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# EVERSOURCE

## ENERGY



MAIN

INSTALLATION: ±3545' OF 2" PLASTIC IP/60# MAIN  
INSTALLATION: ±1400' OF 4" PLASTIC IP/60# MAIN  
INSTALLATION: ±260' OF 8" PLASTIC IP/60# MAIN

ABANDONMENT: ±3140' OF 4" COATED STEEL LP/14" WC MAIN  
ABANDONMENT: ±1355' OF 4" PLASTIC LP/14" WC MAIN  
ABANDONMENT: ±185' OF 4" BARE STEEL LP/14" WC MAIN

AFFECTED STREETS: ACUSHNET AVENUE, JUNE STREET,  
SASSAQUIN AVENUE, CHEROKEE STREET AND PEQUOT  
STREET.

SERVICES

REPLACEMENT: ±2300' OF 0.5" PLASTIC LP/60# SERVICE  
TIE-OVER: ±2700' OF 0.5" PLASTIC LP/60# SERVICE

TOTAL SERVICES: 100  
METER MOVE OUTS: 20

WORK SCOPE

NEW BEDFORD, MASSACHUSETTS  
(NOT TO SCALE)

ISSUED FOR  
REVIEW - 100%

ACUSHNET AVENUE, NEW BEDFORD, MA  
WO# 7329196

A	ISSUED FOR REVIEW - 100%	12/30/2021	XS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
WORK SCOPE, KEY MAP AND TABLE OF CONTENTS				
SCALE: AS NOTED			SHEET 1 OF 25	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-01	A

SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
SIGNATURE	LICENSE EXPIRATION:	<b>ENEngineering</b> 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 353-7777 WWW.ENENGINEERING.COM	



## GENERAL NOTES


- A. IF ANY OF THE FOLLOWING OCCUR, A DRAWING REVISION IS REQUIRED AND MUST BE APPROVED AND/OR STAMPED BY THE ENGINEER OF RECORD. CHANGES CAN BE APPROVED AND/OR STAMPED BY A PROJECT ENGINEER, BUT THE ENGINEER OF RECORD MUST BE INFORMED.
1. IF THE TIE IN POINT MOVES TO A DIFFERENT SEGMENT OF PIPE THAN SHOWN.
  2. IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED.
  3. IF THERE IS ANY CHANGE TO WHAT IS SHOWN ON THE DRAWING WITHIN 50 FT OF A PRESSURE REGULATING STATION, DISTRICT REGULATOR, OR GATE STATION.
  4. IF A CHANGE IN PIPE SIZE, MATERIAL, OR WALL THICKNESS IS REQUIRED.
  5. ALTERNATE FITTINGS THAT ARE ACCEPTABLE FOR ANY TIE-IN DETAIL WILL BE CALLED OUT IN THE DRAWING. FITTING CHANGES NOT SHOWN AS ALTERNATIVES ON THE DRAWING WILL NEED TO FOLLOW THE DRAWING CHANGE PROCESS CONTAINED IN SECTION V.D.
- B. CONSTRUCTION DRAWINGS, LOCATIONS OF EXISTING UTILITIES, UNDERGROUND STRUCTURES AND WORK LOCATIONS ARE BASED ON BEST AVAILABLE INFORMATION BUT HAVE NOT BEEN FIELD VERIFIED.
- C. ALL WORK, MATERIAL AND CONSTRUCTION SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH ALL PERMITS AND APPROVALS PER EVERSOURCE, LOCAL, STATE, OSHA AND FEDERAL REGULATIONS AND STANDARDS.
- D. ALL LIVE GAS WORK EXCEPT SERVICE SIZE TAPS, INCLUDING BUT NOT LIMITED TO TAPPING OF FITTINGS ON LIVE MAINS, STOPPING, MANIPULATING VALVE, ABANDONMENT, SHALL BE PERFORMED BY, OR AT THE DIRECTION AND UNDER THE DIRECT SUPERVISION OF EVERSOURCE GAS PERSONNEL AND IN ACCORDANCE WITH THE WRITTEN PROCEDURE. DRAWING CHANGES MAY ALSO REQUIRE A CHANGE TO THE PROCEDURE.
- E. EXCAVATOR IS REQUIRED TO PROTECT EXISTING UTILITIES, STRUCTURES, LANDSCAPES FEATURES, SIGNAGE, CURBS, ETC. CARE SHOULD BE TAKEN NOT TO DISTURB OR DAMAGE SUCH ITEMS. ROADWAY, SIDEWALKS, AND GRASS DISTURBED SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OR TOWN. PLANT BEDS WILL BE RELOCATED TO THEIR EXISTING REGULAR LOCATION.
- F. ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), INCLUDING ALL REVISIONS AND ADDENDA. ALL TRAFFIC CONTROL DEVICES WILL BE SUPPLIED BY EXCAVATOR.
- G. EXCAVATOR REQUIRED TO CALL DIG-SAFE/CALL BEFORE YOU DIG (DIAL 811) AT LEAST 72 HOURS PRIOR TO CONSTRUCTION. SATURDAYS, SUNDAYS AND HOLIDAYS ARE EXCLUDED FROM THE 72-HOUR TIME SPAN. NOT CONSIDERED BUSINESS WORKDAYS.
- H. IF THE PROJECT IS WITHIN 50 FEET OF A DISTRICT REGULATOR OR GATE STATION, ENSURE THAT A QUALIFIED I&R TECHNICIAN IS ON SITE.
- I. PROPERTY LINES, STRUCTURES AND EXISTING CONDITIONS DEPICTED ON PLANS ARE BASED ON EVERSOURCE GIS INFORMATION AND HAVE NOT BEEN FIELD VERIFIED BY LAND SURVEY UNLESS OTHERWISE NOTED.
- J. EXISTING SERVICES SHOWN ON PLAN ARE FOR INFORMATION ONLY. PROPOSED SERVICES ARE NOT SHOWN ON PLANS AND ARE TO BE INSTALLED PER EVERSOURCE CONSTRUCTION STANDARDS.
- K. MAINS AND SERVICES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH EVERSOURCE STANDARDS.
- L. ALL PIPE SHALL BE INSTALLED WITH THE MINIMUM DEPTH REQUIRED BY EVERSOURCE STANDARDS AND APPLICABLE REGULATIONS.
- M. MAOP DEFINITIONS:
- LP = 14" W.C
  - LIP = 35 PSIG
  - IP = 60 PSIG
  - HP = 90 PSIG
- N. ENSURE ALL SERVICES BEING TRANSFERRED TO A HIGHER PRESSURE SYSTEM HAVE UPGRADED PRESSURE REGULATORS INSTALLED PRIOR TO ACTIVATION.

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - MASTER BOM					
Item #	Size	Quantity	Units	Maximo #	Description
9	2"	4	EA	562087	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING
13	8"	1	EA	500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH
45	4"	2	EA	500855	COUPLING,PIPE, 4 IN IPS, ELECTROFUSION, PLASTIC, P100
47	8"	2	EA	500857	COUPLING,PIPE, 8 IN IPS, ELECTROFUSION, PLASTIC, P100
55	4"	4	EA	545341	ELBOW,PIPE, 90 DEG, 4 IN SDR 11, BUTT WELD ENDS, PLASTIC, P100
69	4" X 2"	1	EA	555593	REDUCER,PIPE, 4 X 2 IPS, BUTT ENDS, POLYETHYLENE, P100, SDR11
90	4"	1	EA	542538	CAP,PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100
92	8"	3	EA	542540	CAP,PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100
137	8" X 1/2"	6	EA	584713	FITTING,TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140
147	2" X 1"	3	EA	560779	TEE,PIPE, NON-BLOWING, 2 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100
172	4" X 2"	4	EA	584304	FITTING,TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621
176	8" X 2"	6	EA	577623	FITTING,TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055, RESTRICTED PURCHA
220	4" x 2"	17	EA	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP
349	2"	6	EA	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924, FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410
364	8"	260	LF	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100
369	1/2"	AS REQUIRED	EA	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609
371	1"	3	EA	583182	FITTING,CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924, FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612
737	4 1/4" square	3	EA	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ.NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX
740	8"	1	EA	604132	BOX VALVE, W/ 5-1/4 IN SQ.NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488. 6/BOX
Z	4"	8	EA		COUPLING, BOLTED MECHANICAL IPS W/ END CAP, VENTED

\*ADDITIONAL ELBOWS MAY BE REQUIRED FOR OFFSETS

ISSUED FOR  
REVIEW - 100%

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
<div> <div>EVERSOURCE</div> <div>ENERGY</div> </div>				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
GENERAL NOTES AND MASTER BOM				
SCALE: NOT TO SCALE			SHEET 2 OF 25	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-02	A

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### LEGEND

\_\_\_\_\_ G \_\_\_\_\_ G \_\_\_\_\_ G \_\_\_\_\_ G \_\_\_\_\_

EXISTING GAS MAIN

— G — G — G — G —

EXISTING GAS MAIN TO BE  
ABANDONED

— G — G — G — G —

## EXISTING GAS MAIN WITH SERVICE TRANSFERS

\_\_\_\_\_ 6 \_\_\_\_\_ 6 \_\_\_\_\_ 6 \_\_\_\_\_ 6 \_\_\_\_\_

### EXISTING GAS MAIN WITH PRESSURE INCREASE

— — — — —

## PROPOSED GAS MAIN



REGULATOR STATION 50' BOUNDARY

\_\_\_\_\_

## RIGHT OF WAY

— X — X — X —

FENCE

\_\_\_\_\_ W \_\_\_\_\_ W \_\_\_\_\_ W \_\_\_\_\_ W \_\_\_\_\_

WATER LINE



FIRE HYDRANT

— S — S — S — S —

SEWER LINE



SEWER MANHOLE

\_\_\_\_\_ D \_\_\_\_\_ D \_\_\_\_\_ D \_\_\_\_\_ D \_\_\_\_\_

DRAIN LINE



DRAIN MANHOLE



## CATCH BASIN



UTILITY POLE



ELECTRIC MANHOLE

— E — E — E — E —

ELECTRIC LINE

\_\_\_\_\_T\_\_\_\_\_T\_\_\_\_\_T\_\_\_\_\_T\_\_\_\_\_

TELEPHONE LINE



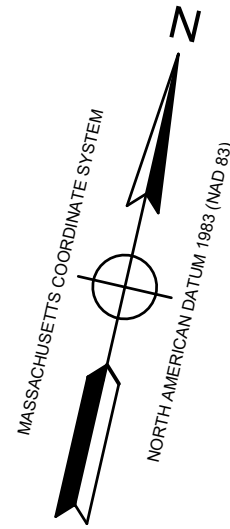
TELEPHONE MANHOLE

ISSUED FOR  
REVIEW - 100%

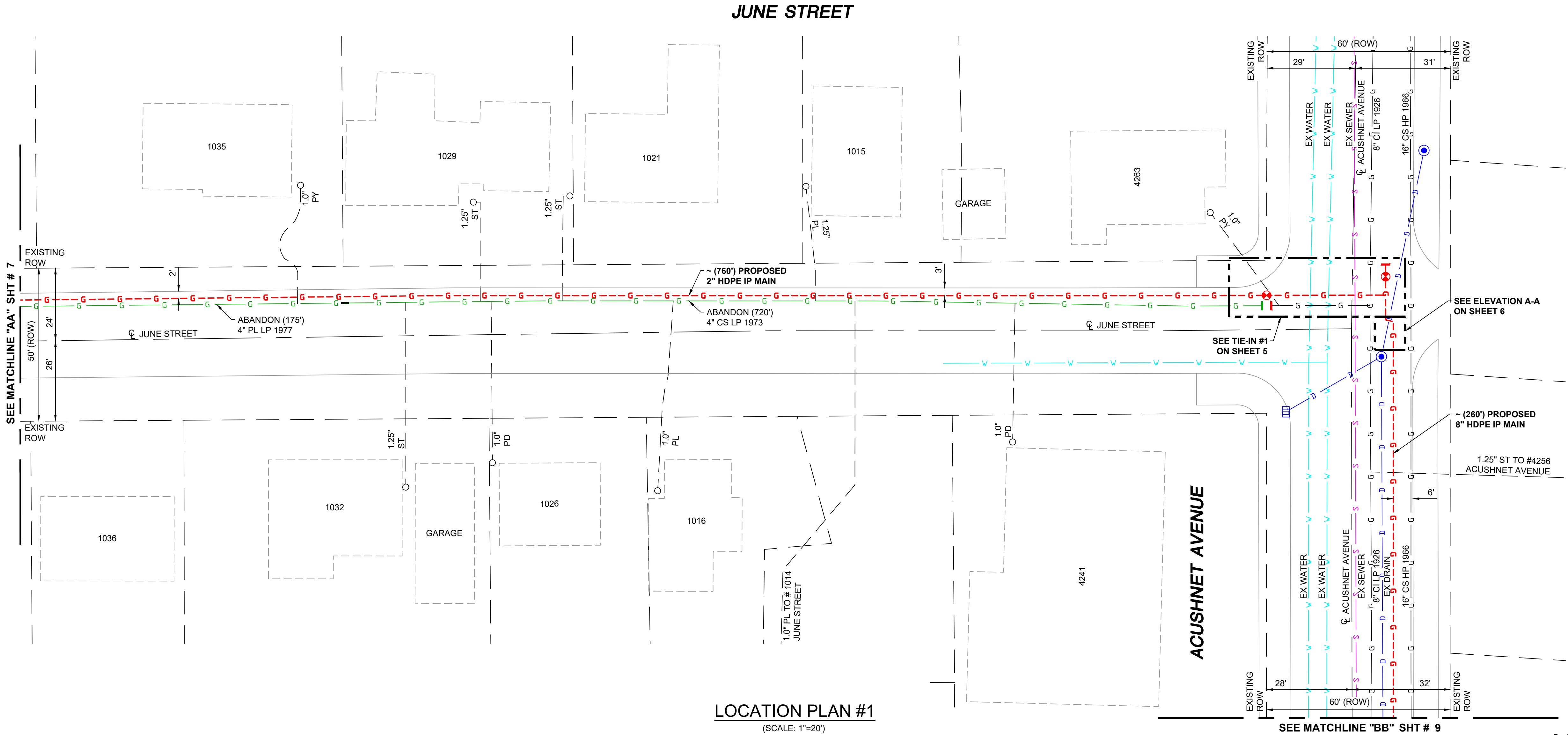
A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
<div>EVERSOURCE</div> <div>ENERGY</div>			
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS			
NEW BEDFORD, MASSACHUSETTS			
LEGEND			
SCALE: NOT TO SCALE		SHEET 3 OF 25	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-03
			REV. NO.
			A

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	LICENSE EXPIRATION:  _____	<b>ENengineering</b>  29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL. (830) 353-4000 FAX (830) 635-7777 WWW.ENENGINEERING.COM	





KEY MAP  
NOT TO SCALE



LOCATION PLAN #1  
(SCALE: 1"=20')

ISSUED FOR  
REVIEW - 100%

- NOTES:
- REFER TO GENERAL NOTES ON SHEET #2.
  - CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

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SIGNATURE \_\_\_\_\_

SEALED ON:  
  
  
LICENSE  
EXPIRATION:

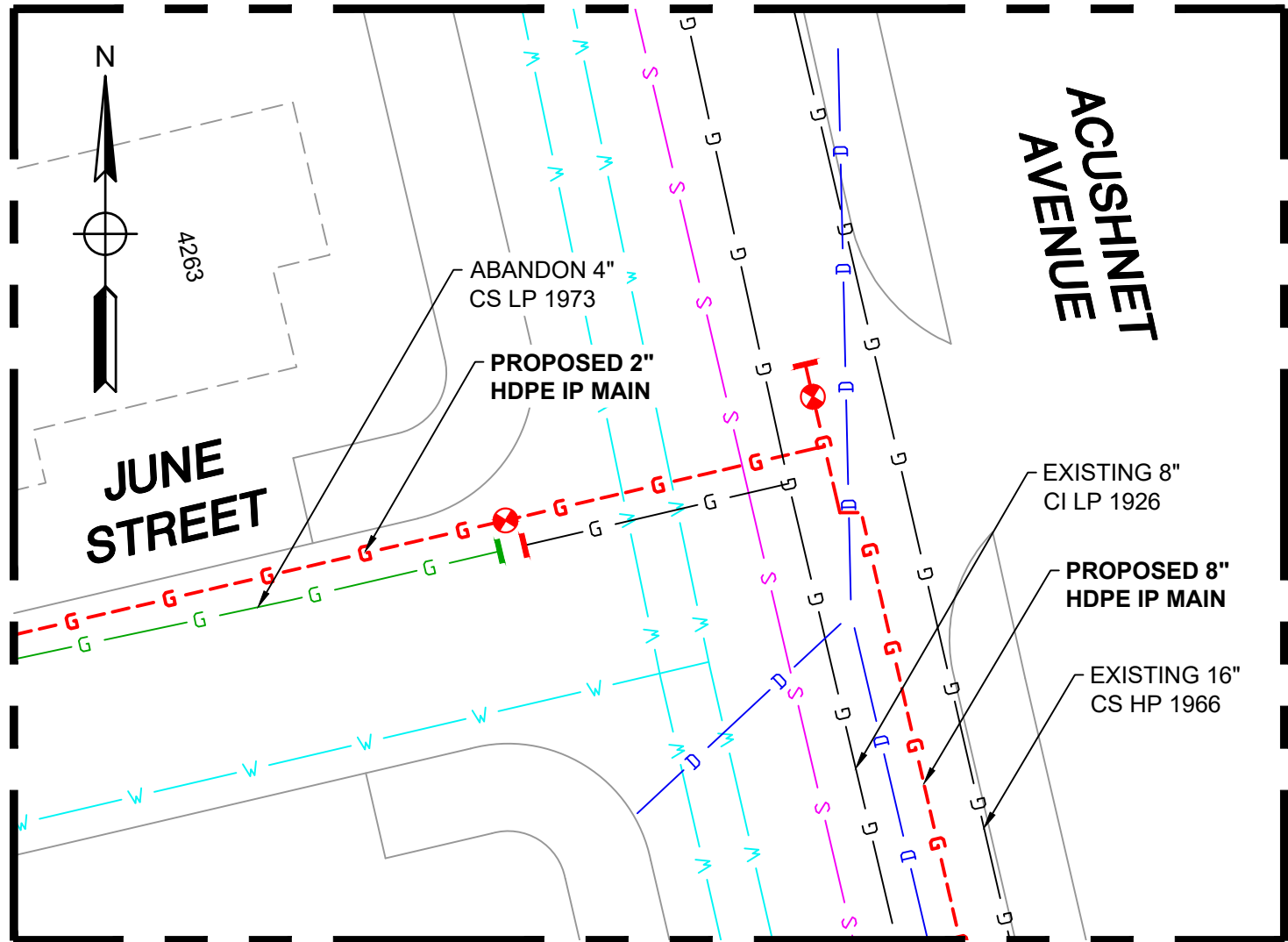
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FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION

A	ISSUED FOR REVIEW - 100%	12/30/2021	XS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
LOCATION PLAN #1				
SCALE: 1"=20' (DO NOT SCALE FROM DRAWINGS)				SHEET 4 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-04	A



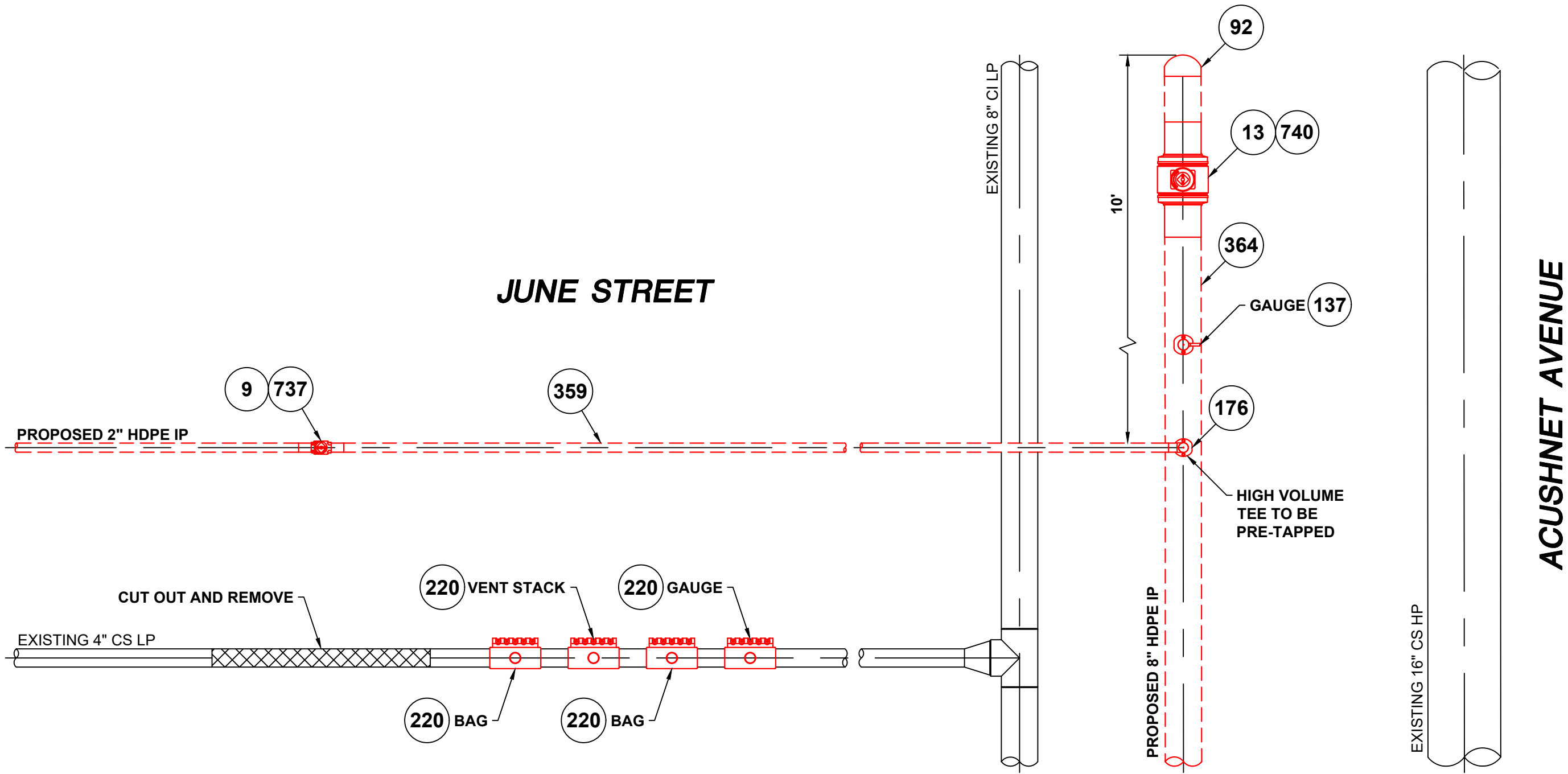
TIE-IN DETAIL #1 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #4)

