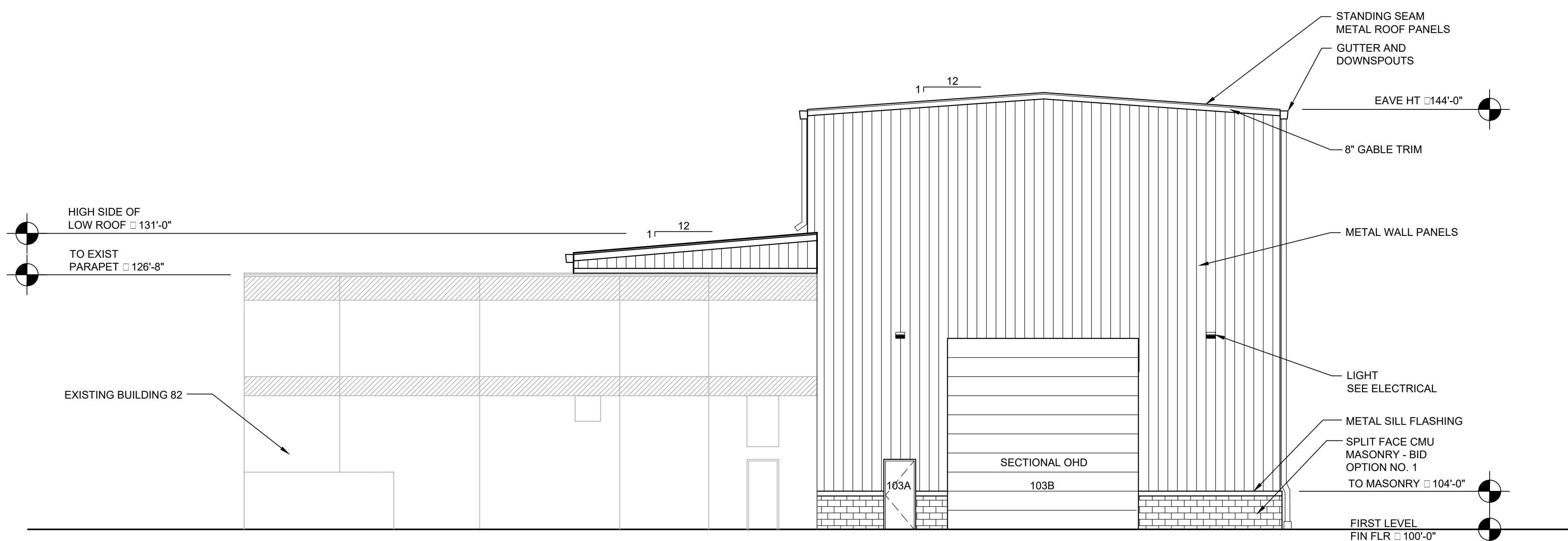
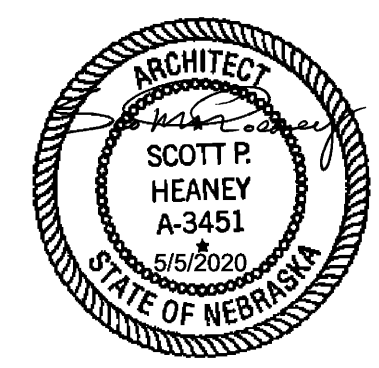


1 NORTH ELEVATION
00A-202 1/8" = 1'-0"



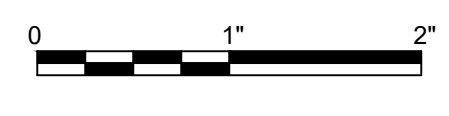
2 WEST ELEVATION
00A-202 1/8" = 1'-0"

PROJECT MANAGER	TOM SVOBODA
CIVIL	B. WECKERLIN
STRUCTURAL	J. LENZ
ARCHITECT	S. HEANEY
MECHANICAL	J. LEWIS
ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



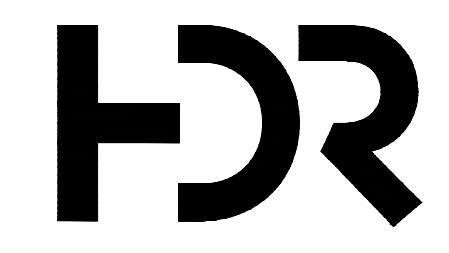
HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003

**SIMULATOR BUILDING
EXTERIOR ELEVATIONS**

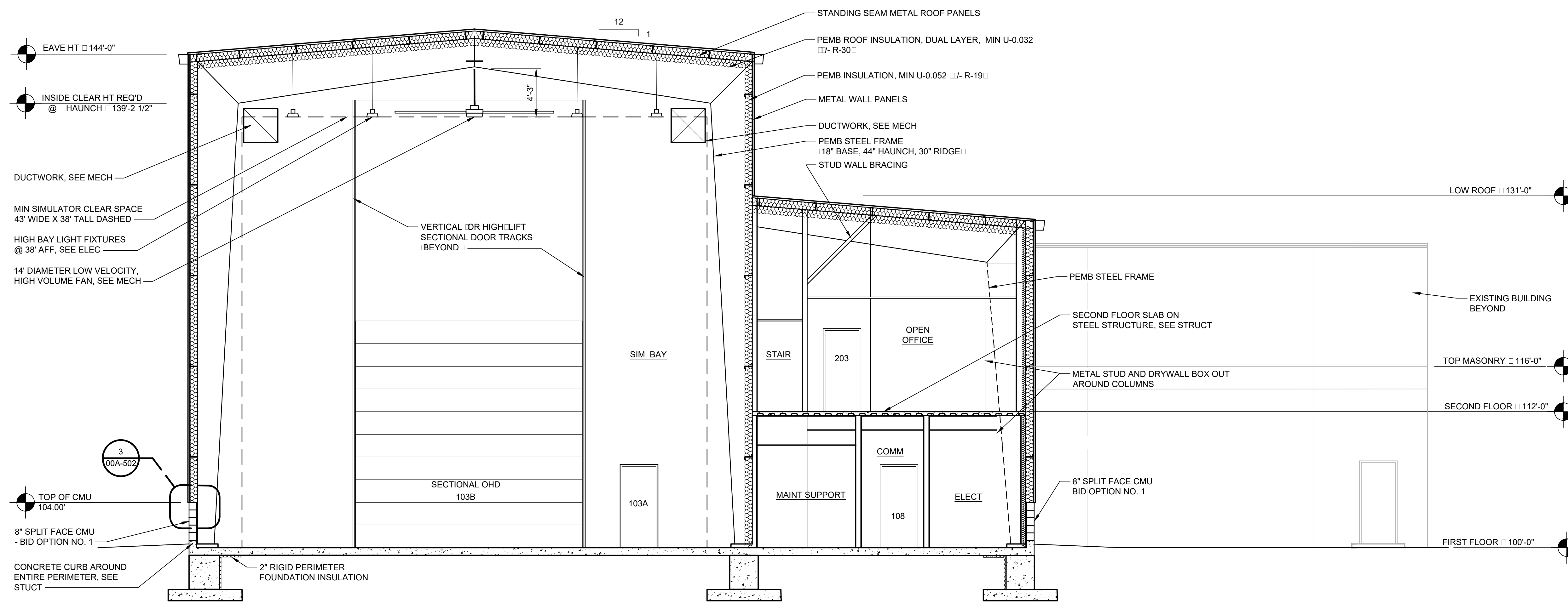


FILENAME 00A-202.DWG
SCALE 1/8" = 1'-0"

SHEET
00A-202



ISSUE	DATE	DESCRIPTION
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EAVE HT □ 144'-0"
 INSIDE CLEAR HT REQ'D
 @ HAUNCH □ 139'-2 1/2"

DUCTWORK, SEE MECH
 MIN SIMULATOR CLEAR SPACE
 43' WIDE X 38' TALL DASHED
 HIGH BAY LIGHT FIXTURES
 @ 38' AFF, SEE ELEC
 14' DIAMETER LOW VELOCITY,
 HIGH VOLUME FAN, SEE MECH

3
 00A-502
 TOP OF CMU
 104.00'
 8" SPLIT FACE CMU
 - BID OPTION NO. 1
 CONCRETE CURB AROUND
 ENTIRE PERIMETER, SEE
 STUCT

STANDING SEAM METAL ROOF PANELS
 PEMB ROOF INSULATION, DUAL LAYER, MIN U-0.032
 □ 7'-R-30 □
 PEMB INSULATION, MIN U-0.052 □ 7'-R-19 □
 METAL WALL PANELS
 DUCTWORK, SEE MECH
 PEMB STEEL FRAME
 □ 18" BASE, 44" HAUNCH, 30" RIDGE □
 STUD WALL BRACING

LOW ROOF □ 131'-0"

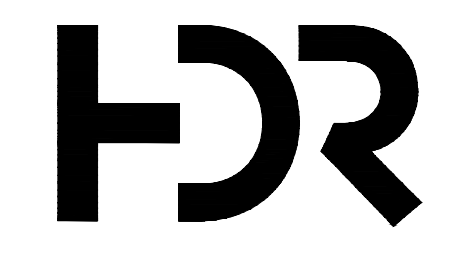
EXISTING BUILDING
 BEYOND

TOP MASONRY □ 116'-0"

SECOND FLOOR □ 112'-0"

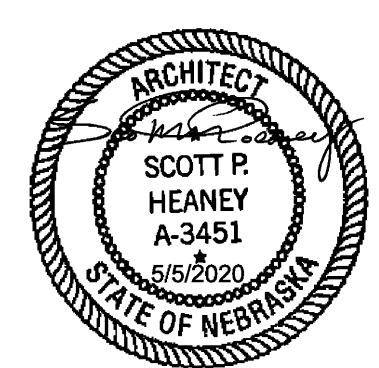
FIRST FLOOR □ 100'-0"

1 BUILDING SECTION
 00A-301 3/16" □ 1'-0"

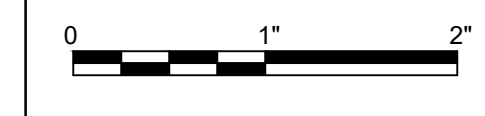


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ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



HARRISBURG ANGB, PA
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 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003

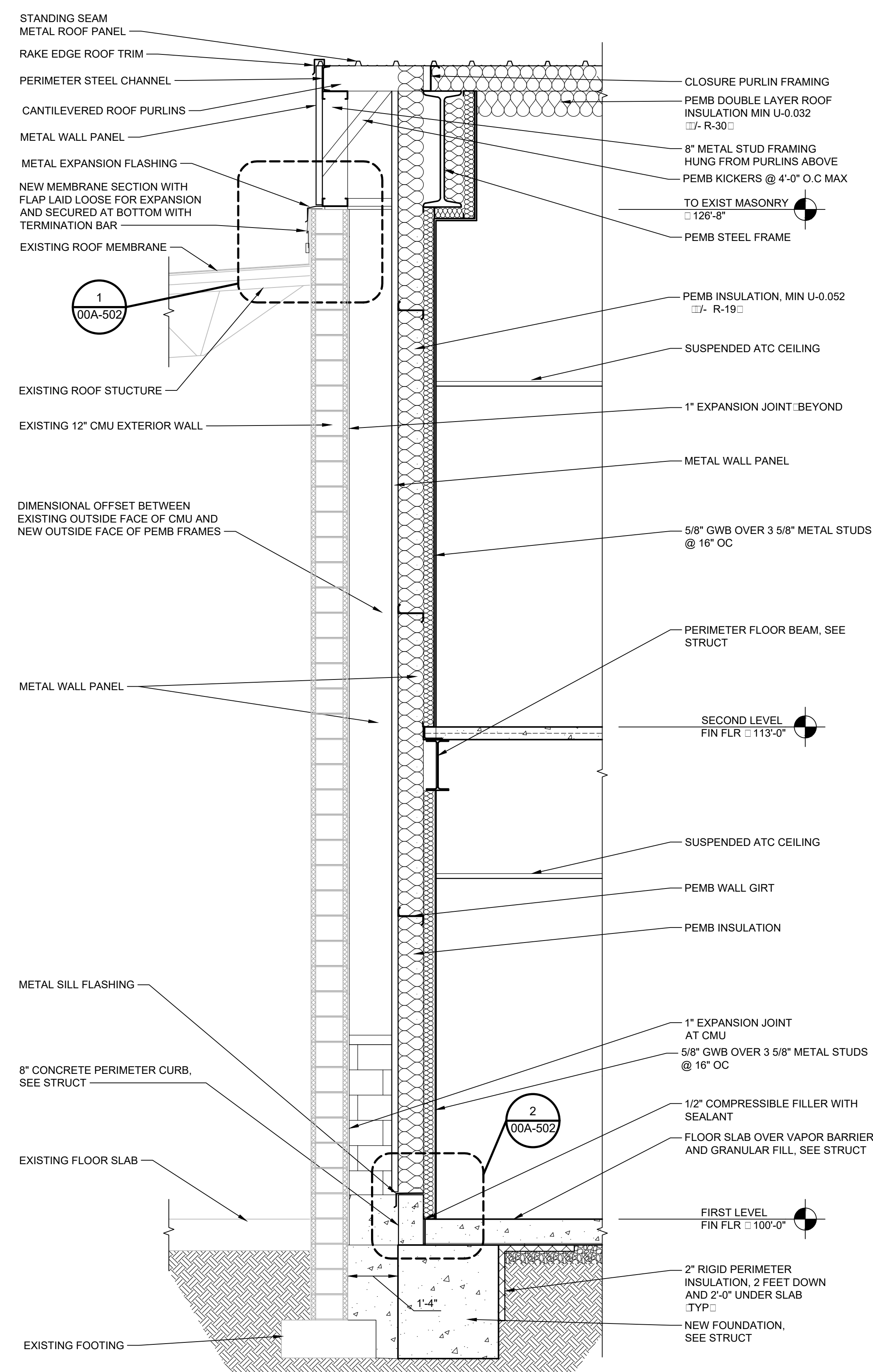


**SIMULATOR BUILDING
 BUILDING SECTIONS**

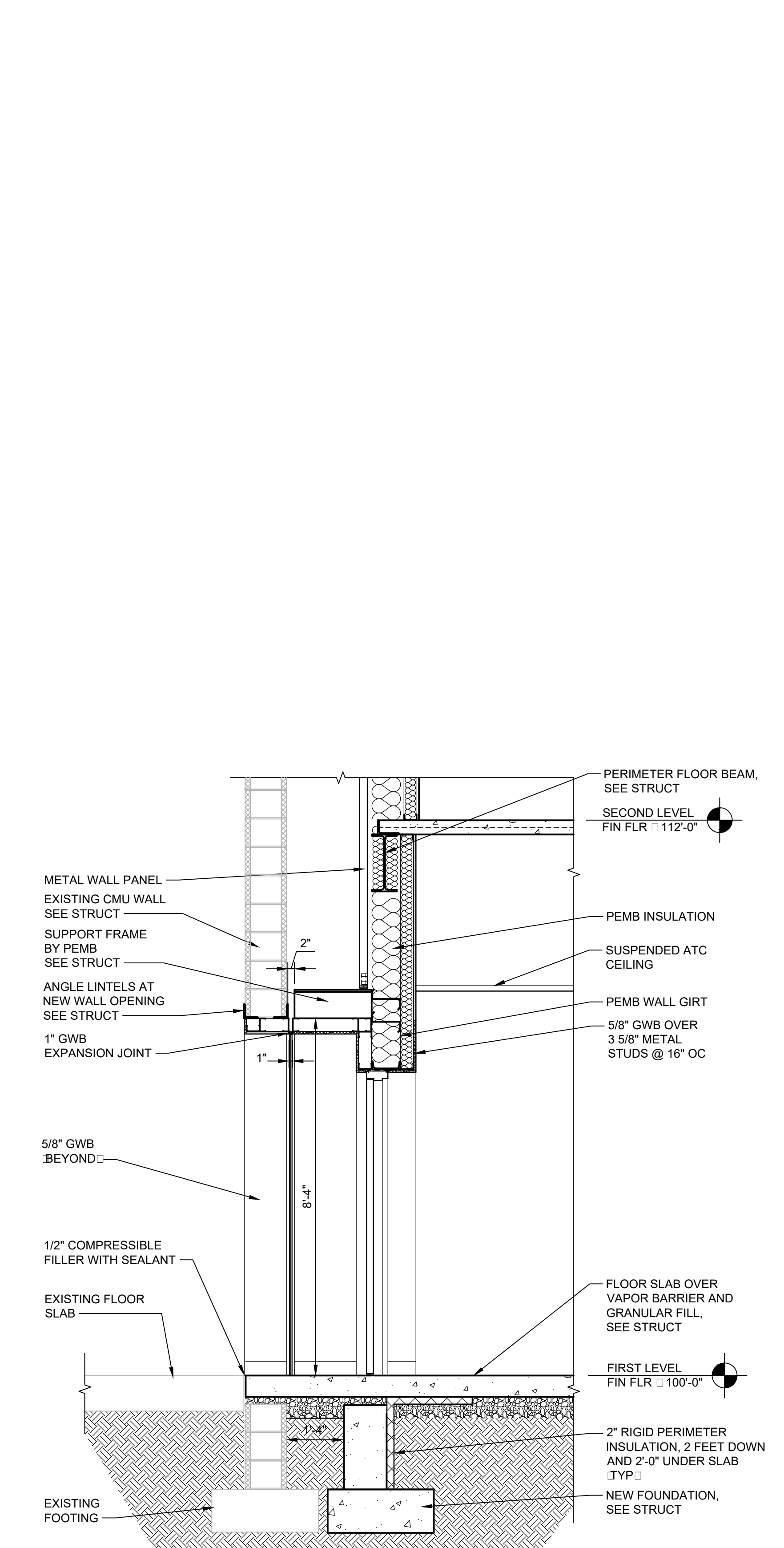
FILENAME 00A-301.DWG
 SCALE 3/16" □ 1'-0"

SHEET
00A-301

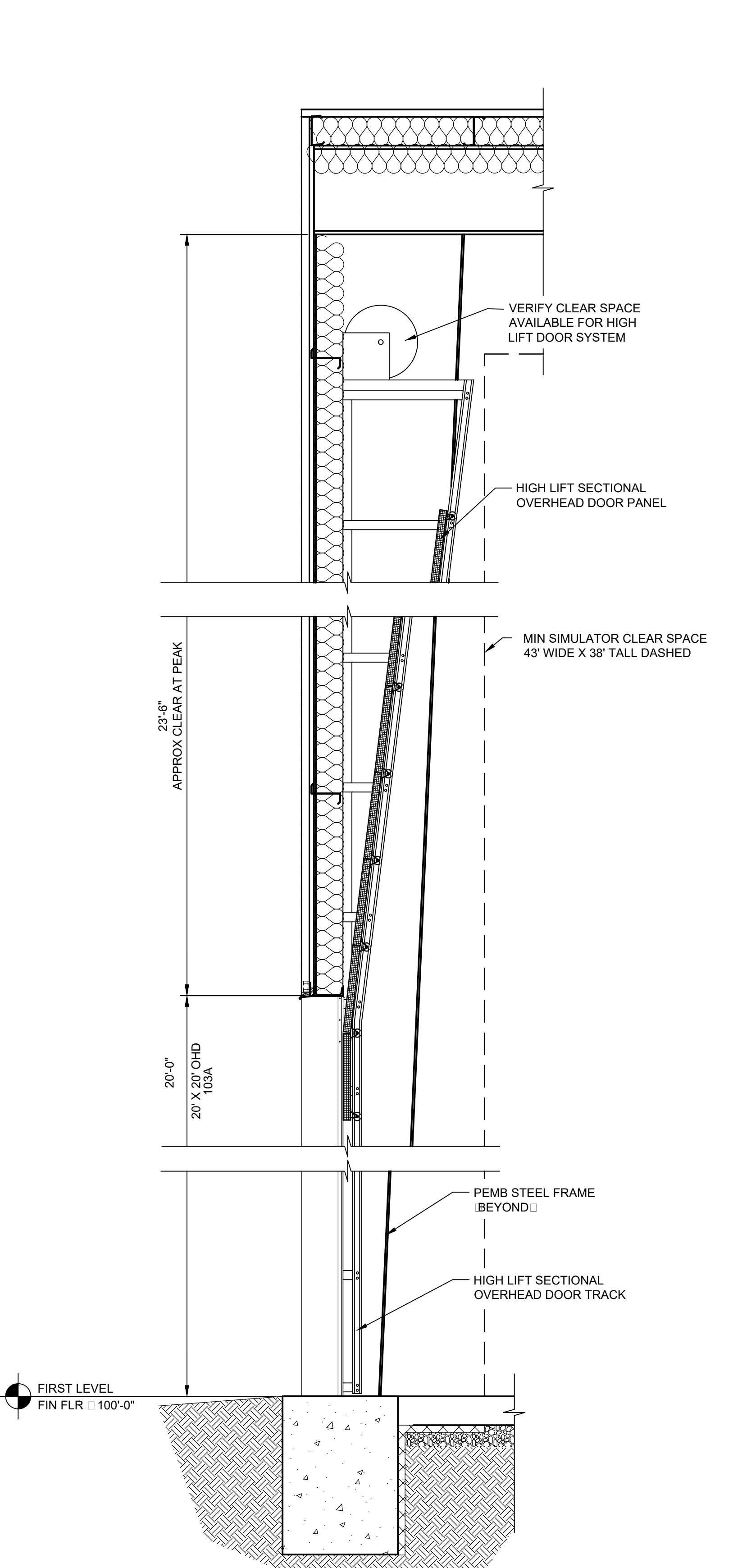
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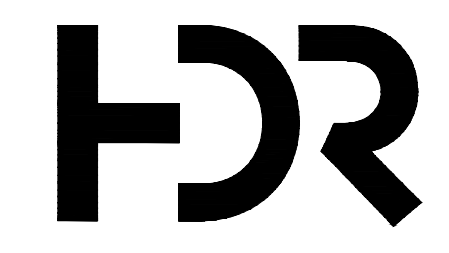
1 WALL SECTION
00A-302 1/2" x 1'-0"



2 WALL SECTION
00A-302 1/2" x 1'-0"

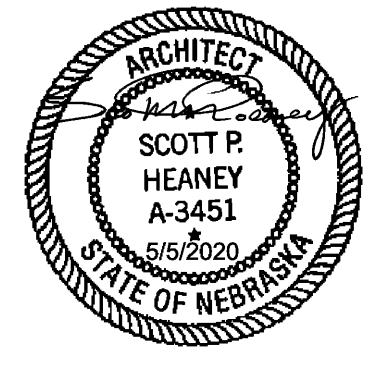


3 WALL SECTION
00A-302 1/2" x 1'-0"

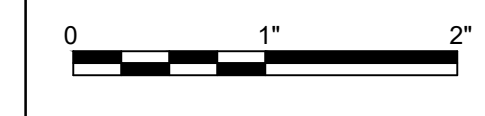


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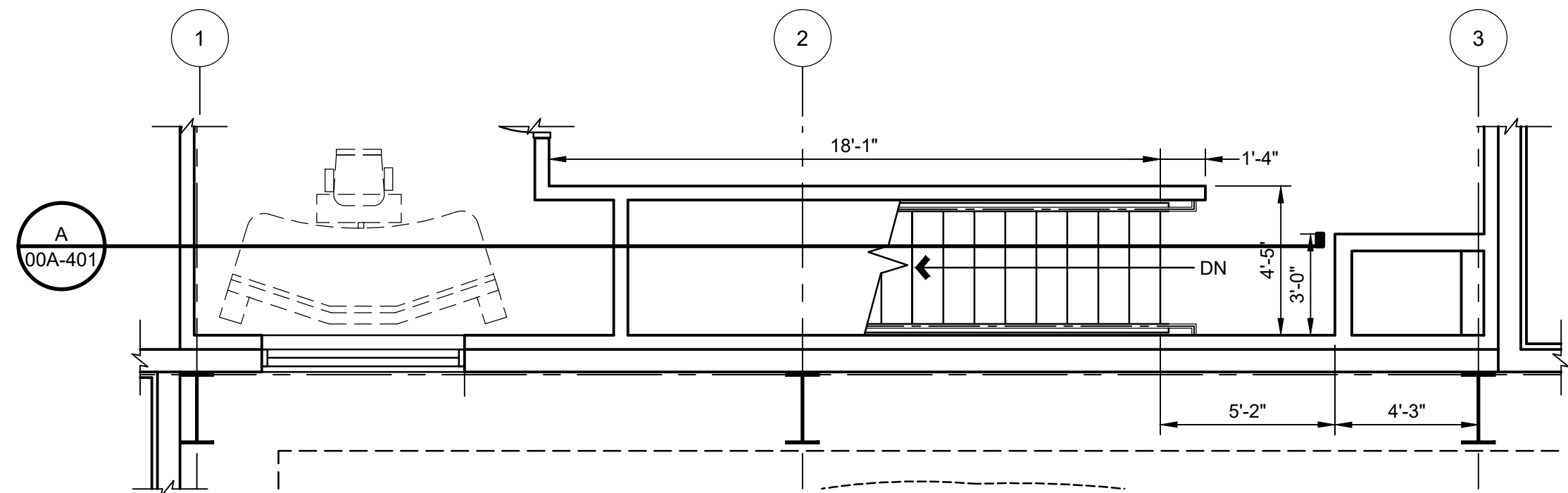
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PROJECT NO.: SHYQ192003



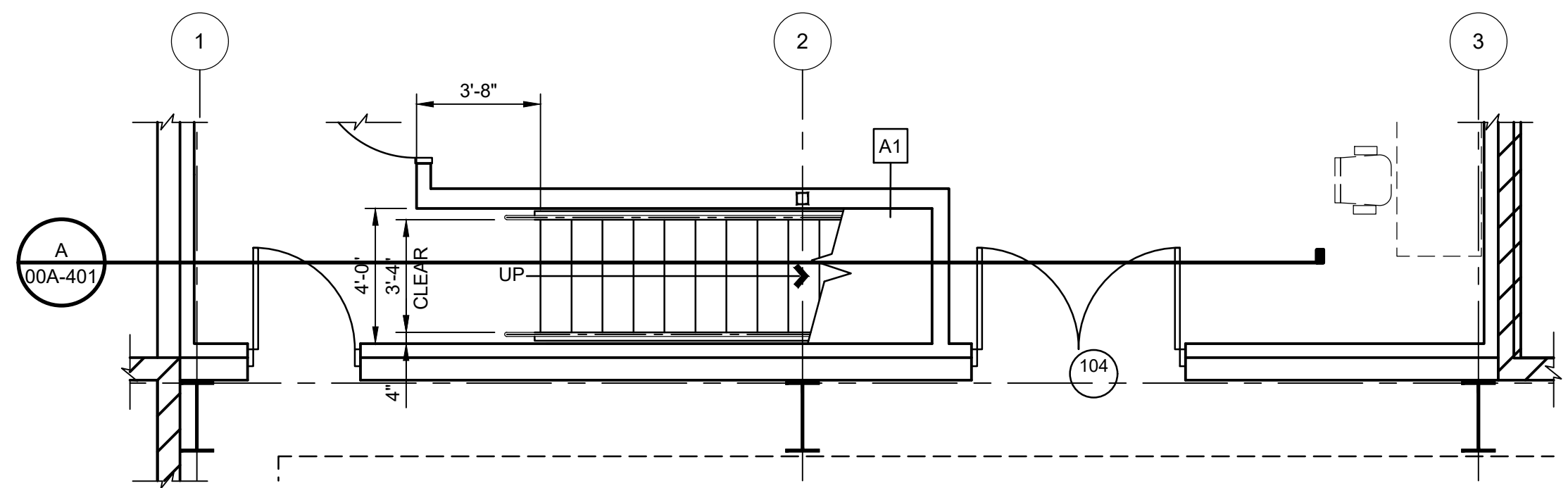
**SIMULATOR BUILDING
WALL SECTIONS**

FILENAME 00A-302.DWG
SCALE AS NOTED

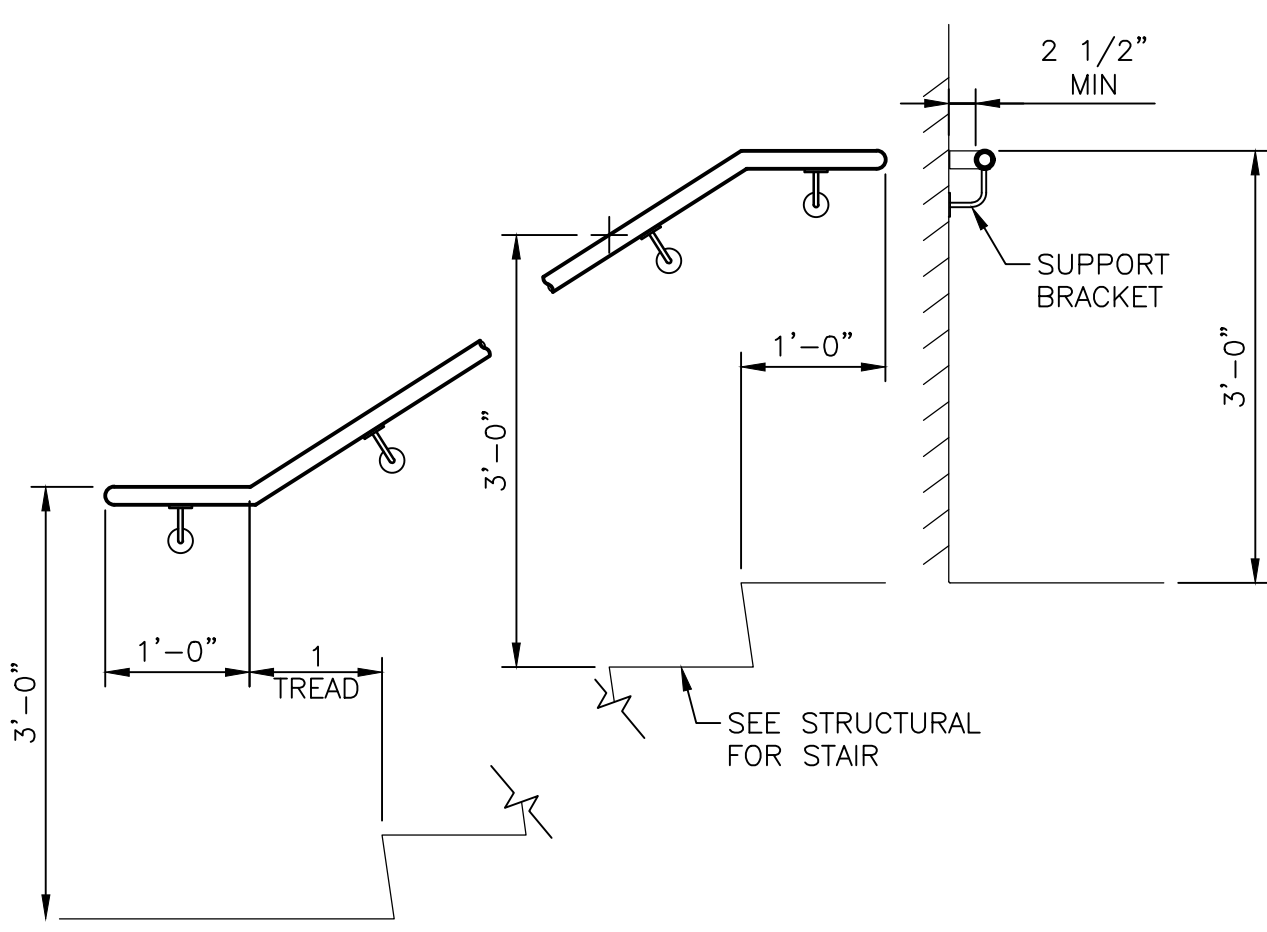
SHEET
00A-302



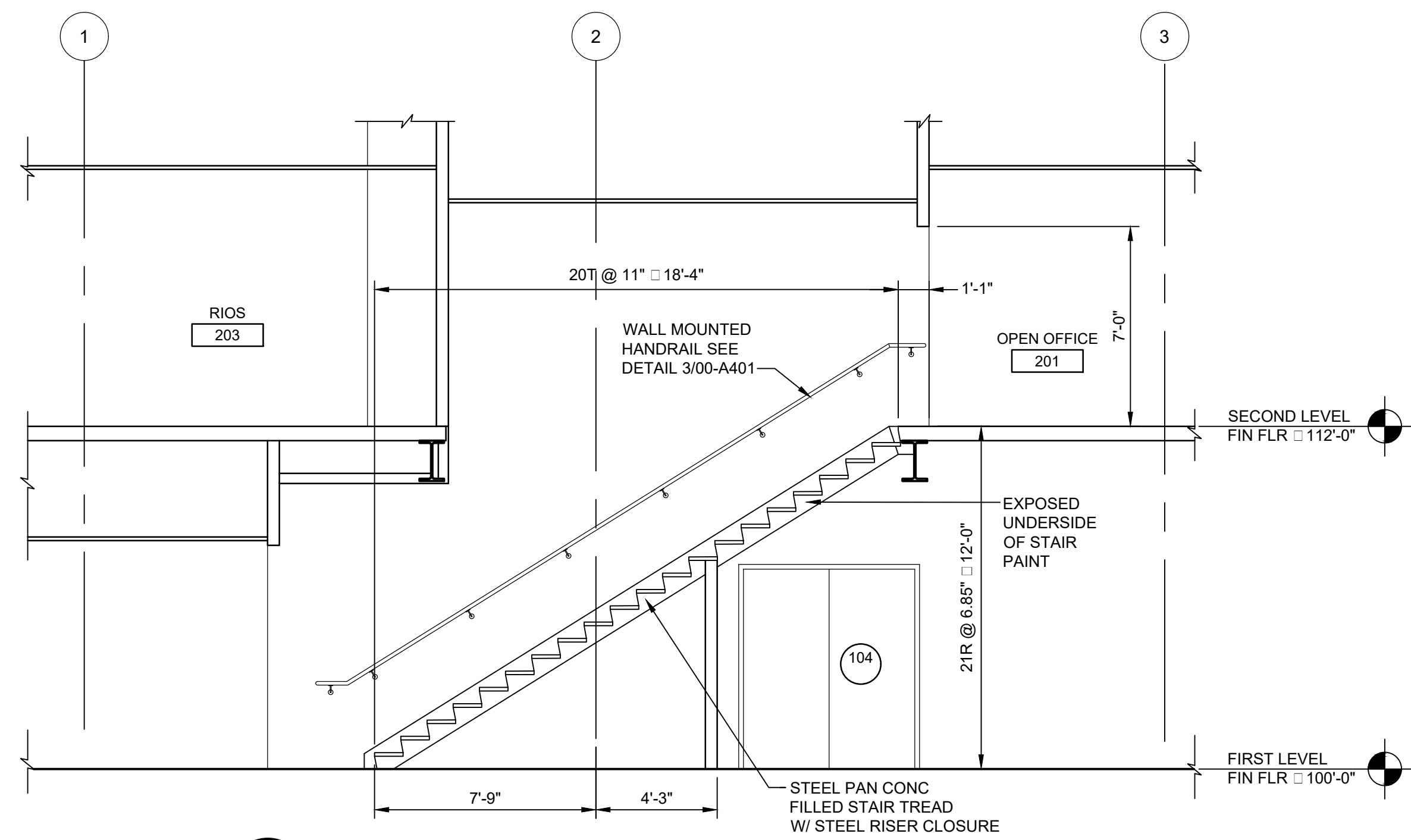
1 ENLARGED STAIR PLAN @ SECOND FLOOR
00A-401 1/4" □ 1'-0"



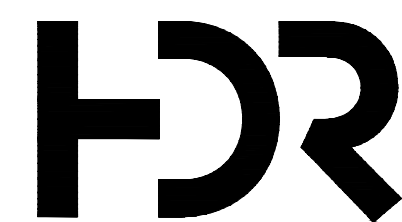
2 ENLARGED STAIR PLAN @ FIRST FLOOR
00A-401 1/4" □ 1'-0"



3 WALL MOUNTED HANDRAIL DETAIL
00A-401 3/4" □ 1'-0"

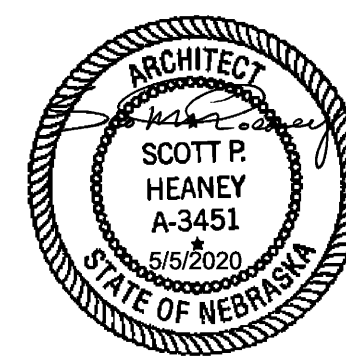


A STAIR SECTION
00A-401 1/4" □ 1'-0"



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JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003

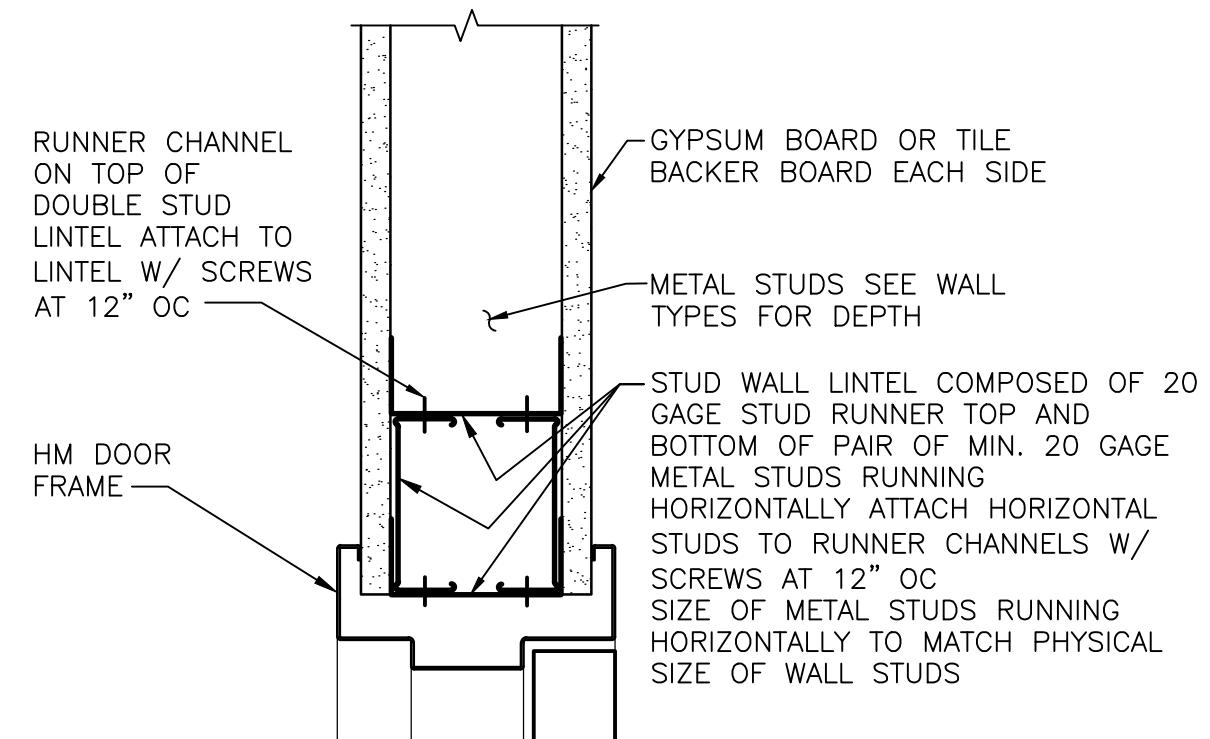


FILENAME 00A-401.DWG
SCALE AS NOTED

SHEET
00A-401

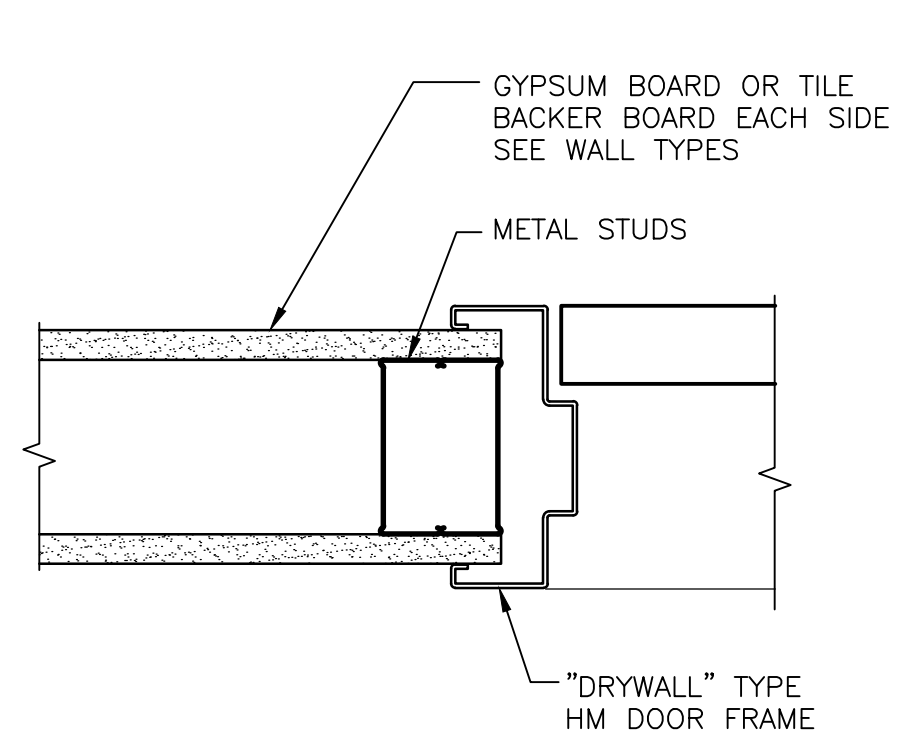
D
C
B
A

C:\powering\harriso\10173455\00A-401.dwg, Pkg: 5/4/2020 10:54:49 AM, DANKEN



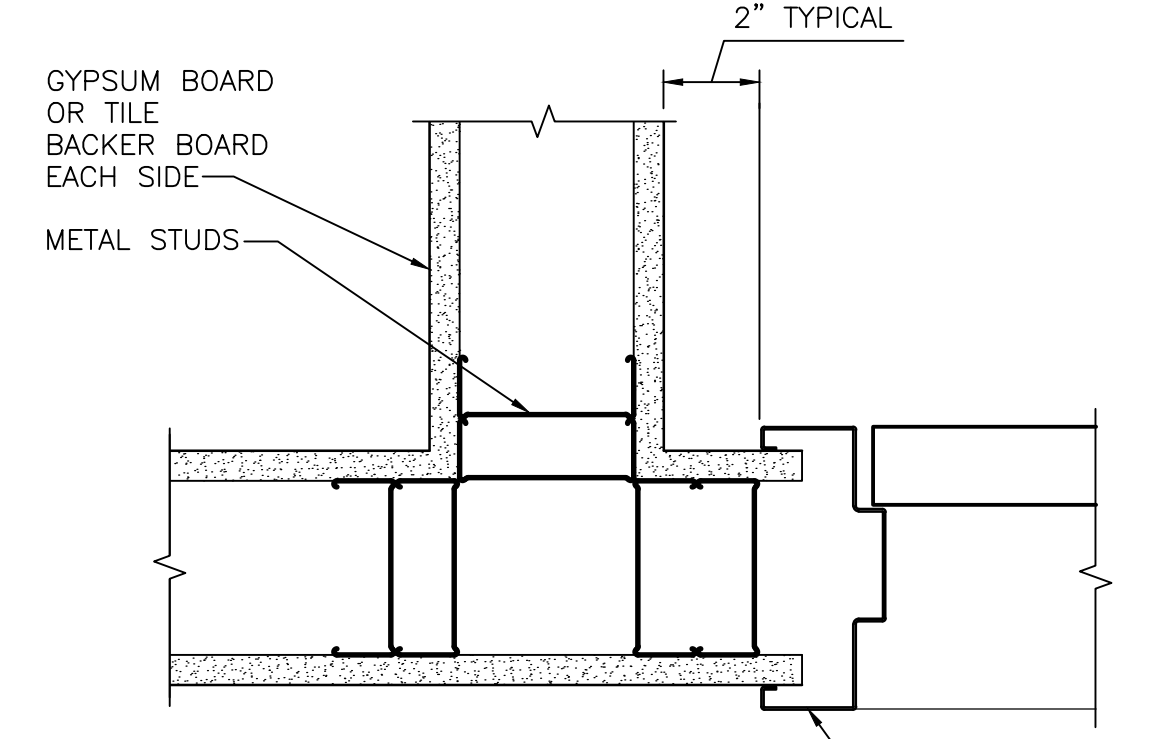
NOTE:
1. INSULATION NOT SHOWN. SEE WALL TYPES.

1 TYPICAL DOOR HEAD DETAIL IN METAL FRAME WALL
3"=1'-0"



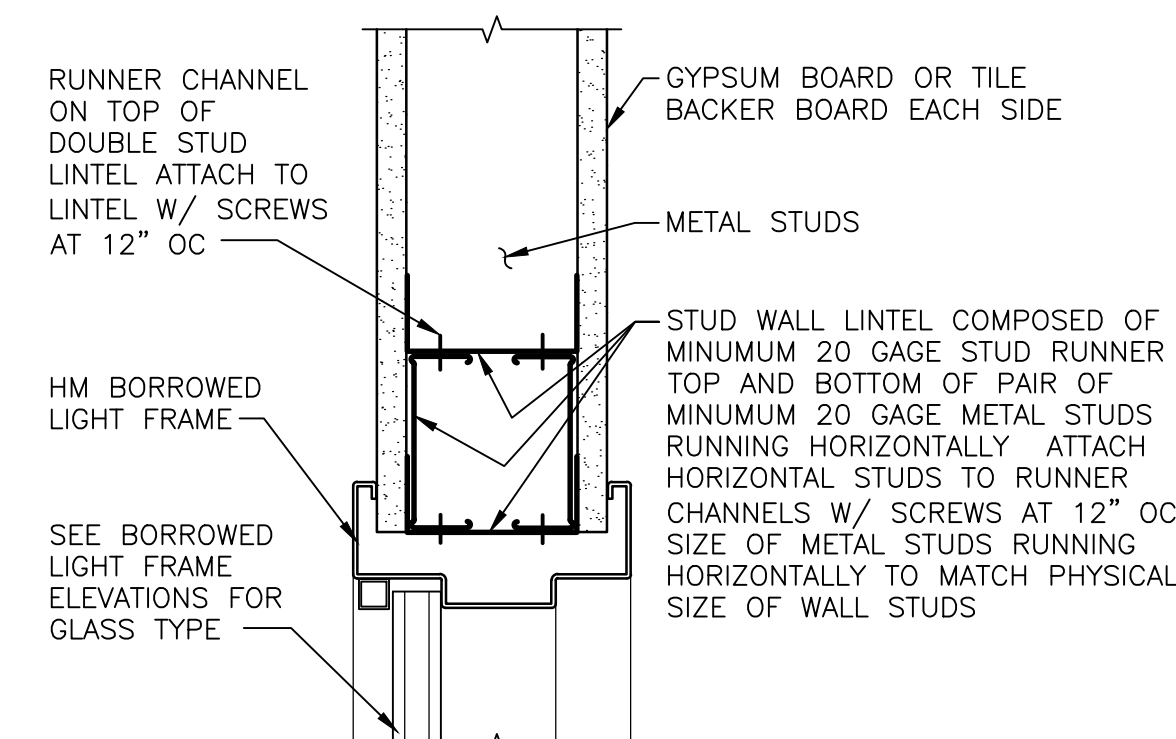
NOTE:
1. INSULATION NOT SHOWN. SEE WALL TYPES.

2 TYPICAL HM DOOR JAMB IN METAL STUD WALL DETAIL
3"=1'-0"



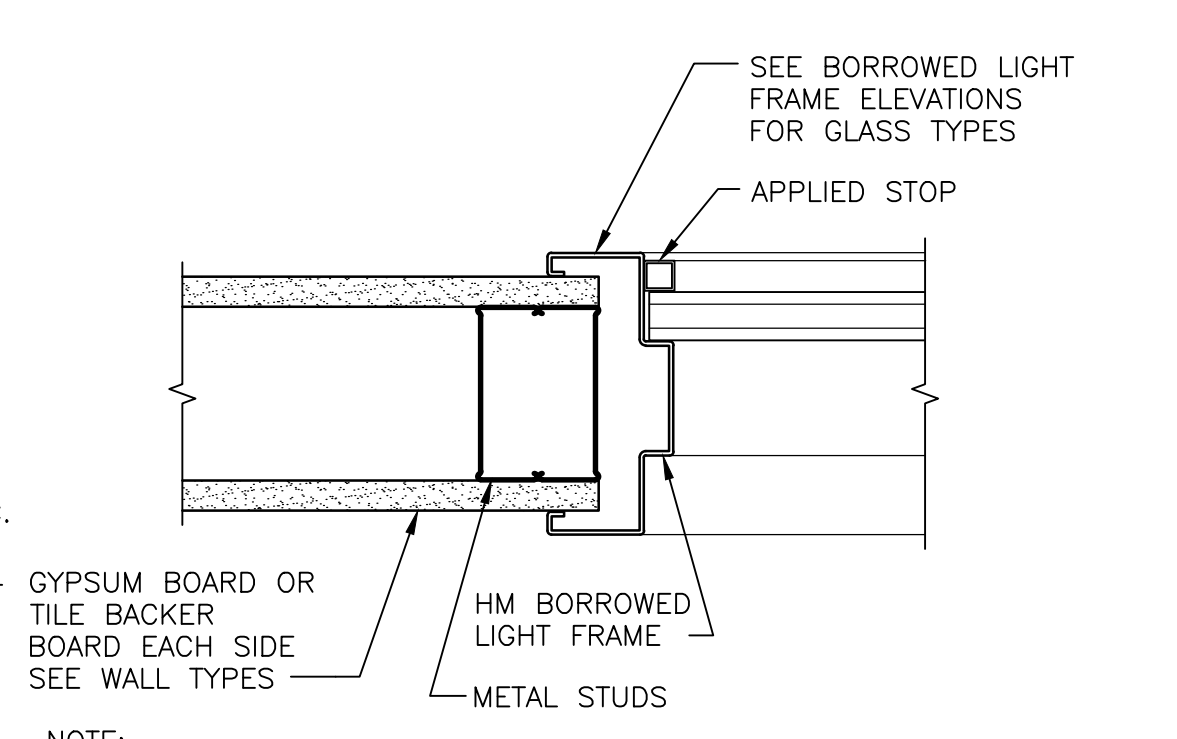
NOTE:
1. INSULATION NOT SHOWN. SEE WALL TYPES.

