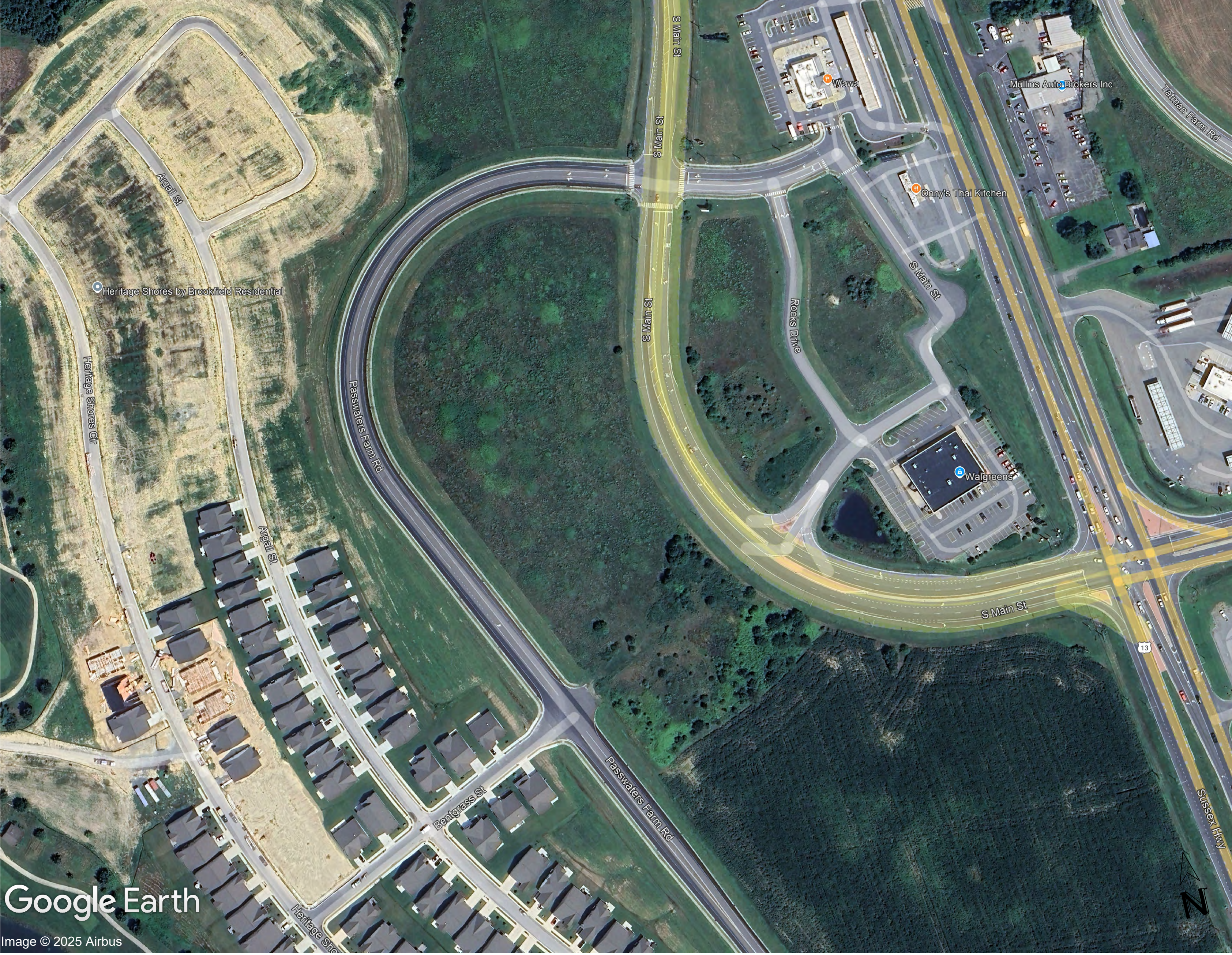


HORIZON FARM CREDIT HQ

M.E.P. DRAWING SET

BRIDGEVILLE, DE
PROJECT NUMBER : 25-2-0007



Google Earth
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SITE PLAN
NA

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CS 0.0

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NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

COVER SHEET



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 DSE JOB # : 25-2-0007
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MECHANICAL ABBREVIATIONS

ABBR	DESCRIPTION	ABBR	DESCRIPTION
ACP	AUTOMATIC CONTROL PANEL	IN	INCH INCHES
AD	ACCESS DOOR	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	LAT	LEAVING AIR TEMPERATURE
AH	AIR HANDLER (INDOOR VRF UNIT)	LBS	POUNDS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LDB	LEAVING DRY BULB TEMPERATURE
APPROX	APPROXIMATELY	LRA	LOCKED ROTOR AMPS
ARCH	ARCHITECTURAL	LWB	LEAVING WET BULB
ATV	ATMOSPHERIC VENT	LWT	LEAVING WATER TEMPERATURE
AV	AUTOMATIC AIR VENT	MAU	MAKE UP AIR UNIT
BAS	BUILDING AUTOMATION SYSTEM	MAX	MAXIMUM
BCS	BUILDING CONTROL SYSTEM	MB	MIXING BOX
BFP	BACKFLOW PREVENTER	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
BG	BARRIER GRILLE	MCA	MINIMUM CIRCUIT AMPACITY
BHP	BRAKE HORSEPOWER	MCC	MOTOR CONTROL CENTER
BOU	BOTTOM OF UNIT	MOD	MOTOR OPERATED DAMPER
BTUH	BRITISH THERMAL UNITS PER HOUR	MIN	MINIMUM
CA	COMBUSTION AIR	MOCP	MAXIMUM OVER CURRENT PROTECTION
CC	COOLING COIL	N/A	NOT APPLICABLE
CCW	COUNTERCLOCKWISE ROTATION	NC	NORMALLY CLOSED
CFM	CUBIC FEET OF AIR PER MINUTE	NIC	NOT IN CONTRACT
CHWR	CHILLED WATER RETURN PIPING	N.O.	NORMALLY OPEN
CHWS	CHILLED WATER SUPPLY PIPING	NOM	NOMINAL
CLG	CEILING	NTS	NOT TO SCALE
CO	CLEANOUT	OA	OUTSIDE AIR
CONC	CONCRETE	OC	ON CENTER
CT	COOLING TOWER	OD	OUTSIDE DIAMETER
CUP	CENTRAL UTILITY PLANT	PH	PHASE
CW	CLOCKWISE ROTATION	PPM	PARTS PER MILLION
DB	DEGREE DRY BULB TEMPERATURE	PSI	POUNDS PER SQUARE INCH
DIA	DIAMETER	PVC	POLYVINYL CHLORIDE
DN	DOWN	RA	RETURN AIR
DWG	DRAWING	RAD	RADIUS
DOAS	DEDICATED OUTDOOR AIR SYSTEM	RAD	RETURN AIR DAMPER
EA	EXHAUST AIR	REL	RELIEF
EAT	ENTERING AIR TEMPERATURE	RH	RELATIVE HUMIDITY
EDB	ENTERING DRY BULB TEMPERATURE	RHC	REHEAT COIL
EF	EXHAUST FAN	RLA	RUNNING LOAD AMPS
EFF	EFFICIENCY	RM	ROOM
ERV	ENERGY RECOVERY VENTILATOR	RPM	REVOLUTIONS PER MINUTE
ESP	EXTERNAL STATIC PRESSURE	RTU	ROOFTOP UNIT
ER	EXHAUST REGISTER / GRILLE	SA	SUPPLY AIR
EUH	ELECTRIC UNIT HEATER	SAD	SUPPLY AIR DAMPER
EWB	ENTERING WET BULB	SAT	SATURATED
EWT	ENTERING WATER TEMPERATURE	SD	SMOKE DAMPER
EX	EXISTING	SENS	SENSIBLE
°F	FAHRENHEIT, DEGREES	SF	SUPPLY FAN
FCU	FAN COIL UNIT	SQ FT	SQUARE FEET
FD	FIRE DAMPER	SS	STAINLESS STEEL
FF	FINAL FILTER	SP	STATIC PRESSURE
FF	FINISHED FLOOR	SW	SWITCH
FOB	FLAT ON BOTTOM	TEMP	TEMPERATURE
FOT	FLAT ON TOP	TSP	TOTAL STATIC PRESSURE
FPM	FEET PER MINUTE	TYP	TYPICAL
FPS	FEET PER SECOND	UC	DOOR UNDERCUT
FT	FOOT OR FEET	UH	UNIT HEATER
FTR	FIN TUBE RADIATION HEATER	UL	UNDERWRITERS LABORATORY
GAL	GALLON, GALLONS	VAV	VARIABLE AIR VOLUME
GPM	GALLONS PER MINUTE	VD	VOLUME DAMPER
GPH	GALLONS PER HOUR	VEL	VELOCITY
HC	HEATING COIL	VERT	VERTICAL
HG	MERCURY	VRF/VRV	VARIABLE REFRIGERANT FLOW/VOLUME
HP	HORSEPOWER	WB	WET BULB
HR	HOUR	W	WITH
HTR	HEATER	WO	WITHOUT
HWR	HOT WATER RETURN PIPING	WC	WATER COLUMN
HWS	WATER SUPPLY PIPING	WG	WATER GAUGE
ID	INSIDE DIAMETER		

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EXHAUST GRILLE TAG INDICATES TYPE		FIRE DAMPER (INSTALLED IN ACCESSIBLE LOCATIONS)
	RETURN GRILLE TAG INDICATES TYPE		FIRE/SMOKE DAMPER (INSTALLED IN ACCESSIBLE LOCATIONS)
	SUPPLY DIFFUSER TAG INDICATES TYPE		SMOKE DAMPER (INSTALLED IN ACCESSIBLE LOCATIONS)
	CHANGE OF ELEVATION IN DIRECTION OF AIR FLOW - UP OR DN (DOWN)		BARRIER GRILLE
	DUCT SIZE - FIRST FIGURE IS SIDE SHOWN		MOTOR OPERATED DAMPER
	DUCT END - CAPPED		VOLUME DAMPER
	ELBOW WITH TURNING VANES		FLEXIBLE CONNECTION
	RADIUS ELBOW - WITH TURNING VANES FOR DUCT WITH R=30" OR MORE		DUCT SYSTEM DESIGNATION
	STANDARD BRANCH - SUPPLY, RETURN OR EXHAUST WITH VOLUME DAMPER AS INDICATED		EXISTING DUCT SYSTEM DESIGNATION
	DUCT TRANSITION		FLEXIBLE DUCT
	HEAT DETECTOR		THERMOSTAT
	SMOKE DETECTOR - DUCT MOUNTED		HUMIDISTAT
	DUCT MOUNTED HUMIDIFIER		CARBON MONOXIDE SENSOR
			STATIC PRESSURE SENSOR
			CARBON DIOXIDE SENSOR
			EQUIPMENT TAG
			INDICATES AIR FLOW DIRECTION

MECHANICAL PIPING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	AIR VENT - AUTOMATIC		CHECK VALVE		AQUASTAT / TEMPERATURE SENSOR
	AIR VENT - MANUAL		CIRCUIT BALANCING VALVE		PRESSURE/TEMPERATURE WELL (PETE'S PLUG)
	PIPE ALIGNMENT GUIDE		BALL VALVE		0-100 PSI PRESSURE GAUGE WITH SHUT OFF VALVE
	ANCHOR		BUTTERFLY VALVE		WATER TEMPERATURE GAUGE
	BOTTOM BRANCH CONNECTION		FLOW ORIFICE		THREE WAY LINKED VALVE ASSEMBLY
	TOP BRANCH CONNECTION		GLOBE VALVE		STEAM TRAP
	DIRECTION OF FLOW		ANGLE GLOBE VALVE		STRAINER WITH PLUG
	THREADED CAPPED CONNECTION		PLUG VALVE		STRAINER WITH BLOW DOWN VALVE AND CAP
	FLANGED CAPPED CONNECTION		3-WAY AUTOMATIC CONTROL VALVE		THREADED UNION
	FLANGED CONNECTION		TWO WAY AUTOMATIC CONTROL VALVE		PIPING W/ELECTRIC HEAT TRACING
	ELBOW DOWN		PRESSURE REDUCING VALVE		FLOW METER
	ELBOW UP		MANUAL MIXING VALVE		PITCH OF PIPE UP (UP) OR DN (DOWN)
	DROP IN DIRECTION OF FLOW		SAFETY OR RELIEF VALVE		POINT OF DISCONNECTION
	RISE IN DIRECTION OF FLOW		SQUARE HEAD COCK		POINT OF CONNECTION-NEW TO EXISTING
	CONCENTRIC REDUCER		LOCK SHIELD VALVE		BALL VALVE IN VERTICAL
	ECCENTRIC REDUCER		NEEDLE VALVE		GATE VALVE IN VERTICAL
	PRESSURE SWITCH		GATE VALVE		SOLENOID VALVE
	FLOW SWITCH		ANGLE GATE VALVE		ANGLE SOLENOID VALVE
	EXPANSION JOINT		GATE VALVE & CAP		
	EXPANSION LOOP		BALL JOINT		
	ANSI Z21.80 GAS REGULATOR		AIR SEPARATOR		

GENERAL MECHANICAL NOTES

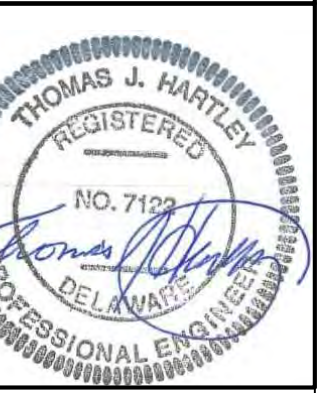
- GENERAL NOTES:** THESE GENERAL NOTES APPLY TO ALL MECHANICAL DRAWINGS.
- CODES:** ALL WORK SHALL CONFORM WITH THE LATEST LOCALLY ADOPTED VERSION OF THE INTERNATIONAL MECHANICAL CODE, INTERNATIONAL ENERGY CONSERVATION CODE, INTERNATIONAL FUEL GAS CODE, NFPA, NEC, NEW CASTLE COUNTY DELAWARE AND STATE OF DELAWARE CODES, ORDINANCES AND REGULATIONS AND SHALL MEET OR EXCEED THE LATEST VERSIONS OF ASHRAE & SMACNA RECOMMENDATIONS.
- SYMBOLS:** NOT ALL SYMBOLS, ABBREVIATIONS AND NOTES MAY BE USED FOR THIS PROJECT.
- COORDINATION:** WORK SHALL BE COORDINATED WITH ALL OTHER TRADES. ROUTING OF DUCTWORK AND PIPING ARE INDICATED TO SHOW GENERAL INTENT. CLEARANCES BETWEEN CEILING AND STRUCTURE ARE MINIMAL IN SEVERAL LOCATIONS. COORDINATE WITH OTHER TRADES PRIOR TO FABRICATION OF DUCT WORK. FAILURE TO COORDINATE PROPERLY WILL BE CONTRACTOR'S FINANCIAL RESPONSIBILITY.
- INTERFERENCE:** PROVIDE OFFSETS AND TRANSITIONS IN DUCTWORK AND PIPING AS REQUIRED TO AVOID INTERFERENCE AT NO ADDITIONAL COST TO THE OWNER.
- FINAL CONNECTIONS:** VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. PROVIDE TRANSITIONS TO FINAL TO EQUIPMENT. MAKE FINAL CONNECTION TO EQUIPMENT, UNLESS OTHERWISE INDICATED. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF WORK.
- ACCESS PANELS:** PROVIDE ACCESS DOORS OR PANELS FOR DUCT-MOUNTED FIRE OR FIRE & SMOKE DAMPERS, SMOKE DETECTORS, VALVES AND OTHER CONCEALED EQUIPMENT.
- DUCT WORK:** DUCT FITTINGS ARE INDICATED SYMBOLICALLY. REFER TO DETAILS FOR CONFIGURATION OF FITTINGS, TAPS AND CONNECTIONS. DUCT CONSTRUCTION SHALL COMPLY WITH SMACNA CONSTRUCTION STANDARDS (LATEST EDITION).
- FLEXIBLE DUCTWORK:** FLEXIBLE DUCTWORK SHALL NOT EXCEED FIVE (5) FEET IN LENGTH. FLEXIBLE DUCT WORK SHALL BE PREFABRICATED INSULATED TYPE WITH VAPOR BARRIER. ONLY USED AS REQUIRED FOR CEILING GRID INSULATION OR VIBRATION INSULATION.
- DUCTWORK:** DUCT FITTINGS ARE INDICATED SYMBOLICALLY. REFER TO DETAILS FOR CONFIGURATION OF FITTINGS, TAPS AND CONNECTIONS. DUCT CONSTRUCTION SHALL COMPLY WITH SMACNA CONSTRUCTION STANDARDS (LATEST EDITION).
- DUCT TURNS:** USE RADIUS DUCTWORK ELBOWS WHERE POSSIBLE. PROVIDE TURNING VANES FOR SQUARE ELBOWS IN SUPPLY AIR DUCTWORK AND AS INDICATED.
- FIRE PROTECTION:** FIRE-SAFE PIPE AND DUCTWORK PENETRATIONS OF ALL FIRE RATED AND SMOKE RESISTIVE CONSTRUCTION IN ACCORDANCE WITH NFPA 90A.
- LIFE SAFETY:** COORDINATE WITH LIFE-SAFETY PLANS, INCLUDING FOR FIRE DETECTOR REQUIREMENTS.
- CONTROLS:** MOUNT AND WIRE SENSORS AND THERMOSTATS TO CONTROL HEATING AND COOLING SYSTEMS.
- EQUIPMENT INSTALLATION:** INSTALL ALL EQUIPMENT LEVEL AND PLUMB. PROVIDE BLOCKING AND MOUNTING HARDWARE AS REQUIRED.
- ROOF EQUIPMENT INSTALLATION:** INSTALL ALL EQUIPMENT REQUIRING PERIODIC SERVICE NOT LESS THAN 10 FEET FROM ROOF EDGE OR OPENING WITHOUT PROTECTIVE RAILING OR PARAPET OF 42-INCHES AFF. COORDINATE WITH OTHER TRADES.
- EXPOSED PIPE INSULATION:** PROVIDE UV PROTECTIVE COATING/COVERING ON ALL ELASTOMERIC PIPE INSULATION WHERE EXPOSED TO SUNLIGHT.
- DUCT INSULATION:** ALL DUCTS SHALL BE EXTERNALLY INSULATED.
- HARDWARE:** PROVIDE ALL REQUIRED HARDWARE, EQUIPMENT RAILS AND ROOF CURBS TO SECURELY MOUNT ALL OUTDOOR EQUIPMENT.
- COMMISSIONING:** THE CONTRACTOR SHALL COMMISSION THE HVAC SYSTEMS BASED ON MANUFACTURER'S RECOMMENDATIONS AND A PLAN DEVELOPED BY THE CONTRACTOR AND APPROVED BY THE OWNER WHICH WILL INCLUDE BALANCING OF THE AIR SYSTEMS, TESTING ALL CONTROLS AND EQUIPMENT.
- DUCT SEALING:** ALL INTERIOR DUCTWORK SHALL BE SEALED WITH MASTIC AND INSULATED WITH A MINIMUM R-6 INSULATION. CONCEALED INSULATION SHALL BE FIBERGLASS DUCT WRAP WITH FOIL FACE.
- EXTERIOR DUCT:** EXPOSED DUCTWORK SHALL BE INSULATED WITH R-8 (2") FIBERGLASS DUCT BOARD WITH VENTURECLAD PLUS 1579CW-E ALUMINUM WRAP.
- FLASHING:** PROVIDE WATER TIGHT FLASHING AT ALL EXTERIOR DUCT AND INTAKE/EXHAUST PENETRATIONS. MATCH COLOR WITH BUILDING.
- SCREENS:** PROVIDE PROPERLY SIZED PERMANENTLY ATTACHED CORROSION RESISTANT BIRD SCREENS FOR EXHAUSTS AND INSECT SCREENS FOR INTAKES ON HVAC EQUIPMENT EXTERIOR WALL OR ROOF PENETRATIONS.
- GAS PIPING:** ALL NATURAL GAS PIPING SHALL BE METALLIC SCHEDULE 40. PROVIDE ALL FITTINGS, VALVES AND UNIONS REQUIRED FOR A COMPLETE INSTALLATION TO EQUIPMENT INDICATED. ALL NATURAL GAS PIPING IS TO BE PRESSURE TESTED.
- TESTING AND BALANCING:** CONTRACTOR SHALL VERIFY CAPACITY FOR NEW AND EXISTING AFFECTED EQUIPMENT AND PROVIDE FINAL REPORT.
- MANUALS:** PROVIDE (2) SETS OF OPERATION AND MAINTENANCE MANUALS TO OWNER.
- CONTRACTOR'S RESPONSIBILITY:** IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL LABOR, TOOLS, MATERIALS, AND SUPERVISION TO COMPLETE ALL THE MECHANICAL WORK AS SHOWN AND DESCRIBED ON THE DRAWINGS. ALL INCIDENTAL MATERIALS NORMALLY REQUIRED FOR A COMPLETE AND OPERATIONAL MECHANICAL SYSTEM, ALTHOUGH NOT SPECIFICALLY IDENTIFIED ON THESE DRAWINGS, ARE UNDERSTOOD TO BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. ALL WORK INCLUDING MATERIALS IS SUBJECT TO APPROVAL OF THE OWNER. ANY QUESTIONS PERTAINING TO THESE NOTES OR LOCATIONS OF EQUIPMENT AND DEVICES MUST BE RESOLVED BY THE ENGINEER.
- WORKMANSHIP:** ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER BY SKILLED MECHANICS, USING THE BEST METHODS AND MATERIALS IN THE TRADE. AND SHALL PRESENT A NEAT AND PROFESSIONAL APPEARANCE WHEN COMPLETED. MECHANICAL EQUIPMENT MUST BE ACCESSIBLE AND CONFORM TO MOUNTING HEIGHTS AND CLEARANCES REQUIRED BY THE MANUFACTURER. MATERIALS NOT INSTALLED TO THE SATISFACTION OF THE OWNER MUST BE REARRANGED AT NO ADDITIONAL COST TO THE OWNER.

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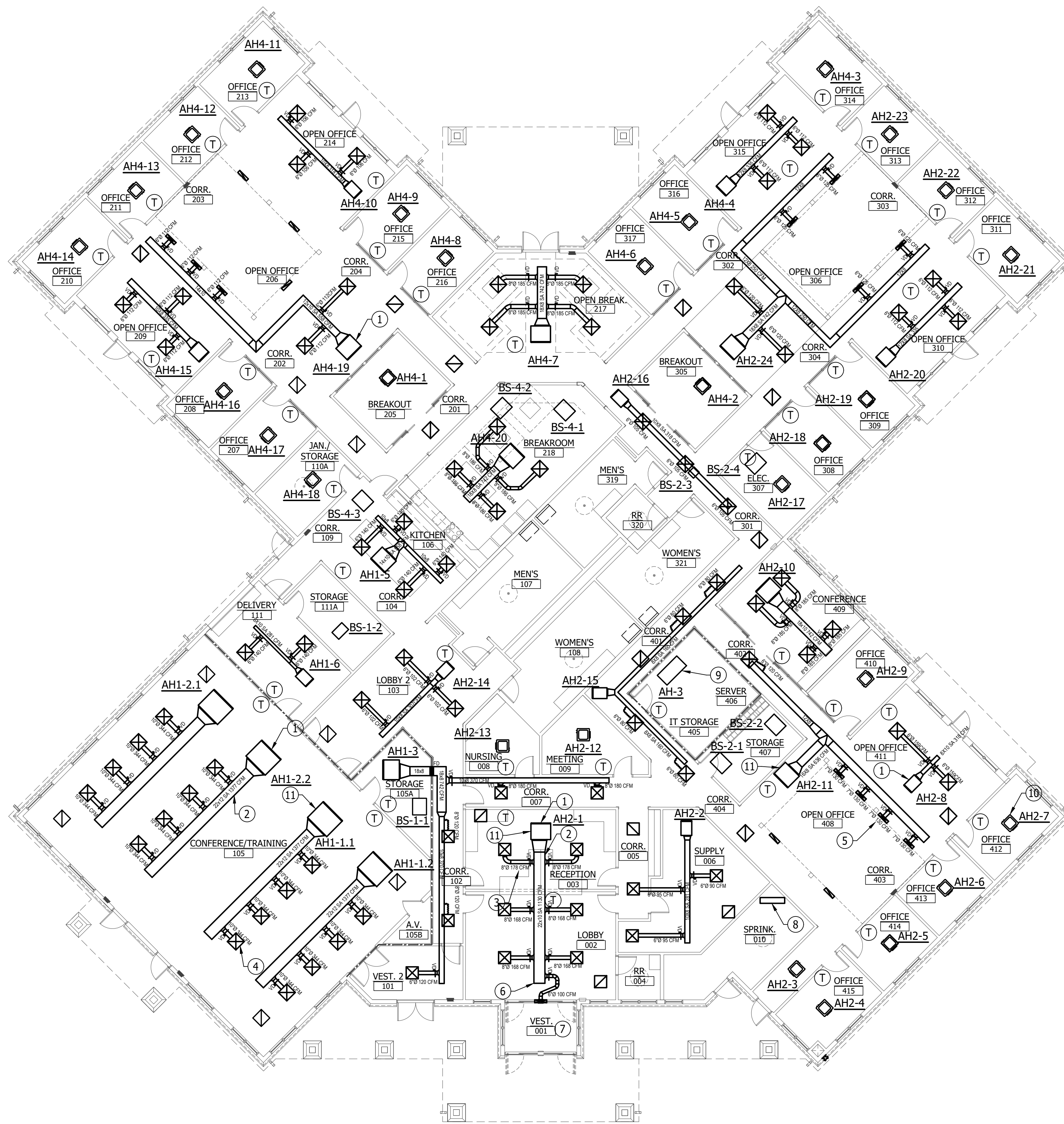
NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

**MECHANICAL NOTES
AND SYMBOLS**



SCALE	: AS NOTED
DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

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- ### DRAWING NOTES (APPLIES TO THIS DRAWING)
- A. AIRFLOW VALUES SHOWN AT TRUNKS, BRANCHES, AND DIFFUSERS REPRESENT DESIGN CFM.
 - B. PROVIDE MANUAL BALANCING DAMPERS AT ALL SUPPLY BRANCH TAKEOFFS.
 - C. ALL SUPPLY AIR DIFFUSERS AND VOLUME DAMPERS SHALL BE BALANCED TO THE AIRFLOW INDICATED.
 - D. TERMINATE ALL SUPPLY AIR TRUNKS WITH END CAPS AT MINIMUM OF 18" PAST THE LAST BRANCH TAKEOFF.
 - E. ALL ROOMS WITHOUT DEDICATED RETURN AIR SHALL TRANSFER AIR TO ADJACENT SPACES VIA DOOR UNDERCUTS (3/4" TYP.) OR TRANSFER GRILLES, UNLESS PROHIBITED BY FIRE RATING.
 - F. ENTRANCE VESTIBULES SHALL BE SUPPLIED WITH CONDITIONED AIR AND SHALL NOT HAVE DEDICATED RETURN IN ORDER TO MAINTAIN SLIGHT POSITIVE PRESSURE RELATIVE TO OUTDOORS.
 - G. DIFFUSER TYPES (CEILING, SIDEWALL, LINEAR) SHALL BE SELECTED BY CONTRACTOR TO SUIT ARCHITECTURAL CONDITIONS AND SHALL MATCH NECK SIZES AND AIRFLOWS SHOWN.
 - H. PROVIDE ACCESS TO MANUAL BALANCING DAMPERS ABOVE ACCESSIBLE CEILING OR ACCESS PANEL.
 - I. THERMOSTAT LOCATION AND MOUNTING TO BE VERIFIED WITH ARCHITECT PRIOR TO INSTALLATION.

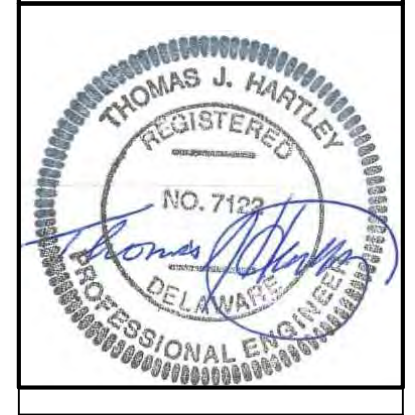
- ### KEYED NOTES (APPLIES TO THIS DRAWING)
- 1 CONCEALED DUCTED VRF INDOOR UNIT. REFER TO MECHANICAL SCHEDULES FOR CAPACITY AND ELECTRICAL REQUIREMENTS.
 - 2 SUPPLY AIR TRUNK DUCT. SIZE AND AIRFLOW AS INDICATED.
 - 3 SUPPLY AIR BRANCH DUCT WITH VOLUME DAMPER (VD). SIZE AND AIRFLOW AS INDICATED.
 - 4 SUPPLY AIR DIFFUSER. NECK SIZE AND AIRFLOW AS INDICATED.
 - 5 HIGH SIDEWALL SUPPLY DIFFUSER. NECK SIZE AND AIRFLOW AS INDICATED.
 - 6 END CAP SUPPLY AIR TRUNK A MINIMUM OF 18" PAST LAST BRANCH TAKEOFF.
 - 7 SUPPLY AIR TO VESTIBULE. PROVIDE CONDITIONED AIR ONLY; NO DEDICATED RETURN AIR.
 - 8 1200W ELECTRIC UNIT HEATER.
 - 9 DUCTLESS MINISPLIT TO SERVER THE SERVER ROOM.
 - 10 CEILING INDOOR VRF CASSETTE.
 - 11 CONDENSATE PAN UNDER DUCTED AH W/ LEAK DETECTOR (TYP).

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NEW CONSTRUCTION FOR:
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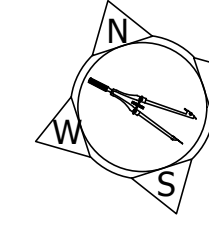
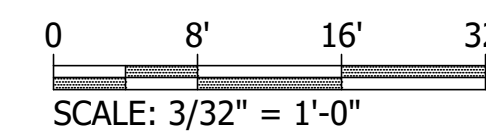
**INDOOR HVAC UNIT
 FLOOR PLANS**



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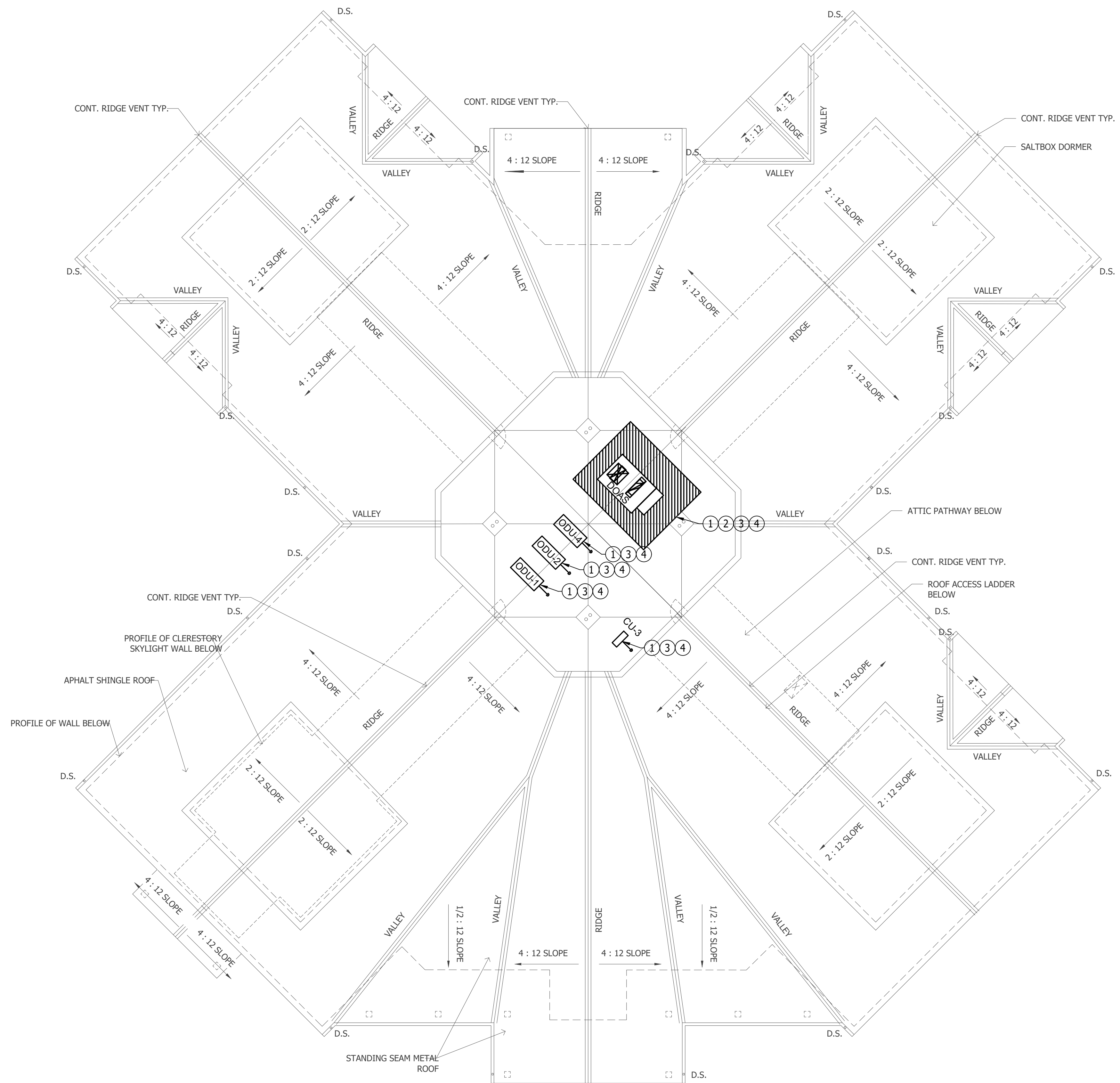
HVAC FLOOR PLAN
 3/32" = 1'-0"



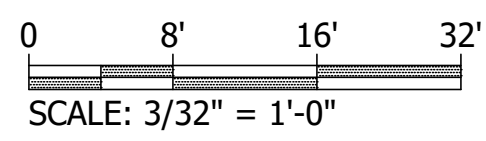
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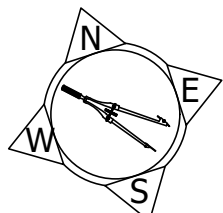
- DRAWING NOTES**
(APPLIES TO THIS DRAWING)
- ① ROOF TOP UNIT CONDENSATE TO NEAREST ADJACENT ROOF DRAIN.
 - ② PROVIDE HVAC UNIT, ROOF CURB, FLASHING, CONDENSATE PIPING, CONTROLS, AND ALL REQUIRED APPURTENANCES. SEE ROOF CURB DETAIL ON M5.0.
 - ③ MAINTAIN REQUIRED EQUIPMENT SERVICE CLEARANCES.
 - ④ CONTRACTOR SHALL COORDINATE ROOF PENETRATIONS WITH ARCHITECTURAL ROOF PLAN, FLASHING DETAILS, AND STRUCTURAL FRAMING, PRIOR TO FABRICATION.



ROOF HVAC PLAN
3/32" = 1'-0"



1
M 2.1



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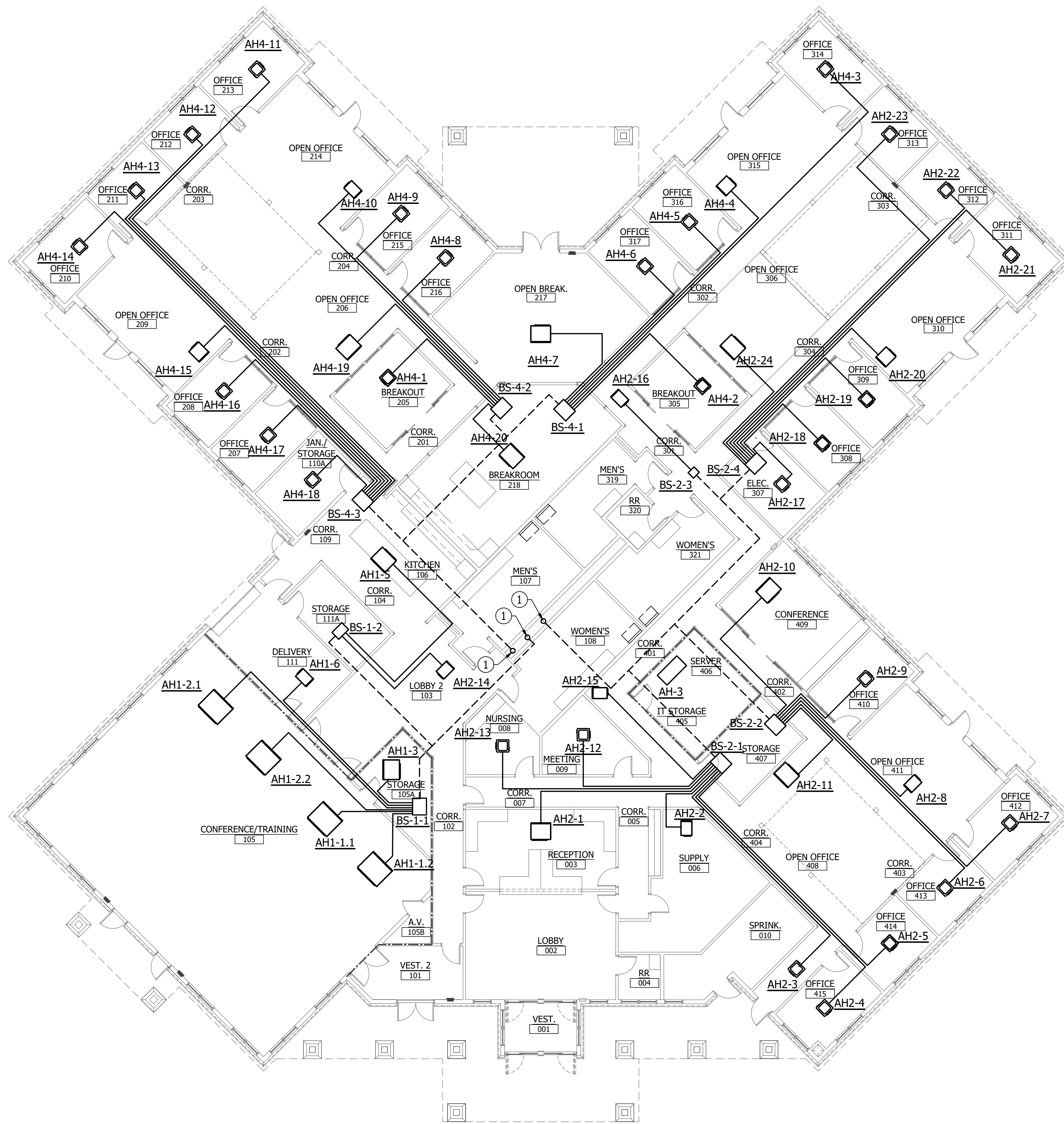
NEW CONSTRUCTION FOR:
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MECHANICAL ROOF PLAN



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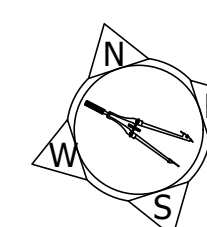
M 2.1



REFRIGERANT PIPING LAYOUT
3/32" = 1'-0"

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

1
M 2.2



DRAWING NOTES
(APPLIES TO THIS DRAWING)

- A. REFRIGERANT PIPING, REFNET JOINTS, BRANCH SELECTOR CONNECTIONS, OIL TRAPS, INSULATION, AND PRESSURE TESTING SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE LATEST DAIKIN VRV DESIGN AND INSTALLATION MANUAL.
- B. PROVIDE REFRIGERANT CONCENTRATION LIMIT (RCL) CALCULATION IN ACCORDANCE WITH ASHRAE 15 AND ASHRAE 34 PRIOR TO INSTALLATION OF REFRIGERANT PIPING.
- C. REFRIGERANT LINE SETS ARE DIAGRAMMATIC. REFER TO DETAIL DRAWINGS FOR INSTALLATION AND CONNECTION REQUIREMENTS.
- D. CONTRACTOR TO FIELD VERIFY PIPE TRANSITIONS.
- E. CONTRACTOR SHALL PROVIDE ISOLATION VALVES AT ALL BRANCH SELECTOR / HEAT RECOVERY BOX CONNECTIONS ON BOTH MAIN REFRIGERANT PIPING AND LINE SETS.

KEYED NOTES
(APPLIES TO THIS DRAWING)

- ① CONTRACTOR SHALL COORDINATE ROOF PENETRATIONS WITH ARCHITECTURAL ROOF PLAN, FLASHING DETAILS, AND STRUCTURAL FRAMING, PRIOR TO FABRICATION.

