

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY IBC 2018 EDITION AND SHALL CONFORM TO ALL OTHER APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE ILLINOIS ACCESSIBILITY CODE (2018) AND THE AMERICANS WITH DISABILITIES ACT.

A. GENERAL NOTES

1. ALL CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND BE KNOWLEDGEABLE REGARDING EXISTING CONDITIONS AND THEIR EFFECT ON THE PROPOSED WORK. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR, ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE PROJECT.
2. NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITY.
3. PROTECT AND KEEP IN SERVICE ACTIVE UNDERGROUND UTILITIES, PIPES, OR CONDUITS, WHETHER INDICATED ON THE DRAWINGS OR NOT, UNLESS SPECIFICALLY CALLED FOR TO BE REMOVED, RELOCATED, OR DISCONNECTED AND ABANDONED.
4. CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THAT OF OTHER TRADES.
5. NO WORK WILL BE PERMITTED TO BE INSTALLED WITHOUT RECEIPT AND SUBSEQUENT REVIEW OF FULL AND COMPLETE SUBMITTALS BY THE ARCHITECT/ENGINEER.
6. DO NOT SCALE DRAWINGS, DIMENSIONS INDICATED TAKE PRECEDENCE OVER SCALE.
7. VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD, WHERE DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS OR ELEVATIONS SHOWN AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT/ENGINEER.

8. WHERE CONFLICTS MAY EXIST BETWEEN THE REQUIREMENTS OF PORTIONS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, HIGHER QUALITY OR MORE STRINGENT REQUIREMENT SHALL GOVERN. THEREFORE, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT, IF IT RAISED NO QUESTIONS REGARDING SUCH CONFLICTS DURING THE BIDDING PROCESS, AND IN THE ABSENCE OF A CLARIFYING ADDENDUM ISSUED DURING THE BIDDING PROCESS, IT HAS VOLUNTEERED TO COMPLY WITH THE MORE EXPENSIVE REQUIREMENT AS PART OF ITS BASIC BID AND IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION TO RESOLVE THE CONFLICT.

9. THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PRODUCTS, SYSTEMS AND SERVICES. BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT THE DRAWINGS SET FORTH THE DESIGN INTENT AND, THEREFORE, MAY NOT EXPRESSLY DEPICT EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE. THE CONTRACTOR FURTHER AGREES THAT, AS PART OF ITS BID, IT MUST FURNISH AND INSTALL EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE AND, CONSEQUENTLY, THE CONTRACTOR IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY LENGTH, SEGMENT, PIECE, PART COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE BECAUSE IT IS NOT EXPRESSLY DEPICTED HEREIN.

B: MISCELLANEOUS AND DEMOLITION NOTES

1. COORDINATE PENETRATIONS AND/OR SLEEVES REQUIRED IN WALLS, FLOORS, CEILINGS OR ROOFS FOR MECHANICAL AND ELECTRICAL WORK REQUIRED BY ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
2. SEAL WITH UL APPROVED MATERIALS PENETRATIONS OF DUCTWORK, CONDUIT AND PIPES THROUGH FIRE-RATED ASSEMBLIES, TO MAINTAIN THE RATING INTEGRITY OF THOSE ASSEMBLIES. PROVIDE FIRE DAMPERS AS INDICATED ON THE DRAWINGS.
3. SEAL WITH ACOUSTICAL SEALANT PENETRATIONS OF DUCTWORK, CONDUIT AND PIPES THROUGH NON-RATED FLOORS, FULL-HEIGHT WALLS/PARTITIONS, ACOUSTICALLY INSULATED WALLS/PARTITIONS, AND SOUND-RATED WALLS/PARTITIONS, TO MAINTAIN THE ACOUSTICAL INTEGRITY OF THOSE ASSEMBLIES.
4. APPLY APPROPRIATE & COMPATIBLE SEALANT MATERIALS AS REQUIRED TO SEPARATE DISSIMILAR METAL FILL GAPS IN EXISTING ASSEMBLIES OR WHERE NEW AND EXISTING ASSEMBLIES MEET OR WHERE OTHERWISE REQUIRED BY THE SPECIFICATIONS.
5. BRING ANY UNFORESEEN OR CONFLICTING CONDITIONS TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
6. REPAIR, PATCH, OR REPLACE FINISH MATERIALS OR VISIBLE ASSEMBLIES THAT ARE SOILED, CUT OR DAMAGED IN ANY FASHION DURING THE COURSE OF THE WORK. PERFORM PATCHING SUCH THAT EDGES BLEND INTO CONTIGUOUS SURFACES SMOOTHLY, MATCHING TEXTURE AND COLOR OF ADJACENT SURFACES.

B: BIDDING NOTES

1. CONTRACTOR TO PROVIDE A \$7,500 ALLOWANCE IN HIS/HER BID FOR UNFORSEEN/MISCELLANEOUS CONDITIONS. WHEN FIGURING THE ALLOWANCE IN THE BID, CONTRACTOR IS TO INCLUDE ALL NECESSARY OVERHEAD AND PROFIT. THIS ALLOWANCE IS NOT FOR THE CONTRACTOR'S BENEFIT, AND IS ONLY AUTHORIZED TO CHARGE AGAINST THE ALLOWANCE WHEN DIRECTED AND APPROVED BY JOULET JUNIOR COLLEGE. THE CONTRACTOR WILL BE ALLOWED TO INVOICE FOR MATERIAL AND RAW LABOR COST ONLY.

STANDARD ABBREVIATIONS

A B	ANCHOR BOLT	EWH	ELECTRIC WATER HEATER	PTN	PARTITION
ABR	ABRASIVE	EXIST	EXISTING	PVMT	PAVEMENT
ACP	ACOUSTICAL CEILING PANEL	EXP	EXPANSION	PC	PIECE
ACT	ACOUSTICAL CEILING TILE	EXP CONST	EXPOSED CONSTRUCTION	PL	PLATE
AFF	ABOVE FINISH FLOOR	FD	FLOOR DRAIN	PLAM	PLASTIC LAMINATE(D)
AFG	ABOVE FINISH GRADE	FDN	FOUNDATION	PL	PLASTER
ACOU	ACOUSTIC	FNDN	FOUNDATION	PLB'G	PLUMBING
ADD'N	ADDITION	FE	FIRE EXTINGUISHER	PLB'G CONTR	PLUMBING CONTRACTOR
ADD'L	ADDITIONAL	FEC	FIRE EXTINGUISHER CABINET	PLYWD	PLYWOOD
ADJ	ADJACENT OR ADJUSTABLE	FHC	FIRE HOSE CABINET	PNT	PAINT
AL	ALUMINUM	FIN	FINISH	P0	PRECAST (CONCRETE) OPENING
ALT	ALTERNATE	FLR	FLOOR	PVC	POLYVINYL CHLORIDE
ANCHR	ANCHOR	FRT	FIRE RETARDANT TREATED	PL-(1)	GYP SUM PLASTER (TYPE)
AP	ACCESS PANEL	FUR CHN'L	FURRING CHANNEL	R	RISER
APPROX	APPROXIMATE	FTG	FOOTING	R OR RAD	RADIUS
ASPH	ASPHALT	GA	GAUGE	R	ROOF DRAIN
AUTO	AUTOMATIC	GALV	GALVANIZED	RO	ROUGH OPENING
AVG	AVERAGE	GEN CONTR	GENERAL CONTRACTOR	RF (1)	RUBBER FLOORING (TYPE)
BSMT	BASEMENT	GC	GENERAL CONTRACTOR	RH	RIGHT HAND
B/	BOTTOM OF	GL	GLASS	REF	REFERENCE
BD	BOARD	GYP BD-(1)	GYP SUM WALL BOARD (TYPE)	REINF	REINFORCE/REINFORCING/REINFORCED
BET	BETWEEN	GYP PL-(1)	GYP SUM PLASTER (TYPE)	REQ'D	REQUIRED
BIT	BITUMINOUS	H	HIGH	RM	ROOM
BLDG	BUILDING	HD	HEAVY DUTY OR HARD	SF	SQUARE FOOT
BLKG	BLOCKING (WOOD)	HDNR	HARDENER	SI	SQUARE INCH
BM	BEAM	HD WD-(1)	HARD WOOD (TYPE)	SK	SINK
B.M.	BENCH MARK	HDWR	HARDWARE	SS	STAINLESS STEEL
BRG	BEARING	HT	HEIGHT	SSK	SERVICE SINK
BRKT	BRACKET	HP	HOLLOW METAL	SQ	SQUARE
BRK	BRICK	HORIZ	HIGH POINT	SCHED	SCHEDULE
BT STL PL	BENT STEEL PLATE	HTG	HORIZONTAL	SEAL/HDNR	SEALER/HARDENER
CJ	CONSTRUCTION OR CONTRACTION JOINT	HVAC	HEATING	SEC	SECTION
CAB	CABINET	IN	HEATING/VENTILATING/AIR CONDITIONING	SHT	SHEET
CEM PL-(1)	CEMENT PASTER (TYPE)	INCH	INCH	SIM	SIMILAR
CT PAV-(1)	CERAMIC PAVER TILE (TYPE)	ID	INSIDE DIAMETER	SOG	SLAB ON GRADE
CLP	CAST-IN-PLACE	INCL	INCLUDE/INCLUDING/INCLUDED	SPEC(S)	SPECIFICATION(S)
CIG	CEILING	INSUL	INSULATION/INSULATING/INSULATED	SPC'G	SPACING
CLR	CLEAR	JT	JOINT	SPK'R	SPEAKER
C.O.	CLEAN-OUT	KD	KNOCK DOWN	STD	STANDARD
CMU	CONCRETE MASONRY UNIT	L	LONG	STD WT	STANDARD WEIGHT
COL	COLUMN	LAM	LAMINATE/LAMINATING/LAMINATED	STL	STEEL
COMB	COMBINATION	LAV	LAVATORY	STRUCT	STRUCTURE OR STRUCTURAL
COMP	COMPRESSIBLE OR COMPACTED	LH	LEFT HAND	SUSP	SUSPEND(ED)
CONC	CONCRETE	LP	LOW POINT	SYM	SYMMETRICAL
CONC OPNG	CONCRETE OPENING	LT WT	LIGHTWEIGHT	T	TREAD
COND	CONDITION	LL	LIVE LOAD	T&G	TONGUE AND GROOVE
CONT	CONTINUOUS	LLH	LONG LEG HORIZONTAL	T/BEAM	TOP OF
CONTR	CONTRACT(OR)	LLV	LONG LEG VERTICAL	T/BEAM	TOP OF BEAM
CPT-(1)	CARPET (TYPE)	LVR	LOUVER	T/C	TOP OF CURB
CT-(1)	CERAMIC TILE (TYPE)	MO	MASONRY OPENING	T/FNDN	TOP OF FOUNDATION
CTR	COUNTER	MT	METAL THRESHOLD	T/STL	TOP OF STEEL
CTR SK	COUNTER SINK	MAS	MASONRY	T/WALL	TOP OF WALL
CTRS	CENTER(S)	MATL	MATERIAL	TB (4)	TACKBOARD (LENGTH IN FEET)
CUH	CABINET UNIT HEATER	MAX	MAXIMUM	T/MAS	TOP OF MASONRY
CUV	CABINET UNIT VENTILATOR	MB (16)	MARKERBOARD (LENGTH IN FEET)	TYP	TYPICAL
DIA	DIAMETER	MECH	MECHANICAL	UD	(WINDOW) UNIT DIMENSION
DIM	DIMENSION	MECH CONTR	MECHANICAL CONTRACTOR	UNO	UNLESS NOTED OTHERWISE
DN	DOWN	MFR	MANUFACTURER	VBC	VINYL BASE COVERED
DO	DOOR OPENING	MIN	MINIMUM OR MINUTE(S)	VBS	VINYL BASE STRAIGHT
DR	DOOR	MISC	MISCELLANEOUS	VCT	VINYL COMPOSITION TILE
DWGS	DRAWINGS	MSB	MOP SERVICE BASIN (SINK)	VEN PL (1)	VENER PLASTER (TYPE)
DTL	DETAIL	MT(D)	MOUNT(ED)	VERT	VERTICAL
DWL'S	DOWELS	MTL	METAL	W	WIDE OR WIDTH
EA	EACH	NIC	NOT IN CONTRACT	W/	WITH
EJ	EXPANSION JOINT	NOM	NOMINAL	W/O	WITHOUT
EL	ELEVATION	NTS	NOT TO SCALE	WCG	WALL CORNER GUARD
ELEC	ELECTRIC/ELECTRICAL	NO	NUMBER	WD	WOOD
ELEC CONTR	ELECTRIC CONTRACTOR	OA	OVERALL OR OUTSIDE AIR	WDW	WINDOW
ELEV	ELEVATOR OR ELEVATION	OC	ON CENTER	WT	WEIGHT
EMBD	EMBEDMENT	OD	OUTSIDE DIAMETER	WP	WATER PROOF
EMER	EMERGENCY	OF	OUTSIDE FACE OR OPPOSITE FACE	WWF	WELDED WIRE FABRIC
EP	EPOXY	OPNG	OPENING	WSB	WALL SERVICE BASIN
EQ	EQUAL	OPP	OPPOSITE OR OPPOSITE HAND		
EW	EACH WAY	PSF	POUNDS PER SQUARE FOOT		
EWC	ELECTRIC WATER COOLER	PS	POUNDS PER SQUARE INCH		
		PT	PRESSURE TREATED OR PAINT		

THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT. ABBREVIATIONS MAY APPEAR WITH PERIODS OR OTHER PUNCTUATION SEPARATING CHARACTERS ON THE DRAWINGS; THE MEANING REMAINS THE SAME.

DETAIL CALLOUT	
DETAIL NUMBER	8
DRAWING NUMBER	A1224
EXTERIOR ELEVATION	
ELEVATION NUMBER	23
DRAWING NUMBER	A719
INTERIOR ELEVATION	
ELEVATION NUMBER	2
DRAWING NUMBER	6 (A916) 5
SECTION REFERENCE	
SECTION NUMBER	1
DRAWING NUMBER	A605
COLUMN NO.	26
REFERENCE LINE NO.	26
LOCATION	
ELEVATION	T/1ST FL. 100'-0"
ROOM	
NUMBER	204
DOOR NO. NEW	203.2
DOOR NO. EXISTING	203.1X
NOMINAL THICKNESS	
CONSTRUCTION TYPE	MS
SPECIAL CONDITION	
KEYNOTE	
IDENTIFICATION	7.531
WINDOW TYPE	
IDENTIFICATION	X
TOILET ACCESSORY	
IDENTIFICATION	A
SPOT	
ELEVATION	T/1ST FL. 100'-0"

DRAFTING SYMBOLS AND MATERIALS LEGEND

FIRE-RATING	
	1-HOUR
	2-HOUR
	CONCRETE
	BRICK MASONRY IN PLAN
	CONCRETE MASONRY IN PLAN (RUNNING BOND)
	CONCRETE MASONRY IN PLAN (STACK BOND)
	STONE MASONRY IN PLAN
	RAKED JOINT IN PLAN CTRL./EXP. JOINT IN PLAN
	BRICK MASONRY IN SECTION DETAIL
	CONCRETE MASONRY IN SECTION DETAIL
	STONE MASONRY IN SECTION DETAIL
	STEEL IN SECTION DETAIL
	DISCONTINUOUS ROUGH WOOD BLOCKING IN SECTION
	CONTINUOUS ROUGH WOOD FRAMING/BLOCKING IN SECTION
	FINISHED WOOD IN SECTION DETAIL
	RIGID BOARD INSULATION
	RIGID BOARD INSULATION (ROOFING)
	BATT INSULATION
	GYPSUM BOARD
	ACOUSTICAL CEILING PANEL
	BITUMINOUS CONCRETE (ASPHALT) PAVING IN SECTION
	AGGREGATE BALLAST, FILL OR BACKFILL IN SECTION
	UNDISTURBED EARTH
	EARTH BACKFILL

PROJECT

OWNER

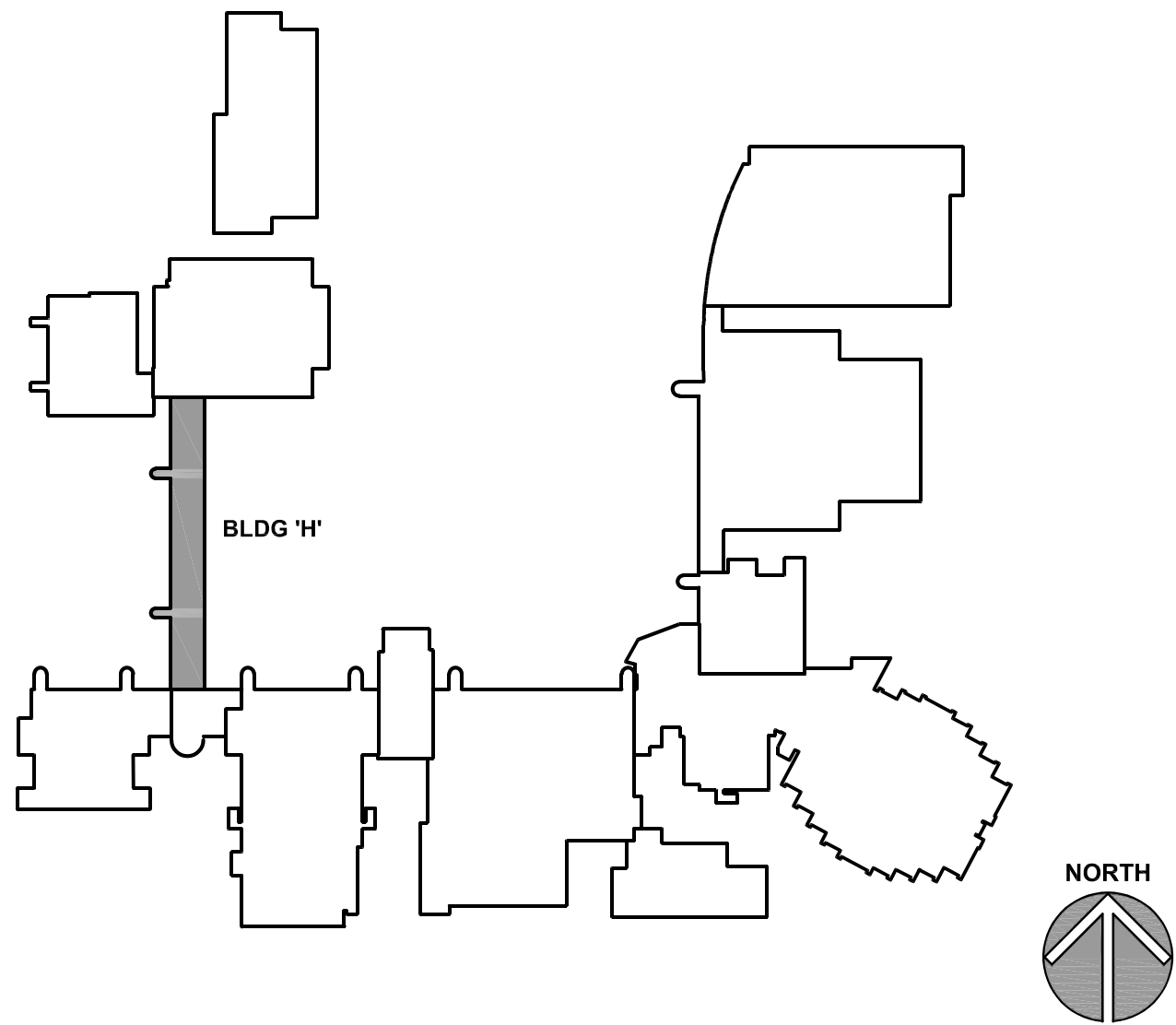
**ARCHITECT/
ENGINEER**

**BUILDING 'H' HVAC
UNIT REPLACEMENT
JOLIET JUNIOR COLLEGE
1215 HOUBOLT ROAD
JOLIET, IL 60431**

JOLIET JUNIOR COLLEGE
1215 HOUBOLT ROAD
JOLIET, IL 60431

KLUBER ARCHITECTS + ENGINEERS
41 W BENTON STREET
AURORA, ILLINOIS 60506
TEL (630) 406-1213
FAX (630) 406-9472
www.kluberinc.com

BID DOCUMENTS



SEALS & CERTIFICATIONS

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH IBC 2021 EDITION, THE ENVIRONMENTAL BARRIERS ACT AND THE ILLINOIS ACCESSIBILITY CODE.