3 TYPICAL HM DOOR JAMB IN STUD WALL INTERSECTION
3"=1'-0"



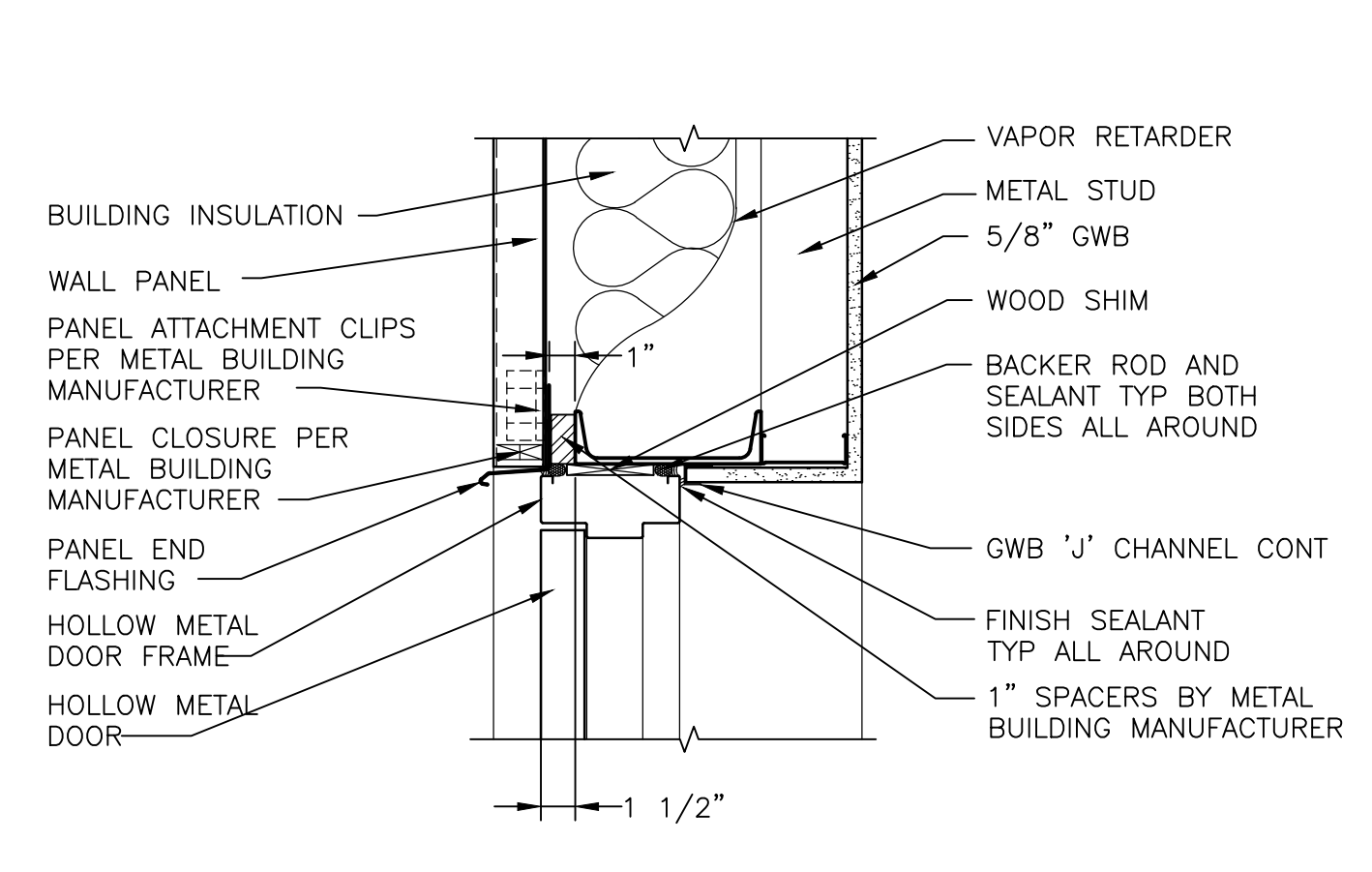
NOTE:
1. INSULATION NOT SHOWN. SEE WALL TYPES.

4 TYPICAL HM WINDOW HEAD IN METAL STUD WALL DETAIL
3"=1'-0"

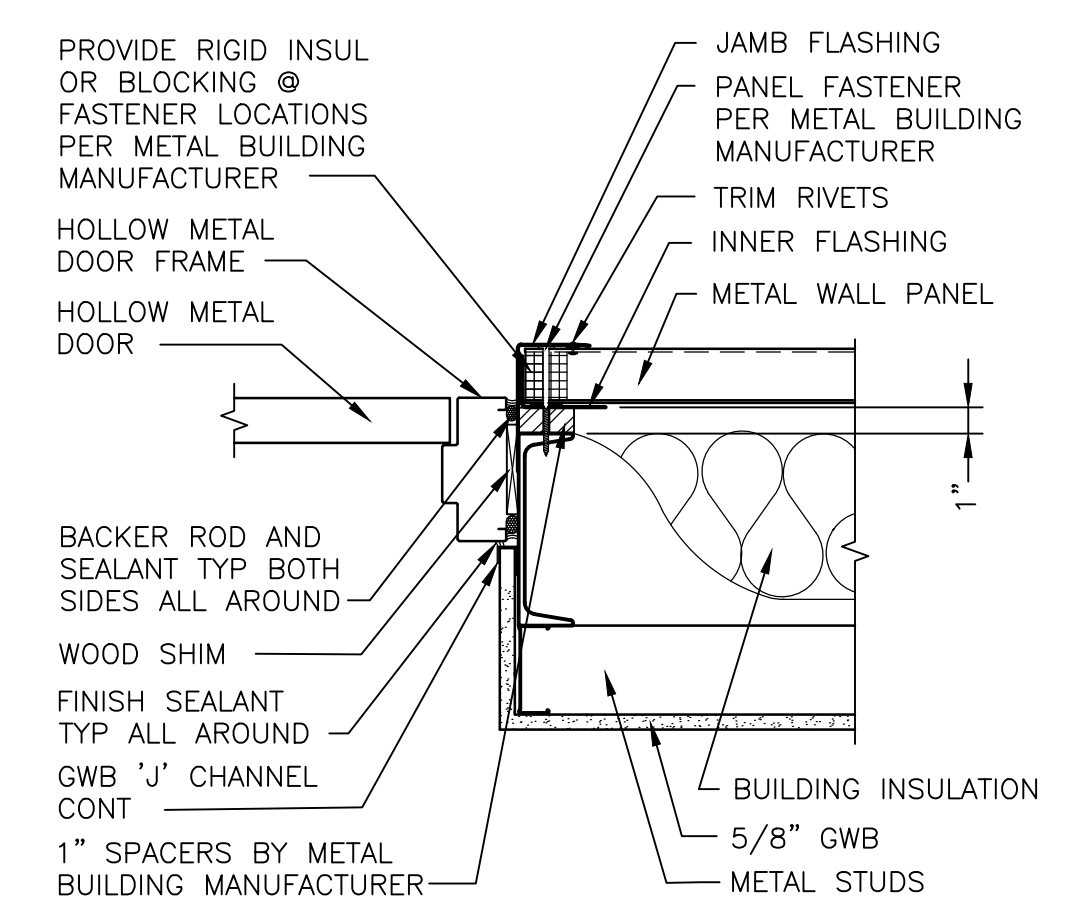


NOTE:
1. INSULATION NOT SHOWN. SEE WALL TYPES.
2. SILL DETAIL SIMILAR.

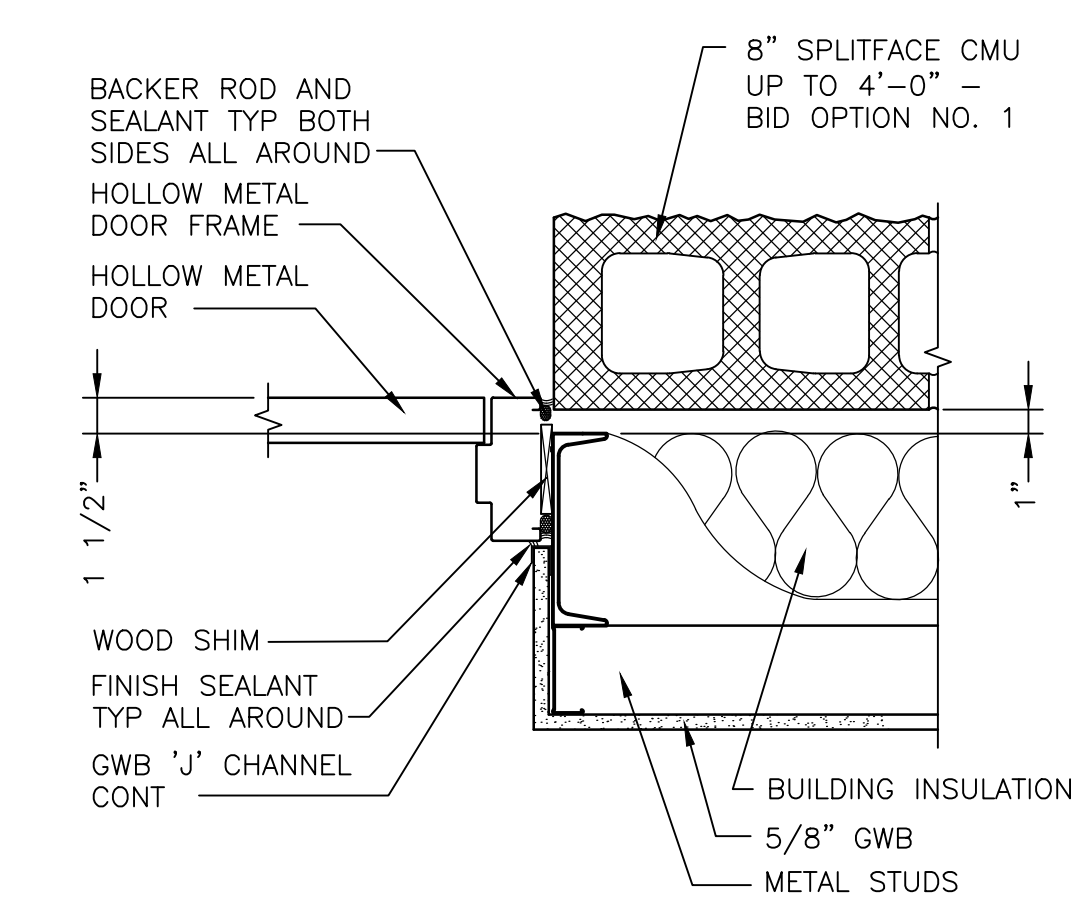
5 TYPICAL HM WINDOW JAMB IN METAL STUD WALL DETAIL
3"=1'-0"



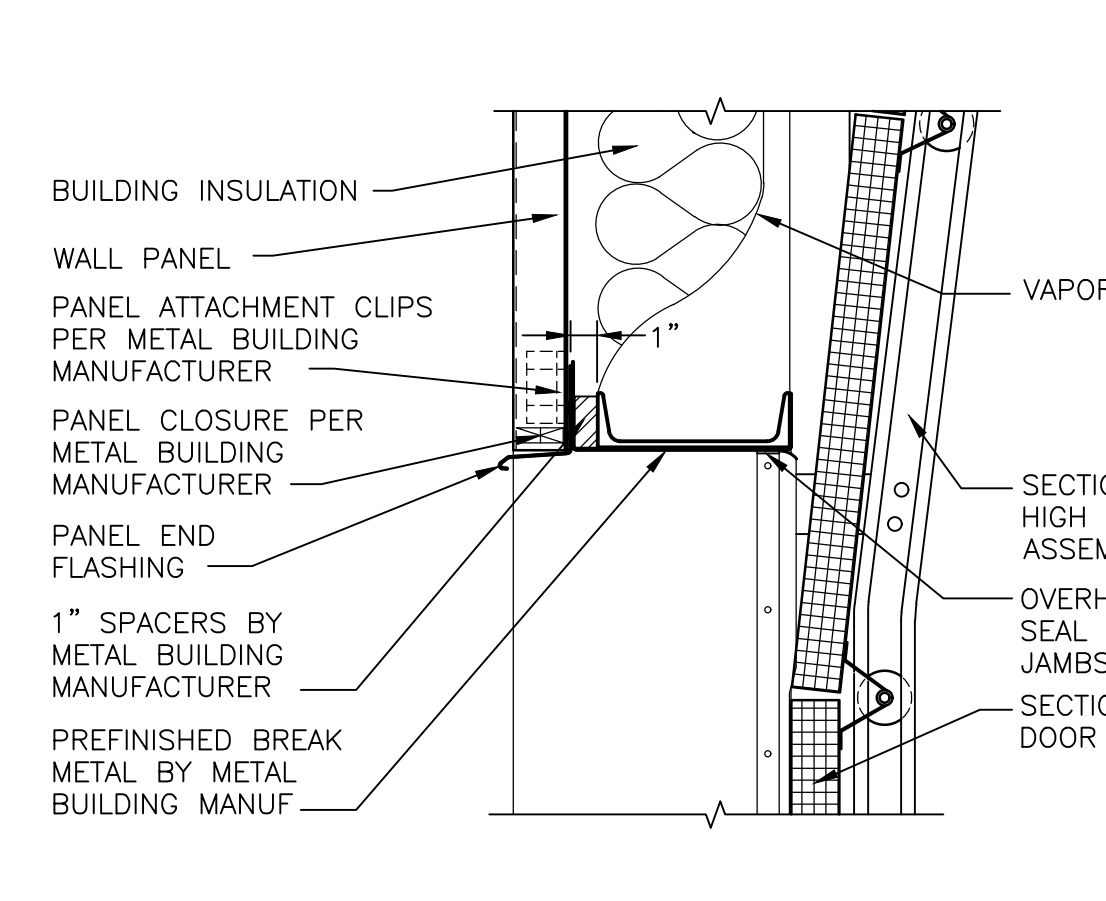
6 H.M. DOOR HEAD DETAIL
1 1/2"=1'-0"



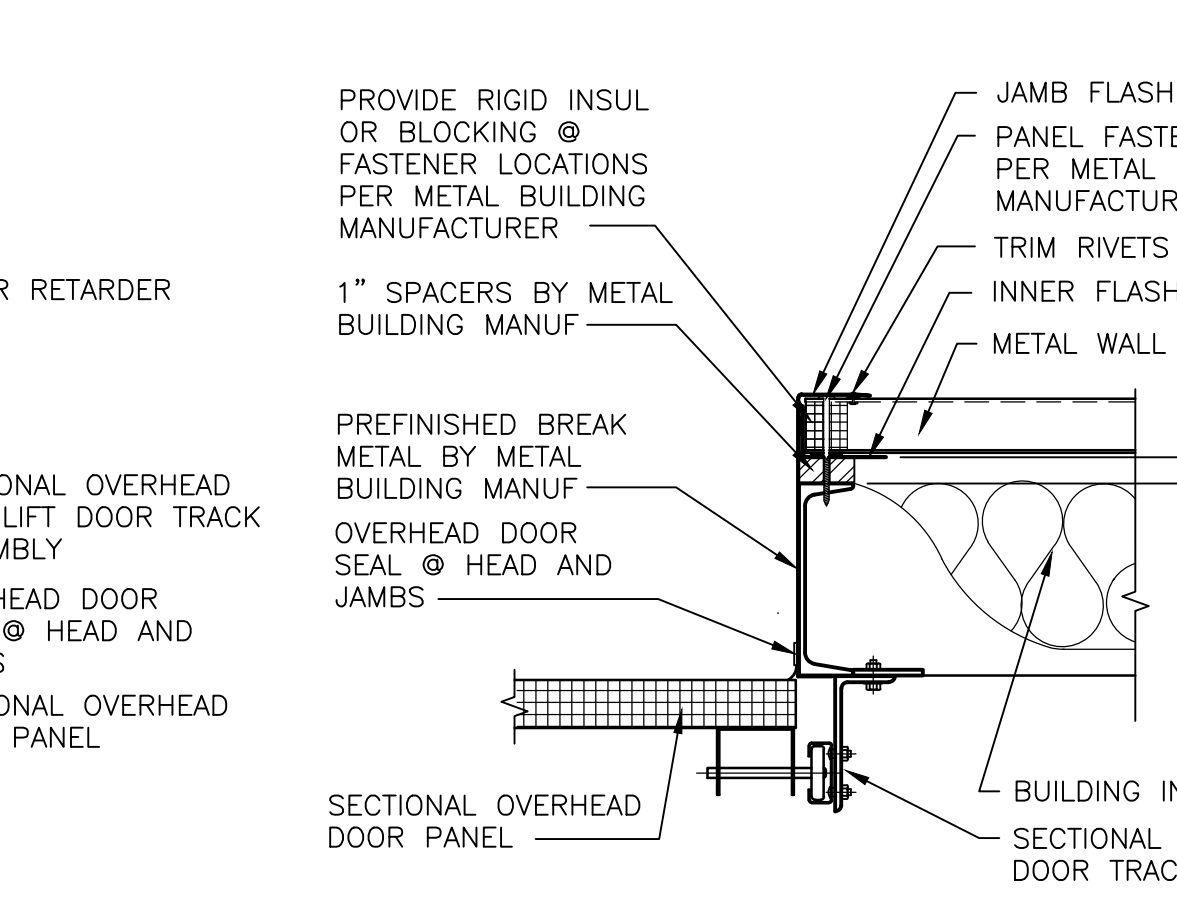
7 H.M. DOOR JAMB DETAIL
1 1/2"=1'-0"



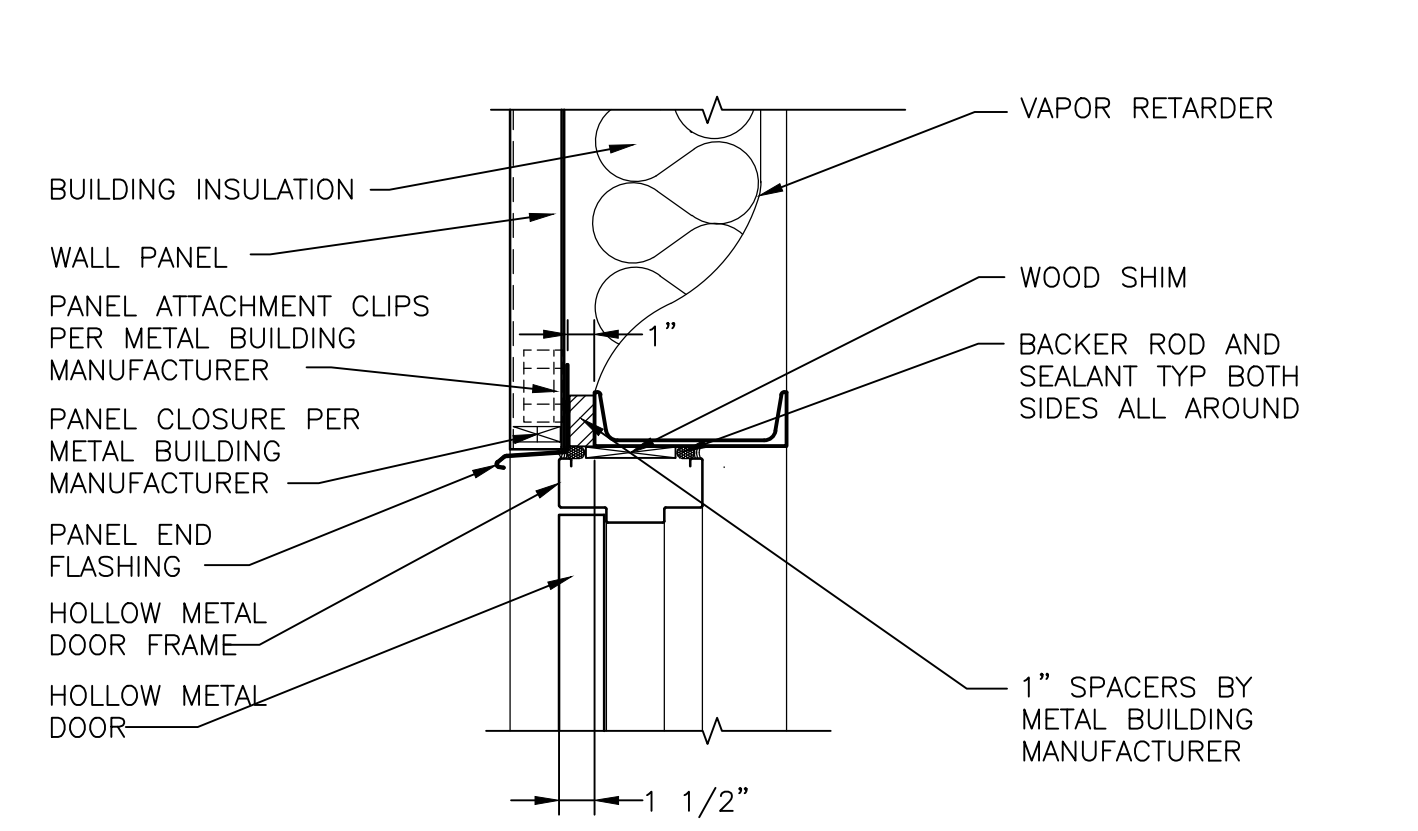
8 H.M. DOOR JAMB DETAIL
1 1/2"=1'-0"



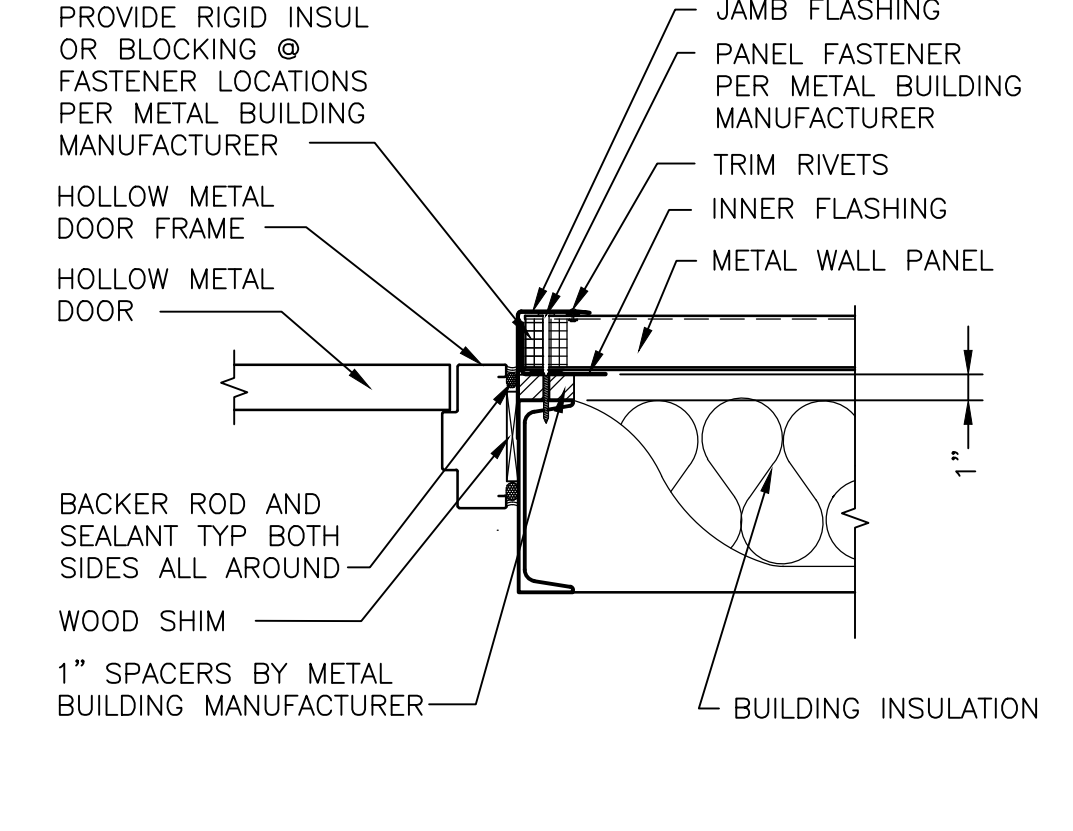
9 O.H. SECTIONAL DOOR HEAD DETAIL
1 1/2"=1'-0"



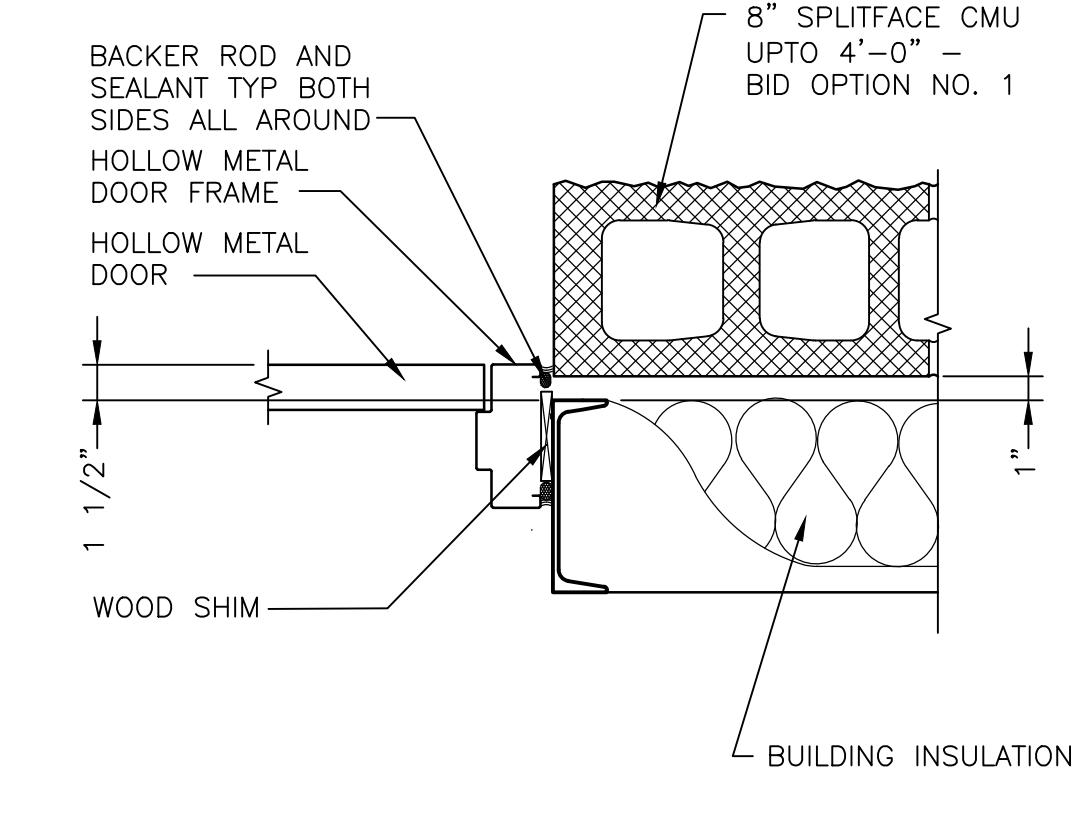
10 O.H. SECTIONAL DOOR JAMB DETAIL
1 1/2"=1'-0"



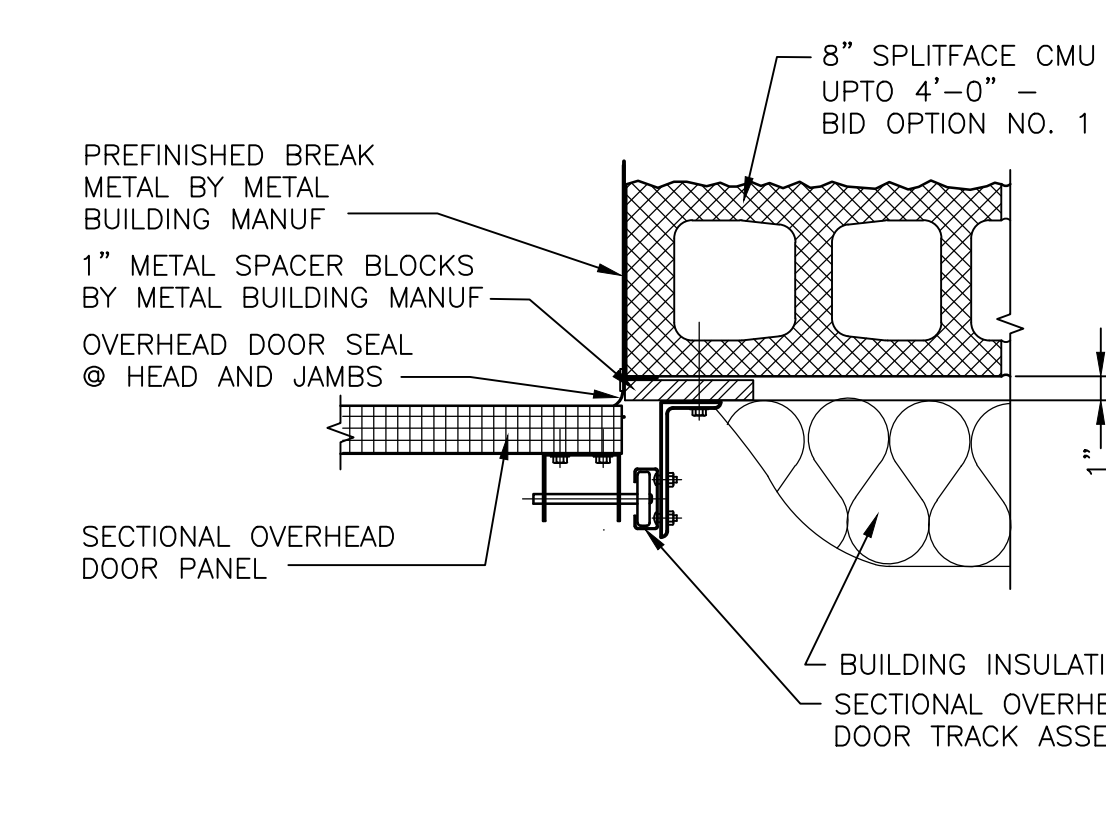
11 H.M. DOOR HEAD DETAIL
1 1/2"=1'-0"



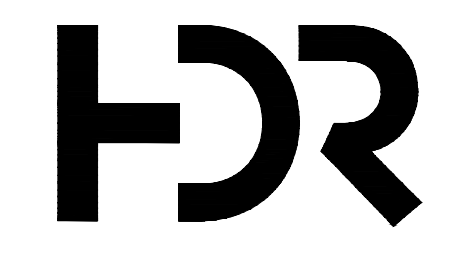
12 H.M. DOOR JAMB DETAIL
1 1/2"=1'-0"



13 H.M. DOOR JAMB DETAIL
1 1/2"=1'-0"

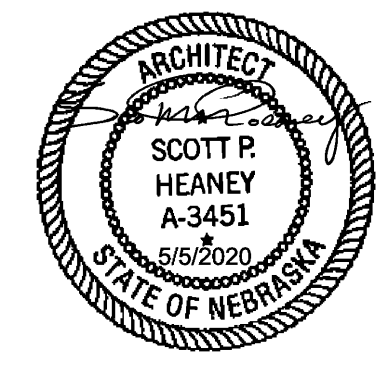


14 O.H. SECTIONAL DOOR JAMB DETAIL
1 1/2"=1'-0"

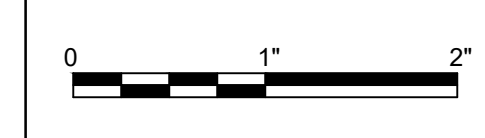


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FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



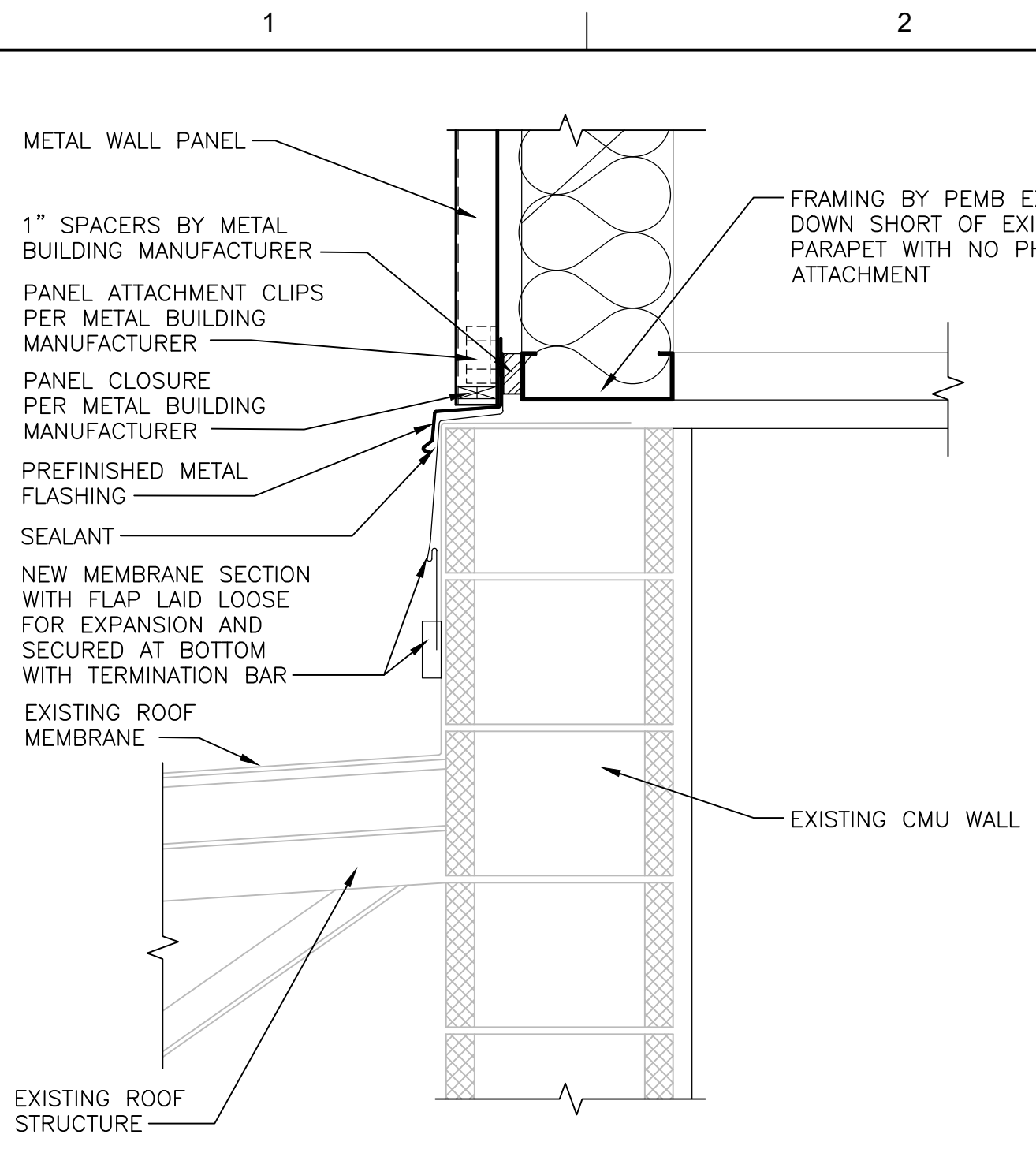
HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003



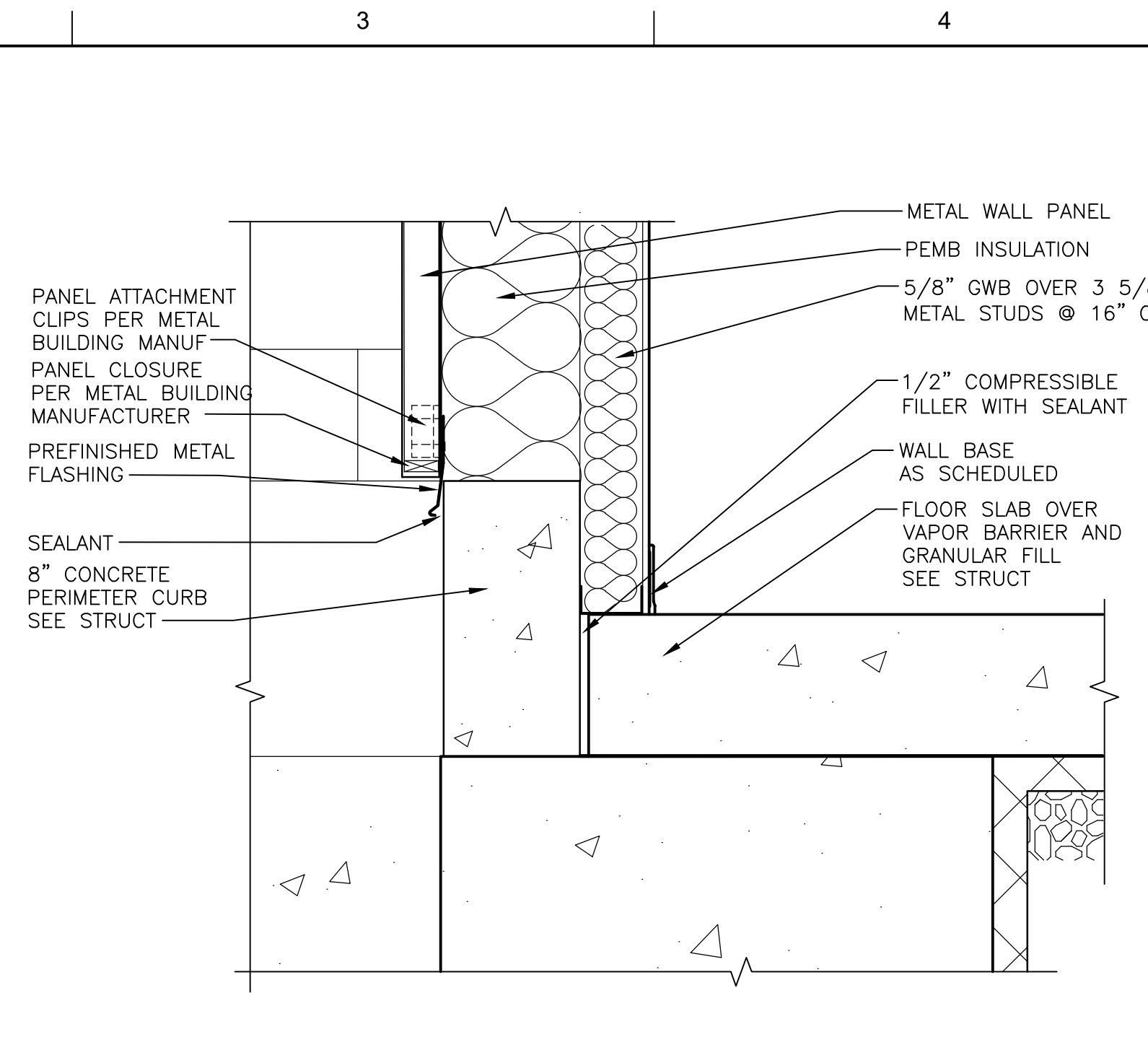
SIMULATOR BUILDING DETAILS

FILENAME | 00A-501.DWG
SCALE | AS NOTED

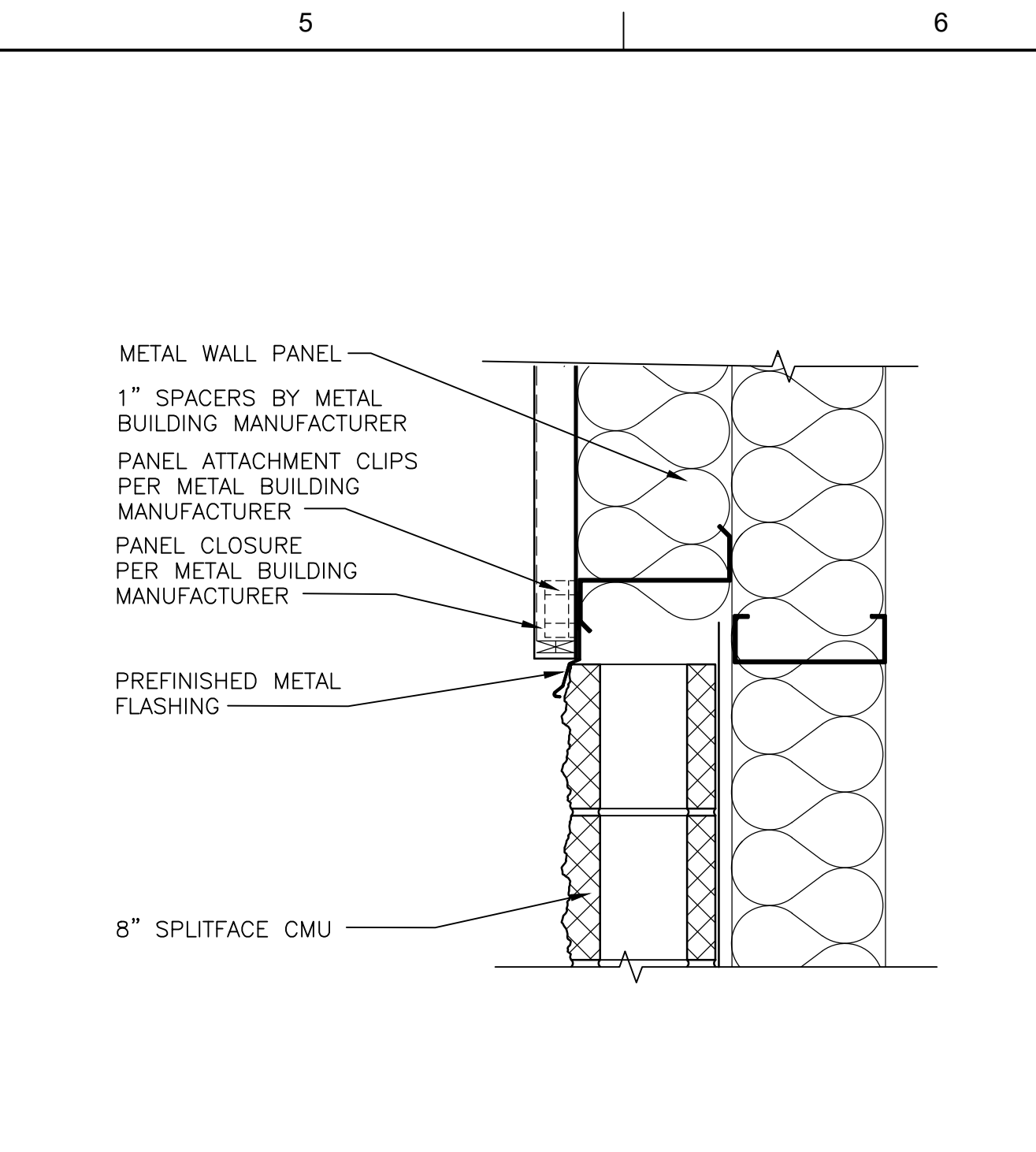
SHEET
00A-501



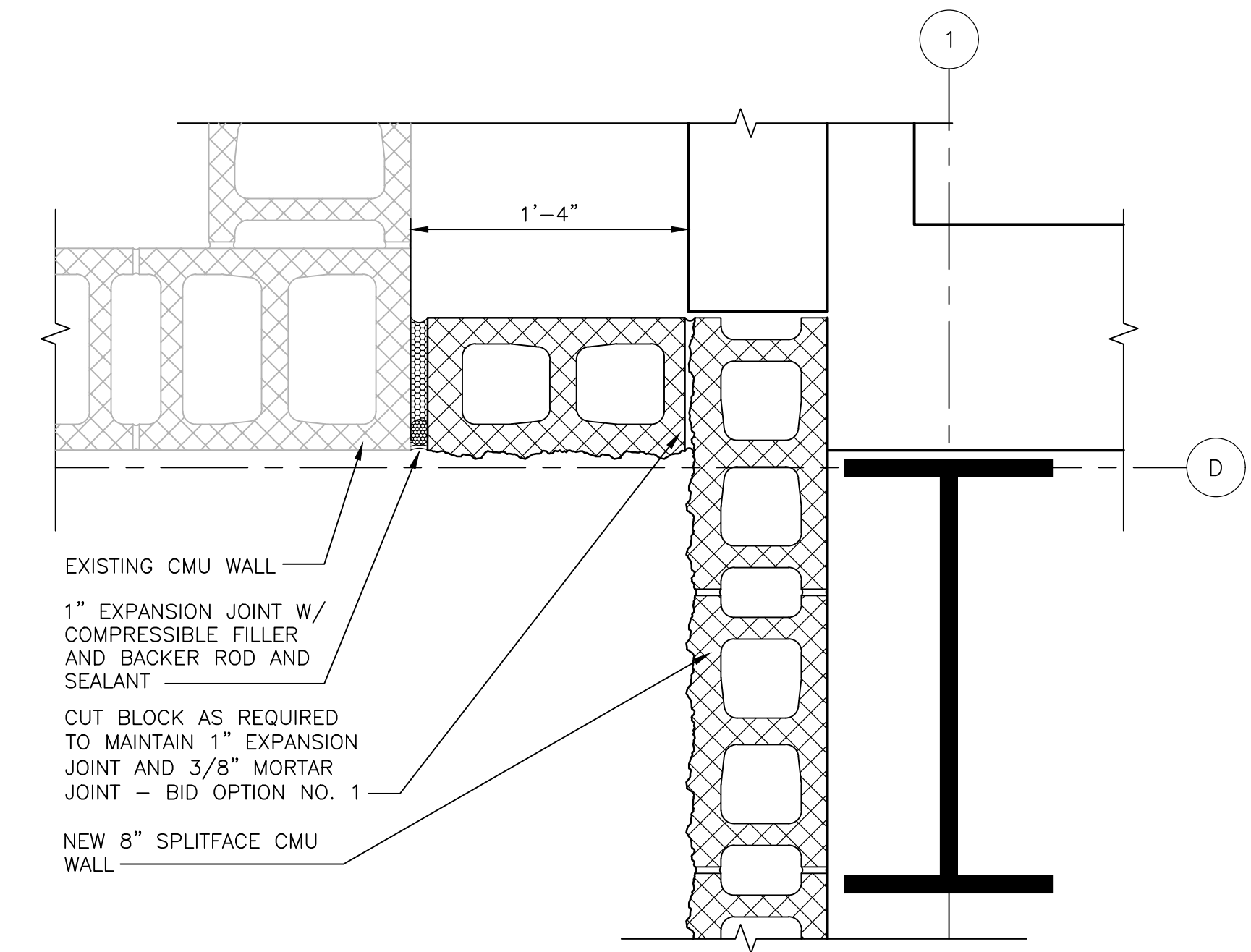
1 WALL DETAIL
00A-502 1 1/2" x 1'-0"



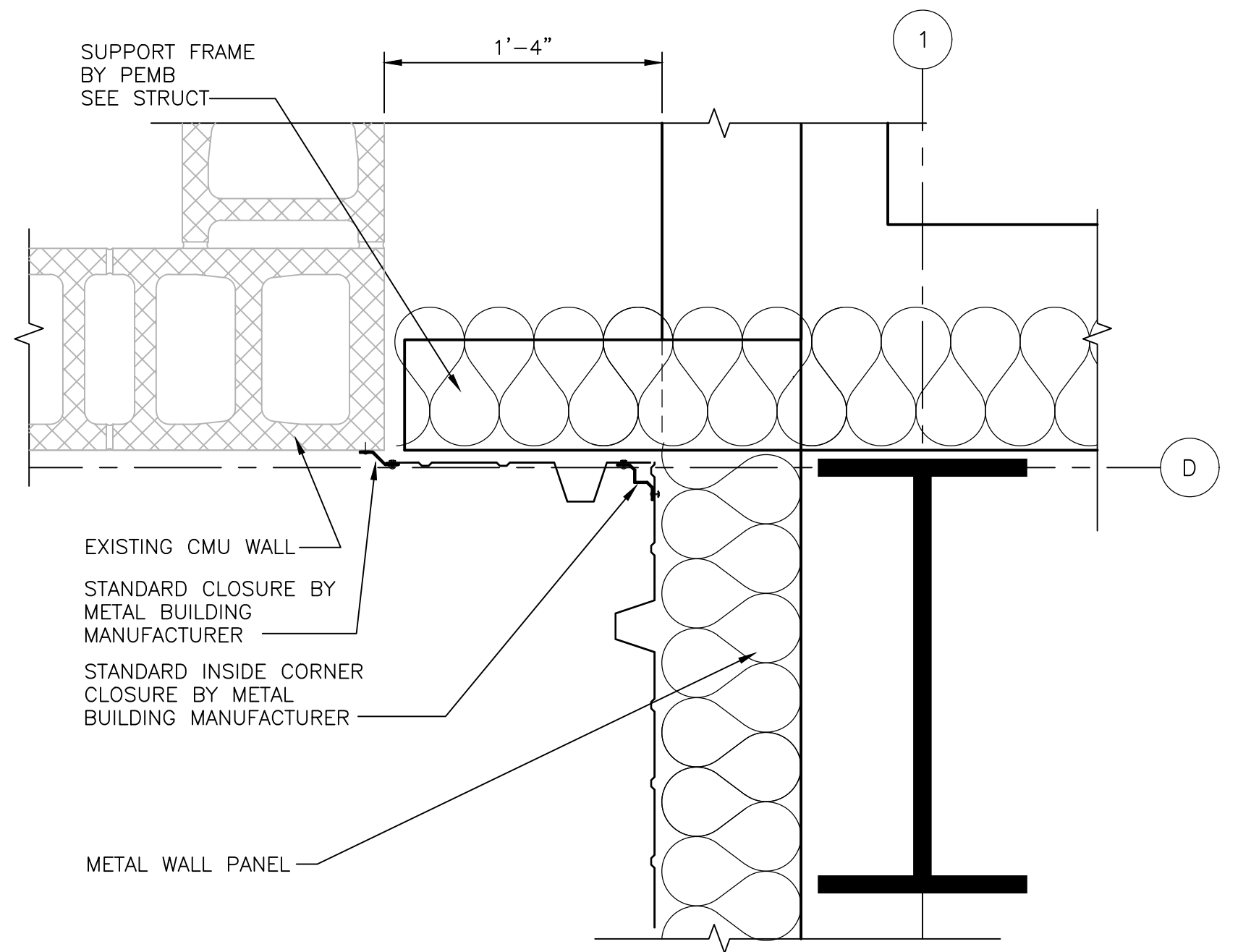
2 WALL DETAIL
00A-502 1 1/2" x 1'-0"



3 WALL DETAIL
00A-502 1 1/2" x 1'-0"

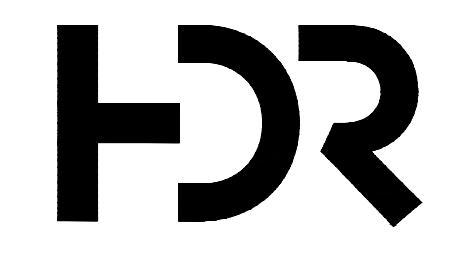


4 WALL EXPANSION DETAIL
00A-502 1 1/2" x 1'-0"



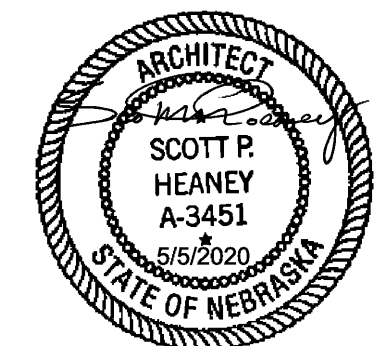
5 WALL EXPANSION DETAIL
00A-502 1 1/2" x 1'-0"

NOTE:
1. SEE STRUCTURAL FOR HORIZ
AND VERTICAL REINFORCING

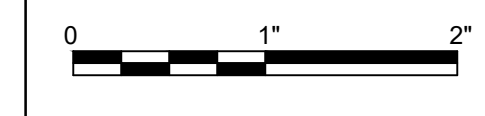


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FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003



**SIMULATOR BUILDING
DETAILS**

FILENAME | 00A-502.DWG
SCALE | AS NOTED

SHEET
00A-502

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ROOM FINISH SCHEDULE										
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS				CEILING		REMARKS
				NORTH	EAST	SOUTH	WEST	HEIGHT	FINISH	
100	ENTRY	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	9'-0"	ACT-1	
101	VEST	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	9'-0"	ACT-1	
102	STAIR	RST-1	RSB-1	PT-1	PT-1	PT-1	-	-	-	
103	SIM BAY	CS	N	-	-	-	-	-	ES	
104	MAINT SUPPORT	CS	RB-1	PT-1	PT-1	PT-1	PT-1	-	PS-1	
105	OFFICE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	9'-0"	ACT-1	
106	OFFICE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	9'-0"	ACT-1	
107	ELEC	CS	RB-1	PT-1	PT-1	PT-1	PT-1	-	PS-1	
108	COMM	CS	RB-1	PT-1	PT-1	PT-1	PT-1	-	PS-1	
201	OPEN OFFICE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	9'-0"	ACT-1	
202	STAIR	RST-1	N	PT-1	-	PT-1	-	8'-0"	ACT-1	
203	RIOS	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	9'-0"	ACT-1	

MATERIAL AND FINISH LEGEND			
FLOOR		BASE	
CS	CHEMICAL FLOOR SEALER	N	NONE
CPT	CARPET TILE	RB	RESILIENT BASE
LVT	LUXURY VINYL TILE		
RST	RESILIENT STAIR TREAD AND NOSING		
WALLS		CEILING	
PT	ARCHITECTURAL PAINT	ACT	ACOUSTICAL CEILING TILE
		ES	EXPOSED STRUCTURE - NO PAINT
		PG	PAINTED GYPSUM WALL BOARD
		PS	PAINTED STEEL STRUCTURE

NOTES:
1. SEE DRAWINGS FOR WALL TYPES.
2. PAINT ALL SOFFITS AND BULKHEADS TO MATCH ADJACENT WALL COLOR.
3. PAINT P-2 - ALL HM DOORS AND FRAMES, STEEL STAIR COMPONENTS, STEEL HANDRAILS.

