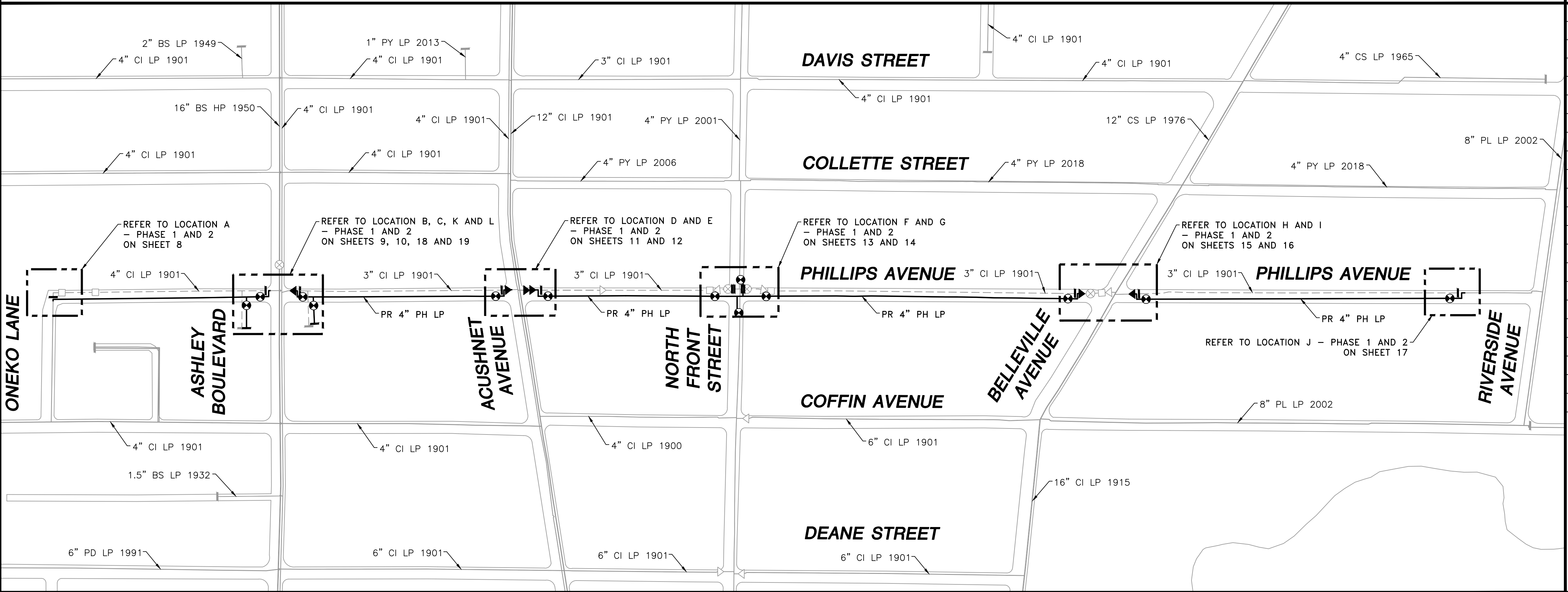




LOCUS PLAN
NOT TO SCALE



SHEET INDEX	
SHEET NUMBER	DESCRIPTION
1	SITE PLAN, LOCUS PLAN AND SHEET INDEX
2	GENERAL NOTES
3	INSTALLATION PLAN
4	INSTALLATION PLAN
5	INSTALLATION PLAN
6	INSTALLATION PLAN
7	INSTALLATION PLAN
8	LOCATION A – PHASE 1, 2 AND SCHEDULE OF MATERIALS
9	LOCATION B – PHASE 1, 2 AND SCHEDULE OF MATERIALS
10	LOCATION C – PHASE 1, 2 AND SCHEDULE OF MATERIALS
11	LOCATION D – PHASE 1, 2 AND SCHEDULE OF MATERIALS
12	LOCATION E – PHASE 1, 2 AND SCHEDULE OF MATERIALS
13	LOCATION F – PHASE 1, 2 AND SCHEDULE OF MATERIALS
14	LOCATION G – PHASE 1, 2 AND SCHEDULE OF MATERIALS
15	LOCATION H – PHASE 1, 2 AND SCHEDULE OF MATERIALS
16	LOCATION I – PHASE 1, 2 AND SCHEDULE OF MATERIALS
17	LOCATION J – PHASE 1, 2 AND SCHEDULE OF MATERIALS
18	LOCATION K AND SCHEDULE OF MATERIALS
19	LOCATION L AND SCHEDULE OF MATERIALS
20	STANDARD CORROSION DETAILS

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP

REVISION STATUS

EVERSOURCE
ENERGY

PHILLIPS AVENUE MAIN RELAY

NEW BEDFORD, MASSACHUSETTS

SITE PLAN, LOCUS PLAN AND SHEET INDEX

SCALE: AS NOTED				SHEET 1 OF 20	
DRAWN BY / DATE ZS 09/30/2020		CHECKED BY / DATE AB 12/22/2020		SHEET NUMBER	
APPROVED BY / DATE EK 12/22/2020		MANEB21PIP026R1		MA-NEB-21-PIP-026-01	
				1	

SITE PLAN

NEW BEDFORD, MASSACHUSETTS
(SCALE: 1"=130')
(DO NOT SCALE FROM DRAWING)

ISSUED FOR
CONSTRUCTION
12/22/2020

SEAL BY:



SIGNATURE

SEALED ON

12/23/2020

LICENSE
EXPIRATION

06/30/2022

DESIGNED IN ACCORDANCE WITH TITLE
49-PART 192 OF MINIMUM FEDERAL SAFETY
STANDARDS AND GPTC GUIDE FOR GAS
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FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

GENERAL NOTES

1. 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.

A. IF THE TIE IN POINT MOVES TO A DIFFERENT SEGMENT OF PIPE THAN SHOWN

B. IF A CHANGE IN THE LOCATION OF VALVES IS REQUIRED

C. 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

D. IF A CHANGE IN PIPE SIZE, MATERIAL, FITTINGS, OR WALL THICKNESS IS REQUIRED.
2. MINOR CHANGES SUCH AS OFFSETS MAY NOT REQUIRE DRAWING CHANGES.
3. EXCAVATOR SHALL CALL DIGSAFE/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.
4. CONSTRUCTION DRAWINGS ARE BASED ON EVERSOURCE HISTORICAL DOCUMENTATION AND HAVE NOT BEEN FIELD VERIFIED. WHEN THE PIPE IS EXPOSED AND VARIANCES TO THE CERTIFIED DRAWINGS ARE FOUND, CONTACT GAS ENGINEERING TO DETERMINE PATH FORWARD.
5. ALL WORK SHALL BE PERFORMED PER EVERSOURCE, LOCAL, STATE, OSHA, AND FEDERAL REGULATIONS AND STANDARDS.
6. MATERIAL AND CONSTRUCTION SHALL CONFORM TO EVERSOURCE GAS STANDARDS.
7. THE LOCATIONS OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES ARE APPROXIMATE AND MUST BE FIELD VERIFIED. ADDITIONAL UNDERGROUND FACILITIES MAY EXIST THAT ARE NOT SHOWN ON THESE DRAWINGS WHICH MAY REQUIRE ADDITIONAL OFFSETS IN THE PIPELINE.
8. WORK LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT LOCATIONS OF TIE-INS SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION TO SUIT FIELD CONDITIONS AT THE SPECIFIC TIE-IN POINT. VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY TIE-IN WORK.
9. ALL LIVE GAS WORK 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.
10. EXCAVATOR IS REQUIRED TO PROTECT EXISTING UTILITIES, STRUCTURES, LANDSCAPE FEATURES, SIGNAGE, CURBS, ETC. CARE SHOULD BE TAKEN NOT TO DISTURB OR DAMAGE SUCH 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.
11. IF THE PROJECT IS WITHIN 50 FEET OF A DISTRICT REGULATOR OR GATE STATION, ENSURE THAT A QUALIFIED I&R TECHNICIAN IS ON SITE.
12. 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.
13. PROPERTY LINES, STRUCTURES AND EXISTING CONDITIONS DEPICTED ON PLANS ARE BASED ON EVERSOURCE GIS INFORMATION AND HAVE NOT BEEN VERIFIED BY LAND SURVEY UNLESS NOTED.
14. 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.
15. PROPOSED WORK SHALL BE PERFORMED AND COMPLETED IN COMPLIANCE WITH ALL PERMITS AND APPROVALS.
16. MAINS AND SERVICES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH EVERSOURCE OM-205.
17. MAOP:

LP = 14" W.C.

LIP = 35 PSIG

IP = 60 PSIG


HP = 90 PSIG
18. ALL WORK SHALL BE PERFORMED PER EVERSOURCE, LOCAL, STATE AND FEDERAL REGULATIONS AND STANDARDS.
19. ALL PIPE WILL BE INSTALLED WITH A MINIMUM DEPTH IN ACCORDANCE WITH EVERSOURCE STANDARDS
20. SQUEEZE OPERATIONS SHOULD BE COMPLETED IN ACCORDANCE WITH OM-233
21. ENSURE ALL SERVICES BEING TRANSFERRED TO A HIGHER PRESSURE SYSTEM HAVE UPGRADED PRESSURE REGULATORS INSTALLED PRIOR TO ACTIVATION.
22. ENSURE VALVES ON EXISTING MAIN, WHERE PROPOSED MAIN WILL BE INSERTED HAVE BEEN MADE INOPERABLE.
23. ADDITIONAL VALVES AND TEES THAT ARE INCLUDED IN THE SCHEDULE OF MATERIALS MAY BE INSTALLED TEMPORARILY WHEN NEEDED TO FACILITATE TIE-INS AND PURGES.
24. METFIT FITTINGS MAY BE SUBSTITUTED FOR ELECTROFUSION FITTINGS WHERE NEEDED.
25. DO NOT SCALE FROM DRAWINGS.

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP

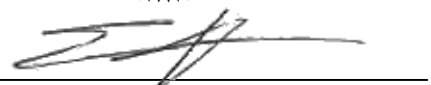
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
GENERAL NOTES			
SCALE: NOT TO SCALE		SHEET 2 OF 20	
DRAWN BY / DATE	CHECKED BY / DATE	SHEET NUMBER	REV. NO.
ZS 09/30/2020	AB 12/22/2020		
APPROVED BY / DATE			
EK 12/22/2020	MANEB21PIP026R1	MA-NEB-21-PIP-026-02	1

ISSUED FOR
CONSTRUCTION
12/22/2020

SEALED BY:



SIGNATURE




SEALED ON:

12/23/2020

LICENSE EXPIRATION:

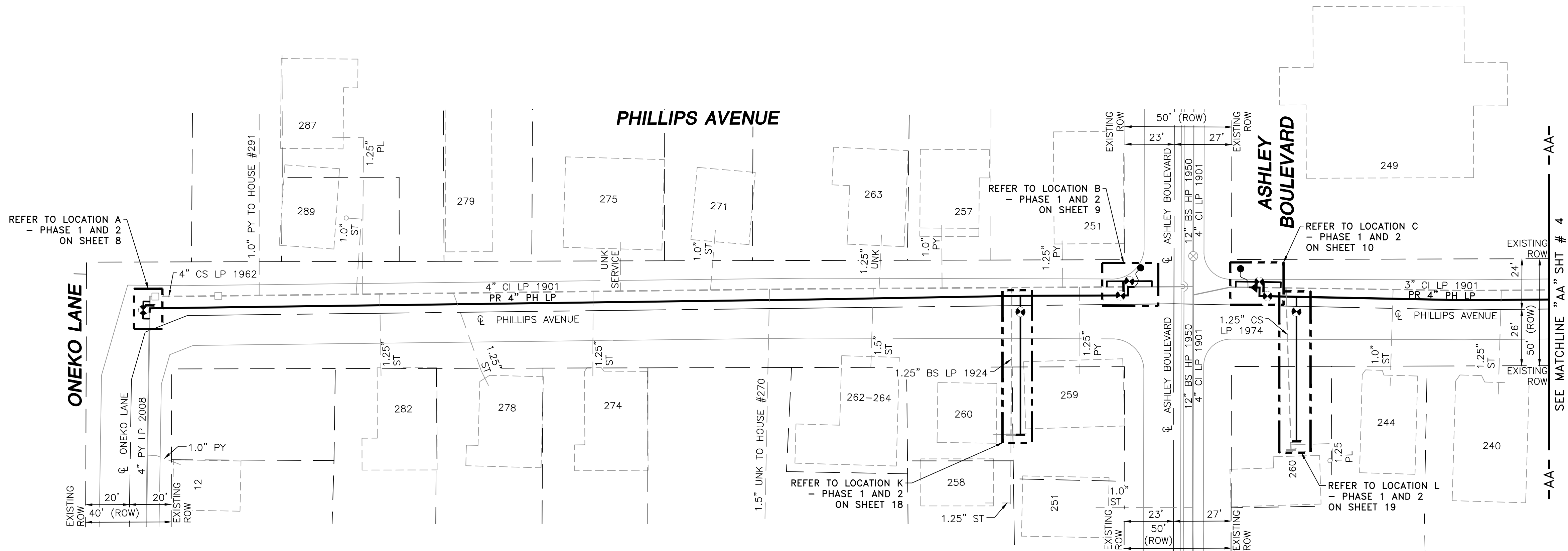
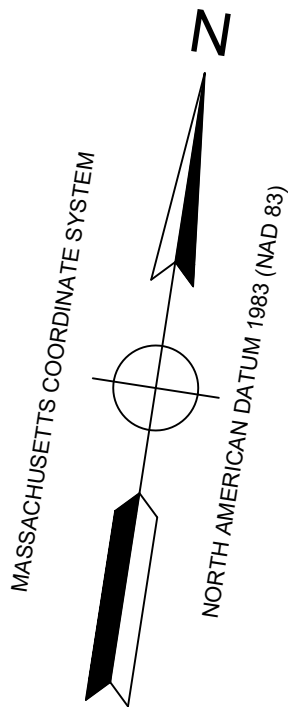
06/30/2022

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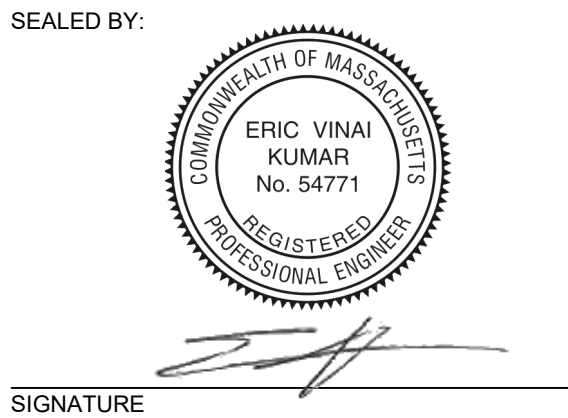
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION



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

LENGTH	SIZE	MATERIAL	DESCRIPTION	LENGTH	SIZE	MATERIAL	DESCRIPTION
130'	2"	PH	INSTALL	450'	4"	CI	RETIRE
615'	4"	PH	INSTALL	10'	4"	PY	RETIRE
70'	1.25"	BS	RETIRE				
75'	1.25"	CS	RETIRE				
135'	3"	CI	RETIRE				

ISSUED FOR
CONSTRUCTION
12/22/2020



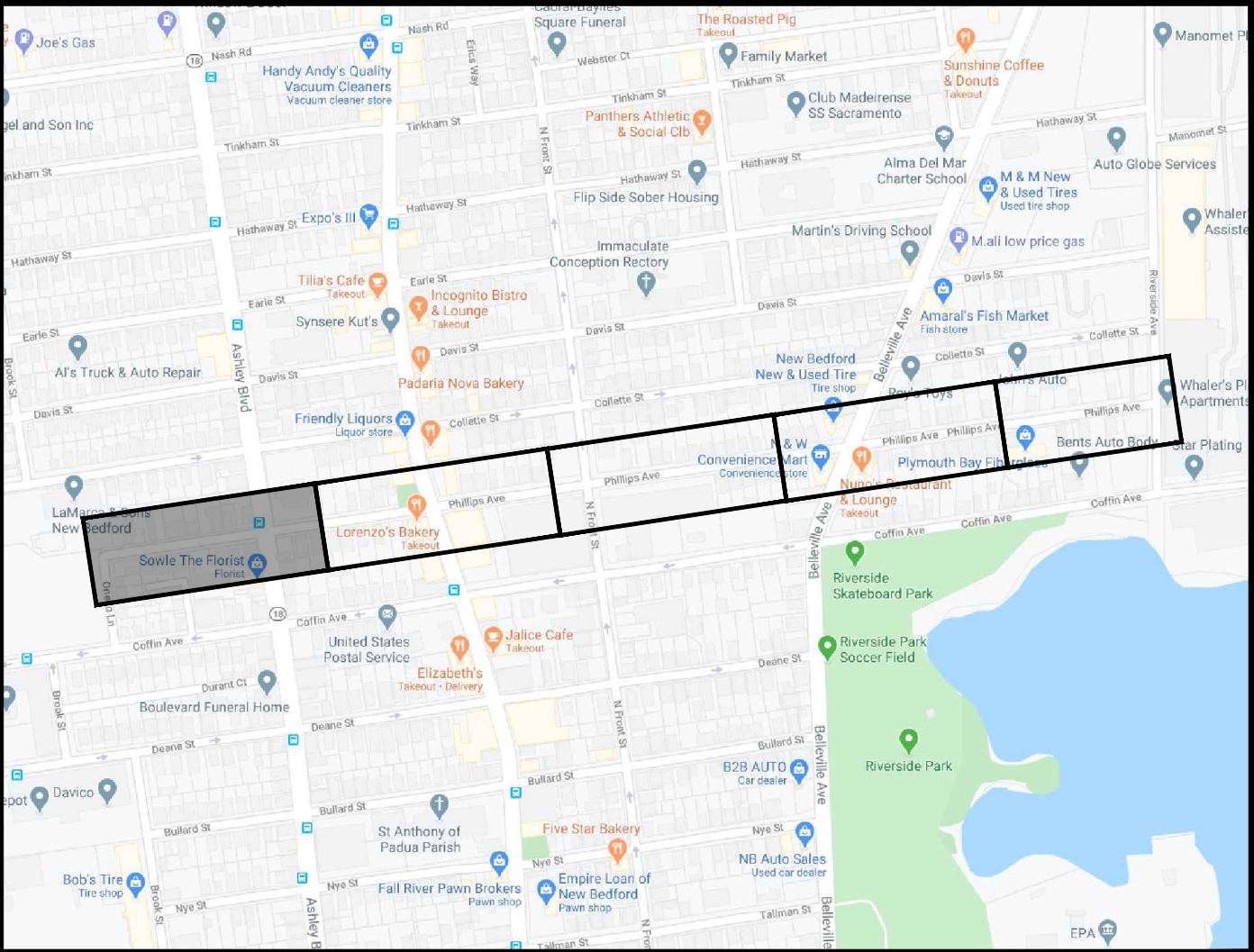
SEALED BY:
12/23/2020
LISCENSE EXPIRATION:
06/30/2022

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FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION



LOCUS PLAN
NOT TO SCALE

DRAWING LEGEND

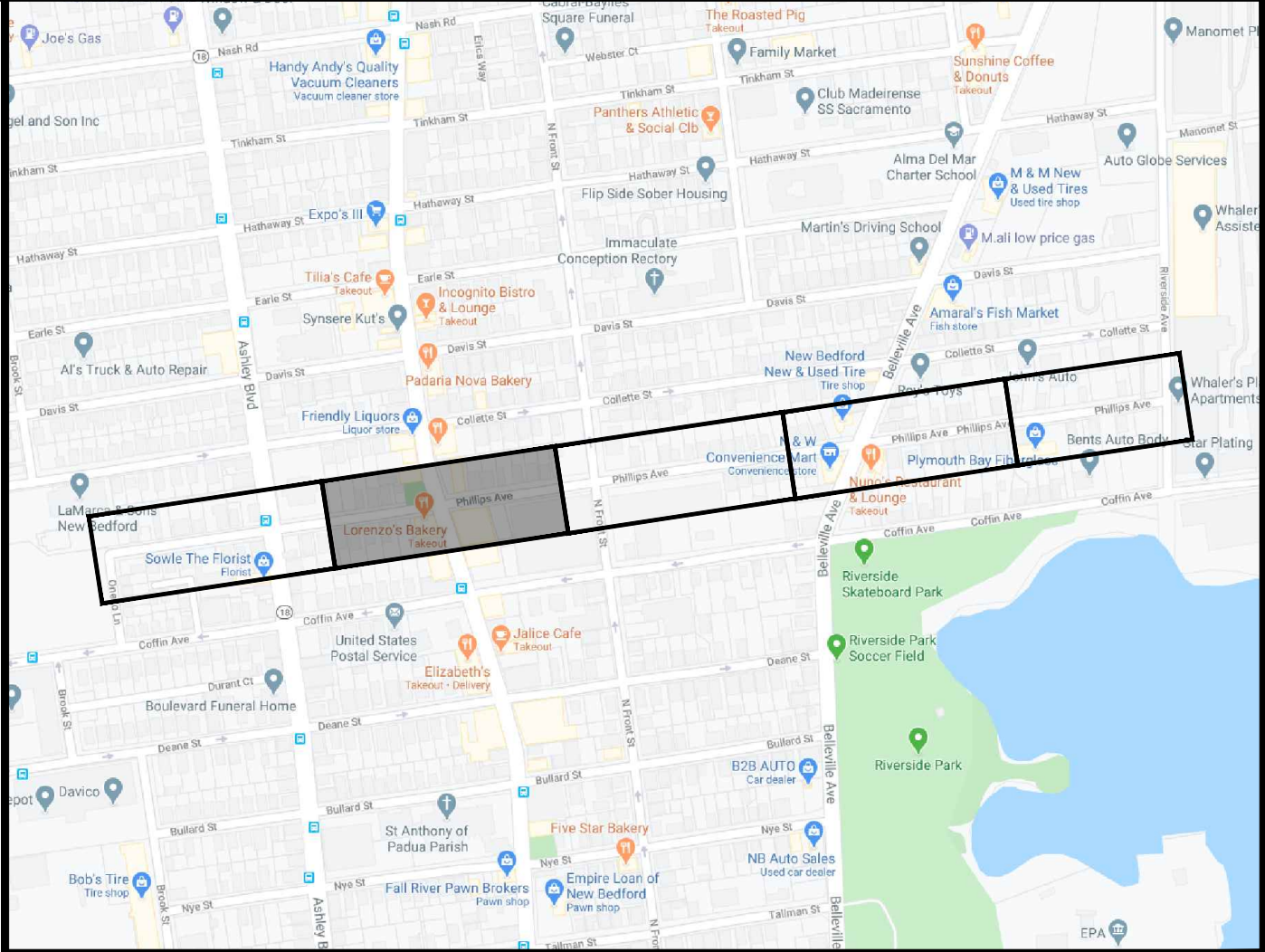
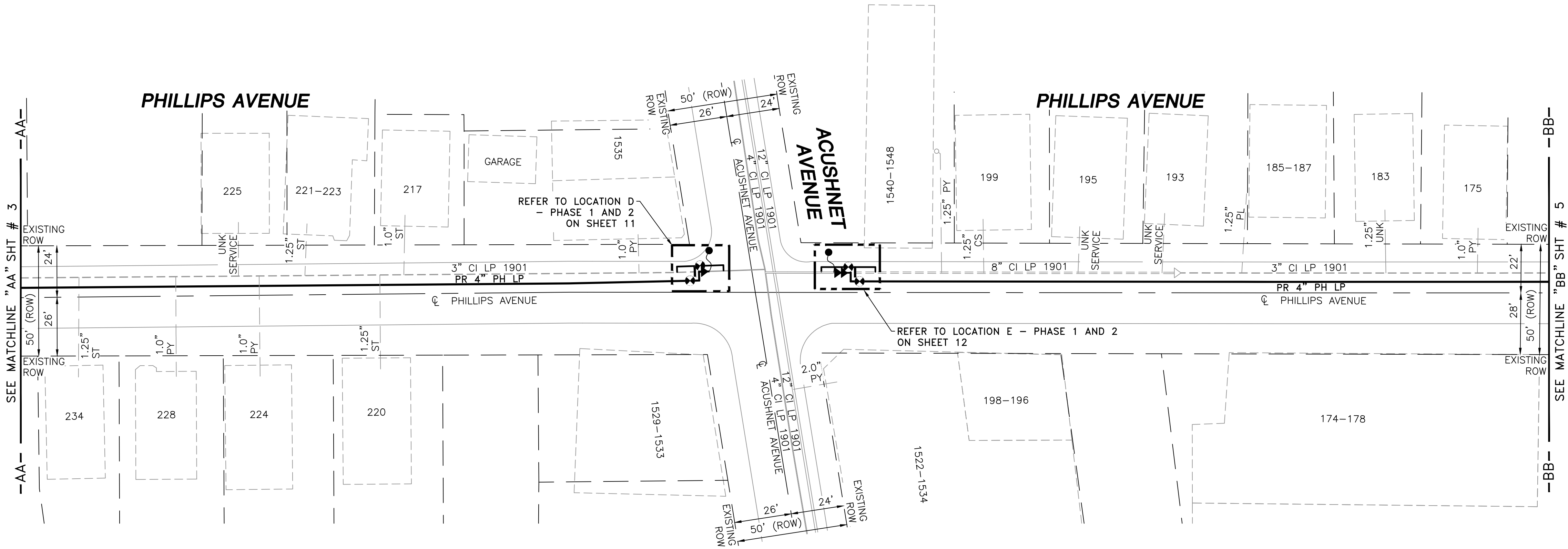
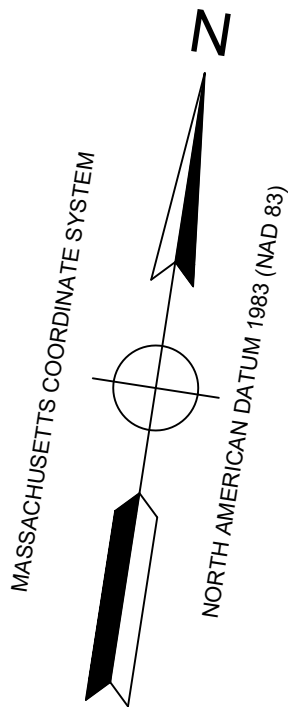
	UTILITY POLE		EXISTING GAS MAIN
	LIGHT POLE		RETIRED GAS MAIN
	CATCH BASIN		PROPOSED GAS MAIN
	FIRE HYDRANT		EXISTING SERVICE
	UTILITY MANHOLE		RIGHT OF WAY
	ELECTRIC MANHOLE		ELECTRIC
	TELEPHONE MANHOLE		TELEPHONE
	WATER MANHOLE		WATER
	SANITARY MANHOLE		SANITARY SEWER
	STORM MANHOLE		STORM SEWER
	EXISTING REDUCER		PROPOSED REDUCER
	EXISTING CAP		PROPOSED CAP
	EXISTING VALVE		PROPOSED VALVE
	EXISTING COUPLING		PROPOSED ANODE

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP

REVISION STATUS
EVERSOURCE
ENERGY
PHILLIPS AVENUE MAIN RELAY
NEW BEDFORD, MASSACHUSETTS

INSTALLATION PLAN

SCALE: 1"=30'		SHEET 3 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE MANEB21PIP026R1	SHEET NUMBER MA-NEB-21-PIP-026-03	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020			



LOCUS PLAN
NOT TO SCALE

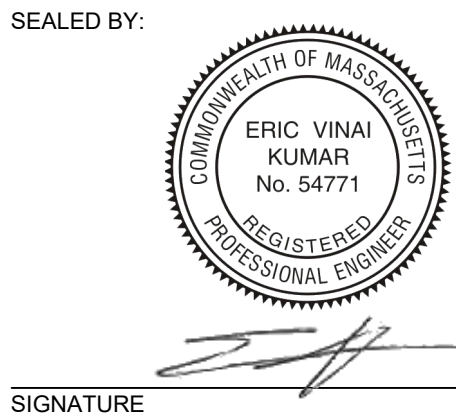
DRAWING LEGEND

	UTILITY POLE		EXISTING GAS MAIN
	LIGHT POLE		RETIRED GAS MAIN
	CATCH BASIN		PROPOSED GAS MAIN
	FIRE HYDRANT		EXISTING SERVICE
	UTILITY MANHOLE		RIGHT OF WAY
	ELECTRIC MANHOLE		ELECTRIC
	TELEPHONE MANHOLE		TELEPHONE
	WATER MANHOLE		WATER
	SANITARY MANHOLE		SANITARY SEWER
	STORM MANHOLE		STORM SEWER
	EXISTING REDUCER		PROPOSED REDUCER
	EXISTING CAP		PROPOSED CAP
	EXISTING VALVE		PROPOSED VALVE
	EXISTING COUPLING		PROPOSED ANODE

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

LENGTH	SIZE	MATERIAL	DESCRIPTION
645'	4"	PH	INSTALL
475'	3"	CI	RETIRE
140'	8"	CI	RETIRE

ISSUED FOR
CONSTRUCTION
12/22/2020



SEALED BY:

12/23/2020

LICENSE EXPIRATION:

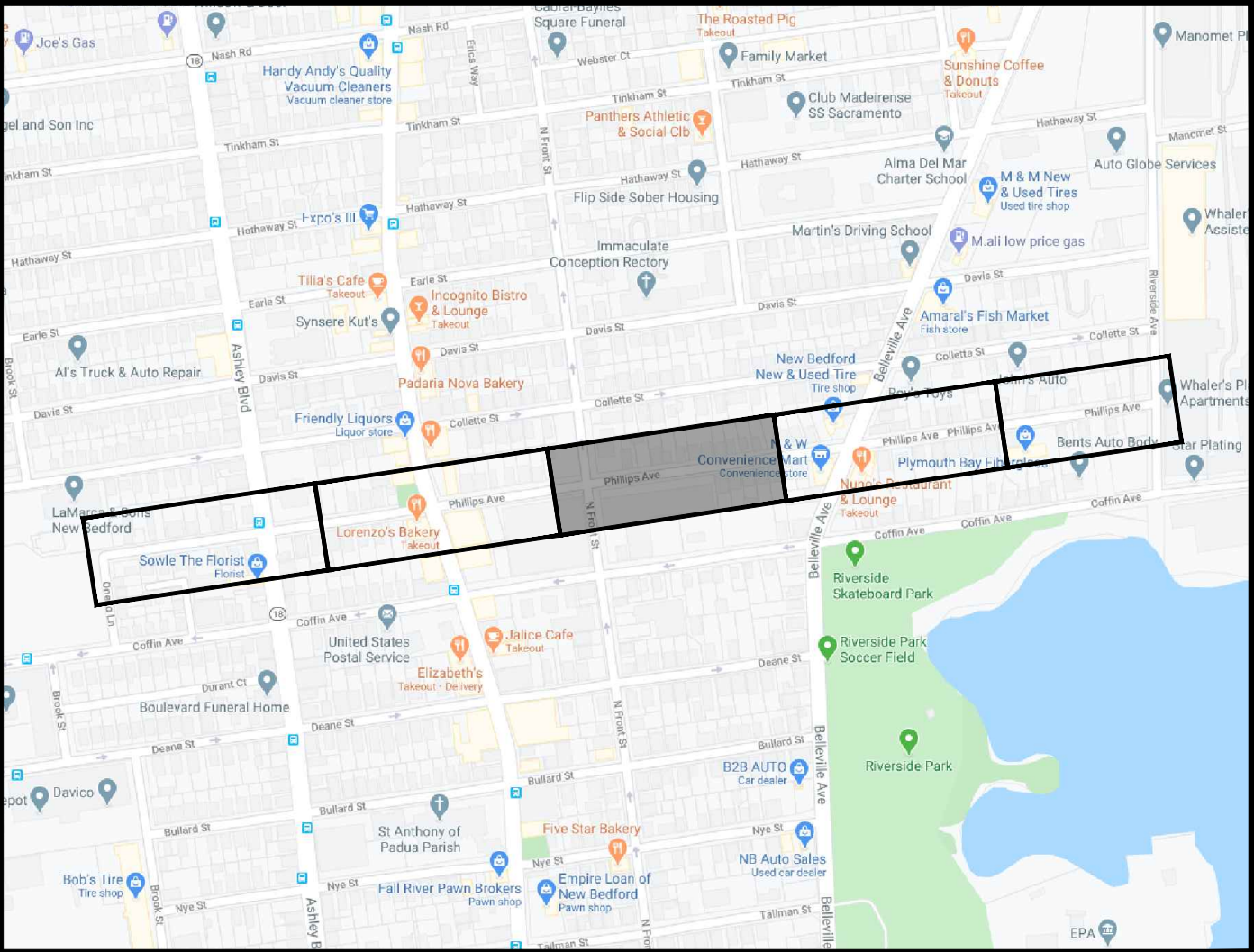
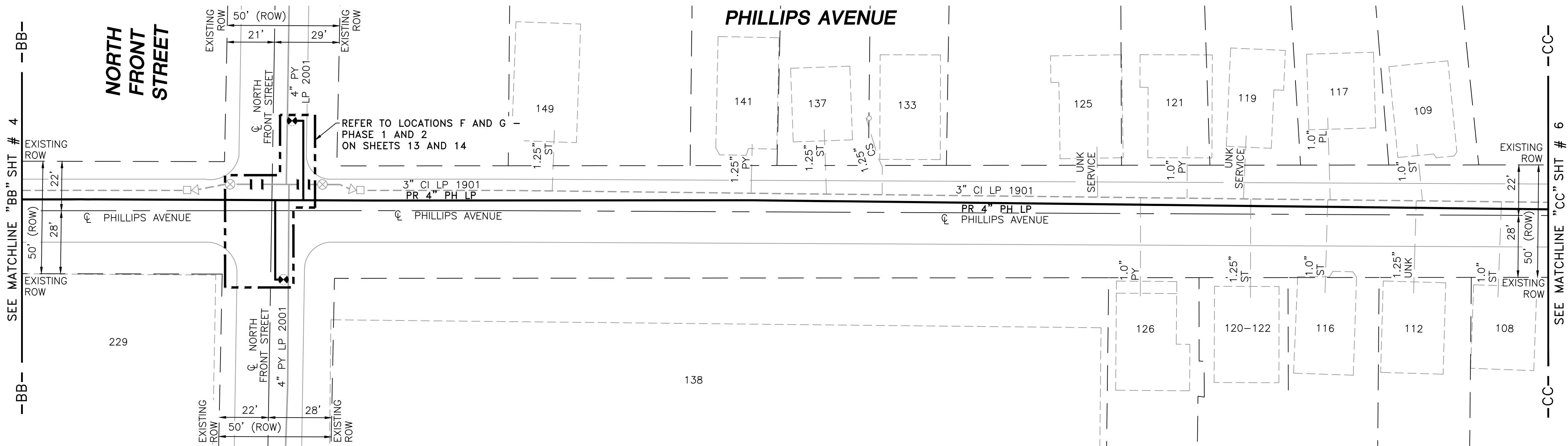
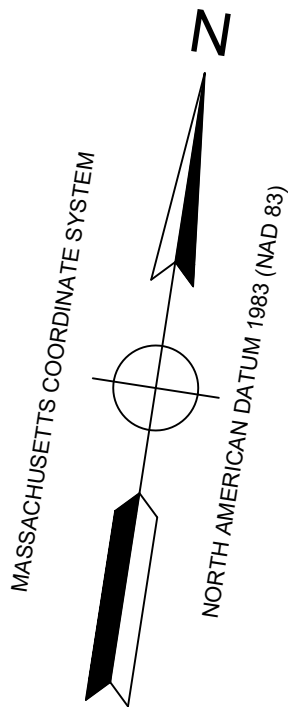
06/30/2022

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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FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS INSTALLATION PLAN			
SCALE: 1"=30'		SHEET 4 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE MANEB21PIP026R1	SHEET NUMBER MA-NEB-21-PIP-026-04	REV. NO. 1



LOCUS PLAN
NOT TO SCALE

DRAWING LEGEND

	UTILITY POLE		EXISTING GAS MAIN
	LIGHT POLE		RETIRED GAS MAIN
	CATCH BASIN		PROPOSED GAS MAIN
	FIRE HYDRANT		EXISTING SERVICE
	UTILITY MANHOLE		RIGHT OF WAY
	ELECTRIC MANHOLE		ELECTRIC
	TELEPHONE MANHOLE		TELEPHONE
	WATER MANHOLE		WATER
	SANITARY MANHOLE		SANITARY SEWER
	STORM MANHOLE		STORM SEWER
	EXISTING REDUCER		PROPOSED REDUCER
	EXISTING CAP		PROPOSED CAP
	EXISTING VALVE		PROPOSED VALVE
	EXISTING COUPLING		PROPOSED ANODE

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

LENGTH	SIZE	MATERIAL	DESCRIPTION
655'	4"	PH	INSTALL
610'	3"	CI	RETIRE
10'	4"	PY	RETIRE

ISSUED FOR
CONSTRUCTION
12/22/2020

SEALED BY:

SIGNATURE

SEALED ON:

12/23/2020

LICENSE EXPIRATION:

06/30/2022

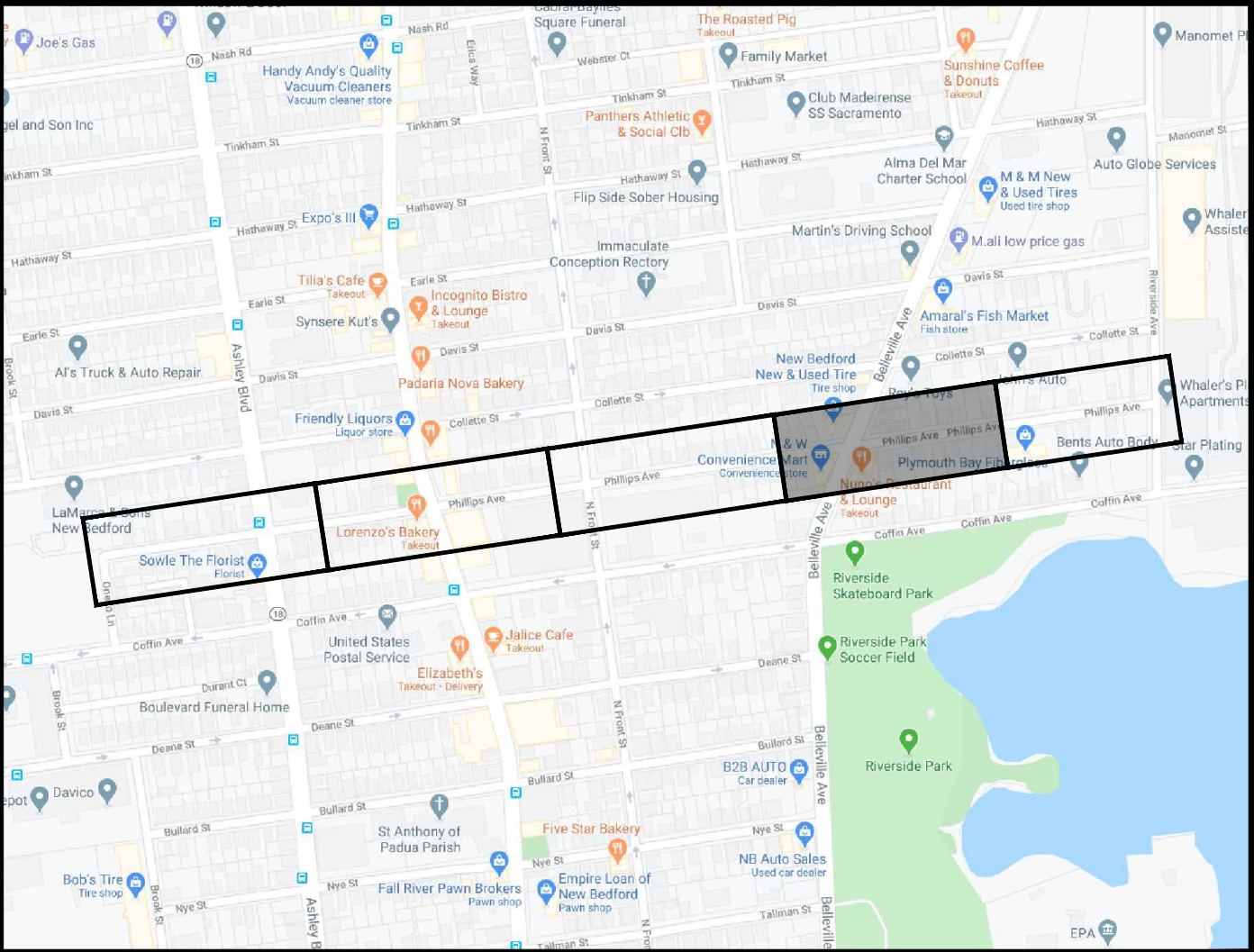
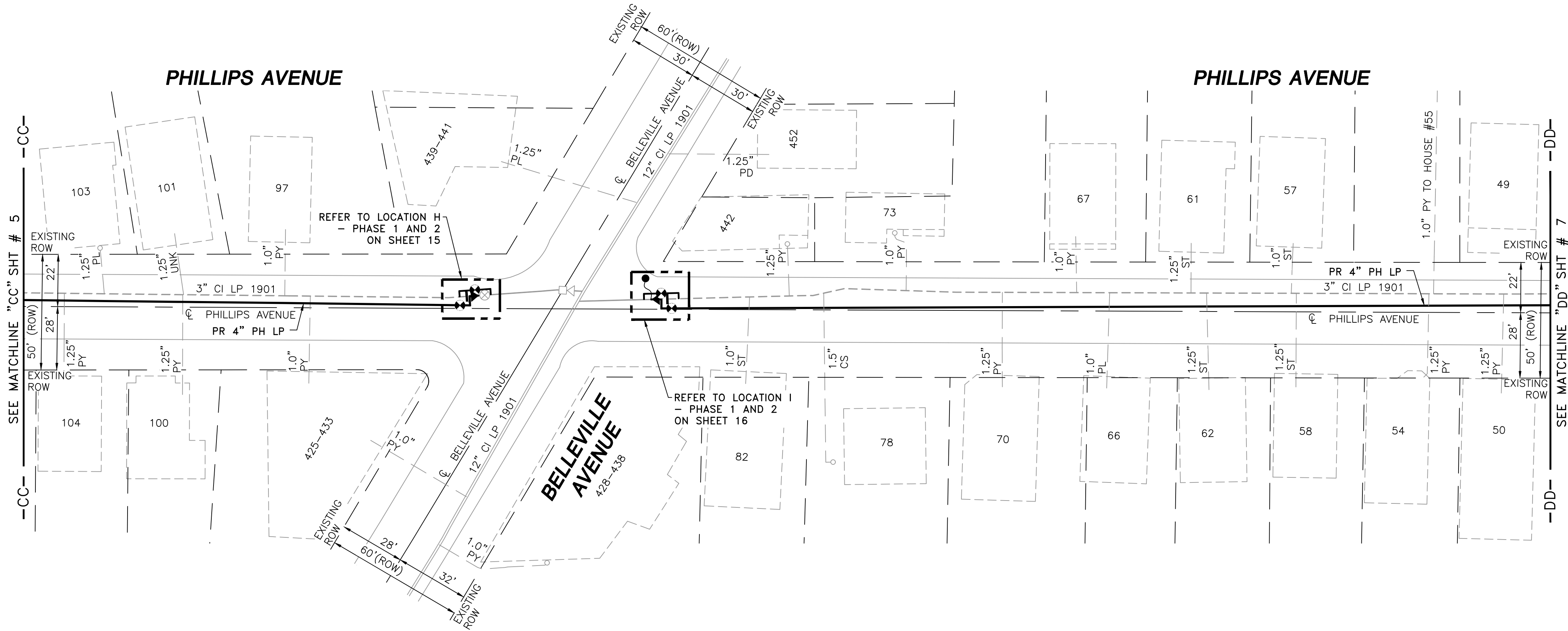
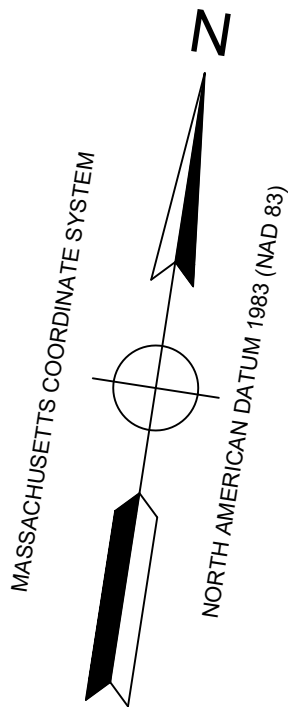
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PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS INSTALLATION PLAN			
SCALE: 1"=30'		SHEET 5 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE MANEB21PIP026R1	SHEET NUMBER MA-NEB-21-PIP-026-05	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020			



LOCUS PLAN
NOT TO SCALE

DRAWING LEGEND

	UTILITY POLE		EXISTING GAS MAIN
	LIGHT POLE		RETIRED GAS MAIN
	CATCH BASIN		PROPOSED GAS MAIN
	FIRE HYDRANT		EXISTING SERVICE
	UTILITY MANHOLE		RIGHT OF WAY
	ELECTRIC MANHOLE		ELECTRIC
	TELEPHONE MANHOLE		TELEPHONE
	WATER MANHOLE		WATER
	SANITARY MANHOLE		SANITARY SEWER
	STORM MANHOLE		STORM SEWER
	EXISTING REDUCER		PROPOSED REDUCER
	EXISTING CAP		PROPOSED CAP
	EXISTING VALVE		PROPOSED VALVE
	EXISTING COUPLING		PROPOSED ANODE

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

LENGTH	SIZE	MATERIAL	DESCRIPTION
590'	4"	PH	INSTALL
575'	3"	CI	RETIRE

ISSUED FOR
CONSTRUCTION
12/22/2020

SEALED BY:

SIGNATURE

SEALED ON:

12/23/2020

LICENSE EXPIRATION:

06/30/2022

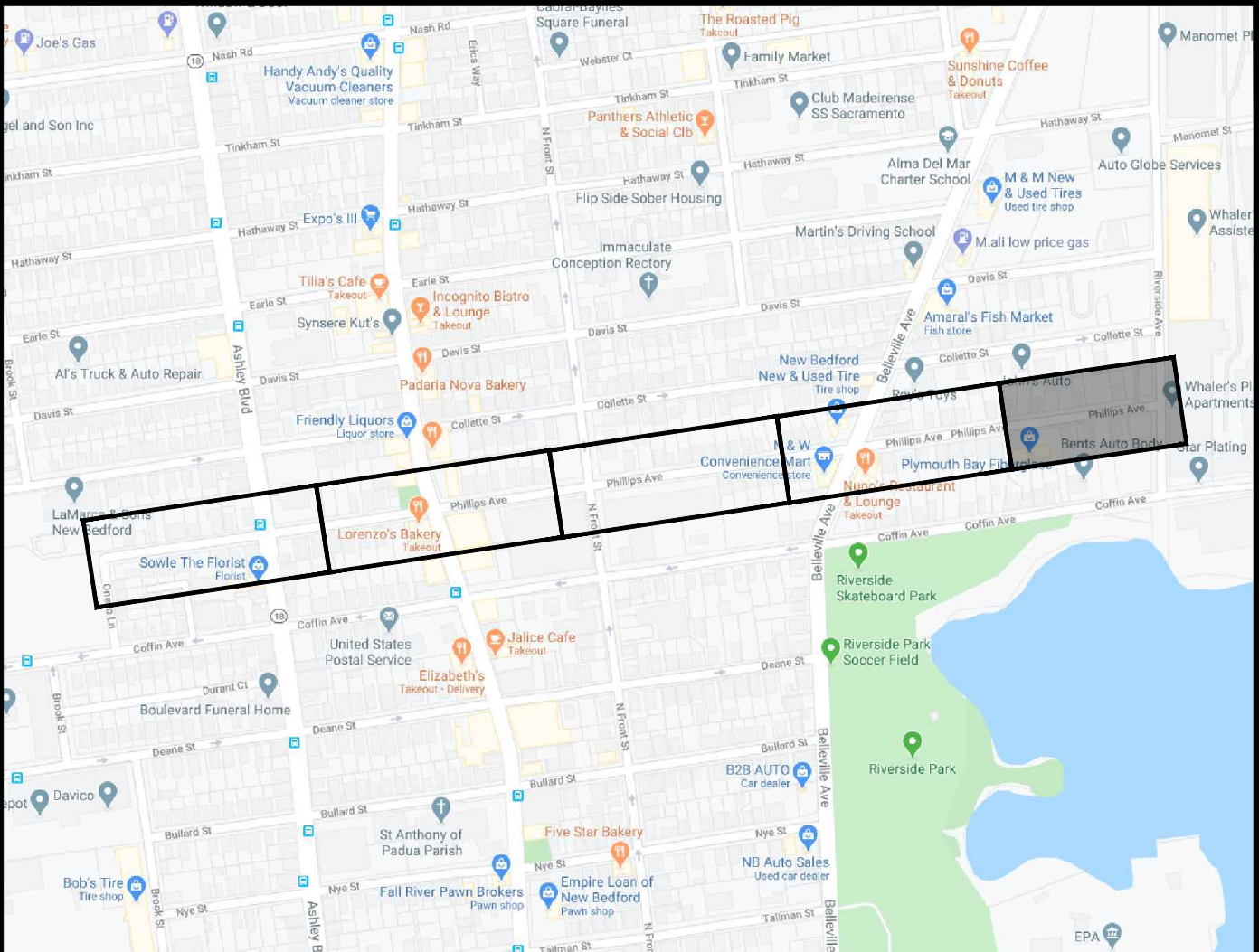
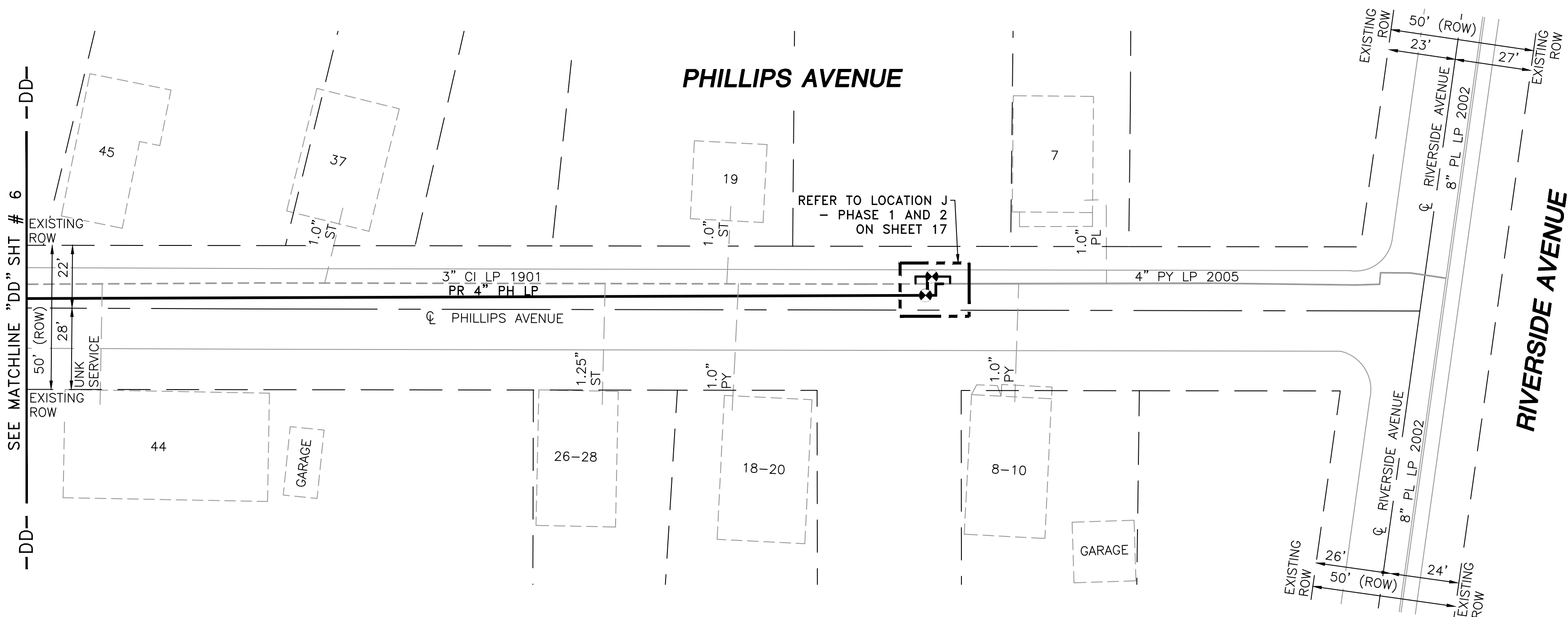
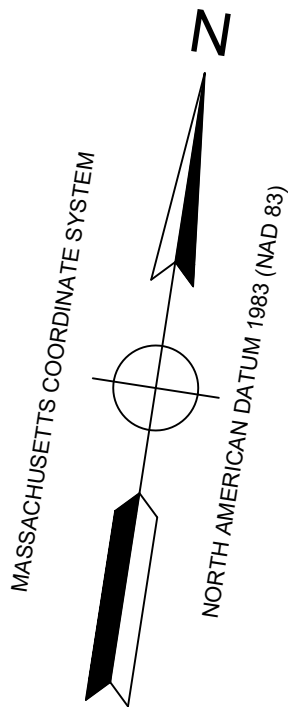
DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192, OF MINIMUM FEDERAL SAFETY STANDARDS AND GPTC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.

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FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
INSTALLATION PLAN			
SCALE: 1"=30'		SHEET 6 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE MANEB21PIP026R1	SHEET NUMBER MA-NEB-21-PIP-026-06	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020			



LOCUS PLAN
NOT TO SCALE

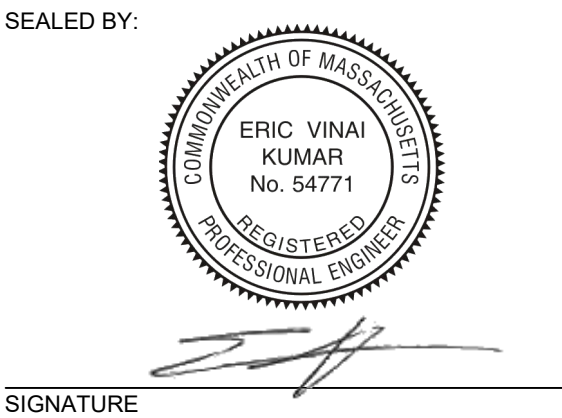
DRAWING LEGEND

	UTILITY POLE		EXISTING GAS MAIN
	LIGHT POLE		RETIRED GAS MAIN
	CATCH BASIN		PROPOSED GAS MAIN
	FIRE HYDRANT		EXISTING SERVICE
	UTILITY MANHOLE		RIGHT OF WAY
	ELECTRIC MANHOLE		ELECTRIC
	TELEPHONE MANHOLE		TELEPHONE
	WATER MANHOLE		WATER
	SANITARY MANHOLE		SANITARY SEWER
	STORM MANHOLE		STORM SEWER
	EXISTING REDUCER		PROPOSED REDUCER
	EXISTING CAP		PROPOSED CAP
	EXISTING VALVE		PROPOSED VALVE
	EXISTING COUPLING		PROPOSED ANODE

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

LENGTH	SIZE	MATERIAL	DESCRIPTION
325'	4"	PH	INSTALL
315'	3"	CI	RETIRE

ISSUED FOR
CONSTRUCTION
12/22/2020



SEALED BY:

12/23/2020

LICENSE EXPIRATION:

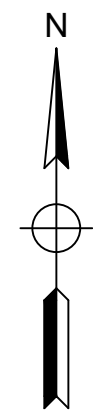
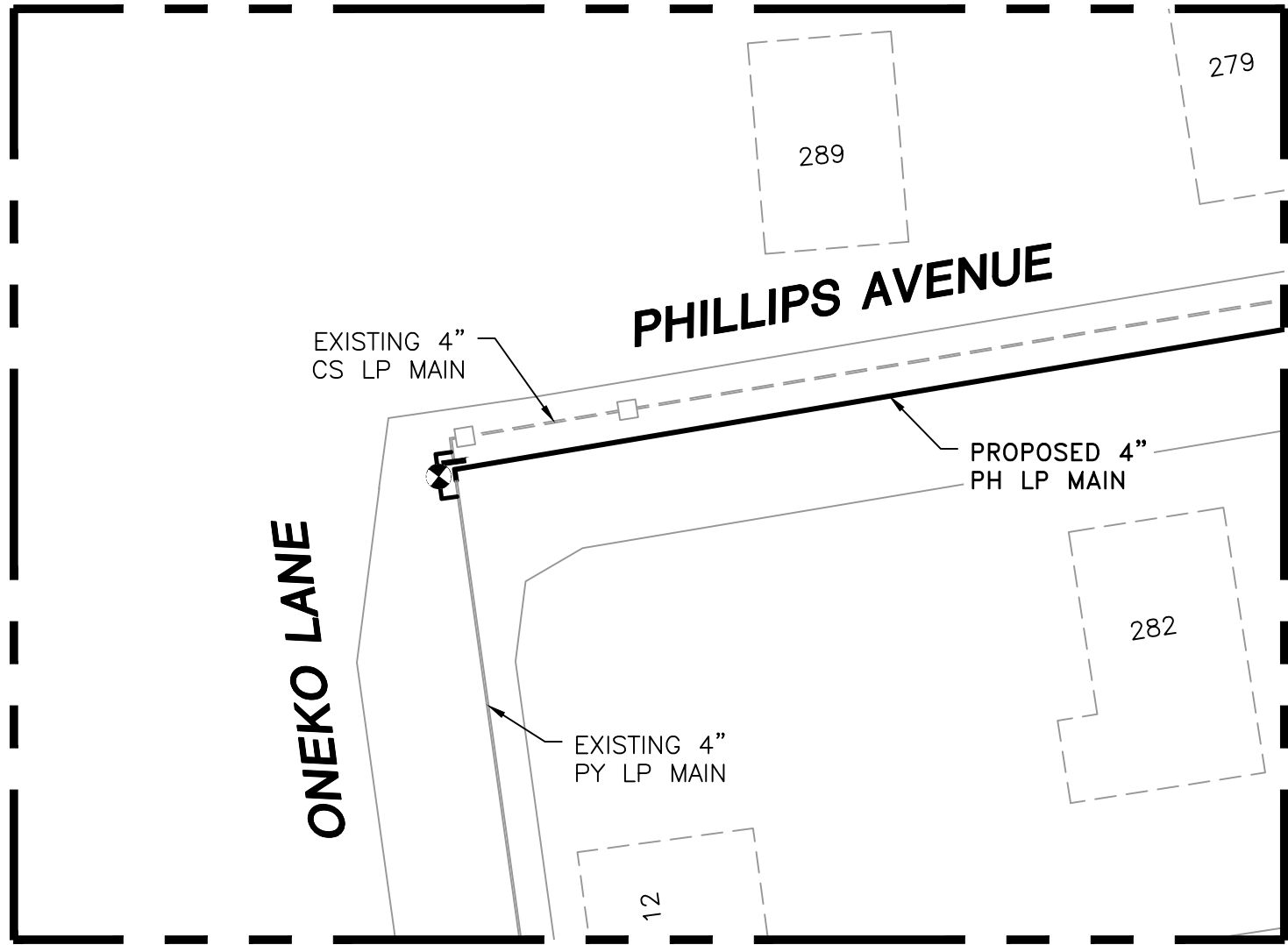
06/30/2022

