

MECHANICAL DIAGRAM SYMBOL LIST

	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	BALANCE VALVE
	BALANCE COCK
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	DRAIN VALVE
	GATE VALVE
	GLOBE VALVE
	NEEDLE VALVE
	PACKLESS VALVE
	PRESSURE REDUCING VALVE
	PRESSURE SUSTAINING VALVE
	SOLENOID VALVE
	TEMPERATURE CONTROL VALVE
	VALVE IN RISER
	ANGLE VALVE
	PRESSURE RELIEF VALVE
	AUTOMATIC AIR VENT
	GAUGE COCK, WITH PRESSURE GAUGE, WITH TEMPERATURE GAUGE
	HOSE BIBB / WALL HYDRANT
	CAP
	ELBOW DOWN
	ELBOW UP
	45 DEGREE ELBOW
	TEE OFF BOTTOM OF PIPE
	TEE OFF TOP OF PIPE
	UNION
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	WYE FITTING
	STRAINER
	TRAP
	WALL CLEANOUT
	FLOOR CLEANOUT
	PIPE ANCHOR
	PIPE GUIDE
	EXPANSION JOINT
	FLEXIBLE JOINT
	AUTOMATIC SPRINKLER RISER
	BACKFLOW PREVENTER
	IN-LINE PUMP
	FAN
	THERMOMETER
	THERMOMETER WELL
	PRESSURE GAUGE
	FLOW METER
	IMMERSSION THERMOSTAT
	MANUAL SWITCH
	HUMIDISTAT
	THERMOSTAT
	CARBON DIOXIDE SENSOR
	CARBON MONOXIDE SENSOR
	NITROGEN DIOXIDE SENSOR
	HYDROGEN SENSOR
	PRESSURE DIFFERENTIAL SENSOR
	STATIC PRESSURE SENSOR
	TEMPERATURE SENSOR
	FLOW SWITCH

DUCTWORK SYMBOL LIST

	NEW DUCTWORK
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	DUCT SIZE, FIRST DUCT SIZE IS DIMENSION SHOWN
	DUCT TRANSITION
	BRANCH TAKEOFF
	ROUND OR RECTANGULAR RADIUS ELBOW
	RECTANGULAR MITERED ELBOW WITH TURNING VANES
	TAKEOFF FROM BOTTOM OF DUCT
	TAKEOFF FROM TOP OF DUCT
	FLEXIBLE DUCT
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
	ROUND DUCT UP
	ROUND DUCT DOWN
	AUTOMATIC CONTROL DAMPER
	BACKDRAFT DAMPER
	BLAST GATE
	FIRE DAMPER
	SMOKE/FIRE DAMPER
	SMOKE DAMPER
	MANUAL DAMPER

PIPING SYMBOL LIST

	COMPRESSED AIR
	NATURAL GAS
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION

GENERAL MECHANICAL NOTES

- THE FOLLOWING NOTES APPLY TO ALL MECHANICAL DRAWINGS UNLESS NOTED OTHERWISE.
- FINAL ELECTRICAL POWER CONNECTIONS TO ALL MECHANICAL EQUIPMENT SHALL BE BY ELECTRICAL TRADE.
 - FINAL GAS CONNECTIONS TO ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED BY PLUMBING TRADE.
 - ALL FIELD CONTROL WIRING AND INTERLOCK WIRING SHALL BE FURNISHED AND INSTALLED BY TEMPERATURE CONTROL TRADES. FOR EXAMPLE, WIRING FROM CONTROL PANEL TO CONTROLLED DEVICE SHALL BE SHOWN AND INSTALLED BY TEMPERATURE CONTROL TRADES.
 - ALL ROOF CURBS FOR MECHANICAL EQUIPMENT ARE FURNISHED BY MECHANICAL TRADES (UNLESS NOTED OTHERWISE) AND INSTALLED BY ARCHITECTURAL TRADES. COORDINATE WITH ROOF SLOPE AND STRUCTURAL DRAWINGS.
 - PROVIDE ALL ACCESS PANEL LOCATIONS REQ'D FOR WALLS/DRYWALL CEILING AREAS TO GENERAL CONTRACTOR FOR EQUIPMENT INSTALLATION AND SERVICE.
 - COORDINATE EQUIPMENT HOUSEKEEPING PAD, SIZE AND LOCATION WITH ARCHITECTURAL AND STRUCTURAL TRADES. ALL MECHANICAL EQUIPMENT SHALL BE ON 4 INCH CONCRETE CURBS IF ON CONCRETE FLOOR.
 - KEEP ALL EXHAUST AIR AND SANITARY VENTS AWAY FROM OUTSIDE AIR INTAKE, AT LEAST A MINIMUM OF 10 FEET.
 - MECHANICAL CONTRACTOR SHALL COORDINATE ALL OPENINGS IN MASONRY/PRE-CAST WALLS WITH MASON/PIRE-CAST CONTRACTOR.
 - MECHANICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL TRADES PAINTING OF ALL EXPOSED DUCTWORK, DIFFUSERS AND PIPING/INSULATION.
 - PROVIDE 4" HIGH CONCRETE CURB AROUND ALL DUCT PENETRATIONS THROUGH MECHANICAL MEZZANINE FLOOR. COORDINATE CURB AND OPENING SIZE WITH ARCHITECTURAL AND STRUCTURAL TRADES CONTRACTORS.
 - TEMPERATURE SENSORS (THERMOSTATS) MOUNTED ON EXTERIOR WALLS TO BE MOUNTED ON MIN. 1" THICK INSULATION.
 - ELECTRICAL TRADES WILL PROVIDE 120 VOLT ELECTRICAL JUNCTION BOXES IN THE MECHANICAL ROOM AND MEZZANINE ROOMS DEDICATED FOR MECHANICAL EQUIPMENT CONTROLS. TEMPERATURE CONTROL TRADES SHALL EXTEND CIRCUITS AS REQUIRED TO FEED THE VARIOUS CONTROL PANELS AND/OR ALL ASSOCIATED CONTROLS.
 - TEMPERATURE CONTROL TRADES SHALL PROVIDE STARTERS, POWER, DISCONNECT SWITCH, FEEDERS AND INTERLOCKS FOR ALL MOTORIZED DAMPERS.
 - ACCESS DOORS: PROVIDE ACCESS DOORS FOR ALL EQUIPMENT THAT REQUIRES ROUTINE MAINTENANCE OR SERVICE. AND THAT IS CONCEALED BEHIND NON-ACCESSIBLE WALL OR CEILING CONSTRUCTION. TYPICALLY ACCESS PANELS ARE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SIZING OF ACCESS DOORS TO PERMIT REQUIRED ACCESS FOR ROUTINE MAINTENANCE OPERATIONS. ACCESS PANELS ARE SHOWN ON THE DRAWINGS ONLY WHEN THEIR SIZE OR LOCATION MUST BE COORDINATED WITH ADJACENT CONSTRUCTION, OR IF THEY ARE TO BE CUSTOM MADE FOR THE PROJECT.
 - ELECTRICAL CONTRACTOR WILL PROVIDE 120 V ELECTRICAL POWER TO TEMPERATURE CONTROL PANELS AND DEDICATED JUNCTION BOXES AS INDICATED ON ELECTRICAL DRAWINGS. THE TEMPERATURE CONTROL CONTRACTOR SHALL EXTEND TO THESE CIRCUITS AS REQUIRED TO FEED THE VARIOUS CONTROL PANELS AND OR ASSOCIATED CONTROLS. THE TEMPERATURE CONTROL CONTRACTOR SHALL REVIEW THE INDICATED 120 V POWER SUPPLY LOCATIONS PROVIDED ON THE ELECTRICAL DRAWINGS. IF THE TEMPERATURE CONTROL CONTRACTOR DETERMINES THAT ADDITIONAL 120 V CIRCUITS ARE REQUIRED TO MEET THEIR SYSTEMS DESIGN NEEDS THAT ARE NOT INDICATED ON THE ELECTRICAL DRAWINGS, THEN TEMPERATURE CONTROL CONTRACTOR SHALL INCLUDE THE ADDITIONAL 120 V CIRCUITS AS PART OF THE TEMPERATURE CONTROL SCOPE OF WORK INCLUDING BREAKERS, CONDUIT, WIRE AND INSTALLATION FOR A COMPLETE AND OPERABLE SYSTEM.
 - TEMPERATURE CONTROL TRADES SHALL PROVIDE STARTERS, POWER, DISCONNECT SWITCH, FEEDERS AND INTERLOCKS FOR ALL MOTORIZED DAMPERS.
 - ALL OF THE RELIEF LOUVERS IN THE HANGAR SHALL INCLUDE SPRING OPEN FAILURE MODE OR AS APPROVED BY AHJ.

GENERAL HVAC NOTES

- THE FOLLOWING NOTES APPLY TO ALL MECHANICAL HVAC DRAWINGS UNLESS NOTED OTHERWISE.
- ALL DUCTWORK DIMENSIONS NOTED ON PLANS REFER TO THE CLEAR INSIDE OPENING REQUIRED.
 - PROVIDE TRANSITION FROM VAV OUTLET SIZE TO NOTED DISCHARGE DUCT SIZE.
 - DUCT FITTINGS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH "DUCT FITTING PROVISIONS" AS SHOWN ON DUCTWORK DETAIL SHEET AND THE LATEST SMACNA STANDARD.
 - INSTALL MANUAL VOLUME DAMPERS AT ALL SUPPLY AIR BRANCH DUCTS TO THE DIFFUSER, BRANCH RETURN AIR DUCT, EXHAUST AIR DUCT, AND OTHER LOCATIONS AS SHOWN ON PLANS, INCLUDE MANUAL VOLUME DAMPERS IN ALL DIFFUSER AND EXHAUST GRILLE DUCTWORK BRANCHES FOR BALANCING.
 - DUCT RUNOUTS TO ALL OVAL OR ROUND NECK AIR DEVICES TO BE THE SAME AS ROUND DEVICE NECK (OR ROUND EQUIVALENT TO OVAL, WITH TRANSITION) U.N.O.
 - PROVIDE FLEXIBLE CONNECTION AT DIFFUSER NECK. ALL FLEXIBLE DUCT SHALL BE INSULATED AND LIMITED TO 5'-0" IN LENGTH.
 - DUCTED EXHAUST AND RETURN GRILLES SHALL BE HARD DUCT CONNECTED.
 - ALL OF THE RELIEF AIR LOUVERS IN THE HANGAR SHALL HAVE MOTORIZED DAMPERS AND SHALL FAIL IN THE OPEN POSITION. SEND AN ALARM TO THE BAS IF THERE IS A FAILURE.
 - EXPOSED EXHAUST ROUND DUCTWORK SHALL BE UNINSULATED SPIRAL DUCTWORK UNLESS NOTED OTHERWISE.
 - CONCEALED ROUND DUCTWORK: FOR ROUND RUNOUTS TO CEILING DIFFUSERS AND VAV TERMINALS, REFER TO OTHER GENERAL HVAC NOTES THIS SECTION U.N.O.
 - PROVIDE FLEXIBLE CONNECTION AT DISCHARGE AND INLET OF ALL HORIZONTAL FAN COILS, LIEBERT UNITS AND FANS (EXHAUST/SUPPLY).
 - NOT USED.

GENERAL HVAC PIPING NOTES

- THE FOLLOWING NOTES APPLY TO ALL HVAC PIPING SHOWN ON PIPING DRAWINGS UNLESS NOTED OTHERWISE.
- ALL REFRIGERATION AND CONDENSATION PIPES ARE TO BE ABOVE CEILING UNLESS NOTED OTHERWISE. PIPING IS TO BE INSULATED PER SPECIFICATION.
 - RUN ALL DRAIN LINES INDIRECT TO NEAREST FLOOR DRAIN WITH MIN. 1/8" PER FOOT SLOPE UNLESS NOTED OTHERWISE.
 - INSTALL SLEEVES FOR ALL PIPES PASSING THROUGH WALLS.
 - ALL SPLIT SYSTEM AIR CONDITIONING UNITS SHALL HAVE CONDENSATE PIPING EXTENDED TO NEAREST DRAIN.
 - EXTEND ALL ROOFTOP UNITS CONDENSATE TO CODE APPROVED LOCATION. INCLUDE P-TRAPS.

MECHANICAL EQUIPMENT IDENTIFICATION

Key Name	Mech ID
AC	AIR COMPRESSOR
ACCU	AIR COOLED CONDENSING UNIT
ACRT	AIR CURTAIN
ACU	SPLIT SYSTEM AIR CONDITIONING UNIT
AHU	AIR HANDLING UNIT
CAF	COMPRESSED AIR FILTER
CAO	COMPRESSED AIR OUTLET W/ FILTER
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CUH	CABINET UNIT HEATER
DG	DOOR GRILLE
EF	EXHAUST FAN
EUH	ELECTRIC UNIT HEATER
HP	HEAT PUMP
HRHP	HEAT RECOVERY HEAT PUMP
HVU	HEATING AND VENTILATING UNIT
IH	INTAKE AIR HOOD
MAU	MAKE-UP AIR UNIT
RCAD	REFRIGERATED COMPRESSED AIR DRYER
RH	RELIEF AIR HOOD
TOP	TEMPERATURE CONTROL PANEL
WMS	WIRE MESH SCREEN



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SHOP
DRAWING

2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
GENERAL
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MO0-00-01
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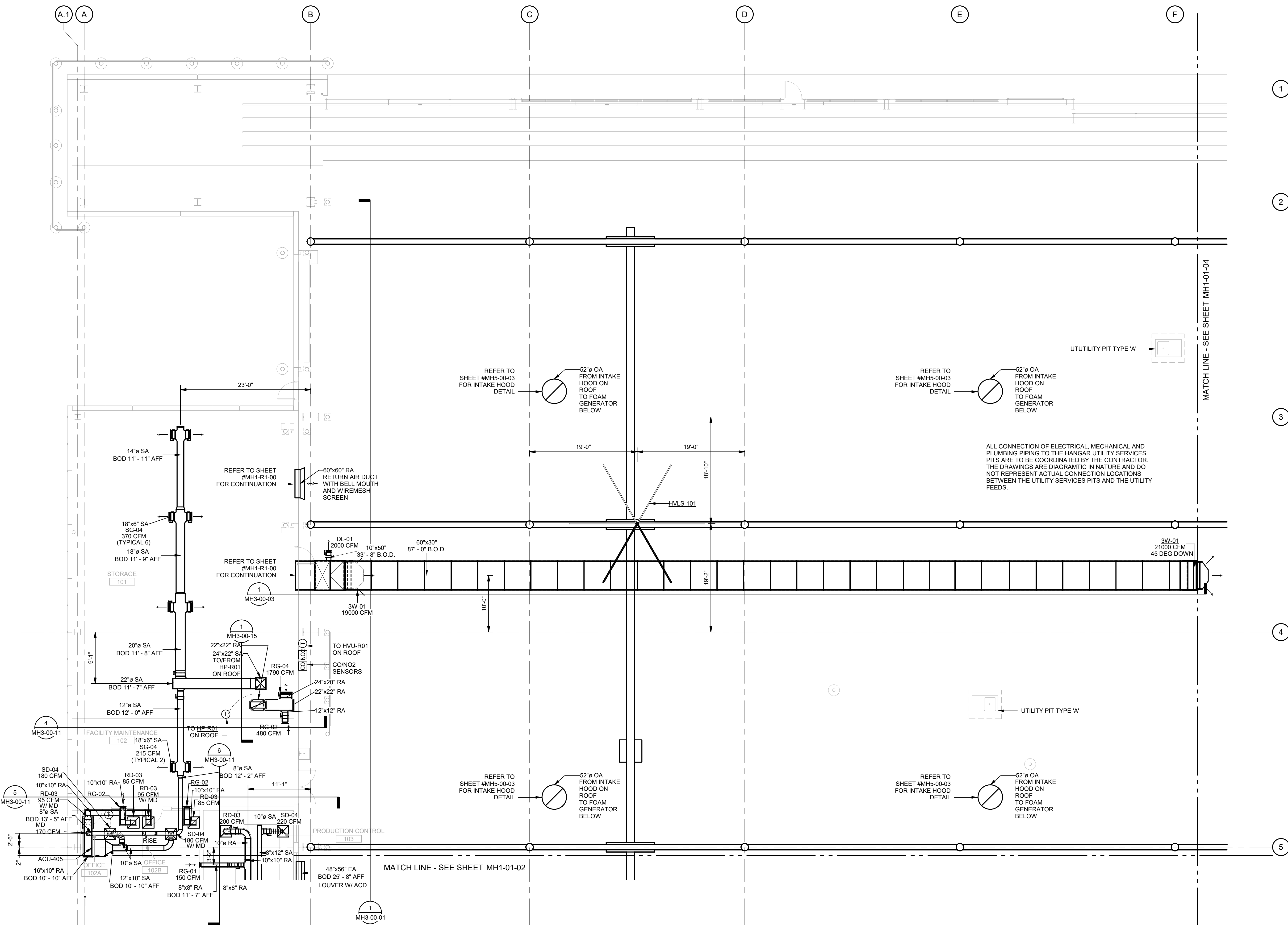
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2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
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MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA A

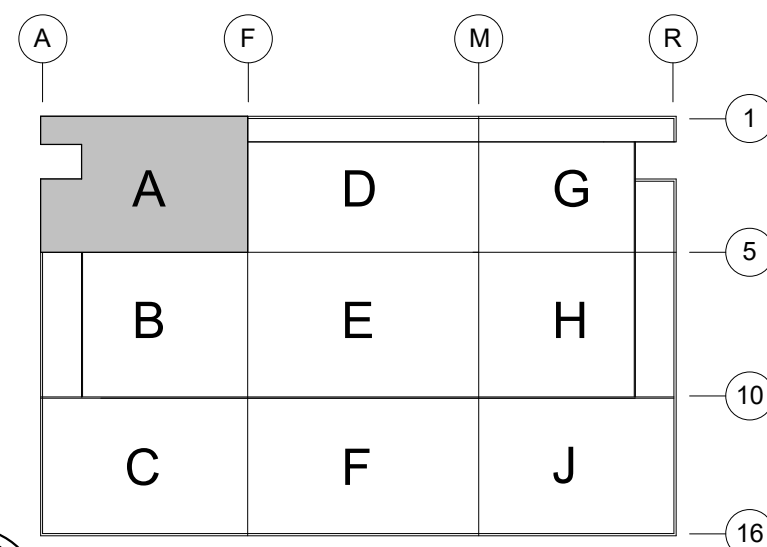
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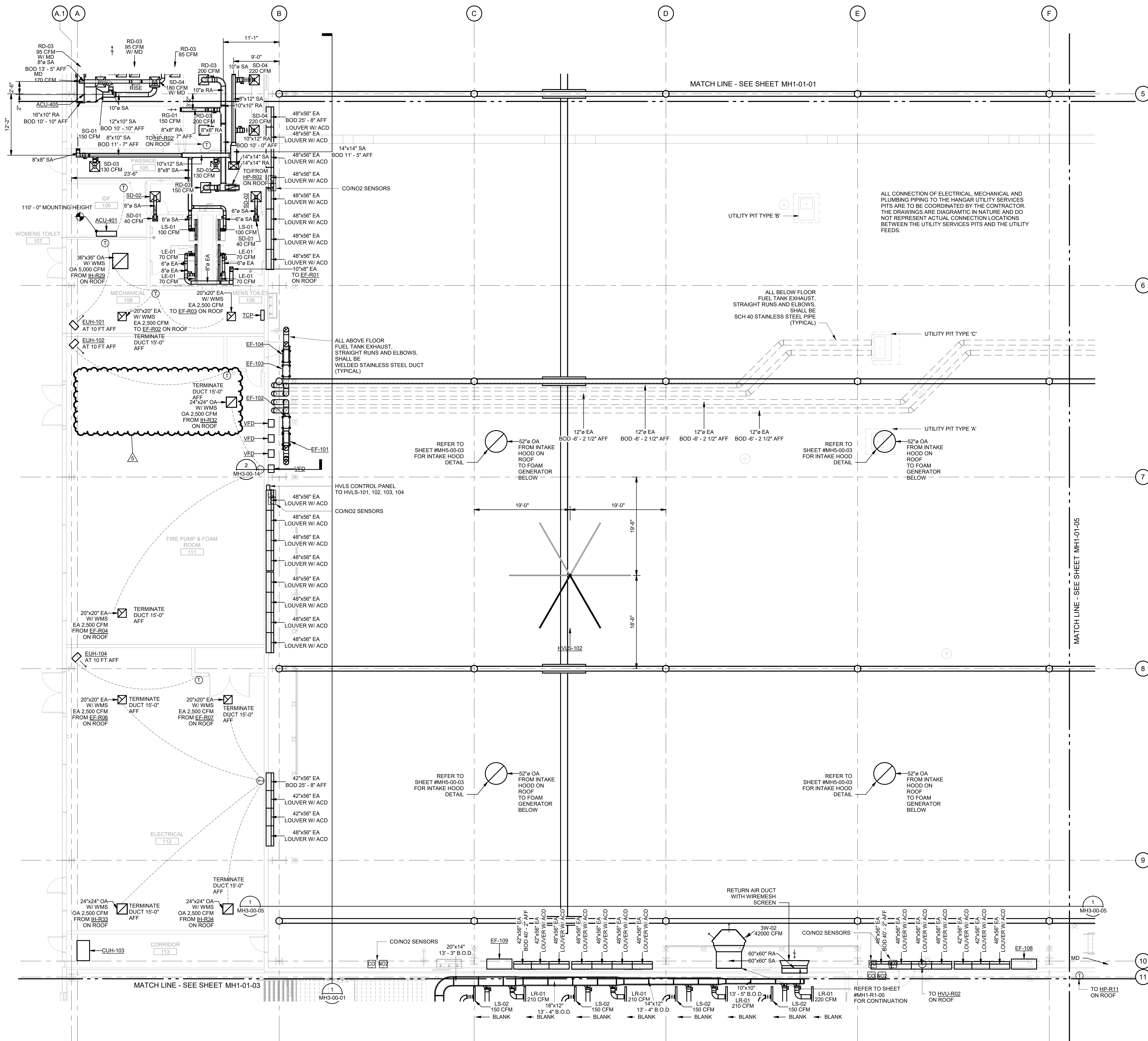


MECHANICAL HVAC PLAN FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"



KEY PLAN





MECHANICAL HVAC PLAN FIRST FLOOR AREA B
SCALE: 1/8" = 1'-0"



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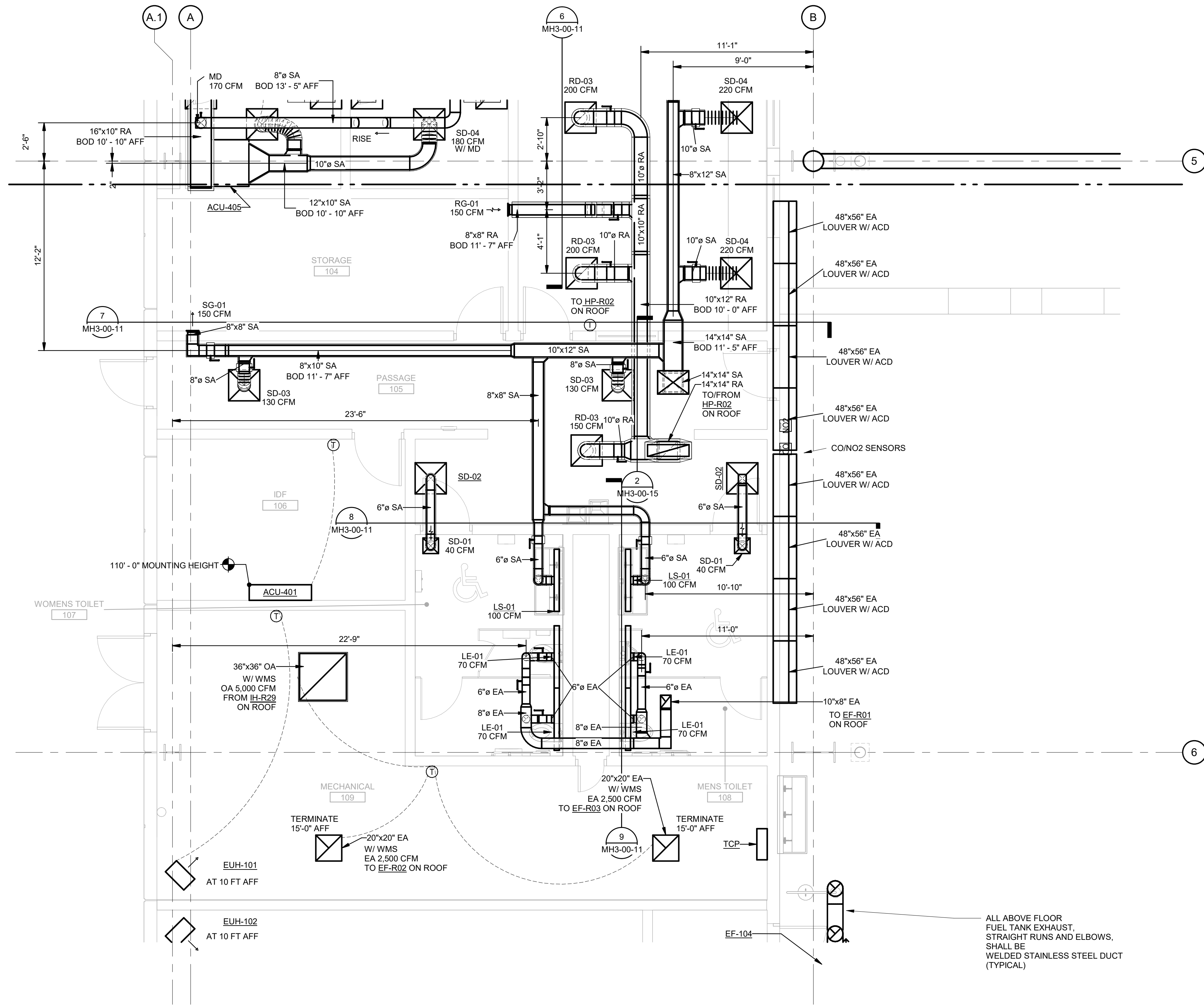
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4	06/03/25	FABRICATION REVISION
3	04/29/25	BULLETIN 6
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET

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MECHANICAL HVAC PLAN FIRST FLOOR AREA B

MH1-01-02
SHEET NUMBER



MECHANICAL HVAC PLAN FIRST FLOOR AREA B - 1 OF 1

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



KEY PLAN

A	F	M	R	
				1
A	D	G		5
B	E	H		10
C	F	J		16

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MECHANICAL HVAC PLAN FIRST FLOOR AREA B - 1 OF 1

MH1-01-2a
SHEET NUMBER

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2	06/03/25	FABRICATION REVISION
1	03/12/25	FABRICATION SET
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5	09/11/25	CONTROL REVISIONS
4	06/16/25	REVISIONS
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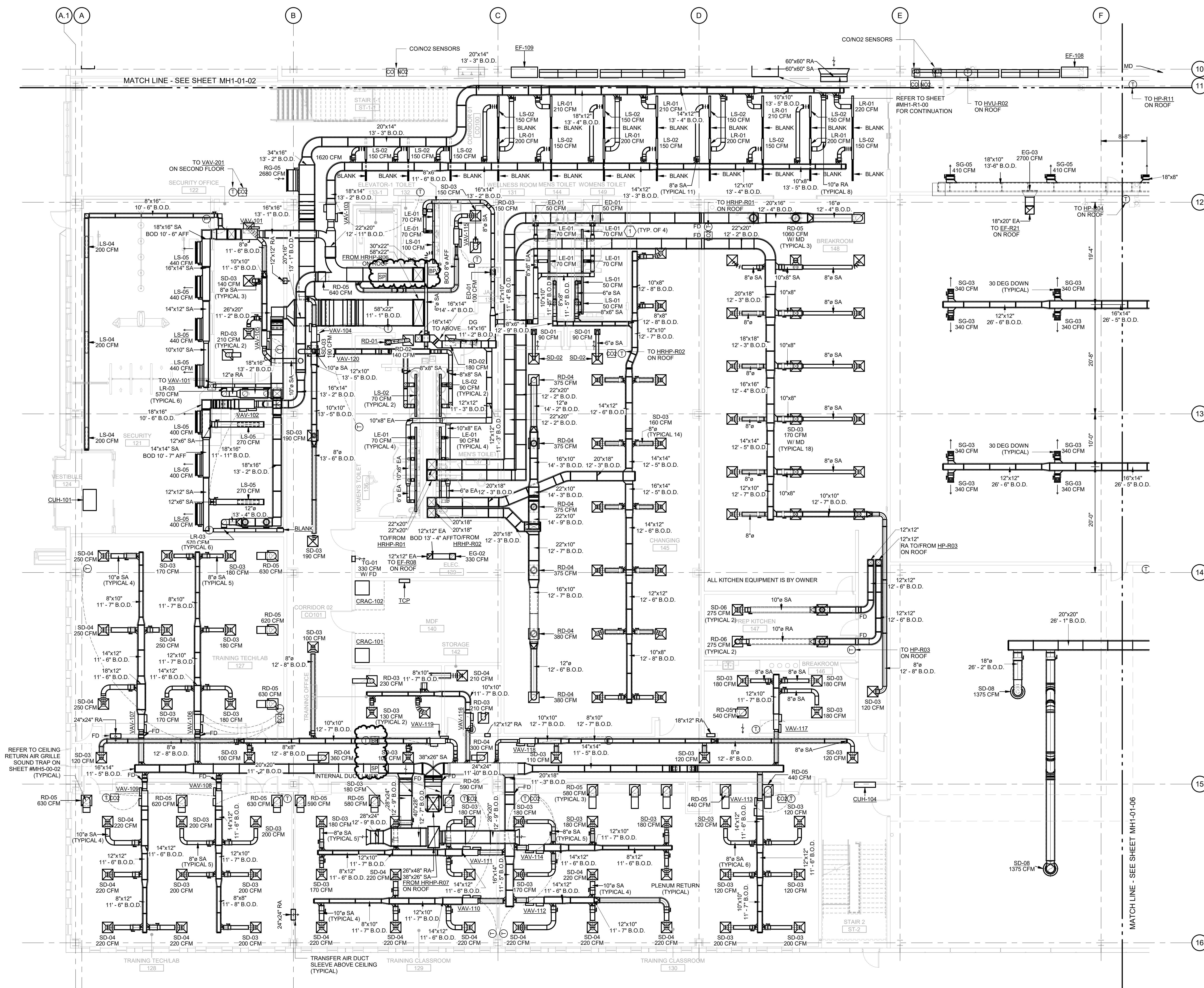
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SHEET TITLE

**MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA C**

MH1-01-03
SHEET NUMBER

NOTES THIS DRAWING

1. LINEAR DEVICE PLENUM BOX TO BE PROVIDED WITH FIELD CUT INLET.



MECHANICAL HVAC PLAN FIRST FLOOR AREA C

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



KEY PLAN

A	D	G
B	E	H
C	F	J



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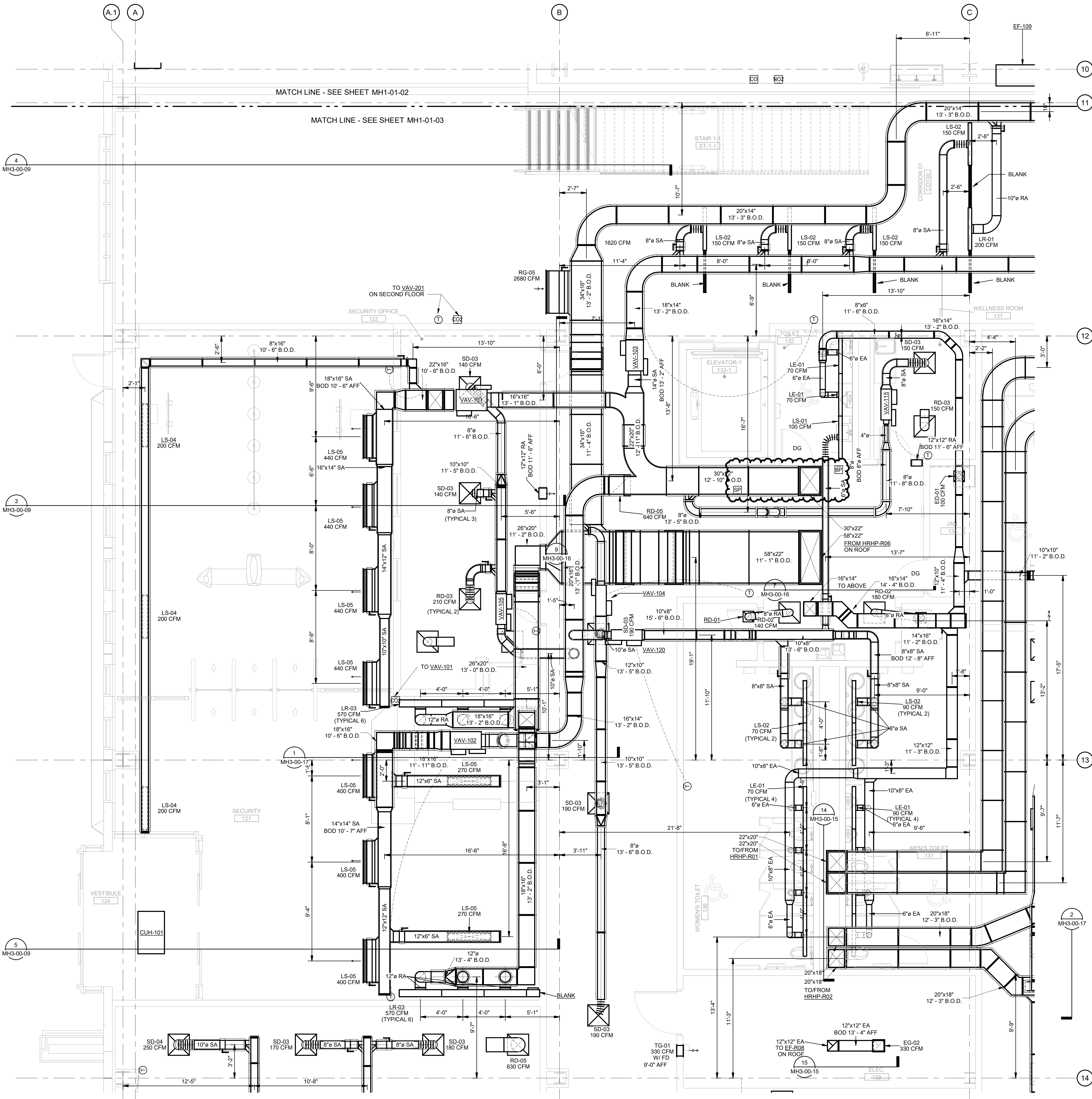
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1	03/12/25	FABRICATION SET
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**MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA C - 1 OF 4**

MH1-01-03a
SHEET NUMBER



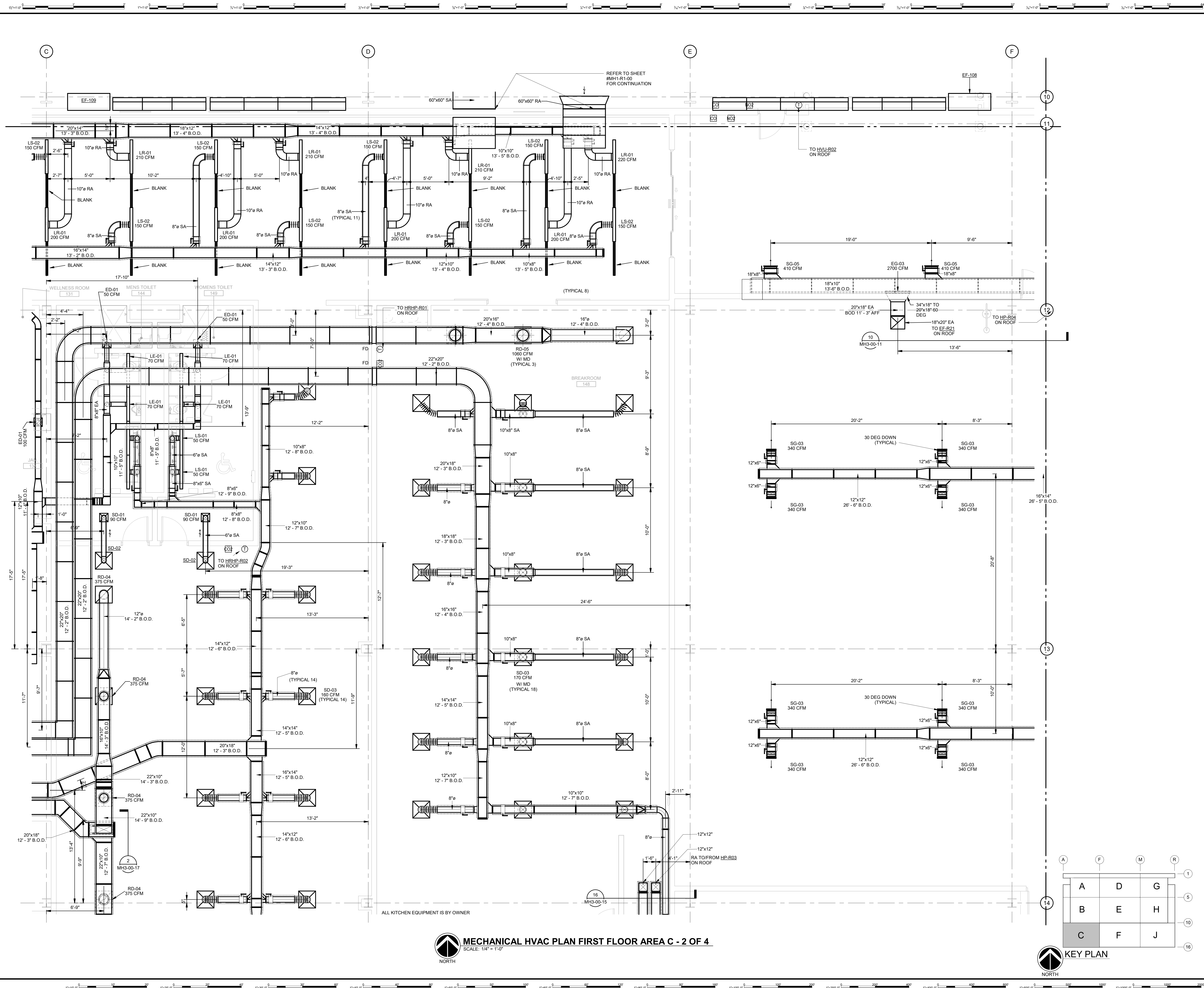
MECHANICAL HVAC PLAN FIRST FLOOR AREA C - 1 OF 4

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



KEY PLAN

A	D	G
B	E	H
C	F	J



MECHANICAL HVAC PLAN FIRST FLOOR AREA C - 2 OF 4

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



KEY PLAN



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**MECHANICAL
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FIRST FLOOR
AREA C - 2 OF 4**

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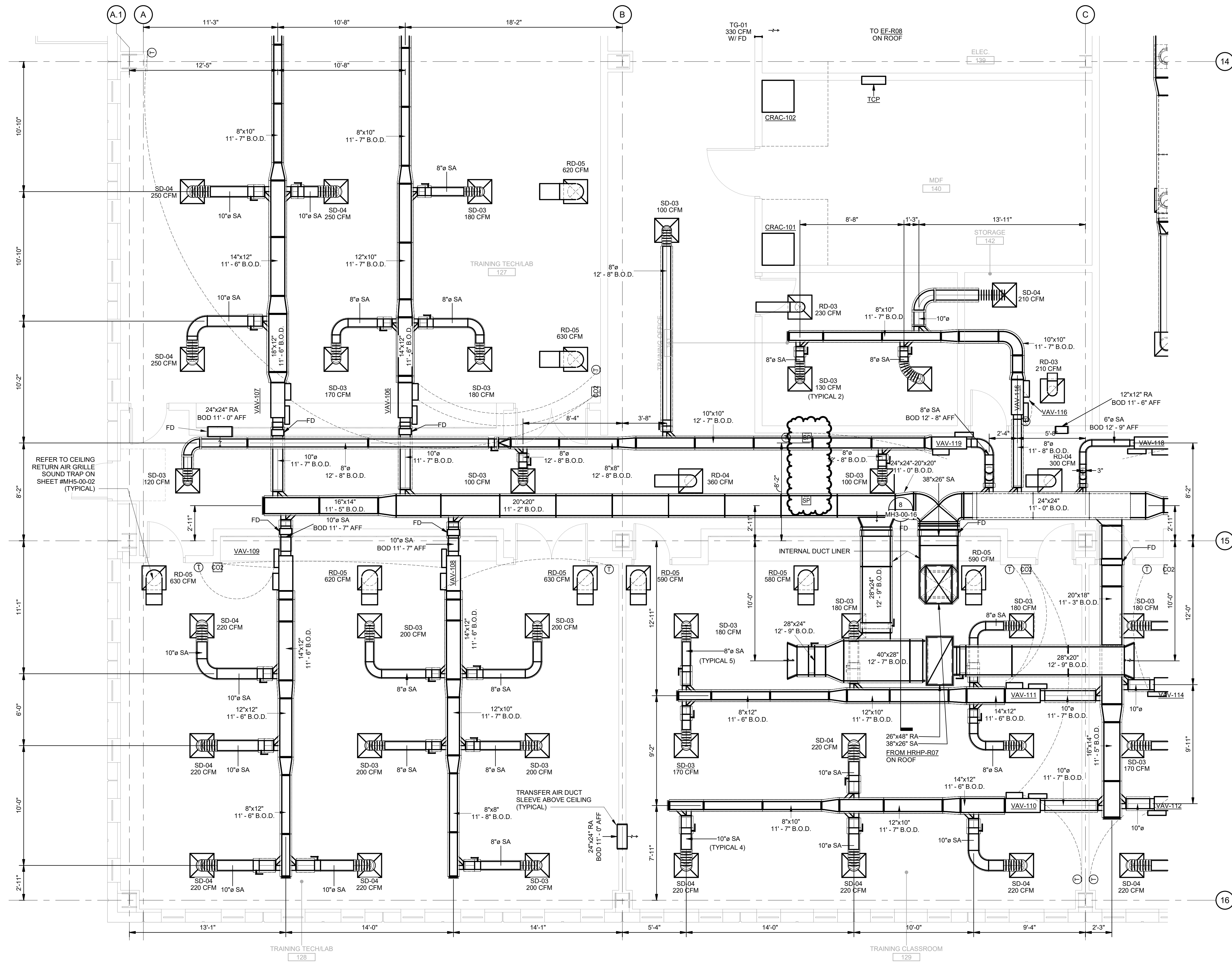
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**MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA C - 3 OF 4**

MH1-01-03c
SHEET NUMBER

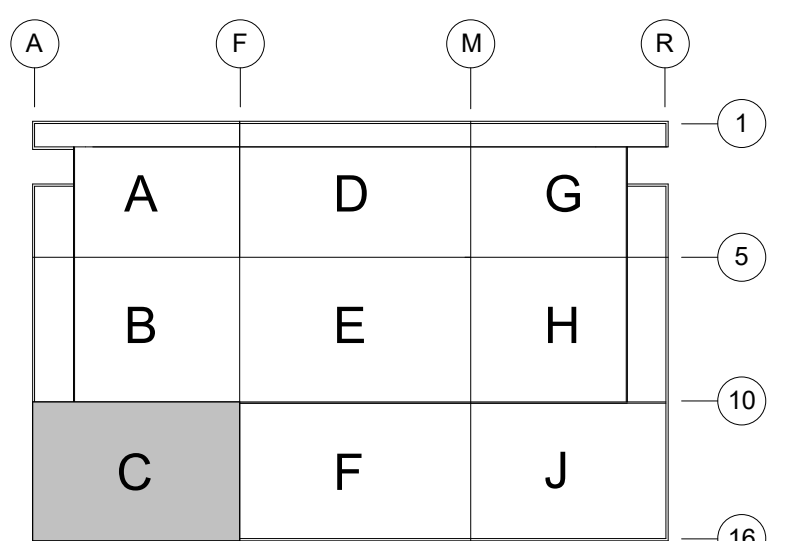


MECHANICAL HVAC PLAN FIRST FLOOR AREA C - 3 OF 4
SCALE: 1/4" = 1'-0"

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



KEY PLAN





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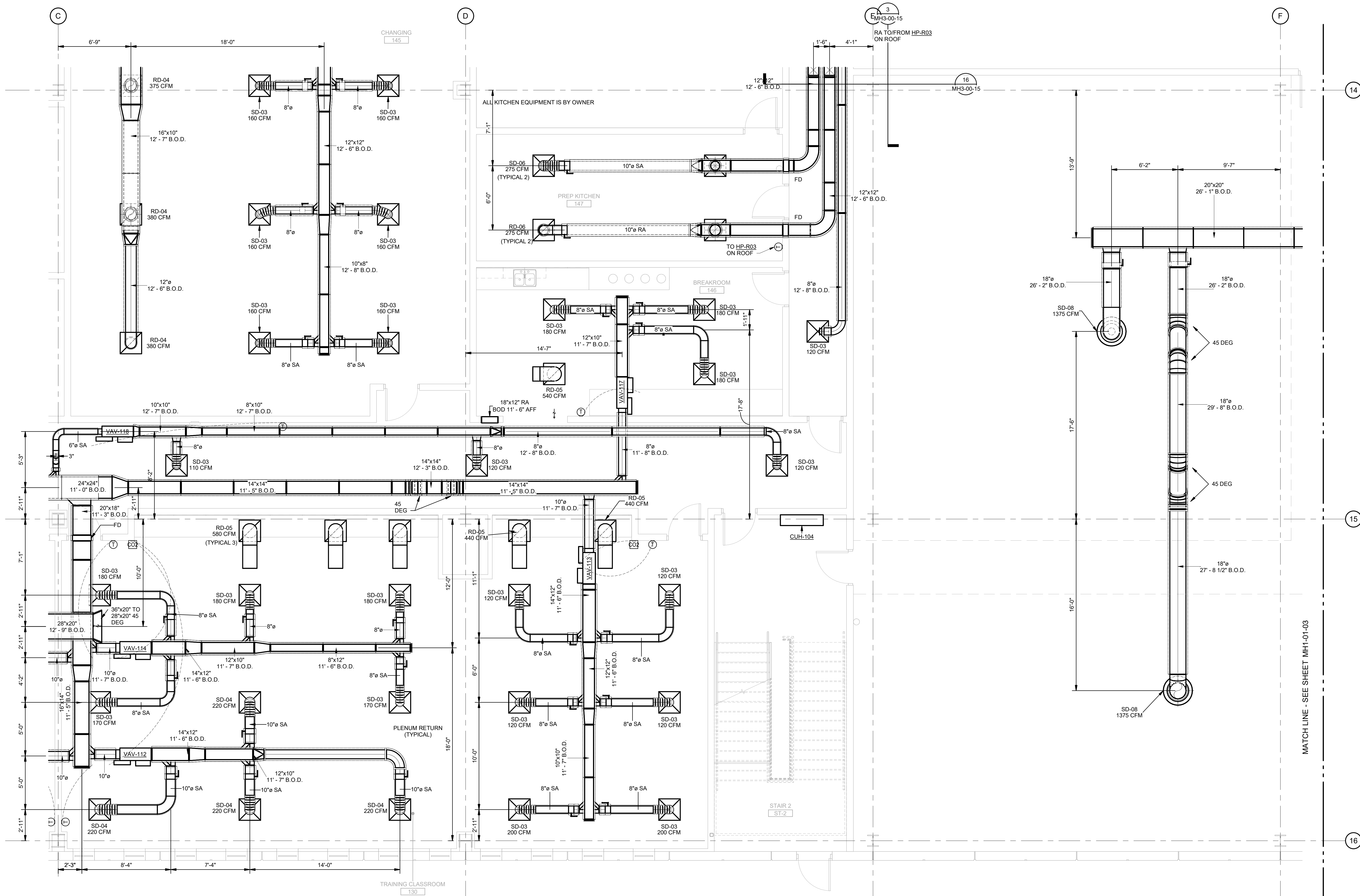
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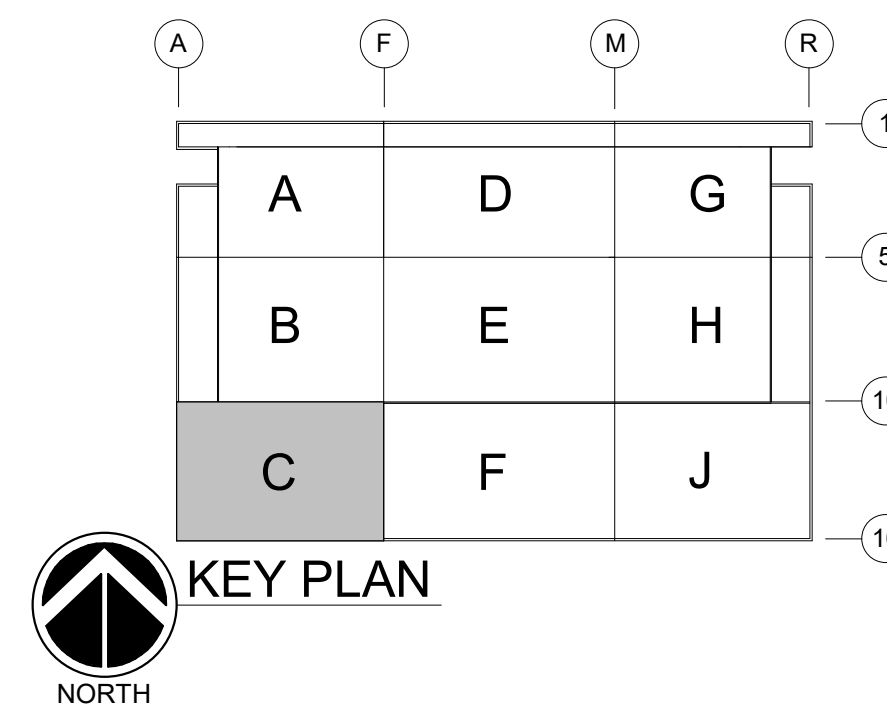
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SHEET TITLE

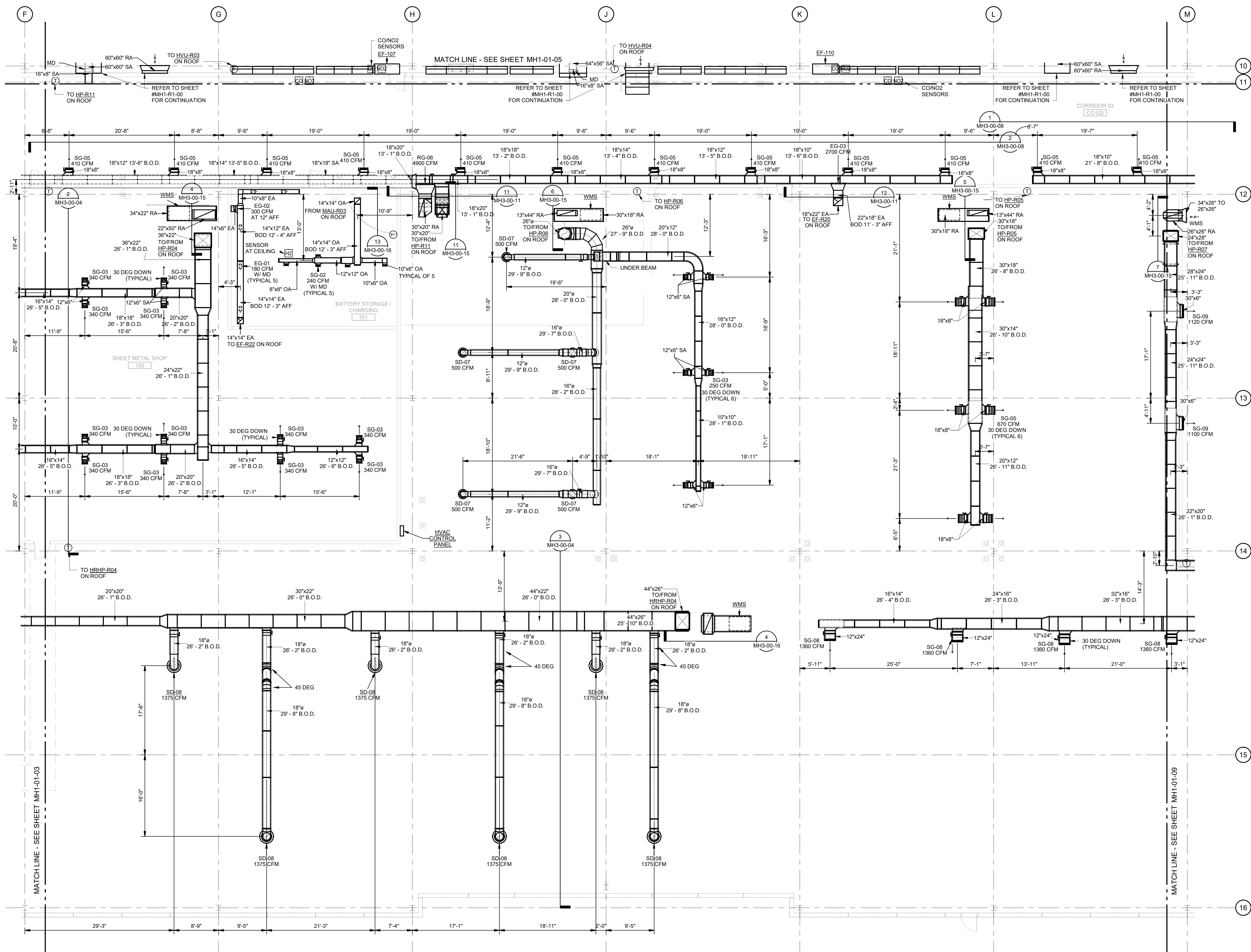
MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA C - 4 OF 4

MH1-01-03d
SHEET NUMBER



MECHANICAL HVAC PLAN FIRST FLOOR AREA C - 4 OF 4
SCALE: 1/4" = 1'-0"



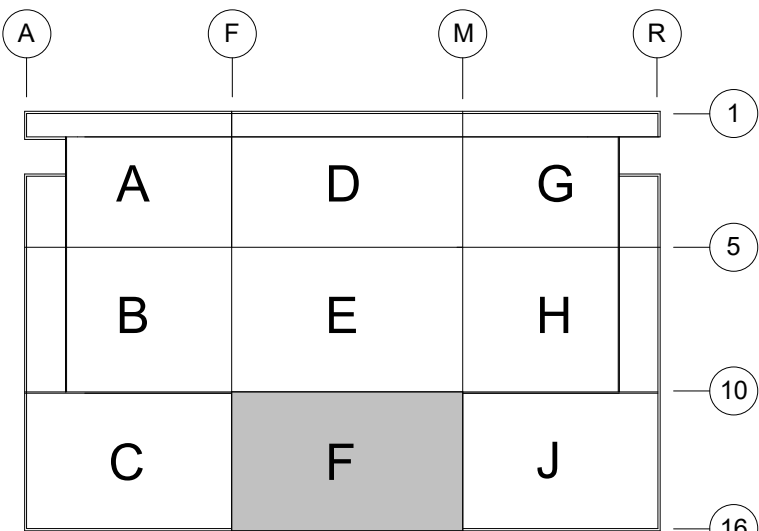


MECHANICAL HVAC PLAN FIRST FLOOR AREA F

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



KEY PLAN



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**SHOP
DRAWING**

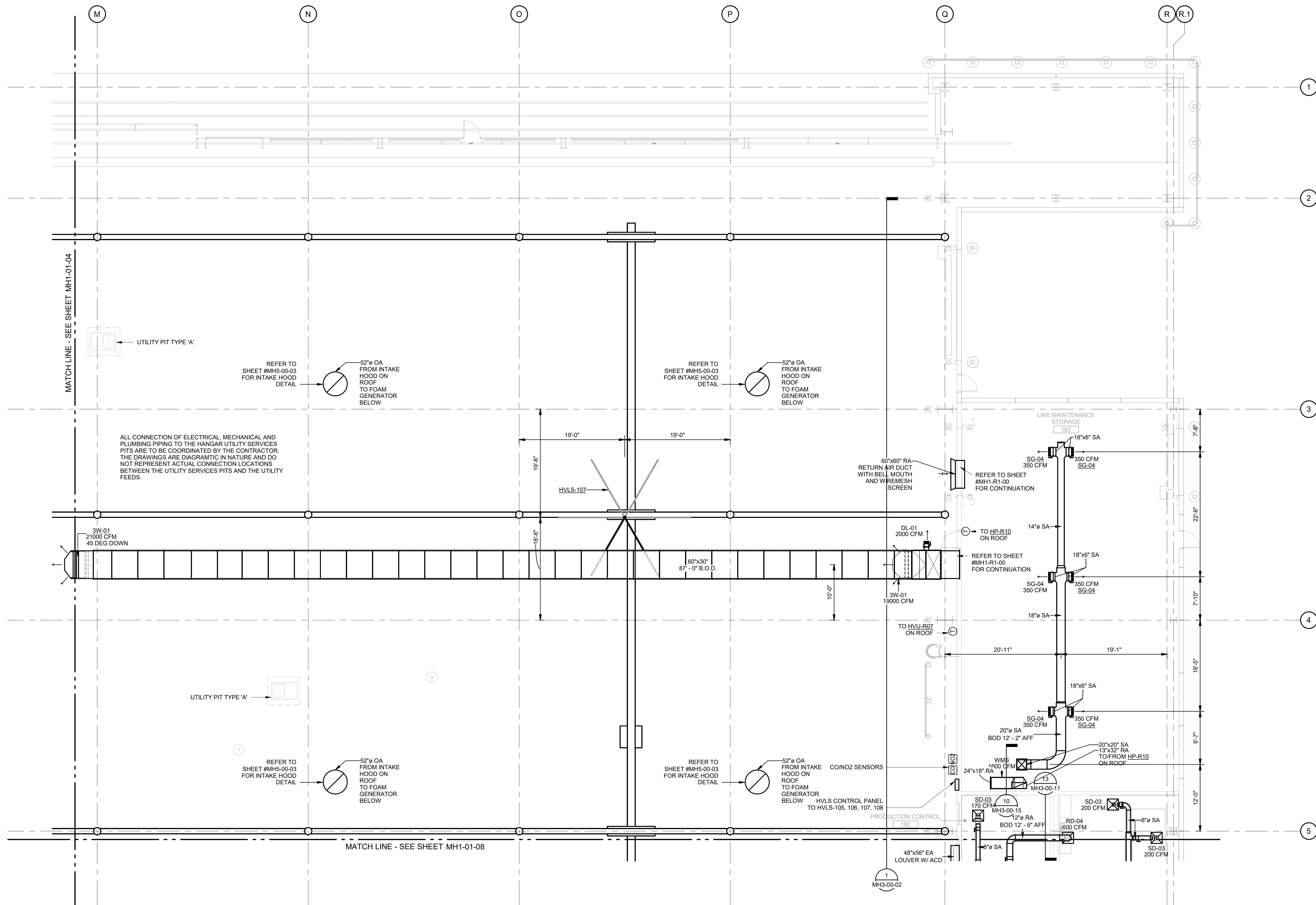
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2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

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**MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA F**

MH1-01-06
SHEET NUMBER

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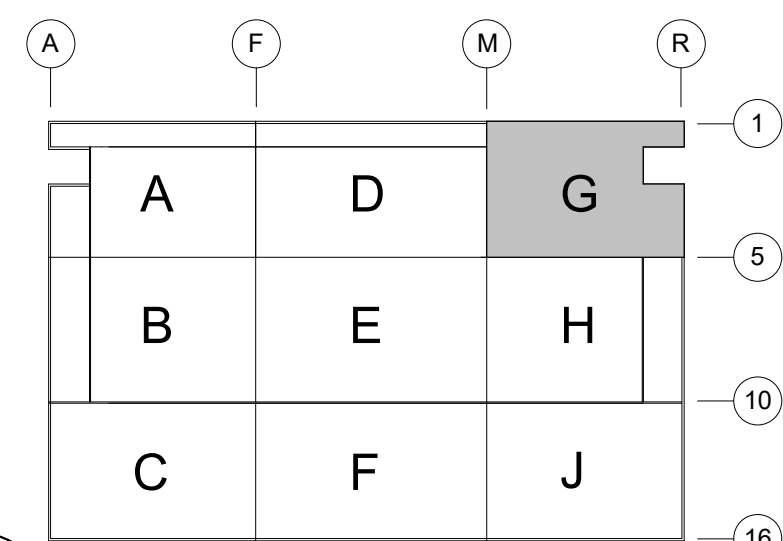


MECHANICAL HVAC PLAN FIRST FLOOR AREA G

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



KEY PLAN



3	06/03/25	FABRICATION REVISION
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

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QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA G