KLUBER, INC. ILLINOIS PROFESSIONAL
DESIGN FIRM LICENSE #184-001284

SEAL

"G" SERIES, "M" SERIES

"G" SERIES, "M" SERIES

SEAL

"G" SERIES, "M" SERIES

"G" SERIES, "M" SERIES

"G" SERIES, "E" SERIES

"G" SERIES, "E" SERIES

	SEAL
"G" SERIES, "M" SERIES	

"G" SERIES, "M" SERIES

INDEX OF DRAWINGS

G100	COVER SHEET, GENERAL NOTES, SYMBOLS, & DRAWING INDEX
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M210	FIRST FLOOR MECHANICAL DEMOLITION PLANS
M310	FIRST FLOOR MECHANICAL PLANS
M311	MECHANICAL ENLARGED FLOOR PLANS
M312	ALTERNATE NO. 1: MECHANICAL ENLARGED FLOOR PLANS
M320	ROOF MECHANICAL PLAN
M410	PIPING SCHEMATIC
M411	TEMPERATURE CONTROLS
M610	MECHANICAL SCHEDULES AND DETAILS
E050	ELECTRICAL ABBREVIATIONS, SYMBOLS LIST, SCHEDULES & DETAILS
E300	GROUND FLOOR AND ROOF ELECTRICAL PLANS
E311	ENLARGED ELECTRICAL PLANS

APPLICABLE CODES

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL AND GAS CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2018 INTERNATIONAL FIRE CODE
2020 NATIONAL ELECTRICAL CODE
LOCAL AMENDMENTS TO THE ABOVE CODES

2014 ILLINOIS PLUMBING CODE
2021 ILLINOIS ENERGY CONSERVATION CODE
(2021 INTERNATIONAL ENERGY CONSERVATION
CODE W/STATE AMENDMENTS)
2018 ILLINOIS ACCESSIBILITY CODE

[illegible]



ALTERNATE NO. 1: GROUND FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

1

KEYNOTES

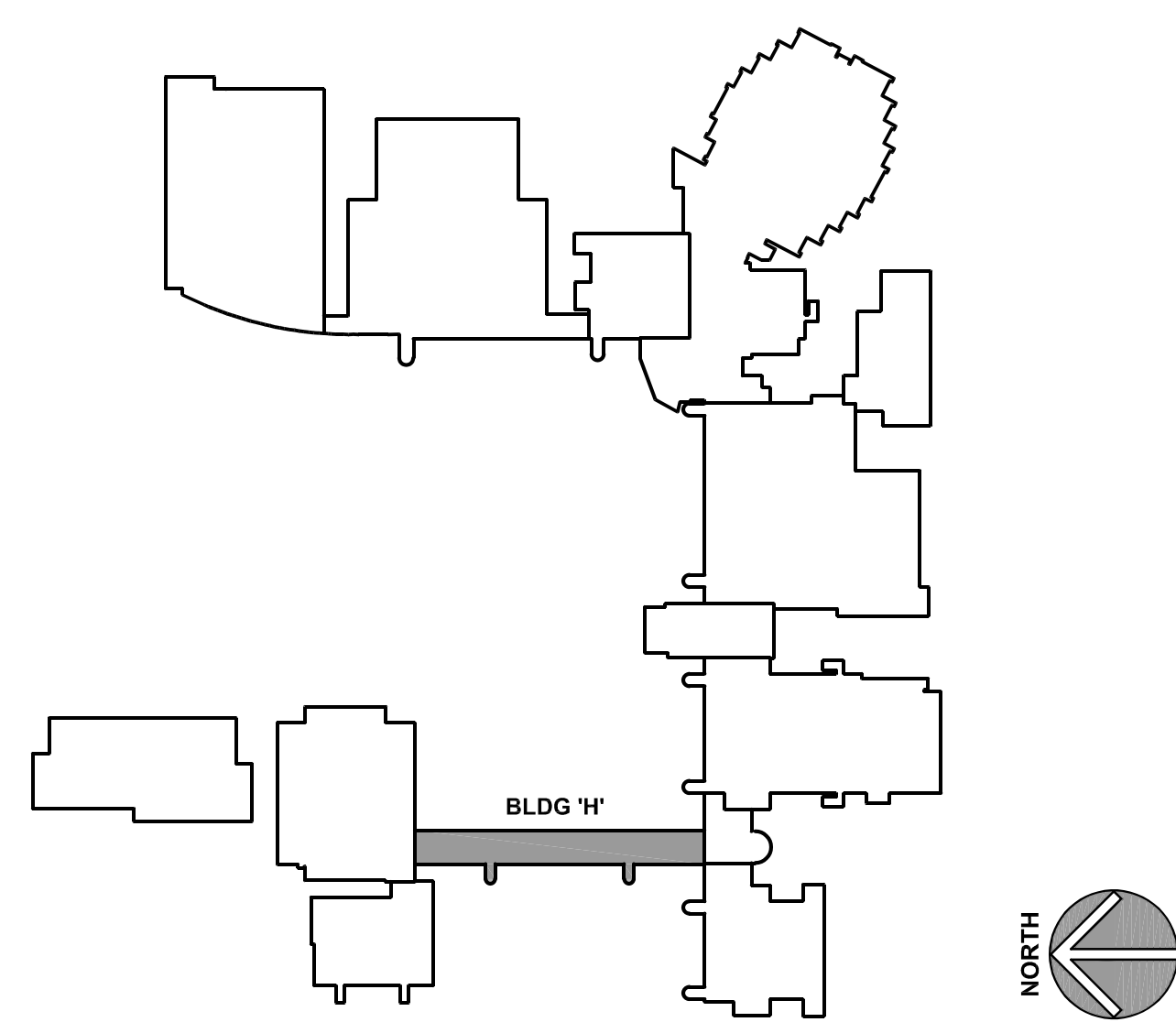
KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL.
AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED
ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 9.240 PATCH EXISTING STUCCO/PLASTER SOFFIT AT LOCATIONS OF REMOVED PIPING UTILIZING PLASTERING MATERIAL, TECHNIQUES AND THICKNESSES TO MATCH EXISTING STUCCO/PASTER SYSTEM AND SURFACE TEXTURE.
- 9.901 PAINT STUCCO/PLASTER PATCHES AND SURROUNDING SURFACES TO BLEND PATCHED AREAS SEAMLESSLY INTO EXISTING SURROUNDING SURFACES.
- 9.902 PAINT EXPOSED PREVIOUSLY UNPAINTED SURFACES OF EXISTING CONCRETE COLUMN TO MATCH SURROUNDING SURFACES; EXTEND PAINTING ONTO SURROUNDING PREVIOUSLY PAINTED SURFACES TO SEAMLESSLY BLEND THE TWO.
- 23.109 REMOVE AIR-COOLED CONDENSING UNIT AND ASSOCIATED SUPPORT STAND.
- 23.110 REMOVE ALL REFRIGERANT PIPING AND ASSOCIATED METAL PIPE CHASE COVER IN ITS ENTIRETY.

GENERAL NOTES

- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- ALL PIPING AND DUCTWORK ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
- EXISTING PIPING AND DUCTWORK INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
- ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
- THERMOSTATIC CONTROLS OF EQUIPMENT SHALL HAVE A 5' F DEADBAND.
- GENERALLY, SMALL DIAMETER PIPE RUNS FROM DRIPS, CONDENSATE PANS AND OTHER SERVICES ARE NOT SHOWN BUT MUST BE PROVIDED. CONDENSATE DRAINS SHALL BE CONFIGURED WITH FITTINGS AND/OR UNIONS TO PERMIT CLEARING OF BLOCKAGES AND PERFORMANCE OF MAINTENANCE WITHOUT CUTTING OF THE LINES.
- SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
- DO NOT CUT THROUGH THE STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
- ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST WIND AND SEISMIC FORCES. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



ISSUED
12/20/24 BID DOCUMENTS

JOB NO. 23-292-1509
DRAWN KJD
CHECKED BWG
APPROVED DDW

SHEET TITLE
ALTERNATE NO. 1:
GROUND FLOOR
MECHANICAL
DEMOLITION PLAN

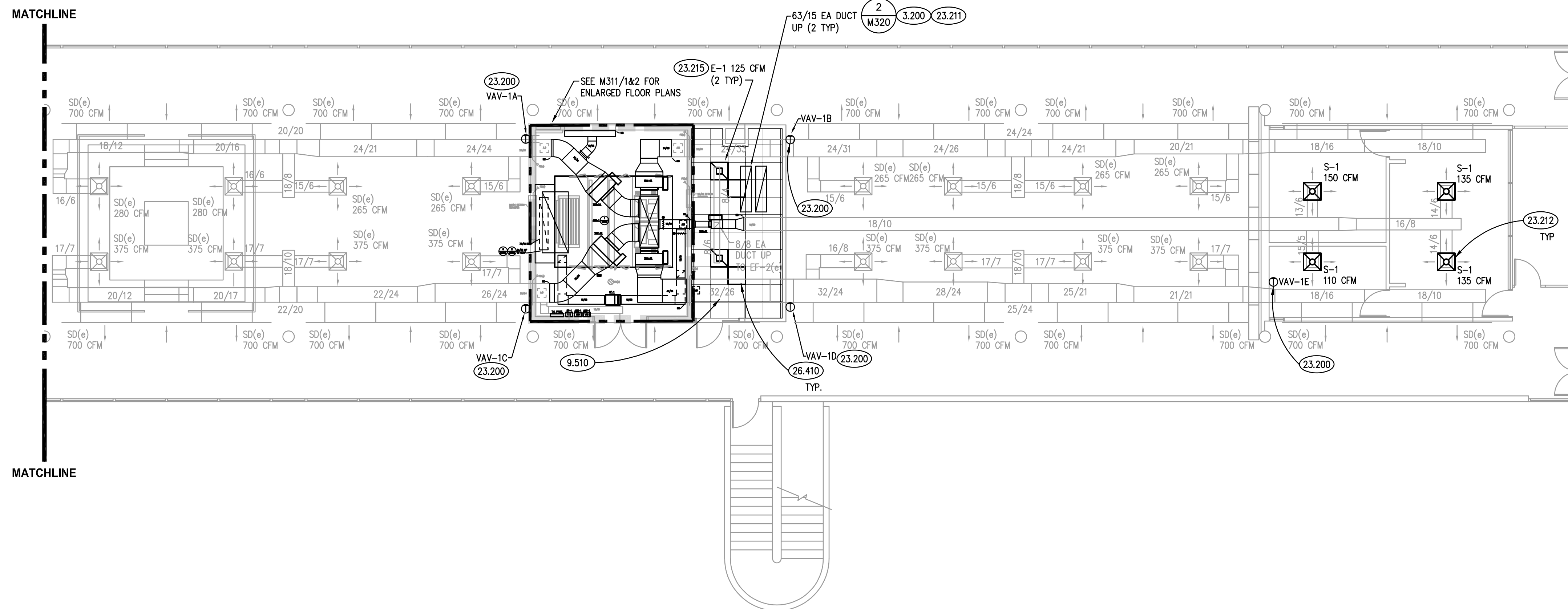
SHEET NUMBER

M200

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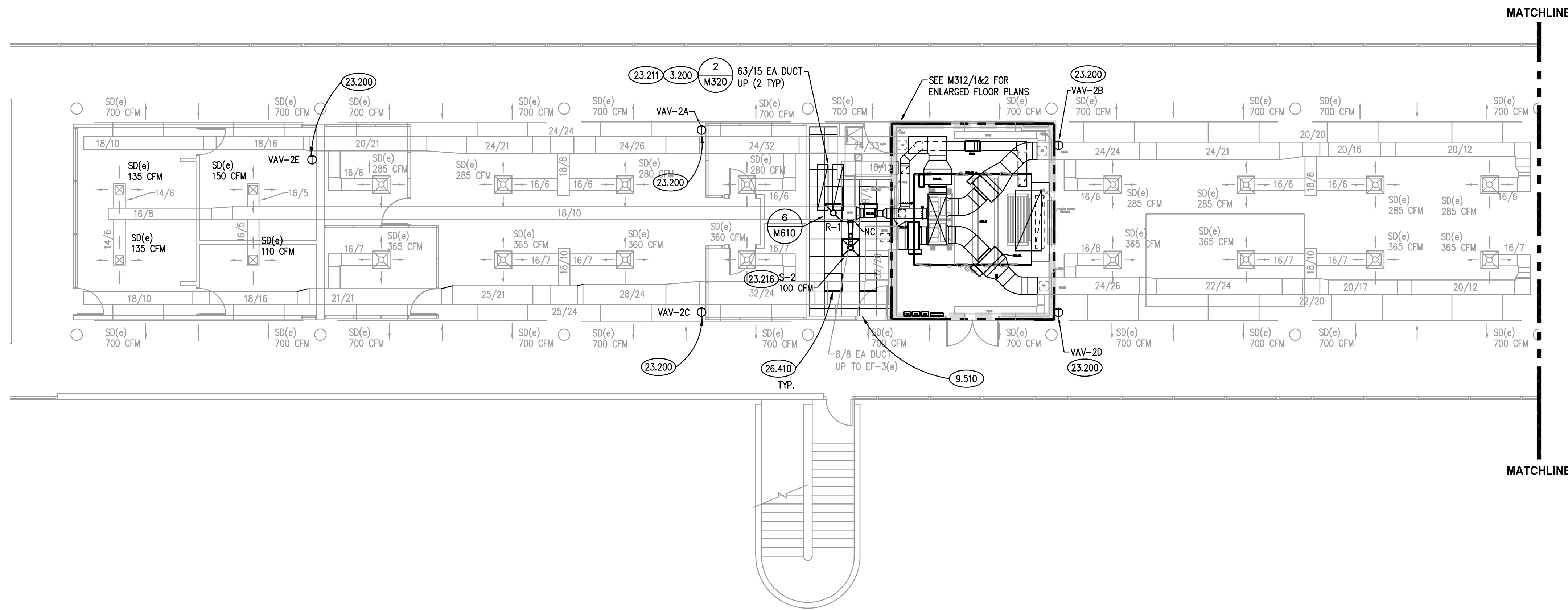
-
- Architectural drawing showing a site plan with various building footprints. A specific building, labeled "BLDG 'H'", is highlighted with a thick black outline. Below this building, two rectangular areas are labeled "AREA B" and "AREA A". A north arrow is located in the bottom right corner of the drawing area.
- ISSUED**
- 02/05/24 BID DOCUMENTS
- JOB NO. 23-292-1509
 DRAWN KJD
 CHECKED BWG
 APPROVED DDW
- SHEET TITLE**
- FIRST FLOOR
 MECHANICAL
 DEMOLITION PLANS**
- SHEET NUMBER**
- M210**

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.


PARTIAL FIRST FLOOR MECHANICAL PLAN AREA A

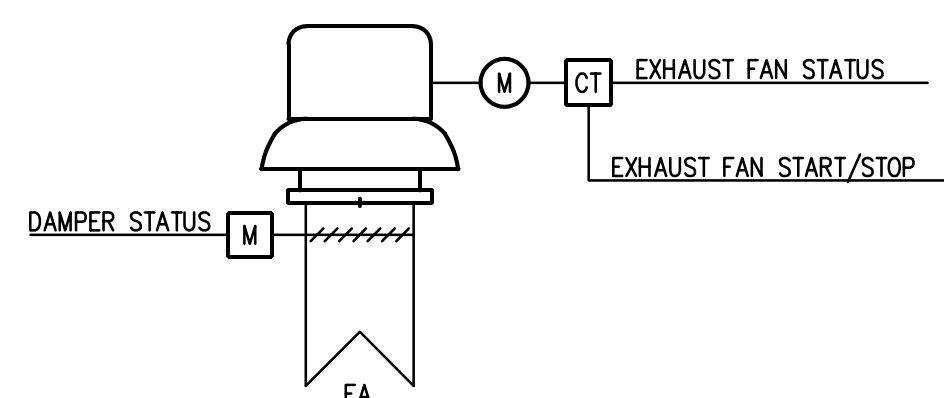
SCALE: 1/8" = 1'-0"

1


ALTERNATE NO. 1: PARTIAL FIRST FLOOR MECHANICAL PLAN AREA B

SCALE: 1/8" = 1'-0"

2

ALT NO. 1: EXHAUST FAN CONTROL SCHEMATIC

SEQUENCE OF OPERATIONS

- EF-2: THE EXHAUST FAN SHALL BE ENERGIZED AS SCHEDULED IN THE BUILDING AUTOMATION SYSTEM. THE EXHAUST FAN MOTORIZED DAMPER SHALL OPEN/CLOSE WHEN THE FAN IS ENERGIZED / DE-ENERGIZED.
- EF-3: THE EXHAUST FAN SHALL BE ENERGIZED AS SCHEDULED IN THE BUILDING AUTOMATION SYSTEM. THE EXHAUST FAN MOTORIZED DAMPER SHALL OPEN/CLOSE WHEN THE FAN IS ENERGIZED / DE-ENERGIZED.

POINTS LIST

	HARDWARE				SOFTWARE			
	AI	AO	DI	DO	SCHED	TREND	ALARM	GRAPHIC
EXHAUST FAN								
FAN START/STOP								X
FAN STATUS			X					X
DAMPER STATUS			X					X

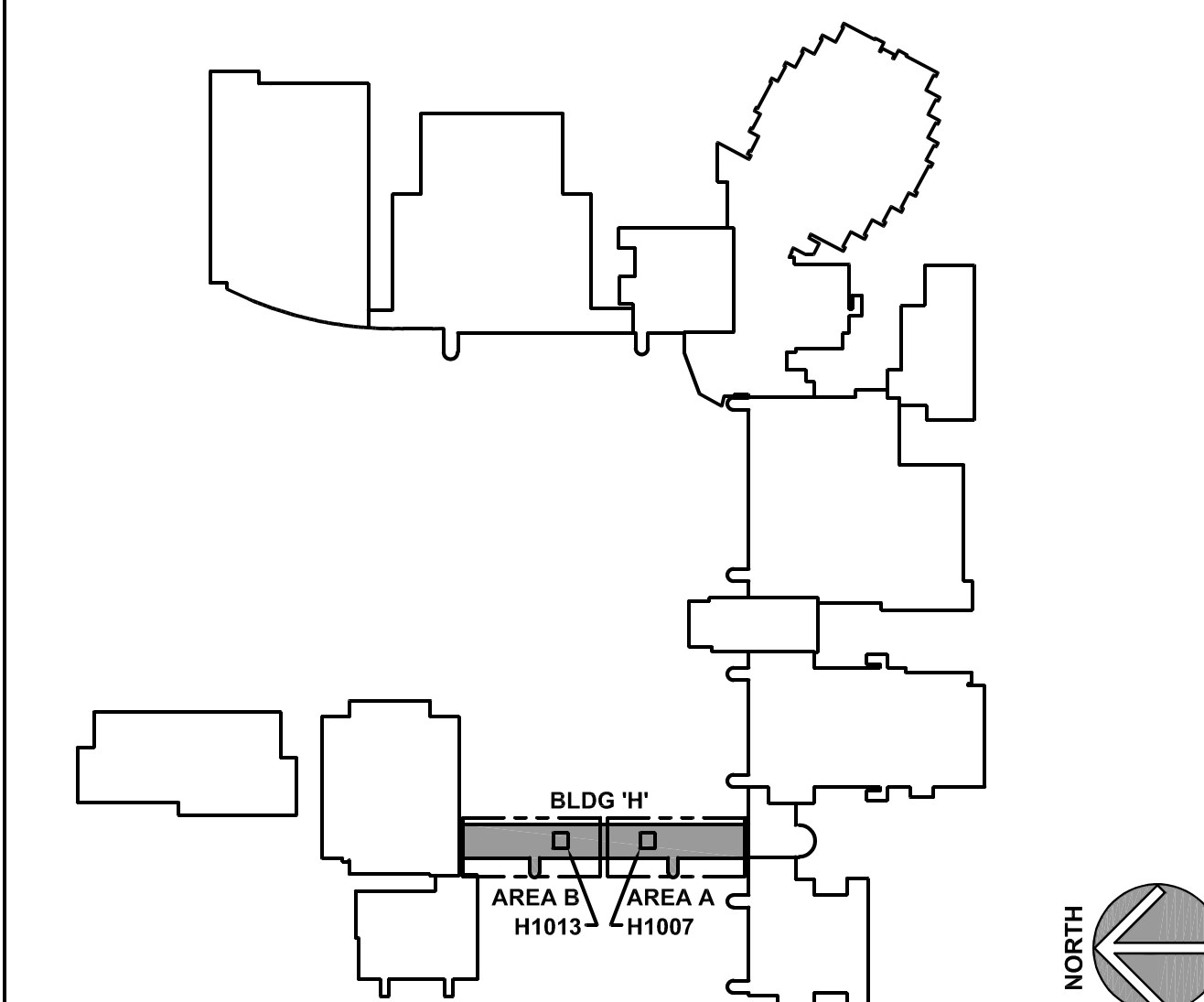
KEYNOTES

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- 3.200 PROVIDE OPENING THROUGH EXISTING POST-TENSIONED CONCRETE ROOF SLAB BY DEMOLITION TECHNIQUES THAT DO NOT CUT OR DAMAGE EXISTING TENDONS. LOCATE STRANDS BY X-RAY OR OTHER MEANS THAT WILL ACCURATELY LOCATE STRANDS. DO NO CUT OR DAMAGE STRANDS. REFER TO DETAIL NOTED FOR FURTHER REQUIREMENTS AND OPENING REINFORCING.
- 9.510 PROVIDE ACOUSTICAL LAY-IN CEILING IN THIS ROOM; TILES AND SUSPENSION GRID AS SPECIFIED; SET CEILING HEIGHT TO MATCH HEIGHT OF ORIGINAL.
- 23.200 PROVIDE NEW THERMOSTAT FOR VAV BOX. COORDINATE WITH OWNER FOR EXACT LOCATION.
- 23.211 PROVIDE EXHAUST DUCT STUBBED INTO RETURN PLENUM ABOVE CEILING. REFER TO ROOF PLAN FOR ADDITIONAL INFORMATION.
- 23.212 PROVIDE NEW SUPPLY DIFFUSER AS SCHEDULED. PROVIDE ALL MATERIALS AND LABOR TO CONNECT NEW DIFFUSER TO EXISTING DUCTWORK. ENLARGE CEILING OPENING AS REQUIRED FOR NEW 24X24 DIFFUSER SIZE. BALANCE AIRFLOW TO REQUIRED CFM.
- 23.215 PROVIDE NEW EXHAUST GRILLE. PROVIDE ALL MATERIALS AND LABOR TO CONNECT NEW GRILLE TO EXISTING EXHAUST DUCTWORK. BALANCE AIRFLOW TO REQUIRED CFM.
- 23.216 PROVIDE NEW SUPPLY DIFFUSER. PROVIDE CONNECTION INTO EXISTING SUPPLY DUCTWORK AS SHOWN.
- 26.410 LIGHT FIXTURE: REFER TO ELECTRICAL DRAWINGS.

