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100% SUBMITTAL

FIREARMS OUTLET
CANADA-DESIGN

Project Manager:	STEVE TIBBALS
Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DECASTRO
Drawn By:	JAMIE HADERLIE
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/2012

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13462

ZM001

—SCALED FOR ORIGINAL DRAWING AT 22" X 34"

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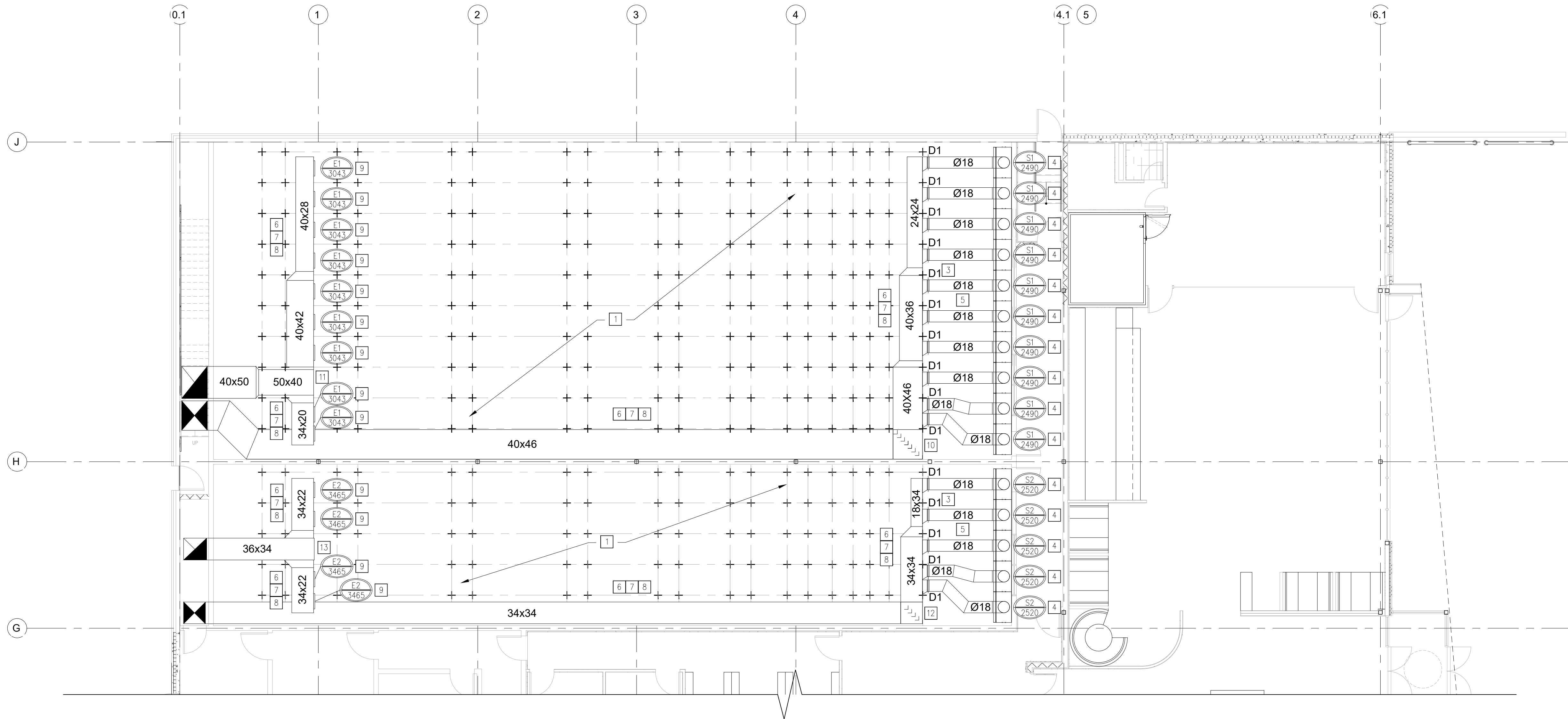
KEYED NOTES (SHEET ZM101.1)

- 1 BALLISTIC CEILING (TYP.). SEE ATI RANGE DRAWINGS FOR DETAILS.
- 2 BULLET TRAP (TYP.). SEE ATI RANGE DRAWINGS FOR DETAILS.
- 3 HIGH EFFICIENCY TAKEOFF (HET) SUPPLIED BY MECHANICAL CONTRACTOR (M.C.). (TYP). MANUAL VOLUME DAMPER SUPPLIED BY ACTION TARGET. (TYP)
- 4 RADIAL SUPPLY AIR (SA) DIFFUSER SUPPLIED BY ATI AND INSTALLED BY M.C. INSTALL RADIAL DIFFUSER UNIFORMLY, PLUMB AND LEVEL, AND SYMMETRICAL ACROSS WIDTH OF RANGE. RADIAL DIFFUSER FACE SHALL BE A MINIMUM OF 7'-0" A.F.F. SEE DETAILS AT.07.01 AND AT.08.04 WITHIN ZM60X SERIES SHEETS. DIFFUSER SHALL BE FIELD BALANCED TO SUPPLY CFM STATED ON PLANS.
- 5 T-BAR LAY-IN CEILING SHALL BE PROVIDED BY OWNER OR GENERAL CONTRACTOR. T-BAR CEILING SHALL BE INSTALLED BETWEEN TOP OF RADIAL DIFFUSER AND THE STEEL SAFETY CEILING. SEE DETAIL AT.08.04 WITHIN ZM60X SERIES SHEETS.
- 6 ALL SUPPLY/RETURN/EXHAUST AIR DUCTWORK INSTALLED ABOVE CEILINGS, OR HUNG HIGH WITHIN SPACE SHALL BE SUPPORTED FROM OVERHEAD STRUCTURE (TYP). OWNER SHALL BE RESPONSIBLE FOR STRUCTURAL INTEGRITY REQUIRED TO SUPPORT ALL DUCTWORK IN ACCORDANCE WITH CODE AND INDUSTRY STANDARDS.
- 7 DUCTWORK HANGERS/SUPPORTS BY M.C. ALL SUPPORTS SHALL BE ABLE TO CARRY THE WEIGHT OF THE SECTION OF DUCT PLUS 15% SAFETY FACTOR. M.C. SHALL BE RESPONSIBLE FOR SUPPORTS FINAL DESIGN AND LOCATION IN COORDINATION WITH FINAL DUCTWORK LAYOUT. ALL SUPPORTS SHALL BE FABRICATED OF RUST RESISTANT MATERIALS.
- 8 ALL DUCTWORK (SA, RA, & EA) SHALL BE CROSS BRACED AND REINFORCED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" - METAL AND FLEXIBLE" LATEST EDITION FOR THE FOLLOWING STATED STATIC PRESSURE RATINGS:
 - SUPPLY AIR (SA) DUCTWORK = 2.5"W.C.
 - RETURN AIR (RA) DUCTWORK = 2.5"W.C.
 - EXHAUST AIR (EA) DUCTWORK = 2.5"W.C. (SEE KEYNOTE 13 EXCEPTION)
- 9 PROVIDE CONTINUOUS 8" SLOT ON DUCT SIDE FOR AIR RETURN. SLOT NOT REQUIRED AT DUCT SECTION JOINTS. COVER WITH SCREEN. AIRFLOW IS APPROXIMATE.

- | | |
|----|---|
| 10 | 40"x46" SUPPLY AIR (SA1) DUCT UP THROUGH DECK TO ROOF TO CURB. CURB CONNECTION SHALL MATCH SA1 DUCT SIZE (38"x38") FROM RANGE. SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION. |
| 11 | 50"x40" EXHAUST AIR (EA1) DUCT UP THROUGH DECK TO ROOF. EA DUCT SHALL CONNECT TO FB-1 (CORRESPONDING EF1 SUCTION). SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION. |
| 12 | 34"x34" SUPPLY AIR (SA2) DUCT UP THROUGH DECK TO ROOF TO CURB. CURB CONNECTION SHALL MATCH SA2 DUCT SIZE (38"x38") FROM RANGE. SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION. |
| 13 | 36"x34" EXHAUST AIR (EA2) DUCT UP THROUGH DECK TO ROOF. EA DUCT SHALL CONNECT TO FB-2 (CORRESPONDING EF2 SUCTION). SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION. |

GENERAL NOTES (SHEET ZM101.1)

1. DIMENSIONS SHOWN ON PLANS ARE APPROXIMATE AND BASED UPON MEASUREMENTS FROM THE BUILDINGS WALLS OR FINISHED FLOOR GENERATED IN A DIGITAL DRAWING. M.C. SHALL FIELD VERIFY ALL MEASUREMENTS AND EQUIPMENT/DUCTWORK LOCATIONS PRIOR TO INSTALLATION (TYP.).
2. FRAMED WALL BETWEEN RANGE AND ADJACENT SPACES SHALL BE AIRTIGHT TO ENSURE PROPER AIR MOVEMENT OF RANGE VENTILATION SYSTEM.
3. PROVIDE ANGLE IRON DUCT TRAPEZE WHERE INDICATED ON PLANS. TRAPEZE PROVIDED BY ACTION TARGET.
4. REFER TO DETAILS WITH ZM60X SERIES SHEETS FOR DUCTWORK INSTALLATION REQUIREMENTS.
5. TURNING VANES SHALL BE USED ON ALL 90, 45, AND 22.5 DEGREE CHANGE IN DIRECTION FITTINGS FOR ALL SUPPLY, RETURN, AND EXHAUST AIR SQUARE/RECTANGULAR DUCTS.
6. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK FLOOR PENETRATIONS WITH STRUCTURAL ENGINEER TO ENSURE THE PROPER STRUCTURAL MODIFICATIONS HAVE BEEN MADE TO ACCOMMODATE PASSAGE.
7. M.C. SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL SEEN AND UNSEEN ARCHITECTURAL AND STRUCTURAL BUILDING FEATURES. FINAL DUCTWORK ROUTING SHALL BE THE RESPONSIBILITY OF THE M.C.
8. M.C. SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS, INCLUDING DUCTWORK ROUTING, TO ATI FOR REVIEW PRIOR TO SYSTEM INSTALLATION.



1 HVAC PLAN
ZM101 SCALE - 1/8" = 1'-0"



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PROJECT STATUS

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CANADA-DESIGN

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Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DE COSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

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SHEET NAME

RANGE 1 & 2 HVAC PLAN

-DRAWING NUMBER

13462

SHEET NUMBER

ZM101.1

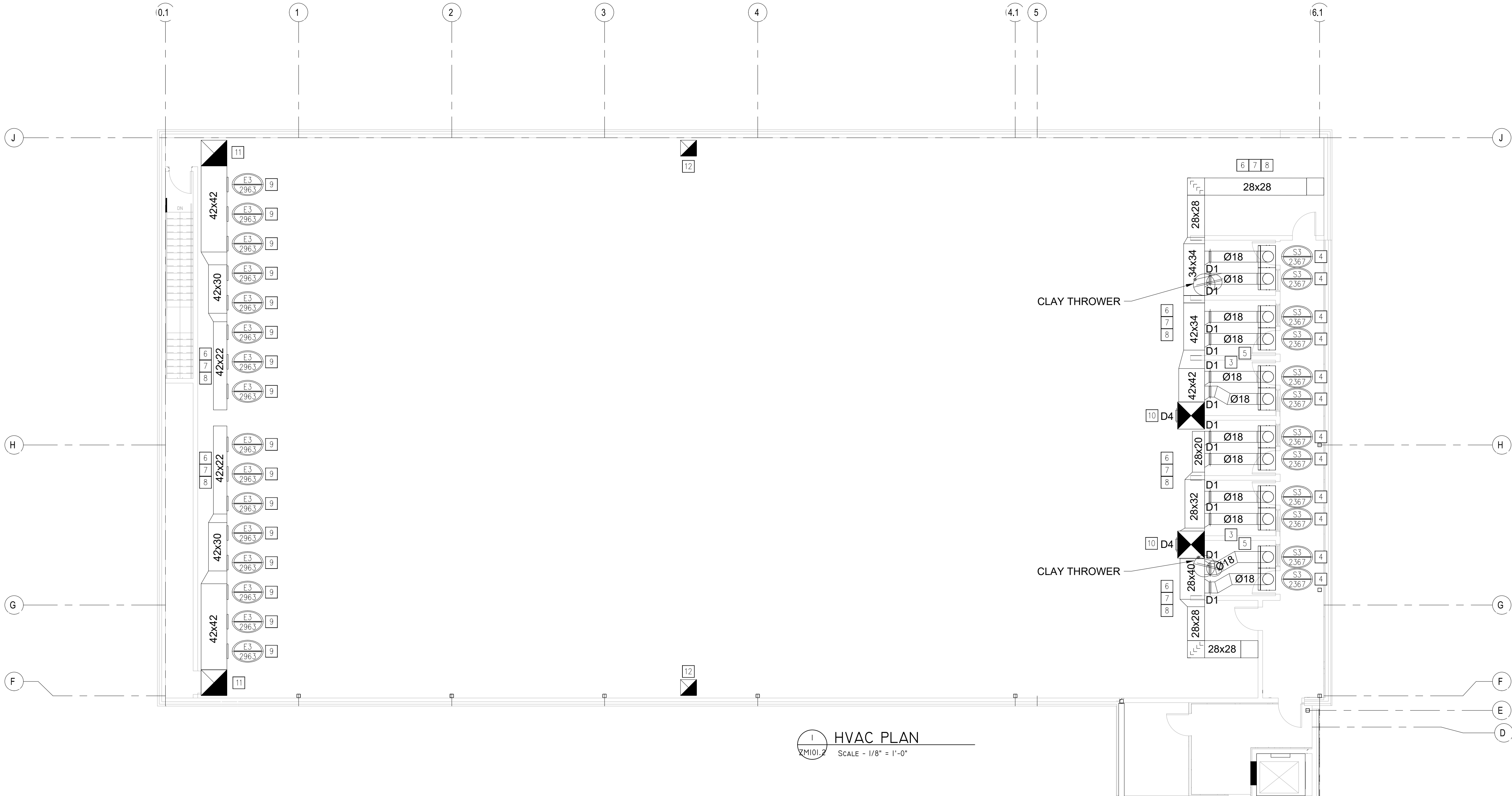
KEYED NOTES (SHEET ZM101.2)

- 1 BALLISTIC CEILING (TYP.). SEE ATI RANGE DRAWINGS FOR DETAILS.
- 2 BULLET TRAP (TYP.). SEE ATI RANGE DRAWINGS FOR DETAILS.
- 3 HIGH EFFICIENCY TAKEOFF (HET) SUPPLIED BY MECHANICAL CONTRACTOR (M.C.). (TYP). MANUAL VOLUME DAMPER SUPPLIED BY ACTION TARGET. (TYP)
- 4 RADIAL SUPPLY AIR (SA) DIFFUSER SUPPLIED BY ATI AND INSTALLED BY M.C. INSTALL RADIAL DIFFUSER UNIFORMLY, PLUMB AND LEVEL, AND SYMMETRICAL ACROSS WIDTH OF RANGE. RADIAL DIFFUSER FACE SHALL BE A MINIMUM OF 7'-0" A.F.F. SEE DETAILS AT.07.01 AND AT.08.04 WITHIN ZM60X SERIES SHEETS. DIFFUSER SHALL BE FIELD BALANCED TO SUPPLY CFM STATED ON PLANS.
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 - RETURN AIR (RA) DUCTWORK = 2.5"W.C.
 - EXHAUST AIR (EA) DUCTWORK = 2.5"W.C. (SEE KEYNOTE 13 EXCEPTION)
- 9 PROVIDE CONTINUOUS 8" SLOT ON DUCT SIDE FOR AIR RETURN. SLOT NOT REQUIRED AT DUCT SECTION JOINTS. COVER WITH SCREEN. AIRFLOW IS APPROXIMATE.

- 10 42"x42" SUPPLY AIR (SA) DUCT UP THROUGH DECK TO ROOF TO CURB. CURB CONNECTION SHALL MATCH SA DUCT SIZE (44"x44") FROM RANGE. SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION.
- 11 42"x42" EXHAUST AIR (EA1) DUCT UP THROUGH DECK TO ROOF. EA1 DUCT SHALL CONNECT TO FB-1 (CORRESPONDING EF SUCTION). SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION.
- 12 26"x26" MIDRANGE EXHAUST AIR (EA2) DUCT UP THROUGH DECK TO ROOF. EA1 DUCT SHALL CONNECT TO FB-1 (CORRESPONDING EF SUCTION). SEE ASSOCIATED ELEVATION SECTION WITHIN ZM301 SERIES SHEETS FOR CLARIFICATION.

GENERAL NOTES (SHEET ZM101.2)

1. DIMENSIONS SHOWN ON PLANS ARE APPROXIMATE AND BASED UPON MEASUREMENTS FROM THE BUILDINGS WALLS OR FINISHED FLOOR GENERATED IN A DIGITAL DRAWING. M.C. SHALL FIELD VERIFY ALL MEASUREMENTS AND EQUIPMENT/DUCTWORK LOCATIONS PRIOR TO INSTALLATION (TYP.).
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3. PROVIDE ANGLE IRON DUCT TRAPEZE WHERE INDICATED ON PLANS. TRAPEZE PROVIDED BY ACTION TARGET.
4. REFER TO DETAILS WITH ZM60X SERIES SHEETS FOR DUCTWORK INSTALLATION REQUIREMENTS.
5. TURNING VANES SHALL BE USED ON ALL 90, 45, AND 22.5 DEGREE CHANGE IN DIRECTION FITTINGS FOR ALL SUPPLY, RETURN, AND EXHAUST AIR SQUARE/RECTANGULAR DUCTS.
6. MECHANICAL CONTRACTOR SHALL COORDINATE ALL DUCTWORK FLOOR PENETRATIONS WITH STRUCTURAL ENGINEER TO ENSURE THE PROPER STRUCTURAL MODIFICATIONS HAVE BEEN MADE TO ACCOMMODATE PASSAGE.
7. M.C. SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL SEEN AND UNSEEN ARCHITECTURAL AND STRUCTURAL BUILDING FEATURES. FINAL DUCTWORK ROUTING SHALL BE THE RESPONSIBILITY OF THE M.C.
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CANADA-DESIGN

Project Manager:	STEVE TIBBALS
Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DE COSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

SHEET NAME

RANGE 3 HVAC PLAN

-DRAWING NUMBER

13462

SHEET NUMBER

ZM101.2

SCALED FOR ORIGINAL DRAWING AT 22" X 34"

SCALED FOR ORIGINAL DRAWING AT 22" X 34"—

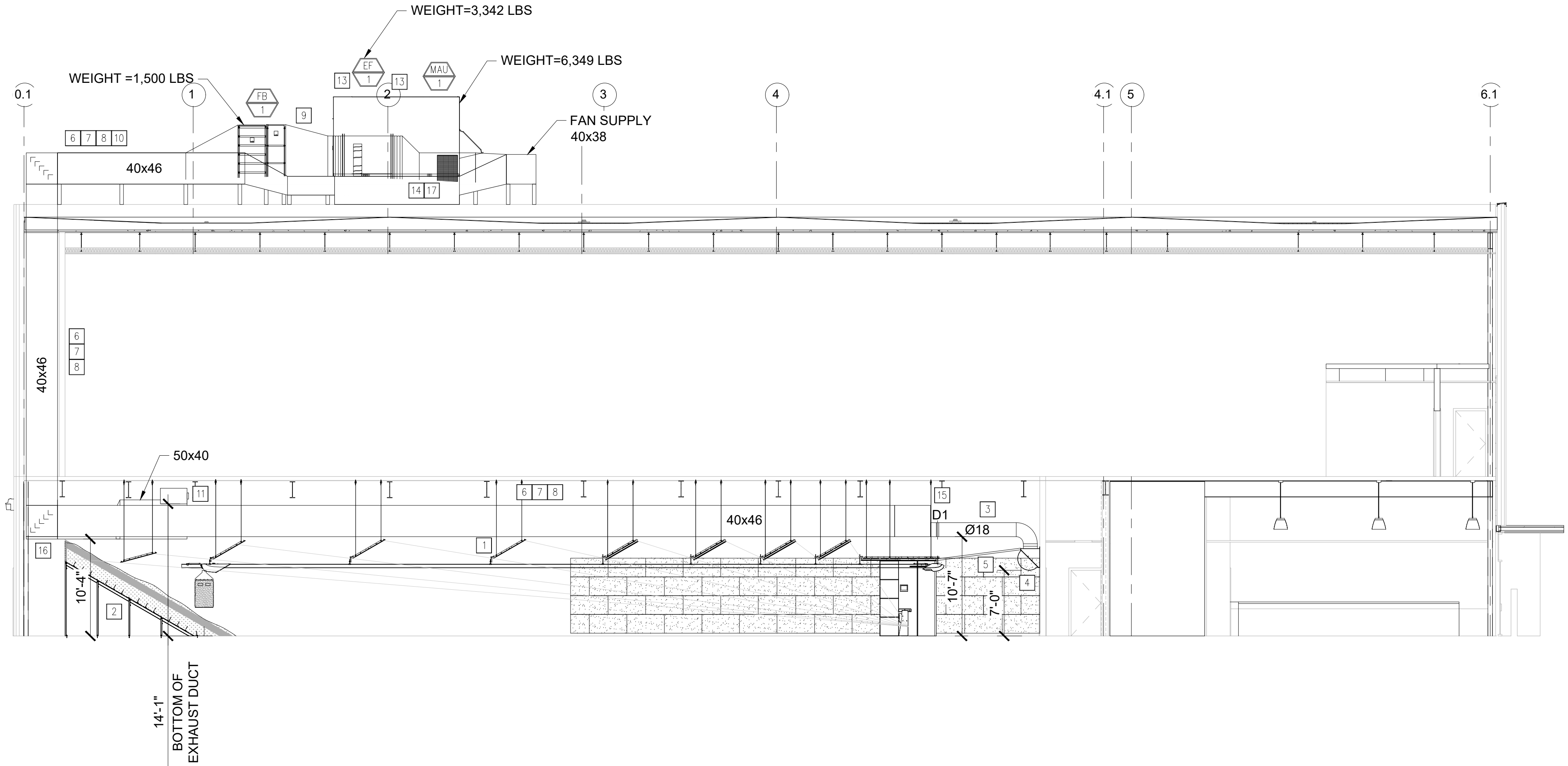
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- 4 RADIAL SUPPLY AIR (SA) DIFFUSER SUPPLIED BY ATI AND INSTALLED BY M.C. INSTALL RADIAL DIFFUSER UNIFORMLY, PLUMB AND LEVEL, AND SYMMETRICAL ACROSS WIDTH OF RANGE. RADIAL DIFFUSER FACE SHALL BE A MINIMUM OF 7'-0" A.F.F. SEE DETAILS AT.07.01 AND AT.08.04 WITHIN ZM60X SERIES SHEETS. DIFFUSER SHALL BE FIELD BALANCED TO SUPPLY CFM STATED ON PLANS.
- 5 T-BAR LAY-IN CEILING SHALL BE PROVIDED BY OWNER OR GENERAL CONTRACTOR. T-BAR CEILING SHALL BE INSTALLED BETWEEN TOP OF RADIAL DIFFUSER AND THE STEEL SAFETY CEILING. SEE DETAIL AT.08.04 WITHIN ZM60X SERIES SHEETS.
- 6 ALL SUPPLY/RETURN/EXHAUST AIR DUCTWORK INSTALLED ABOVE CEILINGS, OR HUNG HIGH WITHIN SPACE SHALL BE SUPPORTED FROM OVERHEAD STRUCTURE (TYP). OWNER SHALL BE RESPONSIBLE FOR STRUCTURAL INTEGRITY REQUIRED TO SUPPORT ALL DUCTWORK IN ACCORDANCE WITH CODE AND INDUSTRY STANDARDS.
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 - RETURN AIR (RA) DUCTWORK = 2.5"W.C.
 - EXHAUST AIR (EA) DUCTWORK = 2.5"W.C. (SEE EXCEPTION BELOW)
- 9 EXHAUST AIR EXCEPTION*** THE SEGMENT OF EXHAUST DUCT, INCLUDING THE TRANSITION, BETWEEN THE FILTER BANK (FB) AND THE EXHAUST FAN (EF) SHALL BE DESIGNED TO HANDLE A STATIC PRESSURE OF -8"W.C. T-GRID CEILING SHALL REMAIN FREE OF ALL OBSTRUCTIONS BETWEEN DIFFUSER AND SHOOTING LINE INCLUDING BUT NOT LIMITED TO LIGHTS, SIGNAGE ETC.

