

# CHILLER REPLACEMENT PROJECT

NEWTON FREE LIBRARY  
330 HOMER ST., NEWTON, MA 02459



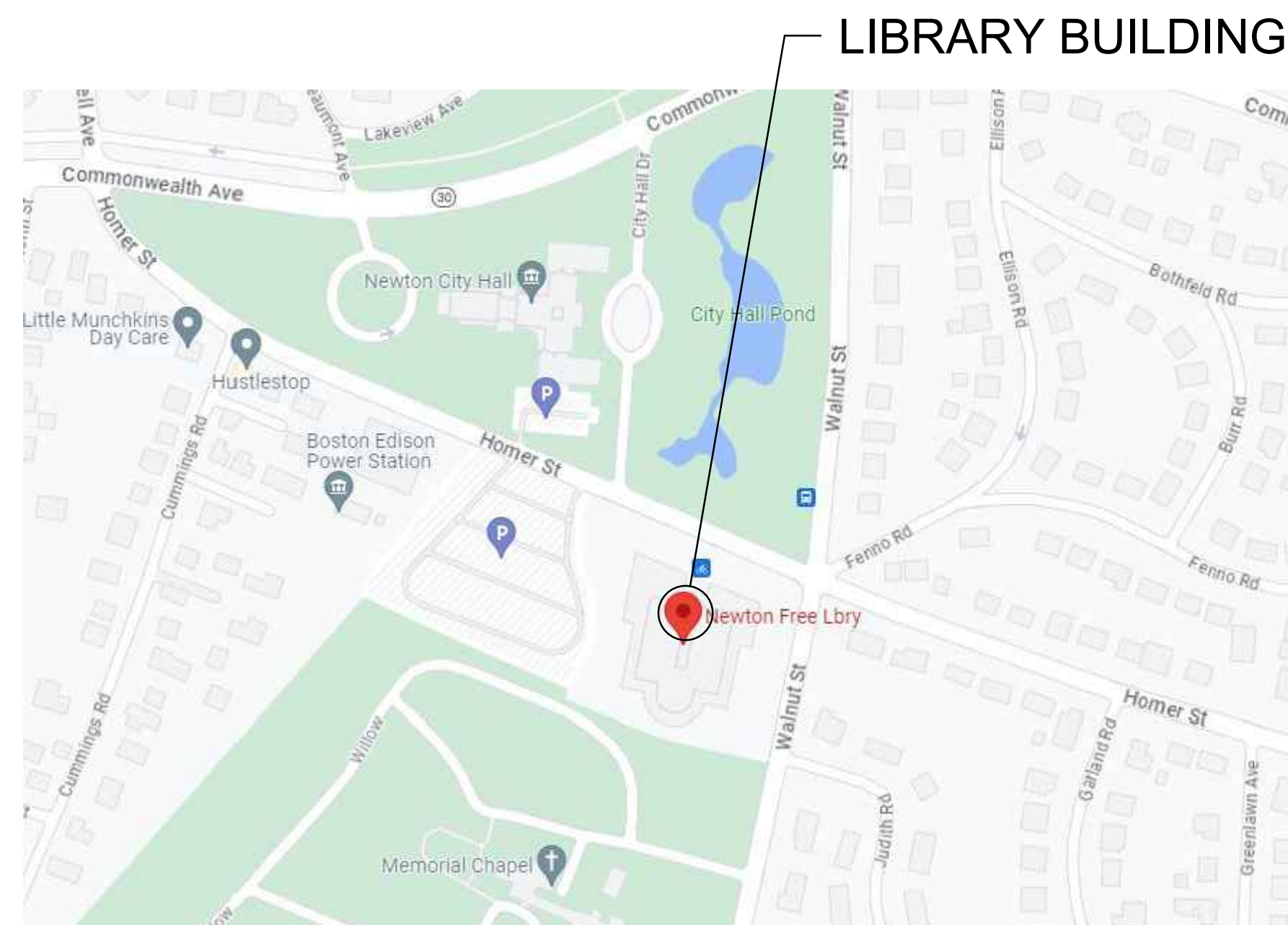
CITY OF NEWTON  
PUBLIC BUILDINGS DEPARTMENT  
52 ELLIOT ST.,  
NEWTON HIGHLANDS, MA 02461

MECHANICAL ENGINEER

C.A. CROWLEY ENGINEERING, INC.  
645 COUNTY ST., UNIT 6,  
TAUNTON, MA 02780.  
TELEPHONE NO. (508) 884-5094

ELECTRICAL ENGINEER

SHEPHERD ENGINEERING INC.  
1308 GRAFTON ST.,  
WORCESTER, MA 01604.  
TELEPHONE NO. (508) 757-7793

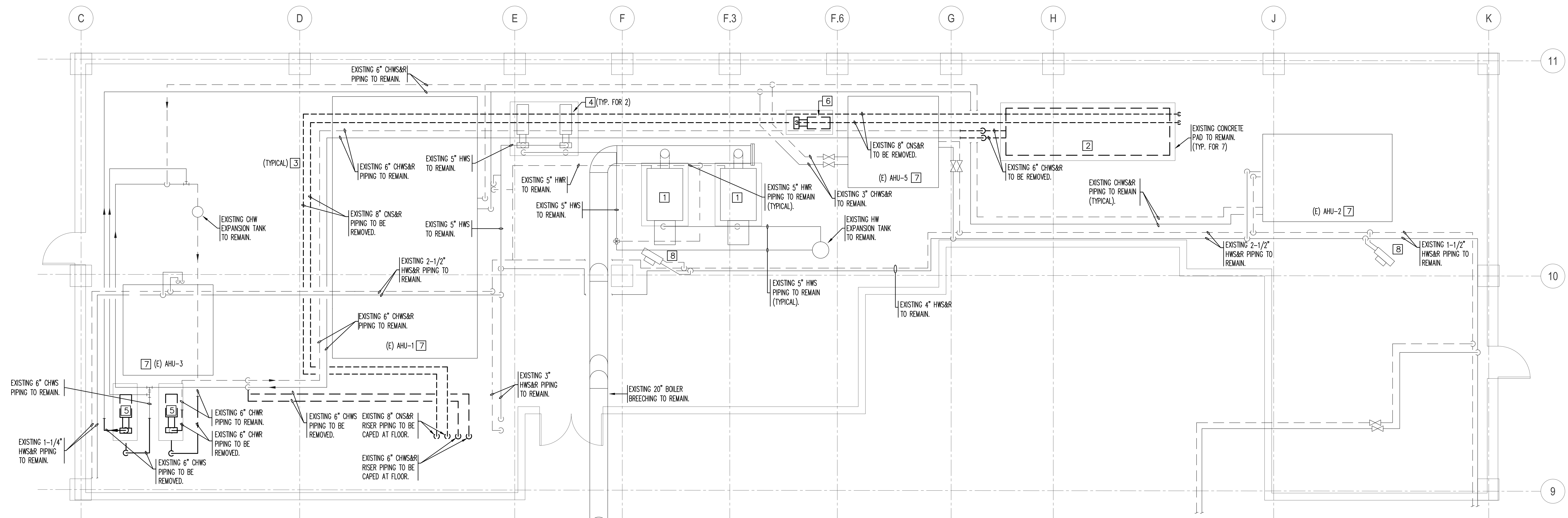


330 HOMER ST., NEWTON, MA - LOCUS PLAN

DECEMBER 13, 2023

## LIST OF DRAWINGS

T-1	T-1	TITLE SHEET
	<u>MECHANICAL</u>	
	M-1.01	MECHANICAL - PARTIAL DEMOLITION PLANS AND NOTES
	M-1.02	MECHANICAL - PARTIAL NEW WORK PLANS AND NOTES
	M-2.01	MECHANICAL - LEGEND AND SCHEMATIC
	M-3.01	MECHANICAL - SCHEDULES AND DETAILS
	<u>ELECTRICAL</u>	
	ED .01	DEMO MEZZANINE AND SITE PLANS - ELECTRICAL
	E-1.01	PARTIAL MEZZANINE AND ROOF PLANS - ELECTRICAL
	E-1.02	SITE/ROOF PLAN - ELECTRICAL



**MECHANICAL ROOM HVAC DEMOLITION PLAN**

SCALE: 1/4"=1'-0"

**DEMOLITION NOTES:**

1. THE EXISTING BOILERS, EXPANSION TANK, AIR SEPARATOR, HWS&R PIPING AND ACCESSORIES RELATED TO BUILDING HEATING SHALL REMAIN UNLESS OTHERWISE NOTED.
2. THE TWO (2) EXISTING COOLING TOWERS (NOT SHOWN ON THE FLOOR PLANS) LOCATED AT GRADE IN A FENCED AREA AND ASSOCIATED ACCESSORIES AND CONTROLS TO BE REMOVED IN ENTIRETY. THE CONDENSER WATER PIPING OUTSIDE SHALL BE REMOVED BACK TO THE POINT OF ENTRANCE TO THE UNDERGROUND TRENCH AND CAPPED. THIS SHALL INCLUDE ALL HANGERS, SUPPORTS, ANCHORS, ETC. THE EXISTING BURIED CNS&R PIPING AND THE ENCLOSED PIPING WITHIN THE BUILDING UP TO THE MECHANICAL ROOM SHALL BE ABANDONED IN PLACE. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A LEGAL MANNER. ALL WALL AND CEILING OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY PATCHED TO MATCH EXISTING.
3. THE NOTED EXISTING CHILLED WATER PUMPS, CHWS&R PIPING, ACCESSORIES AND CONTROLS TO BE REMOVED. THE NOTED CHWS&R PIPING IN THE MECHANICAL ROOM SHALL BE REMOVED BACK TO THE RISER AND PIPING SHALL BE CAPPED AT THE RISER. THIS SHALL INCLUDE ALL HANGERS, SUPPORTS, ANCHORS, ETC. EXISTING ENCLOSED PIPING WITHIN THE BUILDING SHALL BE ABANDONED IN PLACE. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF IN A LEGAL MANNER. ALL WALL AND CEILING OPENINGS ASSOCIATED WITH THE REMOVED APPARATUS SHALL BE PROPERLY PATCHED TO MATCH EXISTING.
4. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS AND SIZES OF EXISTING HWS&R, CHWS&R, CW, ETC. PIPING IN FIELD. ANY MAJOR DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
5. CONTRACTOR SHALL REMOVE THE EXISTING CONTROLS ASSOCIATED WITH THE REMOVED EQUIPMENT PART OF THE HVAC UPGRADES PROJECT. REMOVE ALL CONTROL WIRING AND MAKE SAFE. PREPARE THE EXISTING DELTA BMS TO ACCOMMODATE NEW CONTROL POINTS ASSOCIATED WITH THE REPLACEMENT EQUIPMENT. THE EXISTING CONTROLS ASSOCIATED WITH THE REMAINDER OF THE HVAC SYSTEM SHALL REMAIN UNLESS OTHERWISE NOTED.
6. PLUMBING RELATED ACCESSORIES SHALL BE REMOVED BY THE PLUMBING CONTRACTOR. ALL PLUMBING WORK RELATED TO EQUIPMENT BEING REMOVED SHALL BE DISCONNECTED AND MADE SAFE BY THE P.C.
7. ALL ELECTRICAL WORK RELATED TO EQUIPMENT BEING REMOVED SHALL BE DISCONNECTED AND MADE SAFE BY THE ELECTRICAL CONTRACTOR.

**DEMOLITION KEY NOTES:**

- 1 EXISTING GAS FIRED HW BOILERS AND ASSOCIATED BOILER BREECHING TO REMAIN.
- 2 EXISTING WATER COOLED CHILLER TO BE REMOVED.
- 3 EXISTING CNS&R PIPING IN THE MECHANICAL ROOM SHALL BE REMOVED BACK TO THE RISER. CONTRACTOR SHALL CAP THE PIPING AT THE FLOOR PENETRATION.
- 4 EXISTING BASE MOUNTED HOT WATER END-SUCTION PUMPS AND ASSOCIATED PIPING, ACCESSORIES AND CONTROLS TO REMAIN.
- 5 EXISTING BASE MOUNTED CHILLED WATER END-SUCTION PUMPS AND ASSOCIATED ACCESSORIES & CONTROLS TO BE REMOVED.
- 6 EXISTING BASE MOUNTED CONDENSER WATER END-SUCTION PUMP AND ASSOCIATED ACCESSORIES & CONTROLS TO BE REMOVED.
- 7 EXISTING VAV AHU TO REMAIN.
- 8 EXISTING HW UNIT HEATER TO REMAIN.

