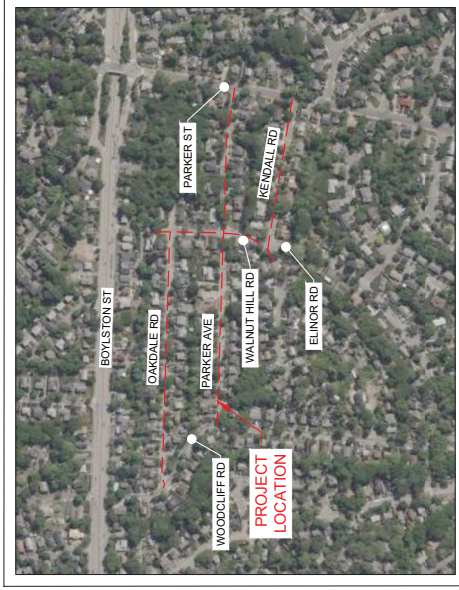


# nationalgrid

## 1-124 PARKER AVE GAS MAIN REPLACEMENT 4" C.S., 4" & 6" B.S., 4", 6", & 8" C.I., & 6" PL TO 6" & 8" PL (L.P.) (1 - 124) PARKER AVE, WOODCLIFF RD, OAKDALE RD, WALNUT HILL RD, KENDALL RD, & PARKER ST, NEWTON, MA W.O. NO.: 1507676

PIPE TOTALS		
DIAMETER	MATERIAL	INSTALLED
4"	CS	250 LF
4"	BS	715 LF
4"	CI	330 LF
6"	CI	2255 LF
6"	BS	210 LF
6"	PL	105 LF
8"	CI	165 LF
8"	PL	3315 LF



LOCATION MAP  
LAT/LON: 42°19'03.3" N, -71°11'50.2" W  
NEWTON, MA  
SCALE: 1:300

INDEX OF SHEETS		
SHEET	NAME	TITLE
1	DDS-NEW-71230026 G-001	COVER - LOCATION MAP
2	DDS-NEW-71230026 G-002	CONSTRUCTION NOTES
3	DDS-NEW-71230026 G-003	CONSTRUCTION NOTES & BILL OF MATERIALS
4	DDS-NEW-71230026 C-001	OVERALL SCOPE OF WORK
5	DDS-NEW-71230026 C-002	LAYOUT SHEET
6	DDS-NEW-71230026 C-003	LAYOUT SHEET
7	DDS-NEW-71230026 C-004	LAYOUT SHEET
8	DDS-NEW-71230026 C-005	LAYOUT SHEET
9	DDS-NEW-71230026 C-006	LAYOUT SHEET
10	DDS-NEW-71230026 C-007	LAYOUT SHEET
11	DDS-NEW-71230026 C-008	LAYOUT SHEET
12	DDS-NEW-71230026 C-009	LAYOUT SHEET
13	DDS-NEW-71230026 C-010	LAYOUT SHEET
14	DDS-NEW-71230026 C-101	TIE-IN & ABANDONMENT DETAILS
15	DDS-NEW-71230026 C-201	STANDARD DETAILS
16	DDS-NEW-71230026 C-202	STANDARD DETAILS
17	DDS-NEW-71230026 C-203	STANDARD DETAILS
18	DDS-NEW-71230026 C-204	STANDARD DETAILS



NO.	DATE	DESCRIPTION
1	02/28/2023	ISSUED FOR CONSTRUCTION
2	02/28/2023	REVISIONS TO THE BLOCK, NOTES, BOM, & TIE-IN DETAILS
3	02/28/2023	REVISIONS TO THE BLOCK, NOTES, BOM, & TIE-IN DETAILS

DESIGNER	CHECKER	DATE	SCALE
DESIGNER	DESIGNER	DATE	SCALE

DRAWING NO.	SHEET NO.
G-001	01

SCOPE OF WORK:

- NATIONAL GRID WORK NUMBER: 1507676  
 PROJECT NAME AND LOCATION: 1-124 PARKER AVE, NEWTON, MA  
 PROJECT SCOPE: AS PART OF THE CMMR-CL10 PROGRAM, LPP INTEGRITY MANAGEMENT RECOMMENDS THE RELAY OF:  
 • APPROXIMATELY 85 FEET OF 6 INCH, L.P. PLASTIC (2006) AND APPROXIMATELY 1080 FEET OF 6 INCH, L.P. CAST IRON WITH APPROXIMATELY 1166 FEET OF 8 INCH, L.P. PLASTIC IN OAKDALE RD FROM WOODCLIFF RD TO WALNUT HILL RD.  
 • APPROXIMATELY 790 FEET OF 6 INCH, L.P. CAST IRON (1926/1929/1933), APPROXIMATELY 330 FEET OF 4 INCH, L.P. CAST IRON (1931), APPROXIMATELY 250 FEET OF 4 INCH, L.P. COATED STEEL (1951) - INNEWOOD.  
 • APPROXIMATELY 210 FEET OF 6 INCH, L.P. BARE STEEL (1946) AND APPROXIMATELY 20 FEET OF 6 INCH, L.P. PLASTIC WITH APPROXIMATELY 1600 FEET OF 8 INCH, L.P. PLASTIC IN PARKER AVE FROM WOODCLIFF RD TO PARKER ST.  
 • APPROXIMATELY 715 FEET OF 4 INCH, L.P. BARE STEEL (1935) WITH APPROXIMATELY 715 FEET OF 6 INCH, L.P. PLASTIC IN KENDALL RD AND APPROXIMATELY 545 FEET OF 8 INCH, L.P. PLASTIC IN WALNUT HILL RD FROM #10 TO PARKER ST.  
 • CAST IRON (1927) WITH APPROXIMATELY 350 FEET OF 8 INCH, L.P. PLASTIC IN WALNUT HILL RD FROM #10 TO WALNUT HILL RD.

GENERAL CONSTRUCTION:

- NEW TRENCHES SHALL BE MADE TO THIS PLAN WITHOUT APPROVAL OF ASSIGNED NATIONAL GRID PROJECT ENGINEER.  
 ENGINEER: EVAN GEORGE  
 PHONE: (774) 245-8019  
 EMAIL: EVAN.GEORGE@NATIONALGRID.COM
- NEW MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL TRENCH DETAIL INCLUDED IN THESE DRAWINGS, UNLESS NOTED OTHERWISE:  
 A. STATE HIGHWAY MINIMUM COVER: 36 INCHES  
 B. DISTRIBUTION MAIN MINIMUM COVER: 24 INCHES  
 C. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 D. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 E. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 F. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 G. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
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 V. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 W. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 X. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 Y. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM  
 Z. SAND PADDING IN ALL DIRECTIONS: 6 INCHES MINIMUM
- SERVICES SHOULD BE INSTALLED WITH 24 INCHES OF COVER.  
 A. MINIMUM IN PUBLIC ROW: 18 INCHES  
 B. MINIMUM IN PRIVATE PROPERTY: 12 INCHES  
 C. MINIMUM IN PRIVATE PROPERTY: 12 INCHES  
 D. CAUTION TAPE SHALL BE INCLUDED ONE FOOT BELOW GRADE.  
 E. REFER TO INST-0230 FOR SHALLOW MAINS: PRIOR TO INSTALLING GAS MAINS WITH LESS THAN 24 INCHES OF COVER, COMPLETE REQUEST FOR WALKER FORM AND CONTACT GAS PIPELINE SAFETY & COMPLIANCE FOR APPROVAL.
- JENNER GULUS - (617) 594-9157 (WA EXCLUDING CAPE AND WEBSTER)  
 A. LEWY GAUTHER - (617) 438-9069 (WA EXCLUDING CAPE AND WEBSTER)  
 B. IF A PROPOSED TOP TEE CONNECTION RESULTS IN A SHALLOW MAIN THAT CANNOT MEET THE WALKER FORM REQUIREMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A WALKER FORM THAT 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:  
 A. DISTRIBUTION MINIMUM CLEARANCE: 12 INCHES  
 B. CANNOT BE ATTAINED, APPROVAL IS REQUIRED BY GAS SYSTEMS ENGINEERING.  
 C. THE PIPE ALIGNMENT IS SHOWN FOR REFERENCE ONLY AS APPROXIMATELY 3 FEET FROM THE EXISTING MAIN. THE CONTRACTOR SHALL VERIFY THE EXISTING MAIN ALIGNMENT AND MAKE ANY NECESSARY ADJUSTMENTS TO THE PROPOSED MAIN ALIGNMENT. 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.  
 D. BE NEEDED BASED ON FIELD CONDITIONS. DEGREES IN MOST APPLICATIONS, 90 DEGREE ELBOWS MAY BE USED.  
 E. VALVES DEPICTED IN THE DESIGN ARE THE MINIMUM REQUIRED FOR SECTIONALIZING, ISOLATION, CRITICAL ACCOMMODATE CONSTRUCTION, ACCOMMODATE TIE-INS, ADDITIONAL FULL PORT VALVES MAY BE ADDED TO ACCOMMODATE CONSTRUCTION.  
 F. VALVES FOR BRANCHES AT INTERSECTIONS SHOULD BE FIELD LOCATED JUST OUTSIDE OF THE INTERSECTION WHERE EASILY ACCESSIBLE, PRIOR TO THE FIRST SERVICE.  
 G. ELECTRICITY SHALL BE KEPT SEPARATE FROM GAS MAINS BY AT LEAST 18 INCHES.  
 H. TIE-IN LOCATIONS MAY VARY UP TO 100 FEET FROM THE PROPOSED LOCATION TO ACCOMMODATE CONSTRUCTION, EXCEPT FOR WHEN THE FOLLOWING CONDITIONS APPLY:  
 A. REGULATOR STATION WITHIN THE SCOPE OF THE JOB OR WITHIN 200 FEET OF THE TIE-IN LOCATION.  
 B. CHANGE TO THE NUMBER OF CONNECTIONS (ADDITIONAL ADDON FROM AN INTERSECTION OR OTHERWISE).  
 C. NOT ALL BYPASSES, GAUGES, PURGES AND OTHER MISCELLANEOUS FITTINGS ARE SHOWN. CONSTRUCTION SHALL INSTALL THESE FITTINGS AS NEEDED IN ACCORDANCE WITH THE APPROVED SOP.  
 D. ALL FITTINGS SHALL BE INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY.  
 E. ALL FITTINGS SHALL BE INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY.  
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 Y. ALL FITTINGS SHALL BE INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY.  
 Z. ALL FITTINGS SHALL BE INSTALLED WITHIN THE PUBLIC RIGHT-OF-WAY.