GENERAL NOTES

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- EXISTING PIPING AND DUCTWORK INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
- ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
- THERMOSTATIC CONTROLS OF EQUIPMENT SHALL HAVE A 5' F DEADBAND.
- GENERALLY, SMALL DIAMETER PIPE RUNS FROM DRIPS, CONDENSATE PANS AND OTHER SERVICES ARE NOT SHOWN BUT MUST BE PROVIDED. CONDENSATE DRAINS SHALL BE CONFIGURED WITH FITTINGS AND/OR UNIONS TO PERMIT CLEARING OF BLOCKAGES AND PERFORMANCE OF MAINTENANCE WITHOUT CUTTING OF THE LINES.
- SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
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- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN
ISSUED
12/20/24 BID DOCUMENTS

JOB NO. 23-292-1509
DRAWN KJD
CHECKED BWG
APPROVED DDW

SHEET TITLE

FIRST FLOOR
MECHANICAL PLANS

SHEET NUMBER

M310

BUILDING 'H' HVAC UNIT REPLACEMENT

JOLIET JUNIOR COLLEGE
1215 HOUBOLT ROAD
JOLIET, ILLINOIS 60431

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Kluber
Architects + Engineers

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7.841 FIRESTOPPING: PROVIDE AT PERIMETER OF ENLARGED DUCT OPENING

23.102 REMOVE AIR HANDLING UNIT. REMOVE SUPPLY DUCT BACK TO LOCATIONS AS SHOWN. EXISTING DUCT ACCESS
DOORS TO REMAIN WHERE INDICATED. PROVIDE TEMPORARY CAP OVER DUCT FOR NEW CONNECTION.

23.103 REMOVE DUCT TAKEOFF TO LINEAR DIFFUSER AS SHOWN. EXISTING LINEAR DIFFUSER TO REMAIN. PROVIDE
TEMPORARY CAP FOR NEW CONNECTION. REFER TO NEW WORK PLANS FOR NEW DUCT CONFIGURATION.

23.104 REMOVE EXISTING PNEUMATIC CONTROL PANEL. REMOVE SUPPLY DUCT BACK TO LOCATION AS SHOWN. PROVIDE TEMPORARY CAP FOR NEW CONNECTION.

23.106 REMOVE PNEUMATIC CONTROL PANEL AND ALL ASSOCIATED END DEVICES. VERIFY ONLY POINTS IN PANEL ARE
ASSOCIATED WITH AHU. IF OTHER CONTROLS ARE IN PANEL AFFECTING OTHER EQUIPMENT NOTIFY OWNER.

23.107 REMOVE OUTSIDE AIR PLENUM BOX AND DUCTWORK DOWN TO FLOOR. PROVIDE TEMPORARY CAP AT FLOOR FOR
NEW CONNECTION.

23.150 REMOVE CHILLED WATER PIPING AND COIL SPECIALTIES FOR AIR HANDLING UNIT BACK TO LOCATION AS SHOWN. PROVIDE TEMPORARY CAP FOR NEW CONNECTION. EXISTING ROOM ISOLATION VALVES TO REMAIN AS SHOWN.

23.151 REMOVE HOT WATER PIPING AND COIL SPECIALTIES BACK TO LOCATION AS SHOWN. PROVIDE TEMPORARY CAP ON TAKEOFFS BEING REUSED. PROVIDE PERMANENT INSULATED CAPS ON TAKEOFFS NOT BEING REUSED.

23.152 COORDINATE WITH OWNER FOR DRAINING OF HOT WATER PIPING. OWNER TO DRAIN AND FILL HOT WATER PIPING.

23.201 PROVIDE OUTSIDE AIR PLENUM BOX ON BACK OF AIR HANDLING UNIT. EXTEND PLENUM BOX TO MECHANICAL ROOM WALL.

23.204 PROVIDE VAV BOXES AS SHOWN. PROVIDE DUCT CONNECTIONS TO EXISTING DUCTWORK AS SHOWN. MAINTAIN

23.205 PROVIDE NEW CONNECTION TO EXISTING LINEAR DIFFUSER AS SHOWN.

23.207 PROPOSED LOCATION OF VARIABLE FREQUENCY DRIVE FOR AHU. CONFIRM FINAL LOCATION WITH OWNER.
 PROVIDE TWO VFDs FOR AIR HANDLING UNIT. ONE VFD SHALL CONTROL TWO FANS.

23.208 PROVIDE DUCT CONNECTION BETWEEN GRAVITY VENTILATOR ON ROOF AND OUTSIDE AIR PLENUM BOX OF AIR HANDLING UNIT. PROVIDE ALL REQUIRED TRANSITIONS AND FITTING TO MAKE THE CONNECTIONS. REFER TO ROOF PLAN FOR ADDITIONAL INFORMATION.

23.209 PROVIDE VARIABLE FREQUENCY DRIVE FOR EXHAUST FAN ON ROOF. CONFIRM FINAL LOCATION WITH OWNER.

23.218 PROVIDE DUCT CONNECTION TO AIR HANDLING UNIT'S MIXING BOX SECTION AS SHOWN.

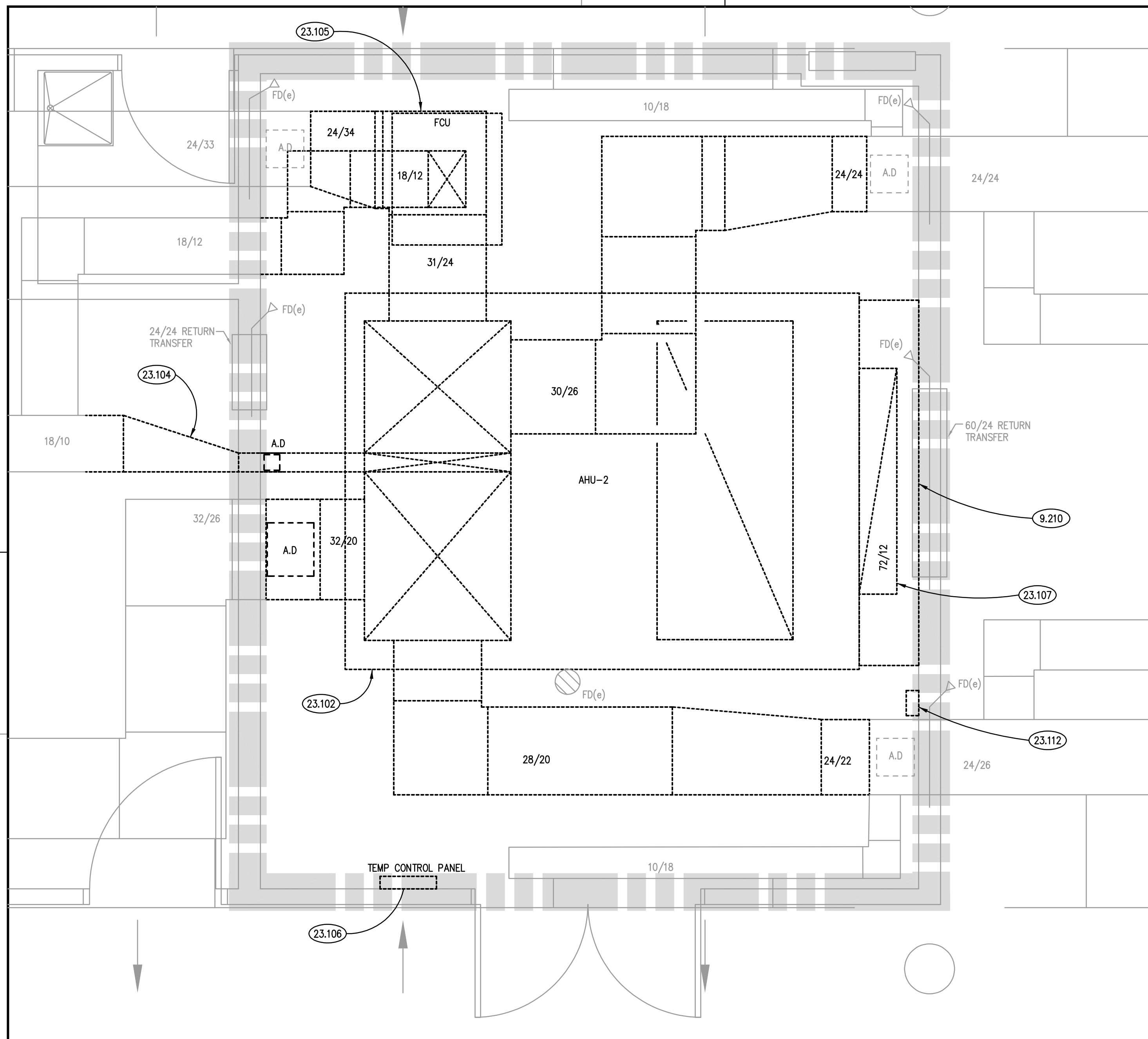
INFORMATION.

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10. ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST WIND AND SEISMIC FORCES. ANCHORAGE TO MEET DESIGN IS NOT NECESSARY. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
11. OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

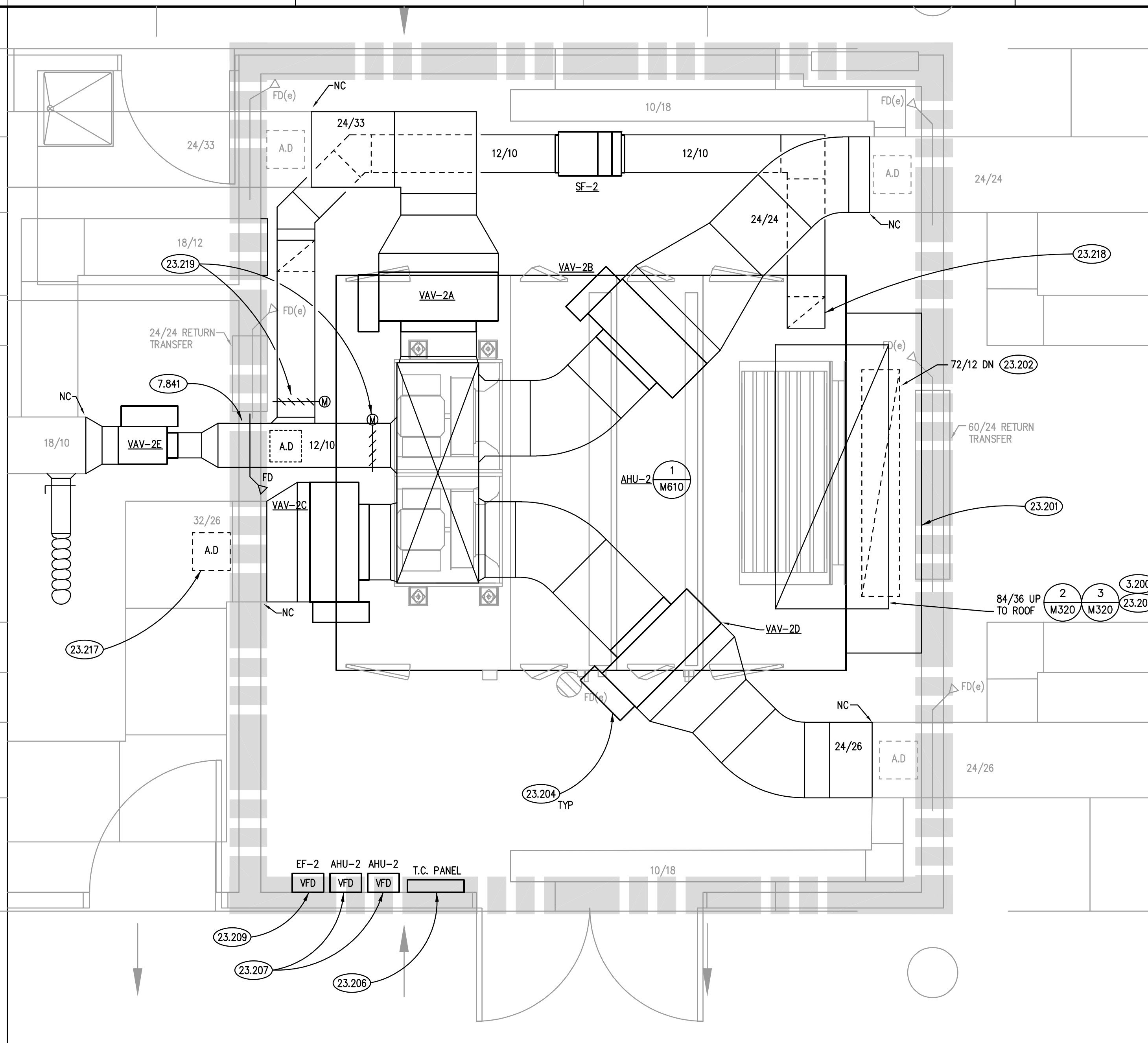
A black and white line drawing of a building complex. The drawing shows several interconnected building footprints. A label "BLDG 'H'" is positioned in the lower-middle part of the drawing, with a leader line pointing to a specific building footprint. The drawing is oriented with a north arrow pointing towards the top right corner.

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES

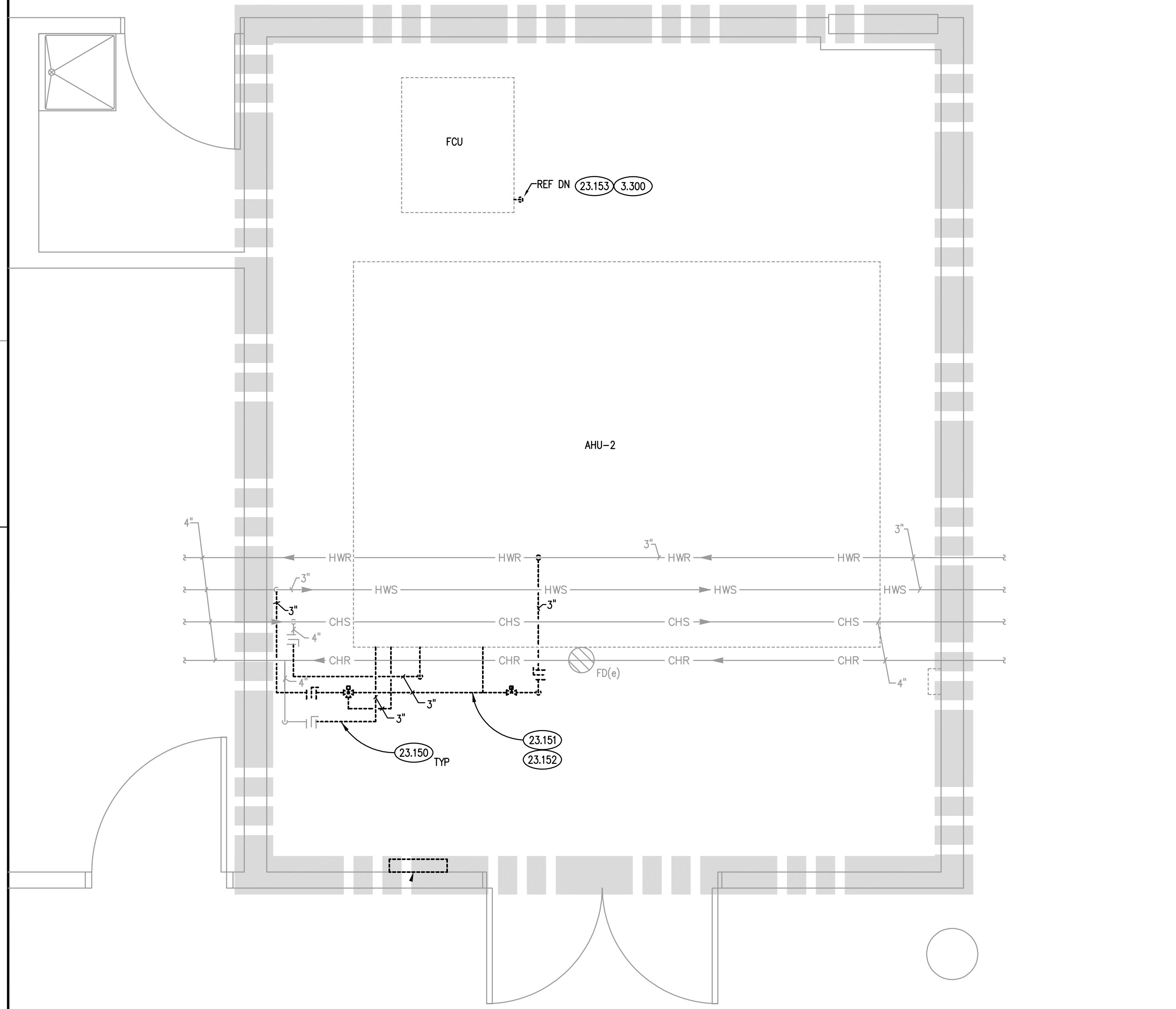




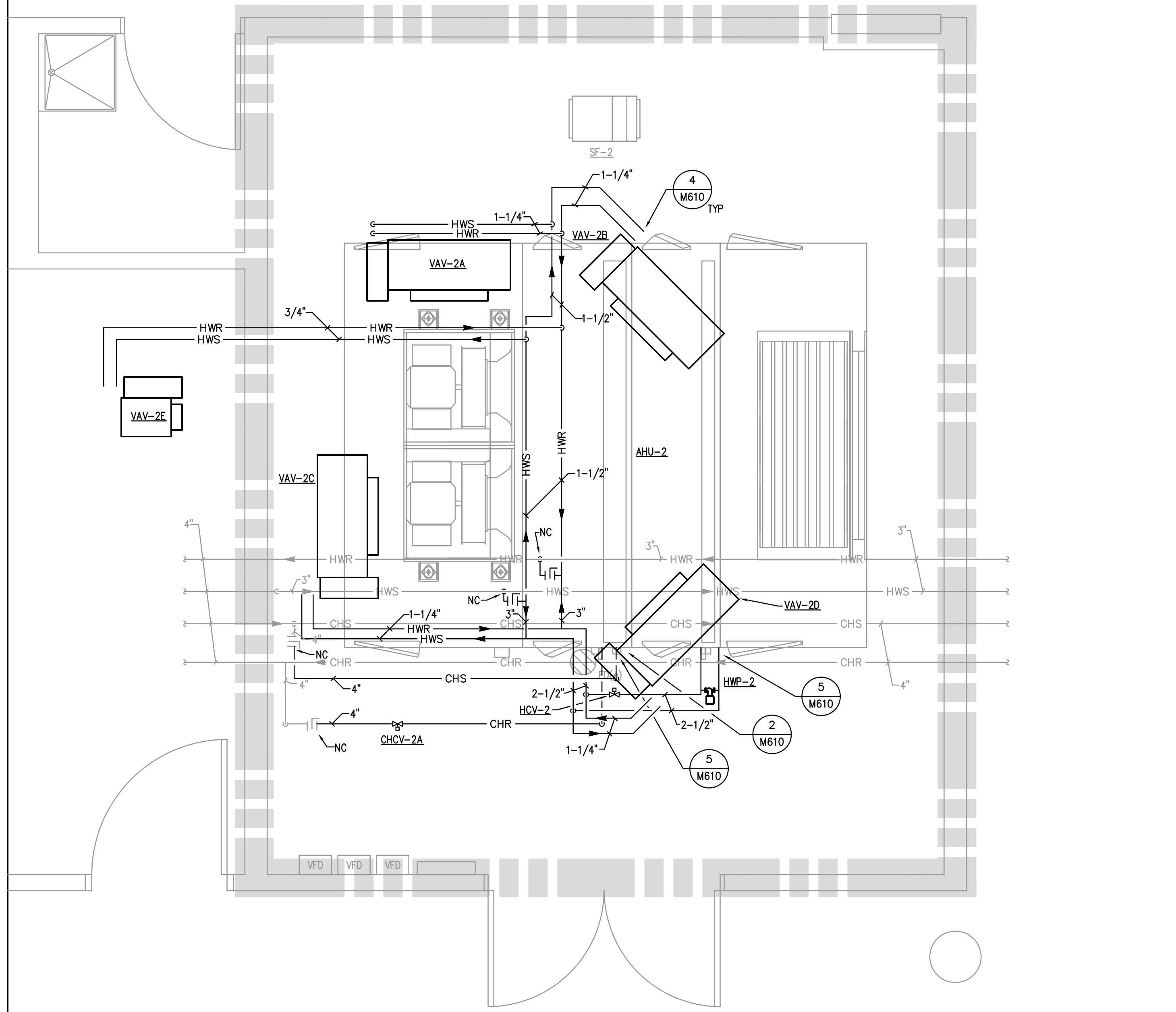
H1013 VENTILATION DEMOLITION FLOOR PLAN
SCALE: 1/2" = 1'-0" **3**