MH1-01-07
SHEET NUMBER



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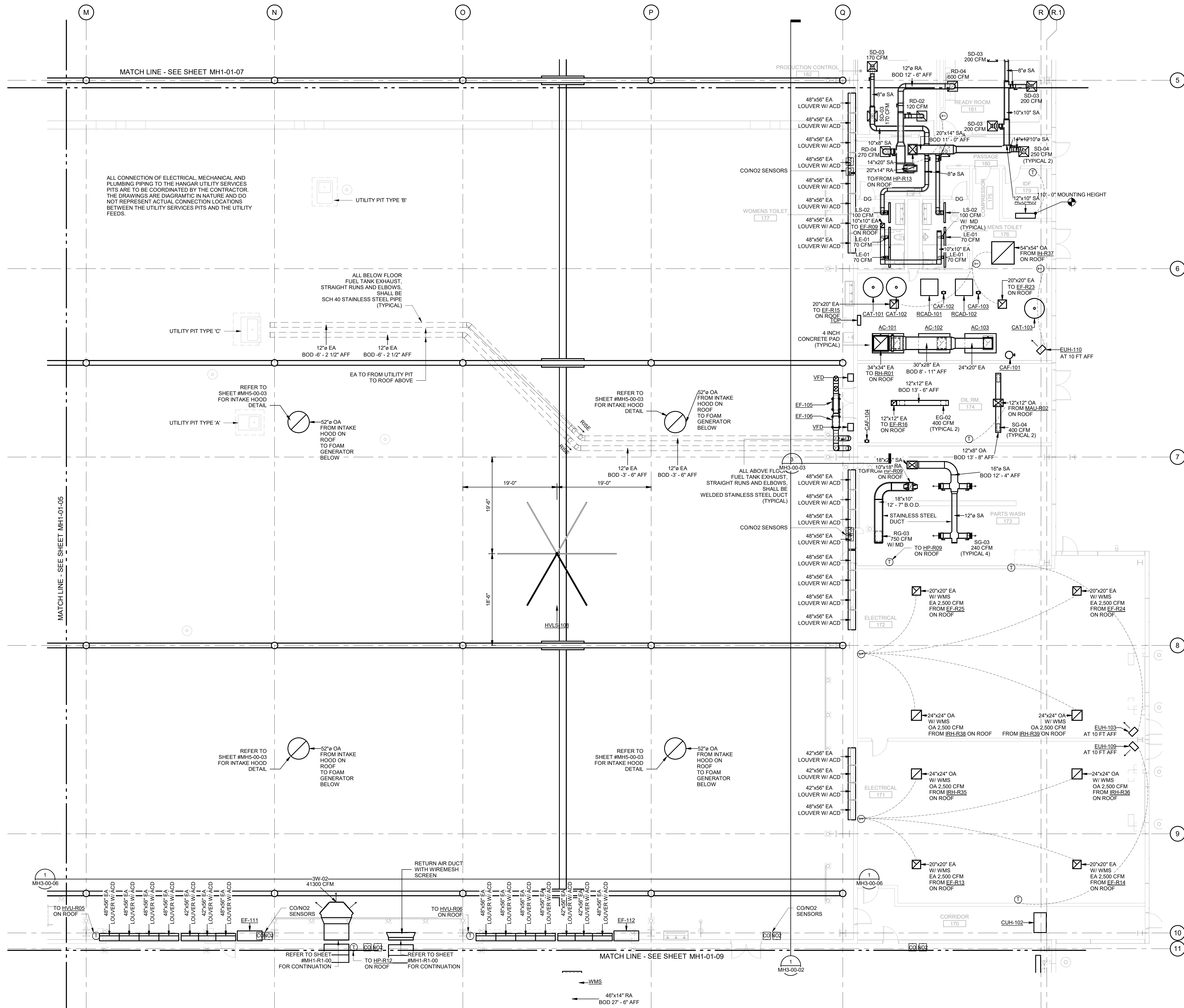
CONTRACTOR INFORMATION

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SHOP
DRAWING



MECHANICAL HVAC PLAN FIRST FLOOR AREA H
SCALE: 1/8" = 1'-0"



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**SHOP
DRAWING**

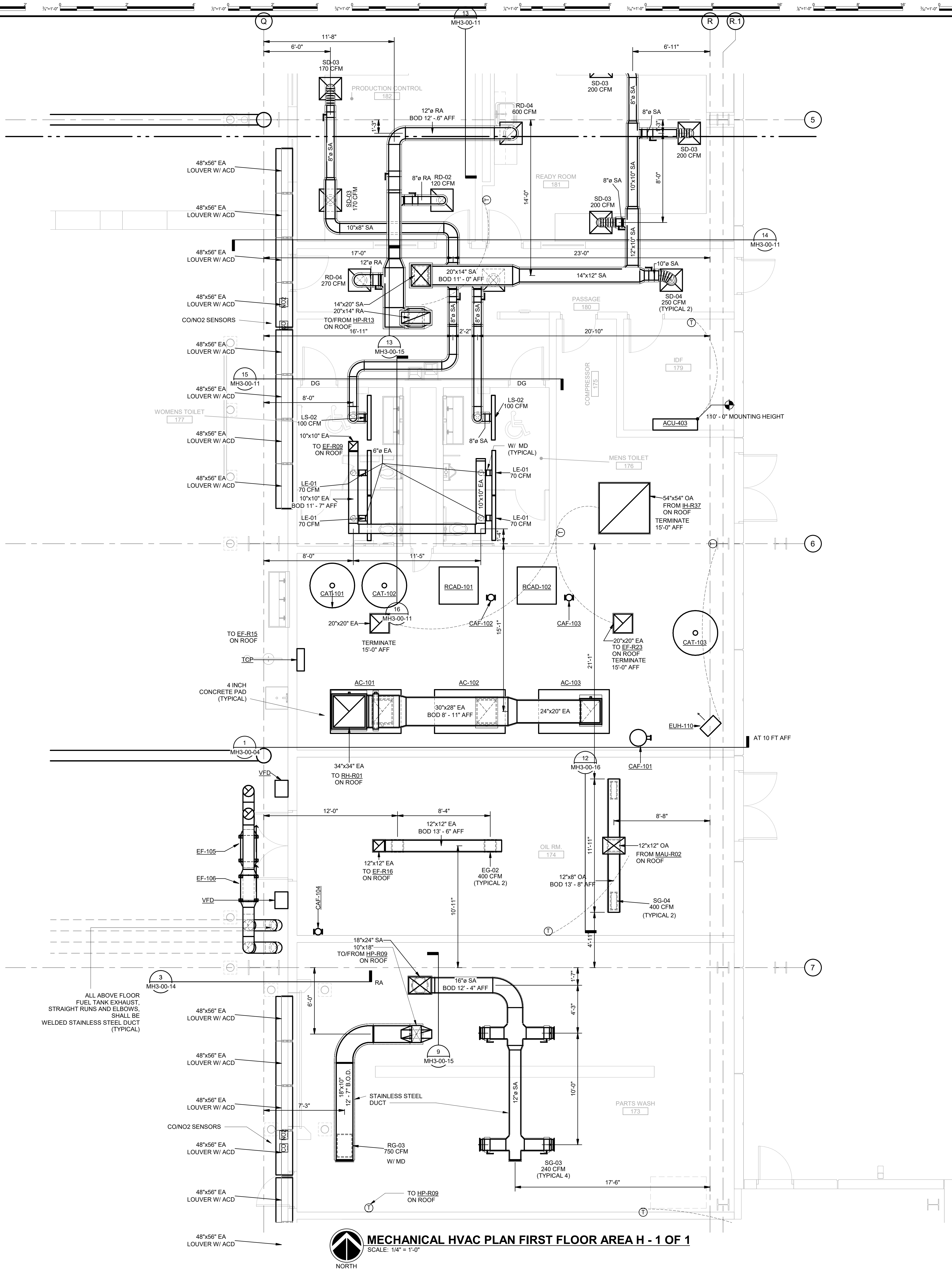
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2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA H**

MH1-01-08
SHEET NUMBER

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MECHANICAL HVAC PLAN FIRST FLOOR AREA H - 1 OF 1

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



KEY PLAN

	A	F	M	R	
1					
5	A	D	G		
10	B	E	H		
16	C	F	J		



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SHOP
DRAWING

2	06/03/25	FABRICATION REVISION
1	03/12/25	FABRICATION SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA H - 1 OF 1

MH1-01-8a
SHEET NUMBER



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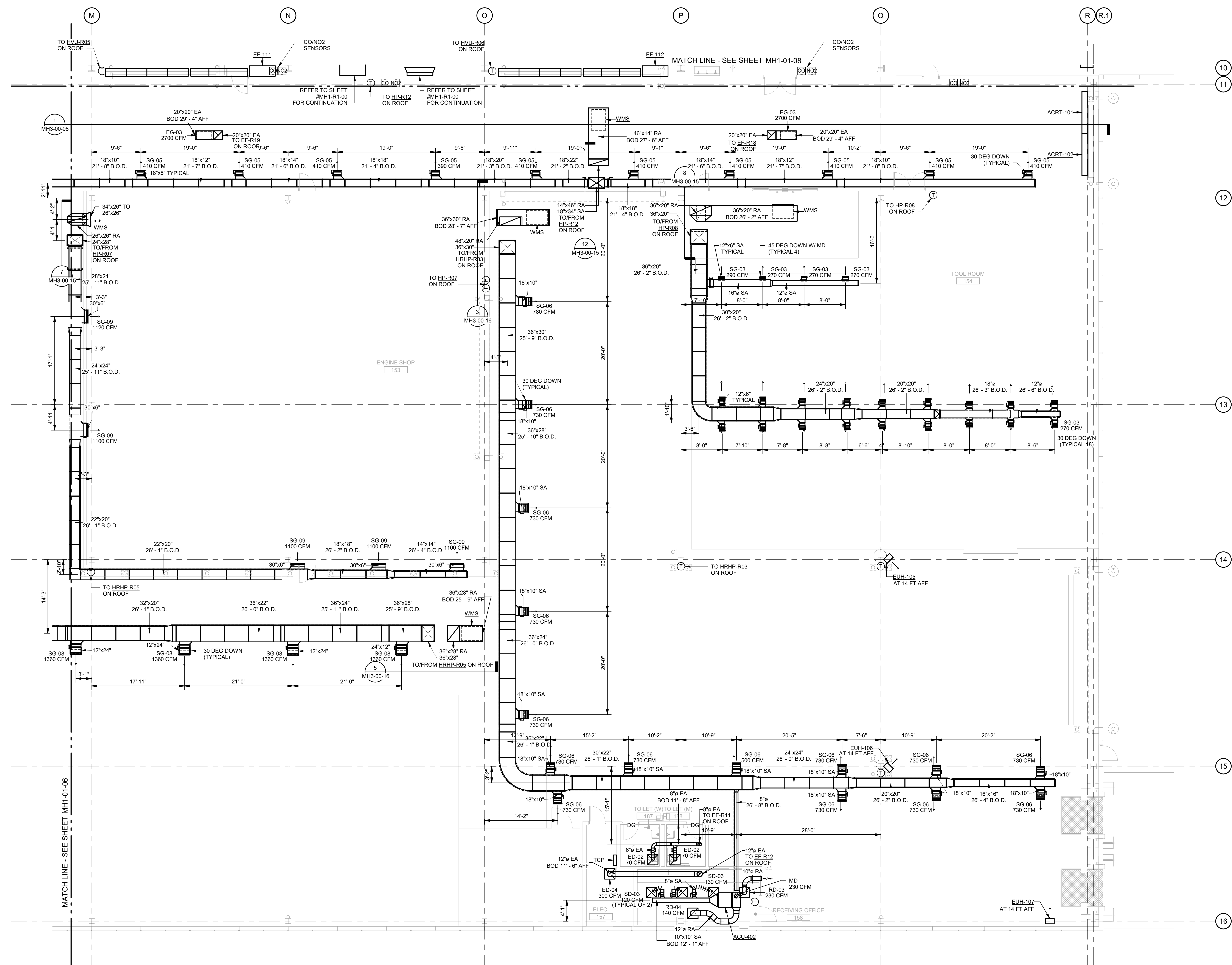
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DRAWING**

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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

**MECHANICAL
HVAC PLAN
FIRST FLOOR
AREA J**

MH1-01-09
SHEET NUMBER



MECHANICAL HVAC PLAN FIRST FLOOR AREA J

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



KEY PLAN



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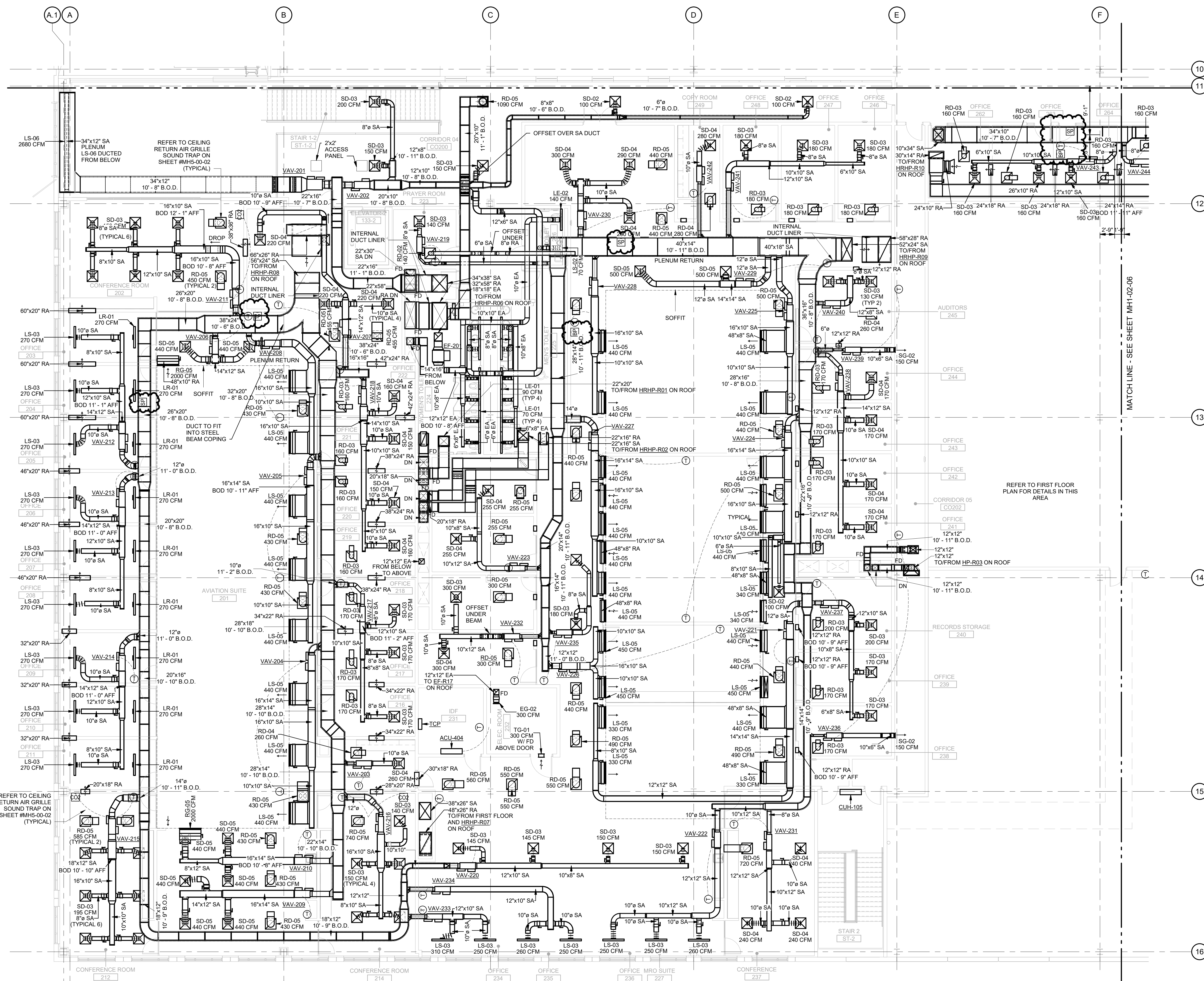
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DRAWING**

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5	06/16/25	REVISIONS
4	06/03/25	FABRICATION REVISION
3	04/29/25	BULLETIN 6
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
HVAC PLAN
SECOND FLOOR
AREA C**

MH1-02-03
SHEET NUMBER



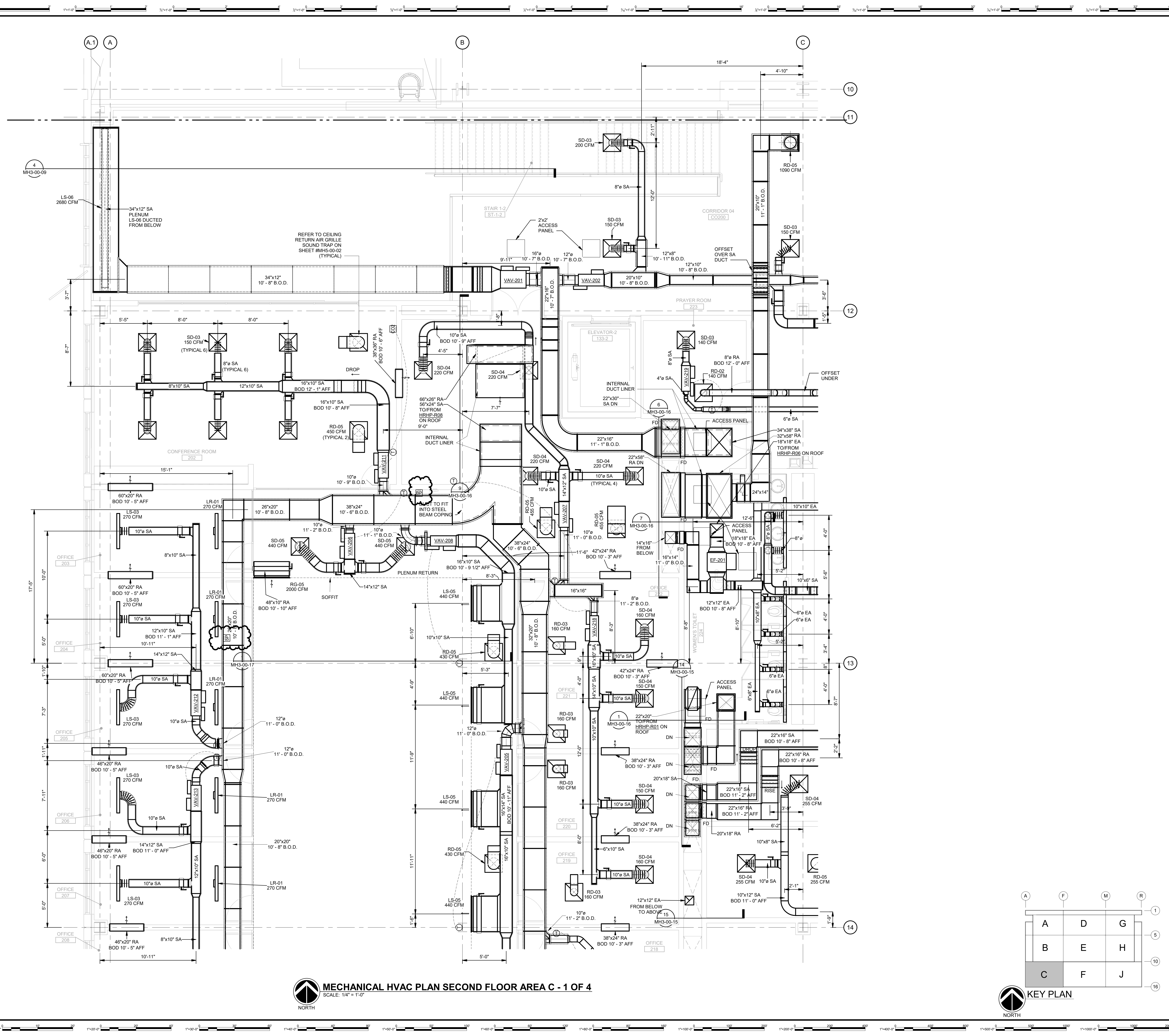
MECHANICAL HVAC PLAN SECOND FLOOR AREA C

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



KEY PLAN

A	D	G
B	E	H
C	F	J



MECHANICAL HVAC PLAN SECOND FLOOR AREA C - 1 OF 4
SCALE: 1/4" = 1'-0"



KEY PLAN

	A	F	M	R	
					1
	A	D	G		5
	B	E	H		10
	C	F	J		16

4	09/11/25	CONTROL REVISIONS
3	06/03/25	FABRICATION REVISION
2	04/29/25	BULLETIN 6
1	03/12/25	FABRICATION SET
REV	DATE	DOC REL # - DESCRIPTION

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL
HVAC PLAN
SECOND FLOOR
AREA C - 1 OF 4

MH1-02-03a
SHEET NUMBER



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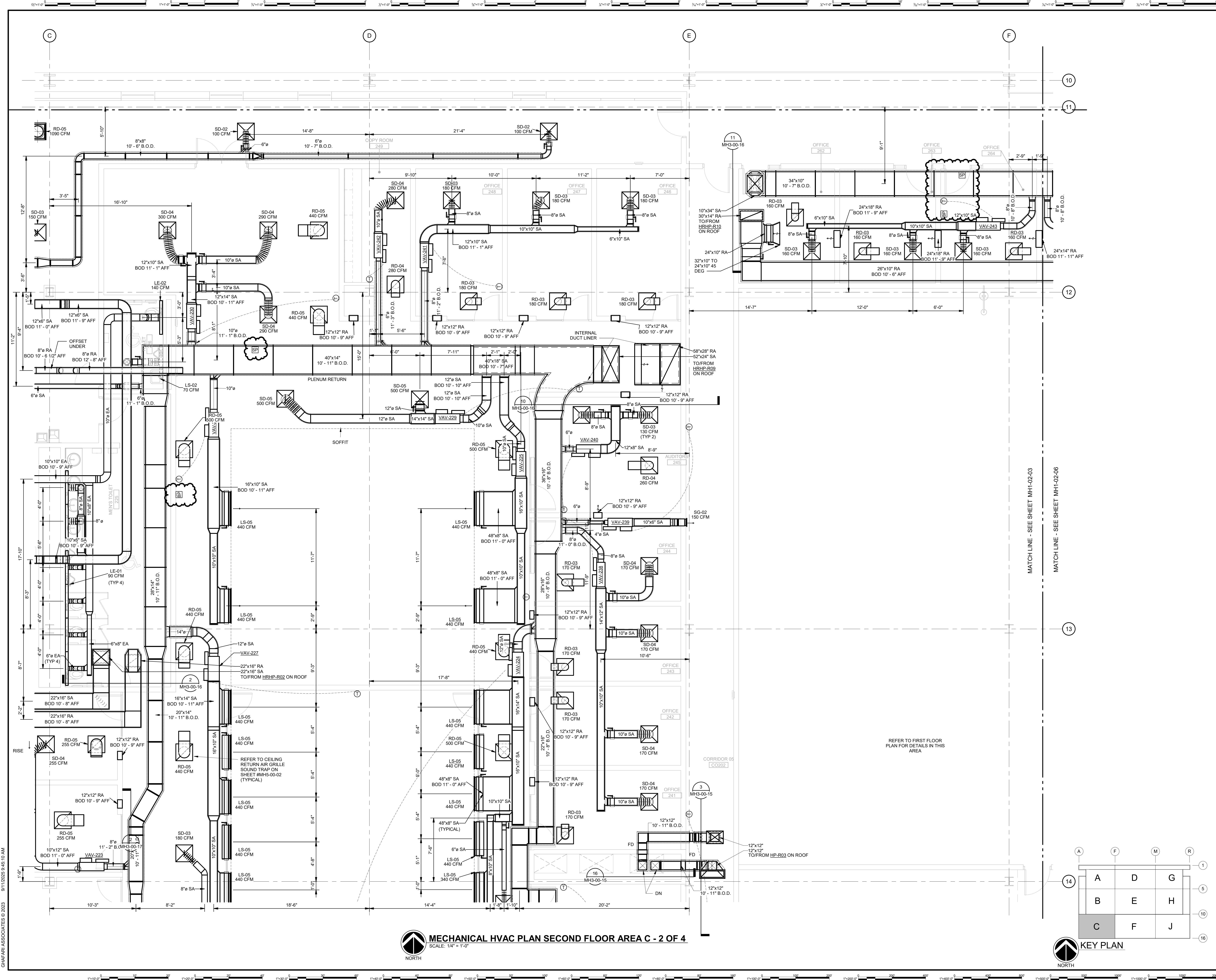
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DRAWING



MECHANICAL HVAC PLAN SECOND FLOOR AREA C - 2 OF 4
SCALE: 1/4" = 1'-0"



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REV	DATE	DOC REL #	DESCRIPTION
5	09/11/25		CONTROL REVISIONS
4	06/16/25		REVISIONS
3	06/03/25		FABRICATION REVISION
2	04/29/25		BULLETIN 6
1	03/12/25		FABRICATION SET

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
HVAC PLAN
SECOND FLOOR
AREA C - 2 OF 4**

MH1-02-03b
SHEET NUMBER



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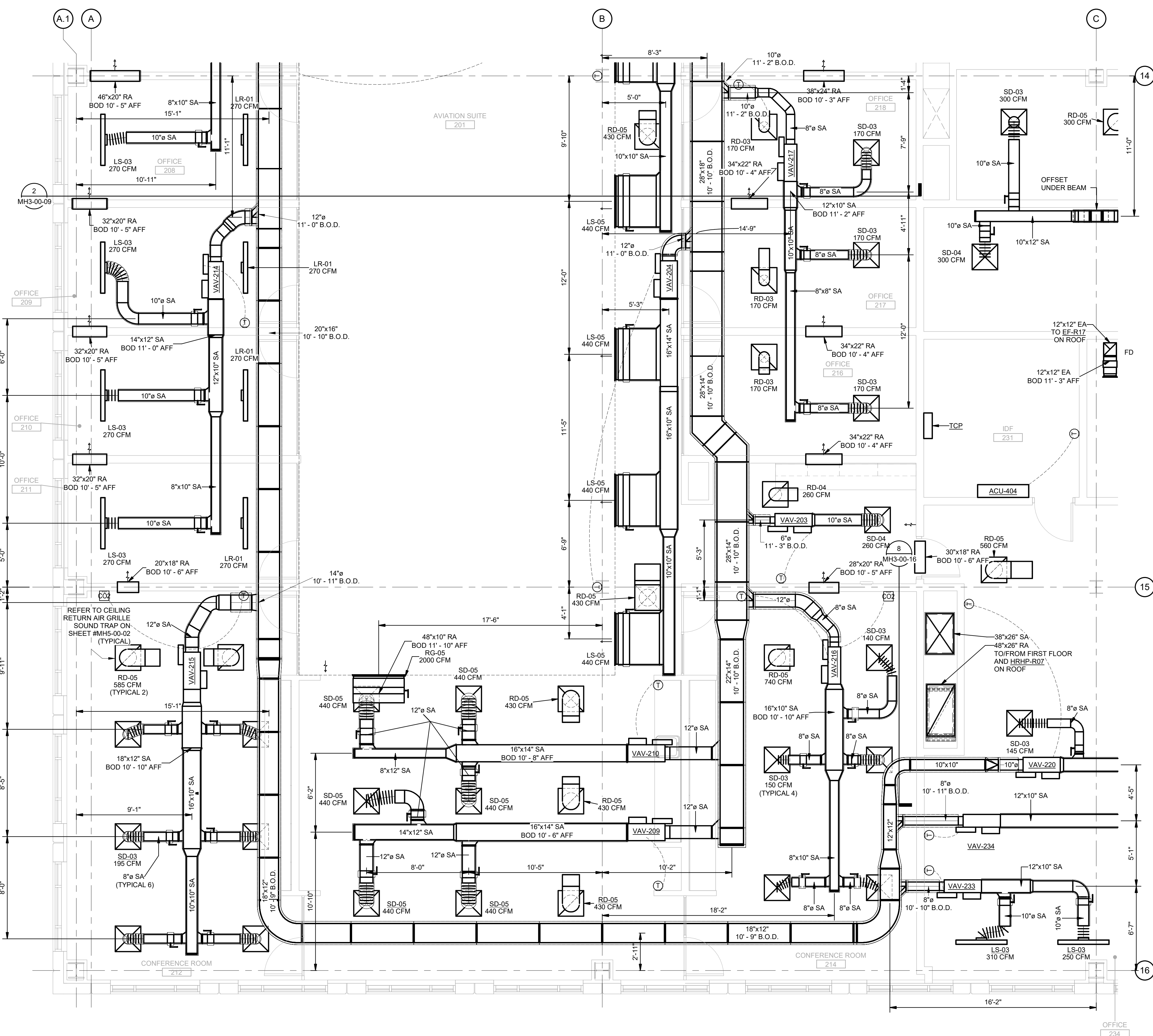
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DRAWING**

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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

**MECHANICAL
HVAC PLAN
SECOND FLOOR
AREA C - 3 OF 4**

MH1-02-03c
SHEET NUMBER

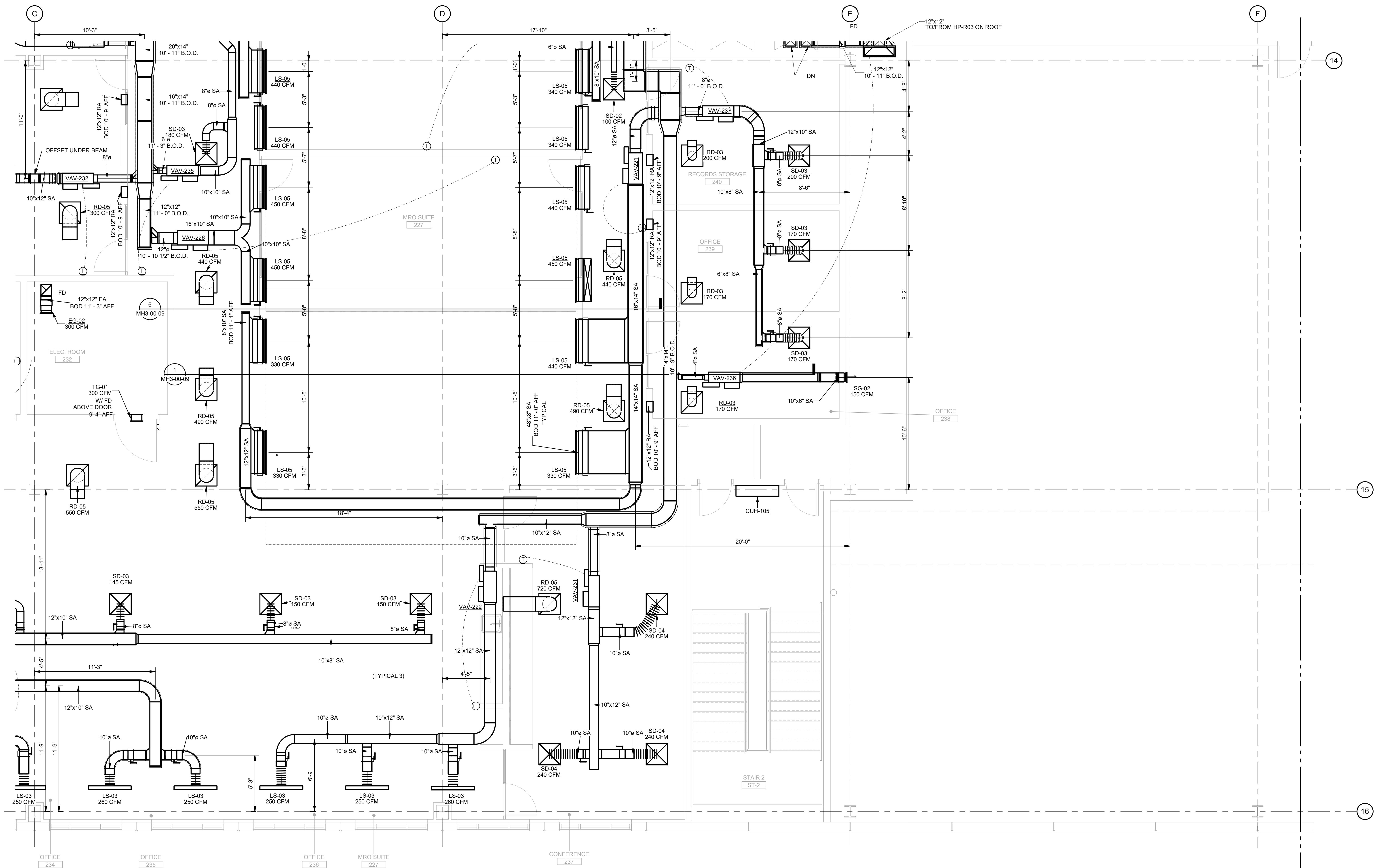


MECHANICAL HVAC PLAN SECOND FLOOR AREA C - 3 OF 4

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



KEY PLAN



MECHANICAL HVAC PLAN SECOND FLOOR AREA C - 4 OF 4

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



KEY PLAN

A	D	G
B	E	H
C	F	J

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL HVAC PLAN SECOND FLOOR AREA C - 4 OF 4

MH1-02-03d
SHEET NUMBER



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CONTRACTOR INFORMATION

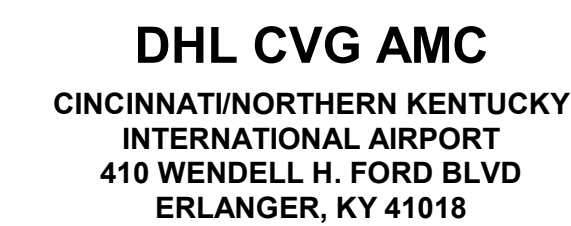
ESTD 1951

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SHOP
DRAWING

REV	DATE	DOC REL # - DESCRIPTION
4	06/16/25	REVISIONS
3	06/03/25	FABRICATION REVISION
2	04/29/25	BULLETIN 6
1	03/12/25	FABRICATION SET



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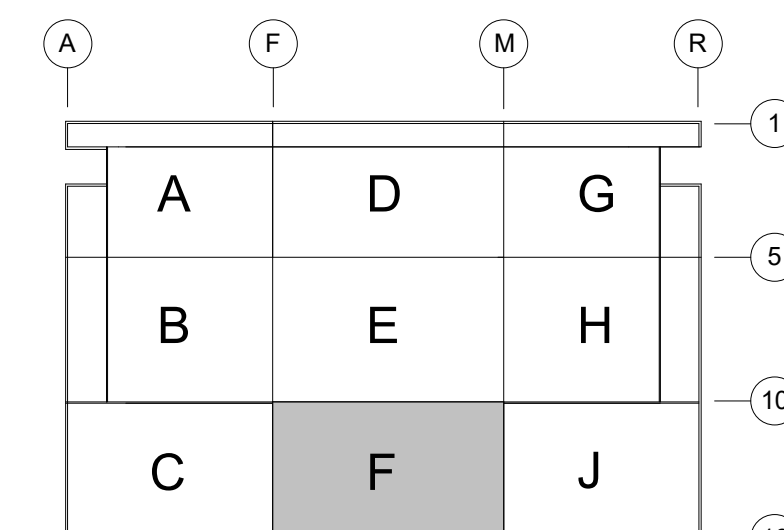
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DRAWING**

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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

**MECHANICAL
HVAC PLAN
SECOND FLOOR
AREA F**

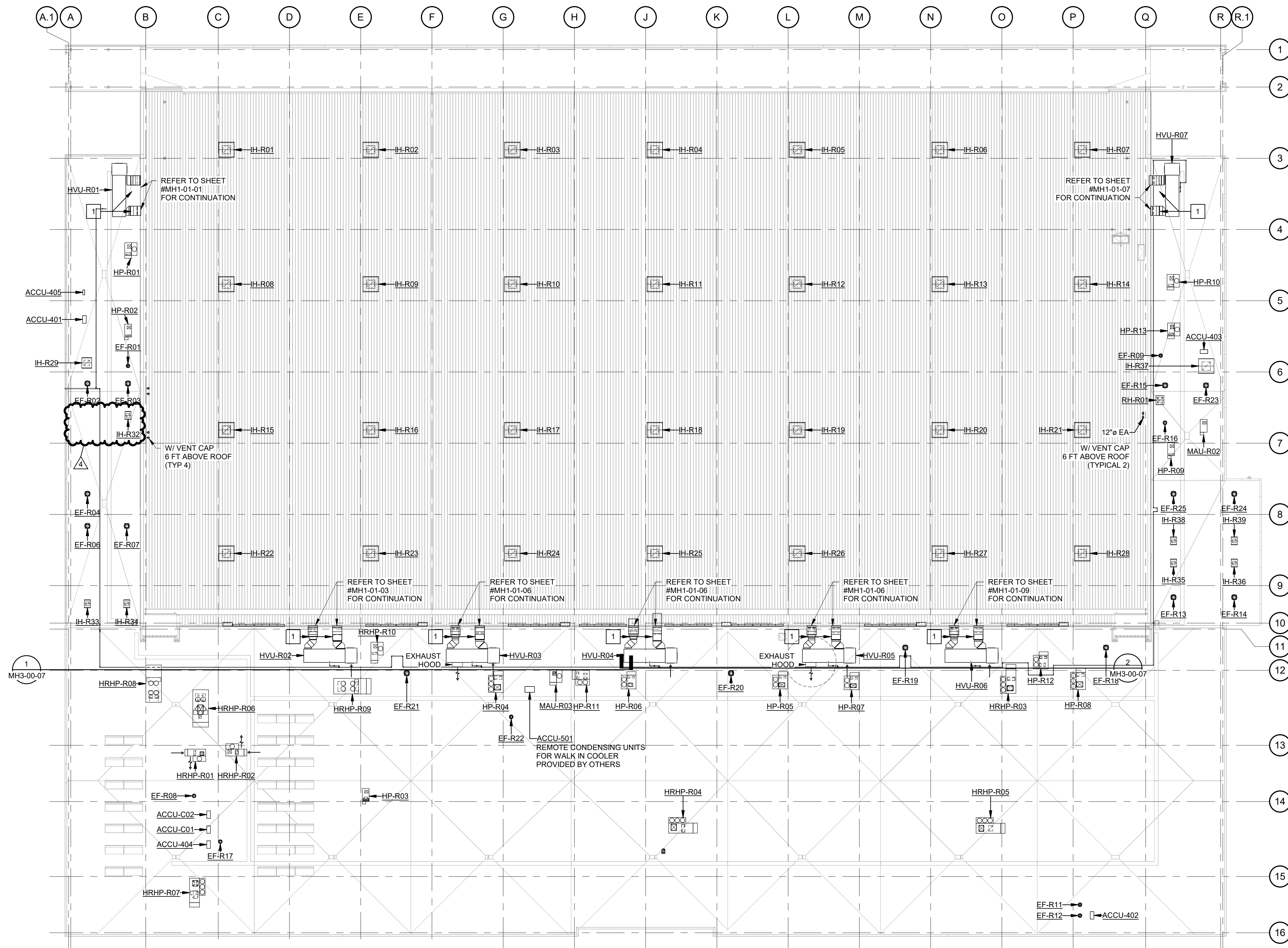
MH1-02-06
SHEET NUMBER



KEY PLAN



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NEW KEY NOTES:

- 1 EXTERIOR SUPPLY AND RETURN DUCT SHALL BE INSULATED WITH DUCT BOARD AND JACKETED WITH STAINLESS STEEL JACKET.

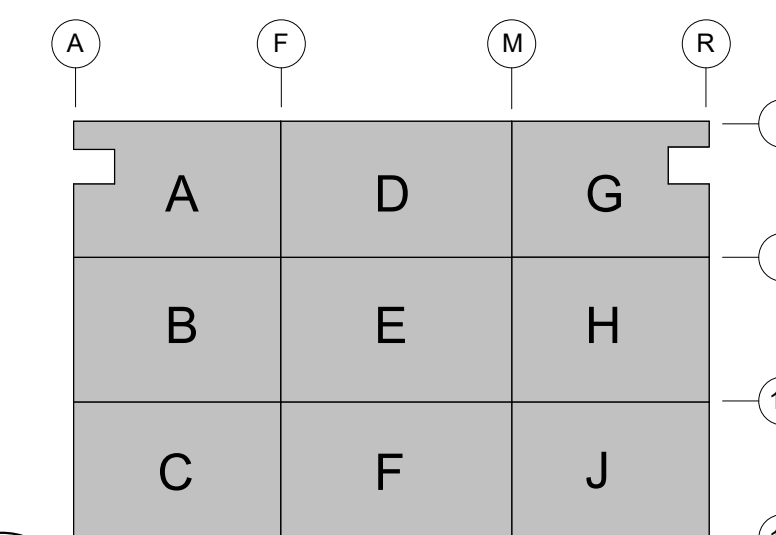


MECHANICAL HVAC PLAN ROOF COMPOSITE

SCALE: 1" = 30'-0"



KEY PLAN



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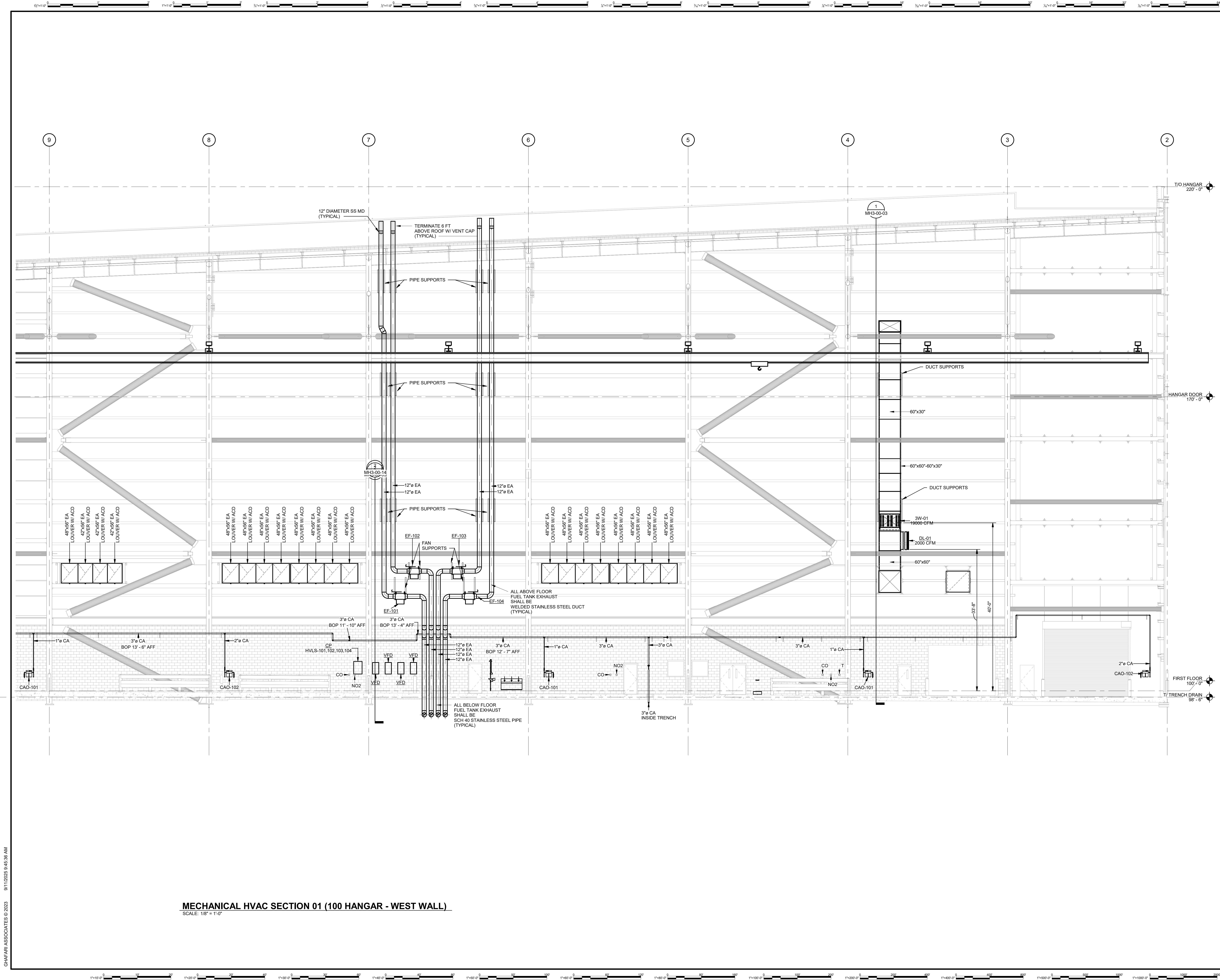
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3	04/29/25	BULLETIN 6
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
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SHEET TITLE

MECHANICAL
HVAC PLAN
ROOF
COMPOSITE

MH1-R1-00
SHEET NUMBER



MECHANICAL HVAC SECTION 01 (100 HANGAR - WEST WALL)
SCALE: 1/8" = 1'-0"



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**SHOP
DRAWING**

3	06/03/25	FABRICATION REVISION
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
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SHEET TITLE

**MECHANICAL
HVAC SECTIONS**

MH3-00-01
SHEET NUMBER



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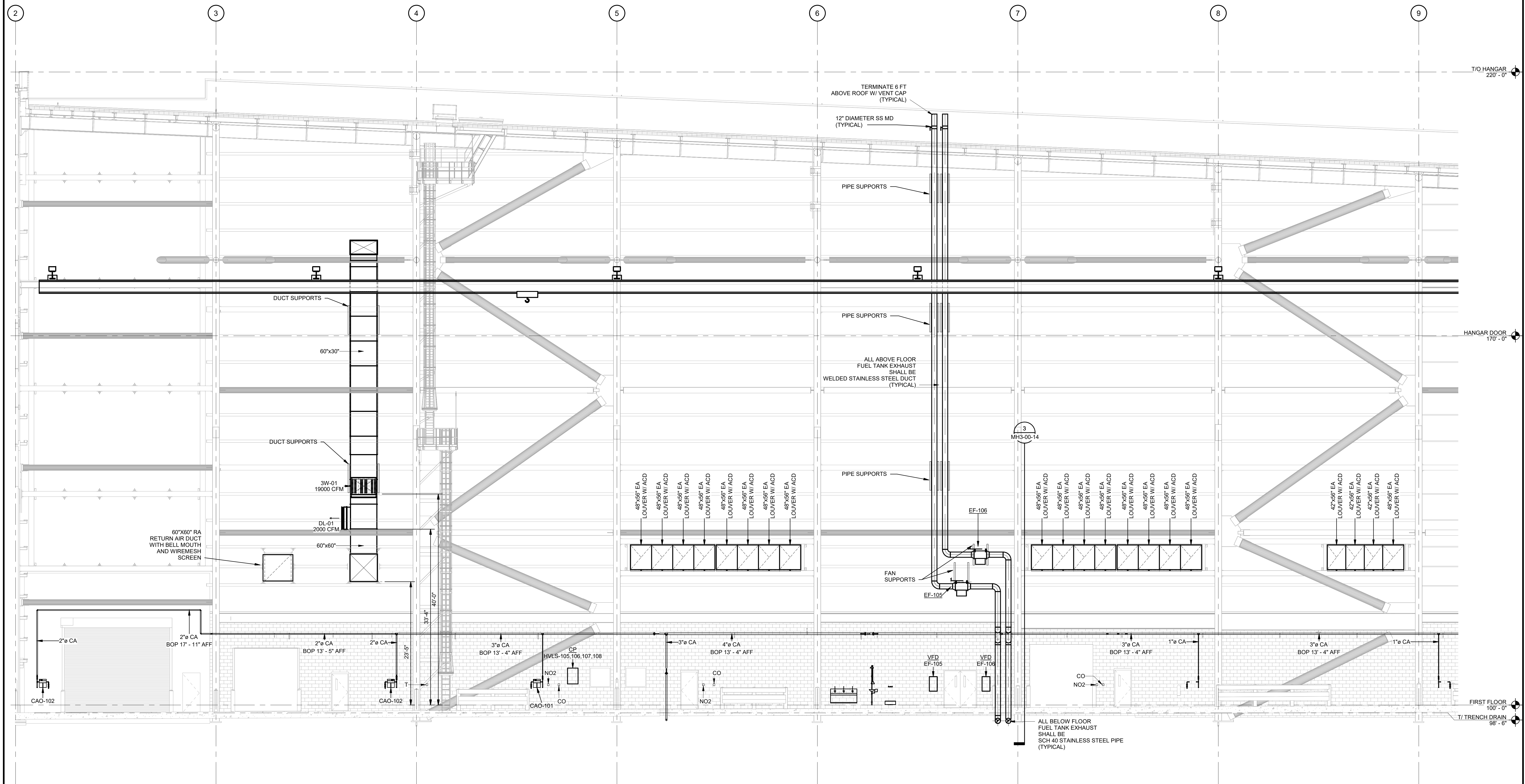
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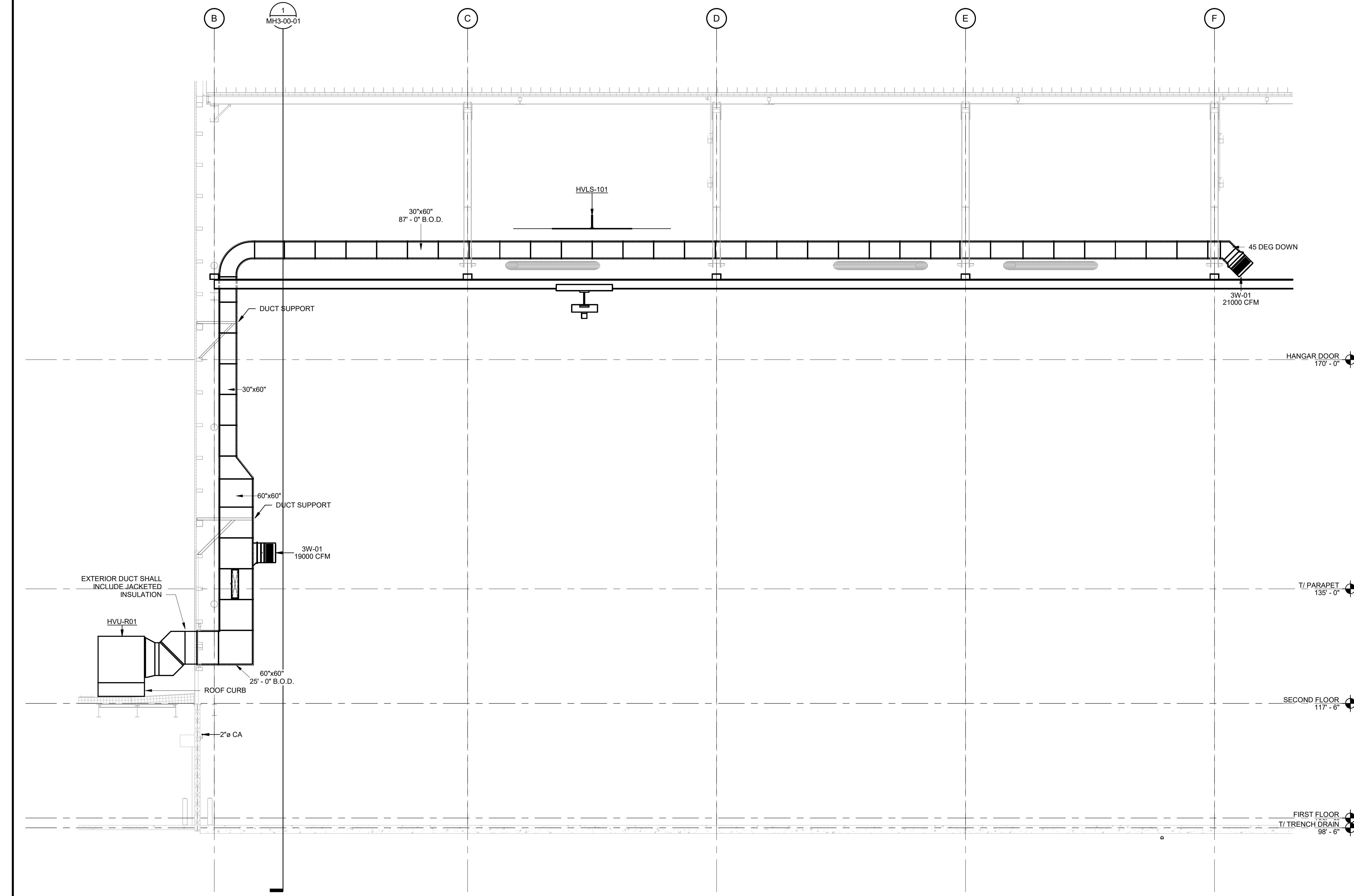
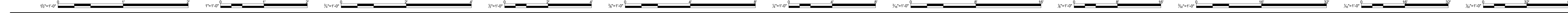
PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL HVAC SECTIONS

MH3-00-02
SHEET NUMBER



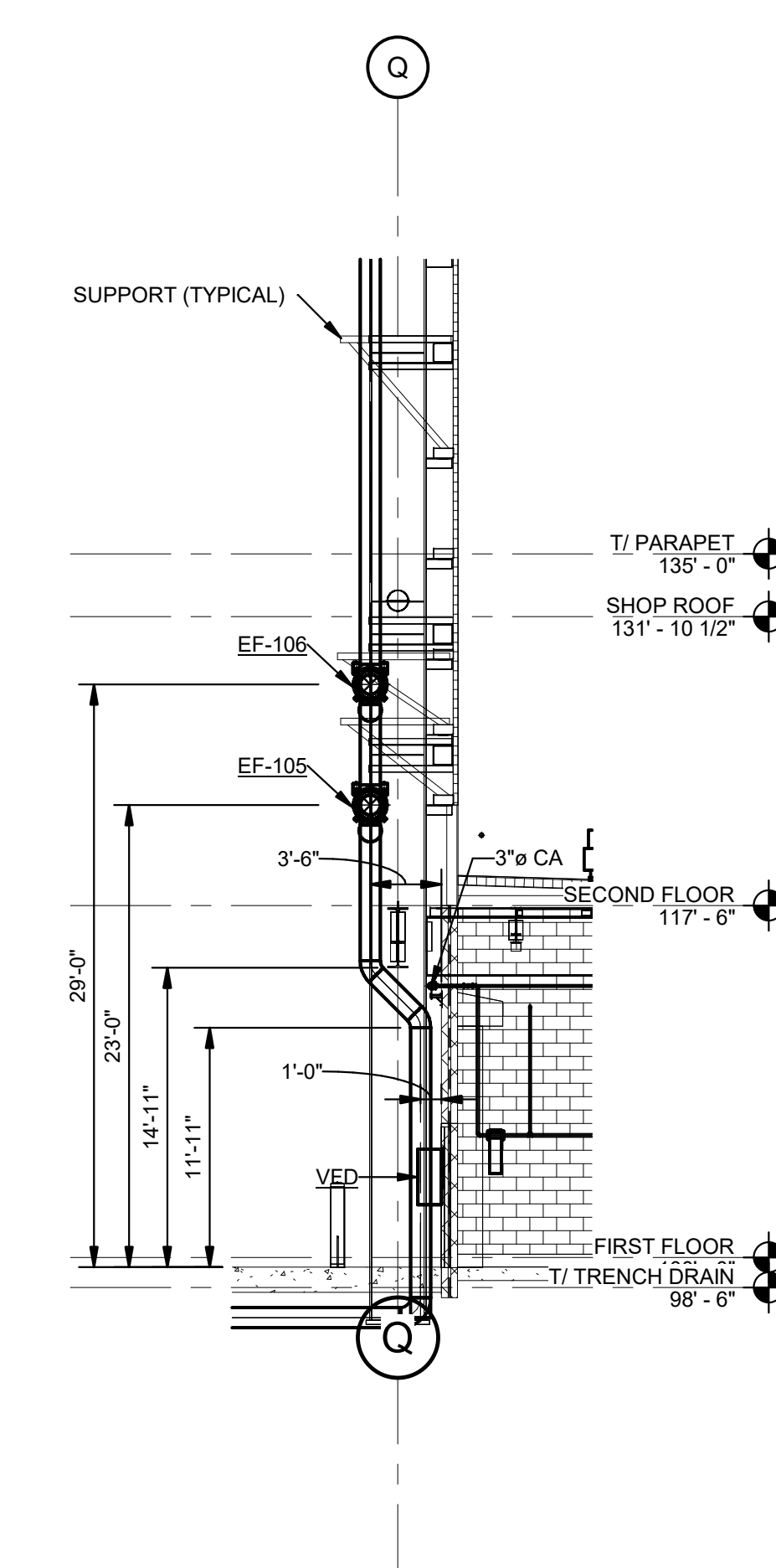
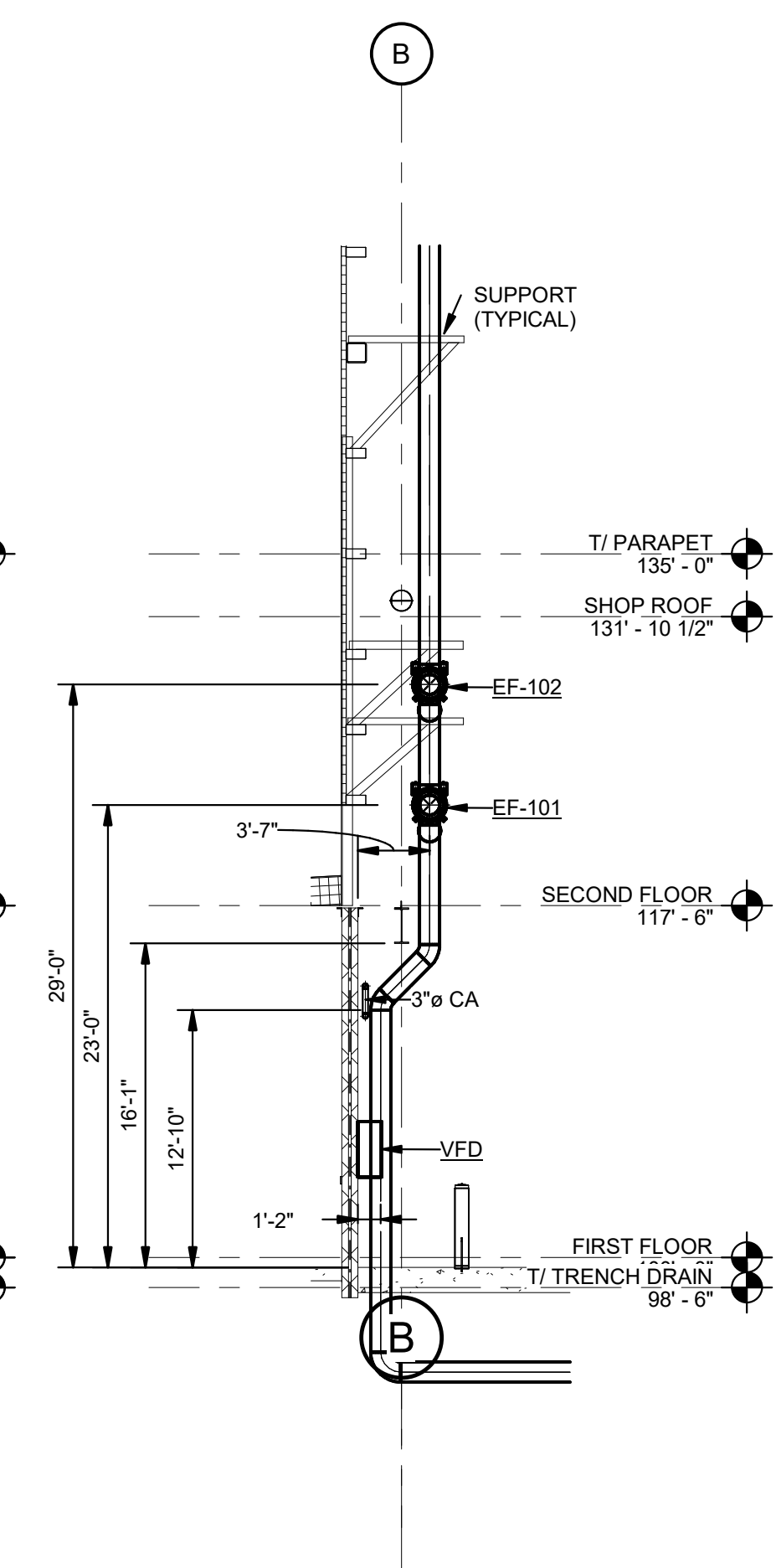
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SCALE: 1/8" = 1'-0"



MECHANICAL HVAC SECTION 03 (100 HANGAR)
SCALE: 1/8" = 1'-0"