CODES & STANDARDS

- WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL CODES IN ADDITION TO NATIONAL GRID GAS POLICIES AND STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL APPLICABLE STANDARDS AND REGULATIONS MAY EXIST, THE MORE STRINGENT CODES, STANDARDS, OR REGULATIONS SHALL APPLY.
- ALL REFERENCES SHALL BE IN ACCORDANCE WITH THE MOST CURRENT REVISION AVAILABLE AT THE TIME OF CONSTRUCTION.
- FEDERAL & STATE:  
 A. AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
 B. 220 CMR: DEPARTMENT OF PUBLIC UTILITIES  
 C. 100.00 - 113.00: MASSACHUSETTS GAS DISTRIBUTION CODE  
 D. AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
 E. 248 CMR 4.7-7: MA FUEL GAS CODE  
 F. 248 CMR 4.7-7: MA FUEL GAS CODE  
 G. 248 CMR 4.7-7: MA FUEL GAS CODE  
 H. 248 CMR 4.7-7: MA FUEL GAS CODE  
 I. 248 CMR 4.7-7: MA FUEL GAS CODE  
 J. 248 CMR 4.7-7: MA FUEL GAS CODE  
 K. 248 CMR 4.7-7: MA FUEL GAS CODE  
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 U. 248 CMR 4.7-7: MA FUEL GAS CODE  
 V. 248 CMR 4.7-7: MA FUEL GAS CODE  
 W. 248 CMR 4.7-7: MA FUEL GAS CODE  
 X. 248 CMR 4.7-7: MA FUEL GAS CODE  
 Y. 248 CMR 4.7-7: MA FUEL GAS CODE  
 Z. 248 CMR 4.7-7: MA FUEL GAS CODE
- CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH NATIONAL GRID GAS POLICIES AND WORK METHODS, INCLUDING BUT NOT LIMITED TO:  
 A. CIST01003: BACKFILL AND RESTORATION  
 B. CIST01005: PREPARATION OF GAS FACILITY HISTORICAL RECORDS  
 C. CIST01006: PREPARATION OF GAS FACILITY HISTORICAL RECORDS  
 D. CIST02014: ENCAPSULATING CAST IRON JOINTS  
 E. CIST02014: ENCAPSULATING CAST IRON JOINTS  
 F. CIST02014: ENCAPSULATING CAST IRON JOINTS  
 G. CIST02014: ENCAPSULATING CAST IRON JOINTS  
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 W. CIST02014: ENCAPSULATING CAST IRON JOINTS  
 X. CIST02014: ENCAPSULATING CAST IRON JOINTS  
 Y. CIST02014: ENCAPSULATING CAST IRON JOINTS  
 Z. CIST02014: ENCAPSULATING CAST IRON JOINTS

DESIGN CRITERIA:

- DESIGN IN ACCORDANCE WITH THE FOLLOWING:  
 A. ENG20001: DESIGN OF GAS SERVICES  
 B. ENG4001: DESIGN OF DISTRIBUTION MAINS  
 C. ENG4010: DESIGN REQUIREMENTS FOR INSTALLATION OF CASINGS
- PROPOSED PIPING:  
 A. DESIGN CLASS LOCATION: 4  
 B. NOMINAL SIZE: 6 & 8 INCH  
 C. MATERIAL: WPE  
 D. MIN. WALL THICKNESS: 1/2 INCH  
 E. MIN. WALL THICKNESS: 1/2 INCH  
 F. MIN. WALL THICKNESS: 1/2 INCH  
 G. MIN. WALL THICKNESS: 1/2 INCH  
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 U. MIN. WALL THICKNESS: 1/2 INCH  
 V. MIN. WALL THICKNESS: 1/2 INCH  
 W. MIN. WALL THICKNESS: 1/2 INCH  
 X. MIN. WALL THICKNESS: 1/2 INCH  
 Y. MIN. WALL THICKNESS: 1/2 INCH  
 Z. MIN. WALL THICKNESS: 1/2 INCH
- PIPE SIZE DETERMINED BY NATIONAL GRID STRATEGIC ASSET AND SYSTEM PLANNING

SEQUENCE OF CONSTRUCTION:

- CONTRACTOR SHALL CALL DISSAFE (DIAL 811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION, SAUNDERS, SIGNERS, AND HOLDINGS ARE EXCLUDED.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.
- INSTALL MAINS AS INDICATED IN SCOPE OF WORK.
- PRESSURE TEST (SEE PRESSURE TESTING SECTION).
- ODORISE AS REQUIRED.
- MAKE CONNECTIONS IN DETAIL.
- TRANSFER/RELAY SERVICES TO NEW MAIN.
- REMOVE EXISTING MAINS FROM SERVICE AND ABANDON.
- PURGE OLD MAIN OUT OF SERVICE AND ABANDON.
- PERFORM RESTORATION.



45 DENYARD ROAD  
 WEST BOSTON, MA 02126  
 PHONE: (617) 552-7500  
 FAX: (617) 552-7501

BOSTON GAS COMPANY  
 476 V  
 nationalgrid  
 WALTHAM, MA 02451



NO.	DESCRIPTION	DATE	DESIGNER	ENGINEER	DATE	ISSUE NO.
1	REVISIONS TO THE BILL OF MATERIALS	03/28/2023	MARK ASH	MARK ASH	03/28/2023	00000001
2	REVISIONS TO THE BILL OF MATERIALS	03/28/2023	MARK ASH	MARK ASH	03/28/2023	00000002
3	REVISIONS TO THE BILL OF MATERIALS	03/28/2023	MARK ASH	MARK ASH	03/28/2023	00000003

DATE	DESIGNER	ENGINEER	DATE	ISSUE NO.
03/28/2023	MARK ASH	MARK ASH	03/28/2023	00000001
03/28/2023	MARK ASH	MARK ASH	03/28/2023	00000002
03/28/2023	MARK ASH	MARK ASH	03/28/2023	00000003

CONSTRUCTION NOTES

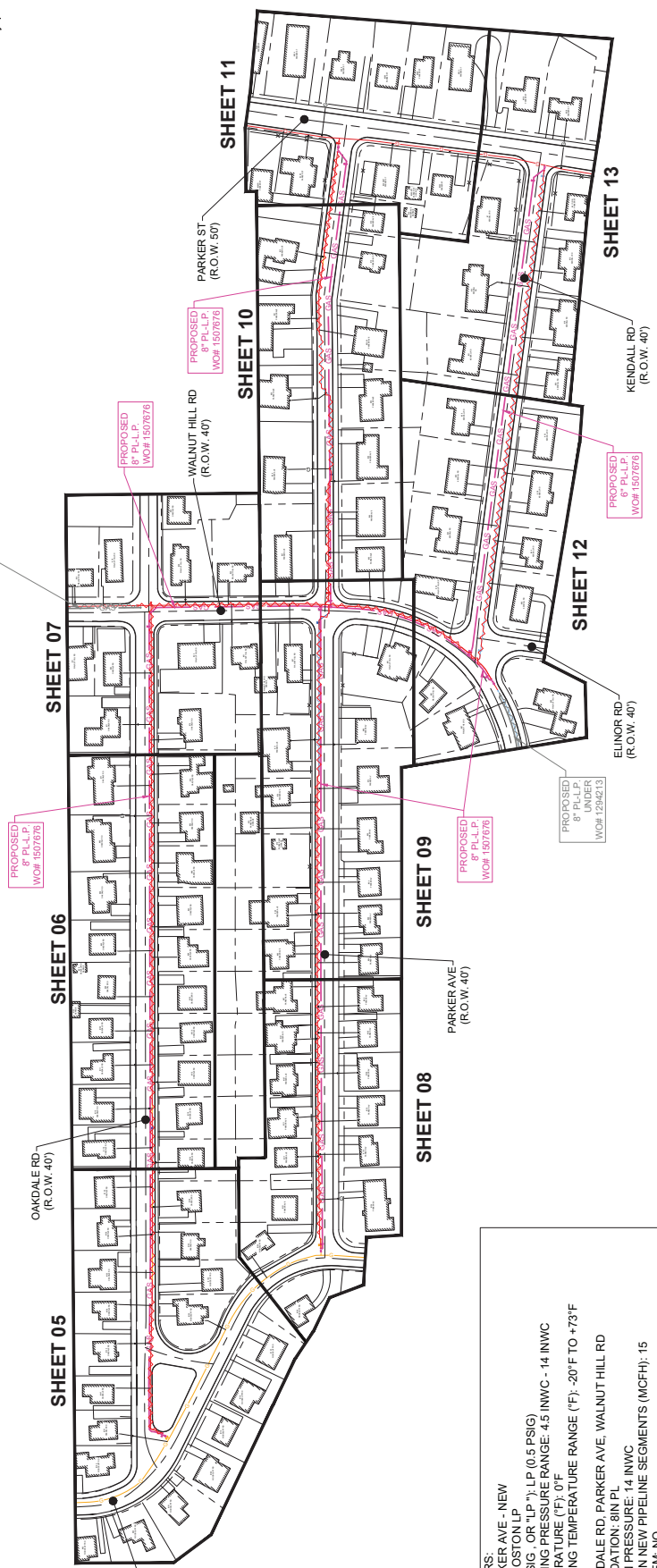
1-124 PARKER AVE GAS MAIN REPLACEMENT  
 PARKER AVE, WOODCLIFF RD, OAKDALE RD, WALNUT HILL RD,  
 KENDALL RD, & PARKER ST  
 NEWTON, MA  
 G-002  
 SHEET NO. 02  
 DRAWING NO.





**SCOPE OF WORK:**  
 AS PART OF THE CMMRPL<10 PROGRAM LPP INTEGRITY MANAGEMENT RECOMMENDS THE RELAY OF:  
 • APPROXIMATELY 85 FEET OF 6 INCH L.P. PLASTIC (2006) AND APPROXIMATELY 1080 FEET OF 6 INCH, L.P. CAST IRON WITH APPROXIMATELY 1165 FEET OF 8 INCH, L.P. PLASTIC IN OAKDALE RD FROM WOODCLIFF RD TO WALNUT HILL RD.  
 • APPROXIMATELY 790 FEET OF 6 INCH, L.P. CAST IRON (1928/1929/1933), APPROXIMATELY 330 FEET OF 4 INCH, L.P. CAST IRON (1931), APPROXIMATELY 250 FEET OF 4 INCH, L.P. COATED STEEL (1951) - NNEW0000, APPROXIMATELY 210 FEET OF 6 INCH, L.P. BARE STEEL (1946) AND APPROXIMATELY 20 FEET OF 6 INCH, L.P. PLASTIC (2007) WITH APPROXIMATELY 1600 FEET OF 8 INCH, L.P. PLASTIC IN PARKER AVE FROM WOODCLIFF RD TO PARKER ST.  
 • APPROXIMATELY 715 FEET OF 4 INCH, L.P. BARE STEEL (1935) WITH APPROXIMATELY 715 FEET OF 6 INCH L.P. PLASTIC IN KENDALL RD, AND  
 • APPROXIMATELY 165 FEET OF 8 INCH, L.P. CAST IRON (1927) AND APPROXIMATELY 385 FEET OF 6 INCH, L.P. CAST IRON (1927) WITH APPROXIMATELY 550 FEET OF 8 INCH, L.P. PLASTIC IN WALNUT HILL RD FROM #16 WALNUT HILL RD TO #67 WALNUT HILL RD.

