment
-  Land Subject to Coastal Storm Flowage
-  Parcel Boundary



PROPOSED GAS MAIN REPLACEMENT

Orthophotograph
9 - 35 India Street
Boston, Massachusetts
Figure 3

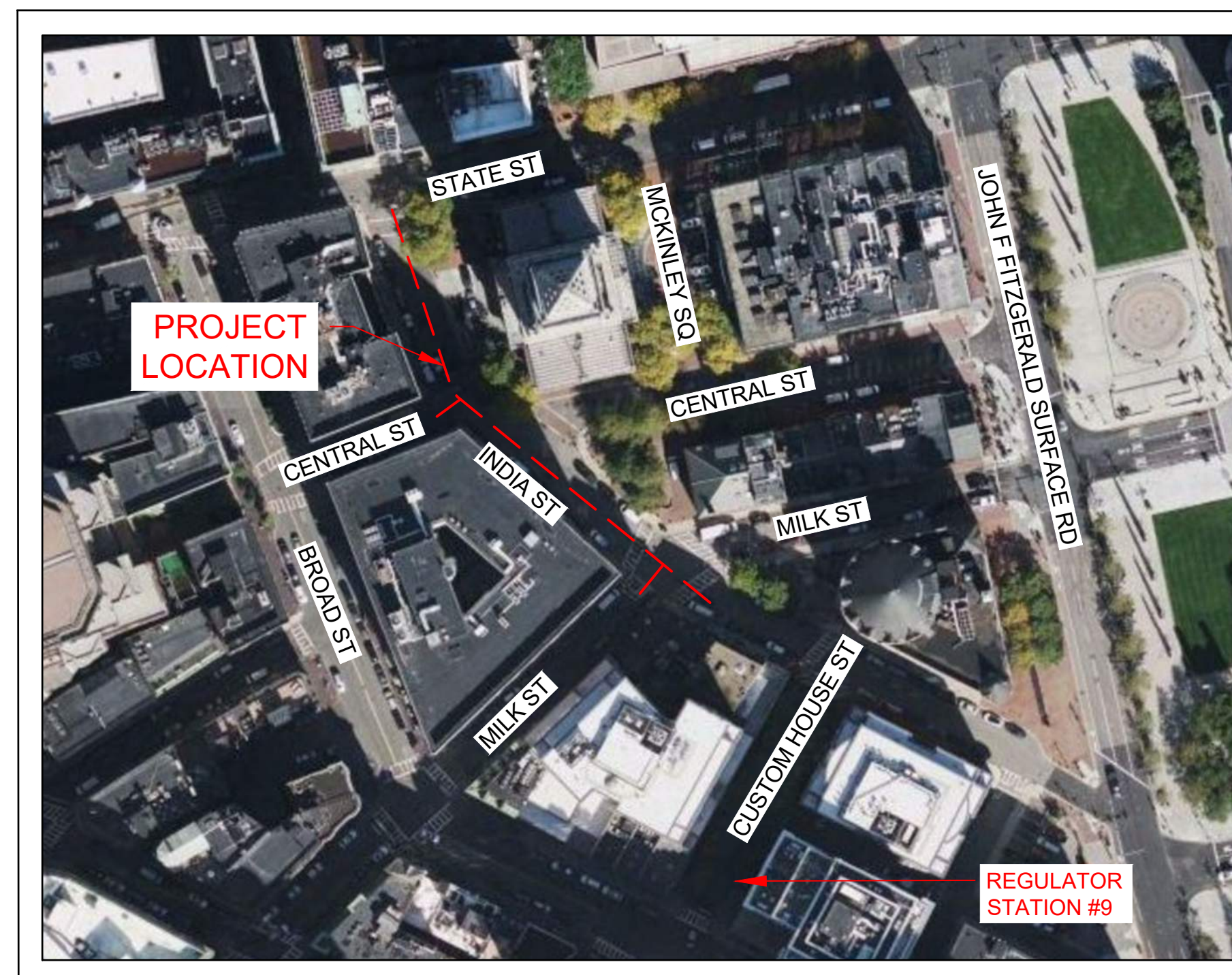
Based on MassGIS Color Orthophotography (2021).



nationalgrid

9 - 35 INDIA STREET GAS MAIN REPLACEMENT 6" & 12" C.I. & 12" C.S. TO 8" & 12" C.S. (L.P.) (9 - 35) INDIA ST, STATE ST, CENTRAL ST, & MILK ST, BOSTON, MA W.O. NO.: 1474472 **PROJECT WITHIN 200' OF REGULATOR STATION #9**

PIPE TOTALS			
DIAMETER	MATERIAL	ABANDONED	INSTALLED
6"	CI	10 LF	--
8"	CS	--	10 LF
12"	CI	355 LF	--
12"	CS	60 LF	415 LF



INDEX OF SHEETS		
SHEET	NAME	TITLE
1	DDS-BOS-71220322 G-001	COVER - LOCATION MAP
2	DDS-BOS-71220322 G-002	CONSTRUCTION NOTES
3	DDS-BOS-71220322 G-003	CONSTRUCTION NOTES & BILL OF MATERIALS
4	DDS-BOS-71220322 C-001	OVERALL LAYOUT SHEET & MBTA DETAIL
5	DDS-BOS-71220322 C-101	TIE-IN & ABANDONMENT DETAILS
6	DDS-BOS-71220322 C-201	STANDARD DETAILS
7	DDS-BOS-71220322 C-202	STANDARD DETAILS
8	DDS-BOS-71220322 C-203	STANDARD DETAILS
9	DDS-BOS-71220322 C-204	STANDARD DETAILS
10	DDS-BOS-71220322 C-205	EXISTING REGULATOR FLOW DIAGRAM

LOCATION MAP
LAT/LON: 42°21'31.5"N, 71°03'13.5"W
BOSTON, MA
SCALE: 1:100



<p>45 HENDRIX ROAD WEST HENRIETTA, NY 14586 PHONE (585) 359-7540 FAX (585) 359-7541</p>	<p>BOSTON GAS COMPANY a/b/a</p> <p>nationalgrid</p> <p>40 SYLVAN ROAD WALTHAM, MA 02451</p> <p>IFC</p>		<p>9-35 INDIA STREET GAS MAIN REPLACEMENT INDIA ST, STATE ST, CENTRAL ST, & MILK ST BOSTON, MA</p> <p>COVER - LOCATION MAP</p>	<p>PAGE 01 OF 10</p> <p>DRAWING NO. G-001 SHEET NO. 01</p>																																	
	<table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DR. BY</th> <th>CK. BY</th> <th>APP. BY</th> </tr> <tr> <td>C</td> <td>MBTA PROFILE VIEW UPDATE</td> <td>09/27/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>B</td> <td>BOM UPDATE</td> <td>09/20/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>A</td> <td>ISSUED FOR CONSTRUCTION</td> <td>09/19/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> </table>		NO.	DESCRIPTION	DATE	DR. BY	CK. BY	APP. BY	C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP	B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP	A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP	<table border="1"> <tr> <th>DWG SIZE</th> <th>DESIGNER</th> <th>ENGINEER</th> <th>DATE</th> <th>ASSET I.D.</th> <th>W.O. NO.:</th> </tr> <tr> <td>22"X34"</td> <td>DDS COMPANIES</td> <td>T. NOSAR</td> <td>08/20/2022</td> <td>XXXXXXXX</td> <td>1474472</td> </tr> </table>	DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:	22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022
NO.	DESCRIPTION	DATE	DR. BY	CK. BY	APP. BY																																
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP																																
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP																																
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP																																
DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:																																
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472																																

SCOPE OF WORK:

NATIONAL GRID WORK ORDER NUMBER: 1474472

PROJECT NAME AND LOCATION: 9-35 INDIA ST, BOSTON, MA

PROJECT SCOPE: AS PART OF THE CIRE101214 PROGRAM, LPP INTEGRITY MANAGEMENT RECOMMENDS THE RELAY OF:

- APRX 140 FEET OF 12 INCH, LP CAST IRON (1849), APRX 5 FEET OF 12 INCH, LP COATED STEEL (1987) – UBOS0321, APRX 50 FEET OF 12 INCH, LP COATED STEEL (1986) – MBOS0023, APRX 215 FEET OF 12 INCH, LP CAST IRON (1849) AND APRX 5 FEET OF 12 INCH, LP COATED STEEL (1988) – UBOS0542 WITH APRX 415 FEET OF 12 INCH, LP STEEL IN INDIA ST FROM THE EXST 12 INCH, LP COATED STEEL (1974) – UBOS0459 AT STATE ST TO THE EXST 12 INCH, LP COATED STEEL (1997) – MBOS0200 AT MILK ST
- APRX 10 FEET OF 6 INCH, LP CAST IRON (1924) WITH APRX 10 FEET OF 8 INCH, LP STEEL IN THE INTERSECTION OF INDIA ST AND MILK ST.

5 MAIN CONNECTIONS

GENERAL CONSTRUCTION:

- NO FIELD CHANGES SHALL BE MADE TO THIS PLAN WITHOUT APPROVAL OF ASSIGNED NATIONAL GRID PROJECT ENGINEER.
ENGINEER: JORGE DE LA CRUZ
PHONE: (781) 718-1957
EMAIL: JORGE.DELACRUZ@NATIONALGRID.COM
- NEW MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL TRENCH DETAIL INCLUDED IN THESE DRAWINGS, UNLESS NOTED OTHERWISE.
 - 36 INCHES OF COVER FROM FINAL GRADE WHERE PRACTICAL
 - STATE HIGHWAY MINIMUM COVER: 36 INCHES
 - DISTRIBUTION MAIN MINIMUM COVER: 24 INCHES
 - SAND PADDING IN ALL DIRECTIONS, 6 INCHES MINIMUM.
 - CAUTION TAPE SHALL BE INCLUDED ONE FOOT BELOW GRADE.
- SERVICES SHOULD BE INSTALLED WITH 24 INCHES OF COVER.
 - MINIMUM IN PUBLIC ROW: 18 INCHES
 - MINIMUM IN PRIVATE PROPERTY: 12 INCHES
 - SAND PADDING IN ALL DIRECTIONS, 6 INCHES MINIMUM.
 - CAUTION TAPE SHALL BE INCLUDED ONE FOOT BELOW GRADE.
- REFER TO CNST-6030 FOR SHALLOW MAINS. PRIOR TO INSTALLING GAS MAINS WITH LESS THAN 24 INCHES OF COVER, COMPLETE REQUEST FOR WAIVER FORM AND CONTACT GAS PIPELINE SAFETY & COMPLIANCE FOR APPROVAL:
 - JENNIFER GILLIS – (617) 594-5157 (MA EXCLUDING CAPE AND WEBSTER)
 - LIEN GAUTHIER – (617) 438-9069 (MA EXCLUDING CAPE AND WEBSTER)
 - IF A PROPOSED TOP TEE CONNECTION RESULTS IN A SHALLOW MAIN THAT CANNOT MEET THE WAIVER CRITERIA, A FULL TEE CONNECTION IS AN ACCEPTABLE ALTERNATIVE. A SPHERICAL TEE IS ONLY ACCEPTABLE WITH APPROVAL FROM NATIONAL GRID STRATEGIC ASSET AND SYSTEM PLANNING.
- ALL MAINS SHOULD BE INSTALLED WITH A CLEARANCE OF 12 INCHES FROM OTHER FACILITIES.
 - DISTRIBUTION MINIMUM CLEARANCE: 6 INCHES
 - APPROPRIATE PROTECTIVE MEASURES SHALL BE USED TO PROTECT THE GAS FACILITY IF MINIMUMS CANNOT BE ATTAINED. APPROVAL IS REQUIRED BY GAS SYSTEMS ENGINEERING.
- THE PIPE ALIGNMENT IS SHOWN FOR REFERENCE ONLY AS APPROXIMATELY 3 FEET FROM THE EXISTING MAIN (BASED ON AVAILABLE RECORD INFORMATION). THE ACTUAL ROUTE AND ALL VERTICAL AND HORIZONTAL OFFSETS ARE TO BE FIELD ROUTED WITHIN THE PUBLIC RIGHT-OF-WAY BASED ON THE ACTUAL LOCATION OF EXISTING UTILITIES. ADDITIONAL FITTINGS NOT SHOWN WILL BE REQUIRED.
 - ELBOWS SHOWN ARE ASSUMED TO BE 45 DEGREES IN MOST APPLICATIONS. 90 DEGREE ELBOWS MAY BE NEEDED BASED ON FIELD CONDITIONS.
- VALVES DEPICTED IN THE DESIGN ARE THE MINIMUM REQUIRED FOR SECTIONALIZING, ISOLATION, CRITICAL VALVES, AND/OR TO ACCOMMODATE TIE-INS. ADDITIONAL FULL PORT VALVES MAY BE ADDED TO ACCOMMODATE CONSTRUCTION.
 - VALVES FOR BRANCHES AT INTERSECTIONS SHOULD BE FIELD LOCATED JUST OUTSIDE OF THE INTERSECTION WHERE EASILY ACCESSIBLE, PRIOR TO THE FIRST SERVICE.
- ELECTROFUSION COUPLINGS MAY BE INTERCHANGED WITH BUTT FUSION WHERE APPLICABLE.
- TIE-IN LOCATIONS MAY VARY UP TO 100 FEET OF THE PROPOSED LOCATION TO ACCOMMODATE CONSTRUCTION, EXCEPT FOR WHEN THE FOLLOWING CONDITIONS APPLY:
 - REGULATOR STATION WITHIN THE SCOPE OF THE JOB OR WITHIN 200 FEET OF THE TIE-IN LOCATION.
 - CHANGE TO THE NUMBER OF CONNECTIONS (ADDITIONAL ADDED FROM AN INTERSECTION OR OTHERWISE).
 - MATERIAL/SIZE CHANGE AT NEW LOCATION.
- NOT ALL BYPASSES, GAUGES, PURGES AND OTHER MISCELLANEOUS FITTINGS ARE SHOWN. CONSTRUCTION SHALL INSTALL THESE FITTINGS AS NEEDED IN ACCORDANCE WITH THE APPROVED SOP.
- WHEN CONNECTING NEW 'DEAD' MAIN TO NEW 'DEAD' MAIN: AS LONG AS THE CONNECTION BRANCH SIZE SHOWN IN THE DRAWINGS CAN BE ACHIEVED, THE FOLLOWING CONNECTION TYPES ARE ACCEPTED AND INTERCHANGEABLE:
 - INLINE TEE
 - PLASTIC HIGH VOLUME TAPPING TEE (2" BRANCH SIZE OR LESS)
 - PLASTIC BRANCH SADDLE (WITH MAIN CUTTER SIZE SHOWN IN NATIONAL GRID POLICIES)
 - STEEL THREE-WAY TEE (WITH MAIN CUTTER SIZE SHOWN IN NATIONAL GRID POLICIES)
- THE LIVE MAIN CONNECTION DETAIL SHOWN IN THE DRAWINGS SHALL BE FOLLOWED. ANY CHANGES TO THE TIE IN CONNECTION TYPE SHALL BE APPROVED BY THE NATIONAL GRID ENGINEER PRIOR TO CONSTRUCTION.
- WHEN RELAYING A LOWER PRESSURE MAIN WITH A HIGHER PRESSURE MAIN, ALL SERVICES SHALL BE RELAYED OR INSERTED.
- PIPE AND FITTING QUANTITY DESCRIBED IN SCOPE MAY VARY FROM AMOUNTS SHOWN ON THE BILL OF MATERIALS TO ACCOMMODATE FIELD CONDITIONS AND CONSTRUCTION.
- CONTRACTOR TO REFER TO NATIONAL GRID SERVICE RECORD INFORMATION, ASSOCIATED CONSTRUCTION STANDARDS AND NATIONAL GRID INSTRUCTION FOR ALL SERVICE WORK WITHIN THE SCOPE OF LIMITS OF THIS PROJECT.
- ANY FITTINGS (SUCH AS BUT NOT LIMITED TO, PURGES, VENTS & GAUGES) WHICH ARE REPRESENTED ON THESE PLANS AND DETAILS WITHOUT AN ASSOCIATED PART ON THE BILL OF MATERIALS ARE TO BE SIZED AND SELECTED PER CURRENT NATIONAL GRID STANDARDS BY THE CONTRACTOR.
- THE CONTRACTOR SHALL CALL DIG-SAFE (DIAL 811) OR 888-344-7233 AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS AND HOLIDAYS ARE EXCLUDED.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES DEPICTED OR NOT DEPICTED ON THIS PLAN PRIOR TO COMMENCEMENT OF CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PHYSICALLY LOCATE ON-SITE UTILITIES THROUGH TEST PIT EXCAVATION OF SAID UTILITIES W/ PRIOR AUTHORIZATION FROM UTILITY OWNER.
- NOTIFY NATIONAL GRID I&R IF THE PROJECT IS WITHIN 200 FEET OF A REGULATOR STATION.
- DIMENSIONS SHOWN ILLUSTRATE THE INTENT OF MAIN PLACEMENT. SLIGHT VARIATIONS ARE EXPECTED. ANY SIGNIFICANT CHANGE NEEDS TO BE BROUGHT TO THE OWNERS (NATIONAL GRID) ATTENTION PRIOR TO PLACEMENT.

- CONTRACTOR TO VERIFY PRESSURE AND GAS FEED DIRECTION OF EXISTING MAINS, NEW MAINS, AND MAINS TO BE ABANDONED PRIOR TO ANY AND ALL TIE INS BEING PERFORMED.
- LOCATION OF ANY IDENTIFIED UNDERGROUND UTILITIES IS APPROXIMATE ONLY, AND IS NOT WARRANTED TO BE CORRECT. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR FOR SERVICE, SIZE, INVERT ELEVATIONS, LOCATION, ETC.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN DIG SAFE FIELD MARKS, ANY EXISTING PROPERTY LINE MONUMENTATION OR OTHER EXISTING SURVEY STAKES OR FIELD MARKS. THE CONTRACTOR SHALL REPLACE AT THEIR EXPENSE ANYTHING DISTURBED OR DESTROYED.
- THE CONTRACTOR SHALL COMPLETE MISCELLANEOUS WORK NOT SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS SUCH AS PAVEMENT PATCHING, TRENCH & EQUIPMENT BLOCKING, TREE TRIMMING, ETC.
- ANY SUBSURFACE UTILITIES, STRUCTURES AND/OR FIXED OBJECTS SHOWN AT, BELOW OR ABOVE GRADE SHOWN ON THESE PLANS HAVE BEEN PLACED BASED ON AVAILABLE RECORD MAPPING, AERIAL IMAGERY AND OTHER DESIGN RESOURCES. CONTRACTOR IS WARNED THAT EXACT OR APPROXIMATE LOCATION OF SUBSURFACE UTILITIES, STRUCTURES AND/OR FIXED OBJECTS SHOWN AT, BELOW OR ABOVE GRADE IN THE PROJECT AREA MAY DIFFER FROM THAT SHOWN OR MAY NOT BE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO PERFORM FIELD VERIFICATION PRIOR TO EXECUTING ANY WORK.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST NATIONAL GRID, APPLICABLE STATE DOT AND LOCAL MUNICIPAL STANDARDS.
- CONTRACTOR SHALL MAINTAIN ALL TRAFFIC IN ALL AREAS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL NECESSARY PRECAUTION FOR THE SAFETY OF THE PUBLIC SHALL BE TAKEN. ALL BARRIERS, WARNING LIGHTS AND OTHER DEVICES AND EQUIPMENT REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES SHALL BE MAINTAINED.
- CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO ALL OTHER EXISTING UTILITIES. DAMAGED UTILITIES SHALL BE IMMEDIATELY REPAIRED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR MAY INSTALL ADDITIONAL VALVES NOT SHOWN IN THE PLANS IF DEEMED NECESSARY IN THE FIELD. NEW VALVES ASSOCIATED WITH TIE INS (SEE DETAILS ON SHEET 5) MUST BE INSTALLED PER THE DETAIL. FINAL LOCATION OF THE NEW VALVES IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. ANY SIGNIFICANT CHANGE MUST BE BROUGHT TO THE OWNERS (NATIONAL GRID) ATTENTION PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUAINTING WITH THE CONDITIONS FOR THE SITE AND FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST TO SUCCESSFULLY PERFORM THE WORK.
- NATIONAL GRID RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OF THIS PROJECT, AS INTENDED AND INTERPRETED BY NATIONAL GRID.

DESIGN CRITERIA:

- DESIGN IN ACCORDANCE WITH THE FOLLOWING:
 - ENGO2001: DESIGN OF GAS SERVICES
 - ENGO4001: DESIGN OF DISTRIBUTION MAINS
 - ENGO4010: DESIGN REQUIREMENTS FOR INSTALLATION OF CASINGS
- PROPOSED PIPING:
 - DESIGN CLASS LOCATION: 4
 - NOMINAL SIZE: 8 & 12 INCH
 - MATERIAL: COATED STEEL
 - MAOP: L.P.
- PIPE SIZE DETERMINED BY NATIONAL GRID STRATEGIC ASSET AND SYSTEM PLANNING

SEQUENCE OF CONSTRUCTION:

- CONTRACTOR SHALL CALL DIGSAFE (DIAL 811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS, AND HOLIDAYS ARE EXCLUDED.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES DEPICTED OR NOT DEPICTED ON THIS DESIGN PRIOR TO CONSTRUCTION.
- NOTIFY NATIONAL GRID I&R IF THE PROJECT IS WITHIN 200 FEET OF A REGULATOR STATION.
- INSTALL MAIN AS INDICATED IN SCOPE OF WORK.
- PRESSURE TEST (SEE PRESSURE TESTING SECTION).
- MAKE CONNECTION IN DETAIL A.
- PURGE NEW MAIN INTO SERVICE.
- TRANSFER/RELAY SERVICES TO NEW MAIN.
- COMPLETE CONNECTIONS IN DETAILS B, C, & D.
- COMPLETE CONNECTION IN DETAIL E, OLD MAIN GO DEAD.
- PURGE OLD MAIN OUT OF SERVICE AND ABANDON.
- PERFORM RESTORATION.

CODES & STANDARDS

- WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL CODES IN ADDITION TO NATIONAL GRID GAS POLICIES AND WORK METHODS. WHERE ANY CONFLICTS OF CODES, STANDARDS AND REGULATIONS MAY EXIST, THE MORE STRINGENT CODE, STANDARD, OR REGULATION SHALL APPLY.
- ALL REFERENCES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT REVISION AVAILABLE AT THE TIME OF CONSTRUCTION.
- FEDERAL & STATE:
 - TITLE 49: PART 192 TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS
 - 220 CMR: DEPARTMENT OF PUBLIC UTILITIES
100.00 – 113.00: MASSACHUSETTS GAS DISTRIBUTION CODE
 - AMERICAN SOCIETY OF MECHANICAL ENGINEERS
B31.8: GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS
 - 248 CMR 4-7: MA FUEL GAS CODE
- CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH NATIONAL GRID GAS POLICIES AND WORK METHODS, INCLUDING BUT NOT LIMITED TO:
 - CNST01003: BACKFILL AND RESTORATION
 - CNST01005: PREPARATION OF GAS FACILITY HISTORICAL RECORDS
 - CNST01006: COMMERCIALLY AVAILABLE SHORING SYSTEMS
 - CNST02014: ENCAPSULATING CAST IRON JOINTS
 - CNST03001: SQUEEZE-OFF OPERATIONS
 - CNST03002: STOP-OFF OPERATIONS ON LOW PRESSURE MAINS
 - CNST03005: PURGING REQUIREMENTS FOR GAS PIPELINES
 - CNST03006: PURGING OPERATIONS – DIRECT DISPLACEMENT
 - CNST03007: PURGING OPERATIONS – COMPLETE INERT FILL
 - CNST03008: PURGING OPERATIONS – SLUG METHOD
 - CNST03014: STOP OFF OPERATIONS FOR KLEISS EQUIPMENT
 - CNST04005: INSTALLING STEEL DISTRIBUTION MAINS
 - CNST04007: FIELD COLD BENDING OF LINE PIPE
 - CNST04008: INSTALLING PLASTIC MAINS
 - CNST04011: ABANDONMENT OF MAINS
 - CNST04012: GROUTING ABANDONED PIPELINES
 - CNST04030: RAISING MAIN AND SERVICE GATE BOXES
 - CNST05001: JOINING OF PLASTIC PIPE
 - CNST5010: GENERAL CONSTRUCTION REQUIREMENTS AND PIPE HANDLING
 - DAMO1011: EXCAVATION AND EXCAVATION NOTIFICATION REQUIREMENTS FOR UNDERGROUND FACILITIES FOR MASSACHUSETTS AND RHODE ISLAND
 - DAMO1015: LOCATE AND MARK-OUT REQUIREMENTS FOR UNDERGROUND GAS FACILITIES
 - DAMO1016: LOCATE AND MARK-OUT OF UNDERGROUND FACILITIES
 - GCON02001: SYSTEM OPERATING PROCEDURE (SOP)
 - GEN01100: OPERATOR QUALIFICATION PLAN
 - GEN03002: PROCESSING GAS MAIN AND NEW SERVICE WORK PACKAGES
 - GEN03004: CHANGE CONTROL PROCEDURE FOR STANDARD CONSTRUCTION PROJECTS
 - INR06002: SUPPLEMENTAL ODORIZATION FOR NEW PIPING
 - NOTIFY I&R FOR PROJECTS IN EXCESS OF 2500 FEET. ODOR MONITORING AND/OR SUPPLEMENTAL ODORIZATION MAY BE REQUIRED
 - MAIN5030: INSTALLATION OF POLYETHYLENE PIPE
 - MECH5010: JOINTS OTHER THAN WELDED
 - AA.030018-CS: SPECIFICATION AND HANDLING OF TRAFFIC PLATES
 - AB.CNST01001: HORIZONTAL DIRECTIONAL DRILLING
 - AC.CNST03011: NO-INTERRUPT SERVICE TRANSFER
 - AD.CNST6061: TRACER WIRE INSTALLATIONS FOR PLASTIC MAINS AND SERVICES
 - AE.MECH6010: CONNECTION OF DISSIMILAR POLYETHYLENE PLASTIC PIPE WITH ELECTROFUSION OR MECHANICAL COUPLING
 - AF.CS-CNST002: TYPICAL UTILITY CROSSING AND TRENCH GUIDELINES
- SERVICE SPECIFIC CONSTRUCTION STANDARDS, GAS POLICIES AND WORK METHODS:
 - CMS03002: CUSTOMER METER AND SERVICE REGULATOR DESIGN AND INSTALLATION POLICY
 - CMS04002: PURGING PROCEDURES FOR CUSTOMER METER SERVICES
 - CNST03011: NO-INTERRUPT SERVICE TRANSFER
 - CNST06002: INSTALLING DISTRIBUTION SERVICES
 - CNST06003: INSTALLATION & MAINTENANCE POLICY FOR CURB VALVES ON SERVICE LINES WITH INSTALLED METER CAPACITIES OVER 1,000 SCFH THAT DON'T HAVE EXCESS FLOW VALVES
 - CNST06009: METER/SERVICE RELOCATION GUIDELINE
 - CNST06020: COMPLETION AND PROCESSING OF GAS SERVICE RECORD CARDS
 - CNST06030: NOTIFICATION OF CUSTOMERS INVOLVED IN THE INTERRUPTION OF GAS SERVICE
 - CS-SERV001: TYPICAL 1/2" SERVICE OUTSIDE SETS
 - CS-SERV002: TYPICAL 1" SERVICE OUTSIDE SETS
 - CS-SERV003: TYPICAL 1-1/4" SERVICE OUTSIDE SETS
 - CS-SERV004: TYPICAL 2" SERVICE
 - CS-SERV005: EXCESS FLOW VALVE REQUIREMENTS ON HP SERVICES
 - CS-SERV009: TYPICAL 1/2" SERVICE INSIDE SETS
 - CS-SERV010: TYPICAL 1" SERVICE INSIDE SETS
 - HTAP-6010: NO-INTERRUPT 1 INCH CTS AND 1-1/4 INCH CTS SERVICE TRANSFER (NIST) LP TO 60 PSIG MAINS
 - SERV-5075: RELOCATION OF METER SET ASSEMBLIES INSIDE TO OUTSIDE
 - SERV6076: 1-1/4" LP PLASTIC SERVICE WITH 1 AL-250 TC METER
 - SERV6077: 1-1/4" CTS LP PLASTIC INSERT WITH 1 AL-250 TC EQUIV. METER INSIDE
 - SERV-6185: HOT TAPPING MD BRANCH SADDLES OFF 4IN – 12IN 60 PSIG MAOP LIVE PLASTIC GAS MAIN USING MCELROY HOT TAPPING TOOL
 - VALV6110: 1/2 INCH – 3 INCH POLYETHYLENE GAS SERVICE VALVE INSTALLATION
- SEE TIE IN DETAILS FOR APPLICABLE MAIN CONNECTION REFERENCES.
- SEE BILL OF MATERIAL FOR MATERIAL SPECIFICATION, STANDARD AND/OR APPLICABLE NATIONAL GRID "FITS" REFERENCE.
 - FOR THIS PROJECT, GRADE B, X42, X52 AND EQUIVALENT ARE ACCEPTABLE STEEL MATERIAL STRENGTHS IF APPLICABLE. ALTERNATES TO THE BOM ARE ALLOWED WITHIN THIS RANGE BASED ON MATERIAL AVAILABILITY.



45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

BOSTON GAS COMPANY
d/b/a
nationalgrid
40 SYLVAN ROAD
WALTHAM, MA 02451

IFC



NO.	DESCRIPTION	DATE	DR.BY	CK.BY	APP.BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET
GAS MAIN REPLACEMENT
INDIA ST, STATE ST, CENTRAL ST, & MILK ST
BOSTON, MA

CONSTRUCTION NOTES

DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"x34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

PAGE 02 OF 10	
DRAWING NO.	SHEET NO.
G-002	02

PRESSURE TESTING REQUIREMENTS:

- PRESSURE TEST ALL DISTRIBUTION PIPING IN ACCORDANCE WITH:
 - CNST04003: PRESSURE TESTING MAINS OPERATING BELOW 125 PSIG
 - TEST PRESSURE (MINIMUM): 90 PSIG
 - TEST DURATION BASED ON LENGTH AND DIAMETER IN ACCORDANCE WITH TABLE 1 OF CNST04003.
 - TEST MEDIUM: AIR AND/OR NITROGEN
- PRESSURE TEST SERVICES IN ACCORDANCE WITH:
 - CNST06008: PRESSURE TESTING SERVICE LINES

WELDING:

- NATIONAL GRID WELDING POLICIES AND PROCEDURES INCLUDE:
 - CNST05002: WELDING POLICY
 - CNST05003: PIPE WELDING SAFETY
 - CNST05005: WELDING PROCEDURE SPECIFICATIONS
 - MS-030: WELDING FILLER MATERIALS
- PRIOR TO THE START OF ANY WORK THE CONTRACTOR SHALL SUBMIT WELDER CERTIFICATION DOCUMENTS FOR EACH OF THE WELDERS EMPLOYED ON THIS PROJECT.
- WELDING PROCEDURE SPECIFICATIONS REQUIRED:
 - BUTT WELDS (GROOVE): WPS-SMAW-E6010/7010 (LATEST REVISION)
 - FILLET WELDS (BRANCH): WPS-SMAW-E6010/7010 (LATEST REVISION)
- 10% (AT LEAST 1) OF WELDS SHALL BE SUBJECT TO NON-DESTRUCTIVE EXAMINATION (NDE):
 - BUTT WELDS 2-INCH AND GREATER: 10% RADIOGRAPH
 - BUTT WELDS < 2-INCHES: 10% MAGNETIC PARTICLE
 - FILLET WELDS: 10% MAGNETIC PARTICLE
- NDE AND WELD MAP SHALL BE PROVIDED BY SKYTESTING.
- SKYTESTING SCHEDULING CONTACT:

WILLIAM (BILL) CLARK
CELL: 704-858-7794
EMAIL: WCLARK@SKYTESTING.COM

CATHODIC PROTECTION:

- IF EXISTING TEST STATIONS, WIRES, AND/OR MAGNESIUM ANODES ARE DISTURBED OR DAMAGED, NOTIFY THE NATIONAL GRID CORROSION DEPARTMENT:

DAVE HALNEN (781) 379-7831 FOR SUPERVISOR ISSUES
ALANNA GRONDINE (339) 225-5378 FOR ENGINEERING ISSUES
ALLISIA APINIAN-MARGIOS (781) 296-7569 FOR MANAGEMENT ISSUES
- 24 HOUR NOTICE IS REQUIRED PRIOR TO INSTALLATION OF INSULATED FITTINGS TO ALLOW FOR ACCEPTANCE TESTING.
- NATIONAL GRID CORROSION GAS POLICIES AND WORK METHODS INCLUDE:
 - COR01100: CORROSION DESIGN CRITERIA
 - COR02001: APPLICATION OF COATING SYSTEMS
 - COR02020: INSPECTING EXPOSED STEEL PIPE FOR CORROSION
 - COR02021: INSPECTING EXPOSED CAST OR DUCTILE PIPING FOR GRAPHITIZATION
 - COR03001: TESTING OF PIPE COATING (JEEP TESTING)
 - COR04001: INSTALLATION OF MAGNESIUM ANODES
 - COR04003: INSTALLATION OF TEST STATIONS FOR CATHODIC PROTECTION
 - COR04004: INSTALLATION OF WIRE CONNECTIONS
 - COR04005: INSTALLATION OF INSULATING JOINTS FOR CATHODIC PROTECTION
 - 030031-CS: FACILITY COATING GUIDE
 - 030026-CS: INSTALLATION OF TEST STATIONS FOR CATHODIC PROTECTION
 - 030036-CS: INSTALLING WIRE CONNECTIONS
- CORROSION DESIGN:
 - SEE DETAILS A, B, C, & E ON SHEET 05:
 - INSTALL AN INSULATED COUPLING, A STEEL SPOOL PIECE AND A SECOND INSULATED COUPLING BETWEEN THE EXISTING COATED STEEL MAIN AND THE PROPOSED COATED STEEL MAIN. INSTALL A 6-WIRE TEST STATION ACROSS THE INSULATORS. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
 - SEE DETAIL D ON SHEET 05:
 - INSTALL A 2-WIRE TEST STATION TO THE PROPOSED COATED STEEL MAIN AT THE COATED STEEL/PLASTIC INTERFACE. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
- STEEL PIPE, FITTINGS, VALVES AND OTHER CARBON STEEL COMPONENTS TO BE BURIED WHICH ARE NOT FACTORY COATED FOR BURIED SERVICE SHALL BE FIELD COATED.

ENVIRONMENTAL:

- WORK SHALL CONFORM TO THE NATIONAL GRID ENVIRONMENTAL POLICY.
- NATIONAL GRID ENVIRONMENTAL CONTACT:

NAME: JAIME WALKER
PHONE: (978) 551-1156
EMAIL: JAIME.WALKER@NATIONALGRID.COM
- CONTRACTOR SHALL REVIEW THE PROJECT WORK ORDER PACKAGE FOR ENVIRONMENTAL GUIDANCE FORMS, FOR EXAMPLE EG-301, FOR THE RESPECTIVE STATE.
- WHEN SOILS OR LIQUIDS ARE ENCOUNTERED THAT ARE BELIEVED TO BE CONTAMINATED WITH OIL AND/OR HAZARDOUS MATERIAL, EXCAVATION WORK SHALL BE HALTED AND FIELD PERSONNEL SHALL NOTIFY THEIR IMMEDIATE SUPERVISOR.
- NO EXCAVATED SOIL THAT IS CONTAMINATED SHALL LEAVE THE WORK SITE UNTIL ENVIRONMENTAL HAS MADE A DETERMINATION FOR ITS PROPER DISPOSAL.
- NATIONAL GRID ENVIRONMENT POLICIES AND PROCEDURES INCLUDE:
 - SHE02001: HANDLING CONTAMINATED MATERIALS AND PIPING
 - SHE02002: REMOVING MERCURY REGULATORS AND DEVICES
 - SHE02003: ENCOUNTERING CONTAMINATION WHILE EXCAVATING
 - EG303-NE: BEST MANAGEMENT PRACTICES
 - EG140: USED GAS PIPE MANAGEMENT
- ENVIRONMENTAL REQUIREMENTS:
 - PROPOSED WORK LOCATED WITHIN 100 FEET OF WETLANDS AND/OR BODIES OF WATER / WITHIN 200 FEET OF A RIVER OR A STREAM (*25 FEET IN BOSTON, BROCKTON, CAMBRIDGE, CHELSEA, EVERETT, FALL RIVER, LAWRENCE, LOWELL, MALDEN, NEW BEDFORD, SOMERVILLE, SPRINGFIELD, WINTHROP, OR WORCESTER) / WITHIN A FLOODPLAIN.

SAFETY:

- WORK SHALL CONFORM TO THE NATIONAL GRID EMPLOYEE SAFETY HANDBOOK AND OSHA REQUIREMENTS.
- REQUIRED PPE SHALL BE WORN AND UTILIZED IN ACCORDANCE WITH THE CURRENT NATIONAL GRID SAFETY POLICY.
- A NATIONAL GRID APPROVED CONTRACTOR HEALTH AND SAFETY PLAN (HASP) IS REQUIRED PRIOR TO CONSTRUCTION.
- CONSTRUCTION SIGNING, DRUMS, BARRICADES, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) PART VI AND SHALL BE MAINTAINED BY THE CONTRACTOR.
- NATIONAL GRID SAFETY PROCEDURES COVER THE FOLLOWING CATEGORIES:
 - ADMINISTRATIVE; B- INSPECTIONS; C- WALKING WORKING SURFACES; D- MEANS OF EGRESS; E- MATERIAL HANDLING AND STORAGE; F- TOXIC AND HAZARDOUS SUBSTANCES; G- HAZARDOUS MATERIALS; H- PERSONAL PROTECTIVE EQUIPMENT; I- GENERAL ENVIRONMENTAL CONTROLS, J- ACCIDENT INVESTIGATION; K- MACHINERY AND GUARDING; L- WELDING/CUTTING/BRAZING; M- EXCAVATIONS; N- CONTRACTORS; FIRE PROTECTION; Q- FLEET AND ROADWAY SAFETY
- NATIONAL GRID SAFETY POLICIES AND PROCEDURES INCLUDE:
 - SHE01001: GENERAL SAFETY REQUIREMENTS
 - SHE01002: SUPPLIED-AIR RESPIRATORS
 - SHE01003: USING AND MAINTAINING PORTABLE GAS MONITORS
 - SHE01004: USING AND MAINTAINING FLAME IONIZATION UNITS
 - SHE01005: DISSIPATING STATIC ELECTRICAL CHARGES ON PLASTIC PIPE
 - SHE01006: ENTERING GAS UTILITY VAULTS
 - SHE01008: USING AND MAINTAINING THE GAS EXPLORER
 - SHE01009: DISSIPATING STATIC ELECTRICAL CHARGES ON PLASTIC PIPE
 - SHE01010: THE APPLICATION OF FORMAL PROCESS SAFETY ASSESSMENTS TO HIGHER-RISK GAS ACTIVITIES PERFORMED IN THE FIELD
- JOB BRIEFINGS, AT A MINIMUM, SHALL BE CONDUCTED BEFORE THE START OF THE FIRST JOB ON EACH DAY OR SHIFT. ADDITIONAL BRIEFINGS MAY BE REQUIRED AFTER EXTENDED WORK BREAKS.
- ANY AND ALL WORKERS THAT HAVE ANY POTENTIAL TO COME INTO CONTACT WITH SOIL AND/OR GROUNDWATER MUST HAVE UP-TO-DATE OSHA 40-HOUR HAZWOPER TRAINING. COPIES OF OSHA CERTIFICATES/TRAINING REFRESHERS SHALL BE PROVIDED TO NATIONAL GRID FOR REVIEW PRIOR TO THE START OF WORK.

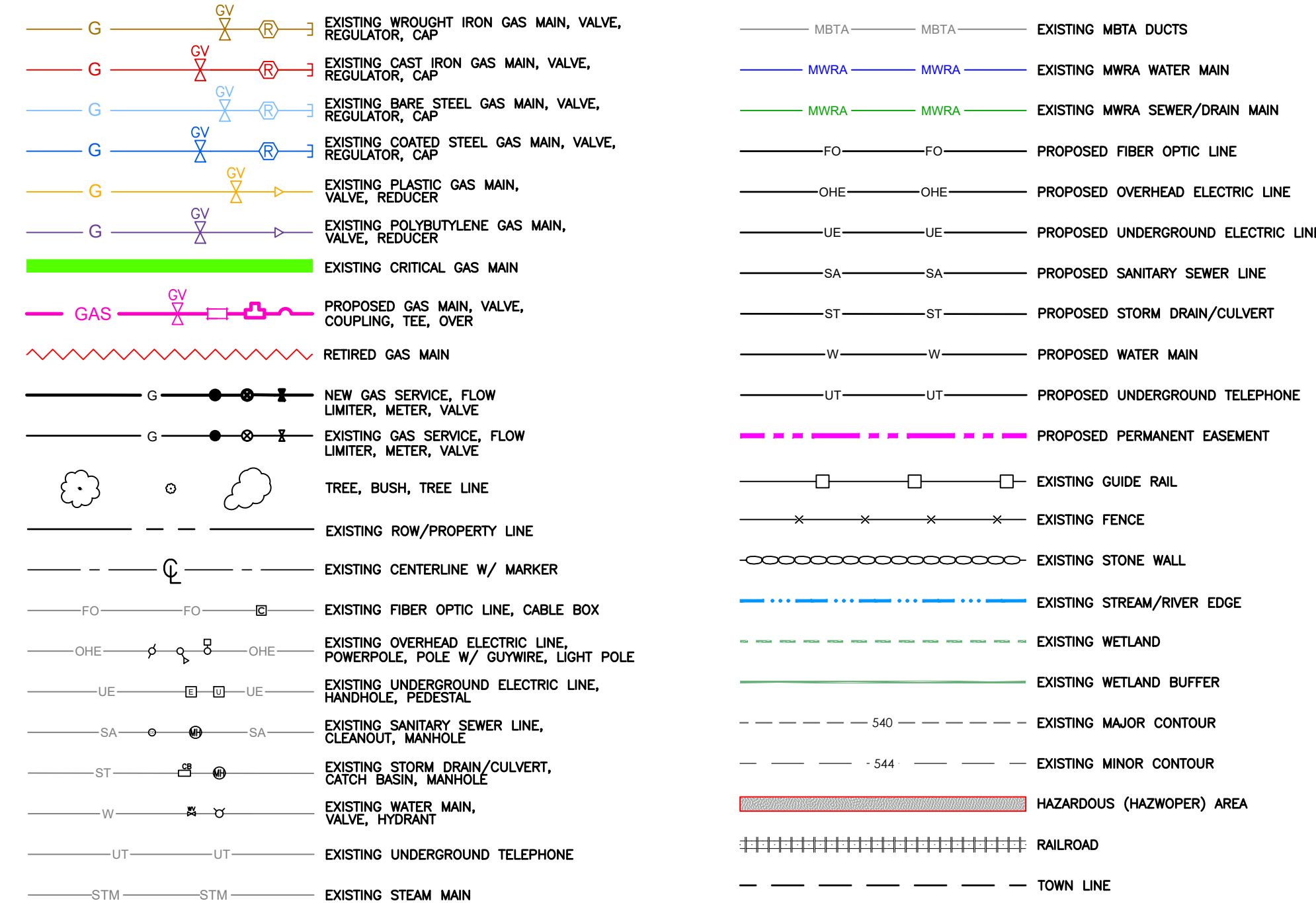
OTHER PERMITTING REQUIREMENTS:

- CITY OF BOSTON STREET OPENING PERMIT
- TRAFFIC MANAGEMENT PLAN (TMP) (TO BE COMPLETED BY FEENEY BROTHERS)
- MBTA PERMIT
- ENVIRONMENTAL PERMIT AND/OR THE USE OF ENVIRONMENTAL BMPS MAY BE REQUIRED.

REFERENCE DRAWINGS:

- LOCATION OF IDENTIFIED UNDERGROUND UTILITIES ARE AN APPROXIMATE BASED ON AVAILABLE RECORD AND FIELD INFORMATION IN ACCORDANCE WITH CI/ASCE 38-02. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT IDENTIFIED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR FOR SERVICE, SIZE, INVERT ELEVATIONS, LOCATIONS, ETC.

LEGEND



BILL OF MATERIALS						
ITEM	QTY	UOM	DESCRIPTION	SIZE (IN.)	NATIONAL GRID REFERENC	SAP ID NUMBER
1	10	FT	PIPE, SDR 11.5, MDPE, 4.50 IN. O.D. X .395 IN. WALL THICKNESS, 40 FT LENGTHS	4	120020-MS	9340857
2	10	FT	PIPE, CARBON STEEL, SCH 40, 0.237 IN. WALL, GRADE X 42. PRITEC WRAPPED SPECIAL RATIO WITH 15/60	4	120020-MS	9322665
3	10	FT	PIPE, COATED STEEL, SCH 40, 0.280 IN. WALL, API-5L GRADE B PSL-1, 40 FT LENGTHS	6	120020-MS	9340726
4*	40	FT	PIPE, CARBON STEEL, SCH 40, 0.322 IN. WALL, API-5L GRADE B PSL-2, 40 FT LENGTHS	8	120020-MS	9340825
5*	440	FT	PIPE, CARBON STEEL, SCH 40 0.375 IN. WALL, API 5L X42 PSL-2, 40 FT LENGTHS	12	120020-MS	9340771
6	1	EA	CAP, BUTT FUSION, MDPE	4	120026-MS	9339534
7	1	EA	CAP, ELECTROFUSION, HDPE	4	120025-MS	9393582
8	2	EA	CAP, LINE, VENTED, SELF RESTRAINING BOLTED, COMPRESSION, FOR STEEL, CONDUCTIVE, 5IN Lx0.250IN THK MIDDLE RING	6	FITS6014	9314880
9	2	EA	CAP, LINE, VENTED, SELF RESTRAINING BOLTED, COMPRESSION, FOR STEEL, CONDUCTIVE, 5IN Lx0.250IN THK MIDDLE RING	12	FITS6014	9315212
10	1	EA	COUPLING, ELECTROFUSION, BLACK, HDPE	4	120025-MS	9314593
11	1	EA	COUPLING, COMPRESSION, RESTRAINING, INSULATED, BOLTED, STEEL X STEEL/PE	4	FITS6025	9314427
12	1	EA	STIFFENER, INSERT, METAL, FOR SDR 11.5 PIPE	4	FITS6025	9340106
13	4	EA	COUPLING, COMPRESSION, RESTRAINING, INSULATED, BOLTED, STEEL X STEEL/PE	6	FITS6025	9314426
14	4	EA	COUPLING, COMPRESSION, RESTRAINING, INSULATED, BOLTED, STEEL X STEEL/PE	12	FITS6025	9307629
15	1	EA	ELBOW, WELD, 90 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.237 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	4	120020-MS	9315385
16	2	EA	ELBOW, WELD, 45 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.280 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	6	120020-MS	9308618
17*	3	EA	ELBOW, WELD, 45 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.322 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	8	120020-MS	9307720
18*	9	EA	ELBOW, WELD, 45 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.375 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	12	120020-MS	9308373
19*	2	EA	TEE, WELD, STEEL, STANDARD WEIGHT, STANDARD WALL 0.375 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	12	120020-MS	9315875
20*	1	EA	TEE, WELD, STEEL, STANDARD WEIGHT, STANDARD WALL 0.375IN X 0.322IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	12X12X8	120020-MS	9315877
21	1	EA	REDUCER, STEEL, WELD, CONCENTRIC, STANDARD WALL 0.322 IN X 0.237 IN, PER ASTM A-234, GRADE WPB	8X4	120020-MS	9315725
22	2	EA	REDUCER, STEEL, WELD, CONCENTRIC, STANDARD WALL 0.375 IN X 0.280 IN, PER ASTM A-234, GRADE WPB	12X6	120020-MS	9315744
23	1	EA	VALVE, BALL, DELTA, FIG 55, FULL PORT, WE X WE	8	VALV6010	9323331
24	1	EA	VALVE BOX FOR 8" CS FULL PORT VALVE	8	VALV6010	9307586
25	4	EA	VALVE, BALL, DELTA, FIG 55, FULL PORT, WE X WE	12	VALV6010	9341948
26	4	EA	VALVE BOX FOR 12" CS FULL PORT VALVE	12	VALV6010	9307586
27	8	EA	FITTING, SHORTSTOPP, WELD, CONTOURED BASE INCLUDES THREADED COMPLETION PLUG AND THREADED CAP	1 1/2	FITS6055	9382855
28	1	EA	FITTING, SHORTSTOPP, WELD, CONTOURED BASE INCLUDES THREADED COMPLETION PLUG AND THREADED CAP	2	FITS6055	9341087
29	8	EA	FITTING, SHORTSTOPP, WELD, CONTOURED BASE INCLUDES THREADED COMPLETION PLUG AND THREADED CAP	3	FITS6055	9382856
30	4	EA	SADDLE, FOR CAST IRON MAIN, SMITH BLAIR 310	12X4	CS-FIT014	9308283
31	4	EA	PLUG, SCREW, MALLEABLE IRON, SQUARE HEAD, STANDARD, THREADED FITTINGS	4	9308743	9308743
32	1	EA	TAPE, YELLOW CAUTION, GAS MAIN, 1000' ROLL	6	CNST6061	9341904
33	10	FT	WIRE, TRACER, DIRECT BURY USE		CNST6060	9315005
34	5	EA	9X9 TEST STATION BOX	9X9	030026-CS	9339391
35	5	EA	TEST STATION BOX COVER	9	030026-CS	9339797
36	20	EA	ANODE, MAGNESIUM, 17LB, HIGH POTENTIAL	30	120004-MS	9311183

* SOME QUANTITIES LABELED ON LAYOUT SHEETS

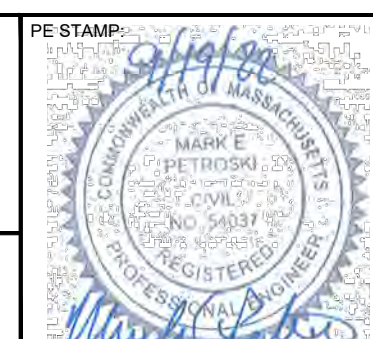
UTILITY OWNER INFORMATION:

SEWER:	BOSTON WATER & SEWER DEPARTMENT #980 HARRISON AVE. BOSTON, MA 02119	GAS:	NATIONAL GRID GAS #40 SYLVAN RD. WALTHAM, MA 02451
DRAIN:	BOSTON WATER & SEWER DEPARTMENT #980 HARRISON AVE. BOSTON, MA 02119	TELEPHONE:	VERIZON #385 MYLES STANDISH BLVD. TAUNTON, MA 02780
WATER:	BOSTON WATER & SEWER DEPARTMENT #980 HARRISON AVE. BOSTON, MA 02119	CABLE:	COMCAST CABLE CORPORATION PO BOX #6505, #5 OMNI WAY CHELMSFORD, MA 01824
ELECTRIC:	BOSTON DPW STREET LIGHTING #400 FRONTAGE RD. BOSTON, MA 02118		AT&T / TELEPORT COMMUNICATIONS AMERICA #50 MALL RD - SUITE #203 BURLINGTON, MA 1803
	EVERSOURCE ELECTRIC "A" #1165 MASSACHUSETTS AVE. DORCHESTER, MA 02125		CROWN CASTLE #80 CENTRAL ST BOXBOROUGH, MA 01719
RAILROAD:	MBTA DOCUMENT CONTROL GROUP #500 ARBORWAY BOSTON, MA 02130		FIRST LIGHT #359 CORPORATE DR PORTSMOUTH, NH 03801



45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

BOSTON GAS COMPANY
d/b/a
nationalgrid
40 SYLVAN ROAD
WALTHAM, MA 02451
IFC



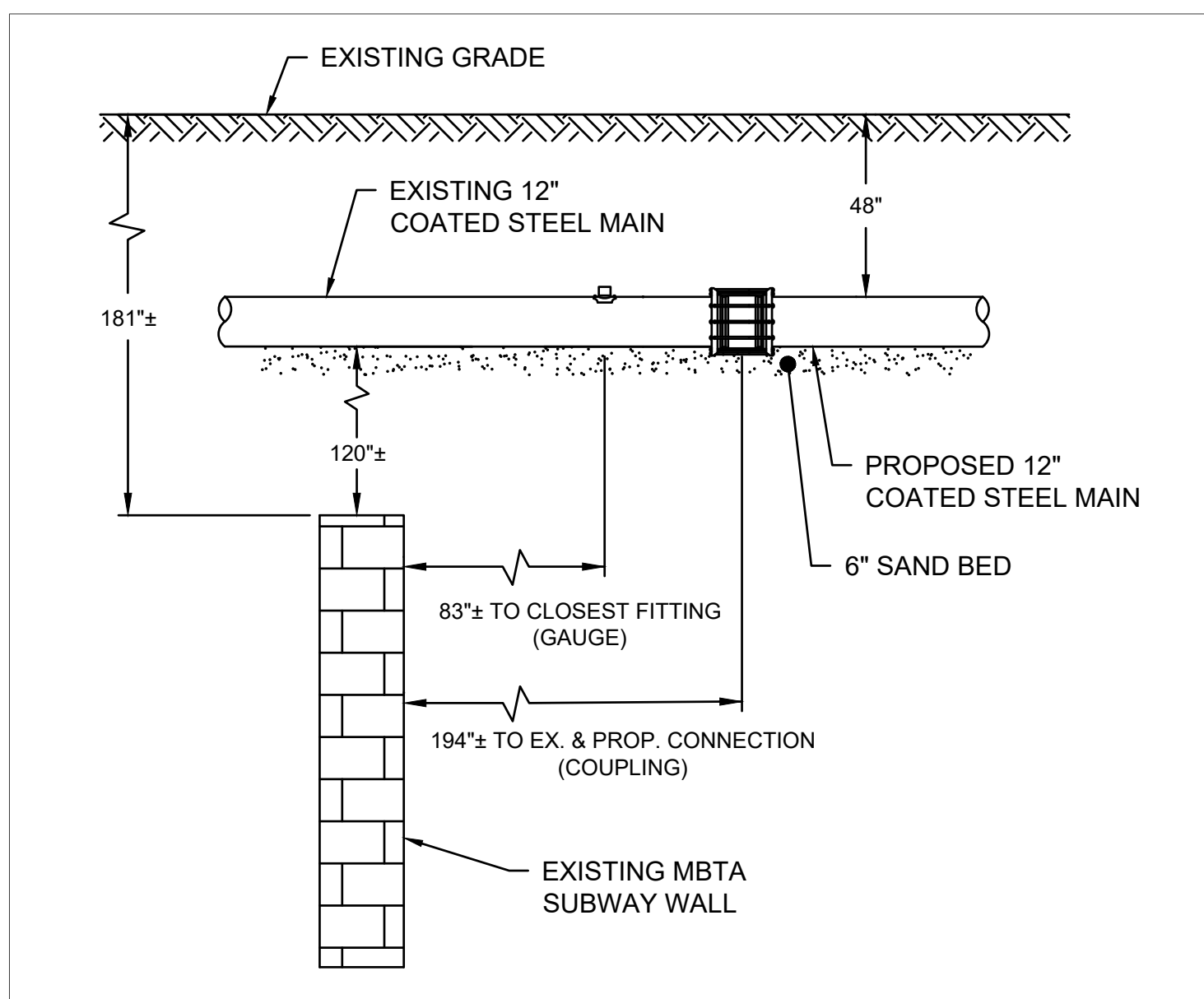
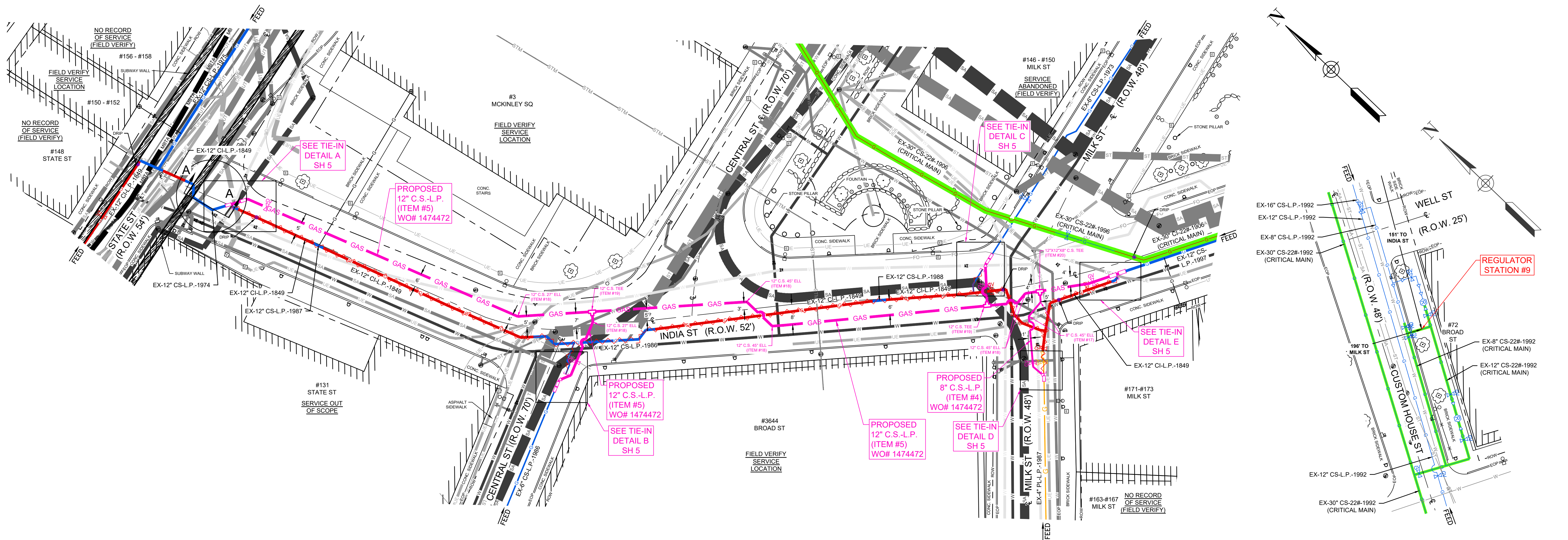
NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET
GAS MAIN REPLACEMENT
INDIA ST, STATE ST, CENTRAL ST, & MILK ST
BOSTON, MA

CONSTRUCTION NOTES & BILL OF MATERIALS

DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

PAGE 03 OF 10	
DRAWING NO.	SHEET NO.
G-003	03



PROFILE DETAIL:
SECTION A-A AT MBTA
N.T.S

DESIGN PARAMETERS:
 1474472 - 9-35 INDIA ST, BOS
 SYSTEM NUMBER: BOSTON LP
 SYSTEMS' MOPS (PSIG, OR "LP"): LP (0.5 PSIG)
 EXPECTED OPERATING PRESSURE RANGE: 4.5 INWC - 14 INWC
 DESIGN DAY TEMPERATURE (F): 0°F
 MIN & MAX OPERATING TEMPERATURE RANGE (F): -20°F TO +73°F
 DESIGN FACTOR: 0.4

STREET NAME: INDIA ST
 SIZING RECOMMENDATION: 12IN ST
 NEW MAINS' DESIGN PRESSURE: 14 INWC
 DESIGN DAY FLOW IN NEW PIPELINE SEGMENTS (MCFH): 40
 SINGLE FEED SYSTEM: NO

STREET NAME: INTERSECTION OF MILK ST/INDIA ST
 SIZING RECOMMENDATION: 8IN ST
 NEW MAINS' DESIGN PRESSURE: 14 INWC
 DESIGN DAY FLOW IN NEW PIPELINE SEGMENTS (MCFH): 5
 SINGLE FEED SYSTEM: NO

REVIEWED BY: KASEY ELKIN. REVIEW DATE: 05/24/2022

SCOPE OF WORK:
 NATIONAL GRID WORK ORDER NUMBER: 1474472
 PROJECT NAME AND LOCATION: 9-35 INDIA ST, BOSTON, MA
 PROJECT SCOPE: AS PART OF THE CIRE101214 PROGRAM, LPP INTEGRITY MANAGEMENT RECOMMENDS THE RELAY OF:

- APRX 140 FEET OF 12 INCH, LP CAST IRON (1849), APRX 5 FEET OF 12 INCH, LP COATED STEEL (1987) - UB0S0321, APRX 50 FEET OF 12 INCH, LP COATED STEEL (1986) - MBOS0023, APRX 215 FEET OF 12 INCH, LP CAST IRON (1849) AND APRX 5 FEET OF 12 INCH, LP COATED STEEL (1988) - UBOS0542 WITH APRX 415 FEET OF 12 INCH, LP STEEL IN INDIA ST FROM THE EXIST 12 INCH, LP COATED STEEL (1974) - UBOS0459 AT STATE ST TO THE EXIST 12 INCH, LP COATED STEEL (1997) - MBOS0200 AT MILK ST
- APRX 10 FEET OF 6 INCH, LP CAST IRON (1924) WITH APRX 10 FEET OF 8 INCH, LP STEEL IN THE INTERSECTION OF INDIA ST AND MILK ST.