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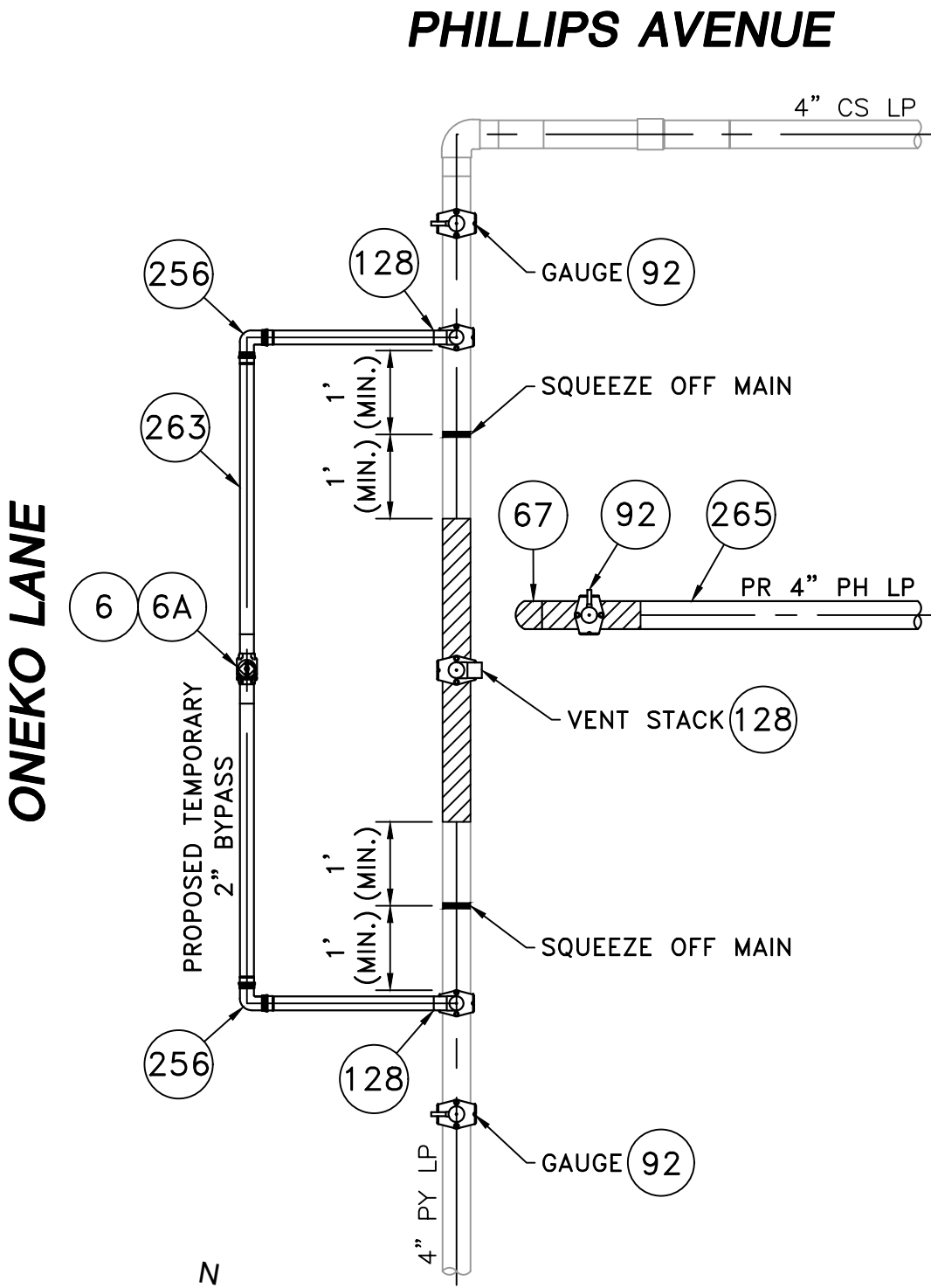
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS INSTALLATION PLAN			
SCALE: 1"=30'		SHEET 7 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE MANEB21PIP026R1	SHEET NUMBER MA-NEB-21-PIP-026-07	REV. NO. 1



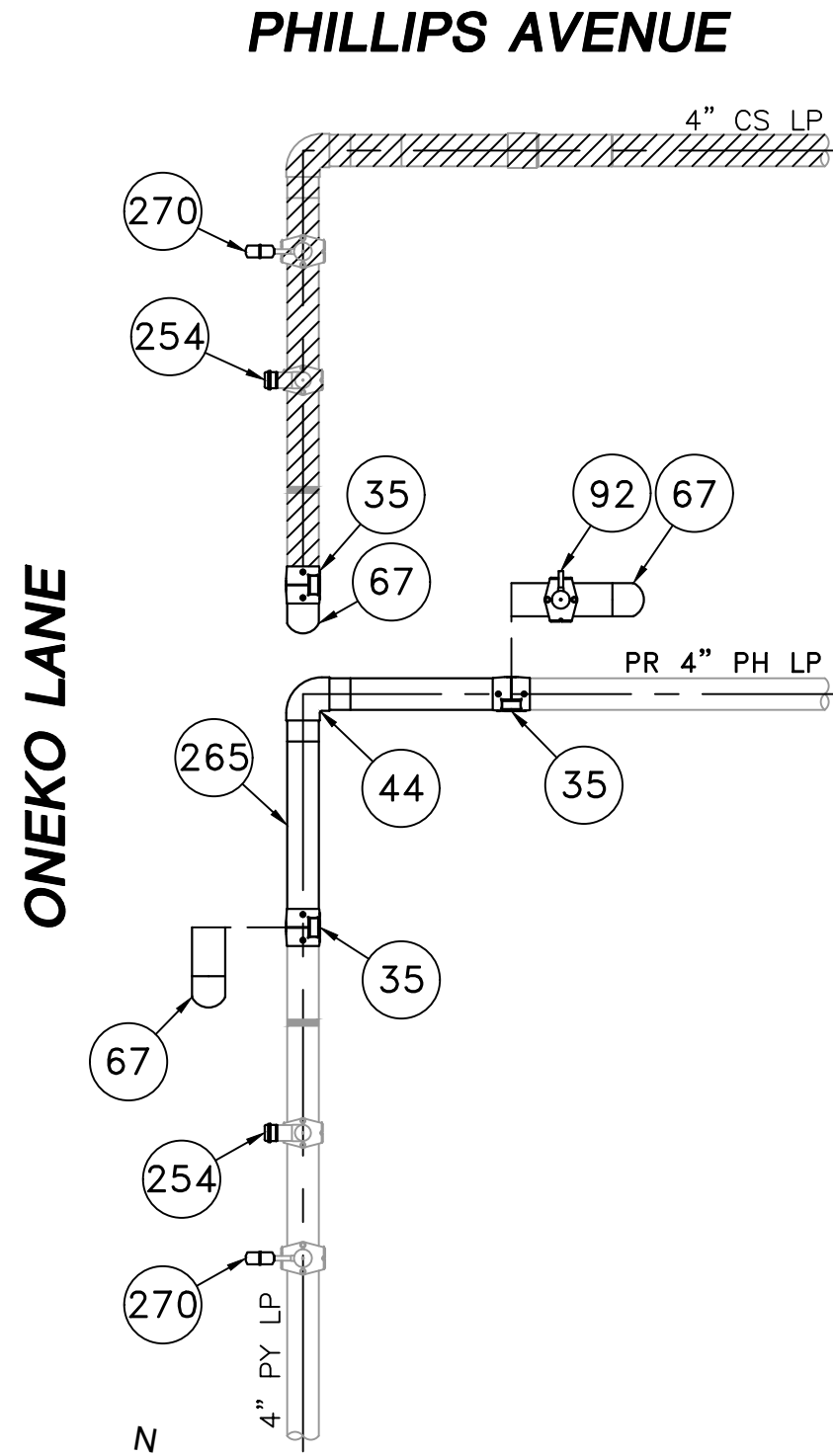
LOCATION A - PLAN VIEW

(SCALE: 1"=30")
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)



LOCATION A - PHASE 1

(SCALE: 1"=2")
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)



LOCATION A - PHASE 2

(SCALE: 1"=2")
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION A - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	4	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	3	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	10'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513

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

ISSUED FOR
CONSTRUCTION
12/22/2020

SEALED BY:

SIGNATURE

SEALED ON:
12/23/2020
LICENSE
EXPIRATION:
06/30/2022

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.

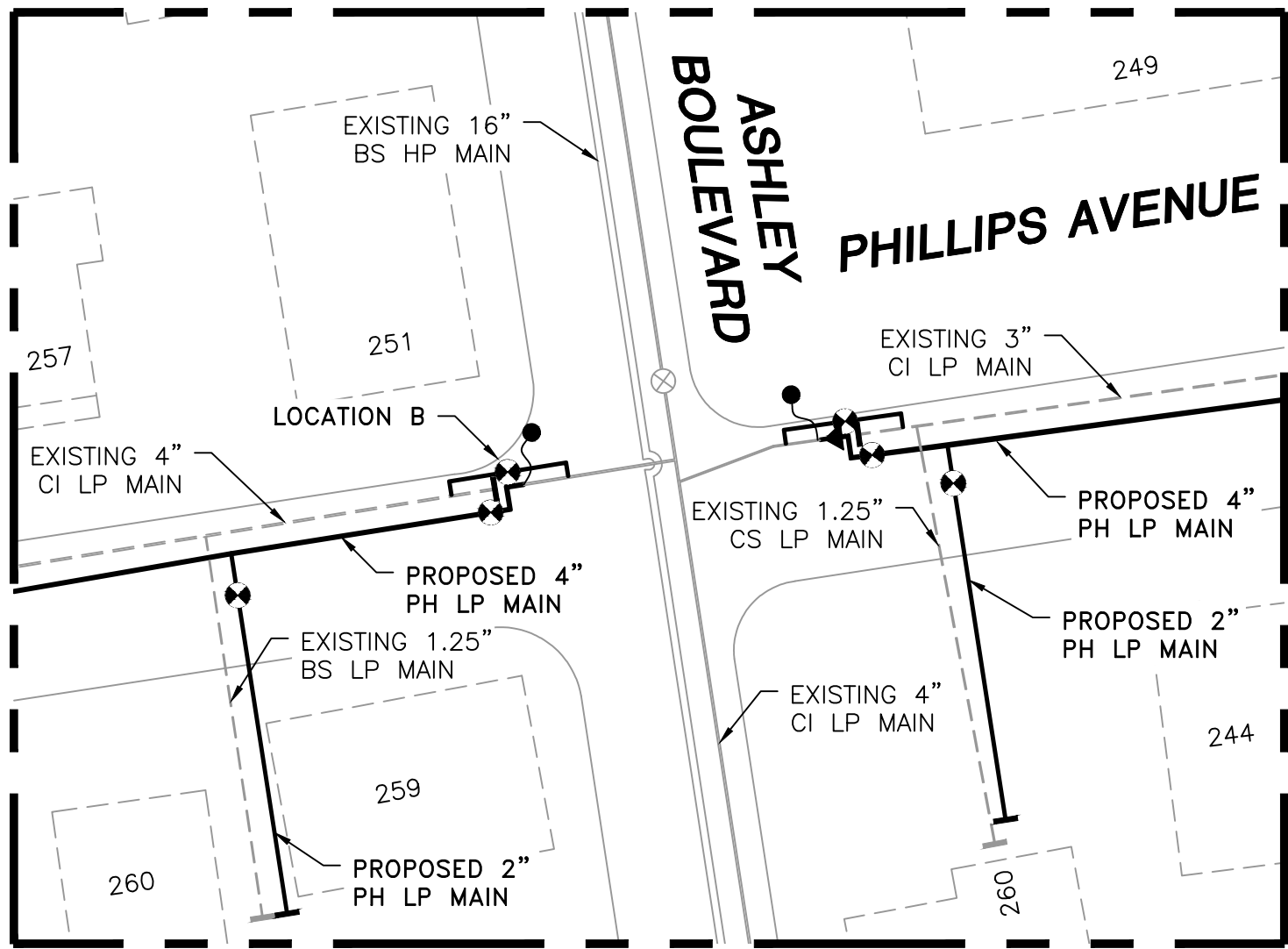
ENEngineering

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

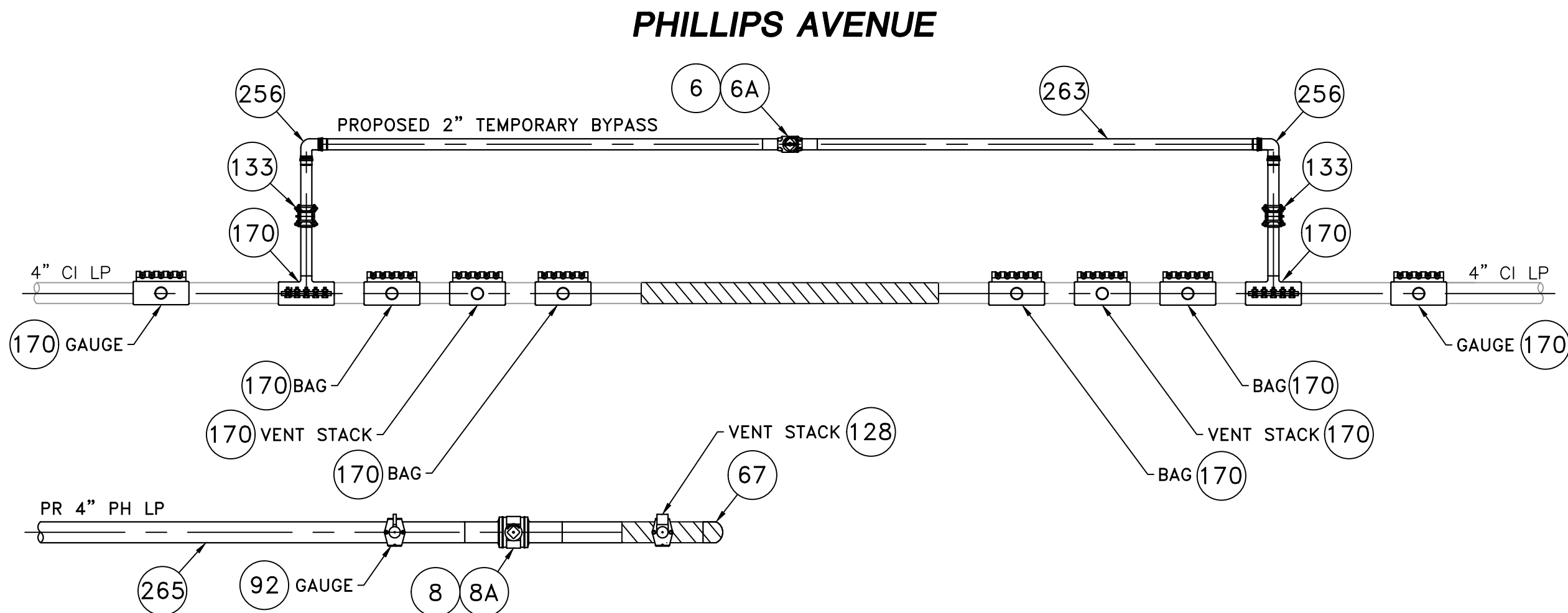
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP

REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION A - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 8 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-08	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		

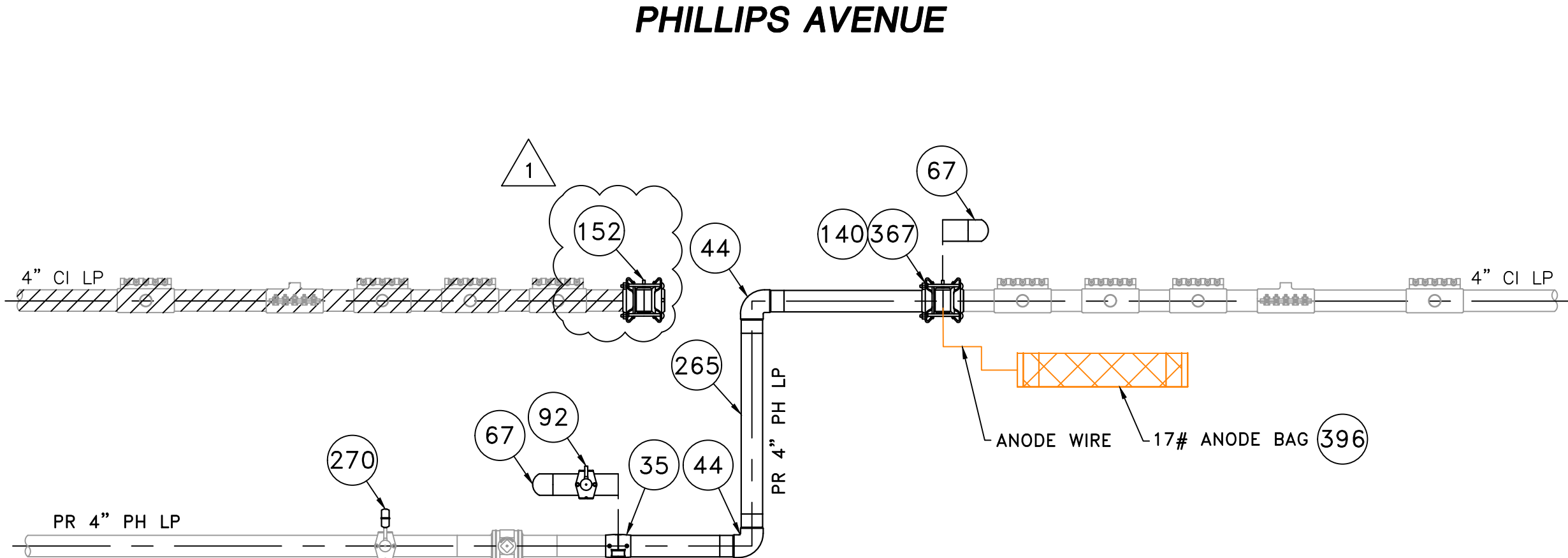


LOCATION B - PLAN VIEW
(SCALE: 1"=30")
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)



LOCATION B - PHASE 1
(SCALE: 1"=2')
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)


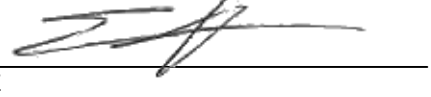
PHILLIPS AVENUE MAIN RELAY - LOCATION B - SCHEDULE OF MATERIALS						
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION		MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.		ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID		
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.		ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID		
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.		ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.		ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.		ASTM D2513
92	2	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.		ASTM D2513
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.		ASTM D2513
133	2	2"	578187	COUPLING, BOLTED MECHANICAL, IPS TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.		ASTM A-53
140	1	4"	578127	COUPLING, BOLTED MECHANICAL, CIP TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.		ASTM A-53
152	1	4"	578128	END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL		
170	10	4" x 2"	543028	BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.		
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.		ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL		ASTM D2513
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL		
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.		ASTM D2513
367	1	4"	578036	INSERT, STIFFENER, 4 IN IPS SDR 11.5, 8 IN LG, RED EPOXY COATING, SMITH BLAIR		
396	1	17#	577776	ANODE BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB WEIGHT		



LOCATION B - PHASE 1
(SCALE: 1"=2')
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)

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

ISSUED FOR
CONSTRUCTION
12/22/2020

SEALED BY:

SIGNATURE


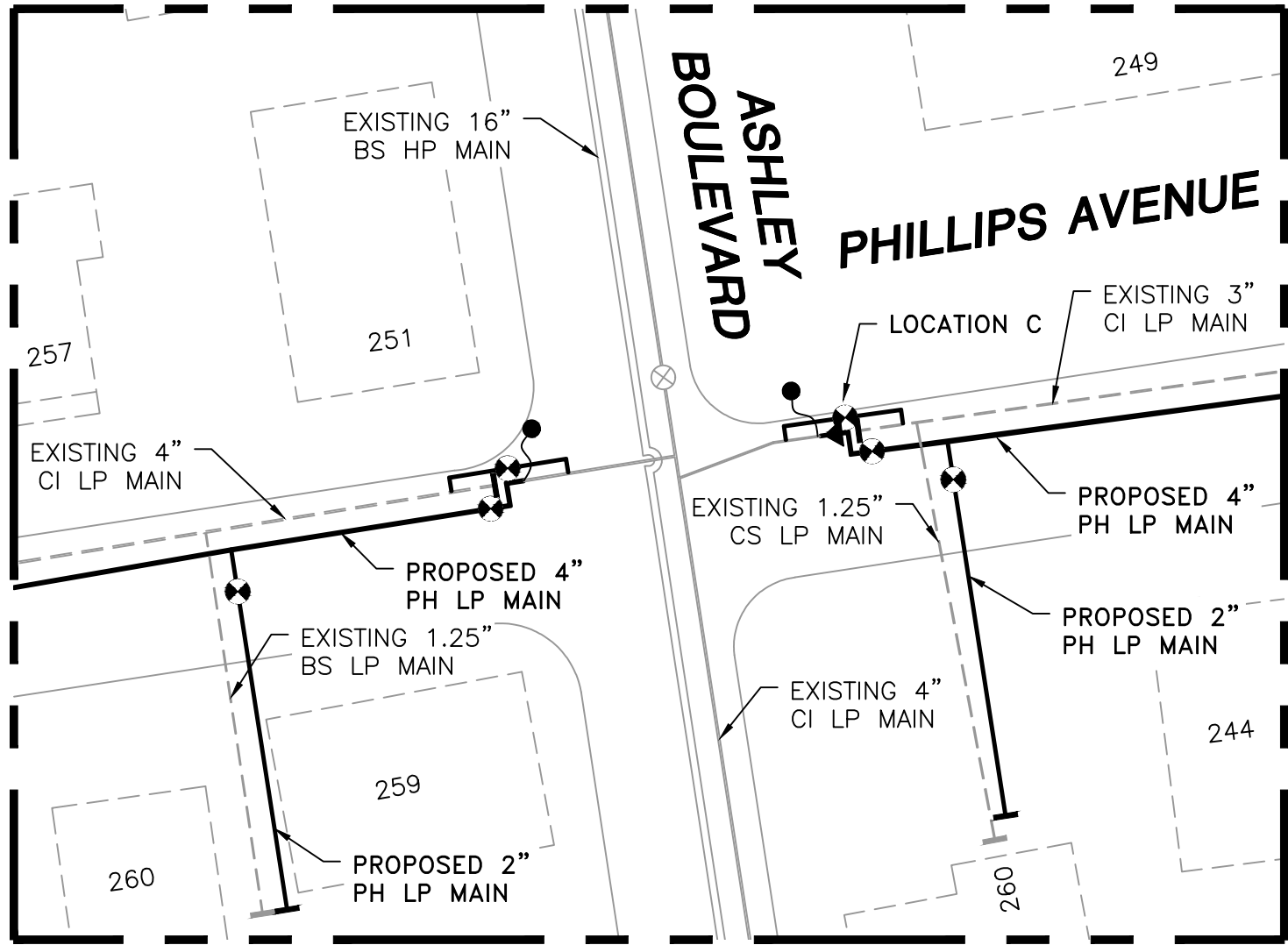
SEALED ON:
12/23/2020
LICENSE
EXPIRATION:
06/30/2022

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

FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

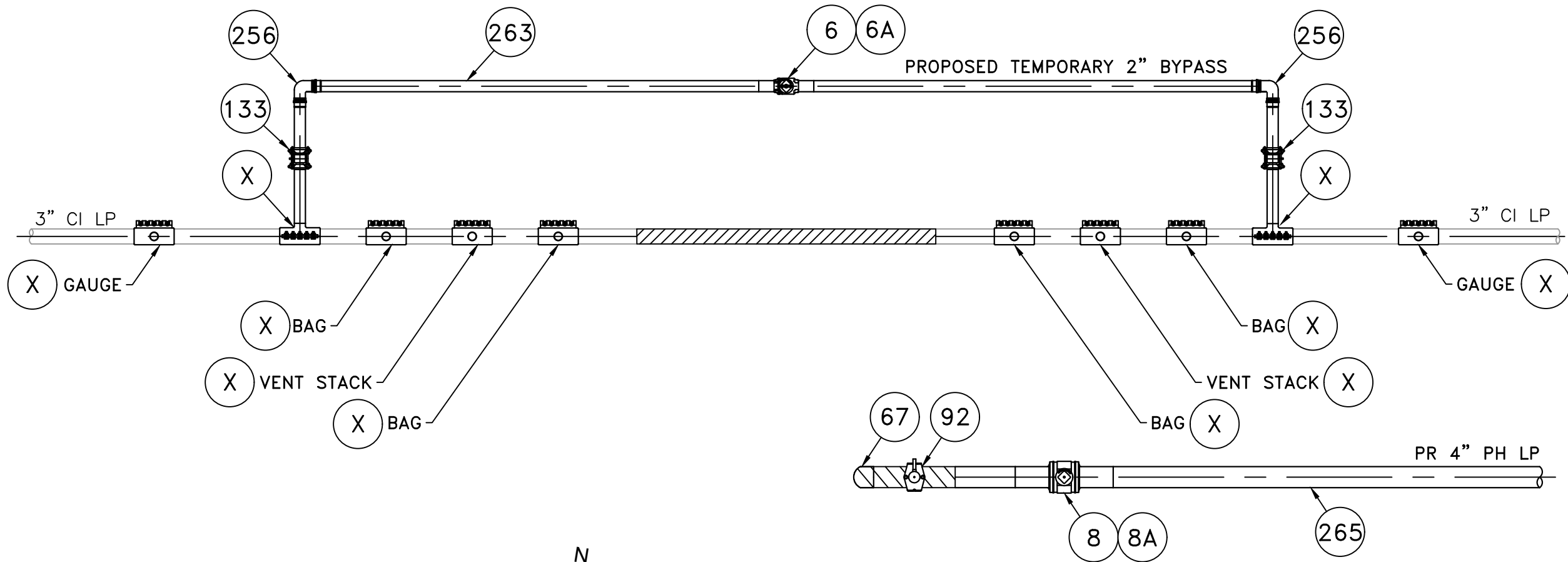
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0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP

REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION B - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 9 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-09	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		



LOCATION C - PLAN VIEW
(SCALE: 1"=30')
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)

ASHLEY BOULEVARD

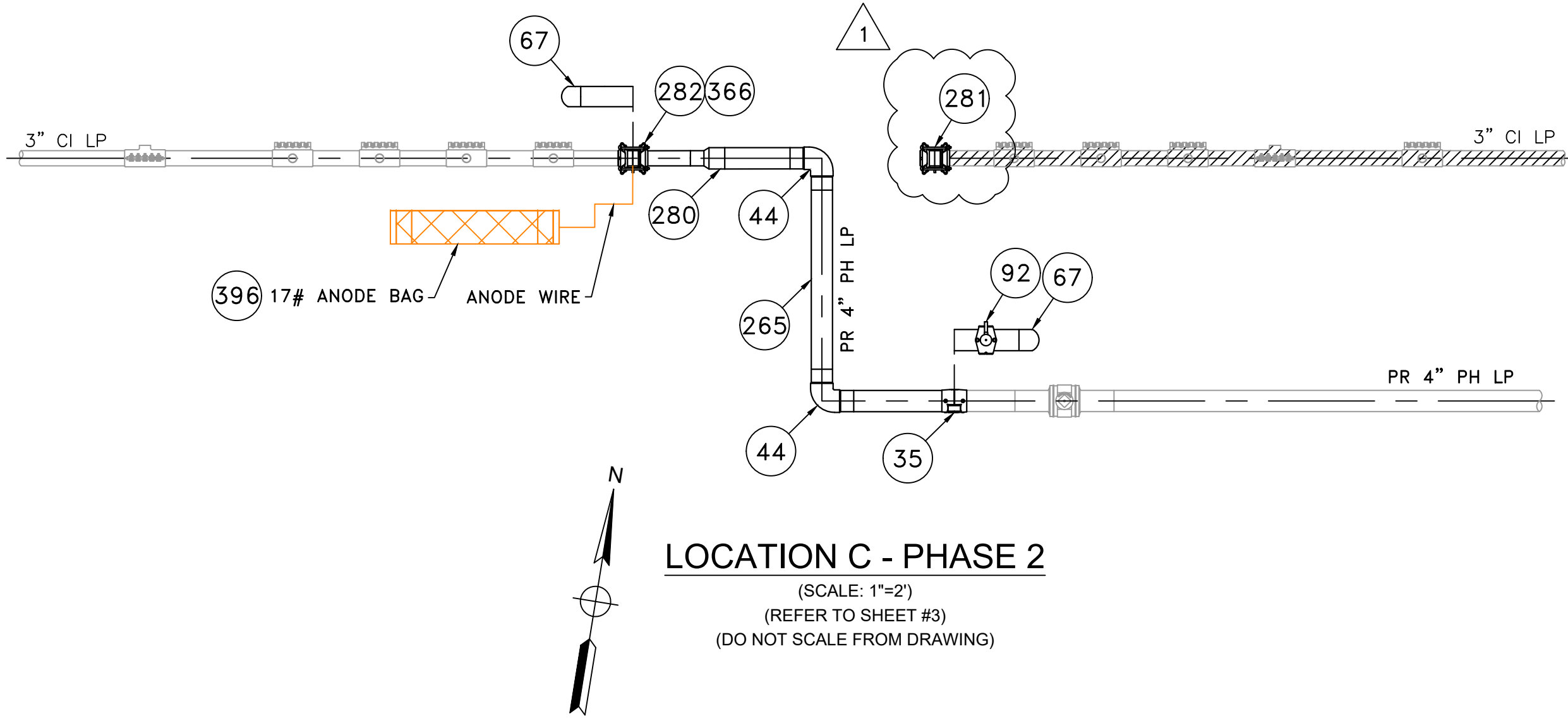


LOCATION C - PHASE 1
(SCALE: 1"=2')
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION C - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	2	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
133	2	2"	578187	COUPLING, BOLTED MECHANICAL, IPS TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	ASTM A-53
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
264	5'	3"	592669	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
280	1	4" X 3"	601067	REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	
281	1	3"		END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	
282	1	3"	544075	COUPLING, BOLTED MECHANICAL, CIP TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	
366	1	3"	578035	INSERT, STIFFENER, 3 IN IPS SDR 11.5, 8 IN LG, RED EPOXY COATING, SMITH BLAIR	
396	1	17#	577776	ANODE BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB WEIGHT	
X	10	3" x 2"		BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.	