REFRIGERANT PIPING KEY
(APPLIES TO THIS DRAWING)

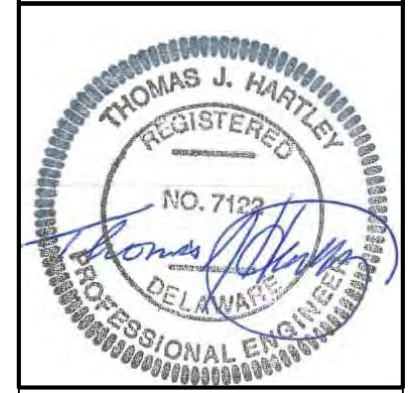
- 3-PIPE - - - - -
- 2-PIPE - - - - -

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

Diamond State Engineering
 Mechanical, Electrical, Plumbing, Fire Protection, and Energy Engineering
 3008 Peachtree Dunwoody Road, Suite 1000, Atlanta, GA 30328
 Phone: 404.977.4744 Fax: 404.977.1208

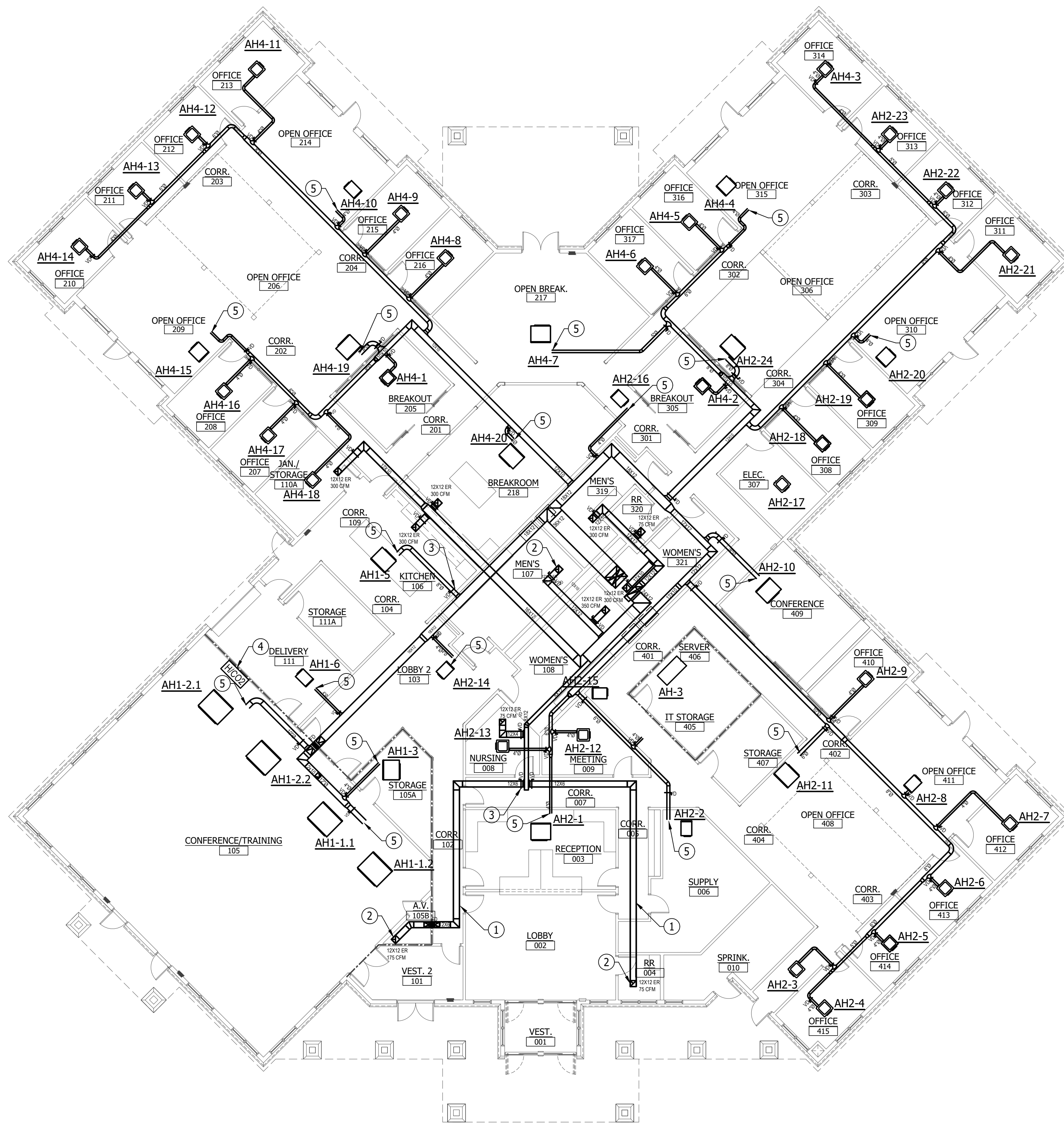
NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

REFRIGERANT LINE
 LAYOUT



SCALE : AS NOTED
 DESIGN BY : BEM
 DRAWN BY : BEM
 CHECKED BY : TJH/PG
 DSE JOB # : 25-2-0007
 DATE : 07/08/2025

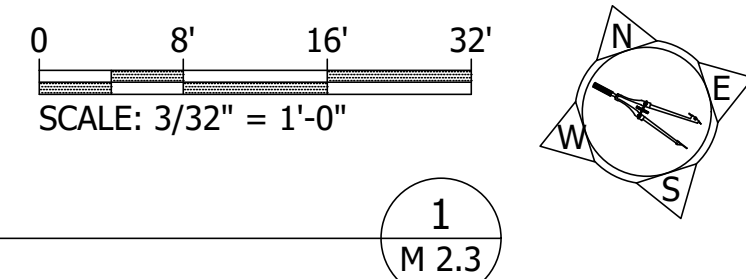
M 2.2



- DRAWING NOTES**
(APPLIES TO THIS DRAWING)
- A. ALL EXHAUST AND VENTILATION AIRFLOWS SHOWN ARE DESIGN VALUES.
 - B. PROVIDE BALANCING DAMPERS AT ALL EXHAUST BRANCHES AS SHOWN.
 - C. EXHAUST SYSTEMS SHALL BE BALANCED BY TAB CONTRACTOR.
 - D. PROVIDE ACCESS TO EXHAUST DAMPERS AND FANS FOR SERVICE.
 - E. ALL EXHAUST AIR SHOWN IS ROUTED TO ENERGY RECOVERY DOAS UNIT.
 - F. ALL VENTILATION AIR SHOWN ON THIS DRAWING IS PROVIDED BY THE DEDICATED OUTDOOR AIR SYSTEM (DOAS). OUTSIDE AIR AND EXHAUST AIRFLOWS ARE AS INDICATED.

- KEYED NOTES**
(APPLIES TO THIS DRAWING)
- ① EXHAUST AIR DUCTWORK. SIZE AND AIRFLOW AS INDICATED.
 - ② EXHAUST AIR GRILLE / REGISTER. AIRFLOW AS INDICATED.
 - ③ PROVIDE MANUAL VOLUME DAMPER AT ALL EXHAUST BRANCH TAKEOFFS AS INDICATED.
 - ④ COMBINED SPACE-MOUNTED HUMIDITY AND CO2 SENSOR FOR DOAS CONTROL. LOCATE IN REPRESENTATIVE OPEN OFFICE AREA.
 - ⑤ FRESH AIR SERVING PLENUM RETURN SPACE.

EXHAUST AND VENTILATION
3/32" = 1'-0"



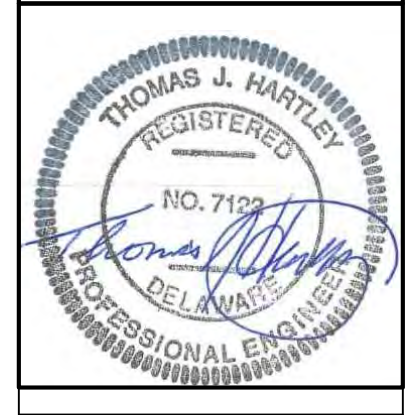
1
M 2.3

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

Diamond State Engineering
MECHANICAL ENGINEERING
3008 Woodbine Blvd.
Baltimore, MD 21286
Phone: (301) 977-7474 Fax: (301) 977-1208

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE



EXHAUST AND VENTILATION PLAN



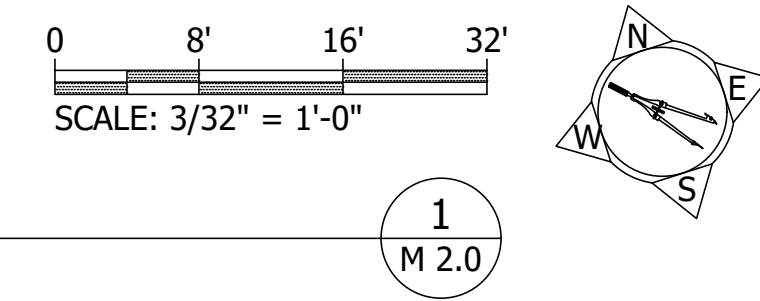
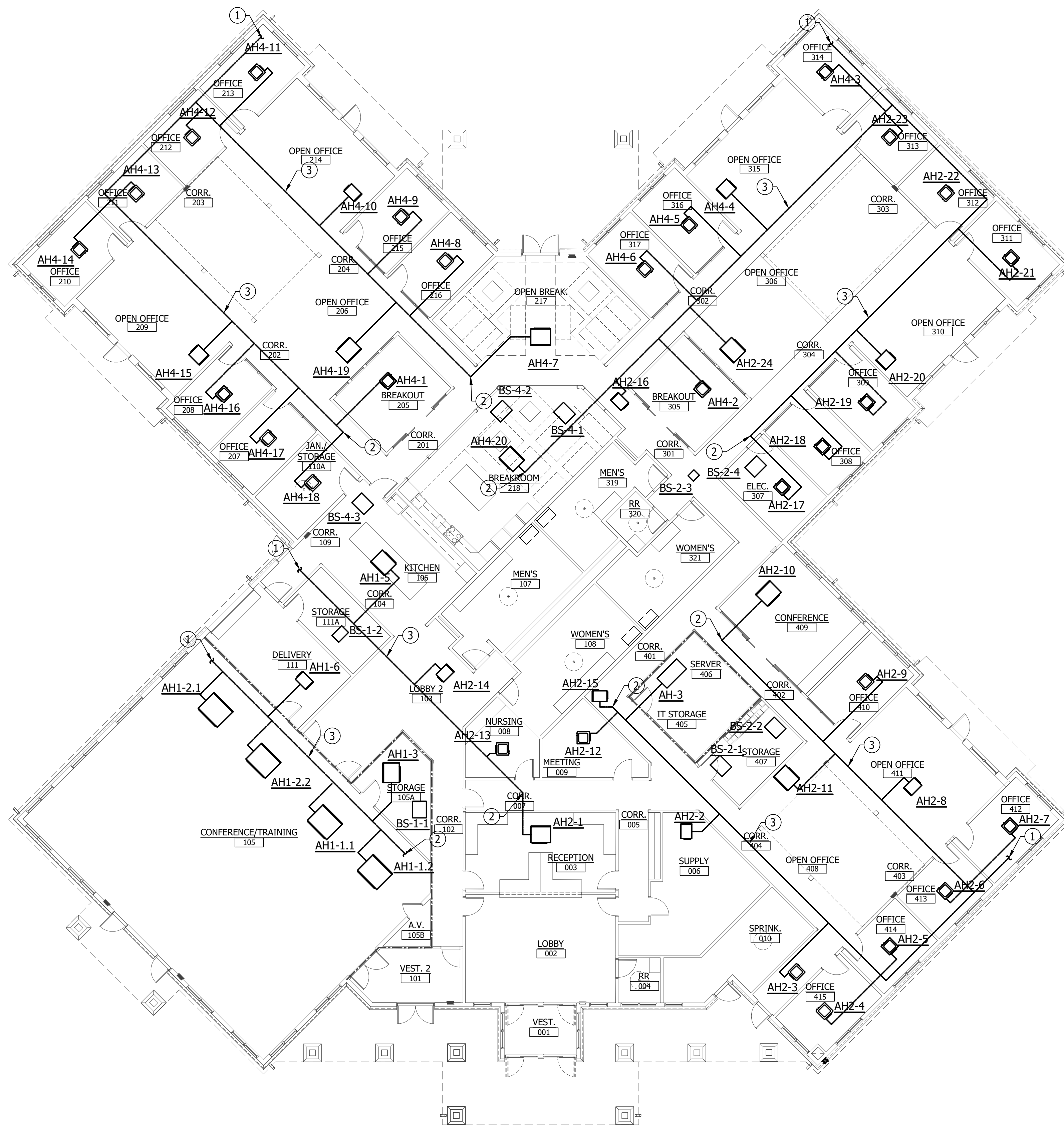
SCALE	: AS NOTED
DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

M 2.3

25-2-0007_M2.0 MECHANICAL PLANS, 1/9/2026 2:40 PM, ARCH D (36.00 X 24.00 INCHES), Katie Brechy

LINE KEY	
	1" PIPE
	1 1/2" PIPE

DRAWING NOTES (APPLIES TO THIS DRAWING)	
①	RUN TO NEAREST DOWNSPOUT.
②	PROVIDE CONDENSATE CLEAN OUT.
③	CONDENSATE DRAIN PIPING SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 1/4" PER FOOT TO POINT OF DISCHARGE (TYP.).



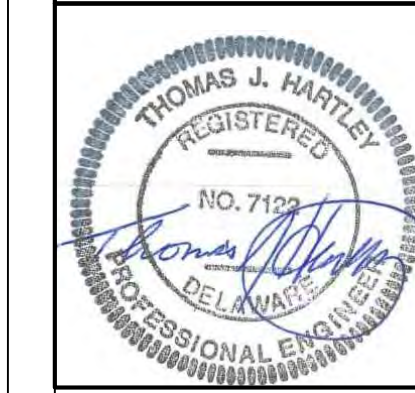
HVAC FLOOR PLAN
3/32" = 1'-0"

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

Diamond State Engineering
 3008 Woodbine Blvd., Suite 200
 P.O. Box 13029, Raleigh, NC 27619-0329
 Phone: 919.877.4444 Fax: 919.877.1208

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

CONDENSATE PLAN



SCALE	: AS NOTED
DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

M 2.4

25-2-0007_M2.0 MECHANICAL PLANS, 1/9/2026 2:41 PM, ARCH D (36.00 X 24.00 INCHES), Katie Brechy

VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE

TAG	Mrel lbs	BASIS OF DESIGN (DAIKIN)	NOMINAL TONNAGE	TYPE	CONNECTED TO:		SUPPLY FAN		COOLING CAPACITY		HEATING CAPACITY		ELECTRICAL			DIMENSIONS WxHxD	WEIGHT Net	Options and Accessories	
					CONDENSING UNIT	ZONE CHANGE/OVER DEVICE	AIR FLOW RATE CFM	AVAILABLE TOTAL BTU/h	SENSIBLE BTU/h	ENTERING AIR °F DB	AVAILABLE BTU/h	ENTERING AIR °F DB	POWER SUPPLY Voltage - Phase	Min Circuit Amps MCA	Max Overcurrent Protection MOP				
																			CONDENSING UNIT
AH-1-5	1.3	FXMA15AAVJU	1.2	Concealed Ducted (High Static)	ODU-1	Yes	558	12,165	9,352	75.0	62.6	17,000	70.0	208-230V 1ph	1.8	15.0	39.4 x 9.7 x 31.5	77.0	BRC1NRV71 (1)
AH-2-14	0.9	FXSA09AAVJU	0.8	Concealed Ducted (Medium Static)	ODU-1	Yes	318	8,312	6,190	75.0	62.6	10,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-1-1.1	2.2	FXMA48AAVJU	4.0	Concealed Ducted (High Static)	ODU-1	Yes	1,377	41,557	31,021	75.0	62.6	54,000	70.0	208-230V 1ph	3.6	15.0	55.1 x 9.6 x 31.5	104.0	BRC1NRV71 (1)
AH-1-1.2	2.2	FXMA48AAVJU	4.0	Concealed Ducted (High Static)	ODU-1	Yes	1,377	41,557	31,021	75.0	62.6	54,000	70.0	208-230V 1ph	3.6	15.0	55.1 x 9.6 x 31.5	104.0	BRC1NRV71 (1)
AH-1-2.1	1.8	FXMA36AAVJU	3.0	Concealed Ducted (High Static)	ODU-1	Yes	1,130	31,115	23,089	75.0	62.6	40,000	70.0	208-230V 1ph	3.1	15.0	55.1 x 9.6 x 31.5	101.0	BRC1NRV71 (1)
AH-1-2.2	1.8	FXMA36AAVJU	3.0	Concealed Ducted (High Static)	ODU-1	Yes	1,130	31,115	23,089	75.0	62.6	40,000	70.0	208-230V 1ph	3.1	15.0	55.1 x 9.6 x 31.5	101.0	BRC1NRV71 (1)
AH-1-3	2.2	FXMA24AAVJU	2.0	Concealed Ducted (High Static)	ODU-1	Yes	742	20,658	15,187	75.0	62.6	27,000	70.0	208-230V 1ph	1.9	15.0	39.4 x 9.6 x 31.5	82.0	BRC1NRV71 (1)
AH-1-6	1.1	FXSA07AAVJU	0.6	Concealed Ducted (Medium Static)	ODU-1	Yes	281	6,289	4,910	75.0	62.6	8,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-2-1	1.9	FXMA24AAVJU	2.0	Concealed Ducted (High Static)	ODU-2	Yes	742	20,658	15,187	75.0	62.6	27,000	70.0	208-230V 1ph	1.9	15.0	39.4 x 9.6 x 31.5	82.0	BRC1NRV71 (1)
AH-2-2	0.9	FXSA07AAVJU	0.6	Concealed Ducted (Medium Static)	ODU-2	Yes	281	6,289	4,910	75.0	62.6	8,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-2-3	1.5	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-4	1.7	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-5	1.7	FXZA09AAVJU	0.8	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	317	8,037	5,899	75.0	62.6	10,574	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-13	1.3	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-12	1.2	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-15	1.0	FXSA09AAVJU	0.8	Concealed Ducted (Medium Static)	ODU-2	Yes	318	8,312	6,190	75.0	62.6	10,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-2-6	1.7	FXZA09AAVJU	0.8	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	317	8,037	5,899	75.0	62.6	10,574	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-7	1.8	FXZA09AAVJU	0.8	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	317	8,037	5,899	75.0	62.6	10,574	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-8	1.2	FXSA09AAVJU	0.8	Concealed Ducted (Medium Static)	ODU-2	Yes	318	8,312	6,190	75.0	62.6	10,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-2-9	1.3	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-10	2.1	FXMA24AAVJU	2.0	Concealed Ducted (High Static)	ODU-2	Yes	742	20,658	15,187	75.0	62.6	27,000	70.0	208-230V 1ph	1.9	15.0	39.4 x 9.6 x 31.5	82.0	BRC1NRV71 (1)
AH-2-11	1.5	FXMA18AAVJU	1.5	Concealed Ducted (High Static)	ODU-2	Yes	636	15,451	12,339	75.0	62.6	20,000	70.0	208-230V 1ph	1.9	15.0	39.4 x 9.6 x 31.5	77.0	BRC1NRV71 (1)
AH-2-16	1.2	FXSA09AAVJU	0.8	Concealed Ducted (Medium Static)	ODU-2	Yes	318	8,312	6,190	75.0	62.6	10,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-2-17	1.1	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-18	1.1	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-19	1.2	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-20	1.3	FXSA12AAVJU	1.0	Concealed Ducted (Medium Static)	ODU-2	Yes	335	10,277	8,563	75.0	62.6	13,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-2-21	1.8	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-22	1.7	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-23	1.8	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-2	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-2-24	1.8	FXMA24AAVJU	2.0	Concealed Ducted (High Static)	ODU-2	Yes	742	20,658	15,187	75.0	62.6	27,000	70.0	208-230V 1ph	1.9	15.0	39.4 x 9.6 x 31.5	82.0	BRC1NRV71 (1)
AH-4-2	1.2	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-3	2.0	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-4	1.6	FXSA12AAVJU	1.0	Concealed Ducted (Medium Static)	ODU-4	Yes	335	10,277	8,563	75.0	62.6	13,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-4-5	1.4	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-6	1.4	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-7	2.0	FXMA24AAVJU	2.0	Concealed Ducted (High Static)	ODU-4	Yes	742	20,658	15,187	75.0	62.6	27,000	70.0	208-230V 1ph	1.9	15.0	39.4 x 9.6 x 31.5	82.0	BRC1NRV71 (1)
AH-4-1	1.1	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-8	1.2	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-9	1.4	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-10	1.4	FXSA09AAVJU	0.8	Concealed Ducted (Medium Static)	ODU-4	Yes	318	8,312	6,190	75.0	62.6	10,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-4-19	1.5	FXMA15AAVJU	1.2	Concealed Ducted (High Static)	ODU-4	Yes	558	12,165	9,352	75.0	62.6	17,000	70.0	208-230V 1ph	1.8	15.0	39.4 x 9.7 x 31.5	77.0	BRC1NRV71 (1)
AH-4-20	2.0	FXMA24AAVJU	2.0	Concealed Ducted (High Static)	ODU-4	Yes	742	20,658	15,187	75.0	62.6	27,000	70.0	208-230V 1ph	1.9	15.0	39.4 x 9.6 x 31.5	82.0	BRC1NRV71 (1)
AH-4-11	2.3	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-12	2.1	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-13	2.0	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-14	2.0	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-15	1.6	FXSA12AAVJU	1.0	Concealed Ducted (Medium Static)	ODU-4	Yes	335	10,277	8,563	75.0	62.6	13,500	70.0	208-230V 1ph	0.8	15.0	21.7 x 9.6 x 31.5	55.0	BRC1NRV71 (1)
AH-4-16	1.4	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-17	1.3	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)
AH-4-18	1.2	FXZA07AAVJU	0.6	4-Way Discharge Ceiling Cassette (2'x2')	ODU-4	Yes	307	6,495	5,210	75.0	62.6	8,527	70.0	208-230V 1ph	0.3	15.0	22.6 x 10.2 x 22.6	35.3	BRC1NRV71 (1), BYFG60C3W1W (1)

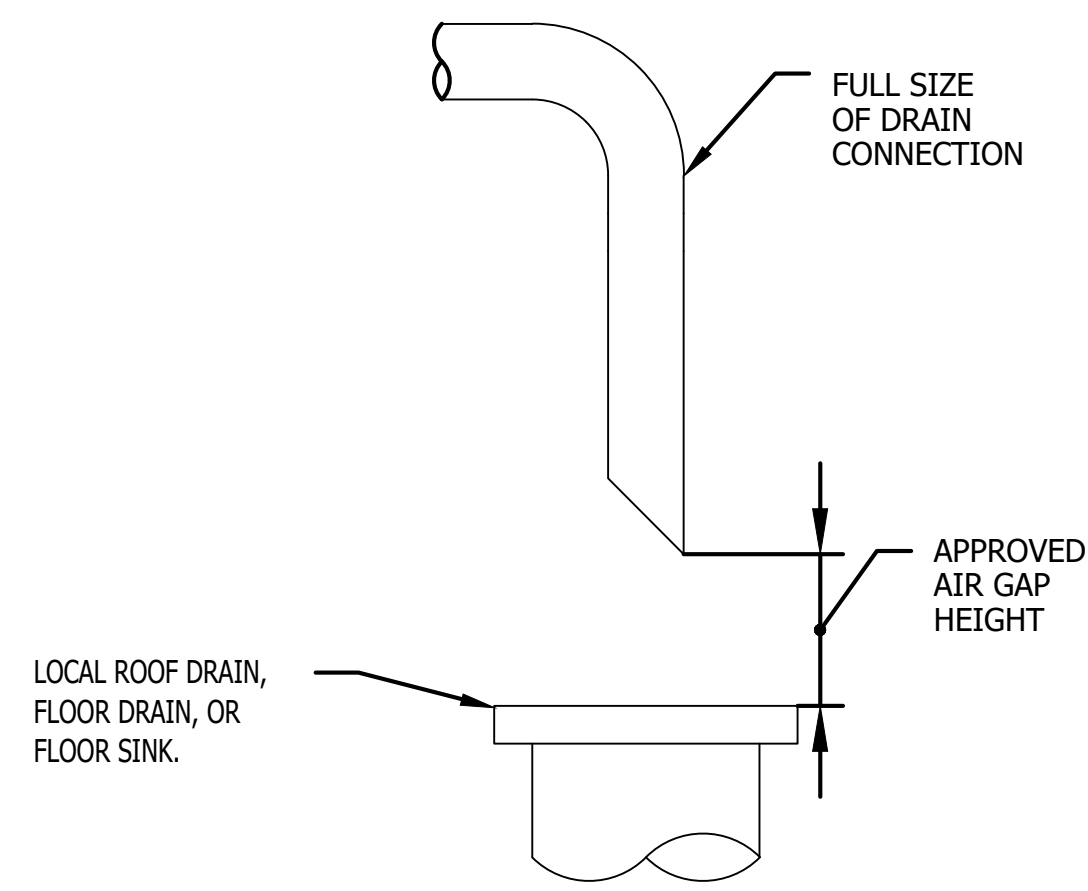
VRV INDOOR UNIT SCHEDULE

SCALE: N.T.S.

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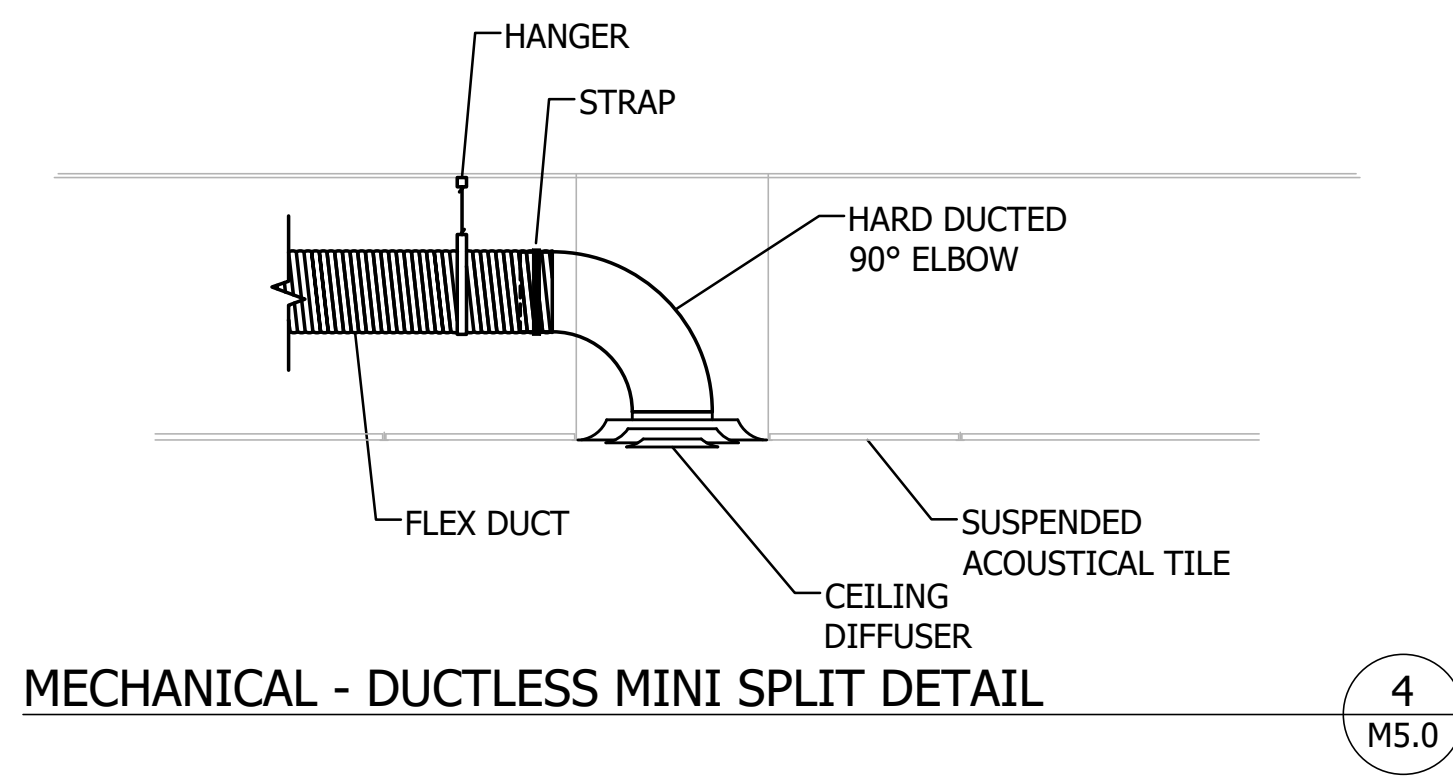
VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE

TAG: ROOM	BASIS OF DESIGN (DAIKIN)	NOMINAL TONNAGE	DESCRIPTION	COOLING CAPACITY		HEATING CAPACITY		REFRIGERANT CHARGE		CONNECTION RATIO (%)	VOLTAGE-PHASE	ELECTRICAL				DIMENSIONS (WxHxD) (inch)	WEIGHT (lbs)	Options and Accessories



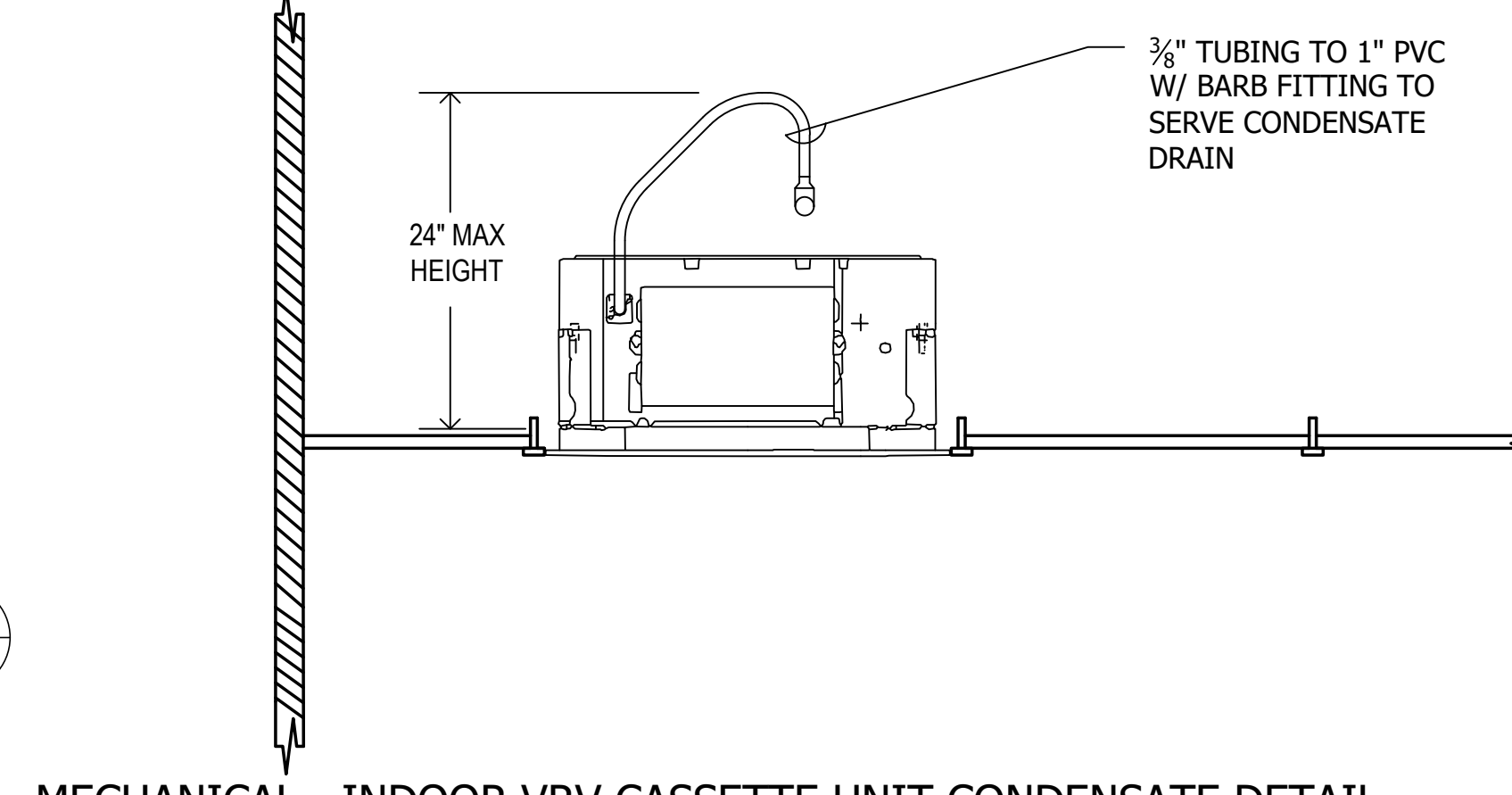
MECHANICAL - CONDENSATE ROOF DRAIN DETAIL

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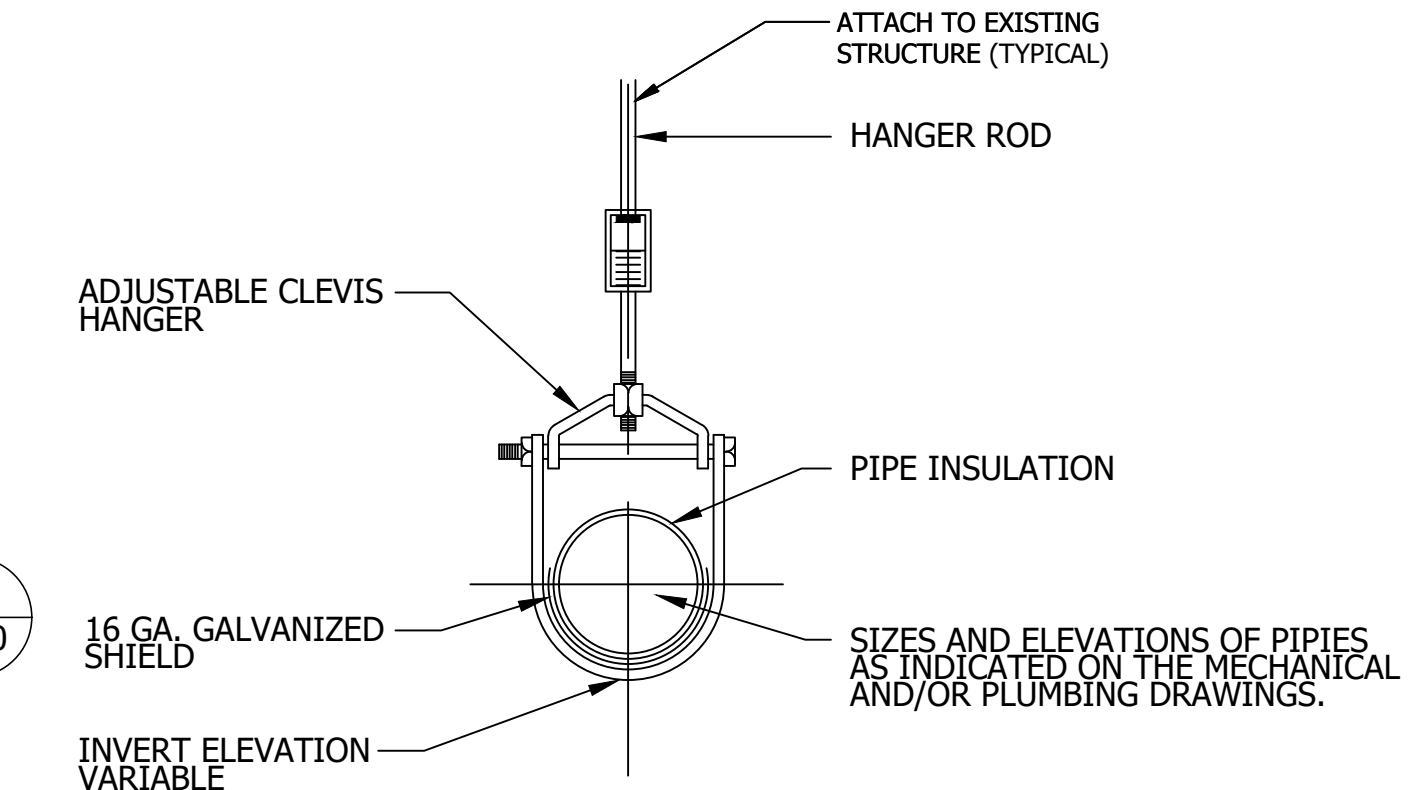
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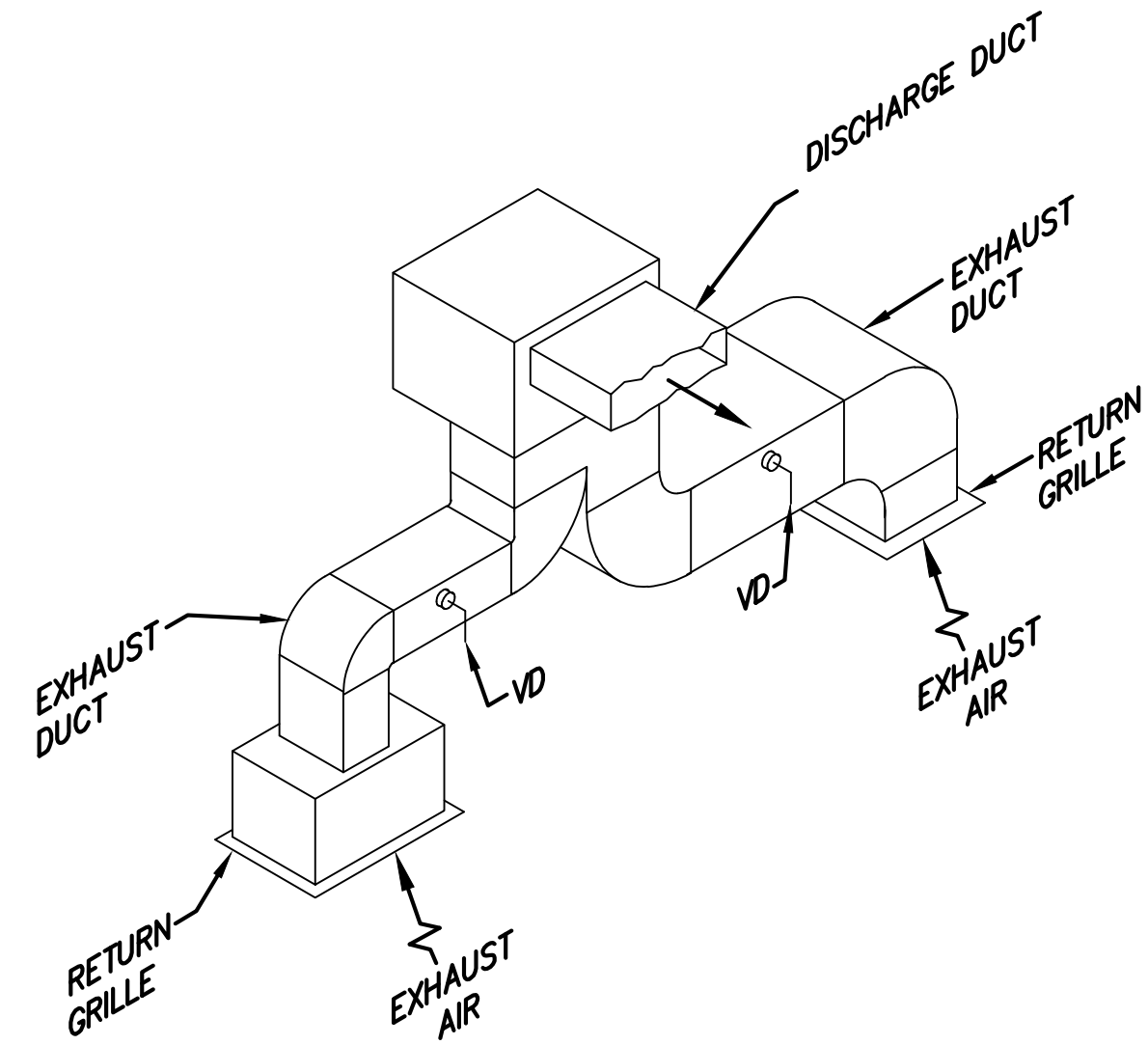
MECHANICAL - INDOOR VRV CASSETTE UNIT CONDENSATE DETAIL

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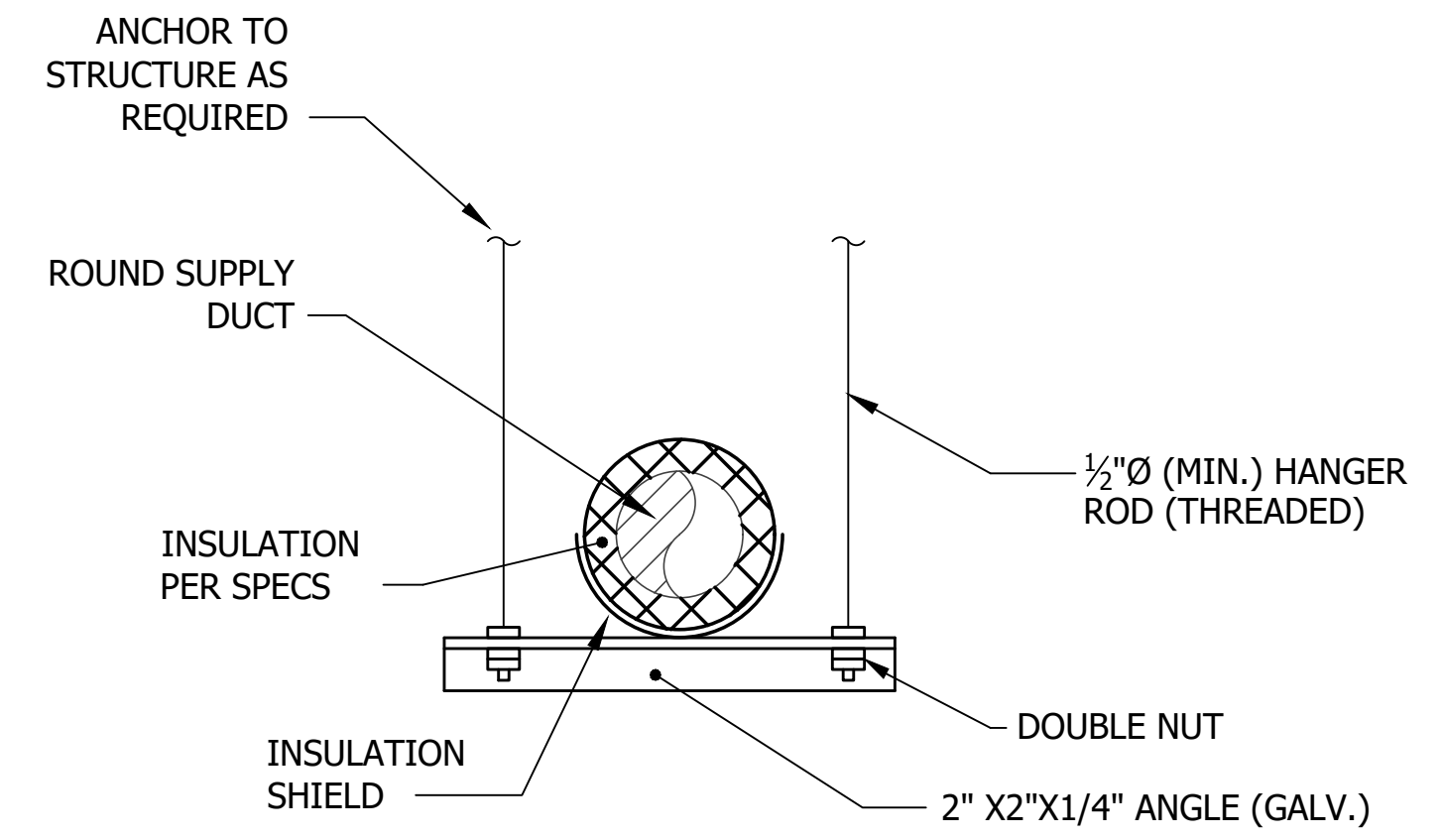
MECHANICAL - PIPE HANGER DETAIL

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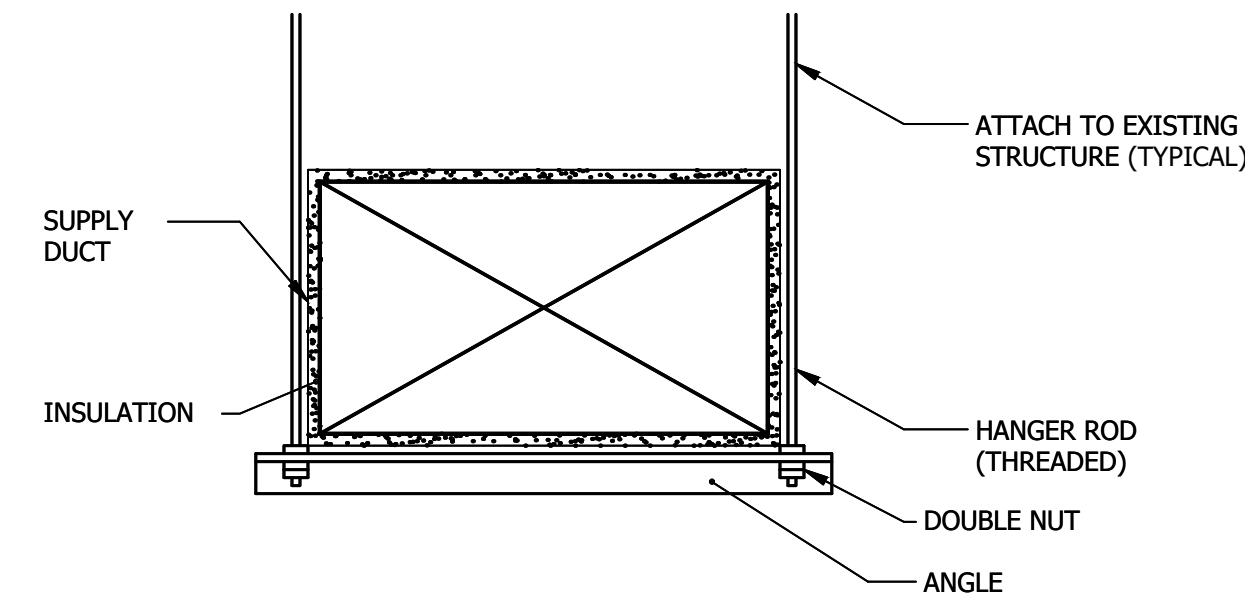
MECHANICAL - BATHROOM EXHAUST DETAIL

