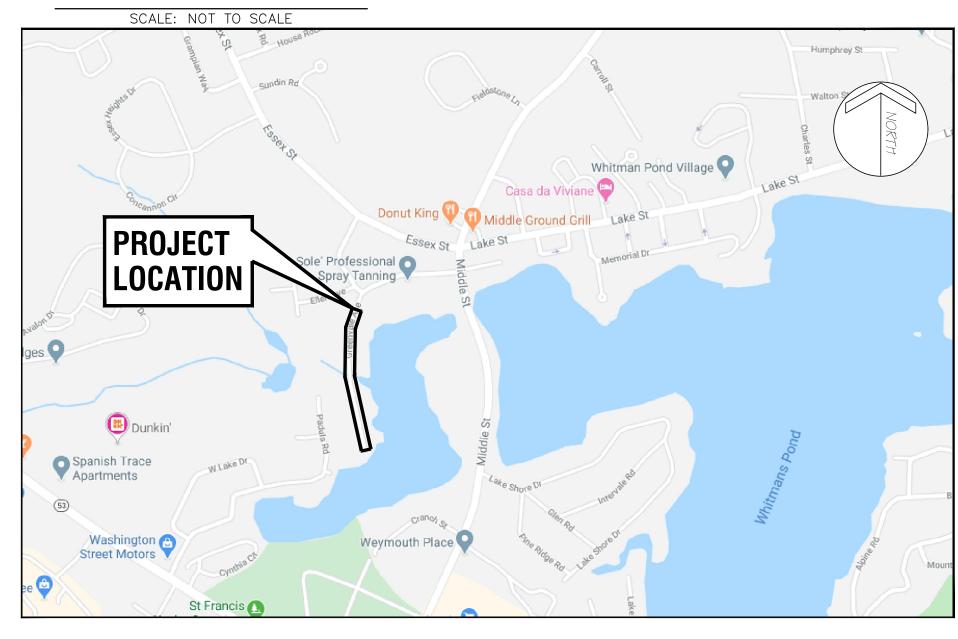
T-001

NATIONAL GRID

PROPOSED APPROXIMATELY (260') 2" PLASTIC HDPE 60 PSIG GAS MAIN INSTALLATION VIA HDD METHOD GREENVALE AVENUE, WEYMOUTH, MA W0# 1217456 nationalgrid

LOCATION MAP:



TOTAL	WORK QUAN	TITIES
TOTAL PIPE INSTALLATION	ESTIMATED	ACTUAL
2" HDPE	260'	
TOTAL TRENCH BACKFILL		
TOTAL ASPHALT & CONCRETE BREAKS		

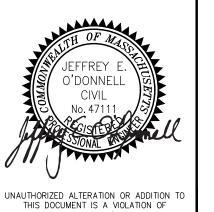
DRAWING INDEX		
DRAWING NO.	DRAWING TITLE	
T-001	TITLE SHEET	
G-001	NOTES & LEGEND	
G-002	BILL OF MATERIALS	
C-001	EXISTING CONDITIONS	
C-101	PROPOSED HDD PLAN AND PROFILE	
M-001	TIE-IN DETAILS	



OCTOBER 2020



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•		UPDATED FEMA ZONE NOTATION	BCW	ARS	ARS	JEO	
)	09/01/20	ISSUED FOR CONSTRUCTION	BCW	ARS	ARS	JEO	UNAU ⁻ TI
0	Date	Revision	Ву	Chkd.	Engr.	Supv.	APPI





PROPOSED GAS MAIN INSTALLATION
VIA HDD ACROSS UNNAMED
PERRENIAL TO WHITMAN'S POND
GREENVALE AVENUE, WEYMOUTH, MA

MR-WEY-1217456

CLIENT DRAWING NUMBER

TITLE SHEET

Drawn: BCW	Date: 02/26/2020	Scale: AS NOTED	CAD FILE NAME	CHA SHEET NUMBE
Chkd.: ARS	Design Engr.:ARS	Design Supv.: JEO	058260.dwg	T-001

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CONSTRUCTION NOTES

SCOPE OF WORK

NATIONAL GRID WORK ORDER NUMBER 1217456:

(GREENVALE AVENUE, WEYMOUTH AVENUE, MA) INSTALL APPROXIMATELY 260' OF 2" PL HDPE 60 PSIG GAS MAIN UNDER THE UNNAMED PERRENIAL TRIBUTARY TO WHITMAN'S POND VIA HDD METHOD AS PART OF THE RELAY OF THE EXISTING 1.5 INCH BARE STEEL ON GREENVALE AVENUE 2 MAIN CONNECTIONS

GENERAL

. NO FIELD CHANGES SHALL BE MADE TO THIS DESIGN WITHOUT APPROVAL FROM THE ASSIGNED NATIONAL GRID ENGINEER ENGINEER: JONAS ILAIRE