PHILLIPS AVENUE


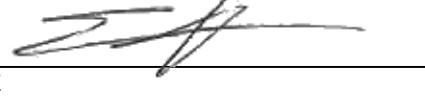
ASHLEY BOULEVARD



LOCATION C - PHASE 2
(SCALE: 1"=2')
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)

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

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12/22/2020

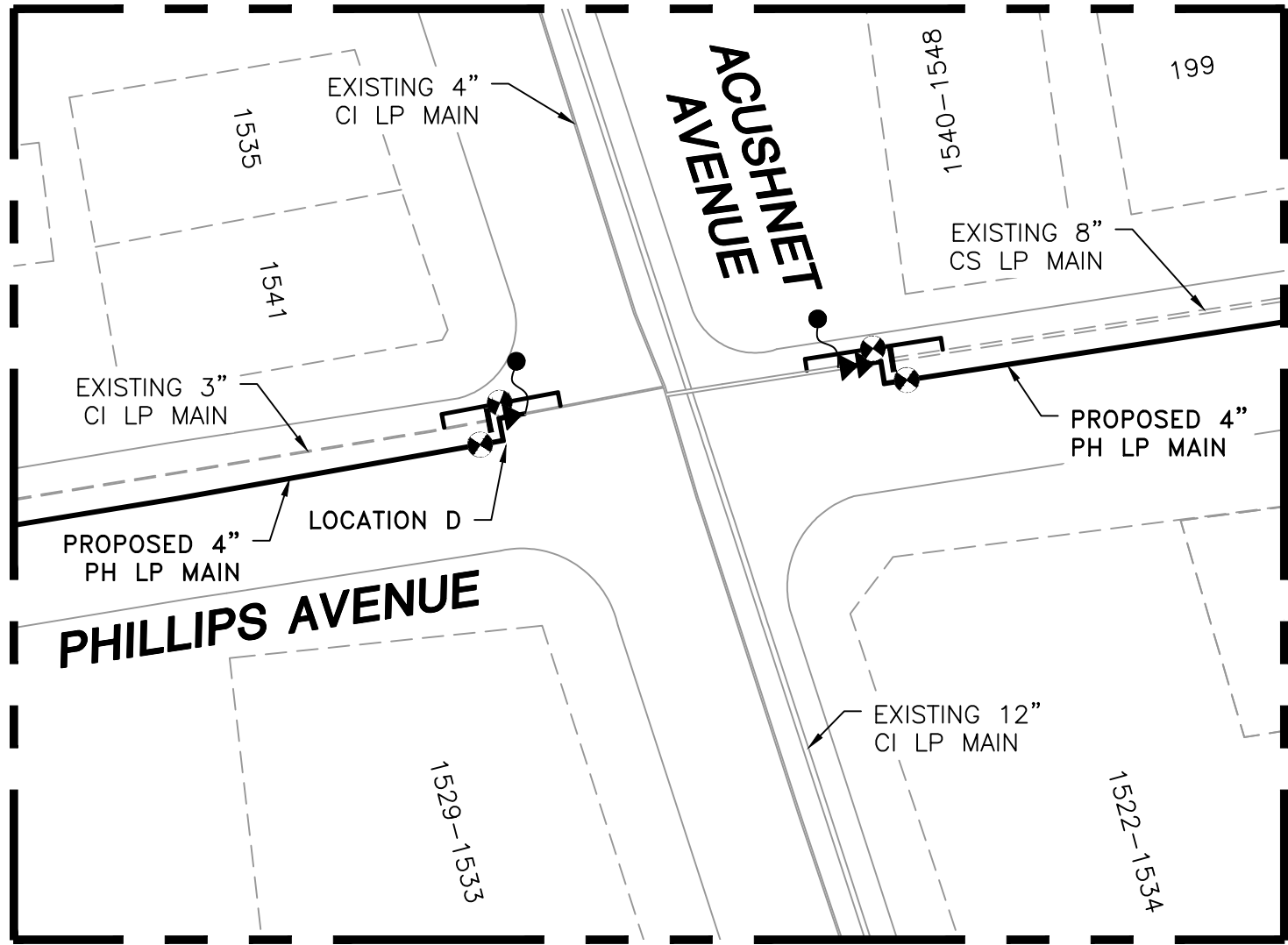
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SIGNATURE


SEALED ON:
12/23/2020
LICENSE EXPIRATION:
06/30/2022

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

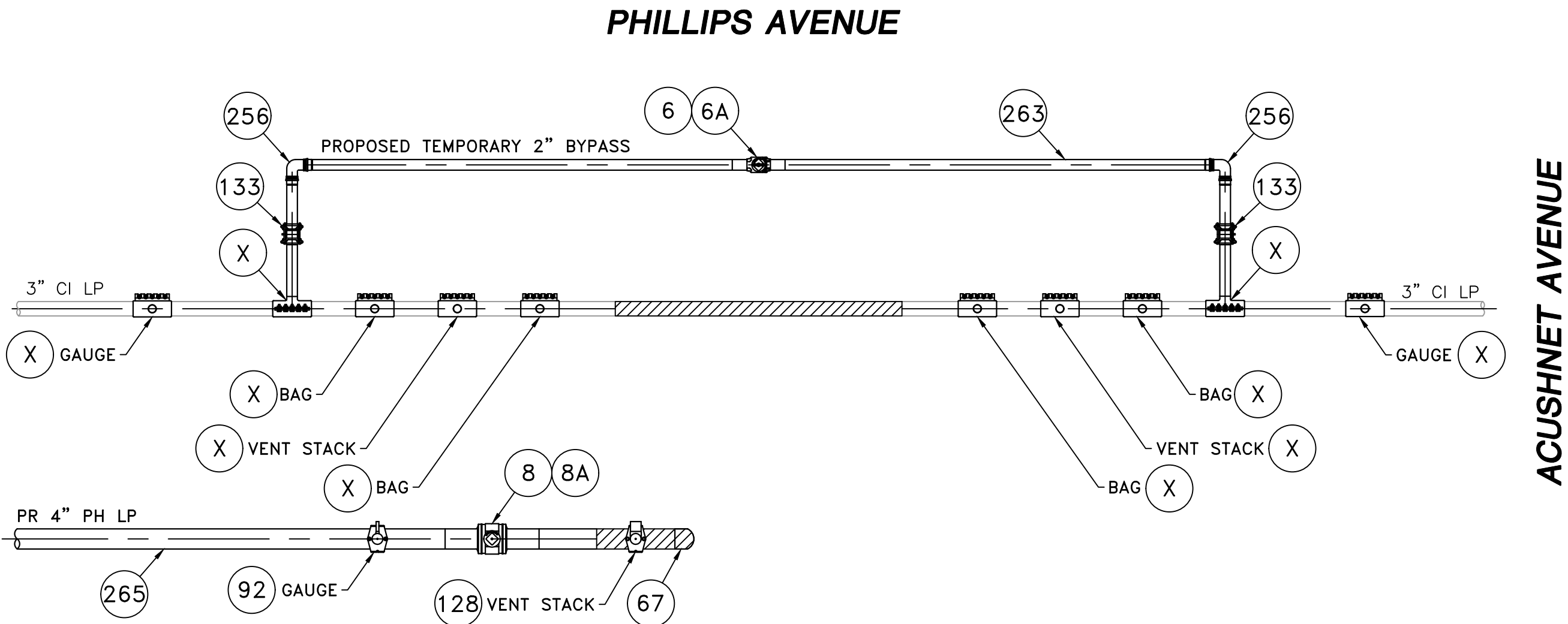
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - UPDATED END CAP	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION C - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 10 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-10	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		

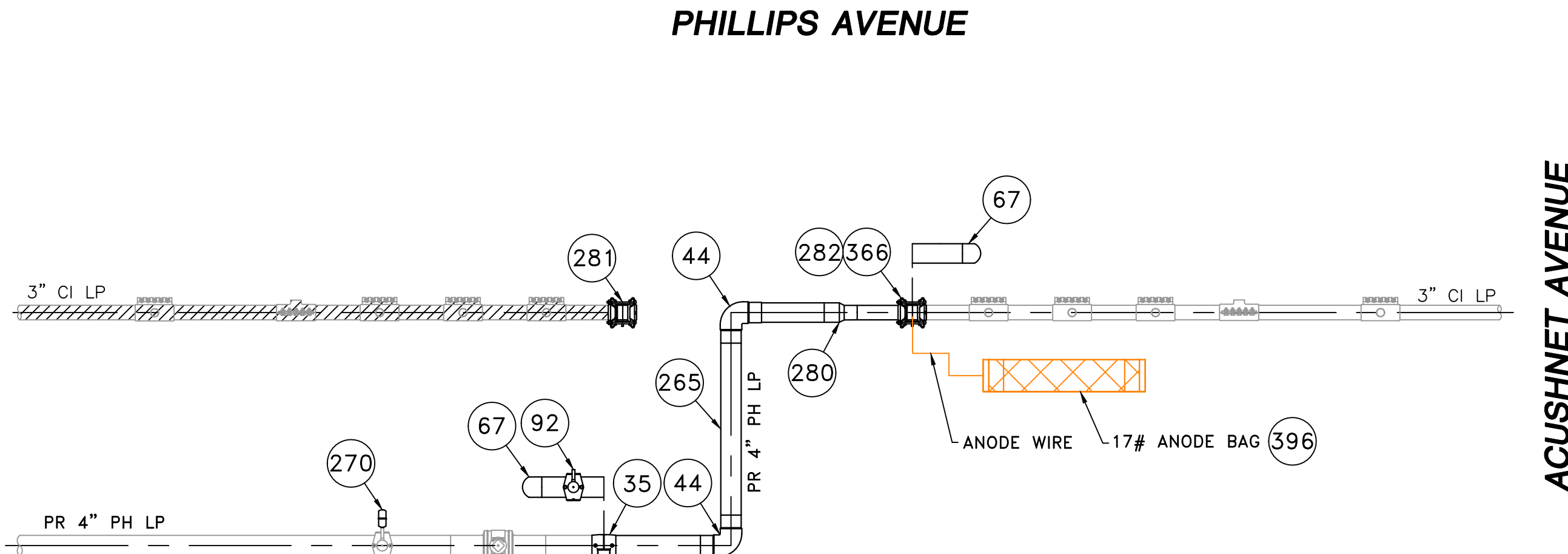


LOCATION D - PLAN VIEW
(SCALE: 1"=30')
(REFER TO SHEET #4)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION D - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	2	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
133	2	2"	578187	COUPLING, BOLTED MECHANICAL, IPS TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	ASTM A-53
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
264	5'	3"	592669	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513
280	1	4" X 3"	601067	REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	
281	1	3"		END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	
282	1	3"	544075	COUPLING, BOLTED MECHANICAL, CIP TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	
366	1	3"	578035	INSERT, STIFFENER, 3 IN IPS SDR 11.5, 8 IN LG, RED EPOXY COATING, SMITH BLAIR	
396	1	17#	577776	ANODE BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB WEIGHT	
X	10	3" x 2"		BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.	




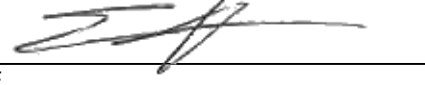
LOCATION D - PHASE 1
(SCALE: 1"=2')
(REFER TO SHEET #4)
(DO NOT SCALE FROM DRAWING)



LOCATION D - PHASE 2
(SCALE: 1"=2')
(REFER TO SHEET #4)
(DO NOT SCALE FROM DRAWING)

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

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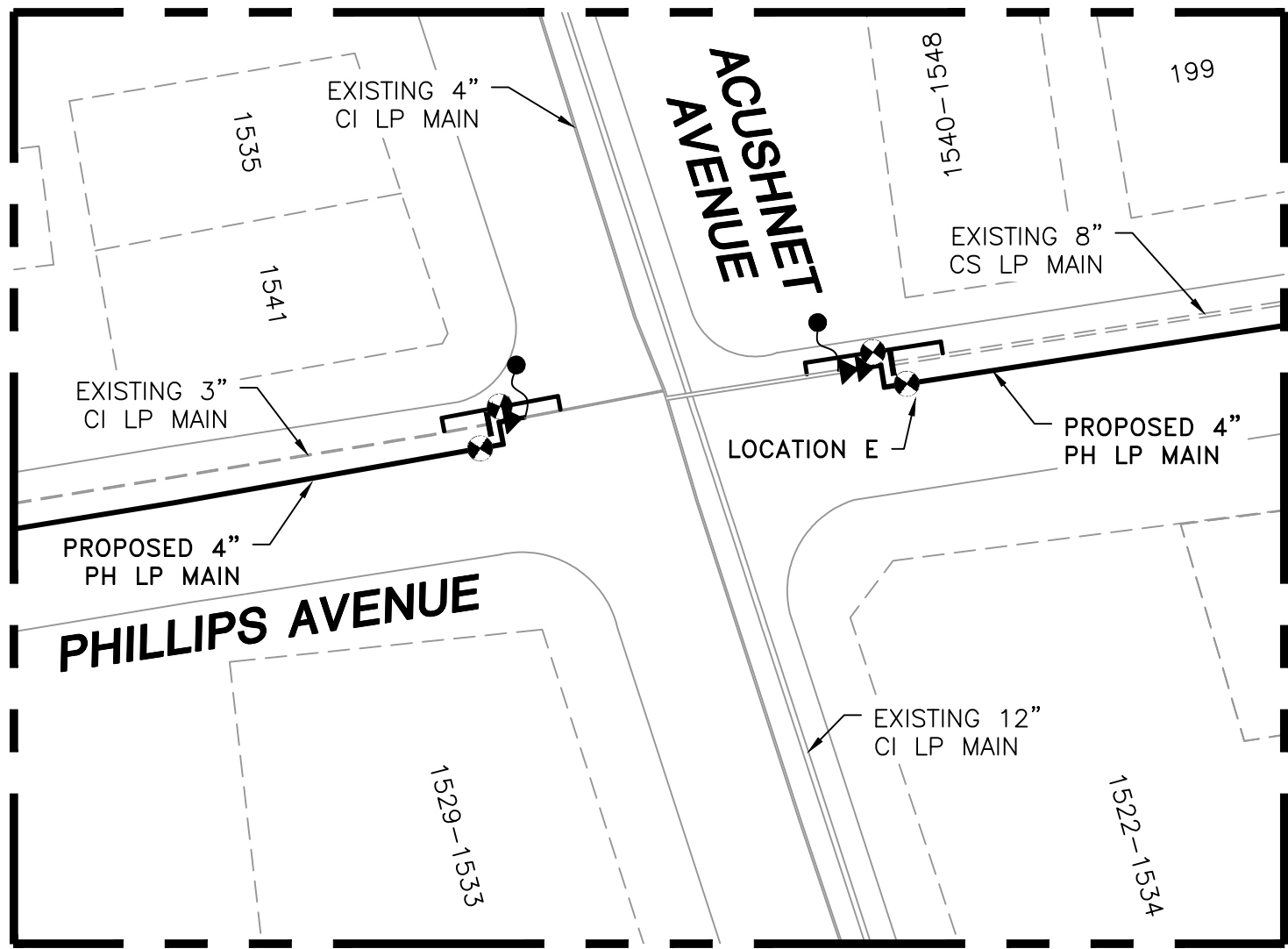
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SEALED ON:
12/23/2020
LICENSE
EXPIRATION:
06/30/2022

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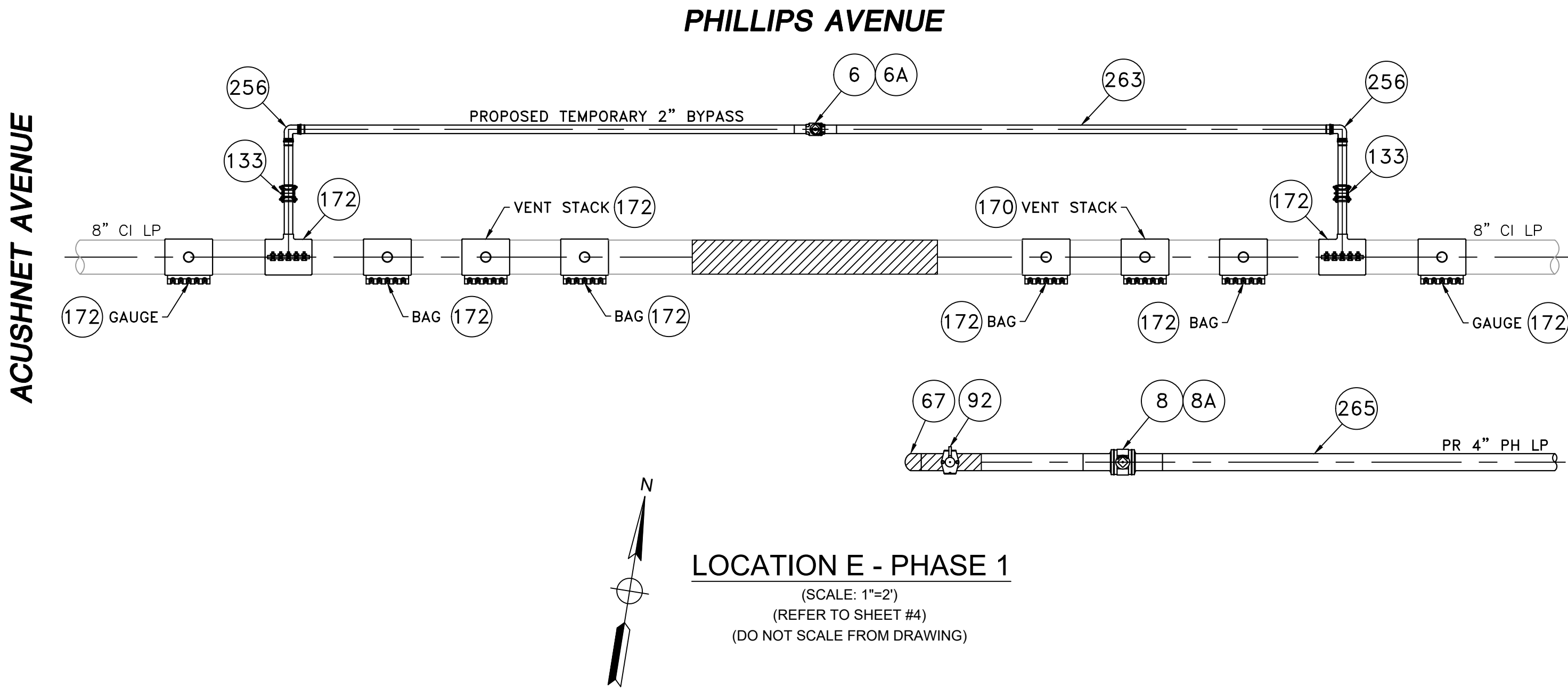
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION D - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 11 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-11	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		

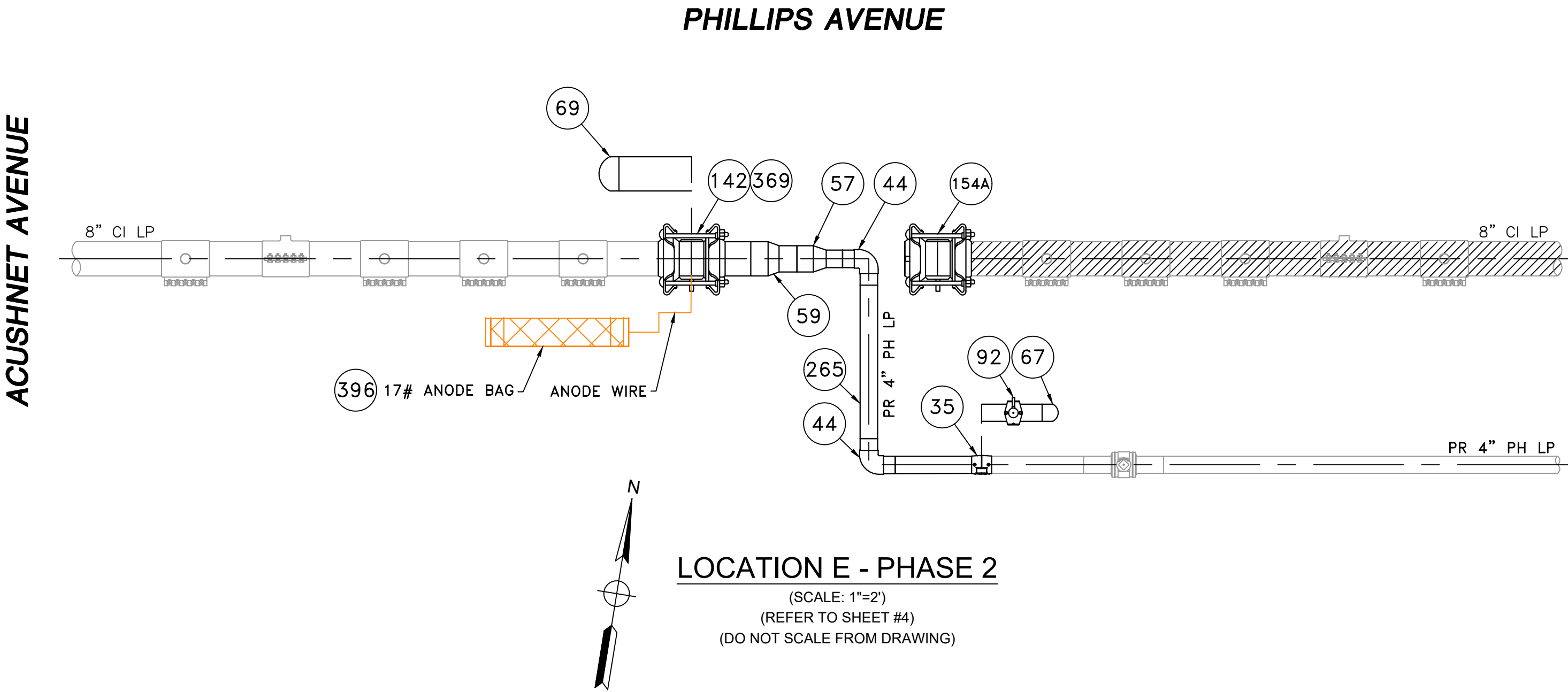


LOCATION E - PLAN VIEW
(SCALE: 1"=30')
(REFER TO SHEET #4)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION E - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
57	1	6" X 4"	555594	REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
59	1	8" X 6"	555596	REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
69	AS REQUIRED	8"	542540	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	2	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
133	2	2"	578187	COUPLING, BOLTED MECHANICAL, IPS TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	ASTM A-53
142	1	8"	583290	COUPLING, BOLTED MECHANICAL, CIP TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	ASTM A-53
154A	1	8"		FITTING, COUPLING, VENTED, SEAL & RESTRAINT, 8 IN, W/ END CAP , FOR CAST IRON PIPE	
172	10	8" x 2"	578014	BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS BANDS AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.	
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	
267	5'	8"	554010	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
369	1	8"	578038	INSERT, STIFFENER, 8 IN IPS SDE 11.5, 8 IN LG, RED EPOXY COATING, SMITH BLAIR	
396	1	17#	577776	ANODE BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB WEIGHT	



LOCATION E - PHASE 1
(SCALE: 1"=2')
(REFER TO SHEET #4)
(DO NOT SCALE FROM DRAWING)



LOCATION E - PHASE 2
(SCALE: 1"=2')
(REFER TO SHEET #4)
(DO NOT SCALE FROM DRAWING)

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

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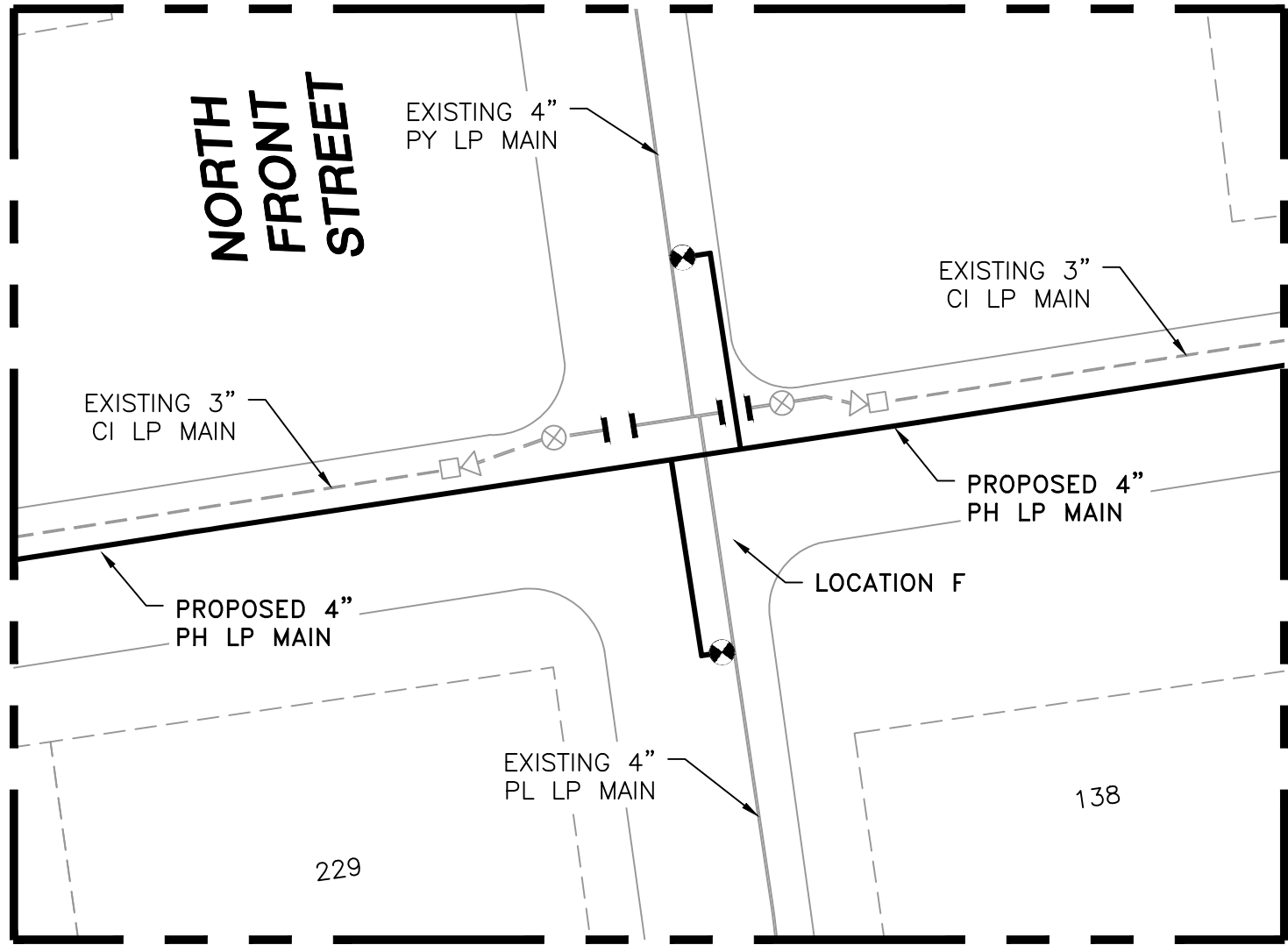
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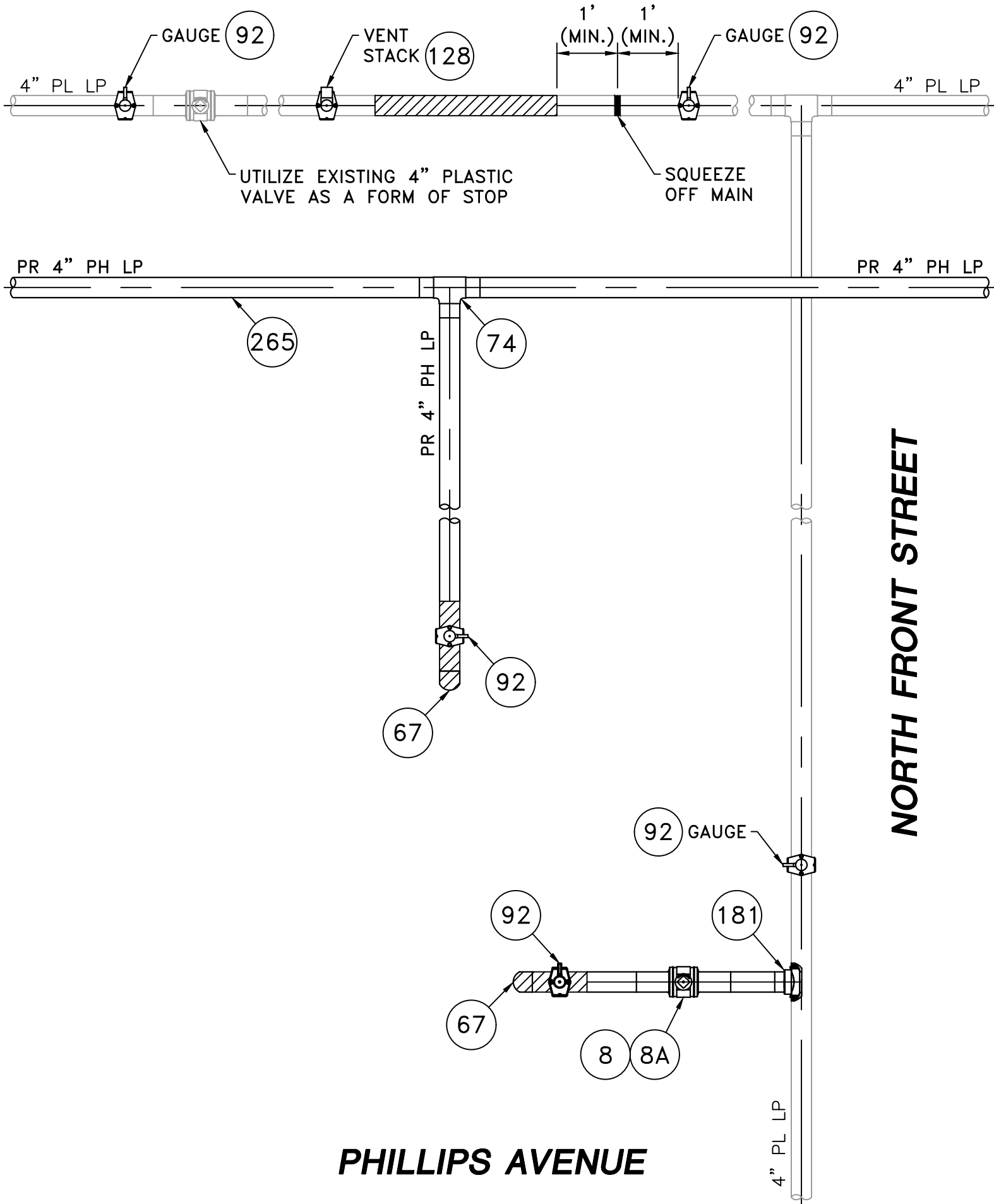
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FAX: (630) 353-7777
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FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION E - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 12 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-12	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		



