

SECTION 000001 – ADDENDUM NUMBER 1

DATE: SEPTEMBER 26, 2025

TO: ALL BIDDERS

**FROM: NV5, INC
200 BRICKSTONE SQUARE, SUITE 201
ANDOVER, MA 01810**

**RE: HEATING SYSTEM AND SERVICE UPGRADE
26 ALBANY STREET, WORCESTER, MA**

THIS ADDENDUM FORMS A PART OF THE CONTRACT AND MODIFIES THE ORIGINAL DOCUMENTS DATED SEPTEMBER 10, 2025.

PART 1 - GENERAL

- 1.1** This addendum must be returned with plans and specifications (if not already returned) to have your deposit returned.
- 1.2** This addendum modifies, amends, and supplements the Contract Documents for the above referenced project. This addendum is hereby made a part of the Contract Documents by reference and shall be as binding as though inserted in locations designated hereunder.
- 1.3** Each general bidder shall be responsible for notifying all his non-filed sub-bidders and suppliers of the content of this addendum. No claim for additional compensation will be considered because of lack of knowledge of changes or modifications contained in this addenda.
- 1.4** Questions or requests for clarification shall be in writing, addressed to Jeremy C. Flansburg at **DEPARTMENT OF PUBLIC FACILITIES**, and may be sent to fax number: (508) 799-8188 OR flansburgj@worcesterma.gov. Please include your name, phone number, and fax number with your fax or e-mail.
- 1.5** Part 2 of this addendum indicates revisions to the Project Manual.
- 1.6** Part 3 of this addendum indicates revisions to the Drawings.
- 1.7** Part 4 of this addendum indicates clarification to Contractors Questions.

PART 2 - DRAWINGS

- 2.1** Drawing No. E200, DELETE Drawing No. E200 in its entirety and REPLACE with new drawing E300 in Attachment A3.1.
- 2.2** Drawing No. E300, DELETE Drawing No. E300 in its entirety and REPLACE with new drawing E300 in Attachment A3.2

List of Attachments

A3.1 – Revised Drawing E200

A3.2 – Revised Drawing E300

END OF ADDENDUM NUMBER 1

W:\BLV\Projects\2024\0240228 - Worcester E200 George 26 Albany Street Heating System and Service Upgrade - Mechanical E200 George 26 Albany Street Heating System and Service Upgrade - Schedule.dwg [24x36] September 25, 2025 - 12:41pm NatalieMcDonnell

MECHANICAL EQUIPMENT SCHEDULE																
LOAD TAG	STARTER LOCATION	LOAD					POWER SOURCE		CONNECTION						BRANCH CIRCUIT	REMARKS
		HP	FLA	KVA	VOLT	PH	PANEL	C/B	FLEX	JB	REC	DISC				
												AS	AF	NEMA		
EUH-1	NOTE 4		19.2	4.0	208	1	P2-11	30A/2P	X	-	-	30	30	1	2#10+10-3/4"C	NOTE 5
EUH-2	NOTE 4		14.5	3.0	208	1	P2B-21	20A/2P	X	-	-	30	20	1	2#12+12G-3/4"C	NOTE 5
GFF-1			6.8	0.8	120	1	P2B-25	15A/1P	X	-	-	30	15	1	2#12+12G-3/4"C	NOTE 5
GFUH-1	NOTE 4	$\frac{1}{15}$	1.0	0.12	120	1	P2A-28	15A/1P	X	-	-	30	1.25	1	2#12+12G-3/4"C	NOTE 5
GFUH-2	NOTE 4	$\frac{1}{8}$	3.8	0.4	120	1			X	-	-	30	5	1	2#12+12G-3/4"C	NOTE 5
GFUH-2	NOTE 4	$\frac{1}{8}$	3.8	0.4	120	1	P2A-30	15A/1P	X	-	-	30	5	1	2#12+12G-3/4"C	NOTE 5
GFUH-2	NOTE 4	$\frac{1}{8}$	3.8	0.4	120	1			X	-	-	30	5	1	2#12+12G-3/4"C	NOTE 5
GFUH-2	NOTE 4	$\frac{1}{8}$	3.8	0.4	120	1	P2A-30	15A/1P	X	-	-	30	5	1	2#12+12G-3/4"C	NOTE 5
GFUH-2	NOTE 4	$\frac{1}{8}$	3.8	0.4	120	1	P2A-30	15A/1P	X	-	-	30	5	1	2#12+12G-3/4"C	NOTE 5
GFUH-3	NOTE 4	$\frac{1}{2}$	9.8	1.2	120	1	P2B-19	15A/1P	X	-	-	30	15	1	2#12+12G-3/4"C	NOTE 5
GFUH-3	NOTE 4	$\frac{1}{2}$	9.8	1.2	120	1	P2-15	15A/1P	X	-	-	30	15	1	2#12+12G-3/4"C	NOTE 5
NOTES:																
1. BRANCH CIRCUIT WIRING METHODS SHALL BE AS NOTED ON THE DRAWINGS AND/OR SPECIFICATIONS FOR THE APPLICABLE LOCATION. THE FINAL THREE FEET (MAXIMUM) SHALL BE FLEXIBLE METAL OR LIQUIDTIGHT FLEXIBLE METAL CONDUIT.																
2. COPPER BRANCH CIRCUIT CONDUCTOR SIZING BASED UPON NEC TABLE 310.16. MAKE ADJUSTMENTS TO CONDUCTORS FOR TEMPERATURE OR VOLTAGE DROP THAT EXCEED NEC AND SPECIFICATION CRITERIA.																
3. RACEWAY SIZES ARE BASED UPON GRSC AND LFMC WITH THWN CONDUCTORS.																
4. REQUIRED STARTER IS PROVIDED INTEGRAL/PREWIRED TO MECHANICAL EQUIPMENT.																
5. FUSES FOR DISCONNECT SWITCHES SHALL BE CLASS RK5. EXACT FUSE SIZE SHALL BE CONFIRMED BY EQUIPMENT MANUFACTURER.																