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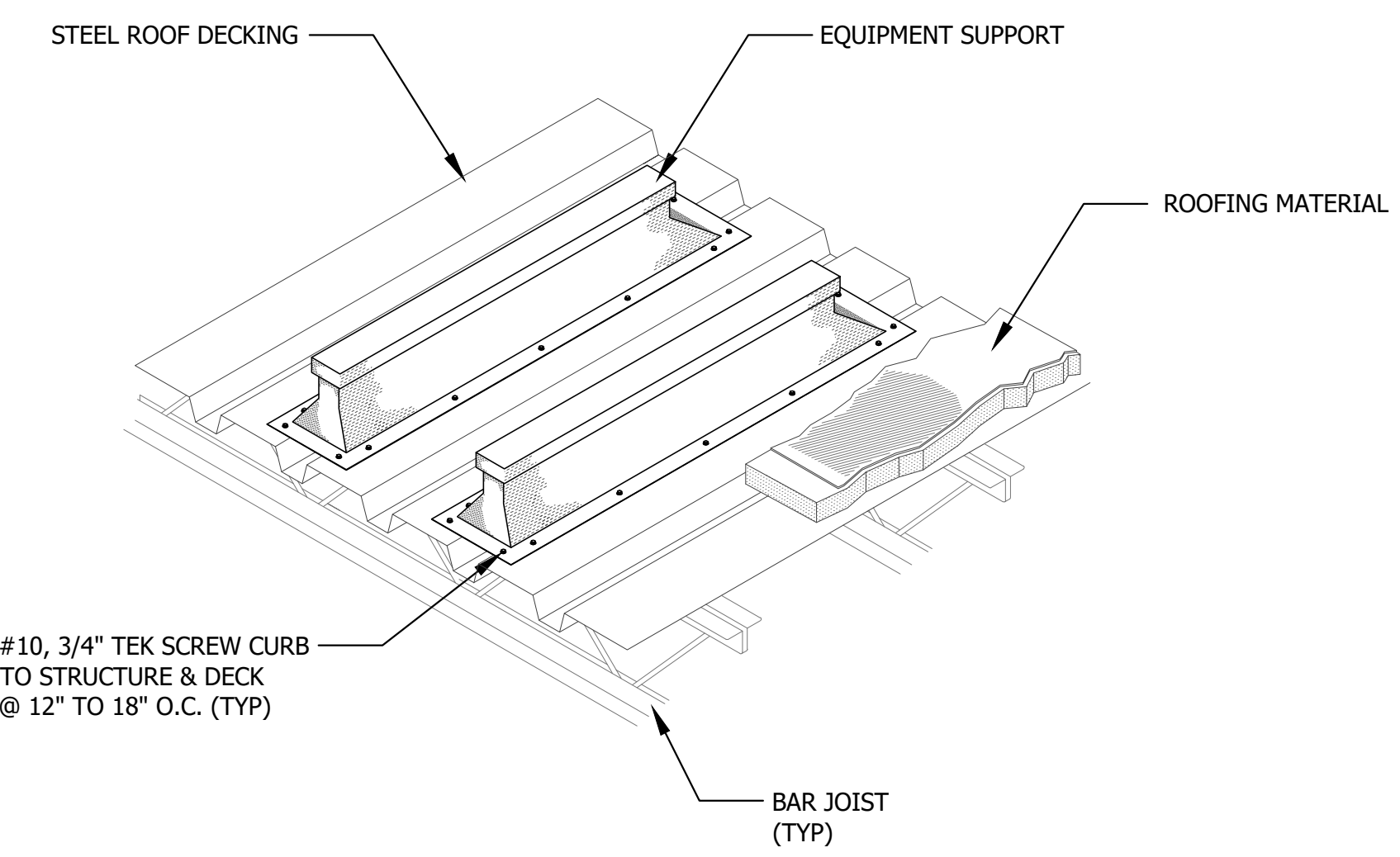
MECHANICAL - ROUND DUCT HANGER DETAIL

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MECHANICAL - DUCT HANGER DETAIL

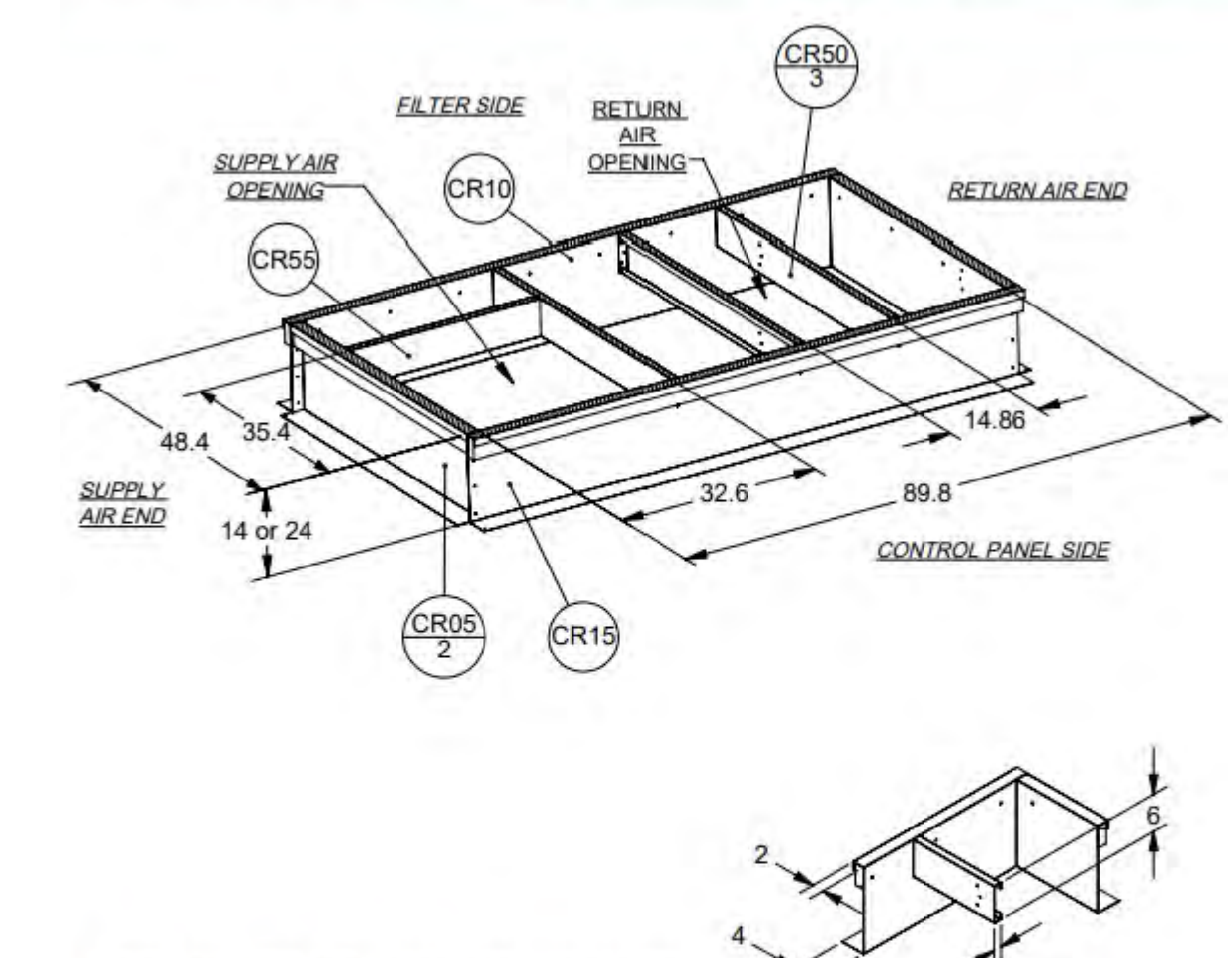
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MECHANICAL - OUTDOOR CONDENSING UNIT ROOF RAILS

3
M5.0

DAIKIN Roof Curb Assembly Instructions with energy recovery wheel option 910412786 Type DPS 7-17T ERW

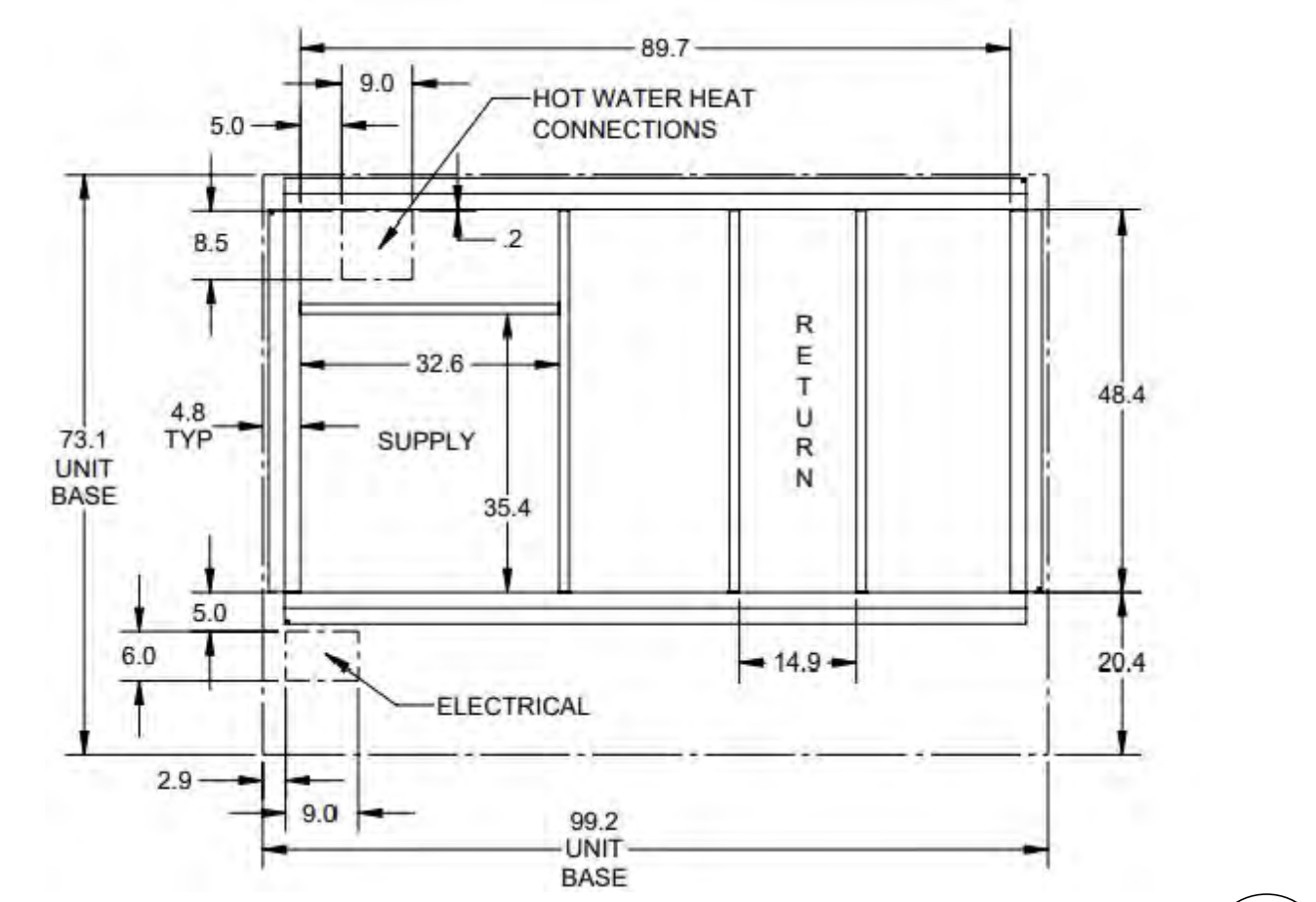


14" TALL CURB KIT - 910374338 141 LBS
24" TALL CURB KIT - 910374351 179 LBS

- Assembly Instructions**
1. Set curbing parts A thru E per dimensions shown over roof opening or on a level surface. Note location of supply air opening. Check alignment of all mating bolt holes.
 2. Bolt curbing parts A thru E together, using fasteners provided. Tighten all bolts finger tight.
 3. Square entire curbing assembly and securely tighten all bolts.
 5. Position curb assembly over roof openings. Curb must be level within .25 inches from side to side and 1.50 inches over its length. Check that top surface of curb is flat with no bowing or sagging.
 6. Weld curb assembly in place. Caulk all seams watertight. Remove backing from .25 x 1.50 wide gasketing and apply to all top surfaces shown with crosshatching.
 7. Flash curbing into roof as shown in roof detail "A".

DOAS ROOF CURB DETAIL
REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND DETAILS

9
M5.0



DOAS ROOF CURB DETAIL
REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND DETAILS

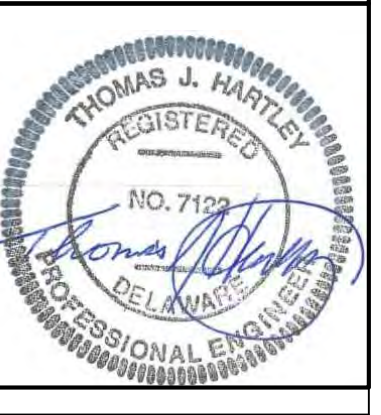
10
M5.10

DATE	2025-12-12
REVISION	2026-01-05
NO.	1
ISSUED FOR PERMIT	11/9/2026
REVISION	2025-12-12
NO.	A
ISSUED FOR PERMIT	11/9/2026
NO.	B
ISSUED FOR PERMIT	11/9/2026

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Atlanta, GA 30328
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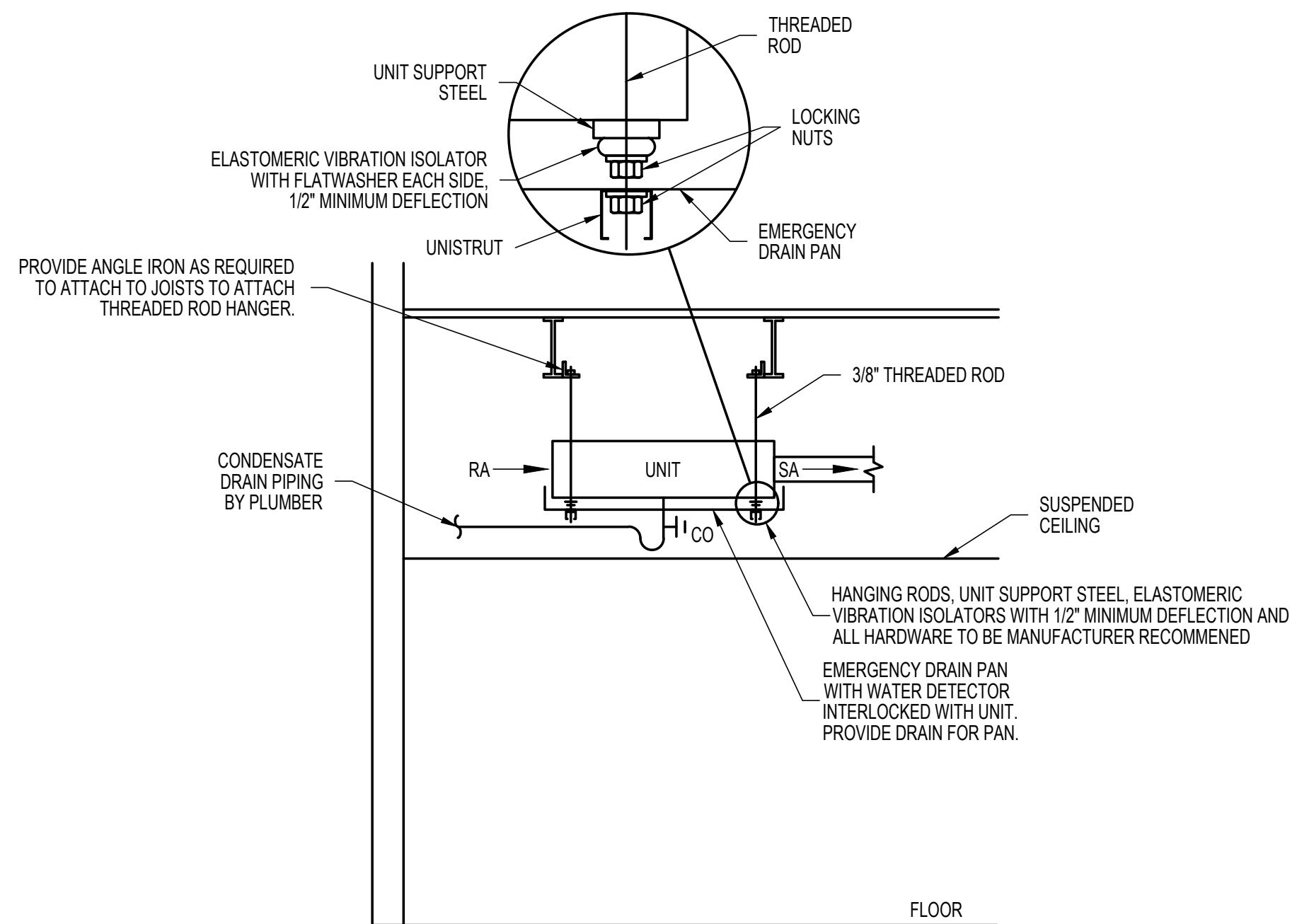
NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

MECHANICAL DETAILS

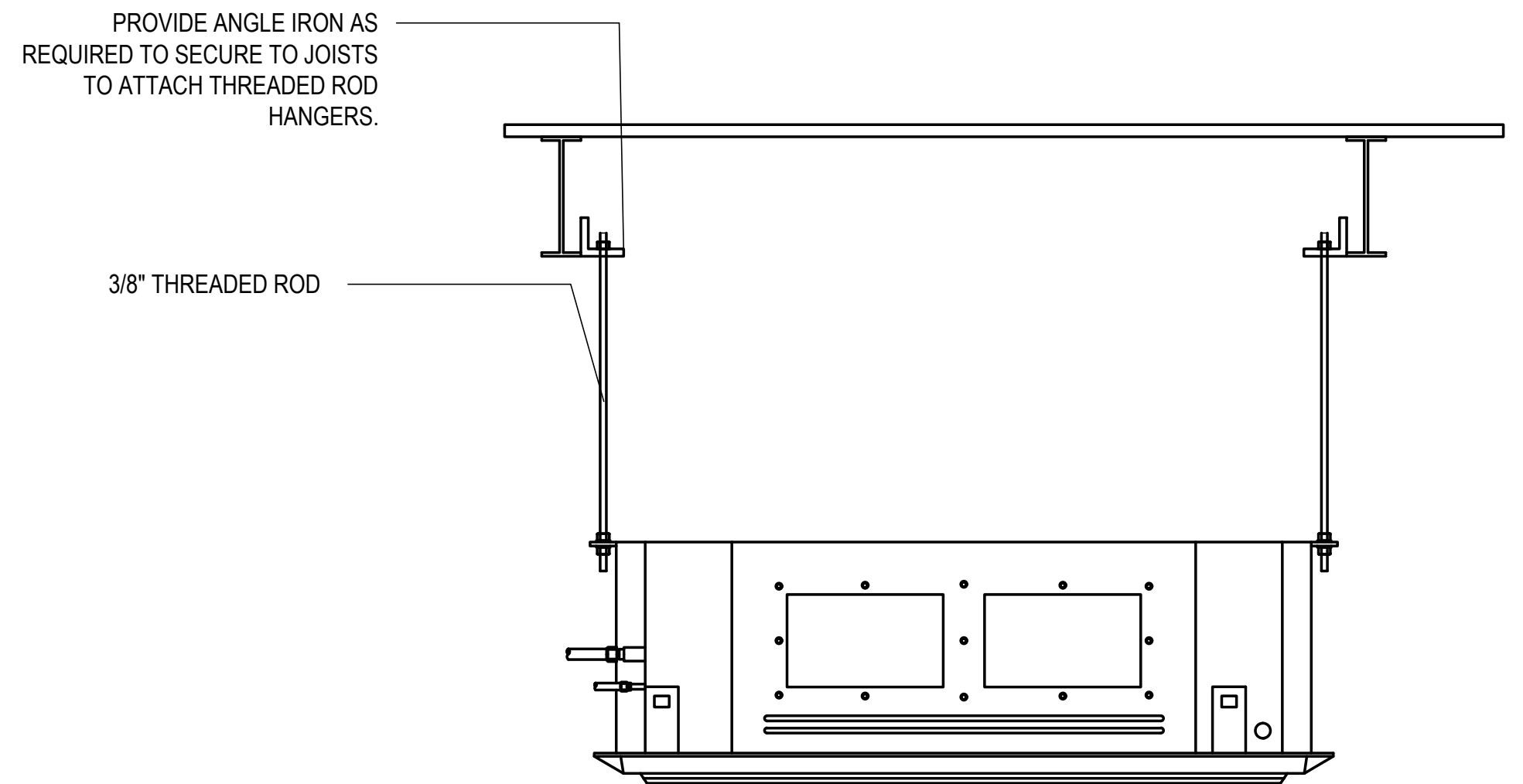


SCALE : AS NOTED
DESIGN BY : BEM
DRAWN BY : BEM
CHECKED BY : TJH/PJG
DSE JOB # : 25-2-0007
DATE : 07/08/2025

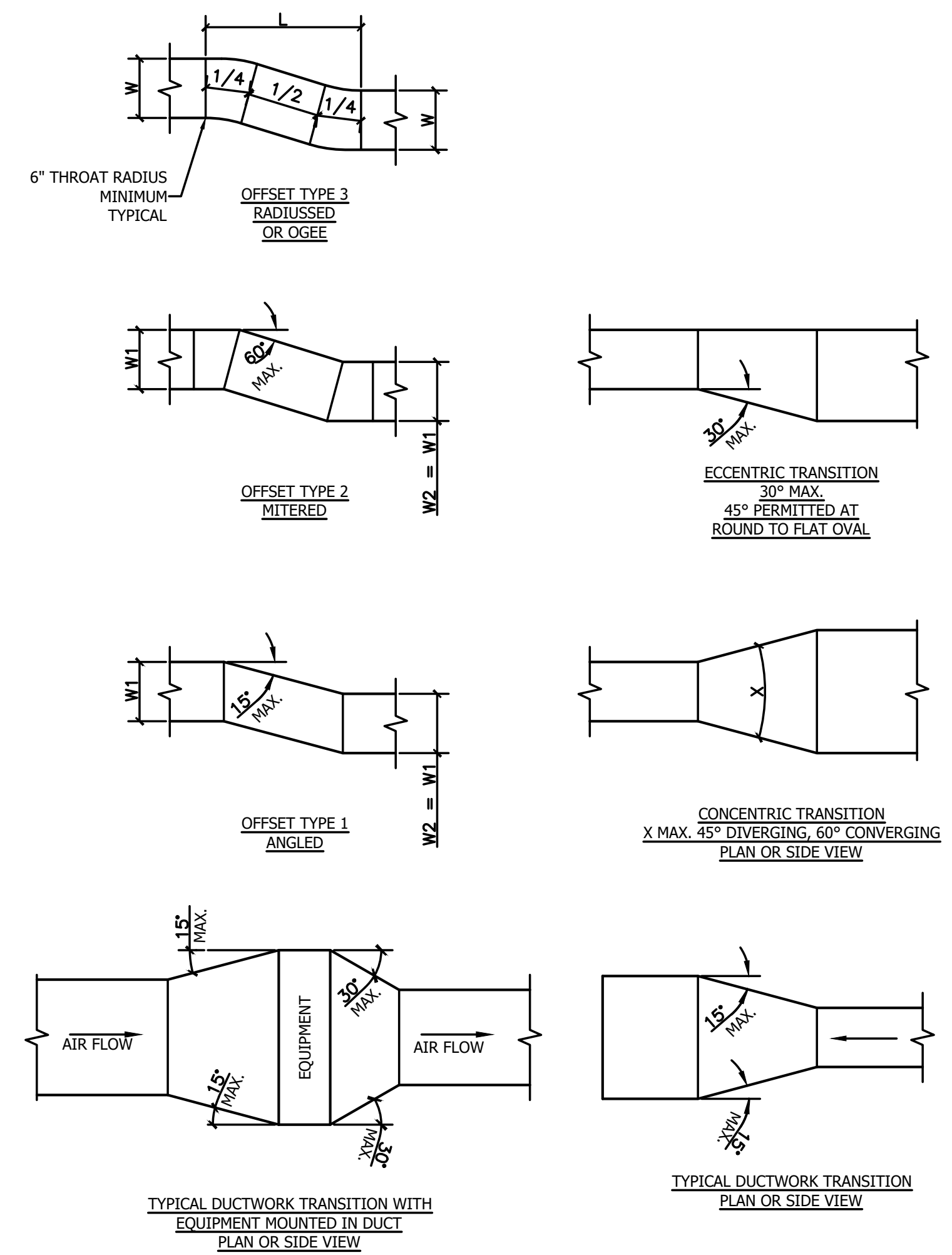
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MECHANICAL - VRV DUCTED UNIT HANGER DETAIL 1 M5.1

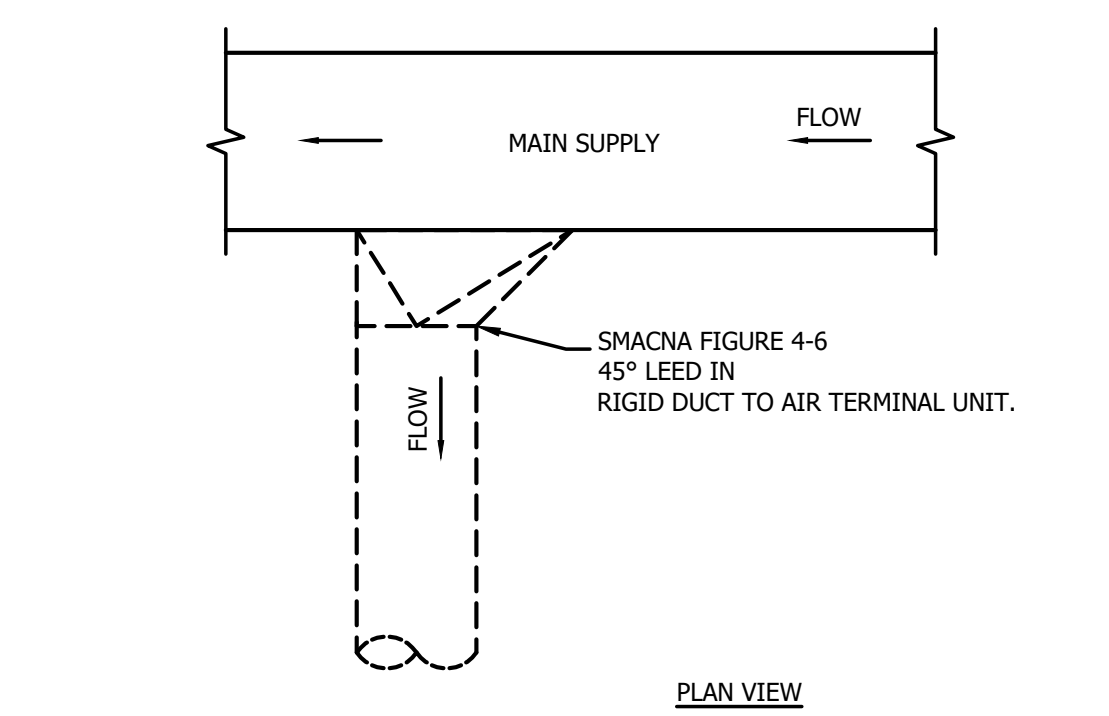


MECHANICAL - VRV CASSETTE HANGER DETAIL 2 M5.1

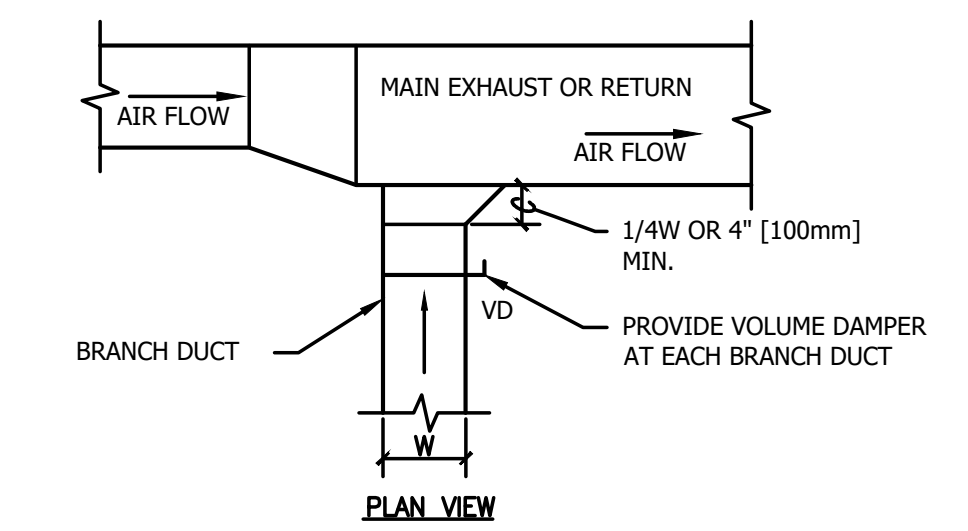


MECHANICAL - SUPPLY DUCT TRANSITIONS 3 M5.1

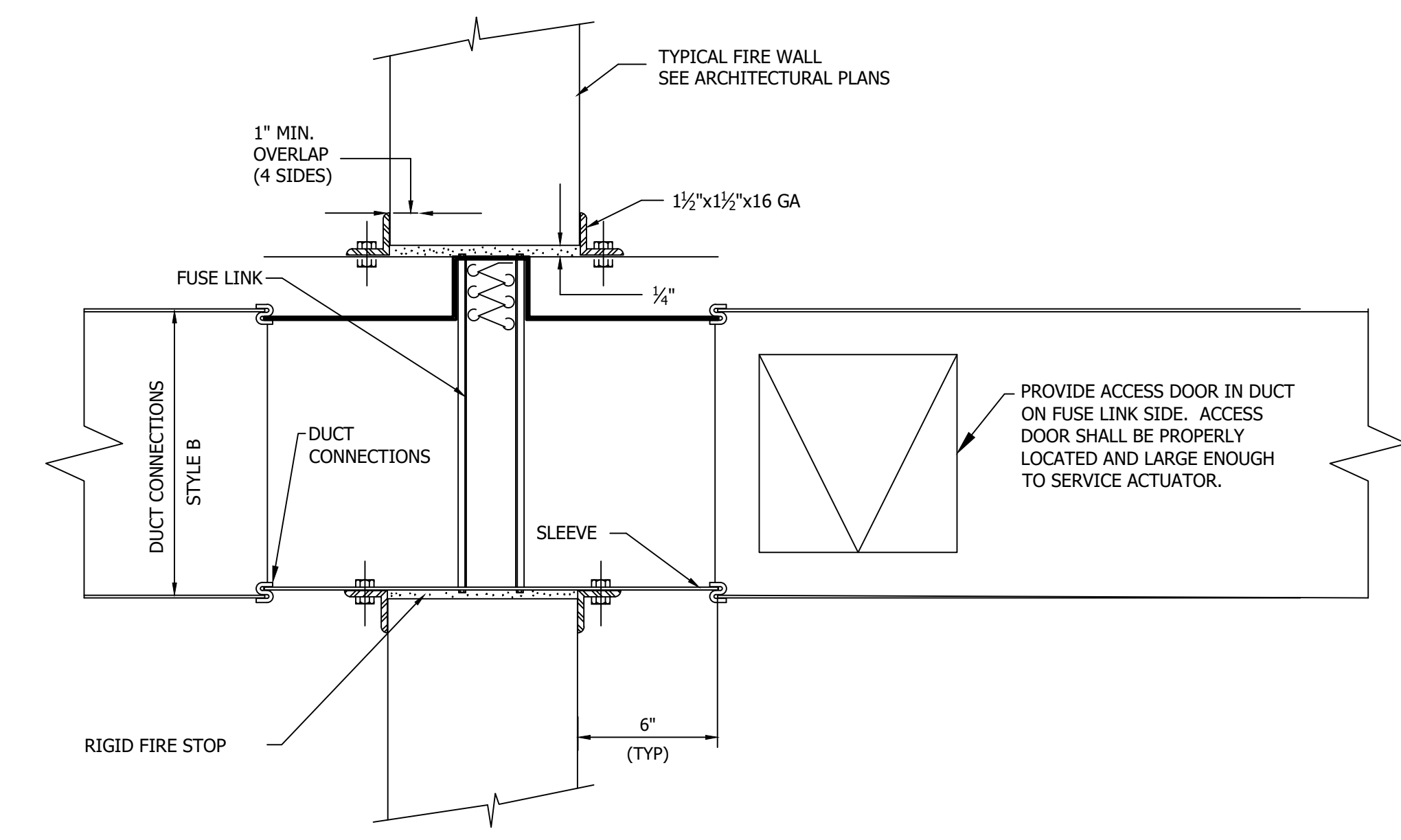
NOTE: UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.



MECHANICAL - DUCT BRANCH DETAIL 4 M5.1



MECHANICAL - EXHAUST DUCT 5 M5.1



FIRE DAMPER - VERTICAL INSTALLATION 6 M5.1

NO.	REVISION	DATE
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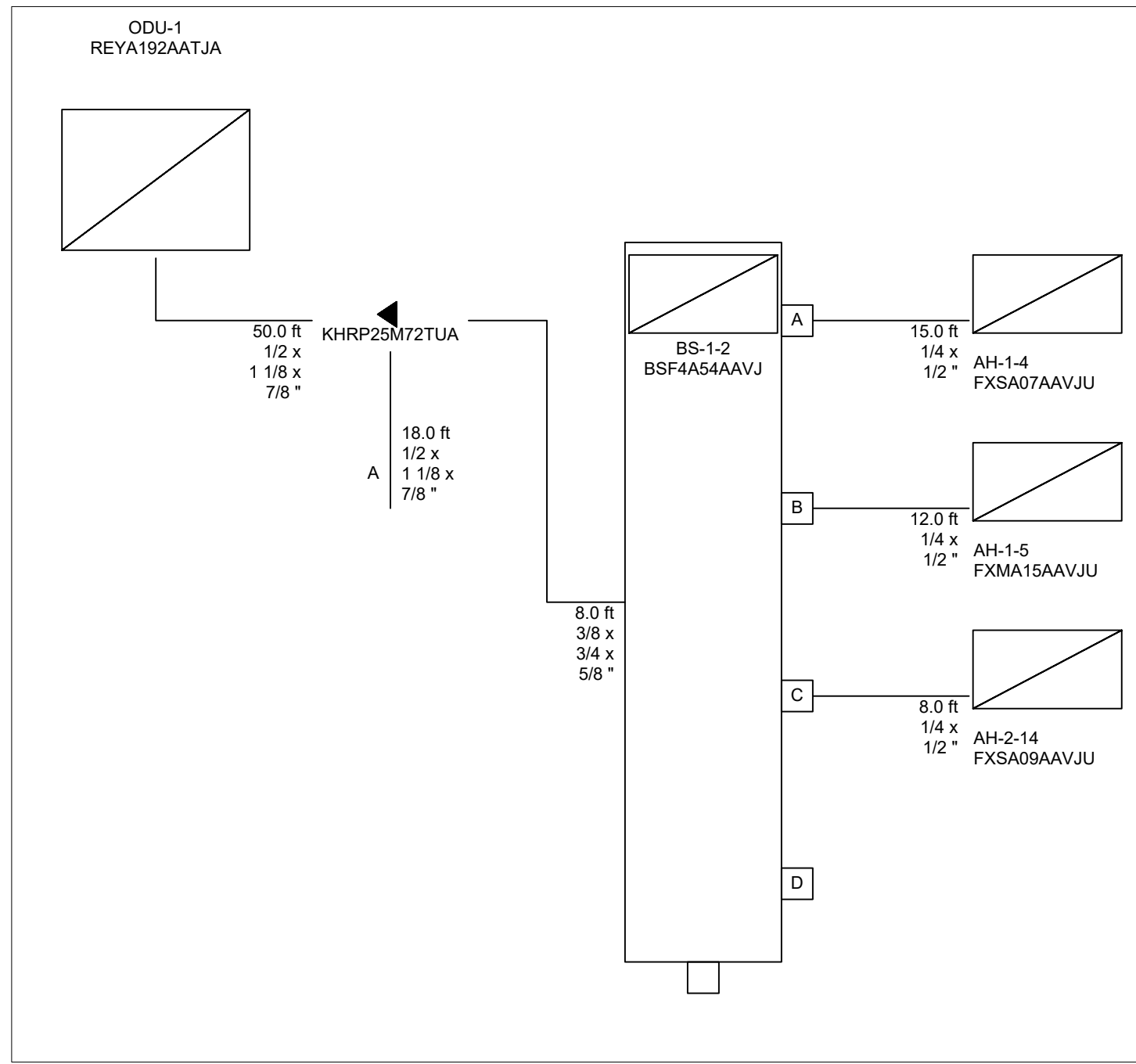
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NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
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MECHANICAL DETAILS

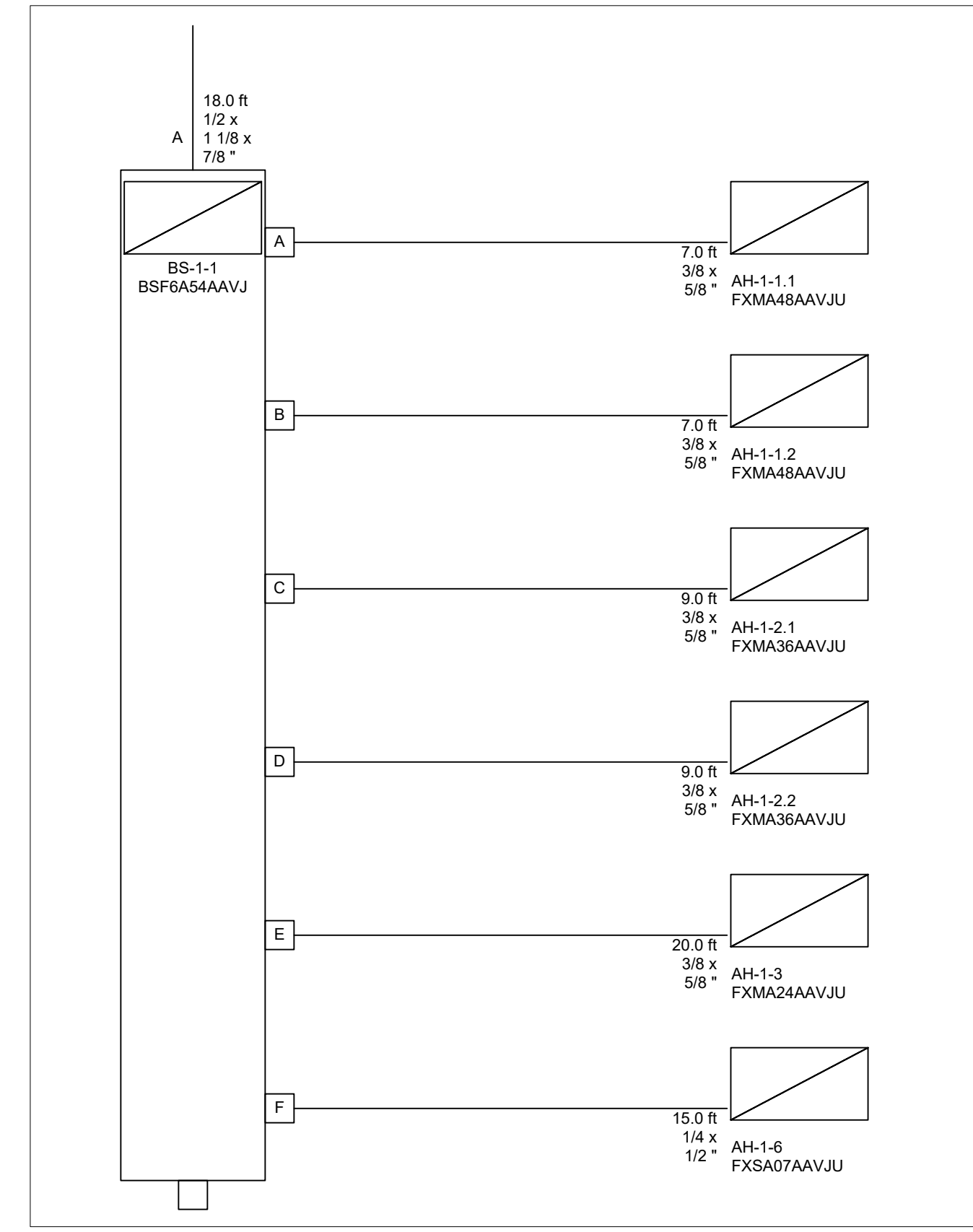
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DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