**NOTE:**  
 1. PROJECT IS OVER 2500 FEET IN LENGTH. PLEASE CONTACT I&R PRIOR TO EXECUTING THE PROJECT FOR SUPPLEMENTAL ODORIZATION. INR06002 - SUPPLEMENTAL ODORIZATION FOR NEW PIPING.  
 2. COMPLETE WORK ON WOF# 1384498 BEFORE THIS PROJECT.



**DESIGN PARAMETERS:**  
 1507676 - 1-124 PARKER AVE - NEW 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

**STREET NAME:** OAKDALE RD, PARKER AVE, WALNUT HILL RD  
**SIZING RECOMMENDATION:** 8IN PL  
**NEW MAINS' DESIGN PRESSURE:** 14 INWC  
**DESIGN DAY FLOW IN NEW PIPELINE SEGMENTS (MCFH):** 15  
**SINGLE FEED SYSTEM:** NO

**STREET NAME:** KENDALL RD  
**SIZING RECOMMENDATION:** 6IN PL  
**NEW MAINS' DESIGN PRESSURE:** 14 INWC  
**DESIGN DAY FLOW IN NEW PIPELINE SEGMENTS (MCFH):** 3  
**SINGLE FEED SYSTEM:** NO  
 REVIEWED BY: KASEY ELKIN, REVIEW DATE: 11/16/2022

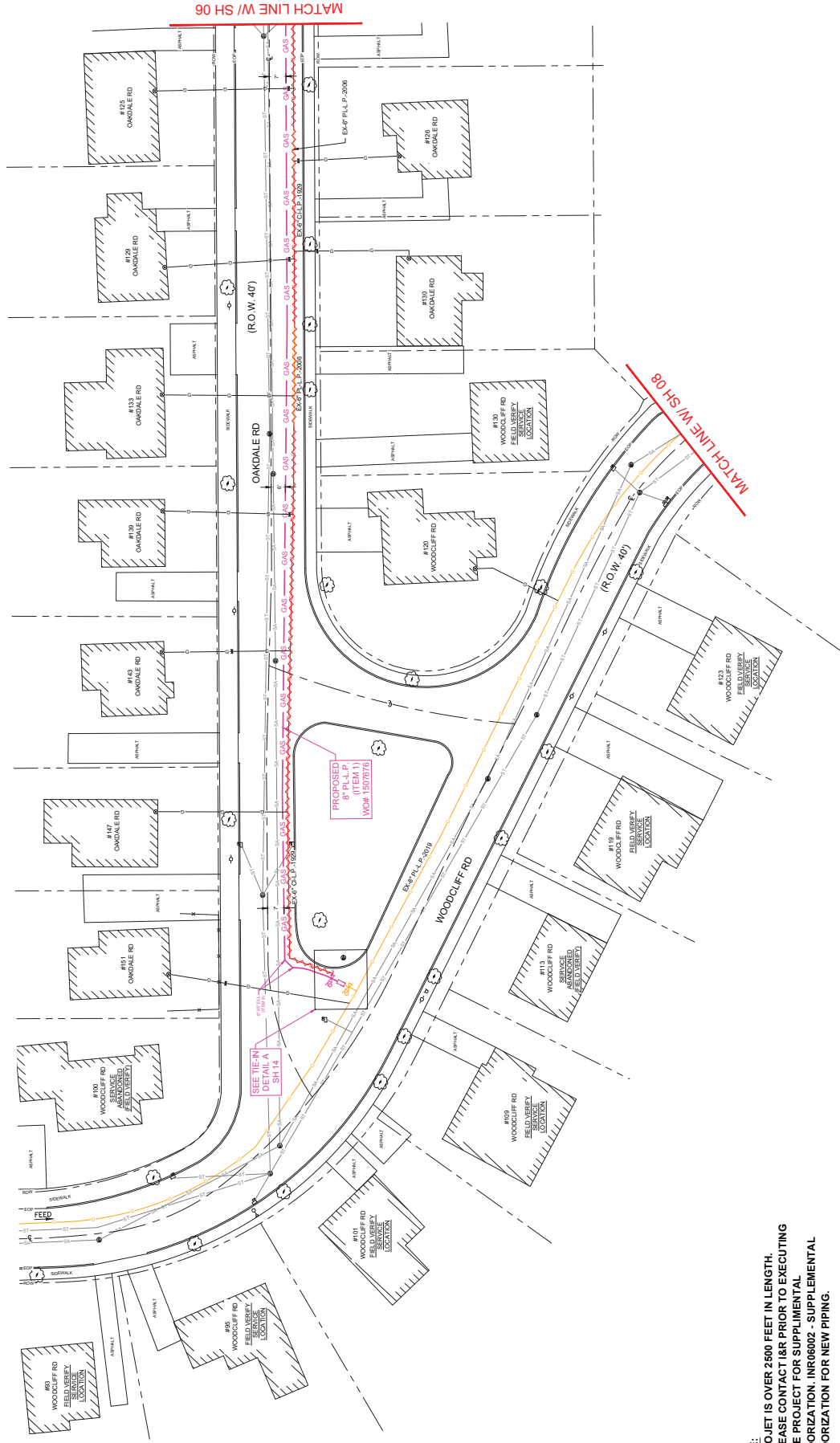
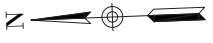


NO.	DESCRIPTION	DATE	DESIGNED	CHECKED	IN CHARGE
1	RELATIONS TO THE BLOCK, NOTES, DIMS & TRAIN DE TALS	03/22/2023	MMK	ASD	MDP
2	RELATIONS TO THE BLOCK, NOTES, DIMS & TRAIN DE TALS	03/22/2023	MMK	ASD	MDP
3	FIELD FOR CONSTRUCTION	03/22/2023	MMK	ASD	MDP
4	FIELD FOR CONSTRUCTION	03/22/2023	MMK	ASD	MDP

1-124 PARKER AVE GAS MAIN REPAIR PROJECT PARKER AVE, WOODCLIFF RD, OAKDALE RD, WALNUT HILL RD, KENDALL RD, & PARKER ST NEWTON, MA		DATE: 03/22/2023	ENGINEER: MMK	IN CHARGE: ASD	DATE: 03/22/2023	DESIGNED: MMK	CHECKED: ASD	IN CHARGE: MDP
OVERALL SCOPE OF WORK		DATE: 03/22/2023	ENGINEER: MMK	IN CHARGE: ASD	DATE: 03/22/2023	DESIGNED: MMK	CHECKED: ASD	IN CHARGE: MDP
DRAWING NO. C-001		DATE: 03/22/2023	ENGINEER: MMK	IN CHARGE: ASD	DATE: 03/22/2023	DESIGNED: MMK	CHECKED: ASD	IN CHARGE: MDP
PAGE 04 OF 18		DATE: 03/22/2023	ENGINEER: MMK	IN CHARGE: ASD	DATE: 03/22/2023	DESIGNED: MMK	CHECKED: ASD	IN CHARGE: MDP







**NOTE:**  
 1. PROJECT IS OVER 2600 FEET IN LENGTH.  
 PLEASE CONTACT I&R PRIOR TO EXECUTING  
 THE PROJECT FOR SUPPLEMENTAL  
 ODORIZATION. INR06002 - SUPPLEMENTAL  
 ODORIZATION FOR NEW PIPING.

45 DENNY ROAD  
 WEST BOSTON, MA 02186  
 PHONE 617.552.7540  
 FAX 617.552.7541

BOSTON GAS COMPANY  
 476 N  
 nationalgrid  
 WALTHAM, MA 02451

IFC



NO.	DATE	DESCRIPTION
1	02/28/2023	ISSUED FOR CONSTRUCTION
2	02/28/2023	REVISIONS TO THE BLOCK, NOTES, DIMS & TRAILER TAIL
3	02/28/2023	MARK AS2
4	02/28/2023	MARK AS2
5	02/28/2023	MARK AS2
6	02/28/2023	MARK AS2
7	02/28/2023	MARK AS2
8	02/28/2023	MARK AS2
9	02/28/2023	MARK AS2
10	02/28/2023	MARK AS2

1-174 PARKER AVE GAS MAIN REPLACEMENT  
 PARKER AVE, WOODCLIFF RD, OAKDALE RD, WALNUT HILL RD,  
 KENDALL RD, & PARKER ST  
 NEWTON, MA

LAYOUT SHEET

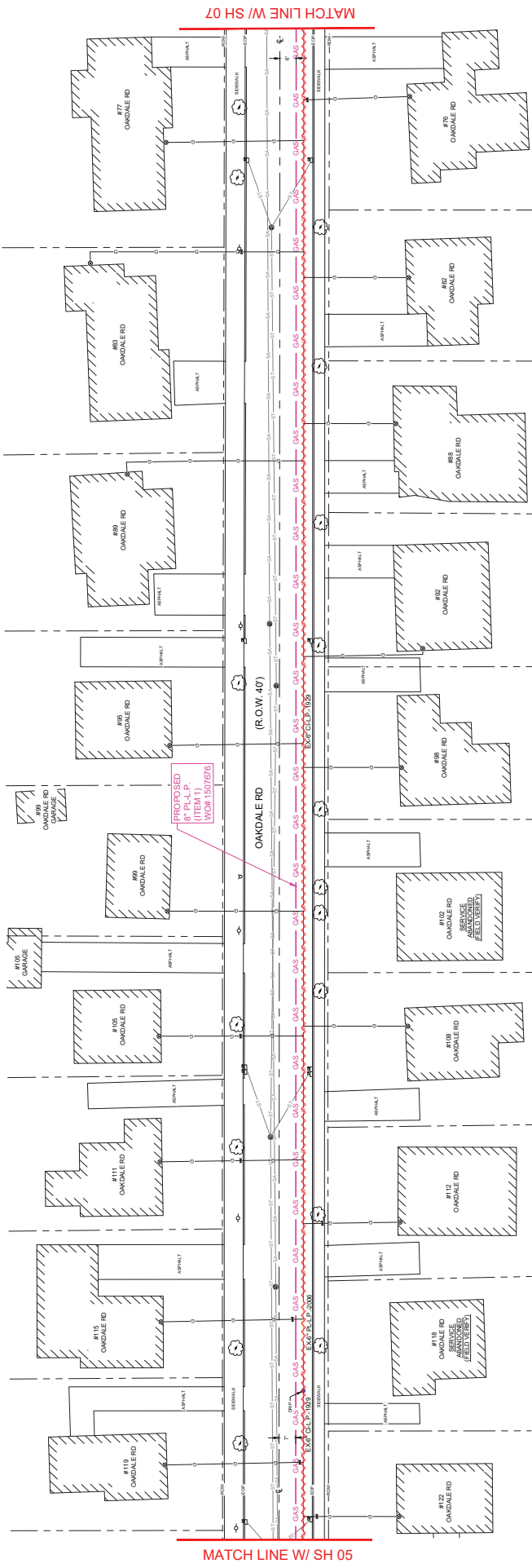
ENGINEER: M. KAZEMZADEH  
 DESIGNED BY: M. KAZEMZADEH  
 DATE: 02/28/2023  
 DWG NO.: 277042  
 IVD NO.: 000000000  
 IVD DATE: 02/28/2023

PROJECT NO.	C-002
DRAWING NO.	05
SHEET NO.	05





**NOTE:**  
 1. PROJECT IS OVER 2500 FEET IN LENGTH.  
 PLEASE CONTACT I&R PRIOR TO EXECUTING  
 THE PROJECT FOR SUPPLEMENTAL  
 ODORIZATION INR06002 - SUPPLEMENTAL  
 ODORIZATION FOR NEW PIPING.



