

SECTION 15739 - SPLIT SYSTEM AIR CONDITIONING UNITS

PART 1 - GENERAL

1.1 SUBMITTALS

- A. Product Data and Manufacturer's Installation Instructions.
- B. WARRANTY: Furnish five year manufacturer's warranty for compressors.

PART 2 - PRODUCTS

2.1 SPLIT SYSTEM AIR CONDITIONING UNITS

- A. Product Description: Split system consisting of air handling unit and condensing unit including cabinet, evaporator fan, refrigerant cooling coil, compressor, refrigeration circuit, condenser, electric heating coil, air filters, controls, air handling unit accessories, condensing unit accessories, and refrigeration specialties.
 - B. Refer to Split-System Unit Schedule on drawing M600 for capacities, and manufacturers.
- 2.2 AIR HANDLING UNIT
- A. Configuration: As indicated on Drawings.
 - B. Evaporator Fan: Forward curved centrifugal type, resiliently mounted with adjustable belt drive and high efficiency motor complying with NEMA MG1, Type 1. Motor permanently lubricated with built-in thermal overload protection. Furnish oversize motor.
 - C. Evaporator Coil: Constructed of copper tubes expanded onto aluminum fins. Factory leak tested under water. Removable, PVC construction, double-sloped drain pan with piping connections on both sides.
 - D. Refrigeration System: Single Dual refrigeration circuits controlled by factory installed thermal expansion valve.
 - E. Electric Heating Coil: Helical nickel-chrome resistance wire coil heating elements with refractory ceramic support bushings easily accessible with automatic reset thermal cut-out, built-in contactors, galvanized steel frame, control circuit transformer and fuse, manual reset thermal cut-out, air flow proving device, pilot duty toggle switch, load fuses. Number of stages as indicated on Drawings.
 - F. Air Filters: 2 inch thick pleated media MERV 13 rating.
 - G. Air Handling Unit Accessories: Vibration Isolators

2.3 CONDENSING UNIT

- A. General: Factory assembled and tested air cooled condensing units, consisting of casing, compressors, condensers, coils, condenser fans and motors, and unit controls.
- B. Controls: Furnish operating and safety controls including high and low pressure cutouts. Control transformer. Furnish magnetic contactors for compressor and condenser fan motors.
- C. Condenser Fans and Drives: Direct drive propeller fans statically and dynamically balanced. Wired to operate with compressor. Permanently lubricated ball bearing type motors with built-in thermal overload protection. Furnish high efficiency fan motors.
- D. Condensing Unit Accessories: Furnish the following accessories:
 - 1. Anti-short cycle timer.
 - 2. Disconnect switch.
 - 3. Vibration isolators.
 - 4. Condenser Coil Guard: Condenser fan openings furnished with PVC coated steel wire safety guards.
- E. Refrigeration specialties: Furnish the following for each circuit:
 - 1. Replaceable core type filter drier.
 - 2. Liquid line sight glass and moisture indicator.
 - 3. Liquid line solenoid valve.
 - 4. Charging valve.
 - 5. Oil level sight glass.
 - 6. Refrigerant: Furnish charge of refrigerant R-410a.

2.4 ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Disconnect Switch: Factory mounted, non-fused type, interlocked with access door, accessible from outside unit, with power lockout capability.
- PART 3 - EXECUTION
- 3.1 INSTALLATION - AIR HANDLING UNIT
- A. Install air handling units on vibration isolators.
 - B. Connect air handling units to supply and return ductwork with flexible connections.
 - C. Install condensate piping with trap and route from drain pan to condensate drainage system
- 3.2 INSTALLATION - CONDENSING UNIT
- A. Install condensing units on vibration isolators.
 - B. Install refrigerant piping from unit to condensing unit.
 - C. Evacuate refrigerant piping and install initial charge of refrigerant.
 - D. Install electrical devices furnished loose for field mounting.
 - E. Install control wiring between air handling unit, condensing unit, and field installed accessories.
 - F. Install connection to electrical power wiring in accordance with Section 16150.
- 3.4 CLEANING
- A. Install temporary filters during construction period. Replace with permanent filters at Substantial Completion.
- 3.5 PROTECTION OF FINISHED WORK
- A. Do not operate air handling units until ductwork is clean, filters are in place, bearings lubricated, and fan has been test run under observation.
- END OF SECTION

SECTION 15810 - DUCTS AND ACCESSORIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for fire and smoke dampers.
- B. Comply with NFPA 90A for systems serving spaces more than 25,000 cu. ft. in volume or building Types II, IV, and V construction more than 3 stories in height.
- C. Comply with NFPA 90B for systems serving spaces in 1 or 2 family dwellings or serving spaces less than 25,000 cu. ft.
- D. Comply with NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations," for kitchen hood ducts.
- E. Comply with UL 181 and UL 181A for ducts and closures.
- F. Testing, Adjusting, and Balancing Agency Qualifications: AABC certified (to be furnished by Tenant).

PART 2 - PRODUCTS

2.1 DUCTS

- A. Spiral Duct: Spiral Lock Seam, without insulation, G90 galvanized finish, ASTM A-653/924
 - 1. Basis of Design Manufacturers: Lindab SPIROsafe, alternates to the basis of design must be submitted for review.
 - 2. Fittings: Factory produced standing seam construction with internal sealing. Fittings with a major axis of 36" or smaller shall be 20 gauge. Fittings with a major axis of 37"-48" shall be 18 gauge.
 - B. Galvanized Steel Sheet: Forming steel, ASTM A 653/653M, G90 coating designation.
 - C. Duct Liner: ASTM C 1071, Type II, with an airstream surface coated with a temperature resistant coating. Thickness: 1-1/2 inch. R-value : 8.
 - 1. Adhesive: ASTM C 916, Type I.
 - 2. Mechanical Fasteners: Galvanized steel pin, length as required to penetrate liner plus a 1/8 inch projection maximum into the airstream.
 - D. Joint and Seam Tape: Comply with UL 181A.
 - E. Joint and Seam Sealant: Comply with UL 181A.
 - F. Rectangular Metal Duct Fabrication: Comply with SMACNA's "HVAC Duct Construction Standard" for metal thickness, reinforcing types and intervals, tie rod applications, and joint types and intervals.
- 2.2 ACCESSORIES
- A. Volume-Control Dampers: Factory fabricated volume control dampers, complete with required hardware and accessories. Single blade and multiple opposed blade, standard leakage rating, and suitable for horizontal or vertical applications.
 - B. Fire Dampers: Factory-fabricated fire dampers, complete with required hardware and accessories. UL labeled according to UL 555, "Fire Dampers".
 - C. Flexible Connectors: Flame retardant or noncombustible fabrics, coatings, and adhesives complying with UL 181, Class 1.
 - D. Flexible Ducts: Factory fabricated, insulated, round duct, with an outer jacket enclosing 2 inch thick, glass fiber insulation, R-value: 6.0, around a continuous inner liner.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Duct System Pressure Class: Construct and install each duct system with 2 inch positive and negative duct pressure classifications.
- B. Conceal ducts from view in finished and occupied spaces. Except where noted as exposed.
- C. Avoid passing through electrical equipment spaces and enclosures.
- D. Support and connect metal ducts according to SMACNA's "HVAC Duct Construction Standard".
- E. Install duct accessories according to applicable portions of details of construction as shown in SMACNA standards.
- F. Install liner and/or insulation on ductwork per the material schedule on sheet M010.
- G. Install volume control dampers in lined duct with methods to avoid damage to liner and to avoid erosion of duct liner.
- H. Install fire and smoke dampers according to manufacturer's UL approved written instructions.
- I. Install fusible links in fire dampers.
- J. Provide saddle taps at tees for exposed ductwork.

3.2 TESTING, ADJUSTING, AND BALANCING

- A. The Tenant will supply an independent balance agent to to balance and adjust the HVAC installation. The balance agent will be responsible for any pulley or belt changes required.
- B. The GC is to have trained staffed available during the balancing to correct issues noted by the balance agent.
- C. The balance agent is to balance airflow within distribution systems, including submains, branches, and terminals to indicated quantities +/- 10%. The hood exhaust system shall be balanced to a tolerance of -0+10% and the make-up air system to a tolerance of -10+0%.
- D. The balance agent is to supply a copy of the balance report to the Tenant, engineer and general contractor for review.

END OF SECTION 15810

SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: None.
- PART 2 - PRODUCTS
- 2.1 OUTLETS AND INLETS
- A. All air terminal devices:
 - 1. Refer to Grills, Registers, and Diffusers Schedule for equipment schedule
 - 2. Manufacturer: As scheduled (NO SUBSTITUTIONS)
 - 3. Material: As scheduled.
 - 4. Finish: As scheduled.
 - 5. Mounting: As scheduled.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Coordinate location and installation with duct installation and installation of other ceiling and wall mounted items.
 - B. Locate ceiling diffusers, registers, and grilles, as indicated on the architectural "reflected ceiling plans." Unless otherwise indicated, locate units in center of acoustical ceiling panels.
- END OF SECTION 15855

HVAC MATERIAL SCHEDULE		
CATEGORY	APPLICATION	ALLOWABLE MATERIAL
DUCT	EXPOSED SUPPLY	RECT. LINED OR ROUND AS SHOWN, NO EXPOSED DUCT-SEALING MASTIC
	EXPOSED RETURN	RECTANGULAR, NO EXPOSED DUCT-SEALING MASTIC
	EXPOSED GEN. EXHAUST	RECTANGULAR OR ROUND AS SHOWN, NO EXPOSED DUCT-SEALING MASTIC
	CONCEALED, SUPPLY	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, RETURN	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, GEN. EXHAUST	RECT. OR ROUND AS SHOWN
	CONCEALED, TYPE I HOOD EXHAUST	RECTANGULAR 16 GA. BLACK IRON W/ WRAP OR UL 1978 FACTORY-MANUFACTURED DUCT W/ WRAP (SUBMIT SHOP DRAWINGS FOR FACTORY-MANUFACTURED DUCT PRIOR TO ORDERING FOR APPROVAL)

HVAC GENERAL NOTES

- A. GENERAL NOTES APPLY TO HVAC SHEETS.
- B. WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING APPLICABLE SECTIONS OF NFPA, THE MECHANICAL CODE, AND ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL. PURCHASE PERMITS ASSOCIATED WITH THE WORK. OBTAIN INSPECTIONS REQUIRED BY CODE. SEE ARCHITECTURAL SHEETS FOR THE PREVAILING CODES.
- C. CONTRACTOR AND SUBCONTRACTORS SHALL REVIEW A COMPLETE SET OF THE CONSTRUCTION DOCUMENTS.
- D. COORDINATE WORK WITH THE WORK OF OTHER TRADES, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND OF THE EXISTING CONDITIONS AT THE PROJECT SITE.
- E. DRAWINGS FOR THE MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWING SHALL NOT BE SCALED FOR EXACT MEASUREMENTS, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, OFFSETS, ACCESSORIES, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- F. DUCT DIMENSIONS ON PLANS INDICATE DIMENSIONS OF INTERNAL FREE AREA.
- G. PERFORATED CEILING DIFFUSERS SHALL BE 4-WAY UNLESS NOTED OTHERWISE.
- H. COORDINATE ROOF WORK WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- I. UNLESS NOTED OTHERWISE RECTANGULAR DUCT ELBOWS GREATER THAN 45° SHALL BE MITERED ELBOWS WITH DOUBLE-THICKNESS TURNING VANES AND RECTANGULAR DUCT ELBOWS 45° OR LESS SHALL BE RADIUSSED ELBOWS WITH AN INSIDE RADIUS OF AT LEAST 1/2 THE WIDTH OF THE DUCT.
- J. REPLACE AIR FILTERS WITH NEW, CLEAN MERV 8 AIR FILTERS AT TURNOVER.
- K. THE TERM "FURNISH" MEANS SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" DESCRIBES THE OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" MEANS TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
- L. INSTALL LABELING CALLED FOR IN THE MECHANICAL DRAWINGS USING ENGRAVED PHENOLIC PLATES (WHITE WITH BLACK LETTERING) FURNISHED BY TSV.
- M. PROVIDE P3000 12 GA. UNISTRUT WITH PG FINISH FOR DUCT SUPPORTS AND OTHER UNISTRUT IN AREAS EXPOSED TO VIEW. SLOTTED UNISTRUT AND OTHER UNISTRUT WITH HOLES IS NOT ACCEPTABLE.

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Contents:

HVAC SPECIFICATIONS

M010

HVAC ABBREVIATIONS

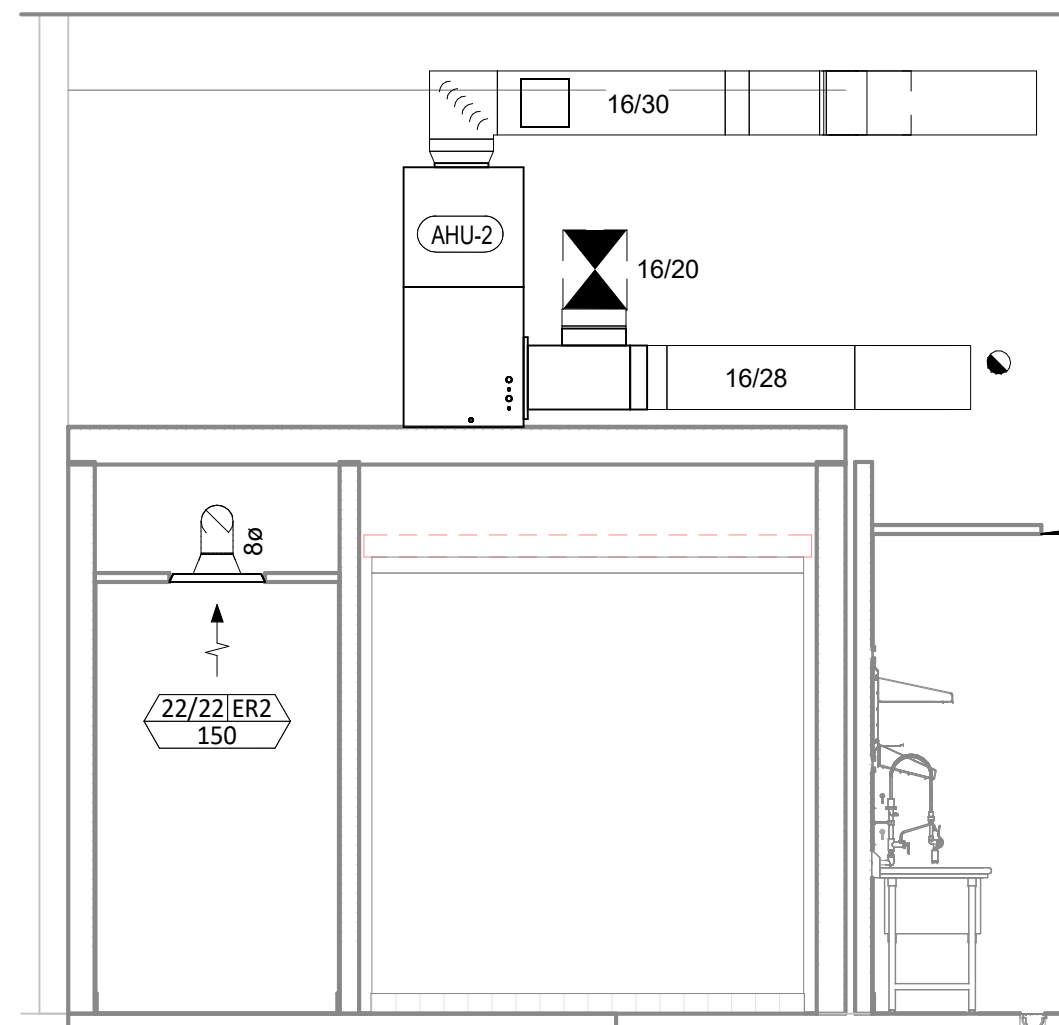
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- CD CEILING DIFFUSER
- CU CONDENSING UNIT
- (E) EXISTING
- EF EXHAUST FAN
- ER EXHAUST REGISTER
- EXT'G EXISTING
- HD HOOD
- MUA MAKEUP AIR UNIT
- OBD BLADE DAMPER
- RG RETURN GRILLE
- RTU ROOFTOP UNIT
- SR SUPPLY REGISTER
- VSC VARIABLE SPEED CONTROL
- CO2AS TENANT'S CO2 ALARM SUPPLIER
- GC GENERAL CONTRACTOR
- HES TENANT'S HVAC EQUIPMENT SUPPLIER
- HS TENANT'S HOOD SUPPLIER
- KES TENANT'S KITCHEN EQUIPMENT SUPPLIER
- TAB TENANT'S TEST AND BALANCE VENDOR
- TCC TENANT'S CABLING CONTRACTOR
- TDC TENANT'S DUCT CLEANER
- TEMS TENANT'S ENERGY MANAGEMENT SYSTEM SUPPLIER
- TLS TENANT'S LIGHT/LAMP SUPPLIER
- TMB TENANT'S MENU BOARD SUPPLIER
- TMS TENANT'S MILLWORK SUPPLIER
- TP TENANT'S PHONE SUPPLIER
- TPS TENANT'S PANELBOARD SUPPLIER
- TRS TENANT'S RAILING SUPPLIER
- TSV TENANT'S SIGN VENDOR
- TUV TENANT'S UV SANITIZER SUPPLIER
- WCS TENANT'S WALK-IN COOLER SUPPLIER
- WHS TENANT'S WATER HEATER SUPPLIER