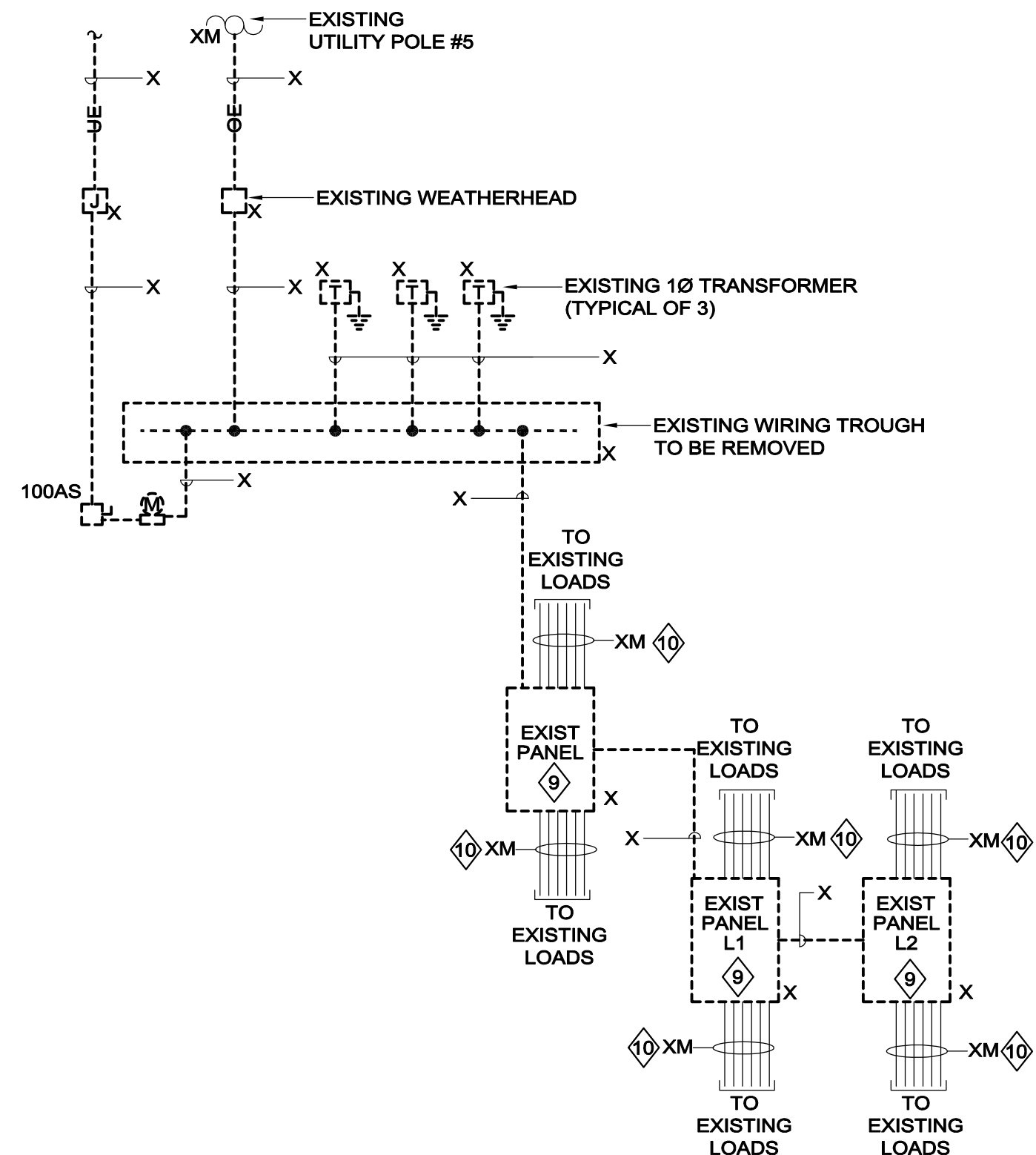
KEYNOTES	
1	DISCONNECT SWITCH HAS BEEN OVERSIZED TO ENABLE TERMINATION OF OVERSIZED FEEDER DUE TO VOLTAGE DROP.
2	FEEDER HAS BEEN OVERSIZED DUE TO VOLTAGE DROP.
3	EXTEND EXISTING BRANCH CIRCUIT WIRING TO NEW PANEL WITH 2#12+12G-3/4"C
4	EXTEND EXISTING BRANCH CIRCUIT WIRING TO NEW PANEL WITH 2#6+10G-3/4"C
5	EXTEND EXISTING BRANCH CIRCUIT WIRING TO NEW PANEL WITH 3#6+10G-3/4"C
6	EXTEND EXISTING BRANCH CIRCUIT WIRING TO NEW PANEL WITH 3#6+10G-3/4"C
7	EXTEND EXISTING BRANCH CIRCUIT WIRING TO NEW PANEL WITH 3#12+12G-3/4"C
8	EXISTING LOADS ARE BASED ON FIELD SURVEY OR CIRCUIT BREAKER RATING AT 80%.
9	EXISTING PANEL TUB SHALL REMAIN AND UTILIZED AS SPLICE BOX. PROVIDE BLANK SCREWED REMOVABLE COVER.