PROPOSED  
 8" P.L.P.  
 (ITEM 1)  
 UGHS 1307276

**THE DDS CORPORATION**  
 45 DENVER ROAD  
 WEST BOSTON, MA 02186  
 PHONE (617) 552-7500  
 FAX (617) 552-7501

**BOSTON GAS COMPANY**  
 476 N  
**nationalgrid**  
 WALTHAM, MA 02451

**IFC**

45 DENVER ROAD  
 WEST BOSTON, MA 02186  
 PHONE (617) 552-7500  
 FAX (617) 552-7501

1-124 PARKER AVE GAS MAIN REPAIR PROJECT  
 PARKER AVE, WOODCROFT RD, OAKDALE RD, WALNUT HILL RD,  
 KENDALL RD, & PARKER ST  
 NEWTON, MA

**LAYOUT SHEET**

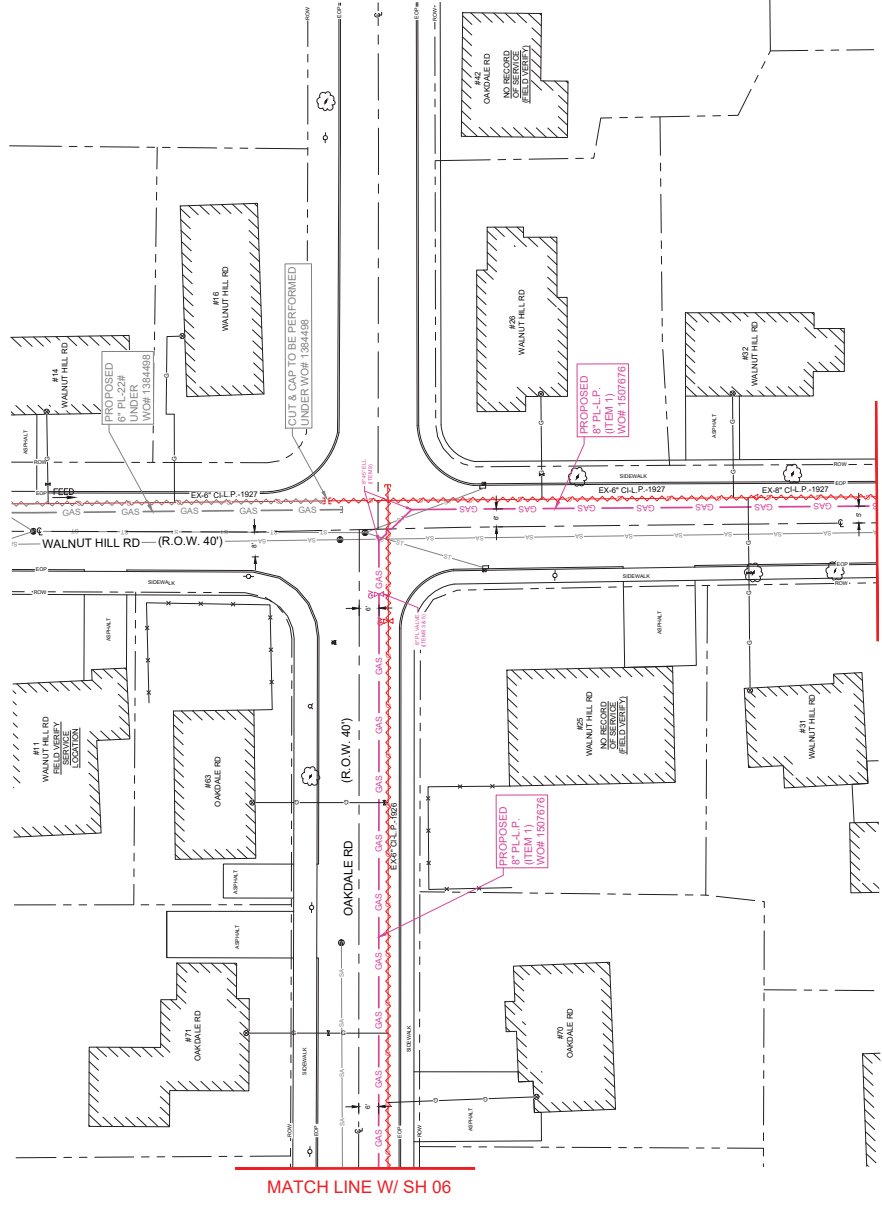
ENGINEER: M. KOZDRO  
 DESIGNED BY: M. KOZDRO  
 DATE: 03/09/2023  
 DWG NO.: 27704  
 DWG SIZE: 11x17  
 I&R NO.: 133-22  
 SHEET NO.: 06

NO.	DATE	DESCRIPTION
1	03/09/2023	ISSUED FOR CONSTRUCTION
2	03/09/2023	REVISIONS TO THE BLOCK, NOTES, DIMS & TRENCH PALE
3	03/09/2023	MARK AS2
4	03/09/2023	MARK AS2
5	03/09/2023	MARK AS2

SCALE: 1"=20'



**NOTE:**  
 1. PROJECT IS OVER 2500 FEET IN LENGTH.  
 PLEASE CONTACT I&R PRIOR TO EXECUTING  
 THE PROJECT FOR SUPPLEMENTAL  
 ODORIZATION IN R06002 - SUPPLEMENTAL  
 ODORIZATION FOR NEW PIPING.



MATCH LINE W/ SH 09

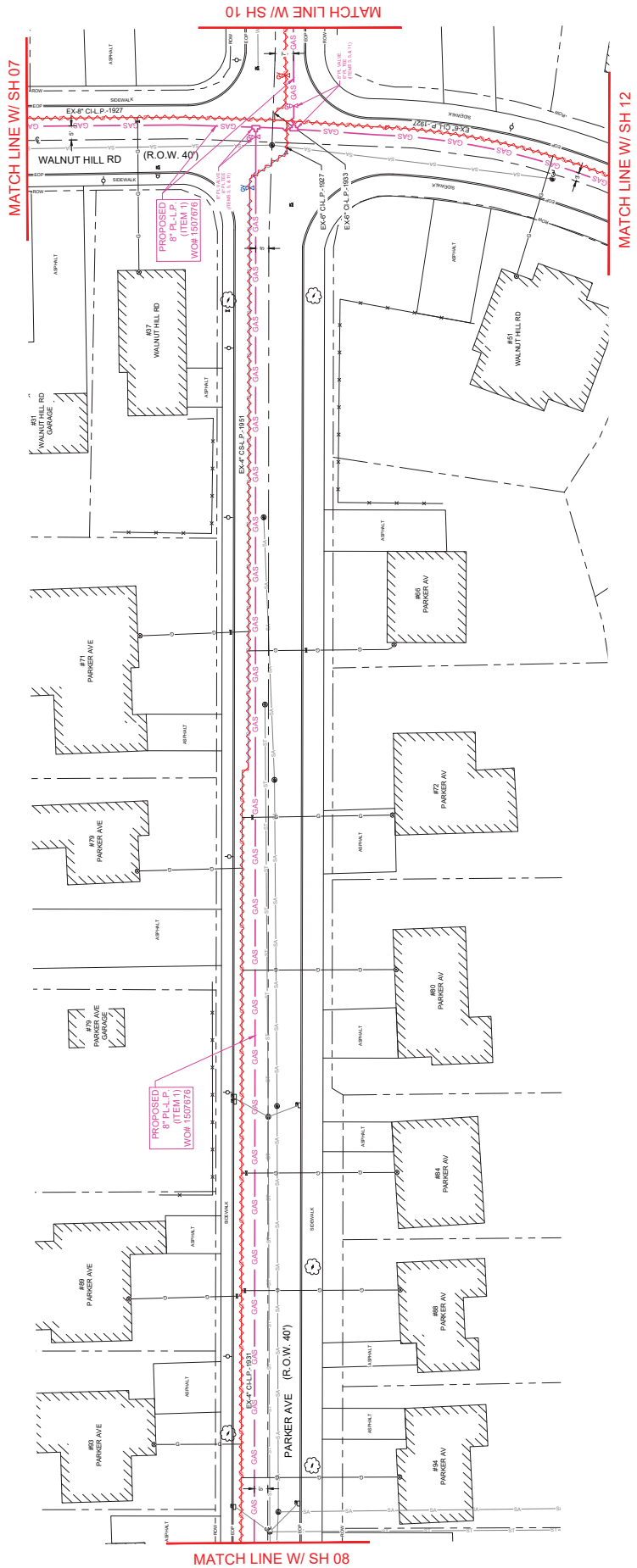
MATCH LINE W/ SH 06

				BOSTON GAS COMPANY 476 N WALTON ST WALTHAM, MA 02451	1-124 PARKER AVE GAS MAIN RE-ASSEMBLY PARKER AVE, WOODCROFT RD, OAKDALE RD, WALNUT HILL RD, KENDALL RD, & PARKER ST NEWTON, MA <b>LAYOUT SHEET</b>	DRAWING NO. <b>C-004</b>	SHEET NO. <b>07</b>
45 DENNY ROAD WEST BOSTON, MA 02126 PHONE 617-552-7500 FAX 617-552-7501		DATE: 03/22/23 TIME: 10:00 AM		ENGINEER: M. HAZENBRO DATE: 03/22/23		ASSET ID: XXXXXXXX V.O. NO.: 150776	
NO. DATE DESCRIPTION		1 03/22/23 MARK AS2 MEP REVISIONS TO THE BLOCK, NOTES, DIMS & TRIM DE TALS		2 03/22/23 MARK AS2 MEP REVISIONS TO THE BLOCK, NOTES, DIMS & TRIM DE TALS		3 03/22/23 MARK AS2 MEP REVISIONS TO THE BLOCK, NOTES, DIMS & TRIM DE TALS	









**NOTE:**  
 1. PROJECT IS OVER 2500 FEET IN LENGTH.  
 PLEASE CONTACT I&R PRIOR TO EXECUTING  
 THE PROJECT FOR SUPPLEMENTAL  
 ODORIZATION IN R06002 - SUPPLEMENTAL  
 ODORIZATION FOR NEW PIPING.