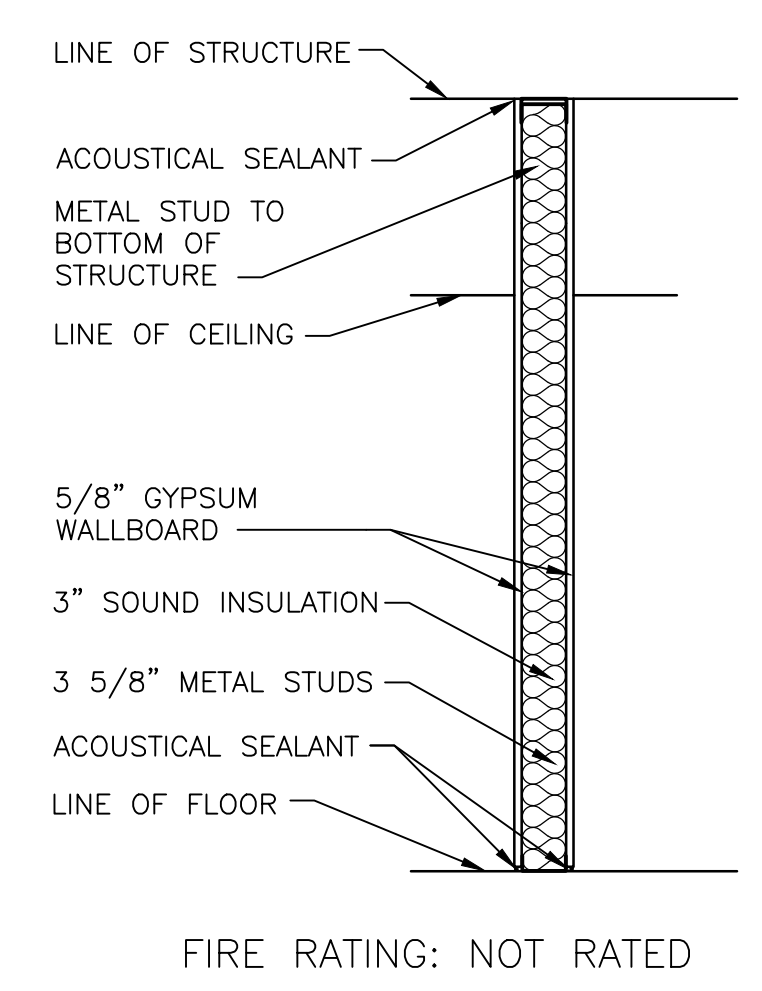
REMARKS:
1. SIMULATOR BAY WILL BE UNFINISHED PEMB (WHITE FACED INSULATION AND FACTORY PRIMED STEEL COMPONENTS).

DOOR SCHEDULE												
DOOR NUMBER	SIZE (W x H)	DOOR				FRAME				HARDWARE SET	DETAILS	REMARKS
		TYPE	MATERIAL	FINISH	GLASS	TYPE	MATERIAL	FINISH	GLASS			
100A	3'-0" X 7'-0"	NV	HM	PT	G-1	1	HM	PT-2	-	1	6,7 & 8 / 00A-501	1
100B	3'-0" X 7'-0"	NV	HM	PT	G-1	2	HM	PT-2	-	4	11,12 / 00A-501	1
100C	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	3	1,2 / 00A-501	
101	3'-0" X 7'-0"	NV	HM	PT	G-1	1	HM	PT-2	-	3,1	6,7 / 00A-501	1
101A	3'-0" X 7'-0"	NV	HM	PT	G-1	1	HM	PT-2	-	2	1,2 / 00A-501	1
103A	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	8	6,7 & 8 / 00A-501	
103B	20'-0" X 20'-0"	SO	ST	FF	-	-	ST	PT-2	-	-	9,10 & 14 / 00A-501	2
103C	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	2	6,7 & 8 / 00A-501	
104	PR 3'-0" X 7'-0"	NV	HM	PT	G-1	1	HM	PT-2	-	6	6,7 / 00A-501	1
105	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	7	1,2 & 3 / 00A-501	
106	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	7	1,2 & 3 / 00A-501	
107	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	2	6,7 & 8 / 00A-501	
108	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	5	1,2 & 3 / 00A-501	
203	3'-0" X 7'-0"	F	HM	PT	-	1	HM	PT-2	-	7	1,2 & 3 / 00A-501	

MATERIAL AND FINISH LEGEND			
MATERIAL		FINISH	
HM	HOLLOW METAL	FF	FACTORY FINISH
ST	STEEL	PT	PAINT

NOTES:
1. SEE THIS SHEET FOR DOOR TYPE AND FRAME TYPE ELEVATIONS.

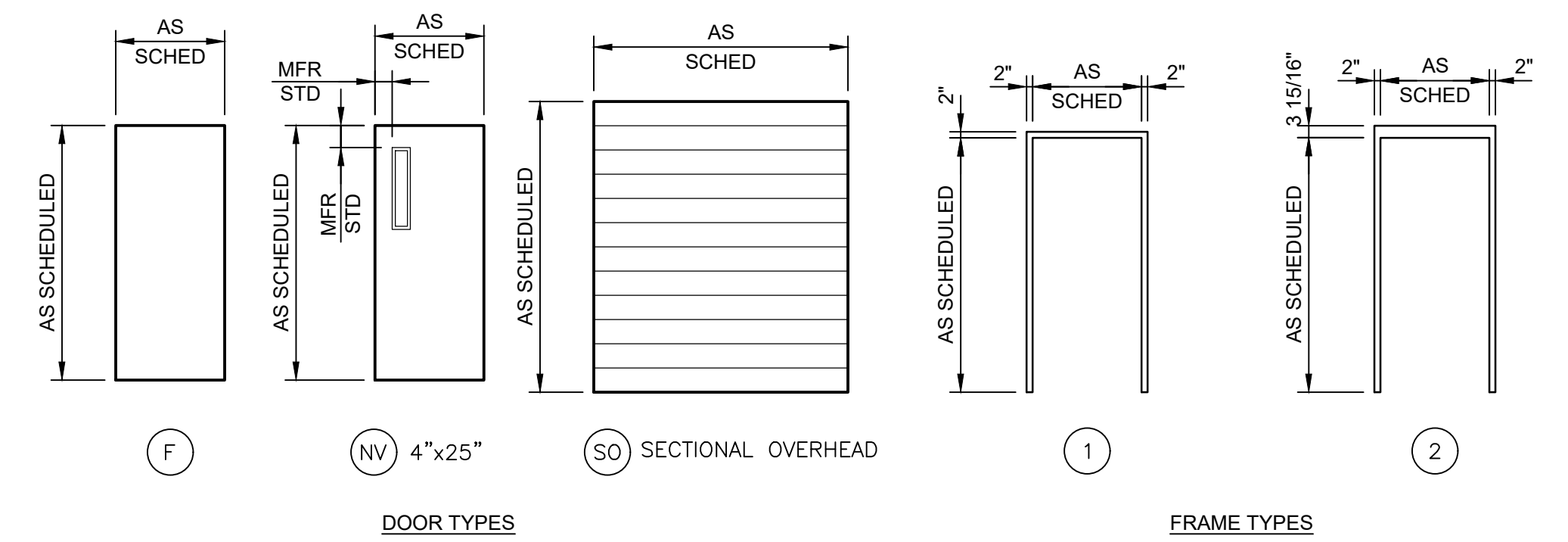
REMARKS:
1. G-1 GLAZING FOR NARROW VISION PANEL SHALL BE 1/4" CLEAR TEMPERED.
2. LOCKING MECHANISM PROVIDED BY OVER-HEAD DOOR MANUFACTURER.



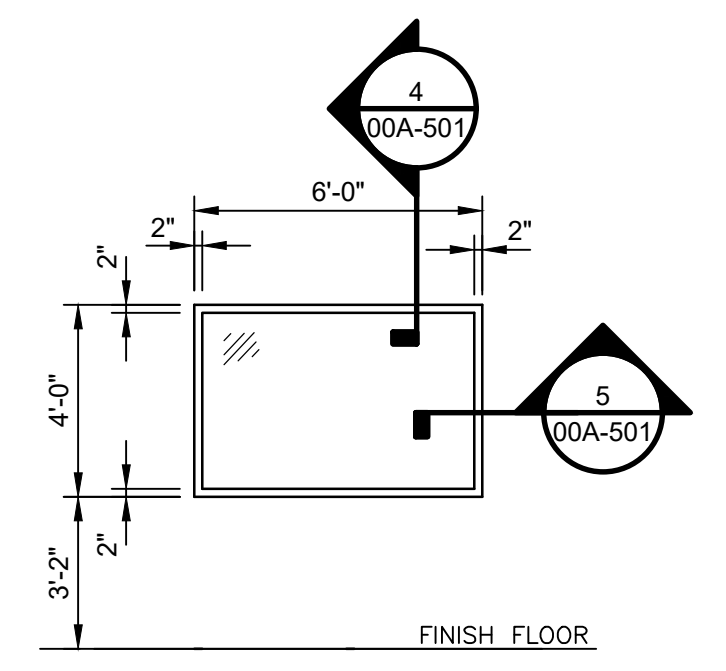
FIRE RATING: NOT RATED

WALL TYPE A
SCALE: NTS
A1 6" STUDS

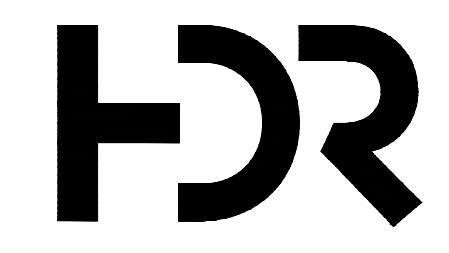
1 WALL TYPES
00A-601 NTS



2 DOOR AND FRAME TYPES
00A-601 1/4" □ 1'-0"

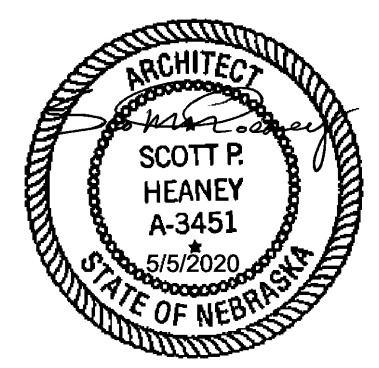


3 WINDOW TYPES
00A-601 1/4" □ 1'-0"



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ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455

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ISSUE	DATE	DESCRIPTION



HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003

**SIMULATOR BUILDING
SCHEDULES, DOOR, FRAME, AND WALL TYPES**

FILENAME: 00A-601.DWG
SCALE: AS NOTED
SHEET: 00A-601

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PIPING SYMBLOGY			MISCELLANEOUS		HVAC SYMBLOGY		HVAC CONTROL SYMBLOGY		AIR FLOW SCHEMATIC AND TEMPERATURE CONTROL DIAGRAM SYMBLOGY	
VALVES SINGLE LINE DOUBLE LINE ISOLATION BALL VALVE BUTTERFLY VALVE DIAPHRAGM VALVE GATE VALVE GLOBE VALVE KNIFE GATE VALVE NEEDLE VALVE PINCH VALVE PLUG VALVE THREE-WAY BALL VALVE THREE-WAY PLUG VALVE			MISCELLANEOUS PIPE JOINT (SEE SPECS FOR REQUIREMENTS) COMPRESSION SLEEVE TYPE COUPLING FLANGED COUPLING ADAPTER (FCA) FLEXIBLE CONNECTION HARNESSED MECHANICAL COUPLING PRESSURE GAGE (W/COCK) TRAP QUICK DISCONNECT CAM & GROOVE COUPLING CAP OR PLUG INTERIOR CLEANOUT HOSE VALVE, HOSE BIBB, OR FLUSHING CONNECTION HOSE RACK X = TYPE DESIGNATED IN SPECIFICATIONS PIPE IN SECTION BELL UP (PLAN) BELL UP (SECTION OR SCHEMATIC) DRAIN (SECTION OR SCHEMATIC) AIR TOOL ASSEMBLY AUTOMATIC VALVE STATION PRESSURE-REDUCING STATION		HVAC SYMBLOGY SUPPLY AIR OR OUTSIDE AIR DUCT UP (SECTION CUT, FIRST DIMENSION DUCT WIDTH) SUPPLY AIR OR OUTSIDE AIR DUCT DOWN (NO SECTION CUT) RETURN AIR DUCT UP (SECTION CUT) RETURN AIR DUCT DOWN (NO SECTION CUT) EXHAUST AIR DUCT UP (NO SECTION CUT) EXHAUST AIR DUCT DOWN (NO SECTION CUT) ROUND ELBOW UP ROUND ELBOW DOWN TRANSITION - DOUBLE SIDED TRANSITION - ONE SIDED TRANSITION - RECTANGULAR TO ROUND DUCT STANDARD BRANCH - FOR SUPPLY AIR W/EXTRACTOR AND RETURN AIR W/O EXTRACTOR ELBOW - W/TURNING VANE (RECTANGULAR) ELBOW - W/TURNING VANES (RECTANGULAR), SMOOTH RADIUS GOOSENECK HOOD (COWL) RECTANGULAR DUCT OR OPENING SIZE - FIRST NUMBER INDICATES SIZE OF SIDE SHOWN ROUND DUCT SIZE RECTANGULAR DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW ROUND DUCT INCLINE - RISE OR DROP IN RESPECT TO THE AIR FLOW HIDDEN DUCT DUCT ELEVATION TAG ABOVE FINISH FLOOR PRESSURE/TEMPERATURE TEST PLUG (PETE PLUG OR EQUAL) SOUND ATTENUATOR SPLITTER DAMPER VD = VOLUME DAMPER BDD = BACKDRAFT DAMPER MOTOR OPERATED DAMPER FIRE DAMPER SMOKE DAMPER SMOKE AND FIRE DAMPER		HVAC CONTROL SYMBLOGY TC TEMPERATURE CONTROLLER TT TEMPERATURE TRANSMITTER TS TEMPERATURE SWITCH T THERMOSTAT TI TEMPERATURE INDICATOR % PERCENTAGE TIMER RC RECEIVER CONTROLLER HOA HAND-OFF-AUTO MS MOTOR STARTER M DAMPER ACTUATOR PI PRESSURE INDICATOR FRZ FREEZE STAT FS FIRE STAT DPS DIFFERENTIAL PRESSURE SWITCH SD SMOKE DETECTOR FS FLOW SWITCH PS PRESSURE SWITCH D TIME DELAY M MINIMUM POSITION RELAY S SIGNAL AO ANALOG OUTPUT AI ANALOG INPUT DO DIGITAL OUTPUT DI DIGITAL INPUT C COMMON PORT S SIGNAL PORT NO NORMALLY OPEN NC NORMALLY CLOSED BALANCING VALVE RHC RESISTANCE HEATING CONTACTOR TA TEST-AUTO TOA TEST-OFF-AUTO ELECTRIC SIGNAL PIPING BULB-TYPE THERMOSTAT		AIR FLOW SCHEMATIC AND TEMPERATURE CONTROL DIAGRAM SYMBLOGY CHILLED WATER COOLING COIL HOT WATER HEATING COIL DIRECT EVAPORATIVE COOLER DIRECT EXPANSION COOLING COIL ELECTRIC HEATING COIL VFD (VARIABLE FREQUENCY DRIVE) CONSTANT AIR VOLUME BOX WITH REHEAT COIL VARIABLE AIR VOLUME BOX WITH REHEAT COIL	
MISCELLANEOUS BACKFLOW PREVENTER WATER METER VARIABLE AREA METER UNION WYE-STRAINER PENETRATION THROUGH STRUCTURE FLEXIBLE HOSE OR TUBING FLEXIBLE PIPING CONNECTION LINE SIZE CHANGE (CONCENTRIC REDUCER) LINE SIZE CHANGE (ECCENTRIC REDUCER) LINE TURNING DOWN LINE TURNING UP BLIND FLANGE PIPE BREAK NOTE: MISCELLANEOUS SYMBLOGY SHOWN IS FOR SINGLE-LINE PIPING. DOUBLE-LINE PIPING SYMBOLS ARE SIMILAR.			PLUMBING SYMBLOGY VENT (VT) POTABLE WATER, COLD (PWC) POTABLE WATER, HOT (PWH) SANITARY (SAN), BURIED SANITARY (SAN) COMPRESSED AIR (CA) NATURAL GAS (NG), BURIED NATURAL GAS (NG) RAIN LEADER (RL) SECONDARY RAIN LEADER (SRL) SERVICE WATER (SWW)		MISCELLANEOUS SYMBLOGY MIST ELIMINATOR ACTIVATED CARBON OR CHEMICAL FILTER CENTRIFUGAL PUMP SPRAY NOZZLE/HUMIDIFIER		GENERAL NOTES: 1. THIS IS A STANDARD PROCESS, MECHANICAL AND PLUMBING SYMBLOGY SHEET. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT. 2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE. 3. SEE INSTRUMENTATION LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.			

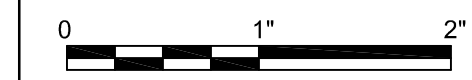


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FIRE PROTECTION	A. NOWKA
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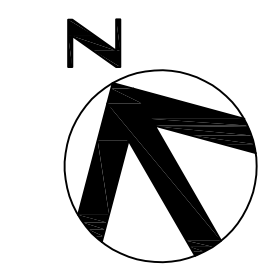
HARRISBURG ANGB, PA
 SOF CONSTRUCT SIMULATOR BAY /
 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003



FILENAME 00M-001.DWG
 SCALE NOT TO SCALE

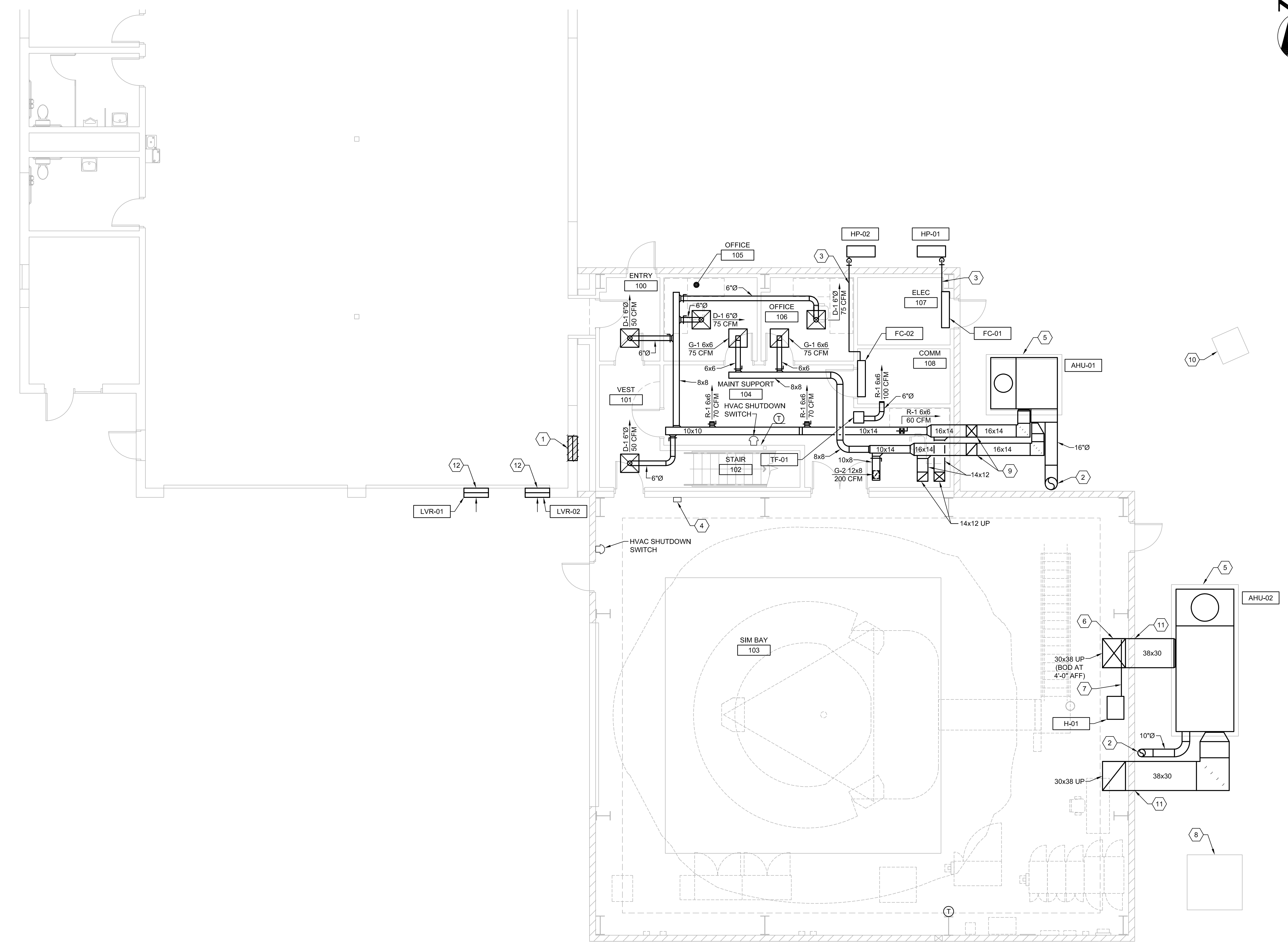
SHEET
 00M-001

MECHANICAL LEGEND



GENERAL NOTES

1. PROVIDE FIRESTOPPING AT PENETRATIONS IN FIRE RATED CONSTRUCTION (EXISTING AND NEW WORK) AND CAULKING AT PENETRATIONS AT FIRE OR SMOKE-RATED SEPARATIONS (EXISTING AND NEW WORK).
- KEYNOTES** (#)
- 1 REMOVE LOUVER / DAMPER AND FILL REMAINING OPENING TO MATCH EXISTING CONSTRUCTION. SEE ARCHITECTURAL.
- 2 ROUTE OUTSIDE AIR DUCT A MINIMUM OF 10'-0" ABOVE GRADE AND TERMINATE WITH GOOSENECK AND WIRE MESH BIRDSCREEN. SUPPORT DUCT FROM BUILDING IN ACCORDANCE WITH SMACNA STANDARDS AND DIVISION 23 SPECIFICATIONS.
- 3 SIZE AND ROUTE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE PIPING WITH ELECTRICAL EQUIPMENT, STACK PIPING AS NECESSARY.
- 4 DESTRAIT FAN (CF-1) CONTROLLER PROVIDED WITH FAN, COORDINATE WITH ELECTRICAL.
- 5 SEE DETAIL 1 ON SHEET 00M-502 FOR AIR HANDLING UNIT SUPPORT FRAMING AND DETAIL 5 ON SHEET 00S-501 FOR CONCRETE EQUIPMENT PAD.
- 6 HUMIDIFIER DISPERSION GRID SHALL BE LOCATED IN VERTICAL DUCT, A MINIMUM OF 4 FT ABOVE THE 90 DEGREE ELBOW, MAXIMUM HEIGHT OF DISPERSION GRID SHALL BE 12 FT AFF. SEE DETAIL 3 ON SHEET 00M-502.
- 7 1-1/2" STEAM DISTRIBUTION PIPING FROM STEAM GENERATOR TO DISPERSION GRID. SEE DETAIL 2 ON SHEET 00M-502.
- 8 SIMULATOR EQUIPMENT COOLING UNIT PROVIDED BY SIMULATOR MANUFACTURER, NOTED HERE FOR REFERENCE AND COORDINATION PURPOSES ONLY. PROVIDE 6 FT. x 6 FT. CONCRETE EQUIPMENT PAD PER DETAIL 5 ON SHEET 00S-501.
- 9 SUPPLY AND RETURN DUCTS TO EXTEND UP EXTERIOR WALL OF BUILDING AND TURN INTO BUILDING AT APPROXIMATELY 9'-0" A.F.F. SUPPORT DUCTWORK ON EXTERIOR BUILDING WALL PER SMACNA STANDARDS AND DIVISION 23 SPECIFICATIONS. PROVIDE SECURITY BARS IN DUCT AT WALL PENETRATION, SEE DETAIL 5 ON SHEET 00M-502.
- 10 TRANSFORMER PAD SEE ELECTRICAL DRAWINGS.
- 11 EXTEND SUPPLY AND RETURN DUCT FROM AHU-02 INTO BUILDING AT BOTTOM ELEVATION OF APPROXIMATELY 4'-6" AFF. SEE ARCHITECTURAL. OFFSET DUCTS AS REQUIRED. PROVIDE SECURITY BARS IN DUCT AT WALL PENETRATION, SEE DETAIL 5 ON SHEET 00M-502.
- 12 PROVIDE NEW LOUVERS LVR-01 & LVR-02 AND MOTORIZED DAMPERS ABOVE OVERHEAD DOOR AS SHOWN. REFER TO ARCHITECTURAL ELEVATIONS FOR LOCATIONS. MODIFY / EXTEND EXISTING DAMPER CONTROLS TO NEW MOTORIZED DAMPERS AT LVR-01 & LVR-02 TO MAINTAIN REQUIRED OPERATION WITH EXHAUST FAN. SEE DETAIL 4 ON SHEET 00M-502.

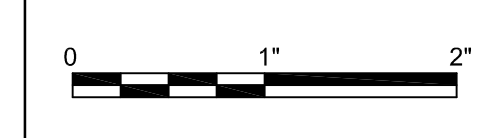


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ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



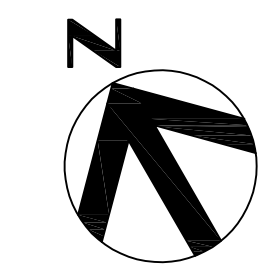
**HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003**



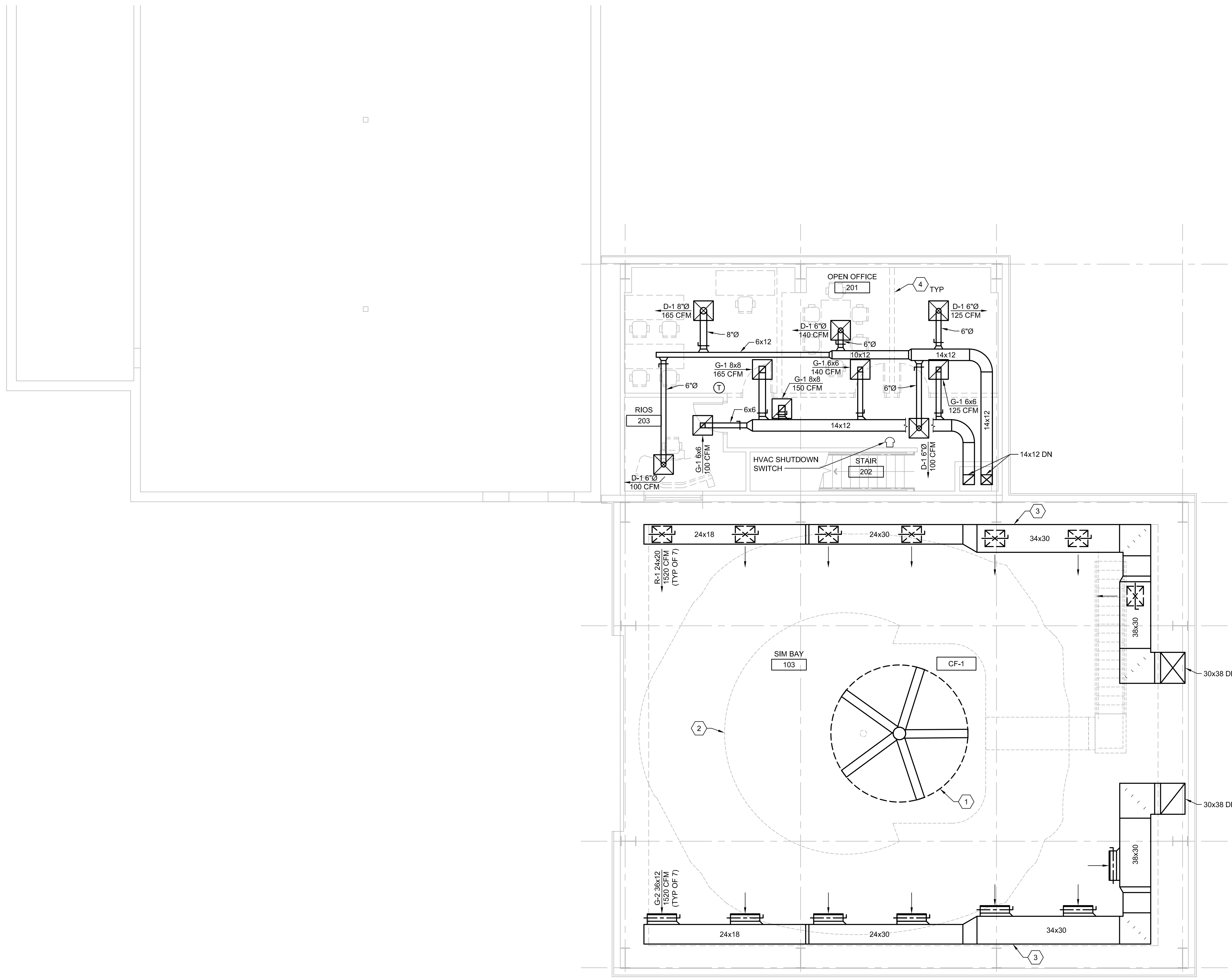
**SIMULATOR BUILDING
FIRST FLOOR HVAC PLAN**

FILENAME | 00M-101.DWG
SCALE | 3/16" = 1'-0"

SHEET
00M-101



- GENERAL NOTES**
1. PROVIDE FIRESTOPPING AT PENETRATIONS IN FIRE RATED CONSTRUCTION (EXISTING AND NEW WORK) AND CAULKING AT PENETRATIONS AT FIRE OR SMOKE-RATED SEPARATIONS (EXISTING AND NEW WORK).
- KEYNOTES** (#)
1. COORDINATE INSTALLATION OF DESTRATIFICATION FAN WITH FIRE SUPPRESSION SYSTEM PER NFPA 13. DESTRATIFICATION FAN CF-1 SHALL BE INTERLOCKED TO DE-ENERGIZE UPON ACTIVATION OF FIRE SUPPRESSION FLOW SWITCH IN ACCORDANCE WITH NFPA 13 AND NFPA 72 REQUIREMENTS. COORDINATE WITH FIRE SUPPRESSION SYSTEM.
 2. CONTRACTOR TO COORDINATE THE INSTALLATION OF ALL SYSTEMS INCLUDING DUCTWORK, PIPING, DESTRATIFICATION FAN, ETC. WITH SIMULATOR EQUIPMENT REQUIRED CLEARANCES.
 3. INSTALL DUCTWORK AS HIGH AS POSSIBLE AND TIGHT TO STRUCTURAL COLUMNS, ALLOWING FOR INSULATION, TO MINIMIZE ENCROACHMENT ON OVERALL SIMULATOR CLEAR SPACE. SEE BUILDING SECTION, SHEET 00A-301.
 4. DASHED OUTLINE DEPICTING FUTURE LAYOUT OF WALLS AND FURNITURE. HVAC LAYOUT SHOWN TO COORDINATE WITH FUTURE LAYOUT.

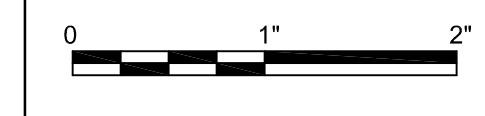


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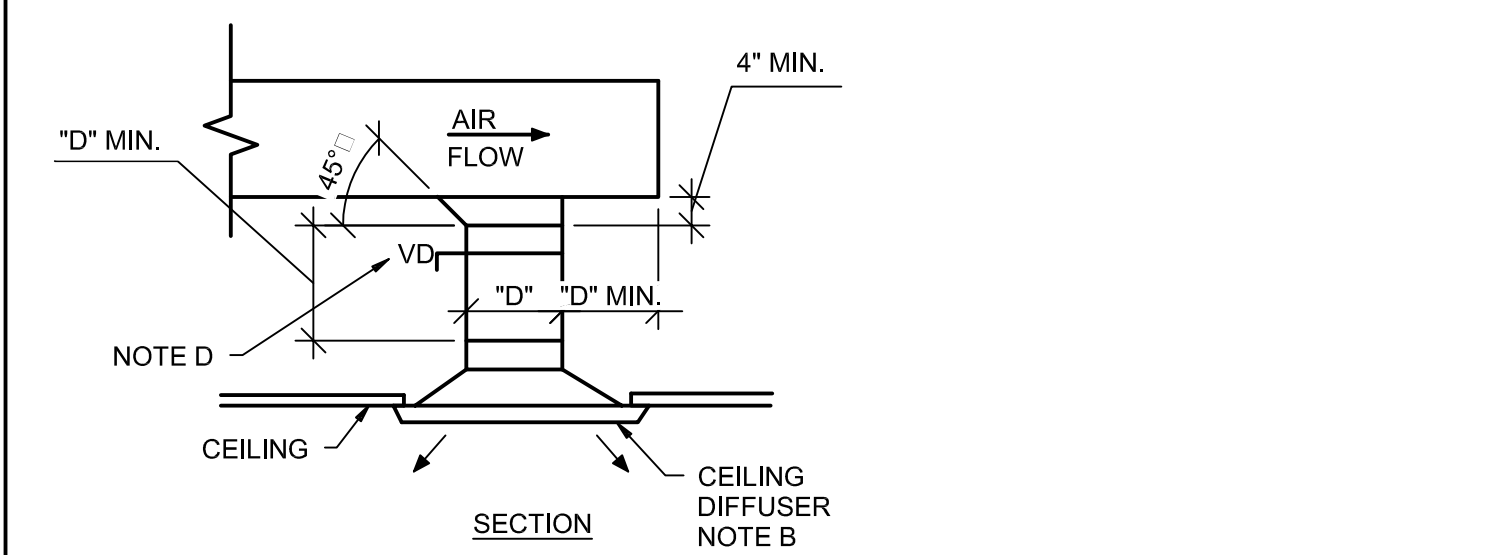
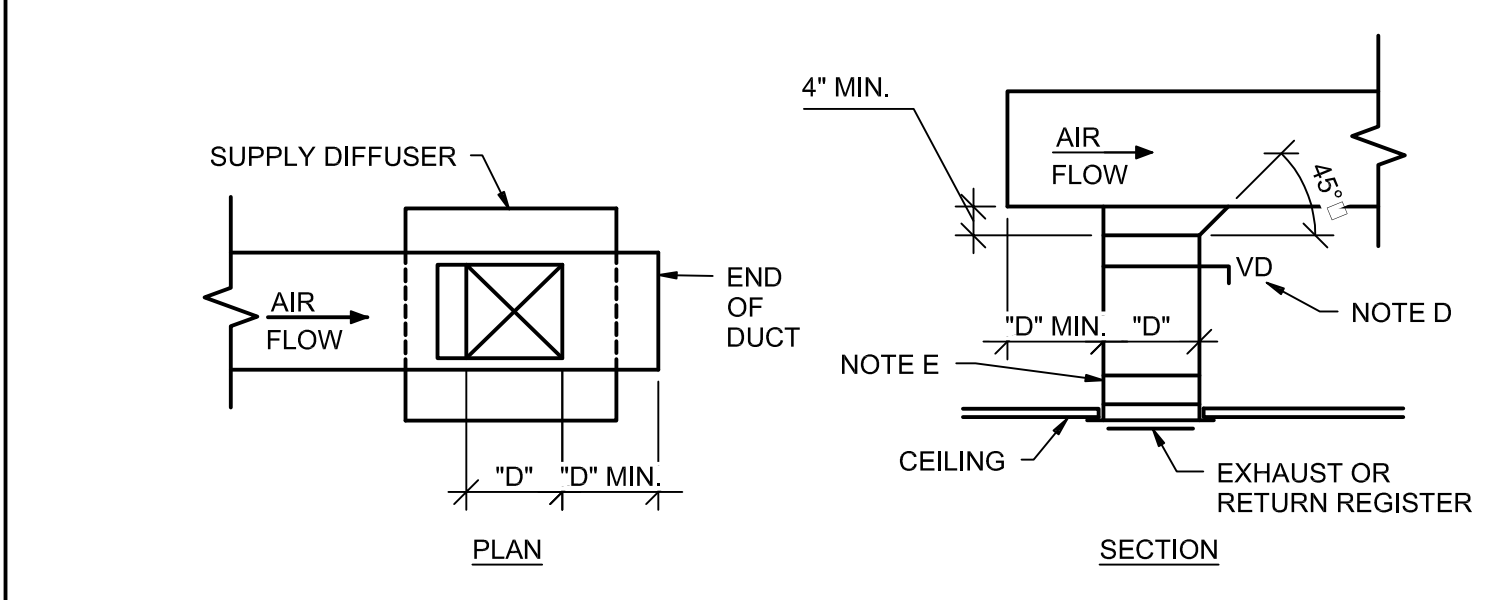
**HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003**



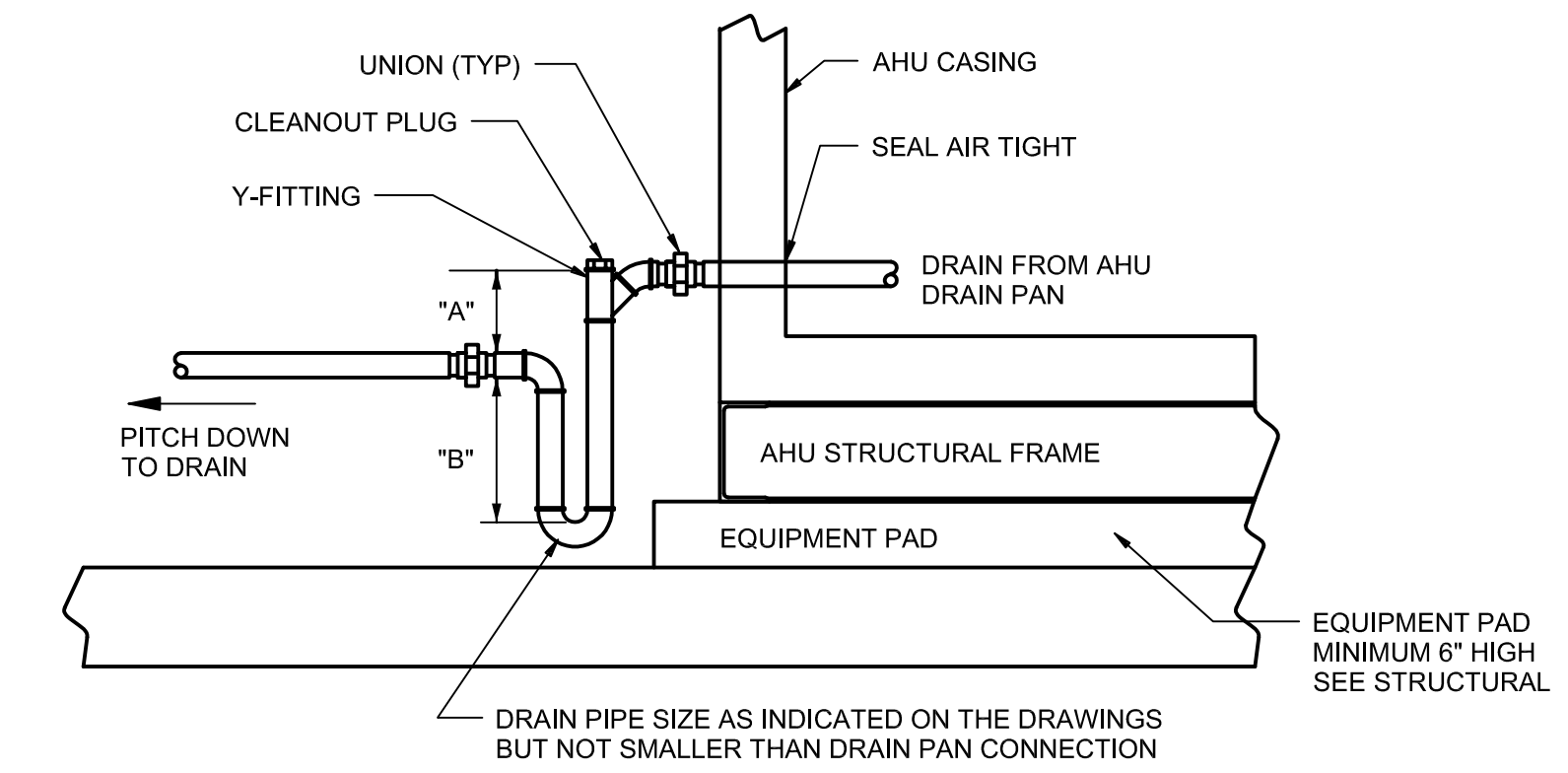
**SIMULATOR BUILDING
SECOND FLOOR HVAC PLAN**

FILENAME 00M-102.DWG
SCALE 3/16" = 1'-0"

SHEET
00M-102



- NOTES:**
- A. "D" IS THROAT DIA OR SIDE DIM. OF SQUARE CONN.
 - B. MIN. LENGTH OF STRAIGHT DUCT ABOVE CEILING DIFFUSER IS "D".
 - C. ABOVE DETAILS ARE REPRESENTATIVE OF STANDARD DUCT CONNECTIONS. ONLY THESE DETAILS ARE NOT INTENDED TO SHOW ALL POSSIBLE DUCT CONNECTIONS.
 - D. BALANCING DAMPERS SHALL BE PROVIDED AT ALL TAKE-OFFS FOR BALANCING. DO NOT BALANCE AIR AT DIFFUSERS AND GRILLES.
 - E. ATTACH DUCT TO DIFFUSER NECK W/SHEET METAL SCREWS (4 MIN.) AND SEAL WITH MASTIC.