10	EXISTING ACTIVE BRANCH CIRCUIT WIRING TO BE MAINTAINED. SPLICE IN EXISTING PANEL TUB AND EXTEND TO NEW PANEL UTILIZING 600V HYPRESS COMPRESSION BUTT SPLICES WITH 600V HEAT SHRINK TUBES. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
11	SERVICE ENTRANCE SPD SHALL HAVE A MAXIMUM SURGE RATING CAPACITY OF 125KA PER MODE (250KA PER PHASE). SPD SHALL BE INDIVIDUALLY MOUNTED IN A NEMA 1 ENCLOSURE CONNECTED TO THE SERVICE VIA A 60A-3P CIRCUIT BREAKER. PROVIDE WITH INDICATING LAMPS, SURGE COUNTER AND FORM C CONTACT FOR CONNECTION TO THE BUILDING AUTOMATION SYSTEM AS A GENERAL ALARM. SPD SHALL BE TO SERIES AS MANUFACTURED BY CURRENT TECHNOLOGY, LM SERIES BY LIEBERT OR CPS SERIES FROM CUTLER HAMMER.
12	PROVIDE POWER SYSTEM STUDY. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
13	SECONDARY FEEDERS SHALL BE COILED UP WITHIN MANHOLE FOR TERMINATION BY NGRID. PROVIDE 6' SLACK.