SECTION - WEST WALL
SCALE: 1/8" = 1'-0"
NORTH

SECTION - EAST WALL
SCALE: 1/8" = 1'-0"
NORTH



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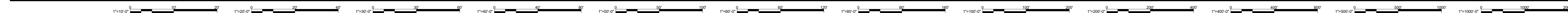
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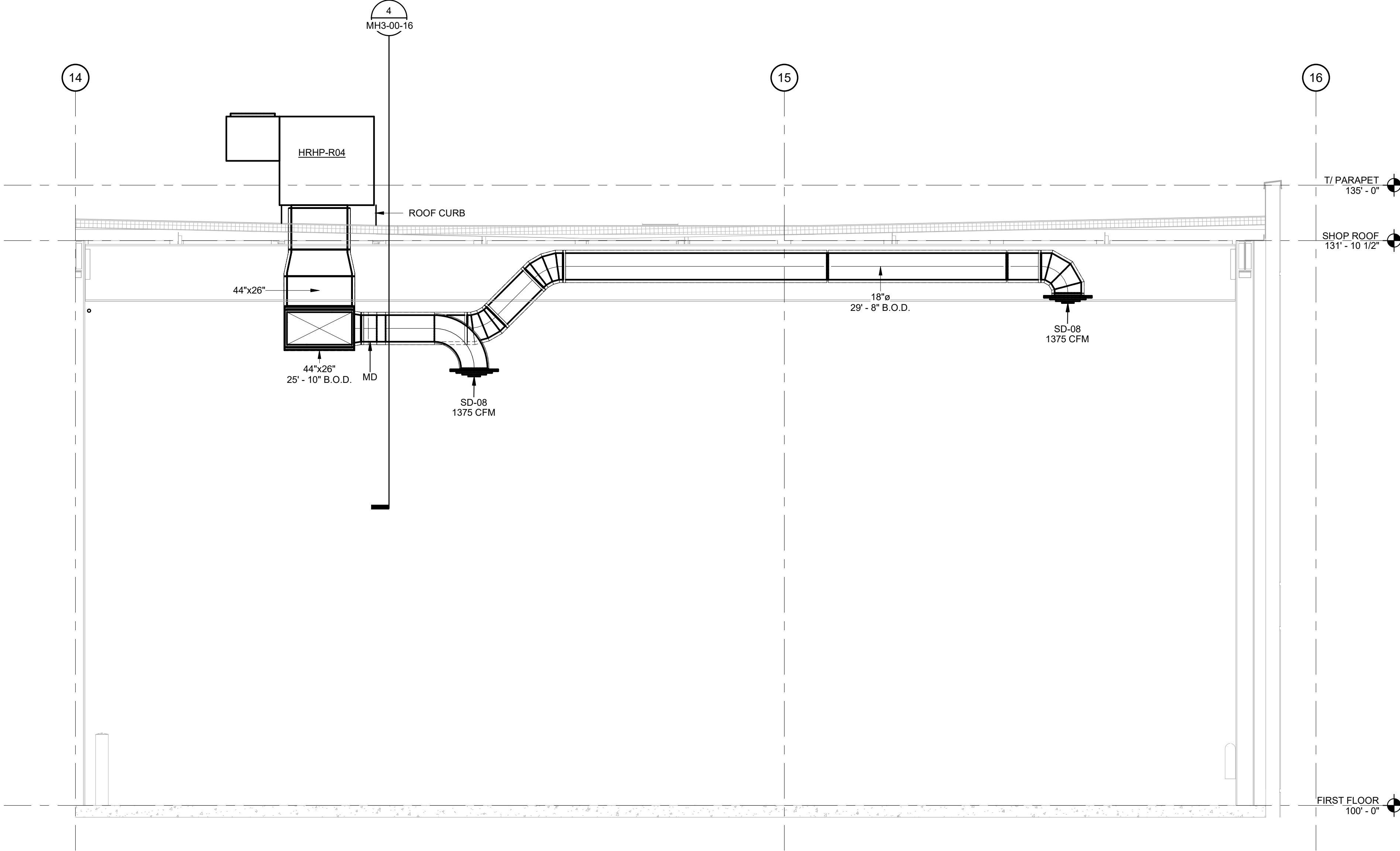
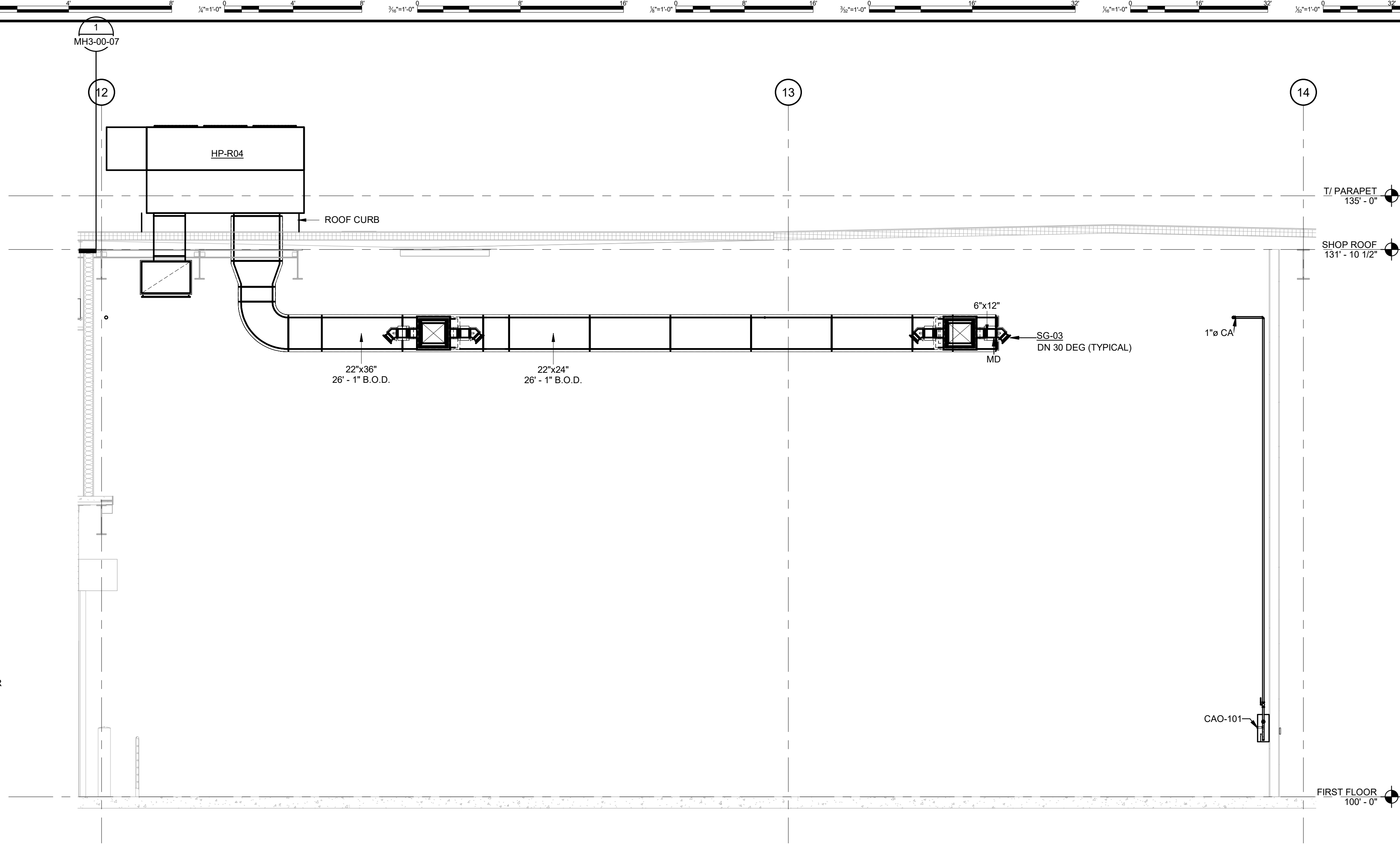
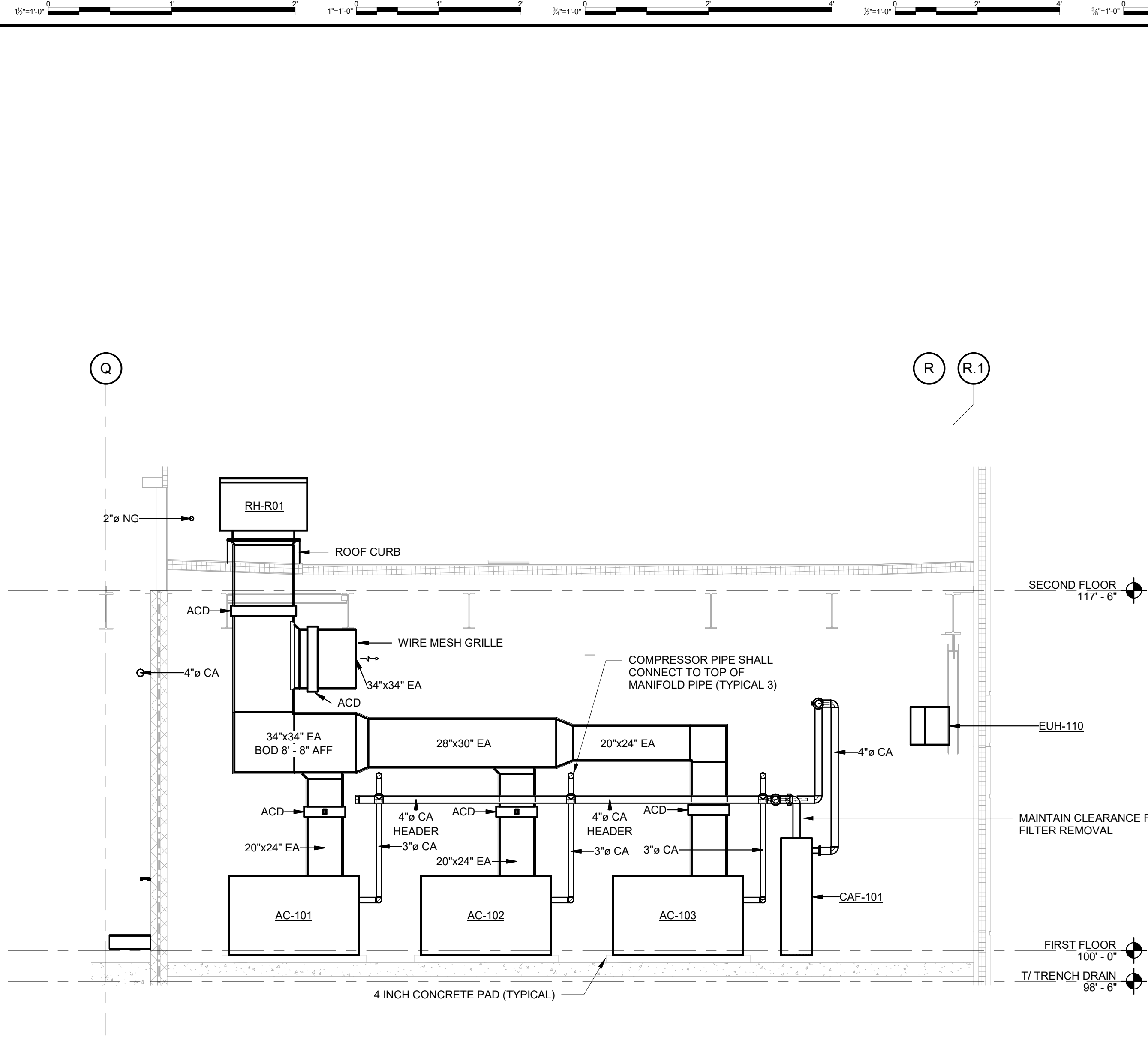
PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

MECHANICAL HVAC SECTIONS

MH3-00-03
SHEET NUMBER



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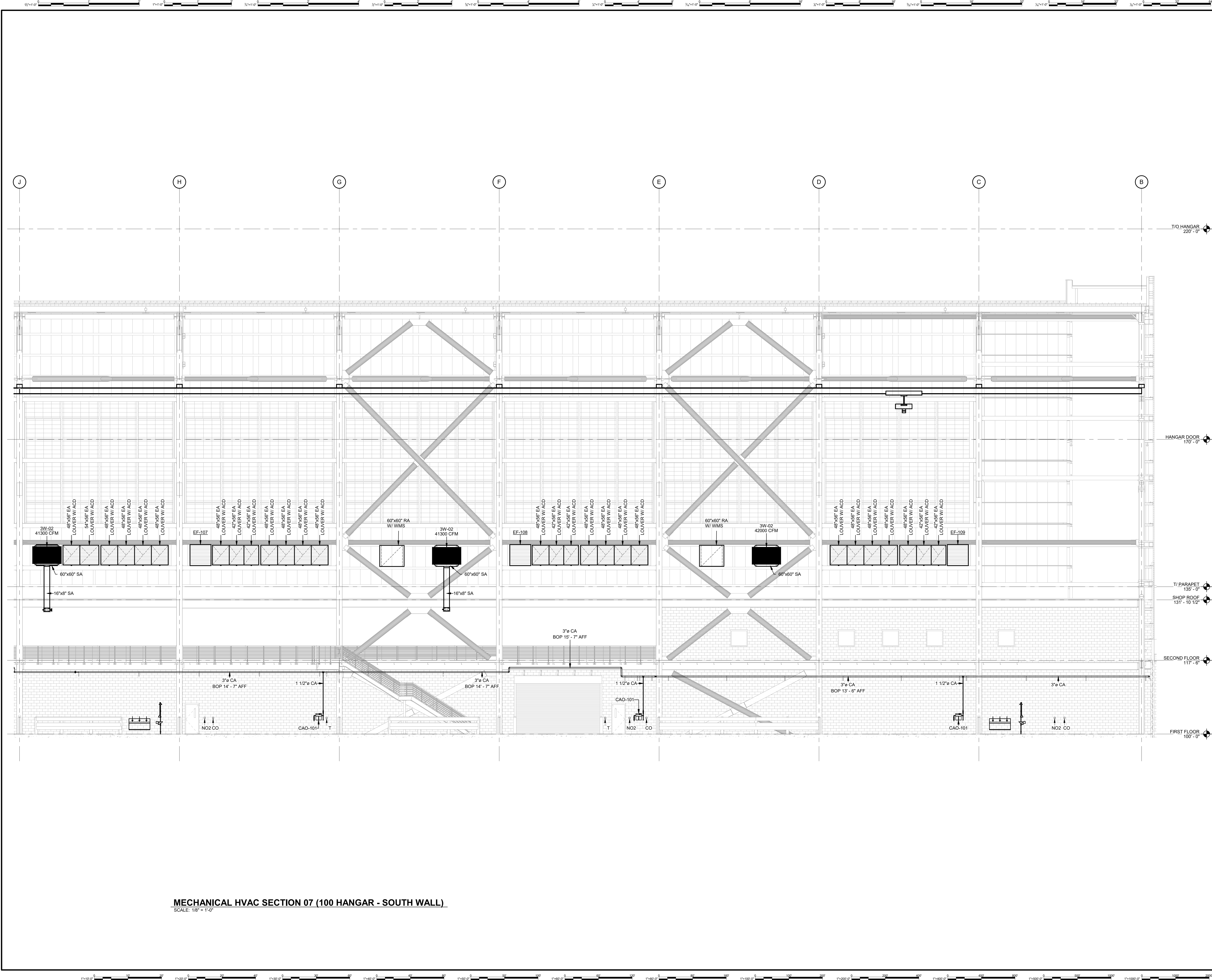
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2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
HVAC SECTIONS**

MH3-00-04
SHEET NUMBER



MECHANICAL HVAC SECTION 07 (100 HANGAR - SOUTH WALL)
SCALE: 1/8" = 1'-0"



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**SHOP
DRAWING**

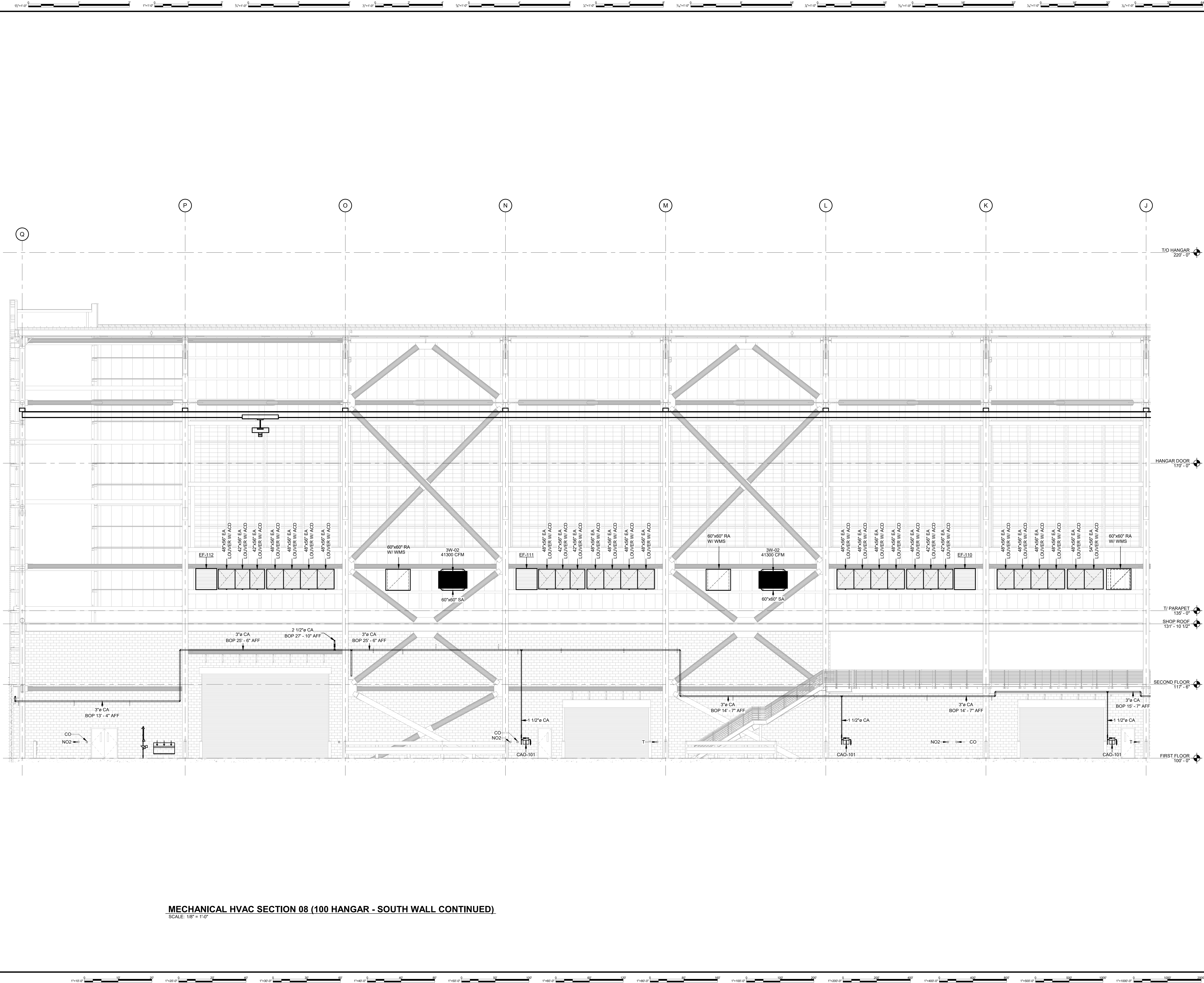
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2	03/12/25	FABRICATION SET
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REV	DATE	DOC REL ## - DESCRIPTION

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
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SHEET TITLE

**MECHANICAL
HVAC SECTIONS**

MH3-00-05
SHEET NUMBER

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MECHANICAL HVAC SECTION 08 (100 HANGAR - SOUTH WALL CONTINUED)
SCALE: 1/8" = 1'-0"



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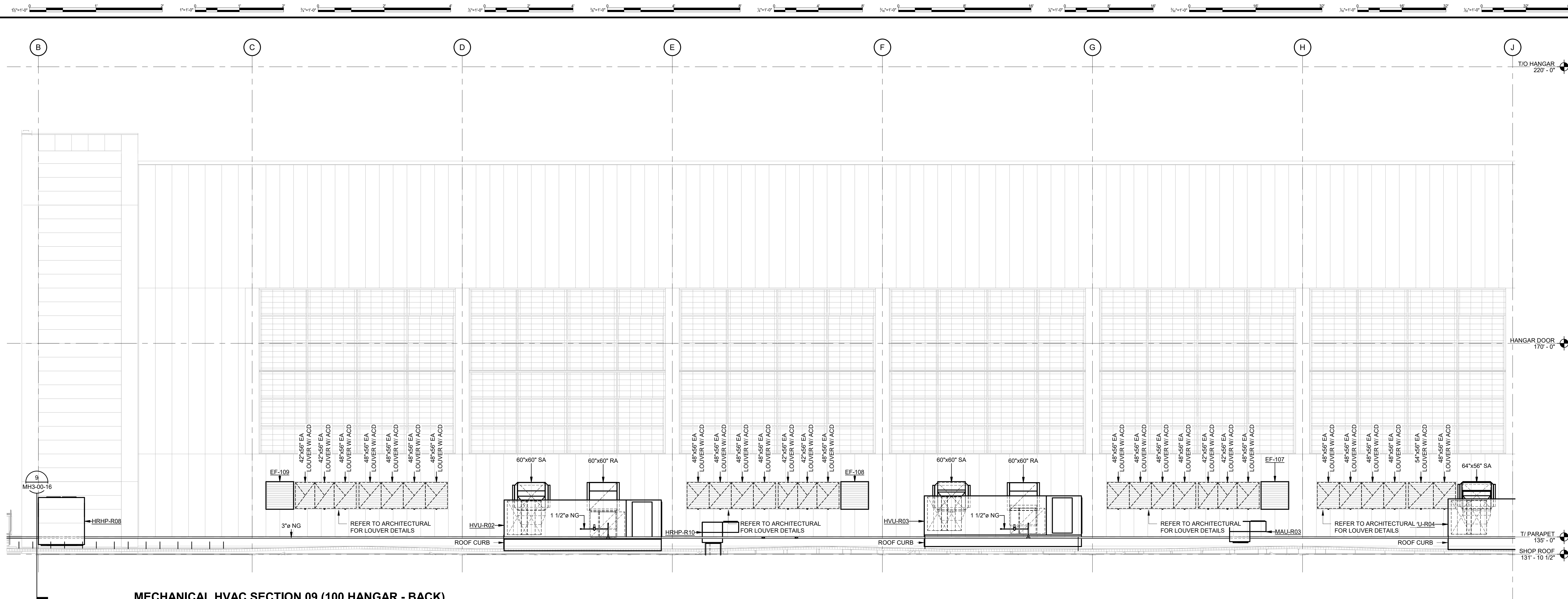
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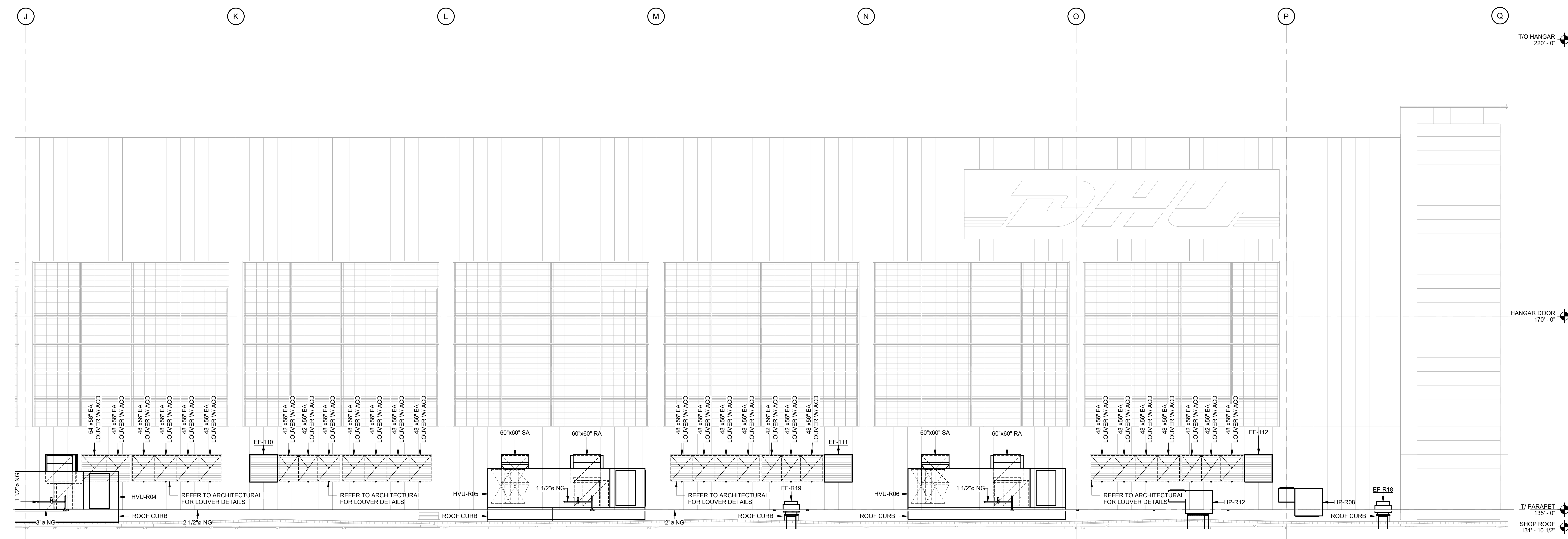
PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
HVAC SECTIONS**

MH3-00-06
SHEET NUMBER



MECHANICAL HVAC SECTION 09 (100 HANGAR - BACK)



MECHANICAL HVAC SECTION 10 (100 HANGAR - BACK CONTINUED)
SCALE: 1/8" = 1'-0"



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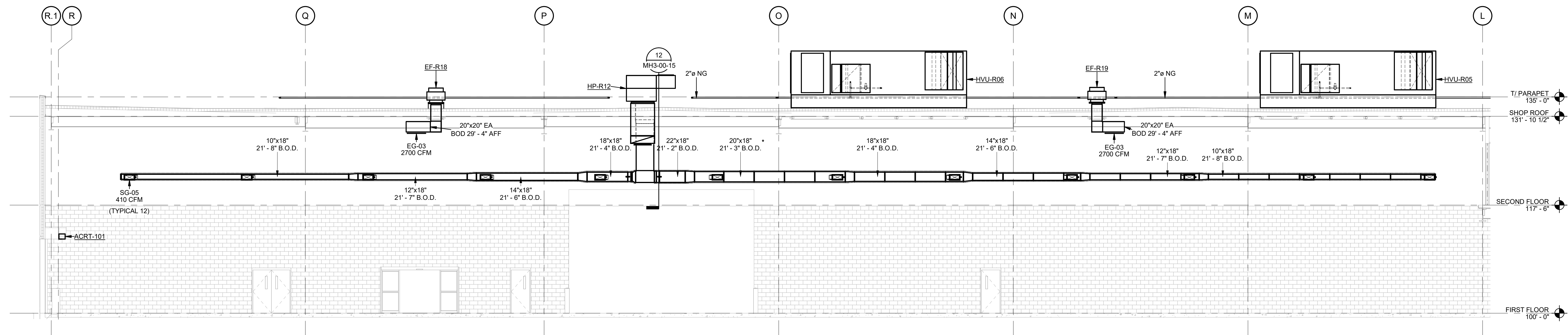
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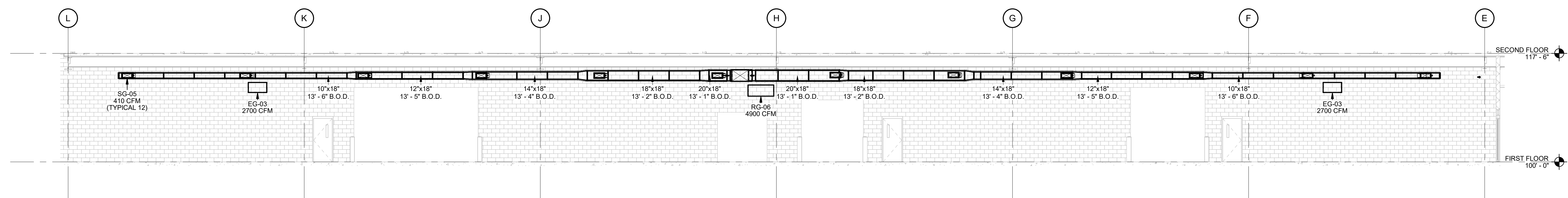
PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL HVAC SECTIONS

MH3-00-07
SHEET NUMBER



MECHANICAL HVAC SECTION 11 (CO102 CORRIDOR 03)
SCALE: 1/8" = 1'-0"



MECHANICAL HVAC SECTION 12 (CO102 CORRIDOR 03 CONTINUED)
SCALE: 1/8" = 1'-0"



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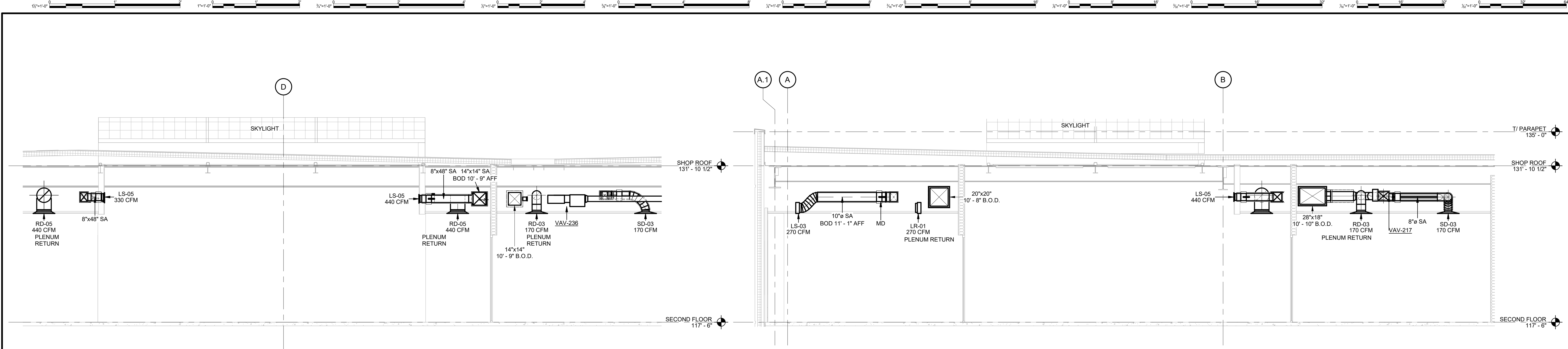
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2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

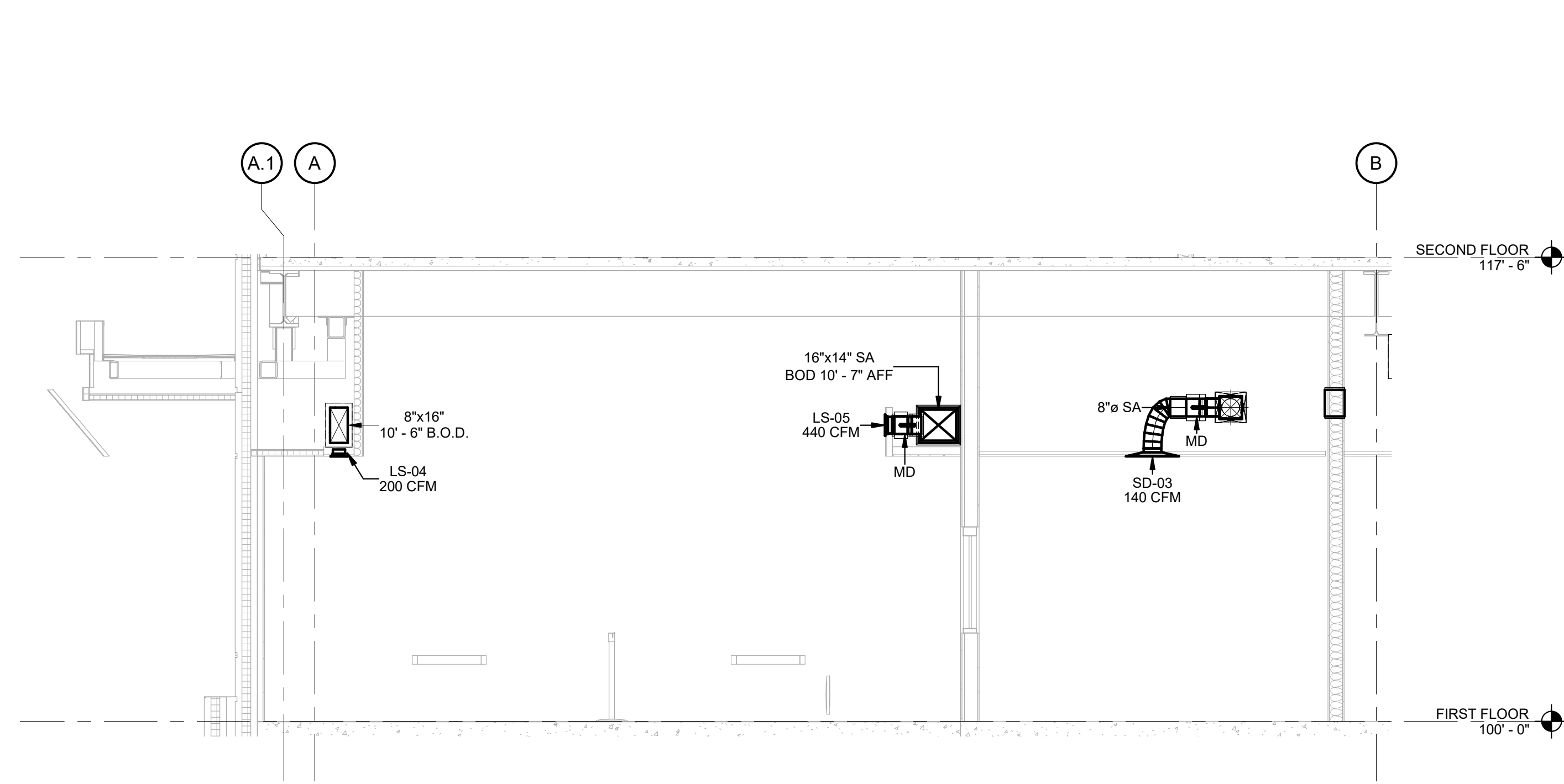
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MH3-00-08
SHEET NUMBER

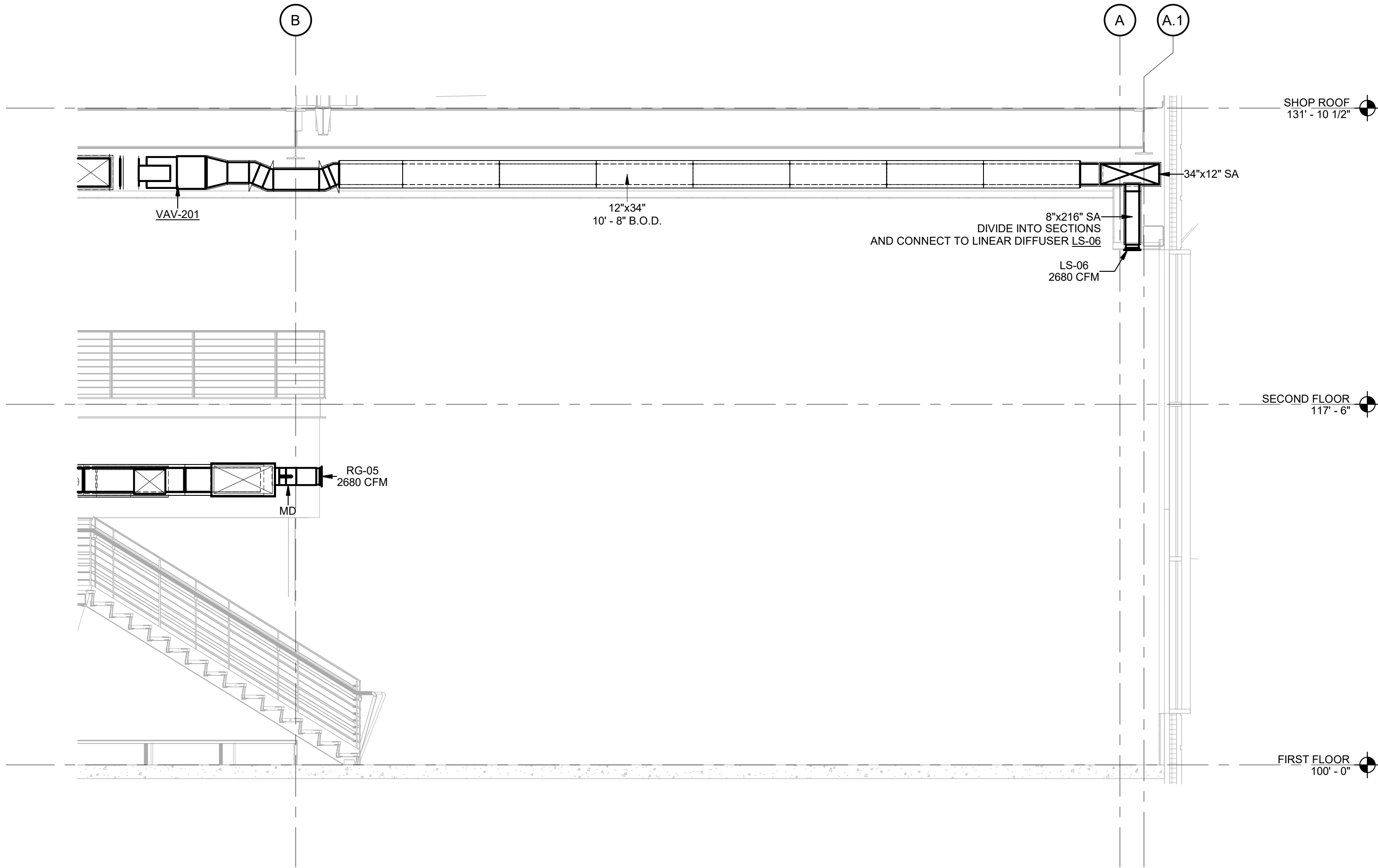


MECHANICAL HVAC SECTION 13 (227 MRO SUITE)
SCALE: 1/4" = 1'-0"

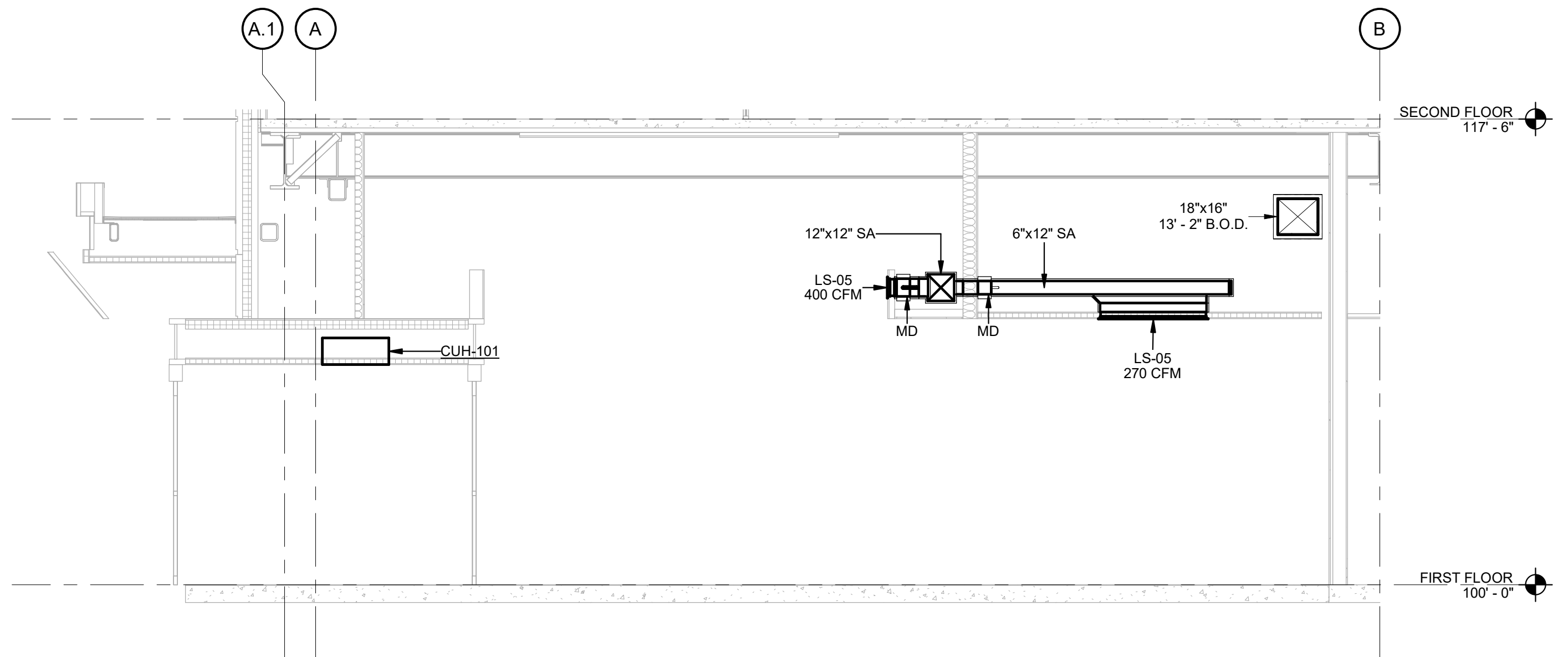
MECHANICAL HVAC SECTION 14 (201 AVIATION SUITE)
SCALE: 1/4" = 1'-0"



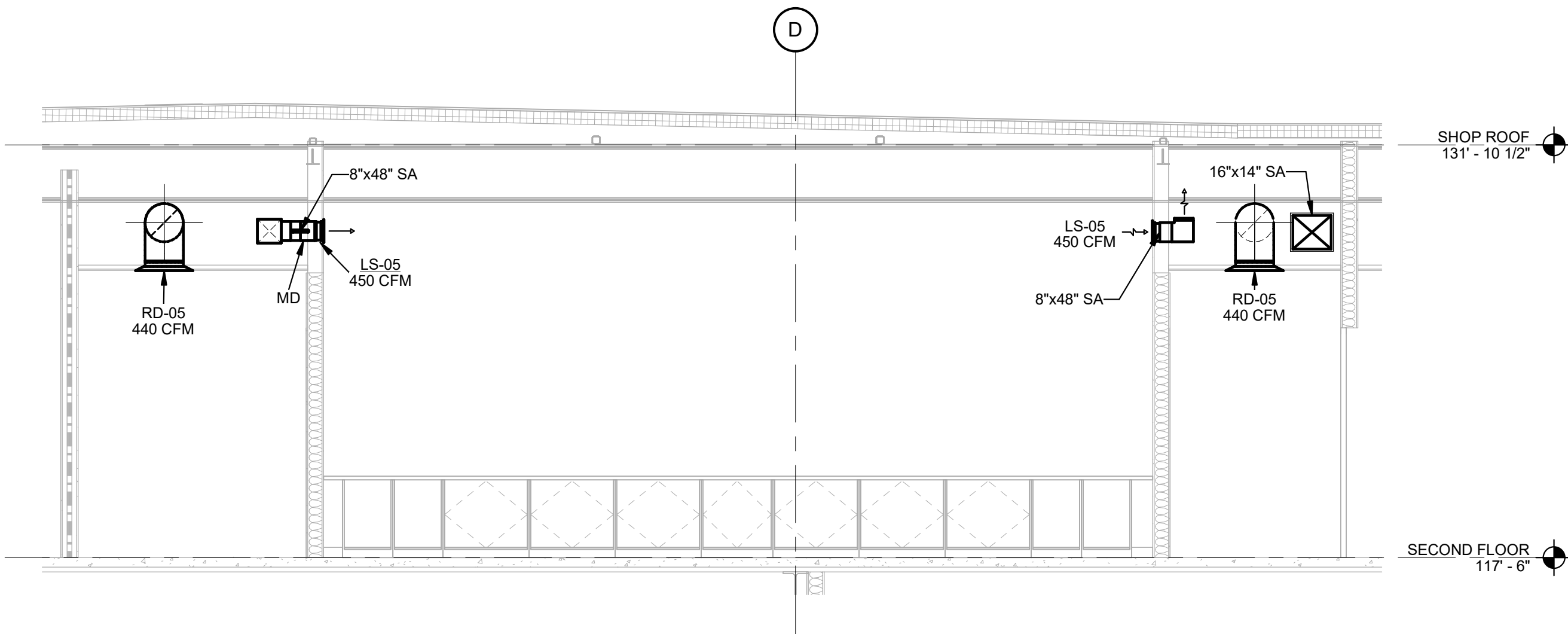
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SCALE: 1/4" = 1'-0"



MECHANICAL HVAC SECTION 16 (CO100 CORRIDOR 01)
SCALE: 1/4" = 1'-0"



MECHANICAL HVAC SECTION 17 (121 SECURITY)
SCALE: 1/4" = 1'-0"



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PERFECTION GROUP
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2649 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545

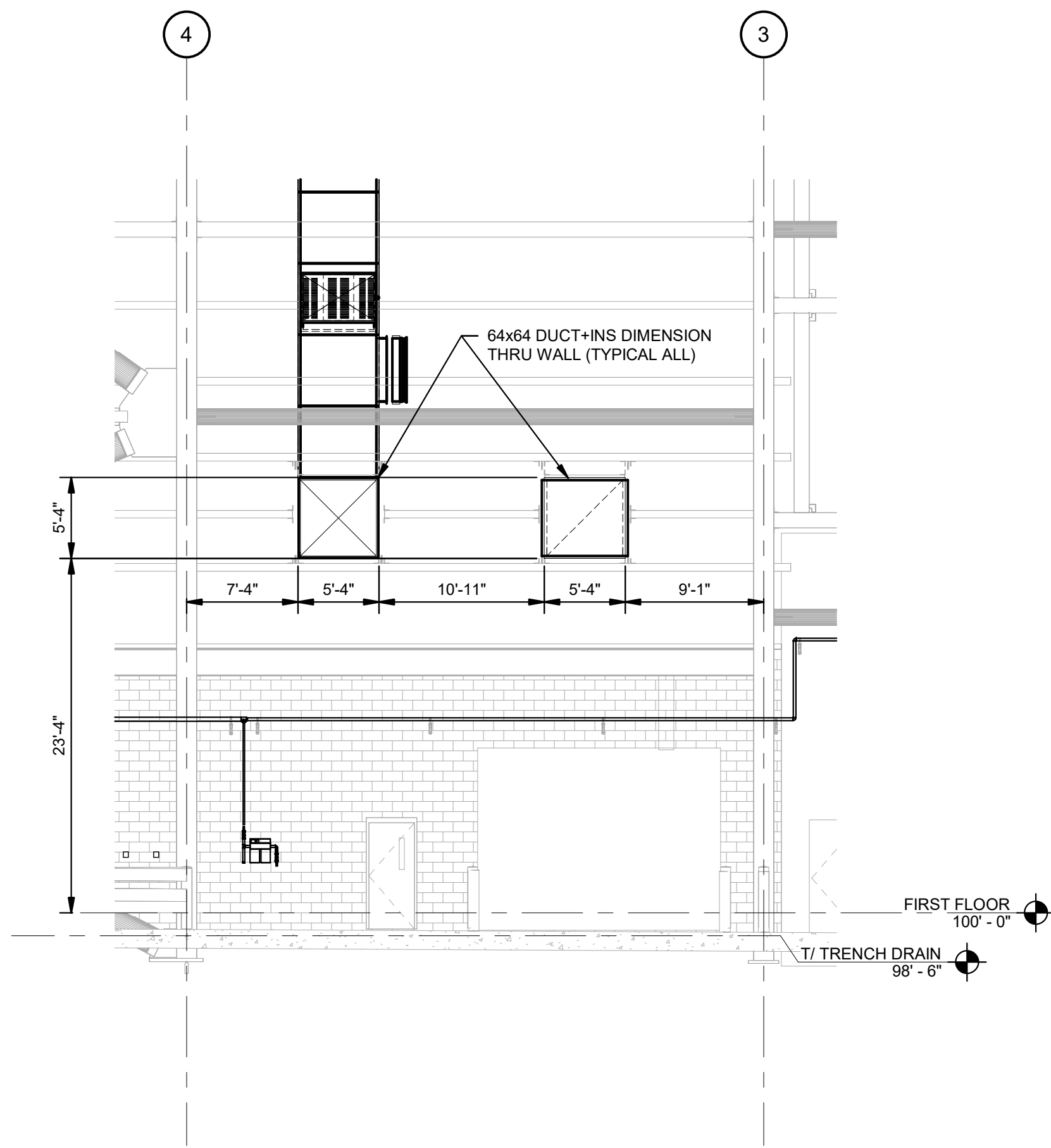
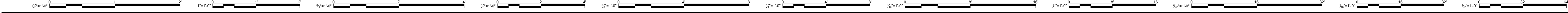
**SHOP
DRAWING**

4	06/03/25	FABRICATION REVISION
3	04/29/25	BULLETIN 6
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

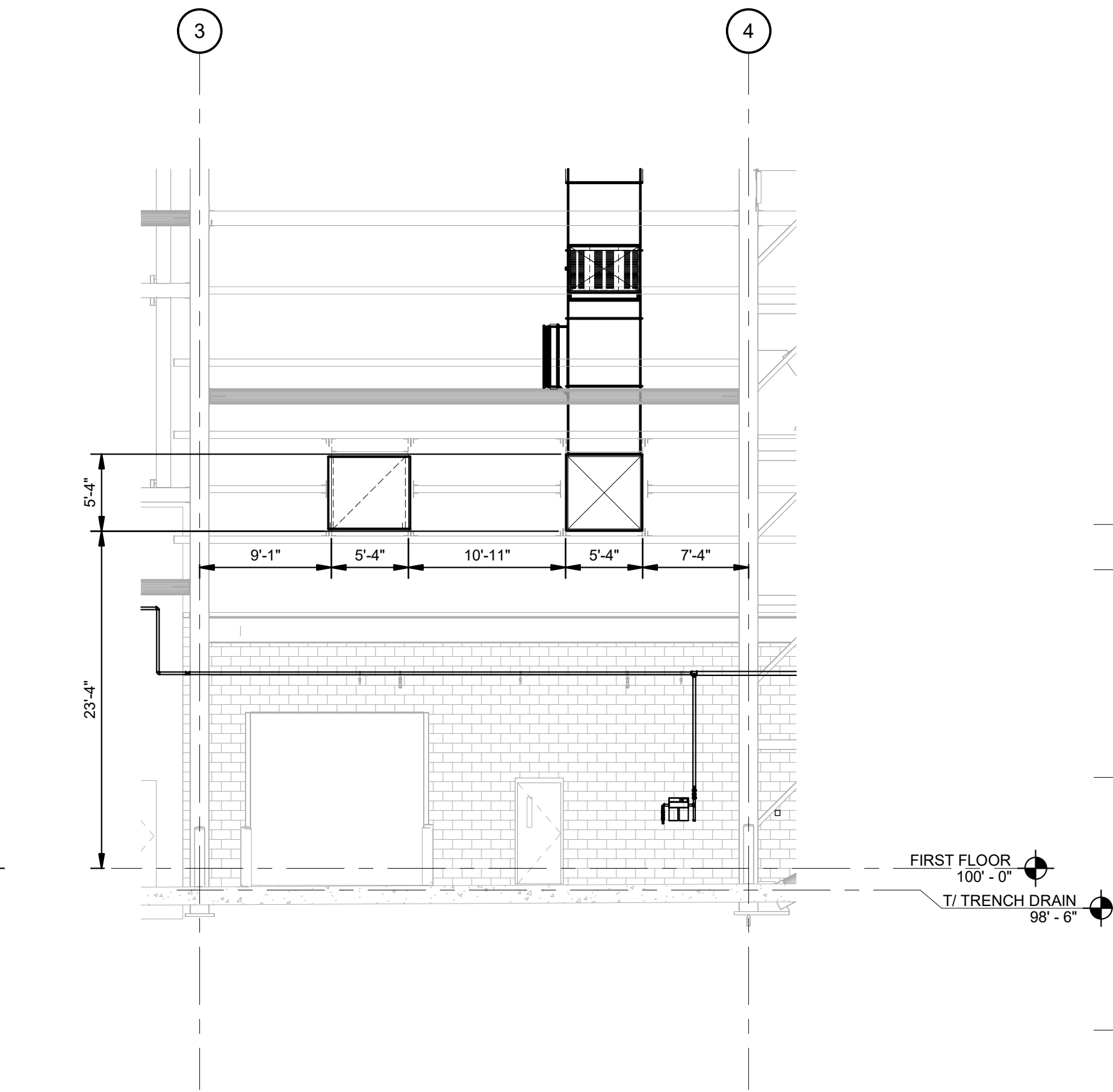
PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
HVAC SECTIONS**

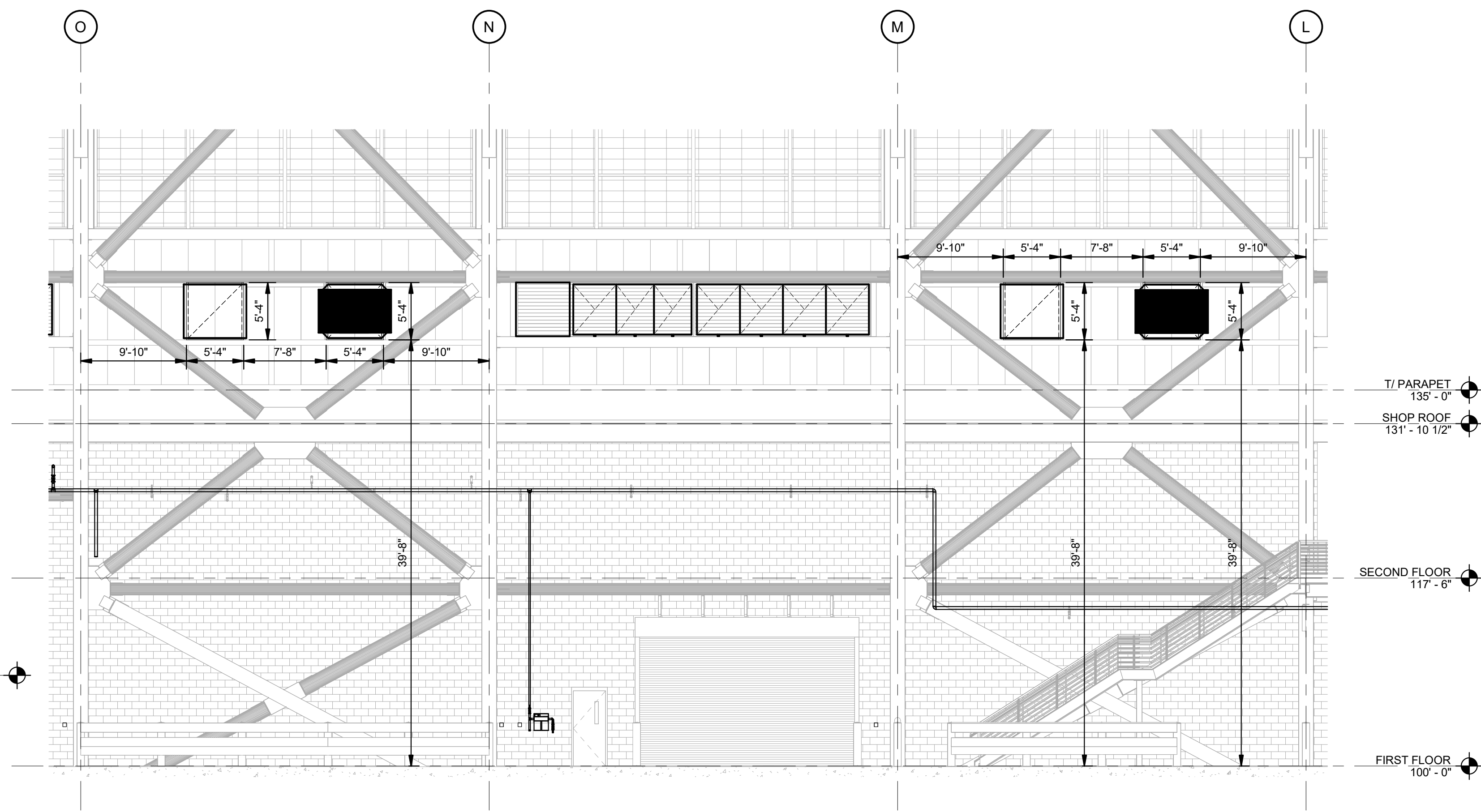
MH3-00-09
SHEET NUMBER



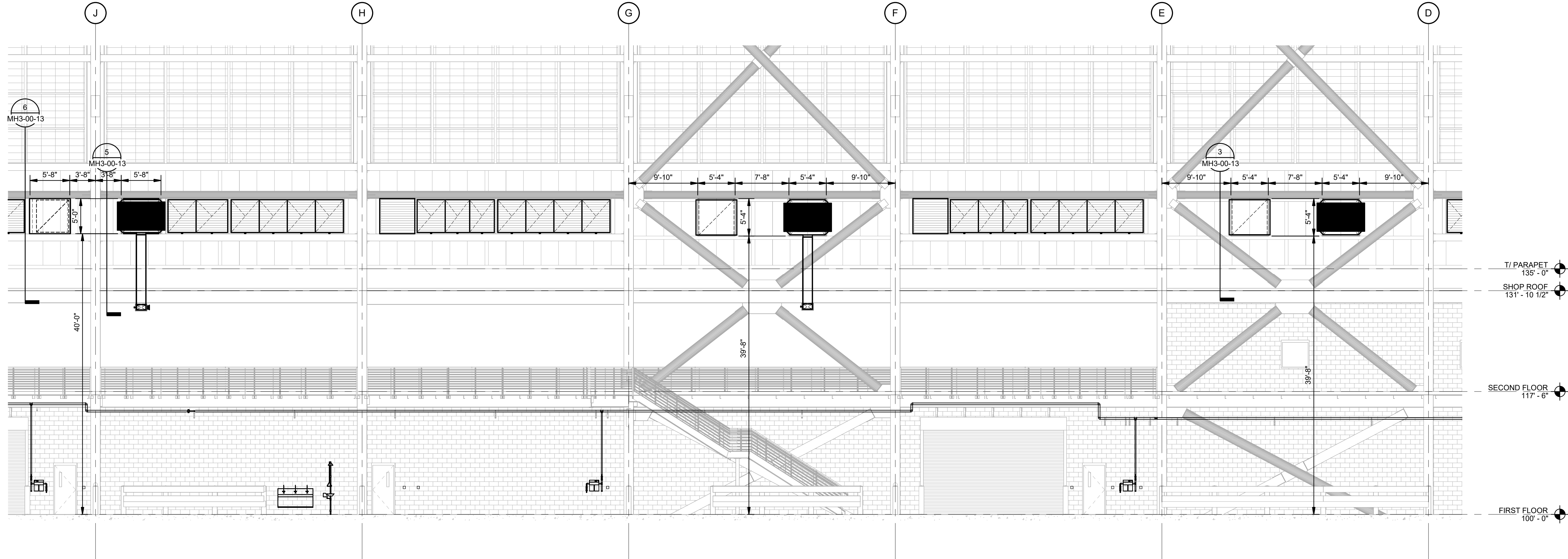
PERFECTION HVAC SECTION 01 (100 HANGAR - WEST WALL)
SCALE: 1/8" = 1'-0"
NORTH



PERFECTION HVAC SECTION 02 (100 HANGAR - EAST WALL)
SCALE: 1/8" = 1'-0"
NORTH



PERFECTION HVAC SECTION (100 HANGAR - SOUTH WALL CONTINUED)
SCALE: 1/8" = 1'-0"
NORTH



PERFECTION HVAC SECTION (100 HANGAR - SOUTH WALL)
SCALE: 1/8" = 1'-0"
NORTH

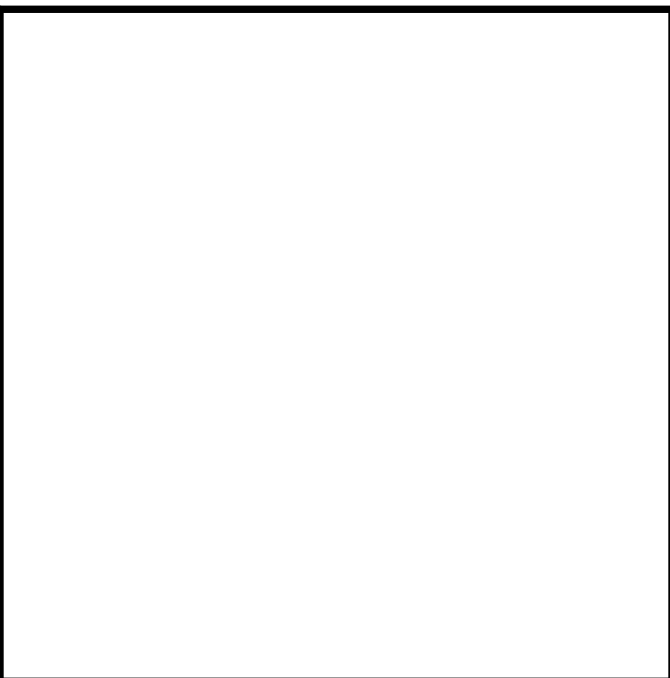
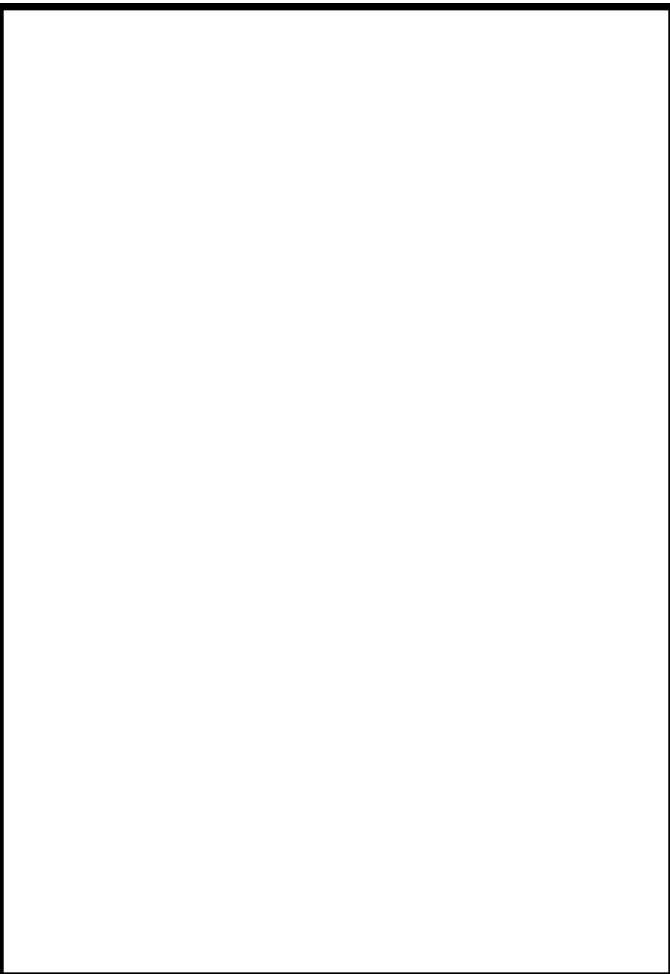