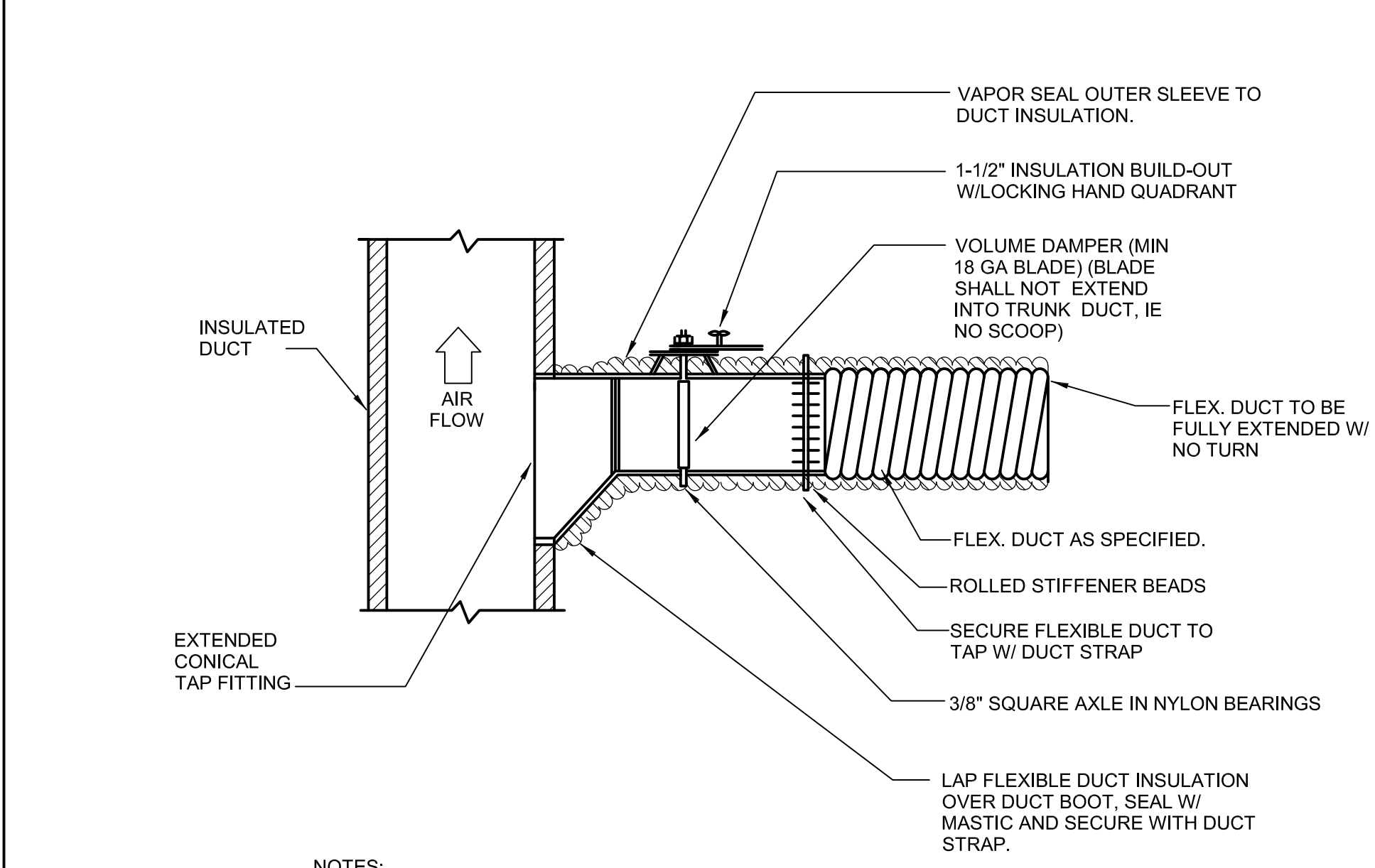


- DRAW THRU SYSTEM**
 "A" = 1" + FAN STATIC PRESSURE
 "B" = HALF OF "A"
- BLOW THRU SYSTEM**
 "A" = 1" MIN"
 "B" = 1" + FAN STATIC PRESSURE

1 DUCT CONNECTION DETAILS (TYP)
 NOT TO SCALE

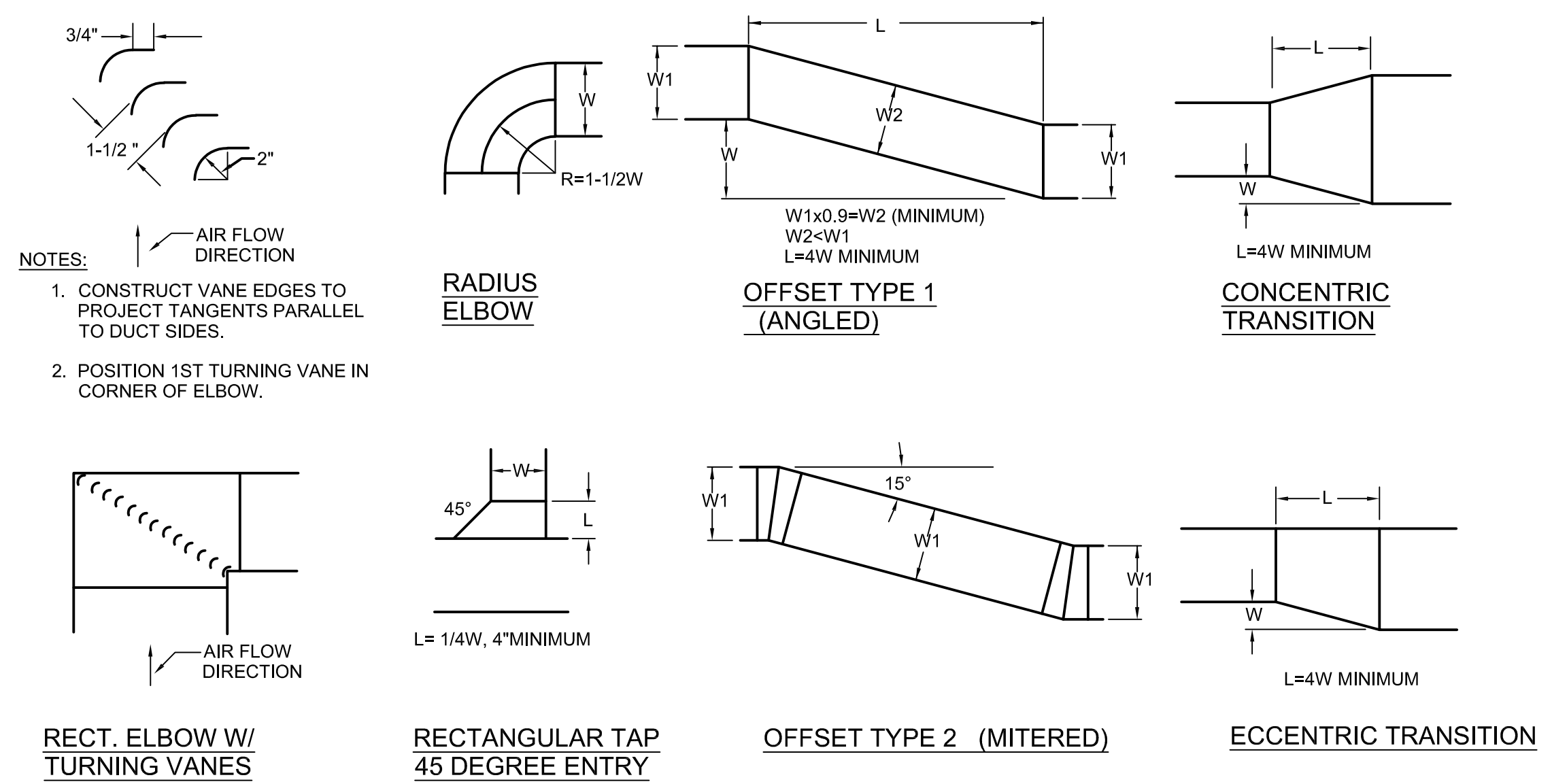
2 RTU LAYOUT (TYP)
 NOT TO SCALE

3 A/C CONDENSATE DRAIN DETAIL (TYP)
 NOT TO SCALE



- NOTES:**
- A. BALANCING DAMPERS SHALL BE PROVIDED AT ALL TAKE-OFFS FOR BALANCING. DO NOT BALANCE AIR USING DAMPERS PROVIDED WITH DIFFUSERS AND GRILLES.

4 BOOT TAP DETAIL (TYP)
 NOT TO SCALE



- NOTES:**
1. CONSTRUCT VANE EDGES TO PROJECT TANGENTS PARALLEL TO DUCT SIDES.
 2. POSITION 1ST TURNING VANE IN CORNER OF ELBOW.

5 STANDARD DUCT CONSTRUCTION DETAIL (TYP)
 NOT TO SCALE

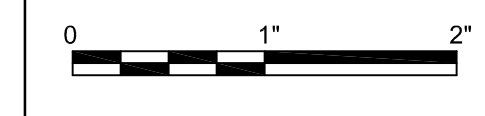


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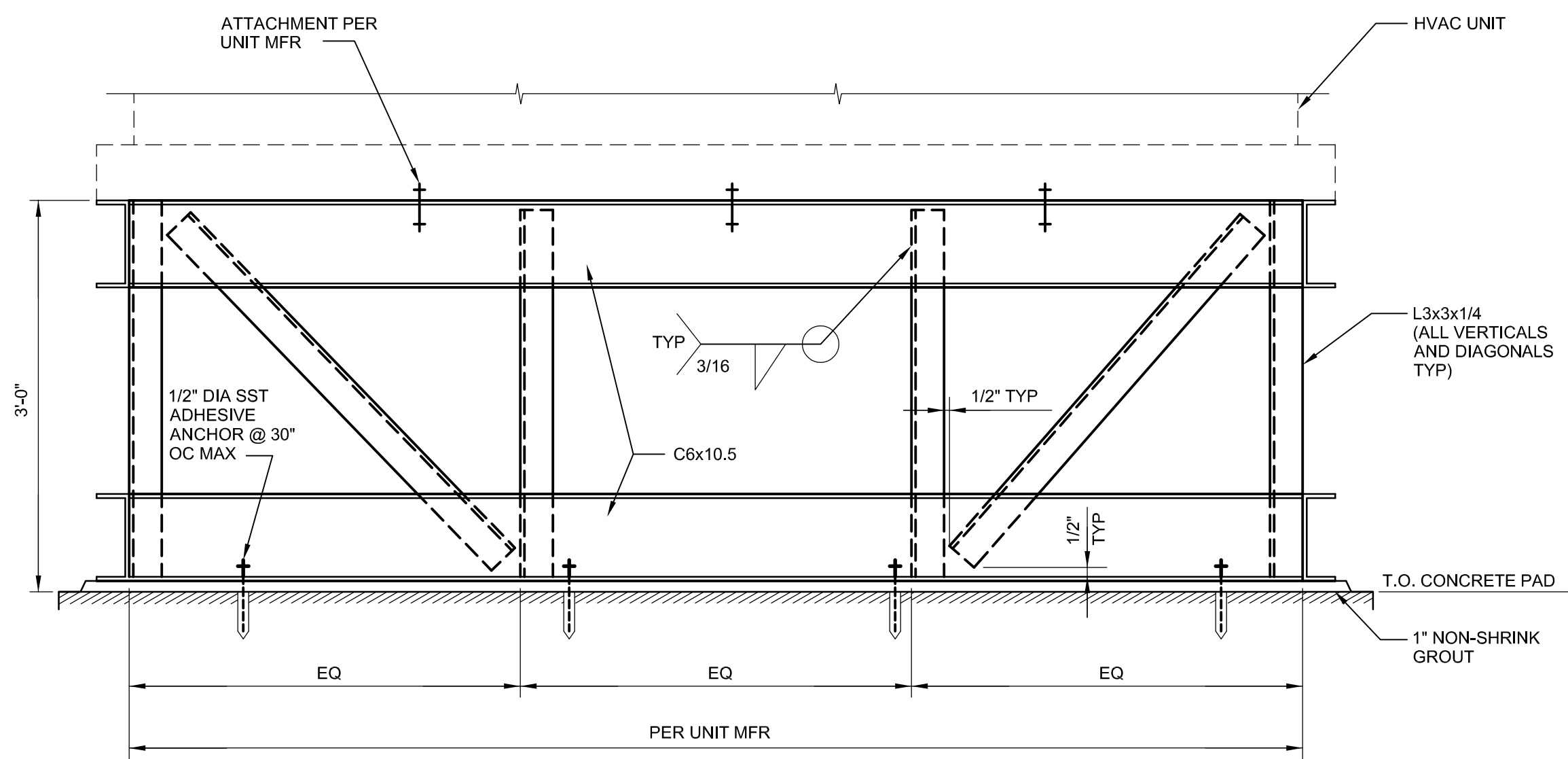
HARRISBURG ANGB, PA
 SOF CONSTRUCT SIMULATOR BAY /
 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003



**SIMULATOR BUILDING
 MECHANICAL DETAILS**

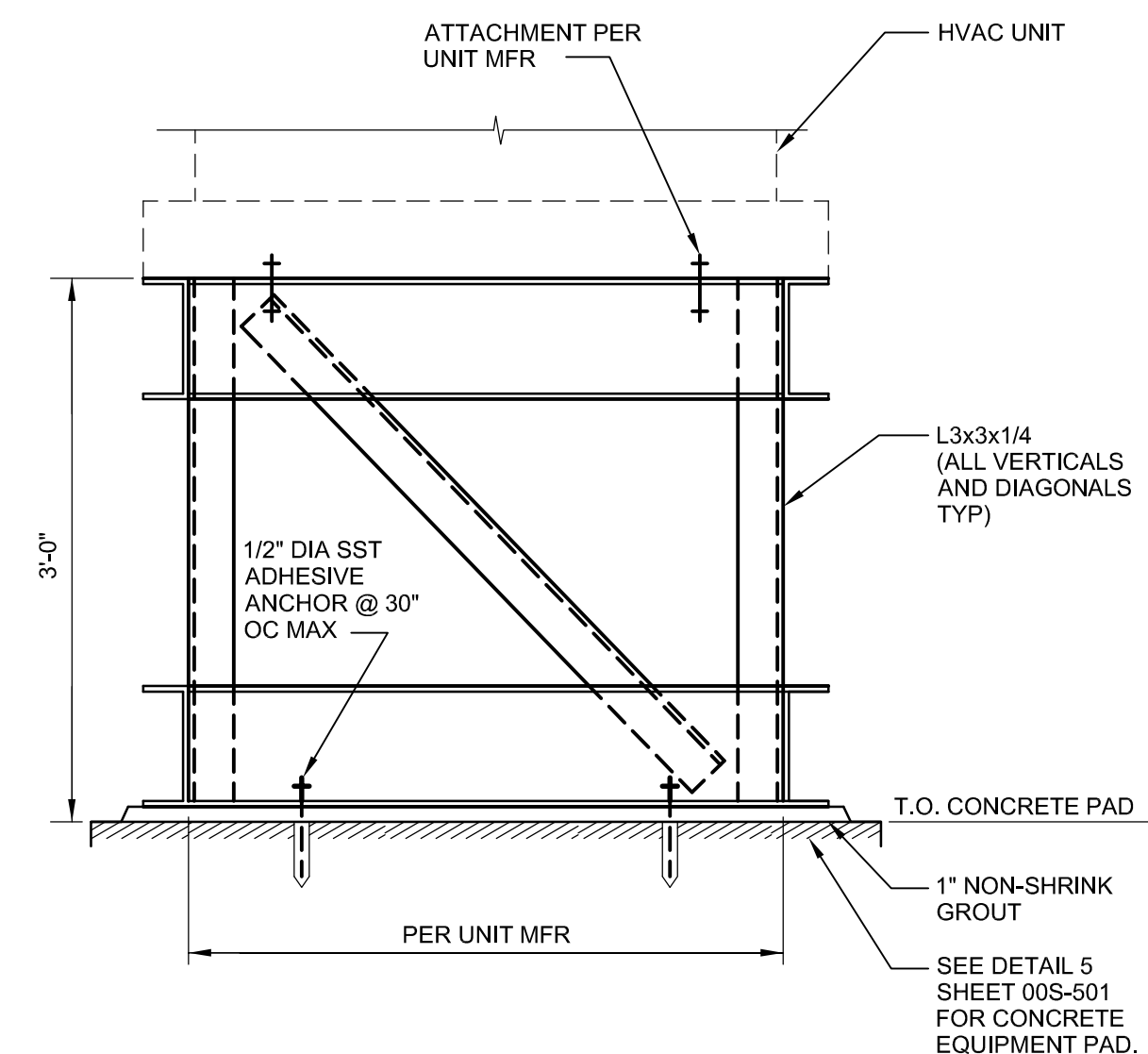
FILENAME | 00M-501.DWG
 SCALE | NOT TO SCALE

SHEET
00M-501



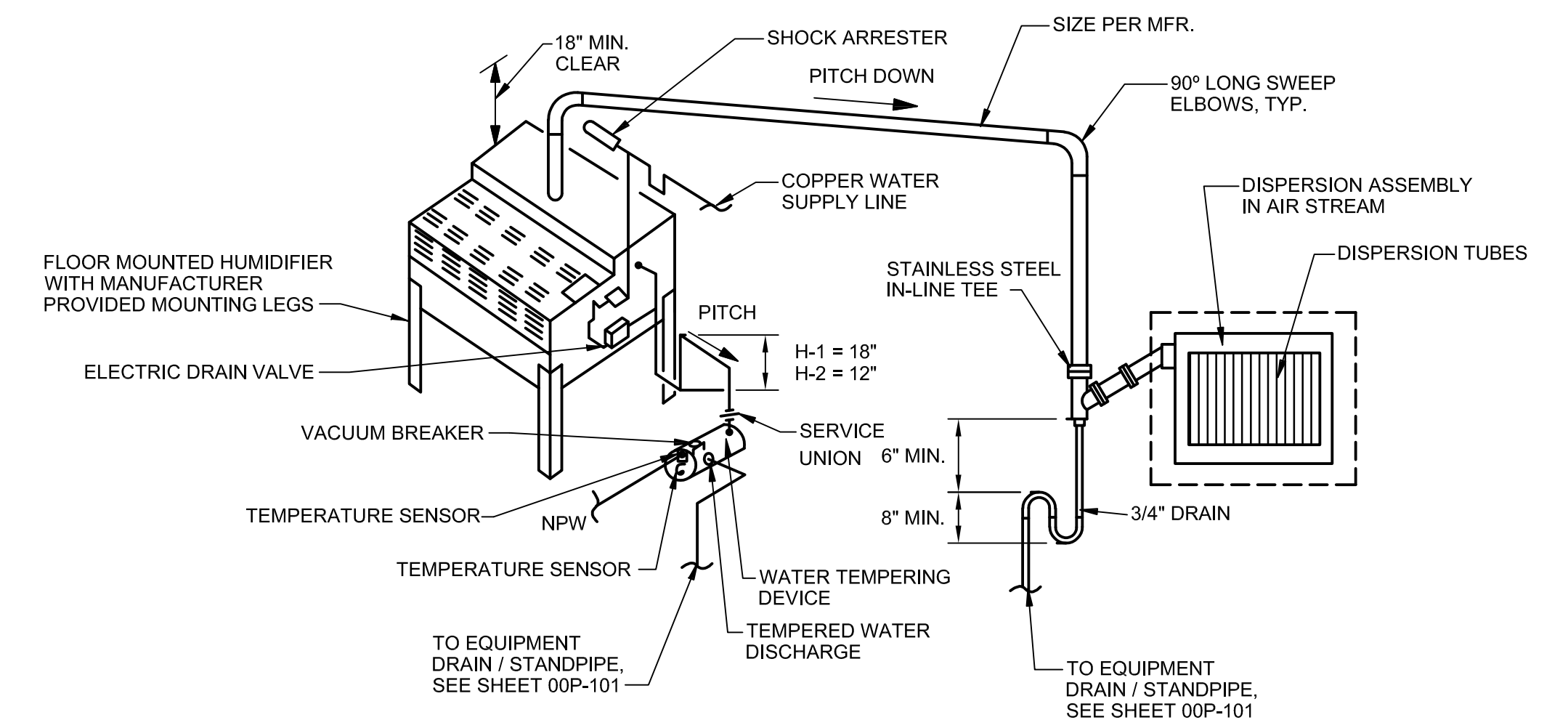
GROUND LEVEL OUTDOOR AIR HANDLING UNIT SUPPORT DETAIL

NOT TO SCALE



AIR HANDLING UNIT SUPPORT DETAIL (END VIEW)

NOT TO SCALE

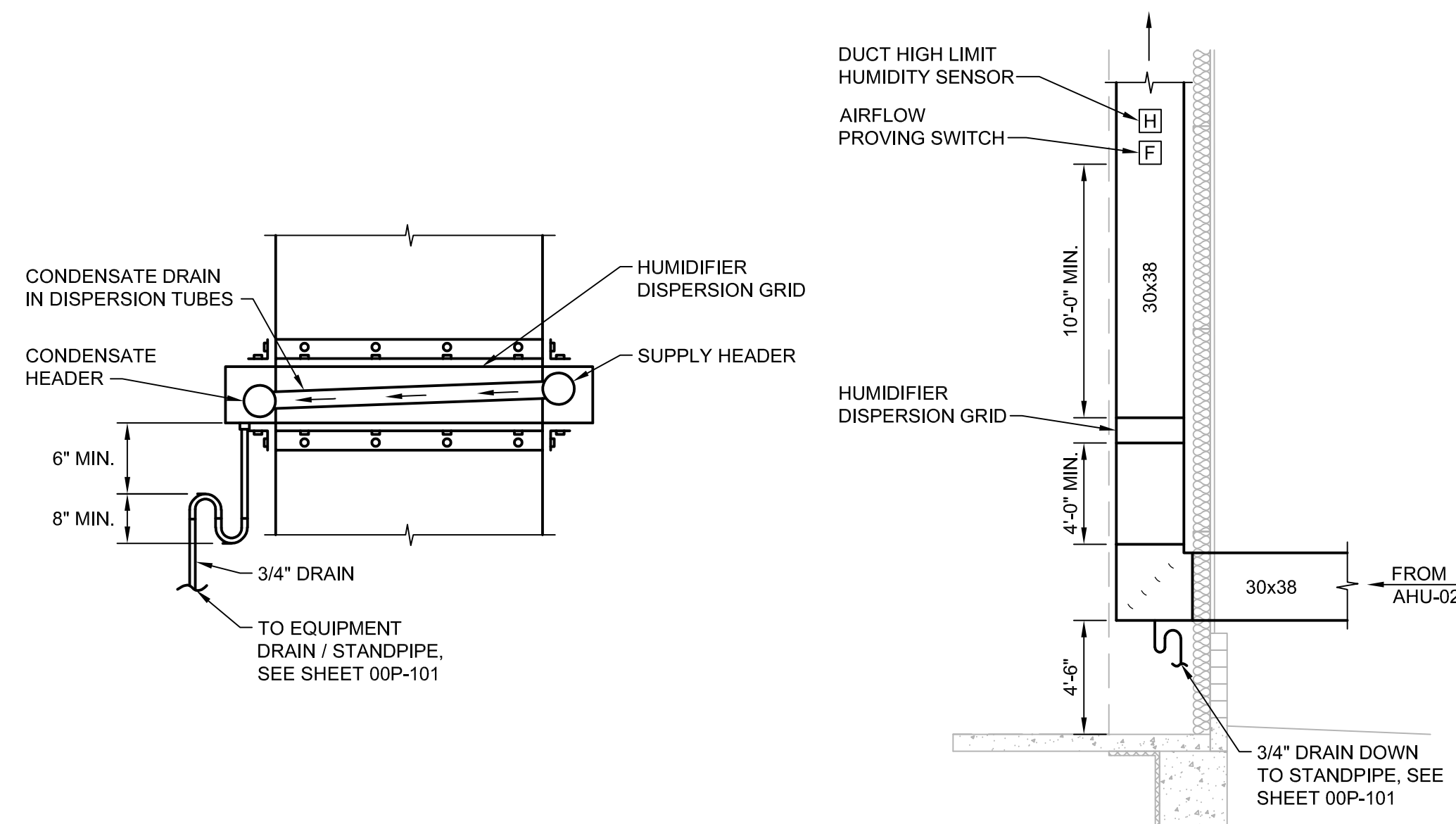


2 ELECTRIC HUMIDIFIER DETAIL

NOT TO SCALE

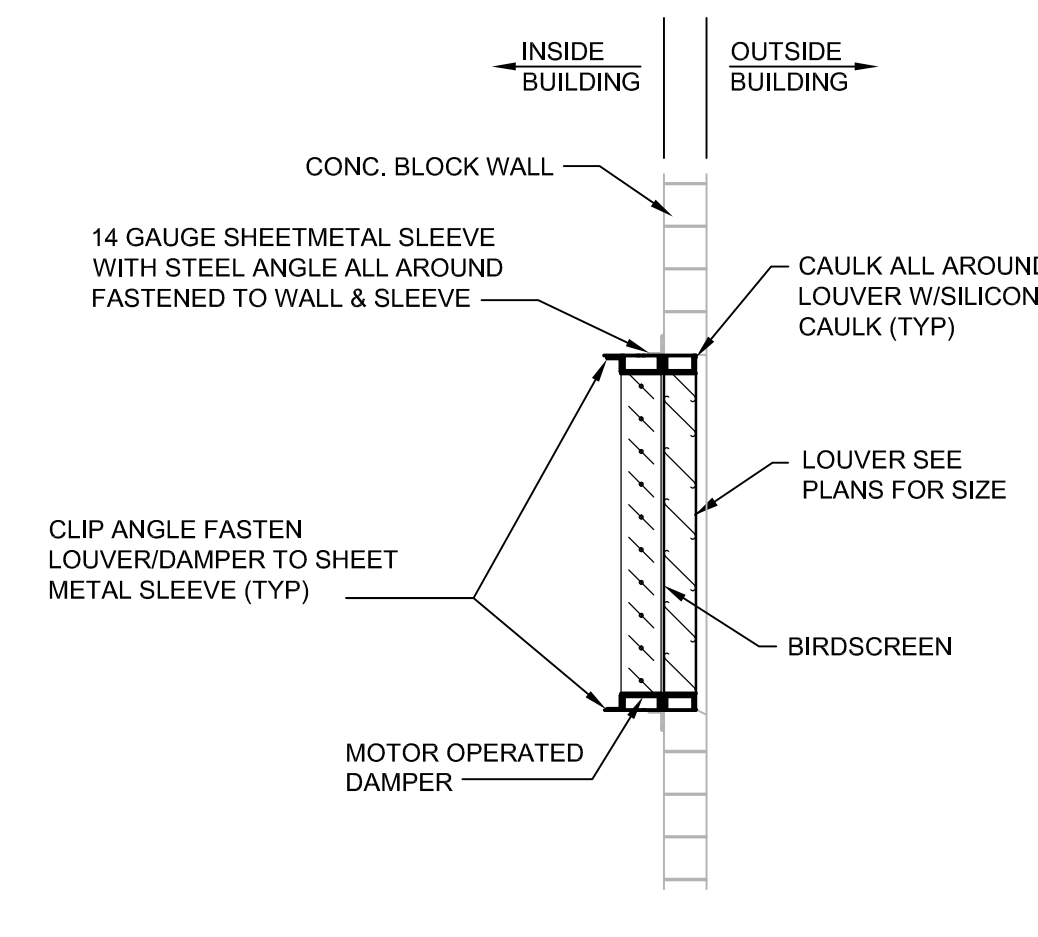
1 AIR HANDLING UNIT SUPPORT DETAIL (TYP)

NOT TO SCALE



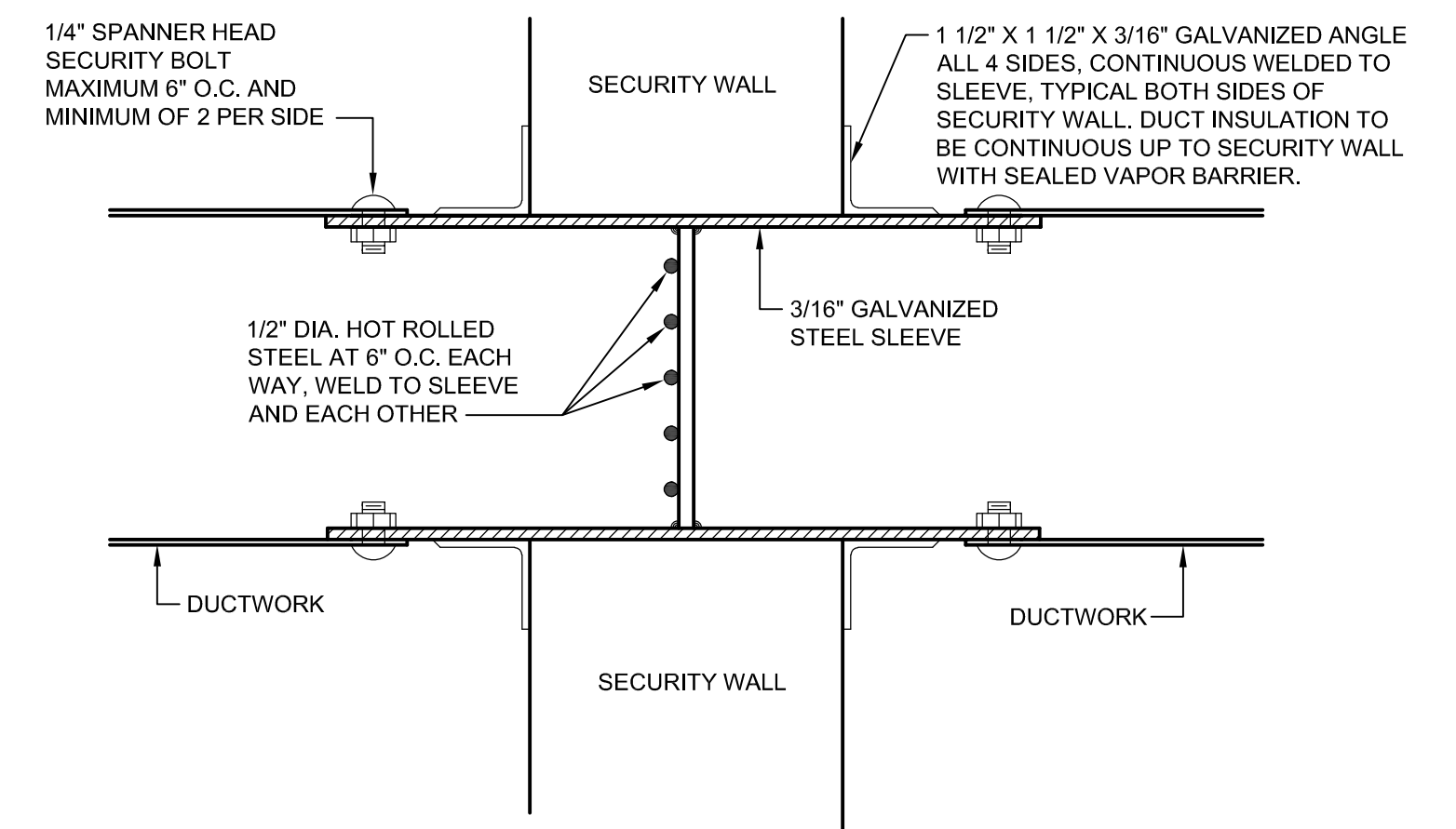
3 DUCT MOUNTED HUMIDIFIER DISPERSION GRID DETAIL

NOT TO SCALE



4 LOUVER DETAIL

NOT TO SCALE



5 SECURITY BAR DETAIL (TYP)

NOT TO SCALE

PROVIDE AT ALL MECHANICAL OPENINGS IN SECURE WALL GREATER THAN 96 SQ. IN.

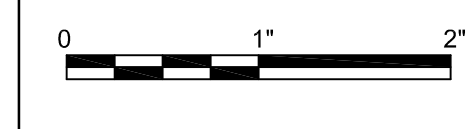


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**HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003**



FILENAME 00M-502.DWG
SCALE NOT TO SCALE

SHEET
00M-502

**SIMULATOR BUILDING
MECHANICAL DETAILS**

DUCTWORK CONSTRUCTION AND LEAKAGE TESTING										
SYSTEM	DUCT PRESSURE CLASS INCHES OF WATER COLUMN				SUPPLY / RETURN / EXHAUST / OUTSIDE AIR				DUCT TEST PRESSURE: INCHES OF WATER COLUMN	NOTES
	SUPPLY DUCT	RETURN DUCT	EXHAUST DUCT	OUTSIDE AIR DUCT	ROUND / OVAL		RECTANGULAR			
					DUCT SEAL CLASS	DUCT LEAK CLASS	DUCT SEAL CLASS	DUCT LEAK CLASS		
AHU-01	2	-2	-	-	A	8	A	16	2	1
AHU-02	2	-2	-	-	A	8	A	16	2	1

NOTES:
1. TEST IN ACCORDANCE WITH SECTION 23 05 93, TESTING, ADJUSTING, AND BALANCING FOR HVAC AND THE PROCEDURES IN SMACNA HVAC AIR DUCT LEAKAGE TEST MANUAL.

LOUVER SCHEDULE												
MARK	TYPE	MATERIAL	CFM	MAX S.P. (IN. WG)	SCREEN		SIZE (IN.)			FINISH	BASIS OF DESIGN	NOTES
					BIRD	INSECT	WIDTH	HEIGHT	DEPTH			
LVR-01	INTAKE	ALUMINUM	2,250	0.05	Y	-	32	40	6	NOTE 1	RUSKIN ELF 6375DX	2, 3
LVR-02	INTAKE	ALUMINUM	2,250	0.05	Y	-	32	40	6	NOTE 1	RUSKIN ELF 6375DX	2, 3

NOTES:
1. ARCHITECT TO SELECT COLOR FROM LIST OF MANUFACTURER'S COMPLETE COLOR CATALOG.
2. PROVIDE MOTORIZED DAMPER ON INSIDE OF LOUVER, RUSKIN CD50.
3. BASIS OF DESIGN MANUFACTURERS LISTED FOR REFERENCE, EQUAL MANUFACTURERS MEETING ALL SCHEDULED PERFORMANCE DATA AND CRITERIA IN SPECIFICATIONS ARE ACCEPTABLE.

DUCTLESS SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE																													
INDOOR UNIT DATA														OUTDOOR UNIT DATA															
MARK	LOCATION	CFM	EXT. S.P. (IN. WG)	COOLING DATA			HEATING DATA			FAN MOTOR DATA			BASIS OF DESIGN	MARK	LOCATION	AMB. TEMP. (°F)	REFR.	ELECTRICAL DATA					MAX UNIT WEIGHT (LBS)	BASIS OF DESIGN	CONTROL TYPE (NOTE 1)	NOTES			
				AIRSIDE DB	AIRSIDE WB	TOTAL CAP. (MBH)	AIRSIDE DB	AIRSIDE WB	TOTAL CAP. (MBH)	RLA	VOLT	HZ						PH	COMP. (RLA)	MCA	MOP	VOLT					PH	HZ	
																													E.A.T. (°F)
FC-01	ELEC 107	700	---	80	67	10.2 / 34.4	70	60	10.2 / 36.0	0.37	208	60	1	40	DAIKIN FTX36NVJU	HP-01	WALL	95	410A	18.25	19.8	20	208	1	60	135	DAIKIN RX36NMVJU	SS-A	2, 3, 4, 5, 6
FC-02	COMM 108	700	---	80	67	10.2 / 34.4	70	60	10.2 / 36.0	0.37	208	60	1	40	DAIKIN FTX36NVJU	HP-02	WALL	95	410A	18.25	19.8	20	208	1	60	135	DAIKIN RX36NMVJU	SS-A	2, 3, 4, 5, 6

NOTES:
1. REFER TO 00M-602 FOR CONTROL TYPE.
2. SYSTEM EER = 9.1 / COP = 2.78.
3. PROVIDE WITH INVERTER TYPE VARIABLE SPEED COMPRESSOR FOR VARIABLE COOLING/HEATING CAPACITY SCHEDULED.
4. AMBIENT OPERATING RANGE (EXTENDED): -24 DEG-F TO 115 DEG-F (COOLING); 5 DEG-F TO 85 DEG-F (HEATING).
5. MOUNT TO EXTERIOR WALL WITH MANUFACTURER PROVIDED WALL MOUNT BRACKET.
6. BASIS OF DESIGN MANUFACTURERS LISTED FOR REFERENCE, EQUAL MANUFACTURERS MEETING ALL SCHEDULED PERFORMANCE DATA AND CRITERIA IN SPECIFICATIONS ARE ACCEPTABLE.

PACKAGED DX-GAS AIR HANDLING UNIT SCHEDULE																							
MARK	LOCATION / SERVES	UNIT FAN DATA										COOLING COIL DATA						MIN. OUTSIDE AIR (CFM)	CURB HEIGHT (IN.)	UNIT WEIGHT (LBS)	BASIS OF DESIGN		
		SERVICE	AIRFLOW (CFM)	EXT. S.P. (IN. WG)	MOTOR HP	RPM	TYPE	DRIVE	WHEEL DIA. (IN.)	TOTAL (MBH)	SENS. (MBH)	E.A.T. (°F)	L.A.T. (°F)	FACE VEL. (FPM)	ROWS / FINS / INCH	P.D. (IN. WG)							
AHU-01	GRADE / ADMIN	SUPPLY	1,080	0.75	2.3 (ECM)	1,440	PLENUM	DIRECT	14	46.6	33.2	80.8 / 66.9	52.7 / 52.7 54.0 / 53.1	225	4 / 16	0.25	200	N/A	1,395	DAIKIN DPS004A			
AHU-02	GRADE / SIM BAY	SUPPLY	10,640	0.75	10	1,735	PLENUM	DIRECT	24	298.8	249.6	71.0 / 59.0	48.6 / 48.4 50.8 / 49.1	500	4 / 15	0.7	250	N/A	4,200	DAIKIN DPS028A			

MARK	TYPE (NOTE 3)	HEATING CAPACITY						CONDENSING SECTION						CONTROL TYPE (NOTE 1)	UNIT ELECTRICAL DATA			NOTES					
		SENS. (MBH)	E.A.T. DB (°F)	L.A.T. DB (°F)	FUEL	INPUT (MBH)	OUTPUT (MBH)	MODULATING TURNDOWN	GAS PRESS. (IN. WC)	COMP. NO.	TYPE	REFRIG.	AMB. AIR TEMP (°F)		EER	VOLT / PHASE	MIN. CIRC. (AMPS)		MAX FUSE (AMPS)				
AHU-01	HGRH	20.3	52.7	70	REFRIG.	-	-	-	-	1	-	-	-	1	INVERTER SCROLL	410A	95	11.8	AHU-A	480 / 3	8.3	15	1 THRU 8
	GAS HEAT	80	30	84.6	NAT. GAS	80	64	5 TO 1	7 - 14	1	-	-	-	1	INVERTER SCROLL	410A	95	10.36	AHU-A	480 / 3	63.2	80	1 THRU 8
AHU-02	HGRH	246.7	48.6	70	REFRIG.	-	-	-	-	1	-	-	-	1	INVERTER SCROLL	410A	95	10.36	AHU-A	480 / 3	63.2	80	1 THRU 8
	GAS HEAT	240	68	86.8	NAT. GAS	300	240	12 TO 1	7 - 14	2	-	-	-	2	FIXED SCROLL	410A	95	10.36	AHU-A	480 / 3	63.2	80	1 THRU 8

NOTES:
1. REFER TO 00M-603 FOR CONTROL TYPE.
2. UNIT SHALL BE SOLID DOUBLE WALL INSULATED CONSTRUCTION.
3. HGRH = HOT GAS REHEAT. ECM = ELECTRICALLY COMMUTATED MOTOR (EC MOTOR).
4. PROVIDE UNIT WITH EC MOTORS TO BE CONTROLLED BY INPUT FROM BMCS.
5. TOP VALUES ARE COIL LEAVING TEMPS, BOTTOM VALUES ARE UNIT LEAVING TEMPS.
6. UNIT SHALL BE PROVIDED WITH A COMPLETE SET OF 2" MERV 8 FILTERS AND 4" MERV 13 FILTERS.
7. PROVIDE UNIT WITH HORIZONTAL DUCT CONNECTIONS. INSTALL UNIT ON CONCRETE EQUIPMENT PAD ON GRADE WITH SUPPORT STAND. SEE DETAIL 1 / 00M-502.
8. BASIS OF DESIGN MANUFACTURERS LISTED FOR REFERENCE, EQUAL MANUFACTURERS MEETING ALL SCHEDULED PERFORMANCE DATA AND CRITERIA IN SPECIFICATIONS ARE ACCEPTABLE.

PLUMBING FIXTURE CONNECTION SCHEDULE											
MARK	FIXTURE DESCRIPTION	CONNECTION SIZE (IN.)					MAX FLOW (GPM/GPF)	MOUNTING HEIGHT (IN.)	ADA COMPLIANT (Y/N)	BASIS OF DESIGN	NOTES
		C.W.	H.W.	WASTE	VENT	OTHER					
WH-1	WALL HYDRANT, FROST FREE	3/4"	-	-	-	-	5	18" ABOVE FINISHED GRADE	N/A	WOODFORD B65	1

NOTES:
1. BASIS OF DESIGN MANUFACTURERS LISTED FOR REFERENCE, EQUAL MANUFACTURERS MEETING ALL SCHEDULED PERFORMANCE DATA AND CRITERIA IN SPECIFICATIONS ARE ACCEPTABLE.

FAN SCHEDULE																	
MARK	TYPE	LOCATION	SERVES	CFM	EXT. S.P. (IN. WG)	DRIVE	RPM	DIA. (IN.)	ELECTRICAL DATA					MAX SONES	CONTROL TYPE	BASIS OF DESIGN	NOTES
									HP	VOLT	PH	HZ	RPM				
TF-01	TRANSFER FAN	MAINT 104	COMM 108	100	0.5	DIRECT	817	8	128 W	120	1	60	817	2	SEE NOTES	GREENHECK SP-B150	1, 5
CF-01	DESTRAT FAN	SIM BAY 103	SIM BAY 103	24,460	NA	DIRECT	32	14 FT	125 W	120	1	60	32	27 DBA	SEE NOTES	GREENHECK DC-S-14	2, 3, 4, 5

NOTES:
1. FAN TO RUN CONTINUOUSLY.
2. PROVIDE WALL-MOUNTED CONTROLLER.
3. PROVIDE FAN WITH ALL REQUIRED MOUNTING HARDWARE INCLUDING SAFETY RETENTION CABLES PER MANUFACTURER'S INSTRUCTIONS.
4. FAN SHUTDOWN WITH SPRINKLER SYSTEM WATER FLOW IN ACCORDANCE WITH NFPA 13 SHALL BE ACHIEVED VIA FIRE ALARM CONTRACTOR ADDRESSABLE RELAY.
5. BASIS OF DESIGN MANUFACTURERS LISTED FOR REFERENCE, EQUAL MANUFACTURERS MEETING ALL SCHEDULED PERFORMANCE DATA AND CRITERIA IN SPECIFICATIONS ARE ACCEPTABLE.

ELECTRIC HUMIDIFIER SCHEDULE																
MARK	LOCATION	SERVES	AREA WxH (IN.)	AIR VOLUME (CFM)	HUMIDIFICATION CAP. (LBS/HR)	ENTERING AIR		LEAVING AIR		ABS. DIST. (IN.)	AMP	VOLT	PH	HZ	BASIS OF DESIGN	NOTES
						TEMP. DB (DEG. F)	% RH	TEMP. DB (DEG. F)	% RH							
H-01	DUCT	AHU-02	38x32	10,640	110.5	54.2	49	55	72	12	50.5	480	3	60	DRI-STEEM VAPORSTREAM MODEL 42-2 WITH ULTRA-SORB MODEL LH DISPERSION GRID	1 THRU 4

NOTES:
1. STAINLESS STEEL CONSTRUCTION, MODULATING CONTROL, TIME PROPORTIONING.
2. PROVIDE WITH 'DRANE-KOOLER' WATER TEMPERING DEVICE, ROOM HUMIDITY TRANSMITTER, ON-OFF HIGH LIMIT DUCT HUMIDISTAT, AIRFLOW PROVING SWITCH, AND CONTROL CABINET WITH REMOTE KEYPAD.
3. CONTROLS SHALL BE BACNET COMPATIBLE AND FULLY INTEGRATED WITH BMCS.
4. BASIS OF DESIGN MANUFACTURERS LISTED FOR REFERENCE, EQUAL MANUFACTURERS MEETING ALL SCHEDULED PERFORMANCE DATA AND CRITERIA IN SPECIFICATIONS ARE ACCEPTABLE.

DIFFUSER, REGISTER AND GRILLE SCHEDULE											
MARK	TYPE	SERVICE	FACE SIZE (IN.)	NECK SIZE (IN.)	FINISH	MAX. P.D. (IN. WG)	MAX. N.C. AT P.D. SHOWN	MATERIAL	FINISH	BASIS OF DESIGN	NOTES
R1	SURFACE MOUNT	SUPPLY AIR	SEE NOTE	SEE PLAN	WHITE	0.1	30	ALUMINUM	WHITE	TITUS 300 FL	1, 3
G1	LAY-IN, EGG CRATE	RET/EXH AIR	24x24	SEE PLAN	WHITE	0.1	30	ALUMINUM	WHITE	TITUS 50F	2, 3
G2	DUCT	RET/EXH AIR	SEE NOTE	SEE PLAN	WHITE	0.1	30	ALUMINUM	WHITE	TITUS 350FL	1, 3

1. FACE SIZE SHALL BE 2" LARGER THAN NECK SIZE IN EACH DIMENSION (1" BORDER).
2. PROVIDE WITH 0 DEGREE DEFLECTION.
3. BASIS OF DESIGN MANUFACTURERS LISTED FOR REFERENCE, EQUAL MANUFACTURERS MEETING ALL SCHEDULED PERFORMANCE DATA AND CRITERIA IN SPECIFICATIONS ARE ACCEPTABLE.

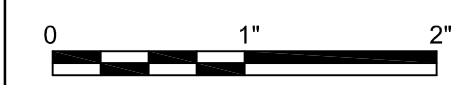


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PROJECT MANAGER	
CIVIL	B. WECKERLIN
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ARCHITECT	S. HEANEY
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ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



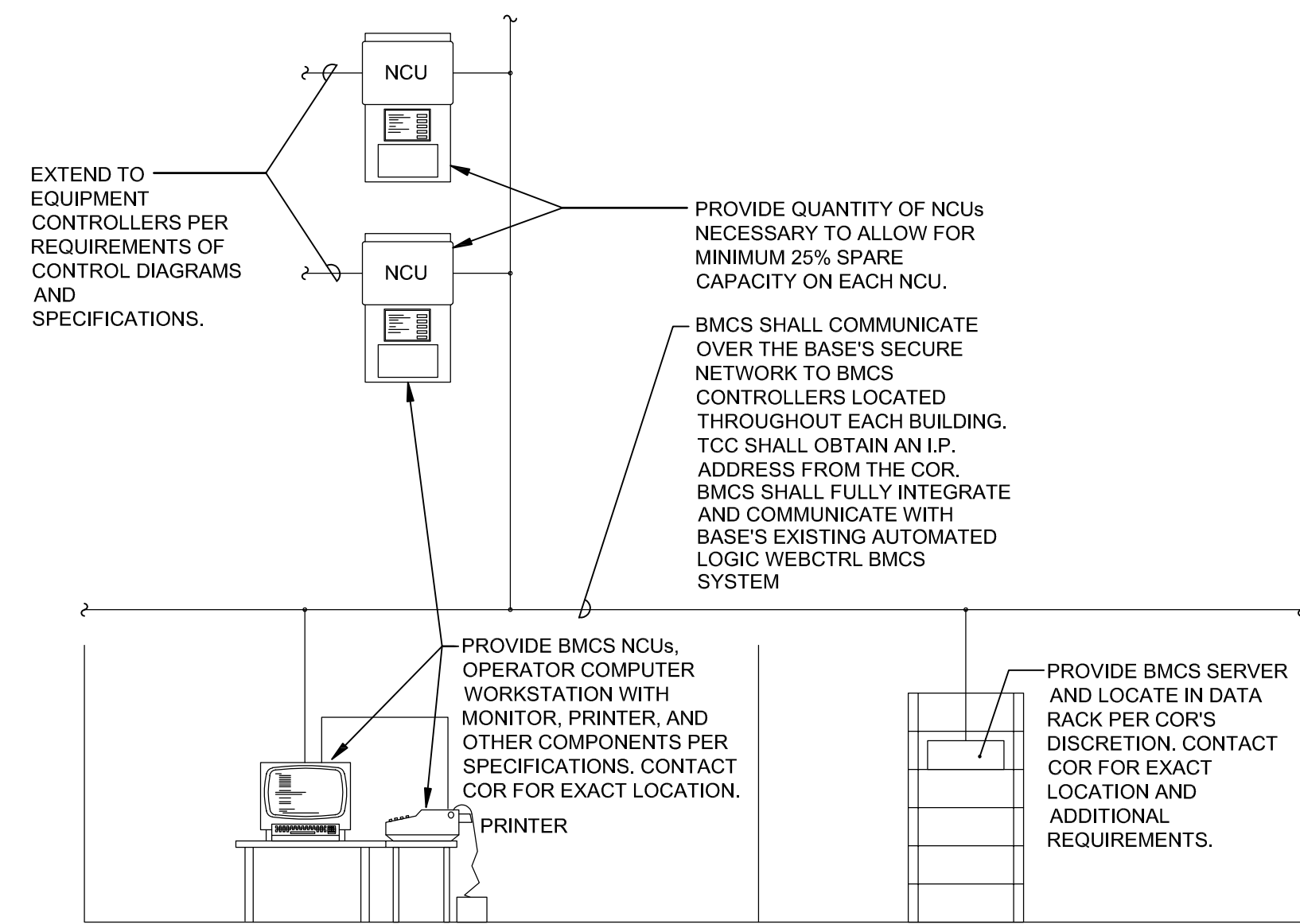
HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003



FILENAME | 00M-601.DWG
SCALE | NOT TO SCALE

SHEET
00M-601

**SIMULATOR BUILDING
MECHANICAL SCHEDULES**



BMCS NETWORK REQUIREMENTS

NOT TO SCALE

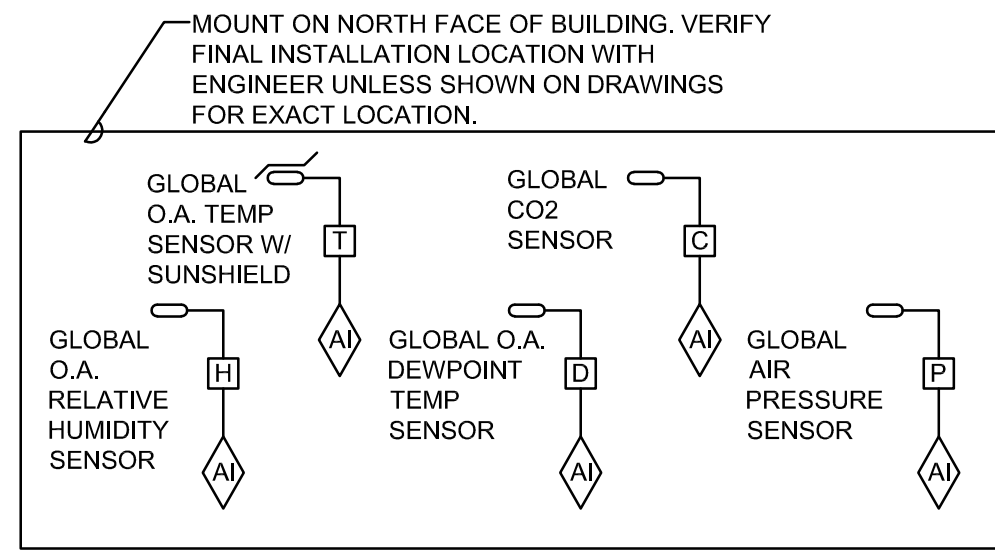
EXTEND TO EQUIPMENT CONTROLLERS PER REQUIREMENTS OF CONTROL DIAGRAMS AND SPECIFICATIONS.

PROVIDE QUANTITY OF NCUs NECESSARY TO ALLOW FOR MINIMUM 25% SPARE CAPACITY ON EACH NCU.

BMCS SHALL COMMUNICATE OVER THE BASE'S SECURE NETWORK TO BMCS CONTROLLERS LOCATED THROUGHOUT EACH BUILDING. TCC SHALL OBTAIN AN I.P. ADDRESS FROM THE COR. BMCS SHALL FULLY INTEGRATE AND COMMUNICATE WITH BASE'S EXISTING AUTOMATED LOGIC WEBCTRL BMCS SYSTEM

PROVIDE BMCS NCUs, OPERATOR COMPUTER WORKSTATION WITH MONITOR, PRINTER, AND OTHER COMPONENTS PER SPECIFICATIONS. CONTACT COR FOR EXACT LOCATION.

PROVIDE BMCS SERVER AND LOCATE IN DATA RACK PER COR'S DISCRETION. CONTACT COR FOR EXACT LOCATION AND ADDITIONAL REQUIREMENTS.



