

COUNTY OF KENOSHA

KENOSHA COUNTY ADMINISTRATION BUILDING

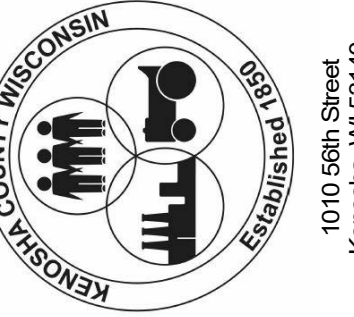
HEAT PUMP REPLACEMENT PHASE 3

1010 56TH ST, KENOSHA, WI 53144

JANUARY 20, 2021

ISSUED FOR BID

BID#2103



PROJECT TITLE
**KENOSHA COUNTY
ADMINISTRATION BUILDING
HEAT PUMP REPLACEMENT
PHASE 3**

DESIGNED : MCB
DRAWN BY : MCB
CHECKED BY : NTP
DATE CHECKED : 1/07/21

NO.	DATE	REVISION

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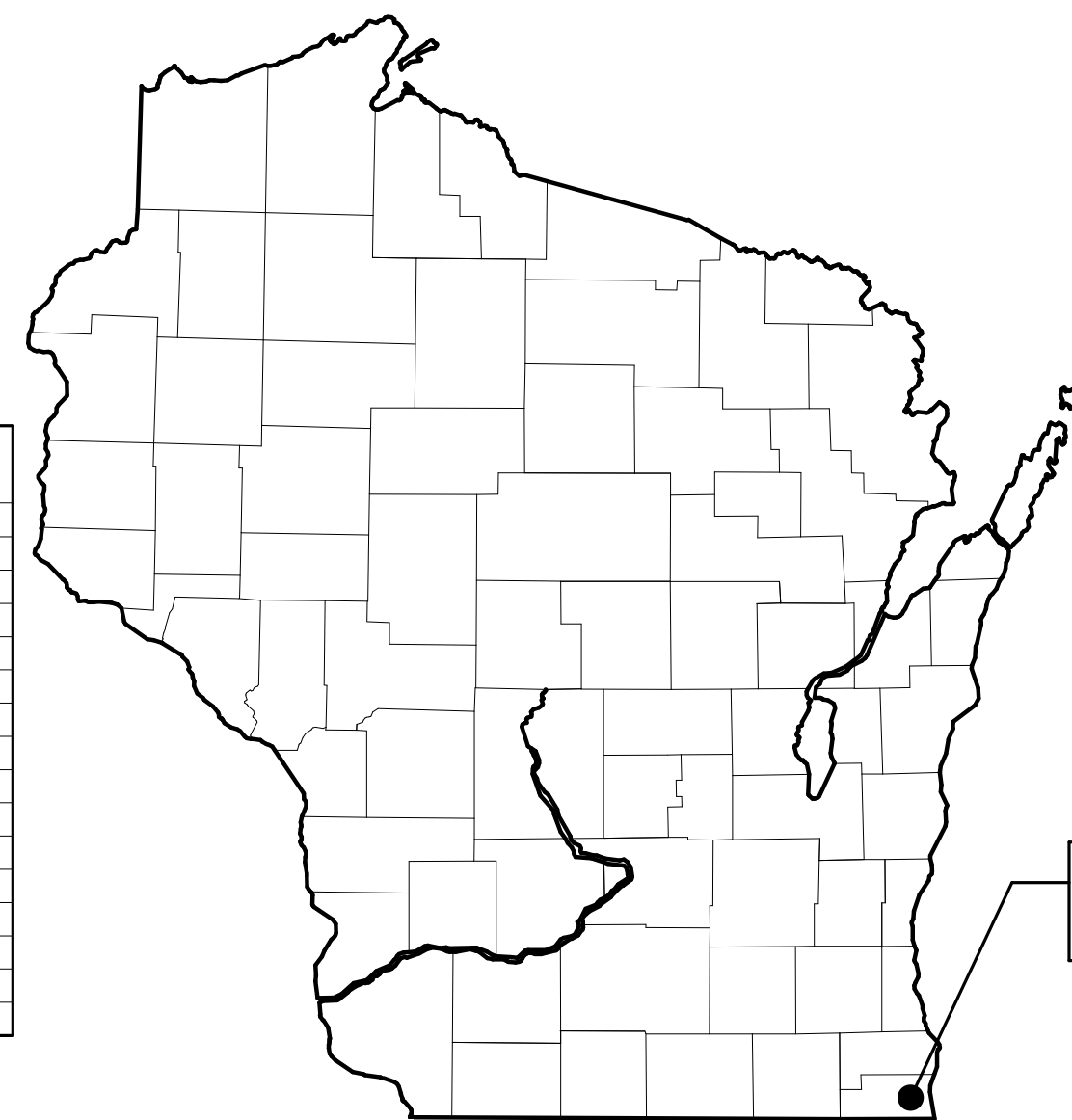
DRAWING TITLE

TITLE SHEET

PROJECT No.
K0450100

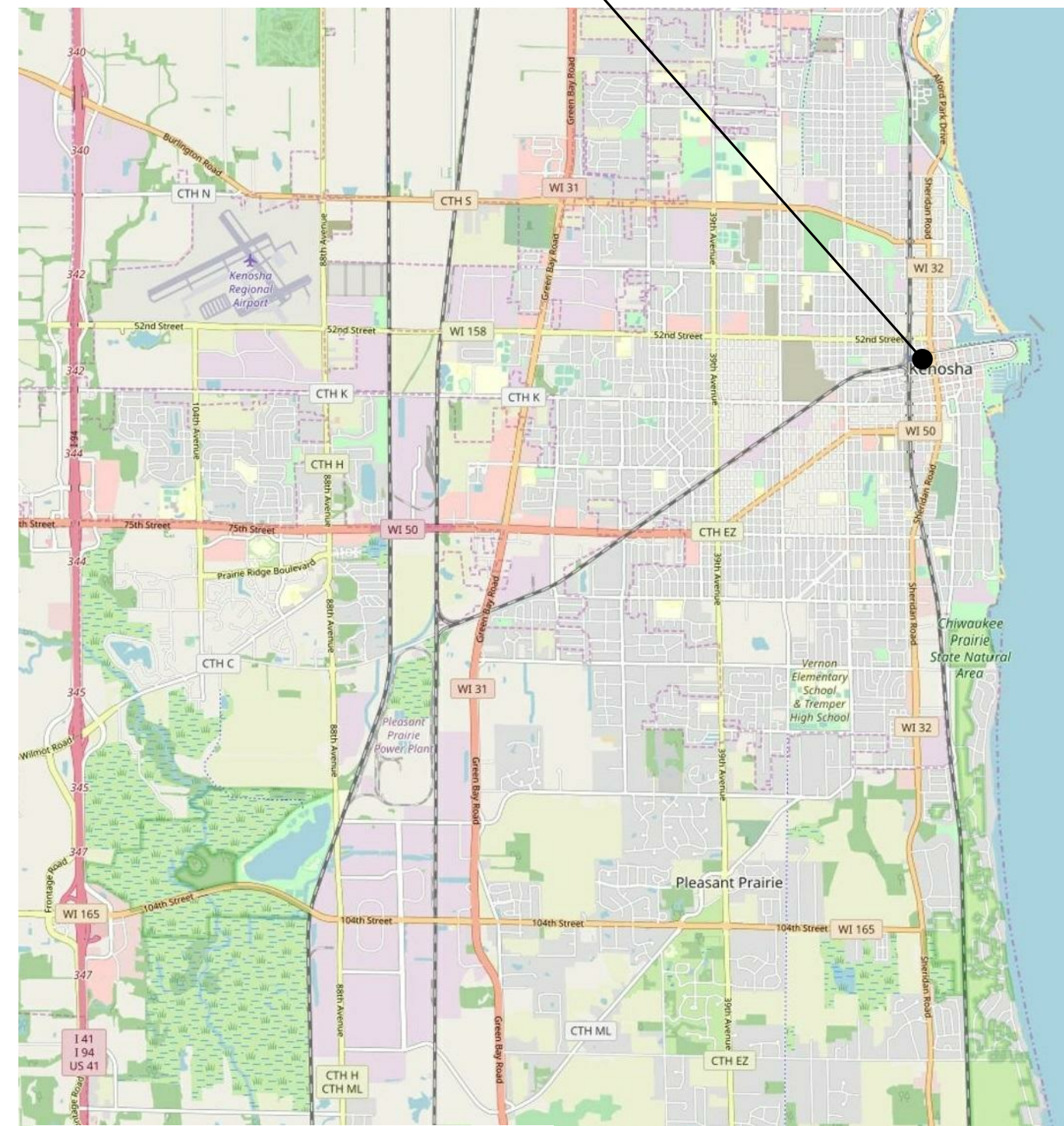
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G0.01

SHEET LIST	
NUMBER	SHEET NAME
DIV.00 - GENERAL	
G0.01	TITLE SHEET
DIV.23 - HVAC	
H0.01	HEATING AND VENTILATION GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
H1.01	SECOND FLOOR HEATING DEMOLITION PLAN
H2.01	SECOND FLOOR VENTILATION PLAN
H3.01	SECOND FLOOR HEATING PLAN
H4.01	HEATING SCHEDULES
H5.01	HEATING DETAILS & SCHEMATIC
DIV.26 - ELECTRICAL	
E0.01	ELECTRICAL GENERAL NOTES AND ABBREVIATIONS
E1.01	SECOND FLOOR ELECTRICAL DEMOLITION PLAN
E2.01	SECOND FLOOR ELECTRICAL PLAN
E5.01	ELECTRICAL SCHEDULES
E5.02	ELECTRICAL SCHEDULES



STATE MAP

PROJECT LOCATION



PROJECT AREA MAP

PROJECT LOCATION



PROJECT LOCATION MAP

PROJECT LOCATION

HEATING MASTER LEGEND

SYMBOL	DESCRIPTION
	PRIMARY SYSTEM WATER SUPPLY
	PRIMARY SYSTEM WATER RETURN
	CONDENSATE DRAIN (GRAVITY)
(NAME)	EXISTING PIPING
	ELBOW DOWN OR AWAY
	ELBOW UP OR TOWARD
	TEE DOWN OR AWAY
	TEE UP OR TOWARD
	RISE OR DROP
	90 DEG. ELBOW
	PIPE TEE
	PIPE TAKEOFF (FROM BOTTOM OF MAIN)
	PIPE TAKEOFF (FROM TOP OF MAIN)
	45 DEG. ELBOW
	45 DEG. BRANCH
	BALANCING VALVE
	BALL VALVE
	UNION - SCREWED
	TO BE REMOVED
	NEW CONNECTION TO EXISTING
	EXISTING SUPPLY SLOT DIFFUSER. "####" INDICATES CFM
	EXISTING SUPPLY CEILING DIFFUSER. "####" INDICATES CFM
	EXISTING RETURN SLOT GRILLE. "####" INDICATES CFM
	EXISTING RETURN CEILING GRILLE. "####" INDICATES CFM
	SUPPLY DUCT UP OR TOWARD
	SUPPLY DUCT DOWN OR AWAY
	RETURN DUCT UP OR TOWARD
	RETURN DUCT DOWN OR AWAY
	EXHAUST DUCT UP OR TOWARD
	EXHAUST DUCT DOWN OR AWAY
	SUPPLY DIFFUSER (WITH HARD DUCT)
	SUPPLY DIFFUSER (WITH FLEXDUCT)
	RETURN GRILLE OR REGISTER (WITH HARD DUCT)
	RETURN GRILLE OR REGISTER (WITH FLEXDUCT)
	EXHAUST GRILLE OR REGISTER (WITH HARD DUCT)
	EXHAUST GRILLE OR REGISTER (WITH FLEXDUCT)
	RECTANGULAR DUCT (FIRST FIGURE IS SIDE SHOWN) ALL DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS
	ROUND DUCTWORK
	FLAT OVAL DUCTWORK
	FLEXIBLE DUCTWORK
	90 DEG. ELBOW WITH TURNING VANES
	BRANCH DUCT TAP
	TRANSITION FROM RECTANGULAR TO ROUND DUCT