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ERLANGER, KY 41018

CONTRACTOR INFORMATION

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PERFECTION GROUP

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CINCINNATI, OHIO 45241
TEL +1.513.772.7545



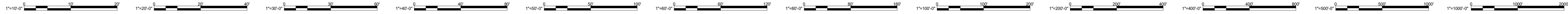
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3	06/03/25	FABRICATION REVISION
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET

REV	DATE	DOC REL ## - DESCRIPTION
3	06/03/25	FABRICATION REVISION
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	Designer
DRAWN BY	Author
QUALCHECK	Checker
SHEET TITLE	

**MECHANICAL
HVAC SECTIONS**

MH3-00-10
SHEET NUMBER



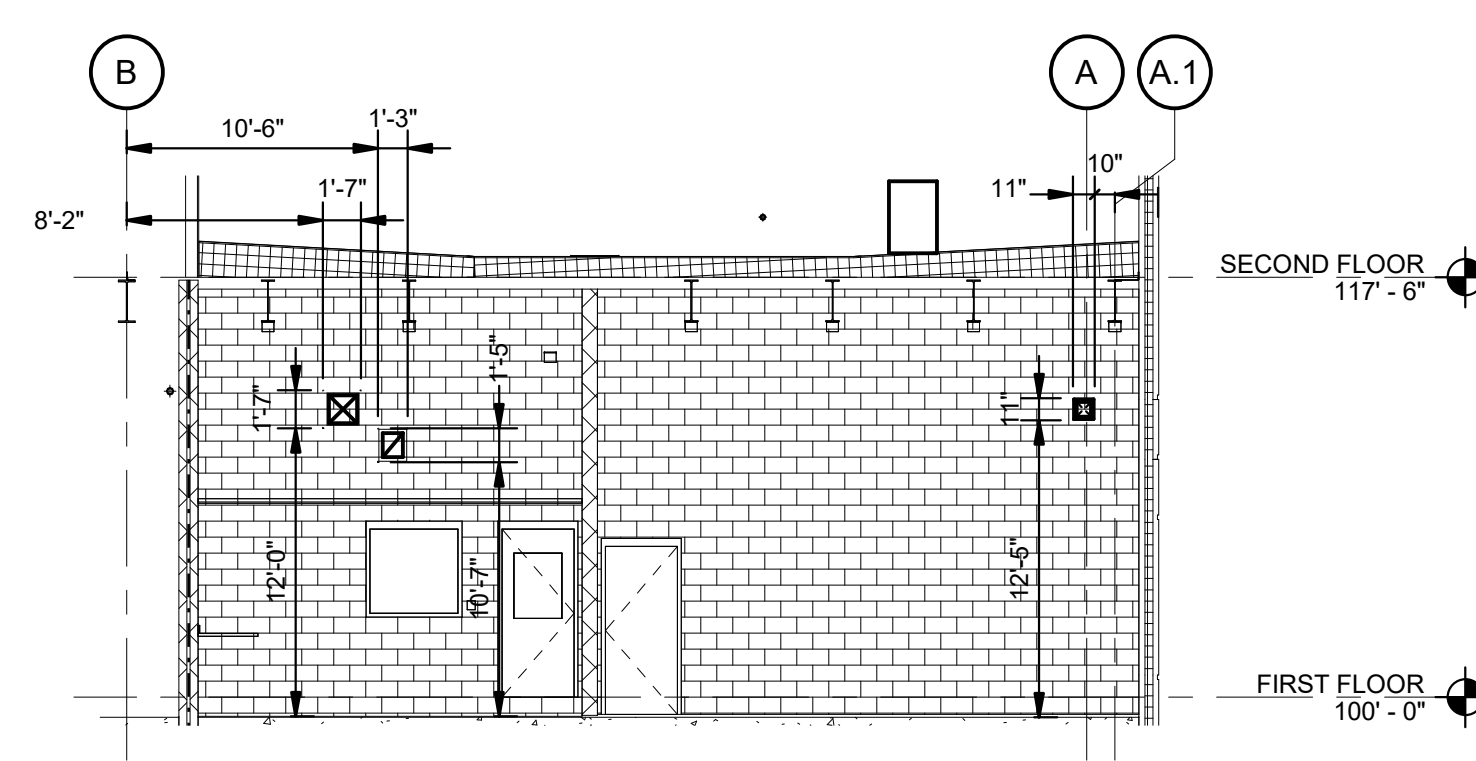
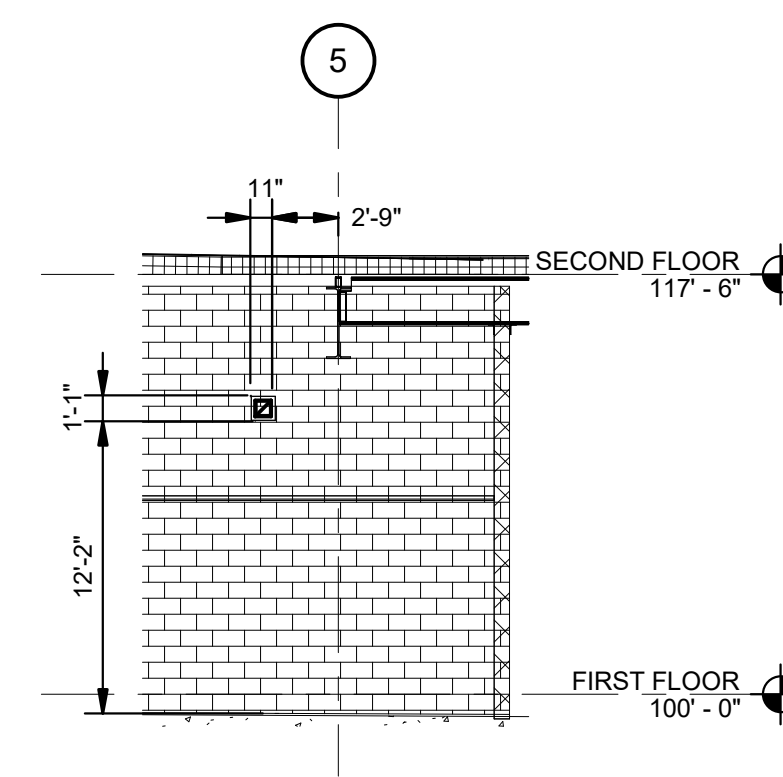
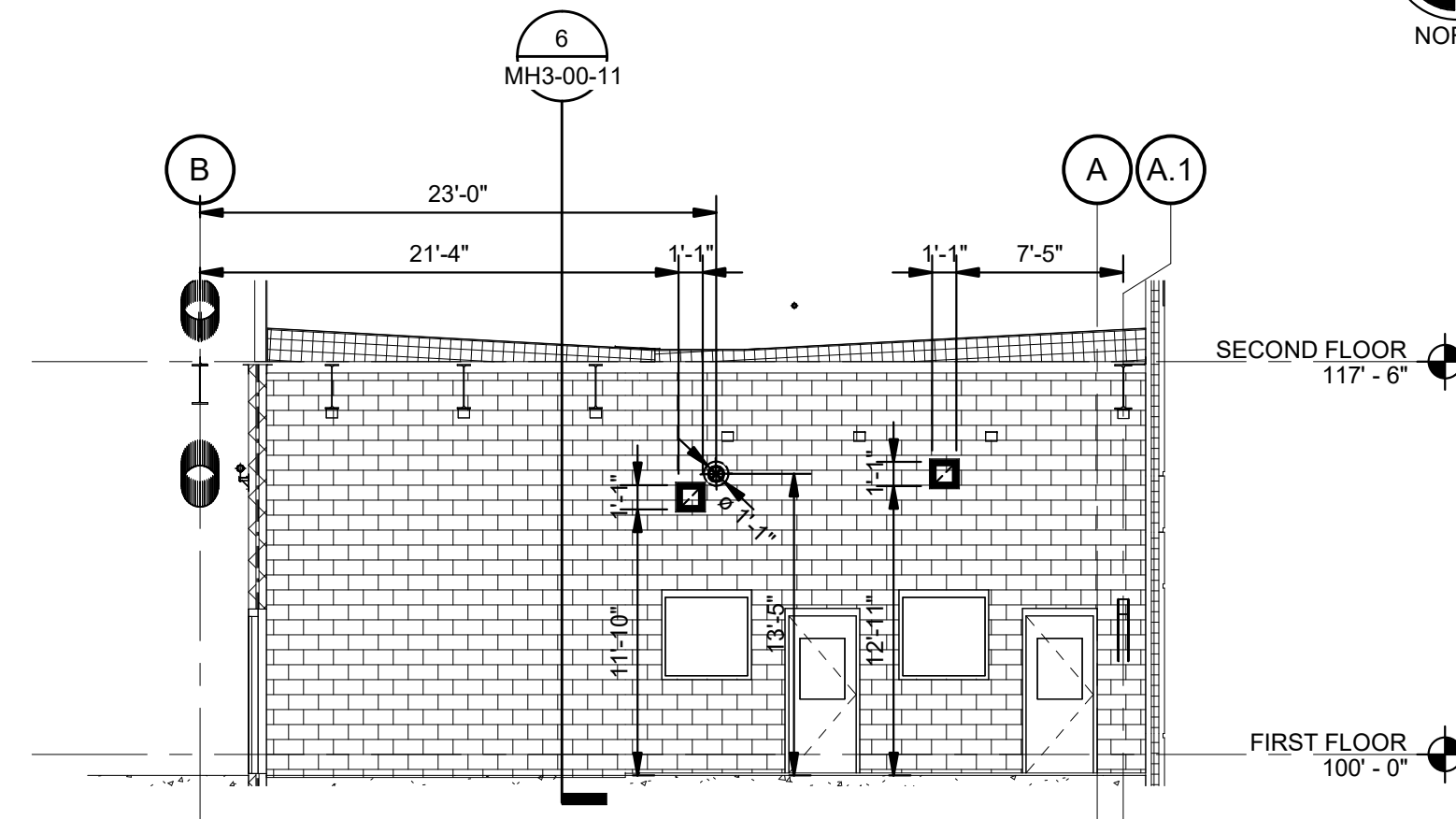
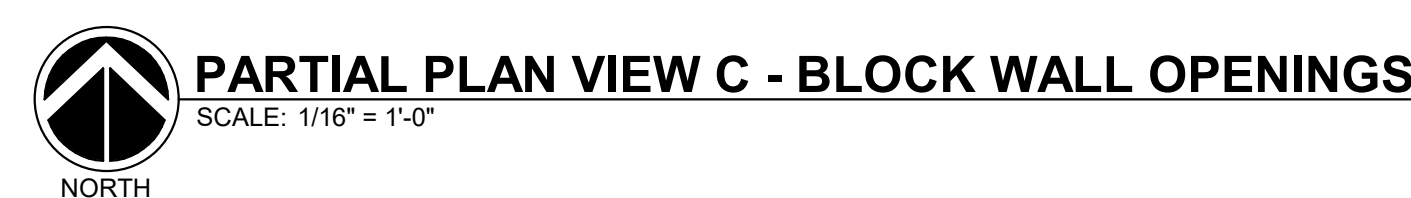
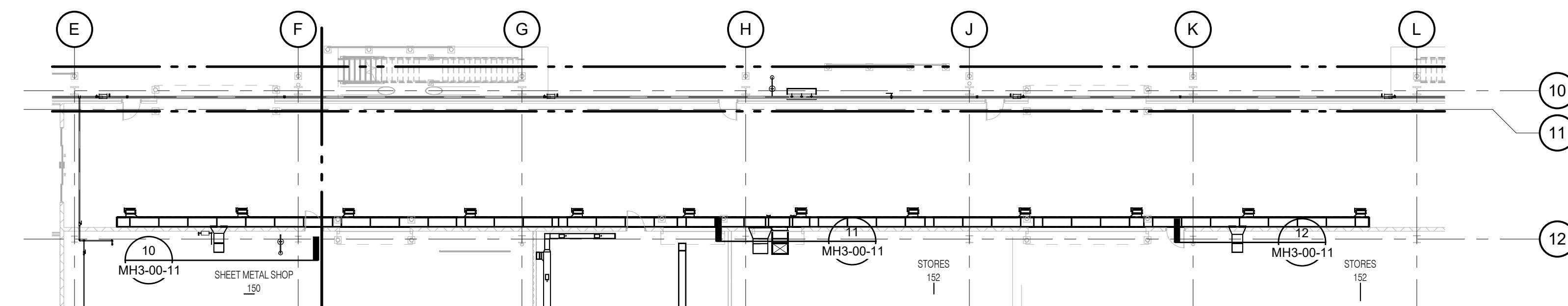
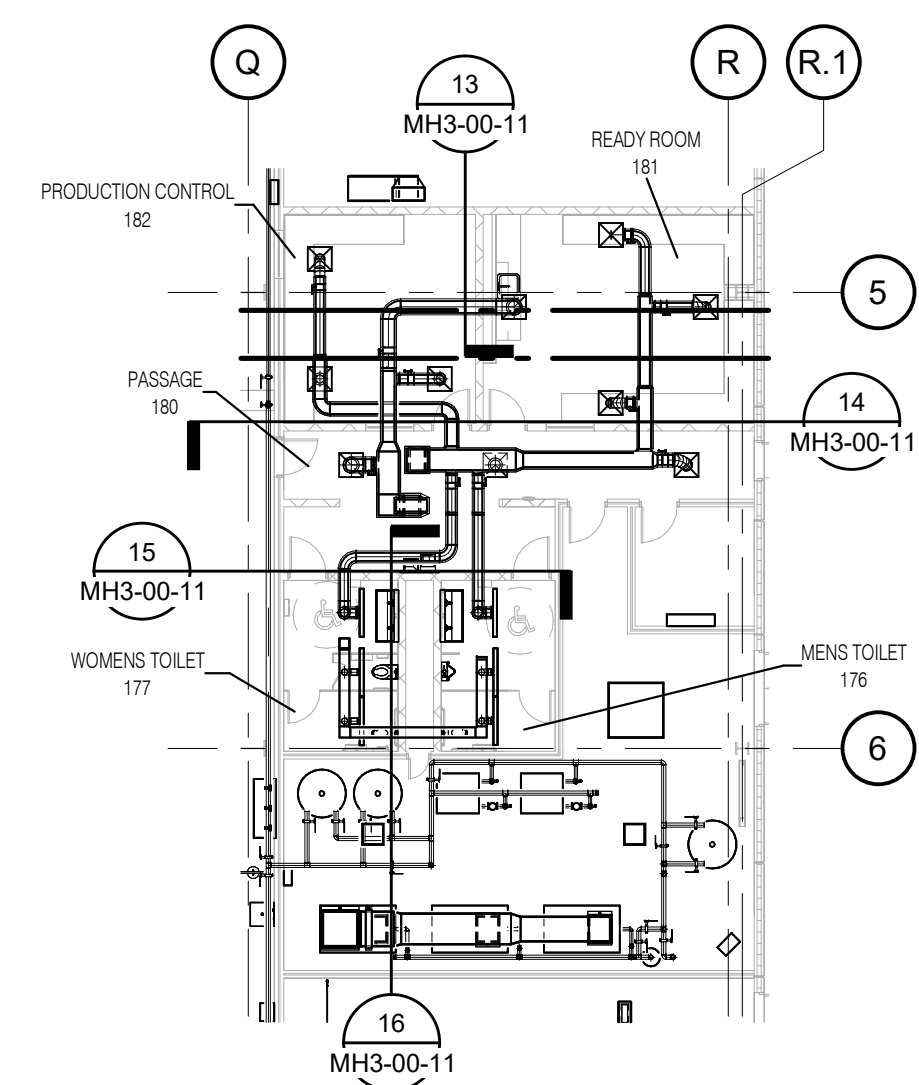


CONTRACTOR INFORMATION

ESTD **P** 1951

PERFECTION GROUP

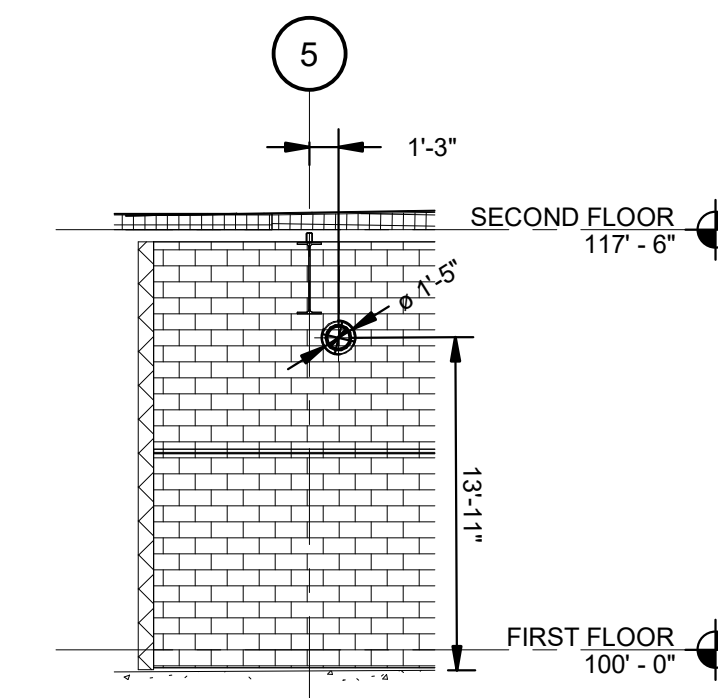
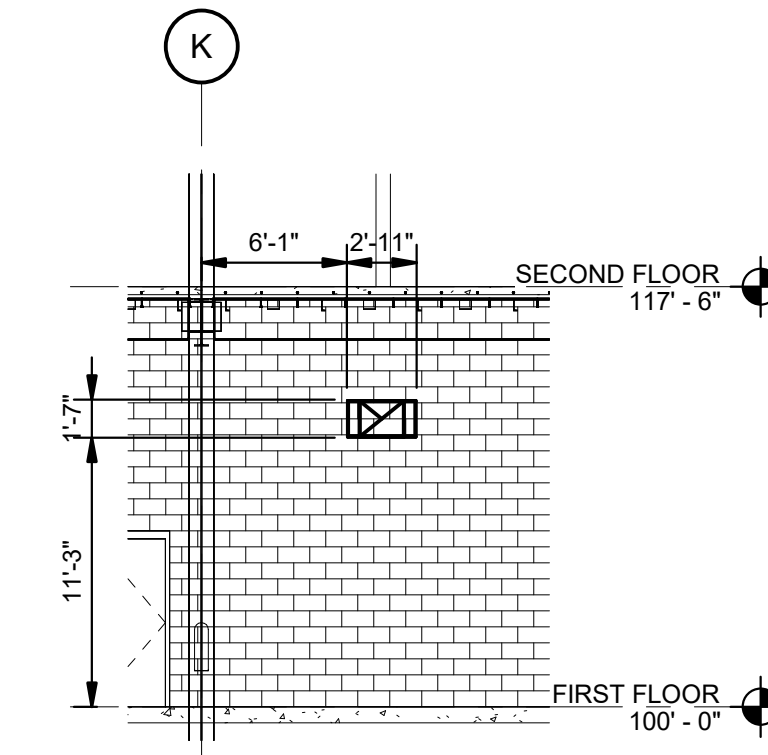
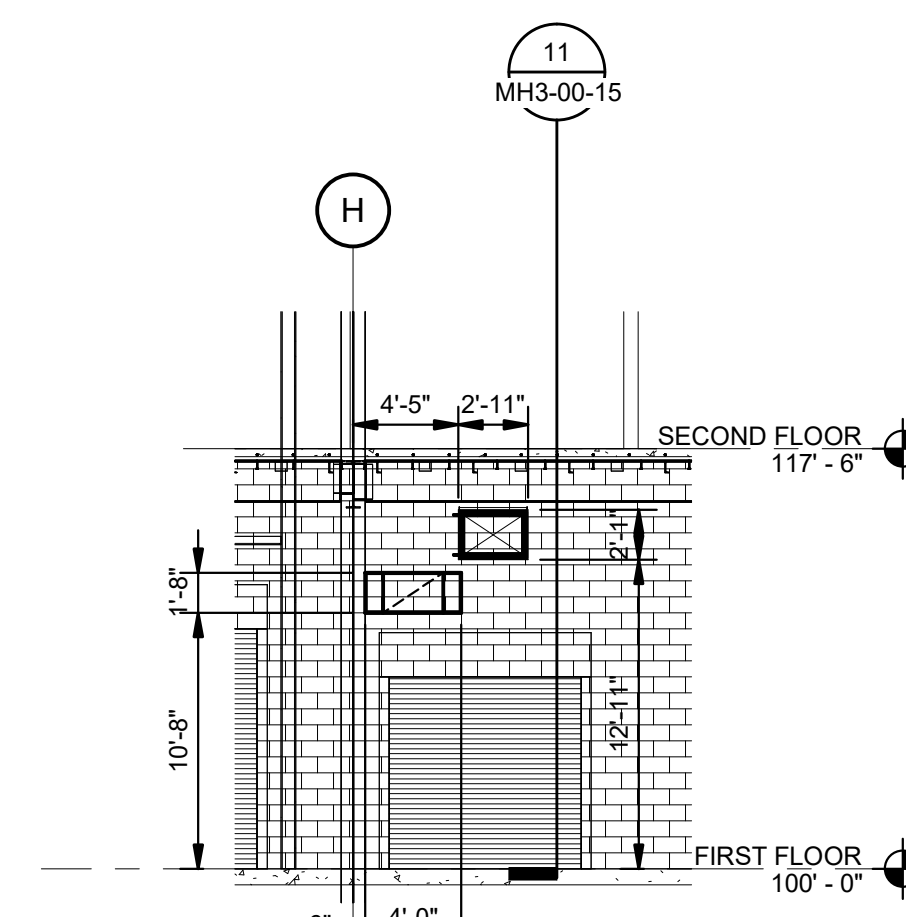
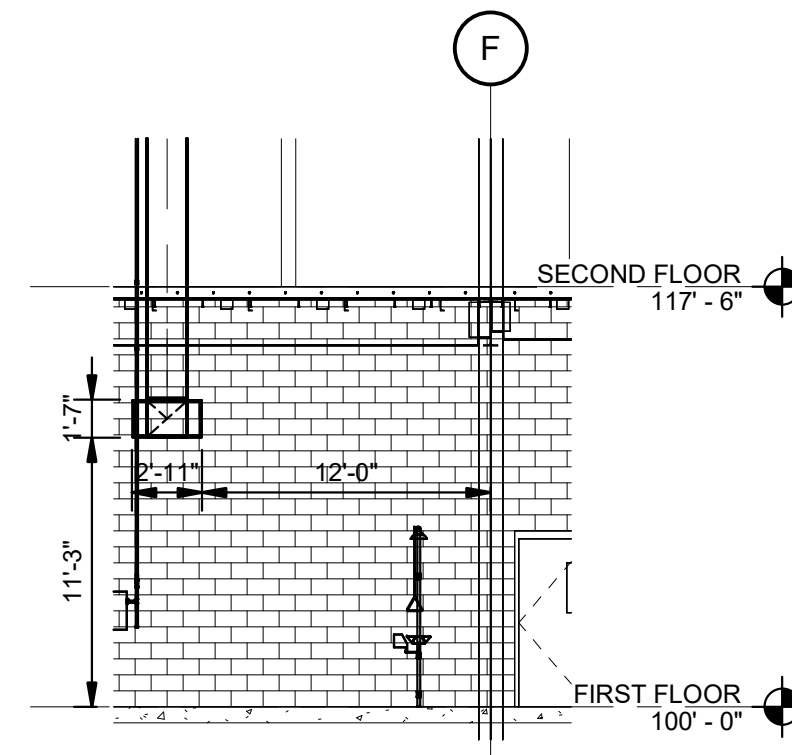
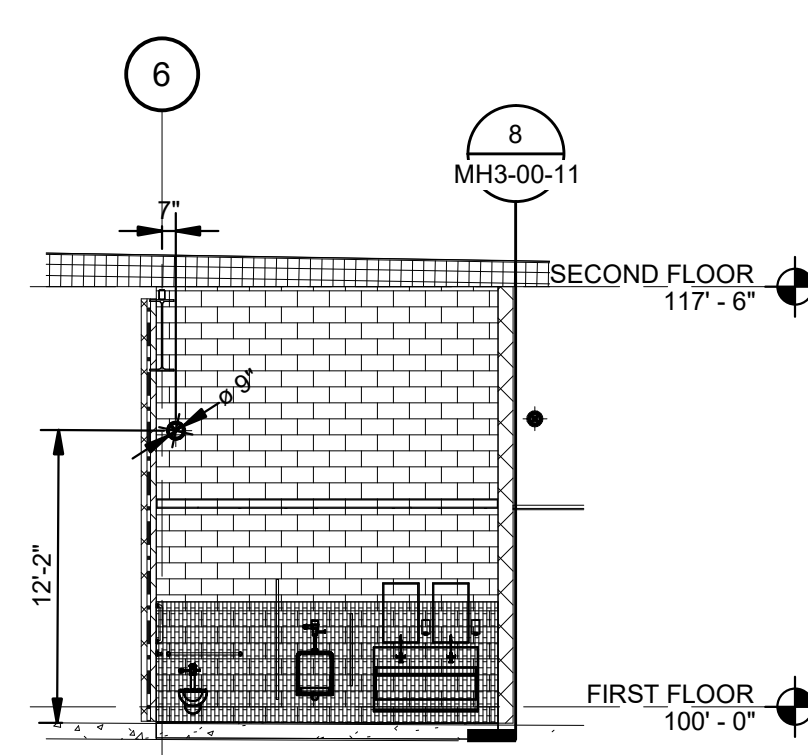
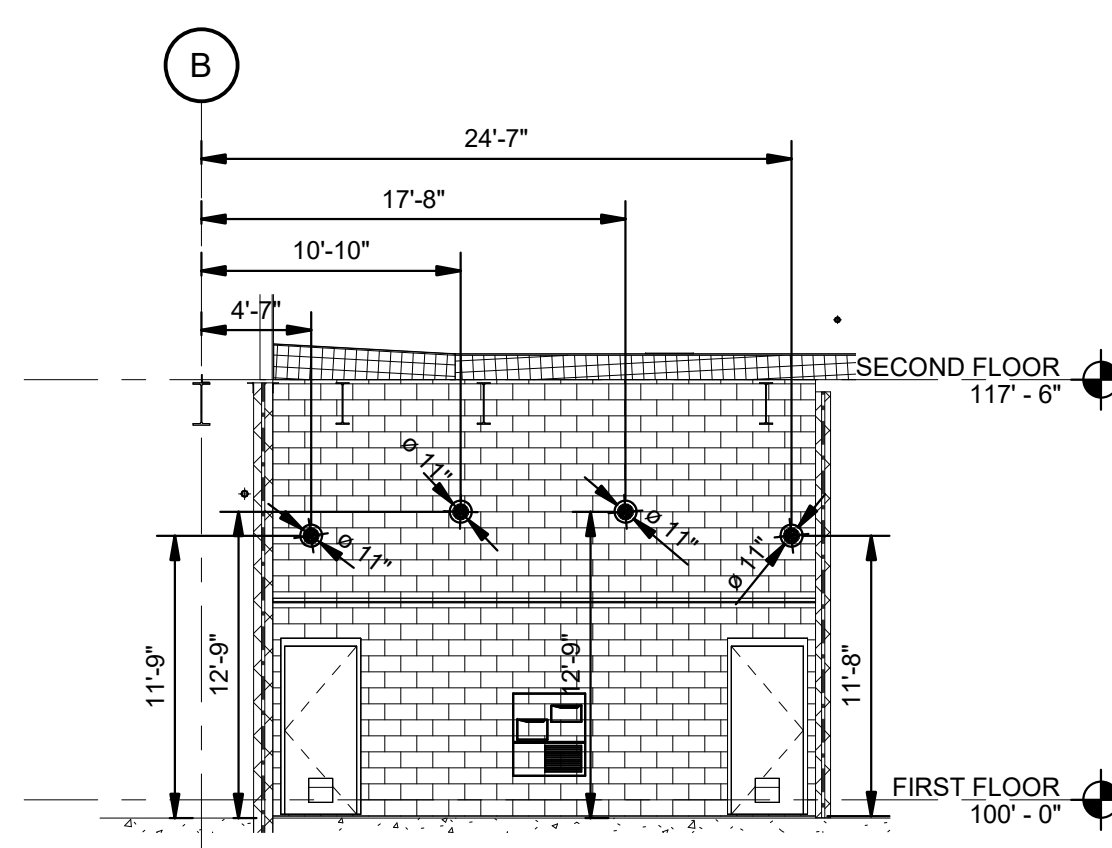
2649 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545



2 - FACILITY MAINTENANCE 102

3 - PRODUCTION CONTROL 103
SCALE: 1/8" = 1'-0"

4 - STORAGE 104
SCALE: 1/8" = 1'-0"



5 - RR 107, RR 108
SCALE: 1/8" = 1'-0"

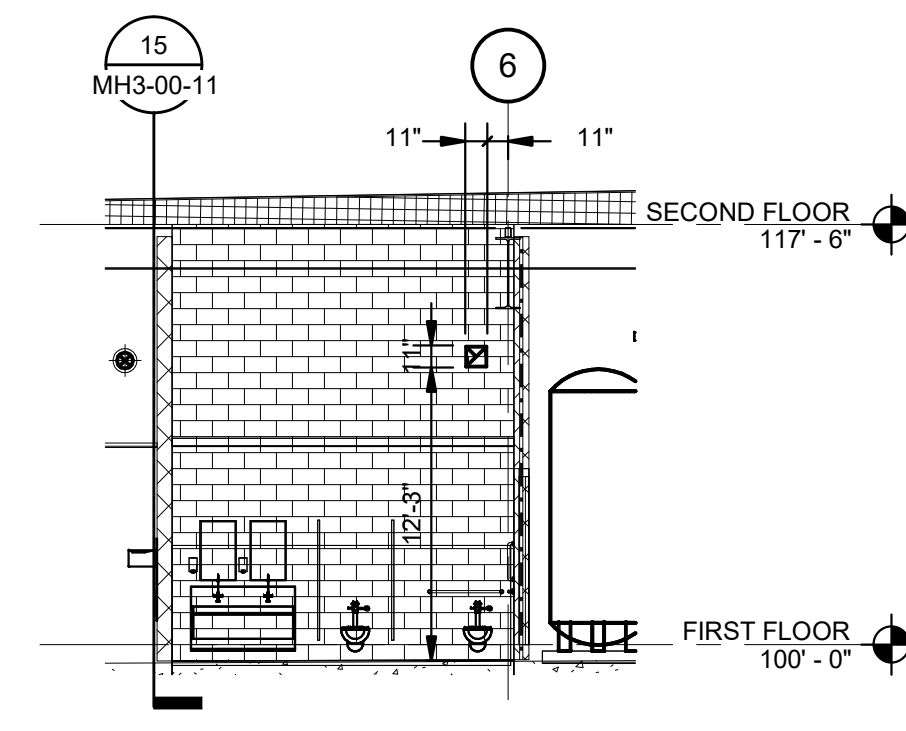
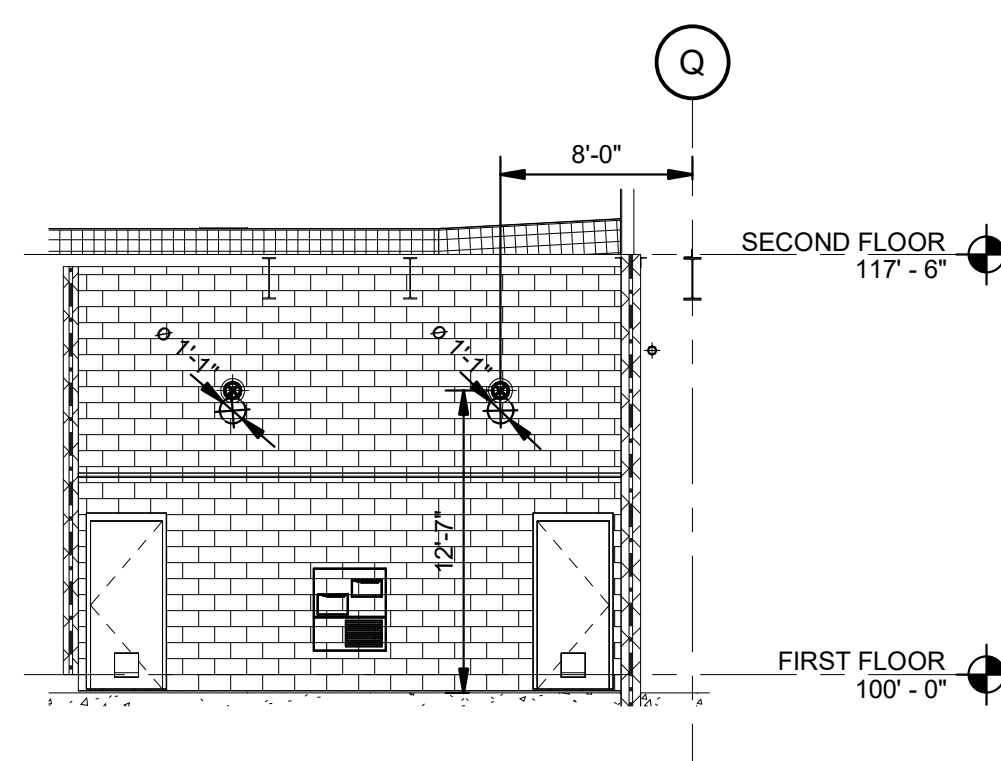
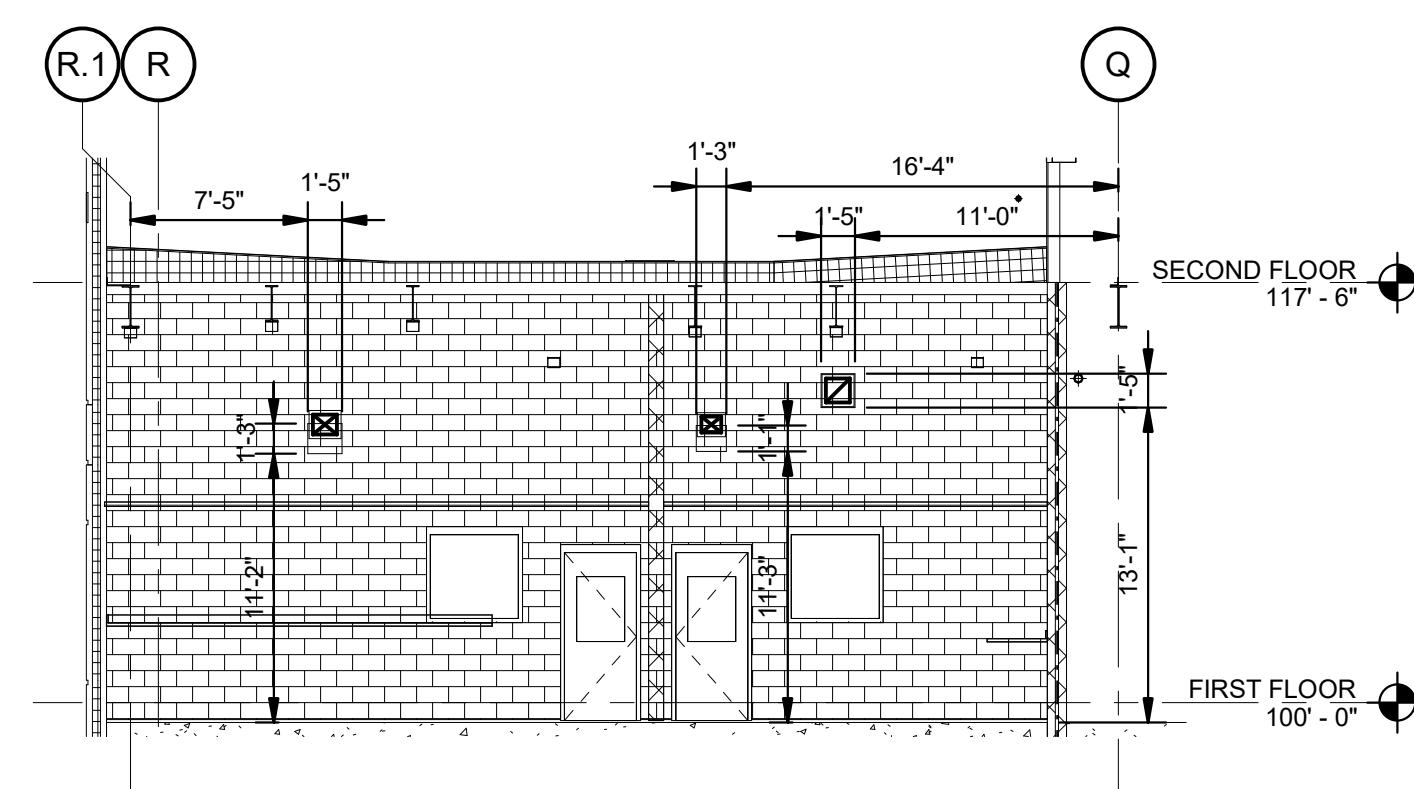
6 - MEN'S TOILET 108
SCALE: 1/8" = 1'-0"

7 - SHEET METAL SHOP

8 - STORES 152
SCALE: 1/8" = 1'-0"

9 - STORES 152
SCALE: 1/8" = 1'-0"

10 - PRODUCTION CONTROL 182
SCALE: 1/8" = 1'-0"



11 - READY ROOM 181, PRODUCTION CONTROL 182
SCALE: 1/8" = 1'-0"

12 - PASSAGE 180
SCALE: 1/8" = 1'-0"

13 - WOMEN'S TOILET 177
SCALE: 1/8" = 1'-0"

**SHOP
DRAWING**

2	06/03/25	FABRICATION REVISION
1	03/12/25	FABRICATION SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	Checke
SHEET TITLE	

MECHANICAL
HVAC SECTIONS

MH3-00-11
SHEET NUMBER



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GROUP**

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CINCINNATI, OHIO 45241
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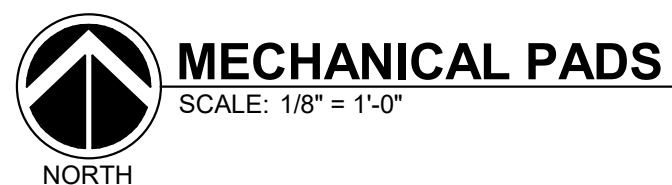
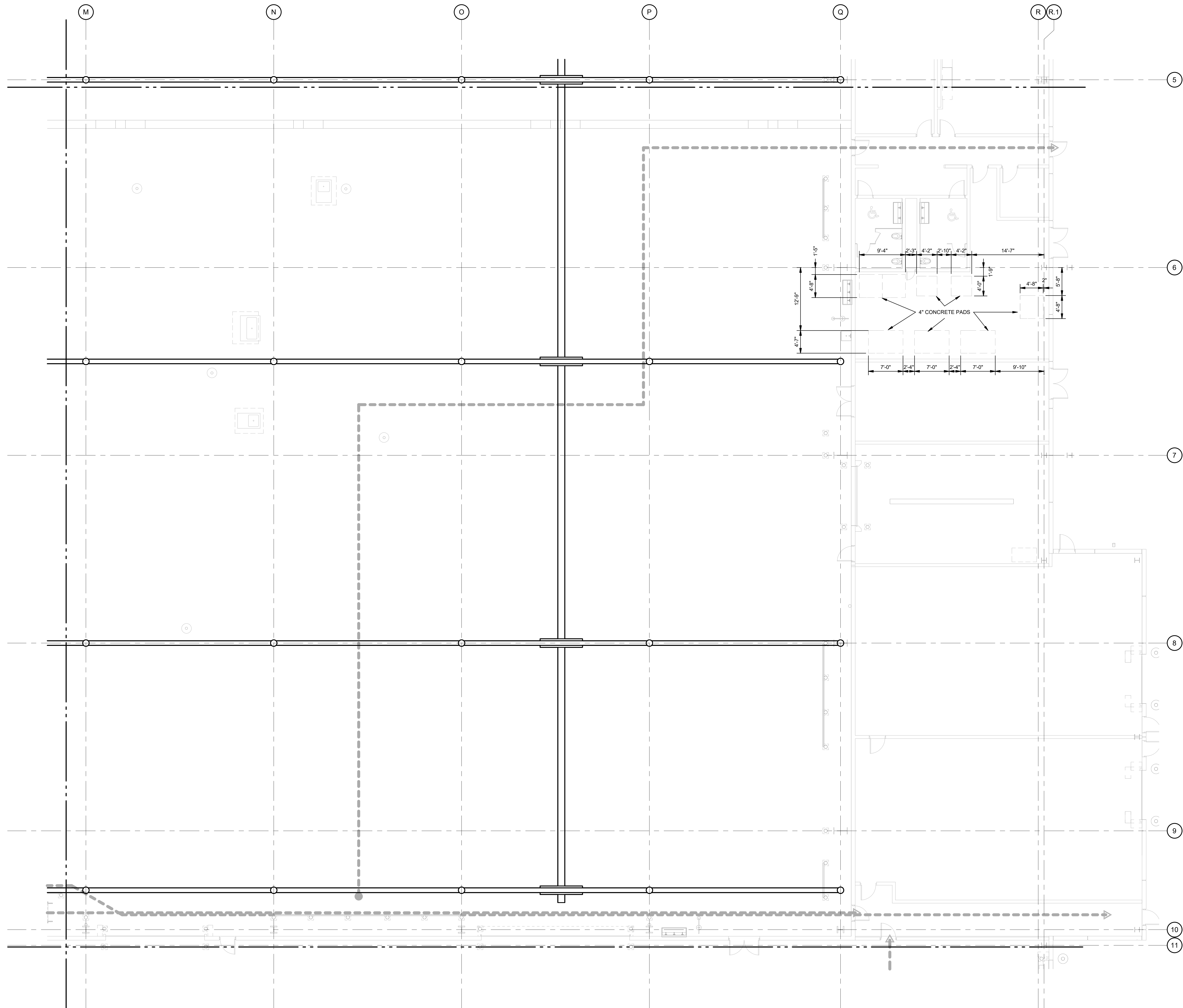
**SHOP
DRAWING**

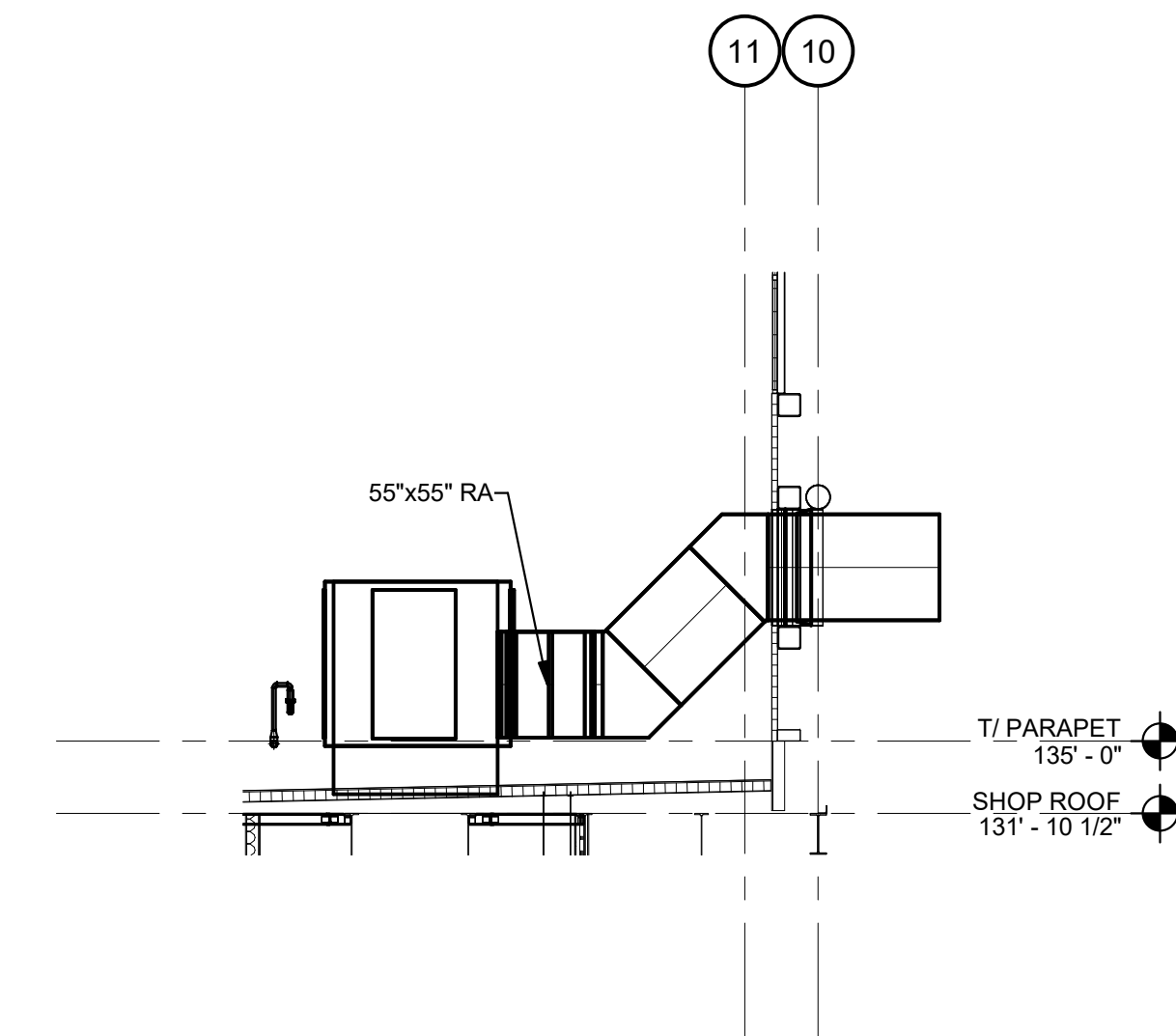
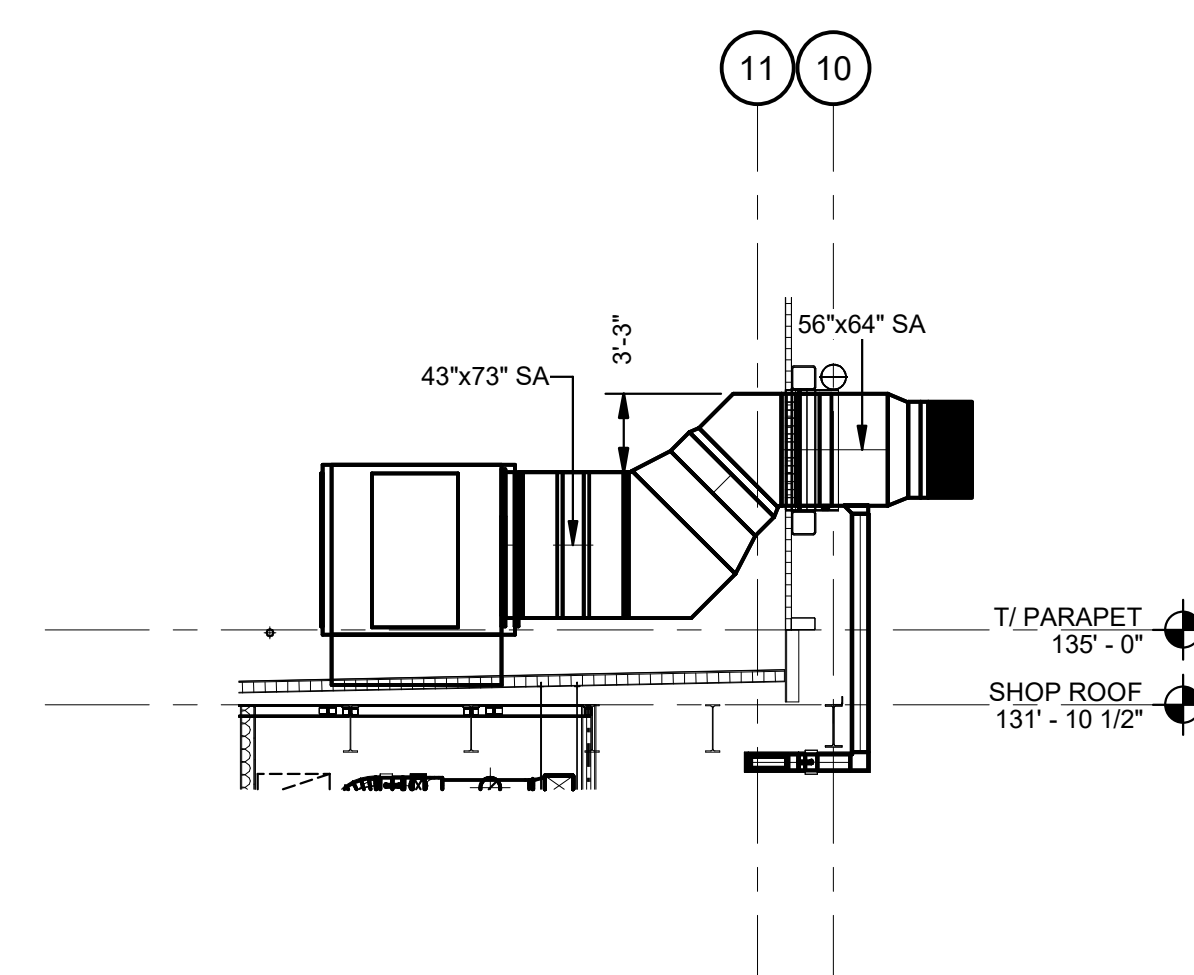
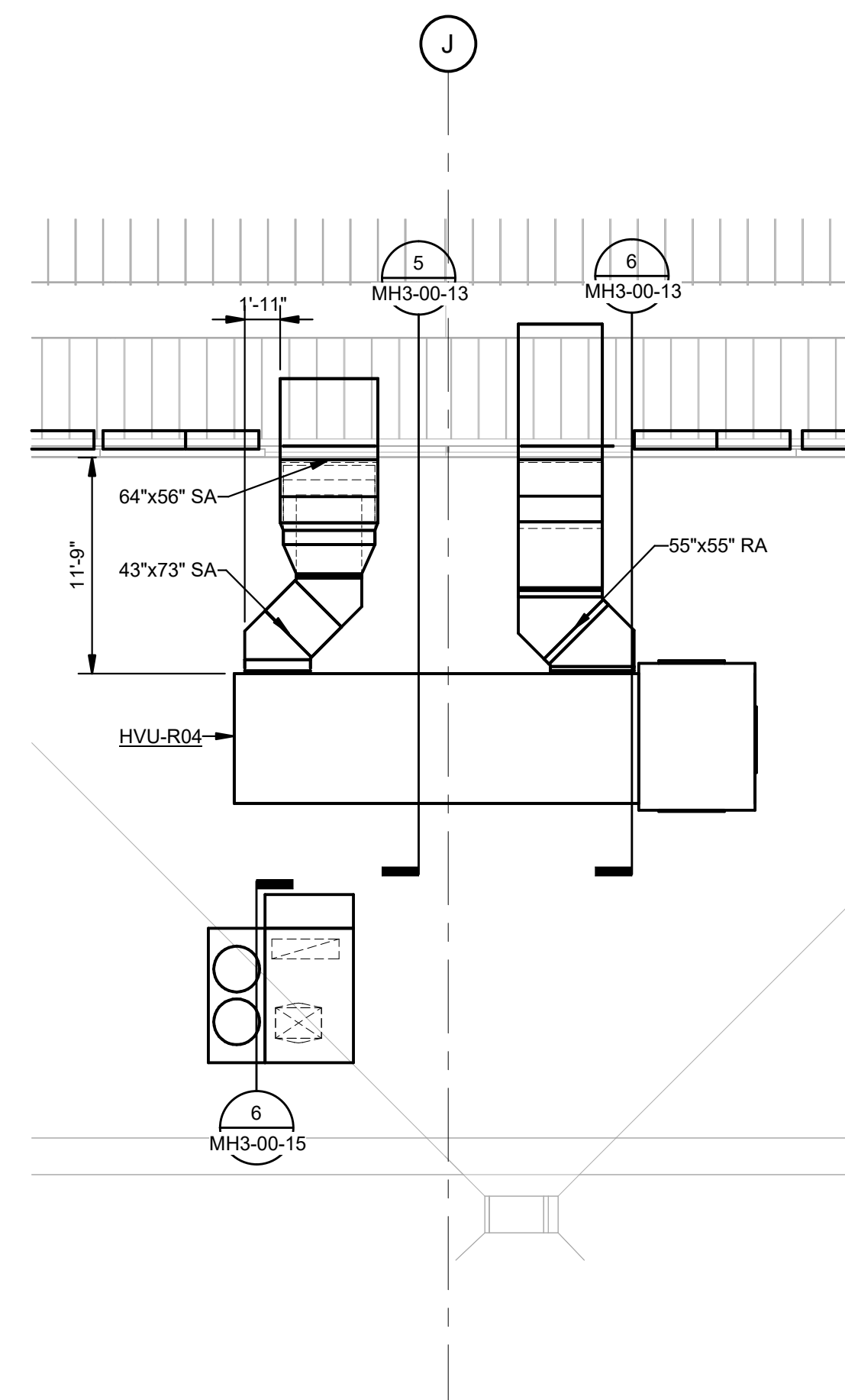
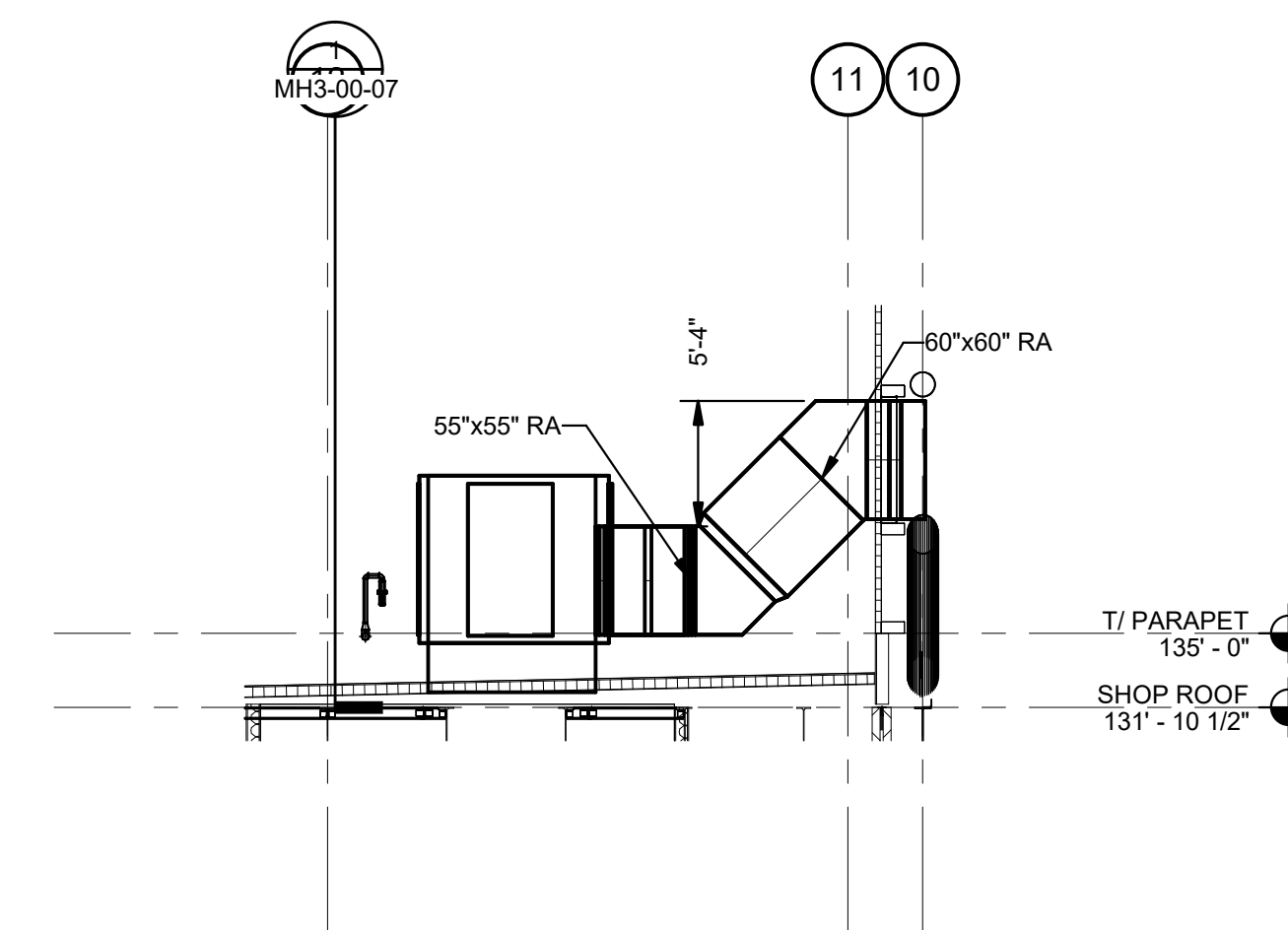
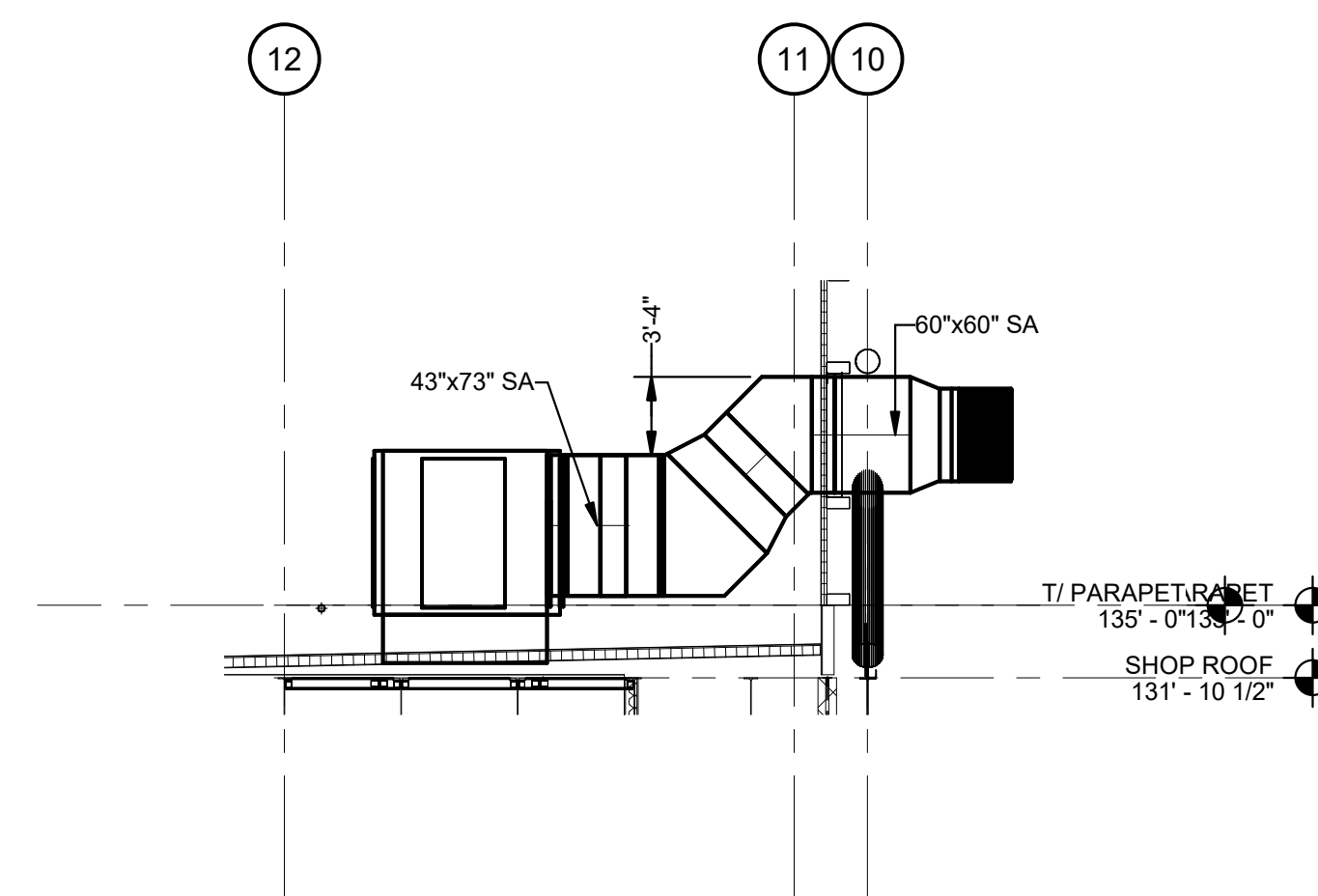
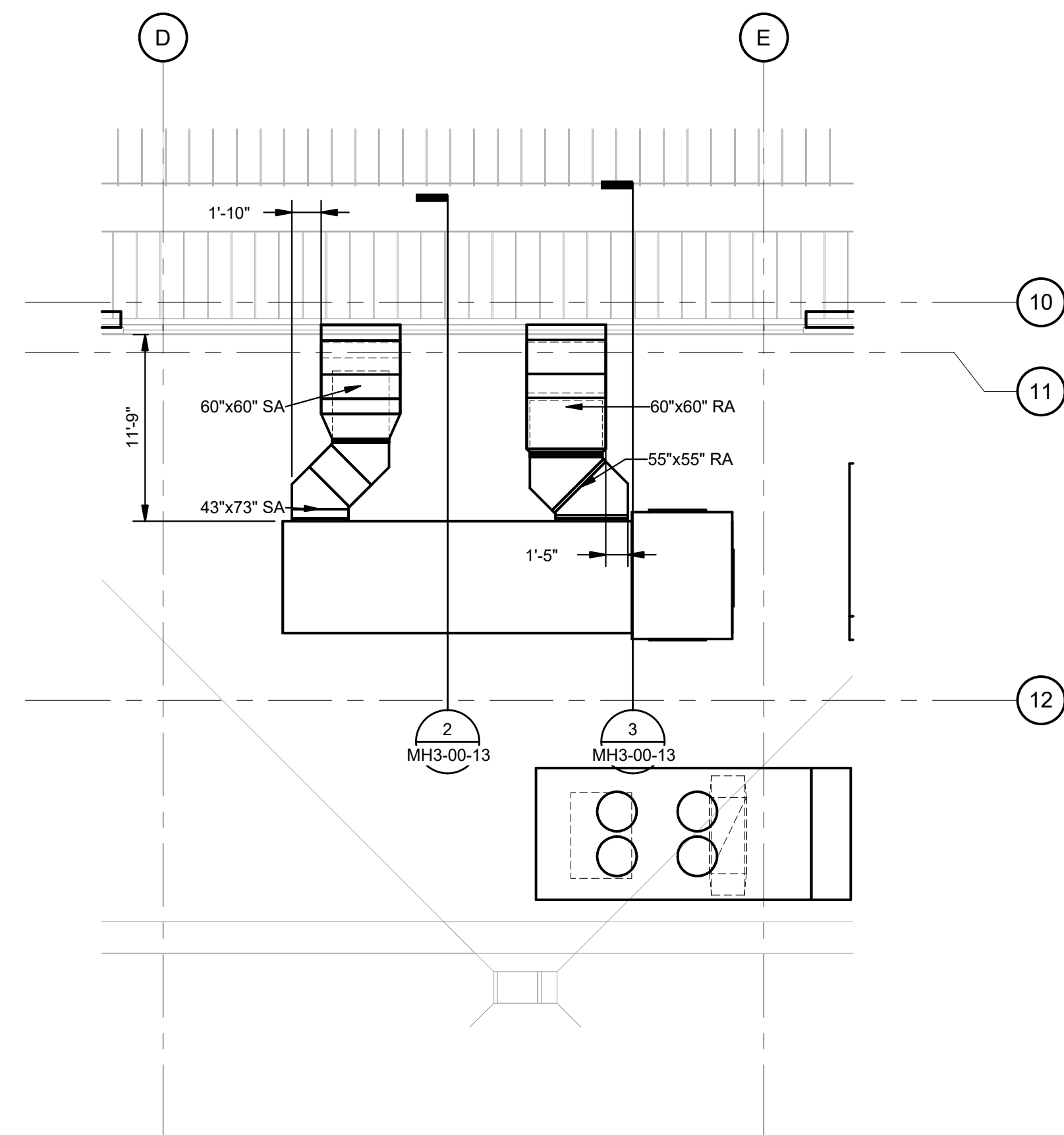
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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	Checker
SHEET TITLE	