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| 10 | ALL EXTERIOR DUCTWORK SHALL BE CONSTRUCTED TO PEAK ON TOP TO PREVENT STANDING WATER. DUCTWORK MAY BE SEALED WATER-TIGHT, INSULATED WITH A CODE MINIMUM R-8 INSULATION, AND JACKETED OR WRAPPED WITH A UV PROTECTIVE COATING. |
| 11 | PROVIDE CONTINUOUS 8" SLOT ON DUCT SIDE FOR AIR RETURN. SLOT NOT REQUIRED AT DUCT SECTION JOINTS. COVER WITH SCREEN. AIRFLOW IS APPROXIMATE. |
| 12 | CO SENSOR PROVIDED BY ATI. SENSOR INSTALLED A MAX OF 48-72" A.F.F. ON RANGE SIDEWALL, AND WITHIN 18" OF BACK EDGE OF SHOOTING STALL. |
| 13 | M.C. SHALL PROVIDE FLEXIBLE DUCTWORK FITTING AT CONNECTION OF DUCT TO EQUIPMENT (TYP.) |
| 14 | CURB PROVIDED BY ATI, TO BE INSTALLED BY MC. CURB SHALL BE BUILT IN COORDINATION WITH SCHEDULED MAU DIMENSIONS. ROOF CURB SHALL BE SECURELY ANCHORED AND BRACED TO ROOF DECK IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION, AND SHALL MEET ALL SEISMIC REQUIREMENTS WHERE APPLICABLE. |
| 15 | 40"x46" SUPPLY AIR (SA) DUCT DOWN THROUGH DECK TO RANGE. M.C. SHALL TRANSITION SA DUCT FROM 40"x26" TO MATCH SA DUCT CONNECTION AT MAU-1. |
| 16 | 40"x50" EXHAUST AIR (EA) DUCT DOWN THROUGH DECK TO RANGE. EA DUCT SHALL CONNECT TO FB-1 (EF-1 SUNCTION). SEE ASSOCIATED ELEVATION SECTION WITHIN ZM30X SERIES SHEETS FOR CLARIFICATION. |
| 17 | PROVIDE SLOPED CURB AT MAU-1 TO MATCH ROOF PITCH. CONTRACTOR SHALL FIELD VERIFY FINAL ROOF PITCH BEFORE INSTALLATION. |

GENERAL NOTES (SHEET ZM301.1)

1. DIMENSIONS SHOWN ON PLANS ARE APPROXIMATE AND BASED UPON MEASUREMENTS FROM THE BUILDINGS WALLS OR FINISHED FLOOR GENERATED IN A DIGITAL DRAWING. M.C. SHALL FIELD VERIFY ALL MEASUREMENTS AND EQUIPMENT/DUCTWORK LOCATIONS PRIOR TO INSTALLATION (TYP.).
2. REFER TO DETAILS WITH ZM60X SERIES SHEETS FOR DUCTWORK INSTALLATION REQUIREMENTS.
3. TURNING VANES SHALL BE USED ON ALL 90, 45, AND 22.5 DEGREE CHANGE IN DIRECTION FITTINGS FOR ALL SUPPLY, RETURN, AND EXHAUST AIR SQUARE/RECTANGULAR DUCTS.
4. MECHANICAL CONTRACTOR (M.C) SHALL COORDINATE ALL DUCTWORK FLOOR PENETRATIONS WITH STRUCTURAL ENGINEER TO ENSURE THE PROPER STRUCTURAL MODIFICATIONS HAVE BEEN MADE TO ACCOMMODATE PASSAGE.
5. ROOF CURB SHALL BE PROVIDED BY ATI. FLASH CURB AND DUCT PENETRATIONS WATERTIGHT.
6. M.C. SHALL REFER TO ZM102 SERIES SHEETS FOR DIMENSIONS OF ROOF PENETRATION SIZES AND EQUIPMENT LOCATIONS.
7. M.C. SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL SEEN AND UNSEEN ARCHITECTURAL AND STRUCTURAL BUILDING FEATURES. FINAL DUCTWORK ROUTING SHALL BE THE RESPONSIBILITY OF THE M.C.
8. M.C. SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS, INCLUDING DUCTWORK ROUTING, TO ATI FOR REVIEW PRIOR TO SYSTEM INSTALLATION.



VENTILATION SECTION



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Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DECOSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

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SHEET NAME

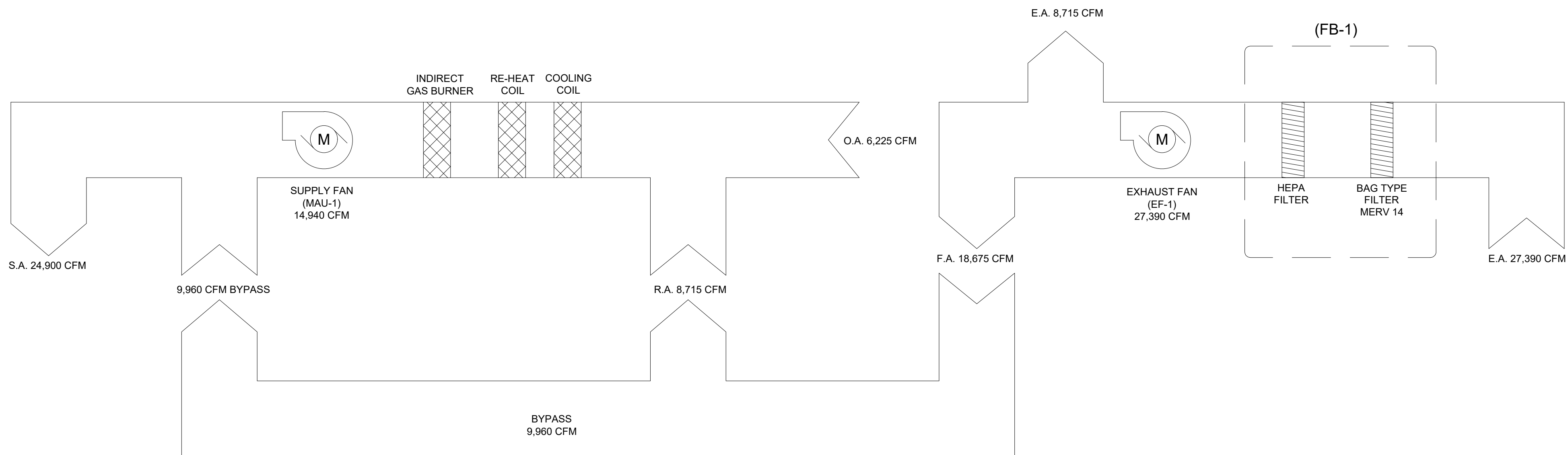
RANGE 1 VENTILATION SECTION

DRAWING NUMBER

13462

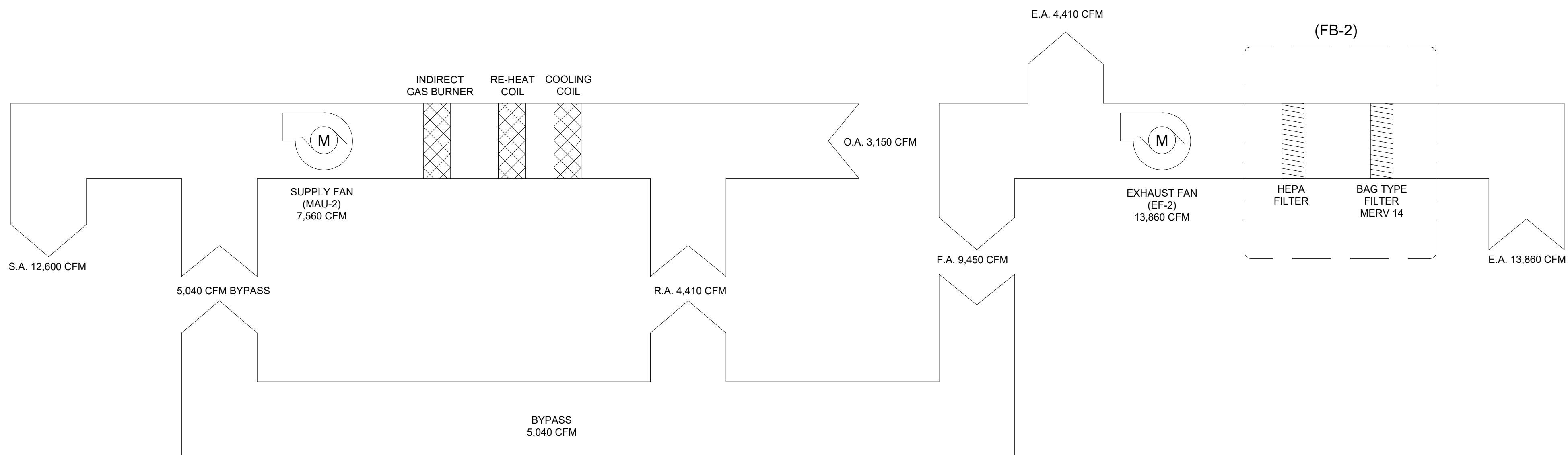
SHEET NUMBER

ZM301.1



AIR FLOW SCHEMATIC-SYSTEM #1

NOT TO SCALE



AIR FLOW SCHEMATIC-SYSTEM #2

NOT TO SCALE



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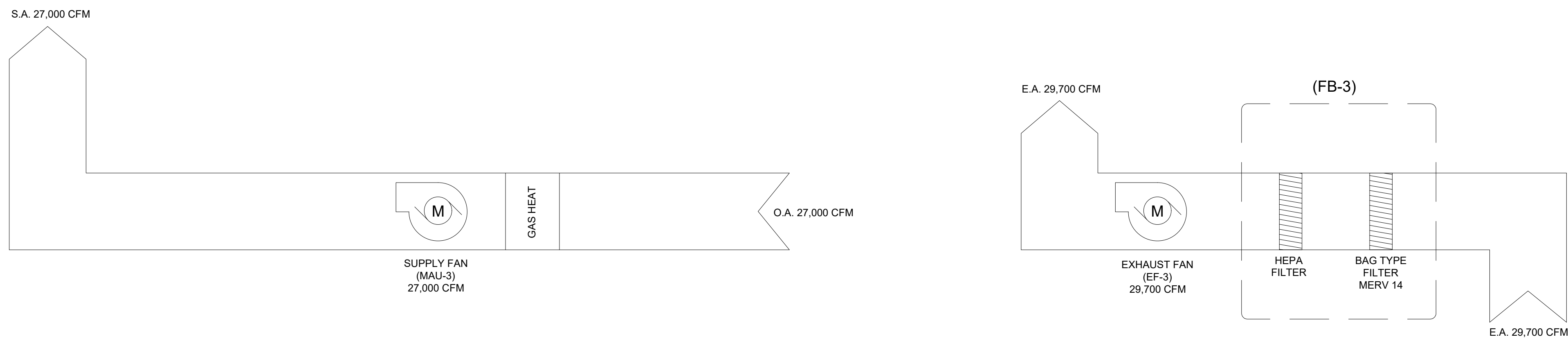
AIRFLOW SCHEMATIC RANGE 1 & 2 RECIRC SYSTEM

—DRAWING NUMBER—

13462

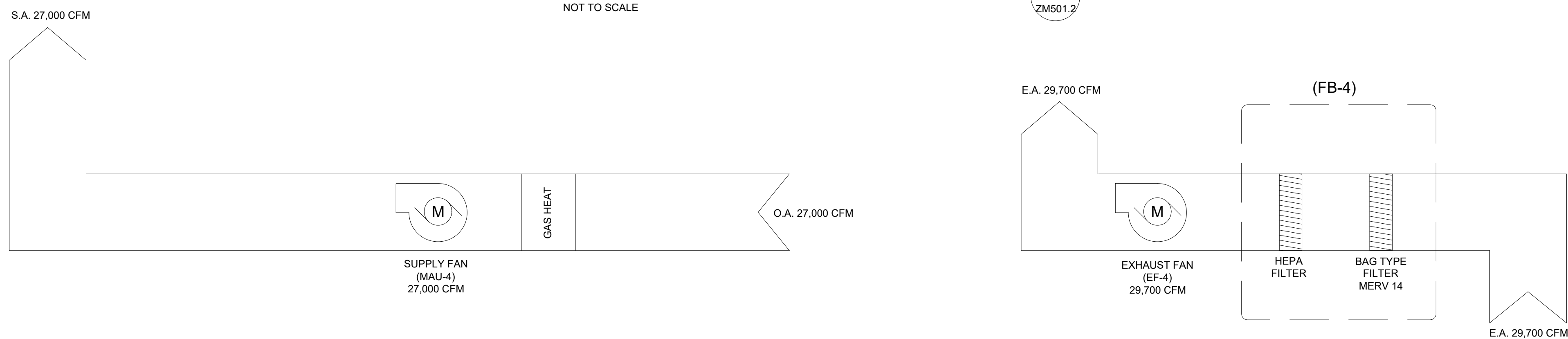
—SHEET NUMBER—

ZM501.1



AIR FLOW SCHEMATIC-SYSTEM #3

NOT TO SCALE



AIR FLOW SCHEMATIC-SYSTEM #4

NOT TO SCALE



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—SHEET NAME

AIRFLOW SCHEMATIC RANGE 3 PURGE SYSTEM

DRAWING NUMBER

13462

SHEET NUMBER

ZM501.2

MAKE-UP AIR UNIT PURGE

ID	LOCATION	SERVICE	MANUFACTURER AND MODEL NUMBER	WEIGHT (LB)	UNIT			HEATING											NOTES:		
					ELECTRICAL			SUPPLY FAN			FILTERS	TYPE	GAS TYPE	GAS CONNECTION	GAS PRESSURE		MODULATION	TOTAL CAPACITY (MBH)		EDB (°F)	LDB (°F)
					VOLTAGE (V/HZ/PH)	MCA (A)	MROPD (A)	AIRFLOW (CFM)	TSP ("W.C.)	MOTOR SIZE					EFFICIENCY	MIN.					
MAU-3	ROOF	CLAY HOSUE	GREENHECK DGX-P227-H38-II	3,908	575/60/3	55.7	70	26,925	2.97	(2) 20 HP	MERV 8	DIRECT GAS	NATURAL GAS	1.5"	14" W.C.	.5 PSI	HI- TURNDOWN	2,118	3.0	70.0	1,2,3,4,5,6,7,8, 9,10

GENERAL NOTES:

1. APPROVED RTU MANUFACTURERS ARE: GREENHECK, OR ATI-APPROVED EQUIVALENT.
2. SEE EQUIPMENT TECHNICAL DATA SHEET FOR ALL UNIT DIMENSIONS.
3. UNIT TO BE SUPPLIED WITH 24" CURB MATCHED TO THE MAU FOOTPRINT.

ACCESSORIES:

1. WEATHERHOOD WITH BIRDSCREEN.
2. GFCI CONVENIENCE OUTLET (NON-POWERED), SEPARATE CIRCUIT, WIRED BY E.C.
3. CURB SUPPLIED BY ATI. REFER TO GENERAL NOTES FOR MORE INFORMATION.
4. VARIABLE SPEED SUPPLY FAN MOTOR CONTROLLED BY VFD.
5. MOTORIZED OA DAMPER, DDC CONTROL
6. HIGH-STATIC PRESSURE SUPPLY FAN.
7. BACNET-IP INTERFACE
- 8.

EXHAUST FAN SCHEDULE PURGE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	AIR TYPE	AIR		FAN		ELECTRICAL			PHYSICAL		NOTES
					MAXIMUM AIRFLOW RATE (CFM)	STATIC PRESSURE (IN H2O)	FAN SPEED (RPM)	OPERATING POWER (HP)	MOTOR SPEED (RPM)	MOTOR SIZE (HP)	POWER V/Hz/PH	LENGTH/ WIDTH/ HEIGHT (IN.)	ESTIMATED WEIGHT (LBS)	
EF-3	GREENHECK USF-33	ROOF	UTILITY SET FAN	EXHAUST	29,700	7.5	1727	56	1770	60	575/60/3	56/64/69	2,166	1,2,3,4,5,6,7

NOTES:

1. SLIP-FIT INLET AND PUNCHED OUTLET FLANGE.
2. DIRECT MOUNT, RESTRAINED-SPRING ISOLATORS, 1 INCH.
3. FAN HOUSING SEALED FOR OUTDOOR USE.
4. ENERGY EFFICIENT MOTOR WITH CLASS-B INSULATION.
5. WEATHER-PROOF MOTOR ENCLOSURE.
6. VFD-RATED MOTOR.
7. SUPPLIED WITH GRAVITY DAMPER ON FAN OUTLET.

SPACE AIRFLOW VENTILATION SCHEDULE PURGE

ID	LOCATION	AIRFLOW REQUIREMENTS		SETPOINTS
		SUPPLY AIRFLOW RATE TO RANGE (CFM)	EXHAUST AIRFLOW RATE FROM RANGE (CFM)	INDOOR AIR CONDITIONS DB/RH ("F/%)
BAY 3	SHOOTING RANGE	26925	29700	72/50
<p><u>NOTES:</u></p> <p>1. SUPPLY AIRFLOW SIZED FOR 75 FPM AIR VELOCITY ACROSS RANGE WIDTH AT FIRING LINE PER NIOSH RECOMMENDATIONS.</p>				

AIR DEVICE SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	SERVICE	TYPE	QTY.	CONNECTION SIZE (IN.) OR (W X H)	FACE SIZE (IN.) OR (W X H)	FINISH	NOTES
S1	ACTION TARGET	RANGE SUPPLY	PERFORATED RADIAL	10	Ø18"	48 X 18	ALUMINUM	1,3
S2	ACTION TARGET	RANGE SUPPLY	PERFORATED RADIAL	5	Ø18"	48 X 18	ALUMINUM	1,3
S3	ACTION TARGET	RANGE SUPPLY	PERFORATED RADIAL	16	Ø18"	48 X 18	ALUMINUM	1,3
E1	TITUS 350ZR	RANGE EXHAUST	LOUVER 0° DEFL	9	-	20 X 20	WHITE	2,4
E2	TITUS 350ZR	RANGE EXHAUST	LOUVER 0° DEFL	4	-	22 X 20	WHITE	2,4
E3	TITUS 350ZR	RANGE EXHAUST	LOUVER 0° DEFL	16	-	20 X 20	WHITE	2,4
D1	GREENHECK MBDR-50	RANGE SUPPLY	SINGLE-BLADE BALANCE DAMPER	27	Ø18"	-	GALVANIZED	6
D2	GREENHECK VCD-20	FAN EXHAUST	3V BLADE CONTROL DAMPER	1	-	26 X 34	GALVANIZED	5
D3	GREENHECK VCD-20	FAN EXHAUST	3V BLADE CONTROL DAMPER	1	-	20 X 26	GALVANIZED	5
D4	GREENHECK VCD-20	MAU SUPPLY	3V BLADE CONTROL DAMPER	2	-	24 X 24	GALVANIZED	5

NOTES:

1. RADIAL DIFFUSER SHALL BE SUPPLIED BY ACTION TARGET.
2. PROVIDE OPPOSED BLADE DAMPER WITH LOUVER. DAMPER SHALL BE ADJUSTABLE THROUGH LOUVER FACE.
3. DIFFUSER SHALL BE INSTALLED IN ACCORDANCE WITH ACTION TARGET SPECIFICATIONS.
4. APPROVED MANUFACTURERS: TITUS, CARNES, NAILOR, PRICE, KRUEGER, METALAIR, HART & COOLEY.
5. DAMPER CONSTRUCTION: 16 GA GALVANIZED STEEL, CHANNEL FRAME W/ SINGLE FLANGE, 3V BLADE TYPE, OPPOSED BLADE OPERATION,
6. DAMPER CONSTRUCTION: 20 GA GALVANIZED STEEL, SLIP FIT, SYNTHETIC AXLE BEARING, MANUAL LOCKING QUADRANT.
7. ACTUATOR: BELIMO AFB24-SR, 24 VDC, MODULATING, 2-10 VDC CONTROL, 2-10 VDC FEEDBACK, SPRING RETURN CLOSED, 180 IN-LB.
8. ACTUATOR: BELIMO AFB24-SR, 24 VDC, MODULATING, 2-10 VDC CONTROL, 2-10 VDC FEEDBACK, SPRING RETURN OPEN, 180 IN-LB.
9. ACTUATOR: BELIMO AFX24-SR, 24 VDC, MODULATING, 2-10 VDC CONTROL, 2-10 VDC FEEDBACK, SPRING RETURN CLOSED, 180 IN-LB, NEMA 4/4X ENCLOSURE.