HVAC SYMBOLS

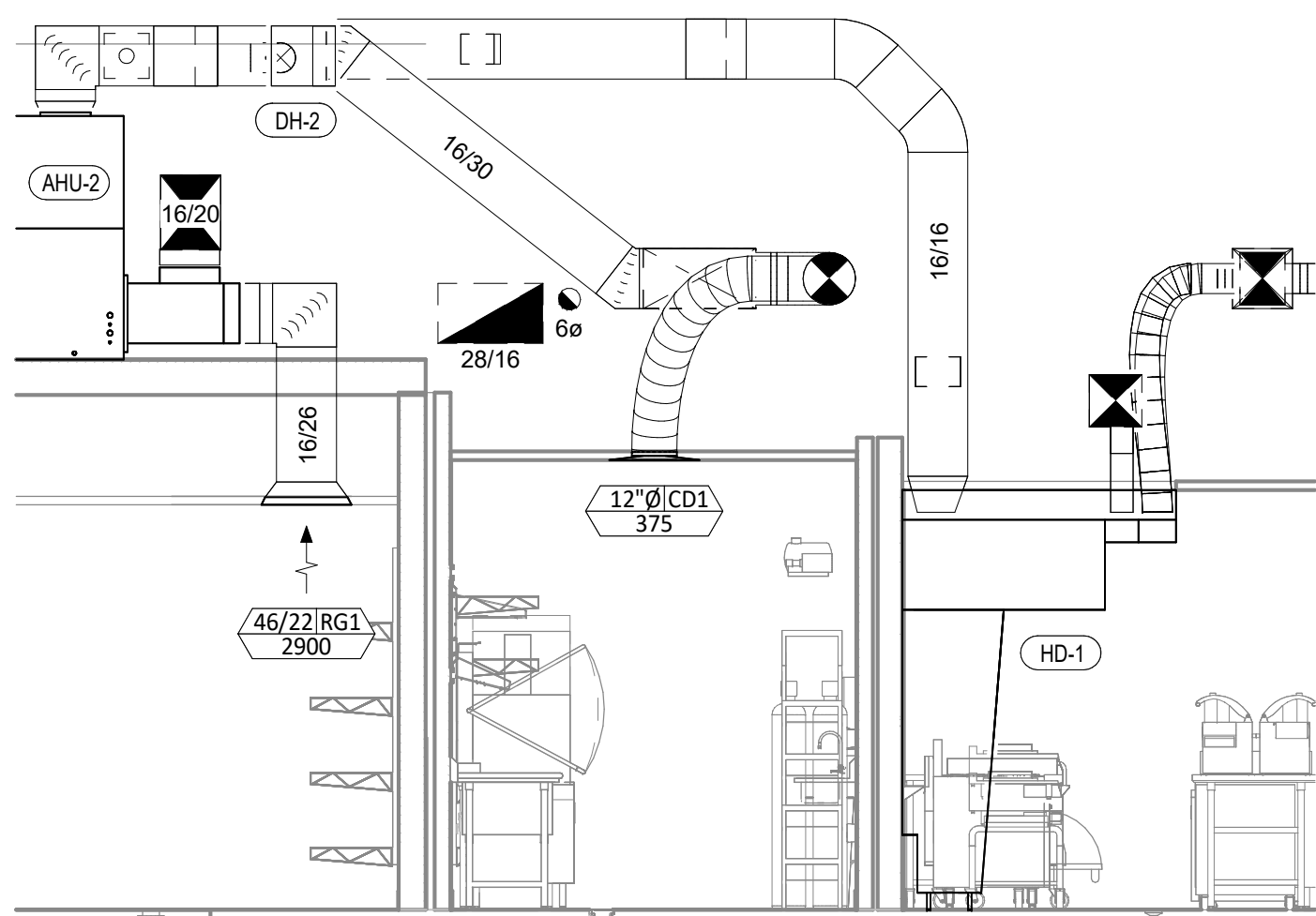
- CEILING DIFFUSER
- CEILING-MOUNTED RETURN OR EXHAUST REGISTER
- SUPPLY REGISTER
- RETURN GRILLE
- FLEXIBLE DUCT
- MITERED CORNER WITH TURNING VANES
- DUCTWORK INTERNAL FREE DIMENSIONS (WIDTH/HEIGHT) RECTANGULAR TO ROUND DUCT TRANSITION
- DUCT-MOUNTED SMOKE DETECTOR
- MOTOR-OPERATED DAMPER
- MANUAL VOLUME DAMPER
- GREASE DUCT CLEANOUT
- MITERED CORNER WITHOUT TURNING VANES
- GRIDPOINT THERMOSTAT
- GRIDPOINT ZONE SENSOR MODULE
- GRIDPOINT SUPPLY PROBE
- PLAN NOTE: SEE PLAN NOTES LISTED ON THE SAME SHEET FOR NOTE MEANING
- CONNECT TO EXISTING
- EQUIPMENT TAG: SEE EQUIPMENT SCHEDULE ON SHEET M600 FOR EQUIPMENT INFORMATION
- AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET
- GRILL, REGISTER, OR DIFFUSER TAG: TAG NECK SIZE AIRFLOW [CFM]

HVAC PLAN NOTES

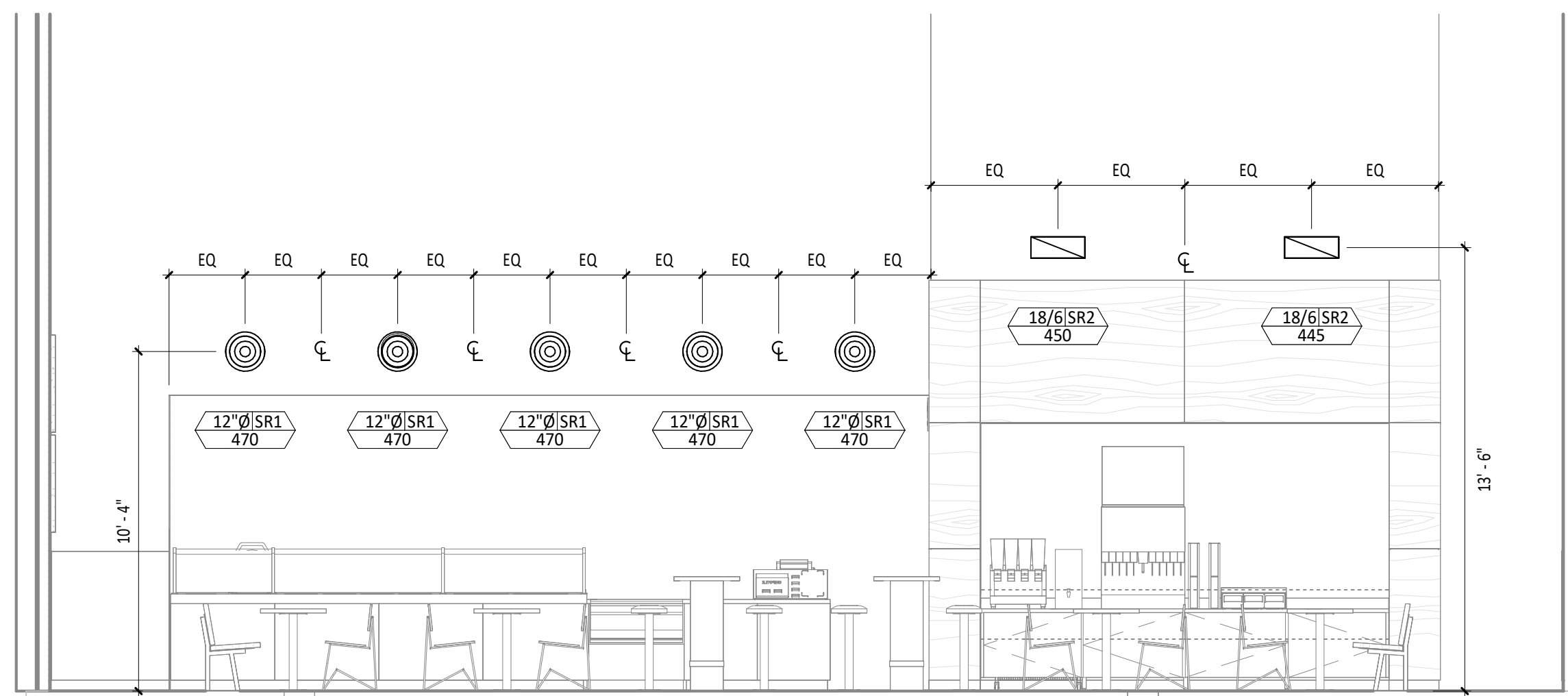
- SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
- PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS AND RETURN GRILL BLACK. TYPICAL.
- CONNECT TO EXISTING GREASE EXHAUST DUCT STUBBED INTO THE SPACE IN THE LOCATION SHOWN. ENSURE ALL CONNECTIONS ARE FULLY WELDED.
- 28/16 DUCT OUT FOR TRANSITION TO AHU-1 RETURN CONNECTION. AHU-1 SHALL HAVE A GC PROVIDED SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO AHU-1 OPERATION.
- 28/16 DUCT OUT FOR TRANSITION TO AHU-2 RETURN CONNECTION. AHU-2 SHALL HAVE A GC PROVIDED SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO AHU-2 OPERATION.
- 30/16 DUCT UP FROM AHU-1 TO BUILDING SUPPLY CONNECTION.
- 30/16 DUCT UP FROM AHU-2 TO BUILDING SUPPLY CONNECTION.
- 26/18 DUCT THROUGH WALL TO MAU-1 SUSPENDED IN GARAGE.
- 16/16 DUCT UP FROM HOOD THROUGH ROOF TO EF-1 COMPLIANT WITH NFPA 96. PROVIDE RADIUS ELBOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN GREASE DUCT.
- PROVIDE DUCT FROM EF-2 & EF-3 TO EXISTING LOUVER AS SHOWN. HOLD EXPOSED DUCT AS HIGH AS POSSIBLE IN DINING ROOM.
- 28/6 DUCT DOWN TO MAKEUP AIR PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL FOR 3.
- 8" DIA. DUCT DOWN TO AC PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL. CAP UNUSED DUCT CONNECTIONS.
- INSTALL SINGLE GANG VERTICAL J-BOX GRIDPOINT THERMOSTATS FURNISHED BY TEMS FOR AHU-1 AND AHU-2 AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR AHU-1 AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR AHU-2 AT THIS LOCATION 66" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR AHU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR AHU-2 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION 60" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.
- INSTALL KITCHEN HOOD, HD-1. SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING, IN COMPLIANCE WITH NFPA 96, THE BUILDING CODE, AND AUTHORITIES HAVING JURISDICTION. HOOD SHALL HAVE AN INTEGRAL DUCT COLLAR TEMPERATURE SENSOR TO AUTOMATICALLY ENERGIZE THE EXHAUST AND MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN. INSTALL HOOD PER DETAILS 2, 4, AND 9/M700. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM.
- ADJUST SUPPLY REGISTERS SO THAT SUPPLY AIR HITS WALL ON OPPOSITE SIDE OF ROOM AT APPROXIMATELY 7' AFF WITH NO DRAFTS FELT IN THE DINING ROOM.
- PROVIDE AUDIO/VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.
- PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 1/M700. TYPICAL.



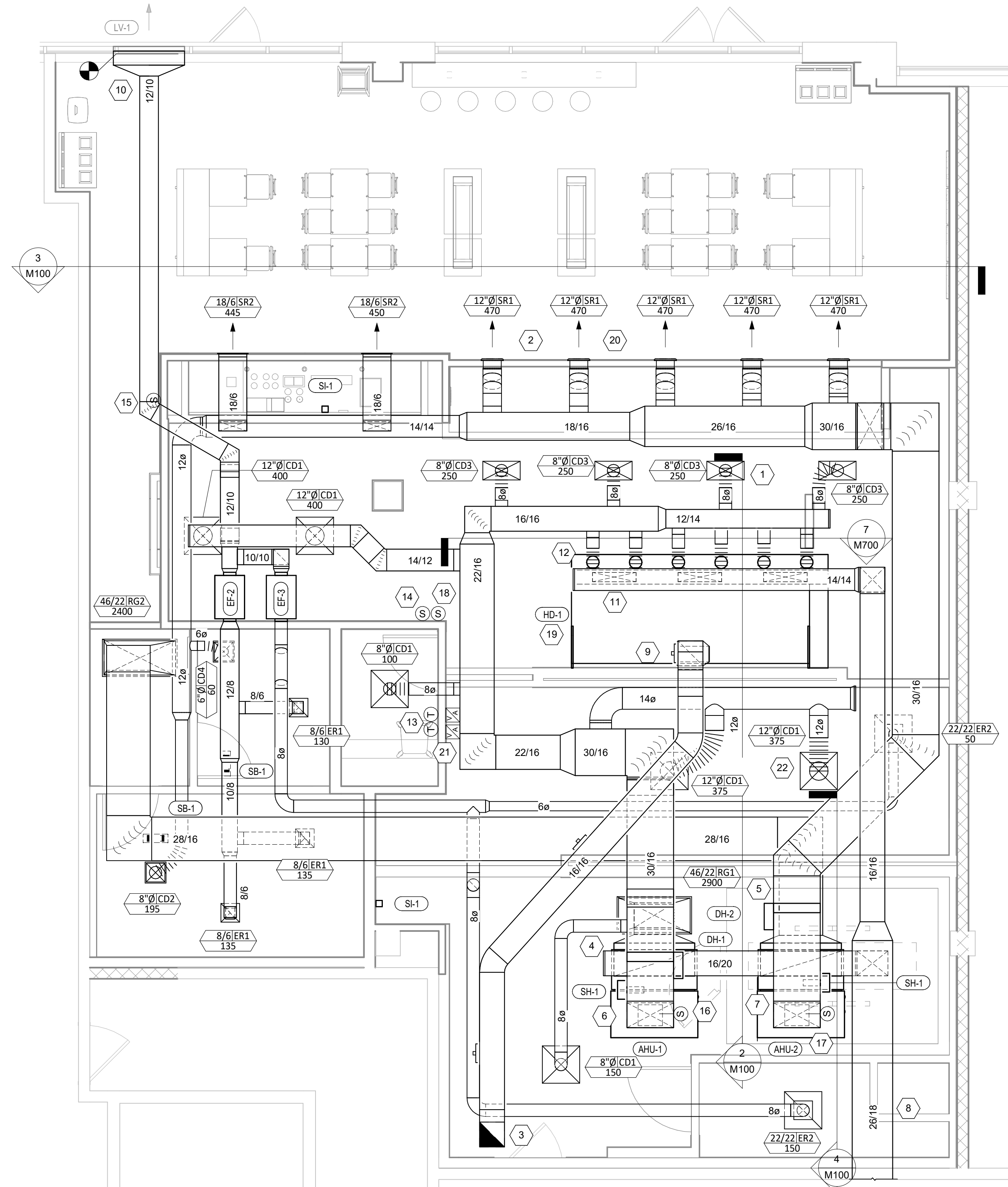
4 DUCT SECTION AT AHU
1/4" = 1'-0"



2 DUCT SECTION AT HOOD
1/4" = 1'-0"



3 HVAC DINING ROOM SECTION
1/4" = 1'-0"



1 HVAC FLOOR PLAN
1/4" = 1'-0"

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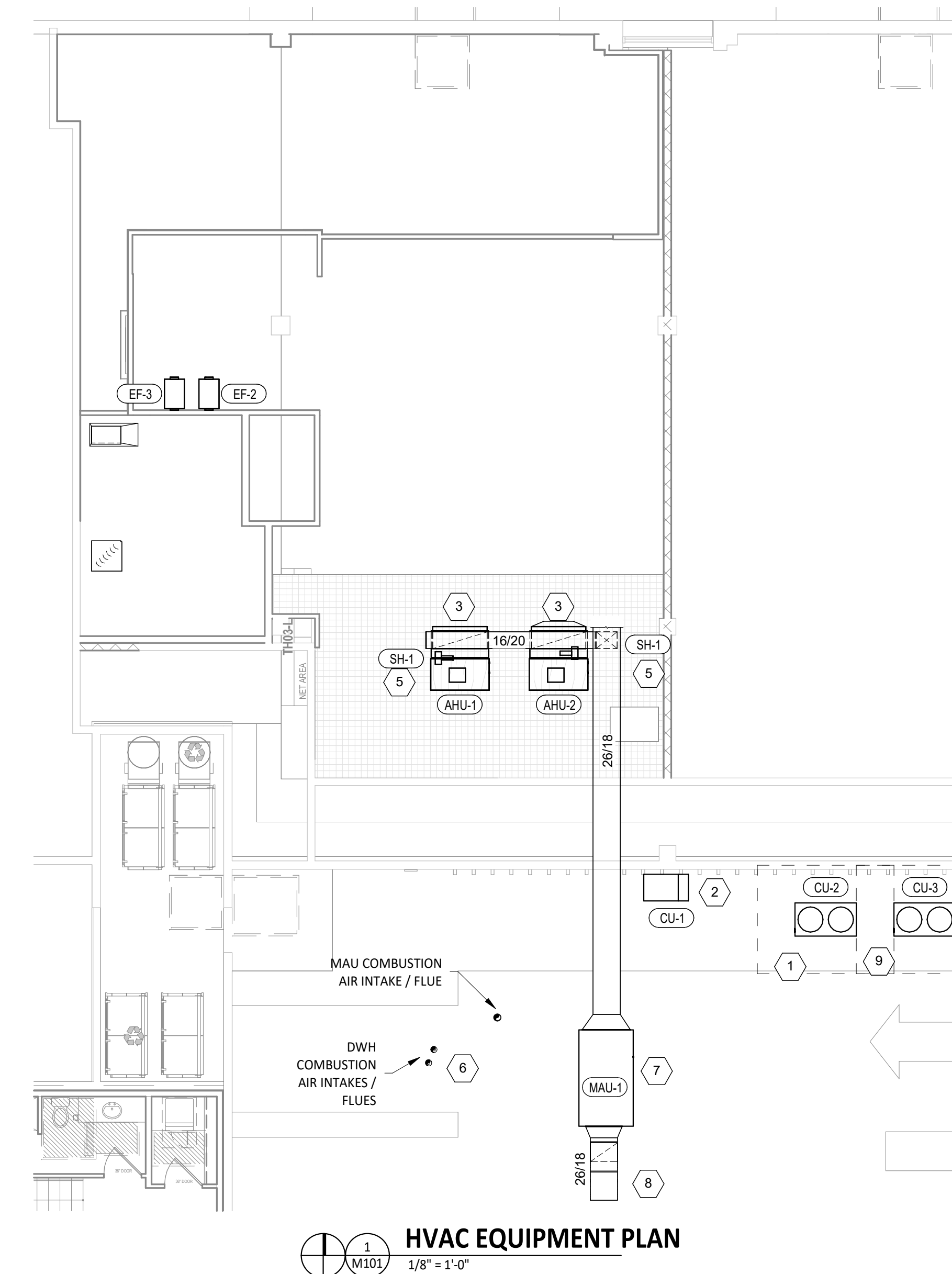
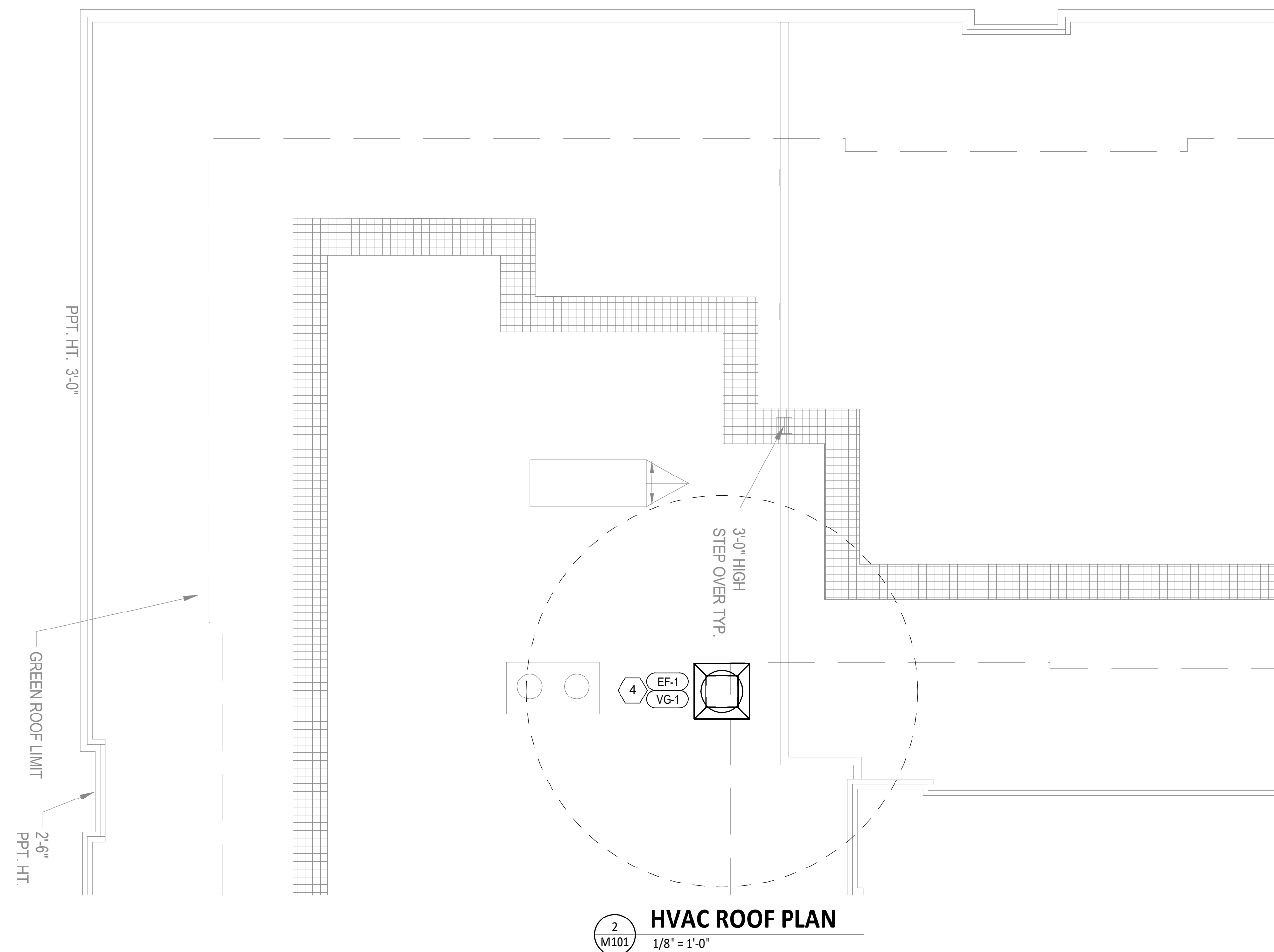
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Contents:
HVAC PLAN