NOTE:

- CONTACT INSTRUMENTATION AND REGULATION BEFORE WORKING WITHIN 200 FEET OF A REGULATOR STATION. BEFORE DOING TIE-IN, CONTACT GAS CONTROL, INSTRUMENTATION AND REGULATION, AND OPERATIONS ENGINEERING REGARDING POTENTIAL NEED TO SHUT DOWN THE STATION.
- ALL CONTROL AND SENSE LINES ARE TO BE FIELD LOCATED PRIOR TO CONSTRUCTION. CONTACT I&R AND DAMAGE PREVENTION FOR CONTROL AND SENSE LINE FIELD LOCATION.
- STEAM LINE IN CENTRAL ST. PLASTIC CANNOT BE INSTALLED WITHIN 18 FT OF THE STEAM LINE IN ACCORDANCE TO ENG04001 AND ENG02001
- MBTA PERMIT REQUIRED TO PERFORM WORK IN STATE ST, BOS.



45 HENDRIX ROAD
 WEST HENRIETTA, NY 14586
 PHONE (585) 359-7540
 FAX (585) 359-7541

BOSTON GAS COMPANY
 a/b/a
nationalgrid
 40 SYLVAN ROAD
 WALTHAM, MA 02451

IFC



NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

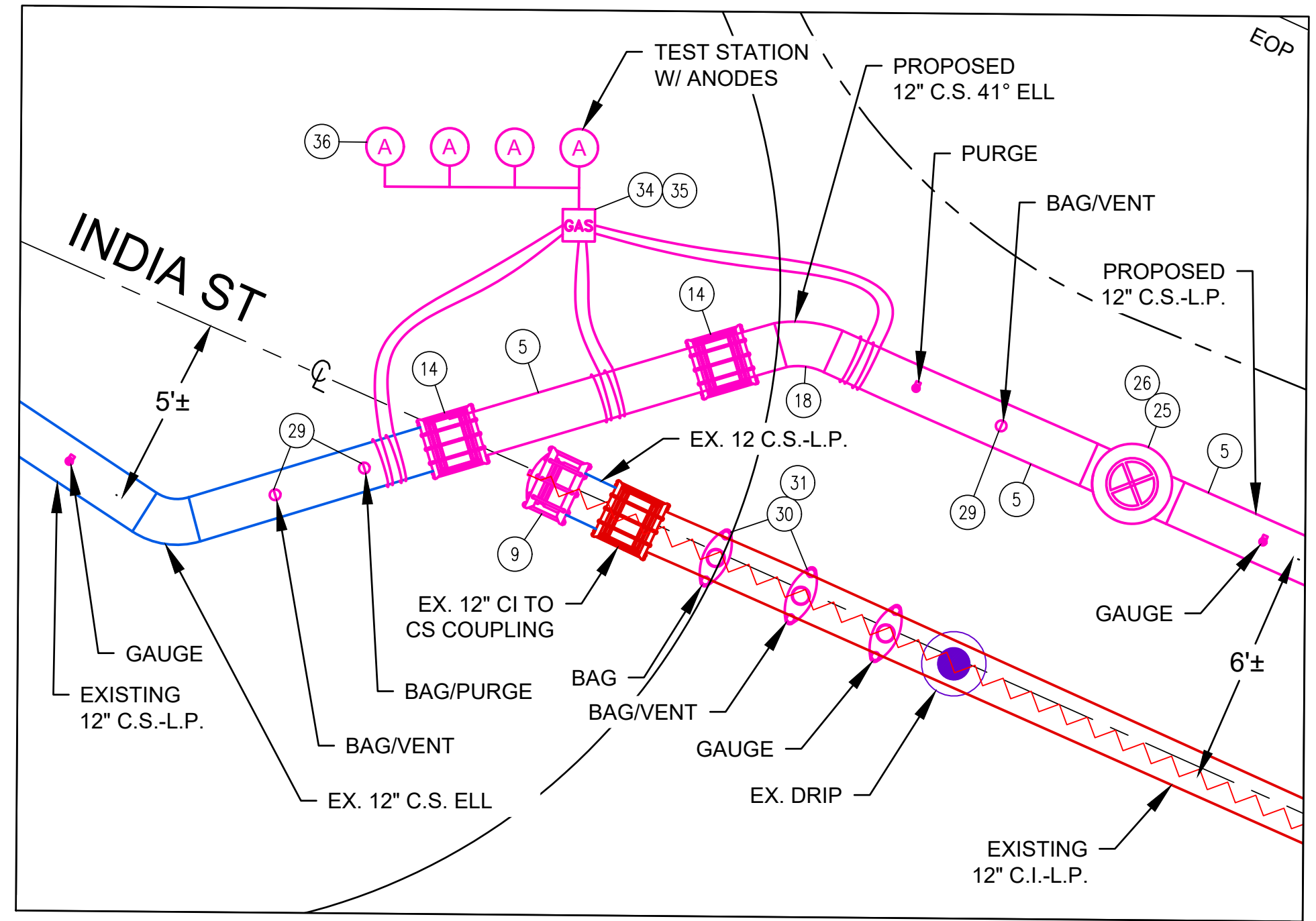
9-35 INDIA STREET
 GAS MAIN REPLACEMENT
 INDIA ST, STATE ST, CENTRAL ST, & MILK ST
 BOSTON, MA

OVERALL LAYOUT SHEET & MBTA DETAIL

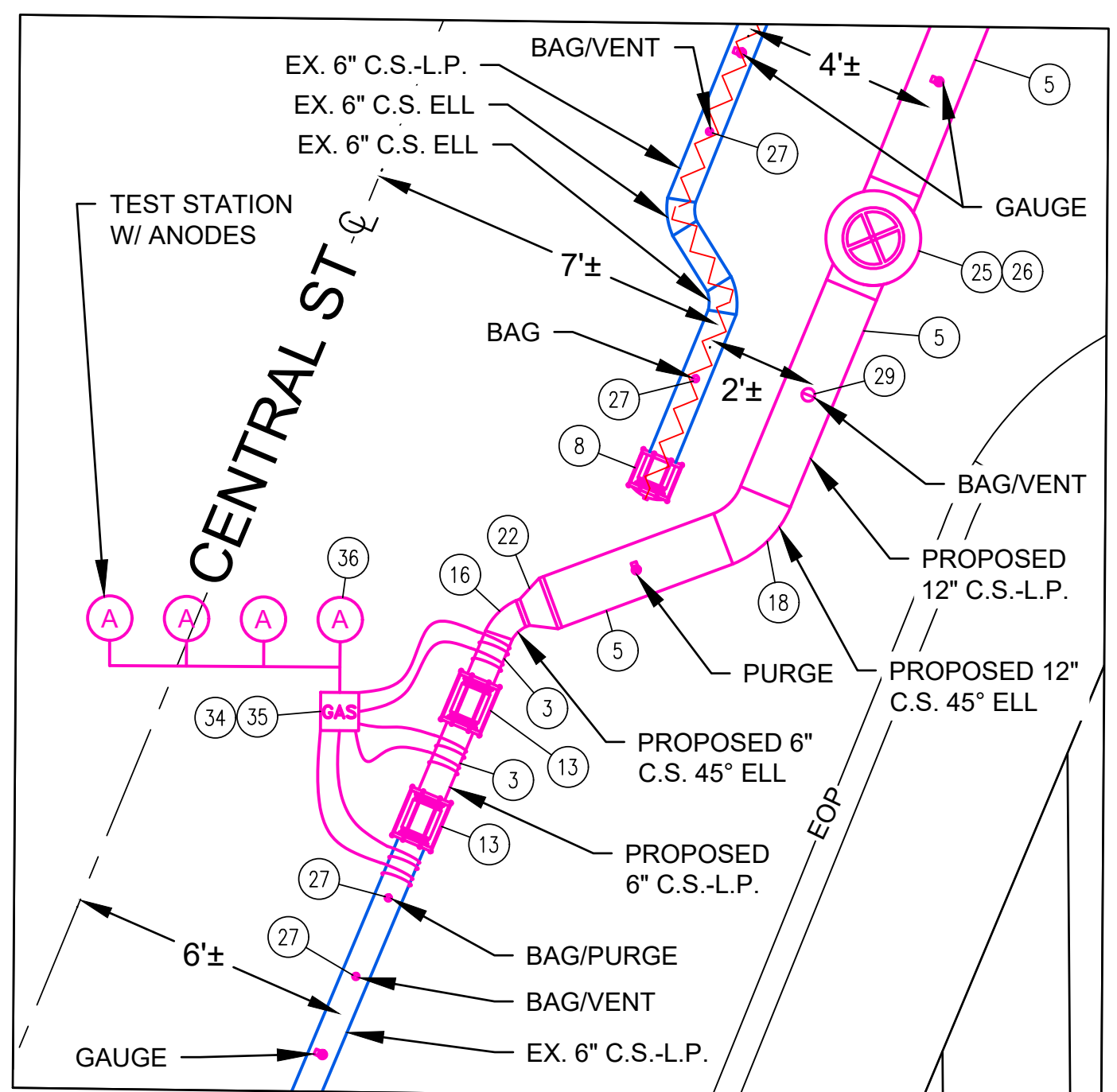
DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"x34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

PAGE 04 OF 10

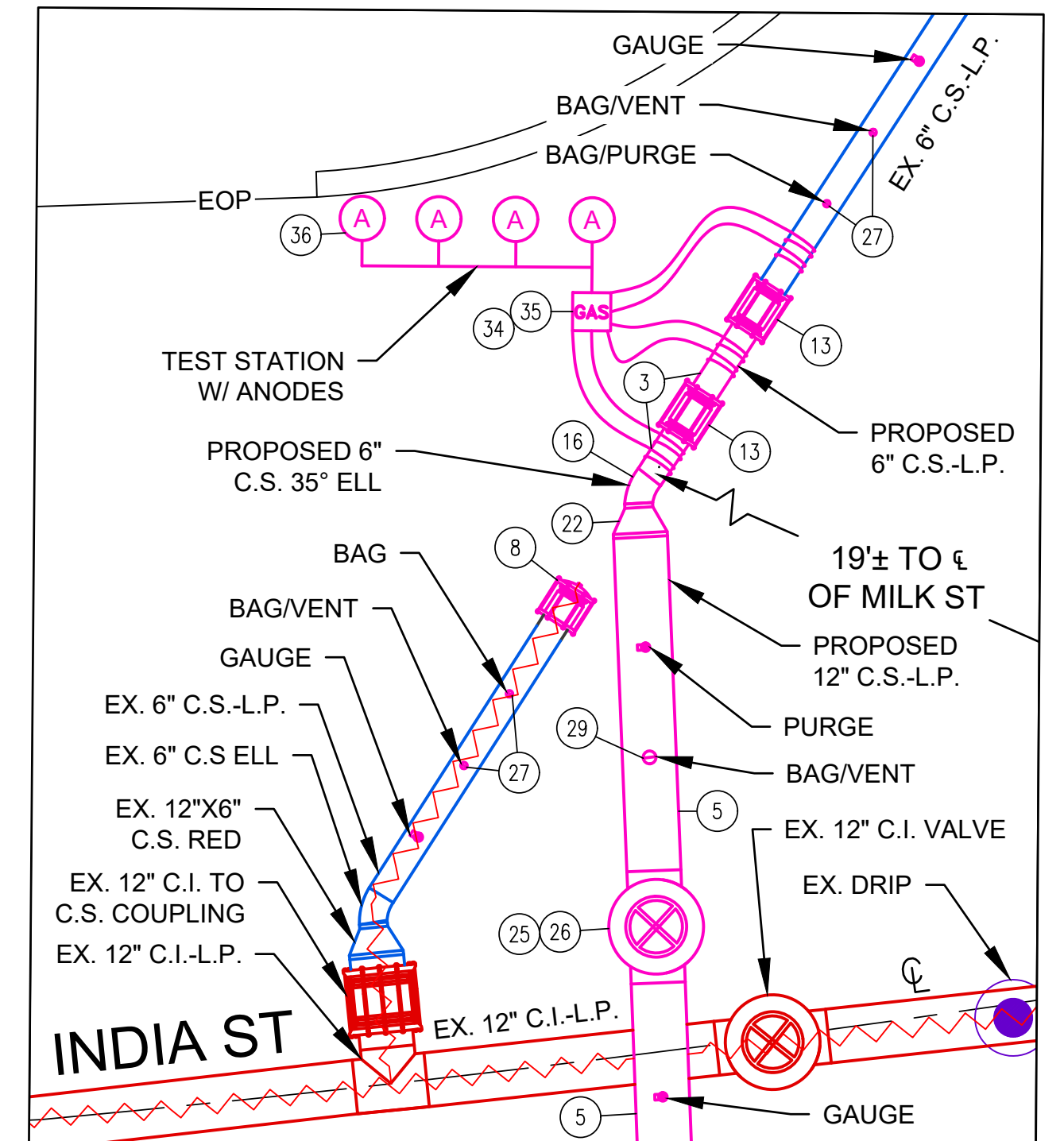
DRAWING NO.	SHEET NO.
C-001	04



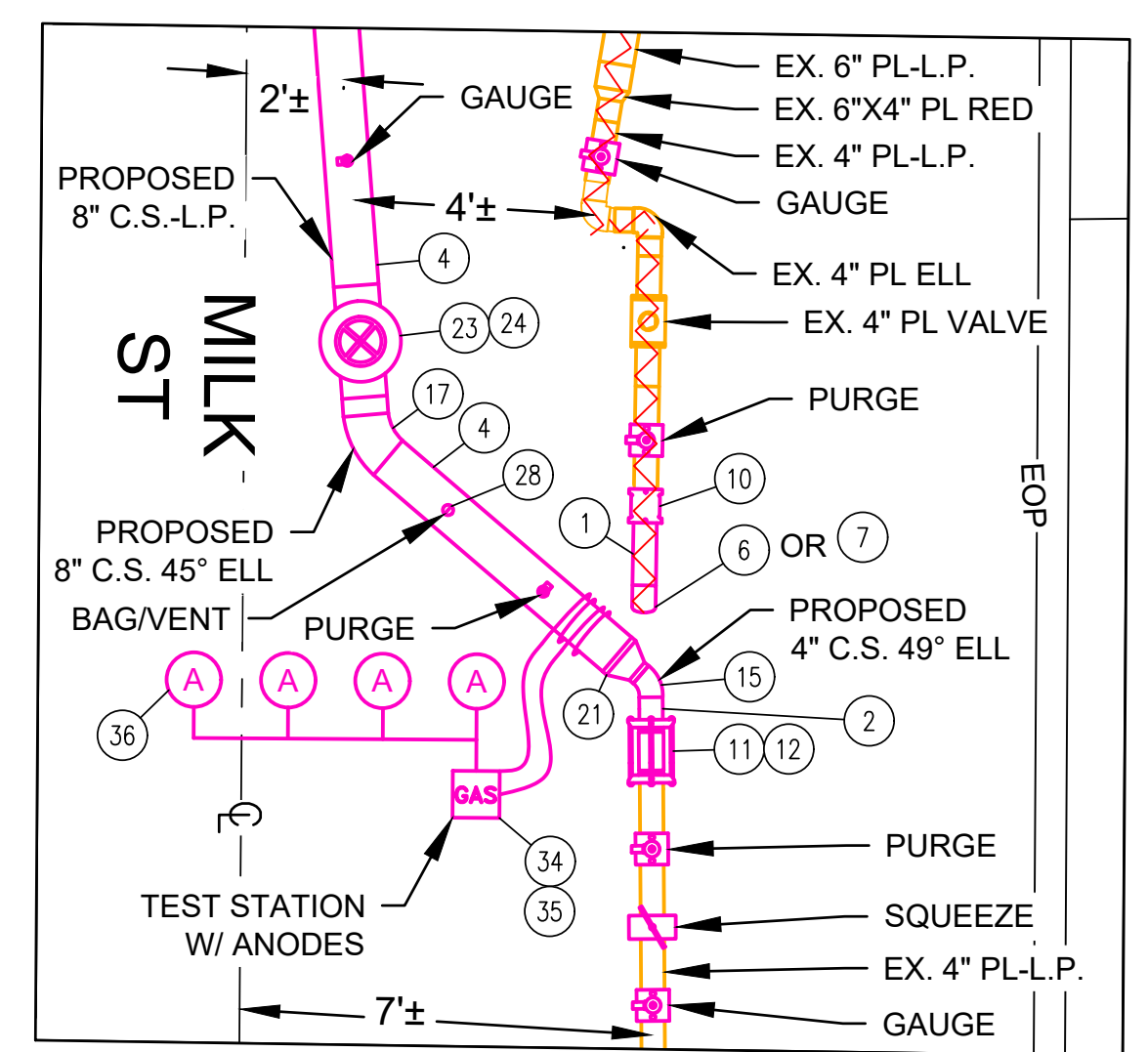
DETAIL A: TIE-IN
(INDIA ST & STATE ST)
SCALE - 1:3
SEE NOTE 1



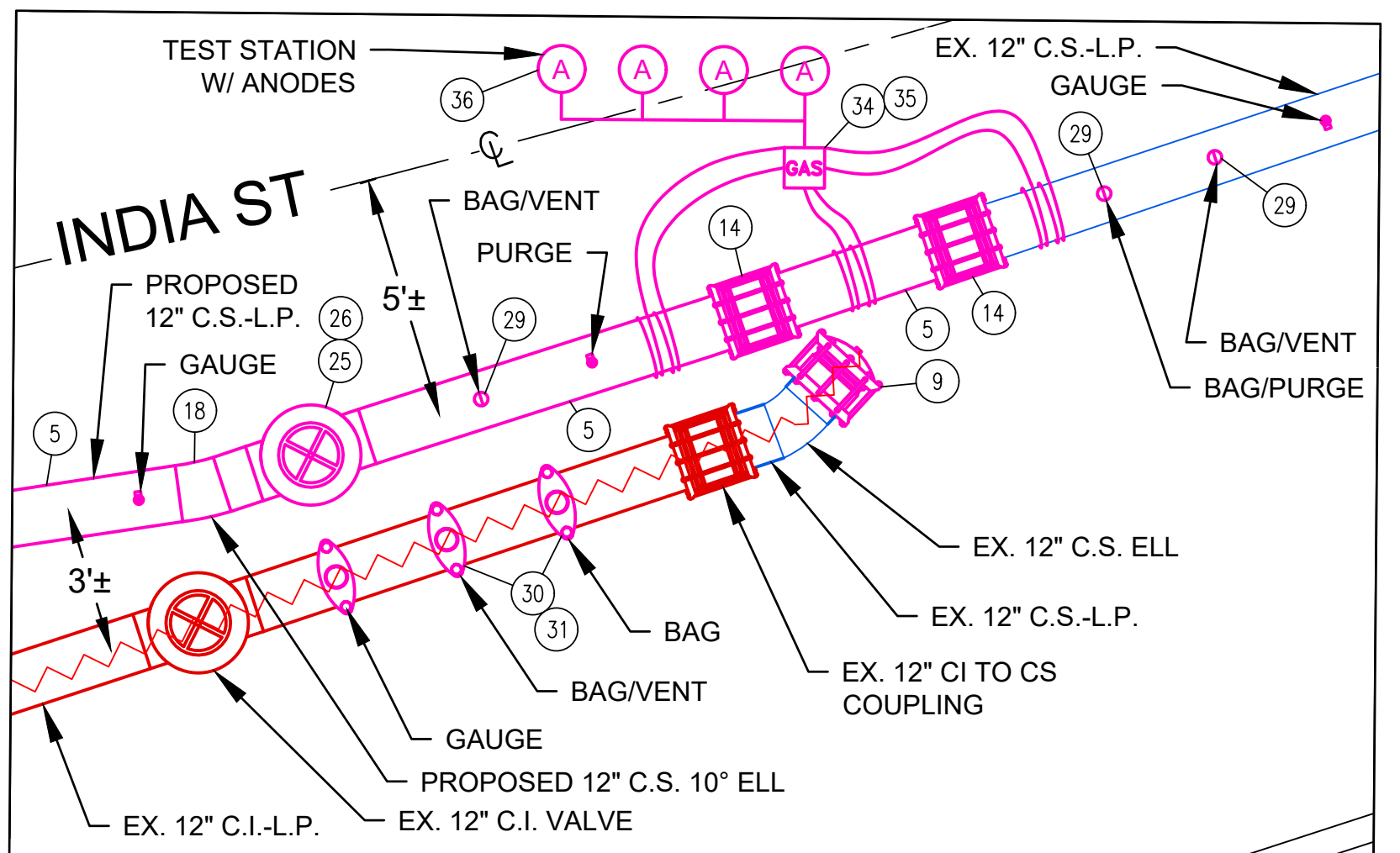
DETAIL B: TIE-IN
(INDIA ST & CENTRAL ST)
SCALE - 1:3
SEE NOTE 1



DETAIL C: TIE-IN
(INDIA ST & MILK ST)
SCALE - 1:3
SEE NOTE 1



DETAIL D: TIE-IN
(INDIA ST & MILK ST)
SCALE - 1:3
SEE NOTES 2, 3, & 4



DETAIL E: TIE-IN
(INDIA ST)
SCALE - 1:3
SEE NOTE 1

- NOTE:**
1. INSTALL AN INSULATED COUPLING, A STEEL SPOOL PIECE AND A SECOND INSULATED COUPLING BETWEEN THE EXISTING COATED STEEL MAIN AND THE PROPOSED COATED STEEL MAIN. INSTALL A 6-WIRE TEST STATION ACROSS THE INSULATORS. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
 2. INSTALL A 2-WIRE TEST STATION TO THE PROPOSED COATED STEEL MAIN AT THE COATED STEEL/PLASTIC INTERFACE. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
 3. ELECTROFUSION CAPS (ITEM 7) CAN BE USED AS ALTERNATE TO BUTT FUSE CAPS (ITEM 6) WITH ELECTROFUSION COUPLINGS (ITEM 10).
 4. STOP OFF METHODS CONTAINED IN CNST03002: STOP OFF OPERATIONS ON LOW PRESSURE MAINS, MAY BE USED IN PLACE OF SQUEEZE OFFS.



45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

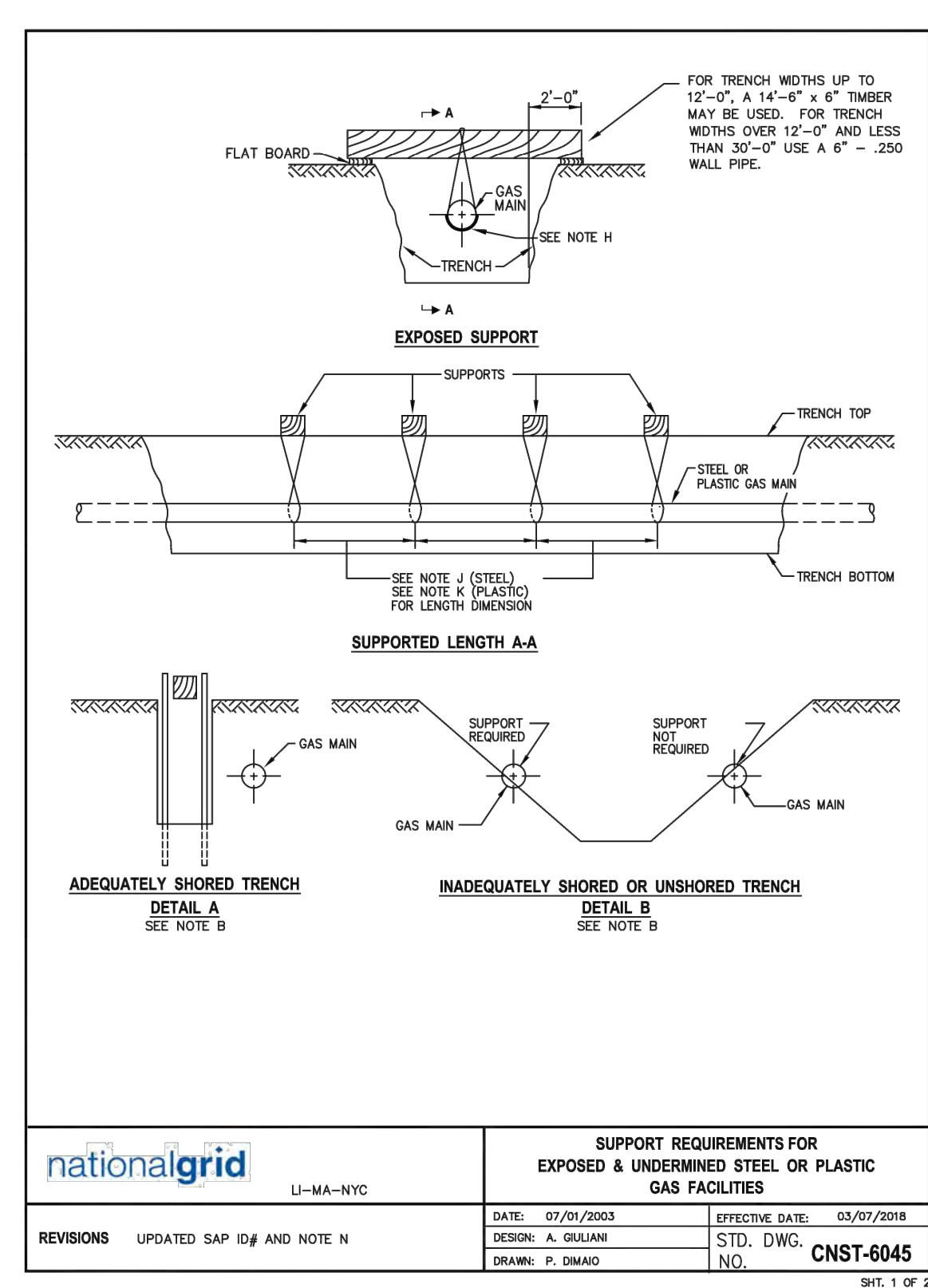
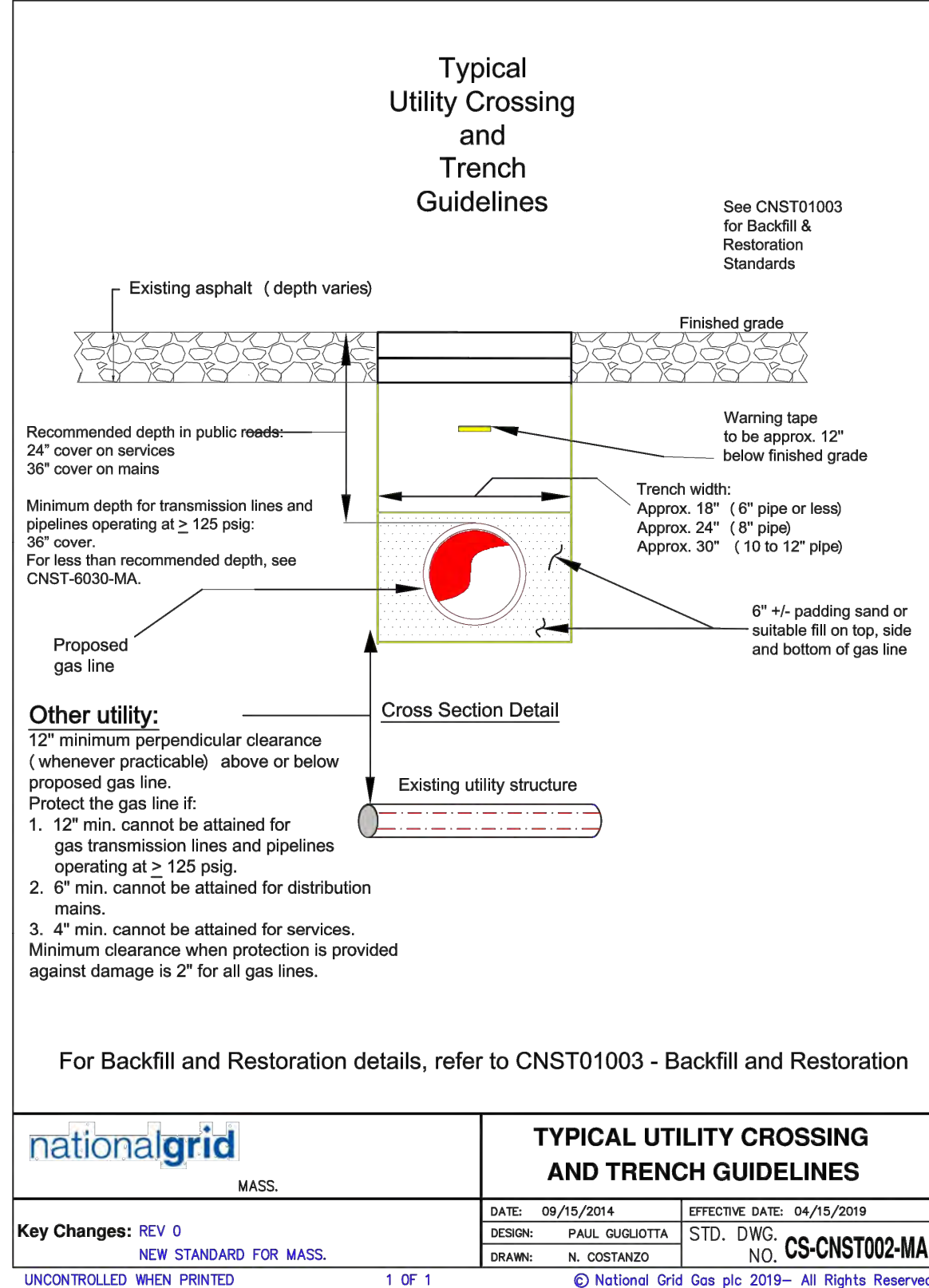
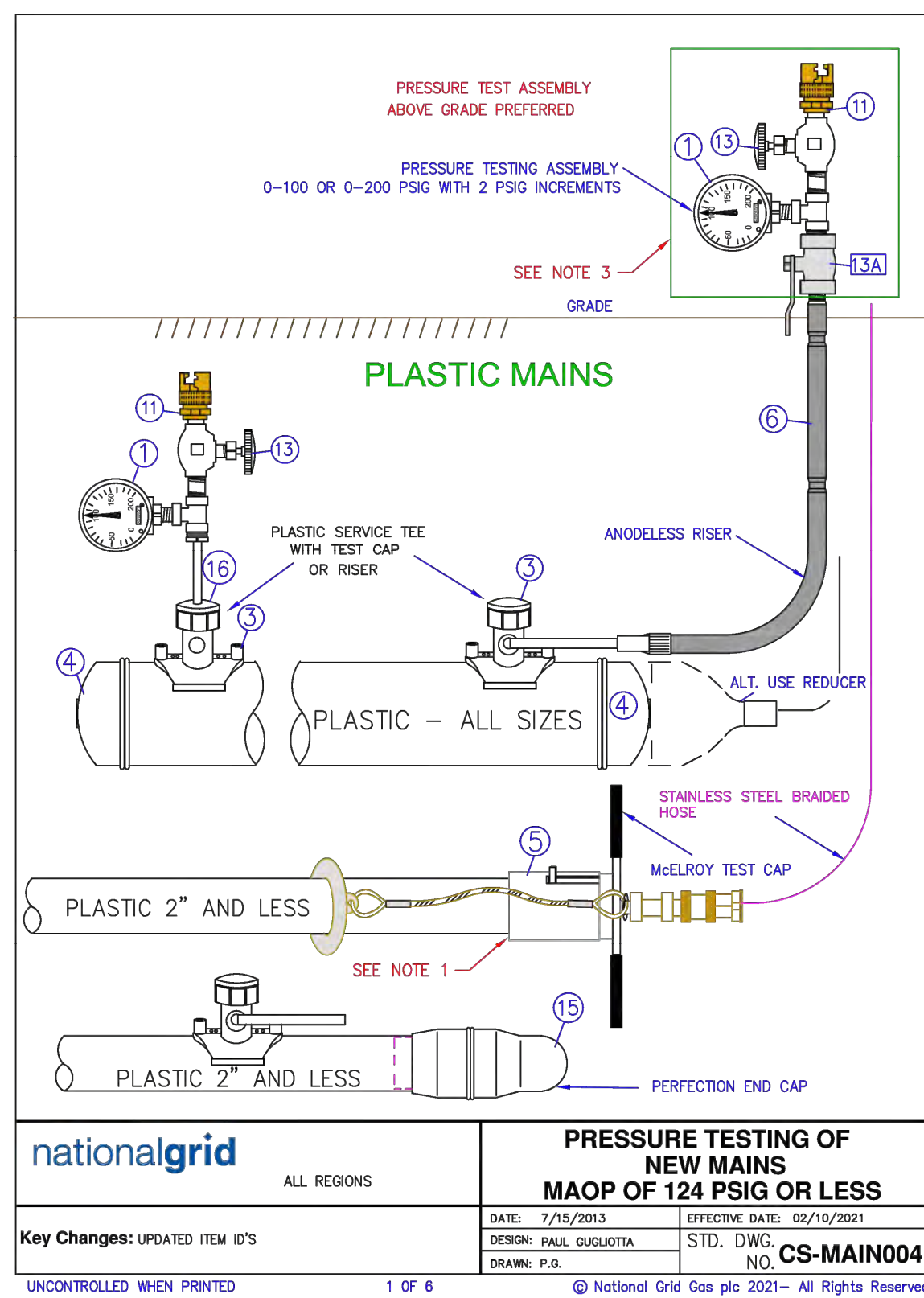
BOSTON GAS COMPANY
d/b/a
nationalgrid
40 SYLVAN ROAD
WALTHAM, MA 02451
IFC



NO.	DESCRIPTION	DATE	DR.BY	CK.BY	APP.BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET GAS MAIN REPLACEMENT INDIA ST, STATE ST, CENTRAL ST, & MILK ST BOSTON, MA					
TIE-IN & ABANDONMENT DETAILS					
DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

PAGE 05 OF 10	
DRAWING NO.	SHEET NO.
C-101	05



NOTES:

- THIS CONSTRUCTION STANDARD SHALL BE USED TO SUPPORT PLASTIC OR STEEL GAS FACILITIES WHICH ARE UNDERMINED AND EXPOSED BY CONSTRUCTION ACTIVITY.
- IF AN EXCAVATION IS MADE AT ANY DISTANCE PARALLEL TO THE GAS FACILITY WITH ADEQUATE OSHA STRUCTURAL SHORING, AS SHOWN IN DETAIL "A", OR IF A STABLE SOIL CONDITION WITH SUFFICIENT COVER ABOVE THE PIPE'S CENTERLINE EXISTS, AS SHOWN IN DETAIL "B", THEN SUPPORTS ARE NOT REQUIRED. UNSTABLE SOIL IS DEFINED AS A SOIL WHICH CAN CAUSE "SOIL RUN OUT FROM BENEATH THE PIPE (i.e., WASHOUT, SOFT CLAY, etc.) OR CAN SHIFT DUE TO CONSTRUCTION ACTIVITY, VIBRATIONS, etc., AND CAUSE A SOIL SCENARIO TO OCCUR AS SHOWN IN DETAIL "B" TO REQUIRE PIPE SUPPORT.
- IF AN EXCAVATION CROSSES OR RUNS PARALLEL TO A GAS FACILITY, SUPPORTS MAY NOT BE REQUIRED IF THE EXPOSED SECTION OF PLASTIC PIPES IS 3' OR LESS AND STEEL PIPES 1' OR LESS.
- ALL EXCAVATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONE CALL DIG SAFE PROGRAM USING THE APPROPRIATE MARK OUT, TEST HOLES AND EXCAVATION TO AVOID DAMAGE TO PIPE OR PIPE COATINGS:
 - NEW YORK STATE CODE RULE 783
 - MA CHAPTER 82 - SECTION 40, GENERAL LAWS, REGULATING NOTICE REQUIREMENTS FOR EXCAVATION IN PUBLIC WAYS
- USE OF THIS CONSTRUCTION STANDARD DOES NOT RELIEVE THE CONSTRUCTION AGENCY OR AUTHORITY OR THEIR RESPECTIVE CONTRACTORS OF RESPONSIBILITY FOR DAMAGES. ALL DAMAGES WILL BE REPAIRED IN ACCORDANCE WITH EXISTING STANDARDS AND THE APPROPRIATE PARTY SHALL BE BILLED FOR ALL EXPENSES.
- GAS FACILITIES SHOULD NOT BE UNDERMINED WITHOUT ADEQUATE SUPPORT (DETAIL A). ALL SUPPORT LINES SHALL BE TENSIONED SO THAT NO DEFLECTION WILL OCCUR WHEN THE FACILITY IS UNDERMINED. THIS TENSION SHALL BE CHECKED AT THE START AND END OF EACH DAY AND ADJUSTED AS NECESSARY.
- WHERE A COUPLING, GAS SERVICE, CLAMP, VALVE, DRIP LINE OR OTHER APPURTENANCE EXISTS ON THE EXPOSED SECTION OF MAIN, AN ADDITIONAL SUPPORT SHALL BE INSTALLED AT THE LOCATION.
- WHEN SUPPORTING AN EXPOSED FACILITY, THE PIPE COATING SHALL BE PROTECTED WITH ROCK SHIELD (ITEM ID 934029), OR OTHER LIKE MATERIAL CUT TO A MINIMUM WIDTH OF 1/2 THE SUPPORTED PIPE DIAMETER. SUPPORT LINES SHALL BE A MINIMUM OF 1/2" POLYPROPYLENE OR BETTER. FRP SHIELDS MAY ALSO BE USED FOR THIS PURPOSE PROVIDED THEY EXTEND A MINIMUM OF 1/2 WAY UP THE PIPE TO PROTECT FROM SIDE LOADING.
- SUPPORTS FOR GAS TRANSMISSION FACILITIES SHALL BE REVIEWED WITH GAS ENGINEERING PRIOR TO INSTALLATION.
- THE MAXIMUM SPACING BETWEEN SUPPORTS FOR STEEL FACILITIES SHALL BE AS FOLLOWS:
 - 7' SPACING FOR 1/2" AND 1 1/2" STEEL
 - 10' SPACING FOR 2" STEEL
 - 15' SPACING FOR 3" AND 4" STEEL
 - 20' SPACING FOR 6" AND LARGER STEEL
- THE MAXIMUM SPACING BETWEEN SUPPORTS FOR PLASTIC FACILITIES SHALL BE AS FOLLOWS:
 - 3' SPACING FOR 2" AND SMALLER PLASTIC
 - 6' SPACING FOR 4" AND LARGER PLASTIC
- VIBRATING MACHINES ARE ALLOWED OVER STEEL OR PLASTIC FACILITIES WITH 24" OR GREATER COVER. HAND HELD MECHANICAL TAMPER IS ACCEPTABLE OVER ANY FACILITY WITH 12" OR GREATER COVER.
- WHEN CONSTRUCTION ACTIVITY IS COMPLETED, CLEAN FILL SHALL BE COMPACTED AROUND AND UNDER THE GAS FACILITY BEFORE REMOVING SUPPORTS.
- SEE REGIONAL DAM01007-NYC-LUNY OR DAM-MA-RI PROCEDURES FOR REPLACEMENT REQUIREMENTS OF CAST IRON PIPE.

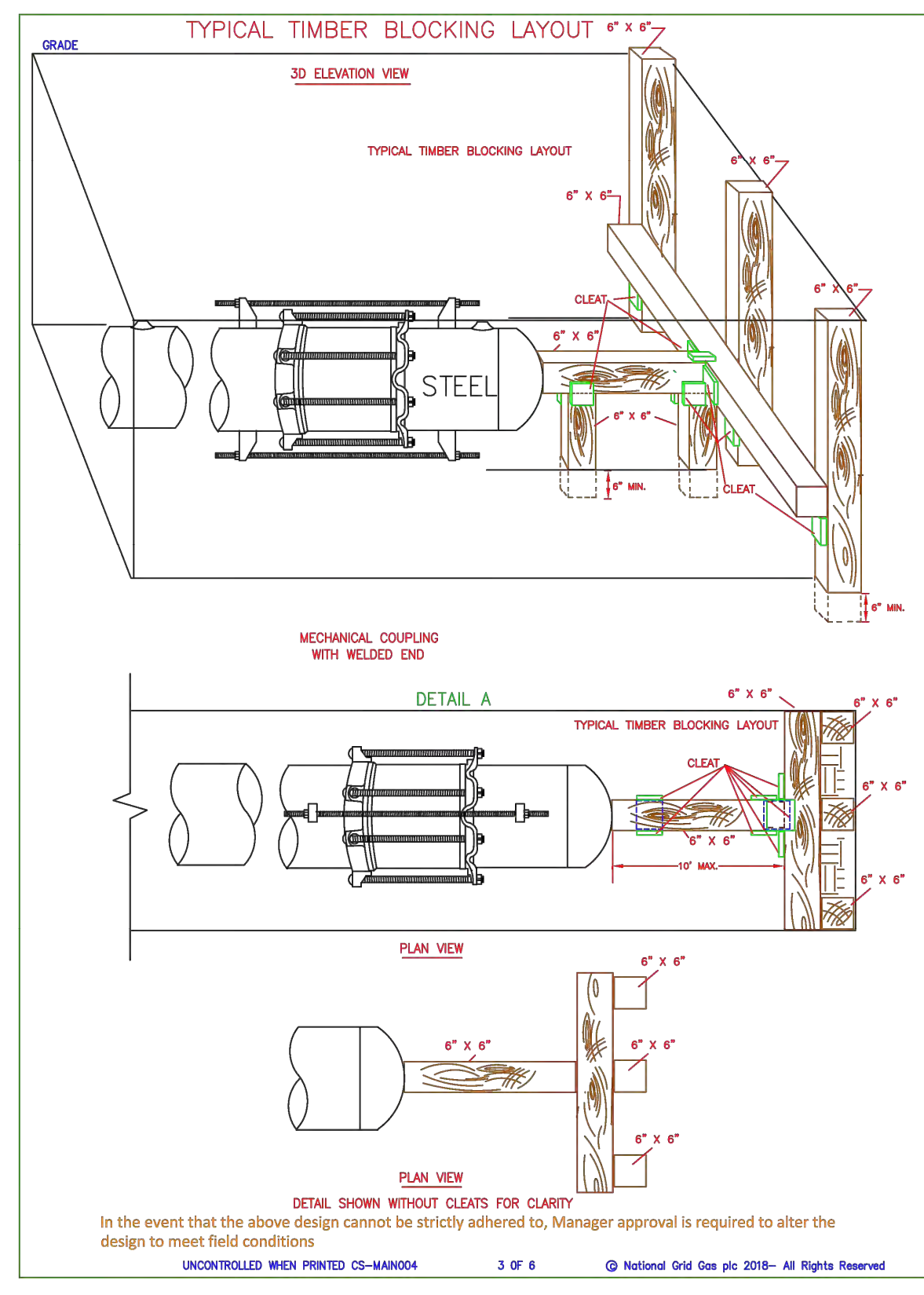
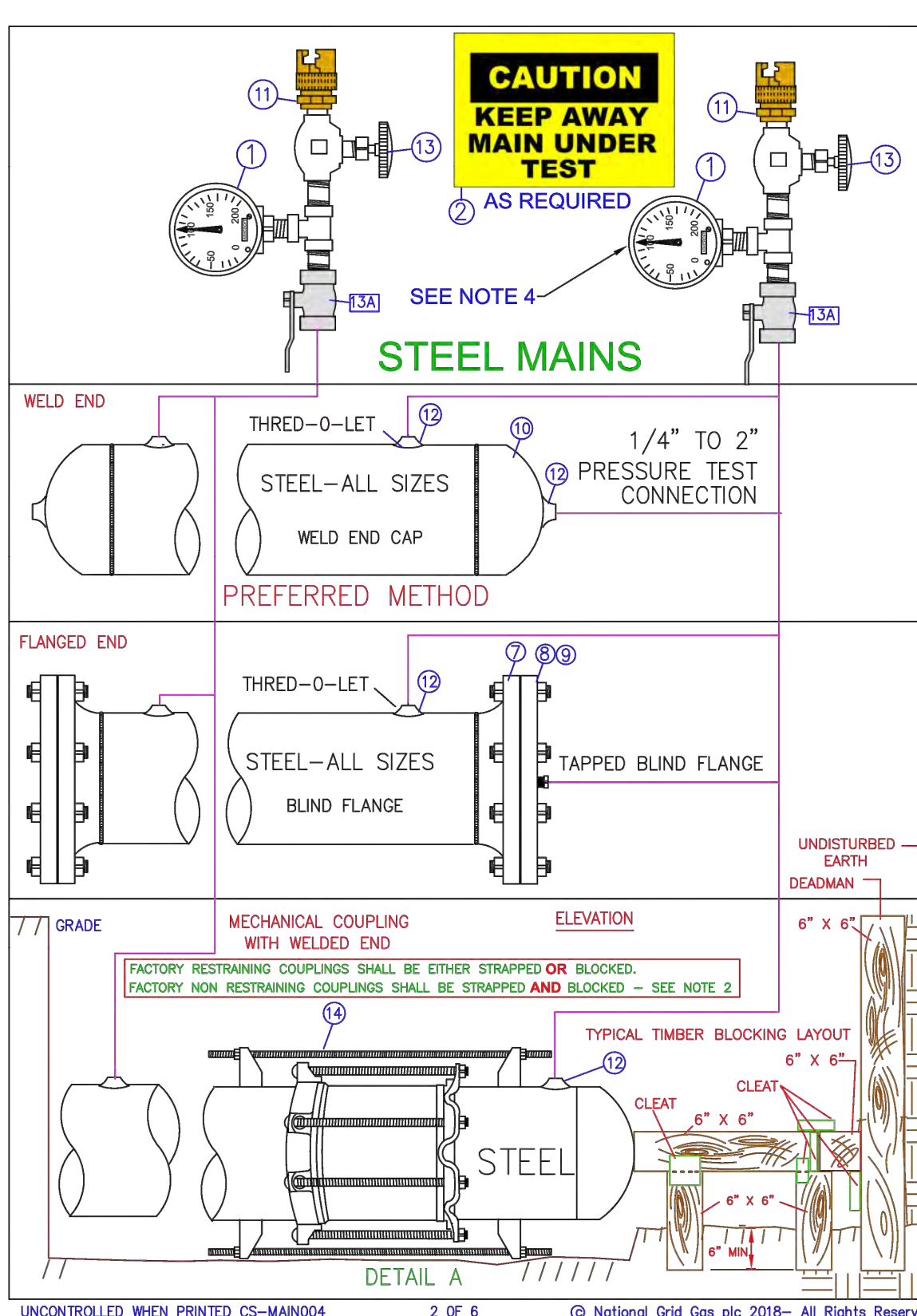
TABLE 1 SUGGESTED MAXIMUM PIPE SUPPORT SPACING "L" SUGGESTED MAXIMUM SPAN

PIPE SIZE (INCHES)	CAST IRON (FEET)
2	-
3	4
4	4
6	4
8	4
12	6
16	6
20	6
24	6

NOTES:

- WHERE A COMPRESSION COUPLING, GAS SERVICE, REPAIR CLAMP, VALVE, DRIP LINE OR ANY OTHER APPURTENANCE IS FOUND INSTALLED ON THE GAS MAIN, ADDITIONAL SUPPORT SHALL BE INSTALLED TO REINFORCE THE PIPING AT THIS LOCATION.
- CONTACT ENGINEERING FOR ALTERNATE OR ADDITIONAL SUPPORT REQUIREMENTS.

UNCONTROLLED WHEN PRINTED 1 OF 1 © National Grid Gas plc 2017 - All Rights Reserved



NOTES:

- INSTALL PER MCELROY MANUFACTURER'S INSTRUCTIONS.
- WHEN USING MECHANICAL COUPLINGS (AS SHOWN IN DETAIL A), NON-RESTRAINING COUPLING SHALL BE STRAPPED AND THE ENDS SHALL BE BLOCKED PER APPROVED STANDARD DRAWINGS. RESTRAINING COUPLINGS NEED TO BE EITHER STRAPPED OR BLOCKED. WHEN USING RESTRAINING COUPLINGS, STRAPPING NUTS SHOULD BE HAND TIGHT.
- ON EXISTING STEEL SYSTEMS, REFER TO THE TABLE BELOW FOR THE MINIMUM SAFE DISTANCE FROM THE EXCAVATION WALL. IF A BURIED, UNSTRAPPED COUPLING EXISTS AT A DISTANCE LESS THAN THE MINIMUM SAFE DISTANCE FROM THE WALL, THEN BLOCKING IS REQUIRED FOR THE PRESSURE TEST. IF AN ALL WELDED SYSTEM CAN NOT BE CONFIRMED, THE WELDED OR FLANGED ENDS SHALL BE BLOCKED.
- REFER TO CONSTRUCTION STANDARD FITS-6025 AND FITS-6015 FOR LIST OF COUPLINGS.
- IT IS RECOMMENDED THAT THE GAUGE ASSEMBLY BE ABOVE GRADE TO PREVENT PERSONNEL FROM ENTERING THE TRENCH WHILE THE PRESSURE TEST IS UNDERWAY.
- ONE PRESSURE TEST GAUGE AT EACH PIPE END IS RECOMMENDED TO VERIFY THE PRESSURE. ALL GAUGES SHALL BE 0-100 OR 0-200 PSIG RANGE (2 PSIG INCREMENTS RECD IN NY STATE ONLY).
- REFER TO CNST04003 "PRESSURE TESTING OF MAINS OPERATING BELOW 124 PSIG" FOR TESTING AND DESIGN REQUIREMENTS.

PIPE SIZE (INCHES)	MINIMUM SAFE DISTANCE FROM THE EXCAVATION WALL (FEET)
2	5
3	6
4	12
6	24
8	41
12	70

ITEM	DESCRIPTION	SAP ITEM ID LI / MA / NYC	SAP ITEMS RI AND UNY	TOOL ITEM
1	PRESSURE GAUGE 0-100 OR 0-200 PSIG - 2 PSI INCREMENTS	9354865		TOOL ITEM
	0-200 PSIG STAINLESS STEEL 1/2" NPT 2-1/2" DIAL	9358390		TOOL ITEM
	0-100 PSIG STAINLESS STEEL 1/2" NPT 2-1/2" DIAL	9352240		TOOL ITEM
2	SIGN - WARNING PRESSURE TEST (AS REQUIRED IN FIELD)	9342517	2X12	NON STOCK
	4" MAIN X 1/2" BUTT FUSE OUTLET LI,MA,NY,NYC	9342516	4X12	NON STOCK
	6" MAIN X 1/2" BUTT FUSE OUTLET LI,MA,NY,NYC	9342516	6X12	NON STOCK
	8" MAIN X 1/2" BUTT FUSE OUTLET LI,MA,NY,NYC	9342517	8X12	NON STOCK
3	TEE SERVICE - ELECTROFUSION YELLOW MD 1/2" CTS BUTT FUSE OUTLET			
	1-1/4" MAIN X 1" OUTLET LI	9342332	1-1/4 X 1	NON STOCK
	2" MAIN X 1 1/2" OUTLET LI	9342521	2X1	NON STOCK
	4" MAIN X 1" OUTLET LI	9342521	4X1	NON STOCK
	6" MAIN X 1" OUTLET LI	9342328	6X1	NON STOCK
	8" MAIN X 1" OUTLET LI	9342327	8X1	NON STOCK
	TEE SERVICE - ELECTROFUSION BLACK HD 1" IPS BUTT FUSE OUTLET			
	2" MAIN X 1" IPS OUTLET MASS	9322683	2X1	NON STOCK
	3" MAIN X 1" IPS OUTLET MASS	9322628	3X1	NON STOCK
	4" MAIN X 1" IPS OUTLET MASS	9322629	4X1	NON STOCK
	6" MAIN X 1" IPS OUTLET MASS	9322628	6X1	NON STOCK
	8" MAIN X 1" IPS OUTLET MASS	9324697	8X1	NON STOCK
	12" MAIN X 1" IPS OUTLET LI, NYC, MA	9318311	12X1	NON STOCK
	TEE SERVICE - SADDLE FUSION HIGH DENSITY BLACK 1/2" CTS BUTT FUSE			
	2" MAIN X 1/2" OUTLET LI	9342405	2X1/2	NON STOCK
	4" MAIN X 1/2" OUTLET LI	9342406	4X1/2	NON STOCK
	6" MAIN X 1/2" OUTLET LI	9342407	6X1/2	NON STOCK
	8" MAIN X 1/2" OUTLET LI	9342408	8X1/2	NON STOCK
	TEE SERVICE - SADDLE FUSION HIGH DENSITY BLACK 1" CTS BUTT FUSE			
	2" MAIN X 1" OUTLET LI	9342409	2X1 SDR 9	9315907 2X1
	4" MAIN X 1" OUTLET LI	9342429	4X1 SDR 9	9315964 4X1
	6" MAIN X 1" OUTLET LI	9342430	6X1 SDR 9	9315965 6X1
	8" MAIN X 1" OUTLET LI	9342431	8X1 SDR 9	9315962 8X1
	12" MAIN X 1" OUTLET LI	9314629	12X1	NON STOCK
	TEE SERVICE MECHANICAL X PERFECTION OUTLET			
	2" MAIN X 1/2" OUTLET	9308584	2X1/2	NON STOCK
	4" MAIN X 1/2" OUTLET	9308585	4X1/2	NON STOCK
	6" MAIN X 1/2" OUTLET	9308472	6X1/2	NON STOCK
	8" MAIN X 1/2" OUTLET	9308471	8X1/2	NON STOCK
	2" MAIN X 1" OUTLET	9315492	2X1	NON STOCK
	3" MAIN X 1" OUTLET	9326123	3X1	NON STOCK
	4" MAIN X 1" OUTLET	9315490	4X1	NON STOCK
	6" MAIN X 1" OUTLET	9308473	6X1	NON STOCK
	8" MAIN X 1" OUTLET	9308178	8X1	NON STOCK

UNCONTROLLED WHEN PRINTED Effective Date 7/15/2013 4 OF 6 © National Grid Gas plc 2021 - All Rights Reserved CS-MAIN004

ITEM	DESCRIPTION	ORACLE ITEM ID LI / MA / NYC	PEOPLESOFT ITEM RI AND UNY
4	CAP END PLASTIC MEDIUM DENSITY YELLOW BUTT FUSE		
	2" SDR11	9339540	NON STOCK
	3" SDR11	9339541	NON STOCK
	4" SDR 11	9339534	NON STOCK
	6" SDR 11	9339733	NON STOCK
	8" SDR 13.5	9339559	NON STOCK
	12" SDR 11.5	9339660	NON STOCK
	CAP END PLASTIC HIGH DENSITY BLACK BUTT FUSION		
	2" SDR 9	9339538	NON STOCK
	4" SDR 9	9339535	NON STOCK
	6" SDR 9	9339536	NON STOCK
	8" SDR 9	9339537	NON STOCK
	2" SDR 11 MASS RI & UNY	9312886	9312886
	3" SDR 11 MASS RI & UNY	9310276	9310276
	4" SDR 11 MASS RI & UNY	9312885	9312885
	6" SDR 11 MASS RI & UNY	9312884	9312884
	8" SDR 11 MASS RI & UNY	9310272	9310272
	12" SDR 11 RI UNY	NON STOCK	NON STOCK
	8" SDR 13.5 RI	9312883	9312883
	12" SDR 13.5 RI	9314605	9314605
	MCELROY TEST CAPS (165 PSIG MAX)	NON STOCK	NON STOCK
	1-1/4" MODEL TP-310	TP-308	TP-308
	2" MODEL TP-310	TP-310	TP-310
	RISER		
	1" CTS MEDIUM DENSITY X 1/2" NPT OUTLET	9344366	NON STOCK
	1" CTS MEDIUM DENSITY X 1/4" IPS OUTLET	9340874	NON STOCK
	1" HIGH DENSITY X 1/4" OUTLET	9340863	NON STOCK
	1" CST SERVAISE X 1" OUTLET	9322627	NON STOCK
	1" CTS HIGH DENSITY (900' WALL X 1" IPS STEEL OUTLET	NON STOCK	NON STOCK
	1/2" CTS (900' WALL PERFECTION END X 1/2" NPT STEEL	NON STOCK	NON STOCK
	1-1/4" CTS (900' WALL PERFECTION END X 1-1/4" NPT STEEL	NON STOCK	NON STOCK
	OR TEST CAPS WITH STEEL OR PLASTIC PIPE TO TEST TEE	0031110 OR TOOL ROOM ITEM	TOOL ROOM ITEM
	TEST CAP FOR CENTRAL PLASTIC ELECTROFUSE TAPPING TEE	NON STOCK	NON STOCK
7	FLANGE 150# WELD END FLAT FACE		
	2"	9314322	9314322
	3"	9314431	9314431
	4"	9314430	9314430
	6"	9308659	9308659
	8"	9308748	9308748
	12"	9308660	9308660
	16"	9322630	MA 16"
	20"	9322632	MA 20"
8	BLIND FLANGE CLASS 150# ASTM A-105		
	2" FLAT FACE WITH 1/2" CENTER NPT TAP	9341434	9341434
	3" FLAT FACE WITH 1/2" CENTER NPT TAP	9341014	9341014
	4" FLAT FACE WITH 1/2" CENTER NPT TAP	9341435	9341435
	6" FLAT FACE WITH 1/2" CENTER NPT TAP	9340942	9340942
	8" FLAT FACE WITH 1/2" CENTER NPT TAP	9308274	9308274
	12" FLAT FACE WITH 1/2" CENTER NPT TAP	9307751	9307751
	16" FLAT FACE WITH 1/2" CENTER NPT TAP	9306252	9306252
	20" FLAT FACE WITH 1/2" CENTER NPT TAP	9308747	9308747
	2" FLAT FACE WITH 3/4" CENTER NPT TAP	9307750	9307750
	3" FLAT FACE WITH 3/4" CENTER NPT TAP	9308749	9308749
9	GABRIETS		
	2" FULL FACE 150#	933167	9315888
	3" FULL FACE 150#	931106	9312067
	4" FULL FACE 150#	9312566	9312566
	6" FULL FACE 150#	9332999	9312568
	8" FULL FACE 150#	9341183	9315889
	12" RING TYPE 150#	9341185	9315889

UNCONTROLLED WHEN PRINTED Effective Date 7/15/2013 5 OF 6 © National Grid Gas plc 2021 - All Rights Reserved CS-MAIN004

ITEM	DESCRIPTION	ORACLE ITEM ID LI / MA / NYC	PEOPLESOFT ITEM RI AND UNY
10	END CAPS - STEEL WELD END STANDARD WALL - GRADE B		
	2"	9312095	9312095
	3"	9308719	9308719
	4"	9312096	9312096
	6"	9312094	9312094
	8"	9312093	9312093
	10"	9315182	9315182
	12"	9312092	9312092
	16"	9314624	9314624
	20"	9339687	9339687
11	THOR FITTING		
	1/2" MALE NPT X HOSE CONNECTION	0050408	NON STOCK
	3/4" FEMALE X HOSE CONNECTION	0050401	NON STOCK
12	THRED-O-LET		
	12" - 6" X 1/2" 3000# PER ASTM A-105 GRADE B	9341652	12-6X3/4
	10" - 6" X 1/2" 3000# PER ASTM A-105 GRADE B	9341656	10-6X1
	8" - 12" X 1" 3000# PER ASTM A-105 GRADE B	9342052	36-10X1
	2" X 1" 3000# PER ASTM A-105 GRADE B	NON STOCK	NON STOCK
	10" - 6" X 1" 3000# PER ASTM A-105 GRADE B	NON STOCK	9307678 2X1
	36" 14" X 12" 3000# PER ASTM A-105 GRADE B	NON STOCK	9307695 10-6X1
	9307677	9307677	9307677
13	VALVE		
13A	VALVE (OPTIONAL - TO SHUT OFF TEST ASSEMBLY)		
	LUG ASSEMBLY		
	7/8" X 24" LONG (LI ONLY - SEE MAIN-6210)	9342211	NON STOCK
	LUG GREEN 3" - 6" MAIN 7/8" DIAM. (NYC ONLY - SEE MAIN-6230 & MAIN-6230)	9342212	NON STOCK
	LUG YELLOW 16" - 30" MAIN 1-1/8" DIAM. (NYC ONLY - SEE MAIN-6230 & MAIN-6230)	9337904	NON STOCK
	ROD 1/2" X 12" LONG (NYC ONLY)	9317905	NON STOCK
	ROD 1/2" X 12" LONG (NYC ONLY)	9328152	NON STOCK
	LUG ASSEMBLY 1/2" 30" LONG	9328150	NON STOCK
	NON STOCK	NON STOCK	NON STOCK
15	COUPLING - END 2" PERFECTION	NON STOCK	0803641
16	TEST GAP		
	FOR SADDLE FUSION TEE - CENTRAL PLASTICS	9325109	TOOL ROOM ITEM
	FOR SADDLE FUSION TEE - JAM EAGLE / POLY / UPONOR	9325017	NON STOCK
	FOR HVT HIGH VOLUME TAPPING TEE - PERFORMANCE PIPE TEES	9341388	NON STOCK
	FOR HVT HIGH VOLUME TAPPING TEE SADDLE FUSION CENTRAL PLASTICS	9342688	NON STOCK
	FOR HVT HIGH VOLUME TAPPING TEE SADDLE FUSION - JAM EAGLE / POLY / UPONOR	9341714	NON STOCK
	FOR HVT HIGH VOLUME TAPPING TEE SADDLE FUSION - PERFORMANCE PIPE TEES	9327174	NON STOCK
	FOR HVT ELECTROFUSION TEE	9324694	NON STOCK
	FOR ELECTROFUSION TEE	9318466	NON STOCK
	FOR PERFECTION PMTT MECHANICAL TEE (CAP FITS ALL MAIN SIZE & OUTLET SIZES OF PMTT)	9339661	NON STOCK