H1013 VENTILATION FLOOR PLAN
SCALE: 1/2" = 1'-0" **1**



H1013 PIPING DEMOLITION FLOOR PLAN
SCALE: 1/2" = 1'-0" **4**



H1013 PIPING FLOOR PLAN
SCALE: 1/2" = 1'-0" **2**

KEYNOTES

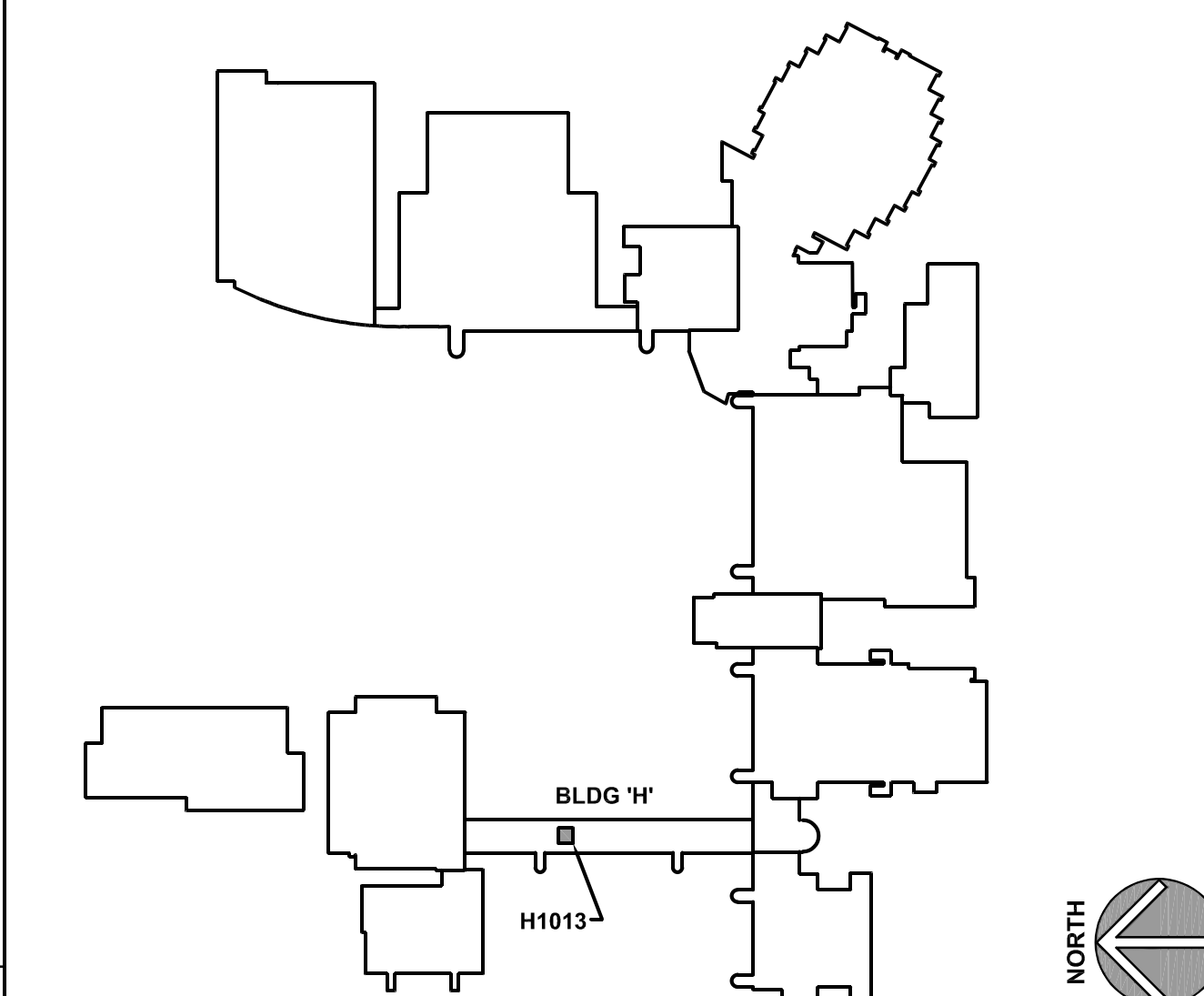
KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 3.200 PROVIDE OPENING THROUGH EXISTING POST-TENSIONED CONCRETE ROOF SLAB BY DEMOLITION TECHNIQUES THAT DO NOT CUT OR DAMAGE EXISTING TENDONS. LOCATE STRANDS BY X-RAY OR OTHER MEANS THAT WILL ACCURATELY LOCATE STRANDS. DO NOT CUT OR DAMAGE STRANDS. REFER TO DETAIL NOTED FOR FURTHER REQUIREMENTS AND OPENING REINFORCING.
- 3.300 INFILL EXISTING CONCRETE FLOOR SLAB CORES AT REMOVED REFRIGERANT LINE LOCATIONS USING LIKE MATERIAL.
- 7.841 FIRESTOPPING: PROVIDE AT PERIMETER OF ENLARGED DUCT OPENING.
- 9.210 PATCH EXISTING GYPSUM WALL AT LOCATIONS OF REMOVED OUTSIDE AIR DUCT WITH TWO LAYERS OF 5/8" GYPSUM BOARD MATCHING EXISTING WALL CONSTRUCTION. PRIME WALL AND PROVIDE TWO TOPCOATS MATCHING EXISTING COLOR.
- 23.102 REMOVE AIR HANDLING UNIT. REMOVE SUPPLY DUCT BACK TO LOCATIONS AS SHOWN. EXISTING DUCT ACCESS DOORS TO REMAIN WHERE INDICATED. PROVIDE TEMPORARY CAP OVER DUCT FOR NEW CONNECTION.
- 23.104 REMOVE SUPPLY DUCTWORK BACK TO LOCATION AS SHOWN. PROVIDE TEMPORARY CAP FOR NEW CONNECTION.
- 23.105 REMOVE FAN COIL UNIT AND ASSOCIATED SUPPORT STAND. REMOVE DUCTWORK BACK TO WALL AS SHOWN AND PROVIDE PERMANENT CAP ON DUCTWORK.
- 23.106 REMOVE PNEUMATIC CONTROL PANEL AND ALL ASSOCIATED END DEVICES. VERIFY ONLY POINTS IN PANEL ARE ASSOCIATED WITH AHU. IF OTHER CONTROLS ARE IN PANEL AFFECTING OTHER EQUIPMENT NOTIFY OWNER.
- 23.107 REMOVE OUTSIDE AIR PLENUM BOX AND DUCTWORK DOWN TO FLOOR. PROVIDE TEMPORARY CAP AT FLOOR FOR NEW CONNECTION.
- 23.112 REMOVE TIMER CONTROLLER FOR EXHAUST FANS. EXISTING EXHAUST FANS TO BE TIED INTO BUILDING AUTOMATION SYSTEM. REFER TO SEQUENCE OF OPERATION ON DRAWING M310.
- 23.150 REMOVE CHILLED WATER PIPING AND COIL SPECIALTIES FOR AIR HANDLING UNIT BACK TO LOCATION AS SHOWN. PROVIDE TEMPORARY CAP FOR NEW CONNECTION. EXISTING ROOM ISOLATION VALVES TO REMAIN AS SHOWN.
- 23.151 REMOVE HOT WATER PIPING AND COIL SPECIALTIES BACK TO LOCATION AS SHOWN. PROVIDE TEMPORARY CAP ON TAKEOFFS BEING REUSED. PROVIDE PERMANENT INSULATED CAPS ON TAKEOFFS NOT BEING REUSED.
- 23.152 COORDINATE WITH OWNER FOR DRAINING OF HOT WATER PIPING. OWNER TO DRAIN AND FILL HOT WATER PIPING.
- 23.153 REMOVE ALL REFRIGERANT AND CONDENSATE PIPING FOR FAN COIL UNIT ITS ENTIRETY.
- 23.201 PROVIDE OUTSIDE AIR PLENUM BOX ON BACK OF AIR HANDLING UNIT. EXTEND PLENUM BOX TO MECHANICAL ROOM WALL.
- 23.202 PROVIDE OUTSIDE AIR DUCT CONNECTION BETWEEN EXISTING OUTSIDE AIR DUCT AT FLOOR LEVEL AND NEW PLENUM BOX.
- 23.204 PROVIDE VAV BOXES AS SHOWN. PROVIDE DUCT CONNECTIONS TO EXISTING DUCTWORK AS SHOWN. MAINTAIN ALL CLEARANCES AROUND VAV BOXES FOR SERVICING.
- 23.206 PROVIDE NEW DDC CONTROLLER FOR AHU. PROVIDE GRAPHICS AND INTERFACE INTO CAMPUS BUILDING AUTOMATION SYSTEM. COORDINATE EXACT LOCATION WITH OWNER.
- 23.207 PROPOSED LOCATION OF VARIABLE FREQUENCY DRIVE FOR AHU. CONFIRM FINAL LOCATION WITH OWNER. PROVIDE TWO VFDs FOR AIR HANDLING UNIT, ONE VFD SHALL CONTROL TWO FANS.
- 23.208 PROVIDE DUCT CONNECTION BETWEEN GRAVITY VENTILATOR ON ROOF AND OUTSIDE AIR PLENUM BOX OF AIR HANDLING UNIT. PROVIDE ALL REQUIRED TRANSITIONS AND FITTING TO MAKE THE CONNECTIONS. REFER TO ROOF PLAN FOR ADDITIONAL INFORMATION.
- 23.209 PROVIDE VARIABLE FREQUENCY DRIVE FOR EXHAUST FAN ON ROOF. CONFIRM FINAL LOCATION WITH OWNER.
- 23.217 PROVIDE NEW ACCESS DOOR FOR FIRE DAMPER IN EXISTING DUCTWORK AS SHOWN.
- 23.218 PROVIDE DUCT CONNECTION TO AIR HANDLING UNIT'S MIXING BOX SECTION AS SHOWN.
- 23.219 PROVIDE MOTORIZED ISOLATION DAMPERS AS SHOWN. REFER TO SEQUENCE OF OPERATION FOR ADDITIONAL INFORMATION.

GENERAL NOTES

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
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5. THERMOSTATIC CONTROLS OF EQUIPMENT SHALL HAVE A 5' F DEADBAND.
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KEY PLAN



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BUILDING 'H' HVAC UNIT REPLACEMENT

JOLIET JUNIOR COLLEGE
1215 HOUBOLT ROAD
JOLIET, ILLINOIS 60431

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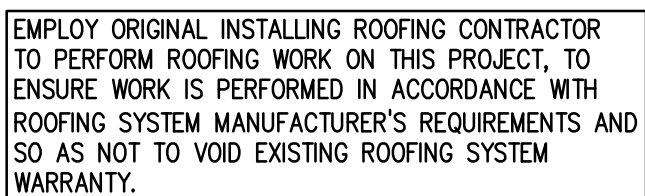
JOB NO. 23-292-1509
DRAWN KJD
CHECKED BWG
APPROVED DDW

SHEET TITLE

ALTERNATE NO. 1:
MECHANICAL
ENLARGED FLOOR
PLANS

SHEET NUMBER

M312



1



1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITIONS OF AISC'S "STEEL CONSTRUCTION MANUAL" AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES".
2. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 USING E70XX ELECTRODES, UNLESS OTHERWISE NOTED, PROVIDE CONT. MIN. SIZED FILLET WELDS PER AISC REQUIREMENTS.
3. THE STEEL FABRICATOR AND ERECTOR ARE TO DEVELOP AND IMPLEMENT A QUALITY CONTROL PROGRAM AS SPECIFIED IN AISC 360-10, CHAPTER N. THE STEEL FABRICATOR AND ERECTOR ARE TO PERFORM QUALITY CONTROL INSPECTIONS OF THE STEEL AT THE FABRICATION PLANT AND AT THE PROJECT SITE. REFER TO AISC 360-10, TABLES N5.4-1, N5.4-2, N5.4-3, N5.6-1, N5.6-2, N5.6-3 AND N6.1 FOR MINIMUM INSPECTION REQUIREMENTS.
4. STRUCTURAL STEEL ERECTION TO COMPLY WITH OSHA REQUIREMENTS.
5. STEEL PROPERTIES:
 - A. HSS TUBE SHAPES = A500, GRADE B ($F_y = 46$ KSI)
 - B. ANGLES, PLATES, CHANNELS & THREADED RODS = A36 ($F_y = 36$ KSI)
 - C. STRUCTURAL BOLTS = 3/4"Ø A325N
 - D. WELDING ELECTRODES = E70XX
4. FINISH REQUIREMENTS:
 - A. TYPICAL CLEANING = SSPC-SP2 OR SSPC-SP3
 - B. PAINT = FABRICATOR'S STANDARD. SEE SPECIFICATIONS FOR ADDITIONAL PAINTING REQUIREMENTS.
 - C. GALVANIZED STEEL = ASTM A123, 1.7 OZ./SQ. FT MIN.
 - D. TOUCH-UP PRIMER = FABRICATOR'S STANDARD.



EXHAUST FAN CONNECTION DETAIL

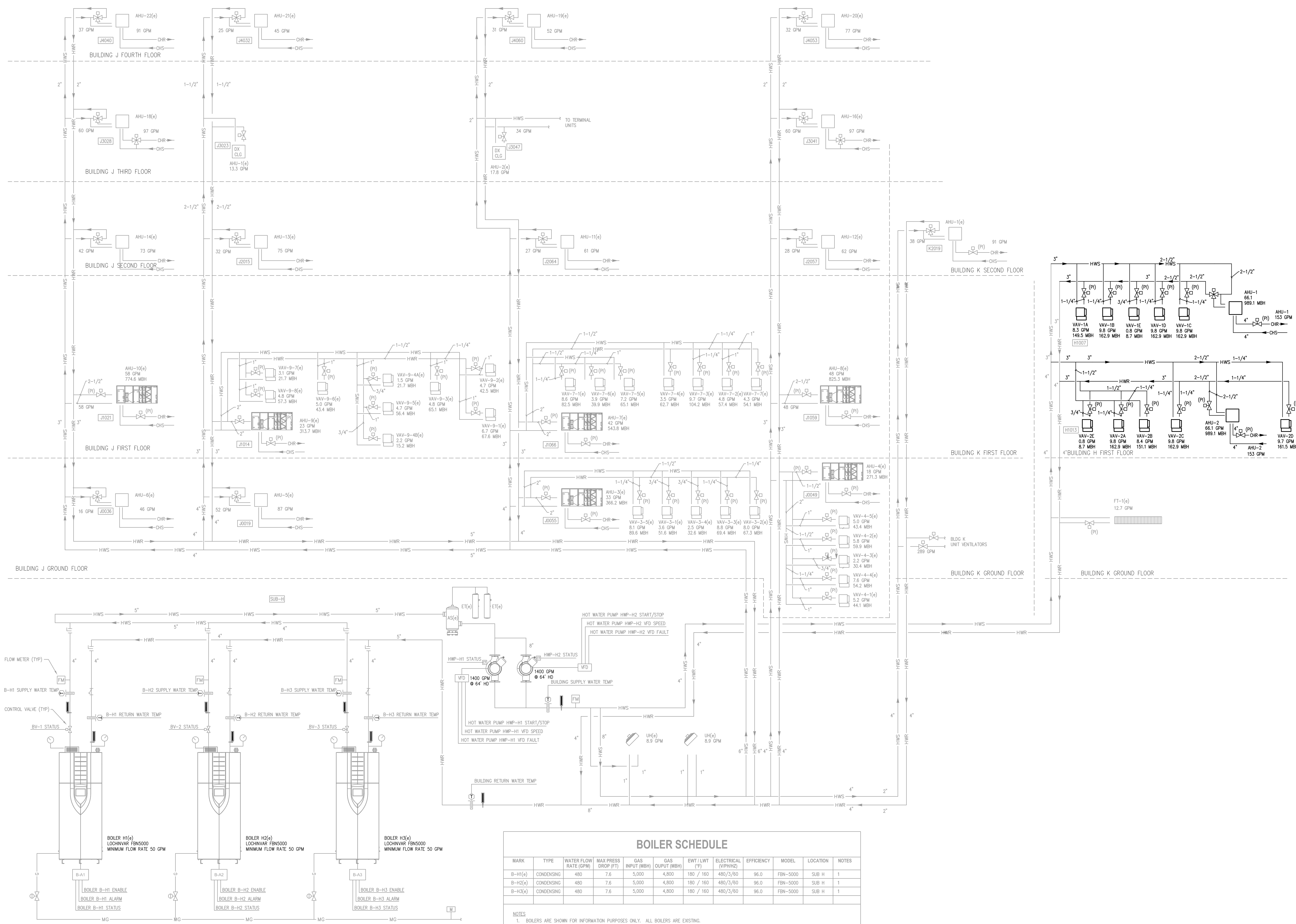
SCALE: N.T.S.

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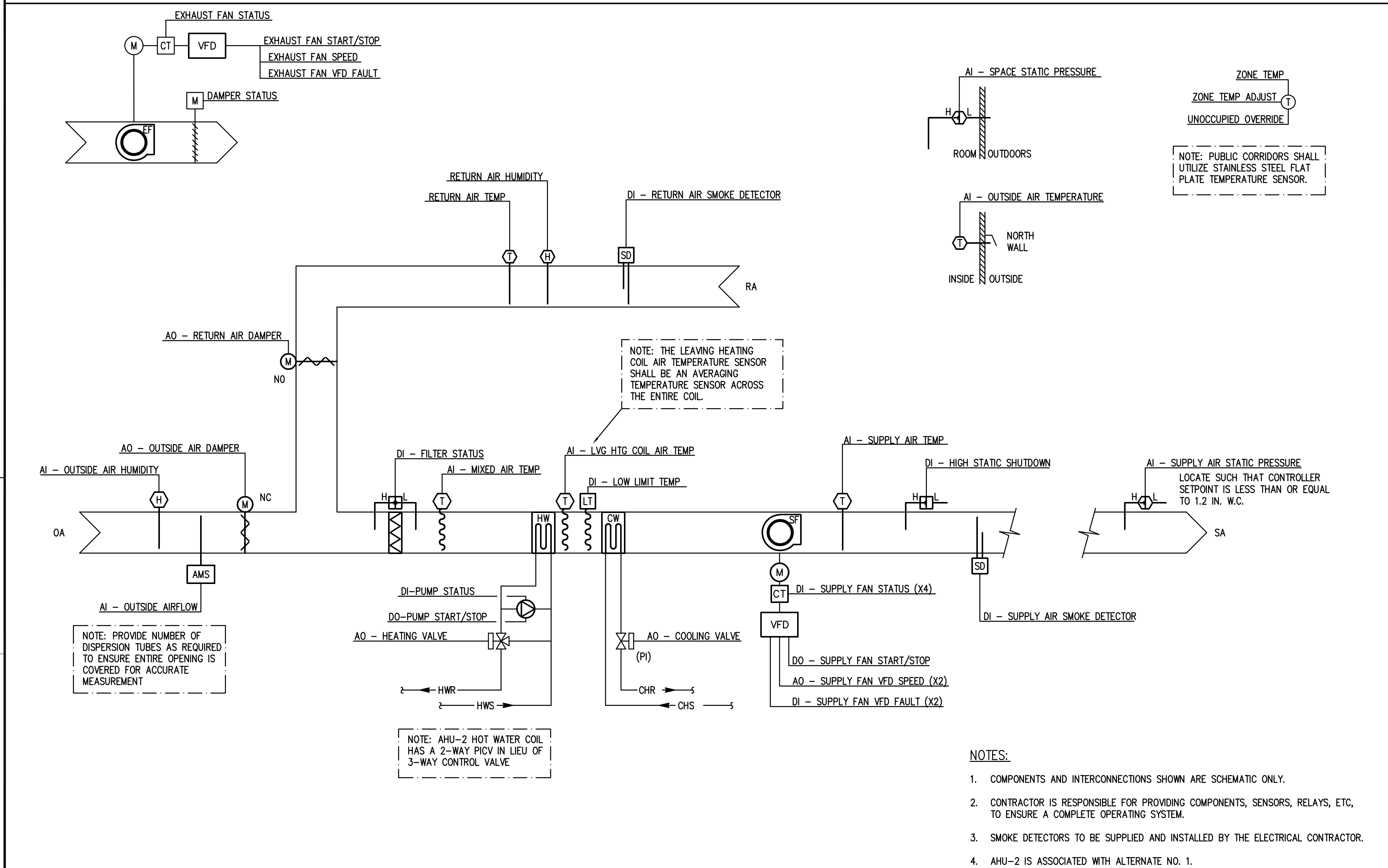
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The site plan shows a complex arrangement of building footprints. A central horizontal corridor, labeled "BLDG 'H'", connects two main building clusters. To the left of this corridor is a large, irregular building footprint. To the right is a larger, more complex building footprint with several smaller structures attached. A parking area, indicated by a series of small 'P' symbols, is located between the central corridor and the building on the right. A north arrow is located in the bottom right corner, pointing towards the top of the page.