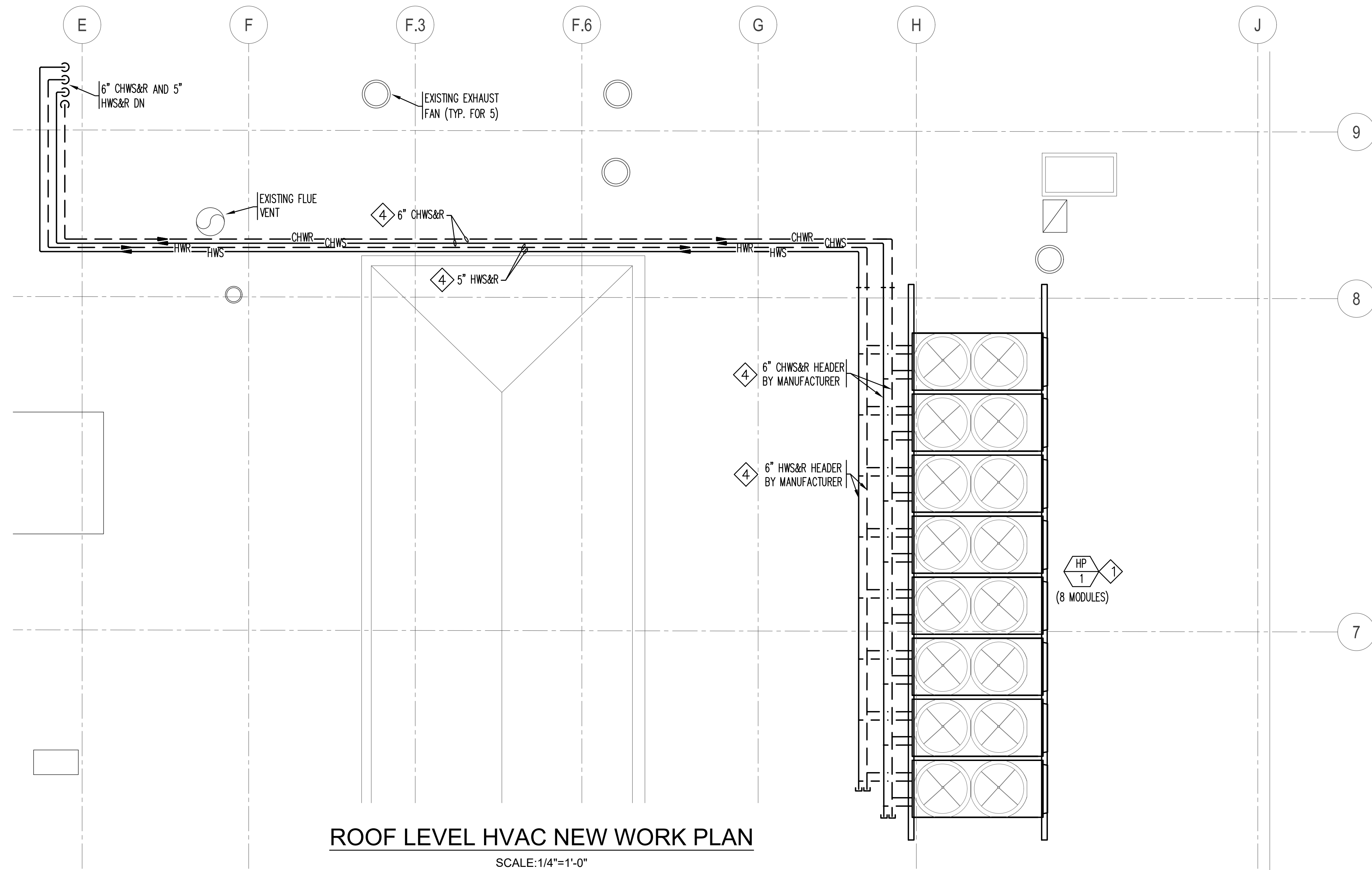
REVISION DATES	NEWTON FREE LIBRARY CHILLER REPLACEMENT PROJECT	STAMP
DATE: 12-13-2023	MECHANICAL - PARTIAL DEMOLITION PLAN AND NOTES	DRAWING NUMBER
SCALE: AS SHOWN	<b>c.a. crowley.</b> ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel. (508) 884.5094 www.crowleyeng.com fax (508) 884.5099	<b>M1.01</b>
DRAWN BY: BC		
CHECKED BY: RA		
PROJECT NO. 23021.00		

**NEW WORK GENERAL NOTES:**

- HVAC CONTRACTOR SHALL PROVIDE AN INDIRECT CONNECTION FOR THE CW MAKE-UP PIPING TO THE GLYCOL HW HEATING SYSTEM LOOP AND CHW COOLING SYSTEM LOOP. PROVIDE A CW CONNECTION WITH BALL VALVE AND HOSE BIBB CONNECTION. PROVIDE A 5' FLEXIBLE HOSE.
- CONTRACTOR SHALL LOCATE ALL NEW EQUIPMENT INCLUDING BUT NOT LIMITED TO THE AIR SOURCE HEAT PUMP, CHILLER, HEAT EXCHANGERS, PUMPS ETC. PER MANUFACTURER'S INSTRUCTIONS MAINTAINING RECOMMENDED CLEARANCES.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS AND SIZES OF EXISTING HWS&R, CHWS&R, CW ETC. PIPING IN FIELD. ANY MAJOR DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
- ALL ELECTRICAL WORK RELATED TO NEW EQUIPMENT SHALL BE DONE BY THE EC. REFER TO ELECTRICAL DESIGN DOCUMENTS FOR MORE INFORMATION.
- ALL PLUMBING WORK RELATED TO NEW EQUIPMENT SHALL BE DONE BY THE PC. REFER TO PLUMBING DESIGN DOCUMENTS FOR MORE INFORMATION.

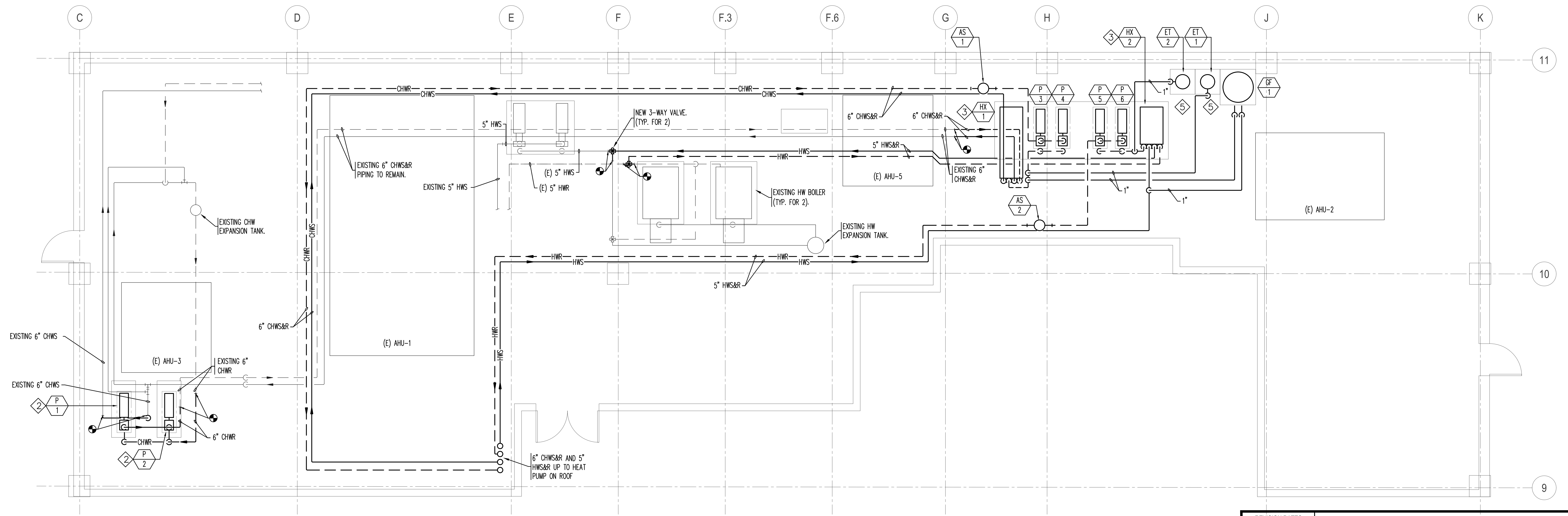
**NEW WORK KEY NOTES:**

- NEW AIR SOURCE HEAT PUMP LOCATED ON THE ROOF. COMMON STEEL FRAME FOR THE CHILLER BY MANUFACTURER. LOCATE UNIT/FRAME ON 18" HIGH STAND. PROVIDE VIBRATION ISOLATION AS RECOMMENDED BY THE MANUFACTURER. CONTRACTOR SHALL INSTALL THE UNITS MAINTAINING MANUFACTURER RECOMMENDED CLEARANCES.
- NEW BASE MOUNTED CHILLED WATER PUMPS. LOCATE PUMPS ON EXISTING CONCRETE PAD. EXTEND CONCRETE PAD AS REQUIRED.
- NEW GLYCOL SYSTEM LOOP PLATE AND FRAME HEAT EXCHANGER. LOCATE HEAT EXCHANGER ON THE EXISTING CONCRETE PAD ASSOCIATED WITH THE REMOVED CHILLER. LOCATED ASSOCIATED BASE MOUNTED PUMPS THE EXISTING PAD. EXTEND PAD AS REQUIRED.
- NEW GLYCOL LOOP HWS&R AND CHWS&R PIPING LOCATED ON THE ROOF. PROVIDE PIPE SUPPORTS FOR THE EXPOSED PIPING. PROVIDE PVC ENCLOSURE AND HEAT TRACE FOR THE EXPOSED PIPING. REFER TO MECHANICAL SPECIFICATIONS FOR MORE INFORMATION.
- NEW GLYCOL SYSTEM LOOP EXPANSION TANKS. LOCATE EXPANSION TANK ON NEW 4" HOUSEKEEPING PAD.