UNCONTROLLED WHEN PRINTED Effective Date 7/15/2021 6 OF 6 © National Grid Gas plc 2021 - All Rights Reserved CS-MAIN004

THE DDS COMPANIES

45 HENDRIX ROAD
 WEST HENRIETTA, NY 14586
 PHONE (585) 359-7540
 FAX (585) 359-7541

nationalgrid

40 SYLVAN ROAD
 WALTHAM, MA 02451

IFC

PE STAMP

PAUL GIULIOTTA
 REGISTERED PROFESSIONAL ENGINEER
 NO. 94931
 STATE OF NEW YORK

NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"x34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

9-35 INDIA STREET
 GAS MAIN REPLACEMENT
 INDIA ST, STATE ST, CENTRAL ST, & MILK ST
 BOSTON, MA

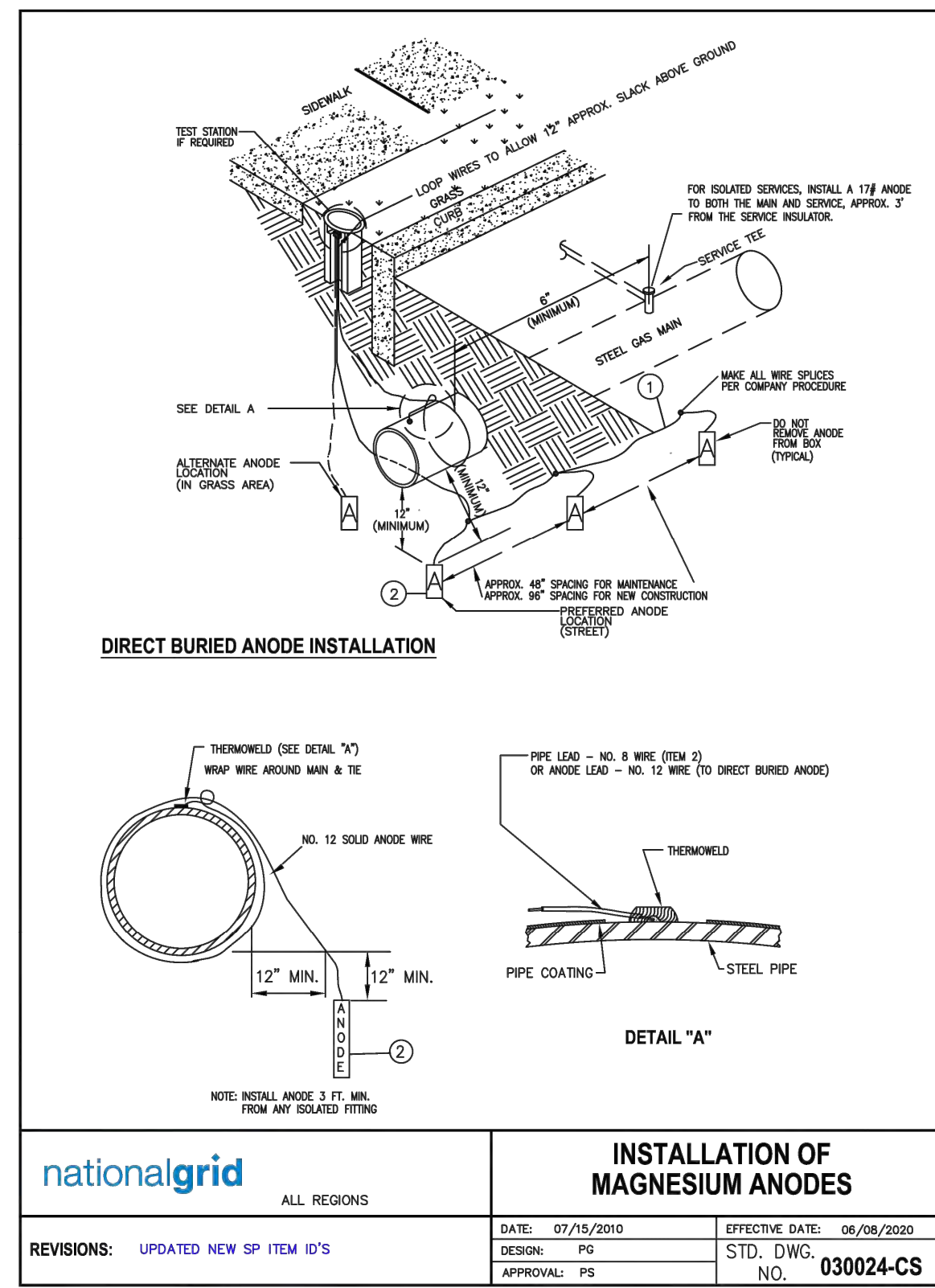
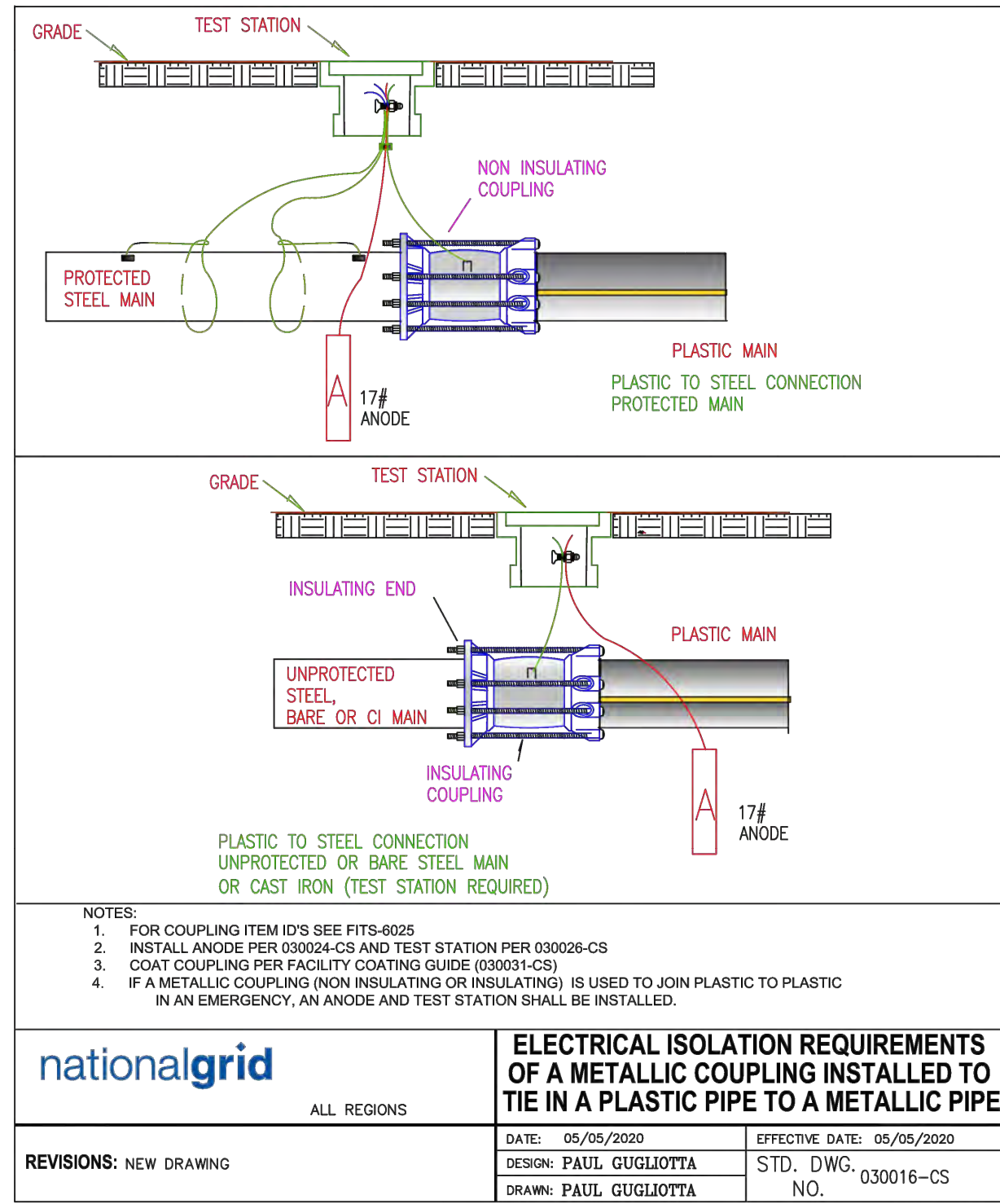
STANDARD DETAILS

C-201

906

PAGE 06 OF 10

DRAWING NO. SHEET NO.

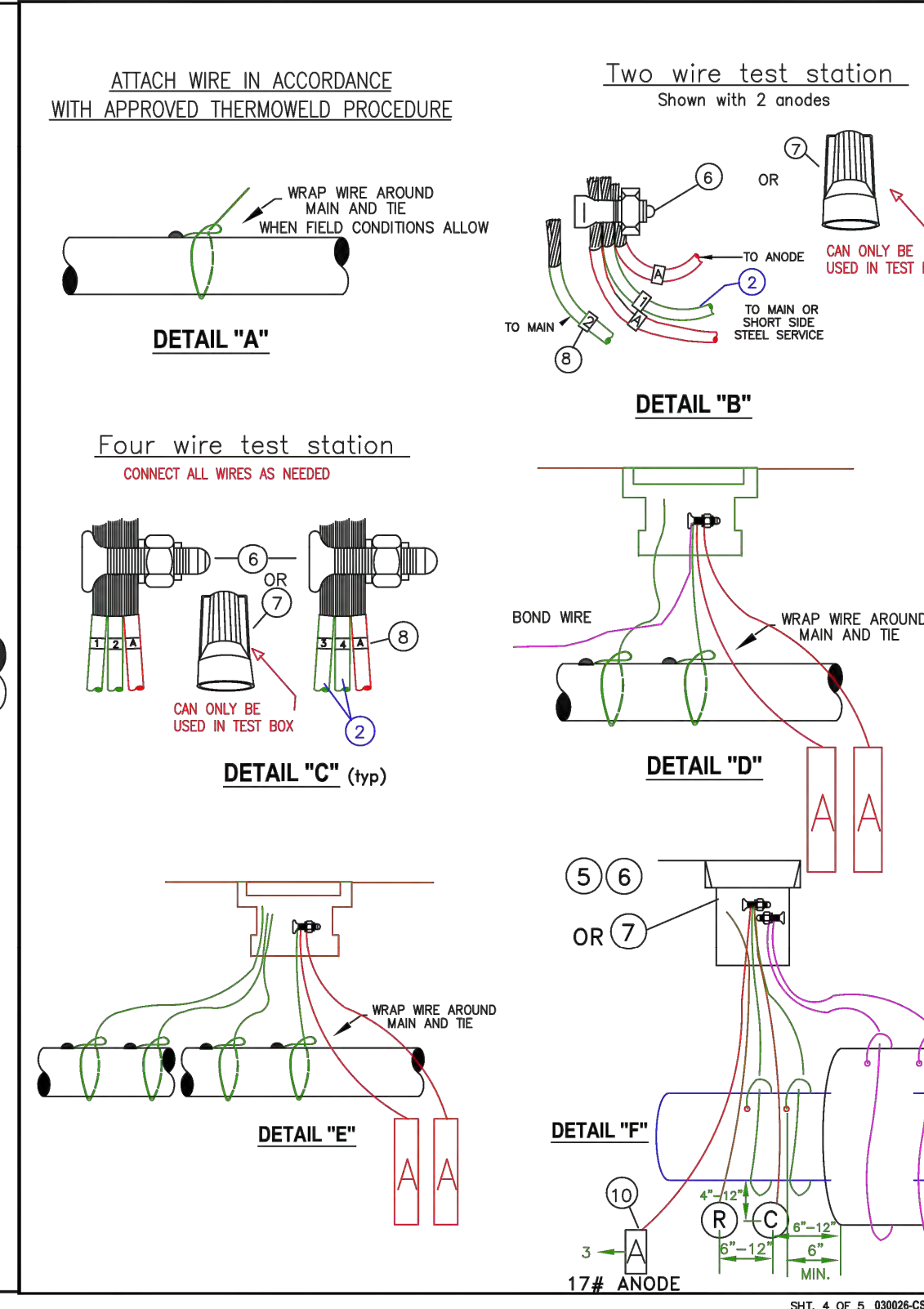
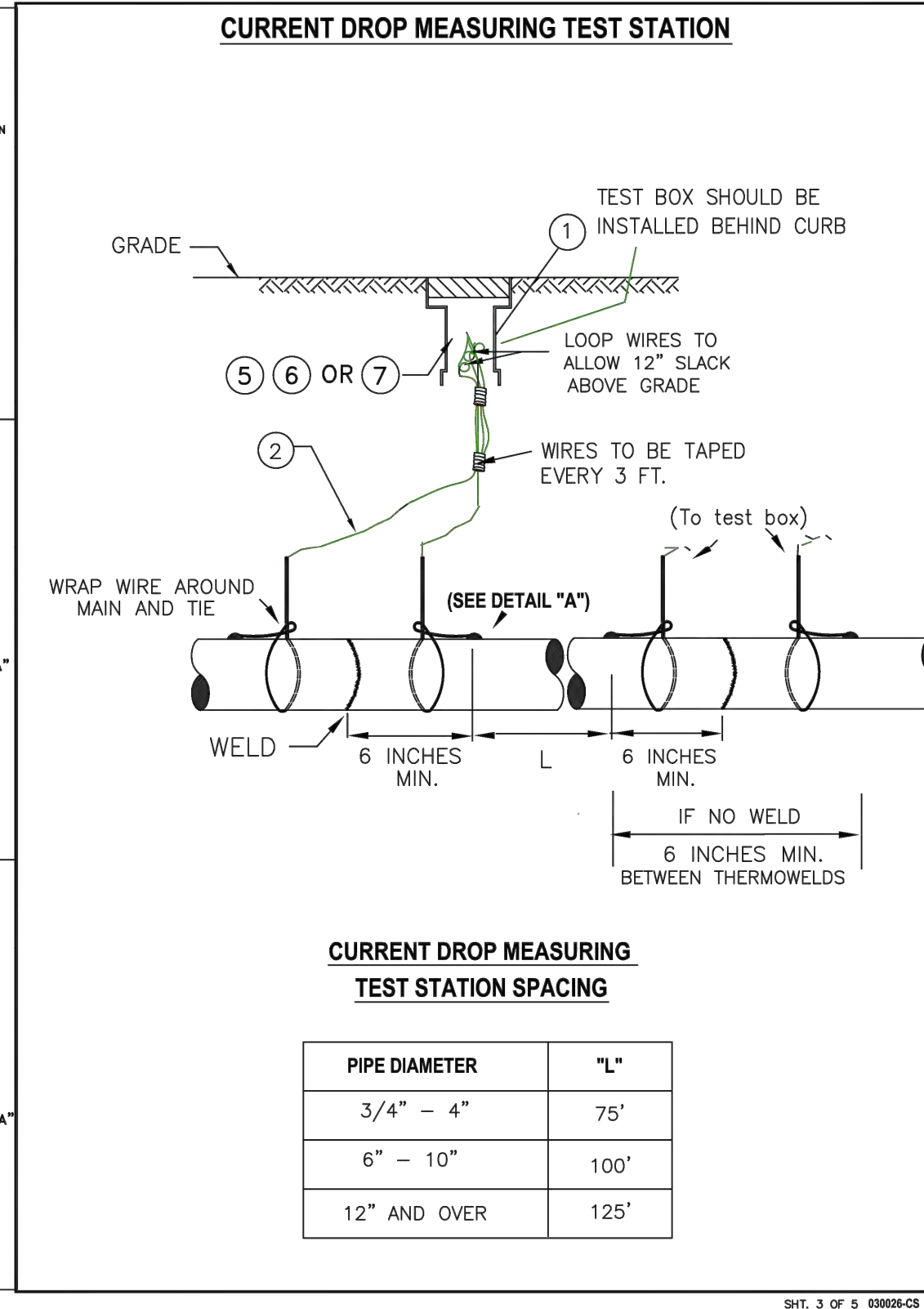
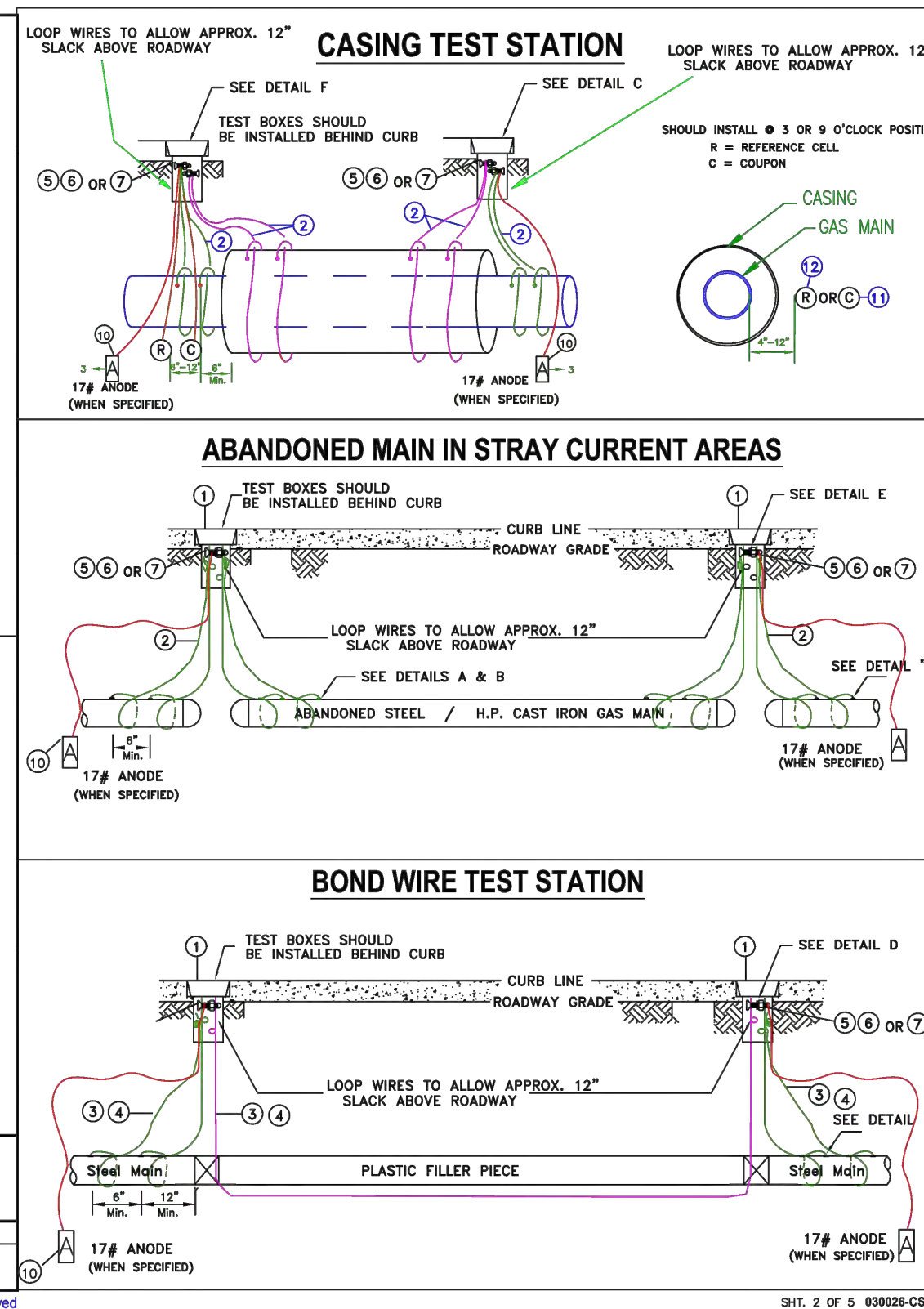
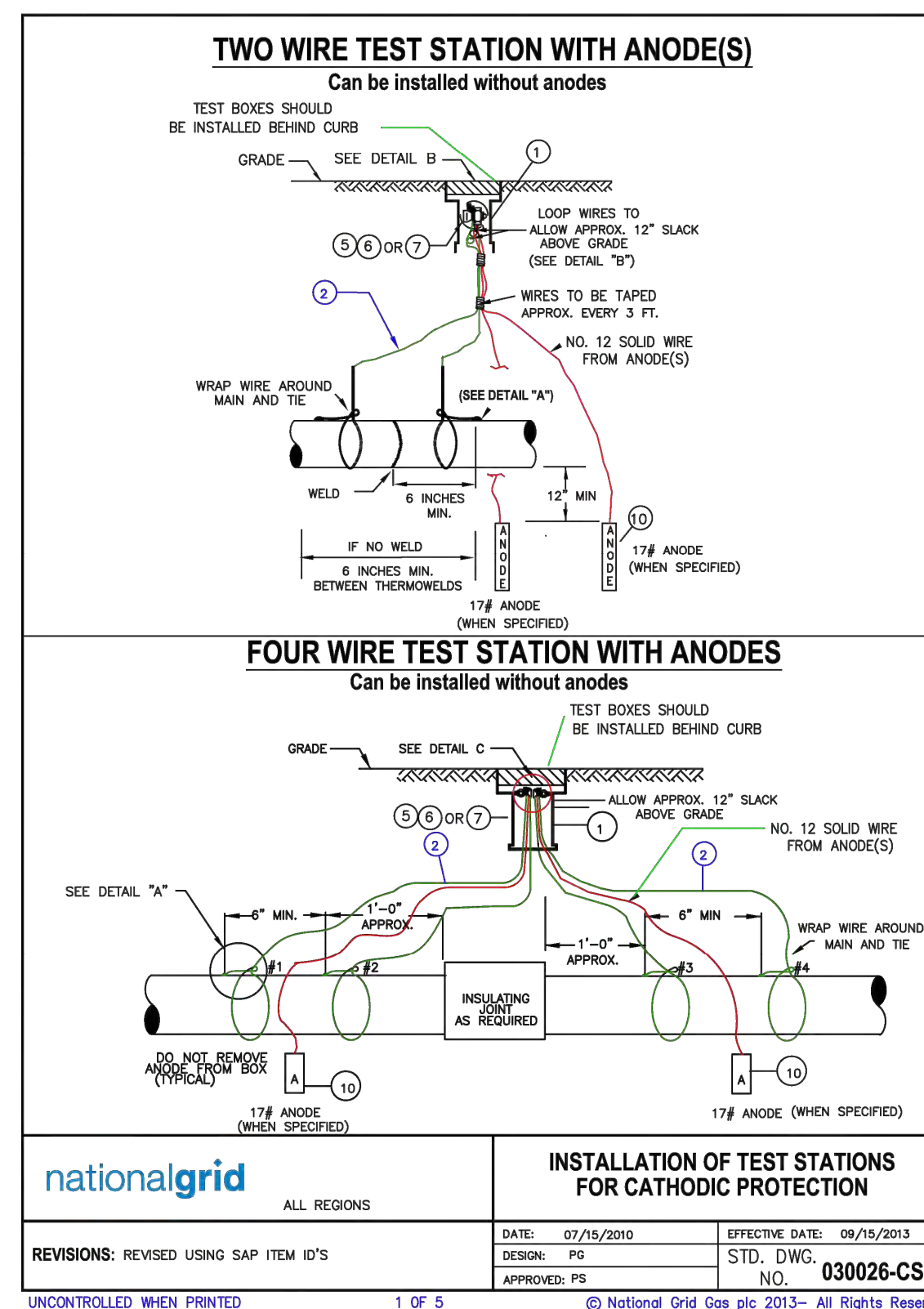


MATERIAL LIST

Description	Down State NY Item I.D.	Upstate NY Item I.D.	New England Item I.D.	Rhode Island Item I.D.	MATERIAL NOTES
1 CABLE NO. 8 - 1/C	9334425	9311214	9334425	9311214	Upstate and RI cable has 19 strands
2 ANODE, MAGNESIUM 17 LB	9311183	9311183	9311183	9311183	
3 ANODE, MAGNESIUM 3 LB	9315645	9315645	9315645	9315645	Use on Tracer wire and all isolated fittings
4 ANODE, MAGNESIUM SPIKE 3 LB	9308624	9308624	9308624	9308624	Use on Service Risers ONLY
• CLAMP, GROUNDING 1/2IN - 1IN DIA.	9386544	9386544	9386544	9386544	Grounding clamp for attaching spike anode lead wire to service riser
• CLAMP, GROUNDING 1-1/4IN - 2IN DIA.	9386559	9386559	9386559	9386559	Grounding clamp for attaching spike anode lead wire to service riser

* Spike Anode Ground Clamp

SHT. 2 OF 2 030024-CS



MATERIAL LIST

Description	Down State SAP Item I.D.	Upstate SAP Item I.D.	New England SAP Item I.D.	Rhode Island SAP Item I.D.	MATERIAL NOTES
1 TEST BOX WITH COVER	9339892	9312291	9339892	9339892	NON LOCKING COVER. DISCARD FOOT PIECE.
TEST BOX 9" SQUARE HEAVY DUTY	9339391	9312291	9339391	9339391	(S11-445) 9311209 or (Lg-556) IN Prov. 9311208
COVER FOR 9" SQUARE BOX	9339797	9307539	9339797	9339797	WEIGHS 95 LBS. STREET USE, WITHOUT COVER
2 WIRE, NO. 8, 7 STRAND	9307539	9307539	9307539	9307539	NON-LOCKING COVER
3 WIRE, NO. 6, 7 STRAND	9311795	9311795	9311795	9311795	TEST WIRE ONLY, NOT FOR GROUND BEDS, UPSTATE AND RI WIRE HAS 19 STRANDS.
4 WIRE 1/0 - 19 STRAND 600 V -1/C	9334171	NON STOCK	9334171	NON STOCK	BOND WIRE ONLY, NOT FOR GROUND BEDS
5 TAPE, PVC - 3/4" WIDE	9334056	9316070	9334056	9316070	USE IN STRAY CURRENT AREAS
6 CONNECTOR, SPLIT BOLT, TYPE B	9331578	9316630	9331578	NON STOCK	NOT FOR PIPE COATING. USE WITH NO. 6 CABLE
7 CONNECTOR, SPLIT BOLT, TYPE 1/01	9331612		9331612		USE WITH 1/0 CABLE
8 CONNECTOR, TWIST ON WIRE NUT TAG ADHESIVE	9330683	9314631	9330683	9314631	USE TO LABEL ANODES
9 NUMBER 1 NUMBER 2 NUMBER 3 NUMBER 4 LETTER A	9307918 9307896 9307895 9307894 9307893	9307918 9307896 9307895 9307894 9307893	9307918 9307896 9307895 9307894 9307893	9307918 9307896 9307895 9307894 9307893	LABEL WITH #1 (N) OR (E), CONSECUTIVELY TO (S) OR (W) SEE DETAILS "B" AND "C"
10 GROUNDING CELL ANODE, MAGNESIUM 17LBS	NON STOCK 9311183	9315642 9311183	NON STOCK 9311183	NON STOCK 9311183	AS SPECIFIED BY CORROSION ENGINEERING SATURATE WITH WATER BEFORE BACKFILL. ANODE MAY BE INSTALLED VERTICALLY OR HORIZONTALLY.
11 COUPON	9386100	By Corrosion	9386100	By Corrosion	MC MILLER OR EQUAL
12 REFERENCE CELL	9385758	By Corrosion	9385758	By Corrosion	BORIN MFGR INC OR EQUAL

UNCONTROLLED WHEN PRINTED Effective Date: 08/08/2020

SHT. 5 OF 5 © National Grid Gas plc 2020- All Rights Reserved 030026-CS

NOTE:
1. CATHODIC PROTECTION DETAILS ARE NOT COVERED UNDER PE STAMP.

THE DDS COMPANIES

45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

BOSTON GAS COMPANY
a/b/a

nationalgrid

40 SYLVAN ROAD
WALTHAM, MA 02451

IFC



NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

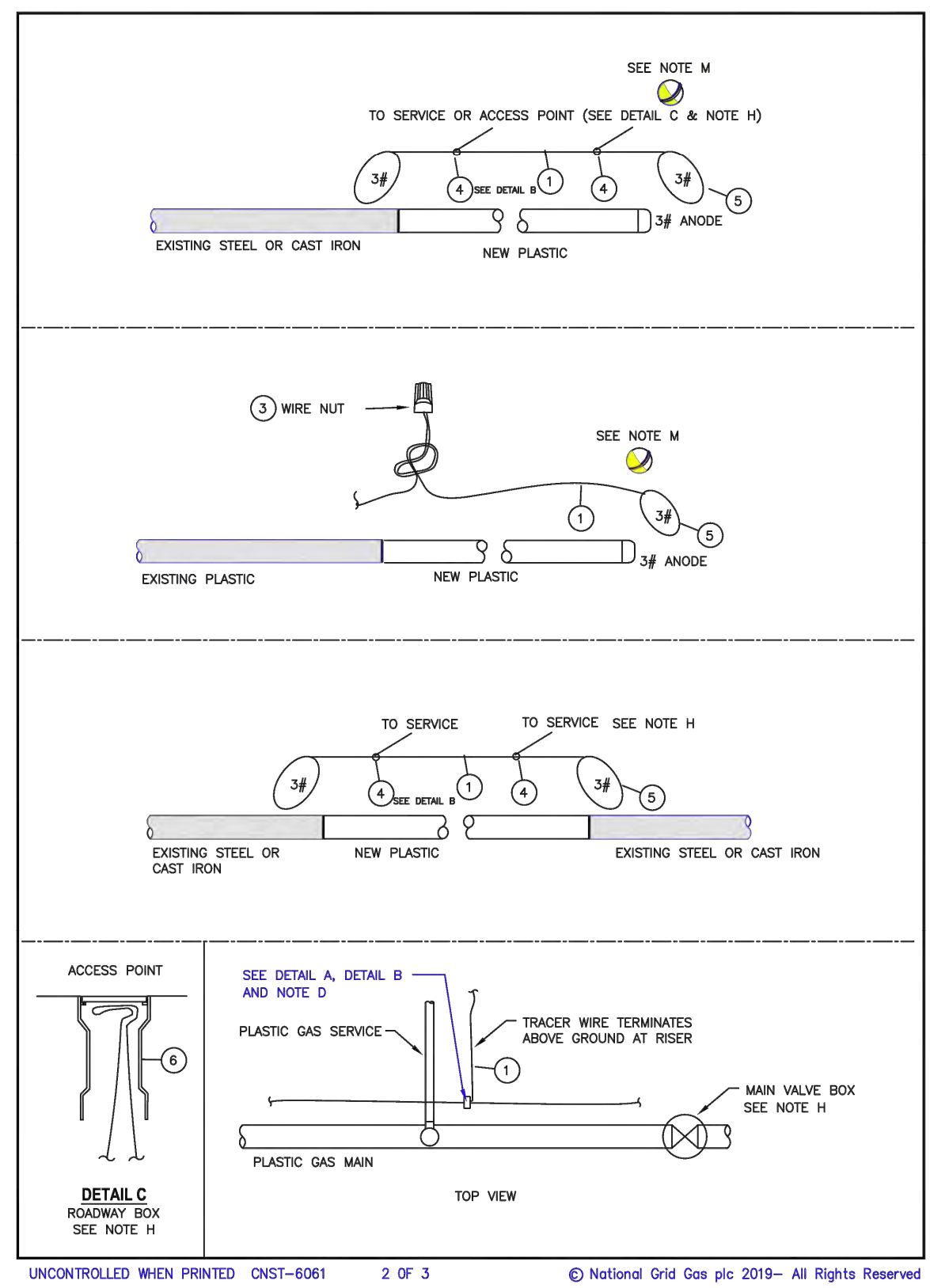
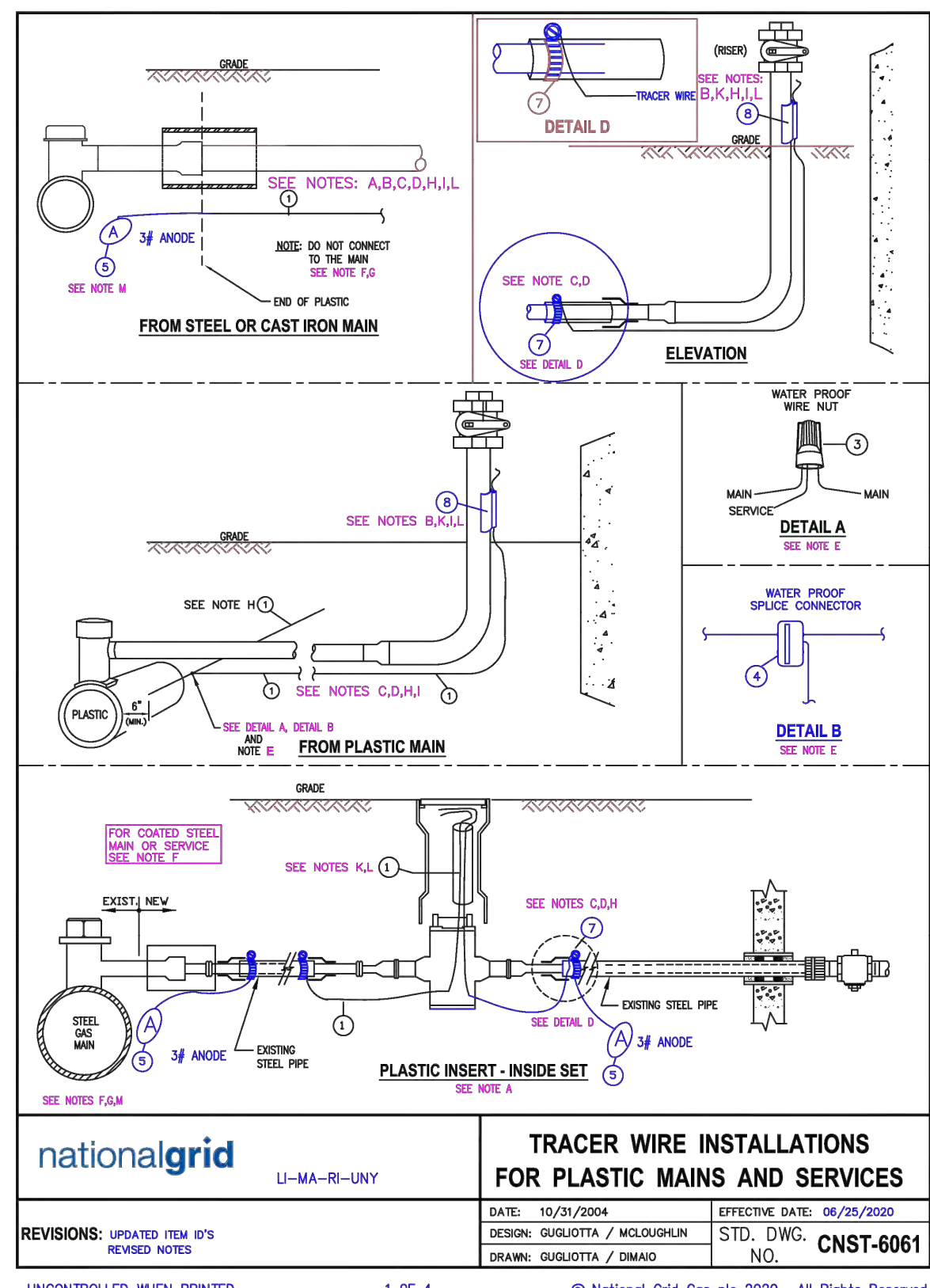
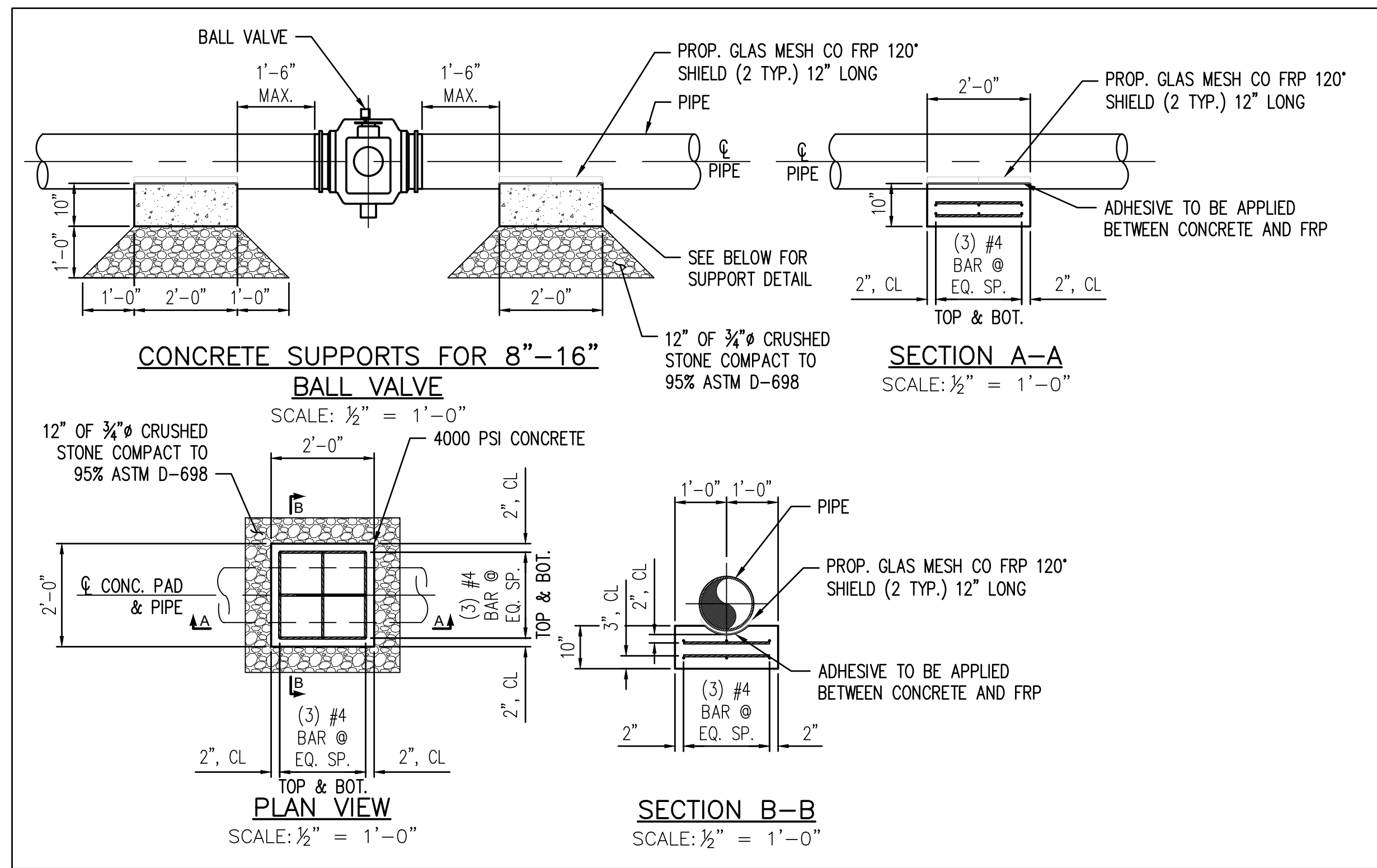
9-35 INDIA STREET
GAS MAIN REPLACEMENT
INDIA ST, STATE ST, CENTRAL ST, & MILK ST
BOSTON, MA

STANDARD DETAILS

DWG SIZE: 22"x34" DESIGNER: DDS COMPANIES ENGINEER: T. NOSAR DATE: 08/20/2022 ASSET I.D.: XXXXXXXX W.O. NO.: 1474472

PAGE 07 OF 10

DRAWING NO.	SHEET NO.
C-202	07



NO.	ITEM	UNY/ MASS	UNY/RI
8	TRACER WIRE SNAP, 2" (represents steel size)	9386134	9386134
8	TRACER WIRE SNAP, 1 1/2" (represents steel size)	9386156	9386156
8	TRACER WIRE SNAP, 1" (represents steel size)	9386150	9386150
8	TRACER WIRE SNAP, 3/4" (represents steel size)	9386558	9386558
7	CLAMP, STAINLESS	9321708	9320783
6	VALVE BOX, ROADWAY	9339890	9312344 UNY 9311208 RI
5	ANODE, 3 LB MAGNESIUM	9315645	9315645
4	WIRE SPLICE CONNECTOR, WATERPROOF	9300236	9300236
3	WIRE NUT, PLASTIC, WATERPROOF	9316444	9314631
2	WIRE, DIRECTIONAL DRILL, STAINLESS, STRANDED 10 AWG	9314167	9314167
1	TRACER WIRE, DIRECT BURY, COPPER, 12 AWG	9315005	9315005

Bill of Material

A. Inside sets: Terminate tracer wire in the curb valve box. Allow enough wire to extend 18" to 24" above grade.

B. Outside Sets: Tracer wire should be extended approximately 18" above grade at riser. Connect tracer wire to the riser using a "tracer snap", item #8. If the appropriate tracer snap is not available, wrap or tie the tracer wire to the riser. Do not permanently attach tracer wire to the riser. Tracer wire should not exceed 6" above the point where it is secured to the riser.

C. Partially tubed services: When the abandoned portion of an existing steel pipe is used as a sleeve for the new plastic, all cut sections of the steel pipe to be inserted with plastic, shall be connected using a section of tracer wire to maintain continuity. If the existing service is coated steel, see [Installation of Test Stations for Cathodic Protection \[030026-CS\]](#) and [Installation of Test Stations for Cathodic Protection \[COR04003\]](#) or contact corrosion department for more guidance.

D. Thermite welding of tracer wire to abandoned steel service is only acceptable prior to insertion of the plastic tubing. See [Installation of Test Stations for Cathodic Protection \[030026-CS\]](#).

E. Plastic Mains: The service tracer wire shall be connected to the plastic main tracer wire using item #3 detail A or item #4 (detail B - preferred) in accordance with [Installing Wire Connections \[COR04004\]](#).

F. Coated Steel Mains: Do not connect the tracer wire to the steel main. See [Installation of Test Stations for Cathodic Protection \[030026-CS\]](#) and [Installation of Test Stations for Cathodic Protection \[COR04003\]](#) or contact corrosion department for more guidance.

G. Cast Iron or Bare Steel Mains: Do not connect the tracer wire to the main. It is required in LI and MA, and suggested in all other areas to terminate the tracing wire with a 3# anode.

Tracer Wire Installation Notes

H. Install tracer wire in close proximity to the plastic pipe. Approximately 4" to 6" away from the pipe. LI & MA - Above or alongside, UNY - above, RI - Under or alongside. Exception: For trenchless pipe installations, the minimum clearance is waived.

I. Maintain separation of approximately 4" from service riser. Do not permanently connect the tracer wire to the riser.

J. For horizontal directional drill installations, use stainless wire, item #2.

K. Tracer wire installed in boxes should allow enough wire to extend 18" to 24" above grade.

L. Verification: upon completion, the installer shall verify the location of the main or service using the tracer wire and locating device and perform a mark out using the conductive method.

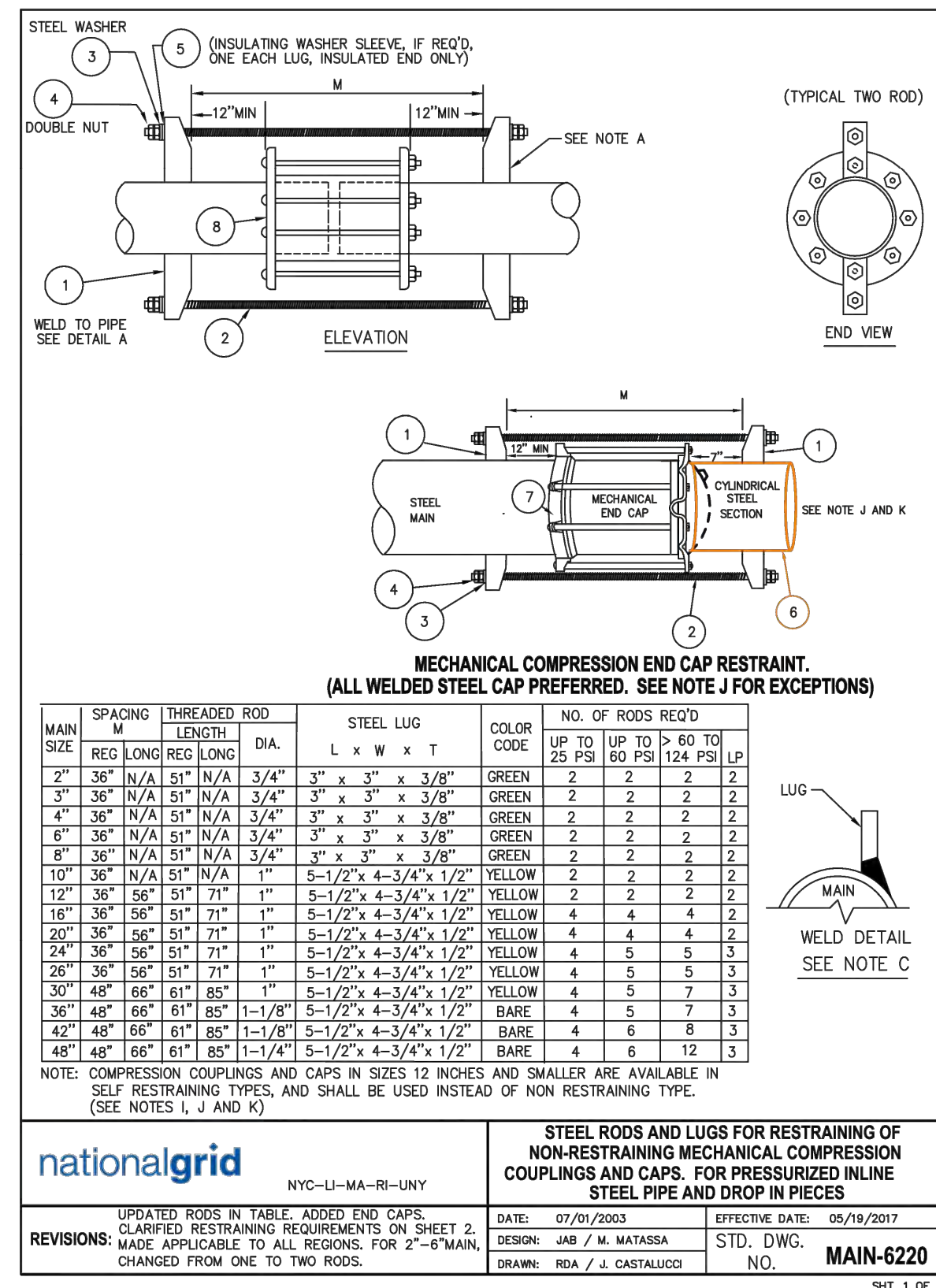
M. LI and MA: Required to terminate the tracing wire with a 3# anode. This is to ground the tracer wire and increase signal strength when locating. This practice is recommended in all areas where signal strength is an issue.

Regional Notes

NYC ONLY: refer to [Installation of Marker Tapes and EMS Pipeline Locators for Mains and Services \[CN26060-NYC\]](#) for installation of electronic marker ball in place of tracer wire.

CONCRETE NOTES:

- SOIL CONDITIONS SHOULD BE VERIFIED SUITABLE BY QUALIFIED INDIVIDUAL. SHOULD POOR SOIL CONDITIONS EXIST CONTACT P&B FOR ALTERNATE VALVE SUPPORT DESIGN.
- CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 308. COLD WEATHER CURING PROVISIONS SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH ACI 306R.
- MIX DESIGNS TO BE SUBMITTED FOR REVIEW & APPROVAL.
- SIDES OF SUPPORTS SHALL BE FORMED.
- REINFORCING - ALL REBAR SHALL BE EPOXY COATED GRADE 60 BILLET STEEL IN ACCORDANCE WITH ASTM A-615.
- ALL FORM WORK AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES AND REGULATIONS AS WELL AS THE ACI 301.
- TOP OF CONCRETE SHALL BE SCREEDED LEVEL AND TRUE TO FINISH ELEVATION AND SHALL BE GIVEN A WOOD FLOAT FINISH WITH STEEL TOOLED EDGES.
- ALL REINFORCING SHALL BE NEW BILLET STEEL GRADE 60 IN ACCORDANCE WITH ASTM A-615 WITH DEFORMATION CONFORMING TO ASTM A-305. 3" CLEAR COVER TO TOP AND BOTTOM BARS.
- ALL BARS SHALL BE SECURELY HELD IN PROPER POSITION WHILE PLACING CONCRETE. ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED AS REQUIRED.
- CONCRETE FINISH SHALL BE FREE OF HONEYCOMB, ROCK POCKETS AND UNEVEN SURFACES.
- IF CONCRETE IS PLACED IN FIELD, GAS PIPE SHALL BE TEMPORARILY SUPPORTED BY WOOD CRIBBING OR A SUITABLE PIPE SUPPORT FOR 3 DAYS, MIN. TO ALLOW ENOUGH TIME FOR CONCRETE TO CURE.



NOTES:

A. FOR LUG DESIGN SEE STANDARD DRAWING MAIN-6220.

B. ROD THREADS TO BE NATIONAL COARSE AND CONFORM TO ASTM A-193, GRADE B7.

C. WELDING TO CONFORM TO WELDING POLICY - 030020-PL. HEAT ON COUPLING GASKET SHALL BE LIMITED TO 212 DEGREES F WHEN WELDING ON LUGS.

D. FIELD COATING TO CONFORM TO COMPANY CORROSION SPECIFICATIONS.

E. MAKE UP ANCHORAGE NUTS WRENCH TIGHT.

F. A MINIMUM OF THREE PASSES ON EACH SIDE IS REQUIRED FOR ENTIRE LENGTH OF LUG-PIPE CONTACT.

G. INSTALL ANODES AND TEST STATION AS PER STANDARD DRAWING 030024-CS.

H. FOR PRESSURES UP TO 60 PSIG, PIPE SHALL BE WELDED. TWELVE 12 INCH DIAMETER AND SMALLER SELF RESTRAINING TYPE COUPLINGS CAN BE USED FOR THE IN CONNECTIONS AS AN ALTERNATE TO WELDED CONNECTIONS (E.G., WHEN GAS READINGS PRESENT, FIELD PLANNING, ETC.). SELF RESTRAINING COUPLINGS DO NOT REQUIRE FURTHER THREADED ROD RESTRAINT. SIZES LARGER THAN 12 INCHES ARE COMMERCIALY AVAILABLE IN NON RESTRAINING ONLY AND MUST BE RESTRAINED WHEN USED. SEE FITS-6025 FOR LIST OF SELF RESTRAINING COUPLINGS AND FITS-6015 FOR LIST OF NON RESTRAINING COUPLINGS.

I. FOR PRESSURE ABOVE 60 PSIG AND UP TO AND INCLUDING 124 PSIG, PIPE SHALL BE WELDED. WELDED TIE IN CONNECTIONS ARE PREFERRED. SELF RESTRAINING COUPLINGS UP TO 12 INCH DIAMETER MAY BE USED FOR THE IN CONNECTIONS AS AN ALTERNATE TO WELDED CONNECTIONS (E.G., WHEN GAS READINGS PRESENT, FIELD PLANNING, FIELD CONDITIONS, ETC.). SELF RESTRAINING COUPLINGS DO NOT REQUIRE FURTHER THREADED ROD RESTRAINT. SIZES LARGER THAN 12 INCHES ARE COMMERCIALY AVAILABLE IN NON RESTRAINING ONLY AND MUST BE RESTRAINED WHEN USED. SEE FITS-6025 FOR LIST OF SELF RESTRAINING COUPLINGS AND FITS-6015 FOR LIST OF NON RESTRAINING COUPLINGS.

J. WELD STEEL END CAPS SHALL BE USED TO PERMANENTLY SEAL LIVE MAINS. IF A WELDED CAP CANNOT BE USED DUE TO A FIELD CONDITION, THEN AN INVENTORY SELF RESTRAINING MECHANICAL LINE CAP, (FOR UP TO 12 INCH DIAMETER AND UP TO 60 PSIG), CAN BE USED. SELF RESTRAINING CAPS DO NOT REQUIRE FURTHER RESTRAINT. SEE FITS-6024 FOR SELF RESTRAINING MECHANICAL CAPS.

K. SIZES LARGER THAN 12 INCHES ARE COMMERCIALY AVAILABLE IN NON RESTRAINING ONLY AND THEREFORE MUST BE RESTRAINED IF USED. FOR THE DIAMETERS LARGER THAN 12 INCH AND FOR PRESSURES UP TO 60 PSIG, THE NON RESTRAINING MECHANICAL CAPS IF USED SHALL BE RESTRAINED IN THE FIELD AS SHOWN HEREIN. SEE FITS-6014 FOR NON-RESTRAINING MECHANICAL CAPS. WELDED STEEL END CAPS SHALL BE USED ON ALL PRESSURES ABOVE 60 PSIG.

L. CYLINDRICAL PIPE PUP TO BE PLACED UP AGAINST MECHANICAL END CAP FOLLOWER RING AND SECURED TO HOST PIPE USING THREADED ROD AND LUGS.

RESTRAINING REQUIREMENTS

H.P. DESIGN

RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS AND CAPS. RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS IF USED ON STRAIGHT PIPE LENGTHS.

UPON UNEARTHING AN EXISTING IN-SERVICE UNRESTRAINED COUPLING, ENSURE THAT THE PIPE ON EACH SIDE OF THE COUPLING IS EMBEDDED IN THE EARTH BEFORE FULLY EXPOSING THE COUPLING TO PREVENT PIPE PULL OUT. IF AN UNRESTRAINED COUPLING IS ENCOUNTERED IN THE FIELD, ANCHORAGE LUGS AND THREADED RODS SHALL BE INSTALLED.

L.P. DESIGN

RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS AND CAPS. RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS IF USED ON STRAIGHT PIPE LENGTHS.