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PROJECT STATUS

100% SUBMITTAL

-PROJECT NAME

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CANADA-DESIGN

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Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DECOSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

SHEET NAME

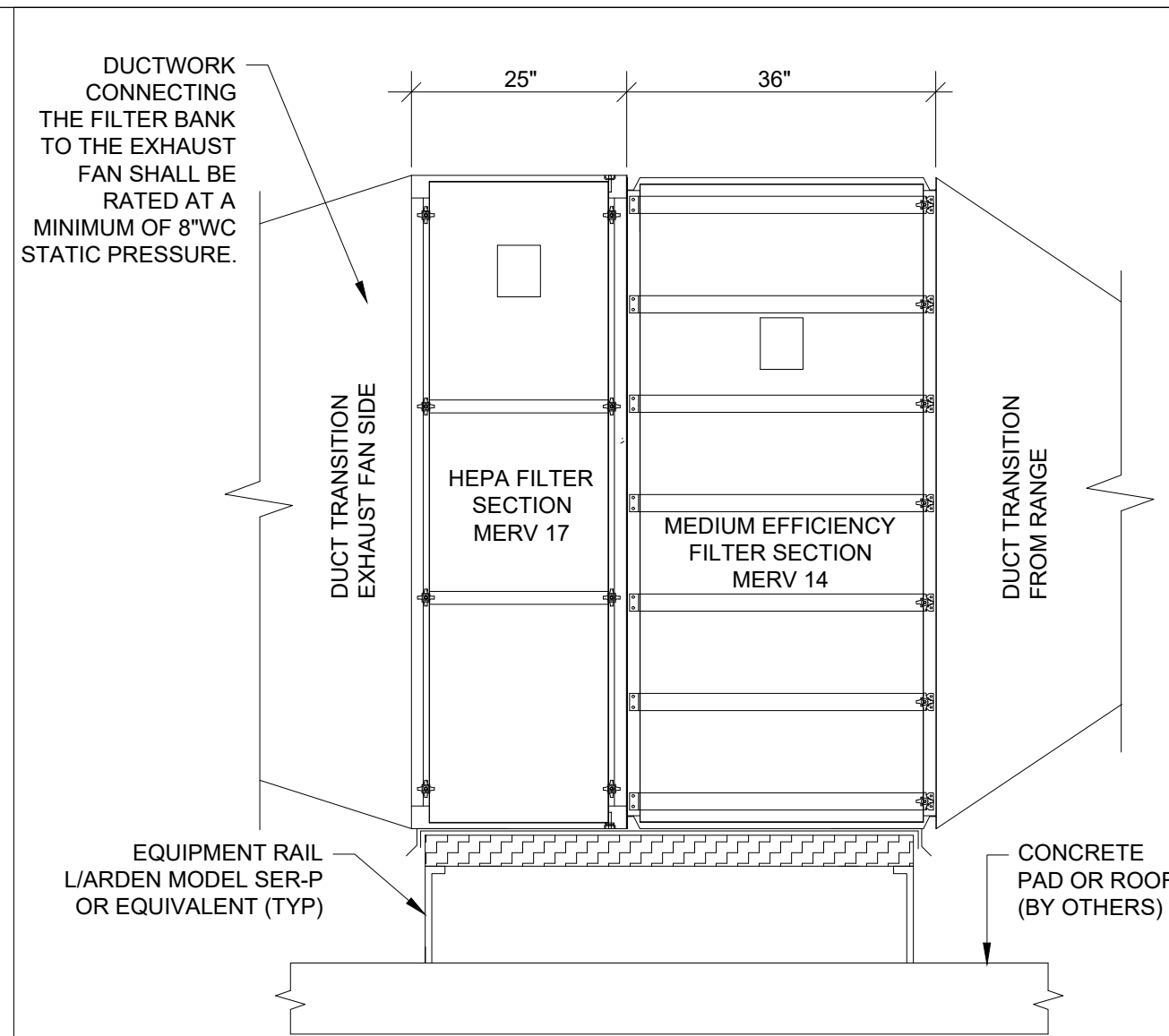
MECHANICAL HVAC SCHEDULES CONTINUED

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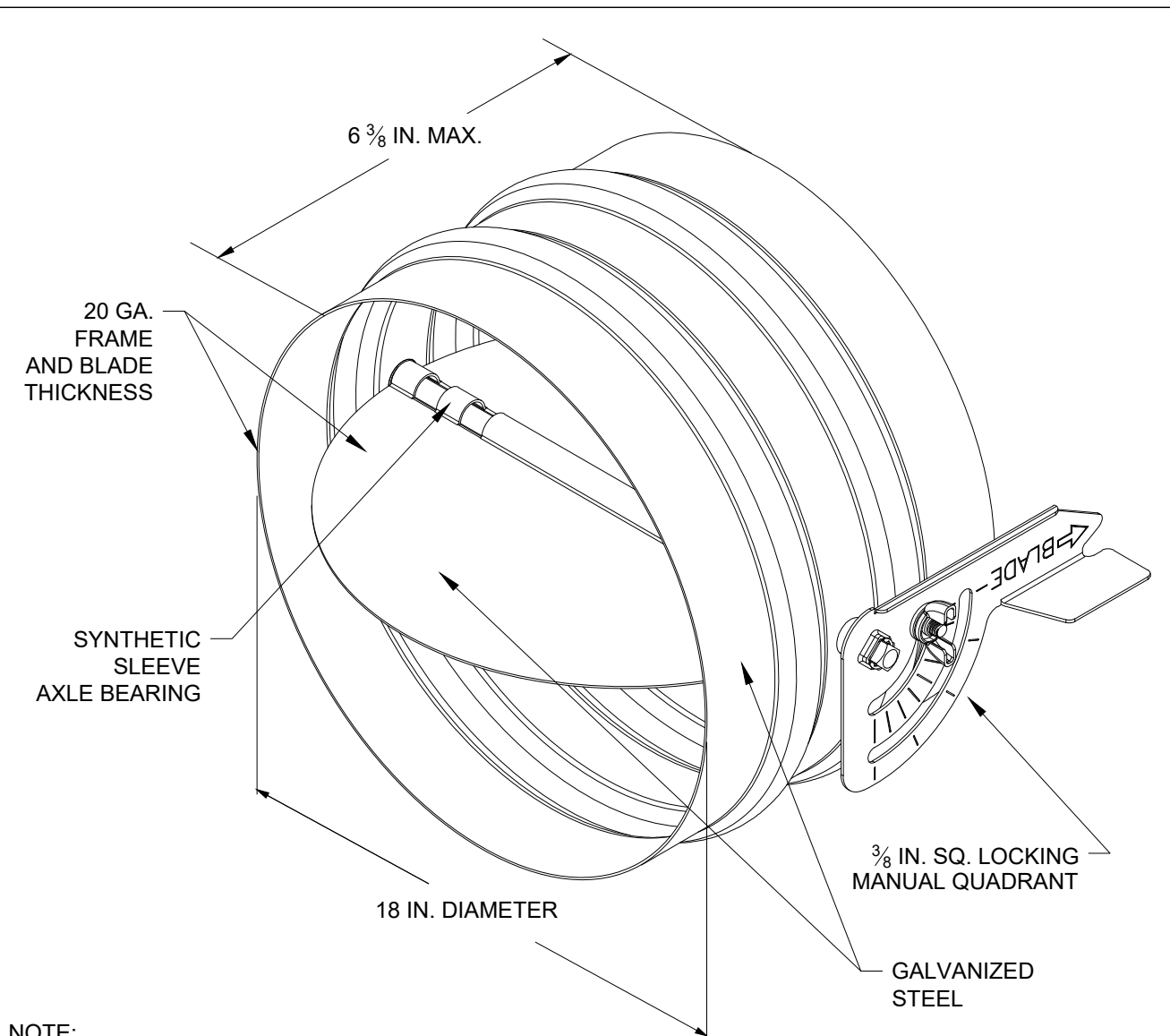
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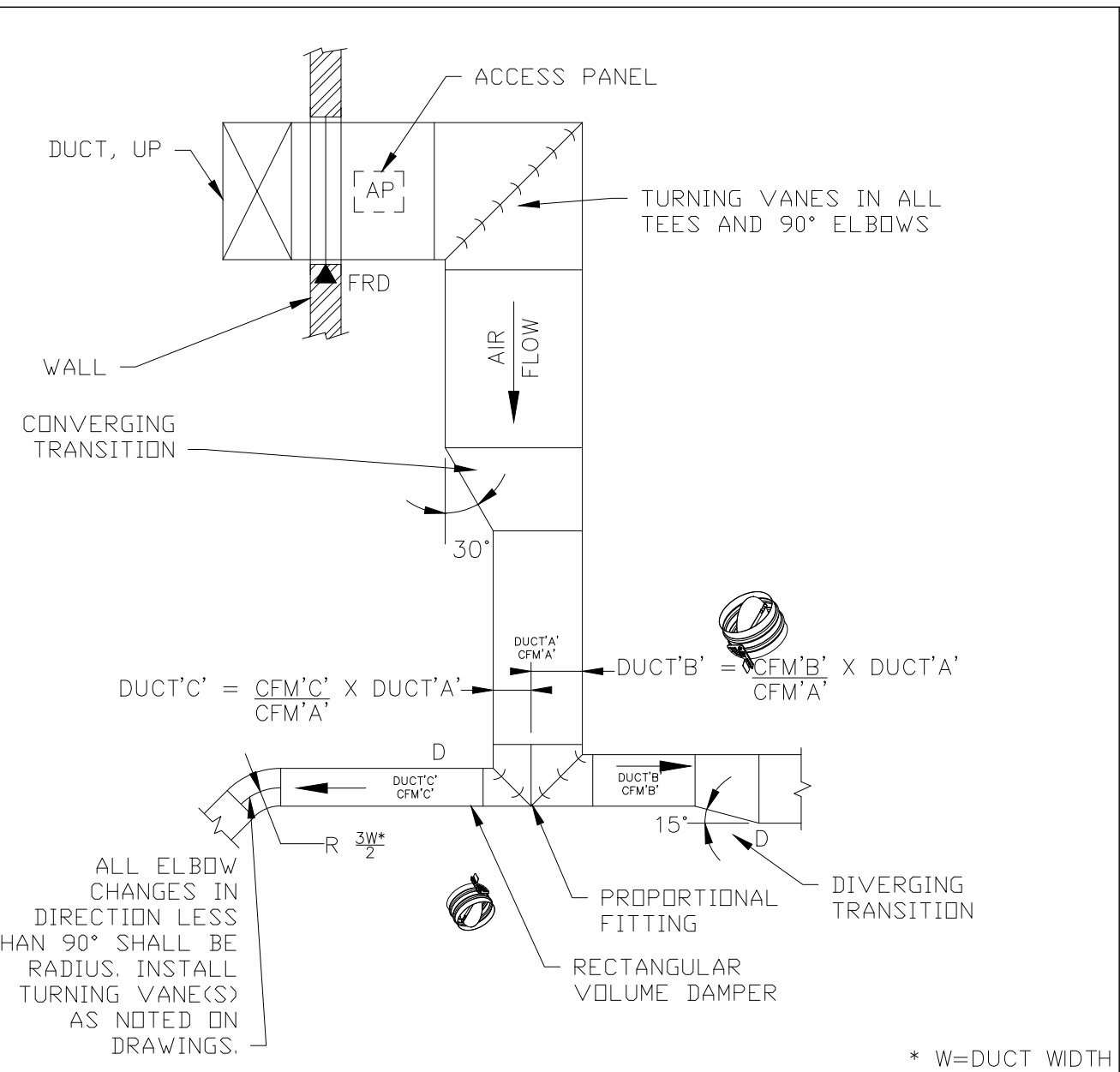
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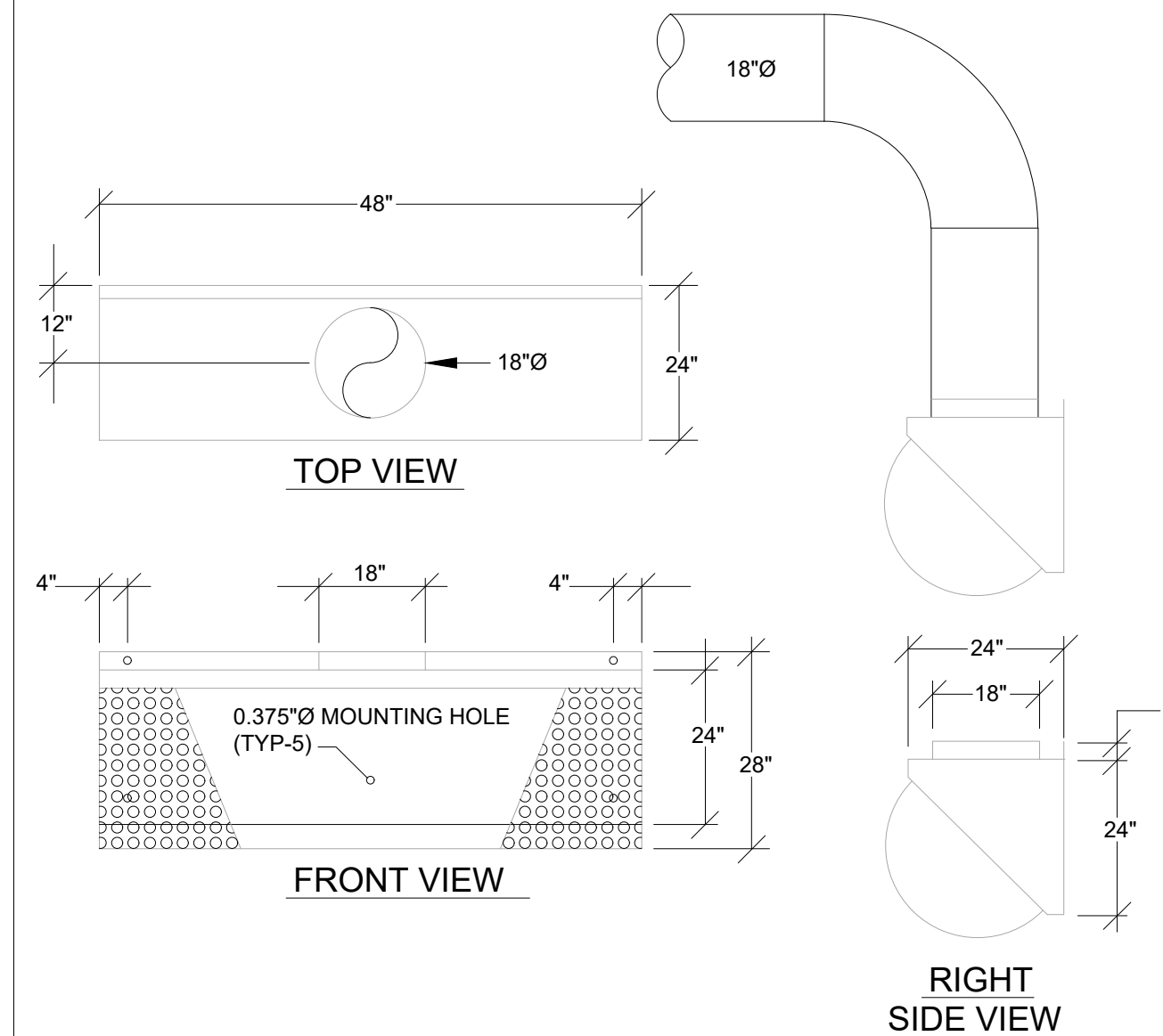
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SCALE: NONE	



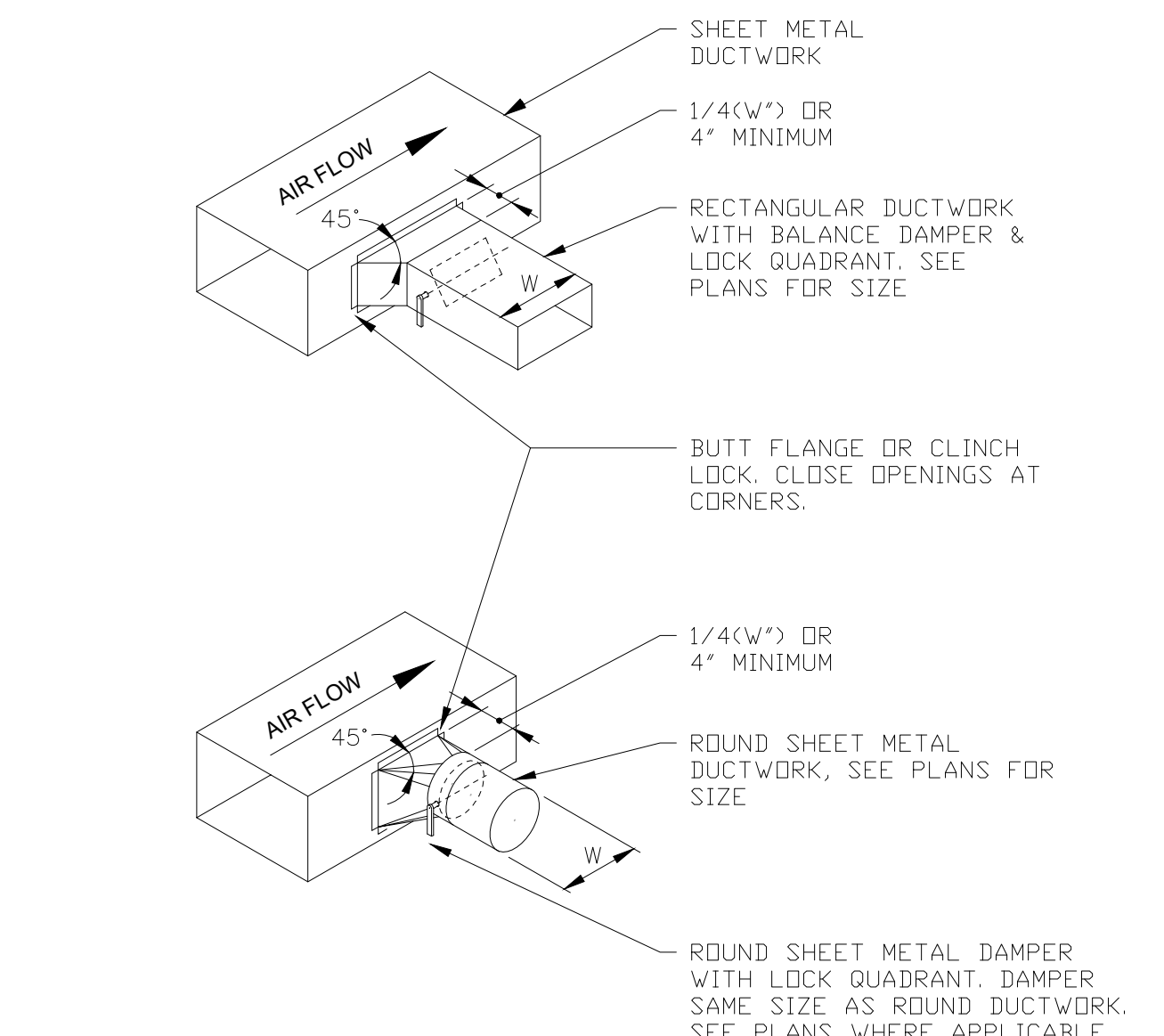
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SCALE: NONE	