NOTES:
1 REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.

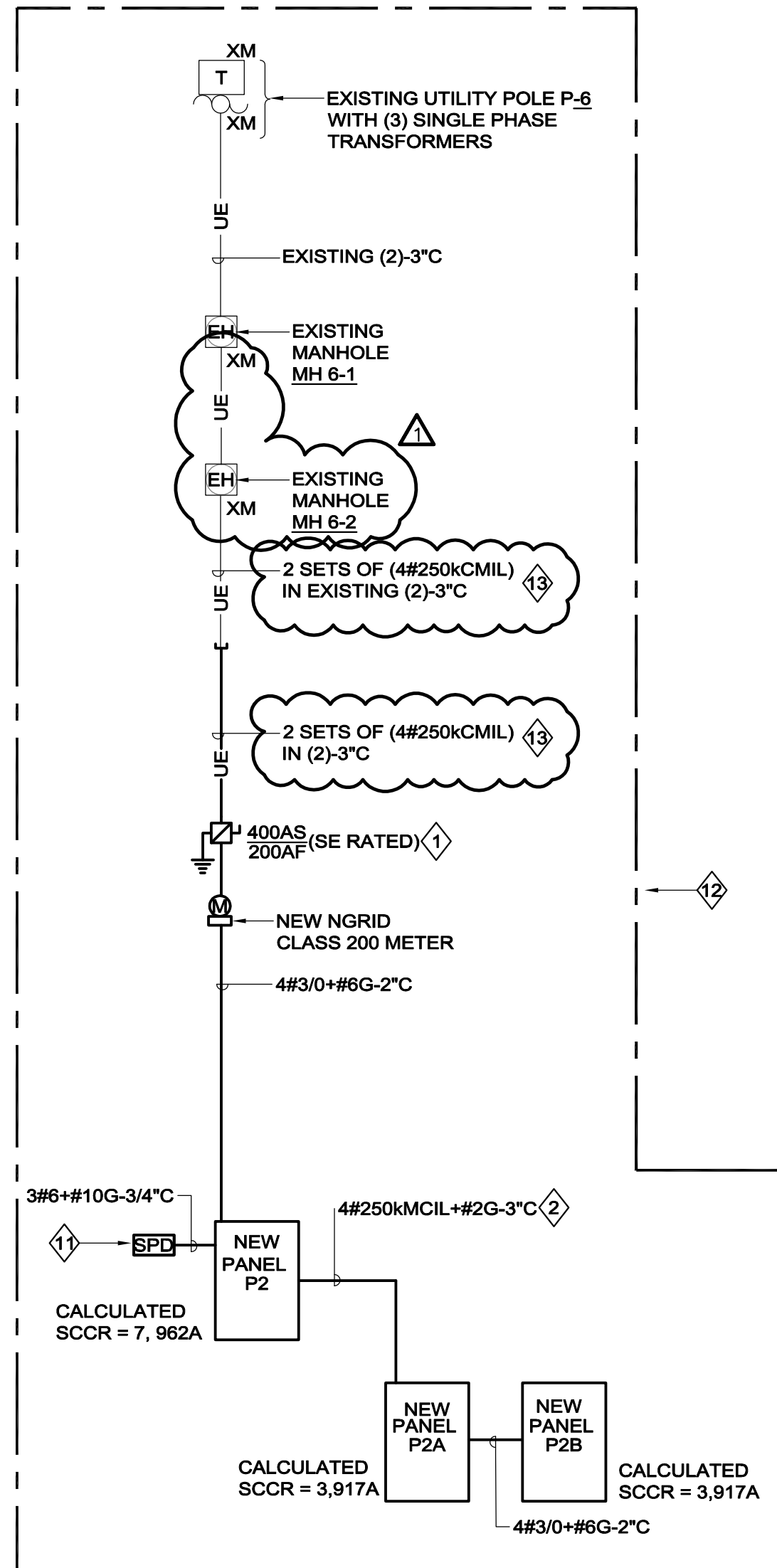
NEW PANELBOARD SCHEDULE										
PANEL: P2			VOLTS: 208Y/120		MOUNT: SURFACE		GROUND BUS: Y			
MAIN: MCB (100% SE RATED)			AMPS: 200A		AIC: 10,000		ISOLATED GROUND BUS: N			
			PHWIRE: 3/4		LOC.: GARAGE		200% NEUTRAL: N			
CIR.	AMPS/ POLES	DESCRIPTION OF LOAD	LOAD KVA	LOAD BY PHASE, KVA			LOAD KVA	DESCRIPTION OF LOAD	AMPS/ POLES	CIR.
				A	B	C				
1	20/1	EXISTING FREEZER	0.24	12.14			11.90	PANEL P2A	100/3	2
3	20/1	EXISTING LIGHTING - GARAGE	1.00		12.90		11.90			4
5	20/1	EXISTING LIGHTING - GARAGE	1.00			12.90	11.90			6
7	20/2	EXISTING OVERHEAD DOOR (1/2HP)	0.55	13.05			12.50		100/3	8
9			0.55		13.05		12.50	PANEL P2B		10
11			2.00			14.50	12.50			12
13	30/2	EUH-1	2.00	5.30			3.30			14
15	20/1	GFUH-3	1.20		4.50		3.30		EXISTING OUTDOOR AC UNIT	40/2
17	20/1	SPARE				0.00		SPARE	20/1	18
19	20/1	SPARE		0.00				SPARE	20/1	20
21	20/1	SPARE			0.00			SPARE	20/1	22
23	20/1	SPARE				0.00		SPARE	20/1	24
25		SPACE		0.00				SPACE		26
27		SPACE			0.00			SPACE		28
29		SPACE				0.00		SPACE		30
31		SPACE		0.00				SPACE		32
33		SPACE			0.00			SPACE		34
35		SPACE				0.00		SPACE		36
37				0.00				SPACE		38
39	60/3	SPD			0.00			SPACE		40
41						0.00		SPACE		42
CONNECTED KVA BY PHASE -				30.49	30.45	27.40		TOTAL CONNECTED KVA-	88.34	
								DEMAND FACTOR	0.80	
								TOTAL DEMAND KVA-	70.67	
								TOTAL DEMAND AMPERES-	196.17	