**ROOF LEVEL HVAC NEW WORK PLAN**

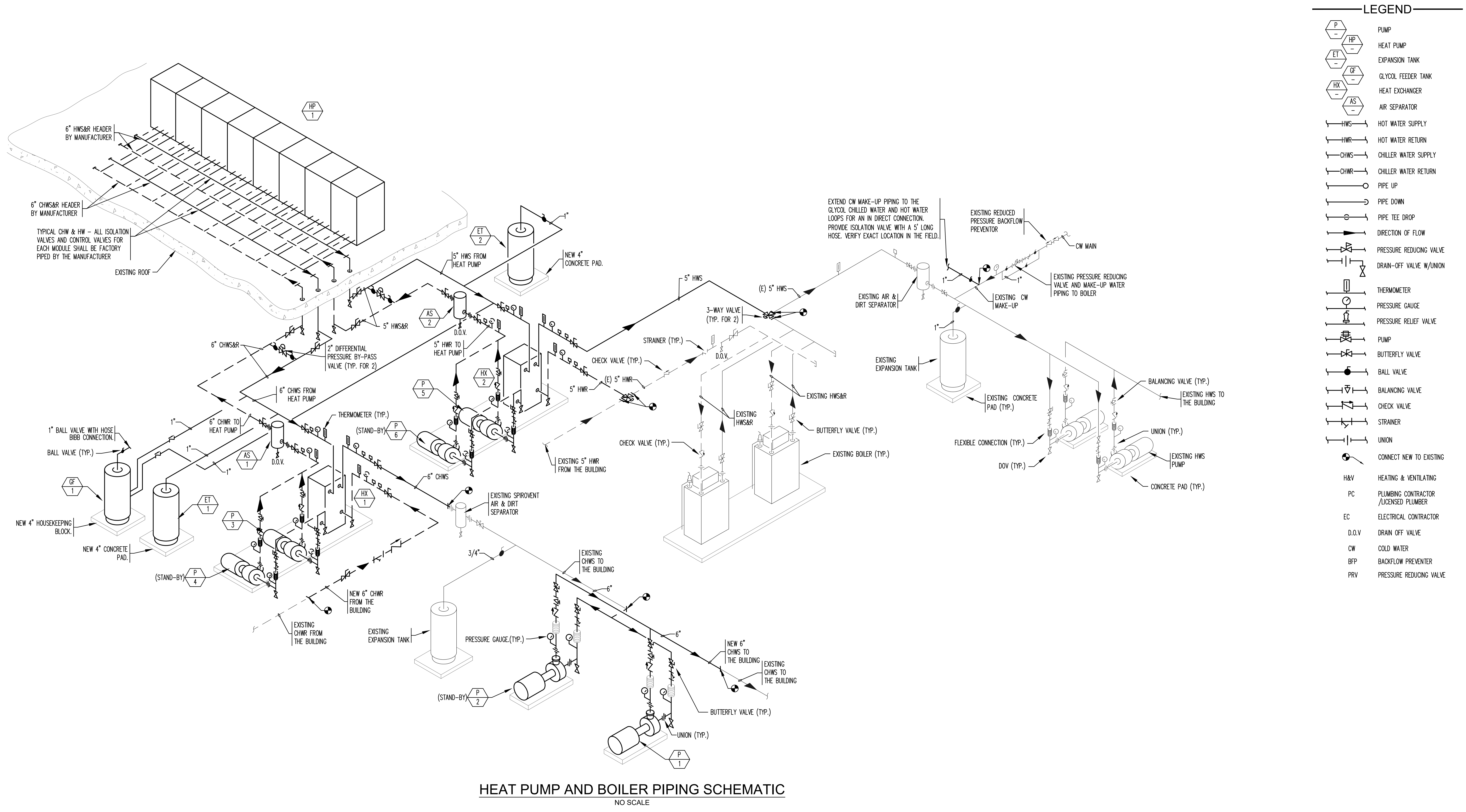
SCALE: 1/4"=1'-0"



**MECHANICAL ROOM HVAC NEW WORK PLAN**

SCALE: 1/4"=1'-0"

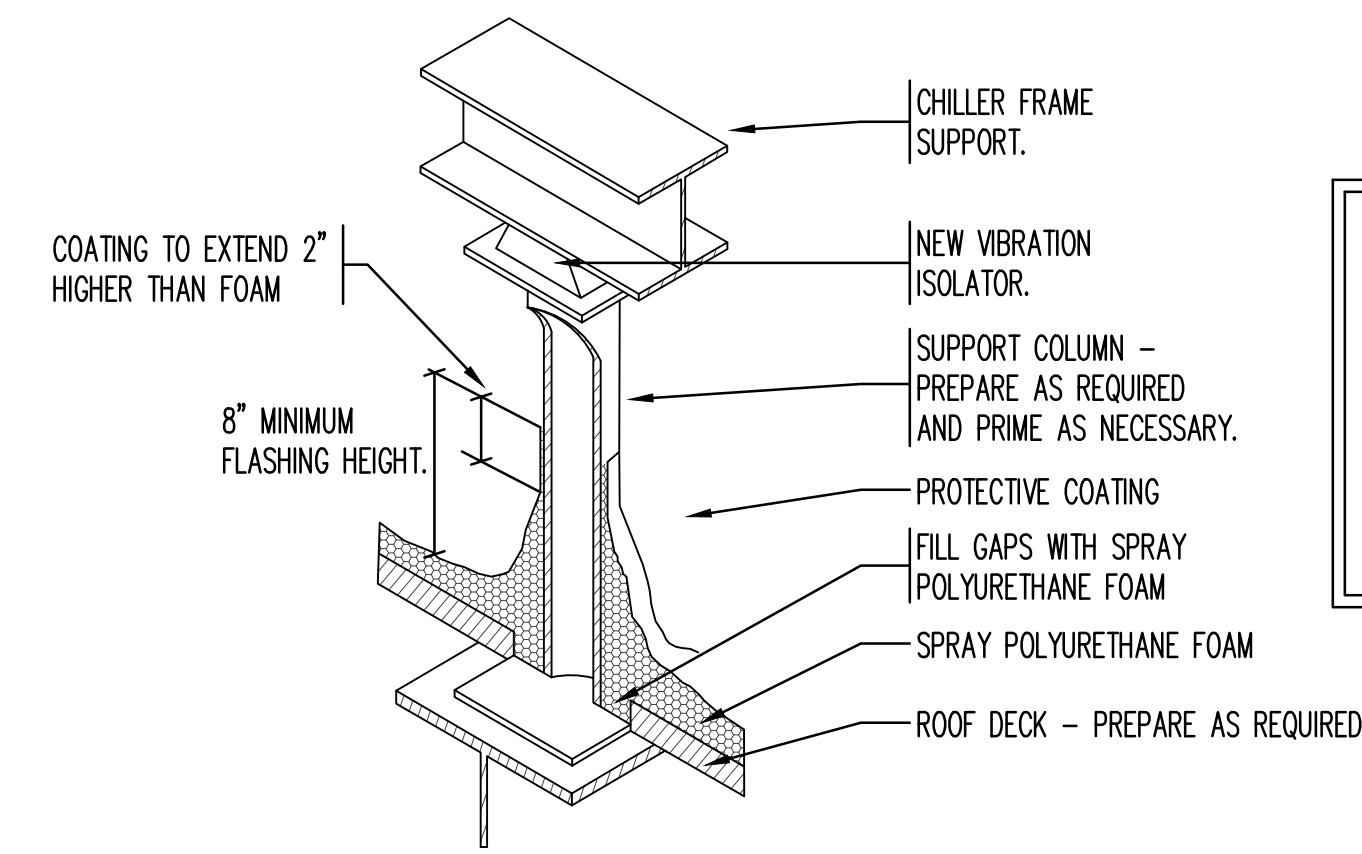
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**HEAT PUMP AND BOILER PIPING SCHEMATIC**  
NO SCALE

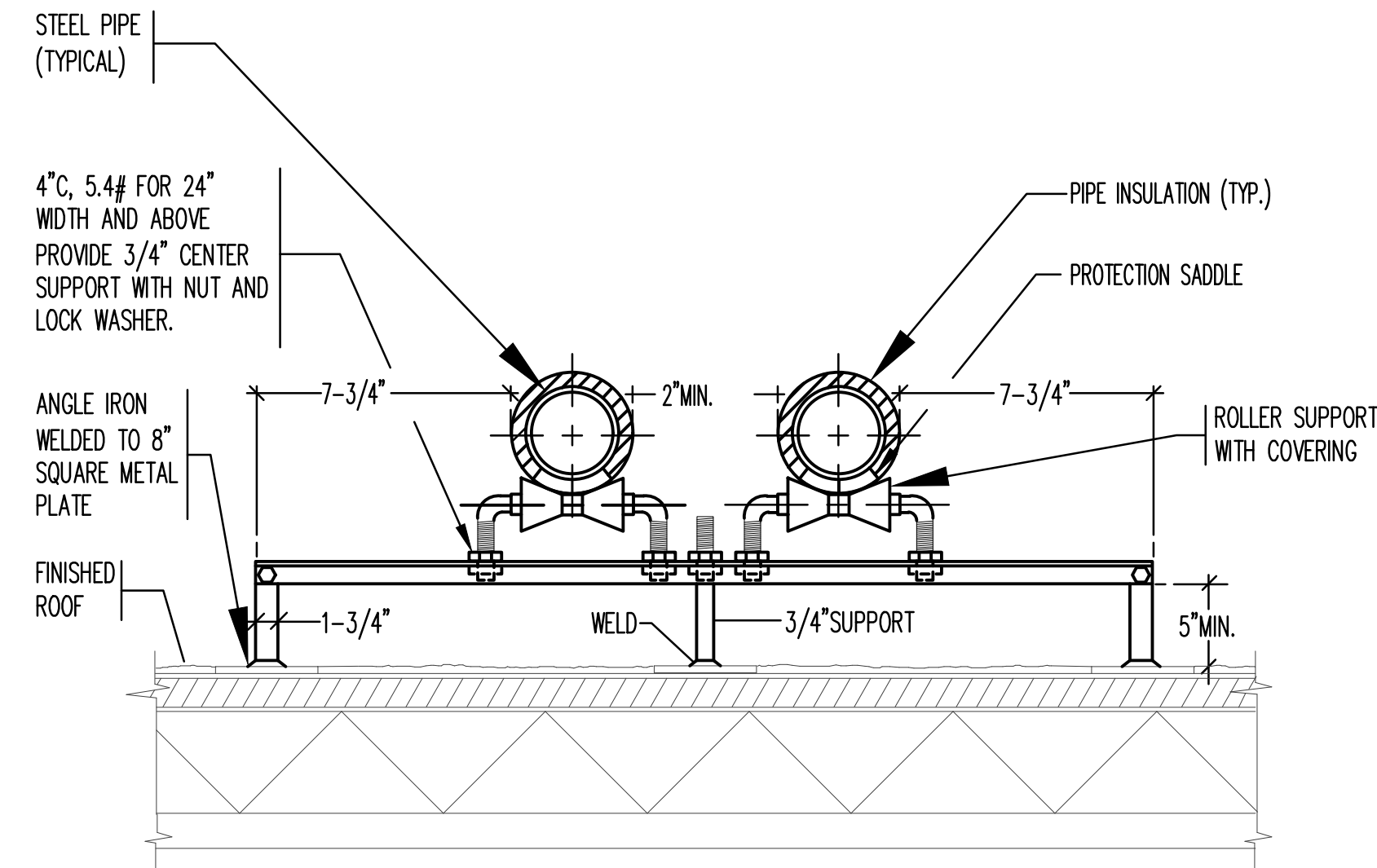
- LEGEND**
- PUMP
  - HEAT PUMP
  - EXPANSION TANK
  - GLYCOL FEEDER TANK
  - HEAT EXCHANGER
  - AIR SEPARATOR
  - HWS
  - HWR
  - CHWS
  - CHWR
  - PIPE UP
  - PIPE DOWN
  - PIPE TEE DROP
  - DIRECTION OF FLOW
  - PRESSURE REDUCING VALVE
  - DRAIN-OFF VALVE W/UNION
  - THERMOMETER
  - PRESSURE GAUGE
  - PRESSURE RELIEF VALVE
  - PUMP
  - BUTTERFLY VALVE
  - BALL VALVE
  - BALANCING VALVE
  - CHECK VALVE
  - STRAINER
  - UNION
  - CONNECT NEW TO EXISTING
  - H&V HEATING & VENTILATING
  - PC PLUMBING CONTRACTOR /LICENSED PLUMBER
  - EC ELECTRICAL CONTRACTOR
  - D.O.V DRAIN OFF VALVE
  - CW COLD WATER
  - BFP BACKFLOW PREVENTOR
  - PRV PRESSURE REDUCING VALVE