M 5.1



MECHANICAL - ODU 1 PIPING

1
M5.2



MECHANICAL - ODU 1 SUBDIAGRAM A PIPING

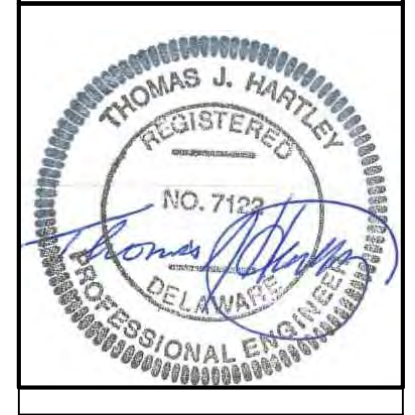
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NO.	REVISION	DATE
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 P.O. Box 13029
 Raleigh, NC 27619
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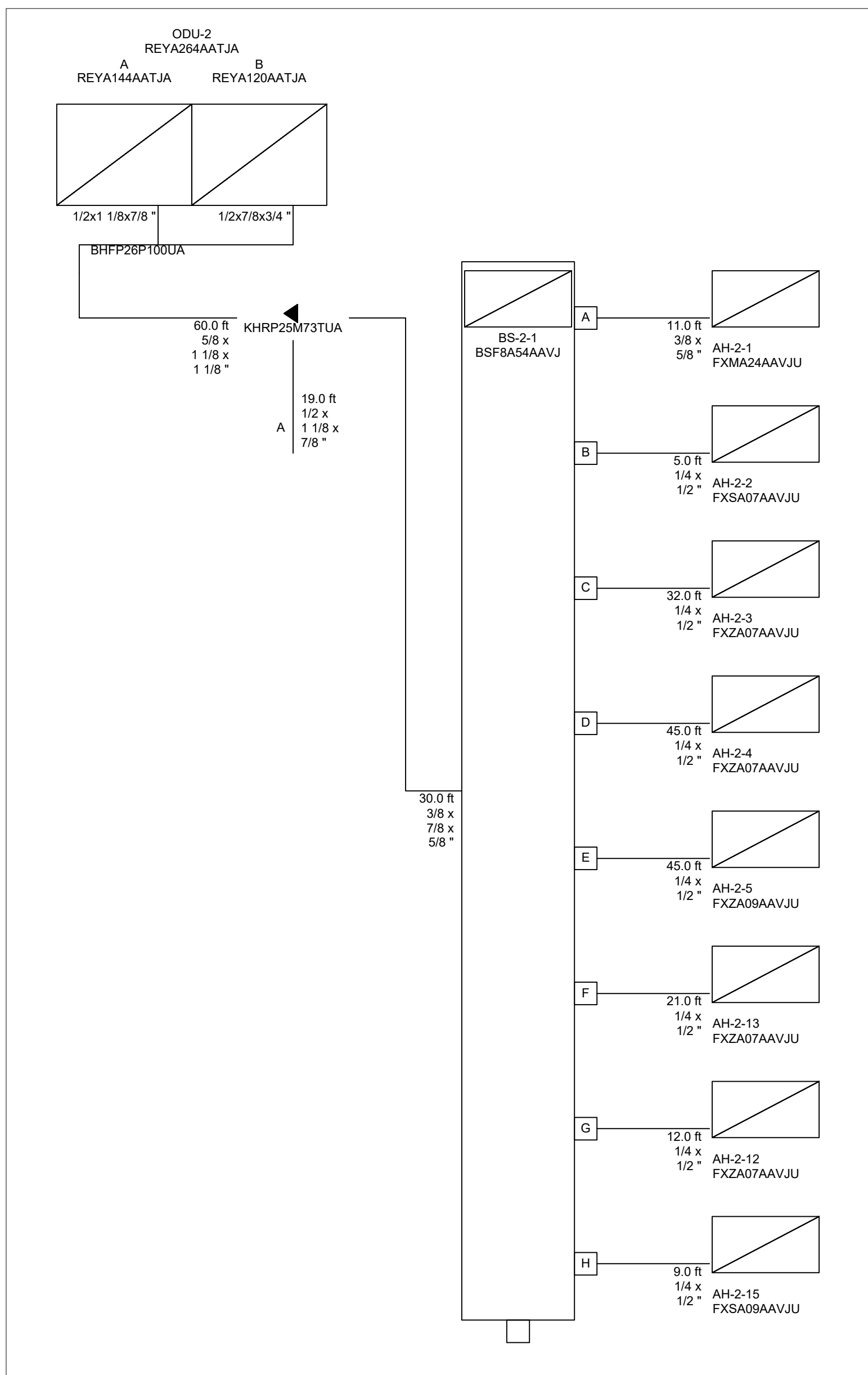
NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

VRV PIPING DIAGRAM
 ODU-1



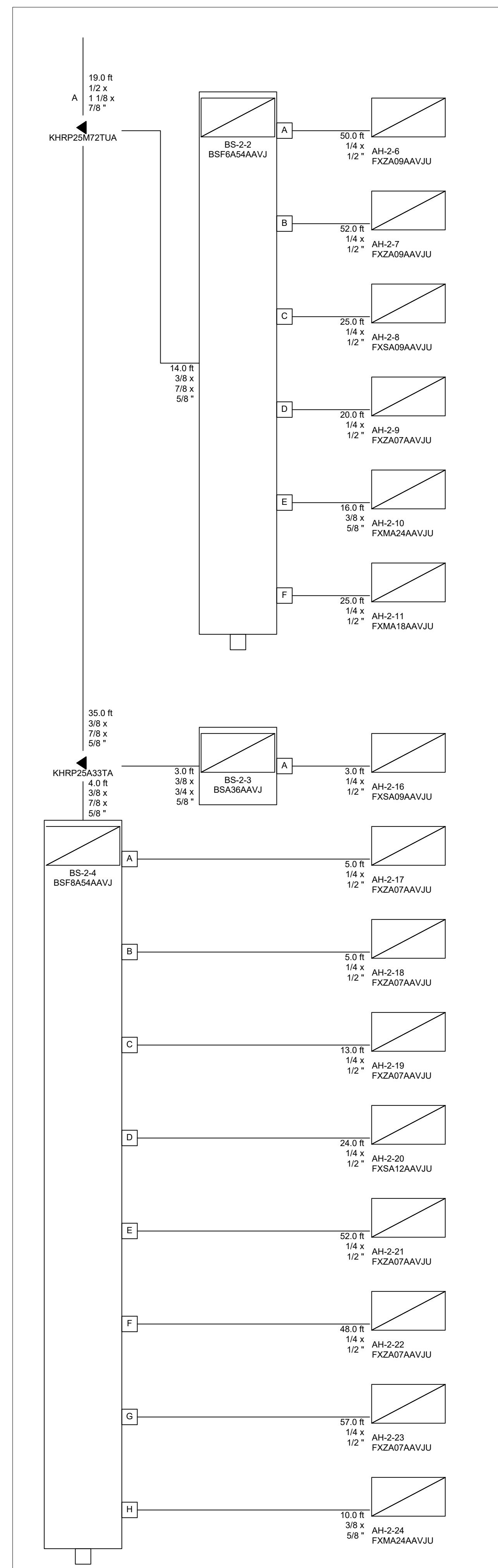
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DRAWN BY	: BEM
CHECKED BY	: TJH/PJG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

M 5.2



MECHANICAL - ODU 2 PIPING

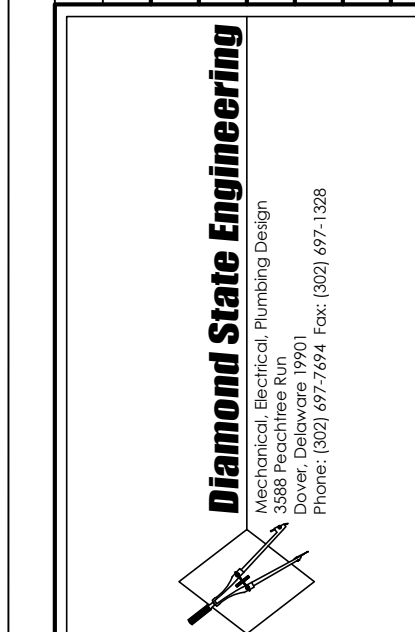
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MECHANICAL - ODU 2 SUBDIAGRAM A

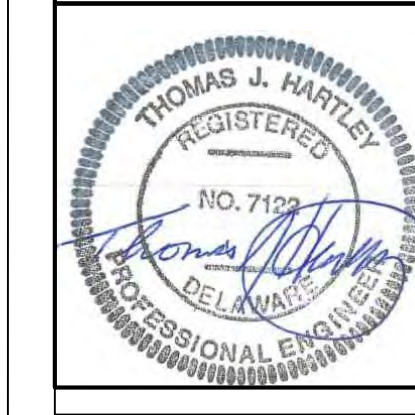
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NO.	REVISION	DATE
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B	ISSUED FOR PERMIT	2026-01-05
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NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

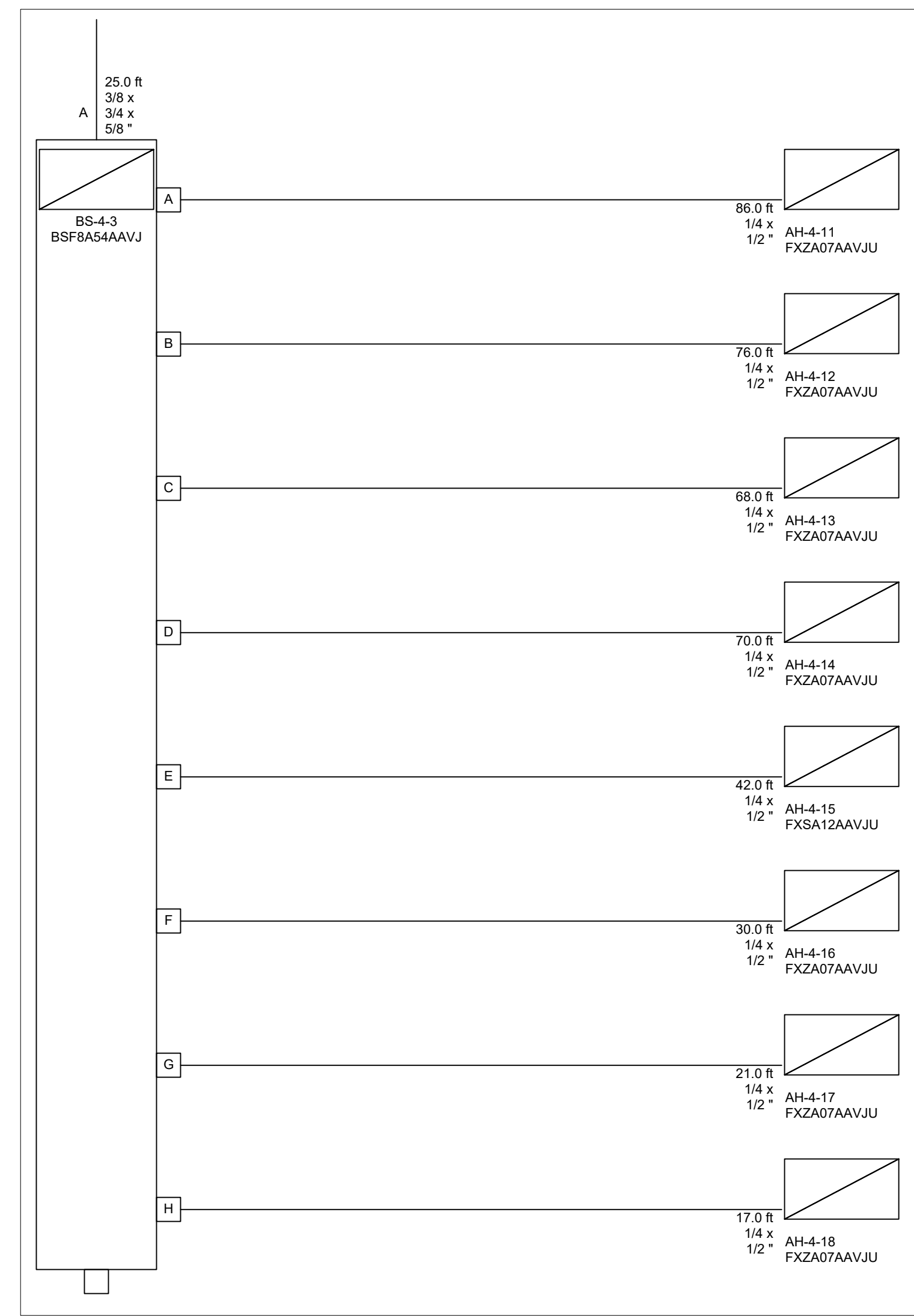
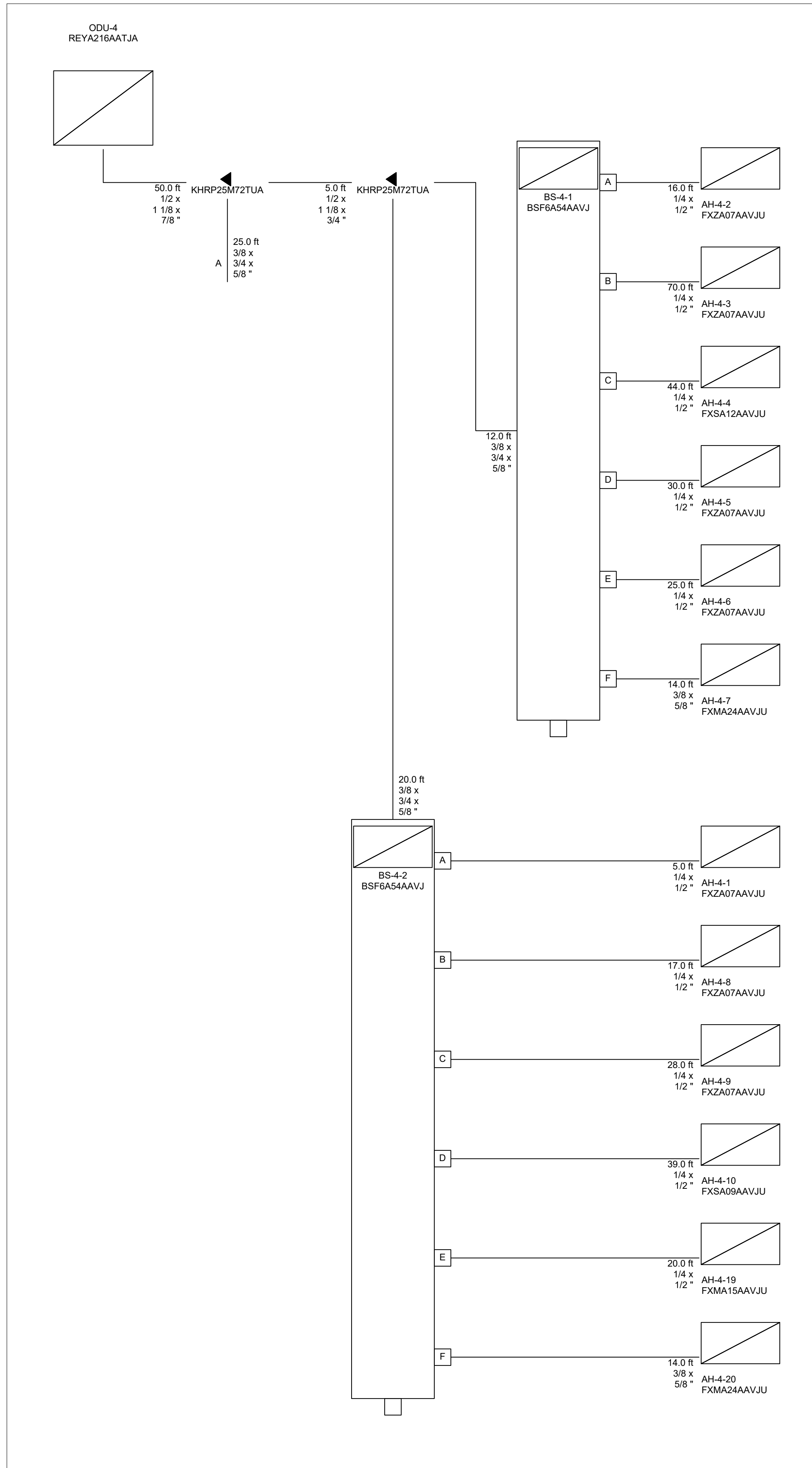
VRV PIPING DIAGRAM
 ODU-2



SCALE	: AS NOTED
DESIGN BY	: BEM
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CHECKED BY	: TJH/PJG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

M 5.3

25-2-0007_M5.0 MECHANICAL DETAILS, 1/9/2026 2:41 PM, ARCH D (36.00 X 24.00 INCHES), Katie Betchy



NO.	REVISION	DATE
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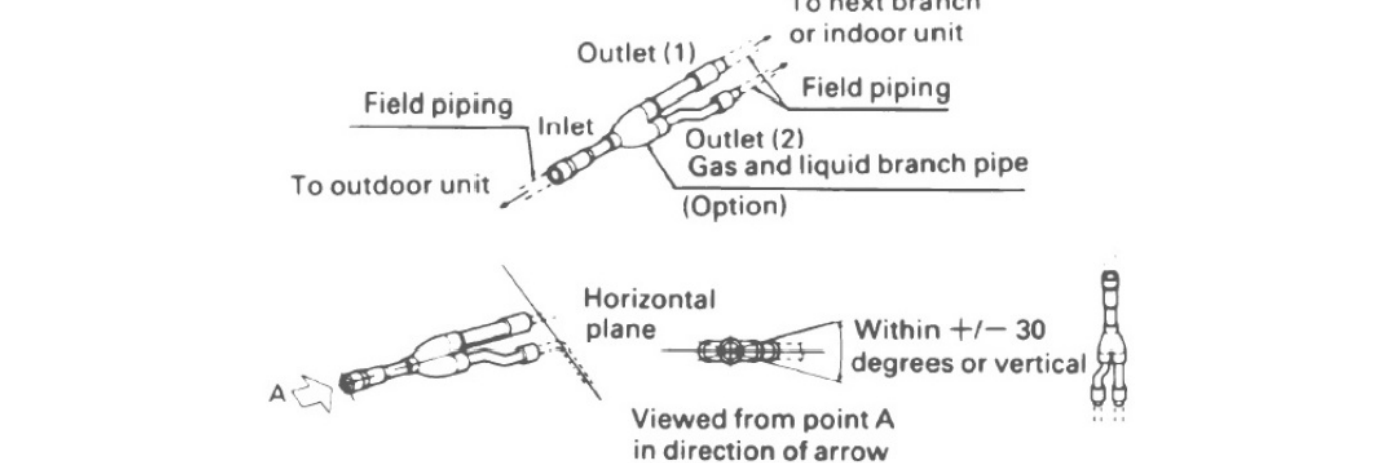
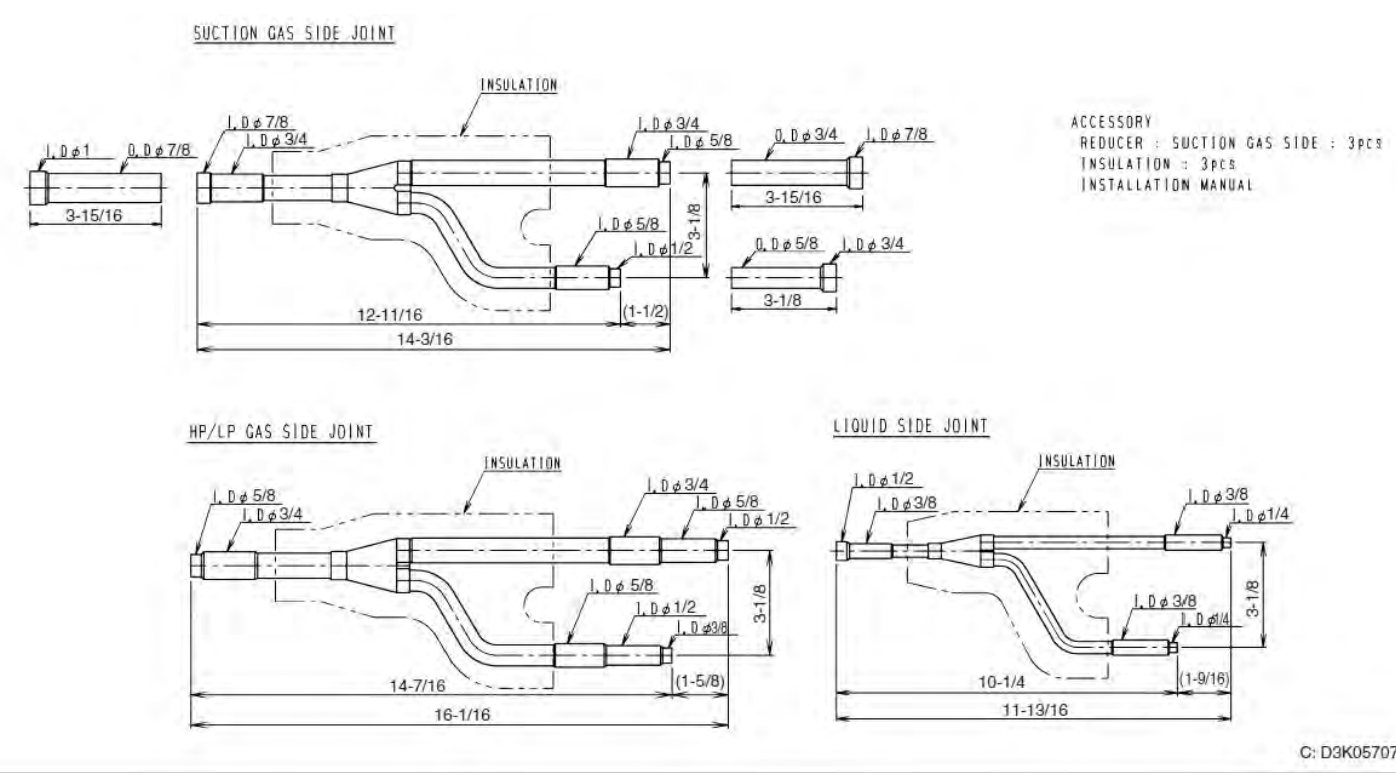
**NEW CONSTRUCTION FOR:
 HORIZON FARM CREDIT
 BRIDGEVILLE, DE**

**VRV PIPING DIAGRAM
 ODU-4**

SCALE	: AS NOTED
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DRAWN BY	: BEM
CHECKED BY	: TJH/PJG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

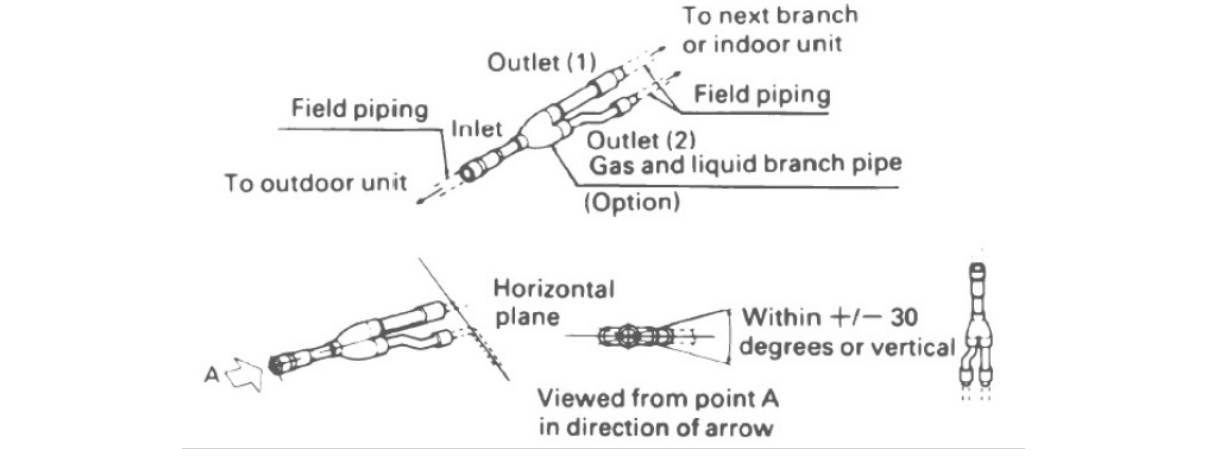
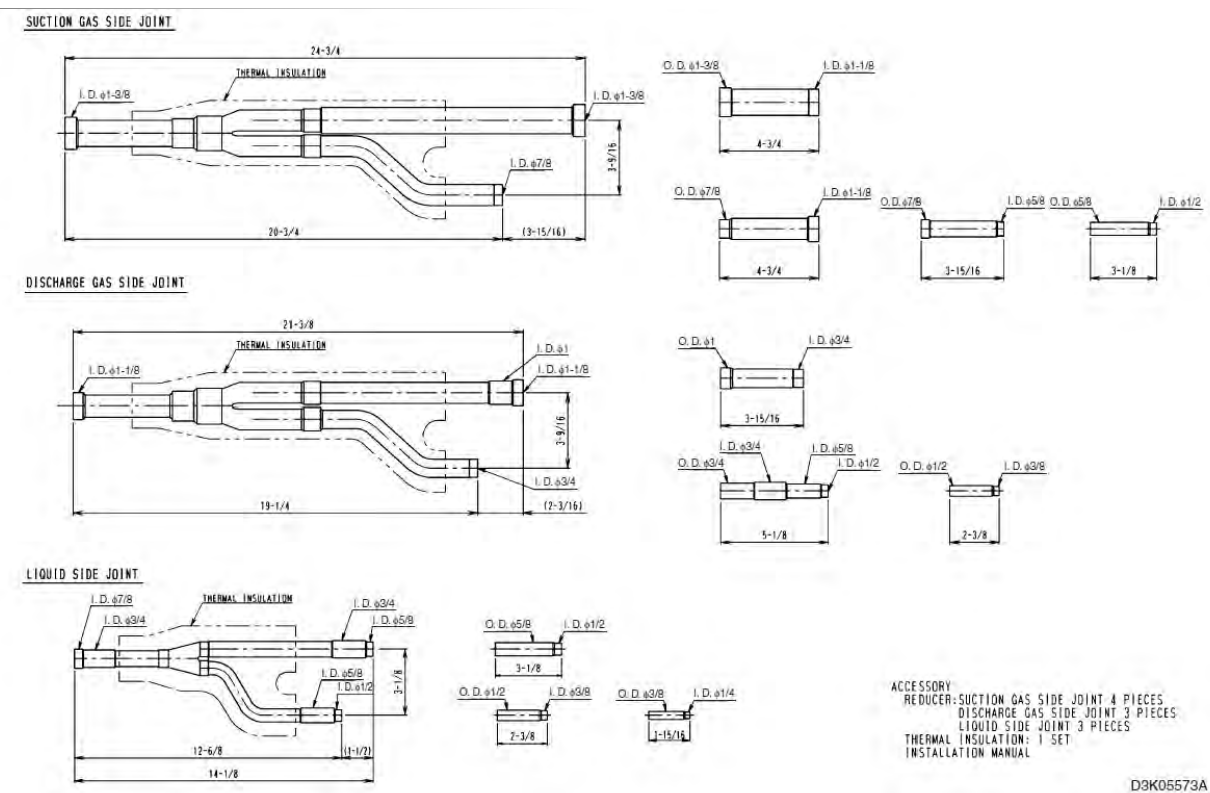
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5.4

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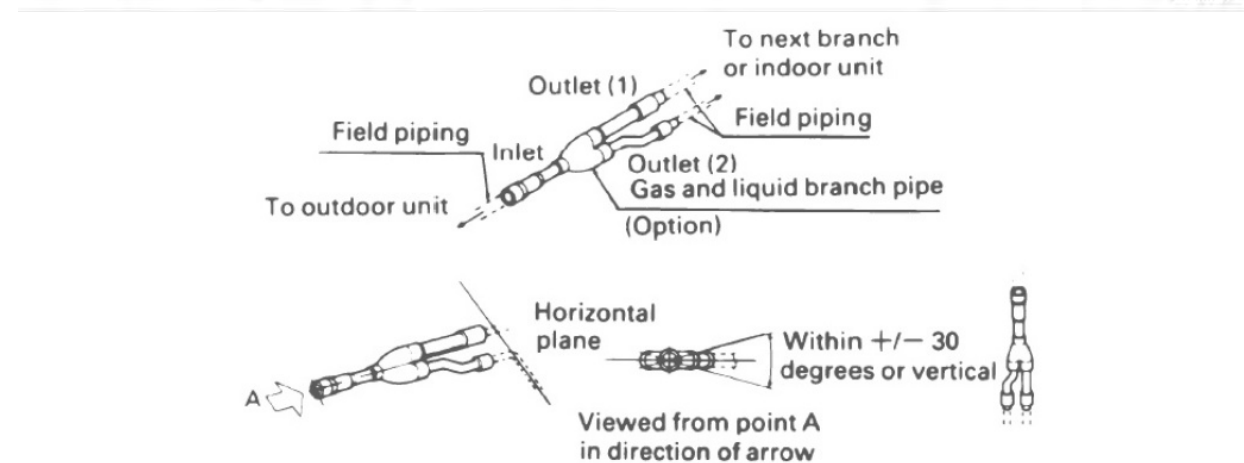
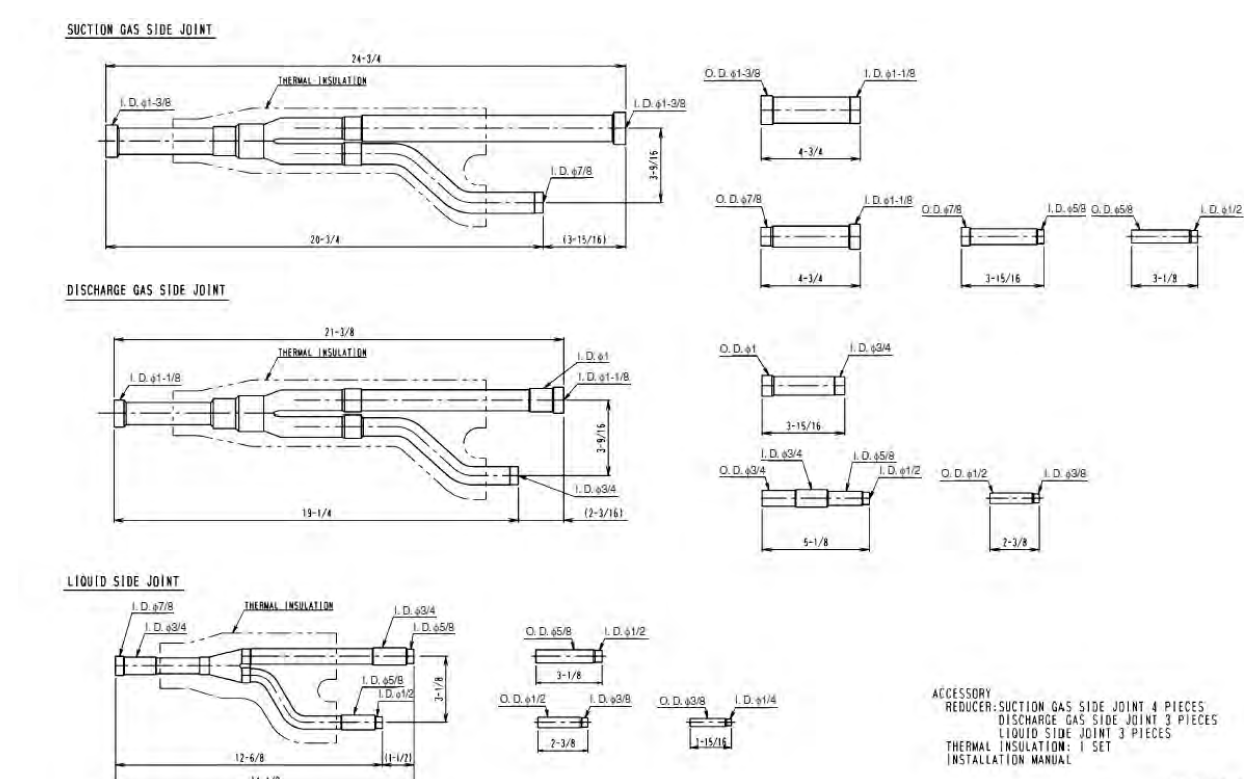
3 PIPE REFNET JOINT - KHRP25A33TA

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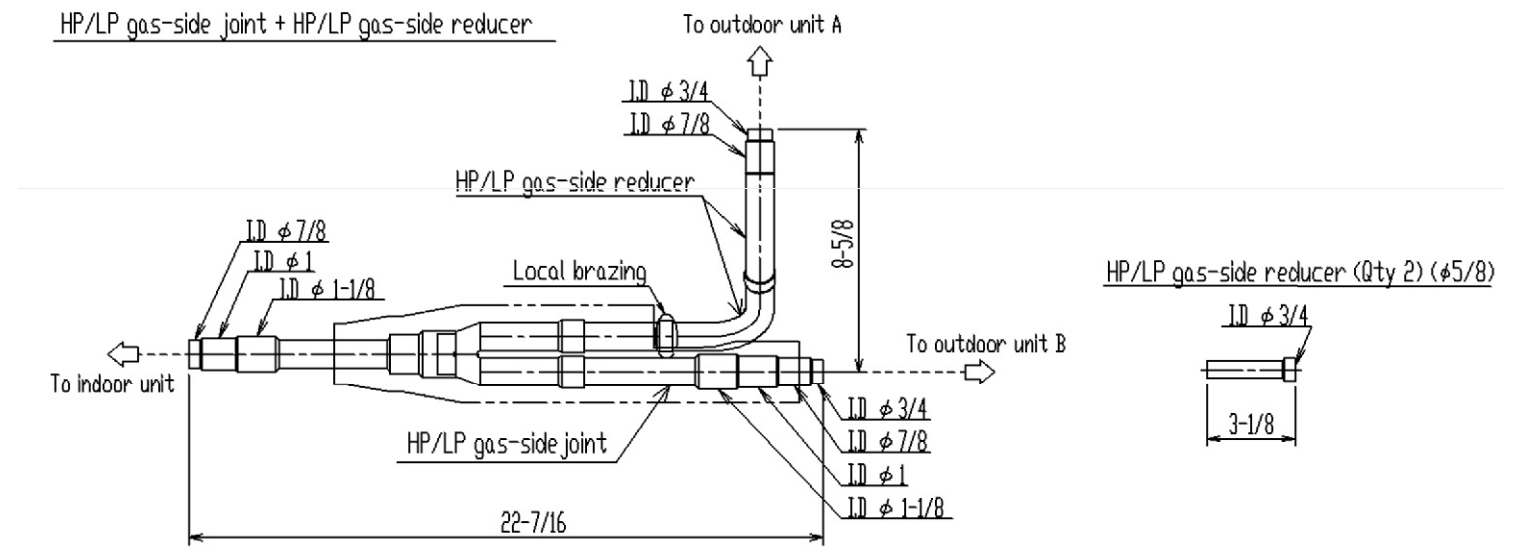
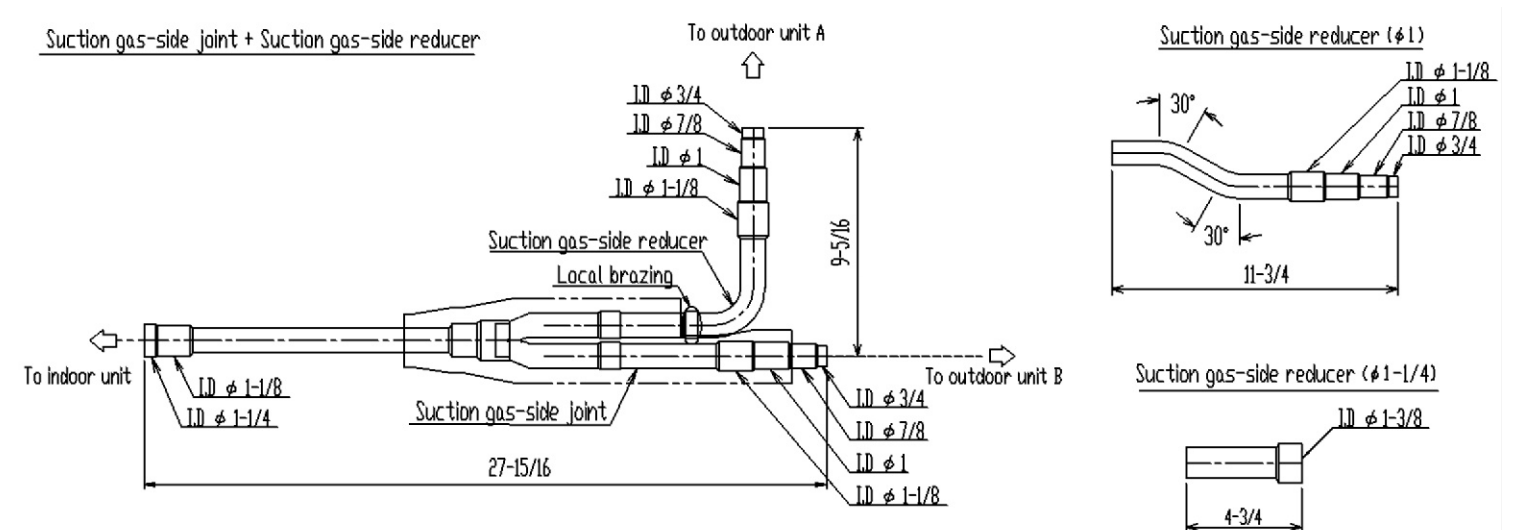
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M5.5



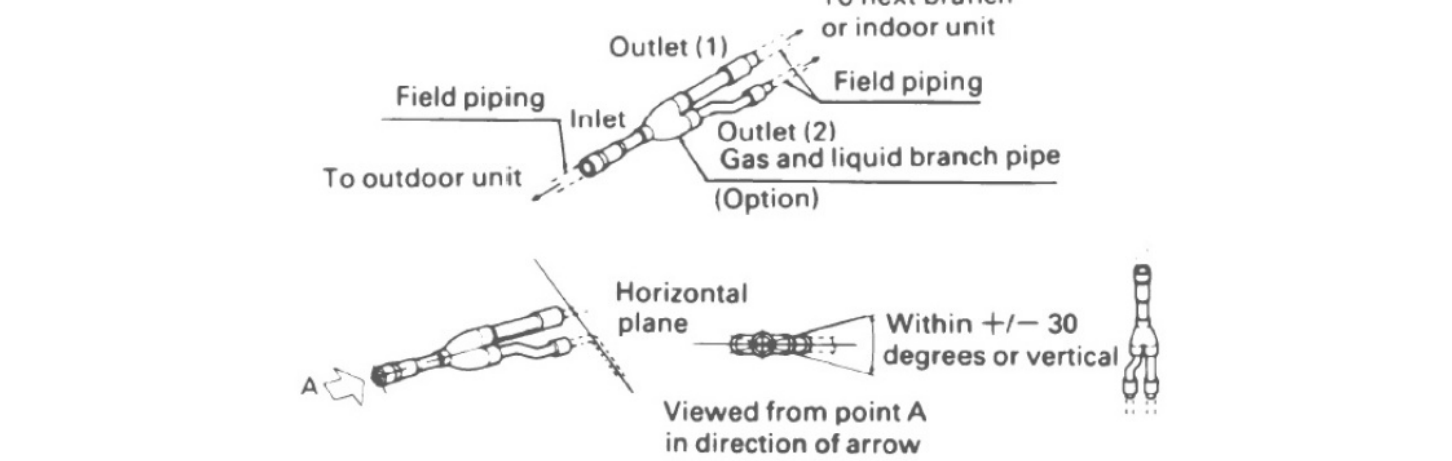
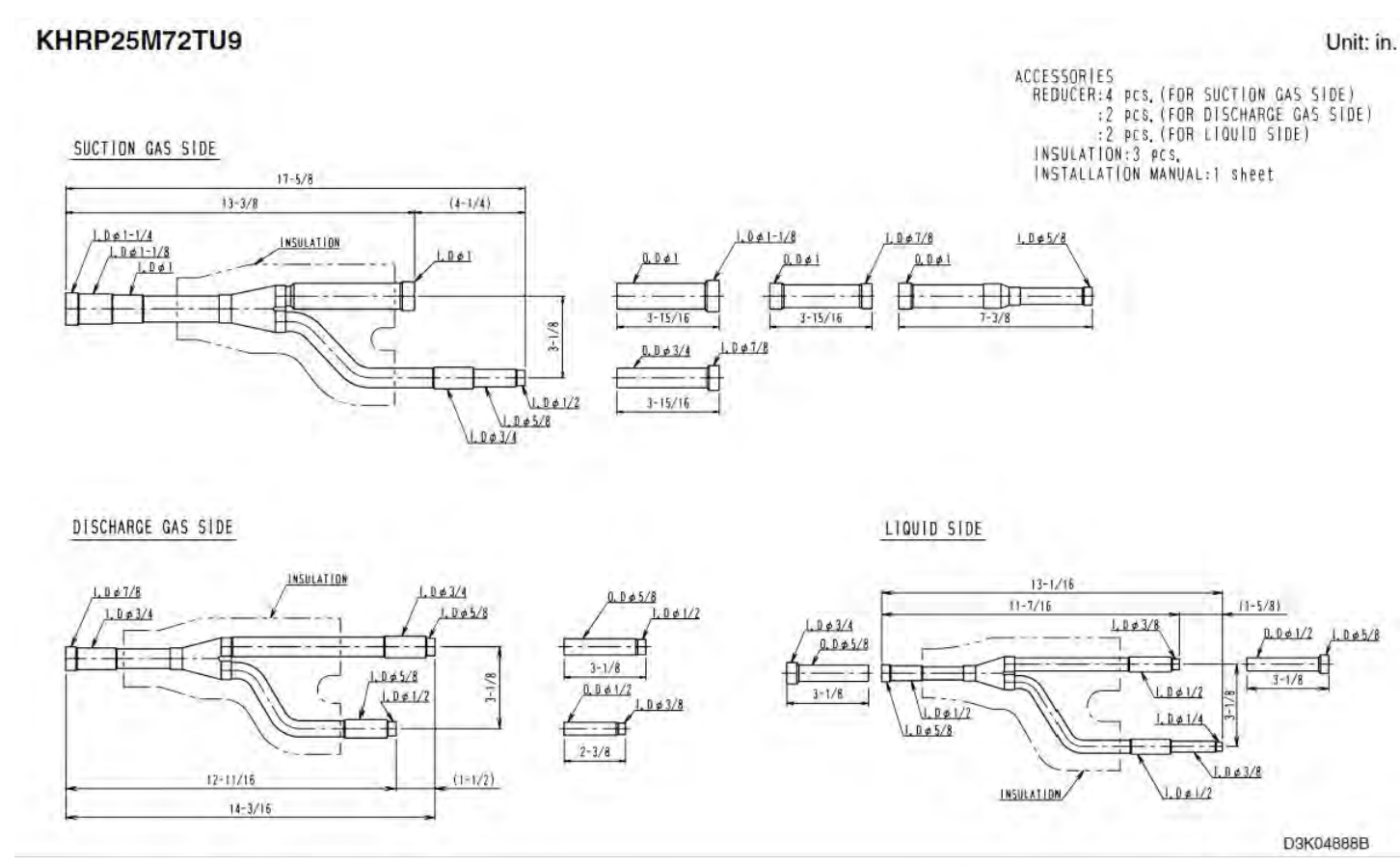
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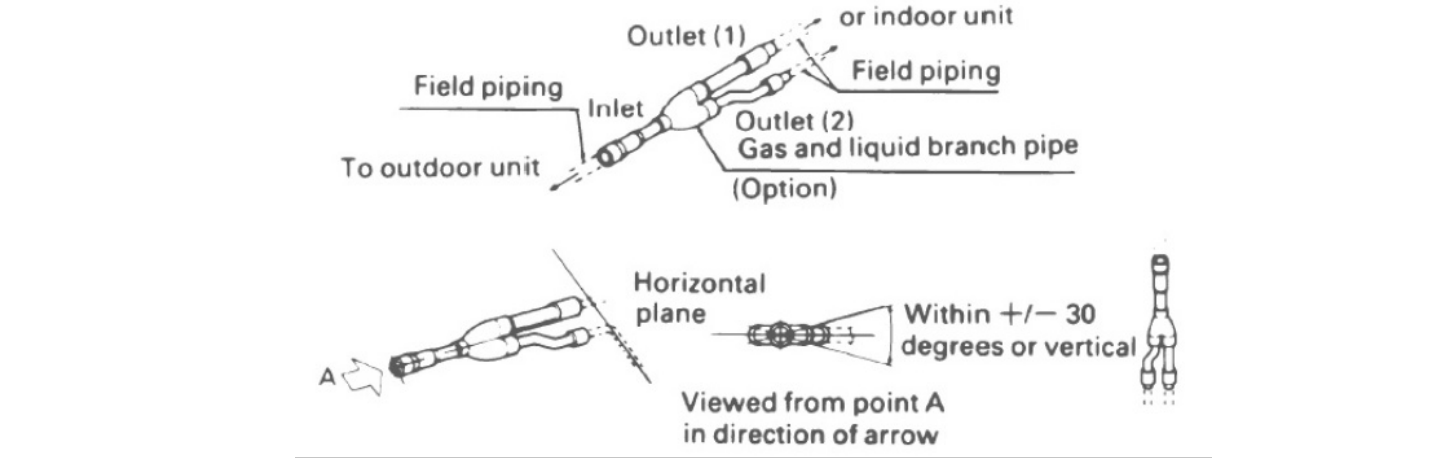
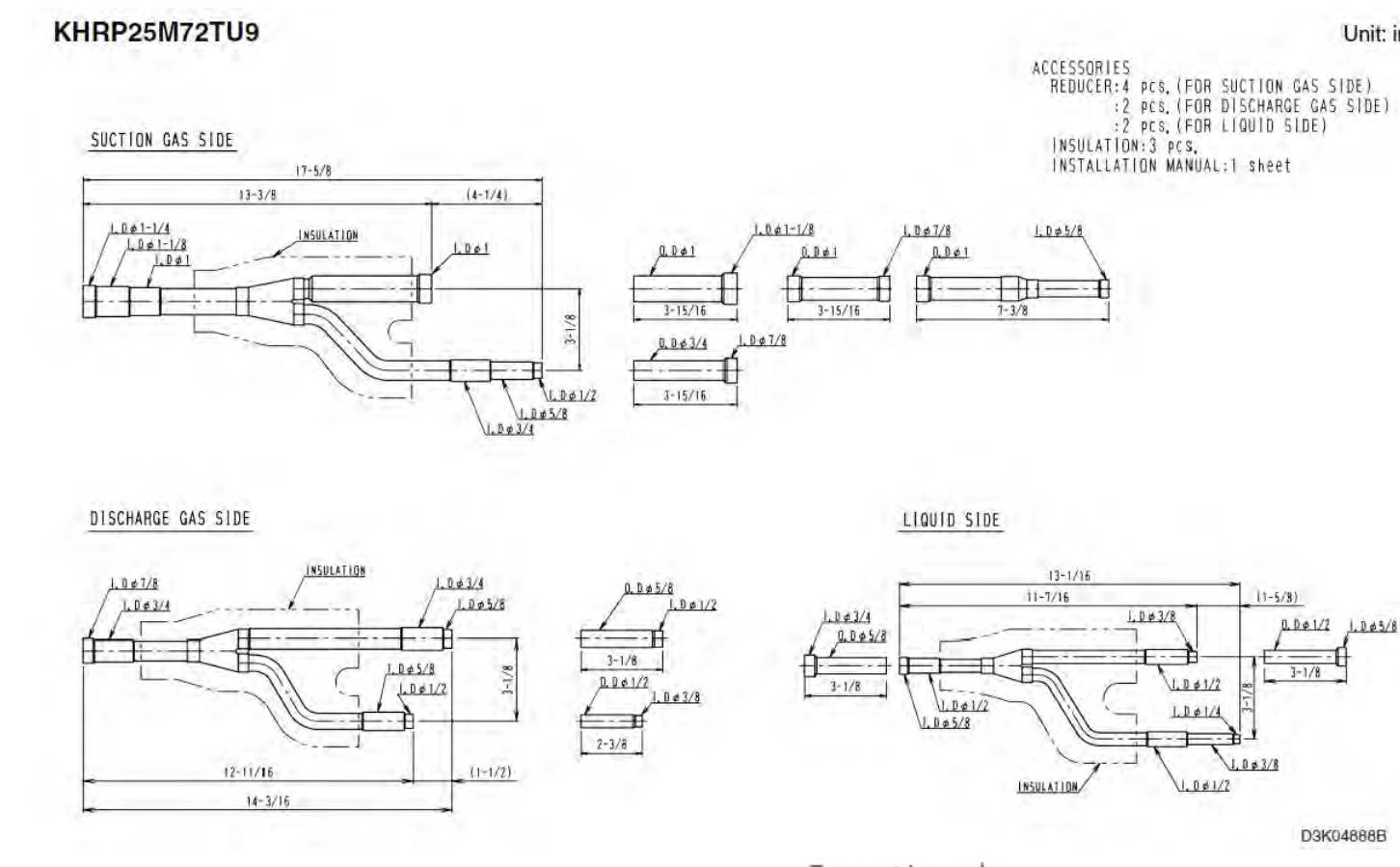
HEAT RECOVERY / DUAL MODULE MULTI CONNECTION PIPING KIT - BHFP26P100UA