LOCATION F - PLAN VIEW
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(REFER TO SHEET #5)
(DO NOT SCALE FROM DRAWING)

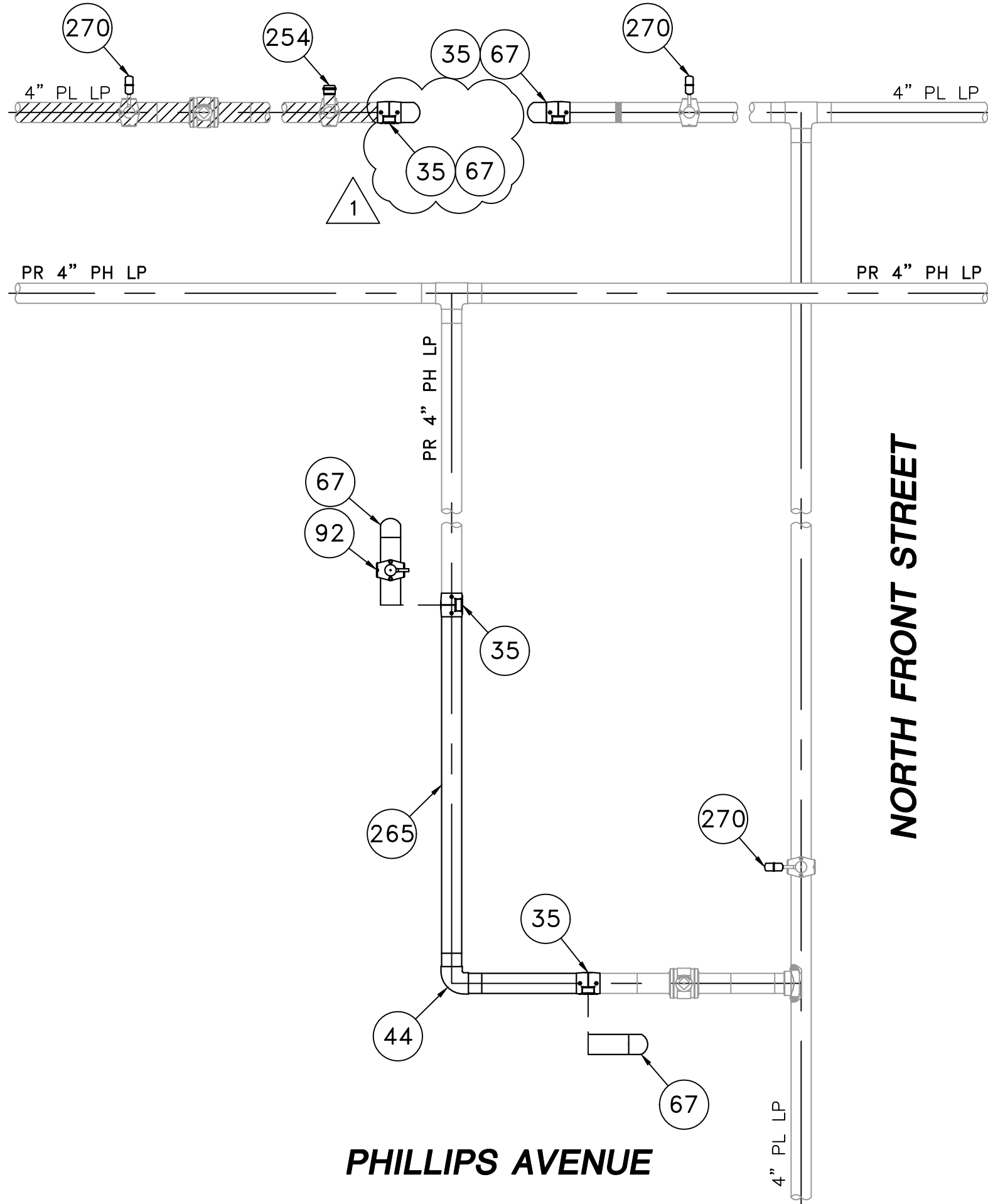


PHILLIPS AVENUE

NORTH FRONT STREET

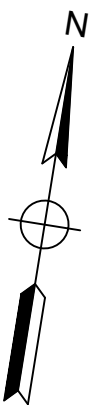


LOCATION F - PHASE 1
(SCALE: 1"=2')
(REFER TO SHEET #5)
(DO NOT SCALE FROM DRAWING)



PHILLIPS AVENUE

NORTH FRONT STREET



LOCATION F - PHASE 2
(SCALE: 1"=2')
(REFER TO SHEET #5)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION F - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
74	1	4"	560679	TEE, STRAIGHT, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE	ASTM D2513
92	5	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
181	1	4" x 4"	584552	BRANCH SADDLE, ELECTROFUSION WITH BUTT FUSION BRANCH, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM	ASTM D2513
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
265	70'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513

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

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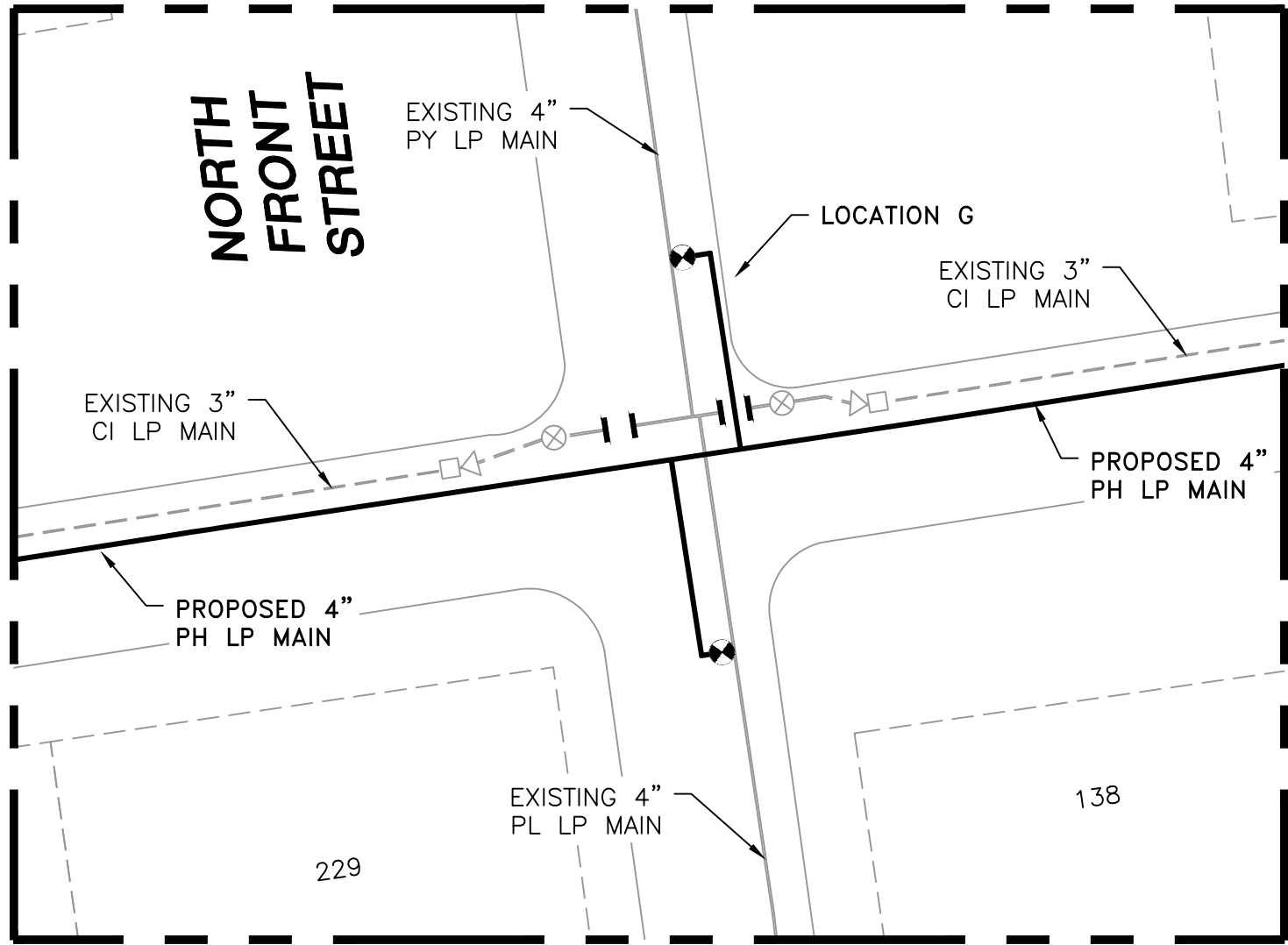
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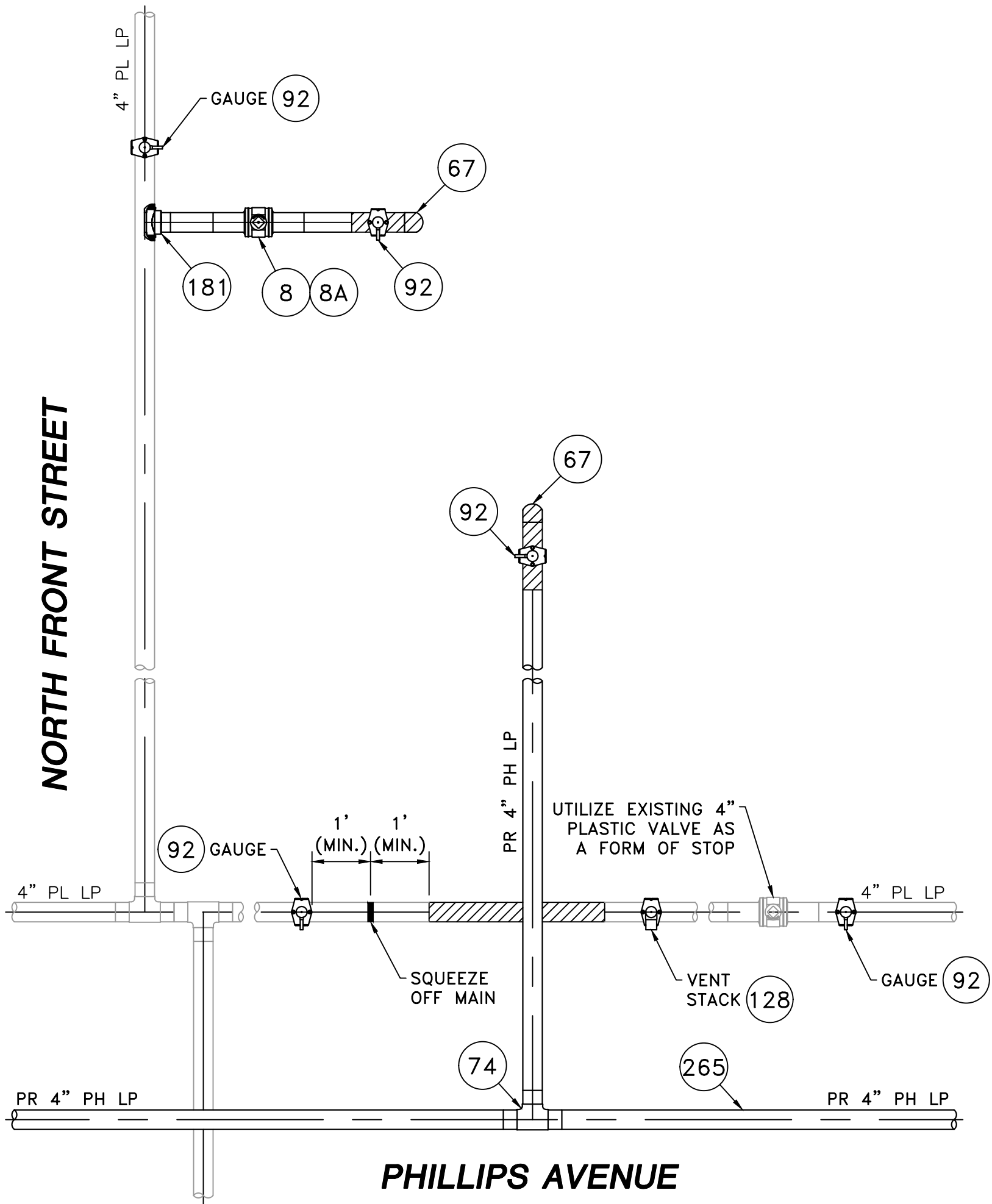
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

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0	ISSUED FOR CONSTRUCTION	11/30/2020
NO.	DESCRIPTION	DATE

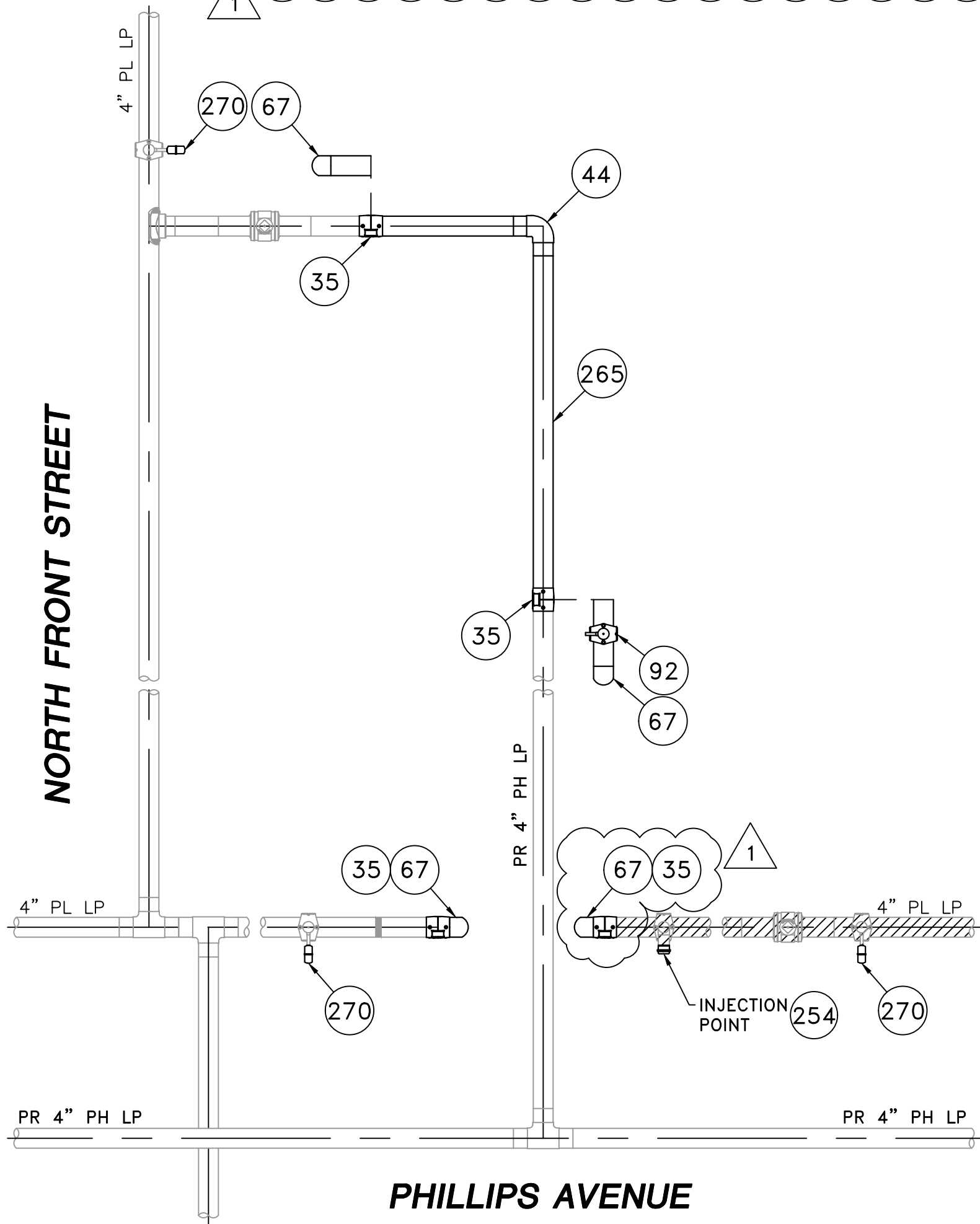
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
LOCATION F - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 13 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-13	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		



LOCATION G - PLAN VIEW
(SCALE: 1"=30")
(REFER TO SHEET #5)
(DO NOT SCALE FROM DRAWING)



LOCATION G - PHASE 1
(SCALE: 1"=2")
(REFER TO SHEET #5)
(DO NOT SCALE FROM DRAWING)



LOCATION G - PHASE 2
(SCALE: 1"=2")
(REFER TO SHEET #5)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION G - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
74	1	4"	560679	TEE, STRAIGHT, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	6	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
181	1	4" x 4"	584552	BRANCH SADDLE, ELECTROFUSION WITH BUTT FUSION BRANCH, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
265	60'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513

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

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12/23/2020
LICENSE EXPIRATION:
06/30/2022

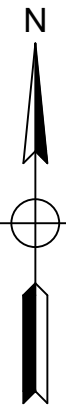
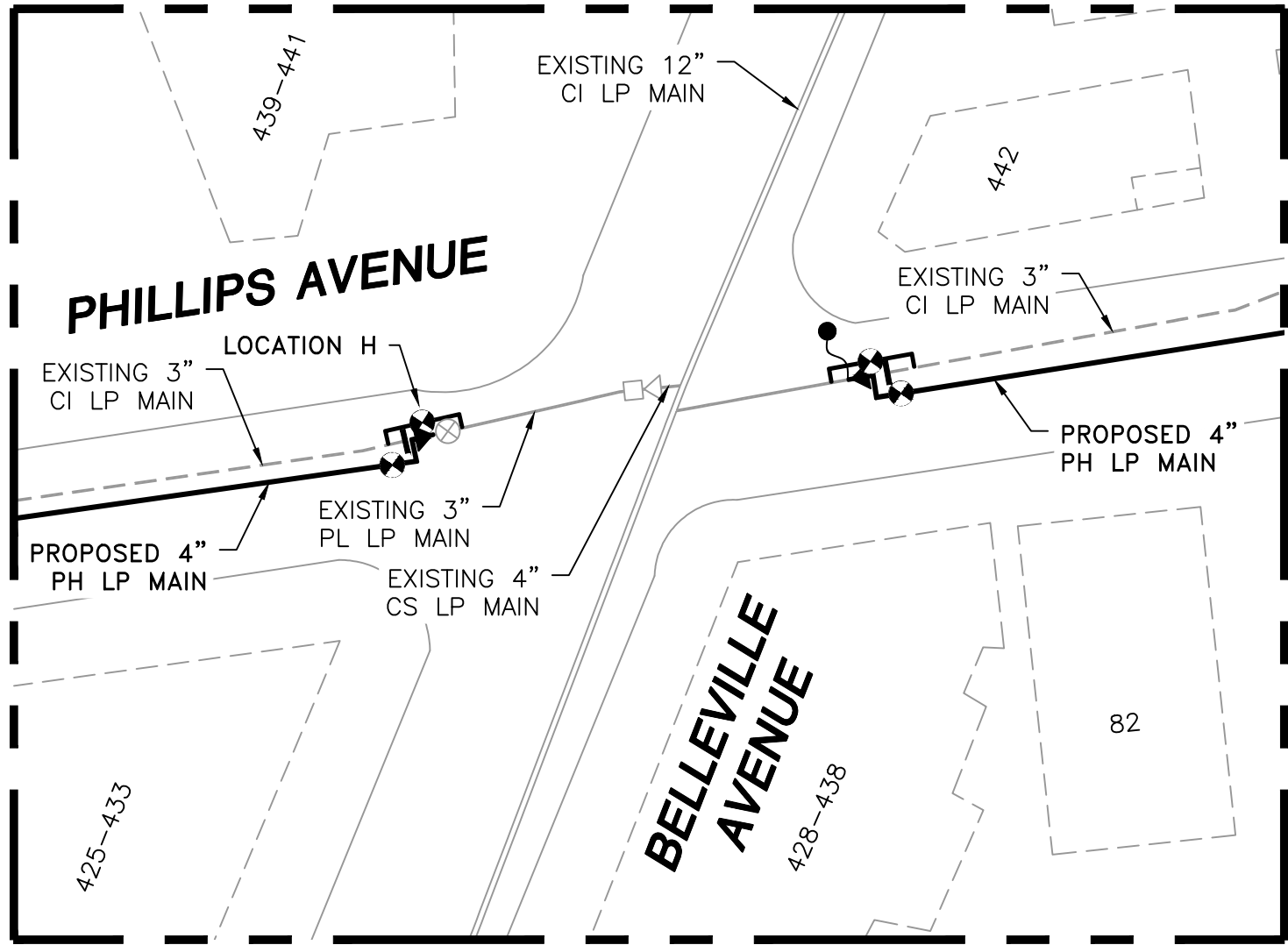
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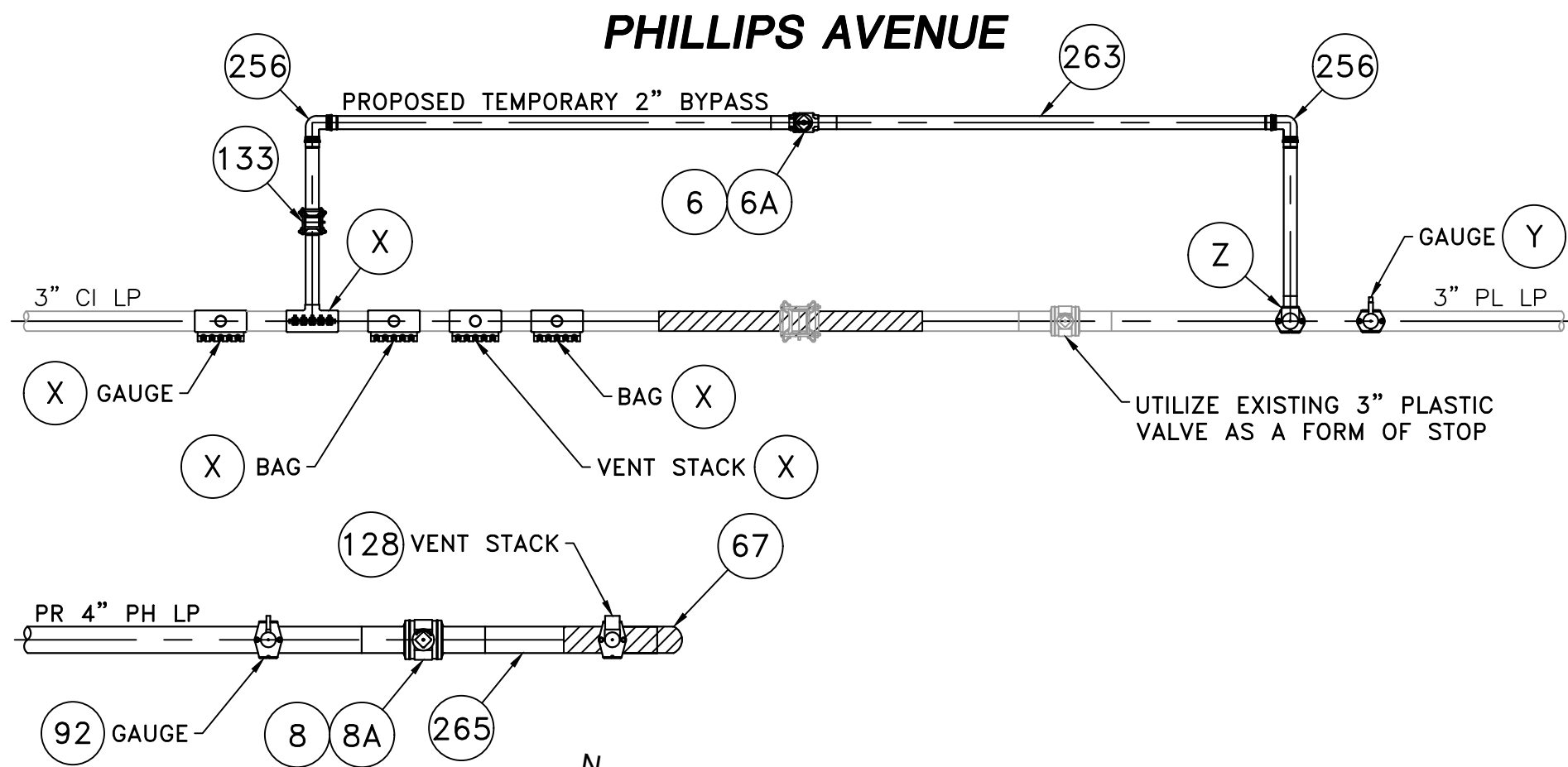
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

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0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION G - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 14 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-14	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		



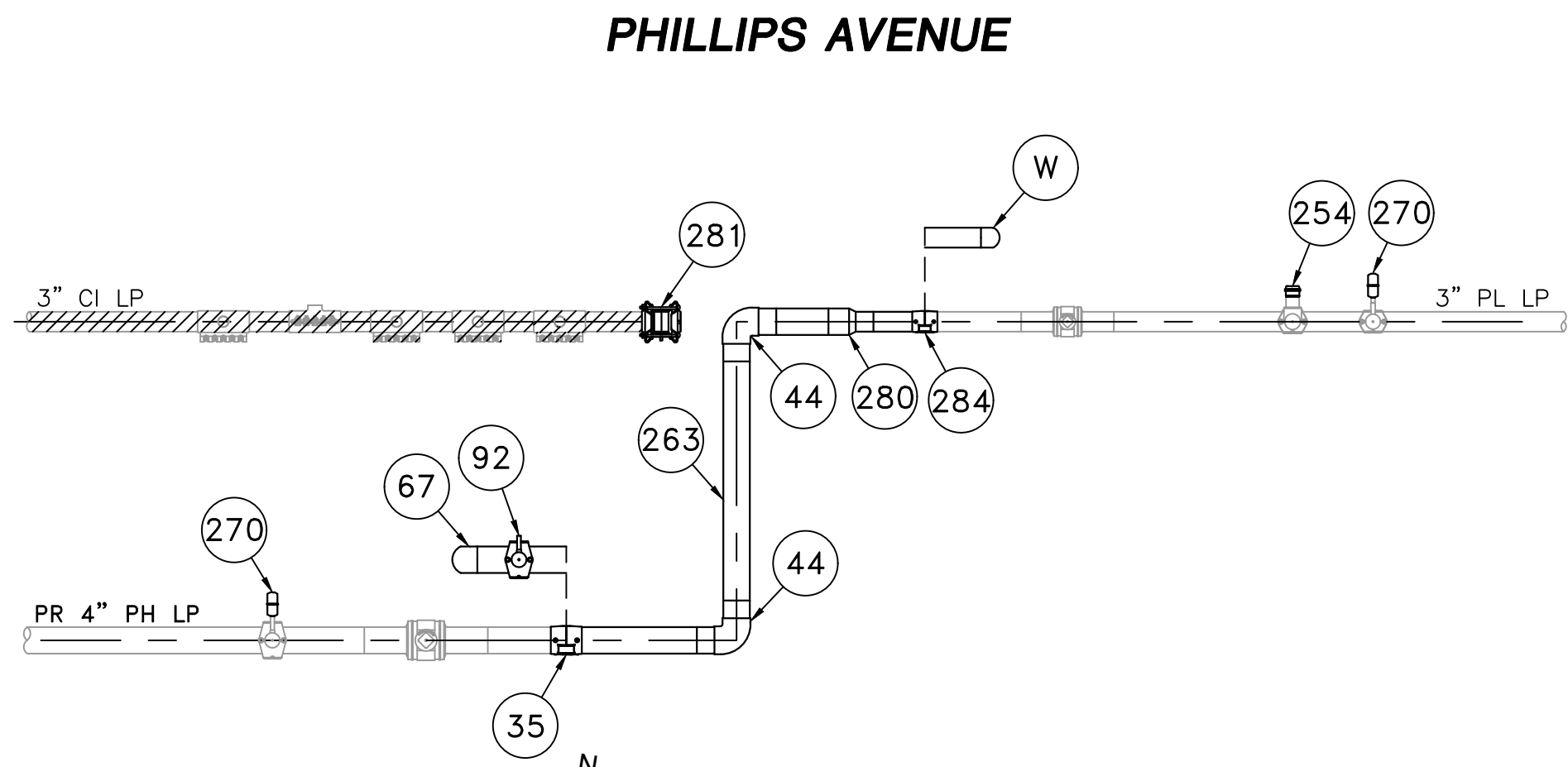
LOCATION H - PLAN VIEW

(SCALE: 1"=30')
(REFER TO SHEET #6)
(DO NOT SCALE FROM DRAWING)