PHONE: (781) 907-2089

EMAIL: JONAS.ILAIRE@NATIONALGRID.COM

- 2. CONTRACTOR SHALL CALL DIGSAFE (DIAL 811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS, AND HOLIDAYS ARE EXCLUDED. 3. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES
- DEPICTED OR NOT DEPICTED ON THIS DESIGN PRIOR TO CONSTRUCTION 4. NEW MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL TRENCH DETAIL
- INCLUDED IN THESE DRAWINGS, UNLESS NOTED OTHERWISE. A. 36 INCHES OF COVER FROM FINAL GRADE WHERE PRACTICAL
- B. SERVICES SHOULD BE INSTALLED WITH 24 INCHES OF COVER SAND PADDING IN ALL DIRECTIONS, 6 INCHES MINIMUM
- D. CAUTION TAPE SHALL BE INCLUDED ONE FOOT BELOW GRADE 5. FOR SHALLOW MAINS LESS THAN MINIMUM COVER LISTED BELOW, INSTALL STEEL
- PLATES PER CNST-6030 AND FOLLOW SHALLOW MAIN NOTIFICATION PROCESS C-16-03 STATE HIGHWAY MINIMUM COVER: 36 INCHES
 - DISTRIBUTION MINIMUM COVER: 24 INCHES
 - SERVICES IN PUBLIC ROW: 18 INCHES
 - SERVICES IN PRIVATE PROPERTY: 12 INCHES
- E. 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.
- 6. ALL MAINS SHOULD BE INSTALLED WITH CLEARANCE OF 12 INCHES FROM OTHER FACILITIES.
 - DISTRIBUTION MINIMUM CLEARANCE: 6 INCHES
 - APPROPRIATE PROTECTIVE MEASURES SHALL BE USED PROTECT THE GAS FACILITY IF MINIMUMS CANNOT BE ATTAINED. APPROVAL IS REQUIRED BY GAS SYSTEMS ENGINEERING.
- 7. 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.
- 8. FIELD ADJUSTMENTS TO PROPOSED TIE-IN DESIGN MAY BE REQUIRED. 9. ALL CUSTOMER SERVICES WITHIN THE SCOPE OF MAIN TO BE ABANDONED SHALL BE TRANSFERRED OR RELAYED BY THE CONTRACTOR TO THE NEW MAIN PRIOR TO ABANDONMENT. WHEN RELAYING A LOWER PRESSURE MAIN WITH HIGHER PRESSURE MAIN, ALL SERVICES SHALL BE RELAYED OR INSERTED.
- 10. CONTACT I&R PRIOR TO ANY WORK WITHIN 200 FEET OF A GAS REGULATOR STATION 11. INSTALL ANY ADDITIONAL VALVES AS NEEDED PER CONSTRUCTION CREW DESIGNATION. 12. FOR HOST STEEL MAIN CONNECTIONS: IN LIEU OF THE USE OF TDW 3-WAY TEE
- FITTINGS. ESPECIALLY WHERE INSUFFICIENT COVERAGE PROHIBITS THEIR USE. A MUELLER WELD ON BOTTOM-OUT FITTING OR A TDW SPHERICAL 3-WAY TEE CAN BE USED FOR STOP OFF/TAKE OFF APPLICATIONS. A TDW SHORTSTOPP FITTING CAN ALSO BE USED AS AN ALTERNATIVE, BUT REQUIRES ANALYSIS FOR BYPASS ETC. NATIONAL GRID SYSTEM PLANNING SHALL REVIEW AND APPROVE THE USE OF AN ALTERNATIVE FITTING. A PULL OUT RESISTANT COUPLING MUST BE USED FOR THE CONNECTION OF THE NEW MAIN TO THE HOST MAIN.
- 13. ON NEW PLASTIC TO EXISTING STEEL CONNECTIONS, IN-LINE TIE-INS USING A STOP-OFF FITTING AND A PULLOUT RESISTANT DRESSER STYLE COUPLING IS INTERCHANGEABLE WITH USING A TDW 3-WAY TEE, AN ELBOW AND A PLASTIC TO STEEL TRANSITION FITTING ON A HIGH PRESSURE DISTRIBUTION MAIN OR SERVICE.
- 14. STEEL MUELLER ANSI 150 CLASS FITTINGS ARE INTERCHANGEABLE WITH TDW FITTINGS OF 150 POUND CLASS PROVIDED THAT THEY ARE THE SAME SIZE AND CAN PROVIDE THE SAME FUNCTION IN A SAFE MANNER IN ACCORDANCE TO THE MANUFACTURER'S SPECIFICATIONS.

DESIGN CRITERIA

- DESIGN IN ACCORDANCE WITH THE FOLLOWING:
- ENGO2001: DESIGN OF GAS SERVICES ENGO4001: DESIGN OF DISTRIBUTION MAINS
- CNST01001: HORIZONTAL DIRECTIONAL DRILLING 2. PROPOSED PIPING:
 - DESIGN CLASS LOCATION 4
 - NOMINAL SIZE 2 INCH IPS
- C. MATERIAL HDPE (SDR 11.0) 3. SYSTEM MAOP -60 PSIG
- 4. PIPE SIZING DETERMINED BY NATIONAL GRID LONG TERM PLANNING 5. BYPASS REQUIREMENTS FOR ALL MAIN CONNECTIONS TO BE DETERMINED BY NATIONAL GRID OPERATIONS ENGINEERING AND IMPLEMENTED IN ACCORDANCE WITH THE SOP PROCESS.
- 6. FOR WORK ORDERS PERTAINING TO ENCROACHMENTS, NATIONAL GRID SHALL DETERMINE IN THE FIELD THE EXACT LOCATION OF THE ENCROACHMENT TO ENSURE THE REPLACEMENT COMPLIES WITH DAMO1008 AND REMOVES ANY POTENTIAL HAZARD CREATED BY THE ENCROACHMENT.
- 7. EFFECTIVE JANUARY 22, 2020, ALL 4" THROUGH 12" POLYETHYLENE (PE) TO CAST IRON (CI) OR STEEL (ST) TIE-INS SHALL BE COMPLETED WITH DRESSER COUPLINGS THAT HAVE A NEW, YELLOW INSTRUCTION TAG. IF THE YELLOW TAGGED COUPLINGS ARE NOT AVAILABLE, THE PE MUST BE TRANSITIONED TO ST USING A TRANSITION FITTING PRIOR TO COMPLETING THE TIE-IN. COUPLINGS WITH ORANGE TAGS WILL NO LONGER BE APPROVED FOR USE ON PE PIPE.