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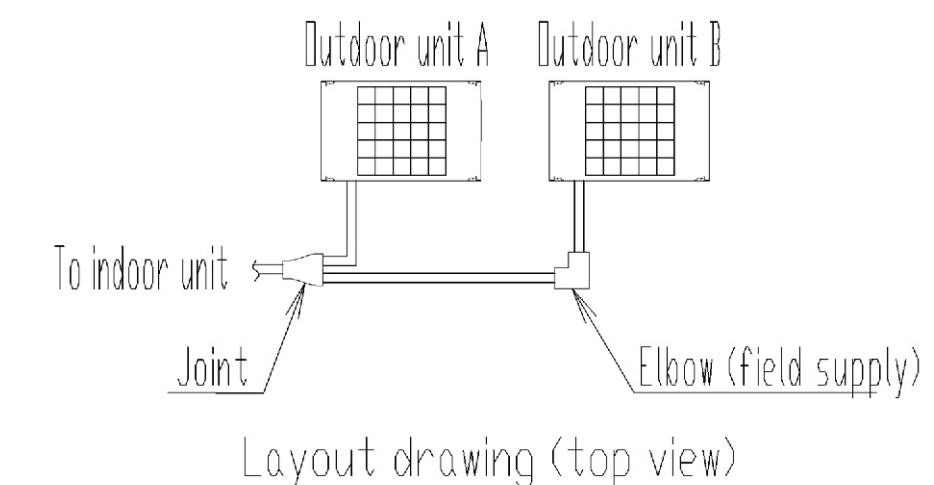
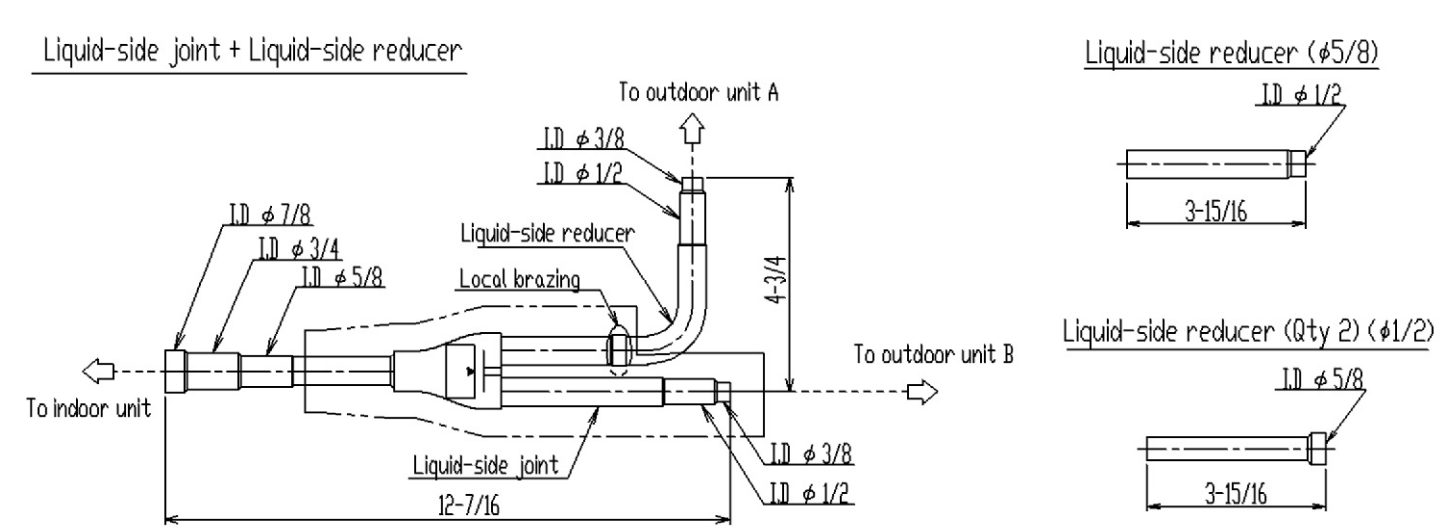
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5
M5.5



3 PIPE REFNET JOINT - KHRP25M72TU9

6
M5.5



HEAT RECOVERY / DUAL MODULE MULTI CONNECTION PIPING KIT - BHFP26P100UA

7
M5.5

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NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

VRV REFNET JOINT
 AND
 MULTI CONNECTION
 DETAILS

SCALE	: AS NOTED
DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

M 5.5

GENERAL ELECTRICAL NOTES

- 1. CODES:** ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST APPROVED VERSION OF THE NATIONAL ELECTRICAL CODE, UNDERWRITERS LABORATORIES, NATIONAL BOARD OF UNDERWRITERS, AND ANY STATE, COUNTY, OR MUNICIPAL LAWS OR AUTHORITIES HAVING JURISDICTION. ALL MATERIAL AND EQUIPMENT SHALL BE APPROVED FOR THE INTENDED USE.
- 2. INSPECTIONS:** THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR THE COMPLETION OF HIS WORK. THE ELECTRICAL CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS AND TESTS REQUIRED BY THE ABOVE AGENCIES. HE SHALL FURNISH REQUIRED CERTIFICATES OF INSPECTION TO THE OWNER, INCLUDING THE ELECTRICAL CERTIFICATE FROM FIRST STATE INSPECTION AGENCY.
- 3. CONTRACTOR'S RESPONSIBILITY:** IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL LABOR, TOOLS, MATERIALS, AND SUPERVISION TO COMPLETE ALL THE ELECTRICAL WORK AS SHOWN AND DESCRIBED ON THE DRAWINGS. ALL INCIDENTAL MATERIALS NORMALLY REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM, ALTHOUGH NOT SPECIFICALLY IDENTIFIED ON THESE DRAWINGS, ARE UNDERSTOOD TO BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL WORK INCLUDING MATERIALS IS SUBJECT TO APPROVAL OF THE OWNER. ANY QUESTIONS PERTAINING TO THESE NOTES OR LOCATIONS OF EQUIPMENT AND DEVICES MUST BE RESOLVED BY THE ENGINEER. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM.
- 4. WIRE ROUTING:** THE ELECTRICAL SYSTEM AND WIRE ROUTING SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE OWNERS REPRESENTATIVE. ROUTING MAY BE MODIFIED BY THE CONTRACTOR AFTER VERIFYING ALL DIMENSIONS AND CONDITIONS FOR POSSIBLE INTERFERENCES WITH MECHANICAL EQUIPMENT, PLUMBING, DUCTWORK, STRUCTURAL SUPPORTS, ETC.
- 5. FIXTURES:** THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL REQUIRED SUPPORTS FOR FIXTURES AND EQUIPMENT. LIGHTING FIXTURES, FANS, ETC., SHALL BE SECURELY MOUNTED TO OUTLET BOXES AND BUILDING CONSTRUCTION. CONTRACTOR SHALL PROVIDE ATTIC STOCK FOR INTERIOR LED FIXTURES. FIXTURES SHALL HAVE A MANUFACTURES WARRANTY OF NO LESS THAN 5 YEARS.
- 6. OUTLET BOXES:** ALL OUTLET BOXES SHALL BE SQUARE AND PLUMB WITH THE SURFACE AND LABELED ON THE COVER PLATE WITH THE CIRCUIT NUMBER AND PANEL. OUTLET BOXES SHALL BE METAL, NON-GANG ABLE KNOCKOUT TYPE. MINIMUM SIZE SHALL BE 4"X2". PROVIDED PLASTER RINGS OF DEPTH REQUIRED TO REACH FINISHED SURFACES.
- 7. CIRCUITS:** IDENTIFY ALL CIRCUITS BY NUMBER IN PANEL BOARD INDEX CARDS. NUMBER CIRCUIT BREAKERS ACCORDINGLY.
- 8. PANEL SCHEDULE:** CONTRACTOR SHALL ADHERE TO THE PANEL SCHEDULE(S) AS SPECIFIED AND PROVIDE REVISED CIRCUIT DIRECTORY CARD(S). DIRECTORY CARD(S) SHALL BE NEATLY AND ACCURATELY TYPED, HAVE A TRANSPARENT COVER(S), AND CONTAIN ALL INFORMATION FROM THE DRAWING PANEL SCHEDULE.
- 9. NEUTRALS:** ALL CIRCUITS SHALL HAVE DEDICATED NEUTRALS AND GROUND WIRES. NEUTRALS SHALL NOT BE SHARED BY MORE THAN ONE PHASE CONDUCTOR.
- 10. GROUNDING:** PROVIDE ALL WIRING, GROUNDING CONDUCTORS, AND GROUNDING DEVICES REQUIRED TO COMPLY WITH ARTICLE 250 OF THE N.E.C.
- 11. RECEPTACLES:** INSTALL G.F.I. RECEPTACLES AS PER N.E.C. MOUNT RECEPTACLES. MOUNT SWITCH OUTLETS 4'-0" A.F.F. AND RECEPTACLES 18" A.F.F. UNLESS OTHERWISE NOTED.
- 12. COVER-PLATES:** COVER-PLATES FOR WIRING DEVICES SHALL BE SMOOTH, UNBREAKABLE NYLON, IVORY COLOR. COVER-PLATES FOR WEATHER PROOF DEVICES SHALL BE GASKETED LEXAN, SELF-CLOSING TYPE.
- 13. CONDUIT:** NO EXPOSED CONDUIT SHALL BE INSTALLED ON THE EXTERIOR SURFACES OF THE BUILDING.
- 14. WIRE AND CABLE:** INSTALL WIRE AND CABLE OF SIZE, TYPE, AND QUALITY INDICATED ON DRAWINGS OR AS REQUIRED BY THE N.E.C. CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE NOTED, AND SHALL ALLOW SUFFICIENT SLACK AT BOXES TO PERMIT PROPER TERMINATION AT DEVICE WITHOUT SPLICES.
- 15. MC:** METALLIC CLAD CABLE, MINIMUM SIZE #12 AWG SHALL BE USED FOR ALL INTERIOR WIRING NOT IN CONDUIT.
- 16. WIRE IDENTIFICATION:** ALL POWER WIRING SHALL BE PROPERLY COLOR CODED AND BE IN CONFORMANCE WITH THE N.E.C. APPROVED WIRE LABELS SHALL BE USED AT EACH JUNCTION BOX AND TERMINATION TO IDENTIFY THE WIRE WITH ITS PANEL AND CIRCUIT NUMBERS.
- 17. INSULATION TAPE** SHALL BE VINYL PLASTIC ELECTRICAL TAPE, MINIMUM 7 MIL THICK, SCOTCH #33 OR APPROVED EQUAL.
- 18. SPLICES:** SPLICES OF #10 WIRE AND SMALLER SHALL BE MADE WITH APPROVED TYPE PRESSURE CONNECTORS AND INSULATING CAPS (WIRE NUTS). SPLICES IN #8 WIRE AND LARGER SHALL BE MADE WITH APPROVED TYPE POLARIS AND INSULATED TO SAME THICKNESS AS THE ORIGINAL INSULATION, WITH AN APPROVED TAPE HAVING HIGH DIELECTRIC STRENGTH. ELIMINATE ALL UNNECESSARY SPLICES.
- 19. JUNCTION AND PULL BOXES** SHALL BE GALVANIZED FINISHED STEEL OF CODE THICKNESS AND OF AMPLE SIZE TO PROPERLY ENCLOSE THE CONDUCTORS. BOXES SHALL BE MOUNTED IN A READILY ACCEPTABLE LOCATION.
- 20. SEALTITE:** LIQUID-TIGHT FLEXIBLE METAL CONDUIT (SEALTITE) SHALL BE USED AT EXTERIOR TERMINATIONS WITH A MAXIMUM LENGTH OF 3 FT. AND MINIMUM SIZE 1/2".
- 21. HVAC** COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE POWER TO ALL REQUIRED MECHANICAL EQUIPMENT.
- 22. PHONE CABLES:** PROVIDE AND INSTALL EMPTY CONDUIT STUB UPS FOR PHONE AND DATA CABLING SYSTEM AS INDICATED. ALL PHONE AND DATA CABLES SHALL BE INSTALLED BY THE OWNERS SELECTED VENDOR.
- 23. ENERGIZING:** THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENERGIZING ALL DEVICES, FIXTURES, AND EQUIPMENT REQUIRING ELECTRICAL POWER.
- 24. COORDINATE FINAL LOCATION** OF ALL ELECTRICAL OUTLETS, SWITCHES, PANEL BOARDS, AND DISCONNECTS WITH OWNER AND ALL OTHER TRADES. PROVIDE COORDINATION FLOOR PLANS AND ELEVATIONS. OWNER HAS THE OPTION OF MOVING DEVICES UP TO 10' WITHOUT COST, PROVIDED SUCH DIRECTION IS GIVEN PRIOR TO INSTALLATION.

25. UPON COMPLETION OF THE WORK, THE ELECTRICAL CONTRACTOR SHALL DEMONSTRATE THAT THE INSTALLATIONS ARE COMPLETE AND IN PERFECT OPERATING ORDER WITH WIRING FREE FROM GROUNDS OR SHORTS AND WITH EQUIPMENT AND RACEWAYS PROPERLY GROUNDED.

26. RACEWAYS: ALL ABOVE GRADE WIRING, IN RACEWAYS OR OTHERWISE, SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING LINES. ALL HANGERS AND FASTENERS MUST BE COMPATIBLE WITH RACEWAY MATERIAL AND CONFORM TO THE N.E.C. CONDUIT SHALL BE LOCATED AND INSTALLED SO THAT IT WILL NOT BE NORMALLY VISIBLE AND FOLLOW THE ROUTING OF MECHANICAL PIPING OR DUCTWORK WHEN EITHER ARE PRESENT. BELOW GRADE RACEWAYS MAY BE INSTALLED IN A DIRECT HORIZONTAL PATH BETWEEN SERVICE POINTS, AND SHALL CONFORM TO THE N.E.C. PROVIDE PROPER SEPARATION BETWEEN LOW VOLTAGE CONDUIT AND DATA/COMMS/VOICE CABLING.

27. PVC: SCHEDULE 40, MINIMUM SIZE 1" POLYVINYL CHLORIDE (RIGID NON-METALLIC CONDUIT) SHALL BE USED FOR ALL EXTERIOR RGS AND BELOW GRADE WIRING. ALL UNDERGROUND CONDUIT SHALL BE BURIED 24" TO 30" BELOW GRADE AND SHALL BE MARKED 8" TO 10" ABOVE CONDUIT WITH 6" WIDE POLYETHYLENE YELLOW MARKING TAPE WHICH READS "CAUTION - ELECTRIC LINE BELOW." (PANDUIT CAT. #HTUGY-E) LONG SWEEP ELLS SHALL BE USED FOR ALL UNDERGROUND, INCOMING SERVICE CONDUITS.

28. PENETRATIONS AND PATCHING SHALL BE PERFORMED BY THE CONTRACTOR. WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER TO MATCH THE EXISTING CONSTRUCTIONS AND MEET WITH THE OWNERS APPROVAL. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL MATCH THE RATING OF THE ASSEMBLY.

29. EQUIPMENT TESTING: THE ELECTRICAL CONTRACTOR SHALL TEST ALL EQUIPMENT AND DEVICES INSTALLED TO THE SATISFACTION OF THE OWNER. RESPONSIBILITY AS TO THE OPERATION O FALL EQUIPMENT SHALL APPLY ONLY TO THOSE ITEMS FURNISHED BY THE ELECTRICAL CONTRACTOR, BUT THE ELECTRICAL CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ACCURATE WORK. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR AND TEST INSTRUMENTS REQUIRED FOR TESTING THIS ELECTRICAL WORK, INCLUDING INFRARED IMAGES.

30. O & M MANUAL: THE CONTRACTOR SHALL FURNISH THE OWNER WITH A DIGITAL O & M MANUAL THAT PROVIDES BASIC DATA RELATING TO THE DESIGN AND MAINTENANCE OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM. THE MANUAL SHALL INCLUDE A TABLE OF CONTENTS, TABS, ELECTRONIC AND HARD COPY OF AS BUILTS, AND MANUFACTURERS OPERATIONAL AND MAINTENANCE INFORMATION FOR ELECTRICAL EQUIPMENT.

31. SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ALL SUBSTITUTIONS: LIGHT FIXTURES, PANELS, WIRING DEVICES, PHONE PATCH PANEL, PHONE CABLE, AND PHONE DEVICES. SUBMIT NOT LESS THAN 1 DIGITAL OR 3 PHYSICAL COPIES OF SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL WITHIN 10 DAYS AFTER THE AWARD OF THE CONTRACT. ALL SUBSTITUTIONS MUST BE APPROVED BY THE OWNER.

32. FIRE ALARM: A COMPLETE AND OPERATIONAL SYSTEM SHALL BE PROVIDED TO COMPLY WITH DELAWARE STATE FIRE MARSHALL REQUIREMENTS.

33. QUALITY OF MATERIALS: ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE U.L. LABEL OR BE U.L. LISTED, WHERE APPLICABLE, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE N.E.C. AND NEMA STANDARDS. THE MATERIALS DESCRIBED ARE INTENDED TO SET A HIGH STANDARD OF COMMERCIAL QUALITY.

34. SPECIFIED ITEMS: WHERE MATERIALS OR EQUIPMENT ARE SPECIFIED BY MANUFACTURER OR BRAND NAME AND CATALOG NUMBER, SUCH DESIGNATION IS TO ESTABLISH STANDARDS OF QUALITY AND STYLE. THE CONTRACTOR ASSUMES THE RISK IF AN ITEM IS SUBSTITUTED FOR BID PURPOSES WITHOUT APPROVAL. MATERIALS SO SPECIFIED, OR APPROVED EQUALS, SHALL BE FURNISHED UNDER THE CONTRACT UNLESS CHANGED BY WRITTEN AGREEMENT. SUBSTITUTIONS MAY BE ACCEPTED ALONG WITH APPROPRIATE DEDUCTS TO THE BID PRICE.

35. RECORD DRAWINGS: THE CONTRACTORS SHALL KEEP AT THE JOB SITE A CLEAN SET OF DRAWINGS FOR HIS USE AND RECORD THEREON ANY AND ALL CHANGES OR DEVIATIONS FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT UP-TO-DATE AND SHALL BE TURNED OVER TO THE OWNER AT THE COMPLETION OF THE JOB.

36. OWNER'S RIGHTS: THE OWNER RESERVES THE RIGHT TO CHANGE, WITHOUT ADDITIONAL COST, THE LOCATION OF ANY OUTLET OR APPARATUS SPECIFIED OR SHOWN ON THE DRAWINGS, PROVIDED SUCH CHANGE DOES NOT ADD MORE THAN 10'-0" TO THE CONDUIT AND/OR CIRCUIT, AND CHANGE IS ORDERED BEFORE THE INSTALLATION FOR SAID WORK HAS COMMENCED.

37. GUARANTEE: THE CONTRACTOR SHALL SUBMIT A GUARANTEE IN WRITING TO THE OWNER THAT WARRANTS THE INSTALLATION IS FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER ALL WORK IS COMPLETED, ACCEPTED BY THE OWNER, AND THE OWNER OCCUPIES THE SPACE. PROVIDE A 5 YEAR WARRANTY ON LIGHTING FIXTURES.

38. COORDINATION: PROGRESS OF THE ELECTRICAL WORK SHALL BE COORDINATED WITH THE OWNER SO THAT ALL WORK WILL BE FULLY COMPLETED ON SCHEDULE. THE CONTRACTOR SHALL WORK IN HARMONY WITH OTHER TRADES. EXECUTION AND COORDINATION OF THE WORK SHALL BE PERFORMED IN AN INTELLIGENT MANNER.

39. SAFETY: THE CONTRACTOR SHALL PERFORM HIS WORK IN A CLEAN AND SAFE MANNER. HE SHALL, AT ALL TIMES, TAKE WHATEVER MEASURES ARE NECESSARY TO ASSURE THE SAFETY OF ALL PERSONNEL. THE CONTRACTOR SHALL CLEAN UP AFTER EACH WORKING DAY AND SECURE INCOMPLETE WORK IN A SAFE AND ORDERLY CONDITION. ALL DEBRIS SHALL BE REMOVED FROM THE SITE IN A TIMELY MANNER.

40. TEMPORARY LIGHTING AND POWER: ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING MEANS OF TEMPORARY POWER AND LIGHTING DURING CONSTRUCTION.

41. BRANCH CIRCUITS: BRANCH CIRCUIT CONDUCTORS SHALL BE A MINIMUM SIZE OF #12 AWG. FOR 120/208V CIRCUITS, WHERE THE CIRCUIT DISTANCE EXCEEDS ONE HUNDRED FEET TO THE FIRST DEVICE, THE SIZE OF THE WIRES SHALL BE INCREASED FROM THAT SPECIFIED BY THE FOLLOWING AMOUNTS.

LENGTH	HOMERUN	REMAINDER OF CIRCUIT
0-100'	AS SPECIFIED	AS SPECIFIED
101-175'	ONE SIZE	AS SPECIFIED
176-300'	TWO SIZES	ONE SIZE
301-450'	THREE SIZES	TWO SIZES

ELECTRICAL ABBREVIATIONS

ABBR	DESCRIPTION	ABBR	DESCRIPTION
A	AMPS	IG	ISOLATED GROUND
ABBR	ABBREVIATION	MCM	THOUSAND CIRCULAR MILS
AC	ALTERNATING CURRENT	KV	KILOVOLT
ADA	AMERICANS WITH DISABILITIES ACT	KVA	KILOVOLT AMPS
AF	ABOVE FINISHED FLOOR	KW	KILOWATTS
AFG	ABOVE FINISHED GRADE	KWH	KILOWATT HOURS
AIC	AMPS INTERRUPTING CURRENT	LSIG	LONGTIME, SHORT TIME, INSTANTANEOUS, GROUND
AL	ALUMINIUM	LP	LIGHT POLE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MAX	MAXIMUM
AV	AUDIO/VSUAL	MIN	MINIMUM
AWG	AMERICAN WIRE GAUGE	MVA	MEGAVOLT AMPS
C	CONDUIT	N	NEW
CB	CIRCUIT BREAKER	NC	NORMALLY CLOSED
CCTV	CLOSED CIRCUIT TELEVISION	NEC	NATIONAL ELECTRICAL CODE
CKT	CIRCUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CL	CLOCK	NEUT/N	NEUTRAL
DL	DAY-LIGHTING	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
DIA	DIAMETER	NIC	NOT IN CONTRACT
E	EMERGENCY	NL	NORMAL
ELEC	ELECTRIC	NO	NORMALLY OPEN
EMT	ELECTRICAL METALLIC TUBING	P	POLE
EQ	EQUAL	PC	PHOTOCELL
EX	EXISTING	PD	PROTECTIVE DEVICE
FUT	FUTURE	PH	PHASE
FA	FIRE ALARM	PNL	PANEL
FAA	FIRE ALARM ANUNCIATOR	RM	ROOM
FACP	FIRE ALARM CONTROL PANEL	SPD	SURGE PROTECTION DEVICE
FATC	FIRE ALARM TERMINAL CABINET	ST	SHUNT TRIP
FDR	FEEDER	T	TRIP SETTING
F	FRAME SIZE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
GFI	GROUND FAULT INTERRUPTER	TYP	TYPICAL
G OR GFCI	GROUND FAULT CIRCUIT INTERRUPTER	UL	UNDERWRITERS LABORATORY
GFEP	GROUND FAULT EQUIPMENT PROTECTION	UON	UNLESS OTHERWISE NOTED
GFP	GROUND FAULT PROTECTION	V	VOLTS
G	GROUND	WG	WEATHERPROOF AND GFCI
HP	HORSEPOWER	WP	WEATHER PROOF
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS	XFMR	TRANSFORMER
DISC	DISCONNECT	NF	NON FUSED

NOTES:
SOME ABBREVIATIONS MAY NOT BE USED WITHIN THESE DRAWINGS.

ELECTRICAL LEGEND

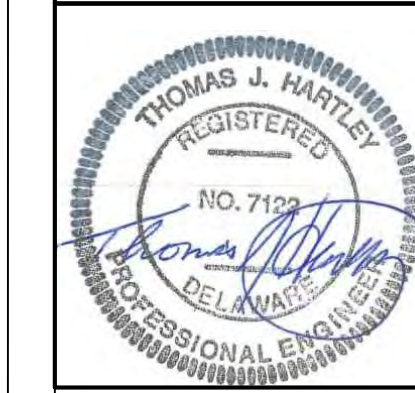
SYMBOL	DESCRIPTION
	LED SURFACE MOUNT. SEE FIXTURE SCHEDULE.
	EXIT/EMERGENCY LIGHT (POWERED FROM LOCAL CIRCUIT). SHADED FACE INDICATES DIRECTION OF TRAVEL. SEE FIXTURE SCHEDULE.
	EMERGENCY LIGHT. SEE FIXTURE SCHEDULE.
	OUTDOOR EGRESS LIGHT POWERED FROM LOCAL EXIT LIGHT. SEE FIXTURE SCHEDULE.
	2' X 2' GRID MOUNTED LED FIXTURE.
	EXTERIOR WALL PACK. SEE FIXTURE SCHEDULE.
	POLE MOUNTED AREA LIGHT. SEE FIXTURE SCHEDULE.
	HUBBELL 5262 SERIES 110V OUTLET DUPLEX OUTLET (48" A.F.F. TYP.). (G = GROUND FAULT CURRENT INTERRUPTER) (WP = WEATHERPROOF & GFCI W/BUBBLE COVER)
	CIRCUIT DESIGNATION (NOT NECESSARILY A DIRECT HOMERUN)
	ELECTRICAL PANEL
	LIGHTING CALCULATION POINT - NUMBER SIGNIFIES FOOTCANDLE LEVEL
	NON-FUSED DISCONNECT SWITCH
	OCCUPANCY SENSOR, POWER PACK. REFER TO SCHEDULE FOR DETAILS
	SWITCH - 48" A.F.F. U.O.N. - DIMMING SWITCH - PILOT LIGHT - MOTOR RATED
	SMOKE DETECTOR, HEAT DETECTOR
	FIRE ALARM PULL STATION
	CARD READER BACKBOX - COORDINATE WITH ACCESS CONTROL VENDOR
	ADA PUSHBUTTON BACKBOX - COORDINATE WITH ACCESS CONTROL VENDOR
	LOW VOLTAGE
	FIRE ALARM - COMBINATION FIRE ALARM HORN & FLASHING STROBE LIGHT W/ ADJUSTABLE LIGHT LEVEL. M.H. 7'-6" A.F.F.

DATE	2025-12-12
REVISION	2026-01-05
NO.	1
ISSUED FOR PERMIT	

Diamond State Engineering
 3008 Woodbine Blvd., Woodbridge, NJ 07095
 Phone: (201) 977-7474 Fax: (201) 977-1208

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

ELECTRICAL NOTES AND SYMBOLS

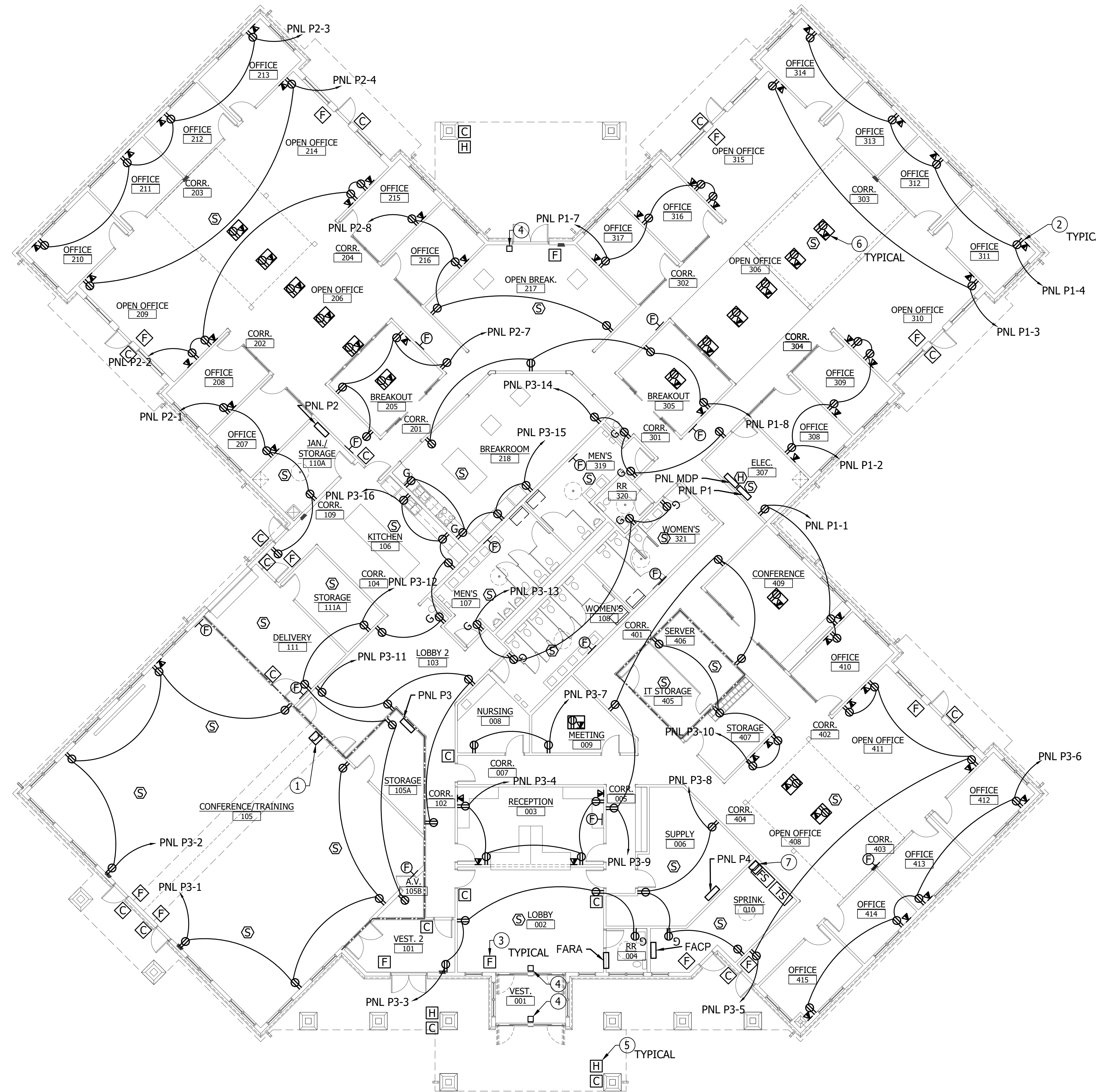


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DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

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DRAWING NOTES
(APPLIES TO THIS DRAWING)

- ① PROVIDE JUNCTION BOX, CONDUIT, CONDUCTORS AND CONNECTIONS FOR SKYFOLD DOOR SYSTEM.
- ② PROVIDE BACKBOX, RECEPTACLE, CONDUIT AND CONDUCTORS.
- ③ PROVIDE BACKBOX AND CONDUIT FOR FIRE ALARM DEVICE. COORDINATE FINAL LOCATIONS WITH FIRE ALARM VENDOR.
- ④ PROVIDE ABOVE CEILING JUNCTION BOX, CONDUIT, AND CONDUCTORS TO SERVE POWERED DOORS.
- ⑤ PROVIDE EXTERIOR BACKBOX, CONDUIT AND CONDUCTORS. COORDINATE FINAL LOCATIONS WITH ARCHITECT/OWNER.
- ⑥ COORDINATE INSTALLATION AND POWER SUPPLY WITH FURNITURE SUPPLIERS. SEE DETAIL ON E-5.0.
- ⑦ PROVIDE JUNCTION BOX, CONDUIT, AND CONDUCTORS FOR CIRCUITRY CONNECTION TO UNIT HEATER. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.



ELECTRICAL FLOOR PLAN - RECEPTACLES AND SPEICAL SYSTEMS
3/32" = 1'-0"

0 8' 16' 32'
SCALE: 3/32" = 1'-0"

1
E 2.0

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B	ISSUED FOR PERMIT	2026-01-05
1		11/9/2026

Diamond State Engineering
Professional Engineering Firm
3008 Woodbine Blvd., Suite 100
Bridgetown, DE 19921

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

**ELECTRICAL FLOOR PLAN
RECEPTACLES AND SPECIAL
SYSTEMS**

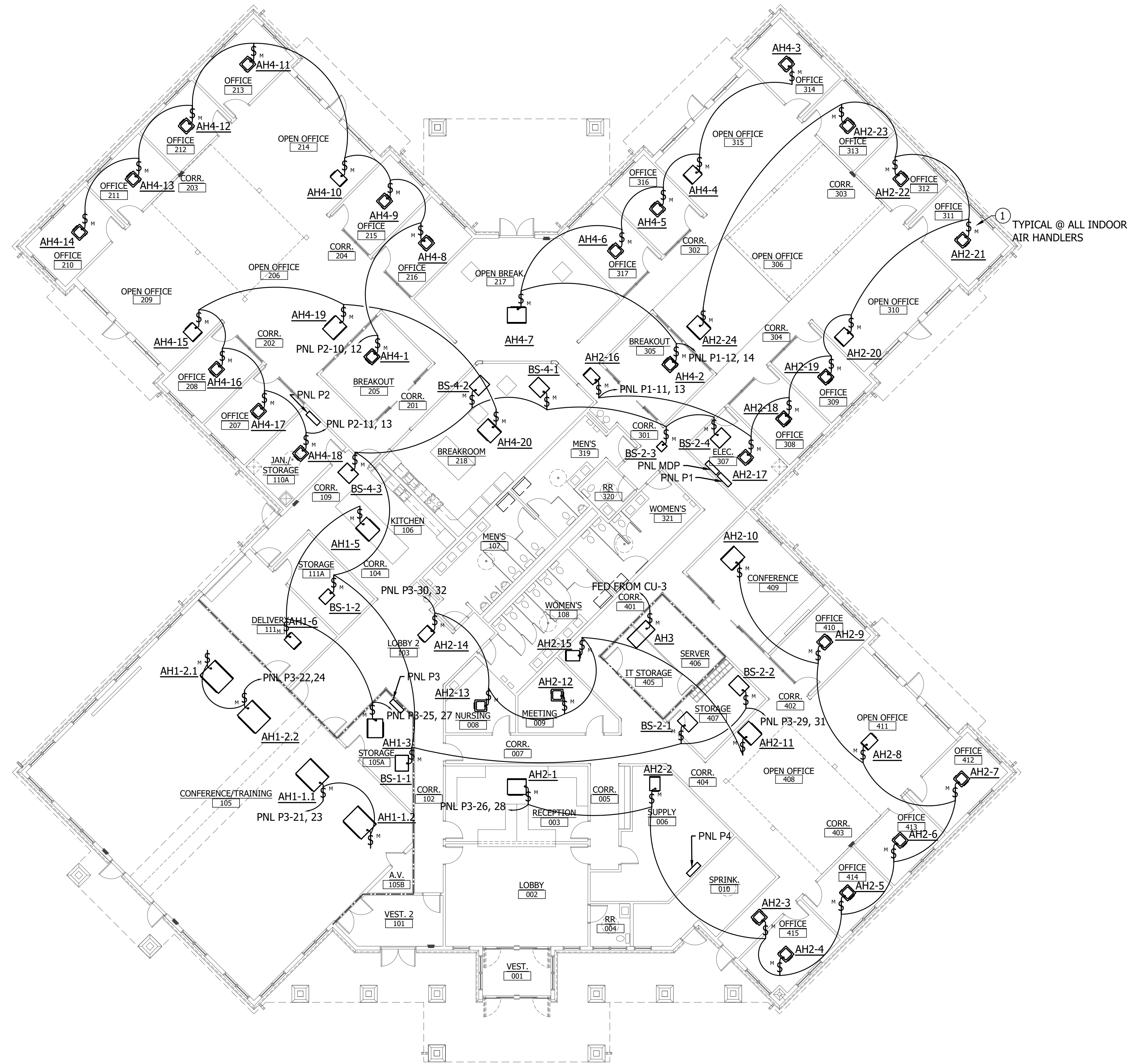


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DSE JOB #	: 25-2-0007
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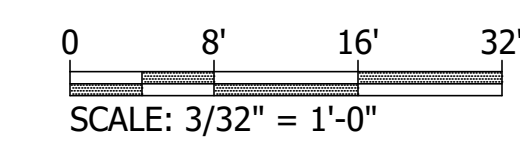
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DRAWING NOTES
(APPLIES TO THIS DRAWING)

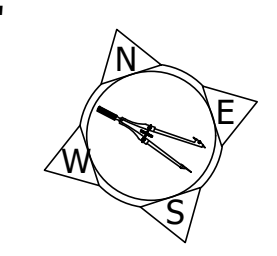
- 1 PROVIDE MOTOR RATED SWITCH, BACK BOX, CONDUIT, CONDUCTORS, AND CONNECTIONS.