M100

HVAC PLAN NOTES

1. INSTALL CONDENSING UNITS FOR AIR HANDLERS ON WALL OF GARAGE AS SHOWN. COORDINATE LOCATIONS WITH EXISTING CONDENSING UNITS AND EQUIPMENT.
2. INSTALL REMOTE CONDENSING UNIT FOR WALK-IN COOLER ON WALL OF GARAGE AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE CONDENSING UNIT. CUT 2-1/2" HOLE IN WALK-IN COOLER ROOF FOR REFRIGERANT LINE SET AND SEAL PER THE COOLER MANUFACTURER'S INSTALLATION INSTRUCTIONS AFTER LINE SET IS INSTALLED.
3. INSTALL EQUIPMENT PLATFORM EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. COORDINATE EQUIPMENT LOCATIONS WITH WORK OF OTHER TRADES SO THAT THE MANUFACTURER RECOMMENDED CLEARANCES ARE MAINTAINED.
4. INSTALL EXHAUST FAN EF-1 PER DETAIL 5/M700 AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL GREASE VIROGUARD SYSTEM FURNISHED BY CHIPOTLE ON EXHAUST FAN, EF-1.
5. INSTALL REME HALO AIR PURIFIER FURNISHED BY TUV IN SUPPLY DUCTWORK PER DETAIL 6/M700. SEE ELECTRICAL DRAWINGS FOR POWER CONNECTION INFORMATION. INSTALL UV WARNING STICKERS ON FACE OF ENCLOSURE PER DETAIL AND ON ANY RTU ACCESS DOOR(S) THROUGH WHICH THE REME HALO WOULD BE VISIBLE IF OPENED.
6. MAINTAIN 15' CLEARANCE BETWEEN WATER HEATER FLUE TERMINATION AND OUTSIDE AIR INTAKES. MAINTAIN 10' CLEARANCE BETWEEN WATER HEATER COMBUSTION AIR INTAKE AND EXHAUST FAN EF-1 DISCHARGE. SEE PLUMBING DRAWINGS FOR MORE INFORMATION ON WATER HEATER FLUE AND COMBUSTION AIR TERMINATIONS.
7. INSTALL MAU-1 TIGHT TO ROOF OF GARAGE. COORDINATE EXACT LOCATION WITH EXISTING EQUIPMENT ON THE GARAGE CEILING.
8. PROVIDE DUCT FROM MAU-1 THROUGH THE GREEN ROOF. PROVIDE GOOSE NECK PER DETAIL 11/M700.
9. PROVIDE REFRIGERANT PIPING BETWEEN THE CONDENSING UNIT AND THE AIR HANDLING UNIT PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFRIGERANT SHALL BE ROUTED THROUGH THE EXTERIOR WALL, CONCEALED WITHIN THE REAR FRAMED WALL OF THE KITCHEN, INTO THE EQUIPMENT PLATFORM SPACE AND ROUTED TO THE EQUIPMENT.



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Drawn: JEJ
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Project No:
 2401135

Contents:

HVAC PLAN

M101

SANITIZING EQUIPMENT SCHEDULE

TAG	COUNT	DESCRIPTION	FURNISH ED BY	INSTALLE D BY	BASIS FOR DESIGN		REMARKS
					MANUFACTURER	MODEL	
SB-1	2	BATHROOM AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	BRU ASSEMBLY	SEE ELECTRICAL SHEETS FOR CONNECTION INFORMATION
SH-1	2	HVAC AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	REME-HALO	SEE DETAIL 6/M700 FOR INSTALLATION INFORMATION.
SI-1	2	ICE MACHINE TREATMENT SYSTEM	TUV	GC	RGF ENVIRONMENTAL GROUP	IMS-B-GA	SEE PLUMBING DRAWINGS FOR INSTALLATION INFORMATION.

VIROGUARD SCHEDULE

TAG	QUANTITY	DESCRIPTION	DUCT CONNECTION SIZE	FAN	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN MANUFACTURER
VG-1	1	VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM	16" X 16"	CAPTIVE-AIRE DU180HFA	TDC	GC	ENVIROMATIC

GRILLS, REGISTERS, AND DIFFUSERS SCHEDULE

TAG	DESCRIPTION	FACE SIZE	MATERIAL	FINISH	MOUNTING	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		NOTES
								MANUFACTURER	MODEL	
CD1	PERFORATED CEILING DIFFUSER	24" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	NAILOR	4320A TYPE L	PROVIDE INTEGRAL OBD
CD2	PERFORATED CEILING DIFFUSER	12" X 12"	ALUMINUM	WHITE	GYP CEILING	GC	GC	NAILOR	4320A TYPE S	PROVIDE INTEGRAL OBD
CD3	PERFORATED CEILING DIFFUSER	24" X 12"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	NAILOR	4320A TYPE L	PROVIDE INTEGRAL OBD, REMOVE 4-WAY DEFLECTOR
CD4	PERFORATED CEILING DIFFUSER	12" X 12"	ALUMINUM	WHITE	GYP CEILING	GC	GC	NAILOR	4320A TYPE S	PROVIDE INTEGRAL OBD
ER1	PERFORATED CEILING EXHAUST	12" X 12"	ALUMINUM	WHITE	GYP CEILING	GC	GC	NAILOR	4330R TYPE S	PROVIDE INTEGRAL OBD
ER2	PERFORATED CEILING RETURN	24" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	NAILOR	4330R TYPE L	
RG1	PERFORATED CEILING RETURN	48" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	NAILOR	4330R TYPE L	
RG2	PERFORATED CEILING RETURN	48" X 24"	ALUMINUM	WHITE	GYP CEILING	GC	GC	NAILOR	4330R TYPE S	
SR1	ADJUSTABLE TURBO NOZZLE	SEE NECK SIZE	ALUMINUM	WHITE	WALL	GC	GC	AIR CONCEPTS	ANR-12	PROVIDE FACE-ACCESSIBLE OBD
SR2	DOUBLE DEFLECTION SUPPLY REGISTER	SEE NECK SIZE	ALUMINUM	WHITE	WALL	GC	GC	NAILOR	51DH	PROVIDE INTEGRAL OBD

LOUVER SCHEDULE

TAG	DESCRIPTION	SIZE	FREE AREA	FLOW	PRESSURE DROP	MATERIAL	FINISH	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
LV-1	DRAINABLE EXHAUST LOUVER	EXT'G	0.86 SF	600 CFM	0.08 in-wg	ALUMINUM	EXT'G	EXT'G	EXT'G	EXISTING	EXISTING	EXISTING LOUVER INSTALLED BY LL

FAN SCHEDULE

TAG	DRIVE TYPE	EXHAUST FLOW [CFM]	E.S.P. [in W.C.]	WEIGHT [lbs]	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
					MOTOR POWER	V/P/H			MANUFACTURER	MODEL	
EF-1	DIRECT	2600 CFM	1.30 in-wg	400	2	208/3/60	HS	GC	CAPTIVE-AIRE	DU180HFA	FURNISHED WITH DISCONNECT AND VENTED ROOF CURB
EF-2	DIRECT	400 CFM	0.80 in-wg	115	0.33	120/1/60	HS	GC	CAPTIVE-AIRE	SIF11DD	WITH DISCONNECT, VARIABLE SPEED CONTROLLER, BACKDRAFT DAMPER, AND VIBRATION ISOLATORS.
EF-3	DIRECT	200 CFM	0.80 in-wg	115	0.33	120/1/60	HS	GC	CAPTIVE-AIRE	SIF11DD	WITH DISCONNECT, VARIABLE SPEED CONTROLLER, BACKDRAFT DAMPER, AND VIBRATION ISOLATORS.

DUCT HEATER SCHEDULE

TAG	DESCRIPTION	TOTAL [CFM]	DUCT SIZE		NUMBER OF STEPS	MBH	EAT [DEG. F]	ELECTRICAL		BASIS FOR DESIGN		REMARKS		
			DUCT WIDTH	DUCT HEIGHT				KW	V/P/H	FURNISHED BY	INSTALLED BY		MANUFACTURER	MODEL
DH-1	KITCHEN DUCT HEATER	3500 CFM	30"	16"	2	49	73	14	208/3/60	HES	GC	INDECO	OPEN COIL	THERMAL CUTOUT, AIRFLOW SWITCH, INTEGRAL DISCONNECT SWITCH.
DH-2	DINING ROOM DUCT HEATER	3500 CFM	30"	16"	2	49	73	14	208/3/60	HES	GC	INDECO	OPEN COIL	THERMAL CUTOUT, AIRFLOW SWITCH, INTEGRAL DISCONNECT SWITCH.

MAKEUP AIR UNIT SCHEDULE

TAG	DESCRIPTION	AIRFLOW		HEATING CAPACITY			APPROXIMATE WEIGHT [lbs]	ELECTRICAL		FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS	
		SUPPLY FLOW [CFM]	E.S.P. [in. W.C.]	INPUT [MBH]	OUTPUT [MBH]	MAXIMUM TURNDOWN		EAT	MOTOR POWER			V/P/H	MANUFACTURER		MODEL
MAU-1	INDIRECT GAS FIRED HEATER	3400	0.80	300	240	12.5:1	3 °F	1066	1 HP	208/1/60	HES	GC	TRANE	GXAA	INDIRECT GAS FIRED HEATER, INDOOR SIDE DISCHARGE, FURNISHED WITH DISCONNECT, COCENTRIC FLUE/INTAKE, AND WASHABLE ALUMINUM FILTERS.

CONDENSING UNIT SCHEDULE

TAG	DESCRIPTION	NOMINAL CAPACITY [TONS]	NUMBER OF COMPRESSORS	NUMBER OF CIRCUITS	REFRIGERANT TYPE	REFRIGERANT CHARGE	WEIGHT	ELECTRICAL			FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN		REMARKS
								MOC	FLA	V/P/H			MANUFACTURER	MODEL	
CU-1	WALK-IN COOLER REMOTE CONDENSING UNIT	--	1	1	R-404A		200	15 A	6.5 A	208/3/60	WCS	GC	HARFORD	PCL99MOP-3	FURNISHED WITH WALK-IN COOLER
CU-2	SPLIT-SYSTEM CONDENSING UNIT	10	2	2	R-454B	27.5	500	50 A	41.6 A	208/3/60	HES	GC	YORK	WC120	FURNISHED WITH VIBRATION ISOLATORS, AND INTEGRAL UNIT-MOUNTED DISCONNECT
CU-3	SPLIT-SYSTEM CONDENSING UNIT	10	2	2	R-454B	27.5	500	50 A	41.6 A	208/3/60	HES	GC	YORK	WC120	FURNISHED WITH VIBRATION ISOLATORS, AND INTEGRAL UNIT-MOUNTED DISCONNECT

AIR HANDLING UNIT SCHEDULE

TAG	DESCRIPTION	NOMINAL CAPACITY [TONS]	EER	AIRFLOW			COOLING CAPACITY				ELECTRICAL			BASIS FOR DESIGN		REMARKS					
				TOTAL [CFM]	OA [CFM]	ESP [in. W.C.]	NET TOTAL [MBH]	NET SENSIBLE [MBH]	EAT [Deg. F]	COND. EAT [Deg. F]	NUMBER OF CIRCUITS	APPROXIMATE WEIGHT [lbs]	MOC	FLA	V/P/H		FURNISHED BY	INSTALLED BY			
				DB	WB																
AHU-1	KITCHEN SPLIT-SYSTEM AIR HANDLING UNIT	10	11.2	3500	600	0.8	118	72	75	65	94	1	500	15 A	11.3 A	208/3/60	HES	GC	YORK	GL120	FURNISHED WITH VIBRATION ISOLATORS AND MIXING BOX (PLENUMS INC YMBNC120 OR EQUAL)
AHU-2	DINING ROOM SPLIT-SYSTEM AIR HANDLING UNIT	10	11.2	3500	1100	0.8	126	68	79	70	94	1	500	15 A	11.3 A	208/3/60	HES	GC	YORK	GL120	FURNISHED WITH VIBRATION ISOLATORS AND MIXING BOX (PLENUMS INC YMBNC120 OR EQUAL)

KITCHEN HOOD SCHEDULE

TAG	DESCRIPTION	MAX COOKING TEMP.	AIRFLOW [CFM]	SP [in. W.C.]	EXHAUST PLENUM					PERFORATED SUPPLY PLENUMS										BASIS FOR DESIGN				REMARKS							
					DUCT COLLARS					MAU PLENUM					AC PLENUM					NUMBER OF LIGHT FIXTURES	APPROXIMATE WEIGHT [lbs]	FURNISHED BY	INSTALLED BY		MANUFACTURER	MODEL					
					NO.	WIDTH	LENGTH	LENGTH	WIDTH	NO.	WIDTH	LENGTH	LENGTH	WIDTH	SP [in. W.C.]	SUPPLY PLENUM LENGTH	SUPPLY PLENUM WIDTH	AIRFLOW [CFM]	NO.								WIDTH	LENGTH	AIRFLOW [CFM]	NO.	DIAMETER
HD-1	TYPE I CANOPY HOOD WITH PERFORATED MAU AND AC SUPPLY PLENUMS	600°F	2600	0.97	1	10"	24"	12' - 9"	4' - 3"	0.1	13' - 9"	19"	1300	3	6"	28"	700	6	8"	8	1100	HS	GC	CAPTIVE-AIRE	5424 ND-2-ACSP-F	MAT'L: 18 GA. TYPE 430 SS. FURNISHED WITH VERTICAL END PANELS, 24V GAS VALVE, VAPORPROOF INCANDESCENT LIGHT FIXTURES, 16" TALL HE SS FILTERS, INTEGRAL UTILITY CABINET, KITCHEN EXHAUST SUPPRESSION SYSTEM, DUCT COLLAR TEMPERATURE SENSOR, PREWIRE PACKAGE, SPARE FIRE SYSTEM DRY CONTACT, AND 4-POLE 20A CONTACTOR					