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS- Tie-in #1: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
9	2"	562087	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
13	8"	500705	VALVE,BALL, 8 IN IPS, POLYETHYLENE, SDR11, BUTT WELD, W/ FULL PORT OPENING, BLACK FINISH	1	EA
92	8"	542540	CAP,PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
137	8" X 1/2"	584713	FITTING,TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140	1	EA
176	8" X 2"	577623	FITTING,TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055 , RESTRICTED PURCHA	1	EA
220	4" x 2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
359	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	20	LF
364	8"	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	10	LF
737	4 1/4" square	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA
740	8"	604132	BOX VALVE, W/ 5-1/4 IN SQ NON-LOCKING LID, FOR 8 IN FULL PORT VALVES, PAVEMENT RISER IN 583488. 6/BOX	1	EA

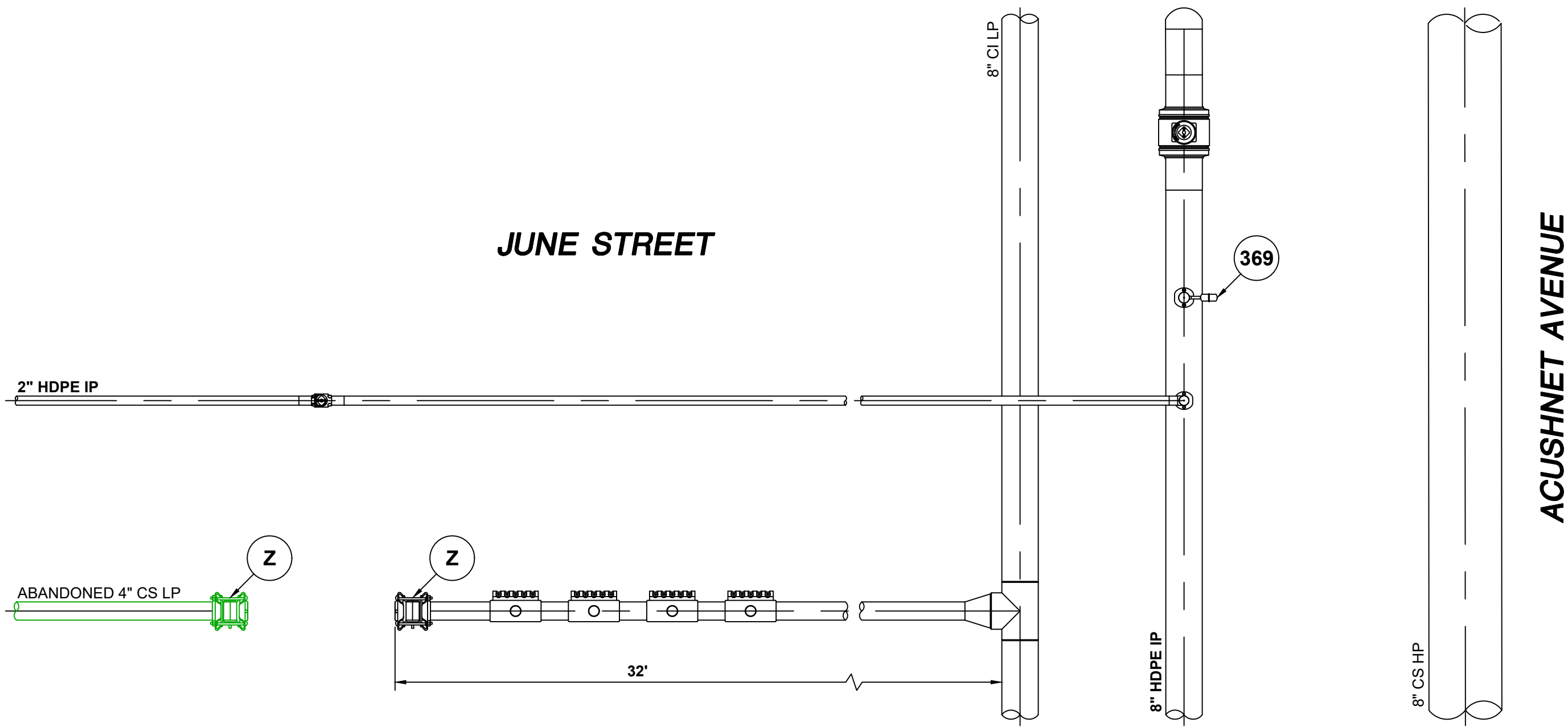
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #1: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	AS REQUIRED	EA
Z	4"		COUPLING, BOLTED MECHANICAL IPS W/ END CAP, VENTED	2	EA

LEGEND	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING



PREPARATORY TIE-IN DETAIL #1

(SCALE: 1"=2')  
(REFER TO SHEET #4)



FINAL TIE-IN DETAIL #1

(SCALE: 1"=2')  
(REFER TO SHEET #4)

ISSUED FOR  
REVIEW - 100%

NOTES:  
1. REFER TO GENERAL NOTES ON SHEET #2.

2005881.001

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				EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #1 AND BOM				SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS) SHEET 5 OF 25				
DRAWN BY / DATE		CHECKED BY / DATE		APPROVED BY / DATE		SHEET NUMBER		REV. NO.
ZS 11/22/2021		AB 12/30/2021		XX XX/XX/2021		MA-NEB-22-PIP-001-05		A

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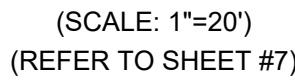




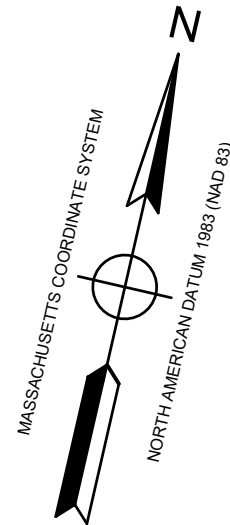
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A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB		
NO.	DESCRIPTION	DATE	DW/CK/AP		
REVISION STATUS					
<div> <div>EVERSOURCE</div> <div>ENERGY</div> </div>					
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS					
NEW BEDFORD, MASSACHUSETTS					
LOCATION PLAN #2					
SCALE: 1"=20' (DO NOT SCALE FROM DRAWINGS)				SHEET 7 OF 25	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.	
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-07	A	

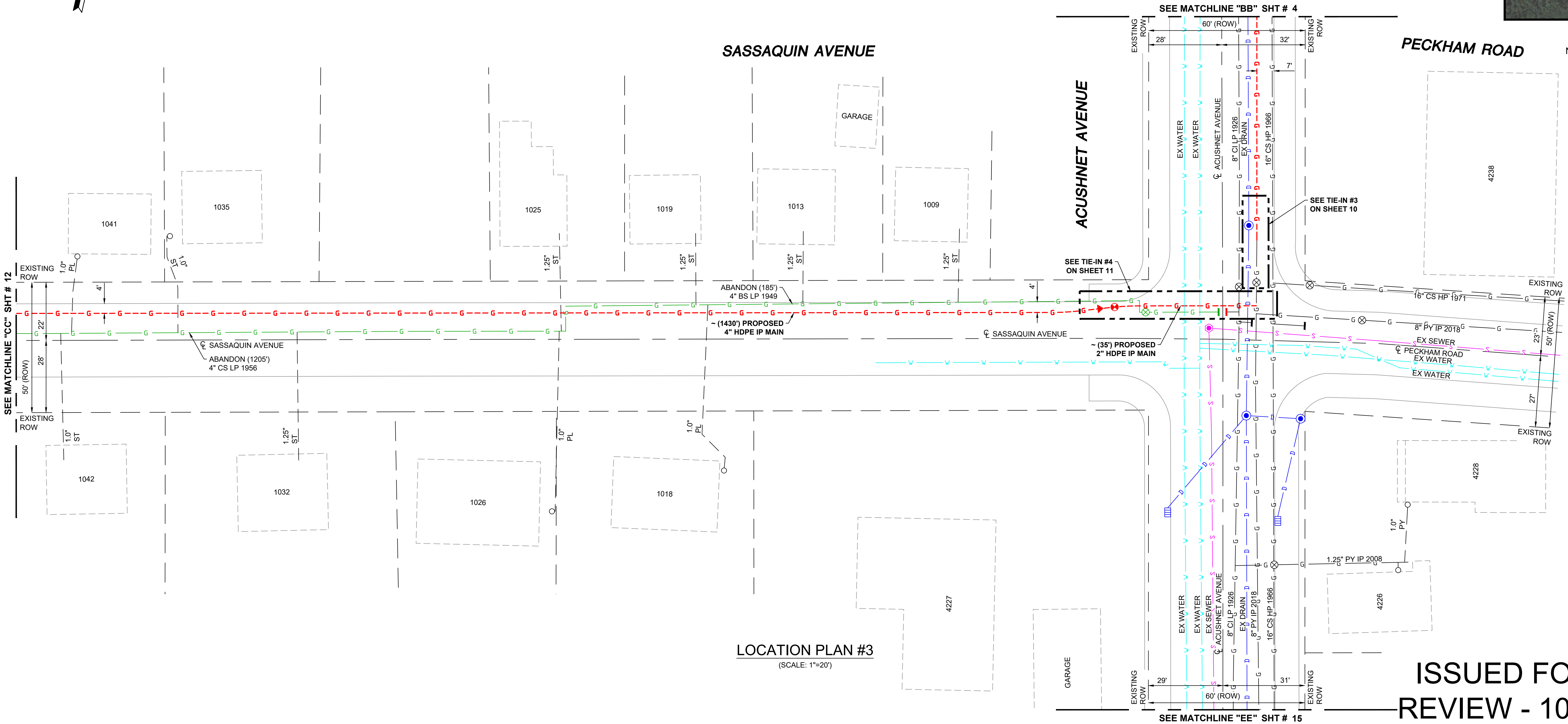
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	_____  LICENSE EXPIRATION:		
SIGNATURE	_____		







KEY MAP  
NOT TO SCALE



LOCATION PLAN #3  
(SCALE: 1"=20')

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REVIEW - 100%

- NOTES:
- REFER TO GENERAL NOTES ON SHEET #2.
  - CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

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SIGNATURE \_\_\_\_\_

SEALED ON: \_\_\_\_\_  
  
LICENSE EXPIRATION: \_\_\_\_\_

DESIGNED IN ACCORDANCE WITH TITLE 49, PART 1B OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

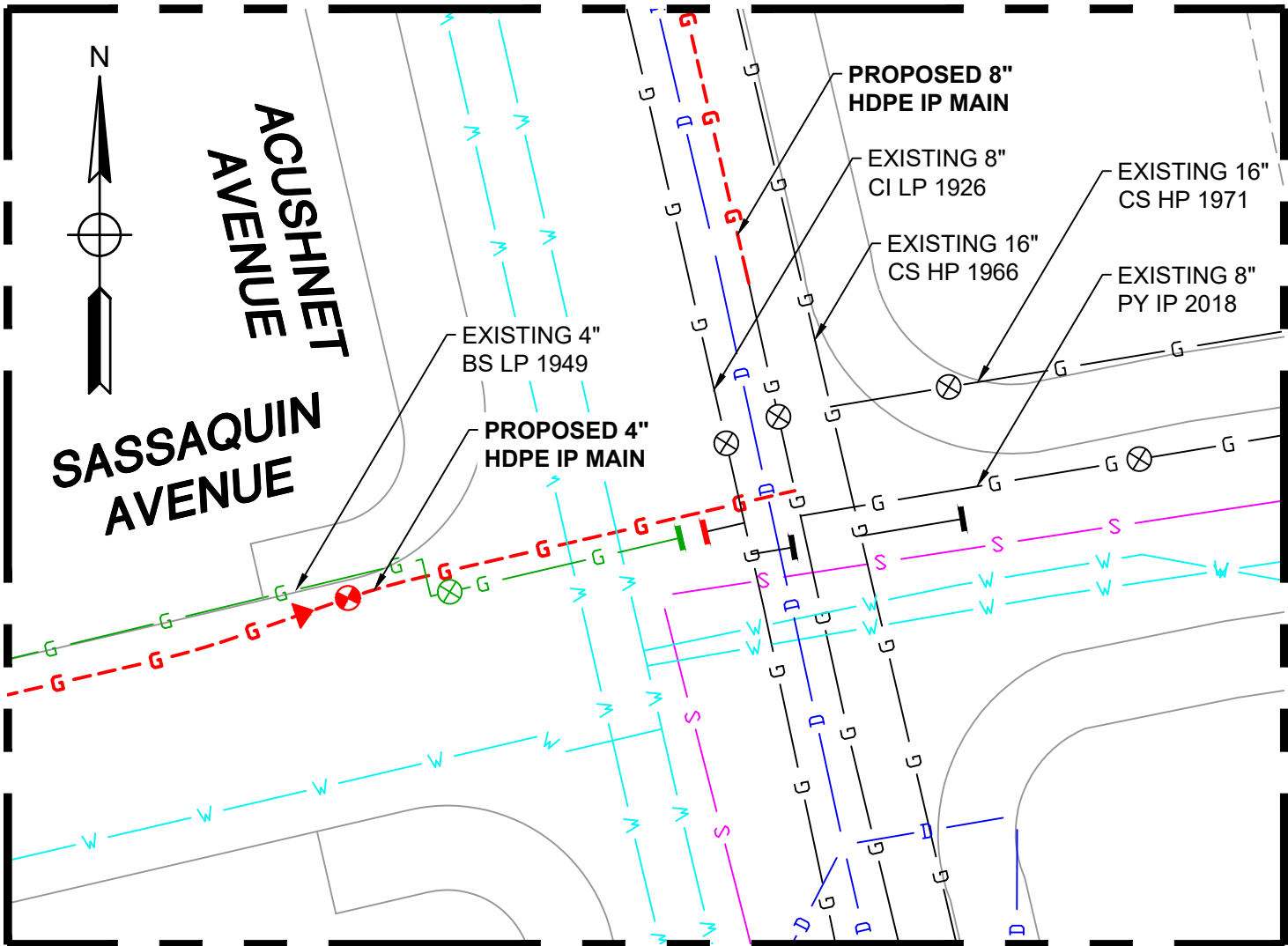
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FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION

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REVISION STATUS				
<b>EVERSOURCE</b> ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
LOCATION PLAN #3				
SCALE: 1"=20' (DO NOT SCALE FROM DRAWINGS)				SHEET 9 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-09	A





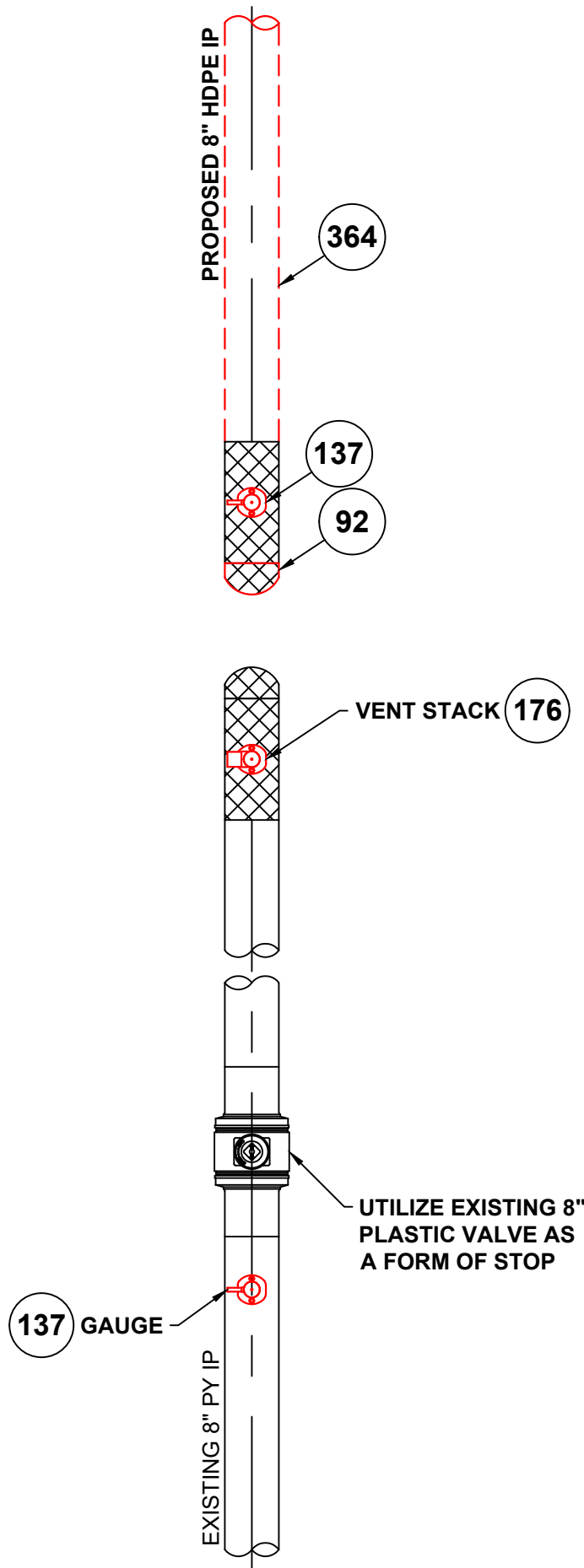
TIE-IN DETAIL #3 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #9)

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #3: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
92	8"	542540	CAP, PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
137	8" X 1/2"	584713	FITTING, TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140	2	EA
176	8" X 2"	577623	FITTING, TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055, RESTRICTED PURCHA	1	EA
364	8"	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	10	LF

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #3: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
47	8"	500857	COUPLING, PIPE, 8 IN IPS, ELECTROFUSION, PLASTIC, P100	2	EA
92	8"	542540	CAP, PIPE, 8 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	2	EA
176	8" X 2"	577623	FITTING, TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055, RESTRICTED PURCHA	1	EA
364	8"	554010	PIPE, 8 IN IPS X 8-3/8 IN X 0.784 IN THK WALL SDR 11, 40 FT LG, POLYETHYLENE, PE3408/PE100	5	LF
369	1/2"	579972	FITTING, CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	1	EA

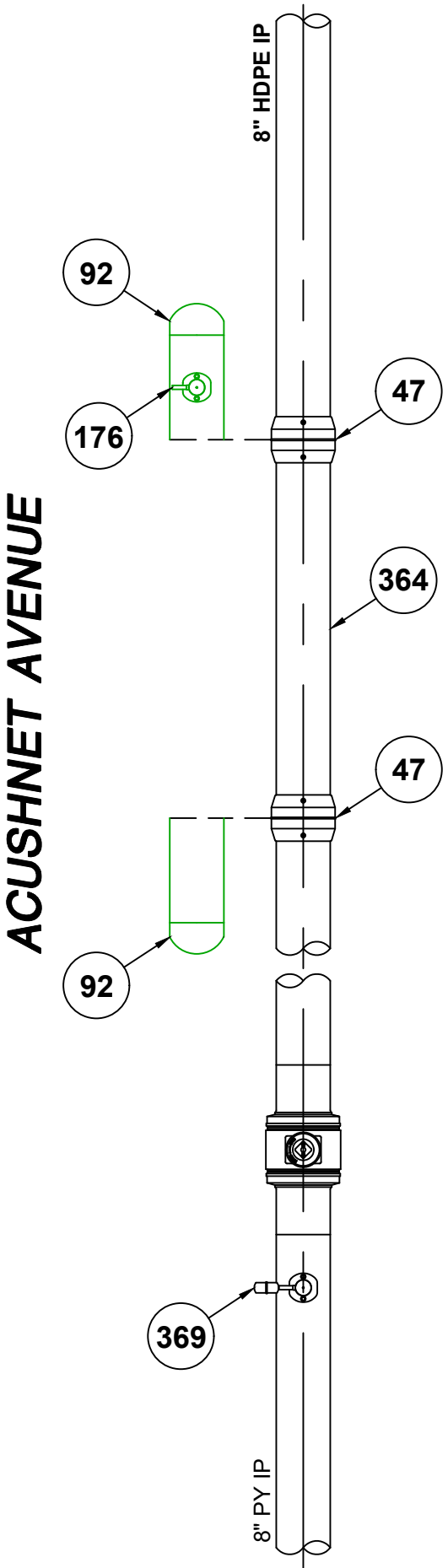
ACUSHNET AVENUE



PREPARATORY TIE-IN DETAIL #3

(SCALE: 1"=2')  
(REFER TO SHEET #9)

ACUSHNET AVENUE



FINAL TIE-IN DETAIL #3

(SCALE: 1"=2')  
(REFER TO SHEET #9)

LEGEND	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

ISSUED FOR  
REVIEW - 100%

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #3 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)				SHEET 10 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-10	A

NOTES:  
1. REFER TO GENERAL NOTES ON SHEET #2.