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.
- 2. ALL REFERENCES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT REVISION AVAILABLE AT THE TIME IF CONSTRUCTION 3. FEDERAL & STATE
 - A. TITLE 49: PART 192 TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS
 - B. 220 CMR: DEPARTMENT OF PUBLIC UTILITIES 100.00 - 113.00: MASSACHUSETTS GAS DISTRIBUTION CODE
- 4. 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
 - G. CNST03003: MAKE-SAFE ACTIONS FOR GAS RELEASES (MIGRATING & BLOWING GAS)
 - H. CNST03005: PURGING REQUIREMENTS FOR GAS PIPELINES I) CNST03006: PURGING OPERATIONS - DIRECT REPLACEMENT
 - II) CNST03007: PURGING OPERATIONS COMPLETE INERT FILL III) CNST03008: PURGING OPERATIONS - SLUG METHOD
 - IV) PURG6040: TYPICAL NITROGEN PURGE ARRANGEMENT CNST04005: INSTALLING STEEL DISTRIBUTION MAINS
 - CNST04007: FIELD COLD BENDING OF LINE PIPE
 - K. CNST04011: ABANDONMENT OF MAINS L. CNST04012: GROUTING ABANDONED PIPELINES
 - M. CNST04030: RAISING MAN AND SERVICE GATE BOXES N. CNST05001: JOINING OF PLASTIC PIPE
 - CNST05010: GENERAL CONSTRUCTION REQUIREMENTS AND PIPE HANDLING
 - P. CNST06045: SUPPORT REQUIREMENTS FOR EXPOSED AND UNDERMINED STEEL OR PLASTIC GAS FACILITIES
 - Q. CNST06046: TEMPORARY SUPPORTS SPACING GUIDELINES FOR CAST IRON MAINS R. CNST06060: INSTALLATION OF MARKER TAPES AND EMS PIPELINE LOCATORS FOR
 - MAINS AND SERVICES S. CNST06061: TRACER WIRE INSTALLATIONS FOR PLASTIC MAINS AND SERVICES
 - CS-CNST002: TYPICAL UTILITY CROSSING AND TRENCH GUIDELINES U. CS-LIVE001: ACCEPTABLE METHODS OF ISOLATION FOR PERFORMING HOT WORK
 - CS-LIVE002: TEMPORARY BYPASSES ON PLASTIC, CAST IRON OR STEEL MAINS W. DAM01008: CAST IRON ENCROACHMENT POLICY FOR MASSACHUSETTS AND RHODE
 - ISLAND X. DAMO1011: EXCAVATION AND EXCAVATION NOTIFICATION REQUIREMENTS FOR
 - UNDERGROUND FACILITIES FOR MASSACHUSETTS AND RHODE ISLAND Y. DAMO1015: LOCATE AND MARKOUT REQUIREMENTS FOR UNDERGROUND GAS FACILITIES
 - Z. DAM01016: LOCATE AND MARK OUT OF UNDERGROUND FACILITIES AA. GCON02001: SYSTEM OPERATING PROCEDURE (SOP)
 - AB. GEN01030: OPERATING AND MAINTENANCE REQUIREMENTS MA
 - AC. GEN01100: OPERATOR QUALIFICATION PLAN
 - AD. GEN02007: NATIONAL GRID MASSACHUSETTS GAS EMERGENCY RESPONSE PLAN
 - AE. GEN03002: PROCESSING GAS MAIN AND NEW SERVICE WORK PACKAGES AF. GEN03003: CHANGE CONTROL PROCEDURE FOR CONSTRUCTION PROJECTS
 - AG. INRO6002: SUPPLEMENTAL ODORIZATION FOR NEW PIPING
 - AH. MAIN5030: INSTALLATION OF POLYETHYLENE PIPE AI. MAIN6010: STANDARD FLOW TEST PROCEDURE FOR MAIN BAG-OFF LOW PRESSURE
 - AJ. MAIN6060: CASING INSTALLATIONS
 - AK. MAIN6100: VENT INSTALLATION FOR GAS MAIN CASINGS AL. MAIN6190: ANCHORAGE FOR CI TO STEEL NON-RESTRAINING INSULATING COUPLING,
 - AM. MAIN6220: STEEL RODS AND LUGS FOR RESTRAINING OF NON-RESTRAINING MECHANICAL COMPRESSION COUPLINGS AND CAPS FOR PRESSURIZED INLINE STEEL PIPE AND DROP IN PIECES
 - AN. MAIN6230: ANCHORAGE LUGS FOR COMPRESSION COUPLING ON STEEL MAINS
 - AO. MECH5010: JOINTS OTHER THAN WELDED AP. MECH6010: CONNECTION OF DISSIMILAR POLYETHYLENE PLASTIC PIPE WITH
 - ELECTROFUSION OR MECHANICAL COUPLING
 - AQ. MECH6020: CONNECTION OF DISSIMILAR POLYETHYLENE PLASTIC PIPE WITH ELECTROFUSION OR MECHANICAL SADDLE TEE
 - AR. MECH6030: CONNECTION OF DISSIMILAR POLYETHYLENE PLASTIC PIPE WITH MECHANICAL COUPLING - ALTERNATE
 - AS. VALV6010: STEEL VALVE INSTALLATIONS 2 IN. 12 IN. FOR DISTRIBUTION SYSTEM OPERATING UP TO 124 PSI AT. VALV6020: 2 IN. - 12 IN. POLYETHYLENE VALVE INSTALLATION ON GAS MAIN
 - AU. VALV6140: CONCRETE VALVE SUPPORTS FOR BALL VALVE INSTALLATIONS AV. 030018-CS SPECIFICATION AND HANDLING OF TRAFFIC PLATES
- 5. SERVICE SPECIFIC GAS POLICIES AND WORK METHODS A. CMS03002: CUSTOMER METER AND SERVICE REGULATOR DESIGN AND INSTALLATION
 - 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
 - F. CNST06009: METER/SERVICE RELOCATION GUIDELINE
 - G. CNST06020: COMPLETION AND PROCESSING OF GAS SERVICE RECORD CARDS H. CNST06030: NOTIFICATION OF CUSTOMERS INVOLVED IN THE INTERRUPTION OF GAS
 - SERVICES I. CS-SERVOO1: TYPICAL 1/2" SERVICE OUTSIDE SETS
 - J. CS-SERVOO2: TYPICAL 1" SERVICE OUTSIDE SETS
 - K. CS-SERV003: TYPICAL 1-1/4" SERVICE OUTSIDE SETS
 - L. CS-SERVOO4: TYPICAL 2" SERVICE