VENTILATION SCHEDULE

ROOM NAME	ROOM PURPOSE (per Table 403.3)	FLOOR AREA	ORDINANCE REQUIREMENTS				ACTUAL PROVIDED				EQUIPMENT		REMARKS
			NATURAL LIGHT AND VENTILATION (SF)		MECHANICAL VENTILATION (CFM)		NATURAL LIGHT & VENTILATION (SF)		MECHANICAL VENTILATION (CFM)		TAG OF EQUIPMENT SUPPLYING THE ROOM	TAG OF EQUIPMENT EXHAUSTING THE ROOM	
			GLASS AREA	VENT AREA	SUPPLY AIR	EXHAUST AIR (from room)	GLASS AREA	VENT AREA	SUPPLY AIR	EXHAUST AIR (from room)			
DINING ROOM	PUBLIC DINING ROOMS - NO COOKING EQUIPMENT	1060	--	--	1,590	1,590	-	-	3,500	2,400	AHU-2	-	*TRANSFER AIR/LEAKAGE
KITCHEN	KITCHENS, PUBLIC	578	--	--	694	2,312	-	-	1800	2,600	AHU-1/ MAU-1	EF-1	2,600 CFM EXHAUSTED THROUGH EF-1, 500 CFM VENTILATION AIR AND 1300 CFM MAKEUP AIR
UNISEX 1 RESTROOM	TOILET ROOMS	63	--	--	0	126	-	-	0	130	-	EF-3	EXHAUSTED THROUGH EF-3 SUPPLY IS VIA TRANSFER AIR FROM DINING
UNISEX 2 RESTROOM	TOILET ROOMS	126	--	--	0	252	-	-	0	270	-	EF-2	EXHAUSTED THROUGH EF-2 SUPPLY IS VIA TRANSFER AIR FROM DINING
OFFICE	OFFICE AND COMPUTER ROOMS	43	--	--	26	--	-	-	100	*100	AHU-1	-	*TRANSFER AIR
TRASH ROOM	TOILET ROOMS	86	--	--	0	172	-	-	0	180	MAU-1	EF-2	EXHAUSTED THROUGH EF-2 SUPPLY IS VIA TRANSFER AIR FROM DINING
DISPLAY	STORAGE INACTIVE	100	--	--	0	0	-	-	0	0	-	-	
HOOD EXHAUST CALCULATIONS			TOTAL		1,871	3,146			3,950	3,910			

HD-1: TYPE 1 HOOD
 Q = LENGTH OF HOOD X CFM/LINEAR FOOT (600 DEG. COOKING WITH END PANELS)
 Q = 12.75' X 170 CFM/FT = 2,167 CFM
 Q + 20% = 2,600 CFM REQUIRED | 2,600 CFM PROVIDED

AIR BALANCE SCHEDULE

Tag	Supply Flow [CFM]	Return Flow [CFM]	Exhaust Flow [CFM]	Subtotal [CFM]
AHU-1	3500	2900	0	600
AHU-2	3500	2400	0	1100
EF-1	0	0	2600	-2600
EF-2	0	0	400	-400
EF-3	0	0	200	-200
MAU-1	3400	0	1900	1500
Net Pressurization [CFM]				0

NOTES:
 1. MAU-1 EXHAUST FLOW FEEDS THE OA OF AHU-1 & AHU-2

CONTROL FUNCTIONS

- THE MAIN COOKING EXHAUST FAN AND MAKE-UP AIR UNIT SHALL BE INTERLOCKED TO OPERATE TOGETHER. THIS CONTROL CIRCUIT IS ACTIVATED BY A SWITCH AND INCLUDES A FIRE PROTECTION OVERRIDE.
- THE TEMPERATURE IN EACH ZONE IS CONTROLLED BY SPACE TEMPERATURE SENSORS CONNECTED TO THE THERMOSTATS LOCATED IN THE OFFICE. ALL ZONES SHALL OPERATE WITH CONTINUOUS FAN OPERATION DURING OCCUPIED TIMES AND INTERMITTENTLY AS NEEDED TO MAINTAIN SET POINTS DURING UNOCCUPIED TIMES. MAKEUP AIR FAN SHALL POWER ON AND SHALL OPERATE CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN THE HOOD SYSTEM IS ON AND SHALL REMAIN DE-ENERGIZED DURING UNOCCUPIED PERIODS.
- THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS BASED ON THE SCHEDULE IN THE ENERGY MANAGEMENT SYSTEM.

Consultant:



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HVAC SCHEDULES

M600

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REGION 40
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EMAIL: reg40@captiveaire.com

PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

HOOD INFORMATION - JOB#7652942

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA				CFM	VEL	SP	END TO END
1	HD - 1	5424 ND-2-ACPSP-F	CAPTIVEAIRE	12' 9"	600 DEG	I	HEAVY	204	2600	10'	24'	4'	2600	1560	-1.004'	1300	696	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT		
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE			ELECTRICAL MODEL #	SWITCHES QUANTITY
1	HD - 1	CAPTRATE SOLID FILTER	9	16"	16"	85% SEE FILTER SPEC	8	L55 SERIES E26	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0	SC-311110MA	1 LIGHT 1 FAN	YES	1223 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	HD - 1	FIELD WRAPPER 10.00' HIGH FRONT, LEFT, RIGHT. INSULATION FOR BACK OF HOOD. RISER SENSOR INSTALL 6IN PLEN. RIGHT VERTICAL END PANEL 27' TOP WIDTH, 21' BOTTOM WIDTH, 80' HIGH INSULATED 430 SS. LEFT VERTICAL END PANEL 27' TOP WIDTH, 21' BOTTOM WIDTH, 80' HIGH INSULATED 430 SS. FULL DIMENSION HANGING BRACKET - FRONT.

CLEARANCE TO COMBUSTIBLES

HOODS #	SURFACE	*CLEARANCE
1	TOP	18"
1	FRONT	0"
1	BACK	0"
1	LEFT	0"
1	RIGHT	18"

- *0' CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	RISER(S)						
						MUA	AC	DIA	CFM	SP		
1	HD - 1	Front	165'	19'	6'	6"	28"	325	0.088"	8"	116	0.043"
										8"	116	0.043"
										8"	116	0.043"
										8"	116	0.043"
										8"	116	0.043"
										8"	116	0.043"
										8"	116	0.043"

1' LAYER OF INSULATION FACTORY INSTALLED IN INTERNAL BACK STANDOFF. MEETS 0 INCH REQUIREMENTS FOR CLEARANCE TO COMBUSTIBLE SURFACES.

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER

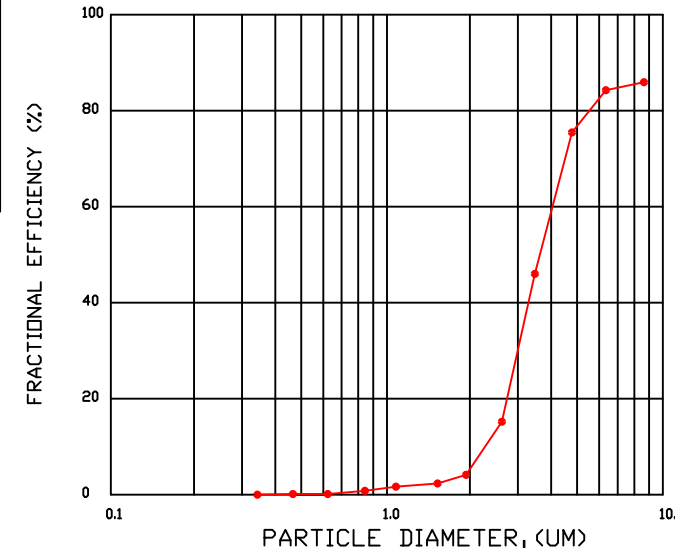
THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-Baffle DESIGN IN CONJUNCTION WITH A SLOTTED REAR Baffle DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

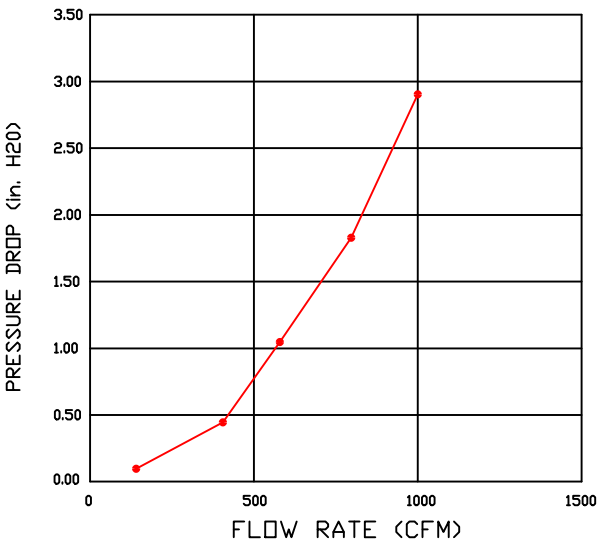
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE. THE CAPTRATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS. PARTICLE DIAMETER

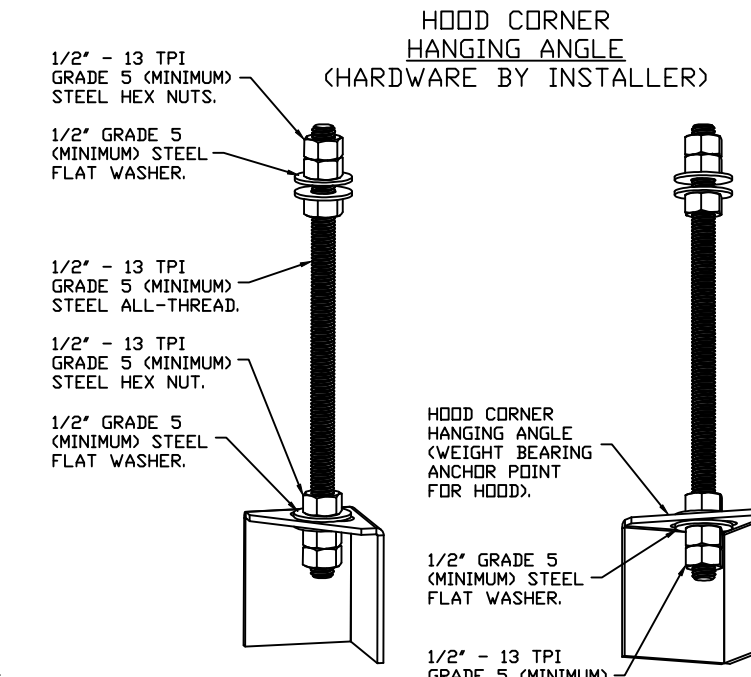
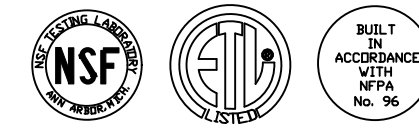


PRESSURE DROP VS. FLOW RATE



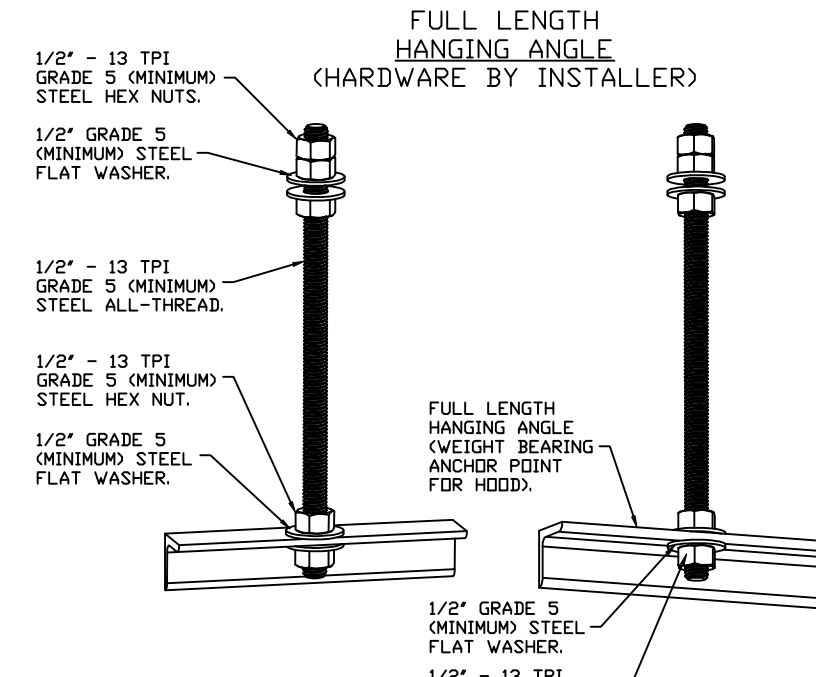
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:

- NFPA #96.
- NSF STANDARD #2.
- UL STANDARD #1046.
- INT. MECH. CODE (IMC).
- ULC-S649.



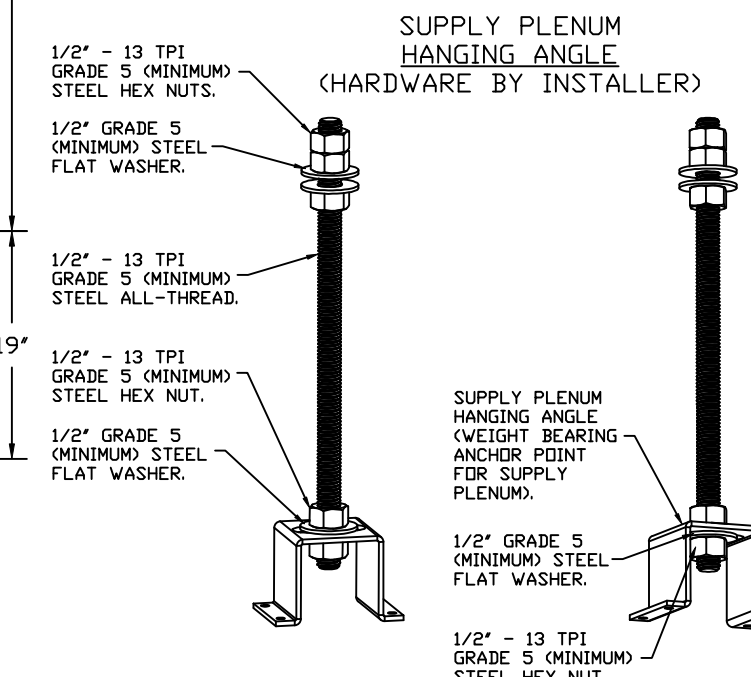
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



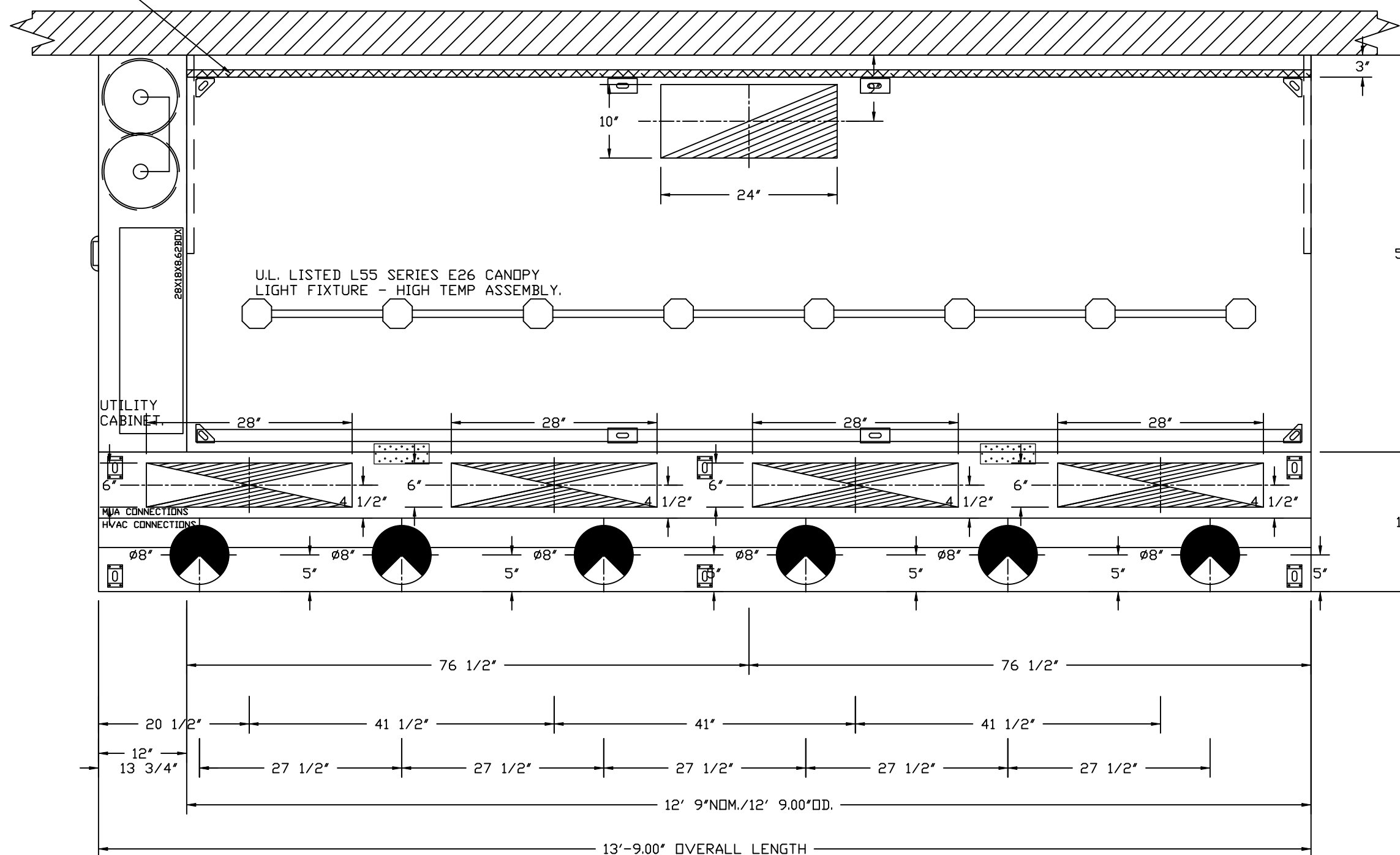
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PLAN VIEW - HOOD #1 (HD - 1)
12' 9.00" LONG 5424ND-2-ACPSP-F
NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12' AND LONGER.

ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

National Engineering, Ltd
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(614) 751-9610

Approved
 Approved as Revise
 Noted
 Rejected
 Resubmit

BY jones DATE 8/6/2025

SUBMITTAL# 1 SPEC CaptiveAire
Approval is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all work in a safe and satisfactory manner.