LOCATION H - PHASE 1

(SCALE: 1"=2')
(REFER TO SHEET #6)
(DO NOT SCALE FROM DRAWING)



LOCATION H - PHASE 2

(SCALE: 1"=2')
(REFER TO SHEET #6)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION H - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ. W/CI NON-LOCKING LID	
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ. W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCEP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	2	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
133	1	2"	578187	COUPLING, BOLTED MECHANICAL, IPS TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	ASTM A-53
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
264	5'	3"	592669	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513
280	1	4" X 3"	601067	REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	
281	1	3"		END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	
284	AS REQUIRED	3"		COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCEP OR APPROVED EQUAL.	
W	AS REQUIRED	3"		CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	
X	5	3" x 2"		BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.	
Y	1	3" X 1/2"		TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	
Z	1	3" x 2"		TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	

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

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12/23/2020

LICENSE
EXPIRATION:

06/30/2022

DESIGNED IN ACCORDANCE WITH TITLE
49, PART 192 OF MINIMUM FEDERAL SAFETY
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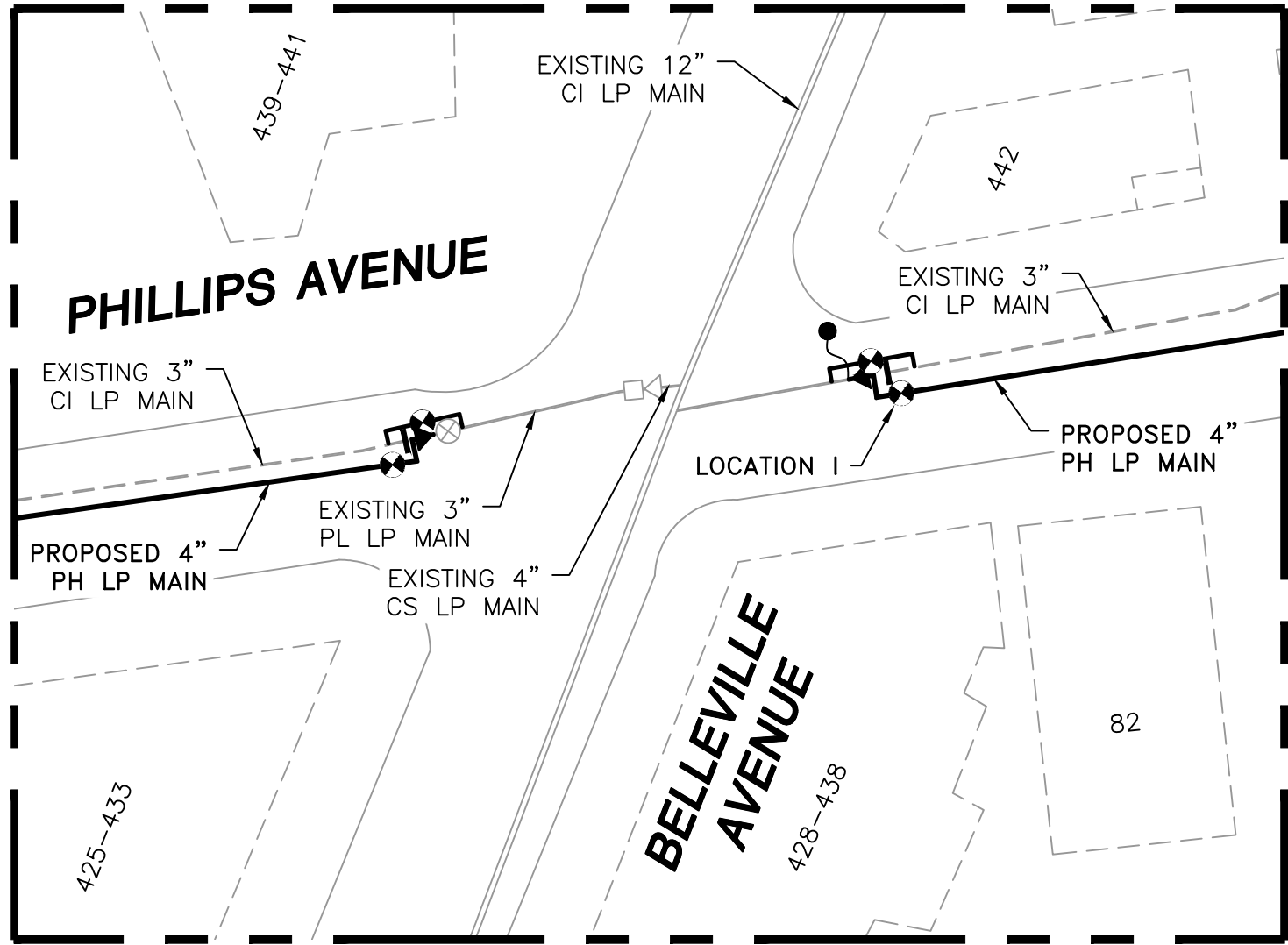
ENEngineering

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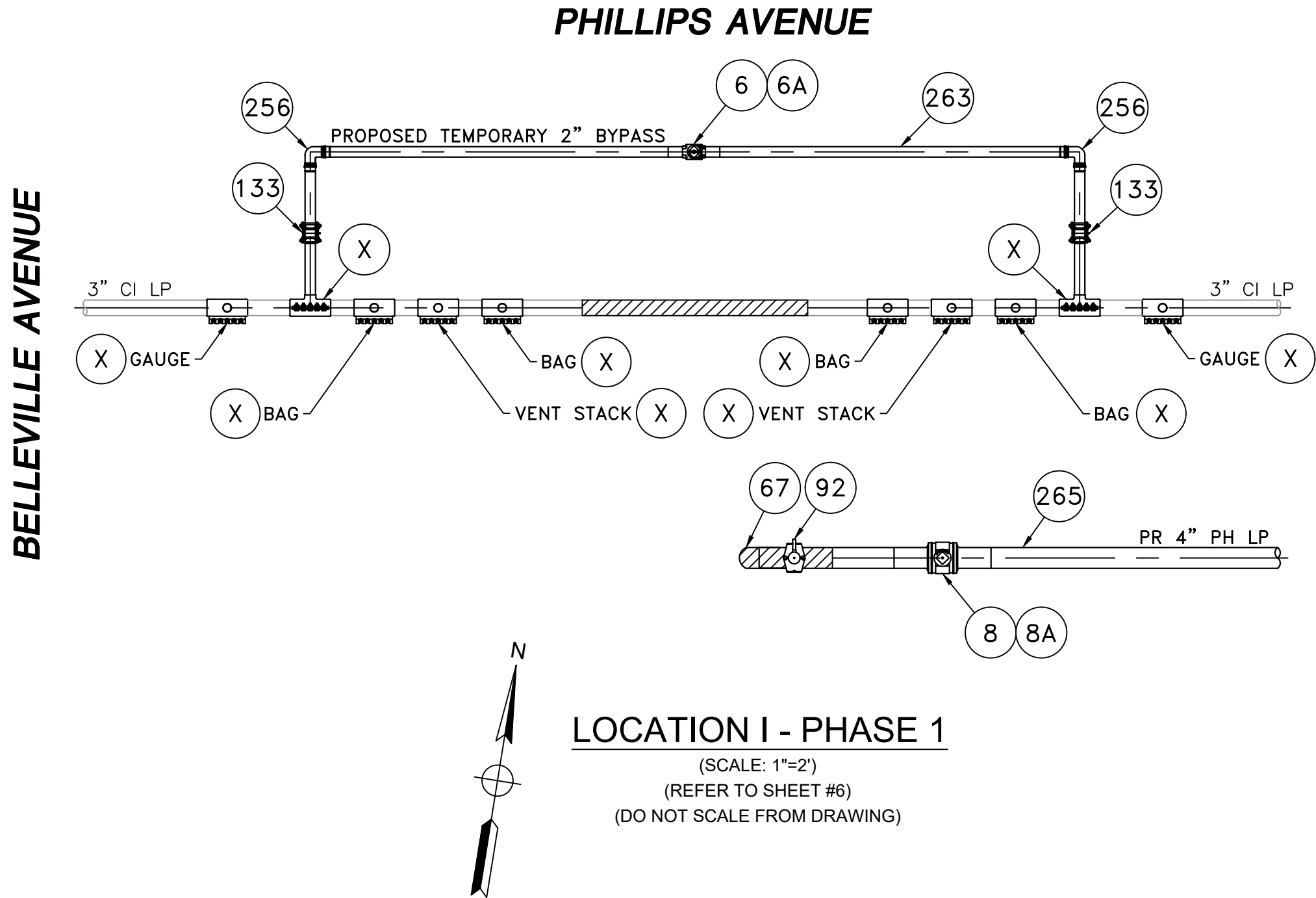
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020
0	ISSUED FOR CONSTRUCTION	11/30/2020
NO.	DESCRIPTION	DATE

REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
LOCATION H - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 15 OF 20	
DRAWN BY / DATE	CHECKED BY / DATE	SHEET NUMBER	REV. NO.
ZS 09/30/2020	AB 12/22/2020	MA-NEB-21-PIP-026-15	1
APPROVED BY / DATE	MANEB21PIP026R1		
EK 12/22/2020			

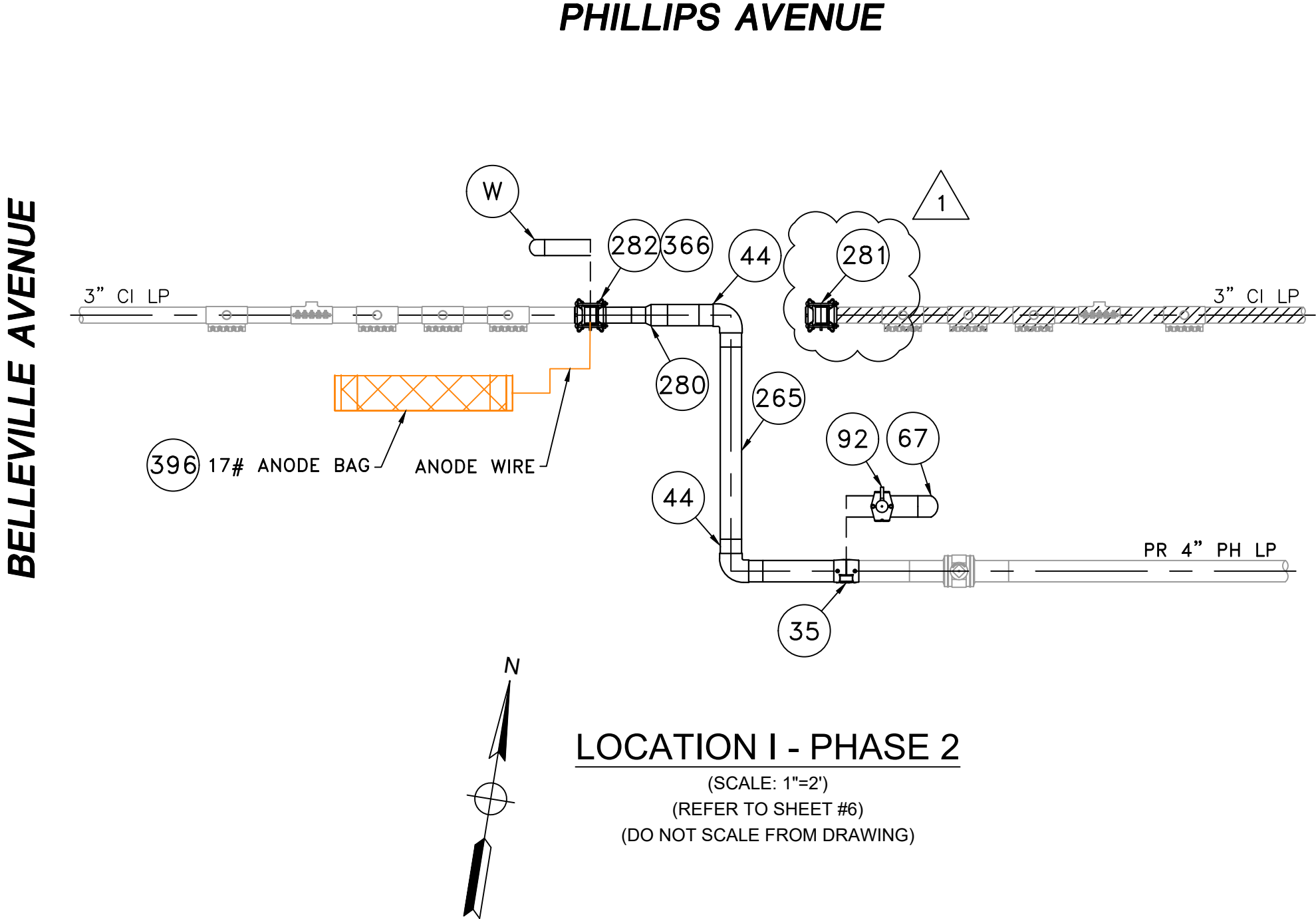


LOCATION I - PLAN VIEW
(SCALE: 1"=30')
(REFER TO SHEET #6)
(DO NOT SCALE FROM DRAWING)



LOCATION I - PHASE 1
(SCALE: 1"=2')
(REFER TO SHEET #6)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION I - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	2	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
133	2	2"	578187	COUPLING, BOLTED MECHANICAL, IPS TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	ASTM A-53
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
264	5'	3"	592669	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
280	1	4" X 3"	601067	REDUCER, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	
281	1	3"		END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	
282	1	3"	544075	COUPLING, BOLTED MECHANICAL, CIP TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	
366	1	3"	578035	INSERT, STIFFENER, 3 IN IPS SDR 11.5, 8 IN LG, RED EPOXY COATING, SMITH BLAIR	
396	1	17#	577776	ANODE BAG, 17 LB NET, HIGH POTENTIAL MAGNESIUM, W/ 10 FT #10 AWG TW ORANGE LEAD WIRE, PACKED IN CARDBOARD BOX 42 LB WEIGHT	
W	AS REQUIRED	3"		CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	
X	10	3" x 2"		BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.	



LOCATION I - PHASE 2
(SCALE: 1"=2')
(REFER TO SHEET #6)
(DO NOT SCALE FROM DRAWING)

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

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12/22/2020

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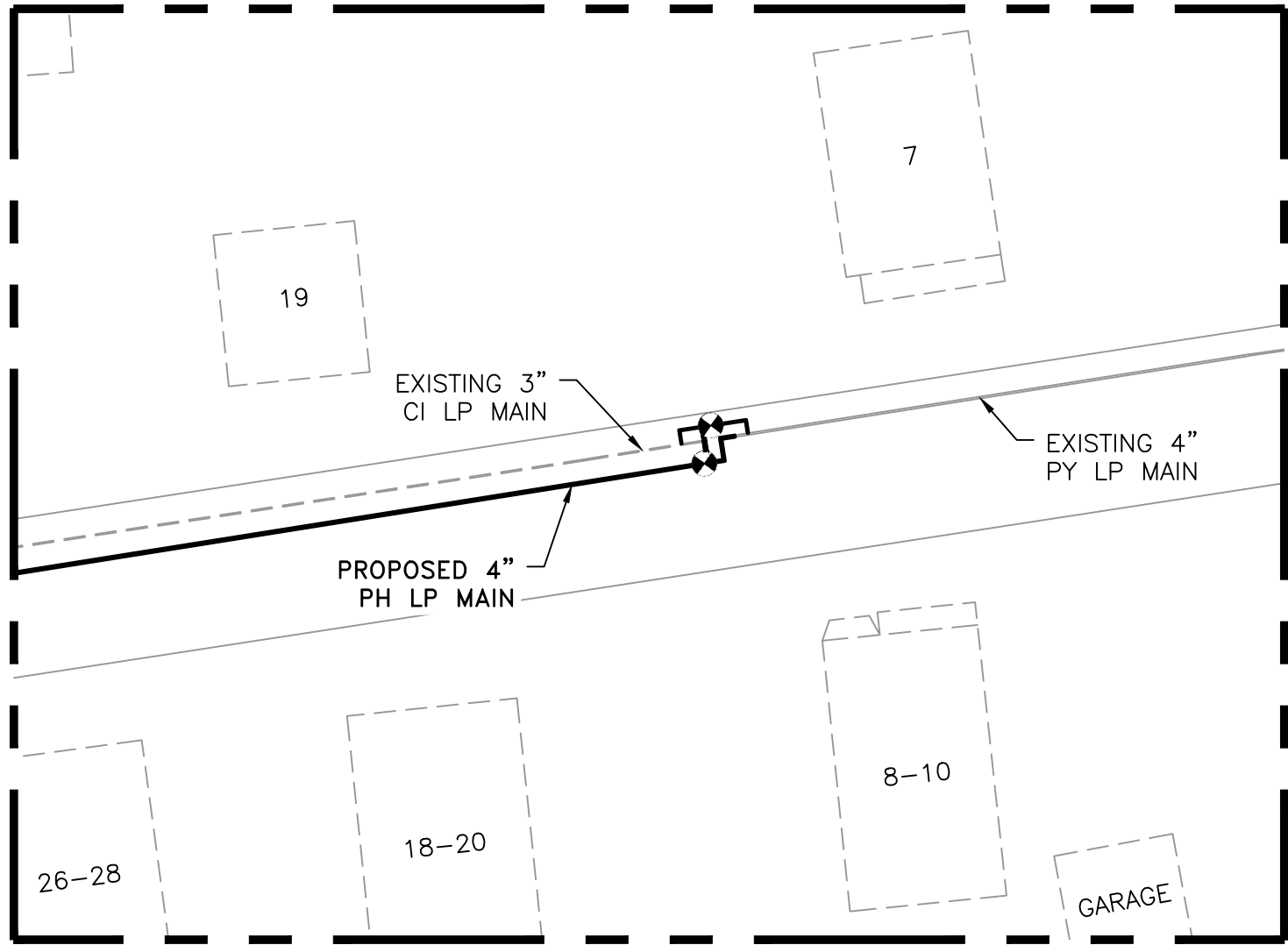
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ENEngineering
29 BARTLETT STREET
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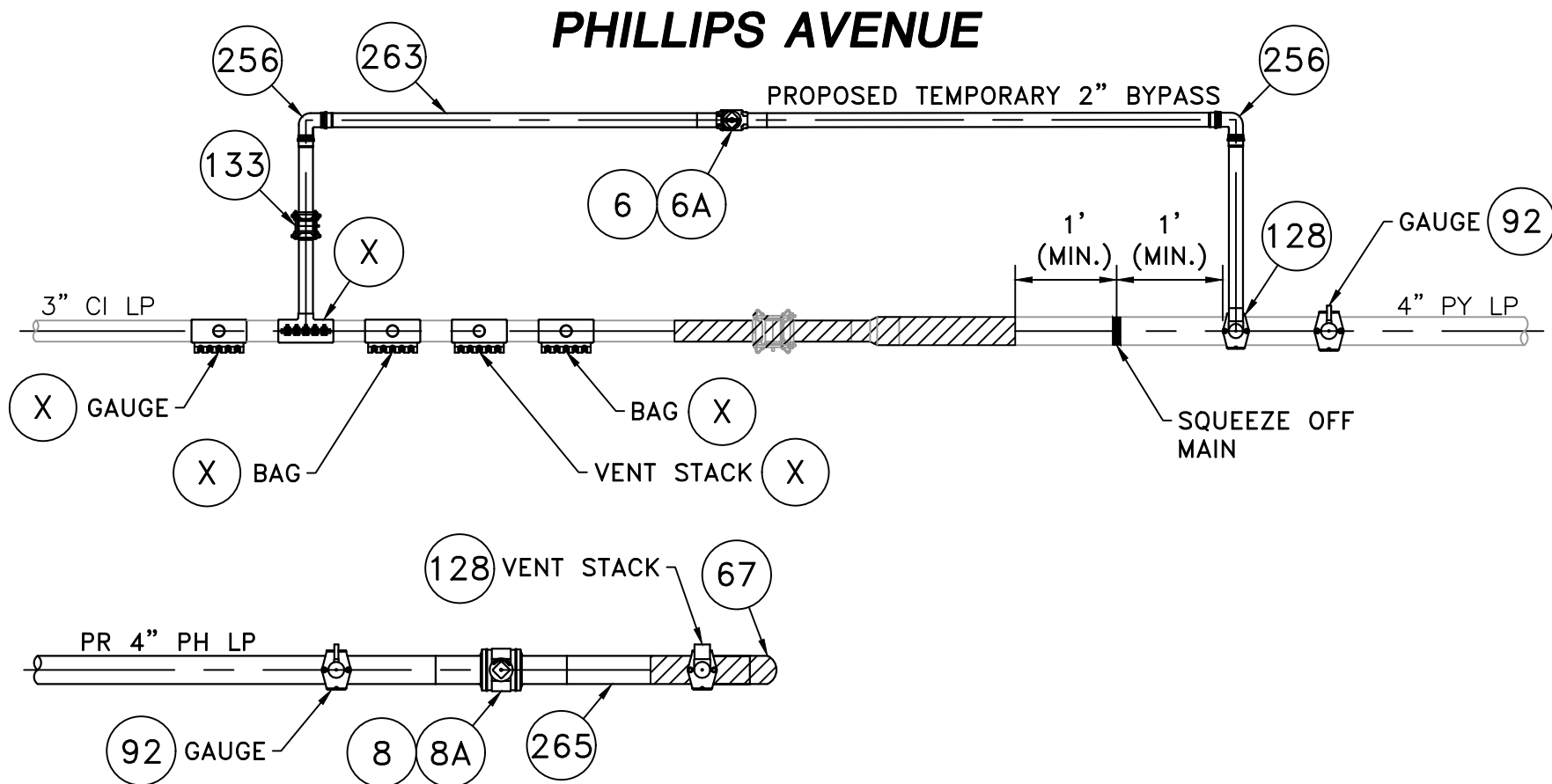
FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - UPDATED END CAP	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION I - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 16 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-16	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		



LOCATION J - PLAN VIEW

(SCALE: 1"=30")
(REFER TO SHEET #7)
(DO NOT SCALE FROM DRAWING)

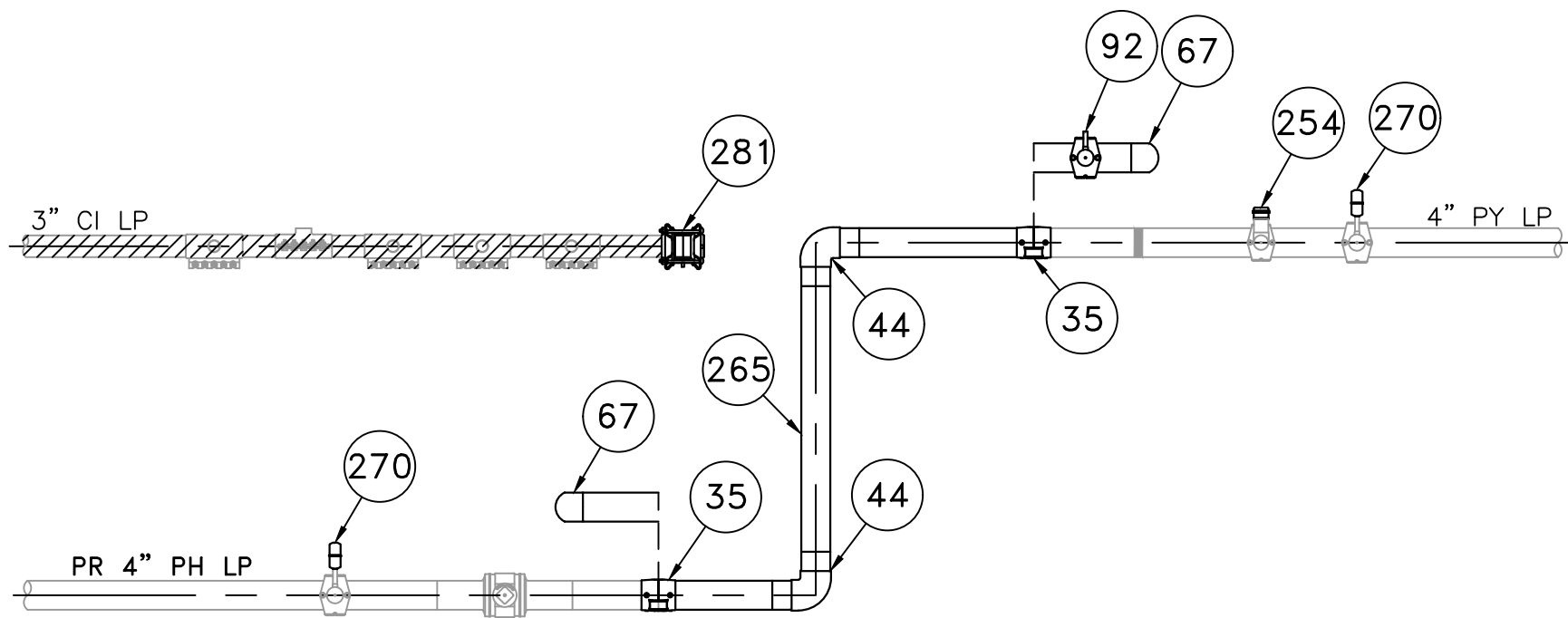


LOCATION J - PHASE 1

(SCALE: 1"=2')
(REFER TO SHEET #7)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION J - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
8	1	4"	501002	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
8A	1	4"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
35	AS REQUIRED	4"	500855	COUPLING, ELECTROFUSION, IPS, HDPE 3408, ASTM D3350, ASTM F1055, COMPATIBLE FOR FUSION TO HDPE 3408/4710 PIPE. GFCP OR APPROVED EQUAL.	ASTM D3350
44	AS REQUIRED	4"	545341	ELBOW, 90 DEG, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
67	AS REQUIRED	4"	542538	CAP, BUTT FUSION, IPS, HDPE 4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261. PERFORMANCE PIPE OR APPROVED EQUAL.	ASTM D2513
92	3	4" X 1/2"	500867	TAPPING TEE, ELECTROFUSION, IPS X CTS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	2	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
133	1	2"	578187	COUPLING, BOLTED MECHANICAL, IPS TO IPS, ASTM A-53 BODY, CONFORMS TO 49 CFR 192.283(b). SMITH-BLAIR MAXI-GRIP EZ OR APPROVED EQUAL.	ASTM A-53
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
256	AS REQUIRED	2"	582521	ELBOW, 90 DEG, MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	AS REQUIRED	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	20'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
270	AS REQUIRED	1/2"	542609	END CAP, MECHANICAL STAB, CTS, HDPE, PE 4710/3408, ASTM D2513, WITH SS GRIPPING SUPPORT RING, ACETAL COLLET AND SPACER RETAINER RING, PE THRUST WASHER, BUNA-N O-RING, ZINC-PLATED CS INSERT STIFFENER, PERFECTION WITH END CAP OR APPROVED EQUAL.	ASTM D2513
281	1	3"		END CAP, BOLTED MECHANICAL, CIP. SMITH-BLAIR MAXI-GRIP OR APPROVED EQUAL	
X	5	3" x 2"		BAND CLAMP, WITH WELDED 2" FNPT SERVICE OUTLET, 304L SS SINGLE SECTION BAND AND GAP BRIDGES, SS STUDS WITH TEFLON COATED HEX NUTS, COMPLETELY LINED WITH NITRILE RUBBER GASKET. MUELLER 540 SERVI-SEAL OR APPROVED EQUAL. COMPLETE WITH PLUG.	