No.	ITEM	NGRID ID
BILL OF MATERIAL		

UNCONTROLLED WHEN PRINTED Effective Date 05/19/2017 2 OF 3 © National Grid Gas plc 2017 - All Rights Reserved MAIN-6220

No.	ITEM	NGRID ID
8	MECHANICAL COUPLING (SEE FITS-6025 AND FITS-6015)	N/A
7	MECHANICAL END CAP (SEE FITS-6014 AND FITS-6024)	N/A
6	CYLINDRICAL STEEL PIPE PUP, O.D. TO BE THE SAME AS NOMINAL COUPLING DIAMETER. (SEE NOTE K&L)	N/A
5	INSULATOR	3/4" 9342398 1" 9342397 1-1/8" 9389930 1-1/4" 9390008
4	NUT, HEX ALLOY STEEL (DIA. X THREADS PER INCH)	3/4" - 10 9328587 1" - 8 9328589 1-1/8" - 8 9389930 1-1/4" - 8 9328532
3	WASHER, STEEL	3/4" 9328236 1" 9328207 1-1/8" 9328206 1-1/4" 9389888
2	ROD, THREADED, 1/2" LENGTH (SEE TABLE ON SHEET 1 FOR LENGTH REQUIRED) SEE NOTE B	3/4" 9328150 1" 9328150 1-1/8" 9328114 1-1/4" 9328113
1	LUG, STEEL	GREEN (FOR 3/4" ROD) 9357904 YELLOW (FOR 1" ROD) 9357905 NO FINISH (FOR 1-1/8" ROD) 9389897 NO FINISH (FOR 1-1/4" ROD) 9389931

UNCONTROLLED WHEN PRINTED Effective Date 05/19/2017 3 OF 3 © National Grid Gas plc 2017 - All Rights Reserved MAIN-6220

THE DDS COMPANIES

45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

BOSTON GAS COMPANY
d/b/a

nationalgrid

40 SYLVAN ROAD
WALTHAM, MA 02451

IFC



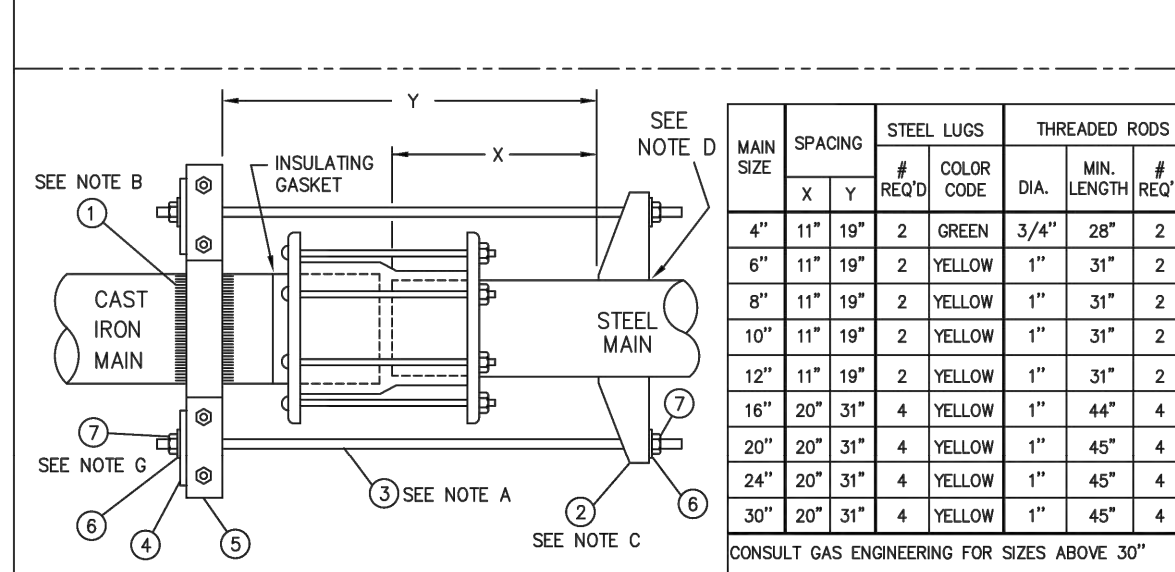
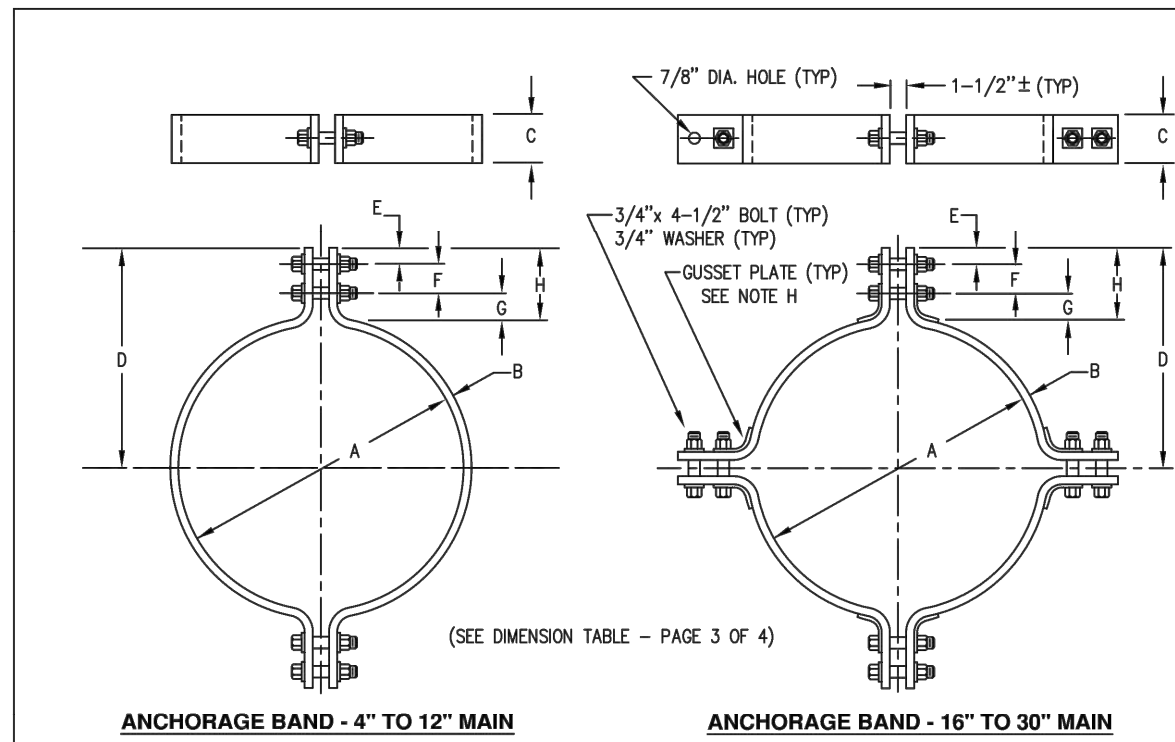
NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET
GAS MAIN REPLACEMENT
INDIA ST, STATE ST, CENTRAL ST, & MILK ST
BOSTON, MA

STANDARD DETAILS

DWG SIZE: 22"x34"
DESIGNER: DDS COMPANIES
ENGINEER: T. NOSAR
DATE: 08/20/2022
ASSET I.D.: XXXXXXXX
W.O. NO.: 1474472

PAGE 08 OF 10	
DRAWING NO.	SHEET NO.
C-203	08



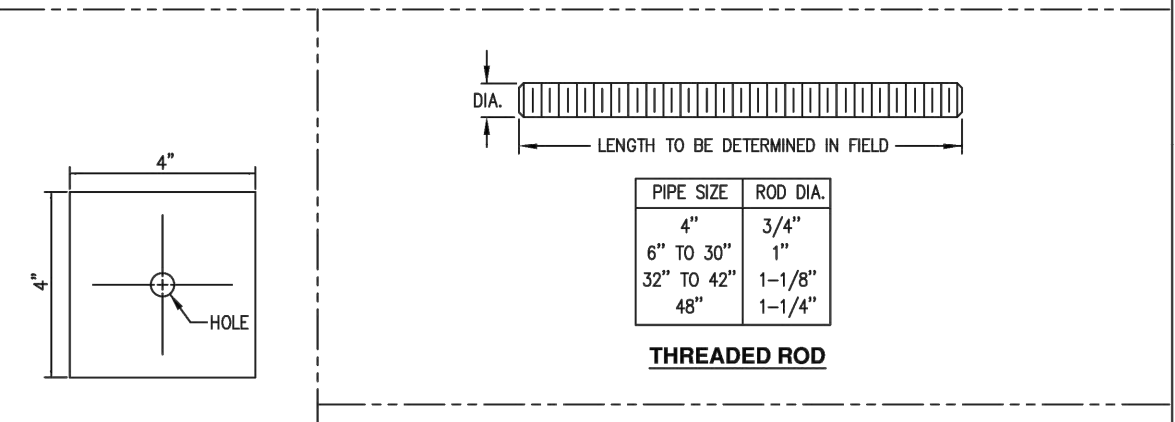
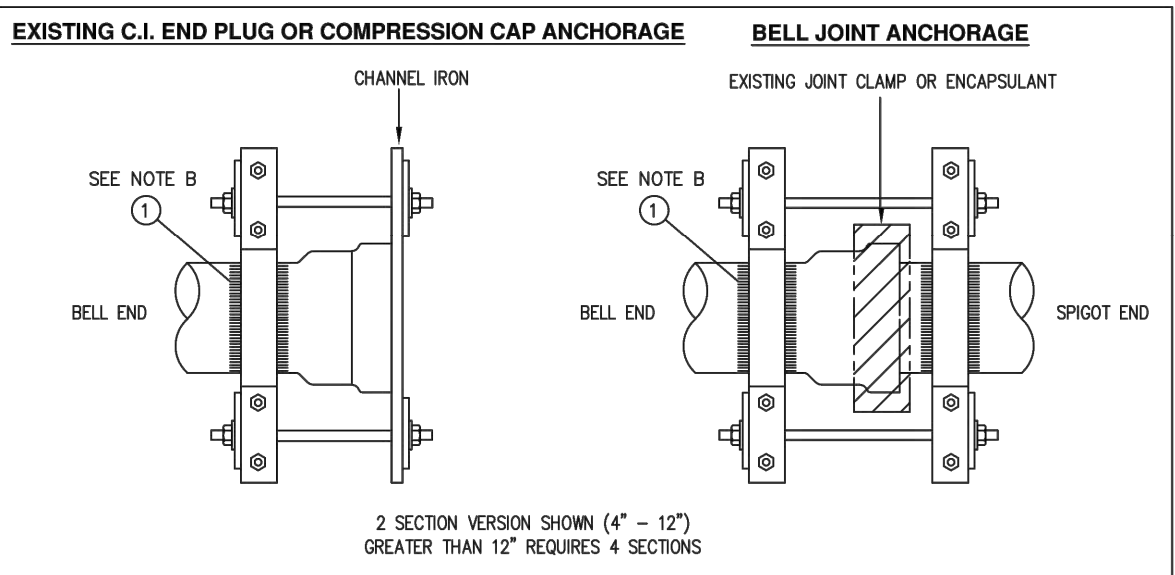
MAIN SIZE	SPACING	STEEL LUGS	THREADED RODS
X	Y	RETO	CODE
4"	11"	19"	2 GREEN 3/4" 28"
6"	11"	19"	2 YELLOW 1" 31"
8"	11"	19"	2 YELLOW 1" 31"
10"	11"	19"	2 YELLOW 1" 31"
12"	11"	19"	2 YELLOW 1" 31"
16"	20"	31"	4 YELLOW 1" 44"
20"	20"	31"	4 YELLOW 1" 45"
24"	20"	31"	4 YELLOW 1" 45"
30"	20"	31"	4 YELLOW 1" 45"

ANCHORAGE FOR CAST IRON BELL JOINTS, NON-RESTRAINING C.I. COUPLINGS AND CAPS

DATE: 11/15/2011 EFFECTIVE DATE: 12/10/2021
 DESIGNER: B. FOSTER STD. DWG. NO. MAIN-6190
 DRAWN: B. FOSTER

REVISIONS: ADDED PAGES 5-8

UNCONTROLLED WHEN PRINTED PAGE 1 © National Grid Gas plc 2020 - All Rights Reserved



PIPE SIZE	HOLE	C - CHANNEL SIZE
4"	7/8"	4" - 24" USE 4" [5.4 LB/FT]
6" TO 30"	1-1/8"	30" - 36" USE 4" [7.5 LB/FT]
32" TO 42"	1-1/4"	48" - 48" USE 6" [8.2 LB/FT]
48"	1-3/8"	

CHANNEL IRON END PIECE FOR USE ON EXISTING C.I. END PLUGS OR ON NON-RESTRAINING COMPRESSION CAPS

DATE: 11/15/2011 EFFECTIVE DATE: 12/10/2021
 DESIGNER: B. FOSTER STD. DWG. NO. MAIN-6190
 DRAWN: B. FOSTER

UNCONTROLLED WHEN PRINTED PAGE 2 © National Grid Gas plc 2020 - All Rights Reserved

ANCHORAGE BAND DIMENSIONS

ALL DIMENSIONS ARE IN INCHES

PIPE SIZE	A	B	C	D	E	F	G	H	J
4"	4-3/4	1/4	2	8-7/8	1-1/2	3	2	5-1/2	12
6"	7	1/4	2	10	1-1/2	3	2	6-1/2	14-1/2
8"	9-3/8	1/4	2	11-5/16	1-1/2	3	2	6-1/2	16-1/2
10"	11-1/8	1/4	2	12	1-1/2	3	2-1/2	6-5/16	N/A
12"	13-1/4	1/4	2	13-1/8	1-1/2	3	2-1/2	7	21-3/4
16"	17-5/8	3/8	3	15-13/16	1-1/2	3	3-1/2	8	25-3/8
20"	21-5/8	1/2	4	18-13/16	1-1/2	3	3-1/2	8	32-5/8
24"	25-3/4	1/2	4	21-3/8	1-1/2	3	4	8-1/2	37-3/4
30"	31-3/4	1/2	4	24-7/8	1-1/2	3	4-1/2	9	44-3/4
36"	38	1/2	4	28-1/2	1-1/2	3	5	9-1/2	52
42"	44-1/4	1/2	4	32	1-1/2	3-1/4	5-1/4	10	58-1/4
48"	50-1/2	1/2	4	34-1/2	2	3-1/4	7-1/4	11-3/4	65-1/2

No.	ITEM	NGRID ID
7	NUT, HEX ALLOY STEEL (SEE NOTE G)	9328567
		9328568
8	WASHER, STEEL	9328236
		9328207
	BAND, STEEL (EACH SET COMPLETE WITH BAND NUTS, BOLTS & WASHERS)	9342533
		9342535
5	4" MAIN	9353346
	6" MAIN	9342536
	8" MAIN	9353346
	10" MAIN	9342512
	12" MAIN	9342513
	16" MAIN	9342514
	20" MAIN	9342531
	24" MAIN	9342537
4	WASHER PLATE (4" X 4" X 1/2" THICK)	9357672
3	ROD, THREADED, 12FT. LENGTH (SEE TABLE ON SHEET 1 FOR LENGTH REQUIRED) SEE NOTE A	9328152
		9329150
2	LUG, STEEL	9357604
	GREEN (FOR 34")	9357605
	YELLOW (FOR 1")	9357608
1	SYNTHOGLASS TAPE, 4" WIDE X 20 FT. ROLL (SEE NOTES B & I)	9357608

BILL OF MATERIAL

UNCONTROLLED WHEN PRINTED PAGE 3 OF 8 © National Grid Gas plc 2021 - All Rights Reserved MAIN-6190

NOTES:

- ROD THREADS TO BE NATIONAL COARSE, SNUG FIT IN STANDARD NUT. RODS TO CONFORM TO ASTM A-306 GRADE 45.
- MINIMUM YIELD STRENGTH OF 22,000 PSI.
- MINIMUM TWO WRAPS OF SYNTHOGLASS TAPE (ITEM 1) SHALL BE INSTALLED TO INSULATE AND ANCHOR ANCHORAGE BANDS FROM CAST IRON MAIN.
- SEE STANDARD DRAWING MAIN-6230 FOR DETAILS OF LUG DESIGN.
- LUG WELDING TO CONFORM TO CURRENT WELDING SPECIFICATIONS.
- CATHODIC PROTECTION COATING TO CONFORM TO CURRENT SPECIFICATIONS.
- USE 1/2" BAND ON 10" MAIN. BAND SHALL BE MODIFIED AND CONTOURED TO MATCH 10" PIPE PRIOR TO INSTALLATION.
- ALL ANCHOR NUTS SHALL BE MADE UP TIGHT.
- GUSSET PLATE (1/2" THICK) TO BE WELDED ON SIZES 30" AND OVER.
- PROCEDURE FOR INSTALLING ANCHORAGE BAND IN SYNTHOGLASS:
 - MAIN MUST BE CLEANED FROM FOREIGN MATTER SIMILAR TO PREPARATION FOR COATING
 - ASSEMBLE BAND LOOSELY IN PLACE ON MAIN
 - CUT ENOUGH SYNTHOGLASS TO DOUBLE WRAP THE MAIN
 - DOUBLE WRAP SYNTHOGLASS AROUND MAIN - FULL WIDTH OF ANCHORAGE BAND
 - SLIDE BAND OVER SYNTHOGLASS AND MAKE UP BOLTS
 - AFTER TIGHTENING BOLTS, WET SYNTHOGLASS TO CLOSE FINAL ASSEMBLY IN PLACE
- CAST IRON JOINT HUBS:** (FOR 7.5 PSIG THRU 25 PSIG CAST IRON ONLY)
 - IF CAST IRON MAIN BELL AND SPIGOT 45 OR GREATER BEND WILL BE EXPOSED FOR ENCAPSULATION, EXPOSE ONLY THE FIRST HALF OF THE BEND AND ANCHOR, THEN PROCEED TO EXPOSE THE SECOND HALF AND ANCHOR.
 - IF CAST IRON WILL BE CAPPED IN AN OPEN EXCAVATION (PERMANENTLY OR TEMPORARILY) THEN PRIOR TO GASSING IN, CAST IRON BELL AND SPIGOT HUBS SHALL BE STRONG BACKED TO PREVENT POSSIBLE HUB PULL OUT DUE TO THE INTERNAL GAS PRESSURE EXERTED ON THE CAP.
 - ALL EXPOSED CAST IRON BELL AND SPIGOT HUBS WITHIN LIMITS OF THE OPEN EXCAVATION
 - ALL BURIED BELL AND SPIGOT HUBS THAT ARE AT LEAST THE MINIMUM PIPE EMBEDMENT DISTANCE "H" AS MEASURED FROM THE FACE OF THE EXCAVATION TOWARDS THE HUB FOR THE GIVEN PIPE DIAMETER AS SHOWN IN TABLE A.

TABLE A (* These Sizes operate at HP in NE only)

PIPE DIA. (INCHES)	MINIMUM PIPE EMBEDMENT DISTANCE "H" (FT)	7.5 PSIG MAOP C.I.	9 PSIG MAOP C.I.	12 PSIG MAOP C.I.	15 PSIG MAOP C.I.	22 thru 25 PSIG MAOP C.I.
4"	1	n/a	n/a	n/a	3	4
6"	n/a	n/a	1	n/a	n/a	6
8"	n/a	n/a	1	n/a	2	6
10"	n/a	n/a	n/a	n/a	n/a	9
12"	n/a	n/a	n/a	n/a	6	10
16"	n/a	n/a	n/a	n/a	9	15
20"	n/a	n/a	n/a	n/a	12	20
24"	n/a	n/a	n/a	n/a	15	25
30"	n/a	n/a	n/a	n/a	19	31
36"	n/a	n/a	n/a	n/a	22	36
42"	n/a	n/a	n/a	n/a	28	46
48"	n/a	n/a	n/a	n/a	30	50

REBAR CAGE DETAIL - TOP VIEW
 (4) 18" #3 REBAR HOOPS
 (6) #6 REBAR
 24" CONCRETE FOOTING

REBAR CAGE DETAIL - ISOMETRIC VIEW
 (4) 18" #3 REBAR HOOPS
 (6) #6 REBAR
 24" CONCRETE FOOTING

REBAR CAGE DETAIL - SIDE VIEW
 3" COVER
 (4) 18" #3 REBAR HOOPS
 (6) #6 REBAR
 24" CONCRETE FOOTING

NOTE: ALL DISTURBED SOIL MUST BE COMPACTED TO ITS ORIGINAL DENSITY.

REBAR CAGE DETAIL FOR REINFORCED CONCRETE FOOTING METHOD 2

UNCONTROLLED WHEN PRINTED PAGE 4 OF 8 © National Grid Gas plc 2021 - All Rights Reserved Effective Date 12/31/2021

K. COUPLINGS AND CAPS - NON-RESTRAINING ONLY

CAST IRON TO STEEL COUPLINGS (AND COMPRESSION CAPS IF CAST IRON WILL BE DEAD ENDED) MUST BE STRONGBACKED AS FOLLOWS:

LOW PRESSURE (< 7.5 PSIG)

- ANCHORAGE FOR CAST IRON TO STEEL COMPRESSION COUPLING CONNECTIONS SHOULD BE CONSIDERED WHEN EXCAVATION AND SIGNIFICANT UNDERMINING IN CLOSE PROXIMITY TO THESE CONNECTIONS ARE ANTICIPATED.
- ANCHOR COUPLINGS ON OFFSETS AND CAPS 16" AND LARGER IN DIAMETER.
- ANCHOR ANY ADDITIONAL COUPLINGS WHERE FIELD CONDITIONS MAY WARRANT.

HIGH PRESSURE (7.5 PSIG THRU 25 PSIG)

- ANCHOR ALL COUPLINGS AT DROP-IN OFFSETS.
- ANCHOR ALL COMPRESSION CAPS PRIOR TO GAS IN.
- ANCHOR COUPLINGS ON STRAIGHT LENGTHS WHERE FIELD CONDITIONS MAY WARRANT.

FOR DIAMETERS OF 24" AND LESS AND PRESSURES OF 22 PSIG AND LESS, SEE ALTERNATE ANCHORING METHODS ON PAGES 5 - 8. CONTACT ENGINEERING FOR LARGER DIAMETERS.

TIE BACK ANCHOR METHOD 1

NOTE: ALL DISTURBED SOIL MUST BE COMPACTED TO ITS ORIGINAL DENSITY.

TIE BACK ANCHOR METHOD 1

UNCONTROLLED WHEN PRINTED PAGE 5 OF 8 © National Grid Gas plc 2020 - All Rights Reserved

CONCRETE FOOTING ANCHOR METHOD 2

NOTE: ALL DISTURBED SOIL MUST BE COMPACTED TO ITS ORIGINAL DENSITY.

CONCRETE FOOTING ANCHOR METHOD 2

UNCONTROLLED WHEN PRINTED PAGE 6 OF 8 © National Grid Gas plc 2020 - All Rights Reserved

REINFORCED CONCRETE FOOTING METHOD 2

NOTE: ALL DISTURBED SOIL MUST BE COMPACTED TO ITS ORIGINAL DENSITY.

REINFORCED CONCRETE FOOTING METHOD 2

UNCONTROLLED WHEN PRINTED PAGE 7 OF 8 © National Grid Gas plc 2020 - All Rights Reserved

h FRAME ANCHOR METHOD 3

NOTE: ALL DISTURBED SOIL MUST BE COMPACTED TO ITS ORIGINAL DENSITY.

h FRAME ANCHOR METHOD 3

UNCONTROLLED WHEN PRINTED PAGE 8 OF 8 © National Grid Gas plc 2020 - All Rights Reserved

BOSTON GAS COMPANY
d/b/a
nationalgrid
40 SYLVAN ROAD
WALTHAM, MA 02451

PE STAMP: [Professional Engineer Seal]

9-35 INDIA STREET
GAS MAIN REPLACEMENT
INDIA ST, STATE ST, CENTRAL ST, & MILK ST
BOSTON, MA

STANDARD DETAILS

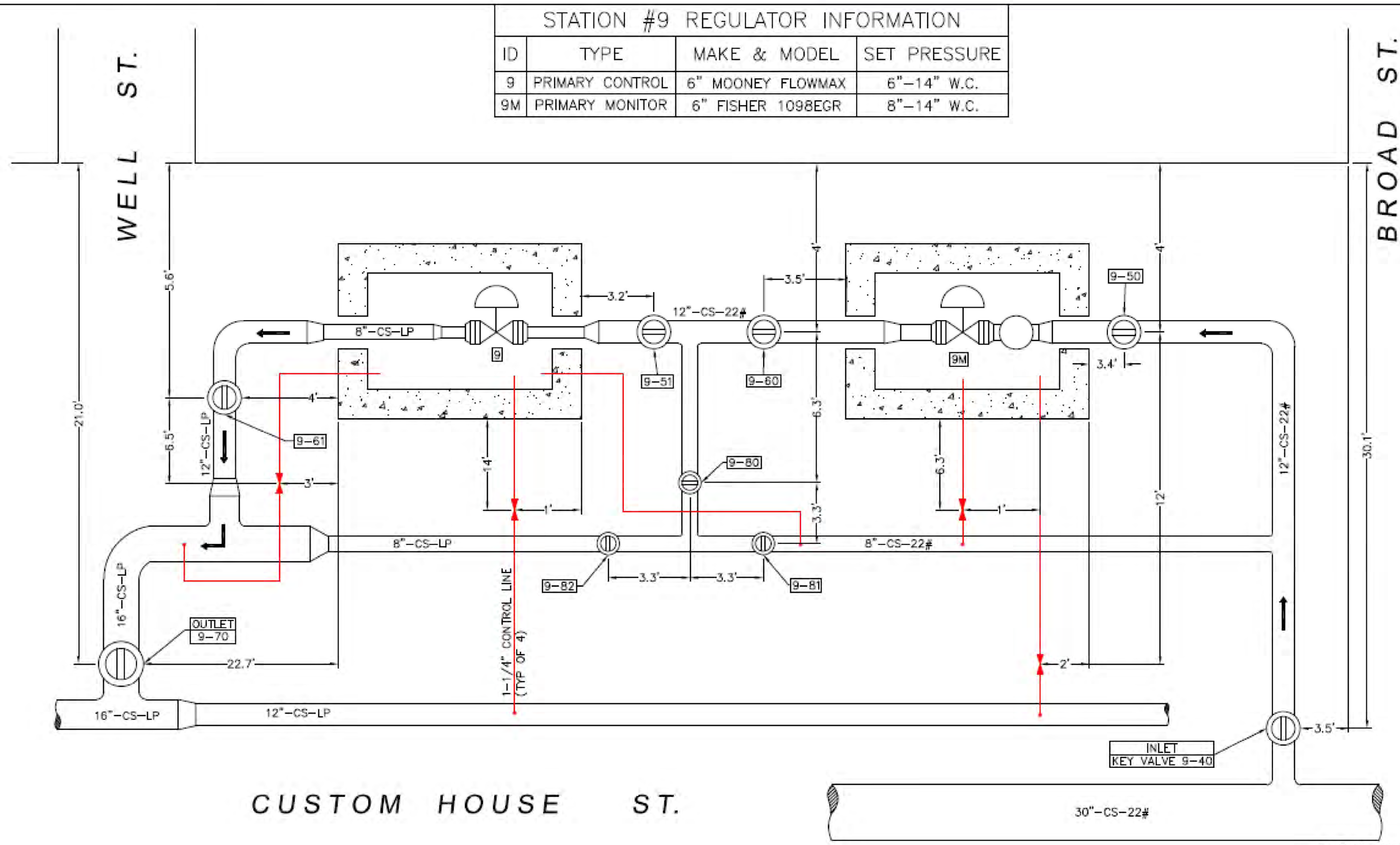
DWG SIZE: 22"x34" DESIGNER: DDS COMPANIES ENGINEER: T. NOSAR DATE: 08/20/2022 ASSET I.D.: XXXXXXXX W.O. NO.: 1474472

PAGE 09 OF 10
DRAWING NO. C-204 SHEET NO. 09

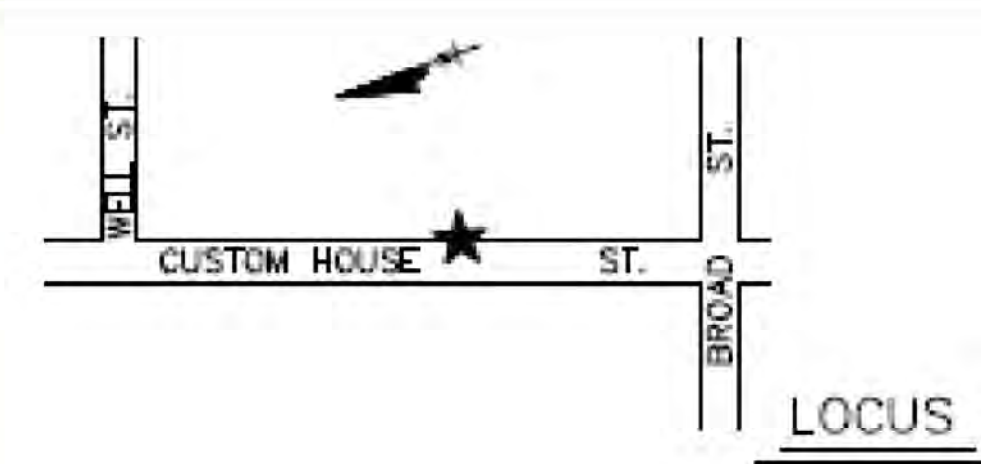
NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

UNCONTROLLED WHEN PRINTED PAGE 9 OF 8 © National Grid Gas plc 2021 - All Rights Reserved Effective Date 12/31/2021

STATION #9 REGULATOR INFORMATION			
ID	TYPE	MAKE & MODEL	SET PRESSURE
9	PRIMARY CONTROL	6" MOONEY FLOWMAX	6"-14" W.C.
9M	PRIMARY MONITOR	6" FISHER 1098EGR	8"-14" W.C.



INSTALLATION DATE: 12/1991

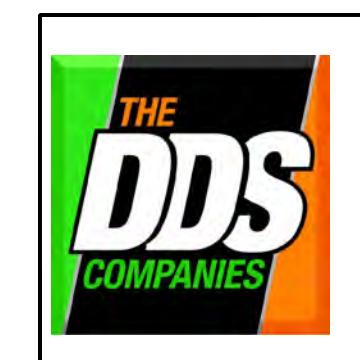


REGULATOR STATION FLOW DIAGRAM
 CUSTOM HOUSE ST @ WELL ST, BOSTON, MA.
 INLET MAOP: 22 PSIG, OUTLET MAOP: 14" W.C.
 NOT TO SCALE

BOSTON GAS COMPANY
 d/b/a
nationalgrid
 40 SYLVAN ROAD
 WALTHAM, MA 02451

NO	DESCRIPTION	DATE	DFT	APP
6	UPDATE ALL CHANGES	12/23/2021	E.A.B	T.R.B
5	ALL CHANGES TO DATE	12/23/2014	M.J.B	A.D

DWG. NO.
 FD-9
 ASSET ID: 9



45 HENDRIX ROAD
 WEST HENRIETTA, NY 14586
 PHONE (585) 359-7540
 FAX (585) 359-7541

BOSTON GAS COMPANY
 d/b/a
nationalgrid
 40 SYLVAN ROAD
 WALTHAM, MA 02451
 IFC



NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET
 GAS MAIN REPLACEMENT
 INDIA ST, STATE ST, CENTRAL ST, & MILK ST
 BOSTON, MA
EXISTING REGULATOR FLOW DIAGRAM

PAGE 10 OF 10
 DRAWING NO. C-205
 SHEET NO. 10

DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET ID	W.O. NO.
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472


ATTACHMENT C
PHOTOGRAPHIC LOG

Attachment C - Photographic Log

Client: National Grid
9 - 35 India Street
Site: Boston, Massachusetts

Job Number: 23-5068-206-02

Photograph No.: 1	Date: November 2020	Direction Taken: Southeast
Description: View of India Street and the approximate proposed gas main alignment at the intersection of India Street and State Street. Refer to the stamped project drawings.		
		
Photo courtesy of Google Street View		

Photograph No.: 2	Date: November 2020	Direction Taken: Southeast
Description: View of India Street and the approximate proposed gas main alignment at the intersection of India Street and Central Street. Refer to the stamped project drawings.		
		
Photo courtesy of Google Street View		

Attachment C - Photographic Log

Client: National Grid

Job Number: 23-5068-206-02

9 - 35 India Street

Site: Boston, Massachusetts

Photograph No.: 3	Date: November 2020	Direction Taken: Southeast
Description: View of India Street and the approximate proposed gas main alignment at the intersection of India Street and Milk Street. Refer to the stamped project drawings.		
		

ATTACHMENT D
ABUTTER INFORMATION

Abutters Within 300-feet of the Project Area (9 - 35 India Street Gas Main Replacement Project)

Parcel ID	Address	City	Zip Code	Owner	Addressee	Mailing Address	City	State	Zip Code
303860000	75 STATE ST	BOSTON	02109	75 STATE OWNER LLC	WOODLAND HALL AT OLD PARKLAND	3953 MAPLE AVENUE SUITE 300	DALLAS	TX	75219
303823000	131 STATE ST	BOSTON	02109	TISHMAN SPEYER ARCHSTONE-	C/O STATE: LOCAL TAX	P.O. BOX 87407	CHICAGO	IL	60680
303755000	8 4 COMMERCIAL ST	BOSTON	02109	KELLEY GERALD F TRST	C/O THOMAS M DINNENAN	210 SOUTH ST	BOSTON	MA	02111
303822010	MCKINLEY SQ	BOSTON	02109	BOSTON REDEVELOPMENT AUTH		MCKINLEY SQ	BOSTON	MA	02109
303757000	156 STATE ST D	BOSTON	02109	ALOISI ANDREW TRST		156 STATE	BOSTON	MA	02109
303738000	21 MERCHANTS RO 5	BOSTON	02109	OSHIMA HAROLD HTS		21 MERCHANTS RO #5	BOSTON	MA	02109
303747000	100 STATE ST 1	BOSTON	02109	LINEAR RETAIL BOSTON #2 LLC MASS LLC	C/O KEYPOINT PARTNERS LLC	ONE BURLINGTON WOODS DR	BURLINGTON	MA	01803
303757000	156 STATE ST	BOSTON	02109	INSURANCE LIBRARY ASSN		156 STATE	BOSTON	MA	02109
303738000	21 MERCHANTS RO 3	BOSTON	02109	MLG MERCHANTS ROW LLC	C/O MICHAEL GRUBER	16 FOREST ST	LEXINGTON	MA	02421
303747000	100 STATE ST 4	BOSTON	02109	STATE STREET CENTURY LLC		100 STATE ST 9TH FL	BOSTON	MA	02109
303738000	21 MERCHANTS RO 1	BOSTON	02109	ANCHOR LLC	C/O CRESSET MANAGEMENT	120 WATER ST 2ND FL	BOSTON	MA	02109
303757000	156 STATE ST F	BOSTON	02109	LLS PROPERTY LLC A MASS LLC	C/O BRUCE LANDAY	156 STATE ST 5TH FLOOR	BOSTON	MA	02109
303757000	158 154 STATE ST	BOSTON	02109	INSURANCE LIBRARY ASSN CONDO TR		158 STATE	BOSTON	MA	02109
303747000	100 STATE ST 3	BOSTON	02109	STATE STREET THIRD LLC		100 STATE STREET, UNIT 3	BOSTON	MA	02109
303790000	200 STATE ST	BOSTON	02109	MBTA		200 STATE ST	BOSTON	MA	02109
303747000	100 110 STATE ST	BOSTON	02109	ONE-HUNDRED STATE ST CONDO	C/O STATE ST MERCHANTS ROW	160 FEDERAL ST	BOSTON	MA	02110
303747000	100 STATE ST 6	BOSTON	02109	SIXTH FLOOR BOSTON LLC MASS LLC		100 STATE ST 6TH FL	BOSTON	MA	02109
303738000	21 MERCHANTS RO 2-B	BOSTON	02109	CLEARY MARY		21 MERCHANTS RO	BOSTON	MA	02109
303790000	200 STATE ST RETAIL	BOSTON	02109	GAZIT HORIZONS (MARKETPLACE) LLC	C/O GAZIT HORIZONS INC	1696 NE MIAMI GARDENS DR	NORTH MIAMI BEACH	FL	33179
303747000	100 STATE ST 11	BOSTON	02109	STATE STREET 1011 LLC A MASS LLC		100 STATE ST SUITE 11	BOSTON	MA	02109
303747000	100 STATE ST 5	BOSTON	02109	BADAWI BASEL		100 STATE ST, UNIT 5	BOSTON	MA	02109
303757000	156 STATE ST E	BOSTON	02109	ADVANCED COSMETIC AND	ADV COSMETIC & IMP DENTISTRY	197 BARNSTABLE RD	HYANNIS	MA	02601
303738000	7 21 MERCHANTS RO	BOSTON	02109	TWENTY 1 MERCHANTS ROW		7 MERCHANTS RO	BOSTON	MA	02109
303738000	21 MERCHANTS RO 4-B	BOSTON	02109	MG PROPERTY LLC MASS LLC		21 MERCHANTS RO 4TH FLR	BOSTON	MA	02109
303841000	130 120 WATER ST	BOSTON	02109	ONE 30 WATER ST ASSOCIATES LLC	C/O CRESSET DEVELOPMENT LLC	130 WATER ST	BOSTON	MA	02110
303868010	5 9 BROAD ST	BOSTON	02109	NINE BROAD ST LLC MASS LLC		9 BROAD ST	BOSTON	MA	02109
303827000	55 57 BROAD ST	BOSTON	02109	AAA BOSTON RE LLC		120 MILK ST	BOSTON	MA	02110
303747000	100 STATE ST 8	BOSTON	02109	HINDS WALTER		100 STATE ST FL11	BOSTON	MA	02111
303747000	100 STATE ST 2	BOSTON	02109	MM LAW LLC MASS LLC	C/O MICHAEL W. MERRILL	100 STATE ST 2ND FLOOR	BOSTON	MA	02112
303747000	100 STATE ST 7	BOSTON	02109	PANAGIOTOPOULOS CHRISTOS	C/O MARATHON STAFFING	164 WESTFORD RD	TYNGBORS	MA	01879
303922000	158 156 MILK ST	BOSTON	02109	MARSHALL ST HISTORICAL		158 MILK	BOSTON	MA	02109
303826000	49 47 BROAD ST	BOSTON	02109	HUB PARKING LLC MASS LLC		74A CLARENDON ST	BOSTON	MA	02116
303738000	21 MERCHANTS RO 2-A	BOSTON	02109	CANBUR INC MASS CORP	C/O JOHN CANESI	21 MERCHANTS ROW #2A	BOSTON	MA	02109
303754000	64 65 CHATHAM ST	BOSTON	02109	HAPPY FAMILY LP MASS LP	C/O JILL LEE	PO BOX 590688	NEWTON	MA	02459
303790000	200 STATE ST OFFICE	BOSTON	02109	CP 200 STATE LLC		1615 L ST NW SUITE 650	WASHINGTON DC		20036
303747000	100 STATE ST 10	BOSTON	02109	NUCLEUS HOLDING LLC MASS LLC	C/O NUCLEUS RESEARCH	100 STATE ST 10TH FLR	BOSTON	MA	02109
303742000	55 56 CHATHAM ST	BOSTON	02109	BOSTON EDISON COMPANY	NSTAR ELECTRIC CO PROP TAX	PO BOX #270	HARTFORD	CT	06141
303822110	3 MCKINLEY SQ	BOSTON	02109	MARRIOTT OWNERSHIP RESORTS		3 MCKINLEY SQ #803	BOSTON	MA	02109
303758000	150 152 STATE ST	BOSTON	02109	LDJ DEVELOPMENT LLC	C/O PREMIER PROPERTY SOLUTIONS LLC	190 HIGHT ST 6TH FL	BOSTON	MA	02110
303832000	119 121 WATER ST	BOSTON	02109	BROAD & WATER LLC MASS LLC	C/O MITCHELL WILSON	109 CHESTNUT ST STE 32	BOSTON	MA	02116
303837000	BROAD ST	BOSTON	02109	CITY OF BOSTON		BROAD	BOSTON	MA	02109
303748000	92 90 STATE ST	BOSTON	02109	STEAMBOAT REALTY LLC	C/O JAMES L. RUDOLPH	92 STATE ST #4TH FLR	BOSTON	MA	02109
303806000	175 177 STATE ST 3	BOSTON	02109	M NEWMAN FAMILY LP	C/O NEWMAN & NEWMAN PC	1 MCKINLEY SQ	BOSTON	MA	02109
303864000	109 STATE ST	BOSTON	02109	BBS REAL ESTATE GROUP LLC	C/O DANIEL RENE COMM REAL ESTATE	109 STATE ST STE 301	BOSTON	MA	02109
303998000	54 62 BROAD ST	BOSTON	02109	AMAN INC DEL CORP	C/O SPAULDING & SLYE	21 CUSTOM HOUSE ST	BOSTON	MA	02110
303824000	36 44 BROAD ST	BOSTON	02109	40 BROAD STREET OWNER INC	C/O ASSET MGR 40 BROAD STREET	2001 ROSS AVE STE 3400	DALLAS	TX	75201
303752000	61 63 CHATHAM ST	BOSTON	02109	JOHNSON CHATHAM LLC		26 WYLLIS AV	EVERETT	MA	02149
303807000	183 STATE ST 7	BOSTON	02109	DER HAGOPIAN MARK A TS	C/O MARK DER HAGOPIAN	655 BOYLSTON	BOSTON	MA	02116
303914000	150 146 MILK ST	BOSTON	02109	JENNEY BUILDING ASSOCS LPS	C/O JOSEPH CAREY	100 WELLS AV	NEWTON	MA	02459
303806000	175 177 STATE ST 1A	BOSTON	02109	FIRST-177 RLTY CO LLP MASS LLP		1430 MASSACHUSETTS AV 3RD FL	CAMBRIDGE	MA	02138
303680000	10 MERCHANTS RO	BOSTON	02109	INDIA BUILDING LLC	RYAN LLC	ONE INTERNATIONAL PL 18TH FLOOR	BOSTON	MA	02110
303744000	CHATHAM RO	BOSTON	02109	MASSACHUSETTS BAY TRANS AUTH		CHATHAM RO	BOSTON	MA	02109

303840000	33 BROAD ST	BOSTON	02109	TERRA FIRMA-33 BROAD LLC	C/O LINCOLN PROPERTY COMPANY	53 STATE ST 7TH FL	BOSTON	MA	02109
303836000	15 19 BROAD ST	BOSTON	02109	REALTY ASSOCIATES FUND XII PORTFOLIO LP	C/O TA REALTY LLC	28 STATE ST, UNIT FL 10	BOSTON	MA	02109
303807000	183 STATE ST 3	BOSTON	02109	E & W HALL REALTY LLC MASS LLC		183 STATE ST #3	BOSTON	MA	02109
303923000	152 154 MILK ST	BOSTON	02109	PAPPAS CHRIS I TRST		77 CENTRAL ST	BOSTON	MA	02109
303670000	CLINTON ST	BOSTON	02109	ASHKENAZY ACQUISITION CORP		433 FIFTH AVE SUITE 200	NEW YORK	NY	10016
303741000	52 54 CHATHAM ST	BOSTON	02109	BOSTON EDISON CO	NSTAR ELECTRIC CO PROP TAX	PO BOX # 270	HARTFORD	CT	06141
303806000	175 177 STATE ST 5	BOSTON	02109	THREETHREEONE HOLDINGS LLC	THREE THREE ONE HOLDINGS LLC	ONE MCKINLEY SQ 5TH FLR	BOSTON	MA	02109
303830000	4 LIBERTY SQ	BOSTON	02109	4 LIBERTY MA LLC		226 5TH AVENUE 3RD FLOOR	NEW YORK	NY	10001
304007000	31 35 INDIA ST	BOSTON	02110	31-35 INDIA STREET REALTY TRUST	C/O HUGH MELLOR II	555 HIGH STREET #103	WESTWOOD	MA	02090
303806000	76 74 CENTRAL ST	BOSTON	02109	MCKINELY SQUARE CONDO ASSN		76 CENTRAL	BOSTON	MA	02109
303806000	175 177 STATE ST	BOSTON	02109	MASSACHUSETTS ASSOCS OF		1 MCKINLEY SQ #2 &	BOSTON	MA	02109
304001000	50 52 BROAD ST	BOSTON	02109	FIFTY BROAD LLC MASS LLC	MAGNAN GRAIZZARO & ASSOC LLC	52 BROAD ST - 4TH FL	BOSTON	MA	02109
303828000	118 MILK ST	BOSTON	02109	TWENTY TWO LLC MASS LLC	C/O 22 LLC -MATT PICCIONE LLC	4 PEPPERHILL DR	WINCHESTER	MA	01890
303807000	183 STATE ST 1	BOSTON	02109	DERHAGOPIAN MARK A	C/O DER HAGOPIAN-HAJJAR	185 STATE ST #1	BOSTON	MA	02109
303746000	116 112 STATE ST	BOSTON	02109	STATE ENTERPRISES LIMITED PA		1270 SOLDIERS FIELD RD	BRIGHTON	MA	02135
303807000	183 STATE ST 6	BOSTON	02109	MCKENZIE DENZIL D TS	C/O DENZIL D MCKENZIE TS	183 STATE ST #6	BOSTON	MA	02109
303756000	160 170 STATE ST	BOSTON	02109	NORTHLAND 160 STATE ST LLC		2150 WASHINGTON ST	NEWTON	MA	02462
303806000	175 177 STATE ST 7	BOSTON	02109	MCKINLEY 7 LLC	C/O COLIN HAVILAND	1 MCKINLEY SQ	BOSTON	MA	02109
303806000	175 177 STATE ST 1B	BOSTON	02109	HENRICKS KAREN	C/O MEHMET KAHVECI DMD	177B STATE ST	BOSTON	MA	02109
304005000	171 173 MILK ST	BOSTON	02109	ONE-71-173 MILK STREET L P MASS LP	C/O 171-173 MILK ST LP	83 CENTRAL ST	BOSTON	MA	02109
303842000	102 114 WATER ST	BOSTON	02109	112 LLC	C/O MATTHEW PICCIONE	2 DRAPER ST #4	WOBURN	MA	01801
303839000	21 R BROAD ST	BOSTON	02109	WOODBURY CONSTRUCTION CO INC		4 CALIFORNIA AV SUITE #103	FRAMINGHAM	MA	01701
303807000	181 183 STATE ST	BOSTON	02109	ONE 83 STATE ST CONDO TR		181 183 STATE ST	BOSTON	MA	02109
303807000	183 STATE ST 2R	BOSTON	02109	FIELD MICHAEL S	C/O MICHAEL FIELD	74 LONGWOOD RD	CHESTNUT HILL	MA	02467
303807000	183 STATE ST 4B	BOSTON	02109	OHEARN PROPERTIES LLC	C/O GP MESSER & CO PC	183 STATE ST 4TH FL	BOSTON	MA	02109
303806000	175 177 STATE ST 4	BOSTON	02109	ONE MCKINLEY LLC MASS LLC	C/O DAVID E LURIE LURIE & KRUPP	1 MCKINLEY SQ	BOSTON	MA	02109
303867000	111 113 STATE ST	BOSTON	02109	CONNIFF JAMES D		111 STATE ST	BOSTON	MA	02109
303807000	183 STATE ST 2F	BOSTON	02109	FIELD MICHAEL S TS	C/O MICHAEL FIELD	74 LONGWOOD RD	CHESTNUT HILL	MA	02467
303745000	122 126 STATE ST	BOSTON	02109	ONE 26 STATE ST ASSOC LLC MASS LLC		148 STATE ST 10TH FL	BOSTON	MA	02109
303807000	183 STATE ST 5	BOSTON	02109	LYBARSKY IGOR TS	C/O IGOR LYBARSKY	183 STATE ST #5	BOSTON	MA	02109
303806000	175 177 STATE ST 6	BOSTON	02109	MSADA REALTY LLC MASS LLC	C/O JEAN FABRIZIO	ONE MCKINLEY SQ	BOSTON	MA	02109
303751000	148 STATE ST	BOSTON	02109	HS 148SST LLC	C/O HARBOR TRADING USA INC	21300 VICTORY BLVD #520	WOODLAND HILLS	CA	91367
303822110	3 MCKINLEY SQ 603	BOSTON	02109	MARRIOTT OWNERSHIP RESORTS INC		3 MCKINLEY SQ, #603	BOSTON	MA	02109
303831000	115 117 WATER ST	BOSTON	02109	KAPLANIDIS JOHN	C/O MICHAEL KAPLANIDIS	226 AUSTRALIAN AVE #2	PALM BEACH	FL	33480
304029000	54 66 BATTERYMARCH ST	BOSTON	02110	DIAMOND ROCK BOSTON BROAD ST	C/O BRIONY QUINN	2 BETHESDA METRO CTR #1400	BETHESDA	MD	20814
303808000	185 191 STATE ST	BOSTON	02109	WATERFRONT REALTY TRUST		185 STATE ST (MARK A HAGOPIAN)	BOSTON	MA	02109
303990010	80 BROAD ST 803	BOSTON	02110	STEFFANO RESIDENTIAL FUND I LLC	C/O JOSEPH E STEFFANO MGR	677 SARATOGA ST	BOSTON	MA	02128
303990010	80 BROAD ST 809	BOSTON	02110	HARE REALTY LLC		54 SWAN RD	WINCHESTER	MA	01890
303990010	80 BROAD ST 908	BOSTON	02110	TSAI TUNGLIN		80 BROAD ST #908	BOSTON	MA	02110
303990010	80 BROAD ST 709	BOSTON	02110	CVETKOVA ZHENYA		80 BROAD ST #709	BOSTON	MA	02110
303990010	80 BROAD ST 806	BOSTON	02110	GAMBINO JOHN		80 BROAD ST #806	BOSTON	MA	02110
303990010	80 BROAD ST 805	BOSTON	02110	MUTAWA AHMED AL		80 BROAD ST #805	BOSTON	MA	02110
303990010	80 BROAD ST 902	BOSTON	02110	KESHIAN GREGORY		80 BROAD ST #902	BOSTON	MA	02110
303990010	80 BROAD ST 708	BOSTON	02110	HOLCOMB TRUST		7471 E QUIEN SABE WAY	SCOTTSDALE	AZ	85331
303990010	80 BROAD ST 802	BOSTON	02110	KWAN CATHERINE L		28 BOBOLINK RD	WELLESLEY	MA	02481
303990010	80 BROAD ST 808	BOSTON	02110	GORMLEY PAUL	C/O KIMI IGUCHI	80 BROAD ST #808	BOSTON	MA	02110
303990010	80 BROAD ST 905	BOSTON	02110	MUKERJEE SANJEEV	C/O SANFEEV MUKERJEE	393 FRANKLIN ST	MANSFIELD	MA	02048
303990010	80 BROAD ST 904	BOSTON	02110	ESTELLA IGNACIO		80 BROAD ST, UNIT 904	BOSTON	MA	02110
303990010	80 BROAD ST 807	BOSTON	02110	COLLINS WILLIAM		80 BROAD ST #807	BOSTON	MA	02110
303990010	80 BROAD ST 804	BOSTON	02110	HUANG KUO FEN		80 BROAD ST #804	BOSTON	MA	02110
303990010	80 BROAD ST 901	BOSTON	02110	SMITH SUSAN M	C/O SUSAN SMITH	8A HERON CIRCLE	GLOUCESTER	MA	01930
303990010	80 BROAD ST 907	BOSTON	02110	ROMANIUK STEFAN J	C/O STEFAN & CHRISTINE ROMANIUK	80 BROAD ST # 907	BOSTON	MA	02110
303990010	80 BROAD ST 801	BOSTON	02110	CHOW CLARA		80 BROAD ST UNIT 801	BOSTON	MA	02110
303990010	80 BROAD ST 906	BOSTON	02110	SCHIAVO MICHAEL S		80 BROAD ST #906	BOSTON	MA	02110

303990010	80 BROAD ST 903	BOSTON	02110	LOGBERG RESOURCES LLC		826 SOUTHERN SHORE DR	PEACHTREE CITY	GA	30269
303990010	80 BROAD ST 909	BOSTON	02110	FAHEY STEPHEN MARK		80 BROAD ST, UNIT 909	BOSTON	MA	02110
303990010	80 BROAD ST 601	BOSTON	02110	ANNETTE SMITH 2012 IRREVOCABLE TRUST		1063 HILLSBORO MILE, UNIT 706	HILLSBORO BEACH	FL	33062
303990010	80 BROAD ST 703	BOSTON	02110	HONG YEJI		80 BROAD ST, UNIT 703	BOSTON	MA	02110
303990010	80 BROAD ST 604	BOSTON	02110	MARCARELLI KAREN H	C/O EDMUND MARCARELLI	80 BROAD ST #604	BOSTON	MA	02110
303990010	80 BROAD ST 507	BOSTON	02110	BELLAVANCE DENNIS		80 BROAD ST, UNIT 507	BOSTON	MA	02110
303990010	80 BROAD ST 706	BOSTON	02110	OGREN ELIZABETH		80 BROAD ST #706	BOSTON	MA	02110
303990010	80 BROAD ST 603	BOSTON	02110	MARTIN PATRICK J		80 BROAD ST #603	BOSTON	MA	02110
303990010	80 BROAD ST 506	BOSTON	02110	LANGATHIANOS GREGORY T		80 BROAD ST # 506	BOSTON	MA	02110
303990010	80 BROAD ST 606	BOSTON	02110	COTTER COLLEEN		80 BROAD ST #606	BOSTON	MA	02110
303990010	80 BROAD ST 509	BOSTON	02110	SWARUP AMITABH		196 CEDAR ST	WELLESLEY	MA	02481
303990010	80 BROAD ST 609	BOSTON	02110	RAUSEO MICHAEL J	C/O MICHAEL J RAUSEO III	32 EMBANKMENT ROAD	BOSTON	MA	02114
303990010	80 BROAD ST 608	BOSTON	02110	DAVOS NICHOLAS V		80 BROAD ST #608	BOSTON	MA	02110
303990010	80 BROAD ST 705	BOSTON	02110	PENSCO TRUST COMPANY	C/O GERALD J KOEHR	10 DEER RUN DRIVE	WESTFORD	MA	01886
303990010	80 BROAD ST 602	BOSTON	02110	QUINN BARBARA	C/O BARBARA QUIN	80 BROAD ST #602	BOSTON	MA	02110
303990010	80 BROAD ST 605	BOSTON	02110	HE ALLEN LIXING		80 BROAD ST #605	BOSTON	MA	02110
303990010	80 BROAD ST 702	BOSTON	02110	JANSCOTT REALTY LLC MASS LLC		45 AUBURN ST	NEWTON	MA	02465
303990010	80 BROAD ST 508	BOSTON	02110	VISCAROLA PETER G		80 BROAD ST #508	BOSTON	MA	02110
303990010	80 BROAD ST 701	BOSTON	02110						
303990010	80 BROAD ST 707	BOSTON	02110	SOLOMON HOWARD I TS		80 BROAD ST #707	BOSTON	MA	02110
303990010	80 BROAD ST 607	BOSTON	02110	DINAPOLI ARIAN		80 BROAD ST #607	BOSTON	MA	02110
303990010	80 BROAD ST 704	BOSTON	02110	RUDOLF LEE		80 BROAD ST #704	BOSTON	MA	02110
303990010	80 BROAD ST 208	BOSTON	02110	GLOD DAVID		80 BROAD ST UNIT 208	BOSTON	MA	02110
303990010	80 BROAD ST PS 110	BOSTON	02110	MANHATTAN II TRUST		80 BROAD STREET #507	BOSTON	MA	02110
303990010	80 BROAD ST PS 104	BOSTON	02110	BRG 55 INDIA LLC	C/O BOSTON RESIDENTIAL GROUP LLC	221 MASSACHUSETTS AVENUE SUITE 402	BOSTON	MA	02115
304018000	65 BROAD ST 5	BOSTON	02109	RUSCH ALAN E	C/O ALAN RUSCH	12 BRINDA LANE	NANTUCKET	MA	02554
303990010	80 BROAD ST 305	BOSTON	02110	HENDERER JAMES F		80 BROAD ST #305	BOSTON	MA	02110
303990010	80 BROAD ST PS 35	BOSTON	02110	NICHOLAS J CARLUCCI		80 BROAD ST #PH-1104	BOSTON	MA	02110
304021000	73 BROAD ST 4	BOSTON	02109	VAN ORDEN KATHERINE R	C/O KATHERINE R VAN ORDEN	73 BROAD ST #4	BOSTON	MA	02109
303990010	80 BROAD ST PS 38	BOSTON	02110	TREC LLC MASS LLC	C/O BRYAN T RICH	PO BOX 439	SHREWSBURY	MA	01545
303811000	199 STATE ST 702	BOSTON	02109	SUN HONGYONG		199 STATE ST UNIT 702	BOSTON	MA	02109
303990010	80 BROAD ST 504	BOSTON	02110	PAONE ROBERT P		80 BROAD ST #504	BOSTON	MA	02110
303990010	80 BROAD ST PH-1404	BOSTON	02110	MARGARET M HOSKINS REVOCABLE TRUST	C/O MARGARET M HOSKINS	80 BROAD ST #PH-1404	BOSTON	MA	02110
303990010	80 BROAD ST PS 50	BOSTON	02110	MARCARELLI KAREN		80 BROAD ST #604	BOSTON	MA	02110
303990010	80 BROAD ST C-102	BOSTON	02110	RAUSEO MICHAEL J TS	C/O MICHAEL J RAUSEO TS	80 BROAD ST #C-102	BOSTON	MA	02110
303990010	80 BROAD ST 302	BOSTON	02110	MCNEIL THOMAS P		23 ALGONQUIN RD	MEDFIELD	MA	02052
303990010	80 BROAD ST PS 15	BOSTON	02110	JOHNSON THOMAS P JR BE		80 BROAD ST #904	BOSTON	MA	02110
303990010	80 BROAD ST PS 7	BOSTON	02110	STEIN ROBERT		80 BROAD ST UNIT 1202	BOSTON	MA	02110
303990010	80 BROAD ST 308	BOSTON	02110	AHMET OZALP FAMILY TRUST		7 COMANCHE PLACE	ANDOVER	MA	01810
303811000	199 STATE ST 601	BOSTON	02109	KELLEHER DEIRDRE	C/O CLAIR MANAGEMENT	PO BOX 35006	BOSTON	MA	02135
303990010	80 BROAD ST 501	BOSTON	02110	LAU CHRISTINA		80 BROAD ST, UNIT 501	BOSTON	MA	02110
303990010	80 BROAD ST PS 41	BOSTON	02110	KHAN MUHAMMAD FURRUKH IRFAN	C/O AMERICAN KNITWEAR LLC	1375 BROADWAY 11TH FL	NEW YORK	NY	10018
304021000	73 BROAD ST 1	BOSTON	02109	HERZOG JOSEPH G		73 BROAD ST #1	BOSTON	MA	02109
303990010	80 BROAD ST PS 47	BOSTON	02110	KWAN CATHERINE L TS	C/O CATHERINE L KWAN TS	28 BOBOLINK EOS	WELLESLEY	MA	02481
303990010	80 BROAD ST 402	BOSTON	02110	DAILY JAMES F III	C/O JAMES F DAILY III	80 BROAD ST #402	BOSTON	MA	02110
303990010	72 80 BROAD ST	BOSTON	02110	FOLIO BOSTON CONDO TRUST	C/O SUFFOLK CO INC	10 POST OFFICE SQ #600	BOSTON	MA	02109
303990010	80 BROAD ST PS 112	BOSTON	02110	KING MARY		4000 TOWERSIDE TERRACE #TS12	MIAMI FLORIDA		33138
303990010	80 BROAD ST PS 6	BOSTON	02110	LORUSSO ANTONIO J JR	C/O ANTONIO J LORUSSO JR	1260 OLD NORTH ST	WALPOLE	MA	02081
303990010	80 BROAD ST 307	BOSTON	02110	PAOLUCCI ANTHONY		80 BROAD ST #307	BOSTON	MA	02110
303990010	80 BROAD ST PS 12	BOSTON	02110	RICH BRYAN T		P O BOX 439	SHREWSBURY	MA	01545
304021000	71 BROAD ST A	BOSTON	02109	KING JADE REALTY LLC MASS LLC		45 COURTLAND CI	MILTON	MA	02186
303990010	80 BROAD ST PS 46	BOSTON	02110	HOLCOMB ROBERT C		80 BROAD ST #708	BOSTON	MA	02110
303990010	80 BROAD ST PS 75	BOSTON	02110	HOANG CHAU		100 STATE ST UNIT 5	BOSTON	MA	02109
303990010	80 BROAD ST 202	BOSTON	02110	BARRETTO JOSEPH J		80 BROAD ST #202	BOSTON	MA	02110

303990010	80 BROAD ST PH-1502	BOSTON	02110	RAUSEO MICHAEL J III	C/O MICHAEL J RAUSEO III	32 EMBANKMENT RD	BOSTON	MA	02114
303990010	80 BROAD ST 407	BOSTON	02110	COONEY JULIAN		80 BROAD ST UNIT 407	BOSTON	MA	02110
303990010	80 BROAD ST 205	BOSTON	02110	DUNNE JOHN C TS	C/O JOHN C DUNNE	363 LINCOLN ST	DUXBURY	MA	02332
303990010	80 BROAD ST PS 115	BOSTON	02110	39B LLC		65 EAST INDIA ROW	BOSTON	MA	02110
303990010	80 BROAD ST PS 52	BOSTON	02110	INGR FIFTY FIVE LLC	C/O KEVIN AHEARN	470 ATLANTIC AVE 4TH FL	BOSTON	MA	02210
303990010	80 BROAD ST 401	BOSTON	02110	GRIBBEL DOUGLAS C		80 BROAD ST #401	BOSTON	MA	02110
303990010	80 BROAD ST 304	BOSTON	02110	GORDON ERIC		80 BROAD ST #304	BOSTON	MA	02110
303811000	199 STATE ST 701	BOSTON	02109	CHEN LIU-ER		33 GREEN HILL RD	BROOKLINE	MA	02445
304021000	73 BROAD ST 3	BOSTON	02109	LAU PAULA S		73 BROAD ST #3	BOSTON	MA	02109
303990010	80 BROAD ST PS 49	BOSTON	02110	COOPER MIRIAM F		80 BROAD ST #PH1203	BOSTON	MA	02110
303990010	80 BROAD ST PS 3	BOSTON	02110	GRAIZZARO JOANN K	C/O MAGNAN GRAIZZARO & ASSOCIATES	50-52 BROAD ST	BOSTON	MA	02109
303990010	80 BROAD ST 404	BOSTON	02110	GUBER TODD A		80 BROAD ST #404	BOSTON	MA	02110
303990010	80 BROAD ST PS 118	BOSTON	02110	MANNING LEE		9 BURROUGHS RD	LEXINGTON	MA	02420
303990010	80 BROAD ST PS 14	BOSTON	02110	WATTS MARY ANN		80 BROAD ST #308	BOSTON	MA	02110
303990010	80 BROAD ST 301	BOSTON	02110	BRESNAHAN RICHARD M		80 BROAD ST #301	BOSTON	MA	02110
303990010	80 BROAD ST 204	BOSTON	02110	NANCY D MONBOUQUETTE REVOCABLE TRUST		80 BROAD ST, UNIT 204	BOSTON	MA	02110
303990010	80 BROAD ST PS 114	BOSTON	02110	39 B LLC		800 YAMATO ROAD #100	BOCA RATON	FL	33431
303990010	80 BROAD ST 309	BOSTON	02110	SANTORO SALVADOR		80 BROAD ST #309	BOSTON	MA	02110
303811000	199 STATE ST 502	BOSTON	02109	MADRIGAL FERNANDO DAN	C/O FERNANDO D MADRIGAL	199 STATE STREET #502	BOSTON	MA	02109
303990010	80 BROAD ST PS 77	BOSTON	02110	GUBER TODD		80 BROAD ST #404	BOSTON	MA	02110
303990010	80 BROAD ST 403	BOSTON	02110	MAGRANER MAX OLIVERA M	C/O MAX MAGRANER	80 BROAD ST #403	BOSTON	MA	02110
303990010	80 BROAD ST 409	BOSTON	02110	LYNCH OWEN B		80 BROAD ST #409	BOSTON	MA	02110
303990010	80 BROAD ST PS 117	BOSTON	02110	KOPPEL ROBERT M		80 BROAD ST #502	BOSTON	MA	02110
303990010	80 BROAD ST PS 11	BOSTON	02110	OCONNOR SEAN		80 BROAD ST #307	BOSTON	MA	02110
303990010	80 BROAD ST PS 111	BOSTON	02110	FOLIO CITY PARKING LLC	C/O MARILYN T BENOIT	4475 N OCEAN BLVD #407	DELRAY BEACH	FL	33483
303990010	80 BROAD ST 207	BOSTON	02110	BOGRAN-ACOSTA ALIDA		80 BROAD ST #207	BOSTON	MA	02110
304018000	65 BROAD ST 4	BOSTON	02109	PORTAS JOSEP BELLES		65 BROAD ST, UNIT 4	BOSTON	MA	02109
303990010	80 BROAD ST PS 37	BOSTON	02110	WILCOX GORDON		80 BROAD ST, UNIT PH 1204	BOSTON	MA	02110
303990010	80 BROAD ST 503	BOSTON	02110	SPRAGUE STEPHEN O		80 BROAD ST #503	BOSTON	MA	02110
303990010	80 BROAD ST PS 51	BOSTON	02110	SACCO ARTHUR C		80 BROAD ST #PH 1403	BOSTON	MA	02110
303990010	80 BROAD ST 406	BOSTON	02110	KIMBALL JASON A		80 BROAD ST, UNIT 406	BOSTON	MA	02110
303990010	80 BROAD ST 201	BOSTON	02110	SIMOLLARDES CHRIS P TS	C/O BETTE & CHRIS SIMOLLARDES	49 CARRIAGE WAY	SUDBURY	MA	01776
303990010	80 BROAD ST PS 10	BOSTON	02110	BAERLEIN JOSEPH T		65 E INDIA ROW #26F	BOSTON	MA	02110
303990010	80 BROAD ST 206	BOSTON	02110	GIBSON ERICA R		80 BROAD ST #206	BOSTON	MA	02110
303990010	80 BROAD ST PS 53	BOSTON	02110	COLANGELO ANNA M TS	C/O ANNA M COLANGELO	42 LEOMINSTER RD	LUNENBURG	MA	01462
303990010	80 BROAD ST 303	BOSTON	02110	FOUGERE NORMAN R III	C/O NORMAN R FOUGERE III	80 BROAD ST #303	BOSTON	MA	02110
303811000	199 STATE ST 602	BOSTON	02109	KELLEHER DEIDRE A	C/O CLAIR MANAGEMENT	PO BOX 35006	BOSTON	MA	02135
303990010	80 BROAD ST PS 36	BOSTON	02110	BRANCHINI GALL		188 I ST #3	SOUTH BOSTON	MA	02127
303990010	80 BROAD ST 405	BOSTON	02110	PATRICIA R BELL REVOCABLE TRUST	C/O PATRICIA R BELL TS	14 EUCLID AVE UNIT 201	SUMMIT	NJ	07901
303990010	80 BROAD ST 209	BOSTON	02110	ALFRED WHITE QTIP TRUST	C/O CHRISTINE WHITE	32 SOUTHPORT DR	MASHPEE	MA	02649
304018000	65 BROAD ST 6	BOSTON	02109	ANDERSON DEVIN J		6 PLEASANT ST	DARTMOUTH	MA	02748
303990010	80 BROAD ST 306	BOSTON	02110	QUESADA MICHAEL		80 BROAD ST, UNIT 306	BOSTON	MA	02110
303990010	80 BROAD ST 505	BOSTON	02110	AZAR VICTORIA		80 BROAD ST #505	BOSTON	MA	02110
304021000	71 73 BROAD ST	BOSTON	02110	SEVENTY 1-73 BROAD ST CONDO		71-73 BROAD ST	BOSTON	MA	02109
304014000	40 BATTERYMARCH ST	BOSTON	02110	NWWT LLC		PO BOX 67294	CHESTNUT HILL	MA	02467
303990010	80 BROAD ST PS 45	BOSTON	02110	LEVY DANIEL L		80 BROAD ST #1002	BOSTON	MA	02110
303990010	80 BROAD ST PS 116	BOSTON	02110	WILLIAM D BAILEY 2011 TRUST	C/O WILLIAM BAILEY	27 HOLLINGSWORTH RD	OSTERVILLE	MA	02655
303990010	80 BROAD ST 203	BOSTON	02110	JAMES P LYNCH 2018 REVOCABLE TRUST		80 BROAD ST UNIT #203	BOSTON	MA	02110
303990010	80 BROAD ST 408	BOSTON	02110	CHEN CHEN		126 BUTTICK LANE	CARLISLE	MA	01741
303811000	199 STATE ST 501	BOSTON	02109	LUSTGARTEN BETH		9 BRISTOL HILL ROAD	WINDHAM	NH	03087
303990010	80 BROAD ST PS 67	BOSTON	02110	HERZOG JOSEPH		73 BROAD ST #1	BOSTON	MA	02109
303990010	80 BROAD ST PS 64	BOSTON	02110	DOHERTY JOHN		172 HIGHLAND ST	SOUTH HAMILTON	MA	01982
303990010	80 BROAD ST PS 63	BOSTON	02110	GOSS ELIZABETH		177 MILK ST #605	BOSTON	MA	02109
303990010	80 BROAD ST PS 69	BOSTON	02110	JLB REALTY TRUST	C/O JEAN-LUC G BOUINOIS	85 E INDIA RO #20F	BOSTON	MA	02110