REVISIONS

DESCRIPTION	DATE

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1825 West Lawrence Avenue,
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DATE: 7/24/2025

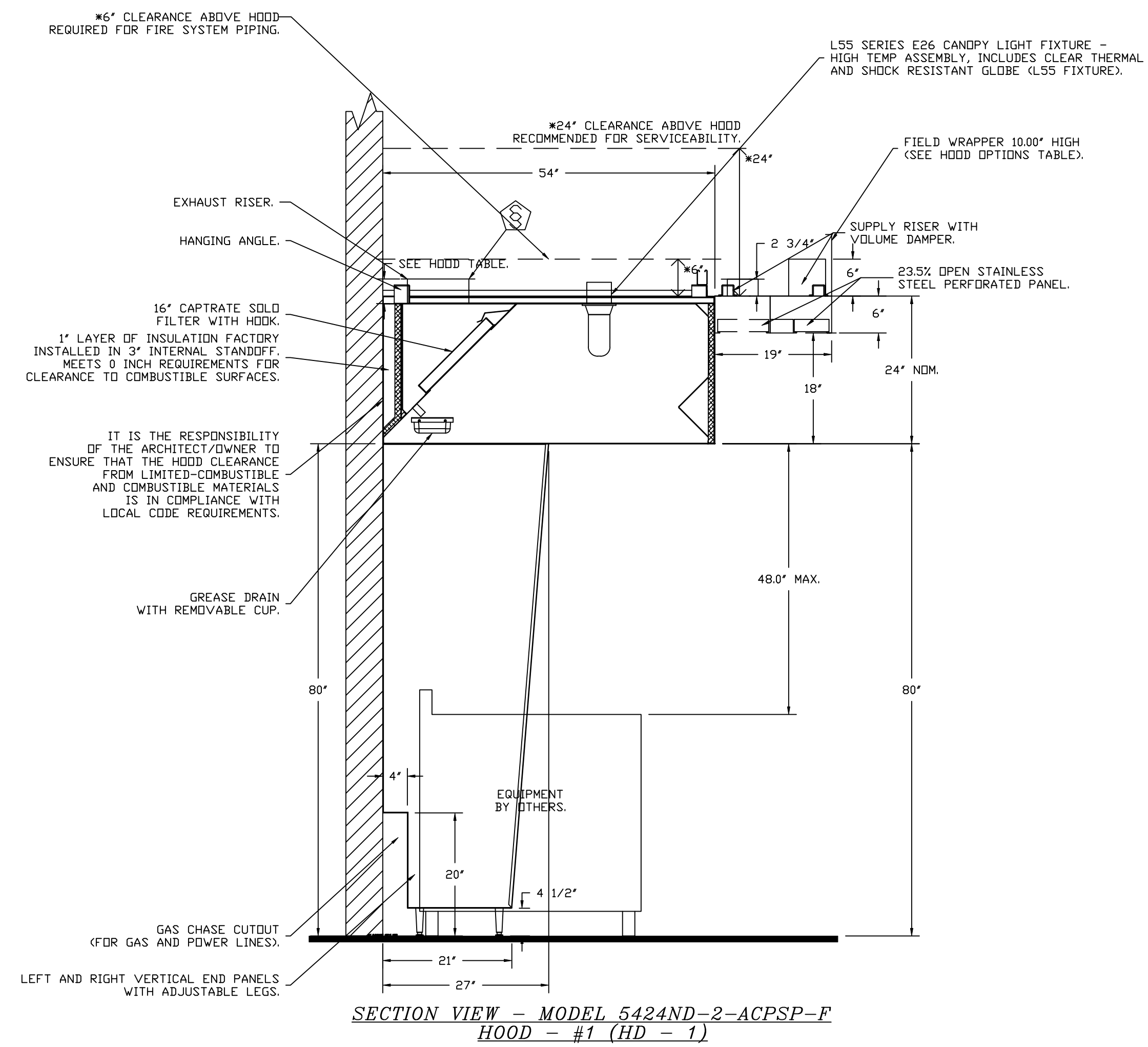
DWG.#: 7652942

DRAWN BY: JMB-40

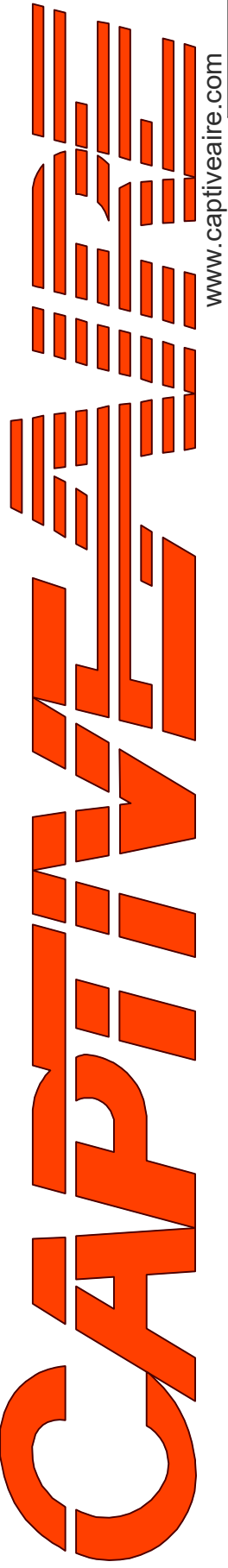
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Highwoods Group

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4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 875 - 0420 FAX: 9198750577 EMAIL: reg40@captiveire.com

CHIPOTLE RAVENSWOOD #5749
 1825 West Lawrence Avenue,
 Chicago, IL, 60640

DATE: 7/24/2025
DWG.#: 7652942
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SCALE: 3/4" = 1'-0"
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FIRE SYSTEM INFORMATION - JOB#7652942

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	40	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIR SYSTEMS

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. ND, CLOSE ON TEMP RISE AT 360°F. (A0034310).	1	0
		0 - 0 - 32-00002 QUIK SEAL - 1/2" (UL).	1	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300033-001 DIN CONNECTOR, CANFIELD PART #5J560-201-EU0A, TANK FIRE SUPPRESSION, SUBMINATURE SOLENOID CONNECTION (CED VENDOR 30377).	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 9055455PC PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LD.	7	0
		0 - 0 - 9097200PC PRO PRESS PC611 1/2 PRESS TEE LD.	7	0
1		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5' DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - B1145 3/8" BLACK IRON 90 ELL.	3	0
		0 - 0 - CBI-104 CHROME PLATED PIPE FITTING 3/8" NPT TEE.	2	0
		0 - 0 - CBI-106 CHROME PLATED PIPE FITTING 3/8" NPT 90 DEGREE ELBOW.	2	0
		0 - 0 - CBI-107 CHROME PLATED PIPE FITTING 3/8" NPT UNION.	2	0
		0 - 0 - CBI-22.5 CHROME PLATED PIPE FITTING 3/8" NPT 22.5 DEGREE ELBOW.	2	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		16 - 16 - 79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	8	0
		16 - 16 - DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLOW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	10	0
		26 - 26 - QSA-3/8 QUIK SEAL - 3/8" (UL).	8	0
		34 - 34 - A0034331 RED COLOR - 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT.	1	0

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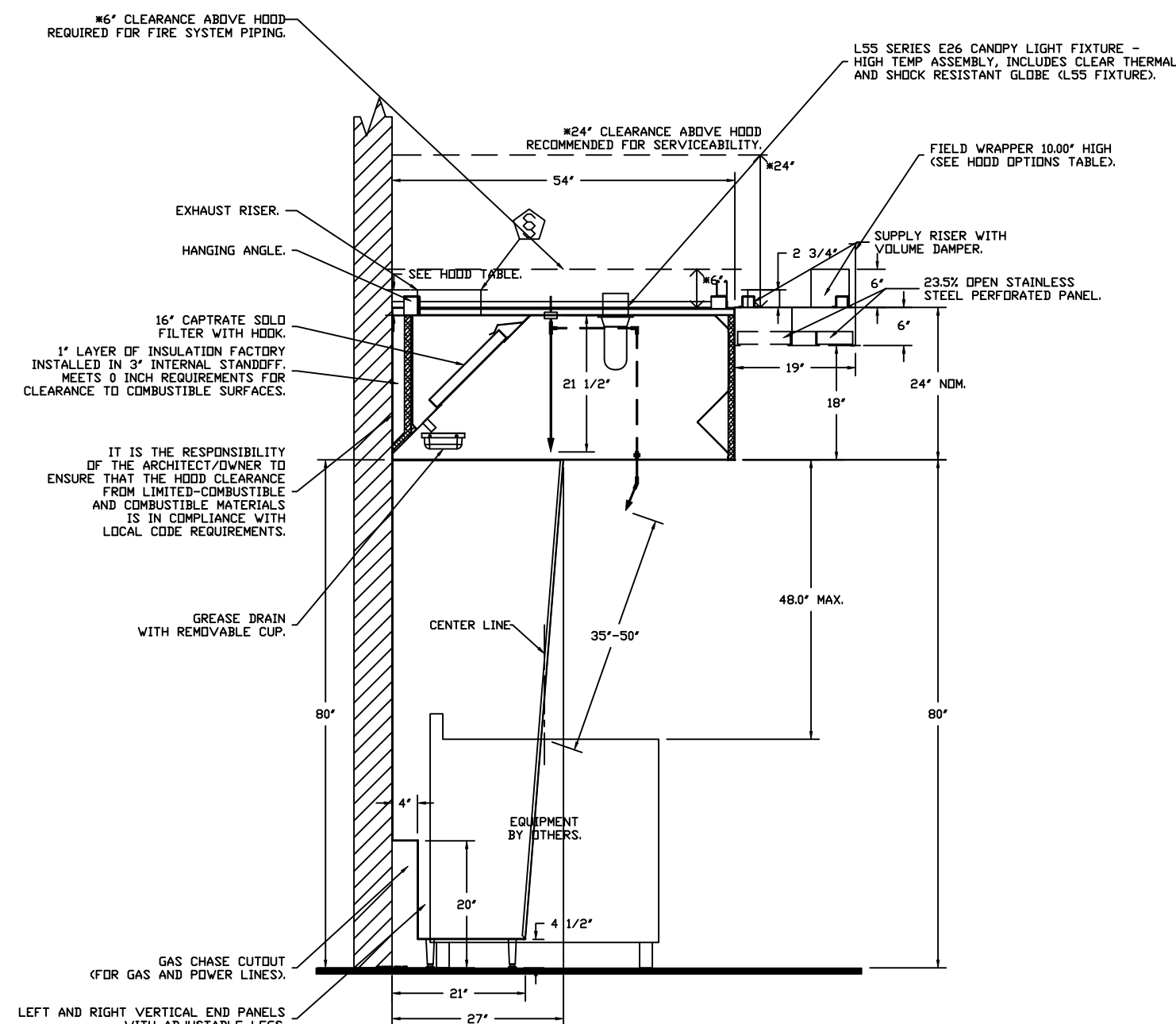
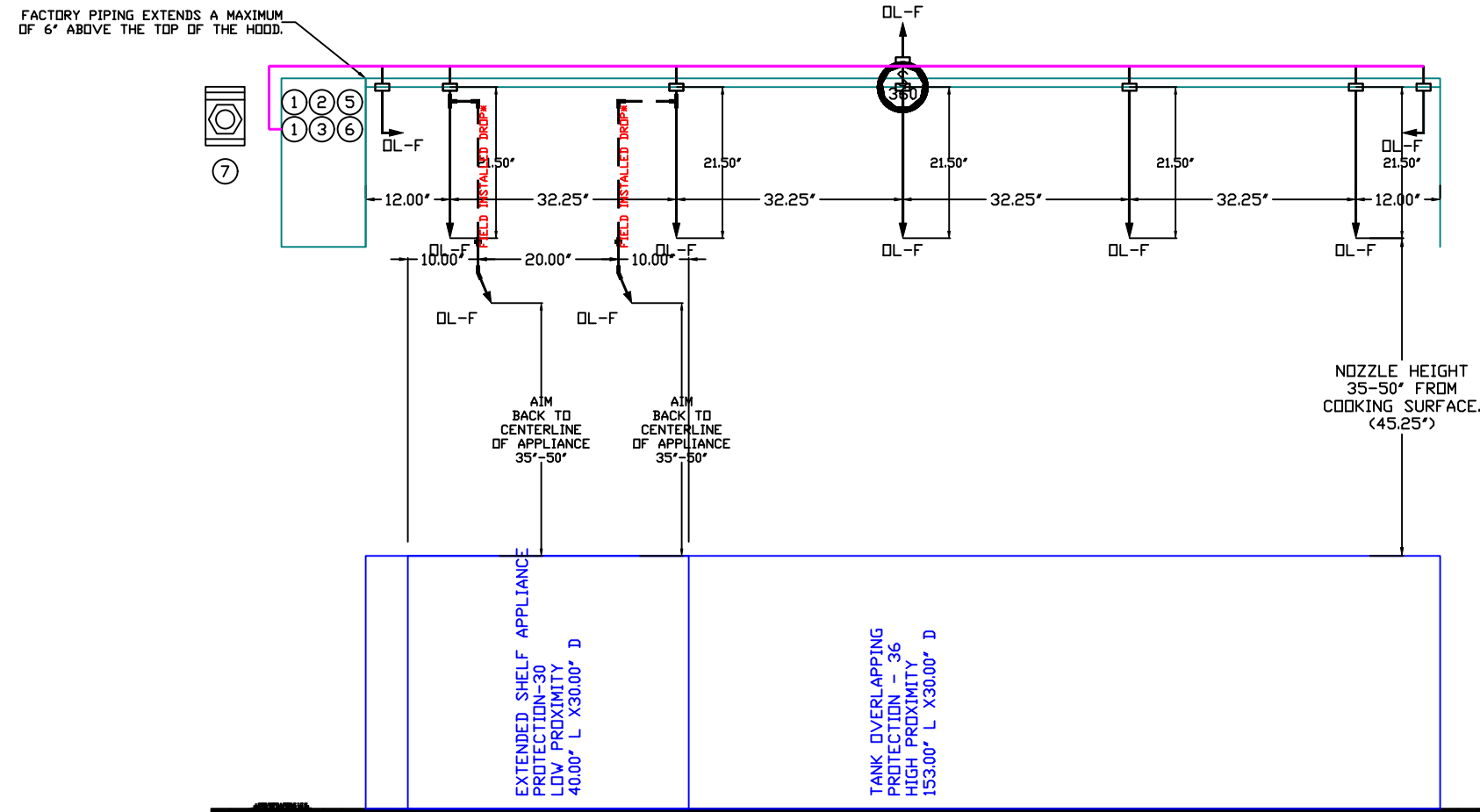
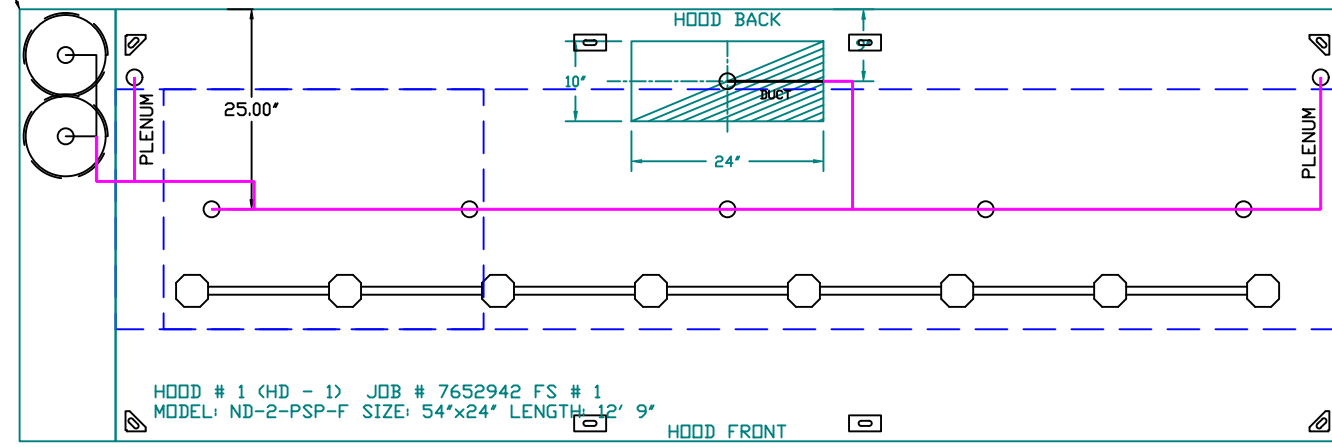
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- SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES. EACH 90 DEGREE ELBOW ADDS 1.5 FT OF EQUIVALENT LENGTH. SEE MANUAL FOR DETAILS.



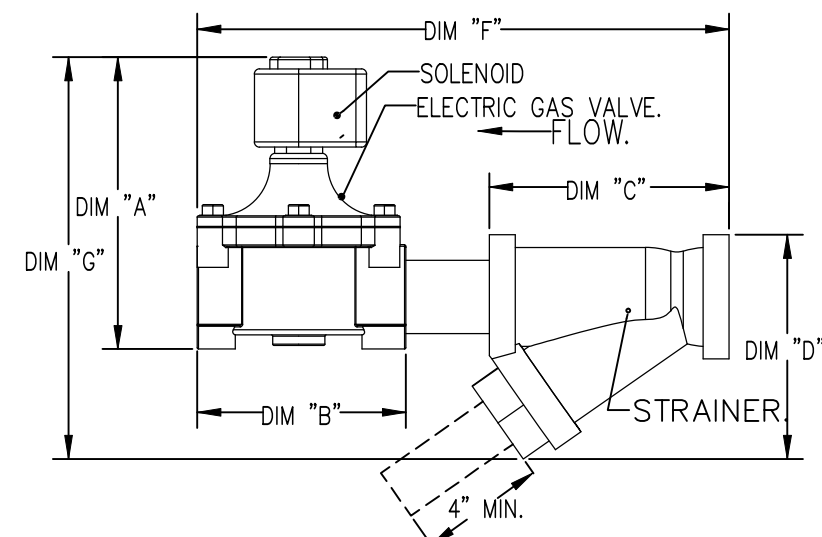
SECTION VIEW - MODEL 5424ND-2-ACPSP-F HOOD - #1

GAS VALVES AND STRAINERS																
TYPE	SIZE	VOLTAGE	GAS VALVE SIZING			GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS			
			MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"		DIM "G"	PIPE ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER
ELECTRICAL	2"	24 VDC	0 PSIG (0 IN.W.C.)	5 PSIG (1.38 IN.W.C.)	2,940,000 BTU/HR	1,800,000 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13/16"	15-5/8"	13-15/16"	HORIZONTAL	8214281-2410C	4417K68	(SCE)CV2-24

ELECTRIC GAS VALVES ONLY-SOLIDNO. OBSTRUCTION
 3/4"-2" ISOLATE GAS VALVES CAN BE MOUNTED IN ANY POSITION AT OR ABOVE HORIZONTAL.
 2 1/2"-2" ISOLATE GAS VALVES MUST BE MOUNTED WITH THE SOLIDNO. VERTICAL AND UPRIGHT.
 24VDC GAS VALVES MUST BE MOUNTED WITH THE SOLIDNO VERTICAL AND UPRIGHT.