MATCH LINE W/ SH 08

MATCH LINE W/ SH 10

MATCH LINE W/ SH 12



45 DENNY ROAD  
 WEST BOSTON, MA 02127  
 PHONE (781) 551-7500  
 FAX (781) 551-7501

BOSTON GAS COMPANY  
 476 N  
**nationalgrid**  
 WALTHAM, MA 02451



NO.	DATE	DESCRIPTION
1	02/28/2023	ISSUED FOR CONSTRUCTION
2	02/28/2023	REVISIONS TO TITLE BLOCK, NOTES, DIMS & TRENCH PALE
3	02/28/2023	MARK ASIS
4	02/28/2023	MARK ASIS
5	02/28/2023	MARK ASIS

1-124 PARKER AVE GAS MAIN REPAIR ACCOUNT  
 PARKER AVE, WOODCROFT RD, OAKDALE RD, WALNUT HILL RD,  
 KENDALL RD, & PARKER ST  
 NEWTON, MA

**LAYOUT SHEET**

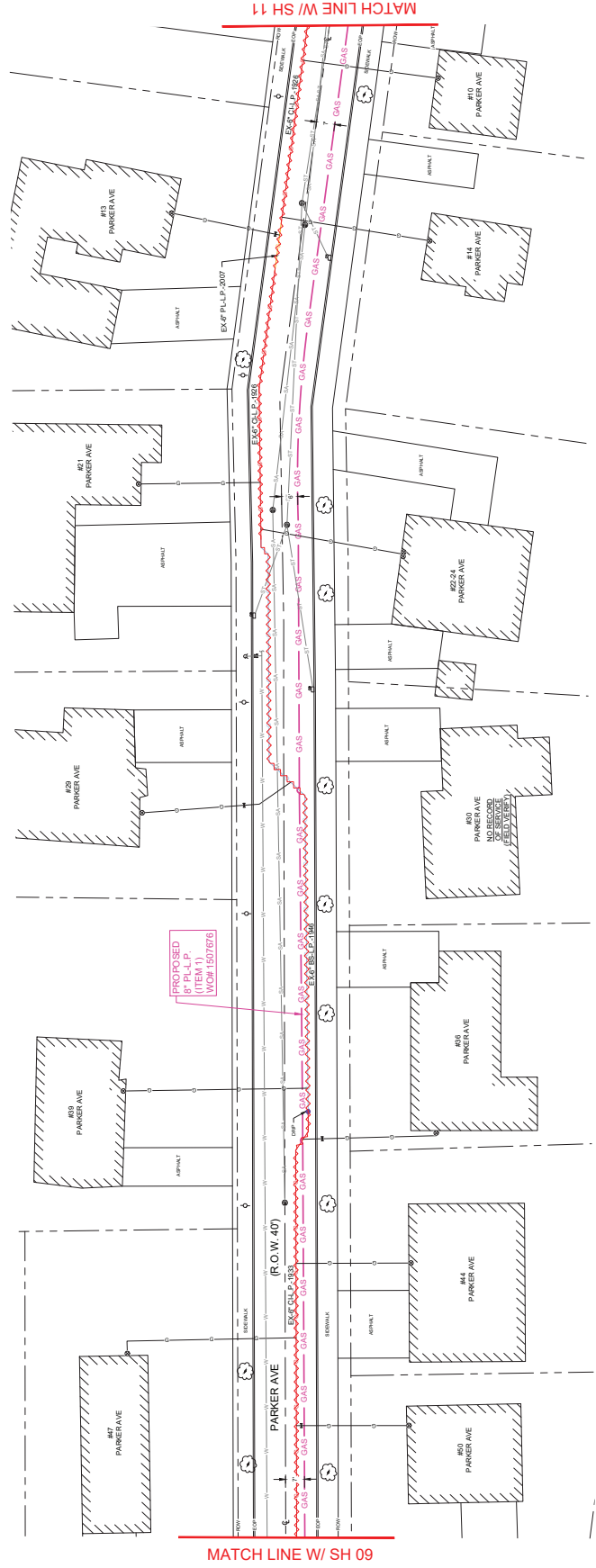
DESIGNER: W. KAZEMZADEH  
 ENGINEER: W. KAZEMZADEH  
 DATE: 02/28/2023  
 DWG NO: 227042  
 SHEET NO: 09

PROJECT NO: C-006  
 DRAWING NO: 133-22  
 SHEET NO: 09





**NOTE:**  
 1. PROJECT IS OVER 2500 FEET IN LENGTH.  
 PLEASE CONTACT I&R PRIOR TO EXECUTING  
 THE PROJECT FOR SUPPLEMENTAL  
 ODORIZATION INR06002 - SUPPLEMENTAL  
 ODORIZATION FOR NEW PIPING.



MATCH LINE W/ SH 09

MATCH LINE W/ SH 11



45 DENVER ROAD  
 WEST BOSTON, MA 02126  
 PHONE (617) 552-7500  
 FAX (617) 552-7501

BOSTON GAS COMPANY  
 476 A  
**nationalgrid**  
 WALTHAM, MA 02451



NO.	DATE	DESCRIPTION
1	02/28/2023	ISSUED FOR CONSTRUCTION
2	02/28/2023	REVISIONS TO THE BLOCK, NOTES, DIMS & TRAILER TAIL
3	02/28/2023	MARK AS2
4	02/28/2023	MARK AS2
5	02/28/2023	MARK AS2
6	02/28/2023	MARK AS2
7	02/28/2023	MARK AS2
8	02/28/2023	MARK AS2
9	02/28/2023	MARK AS2
10	02/28/2023	MARK AS2

1-124 PARKER AVE GAS MAIN REPLACEMENT  
 PARKER AVE, WOODCROFT RD, OAKDALE RD, WALNUT HILL RD,  
 KENDALL RD, & PARKER ST  
 NEWTON, MA

**LAYOUT SHEET**

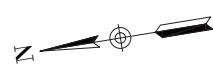
ENGINEER: M. KAZEMZADEH  
 DESIGNED BY: M. KAZEMZADEH  
 DATE: 02/28/2023  
 DWG NO: 277042  
 SHEET NO: 10  
 V.O. NO.: 000000000  
 I&R NO: 133-22

DRAWING NO: C-007  
 SHEET NO: 10  
 PAGE 10 OF 18

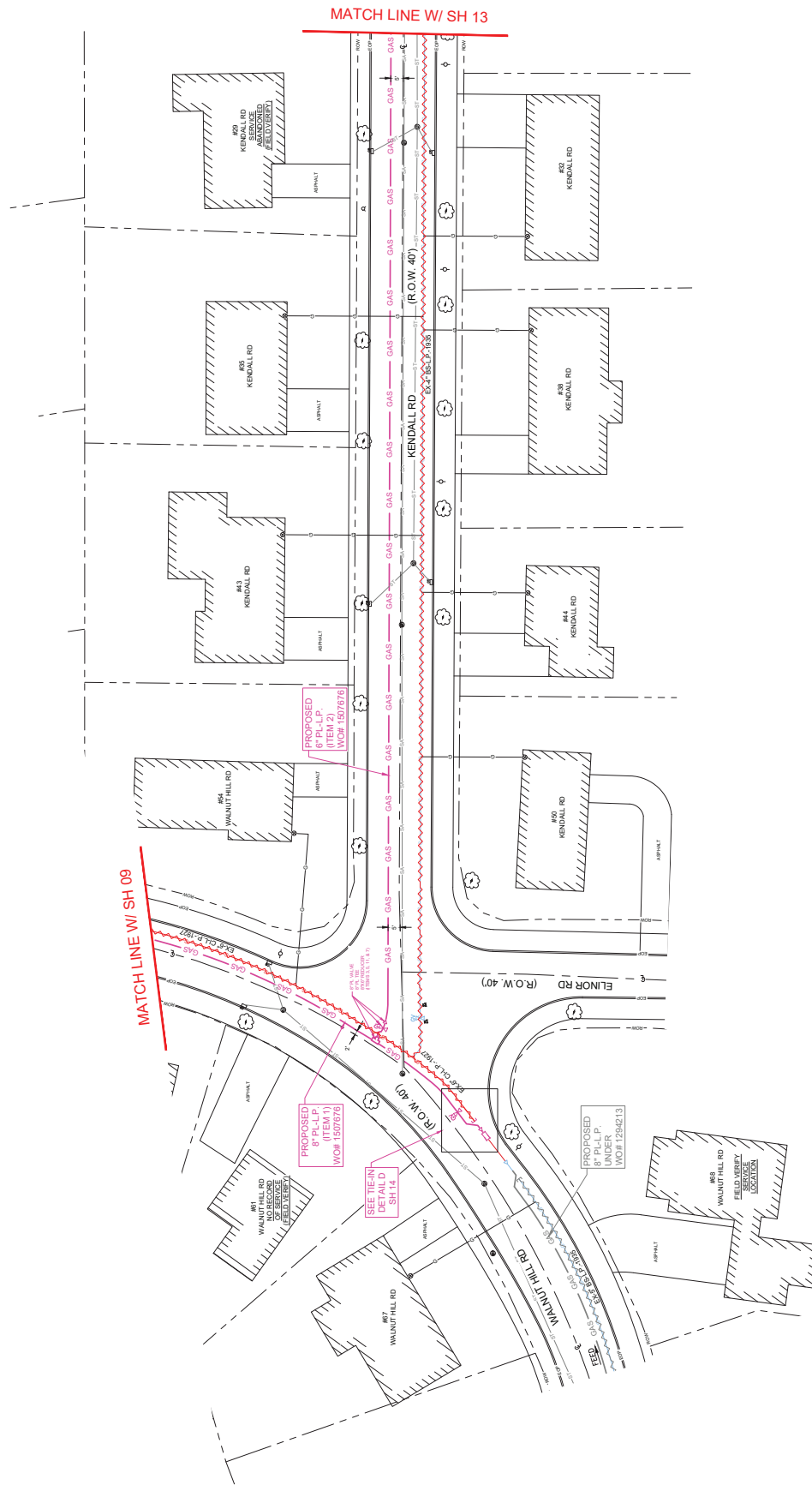








**NOTE:**  
 1. PROJECT IS OVER 2500 FEET IN LENGTH.  
 PLEASE CONTACT I&R PRIOR TO EXECUTING  
 THE PROJECT FOR SUPPLEMENTAL  
 ODORIZATION INR06002 - SUPPLEMENTAL  
 ODORIZATION FOR NEW PIPING.