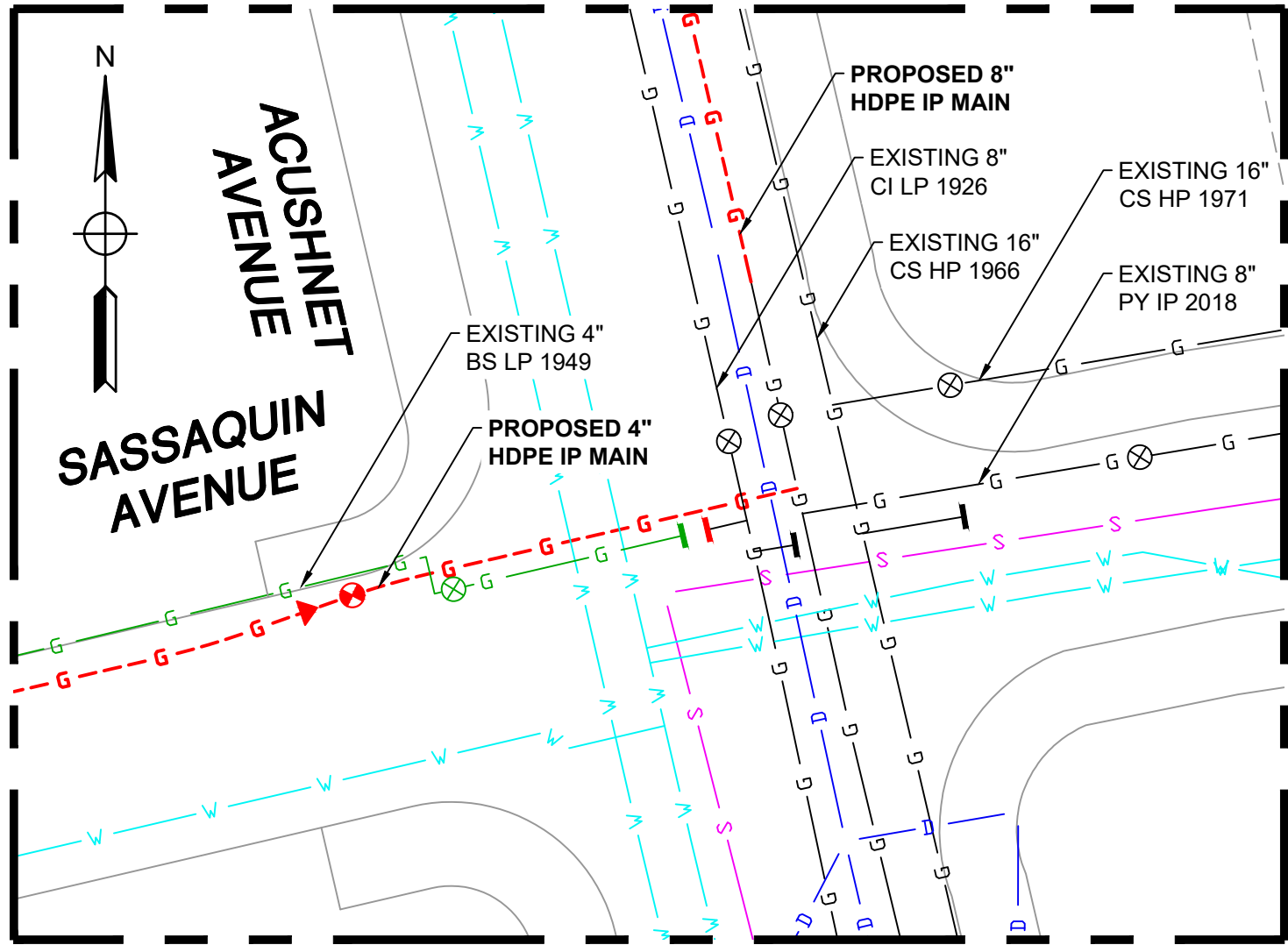
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SIGNATURE	

LICENSE EXPIRATION:
<div></div>

DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.
<b>ENEngineering</b>
29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 353-7777 WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION



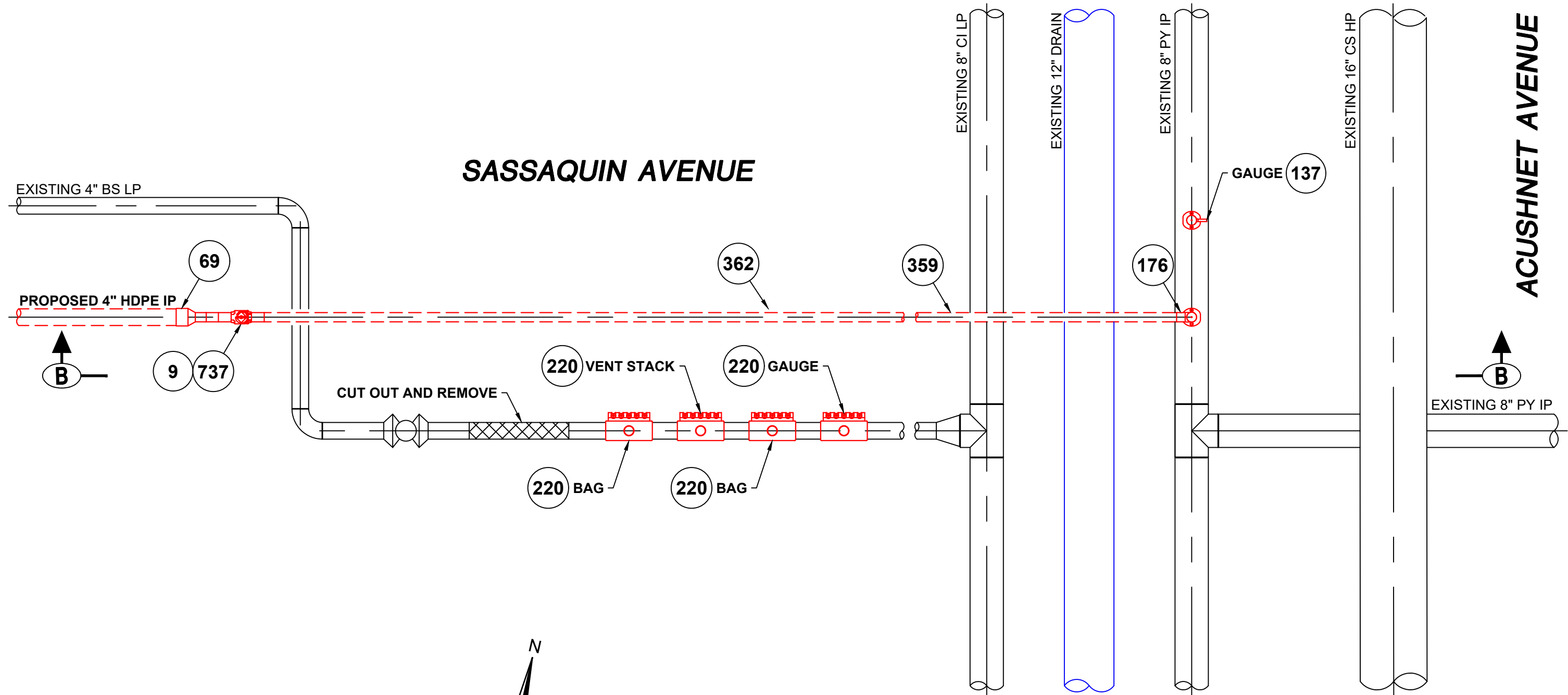
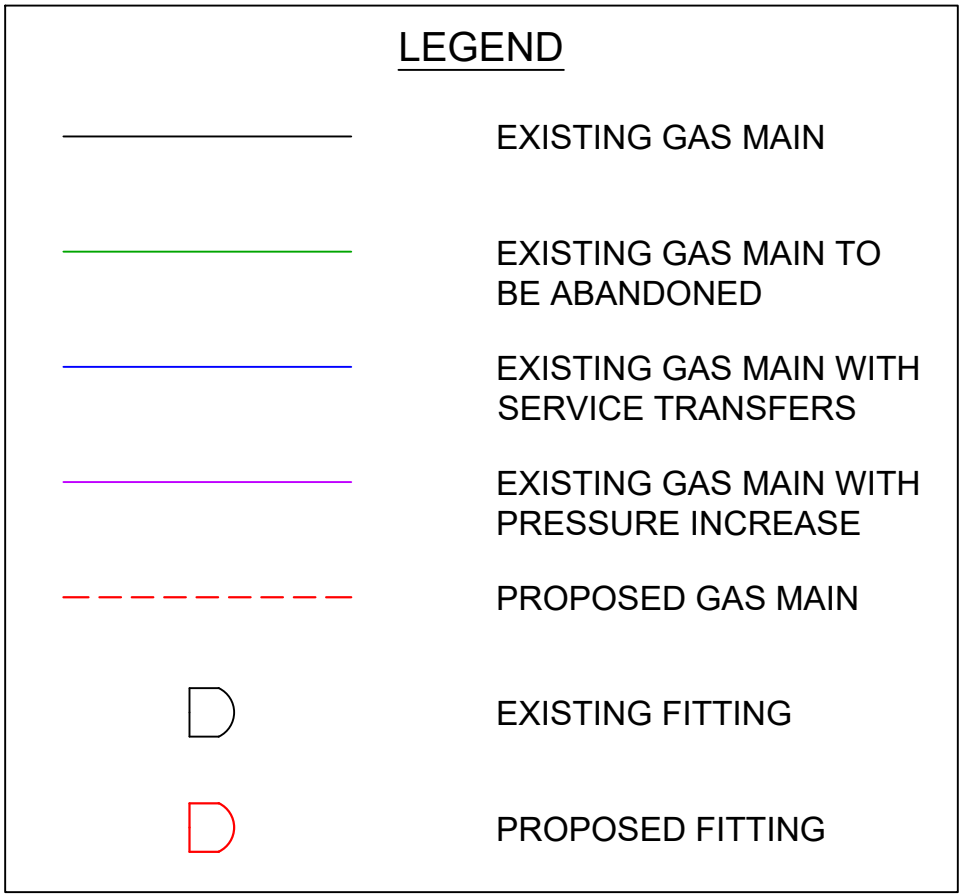


TIE-IN DETAIL #4 - PLAN VIEW

(SCALE: 1"=20")  
(REFER TO SHEET #9)

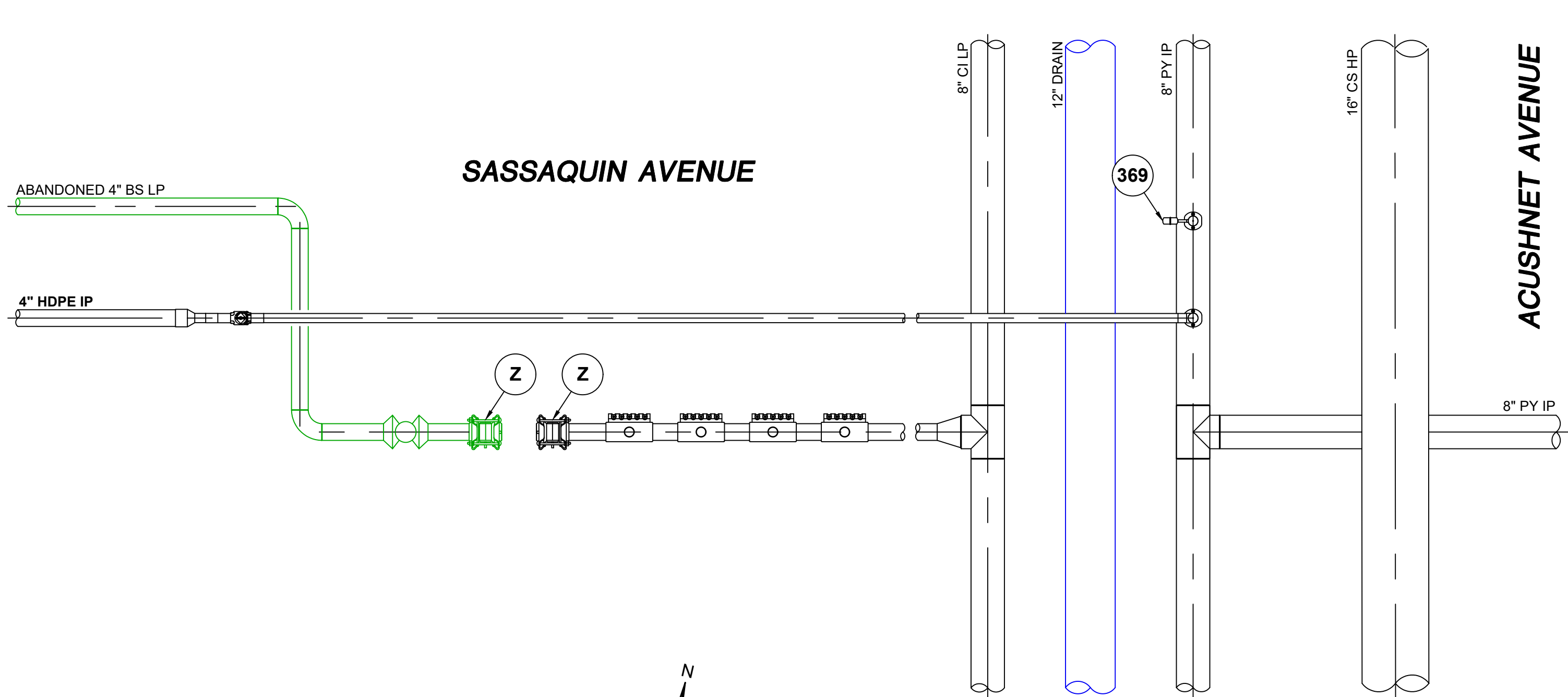
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #4: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
9	2"	562087	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
69	4" X 2"	555593	REDUCER,PIPE, 4 X 2 IPS, BUTT ENDS, POLYETHYLENE, P100, SDR11	1	EA
137	8" X 1/2"	584713	FITTING,TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140	1	EA
176	8" X 2"	577623	FITTING,TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055 , RESTRICTED PURCHA	1	EA
220	4" x 2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
359	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	35	LF
362	4"	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	10	LF
737	4 1/4" square	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #4: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALLS SDR 7, REPLACED IN 542609	AS REQUIRED	EA
Z	4"		COUPLING, BOLTED MECHANICAL IPS W/ END CAP, VENTED	2	EA



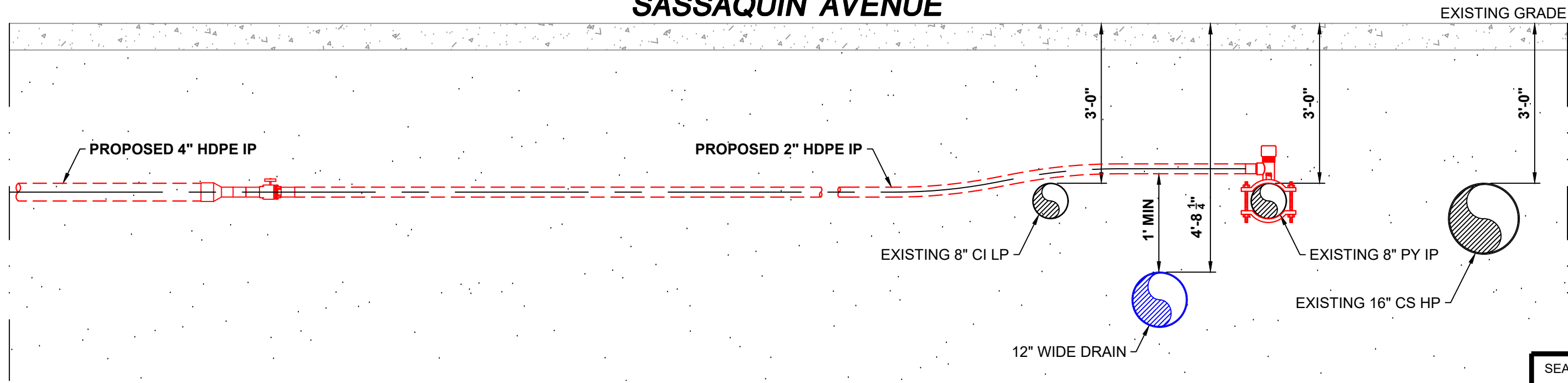
PREPARATORY TIE-IN DETAIL #4

(SCALE: 1"=2")  
(REFER TO SHEET #9)



FINAL TIE-IN DETAIL #4

(SCALE: 1"=2")  
(REFER TO SHEET #9)



ELEVATION B-B

(SCALE: 1"=2")

NOTES:  
1. REFER TO GENERAL NOTES ON SHEET #2.

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SIGNATURE

SEALED ON:

LICENSE EXPIRATION:

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WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION

ISSUED FOR  
REVIEW - 100%

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #4 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)				SHEET 11 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-11	A






**MORTON AVENUE**



ISSUED FOR  
REVIEW - 100%

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	LICENSE EXPIRATION:  _____	 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 432-7777 WWW.ENENGINEERING.COM	


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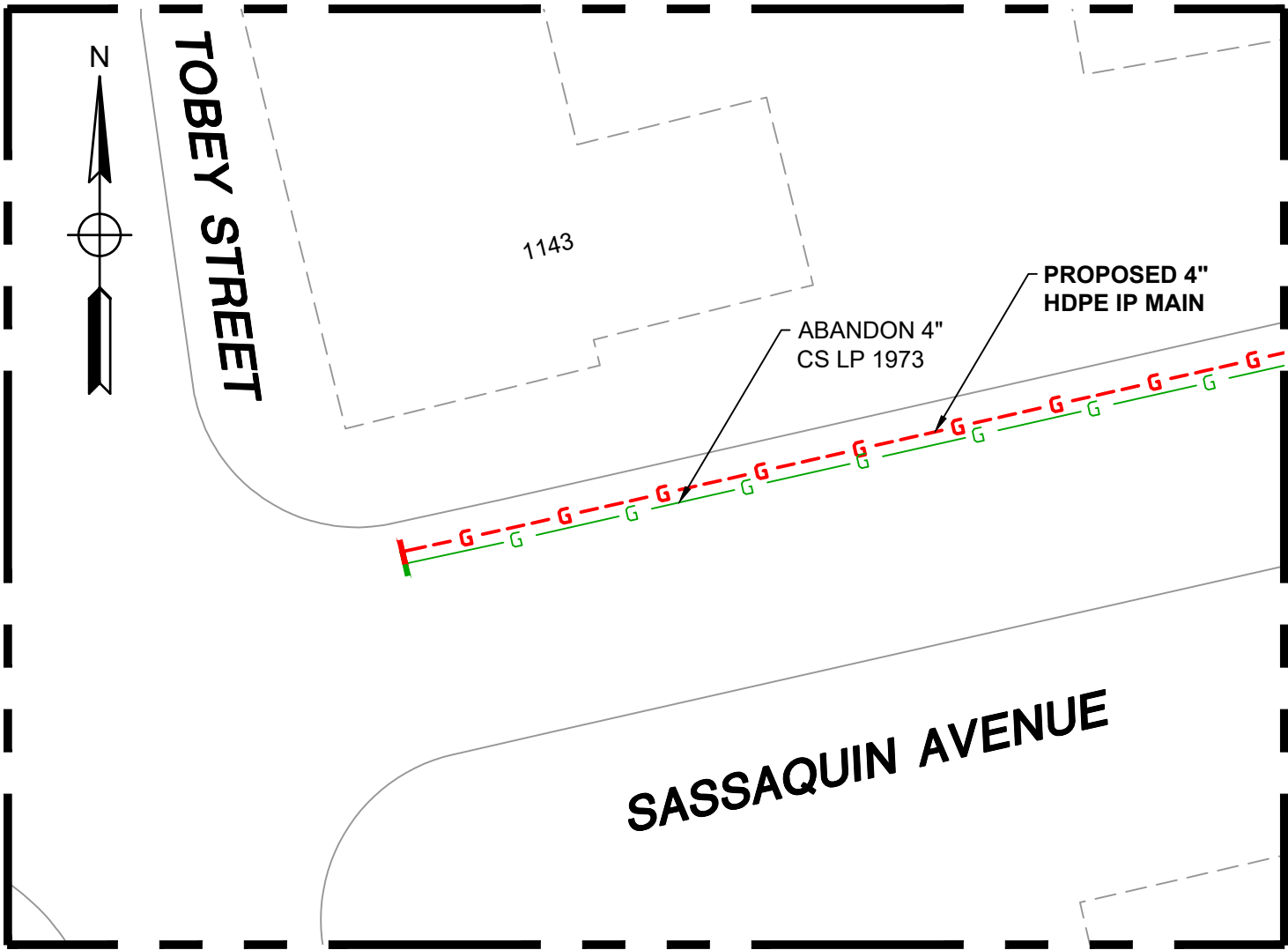
**SASSAQUIN AVENUE**



A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
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ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
LOCATION PLAN #5				
SCALE: 1"=20' (DO NOT SCALE FROM DRAWINGS)			SHEET 13 OF 25	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-13	A

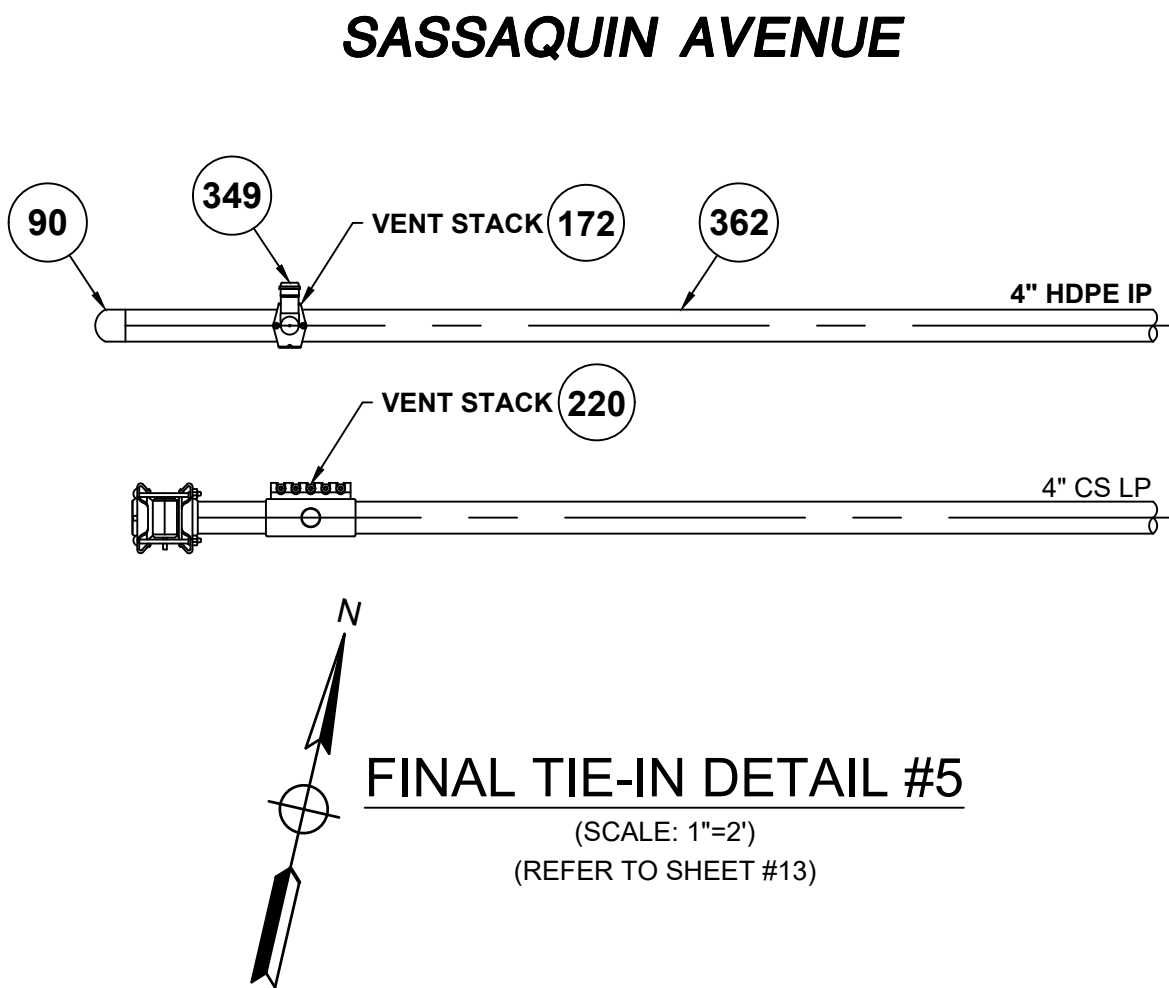
**NOTES:**

1. REFER TO GENERAL NOTES ON SHEET #2.
2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.



TIE-IN DETAIL #5 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #13)