ALL GAS VALVES/STRAINERS
 PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS. A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER. CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING. SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

CALCULATIONS
 TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP:
 NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) x NEW PRESSURE DROP^{3/2}
 TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY:
 NEW BTU/HR = (BTU/HR AT 0.64) x (0.64 / NEW SPECIFIC GRAVITY)^{3/2}



- NOTES**
- FIELD PIPE DROPS AS SHOWN
 - PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
 - FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
 - SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
 - RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
 - OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
 - IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
 - FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.
 - APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
 - THIS PRE-ENGINEERED FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.
 - DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS
 - JOB #: 7652942
 - JOB NAME: CHIPOTLE RAVENSWOOD #5749.

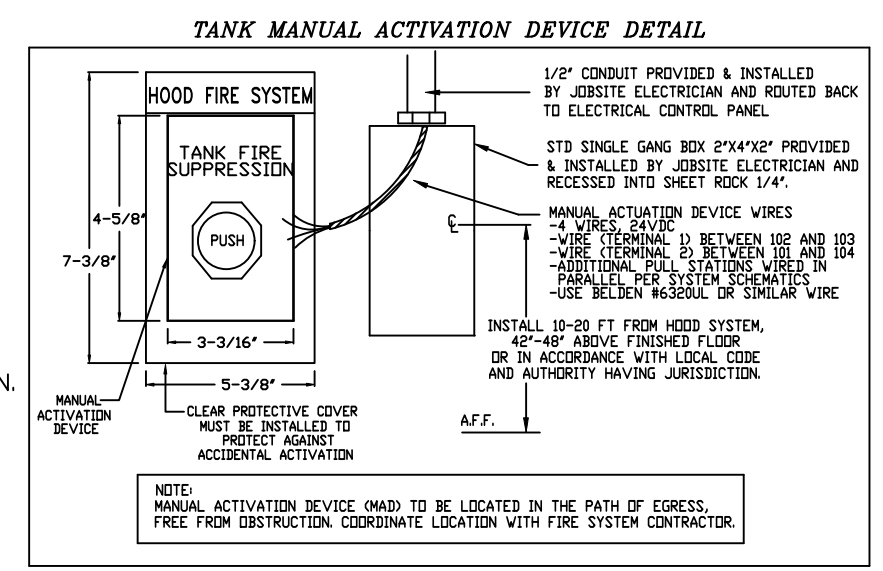
SYSTEM SIZE: TANK-SP-2 DESIGN FP: 40. MAXIMUM FP: 40.
 HOOD # 1 12' 9.00' LONG x 54' WIDE x 24" HIGH.
 RISER # 1 SIZE: 10" x 24".
 HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

- HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FIRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
- MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

AGENT DISTRIBUTION PIPING LIMITATIONS	
PIPE SECTION	MAX PIPE LENGTH (FT)
MAX SUPPLY LINE TO FIRST OVERLAPPING NOZZLE	42
OVERLAPPING NOZZLE APPLIANCE BRANCH	10
DEDICATED NOZZLE APPLIANCE BRANCH	10

LEGEND - FIRE CABINET TANK SYSTEM

- 4 GALLON TANK.
- PRIMARY ACTUATOR RELEASE.
- SECONDARY ACTUATOR RELEASE.
- PRESSURE SUPERVISION SWITCH.
- PRIMARY HOSE ASSEMBLY.
- SECONDARY HOSE ASSEMBLY.
- REMOTE MANUAL ACTUATION DEVICE.



INCLUDES: FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE. TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST). ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES. ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2" PERMIT, AND SYSTEM TEST.
 EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHERS, ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

NOTE: MANUAL ACTIVATION DEVICE (MAD) TO BE LOCATED IN THE PATH OF EGRESS, FREE FROM OBSTRUCTION. COORDINATE LOCATION WITH FIRE SYSTEM CONTRACTOR.

REVISIONS

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EXHAUST FAN INFORMATION – JOB#7652942

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDNES
1	EF-1	1	DUI80HFA	CAPTIVEAIRE	2600	1.450	1232	TEFC,PREMIUM	2.000	1.3050	3	208	7.3	600 FPM	199	17.1
2	EF-2	1	SIF11DD	CAPTIVEAIRE	400	0.800	1404	TEAD-ECM	0.500	0.2270	1	115	6.3		156	8.1
3	EF-3	1	SIF11DD	CAPTIVEAIRE	200	0.800	1342	TEAD-ECM	0.500	0.1760	1	115	6.3		156	7.4

FAN ACCESSORIES

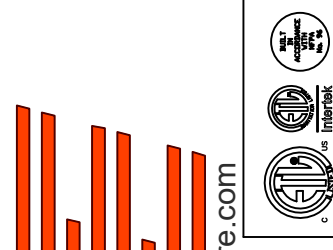
FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	EF-1	YES						
2	EF-2		YES					
3	EF-3		YES					

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	EF-1	39 LBS	CURB	26.500*W X 26.500*L X 20.000*H VENTED.

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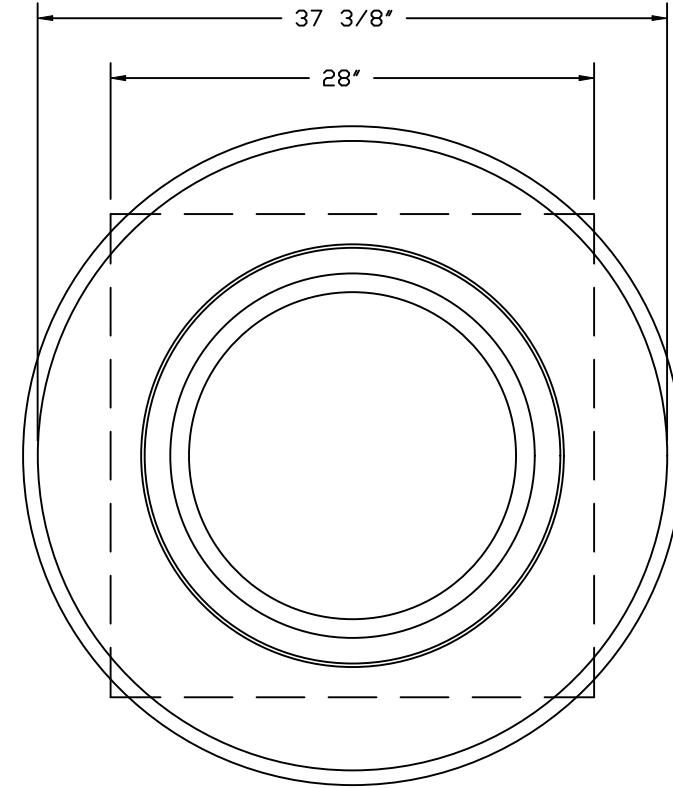
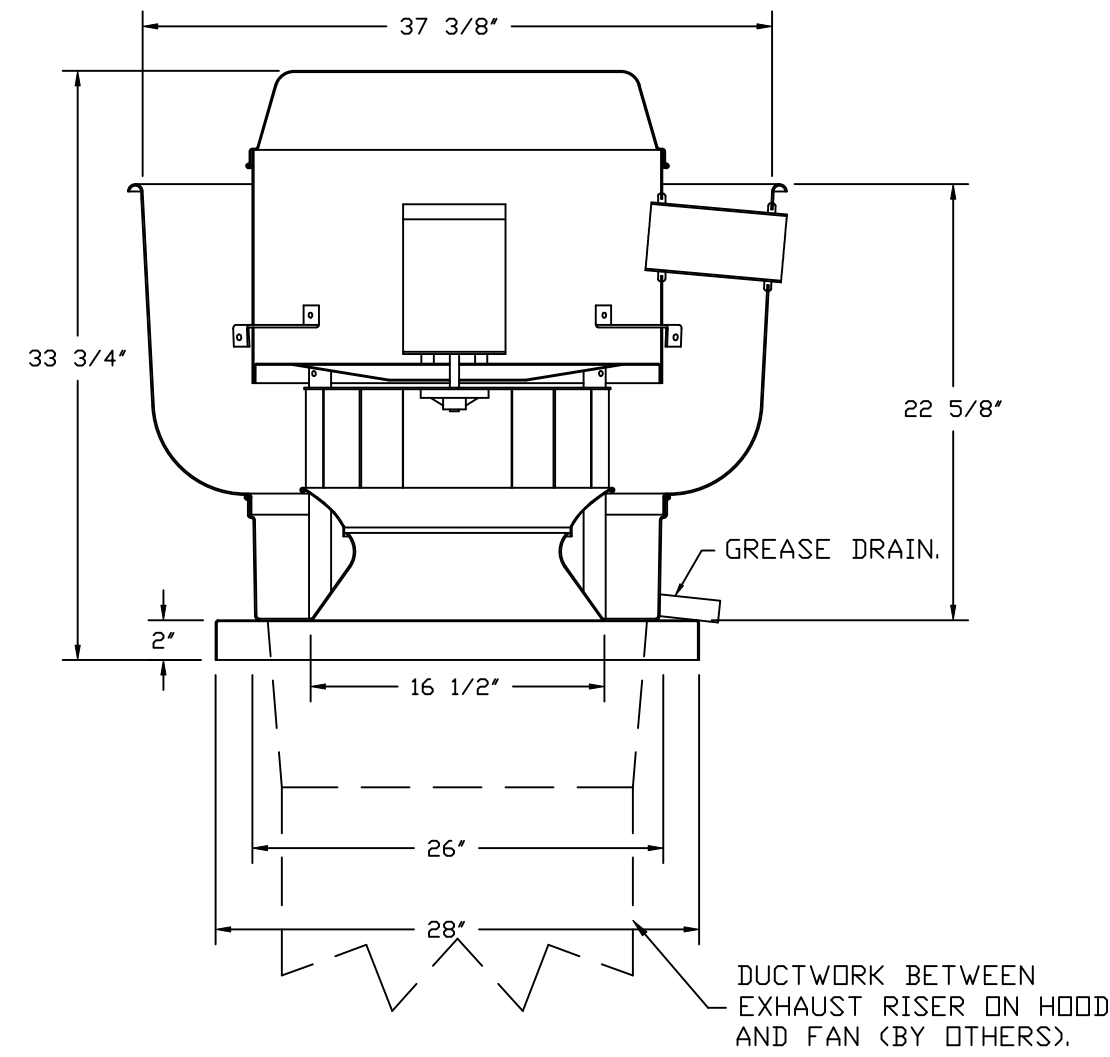
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FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-1	1	GREASE BOX
		1	REMOVE HINGE KIT LABEL FROM THE FAN BASE
		1	2 YEAR PARTS WARRANTY
2	EF-2	1	SIF 11- SS LOW SP STRAIGHT DISCHARGE- SQUARE TO ROUND DISCHARGE ADAPTER
		1	SIF11 - INLET - STANDARD 12" DUCT CONNECTION
		1	SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (11-36)
		1	ECM WIRING PACKAGE - EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -MSC- (TELCO), CCW ROTATION
		1	HANGING SPRING VIBRATION ISOLATORS (SET OF 4), FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA125)
		1	2 YEAR PARTS WARRANTY
3	EF-3	1	SIF 11- SS LOW SP STRAIGHT DISCHARGE- SQUARE TO ROUND DISCHARGE ADAPTER
		1	SIF11 - INLET - STANDARD 12" DUCT CONNECTION
		1	SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (11-36)
		1	ECM WIRING PACKAGE - EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -MSC- (TELCO), CCW ROTATION
		1	HANGING SPRING VIBRATION ISOLATORS (SET OF 4), FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA125)
		1	2 YEAR PARTS WARRANTY

FAN #1 DU180HFA - EXHAUST FAN (EF-1)



TOP VIEW

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST

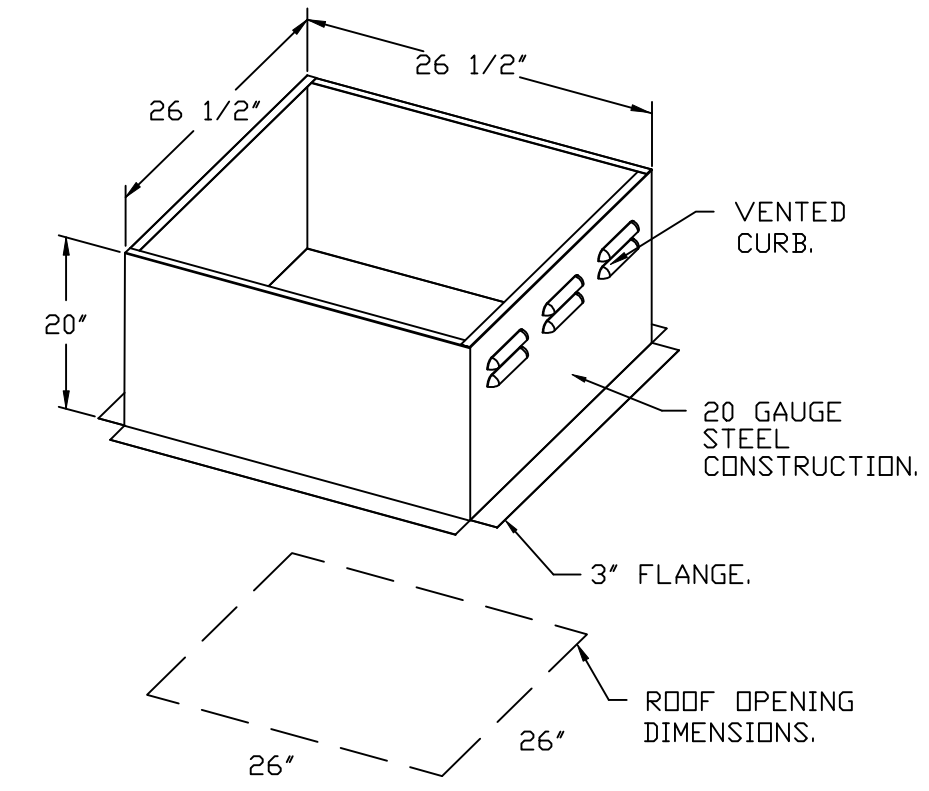
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

- GREASE BOX.
- REMOVE HINGE KIT LABEL FROM THE FAN BASE.
- 2 YEAR PARTS WARRANTY.