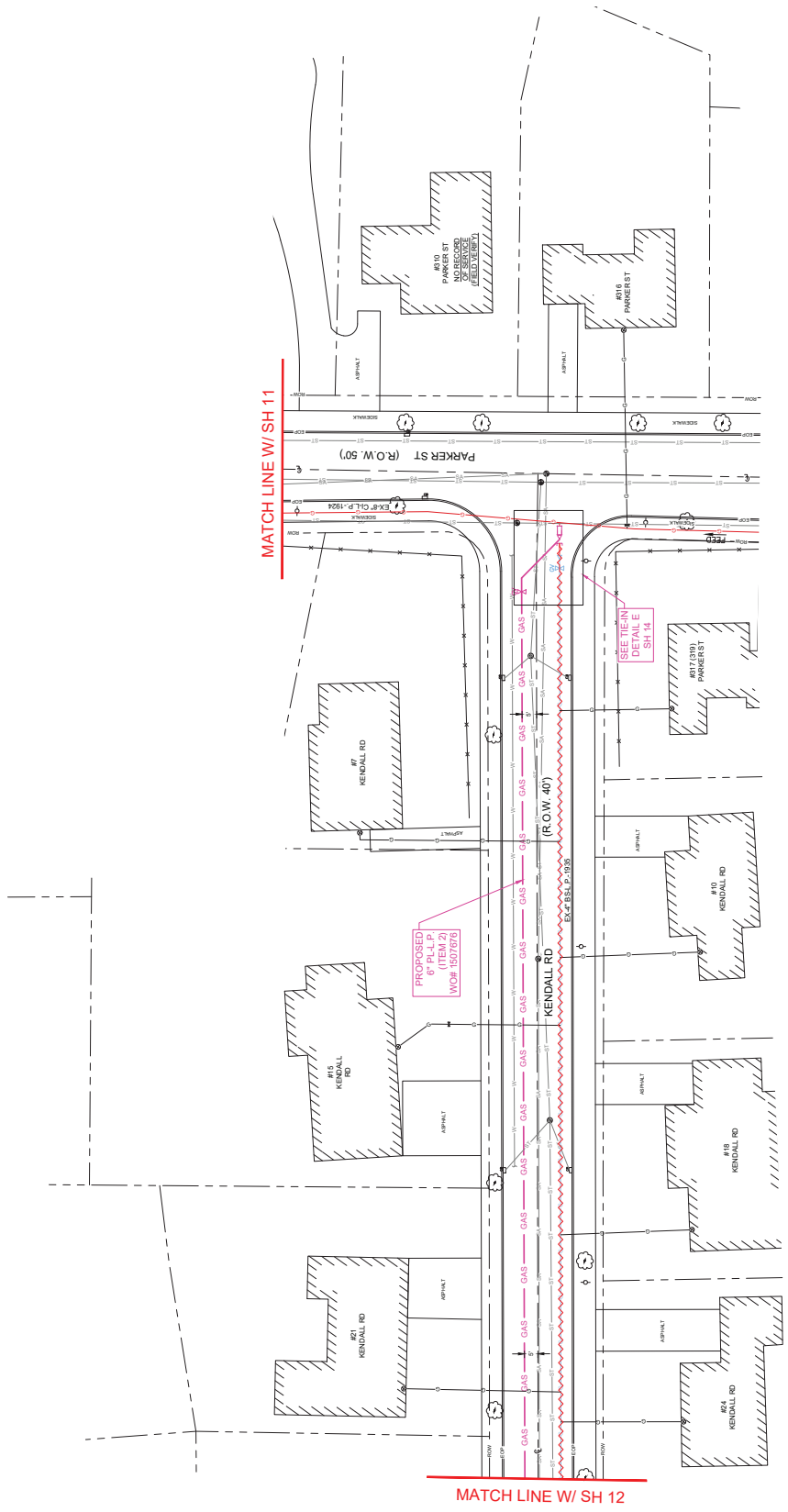


						BOSTON GAS COMPANY 476 N. WALTHAM ST. WALTHAM, MA 02451 IFC	
1-124 PARKER AVE GAS MAIN REPLY ASSESSMENT PARKER AVE, WOODCLIFF RD, OAKDALE RD, WALNUT HILL RD, KENDALL RD, & PARKER ST NEWTON, MA		LAYOUT SHEET		DRAWING NO. C-009		SHEET NO. 12	
NO.	DATE	DESCRIPTION	DESIGNER	DATE	DATE	DATE	DATE
1	02/28/2023	REVISIONS TO THE BLOCK, NOTES, DIMS & TIE-IN DETAILS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
2	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
3	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
4	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
5	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
6	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
7	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
8	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
9	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023
10	02/28/2023	MARK ASSESS	W. KAZEMZADEH	02/28/2023	02/28/2023	02/28/2023	02/28/2023





**NOTE:**  
 1. PROJECT IS OVER 2500 FEET IN LENGTH.  
 PLEASE CONTACT I&R PRIOR TO EXECUTING  
 THE PROJECT FOR SUPPLEMENTAL  
 ODORIZATION INR06002 - SUPPLEMENTAL  
 ODORIZATION FOR NEW PIPING.



MATCH LINE W/ SH 11

MATCH LINE W/ SH 12

**THE DDS COMPANY**  
 45 DENVER ROAD  
 WEST WAREHOUSES 41006  
 PHONE 781/551-7549  
 FAX 781/551-7547

**BOSTON GAS COMPANY**  
 476 G  
**nationalgrid**  
 WALTHAM, MA 02451



NO.	DESCRIPTION	DATE	DESIGNED BY	CHECKED BY	DATE	REVISIONS
1	REVISIONS TO THIS BLOCK, NOTES, DIMS & TRENCH PAIS	02/28/2023	MARK	ASD	MP	
2	REVISIONS TO THE PLACEMENTS	02/28/2023	MARK	ASD	MP	

1-124 PARKER AVE GAS MAIN REPLACEMENT  
 PARKER AVE, WOODCROFT RD, OAKDALE RD, WALNUT HILL RD,  
 KENDALL RD, & PARKER ST  
 NEWTON, MA

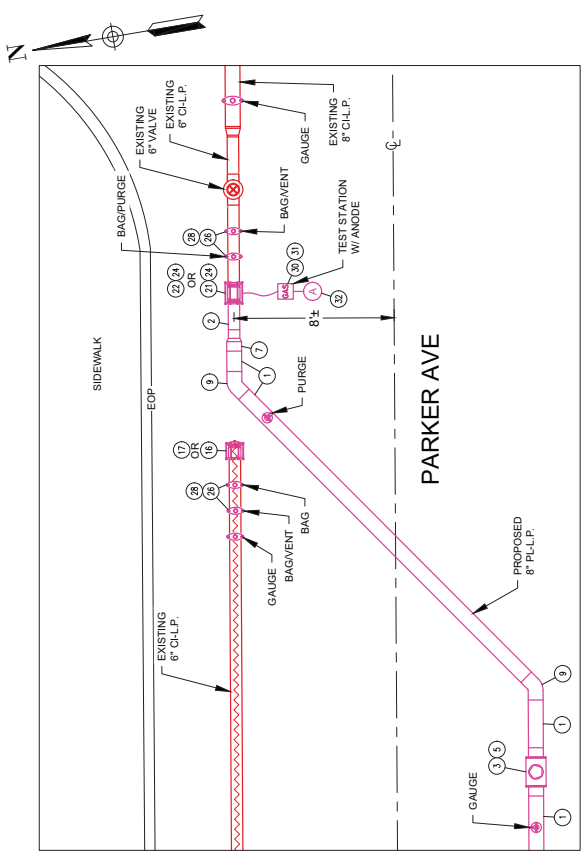
**LAYOUT SHEET**

DATE: 03/08/2023  
 ENGINEER: W. KAZEMI  
 DESIGNED BY: MARK  
 CHECKED BY: ASD  
 DATE: 03/08/2023  
 DWG NO.: 27704  
 DWG SIZE: 24"X36"  
 ANSET ID: XXXXXXXX  
 V.O. NO.: 1507876

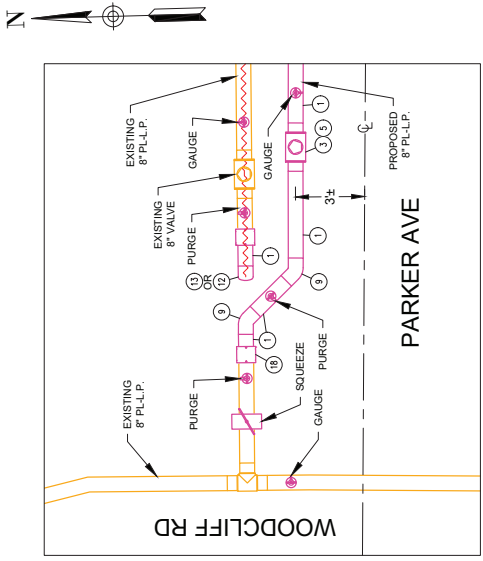
DRAWING NO. C-010  
 SHEET NO. 13



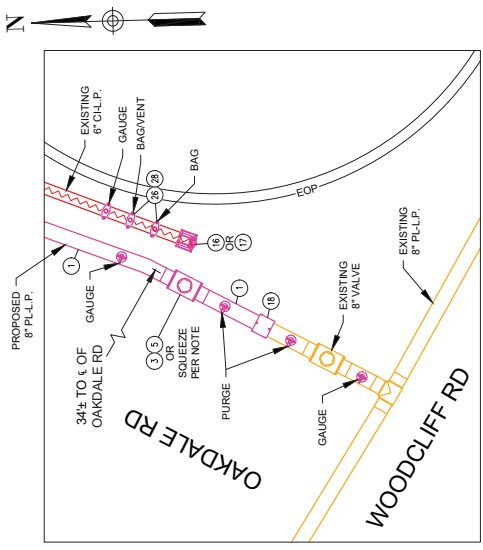




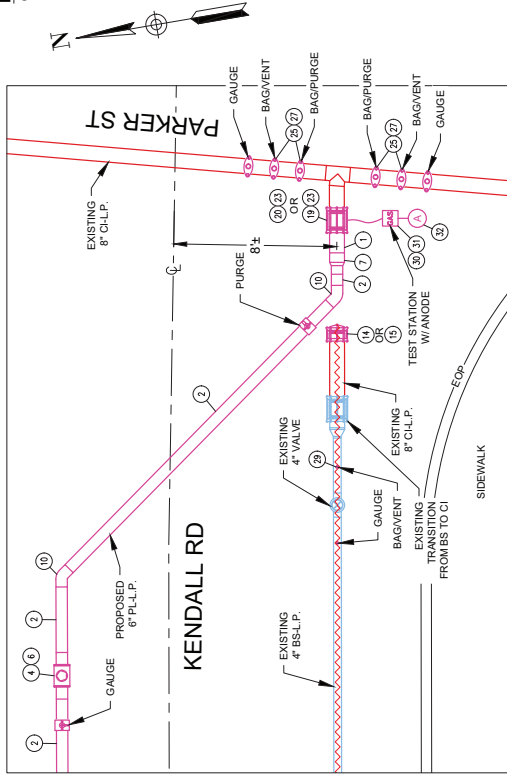
**DETAIL C: TIE-IN**  
(PARKER ST & PARKER AVE)  
SCALE: 1/32  
SEE NOTE 2



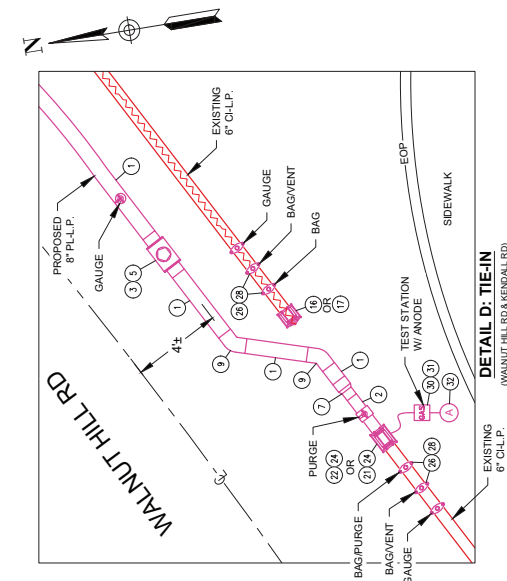
**DETAIL B: TIE-IN**  
(WOODCLIFF RD & PARKER AVE)  
SCALE: 1/32  
SEE NOTE 1 & 3