FINAL TIE-IN DETAIL #5

(SCALE: 1"=2')  
(REFER TO SHEET #13)

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #5: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
90	4"	542538	CAP, PIPE, 4 IN IPS SDR 11, BUTT END, POLYETHYLENE, P100	1	EA
172	4" X 2"	584304	FITTING, TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621	1	EA
220	4" x 2"	543028	CLAMP, PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	1	EA
349	2"	581633	FITTING, CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924, FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA
362	4"	554008	PIPE, 4 IN IPS X 0.409 IN THK WALL SDR 11, 4.5 IN OD, 40 FT LG, POLYETHYLENE, PE3408/PE100, 1200 FT/BUNDLE	10	LF

LEGEND	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

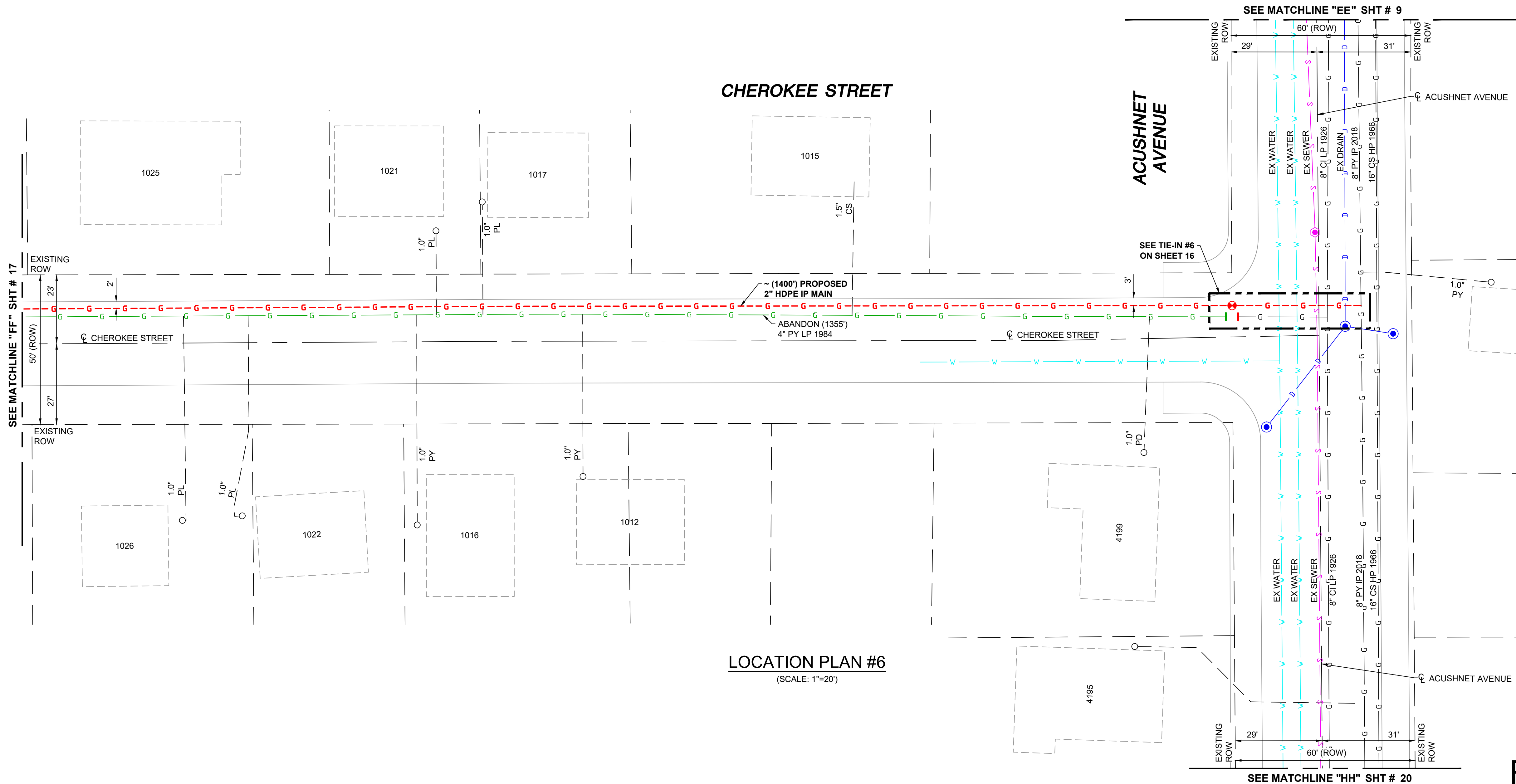
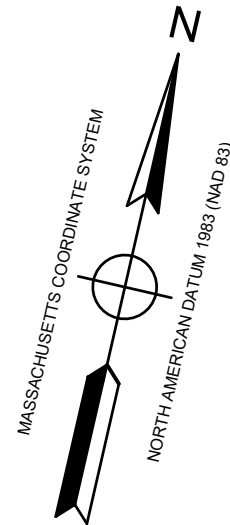
ISSUED FOR  
REVIEW - 100%

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS			
NEW BEDFORD, MASSACHUSETTS			
TIE-IN DETAIL #5 AND BOM			
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)			SHEET 14 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-14
			REV. NO.
			A

NOTES:  
1. REFER TO GENERAL NOTES ON SHEET #2.

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SIGNATURE	LICENSE EXPIRATION:	<b>ENEngineering</b> 29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 353-7777 WWW.ENENGINEERING.COM	





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REVIEW - 100%

- NOTES:
- REFER TO GENERAL NOTES ON SHEET #2.
  - CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

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SIGNATURE

SEALED ON:

LICENSE EXPIRATION:

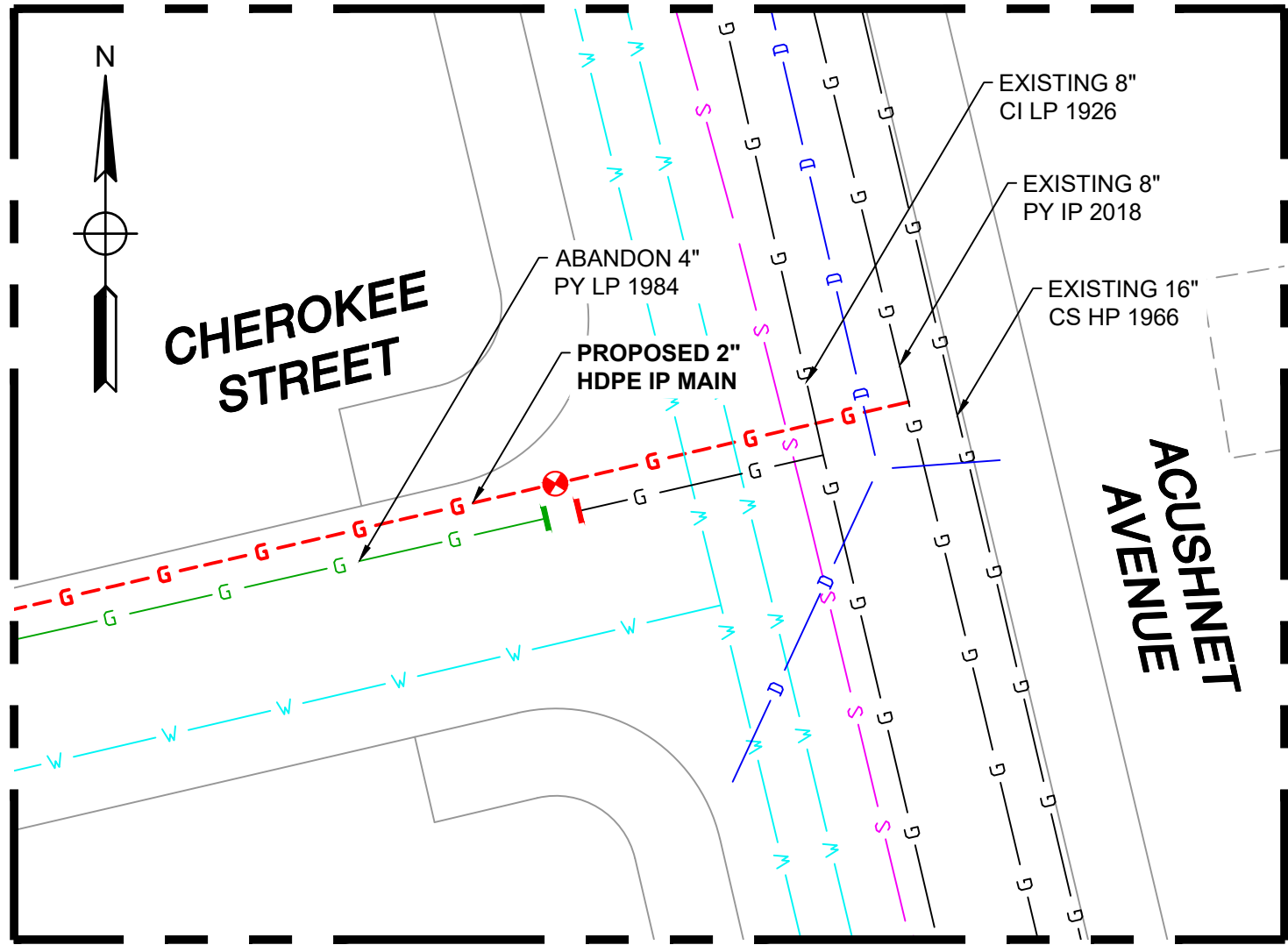
DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

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FAX (603) 353-7777  
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
<b>EVERSOURCE</b> ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
LOCATION PLAN #6				
SCALE: 1"=20' (DO NOT SCALE FROM DRAWINGS)				SHEET 15 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-15	A



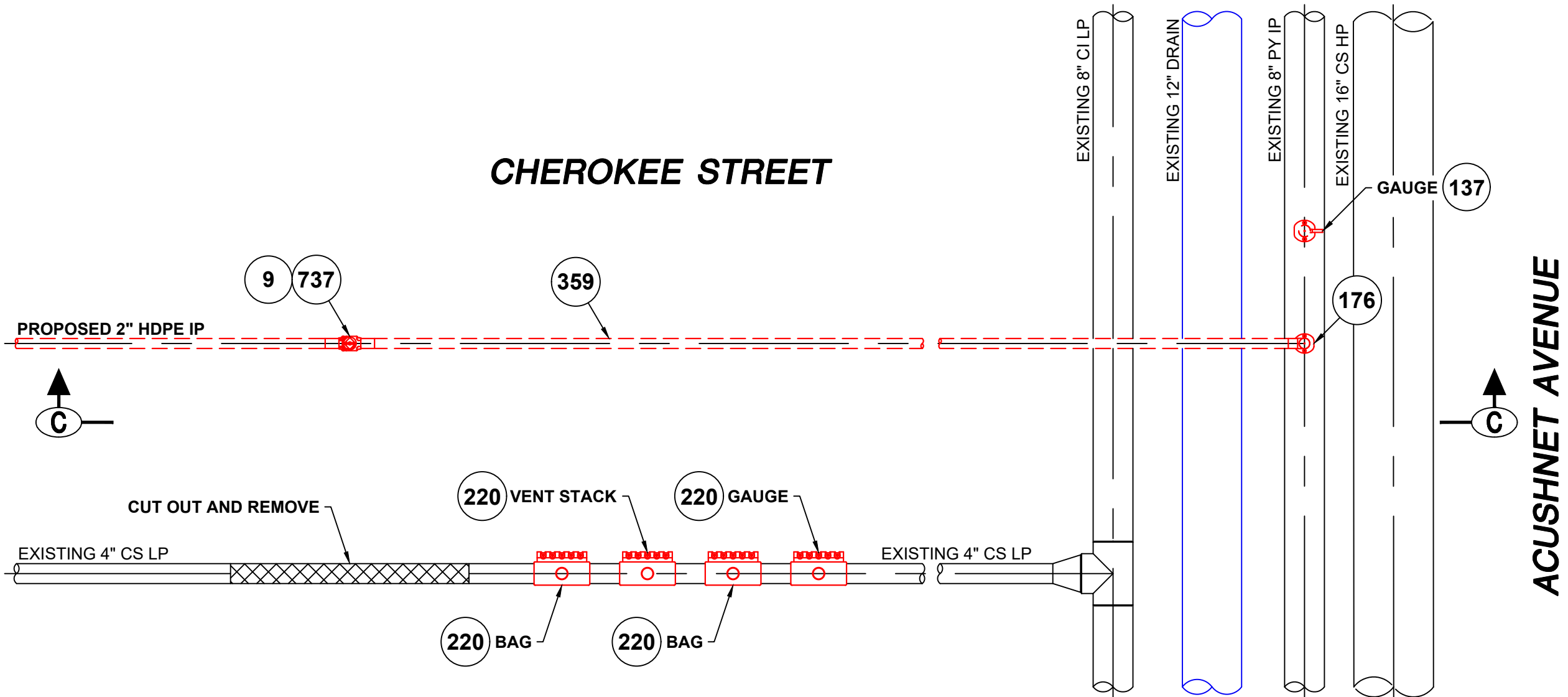
TIE-IN DETAIL #6 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #15)

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #6: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
9	2"	562087	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
137	8" X 1/2"	584713	FITTING,TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140	1	EA
176	8" X 2"	577623	FITTING,TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055 , RESTRICTED PURCHA	1	EA
220	4" x 2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
359	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF

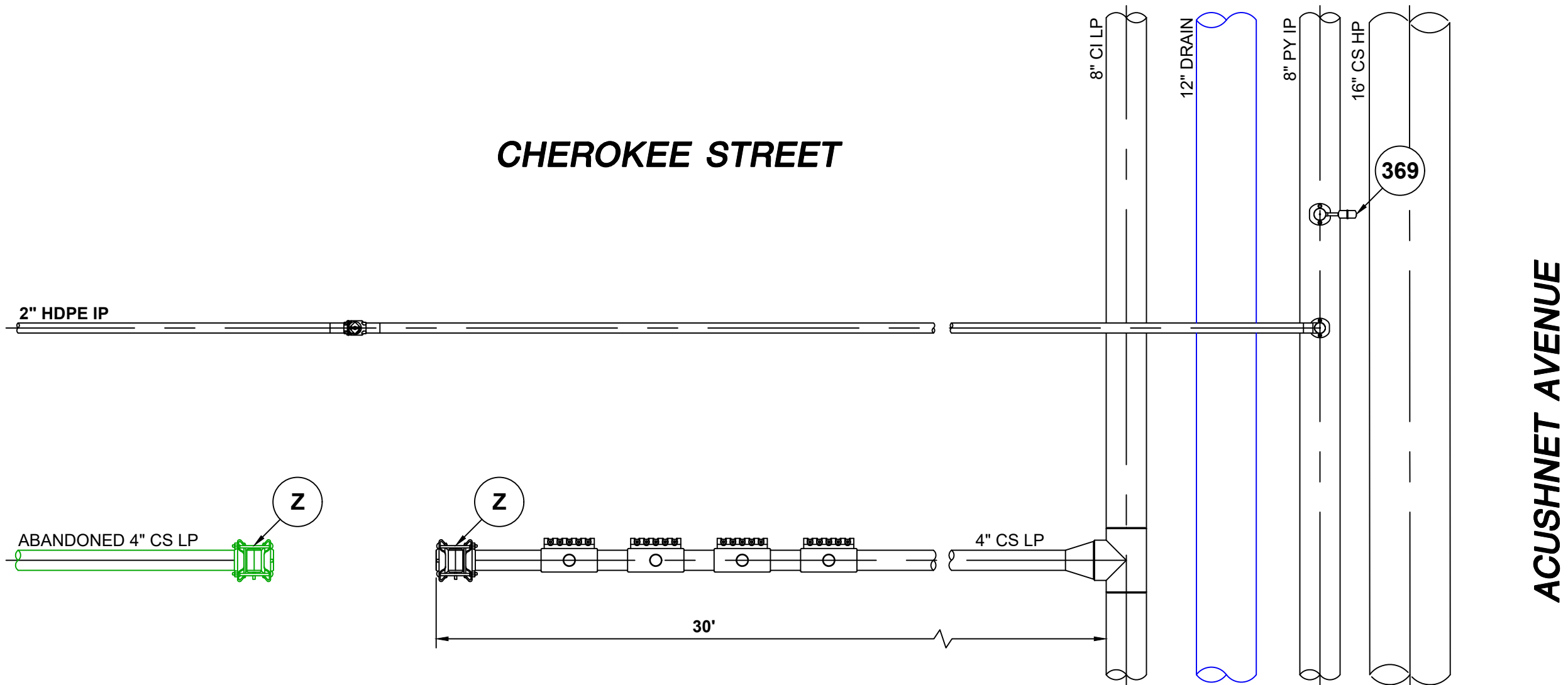
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #6: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	1	EA
Z	4"		COUPLING, BOLTED MECHANICAL IPS W/ END CAP, VENTED	2	EA

LEGEND	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING



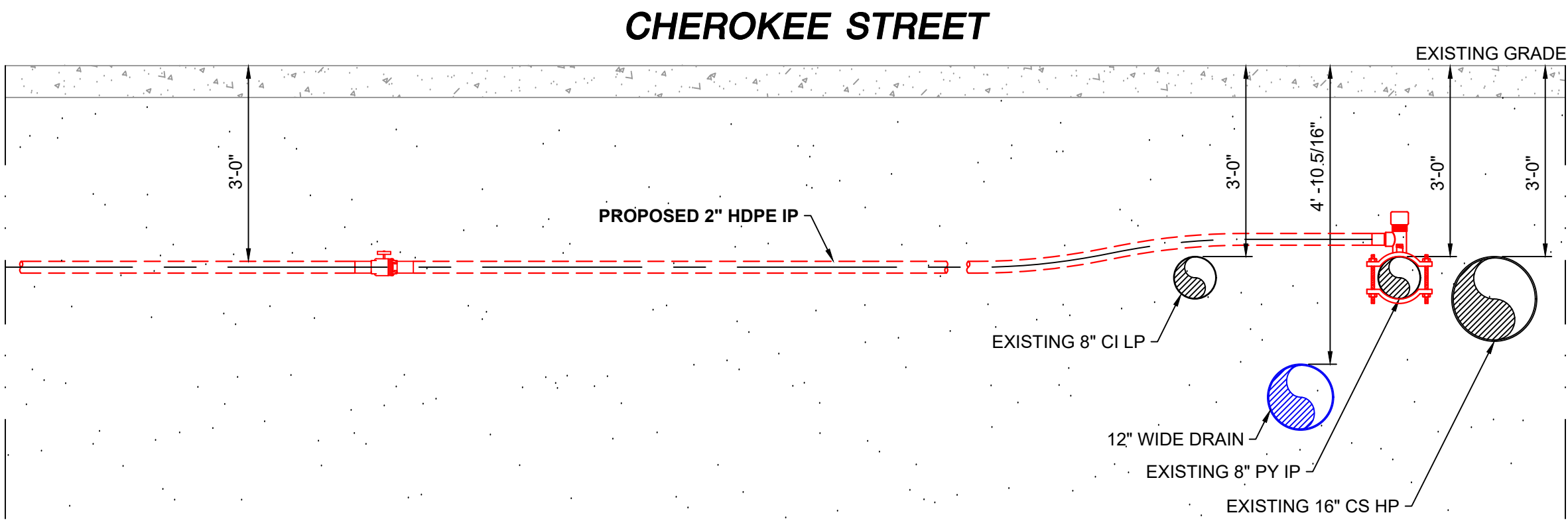
PREPARATORY TIE-IN DETAIL #6

(SCALE: 1"=2')  
(REFER TO SHEET #15)



FINAL TIE-IN DETAIL #6

(SCALE: 1"=2')  
(REFER TO SHEET #15)



ELEVATION C-C

(SCALE: 1"=2')

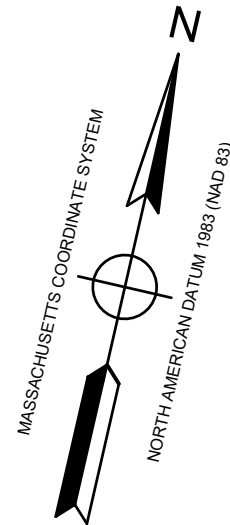
NOTES:  
1. REFER TO GENERAL NOTES ON SHEET #2.