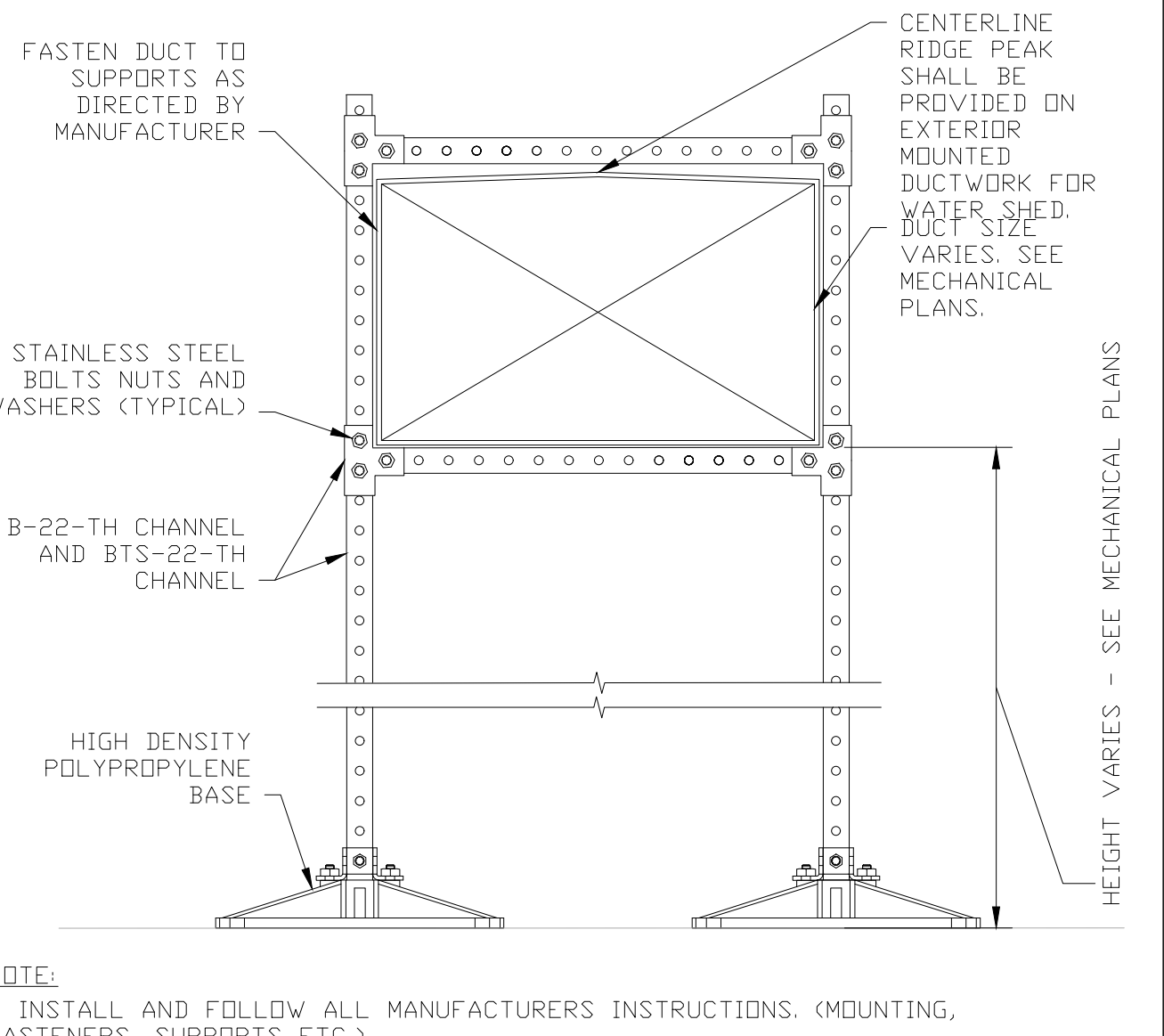
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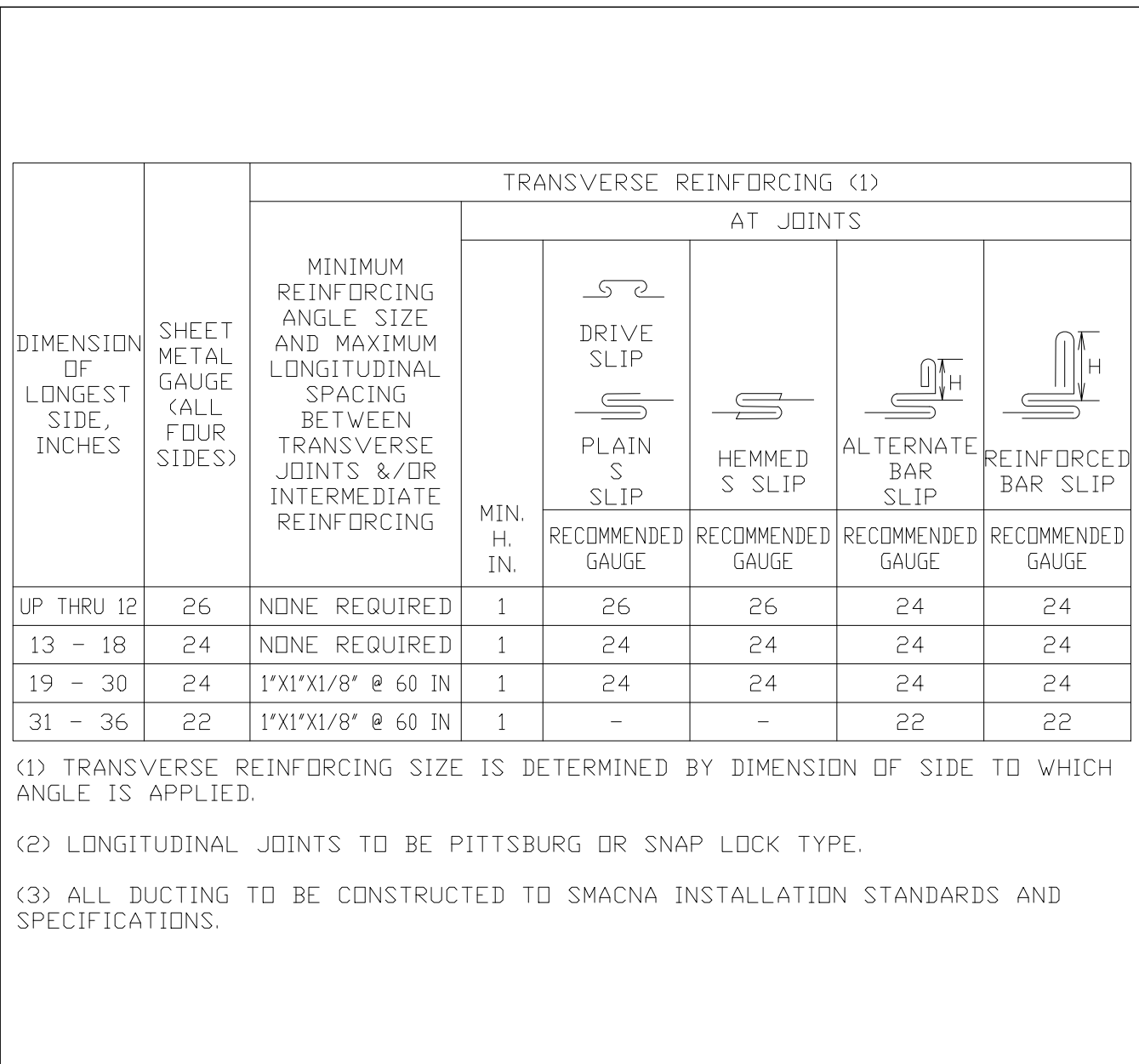
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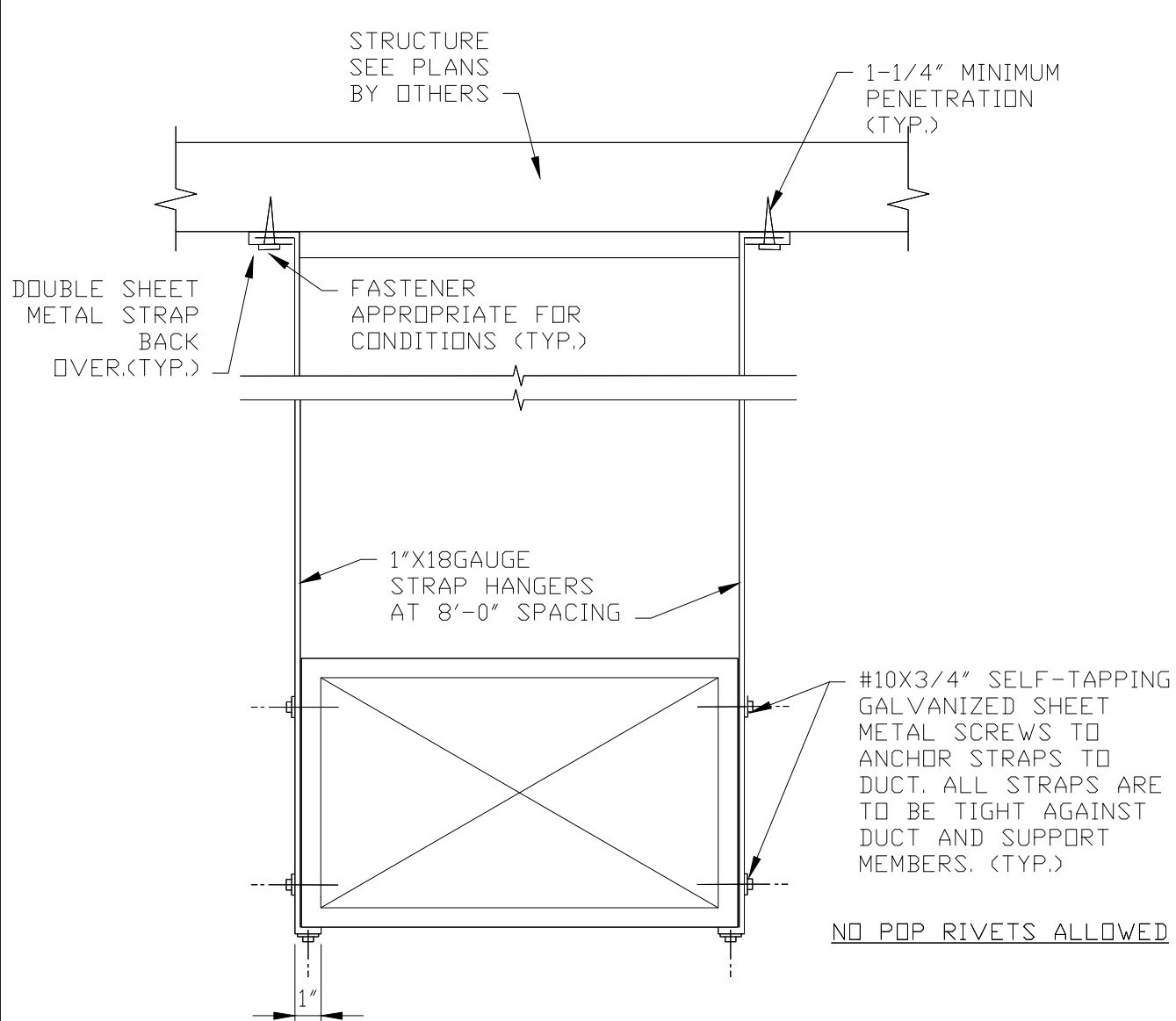
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SCALE: NONE	



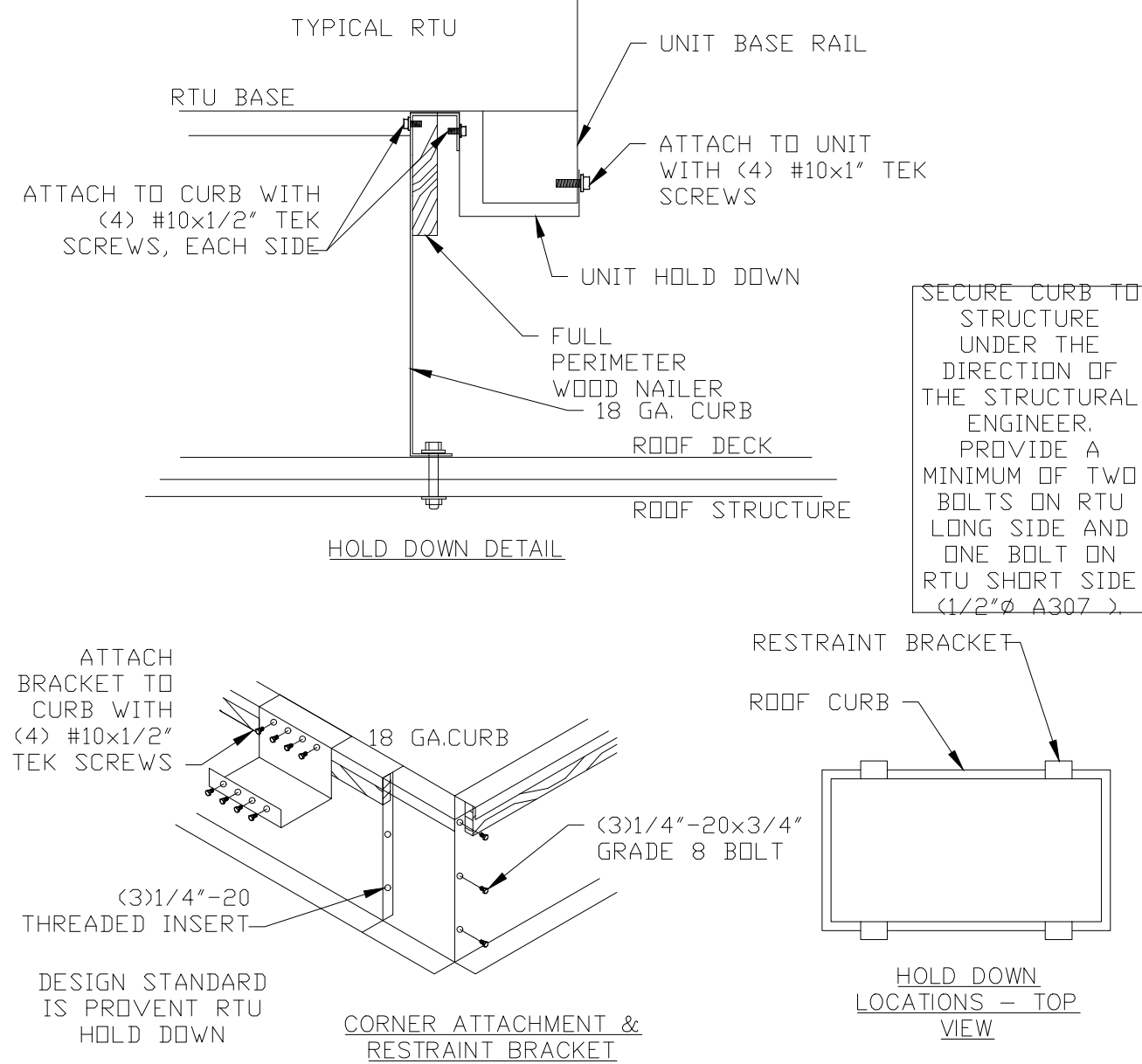
FILE NAME: M.04.09	<p align="center">TYPICAL ROOF DUCT SUPPORT WITH RIDGE PEAK FOR WATER SHED</p>
SCALE: NONE	



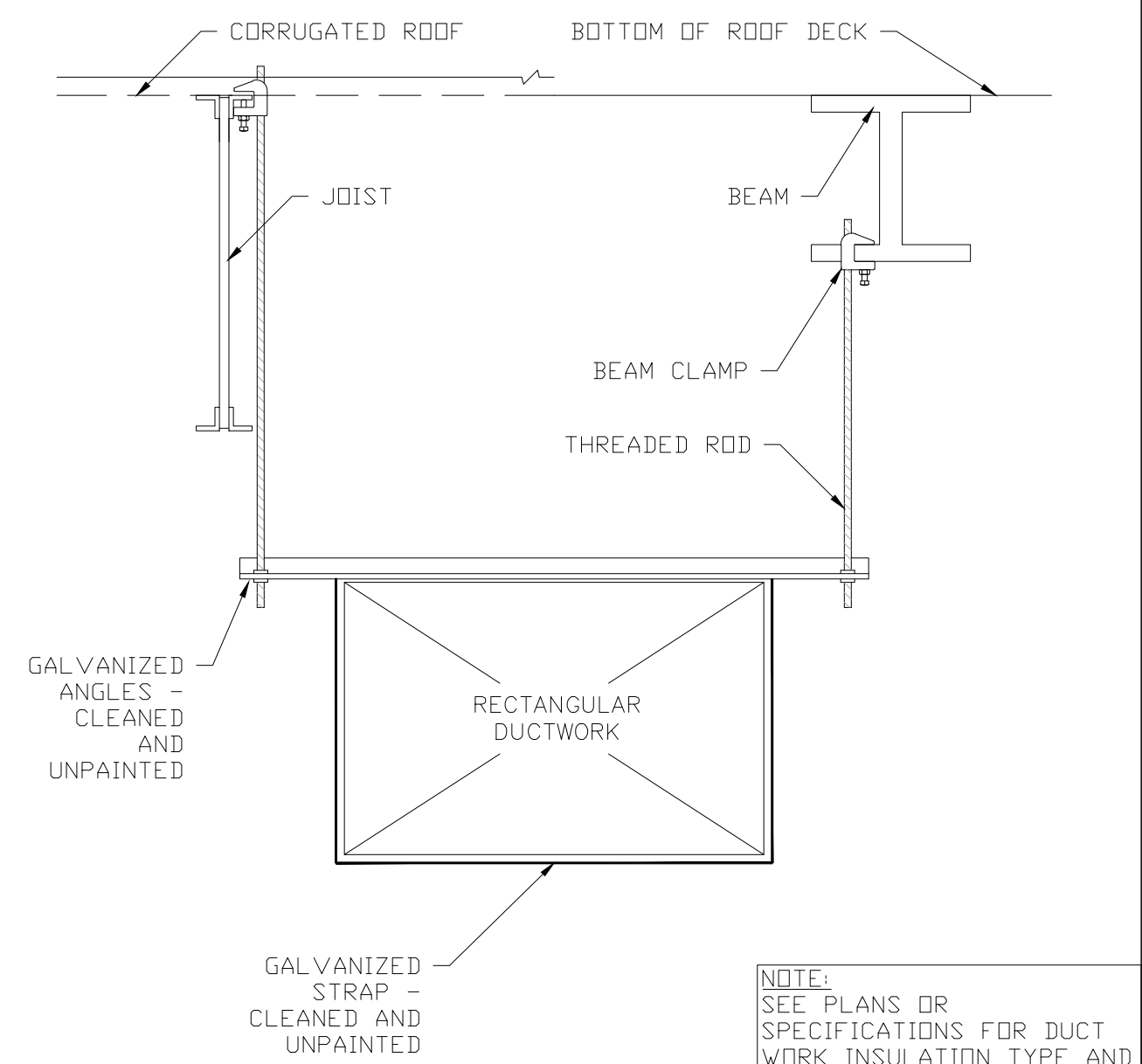
FILE NAME: M.04.14	DUCT CONSTRUCTION
SCALE: NONE	



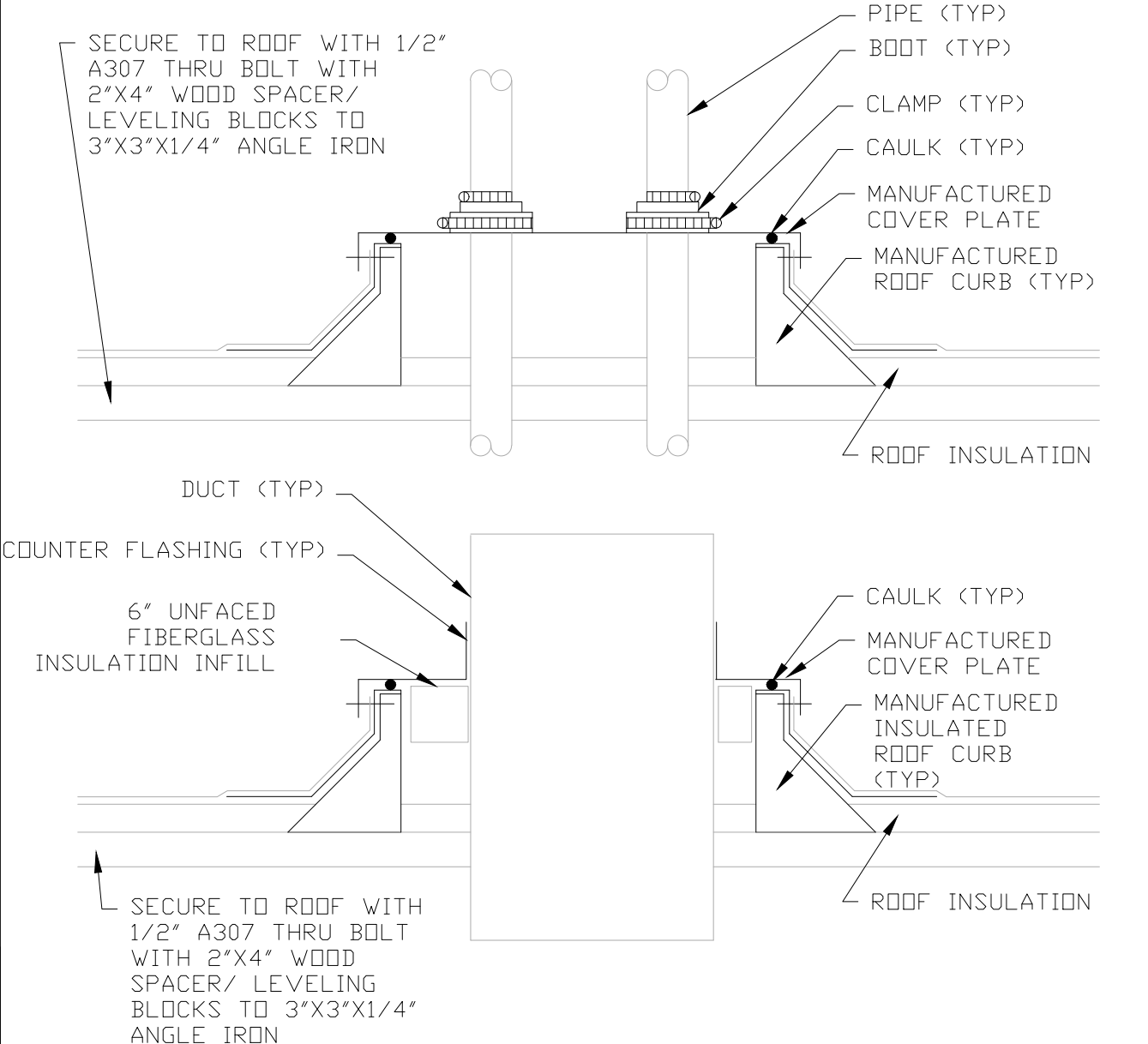
FILE NAME: M.04.10	TYPICAL DUCT STRAP HANGER
SCALE: NONE	



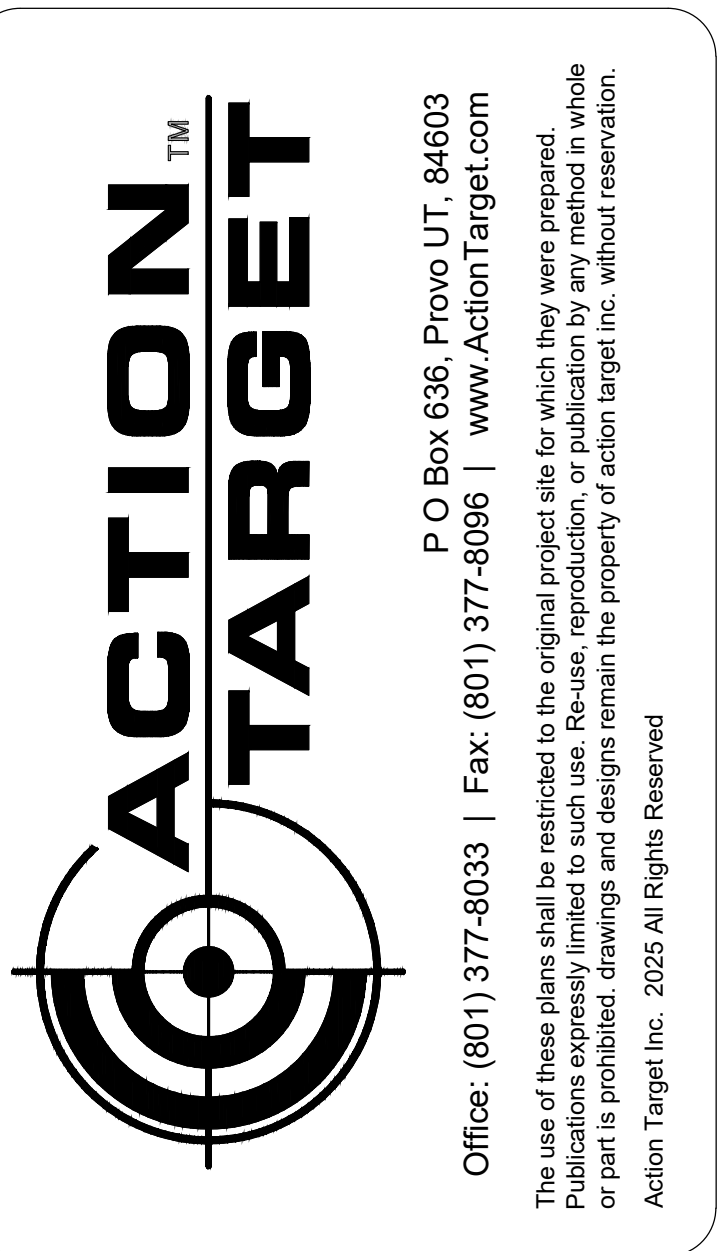
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SCALE: NONE	