MINIMUM MECHANICAL PAD REQUIREMENTS

MH3-00-12
SHEET NUMBER





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INTERNATIONAL AIRPORT
410 WENDELL H. FORD BLVD
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**PERFECTION
GROUP**

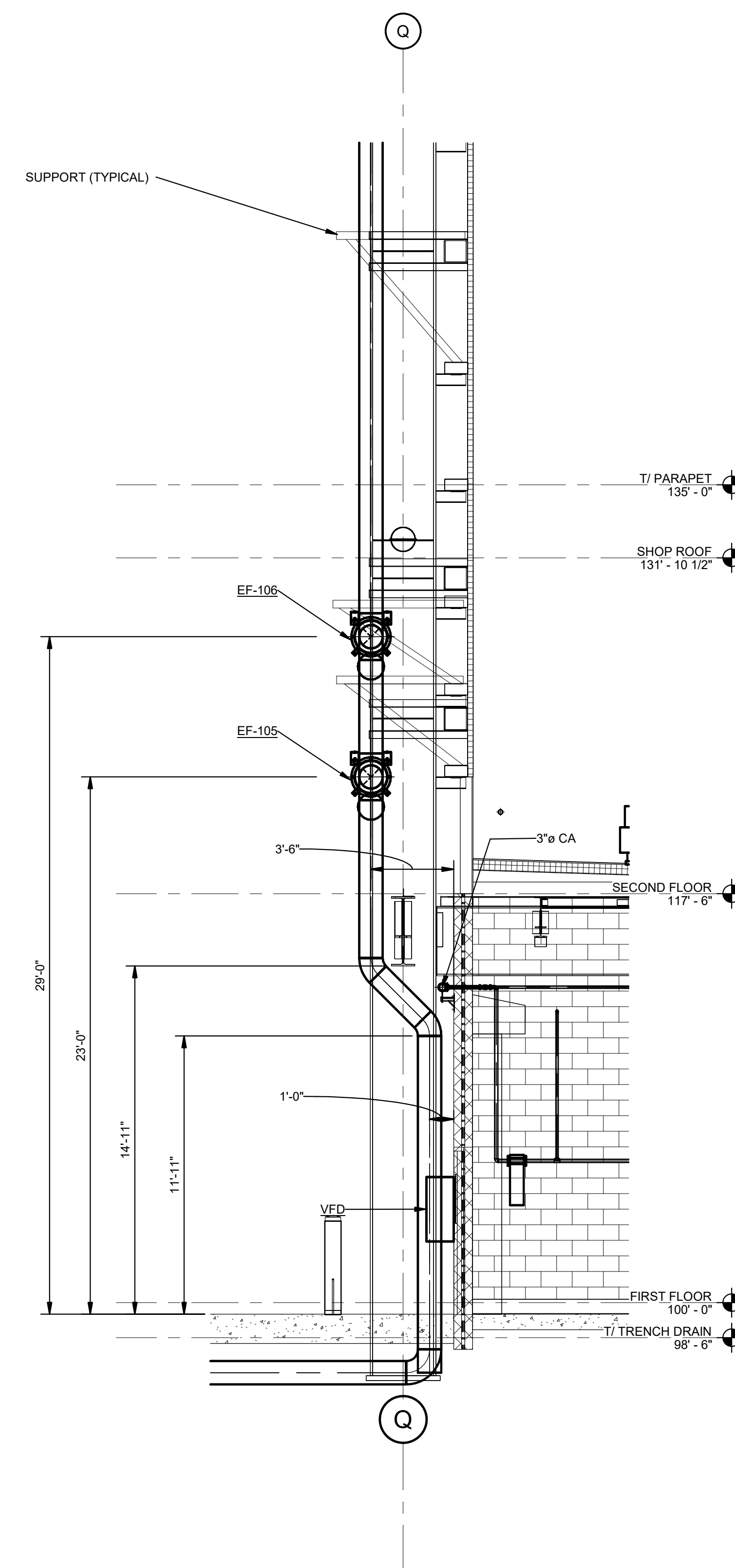
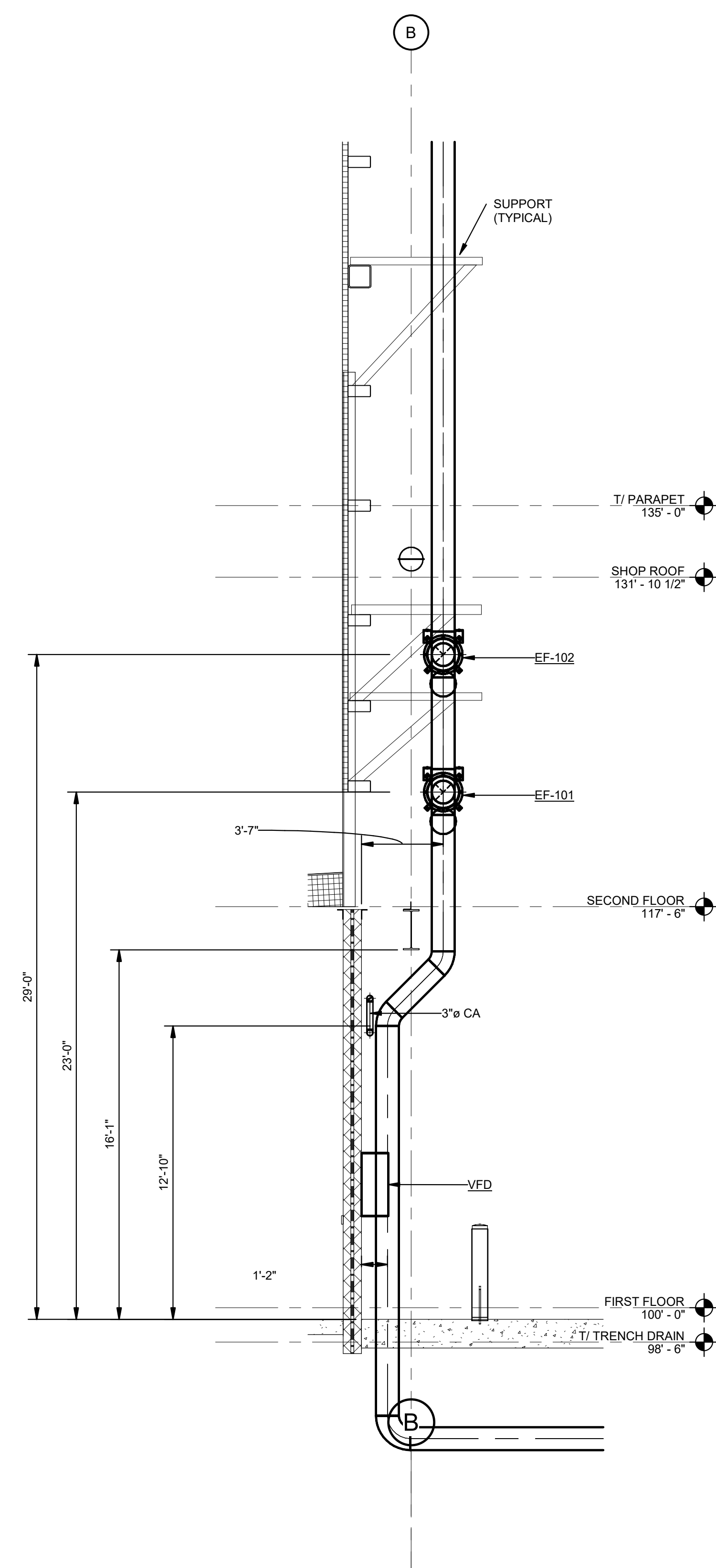
2649 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545

[illegible]

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL HVAC SECTIONS

MH3-00-13
SHEET NUMBER



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INTERNATIONAL AIRPORT
410 WENDELL H. FORD BLVD
ERLANGER, KY 41018

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PERFECTION GROUP

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TEL +1.513.772.7545

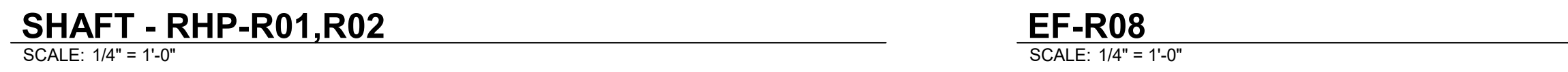
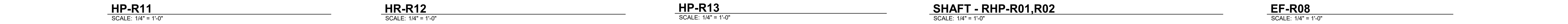
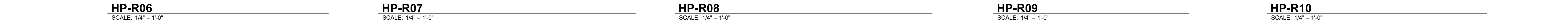
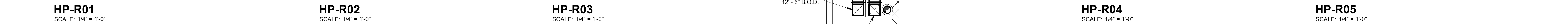
**SHOP
DRAWING**

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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL HVAC SECTIONS

MH3-00-14
SHEET NUMBER



CONTRACTOR INFORMATION

ESTD **P** 1951

**PERFECTION
GROUP**

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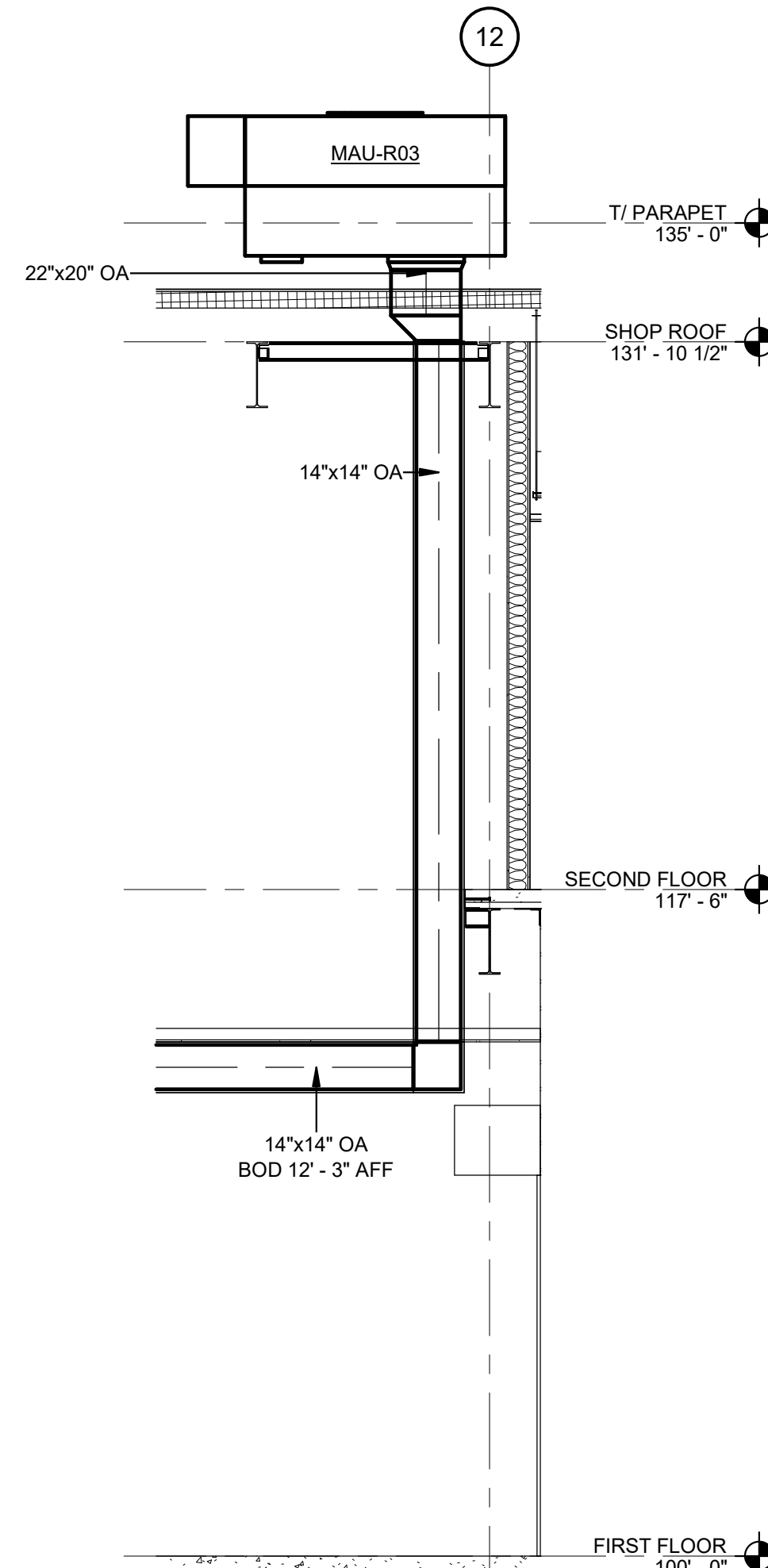
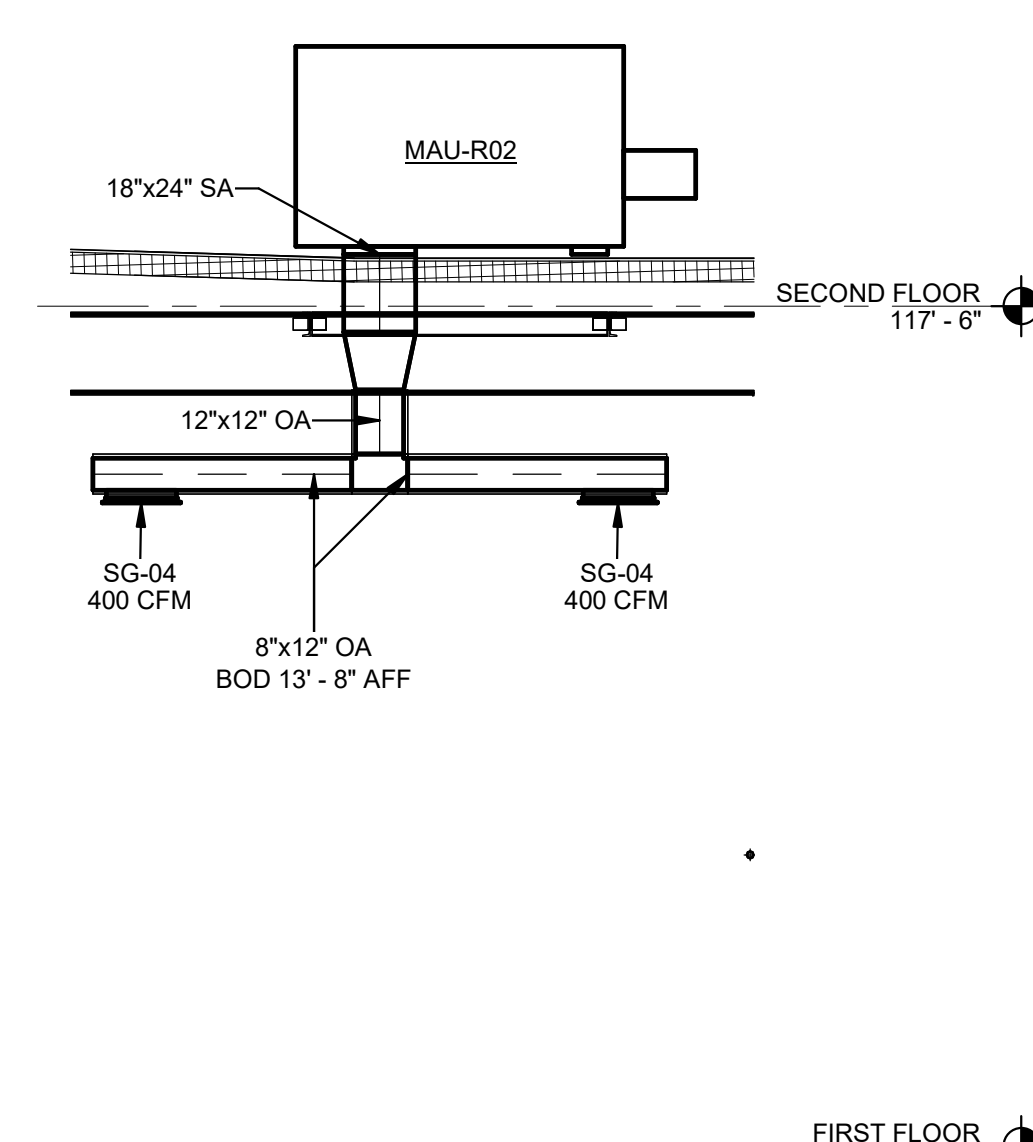
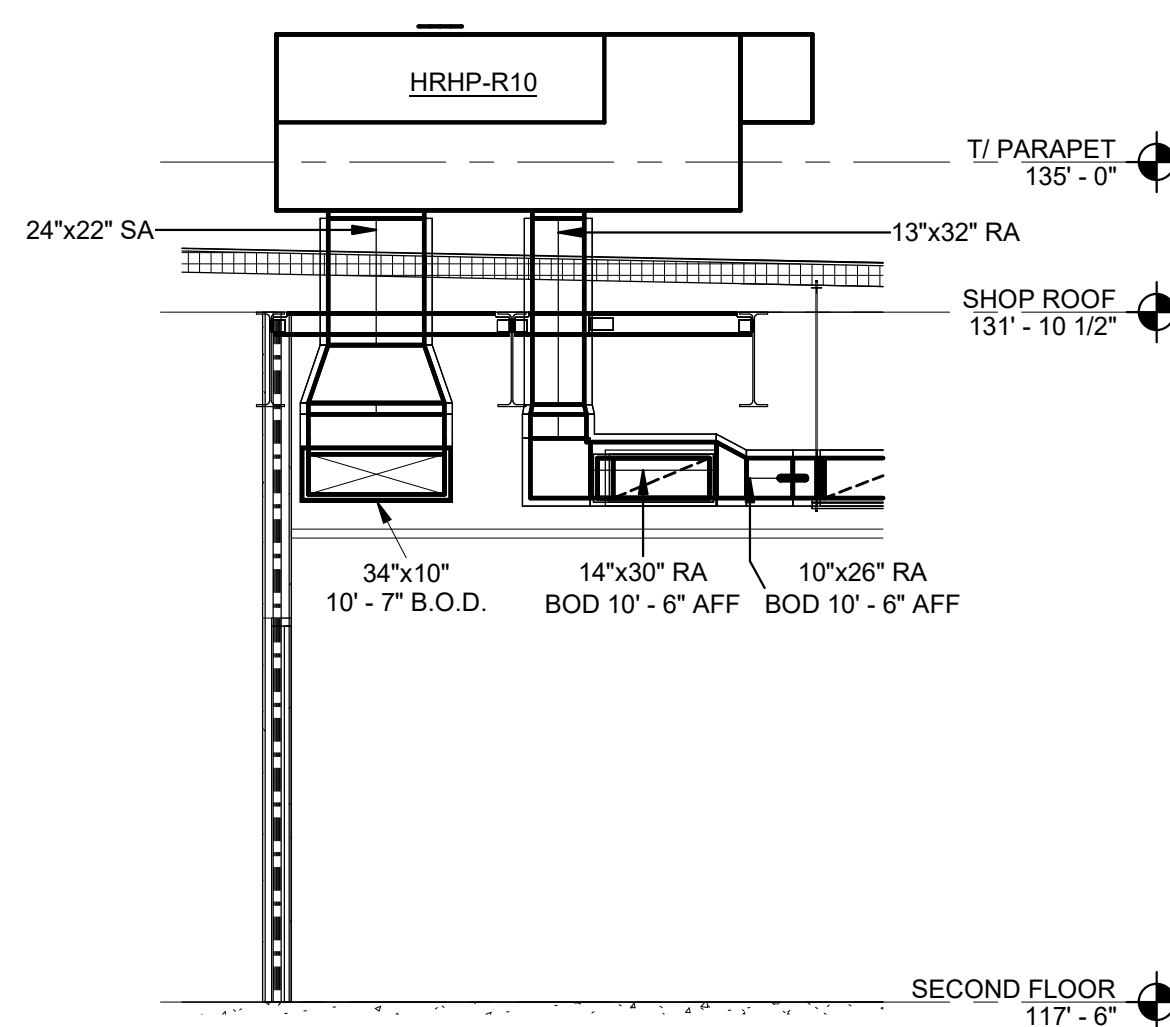
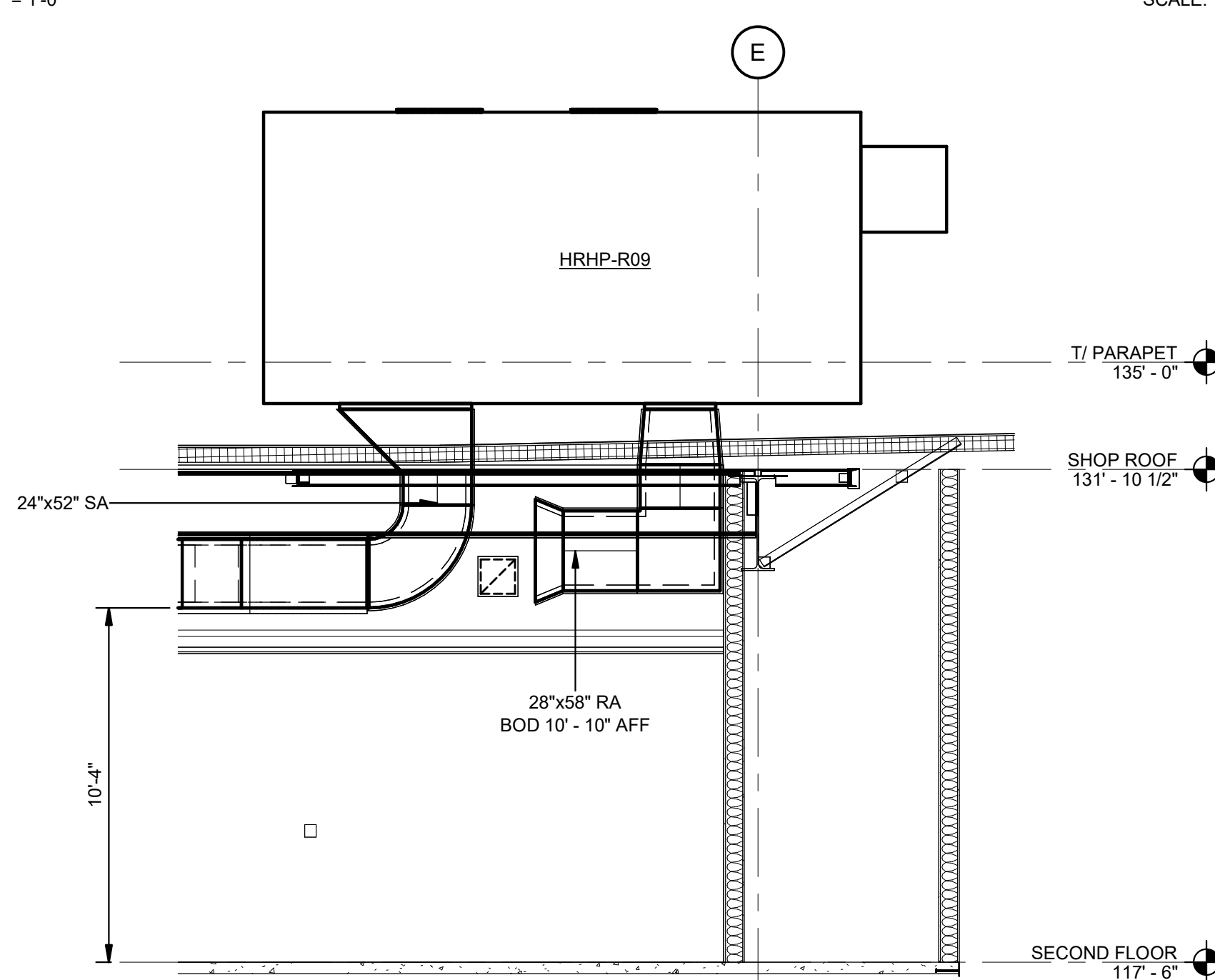
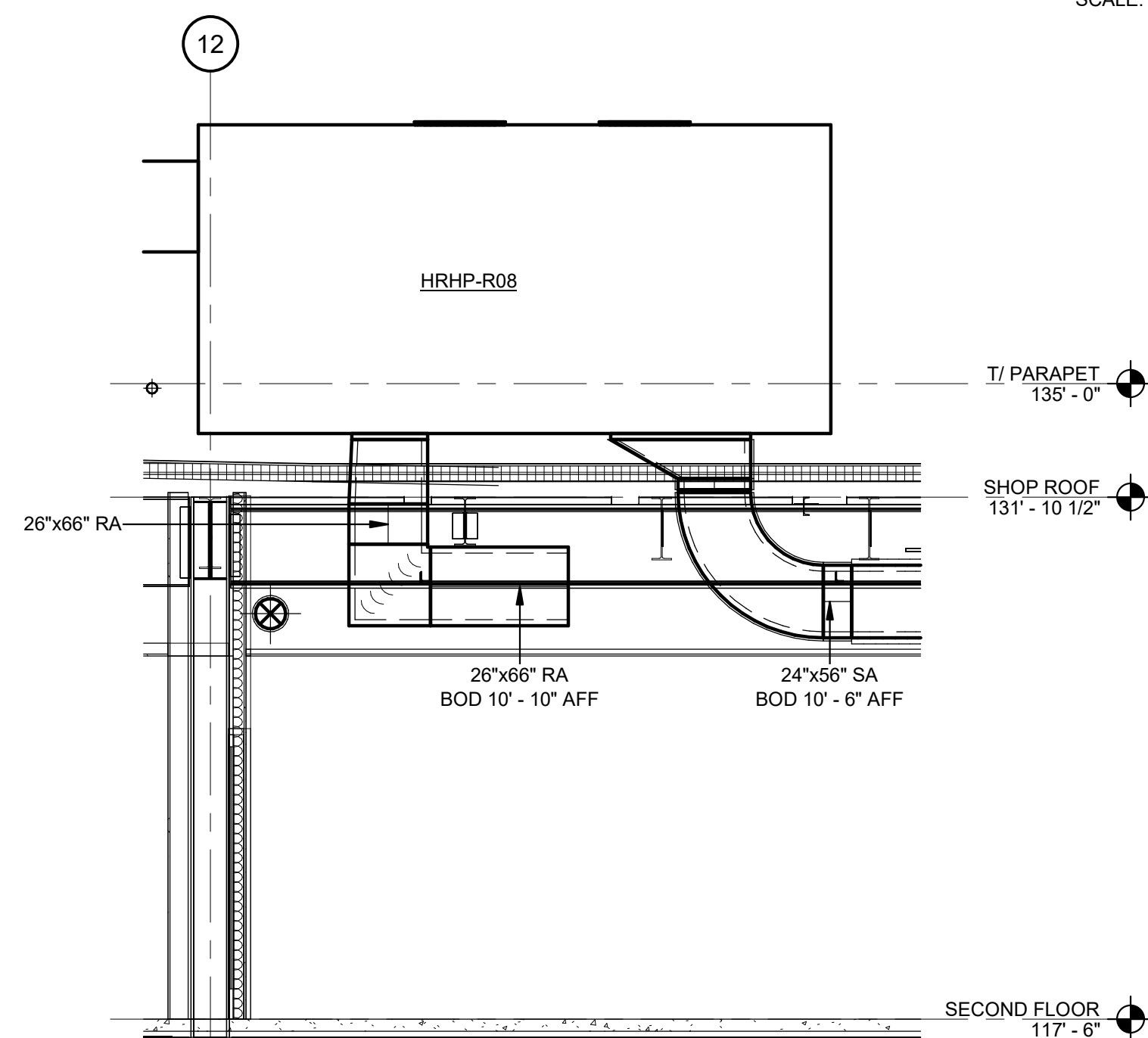
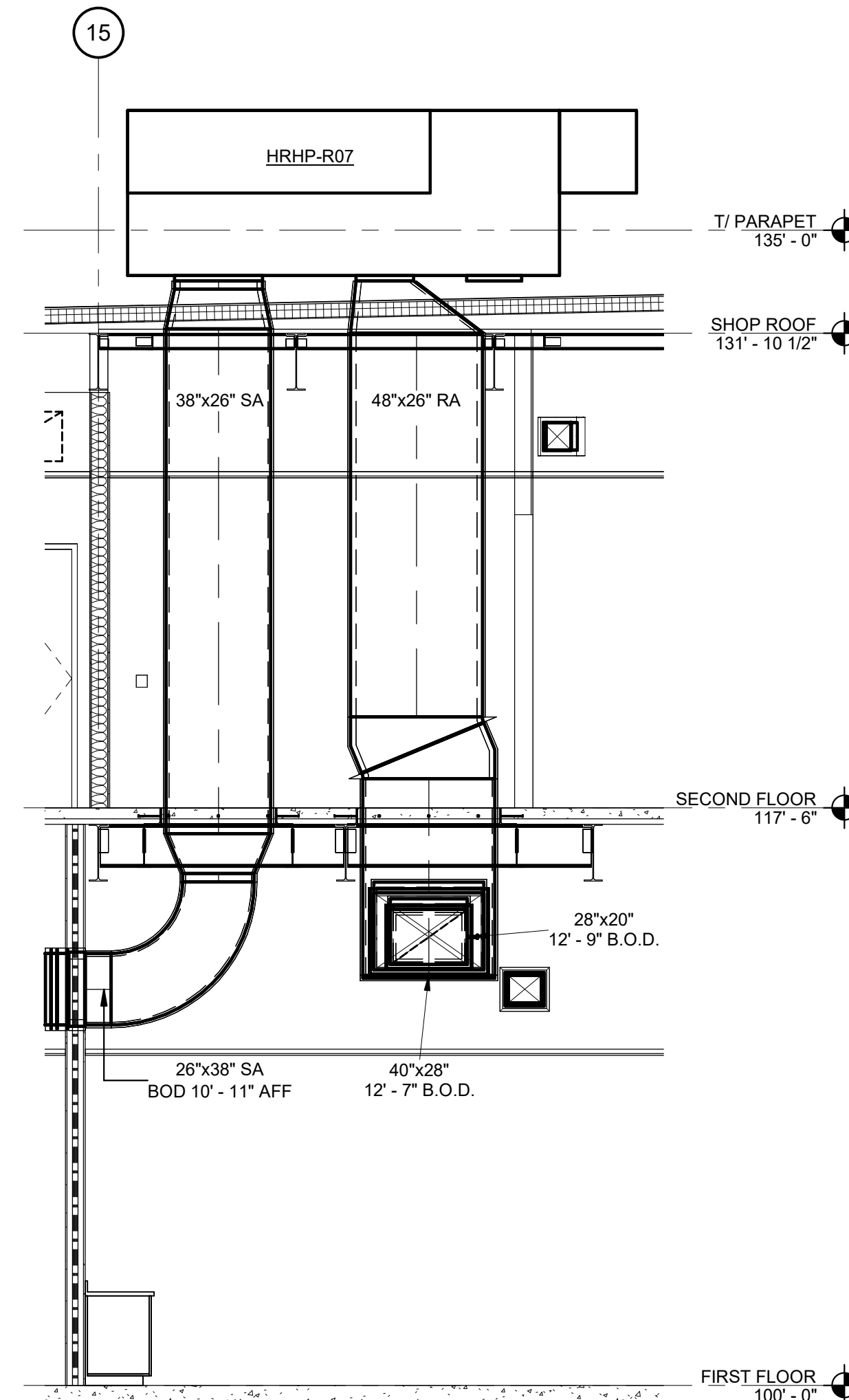
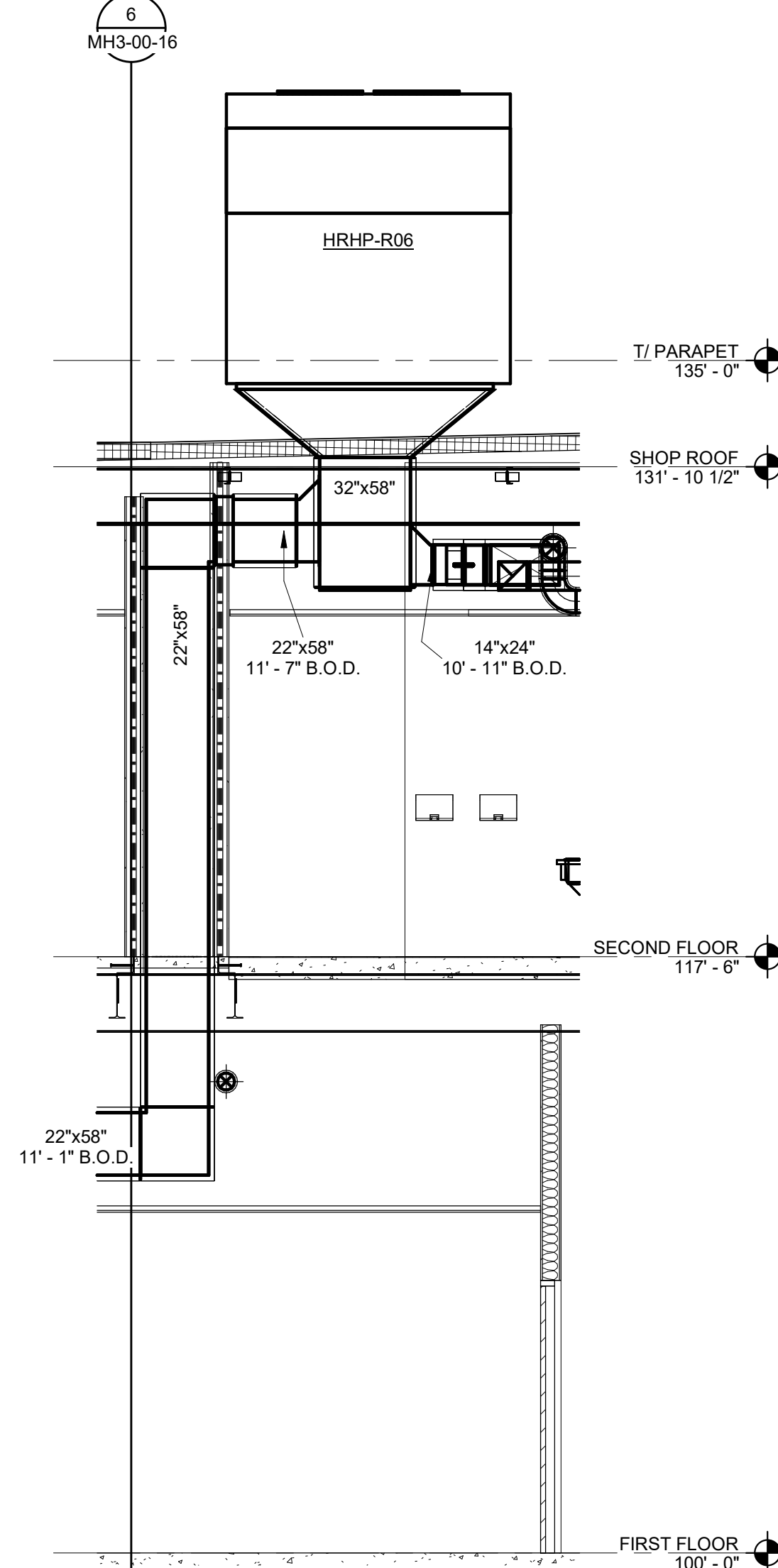
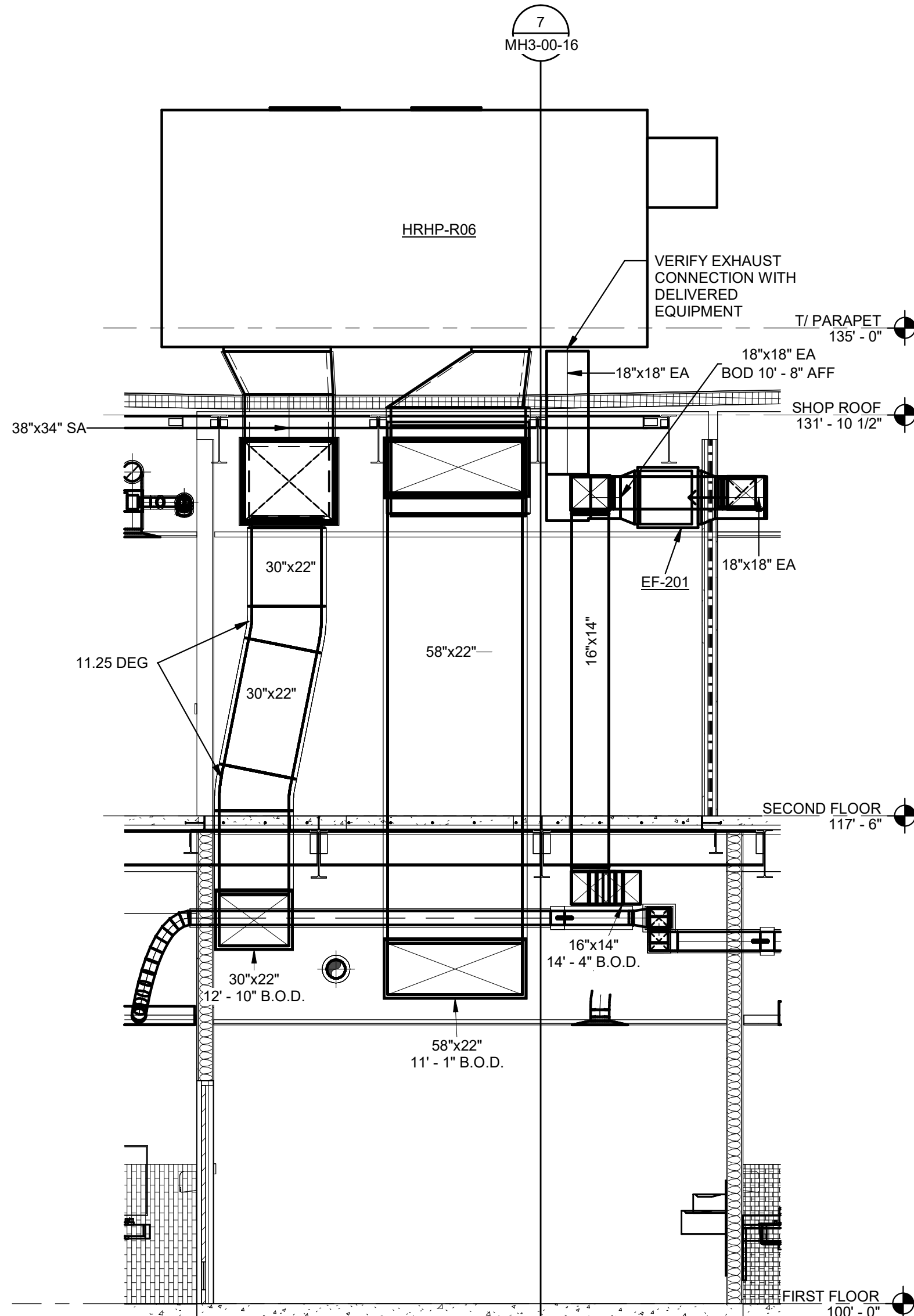
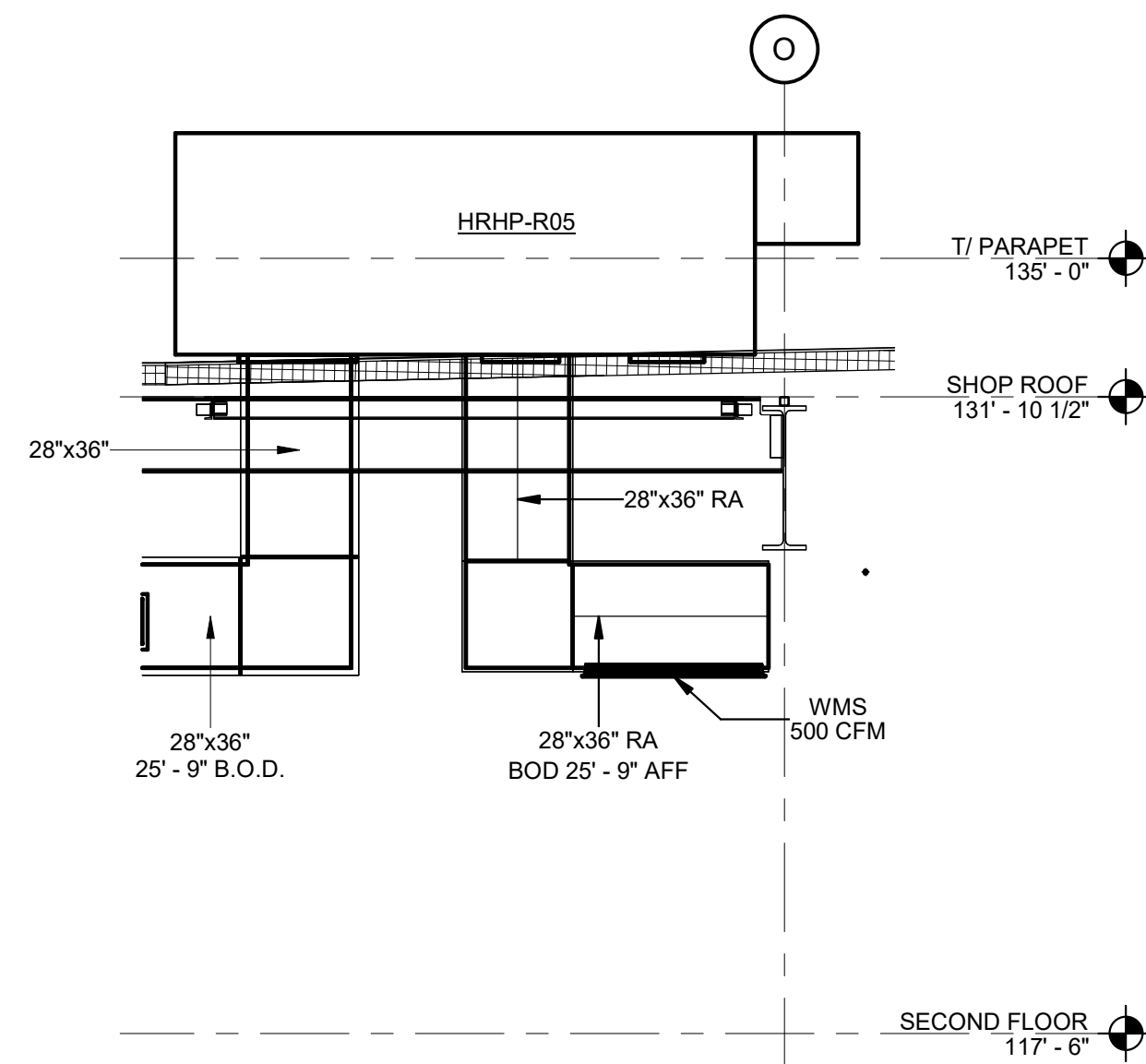
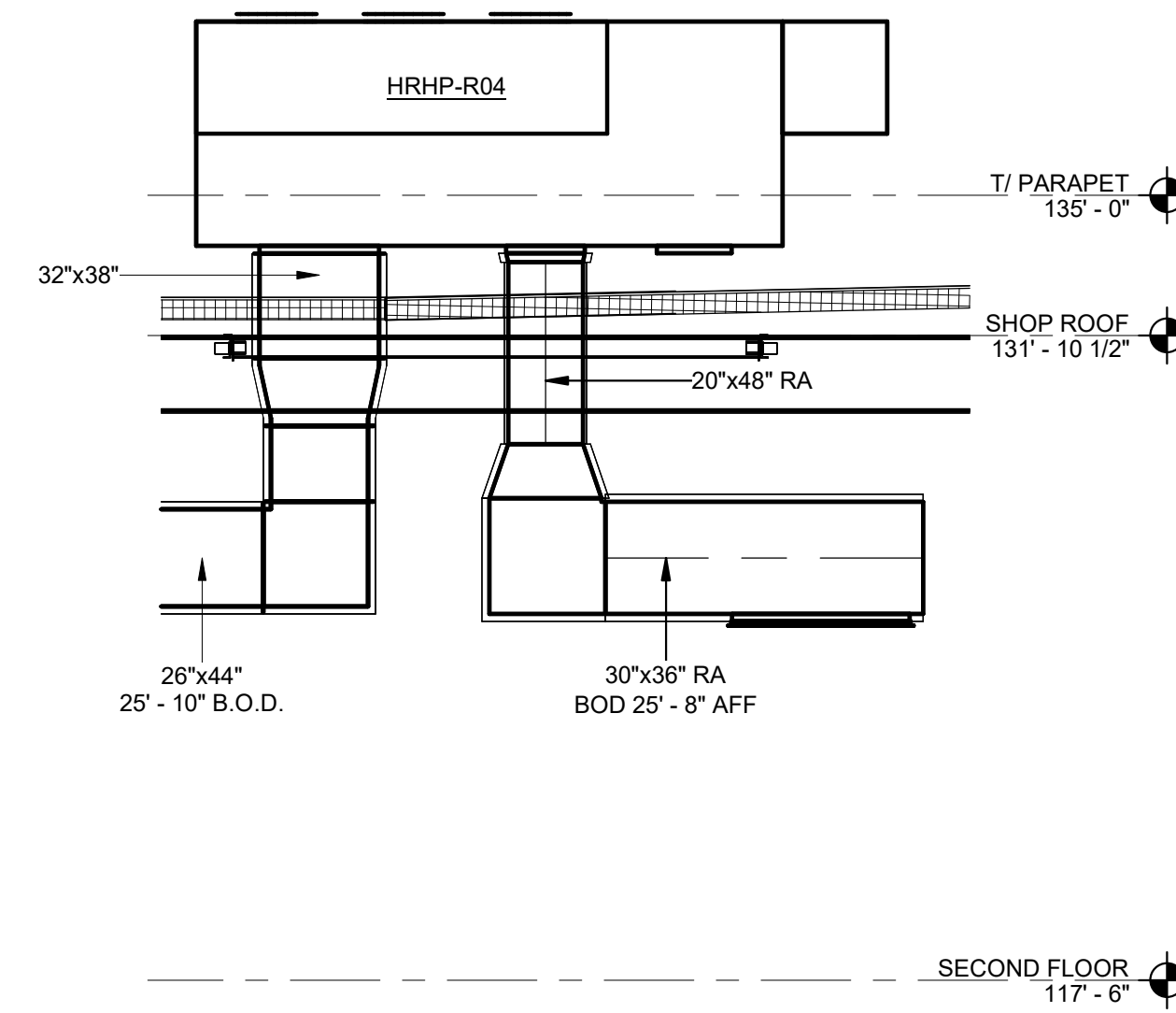
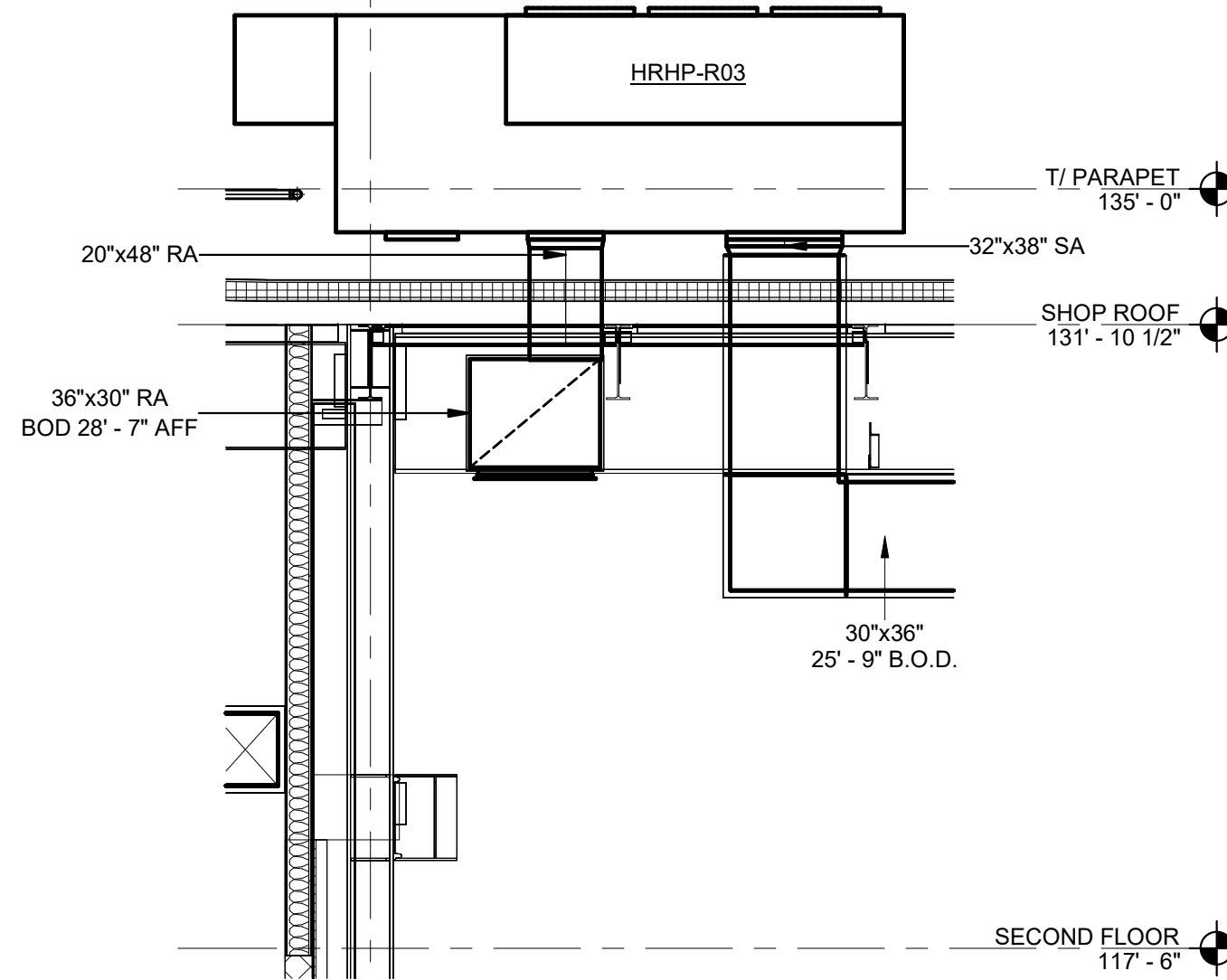
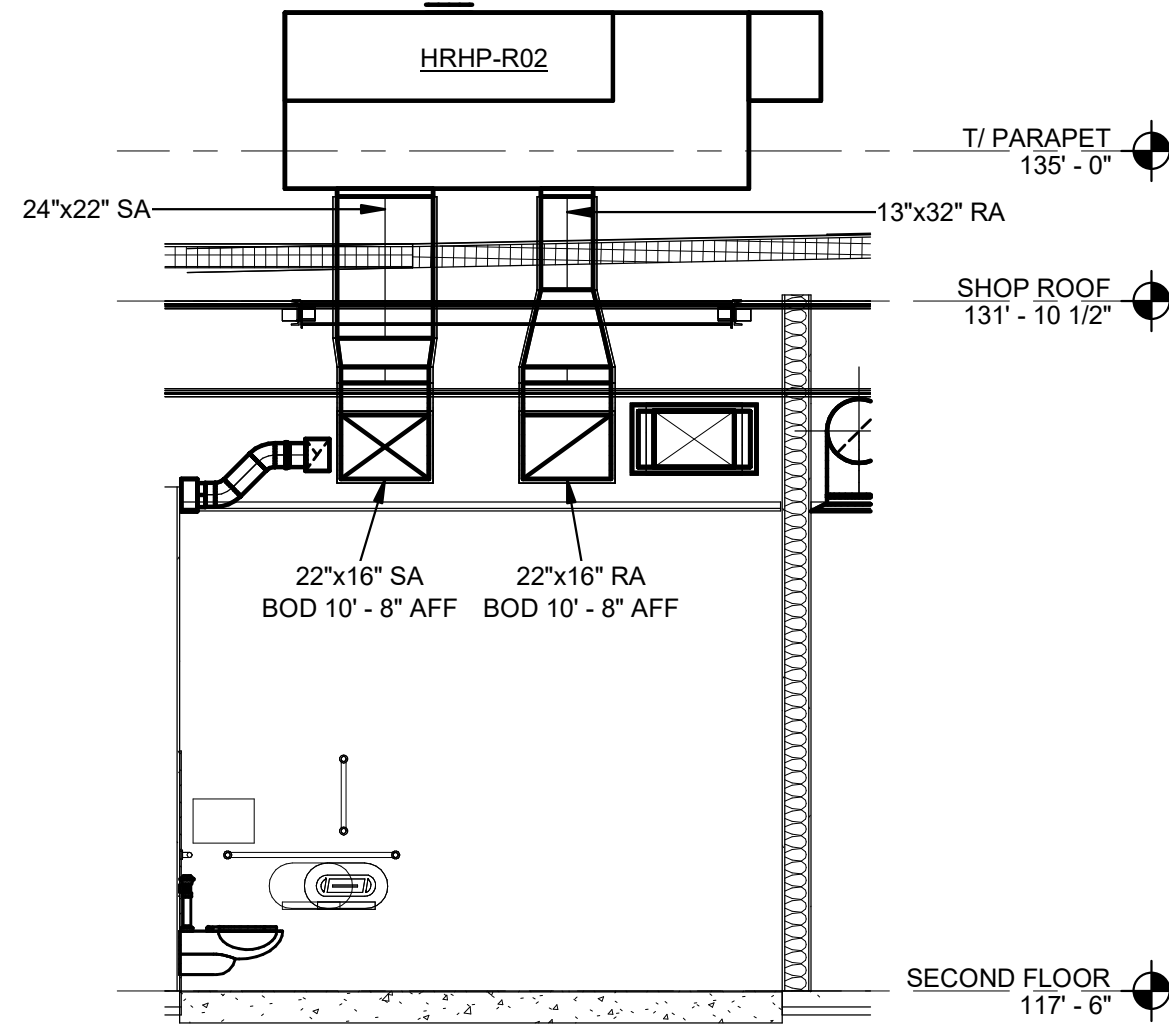
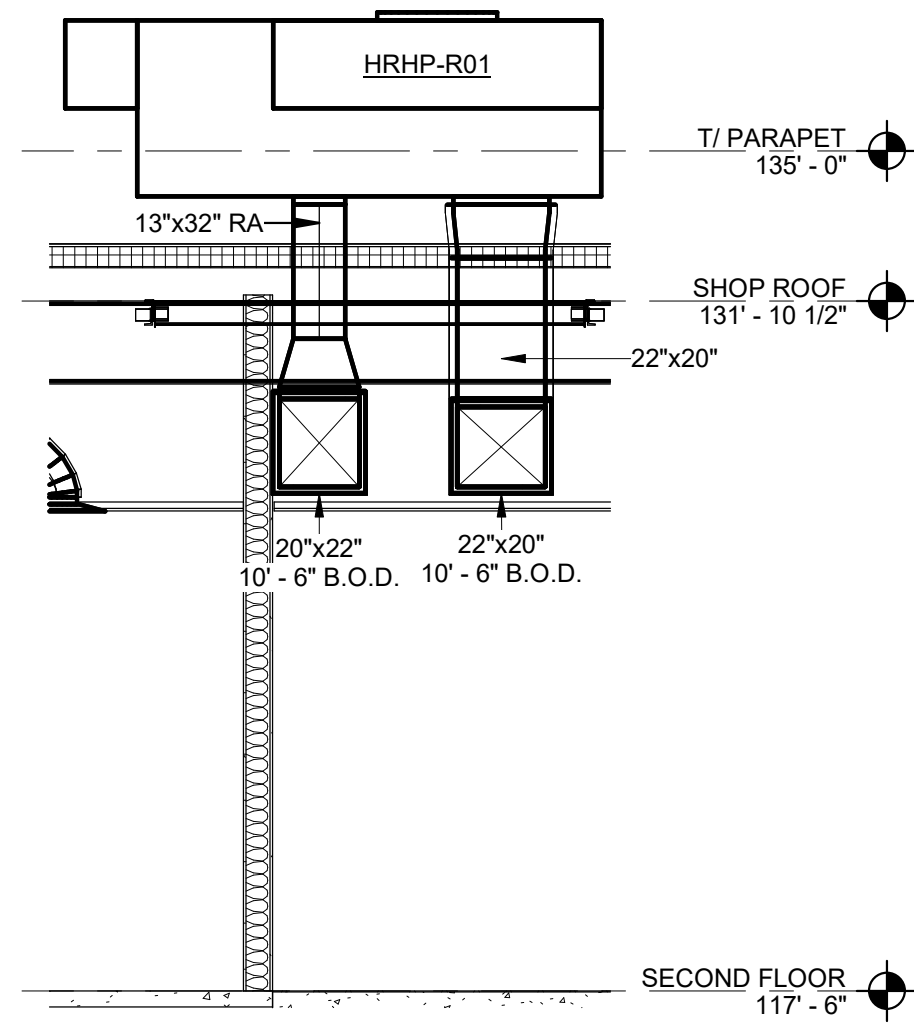
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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL HVAC SECTIONS