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- M. CS-SERVOO5: EXCESS FLOW VALVE REQUIREMENTS ON HP SERVICES N. CS-SERVOO9: TYPICAL 1/2" SERVICE INSIDE SETS
- O. CS-SERVO10: TYPICAL 1" SERVICE INSIDE SETS P. HTAP-6010: NO-INTERRUPT 1 INCH CTS AND 1-1/4 INCH CTS SERVICE TRANSFER
- (NIST) LP TO 60 PSIG MAINS Q. SERV-5075: RELOCATION OF METER SET ASSEMBLIES INSIDE TO OUTSIDE
- R. SERV-6185: HOT TAPPING MD BRANCH SADDLES OFF 4IN 12IN 60 PSIG S. VALV6110: 1/2 INCH - 3 INCH POLYETHYLENE GAS SERVICE VALVE INSTALLATION 6. SEE BILL OF MATERIAL FOR MATERIAL SPECIFICATION, STANDARD AND/OR APPLICABLE
- NATIONAL GRID "FITS" REFERENCE A. FOR THIS PROJECT, GRADE B, X42, X52 AND EQUIVALENT ARE ACCEPTABLE STEEL MATERIAL STRENGTHS IF APPLICABLE. ALTERNATES TO THE BOM ARE ALLOWED WITHIN

PRESSURE TESTING

- 1. PRESSURE TESTING TO BE IN ACCORDANCE WITH:
- A. CNST04003: PRESSURE TESTING MAINS OPERATING BELOW 125 PSIG.
- TEST PRESSURE (MINIMUM): 90 PSIG
- TEST DURATON BASED ON LENGTH AND DIAMETER IN ACCORDANCE WITH TABLE 1 TEST MEDIUM: AIR AND/OR NITROGEN CS-MAINOO4: PRESSURE TESTING OF NEW MAINS MAOP OF 124 PSIG OR LESS
- 2. PRESSURE TEST SERVICES IN ACCORDANCE WITH: A. CNST06008: PRESSURE TESTING SERVICE LINES

- 1. NATIONAL GRID WELDING GAS POLICIES AND WORK METHODS INCLUDE: CNST05002: WELDING POLICY
- CNST05003: PIPE WELDING SAFETY
- CNST05005: WELDING PROCEDURE SPECIFICATIONS
- MS-030: WELDING FILLER MATERIALS 2. PRIOR TO THE START OF ANY WORK THE CONTRACTOR SHALL SUBMIT WELDER CERTIFICATION DOCUMENTS FOR EACH OF THE WELDERS EMPLOYED ON THIS PROJECT.
- 3. WELDING PROCEDURE SPECIFICATIONS REQUIRED
- A. BUTT WELDS (GROOVE): WPS-SMAW-E6010/7010 (LATEST REVISION) B. FILLET WELDS (BRANCH): WPS-SMAW-E6010/7010 (LATEST REVISION)
- 4. 10% (AT LEAST 1) OF WELDS IN EACH CATEGORY BELOW SHALL BE SUBJECT TO NON-DESTRUCTIVE EXAMINATION (NDE).
- A. BUTT WELDS 2-INCH AND GREATER: 10% RADIOGRAPH B. BUTT WELDS < 2-INCHES: 10% MAGNETIC PARTICLE
- FILLET WELDS: 10% MAGNETIC PARTICLE 5. NDE AND WELD MAP SHALL BE PROVIDED BY SKYTESTING
- 6. SKYTESTING SCHEDULING CONTACT: ALAN SMITH CELL: (508) 725-6850
- EMAIL: ALAN@SKYTESTING.COM

ENVIRONMENTAL

- WORK SHALL CONFORM TO THE NATIONAL GRID ENVIRONMENTAL POLICY. 2. ENVIRONMENTAL ENGINEERING CONTACT
- ANDREW L. SHELBY PHONE: (781) 907-1867
- EMAIL: ANDREW.SHELBY@NATIONALGRID.COM
- CONTRACTOR SHALL REVIEW THE PROJECT WORK ORDER PACKAGE FOR THE ENVIRONMENTAL GUIDANCE FORMS, FOR EXAMPLE EG-301, FOR THE RESPECTIVE
- 4. 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. 5. NO EXCAVATED SOIL SHALL LEAVE THE WORK SITE UNTIL ENVIRONMENTAL HAS MADE
- A DETERMINATION FOR ITS PROPER DISPOSAL 6. NATIONAL GRID ENVIRONMENTAL POLICIES AND PROCEDURES INCLUDE:
- A. SHE02001: HANDLING CONTAMINATED MATERIALS AND PIPING SHE02003: ENCOUNTERING CONTAMINATION WHILE EXCAVATING
- EG303-NE: BEST MANAGEMENT PRACTICES D. EG140: USED GAS PIPE MANAGEMENT

- 1. WORK SHALL CONFORM TO THE NATIONAL GRID EMPLOYEE SAFETY
- HANDBOOK AND OSHA REQUIREMENTS 2. REQUIRED PPE SHALL BE WORN AND UTILIZED IN ACCORDANCE WITH THE
- CURRENT NATIONAL GRID SAFETY POLICY. 3. A NATIONAL GRID APPROVED CONTRACTOR HEALTH AND SAFETY PLAN
- (HASP) IS REQUIRED PRIOR TO CONSTRUCTION. 4. CONSTRUCTION SIGNING, DRUMS, BARRICADES, AND OTHER 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.
- 5. NATIONAL GRID SAFETY POLICIES AND PROCEDURES INCLUDE:
- A. SHE01001: GENERAL SAFETY REQUIREMENTS SHE01002: SUPPLIED-AIR RESPIRATORS
- SHE01003: USING AND MAINTAINING PORTABLE GAS MONITORS SHE01005: DISSIPATING STATIC ELECTRICAL CHARGES ON PLASTIC PIPE SHE01010: THE APPLICATION OF FORMAL PROCESS SAFETY
- ASSESSMENTS TO HIGHER-RISK GAS ACTIVITIES PERFORMED IN THE
- SHE02001: HANDLING CONTAMINATED MATERIALS AND PIPING
- G. A-105: JOB BRIEFING H. E-504: MATERIAL HANDLING AND RIGGING EQUIPMENT
- F-617: HANDLING COAL TAR WRAP J. I-903: LOCKOUT - TAGOUT CONTROL OF HAZARDOUS ENERGY
- SOURCES K. J-1002: INCIDENT REPORTING
- L. L-1201: HOT WORK PROCEDURE
- M. M-1301: STANDARDS FOR WORKING IN EXCAVATIONS N. N-1402: CONTRACTOR SAFETY REQUIREMENTS