1 TYPICAL @ ALL INDOOR AIR HANDLERS



1
E 2.0

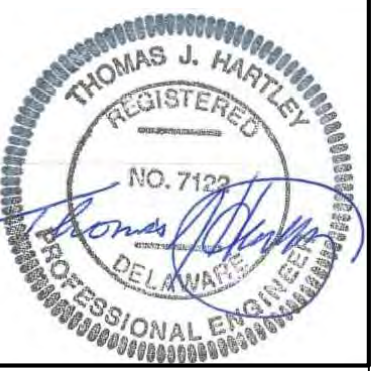


ELECTRICAL FLOOR PLAN - HVAC POWER
3/32" = 1'-0"

Diamond State Engineering
Professional Engineering
3008 Woodbine Blvd., Suite 200
P.O. Box 13029, Norfolk, VA 23509

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

ELECTRICAL FLOOR PLAN
HVAC POWER



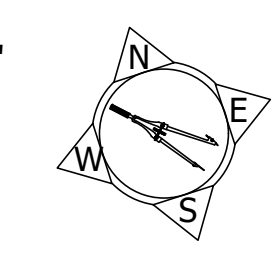
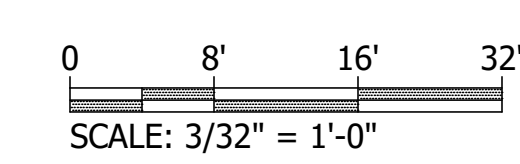
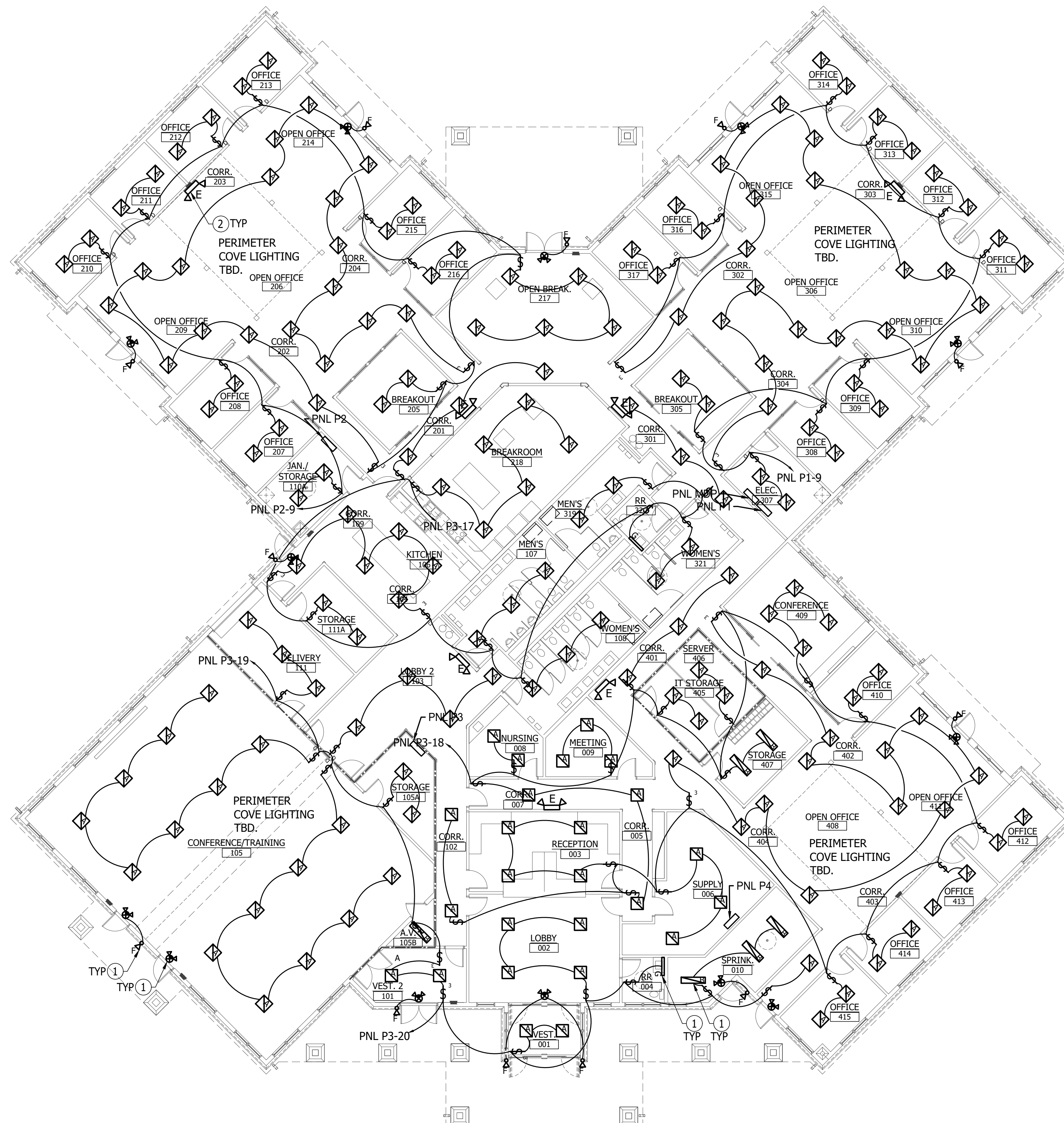
SCALE : AS NOTED
DESIGN BY : BEM
DRAWN BY : BEM
CHECKED BY : TJH/PG
DSE JOB # : 25-2-0007
DATE : 07/08/2025

E 2.1

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B	ISSUED FOR PERMIT	2026-01-05
1		11/9/2026

DRAWING NOTES
(APPLIES TO THIS DRAWING)

- 1 PROVIDE LIGHT, CONDUIT, CONDUCTORS, MOUNTING HARDWARE, AND ALL REQUIRED APPURTENANCES.
- 2 EXIT LIGHT TO BE SERVED BY THE NON SWITCHED LEG OF THE ADJACENT LIGHTING CIRCUIT.



ELECTRICAL FLOOR PLAN - LIGHTING
3/32" = 1'-0"

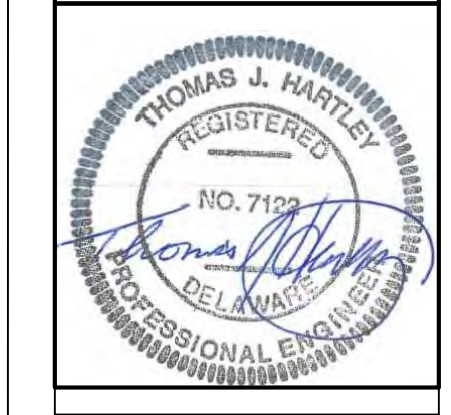
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NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

Diamond State Engineering
 3008 Woodbine Blvd.
 Bridgeville, PA 19003
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NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

ELECTRICAL FLOOR PLAN
LIGHTING

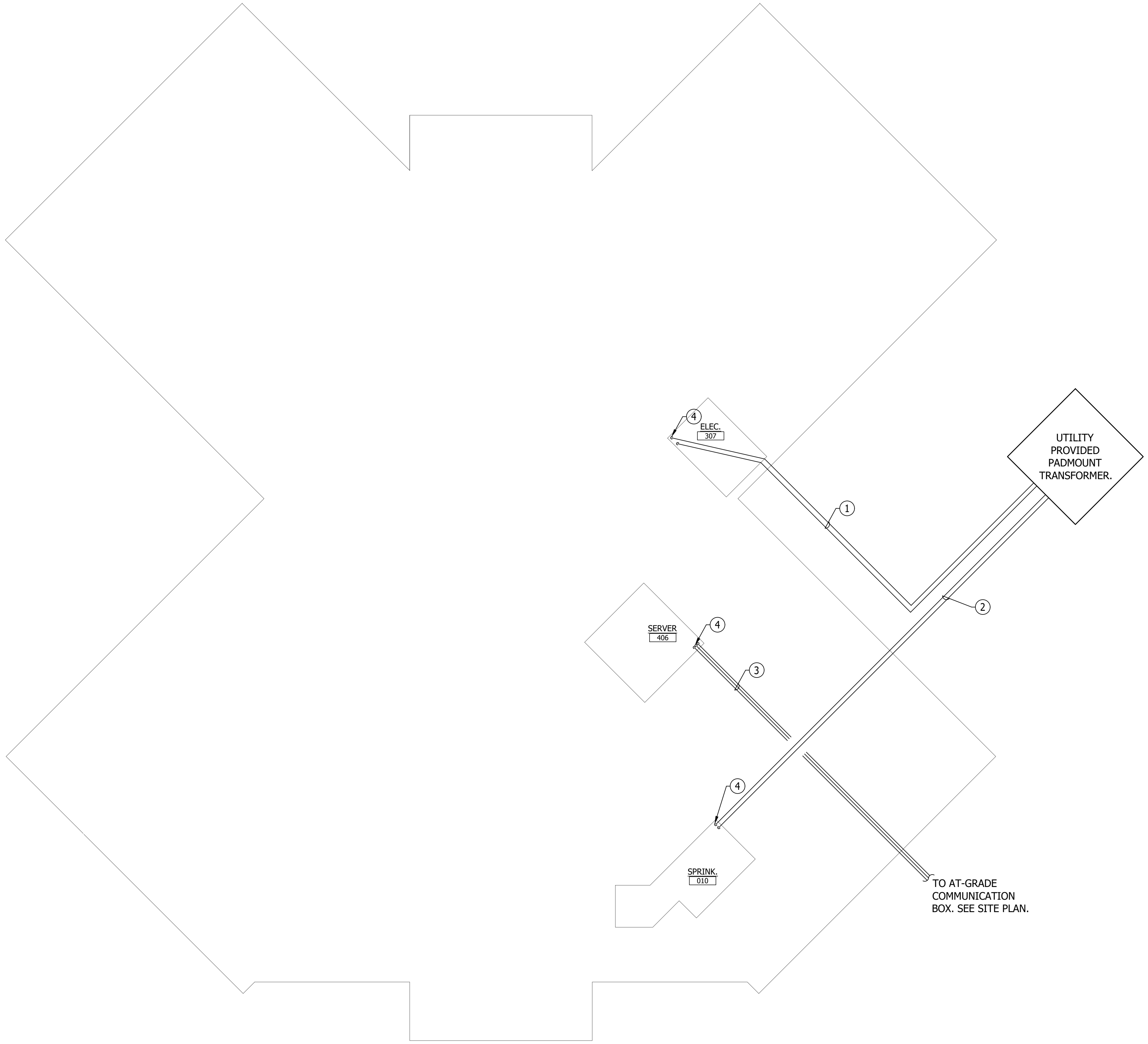


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DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

E 2.2

25-2-0007_E2.0 ELECTRICAL PLANS, 1/9/2026 2:40 PM, ARCH D (36.00 X 24.00 INCHES), Katie Beachy

25-2-007_E2.0 ELECTRICAL PLANS, 1/9/2026 2:41 PM, ARCH D (36.00 X 24.00 INCHES), Katie Beachy



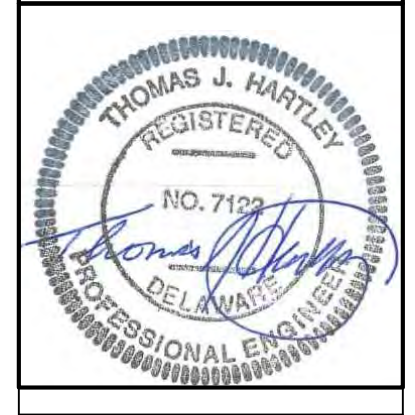
DRAWING NOTES (APPLIES TO THIS DRAWING)	
①	UNDERGROUND FEEDER SERVING PANEL MDP. SEE SINGLE LINE DIAGRAM FOR ADDITIONAL DETAILS.
②	UNDERGROUND FEEDER SERVING THE FIRE PUMP CONTROL PANEL. COORDINATE FINAL STUB UP LOCATION WITH FIRE PROTECTION VENDOR.
③	UNDERGROUND CONDUIT WITH INNERDUCT TO SERVE INCOMING PHONE/INTERNET. COORDINATE FINAL LOCATION OF STUB UP WITH IT VENDOR.
④	PROVIDE 18" STUB UP.

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	1/19/2026

Diamond State Engineering
 Mechanical, Electrical, Plumbing, Fire, and Energy
 3008 Peachtree Dunwoody Road, Suite 100
 Atlanta, GA 30328
 Phone: (404) 497-1100

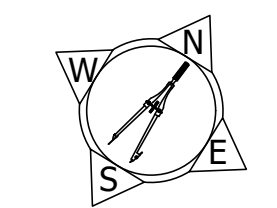
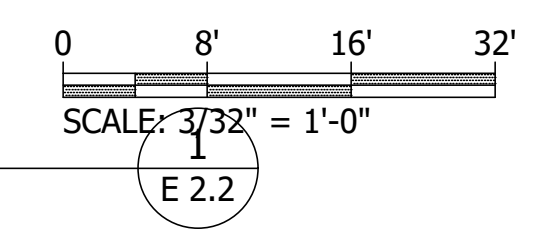
NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

**ELECTRICAL UNDER
 SLAB PLAN**



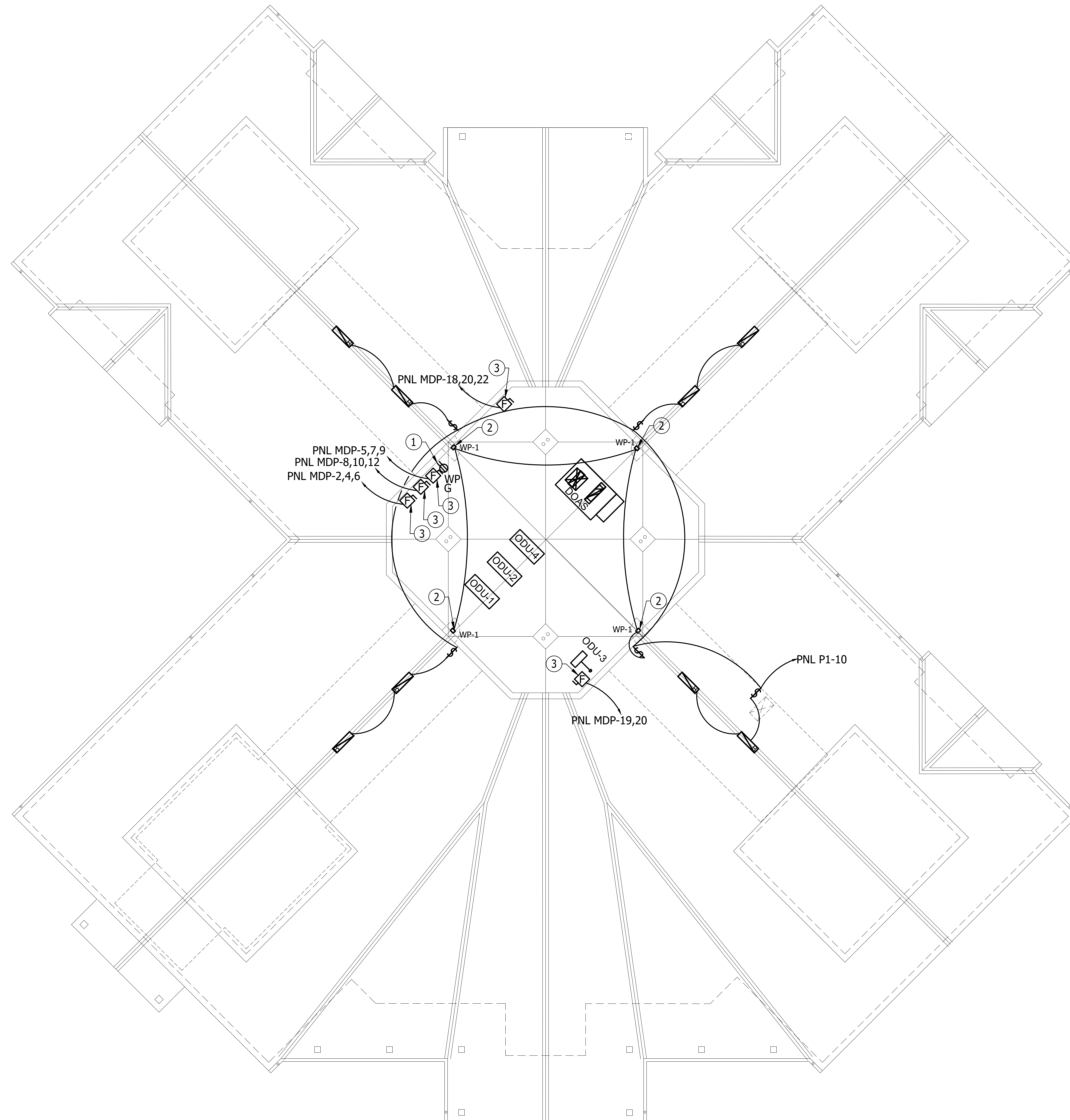
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DESIGN BY	: BEM
DRAWN BY	: BEM
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DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

ELECTRICAL UNDER SLAB PLAN
 3/32" = 1'-0"

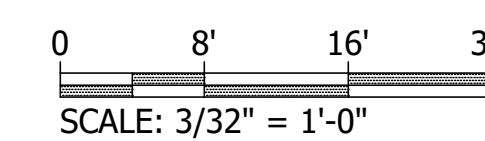


DRAWING NOTES
(APPLIES TO THIS DRAWING)

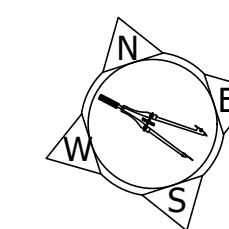
- ① PROVIDE WEATHERPROOF WHILE IN USE GFI RECEPTACLE @ 18" ABOVE FINISHED ROOF.
- ② FIXTURE INTENDED TO BE INSTALLED OVER MAN DOOR. COORDINATE FINAL HEIGHT WITH ARCHITECTURAL FEATURES.
- ③ PROVIDE NEMA 3R DISCONNECT. COORDINATE FUSING REQUIREMENTS WITH FINAL EQUIPMENT SELECTIONS PRIOR TO PURCHASE.



ELECTRICAL ROOF PLAN
3/32" = 1'-0"



1
E 2.3



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NEW CONSTRUCTION FOR:
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BRIDGEVILLE, DE

ELECTRICAL ROOF PLANS



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DSE JOB # : 25-2-0007
DATE : 07/08/2025

E 2.4

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

25-2-0007_E2.0 ELECTRICAL PLANS, 1/9/2026 2:41 PM, ARCH D (36.00 X 24.00 INCHES), Katie Beachy

DISTRIBUTION PANELBOARD: PANEL MDP						
VOLTS: 208Y120		MOUNTING: SURFACE		A.I.C. RATING: 14K		
PHASE WIRE: 3 PHASE, 4 WIRE		ENCLOSURE: TYPE 1		MAINS TYPE: MCB		
SERVED BY: Utility Transformer		EQUIPMENT: EQUIPMENT GRD BAR		MAINS RATING: 800A		
SERVICE ENTRANCE RATED		NEUTRAL BAR		MCB RATING: 800A		
ROOM DESIGNATION: ELEC RM LOCATION:						
CKT NO.	CKT P	BKR TRIP	CIRCUIT DESCRIPTION	CIRCUIT DESCRIPTION	CKT BKR TRIP P	CKT NO.
1	1	20A	SKY FOLD DOOR - CONTROLS			2
3	1	20A	WATER HEATER HW-2	ODU-1	90A 3	4
5						6
7	3	90A	ODU-4			8
9						10
11	2	20A	LTS - WEST PARKING	ODU-2	110A 3	12
13						14
15	2	50A	WATER HEATER HW-1	LTS - EAST PARKING	20A 2	16
17						18
19	2	25A	CU-3	DOAS-1	225A 3	20
21						22
23						24
25	3	20A	SKY FOLD DOOR	PANEL P2	200A 3	26
27						28
29						30
31	3	200A	PANEL P1	PANEL P4	100A 3	32
33						34
35				SPARE	20A 1	36
37	3	200A	PANEL P3	SPARE	20A 1	38
39				SPARE	20A 1	40
41	1	20A	SPARE	SPARE	20A 1	42

PANEL MDP
SCALE: N.T.S.

1
E 4.0

DISTRIBUTION PANELBOARD: PANEL P1						
VOLTS: 208Y120		MOUNTING: SURFACE		A.I.C. RATING: 10K		
PHASE WIRE: 3 PHASE, 4 WIRE		ENCLOSURE: TYPE 1		MAINS TYPE: M.C.B.		
SERVED BY: PANEL MDP		EQUIPMENT: EQUIPMENT GRD BAR NEUTRAL BAR		MAINS RATING: 200A MCB RATING: --		
ROOM DESIGNATION: ELEC RM LOCATION:						
CKT NO.	CKT P	BKR TRIP	CIRCUIT DESCRIPTION	KVAPER PHASE	CIRCUIT DESCRIPTION	CKT BKR TRIP P NO.
1	3	20A	SOUTH EAST ROOM RECPTS.	-- -- --	SOUTH EAST OFFICE RECPTS.	20A 3 2
3	3	20A	EAST OPEN OFFICE RECPTS.	-- -- --	EAST OFFICE RECPTS.	20A 3 4
5	3	20A	SPARE	-- -- --	SPARE	20A 3 6
7	3	20A	NORTH EAST OFFICE RECPTS. 2	-- -- --	EAST BREAKOUT ROOM RECPTS.	20A 3 8
9	3	20A	EAST LTS.	-- -- --	ROOF/ATTIC LTS.	20A 3 10
11	2	15A	A#2 INDOOR UNITS 15-24	-- -- --	A#4 INDOOR UNITS 2-7	15A 2 12
13	3	20A	SPARE	-- -- --	SPARE	20A 3 14
15	3	20A	SPARE	-- -- --	SPARE	20A 3 16
17	3	20A	SPARE	-- -- --	SPARE	20A 3 18
19	3	20A	SPARE	-- -- --	SPARE	20A 3 20
21	3	20A	SPARE	-- -- --	SPARE	20A 3 22
23	3	20A	SPARE	-- -- --	SPARE	20A 3 24
25	3	20A	SPARE	-- -- --	SPARE	20A 3 26
27	3	20A	SPARE	-- -- --	SPARE	20A 3 28
29	3	20A	SPARE	-- -- --	SPARE	20A 3 30
31	3	20A	SPARE	-- -- --	SPARE	20A 3 32
33	3	20A	SPARE	-- -- --	SPARE	20A 3 34
35	3	20A	SPARE	-- -- --	SPARE	20A 3 36
37	3	20A	SPARE	-- -- --	SPARE	20A 3 38
39	3	20A	SPARE	-- -- --	SPARE	20A 3 40
41	3	20A	SPARE	-- -- --	SPARE	20A 3 42

PANEL P1
SCALE: N.T.S.

2
E 4.0

DISTRIBUTION PANELBOARD: PANEL P2						
VOLTS: 208Y120		MOUNTING: SURFACE		A.I.C. RATING: 10K		
PHASE WIRE: 3 PHASE, 4 WIRE		ENCLOSURE: --		MAINS TYPE: M.L.O.		
SERVED BY: PANEL MDP		EQUIPMENT: NEUTRAL BAR EQUIPMENT GRD BAR		MAINS RATING: 200A MCB RATING: --		
ROOM DESIGNATION: JANITORS LOCATION:						
CKT NO.	CKT P	BKR TRIP	CIRCUIT DESCRIPTION	KVAPER PHASE	CIRCUIT DESCRIPTION	CKT BKR TRIP P NO.
1	1	20A	NORTH WEST OFFICE RECPTS.	-- -- --	NORTH OPEN OFFICE RECPTS. 1	20A 1 2
3	1	20A	NORTH OFFICE RECPTS.	-- -- --	NORTH OPEN OFFICE RECPTS. 2	20A 1 4
5	1	20A	SPARE	-- -- --	SPARE	20A 1 6
7	1	20A	NORTH BREAKOUT ROOM	-- -- --	NORTH EAST OFFICE RECPTS. 1	20A 1 8
9	1	20A	NORTH HLTS.	-- -- --	A#4 INDOOR UNITS 1, 8-14	15A 2 10
11	2	15A	A#4 INDOOR UNITS 15-20	-- -- --	RANGE	20A 2 12
13	1	20A	SPARE	-- -- --	SPARE	20A 1 14
15	1	20A	SPARE	-- -- --	SPARE	20A 1 16
17	1	20A	SPARE	-- -- --	SPARE	20A 1 18
19	1	20A	SPARE	-- -- --	SPARE	20A 1 20
21	1	20A	SPARE	-- -- --	SPARE	20A 1 22
23	1	20A	SPARE	-- -- --	SPARE	20A 1 24
25	1	20A	SPARE	-- -- --	SPARE	20A 1 26
27	1	20A	SPARE	-- -- --	SPARE	20A 1 28
29	1	20A	SPARE	-- -- --	SPARE	20A 1 30
31	1	20A	SPARE	-- -- --	SPARE	20A 1 32
33	1	20A	SPARE	-- -- --	SPARE	20A 1 34
35	1	20A	SPARE	-- -- --	SPARE	20A 1 36
37	1	20A	SPARE	-- -- --	SPARE	20A 1 38
39	1	20A	SPARE	-- -- --	SPARE	20A 1 40
41	1	20A	SPARE	-- -- --	SPARE	20A 1 42

PANEL P2
SCALE: N.T.S.

2
E 4.0

DISTRIBUTION PANELBOARD: PANEL P3						
VOLTS: 208Y120		MOUNTING: SURFACE		A.I.C. RATING: 10K		
PHASE WIRE: 3 PHASE, 4 WIRE		ENCLOSURE: TYPE 1		MAINS TYPE: M.L.O.		
SERVED BY: PANEL MDP		EQUIPMENT: EQUIPMENT GRD BAR NEUTRAL BAR		MAINS RATING: 200A MCB RATING: --		
ROOM DESIGNATION: STORGE 105A LOCATION:						
CKT NO.	CKT P	BKR TRIP	CIRCUIT DESCRIPTION	KVAPER PHASE	CIRCUIT DESCRIPTION	CKT BKR TRIP P NO.
1	1	20A	WEST CONF ROOM 1 RECPTS.	-- -- --	WEST CONF ROOM 2 RECPTS.	20A 1 2
3	1	20A	SOUTHWEST LOBBY RECPTS.	-- -- --	RECEPTION RECPTS.	20A 1 4
5	1	20A	SOUTH OPEN OFFICE RECPTS.	-- -- --	SOUTH OFFICE RECPTS.	20A 1 6
7	1	20A	SOUTHWEST ROOMS RECPTS.	-- -- --	SUPPLY/SPRINKLER RECPTS.	20A 1 8
9	1	20A	SOUTH HALLWAY RECPTS.	-- -- --	IT / STORAGE RECPTS.	20A 1 10
11	1	20A	WEST LOBBY RECPTS.	-- -- --	WEST ROOMS RECPTS.	20A 1 12
13	1	20A	BATHROOM RECPTS.	-- -- --	MISC. CENTER RECPTS.	20A 1 14
15	1	20A	BREAKROOM RECPTS.	-- -- --	KITCHEN RECPTS.	20A 1 16
17	1	20A	CENTER LTS.	-- -- --	SOUTH LTS.	20A 1 18
19	1	20A	WEST LTS.	-- -- --	SOUTH WEST LTS.	20A 1 20
21	2	15A	A#1 INDOOR UNIT 1.1 AND 1.2	-- -- --	A#1 INDOOR UNIT 2.1 AND 2.2	15A 2 22
23	2	15A	A#1 INDOOR UNIT 3.1, 3.5	-- -- --	A#2 INDOOR UNIT 1-10	15A 2 24
25	2	15A	BRANCH SELECT OR BOXES	-- -- --	A#2 INDOOR UNITS 11-15	15A 2 26
27	2	15A	BRANCH SELECT OR BOXES	-- -- --	A#2 INDOOR UNITS 11-15	15A 2 28
29	2	15A	BRANCH SELECT OR BOXES	-- -- --	A#2 INDOOR UNITS 11-15	15A 2 30
31	2	15A	BRANCH SELECT OR BOXES	-- -- --	A#2 INDOOR UNITS 11-15	15A 2 32
33	3	20A	SPARE	-- -- --	SPARE	20A 3 34
35	3	20A	SPARE	-- -- --	SPARE	20A 3 36
37	3	20A	SPARE	-- -- --	SPARE	20A 3 38
39	3	20A	SPARE	-- -- --	SPARE	20A 3 40
41	3	20A	SPARE	-- -- --	SPARE	20A 3 42

PANEL P3
SCALE: N.T.S.

2
E 4.0

DISTRIBUTION PANELBOARD: PANEL P4						
VOLTS: 208Y120		MOUNTING: SURFACE		A.I.C. RATING: 10K		
PHASE WIRE: 3 PHASE, 4 WIRE		ENCLOSURE: --		MAINS TYPE: M.L.O.		
SERVED BY: PANEL MDP		EQUIPMENT: NEUTRAL BAR EQUIPMENT GRD BAR		MAINS RATING: -- MCB RATING: 100A		
ROOM DESIGNATION: SPRINKLER RM LOCATION:						
CKT NO.	CKT P	BKR TRIP	CIRCUIT DESCRIPTION	KVAPER PHASE	CIRCUIT DESCRIPTION	CKT BKR TRIP P NO.
1						2
3	3	20A	JOCKEY PUMP	-- -- --	UNIT HEATER	30A 3 4
5						6
7						8
9	3	20A	SPRINKLER SYSTEM	-- -- --	FACP	20A 3 10
11						12
13	3	20A	SPARE	-- -- --	SPARE	20A 3 14
15	3	20A	SPARE	-- -- --	SPARE	20A 3 16
17	3	20A	SPARE	-- -- --	SPARE	20A 3 18
19	3	20A	SPARE	-- -- --	SPARE	20A 3 20
21	3	20A	SPARE	-- -- --	SPARE	20A 3 22
23	3	20A	SPARE	-- -- --	SPARE	20A 3 24

PANEL P4
SCALE: N.T.S.

2
E 4.0

LUMINAIRE SCHEDULE											
TYPE	DESCRIPTION	BASIS OF DESIGN		BALLAST DRIVER		SOURCE		WATTS	INPUT VOLTAGE	MOUNTING	COMMENTS
		MANUFACTURER	SERIES	QTY	TYPE	TYPE	LUMENS				
A	LOW PROFILE CENTER BASKET TROFFER. FROSTED PMMA LENS, COLD ROLLED STEEL FRAME, DIMMING	ATLAS	TLP22S2-4L	1	LED	LED	4000-6500	3500K-5000K	40	120/277V	LOW PROFILE TROFFER
B	LOW PROFILE CENTER BASKET TROFFER. FROSTED PMMA LENS, COLD ROLLED STEEL FRAME, DIMMING	ATLAS	TLP14S2-4L	1	LED	LED	2,500-4,000	3500K-5000K	79	120/277V	SURFACE MOUNT TROFFERS
C	COMMERCIAL DOWNLIGHT, 16 GAUGE SPUN ALUMINUM HOUSING, CLASS 2	ATLAS	CDL4SEL-1-2L	1	LED	LED	1,000-2,000	3500K	10-20	120/277V	DIRECT MOUNT
EX	ALUMINUM HOUSING WITH ACRYLIC FACE LED EXIT/EMERGENCY COMBO, RATED FOR DAMP LOCATIONS	THE EXIT LIGHT CO.	COMBOELR	1	LED	LED	250	-	3	120/277V	J-BOX OR END MOUNTING
E	THERMOPLASTIC LED EMERGENCY LIGHT, 2 POP-OUT ADJUSTABLE HEADS, RATED FOR DAMP LOCATIONS	THE EXIT LIGHT CO.	EL-F2	1	LED	LED	1	-	3	120/277V	UNIVERSAL J-BOX PATTERN KNOCK-OUT
F	OUT DOOR ADJUSTABLE LED REMOTE HEADS, FLAME RETARDANT THERMOPLASTIC HOUSING, RATED FOR WET LOCATIONS	THE EXIT LIGHT CO.	RHB-WPL	1	LED	LED	-	-	1	120/277V	J-BOX
G	CONTEMPORARY SQUARE VANTY WITH SWITCHABLE COLOR TEMPERATURE AND ACRYLIC DIFFUSER.	LITHONIA LIGHTING	FMVCSLS	1	LED	LED	750-3,240	3000K-4000K	9.5-36	120/277V	J-BOX
S-1	EAGLE SERIES AREA LIGHT & STRAIGHT STEEL POLE COMBO, POLYCARBONATE LENS, DIE CAST ALUMINUM, TYPE FT DISTRIBUTION.	ATLAS	PXSLPMS	1	LED	LED	12000-24000	3500K-5000K	79-170	120/277V	25' FIXTURE HEIGHT - 25' POLE ON 6" POLE BASE
S-2	EAGLE SERIES AREA LIGHT & STRAIGHT STEEL POLE COMBO, POLYCARBONATE LENS, DIE CAST ALUMINUM, TYPE 5 DISTRIBUTION	ATLAS	PXSLPMS	1	LED	LED	12000-24000	3500K-5000K	79-170	120/277V	25' FIXTURE HEIGHT - 25' POLE ON 6" POLE BASE
WP-1	INDEPENDENCE TALL WALL LIGHT, POLYCARBONATE HOUSING, RATED FOR WET LOCATIONS, CLASS 2	ATLAS	WS2L	1	LED	LED	2000	4000K-5000K	18	120/277V	J-BOX

LIGHTING SCHEDULE
SCALE: N.T.S.

3
E 4.0

REVISION	DATE	ISSUED FOR PERMIT
1	2025-12-12	1/19/2026

NO. A B 1

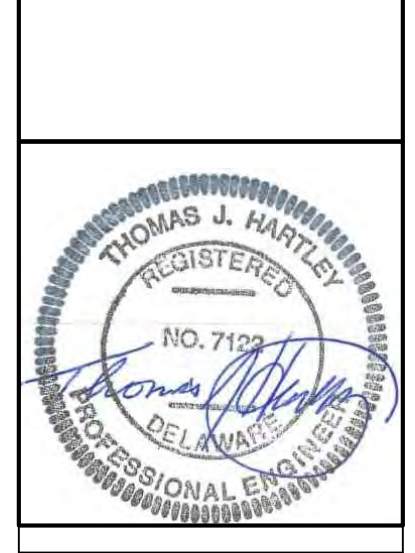
ISSUED FOR PERMIT

1/19/2026

2025-01-05

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

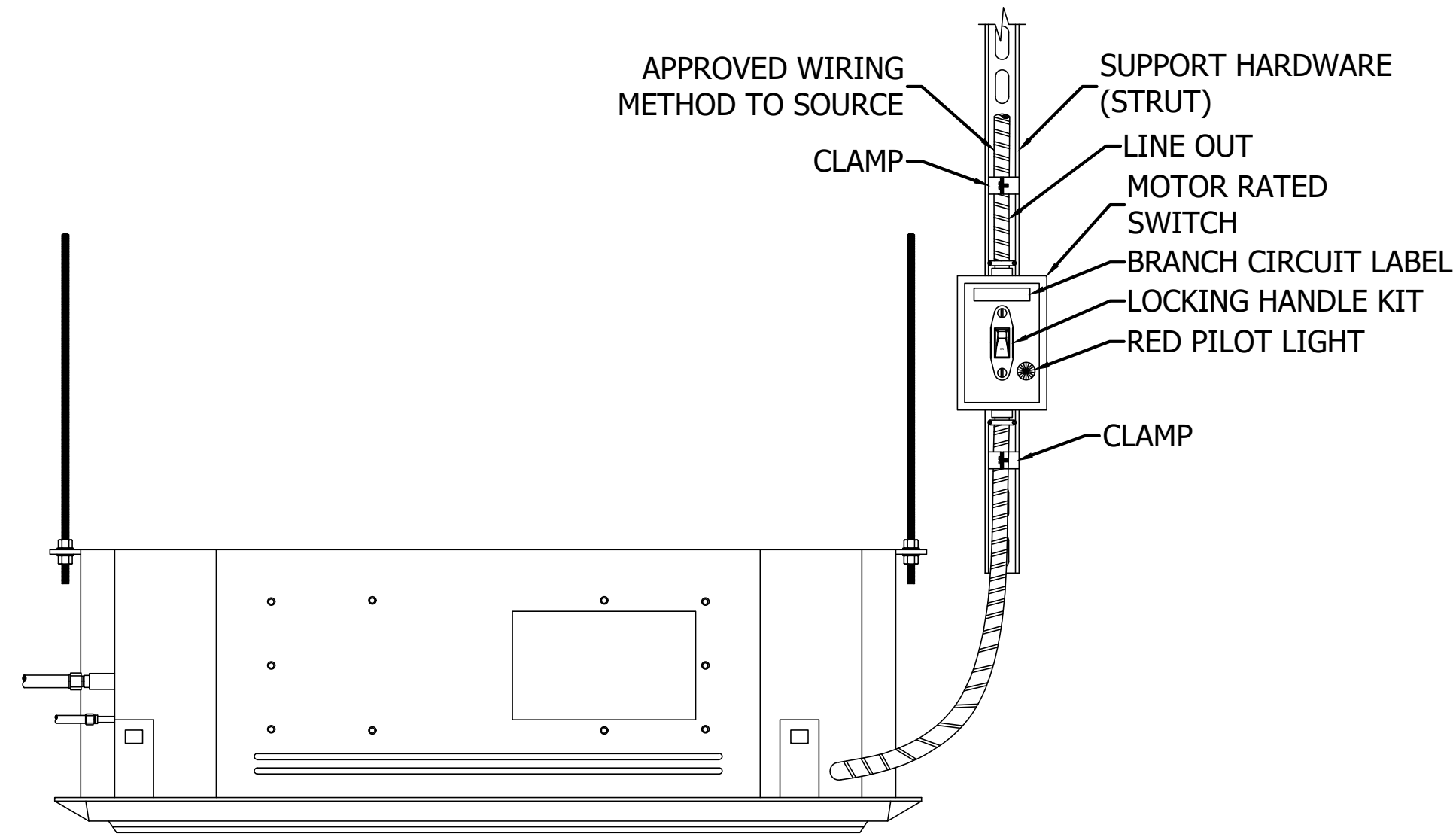
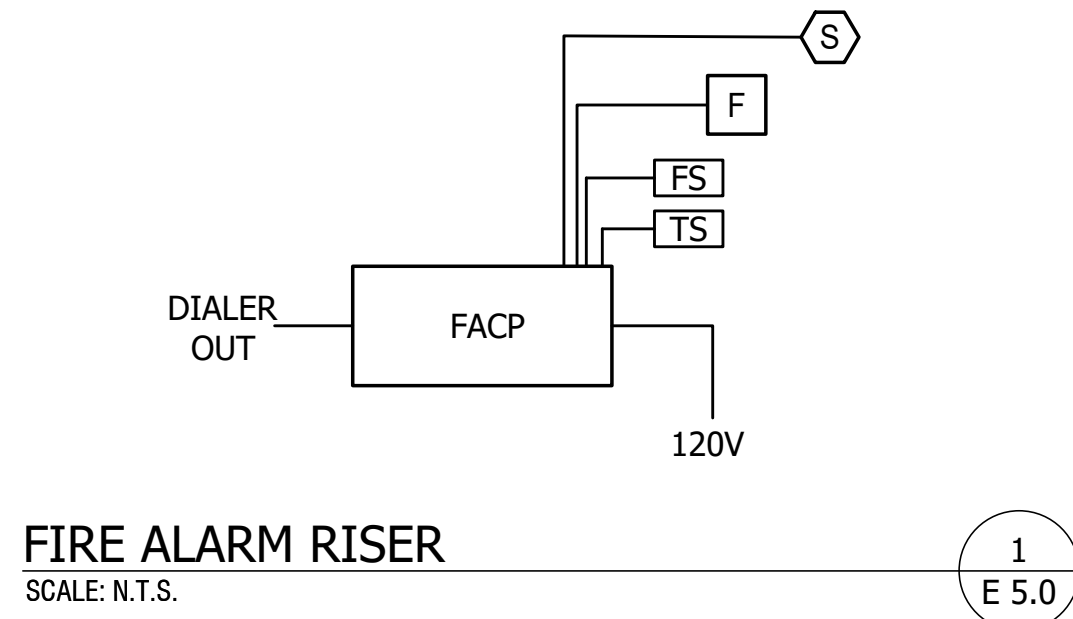
ELECTRICAL SCHEDULES



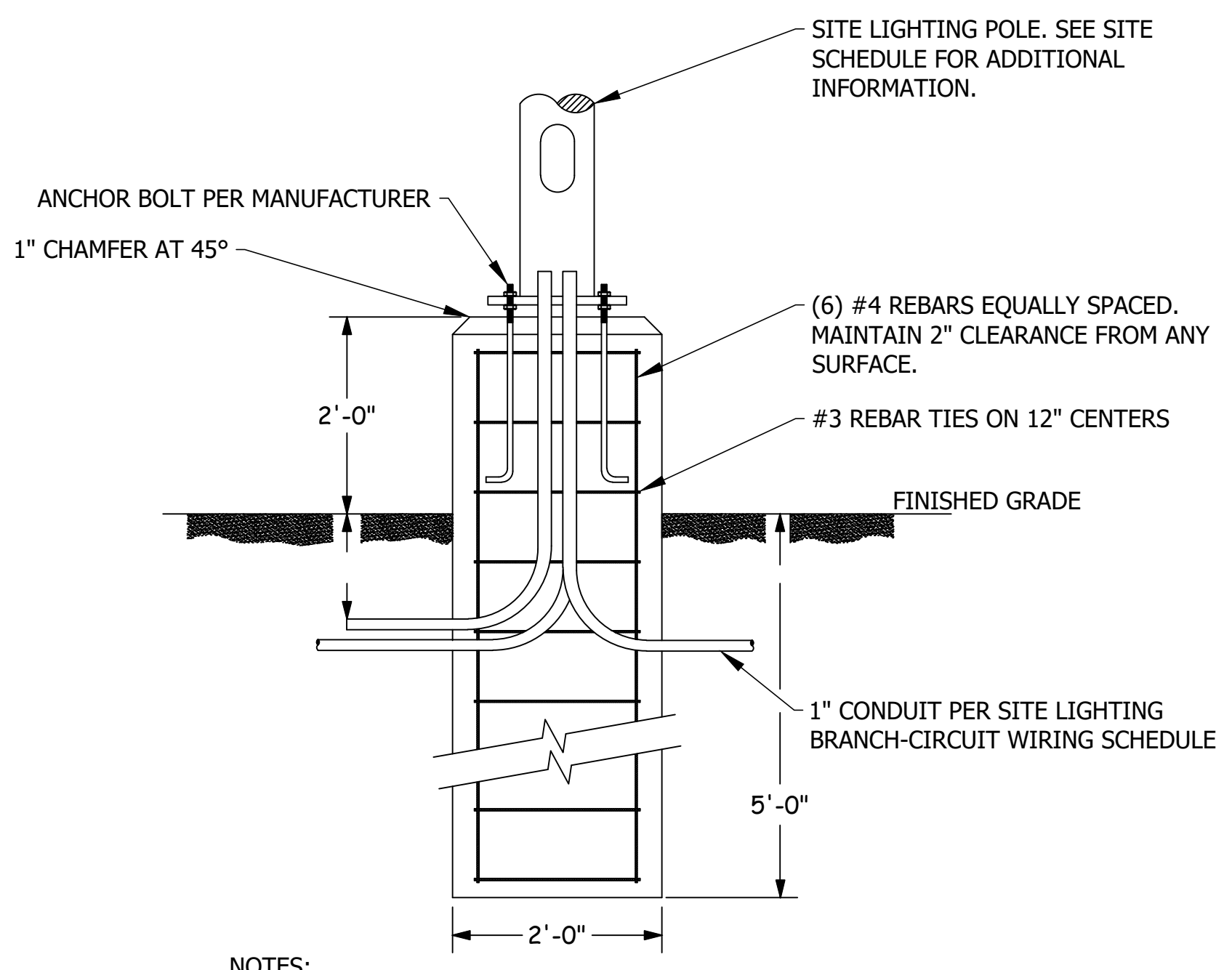
SCALE: AS NOTED
DESIGN BY: BEM
DRAWN BY: BEM
CHECKED BY: TJH/PG
DSE JOB #: 25-2-0007
DATE: 07/08/2025

E 4.0

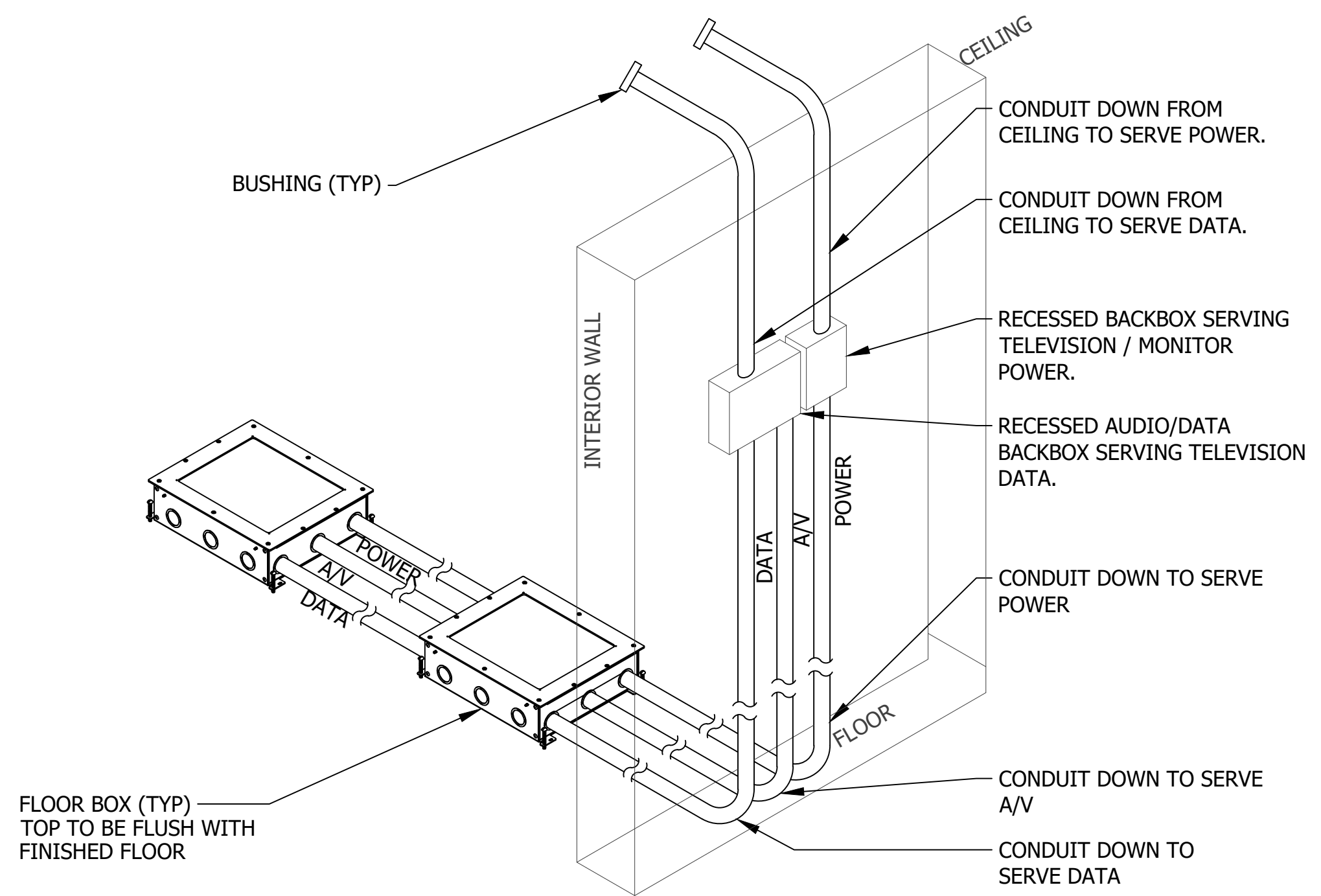
FIRE ALARM SYMBOLS:	
	SMOKE DETECTOR
	FIRE ALARM PULL STATION
	SPRINKLER SYS. FLOW SWITCH
	TAMPER SYS. FLOW SWITCH
	FIRE ALARM CONTROL PANEL



- NOTES:
1. MOTOR RATED SWITCH SHALL BE MOUNTED WITHIN 2 FEET OF UNIT BEING SERVED.
 2. MOTOR RATE SWITCH SHALL BE SERVICABLE (IE: NOT BLOCKED BY UNIT OR OBSTRUCTION).
 3. PROVIDE MACHINE GENERATED LABEL INDICATING PANELBOARD AND CIRCUIT NUMBER (IE: LP2 CKT #4).