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SCALE: AS SHOWN		<b>M2.01</b>
DRAWN BY: BC	<b>c.a. crowley.</b> ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780	tel. (508) 884.5094 www.crowleyeng.com fax (508) 884.5099
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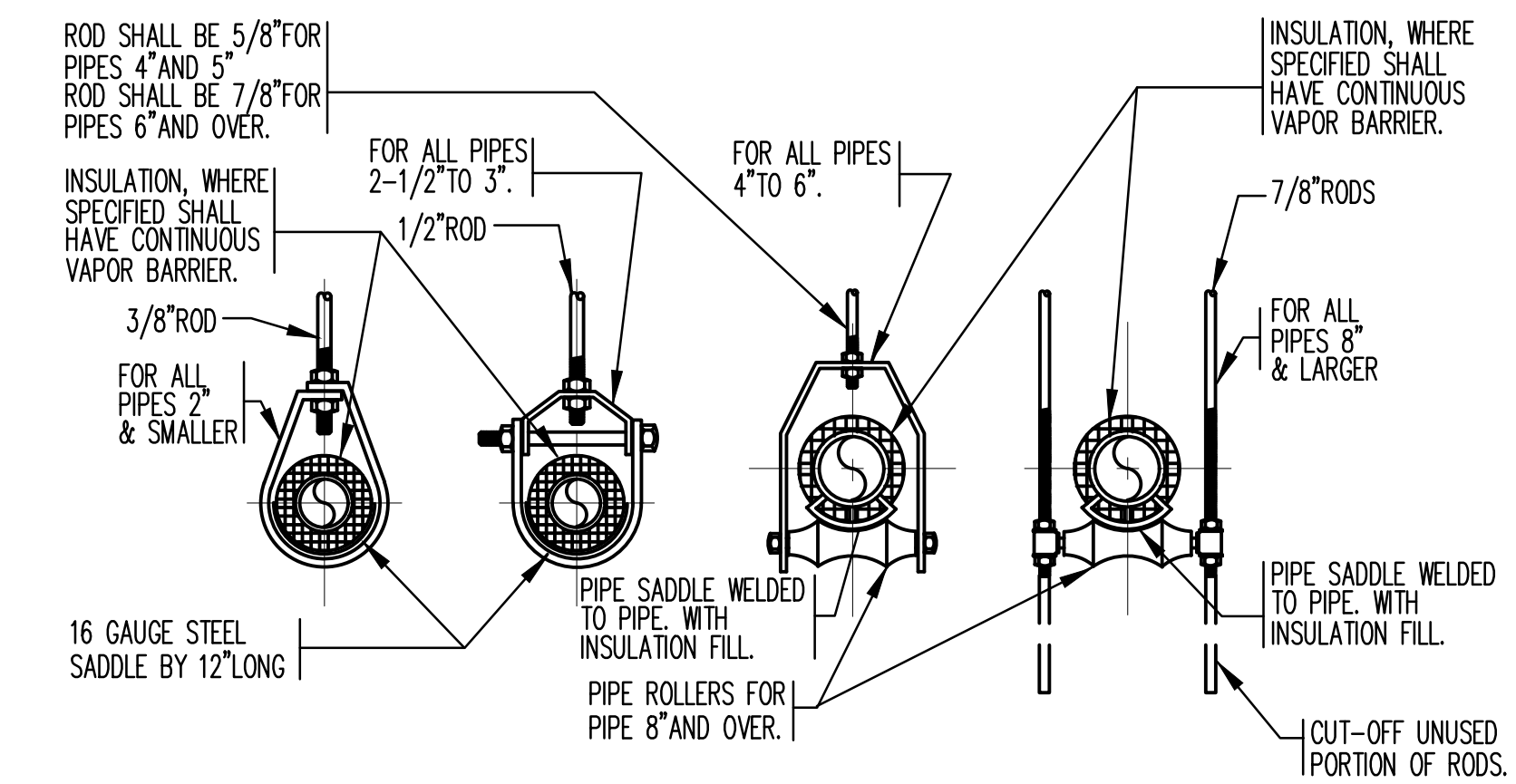


**EQUIPMENT SUPPORT STAND LEG DETAIL**  
NO SCALE

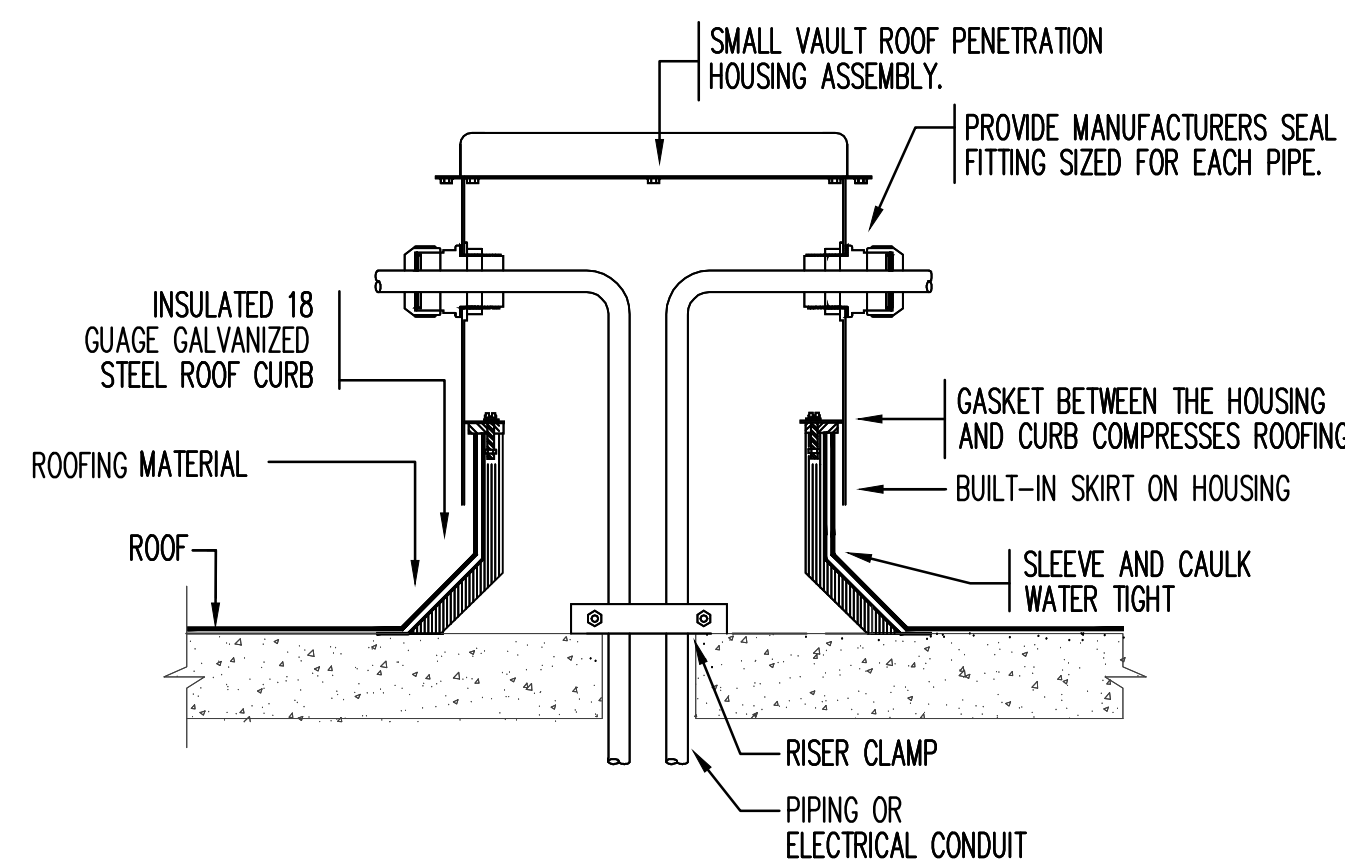
**NOTES:**  
1. ALL STRUCTURAL SUPPORTS SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER. ANY CHANGES TO COORDINATED SUPPORTS SHALL FIRST BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER BEFORE INSTALLATION.  
2. CONTRACTOR MUST BE A CERTIFIED ROOFING CONTRACTOR.



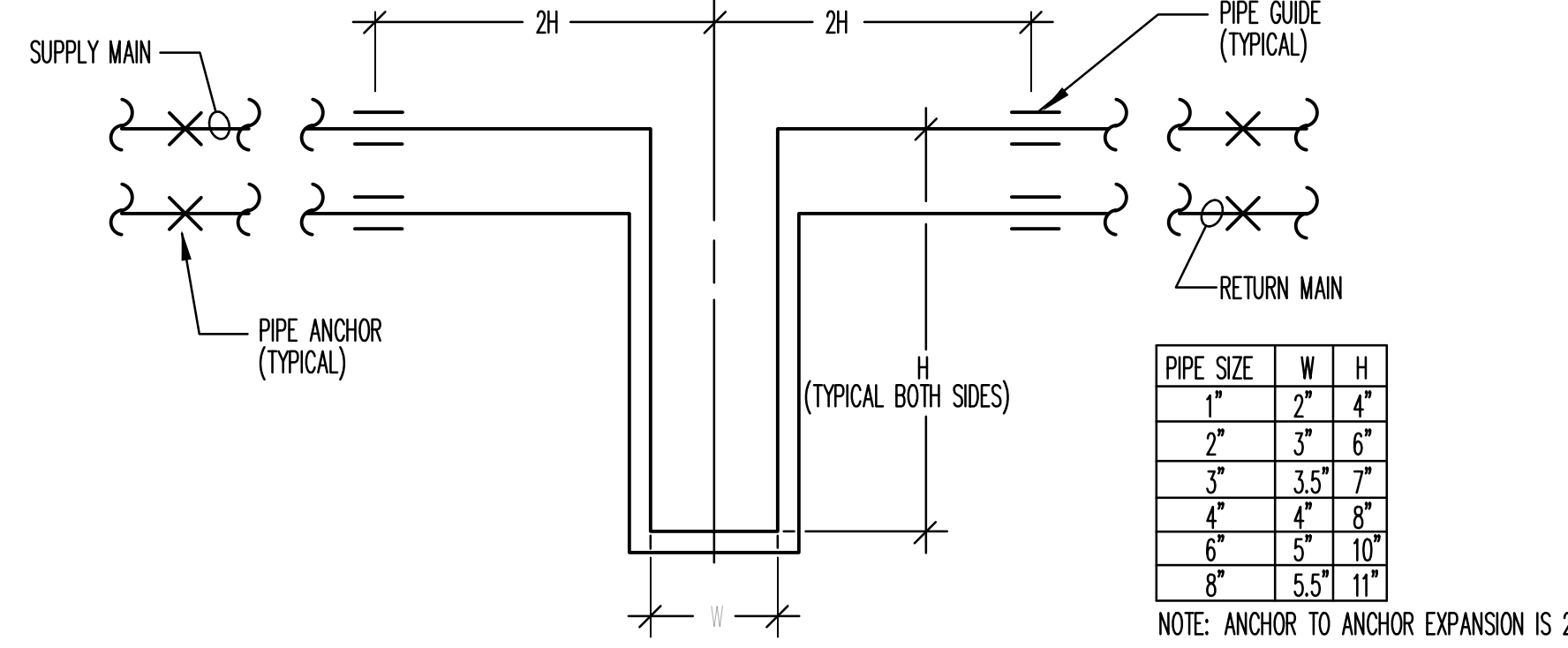
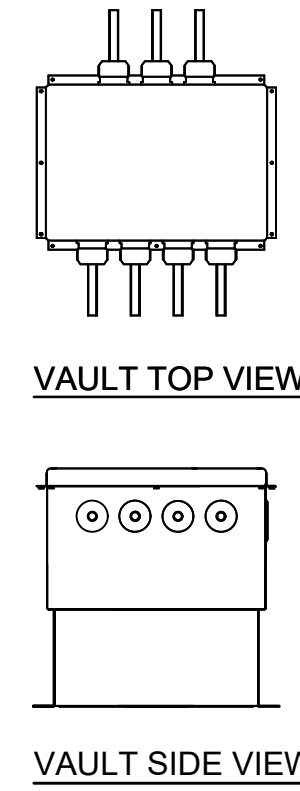
**ROOF PIPE SUPPORT DETAIL**  
NO SCALE