303990010	80 BROAD ST PS 66	BOSTON	02110	JANICE A ZAJCHOWSKI REVOCABLE TRUST		-105 99 BROAD ST, UNIT 7-E	BOSTON	MA	02110
303990010	80 BROAD ST PS 65	BOSTON	02110	COVE 2011 REALTY TRUST	C/O LISA P EVANS	10 WELD ST	ROSLINDALE	MA	02131
303990010	80 BROAD ST PS 62	BOSTON	02110	STEFFANO RESIDENTIAL FUND II LLC	C/O JOSEPH E STEFFANO MGR	677 SARATOGA ST	EAST BOSTON	MA	02128
303990010	80 BROAD ST PS 18	BOSTON	02110	MILOVANOVAK EKATERINA	C/O MARK WATSON & ASSOCIATES	51 NORTH STREET	HINGHAM	MA	02043
303990010	80 BROAD ST PS 27	BOSTON	02110	BOSTON FAMILY TRUST		80 BROAD ST, UNIT 10074	BOSTON	MA	02110
303990010	80 BROAD ST PS 24	BOSTON	02110	INSOLIA SANTO ALESSANDRO		80 BROAD ST #PH 1101	BOSTON	MA	02110
303990010	80 BROAD ST PS 23	BOSTON	02110	SELBST LLOYD		65 EAST INDIA ROW, UNIT 29G	BOSTON	MA	02110
303990010	80 BROAD ST PS 32	BOSTON	02110	BHAWAN JAG BE	C/O JAG BHAWAN	1 FRANKLIN ST #4803	BOSTON	MA	02110
303990010	80 BROAD ST PS 20	BOSTON	02110	SMITH MICHAEL S		1063 HILLSBORO MILE #706	HILLSBORO BEACH	FL	33062
303990010	80 BROAD ST PS 25	BOSTON	02110	YAGHOUBI NADER		80 BROAD ST #1008	BOSTON	MA	02110
303990010	80 BROAD ST PS 17	BOSTON	02110	TUCKETT ROBERT		-105 99 BROAD ST, UNIT 9-B	BOSTON	MA	02110
303990010	80 BROAD ST PS 34	BOSTON	02110	IUANOW ELAINE	C/O NICHOLAS J CARLUCCI	80 BROAD ST #804	BOSTON	MA	02110
303990010	80 BROAD ST PS 16	BOSTON	02110	STEFFANO RESIDENTIAL FUND I LLC	C/O JOSEPH E STEFFANO	677 SARATOGA ST	EAST BOSTON	MA	02128
304012000	75 77 BROAD ST	BOSTON	02109	DYER JOHN CHOUTEAU TRST	C/O VIRGINIA G DYER	32 COOLIDGE HILL RD	CAMBRIDGE	MA	02128
303983000	88 BROAD ST	BOSTON	02110	PACKET BOSTON LLC		TWO PARK PLAZA	BOSTON	MA	02116
303990010	80 BROAD ST PS 19	BOSTON	02110	SACCO ARTHUR	C/O ARTHUR & LINDA SACCO	80 BROAD ST PS-19	BOSTON	MA	02110
303990010	80 BROAD ST PH-1102	BOSTON	02110	EIGHTY BROAD ST LLC		80 BROAD ST #PH-1102	BOSTON	MA	02110
303990010	80 BROAD ST 1005	BOSTON	02110	BANAJI JAMSHEED P		68 HILLTOP DR	SOUTHPORT	CT	06890
303985020	53 59 INDIA ST	BOSTON	02110	BRG 55 INDIA LLC	C/O BOSTON RESIDENTIAL GROUP LLC	221 MASSACHUSETTS AVE., SUITE 402	BOSTON	MA	02116
303940000	177 MILK ST	BOSTON	02109	BEAL BRUCE A		177 MILK	BOSTON	MA	02110
303811000	199 STATE ST 401	BOSTON	02109	SV RESERVE LLC		PO BOX 2173	KETCHUM	ID	83340
303918000	174 172 MILK ST	BOSTON	02109	GLYNN CAPITAL LLC A MASS LLC		83 CENTRAL ST	BOSTON	MA	02109
303990010	80 BROAD ST PH-1401	BOSTON	02110	TREC LLC		PO BOX 439	SHREWSBURY	MA	01545
303811000	197 199 STATE ST	BOSTON	02109	GREENWAY PLACE CONDO TR	C/O KAREN J GUNTHER	200 WHEELER RD SOUTH TOWER	BURLINGTON	MA	01803
303916010	MILK ST	BOSTON	02109	MASSACHUSETTS TURNPIKE AUTHORITY	C/O COMMONWEALTH OF MASS	10 PARK PLZ	BOSTON	MA	02116
303811000	199 STATE ST 201	BOSTON	02109	JUDITH RUBMAN EHRlich REVOCABLE TRUST		199 STATE STREET #201	BOSTON	MA	02109
303990010	80 BROAD ST 1004	BOSTON	02110	KHAN MUHAMMED FARRUKH IRFAN		80 BROAD ST #1004	BOSTON	MA	02110
304018000	65 BROAD ST 2	BOSTON	02109	ARNDT DANIEL LEIGH		65 BROAD ST #2	BOSTON	MA	02109
304015000	32 34 BATTERYMARCH ST	BOSTON	02110	FOREST MILK LLC	C/O THE HOFFMAN COMPANIES	60 TEMPLE PLACE 2ND FLR	BOSTON	MA	02111
304019000	67 69 BROAD ST	BOSTON	02109	WESTWOOD CAPITAL LLC MASS LLC		PO BOX 350	WESTWOOD	MA	02090
304013000	42 48 BATTERYMARCH ST	BOSTON	02110	BAYLE SHIRLEY D		75 STATE ST 16TH FLR HEMENWAY	BOSTON	MA	02109
303990010	80 BROAD ST 1009	BOSTON	02110	CERULLO JOSELITA		80 BROAD ST #1009	BOSTON	MA	02110
303811000	199 STATE ST 101	BOSTON	02109	GREENWAY REALTY TRUST		PO BOX 345	SOMMERVILLE	MA	02143
304018000	63 BROAD ST 1	BOSTON	02109	REPPUCCI ROBERT M	C/O ROBERT M. REPPUCCI TS	25 MILANO DR	SAUGUS	MA	01906
303990010	80 BROAD ST 1001	BOSTON	02110	SACCO JOSEPHINE		80 BROAD ST #1001	BOSTON	MA	02110
303810000	193 195 STATE ST	BOSTON	02109	WATERFRONT REALTYTRUST	C/O MARK DER HAGOPIAN	185-189 STATE STREET	BOSTON	MA	02109
303990010	80 BROAD ST PH-1201	BOSTON	02110	SWOBODA THOMAS M		80 BROAD ST #PH-1201	BOSTON	MA	02110
303811000	199 STATE ST 302	BOSTON	02109	SILVA ALBERICH		199 STATE ST #302	BOSTON	MA	02109
303921000	160 166 MILK ST	BOSTON	02109	160-166 MILK STREET LP		83 CENTRAL ST	BOSTON	MA	02109
304018000	65 BROAD ST 3	BOSTON	02109	BARRY MICHAEL II	C/O MICHAEL BARRY II	65 BROAD ST #3	BOSTON	MA	02109
303990010	80 BROAD ST 1003	BOSTON	02110	YAFYASOVA NAILYA		80 BROAD ST #1003	BOSTON	MA	02110
303811000	199 STATE ST 301	BOSTON	02109	AUGUSTINE CHARLES W		199 STATE ST #301	BOSTON	MA	02109
304018000	63 65 BROAD ST	BOSTON	02109	LOFTS @ BROAD ST CONDO TR	C/O LOFTS @ BROAD STREET LLC	63 BROAD ST	BOSTON	MA	02109
303811000	199 STATE ST RETAIL	BOSTON	02109	MUSTANG CAPITAL PARTNERS LLC	C/O MUSTANG CAPITAL PARTNERS	PO BOX 1405	ANDOVER	MA	01810
303990010	80 BROAD ST 1006	BOSTON	02110	TWO STAR TRUST	C/O JAMES STELLA	40 LAVENDER CIRCLE	NORTH ANDOVER	MA	01845



**AFFIDAVIT OF SERVICE
FOR ABUTTER NOTIFICATION**

**Under the Massachusetts Wetlands Protection Act
and Boston Wetlands Ordinance**

I, _____, hereby certify under pains and penalties of perjury that that at least one week prior to the public hearing, I gave notice to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A _____ was filed under the Massachusetts Wetlands Protection Act and/or the Boston Wetlands Ordinance by _____ for _____ located at _____.

The Abutter Notification For, the list of abutters to whom it was given, and their addresses are attached to this Affidavit of Service.

Name

Date



BABEL NOTICE

English:

IMPORTANT! This document or application contains **important information** about your rights, responsibilities and/or benefits. It is crucial that you understand the information in this document and/or application, and we will provide the information in your preferred language at no cost to you. If you need them, please contact us at cc@boston.gov or 617-635-3850.

Spanish:

¡IMPORTANTE! Este documento o solicitud contiene **información importante** sobre sus derechos, responsabilidades y/o beneficios. Es fundamental que usted entienda la información contenida en este documento y/o solicitud, y le proporcionaremos la información en su idioma preferido sin costo alguno para usted. Si los necesita, póngase en contacto con nosotros en el correo electrónico cc@boston.gov o llamando al 617-635-3850.

Haitian Creole:

AVI ENPÒTAN! Dokiman oubyen aplikasyon sa genyen **enfòmasyon ki enpòtan** konsènan dwa, responsablite, ak/oswa benefis ou yo. Li enpòtan ke ou konprann enfòmasyon ki nan dokiman ak/oubyen aplikasyon sa, e n ap bay enfòmasyon an nan lang ou prefere a, san ou pa peye anyen. Si w bezwen yo, tanpri kontakte nou nan cc@boston.gov oswa 617-635-3850.

Traditional Chinese:

非常重要！這份文件或是申請表格包含關於您的權利，責任，和／或福利的重要信息。請您務必完全理解這份文件或申請表格的全部信息，這對我們來說十分重要。我們會免費給您提供翻譯服務。如果您有需要請聯系我們的郵箱 cc@boston.gov 電話# 617-635-3850..

Vietnamese:

QUAN TRỌNG! Tài liệu hoặc đơn yêu cầu này chứa **thông tin quan trọng** về các quyền, trách nhiệm và/hoặc lợi ích của bạn. Việc bạn hiểu rõ thông tin trong tài liệu và/hoặc đơn yêu cầu này rất quan trọng, và chúng tôi sẽ cung cấp thông tin bằng ngôn ngữ bạn muốn mà không tính phí. Nếu quý vị cần những dịch vụ này, vui lòng liên lạc với chúng tôi theo địa chỉ cc@boston.gov hoặc số điện thoại 617-635-3850.

Simplified Chinese:

非常重要！这份文件或是申请表格包含关于您的权利，责任，和／或福利的重要信息。请您务必完全理解这份文件或申请表格的全部信息，这对我们来说十分重要。我们会免费给您提供翻译服务。如果您有需要请联联系我们的邮箱 cc@boston.gov 电话# 617-635-3850.

Cape Verdean Creole:

INPURTANTI! Es dukumentu ó aplikason ten **informason inpurtanti** sobri bu direitus, rasponsabilidadi i/ó benefisius. Ê krusial ki bu intendi informason na es dukumentu i/ó aplikason ó nu ta da informason na língua di bu preferênsia sen ninhun kustu pa bó. Si bu prisiza del, kontata-nu na cc@boston.gov ó 617-635-3850.

Arabic:

مهم! يحتوي هذا المستند أو التطبيق على معلومات مهمة حول حقوقك ومسؤولياتك أو فوائده. من الأهمية أن تفهم المعلومات الواردة في هذا المستند أو التطبيق. سوف نقدم المعلومات بلغتك المفضلة دون أي تكلفة عليك. إذا كنت في حاجة إليها، يرجى الاتصال بنا على cc@boston.gov أو 617-635-3850.

Russian:

ВАЖНО! В этом документе или заявлении содержится **важная информация** о ваших правах, обязанностях и/или льготах. Для нас очень важно, чтобы вы понимали приведенную в этом документе и/или заявлении информацию, и мы готовы бесплатно предоставить вам информацию на предпочитаемом вами языке. Если Вам они нужны, просьба связаться с нами по адресу электронной почты cc@boston.gov, либо по телефону 617-635-3850.

Portuguese:

IMPORTANTE! Este documento ou aplicativo contém **Informações importantes** sobre os seus direitos, responsabilidades e/ou benefícios. É importante que você compreenda as informações contidas neste documento e/ou aplicativo, e nós iremos fornecer as informações em seu idioma de preferência sem nenhum custo para você. Se precisar deles, fale conosco: cc@boston.gov ou 617-635-3850.

French:

IMPORTANT ! Ce document ou cette demande contient des **informations importantes** concernant vos droits, responsabilités et/ou avantages. Il est essentiel que vous compreniez les informations contenues dans ce document et/ou cette demande, que nous pouvons vous communiquer gratuitement dans la langue de votre choix. Si vous en avez besoin, veuillez nous contacter à cc@boston.gov ou au 617-635-3850.





**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. _____ has filed a _____ with the Boston Conservation Commission seeking permission to alter an Area Subject to Protection under 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 _____.

C. The project involves _____.

D. Copies of the application may be obtained by contacting the Boston Conservation Commission at CC@boston.gov.

E. Copies of the application may be obtained from _____ by contacting them at _____ between the hours of _____, _____.

F. In accordance with the Chapter 107 of the Acts of 2022, the public hearing will take place **virtually** at <https://zoom.us/j/6864582044>. If you are unable to access the internet, you can call 1-929-205-6099, enter Meeting ID 686 458 2044 # and use # as your participant ID.

G. Information regarding the date and time of the public hearing may be obtained from the **Boston Conservation Commission** by emailing CC@boston.gov or calling (617) 635-3850 between the hours of 9 AM to 5 PM, Monday through Friday.

NOTE: Notice of the public hearing, 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 hearing, including its date, time, and place, will be posted on www.boston.gov/public-notice and in Boston City Hall not less than forty-eight (48) hours in advance. If you would like to provide comments, you may attend the public hearing or send written comments to CC@boston.gov or Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201

NOTE: If you would like to provide comments, you may attend the public hearing 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: (978) 694-3200.

NOTE: If you plan to attend the public hearing and are in need of interpretation, please notify staff at CC@boston.gov by 12 PM the day before the hearing.



Certification of Translation




COUNTY OF SUFFOLK
COMMONWEALTH OF MASSACHUSETTS

October 20, 2022

This is to certify that the attached translation is, to the best of my knowledge and belief, a true and accurate translation from English into Traditional Chinese of the attached document:

Chinese (Traditional) Abutter Notification Form_2022 (Filled - English).docx

Linguistic Systems, Inc. adheres to an ISO-certified quality management system that ensures best practices are always followed in the selection of linguists skilled in both the languages and subject matters necessary for every translation.



Jessica Riley
Project Manager
Linguistic Systems



波士頓保護委員會 致周邊居民的通知

根據《麻塞諸塞州濕地保護法》、《麻塞諸塞州普通法》第131章第40節和《波士頓濕地條例》之規定，特此通知您下述事項，因為您是已向波士頓保護委員會提交申請的一個專案的周邊居民。

- A. 波士頓燃氣公司（由Jaime Walker轉交）已向波士頓濕地保護委員會提出確定適用性的申請，請求批准改建一塊受《濕地保護法》（普通法第131章第40節）和《波士頓濕地條例》保護的區域。
- B. 擬開展改建活動的地塊地址為：麻塞諸塞州波士頓印度街9-35號。
- C. 該專案涉及鋪設道路內的燃氣管道更換活動。
- D. 可通過此電郵信箱與波士頓保護委員會聯絡，索取意向通知書的副本：CC@boston.gov。
- E. 您可於週一至週五上午8時到下午5時之間致電 (413) 572-3224，聯絡Tighe & Bond公司的Melissa Coady，索取意向通知書的副本。
- F. 根據2022年法案第107章的規定，公開聽證會將以**虛擬方式**舉行，網址為：<https://zoom.us/j/6864582044>。如果您無法上網，您可以撥打1-929-205-6099，輸入會議ID 686 458 2044#，並使用#作為您的參會者ID。
- G. 如需有關公開聽證會的日期和時間之資訊，可於週一至週五上午9時至下午5時之間，傳送電郵至CC@boston.gov或致電（617）635-3850向波士頓保護委員會索取。

註：公開聽證會的通知，包括其日期、時間和地點，將至少提前五（5）天在《波士頓先驅報》上公佈。

註：公開聽證會的通知，包括其日期、時間和地點，將至少提前四十八（48）小時在www.boston.gov/public-notices發佈並在波士頓市政廳張貼。

註：若您希望提供意見，您可以參加公聽會或將書面意見傳送至CC@boston.gov或郵寄至波士頓市政廳環境部（Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201）。

註：您也可以聯絡波士頓保護委員會或環境保護部（DEP）東北地區辦事處，瞭解有關該申請或《濕地保護法》的更多資訊。如要聯絡DEP，請致電（東北地區）：(978) 694-3200。

註：如果您計畫參加公聽會並需要口譯服務，請在公聽會前一天中午12時前通知工作人員（電郵信箱：CC@boston.gov）。

ATTACHMENT E

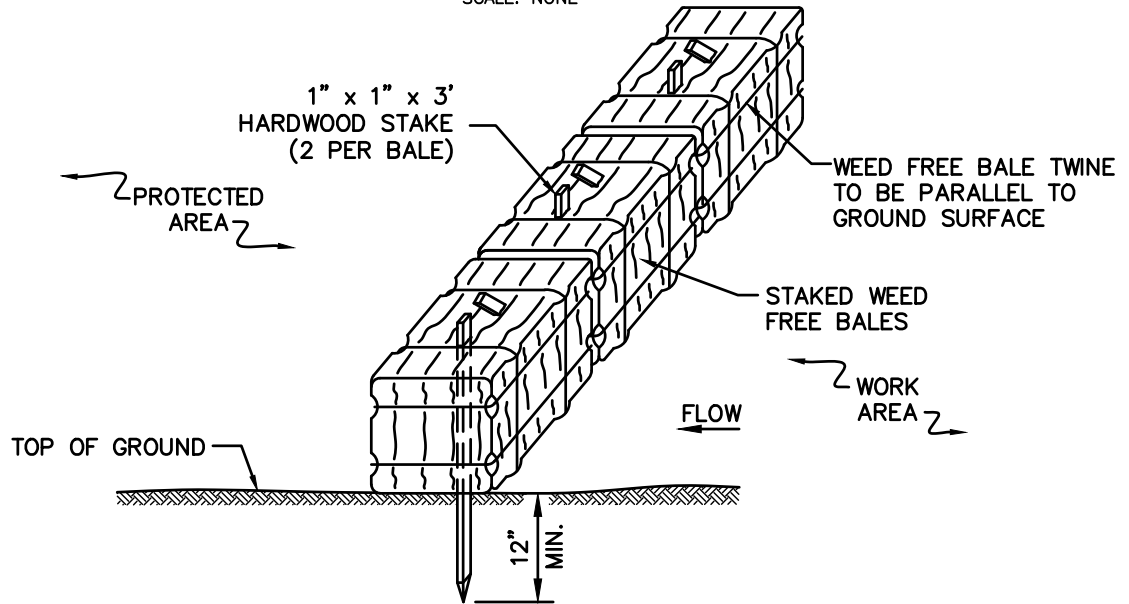
NATIONAL GRID BEST MANAGEMENT PRACTICES

SUBJECT
Access, Maintenance and Construction
Best Management Practices

Reference
EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP DETAIL

SCALE: NONE



NOTES:

1. THE GROUND SHALL BE PREPARED TO PROVIDE COMPLETE CONTACT WITH THE BALES.

BMP PICTURE



File: BALE_BARRIER.DWG

APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-1
WEED FREE BALE BARRIER

SUBJECT

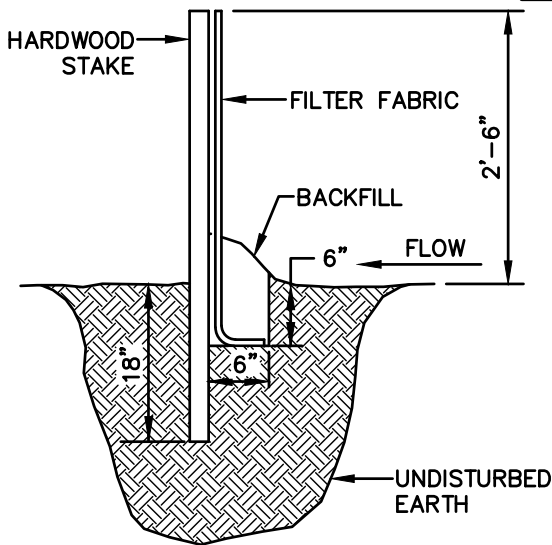
Access, Maintenance and Construction
Best Management Practices

Reference

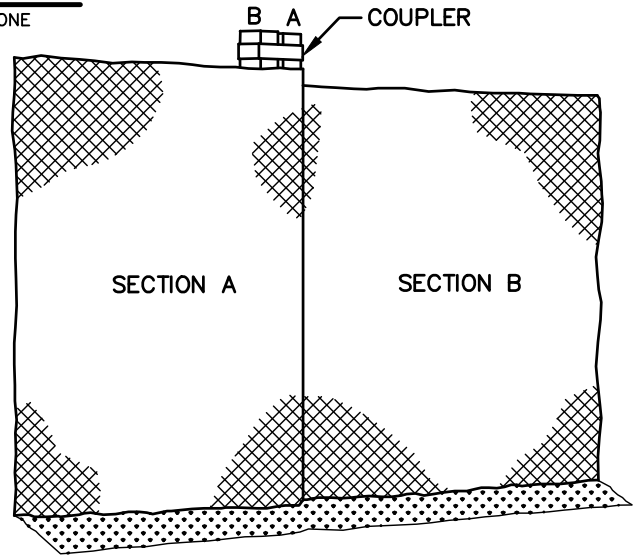
EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP DETAIL

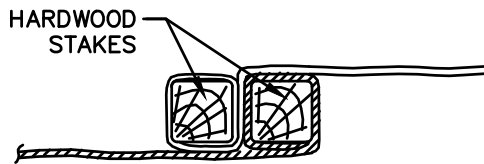
SCALE: NONE



PROFILE



SECTION



PLAN

BMP PICTURE



File: Sediment_Fence.dwg

APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-2
SEDIMENT CONTROL FENCE

SUBJECT

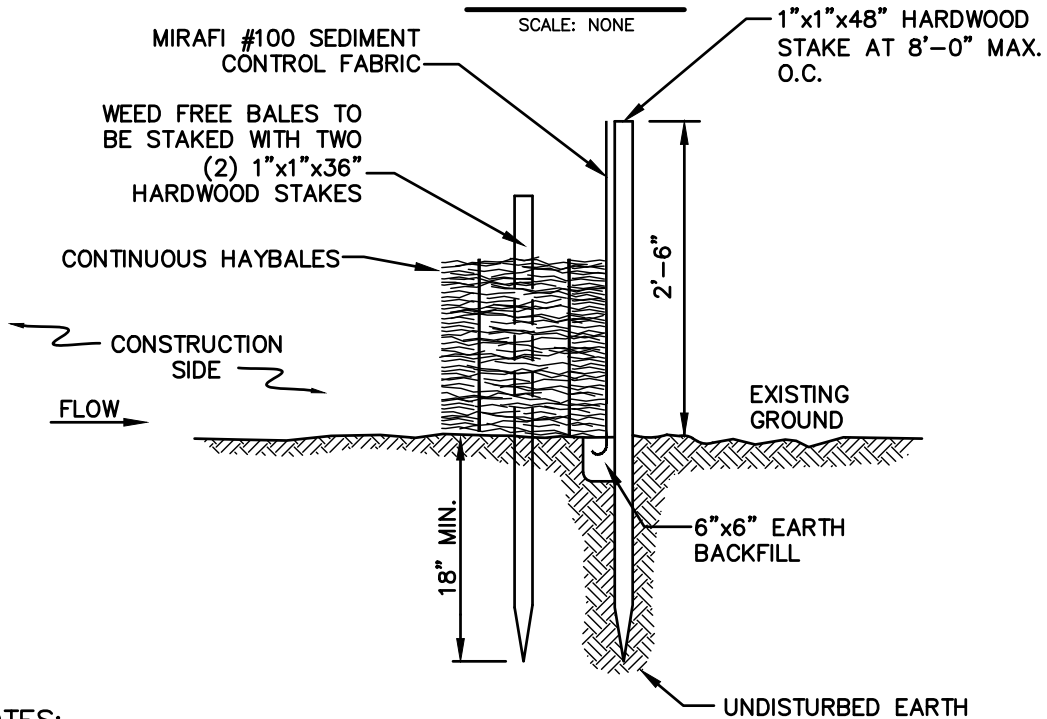
Access, Maintenance and Construction
Best Management Practices

Reference

EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP DETAIL

SCALE: NONE



NOTES:

1. BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO (2) 1"x1"x36" HARDWOOD STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
4. BALES SHALL BE REMOVED AND REPLACED WHEN THEY BECOME FILLED WITH SEDIMENT AND BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
5. BALES SHALL BE REMOVED WHEN THE EMBANKMENTS STABILIZE.
6. BALES TO BE TWINE BOUND.

BMP PICTURE



File: Silt_Fence_&_Barrier.dwg

APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

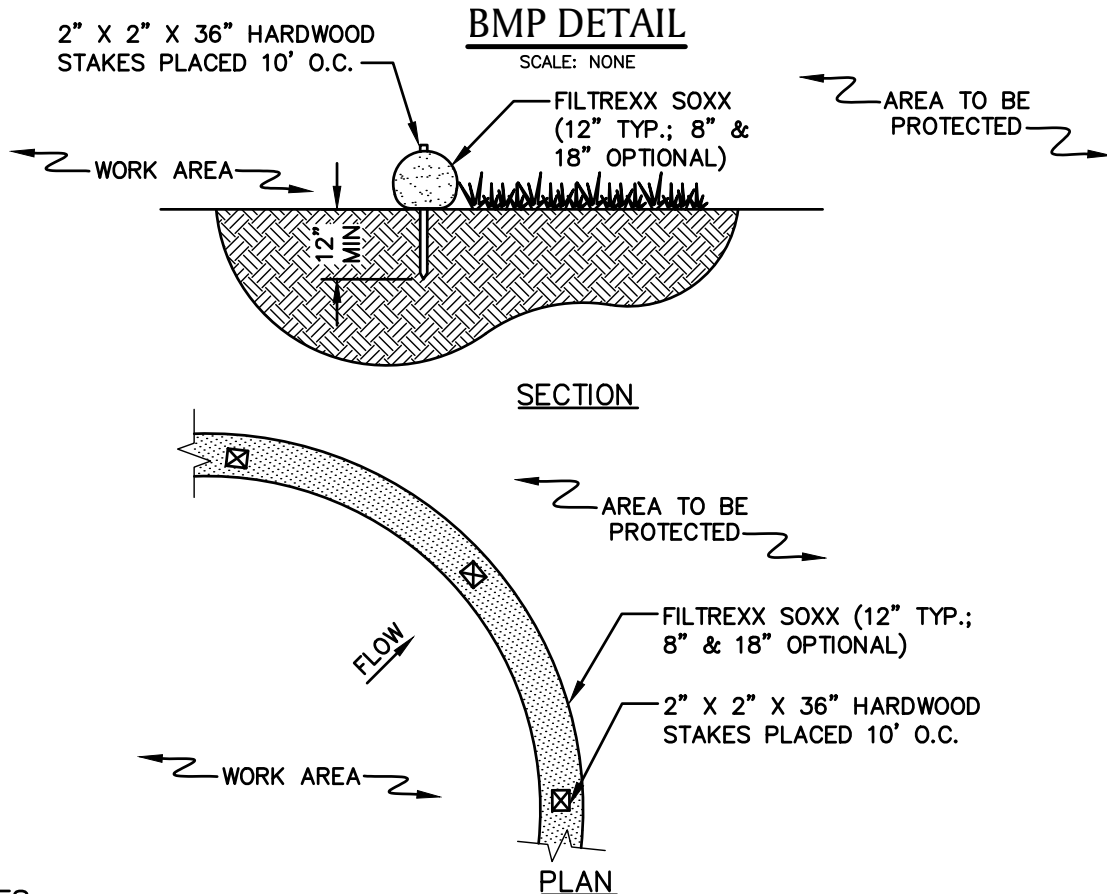
SEC-3
SILT FENCE /
WEED FREE BARRIER

SUBJECT

Access, Maintenance and Construction
Best Management Practices

Reference

EP No. 3 - Natural Resource
Protection (Chapter 6)



NOTES

1. PRODUCT TO BE FILTREXX SILT SOXX OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
3. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
4. MESH CONTAINMENT MATERIAL SHOULD BE KNITTED PHOTODEGRADABLE OR BIODEGRADABLE MATERIAL, WITH OPENING SIZES BETWEEN 1/8" - 3/8".
5. COMPOST MEDIA SHOULD HAVE PARTICLE SIZE WHERE 99% < 2", 50% > 1/2".
6. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.

BMP PICTURE



* PICTURE AND DETAIL PROVIDED BY FILTREXX LAND IMPROVEMENT SYSTEMS
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-4
SILT SOXX *

SUBJECT

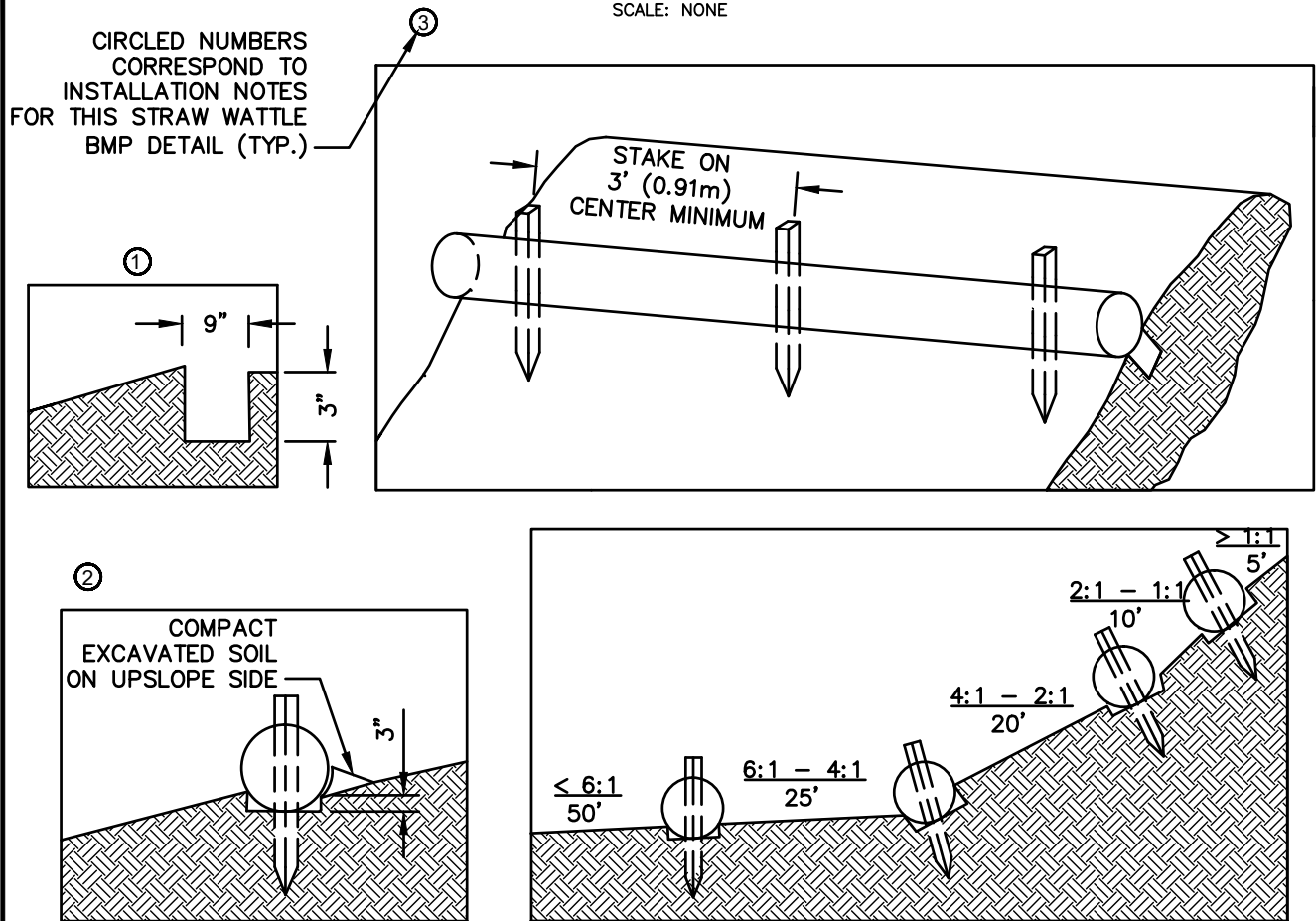
Access, Maintenance and Construction
Best Management Practices

Reference

EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP DETAIL

SCALE: NONE



NOTES:

1. PRODUCT TO BE TENSAR NORTH AMERICAN GREEN STRAW WATTLE OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. TYPICAL WATTLE SPACING BASED ON SLOPE GRADIENT. COORDINATE SPACING AND LOCATION WITH NATIONAL GRID ENVIRONMENTAL SCIENTIST.
3. MINIMUM 12" DIAMETER WATTLES SHOULD BE USED FOR HIGHLY DISTURBED AREAS (I.E., HEAVILY USED ACCESS ROAD WITH ADJACENT WETLAND) AND MINIMUM 9-10" WATTLES SHOULD BE USED FOR LESS DISTURBED SOILS.

INSTALLATION NOTES:

1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP X 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" HARDWOOD STAKES EVERY 3-4' AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

* DETAIL AND PICTURE PROVIDED BY TENSAR NORTH AMERICAN GREEN
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

SEC-5
STRAW WATTLE * (1 OF 2)

SUBJECT

Access, Maintenance and Construction
Best Management Practices

Reference

EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP PICTURE



**STRAW WATTLE – SHALLOW SLOPE ($\leq 4:1$)
(ALTERNATE STAKING)**

ALTERNATE STAKING INSTALLATION NOTES:

1. ON SHALLOW SLOPES ($\leq 4:1$), STRAW WATTLE MAY BE SECURED WITH 18–24” HARDWOOD STAKES DRIVEN AGAINST THE SIDES OF THE WATTLE INSTEAD OF THROUGH. STAKES SHALL ALTERNATE SIDES, AND BE SPACED 3–4’ MAX.
2. TWINE SHALL BE TIED FROM STAKE TO STAKE, CRISS–CROSSING THE STRAW WATTLE. TIE TWINE TO STAKES BELOW THE HEIGHT OF THE WATTLE.

*** DETAIL AND PICTURE PROVIDED BY TENSAR NORTH AMERICAN GREEN
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.**

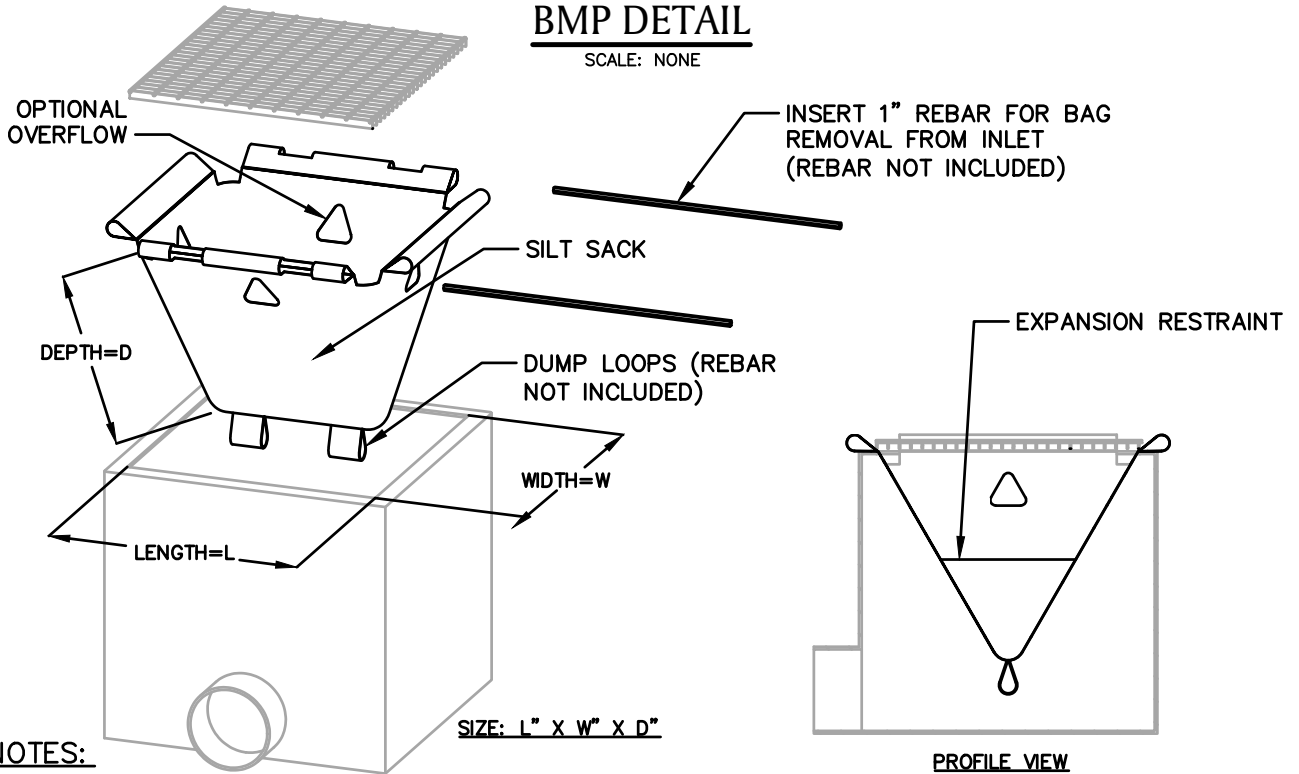
**SEC-5
STRAW WATTLE * (2 OF 2)**

SUBJECT
Access, Maintenance and Construction
Best Management Practices

Reference
EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP DETAIL

SCALE: NONE



NOTES:

1. PRODUCT TO BE SILT SACK OR APPROVED EQUAL BY NATIONAL GRID ENVIRONMENTAL SCIENTIST.
2. THE USE OF A SILT SACK OPTIONAL OVERFLOW AND OVERALL DIMENSIONS ARE TO BE COORDINATED WITH A NATIONAL GRID ENVIRONMENTAL SCIENTIST.

BMP PICTURE



* DETAIL PROVIDED BY ACF ENVIRONMENTAL
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
 PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
 VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

AA-20
 SILT SACK *

SUBJECT

Access, Maintenance and Construction
Best Management Practices

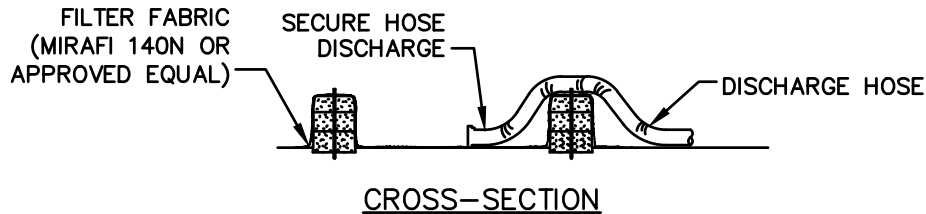
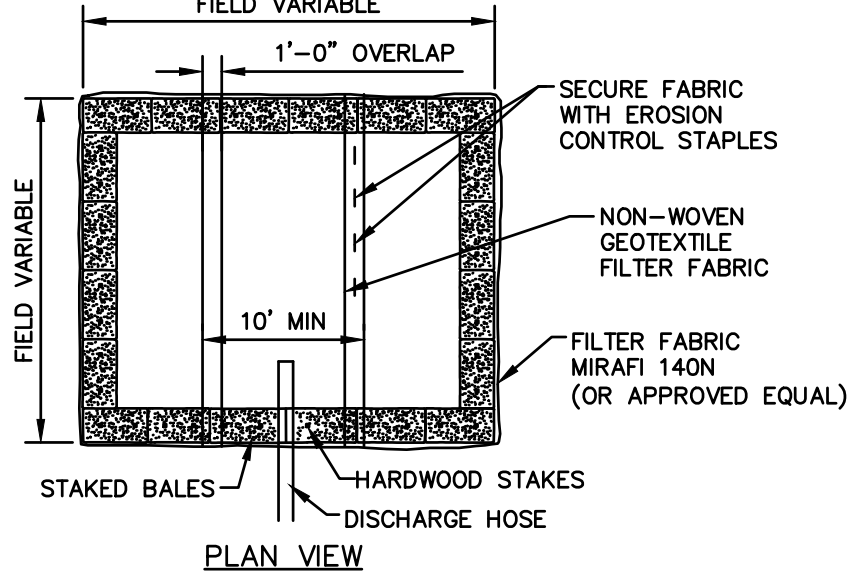
Reference

EP No. 3 - Natural Resource
Protection (Chapter 6)

BMP DETAIL

SCALE: NONE

FIELD VARIABLE



NOTES:

1. NUMBER OF BALES MAY VARY DEPENDING ON SITE CONDITIONS,
2. THE BASIN TO BE SIZED TO PREVENT DISCHARGE WATER FROM OVERTOPPING BASIN.
3. KEEP AS FAR FROM WETLANDS AS PRACTICAL.
4. CLEAN AND REMOVE AS SOON AS DEWATERING IS COMPLETE.

BMP PICTURE



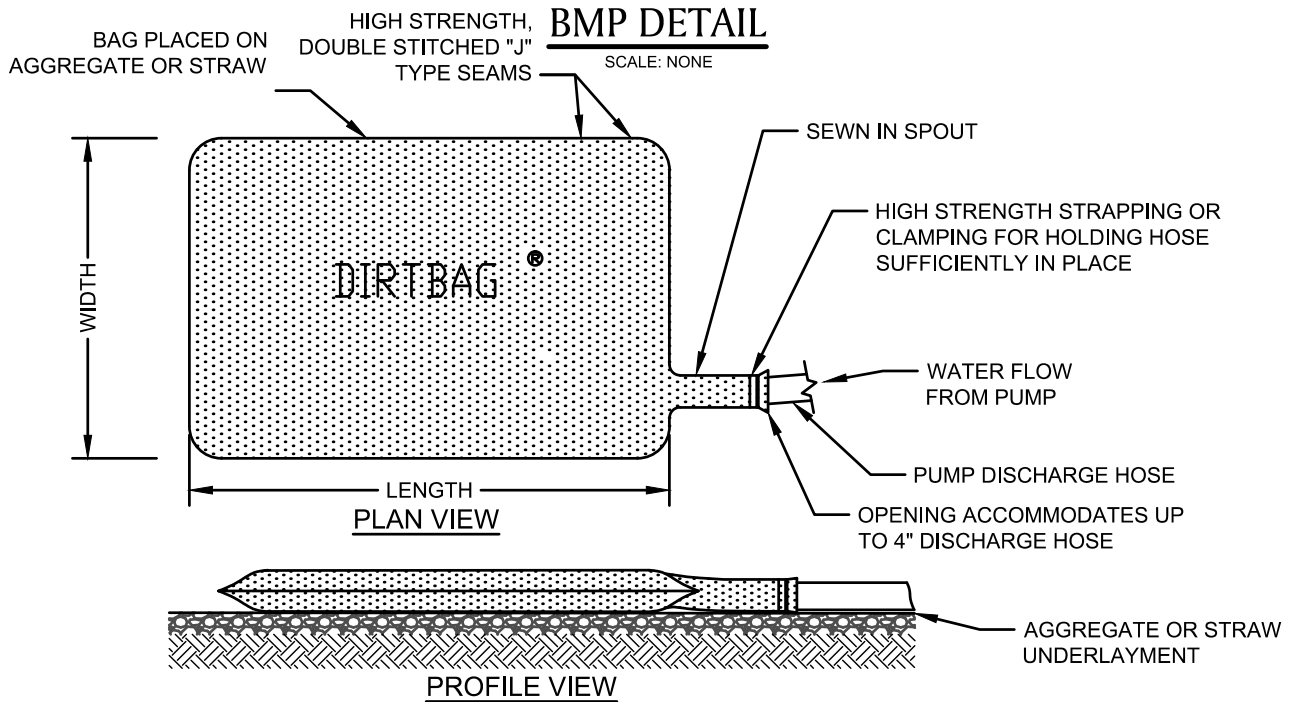
File: Dewat_Bas_Small.dwg

APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

AA-10
DEWATERING BASIN
(SMALL SCALE)

SUBJECT
Access, Maintenance and Construction
Best Management Practices

Reference
EP No. 3 - Natural Resource
Protection (Chapter 6)



NOTE:
ONCE PUMPING COMMENCES, THE DIRT BAG SHALL BE MONITORED FREQUENTLY TO ASSURE THAT THE CONNECTIONS ARE SECURELY FASTENED AND THE RATE OF WATER DELIVERY TO THE STRUCTURE IS LOW ENOUGH TO PREVENT UNFILTERED WATER FROM FLOWING FROM THE HOSE CONNECTIONS OR BAG.


BMP PICTURE



* PICTURE AND DETAIL PROVIDED BY ACF ENVIRONMENTAL
APPROVED BY: VICE PRESIDENT, ENVIRONMENTAL SERVICES
PRINTED COPIES ARE NOT DOCUMENT CONTROLLED. FOR LATEST AUTHORIZED
VERSION PLEASE REFER TO THE NATIONAL GRID ENVIRONMENTAL INFONET SITE.

AA-12
DIRTBAG *



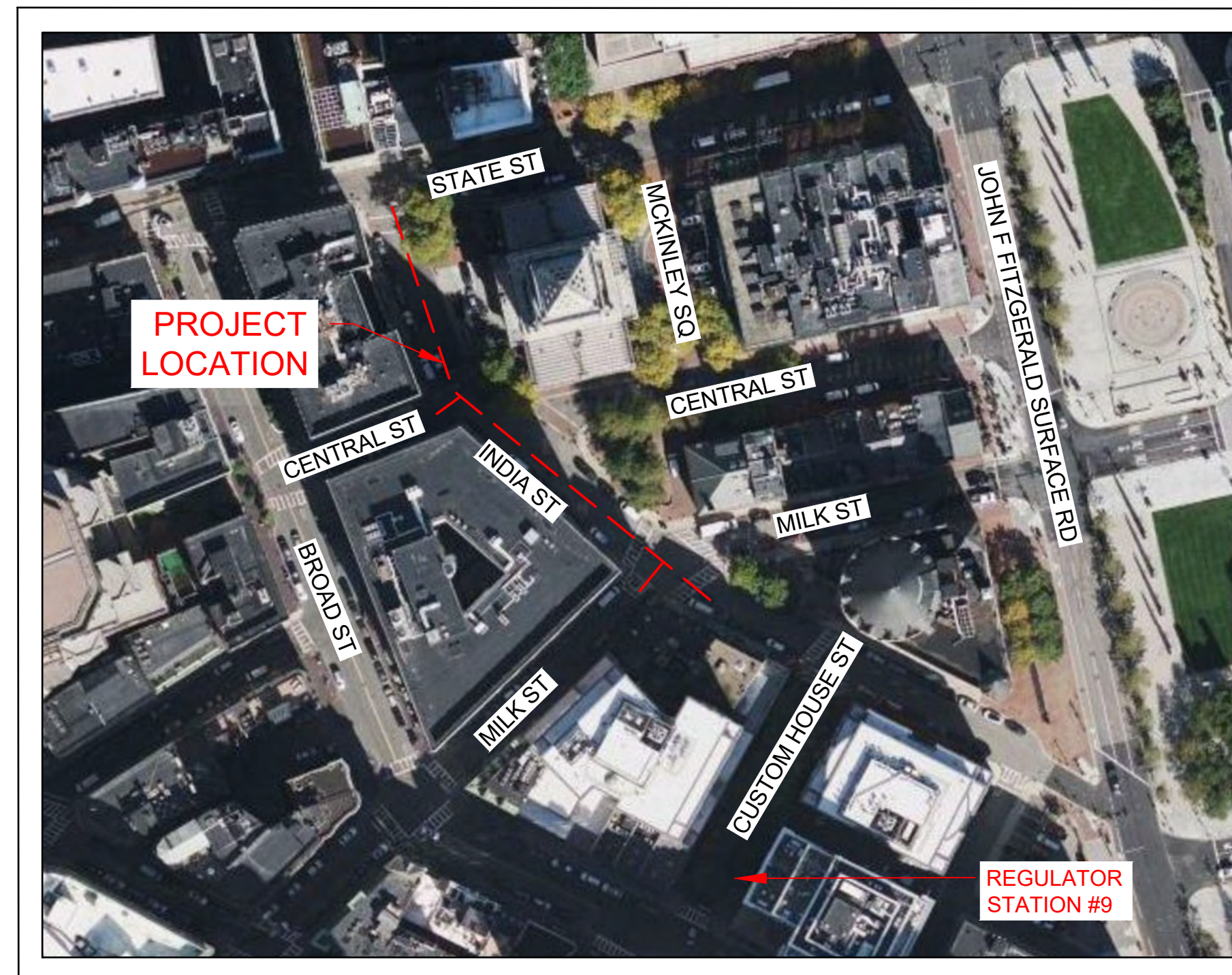
100% Recyclable 

www.tighebond.com

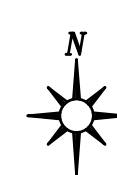
nationalgrid

9 - 35 INDIA STREET GAS MAIN REPLACEMENT 6" & 12" C.I. & 12" C.S. TO 8" & 12" C.S. (L.P.) (9 - 35) INDIA ST, STATE ST, CENTRAL ST, & MILK ST, BOSTON, MA W.O. NO.: 1474472 **PROJECT WITHIN 200' OF REGULATOR STATION #9**

PIPE TOTALS			
DIAMETER	MATERIAL	ABANDONED	INSTALLED
6"	CI	10 LF	--
8"	CS	--	10 LF
12"	CI	355 LF	--
12"	CS	60 LF	415 LF



INDEX OF SHEETS		
SHEET	NAME	TITLE
1	DDS-BOS-71220322 G-001	COVER - LOCATION MAP
2	DDS-BOS-71220322 G-002	CONSTRUCTION NOTES
3	DDS-BOS-71220322 G-003	CONSTRUCTION NOTES & BILL OF MATERIALS
4	DDS-BOS-71220322 C-001	OVERALL LAYOUT SHEET & MBTA DETAIL
5	DDS-BOS-71220322 C-101	TIE-IN & ABANDONMENT DETAILS
6	DDS-BOS-71220322 C-201	STANDARD DETAILS
7	DDS-BOS-71220322 C-202	STANDARD DETAILS
8	DDS-BOS-71220322 C-203	STANDARD DETAILS
9	DDS-BOS-71220322 C-204	STANDARD DETAILS
10	DDS-BOS-71220322 C-205	EXISTING REGULATOR FLOW DIAGRAM



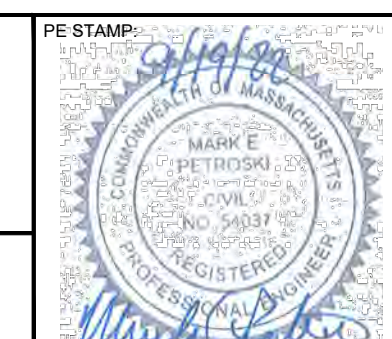
LOCATION MAP

LAT/LON: 42°21'31.5"N, 71°03'13.5"W
BOSTON, MA
SCALE: 1:100



THE DDS COMPANIES
45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

BOSTON GAS COMPANY
d/b/a
nationalgrid
40 SYLVAN ROAD
WALTHAM, MA 02451
IFC



NO.	DESCRIPTION	DATE	DR.BY	CK.BY	APP.BY
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET
GAS MAIN REPLACEMENT
INDIA ST, STATE ST, CENTRAL ST, & MILK ST
BOSTON, MA
COVER - LOCATION MAP

DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

PAGE 01 OF 10	
DRAWING NO.	SHEET NO.
G-001	01

*THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE

SCOPE OF WORK:

NATIONAL GRID WORK ORDER NUMBER: 1474472

PROJECT NAME AND LOCATION: 9-35 INDIA ST, BOSTON, MA

PROJECT SCOPE: AS PART OF THE CIRE101214 PROGRAM, LPP INTEGRITY MANAGEMENT RECOMMENDS THE RELAY OF:

- APRX 140 FEET OF 12 INCH, LP CAST IRON (1849), APRX 5 FEET OF 12 INCH, LP COATED STEEL (1987) – UBOS0321, APRX 50 FEET OF 12 INCH, LP COATED STEEL (1986) – MBOS0023, APRX 215 FEET OF 12 INCH, LP CAST IRON (1849) AND APRX 5 FEET OF 12 INCH, LP COATED STEEL (1988) – UBOS0542 WITH APRX 415 FEET OF 12 INCH, LP STEEL IN INDIA ST FROM THE EXST 12 INCH, LP COATED STEEL (1974) – UBOS0459 AT STATE ST TO THE EXST 12 INCH, LP COATED STEEL (1997) – MBOS0200 AT MILK ST
- APRX 10 FEET OF 6 INCH, LP CAST IRON (1924) WITH APRX 10 FEET OF 8 INCH, LP STEEL IN THE INTERSECTION OF INDIA ST AND MILK ST.