- NOTES:
1. PROVIDE DRILLED SHAFT TO SPECIFIED DIMENSIONS.
 2. CONCRETE FOUNDATION SHALL HAVE A MINIMUM 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
 3. PROVIDE STANDARD COMPACT FILL AS REQUIRED.

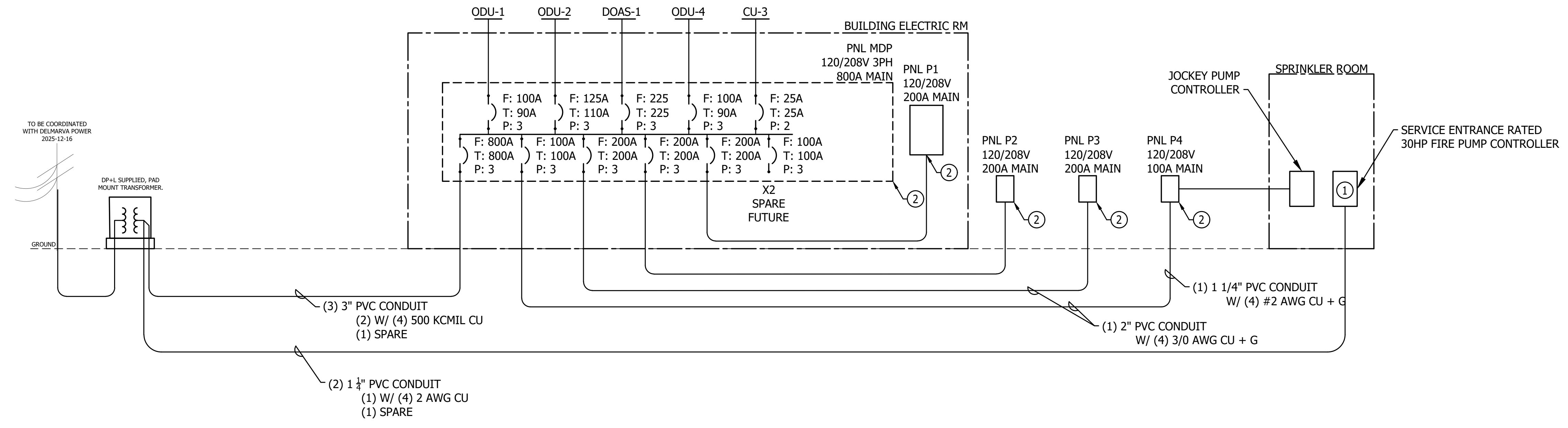


- NOTES:
1. ALL POWER WIRING, RACEWAY, BOXES, RECEPTACLES & COVER PLATES SHALL BE PROVIDED UNDER DIVISION 26.
 2. ALL LOW VOLTAGE DATA, VOICE, AUDIO & CATV CABLES, DEVICE JACKS & TERMINATIONS SHALL BE PROVIDED UNDER DIVISION 27.
 3. PROVIDE AUDIO/VISUAL FLOOR BOX (TYP)

DETAIL - VRF INDOOR UNIT - WORK SWITCH
SCALE: N.T.S.

DRAWING NOTES
(APPLIES TO THIS DRAWING)

1. 30HP FIRE PUMP 92A F.L.A. ON 208V.
2. PROVIDE PANEL, MOUNTING HARDWARE, CONDUIT, AND CONDUCTORS. CONTRACTOR SHALL PROVIDE MACHINE PRINTED AS BUILT CIRCUIT DIRECTORIES (PANEL SCHEDULES).



5
E 5.0

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B	ISSUED FOR PERMIT	2026-01-05
1		1/19/2026

Diamond State Engineering
Professional Engineer
3008 Rockledge Blvd., Suite 100
P.O. Box 1000, Wilmington, DE 19801
Phone: 302.997.2100 Fax: 302.997.1208

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

ELECTRICAL DETAILS
1 OF 2

THOMAS J. HARTLEY
REGISTERED PROFESSIONAL ENGINEER
NO. 7122
DELAWARE

SCALE	: AS NOTED
DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

E 5.0



Delmarva Power is currently Engineering the installation of your underground service, or your job has been determined to be installed utilizing our Accelerated Electric Service process. In both cases, there are items that must be completed by you, the customer, or the customer's representative. One of those items includes installing appropriate conduit and providing pictures to your Field Engineer or Service Associate. In addition to reading over, signing, and returning the service agreement, you MUST provide pictures of the conduit prior to backfilling.

WE MUST RECEIVE A MINIMUM OF 4 PICTURES AS SHOWN BELOW IN EXAMPLES PROVIDED

- Prior to backfilling material into the conduit trench please provide a minimum of **four digital photographs**: one at each bend installation showing a ruler for reference of correct installation depth and displaying properly specified long-sweep bends, one showing the conduit riser to and including the meter socket, one showing the end of the conduit adjacent to the pole/equipment serving your project (see Attachment A for example photographs). Immediately e-mail these pictures to your field engineer or service associate upon completion of the conduit installation. Email confirmation of the conduit completion is required before the job will be released to construction.

CONDUIT INSTALLATION GUIDELINES

- Conduits:** Install **Schedule 40 PVC Grey Electrical** conduit or **Black HDPE (high-density polyethylene)**, SDR-13.5 with a **MULE TAPE** pull cord rated at a minimum of 400lbs pull strength. The Mule Tape pull cord shall be blown in after completion of conduit installation so that the cord will be in proper usable condition during the installation of facilities by DPL. All secondary/service conduits must be continuous to the meter socket.
- The meter socket riser must be **grey schedule 40 PVC**. The meter socket riser should be plumb and secured to the meter socket by a properly sized bushing and lock nut.
- For conduits extended to new DPL equipment:**
 - The conduit ends shall be turned up and capped to 3 feet above grade with a long radius sweep 90 Degree bends. DPL will not be responsible to dig for ends of any conduits extended to new equipment that are not turned up and 3 ft above grade. Delmarva Power will provide a stub-up detail indicating the required spacing and grouping of all conduits based on the intended orientation of newly installed equipment.
- For conduits extended to existing DPL equipment and poles:**
 - Conduit ends shall be installed, capped and left below grade at a maximum distance of 36" from the energized equipment or pole. The ends of the conduit shall be marked with a stake (mark stake with "DPL CONDUIT X Inch" in black sharpie). An additional 10' of mule tape shall be left coiled in the capped end.

Bends: ALL 90, 45, and 30-Degree Long Sweeps shall be 30 Inch Radius. No exceptions. All bends must be Schedule 40 PVC Grey Electrical conduit - White plumbing conduit WILL NOT BE ACCEPTED. DPL shall allow only (3) three 90 Degree Long Radius Sweeps per conduit run or a total of 270 degrees for the entire conduit run. Based upon this condition, each run shall include (1) one 90-degree long radius sweep at conduit start, (1) one 90-degree long radius sweep at conduit end, and at most, (1) one 90-degree or (2) 45-degree or (3) 30-degree long radius sweep(s) along the conduit path. If any additional conduit sweeps are necessary, DPL shall work with the customer in determining the location and arrangement for the installation of a DPL supplied and customer installed pull box.



Measurement showing 25" or more cover



Sweep up into meter pan showing mule tape or pull string



Capped off end at DPL equipment



Inside of Meter Pan with mule tape/pull string

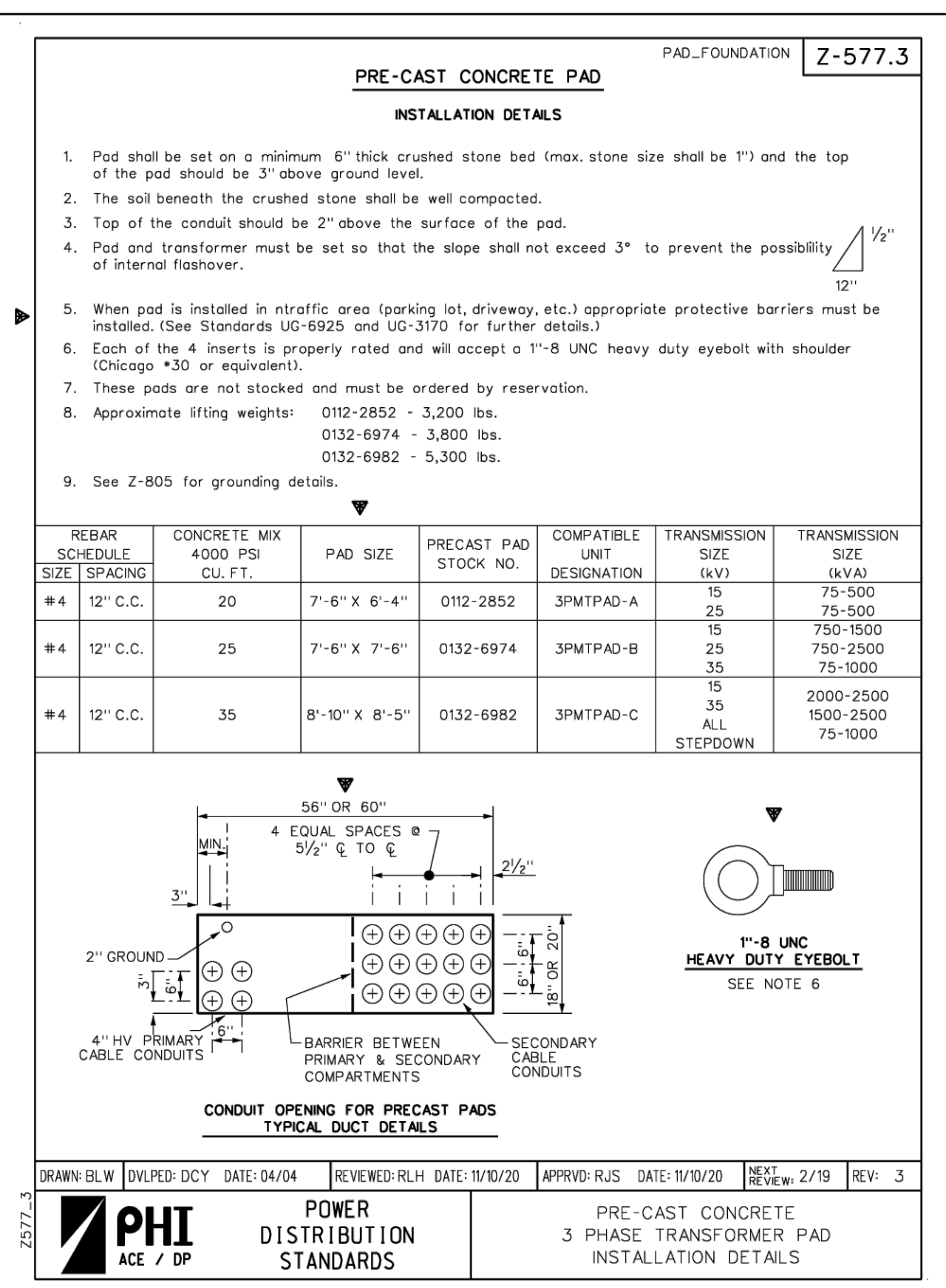
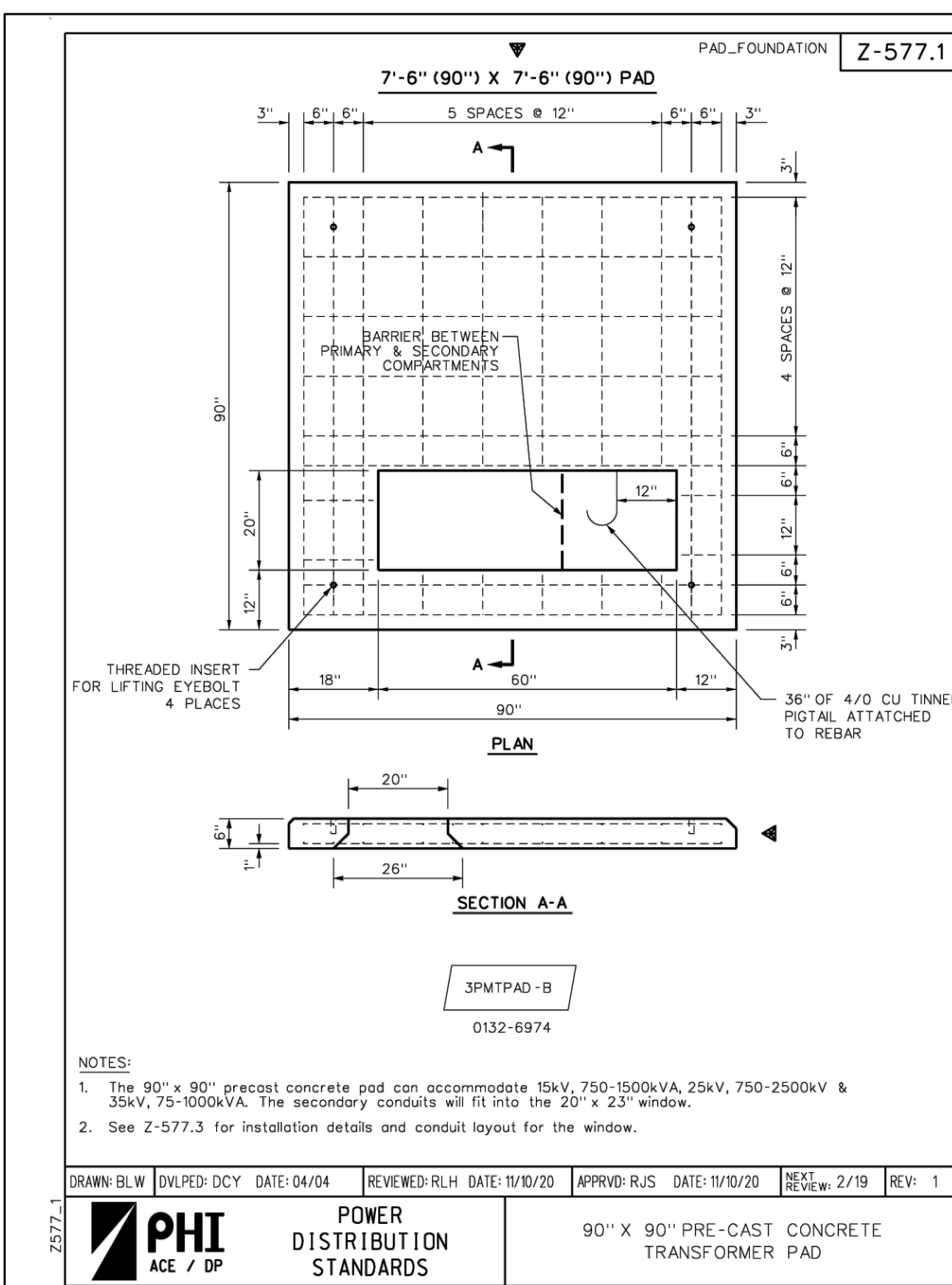


Show any sweeps or bends as necessary

DELMARVA POWER CONDUIT GUIDELINES/REQUIREMENT

1/2" = 1'-0"

1
E5.1



DELMARVA POWER SUPPLIED, CONTRACTOR INSTALLED PRECAST CONCRETE PAD REQUIREMENTS

SCALE: N.T.S.

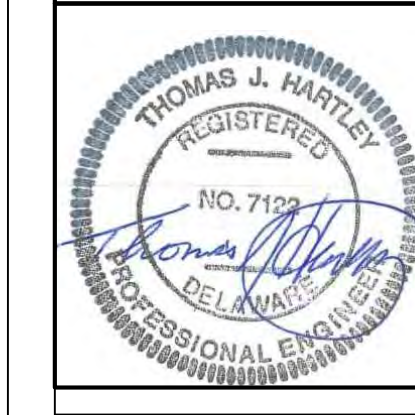
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E5.1

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	1/19/2026

Diamond State Engineering
Professional Engineer
3008 Rockingham Blvd., Wilmington, DE 19804
Phone: 302.977.7474 Fax: 302.977.1268

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

ELECTRICAL DETAILS
2 OF 2



SCALE : AS NOTED

DESIGN BY : BEM

DRAWN BY : BEM

CHECKED BY : TJH/PG

DSE JOB # : 25-2-0007

DATE : 07/08/2025

E 5.1

ES.0 ELECTRICAL DETAILS, 1/9/2026 2:40 PM, ARCH D (36.00 X 24.00 INCHES), Katie Bettsch

GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL THE PROJECT DOCUMENTATION FOR ALL TRADES PRIOR TO BIDDING. DISCREPANCIES BETWEEN DOCUMENTS SHALL BE REPORTED AT THE TIME OF BID.
- VERIFY ALL FIELD CONDITIONS, ACCESS WAYS, DIMENSIONS, AND DETAILS IN THE FIELD PRIOR TO BID AND PRIOR TO FABRICATION. INCLUDE IN BID ALL WORK NECESSARY TO COVER COSTS RESULTING FROM FIELD CONDITIONS.
- THE CONTRACTOR SHALL NOT "SCALE" THE DRAWINGS FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS, DIMENSIONS, ETC. IN THE FIELD.
- ALL WORK SHALL BE IN CONFORMANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS ADOPTED BY MUNICIPAL, COUNTY, STATE AND FEDERAL AUTHORITIES, UTILITY COMPANIES, INSURANCE AGENCIES AND OTHER AUTHORITIES HAVING JURISDICTION OVER THE WORK.
- ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH ALL CURRENT ENVIRONMENTAL REGULATIONS.
- THE CONTRACTOR SHALL APPLY FOR, SECURE AND PAY FOR ALL PERMITS AND/OR CERTIFICATES OF INSPECTION REQUIRED IN THE PERFORMANCE OF THE WORK BY ALL AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY AND SHALL FOLLOW ALL OSHA AND OWNER RULES AND CONDITIONS FOR CONTRACTORS. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL BARRICADES, TEMPORARY PARTITIONS, SIGNS, FIRE EXTINGUISHERS, ETC.
- THE CONTRACTOR SHALL KEEP THE WORK AREA CLEAN AND ORDERLY. ALL DEBRIS SHALL BE REMOVED FROM THE SITE DAILY.
- PRIOR TO DELIVERY OF MATERIALS TO THE SITE, THE CONTRACTOR SHALL PROVIDE MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL ITEMS AND MATERIALS USED IN THE WORK.
- ALL EQUIPMENT SHALL BE NEW UNLESS NOTED OTHERWISE AND SHALL HAVE ITS MANUFACTURERS' NAMEPLATE SECURELY ATTACHED GIVING DESIGN AND OPERATING CHARACTERISTICS. NAMEPLATES SHALL NOTE BE COVERED OR OBSTRUCTED FROM VIEW. ALL EQUIPMENT SHALL BE ASME AND/OR UL APPROVED OR EQUIVALENT AGENCY.
- ALL MATERIALS USED IN CONSTRUCTION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS, A SMOKE DEVELOPMENT RATING OF 50 OR LESS AND A FUEL CONTRIBUTING RATING OF 25 OR LESS. ALL MATERIALS SHALL BE "SELF-EXTINGUISHING."
- THE CONTRACTOR SHALL SUBMIT TO THE OWNER (OR THEIR DESIGNATED REPRESENTATIVE IS ARCHITECT, ENGINEER, CONSTRUCTION MANAGER, ETC.) FOR THEIR APPROVAL SPECIFICATION SHEETS FOR ALL EQUIPMENT BEING SUPPLIED AND INSTALLED. PURCHASE OF OR INSTALLATION OF MATERIALS OR SYSTEM PARTS SHALL NOT PROCEED UNTIL REVIEWED AND SHOP DRAWINGS ARE RETURNED TO THE SUBMITTING CONTRACTOR. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS IN A TIMELY MANNER TO ALLOW TEN WORKING DAYS FOR REVIEW, STARTING FROM DATE OF RECEIPT BY THE ENGINEER.
- WHERE PRODUCTS ARE SCHEDULED WITH A MANUFACTURER'S NAME AND MODEL NUMBER IT IS TO ESTABLISH THE UNIT'S FEATURES AND STANDARD OF QUALITY. ACCESSORIES SCHEDULED SHALL BE PROVIDED BY THE UNIT MANUFACTURER OR, IF NOT A FACTORY STANDARD, BY THE CONTRACTOR. COMPARABLE PRODUCTS OF OTHER MANUFACTURERS MAY BE SUBMITTED FOR REVIEW, PROVIDED THE SUBMISSION INCLUDES THE PARTS AND ACCESSORIES SCHEDULED, AND THE PRODUCT MEETS OR EXCEEDS THE SPECIFIED CHARACTERISTICS OR DUTIES AT THE CONDITIONS SCHEDULED.
- PRODUCTS SUBMITTED AND ACCEPTED FOR USE THAT NECESSITATE CHANGES TO THE WORK OF ANY OR ALL OTHER TRADES' WORK SHALL BE COORDINATED AND PAID FOR BY THE CONTRACTOR MAKING THE SUBMISSION WHO REQUIRED THE CHANGE.
- CONTRACTOR SHALL SUBMIT REQUESTS FOR INFORMATION IN A TIMELY MANNER TO ALLOW FIVE WORKING DAYS FOR RESPONSE, STARTING FROM DATE OF RECEIPT BY THE ENGINEER.
- CONTRACTORS SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, INCIDENTALS, METHODS AND SERVICES REQUIRED TO INSTALL ALL THE WORK INDICATED COMPLETELY AND IN FULL OPERATION. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- IN ADDITION TO THE SPECIFICS AS MY DEFINED HEREINAFTER THE CONTRACTOR SHALL PROTECT THE WORK SITE AND ALL HIS WORK AGAINST DAMAGE FROM ANY SOURCE (INCLUDING BUT NOT LIMITED TO WATER, DUST, HEAT, FREEZING, ETC.) UNTIL FINAL COMPLETION AND ACCEPTANCE BY THE OWNER
- CONTRACTOR SHALL COMPLETE ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THEIR WORK. CUTTING AND PATCHING SHALL BE COMPLETED IN A NEAT AND WORKMAN LIKE MANNER. PATCHING MATERIALS SHALL MATCH THE EXISTING MATERIALS TO THE GREATEST EXTENT POSSIBLE. PROVIDE TOUCH-UP PAINT TO MATCH EXISTING SURROUNDING AREAS OF CUTTING AND PATCHING WORK.
- EACH TRADE CONTRACTOR SHALL PROVIDE AND INSTALL AN APPROVED FIRE STOP SEALANT, TOTALLY ENCLOSING ALL PENETRATIONS THROUGH CEILINGS, WALLS, ROOFS AND FLOORS.
- ALL ROOF PENETRATIONS SHALL BE SEALED WATERTIGHT AND SHALL BE PERFORMED BY THE SITE-APPROVED ROOF CONTRACTOR. ALL ROOF WARRANTIES SHALL REMAIN INTACT UPON COMPLETION OF THE PROJECT.
- ALL PIPING IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL VERIFY ALL ROUTING FOR POSSIBLE INTERFERENCES BEFORE FABRICATION AND INSTALLATION. CONTRACTOR'S BID SHALL INCLUDE LABOR, MATERIAL AND EQUIPMENT REQUIRED TO RESOLVE INTERFERENCES.
- THE CONSTRUCTION DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DUE TO THE SMALL SCALE OF THE DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL THE FITTINGS, VALVES, VENT AND PIPING SPECIALTIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE OPERATING SYSTEMS AND SHALL FURNISH ALL NECESSARY FITTINGS AND SPECIALTIES WHETHER INDICATED OR NOT.
- THE CONTRACTOR SHALL LABEL ALL NEW EQUIPMENT, PIPING, VALVES (INDOOR AND OUTDOOR) IN A PERMANENT MANNER. PIPING SHALL BE LABELED WITH SELF-ADHESIVE PIPE MARKERS EQUAL TO PARKING SERVICES INC. (MSI) SERIES WS-900 MARKERS. COMPLY WITH ASME A13.1 FOR LETTERING, SIZE, LENGTH OF COLOR FIELDS, COLOR, AND VIEWING ANGLES OR IDENTIFICATION. DIRECTION OF FLOW SHALL BE IDENTIFIED WITH MS-900 FLOW DIRECTIONAL ARROW TAPE. VALVES SHALL BE IDENTIFIED WITH A BRASS VALVE TAGS. TAGS SHALL BE ATTACHED WITH A SOLID BRASS CHAIN AND "S" HOOKS. VALVE TAGS SHALL BE COORDINATED WITH VALVE SCHEDULE PROVIDED IN THE OPERATION AND MAINTENANCE MANUAL. EQUIPMENT SHALL BE LABELED WITH ENGRAVED PLASTIC TAGS AND MOUNTING HOLES WITH STAINLESS STEEL SCREWS. ALL LABELING SHALL HAVE HIGH CONTRAST BETWEEN LETTERING AND BACKGROUND COLORS AND SHALL BE LOCATED FOR EASY VISIBILITY.

- PRIOR TO THE ACCEPTANCE OF THE PROJECT, ALL SYSTEMS SHALL BE TESTED, BALANCED AND OPERATED TO DEMONSTRATE TO THE OWNER OR HIS REPRESENTATIVE THAT THE INSTALLATION AND PERFORMANCE OF THESE SYSTEM AND/OR PARTS THEREOF CONFORM TO THE DESIGN INTENT.
- CONTRACTOR SHALL PROVIDE MANUFACTURER'S TRAINING TO OWNER'S OPERATING STAFF PERSONS ON THE PROPER OPERATION, MAINTENANCE AND SERVICING OF ALL EQUIPMENT INSTALLED.
- UPON COMPLETION OF THE CONTRACT THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (3) COMPLETE SETS OF MANUFACTURERS' OPERATING, MAINTENANCE, AND PREVENTIVE MAINTENANCE INSTRUCTIONS (IN BOUND BOOKS FORM) INCLUDING PARTS LISTS, AND COMPLETE PROCUREMENT INFORMATION INCLUDING EQUIPMENT NUMBERS AND DESCRIPTIONS. OPERATING STAFF PERSONS SHALL BE INSTRUCTED IN PROPER OPERATING AND SERVICE REQUIREMENTS OF THE SYSTEMS AND EQUIPMENT.
- THE CONTRACTOR SHALL GUARANTEE THE ENTIRE INSTALLATION FOR A PERIOD OF ONE YEAR (EXCEPT WHERE EXTENSIONS OF THIS ONE-YEAR PERIOD ARE SPECIFIED) FROM THE DATE OF ACCEPTANCE OF THE SYSTEM AS A WHOLE. ANY DEFECTS IN WORKMANSHIP, MATERIALS, MALFUNCTION OF EQUIPMENT OR UNSATISFACTORY PERFORMANCE AND ALL OTHER WORK OR PARTS OF THE BUILDING DAMAGED THEREBY SHALL BE REPAIRED, REPLACED OR OTHERWISE REMEDIED WITHOUT EXPENSE TO THE OWNER. SUCH REPAIRS AND REPLACEMENTS SHALL BE MADE IN A TIMELY MANNER AND AT THE CONVENIENCE OF THE OWNER.

PLUMBING NOTES

- ALL PIPING SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING TABLE:
 - WATER (HOT AND COLD): TYPE "L" SEAMLESS COPPER TUBING, ASTM B88
 - DWV (BELOW GRADE): SCHEDULE 40 DWV PVC PIPING
 - DWV (ABOVE GRADE): SCHEDULE 40 DWV PVC PIPING
- COPPER PIPING SHALL NOT BE IN DIRECT CONTACT WITH CONCRETE. PIPING SHALL BE INSULATED AS SPECIFIED BELOW.
- ALL BALL VALVES SHALL BE FULL PORT.
- ALL DOMESTIC HOT AND COLD WATER PIPING SHALL BE INSULATED. ALL INSULATION SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. INSULATION SHALL BE SIZED FOR THE APPROPRIATE PIPE DIAMETER AND A MINIMUM THICKNESS FOR AN INSTALLED INSULATION VALUE OF R-4. APPROVED INSULATION INCLUDES PREFORMED FIBERGLASS PIPE INSULATION OR EPDM FOAM.
- COORDINATE ROUGH-IN LOCATIONS FOR ALL EQUIPMENT PRIOR TO INSTALLATION AND ROUTING OF ANY PIPING SERVICES.
- ALL PIPING SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING LINES WHERE PRACTICAL.
- ALL VERTICAL PIPING SHALL BE CONCEALED IN THE WALLS OR IN NEW PIPE CHASES.
- THE CONTRACTOR SHALL PROVIDE DIELECTRIC FITTINGS AT ALL CONNECTIONS BETWEEN PIPING OF DISSIMILAR METALS.
- ALL PIPING SHALL BE SUPPORTED AS REQUIRED FOR SPANS. DO NOT USE ELECTRICAL TRAYS OR TRAY SUPPORTS TO SUPPORT PIPING. ALL PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL STEEL. CONTRACTOR SHALL PROVIDE SUPPLEMENTAL STEEL SUPPORTS AS REQUIRED.
- THE CONTRACTOR SHALL PROVIDE ALL HANGERS, NUTS, BOLTS AND GASKETS.
- PROVIDE STEEL SLEEVES FOR PIPING THAT PASSES THROUGH CONCRETE BLOCK WALLS. FILL SPACE BETWEEN SLEEVE AND PENETRATING ITEM WITH FIREPROOF EXPANDING FOAM AS SPECIFIED. GROUT BETWEEN SLEEVE AND BLOCK. PROVIDE FLASHING ON ALL OUTDOOR PENETRATIONS.

PLUMBING LEGEND

-----	COLD WATER PIPING
-HW---HW---HW---HW---	HOT WATER PIPING
-----	SANITARY PIPING
-----	VENT PIPING
C	WATER PIPING DROP
C	SANITARY, WASTE, VENT & PIPE DROP
O	WATER PIPE RISER
O	SANITARY, WASTE, VENT & PIPE RISER

PLUMBING ABBREVIATIONS

BFP	BACK FLOW PREVENTER	LAV	LAVATORY
CO	CLEANOUT	MB	MOP BASIN
CW	COLD WATER	SCH	SCHEDULE
DOM	DOMESTIC	VTR	VENT THROUGH ROOF
DR	DRAIN	UR	URINAL
EWC	ELECTRIC WATER COOLER	W	WASTE
FCO	FLOOR CLEANOUT	WC	WATER CLOSET
FD	FLOOR DRAIN	WH	WALL HYDRANT
GPM	GALLONS PER MINUTE	WHA	WATER HAMMER ARRESTER
HW	HOT WATER	YH	YARD HYDRANT

FIRE PROTECTION NOTES

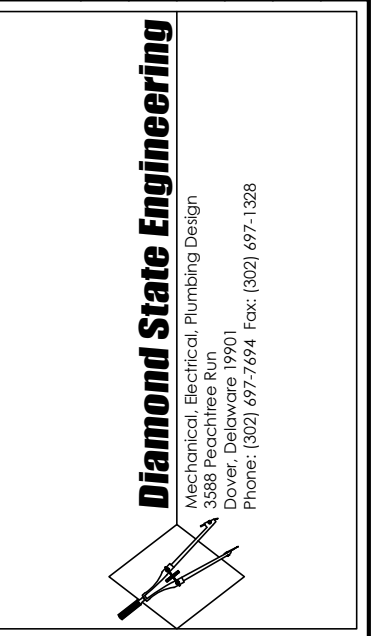
- WET PIPE AND / OR DRY PIPE SPRINKLER SYSTEM TO BE INSTALLED PER NEW CONSTRUCTION PLAN. SPRINKLER CONTRACTOR TO VERIFY HAZARD CLASSIFICATION WITH FIRE MARSHAL. SPRINKLER CONTRACTOR IS RESPONSIBLE FOR ALL HYDRAULIC CALCULATIONS, SYSTEM DESIGN AND DESIGN DRAWINGS. ARCHITECTURAL DRAWINGS TO BE REFERENCED FOR LAYOUT AND BUILDING DETAILS. FIRE PROTECTION DESIGN TO INCLUDE ALL EXTERIOR AREAS COVERED BY CANOPIES, WHERE APPLICABLE.
- FURNISH AND INSTALL A DRY PIPE SPRINKLER SYSTEM TO PROTECT THE ATTIC SPACE. THE CONTRACTOR IS RESPONSIBLE FOR SYSTEM DESIGN AND DESIGN DRAWINGS.
- SPRINKLER SYSTEM AND ALL REQUIRED EQUIPMENT TO BE IN ACCORDANCE WITH ALL APPLICABLE NFPA 13 CODE REQUIREMENTS. SYSTEM DESIGN SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE FIRE MARSHAL.
- WATER SUPPLY SHALL BE IN ACCORDANCE WITH NFPA 1142 REQUIREMENTS AND DSFPR REQUIREMENTS. FIRE ALARM SIGNALING SYSTEM SHALL BE PROVIDED PER DSFPR. THE WATER SUPPLY SYSTEM DESIGN IS SUBJECT TO THE REVIEW AND APPROVAL OF THE FIRE MARSHAL. (SEE CIVIL DRAWINGS FOR MORE INFORMATION.
- SPRINKLER HEADS TO BE AUTOMATIC, FUSIBLE LINK OR BULB TYPE WITH ORDINARY TEMPERATURE CLASSIFICATION, 165F SET POINT. PROVIDE INTERMEDIATE OR HIGH TEMPERATURE HEADS ONLY WHEN REQUIRED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN, SUBMIT, OBTAIN APPROVAL OF DESIGN CALCULATIONS AND WORKING PLANS TO THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR IS REQUIRED TO SUBMIT A PRELIMINARY DESIGN TO THE AUTHORITY HAVING FOR THE PURPOSE OF REVIEW OF SPRINKLER HEAD

AND PIPING LOCATIONS AND OTHER RELATED ITEMS. UPON THE APPROVAL FROM THE AUTHORITY HAVING JURISDICTION, THE CONTRACTOR SHALL SUBMIT SEALED DESIGN DOCUMENTS BY A LICENSED FIRE PROTECTION DESIGNER. THIS PROCEDURE IS TO BE COMPLETED BEFORE INSTALLATION AND MODIFICATION BEGINS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HYDRAULIC DESIGN, SPRINKLER HEAD LAYOUT AND PIPE SIZING.

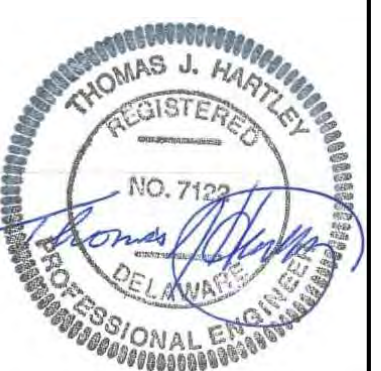
CONTRACTOR TO ENSURE CATWALK REMAINS AS CLEAR AND ACCESSIBLE AS POSSIBLE. DUCTWORK, PIPING, ETC. TO BE INSTALLED/ROUTED IN A MANOR TO AVOID CATWALK AREA. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	1/19/2026



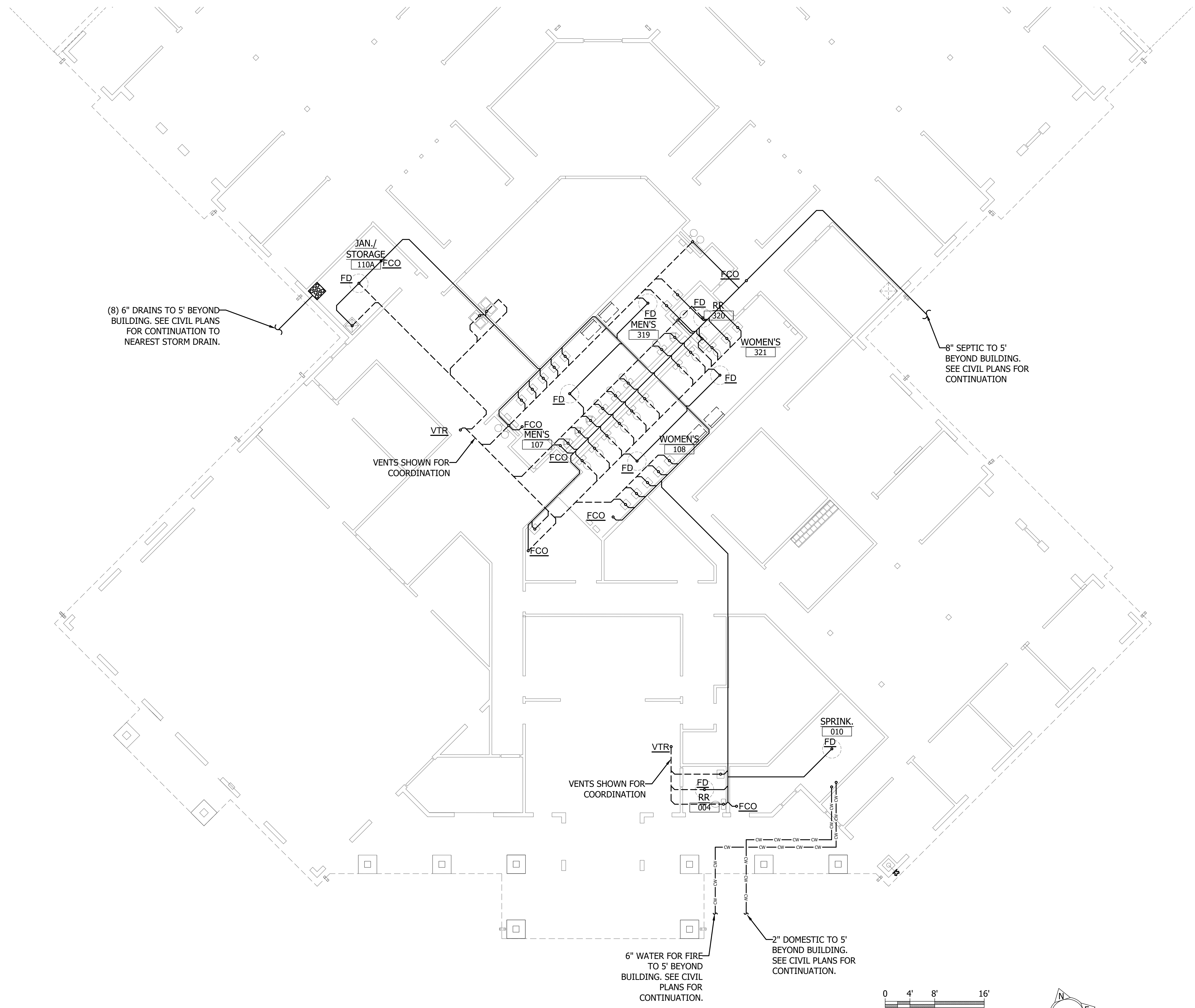
NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

PLUMBING AND FIRE
 PROTECTION NOTES
 AND SYMBOLS



SCALE	: AS NOTED
DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

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(8) 6" DRAINS TO 5' BEYOND BUILDING. SEE CIVIL PLANS FOR CONTINUATION TO NEAREST STORM DRAIN.

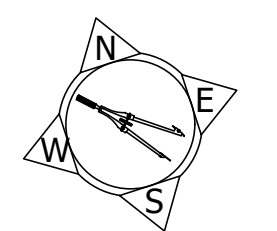
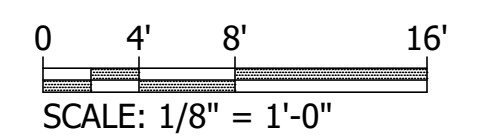
8" SEPTIC TO 5' BEYOND BUILDING. SEE CIVIL PLANS FOR CONTINUATION

VTR
VENTS SHOWN FOR COORDINATION

VTR
VENTS SHOWN FOR COORDINATION

6" WATER FOR FIRE TO 5' BEYOND BUILDING. SEE CIVIL PLANS FOR CONTINUATION.

2" DOMESTIC TO 5' BEYOND BUILDING. SEE CIVIL PLANS FOR CONTINUATION.