HEATING/VENTILATION ABBREVIATIONS

CAP.	CAPACITY
CD	CONDENSATE DRAIN (GRAVITY)
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB TEMPERATURE, °F
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EXT. S.P.	EXTERNAL STATIC PRESSURE, IN WG
GPM	GALLONS (US) PER MINUTE
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
OA	OUTDOOR AIR
PWR	PRIMARY SYSTEM WATER RETURN
PWS	PRIMARY SYSTEM WATER SUPPLY
RL	RELIEF LOUVER
SA	SUPPLY AIR
SENS.	SENSIBLE
S/S	START/STOP
WB	WET BULB TEMPERATURE, °F
WPD	WATER PRESSURE DROP

GENERAL HEATING/VENTILATION NOTES

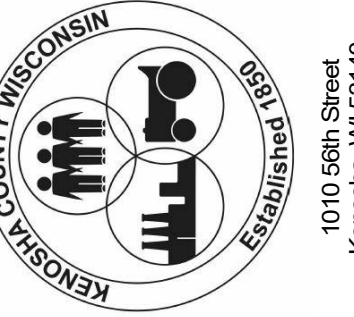
- THE LOCATIONS AND SIZES OF EXISTING PIPING, DUCTWORK, AND EQUIPMENT HAVE BEEN TAKEN FROM "AS-BUILT" DRAWINGS, INFORMATION PROVIDED BY THE OWNER, AND SITE WALK-THROUGHS WHERE POSSIBLE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.
- DUCTWORK AND PIPING IS SHOWN IN SCHEMATIC FORM ONLY, OFFSETS AND CHANGES IN ELEVATION ARE NOT NECESSARILY SHOWN. ROUTE DUCTWORK AND PIPING IN AN ORDERLY MANNER AS REQUIRED FOR CLEARANCE WITH STRUCTURAL CONDITIONS. COORDINATE LOCATION OF DUCTWORK AND PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. WHERE POSSIBLE RACK PIPING HORIZONTALLY AND VERTICALLY.
- COORDINATE LOCATIONS AND SIZES OF DUCT CONNECTIONS AND PIPING CONNECTIONS TO EQUIPMENT BEING PROVIDED.
- LOCATE ALL ISOLATION VALVES IN AN ACCESSIBLE LOCATION. WHERE VALVES ARE NOT ACCESSIBLE, PROVIDE 12"x12" ACCESS DOOR.
- UNLESS OTHERWISE NOTED, CONCEAL ALL DUCTWORK AND PIPING ABOVE CEILINGS, IN WALLS, OR INSIDE CHASES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SUPPORTING SYSTEMS AND DEVICES FOR ALL DUCTWORK, EQUIPMENT, PIPING AND ACCESSORIES.
- FOR DUCT AND PIPING CONNECTIONS TO HEAT PUMPS, SEE MECHANICAL DETAILS.
- LOCATE AND INSTALL ALL MECHANICAL EQUIPMENT TO PROVIDE MANUFACTURER'S MINIMUM SERVICE CLEARANCES.
- ALL CONNECTIONS TO, OR SHUTDOWNS OF, EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER TO PROVIDE MINIMUM INTERFERENCE WITH THEIR OPERATION AND DOWNTIME OF THE SYSTEM. PROVIDE PROPOSED PHASING PLAN FOR CONNECTIONS TO EXISTING SERVICES TO OWNER FOR APPROVAL PRIOR TO STARTING OF WORK.
- CONTRACTOR SHALL VERIFY THAT BALANCING VALVES CAN BE ADJUSTED TO MEET FLOW REQUIREMENTS WITHOUT THE PRODUCTION OF UNACCEPTABLE NOISE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL CEILING TILES REQUIRED TO INSTALL THEIR WORK. PROVIDE NEW MATCHING CEILING TILES WHERE EXISTING CEILING TILES ARE DAMAGED DURING WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING OR DISCONNECTING EXISTING LIGHT FIXTURES AS REQUIRED TO PERFORM THEIR WORK. LIGHT FIXTURES SHALL BE REINSTALLED AND RECONNECTED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- THE INFORMATION SHOWN ON TEMPERATURE CONTROL SCHEMATIC IS FOR GENERAL ARRANGEMENT ONLY. ACTUAL SYSTEM ARCHITECTURE SHALL BE DESIGNED BY CONTROLS CONTRACTOR.
- REVIEW EXISTING TEMPERATURE CONTROL INFRASTRUCTURE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROLLER REQUIRED TO ENSURE ADEQUATE POINTS CAPACITY. INSTALL NEW CONTROLLER IN EXISTING CONTROL PANEL ON SECOND FLOOR.
- PROVIDE FIRE STOPPING OR FIRE CAULK AT ALL PENETRATIONS AT FLOORS.

GENERAL HEATING DEMOLITION NOTES

- VERIFY EXACT SIZE AND LOCATION OF EXISTING UTILITIES PRIOR TO START OF DEMOLITION.
- UNLESS OTHERWISE NOTED, REMOVAL OF PIPING AND/OR EQUIPMENT SHALL INCLUDE ALL INSULATION, VALVES, HANGERS, SUPPORTS, EQUIPMENT PADS, FLASHING, CONTROLS, AND ASSOCIATED ACCESSORIES.
- DISCONNECT ALL HEATING PIPING CONNECTIONS TO EQUIPMENT BEING REMOVED. COORDINATE EXTENT OF REMOVAL WITH ALL TRADES.
- ALL OPENING OR HOLES LEFT IN EXISTING WALL, FLOORS AND CEILINGS TO REMAIN, INCLUDING CHASES, SHALL BE PATCHED TO MATCH EXISTING CONDITIONS. PATCHING SHALL MATCH ADJACENT SURFACES.
- THE CONTRACTOR SHALL DISCONNECT EXISTING TEMPERATURE CONTROL COMPONENTS, ASSOCIATED WIRING AND DEVICES. UNLESS OTHERWISE NOTED INSTALL NEW DEVICES ON EXISTING LOCATIONS. MATCH ANY OPENINGS OR PATCHES TO ADJACENT SURFACES TO OWNER'S SATISFACTION.

ClarkDietz

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625 57th Street, 6th Floor
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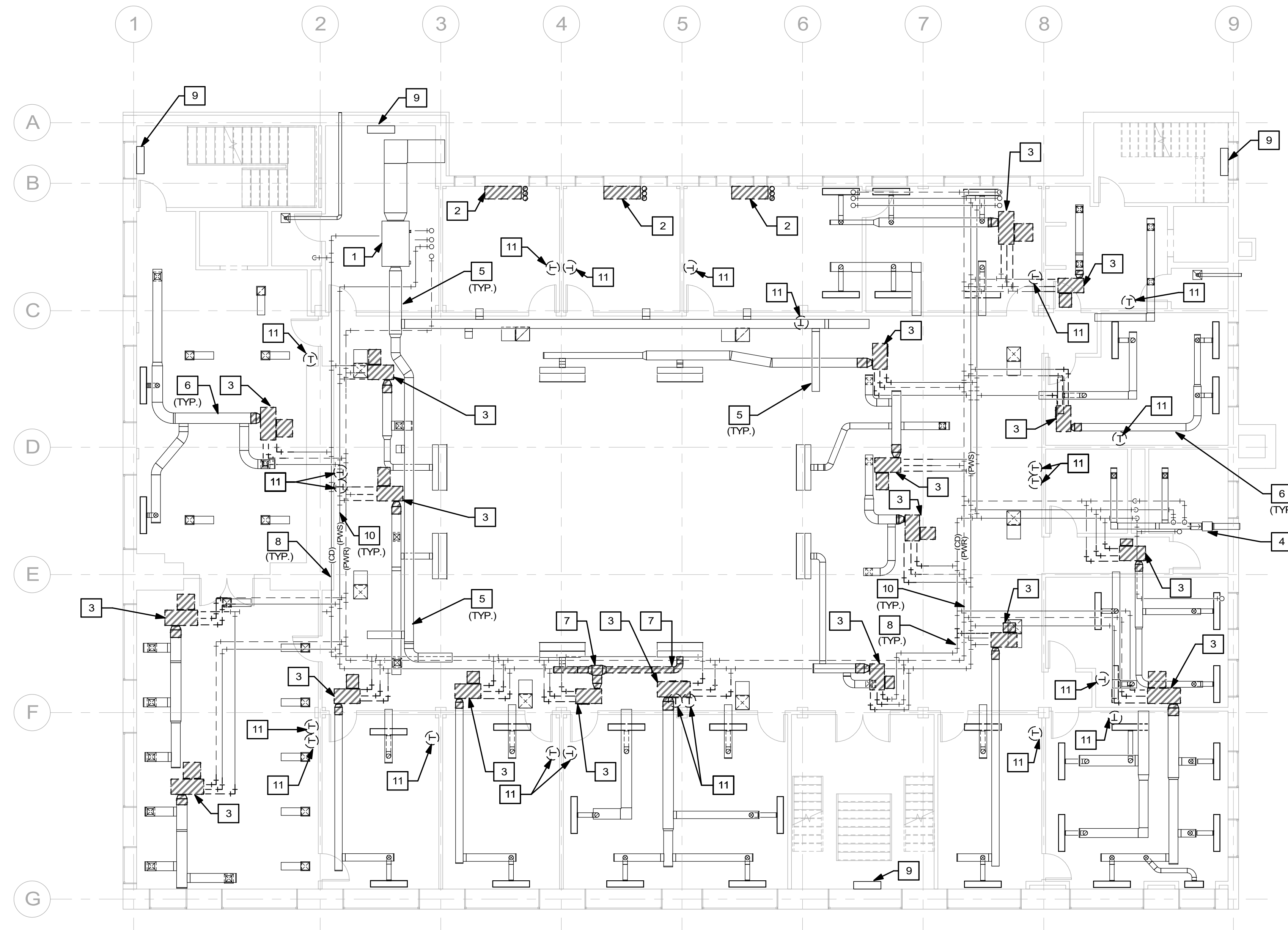
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**HEATING AND VENTILATION
GENERAL NOTES, SYMBOLS
AND ABBREVIATIONS**

PROJECT No.
K0450100

DRAWING No.
H0.01



1 SECOND FLOOR HEATING DEMOLITION PLAN

0 2 4 8 16'

NOTES (THIS SHEET)

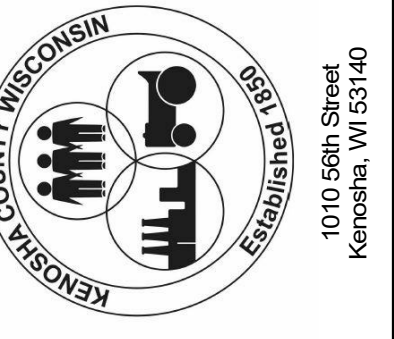
1. SEE H0.01 FOR HEATING GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING LIGHT FIXTURES TO FACILITATE WORK AND REPLACING LIGHT FIXTURES WHEN WORK IS COMPLETE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING, PROTECTING, AND RESTORING ALL FURNITURE AND CABINETS TO FACILITATE THEIR WORK. TEMPORARY RELOCATION OF FURNITURE AND PERSONNEL SHALL BE COORDINATED WITH OWNER.
4. REMOVE EXISTING LAY-IN CEILING TILE AND GRID AS REQUIRED FOR DEMOLITION OF EXISTING AND INSTALLATION OF NEW HEAT PUMPS, DUCTWORK, AND PIPING. REPLACE TILES AND GRID TO MATCH EXISTING CEILING.
5. EXISTING SUPPLY DIFFUSERS, RETURN DIFFUSERS AND ASSOCIATED DUCTWORK TO REMAIN UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING EXISTING DUCTWORK, PIPING, CONDUIT OR OTHER UTILITIES FOR REMOVAL AND INSTALLATION OF NEW HEAT PUMPS. REINSTALL OR REPLACE DUCTWORK, PIPING, CONDUIT AFTER REMOVAL AND REINSTALLATION HAS BEEN COMPLETED.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF EXISTING TEMPERATURE CONTROL WIRING IN WALL.