**PIPE HANGER STANDARDS DETAIL**  
NO SCALE



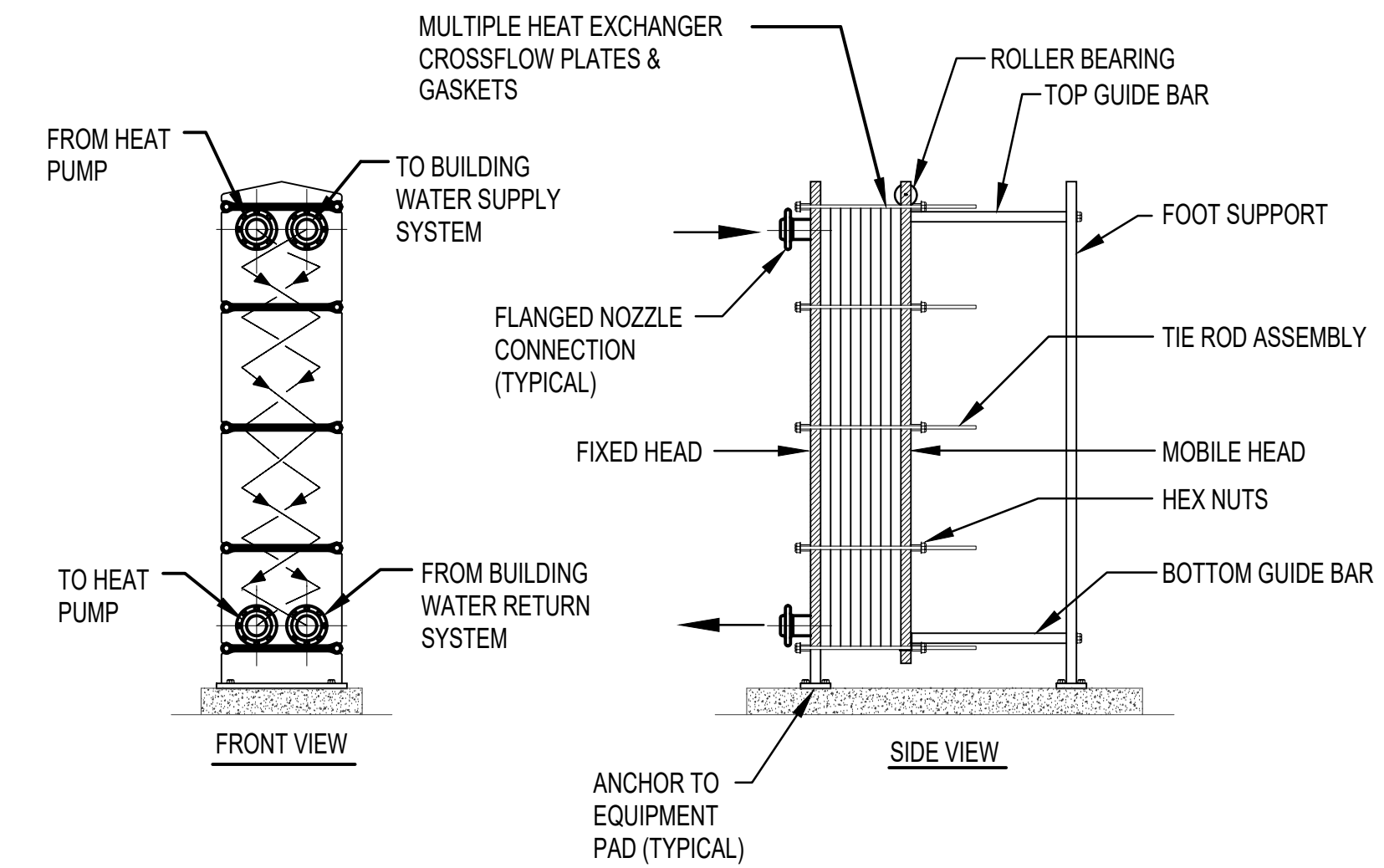
**PIPE ROOF PENETRATION DETAIL**  
NO SCALE



**TYPICAL EXPANSION LOOP PIPING DETAIL**  
NOT TO SCALE

PIPE SIZE	W	H
1"	2"	4"
2"	3"	6"
3"	3.5"	7"
4"	4"	8"
6"	5"	10"
8"	5.5"	11"

NOTE: ANCHOR TO ANCHOR EXPANSION IS 2'



**PLATE AND FRAME HEAT EXCHANGER**  
NOT TO SCALE

MODULAR HEAT PUMP SCHEDULE																													
ITEM NO.	MANUFACTURER	MODULES	BASE MODEL NUMBER	ETHYLENE GLYCOL CONCENTRATION (%) CHW & HW LOOPS	COMPRESSORS / MODULE	TOTAL COOLING CAPACITY (TON)	TOTAL HEATING CAPACITY (MBH)	HEATING COMBINED FLOW (GPM)	COOLING COMBINED FLOW (GPM)	CHILLED WATER				HEATING WATER				MODULE ELECTRICAL				COMBINED ELECTRICAL				UNIT W/ PIPE RACK WEIGHT (LBS)	REFRIGERANT		
										MODULE COOLING (TON)	EWI/ LWT (°F)	MODULE GPM	PD. PSI	MODULE HEATING (MBH)	EWI/ LWT (°F)	MODULE GPM	PD. PSI	MCA	FLA	MOCP	V/PH/HZ	EER	IPLV	MCA	FLA			MOCP	V/PH/HZ
HP-1	WATER FURNACE	8	ACHW030	35	2	222.4	1682.4	352.8	550.3	27.8	53/43	68.8	3.91	213.6	120/130	44.1	2.68	120	107.4	150	460/60/3	10.14	15.23	886	859.2	1000	460/60/3	22,131	R-454B

BASED ON WATERFURNACE  
1. EACH MODULE SHALL BE CAPABLE OF OPERATING IN EITHER HEATING MODE, COOLING MODE OR SIMULTANEOUS HEATING OR COOLING MODE. THE UNIT AS A WHOLE SHALL BE ABLE TO PROVIDE CHILLED WATER, HEATING WATER, OR BOTH SIMULTANEOUSLY.  
2. BOTH COMPRESSORS FOR EACH MODULE SHALL HAVE VARIABLE SPEED/ CAPACITY CAPABILITY.  
3. HEATING AND COOLING FLUID IS 35% GLYCOL.  
4. PROVIDE WITH PIPE RACK, TEMPERATURE HEADERS, INTERNAL ISOLATION OF MODULES, AND ONBOARD AUTOMATIC CONTROLS.  
5. ALL MODULES ARE TO BE FACTORY ASSEMBLED ON A COMMON STEEL FRAME BY THE UNIT MANUFACTURER.  
6. ALL MODULES WILL BE FACTORY WIRED TO A SINGLE POINT POWER PANEL BY THE UNIT MANUFACTURER.

PUMP SCHEDULE											
ITEM NO.	MODEL	TYPE	SERVING	GPM	FT. HD.	RPM	HP	V	PH	HZ	REMARKS
P-1	F14009D-4P-PM	END SUCTION	BLDG. CHW	600	70	1760	20.0	460	3	60	VFD ①
P-2	F14009D-4P-PM	END SUCTION	BLDG. CHW	600	70	1760	20.0	460	3	60	VFD ①
P-3	F14007D-4P-PM	END SUCTION	GLYCOL CHW LOOP	555	35	1760	7.50	460	3	60	VFD ①
P-4	F14007D-4P-PM	END SUCTION	GLYCOL CHW LOOP	555	35	1760	7.50	460	3	60	VFD ①
P-5	F13007D-4P-PM	END SUCTION	GLYCOL HW LOOP	335	35	1760	5.0	460	3	60	VFD ①
P-6	F13007D-4P-PM	END SUCTION	GLYCOL HW LOOP	335	35	1760	5.0	460	3	60	VFD ①

BASED ON TACO ① PUMPS IN PRIMARY/STAND-BY ARRANGEMENT. DDC SHALL ALTERNATE RUN-TIMES.

EXPANSION TANK SCHEDULE							
ITEM NO.	MODEL	TANK VOLUME (GAL.)	ACCEPTANCE VOLUME (GAL.)	TANK DIAMETER (IN.)	TANK HEIGHT (IN.)	CONNECTION SIZE (IN.)	REMARKS
ET-1	CBX84-125	22	5.0	16	38-9/16	3/4	ASME TANK
ET-2	CBX84-125	22	5.0	16	38-9/16	3/4	ASME TANK

BASED ON TACO

GLYCOL FILL SCHEDULE							
ITEM NO.	MODEL	TANK VOLUME (GAL.)	PRESSURE RANGE (PSIG)	GLYCOL %	WEIGHT (LB)	ELECTRICAL	REMARKS
GF-1	GMPD-23050	50	10-70	35	214	110/60/1#	① ②

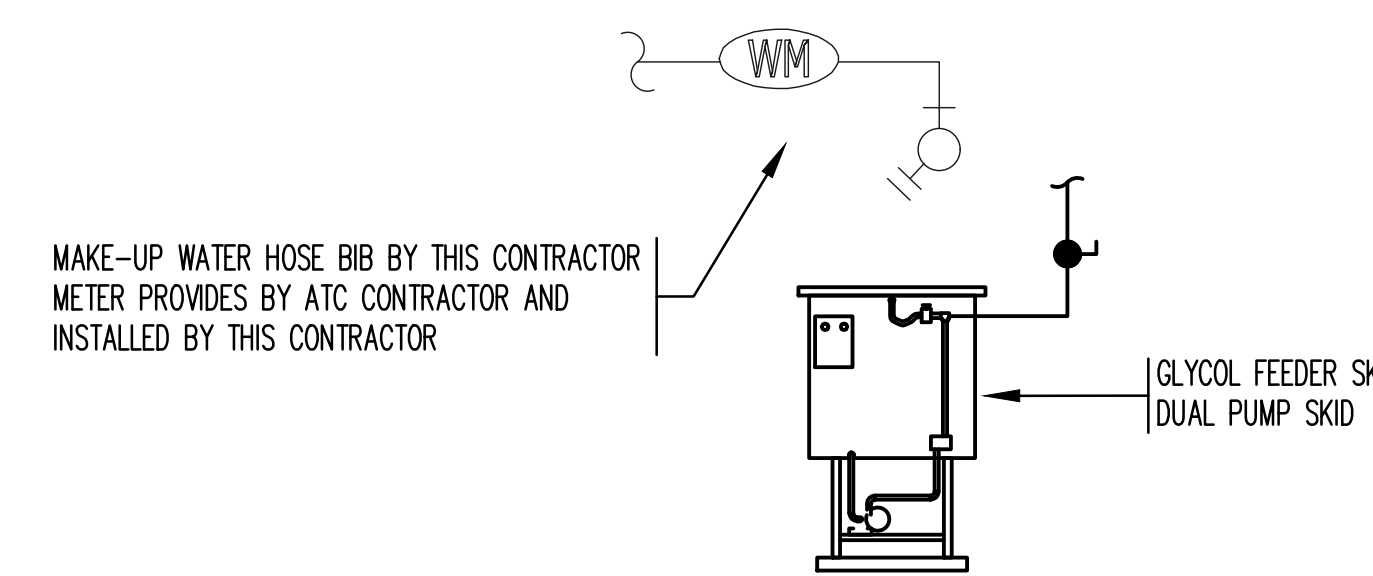
BASED ON WESSELS ① UNIT SHALL BE ABLE TO SIGNAL AN ALARM TO THE BAS.  
② UNIT SHALL BE FACTORY ASSEMBLED AND SHIPPED AS A SINGLE PACKAGE.