5 MAIN CONNECTIONS

GENERAL CONSTRUCTION:

- NO FIELD CHANGES SHALL BE MADE TO THIS PLAN WITHOUT APPROVAL OF ASSIGNED NATIONAL GRID PROJECT ENGINEER.
ENGINEER: JORGE DE LA CRUZ
PHONE: (781) 718-1957
EMAIL: JORGE.DELACRUZ@NATIONALGRID.COM
- NEW MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL TRENCH DETAIL INCLUDED IN THESE DRAWINGS, UNLESS NOTED OTHERWISE.
 - 36 INCHES OF COVER FROM FINAL GRADE WHERE PRACTICAL
 - STATE HIGHWAY MINIMUM COVER: 36 INCHES
 - DISTRIBUTION MAIN MINIMUM COVER: 24 INCHES
 - SAND PADDING IN ALL DIRECTIONS, 6 INCHES MINIMUM.
 - CAUTION TAPE SHALL BE INCLUDED ONE FOOT BELOW GRADE.
- SERVICES SHOULD BE INSTALLED WITH 24 INCHES OF COVER.
 - MINIMUM IN PUBLIC ROW: 18 INCHES
 - MINIMUM IN PRIVATE PROPERTY: 12 INCHES
 - SAND PADDING IN ALL DIRECTIONS, 6 INCHES MINIMUM.
 - CAUTION TAPE SHALL BE INCLUDED ONE FOOT BELOW GRADE.
- REFER TO CNST-6030 FOR SHALLOW MAINS. PRIOR TO INSTALLING GAS MAINS WITH LESS THAN 24 INCHES OF COVER, COMPLETE REQUEST FOR WAIVER FORM AND CONTACT GAS PIPELINE SAFETY & COMPLIANCE FOR APPROVAL:
 - JENNIFER GILLIS – (617) 594-5157 (MA EXCLUDING CAPE AND WEBSTER)
 - LIEN GAUTHIER – (617) 438-9069 (MA EXCLUDING CAPE AND WEBSTER)
 - IF A PROPOSED TOP TEE CONNECTION RESULTS IN A SHALLOW MAIN THAT CANNOT MEET THE WAIVER CRITERIA, A FULL TEE CONNECTION IS AN ACCEPTABLE ALTERNATIVE. A SPHERICAL TEE IS ONLY ACCEPTABLE WITH APPROVAL FROM NATIONAL GRID STRATEGIC ASSET AND SYSTEM PLANNING.
- ALL MAINS SHOULD BE INSTALLED WITH A CLEARANCE OF 12 INCHES FROM OTHER FACILITIES.
 - DISTRIBUTION MINIMUM CLEARANCE: 6 INCHES
 - APPROPRIATE PROTECTIVE MEASURES SHALL BE USED TO PROTECT THE GAS FACILITY IF MINIMUMS CANNOT BE ATTAINED. APPROVAL IS REQUIRED BY GAS SYSTEMS ENGINEERING.
- THE PIPE ALIGNMENT IS SHOWN FOR REFERENCE ONLY AS APPROXIMATELY 3 FEET FROM THE EXISTING MAIN (BASED ON AVAILABLE RECORD INFORMATION). THE ACTUAL ROUTE AND ALL VERTICAL AND HORIZONTAL OFFSETS ARE TO BE FIELD ROUTED WITHIN THE PUBLIC RIGHT-OF-WAY BASED ON THE ACTUAL LOCATION OF EXISTING UTILITIES. ADDITIONAL FITTINGS NOT SHOWN WILL BE REQUIRED.
 - ELBOWS SHOWN ARE ASSUMED TO BE 45 DEGREES IN MOST APPLICATIONS. 90 DEGREE ELBOWS MAY BE NEEDED BASED ON FIELD CONDITIONS.
- VALVES DEPICTED IN THE DESIGN ARE THE MINIMUM REQUIRED FOR SECTIONALIZING, ISOLATION, CRITICAL VALVES, AND/OR TO ACCOMMODATE TIE-INS. ADDITIONAL FULL PORT VALVES MAY BE ADDED TO ACCOMMODATE CONSTRUCTION.
 - VALVES FOR BRANCHES AT INTERSECTIONS SHOULD BE FIELD LOCATED JUST OUTSIDE OF THE INTERSECTION WHERE EASILY ACCESSIBLE, PRIOR TO THE FIRST SERVICE.
- ELECTROFUSION COUPLINGS MAY BE INTERCHANGED WITH BUTT FUSION WHERE APPLICABLE.
- TIE-IN LOCATIONS MAY VARY UP TO 100 FEET OF THE PROPOSED LOCATION TO ACCOMMODATE CONSTRUCTION, EXCEPT FOR WHEN THE FOLLOWING CONDITIONS APPLY:
 - REGULATOR STATION WITHIN THE SCOPE OF THE JOB OR WITHIN 200 FEET OF THE TIE-IN LOCATION.
 - CHANGE TO THE NUMBER OF CONNECTIONS (ADDITIONAL ADDED FROM AN INTERSECTION OR OTHERWISE).
 - MATERIAL/SIZE CHANGE AT NEW LOCATION.
- NOT ALL BYPASSES, GAUGES, PURGES AND OTHER MISCELLANEOUS FITTINGS ARE SHOWN. CONSTRUCTION SHALL INSTALL THESE FITTINGS AS NEEDED IN ACCORDANCE WITH THE APPROVED SOP.
- WHEN CONNECTING NEW 'DEAD' MAIN TO NEW 'DEAD' MAIN: AS LONG AS THE CONNECTION BRANCH SIZE SHOWN IN THE DRAWINGS CAN BE ACHIEVED, THE FOLLOWING CONNECTION TYPES ARE ACCEPTED AND INTERCHANGEABLE:
 - INLINE TEE
 - PLASTIC HIGH VOLUME TAPPING TEE (2" BRANCH SIZE OR LESS)
 - PLASTIC BRANCH SADDLE (WITH MAIN CUTTER SIZE SHOWN IN NATIONAL GRID POLICIES)
 - STEEL THREE-WAY TEE (WITH MAIN CUTTER SIZE SHOWN IN NATIONAL GRID POLICIES)
- THE LIVE MAIN CONNECTION DETAIL SHOWN IN THE DRAWINGS SHALL BE FOLLOWED. ANY CHANGES TO THE TIE IN CONNECTION TYPE SHALL BE APPROVED BY THE NATIONAL GRID ENGINEER PRIOR TO CONSTRUCTION.
- WHEN RELAYING A LOWER PRESSURE MAIN WITH A HIGHER PRESSURE MAIN, ALL SERVICES SHALL BE RELAYED OR INSERTED.
- PIPE AND FITTING QUANTITY DESCRIBED IN SCOPE MAY VARY FROM AMOUNTS SHOWN ON THE BILL OF MATERIALS TO ACCOMMODATE FIELD CONDITIONS AND CONSTRUCTION.
- CONTRACTOR TO REFER TO NATIONAL GRID SERVICE RECORD INFORMATION, ASSOCIATED CONSTRUCTION STANDARDS AND NATIONAL GRID INSTRUCTION FOR ALL SERVICE WORK WITHIN THE SCOPE OF LIMITS OF THIS PROJECT.
- ANY FITTINGS (SUCH AS BUT NOT LIMITED TO, PURGES, VENTS & GAUGES) WHICH ARE REPRESENTED ON THESE PLANS AND DETAILS WITHOUT AN ASSOCIATED PART ON THE BILL OF MATERIALS ARE TO BE SIZED AND SELECTED PER CURRENT NATIONAL GRID STANDARDS BY THE CONTRACTOR.
- THE CONTRACTOR SHALL CALL DIG-SAFE (DIAL 811) OR 888-344-7233 AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS AND HOLIDAYS ARE EXCLUDED.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES DEPICTED OR NOT DEPICTED ON THIS PLAN PRIOR TO COMMENCEMENT OF CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PHYSICALLY LOCATE ON-SITE UTILITIES THROUGH TEST PIT EXCAVATION OF SAID UTILITIES W/ PRIOR AUTHORIZATION FROM UTILITY OWNER.
- NOTIFY NATIONAL GRID I&R IF THE PROJECT IS WITHIN 200 FEET OF A REGULATOR STATION.
- DIMENSIONS SHOWN ILLUSTRATE THE INTENT OF MAIN PLACEMENT. SLIGHT VARIATIONS ARE EXPECTED. ANY SIGNIFICANT CHANGE NEEDS TO BE BROUGHT TO THE OWNERS (NATIONAL GRID) ATTENTION PRIOR TO PLACEMENT.

- CONTRACTOR TO VERIFY PRESSURE AND GAS FEED DIRECTION OF EXISTING MAINS, NEW MAINS, AND MAINS TO BE ABANDONED PRIOR TO ANY AND ALL TIE INS BEING PERFORMED.
- LOCATION OF ANY IDENTIFIED UNDERGROUND UTILITIES IS APPROXIMATE ONLY, AND IS NOT WARRANTED TO BE CORRECT. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR FOR SERVICE, SIZE, INVERT ELEVATIONS, LOCATION, ETC.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN DIG SAFE FIELD MARKS, ANY EXISTING PROPERTY LINE MONUMENTATION OR OTHER EXISTING SURVEY STAKES OR FIELD MARKS. THE CONTRACTOR SHALL REPLACE AT THEIR EXPENSE ANYTHING DISTURBED OR DESTROYED.
- THE CONTRACTOR SHALL COMPLETE MISCELLANEOUS WORK NOT SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS SUCH AS PAVEMENT PATCHING, TRENCH & EQUIPMENT BLOCKING, TREE TRIMMING, ETC.
- ANY SUBSURFACE UTILITIES, STRUCTURES AND/OR FIXED OBJECTS SHOWN AT, BELOW OR ABOVE GRADE SHOWN ON THESE PLANS HAVE BEEN PLACED BASED ON AVAILABLE RECORD MAPPING, AERIAL IMAGERY AND OTHER DESIGN RESOURCES. CONTRACTOR IS WARNED THAT EXACT OR APPROXIMATE LOCATION OF SUBSURFACE UTILITIES, STRUCTURES AND/OR FIXED OBJECTS SHOWN AT, BELOW OR ABOVE GRADE IN THE PROJECT AREA MAY DIFFER FROM THAT SHOWN OR MAY NOT BE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO PERFORM FIELD VERIFICATION PRIOR TO EXECUTING ANY WORK.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST NATIONAL GRID, APPLICABLE STATE DOT AND LOCAL MUNICIPAL STANDARDS.
- CONTRACTOR SHALL MAINTAIN ALL TRAFFIC IN ALL AREAS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL NECESSARY PRECAUTION FOR THE SAFETY OF THE PUBLIC SHALL BE TAKEN. ALL BARRIERS, WARNING LIGHTS AND OTHER DEVICES AND EQUIPMENT REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES SHALL BE MAINTAINED.
- CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO ALL OTHER EXISTING UTILITIES. DAMAGED UTILITIES SHALL BE IMMEDIATELY REPAIRED BY CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR MAY INSTALL ADDITIONAL VALVES NOT SHOWN IN THE PLANS IF DEEMED NECESSARY IN THE FIELD. NEW VALVES ASSOCIATED WITH TIE INS (SEE DETAILS ON SHEET 5) MUST BE INSTALLED PER THE DETAIL. FINAL LOCATION OF THE NEW VALVES IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. ANY SIGNIFICANT CHANGE MUST BE BROUGHT TO THE OWNERS (NATIONAL GRID) ATTENTION PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUAINTING WITH THE CONDITIONS FOR THE SITE AND FOR ESTIMATING PROPERLY THE DIFFICULTY AND COST TO SUCCESSFULLY PERFORM THE WORK.
- NATIONAL GRID RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO DETERMINE THE CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OF THIS PROJECT, AS INTENDED AND INTERPRETED BY NATIONAL GRID.

DESIGN CRITERIA:

- DESIGN IN ACCORDANCE WITH THE FOLLOWING:
 - ENGO2001: DESIGN OF GAS SERVICES
 - ENGO4001: DESIGN OF DISTRIBUTION MAINS
 - ENGO4010: DESIGN REQUIREMENTS FOR INSTALLATION OF CASINGS
- PROPOSED PIPING:
 - DESIGN CLASS LOCATION: 4
 - NOMINAL SIZE: 8 & 12 INCH
 - MATERIAL: COATED STEEL
 - MAOP: L.P.
- PIPE SIZE DETERMINED BY NATIONAL GRID STRATEGIC ASSET AND SYSTEM PLANNING



SEQUENCE OF CONSTRUCTION:

- CONTRACTOR SHALL CALL DIGSAFE (DIAL 811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS, AND HOLIDAYS ARE EXCLUDED.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES DEPICTED OR NOT DEPICTED ON THIS DESIGN PRIOR TO CONSTRUCTION.
- NOTIFY NATIONAL GRID I&R IF THE PROJECT IS WITHIN 200 FEET OF A REGULATOR STATION.
- INSTALL MAIN AS INDICATED IN SCOPE OF WORK.
- PRESSURE TEST (SEE PRESSURE TESTING SECTION).
- MAKE CONNECTION IN DETAIL A.
- PURGE NEW MAIN INTO SERVICE.
- TRANSFER/RELAY SERVICES TO NEW MAIN.
- COMPLETE CONNECTIONS IN DETAILS B, C, & D.
- COMPLETE CONNECTION IN DETAIL E, OLD MAIN GO DEAD.
- PURGE OLD MAIN OUT OF SERVICE AND ABANDON.
- PERFORM RESTORATION.

CODES & STANDARDS

- WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL CODES IN ADDITION TO NATIONAL GRID GAS POLICIES AND WORK METHODS. WHERE ANY CONFLICTS OF CODES, STANDARDS AND REGULATIONS MAY EXIST, THE MORE STRINGENT CODE, STANDARD, OR REGULATION SHALL APPLY.
- ALL REFERENCES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT REVISION AVAILABLE AT THE TIME OF CONSTRUCTION.
- FEDERAL & STATE:
 - TITLE 49: PART 192 TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS
 - 220 CMR: DEPARTMENT OF PUBLIC UTILITIES
100.00 – 113.00: MASSACHUSETTS GAS DISTRIBUTION CODE
 - AMERICAN SOCIETY OF MECHANICAL ENGINEERS
B31.8: GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS
 - 248 CMR 4-7: MA FUEL GAS CODE
- CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH NATIONAL GRID GAS POLICIES AND WORK METHODS, INCLUDING BUT NOT LIMITED TO:
 - CNST01003: BACKFILL AND RESTORATION
 - CNST01005: PREPARATION OF GAS FACILITY HISTORICAL RECORDS
 - CNST01006: COMMERCIALLY AVAILABLE SHORING SYSTEMS
 - CNST02014: ENCAPSULATING CAST IRON JOINTS
 - CNST03001: SQUEEZE-OFF OPERATIONS
 - CNST03002: STOP-OFF OPERATIONS ON LOW PRESSURE MAINS
 - CNST03005: PURGING REQUIREMENTS FOR GAS PIPELINES
 - CNST03006: PURGING OPERATIONS – DIRECT DISPLACEMENT
 - CNST03007: PURGING OPERATIONS – COMPLETE INERT FILL
 - CNST03008: PURGING OPERATIONS – SLUG METHOD
 - CNST03014: STOP OFF OPERATIONS FOR KLEISS EQUIPMENT
 - CNST04005: INSTALLING STEEL DISTRIBUTION MAINS
 - CNST04007: FIELD COLD BENDING OF LINE PIPE
 - CNST04008: INSTALLING PLASTIC MAINS
 - CNST04011: ABANDONMENT OF MAINS
 - CNST04012: GROUTING ABANDONED PIPELINES
 - CNST04030: RAISING MAIN AND SERVICE GATE BOXES
 - CNST05001: JOINING OF PLASTIC PIPE
 - CNST5010: GENERAL CONSTRUCTION REQUIREMENTS AND PIPE HANDLING
 - DAMO1011: EXCAVATION AND EXCAVATION NOTIFICATION REQUIREMENTS FOR UNDERGROUND FACILITIES FOR MASSACHUSETTS AND RHODE ISLAND
 - DAMO1015: LOCATE AND MARK-OUT REQUIREMENTS FOR UNDERGROUND GAS FACILITIES
 - DAMO1016: LOCATE AND MARK-OUT OF UNDERGROUND FACILITIES
 - GCON02001: SYSTEM OPERATING PROCEDURE (SOP)
 - GEN01100: OPERATOR QUALIFICATION PLAN
 - GEN03002: PROCESSING GAS MAIN AND NEW SERVICE WORK PACKAGES
 - GEN03004: CHANGE CONTROL PROCEDURE FOR STANDARD CONSTRUCTION PROJECTS
 - INR06002: SUPPLEMENTAL ODORIZATION FOR NEW PIPING
 - NOTIFY I&R FOR PROJECTS IN EXCESS OF 2500 FEET. ODOR MONITORING AND/OR SUPPLEMENTAL ODORIZATION MAY BE REQUIRED
 - MAIN5030: INSTALLATION OF POLYETHYLENE PIPE
 - MECH5010: JOINTS OTHER THAN WELDED
 - AA.030018-CS: SPECIFICATION AND HANDLING OF TRAFFIC PLATES
 - AB.CNST01001: HORIZONTAL DIRECTIONAL DRILLING
 - AC.CNST03011: NO-INTERRUPT SERVICE TRANSFER
 - AD.CNST6061: TRACER WIRE INSTALLATIONS FOR PLASTIC MAINS AND SERVICES
 - AE.MECH6010: CONNECTION OF DISSIMILAR POLYETHYLENE PLASTIC PIPE WITH ELECTROFUSION OR MECHANICAL COUPLING
 - AF.CS-CNST002: TYPICAL UTILITY CROSSING AND TRENCH GUIDELINES
- SERVICE SPECIFIC CONSTRUCTION STANDARDS, GAS POLICIES AND WORK METHODS:
 - CMS03002: CUSTOMER METER AND SERVICE REGULATOR DESIGN AND INSTALLATION POLICY
 - CMS04002: PURGING PROCEDURES FOR CUSTOMER METER SERVICES
 - CNST03011: NO-INTERRUPT SERVICE TRANSFER
 - CNST06002: INSTALLING DISTRIBUTION SERVICES
 - CNST06003: INSTALLATION & MAINTENANCE POLICY FOR CURB VALVES ON SERVICE LINES WITH INSTALLED METER CAPACITIES OVER 1,000 SCFH THAT DON'T HAVE EXCESS FLOW VALVES
 - CNST06009: METER/SERVICE RELOCATION GUIDELINE
 - CNST06020: COMPLETION AND PROCESSING OF GAS SERVICE RECORD CARDS
 - CNST06030: NOTIFICATION OF CUSTOMERS INVOLVED IN THE INTERRUPTION OF GAS SERVICE
 - CS-SERV001: TYPICAL 1/2" SERVICE OUTSIDE SETS
 - CS-SERV002: TYPICAL 1" SERVICE OUTSIDE SETS
 - CS-SERV003: TYPICAL 1-1/4" SERVICE OUTSIDE SETS
 - CS-SERV004: TYPICAL 2" SERVICE
 - CS-SERV005: EXCESS FLOW VALVE REQUIREMENTS ON HP SERVICES
 - CS-SERV009: TYPICAL 1/2" SERVICE INSIDE SETS
 - CS-SERV010: TYPICAL 1" SERVICE INSIDE SETS
 - HTAP-6010: NO-INTERRUPT 1 INCH CTS AND 1-1/4 INCH CTS SERVICE TRANSFER (NIST) LP TO 60 PSIG MAINS
 - SERV-5075: RELOCATION OF METER SET ASSEMBLIES INSIDE TO OUTSIDE
 - SERV6076: 1-1/4" LP PLASTIC SERVICE WITH 1 AL-250 TC METER
 - SERV6077: 1-1/4" CTS LP PLASTIC INSERT WITH 1 AL-250 TC EQUIV. METER INSIDE
 - SERV-6185: HOT TAPPING MD BRANCH SADDLES OFF 4IN – 12IN 60 PSIG MAOP LIVE PLASTIC GAS MAIN USING MCELROY HOT TAPPING TOOL
 - VALV6110: 1/2 INCH – 3 INCH POLYETHYLENE GAS SERVICE VALVE INSTALLATION
- SEE TIE IN DETAILS FOR APPLICABLE MAIN CONNECTION REFERENCES.
- SEE BILL OF MATERIAL FOR MATERIAL SPECIFICATION, STANDARD AND/OR APPLICABLE NATIONAL GRID "FITS" REFERENCE.
 - FOR THIS PROJECT, GRADE B, X42, X52 AND EQUIVALENT ARE ACCEPTABLE STEEL MATERIAL STRENGTHS IF APPLICABLE. ALTERNATES TO THE BOM ARE ALLOWED WITHIN THIS RANGE BASED ON MATERIAL AVAILABILITY.

***THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE**

 <p>45 HENDRIX ROAD WEST HENRIETTA, NY 14586 PHONE (585) 359-7540 FAX (585) 359-7541</p>	BOSTON GAS COMPANY d/b/a nationalgrid 40 SYLVAN ROAD WALTHAM, MA 02451 IFC	PE STAMP 	9-35 INDIA STREET GAS MAIN REPLACEMENT INDIA ST, STATE ST, CENTRAL ST, & MILK ST BOSTON, MA				PAGE 02 OF 10	
	CONSTRUCTION NOTES			DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.
			22"x34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472
			NO.	DESCRIPTION	DATE	DR.BY	CK.BY	APP.BY
			E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP
			D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP
			C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
			B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
			A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

DRAWING NO.

G-002

SHEET NO.

02

PRESSURE TESTING REQUIREMENTS:

- PRESSURE TEST ALL DISTRIBUTION PIPING IN ACCORDANCE WITH:
 - CNST04003: PRESSURE TESTING MAINS OPERATING BELOW 125 PSIG
 - TEST PRESSURE (MINIMUM): 90 PSIG
 - TEST DURATION BASED ON LENGTH AND DIAMETER IN ACCORDANCE WITH TABLE 1 OF CNST04003.
 - TEST MEDIUM: AIR AND/OR NITROGEN
- PRESSURE TEST SERVICES IN ACCORDANCE WITH:
 - CNST06008: PRESSURE TESTING SERVICE LINES

WELDING:

- NATIONAL GRID WELDING POLICIES AND PROCEDURES INCLUDE:
 - CNST05002: WELDING POLICY
 - CNST05003: PIPE WELDING SAFETY
 - CNST05005: WELDING PROCEDURE SPECIFICATIONS
 - MS-030: WELDING FILLER MATERIALS
- PRIOR TO THE START OF ANY WORK THE CONTRACTOR SHALL SUBMIT WELDER CERTIFICATION DOCUMENTS FOR EACH OF THE WELDERS EMPLOYED ON THIS PROJECT.
- WELDING PROCEDURE SPECIFICATIONS REQUIRED:
 - BUTT WELDS (GROOVE): WPS-SMAW-E6010/7010 (LATEST REVISION)
 - FILLET WELDS (BRANCH): WPS-SMAW-E6010/7010 (LATEST REVISION)
- 10% (AT LEAST 1) OF WELDS SHALL BE SUBJECT TO NON-DESTRUCTIVE EXAMINATION (NDE):
 - BUTT WELDS 2-INCH AND GREATER: 10% RADIOGRAPH
 - BUTT WELDS < 2-INCHES: 10% MAGNETIC PARTICLE
 - FILLET WELDS: 10% MAGNETIC PARTICLE
- NDE AND WELD MAP SHALL BE PROVIDED BY SKYTESTING.
- SKYTESTING SCHEDULING CONTACT:

WILLIAM (BILL) CLARK
CELL: 704-858-7794
EMAIL: WCLARK@SKYTESTING.COM

CATHODIC PROTECTION:

- IF EXISTING TEST STATIONS, WIRES, AND/OR MAGNESIUM ANODES ARE DISTURBED OR DAMAGED, NOTIFY THE NATIONAL GRID CORROSION DEPARTMENT:

DAVE HALNEN (781) 379-7831 FOR SUPERVISOR ISSUES
ALANNA GRONDINE (339) 225-5378 FOR ENGINEERING ISSUES
ALLISIA APINIAN-MARGIOS (781) 296-7569 FOR MANAGEMENT ISSUES
- 24 HOUR NOTICE IS REQUIRED PRIOR TO INSTALLATION OF INSULATED FITTINGS TO ALLOW FOR ACCEPTANCE TESTING.
- NATIONAL GRID CORROSION GAS POLICIES AND WORK METHODS INCLUDE:
 - COR01100: CORROSION DESIGN CRITERIA
 - COR02001: APPLICATION OF COATING SYSTEMS
 - COR02020: INSPECTING EXPOSED STEEL PIPE FOR CORROSION
 - COR02021: INSPECTING EXPOSED CAST OR DUCTILE PIPING FOR GRAPHITIZATION
 - COR03001: TESTING OF PIPE COATING (JEEP TESTING)
 - COR04001: INSTALLATION OF MAGNESIUM ANODES
 - COR04003: INSTALLATION OF TEST STATIONS FOR CATHODIC PROTECTION
 - COR04004: INSTALLATION OF WIRE CONNECTIONS
 - COR04005: INSTALLATION OF INSULATING JOINTS FOR CATHODIC PROTECTION
 - 030031-CS: FACILITY COATING GUIDE
 - 030026-CS: INSTALLATION OF TEST STATIONS FOR CATHODIC PROTECTION
 - 030036-CS: INSTALLING WIRE CONNECTIONS
- CORROSION DESIGN:
 - SEE DETAILS A, B, C, & E ON SHEET 05:
 - INSTALL AN INSULATED COUPLING, A STEEL SPOOL PIECE AND A SECOND INSULATED COUPLING BETWEEN THE EXISTING COATED STEEL MAIN AND THE PROPOSED COATED STEEL MAIN. INSTALL A 6-WIRE TEST STATION ACROSS THE INSULATORS. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
 - SEE DETAIL D ON SHEET 05:
 - INSTALL A 2-WIRE TEST STATION TO THE PROPOSED COATED STEEL MAIN AT THE COATED STEEL/PLASTIC INTERFACE. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
- STEEL PIPE, FITTINGS, VALVES AND OTHER CARBON STEEL COMPONENTS TO BE BURIED WHICH ARE NOT FACTORY COATED FOR BURIED SERVICE SHALL BE FIELD COATED.

ENVIRONMENTAL:

- WORK SHALL CONFORM TO THE NATIONAL GRID ENVIRONMENTAL POLICY.
- NATIONAL GRID ENVIRONMENTAL CONTACT:

NAME: JAIME WALKER
PHONE: (978) 551-1156
EMAIL: JAIME.WALKER@NATIONALGRID.COM
- CONTRACTOR SHALL REVIEW THE PROJECT WORK ORDER PACKAGE FOR ENVIRONMENTAL GUIDANCE FORMS, FOR EXAMPLE EG-301, FOR THE RESPECTIVE STATE.
- WHEN SOILS OR LIQUIDS ARE ENCOUNTERED THAT ARE BELIEVED TO BE CONTAMINATED WITH OIL AND/OR HAZARDOUS MATERIAL, EXCAVATION WORK SHALL BE HALTED AND FIELD PERSONNEL SHALL NOTIFY THEIR IMMEDIATE SUPERVISOR.
- NO EXCAVATED SOIL THAT IS CONTAMINATED SHALL LEAVE THE WORK SITE UNTIL ENVIRONMENTAL HAS MADE A DETERMINATION FOR ITS PROPER DISPOSAL.
- NATIONAL GRID ENVIRONMENT POLICIES AND PROCEDURES INCLUDE:
 - SHE02001: HANDLING CONTAMINATED MATERIALS AND PIPING
 - SHE02002: REMOVING MERCURY REGULATORS AND DEVICES
 - SHE02003: ENCOUNTERING CONTAMINATION WHILE EXCAVATING
 - EG303-NE: BEST MANAGEMENT PRACTICES
 - EG140: USED GAS PIPE MANAGEMENT
- ENVIRONMENTAL REQUIREMENTS:
 - PROPOSED WORK LOCATED WITHIN 100 FEET OF WETLANDS AND/OR BODIES OF WATER / WITHIN 200 FEET OF A RIVER OR A STREAM (*25 FEET IN BOSTON, BROCKTON, CAMBRIDGE, CHELSEA, EVERETT, FALL RIVER, LAWRENCE, LOWELL, MALDEN, NEW BEDFORD, SOMERVILLE, SPRINGFIELD, WINTHROP, OR WORCESTER) / WITHIN A FLOODPLAIN.

SAFETY:

- WORK SHALL CONFORM TO THE NATIONAL GRID EMPLOYEE SAFETY HANDBOOK AND OSHA REQUIREMENTS.
- REQUIRED PPE SHALL BE WORN AND UTILIZED IN ACCORDANCE WITH THE CURRENT NATIONAL GRID SAFETY POLICY.
- A NATIONAL GRID APPROVED CONTRACTOR HEALTH AND SAFETY PLAN (HASP) IS REQUIRED PRIOR TO CONSTRUCTION.
- CONSTRUCTION SIGNING, DRUMS, BARRICADES, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) PART VI AND SHALL BE MAINTAINED BY THE CONTRACTOR.
- NATIONAL GRID SAFETY PROCEDURES COVER THE FOLLOWING CATEGORIES:
 - ADMINISTRATIVE; B- INSPECTIONS; C- WALKING WORKING SURFACES; D- MEANS OF EGRESS; E- MATERIAL HANDLING AND STORAGE; F- TOXIC AND HAZARDOUS SUBSTANCES; G- HAZARDOUS MATERIALS; H- PERSONAL PROTECTIVE EQUIPMENT; I- GENERAL ENVIRONMENTAL CONTROLS, J- ACCIDENT INVESTIGATION; K- MACHINERY AND GUARDING; L- WELDING/CUTTING/BRAZING; M- EXCAVATIONS; N- CONTRACTORS; FIRE PROTECTION; Q- FLEET AND ROADWAY SAFETY
- NATIONAL GRID SAFETY POLICIES AND PROCEDURES INCLUDE:
 - SHE01001: GENERAL SAFETY REQUIREMENTS
 - SHE01002: SUPPLIED-AIR RESPIRATORS
 - SHE01003: USING AND MAINTAINING PORTABLE GAS MONITORS
 - SHE01004: USING AND MAINTAINING FLAME IONIZATION UNITS
 - SHE01005: DISSIPATING STATIC ELECTRICAL CHARGES ON PLASTIC PIPE
 - SHE01006: ENTERING GAS UTILITY VAULTS
 - SHE01008: USING AND MAINTAINING THE GAS EXPLORER
 - SHE01009: DISSIPATING STATIC ELECTRICAL CHARGES ON PLASTIC PIPE
 - SHE01010: THE APPLICATION OF FORMAL PROCESS SAFETY ASSESSMENTS TO HIGHER-RISK GAS ACTIVITIES PERFORMED IN THE FIELD
- JOB BRIEFINGS, AT A MINIMUM, SHALL BE CONDUCTED BEFORE THE START OF THE FIRST JOB ON EACH DAY OR SHIFT. ADDITIONAL BRIEFINGS MAY BE REQUIRED AFTER EXTENDED WORK BREAKS.
- ANY AND ALL WORKERS THAT HAVE ANY POTENTIAL TO COME INTO CONTACT WITH SOIL AND/OR GROUNDWATER MUST HAVE UP-TO-DATE OSHA 40-HOUR HAZWOPER TRAINING. COPIES OF OSHA CERTIFICATES/TRAINING REFRESHERS SHALL BE PROVIDED TO NATIONAL GRID FOR REVIEW PRIOR TO THE START OF WORK.

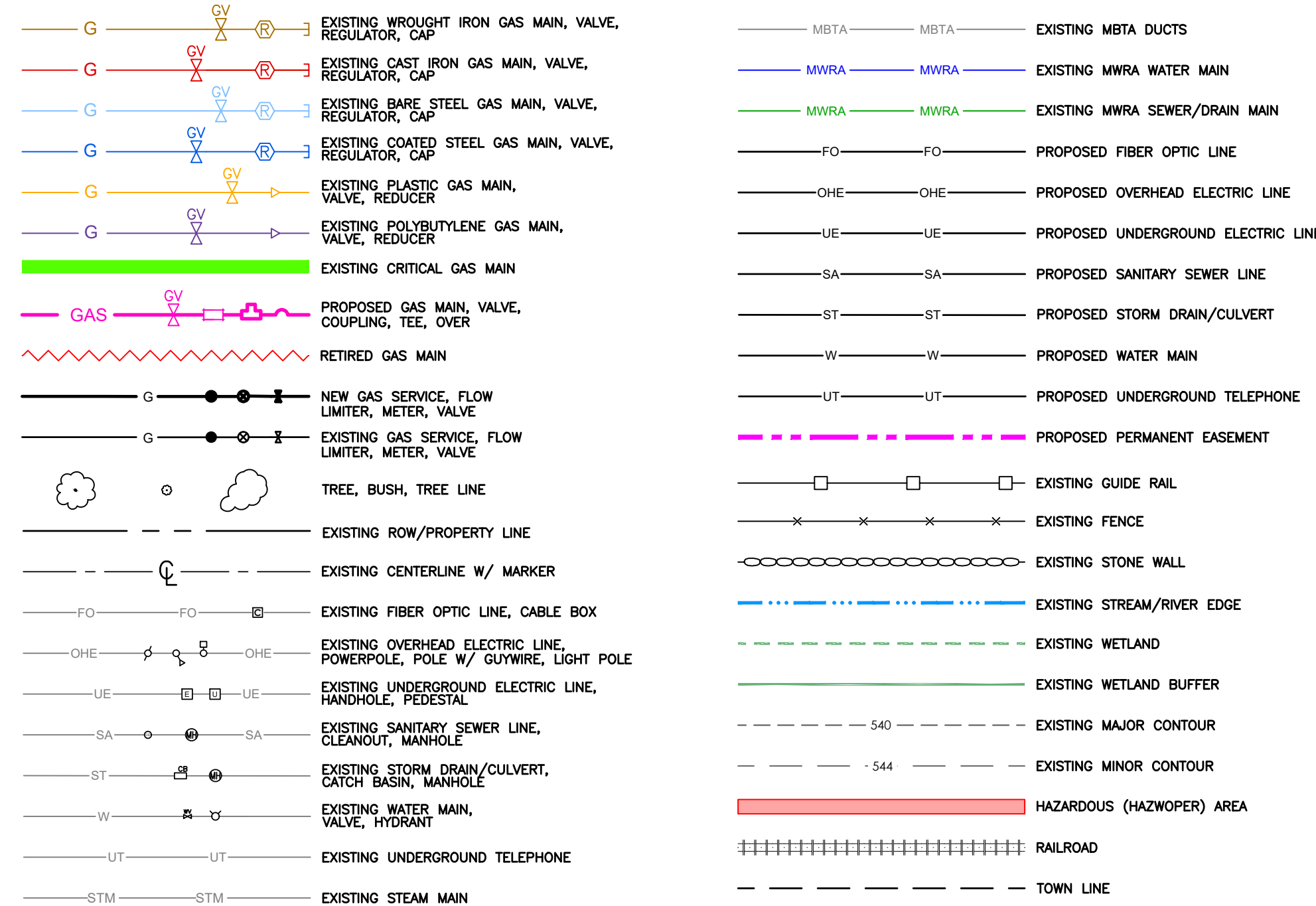
OTHER PERMITTING REQUIREMENTS:

- CITY OF BOSTON STREET OPENING PERMIT
- TRAFFIC MANAGEMENT PLAN (TMP) (TO BE COMPLETED BY FEENEY BROTHERS)
- MBTA PERMIT
- ENVIRONMENTAL PERMIT AND/OR THE USE OF ENVIRONMENTAL BMPs MAY BE REQUIRED.

REFERENCE DRAWINGS:

- LOCATION OF IDENTIFIED UNDERGROUND UTILITIES ARE AN APPROXIMATE BASED ON AVAILABLE RECORD AND FIELD INFORMATION IN ACCORDANCE WITH CI/ASCE 38-02. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT IDENTIFIED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR FOR SERVICE, SIZE, INVERT ELEVATIONS, LOCATIONS, ETC.

LEGEND



BILL OF MATERIALS						
ITEM	QTY	UOM	DESCRIPTION	SIZE (IN.)	NATIONAL GRID REFERENC	SAP ID NUMBER
1	10	FT	PIPE, SDR 11.5, MDPE, 4.50 IN. O.D. X .395 IN. WALL THICKNESS, 40 FT LENGTHS	4	120020-MS	9340857
2	10	FT	PIPE, CARBON STEEL, SCH 40, 0.237 IN. WALL, GRADE X 42. PRITEC WRAPPED SPECIAL RATIO WITH 15/60	4	120020-MS	9322665
3	10	FT	PIPE, COATED STEEL, SCH 40, 0.280 IN. WALL, API-5L GRADE B PSL-1, 40 FT LENGTHS	6	120020-MS	9340726
4*	40	FT	PIPE, CARBON STEEL, SCH 40, 0.322 IN WALL, API-5L GRADE B PSL-2, 40 FT LENGTHS	8	120020-MS	9340825
5*	440	FT	PIPE, CARBON STEEL, SCH 40 0.375 IN WALL, API 5L X42 PSL-2, 40 FT LENGTHS	12	120020-MS	9340771
6	1	EA	CAP, BUTT FUSION, MDPE	4	120026-MS	9339534
7	1	EA	CAP, ELECTROFUSION, HDPE	4	120025-MS	9393582
8	2	EA	CAP, LINE, VENTED, SELF RESTRAINING BOLTED, COMPRESSION, FOR STEEL, CONDUCTIVE, 5IN Lx0.250IN THK MIDDLE RING	6	FITS6014	9314880
9	2	EA	CAP, LINE, VENTED, SELF RESTRAINING BOLTED, COMPRESSION, FOR STEEL, CONDUCTIVE, 5IN Lx0.250IN THK MIDDLE RING	12	FITS6014	9315212
10	1	EA	COUPLING, ELECTROFUSION, BLACK, HDPE	4	120025-MS	9314593
11	1	EA	COUPLING, COMPRESSION, RESTRAINING, INSULATED, BOLTED, STEEL X STEEL/PE	4	FITS6025	9314427
12	1	EA	STIFFENER, INSERT, METAL, FOR SDR 11.5 PIPE	4	FITS6025	9340106
13	4	EA	COUPLING, COMPRESSION, RESTRAINING, INSULATED, BOLTED, STEEL X STEEL/PE	6	FITS6025	9314426
14	4	EA	COUPLING, COMPRESSION, RESTRAINING, INSULATED, BOLTED, STEEL X STEEL/PE	12	FITS6025	9307629
15	1	EA	ELBOW, WELD, 90 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.237 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	4	120020-MS	9315385
16	2	EA	ELBOW, WELD, 45 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.280 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	6	120020-MS	9308618
17*	3	EA	ELBOW, WELD, 45 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.322 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	8	120020-MS	9307720
18*	9	EA	ELBOW, WELD, 45 DEGREE, LONG RADIUS, STEEL, STANDARD WALL 0.375 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	12	120020-MS	9308373
19*	2	EA	TEE, WELD, STEEL, STANDARD WEIGHT, STANDARD WALL 0.375 IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	12	120020-MS	9315875
20*	1	EA	TEE, WELD, STEEL, STANDARD WEIGHT, STANDARD WALL 0.375IN X 0.322IN, PER ANSI B16.9, ASTM A-234, GRADE WPB	12X12X8	120020-MS	9315877
21	1	EA	REDUCER, STEEL, WELD, CONCENTRIC, STANDARD WALL 0.322 IN X 0.237 IN, PER ASTM A-234, GRADE WPB	8X4	120020-MS	9315725
22	2	EA	REDUCER, STEEL, WELD, CONCENTRIC, STANDARD WALL 0.375 IN X 0.280 IN, PER ASTM A-234, GRADE WPB	12X6	120020-MS	9315744
23	1	EA	VALVE, BALL, DELTA, FIG 55, FULL PORT, WE X WE	8	VALV6010	9323331
24	1	EA	VALVE BOX FOR 8" CS FULL PORT VALVE	8	VALV6010	9307586
25	4	EA	VALVE, BALL, DELTA, FIG 55, FULL PORT, WE X WE	12	VALV6010	9341948
26	4	EA	VALVE BOX FOR 12" CS FULL PORT VALVE	12	VALV6010	9307586
27	8	EA	FITTING, SHORTSTOPP, WELD, CONTOURED BASE INCLUDES THREADED COMPLETION PLUG AND THREADED CAP	1 1/2	FITS6055	9382855
28	1	EA	FITTING, SHORTSTOPP, WELD, CONTOURED BASE INCLUDES THREADED COMPLETION PLUG AND THREADED CAP	2	FITS6055	9341087
29	8	EA	FITTING, SHORTSTOPP, WELD, CONTOURED BASE INCLUDES THREADED COMPLETION PLUG AND THREADED CAP	3	FITS6055	9382856
30	4	EA	SADDLE, FOR CAST IRON MAIN, SMITH BLAIR 310	12X4	CS-FIT014	9308283
31	4	EA	PLUG, SCREW, MALLEABLE IRON, SQUARE HEAD, STANDARD, THREADED FITTINGS	4	9308743	9308743
32	1	EA	TAPE, YELLOW CAUTION, GAS MAIN, 1000' ROLL	6	CNST6061	9341904
33	10	FT	WIRE, TRACER, DIRECT BURY USE		CNST6060	9315005
34	5	EA	9X9 TEST STATION BOX	9X9	030026-CS	9339391
35	5	EA	TEST STATION BOX COVER	9	030026-CS	9339797
36	20	EA	ANODE, MAGNESIUM, 17LB, HIGH POTENTIAL	30	120004-MS	9311183

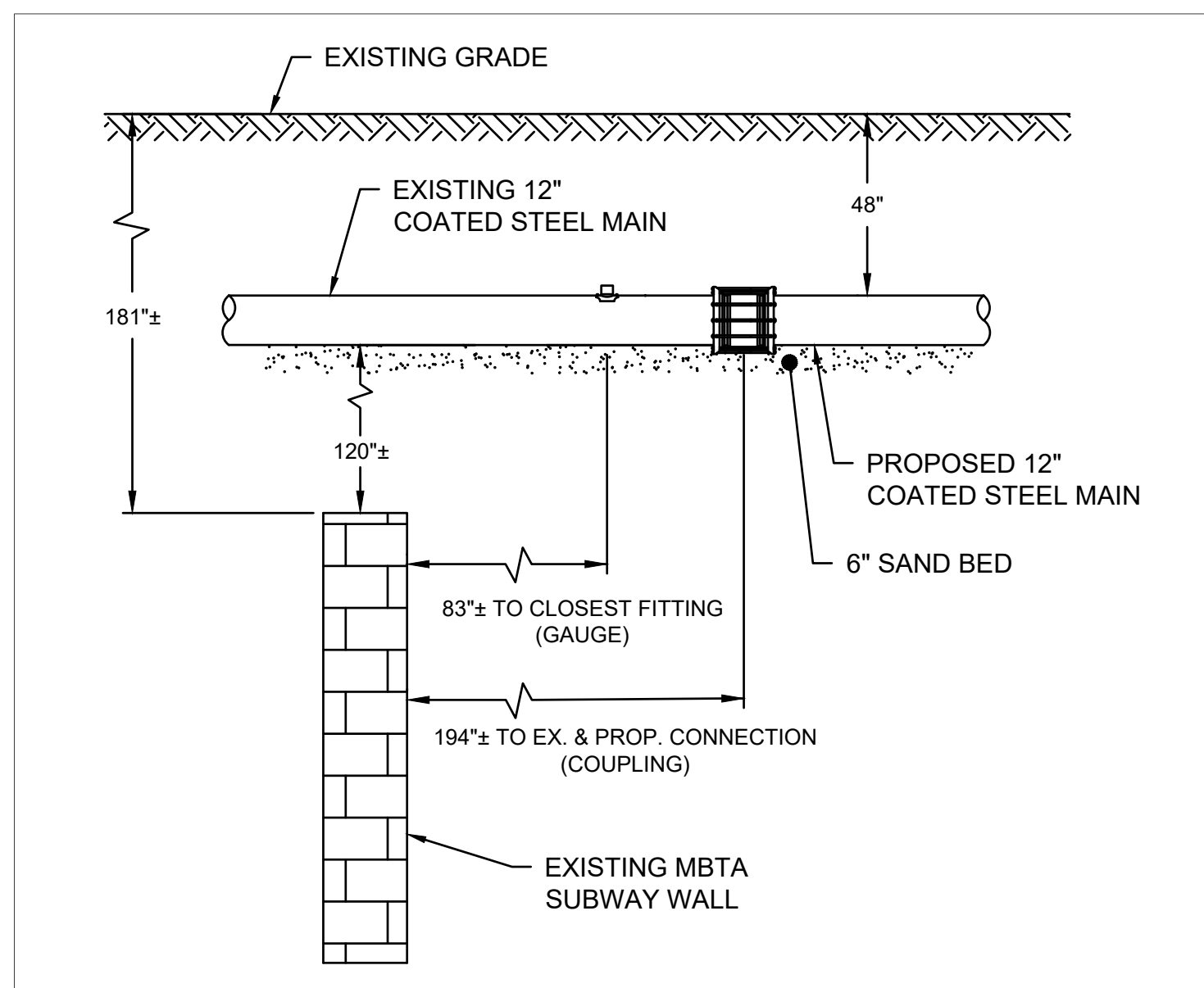
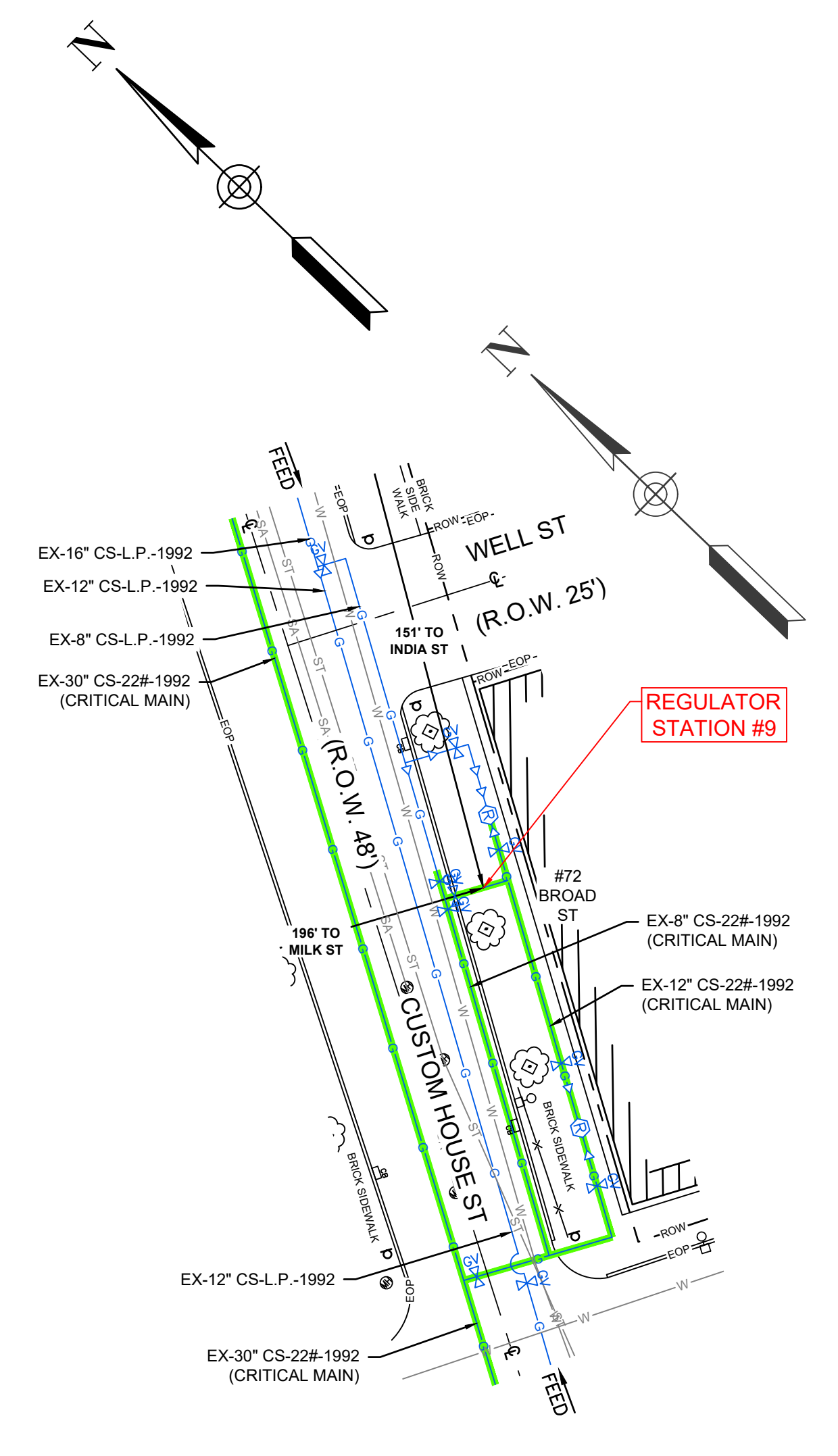
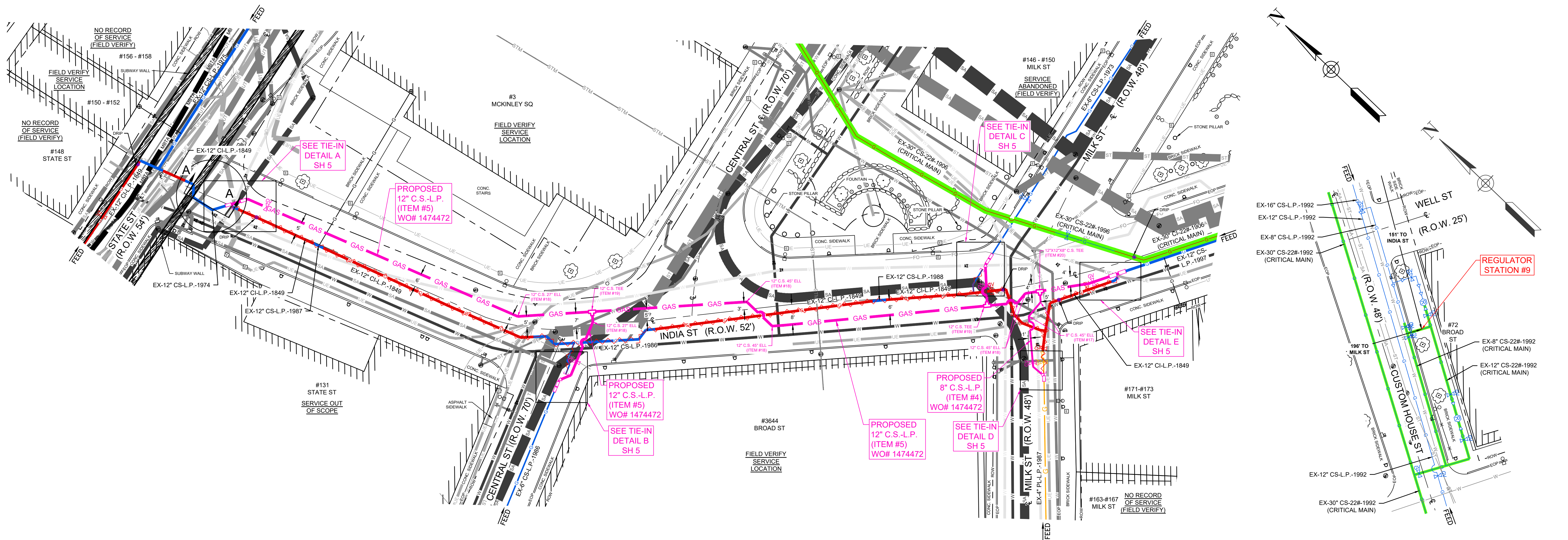
* SOME QUANTITIES LABELED ON LAYOUT SHEETS

UTILITY OWNER INFORMATION:

SEWER:	BOSTON WATER & SEWER DEPARTMENT #980 HARRISON AVE. BOSTON, MA 02119	GAS:	NATIONAL GRID GAS #40 SYLVAN RD. WALTHAM, MA 02451
DRAIN:	BOSTON WATER & SEWER DEPARTMENT #980 HARRISON AVE. BOSTON, MA 02119	TELEPHONE:	VERIZON #385 MYLES STANDISH BLVD. TAUNTON, MA 02780
WATER:	BOSTON WATER & SEWER DEPARTMENT #980 HARRISON AVE. BOSTON, MA 02119	CABLE:	COMCAST CABLE CORPORATION PO BOX #6505, #5 OMNI WAY CHELMSFORD, MA 01824
ELECTRIC:	BOSTON DPW STREET LIGHTING #400 FRONTAGE RD. BOSTON, MA 02118		AT&T / TELEPORT COMMUNICATIONS AMERICA #50 MALL RD - SUITE #203 BURLINGTON, MA 1803
	EVERSOURCE ELECTRIC "A" #1165 MASSACHUSETTS AVE. DORCHESTER, MA 02125		CROWN CASTLE #80 CENTRAL ST BOXBOROUGH, MA 01719
RAILROAD:	MBTA DOCUMENT CONTROL GROUP #500 ARBORWAY BOSTON, MA 02130		FIRST LIGHT #359 CORPORATE DR PORTSMOUTH, NH 03801

*THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE

<p>45 HENDRIX ROAD WEST HENRIETTA, NY 14586 PHONE (585) 359-7540 FAX (585) 359-7541</p>	<p>BOSTON GAS COMPANY d/b/a nationalgrid 40 SYLVAN ROAD WALTHAM, MA 02451</p> <p>IFC</p>		<p>9-35 INDIA STREET GAS MAIN REPLACEMENT INDIA ST, STATE ST, CENTRAL ST, & MILK ST BOSTON, MA</p>				<p>PAGE 03 OF 10</p>																																				
			<p>CONSTRUCTION NOTES & BILL OF MATERIALS</p>				<p>DRAWING NO. G-003</p>	<p>SHEET NO. 03</p>																																			
<table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DR BY</th> <th>CK BY</th> <th>APP BY</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>BOSTON CONSERVATION COMMISSION UPDATE #2</td> <td>11/08/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>D</td> <td>BOSTON CONSERVATION COMMISSION UPDATE</td> <td>11/07/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>C</td> <td>MBTA PROFILE VIEW UPDATE</td> <td>09/27/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>B</td> <td>BOM UPDATE</td> <td>09/20/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>A</td> <td>ISSUED FOR CONSTRUCTION</td> <td>09/19/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> </tbody> </table>	NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY	E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP	D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP	C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP	B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP	A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP	<p>DWG SIZE 22"X34"</p>		DESIGNER DDS COMPANIES	ENGINEER T. NOSAR	DATE 08/20/2022	ASSET I.D. XXXXXXXX	W.O. NO. 1474472
NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY																																						
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP																																						
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP																																						
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP																																						
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP																																						
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP																																						



PROFILE DETAIL:
SECTION A-A AT MBTA
N.T.S

DESIGN PARAMETERS:
 1474472 - 9-35 INDIA ST, BOS
 SYSTEM NUMBER: BOSTON LP
 SYSTEMS' MOPS (PSIG, OR "LP"): LP (0.5 PSIG)
 EXPECTED OPERATING PRESSURE RANGE: 4.5 INWC - 14 INWC
 DESIGN DAY TEMPERATURE (F): 0°F
 MIN & MAX OPERATING TEMPERATURE RANGE (F): -20°F TO +73°F
 DESIGN FACTOR: 0.4

STREET NAME: INDIA ST
 SIZING RECOMMENDATION: 12IN ST
 NEW MAINS' DESIGN PRESSURE: 14 INWC
 DESIGN DAY FLOW IN NEW PIPELINE SEGMENTS (MCFH): 40
 SINGLE FEED SYSTEM: NO

STREET NAME: INTERSECTION OF MILK ST/INDIA ST
 SIZING RECOMMENDATION: 8IN ST
 NEW MAINS' DESIGN PRESSURE: 14 INWC
 DESIGN DAY FLOW IN NEW PIPELINE SEGMENTS (MCFH): 5
 SINGLE FEED SYSTEM: NO

REVIEWED BY: KASEY ELKIN. REVIEW DATE: 05/24/2022

SCOPE OF WORK:
 NATIONAL GRID WORK ORDER NUMBER: 1474472
 PROJECT NAME AND LOCATION: 9-35 INDIA ST, BOSTON, MA
 PROJECT SCOPE: AS PART OF THE CIRE101214 PROGRAM, LPP INTEGRITY MANAGEMENT RECOMMENDS THE RELAY OF:

- APRX 140 FEET OF 12 INCH, LP CAST IRON (1849), APRX 5 FEET OF 12 INCH, LP COATED STEEL (1987) - UB0S0321, APRX 50 FEET OF 12 INCH, LP COATED STEEL (1986) - MBOS0023, APRX 215 FEET OF 12 INCH, LP CAST IRON (1849) AND APRX 5 FEET OF 12 INCH, LP COATED STEEL (1988) - UBOS0542 WITH APRX 415 FEET OF 12 INCH, LP STEEL IN INDIA ST FROM THE EXIST 12 INCH, LP COATED STEEL (1974) - UBOS0459 AT STATE ST TO THE EXST 12 INCH, LP COATED STEEL (1997) - MBOS0200 AT MILK ST
- APRX 10 FEET OF 6 INCH, LP CAST IRON (1924) WITH APRX 10 FEET OF 8 INCH, LP STEEL IN THE INTERSECTION OF INDIA ST AND MILK ST.

- NOTE:**
- CONTACT INSTRUMENTATION AND REGULATION BEFORE WORKING WITHIN 200 FEET OF A REGULATOR STATION. BEFORE DOING TIE-IN, CONTACT GAS CONTROL, INSTRUMENTATION AND REGULATION, AND OPERATIONS ENGINEERING REGARDING POTENTIAL NEED TO SHUT DOWN THE STATION.
 - ALL CONTROL AND SENSE LINES ARE TO BE FIELD LOCATED PRIOR TO CONSTRUCTION. CONTACT I&R AND DAMAGE PREVENTION FOR CONTROL AND SENSE LINE FIELD LOCATION.
 - STEAM LINE IN CENTRAL ST. PLASTIC CANNOT BE INSTALLED WITHIN 18 FT OF THE STEAM LINE IN ACCORDANCE TO ENG04001 AND ENG02001
 - MBTA PERMIT REQUIRED TO PERFORM WORK IN STATE ST, BOS.
 - THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE.