DEMOLITION KEYNOTES

1. EXISTING AIR HANDLER (DEDICATED OUTDOOR AIR) TO REMAIN.
2. REMOVE EXISTING FLOOR MOUNTED HEAT PUMP. DISCONNECT AND REMOVE EXISTING PRIMARY SUPPLY/RETURN PIPING AND CONDENSATE PIPING AS REQUIRED TO INSTALL NEW HEAT PUMP. UNIT IS FED FROM THE FLOOR BELOW. SEE H2.01 FOR NEW WORK.
3. REMOVE EXISTING HEAT PUMP ABOVE CEILING. DISCONNECT AND REMOVE EXISTING SUPPLY DUCT, PRIMARY SUPPLY/RETURN PIPING, AND CONDENSATE PIPING AS REQUIRED TO INSTALL NEW HEAT PUMP. SEE H2.01 FOR NEW WORK.
4. EXISTING EXHAUST FAN TO REMAIN.
5. EXISTING OUTDOOR AIR DUCTWORK IN PLENUM TO REMAIN. SUPPLY AIR IS DISCHARGED INTO THE PLENUM.
6. EXISTING HEAT PUMP SUPPLY DUCT AND ASSOCIATED DIFFUSERS TO REMAIN.
7. REMOVE EXISTING DUCTWORK AS REQUIRED FOR REMOVAL AND INSTALLATION OF HEAT PUMP. REFER TO SHEET H2.01 FOR MORE DETAILS.
8. EXISTING CONDENSATE PIPING TO REMAIN.
9. EXISTING CABINET UNIT HEATER TO REMAIN.
10. EXISTING PRIMARY WATER SUPPLY AND RETURN PIPING TO REMAIN.
11. EXISTING TEMPERATURE SENSOR AND ASSOCIATED WIRING TO BE REPLACED WITH NEW.



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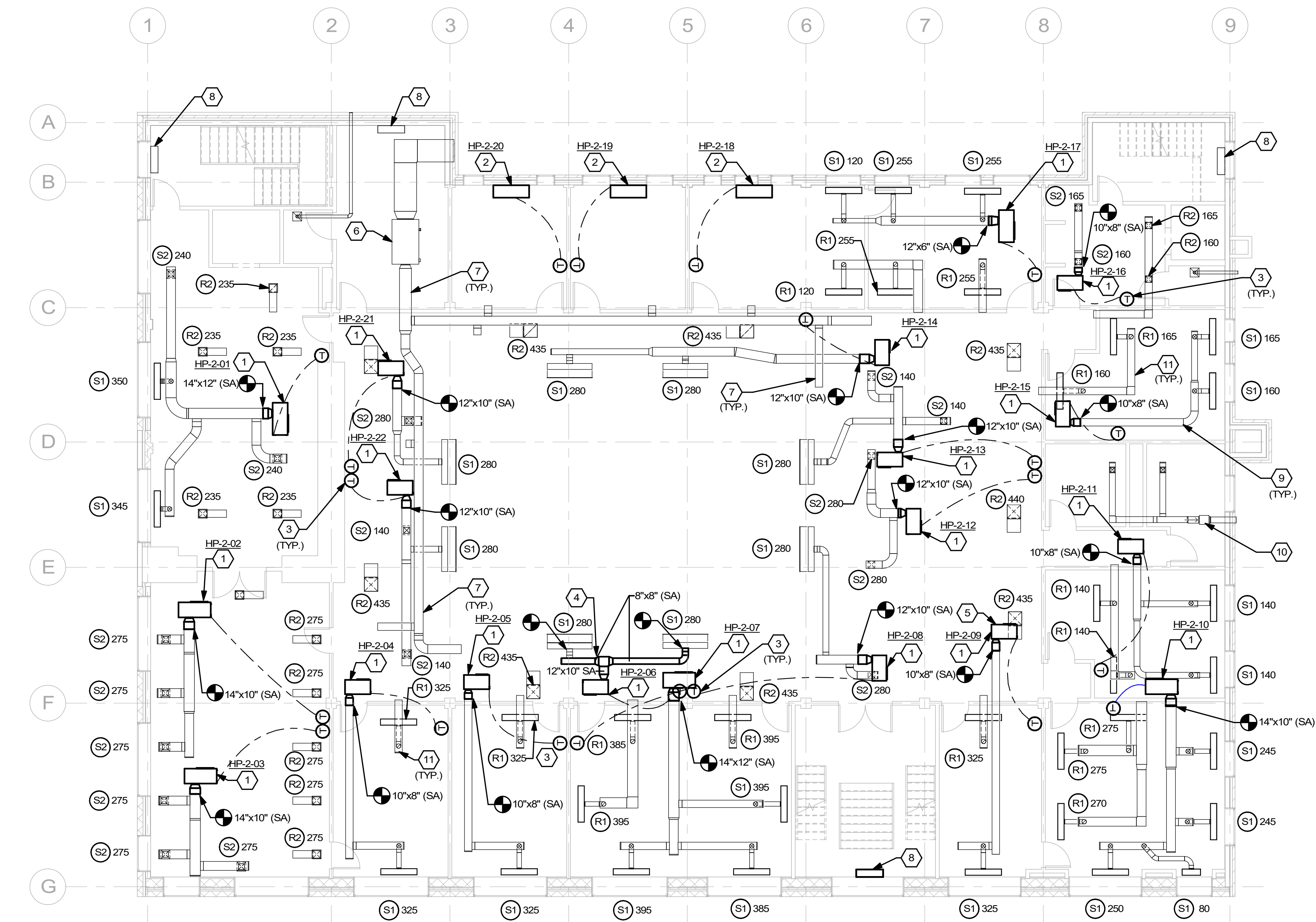
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**SECOND FLOOR HEATING
 DEMOLITION PLAN**

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DRAWING No.
H1.01



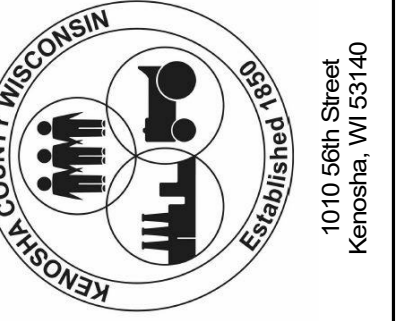
1 SECOND FLOOR VENTILATION PLAN

NOTES (THIS SHEET)

- SEE H0.01 FOR HEATING GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING LIGHT FIXTURES TO FACILITATE WORK AND REPLACING LIGHT FIXTURES WHEN WORK IS COMPLETE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING, PROTECTING, AND RESTORING ALL FURNITURE AND CABINETS TO FACILITATE THEIR WORK. TEMPORARY RELOCATION OF FURNITURE AND PERSONNEL SHALL BE COORDINATED WITH OWNER.
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- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING EXISTING DUCTWORK, PIPING, CONDUIT OR OTHER UTILITIES FOR REMOVAL AND INSTALLATION OF NEW HEAT PUMPS. REINSTALL OR REPLACE DUCTWORK, PIPING, CONDUIT AFTER REMOVAL AND REINSTALLATION HAS BEEN COMPLETED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF EXISTING TEMPERATURE CONTROL WIRING IN WALL.
- VERIFY EXACT SIZE OF FLOOR MOUNTED HEAT PUMPS PRIOR TO REMOVAL. LOCATE HEAT PUMPS WITH MINIMAL IMPACT TO ARCHITECTURAL ELEMENTS. PATCH/PAINT ADJACENT WALLS WHERE HEAT PUMP SIZES DON'T EXACTLY MATCH.
- VERIFY EXACT SIZE OF FLOOR MOUNTED HEAT PUMPS PRIOR TO REMOVAL. LOCATE HEAT PUMPS WITH MINIMAL IMPACT TO FLOORING. PROVIDE COVERING/TRIM WHERE NEW HEAT PUMP DOES NOT COVER EXISTING FLOORING.

KEYNOTES

- PROVIDE NEW HEAT PUMP ABOVE CEILING. PROVIDE CONNECTIONS TO EXISTING SUPPLY DUCT. SEE DETAIL 4/H5.01. PROVIDE SA DUCT TRANSITION FROM HP OUTLET TO EXISTING SA AND MAKE FINAL CONNECTION WITH FLEXIBLE CONNECTION.
- PROVIDE NEW FLOOR MOUNTED HEAT PUMP. LOCATE UNIT AT THE SAME LOCATION AS DEMOLISHED UNIT. ROUTE CONTROL WIRING FROM THE FLOOR BELOW.
- PROVIDE NEW TEMPERATURE SENSOR. LOCATE THERMOSTAT AT SAME LOCATION AS EXISTING. ROUTE NEW CONTROL WIRING IN EXISTING WALL UP TO ABOVE CEILING AND CONNECT TO HEAT PUMP.
- REINSTALL REMOVED DUCTWORK TO ALLOW FOR HP-2-06 AND HP-2-07 INSTALLATION. CONTRACTOR TO CONFIRM IN FIELD EXTENT OF EXISTING DUCTWORK REMOVAL AND REPLACEMENT REQUIRED.
- REMOVE EXISTING CABLE TRAY AS REQUIRED TO INSTALL NEW WORK. COORDINATE REMOVAL AND REPLACEMENT OF CABLES WITH KENOSHA COUNTY.
- EXISTING AIR HANDLER (DEDICATED OUTDOOR AIR) TO REMAIN. NO CHANGE.
- EXISTING OUTDOOR AIR DUCTWORK IN PLENUM TO REMAIN. SUPPLY AIR IS DISCHARGED INTO THE PLENUM. NO CHANGE.
- EXISTING CABINET UNIT HEATER TO REMAIN. NO CHANGE.
- EXISTING SUPPLY DUCT AND ASSOCIATED DIFFUSERS TO REMAIN.
- EXISTING EXHAUST FAN TO REMAIN. NO CHANGE.
- EXISTING TRANSFER DUCTS TO REMAIN. NO CHANGE.



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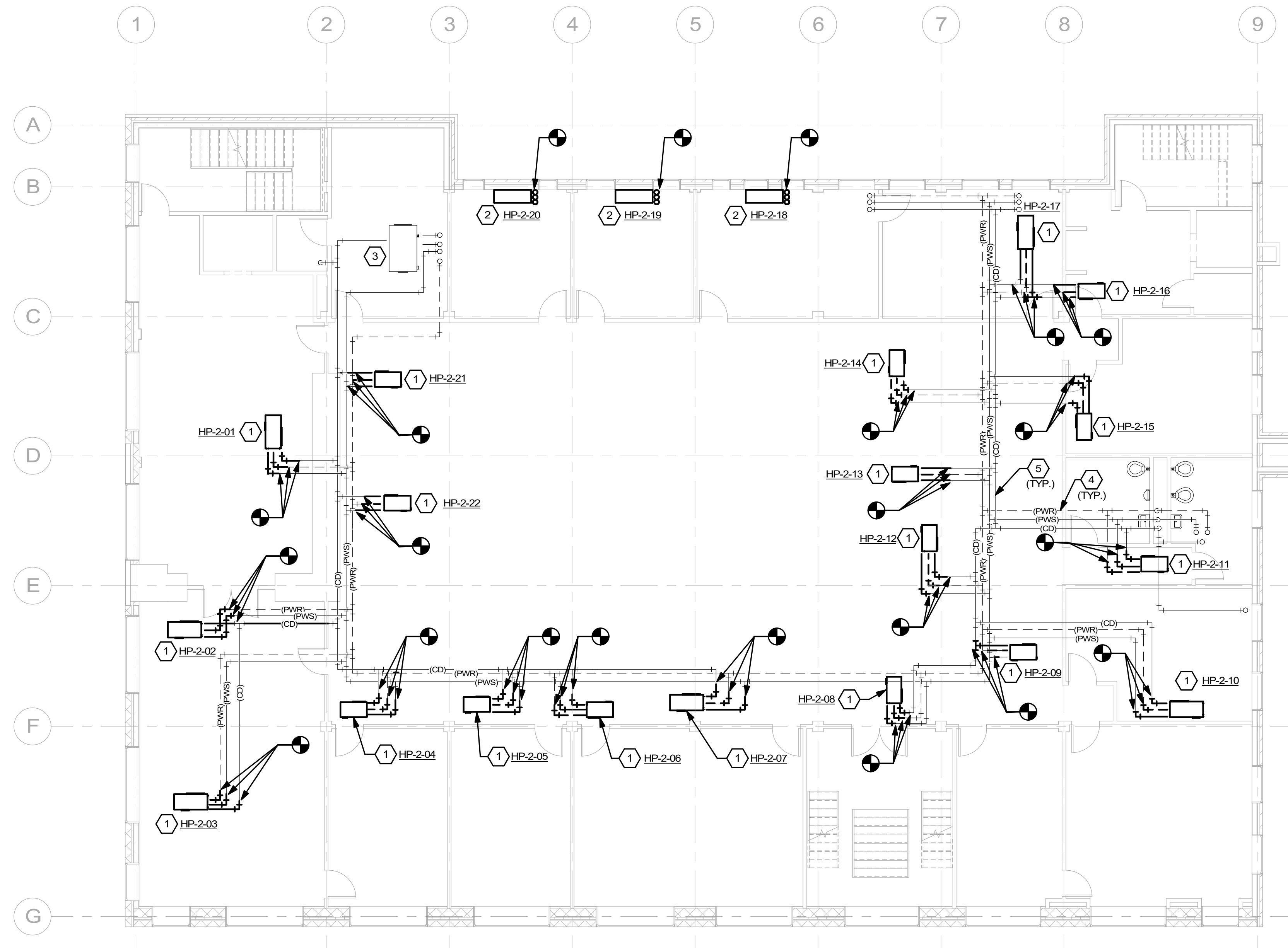
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**SECOND FLOOR
VENTILATION PLAN**