**DETAIL A: TIE-IN**  
(WOODCLIFF RD & OAKDALE RD)  
SCALE: 1/32  
SEE NOTE 4



**DETAIL E: TIE-IN**  
(PARKER ST & KENDALL RD)  
SCALE: 1/32  
SEE NOTE 2 & 5



**DETAIL D: TIE-IN**  
(WALNUT HILL RD & KENDALL RD)  
SCALE: 1/32  
SEE NOTE 2

- NOTE:**
1. ELECTROFUSION CAPS (ITEM 13) CAN BE USED AS ALTERNATE TO BUTT FUSE CAPS (ITEM 12) WITH ELECTROFUSION COUPLINGS (ITEM 18).
  2. INSTALL A 1-WIRE TEST STATION TO THE PROPOSED INSULATED COUPLING (PIPE END SPACER AND INSULATOR SLEEVE FACING THE CAST IRON) BY USING THE CLIP ON THE COUPLING. INCLUDE THE 9X9 TEST STATION AT LEAST 1 FT BELOW THE MAIN. INSTALL THE 9X9 TEST STATION IN AN ACCESSIBLE LOCATION.
  3. STOP OFF METHODS CONTAINED IN CNST03002: STOP OFF OPERATIONS ON LOW PRESSURE MAINS, MAY BE USED IN PLACE OF SQUEEZE OFFS.
  4. PROPOSED PL VALVE NOT REQUIRED TO BE INSTALLED IF EXISTING VALVE IS OPERATING TO NATIONAL GRID'S STANDARDS. IF THE EXISTING VALVE IS NOT OPERATING TO NATIONAL GRID'S STANDARDS, ABANDON AND REPLACE IN ACCORDANCE WITH CNST04011. USE EXISTING VALVE FOR ISOLATION AND SQUEEZE OFF IN ACCORDANCE WITH CNST03001 OR STOP OFF IN ACCORDANCE WITH CNST03002.
  5. CONFIRM IF EXISTING 4" VALVE IS OPERATIONAL. IF DEEMED INOPERABLE, INSTALL AN ADDITIONAL BAG AS A SECONDARY STOP OFF.

DRAWING NO.		C-101	SHEET NO.	14
PAGE 14 OF 18				

1-174 PARKER AVE GAS MAIN RECONFIGURATION PARKER AVE, WOODCLIFF RD, OAKDALE RD, WALNUT HILL RD, KENDALL RD, & PARKER ST NEWTON, MA				
<b>TIE-IN &amp; ABANDONMENT DETAILS</b>				
DATE	DESIGNER	ENGINEER	ISSUE NO.	ISSUE DATE
02/28/23	MARK ASH	MARK ASH	00000001	02/28/23
02/28/23	MARK ASH	MARK ASH	00000002	02/28/23
02/28/23	MARK ASH	MARK ASH	00000003	02/28/23
02/28/23	MARK ASH	MARK ASH	00000004	02/28/23
02/28/23	MARK ASH	MARK ASH	00000005	02/28/23

NO.	DATE	DESCRIPTION
1	02/28/23	ISSUED FOR CONSTRUCTION
2	02/28/23	REVISIONS TO THE BLOCK, NOTES, DIMS & TIE-IN PLANS
3	02/28/23	MARK ASH
4	02/28/23	MARK ASH
5	02/28/23	MARK ASH



BOSTON GAS COMPANY  
476 N  
**nationalgrid**  
WALTON, MA 02451  
**IFC**

45 DENVER ROAD  
WEST HAVEN, CT 06611  
PHONE 203-793-7500  
FAX 203-793-7501


**THE DDS**  
CONTRACTORS



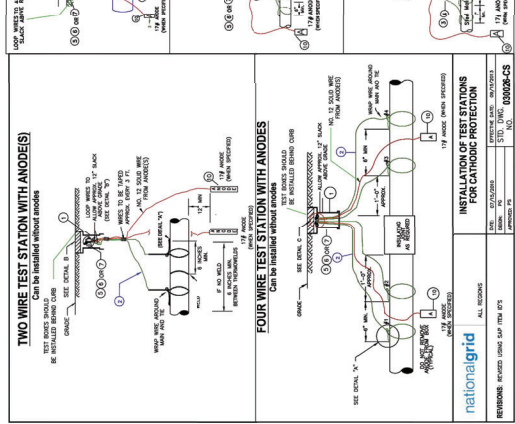
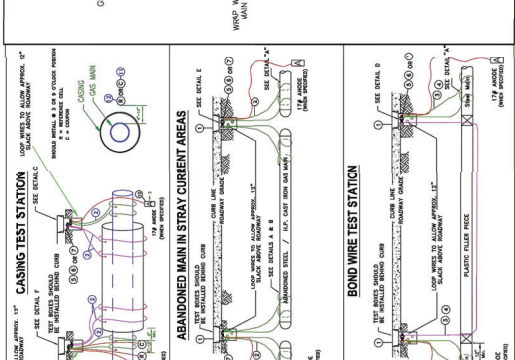
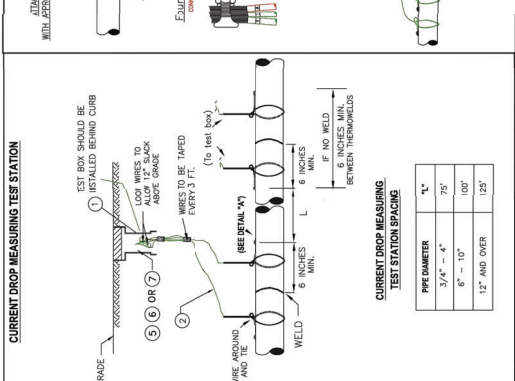
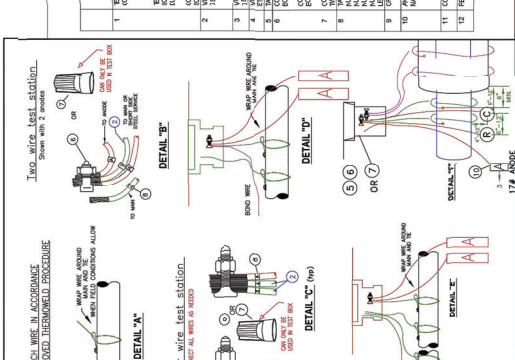
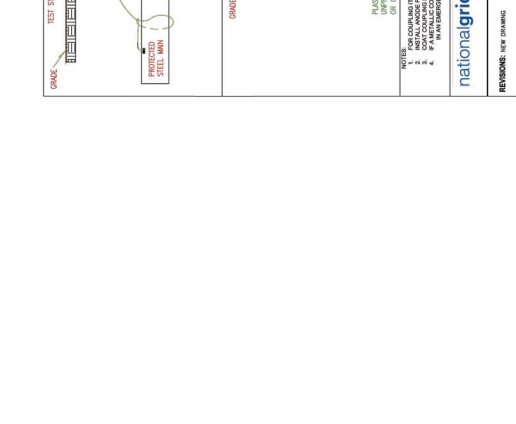
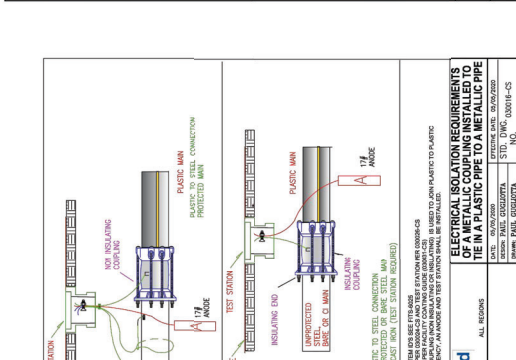
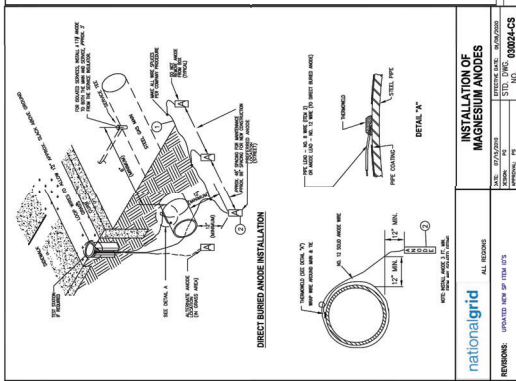


**MATERIAL LIST**

Description	Quantity	Unit	Notes	Material Notes
1. CABLE, NO. 12, 12/10	100	FT.	100	Use as per Section 19
2. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
3. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
4. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
5. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
6. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
7. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
8. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
9. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
10. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
11. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all
12. 1/2" DIA. MAGNESIUM ANODE	100	EA	100	Use on Trench wire and all



\* 1/2" Dia. Magnesium Anode



**nationalgrid**

REVISED: UPDATED NEW SP. TEST SETS. 5/11/15. ST. D. P. C. 100014-C5

UNCONTROLLED WHEN PRINTED

1 OF 5

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

**THE DDS GROUP**

45 DENVER ROAD  
WEST BROMWICH, WOOD  
PHONE 01202 551550  
FAX 01202 551551

**nationalgrid**

BOSTON GAS COMPANY  
476 N  
nationalgrid  
WALTHAM, MA 02451

**IPC**

DATE: 08/20/2017 TIME: 10:10:10 AM  
DRAWING NO: 00000003  
JOB NO: 00000003  
JOB NAME: 00000003

1-174 PARKER AVE GAS MAIN REPLACEMENT  
PARKER AVE, WOODGATE RD, OAKDALE RD, WALNUT HILL RD,  
KENDALL RD, & PARKER ST  
NEWTON, MA

**STANDARD DETAILS**

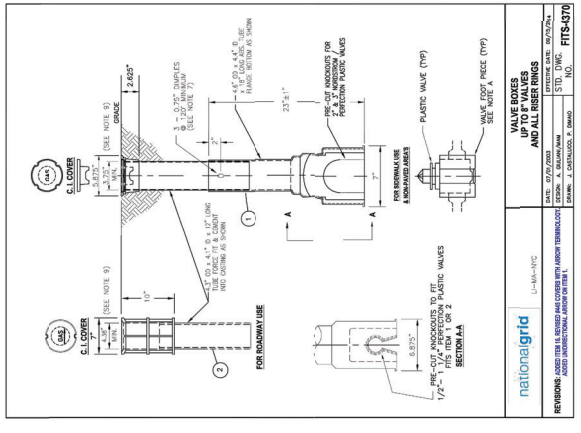
DATE: 08/20/2017 TIME: 10:10:10 AM  
DRAWING NO: 00000003  
JOB NO: 00000003  
JOB NAME: 00000003