O. Q-1702: WORK ZONE TRAFFIC CONTROL CATHODIC PROTECTION

- 1. IF EXISTING TEST STATIONS, WIRES, AND/OR MAGENSIUM ANODES ARE DISTURBED OR DAMAGED, NOTIFY THE NATIONAL GRID CORROSION DEPARTMENT MICHAEL HARMON: (781) 953-2545
- BUTCH VINCENT: (617) 438-5192 RICK LEPAGE: (508) 948-8432
- 2. 24 HOUR NOTICE IS REQUIRED PRIOR TO INSTALLATION OF INSULATED FITTINGS TO
- ALLOW FOR ACCEPTANCE TESTING CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH NATIONAL GRID CORROSION GAS POLICIES AND WORK METHODS INCLUDING:
- COR01100: CORROSION DESIGN CRITERIA COR02001: APPLICATION OF COATING SYSTEMS COR02020: INSPECTING EXPOSED STEEL PIPE FOR CORROSION
- CORO3001: TESTING OF PIPE COATING (JEEP TESTING) CORO4001: INSTALLATION OF MAGNESIUM ANODES
- CORO4003: INSTALLATION OF TEST STATIONS FOR CATHODIC PROTECTION CORO4004: INSTALLATION OF WIRE CONNECTION COR04005: INSTALLATION OF INSULATING JOINTS FOR CATHODIC PROTECTION
- 030024-CS: INSTALLATION OF MAGNESIUM ANODES 030026-CS: INSTALLATION OF TEST STATIONS FOR CATHODIC PROTECTION 030028-CS: INSTALLATION OF INSULATING JOINTS FOR CATHODIC PROTECTION
- 030031-CS: FACILITY COATING GUIDE M. 030036-CS: INSTALLING WIRE CONNECTIONS
- 4. CORROSION DESIGN: N/A

 $BCW \mid ARS \mid ARS \mid JEO$





CABLE MANHOLE

Drawn: ARS

Chkd.: JEO

OTHER PERMITTING REQUIREMENTS CITY OF WEYMOUTH STREET OPENING PERMIT

<u>REFERENCE DRAWINGS</u> UNDERGROUND UTILITIES ARE NOT SHOWN, NATIONAL GRID FACILITIES

CONSULTANT CONTACT INFORMATION

ARE SHOWN BASED ON AVAILABLE MAPS AND RECORDS.

CHA CONSULTING, INC .:

JEFFREY O'DONNELL, P.E. CHIEF ENGINEER ~ SUBSURFACE & GAS

(781) 982-5456

978-848-5163

JODONNELL@CHACOMPANIES.COM

CITY OF WEYMOUTH GRANT OF LOCATION

UTILITY OWNER INFORMATION

RAILROAD: COMCAST CABLE CORP MBTA PO BOX 6505, 5 OMNI WAY 100 SUMMER STREET - SUITE 1200 CHELMSFORD, MA 01824 BOSTON, MA 02110 617-222-3361

CROWN CASTLE / LIGHTOWER WEYMOUTH TOWN ENGINEER 80 CENTRAL STREET 120 WINTER STREET BOXBOROUGH, MA 01719 WEYMOUTH, MA 02188 508-616-7818 781-337-5100

MWRA WATER & SEWER: NATIONAL GRID ELECTRIC 1250 BRAYTON POINT ROAD 2 GRIFFIN WAY SOMERSET, MA 02725 CHELSEA, MA 02150 508-962-6298 617-305-5956

FIRE ALARM: WEYMOUTH FIRE ALARM 636 BROAD STREET EAST WEYMOUTH, MA 02189 781-340-5021

NATIONAL GRID GAS 40 SYLVAN ROAD-3RD FLOOR-W3.244 385 MYLES STANDISH BLVD. WALTHAM, MA 02451 781-907-1100

WEYMOUTH DPW WATER & SEWER DIV. SPECTRA ENERGY/ENBRIDGE 120 WINTER STREET 8 WILSON WAY WEYMOUTH, MA 02188 WESTWOOD, MA 02090 508-938-7728 781-337-5100

WEYMOUTH DPW WATER & SEWER DIV.

120 WINTER STREET

781-337-5100

774-409-3160

TELEPHONE

VERIZON

WEYMOUTH, MA 02188

TAUNTON, MA 02780

TYPICAL UTILITY CROSSING AND **TRENCH GUIDELINES** SEE CNST01003 FOR BACKFILL & RESTORATION STANDARDS - EXISTING ASPHALT (DEPTH VARIES) INISHED GRADE - WARNING TAPE TO APPROX. 12' RECOMMENDED DEPTH IN -BELOW FINISHED GRADE PUBLIC ROADS: 24" COVER ON SERVICES - TRENCH WIDTH: 36" COVER ON MAINS APPROX. 18" (6" PIPE OR LESS) APPROX. 24" (8" PIPE) MINIMUM DEPTH FOR APPROX. 30" (10" TO 12" PIPE) TRANSMISSION LINES AND PIPELINES OPERATING AT ≥125PSIG: 30" COVER 6"± PADDING SAND OR OR LESS THAN RECOMMENDED DEPTHS, SEE CNST-6030-MA. AND BOTTOM OF GAS LINE PROPOSED GAS LINE -OTHER UTILITY: CROSS SECTION DETAIL 12" MINIMUM PERPENDICULAR CLEARANCE (WHENEVER PRACTICABLE) ABOVE AND BELOW PROPOSED GAS LINE PROTECT THE GAS LINE IF: XISTING UTILITY STRUCTUR 12" MIN. CANNOT BE ATTAINED FOR GAS TRANSMISSION LINES AND PIPELINES OPERATING AT ≥125 PSIG. 6" MIN. CANNOT BE ATTAINED FOR DISTRIBUTION MAINS. 3. 4" MIN. CANNOT BE ATTAINE 4. FOR SERVICES MINIMUM CLEARANCE WHEN PROTECTION IS PROVIDED AGAINST DAMAGE IS 2" FOR ALL GAS LINES. FOR BACKFILL AND RESTORATION DETAILS, REFER TO CNST01003 - BACKFILL AND RESTORATION TYPICAL UTILITY CROSSING national**grid** AND TRENCH GUIDELINES E: 09/15/2014 EFFECTIVE DATE: 04/15/2019 KEY CHANGES: REV 0 NEW STANDARD FOR MASS. DESIGN: PAUL GUGLIOTTA STD. DWG. CS-CNST002-MA © NATIONAL GRID GAS PIC 2019 – ALL RIGHTS RESERVE