PROJECT No.
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DRAWING No.
H2.01



1 SECOND FLOOR HEATING PLAN

0 2 4 8 16'

NOTES (THIS SHEET)

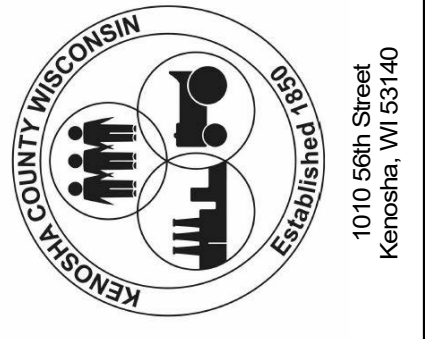
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- CONDENSATE TO BE GRAVITY DRAIN, TIED INTO MAIN CONDENSATE PIPING. CONTRACTOR TO CONFIRM WITH FIELD CONDITIONS GRAVITY DRAIN CAN BE ACCOMPLISHED. REPORT TO ENGINEER AND PROVIDE PUMPED CONDENSATE IF FOUND OTHERWISE.

KEYNOTES

- PROVIDE NEW HEAT PUMP ABOVE CEILING. PROVIDE CONNECTIONS TO EXISTING HEAT PIPING AND CONDENSATE PIPING. SEE DETAILS 1/H5.01 & 2/H5.01.
- NEW FLOOR MOUNTED HEAT PUMP. LOCATE UNIT AT THE SAME LOCATION AS DEMOLISHED UNIT. PROVIDE CONNECTIONS TO EXISTING HEAT PIPING AND CONDENSATE PIPING. SEE DETAILS 1/H5.01 & 5/H5.01. UNIT IS FEED FROM THE FLOOR BELOW.
- EXISTING AIR HANDLER (DEDICATED OUTDOOR AIR) TO REMAIN. NO CHANGE.
- EXISTING PRIMARY WATER SUPPLY AND RETURN REMAINS.
- EXISTING CONDENSATE PIPING REMAINS.



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**SECOND FLOOR HEATING
 PLAN**

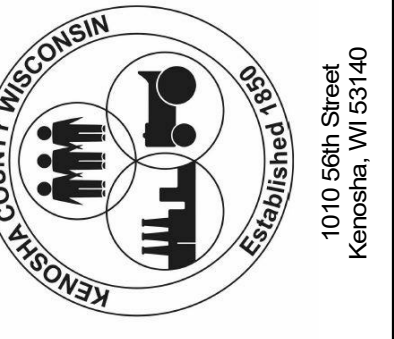
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H3.01

WATER SOURCE HEAT PUMP SCHEDULE

TAG	FAN DATA		COOLING PERFORMANCE							HEATING PERFORMANCE						GPM	ELECTRICAL DATA						REMARKS	DESIGN BASIS	
	AIRFLOW (CFM)	EXT. S.P. (IN WG)	TOTAL CAP. (MBH)	SENS. CAP. (MBH)	EAT (DB/WB)	LAT (DB/WB)	EWT (°F)	LWT (°F)	WPD (FT H2O)	TOTAL CAP. (MBH)	EAT (DB)	LAT (DB)	EWT (°F)	LWT (°F)	WPD (FT H2O)		V	PH	HZ	FLA	MCA	MOCP		MANUFACTURER	MODEL
HP-2-01	1175	0.50	33.1	24.2	80/67	61/56	90	101.5	5.40	42.2	70	103	60	52	6.50	7.5	208	1	60	19.4	23.6	40	NOTES 1-7	CLIMATE MASTER	TC-036
HP-2-02	825	0.50	23.2	17.8	80/67	60/55	90	102.1	7.40	27.5	70	101	60	52	8.80	5.0	208	1	60	15.5	18.7	30	NOTES 1-7	CLIMATE MASTER	TC-024
HP-2-03	825	0.50	23.2	17.8	80/67	60/55	90	102.1	7.40	27.5	70	101	60	52	8.80	5.0	208	1	60	15.5	18.7	30	NOTES 1-7	CLIMATE MASTER	TC-024
HP-2-04	325	0.50	8.6	6.3	80/67	62/58	90	101.8	3.30	11.1	70	102	60	51	3.30	2.0	208	1	60	4.5	5.5	15	NOTES 1-7	CLIMATE MASTER	TC-009
HP-2-05	325	0.50	8.6	6.3	80/67	62/58	90	101.8	3.30	11.1	70	102	60	51	3.30	2.0	208	1	60	4.5	5.5	15	NOTES 1-7	CLIMATE MASTER	TC-009
HP-2-06	560	0.50	14.5	11.3	80/67	61/56	90	101.7	2.90	16.9	70	98	60	52	3.60	3.1	208	1	60	6.5	7.9	15	NOTES 1-7	CLIMATE MASTER	TC-015
HP-2-07	1175	0.50	33.1	24.2	80/67	61/56	90	101.5	7.40	42.2	70	103	60	52	8.80	7.5	208	1	60	19.4	23.6	40	NOTES 1-7	CLIMATE MASTER	TC-036
HP-2-08	560	0.50	14.5	11.3	80/67	61/56	90	101.7	2.90	16.9	70	98	60	52	3.60	3.1	208	1	60	6.5	7.9	15	NOTES 1-7	CLIMATE MASTER	TC-015
HP-2-09	325	0.50	8.6	6.3	80/67	62/58	90	101.8	3.30	11.1	70	102	60	51	3.30	2.0	208	1	60	4.5	5.5	15	NOTES 1-7	CLIMATE MASTER	TC-009
HP-2-10	825	0.50	23.2	17.8	80/67	60/55	90	102.1	7.40	27.5	70	101	60	52	8.80	5.0	208	1	60	15.5	18.7	30	NOTES 1-7	CLIMATE MASTER	TC-024
HP-2-11	280	0.50	8.0	5.9	80/67	61/56	90	101.1	2.60	10.6	70	103	60	52	3.30	2.0	208	1	60	4.5	5.5	15	NOTES 1-7	CLIMATE MASTER	TC-009
HP-2-12	560	0.50	14.5	11.3	80/67	61/56	90	101.7	2.90	16.9	70	98	60	52	3.60	3.1	208	1	60	6.5	7.9	15	NOTES 1-7	CLIMATE MASTER	TC-015
HP-2-13	560	0.50	14.5	11.3	80/67	61/56	90	101.7	2.90	16.9	70	98	60	52	3.60	3.1	208	1	60	6.5	7.9	15	NOTES 1-7	CLIMATE MASTER	TC-015
HP-2-14	560	0.50	14.5	11.3	80/67	61/56	90	101.7	2.90	16.9	70	98	60	52	3.60	3.1	208	1	60	6.5	7.9	15	NOTES 1-7	CLIMATE MASTER	TC-015
HP-2-15	325	0.50	8.6	6.3	80/67	62/58	90	101.8	3.30	11.1	70	102	60	51	3.30	2.0	208	1	60	4.5	5.5	15	NOTES 1-7	CLIMATE MASTER	TC-009
HP-2-16	325	0.50	8.6	6.3	80/67	62/58	90	101.8	3.30	11.1	70	102	60	51	3.30	2.0	208	1	60	4.5	5.5	15	NOTES 1-7	CLIMATE MASTER	TC-009
HP-2-17	630	0.50	23.2	15.9	80/67	57/51	90	101.9	7.40	27.6	70	111	60	52	8.80	5.0	208	1	60	15.5	18.7	30	NOTES 1-7	CLIMATE MASTER	TC-024
HP-2-18	520	0.25	13.6	10.4	80/67	62/57	90	101.2	5.80	15.6	70	108	60	53	7.00	3.1	208	1	60	6.4	7.8	15	NOTES 1-6,8	CLIMATE MASTER	TRC-015
HP-2-19	270	0.25	7.9	6.4	80/67	58/53	90	101	5.50	10.4	70	104	60	52	6.60	2.0	208	1	60	4.9	6.0	15	NOTES 1-6,8	CLIMATE MASTER	TRC-09
HP-2-20	270	0.25	7.9	6.4	80/67	58/53	90	101	5.50	10.4	70	104	60	52	6.60	2.0	208	1	60	4.9	6.0	15	NOTES 1-6,8	CLIMATE MASTER	TRC-09
HP-2-21	560	0.50	14.5	11.3	80/67	61/56	90	101.7	2.90	16.9	70	98	60	52	3.60	3.1	208	1	60	6.5	7.9	15	NOTES 1-7	CLIMATE MASTER	TC-015
HP-2-22	560	0.50	14.5	11.3	80/67	61/56	90	101.7	2.90	16.9	70	98	60	52	3.60	3.1	208	1	60	6.5	7.9	15	NOTES 1-7	CLIMATE MASTER	TC-015

- NOTES:**
1. CONTRACTOR TO COORDINATE UNIT CONFIGURATION (LEFT HAND/RIGHT HAND) WITH FIELD CONDITIONS PRIOR TO ORDERING UNITS.
 2. PROVIDE HIGH STATIC PSC MOTORS.
 3. PROVIDE REMOTE MOUNTED THERMOSTAT.
 4. PROVIDE BACNET INTERFACE.
 5. CONDENSATE TO BE GRAVITY DRAIN, TIED INTO MAIN CONDENSATE PIPING. CONTRACTOR TO CONFIRM WITH FIELD CONDITIONS GRAVITY DRAIN CAN BE ACCOMPLISHED. REPORT TO ENGINEER AND PROVIDE PUMPED CONDENSATE IF REQUIRED. ON HEAT PUMPS WHERE CONDENSATE PUMPS ARE REQUIRED, PROVIDE PUMPS WITH BUILT-IN SAFETY SWITCH THAT CAN BE INTERCONNECTED TO HEAT PUMP.
 6. ELECTRICAL CONTRACTOR TO PROVIDE FIELD MOUNTED DISCONNECT SWITCH.
 7. TRC MODELS TO BE PROVIDED WITH DISCONNECT SWITCH.