GLOBAL REFERENCE POINTS:

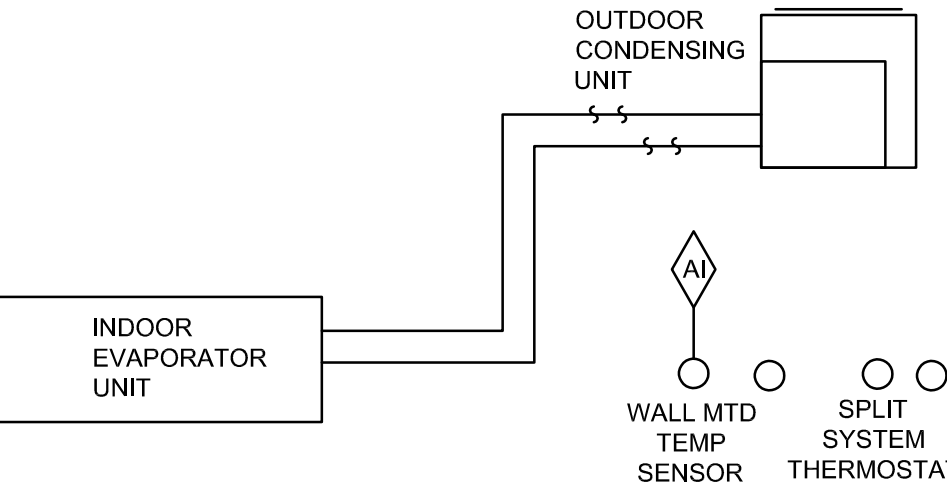
PROVIDE GLOBAL O.A. TEMPERATURE, GLOBAL O.A. DEWPOINT TEMPERATURE, GLOBAL CO2, GLOBAL AIR PRESSURE, AND GLOBAL RELATIVE HUMIDITY TRANSMITTERS.

OUTSIDE AIR PRESSURE SHALL BE INSTALLED ON ALL FOUR SIDES OF THE BUILDING AND PIPED WITH EQUAL LENGTHS OF 1/4" TUBING TO A PIPE MANIFOLD. PIPING BY TCC. LOCATIONS TO BE DETERMINED PER MANUFACTURER'S RECOMMENDATIONS AND ARCHITECT/ENGINEER'S APPROVAL. TCC SHALL PRIME AND PAINT THE DEVICE ENCLOSURE.

GLOBAL SENSORS SHALL CONTINUOUSLY UPDATE BMCS FOR USE IN CONTROLLING MECHANICAL EQUIPMENT AS REQUIRED IN SEQUENCES OF OPERATION.

GLOBAL REFERENCE POINTS

NOT TO SCALE



SPLIT SYSTEM DESCRIPTION:

THE SPLIT SYSTEM MANUFACTURER SHALL PROVIDE A FACTORY INSTALLED CONTROL SYSTEM AND REMOTELY MOUNTED THERMOSTAT CAPABLE OF SCHEDULING 24 HOURS SEVEN DAYS A WEEK.

SEQUENCE OF OPERATION:

THE SPLIT SYSTEM SHALL MAINTAIN SPACE SETPOINT AT 78°F (ADJ.). FACTORY INSTALLED CONTROL SYSTEM SHALL RESTART ON A POWER FAILURE.

ALARMS, INTERLOCKS AND SAFETIES:

WHEN REMOTE TEMP SENSOR READS SPACE TEMPERATURE ABOVE 85°F (ADJ.) OR BELOW 40°F (ADJ.), AN ALARM SHALL BE SENT TO THE BMCS.

SPLIT SYSTEM SS-A

NOT TO SCALE

CONTROL SYMBOLS LIST

SYMBOL:	DESCRIPTION:
	FAN
	MOTOR
	CONTACTOR
	PUMP
	STATIC PRESSURE SWITCH
	FLOAT SWITCH
	LOW LIMIT TEMP SWITCH
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	HUMIDISTAT SENSOR
	OCCUPANCY SENSOR
	PRESSURE SENSOR/MONITOR
	HUMIDISTAT/SENSOR (DUCT MOUNTED)
	PRESSURE SENSOR (DUCT MOUNTED)
	TEMPERATURE SENSOR (DUCT MOUNTED)
	ACTUATOR
	DOOR SWITCH
	DIFFERENTIAL PRESSURE SWITCH
	CURRENT SWITCH
	FLOW METER
	CHECK VALVE
	TEMPERATURE SENSOR WITH WELL
	FLOW SWITCH
	OPEN CONTACT
	CLOSED CONTACT
	MANUAL MOTOR STARTER W/THERMAL OVERLOAD
	BIMCS BUILDING MANAGEMENT CONTROL SYSTEM
	CONTRACTING OFFICER REPRESENTATIVE
	EXHAUST/RELIEF AIR
	NORMALLY CLOSED
	NETWORK CONTROL UNITS
	NORMALLY OPEN
	OUTSIDE AIR
	RETURN AIR
	SUPPLY AIR
	MODULATING
	SECONDARY
	FEEDBACK
	ANALOG INPUT
	ANALOG OUTPUT
	DIGITAL INPUT
	DIGITAL OUTPUT
	HEATING/COOLING COIL
	FILTER
	MOTOR OPERATED DAMPER

GENERAL CONTROL NOTES (APPLY TO ALL CONTROL SHEETS)

- ALL NOTES DO NOT NECESSARILY APPLY TO PROJECT.
- REFER TO EQUIPMENT SCHEDULES TO CROSS REFERENCE WHICH CONTROL DIAGRAMS APPLY TO WHICH ITEMS OF EQUIPMENT.
 - EACH D.I., D.O., A.I. AND A.O. POINT SHOWN FOR ALL CONTROL DIAGRAMS SHALL BE DISCRETE FROM ALL OTHER POINTS EXCEPT AS SPECIFICALLY NOTED.
 - ALL WIRING, CONTROL COMPONENTS, DEVICES AND PROGRAMMING SHOWN ON THESE CONTROL DRAWINGS SHALL BE PROVIDED BY THE TCC UNLESS SPECIFICALLY NOTED OTHERWISE.
 - ALL ACTUATORS SHALL BE OF THE ELECTRICAL TYPE FOR THIS PROJECT UNLESS AN ACTUATOR IS SPECIFICALLY INDICATED ON THE DRAWINGS OR SPECIFICATIONS TO BE PNEUMATIC.
 - ALL MODULATING DAMPER AND VALVE ACTUATORS SHOWN WITH POSITION FEEDBACK SHALL HAVE THE VALVE POSITION DISPLAYED ON GRAPHICAL SCREEN ADJACENT TO THE DAMPER/VALVE COMMAND SIGNAL. DISPLAYED VALVE POSITION SHALL BE FROM THE FEEDBACK DEVICE/CIRCUIT (OUTPUT SIGNAL FROM THE BMCS TO THE ACTUATOR IS NOT ACCEPTABLE).
 - MODULATING SIGNALS SHALL BE DISPLAYED AS % OPEN (SIGNALS DISPLAYED AS % CLOSED ARE NOT ACCEPTABLE).
 - PRESSURE TRANSMITTERS WHOSE SIGNAL IS UTILIZED FOR MAINTAINING DUCT STATIC PRESSURE SHALL BE WIRED DIRECTLY TO THE CONTROLLER WHICH MODULATES FAN SPEED. SIGNAL SHALL BE COMPLETELY INDEPENDENT OF THE BMCS NETWORK.
 - PRESSURE TRANSMITTERS WHOSE SIGNAL IS UTILIZED FOR MAINTAINING DIFFERENTIAL PRESSURE OF ANY PUMPED WATER SYSTEM SUCH AS HEATING HOT WATER SHALL BE WIRED DIRECTLY TO THE CONTROLLER WHICH MODULATES PUMP SPEED. SIGNAL SHALL BE COMPLETELY INDEPENDENT OF THE BMCS NETWORK.
 - ALL CONTROL COMPONENTS SUCH AS RELAYS, SWITCHES, DDC CONTROLLERS, ETC. SHALL BE MOUNTED IN STEEL ENCLOSURES WITH STEEL MOUNTING BACKPLATES.
 - EACH CONTROL PANEL SHALL HAVE A LAMINATED COPY OF THE APPLICABLE SEQUENCE OF OPERATION AND CONTROL DIAGRAM INDICATING THE POINTS, COMPONENTS AND OPERATION OF EQUIPMENT ASSOCIATED WITH EACH PANEL.
 - TCC SHALL WIRE THE CONTROL SIGNAL FROM THE ASSOCIATED ENERGY RECOVERY UNIT, FAN COIL UNIT, AND AIR HANDLING UNIT CONTROL PANEL TO CONTROL THE OPERATION OF COMBINATION FIRE AND/OR SMOKE DAMPERS IN ACCORDANCE WITH SEQUENCE OF OPERATION. TCC SHALL PROVIDE ALL WIRING, CONDUIT, TRANSFORMERS, FUSING AND ALL OTHER ELECTRICAL COMPONENTS REQUIRED FOR COMPLETE INSTALLATION.
 - TCC SHALL EXTEND CONTROL SIGNAL FROM ADDRESSABLE RELAY DEVICE SERVING EACH ENERGY RECOVERY UNIT, FAN COIL UNIT, AND AIR HANDLING UNIT. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS. TCC SHALL EXTEND AND TERMINATE WIRING FOR EQUIPMENT SHUTDOWN.
 - TCC SHALL PROVIDE CONDUIT RUNS FOR OUTDOOR EQUIPMENT AND FOR EQUIPMENT INSTALLED REMOTELY FROM THE MAIN BUILDING THAT IS BEING MONITORED OR CONTROLLED BY THE BMCS.
 - TCC SHALL PROVIDE THERMOSTATS FOR AUTOMATIC CONTROL OF EQUIPMENT AS INDICATED WITHIN THE CONTROL DRAWINGS. THERMOSTAT CONTACT AMP RATING SHALL BE MINIMUM 125% OF THE MAX. CURRENT DRAW FOR THE EQUIPMENT BEING SERVED. WHERE THERMOSTATS CONTROL THE STARTING OF MOTORS SUCH AS FANS, THERMOSTATS SHALL BE RATED FOR MOTOR STARTING APPLICATIONS.
 - ELEMENT LENGTHS FOR BOTH MIXED AIR TEMP SENSORS AND LOW LIMIT TEMP SWITCHES SHALL BE MINIMUM 1 LINEAR FOOT PER SQUARE FOOT OF COIL SURFACE AREA. PROVIDE MULTIPLE SENSORS AND SWITCHES AS NEEDED TO ACHIEVE REQUIRED ELEMENT LENGTHS. LOCATE RESET SWITCHES MAX. 6'-8" ABOVE ADJACENT STANDING SURFACE (I.E. ROOF, PLATFORM OR FLOOR) SO THE RESET SWITCH CAN BE CYCLED WITHOUT THE NEED FOR A LADDER.
 - WHEN EQUIPMENT IS SERVED BY A GENERATOR TO PREVENT GENERATOR OVERLOADING, TCC SHALL PROGRAM A STAGGERED START TIME FOR ALL MECHANICAL EQUIPMENT THAT IS CONTROLLED BY BMCS TO INCLUDE, BUT NOT LIMITED TO, ENERGY RECOVERY UNITS, AIR HANDLERS, PUMPS, EXHAUST FANS, ETC. THE FIRST EQUIPMENT SHALL START 2 MINUTES (ADJ.) FROM THE TIME THE BMCS RECEIVES THE SIGNAL THAT THE TRANSFER SWITCH CHANGED TO EMERGENCY POWER SOURCE WITH ALL EQUIPMENT BEING ENERGIZED WITHIN A 20 MINUTE (ADJ.) TIME SPAN. COORDINATE ORDER OF EQUIPMENT STAGING WITH COR.
 - CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND DO NOT SHOW ALL REQUIRED CONTROL DEVICES AND COMPONENTS. REFER TO FLOOR PLANS, FLOW DIAGRAMS AND DETAILS FOR ADDITIONAL CONTROL DEVICES, COMPONENTS AND REQUIREMENTS NOT SHOWN ON THESE CONTROL DRAWINGS.
 - TCC SHALL PROVIDE ALL CONTROL COMPONENTS AND ACCESSORIES AS REQUIRED FOR EQUIPMENT TO BE CONTROLLED AS DESCRIBED IN THE SEQUENCE OF OPERATION REGARDLESS OF WHETHER ALL CONTROL COMPONENTS OR POINTS ARE SHOWN IN THE ASSOCIATED CONTROL DIAGRAM.

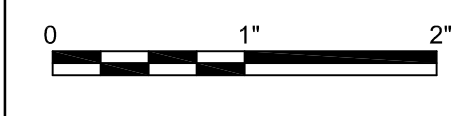


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ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455

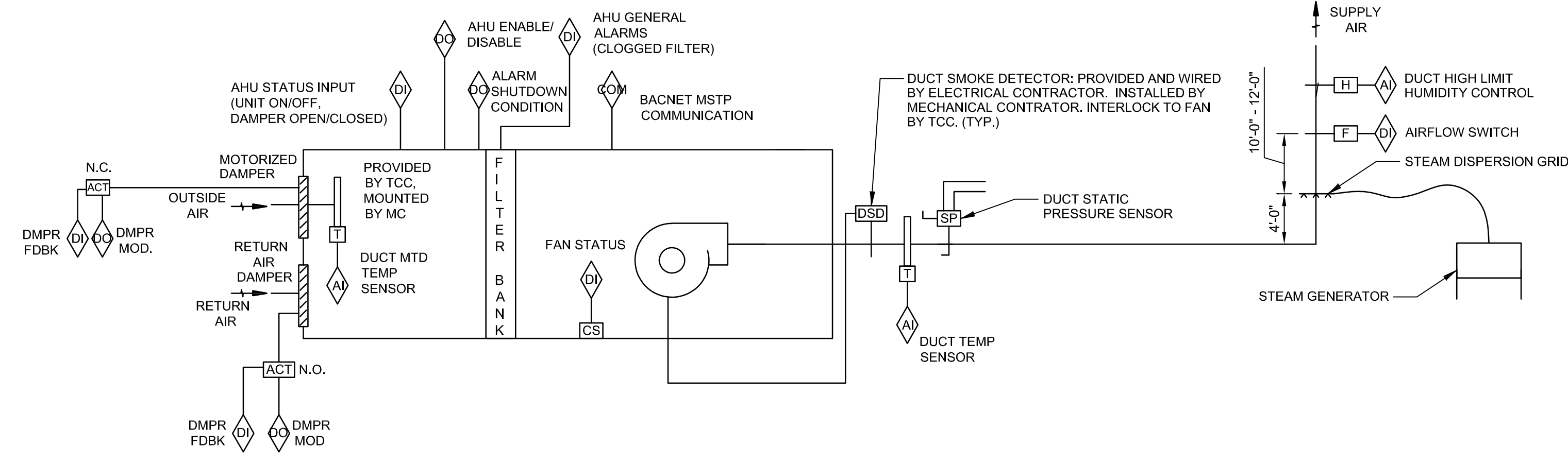


HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003



FILENAME | 00M-602.DWG
 SCALE | NOT TO SCALE

SHEET
00M-602



POINTS PROVIDED WITH AHU CONTROLLER:
POINTS WILL BE MADE AVAILABLE TO BMCS OVER INTERFACE CARD SEE SPECIFICATION SECTION 23 00 00 FOR POINTS PROVIDED WITH AHU.

AHU REPORT GENERATION:
BMCS SHALL MONITOR THE FOLLOWING POINTS ON 10 MINUTE (ADJ.) INTERVALS WITHIN A SINGLE TREND. THE TREND SHALL RUN FOR A 100-DAY (ADJ.) DURATION AT WHICH POINT THE NEWEST VALUES SHALL AUTOMATICALLY OVERWRITE THE OLDEST VALUES:

- TIME
- GLOBAL OUTSIDE AIR TEMP [°F]
- GLOBAL OUTSIDE AIR DEWPOINT [°F]
- GLOBAL OUTSIDE AIR HUMIDITY [%RH]
- SUPPLY AIR TEMP (SAT) [°F]
- SUPPLY AIR TEMP SETPOINT [°F]
- SUPPLY AIR RELATIVE HUMIDITY [%]
- RETURN AIR TEMP (RAT) [°F]
- RETURN AIR RELATIVE HUMIDITY [%]
- PRE-FILTER LOADING (MERV 8 FILTER) [INCHES W.G.]
- FINAL FILTER LOADING (MERV 13 FILTER) [INCHES W.G.]
- SUPPLY DUCT STATIC PRESSURE [INCHES W.G.]
- SUPPLY FAN OUTPUT [% FULL SPEED]

THIS INFORMATION SHALL BE ACCESSIBLE TO VIEW IN GRAPHICAL FORM ON THE BMCS OPERATOR WORKSTATION.

ONCE PER MONTH, THE DDC BMCS SHALL RECORD THE LARGEST AHU AIRFLOW WHICH OCCURRED DURING THAT MONTH. THE DATE, TIME, OUTSIDE AIR TEMPERATURE (AND ALL OTHER VALUES LISTED ABOVE) THAT COINCIDED WITH THAT EVENT SHALL ALSO BE RECORDED. THIS INFORMATION SHALL BE STORED TO A MEMORY LOCATION ON THE BMCS OPERATOR WORKSTATION THAT IS MAINTAINED (NOT AUTOMATICALLY OVERRITTEN).

PACKAGED AIR HANDLING UNIT CONTROL - AHU-A

PACKAGED AHU SYSTEM DESCRIPTION:
THE AHU MANUFACTURER SHALL PROVIDE A FACTORY MOUNTED CONTROL PANEL. ALL AVAILABLE DATA PROVIDED/MONITORED BY THE AHU CONTROL PANEL SHALL BE AVAILABLE TO AND MONITORED BY THE BMCS SYSTEM. REFER TO SPECIFICATION SECTION 23 00 00 FOR A DESCRIPTION OF THE AHU AND THE CONTROLS PROVIDED BY THE MANUFACTURER.

THE TCC SHALL EXTEND THE BMCS NETWORK TO THE AHU UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SPECIFICATION SECTION 23 09 23.02. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION.

BUILDING OCCUPANCY SCHEDULING:
BMCS SHALL BE PROGRAMMED WITH THE FOLLOWING TENTATIVE SCHEDULE:

• OCCUPIED MODE:	MONDAY - FRIDAY	6:00 AM - 6:00 PM (ADJ.)
	SATURDAY - SUNDAY	8:00 AM - 6:00 PM (ADJ.)
• UNOCCUPIED MODE:	MONDAY - FRIDAY	6:00 PM - 6:00 AM (ADJ.)
	SATURDAY - SUNDAY	6:00 PM - 8:00 AM (ADJ.)

EXACT SCHEDULE SHALL BE VERIFIED WITH THE COR.

START-UP AND SYSTEM CHANGE-OVER:
CHANGE-OVER OCCURS AT THE BEGINNING OF EVERY OCCUPIED PERIOD AND WHENEVER THE AHU CONTROLLER SWITCHES BETWEEN COOLING AND HEATING MODES.

OCCUPIED MODE: DURING OCCUPIED PERIODS, THE AHU CONTROLLER SHALL RECEIVE INPUT FROM THE SPACE TEMPERATURE SENSOR(S) AND AVERAGE THE INPUT WHEN APPLICABLE. A CALL FOR A PARTICULAR MODE (HEATING OR COOLING) IS BASED UPON THE AVERAGE OF REQUESTS FROM THE SPACE SENSOR(S).

UNOCCUPIED MODE: IN UNOCCUPIED MODE, DISABLE THE PACKAGED UNIT, CLOSE THE OUTSIDE AIR DAMPER, AND POSITION THE RETURN/EXHAUST AIR DAMPERS FOR FULL RETURN AIR (NO EXHAUST). WHEN A ZONE SENSOR'S OVERRIDE BUTTON IS DEPRESSED DURING UNOCCUPIED PERIOD, OPERATE THE SYSTEM IN OCCUPIED MODE FOR ONE HOUR (ADJ.).

SUPPLY TEMPERATURE LIMITS: DURING ANY MODE, WHEN THE SUPPLY AIR TEMPERATURE EXCEEDS 110° F (ADJ.), OR FALLS BELOW 50° F (ADJ.), DISABLE THE COOLING OR HEATING IN THE PACKAGED UNIT AND INITIATE AN ALARM IN THE CONTROL SYSTEM.

FAN OPERATION: RUN THE UNIT FAN IN ALL MODES EXCEPT UNOCCUPIED MODE. ANY TIME THE SUPPLY FAN IS RUNNING, OPEN THE OUTSIDE AIR DAMPER TO PROVIDE MINIMUM OUTDOOR AIR. AHU CONTROLLER SHALL MODULATE SIGNAL TO SUPPLY FAN EC MOTOR BASED ON SPACE TEMPERATURE (SINGLE ZONE VAV CONTROL).

SHUTDOWN: WHEN SHUTDOWN IS INITIATED, PLACE THE PACKAGED UNIT IN UNOCCUPIED MODE.

FIRE ALARM: FOR FIRE ALARM MODE OPERATION, THE SUPPLY FAN WILL BE SHUT DOWN BY HARDWIRED CONTACT. ONCE RESET, THE AFFECTED UNIT(S) WILL RESUME THE CURRENT MODE OF OPERATION.

COOLING MODE ENABLE: WHEN THE AHU CONTROLLER RECEIVES A CALL FOR COOLING, ENABLE THE UNIT'S COMPRESSOR. RESET THE SUPPLY AIR TEMPERATURE UPWARD FROM 55°F TO 65°F AS THE OUTDOOR TEMPERATURE FALLS FROM 90°F OR GREATER TO 65°F OR LOWER. ALLOW THE PACKAGE UNIT'S CONTROLS TO MODULATE THE COMPRESSOR TO SUPPLY THE NEEDED AIR TEMPERATURE. THE PACKAGE UNIT'S INTERNAL CONTROLS PROTECT THE EQUIPMENT FROM EXCESSIVE OPERATING CONDITIONS INCLUDING LOW OIL PRESSURE, HIGH DISCHARGE PRESSURE, LOW SUCTION PRESSURE, EXCESSIVE CYCLING (MORE THAN ONE EVERY 5 MINUTES OR 6 CYCLES/HOUR), LOW REFRIGERANT CHARGE, HIGH AND LOW REFRIGERANT TEMPERATURES, ETC. IF EXCESSIVE OPERATING CONDITIONS OCCUR, GENERATE AN ALARM ON THE AHU CONTROLLER AND SHUT DOWN THE PACKAGE UNIT TO PROTECT IT.

DEHUMIDIFICATION MODE: UNIT CONTROLS SHALL MODULATE COMPRESSOR(S) AND CONTROL HOT GAS REHEAT TO MAINTAIN SPACE RELATIVE HUMIDITY WITHIN 40-60% (ADJ.).

COOLING MODE SHUTDOWN: IF A CALL FOR COOLING HAS BEEN SATISFIED, A SYSTEM FAILURE HAS OCCURRED, OR THE SUPPLY AIR TEMPERATURE HAS FALLEN BELOW 50° F FOR MORE THAN ONE MINUTE, CYCLE THE COMPRESSOR OFF. AFTER THE COMPRESSOR HAS SHUT DOWN, CONTINUE RUNNING THE SUPPLY FAN FOR 5 MINUTES BEFORE SHUTTING IT DOWN (EVEN IF THE UNOCCUPIED MODE IS ISSUED).

HEATING MODE ENABLE: WHEN THE AHU CONTROLLER RECEIVES A CALL FOR HEATING THE PACKAGED UNIT SHALL MODULATE THE GAS HEATER TO SUPPLY HEAT TO THE SPACE. RESET THE SUPPLY AIR TEMPERATURE UPWARD FROM 80°F (ADJ.) TO 90°F (ADJ.) AS THE OUTDOOR TEMPERATURE FALLS FROM 65° F OR GREATER TO 40° F OR LOWER. THE PACKAGE UNIT'S INTERNAL CONTROLS PROTECT THE EQUIPMENT FROM EXCESSIVE OPERATING CONDITIONS INCLUDING HIGH TEMPERATURE, FLAME FAILURE, EXCESSIVE CYCLING (MORE THAN ONE EVERY 5 MINUTES OR 6 CYCLES/HOUR), LOW GAS PRESSURE, ETC. IF EXCESSIVE OPERATING CONDITIONS OCCUR, GENERATE AN ALARM ON THE AHU CONTROLLER AND SHUT DOWN THE PACKAGE UNIT TO PROTECT IT.

HEATING MODE SHUTDOWN: IF A CALL FOR HEATING HAS ENDED, A SYSTEM FAILURE HAS OCCURRED, OR THE SUPPLY AIR TEMPERATURE HAS RISEN ABOVE 110° F FOR MORE THAN ONE MINUTE, CYCLE THE HEATER OFF. AFTER THE HEATER HAS SHUT DOWN, CONTINUE RUNNING THE SUPPLY FAN FOR 5 MINUTES BEFORE SHUTTING IT DOWN (EVEN IF THE UNOCCUPIED MODE IS ISSUED BY THE AHU CONTROLLER).

HEATING SYSTEM OUTDOOR AIR TEMPERATURE LOCKOUT: IF THE OUTDOOR AIR TEMPERATURE RISES ABOVE 68° F (ADJ.), THE HEATING SYSTEM SHALL BE LOCKED OUT. IF THE OUTDOOR AIR TEMPERATURE FALLS BELOW 65° F (ADJ.), THE HEATER WILL BE ALLOWED TO FUNCTION AS REQUIRED TO MAINTAIN LOAD.

HVAC EMERGENCY SHUTOFF SWITCH: WHENEVER ANY OF THE HVAC EMERGENCY SHUTOFF SWITCHES ARE SWITCHED TO THE ON POSITION, ALL OUTSIDE AND EXHAUST AIR DAMPERS SHALL CLOSE AND THE ASSOCIATED EQUIPMENT SHALL TURN OFF. SHUTOFF SWITCH SHALL CONSIST OF RED PUSH BUTTON TO ACTIVATE, LOCATED AS SHOWN ON THE PLANS IN A POLYCARBONATE HOUSING AND SHALL BE LABELED "EMERGENCY HVAC SHUTOFF." HVAC EMERGENCY SHUTOFF SWITCHES SHALL BE HARD WIRED TO THE AHUS.

PACKAGED HUMIDIFIER SYSTEM DESCRIPTION:

THE HUMIDIFIER MANUFACTURER SHALL PROVIDE FACTORY CONTROLS TO FULLY OPERATE HUMIDIFIER. ALL AVAILABLE DATA PROVIDED/MONITORED BY THE HUMIDIFIER CONTROLS SHALL BE AVAILABLE TO AND MONITORED BY THE BMCS SYSTEM. REFER TO SPECIFICATION SECTION 23 81 00 FOR A DESCRIPTION OF THE HUMIDIFIER AND THE CONTROLS PROVIDED BY THE MANUFACTURER.

THE TCC SHALL EXTEND THE BMCS NETWORK TO THE HUMIDIFIER UNITARY CONTROLLER PER THE PROTOCOL SPECIFIED IN SPECIFICATION SECTION 23 09 23.02. THE TCC SHALL PROVIDE ALL ADDITIONAL CONTROL COMPONENTS REQUIRED TO ACCOMPLISH THE SEQUENCE OF OPERATION.

OPERATION: HUMIDIFIER CONTROL SYSTEM SHALL MODULATE STEAM OUTPUT TO DISPERSION GRID TO MAINTAIN A SPACE HUMIDITY SETPOINT OF 45% RH (ADJ.). AIRFLOW PROVING SWITCH LOCATED IN THE SUPPLY DUCT DOWNSTREAM OF THE DISPERSION GRID SHALL PROVE AIRFLOW PRIOR TO ALLOWING HUMIDIFIER TO DISPERSE STEAM FOR HUMIDIFICATION. HIGH LIMIT TRANSMITTER LOCATED IN THE SUPPLY DUCT DOWNSTREAM OF THE DISPERSION GRID SHALL SENSE HUMIDITY IN SUPPLY AIRSTREAM AND SHUT DOWN HUMIDIFIER IF ADJUSTABLE UPPER LIMIT IS REACHED.

PACKAGED AIR HANDLING UNIT CONTROL - AHU-A

NOT TO SCALE

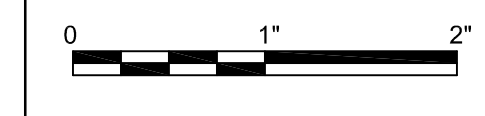


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MECHANICAL	J. LEWIS
ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



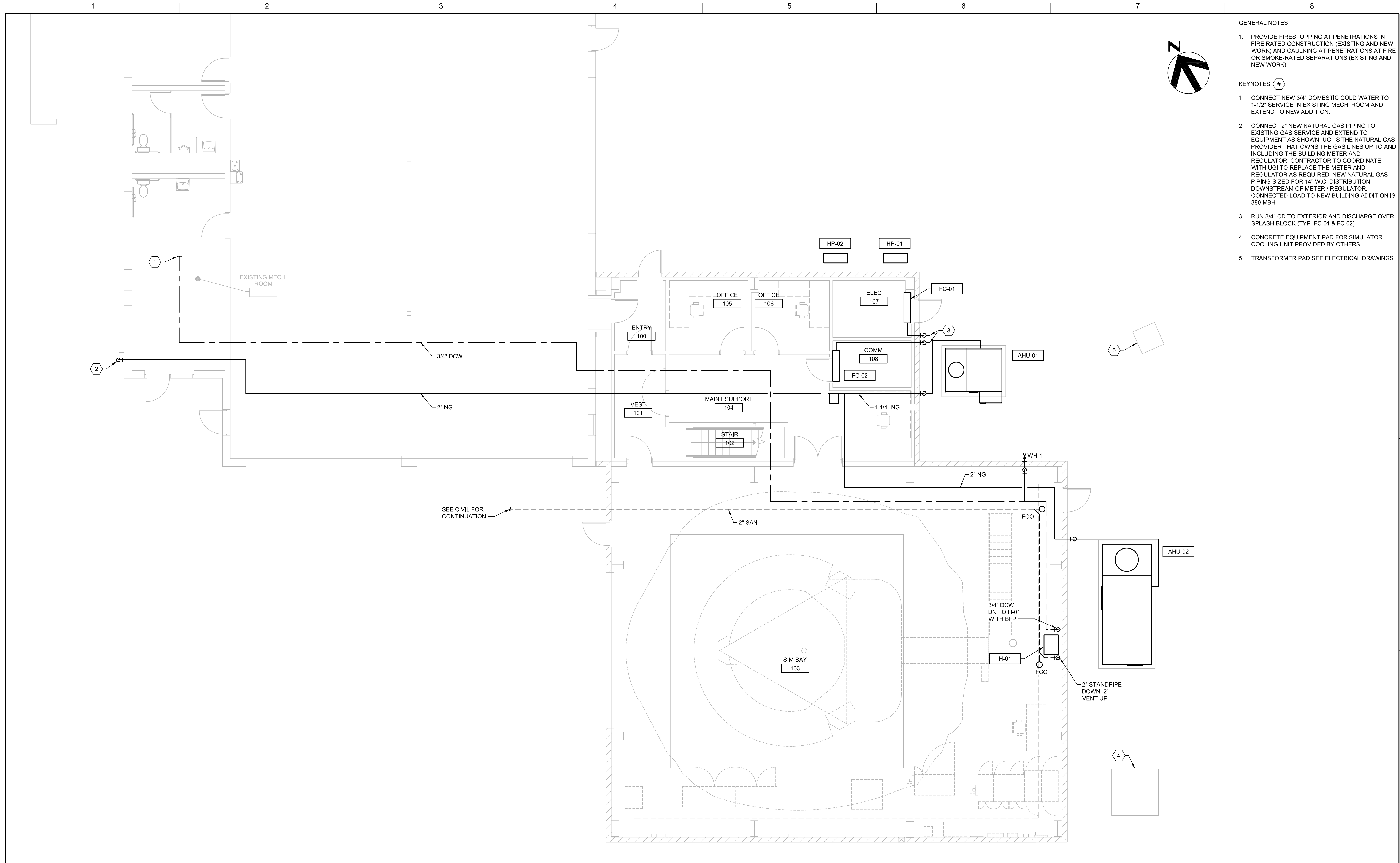
HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003



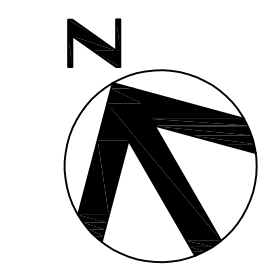
SIMULATOR BUILDING MECHANICAL CONTROLS

FILENAME | 00M-603.DWG
SCALE | NOT TO SCALE

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00M-603



- GENERAL NOTES**
1. PROVIDE FIRESTOPPING AT PENETRATIONS IN FIRE RATED CONSTRUCTION (EXISTING AND NEW WORK) AND CAULKING AT PENETRATIONS AT FIRE OR SMOKE-RATED SEPARATIONS (EXISTING AND NEW WORK).
- KEYNOTES** (#)
1. CONNECT NEW 3/4" DOMESTIC COLD WATER TO 1-1/2" SERVICE IN EXISTING MECH. ROOM AND EXTEND TO NEW ADDITION.
 2. CONNECT 2" NEW NATURAL GAS PIPING TO EXISTING GAS SERVICE AND EXTEND TO EQUIPMENT AS SHOWN. UGI IS THE NATURAL GAS PROVIDER THAT OWNS THE GAS LINES UP TO AND INCLUDING THE BUILDING METER AND REGULATOR. CONTRACTOR TO COORDINATE WITH UGI TO REPLACE THE METER AND REGULATOR AS REQUIRED. NEW NATURAL GAS PIPING SIZED FOR 14" W.C. DISTRIBUTION DOWNSTREAM OF METER / REGULATOR. CONNECTED LOAD TO NEW BUILDING ADDITION IS 380 MBH.
 3. RUN 3/4" CD TO EXTERIOR AND DISCHARGE OVER SPLASH BLOCK (TYP. FC-01 & FC-02).
 4. CONCRETE EQUIPMENT PAD FOR SIMULATOR COOLING UNIT PROVIDED BY OTHERS.
 5. TRANSFORMER PAD SEE ELECTRICAL DRAWINGS.

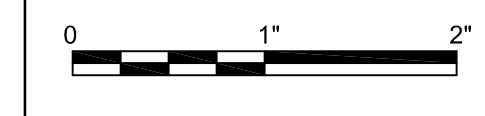


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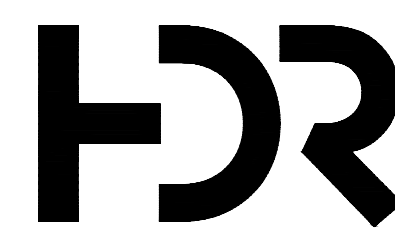
**SIMULATOR BUILDING
FIRST FLOOR PLUMBING PLAN**

FILENAME | 00P-101.DWG
SCALE | 3/16" = 1'-0"

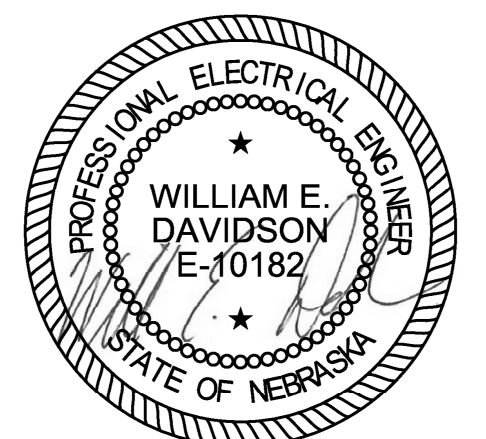
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00P-101

ONE LINE, POWER AND LIGHTING SYMBOLOGY

<p> LOW VOLTAGE CIRCUIT BREAKER (CB) RATING AND NO. OF POLES AS SHOWN. WHEN SPECIFIC TYPE, OTHER THAN MCCB, IS REQUIRED, X INDICATES TYPE.</p> <p>TYPES: MCCB - MOLDED CASE ICCB - INSULATED CASE LVP - LOW VOLTAGE POWER MCP - MOTOR CIRCUIT PROTECTOR [RATING PER CONNECTED LOAD]</p> <p>TRIP UNIT: L - LONG TIME PICKUP S - SHORT TIME PICKUP I - INSTANTANEOUS PICKUP G - GROUND FAULT PICKUP A - ARC FLASH MAINTENANCE</p> <p> INTERLOCK (X INDICATES TYPE)</p> <p>TYPES: E - ELECTRICAL M - MECHANICAL K - KEY</p> <p> GROUND FAULT PROTECTION</p> <p> MEDIUM VOLTAGE CIRCUIT BREAKER</p> <p> FUSE, RATING, AND NUMBER OF FUSES AS NOTED</p> <p> FUSED CUTOFF, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED</p> <p> FUSIBLE SWITCH, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED (3 POLE UON)</p> <p> NON-FUSED SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED (3 POLE UON)</p> <p> DISCONNECT OR DRAWOUT CONNECTION</p> <p> MAGNETIC MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MAGNETIC MOTOR STARTER</p> <p> MOTOR/LOAD CONTROLLER AND SEPARATELY MOUNTED MOTOR/LOAD CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT</p> <p>MOTOR STARTER AND CONTROLLER SUBSCRIPTS: A - MAGNETIC STARTER NEMA SIZE B - STARTER TYPE NONE - FULL VOLTAGE NON-REVERSING (FVNR) FVR - FULL VOLTAGE REVERSING 2S - TWO SPEED RVAT - REDUCED VOLTAGE AUTO TRANSFORMER C - CONTROL DIAGRAM OR CONTROLS SCHEDULE NUMBER (IF REQUIRED) D - CONTROLLER TYPE VFD - VARIABLE FREQUENCY DRIVE SS - SOLID STATE CONT - CONTACTOR</p> <p> SEPARATELY MOUNTED COMBINATION MOTOR STARTER OR CONTROLLER. SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</p> <p> SEPARATELY MOUNTED MOTOR STARTER OR CONTROLLER. SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION.</p> <p> NON-FUSED SAFETY SWITCH, 30A, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE. MR INDICATES FUSE SIZE PER MANUFACTURER'S RECOMMENDATION</p> <p> SAFETY SWITCH, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE. MR INDICATES FUSE SIZE PER MANUFACTURER'S RECOMMENDATION</p> <p> SEPARATELY MOUNTED CIRCUIT BREAKER. SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</p>	<p> MOTOR WITH DESIGN HORSEPOWER WHEN INDICATED</p> <p> GENERATOR</p> <p> TRANSFER SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED ATS - AUTOMATIC MTS - MANUAL</p> <p> TRANSFORMER Δ 3-PHASE, 3-WIRE DELTA CONNECTION ⏚ 3-PHASE, 4-WIRE GROUNDED WYE CONNECTION</p> <p> SWITCHBOARD OR PANELBOARD NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED</p> <p> NON-MOTOR LOAD WITH DESIGN KVA, KW, OR AMP</p> <p> VOLTAGE TRANSFORMER (VT, PT, OR CPT)</p> <p> CURRENT TRANSFORMER (CT)</p> <p> UTILITY WATT-HOUR METER PER UTILITY REQUIREMENTS</p> <p> DIGITAL METERING PACKAGE</p> <p> GROUND</p> <p> LIGHTNING ARRESTER</p> <p> LOW VOLTAGE SURGE PROTECTIVE DEVICE</p> <p> SELECTOR SWITCH</p> <p> PUSHBUTTON</p> <p> INSTRUMENTATION/CONTROL DEVICE</p> <p> CONTROL PANEL INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</p> <p> CONTROL PANEL WITH DISCONNECT SWITCH INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</p> <p> JUNCTION OR PULL BOX</p> <p> PANELBOARD 250V TO 600V</p> <p> PANELBOARD LESS THAN 250V</p> <p> ELECTRICAL EQUIPMENT ENCLOSURE: SWITCHBOARD, MOTOR CONTROL CENTER, CONTROL PANEL, TRANSFORMER OR OTHER EQUIPMENT AS INDICATED. ESTIMATED SIZE AS INDICATED. WHEN USED X INDICATES EQUIPMENT TYPE.</p> <p>EQUIPMENT TYPES: ATS - AUTOMATIC TRANSFER SWITCH CP - CONTROL PANEL MTS - MANUAL TRANSFER SWITCH MCC - MOTOR CONTROL CENTER UPS - UNINTERRUPTIBLE POWER SUPPLY VFD - VARIABLE FREQUENCY DRIVE SB - SWITCHBOARD SG - SWITCHGEAR T - TRANSFORMER</p>	<p> CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> WALL MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> POLE/STANCHION MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> EMERGENCY LIGHT, NUMBER OF ATTACHED HEADS SHOWN</p> <p> EMERGENCY LIGHT, REMOTE MOUNTED HEAD</p> <p> DOUBLE-FACED CEILING OR WALL-MOUNTED EXIT LIGHT (DIRECTIONAL ARROWS IF REQUIRED AS INDICATED ON PLANS)</p> <p> SINGLE-FACED CEILING OR WALL-MOUNTED EXIT LIGHT (DIRECTIONAL ARROWS IF REQUIRED AS INDICATED ON PLANS)</p> <p>LIGHTING FIXTURE SUBSCRIPTS: X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD Z - INDICATES CONTROLLING SWITCH (IF REQUIRED) NL - NIGHT LIGHT UNSWITCHED</p> <p> TOGGLE SWITCH</p> <p>SUBSCRIPTS: X - INDICATES TYPE NONE - SINGLE POLE 2 - DOUBLE POLE 3 - THREE-WAY 4 - FOUR-WAY K - KEY SWITCH P - PILOT LIGHT L - LIGHTED HANDLE DM - DIMMING MC - MOMENTARY CONTACT T - TIMER Y - INDICATES CONTROLLING SWITCH (IF REQUIRED)</p> <p> PHOTOCELL</p> <p> TIME CLOCK</p> <p> LIGHTING CONTROL OCCUPANCY SENSOR, WALL MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</p> <p> LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</p> <p> ROOM/AREA LIGHTING CONTROL TYPE. SEE LIGHTING CONTROL SCHEDULE FOR REQUIREMENTS</p> <p> LOW VOLTAGE DIGITAL WALL SWITCH, NUMBER INDICATES QUANTITY OF PUSH BUTTONS PER SINGLE GANG PLATE, LETTER INDICATES CONTROL ZONE WHEN SHOWN</p>	<p> PLUG-IN RECEPTACLE STRIP, QUANTITY AND SPACING OF RECEPTACLES AS NOTED OR SPECIFIED</p> <p> SPECIAL-PURPOSE RECEPTACLE AS DEFINED ON PLANS</p> <p> TWO RECEPTACLES IN 2-GANG BOX UNDER COMMON COVER PLATE</p> <p> DUPLEX RECEPTACLE</p> <p> SIMPLEX RECEPTACLE</p> <p> RECESSED FLOOR MOUNTED BOX, QUANTITY AND TYPE OF RECEPTACLES AS INDICATED</p> <p>SUBSCRIPTS: X - INDICATES TYPE GFCI - GROUND FAULT CIRCUIT INTERRUPTER IG - ISOLATED GROUND TR - TAMPER RESISTANT PLH - PLUG LOAD HALF CONTROLLED PLD - PLUG LOAD DUAL CONTROLLED USB - USB CHARGING STATION SPD - SURGE PROTECTIVE DEVICE Y - INDICATES CONTROLLING SWITCH (IF REQUIRED)</p> <p> CONDUIT TURNING UP</p> <p> CONDUIT TURNING DOWN</p> <p> HOMERUN TO PANEL SINGLE PHASE: 2#12, 1#12G IN 3/4" C THREE PHASE: 3#12, 1#12G IN 3/4" C UNLESS OTHERWISE NOTED, CONDUCTOR SIZE IS FOR ENTIRE CIRCUIT</p> <p> CONDUIT CONNECTION TO EQUIPMENT</p> <p> CIRCUIT RUN BETWEEN DEVICES EXPOSED IN NON-ARCHITECTURALLY FINISHED AREAS OR CONCEALED IN ARCHITECTURALLY FINISHED AREAS. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</p> <p> CONDUIT RUN BETWEEN DEVICES CONCEALED IN NON-ARCHITECTURALLY FINISHED AREAS OR UNDER FLOOR SLAB. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</p> <p> CIRCUIT HASH MARKS (WHEN INDICATED) LONG, SHORT, SINGLE DOT, AND DOUBLE DOT REPRESENT PHASE, NEUTRAL, EQUIPMENT GROUND, AND ISOLATED EQUIPMENT GROUND, RESPECTIVELY. #12 IN 3/4" CONDUIT UNLESS OTHERWISE INDICATED.</p> <p> CIRCUIT CONTINUATION</p> <p> CONDUIT STUBBED OUT AND CAPPED</p> <p> CORD AND PLUG CONNECTION</p> <p> CONDUIT TAG OR CIRCUIT NUMBER - WIRE AND CONDUIT SIZE AS SPECIFIED IN CIRCUIT SCHEDULE ON THE SHEETS</p> <p> GROUND CABLE</p> <p> GROUND ROD</p> <p>GENERAL NOTES: 1. THIS IS A STANDARD ELECTRICAL SYMBOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT. 2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE. 3. SEE P-10 LEGEND SHEET FOR PROJECT-SPECIFIC SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.</p>
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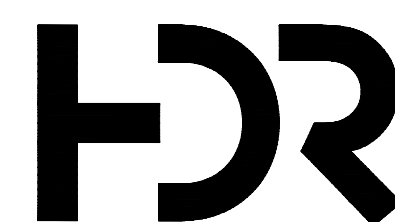
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ELECTRICAL LEGEND

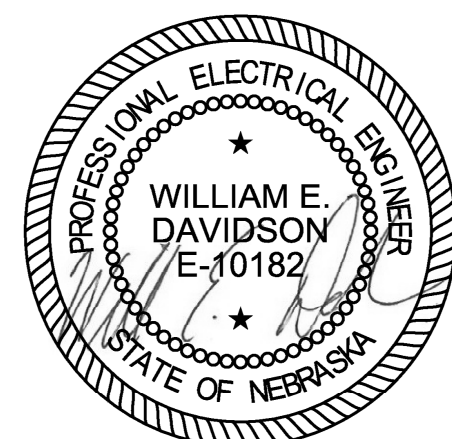
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1	2	3	4	5	6	7	8
COMMUNICATION SYMBOLOGY		EMERGENCY ALARM SYMBOLOGY		CONTROL SYMBOLOGY		CONTROL SYMBOLOGY	
WALL MOUNTED TELEPHONE OUTLET WALL MOUNTED DATA OUTLET <small>N - NIPR (NON-CLASSIFIED INTERNET PROTOCOL) S - SIPR (SECRET INTERNET ROUTER NETWORK)</small> WALL MOUNTED COMBINATION TELEPHONE AND DATA OUTLET RECESSED FLOOR MOUNTED TELEPHONE OUTLET RECESSED FLOOR MOUNTED DATA OUTLET RECESSED FLOOR MOUNTED COMBINATION TELEPHONE AND DATA OUTLET		ALARM BELL ALARM HORN ALARM FLASHING LIGHT ALARM BELL AND FLASHING LIGHT COMBINATION UNIT ALARM HORN AND FLASHING LIGHT COMBINATION UNIT PUSHBUTTON OR PULLSTATION		ELECTRICAL CONNECTION NO ELECTRICAL CONNECTION SOLENOID VALVE CONTROL/RELAY COIL X INDICATES TYPE, Y INDICATES LOOP NO. WHEN USED <small>TYPES: CR - CONTROL RELAY PC - PHOTOCELL DP - DEFINITE PURPOSE RELAY TC - TIME CLOCK LC - LIGHTING CONTACTOR TR - TIMING RELAY M - MOTOR STARTER</small>		INDICATING LIGHT, X INDICATES LENS COLOR PUSH TO TEST INDICATING LIGHT, X INDICATES LENS COLOR <small>LENS COLORS: R - RED Y - YELLOW G - GREEN W - WHITE B - BLUE A - AMBER</small>	
AUDIO/VISUAL SYMBOLOGY		SITE SYMBOLOGY		CONTROL SYMBOLOGY		CONTROL SYMBOLOGY	
TELEVISION OUTLET CEILING MOUNT SPEAKER WALL MOUNT SPEAKER <small>SPEAKER SUBSCRIPTS: X - INDICATES HEIGHT</small> HORN TYPE TRANSDUCER VOLUME CONTROL HEAD END EQUIPMENT FLOOR MOUNTED MICROPHONE JACK WALL MOUNTED MICROPHONE JACK		EXTERIOR PAD MOUNTED TRANSFORMER POLE - MOUNTED TRANSFORMER ELECTRICAL HANDHOLE OR MANHOLE <small>X - INDICATES SEQUENCE NUMBER Y - MHX OR HHX</small> POLE/STANCHION MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED POLE MOUNTED, AREA OR ROADWAY LUMINAIRE, LAMP TYPE AS SPECIFIED HIGH MAST LIGHTING, NUMBER OF LUMINAIRES AS SPECIFIED <small>LIGHTING FIXTURE SUBSCRIPTS: X - INDICATES LUMINAIRE/POLE TYPE PER LUMINAIRE SCHEDULE Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD</small> POWER POLE DOWNGUY UNDERGROUND ELECTRICAL AND COMMUNICATIONS SYSTEMS PATHWAY OVERHEAD ELECTRICAL AND COMMUNICATIONS SYSTEMS PATHWAY		NORMALLY OPEN CONTACT (N.O.) NORMALLY CLOSED CONTACT (N.C.) NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS ENERGIZED NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS ENERGIZED NORMALLY OPEN TIME DELAY RELAY CONTACT WITH TIME DELAY ON OPENING AFTER COIL IS DE-ENERGIZED NORMALLY CLOSED TIME DELAY RELAY CONTACT WITH TIME DELAY ON CLOSING AFTER COIL IS DE-ENERGIZED NORMALLY OPEN TEMPERATURE SWITCH <small>CLOSE ON RISING TEMPERATURE</small> NORMALLY CLOSED TEMPERATURE SWITCH <small>OPEN ON RISING TEMPERATURE</small> NORMALLY OPEN FLOW SWITCH <small>CLOSE ON INCREASING FLOW</small> NORMALLY CLOSED FLOW SWITCH <small>OPEN ON INCREASING FLOW</small> NORMALLY OPEN LEVEL SWITCH, CLOSE ON RISING LEVEL NORMALLY CLOSED LEVEL SWITCH, OPEN ON RISING LEVEL NORMALLY OPEN PRESSURE SWITCH, CLOSE ON INCREASING PRESSURE NORMALLY CLOSED PRESSURE SWITCH, OPEN ON INCREASING PRESSURE NORMALLY OPEN LIMIT SWITCH, CLOSE ON REACHING LIMIT NORMALLY CLOSED LIMIT SWITCH, OPEN ON REACHING LIMIT MICROPROCESSOR (PLC, RTU, ETC.) OUTPUT MICROPROCESSOR (PLC, RTU, ETC.) INPUT FIELD WIRING EXTERNAL TO CONTROL PANEL 3 POSITION SELECTOR SWITCH, MAINTAINED CONTACTS UNLESS OTHERWISE NOTED, 2-POSITION SIMILAR NORMALLY OPEN PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED NORMALLY CLOSED PUSHBUTTON, MOMENTARY CONTACT UNLESS OTHERWISE NOTED		THERMAL OVERLOAD ELEMENT THERMAL OVERLOAD RELAY CONTACT. WHEN SHOWN X INDICATES QUANTITY. CONTROL POWER TRANSFORMER (CPT) RUN TIME METER	
SECURITY SYMBOLOGY							
DOOR POSITION SWITCH COMBINATION ELECTRIC DOOR STRIKE AND POSITION SWITCH PROXIMITY CARD READER PROXIMITY CARD READER WITH KEYPAD DUAL TECHNOLOGY MOTION DETECTOR REQUEST TO EXIT MOTION DETECTOR REQUEST TO EXIT PUSH BUTTON GLASS BREAK DETECTOR CCTV CAMERA <small>PAN/TILT/ZOOM WHEN INDICATED</small> SECURITY EQUIPMENT CABINET REMOTE KEYPAD/CONTROL STATION							



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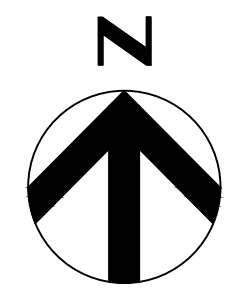
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PROJECT NO.: SHYQ192003**

ELECTRICAL LEGEND

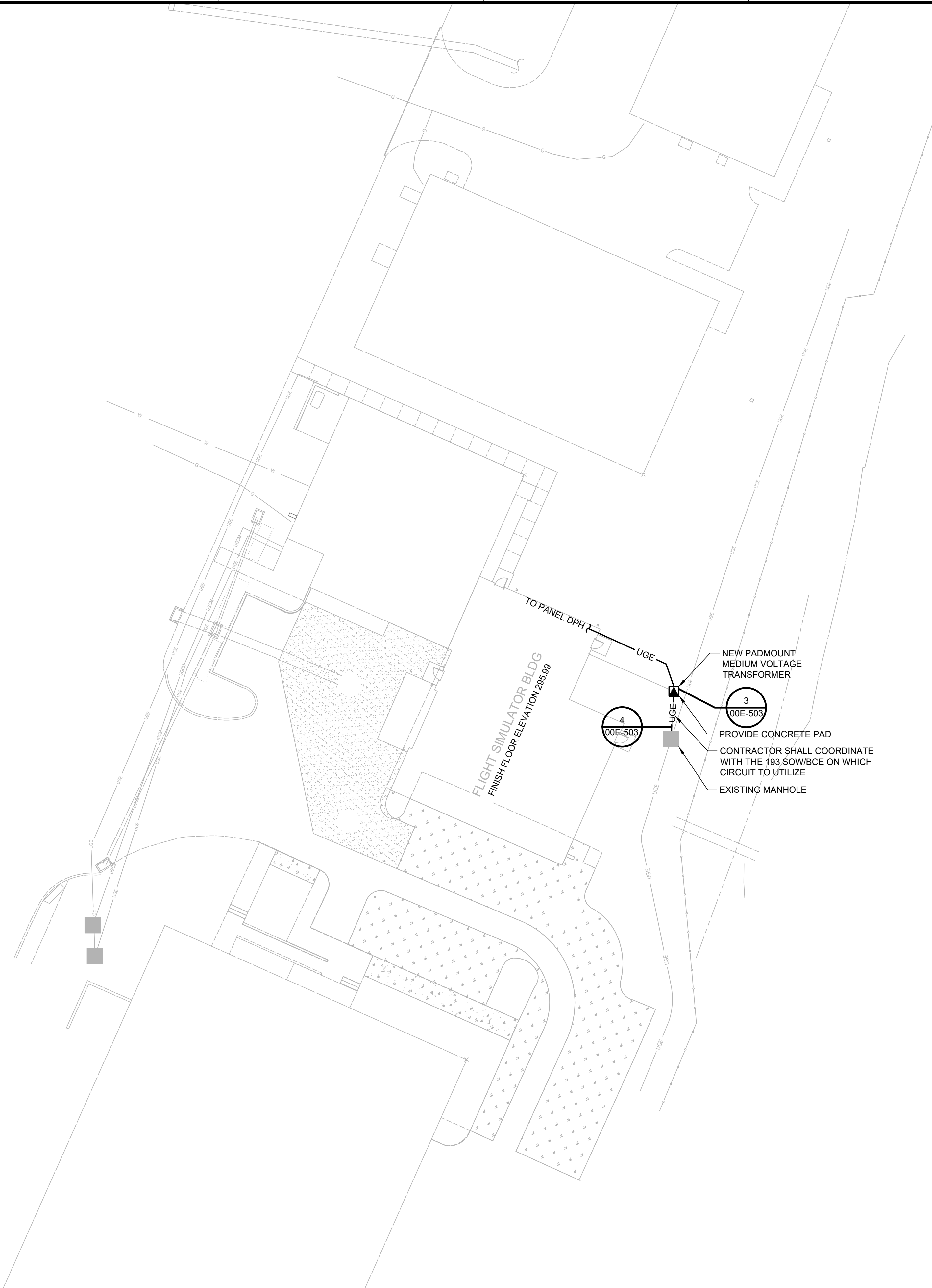


FILENAME
SCALE

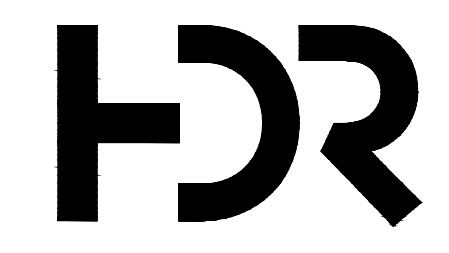
SHEET
00E-002



GENERAL NOTES
 1. ALL MEDIUM VOLTAGE ELECTRICAL CONNECTIONS WITHIN MANHOLE SHALL BE MADE WATERTIGHT.