FILE NAME: M.04.21	<div> <div>APPLICATION</div> <div>TRAPEZE HANGER DETAIL</div> </div>
SCALE: NONE	



FILE NAME: MP.01.07	DUCT/PIPE ROOF CURB DETAIL
SCALE: NONE	



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Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DECOSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

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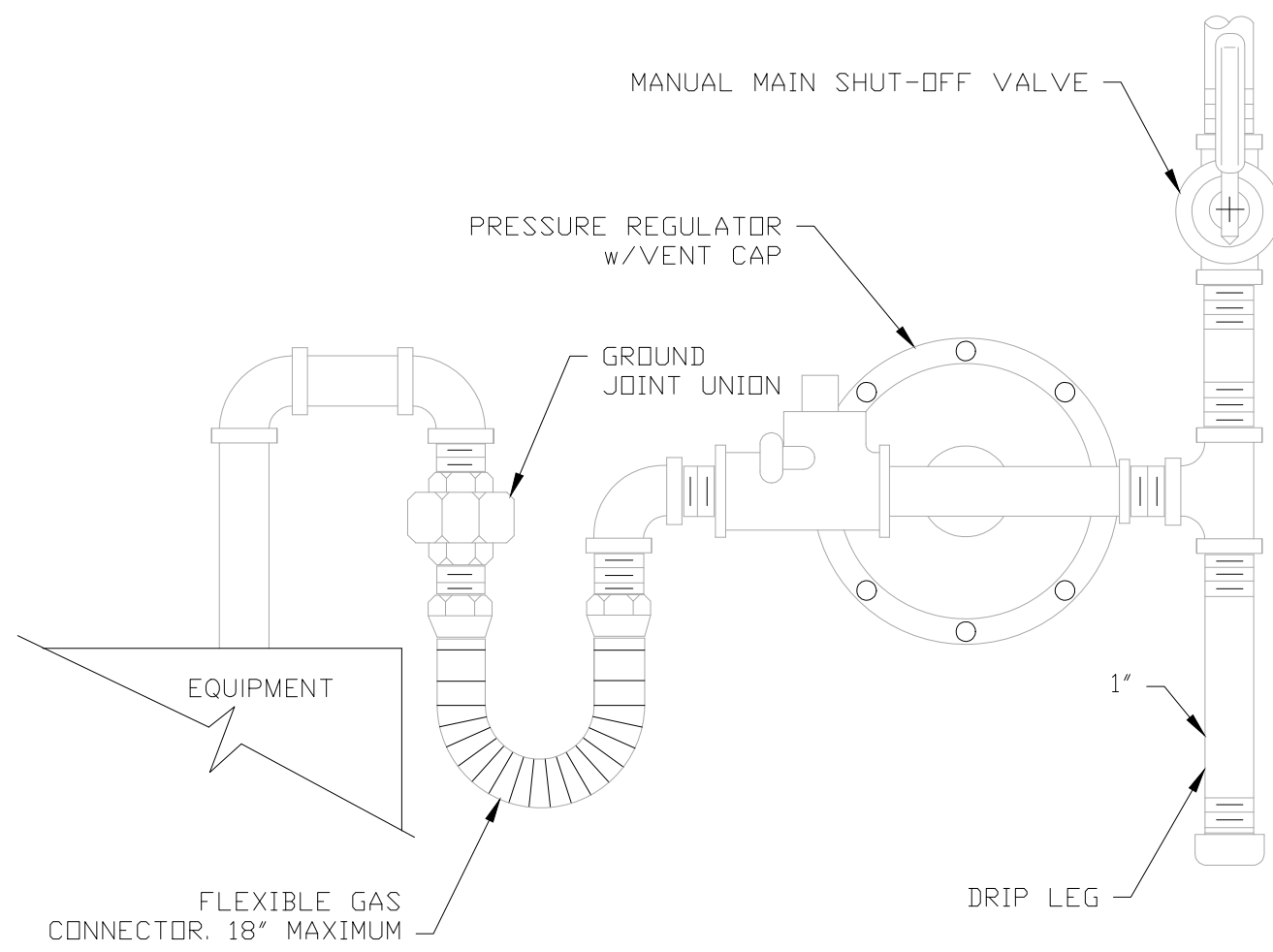
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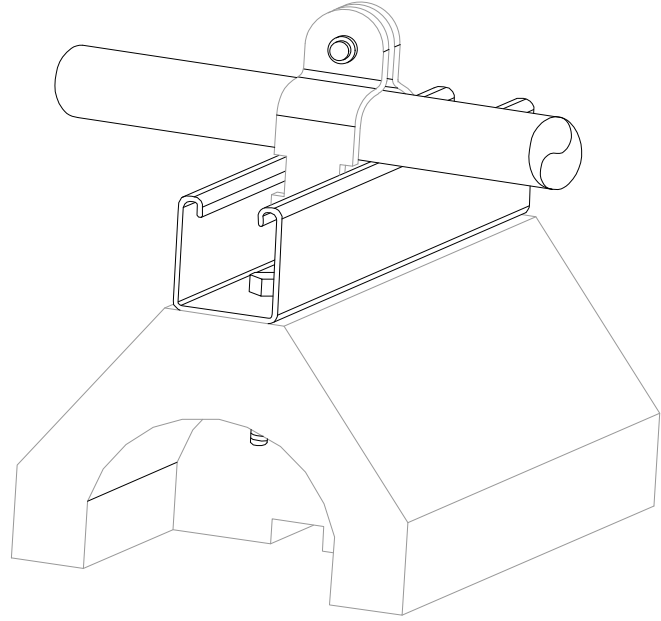
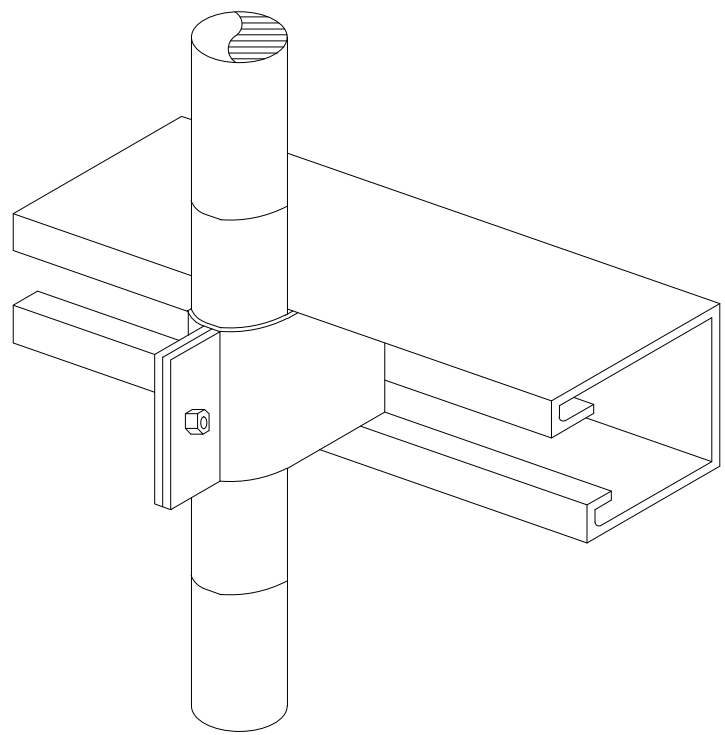
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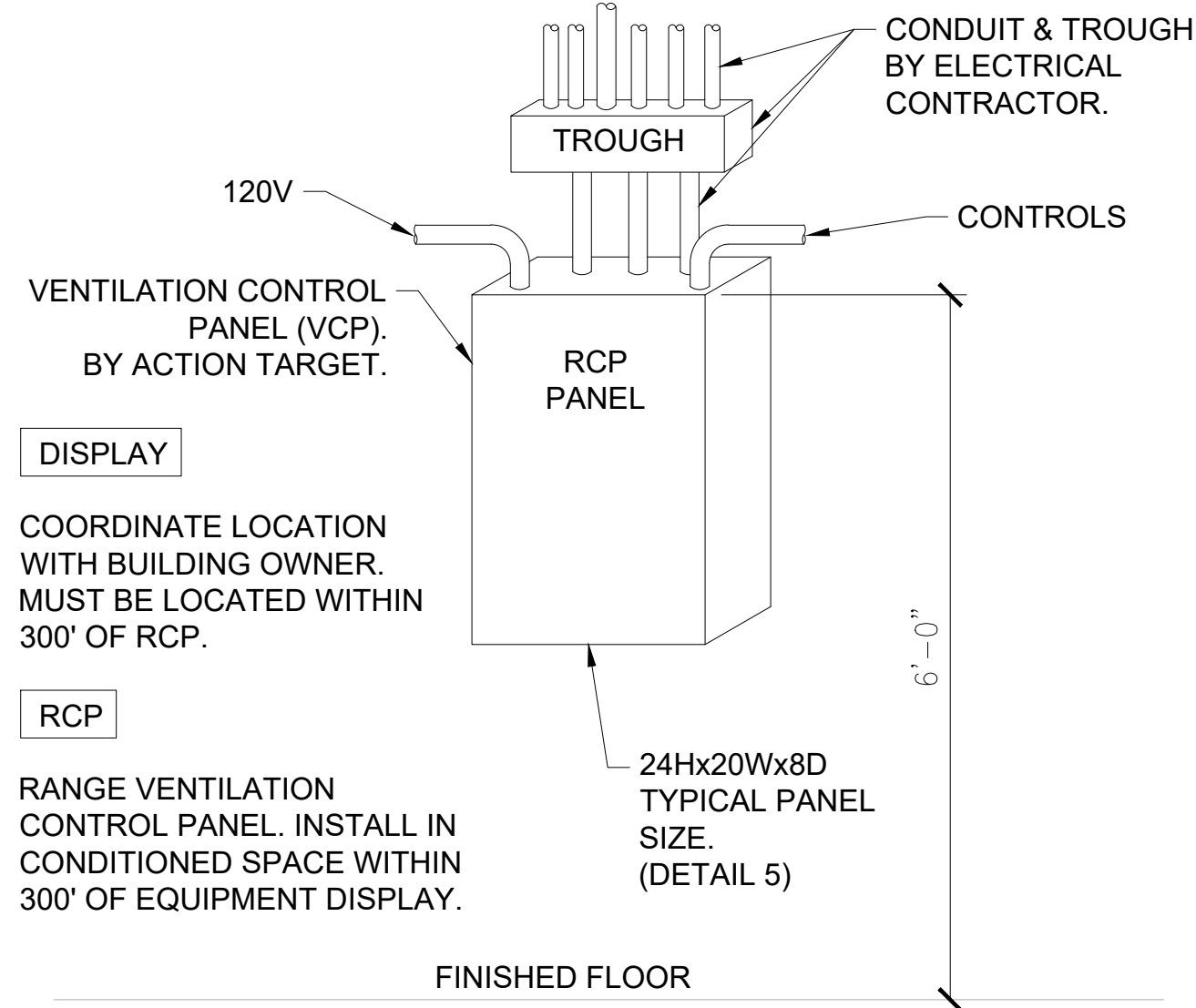
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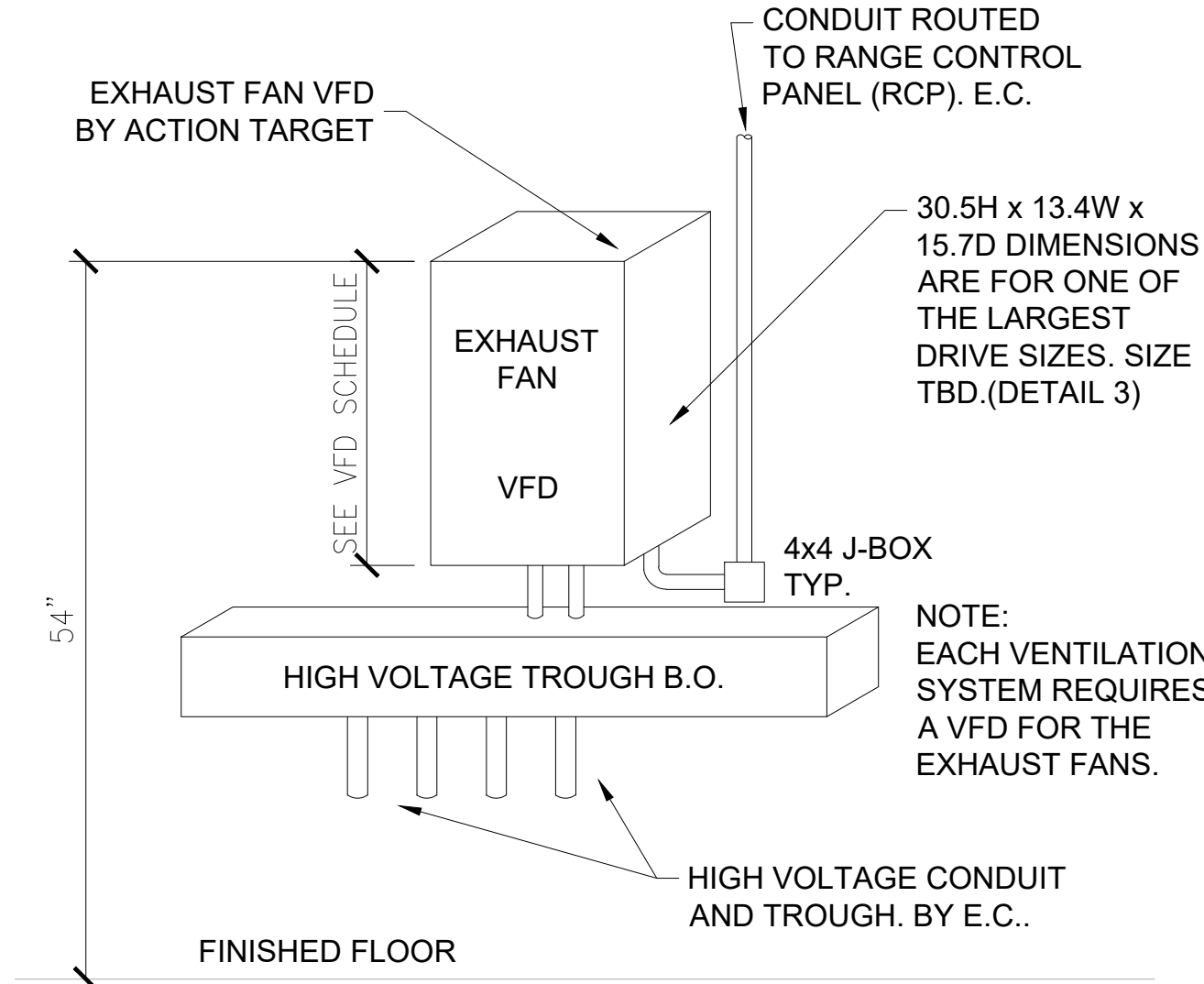
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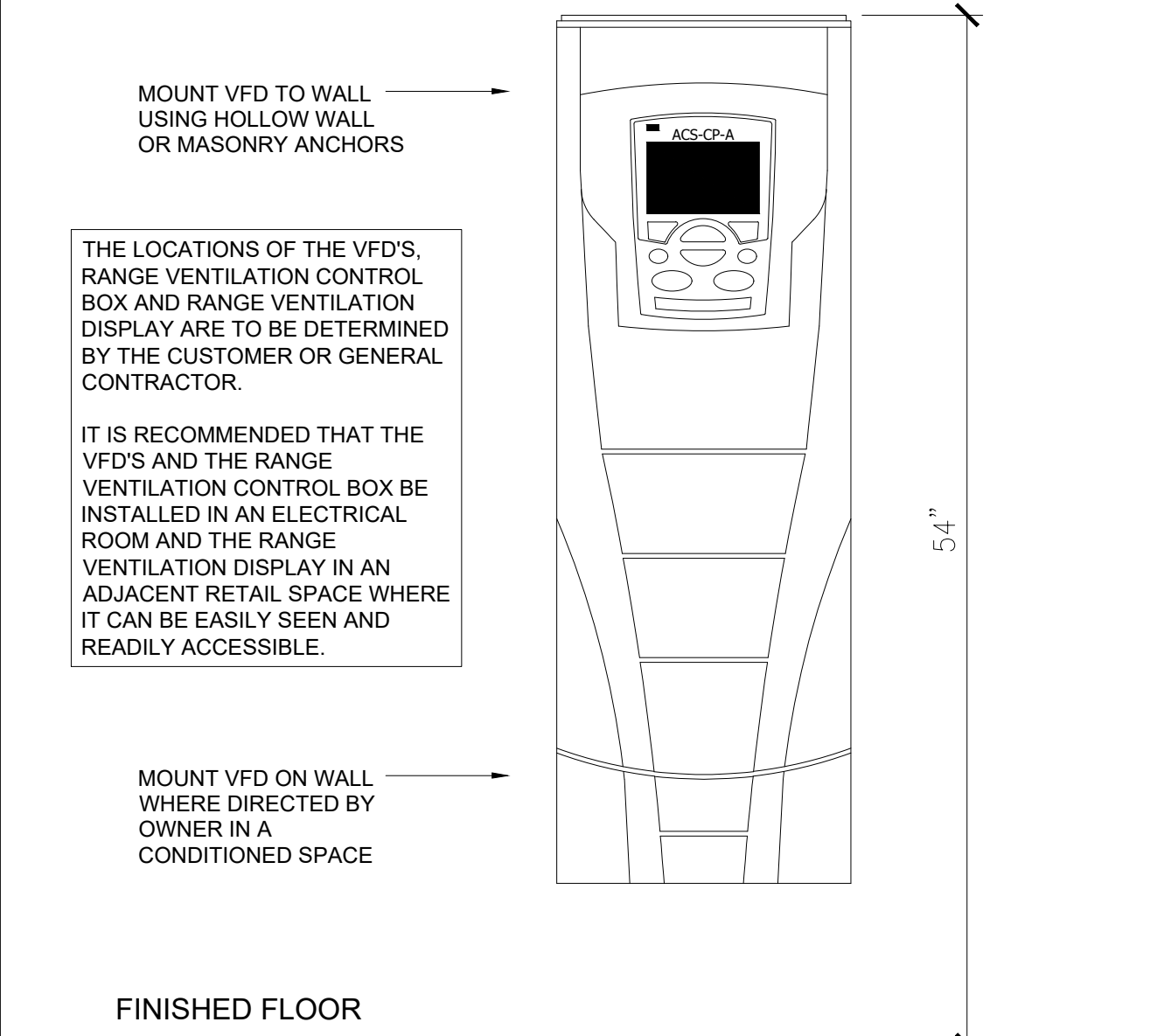
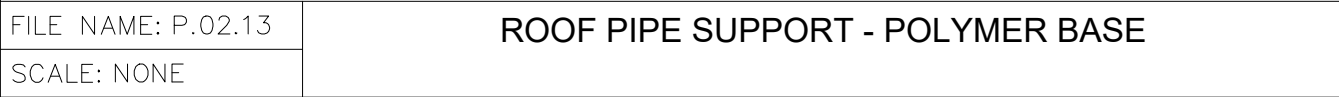


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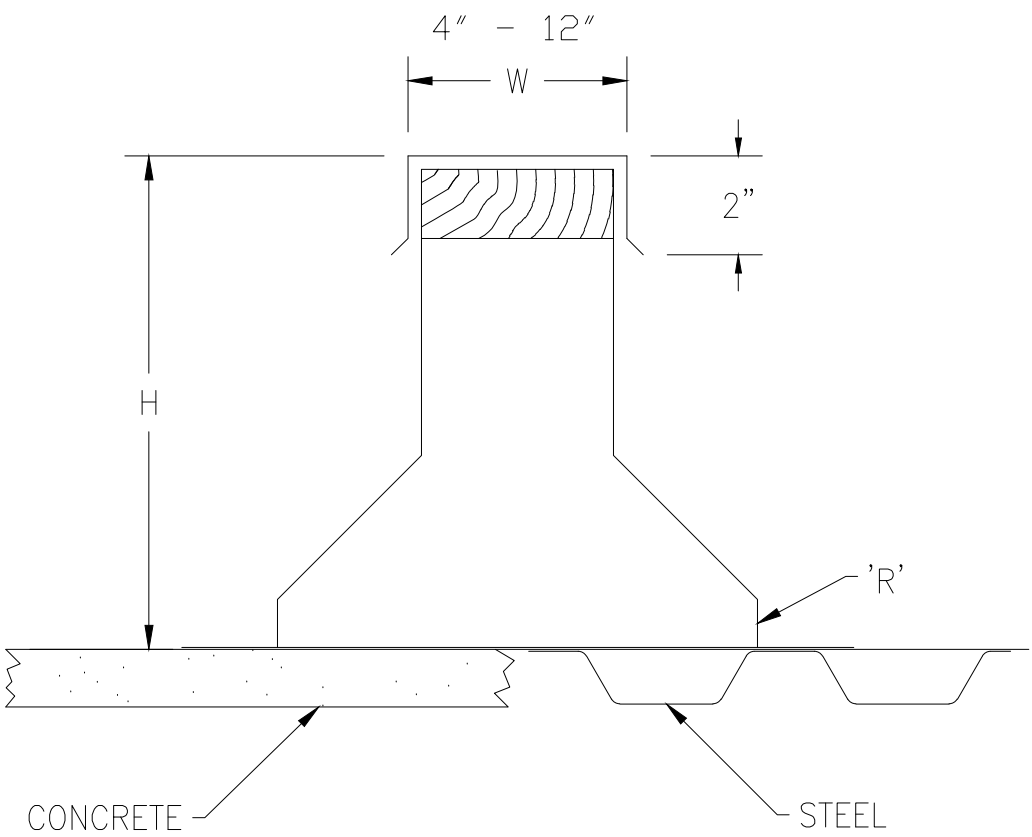
VFD = VARIABLE FREQUENCY DRIVE
E.C. = ELECTRICAL CONTRACTOR