16

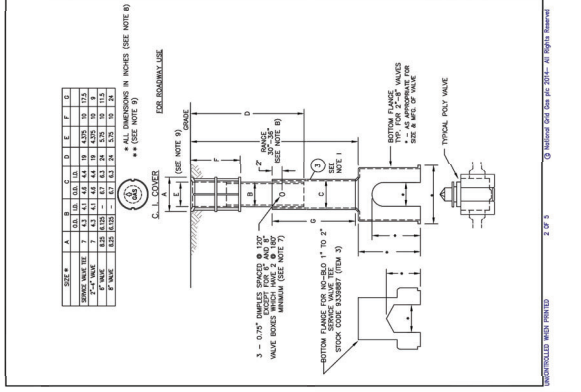
C-202

16 OF 18

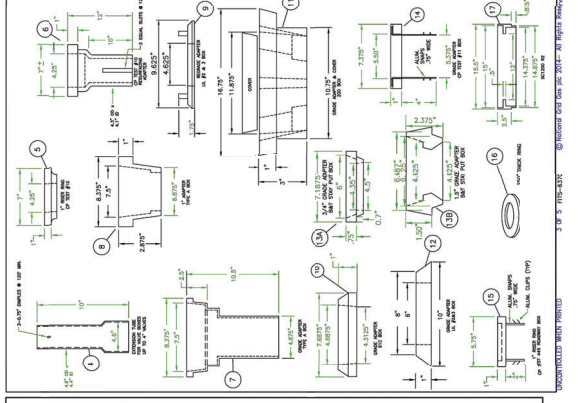




NO.	REV.	DESCRIPTION	DATE	BY	CHK.
1		AS SHOWN	01/24/2020	W. WOODWARD	J. L. CORREIA
2		REVISION: PER LOCAL AGENCY	01/24/2020	W. WOODWARD	J. L. CORREIA



NO.	REV.	DESCRIPTION	DATE	BY	CHK.
1		AS SHOWN	01/24/2020	W. WOODWARD	J. L. CORREIA
2		REVISION: PER LOCAL AGENCY	01/24/2020	W. WOODWARD	J. L. CORREIA

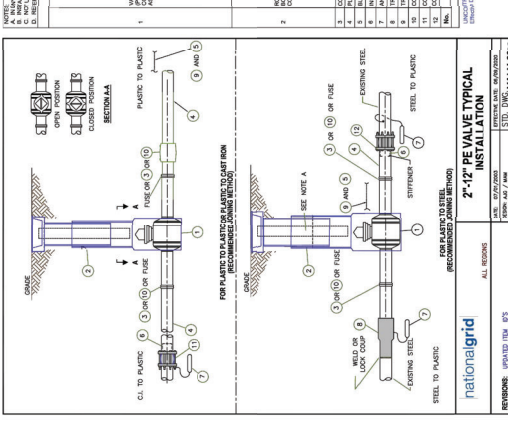


NO.	REV.	DESCRIPTION	DATE	BY	CHK.
1		AS SHOWN	01/24/2020	W. WOODWARD	J. L. CORREIA
2		REVISION: PER LOCAL AGENCY	01/24/2020	W. WOODWARD	J. L. CORREIA

**INSTALLATION NOTES:**

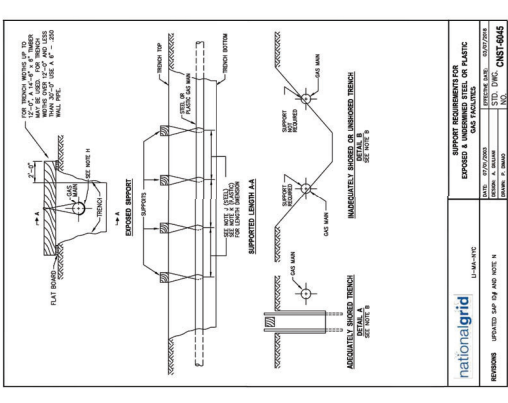
- VALVE FOOT PCE TO BE INSTALLED AROUND THE VALVE THEN INSERTED INTO THE BOTTOM FLANGE OF THE VALVE BOX.
- THE WIDTH OF THE VALVE BOX FROM TOP OF GRADE TO TOP OF VALVE IS 24" TO 36". FOR REFERRED VALVES SEE THE NOTES ON THE VALVE BOX.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE. THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.

BILL OF MATERIAL		MATERIAL NOTES	
NO.	ITEM	QTY	UNIT
1	VALVE BOX WITH VALVE	1	EA
2	CONCRETE	1	CBY
3	STEEL	1	LB
4	PLASTIC	1	LB
5	WOOD	1	CU YD



NO.	REV.	DESCRIPTION	DATE	BY	CHK.
1		AS SHOWN	01/24/2020	W. WOODWARD	J. L. CORREIA
2		REVISION: PER LOCAL AGENCY	01/24/2020	W. WOODWARD	J. L. CORREIA

BILL OF MATERIAL		MATERIAL NOTES	
NO.	ITEM	QTY	UNIT
1	VALVE BOX WITH VALVE	1	EA
2	CONCRETE	1	CBY
3	STEEL	1	LB
4	PLASTIC	1	LB
5	WOOD	1	CU YD



NO.	REV.	DESCRIPTION	DATE	BY	CHK.
1		AS SHOWN	01/24/2020	W. WOODWARD	J. L. CORREIA
2		REVISION: PER LOCAL AGENCY	01/24/2020	W. WOODWARD	J. L. CORREIA

**INSTALLATION NOTES:**

- VALVE FOOT PCE TO BE INSTALLED AROUND THE VALVE THEN INSERTED INTO THE BOTTOM FLANGE OF THE VALVE BOX.
- THE WIDTH OF THE VALVE BOX FROM TOP OF GRADE TO TOP OF VALVE IS 24" TO 36". FOR REFERRED VALVES SEE THE NOTES ON THE VALVE BOX.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE. THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.
- IF THE VALVE BOX IS TO BE INSTALLED ON A SLOPE, THE VALVE BOX SHALL BE INSTALLED ON A FLAT SURFACE WITH THE BOTTOM FLANGE OF THE VALVE BOX IN CONTACT WITH THE CONCRETE OR GRADE BELOW.

BILL OF MATERIAL		MATERIAL NOTES	
NO.	ITEM	QTY	UNIT
1	VALVE BOX WITH VALVE	1	EA
2	CONCRETE	1	CBY
3	STEEL	1	LB
4	PLASTIC	1	LB
5	WOOD	1	CU YD

1 OF 2

nationalgrid

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DATE: 01/24/2020

DRAWN BY: W. WOODWARD

CHECKED BY: J. L. CORREIA

PROJECT NO. 133-22

DATE: 01/24/2020

SCALE: AS SHOWN

DESIGNED BY: W. WOODWARD

CHECKED BY: J. L. CORREIA

DRAWN BY: W. WOODWARD

CHECKED BY: J. L. CORREIA

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nationalgrid

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1-174 PARKER AVE GAS MAIN REPAIR ACCOUNT  
PARKER AVE, WOODLUFF RD, OAKDALE RD, WALNUT HILL RD,  
KENDALL RD, & PARKER ST  
NEWTON, MA  
STANDARD DETAILS

ENGINEER DATE: 03/09/2023  
DESIGNER: M. NOZOMO  
CHECKER: M. NOZOMO  
ISSUED FOR PERMITS: 273042  
W.O. NO.: 300030303  
10/07/23

NO.	DATE	DESCRIPTION	BY	CHK'D
1	03/09/2023	ISSUED FOR PERMITS	MN	MP
2	03/09/2023	ISSUED FOR PERMITS	MN	MP
3	03/09/2023	ISSUED FOR PERMITS	MN	MP



BOSTON GAS COMPANY  
476 S  
nationalgrid  
WALTHAM, MA 02451  
IFC

65 BURNING ROAD  
WEST WAREHAM, MA 01986  
PHONE: 978/381-7560  
FAX: 978/381-7561



**NOTES:**

1. HOOKS, ANCHORS, AND BOLTS SHALL BE PROVIDED IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE COMPATIBLE WITH THE CONCRETE.
2. ALL REINFORCING SHALL BE PROVIDED IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE COMPATIBLE WITH THE CONCRETE.
3. ALL REINFORCING SHALL BE PROVIDED IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE COMPATIBLE WITH THE CONCRETE.
4. ALL REINFORCING SHALL BE PROVIDED IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE COMPATIBLE WITH THE CONCRETE.

**TABLE 1. MINIMUM PIPE EMBEDMENT (INCHES)**

PIPE SIZE (INCHES)	1.2 MPD	1.8 MPD	1.2 MPD	1.8 MPD	2.0 MPD	2.4 MPD
1/2	12	12	12	12	12	12
3/4	12	12	12	12	12	12
1	12	12	12	12	12	12
1 1/4	12	12	12	12	12	12
1 1/2	12	12	12	12	12	12
2	12	12	12	12	12	12
2 1/2	12	12	12	12	12	12
3	12	12	12	12	12	12
3 1/2	12	12	12	12	12	12
4	12	12	12	12	12	12
4 1/2	12	12	12	12	12	12
5	12	12	12	12	12	12
6	12	12	12	12	12	12

**FIGURE 18-1: ISOLATED COUPLING ANCHORAGE**

**CAST IRON TO STEEL NON-RESTRAINING ISOLATED COUPLING ANCHORAGE**

3 SECTION BEHIND SPINE (P = 12' MAX)

**ANCHORAGE FOR CAST IRON BELL SECTION**  
MINIMUM ANCHOR CL TO ANCHORAGE AND RING  
CAST IRON BELL SECTION  
MINIMUM ANCHOR CL TO ANCHORAGE AND RING

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**ANCHORAGE BAND - 10" TO 30" MAIN**

**CAST IRON TO STEEL NON-RESTRAINING ISOLATED COUPLING ANCHORAGE**

3 SECTION BEHIND SPINE (P = 12' MAX)

**ANCHORAGE BAND - 4" TO 10" MAIN**

**CAST IRON TO STEEL NON-RESTRAINING ISOLATED COUPLING ANCHORAGE**

3 SECTION BEHIND SPINE (P = 12' MAX)

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**EXISTING CL END PLUG OR COMPRESSION CAP ANCHORAGE**

**EXISTING CLAMP OR PLUG OF ANCHORAGE**

**BELL-JOINT ANCHORAGE**

**CHANNEL END OR COMPRESSION CAP ANCHORAGE**

**ANCHORAGE BAND - 10" TO 30" MAIN**

**ANCHORAGE BAND - 4" TO 10" MAIN**

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**ANCHORAGE BAND - 10" TO 30" MAIN**

ITEM	DESCRIPTION	QTY	UNIT	NOTE
1	ANCHORAGE BAND	1	EA	
2	ANCHORAGE BAND	1	EA	
3	ANCHORAGE BAND	1	EA	
4	ANCHORAGE BAND	1	EA	
5	ANCHORAGE BAND	1	EA	

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**ANCHORAGE BAND - 10" TO 30" MAIN**

ITEM	DESCRIPTION	QTY	UNIT	NOTE
1	ANCHORAGE BAND	1	EA	
2	ANCHORAGE BAND	1	EA	
3	ANCHORAGE BAND	1	EA	
4	ANCHORAGE BAND	1	EA	
5	ANCHORAGE BAND	1	EA	

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