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REVIEW - 100%

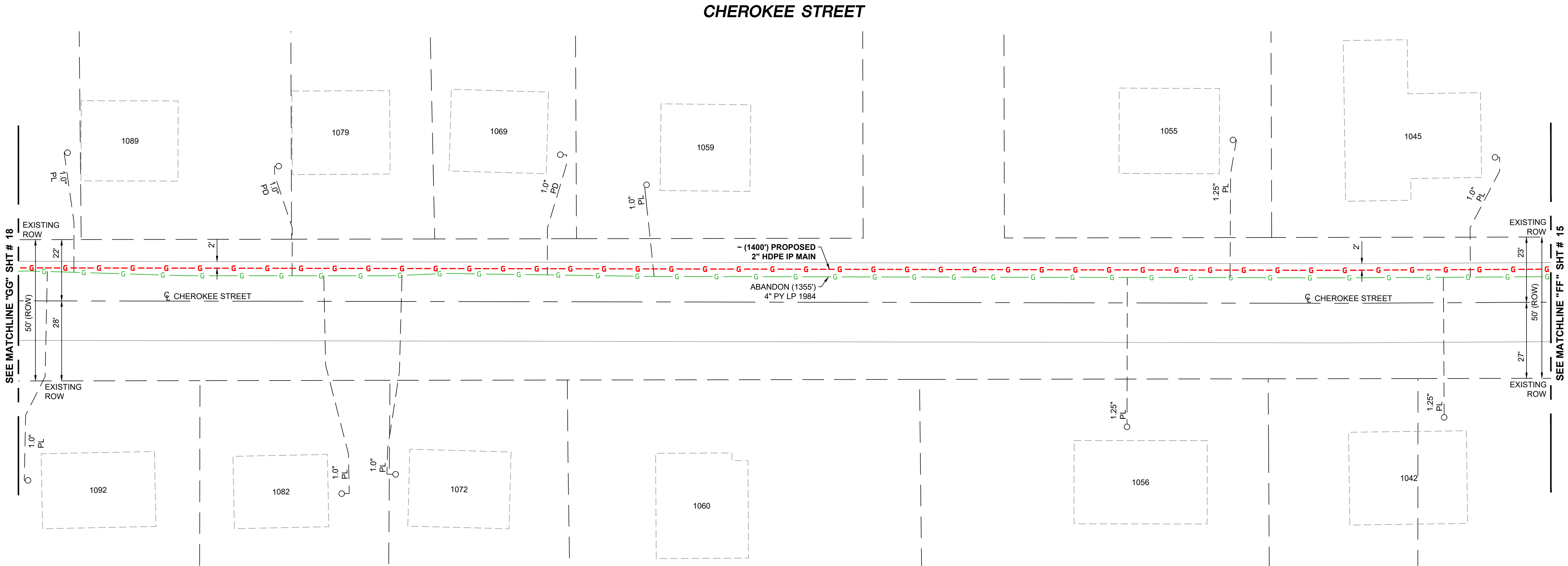
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #6 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)				
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-16	A

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		<b>ENEngineering</b>	
SIGNATURE	LICENSE EXPIRATION:	29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 353-7777 WWW.ENENGINEERING.COM	





KEY MAP  
NOT TO SCALE



LOCATION PLAN #7  
(SCALE: 1"=20')

ISSUED FOR  
REVIEW - 100%

- NOTES:
- REFER TO GENERAL NOTES ON SHEET #2.
  - CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

A	ISSUED FOR REVIEW - 100%		12/30/2021	ZS/AB
NO.	DESCRIPTION		DATE	DW/CK/AP
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
LOCATION PLAN #7				
SCALE: 1"=20' (DO NOT SCALE FROM DRAWINGS)				SHEET 17 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-17	A

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\_\_\_\_\_  
SIGNATURE

SEALED ON:

\_\_\_\_\_  
LICENSE EXPIRATION:

DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

**EN**Engineering

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MARLBOROUGH, MA 01752  
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FAX (630) 353-7777  
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION



**CHEROKEE STREET**

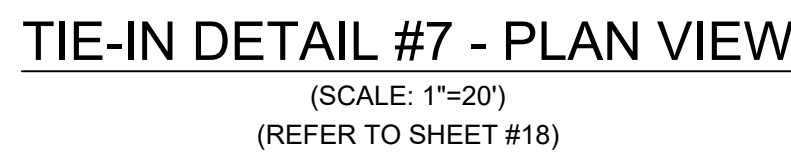


ISSUED FOR  
REVIEW - 100%

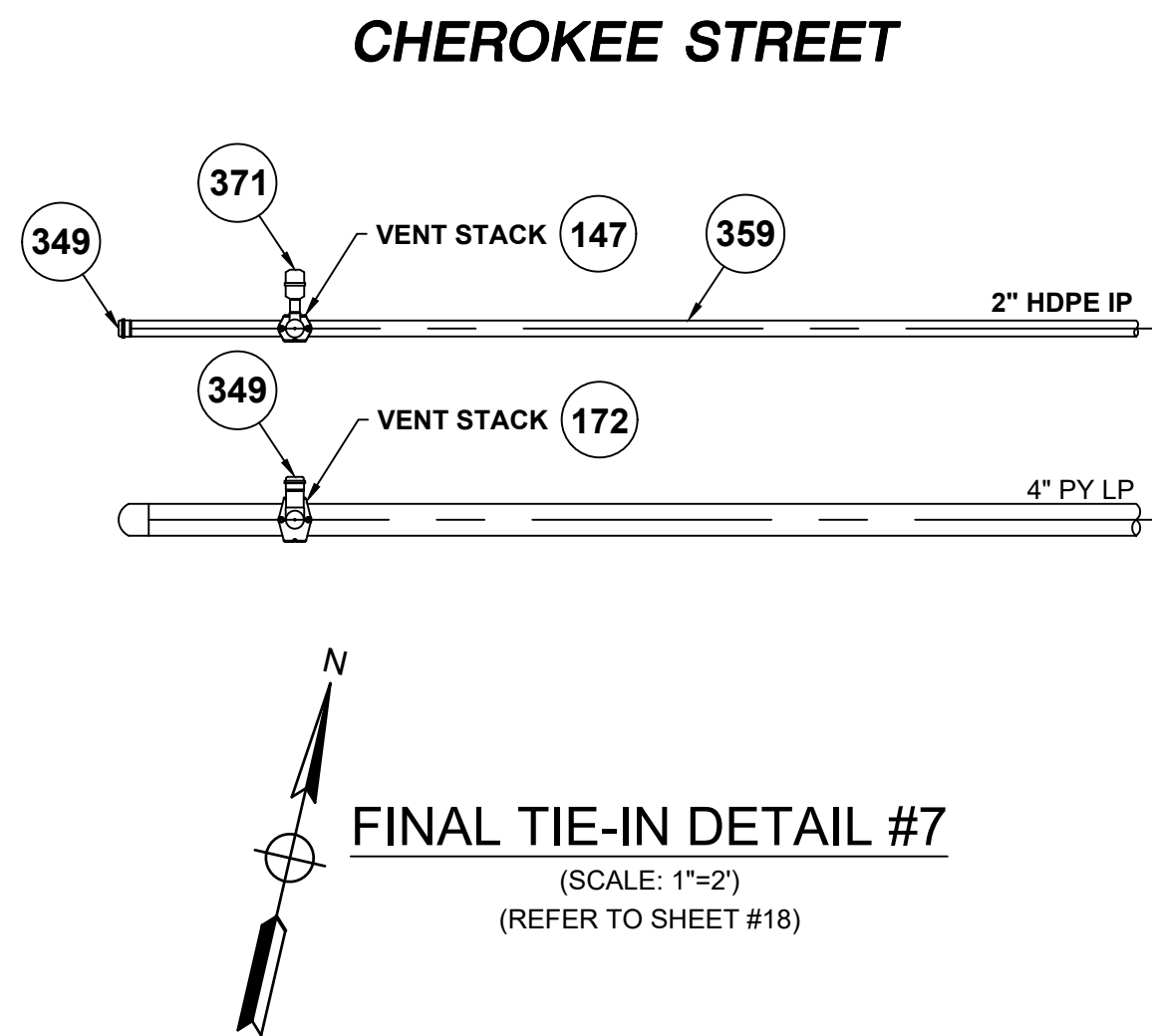
SEALED BY:	SEALED ON:	DESIGNED IN ACCORDANCE WITH TITLE 49-PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.	FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
	LICENSE EXPIRATION:		
SIGNATURE			








- NOTES:
1. REFER TO GENERAL NOTES ON SHEET #2.
  2. CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.





ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #7: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
147	2" X 1"	560779	TEE,PIPE, NON-BLOWING, 2 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LGHT WALL, POLYETHYLENE, PE3408/PE100	1	EA
172	4" X 2"	584304	FITTING,TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621	1	EA
349	2"	581633	FITTING,CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	1	EA
359	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF
371	1"	583182	FITTING,CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612	1	EA



<u>LEGEND</u>	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

ISSUED FOR  
REVIEW - 100%

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
<div> <div>EVERSOURCE</div> <div>ENERGY</div> </div>				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #7 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)			SHEET 19 OF 25	
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-19	A

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	LICENSE EXPIRATION:  _____	<b>ENEngineering</b>  29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	

NOTES:

1. REFER TO GENERAL NOTES ON SHEET #2

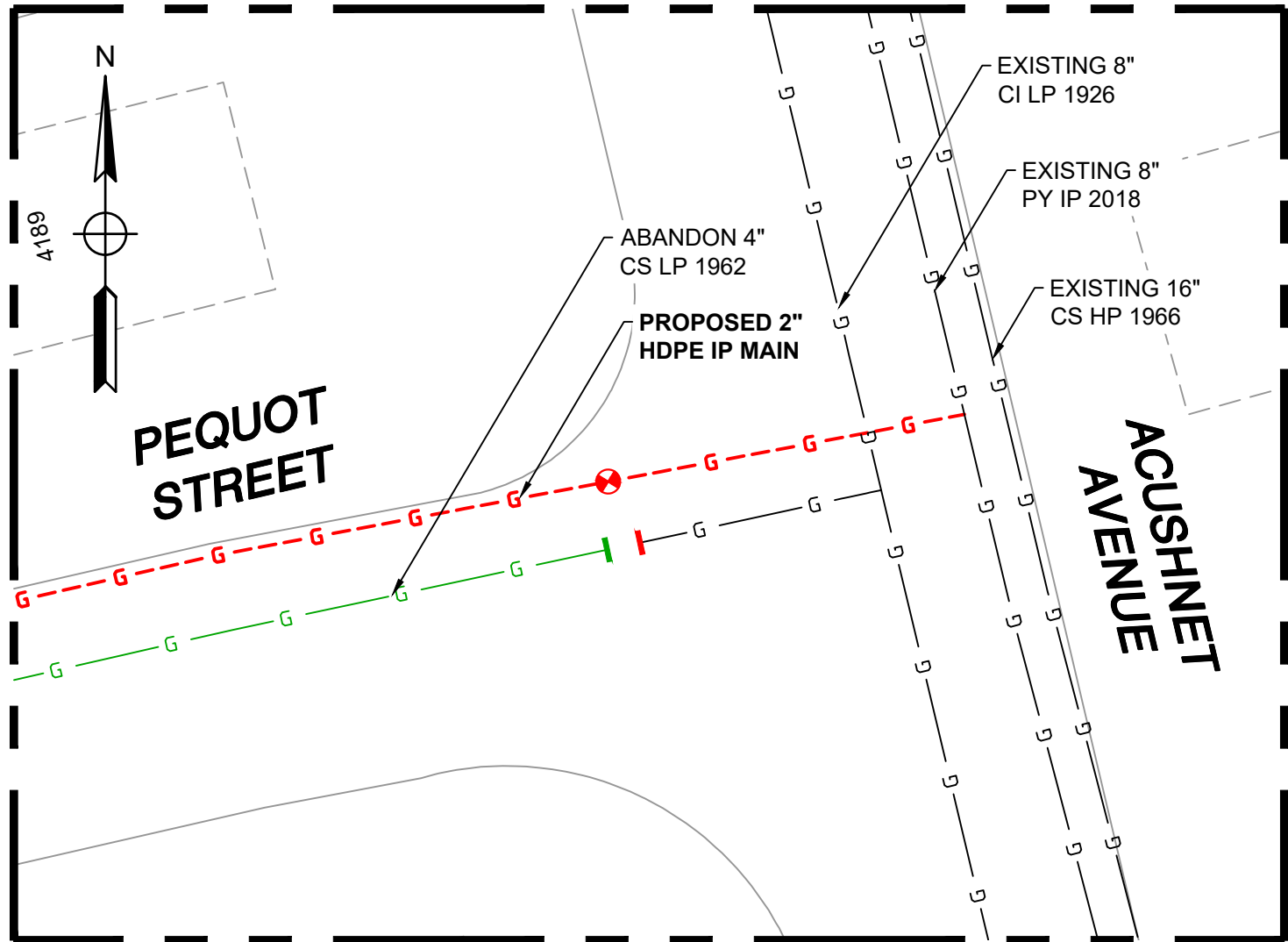


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REVIEW - 100%

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	LICENSE EXPIRATION:  _____	<b>ENEngineering</b>  29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 535-7777 WWW.ENENGINEERING.COM	

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TIE-IN DETAIL #8 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #20)

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #8: Preparatory					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
9	2"	562087	VALVE,BALL, 2 IN IPS, POLYETHYLENE, SDR 11, BUTT WELD, W/ FULL PORT OPENING	1	EA
137	8" X 1/2"	584713	FITTING,TEE, 8 IN IPS X 1/2 IN CTS, ELECTROFUSION TAPPING TEE WITH PERMASERT STAB OUTLET, HDPE, BLACK, NSTAR M-140	1	EA
176	8" X 2"	577623	FITTING,TEE, 8 IN IPS X 2 IN IPS, HIGH VOLUME ELECTROFUSION TAPPING TEE WITH BUTT FUSION OUTLET, HDPE, BLACK, ASTM F1055 , RESTRICTED PURCHA	1	EA
220	4" x 2"	543028	CLAMP,PIPE, REPAIR, 4 IN IPS, SS, W/2 IN TAP	4	EA
359	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	20	LF
737	4 1/4" square	577813	BOX VALVE, CURB, W/ 4-1/4 IN SQ NON-LOCKING LID, FOR 2 IN VALVES, PAVEMENT RISER RING IN 583489, 20/BOX	1	EA

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #8: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
369	1/2"	579972	FITTING,CAP, METFIT, 1/2 IN CTS X 0.90 IN THK WALL SDR 7, REPLACED IN 542609	1	EA
Z	4"		COUPLING, BOLTED MECHANICAL IPS W/ END CAP, VENTED	1	EA

LEGEND

EXISTING GAS MAIN

EXISTING GAS MAIN TO BE ABANDONED

EXISTING GAS MAIN WITH SERVICE TRANSFERS

EXISTING GAS MAIN WITH PRESSURE INCREASE

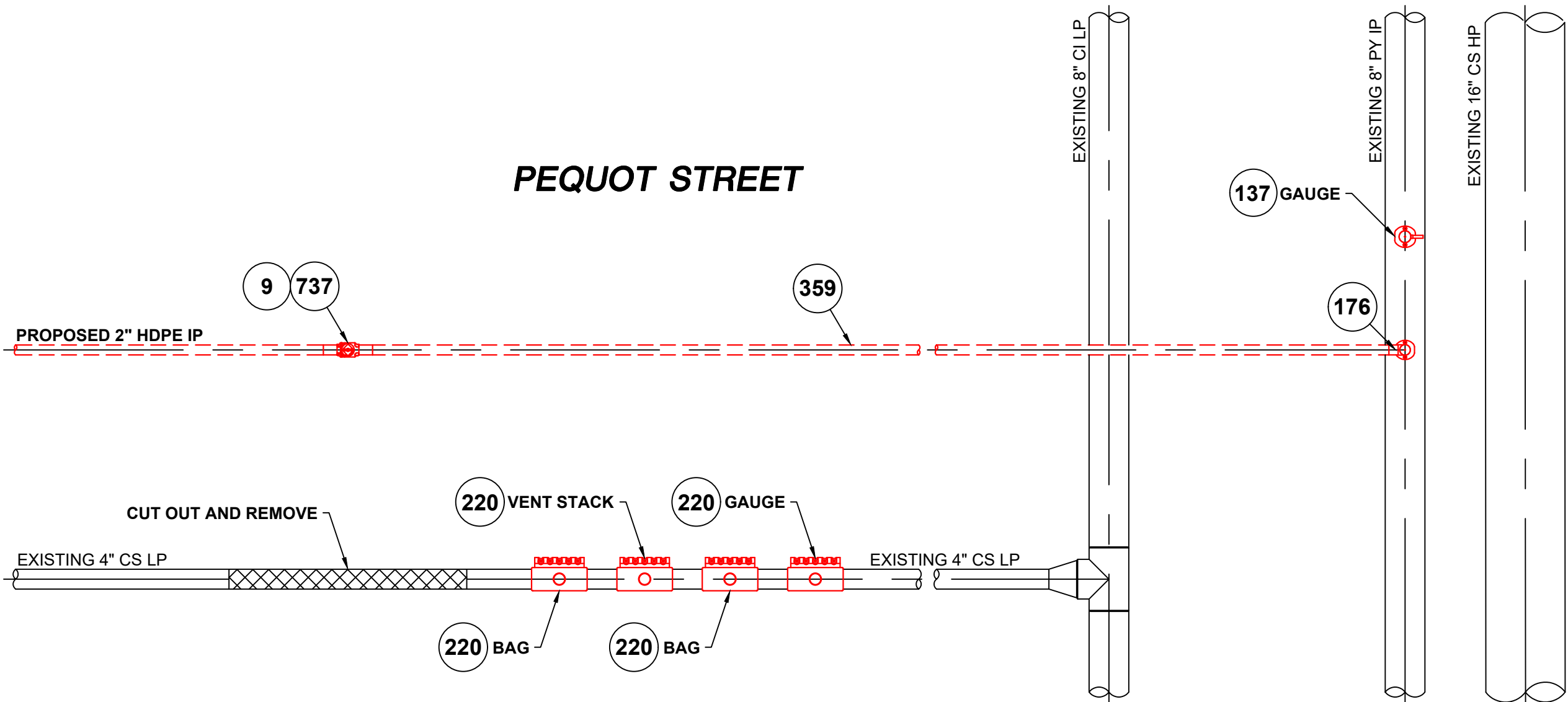
PROPOSED GAS MAIN

D

EXISTING FITTING

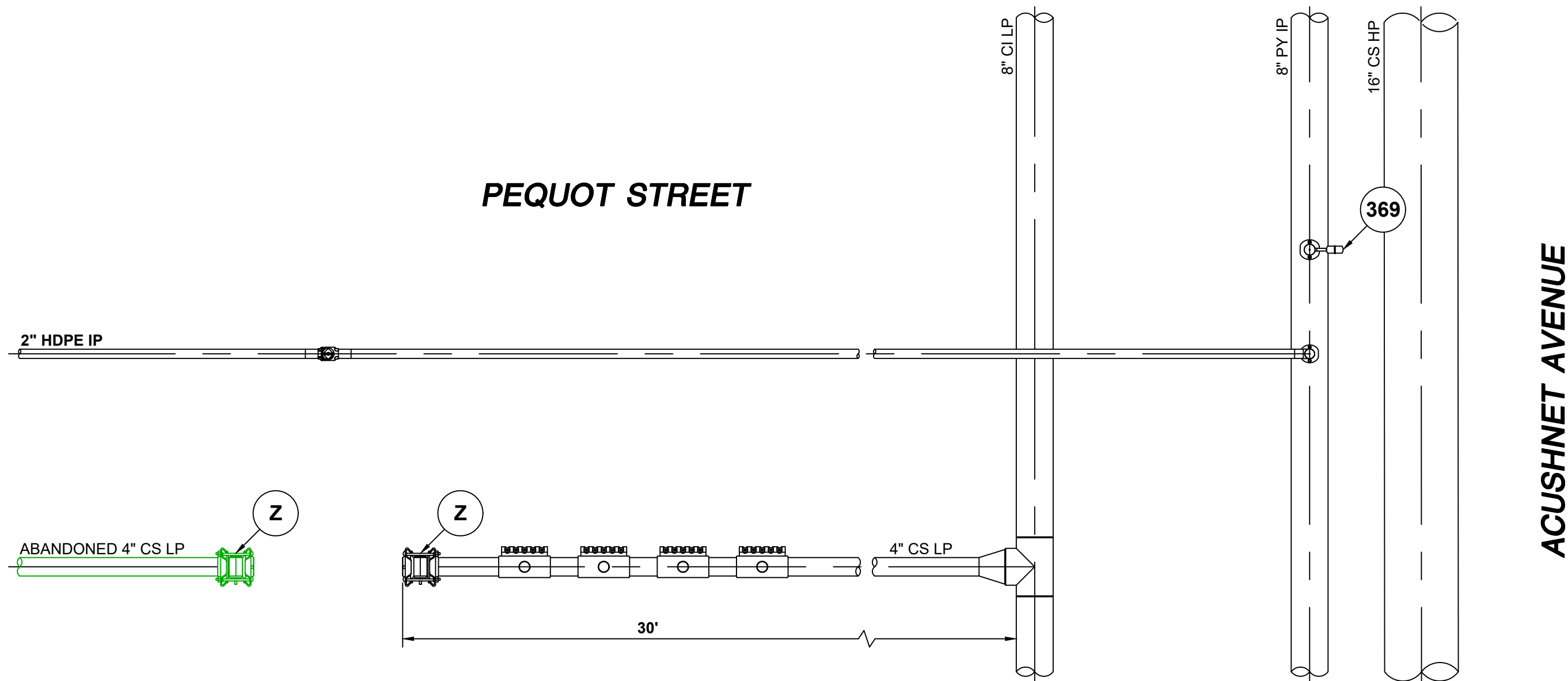
D

PROPOSED FITTING



PREPARATORY TIE-IN DETAIL #8

(SCALE: 1"=2')  
(REFER TO SHEET #20)



FINAL TIE-IN DETAIL #8

(SCALE: 1"=2')  
(REFER TO SHEET #20)

ISSUED FOR  
REVIEW - 100%

NOTES:  
1. REFER TO GENERAL NOTES ON SHEET #2.