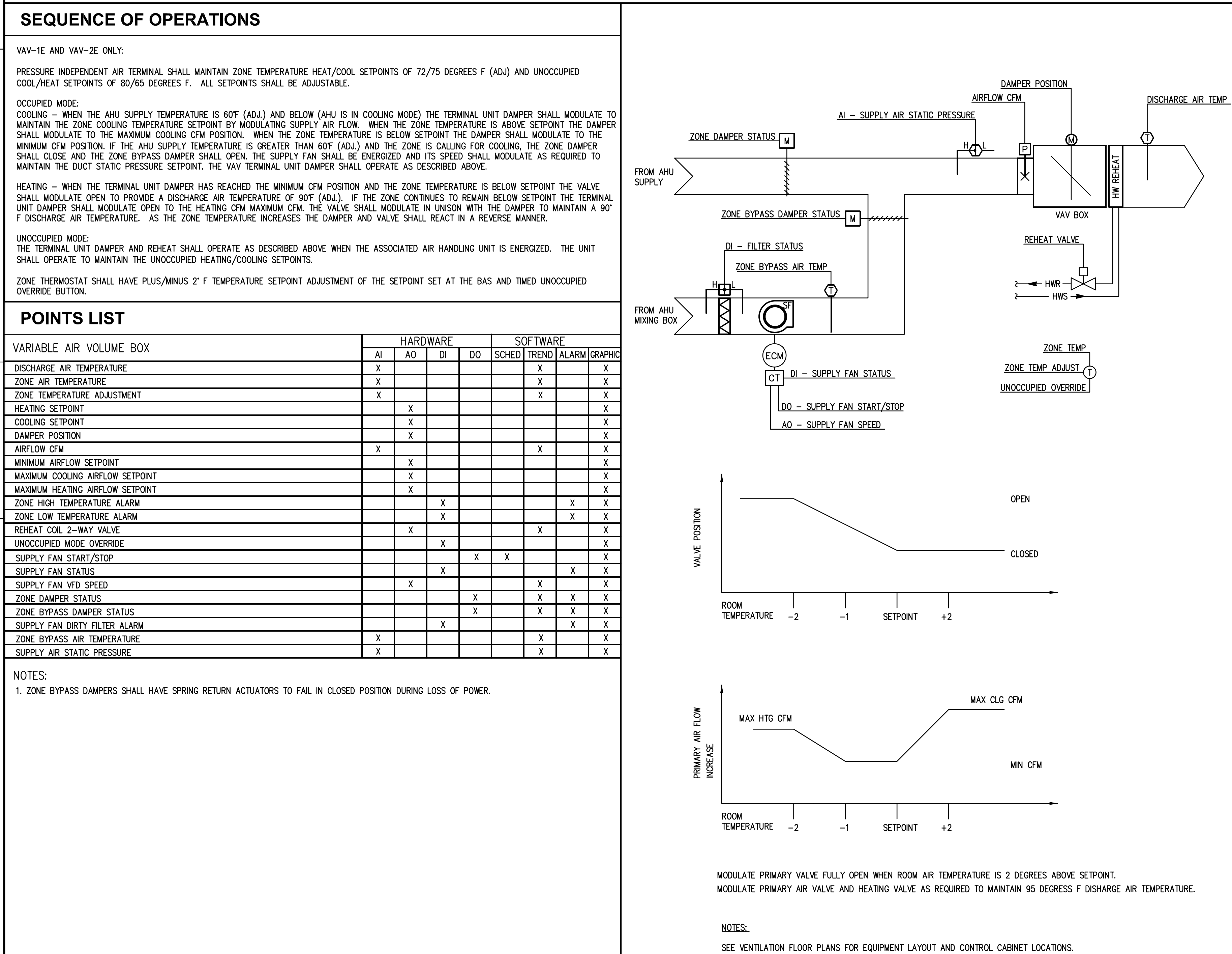
NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES



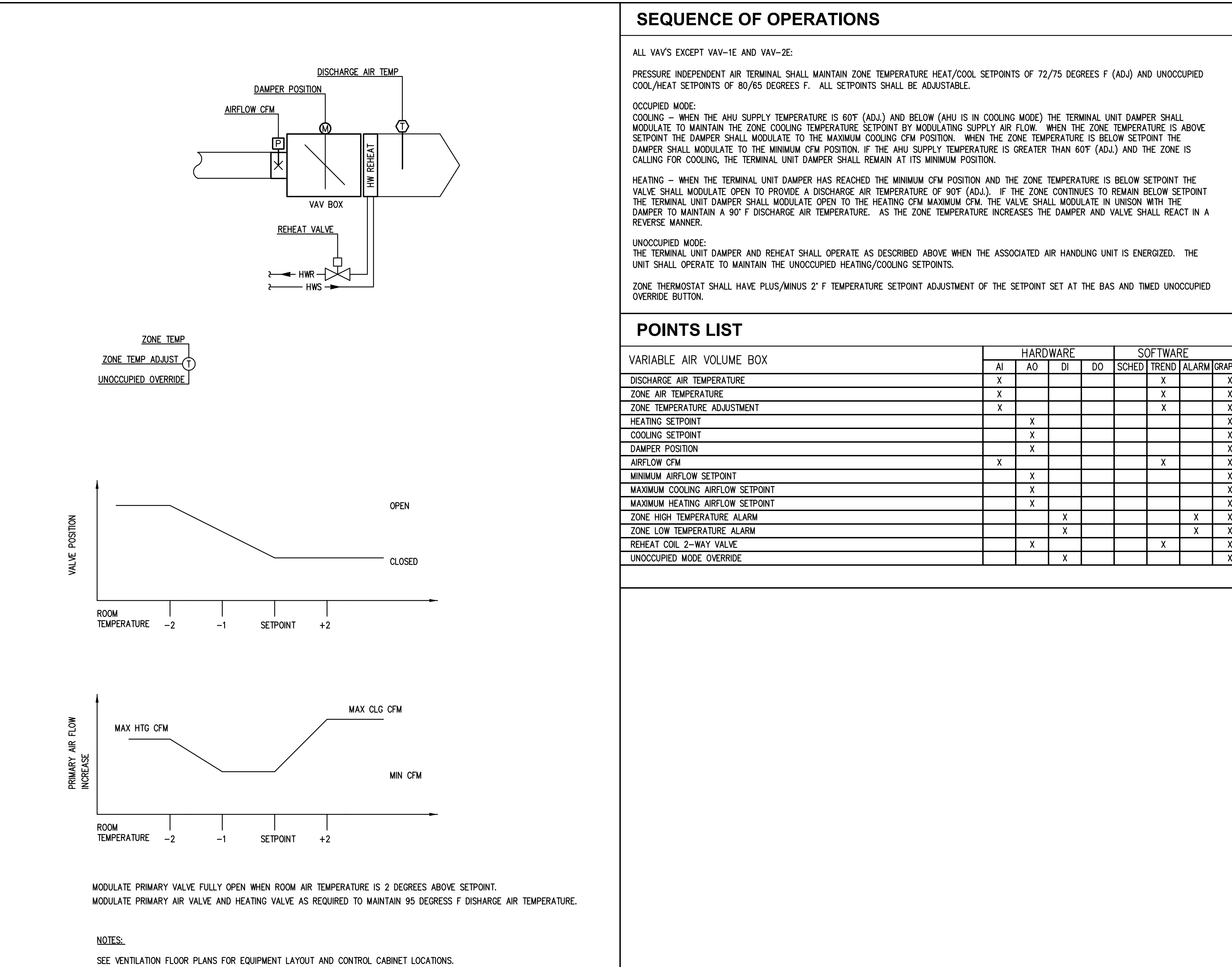
AHU-1, -2, TEMPERATURE CONTROL SCHEMATIC



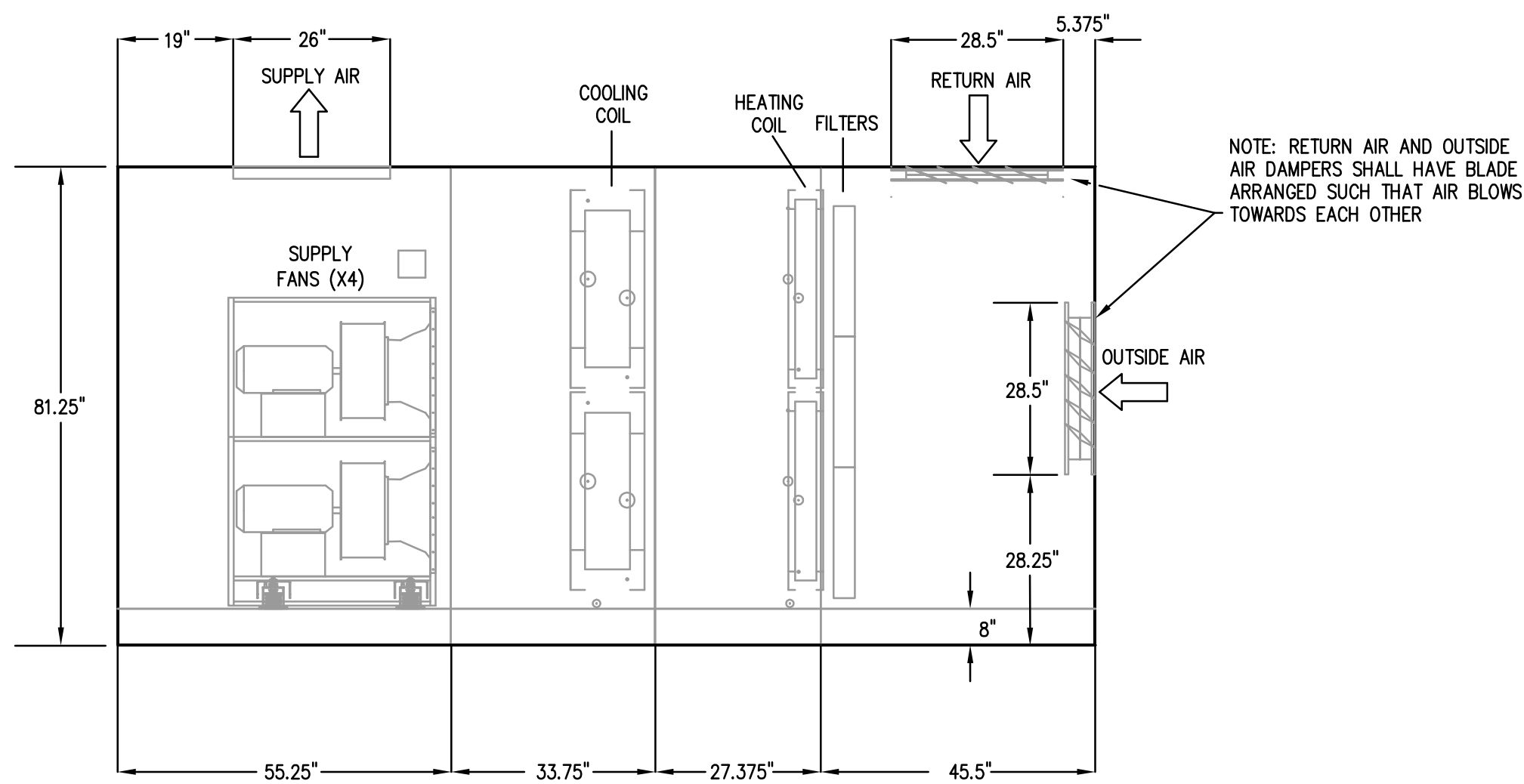
VAV-1E AND VAV-2E CONTROL SCHEMATIC



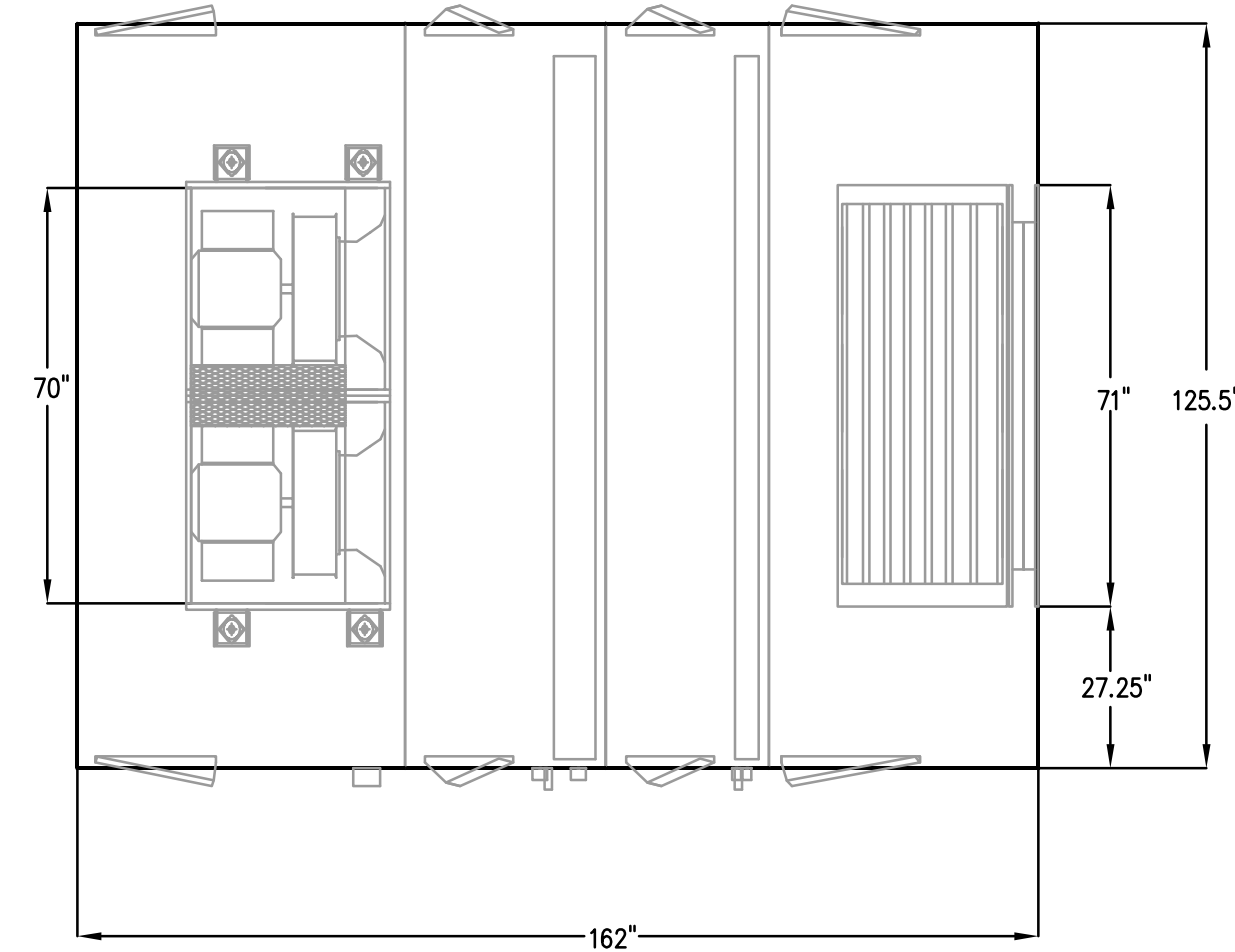
VARIABLE AIR VOLUME BOX CONTROL SCHEMATIC



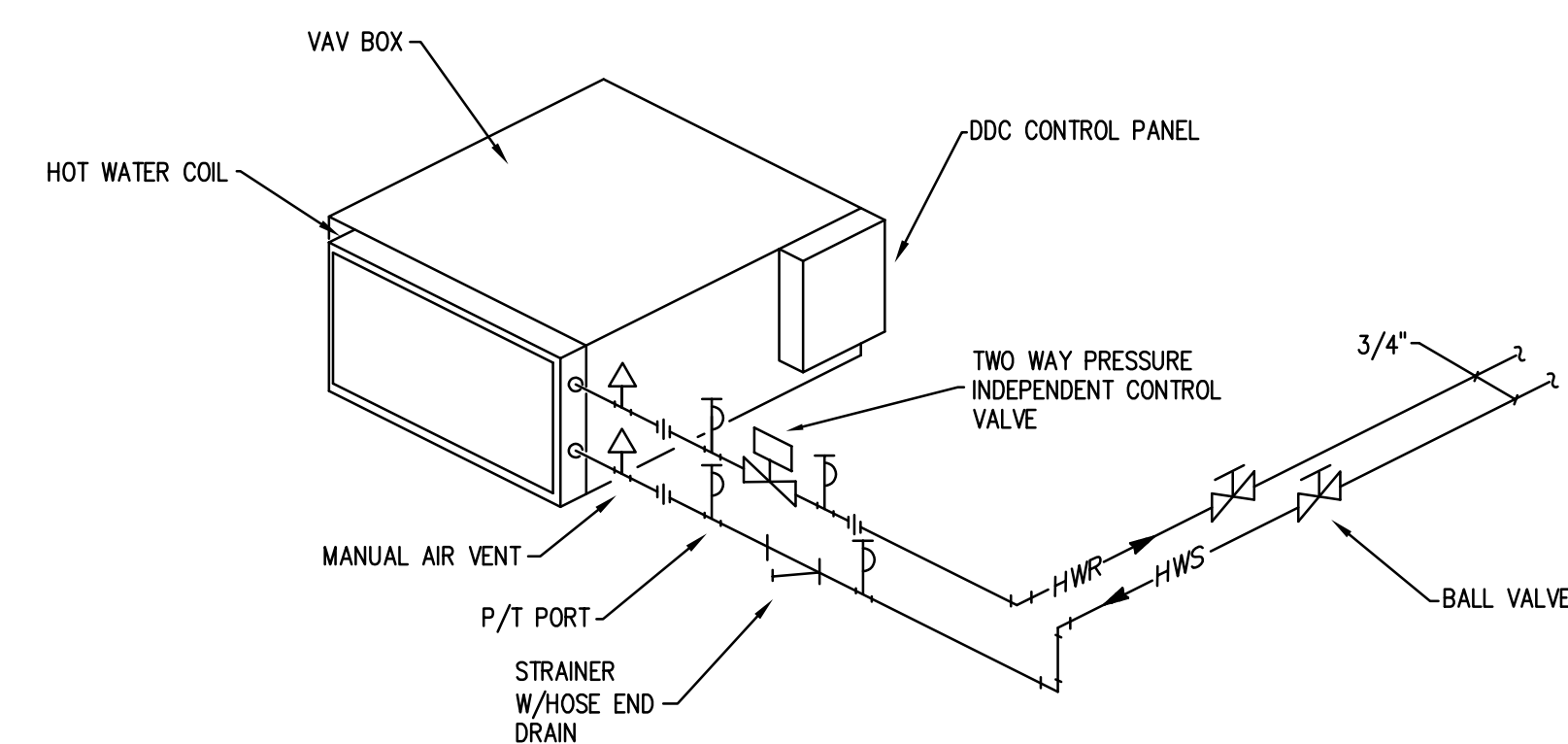
SIDE VIEW



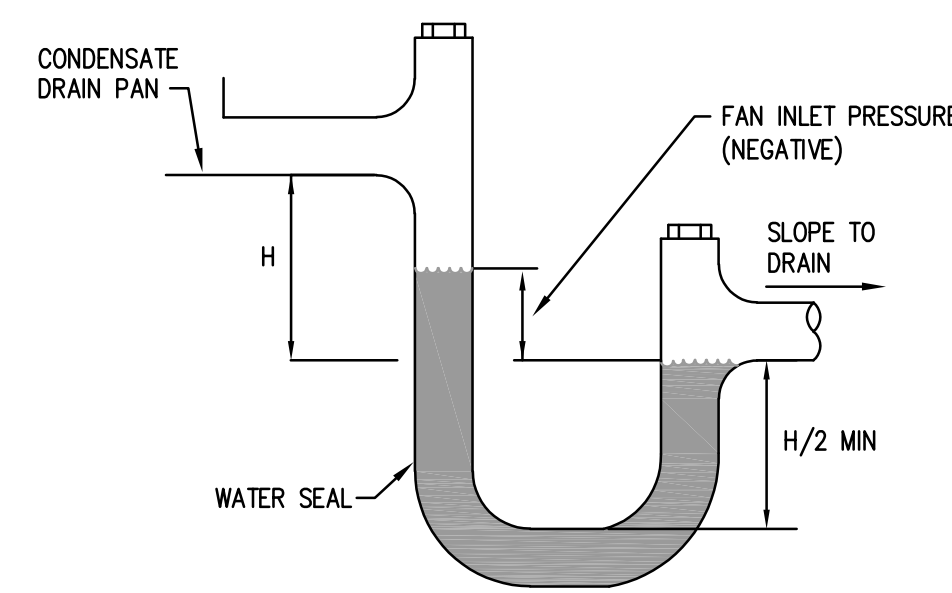
PLAN VIEW



NOTE: AHU-1 COIL CONNECTION AND ACCESS DOORS ARE ON RIGHT SIDE OF UNIT. AHU-2 IS A LEFT HANDED UNIT.