PROJECT TITLE
KENOSHA COUNTY
ADMINISTRATION BUILDING
HEAT PUMP REPLACEMENT
PHASE 3

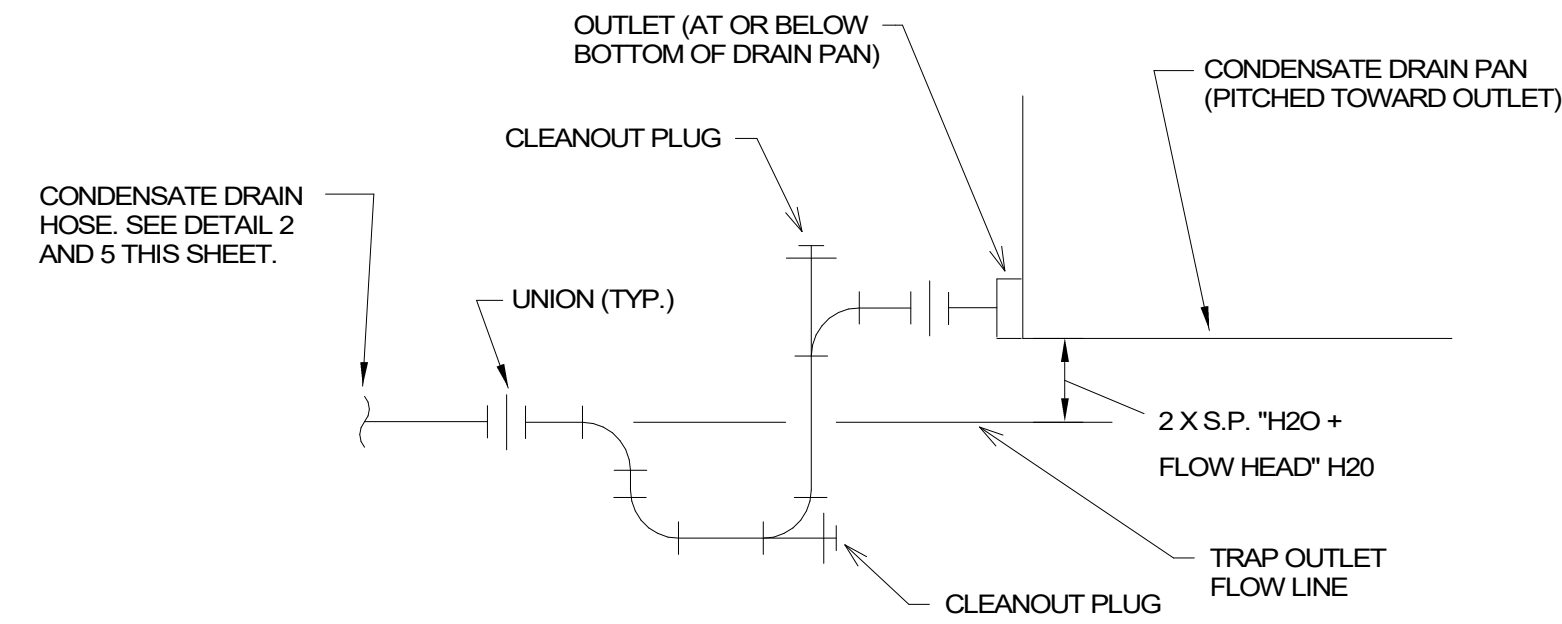
DESIGNED BY: MCB
 DRAWN BY: MCB
 CHECKED BY: NTP
 DATE CHECKED: 1/07/21

NO.	DATE	REVISION
	01/20/21	ISSUED FOR BID

DRAWING TITLE
HEATING SCHEDULES

PROJECT No.
K0450100

DRAWING No.
H4.01

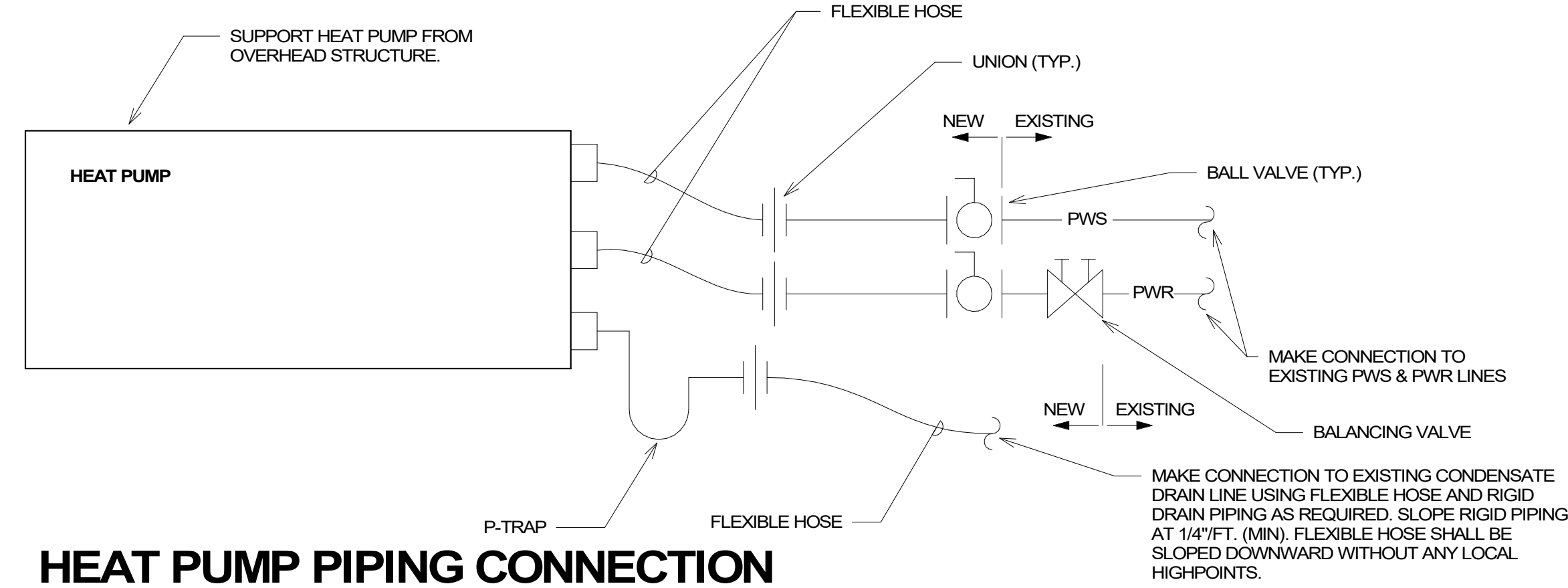


NOTES:

1. P-TRAP PIPING CONSTRUCTED OF HARD DRAWN TYPE L COPPER TUBING AND SWEAT FITTINGS.
2. ALL DRAIN PIPING AND TRAPS TO BE INSULATED.
3. DRAIN PIPING TO BE 1-1/2" MIN. OR LARGER AS REQUIRED TO MAINTAIN MAXIMUM PRESSURE DROP OF 1.0" W.C. AT MAX. CONDENSATE FLOW.
4. SP=DIFFERENTIAL STATIC PRESSURE BETWEEN INTERIOR UNIT DRAIN PAN OUTLET AND EXTERNAL ATMOSPHERIC PRESSURE.

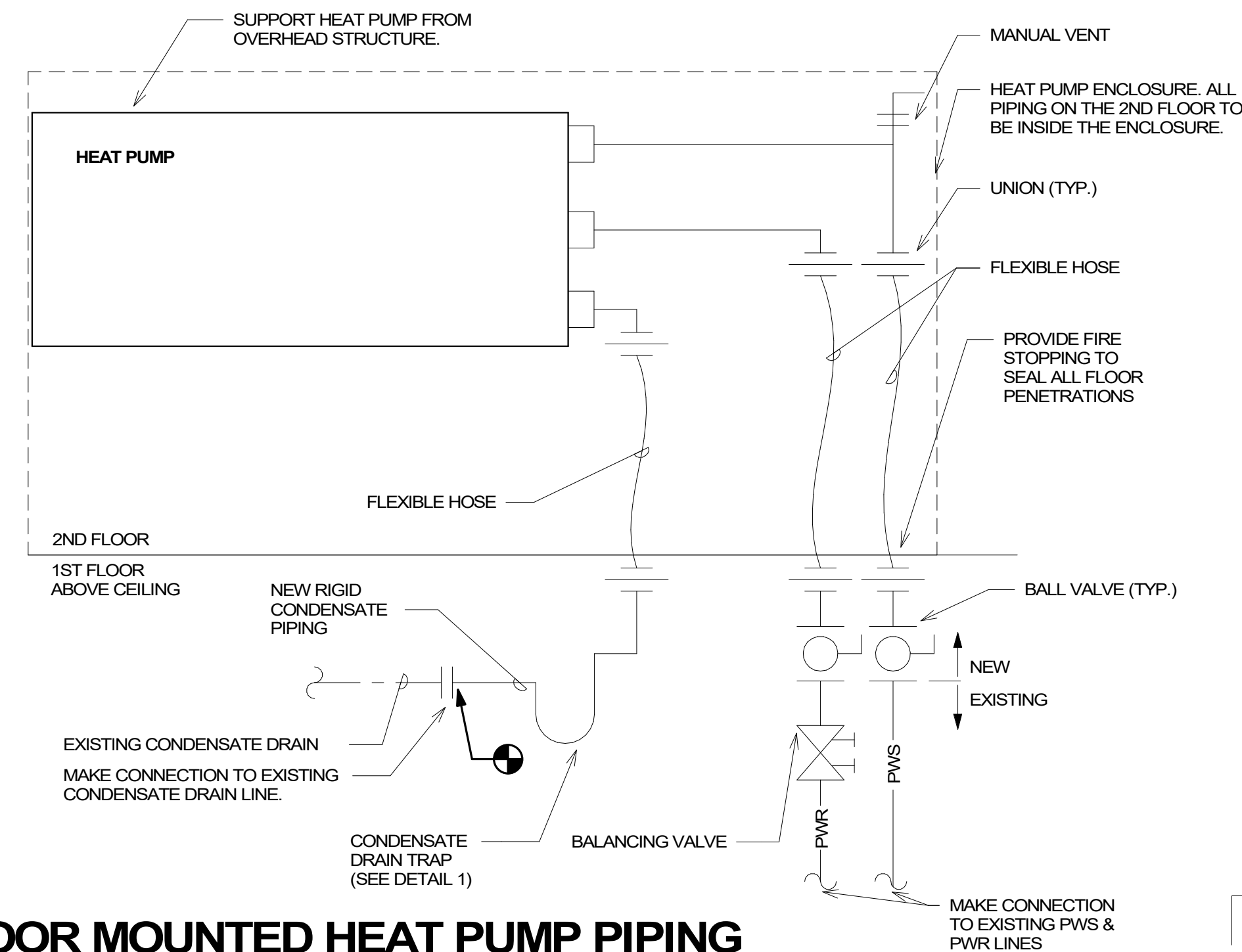
CONDENSATE DRAIN TRAP

SCALE : N.T.S.



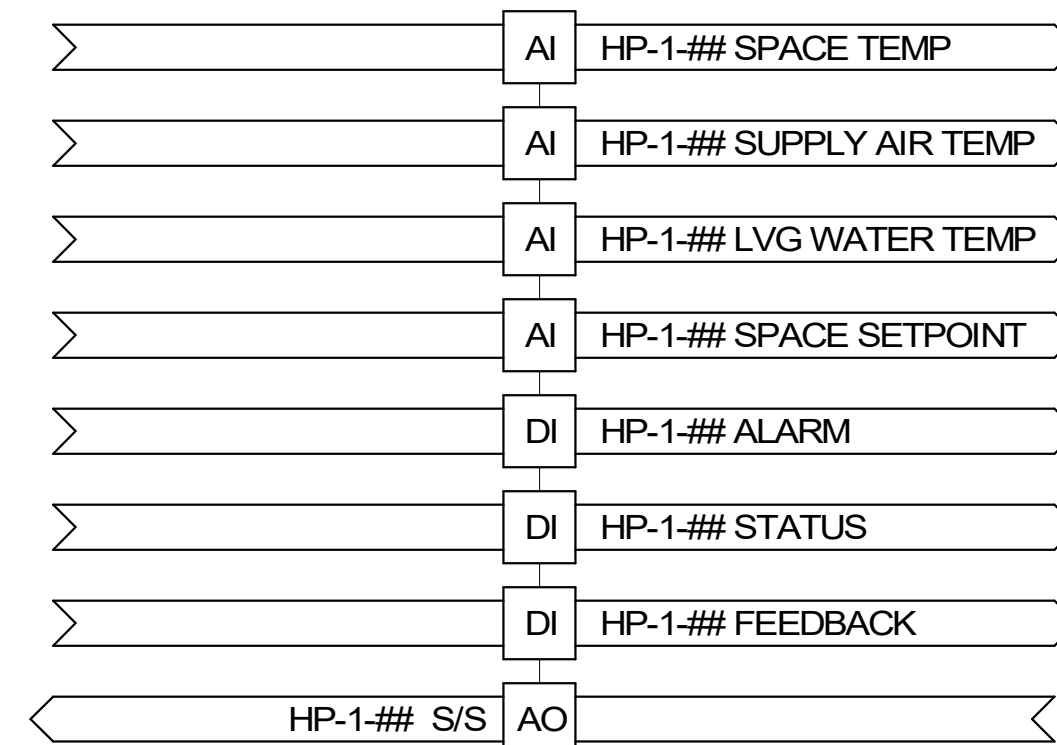
HEAT PUMP PIPING CONNECTION DETAIL

SCALE : N.T.S.