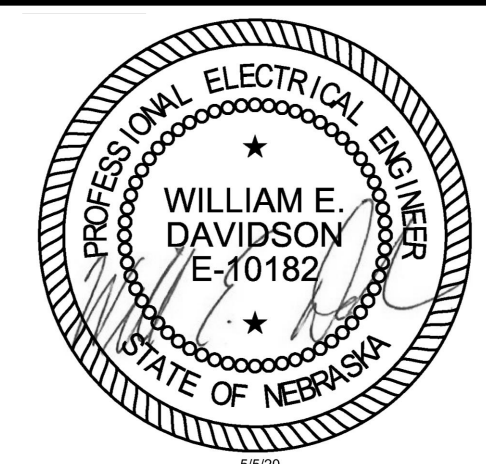


D
C
B
A

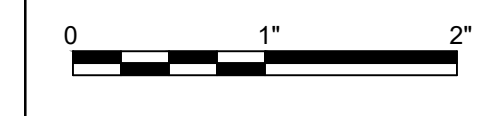


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PROJECT MANAGER	TOM SVOBODA
CIVIL	B. WECKERLIN
STRUCTURAL	J. LENZ
ARCHITECT	S. HEANEY
MECHANICAL	J. LEWIS
ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



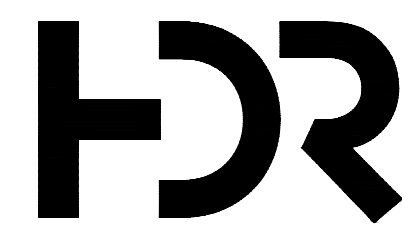
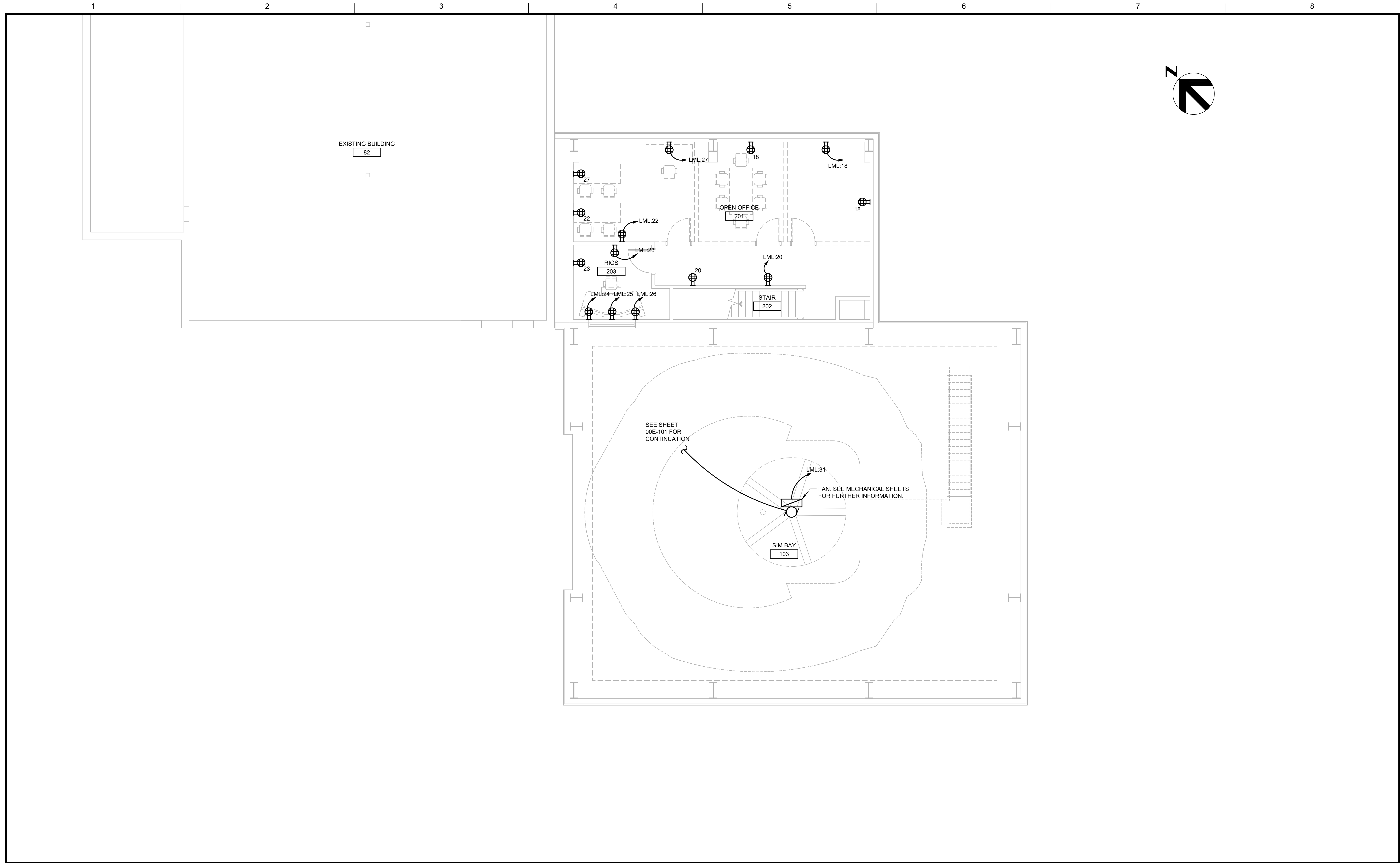
HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003



SIMULATOR BUILDING
ELECTRICAL SITE PLAN

FILENAME | 00E-100.DWG
 SCALE | 1" = 20'-0"

SHEET
00E-100



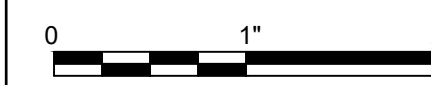
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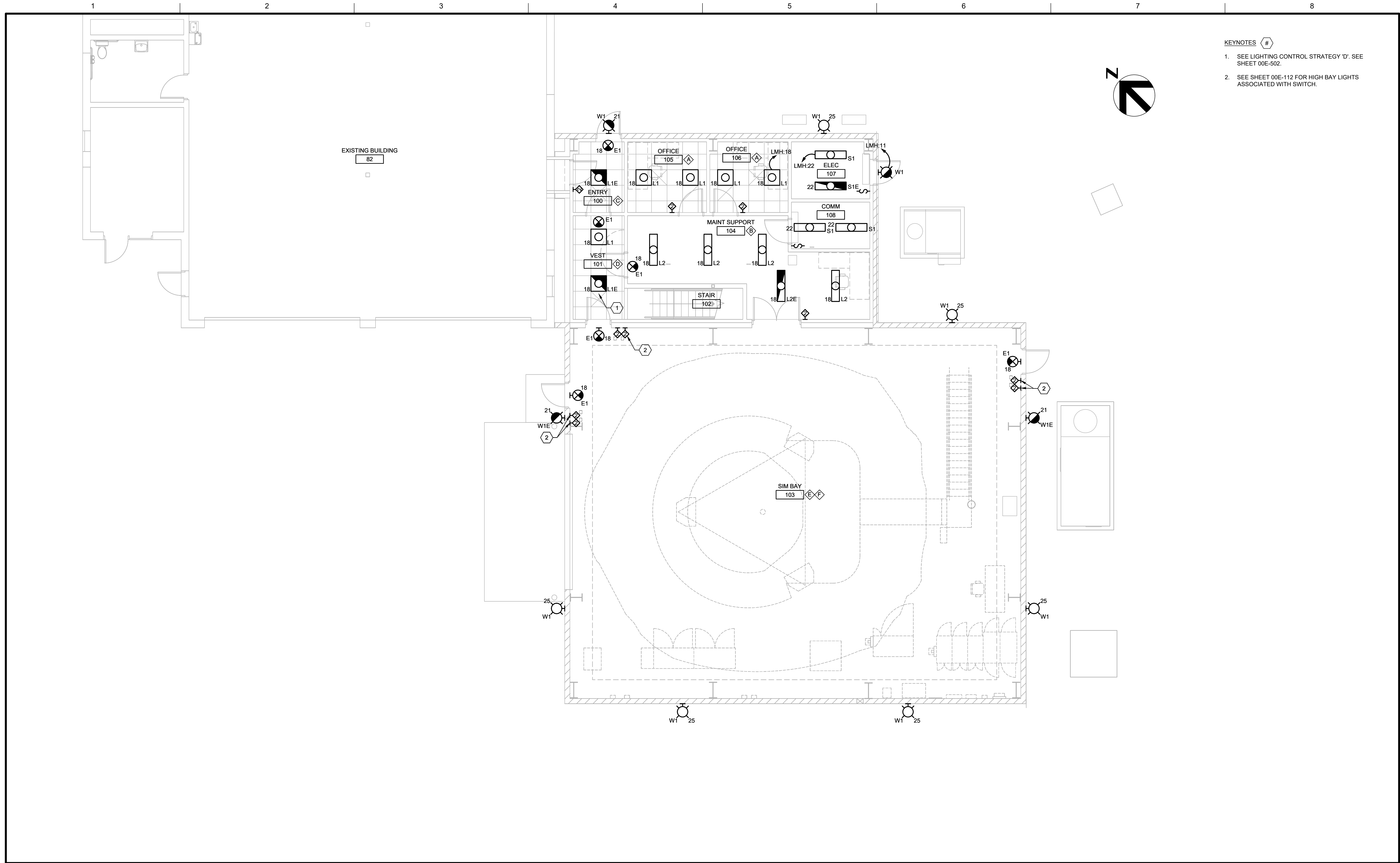
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 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003

**SIMULATOR BUILDING
 SECOND FLOOR POWER PLAN**

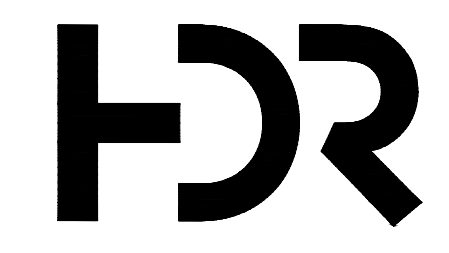


FILENAME | 00E-101.DWG
 SCALE | 3/16" = 1'-0"

SHEET
00E-102

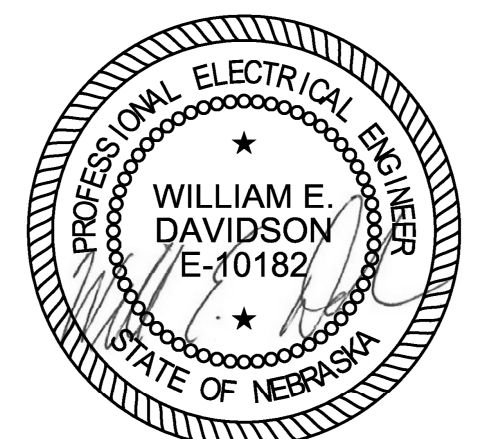


- KEYNOTES** #
1. SEE LIGHTING CONTROL STRATEGY 'D'. SEE SHEET 00E-502.
 2. SEE SHEET 00E-112 FOR HIGH BAY LIGHTS ASSOCIATED WITH SWITCH.



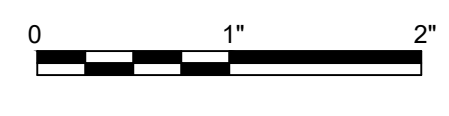
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HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003

SIMULATOR BUILDING
FIRST FLOOR LIGHTING PLAN

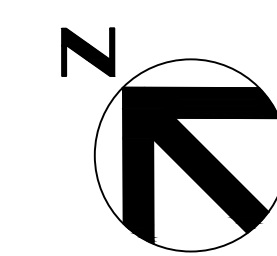


FILENAME | 00E-111.DWG
 SCALE | 3/16" = 1'-0"

SHEET
00E-111

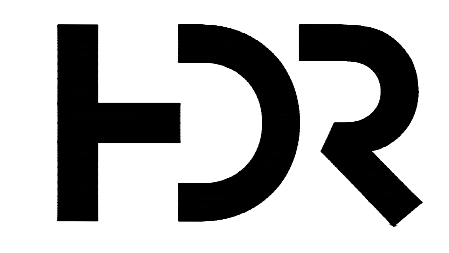
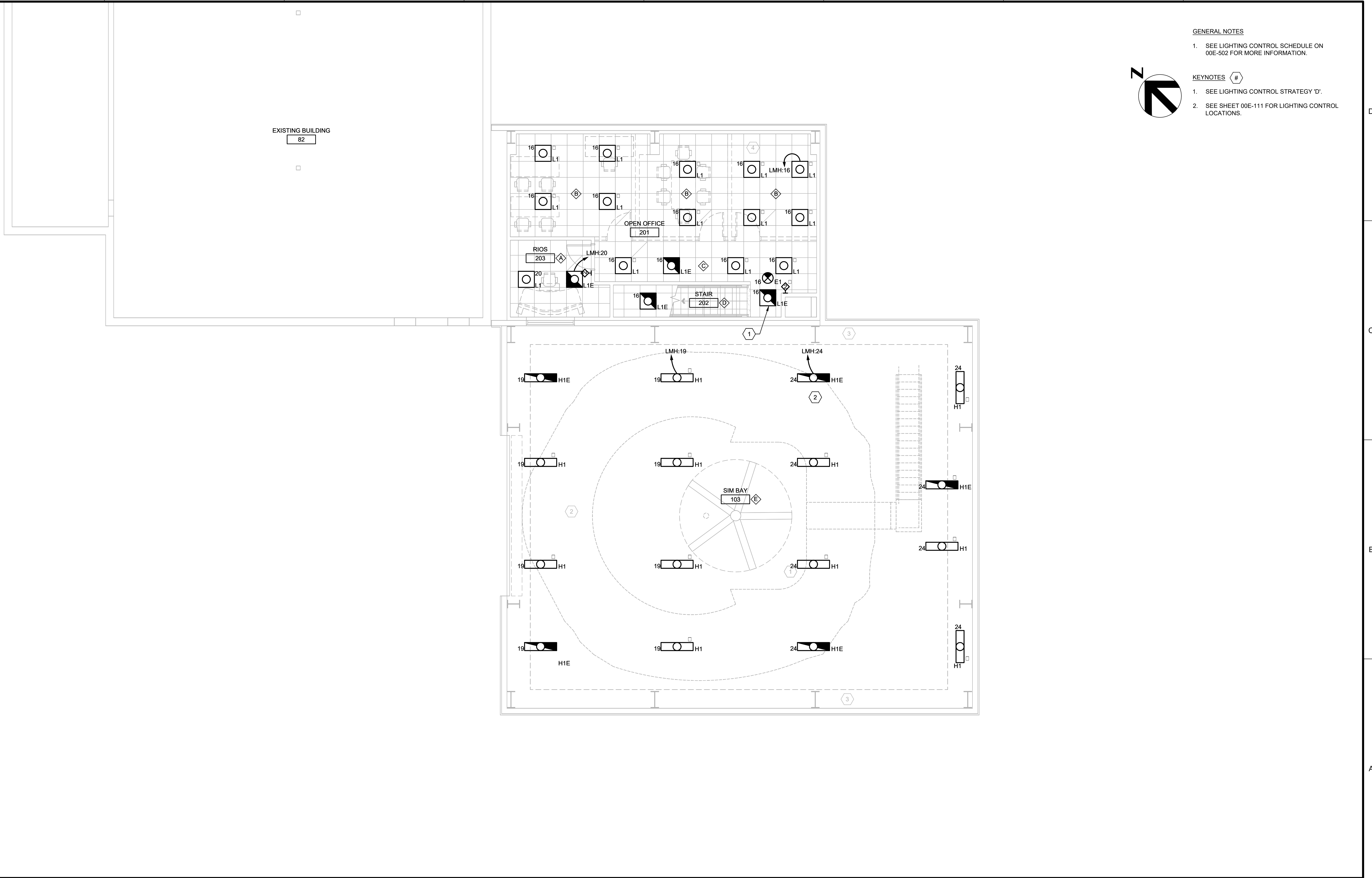
GENERAL NOTES

1. SEE LIGHTING CONTROL SCHEDULE ON 00E-502 FOR MORE INFORMATION.



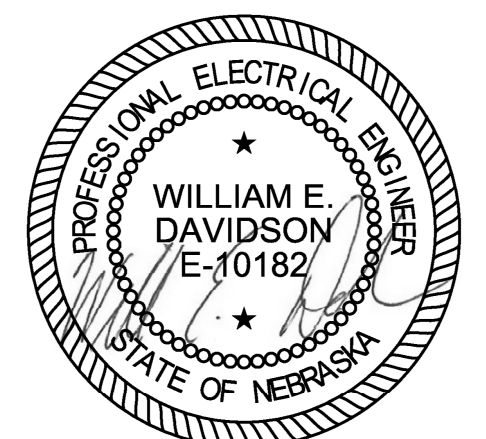
KEYNOTES #

1. SEE LIGHTING CONTROL STRATEGY 'D'.
 2. SEE SHEET 00E-111 FOR LIGHTING CONTROL LOCATIONS.

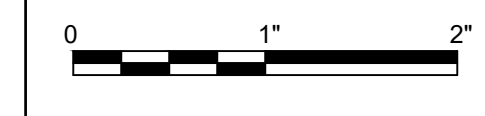


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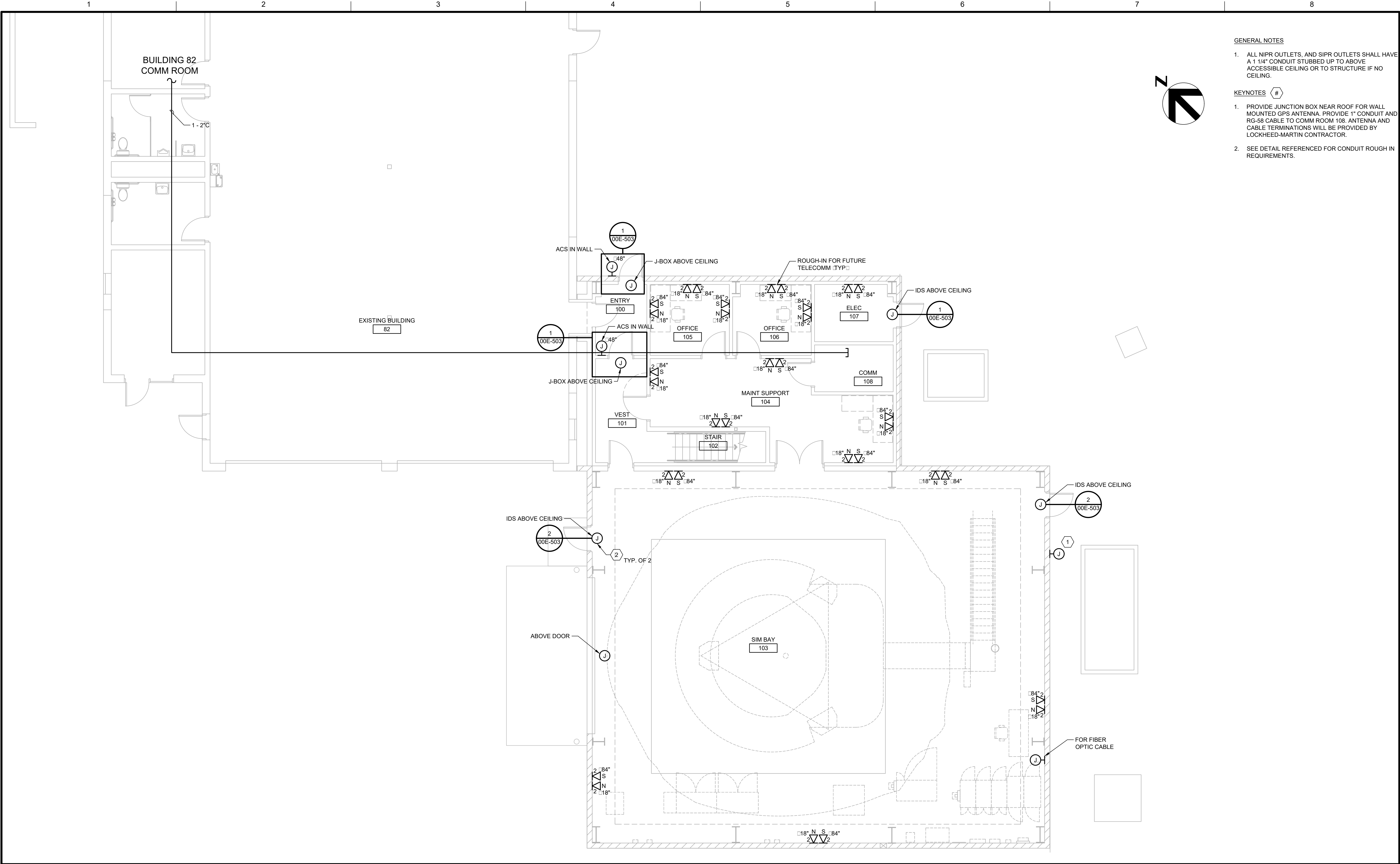


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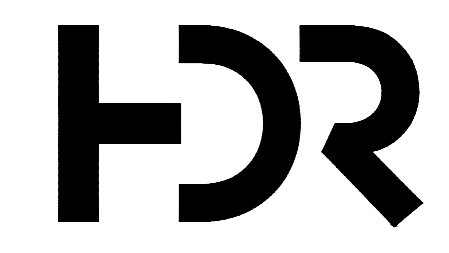


FILENAME 00E-111.DWG
 SCALE 3/16" = 1'-0"

SHEET
00E-112



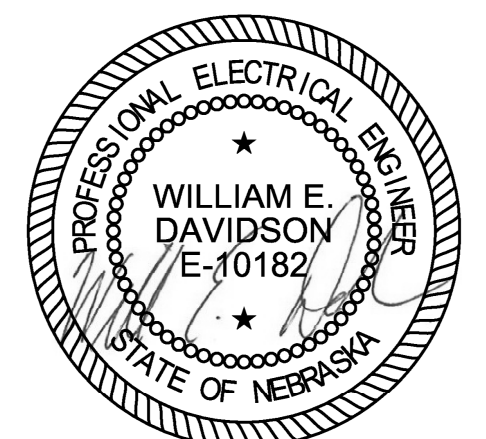
- GENERAL NOTES**
- ALL NIPR OUTLETS, AND SIPR OUTLETS SHALL HAVE A 1 1/4" CONDUIT STUBBED UP TO ABOVE ACCESSIBLE CEILING OR TO STRUCTURE IF NO CEILING.
- KEYNOTES** #
- PROVIDE JUNCTION BOX NEAR ROOF FOR WALL MOUNTED GPS ANTENNA. PROVIDE 1" CONDUIT AND RG-58 CABLE TO COMM ROOM 108. ANTENNA AND CABLE TERMINATIONS WILL BE PROVIDED BY LOCKHEED-MARTIN CONTRACTOR.
 - SEE DETAIL REFERENCED FOR CONDUIT ROUGH IN REQUIREMENTS.



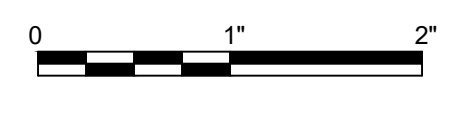
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**HARRISBURG ANGB, PA
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JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003**



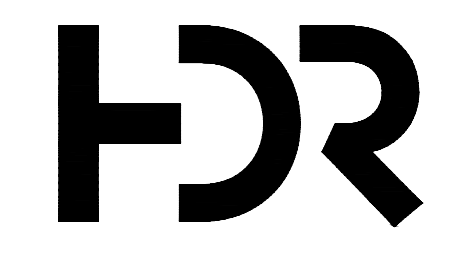
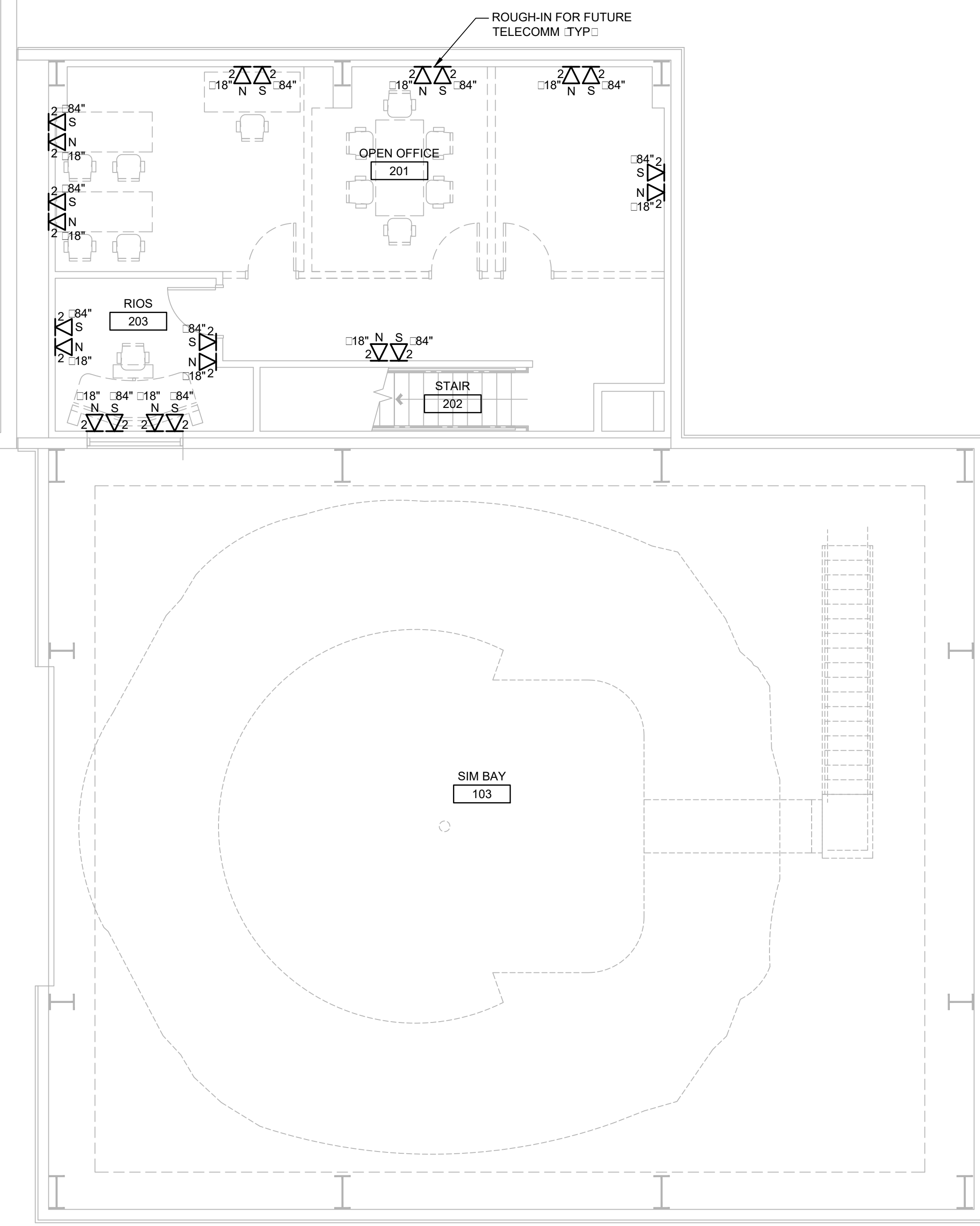
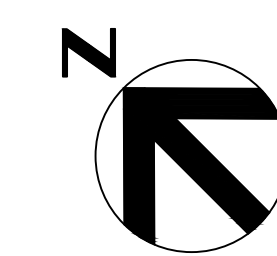
FILENAME 00E-121.DWG
SCALE 1/8" = 1'-0"

**SIMULATOR BUILDING
FIRST FLOOR AUXILIARY SYSTEMS PLAN**

SHEET
00E-121

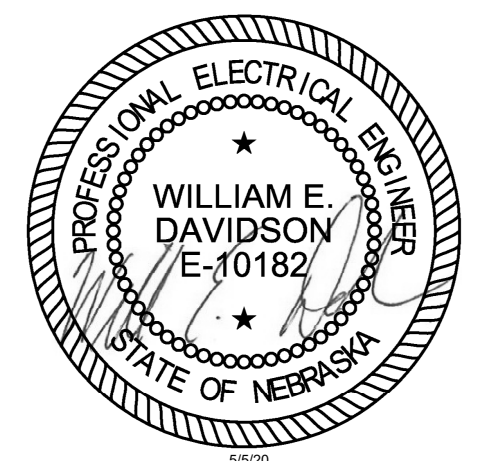
GENERAL NOTES

1. ALL NIPR OUTLETS, AND SIPR OUTLETS SHALL HAVE A 1 1/4" CONDUIT STUBBED UP TO ABOVE ACCESSIBLE CEILING OR TO STRUCTURE IF NO CEILING.



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FIRE PROTECTION	A. NOWKA
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HARRISBURG ANGB, PA
 SOF CONSTRUCT SIMULATOR BAY /
 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003

**SIMULATOR BUILDING
 SECOND FLOOR AUXILIARY SYSTEMS PLAN**

0 1" 2" SCALE 3/16" = 1'-0"

FILENAME 00E-121.DWG
 SHEET 00E-122

- KEYNOTES #
- MSEMM BREAKER SHALL BE SIZED TO HANDLE 12X INRUSH CURRENT PER LOCKHEED-MARTIN.
 - PROVIDED BY LOCKHEED-MARTIN CONTRACTOR.
 - PROVIDE 60 AMP, 3 POLE ENCLOSED CIRCUIT BREAKER.
 - PROVIDE SURGE PROTECTIVE DEVICE, LEAD LENGTHS FOR CONNECTION TO BREAKER SHALL BE AS SHORT AS POSSIBLE. PROVIDE BREAKER RATING IN PANEL PER MANUFACTURER'S RECOMMENDATION.
 - ASD BREAKER SHALL BE SHUNT TRIP.

PANELBOARD NO: LMH
VOLTAGE: 480/277 **BUS RATING (A):** 400 **ENCLOSURE:** NEMA 1
PHASE: 3 **MAIN OC DEVICE (A/PHASE):** 400 MLO **MOUNTING:** SURFACE
WIRE: 4+GND **INTERRUPTING RATING (KA):** 35
200% NEUTRAL: NO **SERVICE ENTRANCE LABEL:** NO

CKT NO.	DESCRIPTION	CONNECTED LOAD (VA)						CONNECTED LOAD (VA)						DESCRIPTION	CKT NO.		
		LTS	REC	MECH	MISC	AMPS P	AMPS P	LTS	REC	MECH	MISC	LTS	REC			MECH	MISC
1	PANEL LML THRU XFMR															15,133	2
3																15,133	4
5																15,133	6
7																1,466	8
9	MSUPS															1,466	10
11																1,466	12
13																	14
15	SPARE																16
17																	18
19	LTS RM 103	1,056															20
21	LTS EXTERIOR	324															22
23	EXT SECURITY LTS	486															24
25																	26
27																	28
29																	30

LOAD SUMMARY							PHASE BALANCE		
CONNECTED LOAD (KVA)	LTS	REC	MECH	MISC	SPARE	TOTAL	480 LINE-TO-LINE VOLTS	PHASE A (KVA)	45
3.9	0.0	4.4	128.2	---	136.5	---	480	PHASE B (KVA)	45
DEMAND FACTOR	1.25	NEC	1.00	1.00	20%	---	164	CONNECTED AMPS	45
DESIGN LOAD (KVA)	4.9	0.0	4.4	128.2	27.3	164.8	198	DESIGN AMPS	46

Power Panel NO: DPH
VOLTAGE: 480Y/277 **BUS RATING (A):** 800 **ENCLOSURE:** NEMA 1
PHASE: 3 **MAIN (A):** 800 MCB **MOUNTING:** WALL MOUNT
WIRE: 4+GND **INTERRUPTING RATING (KA):** 35 **FRONT ACCESS**
200% NEUTRAL: NO **SERVICE ENTRANCE LABEL:** YES

CKT NO.	DESCRIPTION	CONNECTED LOAD (KVA)						OC		REMARKS		
		LTS	REC	MECH	MISC-1	MISC-2	MISC-3	MISC-4	AMPS P		AMPS P	
1	LMH									136.5	400	3
2	BUILDING 82									200.0	400	3
3	MSEMM									80.0	200	3
4	H-01									41.7	100	3
5	(MSA) COCKPIT A/C									5.0	30	3
6	SPACE											
7	SPACE											
8	SPD										XX	

LOAD SUMMARY									
CONNECTED LOAD (KVA)	LTS	REC	MECH	MISC-1	MISC-2	MISC-3	MISC-4	SPARE	TOTAL
480	0.0	0.0	126.7	0.0	0.0	0.0	336.5	---	463.2
DEMAND FACTOR	1.25	NEC	1.00	1.00	1.00	1.00	1.00	20%	---
DESIGN LOAD (KVA)	0.0	0.0	126.7	0.0	0.0	0.0	336.5	92.6	555.8

PANELBOARD NO: PDUH
VOLTAGE: 480/277 **BUS RATING (A):** 400 **ENCLOSURE:** NEMA 1
PHASE: 3 **MAIN (A):** 400 MLO **MOUNTING:** SURFACE
WIRE: 4+GND **INTERRUPTING RATING (KA):** 35
200% NEUTRAL: NO **SERVICE ENTRANCE LABEL:** NO

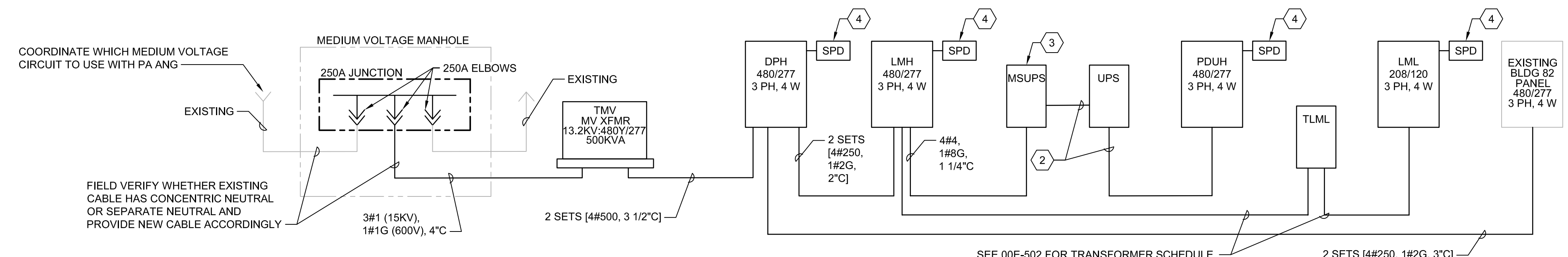
CKT NO.	DESCRIPTION	CONNECTED LOAD (VA)						CONNECTED LOAD (VA)						DESCRIPTION	CKT NO.		
		LTS	REC	MECH	MISC	AMPS P	AMPS P	LTS	REC	MECH	MISC	LTS	REC			MECH	MISC
1	(MST) T2															1,000	2
3																1,000	4
5	CONTL PWR BUS B															2,000	6
7																2,000	8
9	(MSS-1) P1															2,000	10
11																2,000	12
13																	14
15																	16
17																	18
19																	20
21																	22
23																	24
25																	26
27																	28
29																	30

LOAD SUMMARY							PHASE BALANCE		
CONNECTED LOAD (KVA)	LTS	REC	MECH	MISC	SPARE	TOTAL	480 LINE-TO-LINE VOLTS	PHASE A (KVA)	3
0.0	0.0	0.0	0.0	10.0	---	10.0	480	PHASE B (KVA) <td>3</td>	3
DEMAND FACTOR	1.25	NEC	1.00	1.00	20%	---	12	CONNECTED AMPS <td>3</td>	3
DESIGN LOAD (KVA)	0.0	0.0	0.0	10.0	2.0	12.0	14	DESIGN AMPS <td>4</td>	4

PANELBOARD NO: LML
VOLTAGE: 208/120 **BUS RATING (A):** 225 **ENCLOSURE:** NEMA 1
PHASE: 3 **MAIN OC DEVICE (A/PHASE):** 225 MCB **MOUNTING:** SURFACE
WIRE: 4+GND **INTERRUPTING RATING (KA):** 10
200% NEUTRAL: NO **SERVICE ENTRANCE LABEL:** NO

CKT NO.	DESCRIPTION	CONNECTED LOAD (VA)						CONNECTED LOAD (VA)						DESCRIPTION	CKT NO.		
		LTS	REC	MECH	MISC	AMPS P	AMPS P	LTS	REC	MECH	MISC	LTS	REC			MECH	MISC
1	REC RM 100-101															1,867	2
3	REC RM 104															1,867	4
5	FC-02/HP-02															1,867	6
7																900	8
9	MSSD															2,023	10
11	MSNET															2,023	12
13	REC RM 105															360	14
15	REC RM 106															360	16
17	REC RM 104															1,080	18
19	REC RM 103															720	20
21	REC RM 103															720	22
23	REC RM 203															360	24
25	REC RM 203															360	26
27	REC RM 201															360	28
29	REC RM 108															1,000	30
31	FAN															360	32
33																	34
35	DOOR POWER															450	36
37																	38
39																	40
41																	42
43																	44
45																	46
47																	48
49																	50
51																	52
53																	54

LOAD SUMMARY							PHASE BALANCE		
CONNECTED LOAD (KVA)	LTS	REC	MECH	MISC	SPARE	TOTAL	208 LINE-TO-LINE VOLTS	PHASE A (KVA)	10
0.0	14.4	9.1	9.4	---	32.9	---	208	PHASE B (KVA) <td>9</td>	9
DEMAND FACTOR	1.25	NEC	1.00	1.00	20%	---	91	CONNECTED AMPS <td>9</td>	9
DESIGN LOAD (KVA)	0.0	12.2	9.1	9.4	6.6	37.2	103	DESIGN AMPS <td>13</td>	13



ONE LINE DIAGRAM

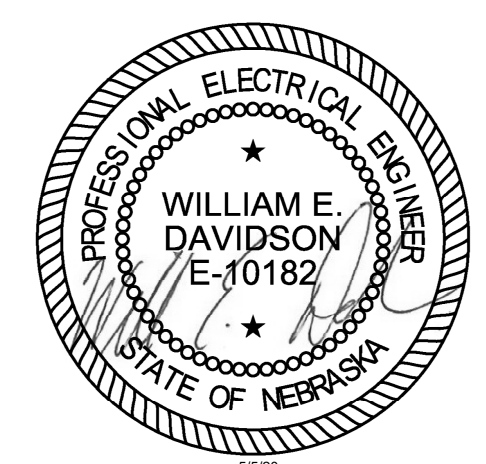


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FIRE PROTECTION	A. NOWKA

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HARRISBURG ANGB, PA
 SOF CONSTRUCT SIMULATOR BAY /
 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003

SIMULATOR BUILDING
 ELECTRICAL SCHEDULES AND DIAGRAMS



SHEET
 00E-501

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LUMINAIRE SCHEDULE										
DWG ID TYPE	DESCRIPTION	MANUFACTURER AND LUMINAIRE TYPE	LAMP			DRIVER	FITTURE VOLTS	MOUNTING		NOTES
			TYPE	QTY	WATTS			TYPE	HEIGHT	
E1	LED UNIVERSAL MOUNT EXIT SIGN WITH AN INTEGRAL BATTERY	COMPASS LIGHTING # CCESRE	LED	1	1	INTEGRATED	120/277	SURFACE	1'-0" ABOVE DOOR UNO	
H1 H1E	LED HIGHBAY E SUBSCRIPT INDICATES LIGHTING FIXTURE WITH AN INTEGRAL EMERGENCY BATTERY	METALUX #LHB-18-L840-CD	LED	1	132	0-10V	277	SURFACE	38'-6" AFF	
L1 L1E	2 X 2 DIRECT/INDIRECT E SUBSCRIPT INDICATES LIGHTING FIXTURE WITH AN INTEGRAL EMERGENCY BATTERY	CORELITE # R2X-WO-3-L40-LD5-UNV-22-T1-STD	LED	1	26.5	0-10V	277	RECESSED	CEILING	
L2 L2E	WRAPAROUND E SUBSCRIPT INDICATES LIGHTING FIXTURE WITH AN INTEGRAL EMERGENCY BATTERY	METALUX #WSNLED	LED	1	39.8	0-10V	277	SURFACE	CEILING	
S1 S1E	LED STRIP LIGHT E SUBSCRIPT INDICATES LIGHTING FIXTURE WITH AN INTEGRAL EMERGENCY BATTERY	METALUX # 4ST2L4040R	LED	1	39.2	0-10V	277	SURFACE	CEILING	
W1 W1E	LED WALL MOUNT E SUBSCRIPT INDICATES LIGHTING FIXTURE WITH AN INTEGRAL EMERGENCY BATTERY	LUMARK # XTOR6B-W-PC2	LED	1	58	INTEGRATED	277	SURFACE	20'-0" AFF	

TRANSFORMER SCHEDULE							
EQUIPMENT ID	KVA	PHASE	VOLTAGE	PRIMARY CONDUCTOR	SECONDARY CONDUCTORS	GROUNDING ELECTRODE CONDUCTOR	NOTES
TLML	75	3	480:208Y/120	3#1, 1#6G, 1 1/2" C	4#250, 1#2G, 3" C	#2, 3/4" C	
TMV	500	3	13.2KV:480Y/277	SEE ONE LINE 00E-501	SEE ONE LINE 00E-501	SEE GROUNDING DIAGRAM BELOW	

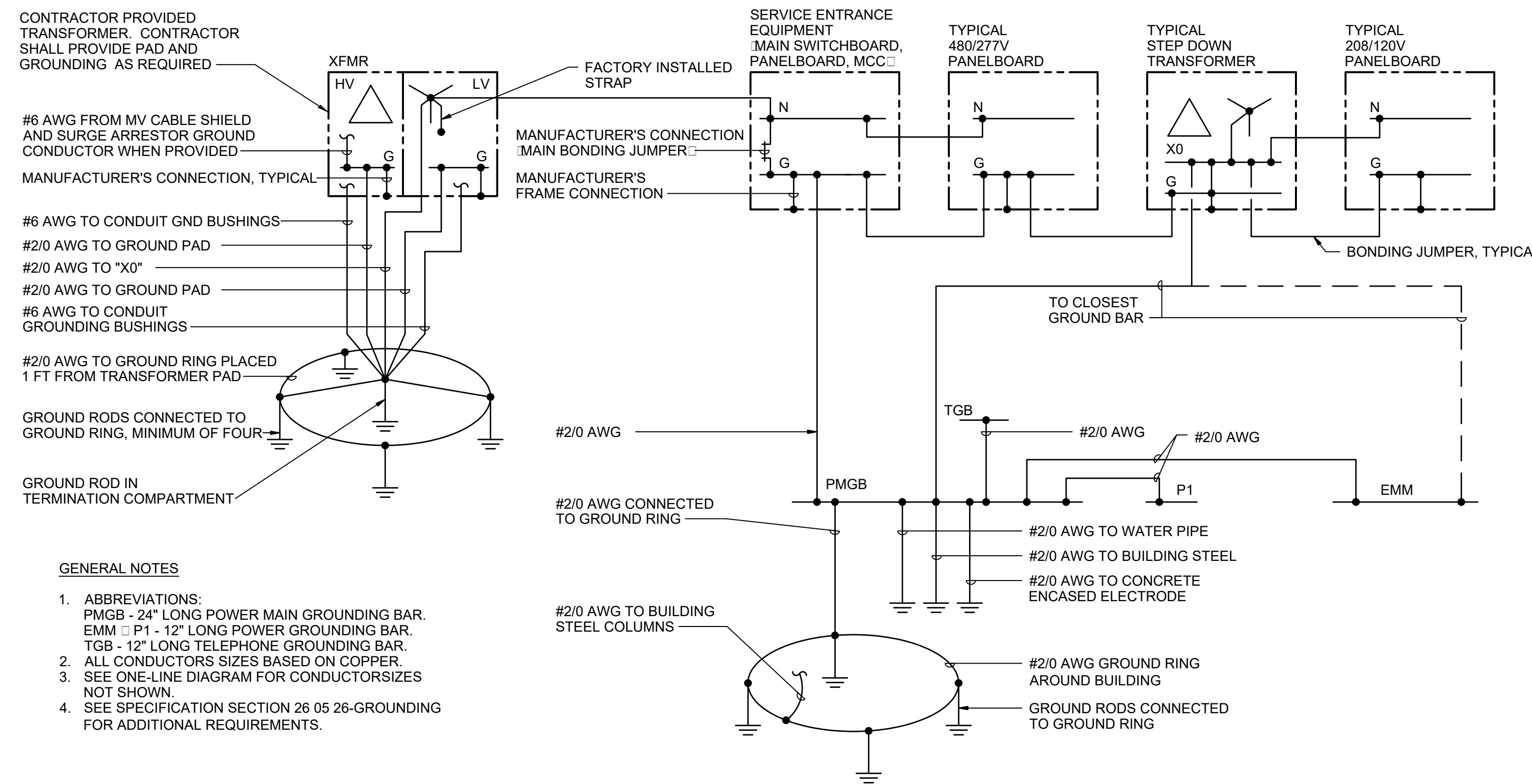
LIGHTING CONTROL STRATEGY SCHEDULE											
DESIGNATION	OCCUPANCY DETECTION					WALL CONTROL		EXAMPLE SPACE TYPE	REMARKS	LIGHTING CONTROL STRATEGY DESCRIPTION	
	CEILING MOUNT OCCUPANT DETECTION	LUMINAIRE MOUNT OCCUPANT DETECTION	AUTO ON (60%)	AUTO ON (100%)	MANUAL ON (VACANCY SENSOR)	OCCUPANCY DETECTION TIME-OUT (30 MIN. MAX)	ON/OFF				ON/OFF DIMMER
A	•				•	15				PRIVATE OFFICE	f.
B	•				•	15				OPEN OFFICE / MAINT SUPPORT	b.
C	•				•	30				ENTRY	a.
D										VEST/STAIR	d.
E										SIM BAY	e.