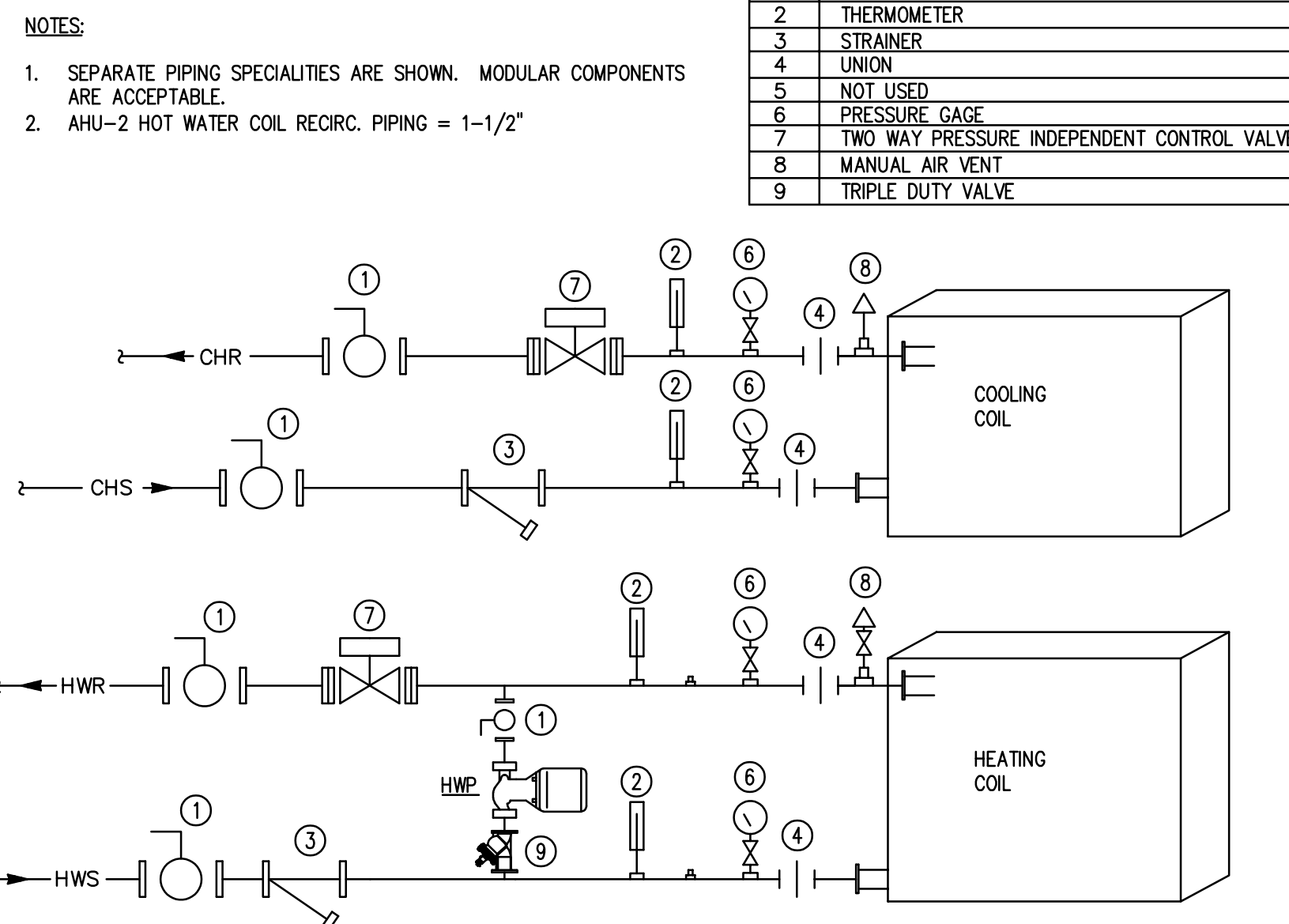
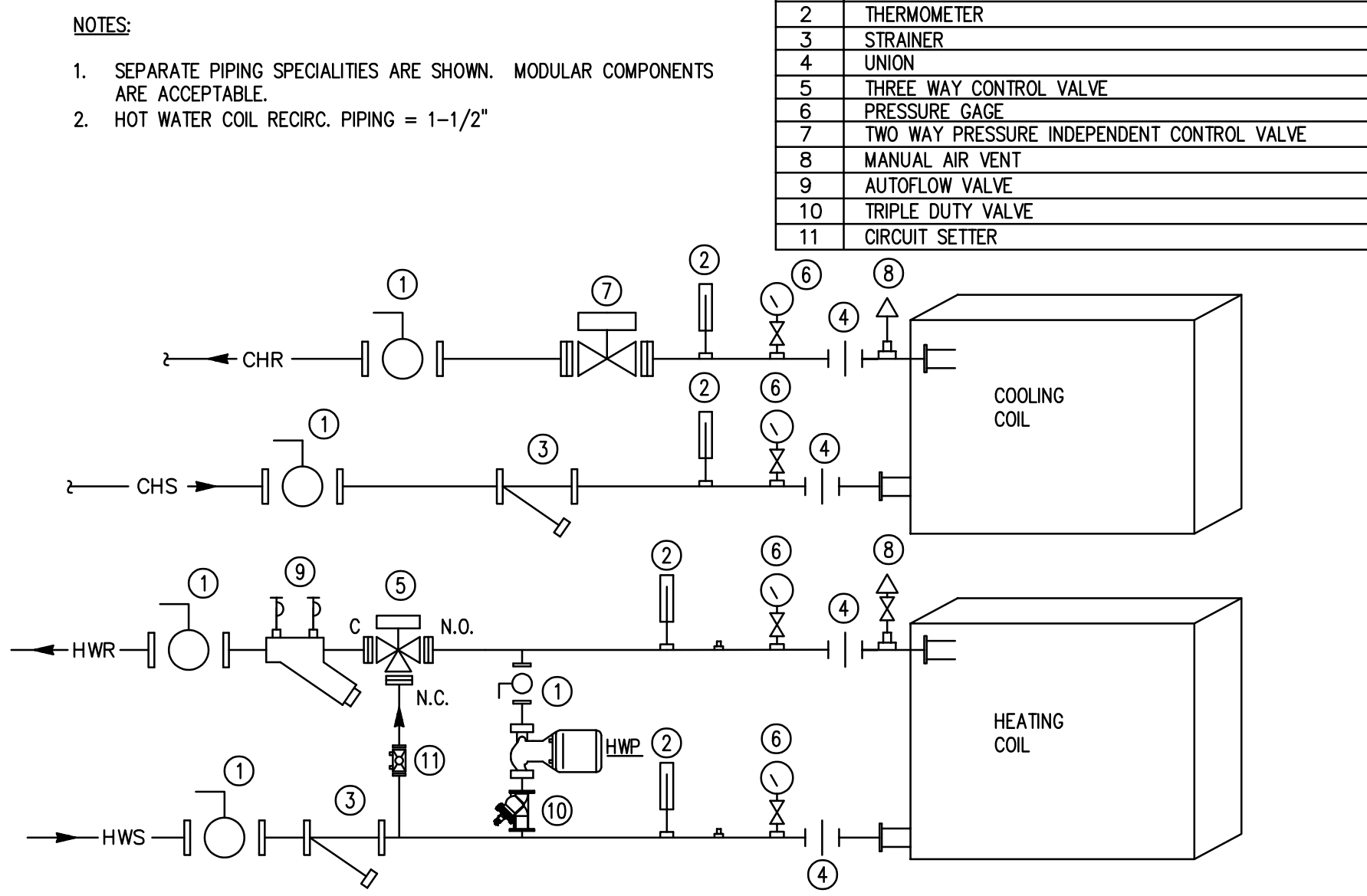
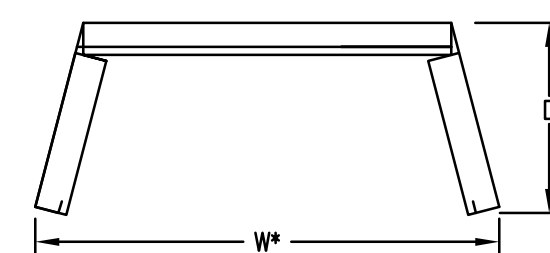
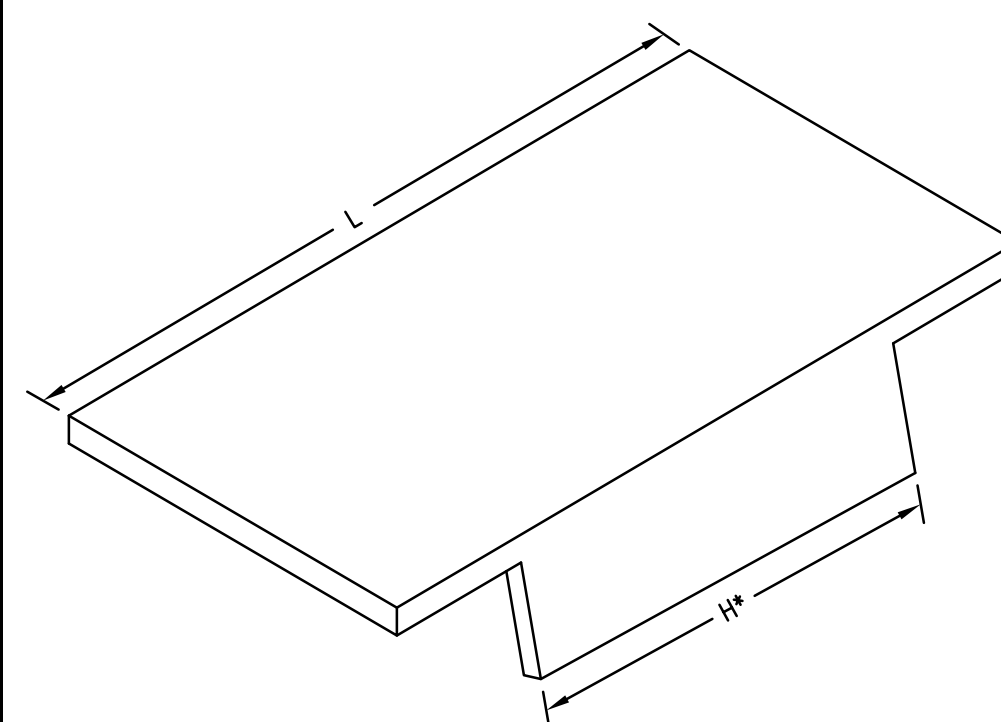
AIR HANDLING UNIT (AHU-1), (AHU-2) DETAIL
SCALE: NTS ①

- NOTES:
1. PIPING TO ALL REHEAT COILS SHALL BE MINIMUM 3/4" UNLESS OTHERWISE NOTED.
 2. SEPARATE PIPING SPECIALTIES ARE SHOWN. MODULAR COMPONENTS ARE ACCEPTABLE.



DRAW-THRU TRAPS

H = FAN INLET PRESSURE (IN. W.C.) + 1 IN.

REHEAT COIL PIPING DETAIL
SCALE: NTS ④AHU-2 COIL PIPING DETAIL
SCALE: NTS ⑤COOLING COIL CONDENSATE TRAP DETAILS
SCALE: NTS ②AHU-1 COIL PIPING DETAIL
SCALE: NTS ③

STANDARD DIMENSIONS		
W-WIDTH	H-HEIGHT	D-DEPTH
12	12	7
24	24	7
12	24	7
24	48	7
- ALL DIMENSIONS ARE IN INCHES.		

* ACTUAL WIDTH & HEIGHT TYPICALLY 1/8 INCH LESS NOMINAL DIMENSIONS.

RETURN AIR CANOPY DETAIL
SCALE: NTS ⑥

AIR HANDLING UNIT SCHEDULE

MARK	AIR FLOW (CFM)	MINIMUM OA (CFM)	ENT AIR TEMP (db / wb °F)	LVG AIR TEMP (db / wb °F)	EWI / LWT (°F)	COOLING SENS CAP (MBH)	TOTAL CAP (MBH)	WATER FLOW RATE (GPM)	WATER PRES DROP (FT)	TOTAL CAP (MBH)	EWI / LWT (°F)	HEATING EAT / LAT (°F)	WATER FLOW RATE (GPM)	WATER PRES DROP (FT)	SUPPLY FAN (HP)	EXTERNAL STATIC PRESS (IN WG)	ELECTRICAL V/PHRZ	MCA	MODEL	NOTES
AHU-1	22,800	4,600	79.2 / 67.2	53.0 / 52.9	45.0 / 59.8	658.9	995.6	153.0	14.1	989.1	140 / 110	50.0 / 90.0	66.1	2.2	4 @ 7.5	2.3	460/3/60	-	CSAA050	1, 2, 4
AHU-2	22,800	4,600	79.2 / 67.2	53.0 / 52.9	45.0 / 59.8	658.9	995.6	153.0	14.1	989.1	140 / 110	50.0 / 90.0	66.1	2.2	4 @ 7.5	2.3	460/3/60	-	CSAA050	1, 2, 3, 4

- NOTES:
1. MODEL BASED ON TRANE.
 2. PROVIDE AN ADDITIONAL 0.4" PRESSURE DROP ALLOWANCE FOR DIRTY FILTERS.
 3. ITEM ASSOCIATED WITH ALTERNATE 1.
 4. PROVIDE WITH FAN BLANK-OFF PLATES AND 8-INCH BASERAIL.

VARIABLE AIR VOLUME BOX SCHEDULE

MARK	AIR FLOW (CFM)	MIN AIR FLOW (CFM)	INLET SIZE (IN)	AIR FLOW (CFM)	MAX APD (IN WG)	EAT / LAT (°F)	WATER (GPM)	EWI/LWT (°F)	MAX WPD (FT)	CAPACITY (MBH)	ROWS / FINS PER INCH	MODEL	NOTES
VAV-1A	4,590	1,530	24 / 16	4,590	0.83	60.0 / 90.0	8.3	140 / 103.2	0.75	149.5	4 / 10	DESV	1, 2, 3
VAV-1B	5,960	2,000	24 / 16	5,960	1.29	60.0 / 90.0	9.8	140 / 106.3	1.04	162.9	4 / 10	DESV	1, 2, 3
VAV-1C	5,000	1,650	24 / 16	5,000	0.96	60.0 / 90.0	9.8	140 / 106.3	1.04	162.9	4 / 10	DESV	1, 2, 3
VAV-1D	6,400	2,115	24 / 16	5,000	1.46	60.0 / 90.0	9.8	140 / 106.3	1.04	162.9	4 / 10	DESV	1, 2, 3
VAV-1E	530	175	8	265	0.19	60.0 / 90.1	0.8	140 / 119.0	0.19	8.7	2 / 10	DESV	1, 2, 3
VAV-2A	6,030	1,990	24 / 16	6,030	1.32	60.0 / 90.0	9.8	140 / 106.3	1.04	162.9	4 / 10	DESV	1, 2, 3, 4
VAV-2B	4,640	1,535	24 / 16	4,640	0.85	60.0 / 90.0	8.4	140 / 103.6	0.78	151.1	4 / 10	DESV	1, 2, 3, 4
VAV-2C	6,350	2,100	24 / 16	6,350	1.44	60.0 / 90.0	9.8	140 / 106.3	1.04	162.9	4 / 10	DESV	1, 2, 3, 4
VAV-2D	4,960	1,640	24 / 16	4,960	0.95	60.0 / 90.0	9.7	140 / 106.0	1.01	161.5	4 / 10	DESV	1, 2, 3, 4
VAV-2E	630	175	8	265	0.25	60.0 / 90.1	0.8	140 / 119.0	0.19	8.7	2 / 10	DESV	1, 2, 3, 4

- NOTES:
1. MODEL BASED ON TITUS.
 2. MAXIMUM AIR PRESSURE DROP BASED ON MAXIMUM SCHEDULED CFM.
 3. PROVIDE WITH PREMIUM CAMLOCK ACCESS DOORS ON BOTTOM OF VAV BOX.
 4. ITEM ASSOCIATED WITH ALTERNATE 1.

PRESSURE INDEPENDENT CONTROL VALVE SCHEDULE

TAG	SIZE (IN)	VALVE FLOW RATE (GPM)	MIN FLOW RATE (GPM @ 5 PSIG)	MAX FLOW RATE (GPM)	MAX FLOW VARIATION (%)	MIN DELTA P ACROSS VALVE (PSIG)	CLOSE OFF PRESSURE (PSIG)	BODY PRESSURE RATING (PSIG)	FAIL (LAST, OPEN CLOSED)	VALVE MATERIALS			CONNECTION TYPE	NOTES
										BODY	INTERNALS	SEALS		
CHCV-1	3	153.0	-	176	5	8.7	232	200	LAST	CAST IRON	COPPER / 304 SS	EDPM	FLANGED	1, 2, 3, 4
CHCV-2	3	153.0	-	176	5	8.7	232	200	LAST	CAST IRON	COPPER / 304 SS	EDPM	FLANGED	1, 2, 3, 4, 5
HCV-2	2-1/2	66.1	-	85	5	4.4	232	200	OPEN	CAST IRON	COPPER / 304 SS	EDPM	FLANGED	1, 2, 3, 4, 5
VAV-1A	1	8.3	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4
VAV-1B	1	9.8	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4
VAV-1C	1	9.8	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4
VAV-1D	1	9.8	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4
VAV-1E	1/2	0.8	-	1.2	5	2.3	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4
VAV-2A	1	9.8	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4, 5
VAV-2B	1	8.4	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4, 5
VAV-2C	1	9.8	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4, 5
VAV-2D	1	9.7	-	12	5	5.0	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4, 5
VAV-2E	1/2	0.8	-	1.2	5	2.3	232	200	OPEN	BRASS	BRASS / 304 SS	EDPM	MALE NPT	1, 2, 3, 4, 5

- NOTES:
1. DESIGN BASIS: DANFOSS AB-QM.
 2. VALVE SHALL HAVE LINEAR FLOW CHARACTERISTIC, FIELD ADJUSTABLE FLOW RATE AND MODULATING ACTUATOR.
 3. PROVIDE WITH UNION, BALL VALVE, AND STRAINER (#20 MESH).
 4. PROVIDE WITH PRESSURE AND TEMPERATURE MEASUREMENT PORTS.
 5. ITEM ASSOCIATED WITH ALTERNATE NO. 1.

FAN SCHEDULE

MARK	AIR FLOW RATE (CFM)	EXTERNAL S.P. (IN WG)	DRIVE TYPE	DISCHARGE	ROTATION	MOTOR (HP)	ELECTRICAL (V/PHRZ)	FAN ENERGY INDEX (FEI)	AREA SERVED	LOCATION	MODEL	NOTES
EF-1	15,000	1.0	BELT	TOP HORZ.	CCW	7.5	460/3/60	1.19	AHU-1	ROOF	300 CPS-A	1, 2
EF-2	15,000	1.0	BELT	TOP HORZ.	CCW	7.5	460/3/60	1.19	AHU-2	ROOF	300 CPS-A	1, 2, 3
SF-1	530	0.65	DIRECT	INLINE	-	0.33	115/1/60	N/A	VAV-1E	RM H1007	SQND-EC	1, 4, 5
SF-2	630	0.65	DIRECT	INLINE	-	0.33	115/1/60	N/A	VAV-2E	RM H1013	SQND-EC	1, 3, 4, 5

- NOTES:
1. MODEL BASED ON LOREN COOK.
 2. CLASS I, ARRANGEMENT 10.
 3. ITEM ASSOCIATED WITH ALTERNATE NO. 1.
 4. PROVIDE WITH VARIABLE SPEED PRESSURE CONTROL PACKAGE.
 5. PROVIDE WITH MERV 8 FILTER BOX HOUSING.

GRAVITY VENTILATOR SCHEDULE

MARK	AIR FLOW RATE (CFM)	THROAT SIZE (INxIN)	HOOD SIZE (INxIN)	TYPE	FACE AREA (SQ FT)	INTAKE VELOCITY (FPM)	PRESSURE DROP (IN WG)	SERVED BY	MODEL	NOTES
GV-1	12,500	36 x 84	47.75 x 95.75	INTAKE	38.08	328.24	.080	AHU-1	36X84X10TRE	1
GV-2	12,500	36 x 84	47.75 x 95.75	INTAKE	38.08	328.24	.080	AHU-2	36X84X10TRE	1, 2

- NOTES:
1. MODEL BASED ON LOREN COOK.
 2. ITEM ASSOCIATED WITH ALTERNATE 1.

PUMP SCHEDULE

MARK	WATER FLOW RATE (GPM)	HEAD (FT)	TYPE	MOTOR POWER (HP)	ELECTRICAL (V/PHRZ)	MOTOR SPEED (RPM)	SERVICE	MODEL	NOTES
HWP-1	17	10	INLINE	1/6	115/1/60	1,725	AHU-1	SERIES-HV	1
HWP-2	17	10	INLINE	1/6	115/1/60	1,725	AHU-2	SERIES-HV	1, 2

- NOTES:
1. MODEL BASED ON BELL & GOSSETT.
 2. ITEM ASSOCIATED WITH ALTERNATE 1.