FLOOR MOUNTED HEAT PUMP PIPING CONNECTION DETAIL

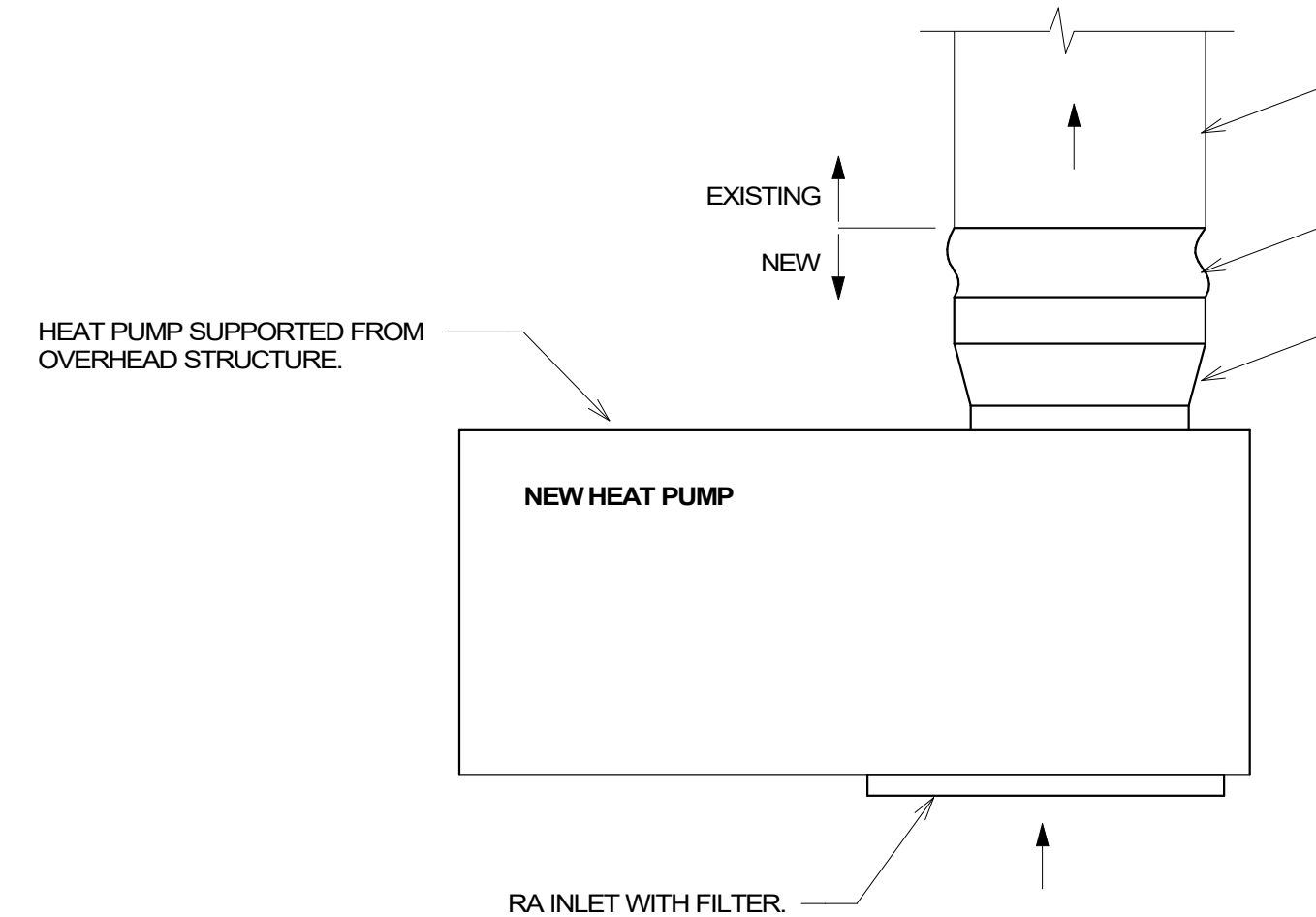
SCALE : N.T.S.



POINTS LIST							
ADDRESS	POINT DESCRIPTOR	POINT TYPE					REMARKS
		DI	AI	DO	AO	VP	
	HP-1-## SPACE TEMP		•				FOR EACH HP
	HP-1-## SUPPLY AIR TEMP		•				FOR EACH HP
	HP-1-## LVG WATER TEMP		•				FOR EACH HP
	HP-1-## SPACE SETPOINT	•					FOR EACH HP
	HP-1-## ALARM	•					FOR EACH HP
	HP-1-## STATUS	•					FOR EACH HP
	HP-1-## FEEDBACK	•					FOR EACH HP
	HP-1-## S/S				•		FOR EACH HP

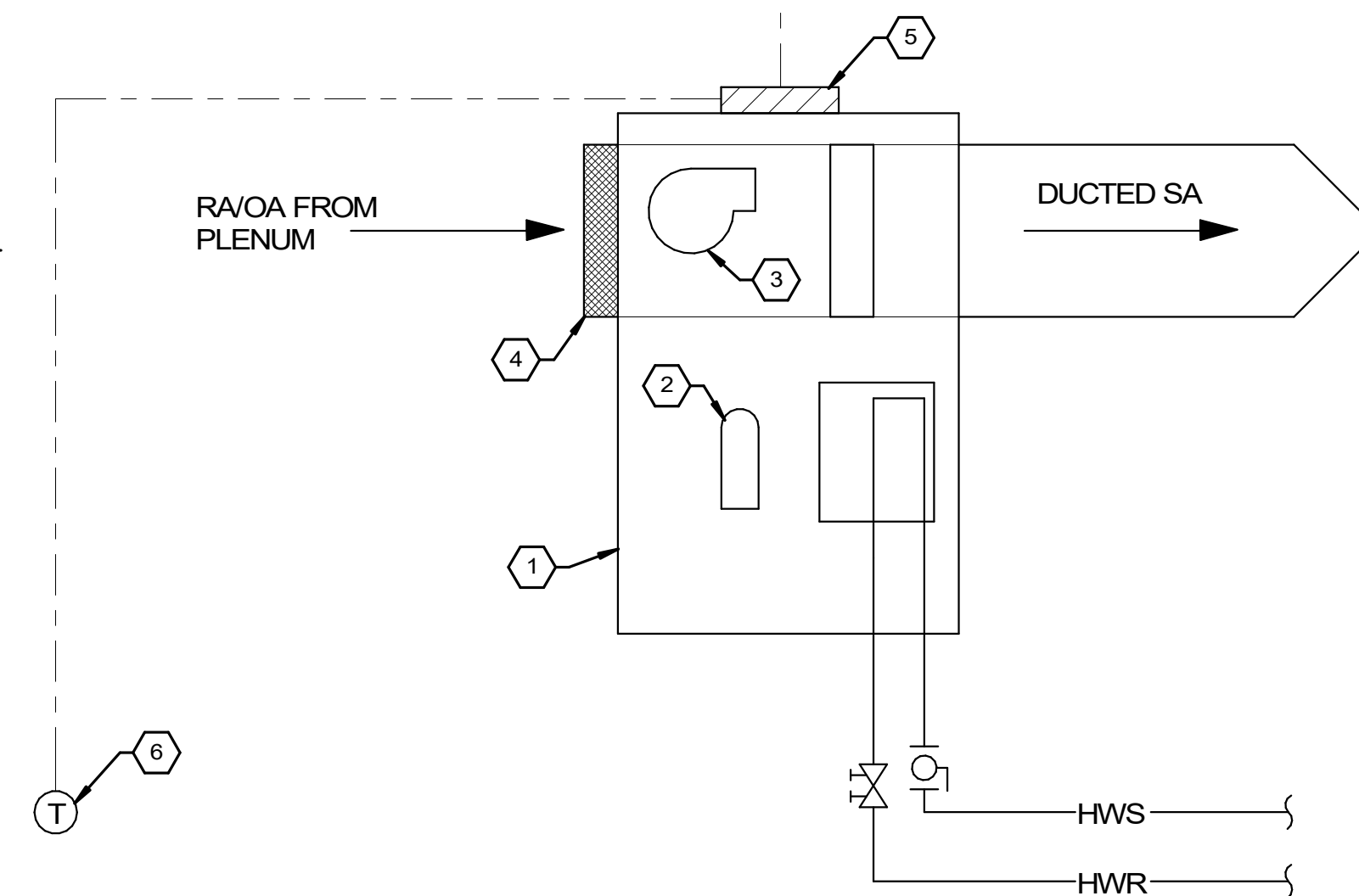
KEYNOTES (THIS DETAIL)

1. UNITARY HEAT PUMP
2. COMPRESSOR
3. SUPPLY FAN
4. AIR FILTER
5. MANUFACTURER-PROVIDED BACNET CONTROLLER
6. PROVIDE NEW TEMPERATURE SENSOR FOR NEW HEAT PUMP.



HEAT PUMP DUCT CONNECTION DETAIL

SCALE : N.T.S.



WATER SOURCE HEAT PUMP TEMPERATURE CONTROL SCHEMATIC

N.T.S.

SEQUENCE OF OPERATION

1. THE HEAT PUMP SHALL BE FULLY CONTROLLED BY MANUFACTURER-PROVIDED MICROPROCESSOR-BASED CONTROL WITH INTEGRATION TO THE BAS VIA BACNET.
2. SYSTEM ENABLE: EACH UNITARY HEAT PUMP SHALL BE ENABLED/DISABLED BY THE BAS BASED ON AN OCCUPANCY CYCLE. DURING THE SCHEDULED UNOCCUPIED CYCLE, THE SYSTEM MAY BE TEMPORARILY ENABLED ON A CALL FOR HEATING OR COOLING TO MEET UNOCCUPIED NIGHT SETPOINT.
3. UNITARY HEAT PUMP CONTROL; ONCE ENABLED BY THE BAS AND STATUS HAS BEEN PROVEN, THE MANUFACTURER'S CONTROLLER SHALL FULLY CONTROL THE HEAT PUMP AS REQUIRED TO MEET THE SPACE SETPOINT (68°F FOR HEATING & 75°F FOR COOLING - BOTH ADJ.). THE INTERNAL CONTROL VALVE SHALL REMAIN FULLY OPEN AT ALL TIMES.
4. INTERFACE WITH THE BAS: THE HEAT PUMP CONTROLLER SHALL BE CAPABLE OF PROVIDING INPUTS TO THE BAS AS DEFINED ON THIS DRAWING AND IN THE SPECIFICATION AT MINIMUM. OWNER SHALL BE ABLE TO CHOOSE FROM ADDITIONAL AVAILABLE POINTS. THE CONTROLLER SHALL CONTINUE TO COMMUNICATE WITH THE BAS AT ALL TIMES.
5. UNOCCUPIED CYCLE: DURING THE UNOCCUPIED CYCLE, THE HEAT PUMP MAY BE ENABLED BY THE BAS TO MAINTAIN AN OCCUPIED NIGHT SETPOINT OF 55°F (ADJ.) FOR HEATING AND 80°F (ADJ.) FOR COOLING.