NEW PANELBOARD SCHEDULE										
PANEL: P2A			VOLTS: 208Y/120		MOUNT: SURFACE		GROUND BUS: Y			
MAIN: MLO			AMPS: 100		AIC: 10,000		ISOLATED GROUND BUS: N			
			PHWIRE: 3/4		LOC.: SHOP		200% NEUTRAL: N			
CIR.	AMPS/ POLES	DESCRIPTION OF LOAD	LOAD KVA	LOAD BY PHASE, KVA			LOAD KVA	DESCRIPTION OF LOAD	AMPS/ POLES	CIR.
				A	B	C				
1	20/1	OVERHEAD LTS ROW 1	0.25	0.50			0.25	OVERHEAD LTS ROW 2	20/1	2
3	20/1	OVERHEAD LTS ROW 1	0.25		0.50		0.25	OVERHEAD LTS ROW 2	20/1	4
5	20/1	GARAGE LTS	0.50			0.75	0.25	OVERHEAD LTS ROW 3	20/1	6
7	20/1	DOCK LTS	0.20	0.45			0.25	OVERHEAD LTS ROW 3	20/1	8
9	20/1	GARAGE DOOR LTS	0.10		0.60		0.50	OVERHEAD LTS ROW 4	20/1	10
11	20/1	YARD LTS	0.10			0.30	0.20	TOOL STORAGE	20/1	12
13	20/1	OFFICE LTS	0.20	0.40			0.20	PANT ROOM	20/1	14
15	20/1	PAVEMENT MARKING	0.20		0.40		0.20	SIGNAL STORAGE	20/1	16
17	20/1	DOOR #1	1.80			2.16	0.36	DOCK REC + CLOCK	20/1	18
19	20/1	DOOR #3	1.80	2.16			0.36	OFFICE REC	20/1	20
21	20/1	DOOR #2	1.80		2.16		0.36	OFFICE REC + PANT RM REC	20/1	22
23	20/1	GARAGE OVERHEAD LTS	0.20			0.56	0.36	OFFICE REC	20/1	24
25	20/1	GARAGE POST OUTLETS	0.36	0.56			0.20	TOILET + SHOWER	20/1	26
27	50/2	STOVE	4.16		5.08		0.92	GFUH-1, GFUH-2(2)	15/1	28
29			4.16			4.96	0.80	GFUH-2 (2)	20/1	30
31	50/3	EXISTING UNKNOWN LOAD	4.80	4.80				SPARE	20/1	32
33			4.80		4.80			SPARE	20/1	34
35			4.80			4.80		SPARE	20/1	36
37	20/1	SPARE		0.00				SPARE	20/1	38
39	20/1	SPARE			0.00			SPARE	20/1	40
41	20/1	SPARE				0.00		SPARE	20/1	42
CONNECTED KVA BY PHASE -				8.87	13.54	13.53		TOTAL CONNECTED KVA-	35.94	Σ
								DEMAND FACTOR	0.80	
								TOTAL DEMAND KVA-	28.75	
								TOTAL DEMAND AMPERES-	79.81	