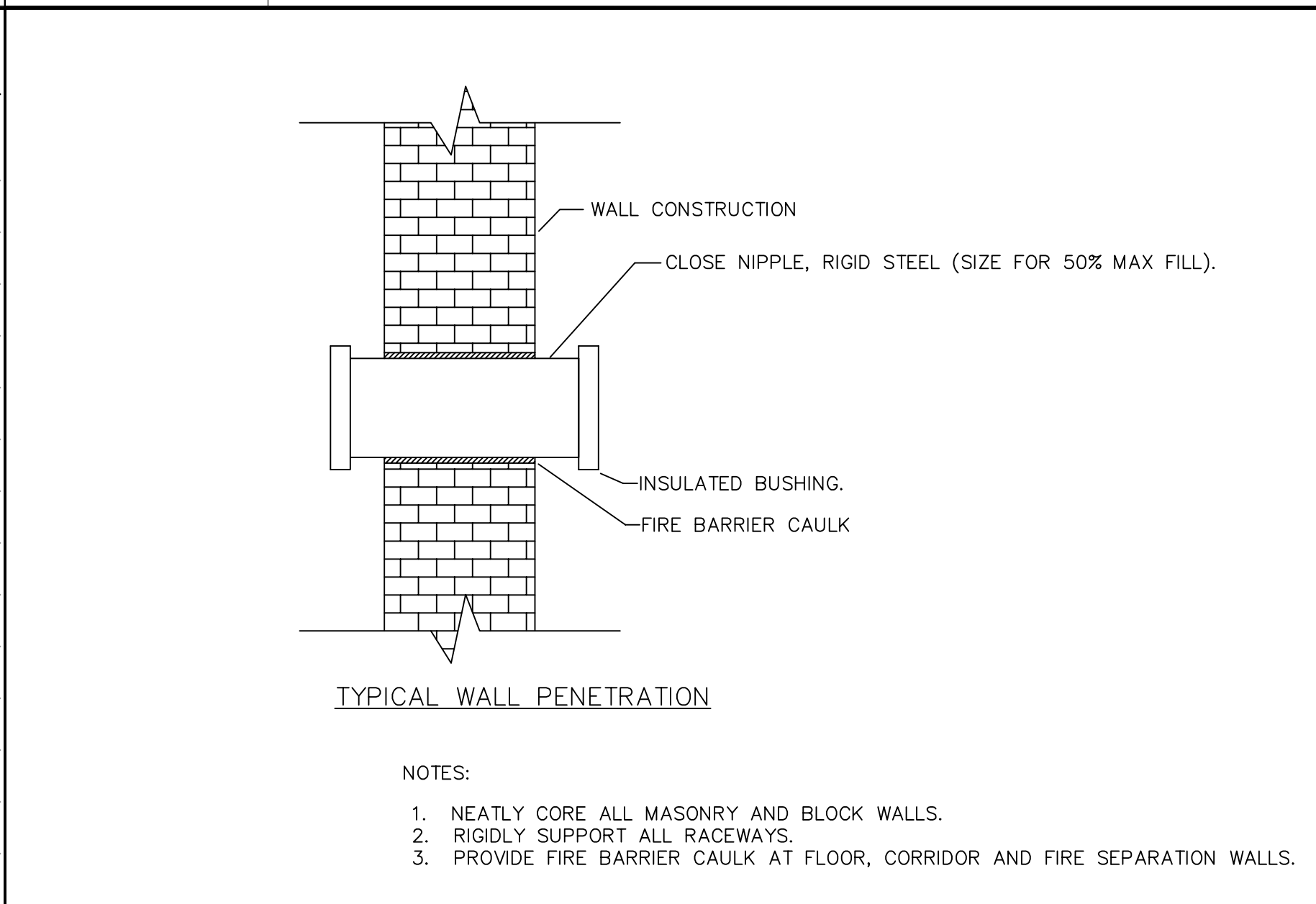
DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

MARK	MODEL	SIZE	NECK	DAMPER	MATERIAL	REMARKS
S-1	OMNI	24 / 24	8"ø	OBD	ST	1
S-2	OMNI	24 / 24	6"ø	OBD	ST	1, 3
R-1	50F	24 / 24	-	-	AL	1, 2, 3
E-1	PAR	24 / 24	8"ø	-	ST	1

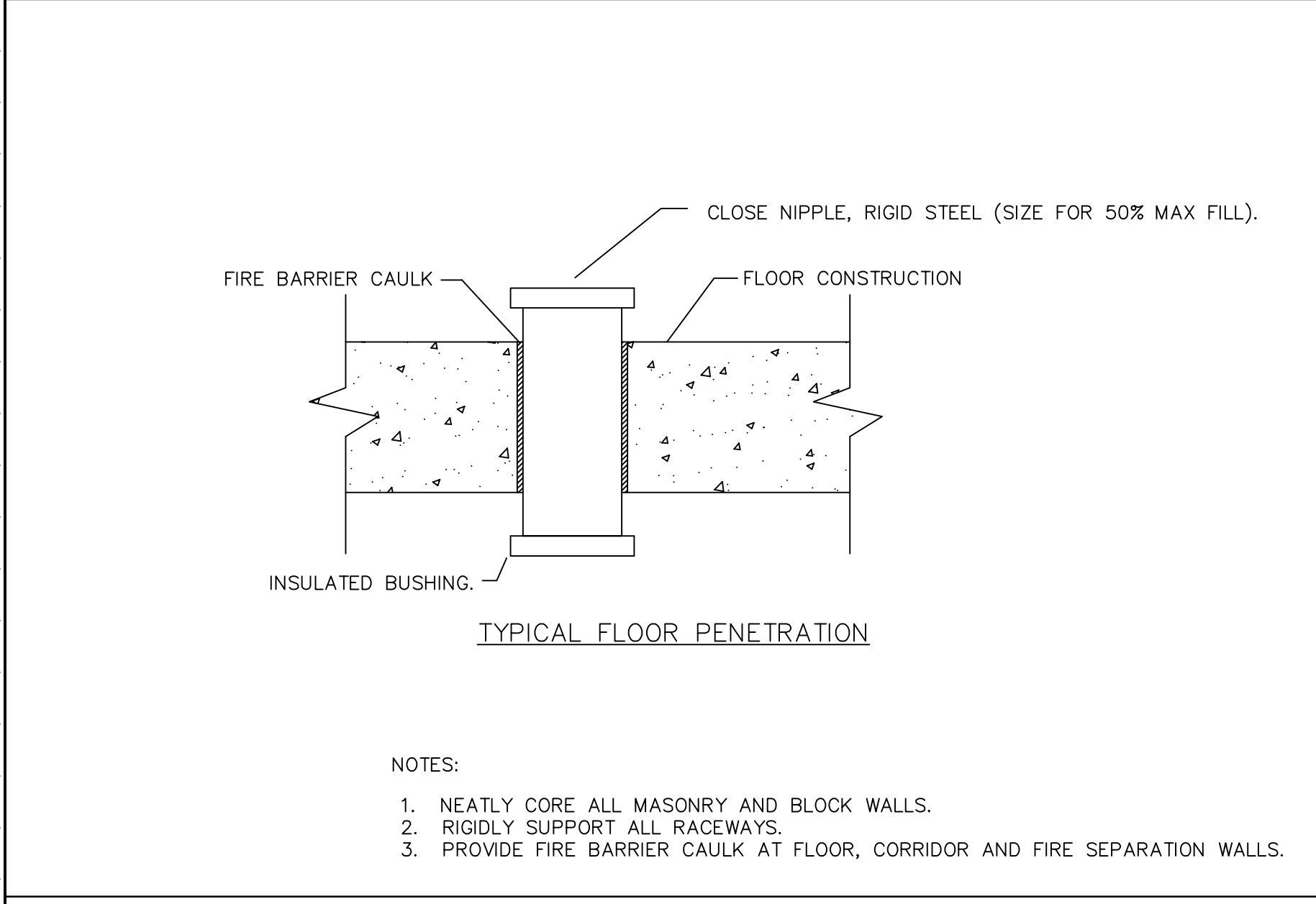
- NOTES:
1. MODEL BASED ON TITUS.
 2. PROVIDE WITH RETURN AIR CANOPY (RCP).
 3. ITEM ASSOCIATED WITH ALTERNATE NO. 1.

ABBREVIATIONS											
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A		I		P							
A	AMPS	IDF	INTERMEDIATE DISTRIBUTION FRAME	PB	PUSH BUTTON						
AC	ABOVE COUNTER	IG	ISOLATED GROUND	PC	PLUMBING CONTRACTOR						
AF	AMPERE FRAME/AMPERE FUSE	INC	INCANDESCENT	PDU	POWER DISTRIBUTION UNIT						
AFF	ABOVE FINISHED FLOOR	INT	INTEGRAL	PH	PHASE						
AHU	AIR HANDLING UNIT	IR	IN ROOM	PNL	PANEL						
AIC	AMPERE INTERRUPTING CURRENT	IU	IN UNIT	PROVIDE	FURNISHED, INSTALLED, WIRED AND CONNECTED COMPLETE BY CONTRACTOR						
AT	AMPERE TRIP			PVC	POLYVINYL CONDUIT						
ATS	AUTOMATIC TRANSFER SWITCH			PW	PRE-WIRED						
AWG	AMERICAN WIRE GAGE										
B		J		Q							
BKR	BREAKER	JB	JUNCTION BOX	QTY.	QUANTITY						
BOL	BUILT-IN OVERLOAD										
BWE	BAKED WHITE ENAMEL										
BTU	BRITISH THERMAL UNIT										
C		K		R							
C	CONDUIT	Kcmil	1000 CIRCULAR MILS	REQ'D	REQUIRED						
CATV	CABLE TELEVISION SYSTEM	KV	KILOVOLT	RTU	ROOF TOP UNIT						
C/B	CIRCUIT BREAKER	KVA	KILOVOLT-AMPS								
CCTV	CLOSED CIRCUIT TELEVISION	KVAR	KILOVOLT-AMPS REACTIVE								
CKT	CIRCUIT	KW	KILOWATT								
CU	COPPER	KWH	KILOWATT-HOUR								
D		L		S							
DPDT	DOUBLE-POLE, DOUBLE-THROW	LP	LOW PRESSURE	SC	SEPARATE CIRCUIT						
DS	DOUBLE-POLE, SINGLE-THROW DOWNSPOUT	LV	LOW-VOLTAGE	SD	SMOKE DETECTOR						
E		LVT	LOW-VOLTAGE THERMOSTAT	SF	SQUARE FEET						
EBH	ELECTRIC BASEBOARD HEATER			SPOT	SINGLE-POLE, DOUBLE-THROW						
EC, E.C.	ELECTRICAL CONTRACTOR			SPST	SINGLE-POLE, SINGLE-THROW						
ECH	ELECTRIC CABINET HEATER			SS	STAINLESS STEEL						
EF	EXHAUST FAN			SW	SWITCH						
EM	EMERGENCY			SWBD	SWITCHBOARD						
EMT	ELECTRICAL METALLIC TUBING										
EWC	ELECTRIC WATER COOLER										
EWH	ELECTRIC WATER HEATER										
F		M		T							
F	FUSED	MAG	MAGNETIC MOTOR STARTER	T	THERMOSTAT						
FAAP	FIRE ALARM ANNUNCIATOR PANEL	MAN	MANUAL MOTOR STARTER	TELE	TELEPHONE						
FACP	FIRE ALARM CONTROL PANEL	MC	MECHANICAL CONTRACTOR	TC	TIME CLOCK						
FC	FUSE CLIP SIZE	MCA	MAXIMUM CURRENT AMPACITY	TC	TEMPERATURE CONTROL PANEL						
FPB	FAN POWERED BOX	MCB	MAIN CIRCUIT BREAKER	TCP	TOGGLE SWITCH						
FBO	FURNISHED BY OTHERS	MCC	MOTOR CONTROL CENTER	TS	TELEPHONE TERMINAL BOARD						
FLA	FULL LOAD AMPS	MD	MOTORIZED DAMPER	TB	TELEPHONE TERMINAL BOARD						
FLR	FLOOR	MDP	MAIN DISTRIBUTION FRAME	TTC	TELEPHONE TERMINAL CABINET						
FLR	FIRE PROTECTION CONTRACTOR	MFR	MANUFACTURER	TWJ	THRU WALL AIR CONDITIONING UNIT						
FS	FLOAT SWITCH	MH	METAL HALIDE	TYP.	TYPICAL						
FVNR	FULL-VOLTAGE, NON-REVERSING	MLO	MAIN LUG ONLY								
G		MNS	MASS NOTIFICATION SYSTEM	U							
GC	GENERAL CONTRACTOR	MOC	MINIMUM OVERCURRENT PROTECTION	UG	UNDERGROUND						
GFI	GROUND FAULT CIRCUIT INTERRUPTER	MS	MANUAL SWITCH	UH	UNIT HEATER						
GRD	GROUND	MSBD	MAIN SWITCH BOARD	UL	UNDERWRITERS LABORATORIES, INC.						
GRS	GALVANIZED RIGID STEEL	MTD	MOUNTED	U.N.O.	UNLESS NOTED OTHERWISE						
H		MUA	MAKE-UP AIR UNIT	UM	UNIT MANUFACTURER						
HOA	HAND-OFF-AUTOMATIC			UPS	UNINTERRUPTIBLE POWER SUPPLY						
HP	HORSEPOWER										
HPS	HIGH PRESSURE SODIUM	N		V							
HVAC	HEATING AND VENTILATING CONTRACTOR	N/A	NOT APPLICABLE	VA	VOLT-AMPERES						
HWGC	HEAVY WALL GALVANIZED CONDUIT	N.C.	NORMALLY CLOSED	VAC	VOLT ALTERNATING CURRENT						
		NF	NON-FUSED	VAV	VARIABLE AIR VOLUME						
		N.I.C.	NOT IN CONTRACT	VFD	VARIABLE FREQUENCY DRIVE						
		NL	NIGHT LIGHT								
		N.O.	NORMALLY OPEN								
		N.T.S., NTS	NOT TO SCALE	W							
		NU	NEAR UNIT	W	WATT						
				W/	WITH						
		O		W/O	WITHOUT						
		O.H.	OVERHEAD	WG	WIRE GUARD						
		OU	ON UNIT	WP	WEATHER PROOF						
		OCPO	OVERCURRENT PROTECTION DEVICE								
				X							
				X	EXISTING EQUIPMENT						
				XFMR	TRANSFORMER						
				XP	EXPLOSION-PROOF						
THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ABBREVIATIONS, ETC., ARE NECESSARILY USED IN THIS PROJECT.											

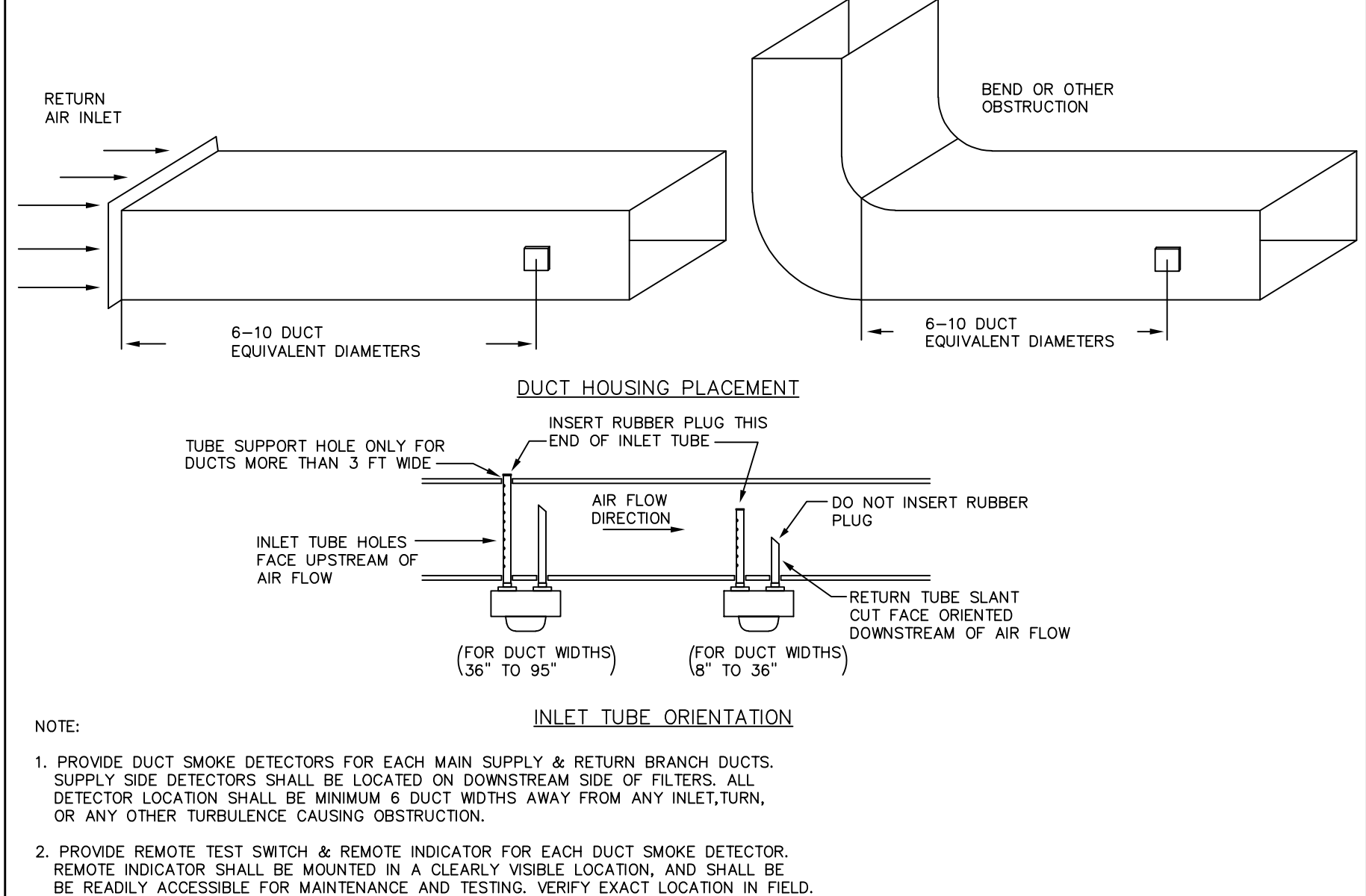
ELECTRICAL SYMBOLS LIST				DESCRIPTION
SYMBOL				
CEILING	WALL	FLOOR		
				2X4 RECESSED TROFFER FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE.
				SHADOW-NIGHT LIGHT
				DOWN LIGHT FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE.
				SINGLE POLE TOGGLE SWITCH. 15A OR 20A AS REQUIRED. 120/277V
				3-WAY TOGGLE SWITCH. 15A OR 20A AS REQUIRED. 120/277V
				DUPLEX RECEPTACLE. 20A 125V 2P 3W GRD. NEMA5-20R. Ø1/8" AFF
				DOUBLE DUPLEX RECEPTACLE. Ø1/8" AFF
				JUNCTION BOX
				WIRING IN CONDUIT CONCEALED ABOVE CEILING, IN WALL AND UNDER FLOOR OR UNDERGROUND.
				WIRING IN CONDUIT EXPOSED ON CEILING OR WALL.
				BRANCH CIRCUIT WIRING IN CONDUIT HOMERUN TO PANEL ONE ARROW PER HOMERUN. SLASHES INDICATE NUMBER OF CONDUCTORS.
				INDICATES GROUND CONDUCTOR.
				INDICATES ISOLATED GROUND CONDUCTOR.
				FIRE ALARM HORN/STROBE COMBINATION. Ø80" AFF
				SMOKE DETECTOR.
				FIRE ALARM DUCT SMOKE DETECTOR WITH FAN SHUT DOWN RELAY.
				REMOTE INDICATING LIGHT WITH TEST SWITCH.
				MONITOR/CONTROL MODULE. S=SINGLE POINT MONITOR MODULE, D=DUAL POINT, C=CONTROL MODULE.
				MOTOR. HP= HORSE-POWER RATING.
				PANEL 240V & BELOW.
				PANEL ABOVE 240V.
				MOUNTING HEIGHT
FIRE ALARM PULL STATION				48"
STROBES				80"
RECEPTACLE(CENTERLINE)				18"
SWITCH				48"
SAFETY SWITCHES				48"
PANELS(TOP)				72"
				MISCELLANEOUS
				HVAC EQUIPMENT IDENTIFICATION
				KEYNOTE IDENTIFICATION
				DETAIL IDENTIFICATION



TYP. WALL PENETRATION DETAIL
SCALE: N.T.S. 4



TYP. FLOOR PENETRATION DETAIL
SCALE: N.T.S. 3



DUCT SMOKE MOUNTING DETAIL
SCALE: N.T.S. 2

PANEL : H1H2 60 AMPERE MAIN BREAKER									
CKT. NO.	BRKR	DESCRIPTION	A	PHASE	B	C	DESCRIPTION	BRKR	CKT. NO.
1	3P35	AHU-1/VFD-1	5429				AHU-1/VFD-2	3P35	2
3	/		5429		5429			/	4
5	/		5429		5429			/	6
7	3P15	EF-1	3047				-	-	8
9	/		3047		0		-	-	10
11	/		3047		0		-	-	12
13	-	-	0		0		-	-	14
15	-	-	0		0		-	-	16
17	-	-	0		0		-	-	18
TOTAL PHASE A:			13905.4	NOTES:			MOUNTING:	SURFACE	VOLTAGE (L/N): 277
TOTAL PHASE B:			13905.4				RATING:	65000 AIC	VOLTAGE (L/L): 480
TOTAL PHASE C:			13905.4				ENCLOSURE:	NEMA 1	PHASE: 3
DEMAND VA:			41716.2				FED FROM:	H1H1	WIRE: 4
DEMAND AMPS:			50.2				FEEDER SIZE:	4#6.#8G, 3/4"	
							LOCATION:	H1007	

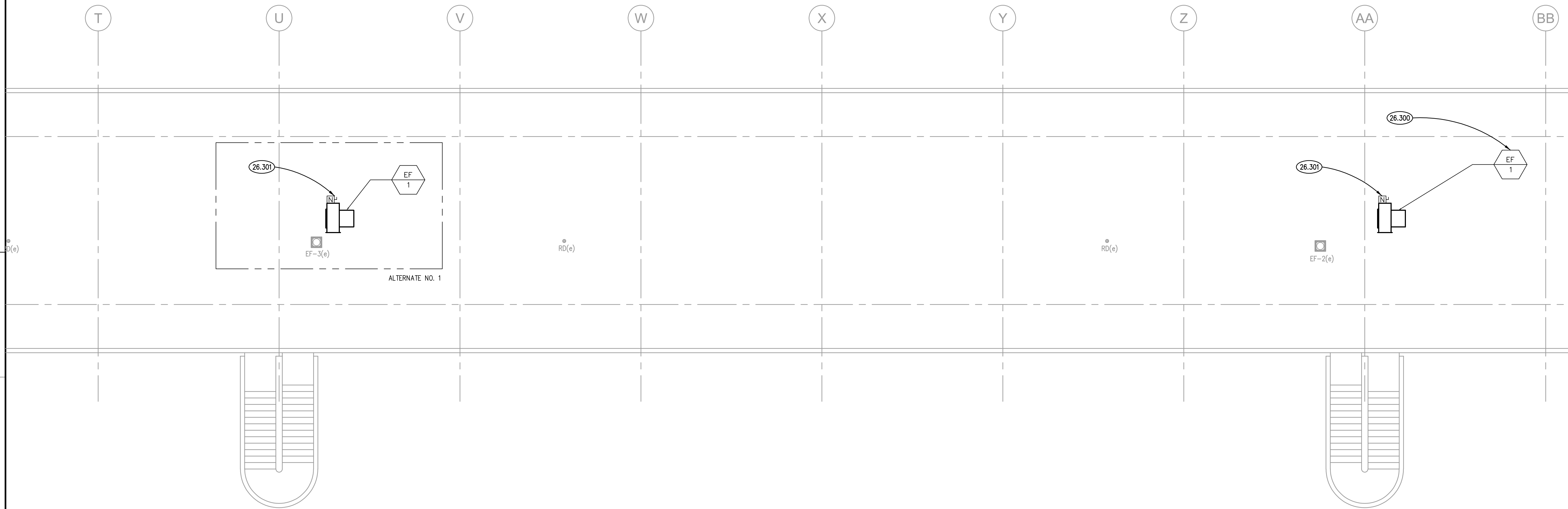
PANEL : H1H3 60 AMPERE MAIN BREAKER									
CKT. NO.	BRKR	DESCRIPTION	A	PHASE	B	C	DESCRIPTION	BRKR	CKT. NO.
1	3P35	AHU-2/VFD-1	5429				AHU-2/VFD-2	3P35	2
3	/		5429		5429			/	4
5	/		5429		5429			/	6
7	3P20	EF-1	3047				-	-	8
9	/		3047		0		-	-	10
11	/		3047		0		-	-	12
13	-	-	0		0		-	-	14
15	-	-	0		0		-	-	16
17	-	-	0		0		-	-	18
TOTAL PHASE A:			13905.4	NOTES:			MOUNTING:	SURFACE	VOLTAGE (L/N): 277
TOTAL PHASE B:			13905.4				RATING:	65000 AIC	VOLTAGE (L/L): 480
TOTAL PHASE C:			13905.4				ENCLOSURE:	NEMA 1	PHASE: 3
CONNECTED VA:			41716.2				FED FROM:	H1H1	WIRE: 4
CONNECTED AMPS:			50.2				FEEDER SIZE:	4#6.#8G, 3/4"	
							LOCATION:	H1013	