FILE NAME: AT.08.04	HVAC RECIRC SYSTEM
SCALE: NONE	VARIABLE FREQUENCY DRIVE (VFD) DETAIL

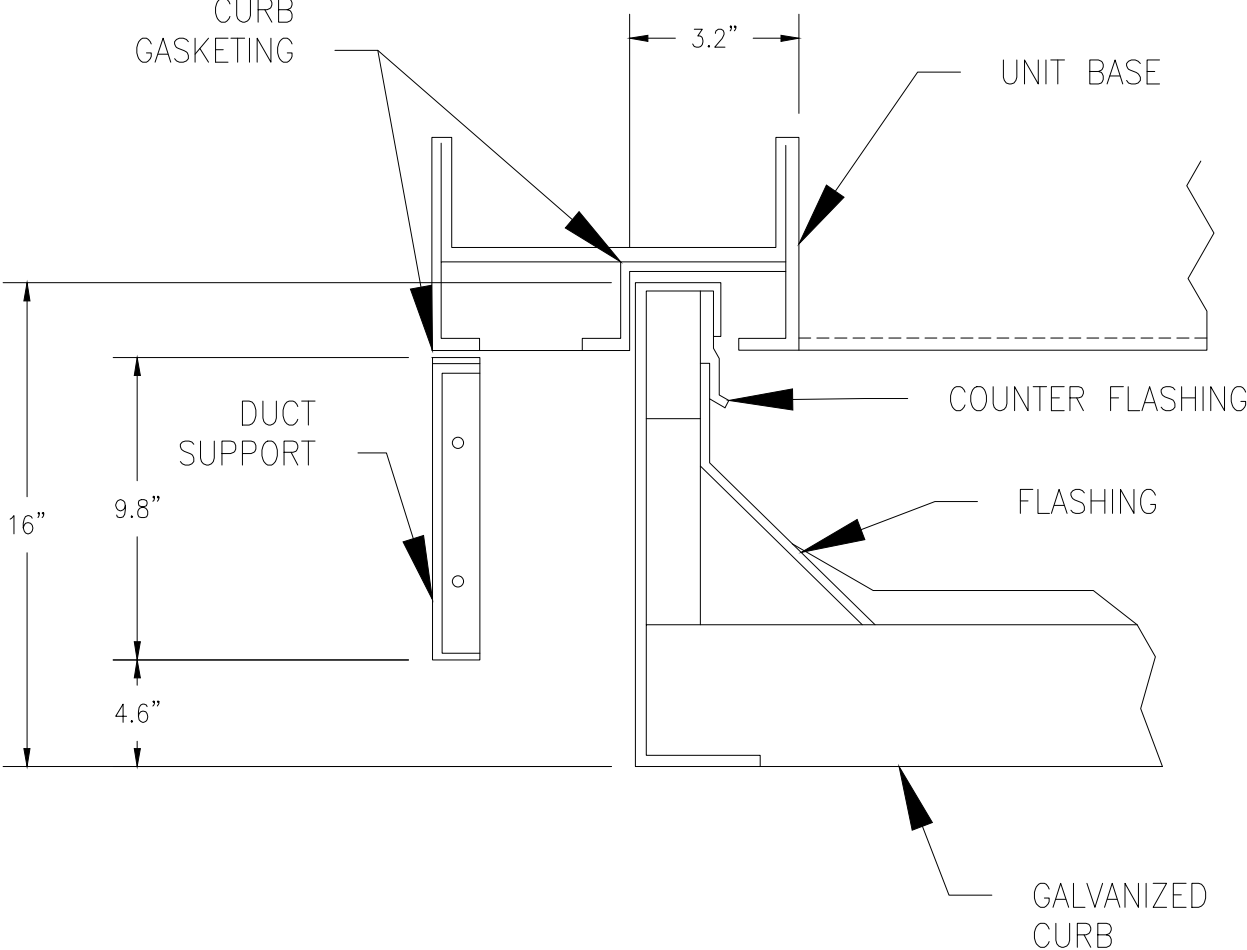


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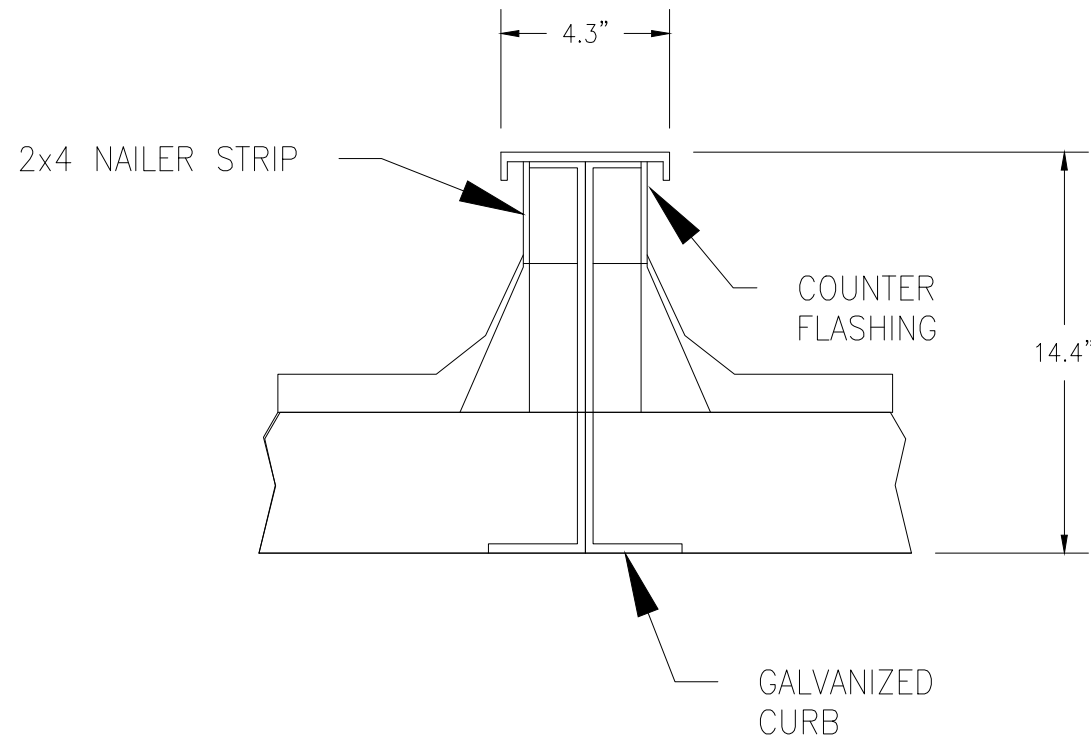
NOTES:



FILE NAME: AT.08.06	EQUIPMENT STAND DETAIL R-CER TYPE
SCALE: NONE	



FILE NAME: AT.08.07	MAKE-IT
SCALE: NONE	



PAIR UNIT CURB DIAGRAM



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Drawn By:	JA
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Origination Date:	03/27/25

[illegible]

SHEET NAME

MECHANICAL
DETAILS
CONTINUED

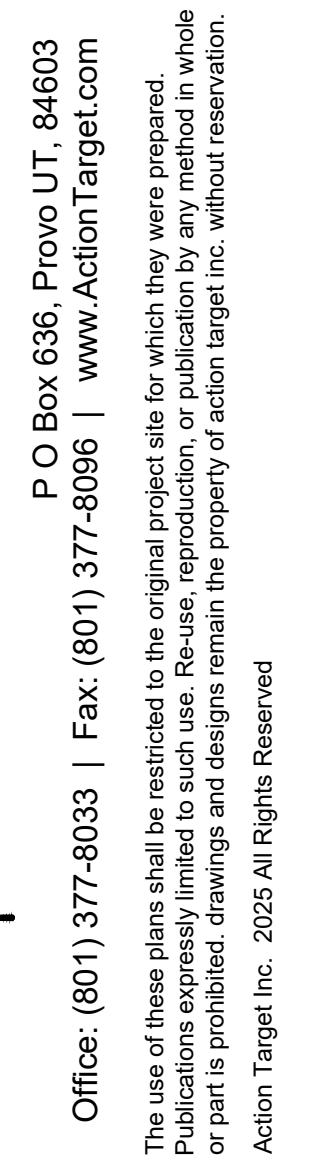
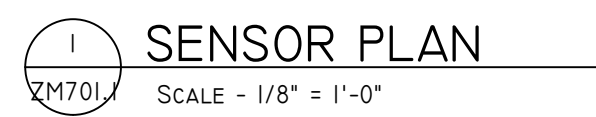
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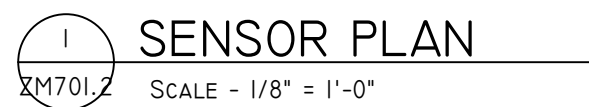
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ZM603

SCALED FOR ORIGINAL DRAWING AT 22" X 34"



—SCALED FOR ORIGINAL DRAWING AT 22" X 34"—



 CONDUIT NUMBER
 SENSOR ID
 SEE SCHEDULES SHEET FOR FILL, QTY, AND TERMINATION STYLE



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Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

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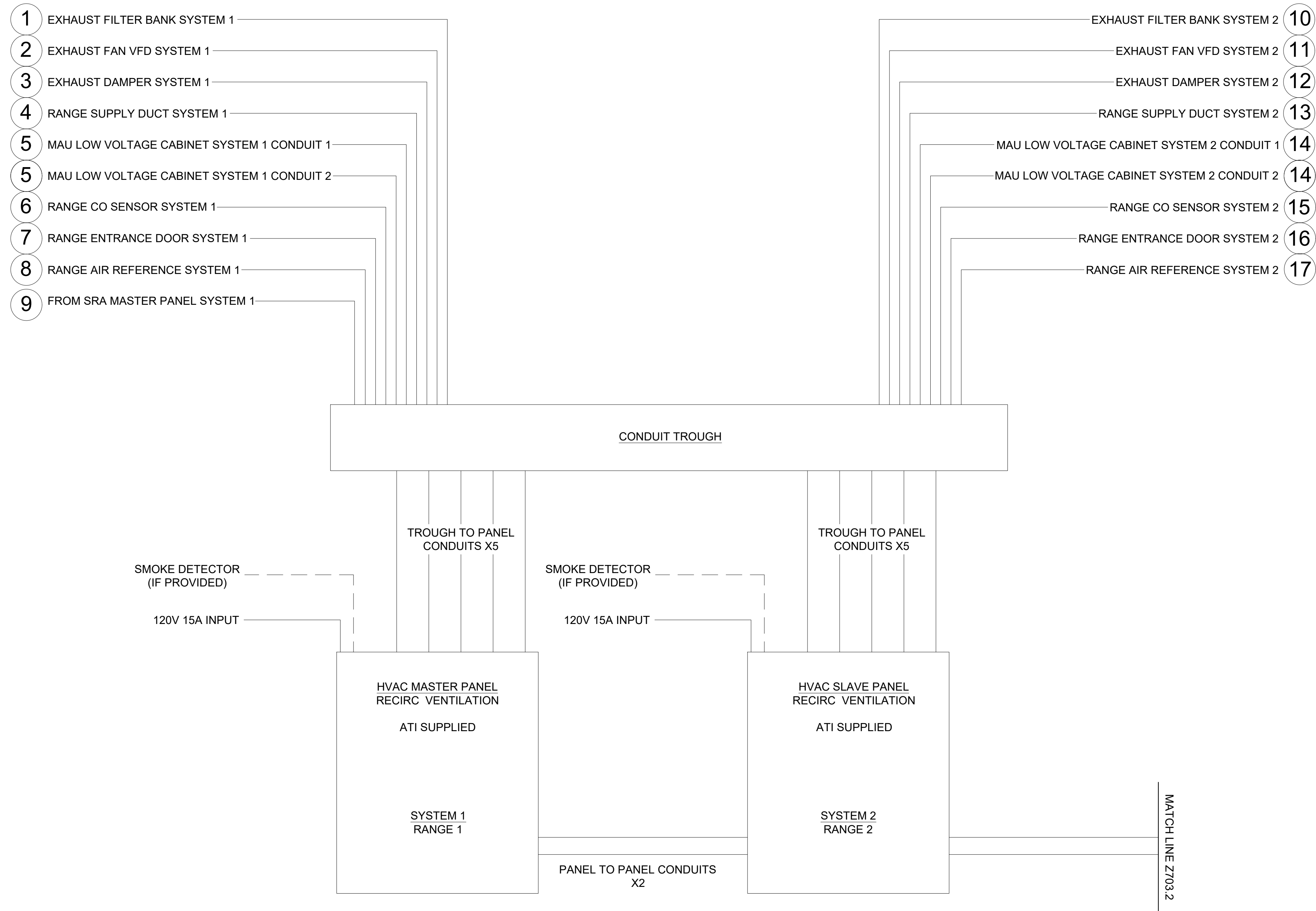
SHEET NAME

HVAC CONTROLS
CONDUIT/SENSOR
ABOVE CEILING
PLAN RANGE 3

13462

ZM701.2

—SCALED FOR ORIGINAL DRAWING AT 22" X 34"—



NOTE:

- ALL CONDUITS 3/4 INCH UNLESS SPECIFIED OTHERWISE
- PROVIDE A MINIMUM OF 5 CONDUITS BETWEEN TROUGH AND EACH CONTROL PANEL
- PROVIDE A MINIMUM OF 2 CONDUITS BETWEEN CONTROL PANELS, IF MULTIPLE CONTROL PANELS ARE PRESENT
- PROVIDE EACH CONTROL PANEL WITH 120V 15AMP 1 ϕ SERVICE, ON LEFT HAND SIDE
- IF INTEGRATION WITH SITE SMOKE DETECTORS IS REQUIRED, RUN ADDITIONAL CONDUIT FROM FIRE SYSTEM TO HVAC SYSTEM, AS DIRECTED BY FIRE SYSTEM INSTALLERS
- SEE CONDUIT AND SENSOR PLANS FOR CONDUIT PLACEMENT
- SEE CONDUIT SCHEDULE AND RANGE DETAILS FOR CONDUIT TERMINATIONS AND CONDUIT FILL



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Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DE COSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

—SHEET NAME

HVAC CONTROLS CONDUIT RECIRC SCHEMATIC

DRAWING NUMBER

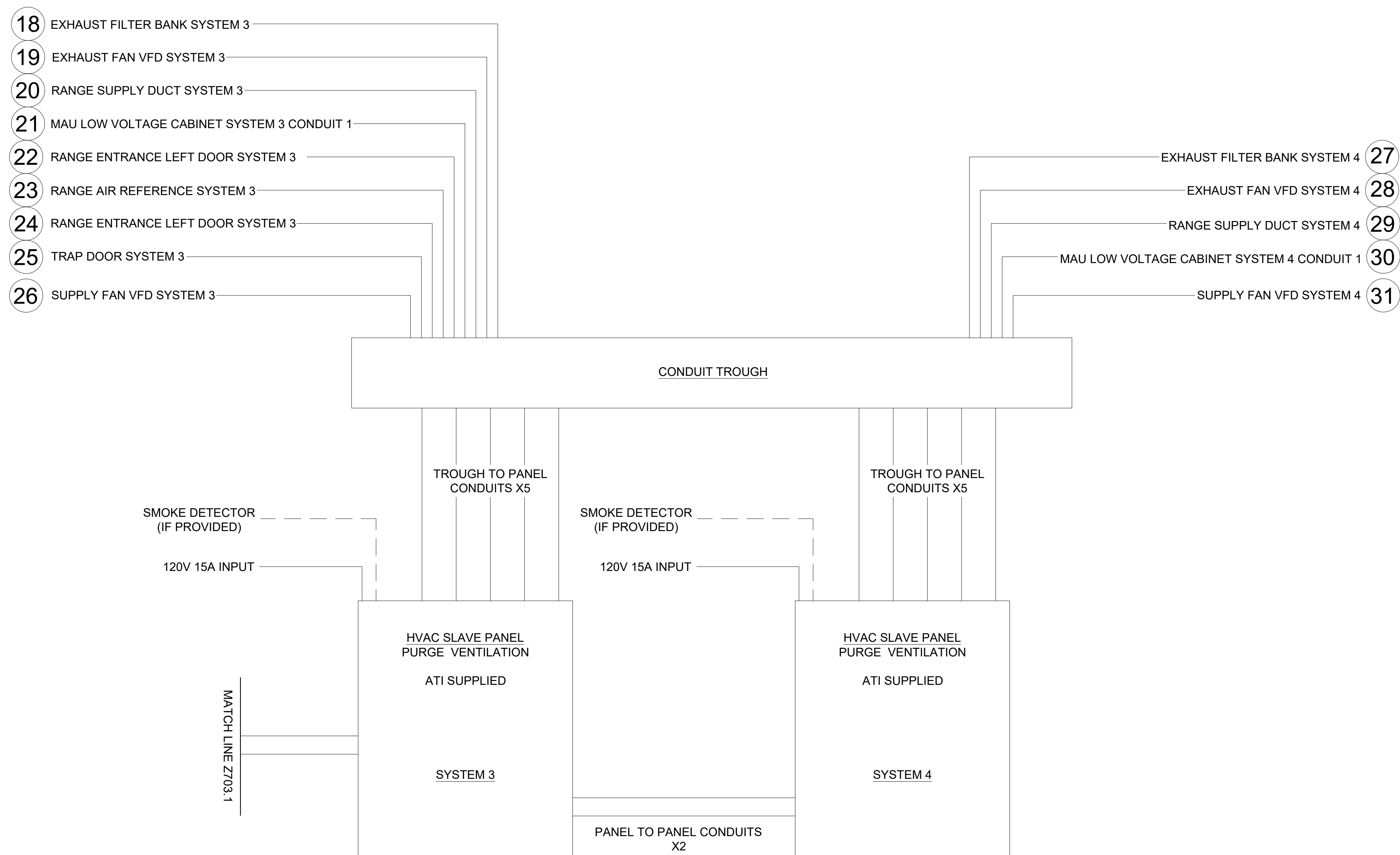
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SHEET NUMBER

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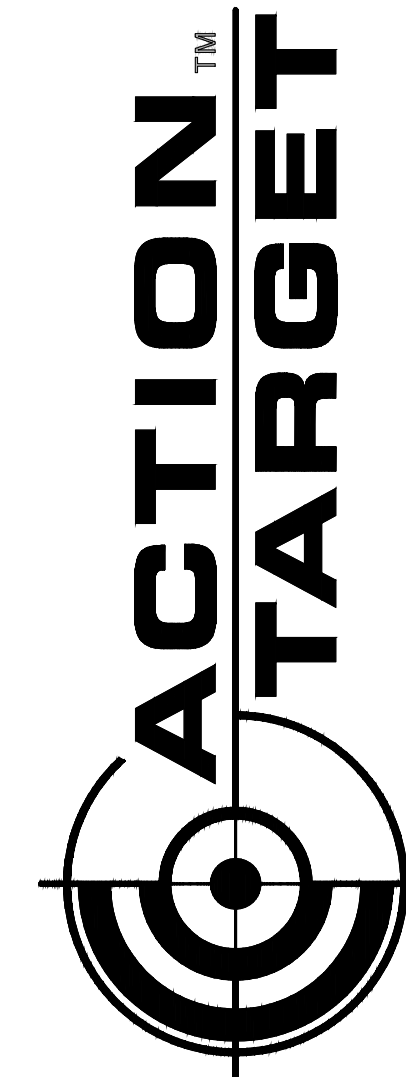
-SCALED FOR ORIGINAL DRAWING AT 22" X 34"

HVAC CONTROLS CONDUIT SCHEMATIC



NOTE:

- ALL CONDUITS 3/4 INCH UNLESS SPECIFIED OTHERWISE
- PROVIDE A MINIMUM OF 5 CONDUITS BETWEEN TROUGH AND EACH CONTROL PANEL
- PROVIDE A MINIMUM OF 2 CONDUITS BETWEEN CONTROL PANELS, IF MULTIPLE CONTROL PANELS ARE PRESENT
- PROVIDE EACH CONTROL PANEL WITH 120V 15AMP 1 ϕ SERVICE, ON LEFT HAND SIDE
- IF INTEGRATION WITH SITE SMOKE DETECTORS IS REQUIRED, RUN ADDITIONAL CONDUIT FROM FIRE SYSTEM TO HVAC SYSTEM, AS DIRECTED BY FIRE SYSTEM INSTALLERS
- SEE CONDUIT AND SENSOR PLANS FOR CONDUIT PLACEMENT
- SEE CONDUIT SCHEDULE AND RANGE DETAILS FOR CONDUIT TERMINATIONS AND CONDUIT FILL



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Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

—SHEET NAME

HVAC CONTROLS CONDUIT PURGE SCHEMATIC

DRAWING NUMBER

13462

SHEET NUMBER

ZM703.2

—SCALED FOR ORIGINAL DRAWING AT 22" X 34"

HVAC CONTROLS CONDUIT SCHEMATIC

CONDUIT SCHEDULE RANGE 1 SYSTEM #1

CONDUIT	QTY	DECRPTION	FROM	TO	FILL	SENSOR(S)
①	1	TO EXHAUST FILTER BANK. TERMINATE WITH A 36" STUB UP, WITHIN 12" NEAR FILER BANK AS INDICATED ON PLANS.	TROUGH	EXHAUST FILTER BANK	(1) 18/6	3,4
②	1	TO EXHAUST FAN VFD, TERMINATE TO 4 SQUARE BOX WITH BLANK, 6-12" FROM VFD	TROUGH	EXHAUST FAN VFD	(1) 18/4, (1) CAT5E	13,14
③	1	TO EXHAUST DAMPER, TERMINATE WITH A 36" STUB UP WITHIN 12" OF EXHUAUST DAMPER, AS INDICATED ON THE PLANS	TROUGH	EXHAUST DAMPER	(1) 18/6	15
④	2	TO RANGE SUPPLY DUCT, MOUNT ON DUCT, AT LAMINAR FLOW POINT IN THE RANGE FROM MAU, TERMINATE A 4 SQUARE BOX WITH A BLANK.	TROUGH	RANGE SUPPLY DUCT	(2) 18/4, (1) 18/6 (1) 1/4" PNEUMATIC TUBE	5 LOW,8,10,11
⑤	2	TO MAU, TERMINATE IN LOW VOLTAGE CABINET	TROUGH	MAU	(2) 18/6, (2) 18/4 (4) 18/2, (1) CAT5E	6,7,9,12 AAON VCCX2 & BACNET & SRA LINK
⑥	1	TO RANGE CO SENSOR BOX, TERMINATE TO 4 SQUARE BOX WITH SINGLE GANG MUD RING, 48" AFF, BEHIND FIRING LINE, SHOOTERS LEFT	TROUGH	RANGE CO SENSOR	(1) 18/4	2
⑦	1	TO RANGE ENTRANCE DOOR, TERMINATE TO 4 SQUARE BOX WITH BLANK, 6" ABOVE DOOR FRAME, ON THE RANGE SIDE, ON HANDLE SIDE OF ENTRANCE DOOR	TROUGH	RANGE ENTRANCE DOOR	(1) 18/4	1
⑧	1	TO RANGE AIR REFERENCE AREA, TERMINATE IN A 4 SQUARE BOX WITH SINGLE GANG MUD RING IN OCCUPIED REFERENCE SPACE, LOCATE AWAY FROM DOORS AND HVAC DIFFUSERS ON THE CEILING	TROUGH	RANGE AIR REFERENCE AREA	(1) 1/4" PNEUMATIC TUBE	5 HIGH
⑨	1	TO SMART RANGE AXIS MASTER PANEL, TERMINATE ON OR IN SRA MASTER PANEL	TROUGH	SMART RANGE AXIS MASTER PANEL	(1) CAT5E	N/A