PLUMBING - UNDER SLAB PLAN
1/8" = 1'-0"

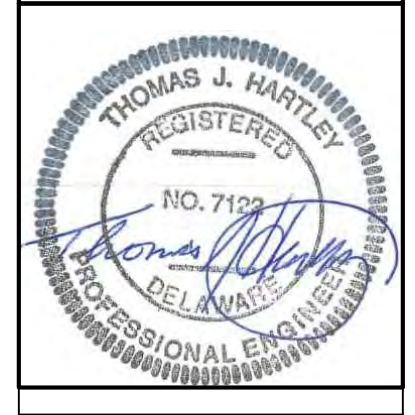
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NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

Diamond State Engineering
 3008 Woodbine Blvd., Suite 100
 Newark, DE 19711
 Phone: 302.997.2100 Fax: 302.997.1208

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

PLUMBING - UNDER SLAB PLAN



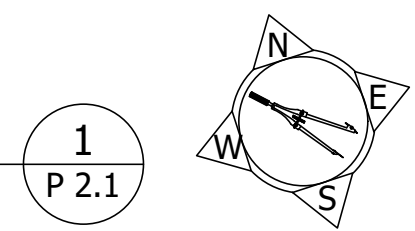
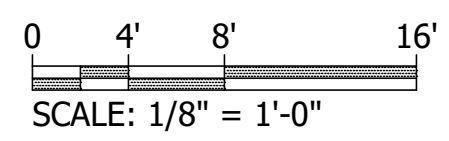
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DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

P 2.0

P2.0 PLUMBING SLAB PLANS, 1/9/2026 2:40 PM, ARCH D (36.00 X 24.00 INCHES), Katie Beachy



PLUMBING DESIGN - DOMESTIC WATER
1/8" = 1'-0"



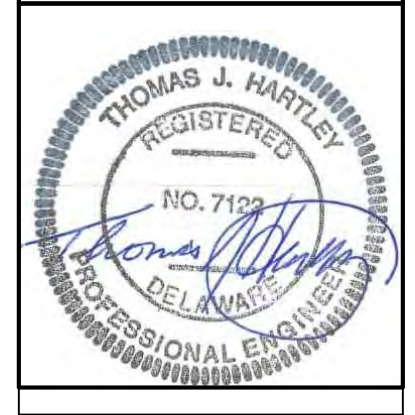
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P 2.1

NO.	REVISION	DATE
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B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

Diamond State Engineering
 3008 Woodbine Blvd., Suite 100
 Bridgeville, PA 19003
 Phone: 610-329-9777 FAX: 610-329-9778

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
 BRIDGEVILLE, DE

PLUMBING FLOOR PLAN



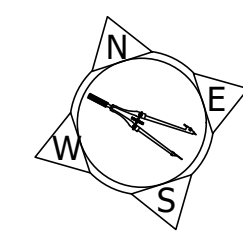
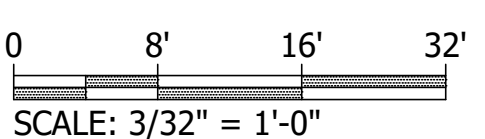
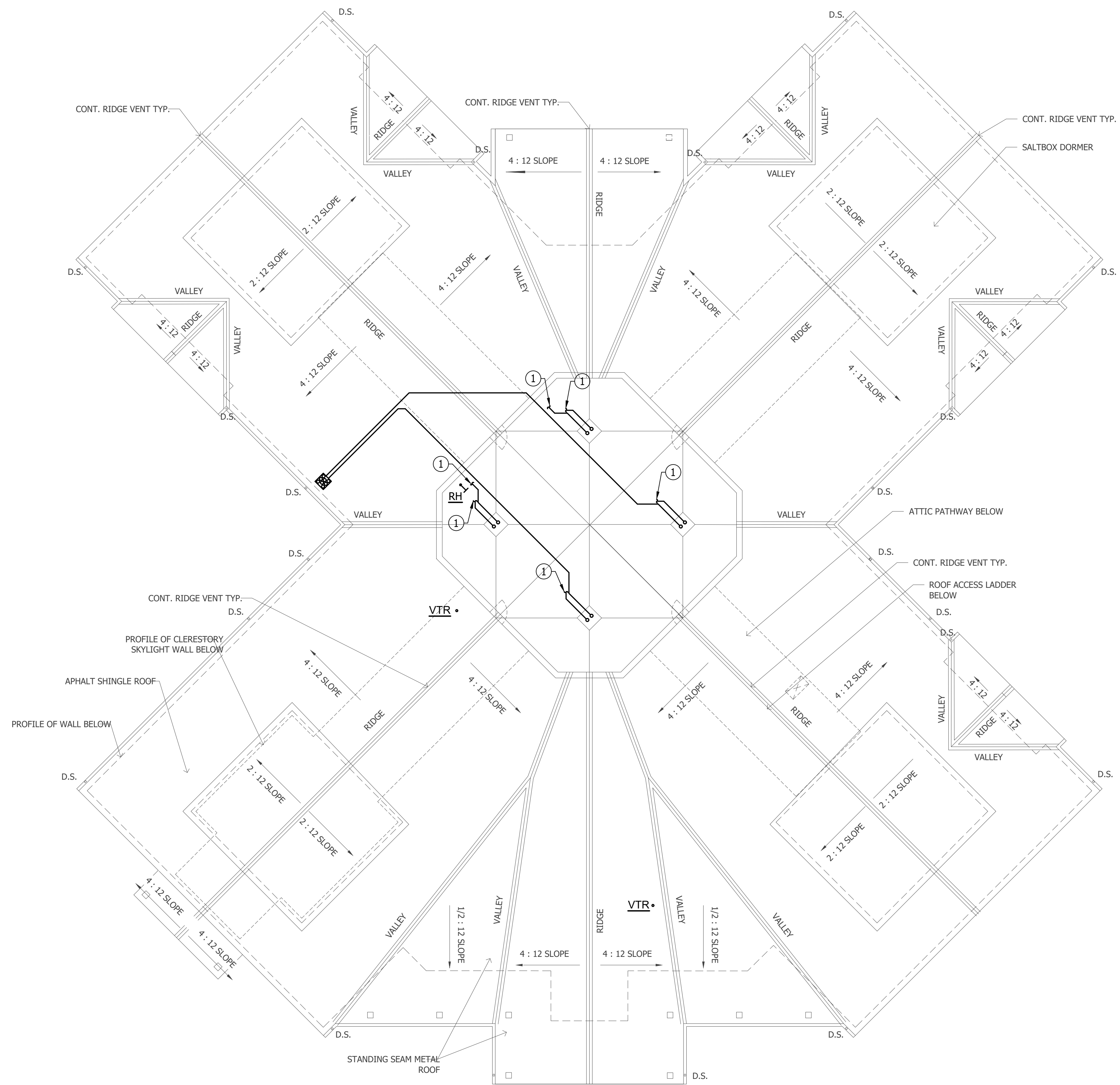
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 DRAWN BY : BEM
 CHECKED BY : TJH/PG
 DSE JOB # : 25-2-0007
 DATE : 07/08/2025

P 2.1

P2.0 PLUMBING SLAB PLANS, 1/9/2026 2:40 PM, ARCH D (36.00 X 24.00 INCHES), Katie Beachy

DRAWING NOTES
(APPLIES TO THIS DRAWING)

① DRAIN PIPE CONTINUES PARALLEL TO NEAREST SHOWN DRAIN PIPE.



PLUMBING ROOF DESIGN
3/32" = 1'-0"

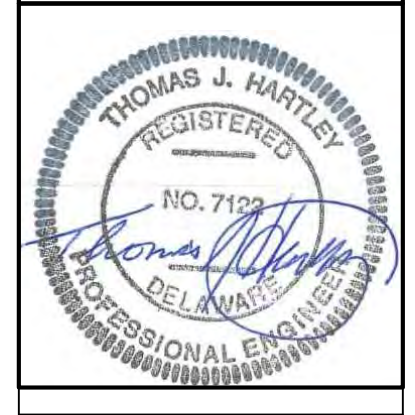
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P 2.2

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B		2026-01-05
1	ISSUED FOR PERMIT	11/9/2026

Diamond State Engineering
Professional Engineering Firm
3008 Peachtree Dunwoody Road, Suite 100
Atlanta, GA 30328
Phone: 404.977.2100 Fax: 404.977.1208

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

PLUMBING ROOF PLANS

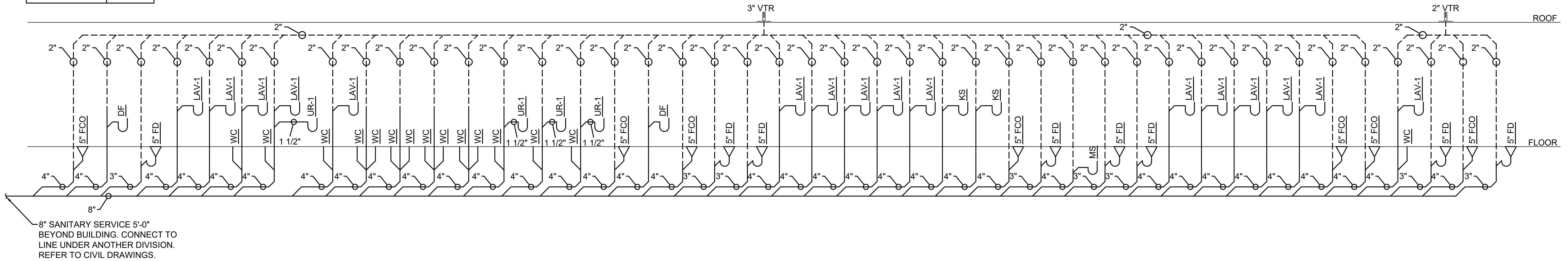


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CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

P 2.2

P2.0 PLUMBING SLAB PLANS, 1/9/2026 2:41 PM, ARCH D (36.00 X 24.00 INCHES), Katie Beachy

LINE KEY	
—	DRAIN
- - - - -	VENT

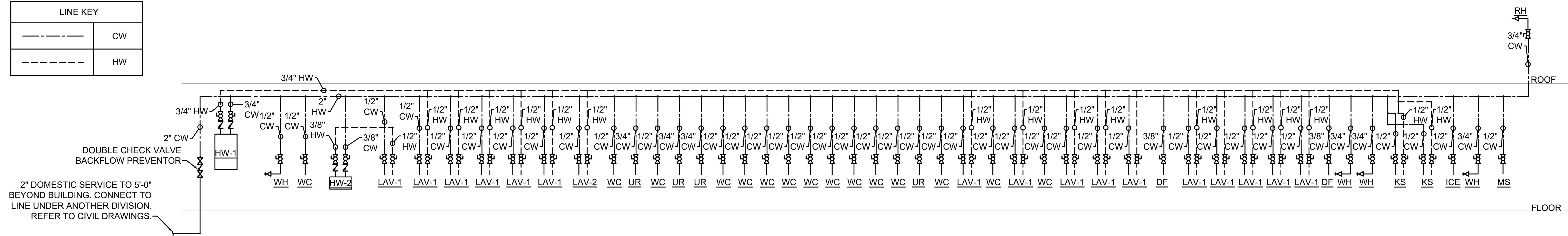


SANITARY + VENTING RISER DIAGRAM

SCALE: N.T.S.

1
P-3.0

LINE KEY	
—	CW
- - - - -	HW



DOMESTIC WATER RISER DIAGRAM

SCALE: N.T.S.

2
P-3.0

DRAWING NOTES
(APPLIES TO THIS DRAWING)

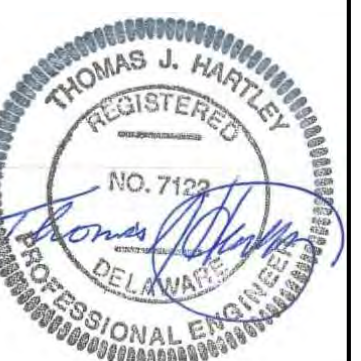
HOT WATER RECIRCULATION SYSTEM IS REQUIRED, NOT SHOWN ON THIS PLAN.

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1		1/19/2026



NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

PLUMBING RISER DIAGRAMS



SCALE	: AS NOTED
DESIGN BY	: BEM
DRAWN BY	: BEM
CHECKED BY	: TJH/PG
DSE JOB #	: 25-2-0007
DATE	: 07/08/2025

P 3.0

P3.0 PLUMBING RISER DIAGRAMS, 1/9/2026 2:40 PM, ARCH D (36.00 X 24.00 INCHES), Katie Brechy

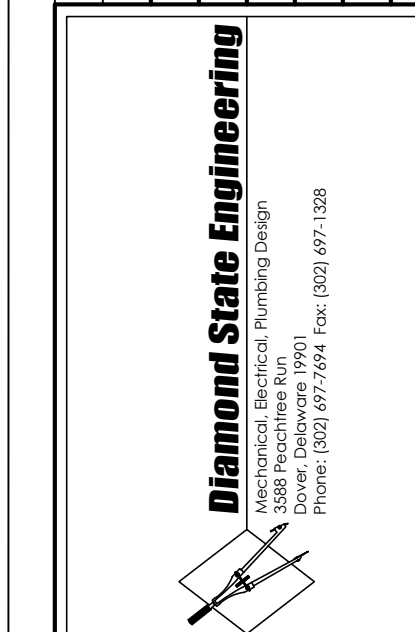
PLUMBING FIXTURE SCHEDULE							
ITEM	DESCRIPTION	CW	HW	DRAIN	VENT	DESCRIPTION/BASIS OF DESIGN	SPEC SHEET
WC	WATER CLOSET	1"	---	3"	3"	AMERICAN STANDARD CADET PRO ELONGATED TOILET WITH TANK, VITREOUS CHINA, WHITE FINISH, FLOOR MOUNTED.	<u>WATER CLOSET</u>
UR	URINAL	3/4"	---	2"	1 1/2"	KOHLER HIGH EFFICIENCY URINAL, VITREOUS CHINA, WHITE FINISH. HARDWIRED SLOAN SENSOR FLUSHOMETER WITH TRANSFORMER.	<u>URINAL & FLUSH VALVE</u>
LAV-1	BATHROOM SINK	1/2"	1/2"	---	2"	KOHLER GREENWICH WALL MOUNT BATHROOM SINK, VITREOUS CHINA, WHITE FINISH. HARDWIRED CHICAGO FAUCETS TOUCHLESS FAUCETS WITH TRANSFORMER.	<u>BATHROOM SINK & FAUCET</u>
LAV-2	STAINLESS STEEL SINK	1/2"	1/2"	3 1/2"	2"	ELKAY SINGLE BOWL DROP IN, LUSTERTONE CLASSIC STAINLESS STEEL. DECK MOUNTED CHICAGO FAUCETS MANUAL SINK FAUCETS, SWING GOOSENECK SPOUT.	<u>SINK & FAUCET</u>
KS	KITCHEN SINK	1/2"	1/2"	3 1/2"	2"	ELKAY CROSSTOWN DOUBLE BOWL DUAL MOUNT SINK, STAINLESS STEEL, POLISHED SATIN FINISH. DECK MOUNTED CHICAGO FAUCETS MANUAL SINK FAUCETS, SWING GOOSENECK SPOUT.	<u>KITCHEN SINK & FAUCET</u>
MS	MOP SINK	1/2"	1/2"	3"	2"	PROFLO PFMB MOP BASIN, HIGH DENSITY COMPOSITE. WALL MOUNTED CHICAGO FAUCETS MANUAL SINK FAUCET.	<u>MOP SINK & FAUCET</u>
DF	DRINKING FOUNTAIN	3/8"	---	1 1/4"	2	ELKAY BOTTLE FILLING STATION WITH BI-LEVEL INTEGRAL SWIRLFLO FOUNTAIN, STAINLESS STEEL, WALL MOUNT.	<u>DRINKING FOUNTAIN</u>
FD	FLOOR DRAIN	---	---	3"	2"	WATTS FD-100-A FLOOR DRAIN, EPOXY COATED CAST IRON WITH ANCHOR FLANGE, ADJUSTABLE ROUND HEEL PROOF NICKEL BRONZE STRAINER WITH JONES STEPHANS TRAP SEAL.	<u>FLOOR DRAIN</u>
FCO	FLOOR CLEANOUT	---	---	4"	2"	WATTS CO-200-R FLOOR CLEANOUT WITH ROUND TOP, EPOXY COATED CAST IRON WITH 5" ADJUSTABLE GASKETED NICKEL BRONZE TOP.	<u>FLOOR CLEANOUT</u>
RH	ROOF HYDRANT	3/4"	---	1/8"	---	WATTS HY-900 NON-FREEZE ROOF HYDRANT WITH 1/8" NPT DRAIN PORT, GALVANIZED STEEL CASING, CAST IRON HEAD.	<u>ROOF HYDRANT</u>
WH	WALL HYDRANT	3/4"	---	---	---	WATTS HY-330 NON-FREEZE WALL HYDRANT WITH NB BOX & INTEGRAL VACUUM BREAKER.	<u>WALL HYDRANT</u>
HW-1	HOT WATER HEATER	3/4"	---	3/4"	---	BRADFORD WHITE 40 GALLON ELECTRIC WATER HEATER.	<u>ELECTRIC WATER HEATER</u>
HW-2	INSTA HOT WATER HEATER	3/8"	---	3/8"	---	STIEBEL ELTRON MINI ELECTRIC TANKLESS WATER HEATER.	<u>TANKLESS WATER HEATER</u>

NOTE:
1. ALL PLUMBING FIXTURES ROUGH-IN SHALL BE COORDINATED WITH THE ARCHITECT TO ENSURE ADEQUATE ACCESS AND CLEARANCES ARE PROVIDED. FIXTURE SELECTION BY ARCHITECT SUPERCEDES MATERIALS SCHEDULED.
2. CONTRACTOR SHALL SELECT FLUSH VALVE HANDLE ORIENTATION IS PROPER FOR THE APPLICATION AND MEETS THE ADA GUIDELINES FOR ACCESSIBILITY.
3. ALL FLOOR DRAINS TRAPS SHALL BE PROVIDED WITH TRAP PRIMERS. PRIMERS SHALL BE AUTOMATIC PRESSURE DROP ACTIVATED WATTS TP300 OR EQUAL TRAP PRIMER VALVE.
4. TRAP PRIMERS SHALL BE LOCATED IN ACCESSIBLE LOCATIONS FOR SERVICE AND MAINTENANCE.

PLUMBING FIXTURE SCHEDULE
SCALE: N.T.S.

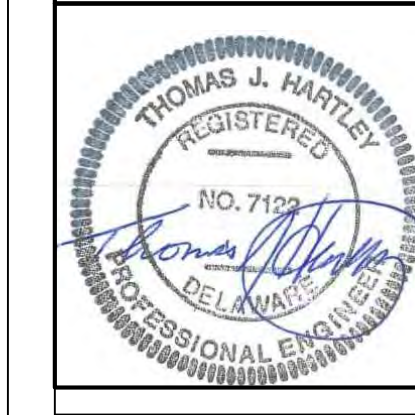
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NO.	REVISION	DATE
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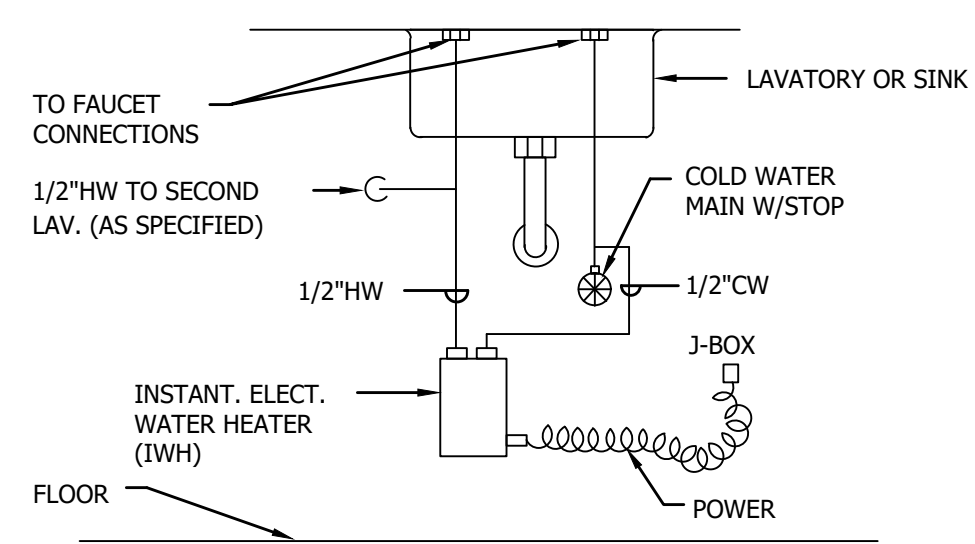
NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

PLUMBING SCHEDULES



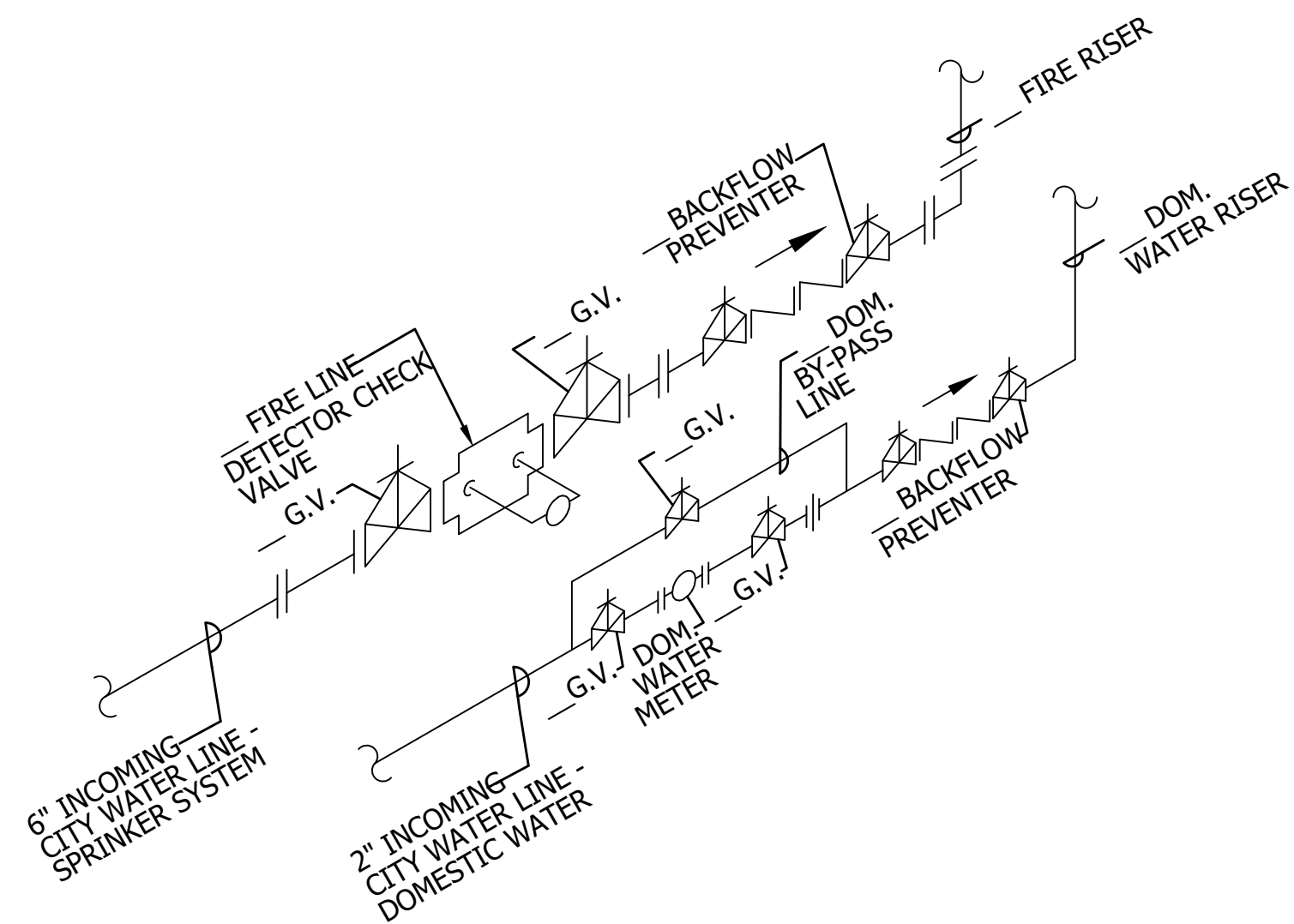
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DRAWN BY : BEM
CHECKED BY : TJH/PJG
DSE JOB # : 25-2-0007
DATE : 07/08/2025

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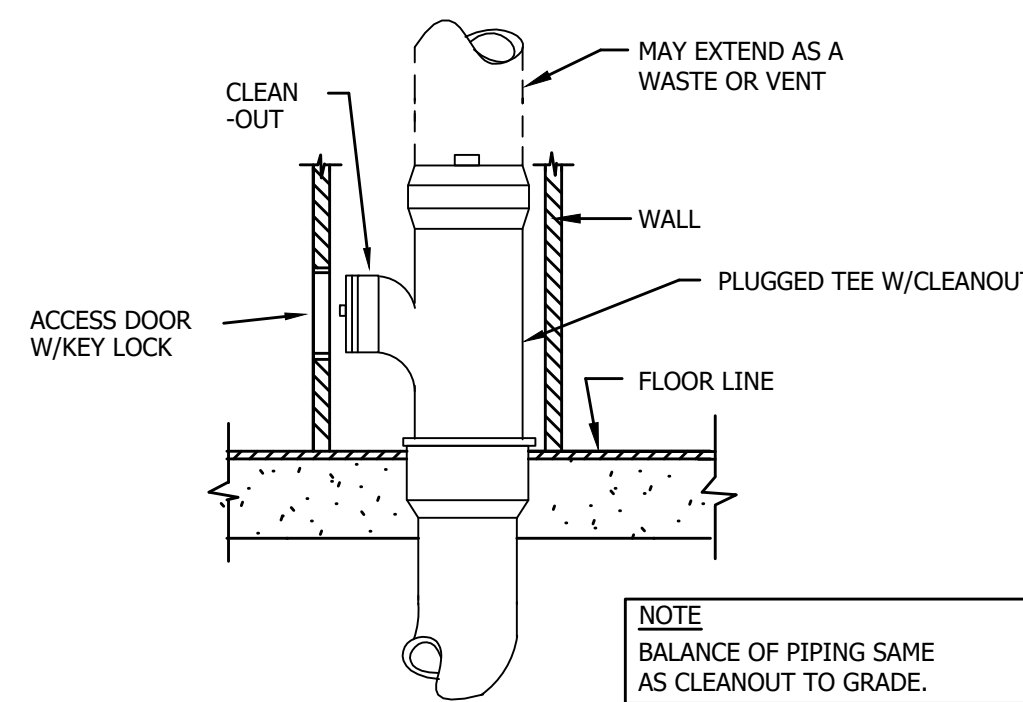
INSTANEOUS WATER HEATER DETAIL HW-2
SCALE: N.T.S.

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P5.0



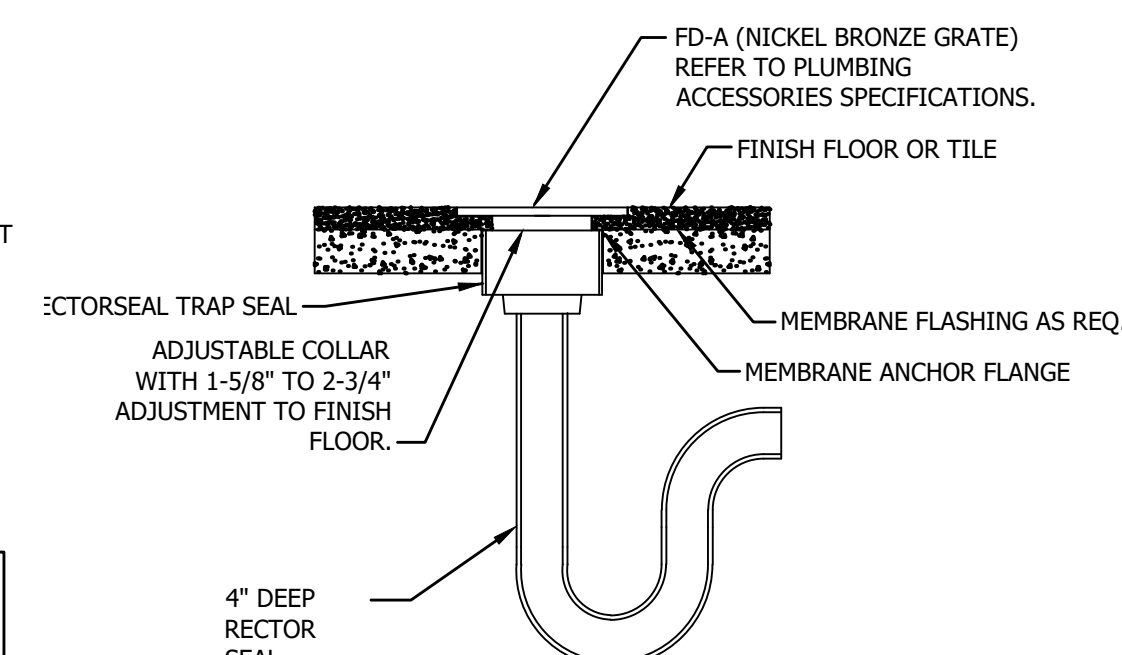
WATER METER INSTALLATION DETAIL
SCALE: N.T.S.

2
P5.0



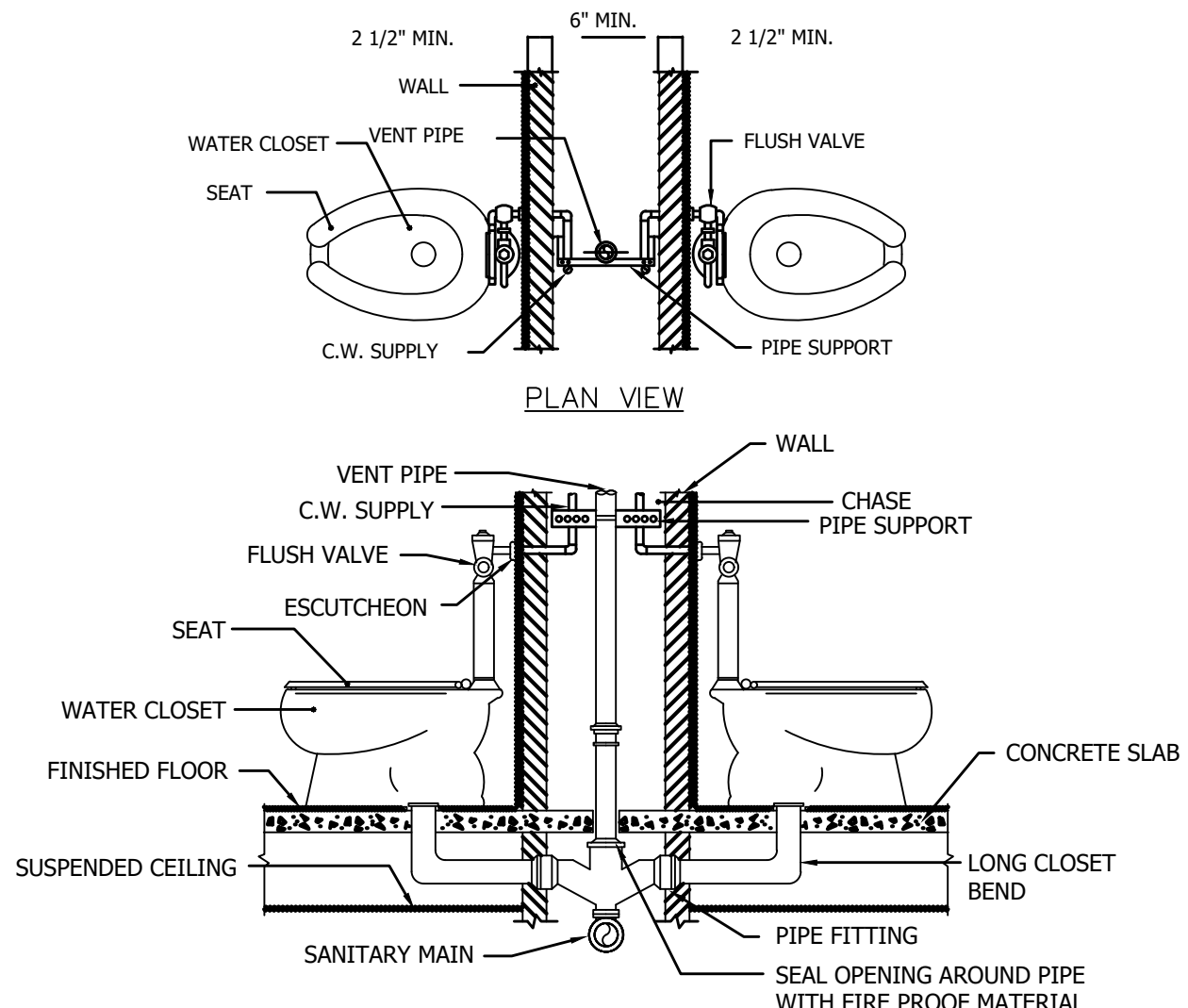
WALL CLEANOUT DETAIL
SCALE: N.T.S.

3
P5.0



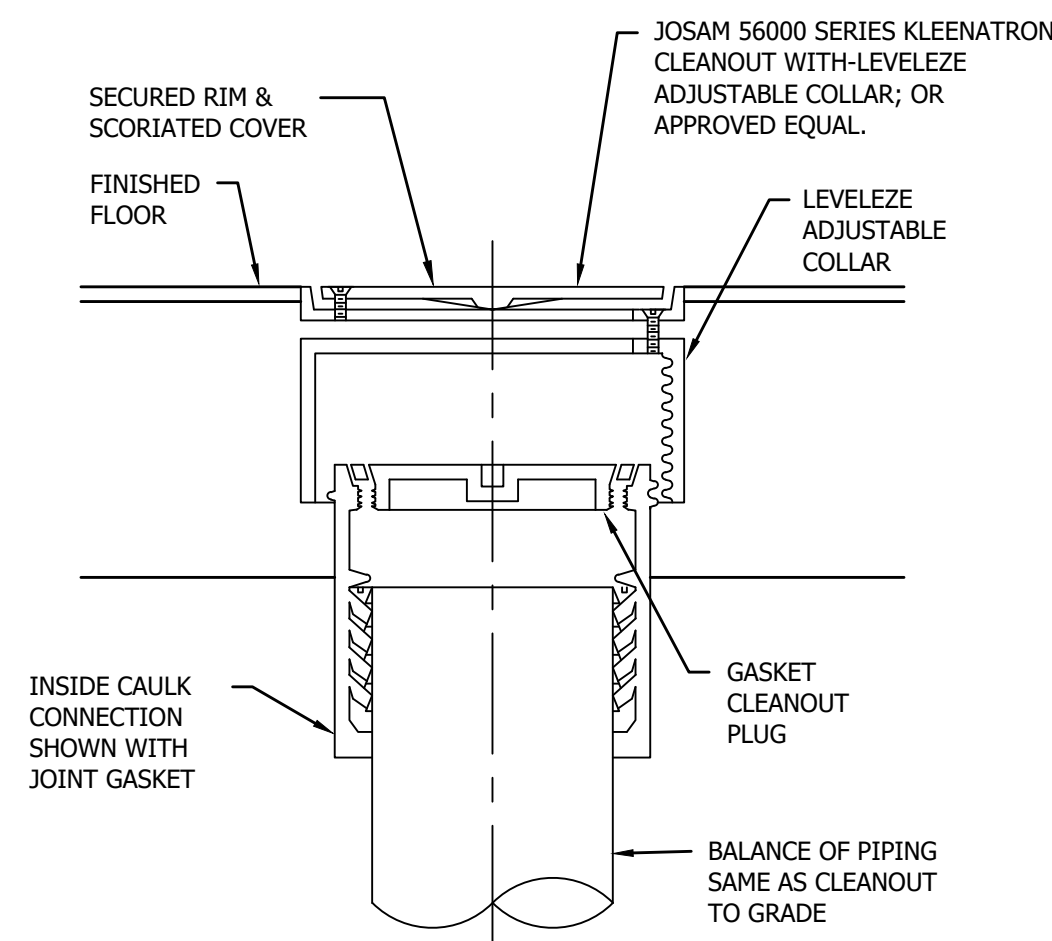
RECTOR SEAL P-TRAP & FLOOR DRAIN
SCALE: N.T.S.

4
P5.0



BACK TO BACK FLOOR MOUNTED WC
SCALE: N.T.S.

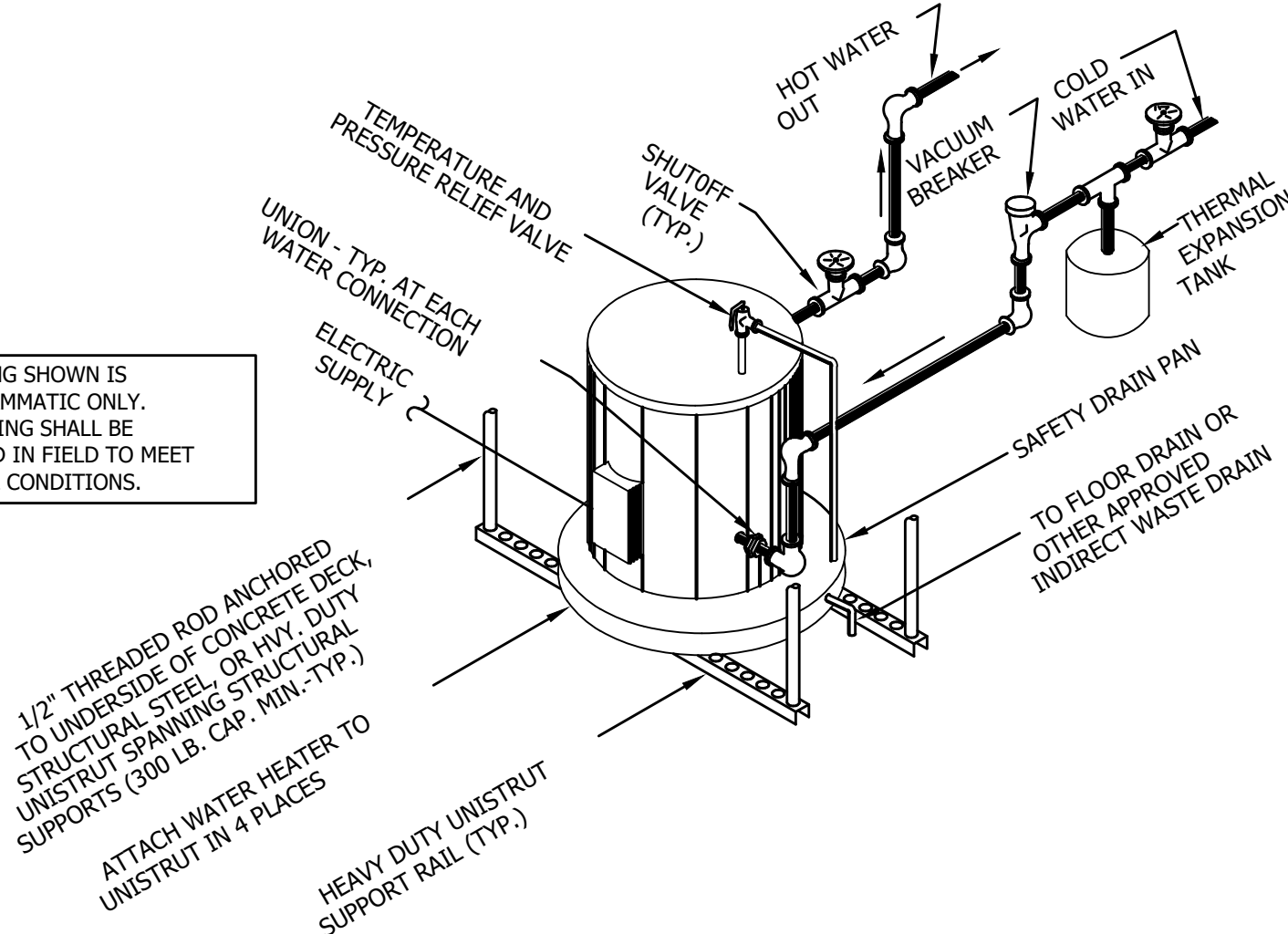
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P5.0



FLOOR CLEANOUT DETAIL
SCALE: N.T.S.

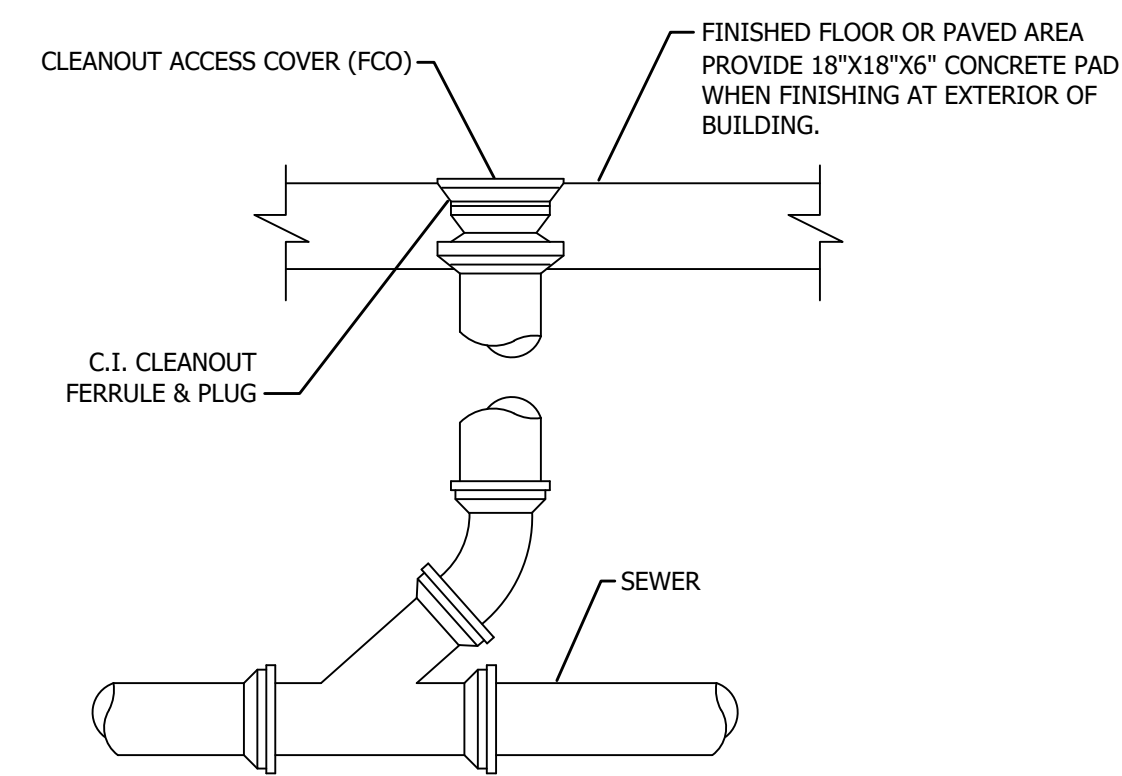
7
P5.0

NOTE: ALL PIPING SHOWN IS DIAGRAMMATIC ONLY. ALL PIPING SHALL BE ROUTED IN FIELD TO MEET ACTUAL CONDITIONS.



CEILING MOUNTED WATER HEATER HW-1
SCALE: N.T.S.

9
P5.0



CLEAN OUT DETAIL
SCALE: N.T.S.

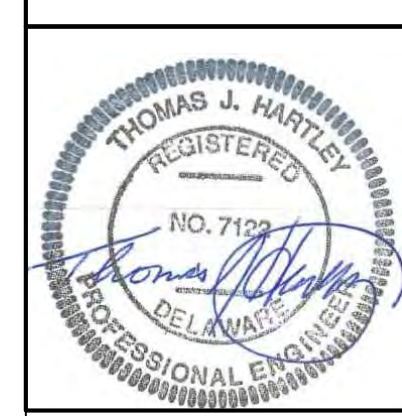
10
P5.0

NO.	REVISION	DATE
A	SUBMITTED FOR DESIGN/BUILD TEAM REVIEW AND COMMENT	2025-12-12
B	ISSUED FOR PERMIT	2026-01-05
1		1/19/2026

Diamond State Engineering
Professional Engineers
3008 Peachtree Dunwoody Road, Suite 100
Atlanta, GA 30328
Phone: 404.977.2144 Fax: 404.977.1208

NEW CONSTRUCTION FOR:
HORIZON FARM CREDIT
BRIDGEVILLE, DE

PLUMBING DETAILS



SCALE : AS NOTED
DESIGN BY : BEM
DRAWN BY : BEM
CHECKED BY : TJH/PJG
DSE JOB # : 25-2-0007
DATE : 07/08/2025

P 5.0