AIR AND DIRT SEPARATOR SCHEDULE				
ITEM NO.	MODEL	FLOW RATE (OPM)	PIPE SIZE (IN.)	REMARKS
AS-1	VDT-800FA	555	6	COMBINATION AIR & DIRT SEPARATOR
AS-2	VDT-800FA	332	5	COMBINATION AIR & DIRT SEPARATOR

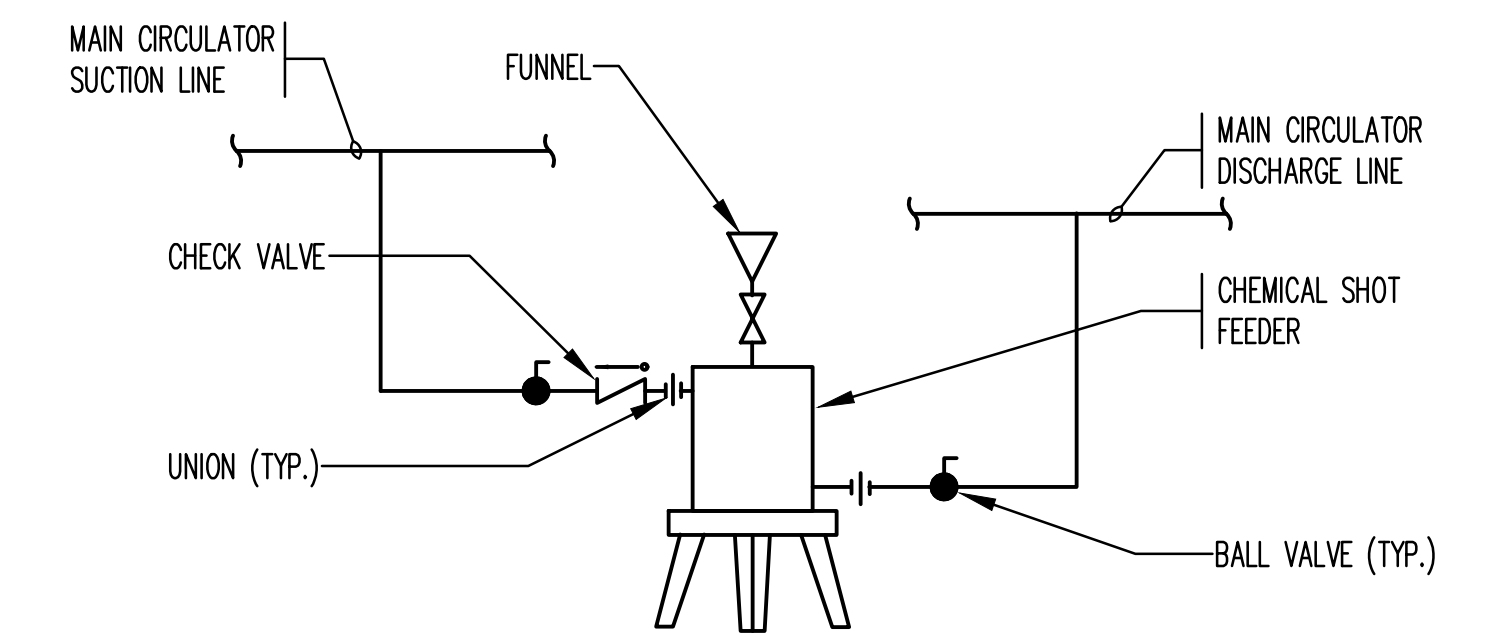
BASED ON SPIROTHERM

PLATE & FRAME HEAT EXCHANGER SCHEDULE														
ITEM NO.	MODEL	SERVING	HOT SIDE					COLD SIDE					FLUID	REMARKS
			EWI	LWT	GPM	PD(PSI)	MIN. MBH	EWI	LWT	GPM	PD(PSI)	MIN. MBH		
HX-1	A06T-BFG	CHILLING	55F	46.4F	600	5.8	2,577	43F	53F	555	7.0	2,577	WATER	-
HX-2	AQ4L-FG	HEATING	130F	120F	274.2	4.1	1,281.5	119F	129F	260	3.2	1,281.5	WATER	-

BASED ON ALFA LAVAL

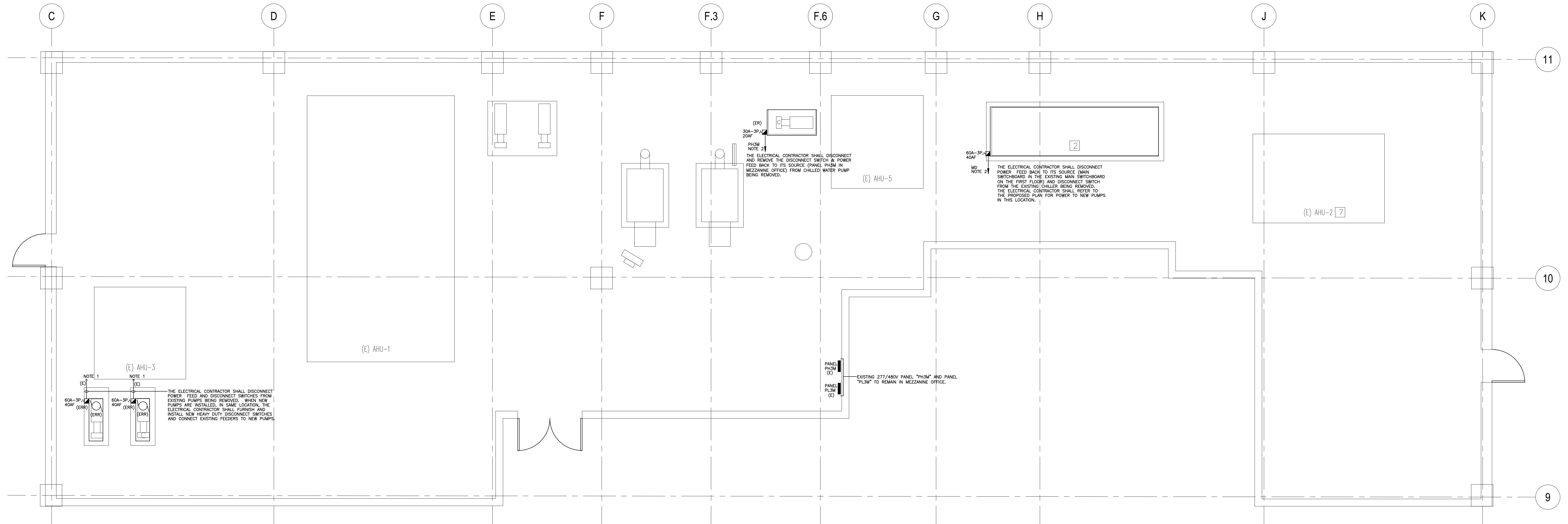


**GLYCOL FEEDER PIPING DETAIL**  
NO SCALE

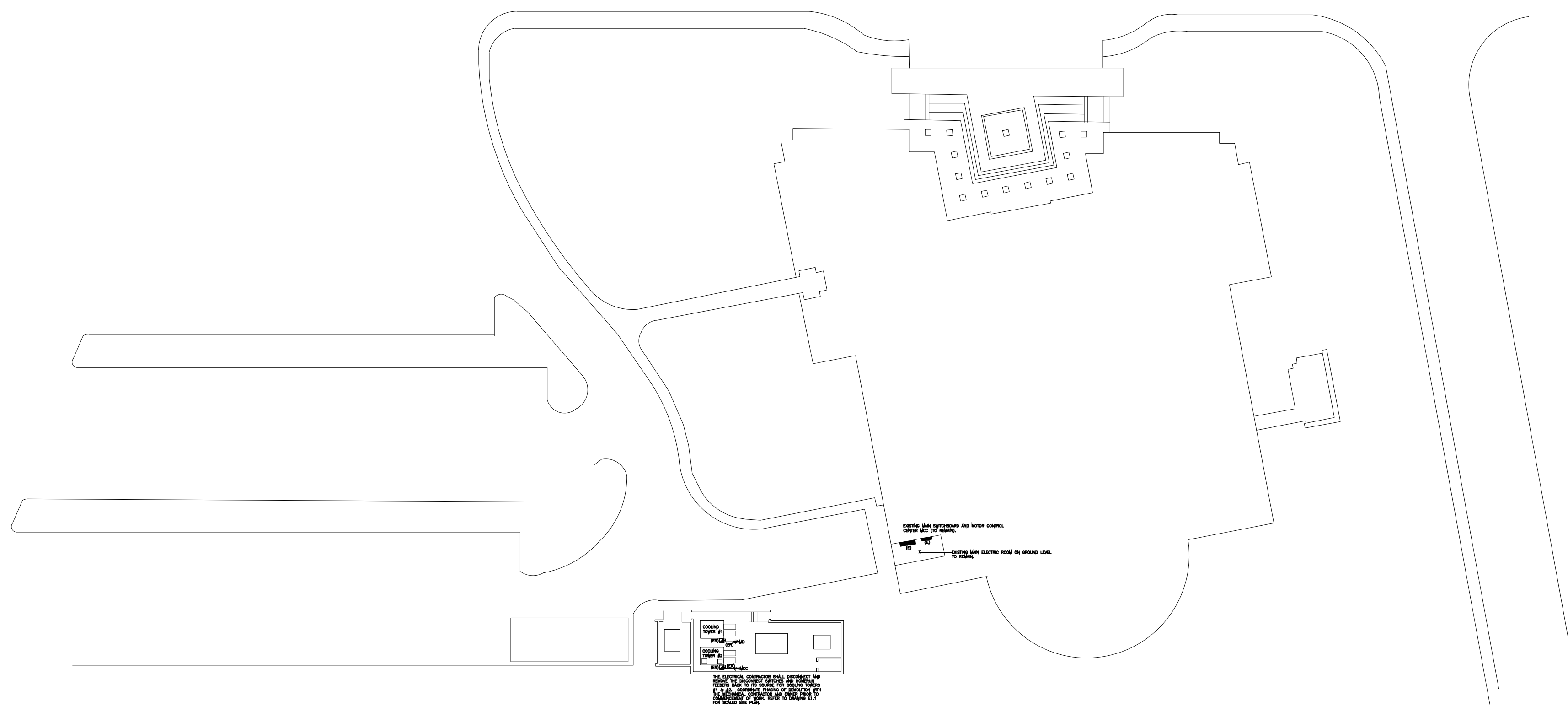


**CHEMICAL SHOT FEEDER PIPING DETAIL**  
NO SCALE

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PROJECT NO. 23021.00	<p><b>c.a. crowley.</b> ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 tel: (508) 884-5094 WWW.CROWLEYENG.COM fax: (508) 884-5099</p>	



**PARTIAL DEMO MEZZANINE FLOOR PLAN -ELECTRICAL**  
Scale: 1/4"=1'-0"



**PARTIAL DEMO SITE PLAN -ELECTRICAL**  
Scale: N.T.S.

**PHASING NOTE:**  
IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE PHASING OF ALL WORK (REFER TO SPECIFICATION AND MECHANICAL PHASING PLANS). THE ROUTING OF NEW FEEDERS EXTEND BEYOND THE LIMIT OF PHASING WORK. THE ELECTRICAL CONTRACTOR SHALL INFORM THE OWNER TO ENSURE ACCESS TO PUBLIC AREAS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR PRIOR TO RUNNING FEEDS. ALL EXISTING ELECTRICAL TO EQUIPMENT SHALL REMAIN OPERATIONAL UNTIL THE NEW IS IN PLACE AND ENERGIZED. ONCE NEW EQUIPMENT IS ENERGIZED, THE EC SHALL DISCONNECT AND REMOVE POWER, BACK TO ITS SOURCE, TO THE EXISTING EQUIPMENT.

**NOTE: NEW FEEDERS TO MECHANICAL EQUIPMENT:**  
THE ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO UNIT BEING REMOVED BY MECHANICAL CONTRACTOR. WHEN NEW EQUIPMENT IS IN PLACE, FURNISH AND INSTALL A NEW FEEDER AND DISCONNECT SWITCH FROM NEW EQUIPMENT TO NEW SUB-PANEL, AS SHOWN.

**NOTE 1: EXISTING FEEDER AND CIRCUIT BREAKER TO BE REUSED:**  
THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY DISCONNECT POWER TO UNIT. WHEN NEW EQUIPMENT IS IN PLACE, RECONNECT EXISTING FEEDER TO THE NEW DISCONNECT SWITCH.

**NOTE 2: EXISTING FEEDER TO BE REMOVED:**  
THE ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING FEEDER BACK TO ITS SOURCE. MARK EXISTING PANEL DIRECTORY TO SHOW CIRCUIT BREAKER AS SPARE.

**DEMOLITION NOTES:**

**NOTE 1:**  
THE EQUIPMENT SHOWN IS TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO REVIEW THE SITE AND TO COORDINATE WITH THE PRIME CONTRACTOR TO DETERMINE THE AMOUNT AND PHASING OF DEMOLITION WORK REQUIRED.

**NOTE 2:**  
THIS CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ELECTRICAL EQUIPMENT BEING REMOVED BY THE PRIME/DEMOLITION CONTRACTOR IS TAGGED AND MADE ELECTRICALLY SAFE. CUT ALL CABLES FROM THE PANEL AND AT THE EQUIPMENT TO ENSURE SAFE REMOVAL.

**NOTE 3:**  
IN THE EVENT THAT A DEVICE BEING REMOVED CAUSES ANOTHER DEVICE REMAINING NOT TO OPERATE, IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO RECONNECT THE EQUIPMENT REMAINING BACK TO ITS SOURCE.