CONDUIT SCHEDULE RANGE 2 SYSTEM #2

CONDUIT SCHEDULE RANGE 2 SYSTEM #2						
CONDUIT	QTY	DECRPTION	FROM	TO	FILL	SENSOR(S)
⑩	1	TO EXHAUST FILTER BANK. TERMINATE WITH A 36" STUB UP, WITHIN 12" NEAR FILER BANK AS INDICATED ON PLANS.	TROUGH	EXHAUST FILTER BANK	(1) 18/6	18, 19
⑪	1	TO EXHAUST FAN VFD, TERMINATE TO 4 SQUARE BOX WITH BLANK, 6-12" FROM VFD	TROUGH	EXHAUST FAN VFD	(1) 18/4, (1) CAT5E	28, 29
⑫	1	TO EXHAUST DAMPER, TERMINATE WITH A 36" STUB UP WITHIN 12" OF EXHUAUST DAMPER, AS INDICATED ON THE PLANS	TROUGH	EXHAUST DAMPER	(1) 18/6	30
⑬	2	TO RANGE SUPPLY DUCT, MOUNT ON DUCT, AT LAMINAR FLOW POINT IN THE RANGE FROM MAU, TERMINATE TO A 4 SQUARE BOX WITH A BLANK.	TROUGH	RANGE SUPPLY DUCT	(2) 18/4, (1) 18/6 (1) 1/4" PNEUMATIC TUBE	23, 25, 26, 20 LOW
⑭	2	TO MAU, TERMINATE IN LOW VOLTAGE CABINET	TROUGH	MAU	(2) 18/6, (2) 18/4 (2) 18/2, (1) CAT5E	21, 22, 24, 27 AAON VCCX2 & BACNET & SRA LINK
⑮	1	TO RANGE CO SENSOR BOX, TERMINATE TO 4 SQUARE BOX WITH SINGLE GANG MUD RING, 48" AFF, BEHIND FIRING LINE, SHOOTERS LEFT	TROUGH	RANGE CO SENSOR	(1) 18/4	17
⑯	1	TO RANGE ENTRANCE DOOR, TERMINATE TO 4 SQUARE BOX WITH BLANK, 6" ABOVE DOOR FRAME, ON THE RANGE SIDE, ON HANDLE SIDE OF ENTRANCE DOOR	TROUGH	RANGE ENTRANCE DOOR	(1) 18/4	16
⑰	0	TO RANGE AIR REFERENCE AREA, TERMINATE IN A 4 SQUARE BOX WITH SINGLE GANG MUD RING IN OCCUPIED REFERENCE SPACE, LOCATE AWAY FROM DOORS AND HVAC DIFFUSERS ON THE CEILING	TROUGH	RANGE AIR REFERENCE AREA	(1) 1/4" PNEUMATIC TUBE	20 HIGH

SENSOR SCHEDULE RANGE 1 SYSTEM #1

QTY	DECRPTION	MFR	MFR PN	FED FROM CONDUIT	WIRE TYPE	SENSOR ID
1	RANGE ENTRANCE RIGHT DOOR MAGNETIC SENSOR	RESIDEO	7939WG-WH	⑦	(1) 18/4	1
1	RANGE CO SENSOR	KELE	KCOC-W-V-LCD	⑥	(1) 18/4	2
1	BAG FILTER SENSOR	SETRA	2651005WDACT1C	①	(1) 18/6	3
1	HEPA FILTER SENSOR	SETRA	2651005WDACT1C	①	(1) 18/6	4
1	RANGE PRESSURE SENSOR LOW/HIGH	SETRA	2651005WDACT1C	④	1/4" PNEUMATIC TUBE	5 LOW
				⑧		5 HIGH
1	SUPPLY FAN STATUS SENSOR	AUTOMATION DIRECT	ACSN250-AE-S	⑤	(1) 18/4	6
1	OUTSIDE AIR FILTER SENSOR	SETRA	2651005WDACT1C	⑤	(1) 18/4	7
1	BYPASS DAMPER ACTUATOR	BELIMO	AFB24-SR	④	(1) 18/6	8
1	RETURN DAMPER ACTUATOR	BELIMO	AFB24-SR	⑤	(1) 18/6	9
1	SUPPLY DUCT PRESSURE SENSOR	SETRA	2651005WDACT1C	④	(1) 18/4	10
1	SUPPLY AIR TEMP/HUMIDITY	SIEMENS	QFM2160U	④	(1) 18/4	11
1	OUTSIDE AIR DAMPER ACTUATOR	AAON	USE BUILT IN	⑤	(1) 18/6	12
1	EXHAUST FAN VFD STATUS/RUN ENABLE	RIB	RIBXLCJF	②	(1) 18/4	13
1	EXHAUST FAN VFD COMM MODULE	GALT	G500	②	(1) CAT5E	14
1	EXHAUST DAMPER ACTUATOR	BELIMO	AFB24-SR	③	(1) 18/6	15

SENSOR SCHEDULE RANGE 2 SYSTEM #2

QTY	DECRPTION	MFR	MFR PN	FED FROM CONDUIT	WIRE TYPE	SENSOR ID
1	RANGE ENTRANCE DOOR MAGNETIC SENSOR	RESIDEO	7939WG-WH	⑩	(1) 18/4	⑩
1	RANGE CO SENSOR	KELE	KCOC-W-V-LCD	⑮	(1) 18/4	⑰
1	BAG FILTER SENSOR	SETRA	2651005WDACT1C	⑩	(1) 18/6	⑱
1	HEPA FILTER SENSOR	SETRA	2651005WDACT1C	⑩	(1) 18/6	⑲
1	RANGE PRESSURE SENSOR LOW/HIGH	SETRA	2651005WDACT1C	⑬	1/4" PNEUMATIC TUBE	⑳ LOW
				⑰		㉑ HIGH
1	SUPPLY FAN STATUS SENSOR	AUTOMATION DIRECT	ACSN250-AE-S	⑭	(1) 18/4	㉒
1	OUTSIDE AIR FILTER SENSOR	SETRA	2651005WDACT1C	⑭	(1) 18/4	㉓
1	BYPASS DAMPER ACTUATOR	BELIMO	AFB24-SR	⑬	(1) 18/6	㉔
1	RETURN DAMPER ACTUATOR	BELIMO	AFB24-SR	⑭	(1) 18/6	㉕
1	SUPPLY DUCT PRESSURE SENSOR	SETRA	2651005WDACT1C	⑬	(1) 18/4	㉖
1	SUPPLY AIR TEMP/HUMIDITY	SIEMENS	QFM2160U	⑬	(1) 18/4	㉗
1	OUTSIDE AIR DAMPER ACTUATOR	AAON	USE BUILT IN	⑭	(1) 18/6	㉘
1	EXHAUST FAN VFD STATUS/RUN ENABLE	RIB	RIBXLCJF	⑪	(1) 18/4	㉙
1	EXHAUST FAN VFD COMM MODULE	GALT	G500	⑪	(1) CAT5E	㉚
1	EXHAUST DAMPER ACTUATOR	BELIMO	AFB24-SR	⑫	(1) 18/6	㉛

NOTE:

- ALL 4 CONDUCTOR CABLE IS GENESIS 22151009, 18AWG, STRANDED, SHIELDED, CMR RATED, AND SUNLIGHT RESISTANT, OR EQUIVALENT
- ALL 6 CONDUCTOR CABLE IS GENESIS 22161009, 18AWG, STRANDED, SHIELDED, CMR RATED, AND SUNLIGHT RESISTANT, OR EQUIVALENT
- ALL COMMUNICATION CABLE IS CAT5E OR GREATER, 4 PAIR UTP, 24 AWG, CMR OR PLENUM RATED, SUNLIGHT RESISTANT, OR EQUIVALENT
- ALL 2 CONDUCTOR CABLE IS BELDEN 82760, 18 AWG, TWISTED PAIR, PLENUM RATED
- LEAVE ENOUGH WIRE TO EXTEND 24" BEYOND WHERE THE SENSOR IS LOCATED ON THE PLANS
- FOR WIRE PULLS TO AON UNIT, LEAVE ENOUGH WIRE TO PULL THROUGH THE ENTIRE LENGTH OF UNIT +24"



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PROJECT STATUS

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-PROJECT NAME

FIREARMS OUTLET
CANADA-DESIGN

Project Manager:	STEVE TIBBALS
Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DE COSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

-SHEET NAME:

HVAC CONTROLS
CONDUIT AND
SENSOR SCHEDULE
SYSTEM #1 & #2

-DRAWING NUMBER

13462

SHEET NUMBER

ZM704.1

CONDUIT SCHEDULE RANGE 3 SYSTEM #3

CONDUIT SCHEDULE RANGE 3 SYSTEM #3						
CONDUIT	QTY	DECRPTION	FROM	TO	FILL	SENSOR(S)
⑮	1	TO EXHAUST FILTER BANK. TERMINATE WITH A 36" STUB UP, WITHIN 12" NEAR FILER BANK AS INDICATED ON PLANS.	TROUGH	EXHAUST FILTER BANK	(1) 18/6	③② ③③
⑰	1	TO EXHAUST FAN VFD, TERMINATE TO A 4 SQUARE BOX WITH BLANK, 6-12" FROM VFD	TROUGH	EXHAUST FAN VFD	(1) 18/4	④① ④②
⑳	1	TO RANGE SUPPLY DUCT, MOUNT ON DUCT, AT LAMINAR FLOW POINT IN THE RANGE FROM MAU, TERMINATE TO A 4 SQUARE BOX WITH A BLANK.	TROUGH	RANGE SUPPLY DUCT	(2) 18/4 (1) 1/4" PNEUMATIC TUBE	③④ LOW ③⑥ ③⑦
㉑	2	TO MAU, TERMINATE IN LOW VOLTAGE CABINET	TROUGH	MAU	(1) 18/6, (2) 18/4 (4) 18/2, (1) CAT5E	③⑤, ④②, ④③, GREENHECK DDC & BACNET & SRA LINK
㉒	1	TO RANGE ENTRANCE DOOR LEFT, TERMINATE TO A 4 SQUARE BOX WITH BLANK, 6" ABOVE DOOR FRAME, ON THE RANGE SIDE, ON HANDLE SIDE OF ENTRANCE DOOR	TROUGH	RANGE ENTRANCE DOOR RIGHT	(1) 18/4	③①
㉓	1	TO RANGE AIR REFERENCE AREA. TERMINATE TO A 4 SQUARE BOX WITH SINGLE GANG MUD RING IN OCCUPIED REFERENCE SPACE, LOCATE AWAY FROM DOORS AND HVAC DIFFUSERS ON THE CEILING	TROUGH	RANGE AIR REFERENCE AREA	(1) 1/4" PNEUMATIC TUBE	③④ HIGH
㉔	1	TO RANGE ENTRANCE DOOR LEFT2, TERMINATE TO 4 SQUARE BOX WITH BLANK, 6" ABOVE DOOR FRAME, ON THE RANGE SIDE, ON HANDLE SIDE OF DOOR	TROUGH	RANGE ENTRANCE DOOR LEFT2	(1) 18/4	③⑧
㉕	1	TO RANGE TRAP DOOR, TERMINATE TO A 4 SQUARE BOX WITH BLANK, 6" ABOVE DOOR FRAME, ON THE RANGE SIDE, ON HANDLE SIDE OF DOOR	TROUGH	RANGE TRAP DOOR	(1) 18/4	③⑨

SENSOR SCHEDULE RANGE 3 SYSTEM #3

QTY	DECRPTION	MFR	MFR PN	FED FROM CONDUIT	WIRE TYPE	SENSOR ID
1	RANGE ENTRANCE LEFT DOOR MAGNETIC SENSOR	RESIDEO	7939WG-WH	②②	(1) 18/4	31
1	BAG FILTER SENSOR	SETRA	2651005WDACT1C	①⑧	(1) 18/6	32
1	HEPA FILTER SENSOR	SETRA	2651005WDACT1C	①⑧	(1) 18/6	33
1	RANGE PRESSURE SENSOR LOW/HIGH	SETRA	IN PANEL	②①	1/4" PNEUMATIC TUBE	34 LOW
				②③		34 HIGH
1	SUPPLY FAN STATUS SENSOR	AUTOMATION DIRECT	ACSN250-AE-S	②①	(1) 18/4	35
1	SUPPLY DUCT PRESSURE SENSOR	SETRA	2651005WDACT1C	②①	(1) 18/4	36
1	SUPPLY AIR TEMP	SIEMENS	QAM2161.040	②①	(1) 18/4	37
1	RANGE ENTRANCE LEFT2 DOOR SENSOR	RESIDEO	7939WG-WH	②④	(1) 18/4	38
1	RANGE TRAP DOOR SENSOR	RESIDEO	7939WG-WH	②⑤	(1) 18/4	39
1	EXHAUST FAN VFD STATUS/RUN ENABLE	RIB	RIBXLCJF	①⑨	(1) 18/4	40
1	EXHAUST FAN VFD COMM MODULE	GALT	G500	①⑨	(1) CAT5E	41
1	OUTSIDE AIR FILTER SENSOR	SETRA	2651005WDACT1C	②①	(1) 18/4	42
1	OUTSIDE AIR DAMPER ACTUATOR	AAON	USE BUILT IN	②①	(1) 18/6	43

NOTE:

- ALL 4 CONDUCTOR CABLE IS GENESIS 22151009, 18AWG, STRANDED, SHIELDED, CMR RATED, AND SUNLIGHT RESISTANT, OR EQUIVALENT
- ALL 6 CONDUCTOR CABLE IS GENESIS 22161009, 18AWG, STRANDED, SHIELDED, CMR RATED, AND SUNLIGHT RESISTANT, OR EQUIVALENT
- ALL COMMUNICATION CABLE IS CAT5E OR GREATER, 4 PAIR UTP, 24 AWG, CMR OR PLENUM RATED, SUNLIGHT RESISTANT, OR EQUIVALENT
- ALL 2 CONDUCTOR CABLE IS BELDEN 82760, 18 AWG, TWISTED PAIR, PLENUM RATED
- LEAVE ENOUGH WIRE TO EXTEND 24" BEYOND WHERE THE SENSOR IS LOCATED ON THE PLANS
- FOR WIRE PULLS TO MAU UNIT, LEAVE ENOUGH WIRE TO PULL THROUGH THE ENTIRE LENGTH OF UNIT +24"



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PROJECT STATUS

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-PROJECT NAME

FIREARMS OUTLET
CANADA-DESIGN

Project Manager:	STEVE TIBBALS
Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DECONSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

SHEET NAME

HVAC CONTROLS
CONDUIT AND
SENSOR SCHEDULE
SYSTEM #3

DRAWING NUMBER

13462

SHEET NUMBER

ZM704.2

-SCALED FOR ORIGINAL DRAWING AT 22" X 34"

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
ENTRANCE DOOR	1	RED	+24	18/4	RED	⑦	1
	2	WHITE	SIGNAL		WHITE		
N/A	3	RED	+24	18/4	RED	N/A	N/A
	4	WHITE	SIGNAL		WHITE		
TEMP/HUMIDITY SENSOR	5	GREEN	TEMP SIGNAL 0-10V	18/4	GREEN	④	11
	6	WHITE	HUMIDITY SIGNAL 0-10V		WHITE		
	7	RED	+24		RED		
	8	BLACK	DC GRND		BLACK		
CARBON MONOXIDE SENSOR	9	GREEN	CO SIGNAL 0-10V	18/4	GREEN	⑥	2
	10	WHITE	DC GRND		WHITE		
	11	RED	+24		RED		
	12	BLACK	DC GRND		BLACK		
OUTSIDE AIR FILTER	13	RED	+24	18/4	RED	⑤	7
	14	BLACK	DC GRND		BLACK		
	15	WHITE	OUTSIDE AIR FILTER SIGNAL 0-10V		WHITE		
SUPPLY FAN STATUS	16	BROWN	+24	18/4	BROWN	⑤	6
	17	GREEN	SIGNAL		GREEN		
BYPASS DAMPER	18	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	④	8
	19	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	20	WHITE	DC GRND		WHITE		
	21	ORANGE	+24		BROWN		
	22	RED	+24		RED		
	23	BLACK	DC GRND		BLACK		
RETURN DAMPER	24	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	⑤	9
	25	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	26	WHITE	DC GRND		WHITE		
	27	ORANGE	+24		BROWN		
	28	RED	+24		RED		
	29	BLACK	DC GRND		BLACK		
EXHAUST DAMPER	30	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	③	15
	31	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	32	WHITE	DC GRND		WHITE		
	33	ORANGE	+24		BROWN		
	34	RED	+24		RED		
	35	BLACK	DC GRND		BLACK		

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
EXHAUST/RETURN FILTERS	36	BLUE	HEPA FILTER SIGNAL 0-10V	18/6	BLUE	①	34
	37	GREEN	BAG FILTER SIGNAL 0-10V		GREEN		
	38	WHITE	DC GRND		WHITE		
	39	ORANGE	+24		BROWN		
	40	RED	+24		RED		
	41	BLACK	DC GRND		BLACK		
TRAP DOOR	42	RED	+24	18/4	RED	⑫	15
	43	WHITE	SIGNAL		WHITE		
EXHAUST FAN VFD	44	GREEN	+24	18/4	GREEN	②	1314
	45	WHITE	DC GRND		WHITE		
	46	RED	VFD ENABLE SIGNAL		RED		
	47	BLACK	CURRENT SENSOR FB SIGNAL		BLACK		
N/A	48	RED	+24	18/4	RED	N/A	N/A
	49	WHITE	SIGNAL		WHITE		
SMOKE DETECTOR/FIRE	80	GREEN	SIGNAL	BY OTHERS			
	81	WHITE	+24				
	82	RED	+24				
	83	BLACK	DC GRND				
SUPPLY DUCT PRESSURE	84	GREEN	SUPPLY DP SIGNAL 0-10V	18/4	GREEN	④	10
	85	WHITE	+24		WHITE		
	86	RED	+24		RED		
	87	BLACK	DC GRND		BLACK		
*OUTSIDE AIR DAMPER	SEE FIELD WIRING PACKET		DRIVE SIGNAL 0-10V	18/6	GREEN	⑤	12
			DC GRND		WHITE		
			+24		BROWN		
			+24		RED		
			DC GRND		BLACK		

NOTE:
*MAU OUTSIDE AIR DAMPER WIRING FOR EXTERNAL CONTROL
DIRECT WIRE TO PLC ANALOG OUTPUT 1 TERMINAL 2.3. SEE FIELD
WIRING PACKET FOR ADDITIONAL DETAILS.



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PROJECT STATUS

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PROJECT NAME

FIREARMS OUTLET
CANADA-DESIGN

Project Manager:	STEVE TIBBALS
Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DE COSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

SHEET NAME

HVAC CONTROLS PANEL WIRING SYSTEM #1

-DRAWING NUMBER

13462

SHEET NUMBER

ZM705.1

SCALED FOR ORIGINAL DRAWING AT 22" X 34"

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
ENTRANCE DOOR	1	RED	+24	18/4	RED	⑩	16
	2	WHITE	SIGNAL		WHITE		
N/A	3	RED	+24	18/4	RED	N/A	N/A
	4	WHITE	SIGNAL		WHITE		
TEMP/HUMIDITY SENSOR	5	GREEN	TEMP SIGNAL 0-10V	18/4	GREEN	⑬	26
	6	WHITE	HUMIDITY SIGNAL 0-10V		WHITE		
	7	RED	+24		RED		
	8	BLACK	DC GRND		BLACK		
CARBON MONOXIDE SENSOR	9	GREEN	CO SIGNAL 0-10V	18/4	GREEN	⑮	17
	10	WHITE	DC GRND		WHITE		
	11	RED	+24		RED		
	12	BLACK	DC GRND		BLACK		
OUTSIDE AIR FILTER	13	RED	+24	18/4	RED	⑭	22
	14	BLACK	DC GRND		BLACK		
	15	WHITE	OUTSIDE AIR FILTER SIGNAL 0-10V		WHITE		
SUPPLY FAN STATUS	16	BROWN	+24	18/4	BROWN	⑭	21
	17	GREEN	SIGNAL		GREEN		
BYPASS DAMPER	18	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	⑬	23
	19	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	20	WHITE	DC GRND		WHITE		
	21	ORANGE	+24		BROWN		
	22	RED	+24		RED		
	23	BLACK	DC GRND		BLACK		
RETURN DAMPER	24	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	⑭	24
	25	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	26	WHITE	DC GRND		WHITE		
	27	ORANGE	+24		BROWN		
	28	RED	+24		RED		
	29	BLACK	DC GRND		BLACK		
EXHAUST DAMPER	30	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	⑫	30
	31	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	32	WHITE	DC GRND		WHITE		
	33	ORANGE	+24		BROWN		
	34	RED	+24		RED		
	35	BLACK	DC GRND		BLACK		

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
EXHAUST/RETURN FILTERS	36	BLUE	HEPA FILTER SIGNAL 0-10V	18/6	BLUE	⑩	18 19
	37	GREEN	BAG FILTER SIGNAL 0-10V		GREEN		
	38	WHITE	DC GRND		WHITE		
	39	ORANGE	+24		BROWN		
	40	RED	+24		RED		
	41	BLACK	DC GRND		BLACK		
N/A	42	RED	+24	18/4	RED	N/A	N/A
	43	WHITE	SIGNAL		WHITE		
EXHAUST FAN VFD	44	GREEN	+24	18/4	GREEN	⑪	28 29
	45	WHITE	DC GRND		WHITE		
	46	RED	VFD ENABLE SIGNAL		RED		
	47	BLACK	CURRENT SENSOR FB SIGNAL		BLACK		
N/A	48	RED	+24	18/6	RED	N/A	N/A
	49	WHITE	SIGNAL		WHITE		
SMOKE DETECTOR/FIRE	80	GREEN	SIGNAL	BY OTHERS			
	81	WHITE	+24				
	82	RED	+24				
	83	BLACK	DC GRND				
SUPPLY DUCT PRESSURE	84	GREEN	SUPPLY DP SIGNAL 0-10V	18/4	GREEN	⑬	25
	85	WHITE	+24		WHITE		
	86	RED	+24		RED		
	87	BLACK	DC GRND		BLACK		
*OUTSIDE AIR DAMPER	SEE FIELD WIRING PACKET		DRIVE SIGNAL 0-10V	18/6	GREEN	⑭	27
			DC GRND		WHITE		
			+24		BROWN		
			+24		RED		
			DC GRND		BLACK		

NOTE:
*MAU OUTSIDE AIR DAMPER WIRING FOR EXTERNAL CONTROL
DIRECT WIRE TO PLC ANALOG OUTPUT 1 TERMINAL 2.3. SEE FIELD
WIRING PACKET FOR ADDITIONAL DETAILS.