NEW PANELBOARD SCHEDULE										
PANEL: P2B			VOLTS: 208Y/120		MOUNT: SURFACE		GROUND BUS: Y			
MAIN: MLO			AMPS: 100		AIC: 10,000		ISOLATED GROUND BUS: N			
			PHWIRE: 3/4		LOC.: SHOP		200% NEUTRAL: N			
CIR.	AMPS/ POLES	DESCRIPTION OF LOAD	LOAD KVA	LOAD BY PHASE, KVA			LOAD KVA	DESCRIPTION OF LOAD	AMPS/ POLES	CIR.
				A	B	C				
1	20/1	WATER HEATER	1.80	1.98			0.18	REC AT VATS	20/1	2
3	20/1	REC AT PANEL	0.18		0.36		0.18	REC N WALL	20/1	4
5	20/1	REC NORTH WALL	0.18			0.36	0.18	REC N WALL	20/1	6
7	20/1	SPARE		0.18			0.18	REC REAR WALL SOLVENT	20/1	8
9	20/1	REC N WALL	0.18		0.36		0.18	REC REAR WALL SOLVENT	20/1	10
11	20/1	REC REAR WALL	0.18			0.36	0.18	DRILL PRESS BACK REC	20/1	12
13			2.20	2.20				SPARE	20/1	14
15	20/2	EXISTING LOAD	2.20		2.38		0.18	GF REC AT OUTSIDE AC	20/1	16
17	20/1	EXISTING LOAD	1.80			1.98	0.18	BENCH REC	20/1	18
19	20/1	GFUH-3	1.20	1.77			0.57	CEILING FAN (ASSUME 1HP)		20
21			1.50		2.07		0.57			22
23	20/2	EUH-2	1.50			2.07	0.57			24
25	20/1	GFF-1	0.80	2.40			1.60	INSIDE AC (OFF)	20/2	26
27	20/1	SPARE			1.60		1.60			28
29	20/1	SPARE				0.00		SPARE	20/1	30
31	20/1	SPARE		0.00				SPARE	20/1	32
33			2.20		7.80		5.60	WELDING REC	50/2	34
35	20/2	CLEANING TABLE REC	2.20			7.80	5.60			36
37			0.57	1.14			0.57	COMPRESSOR (ASSUME 1HP)	20/3	38
39	20/3	FAN (ASSUME 1HP)	0.57		1.14		0.57			40
41			0.57			1.14	0.57	TOTAL CONNECTED KVA-	39.09	
CONNECTED KVA BY PHASE -				9.67	15.71	13.71		DEMAND FACTOR	0.65	
								TOTAL DEMAND KVA-	25.41	
								TOTAL DEMAND AMPERES-	70.53	



ELECTRICAL ONE-LINE DIAGRAM - DEMOLITION
SCALE: N.T.S.



ELECTRICAL ONE-LINE DIAGRAM - NEW WORK
SCALE: N.T.S.