PHILLIPS AVENUE


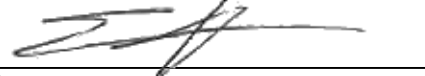


LOCATION J - PHASE 2

(SCALE: 1"=2')
(REFER TO SHEET #7)
(DO NOT SCALE FROM DRAWING)

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

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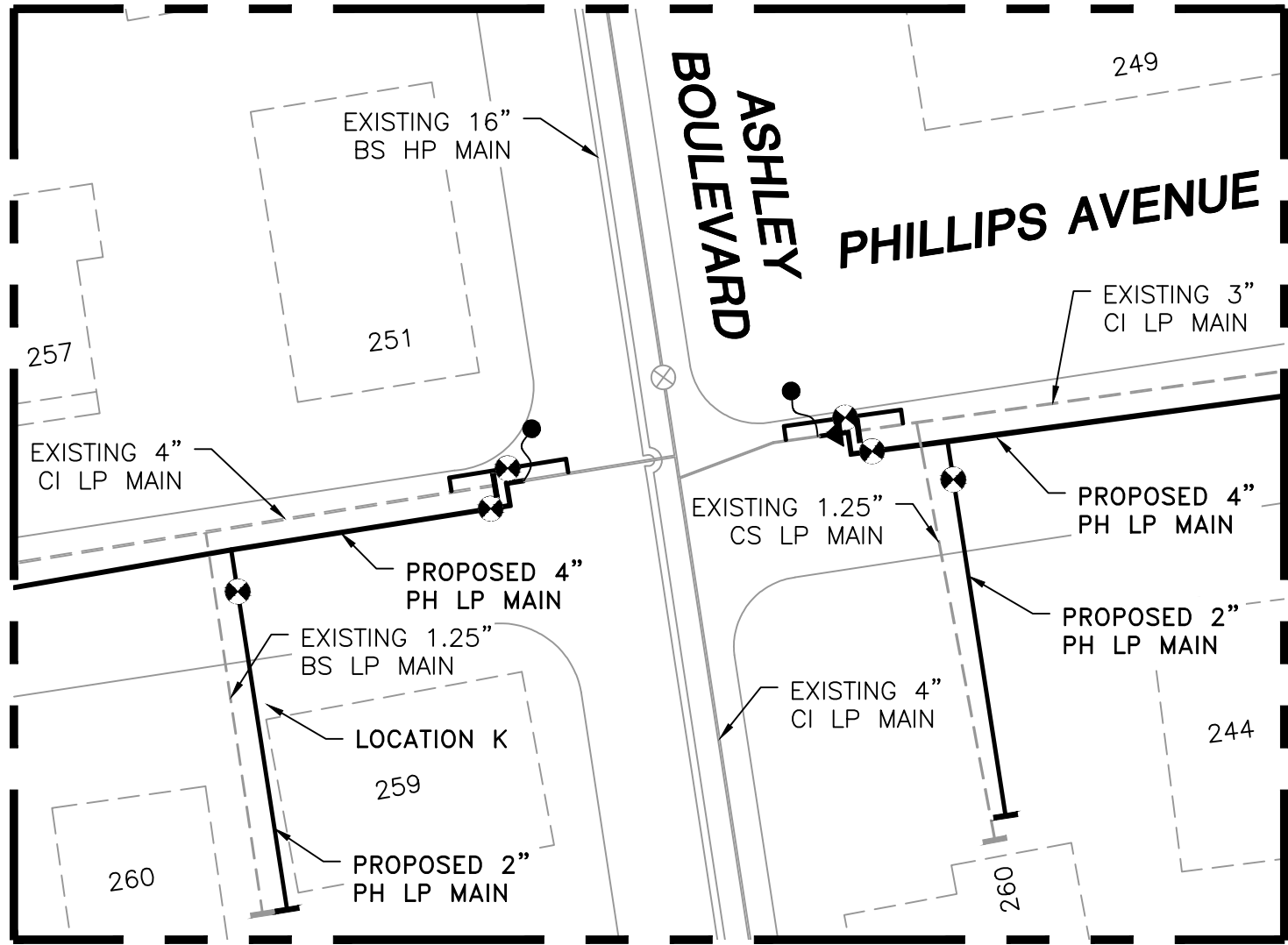
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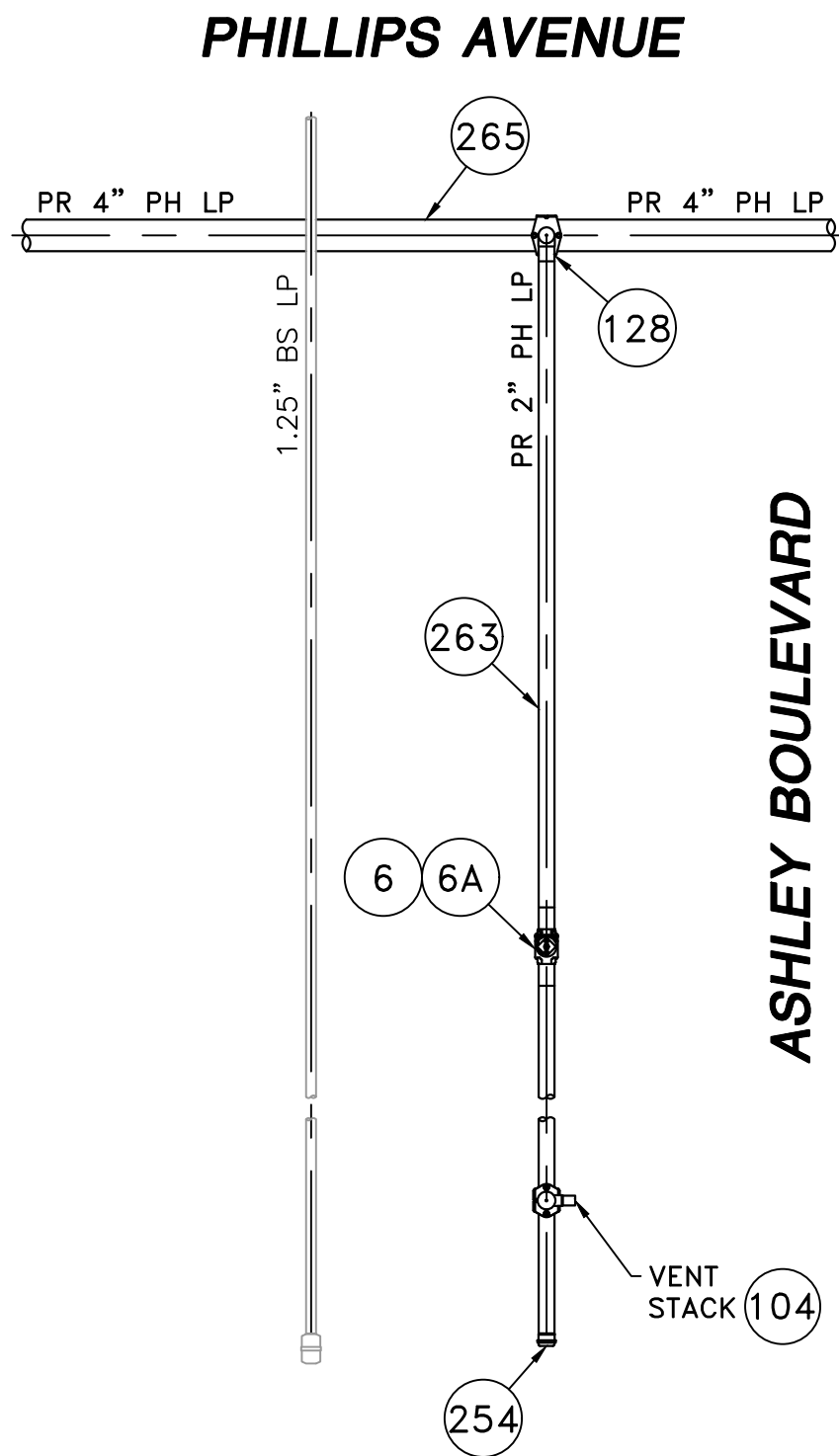
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FAX (630) 353-7777
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION J - PHASE 1, 2 AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 17 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-17	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		



LOCATION K - PLAN VIEW
(SCALE: 1"=30")
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)



LOCATION K
(SCALE: 1"=2')
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION K - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
104	1	2" X 1"	560779	TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	65'	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	15'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513

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

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
LOCATION K AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 18 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER	REV. NO.
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1	MA-NEB-21-PIP-026-18	1

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12/22/2020

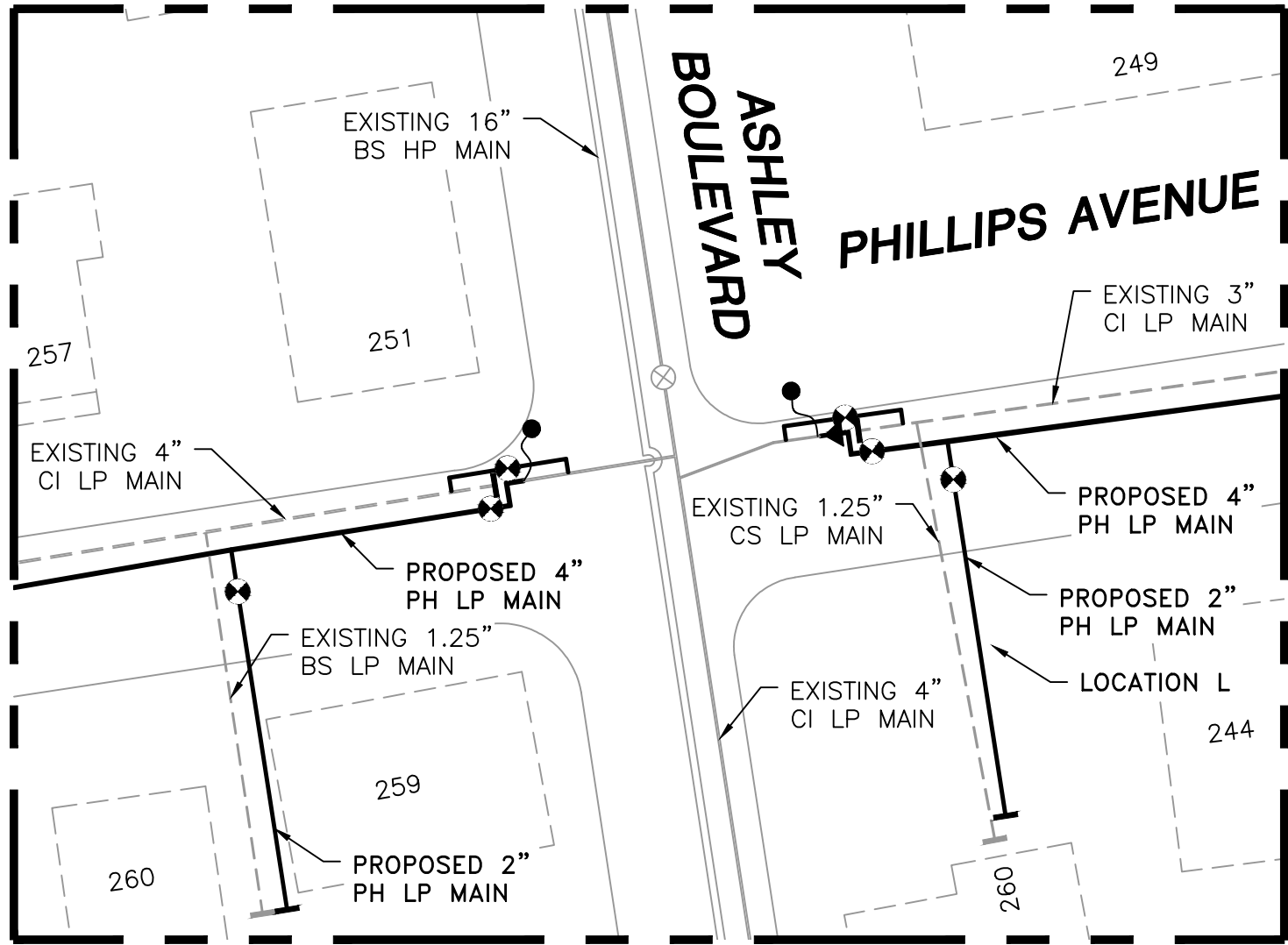
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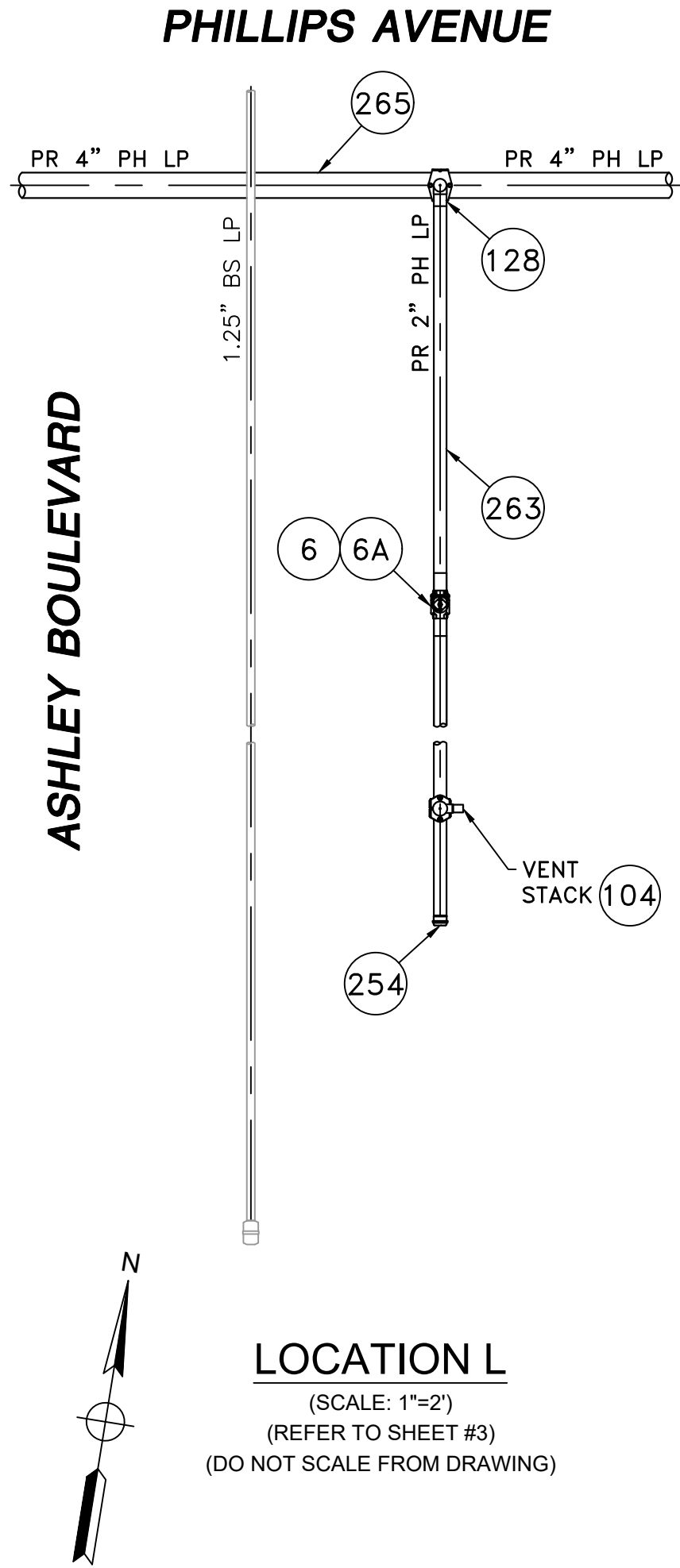
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MARLBOROUGH, MA 01752
TEL (630) 353-4000
FAX (630) 353-7777
WWW.ENENGINEERING.COM

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PRIOR TO PIPE FABRICATION



LOCATION L - PLAN VIEW
(SCALE: 1"=30")
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)




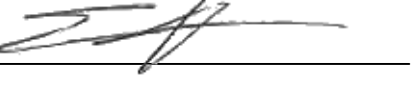
LOCATION L
(SCALE: 1"=2')
(REFER TO SHEET #3)
(DO NOT SCALE FROM DRAWING)

PHILLIPS AVENUE MAIN RELAY - LOCATION L - SCHEDULE OF MATERIALS					
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION	MATERIAL
6	1	2"	562087	BALL VALVE, BUTT FUSION, IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASME B16.40. FULL PORT, 1/4 TURN, KEROTEST POLYBALL OR APPROVED EQUAL.	ASTM D2513
6A	1	2"		BOX, VALVE, PLASTIC, SNAP-ON, ADJ, W/CI NON-LOCKING LID	
104	1	2" X 1"	560779	TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
128	1	4" X 2"	584304	HV TAPPING TEE, ELECTROFUSION, IPS X IPS, HDPE 3408/4710, SDR 11, ASTM D2513, ASTM D3350, ASTM D3261, ASTM F1055. CENTRAL PLASTICS OR APPROVED EQUAL.	ASTM D2513
254	AS REQUIRED	2"	581633	END CAP MECHANICAL COMPRESSION, SDR 11 IPS, DUPONT ZYTEL ST-801 NYLON BODY, 316 SS COMPRESSION RING, INTERNAL STIFFENER, ASTM D-2513, ASTM F1924. METFIT OR APPROVED EQUAL.	ASTM D2513
263	70'	2"	554025	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513
265	15'	4"	554008	PIPE, IPS, HDPE 3408/4710 SDR 11, ASTM D2513, ASTM D3350, PERFORMANCE PIPE OR APPROVED EQUAL	ASTM D2513

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

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP
REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY NEW BEDFORD, MASSACHUSETTS			
LOCATION L AND SCHEDULE OF MATERIALS			
SCALE: AS NOTED		SHEET 19 OF 20	
DRAWN BY / DATE ZS 09/30/2020	CHECKED BY / DATE AB 12/22/2020	SHEET NUMBER MA-NEB-21-PIP-026-19	REV. NO. 1
APPROVED BY / DATE EK 12/22/2020	MANEB21PIP026R1		