45 HENDRIX ROAD
 WEST HENRIETTA, NY 14586
 PHONE (585) 359-7540
 FAX (585) 359-7541

BOSTON GAS COMPANY
 a/b/a
nationalgrid
 40 SYLVAN ROAD
 WALTHAM, MA 02451

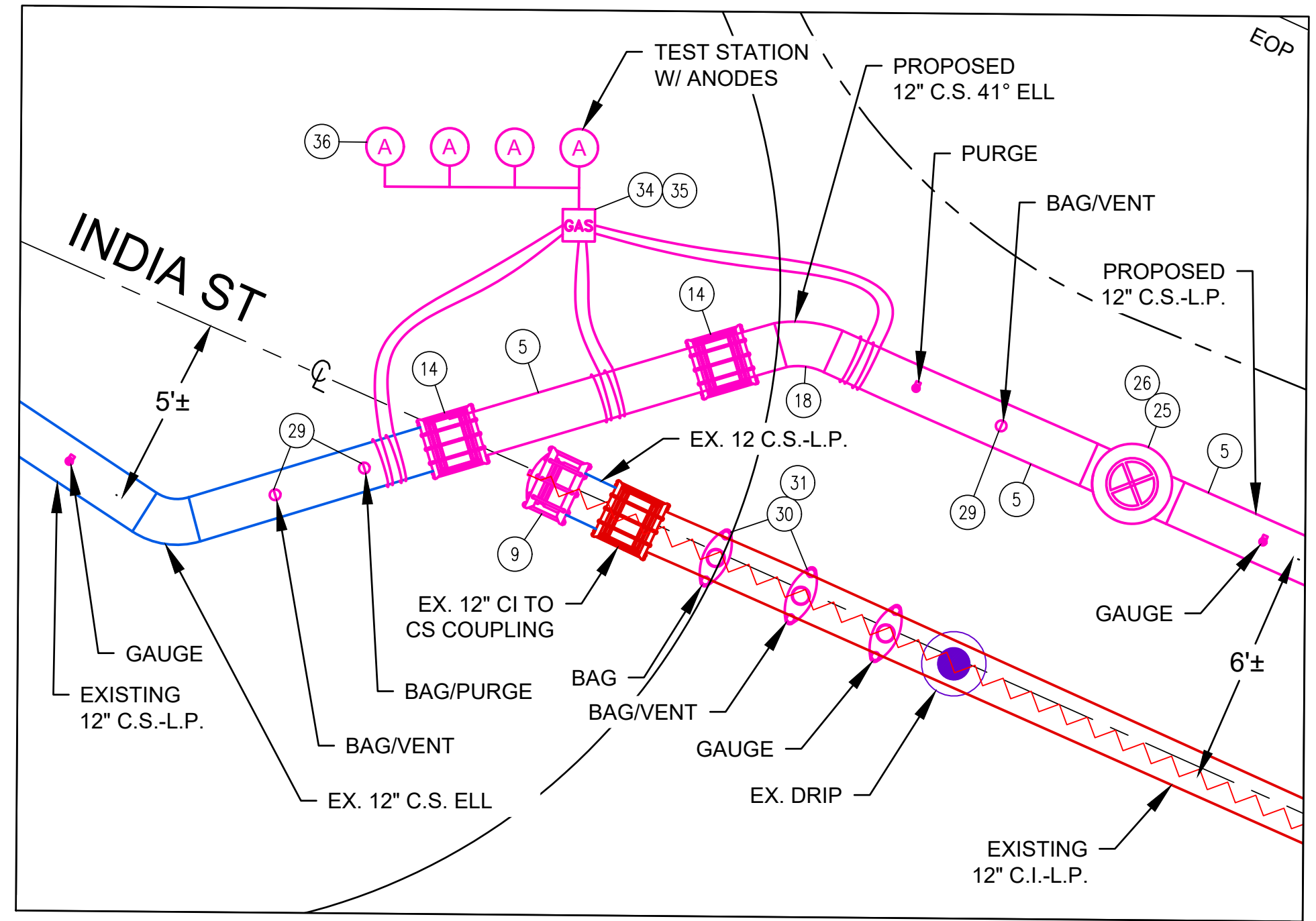
IFC



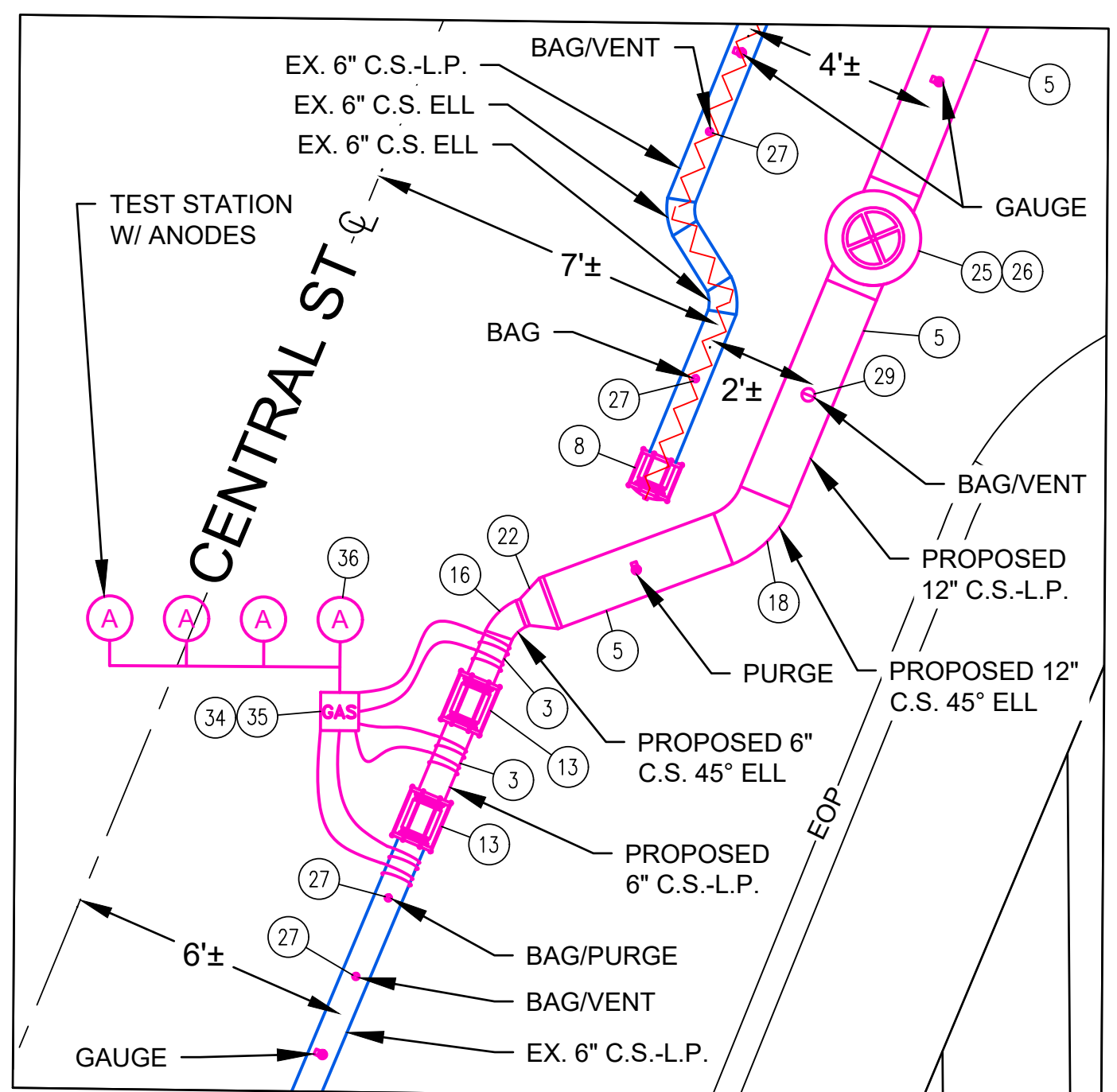
NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET GAS MAIN REPLACEMENT INDIA ST, STATE ST, CENTRAL ST, & MILK ST BOSTON, MA					
OVERALL LAYOUT SHEET & MBTA DETAIL					
DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

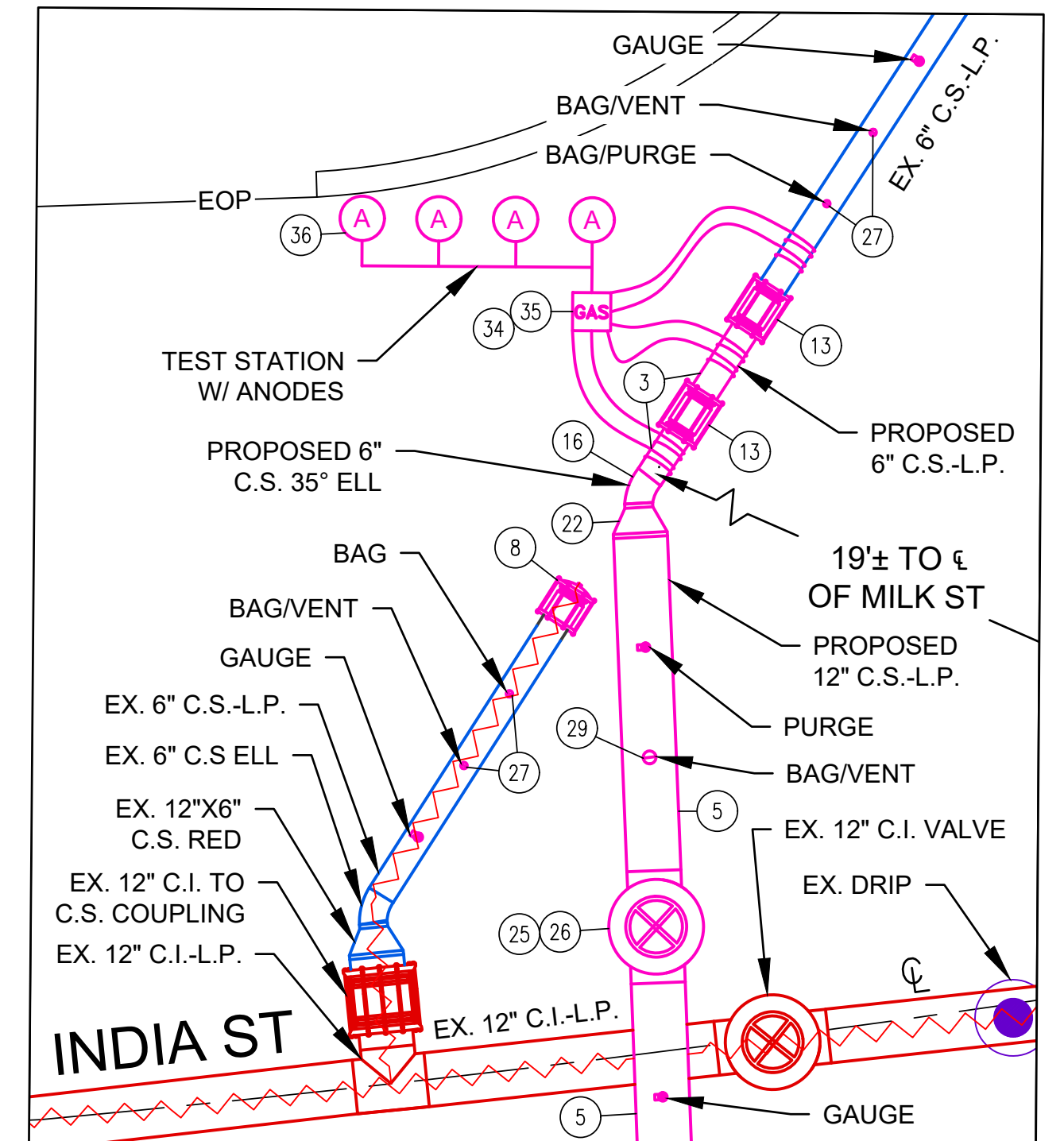
PAGE 04 OF 10	
DRAWING NO.	SHEET NO.
C-001	04



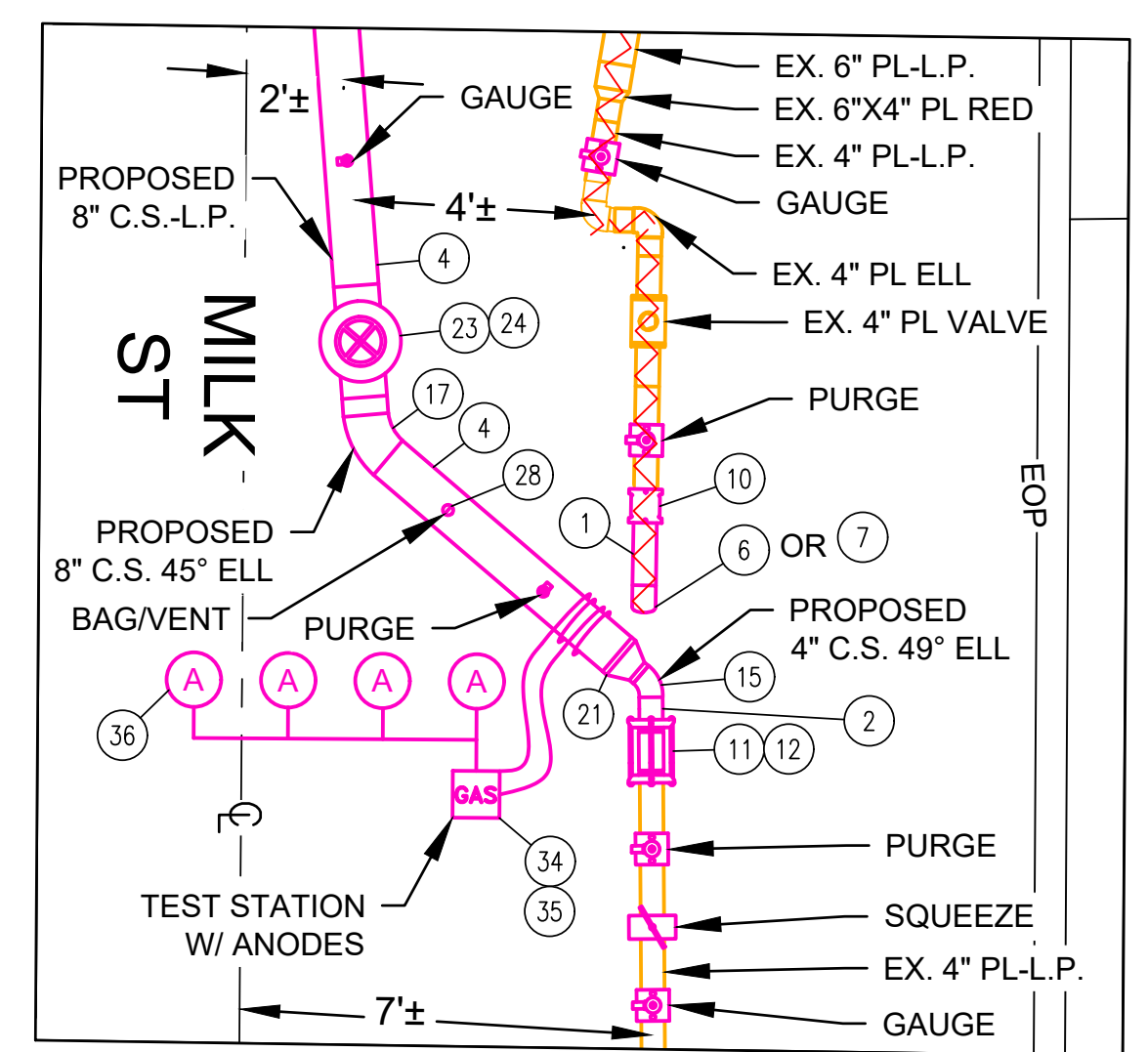
DETAIL A: TIE-IN
(INDIA ST & STATE ST)
SCALE - 1:3
SEE NOTE 1



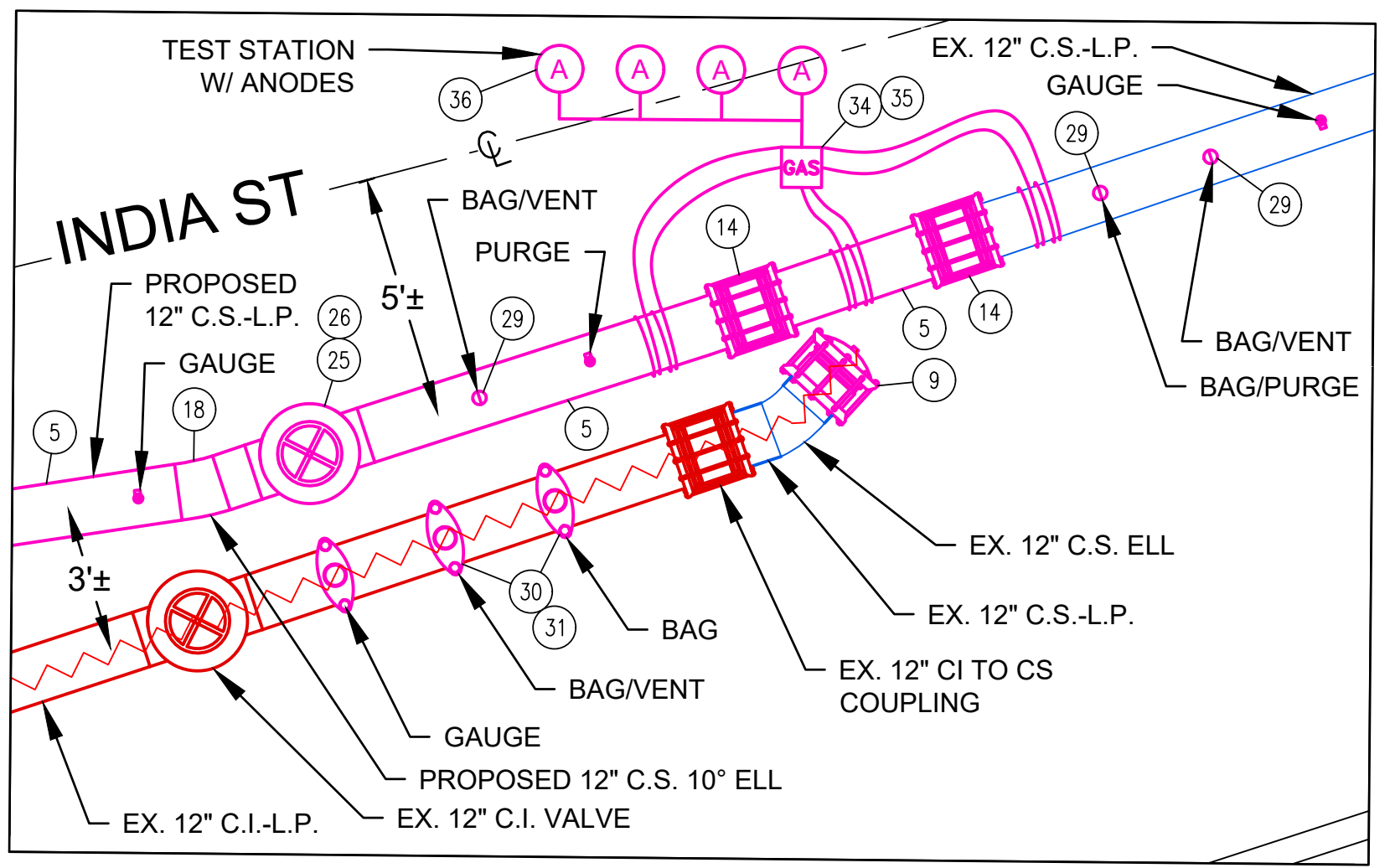
DETAIL B: TIE-IN
(INDIA ST & CENTRAL ST)
SCALE - 1:3
SEE NOTE 1



DETAIL C: TIE-IN
(INDIA ST & MILK ST)
SCALE - 1:3
SEE NOTE 1

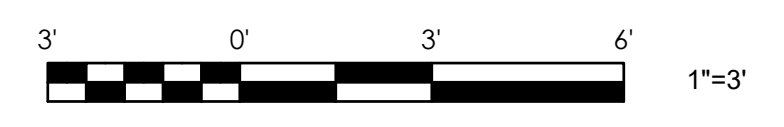


DETAIL D: TIE-IN
(INDIA ST & MILK ST)
SCALE - 1:3
SEE NOTES 2, 3, & 4



DETAIL E: TIE-IN
(INDIA ST)
SCALE - 1:3
SEE NOTE 1

- NOTE:**
1. INSTALL AN INSULATED COUPLING, A STEEL SPOOL PIECE AND A SECOND INSULATED COUPLING BETWEEN THE EXISTING COATED STEEL MAIN AND THE PROPOSED COATED STEEL MAIN. INSTALL A 6-WIRE TEST STATION ACROSS THE INSULATORS. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
 2. INSTALL A 2-WIRE TEST STATION TO THE PROPOSED COATED STEEL MAIN AT THE COATED STEEL/PLASTIC INTERFACE. INCLUDE 4-17 LB ANODES SPACED AT LEAST 8 FT APART AND 1 FT BELOW THE MAIN USING A SINGLE HEADER CABLE. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
 3. ELECTROFUSION CAPS (ITEM 7) CAN BE USED AS ALTERNATE TO BUTT FUSE CAPS (ITEM 6) WITH ELECTROFUSION COUPLINGS (ITEM 10).
 4. STOP OFF METHODS CONTAINED IN CNST03002: STOP OFF OPERATIONS ON LOW PRESSURE MAINS, MAY BE USED IN PLACE OF SQUEEZE OFFS.
 5. THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE.



THE DDS COMPANIES
45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

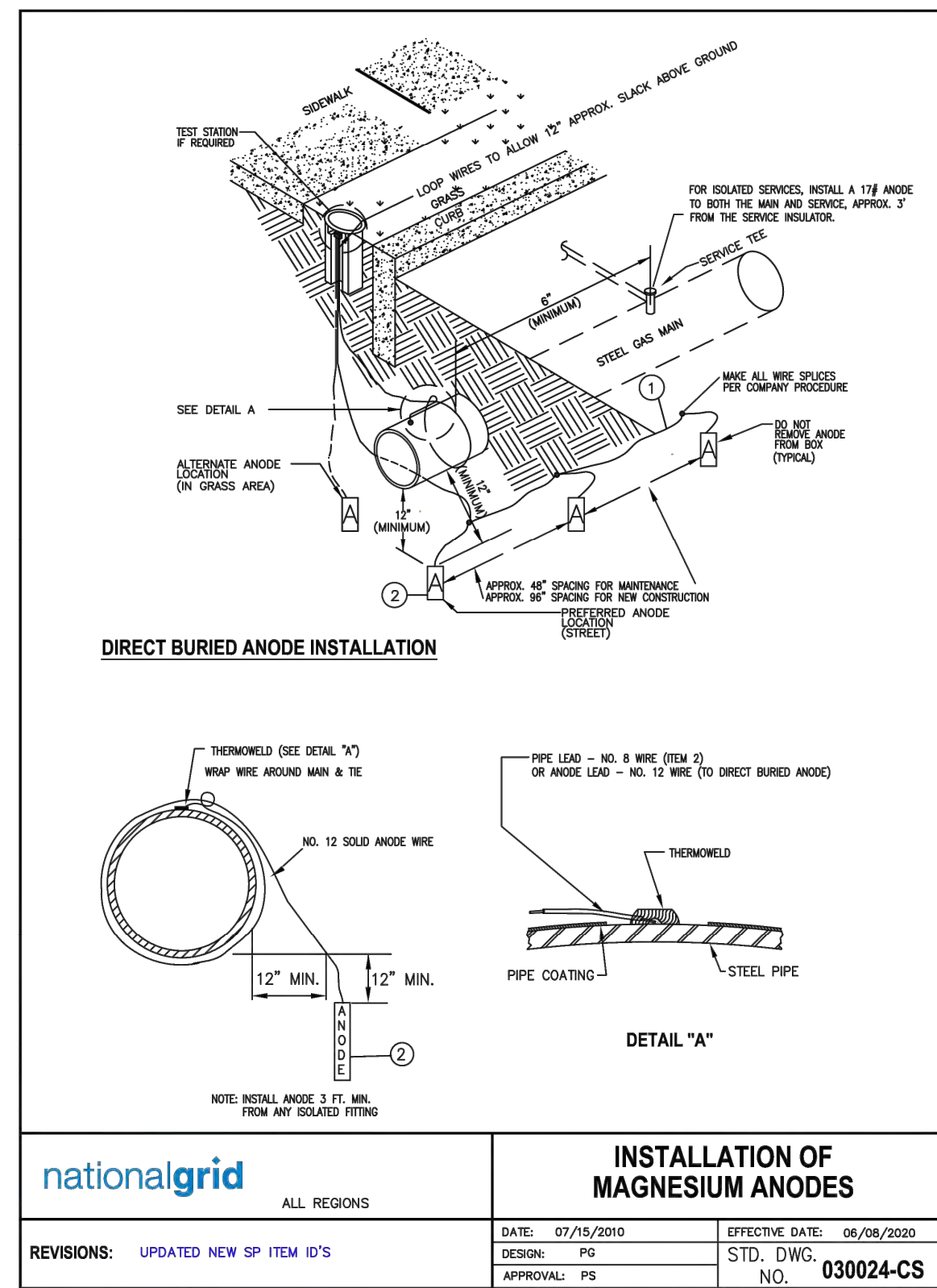
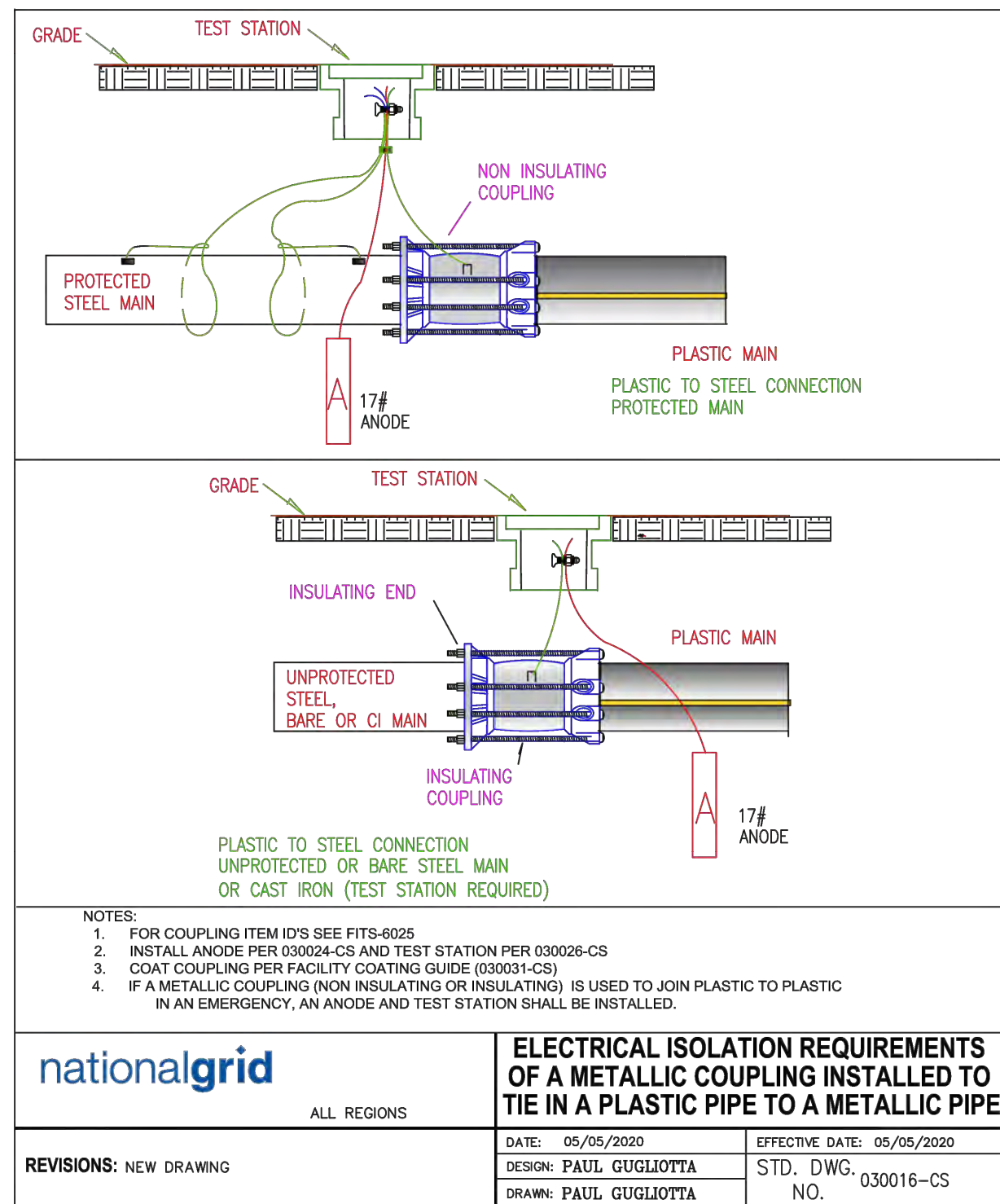
BOSTON GAS COMPANY
a/b/a
nationalgrid
40 SYLVAN ROAD
WALTHAM, MA 02451
IFC

PE STAMP
MARK E. TROSA
REGISTERED PROFESSIONAL ENGINEER
NO. 54931
STATE OF MASSACHUSETTS

NO.	DESCRIPTION	DATE	DR.BY	CK.BY	APP.BY
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET GAS MAIN REPLACEMENT INDIA ST, STATE ST, CENTRAL ST, & MILK ST BOSTON, MA					
TIE-IN & ABANDONMENT DETAILS					
DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

PAGE 05 OF 10	
DRAWING NO.	SHEET NO.
C-101	05

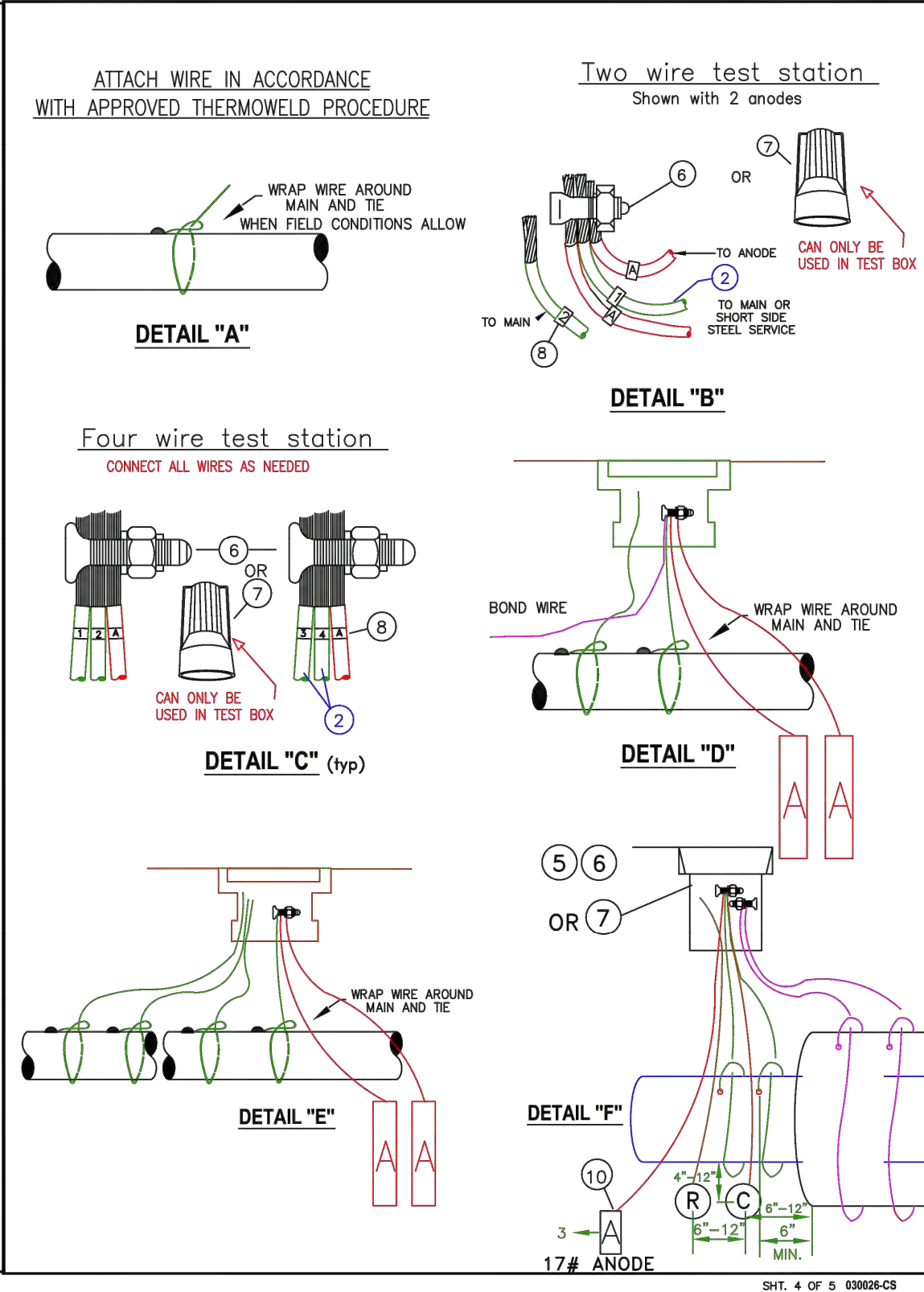
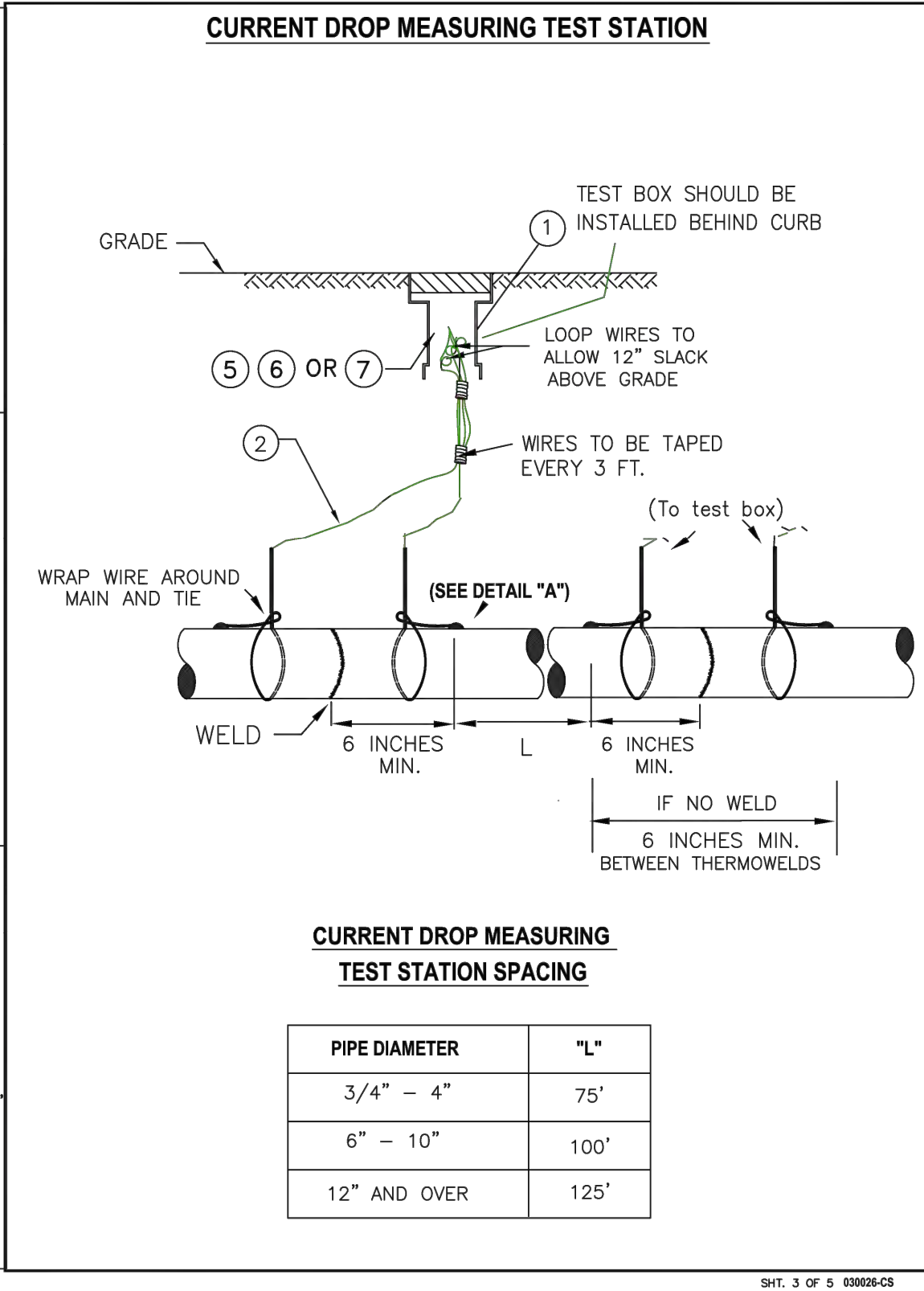
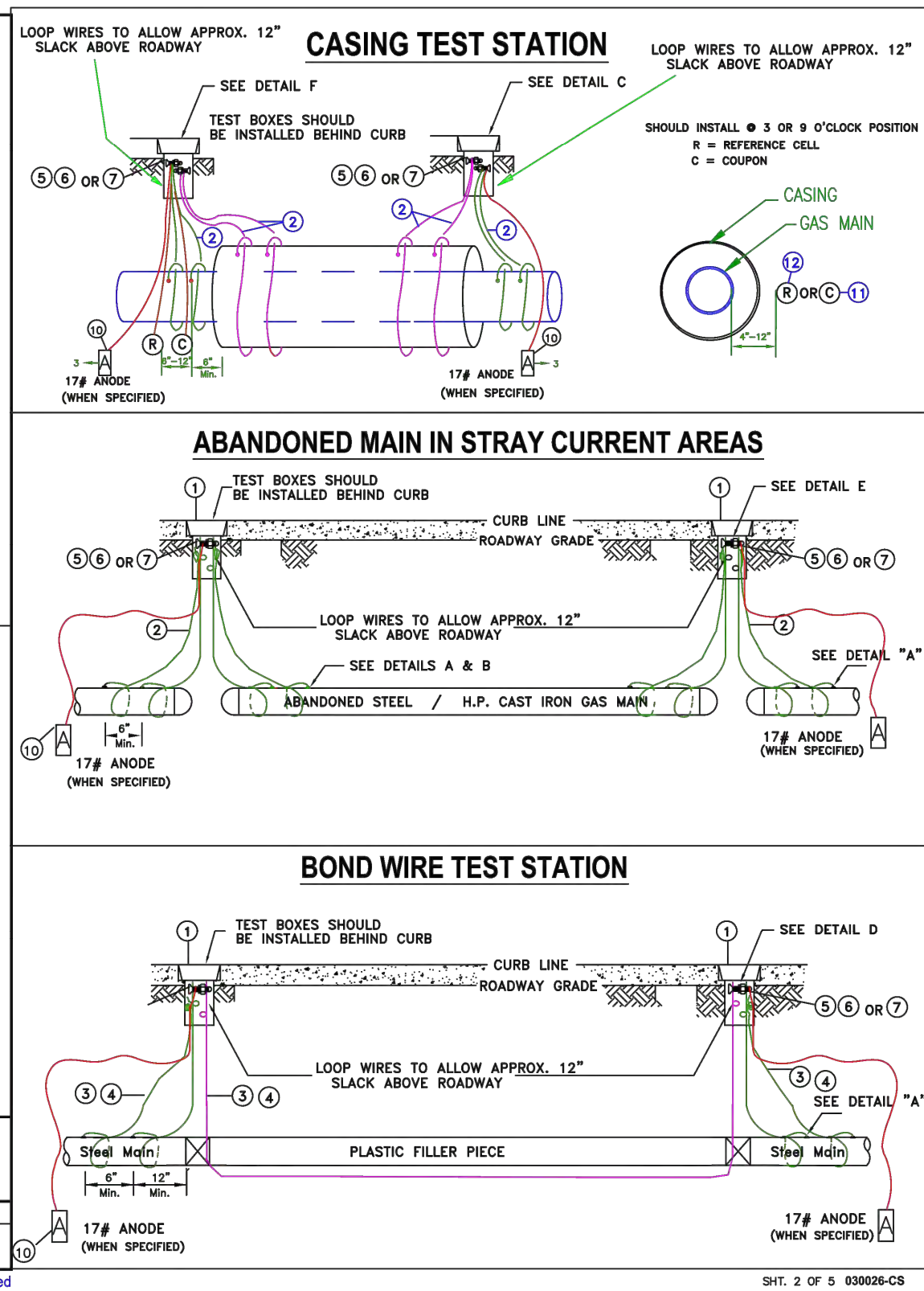
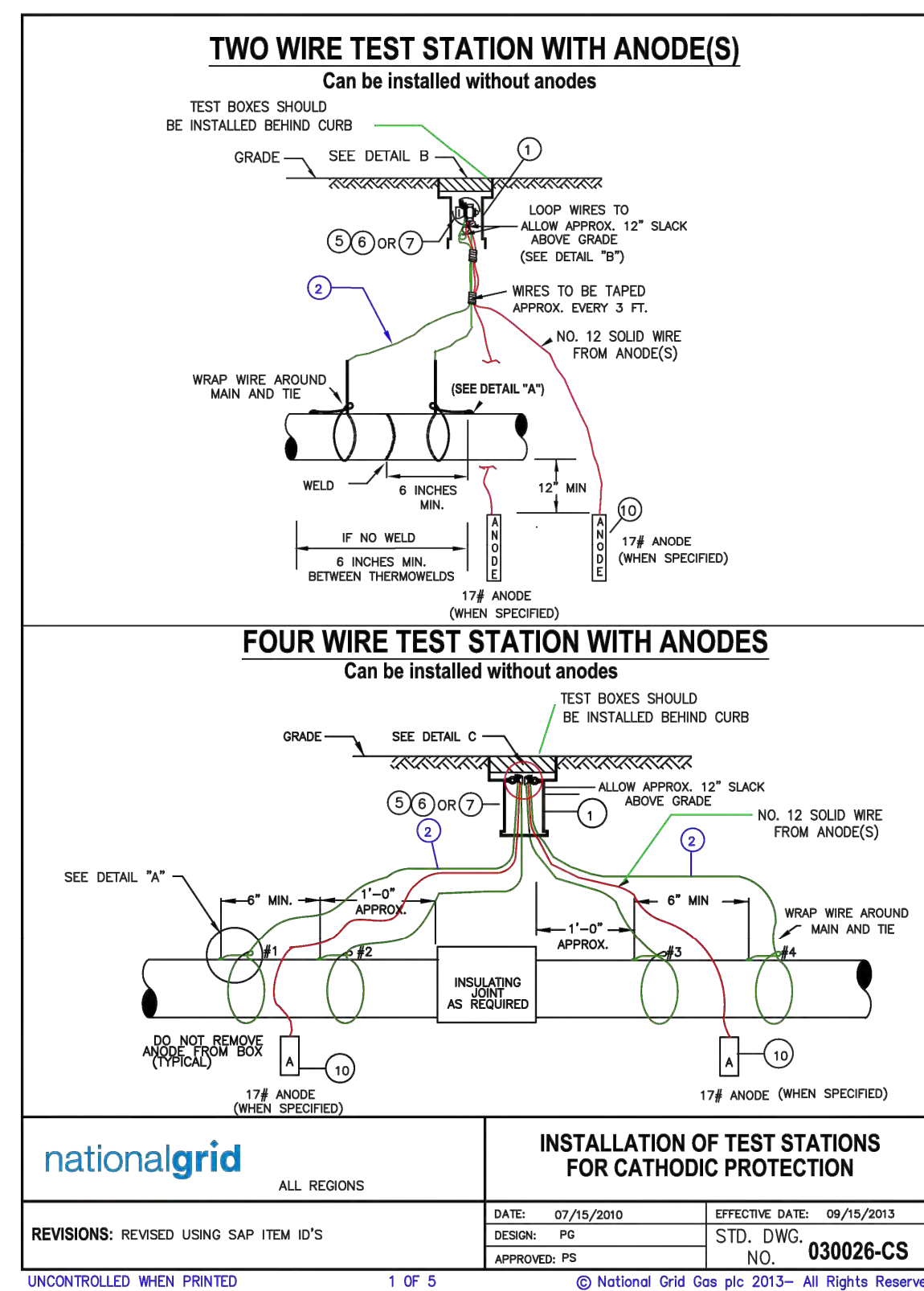


MATERIAL LIST

Description	Down State NY Item I.D.	Upstate NY Item I.D.	New England Item I.D.	Rhode Island Item I.D.	MATERIAL NOTES
1 CABLE NO. 8 - 1/C	9334425	9311214	9334425	9311214	Upstate and RI cable has 19 strands
2 ANODE, MAGNESIUM 17 LB	9311183	9311183	9311183	9311183	
3 ANODE, MAGNESIUM 3 LB	9315645	9315645	9315645	9315645	Use on Tracer wire and all isolated fittings
4 ANODE, MAGNESIUM SPIKE 3 LB	9308624	9308624	9308624	9308624	Use on Service Risers ONLY
CLAMP, GROUNDING 1/2IN - 1IN DIA.	9386544	9386544	9386544	9386544	Grounding clamp for attaching spike anode lead wire to service riser
CLAMP, GROUNDING 1-1/4IN - 2IN DIA.	9386559	9386559	9386559	9386559	Grounding clamp for attaching spike anode lead wire to service riser

* Spike Anode Ground Clamp

SHT. 2 OF 2 030024-CS



MATERIAL LIST

Description	Down State SAP Item I.D.	Upstate SAP Item I.D.	New England SAP Item I.D.	Rhode Island SAP Item I.D.	MATERIAL NOTES
1 TEST BOX WITH COVER	9339892	9312291	9339892	9339892	NON LOCKING COVER. DISCARD FOOT PIECE.
TEST BOX 9" SQUARE HEAVY DUTY	9339391	9312291	9339391	9339391	(SM - 445) 9311209 or (Lg - 556) in Prov. 9311208
COVER FOR 9" SQUARE BOX	9339797	9307539	9339797	9339797	WEIGHS 95 LBS. STREET USE, WITHOUT COVER
2 WIRE, NO. 8, 7 STRAND	9307539	9307539	9307539	9307539	NON-LOCKING COVER
3 WIRE, NO. 6, 7 STRAND	9311795	9311795	9311795	9311795	TEST WIRE ONLY, NOT FOR GROUND BEDS, UPSTATE AND RI WIRE HAS 19 STRANDS.
4 WIRE 1/0 - 19 STRAND 600 V -1/C	9334171	NON STOCK	9334171	NON STOCK	BOND WIRE ONLY, NOT FOR GROUND BEDS
5 TAPE, PVC - 3/4" WIDE	9334056	9316070	9334056	9316070	USE IN STRAY CURRENT AREAS
6 CONNECTOR, SPLIT BOLT, TYPE B	9331578	9316630	9331578	NON STOCK	NOT FOR PIPE COATING. USE WITH NO. 6 CABLE
7 CONNECTOR, SPLIT BOLT, TYPE 1/01	9331612		9331612		USE WITH 1/0 CABLE
8 CONNECTOR, TWIST ON WIRE NUT TAG ADHESIVE NUMBER 1	9307918	9307918	9307918	9307918	USE TO LABEL ANODES
NUMBER 2	9307896	9307896	9307896	9307896	LABEL WITH #1 (N) OR (E), CONSECUTIVELY TO (S) OR (W)
NUMBER 3	9307895	9307895	9307895	9307895	SEE DETAILS "B" AND "C"
NUMBER 4	9307894	9307894	9307894	9307894	
LETTER A	9307893	9307893	9307893	9307893	
9 GROUNDING CELL	NON STOCK	9315642	NON STOCK	NON STOCK	AS SPECIFIED BY CORROSION ENGINEERING
10 ANODE, MAGNESIUM 17LBS	9311183	9311183	9311183	9311183	SATURATE WITH WATER BEFORE BACKFILL. ANODE MAY BE INSTALLED VERTICALLY OR HORIZONTALLY.
11 COUPON	9386100	By Corrosion	9386100	By Corrosion	MC MILLER OR EQUAL
12 REFERENCE CELL	9385758	By Corrosion	9385758	By Corrosion	BORIN MFGR INC OR EQUAL

UNCONTROLLED WHEN PRINTED 5 OF 5 Effective Date: 06/06/2020 © National Grid Gas plc 2020 - All Rights Reserved 030026-CS

*THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE

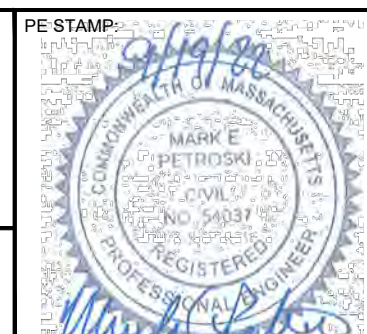
NOTE:
1. CATHODIC PROTECTION DETAILS ARE NOT COVERED UNDER PE STAMP.

THE DDS COMPANIES

45 HENDRIX ROAD
WEST HENRIETTA, NY 14586
PHONE (585) 359-7540
FAX (585) 359-7541

BOSTON GAS COMPANY
d/b/a
nationalgrid
40 SYLVAN ROAD
WALTHAM, MA 02451

IFC



NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

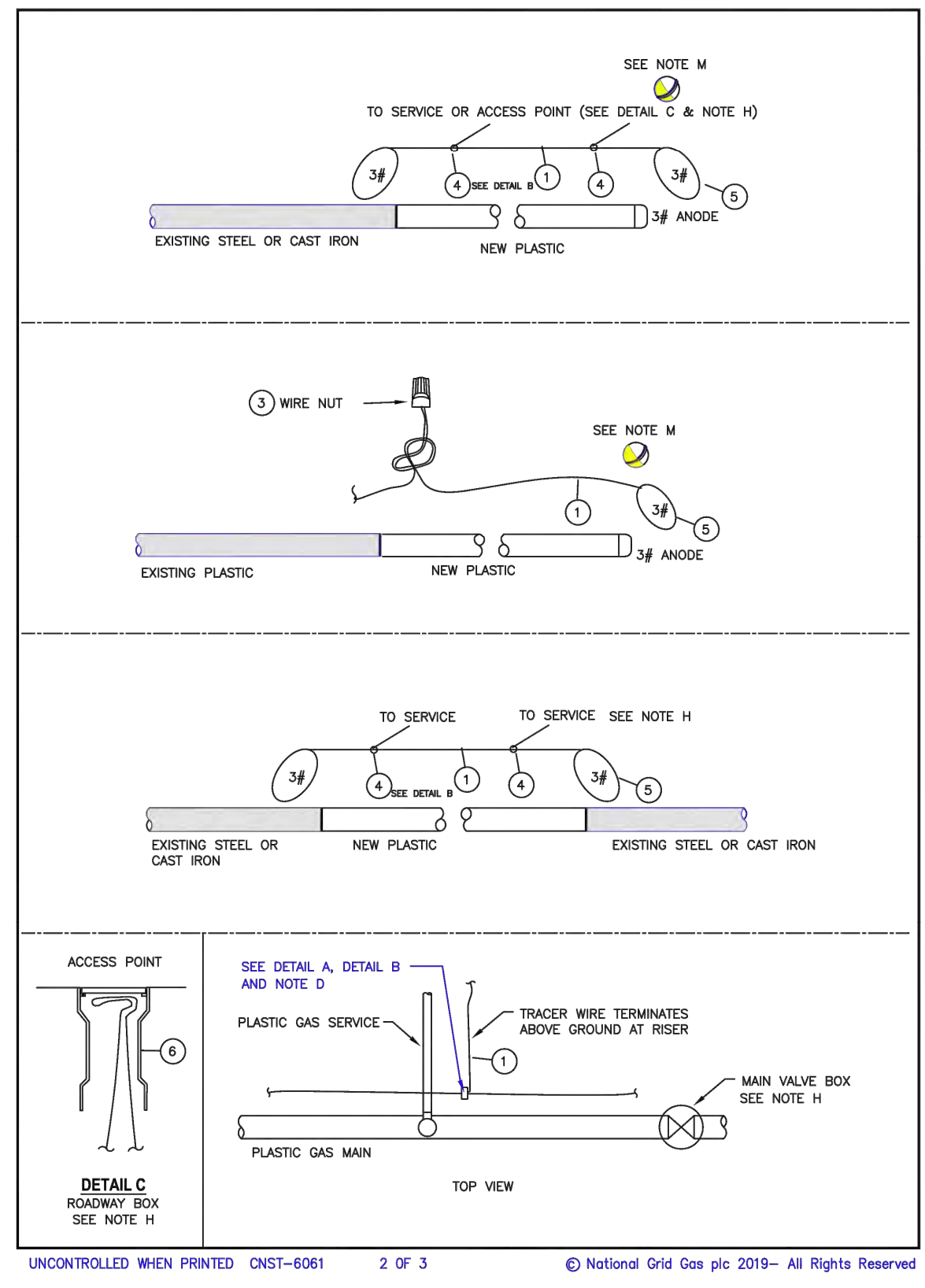
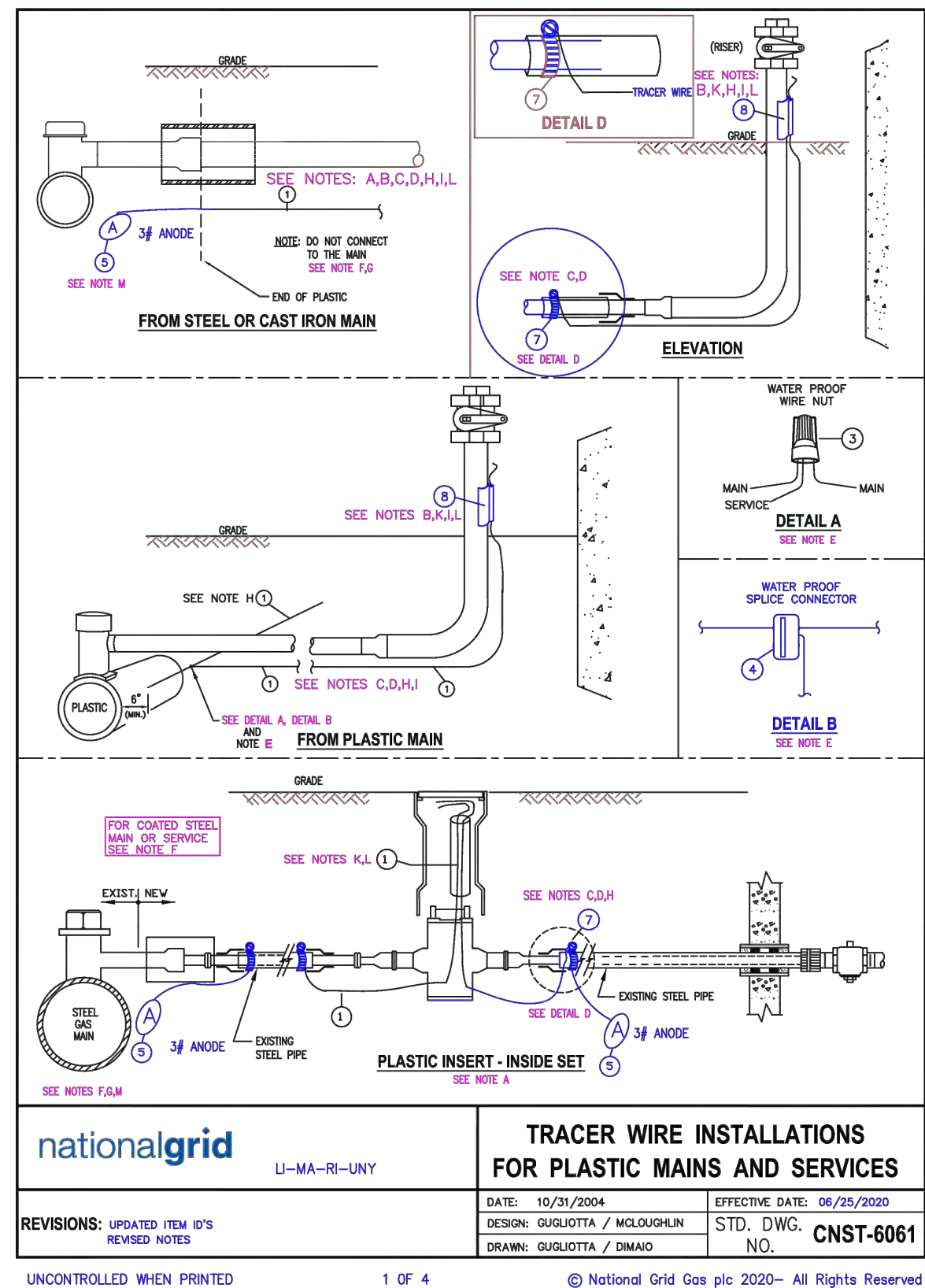
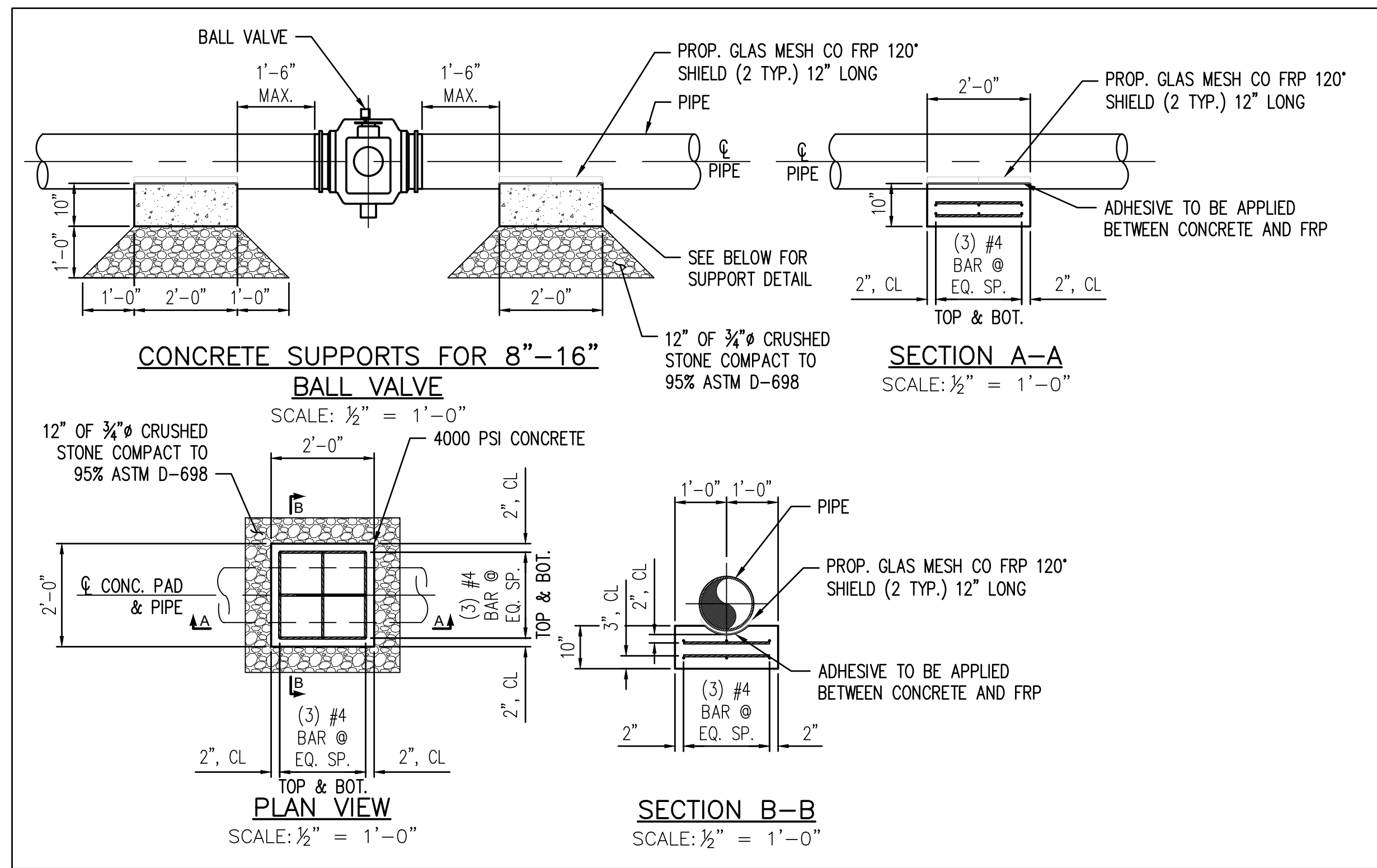
9-35 INDIA STREET
GAS MAIN REPLACEMENT
INDIA ST, STATE ST, CENTRAL ST, & MILK ST
BOSTON, MA

STANDARD DETAILS

DWG SIZE: 22"x34"
DESIGNER: DDS COMPANIES
ENGINEER: T. NOSAR
DATE: 08/20/2022
ASSET I.D.: XXXXXXXX
W.O. NO.: 1474472

PAGE 07 OF 10

DRAWING NO.	SHEET NO.
C-202	07



NO.	ITEM	NGRID ID	SAP ITEM ID
1	TRACER WIRE, DIRECT BURY, COPPER, 12 AWG	9315005	9315005
2	TRACER WIRE, DIRECT BURY, COPPER, 12 AWG	9315005	9315005
3	TRACER WIRE SNAP, 1/2" (represents steel size)	9386134	9386134
4	TRACER WIRE SNAP, 1/2" (represents steel size)	9386134	9386134
5	TRACER WIRE SNAP, 1/2" (represents steel size)	9386134	9386134
6	TRACER WIRE SNAP, 1/2" (represents steel size)	9386134	9386134
7	CLAMP, STAINLESS	9307708	9307708
8	VALVE BOX, ROADWAY	9339890	931208 RI
9	ANODE, 3 LB MAGNESIUM	9315645	9315645
10	WIRE SPLICE CONNECTOR, WATERPROOF	9306036	9306036
11	WIRE NUT, PLASTIC, WATERPROOF	9316444	9314631
12	WIRE, DIRECTIONAL DRILL, STAINLESS, STRANDED 10 AWG	9314187	9314187
13	TRACER WIRE, DIRECT BURY, COPPER, 12 AWG	9315005	9315005

A. Inside sets: Terminate tracer wire in the curb valve box. Allow enough wire to extend 18" to 24" above grade.

B. Outside Sets: Tracer wire should be extended approximately 18" above grade at riser. Connect tracer wire to the riser using a "tracer snap", item #8. If the appropriate tracer snap is not available, wrap or tie the tracer wire to the riser. Do not permanently attach tracer wire to the riser. Tracer wire should not exceed 6" above the point where it is secured to the riser.

C. Partially tubed services: When the abandoned portion of an existing steel service pipe is used as a sleeve for the new plastic, all cut sections of the steel pipe to be inserted with plastic, shall be connected using a section of tracer wire to maintain continuity. If the existing service is coated steel, see [Installation of Test Stations for Cathodic Protection \[030026-CS\]](#) and [Installation of Test Stations for Cathodic Protection \[COR04003\]](#) or contact corrosion department for more guidance.

D. Thermite welding of tracer wire to abandoned steel service is only acceptable prior to insertion of the plastic tubing. See [Installation of Test Stations for Cathodic Protection \[030026-CS\]](#).

E. Plastic Mains: The service tracer wire shall be connected to the plastic main tracer wire using item #3 detail A or item #4 (detail B - preferred) in accordance with [Installing Wire Connections \[COR04004\]](#).

F. Coated Steel Mains: Do not connect the tracer wire to the steel main. See [Installation of Test Stations for Cathodic Protection \[030026-CS\]](#) and [Installation of Test Stations for Cathodic Protection \[COR04003\]](#) or contact corrosion department for more guidance.

G. Cast Iron or Bare Steel Mains: Do not connect the tracer wire to the main. It is required in LI and MA, and suggested in all other areas to terminate the tracing wire with a 3# anode.

Tracer Wire Installation Notes

H. Install tracer wire in close proximity to the plastic pipe. Approximately 4" to 6" away from the pipe. LI & MA - Above or alongside, UNY - above, RI - Under or alongside. Exception: For trenchless pipe installations, the minimum clearance is waived.

I. Maintain separation of approximately 4" from service riser. Do not permanently connect the tracer wire to the riser.

J. For horizontal directional drill installations, use stainless wire, item #2.

K. Tracer wire installed in boxes should allow enough wire to extend 18" to 24" above grade.

L. Verification: upon completion, the installer shall verify the location of the main or service using the tracer wire and locating device and perform a mark out using the conductive method.