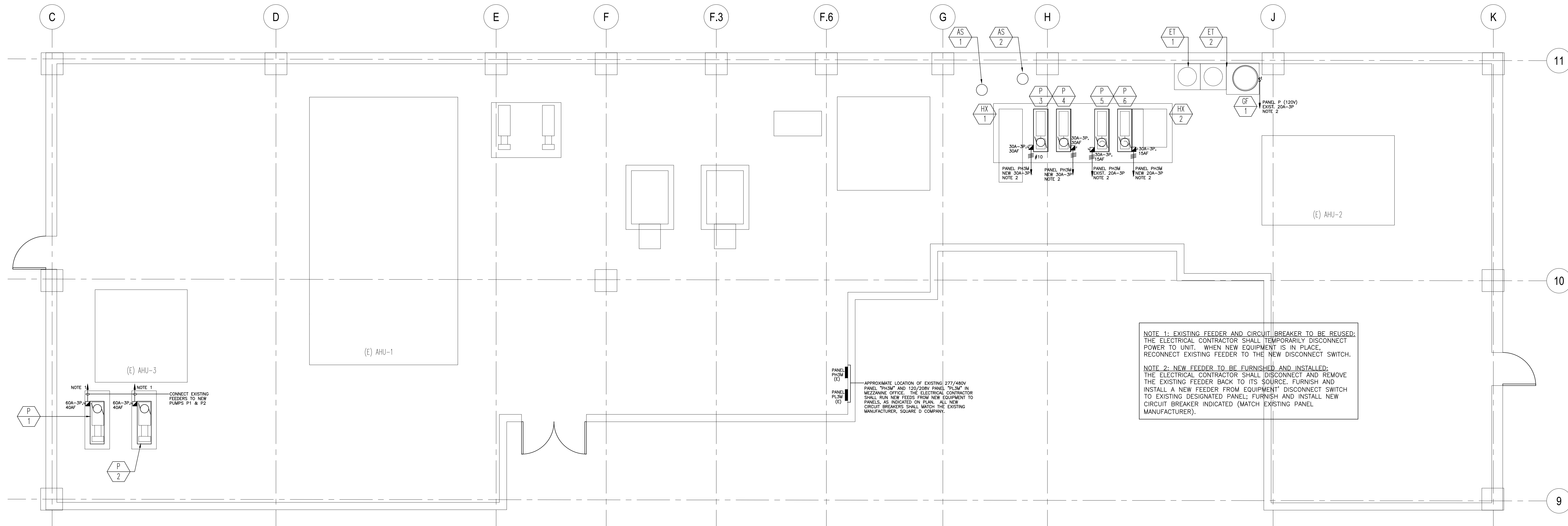
**NOTE 4:**  
ALL DEVICES SHOWN SHALL BE DISCONNECTED AND REMOVED BACK TO ITS SOURCE, UNLESS OTHERWISE STATED ON PLANS.

**DEMOLITION LEGEND:**

"E" EXISTING TO REMAIN  
 "ER" EXISTING TO BE REMOVED IN ITS ENTIRETY BACK TO ITS SOURCE.  
 "ERR" EXISTING TO BE REMOVED AND REPLACED WITH NEW IN PLACE; REFER TO PROPOSED PLAN.

**SHEPHERD ENGINEERING, INC.**  
ELECTRICAL CONSULTANTS  
1308 CRAFTON STREET  
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PHONE: (508) 757-7793 • FAX: (508) 753-2309  
REFERENCE NO.: 23234

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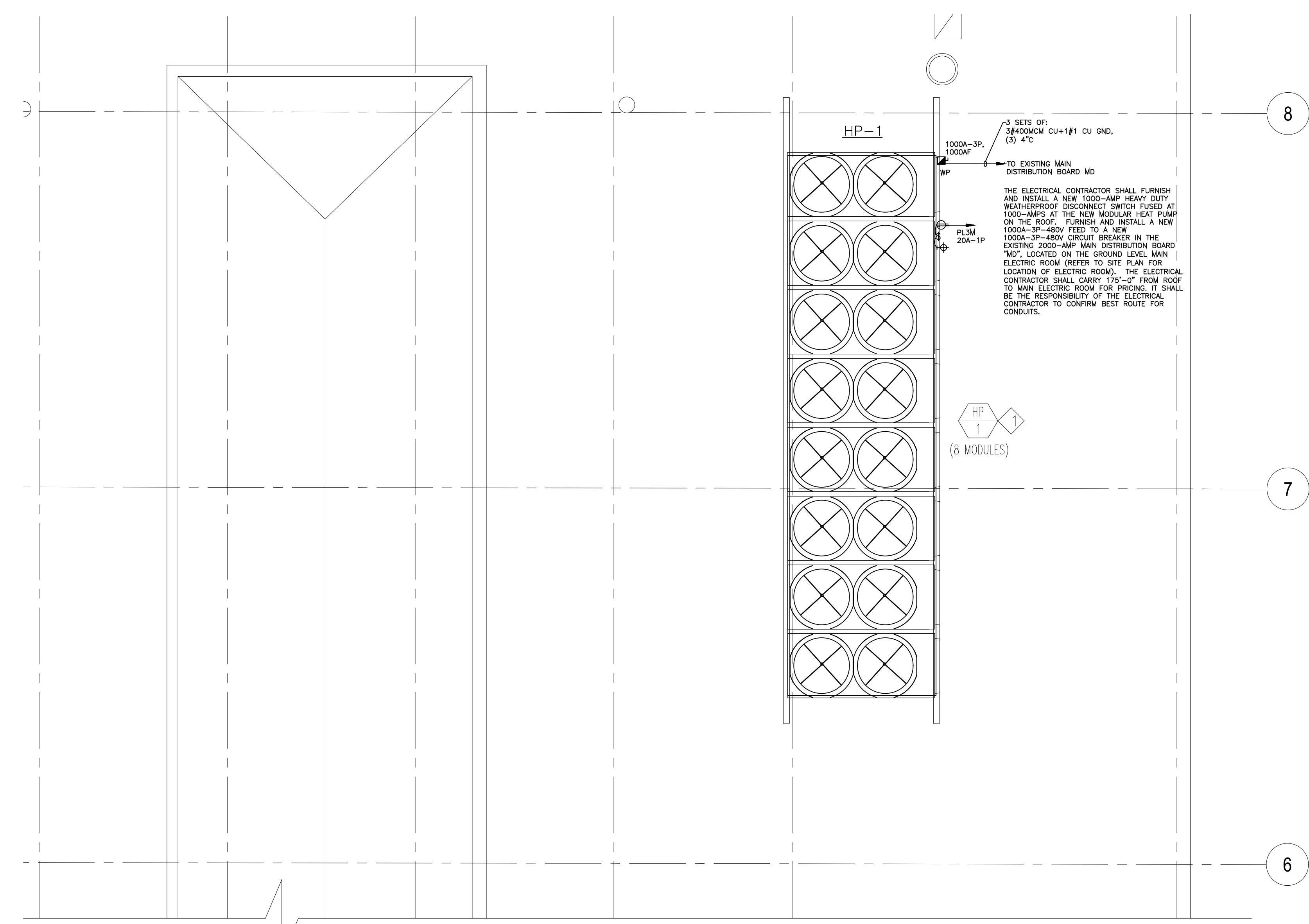


**PARTIAL MEZZANINE FLOOR PLAN - ELECTRICAL**  
Scale: 1/4"=1'-0"

**NOTE 1: EXISTING FEEDER AND CIRCUIT BREAKER TO BE REUSED:**  
THE ELECTRICAL CONTRACTOR SHALL TEMPORARILY DISCONNECT POWER TO UNIT. WHEN NEW EQUIPMENT IS IN PLACE, RECONNECT EXISTING FEEDER TO THE NEW DISCONNECT SWITCH.

**NOTE 2: NEW FEEDER TO BE FURNISHED AND INSTALLED:**  
THE ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING FEEDER BACK TO ITS SOURCE. FURNISH AND INSTALL A NEW FEEDER FROM EQUIPMENT DISCONNECT SWITCH TO EXISTING DESIGNATED PANEL; FURNISH AND INSTALL NEW CIRCUIT BREAKER INDICATED (MATCH EXISTING PANEL MANUFACTURER).

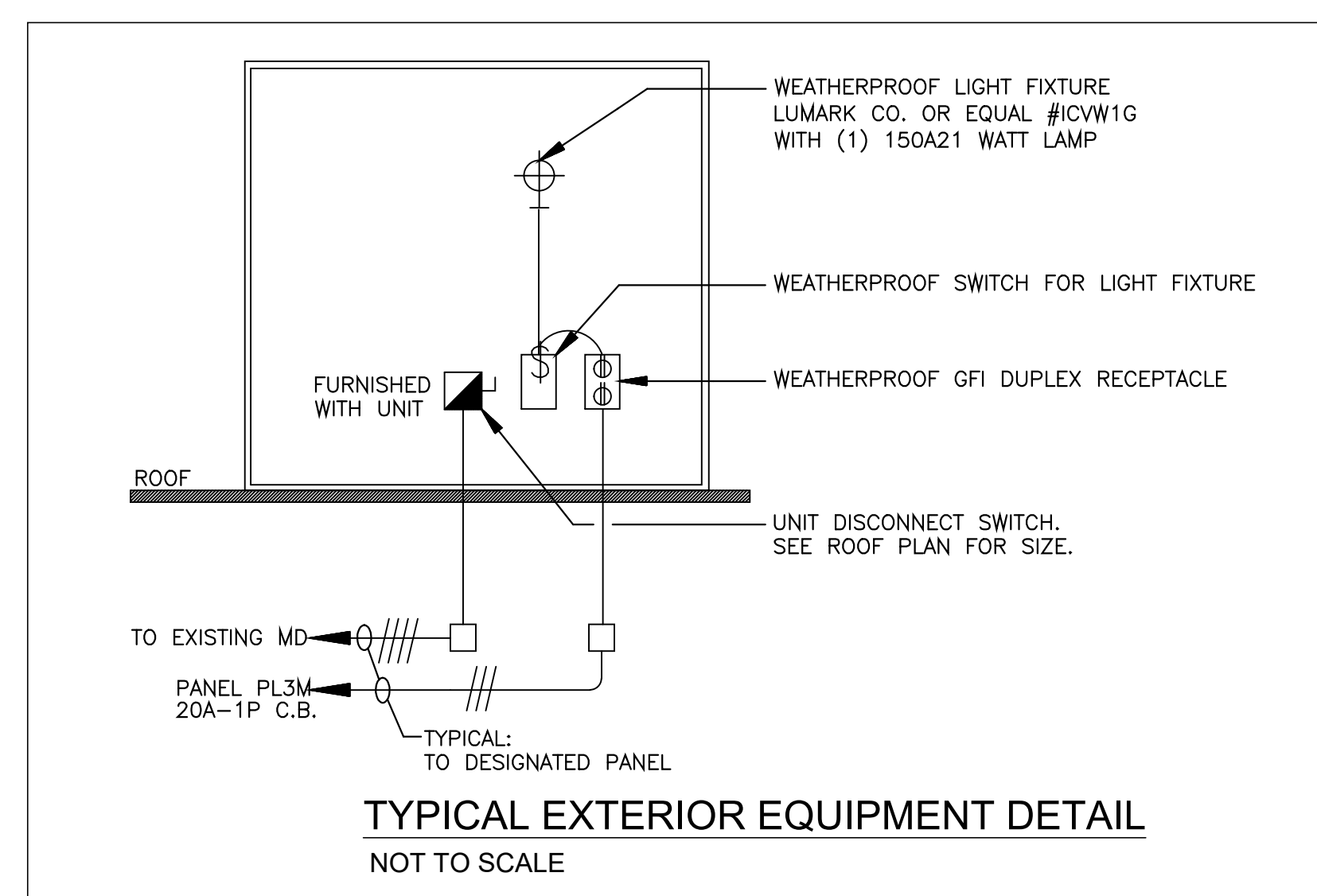
APPROXIMATE LOCATION OF EXISTING 277/480V PANEL "P13M" AND 120/208V PANEL "P14M" IN MEZZANINE OFFICE. THE ELECTRICAL CONTRACTOR SHALL RUN NEW FEEDS FROM NEW EQUIPMENT TO PANELS AS INDICATED ON PLAN. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE EXISTING MANUFACTURER, SQUARE D COMPANY.