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PROJECT STATUS

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PROJECT NAME

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CANADA-DESIGN

Project Manager:	STEVE TIBBALS
Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DE COSTA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

SHEET NAME

HVAC CONTROLS PANEL WIRING SYSTEM #2

-DRAWING NUMBER

13462

SHEET NUMBER

ZM705.2

SCALED FOR ORIGINAL DRAWING AT 22" X 34"

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
ENTRANCE DOOR LEFT	1	RED	+24	18/4	RED	22	33
	2	WHITE	SIGNAL		WHITE		
ENTRANCE DOOR LEFT2	3	RED	+24	18/4	RED	24	38
	4	WHITE	SIGNAL		WHITE		
TEMP SENSOR	5	GREEN	TEMP SIGNAL 0-10V	18/4	GREEN	20	37
	6	WHITE	HUMIDITY SIGNAL 0-10V		WHITE		
	7	RED	+24		RED		
	8	BLACK	DC GRND		BLACK		
MAU OA TEMP	9	GREEN	TEMP SIGNAL 0-10V	18/4	GREEN	N/A	N/A
	10	WHITE	DC GRND		WHITE		
	11	RED	+24		RED		
	12	BLACK	DC GRND		BLACK		
OUTSIDE AIR FILTER	13	RED	+24	18/4	RED	21	42
	14	BLACK	DC GRND		BLACK		
	15	WHITE	OUTSIDE AIR FILTER SIGNAL 0-10V		WHITE		
SUPPLY FAN STATUS	16	BROWN	+24	18/4	BROWN	21	35
	17	GREEN	SIGNAL		GREEN		
OUTSIDE AIR DAMPER	18	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	N/A	N/A
	19	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	20	WHITE	DC GRND		WHITE		
	21	ORANGE	+24		BROWN		
	22	RED	+24		RED		
	23	BLACK	DC GRND		BLACK		
HEATER CONTROL	24	GREEN	HEAT CONTROL	18/4	GREEN	N/A	N/A
	25	WHITE	HEAT ENABLE		WHITE		
	26	RED	+24		RED		
	27	BLACK	DC GRND		BLACK		
SUPPLY FAN ENABLE	29	WHITE	DC GRND	18/4	WHITE	N/A	N/A
	30	RED	ENABLE SIGNAL		RED		
SUPPLY FAN STATUS	28	GREEN	+24	18/4	GREEN	N/A	N/A
	31	BLACK	SIGNAL		BLACK		

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
EXHAUST/RETURN FILTERS	32	BLUE	HEPA FILTER SIGNAL 0-10V	18/6	BLUE	⑮	32 33
	33	GREEN	BAG FILTER SIGNAL 0-10V		GREEN		
	34	WHITE	DC GRND		WHITE		
	35	ORANGE	+24		BROWN		
	36	RED	+24		RED		
	37	BLACK	DC GRND		BLACK		
TRAP DOOR	38	RED	+24	18/4	RED	⑮	39
	39	WHITE	SIGNAL		WHITE		
EXHAUST FAN VFD	40	GREEN	+24	18/4	GREEN	⑮	30 31
	41	WHITE	DC GRND		WHITE		
	42	RED	VFD ENABLE SIGNAL		RED		
	43	BLACK	CURRENT SENSOR FB SIGNAL		BLACK		
OTHER DOOR	44	RED	+24	18/6	RED	N/A	N/A
	45	WHITE	SIGNAL		WHITE		
SMOKE DETECTOR/FIRE	80	GREEN	SIGNAL	BY OTHERS			
	81	WHITE	+24				
	82	RED	+24				
	83	BLACK	DC GRND				
SUPPLY DUCT PRESSURE	84	GREEN	SUPPLY DP SIGNAL 0-10V	18/4	GREEN	⑮	36
	85	WHITE	+24		WHITE		
	86	RED	+24		RED		
	87	BLACK	DC GRND		BLACK		
*OUTSIDE AIR DAMPER	SEE FIELD WIRING PACKET		DRIVE SIGNAL 0-10V	18/6	GREEN	⑮	43
			DC GRND		WHITE		
			+24		BROWN		
			+24		RED		
			DC GRND		BLACK		

NOTE:
*MAU OUTSIDE AIR DAMPER WIRING FOR EXTERNAL CONTROL
DIRECT WIRE TO PLC ANALOG OUTPUT 1 TERMINAL 2.3. SEE FIELD
WIRING PACKET FOR ADDITIONAL DETAILS.



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PROJECT STATUS

100% SUBMITTAL

-PROJECT NAME

FIREARMS OUTLET
CANADA-DESIGN

Project Manager:	STEVE TIBBALS
Territory Manager:	WYATT DAVIS
Project Engineer:	ROB DECONA
Drawn By:	JA
Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

SHEET NAME

HVAC CONTROLS PANEL WIRING SYSTEM #3

-DRAWING NUMBER

13462

SHEET NUMBER

ZM705.3

SCALED FOR ORIGINAL DRAWING AT 22" X 34"

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
ENTRANCE DOOR LEFT	1	RED	+24	18/4	RED	N/A	N/A
	2	WHITE	SIGNAL		WHITE		
ENTRANCE DOOR LEFT2	3	RED	+24	18/4	RED	N/A	N/A
	4	WHITE	SIGNAL		WHITE		
TEMP SENSOR	5	GREEN	TEMP SIGNAL 0-10V	18/4	GREEN	28	49
	6	WHITE	HUMIDITY SIGNAL 0-10V		WHITE		
	7	RED	+24		RED		
	8	BLACK	DC GRND		BLACK		
MAU OA TEMP	9	GREEN	TEMP SIGNAL 0-10V	18/4	GREEN	N/A	N/A
	10	WHITE	DC GRND		WHITE		
	11	RED	+24		RED		
	12	BLACK	DC GRND		BLACK		
OUTSIDE AIR FILTER	13	RED	+24	18/4	RED	29	52
	14	BLACK	DC GRND		BLACK		
	15	WHITE	OUTSIDE AIR FILTER SIGNAL 0-10V		WHITE		
SUPPLY FAN STATUS	16	BROWN	+24	18/4	BROWN	21	35
	17	GREEN	SIGNAL		GREEN		
OUTSIDE AIR DAMPER	18	BLUE	FEEDBACK SIGNAL 0-10V	18/6	BLUE	N/A	N/A
	19	GREEN	DRIVE SIGNAL 0-10V		GREEN		
	20	WHITE	DC GRND		WHITE		
	21	ORANGE	+24		BROWN		
	22	RED	+24		RED		
	23	BLACK	DC GRND		BLACK		
HEATER CONTROL	24	GREEN	HEAT CONTROL	18/4	GREEN	N/A	N/A
	25	WHITE	HEAT ENABLE		WHITE		
	26	RED	+24		RED		
	27	BLACK	DC GRND		BLACK		
SUPPLY FAN ENABLE	29	WHITE	DC GRND	18/4	WHITE	N/A	N/A
	30	RED	ENABLE SIGNAL		RED		
SUPPLY FAN STATUS	28	GREEN	+24	18/4	GREEN	N/A	N/A
	31	BLACK	SIGNAL		BLACK		

SENSOR NAME	TERMINAL#	TERMINAL COLOR	SIGNAL	WIRE	WIRE COLOR	CONDUIT FEED	SENSOR(S)
EXHAUST/RETURN FILTERS	32	BLUE	HEPA FILTER SIGNAL 0-10V	18/6	BLUE	26	44 45
	33	GREEN	BAG FILTER SIGNAL 0-10V		GREEN		
	34	WHITE	DC GRND		WHITE		
	35	ORANGE	+24		BROWN		
	36	RED	+24		RED		
	37	BLACK	DC GRND		BLACK		
TRAP DOOR	38	RED	+24	18/4	RED	N/A	N/A
	39	WHITE	SIGNAL		WHITE		
EXHAUST FAN VFD	40	GREEN	+24	18/4	GREEN	27	50 51
	41	WHITE	DC GRND		WHITE		
	42	RED	VFD ENABLE SIGNAL		RED		
	43	BLACK	CURRENT SENSOR FB SIGNAL		BLACK		
OTHER DOOR	44	RED	+24	18/6	RED	N/A	N/A
	45	WHITE	SIGNAL		WHITE		
SMOKE DETECTOR/FIRE	80	GREEN	SIGNAL	BY OTHERS			
	81	WHITE	+24				
	82	RED	+24				
	83	BLACK	DC GRND				
SUPPLY DUCT PRESSURE	84	GREEN	SUPPLY DP SIGNAL 0-10V	18/4	GREEN	28	48
	85	WHITE	+24		WHITE		
	86	RED	+24		RED		
	87	BLACK	DC GRND		BLACK		
*OUTSIDE AIR DAMPER	SEE FIELD WIRING PACKET		DRIVE SIGNAL 0-10V	18/6	GREEN	29	53
			DC GRND		WHITE		
			+24		BROWN		
			+24		RED		
			DC GRND		BLACK		

NOTE:

*MAU OUTSIDE AIR DAMPER WIRING FOR EXTERNAL CONTROL
DIRECT WIRE TO PLC ANALOG OUTPUT 1 TERMINAL 2.3. SEE FIELD
WIRING PACKET FOR ADDITIONAL DETAILS.



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Project Engineer:	ROB DECOSTA
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Approved By:	JAMIE HADERLIE
Origination Date:	03/27/25

[illegible]

SHEET NAME

HVAC CONTROLS PANEL WIRING SYSTEM #4

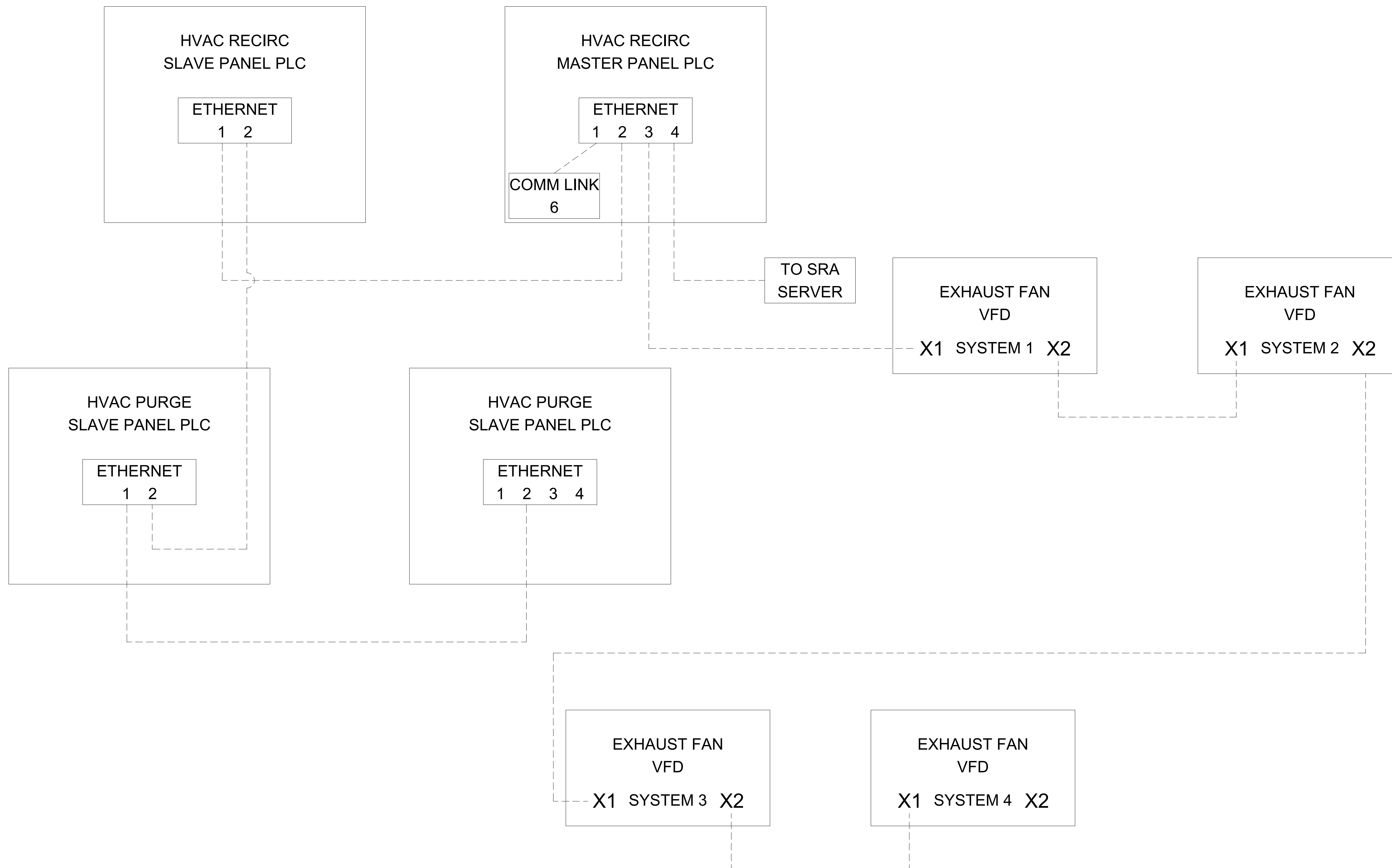
-DRAWING NUMBER

13462

SHEET NUMBER

ZM705.4

SCALED FOR ORIGINAL DRAWING AT 22" X 34"



NOTE:

- ALL WIRING CAT5E OR GREATER. TERMINATE w/RJ45 PLUGS. TEST FOR CONTINUITY AND BAND WIDTH.
- ALL COMMUNICATION CABLE IS CAT5E OR GREATER, 4 PAIR UTP, 24 AWG, CMR OR PLENUM RATED, SUNLIGHT RESISTANT, OR EQUIVALENT



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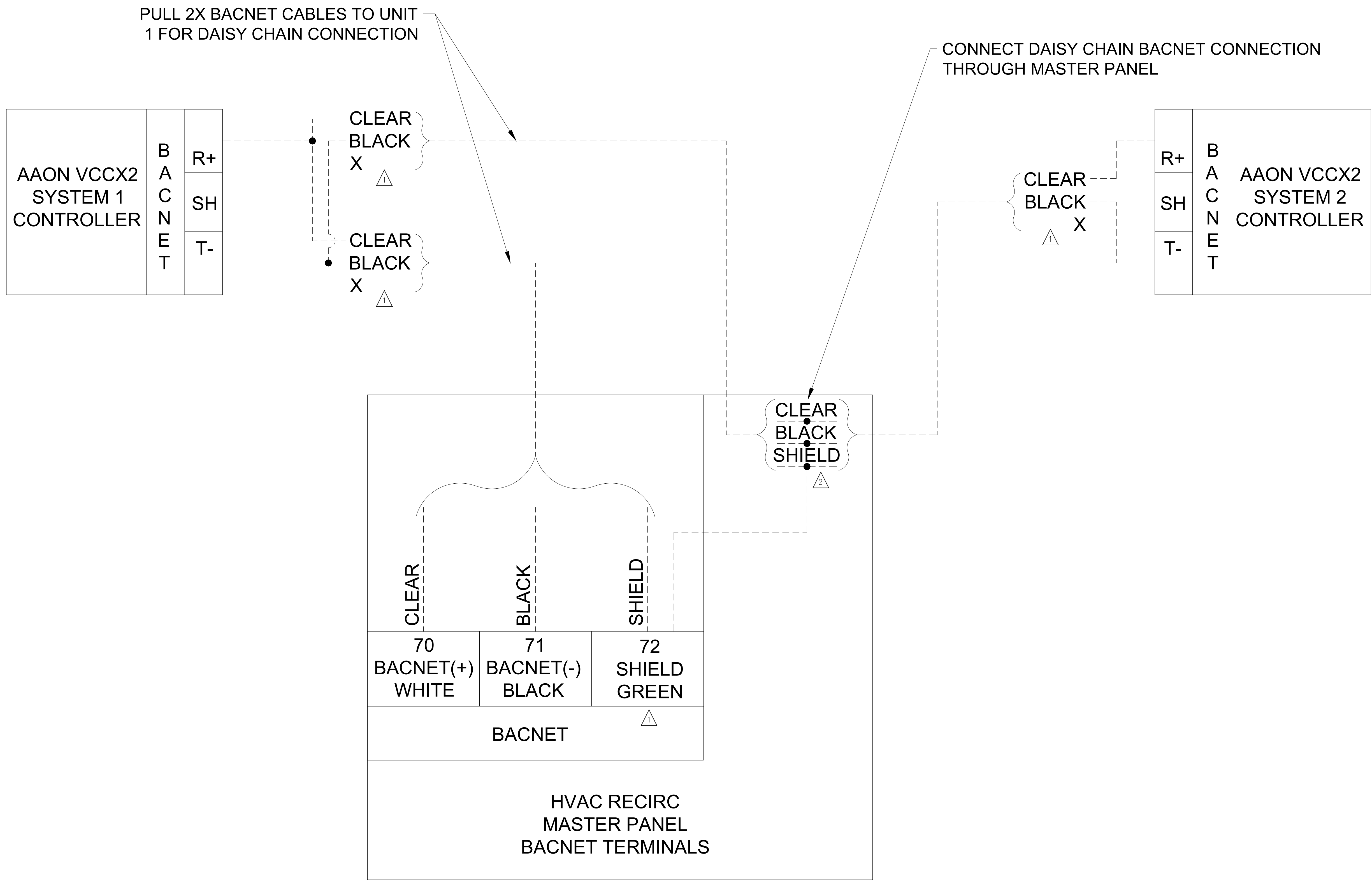
HVAC RECIRC & PURGE NETWORK DIAGRAM ETHERNET

DRAWING NUMBER

13462

— SHEET NUMBER

ZM707.1



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[illegible]

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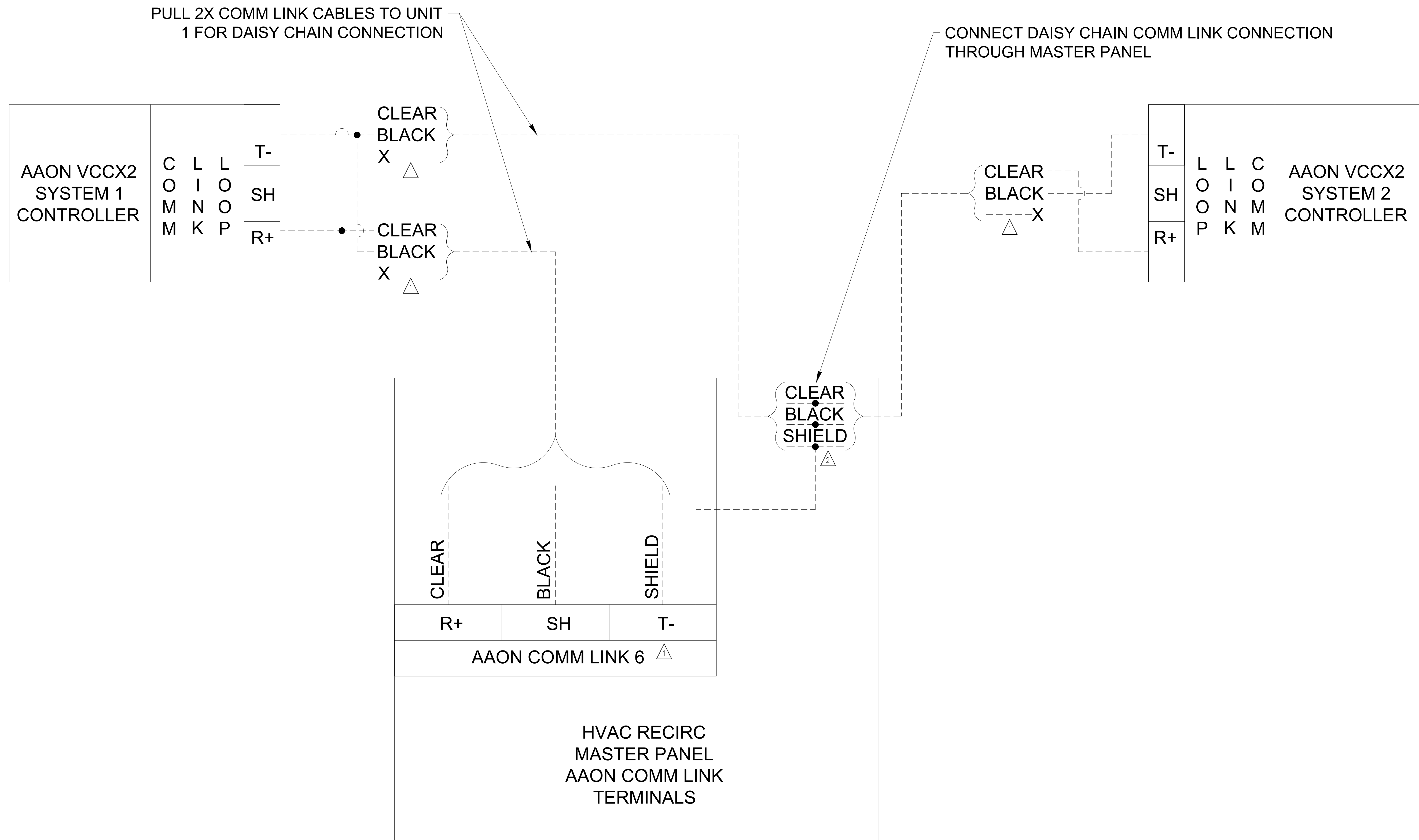
HVAC RECIRC NETWORK DIAGRAM BACNET

DRAWING NUMBER—

13462

SHEET NUMBER

ZM707.2



NOTE:

- ALL 2 CONDUCTOR CABLE IS BELDEN 82760, 18 AWG, TWISTED PAIR, PLENUM RATED
- COMM LINK CONNECTIONS ARE DAISY CHAINED
- TERMINATE LOOP START/END WITH 120 Ω RESISTORS

▲ SHIELD WIRES ONLY CONNECTED ON ONE SIDE

▲ DAISY CHAIN COMM LINK CONNECTION THROUGH MASTER PANEL



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[illegible]

SHEET NAME

HVAC RECIRC NETWORK DIAGRAM AAON COMM LINK

-DRAWING NUMBER

13462

SHEET NUMBER

ZM707.3