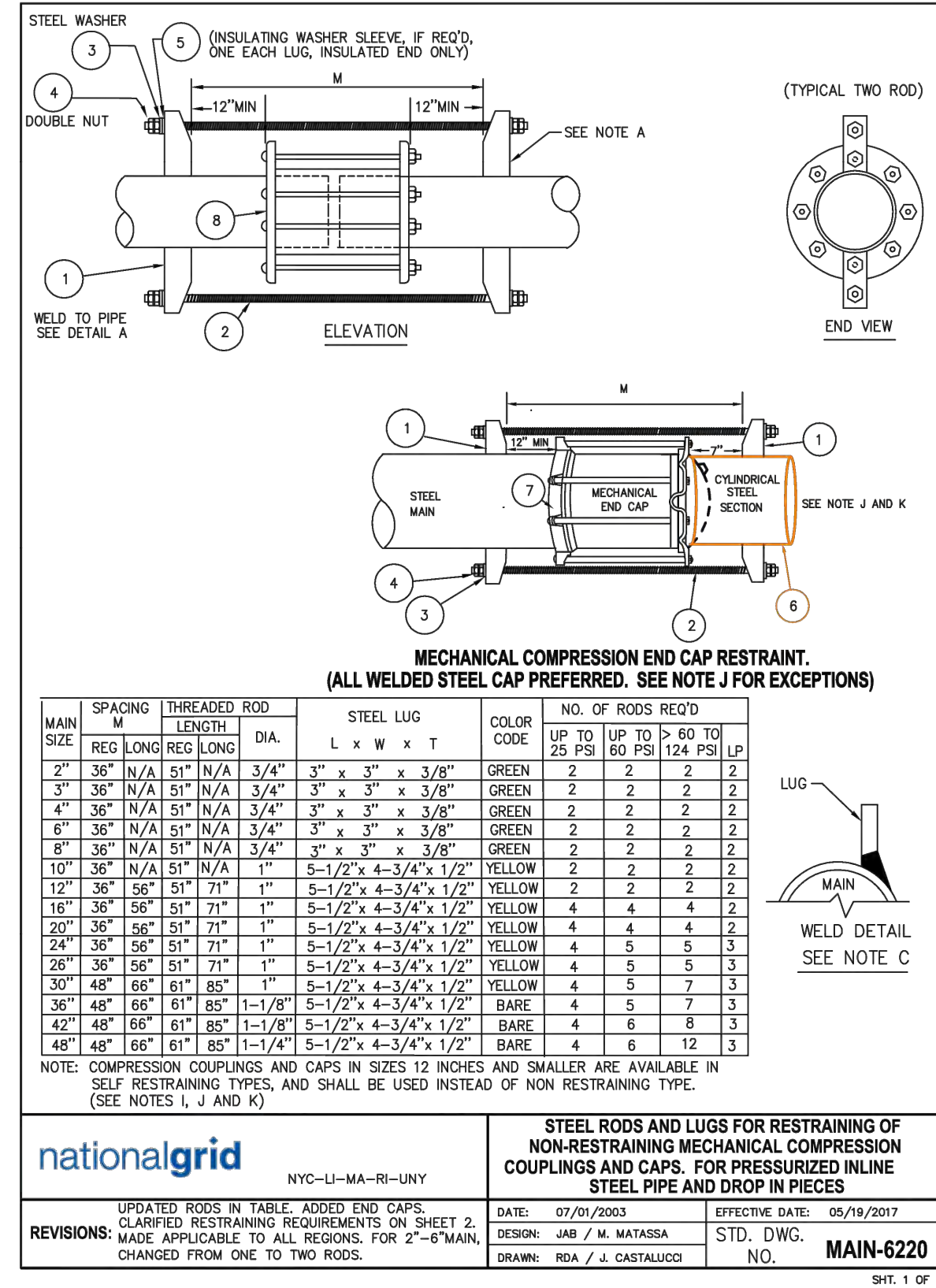
M. LI and MA: Required to terminate the tracing wire with a 3# anode. This is to ground the tracer wire and increase signal strength when locating. This practice is recommended in all areas where signal strength is an issue.

Regional Notes

NYC ONLY: refer to [Installation of Marker Tapes and EMS Pipeline Locators for Mains and Services \[CNST6060-NYC\]](#) for installation of electronic marker ball in place of tracer wire.

CONCRETE NOTES:

- SOIL CONDITIONS SHOULD BE VERIFIED SUITABLE BY QUALIFIED INDIVIDUAL. SHOULD POOR SOIL CONDITIONS EXIST CONTACT P&B FOR ALTERNATE VALVE SUPPORT DESIGN.
- CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 308. COLD WEATHER CURING PROVISIONS SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH ACI 306R.
- MIX DESIGNS TO BE SUBMITTED FOR REVIEW & APPROVAL.
- SIDES OF SUPPORTS SHALL BE FORMED.
- REINFORCING - ALL REBAR SHALL BE EPOXY COATED GRADE 60 BILLET STEEL IN ACCORDANCE WITH ASTM A-615.
- ALL FORM WORK AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES AND REGULATIONS AS WELL AS THE ACI 301.
- TOP OF CONCRETE SHALL BE SCREEDED LEVEL AND TRUE TO FINISH ELEVATION AND SHALL BE GIVEN A WOOD FLOAT FINISH WITH STEEL TOOLED EDGES.
- ALL REINFORCING SHALL BE NEW BILLET STEEL GRADE 60 IN ACCORDANCE WITH ASTM A-615 WITH DEFORMATION CONFORMING TO ASTM A-305. 3" CLEAR COVER TO TOP AND BOTTOM BARS.
- ALL BARS SHALL BE SECURELY HELD IN PROPER POSITION WHILE PLACING CONCRETE. ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED AS REQUIRED.
- CONCRETE FINISH SHALL BE FREE OF HONEYCOMB, ROCK POCKETS AND UNEVEN SURFACES.
- IF CONCRETE IS PLACED IN FIELD, GAS PIPE SHALL BE TEMPORARILY SUPPORTED BY WOOD CRIBBING OR A SUITABLE PIPE SUPPORT FOR 3 DAYS, MIN. TO ALLOW ENOUGH TIME FOR CONCRETE TO CURE.



NOTES:

- FOR LUG DESIGN SEE STANDARD DRAWING MAIN-6230.
- ROD THREADS TO BE NATIONAL COARSE AND CONFORM TO ASTM A-193, GRADE B7.
- WELDING TO CONFORM TO WELDING POLICY - 030020-PL. HEAT ON COUPLING GASKET SHALL BE LIMITED TO 212 DEGREES F WHEN WELDING ON LUGS.
- FIELD COATING TO CONFORM TO COMPANY CORROSION SPECIFICATIONS.
- MAKE UP ANCHORAGE NUTS WRENCH TIGHT.
- A MINIMUM OF THREE PASSES ON EACH SIDE IS REQUIRED FOR ENTIRE LENGTH OF LUG-PIPE CONTACT.
- INSTALL ANODES AND TEST STATION AS PER STANDARD DRAWING 030024-CS.

- FOR PRESSURES UP TO 60 PSIG, PIPE SHALL BE WELDED. TWELVE 12 INCH DIAMETER AND SMALLER SELF RESTRAINING TYPE COUPLINGS CAN BE USED FOR THE TIE IN CONNECTIONS AS AN ALTERNATE TO WELDED CONNECTIONS (E.G., WHEN GAS READINGS PRESENT, FIELD PLANNING, ETC.). SELF RESTRAINING COUPLINGS DO NOT REQUIRE FURTHER THREADED ROD RESTRAINT. SIZES LARGER THAN 12 INCHES ARE COMMERCIALY AVAILABLE IN NON RESTRAINING ONLY AND MUST BE RESTRAINED WHEN USED. SEE FITS-6025 FOR LIST OF SELF RESTRAINING COUPLINGS AND FITS-6015 FOR LIST OF NON RESTRAINING COUPLINGS.
- FOR PRESSURE ABOVE 60 PSIG AND UP TO AND INCLUDING 124 PSIG, PIPE SHALL BE WELDED. WELDED TIE IN CONNECTIONS ARE PREFERRED. SELF RESTRAINING COUPLINGS UP TO 12 INCH DIAMETER MAY BE USED FOR THE TIE IN CONNECTIONS AS AN ALTERNATE TO WELDED CONNECTIONS (E.G., WHEN GAS READINGS PRESENT, FIELD PLANNING, FIELD CONDITIONS, ETC.). SELF RESTRAINING COUPLINGS DO NOT REQUIRE FURTHER THREADED ROD RESTRAINT. SIZES LARGER THAN 12 INCHES ARE COMMERCIALY AVAILABLE IN NON RESTRAINING ONLY AND MUST BE RESTRAINED WHEN USED. SEE FITS-6025 FOR LIST OF SELF RESTRAINING COUPLINGS AND FITS-6015 FOR LIST OF NON RESTRAINING COUPLINGS.
- WELD STEEL END CAPS SHALL BE USED TO PERMANENTLY SEAL LIVE MAINS. IF A WELDED CAP CANNOT BE USED DUE TO A FIELD CONDITION, THEN AN INVENTORY SELF RESTRAINING MECHANICAL LINE CAP (FOR UP TO 12 INCH DIAMETER AND UP TO 60 PSIG), CAN BE USED. SELF RESTRAINING CAPS DO NOT REQUIRE FURTHER RESTRAINT. SEE FITS-6024 FOR SELF RESTRAINING MECHANICAL CAPS.
- SIZES LARGER THAN 12 INCHES ARE COMMERCIALY AVAILABLE IN NON RESTRAINING ONLY AND THEREFORE MUST BE RESTRAINED IF USED. FOR THE DIAMETERS LARGER THAN 12 INCH AND FOR PRESSURES UP TO 60 PSIG, THE NON RESTRAINING MECHANICAL CAPS IF USED SHALL BE RESTRAINED IN THE FIELD AS SHOWN HEREIN. SEE FITS-6014 FOR NON-RESTRAINING MECHANICAL CAPS. WELDED STEEL END CAPS SHALL BE USED ON ALL PRESSURES ABOVE 60 PSIG.
- CYLINDRICAL PIPE PUP TO BE PLACED UP AGAINST MECHANICAL END CAP FOLLOWER RING AND SECURED TO HOST PIPE USING THREADED ROD AND LUGS.

RESTRAINING REQUIREMENTS

H.P. DESIGN
 RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS AND CAPS.
 RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS IF USED ON STRAIGHT PIPE LENGTHS.

UPON UNEARTHING AN EXISTING IN-SERVICE UNRESTRAINED COUPLING, ENSURE THAT THE PIPE ON EACH SIDE OF THE COUPLING IS EMBEDDED IN THE EARTH BEFORE FULLY EXPOSING THE COUPLING TO PREVENT PIPE PULL OUT. IF AN UNRESTRAINED COUPLING IS ENCOUNTERED IN THE FIELD, ANCHORAGE LUGS AND THREADED RODS SHALL BE INSTALLED.

L.P. DESIGN
 RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS AND CAPS.
 RESTRAIN ALL MECHANICAL NON SELF RESTRAINING COUPLINGS IF USED ON STRAIGHT PIPE LENGTHS.

No.	ITEM	NGRID ID
1	MECHANICAL COUPLING (SEE FITS-6025 AND FITS-6015)	N/A
2	MECHANICAL END CAP (SEE FITS-6014 AND FITS-6024)	N/A
3	CYLINDRICAL STEEL PIPE PUP, O.D. TO BE THE SAME AS NOMINAL COUPLING DIAMETER. (SEE NOTE K&L)	N/A
4	INSULATOR	3/4" 9342398 1" 9342397 1-1/8" 930817 1-1/4" 930008
5	NUT, HEX ALLOY STEEL (DIA. X THREADS PER INCH)	3/4" - 10 9328587 1" - 8 9328589 1-1/8" - 8 9389930 1-1/4" - 8 9328532
6	WASHER, STEEL	3/4" 9328236 1" 9328207 1-1/8" 9328206 1-1/4" 9389888
7	ROD, THREADED, 1/2"FT. LENGTH (SEE TABLE ON SHEET 1 FOR LENGTH REQUIRED) SEE NOTE B	3/4" 9328150 1" 9328152 1-1/8" 9328114 1-1/4" 9328113
8	LUG, STEEL	GREEN (FOR 3/4" ROD) 9357904 YELLOW (FOR 1" ROD) 9357905 NO FINISH (FOR 1-1/8" ROD) 9389897 NO FINISH (FOR 1-1/4" ROD) 9389931

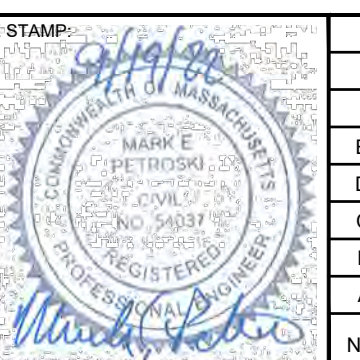
No.	ITEM	NGRID ID
1	MECHANICAL COUPLING (SEE FITS-6025 AND FITS-6015)	N/A
2	MECHANICAL END CAP (SEE FITS-6014 AND FITS-6024)	N/A
3	CYLINDRICAL STEEL PIPE PUP, O.D. TO BE THE SAME AS NOMINAL COUPLING DIAMETER. (SEE NOTE K&L)	N/A
4	INSULATOR	3/4" 9342398 1" 9342397 1-1/8" 930817 1-1/4" 930008
5	NUT, HEX ALLOY STEEL (DIA. X THREADS PER INCH)	3/4" - 10 9328587 1" - 8 9328589 1-1/8" - 8 9389930 1-1/4" - 8 9328532
6	WASHER, STEEL	3/4" 9328236 1" 9328207 1-1/8" 9328206 1-1/4" 9389888
7	ROD, THREADED, 1/2"FT. LENGTH (SEE TABLE ON SHEET 1 FOR LENGTH REQUIRED) SEE NOTE B	3/4" 9328150 1" 9328152 1-1/8" 9328114 1-1/4" 9328113
8	LUG, STEEL	GREEN (FOR 3/4" ROD) 9357904 YELLOW (FOR 1" ROD) 9357905 NO FINISH (FOR 1-1/8" ROD) 9389897 NO FINISH (FOR 1-1/4" ROD) 9389931

THE DDS COMPANIES

45 HENDRIX ROAD
 WEST HENRIETTA, NY 14586
 PHONE (585) 359-7540
 FAX (585) 359-7541

BOSTON GAS COMPANY
 d/b/a
nationalgrid
 40 SYLVAN ROAD
 WALTHAM, MA 02451

IFC



NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

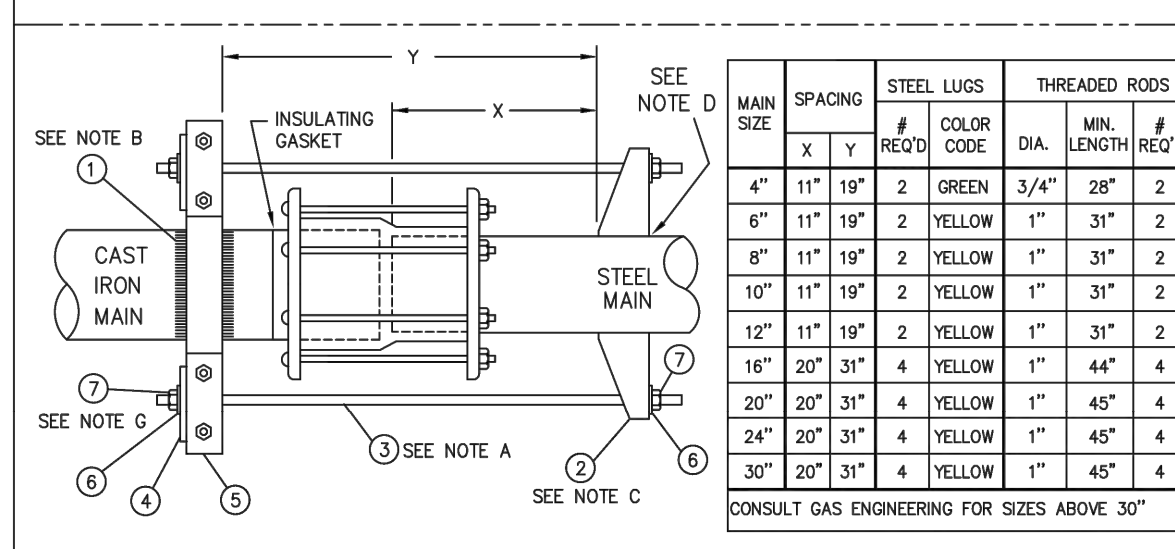
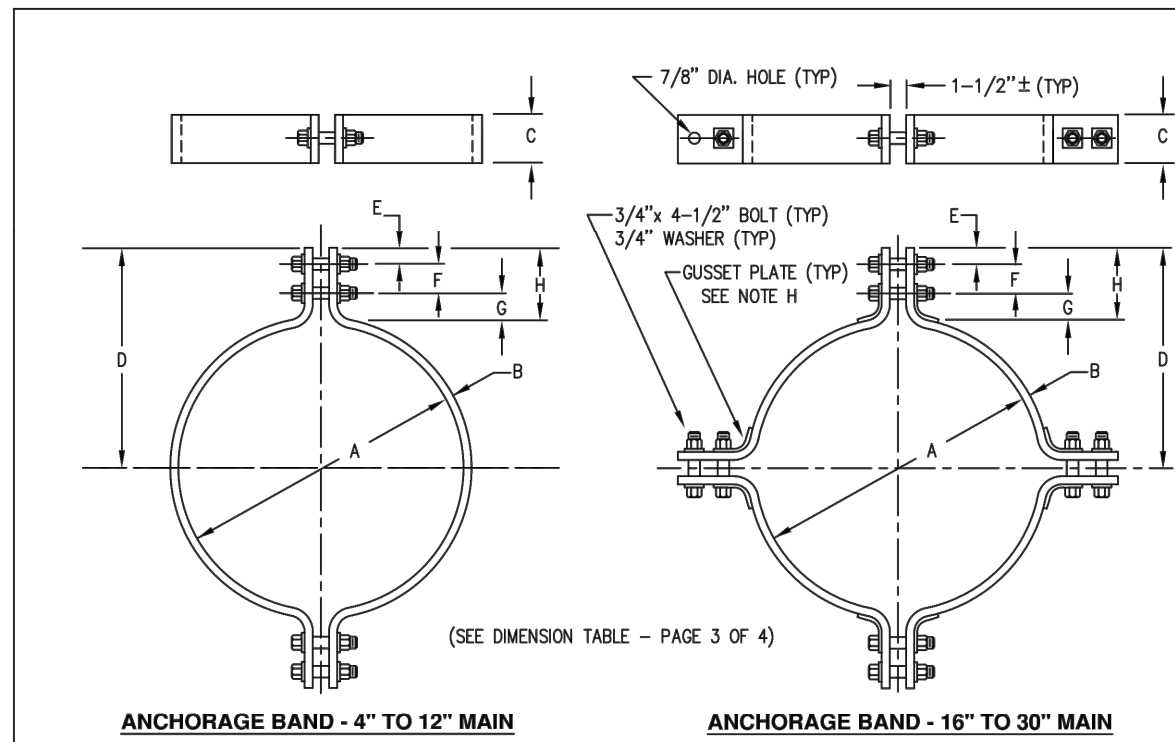
***THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE**

9-35 INDIA STREET
 GAS MAIN REPLACEMENT
 INDIA ST, STATE ST, CENTRAL ST, & MILK ST
 BOSTON, MA

STANDARD DETAILS

DWG SIZE	DESIGNER	ENGINEER	DATE:	ASSET I.D.	W.O. NO.:
22"x34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472

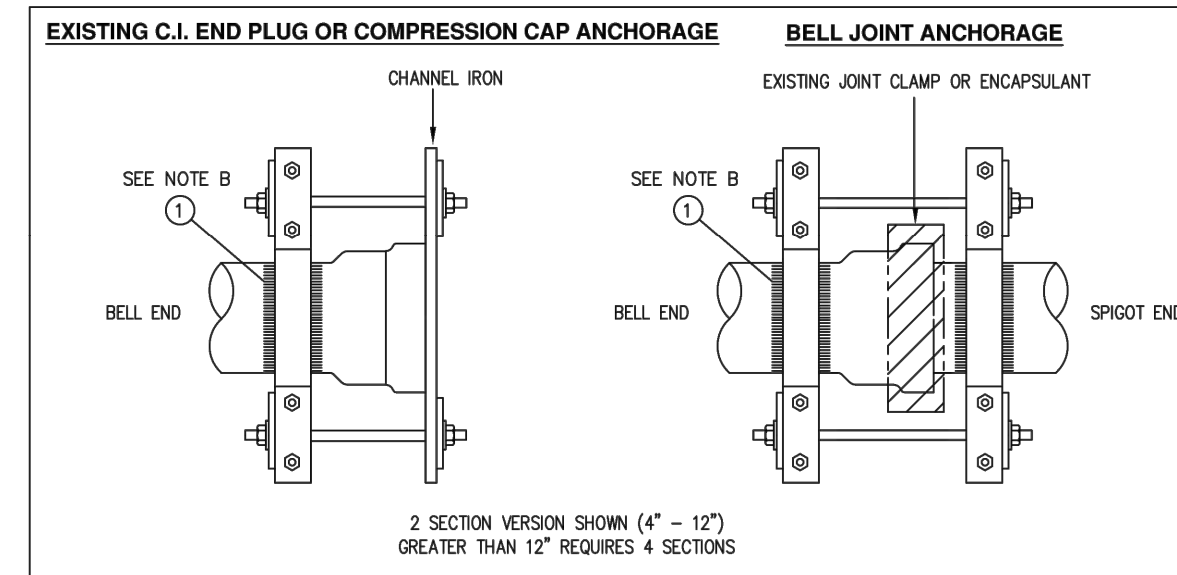
PAGE 08 OF 10	
DRAWING NO.	SHEET NO.
C-203	08



MAIN SIZE	SPACING		STEEL LUGS	COLOR CODE	THREADED RODS	REOD
	X	Y				
4"	11"	19"	2	GREEN	3/4"	28"
6"	11"	19"	2	YELLOW	1"	31"
8"	11"	19"	2	YELLOW	1"	31"
10"	11"	19"	2	YELLOW	1"	31"
12"	11"	19"	2	YELLOW	1"	31"
16"	20"	31"	4	YELLOW	1"	44"
20"	20"	31"	4	YELLOW	1"	45"
24"	20"	31"	4	YELLOW	1"	45"
30"	20"	31"	4	YELLOW	1"	45"

CONSULT GAS ENGINEERING FOR SIZES ABOVE 30"

nationalgrid ALL REGIONS
ANCHORAGE FOR CAST IRON BELL JOINTS, NON-RESTRAINING C.I. COUPLINGS AND CAPS
 DATE: 11/15/2011 EFFECTIVE DATE: 12/10/2021
 DESIGNER: B. FOSTER STD. DWG. NO. MAIN-6190
 DRAWN: B. FOSTER
 REVISIONS: ADDED PAGES 5-8
 UNCONTROLLED WHEN PRINTED PAGE 1 © National Grid Gas plc 2020 - All Rights Reserved



PIPE SIZE	HOLE	C - CHANNEL SIZE
4"	7/8"	4" - 24" USE 4" [5.4 LB/FT]
6" TO 30"	1-1/8"	30" - 36" USE 4" [7.5 LB/FT]
32" TO 42"	1-1/4"	48" - 48" USE 6" [8.2 LB/FT]
48"	1-3/8"	

PIPE SIZE	HOLE	C - CHANNEL SIZE
4"	7/8"	4" - 24" USE 4" [5.4 LB/FT]
6" TO 30"	1-1/8"	30" - 36" USE 4" [7.5 LB/FT]
32" TO 42"	1-1/4"	48" - 48" USE 6" [8.2 LB/FT]
48"	1-3/8"	

1/2" THICK WASHER PLATE
 CHANNEL IRON END PIECE FOR USE ON EXISTING C.I. END PLUGS OR NON-RESTRAINING COMPRESSION CAPS

nationalgrid ALL REGIONS
ANCHORAGE FOR CAST IRON BELL JOINTS, NON-RESTRAINING C.I. COUPLINGS AND CAPS
 DATE: 11/15/2011 EFFECTIVE DATE: 12/10/2021
 DESIGNER: B. FOSTER STD. DWG. NO. MAIN-6190
 DRAWN: B. FOSTER
 REVISIONS: ADDED PAGES 5-8
 UNCONTROLLED WHEN PRINTED PAGE 2 © National Grid Gas plc 2020 - All Rights Reserved

ANCHORAGE BAND DIMENSIONS
 ALL DIMENSIONS ARE IN INCHES

PIPE SIZE	A	B	C	D	E	F	G	H	J
4"	4-3/4	1/4	2	8-7/8	1-1/2	3	2	5-1/2	12
6"	7	1/4	2	10	1-1/2	3	2	6-1/2	14-1/2
8"	9-3/8	1/4	2	11-5/16	1-1/2	3	2	6-1/2	16-1/2
10"	11-1/8	1/4	2	12	1-1/2	3	2-1/2	6-5/16	N/A
12"	13-1/4	1/4	2	13-1/8	1-1/2	3	2-1/2	7	21-3/4
16"	17-5/8	3/8	3	15-13/16	1-1/2	3	3-1/2	8	25-3/8
20"	21-5/8	1/2	4	18-13/16	1-1/2	3	3-1/2	8	32-5/8
24"	25-3/4	1/2	4	21-3/8	1-1/2	3	4	8-1/2	37-3/4
30"	31-3/4	1/2	4	24-7/8	1-1/2	3	4-1/2	9	44-3/4
36"	38	1/2	4	28-1/2	1-1/2	3	5	9-1/2	52
42"	44-1/4	1/2	4	32	1-1/2	3-1/4	5-1/4	10	58-1/4
48"	50-1/2	1/2	4	34-1/2	2	3-1/4	7-1/4	11-3/4	65-1/2

No.	ITEM	NGRID ID
7	NUT, HEX ALLOY STEEL (SEE NOTE G)	9328597
		9328598
8	WASHER, STEEL	9328236
		9328207
	BAND, STEEL (EACH SET COMPLETE WITH BAND NUTS, BOLTS & WASHERS)	9342533
		9342535
		9342536
		9353346
		9342512
		9342513
		9342514
		9342531
		9342537
4	WASHER PLATE (4" X 4" X 1/2" THICK)	9357672
3	ROD, THREADED, 12FT. LENGTH (SEE TABLE ON SHEET 1 FOR LENGTH REQUIRED) SEE NOTE A	9328152
		9329150
2	LUG, STEEL	9357604
		9357905
1	SYNTHOGLASS TAPE, 4" WIDE X 20 FT. ROLL (SEE NOTES B & I)	9357928

BILL OF MATERIAL

No.	ITEM	NGRID ID
7	NUT, HEX ALLOY STEEL (SEE NOTE G)	9328597
		9328598
8	WASHER, STEEL	9328236
		9328207
	BAND, STEEL (EACH SET COMPLETE WITH BAND NUTS, BOLTS & WASHERS)	9342533
		9342535
		9342536
		9353346
		9342512
		9342513
		9342514
		9342531
		9342537
4	WASHER PLATE (4" X 4" X 1/2" THICK)	9357672
3	ROD, THREADED, 12FT. LENGTH (SEE TABLE ON SHEET 1 FOR LENGTH REQUIRED) SEE NOTE A	9328152
		9329150
2	LUG, STEEL	9357604
		9357905
1	SYNTHOGLASS TAPE, 4" WIDE X 20 FT. ROLL (SEE NOTES B & I)	9357928

UNCONTROLLED WHEN PRINTED 3 OF 8 © National Grid Gas plc 2021 - All Rights Reserved MAIN-6190

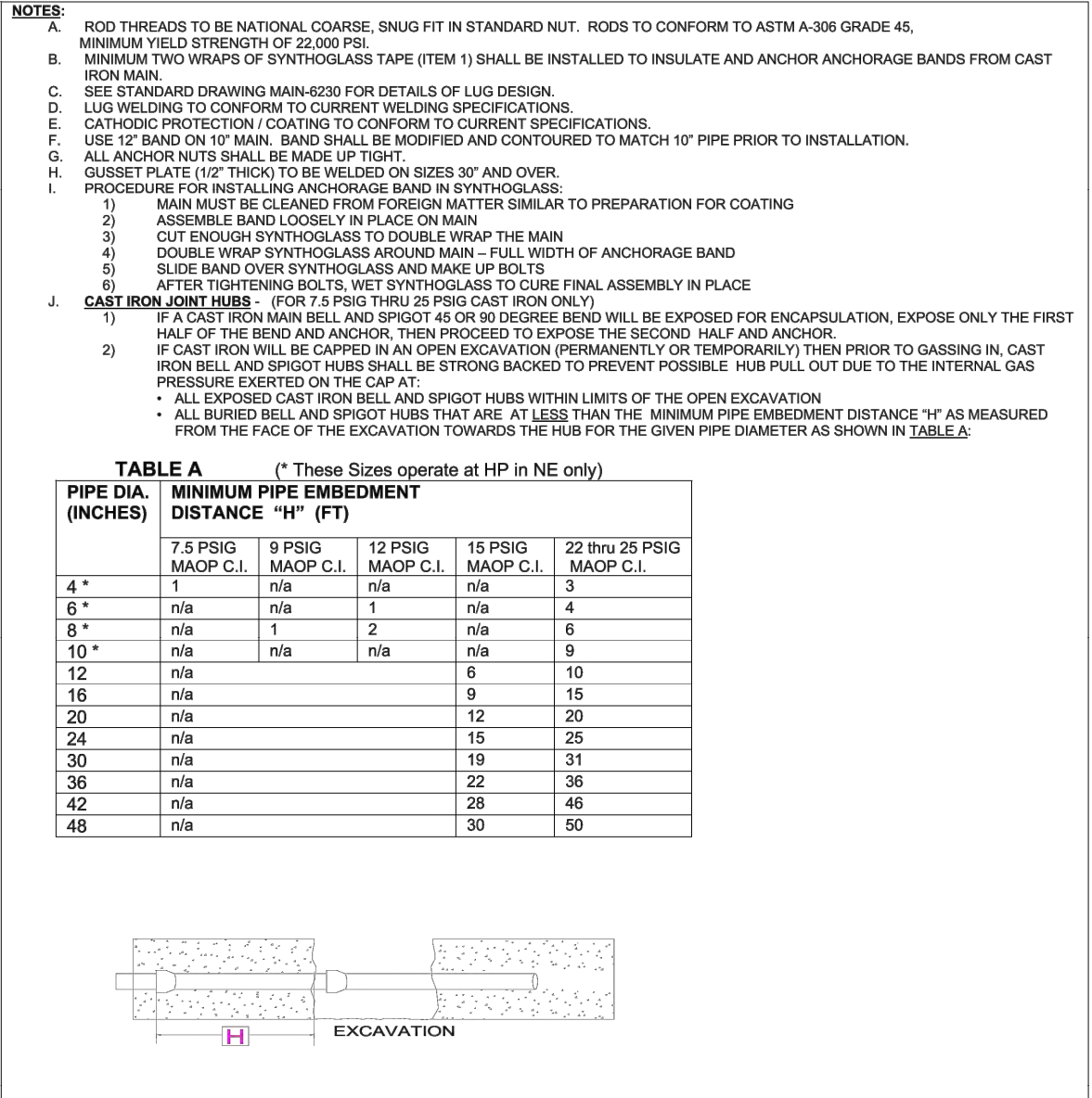
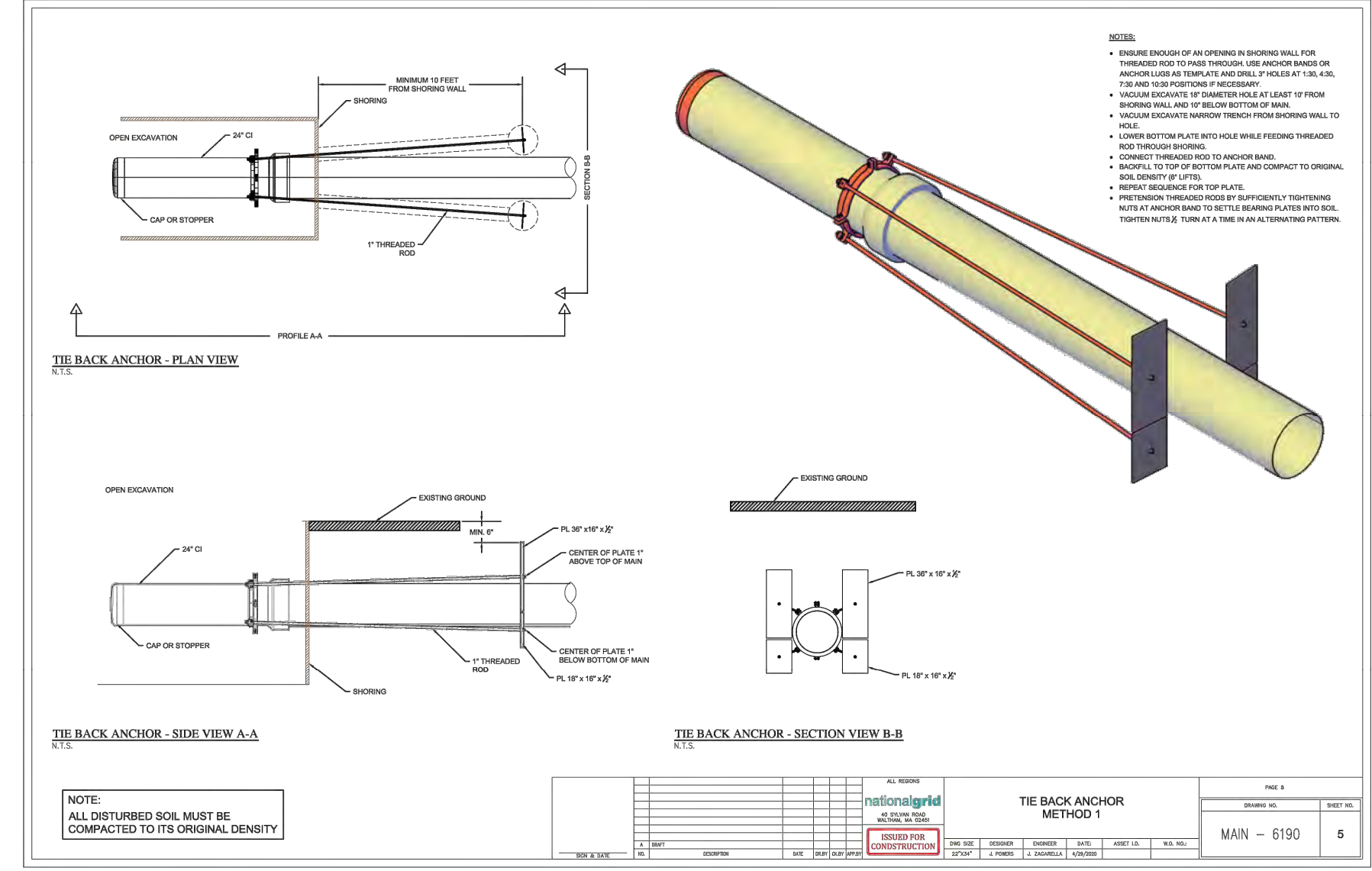


TABLE A (* These Sizes operate at HP in NE only)

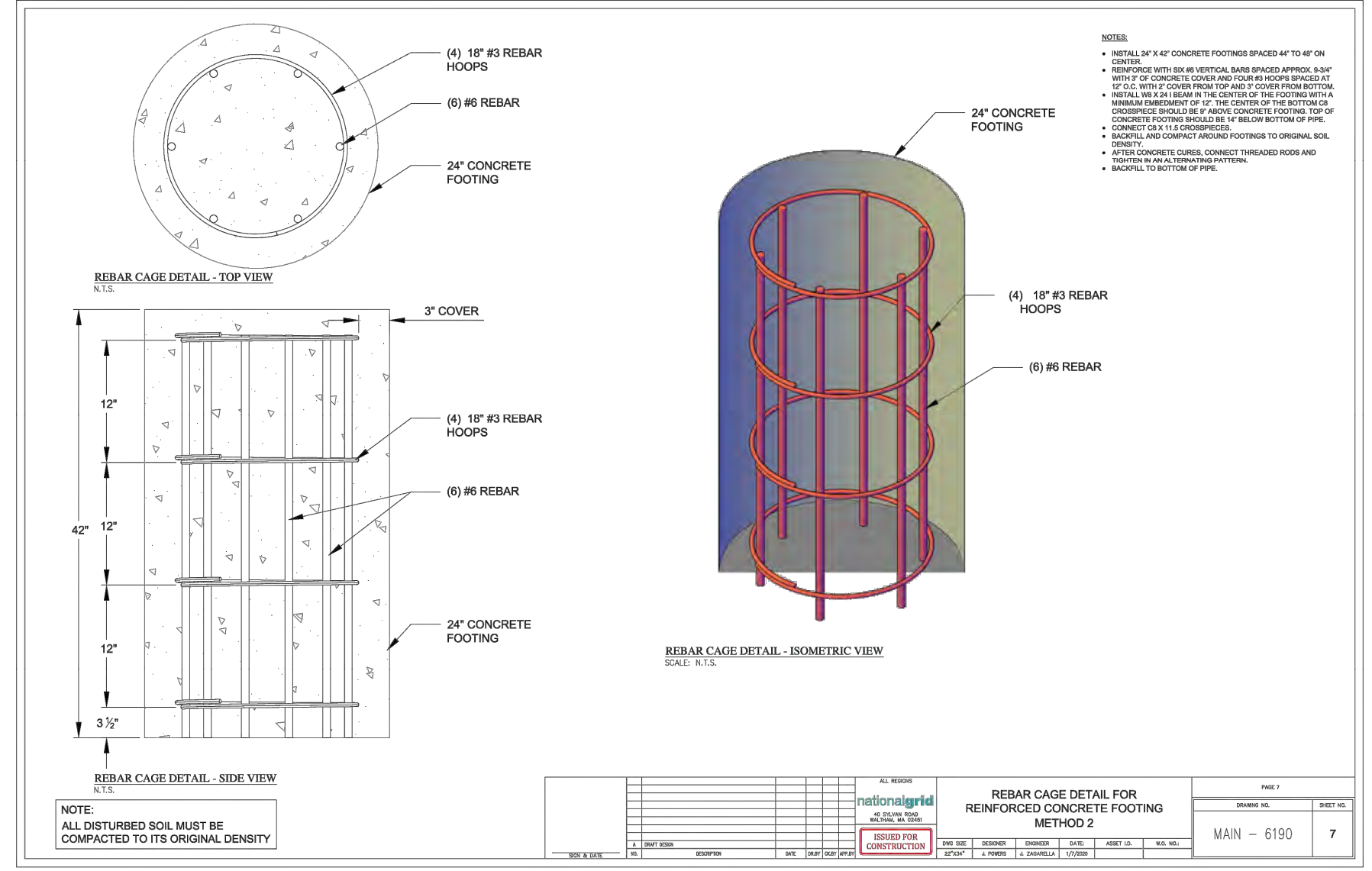
PIPE DIA. (INCHES)	MINIMUM PIPE EMBEDMENT DISTANCE "H" (FT)	7.5 PSIG MAOP C.I.	9 PSIG MAOP C.I.	12 PSIG MAOP C.I.	15 PSIG MAOP C.I.	22 thru 25 PSIG MAOP C.I.
4"	1	n/a	n/a	n/a	3	4
6"	n/a	n/a	1	n/a	n/a	n/a
8"	n/a	1	2	n/a	5	6
10"	n/a	n/a	n/a	n/a	9	9
12"	n/a	n/a	n/a	n/a	6	10
16"	n/a	n/a	n/a	n/a	9	15
20"	n/a	n/a	n/a	n/a	12	20
24"	n/a	n/a	n/a	n/a	15	25
30"	n/a	n/a	n/a	n/a	19	31
36"	n/a	n/a	n/a	n/a	22	36
42"	n/a	n/a	n/a	n/a	28	46
48"	n/a	n/a	n/a	n/a	30	50

UNCONTROLLED WHEN PRINTED 4 OF 8 © National Grid Gas plc 2021 - All Rights Reserved Effective Date 12/31/2021



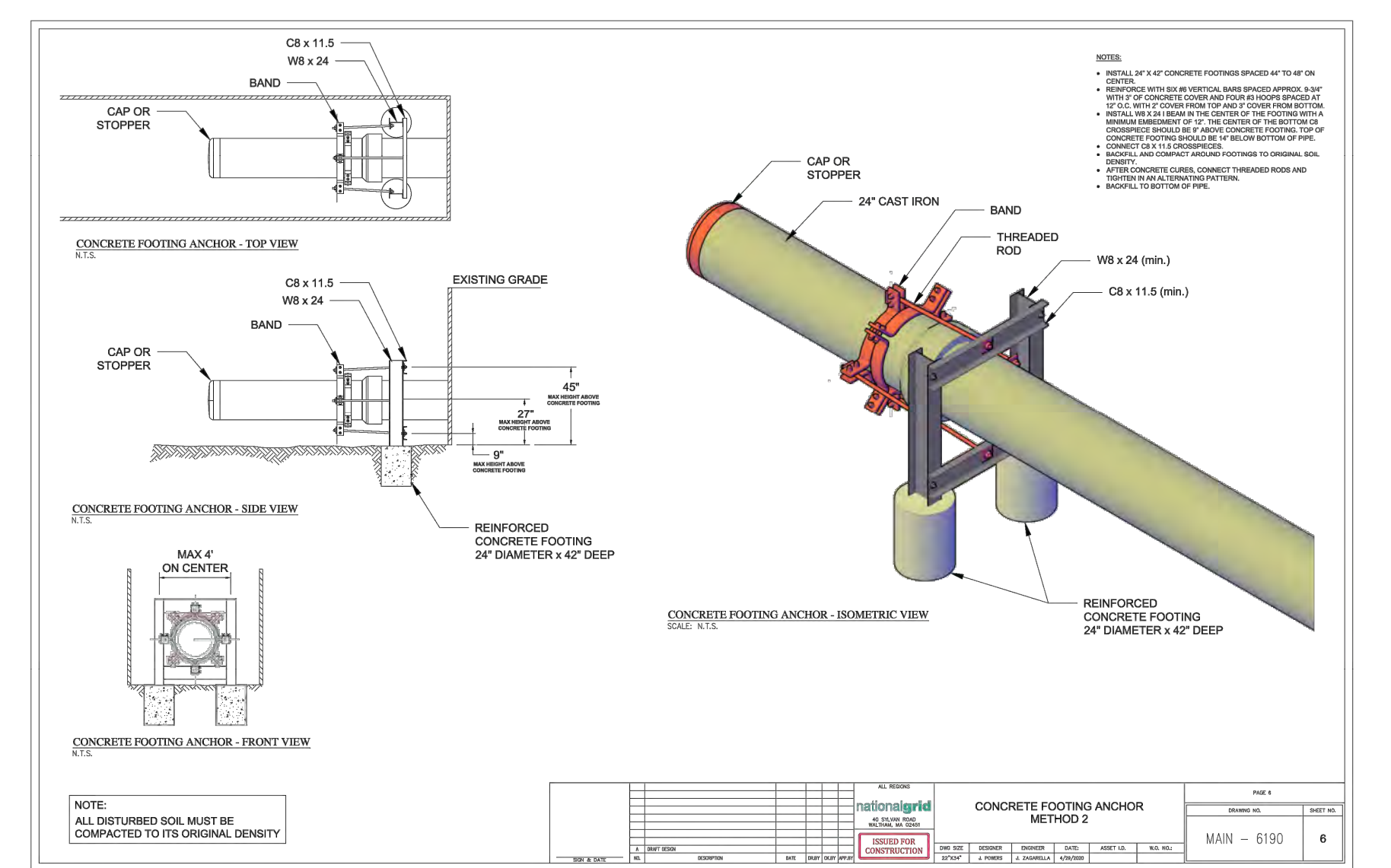
PIPE SIZE	ROD DIA.
4"	3/4"
6" TO 30"	1"
32" TO 42"	1-1/8"
48"	1-1/4"

1/2" THICK WASHER PLATE
 TIE BACK ANCHOR METHOD 1
 DATE: 11/15/2011 EFFECTIVE DATE: 12/10/2021
 DESIGNER: B. FOSTER STD. DWG. NO. MAIN-6190
 DRAWN: B. FOSTER
 REVISIONS: ADDED PAGES 5-8
 UNCONTROLLED WHEN PRINTED PAGE 5 © National Grid Gas plc 2020 - All Rights Reserved



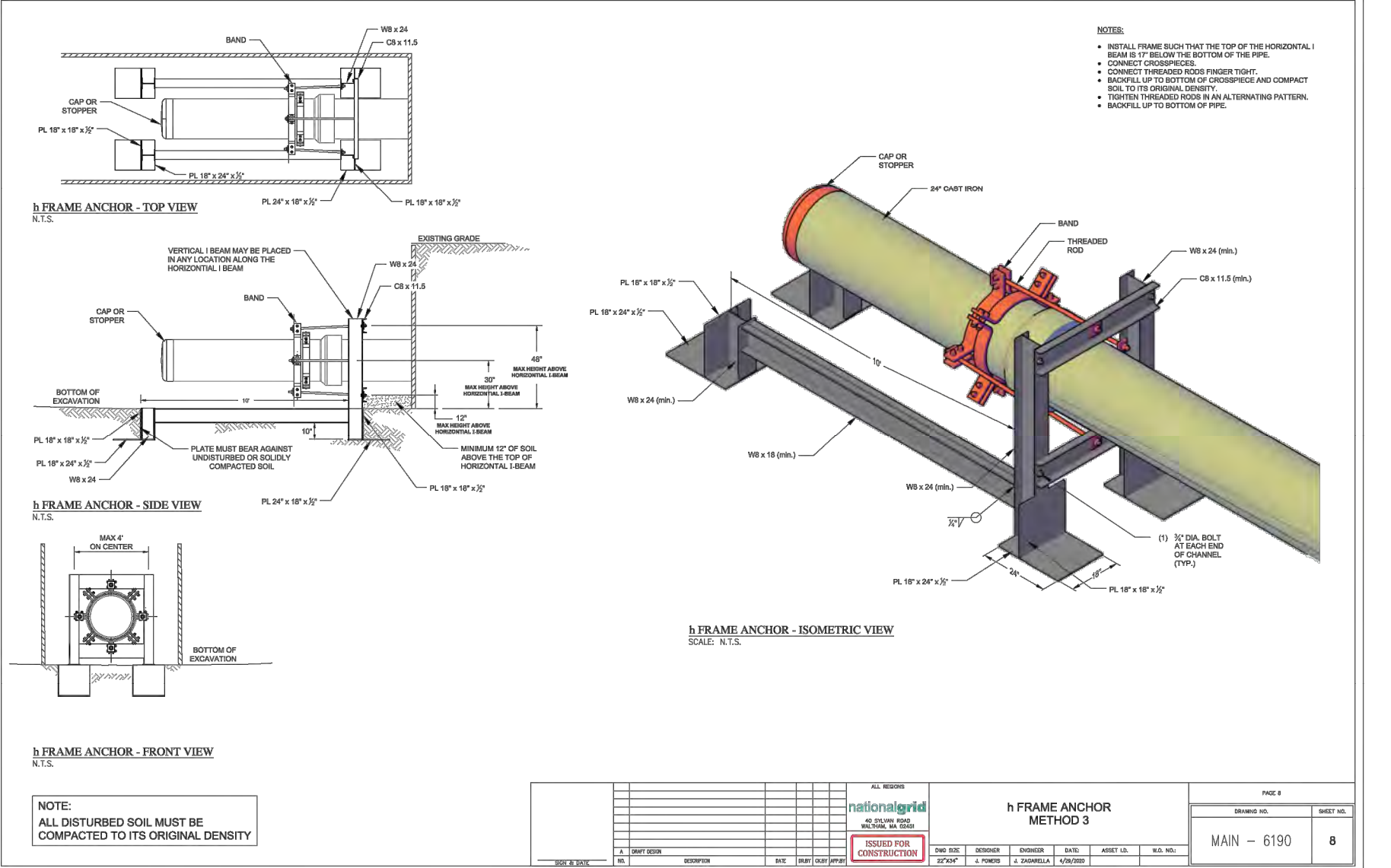
PIPE DIA. (INCHES)	MINIMUM PIPE EMBEDMENT DISTANCE "H" (FT)	7.5 PSIG MAOP C.I.	9 PSIG MAOP C.I.	12 PSIG MAOP C.I.	15 PSIG MAOP C.I.	22 thru 25 PSIG MAOP C.I.
4"	1	n/a	n/a	n/a	3	4
6"	n/a	n/a	1	n/a	n/a	n/a
8"	n/a	1	2	n/a	5	6
10"	n/a	n/a	n/a	n/a	9	9
12"	n/a	n/a	n/a	n/a	6	10
16"	n/a	n/a	n/a	n/a	9	15
20"	n/a	n/a	n/a	n/a	12	20
24"	n/a	n/a	n/a	n/a	15	25
30"	n/a	n/a	n/a	n/a	19	31
36"	n/a	n/a	n/a	n/a	22	36
42"	n/a	n/a	n/a	n/a	28	46
48"	n/a	n/a	n/a	n/a	30	50

UNCONTROLLED WHEN PRINTED 6 OF 8 © National Grid Gas plc 2021 - All Rights Reserved Effective Date 12/31/2021



PIPE DIA. (INCHES)	MINIMUM PIPE EMBEDMENT DISTANCE "H" (FT)	7.5 PSIG MAOP C.I.	9 PSIG MAOP C.I.	12 PSIG MAOP C.I.	15 PSIG MAOP C.I.	22 thru 25 PSIG MAOP C.I.
4"	1	n/a	n/a	n/a	3	4
6"	n/a	n/a	1	n/a	n/a	n/a
8"	n/a	1	2	n/a	5	6
10"	n/a	n/a	n/a	n/a	9	9
12"	n/a	n/a	n/a	n/a	6	10
16"	n/a	n/a	n/a	n/a	9	15
20"	n/a	n/a	n/a	n/a	12	20
24"	n/a	n/a	n/a	n/a	15	25
30"	n/a	n/a	n/a	n/a	19	31
36"	n/a	n/a	n/a	n/a	22	36
42"	n/a	n/a	n/a	n/a	28	46
48"	n/a	n/a	n/a	n/a	30	50

UNCONTROLLED WHEN PRINTED 7 OF 8 © National Grid Gas plc 2021 - All Rights Reserved Effective Date 12/31/2021



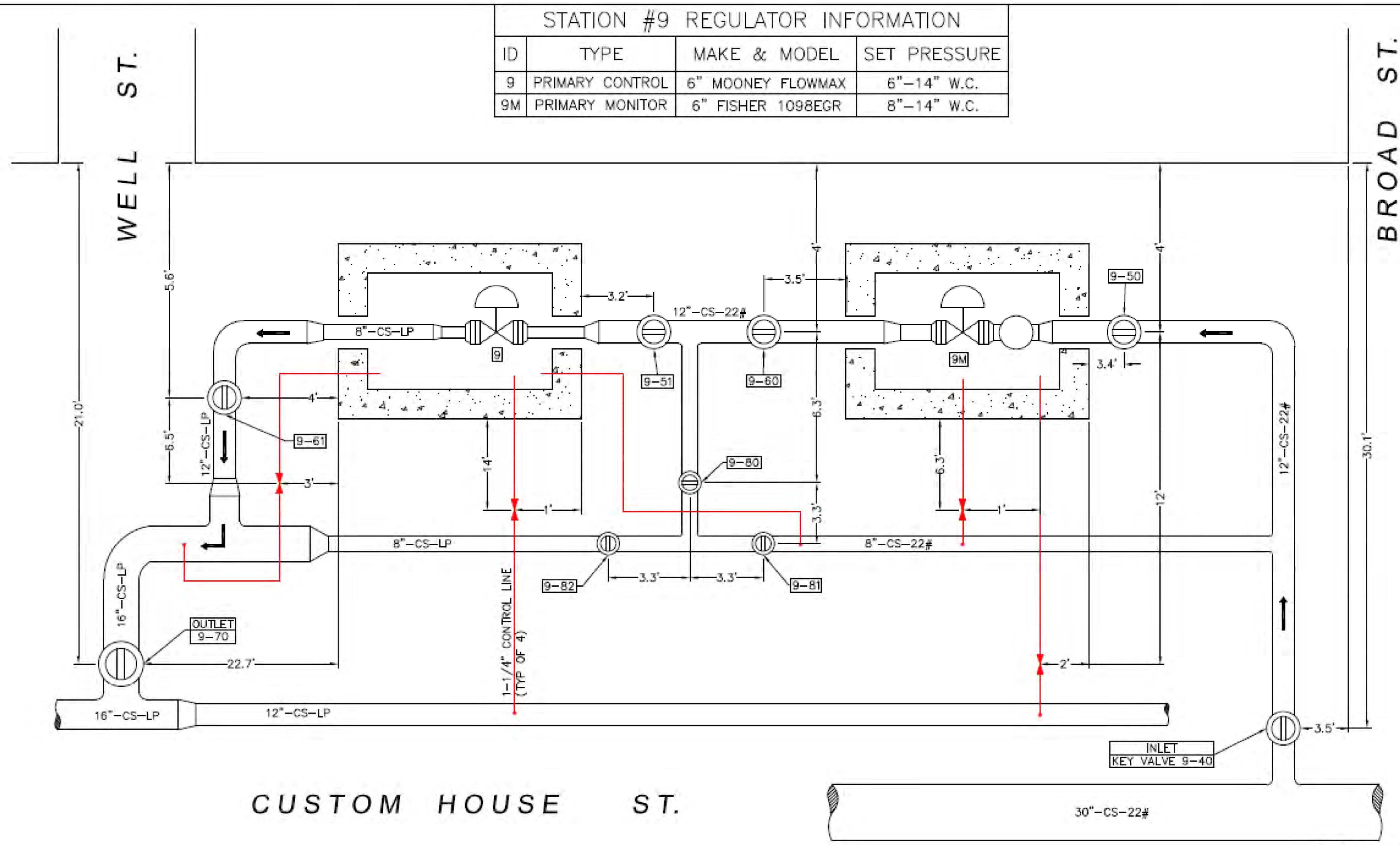
PIPE DIA. (INCHES)	MINIMUM PIPE EMBEDMENT DISTANCE "H" (FT)	7.5 PSIG MAOP C.I.	9 PSIG MAOP C.I.	12 PSIG MAOP C.I.	15 PSIG MAOP C.I.	22 thru 25 PSIG MAOP C.I.
4"	1	n/a	n/a	n/a	3	4
6"	n/a	n/a	1	n/a	n/a	n/a
8"	n/a	1	2	n/a	5	6
10"	n/a	n/a	n/a	n/a	9	9
12"	n/a	n/a	n/a	n/a	6	10
16"	n/a	n/a	n/a	n/a	9	15
20"	n/a	n/a	n/a	n/a	12	20
24"	n/a	n/a	n/a	n/a	15	25
30"	n/a	n/a	n/a	n/a	19	31
36"	n/a	n/a	n/a	n/a	22	36
42"	n/a	n/a	n/a	n/a	28	46
48"	n/a	n/a	n/a	n/a	30	50

UNCONTROLLED WHEN PRINTED 8 OF 8 © National Grid Gas plc 2021 - All Rights Reserved Effective Date 12/31/2021

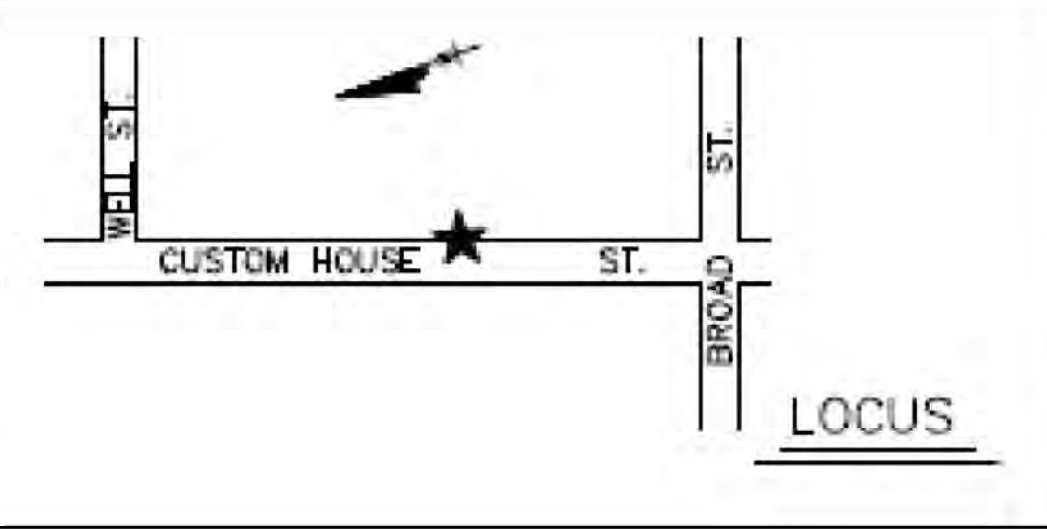
*THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE

	45 HENDRIX ROAD WEST HENRIETTA, NY 14586 PHONE (585) 359-7540 FAX (585) 359-7541	nationalgrid 40 SYLVAN ROAD WALTHAM, MA 02451		9-35 INDIA STREET GAS MAIN REPLACEMENT INDIA ST, STATE ST, CENTRAL ST, & MILK ST BOSTON, MA	PAGE 09 OF 10																																				
						DRAWING NO. C-204	SHEET NO. 09																																		
<p style="text-align: center;">STANDARD DETAILS</p>																																									
<table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DR BY</th> <th>CK BY</th> <th>APP BY</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>BOSTON CONSERVATION COMMISSION UPDATE #2</td> <td>11/08/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>D</td> <td>BOSTON CONSERVATION COMMISSION UPDATE</td> <td>11/07/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>C</td> <td>MBTA PROFILE VIEW UPDATE</td> <td>09/27/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>B</td> <td>BOM UPDATE</td> <td>09/20/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> <tr> <td>A</td> <td>ISSUED FOR CONSTRUCTION</td> <td>09/19/2022</td> <td>TSN</td> <td>DMJ</td> <td>MEP</td> </tr> </tbody> </table>						NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY	E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP	D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP	C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP	B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP	A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP
NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY																																				
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP																																				
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP																																				
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP																																				
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP																																				
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP																																				
<table border="1"> <thead> <tr> <th>DWG SIZE</th> <th>DESIGNER</th> <th>ENGINEER</th> <th>DATE</th> <th>ASSET I.D.</th> <th>W.O. NO.:</th> </tr> </thead> <tbody> <tr> <td>22"x34"</td> <td>DDS COMPANIES</td> <td>T. NOSAR</td> <td>08/20/2022</td> <td>XXXXXXXX</td> <td>1474472</td> </tr> </tbody> </table>						DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:	22"x34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472																								
DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET I.D.	W.O. NO.:																																				
22"x34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXXX	1474472																																				

STATION #9 REGULATOR INFORMATION			
ID	TYPE	MAKE & MODEL	SET PRESSURE
9	PRIMARY CONTROL	6" MOONEY FLOWMAX	6"-14" W.C.
9M	PRIMARY MONITOR	6" FISHER 1098EGR	8"-14" W.C.



INSTALLATION DATE: 12/1991



REGULATOR STATION FLOW DIAGRAM
 CUSTOM HOUSE ST @ WELL ST, BOSTON, MA.
 INLET MAOP: 22 PSIG, OUTLET MAOP: 14" W.C.
 NOT TO SCALE

BOSTON GAS COMPANY
 d/b/a
nationalgrid
 40 SYLVAN ROAD
 WALTHAM, MA 02451

NO	DESCRIPTION	DATE	DFT	APP
6	UPDATE ALL CHANGES	12/23/2021	E.A.B	T.R.B
5	ALL CHANGES TO DATE	12/23/2014	M.J.B	A.D

DWG. NO.
 FD-9
 ASSET ID: 9

*THE ENTIRE PROJECT AREA IS WITHIN LAND SUBJECT TO COASTAL STORM FLOWAGE



45 HENDRIX ROAD
 WEST HENRIETTA, NY 14586
 PHONE (585) 359-7540
 FAX (585) 359-7541

BOSTON GAS COMPANY
 d/b/a
nationalgrid
 40 SYLVAN ROAD
 WALTHAM, MA 02451
 IFC



NO.	DESCRIPTION	DATE	DR BY	CK BY	APP BY
E	BOSTON CONSERVATION COMMISSION UPDATE #2	11/08/2022	TSN	DMJ	MEP
D	BOSTON CONSERVATION COMMISSION UPDATE	11/07/2022	TSN	DMJ	MEP
C	MBTA PROFILE VIEW UPDATE	09/27/2022	TSN	DMJ	MEP
B	BOM UPDATE	09/20/2022	TSN	DMJ	MEP
A	ISSUED FOR CONSTRUCTION	09/19/2022	TSN	DMJ	MEP

9-35 INDIA STREET
 GAS MAIN REPLACEMENT
 INDIA ST, STATE ST, CENTRAL ST, & MILK ST
 BOSTON, MA
EXISTING REGULATOR FLOW DIAGRAM

PAGE 10 OF 10	
DRAWING NO.	SHEET NO.
C-205	10

DWG SIZE	DESIGNER	ENGINEER	DATE	ASSET ID.	W.O. NO.:
22"X34"	DDS COMPANIES	T. NOSAR	08/20/2022	XXXXXXX	1474472