HVAC/PLUMBING EQUIPMENT SCHEDULE												
NO.	DESCRIPTION	FLA	KW	HP	VOL	PH	CCT NO.	DISC FURN BY	STARTER		CIRCUIT WIRING	NOTE
									TYPE	BY		
AHU-1	AIR HANDLING UNIT	19.6	-	2 @ 7.5	480	3	H1H2-1/3/5	MC	VFD	MC	3#10, #12G, 3/4"	1.3
		19.6	-	2 @ 7.5	480	3	H1H2-2/4/6	MC	VFD	MC	3#10, #12G, 3/4"	
EF-1	EXHAUST FAN	11	-	7.5	480	3	H1H2-7/9/11	UNIT	VFD	MC	3#12, #12G, 3/4"	1
HWP-1	HOT WATER PUMP	1.9	-	1/6	120	1	L1F-40	EC	UNIT	MFR	2#12, #12G, 1/2"	4
SF-1	SUPPLY FAN	4.4	-	1/3	120	1	L1F-42	UNIT	ECM	MFR	2#12, #12G, 1/2"	4
AHU-2	AIR HANDLING UNIT	19.6	-	2 @ 7.5	480	3	H1H3-1/3/5	MC	VFD	MC	3#10, #12G, 3/4"	1.2,3
		19.6	-	2 @ 7.5	480	3	H1H3-2/4/6	MC	VFD	MC	3#10, #12G, 3/4"	
EF-2	EXHAUST FAN	11	-	7.5	480	3	H1H3-7/9/11	UNIT	VFD	MC	3#12, #12G, 3/4"	1.2
HWP-2	HOT WATER PUMP	1.9	-	1/6	120	1	L1FA-7	EC	UNIT	MFR	2#12, #12G, 1/2"	2.5
SF-2	SUPPLY FAN	4.4	-	1/3	120	1	LF1A-9	UNIT	ECM	MFR	2#12, #12G, 1/2"	2.6
NOTES:												
1. PROVIDE ELECTRICAL CONNECTION TO VFD PROVIDED BY M.C. AND ALL INTERCONNECTING CONDUIT AND WIRING BETWEEN EQUIPMENT AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.												
2. ITEM ASSOCIATED WITH ALTERNATE NO. 1.												
3. PROVIDE WARNING SIGN INDICATING EQUIPMENT IS POWERED BY MORE THAN ONE SOURCE.												
4. PROVIDE NEW 15 AMPERE SINGLE POLE BREAKER IN PANEL L1F FOR DEDICATED BRANCH CIRCUIT FOR EQUIPMENT.												
5. REMOVE AND RETURN TO OWNER 20 AMPERE, SINGLE POLE BREAKER IN PANEL L1FA. PROVIDE NEW 15 AMPERE, SINGLE POLE BREAKER FOR DEDICATED BRANCH CIRCUIT FOR EQUIPMENT.												

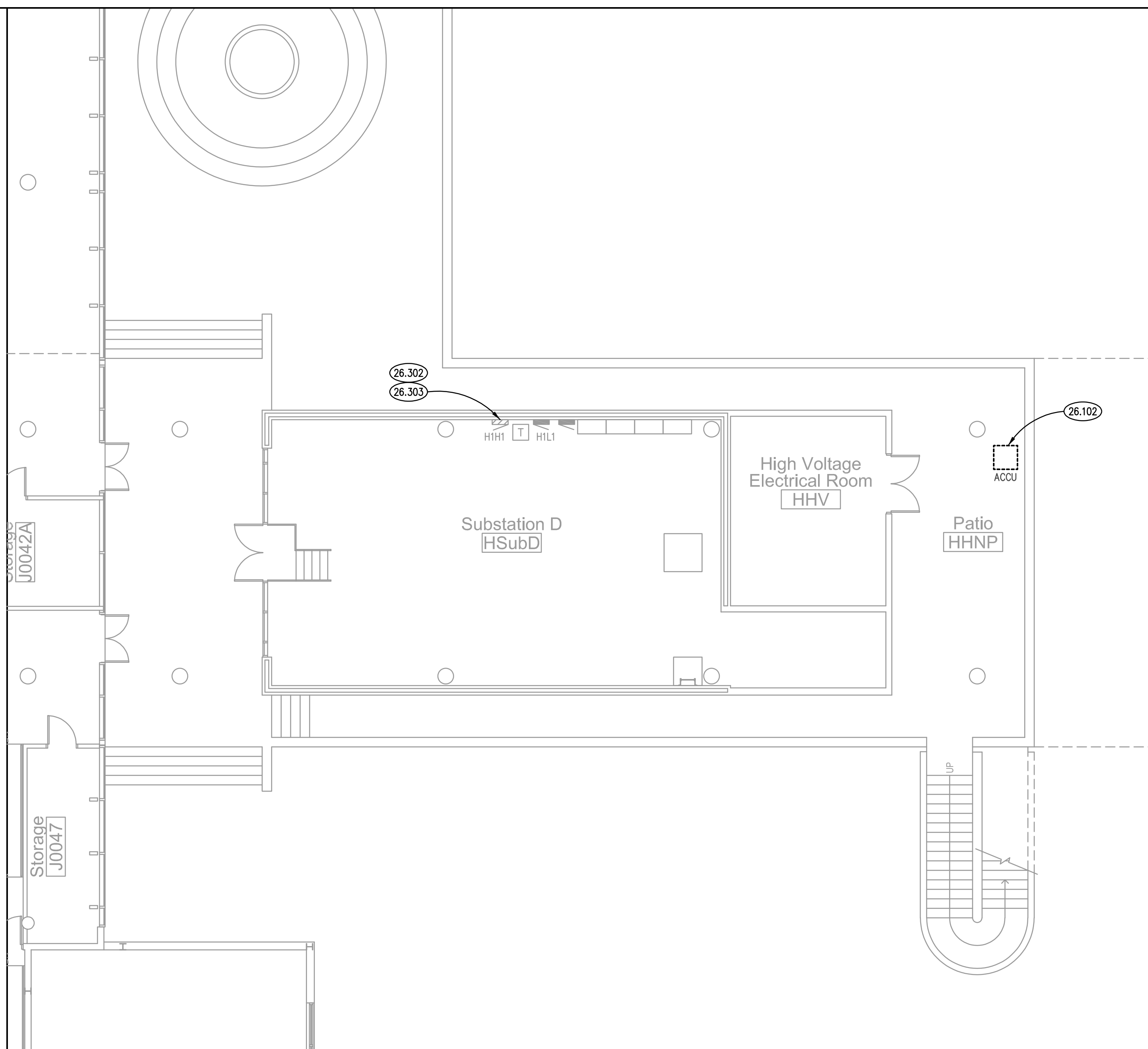
KEYNOTES

KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 26.102 ALTERNATE NO. 1: DEMOLISH ELECTRICAL CONNECTION TO EXISTING AIR-COOLED CONDENSING UNIT INCLUDING BRANCH CIRCUITRY TO SOURCE.
- 26.300 PROVIDE ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REFER TO EQUIPMENT SCHEDULE - SHEET E050.
- 26.301 PROVIDE HEAVY-DUTY NON-FUSED DISCONNECT SWITCH (480V, 60 AMPERE, 3 POLE, NEMA 3R).
- 26.302 LOCATION OF PANELBOARD HH1. PROVIDE QTY. (2) - 60 AMPERE, 3 POLE CIRCUIT BREAKERS IN EXISTING PANELBOARD FOR NEW PANELS HH2 AND HH3 (HH1-19/21/23, 14/16/18). PANELBOARD HH1: SQUARE D NF PANELBOARD SERIES E1 480Y/277V 3PH, 4W WITH E FRAME CIRCUIT BREAKERS.
- 26.303 HOMERUN NEW FEEDER FOR PANELBOARD THROUGH EXISTING 3/4" CONDUIT (PREVIOUS AHU FEEDS) TO NEW BREAKER IN PANELBOARD HH1.

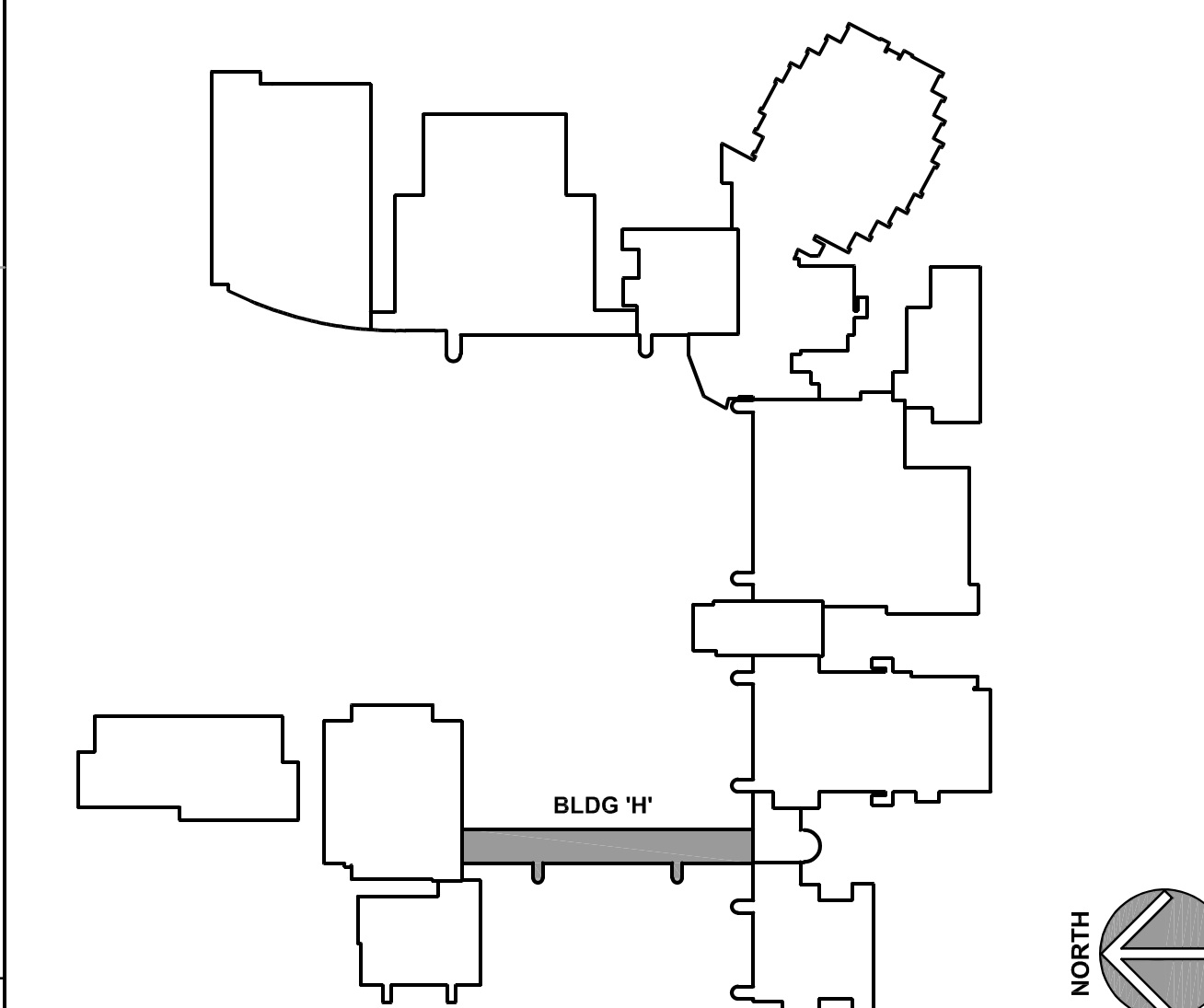


BUILDING 'H' PARTIAL ROOF ELECTRICAL PLAN **2**
SCALE: 1/8" = 1'-0"



BUILDING 'H' PARTIAL GROUND FLOOR ELECTRICAL PLAN **1**
SCALE: 1/8" = 1'-0"

KEY PLAN

ISSUED
12/28/24 BID DOCUMENTS

JOB NO. 23-292-1509
DRAWN ATR
CHECKED MTK
APPROVED MTK

SHEET TITLE

GROUND FLOOR AND
ROOF ELECTRICAL
PLANS

SHEET NUMBER

E300**BUILDING 'H' HVAC UNIT REPLACEMENT**

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Kluber
Architects + Engineers

KEYNOTES

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- 26.100 DEMOLISH ELECTRICAL CONNECTION TO AIR-HANDLING UNIT. PRESERVE AND PROTECT EXISTING CONDUIT FOR RE-USE.
- 26.101 DEMOLISH EXISTING LUMINAIRE. DISCONNECT AND PROTECT EXISTING BRANCH CIRCUITRY.
- 26.103 ALTERNATE NO. 1: DEMOLISH ELECTRICAL CONNECTION TO EXISTING FAN COIL UNIT INCLUDING BRANCH CIRCUITRY TO SOURCE.
- 26.104 TEMPORARILY REMOVE DISCONNECT. PROVIDE TEMPORARY FEED TO EXISTING TRANSFORMER T-1. PROTECT EXISTING CONDUIT AND FEEDER DURING CONSTRUCTION OPERATIONS.
- 26.300 PROVIDE ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REFER TO EQUIPMENT SCHEDULE - SHEET E050.
- 26.303 HOMERUN NEW FEEDER FOR PANELBOARD THROUGH EXISTING 3/4" CONDUIT (PREVIOUS AHU FEEDS) TO NEW BREAKER IN PANELBOARD H1H1.
- 26.304 LOCATION OF PANELBOARD L1F. PROVIDE QTY. (2) - 20 AMPERE, 1 POLE CIRCUIT BREAKERS IN EXISTING PANELBOARD FOR AHU LIGHTING CIRCUIT AND HWP-2. PANELBOARD L1F: WESTINGHOUSE TYPE NGB PANELBOARD 120/208V 3PH, 4W.
- 26.305 REINSTALL EXISTING DISCONNECT. PROVIDE STRUT SUPPORT SYSTEM. COORDINATE EXACT LOCATION IN FIELD ONCE NEW UNIT IS INSTALLED. MAINTAIN PROPER WORKING CLEARANCES AS REQUIRED BY NEC 110.26.
- 26.306 PROVIDE PERMANENT SPLICE AND EXTEND EXISTING TRANSFORMER FEEDER TO RELOCATED DISCONNECT LOCATION.
- 26.306 PROVIDE ELECTRICAL CONNECTION TO UNIT MOUNTED LUMINAIRES. PROVIDE 20 AMPERE, SINGLE POLE BREAKER IN NEAREST 120/208V PANELBOARD. HOMERUN BRANCH CIRCUITRY TO NEW CIRCUIT BREAKER.
- 26.307 NEW ROOF OPENING FOR OUTSIDE AIR: RELOCATE ANY AND ALL ELECTRICAL DEVICES, WIRING, CONDUIT, ETC. AS REQUIRED TO ACCOMMODATE NEW OPENING AND ENSURE EXISTING SYSTEMS ARE FULLY OPERATIONAL.
- 26.400 EXTEND EXISTING LUMINAIRE BRANCH CIRCUITRY TO NEW LIGHTING AND SWITCHES TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM.
- 26.401 PROVIDE 4' LED INDUSTRIAL STRIP LIGHT. BASIS OF DESIGN: LITHONIA LIGHTING - CSS L48 AL03 MVOLT SWM3 BOCR.
- 26.402 PROVIDE 2'x2' LED PANEL TROFFER. BASIS OF DESIGN: LITHONIA LIGHTING - CPANL 2X2 AL01 SWW7 M4.
- 26.403 PROVIDE SURFACE WALL MOUNTED 3-WAY SWITCH. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- 28.100 DEMOLISH EXISTING DUCT DETECTOR. DISCONNECT AND PROTECT EXISTING WIRING FOR REUSE.
- 28.101 SALVAGE EXISTING SMOKE DETECTOR. DISCONNECT AND PROTECT EXISTING WIRING FOR REUSE.
- 28.200 PROVIDE DUCT SMOKE DETECTOR. EXTEND EXISTING FIRE ALARM SIGNALLING LINE CIRCUIT TO NEW DEVICE AS NECESSARY TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM.
- 28.201 REINSTALL EXISTING SMOKE DETECTOR IN NEW CEILING. EXTEND WIRING TO DEVICE LOCATION AS REQUIRED.

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BUILDING 'H' HVAC UNIT REPLACEMENT

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ALTERNATE NO. 1: H1013 ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

4

ALTERNATE NO. 1: H1013 ELECTRICAL DEMOLITION PLAN

SCALE: 1/2" = 1'-0"

3

H1007 ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

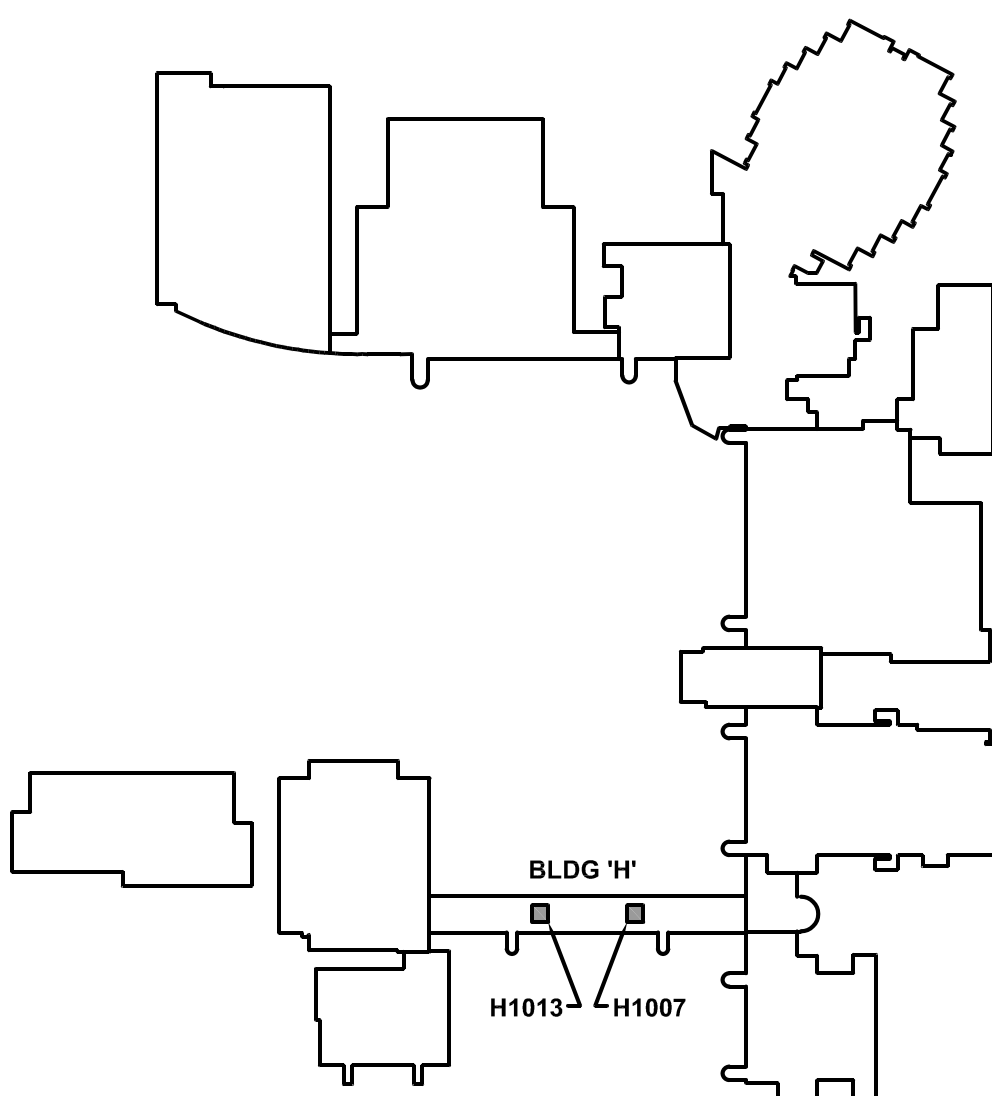
2

H1007 ELECTRICAL DEMOLITION FLOOR PLAN

SCALE: 1/2" = 1'-0"

1

KEY PLAN



ISSUED
12/28/24 BID DOCUMENTS

JOB NO. 23-292-1509
DRAWN ATR
CHECKED MTK
APPROVED MTK

SHEET TITLE
ENLARGED ELECTRICAL PLANS

SHEET NUMBER

E311