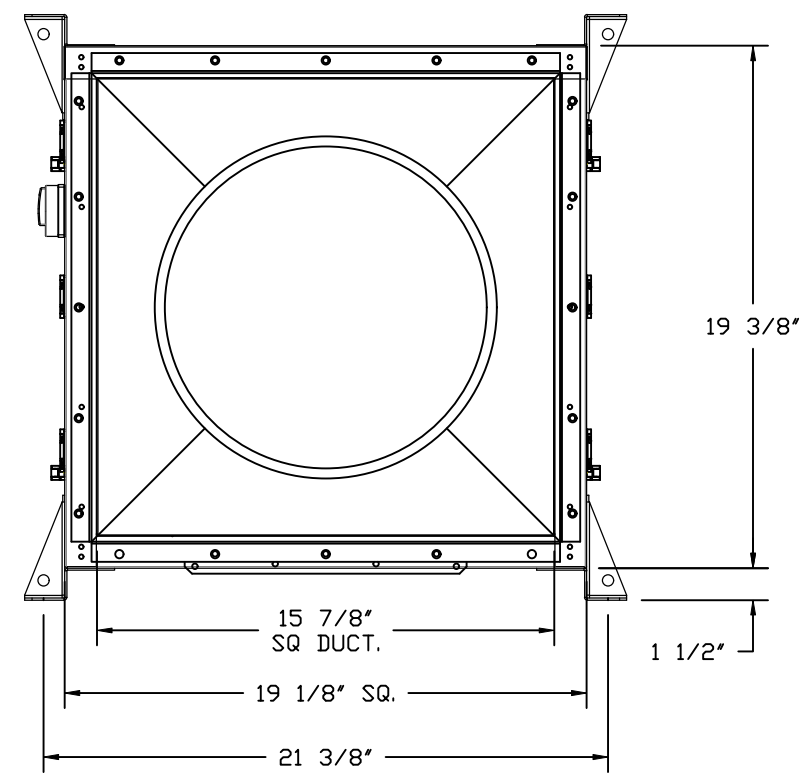
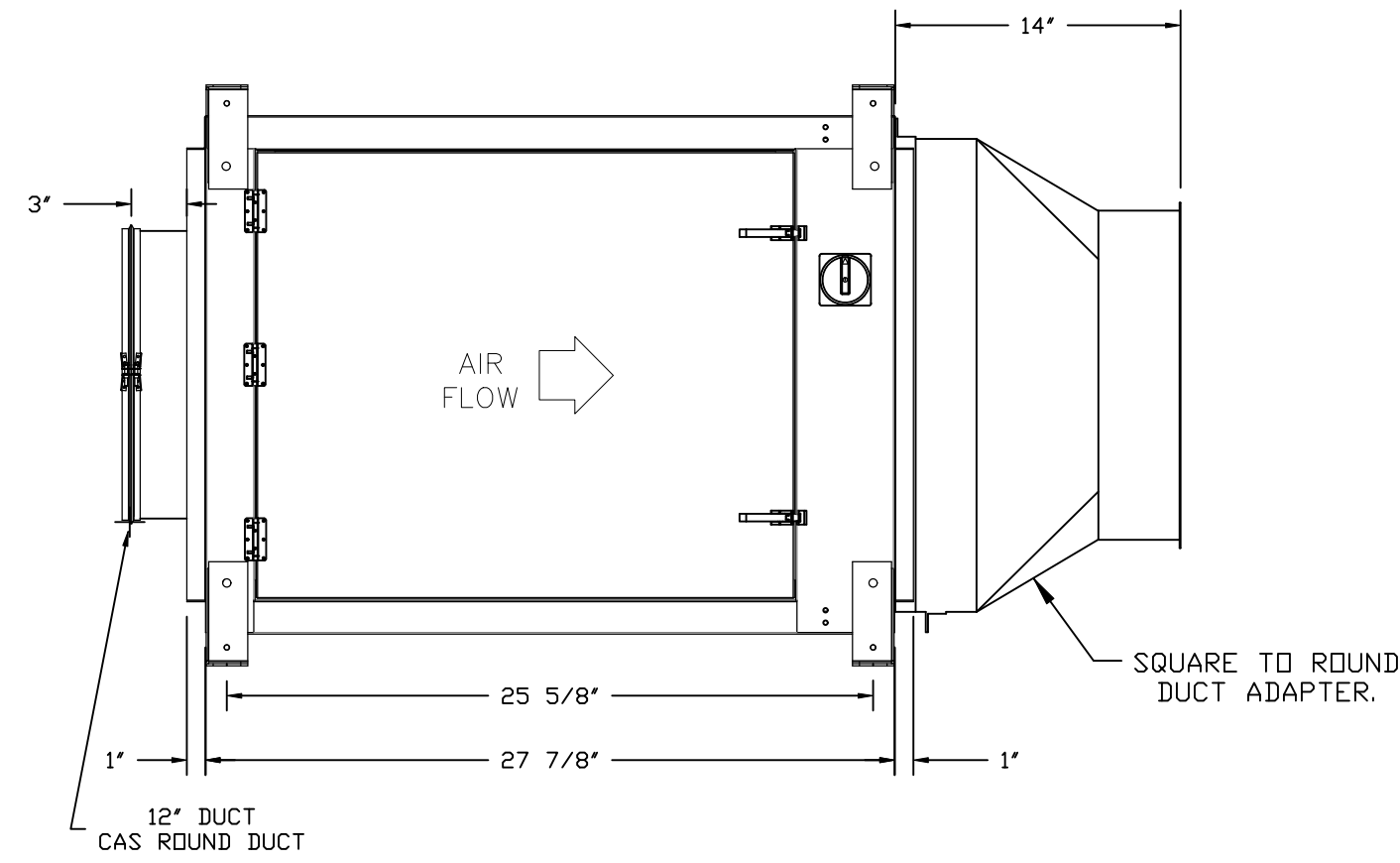
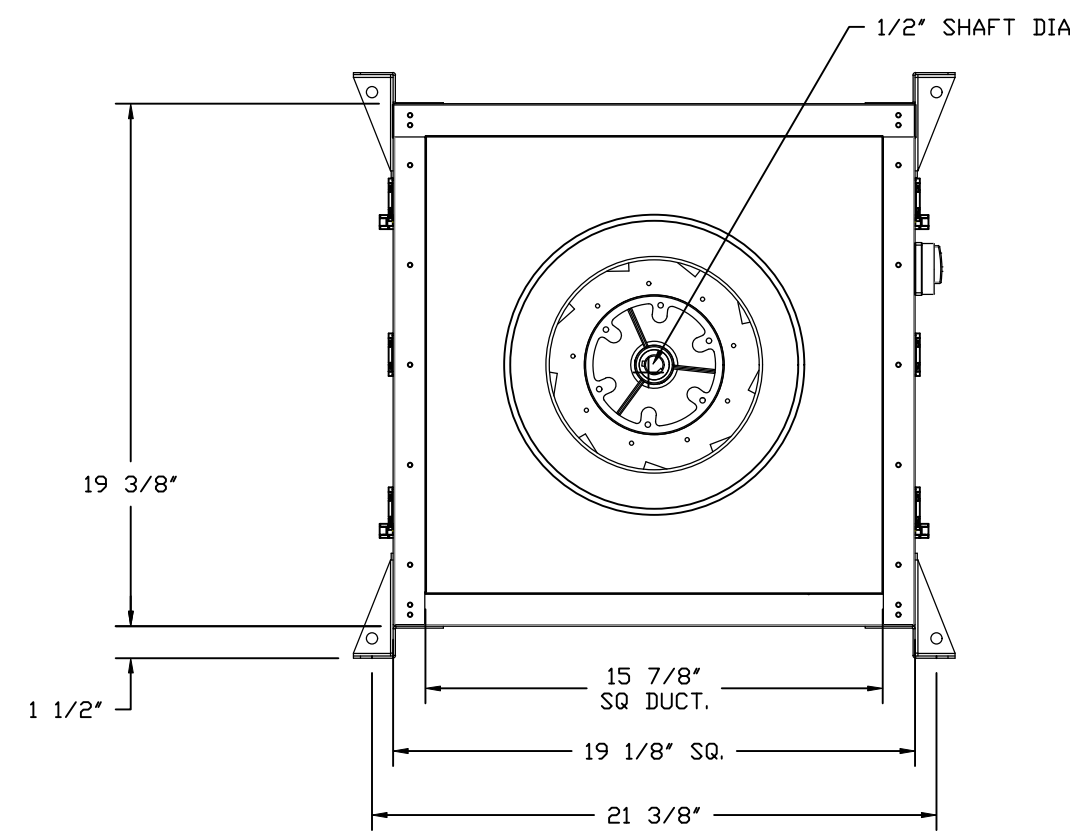
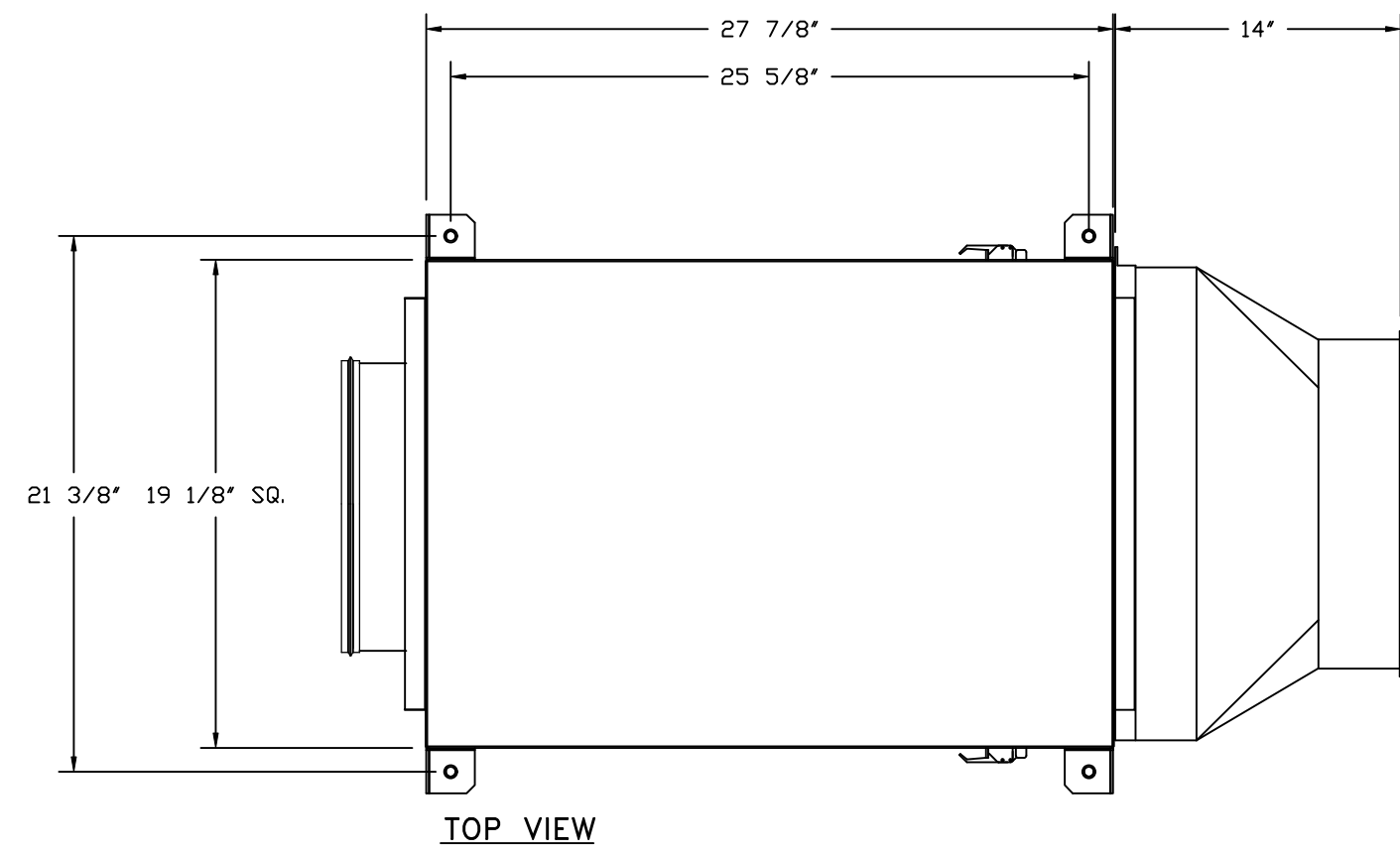
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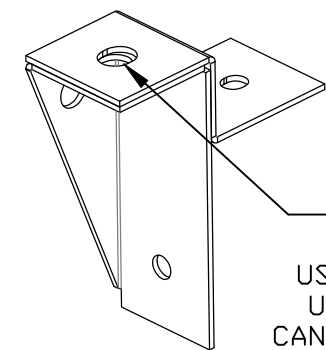
FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- TWO ACCESS DOORS FOR EASY ACCESS.
- BACKWARD INCLINED NON-OVERLOADING WHEELS.
- UL705 LISTING.
- AMCA AIR & SOUND CERTIFIED.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

OPTIONS

- SIF 11- SS LOW SP STRAIGHT DISCHARGE - SQUARE TO ROUND DISCHARGE ADAPTER.
- SIF 11 - INLET - STANDARD 12" DUCT CONNECTION.
- SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (11-36).
- ECM WIRING PACKAGE - EXHAUST - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -MSC- (TELCD), CCW ROTATION.
- HANGING SPRING VIBRATION ISOLATORS (SET OF 4), FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA12S).
- 1 15-BDD DAMPER.
- 2 YEAR PARTS WARRANTY.

- NOTES:**
- DWXXFRISER USED WHEN CONNECTING TO STANDARD DUCT.
 - DWXXFRISERS ARE INSTALLED ON THE INTAKE AND/OR DISCHARGE SIDES.



UNIVERSAL MOUNTING BRACKET

- 1/2" DIA. THREADED ROD ONLY
- .560" DIA. MOUNTING HOLES.
- USED WITH CEILING VIBRATION ISOLATORS.
- USED WITH FLOOR VIBRATION ISOLATORS.
- CAN BE RELOCATED IN THE FIELD AS NEEDED.