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SEALED ON:

LICENSE EXPIRATION:

SIGNATURE

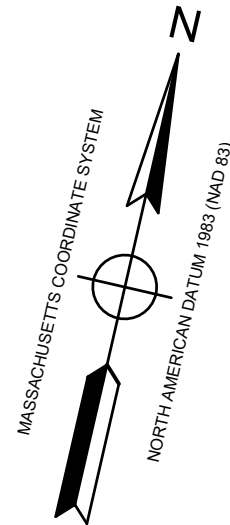
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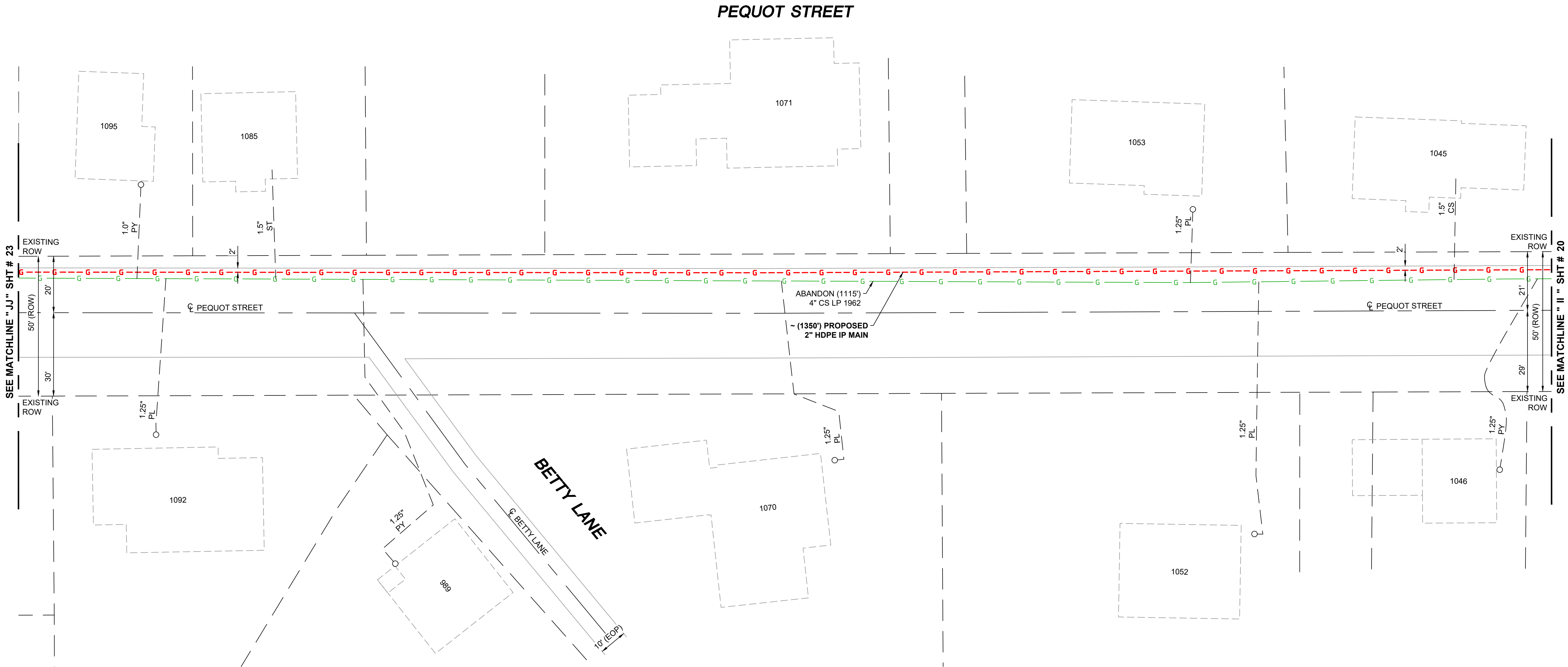
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TEL (630) 353-4000  
FAX (630) 353-7777  
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
TIE-IN DETAIL #8 AND BOM				
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)				SHEET 21 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-21	A



KEY MAP  
NOT TO SCALE



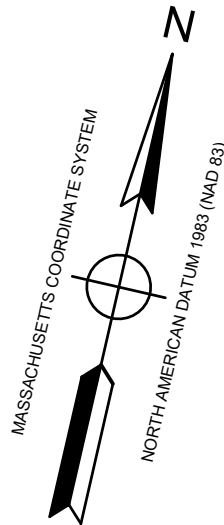
LOCATION PLAN #10  
(SCALE: 1"=20')

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REVIEW - 100%

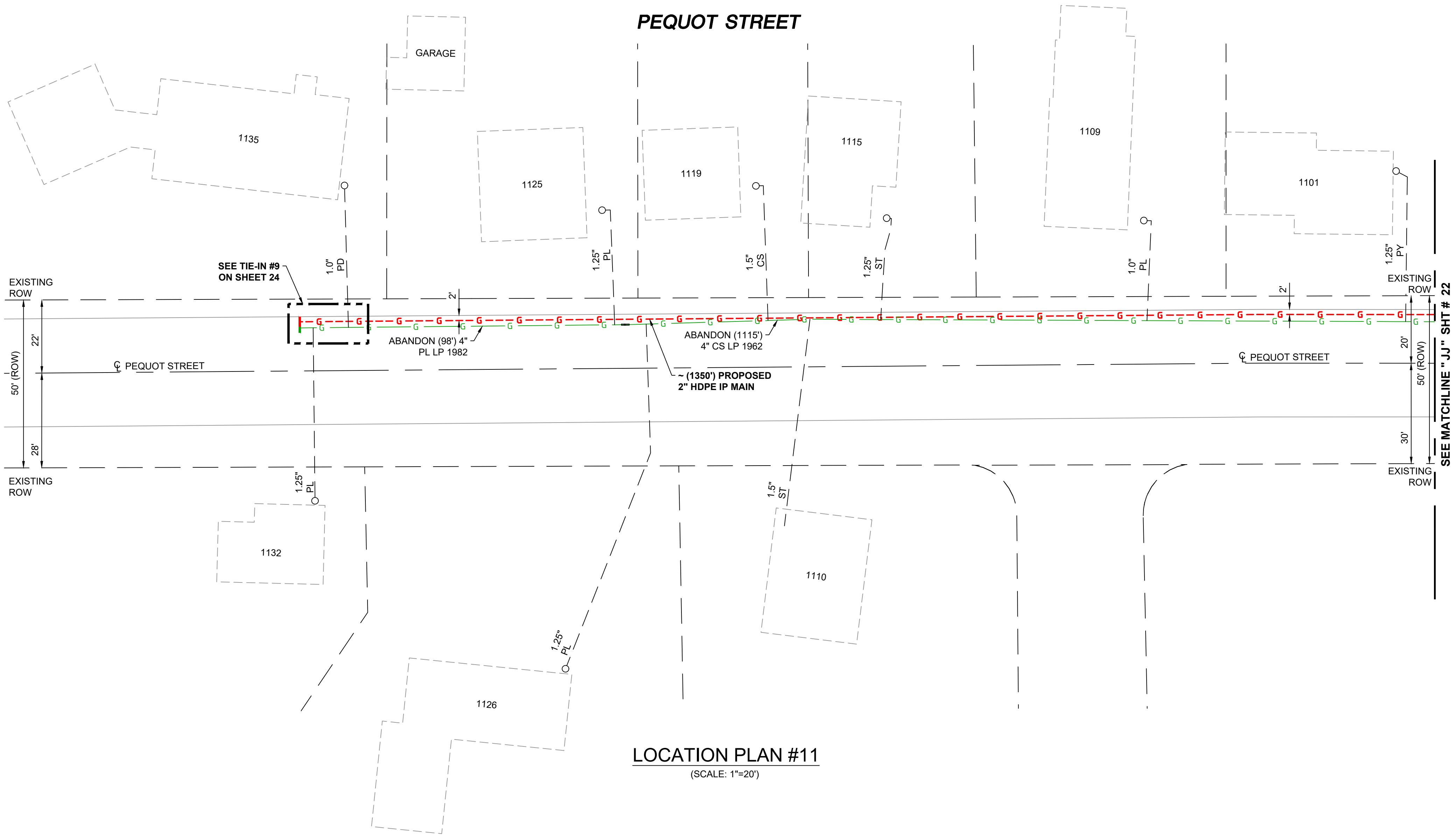
- NOTES:
- REFER TO GENERAL NOTES ON SHEET #2.
  - CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

SEALED BY:  
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KEY MAP  
NOT TO SCALE



LOCATION PLAN #11  
(SCALE: 1"=20')

ISSUED FOR  
REVIEW - 100%

- NOTES:
- REFER TO GENERAL NOTES ON SHEET #2.
  - CONTRACTOR TO POTHOLE EXISTING UTILITIES AT CROSSING LOCATIONS PRIOR TO CONSTRUCTION.

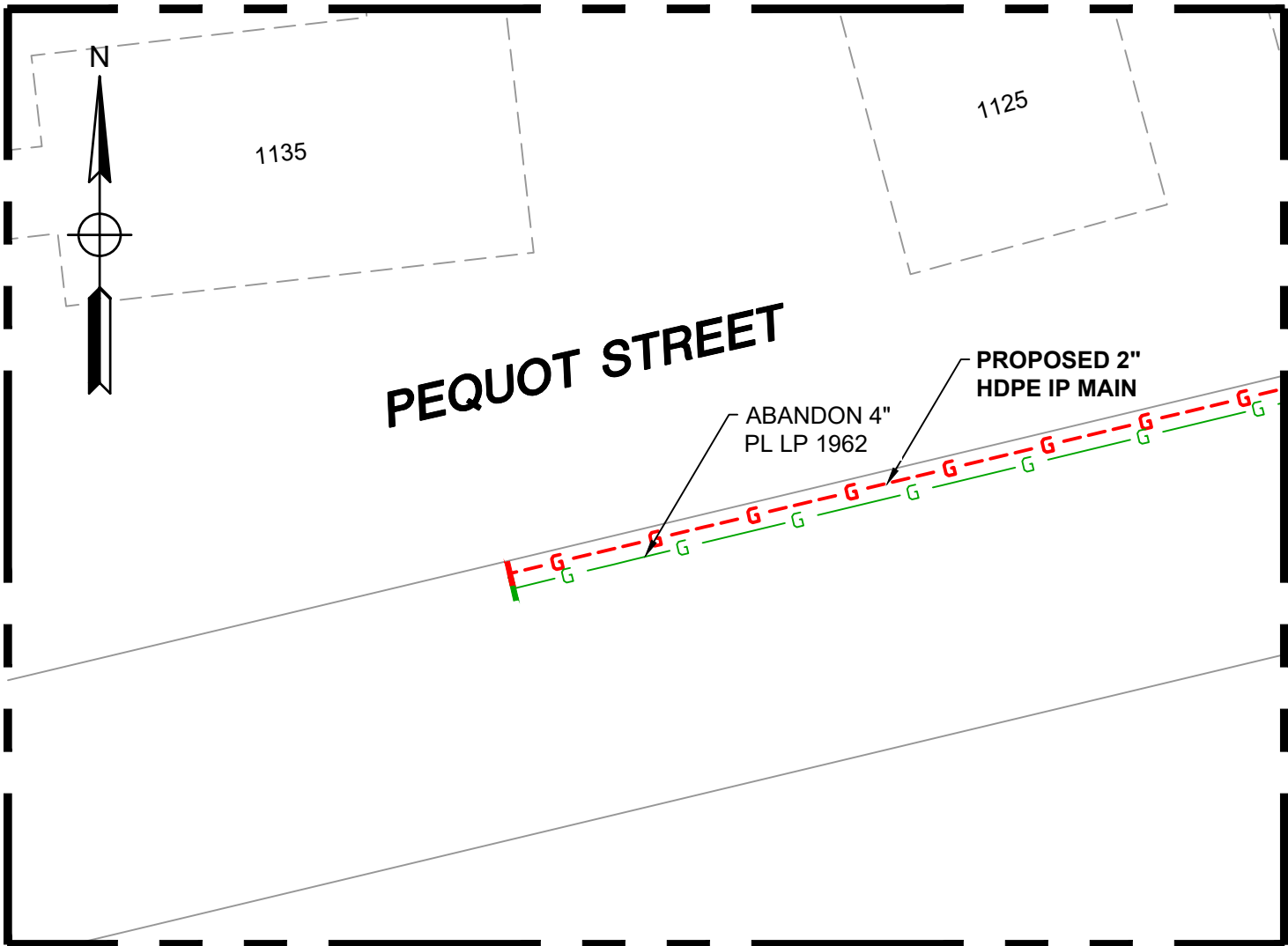
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SIGNATURE	

LICENSE EXPIRATION:
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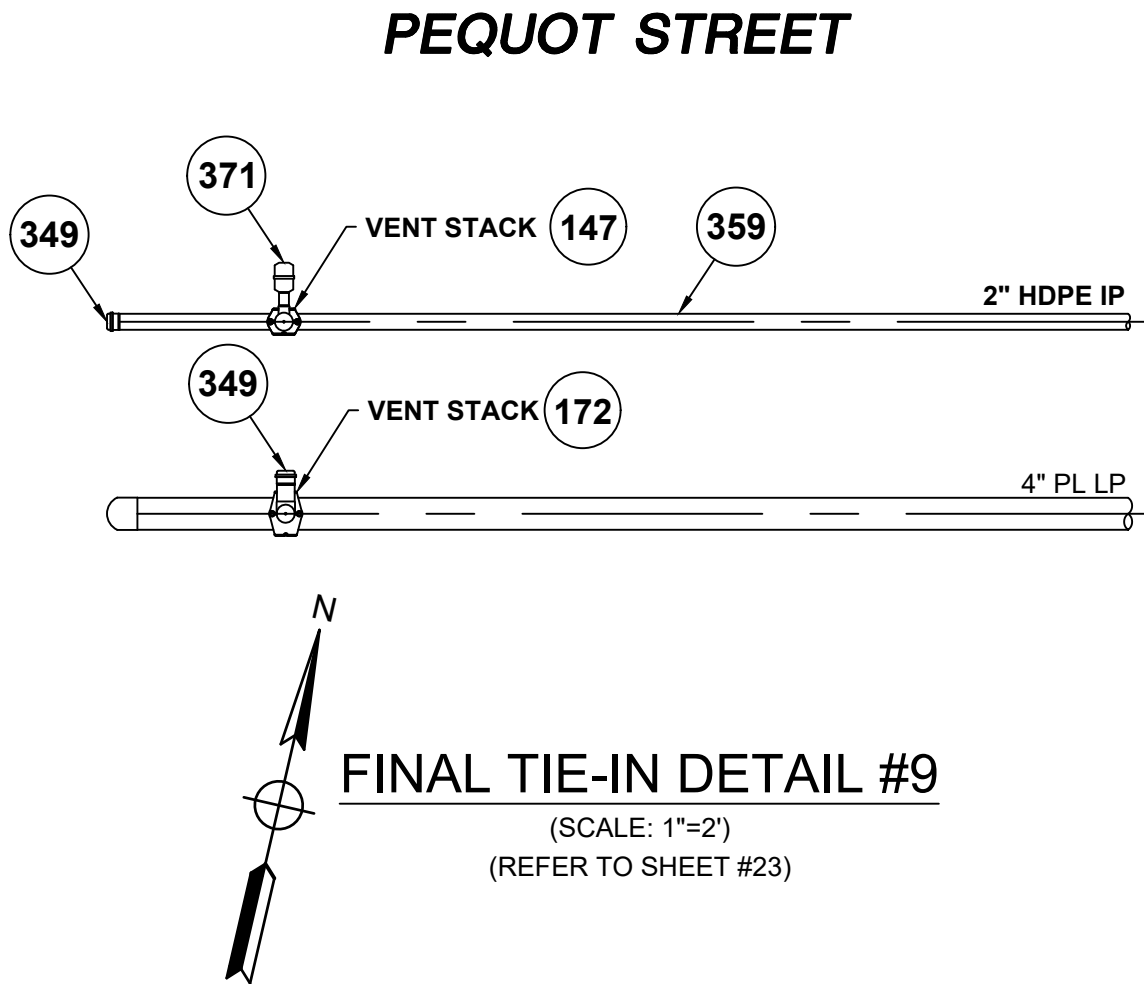
FIELD VERIFY DIMENSIONS PRIOR TO PIPE FABRICATION
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A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS			
NEW BEDFORD, MASSACHUSETTS			
LOCATION PLAN #11			
SCALE: 1"=20' (DO NOT SCALE FROM DRAWINGS)			SHEET 23 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-23
			REV. NO.
			A



TIE-IN DETAIL #9 - PLAN VIEW

(SCALE: 1"=20')  
(REFER TO SHEET #23)



FINAL TIE-IN DETAIL #9

(SCALE: 1"=2')  
(REFER TO SHEET #23)

ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS - Tie-in #9: Final					
REQUIRED BILL OF MATERIALS					
ITEM	SIZE	MAXIMO NO.	Description	Quantity	Units
147	2" X 1"	560779	TEE, PIPE, NON-BLOWING, 2 X 1 IN IPS SDR 11, ELECTROFUSION X COMPRESSION ENDS, LIGHT WALL, POLYETHYLENE, PE3408/PE100	1	EA
172	4" X 2"	584304	FITTING, TEE, 4 IN IPS X 2 IN IPS, ELECTROFUSION HIGH VOLUME TAPPING WITH BUTT FUSION OUTLET, HDPE, BLACK, WAS ITEM 577621	1	EA
349	2"	581633	FITTING, CAP, METFIT, 2 IN IPS X 0.216 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, NSTAR M-410	2	EA
359	2"	592668	PIPE, 2 IN IPS SDR 11, 250 FT LG COIL, HDPE PE4710, BLACK, ASTM D2513, 102 PSIG, W/ YELLOW STRIPES, REPLACING ITEM 554007	10	LF
371	1"	583182	FITTING, CAP, METFIT, 1 IN IPS X 0.119 IN THK WALL SDR 11, ASTM F1924 , FOR CAPPING PE GAS DISTRIBUTION PIPE AND TUBING, REPLACED IN 542612	1	EA

LEGEND	
	EXISTING GAS MAIN
	EXISTING GAS MAIN TO BE ABANDONED
	EXISTING GAS MAIN WITH SERVICE TRANSFERS
	EXISTING GAS MAIN WITH PRESSURE INCREASE
	PROPOSED GAS MAIN
	EXISTING FITTING
	PROPOSED FITTING

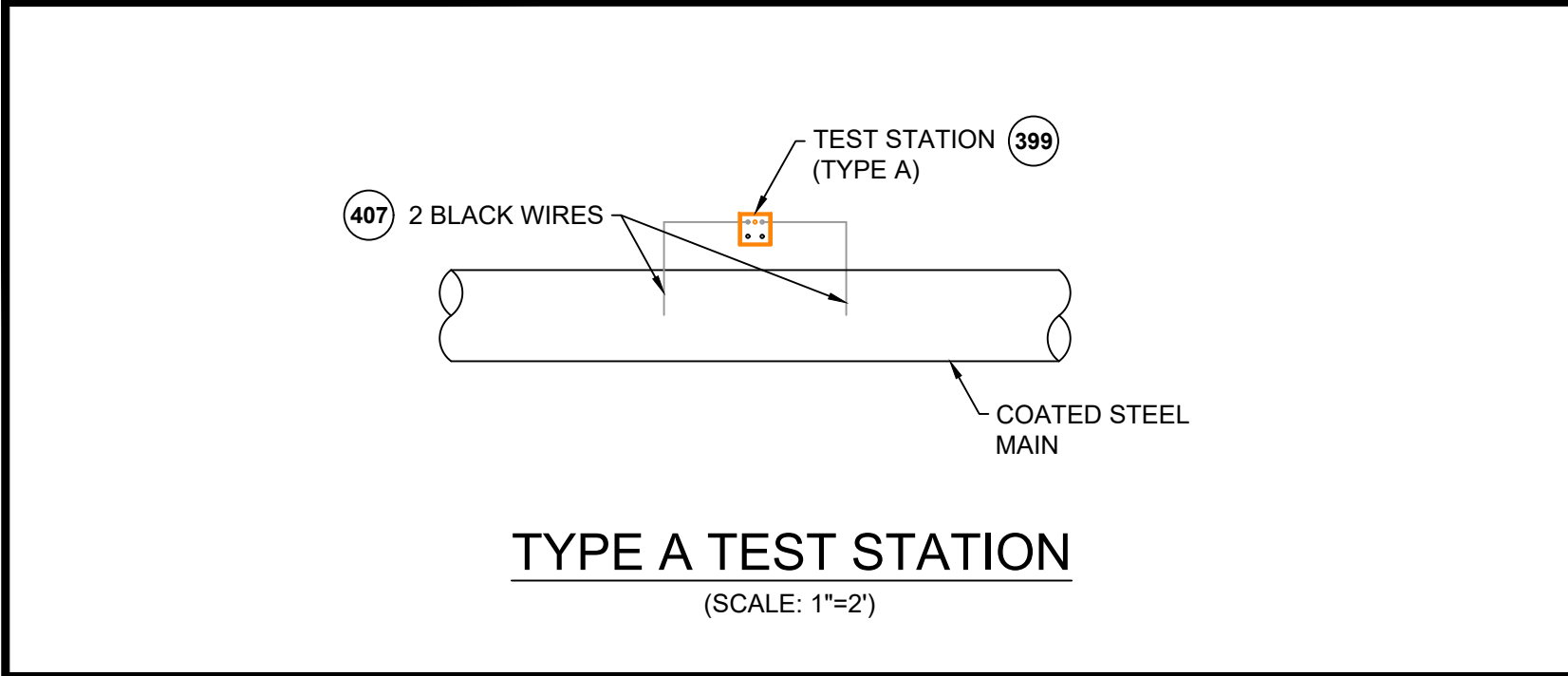
ISSUED FOR  
REVIEW - 100%

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS			
NEW BEDFORD, MASSACHUSETTS			
TIE-IN DETAIL #9 AND BOM			
SCALE: AS NOTED (DO NOT SCALE FROM DRAWINGS)			SHEET 24 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-24
			REV. NO.
			A

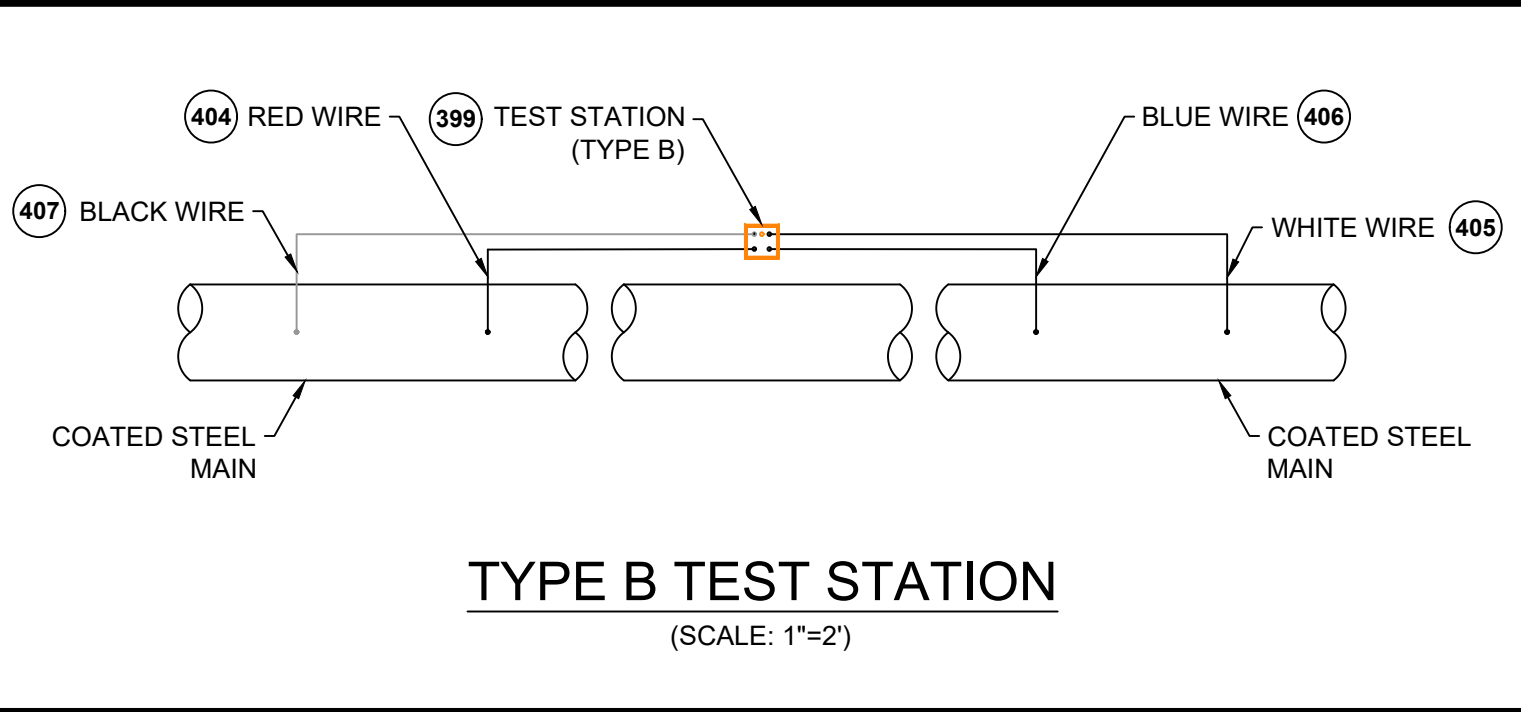
NOTES:  
1. REFER TO GENERAL NOTES ON SHEET #2.