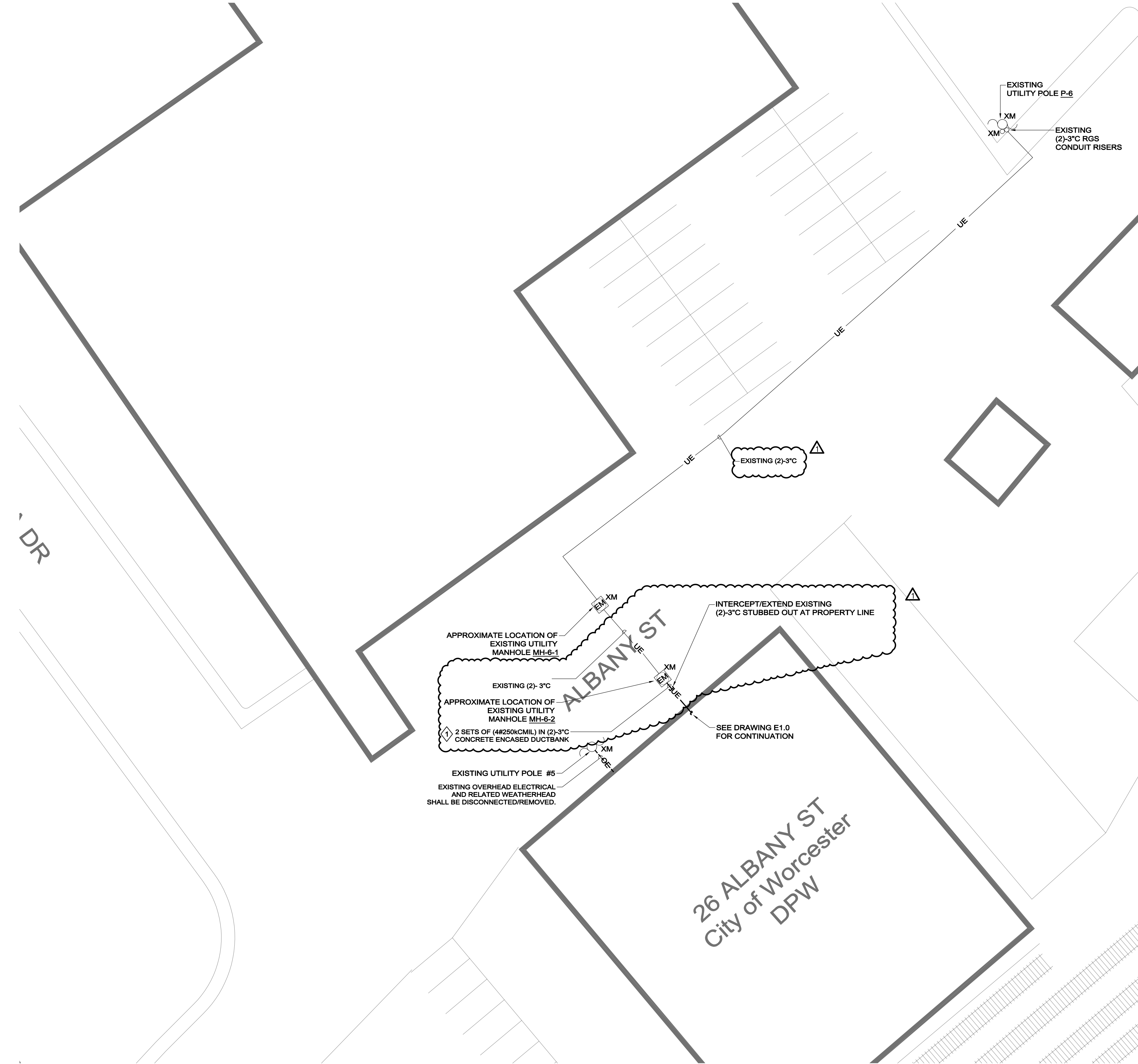
REVISIONS

▲ DATE CHK DESCRIPTION

DATE	CHK	DESCRIPTION

SEAL

W:\BLDGS\Projects\2024\0240228 - Worcester DPW - George 26 Albany St\00 Drawings\001\01.dwg [E300 ELECTRICAL Site Plan.dwg] September 25, 2025 - 12:40pm MarkMcDonnell



ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"

NOTES:

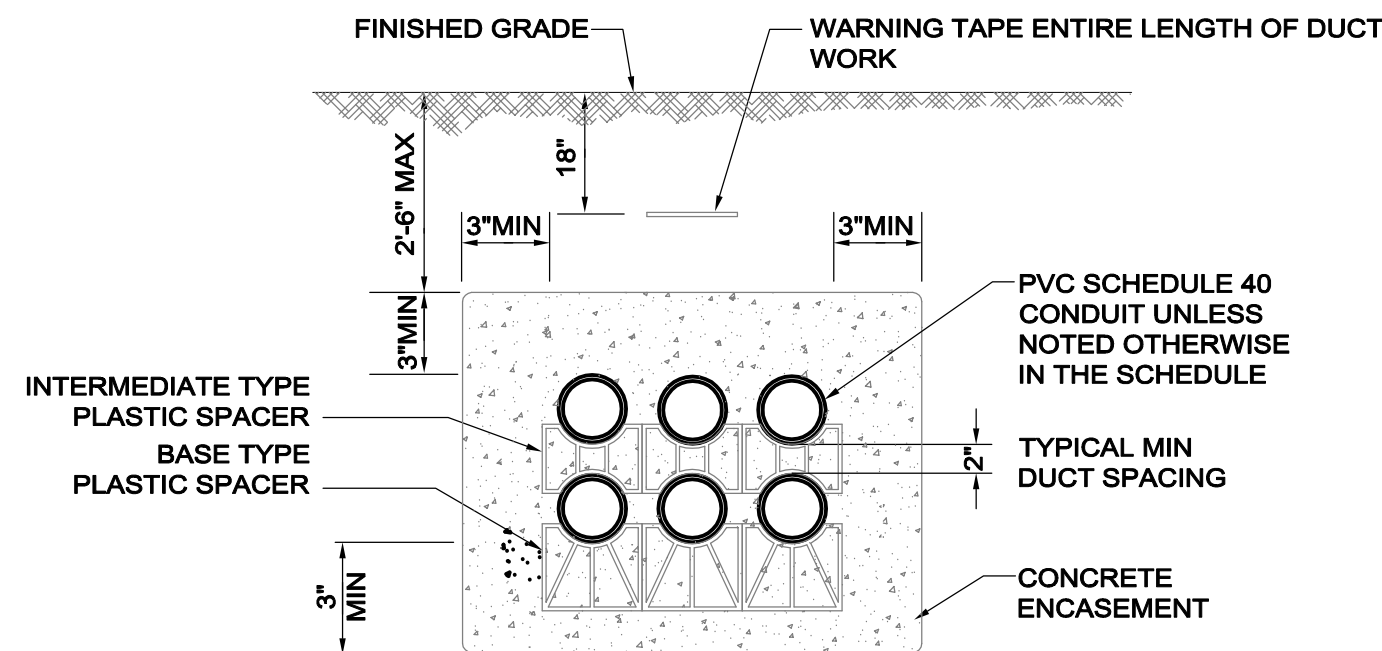
1. REFER TO DRAWING E000 FOR LEGEND, SYMBOLS AND GENERAL NOTES.

KEYNOTES

1 PROVIDE EXCAVATION FROM PROPERTY LINE TO BUILDING TO ENABLE EXTENSION OF EXISTING DUCTBANK/EMPTY CONDUIT SYSTEM INSTALLED BY UTILITY COMPANY (NGRID) TO NEW SERVICE ENTRANCE DISCONNECT AS ILLUSTRATED. REFER TO DUCTBANK DETAIL E502 FOR ADDITIONAL INFORMATION. PATCH EXISTING ASPHALT PAVING TO MATCH EXISTING ADJACENT CONDITIONS UPON COMPLETION OF WORK.

NOTES:

1 REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.



TYPICAL DUCT SECTION

REBAR NOTE:

(4) #6 TOP
(1) #6 EACH FACE
(4) #6 BOTTOM
LAP 2'-1" AT SPLICE
(QUANTITY INCREASES PROPORTIONAL TO CONDUIT QUANTITY)

#6 REBAR (TYPICAL)

REBAR DETAIL

NOTES:

1. THIS DETAIL IS INTENDED TO ILLUSTRATE CONSTRUCTION OF TYPICAL DUCT BANK. REFER TO REFERENCED SECTION FOR QUANTITY AND SIZE OF CONDUIT REQUIRED. DUCT CONSTRUCTION SHALL BE MODIFIED TO ACCOMMODATE REQUIREMENTS ILLUSTRATED IN THE ACTUAL SECTION, UTILIZING THE CRITERIA ESTABLISHED IN THIS DETAIL AND AS WRITTEN IN THE SPECIFICATIONS.
2. REBAR SHALL BE USED FOR ALL DUCT BANKS INSTALLED UNDER TRAVELED WAYS, ROADWAYS, AND TRANSITIONS INTO MANHOLES/HANDHOLES AND FOUNDATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.
3. WARNING TAPE SHALL BE DETECTABLE TYPE FOIL BACKED 4 MIL POLYETHYLENE WITH FADE RESISTANT "BURIED ELECTRIC LINE BELOW" A MINIMUM OF 12 INCHES ABOVE THE BURIED SERVICE. TAPE SHALL BE EQUAL TO T & B NAF-0705

N|V|5

TYPICAL ELECTRICAL DUCT DETAIL

E502

N|V|5

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Andover, MA 01810-1488

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REVISIONS

DATE CHK DESCRIPTION

SEAL

PROJECT

NUMBER
0240052

DATE
09/10/2025

CITY OF WORCESTER
26 ALBANY STREET
HEATING SYSTEM
AND SERVICE UPGRADE

DRAWING

DRAWN BY
MVM

CHECKED BY
KEG

SCALE
1"=20'-0"

ELECTRICAL
SITE PLAN

N|V|5

E300