TYPICAL TRENCH DETAIL NOT TO SCALE

<u>LEGEND</u>

25.2

STUMP TELEPHONE MANHOLE BUILDING LINE PINE TREE TELEPHONE LINE MARKER PARCEL BOUNDARY LINE DECIDUOUS TREE TELEPHONE PEDESTAL ADJOINING PARCEL LINE GAS LINE MARKER STREET/HIGHWAY LINE SQUARE DROP INLET GAS SHUT OFF EDGE OF ASPHALT ROUND DROP INLET GAS VALVE EDGE OF CONCRETE GAS METER FLOOR DRAIN EDGE OF GRAVEL/CRUSHED STONE SEWER MANHOLE ROUND CATCH BASIN CLEAN OUT SQUARE CATCH BASIN WIRE FENCE LINE (BARBED, WOVEN, AMERICAN, ETC. O VENT CHAIN LINK FENCE LINE STORM MANHOLE UTILITY POLE STOCKADE FENCE LINE (WOOD) INVERT GUY POLE TREE LINE LIGHT POLE WATER MANHOLE ELECTRIC LINE GUY WIRE POST INDICATOR VALVE TRAFFIC HAND HOLE TRAFFIC MANHOLE WATER HAND HOLE SIGNAL POLE ----- UNKNOWN UTILITY LINE WATER METER TSX TRAFFIC SIGNAL BOX OVERHEAD UTILITY LINE FIBER OPTICS MARKER WATER LINE MARKER SEWER LINE WATER SHUT OFF FOX FIBER OPTICS BOX WATER VALVE STEAM LINE TEST BORING HYDRANT DRAINAGE LINE PROPOSED GAS VALVE TELEPHONE LINE CABLE LINE MARKER CABLE TV LINE CABLE BOX CABLE HAND HOLE — G——— G——— PROPOSED GAS LINE

PROPOSED GAS MAIN INSTALLATION

VIA HDD ACROSS UNNAMED PERRENIAL TO WHITMAN'S POND

GREENVALE AVENUE, WEYMOUTH, MA

NOTES & LEGEND

Design Engr.:ARS

Date: 03/03/2020 | Scale: AS NOTED

Design Supv.: JEO

CLIENT DRAWING NUMBER

MR-WEY-1217456

CAD FILE NAME CHA SHEET NUMBER 058260.dwg

G-001

0 09/01/20 ISSUED FOR CONSTRUCTION Revision

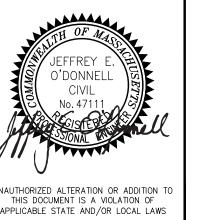
AUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF APPLICABLE STATE AND/OR LOCAL LAWS

	BILL OF MATERIALS								
ITEM	QTY	UOM	DESCRIPTION	SIZE (IN.)	NATIONAL GRID REFERENCE	SAP ID NUMBER			
1	260	FT	PIPE, HDPE-COIL 350'	2	120025-MS	9312078			
2	A/R	EA	ELBOW, HDPE, 90 DEGREE	2	CS-FIT011	9314900			
3	2	EA	VALVE, HDPE	2	VALV6020	9312060			
4	2	EA	FITTING, TRANSITION	2	N/A	9315794			
5	2	EA	TEE, 3 WAY, TAPPING, CONTOURED	1.5	N/A	9384665			
6	A/R	EA	COUPLING, PLASTIC ELECTROFUSION	2	CS-FIT015	9314594			
7	4	EA	CAP, STEEL, STYLE 90, LOCKING	1.5	FITS6024	9339554			
8	2	EA	FITTING, SHORTSTOPP, WILLIAMSON, CONTOURED (IF REQUIRED)	1.5	HTAP5010	9382855			
9	2	EA	REDUCER, STEEL	2X1.5	MATL3100	9308760			
GENERAL				•					
G1	A/R	FT	TRACER WIRE		CNST6061	(SEE STD)			
G2	A/R	ROLL	YELLOW CAUTION TAPE - GAS MAIN - 6" WIDE	6	-	9341904			
G3	G3 2 EA VALVE BOX ASSEMBLY			2	FITS6370	(SEE STD)			
CATHODIC	PROTECT	ION							
C1	A/R	EA	CP TEST BOX W/ COVER	N/A	030026-CS	(SEE STD)			
C2	A/R	EA	17# ANODE	N/A	030024-CS	9339399			

NOTE: ALL MATERIAL QUANTITIES ARE ESTIMATED BASED ON PROPOSED DESIGN. ADDITIONAL QUANTITIES AND/OR OTHER MATERIALS MAY BE REQUIRED TO CONSTRUCT VERTICAL OFFSETS OR DUE TO OTHER UNKNOWN AS-FOUND CONDITIONS/DESIGN CONFLICTS AND FOR TESTING.

nationalgrid

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No	Date	Revision	Ву	Chkd.	Engr.	Supv.	AP