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LICENSE EXPIRATION:		<b>EN</b> Engineering	
		29 BARTLETT STREET MARLBOROUGH, MA 01752 TEL (630) 353-4000 FAX (630) 353-7777 WWW.ENENGINEERING.COM	
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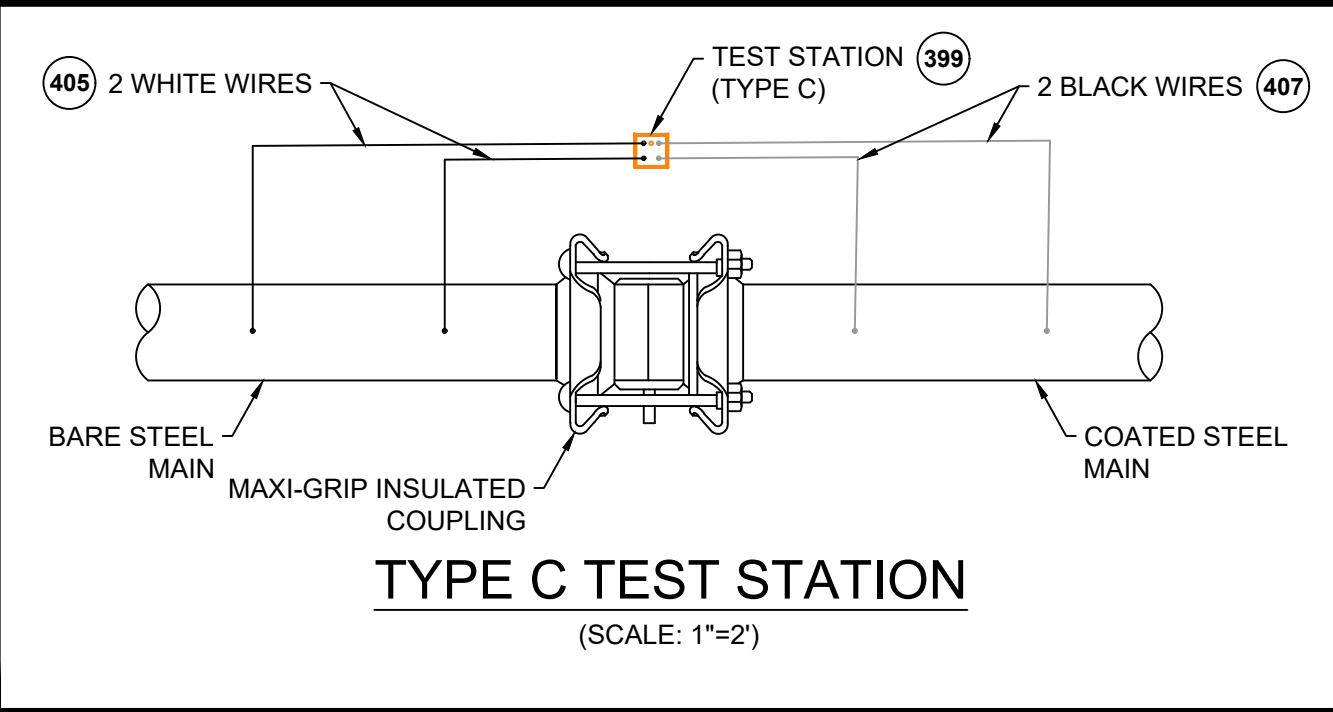




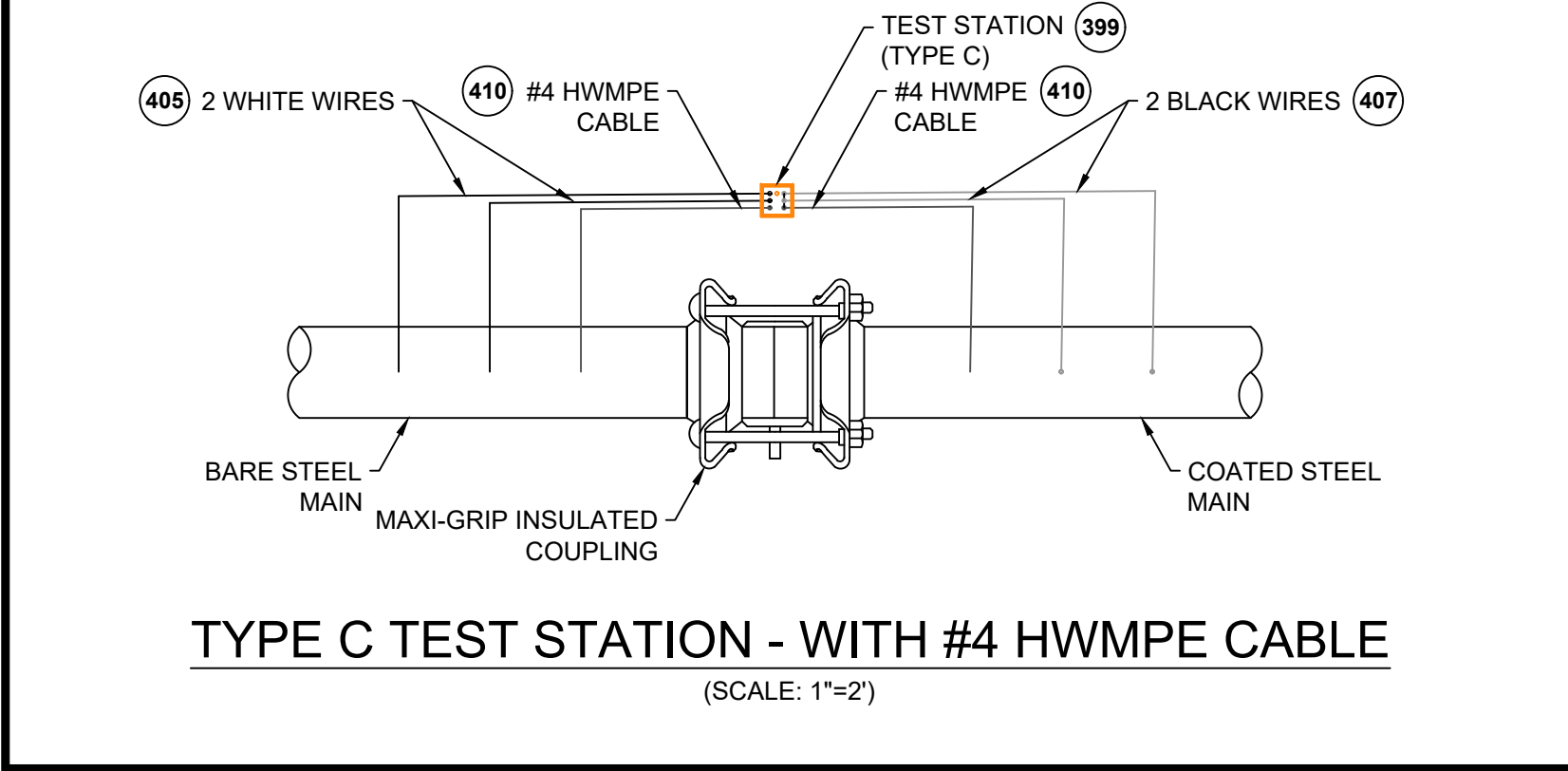
TYPE A TEST STATION  
(SCALE: 1"=2")



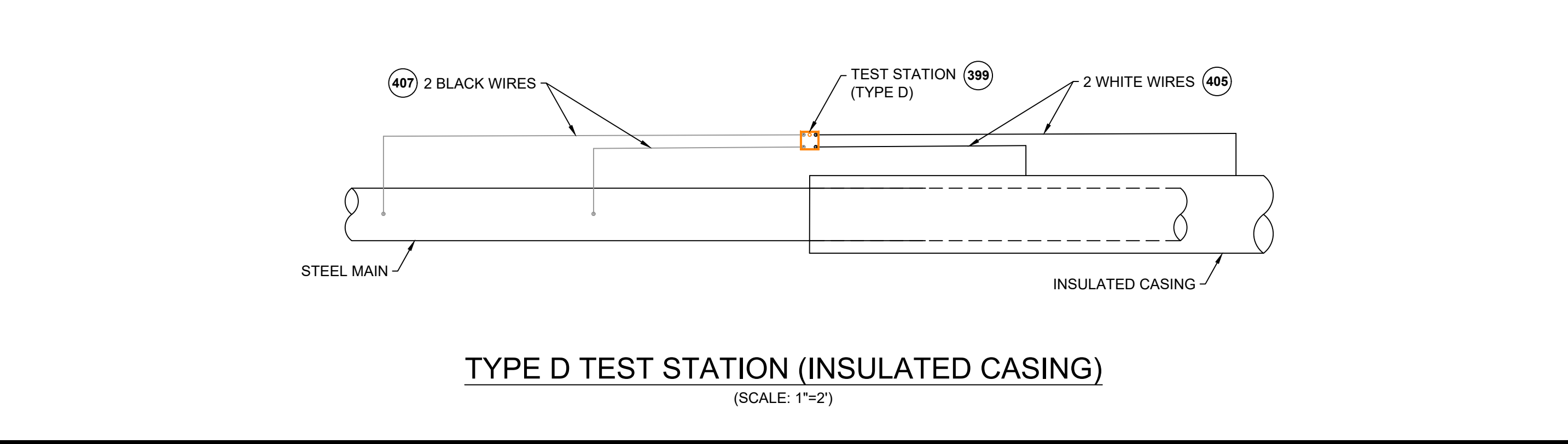
TYPE B TEST STATION  
(SCALE: 1"=2")



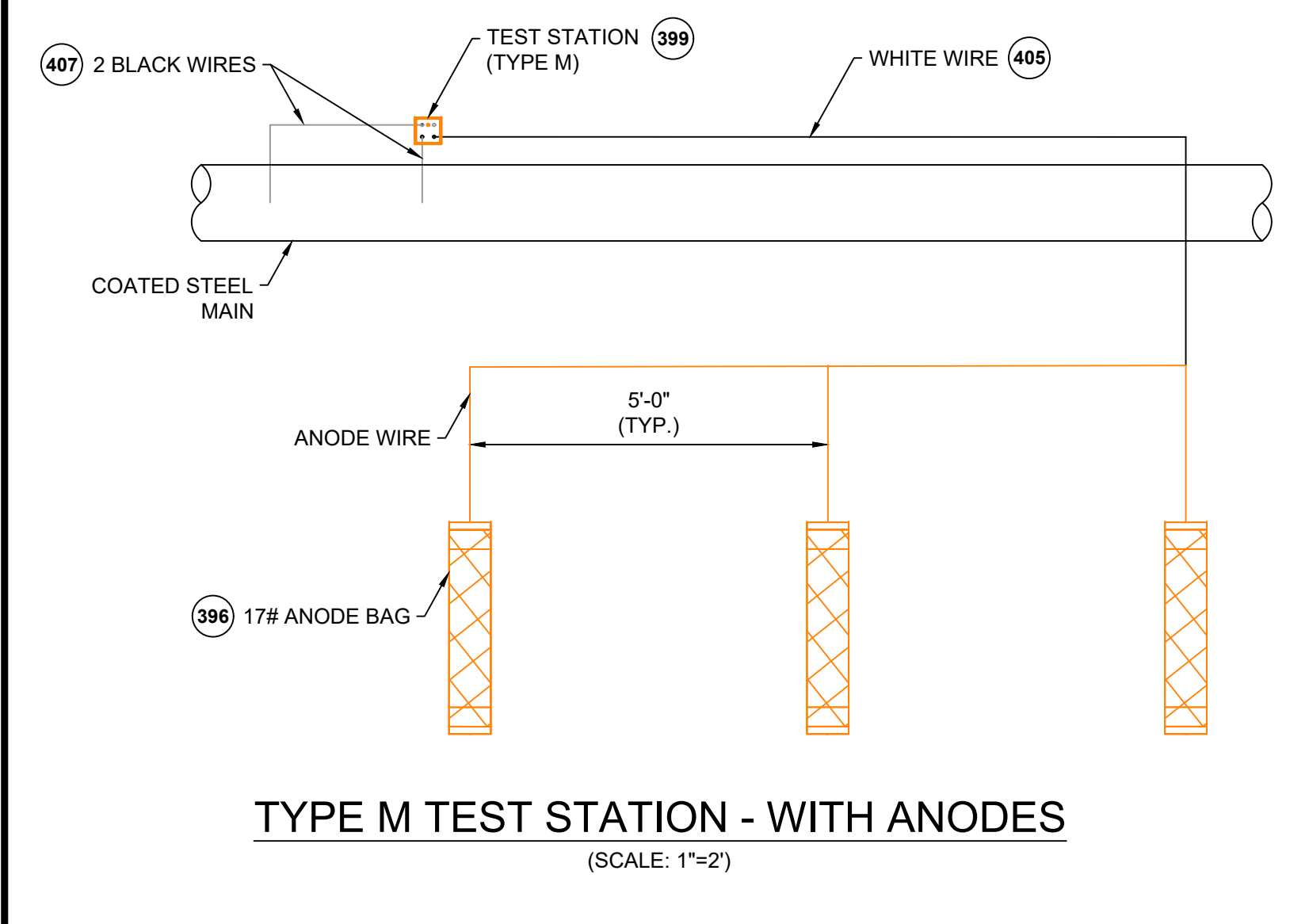
TYPE C TEST STATION  
(SCALE: 1"=2")



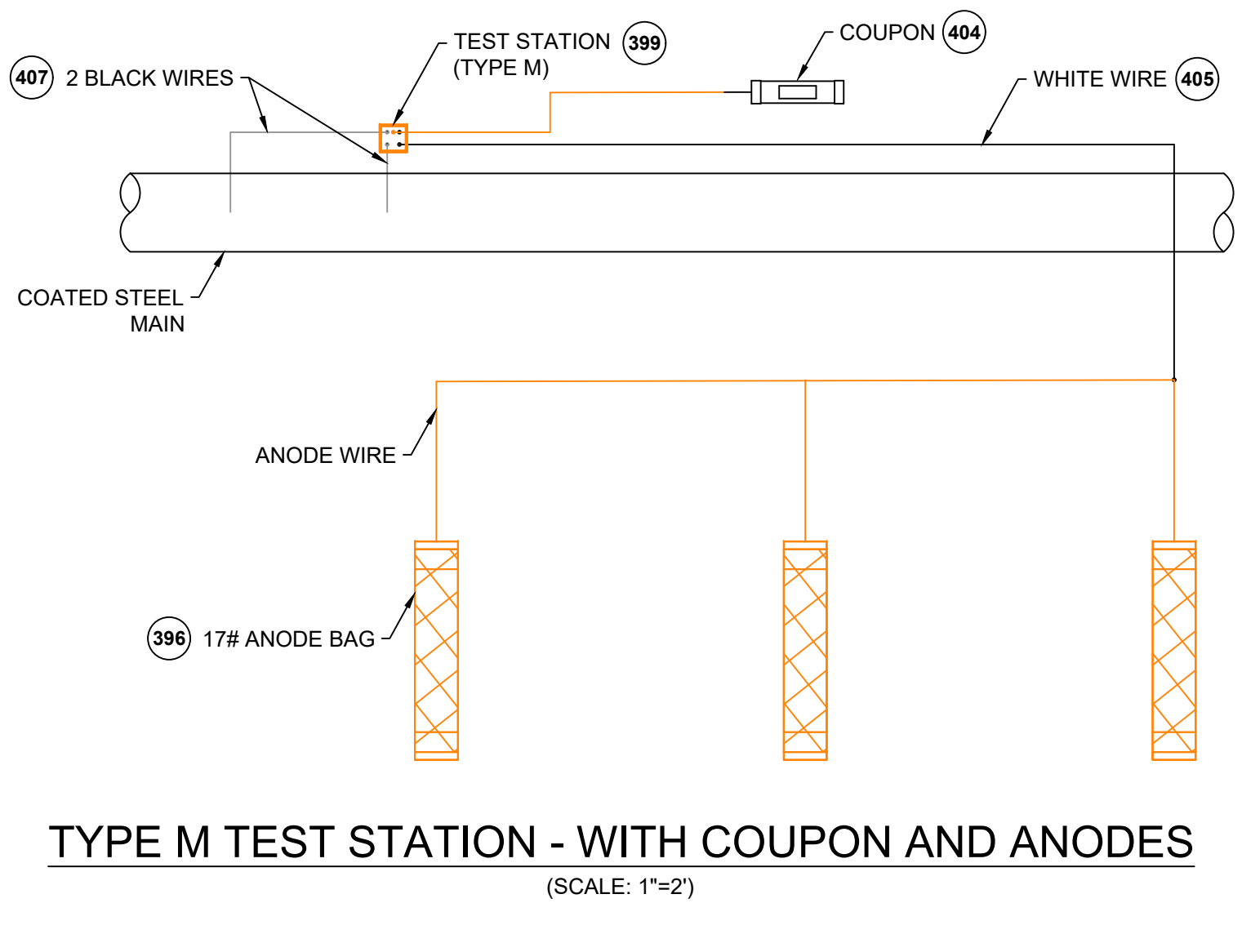
TYPE C TEST STATION - WITH #4 HWMPE CABLE  
(SCALE: 1"=2")



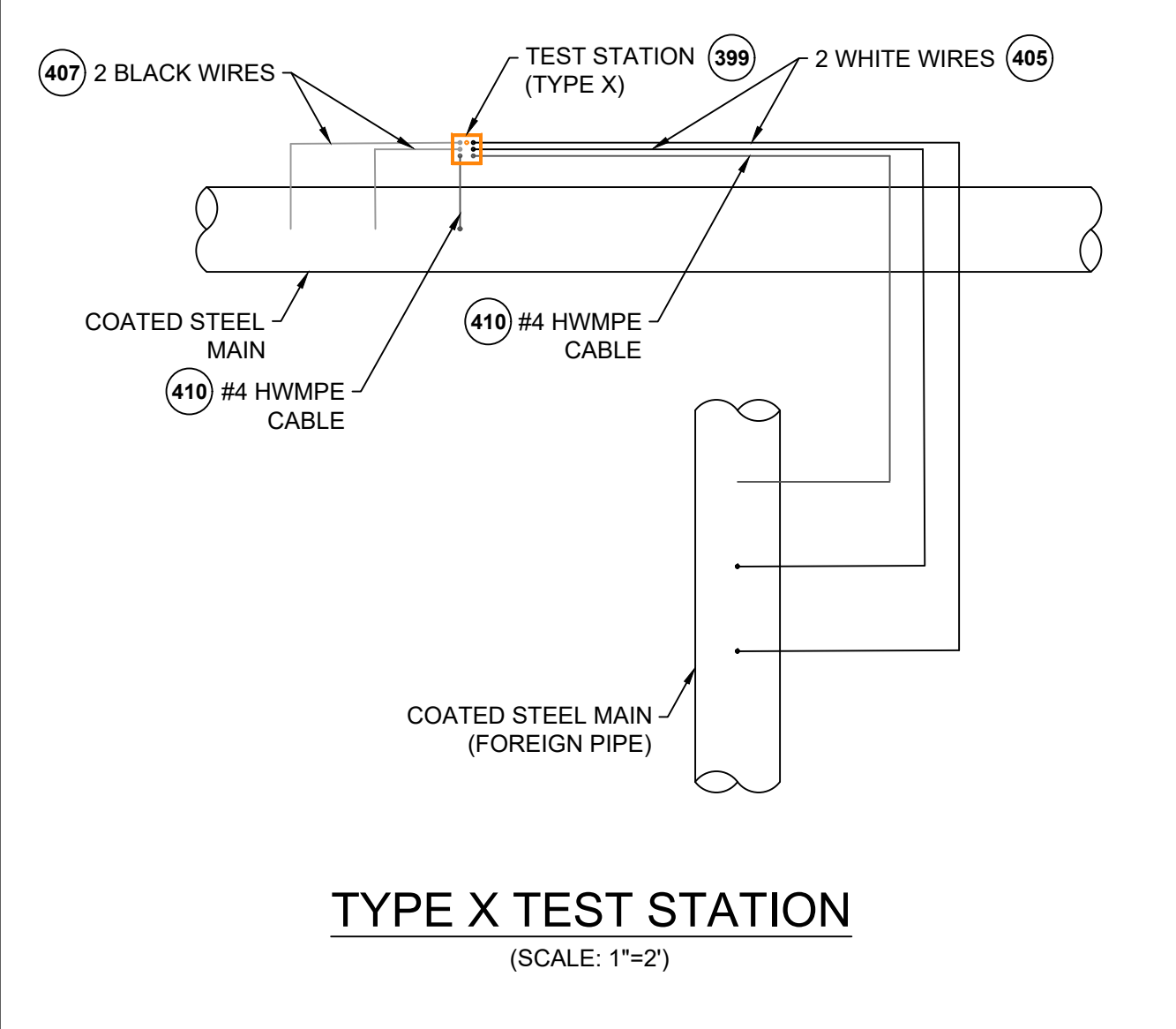
TYPE D TEST STATION (INSULATED CASING)  
(SCALE: 1"=2")