LIGHTING CONTROL SCHEDULE GENERAL NOTES

- A. WHERE DIMMER IS INDICATED FOR WALL CONTROL, PROVIDE ONE TWO BUTTON PUSHBUTTON SWITCH (UNLESS NOTED OTHERWISE) WITH ON/RAISE AND OFF/LOWER CONTROL FOR EACH LIGHTING ZONE AS SHOWN ON THE DRAWINGS. WHERE ONLY ON/OFF IS INDICATED FOR WALL CONTROL, PROVIDE A TWO BUTTON STATION WITH ON AND OFF. EACH SPACE SHALL HAVE A MINIMUM OF ONE ZONE OF CONTROL AND ADDITIONAL ZONES OF CONTROL ADDED AS SHOWN ON THE DRAWINGS.
- B. THE LIGHTING CONTROL DESIGNATION ON THE DRAWINGS INDICATES THE TYPE OF CONTROL REQUIRED IN THE CORRESPONDING ROOM/AREA. THE MANUFACTURER SHALL DETERMINE THE QUANTITY AND LOCATION OF SENSORS AND ACCESSORIES NECESSARY FOR COMPLETE COVERAGE AND PROPER SYSTEM OPERATION. SEE SPECIFICATION SECTION 26 09 46 FOR FURTHER REQUIREMENTS.

LIGHTING CONTROL STRATEGY DESCRIPTION

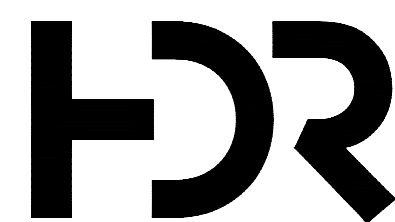
- a. MANUAL ON/VACANCY OFF: OCCUPANT MANUALLY TURNS THE LIGHT ON UPON ENTERING THE SPACE. UPON SENSING VACANCY THE LIGHTS TURN OFF AFTER TIMEOUT PERIOD.
- b. OCCUPANCY ON/MANUAL ADJUST/VACANCY OFF: OCCUPANT ENTERS SPACE AND LIGHTS AUTOMATICALLY TURN ON TO 100% OF FULL LIGHT OUTPUT. OCCUPANT CAN MANUALLY ADJUST (RAISE OR LOWER) LIGHT LEVEL. UPON SENSING VACANCY THE LIGHTS TURN OFF AFTER TIMEOUT PERIOD.
- c. MANUAL ON/MANUAL ADJUST/VACANCY OFF: OCCUPANT MANUALLY TURNS THE LIGHTS ON UPON ENTERING SPACE. OCCUPANT CAN MANUALLY ADJUST (RAISE OR LOWER) LIGHT LEVEL. UPON SENSING VACANCY LIGHTS TURN OFF AFTER TIME OUT PERIOD.
- d. CONTINUOUS ON, EGRESS LIGHTING REMAINS ON 24/7.
- e. MANUAL ON/MANUAL ADJUST/MANUAL OFF.



GENERAL NOTES

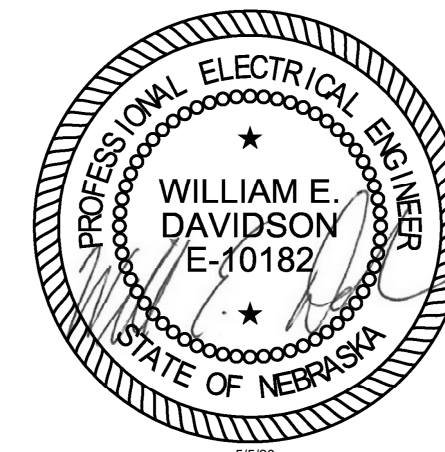
1. ABBREVIATIONS:
PMGB - 24" LONG POWER MAIN GROUNDING BAR.
EMM - P1 - 12" LONG POWER GROUNDING BAR.
TGB - 12" LONG TELEPHONE GROUNDING BAR.
2. ALL CONDUCTORS SIZES BASED ON COPPER.
3. SEE ONE-LINE DIAGRAM FOR CONDUCTOR SIZES NOT SHOWN.
4. SEE SPECIFICATION SECTION 26 05 26-GROUNDING FOR ADDITIONAL REQUIREMENTS.

1 GROUNDING DIAGRAM
NOT TO SCALE



ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER TOM SVOBODA	
CIVIL	B. WECKERLIN
STRUCTURAL	J. LENZ
ARCHITECT	S. HEANEY
MECHANICAL	J. LEWIS
ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



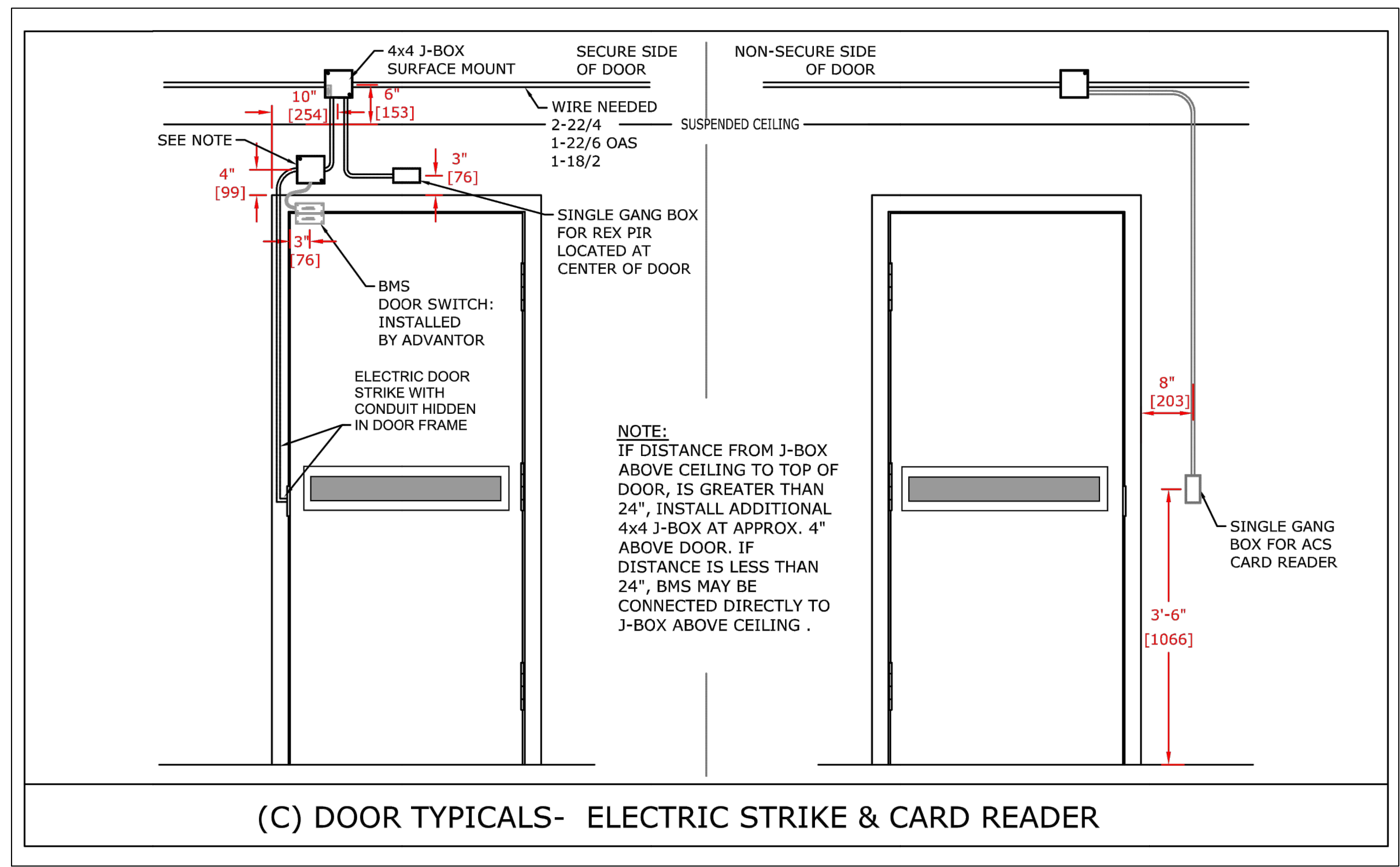
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JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003

**SIMULATOR BUILDING
ELECTRICAL SCHEDULES AND DIAGRAMS**

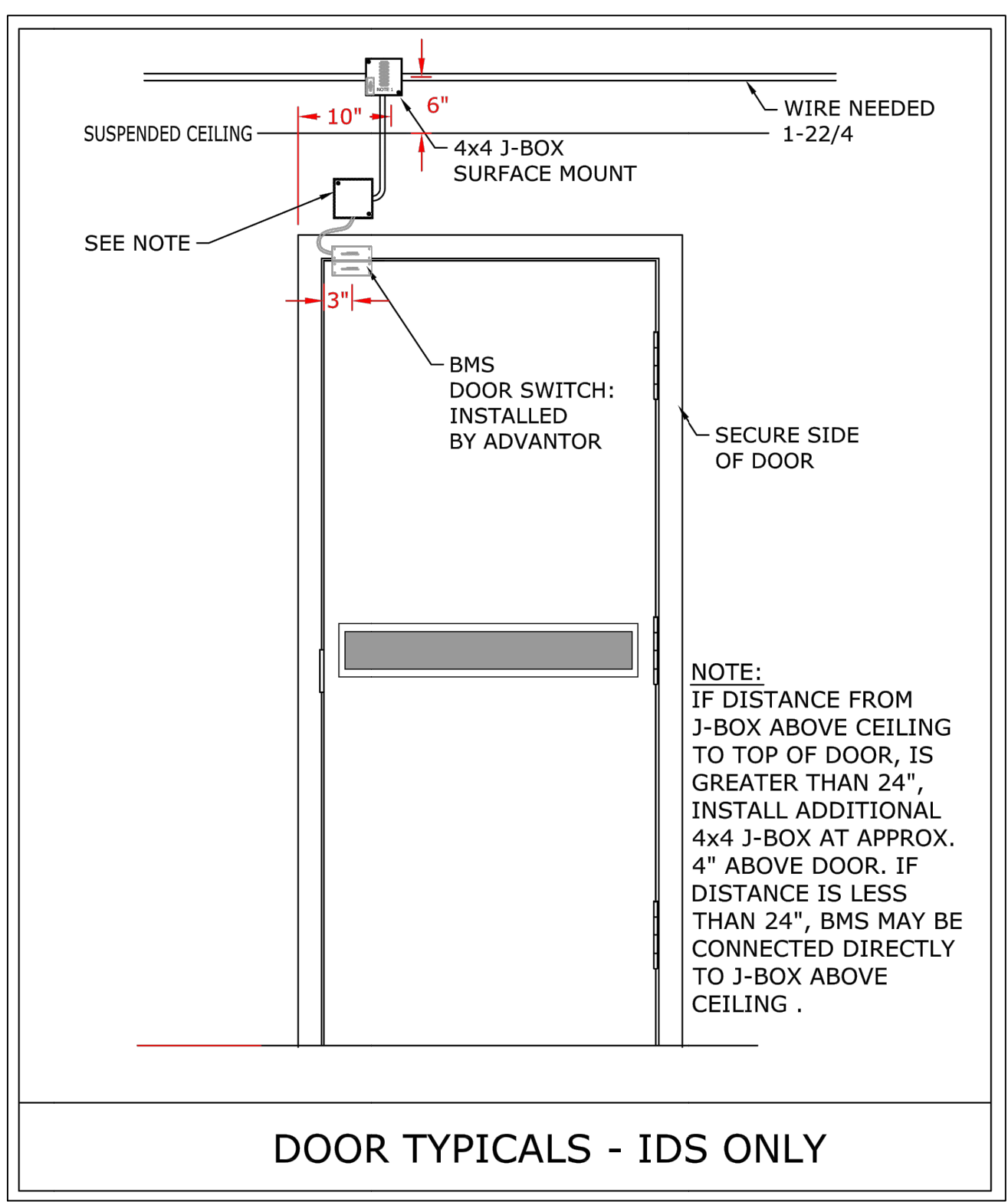


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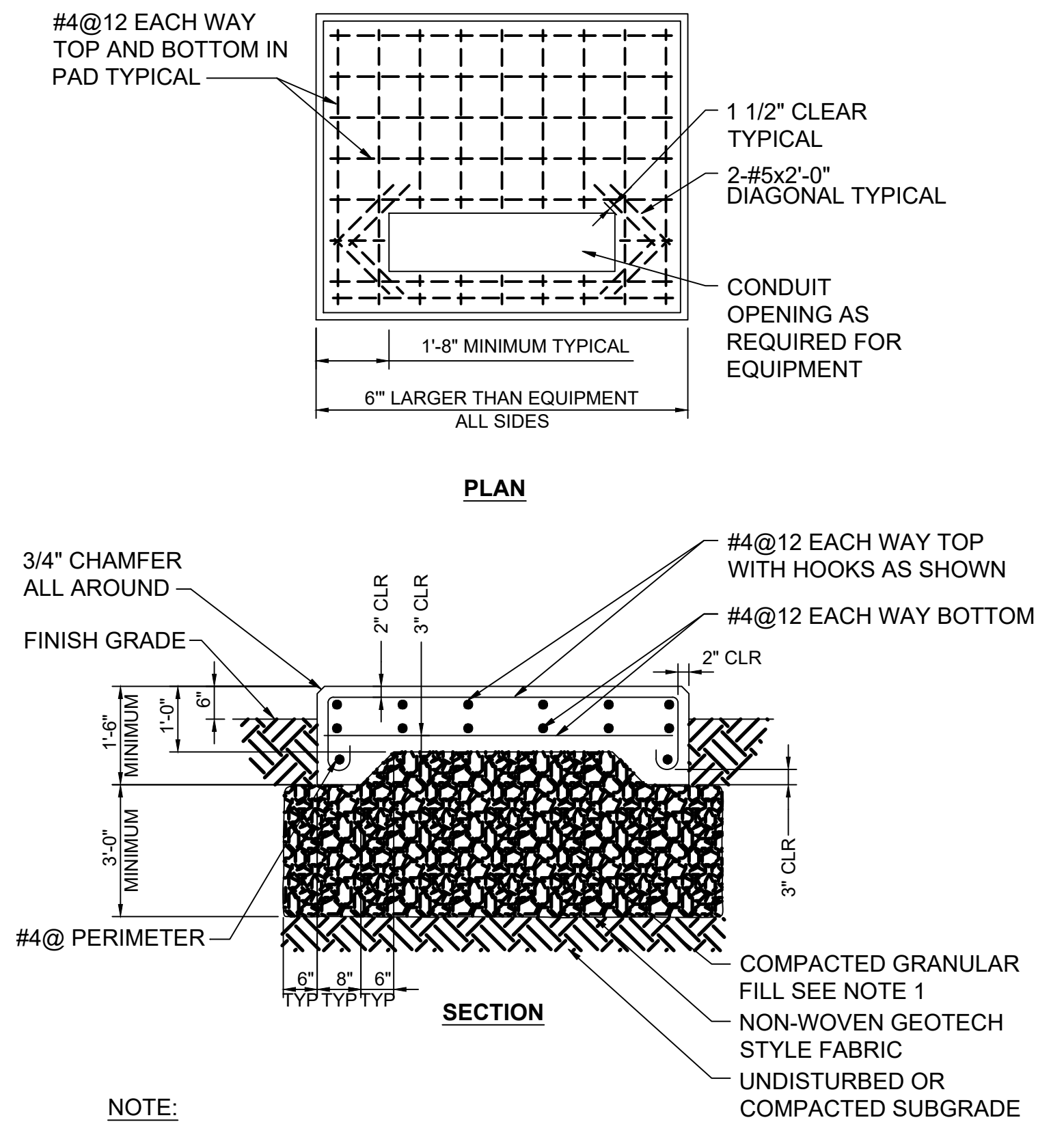
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00E-502



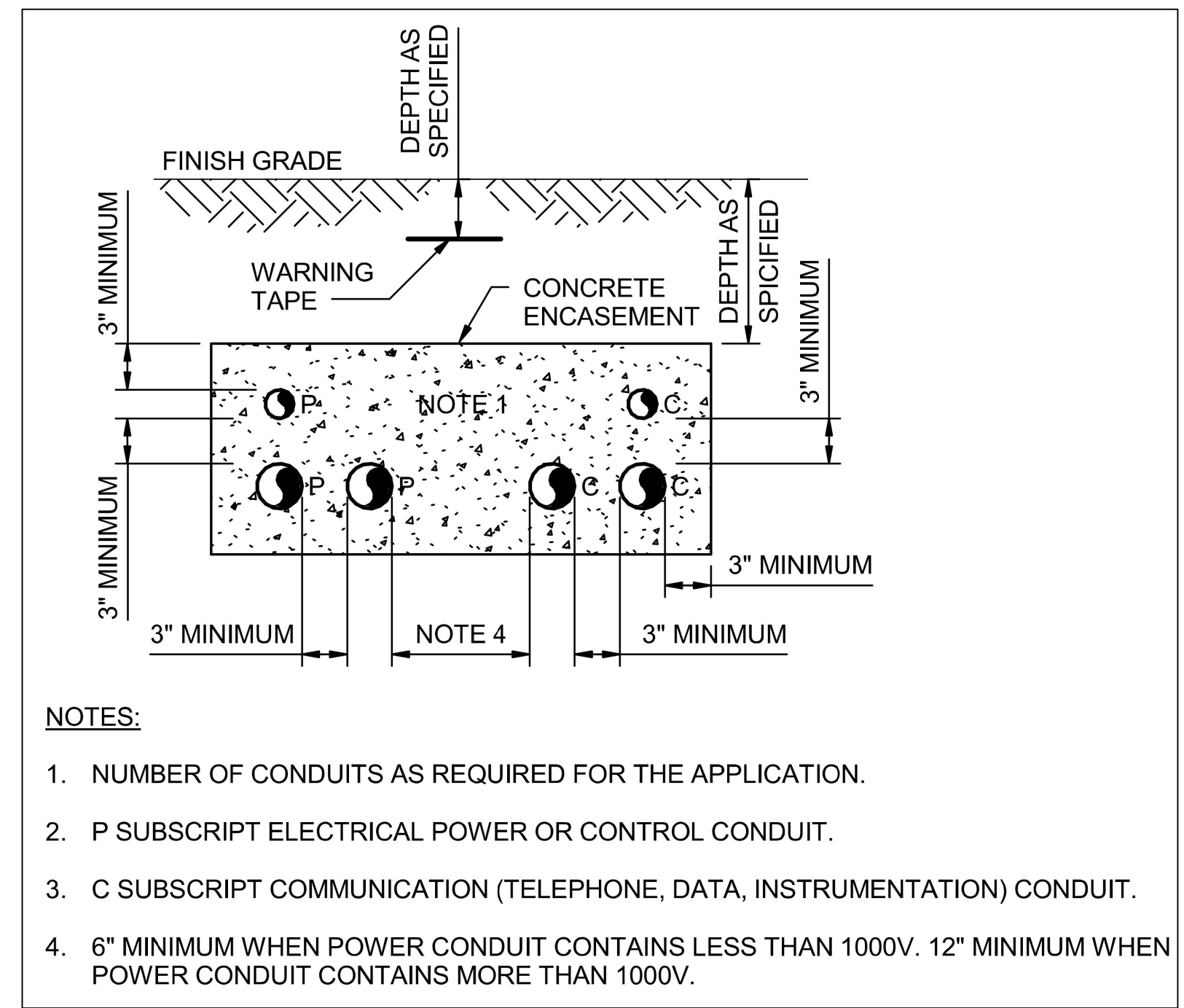
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00E-503 NO SCALE



2 IDS DOOR DETAIL
00E-503 NO SCALE



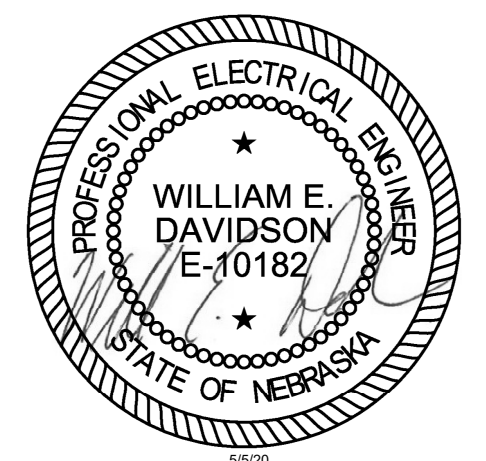
3 TRANSFORMER PAD DETAIL
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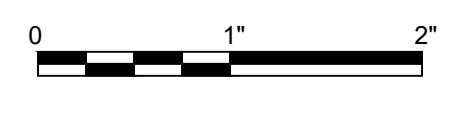
4 DUCTBANK DETAIL
00E-503 NO SCALE

- NOTES:**
- NUMBER OF CONDUITS AS REQUIRED FOR THE APPLICATION.
 - P SUBSCRIPT ELECTRICAL POWER OR CONTROL CONDUIT.
 - C SUBSCRIPT COMMUNICATION (TELEPHONE, DATA, INSTRUMENTATION) CONDUIT.
 - 6" MINIMUM WHEN POWER CONDUIT CONTAINS LESS THAN 1000V. 12" MINIMUM WHEN POWER CONDUIT CONTAINS MORE THAN 1000V.

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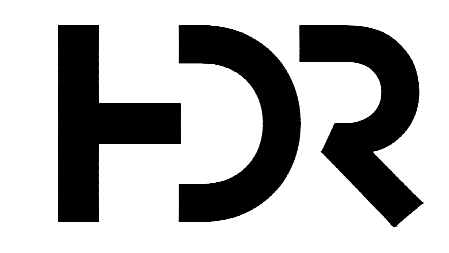
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**SIMULATOR BUILDING
ELECTRICAL DETAILS**

FILENAME 00E-501.DWG
SCALE NO SCALE

SHEET
00E-503



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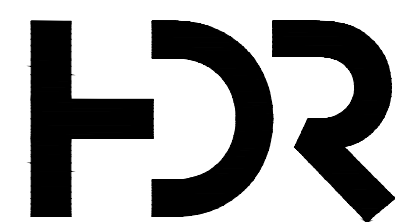
FIRE PROTECTION GENERAL NOTES:

1. WORK SHALL BE PERFORMED IN ACCORDANCE WITH UFC 3-600-01, NFPA 13, AND LOCKEED MARTIN INSTALLATION DESIGN GUIDE.
2. SYSTEM COMPONENTS AND ASSEMBLIES SHALL BE U.L. LISTED OR FM APPROVED.
3. DETAILED DESIGN AND WORK SHALL BE SIGNED AND PERFORMED UNDER THE DIRECT SUPERVISION OF A LICENSED FIRE PROTECTION ENGINEER OR FIRE PROTECTION SPECIALIST WITH A MINIMUM REGISTRATION OF NICET LEVEL IV IN WATER-BASED FIRE PROTECTION SYSTEM LAYOUT.
4. THE ENTIRE PROJECT SHALL BE PROTECTED BY A HYDRAULICALLY DESIGNED WET PIPE SPRINKLER SYSTEM. SYSTEM DESIGN CRITERIA AS DETAIL ON DRAWINGS.
5. THE SOURCE OF WATER FOR THE SPRINKLER SYSTEMS SHALL BE THE EXISTING DOMESTIC WATER SYSTEM. RECENT WATER SUPPLY TEST RESULT ARE DETAILED ON DRAWINGS. CONTRACTOR TO DESIGN SPRINKLER SYSTEM BASED ON THE EXISTING WATER SUPPLY. HYDRAULIC CALCULATIONS SHALL BE PROVIDED TO DEMONSTRATE THAT THE REQUIRED SPRINKLER SYSTEMS ARE DESIGNED BASE UPON THE EXISTING WATER SUPPLY. SHOULD THE CONTRACTOR DETERMINE THAT THE EXISTING WATER SUPPLY VOLUME OR PRESSURE AREA INADEQUATE FOR THE REQUIRED SPRINKLER SYSTEMS, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICE.
 FIRE HYDRANT FLOW TEST CURRENT: 54 PSI
 RESIDUAL: 43 PSI
 FLOW: 1048 GPM
 DATE: 06-25-2019
 SOURCE: HDR INC.
6. SPRINKLER SYSTEM CONTROL VALVES SHALL BE PROVIDED WITH SUPERVISORY TAMPER SWITCHES MONITORED BY THE FIRE ALARM SYSTEM.
7. THE FIRE DEPARTMENT CONNECTION SHALL BE LOCATED NOT LESS THAN 18 IN. OR MORE THAN 48 IN. ABOVE THE LEVEL OF THE ADJOINING GROUND, SIDEWALK, OR GRADE SURFACE. THE FIRE DEPARTMENT CONNECTION SHALL BE LOCATED WITHIN 150 FT. OF A FIRE HYDRANT. EACH FIRE DEPARTMENT CONNECTION FDC SHALL BE DESIGNATED BY A SIGN HAVING LETTERS, AT LEAST 1 IN. IN HEIGHT, THAT READS "AUTOMATIC SPRINKLERS" ALONG WITH A SIGN THAT INDICATES THE HYDRAULIC DESIGN INFORMATION AND PRESSURE REQUIRED AT THE INLETS TO DELIVER THE SYSTEM DEMAND.
8. PROVIDE FIRESTOPPING AT PENETRATIONS IN FIRE RATED CONSTRUCTION AND CAULKING AT PENETRATIONS OF FIRE OR SMOKE-RATED SEPARATIONS WHICH INCLUDE PENETRATIONS MADE WITHIN EXISTING BUILDING NO. 82.
9. PROVIDE FIRESTOPPING AT PENETRATIONS IN FIRE RATED CONSTRUCTION EXISTING AND NEW WORK AND CAULKING AT PENETRATIONS AT FIRE OR SMOKE SEPARATIONS EXISTING AND NEW WORK.
10. COORDINATE WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL TRADES. PROVIDE OFFSETS TO AVOID INTERFERENCE WITH EQUIPMENT, PIPING, DUCTWORK, LIGHTS, CONDUIT, OR STRUCTURAL MEMBERS.
11. INSTALL SPRINKLER SYSTEM SUCH THAT NO SPRINKLER PIPING, SPRINKLER FITTINGS OR SPRINKLER HEADS ARE INSTALLED WITHIN THE DEDICATED ELECTRIC SPACE LOCATED ABOVE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC NFPA 70 ARTICLE 110.26.E.
12. SUBMIT SHOP DRAWINGS AND HYDRAULIC CALCULATIONS TO ENGINEER FOR REVIEW, IN A MANNER AS REQUIRED PER NFPA 13 AND UFC 3-600-01. SUBMIT EQUIPMENT DATA SHEETS FOR A COMPLETE INSTALLATION OF THE SPRINKLER SYSTEM. APPROVED SHOP DRAWINGS, DATA SHEETS, AND HYDRAULIC CALCULATIONS ARE REQUIRED PRIOR TO COMMENCEMENT OF WORK.
13. SPRINKLER HEADS SHALL BE CENTERED WITHIN CEILING TILES. SEE REFLECTED CEILING PLANS COORDINATION.
14. PROVIDE A MINIMUM 18 IN. OF CLEARANCE AROUND SPRINKLER RISERS, BACKFLOW PREVENTER, VALVES, GAUGES, AND PIPING. MECHANICAL EQUIPMENT, PIPES, DUCTS, ETC. SHALL NOT RESTRICT ACCESS TO THE SPRINKLER RISER.
15. PROVIDE AND COORDINATE FIRE SPRINKLER HEADS AND PIPING WITH SIMULATOR BAY HVLS DESTRATIFICATION FAN CF-1 WITH FIRE ALARM SHUT DOWN UPON WATER FLOW SWITCH ACTIVATION.
16. PROVIDE AN AUTOMATIC AIR VENT AT HIGHEST POINT OF THE SYSTEM.

FIRE ALARM GENERAL NOTES:

1. PROVIDE A FIRE ALARM AND MASS NOTIFICATION SYSTEM, THROUGHOUT THE BUILDING. THE FIRE ALARM AND MASS NOTIFICATION SHALL BE TWO SEPARATE SYSTEMS. INSTALL THE FIRE ALARM AND THE MASS NOTIFICATION CONTROL PANELS AS DETAILED ON DRAWINGS. PROVIDE MANUAL PULL STATIONS AT ALL EXITS. PROVIDE DUCT SMOKE DETECTION AND HVAC SHUTDOWN PER NFPA 90A. PROVIDE OCCUPANT NOTIFICATION COMPLYING WITH NFPA 72. WORK SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE EDITIONS OF NFPA 70, NFPA 72, NFPA 101, UFC 3-600-01, AND UFC 4-021-01. CERTIFICATE OF FINAL INSPECTION SHALL BE PROVIDED BY THE CONTRACTOR AT COMPLETION OF PROJECT. AND PRESENTED TO GOVERNMENT. LOCAL MASS NOTIFICATION SHALL BE TIED INTO THE BASE WIDE GIANT VOICE SYSTEM.
2. PROVIDE COMPLETE FUNCTIONAL SYSTEM AS INDICATED ON CONTRACT DOCUMENT AND AS EVIDENTLY INTENDED. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE GENERAL ARRANGEMENTS OF SYSTEM AND SCOPE OF WORK. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT AND WIRING AS REQUIRED, ACCOMPLISHING THE FUNCTIONS INTENDED.
3. PLACEMENT OF FIRE ALARM AND MASS NOTIFICATION CONTROL UNITS AND WALL MOUNT DEVICES SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OTHER TRADES.
4. COORDINATE WORK WITH OTHER TRADES. RESOLVE CONFLICTS THROUGH THE A/E PRIOR TO ROUGH-IN. FAILURE TO COORDINATE WORK WITH OTHER TRADES SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION AND MAY RESULT IN REJECTION OF CONTRACTOR'S WORK.
5. THE QUANTITY AND PLACEMENT OF VISUAL NOTIFICATION DEVICES IS DEPENDENT UPON CANDELA RATING.
6. WEATHER PROOF DEVICES SHALL BE PROVIDED AS REQUIRED, BASED UPON OCCUPANCY AND ENVIRONMENTAL CONDITIONS OR AS NOTED ON DRAWINGS. CONSULT ELECTRICAL SHEETS FOR REQUIRED ELECTRICAL HAZARD CLASSIFICATION.
7. MATERIALS SHALL BE NEW AND SUITABLE FOR THE APPLICATION INTENDED. MATERIALS SHALL BEAR LABELS OR MARKINGS INDICATING THIRD PARTY TESTING LABORATORY LISTING ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
8. CONDUIT AND WIRING SHALL BE CONCEALED IN FINISHED SPACES, AND MAY BE INSTALLED EXPOSED IN UNFINISHED SPACES SUCH AS MECHANICAL AND ELECTRICAL ROOMS. CONDUIT AND WIRING, WHETHER CONCEALED OR EXPOSED, SHALL BE RUN EITHER PERPENDICULAR OR PARALLEL TO THE BUILDING'S STRUCTURAL COMPONENTS. PROVIDE PULL AND JUNCTIONS BOXES AS REQUIRED TO MEET CODE AND INSTALLATION REQUIREMENTS. THE INSTALLATION OF CONDUIT, PULL AND JUNCTION BOXES SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES SO AS TO AVOID CONFLICTS.
9. CONDUCTORS SHALL BE IDENTIFIED AT EACH JUNCTIONS BOX, OUTLET BOX, CABINET, ETC., WITH PRINTED HEAT SHRINK LABELS INDICATING PANEL AND CIRCUIT NUMBER AND OTHER APPROPRIATE INFORMATION. JUNCTION BOXES SHALL BE LABELED AS TO FUNCTION. WHERE EMPTY IS INSTALLED, IT SHALL BE LABELED AT BOTH ENDS AND FITTED WITH NYLON PULLSTRINGS FOR FUTURE USE.
10. EQUIPMENT SHALL BE SECURELY FASTENED BY MEANS OF ANCHORS, RODS, HANGARS, SWAY BRACES, ETC., TO MAINTAIN ALIGNMENT AND PREVENT EQUIPMENT MOVEMENT. EQUIPMENT LOCATED IN SEISMIC ZONES SHALL BE SECURED AS REQUIRED IN ACCORDANCE TO THE SEISMIC ZONE. SEE STRUCTURAL PLANS FOR SEISMIC DESIGN CRITERIA.
11. PENETRATIONS OF FIRE OR SMOKE RATED CONSTRUCTION SHALL BE SEALED WITH FIRESTOPPING MATERIALS APPROVED AND LISTED FOR THE RATING OF THE CONSTRUCTION PENETRATED. PROVIDE DOCUMENTATION ON SUCH PENETRATION SEALING SYSTEM SYSTEMS FOR VERIFICATION OF PROPER INSTALLATION.
12. PENETRATIONS OF ROOFS, EXTERIOR WALLS, FOUNDATIONS, OR OTHER MOISTURE PROOF CONSTRUCTION SHALL BE SEALED WITH APPROPRIATE SEALING FITTINGS OR SEALED CONSTRUCTION TO PREVENT THE INTRODUCTION OF MOISTURE INTO THE BUILDING.
13. WORK SHALL BE PERFORMED ON DE-ENERGIZED SYSTEMS ONLY TO PREVENT PERSONNEL INJURY AND POTENTIAL SYSTEM FAILURE.
14. CEILING MOUNT FIRE ALARM DEVICES SHALL BE CENTERED WITHIN THE CEILING TILE NEAREST THE CENTER OF THE ROOM, EXCEPT WHERE DOING SO PLACES A CEILING MOUNTED SMOKE DETECTOR LESS THAN 36 IN FROM A HVAC DIFFUSER OF RETURN GRILL. REFER TO REFLECTED CEILING PLANS.
15. FIRE ALARM AND MASS NOTIFICATION SYSTEMS SHALL TRANSMIT FIRE ALARM SIGNALS TO THE BASE RECEIVING STATION, THE REGIONAL DISPATCH CENTER, VIA DACT.
16. SPEAKER QUANTITIES, PLACEMENT AND TAP SETTINGS SHOWN ON DRAWINGS ARE SHOWN TO CONVEY THE DESIGN INTENT. SPEAKER QUANTITIES, PLACEMENT AND TRANSFORMER TAP SETTING SHALL BE PROVIDED TO ENSURE VOICE INTELLIGIBILITY IN ACCORDANCE WITH UFC 4-021-01. AND NFPA 72. ACOUSTIC MODELING SHALL BE PROVIDED WITH USING COMPUTER BASE SOFTWARE SUCH AS, BUT NOT LIMITED TO MODELER BY BOSE OR EASE BY ADMG. SHOP DRAWINGS SHALL INCLUDE DRAWINGS DEFINING EACH ACOUSTICALLY DEFINED SPACE ADS, INTENDED SOUND PRESSURE LEVEL SPL, AND INTENDED INTELLIGIBILITY VALUE STI OR CIS. REFER TO NFPA 72, APPENDIX D FOR

- INTELLIGIBILITY GUIDANCE.
17. THE QUANTITY AND PLACEMENT OF VISUAL NOTIFICATION DEVICES IS DEPENDENT UPON THE DEVICE'S CANDELA RATING. DEVICE PLACEMENT SHOULD BE BASED UPON ALLOWABLE DEVICE COVERAGE ASSOCIATED WITH THE DEVICES CANDELA RATING PER NFPA 72 CHAPTER 18.5.5.4.
 18. FOR ALL FIRE ALARM CABLING RUN IN SUB-FLOOR SPACES, PLENUM-RATED FIRE ALARM CABLING SHALL BE USED. ALL CABLING SHALL BE TERMINATED ON TERMINAL STRIPSON SCREW TERMINALS. WIRE NUTS SHALL NOT BE ACCEPTED.
 19. STC-RATED WALLS ALL PIPE PENETRATIONS SHALL BE SEALED WITH AN ACOUSTICAL SEALANT TO MAINTAIN WALL STC RATING TYPICAL.
 20. SPEAKERS AND OTHER TRANSDUCERS THAT ARE PART OF A SYSTEM THAT IS NOT ONLY WHOLLY CONTAINED IN THE SECURE AREA, BUT ARE INSTALLED IN THE SECURE AREA FOR LIFE SAFETY OR FIRE REGULATIONS THE SYSTEM MUST BE PROTECTED AS FOLLOWS: 1 ALL INCOMING WIRE SHALL BREACH THE SECURE AREA PERIMETER AT ON POINT. 2. ONE-WAY AUDIO INTO THE SECURE AREA COMMUNICATIONS SHALL HAVE A HIGH GAIN AMPLIFIER. 3. ALL ELECTRONIC ISOLATION COMPONENTS SHALL BE INSTALLED WITHIN THE SECURE AREA AND AS CLOSE TO THE POINT OF SECURE AREA PENETRATION AS POSSIBLE.
 21. COORDINATE FIRE ALARM MASS NOTIFICATION SYSTEM DEVICES WITH EXISTING BUILDING 82 SYSTEM.
 22. PROVIDE SHUNT TRIP BREAKER SHUT DOWN SIGNAL FOR SIMULATOR BAY ELECTRICAL BREAKERS AS INDICATED ON ELECTRICAL SHEET 00E-501.
 23. PROVIDE HVLS FAN SHUT DOWN UPON WATER FLOW PER NFPA 13. COORDINATE WITH FAN CONTROLLER AND FIRE SPRINKLER EQUIPMENT.
 24. FIRE ALARM CONDUIT SHALL BE RED IN COLOR.
 25. ALL HARDWARE, SOFTWARE, GRAPHICS AND PROGRAMMING SHALL BE UPDATED AT THE BASE RECEIVING STATION THAT RECEIVES SIGNALS FROM THIS BUILDING ADDITION.

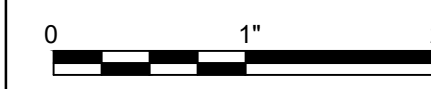


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CIVIL	B. WECKERLIN
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FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



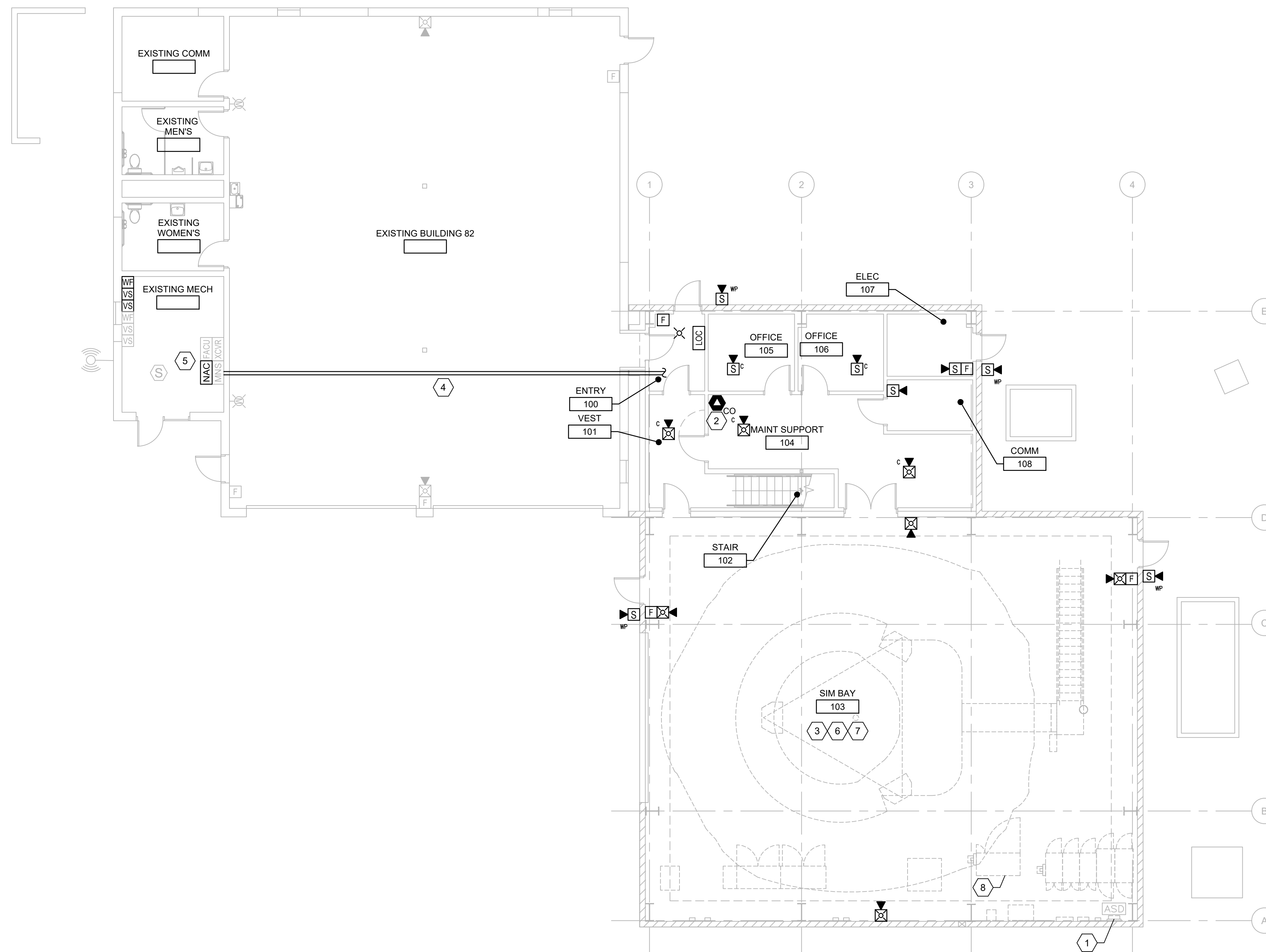
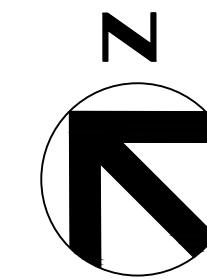
**HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003**



**SIMULATOR BUILDING
FIRE PROTECTION
GENERAL NOTES**

FILENAME | 00F-001.DWG
SCALE | NO SCALE

SHEET
00F-001



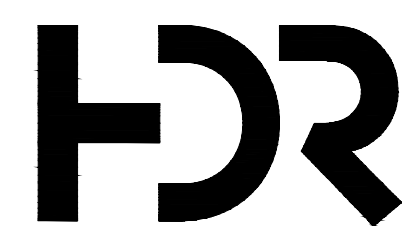
KEY NOTES: #

1. MONITOR SIMULATOR ASPIRATING SMOKE DETECTION FOR FIVE INPUTS. SEE DETAIL 2 ON SHEET 00FA-501. DETECTOR, SAMPLE TUBING AND DETECTOR MOUNTING BRACKET IS PROVIDED AND INSTALLED BY LOCKHEED MARTIN CONTRACTOR TEAM.
2. PROVIDE CARBON MONOXIDE (CO) DETECTION AND MONITOR ALARM AND TROUBLE WITH THE FIRE ALARM SYSTEM.
3. COORDINATE FIRE ALARM WITH ELECTRICAL AND MECHANICAL TO SHUNT DESTRATIFICATION FAN CF-1 HVLS FAN UPON ACTIVATION OF THE WATERFLOW SWITCH. COORDINATE WITH FAN CONTROLLER.
4. PROVIDE NEW FIRE ALARM CONDUITS AS REQUIRED FOR NEW INSTALLATION. PATH IS SCHEMATIC IN NATURE. COORDINATE NEW FIRE ALARM EQUIPMENT AND CONDUIT ROUTING WITH ALL NEW AND EXISTING HVAC, PLUMBING, FIRE SPRINKLER NEW AND EXISTING, ETC.
5. SEE DETAIL 4 ON SHEET 00FA-501 FOR WALL MOUNTED EQUIPMENT IN THIS ROOM. NEW NAC PANELS TO POWER NEW NOTIFICATION APPLIANCES, LOCAL OPERATING CONSOLES AND GAS DETECTION. POWER SUPPLY TO BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM. FIRE ALARM SYSTEM TO CONTROL AND MONITOR NEW POWER SUPPLY.
6. MONITOR MANUAL PULL STATION FOR THE SIMULATOR COCKPIT, MANUAL STATION PROVIDED BY SIMULATOR CONTRACTOR.
7. CONTROL NOTIFICATION APPLIANCE DEVICE FOR THE SIMULATOR COCKPIT, NAC DEVICE PROVIDED BY SIMULATOR CONTRACTOR.
8. MONITOR ALARM CONDITION OF SIMULATOR POWER CABINET (P1)

FIRE ALARM LEGEND:

- [FACU] EXISTING FIRE ALARM AND MASS NOTIFICATION CONTROL UNIT
 - [XCVR] EXISTING MONACO TRANSCIEVER MONACO
 - [ASD] ASPIRATING TYPE SMOKE DETECTOR AND POWER SUPPLY, PROVIDED AND INSTALLED BY LOCKHEED-MARTIN CONTRACTOR, MONITORED BY FIRE ALARM SYSTEM.
 - [LOC] LOCAL OPERATORS CONSOLE
 - [NAC] NAC EXTENDER BOOSTER POWER SUPPLY
 - [EOL] END-OF-LINE SUPERVISION DEVICE
 - [F] MANUAL STATION, FIRE ALARM
 - [S] FIRE ALARM SPEAKER/ CLEAR STROBE COMBO
C [] CEILING MOUNT
WP [] WEATHER PROOF
 - [S] SPEAKER ONLY, WALL MOUNT
C [] CEILING MOUNT
WP [] WEATHER PROOF
 - [X] CLEAR STROBE ONLY, CEILING MOUNT
 - [X] CLEAR STROBE ONLY, WALL MOUNT
 - [U] AMBER STROBE ONLY, WALL MOUNT
 - [OM] ADDRESSABLE OUTPUT MODULE
 - [AIM] ADDRESSABLE INPUT MODULE
 - [S] SMOKE DETECTOR
 - [CO] CARBON MONOXIDE DETECTOR
 - [WF] FIRE SPRINKLER WATERFLOW SWITCH
 - [VS] FIRE SPRINKLER VALVE SUPERVISORY SWITCH
 - [ANT] EXISTING TRANSCIEVER ANTENNA
- NOTE: DEVICES SHOWN IN HALF-TONE ARE EXISTING TO REMAIN