NO.	DATE	REVISION
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ELECTRICAL GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE 2017 NATIONAL ELECTRICAL CODE AND ALL APPLICABLE CODES.
2. CONTRACTOR SHALL FURNISH ALL MATERIALS FOR A COMPLETE AND WORKABLE SYSTEM. ALL MATERIALS FURNISHED BY THE CONTRACTOR ARE TO BE NEW.
3. CONTRACTOR SHALL COORDINATE ALL OUTAGES OF POWER, FIRE ALARM, DATA AND TELEPHONE SERVICES WITH USING AGENCY. CONTRACTOR SHALL PROVIDE 7 DAYS NOTICE PRIOR TO OUTAGE.
4. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL MATERIALS REMOVED AS PART OF THIS PROJECT, INCLUDING BUT NOT LIMITED TO FIXTURES, PANELBOARDS, LAMPS, BALLASTS (BOTH WITH AND WITHOUT PCB'S), CONDUIT, WIRE AND OTHER BUILDING MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. ALL DISPOSAL SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL REMOVE ALL UNUSED CONDUIT AND WIRE BACK TO SOURCE.
6. ALL EQUIPMENT SHOWN ON THE SHEETS IS NEW UNLESS OTHERWISE NOTED AS EXISTING OR RELOCATED.
7. ALL EXISTING AND NEW OPENINGS LEFT AND/OR CUT IN EXISTING WALLS, FLOORS AND CEILINGS NOT BEING DEMOLISHED, INCLUDING CHASES, SHALL BE PATCHED TO MATCH EXISTING CONDITIONS BY THE CONTRACTOR WHOSE WORK HAS CREATED THE OPENING. ALL HOLES IN WALLS WHERE ELECTRICAL EQUIPMENT IS BEING REMOVED (I.E. BOXES, SURFACE RACEWAY, CONDUIT, ETC.) SHALL BE PATCHED AND PAINTED OR HOLES FILLED WITH GROUT TO MATCH EXISTING CONDITIONS BY ELECTRICAL CONTRACTOR.
8. CONTRACTOR SHALL PROVIDE BLANK STAINLESS STEEL COVER PLATES FOR ALL UNUSED WALLBOXES.
9. ALL CIRCUIT DIRECTORIES IN PANELBOARDS SHALL BE UPDATED WITH THE CORRECT CIRCUIT DESIGNATION, INCLUDING THE ROOM NUMBERS. CONTRACTOR SHALL UPDATE CIRCUIT DIRECTORIES WITH ALL NEW OR MODIFIED LOADS (I.E. LIGHTING CIRCUITS, ADDED RECEPTACLES, NEW A/V EQUIPMENT, ADA DOOR OPERATORS, MOTOR LOADS, ETC.) AND ALSO ANY KNOWN DISCREPANCIES THEY COME UPON. UNUSED CIRCUIT BREAKERS SHALL BE LABELED AS SPARE AND TURNED OFF.
10. CONTRACTOR SHALL INDICATE ALL CORRECT CIRCUIT NUMBERS FOR ALL NEW OR MODIFIED LOADS ON THE RECORD DRAWINGS.

ELECTRICAL ABBREVIATIONS

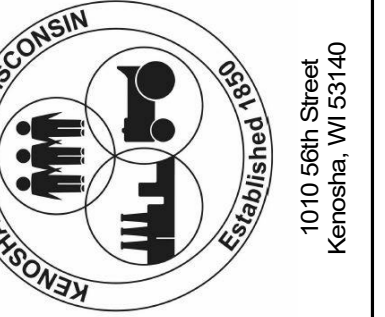
A	AMPERES	KV	KILO-VOLT
AC	ABOVE COUNTER	KVA	KILO-VOLT AMPERES
AFF	ABOVE FINISHED FLOOR	KW	KILOWATTS
ALUM	ALUMINUM	LBS	POUNDS
ASPH	ASPHALT	MC	MECHANICAL CONTRACTOR
AV	AUDIO / VIDEO	MCC	MOTOR CONTROL CENTER
BDF	BUILDING DISTRIBUTION FRAME	MLO	MAIN LUG ONLY
CKT	CIRCUIT	MMS	MANUAL MOTOR STARTER
CLG	CEILING	NIC	NOT IN CONTRACT
CONC	CONCRETE	OC	OVERCURRENT
CONT	CONTINUED	PTT	PUSH TO TEST
CRD	CREDENZA	P	POLE
DDC	CIRECT DIGITAL CONTROL	PC	PLUMBING CONTRACTOR
DN	DOWN	PRI	PRIMARY
E	ELECTRIC	RGS	RIGIS GALVANIZED STEEL
EC	ELECTRICAL CONTRACTOR	RPM	REVOLUTIONS PER MINUTE
EM	EMERGENCY	SEC	SECONDARY
EWC	ELECTRIC WATER COOLER	T	TELEPHONE
FACP	FIRE ALARM CONTROL PANEL	TGB	TELECOMMUNICATIONS GROUND BAR
FLA	FULL LOAD AMPERES	UPS	UNINTERRUPTIBLE POWER SUPPLY
FLUOR	FLUORESCENT	V	VOLTS
FPC	FIRE PROTECTION CONTRACTOR	VA	VOLT AMPERES
FVNR	FULL VOLTAGE NON REVERSING	VC	VENTILATING CONTRACTOR
G.GND	GROUND	VFD	VARIABLE FREQUENCY DRIVE
GC	GENERAL CONTRACTOR	W	WATTS
GFI	GROUND FAULT INTERRUPTER	WP	WEATHER PROOF
HID	HIGH INTENSITY DISCHARGE		
HP	HORSEPOWER		
IDF	INTERMEDIATE DISTRIBUTION FRAME		
IN	INCHES		

ELECTRICAL SYMBOL LEGEND

- ⊗ - ELECTRICAL MOTOR OR EQUIPMENT CONNECTION. REFER TO KEYNOTES FOR ADDITIONAL INFORMATION.

ClarkDietz

DESIGN FIRM REGISTRATION No. 194-000450
625 57th Street, 6th Floor
Kenosha, WI 53140
PHONE: 262.657.1550 www.clarkdietz.com



1010 56th Street
Kenosha, WI 53140

PROJECT TITLE
**KENOSHA COUNTY
ADMINISTRATION BUILDING
HEAT PUMP REPLACEMENT
PHASE 3**

DESIGNED BY : CAS
DRAWN BY : CAS
CHECKED BY : LMZ
DATE CHECKED : 1/07/21

NO.	DATE	REVISION
	01/20/21	ISSUED FOR BID

DRAWING TITLE
**ELECTRICAL GENERAL
NOTES AND
ABBREVIATIONS**

PROJECT No.
K0450100

DRAWING No.
E0.01



1 SECOND FLOOR ELECTRICAL DEMOLITION PLAN

0 2 4 8 16'
SCALE 1/8" = 1'

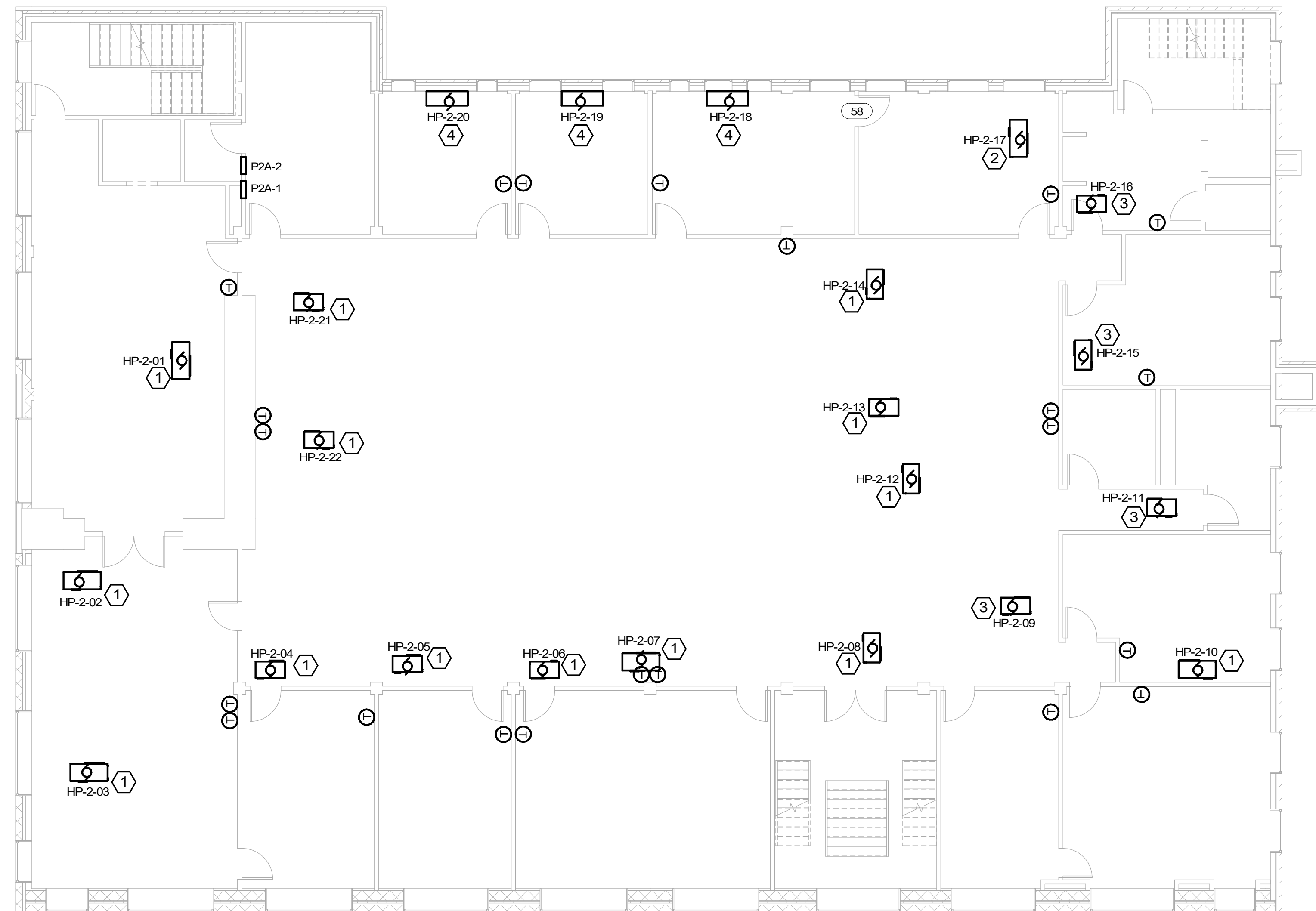
NOTES (THIS SHEET)

1. SEE E0.01 FOR ELECTRICAL GENERAL NOTES AND ABBREVIATIONS.
2. DEMOLITION DRAWINGS ARE BASED ON DRAWINGS FROM PAST PROJECTS, EXISTING PANEL SCHEDULES AND CASUAL FIELD OBSERVATIONS. CONTRACTOR SHALL VERIFY EXISTING CIRCUIT NUMBERS, CONDUIT AND CONDUCTOR CHARACTERISTICS PRIOR TO REMOVING EXISTING EQUIPMENT FROM SERVICE. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING LIGHT FIXTURES TO FACILITATE WORK AND REPLACING LIGHT FIXTURES WHEN WORK IS COMPLETE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING, PROTECTING, AND RESTORING ALL FURNITURE AND CABINETS TO FACILITATE THEIR WORK. TEMPORARY RELOCATION OF FURNITURE AND PERSONNEL SHALL BE COORDINATED WITH OWNER.
5. REMOVE EXISTING LAY-IN CEILING TILE AND GRID AS REQUIRED FOR DEMOLITION OF EXISTING AND INSTALLATION OF NEW EQUIPMENT, CONDUITS AND CONDUCTORS. REPLACE TILES AND GRID TO MATCH EXISTING CEILING.

DEMOLITION KEYNOTES

1. DISCONNECT EXISTING HEAT PUMP. PROTECT EXISTING CONDUCTORS FOR REUSE AT NEW EQUIPMENT. VERIFY EXISTING CONDUCTORS MEET NEW EQUIPMENT REQUIREMENTS. SEE MOTOR SCHEDULE.
2. DISCONNECT EXISTING HEAT PUMP. REMOVE EXISTING CONDUIT AND CONDUCTORS BACK TO SOURCE.