PROPOSED GAS MAIN INSTALLATION
VIA HDD ACROSS UNNAMED
PERRENIAL TO WHITMAN'S POND
GREENVALE AVENUE, WEYMOUTH, MA

MR-WEY-1217456

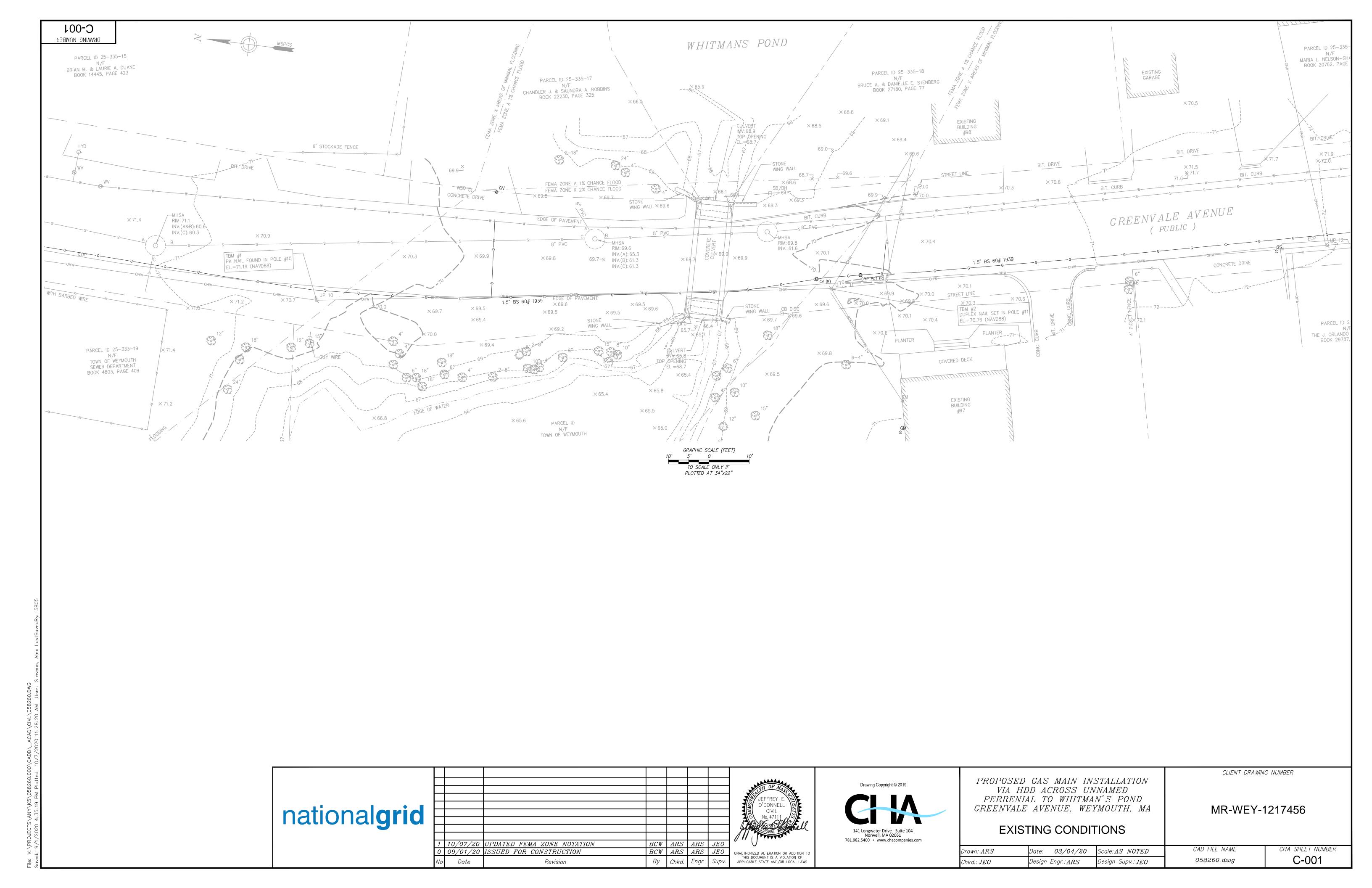
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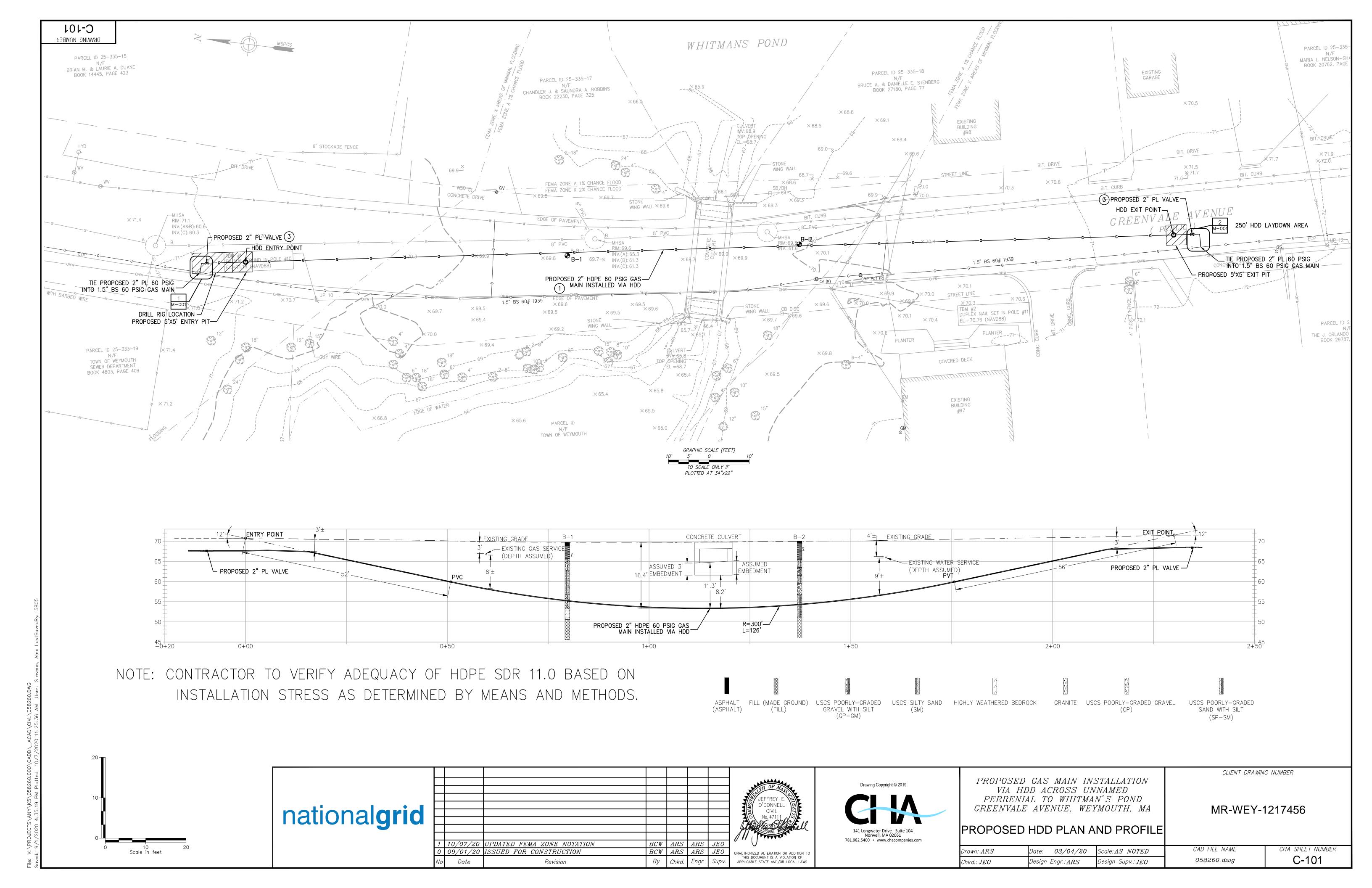
CAD FILE NAME CHA SHEET NUMBER G-002 058260.dwg