**PARTIAL ROOF PLAN - ELECTRICAL**  
Scale: 1/4"=1'-0"

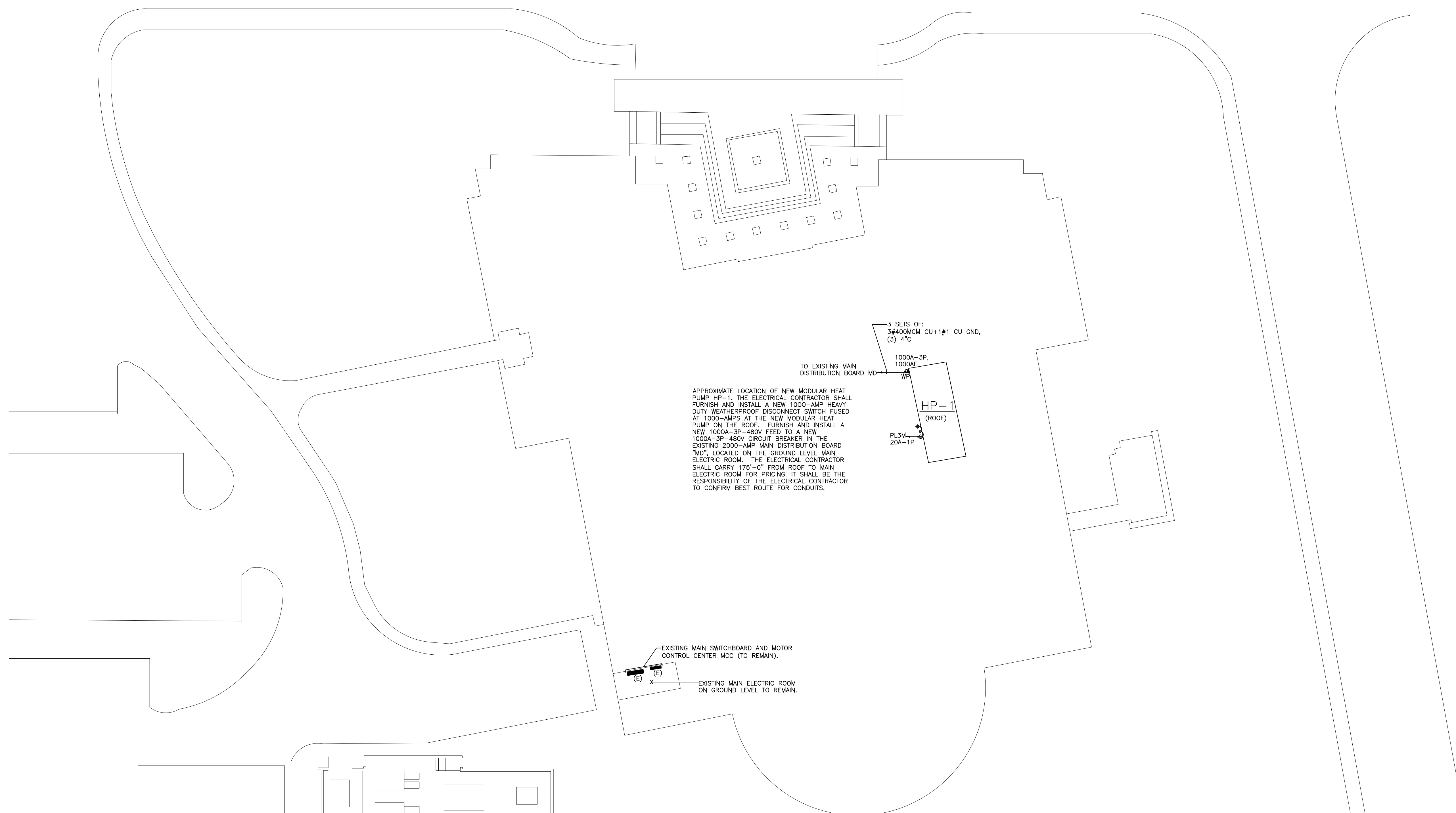
**PHASING NOTE:**  
IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE PHASING OF ALL WORK (REFER TO SPECIFICATION AND MECHANICAL PHASING PLANS). THE ROUTING OF NEW FEEDERS EXTEND BEYOND THE LIMIT OF PHASED WORK. THE ELECTRICAL CONTRACTOR SHALL INFORM THE OWNER TO ENSURE ACCESS TO PUBLIC AREAS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR PRIOR TO RUNNING FEEDS. ALL EXISTING ELECTRICAL TO EQUIPMENT SHALL REMAIN OPERATIONAL UNTIL THE NEW IS IN PLACE AND ENERGIZED. ONCE NEW EQUIPMENT IS ENERGIZED, THE EC SHALL DISCONNECT AND REMOVE POWER, BACK TO ITS SOURCE, TO THE EXISTING EQUIPMENT.

**NOTE: NEW FEEDERS TO MECHANICAL EQUIPMENT:**  
THE ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO UNIT BEING REMOVED BY MECHANICAL CONTRACTOR. WHEN NEW EQUIPMENT IS IN PLACE, FURNISH AND INSTALL A NEW FEEDER AND DISCONNECT SWITCH FROM NEW EQUIPMENT TO NEW SUB-PANEL, AS SHOWN.

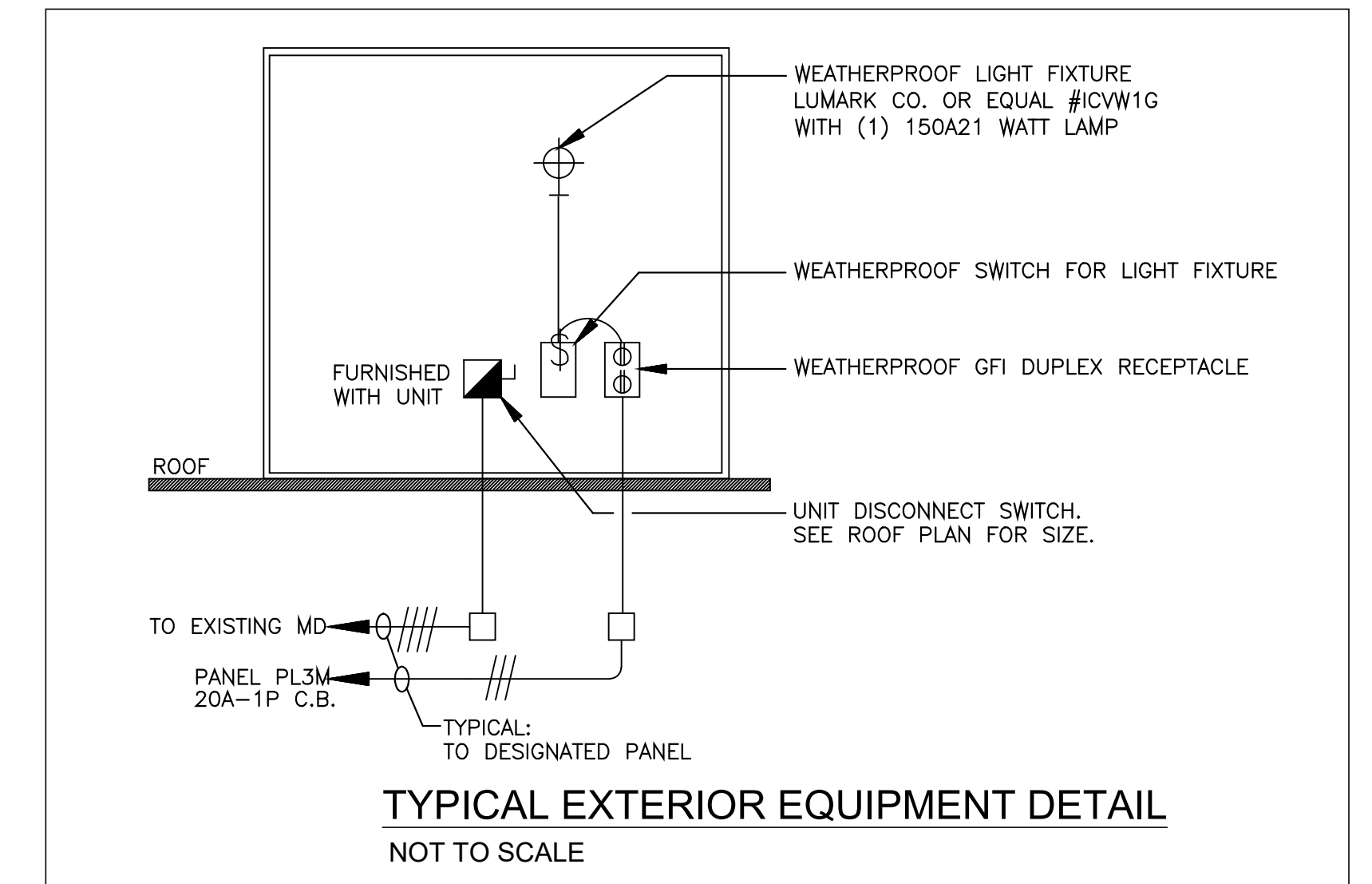


POWER LEGEND	
	DUPLEX RECEPTACLE
	GFI RECEPTACLE
	DISCONNECT SWITCH
	MOTOR
	JUNCTION BOX
	PANEL
	HOMERUN TO PANEL

REVISION DATES	NEWTON FREE LIBRARY CHILLER REPLACEMENT PROJECT	STAMP
DATE: 12-13-2023 SCALE: AS SHOWN DRAWN BY: ALJ CHECKED BY: JDS PROJECT NO. 23021.00	PARTIAL MEZZANINE AND ROOF PLANS ELECTRICAL	DRAWING NUMBER <b>E-1.01</b>
<b>SHEPHERD ENGINEERING, INC.</b> ELECTRICAL CONSULTANTS 1308 CRAFTON STREET WORCESTER, MASSACHUSETTS 01604 PHONE: (508) 757-7793 • FAX: (508) 753-2309 REFERENCE NO.: 23234		<b>c.a. crowley,</b> ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 WWW.CROWLEYENG.COM tel. (508) 884.5094 fax. (508) 884.5099



**SITE PLAN - ELECTRICAL**  
Scale: 1"=20'-0"



POWER LEGEND	
	DUPLEX RECEPTACLE
	GFI RECEPTACLE
	DISCONNECT SWITCH
	MOTOR
	JUNCTION BOX
	PANEL
	HOMERUN TO PANEL

**PHASING NOTE:**  
IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE PHASING OF ALL WORK (REFER TO SPECIFICATION AND MECHANICAL PHASING PLANS). THE ROUTING OF NEW FEEDERS EXTEND BEYOND THE LIMIT OF PHASED WORK. THE ELECTRICAL CONTRACTOR SHALL INFORM THE OWNER TO ENSURE ACCESS TO PUBLIC AREAS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR PRIOR TO RUNNING FEEDS. ALL EXISTING ELECTRICAL TO EQUIPMENT SHALL REMAIN OPERATIONAL UNTIL THE NEW IS IN PLACE AND ENERGIZED. ONCE NEW EQUIPMENT IS ENERGIZED, THE EC SHALL DISCONNECT AND REMOVE POWER, BACK TO ITS SOURCE, TO THE EXISTING EQUIPMENT.

**NOTE: NEW FEEDERS TO MECHANICAL EQUIPMENT:**  
THE ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER TO UNIT BEING REMOVED BY MECHANICAL CONTRACTOR. WHEN NEW EQUIPMENT IS IN PLACE, FURNISH AND INSTALL A NEW FEEDER AND DISCONNECT SWITCH FROM NEW EQUIPMENT TO NEW SUB-PANEL, AS SHOWN.

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REVISION DATES	NEWTON FREE LIBRARY CHILLER REPLACEMENT PROJECT	STAMP
	<b>SITE/ROOF PLAN - ELECTRICAL</b>	
DATE: 12-13-2023	<b>c.a. crowley,</b> ENGINEERING, INC. 645 County Street, Suite 6 Taunton, MA 02780 WWW.CROWLEYENG.COM tel. (508) 884.5094 fax . (508) 884.5099	DRAWING NUMBER
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