MH3-00-15
SHEET NUMBER

CHAFAR ASSOCIATES © 2023 9/11/2025 9:47:10 AM



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CINCINNATI/NORTHERN KENTUCKY
INTERNATIONAL AIRPORT
410 WENDELL H. FORD BLVD
ERLANGER, KY 41018

CONTRACTOR INFORMATION

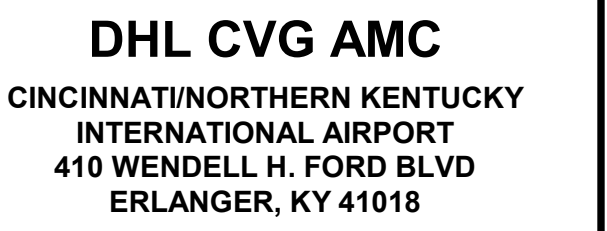
ESTD **P** 1991
PERFECTION GROUP
2649 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545

1	06/03/25	FABRICATION REVISION
REV	DATE	DOC REL # - DESCRIPTION

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL SECTIONS

MH3-00-16
SHEET NUMBER



**PERFECTION
GROUP**

2649 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545

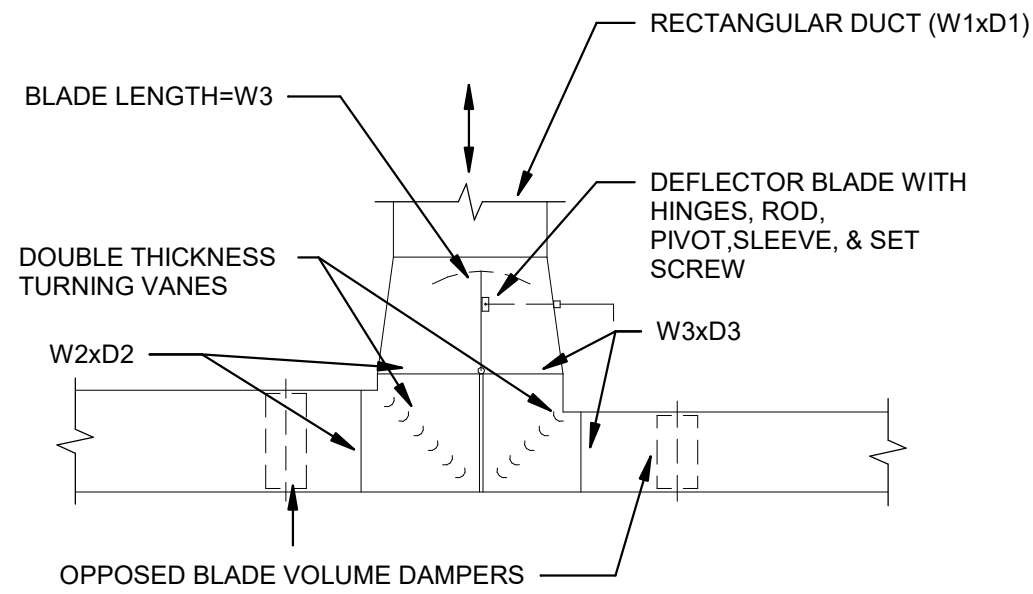
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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL SECTIONS

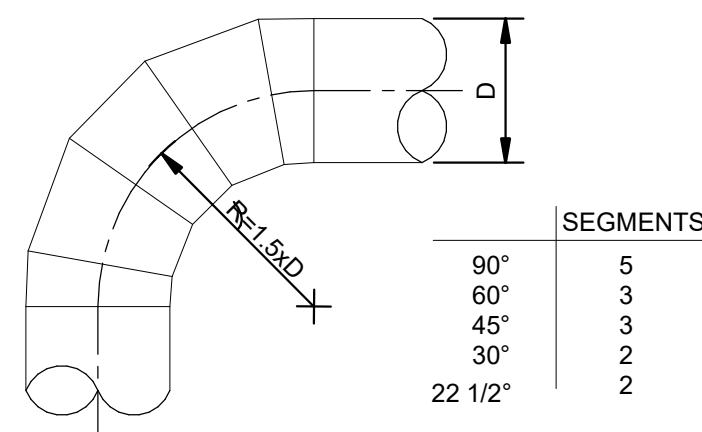
MH3-00-17
SHEET NUMBER

GHAFAR ASSOCIATES © 2023 9/11/2025 9:47:12 AM



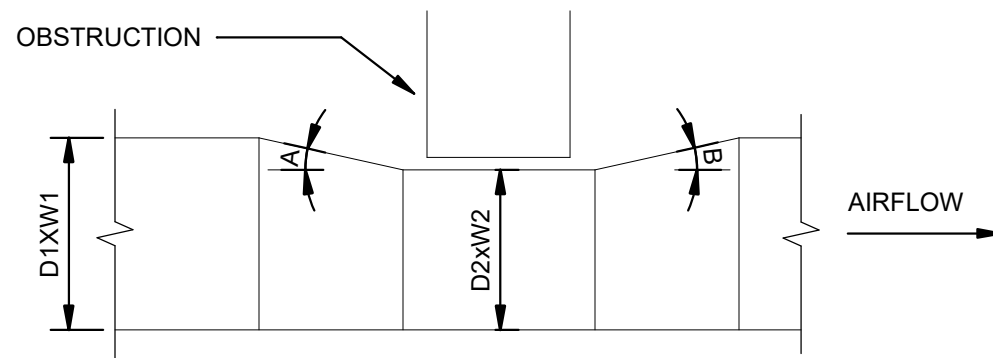
MITERED ELBOW SPLIT - 1S DETAIL

NOT TO SCALE



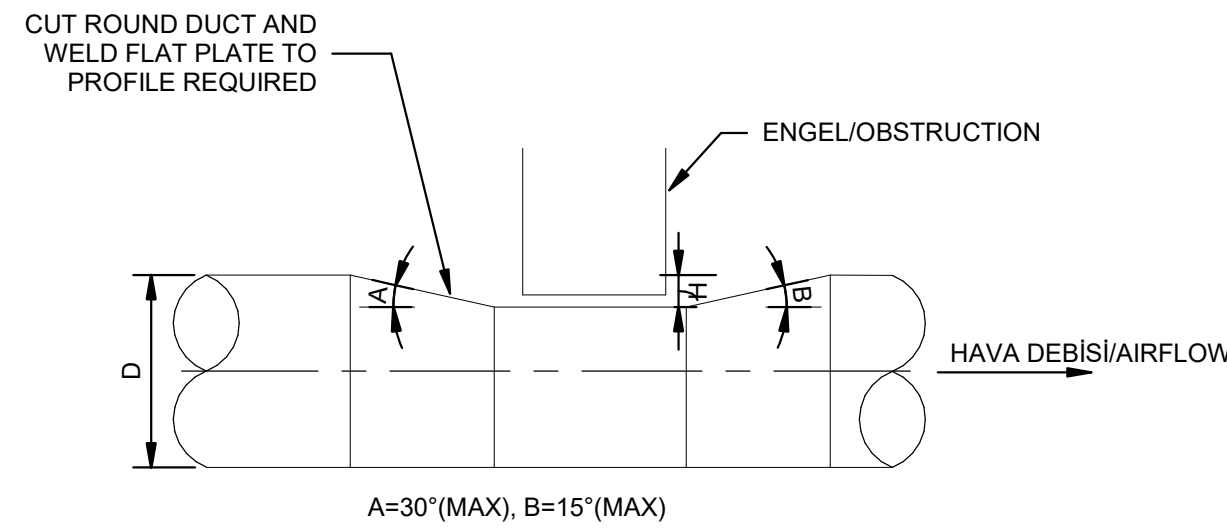
MULTIPLE PIECE ROUND ELBOW - 5E DETAIL

NOT TO SCALE



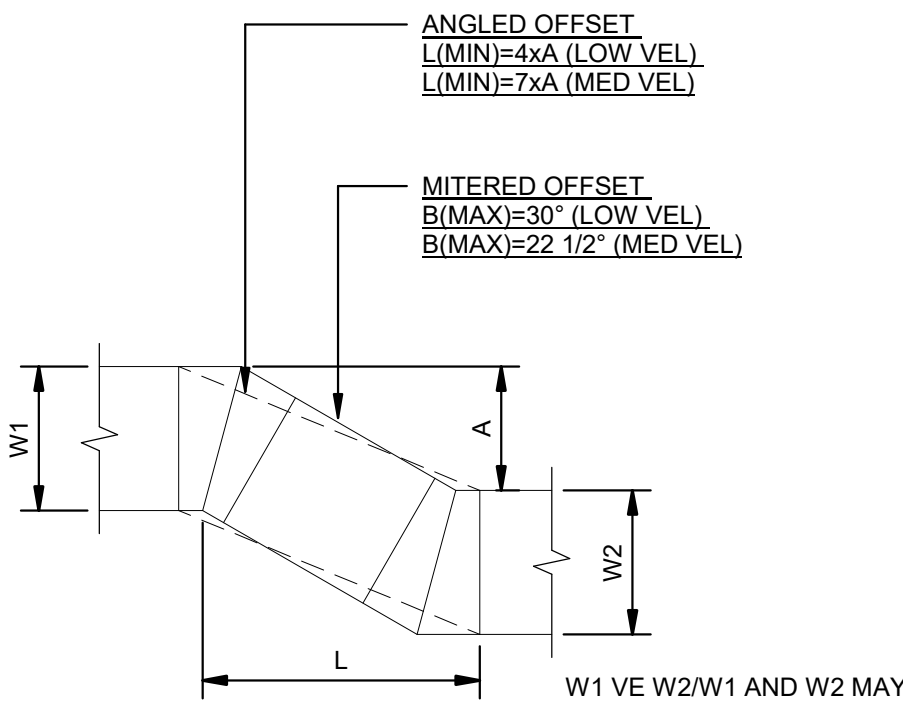
OBSTRUCTION - RECTANGULAR DUCT - 10B DETAIL

NOT TO SCALE



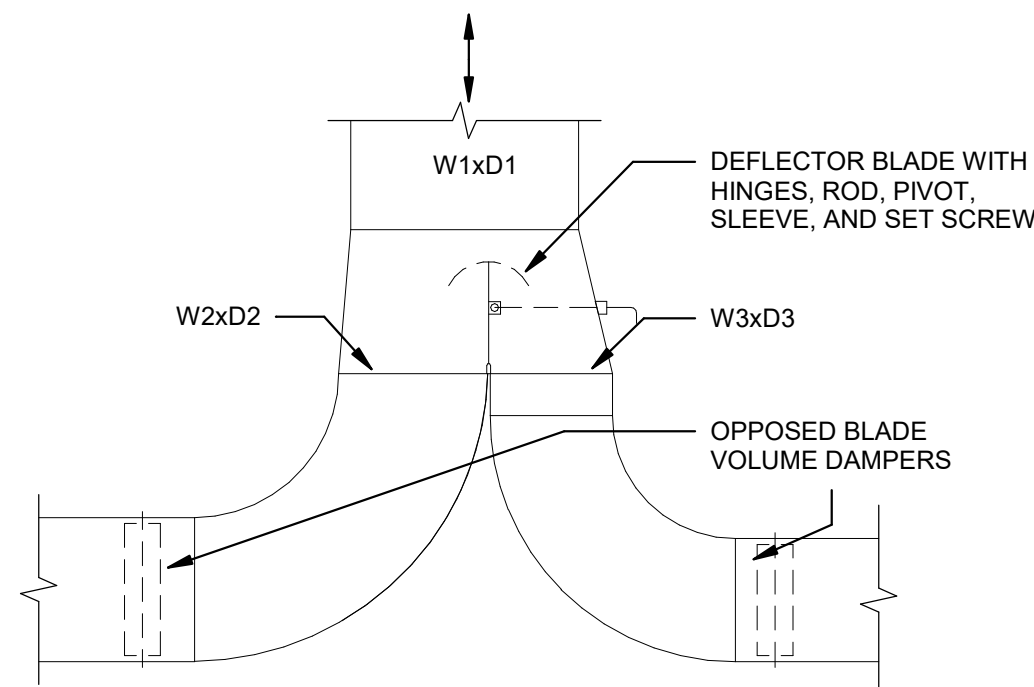
OBSTRUCTION - ROUND DUCT - 20B DETAIL

NOT TO SCALE



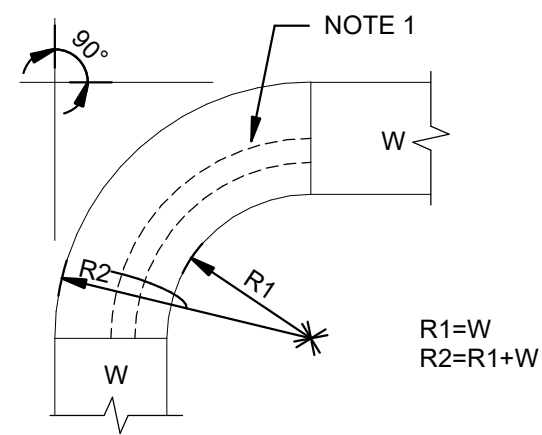
OFFSETS - 1O DETAIL

NOT TO SCALE



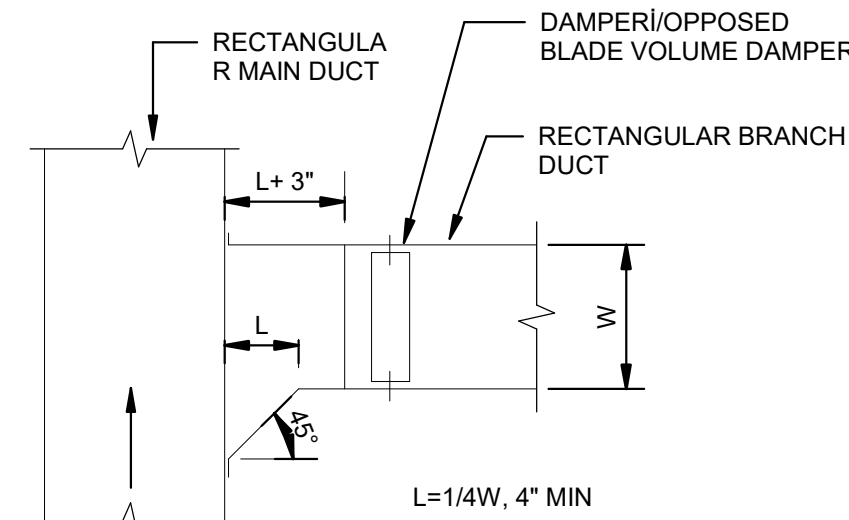
RADIAL ELBOW SPLIT - 2S DETAIL

NOT TO SCALE



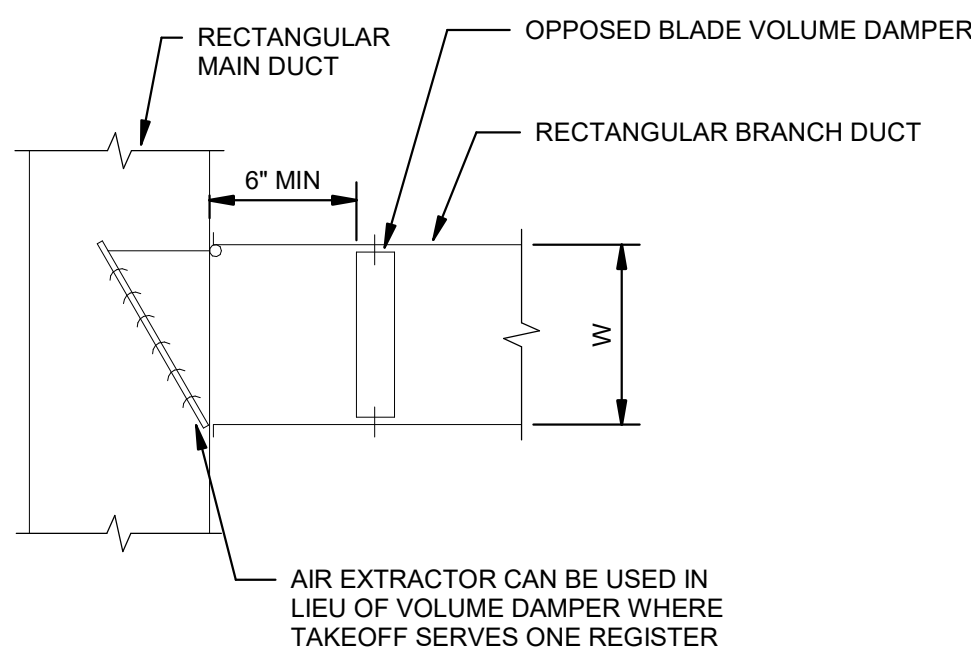
RADIAL RECTANGULAR ELBOW - 3E DETAIL

NOT TO SCALE



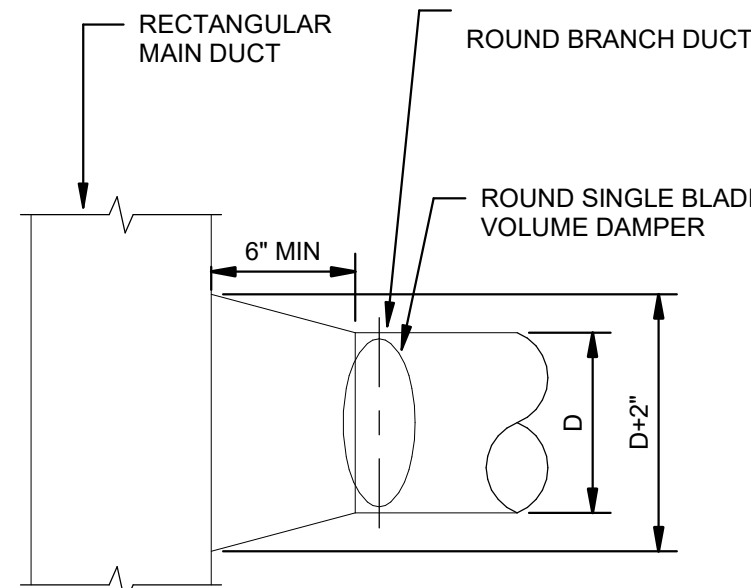
RECTANGULAR TO RECTANGULAR BRANCH - 1B DETAIL

NOT TO SCALE



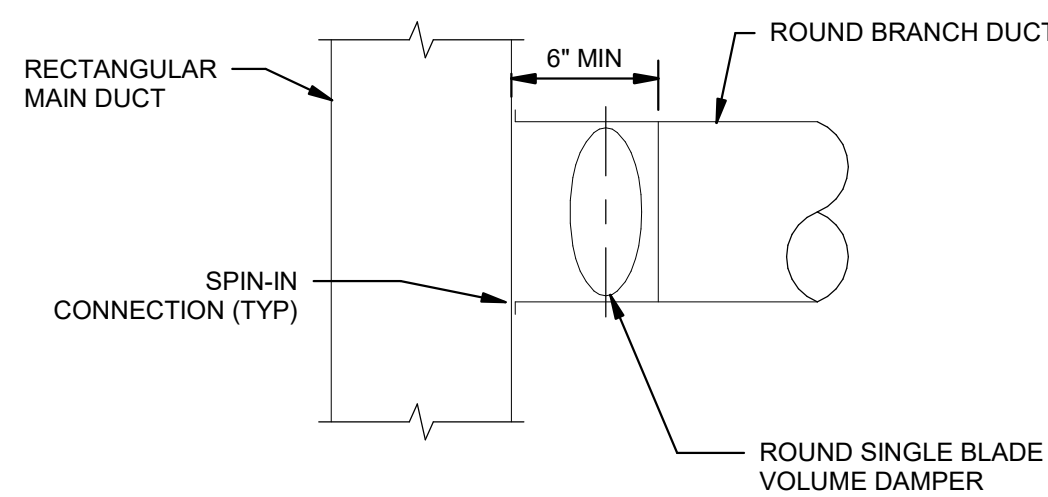
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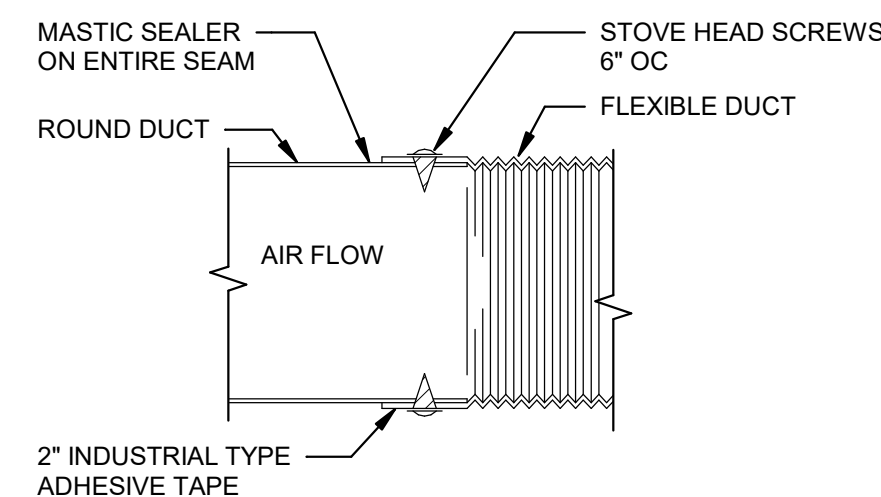
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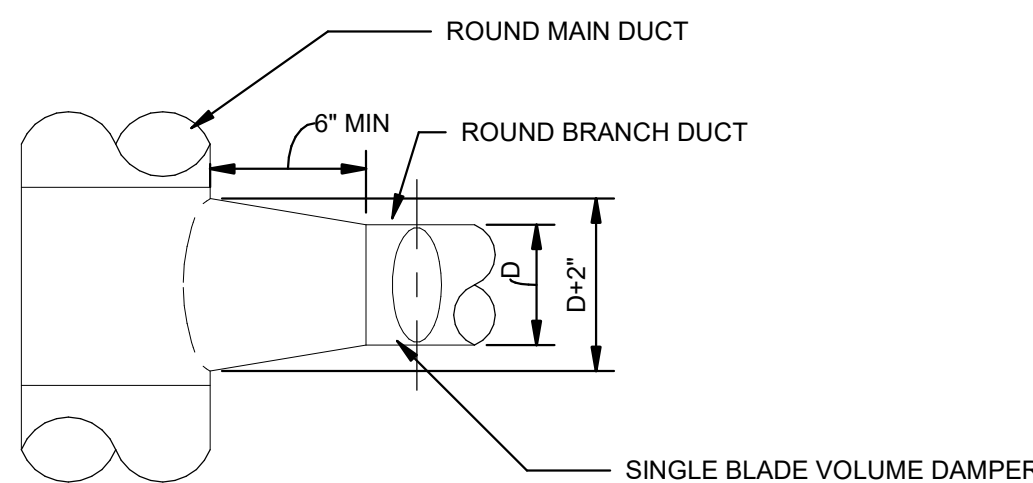
RECTANGULAR TO ROUND BRANCH DETAIL

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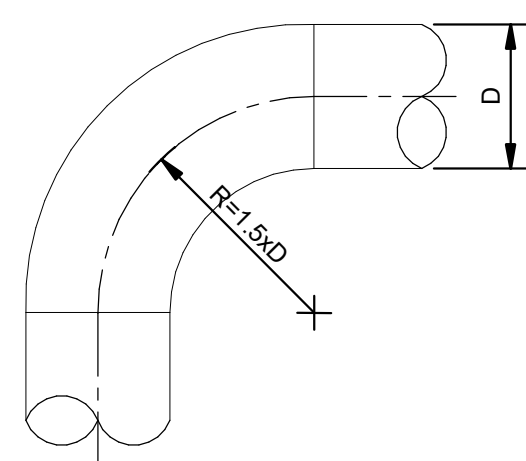
ROUND TO FLEXIBLE CONNECTION DETAIL

NOT TO SCALE



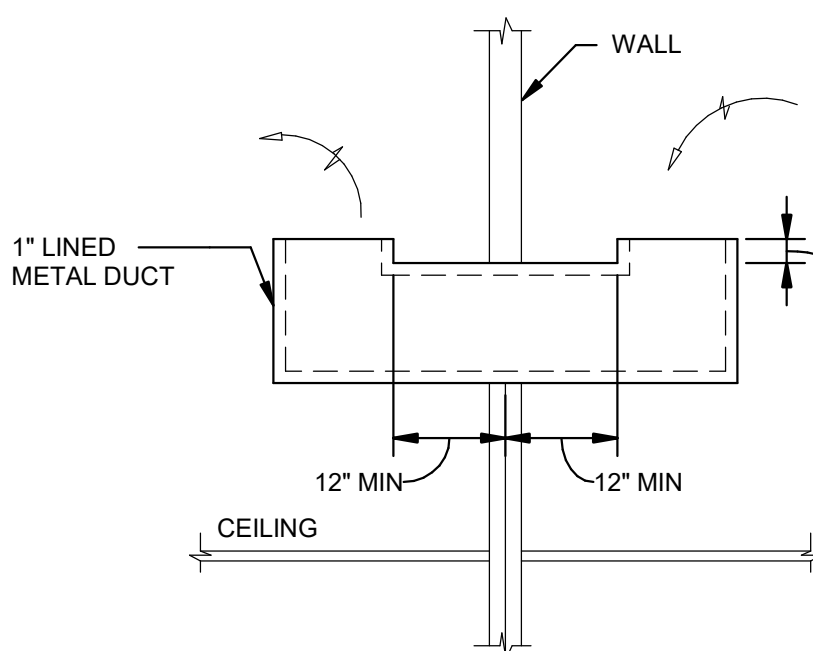
ROUND TO ROUND BRANCH - 6B DETAIL

NOT TO SCALE



SINGLE PIECE ROUND ELBOW - 4E DETAIL

NOT TO SCALE



SOUND TRAP DETAIL

NOT TO SCALE



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410 WENDELL H. FORD BLVD
ERLANGER, KY 41018

CONTRACTOR INFORMATION

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PERFECTION
GROUP

2849 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545

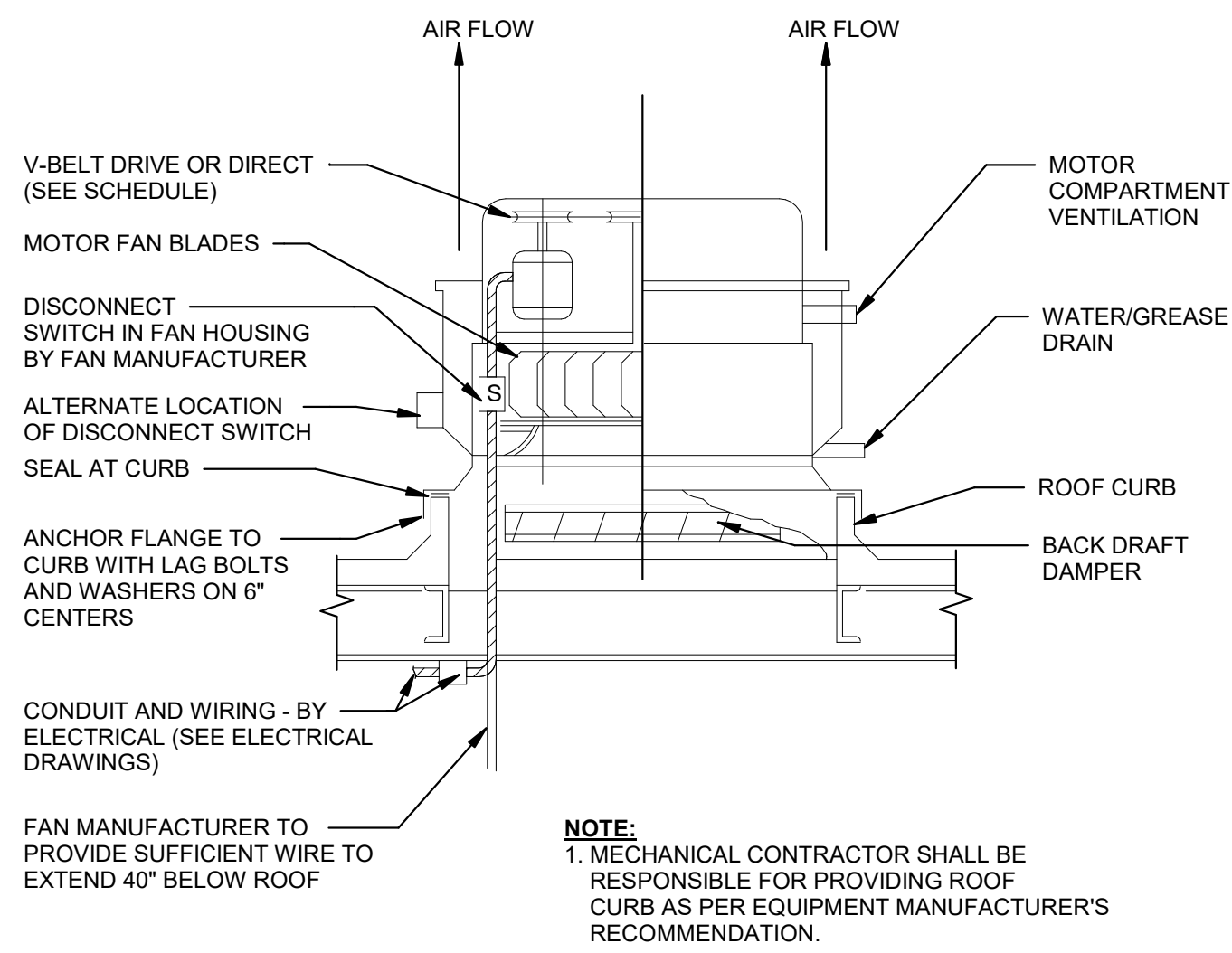
SHOP
DRAWING

2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

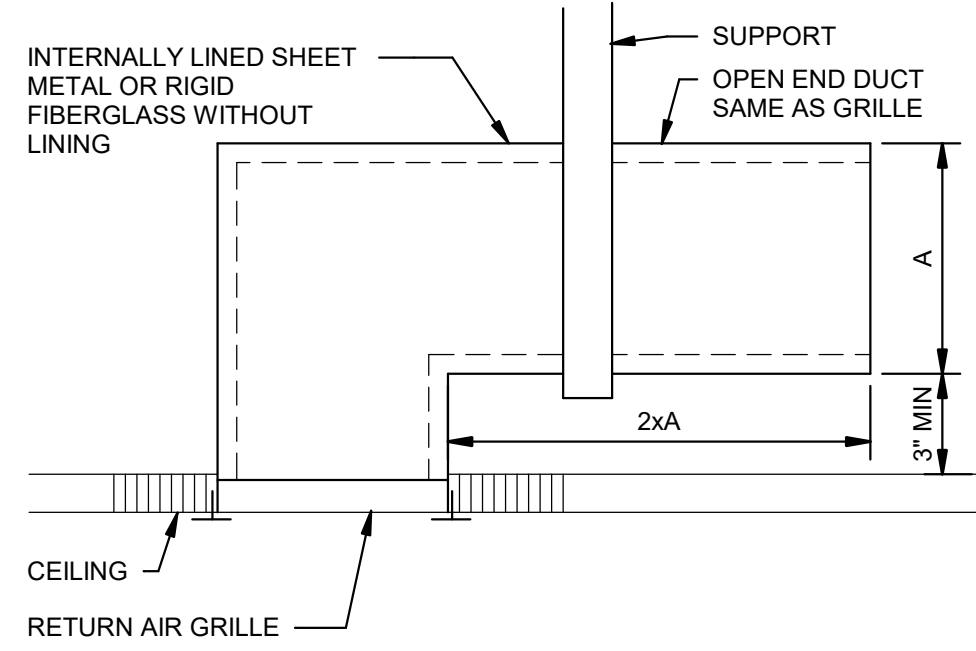
PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

MECHANICAL
HVAC DETAILS

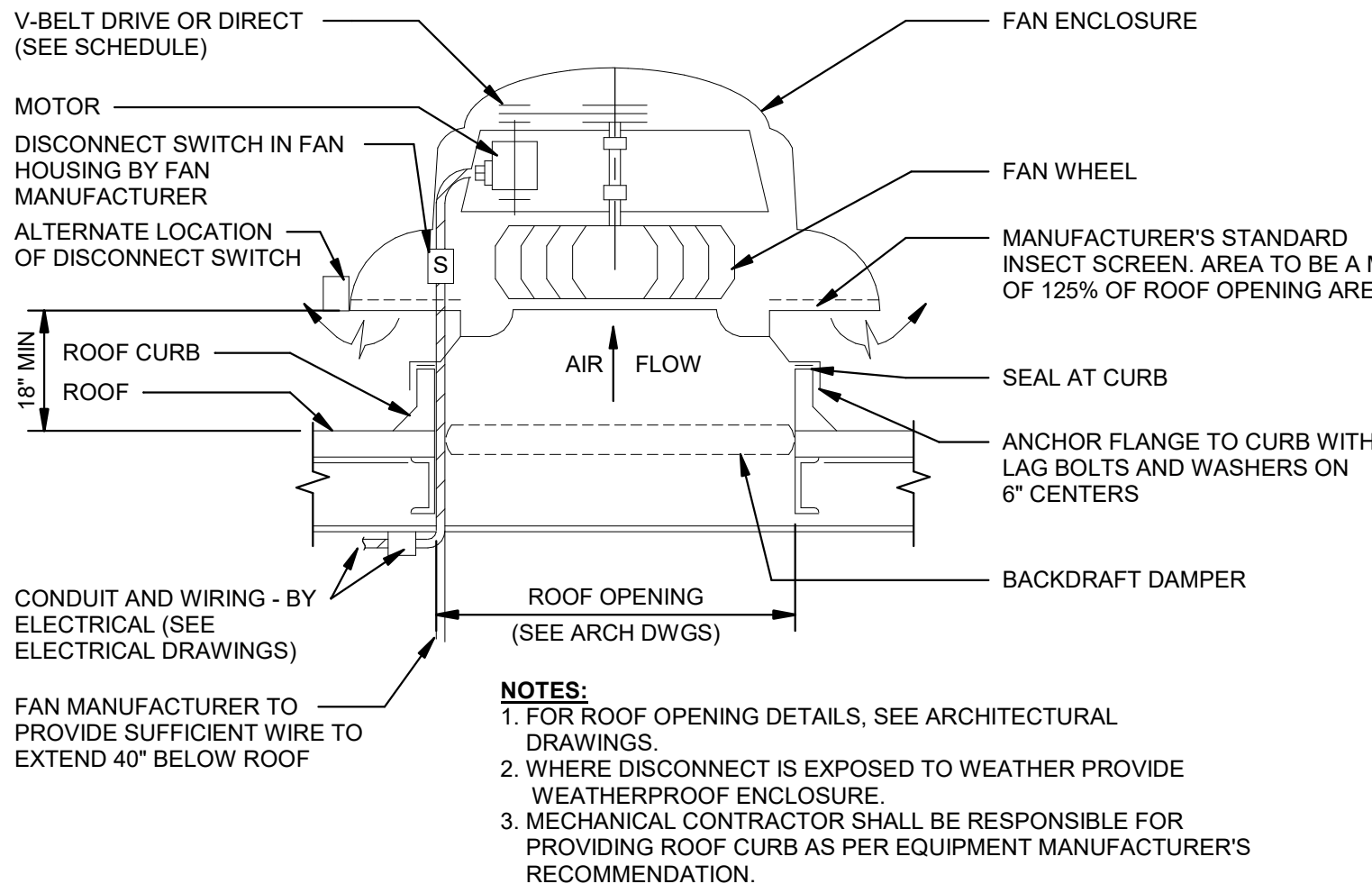
MH5-00-01
SHEET NUMBER



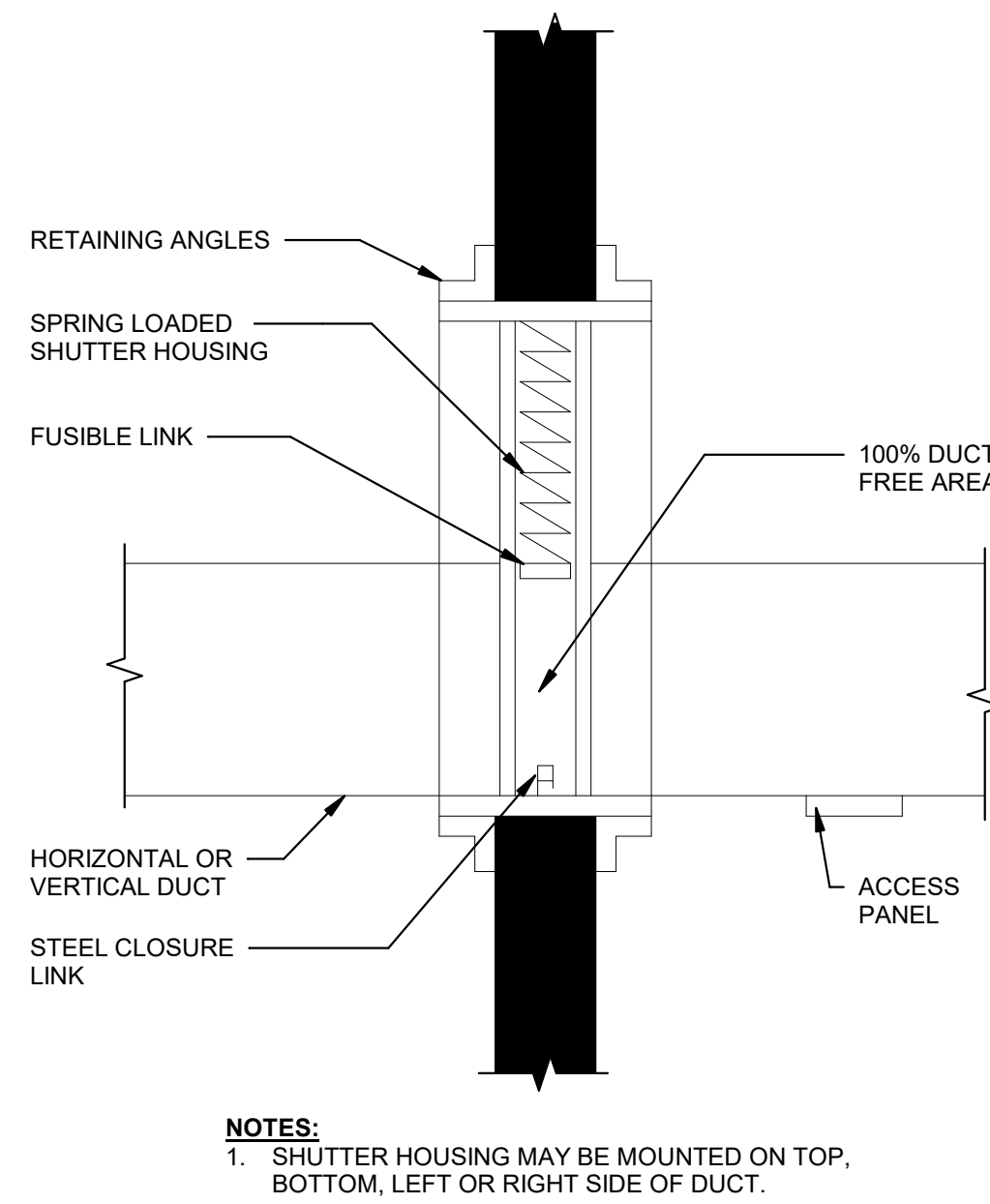
CENTRIFUGAL UPBLAST ROOF FAN DETAIL
NOT TO SCALE



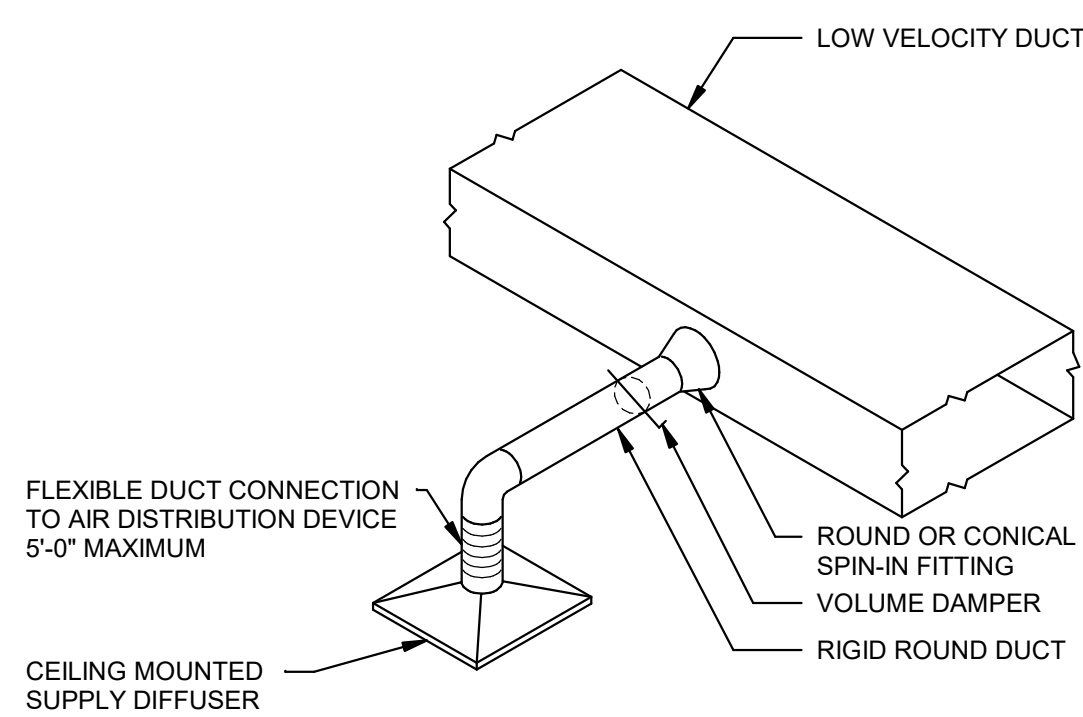
CEILING RETURN AIR GRILLE WITH SOUND TRAP DETAIL
NOT TO SCALE



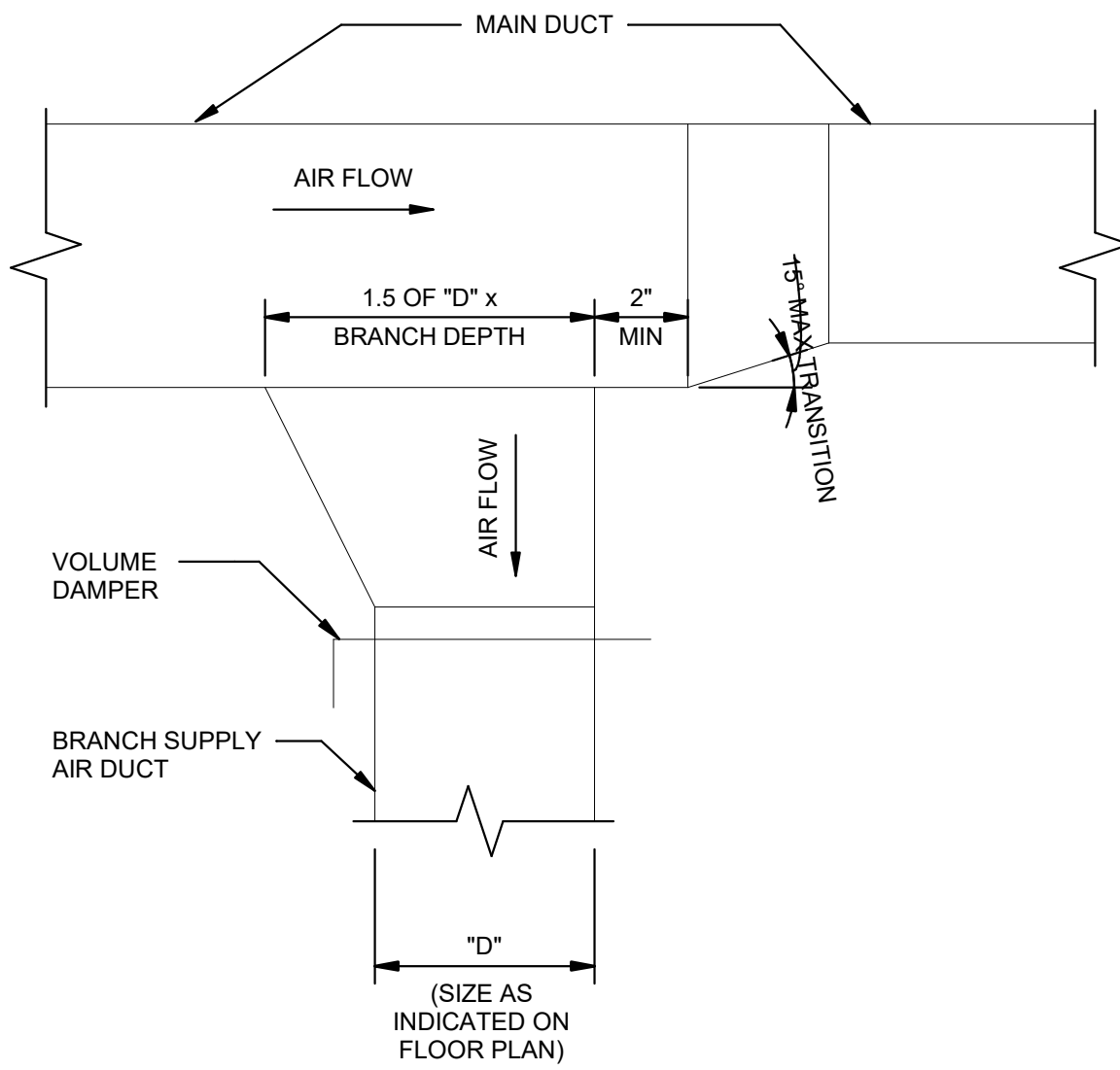
CENTRIFUGAL DOME TYPE ROOF EXHAUST FAN DETAIL
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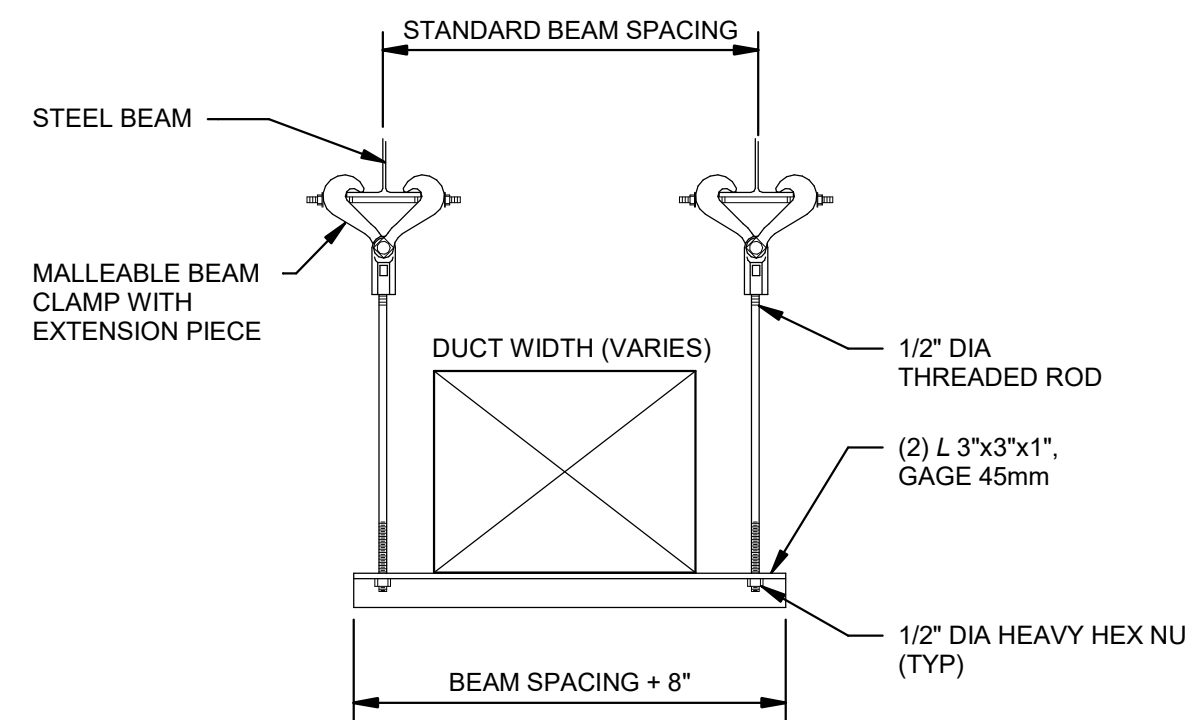
CURTAIN TYPE DYNAMIC FIRE DAMPER DETAIL
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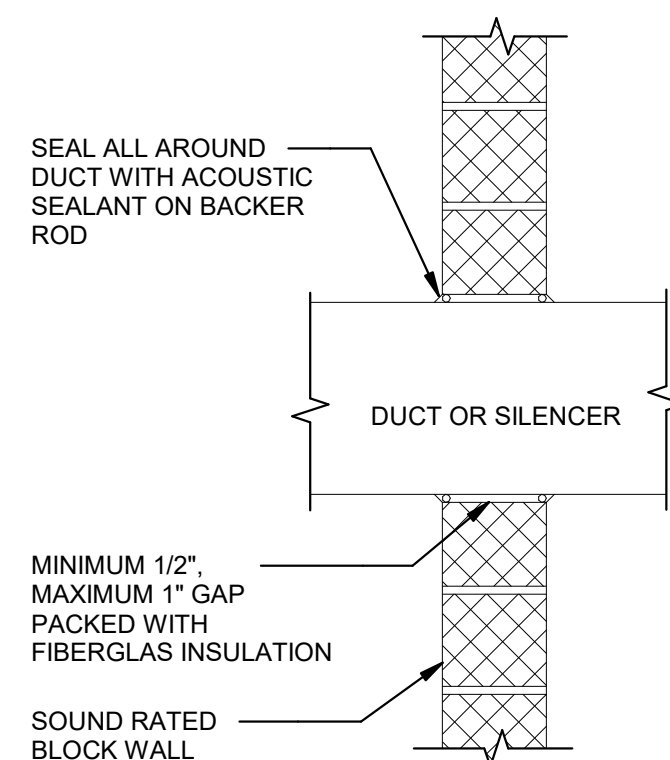
DIFFUSER CONNECTION DETAIL
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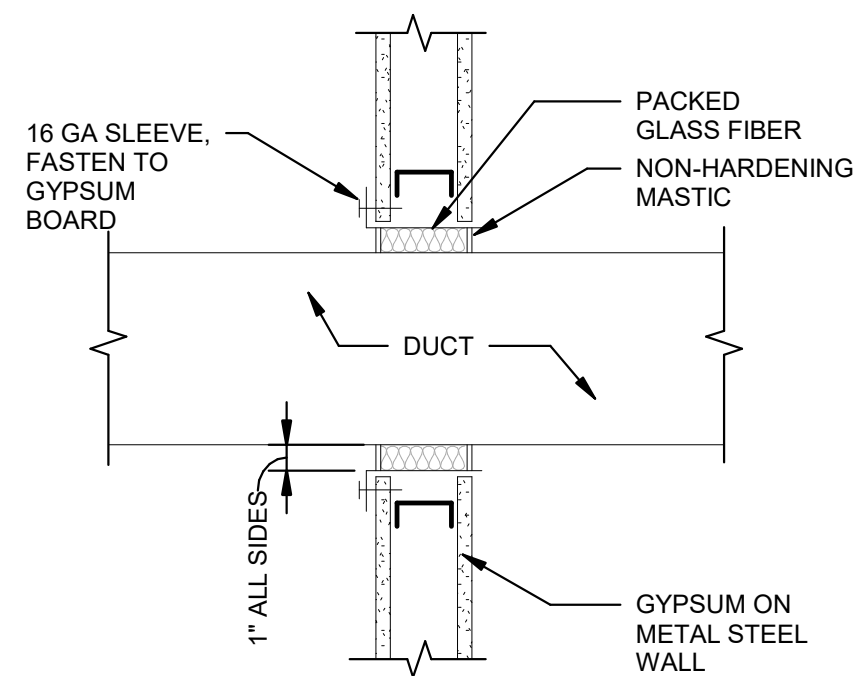
DUCT CONNECTION DETAIL
NOT TO SCALE



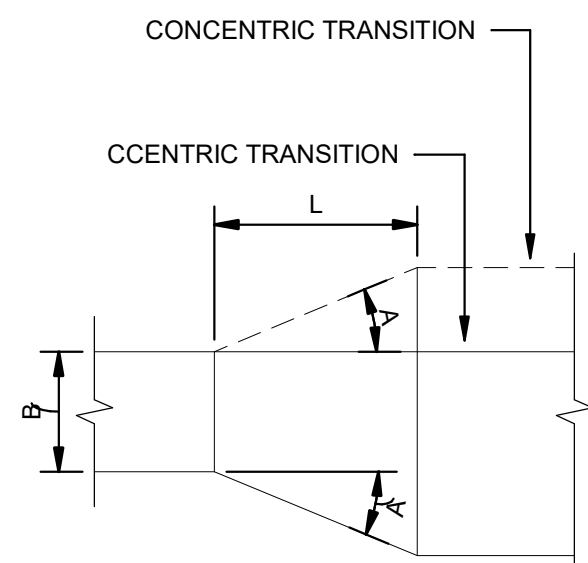
DUCT HANGER DETAIL
NOT TO SCALE



DUCT PENETRATION DETAIL
NOT TO SCALE

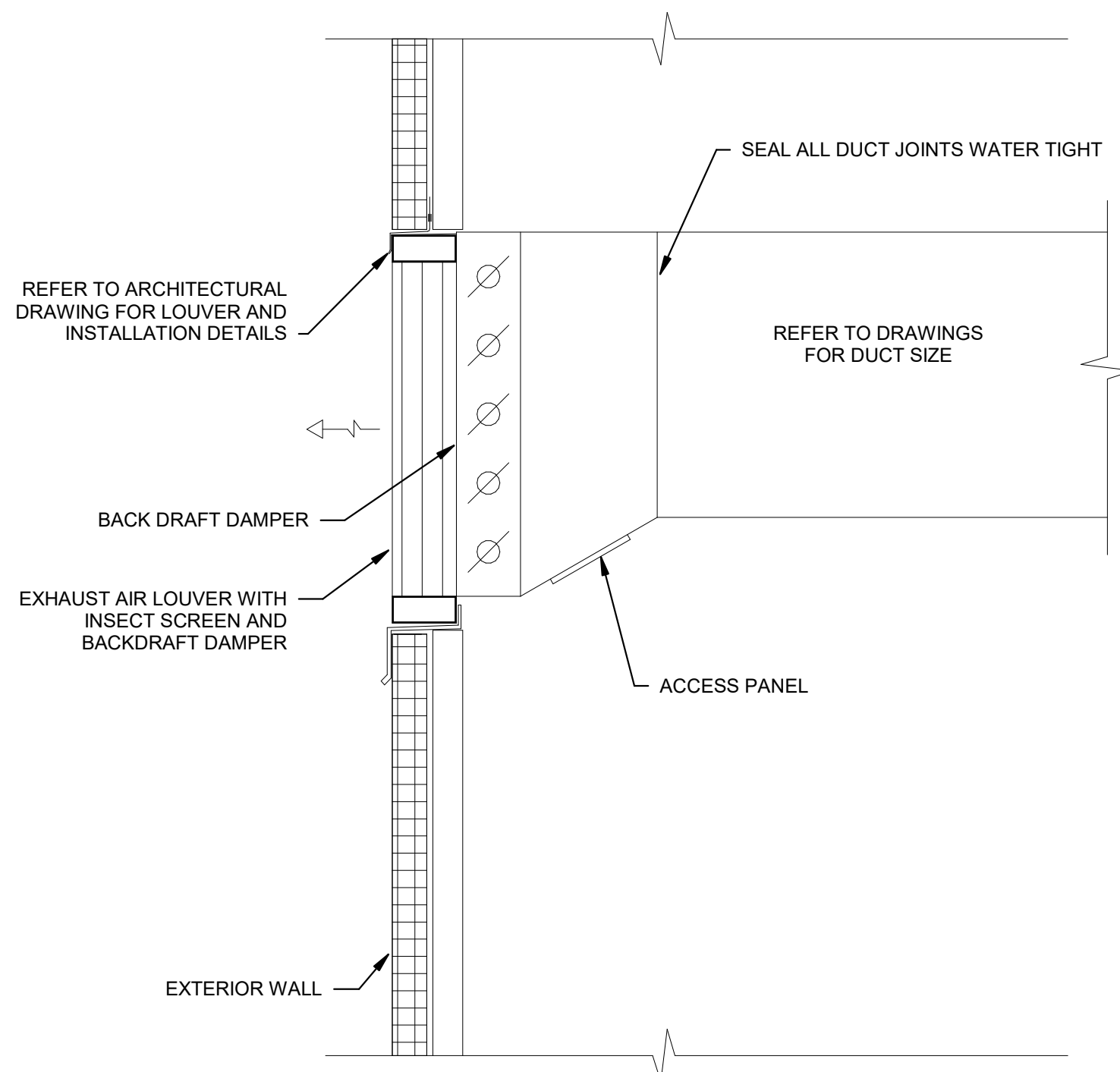


DUCT SEAL AT NON-RATED WALLS DETAIL
NOT TO SCALE

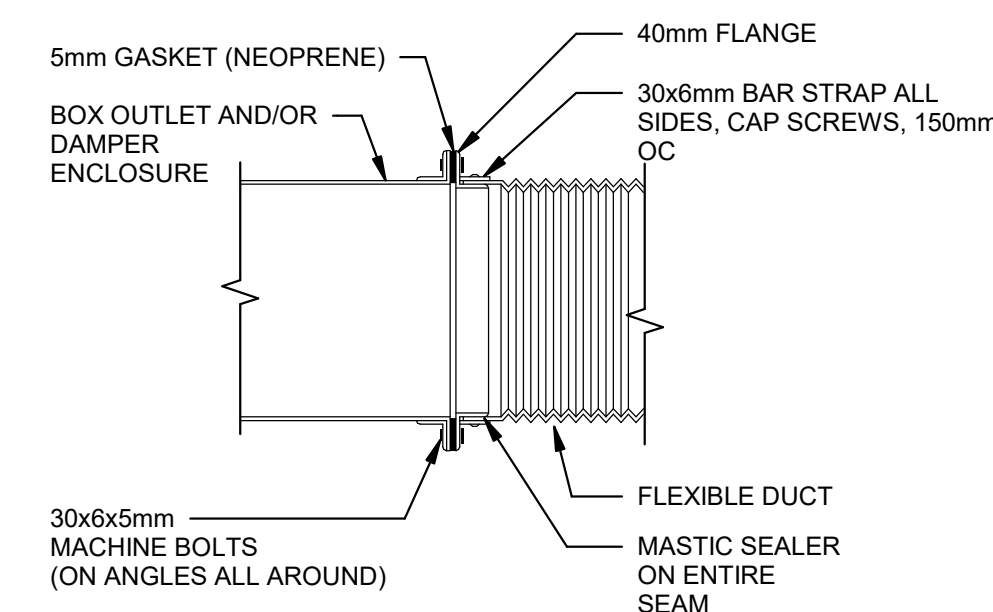


MAX= 22 1/2" FOR DIVERGING AIR FLOW
30" FOR CONVERGING AIR FLOW

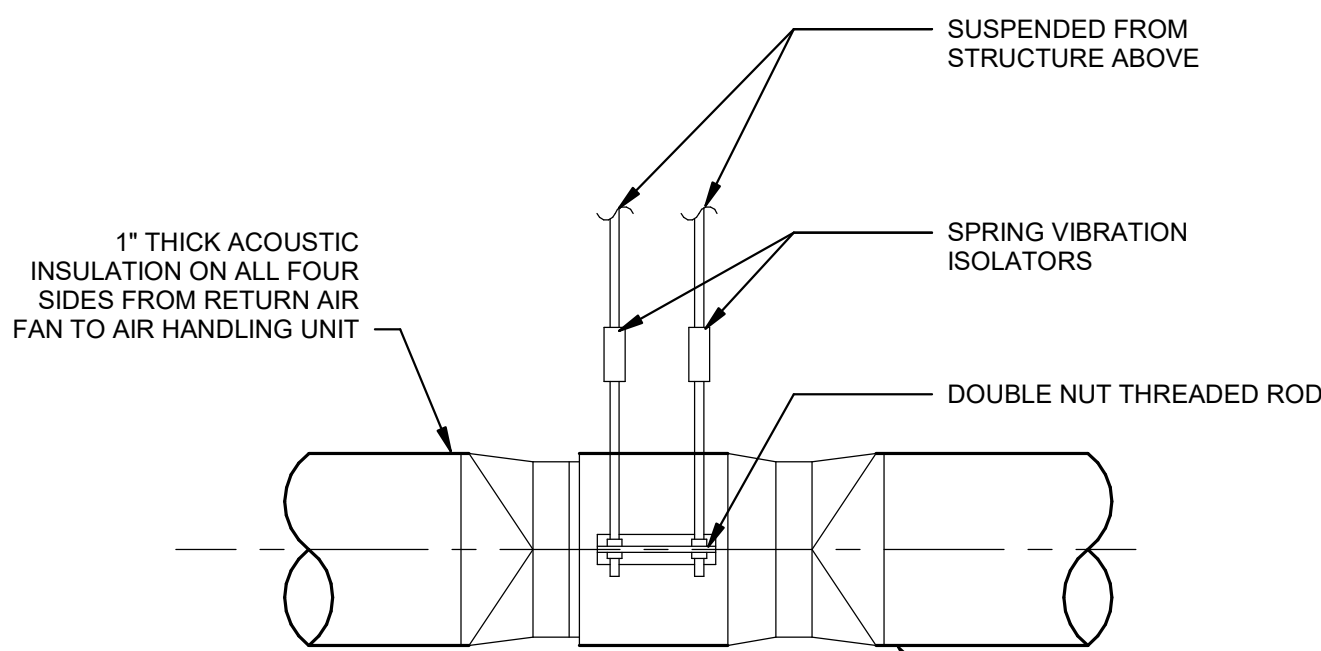
DUCT TRANSITIONS - 1T DETAIL
NOT TO SCALE



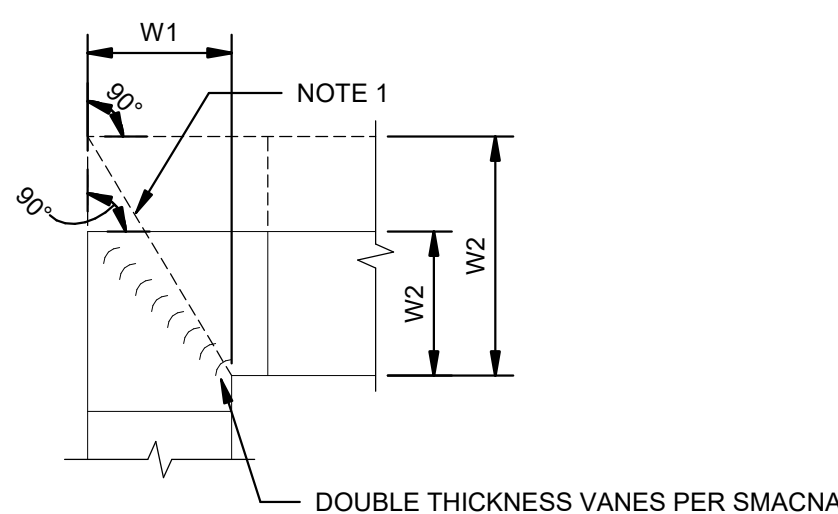
EXHAUST & RELIEF AIR LOUVER DETAIL
NOT TO SCALE



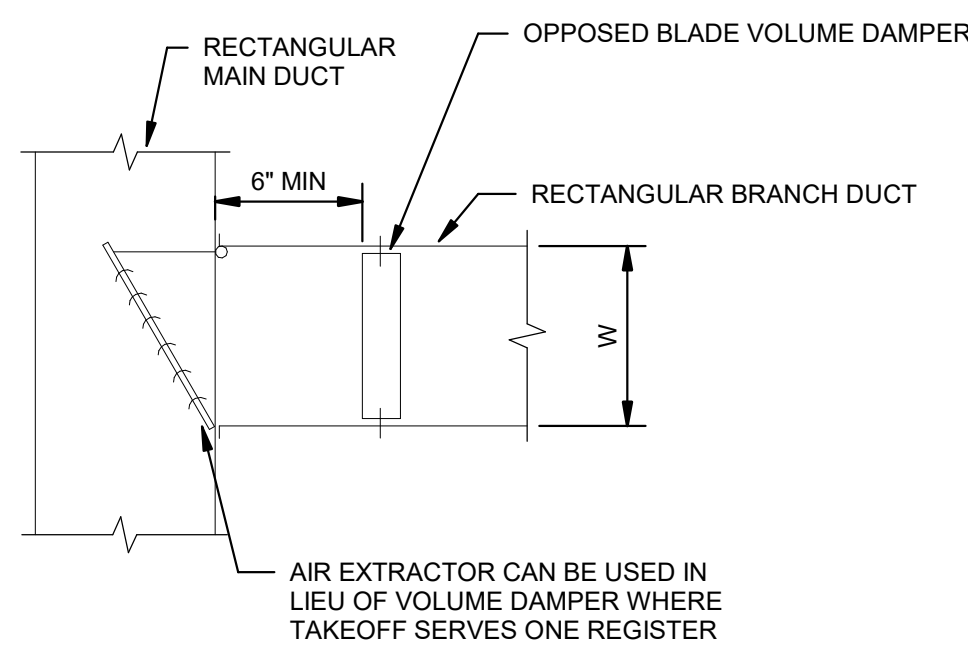
FLEXIBLE CONNECTION DETAIL
NOT TO SCALE



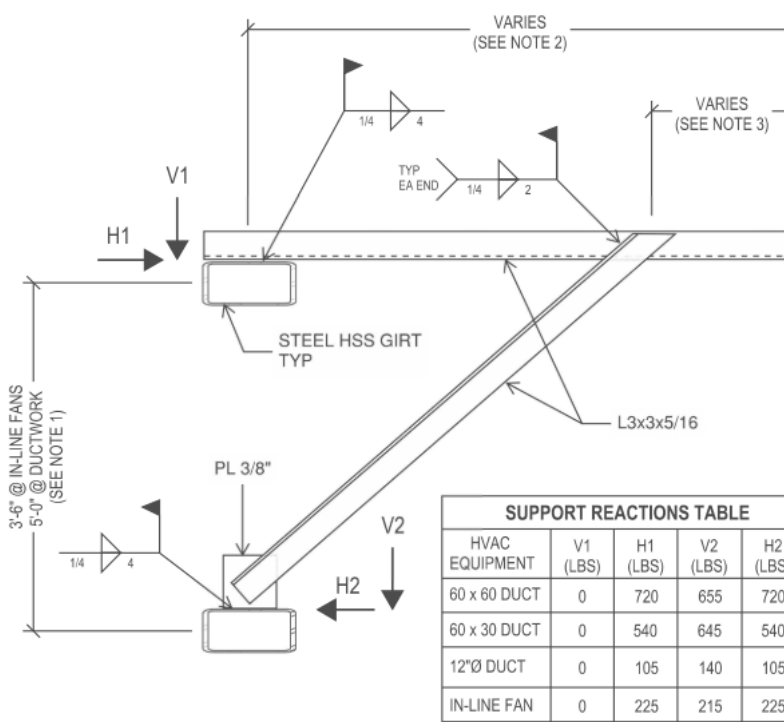
IN-LINE FAN DETAIL
NOT TO SCALE



MITERED ELBOW (90°) - 1E DETAIL
NOT TO SCALE



MITERED ELBOW (LESS THAN 90°) - 2E DETAIL
NOT TO SCALE



NOTES:
1. SUPPORT REACTIONS PROVIDED ARE BASED ON GRID SPACING SHOWN.
2. COORDINATE HORIZONTAL ANGLE LENGTH WITH HVAC DUCT/FAN.
3. LOCATE TOP OF DIAGONAL BRACE TO BE CENTERED ON THE SUPPORTED ELEMENT (IE CENTER OF DUCT/FAN OR CENTER OF DUCT/FAN ATTACHMENT).