BILL OF MATERIALS Drawn: ARS

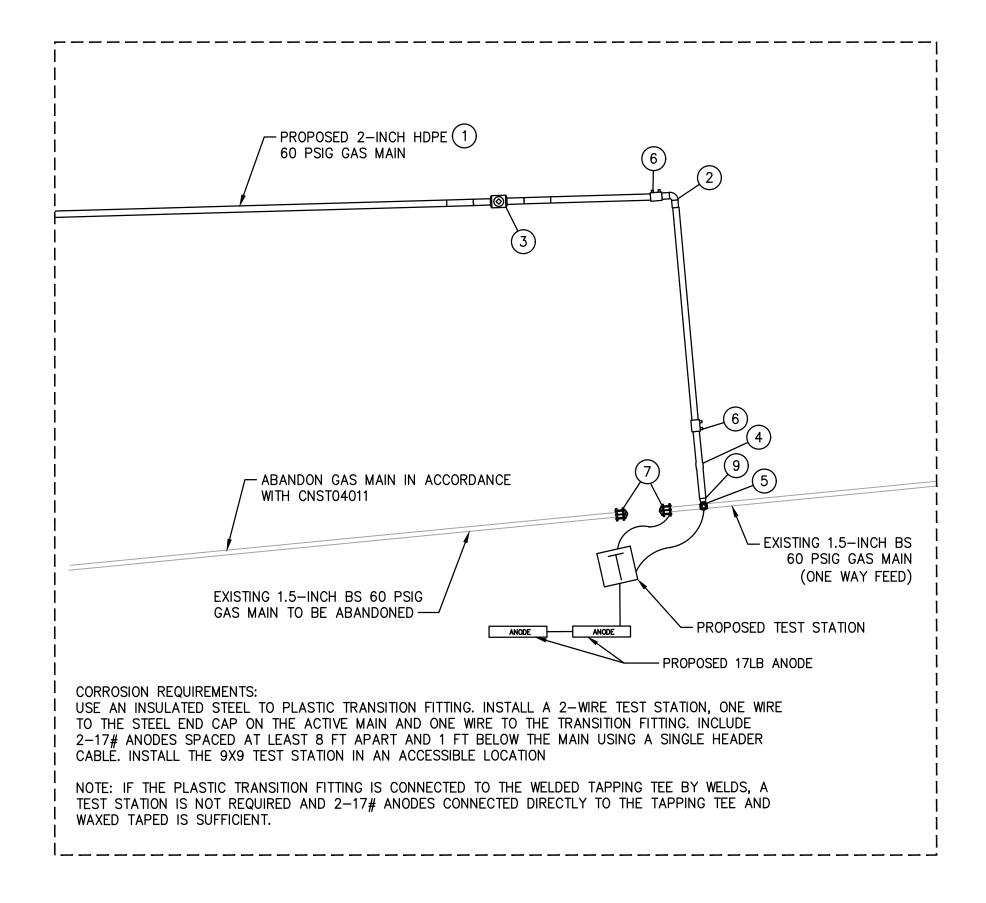
Chkd.: JEO

Date: 03/04/20 Scale: AS NOTED Design Supv.: JEO Design Engr.:ARS





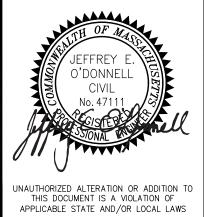
1 PROPOSED TIE—IN AT GREENVALE AVENUE SCALE: 1"=3"



2 PROPOSED TIE-IN AT GREENVALE AVENUE
SCALE: 1"=3"

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PROPOSED GAS MAIN INSTALLATION
VIA HDD ACROSS UNNAMED
PERRENIAL TO WHITMAN'S POND
GREENVALE AVENUE, WEYMOUTH, MA

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CLIENT DRAWING NUMBER

TIE-IN DETAILS

Drawn: ES	Date:	02/26/2020	Scale: AS NOTED	
Chkd · ARS	Desian	Engr.: ARS	Design Supv.:.IF.O	

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M-001