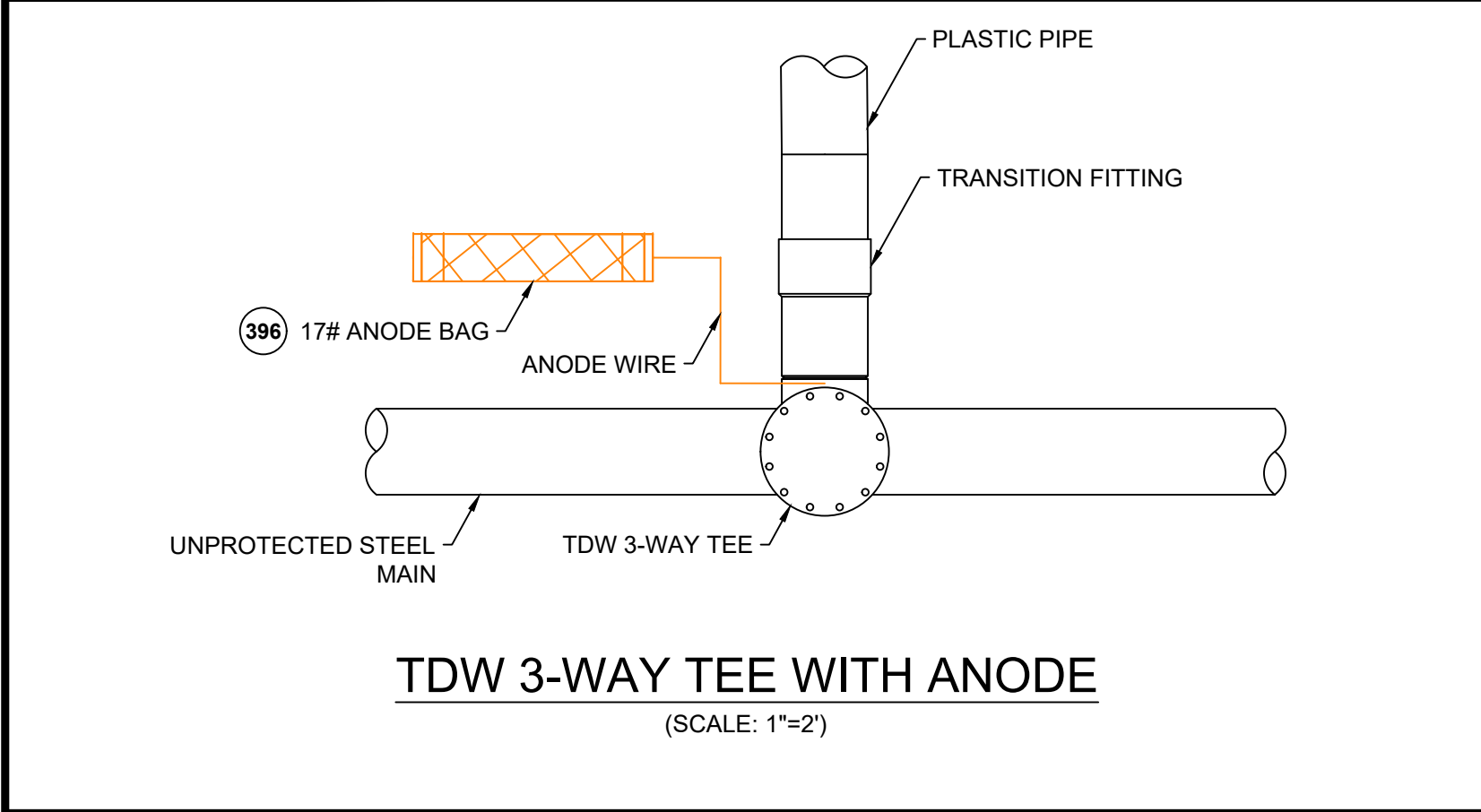
TYPE M TEST STATION - WITH ANODES  
(SCALE: 1"=2")



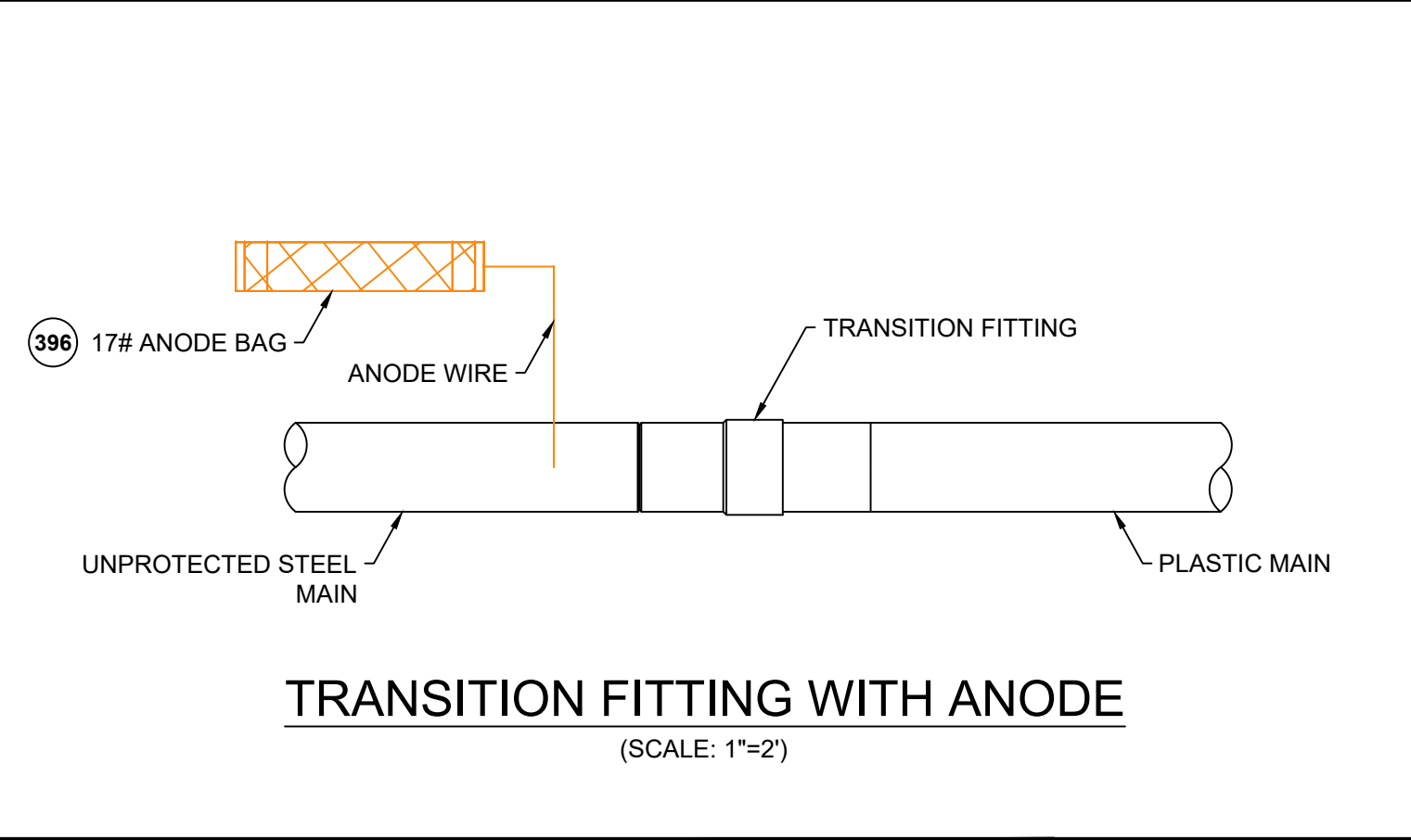
TYPE M TEST STATION - WITH COUPON AND ANODES  
(SCALE: 1"=2")



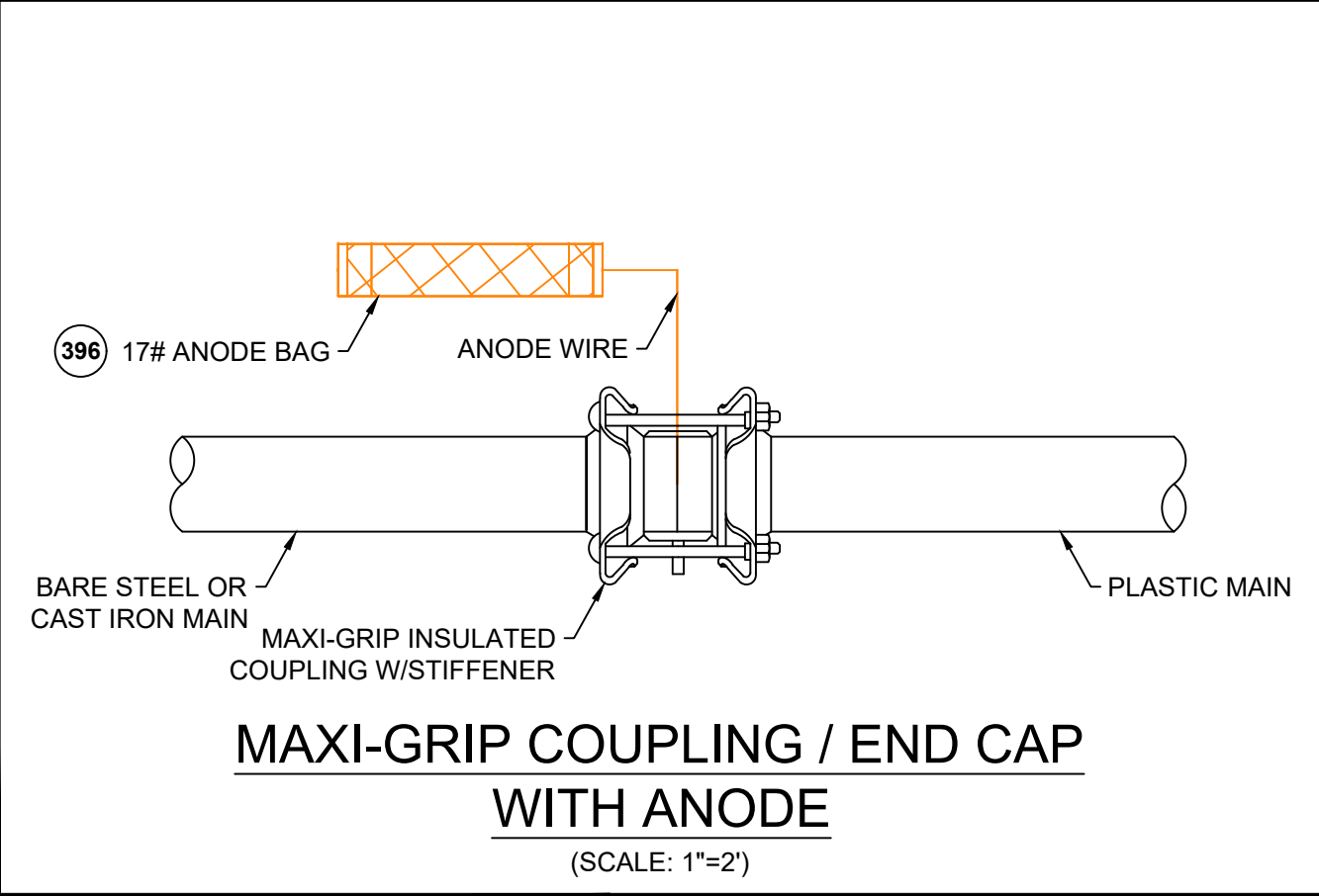
TYPE X TEST STATION  
(SCALE: 1"=2")



TDW 3-WAY TEE WITH ANODE  
(SCALE: 1"=2")



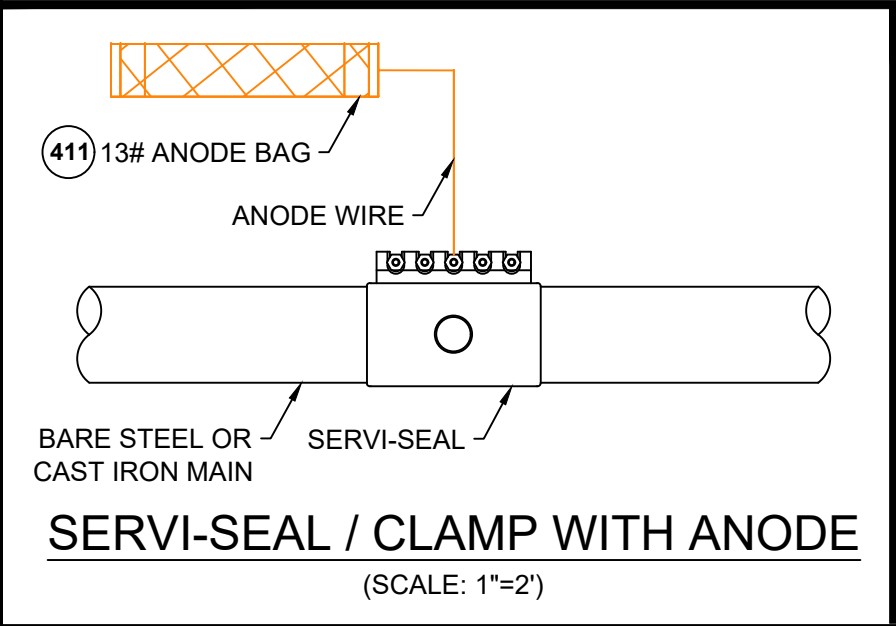
TRANSITION FITTING WITH ANODE  
(SCALE: 1"=2")



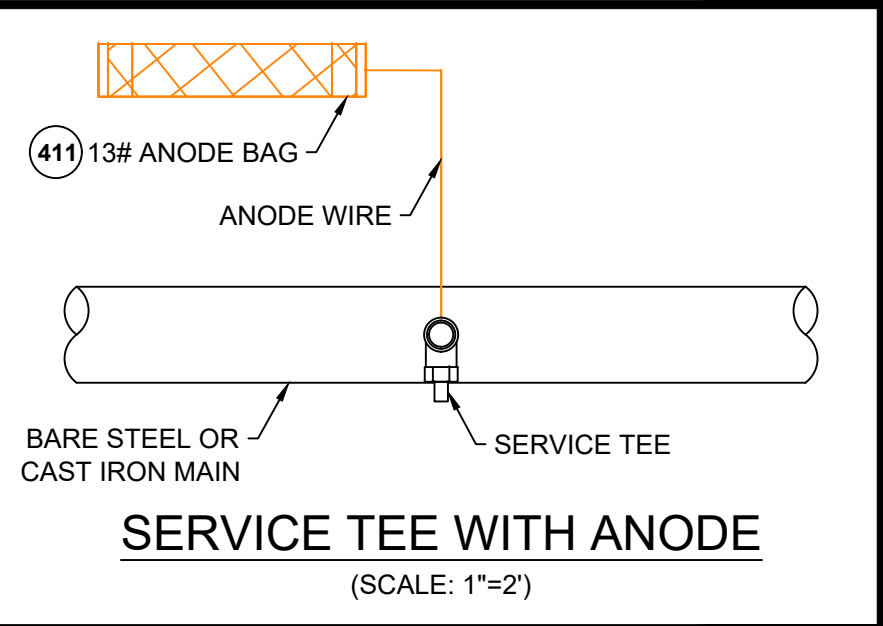
MAXI-GRIP COUPLING / END CAP  
WITH ANODE  
(SCALE: 1"=2")

CATHODIC PROTECTION BILL OF MATERIALS			
ITEM	MAXIMO NO.	DESCRIPTION	UNITS
396	577776	ANODE,BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB TOTAL WEIGHT	EA
397	517626	CONNECTOR, SPLIT BOLT, 12 SOLID - 10 STRANDED, CU TO CU, HOUSING (COVER) MATE IN 590389,	EA
398	590389	HOUSING, 50 V MAX, 10 AWG MAX, FOR PROTECTING TRACER WIRE SPLICES, USED WITH CONNECTOR IN 517626, 10/BAG	EA
399	590871	BOX VALVE, TEST STATION, CP TEST #178, 10-1/4 IN DIA. LID. 8-3/8 IN I.D. 16 IN H., ASTM A48 CL 25 CAST IRON, FOR OFF-ROAD USE ONLY	EA
400	508567	POWDER, CARTRIDGE, TYPE IS F-33, ALLOY , CAP COLOR CLEAR, 15 GM CHARGE, 20/PAC, FOR STEEL PIPE	BOX
401	559168	SLEEVE,ELECTRICAL, #14 TO 10 AWG, W/ THERMITE WELDER, FOR CATHODIC PROTECTION	EA
402	584045	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW010, 10 FT OF CABLE	ES
403	603126	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW025, 25 FT OF CABLE	ES
404	603140	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, RED, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL
405	578415	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, WHITE, INSULATED, CU, 500 FT SPOOL, WIRE	ROLL
406	603141	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLUE INSULATED, CU, 500 FT SPOOL, WIRE	ROLL
407	603139	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLACK, INSULATED, CU, 500 FT SPOOL,WIRE	ROLL
408	500804	WELDER,THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE,HORIZONTAL STEEL PIPE 4 IN AND LARGER DIAMETER	EA
409	500805	WELDER,THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE, HORIZONTAL STEEL PIPE 3/4 - 3-1/2 IN DIAMETER	EA
410	513850	CABLE, INSULATED, CATHODIC PROTECTION, 1/C, #4 AWG, 7 STR, 600 V, BLACK, HWMPE, CU, 1000 FT ROLLS	FT
411	505818	ANODE,BAG, 2.5 X 2.5 X 4.5 IN, 10 FT LG, 3 LB, MAGNESIUM, Alternate IN 577776	EA
575	508572	PRIMER, 4 GAL/CASE, BROWN, FOR WAX TAPE, APPLICATION TEMP 0 TO 230 F, TEMCOAT 3000	EA
576	503673	TAPE,WAX, 9 FT LG X 4 IN W, 24 ROLLS/CS, ABOVE AND BELOW GROUND APPLICATIONS, TR-#2A WAX, ALUMINUM	ROLL
577	603769	TRENTON-FILL POR PM-GP, 140 FA, FOR FILLING VOIDS & IRREGULAR SPACES PRIOR TO WRAPPING W/WAX TAPE, 0F TO 110F APPLICATION TEMPERATURE, 6 BLOCKS/CASE, TAPE,WAX, 9 FT LG X 6 IN W X 70.90 MIL THK, 16 ROLLS/CS, ABOVE AND BELOW GROUND APPLICATIONS, TR-#2A WAX, ALUMINUM	CASE
	603423		ROLL

- NOTES:
- ALL TEST STATION BOXES SHOULD BE INSTALLED IN A SAFE LOCATION WHERE ONE INDIVIDUAL CAN SAFELY OPEN AND ACCESS THE TEST WIRES. ALL TEST WIRES INSIDE THE BOX SHOULD HAVE ENOUGH SLACK ON THE WIRES SO THEY CAN EXTEND A MINIMUM OF 12" ABOVE GRADE.
  - FOR TYPE A TEST STATIONS, THE TWO WIRES SHOULD BE THERMITE WELDED TO THE COATED STEEL MAIN AND BE THE SAME COLOR. (COUPONS COULD BE ADDED TO THE TEST STATION TYPE).
  - FOR TYPE B TEST STATIONS, EACH OF THE FOUR WIRES SHOULD BE A DIFFERENT COLOR AND DOCUMENTED
  - FOR TYPE C TEST STATIONS, THE WIRES SHOULD BE THE SAME COLOR ON EACH SIDE OF THE INSULATED COUPLING. (ANODES AND/OR COUPONS COULD BE ADDED TO THIS TEST STATION TYPE).
  - FOR TYPE D TEST STATIONS WHICH ARE AT A CASING, WHITE WIRES ARE NORMALLY INSTALLED ON THE STEEL CASING AND BLACK WIRES ARE INSTALLED ON THE CARRIER PIPE. (ANODES AND/OR COUPONS COULD BE ADDED TO THIS TEST STATION TYPE).
  - FOR TYPE M TEST STATIONS, THE TWO WIRES THERMITE WELDED TO THE CARRIER PIPE SHOULD BE THE SAME COLOR WIRE. THERE IS ALSO MAGNESIUM ANODE(S) WIRE(S) LOCATED INSIDE THE TEST STATION BOX.THE WIRE COLOR (TYPICALLY ORANGE) FOR THE ANODES. IF THE ANODE WIRES ARE SPICED TO A COMMON ANODE HEADER CABLE, THE ANODE HEADER CABLE SHOULD BE A (WHITE OR RED) DIFFERENT COLOR WIRE THAN THE WIRE THAT WAS THERMITE WELDED TO THE CARRIER PIPE. AT A TYPE M TEST STATION, NO MAGNESIUM ANODES SHOULD BE DIRECTLY THERMITE WELDED TO THE CARRIER PIPE OR IN CONTACT WITH THE CARRIER PIPE. THE ANODE HEADER WIRE OR INDIVIDUAL ANODE WIRES SHOULD TERMINATE INSIDE THE TEST STATION BOX. ANODES SHOULD BE SPACED A MINIMUM OF 5' ON CENTER FROM EACH OTHER AND A MINIMUM OF 12" AWAY AND BELOW THE BOTTOM OF THE STEEL MAIN.
  - IF COUPONS ARE TO BE INSTALLED , FIRST REMOVE THE PROTECTIVE LABEL COVERING THE STEEL COUPON AND THE RED STICKERS COVERING EACH SENSING PORT. CLEAN THE ENTIRE STEEL COUPON SURFACE WITH ALCOHOL TO REMOVE THE CORROSION INHIBITOR .PLACE THE COUPON ASSEMBLY APPROXIMATELY 12" FROM THE GAS MAIN BEING MONITORED WITH THE SENSING PORTS FACING THE GAS MAIN. THE COUPON ASSEMBLY SHOULD BE LOCATED ADJACENT TO THE BOTTOM PORTION OF THE GAS MAIN, ANYWHERE BETWEEN 3 O'CLOCK AND 9 O'CLOCK. THE SOIL BETWEEN THE COUPON AND THE MAIN SHOULD BE WELL COMPACTED AND CONTAIN NO ROCKS LARGER THAN A CENTIMETER IN DIAMETER OR FOREIGN MATERIAL.
  - ONE (1) 3# ANODE (MINIMUM) SHALL BE INSTALLED TO PROTECT THE CLAMPS ON EACH 10-FOOT SPAN OF PIPE. EACH 10-FOOT SPAN OF PIPE MUST BE A CONTINUOUS SECTION OF STEEL. CLAMPS ON NON-CONTINUOUS SECTIONS OF STEEL EVEN IF THEY ARE WITHIN 10 FEET OF EACH CANNOT BE PROTECTED BY THE SAME ANODE.
  - REFER TO CONSTRUCTION STANDARD CS-500 SECTION IV.G WHICH PROVIDES GENERAL GUIDANCE REGARDING "WRAPPING" FOR CORROSION PROTECTION. CS-500 SECTION IV.G.5. DESCRIBES THE BASIC STEPS REQUIRED TO WRAP LEAK REPAIR CLAMPS.



SERVI-SEAL / CLAMP WITH ANODE  
(SCALE: 1"=2")



SERVICE TEE WITH ANODE  
(SCALE: 1"=2")

ISSUED FOR  
REVIEW - 100%

A	ISSUED FOR REVIEW - 100%	12/30/2021	ZS/AB	
NO.	DESCRIPTION	DATE	DW/CK/AP	
REVISION STATUS				
EVERSOURCE ENERGY				
ACUSHNET AVENUE AND PECKHAM ROAD MAIN RELAYS				
NEW BEDFORD, MASSACHUSETTS				
STANDARD CORROSION DETAILS				
SCALE: 1"=2' (DO NOT SCALE FROM DRAWINGS)				SHEET 25 OF 25
DRAWN BY / DATE	CHECKED BY / DATE	APPROVED BY / DATE	SHEET NUMBER	REV. NO.
ZS 11/22/2021	AB 12/30/2021	XX XX/XX/2021	MA-NEB-22-PIP-001-25	A

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EXPIRATION:

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49, PART 192 OF MINIMUM FEDERAL SAFETY  
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FIELD VERIFY DIMENSIONS  
PRIOR TO PIPE FABRICATION