INLINE FAN AND VERTICAL DUCT SUPPORT
NOT TO SCALE



DHL CVG AMC
CINCINNATI/NORTHERN KENTUCKY
INTERNATIONAL AIRPORT
410 WENDELL H. FORD BLVD
ERLANGER, KY 41018

CONTRACTOR INFORMATION

ESTD **P** 1951
PERFECTION GROUP

2849 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545

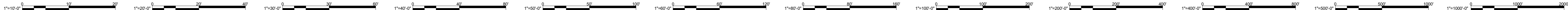
**SHOP
DRAWING**

2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
HVAC DETAILS**

MH5-00-02
SHEET NUMBER





KEY NOTES:

1. PROVIDE "5B" IF ROUND DUCT CONNECTION IS GREATER THAN MAIN DUCT HEIGHT.
2. DO NOT USE VANED ELBOWS WHERE DUCT VELOCITIES EXCEED 915 METERS/MIN.



MH5-00-03
SHEET NUMBER



HEATING AND VENTILATING UNIT (GAS HEATING - DIRECT FIRED) SCHEDULE																															
SUPPLY FAN										BURNER (NATURAL GAS)										ELECTRICAL											
MARK	AREA SERVED	LOCATION	AIR FLOW (CFM)	MIN OA (CFM)	ESP (IN WC)		TSP (IN WC)		MOTOR (HP)	MOTOR (BHP)	TYPE	GAS INPUT (MBH)	GAS OUTPUT (MBH)	GAS INLET PRESSURE (PSI)		EAT (F)	LAT (F)	FILTER SECTION		FINAL FILTER		VOLT	PH	Hz	MCA	MOP	SCCR	DIMENSION (LxWxH) (IN)	WEIGHT W/ ROOF CURB (LB)	BASED ON MANUFACTURER MODEL	COMMENTS
					(IN)	(OUT)	(IN)	(OUT)						(IN)	(OUT)			TYPE	EFFICIENCY	TYPE	EFFICIENCY										
HVU-R01	100 HANGAR	ROOF	42000	12600	1.00	2.52	23.54	25.0	DIRECT	2734.2	2734.2	5	35.0	95.0	2" RIGID	MERV 9					480	3	60	45	70	65	338 x 85 x 85	7560	RAPID ENGINEERING 4054	NOTE 1 TO 8	
HVU-R02	100 HANGAR	ROOF	42000	12600	1.00	2.52	23.54	25.0	DIRECT	2734.2	2734.2	5	35.0	95.0	2" RIGID	MERV 9					480	3	60	45	70	65	338 x 85 x 85	7560	RAPID ENGINEERING 4054	NOTE 1 TO 8	
HVU-R03	100 HANGAR	ROOF	42000	12600	1.00	2.52	23.54	25.0	DIRECT	2734.2	2734.2	5	35.0	95.0	2" RIGID	MERV 9	4" PLEATED	MERV 13			480	3	60	45	70	65	338 x 85 x 85	7560	RAPID ENGINEERING 4054	NOTE 1 TO 9	
HVU-R04	100 HANGAR	ROOF	42000	12600	1.00	2.52	23.54	25.0	DIRECT	2734.2	2734.2	5	35.0	95.0	2" RIGID	MERV 9	4" PLEATED	MERV 13			480	3	60	45	70	65	338 x 85 x 85	7560	RAPID ENGINEERING 4054	NOTE 1 TO 8	
HVU-R05	100 HANGAR	ROOF	42000	12600	1.00	2.52	23.54	25.0	DIRECT	2734.2	2734.2	5	35.0	95.0	2" RIGID	MERV 9	4" PLEATED	MERV 13			480	3	60	45	70	65	338 x 85 x 85	7560	RAPID ENGINEERING 4054	NOTE 1 TO 9	
HVU-R06	100 HANGAR	ROOF	42000	12600	1.00	2.52	23.54	25.0	DIRECT	2734.2	2734.2	5	35.0	95.0	2" RIGID	MERV 9	4" PLEATED	MERV 13			480	3	60	45	70	65	338 x 85 x 85	7560	RAPID ENGINEERING 4054	NOTE 1 TO 8	
HVU-R07	100 HANGAR	ROOF	42000	12600	1.00	2.52	23.54	25.0	DIRECT	2734.2	2734.2	5	35.0	95.0	2" RIGID	MERV 9					480	3	60	45	70	65	338 x 85 x 85	7560	RAPID ENGINEERING 4054	NOTE 1 TO 8	

HEATING AND VENTILATING UNIT (GAS HEATING - DIRECT FIRED) SCHEDULE NOTES:

- INCLUDE 3-WAY DISCHARGE HEAD. SEE FLOOR PLANS FOR SIZES.
- EXTERNAL STATIC PRESSURE DOES NOT INCLUDE HEATING EXCHANGER, FILTERS, MIXING BOX, OR CASING LOSSES.
- PROVIDE FACTORY BUILT-IN STARTER.
- PROVIDE FACTORY MOUNTED NON-FUSED DISCONNECT.
- PROVIDE ULTRA LOW LEAK DAMPERS.
- INCLUDE INSULATED ROOF CURB. CONTRACTOR SHALL COORDINATE ROOF CURB HEIGHT ACCORDING TO SUPPLY AND RETURN WALL OPENINGS.
- INCLUDE GAS PRESSURE REGULATOR.
- PROVIDE INTEGRAL POWERED "GFCI" RECEPTACLE WITH WHILE-IN-USE WEATHERPROOF COVER LISTED AND IDENTIFIED AS "EXTRA DUTY". RECEPTACLE SHALL BE WIRED AHEAD OF DISCONNECT SWITCH.
- PROVIDE WEATHER PROOF EXHAUST DISCHARGE HOOD.

AIR HANDLING UNIT (DX COOLING / HEAT PUMP) SCHEDULE																																										
MARK	AREA SERVED	LOCATION	SUPPLY FAN										COOLING (DX)										HEATING				CONDENSER				FILTER SECTION		ELECTRICAL									
			AIR FLOW (CFM)	MIN OA (CFM)	ESP (IN WC)	TSP (IN WC)	MOTOR (HP)	TOTAL (MBH)	EAT (°F)				LAT (°F)	REFRIGERANT	MIN EFFICIENCY	ELECTRIC PRE-HEAT (KW)	PRIMARY HEATING (HEAT PUMP)				ELECTRIC AUXILIARY HEAT (KW)	AMBIENT DB TEMPERATURE (°F)	COMPRESSOR TYPE	COMPRESSOR QTY	CONDENSER FAN QTY	FILTER		VOLT	PHASE	Hz	MCA	MOP	SCCR	OA AIR FLOW (CFM)	ECONOMIZER	DIMENSIONS LxWxH (IN)	WEIGHT W/ ROOF CURB (LBS)	BASED ON MFR MODEL	COMMENTS			
									DB	WB	DB	WB					CAPACITY (MBH)	EAT DB / WB (°F)	LAT DB (°F)	LAT WB (°F)						MIN EFFICIENCY COP	HSPF															
HP-R01	180 PASSAGE / 181 READY RM / 182 PRODUCTION CONTROL	ROOF	2820	540	0.52	1.78	3.0	108.8	75.6	77.8	65.1	52.8	51.6	R-410A	11.0	-	5	51.1	56 / 50	100.4	69.7	-	7.7	15	95	SCROLL	1	2	2" RIGID	9	480	3	60	25	40	65	540	Yes	82 x 44 x 44	1316	AAON RN-010	NOTE 1 TO 12
HP-R02	103 PRODUCTION CONTROL/105 PASSAGE/108 M TOILET/107 W TOILET	ROOF	1050	321	0.48	1.39	1.0	40.6	28.2	77.2	65.0	52.1	51.4	R-410A	-	13.0	-	45.1	56 / 50	99.7	64.9	-	7.7	-	95	SCROLL	1	2	2" RIGID	9	480	3	60	14	20	65	321	Yes	82 x 44 x 50	927	AAON RG-003	NOTE 1 TO 12
HP-R03	147 WARMING KITCHEN	ROOF	550	90	0.80	1.19	1.0	23.0	15.8	77.1	64.5	50.4	49.5	R-410A	-	13.0	-	27.0	56 / 50	99.9	66.5	-	7.7	-	95	SCROLL	1	1	2" RIGID	9	480	3	60	9	15	65	90	Yes	82 x 44 x 50	932	AAON RG-002	NOTE 1 TO 12
HP-R04	150 SHEET METAL SHOP	ROOF	960	430	0.78	2.27	7.5	271.6	186.4	75.6	64.7	54.0	53.3	R-410A	9.5	-	-	108.4	56 / 50	94.7	64.8	3.2	-	20	95	SCROLL	2	3	2" RIGID	9	480	3	60	90	100	65	2063	Yes	110 x 60 x 60	2592	AAON RN-025	NOTE 1 TO 12
HP-R05	152 STORES	ROOF	4020	0	0.54	1.91	5.0	125.5	96.7	75.0	63.0	52.7	51.9	R-410A	11.0	-	-	65.2	56 / 50	69.4	55.6	3.3	-	40	95	SCROLL	2	2	2" RIGID	9	480	3	60	91	100	65	0	Yes	88 x 58 X 50	2091	AAON RN-013	NOTE 1 TO 12
HP-R06	152 STORES	ROOF	4000	0	0.59	1.96	5.0	125.3	96.3	75.0	63.0	52.6	51.9	R-410A	11.0	-	-	65.2	56 / 50	69.4	55.6	3.3	-	40	95	SCROLL	2	2	2" RIGID	9	480	3	60	91	100	65	0	Yes	88 x 58 X 50	2091	AAON RN-013	NOTE 1 TO 12
HP-R07	153 ENGINE SHOP	ROOF	5520	1000	0.59	2.61	5.0	171.8	134.1	78.4	65.1	55.7	54.4	R-410A	10.6	-	-	73.5	56 / 50	67.6	54.7	3.2	-	50	95	SCROLL	2	2	2" RIGID	9	480	3	60	102	110	65	1715	Yes	88 x 58 X 50	2091	AAON RN-015	NOTE 1 TO 12
HP-R08	154 TOOL ROOM	ROOF	5960	1080	1.34	2.71	7.5	221.3	154.7	77.5	65.1	53.3	52.2	R-410A	10.6	-	-	108.0	56 / 50	70.9	56.2	3.2	-	60	95	SCROLL	2	2	2" RIGID	9	480	3	60	123	125	65	1050	Yes	110 x 60 x 60	2885	AAON RN-020	NOTE 1 TO 12
HP-R09	173 PARTS WASH	ROOF	960	430	0.43	1.25	1.0	51.0	31.2	84.9	70.9	54.2	53.5	R-410A	-	13.0	-	52.6	56 / 50	105.1	68.1	-	7.7	-	95	SCROLL	1	2	2" RIGID	9	480	3	60	16	20	65	430	Yes	82 x 44 x 50	984	AAON RG-004	NOTE 1 TO 12
HP-R10	183 LINE MAINTENANCE STORAGE	ROOF	2100	500	0.41	1.34	2.0	86.7	55.8	77.4	65.8	52.7	51.4	R-410A	11.0	-	-	101.7	56 / 50	99.4	66.3	3.3	-	-	95	SCROLL	1	1	2" RIGID	9	480	3	60	21	30	65	535	Yes	82 x 44 x 44	1316	AAON RN-008	NOTE 1 TO 12
HP-R11	C0102 CORRIDOR 03	ROOF	4900	980	0.84	2.59	5.0	173.1	129.7	80.0	66.1	55.2	54.1	R-410A	9.5	-	-	73.5	56 / 50	68.4	55.2	3.2	-	50	95	SCROLL	2	2	2" RIGID	9	480	3	60	102	110	65	980	Yes	88 x 58 X 50	2041	AAON RN-015	NOTE 1 TO 12
HP-R12	C0102 CORRIDOR 03	ROOF	4900	980	0.78	2.59	5.0	173.1	129.7	80.0	66.1	55.2	54.1	R-410A	9.5	-	-	73.5	56 / 50	68.4	55.2	3.2	-	50	95	SCROLL	2	2	2" RIGID	9	480	3	60	102	110	65	980	Yes	88 x 58 X 50	2041	AAON RN-015	NOTE 1 TO 12
HP-R13	180 PASSAGE / 181 READY RM / 182 PRODUCTION CONTROL	ROOF	1640	540	0.65	1.84	2.0	50.1	42.9	78.7	64.7	54.3	54.2	R-410A	-	13.0	5	51.1	56 / 50	100.4	69.7	-	7.7	15	95	SCROLL	1	2	2" RIGID	9	480	3	60	25	40	65	540	Yes	82 x 44 x 44	1316	AAON RN-008	NOTE 1 TO 12

AIR HANDLING UNIT SCHEDULE NOTES:

- INCLUDE VARIABLE SPEED COMPRESSOR AND COLD CLIMATE HEAT PUMP OPTION.
- EXTERNAL STATIC PRESSURE DOES NOT INCLUDE COOLING COIL, HEAT EXCHANGER, FILTERS, MIXING BOX OR CASING LOSSES.
- PROVIDE ELECTRICAL DISCONNECT SWITCH.
- FILTER LOADING BASED ON MID LIFE LOADING (CLEAN + 0.75 IN.). PROVIDE 0-2" MAGNEHELIC FILTER GAGE.
- PROVIDE ULTRA LOW LEAK DAMPERS.
- PROVIDE INTERNALLY ISOLATED FAN WITH SPRING ISOLATOR.
- PROVIDE 14" INSULATED ROOF CURB.
- BOTTOM SUPPLY & RETURN DUCT CONNECTION.
- PROVIDE ECM MOTOR FOR SPEED CONTROL.
- PROVIDE UNIT MOUNTED VARIABLE FREQUENCIES DRIVE.
- PROVIDE INTEGRAL POWERED "GFCI" RECEPTACLE WITH WHILE-IN-USE WEATHERPROOF COVER LISTED AND IDENTIFIED AS "EXTRA DUTY". RECEPTACLE SHALL BE WIRED AHEAD OF DISCONNECT SWITCH.
- UNIT SHALL INCLUDE ECONOMIZER AND SHALL INCLUDE CONTROL FAULT DETECTION AND DIAGNOSTICS IN CONTROLS.

HEAT RECOVERY AIR HANDLING UNIT (DX COOLING / HEAT PUMP) UNIT SCHEDULE																																				
MARK			AREA SERVED			LOCATION			SUPPLY FAN					EXHAUST FAN					COOLING COIL (DX)					HEATING					CONDENSER							
									AIR FLOW (CFM)	MIN OA (CFM)	ESP (IN WC)	TSP (IN WC)	MOTOR (HP)	AIR FLOW (CFM)	ESP (IN WC)	TSP (IN WC)	MOTOR (HP)	TOTAL (MBH)	SENSIBLE (MBH)	EAT (°F)			LAT (°F)	REFRIGERANT TYPE	MIN EFFICIENCY		PRIMARY HEATING (HEAT PUMP)			MIN EFFICIENCY COP	HSPF	ELECTRIC AUXILIARY HEAT (KW)	AMBIENT DB TEMPERATURE (°F)	COMPRESSOR TYPE	COMPRESSOR QTY	CONDENSER FAN QTY
																				DB	WB	DB			WB	EER	SEER	ELECTRIC PRE-HEAT (KW)	CAPACITY (MBH)							
HRHP-R01	148 BREAKROOM	ROOF	3180	620	1.36	2.86	5.00	620 / 3180	0.25	0.74	2.00	115.2	74.7	80.1	68.1	58.1	56.4	R-410A	11.0	-	20	58.5	57.0 / 50.0	3.3	-	60	95	SCROLL	1	2						
HRHP-R02	145 CHANGING	ROOF	2440	1040	0.90	2.34	3.00	1040 / 2440	0.25	0.75	1.00	88	62.1	80.3	66.7	56.5	54.5	R-410A	11.0	-	30	50.6	55.0 / 48.2	3.3	-	30	95	SCROLL	1	2						
HRHP-R03	152 STORES	ROOF	10800	2800	1.03	3.64	15.00	2800 / 10000	0.25	1.08	10.00	294.4	230.7	76.0	63.6	56.1	54.2	R-410A	9.5	-	-	151.3	55.0 / 49.1	3.2	-	120	95	SCROLL	2	3						
HRHP-R04	152 STORES	ROOF	10800	2800	1.03	3.64	15.00	2800 / 10000	0.25	1.08	10.00	294.4	230.7	76.0	63.6	56.1	54.2	R-410A	9.5	-	-	151.3	55.0 / 49.1	3.2	-	120	95	SCROLL	2	3						
HRHP-R05	152 STORES	ROOF	9800	2800	1.03	3.44	15.00	2800 / 9800	0.25	1.06	10.00	299.5	219.8	75.1	63.4	54.4	52.7	R-410A	9.5	-	-	162.6	55.0 / 50.2	3.2	-	120	95	SCROLL	2	3						
HRHP-R06	121 SECURITY	ROOF	12000	3850	2.50	3.99	20.00	3850 / 12000	1.00	1.76	5.00	480.5	300.7	76.0	62.9	52.7	52.6	R-410A	9.5	-	60	184.5	71.5 / 59.9	3.2	-	40	95	SCROLL	2	4						
HRHP-R07	1ST FLOOR ADMIN	ROOF	9000	3774	2.75	5.01	15.00	3774 / 9000	1.00	2.13	10.00	443.7	248.5	77.0	63.6	51.3	50.9	R-410A	9.5	-	50	157.6	68.7 / 57.7	3.2	-	30	95	SCROLL	2	3						
HRHP-R08	2ND FLOOR ADMIN	ROOF	13500	3000	2.65	4.35	20.00	3000 / 13500	0.75	1.92	10.00	460.6	321.9	75.8	62.5	53.5	53.4	R-410A	9.5	-	40	184.6	73.0 / 67.7	3.2	-	40	95	SCROLL	2	4						
HRHP-R09	2ND FLOOR ADMIN	ROOF	13500	3000	2.75	4.44	10.00	3000 / 13500	0.75	1.80	10.00	454.0	319.5	75.6	62.5	53.5	53.4	R-410A	9.5	-	40	184.6	73.0 / 66.7	3.2	-	45	95	SCROLL	2	4						
HRHP-R10	2ND FLOOR ADMIN	ROOF	3000	400	2.00	3.31	5.00	400 / 3000	0.75	1.13	2.00	92.2	69.5	75.3	62.3	53.9	53.2	R-410A	11.0	-	5	74.0	52.0 / 47.1	3.2	-	15	95	SCROLL	1	1						

TERMINAL UNIT SCHEDULE																		
MARK	AREA SERVED	LOCATION	INLET SIZE (IN)	AIR FLOW (CFM)		AIR TEMP (°F)		ELECTRIC REHEAT	ELECTRICAL					TOTAL STATIC PD (IN WC)	BASED ON MANUFACTURER MODEL	COMMENTS		
				MAX	MIN	COOLING	HEATING		ENT	LVG	KW	VOLT	PHASE				HZ	MCA
VAV-101	121 SECURITY	122 SECURITY OFFICE	16	2110	710	1180	55	85	0.0	277	1	60	51.9	60.0	0.0	PRICE SDV	NOTE 1	
VAV-102	121 SECURITY	121 SECURITY	14	1740	530	870	55	85	8.5	277	1	60	38.4	40.0	0.0	TITUS DESV	NOTE 1	
VAV-103	CO100 CORRIDOR 01	CO100 CORRIDOR 01	14	1650	500	830	55	85	0.0	277	1	60	36.1	40.0	0.0	PRICE SDV	NOTE 1	
VAV-104	CO101 CORRIDOR 02	CO101 CORRIDOR 02	8	570	290	290	55	85	0.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-105	122 SECURITY OFFICE	122 SECURITY OFFICE	8	420	130	130	55	85	1.5	277	1	60	8.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-106	127 TRAINING TECHLABS	127 TRAINING TECHLABS	10	880	270	440	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-107	127 TRAINING TECHLABS	127 TRAINING TECHLABS	10	1000	300	500	55	85	5.0	277	1	60	22.6	25.0	0.0	TITUS DESV	NOTE 1	
VAV-108	128 TRAINING TECHLABS	128 TRAINING TECHLABS	10	1000	300	500	55	85	0.0	277	1	60	22.6	25.0	0.0	TITUS DESV	NOTE 1	
VAV-109	128 TRAINING TECHLABS	128 TRAINING TECHLABS	10	880	270	440	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-110	129 TRAINING CLASSROOM	129 TRAINING CLASSROOM	10	880	270	440	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-111	129 TRAINING CLASSROOM	129 TRAINING CLASSROOM	10	880	270	440	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-112	130 TRAINING CLASSROOM	130 TRAINING CLASSROOM	10	880	270	440	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-113	130 TRAINING CLASSROOM	130 TRAINING CLASSROOM	10	880	270	440	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-114	130 TRAINING CLASSROOM	130 TRAINING CLASSROOM	10	880	270	440	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-115	131 WELLNESS ROOM	131 WELLNESS ROOM	4	150	50	75	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-116	142 STORAGE / 141 TRAINING OFFICE	142 STORAGE	8	470	150	150	55	85	1.5	277	1	60	6.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-117	146 BREAKROOM	146 BREAKROOM	8	540	170	170	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	
VAV-118	CO101 CORRIDOR 02	CO101 CORRIDOR 02	6	350	110	110	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-119	CO101 CORRIDOR 02	CO101 CORRIDOR 02	8	420	130	130	55	85	0.0	277	1	60	8.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-120	132 TOILET / 136 W TOILET / 137 M TOILET	136 W TOILET	8	420	420	420	55	85	0.0	277	1	60	11.3	15.0	0.0	TITUS DESV	NOTE 1	
VAV-201	121 SECURITY	122 SECURITY OFFICE	16	2680	810	1340	55	85	13.0	277	1	60	58.7	60.0	0.0	TITUS DESV	NOTE 1	
VAV-202	121 SECURITY	122 SECURITY OFFICE	12	1090	330	550	55	85	0.0	277	1	60	24.8	25.0	0.0	PRICE SDV	NOTE 1	
VAV-203	201 AVIATION SUITE	201 AVIATION SUITE	6	260	80	80	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-204	201 AVIATION SUITE	201 AVIATION SUITE	12	1320	400	400	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-205	201 AVIATION SUITE	201 AVIATION SUITE	12	1320	400	400	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-206	201 AVIATION SUITE	201 AVIATION SUITE	10	880	270	270	55	85	3.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-207	201 AVIATION SUITE	201 AVIATION SUITE	10	880	270	270	55	85	0.0	277	1	60	13.5	15.0	0.0	PRICE SDV	NOTE 1	
VAV-208	201 AVIATION SUITE	201 AVIATION SUITE	10	880	270	270	55	85	3.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-209	201 AVIATION SUITE	201 AVIATION SUITE	12	1320	400	400	55	85	6.5	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-210	201 AVIATION SUITE	201 AVIATION SUITE	12	1320	400	400	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-211	202 CONFERENCE ROOM	202 CONFERENCE ROOM	10	900	270	450	55	85	4.5	277	1	60	20.3	25.0	0.0	TITUS DESV	NOTE 1	
VAV-212	203 OFFICE / 204 OFFICE / 205 OFFICE	205 OFFICE	10	810	250	410	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-213	206 OFFICE / 207 OFFICE / 208 OFFICE	206 OFFICE	10	810	250	410	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-214	209 OFFICE / 210 OFFICE / 211 OFFICE	209 OFFICE	10	810	250	410	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-215	212 CONFERENCE ROOM	212 CONFERENCE ROOM	12	1170	360	590	55	85	0.0	277	1	60	27.1	30.0	0.0	PRICE SDV	NOTE 1	
VAV-216	214 CONFERENCE ROOM	214 CONFERENCE ROOM	8	740	230	370	55	85	3.5	277	1	60	15.8	20.0	0.0	TITUS DESV	NOTE 1	
VAV-217	216 OFFICE / 217 OFFICE / 218 OFFICE	218 OFFICE	8	510	160	260	55	85	2.5	277	1	60	11.3	15.0	0.0	TITUS DESV	NOTE 1	
VAV-218	219 OFFICE / 220 OFFICE / 221 OFFICE / 222 OFFICE	222 OFFICE	8	620	190	190	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	
VAV-219	223 PRAYER ROOM	223 PRAYER ROOM	4	140	50	75	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-220	227 MRO SUITE	227 MRO SUITE	10	590	270	270	55	85	3.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-221	227 MRO SUITE	227 MRO SUITE	12	1430	400	660	55	85	6.5	277	1	60	29.3	30.0	0.0	TITUS DESV	NOTE 1	
VAV-222	227 MRO SUITE	227 MRO SUITE	10	760	230	230	55	85	2.5	277	1	60	11.3	15.0	0.0	TITUS DESV	NOTE 1	
VAV-223	227 MRO SUITE	227 MRO SUITE	8	510	160	260	55	85	2.5	277	1	60	11.3	15.0	0.0	TITUS DESV	NOTE 1	
VAV-224	227 MRO SUITE	227 MRO SUITE	12	1320	400	400	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-225	227 MRO SUITE	227 MRO SUITE	10	880	270	270	55	85	3.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-226	227 MRO SUITE	227 MRO SUITE	12	900	400	400	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-227	227 MRO SUITE	227 MRO SUITE	12	1320	400	400	55	85	4.0	277	1	60	18.1	20.0	0.0	TITUS DESV	NOTE 1	
VAV-228	227 MRO SUITE	227 MRO SUITE	10	880	270	270	55	85	3.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-229	227 MRO SUITE	227 MRO SUITE	10	1000	300	300	55	85	3.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-230	227 MRO SUITE	227 MRO SUITE	10	880	270	270	55	85	0.0	277	1	60	13.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-231	229 PRODUCTION PLANNING	229 PRODUCTION PLANNING	8	720	220	220	55	85	2.5	277	1	60	11.3	15.0	0.0	TITUS DESV	NOTE 1	
VAV-232	230 CONFERENCE	230 CONFERENCE	8	600	180	180	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	
VAV-233	233 OFFICE / 234 OFFICE	233 OFFICE	8	560	170	280	55	85	3.0	277	1	60	11.3	15.0	0.0	TITUS DESV	NOTE 1	
VAV-234	235 OFFICE / 236 OFFICE	235 OFFICE	8	510	160	260	55	85	2.5	277	1	60	11.3	15.0	0.0	TITUS DESV	NOTE 1	
VAV-235	237 CONFERENCE	237 CONFERENCE	6	360	110	180	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	
VAV-236	CO202 CORRIDOR 05	239 OFFICE	4	150	50	75	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-237	238 OFFICE / 239 OFFICE / 240 RECORDS STORAGE	240 RECORDS STORAGE	8	540	170	170	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	
VAV-238	241 OFFICE / 242 OFFICE / 243 OFFICE / 244 OFFICE	244 OFFICE	8	680	210	210	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	
VAV-239	CO202 CORRIDOR 05	244 OFFICE	4	150	50	75	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-240	245 AUDITORS	245 AUDITORS	6	260	80	80	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-241	246 OFFICE / 247 OFFICE / 249 OFFICE	248 OFFICE	8	540	170	170	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	
VAV-242	249 COPY ROOM	249 COPY ROOM	6	280	90	90	55	85	1.0	277	1	60	4.5	15.0	0.0	TITUS DESV	NOTE 1	
VAV-243	262 OFFICE / 263 OFFICE / 264 OFFICE	264 OFFICE	8	480	150	150	55	85	1.5	277	1	60	6.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-244	265 OFFICE / 266 OFFICE / 267 OFFICE	265 OFFICE	8	480	150	150	55	85	1.5	277	1	60	6.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-245	268 OFFICE / 269 OFFICE / 270 OFFICE	268 OFFICE	8	480	150	150	55	85	1.5	277	1	60	6.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-246	272 OFFICE / 273 OFFICE / 274 OFFICE	272 OFFICE	8	480	150	150	55	85	1.5	277	1	60	6.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-247	275 OFFICE / 276 OFFICE / 277 OFFICE	275 OFFICE	8	480	150	150	55	85	1.5	277	1	60	6.8	15.0	0.0	TITUS DESV	NOTE 1	
VAV-248	278 OFFICE / 279 OFFICE / 271 OFFICE	278 OFFICE	8	560	170	170	55	85	2.0	277	1	60	9.0	15.0	0.0	TITUS DESV	NOTE 1	

TERMINAL UNIT SCHEDULE NOTES:

1. INCLUDE SCR CONTROLLER.

AIR CONDITIONING UNIT (SPLIT SYSTEM HEAT PUMP) SCHEDULE																		
MARK	AREA SERVED	LOCATION	TYPE EQUIP	NOMINAL CAPACITY (TON)	REFRIGERANT TYPE	FAN AIRFLOW (CFM)	COOLING CAPACITY (BTUH)		HEATING CAPACITY (BTUH)	ELECTRICAL					APPROX WEIGHT (LB)	BASED ON MANUFACTURER MODEL	COMMENTS	
							TOTAL	SENSIBLE		WATT	VOLT	PHASE	HZ	SCCR				
ACU-401	106 IDF	106 IDF	WALL MOUNTED	1.5	R-410A	425	18000	16000	19000	30	208	1	60	5	30	TRANE TPKA0A18	NOTE 1, 2, 3	
ACU-402	159 RECEIVING OFFICE	159 RECEIVING OFFICE	DUCTED ENCLOSED	1.3	R-410A	370	15000	14000	17000	90	208	1	60	5	60	TRANE TPPEYF 015 MA	NOTE 1, 2, 3	
ACU-403			177 IDF	WALL MOUNTED	1.5	R-410A	425	18000	16000	19000	30	208	1	60	5	30	TRANE TPKA0A18	NOTE 1, 2, 3
ACU-404			231 IDF	WALL MOUNTED	1.5	R-410A	425	18000	16000	19000	30	208	1	60	5	30	TRANE TPKA0A18	NOTE 1, 2, 3
ACU-405	102A OFFICE / 102B OFFICE	102A OFFICE	DUCTED ENCLOSED	1.0	R-410A	360	12000	9960	8700	30	208	1	60	5	60	TRANE TP6AD A12	NOTE 1, 2, 3	

FOAM GENERATOR ROOF INTAKE HOOD SCHEDULE												
MARK	LOCATION	SYSTEM SERVED	CFM	APPROX DIMENSIONS				MAX AIR PD (IN WC)	ROOF OPENING		BASED ON MANUFACTURER MODEL	COMMENTS
				LENGTH	WIDTH	HEIGHT	WEIGHT (LB)		LENGHT (IN)	WIDTH (IN)		
IHR-01	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-02	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-03	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-04	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-05	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-06	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-07	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-08	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-09	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-10	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-11	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-12	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-13	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-14	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-15	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-16	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-17	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-18	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-19	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-20	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-21	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-22	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-23	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-24	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-25	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-26	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-27	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3
IHR-28	HANGAR ROOF	HIGH EXPANSION FOAM GENERATOR	21391	8'-3"	8'-3"	2'-2"	525	0.10	54	54	ANSUL JET-X 27 WEATHER HOOD	NOTE 1, 2, 3

FOAM GENERATOR ROOF INTAKE HOOD SCHEDULE NOTES:

1. REFER TO FIRE PROTECTION PLANS FOR HIGH EXPANSION FOAM GENERATOR.
2. INCLUDE SLOPED 12" ROOF CURB. CURB SLOPE TO MATCH ROOF SLOPE.
3. INCLUDE AUTOMATIC CONTROL DAMPER THAT SHALL BE TIED TO FIRE ALARM.

ROOF INTAKE / RELIEF HOOD SCHEDULE												
MARK	AREA/SYSTEM SERVED	LOCATION	THROAT WIDTH	THROAT LENGTH	MAX THROAT VELOCITY (FPM)	CFM	STATIC PRESSURE DROP (IN WC)	ACCESSORIES	ELECTRICAL			COMMENTS
									VOLT	PHASE	HZ	
IHR-29	109 MECHANICAL	ROOF	36"	36"	700	5000	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-32	110 FIRE RISER	ROOF	24"	24"	700	2500	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-33	112 ELECTRICAL	ROOF	24"	24"	700	2500	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-34	112 ELECTRICAL	ROOF	24"	24"	700	2500	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-35	171 ELECTRICAL	ROOF	24"	24"	700	2500	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-36	171 ELECTRICAL	ROOF	24"	24"	700	2500	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-37	175 COMPRESSOR	ROOF	54"	54"	1000	16490	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-38	172 ELECTRICAL	ROOF	24"	24"	700	2500	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
IHR-39	172 ELECTRICAL	ROOF	24"	24"	700	2500	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2
RH-R01	175 COMPRESSOR	ROOF	36"	36"	1400	11490	0.100	MOTORIZED DAMPER	120	1	60	NOTE 1, 2

ROOF INTAKE / RELIEF HOOD SCHEDULE NOTES:

1. INCLUDE ROOF CURB.
2. INCLUDE AUTOMATIC CONTROL DAMPER.

AIR CURTAIN SCHEDULE																
MARK	AREA SERVED	LOCATION	OVERALL LENGTH	MAX FPM AT NOZZLE	MAX CFM AT NOZZLE	dBA MEASURED 10FT FROM NOZZLE	MOUNTING HEIGHT	MOTOR DATA		ELECTRICAL				APPROX WEIGHT (LB)	BASED ON MANUFACTURER MODEL	COMMENTS
								HP	RPM	VOLT	PHASE	HZ	AMP			
ACRT-101	CO102 CORRIDOR 03 O.H	CO102 CORRIDOR 03	98"	4247	2884	73	144'-0"	2.5	1750	480	3	60	1.6	135	MARS STD296	NOTE 1
ACRT-102	CO102 CORRIDOR 03 O.H	CO102 CORRIDOR 03	98"	4247	2884	73	144'-0"	2.5	1750	480	3	60	1.6	135	MARS STD296	NOTE 1

AIR CURTAIN NOTES:

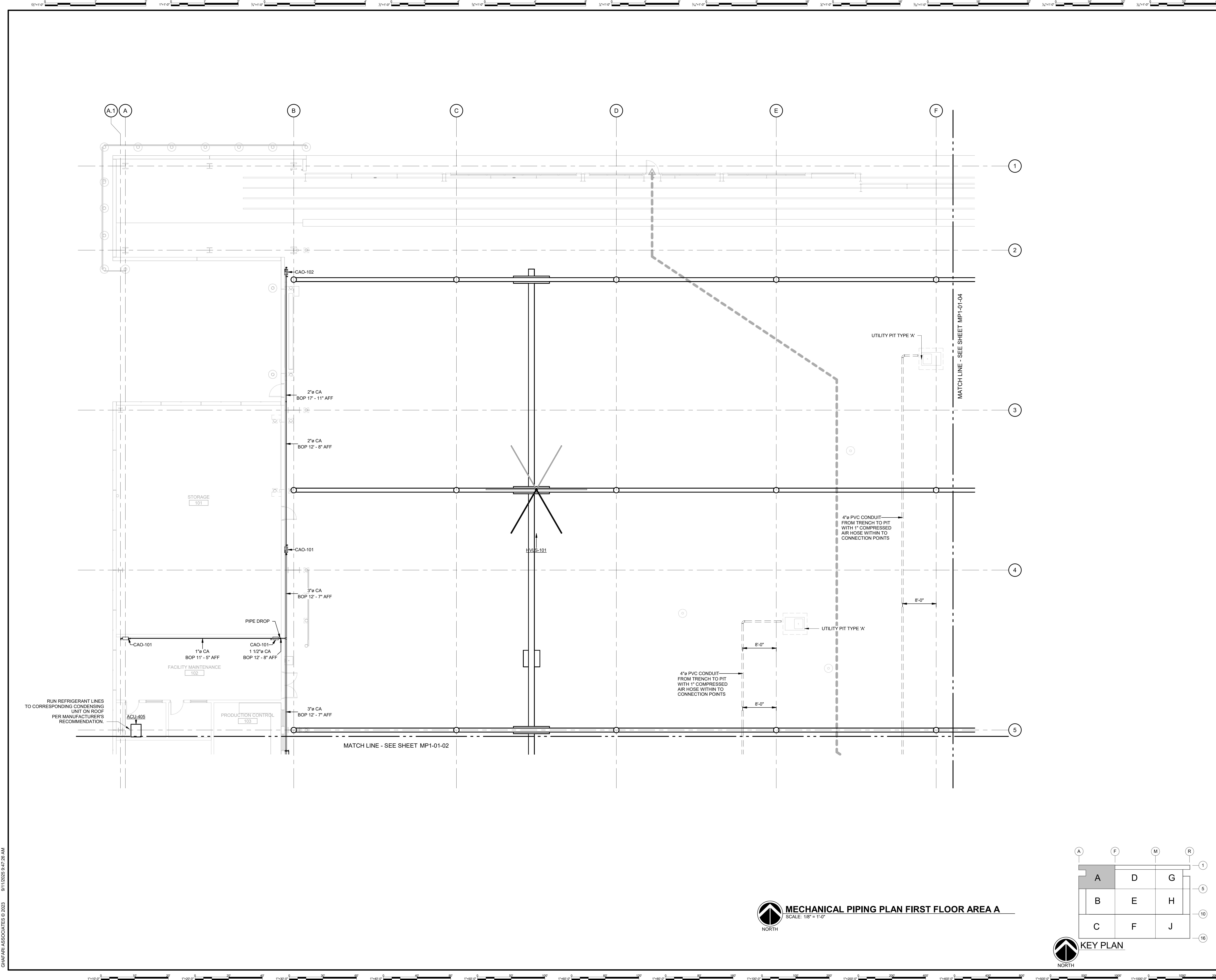
1. PROVIDE DOOR SWITCH CONTROL.

UNIT HEATER (ELECTRIC) SCHEDULE														
MARK	AREA SERVED	LOCATION	TYPE	NOM CFM	AIR TEMPERATURE		HEATING COIL (KW)	FAN POWER	ELECTRICAL			BASED ON MANUFACTURER		COMMENTS
					EAT (°F)	LAT (°F)			VOLT	PHASE	HZ	AMP	MODEL	
CUH-101	124 VESTIBULE	124 VESTIBULE	HORIZONTAL CABINET	600	55	80	3.0	1/30	480	3	60	3.7	TRANE FF D 060	NOTE 2, 4, 5
CUH-102	170 CORRIDOR	170 CORRIDOR	HORIZONTAL RECESSED	600	55	80	3.0	1/30	480	3	60	3.7	TRANE FF E 060	NOTE 2, 4
CUH-103	113 CORRIDOR	113 CORRIDOR	HORIZONTAL RECESSED	600	55	80	3.0	1/30	480	3	60	3.7	TRANE FF E 060	NOTE 2, 4
CUH-104	ST-2 STAIR 2	ST-2 STAIR 2	VERTICAL WALL HUNG CABINET	600	55	80	3.0	1/30	480	3	60	3.7	TRANE FF F 060	NOTE 2, 5
CUH-105	ST-2 STAIR 2	ST-2 STAIR 2	VERTICAL WALL HUNG CABINET	600	55	80	3.0	1/30	480	3	60	3.7	TRANE FF F 060	NOTE 2, 5
EUH-101	109 MECHANICAL	109 MECHANICAL	SUSPENDED	650	45	95	7.5	1/30	480	3	60	9	MARLEY MUH-07-4	NOTE 1, 2
EUH-102	111 FIRE PUMP	111 FIRE PUMP	SUSPENDED	650	45	95	7.5	1/30	480	3	60	9	MARLEY MUH-07-4	NOTE 1, 2
EUH-103	112 ELECTRICAL	112 ELECTRICAL	SUSPENDED	650	45	95	7.5	1/30	480	3	60	9	MARLEY MUH-07-4	NOTE 1, 2
EUH-104	112 ELECTRICAL	112 ELECTRICAL	SUSPENDED	650	45	95	7.5	1/30	480	3	60	9	MARLEY MUH-07-4	NOTE 1, 2
EUH-105	152 STORES	152 STORES	SUSPENDED	650	45	95	10.0	1/30	480	3	60	12	MARLEY MUH-10-4	NOTE 1, 2
EUH-106	152 STORES	152 STORES	SUSPENDED	650	45	95	10.0	1/30	480	3	60	12	MARLEY MUH-10-4	NOTE 1, 2
EUH-107	152 STORES	152 STORES	SUSPENDED	650	45	95	10.0	1/30	480	3	60	12	MARLEY MUH-10-4	NOTE 1, 2
EUH-108	171 ELECTRICAL	171 ELECTRICAL	SUSPENDED	650	45	95	7.5	1/30	480	3	60	9	MARLEY MUH-07-4	NOTE 1, 2
EUH-110	COMPRESSED AIR SYSTEM	175 COMPRESSOR	SUSPENDED	650	45	95	7.5	1/30	480	3	60	9	MARLEY MUH-07-4	NOTE 1, 2

UNIT HEATER (ELECTRIC) SCHEDULE NOTES:

1. PROVIDE WALL BRACKET SUPPLIED BY UNIT MANUFACTURER.
2. BMS TEMPERATURE SENSOR.
3. INTRINSICALLY SAFE UNIT.
4. WITH BOTTOM SUPPLY AND RETURN.
5. WITH INTEGRATED THERMOSTAT.

FAN SCHEDULE																
MARK	AREA/SYSTEM SERVED	LOCATION	TYPE	AIR FLOW (CFM)	ESP (IN WC)	FAN RPM	DRIVE TYPE	HP	ELECTRICAL			MOTOR CONTROL	ROOF/WALL OPENING (IN)	APPROX WEIGHT (LB)	BASED ON MANUFACTURER MODEL	COMMENTS
									VOLT	PHASE	HZ					
EF-107	100 HANGAR	100 HANGAR	SIDEWALL PROPELLER	14,600	0.30	389	BELT	2.00	480	3	60	BMS	60 x 60	222	GREENHECK SBE-2L54-20	NOTE 1, 3
EF-108	100 HANGAR	100 HANGAR	SIDEWALL PROPELLER	14,600	0.30	389	BELT	2.00	480	3	60	BMS	60 x 60	222	GREENHECK SBE-2L54-20	NOTE 1, 3
EF-109	100 HANGAR	100 HANGAR	SIDEWALL PROPELLER	14,600	0.30	389	BELT	2.00	480	3	60	BMS	60 x 60	222	GREENHECK SBE-2L54-20	NOTE 1, 3
EF-110	100 HANGAR	100 HANGAR	SIDEWALL PROPELLER	14,600	0.30	389	BELT	2.00	480	3	60	BMS	60 x 60	222	GREENHECK SBE-2L54-20	NOTE 1, 3
EF-111	100 HANGAR	100 HANGAR	SIDEWALL PROPELLER	14,600	0.30	389	BELT	2.00	480	3	60	BMS	60 x 60	222	GREENHECK SBE-2L54-20	NOTE 1, 3
EF-112	100 HANGAR	100 HANGAR	SIDEWALL PROPELLER	14,600	0.30	389	BELT	2.00	480	3	60	BMS	60 x 60	222	GREENHECK SBE-2L54-20	NOTE 1, 3
EF-R01	107 M TOILET / 108 M TOILET	ROOF	CENTRIFUGAL DOWNBLAST	280	0.20	724	BELT	0.25	120	1	60	BMS	14 1/2" x 14 1/2"	70	GREENHECK GB-100	NOTE 2, 3
EF-R02	109 MECHANICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R03	109 MECHANICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R04	111 FIRE PUMP	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R06	112 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R07	112 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R08	140 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	330	0.40	1021	BELT	0.25	120	1	60	BMS	14 1/2" x 14 1/2"	70	GREENHECK GB-100	NOTE 1, 2
EF-R09	176 M TOILET / 177 W TOILET	ROOF	CENTRIFUGAL DOWNBLAST	500	0.40	1045	BELT	0.25	120	1	60	BMS	14 1/2" x 14 1/2"	70	GREENHECK GB-100	NOTE 2, 3
EF-R10	147 WARNING KITCHEN	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.00	0	BELT	0.00	480	3	60	MANUAL AT HOOD	20 1/2" x 20 1/2"	100	GREENHECK GB-200	BY KITCHEN SUPPLIER
EF-R11	155 TOILET / 156 TOILET	ROOF	CENTRIFUGAL DOWNBLAST	150	0.40	1163	BELT	0.20	120	1	60	BMS	14 1/2" x 14 1/2"	70	GREENHECK GB-091	NOTE 1, 2
EF-R12	157 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	200	0.40	1163	BELT	0.20	120	1	60	BMS	14 1/2" x 14 1/2"	70	GREENHECK GB-091	NOTE 1, 2
EF-R13	171 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R14	171 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R15	175 COMPRESSOR	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R16	174 OIL RM.	ROOF	CENTRIFUGAL UPBLAST	800	0.30	1174	BELT	0.25	120	1	60	BMS	14 1/2" x 14 1/2"	80	GREENHECK CUBE-100	NOTE 1, 3, 5
EF-R17	232 ELEC. ROOM	ROOF	CENTRIFUGAL DOWNBLAST	200	0.00	1163	BELT	0.20	120	1	60	BMS	14 1/2" x 14 1/2"	70	GREENHECK GB-091	NOTE 1, 2
EF-R18	C0102 CORRIDOR 03	ROOF	CENTRIFUGAL UPBLAST	2,700	0.30	801	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	100	GREENHECK CUBE-180	NOTE 1, 3, 5
EF-R19	C0102 CORRIDOR 03	ROOF	CENTRIFUGAL UPBLAST	2,700	0.30	801	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	100	GREENHECK CUBE-180	NOTE 1, 3, 5
EF-R20	C0102 CORRIDOR 03	ROOF	CENTRIFUGAL UPBLAST	2,700	0.30	801	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	100	GREENHECK CUBE-180	NOTE 1, 3, 5
EF-R21	C0102 CORRIDOR 03	ROOF	CENTRIFUGAL UPBLAST	2,700	0.30	801	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	100	GREENHECK CUBE-180	NOTE 1, 3, 5
EF-R22	151 BATTERY STORAGE/CHARGING	ROOF	CENTRIFUGAL UPBLAST	1,200	0.30	1182	BELT	0.25	120	1	60	BMS	14 1/2" x 14 1/2"	80	GREENHECK CUBE-120	NOTE 1, 3, 5
EF-R23	175 COMPRESSOR	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R24	172 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3
EF-R25	172 ELECTRICAL	ROOF	CENTRIFUGAL DOWNBLAST	2,500	0.30	759	BELT	0.33	120	1	60	BMS	20 1/2" x 20 1/2"	90	GREENHECK GB-180	NOTE 1, 3



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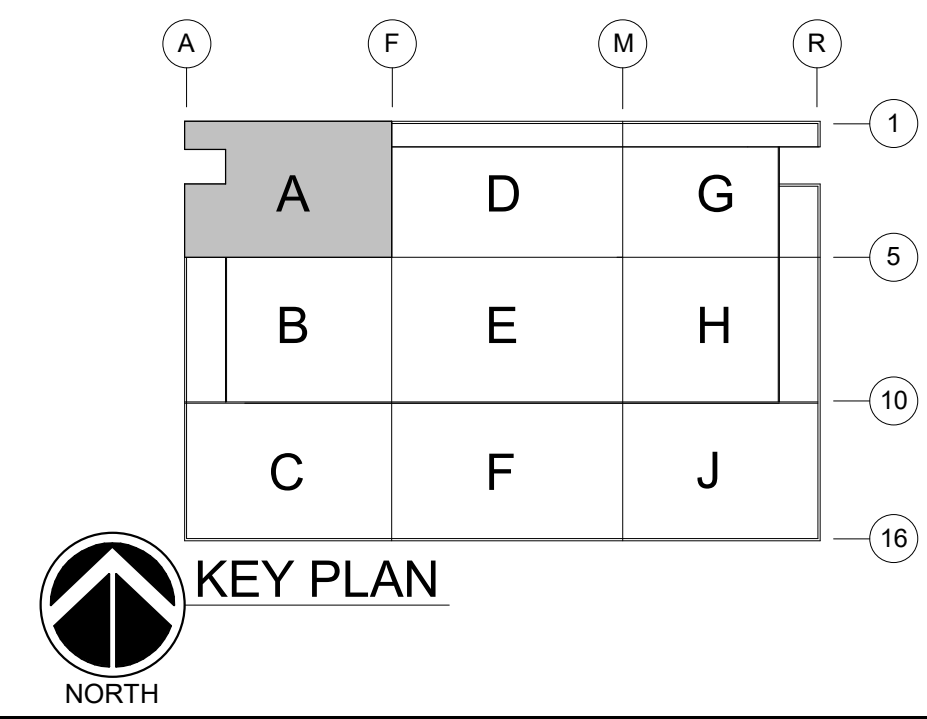
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1	01/02/25	REVIEW SET

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PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
PIPING PLAN
FIRST FLOOR
AREA A**

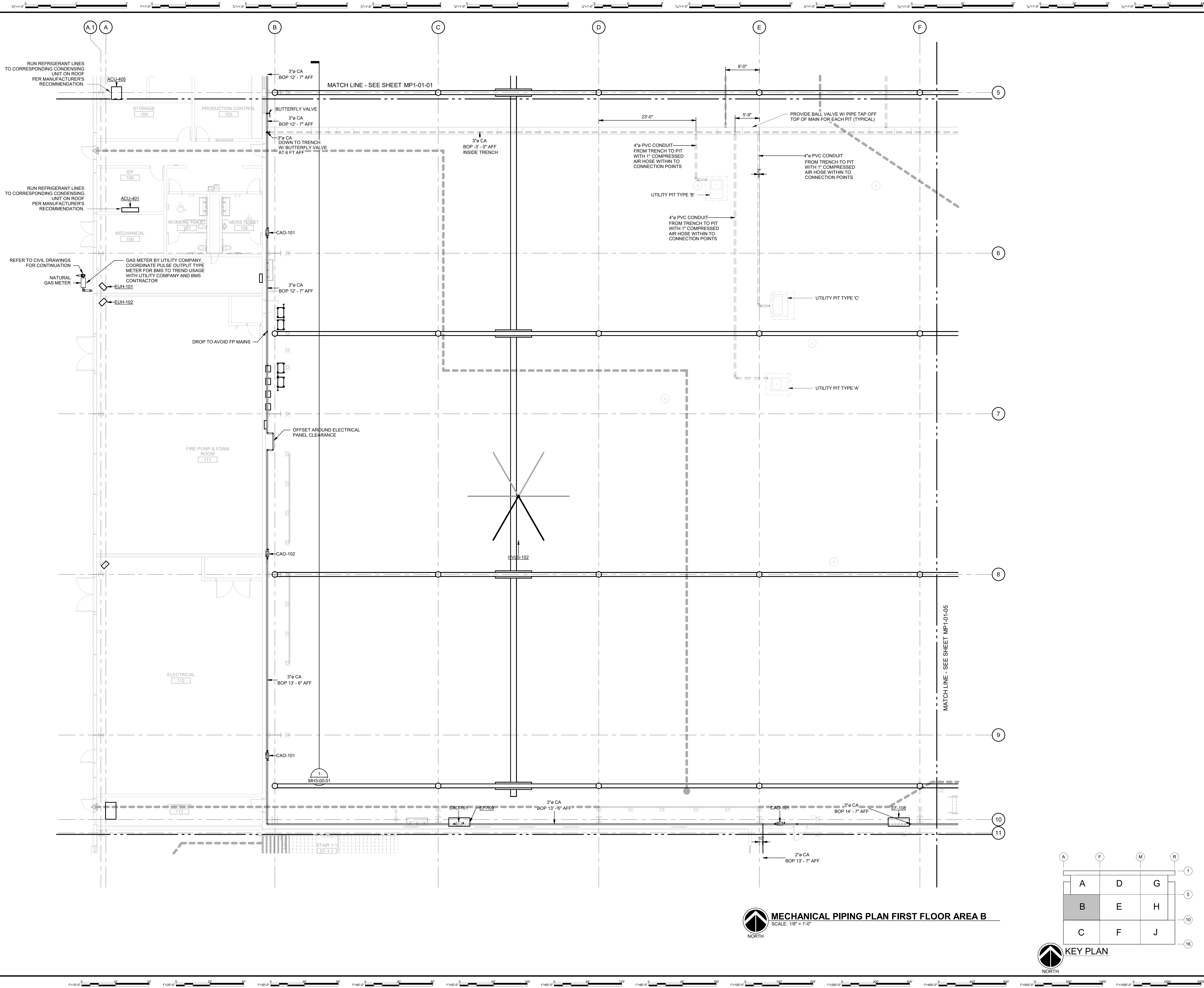
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MECHANICAL PIPING PLAN FIRST FLOOR AREA A
SCALE: 1/8" = 1'-0"



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CHAFAR ASSOCIATES © 2023 9/11/2025 9:47:39 AM