1 FIRE ALARM PLAN - FIRST FLOOR
00FA-101 1/8" = 1'-0"



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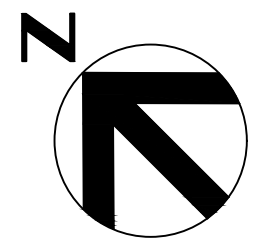
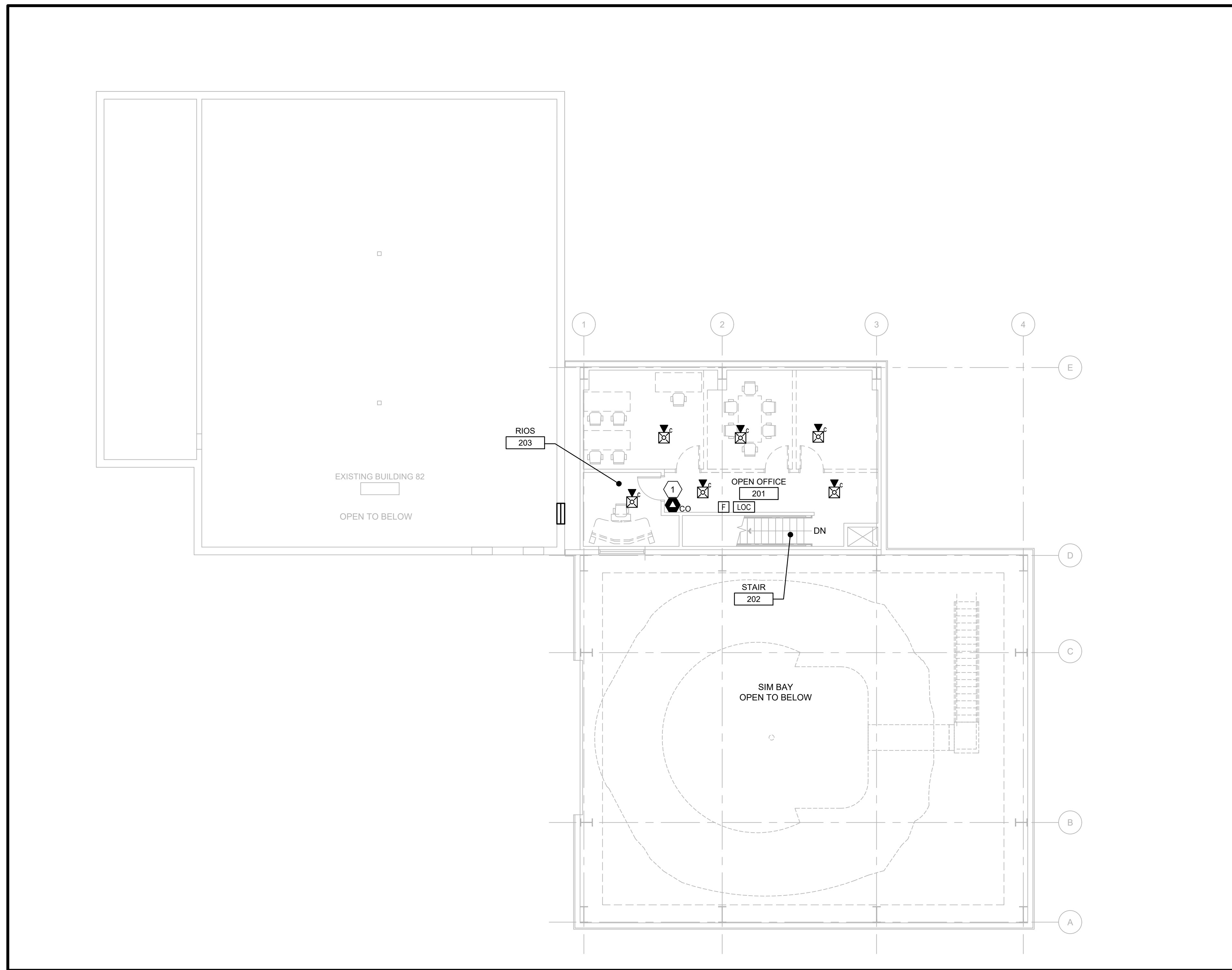
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SIMULATOR BUILDING
FIRE ALARM PLAN
FIRST FLOOR

FILENAME 00FA-101.DWG
SCALE 1/8" = 1'-0"

SHEET
00FA-101



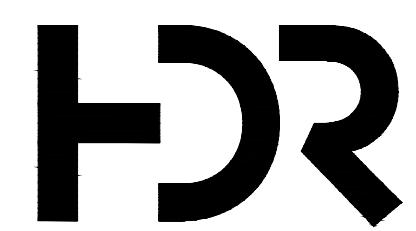
KEY NOTES: (#)

1. PROVIDE CARBON MONOXIDE (CO) DETECTION AND MONITOR ALARM AND TROUBLE WITH THE FIRE ALARM SYSTEM.

FIRE ALARM LEGEND:

- [FACU] EXISTING FIRE ALARM AND MASS NOTIFICATION CONTROL UNIT
 - [XCVR] EXISTING MONACO TRANSCIVER MONACO
 - [ASD] ASPIRATING TYPE SMOKE DETECTOR AND POWER SUPPLY, PROVIDED AND INSTALLED BY LOCKHEED-MARTIN CONTRACTOR, MONITORED BY FIRE ALARM SYSTEM.
 - [LOC] LOCAL OPERATORS CONSOLE
 - [NAC] NAC EXTENDER BOOSTER POWER SUPPLY
 - [EOL] END-OF-LINE SUPERVISION DEVICE
 - [F] MANUAL STATION, FIRE ALARM
 - [S] FIRE ALARM SPEAKER/ CLEAR STROBE COMBO
C □ CEILING MOUNT
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 - [S] SPEAKER ONLY, WALL MOUNT
C □ CEILING MOUNT
WP □ WEATHER PROOF
 - [X] CLEAR STROBE ONLY, CEILING MOUNT
 - [X] CLEAR STROBE ONLY, WALL MOUNT
 - [X] AMBER STROBE ONLY, WALL MOUNT
 - [COM] ADDRESSABLE OUTPUT MODULE
 - [CIM] ADDRESSABLE INPUT MODULE
 - [S] SMOKE DETECTOR
 - [CO] CARBON MONOXIDE DETECTOR
 - [WFS] FIRE SPRINKLER WATERFLOW SWITCH
 - [VSS] FIRE SPRINKLER VALVE SUPERVISORY SWITCH
 - [A] EXISTING TRANSCIVER ANTENNA
- NOTE: DEVICES SHOWN IN HALF-TONE ARE EXISTING TO REMAIN

1 FIRE ALARM PLAN - SECOND FLOOR
00FA-102 1/8" □ 1'-0"

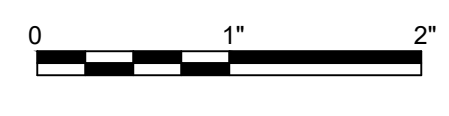


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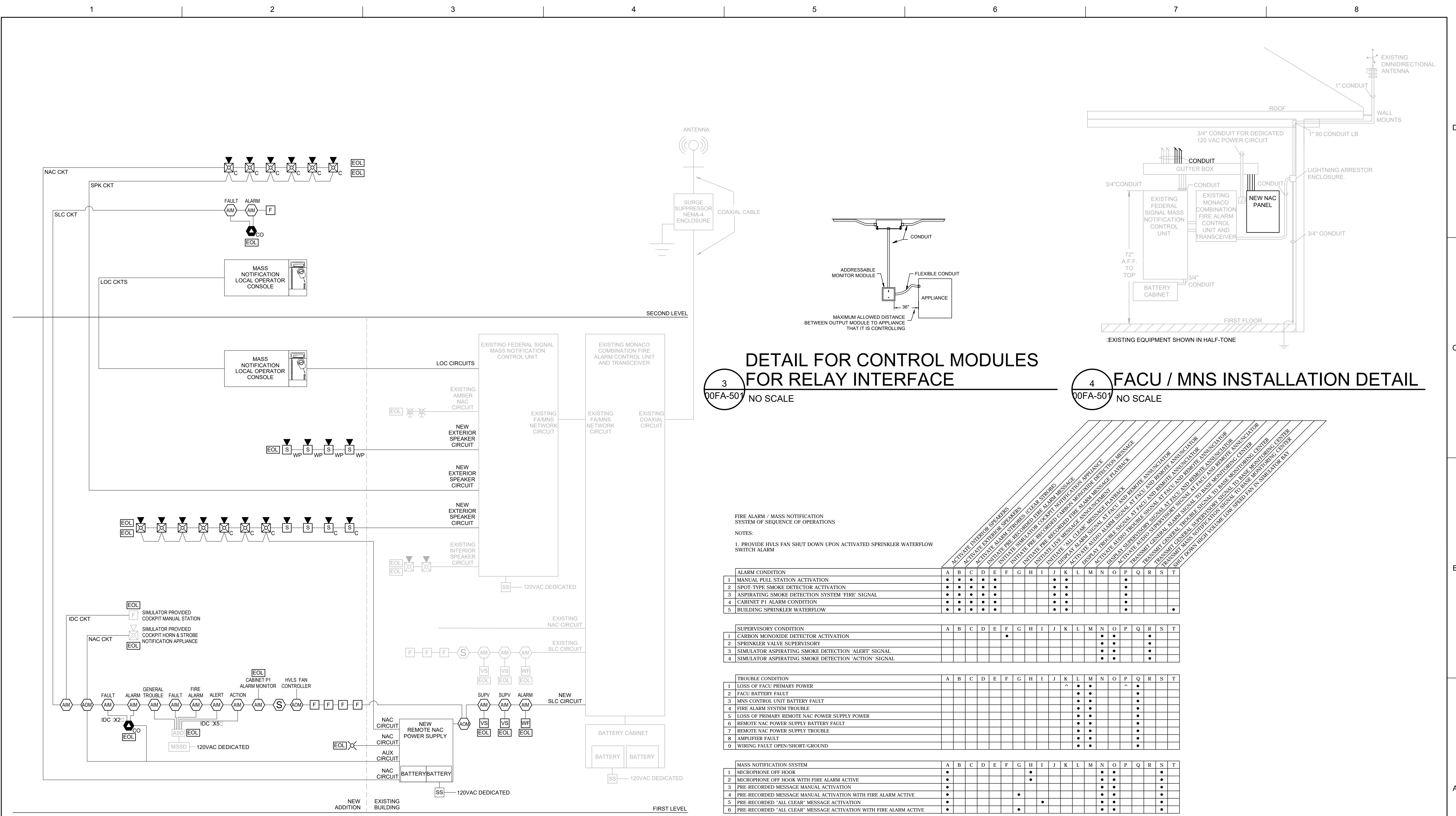


SIMULATOR BUILDING
FIRE ALARM PLAN
SECOND FLOOR

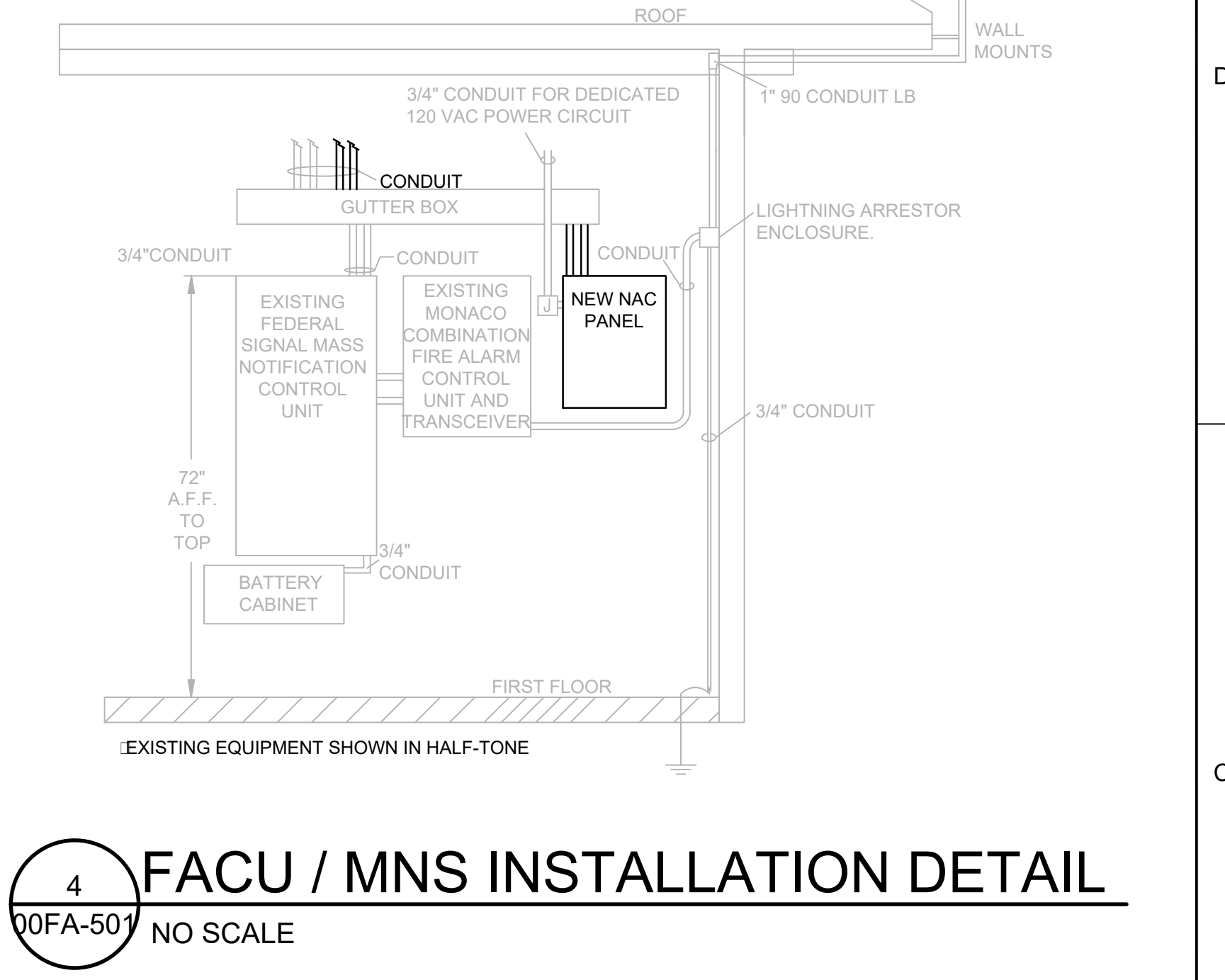
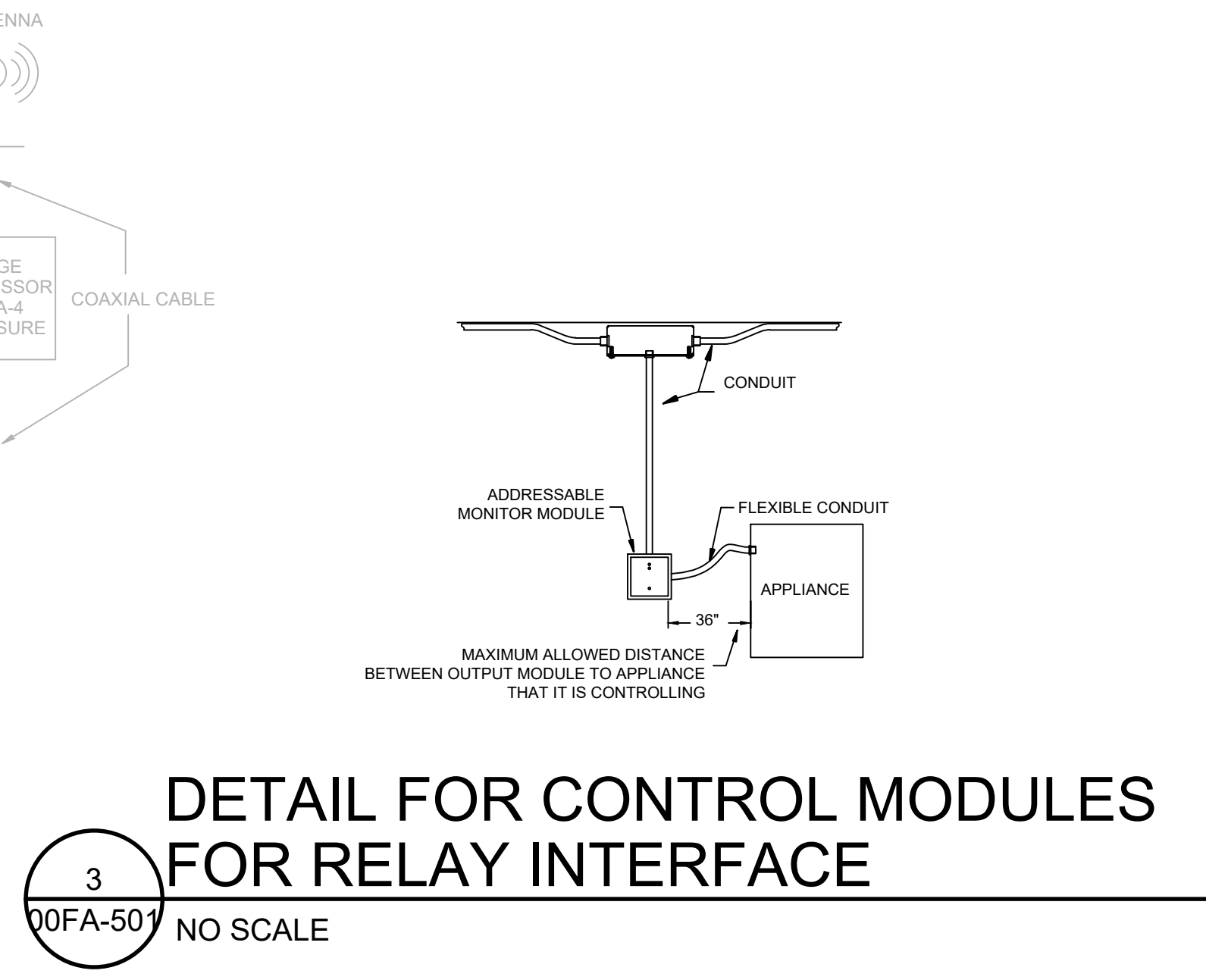
FILENAME | 00FA-102.DWG
SCALE | 1/8" □ 1'-0"

SHEET
00FA-102

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1 FIRE ALARM AND MASS NOTIFICATION SYSTEM ONE-LINE-DIAGRAM
 00FA-501 NO SCALE



FIRE ALARM / MASS NOTIFICATION SYSTEM OF SEQUENCE OF OPERATIONS
 NOTES:
 1. PROVIDE HVLS FAN SHUT DOWN UPON ACTIVATED SPRINKLER WATERFLOW SWITCH ALARM

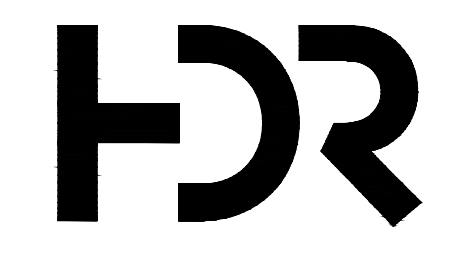
ALARM CONDITION	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1 MANUAL PULL STATION ACTIVATION	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2 SPOT-TYPE SMOKE DETECTOR ACTIVATION	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
3 ASPIRATING SMOKE DETECTION SYSTEM 'FIRE' SIGNAL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
4 CABINET P1 ALARM CONDITION	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
5 BUILDING SPRINKLER WATERFLOW	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

SUPERVISORY CONDITION	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1 CARBON MONOXIDE DETECTOR ACTIVATION																				
2 SPRINKLER VALVE SUPERVISORY																				
3 SIMULATOR ASPIRATING SMOKE DETECTION 'ALERT' SIGNAL																				
4 SIMULATOR ASPIRATING SMOKE DETECTION 'ACTION' SIGNAL																				

TROUBLE CONDITION	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1 LOSS OF FACU PRIMARY POWER																				
2 FACU BATTERY FAULT																				
3 MNS CONTROL UNIT BATTERY FAULT																				
4 FIRE ALARM SYSTEM TROUBLE																				
5 LOSS OF PRIMARY REMOTE NAC POWER SUPPLY POWER																				
6 REMOTE NAC POWER SUPPLY BATTERY FAULT																				
7 REMOTE NAC POWER SUPPLY TROUBLE																				
8 AMPLIFIER FAULT																				
9 WIRING FAULT OPEN/SHORT/GROUND																				

MASS NOTIFICATION SYSTEM	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1 MICROPHONE OFF HOOK																				
2 MICROPHONE OFF HOOK WITH FIRE ALARM ACTIVE																				
3 PRE-RECORDED MESSAGE MANUAL ACTIVATION																				
4 PRE-RECORDED MESSAGE MANUAL ACTIVATION WITH FIRE ALARM ACTIVE																				
5 PRE-RECORDED 'ALL CLEAR' MESSAGE ACTIVATION																				
6 PRE-RECORDED 'ALL CLEAR' MESSAGE ACTIVATION WITH FIRE ALARM ACTIVE																				

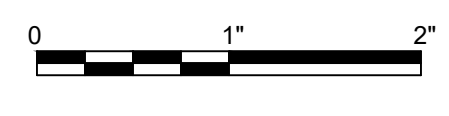
2 FIRE ALARM SYSTEM SEQUENCE OF OPERATIONS
 00FA-501 NO SCALE



PROJECT MANAGER	TOM SVOBODA
CIVIL	B. WECKERLIN
STRUCTURAL	J. LENZ
ARCHITECT	S. HEANEY
MECHANICAL	J. LEWIS
ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455



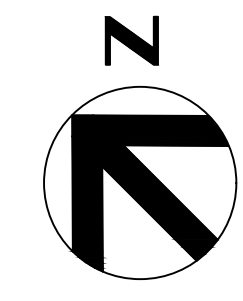
HARRISBURG ANGB, PA
 SOF CONSTRUCT SIMULATOR BAY /
 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003



SIMULATOR BUILDING FIRE ALARM DETAILS

FILENAME: 00FA-501.DWG
 SCALE: NO SCALE
 SHEET: 00FA-501

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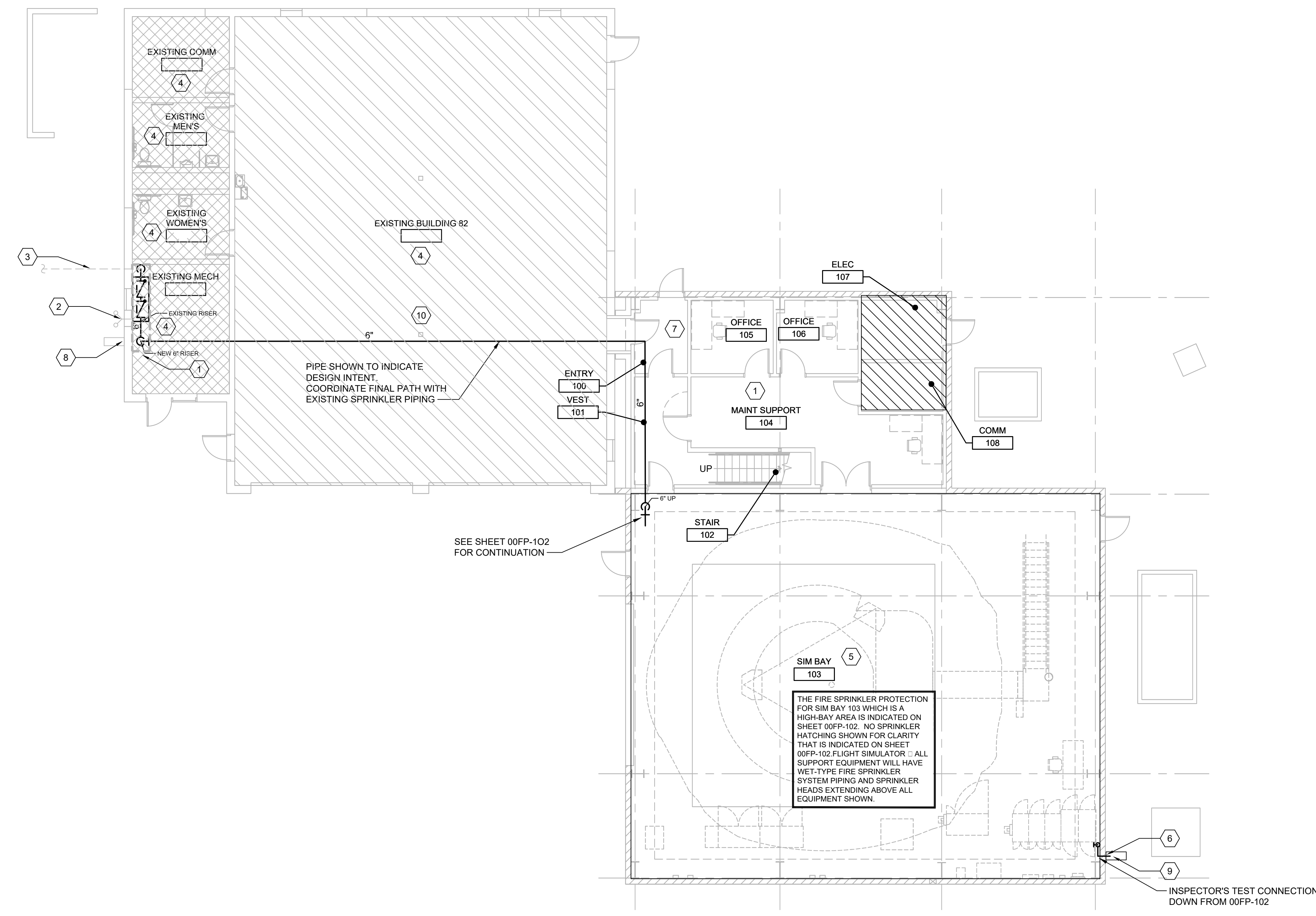


GENERAL NOTES:

1. ALL AREAS PROVIDED WITH FIRE SPRINKLER PROTECTION IN ACCORDANCE WITH THE SPRINKLER SYSTEM LEGEND ON THIS SHEET.
2. SPRINKLER SYSTEM IS DEFERRED DESIGN. ALL PIPING SHOWN IN SIMULATOR BAY SHOWN ONLY FOR REFERENCE THAT ALL SIMULATOR WILL HAVE WET-TYPE SPRINKLER SYSTEM PIPING AND SPRINKLER HEADS TO MEET COVERAGE REQUIREMENTS. FIRE SPRINKLER CONTRACTOR SHALL FULLY DESIGN SPRINKLER SYSTEM FOR ALL AREAS OF THE BUILDING.

KEY NOTES: #

1. EXISTING FIRE SPRINKLER RISER ASSEMBLY. SEE FIRE SPRINKLER RISER DETAIL 1 ON SHEET 00FP-501.
2. EXISTING FIRE DEPARTMENT CONNECTION
3. 6" EXISTING COMBINED FIRE SPRINKLER AND DOMESTIC WATER SUPPLY WITH PIV WITH TAMPER SWITCH ACROSS OLMSTEAD BLVD SEE CIVIL SITE UTILITY PLAN PAGE 00C-103 FOR WATER MAIN ENTRANCE LOCATION AND 00G-102 SITE CODE COMPLIANCE SITE PLAN FOR CONTINUATION.
4. EXISTING FIRE SPRINKLER PROTECTION THROUGHOUT BUILDING 82 IS TO REMAIN. MODIFICATIONS IN FIRE SPRINKLER RISER LOCATED IN EXISTING MECHANICAL ROOM. NEW FIRE SPRINKLER ZONE WILL BE ADDED AND NEW SPRINKLER PIPING WILL BE ROUTED FROM WATER SUPPLY TO BUILDING ADDITION AREAS. SEE SHEET 00FP-102 FOR OVERHEAD SPRINKLER HATCH FOR EXISTING RESTROOM, COMM, MECHANICAL ROOM AND HIGH-BAY STORAGE AREAS.
5. THE SIMULATOR BAY WILL BE OPEN TO ABOVE. SPRINKLER PROTECTION INDICATED ON SECOND LEVEL PLAN SHEET 00FP-102.
6. INSPECTOR'S TEST CONNECTION DRAIN
7. PROVIDE DRY-PENDENT SPRINKLER HEAD IN ENTRY ROOM 100
8. EXISTING MAIN DRAIN SPLASH BLOCK LOCATED BELOW FDC. SHOWN OFFSET FOR CLARITY. SEE CIVIL SHEET 00C-103
9. PROVIDE NEW SPLASH BLOCK. SEE FIRE PROTECTION DETAIL 2 ON SHEET 00FP-501. SEE CIVIL SHEET 00C-103.
10. PROVIDE NEW FIRE SPRINKLER PIPES AS REQUIRED FOR NEW INSTALLATION. PATH IS SCHEMATIC IN NATURE. MAINTAIN MINIMUM CLEAR HEIGHT REQUIRED FOR HIGH BAY STORAGE AREA. COORDINATE NEW FIRE SPRINKLER PIPE ROUTING WITH ALL NEW AND EXISTING HVAC, PLUMBING, FIRE ALARM NEW EXISTING, ETC.

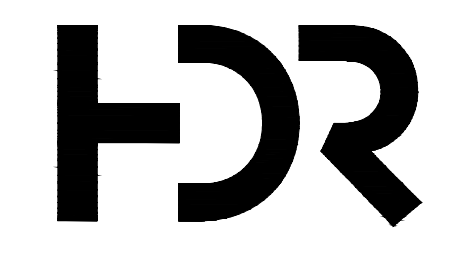


SPRINKLER SYSTEM SCHEDULE					
AREA	HAZARD CLASS	MIN. DENSITY GPM/SQ.-FT.	HYDRAULIC DESIGN AREA SQ.-FT.	HOSE GPM	DURATION GPM
ALL NEW AREAS NOT HATCHED	LIGHT	0.10	1500	250	60
	EXISTING LIGHT ORDINARY	0.10 □ 0.20	1500	250	60
	EXISTING STORAGE	0.297	2000	500	90
	ORDINARY	0.20	2500	250	60

□ BASED ON UFC 3-600-01 TABLE 9-3 SPRINKLER DESIGN DEMAND AND MINIMUM K-FACTOR AND TABLE 9-4 HOSE STREAM DEMAND AND DURATION.
 □ MINIMUM K-FACTOR FOR LIGHT HAZARD LESS THAN 30 FT IS 5.6
 MINIMUM K-FACTOR FOR ORDINARY HAZARD GREATER THAN 30 FT AND LESS THAN 45 FT IS 11.2

NOTE:
 PRELIMINARY FIRE SPRINKLER PIPE ROUTING AND SPRINKLER HEAD LOCATION IS SCHEMATIC IN NATURE - SHOWN TO CLARIFY PIPING WILL BE LOCATED ABOVE FIRE SIMULATOR AND SUPPORTING EQUIPMENT.
 THE FIRE SPRINKLER CONTRACTOR WILL BE RESPONSIBLE FOR DESIGNING A SPRINKLER SYSTEM THAT MINIMIZES FRICTION LOSSES AND PRESSURE DEMAND ON THE SYSTEM THAT THE EXISTING PA ANG/HARRISBURG AIRPORT WATER DISTRIBUTIONS SYSTEM IS CAPABLE OF MEETING SYSTEM DEMAND AND DURATION. THIS WILL BE DONE AT NO ADDITIONAL COST TO THE GOVERNMENT.

1 FIRE PROTECTION PLAN - FIRST FLOOR
 00FP-101 1/8" □ 1'-0"



PROJECT MANAGER	TOM SVOBODA
CIVIL	B. WECKERLIN
STRUCTURAL	J. LENZ
ARCHITECT	S. HEANEY
MECHANICAL	J. LEWIS
ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455

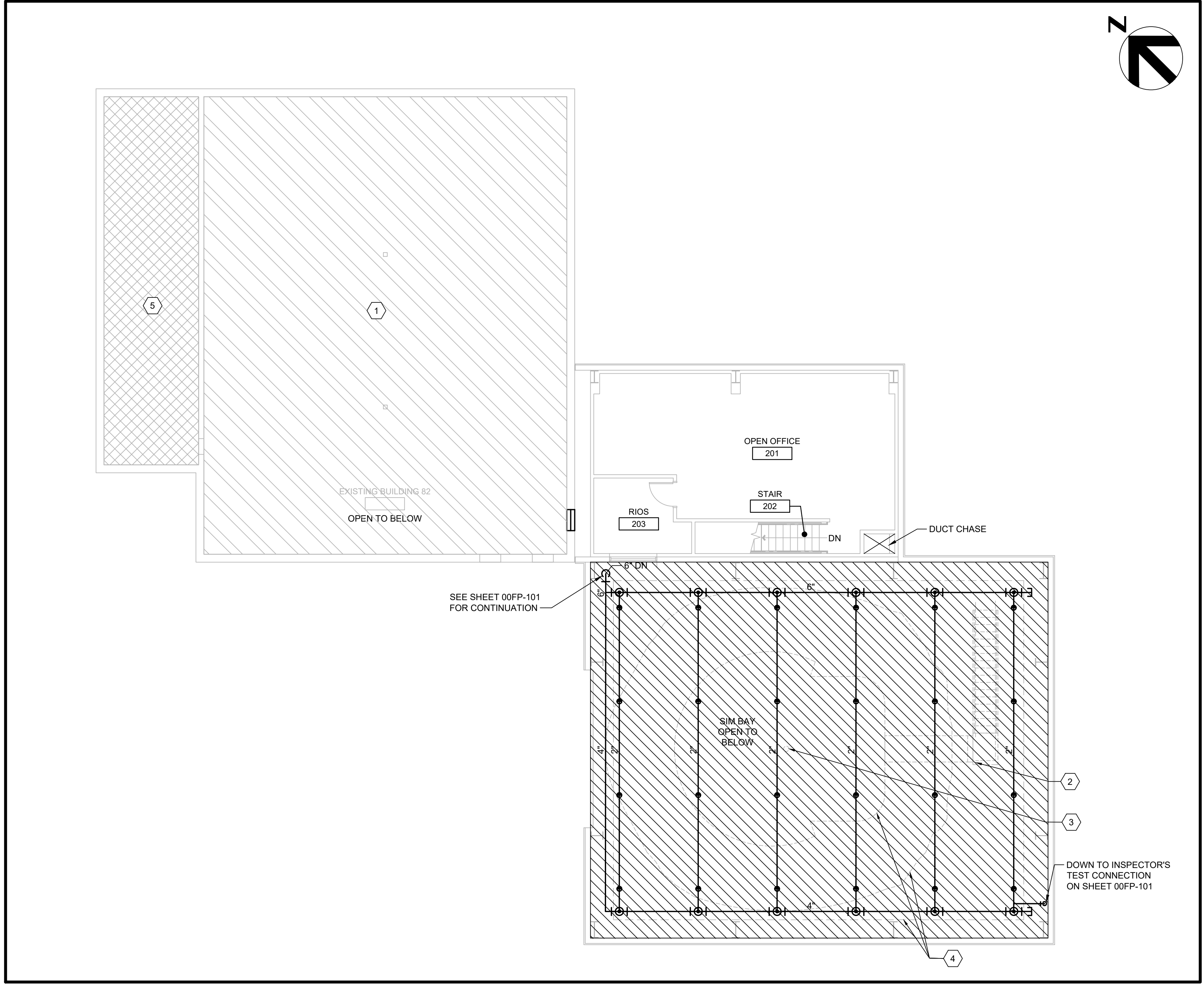
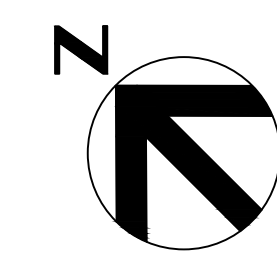


HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003

SIMULATOR BUILDING
FIRE PROTECTION PLAN
FIRST FLOOR

FILENAME | 00FP-101.DWG
 SCALE | 1/8" □ 1'-0"
 SHEET | **00FP-101**

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GENERAL NOTES:

1. ALL AREAS PROVIDED WITH FIRE SPRINKLER PROTECTION IN ACCORDANCE WITH THE SPRINKLER SYSTEM LEGEND ON THIS SHEET.
2. SPRINKLER SYSTEM IS DEFERRED DESIGN. ALL PIPING SHOWN IN SIMULATOR BAY SHOWN ONLY FOR REFERENCE THAT ALL SIMULATOR WILL HAVE WET-TYPE SPRINKLER SYSTEM PIPING AND SPRINKLER HEADS TO MEET COVERAGE REQUIREMENTS. FIRE SPRINKLER CONTRACTOR SHALL FULLY DESIGN SPRINKLER SYSTEM FOR ALL AREAS OF THE BUILDING.

KEY NOTES: (#)

1. EXISTING AREA PROTECTED WITH STORAGE AREA DESIGN DENSITY FIRE SPRINKLER SYSTEM. LIMITED FIRE SUPPRESSION WORK IN EXISTING AREAS OUTSIDE OF RISER ROOM. EXISTING BUILDING 82 AREAS ARE PROTECTED WITH EXISTING FIRE SPRINKLER SYSTEM. THIS SYSTEM IS TO REMAIN AND ONLY MODIFY FIRE SPRINKLER SYSTEM IF REQUIRED TO ALLOW FOR NEW SPRINKLER PIPING PASSING THROUGH EXISTING AREAS TO SERVE BUILDING 82 ADDITION AS NECESSARY.
2. SPRINKLERS SHALL BE INSTALLED BENEATH OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13
3. COORDINATE FIRE SPRINKLER PIPE WITH DESTRATIFICATION FAN (CF-1 HVLS FAN). SPRINKLER SYSTEM FLOW SWITCH ACTIVATION THROUGH FIRE ALARM SYSTEM SHALL SHUT DOWN HVLS FAN. COORDINATE/PROVIDE MODULES AT ELECTRICAL CONTROLLER FOR SHUTDOWN. SEE SHEET 00M-102 FOR FAN LOCATION.
4. ALL SPRINKLER HEADS AND PIPING SHALL REMAIN CLEAR OF SIMULATOR CLEARANCE AREAS INDICATED.
5. SPRINKLER PROTECTION OF EXISTING LIGHT HAZARD AREAS BELOW. SHOWN FOR CLARITY ON UPPER LEVEL.

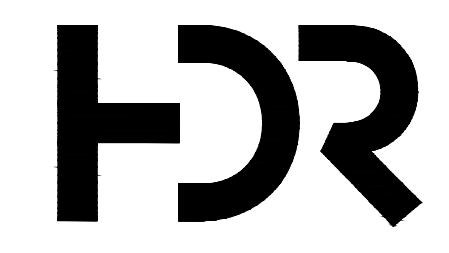
SPRINKLER SYSTEM SCHEDULE					
AREA	HAZARD CLASS	MIN. DENSITY (GPM/SQ.-FT.)	HYDRAULIC DESIGN AREA (SQ.-FT.)	HOSE (GPM)	DURATION (GPM)
ALL NEW AREAS NOT HATCHED	LIGHT	0.10	1500	250	60
	EXISTING LIGHT ORDINARY	0.10 □ 0.20	1500	250	60
	EXISTING STORAGE	0.297	2000	500	90
	ORDINARY	0.20	2500	250	60

□ BASED ON UFC 3-600-01 TABLE 9-3 SPRINKLER DESIGN DEMAND AND MINIMUM K-FACTOR AND TABLE 9-4 HOSE STREAM DEMAND AND DURATION.
 □ MINIMUM K-FACTOR FOR LIGHT HAZARD LESS THAN 30 FT IS 5.6
 MINIMUM K-FACTOR FOR ORDINARY HAZARD GREATER THAN 30 FT AND LESS THAN 45 FT IS 11.2

NOTE:
 SCHEMATIC SPRINKLER PIPING ROUTING TO HIGH-BAY AREA IS SHOWN ON SHEET 00FP-101.

THE FIRE SPRINKLER CONTRACTOR WILL BE RESPONSIBLE FOR DESIGNING A SPRINKLER SYSTEM THAT MINIMIZES FRICTION LOSSES AND PRESSURE DEMAND ON THE SYSTEM THAT THE EXISTING PA ANG/HARRISBURG AIRPORT WATER DISTRIBUTIONS SYSTEM IS CAPABLE OF MEETING SYSTEM DEMAND AND DURATION. THIS WILL BE DONE AT NO ADDITIONAL COST TO THE GOVERNMENT.

1 FIRE PROTECTION PLAN - SECOND FLOOR
 00FP-102 1/8" □ 1'-0"

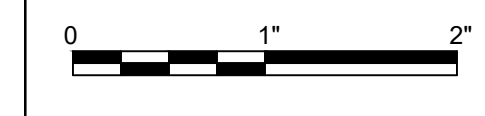


PROJECT MANAGER	TOM SVOBODA
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STRUCTURAL	J. LENZ
ARCHITECT	S. HEANEY
MECHANICAL	J. LEWIS
ELECTRICAL	W. DAVIDSON
FIRE PROTECTION	A. NOWKA
PROJECT NUMBER	10173455

A	5/5/2020	Issued for Bids
ISSUE	DATE	DESCRIPTION



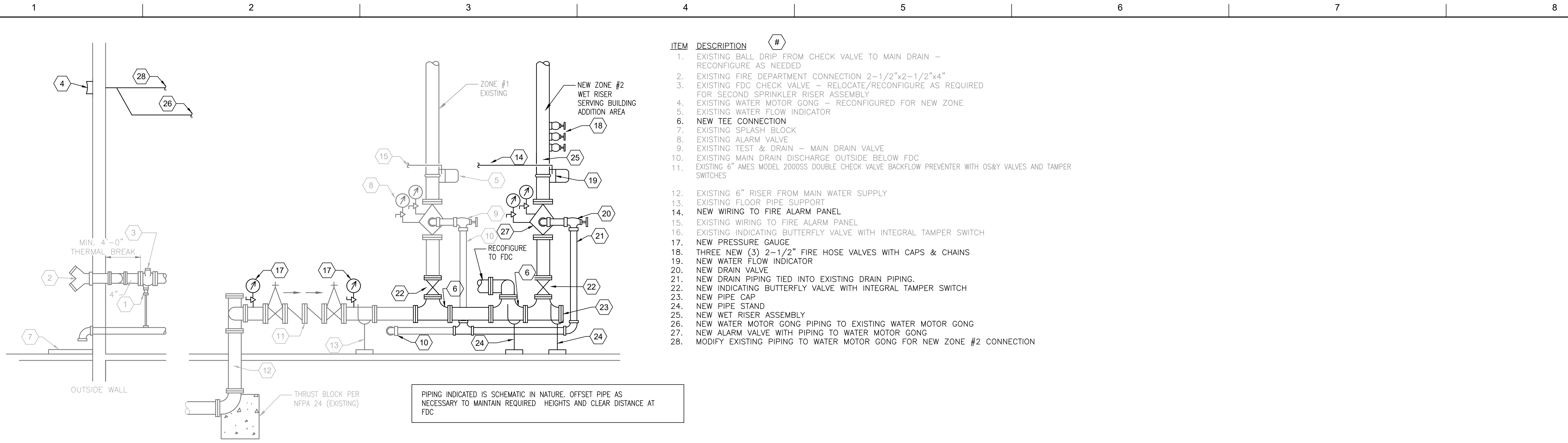
**HARRISBURG ANGB, PA
 SOF CONSTRUCT SIMULATOR BAY /
 JET ENGINE MAINTENANCE SHOP ADDITION
 PROJECT NO.: SHYQ192003**



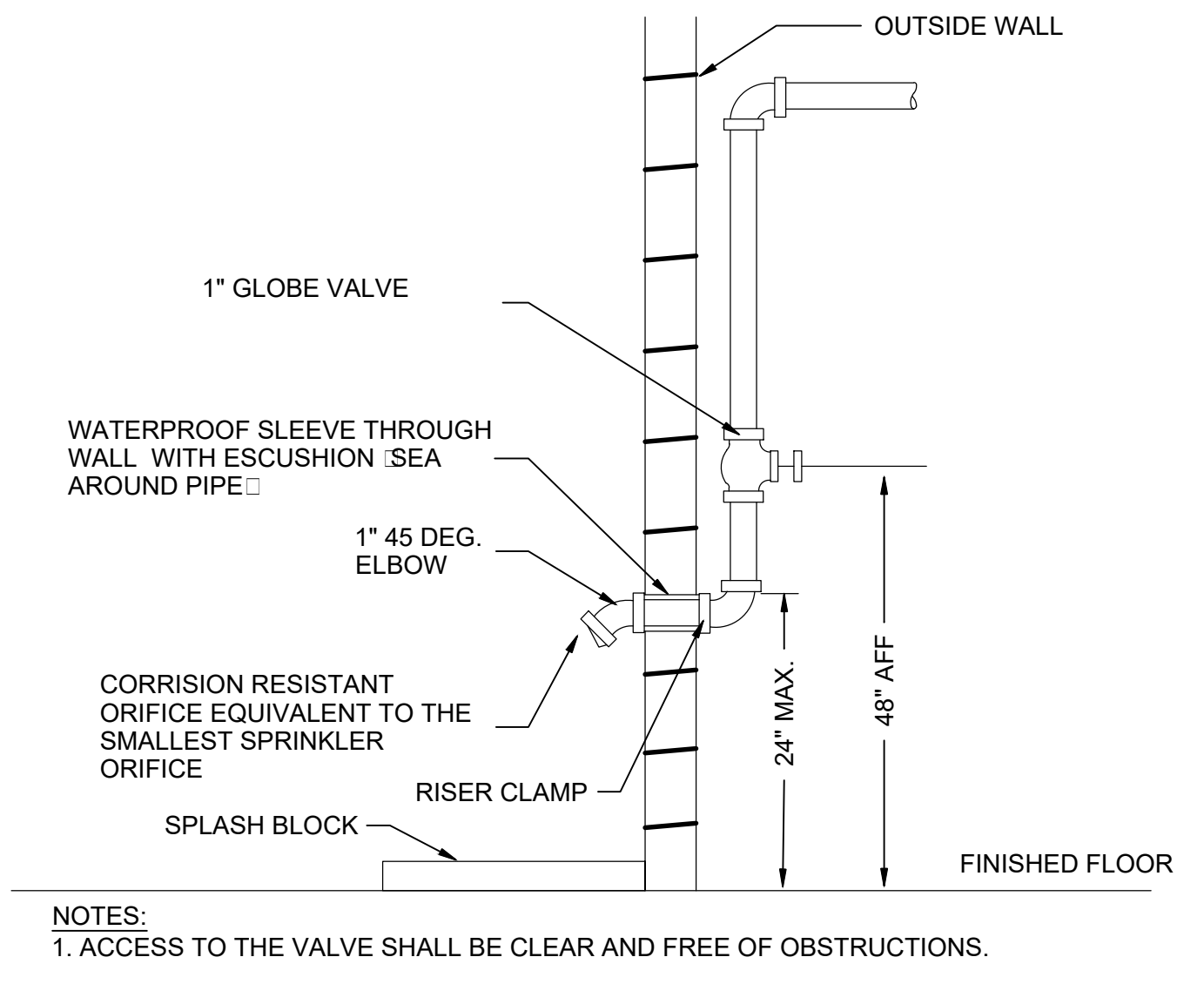
**SIMULATOR BUILDING
 FIRE PROTECTION PLAN
 SECOND FLOOR**

FILENAME 00FP-102.DWG
 SCALE 1/8" □ 1'-0"

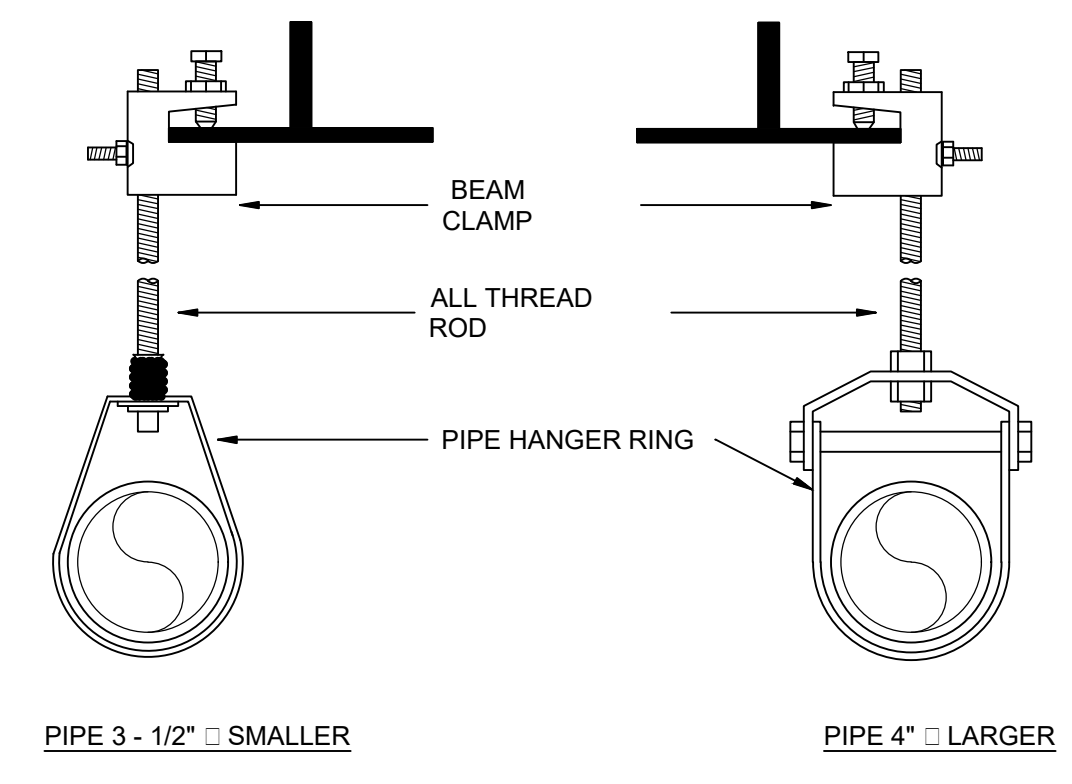
SHEET
00FP-102



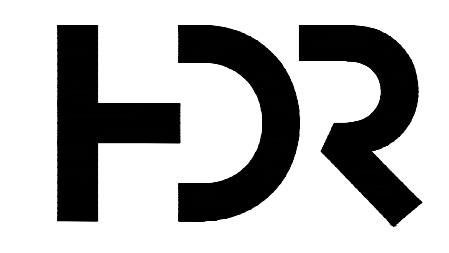
1 FIRE RISER DETAILS
00FP-501 N.T.S.



2 WET PIPE INSPECTOR'S TEST AND EXPRESS DRAIN DISCHARGE CONNECTION DETAIL
00FP-501 N.T.S.



3 BEAM CLAM PIPE HANGER DETAIL
00FP-501 N.T.S.



PROJECT MANAGER	TOM SVOBODA	
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ELECTRICAL	W. DAVIDSON	
FIRE PROTECTION	A. NOWKA	
PROJECT NUMBER	10173455	
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HARRISBURG ANGB, PA
SOF CONSTRUCT SIMULATOR BAY /
JET ENGINE MAINTENANCE SHOP ADDITION
PROJECT NO.: SHYQ192003

SIMULATOR BUILDING
FIRE PROTECTION DETAILS

SCALE: 1" = 2"
FILENAME: 00FP-501.DWG
SCALE: NO SCALE
SHEET: 00FP-501

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