NO.	DATE	REVISION
	01/20/21	ISSUED FOR BID



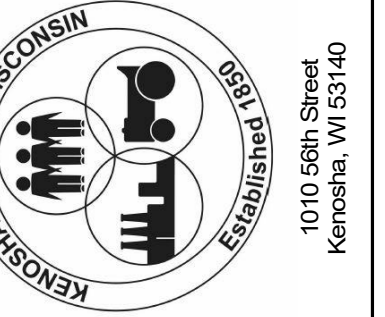
1 SECOND FLOOR ELECTRICAL PLAN
 0 4 8 16
 SCALE 1/8" = 1'

NOTES (THIS SHEET)

- SEE E0.01 FOR ELECTRICAL GENERAL NOTES AND ABBREVIATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING LIGHT FIXTURES TO FACILITATE WORK AND REPLACING LIGHT FIXTURES WHEN WORK IS COMPLETE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY REMOVING, PROTECTING, AND RESTORING ALL FURNITURE AND CABINETS TO FACILITATE THEIR WORK. TEMPORARY RELOCATION OF FURNITURE AND PERSONNEL SHALL BE COORDINATED WITH OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL CEILING TILES OR GRID REQUIRED TO INSTALL THEIR WORK. PROVIDE NEW CEILING TILES OR GRID WHERE EXISTING CEILING TILES OR GRID ARE DAMAGED DURING WORK.

KEYNOTES

- PROVIDE CONNECTION TO NEW HEAT PUMP. PROVIDE NEW DISCONNECT AND CIRCUIT BREAKER. EXTEND CIRCUIT SERVING REMOVED HEAT PUMP TO NEW EQUIPMENT. SEE MOTOR SCHEDULE AND PANEL SCHEDULES.
- PROVIDE CONNECTION TO NEW HEAT PUMP. PROVIDE NEW DISCONNECT, CONDUIT, CONDUCTORS AND CIRCUIT BREAKER. SEE MOTOR SCHEDULE AND PANEL SCHEDULE.
- PROVIDE CONNECTION TO NEW HEAT PUMP. PROVIDE NEW DISCONNECT. EXTEND CIRCUIT SERVING REMOVED HEAT PUMP TO NEW EQUIPMENT. SEE MOTOR SCHEDULE AND PANEL SCHEDULES.
- PROVIDE CONNECTION TO NEW HEAT PUMP. EXTEND CIRCUIT SERVING REMOVED HEAT PUMP TO NEW EQUIPMENT. PROVIDE NEW CIRCUIT BREAKER. SEE MOTOR SCHEDULE AND PANEL SCHEDULES.



PROJECT TITLE
**KENOSHA COUNTY
 ADMINISTRATION BUILDING
 HEAT PUMP REPLACEMENT
 PHASE 3**

DESIGNED BY: CAS
 DRAWN BY: CAS
 CHECKED BY: LMZ
 DATE CHECKED: 1/07/21

NO.	DATE	REVISION
01	01/20/21	ISSUED FOR BID

DRAWING TITLE
**SECOND FLOOR
 ELECTRICAL PLAN**

PROJECT No.
K0450100

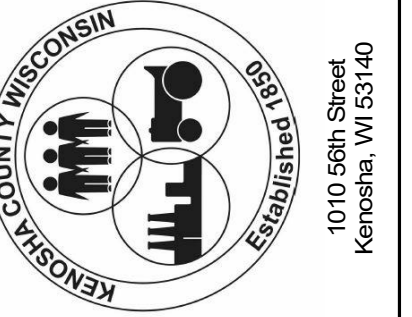
DRAWING No.
E2.01

PANEL ID.	AMPS	PHASE	MAIN CB AMPS:				MOUNTING:	SURFACE MOUNT	LOCATION:
			MLO	SFL	FTL	TUB SIZE (I.E. 42...)			
P2A-1	225 A	3	X						
	WIRE	4						FED FROM:	
	VOLTAGE	120/208 Wye					36 CKT		
CIRCUIT DESCRIPTION	BREAKER AMP	POLE	Circuit Number	A	B	C	Circuit Number	BREAKER AMP POLE	CIRCUIT DESCRIPTION
HP-2-14 (OLD 2-19) (*NOTE 1)	15 A	2	1	0 VA	0 VA		2	-- --	WALL HEATERS
			3				4	-- --	WALL HEATERS
HP-2-06 (OLD 2-5) (*NOTE 1)	15 A	2	5	0 VA	0 VA		6	2 15 A	HP-2-12 (2-13) (*NOTE 1)
HP-2-05 (OLD 2-4) (*NOTE 1)	15 A	2	7				8		
HP-2-09, HP-2-11 (OLD 2-8, 2-10)	20 A	2	9				10	2 15 A	HP-2-13 (OLD 2-15) (*NOTE 1)
HP-2-21 (OLD 2-16) (*NOTE 1)	15 A	2	11	0 VA	0 VA		12		
HP-2-04 (OLD 2-3) (*NOTE 1)	15 A	2	13	0 VA	0 VA		14	2 15 A	HP-2-08 (OLD 2-7) (*NOTE 1)
HP-2-22 (OLD 2-18) (*NOTE 1)	15 A	2	15				16		
			17				18	-- --	WALL HEATER
			19	0 VA	0 VA		20	-- --	WALL HEATER
			21				22		HP-2-19 (OLD WALL MOUNTED CENTER HEAT PUMP) (*NOTE 1)
			23				24	2 15 A	
			25	0 VA	0 VA		26	-- --	SCU
			27				28	1 20 A	SPARE
SPACE	--	--	29				30	-- --	SPACE
SPACE	--	--	31	0 VA	0 VA		32	-- --	SPACE
SPACE	--	--	33				34	-- --	SPACE
SPACE	--	--	35				36	-- --	SPACE
TOTAL LINE-NUETRAL VA				0 VA	0 VA		0 VA		
TOTAL CONNECTED VA				0 VA					0 VA
TOTAL CONNECTED AMPS				0 A					0 A
TOTAL ESTIMATED VA DEMAND:									0 VA
TOTAL ESTIMATED AMP DEMAND:									0 A
TOTAL BY TYPE	Motor			0 VA			0 VA		NOTES :

PANEL ID.	AMPS	PHASE	MAIN CB AMPS:				MOUNTING:	SURFACE MOUNT	LOCATION:
			MLO	SFL	FTL	TUB SIZE (I.E. 42...)			
P2A-2	225 A	3	X						
	WIRE	4						FED FROM:	
	VOLTAGE	120/208 Wye					30 CKT		
CIRCUIT DESCRIPTION	BREAKER AMP	POLE	Circuit Number	A	B	C	Circuit Number	BREAKER AMP POLE	CIRCUIT DESCRIPTION
HP-2-10 (OLD 2-9) (*NOTE 1)	30 A	2	1	0 VA	0 VA		2	2 40 A	HP-2-07 (OLD 2-6) (*NOTE 1)
			3				4	-- --	
HP-2-01 (OLD 2-17) (*NOTE 1)	40 A	2	5				6	-- --	EXHAUST FAN
			7	0 VA	0 VA		8	-- --	EXHAUST FAN
HP-2-15, HP-2-16 (OLD 2-11, 2-12)	20 A	2	9				10	-- --	AHU
HP-2-02 (OLD 2-1) (*NOTE 1)	30 A	2	11	0 VA	0 VA		12	-- --	WALL HEATER
			13	0 VA	0 VA		14	-- --	EXHAUST FAN
HP-2-03 (OLD 2-2) (*NOTE 1)	30 A	2	15				16	-- --	SPARE
			17				18	-- --	SPARE
HP-2-20 (OLD WALL MOUNTED SOUTH HEAT PUMP) (*NOTE 1)	15 A	2	19	0 VA	0 VA		20	2 30 A	HP-2-17 (OLD 2-14) (*NOTE 1)
			21				22	-- --	
HP-2-18 (OLD WALL MOUNTED NORTH HEAT PUMP) (*NOTE 1)	15 A	2	23	0 VA	0 VA		24	-- --	SPACE
			25	0 VA	0 VA		26	-- --	SPACE
SPACE	--	--	27				28	-- --	SPACE
			29				30	-- --	SPACE
TOTAL LINE-NUETRAL VA				0 VA	0 VA		0 VA		
TOTAL CONNECTED VA				0 VA					0 VA
TOTAL CONNECTED AMPS				0 A					0 A
TOTAL ESTIMATED VA DEMAND:									0 VA
TOTAL ESTIMATED AMP DEMAND:									0 A
TOTAL BY TYPE	Motor			0 VA			0 VA		NOTES :

PANEL SCHEDULE NOTES

- REMOVE EXISTING CIRCUIT BREAKER AND REPLACE WITH BREAKER AS SHOWN. EXISTING BREAKERS ARE GE THQB BREAKERS.



**KENOSHA COUNTY
ADMINISTRATION BUILDING
HEAT PUMP REPLACEMENT
PHASE 3**

DESIGNED BY : CAS
DRAWN BY : CAS
CHECKED BY : LMZ
DATE CHECKED : 1/07/21

NO.	DATE	REVISION
01/20/21	ISSUED FOR BID	

ELECTRICAL SCHEDULES

PROJECT No.
K0450100

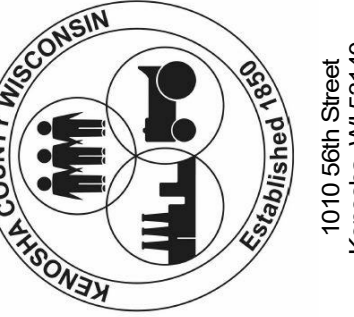
DRAWING No.
E5.01

MOTOR SCHEDULE

NO.	VOLTAGE	PHASE	MCA	MOCP	PANEL	WIRE NO.	WIRE SIZE	WIRE GND	WIRE TYPE	CONDUIT SIZE	CONDUIT TYPE	DISCONNECT SIZE	DISCONNECT FUSE SIZE	DISCONNECT ENCLS.	DISCONNECT MOUNT	DISCONNECT BY	MOTOR NOTES
HP-2-01	208 V	1	23.6	40	P2A-2	2	8	8	THHN	3/4"	EMT	60 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-02	208 V	1	18.7	30	P2A-2	2	10	10	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-03	208 V	1	18.7	30	P2A-2	2	10	10	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-04	208 V	1	5.5	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-05	208 V	1	5.5	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-06	208 V	1	7.9	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-07	208 V	1	23.6	40	P2A-2	2	8	8	THHN	3/4"	EMT	60 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-08	208 V	1	7.9	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-09	208 V	1	5.5	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	FUSED	NEMA 1	NEAR UNIT	EC	1,2,4
HP-2-10	208 V	1	18.7	30	P2A-2	2	10	10	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-11	208 V	1	5.5	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	FUSED	NEMA 1	NEAR UNIT	EC	1,2,4
HP-2-12	208 V	1	7.9	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-13	208 V	1	7.9	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-14	208 V	1	7.9	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-15	208 V	1	5.5	15	P2A-2	2	12	12	THHN	3/4"	EMT	30 AMP	FUSED	NEMA 1	NEAR UNIT	EC	1,2,4
HP-2-16	208 V	1	5.5	15	P2A-2	2	12	12	THHN	3/4"	EMT	30 AMP	FUSED	NEMA 1	NEAR UNIT	EC	1,2,4
HP-2-17	208 V	1	18.7	30	P2A-2	2	10	10	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,3
HP-2-18	208 V	1	7.8	15	P2A-2	2	12	12	THHN	3/4"	EMT	WU	-	-	ES	2	
HP-2-19	208 V	1	6	15	P2A-1	2	12	12	THHN	3/4"	EMT	WU	-	-	ES	2	
HP-2-20	208 V	1	6	15	P2A-2	2	12	12	THHN	3/4"	EMT	WU	-	-	ES	2	
HP-2-21	208 V	1	7.9	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2
HP-2-22	208 V	1	7.9	15	P2A-1	2	12	12	THHN	3/4"	EMT	30 AMP	NON-FUSED	NEMA 1	NEAR UNIT	EC	1,2

MOTOR SCHEDULE NOTES

1. PROVIDE NEW DISCONNECT FOR EQUIPMENT CONNECTION.
2. UTILIZE EXISTING CONDUCTORS. SEE PLAN NOTES.
3. PROVIDE NEW CONDUIT AND CONDUCTORS.
4. PROVIDE 15 AMP FUSES AT DISCONNECT.



PROJECT TITLE

KENOSHA COUNTY
 ADMINISTRATION BUILDING
 HEAT PUMP REPLACEMENT
 PHASE 3

DESIGNED BY: MCB
 DRAWN BY: MCB
 CHECKED BY: NTP
 DATE CHECKED: 1/07/21

NO.	DATE	REVISION
01	01/20/21	ISSUED FOR BID

DRAWING TITLE

ELECTRICAL SCHEDULES

PROJECT No.
K0450100

DRAWING No.
E5.02