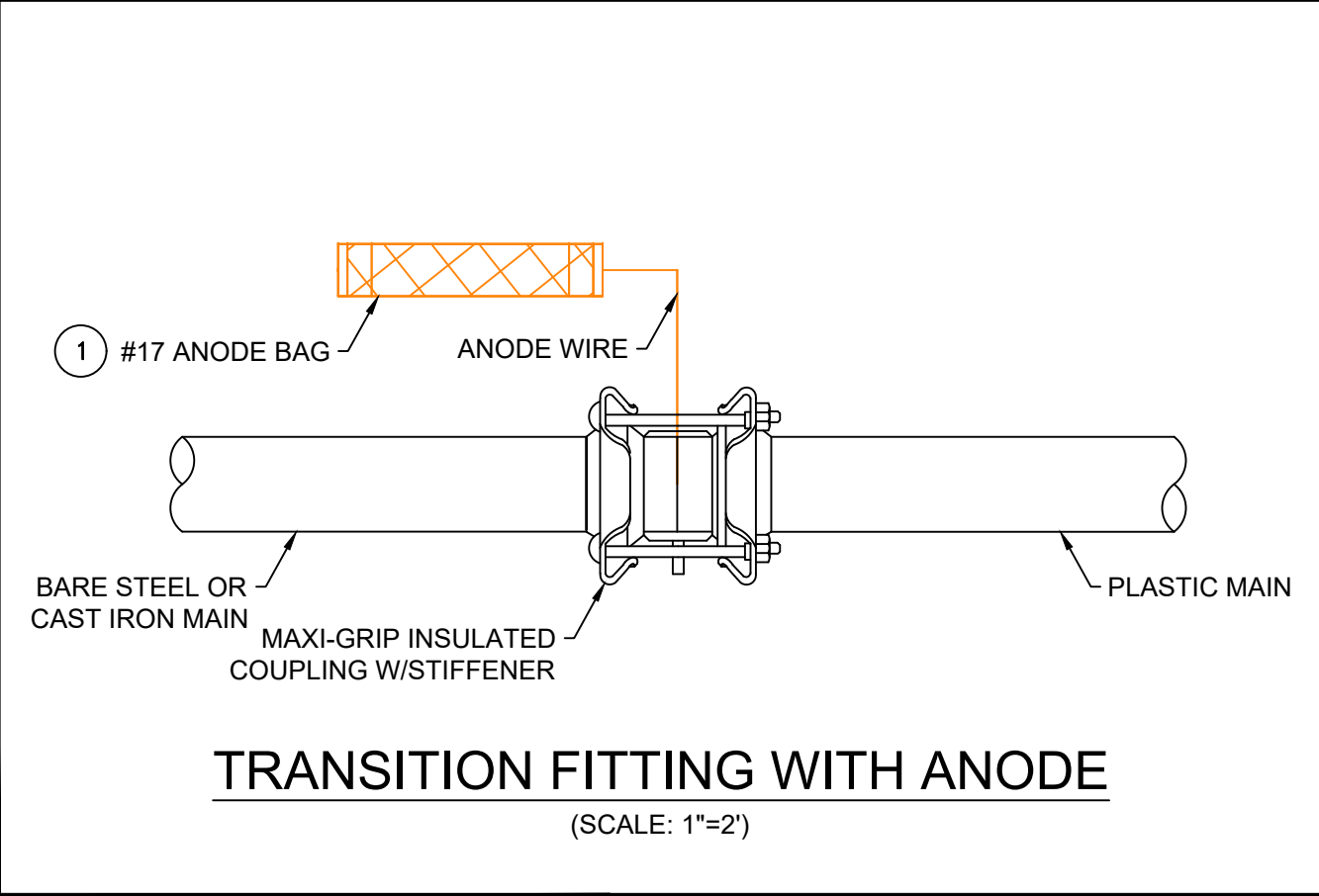
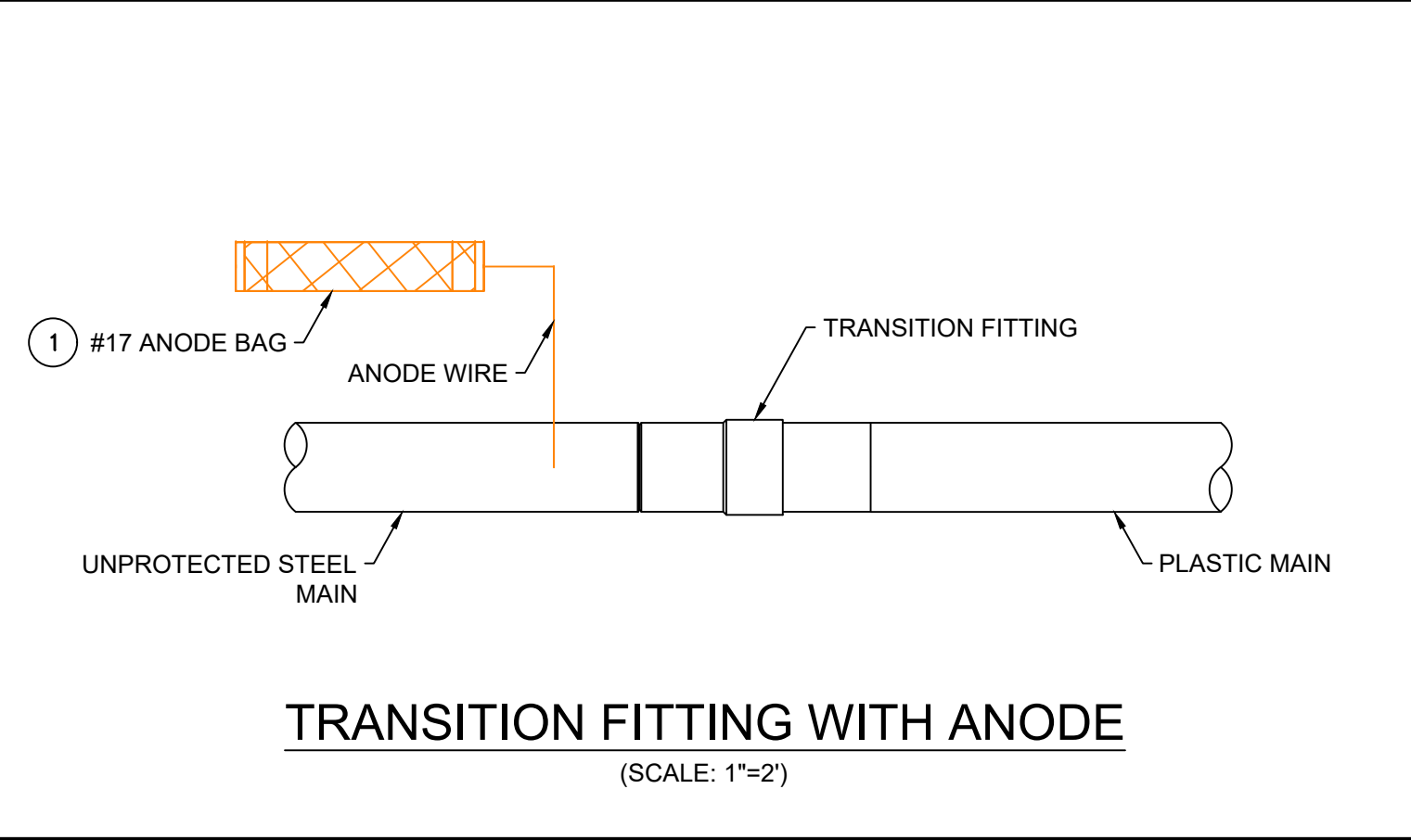
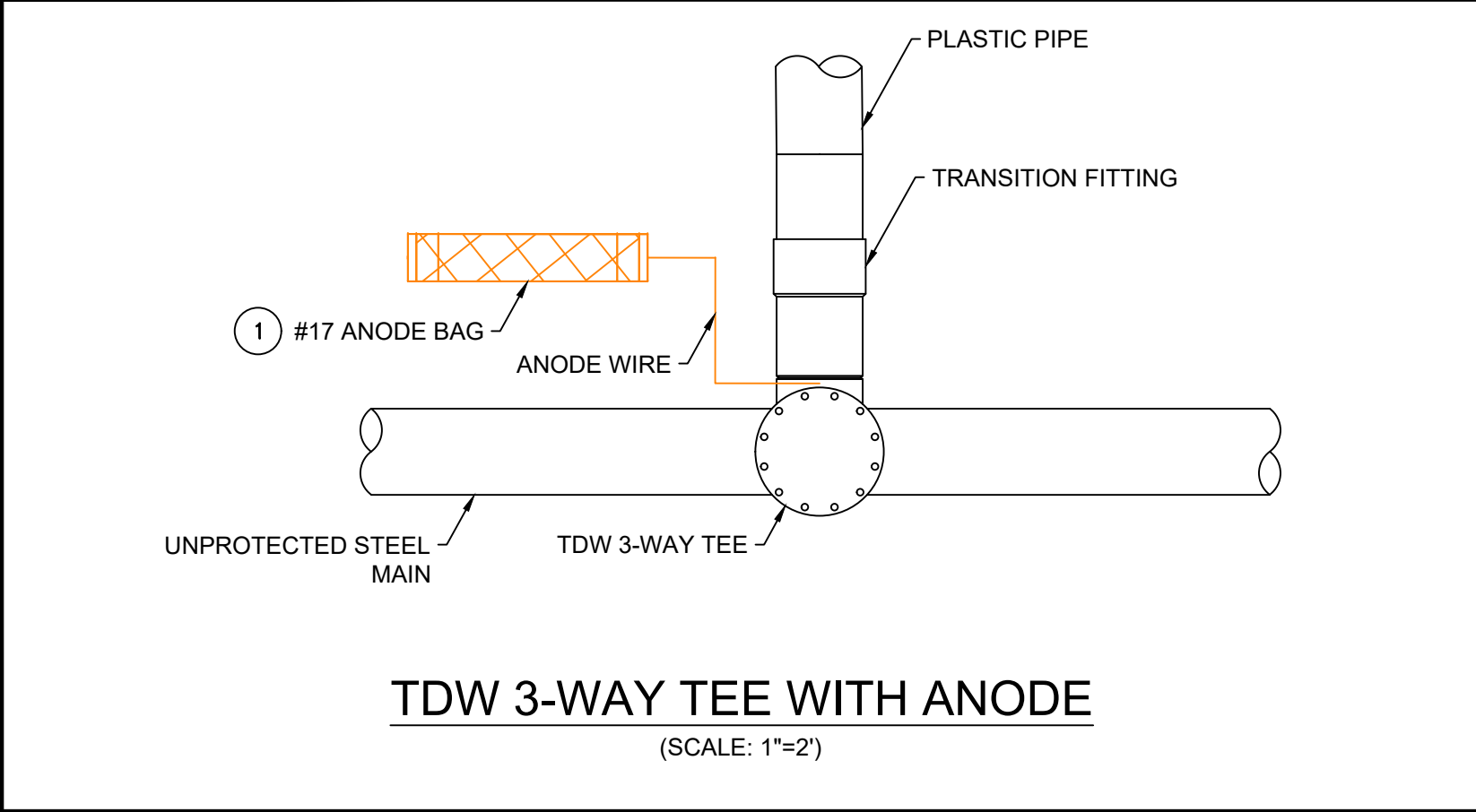
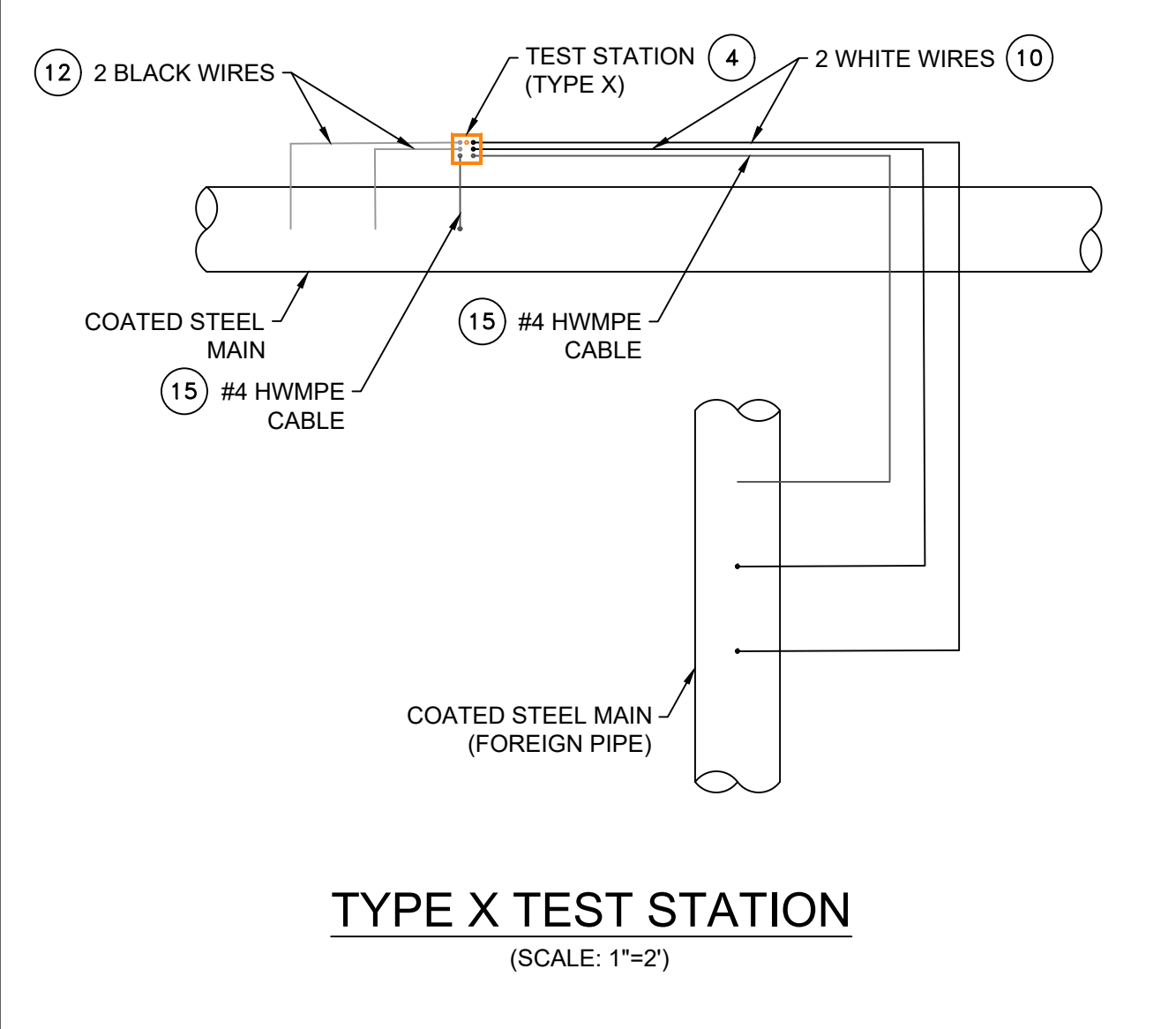
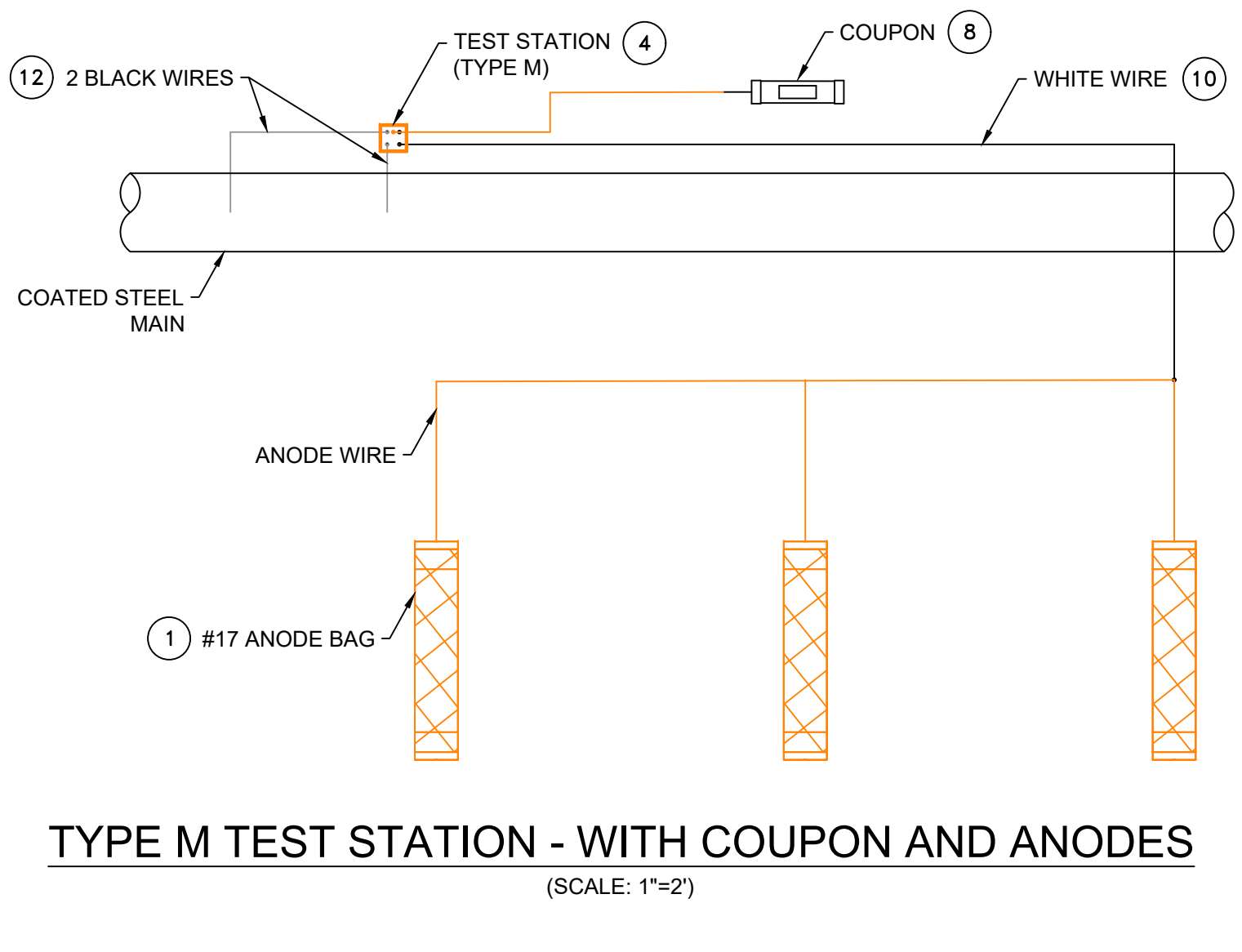
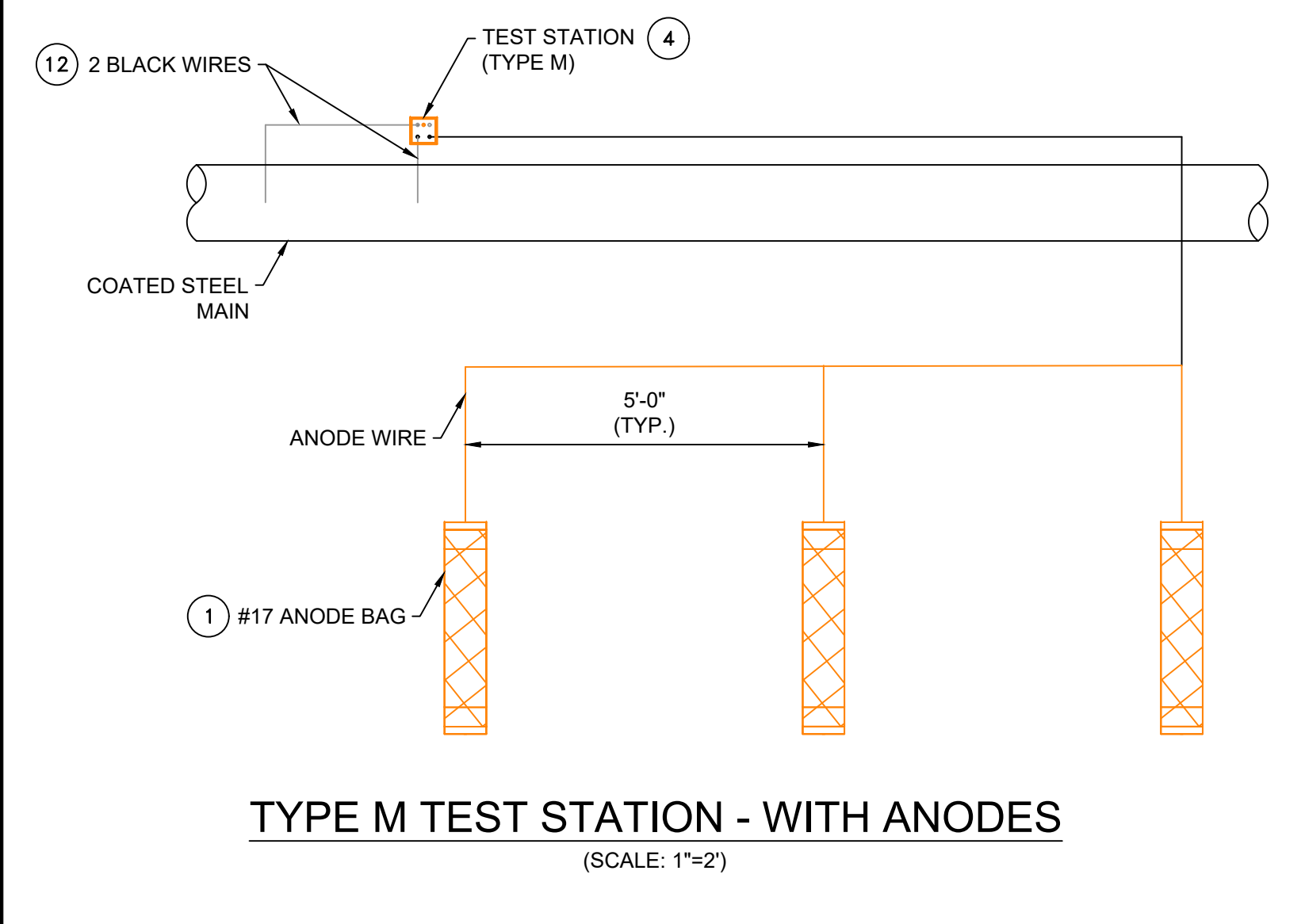
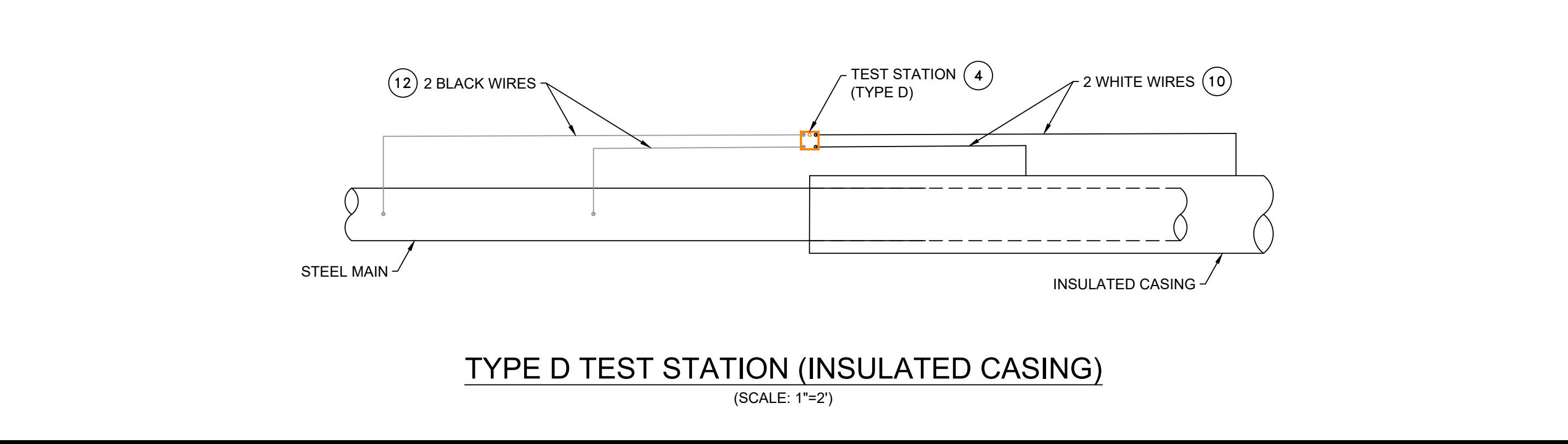
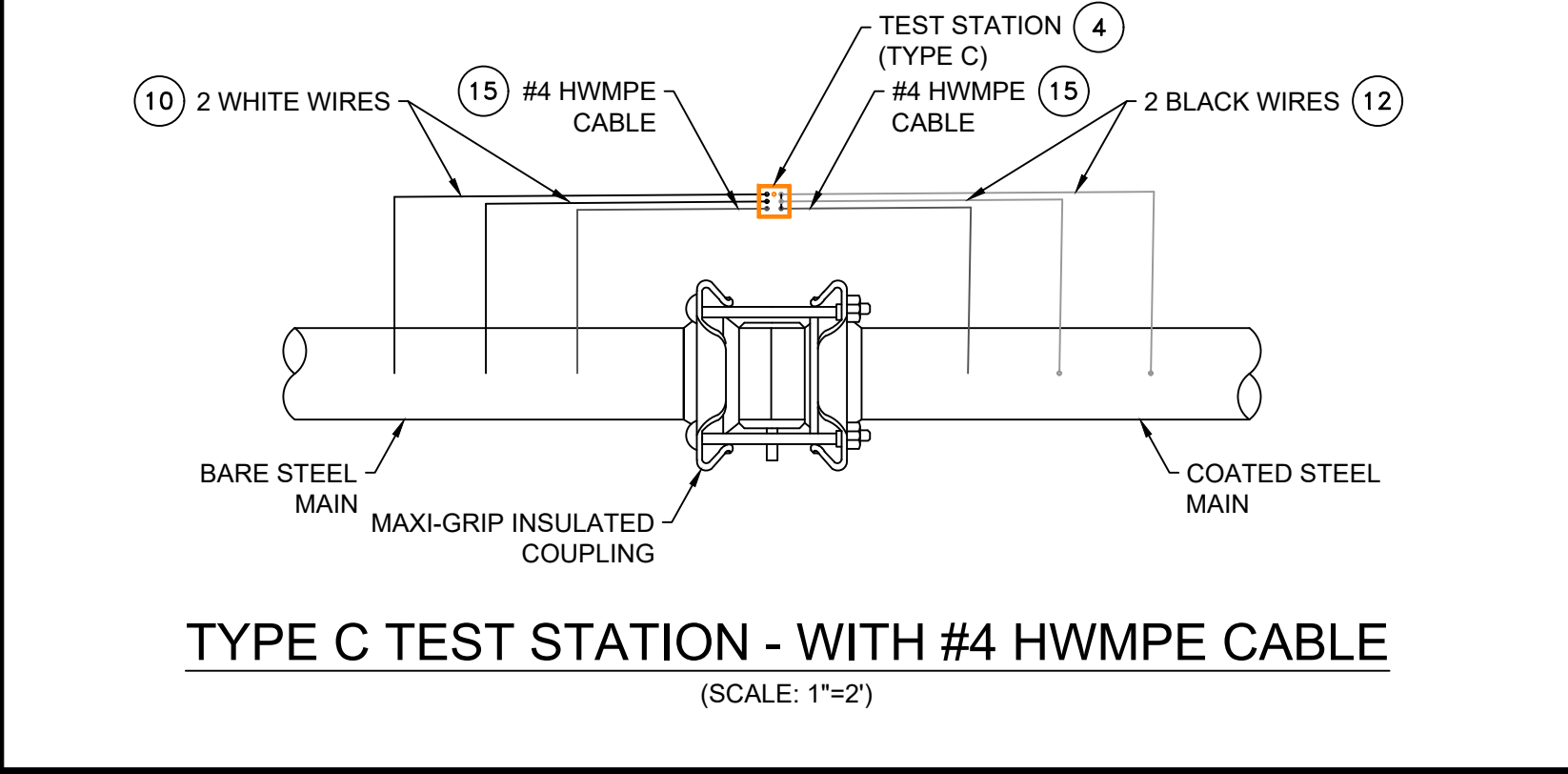
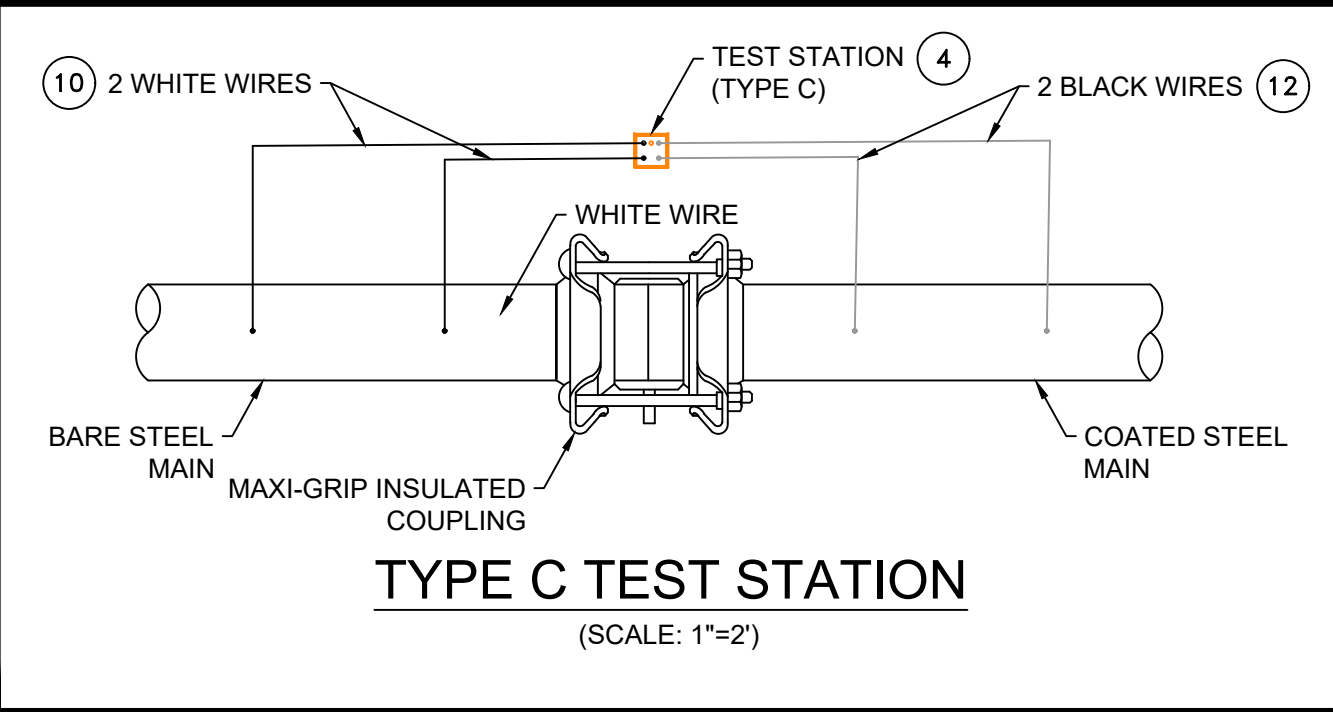
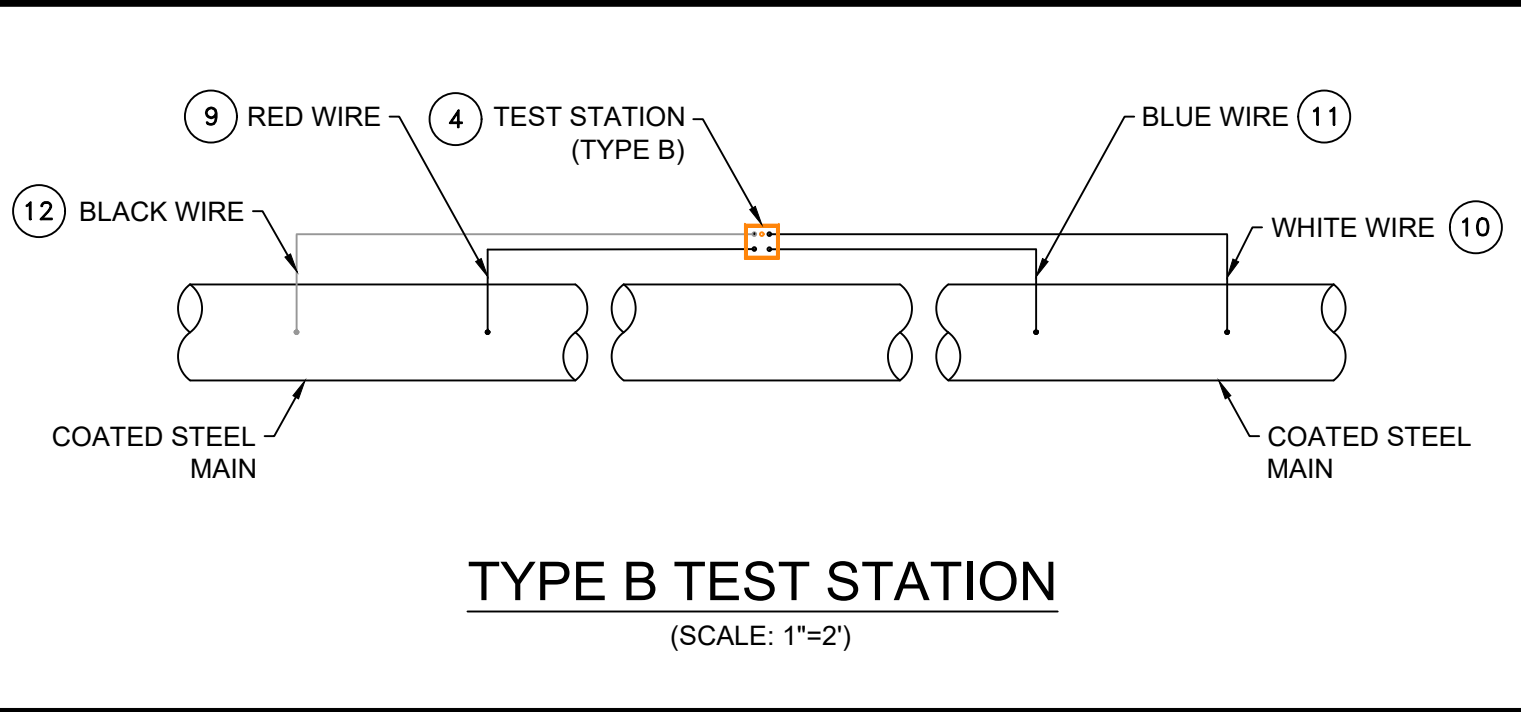
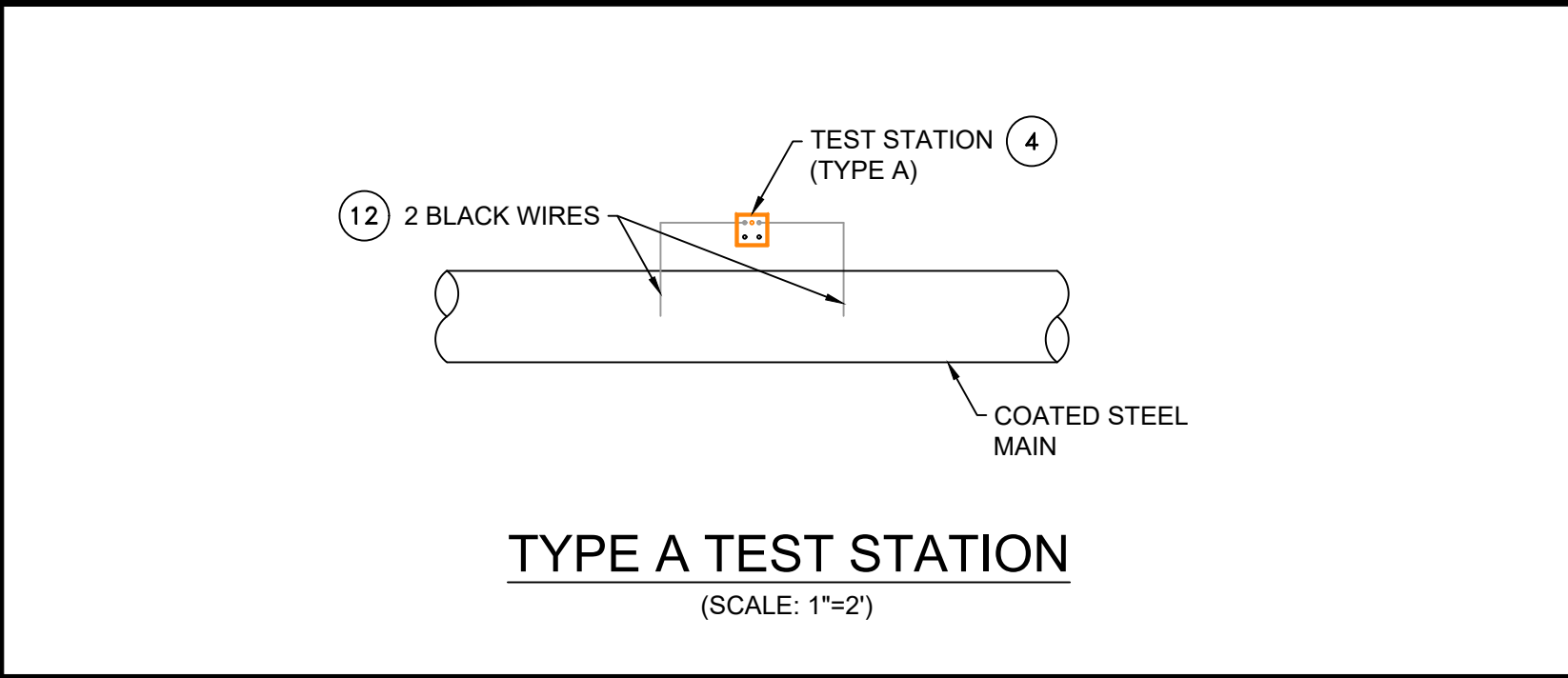
ISSUED FOR
CONSTRUCTION
12/22/2020

SEALED BY:

SIGNATURE


SEALED ON:
12/23/2020
LICENSE
EXPIRATION:
06/30/2022

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.
ENEngineering
29 BARTLETT STREET
MARLBOROUGH, MA 01752
TEL (630) 353-4000
FAX (630) 353-7777
WWW.ENENGINEERING.COM

FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION



CATHODIC PROTECTION BILL OF MATERIALS				
ITEM	QTY	SIZE	MAXIMO NO.	DESCRIPTION
1	X	EA	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
2	X	EA	517626	CONNECTOR, SPLIT BOLT, 12 SOLID - 10 STRANDED, CU TO CU, HOUSING (COVER) MATE IN 590389,
3	X	EA	590389	HOUSING, 50 V MAX, 10 AWG MAX, FOR PROTECTING TRACER WIRE SPLICES, USED WITH CONNECTOR IN 517626. 10/BAG
4	X	EA	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
5	X	BOX	508567	POWDER, CARTRIDGE, TYPE IS F-33, ALLOY , CAP COLOR CLEAR, 15 GM CHARGE, 20/PAC, FOR STEEL PIPE
6	X	EA	559168	SLEEVE,ELECTRICAL, #14 TO 10 AWG, W/ THERMITE WELDER, FOR CATHODIC PROTECTION
7	X	ES	584045	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW010, 10 FT OF CABLE
8	X	ES	603126	EDI CONCENTRIC COUPON ASSEMBLY INCLUDING UCB-ZIN-LW025, 25 FT OF CABLE
9	X	ROLL	603140	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, RED, INSULATED, CU, 500 FT SPOOL, WIRE
10	X	ROLL	578415	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, WHITE, INSULATED, CU, 500 FT SPOOL, WIRE
11	X	ROLL	603141	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLUE INSULATED, CU, 500 FT SPOOL, WIRE
12	X	ROLL	603139	WIRE,ELECTRICAL, THHN, 1/C, #10 AWG, STRANDED, BLACK, INSULATED, CU, 500 FT SPOOL,WIRE
13	X	EA	500804	WELDER,THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE,HORIZONTAL STEEL PIPE 4 IN AND LARGER DIAMETER
14	X	EA	500805	WELDER,THERMITE, THERMITE, FOR GAS PIPE, #12 CABLE, HORIZONTAL STEEL PIPE 3/4 - 3-1/2 IN DIAMETER
15	X	FT	513850	CABLE, INSULATED, CATHODIC PROTECTION, 1/C, #4 AWG, 7 STR, 600 V, BLACK, HWMPE, CU, 1000 FT ROLLS

- NOTES:**
1. 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.
 2. 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).
 3. FOR TYPE B TEST STATIONS, EACH OF THE FOUR WIRES SHOULD BE A DIFFERENT COLOR AND DOCUMENTED
 4. 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).
 5. FOR TYPE D TEST STATIONS WHICH ARE AT A CASING, WHITE WIRES ARE NORMALLY INSTALLED ON THE STEEL CASING AND BLACK WIRES ON INSTALLED ON THE CARRIER PIPE. (ANODES AND/OR COUPONS COULD BE ADDED TO THIS TEST STATION TYPE).
 6. 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 SPliced 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.
 7. 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.

*THESE DETAILS WERE PROVIDED BY EVERSOURCE FOR TYPICAL INSTALLATIONS AND ARE FOR REFERENCE USE ONLY.

ISSUED FOR
CONSTRUCTION
12/22/2020

SEALED BY:
ERIC VINAI KUMAR
No. 54771
REGISTERED PROFESSIONAL ENGINEER
SIGNATURE

SEALED ON:
12/23/2020
LICENSE EXPIRATION:
06/30/2022

DESIGNED IN ACCORDANCE WITH TITLE 49, PART 192 OF MINIMUM FEDERAL SAFETY STANDARDS AND GPIC GUIDE FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS, LATEST EDITION.
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FIELD VERIFY DIMENSIONS
PRIOR TO PIPE FABRICATION

1	IFC - NO CHANGES THIS SHEET	12/22/2020	TG/AB/EK
0	ISSUED FOR CONSTRUCTION	11/30/2020	ZS/AB/EK
NO.	DESCRIPTION	DATE	DW/CK/AP

REVISION STATUS			
EVERSOURCE ENERGY			
PHILLIPS AVENUE MAIN RELAY			
NEW BEDFORD, MASSACHUSETTS			
STANDARD CORROSION DETAILS			
SCALE: 1"=2' (DO NOT SCALE FROM DRAWINGS)			SHEET 20 OF 20
DRAWN BY / DATE	CHECKED BY / DATE	SHEET NUMBER	REV. NO.
ZS 09/30/2020	AB 12/22/2020	MA-NEB-21-PIP-026-20	1
APPROVED BY / DATE	MANEB21PIP026R1		
EK 12/22/2020			