MECHANICAL PIPING PLAN FIRST FLOOR AREA B

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



KEY PLAN

A	D	G
B	E	H
C	F	J



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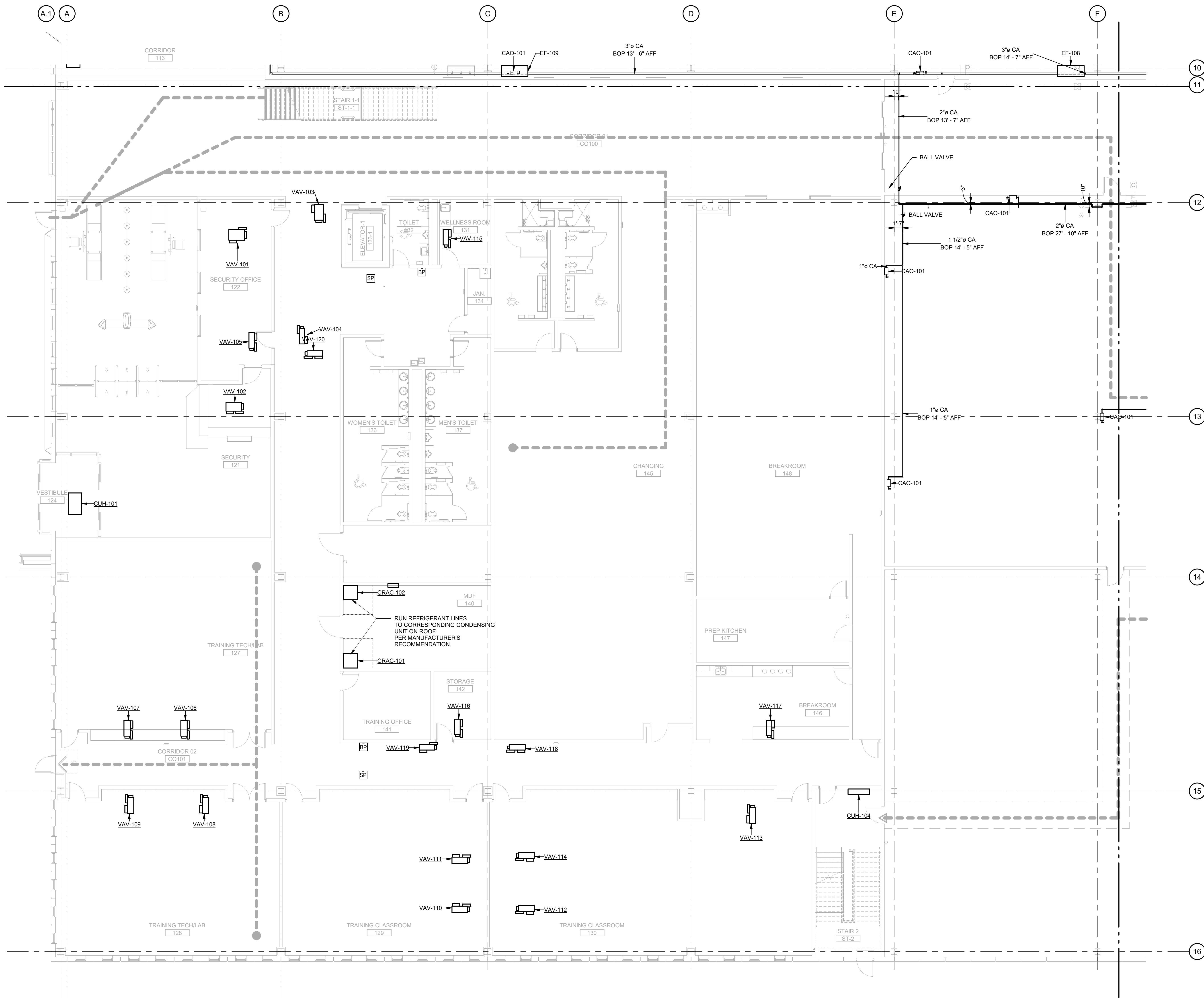
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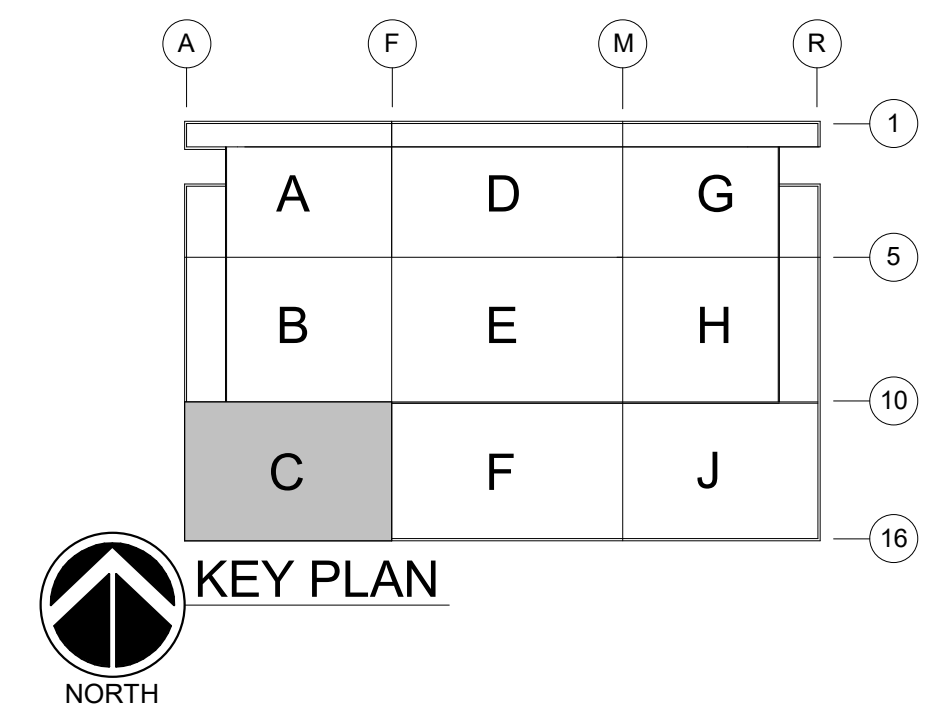
MECHANICAL PIPING PLAN FIRST FLOOR AREA B

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MECHANICAL PIPING PLAN FIRST FLOOR AREA C
SCALE: 1/8" = 1'-0"



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PROJECT MANAGER E. RICE
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**MECHANICAL
PIPING PLAN
FIRST FLOOR
AREA C**

MP1-01-03
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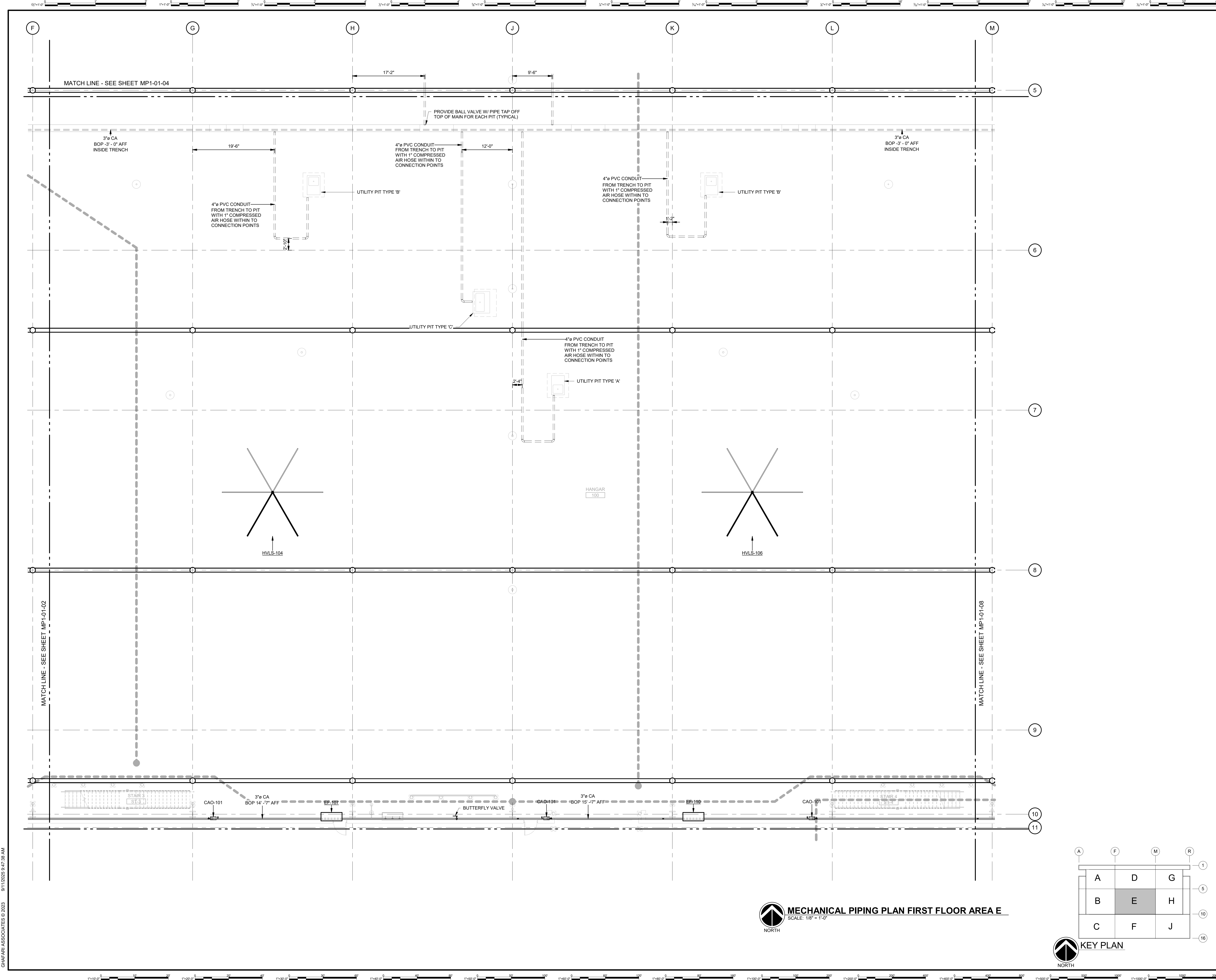
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PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

**MECHANICAL
PIPING PLAN
FIRST FLOOR
AREA D**

MP1-01-04
SHEET NUMBER



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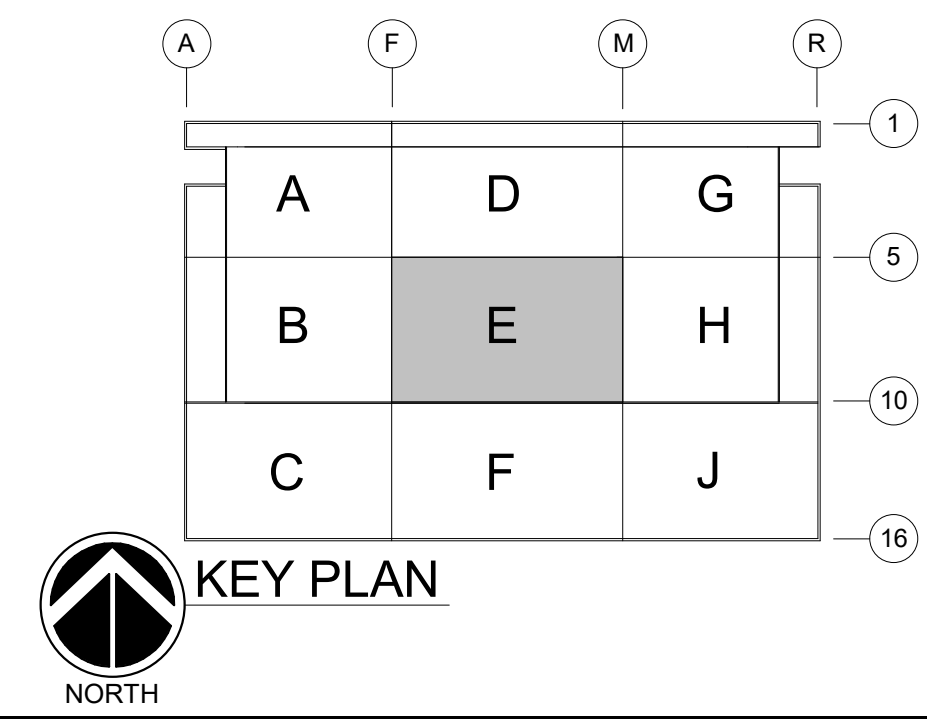
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2	03/12/25	FABRICATION SET
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PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
PIPING PLAN
FIRST FLOOR
AREA E**

MP1-01-05
SHEET NUMBER

MECHANICAL PIPING PLAN FIRST FLOOR AREA E
SCALE: 1/8" = 1'-0"



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PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

**MECHANICAL
PIPING PLAN
FIRST FLOOR
AREA F**

MP1-01-06
SHEET NUMBER

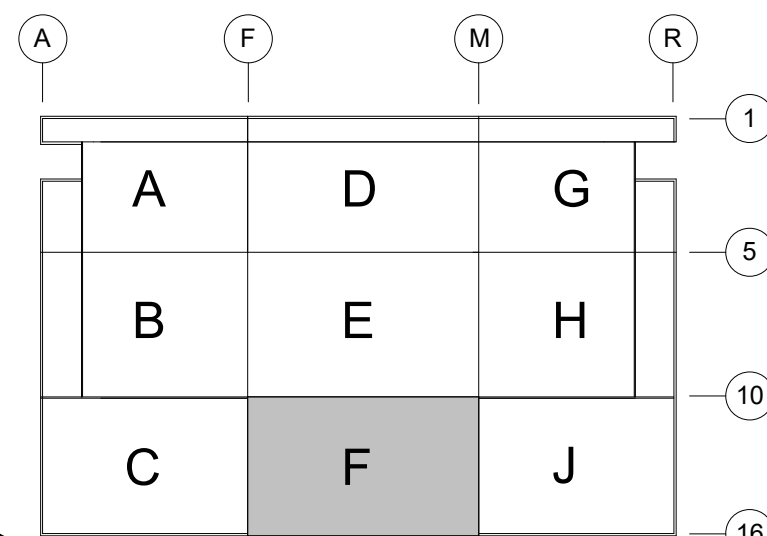


MECHANICAL PIPING PLAN FIRST FLOOR AREA F

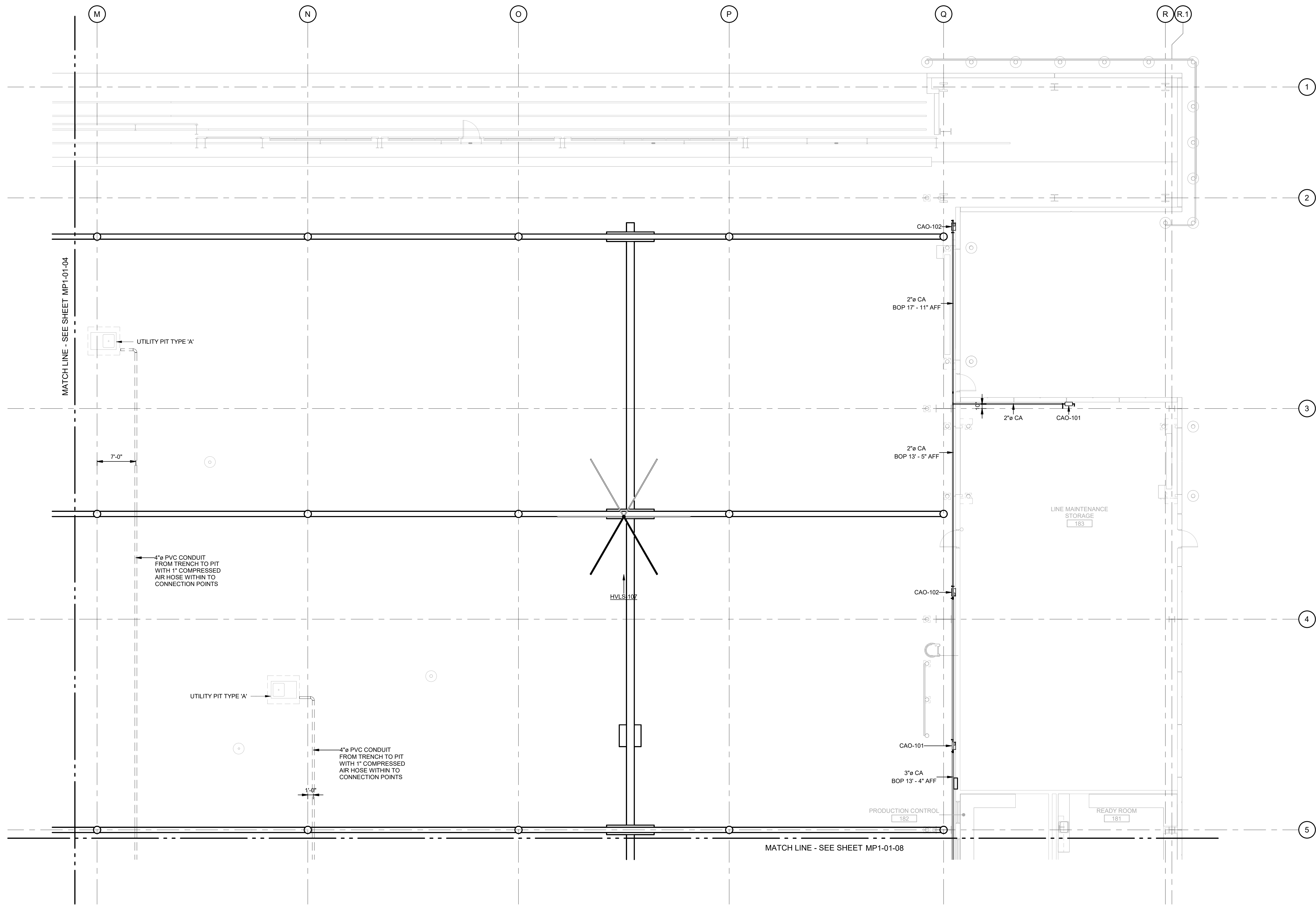
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KEY PLAN



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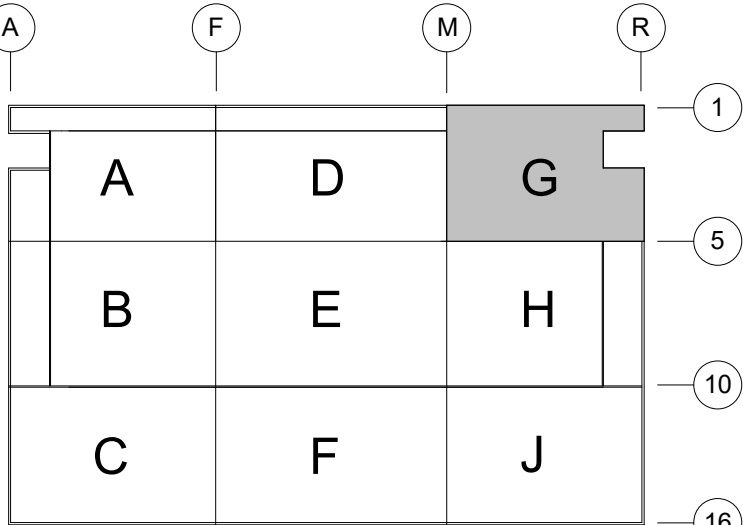


MECHANICAL PIPING PLAN FIRST FLOOR AREA G

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



KEY PLAN



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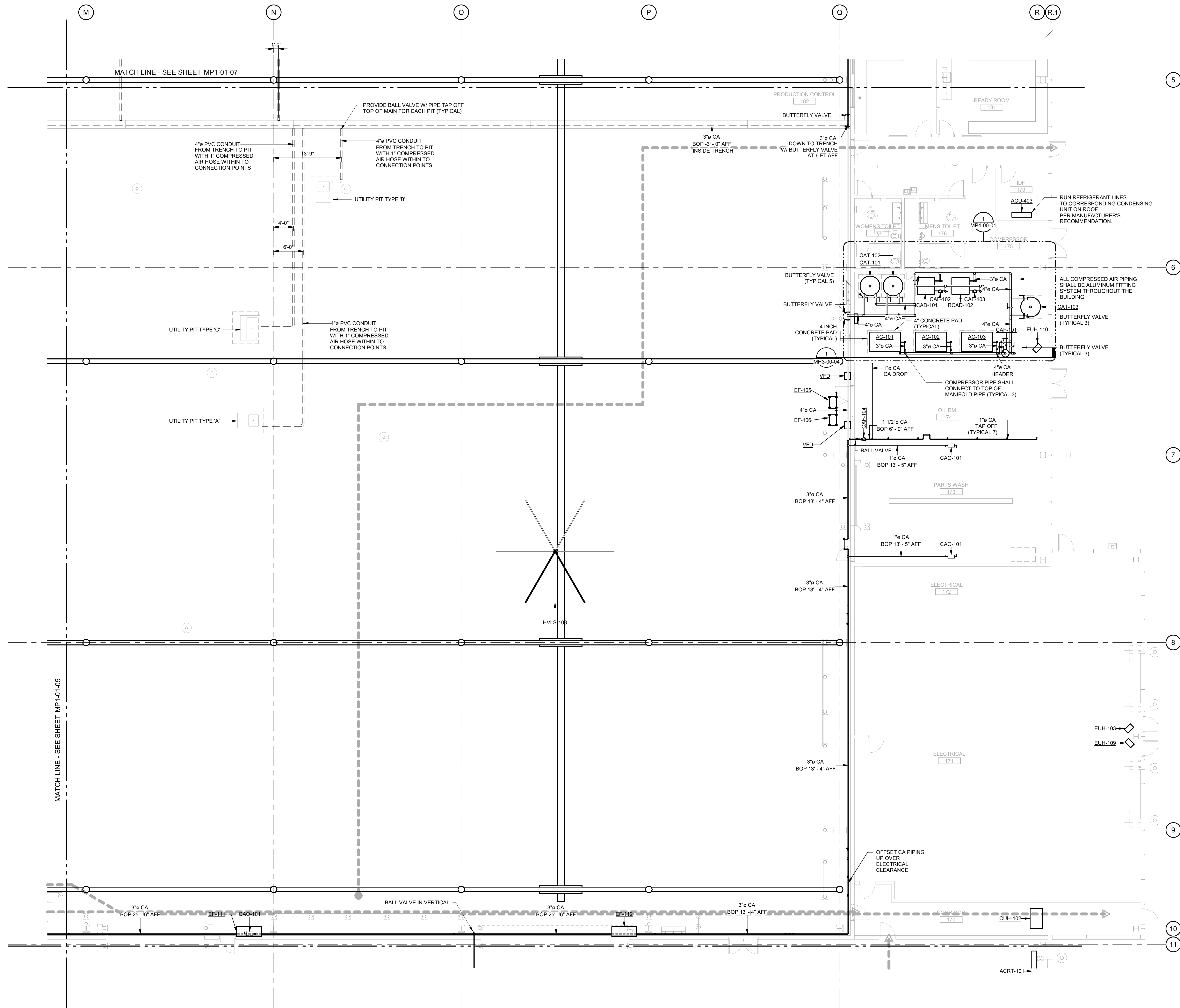
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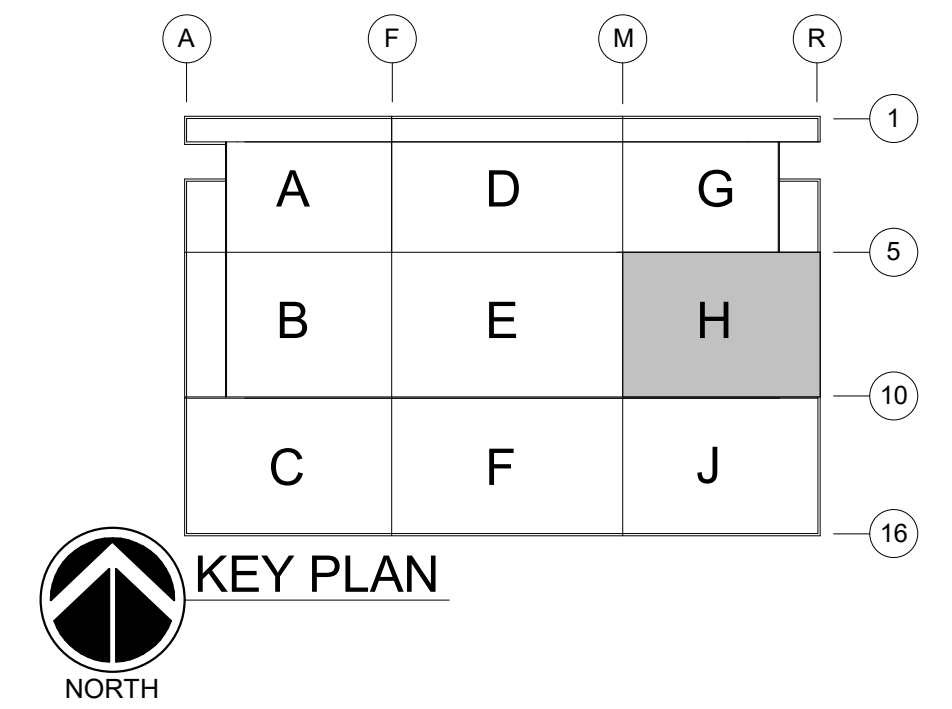
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MECHANICAL
PIPING PLAN
FIRST FLOOR
AREA G

MP1-01-07
SHEET NUMBER



MECHANICAL PIPING PLAN FIRST FLOOR AREA H
SCALE: 1/8" = 1'-0"



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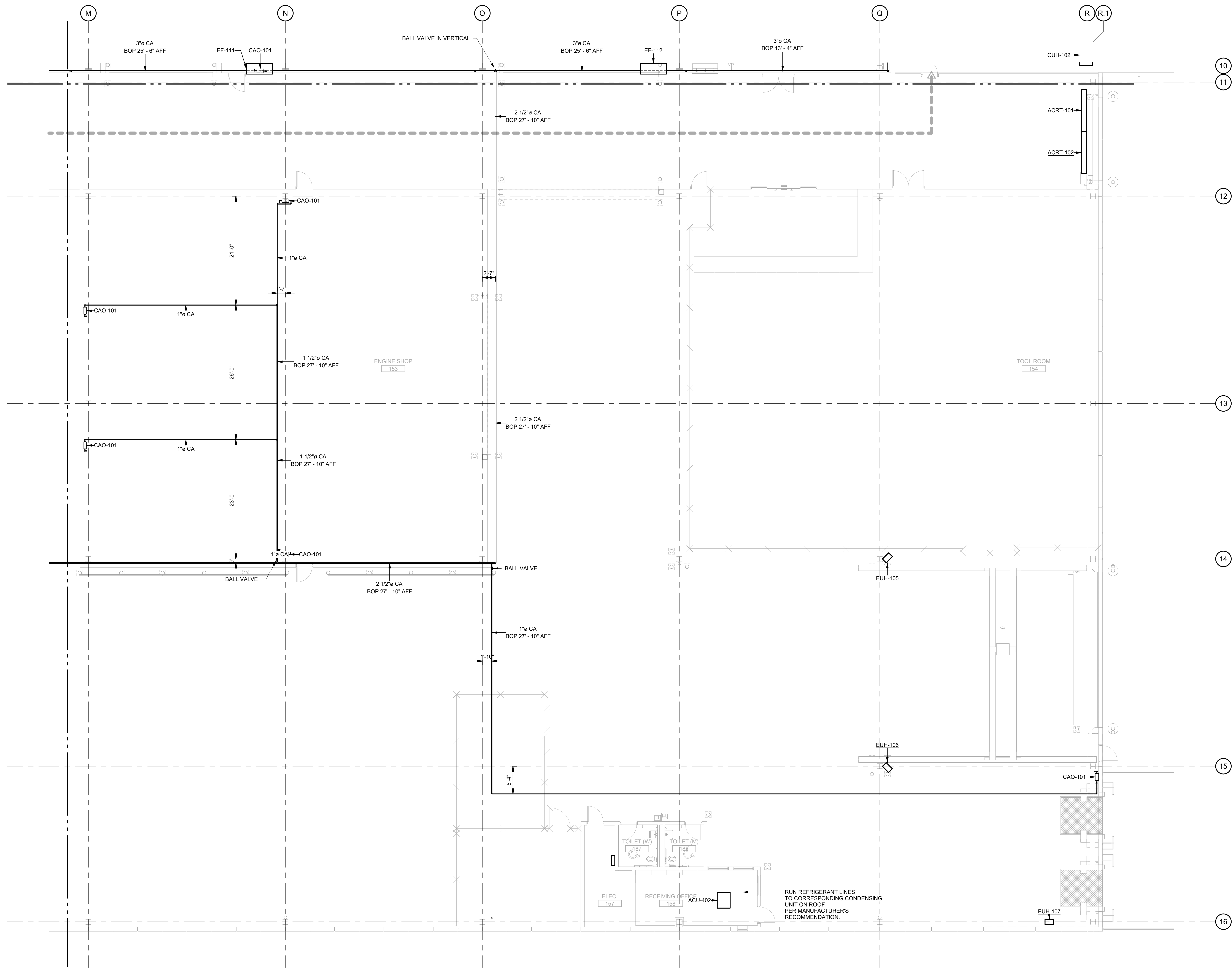
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2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

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PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
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SHEET TITLE

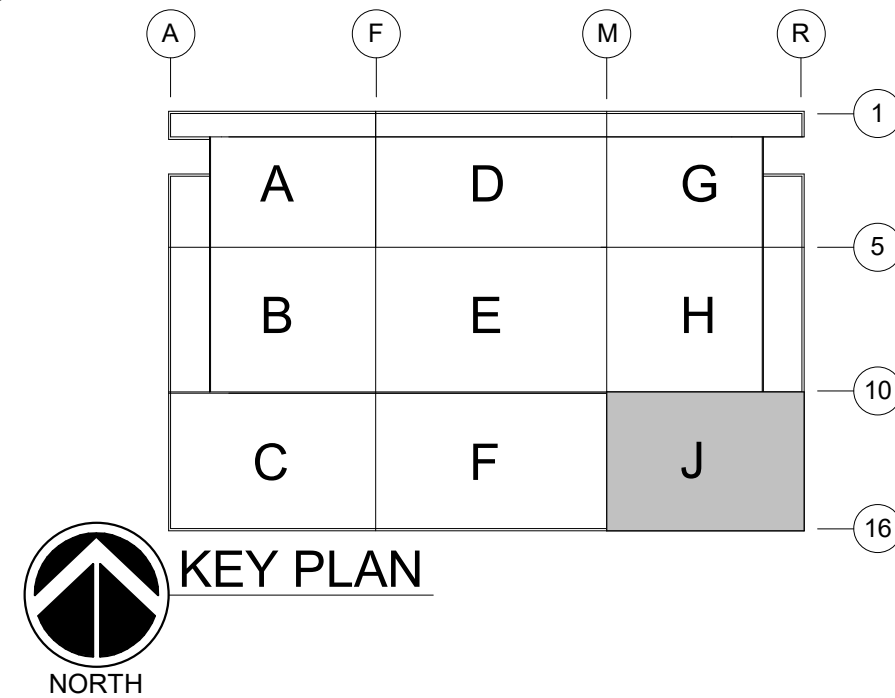
**MECHANICAL
PIPING PLAN
FIRST FLOOR
AREA H**

MP1-01-08
SHEET NUMBER

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MECHANICAL PIPING PLAN FIRST FLOOR AREA J
SCALE: 1/8" = 1'-0"



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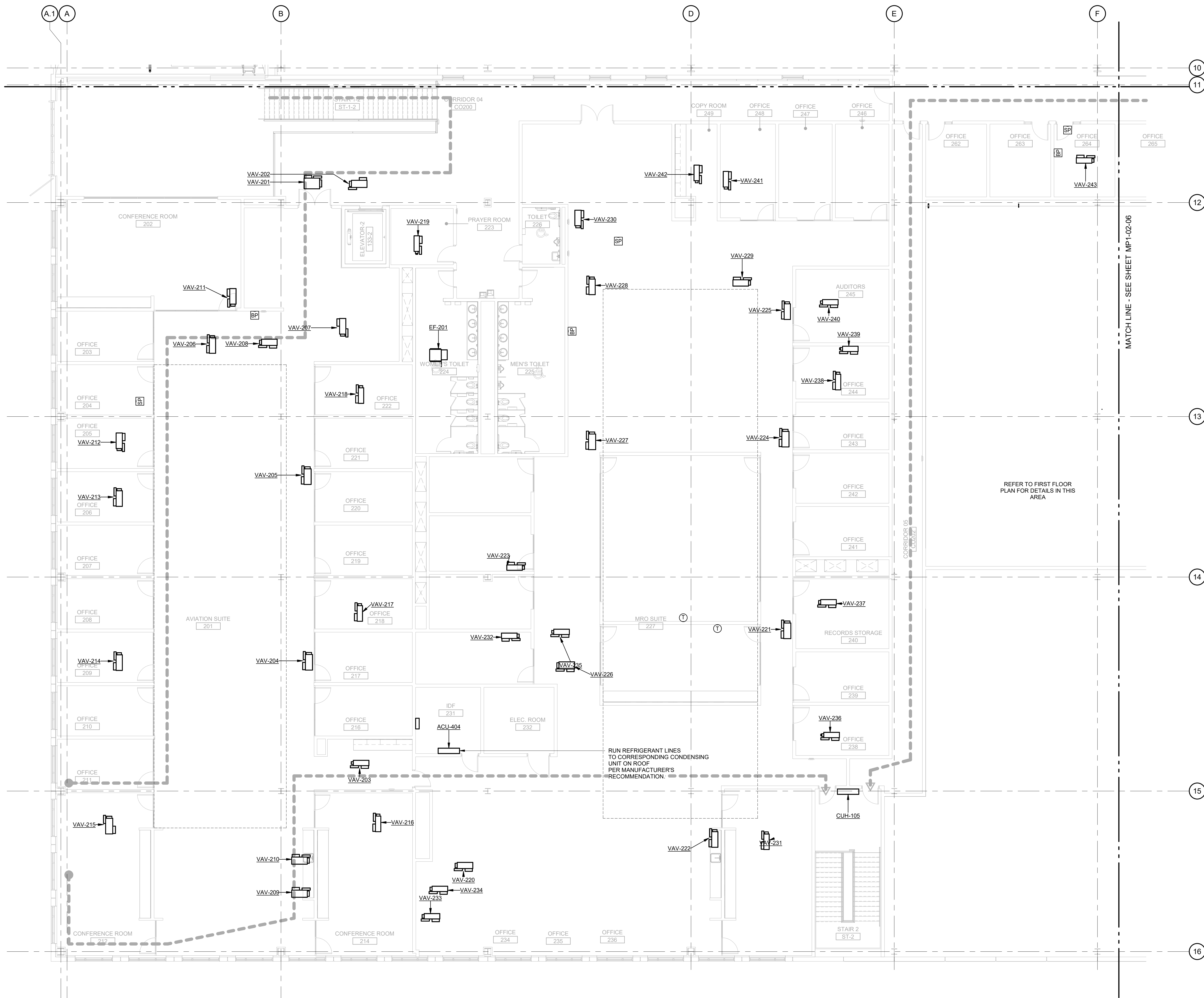
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2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL PIPING PLAN
FIRST FLOOR
AREA J**

MP1-01-09
SHEET NUMBER

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MECHANICAL PIPING PLAN SECOND FLOOR AREA C

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



KEY PLAN

	A	F	M	R	
1					
5	A	D	G		
10	B	E	H		
16	C	F	J		



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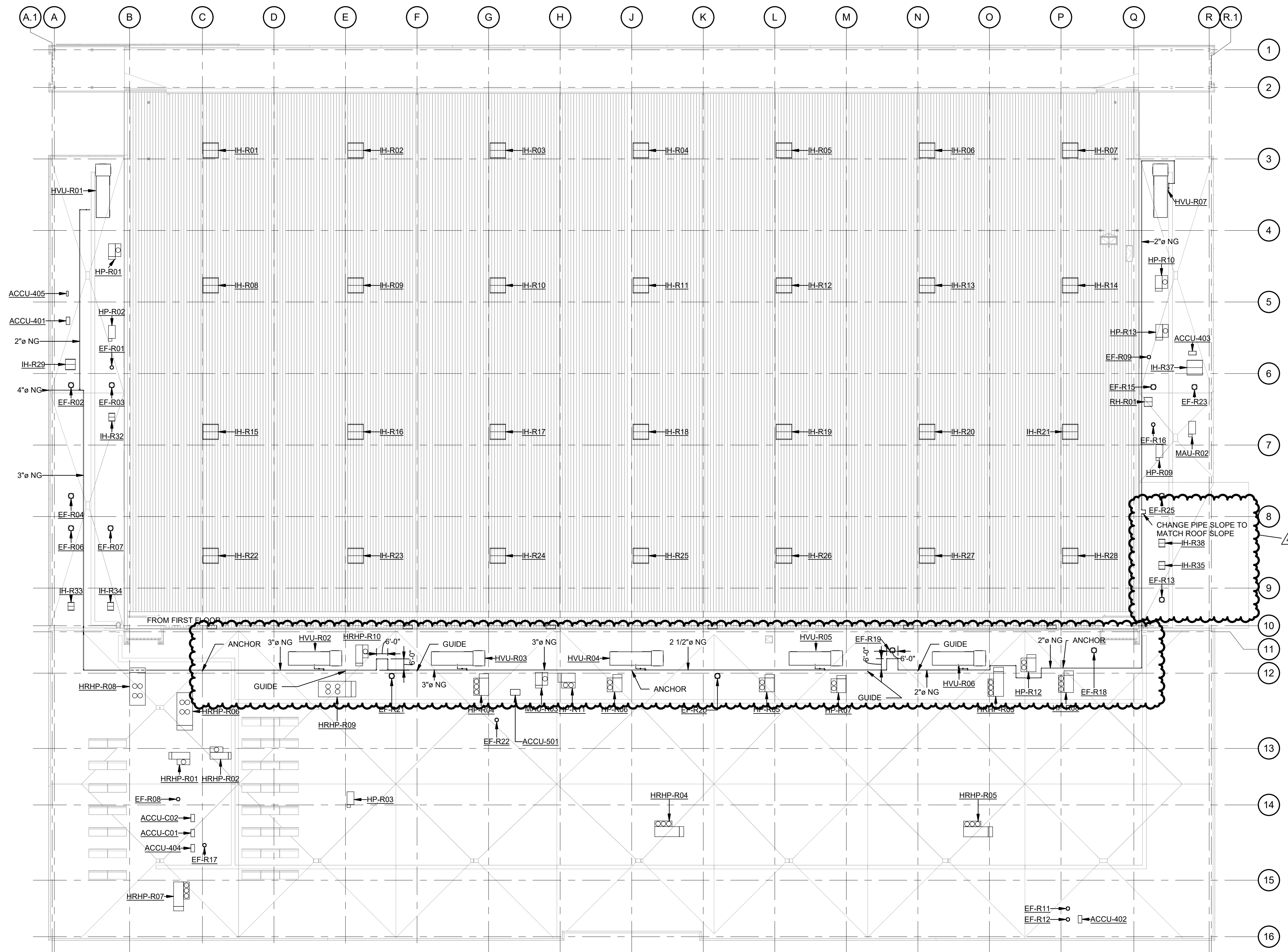
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REV	DATE	DOC REL ## - DESCRIPTION

PROJECT #	241054
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DESIGNED BY	T. JANZEN
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SHEET TITLE	

**MECHANICAL
PIPING PLAN
SECOND FLOOR
AREA C**

MP1-02-03
SHEET NUMBER

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MECHANICAL PIPING PLAN ROOF COMPOSITE
SCALE: 1" = 30'-0"

KEY PLAN



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**SHOP
DRAWING**

4	06/16/25	REVISIONS
3	06/03/25	FABRICATION REVISION
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

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PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

**MECHANICAL
PIPING PLAN
ROOF
COMPOSITE**

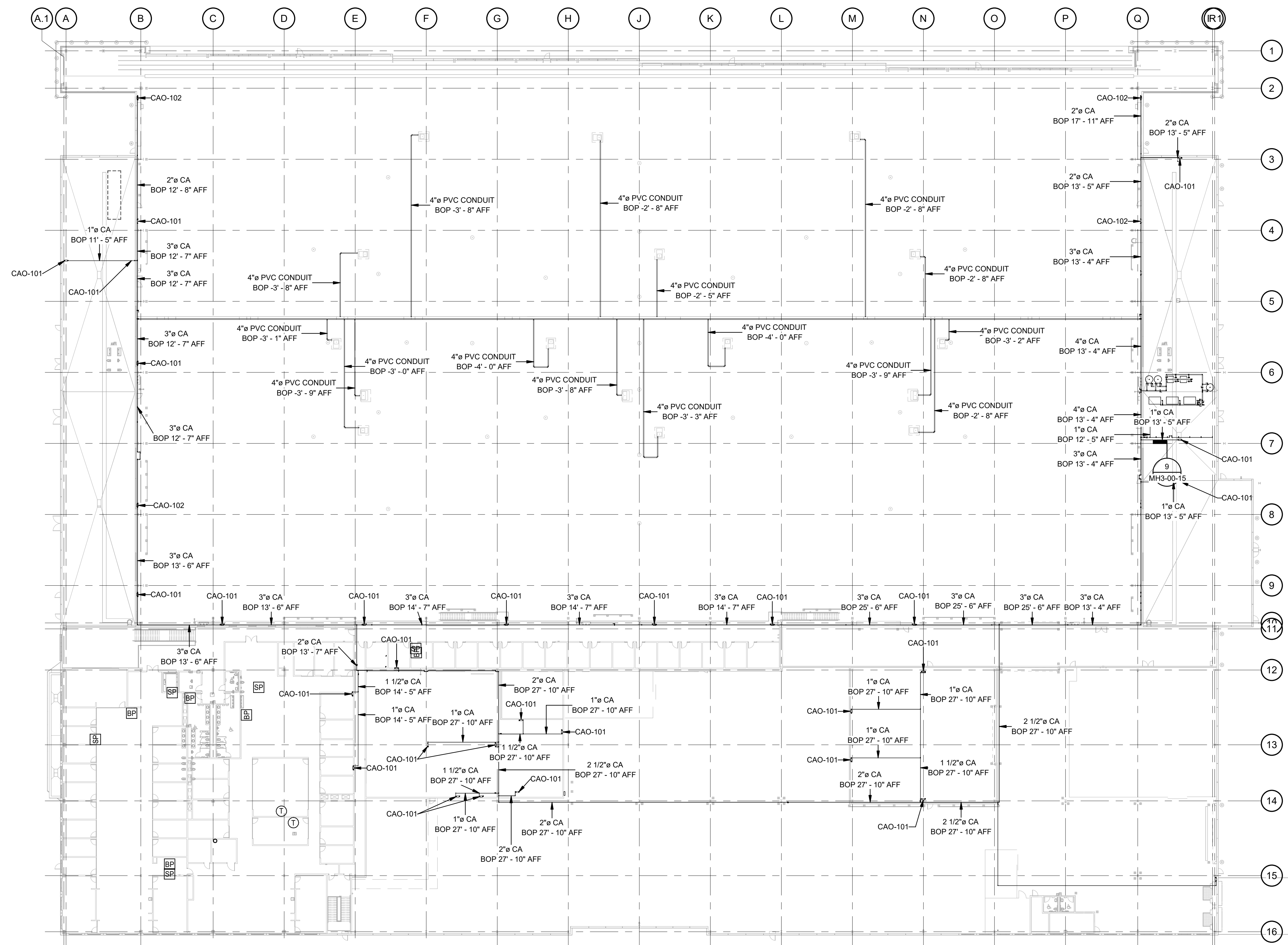
MP1-R1-00
SHEET NUMBER



CONTRACTOR INFORMATION



2649 COMMERCE BLVD.
CINCINNATI, OHIO 45241
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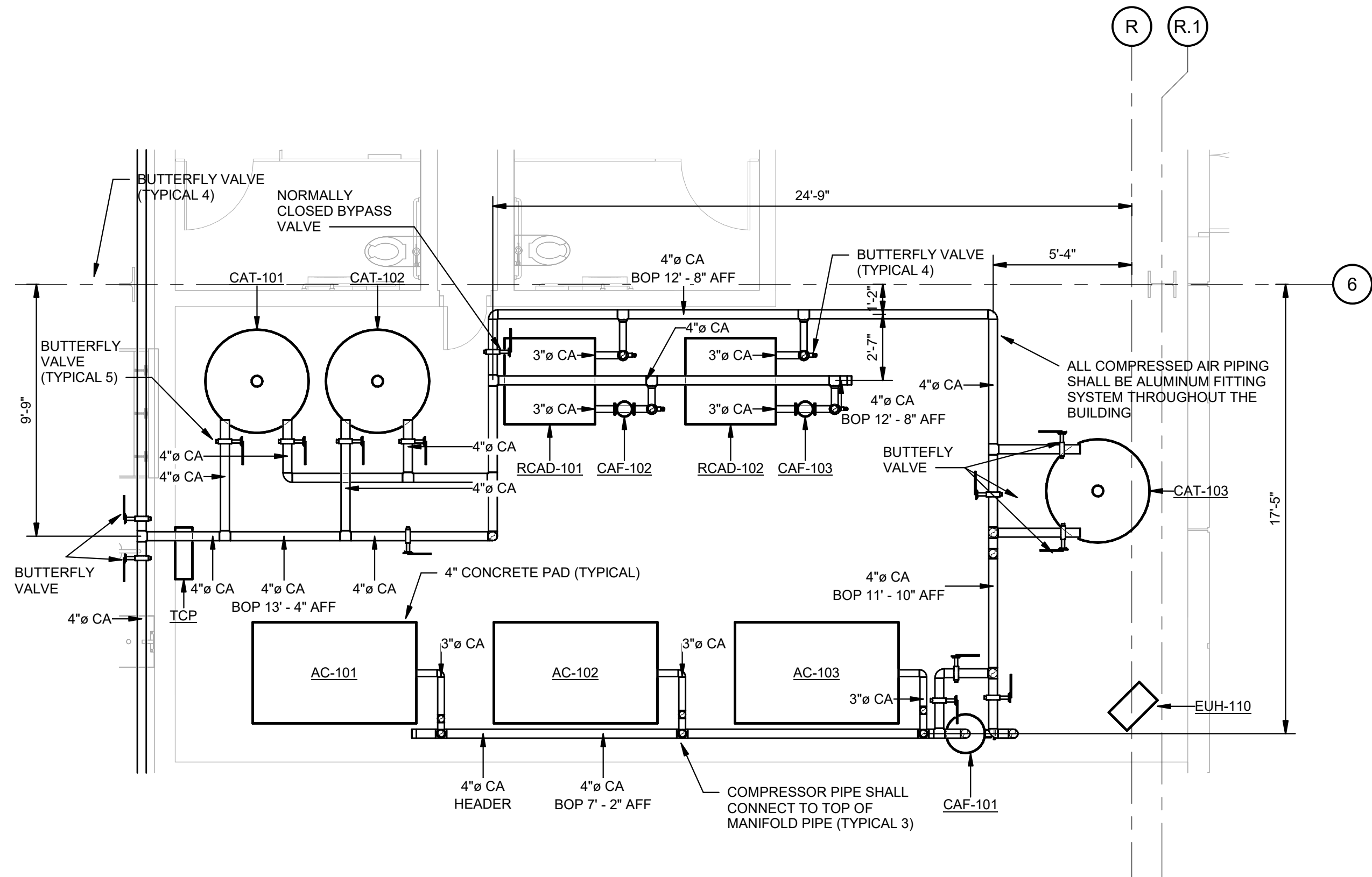


1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

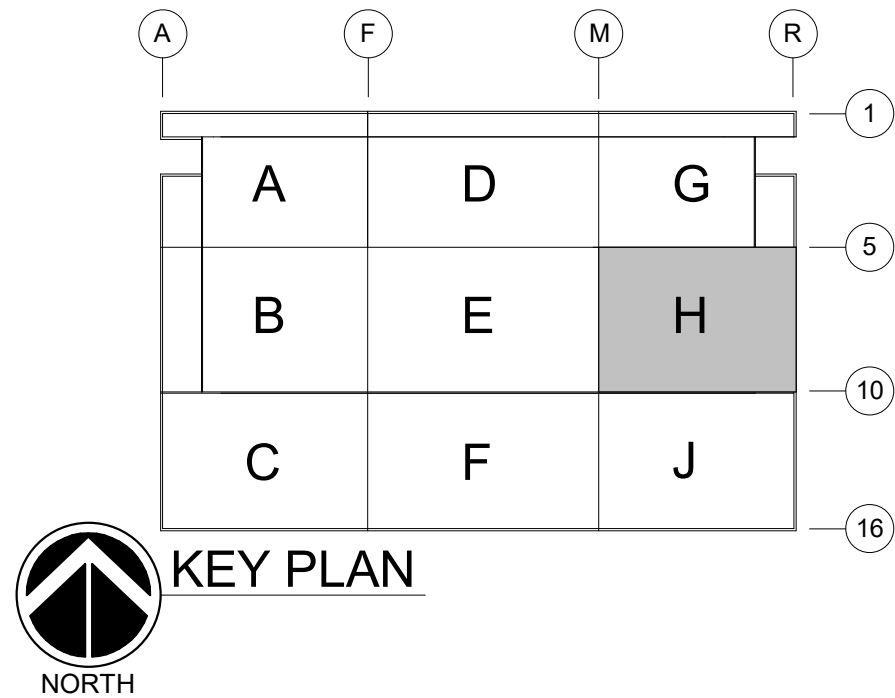
PERFECTION MECHANICAL PIPING PLAN

MP1-R1-01
SHEET NUMBER



MECHANICAL PIPING PLAN FIRST FLOOR AREA H - Callout 1

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



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INTERNATIONAL AIRPORT
410 WENDELL H. FORD BLVD
ERLANGER, KY 41018

CONTRACTOR INFORMATION

ESTD 1951

PERFECTION GROUP

2849 COMMERCE BLVD.
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SHOP
DRAWING

3	06/03/25	FABRICATION REVISION
2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT # 241054
PROJECT MANAGER E. RICE
DESIGNED BY T. JANZEN
DRAWN BY T. JANZEN
QUALCHECK C. LONG
SHEET TITLE

MECHANICAL
PIPING PLAN
LARGE SCALE

MP4-00-01
SHEET NUMBER



- PENETRATION - PRECAST EXTERIOR WALL PIPE SLEEVE**
NOT TO SCALE



**SHOP
DRAWING**

MP5-00-01
SHEET NUMBER



AIR COMPRESSOR (AIR COOLED) SCHEDULE																	
MARK	SYSTEM SERVED	LOCATION	DELIVERED SCFM	DISCHARGE PRESSURE (POST AFTERCOOLER) (PSIG)	COOLING AIR TEMP RISE (°F)	COOLING AIR FLOW (CFM)	ADDED AIR PRESSURE DROP MAX (IN.WC)	ELECTRICAL							WEIGHT (LBS)	BASED ON MANUFACTURER MODEL	COMMENTS
								INPUT (KW)	VOLT	PHASE	HZ	FLA	MOP	SCCR			
AC-101	COMPRESSED AIR SYSTEM	175 COMPRESSOR	217	145	41	3,826	0.00	45	480	3	60	70	125	65	2513	INGERSOLL RAND IRS37IE-A145	NOTE 1, 2, 3, 4
AC-102	COMPRESSED AIR SYSTEM	175 COMPRESSOR	217	145	41	3,826	0.00	45	480	3	60	70	125	65	2513	INGERSOLL RAND IRS37IE-A145	NOTE 1, 2, 3, 4
AC-103	COMPRESSED AIR SYSTEM	175 COMPRESSOR	217	145	41	3,826	0.00	45	480	3	60	70	125	65	2513	INGERSOLL RAND IRS37IE-A145	NOTE 1, 2, 3, 4

AIR COMPRESSOR SCHEDULE NOTES:

2. DUCTED AIR INTAKE AND EXHAUST: INCLUDE DUCT COLLARS AND REFER TO SHEET MHM3-30-04 FOR SECTION.
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE CONTROL WIRE IN CONDUIT BETWEEN EACH AIR COMPRESSOR TO ALLOW INTERNAL COMPRESSOR COMMUNICATION. INTERNAL COMPRESSOR CONTROLS SHALL BE INCLUDED TO PROVIDE DISPLAY WITH GRAPHING CAPABILITY, CAPACITY, PRESSURE, TEMPERATURE, AND VIBRATION. PROVIDE A CONTROL PANEL WITH THE FOLLOWING: CONTROL LOGIC, SEQUENCING OF UNITS, LIMIT PRIORITY, ROTATIONAL INTERVAL, STARRING DELAY INTERVALS, DAMPING, PRESSURE TOLERANCE, LOAD AND UNLOAD, AND DISPLAY ANALOG AND DIGITAL INPUT/OUTPUTS DATA FOR ALL THE COMPRESSORS WITH DIAGNOSTICS AND ALARMS WITH PASSWORD PROTECTION.
4. INCLUDE DISCONNECT SWITCH.

REFRIGERATED COMPRESSED AIR DRYER SCHEDULE																
MARK	SYSTEM SERVED	LOCATION	TYPE	REFRIGERANT TYPE	DESIGN INLET SCFM	INLET AIR PRESSURE (PSIG)	AIR SIDE PRESSURE DROP MAX (PSIG)	ELECTRICAL							BASED ON MANUFACTURER MODEL	COMMENTS
								POWER (KW)	VOLT	PHASE	HZ	MCA	MOP	SCCR		
RCAD-101	COMPRESSED AIR SYSTEM	175 COMPRESSOR	REFRIGERATED COMPRESSED AIR DRYER	R-404A	700	140.0	2.7	5	480	3	60	12.6	20.0	65	INGERSOLL RAND NVC700	NOTE 1, 2, 3, 4
RCAD-102	COMPRESSED AIR SYSTEM	175 COMPRESSOR	REFRIGERATED COMPRESSED AIR DRYER	R-404A	700	140.0	2.7	5	480	3	60	12.6	20.0	65	INGERSOLL RAND NVC700	NOTE 1, 2, 3, 4

COMPRESSED AIR DRYER SCHEDULE NOTES:

1. INSTALL FILTER ON THE OUTLET OF THE DRYER
2. INSTALL 3" BUTTERFLY SHUT OFF VALVES AND BYPASS VALVE IN VERTICAL PIPES PROVIDED BY MECHANICAL CONTRACTOR.
3. INSTALL 3" TO 4" TRANSITION IN VERTICAL PIPE
4. INCLUDE DISCONNECT SWITCH.

COMPRESSED AIR TANK SCHEDULE										
MARK	SYSTEM SERVED	LOCATION	TYPE OF EQUIPMENT	PRESSURE OUT RATING (PSI)	VOLUME (GAL)	DIAMETER (FT-IN)	HEIGHT (FT-IN)	WEIGHT (LBS)	BASED ON MANUFACTURER MODEL	COMMENTS
CAT-101	COMPRESSED AIR SYSTEM	175 COMPRESSOR	COMPRESSED AIR TANK	200	1060	4'-0"	12'-0"	1	INGERSOLL RAND 1060 GAL	NOTE 1, 2, 3
CAT-102	COMPRESSED AIR SYSTEM	175 COMPRESSOR	COMPRESSED AIR TANK	200	1060	4'-0"	12'-0"	1	INGERSOLL RAND 1060 GAL	NOTE 1, 2, 3
CAT-103	COMPRESSED AIR SYSTEM	175 COMPRESSOR	COMPRESSED AIR TANK	200	1060	4'-0"	12'-0"	1	INGERSOLL RAND 1060 GAL	NOTE 1, 2, 3

COMPRESSED AIR TANK SCHEDULE NOTES:

1. INCLUDE TEMPERATURE AIR CONNECTION UPSTREAM OF RECEIVER.
2. INCLUDE EWD50 ELECTRONIC NO-LOSS CONDENSATE DRAIN.
3. COORDINATE INLET AND OUTLET PIPE CONNECTION FLANGE TO FRONT OF TANK WITH MECHANICAL CONTRACTOR.

COMPRESSED AIR EQUIPMENT							
MARK	SYSTEM SERVED	LOCATION	TYPE	AIR FLOW (SCFM)	MAX WORKING PRESSURE (PSI)	BASED ON MANUFACTURER MODEL	COMMENTS
CAF-101	AC-101, 102, 103	175 COMPRESSOR	COALESCING FILTER	800	150	INGERSOLL RAND F850G	NOTE 2, 3
CAF-102	RCAD-101	175 COMPRESSOR	COALESCING FILTER	710	250	INGERSOLL RAND FA1200H	NOTE 1, 2, 3
CAF-103	RCAD-102	175 COMPRESSOR	COALESCING FILTER	710	250	INGERSOLL RAND FA1200H	NOTE 1, 2, 3
CAF-104	OIL PUMPS	174 OIL ROOM	COALESCING FILTER	710	250	INGERSOLL RAND FA1200H	NOTE 2, 3

COMPRESSED AIR EQUIPMENT SCHEDULE NOTES:

1. LOCATE AT EACH DRYER AND INCLUDE GRADE H FILTRATION ELEMENT.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. COORDINATE CLEARANCE REQUIRED FOR FILTER AND ELEMENT REMOVAL.

COMPRESSED AIR PIPE ACCESSORY SCHEDULE						
MARK	DESCRIPTION	PIPE SIZE (IN) -<var>size>	DELIVERED SCFM -<var>size>	DISCHARGE PRESSURE (PSIG) -<var>size>	BASED ON MANUFACTURER MODEL -<var>size>	COMMENTS -<var>size>
CAO-101	COMPRESSED AIR OUTLET WITH FILTER	2	120	115	INGERSOLL RAND MODEL ARO W/ PRESSURE GAUGE	PROVIDE AIR FILTER TO FILTER 5 MICRON SOLID PARTICLES



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ESTD 1951

**PERFECTION
GROUP**

2649 COMMERCE BLVD.
CINCINNATI, OHIO 45241
TEL +1.513.772.7545

**SHOP
DRAWING**

[illegible]

2	03/12/25	FABRICATION SET
1	01/02/25	REVIEW SET
REV	DATE	DOC REL ## - DESCRIPTION

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
QUALCHECK	C. LONG
SHEET TITLE	

MECHANICAL PIPING SCHEDULES

MP7-00-01
SHEET NUMBER

165-7-



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**PERFECTION
GROUP**

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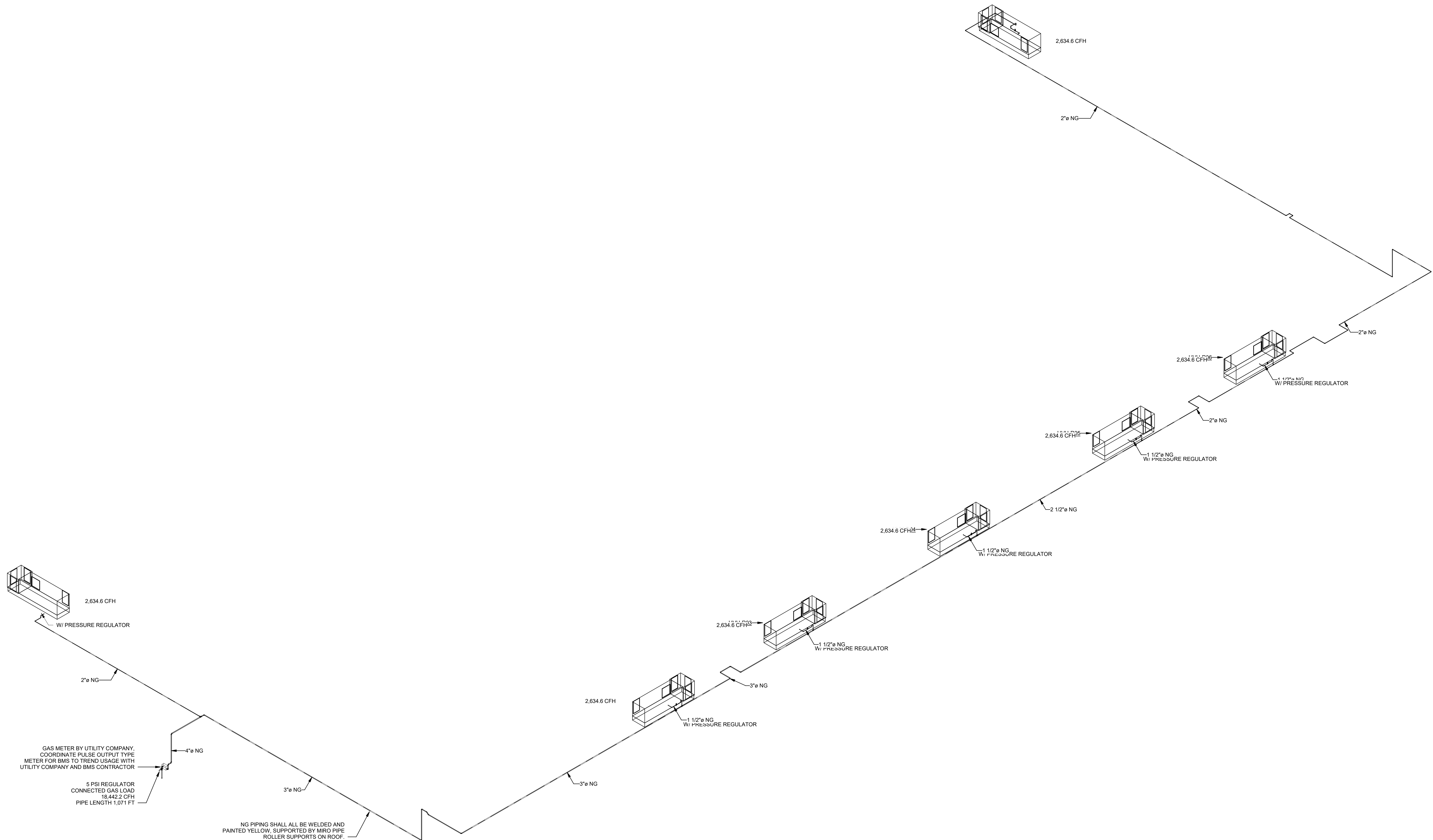
**SHOP
DRAWING**

[illegible]

PROJECT #	241054
PROJECT MANAGER	E. RICE
DESIGNED BY	T. JANZEN
DRAWN BY	T. JANZEN
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SHEET TITLE	

MECHANICAL PIPING ISOMETRICS

MP9-00-01
SHEET NUMBER



MECHANICAL PIPING 3D - NATURAL GAS
NOT TO SCALE