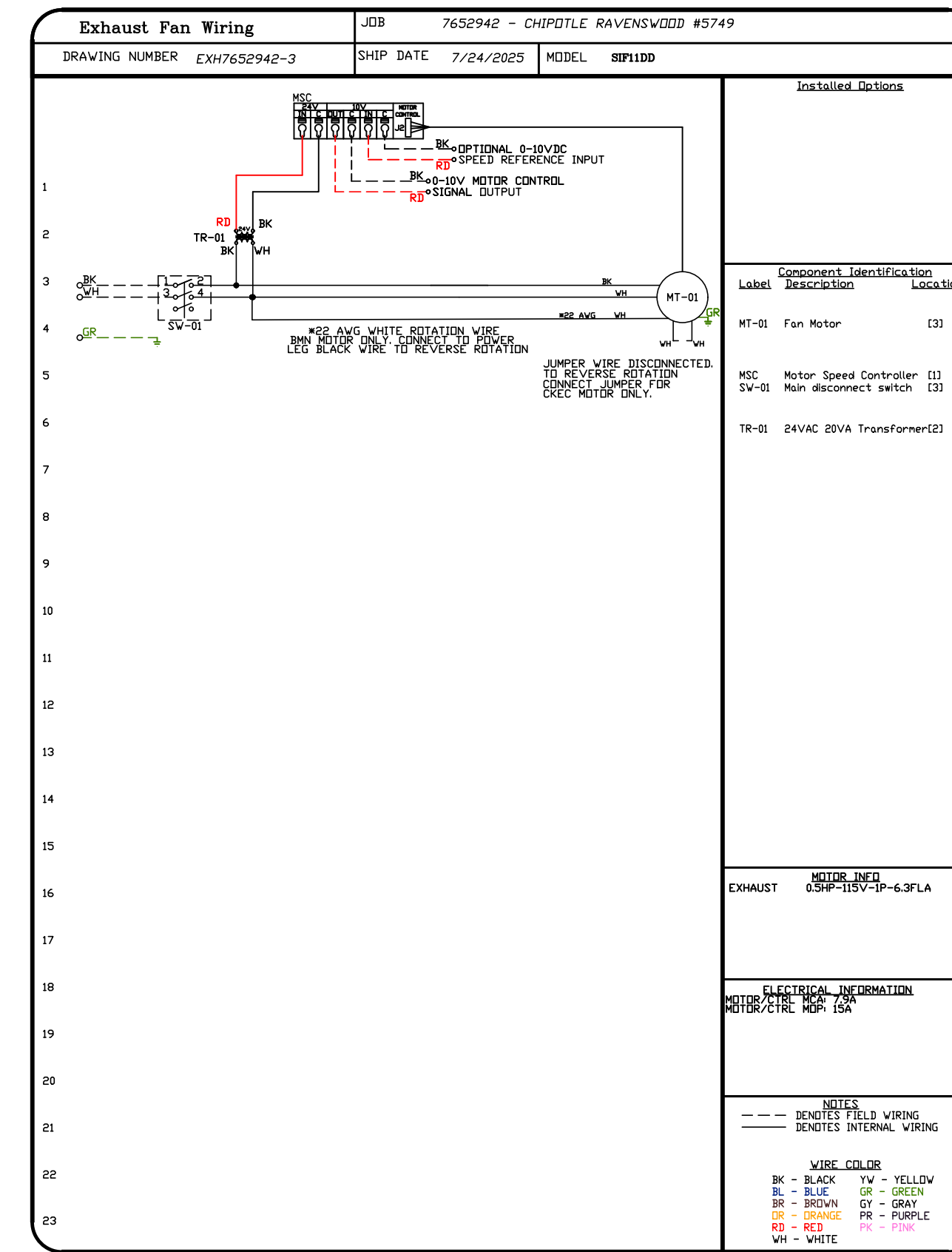
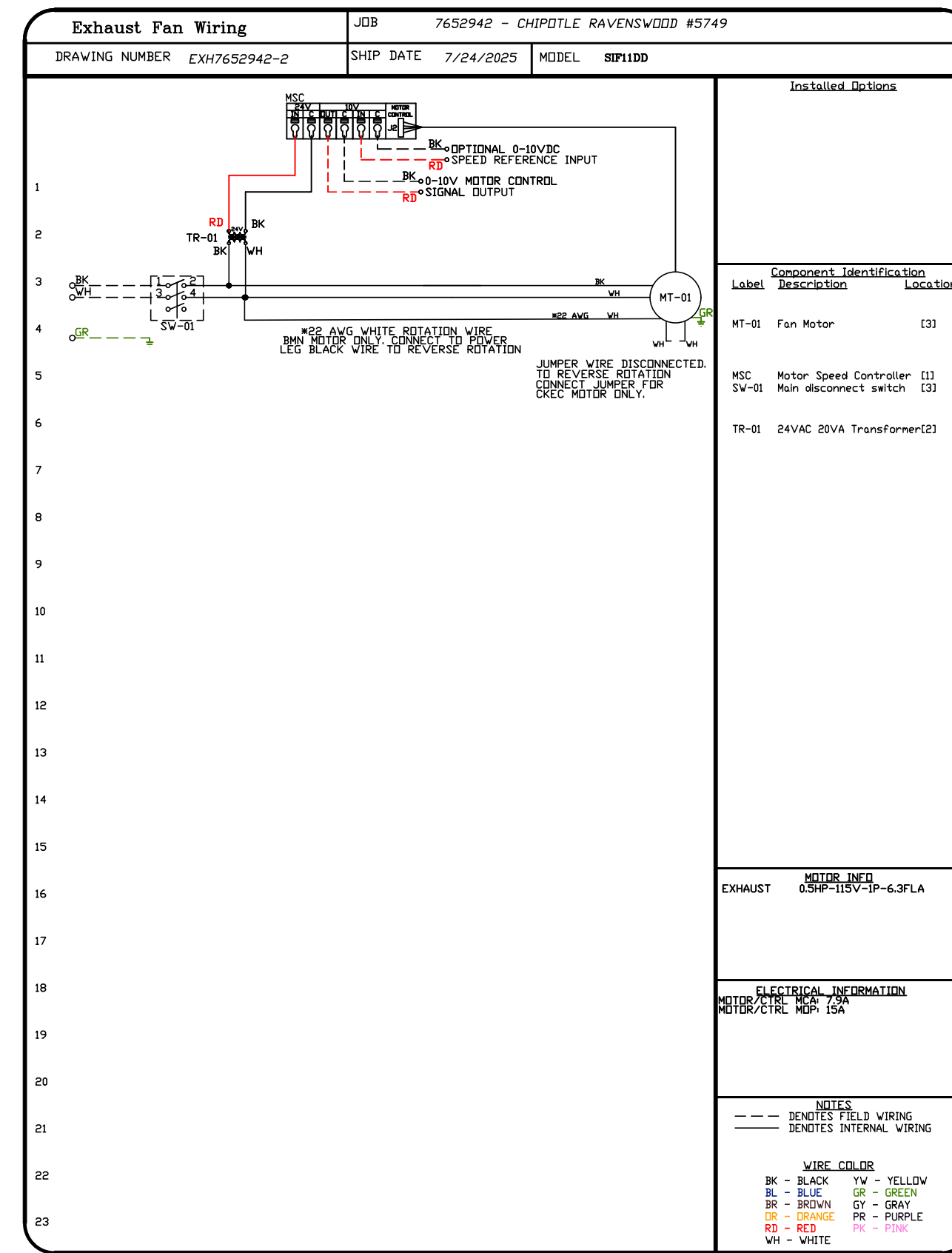
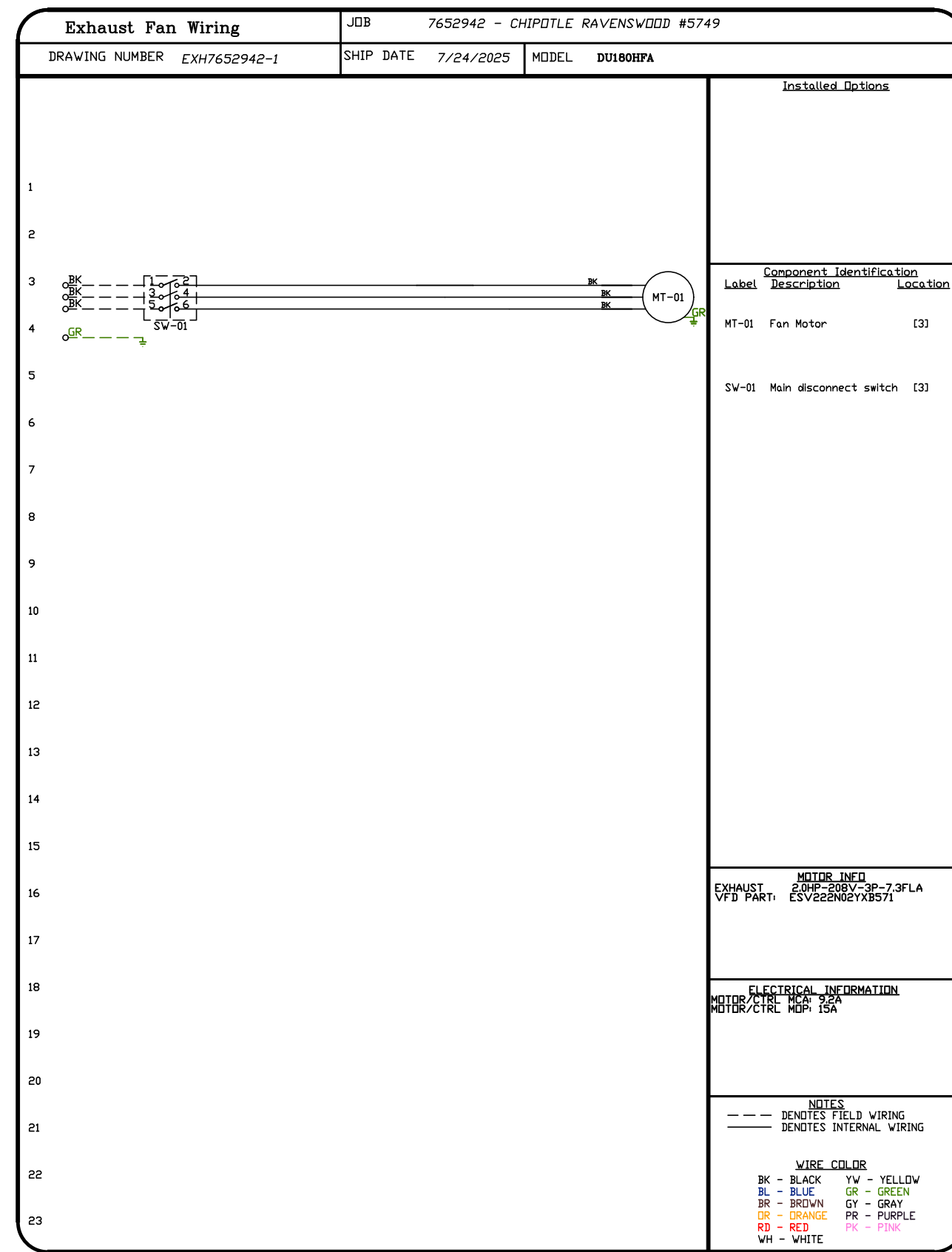
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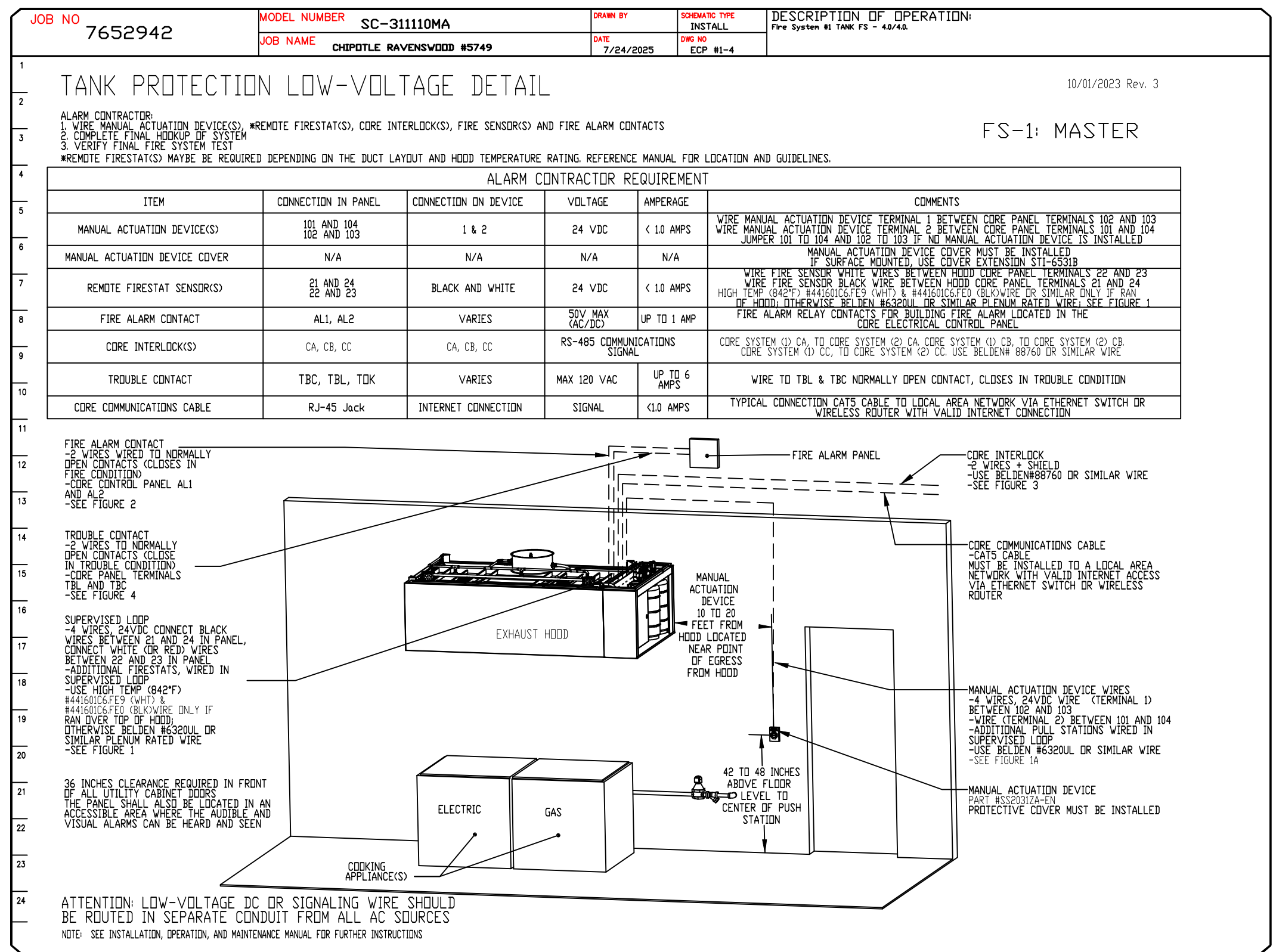
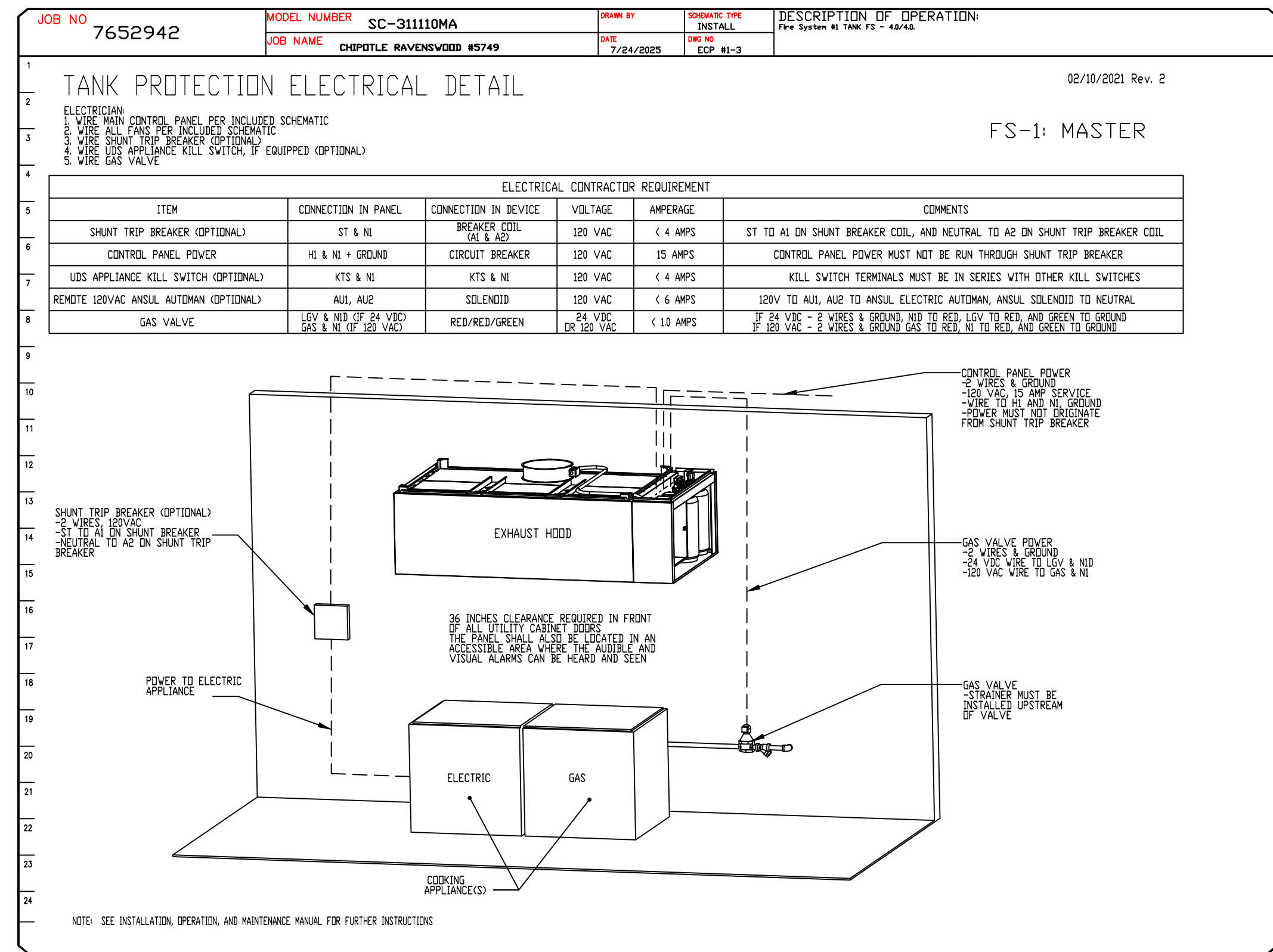
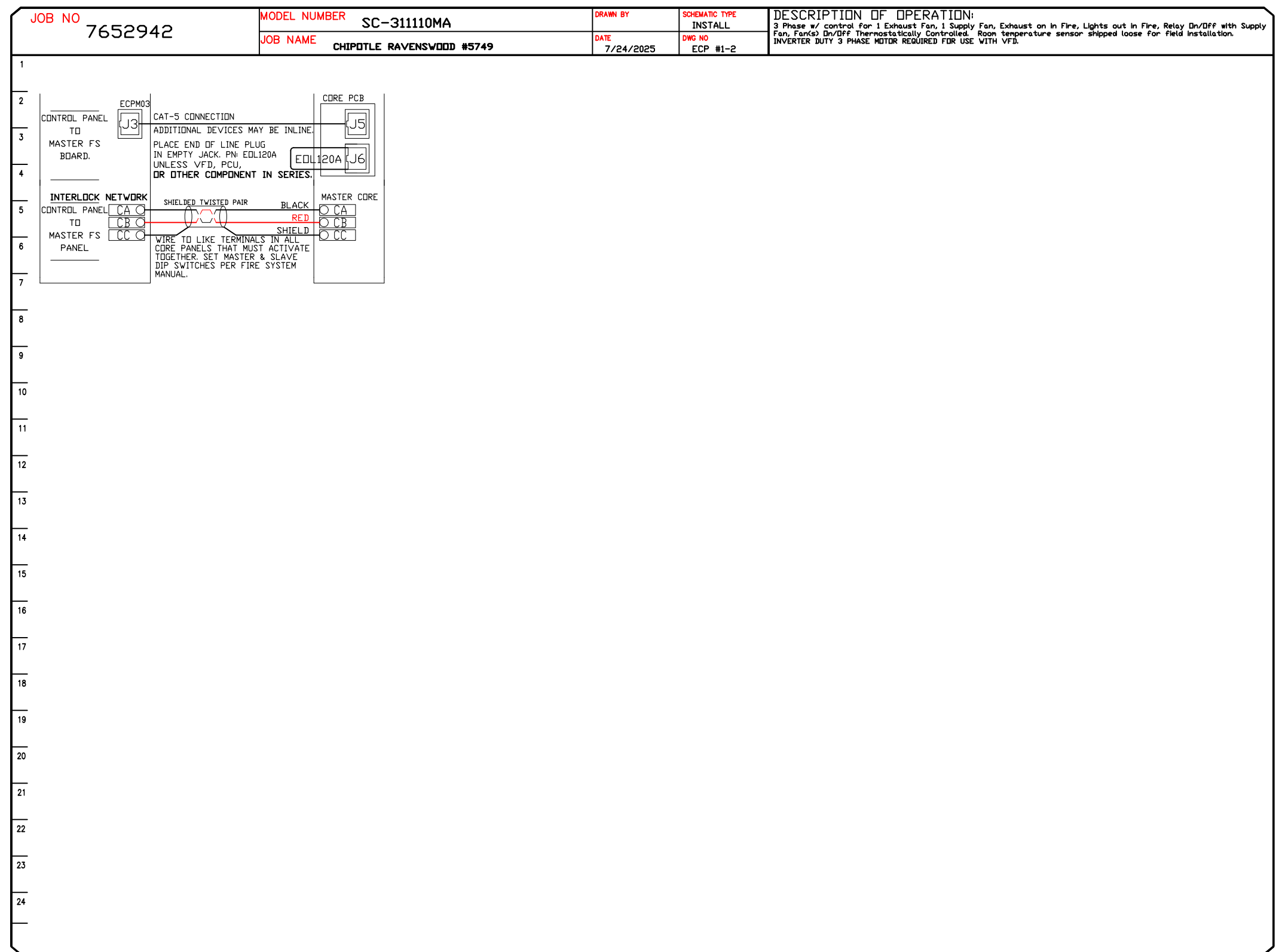
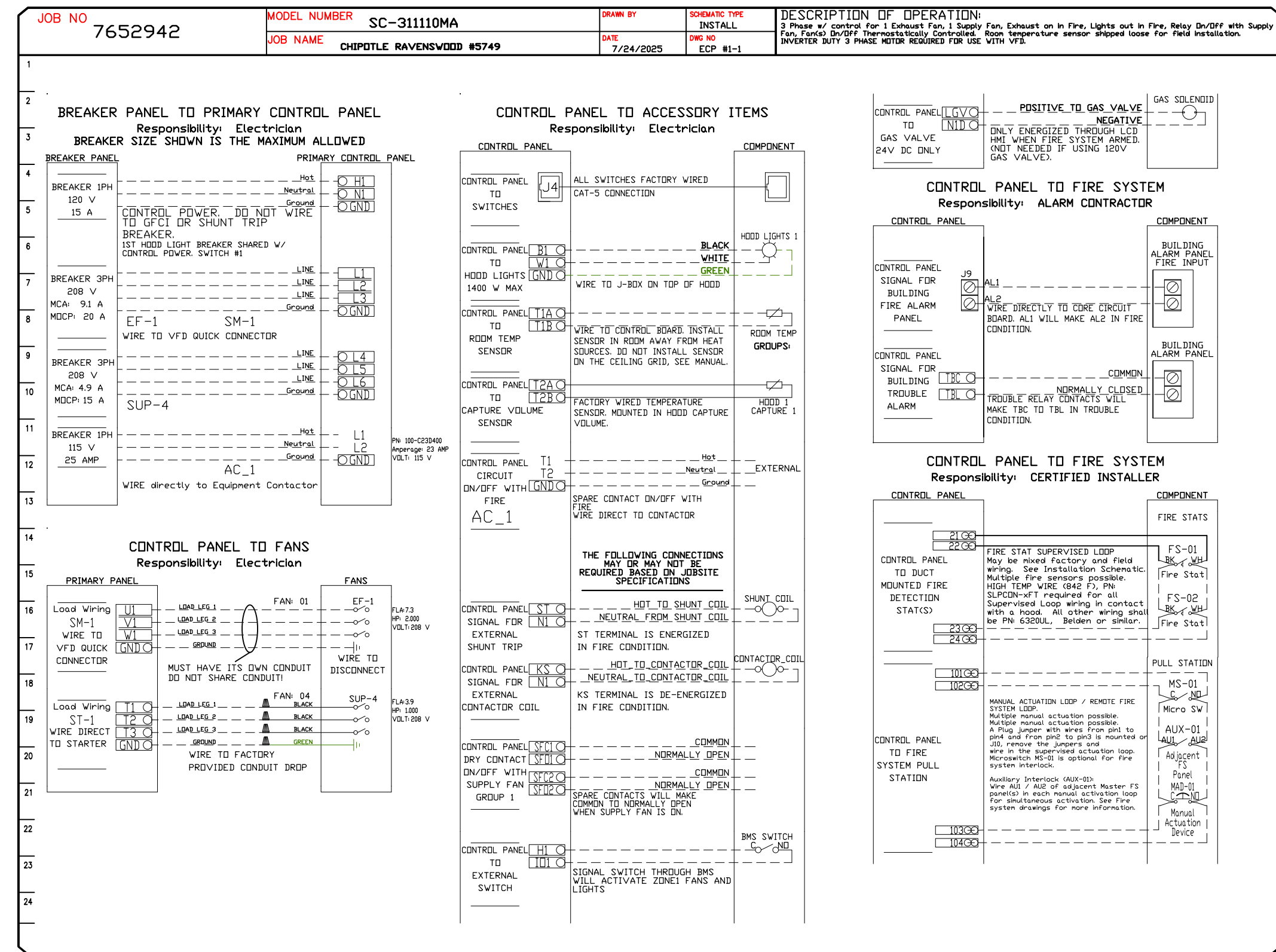
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8

ELECTRICAL PACKAGE - JOB#7652942

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	#	HP	VOLT	FLA
1		SC-311110MA	UTILITY CABINET LEFT	UTILITY CABINET LEFT HOOD # 1	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EF-1	EXHAUST	3	2.000	208	7.3
								SUPPLY	3	1.000	208	3.9



REVISIONS

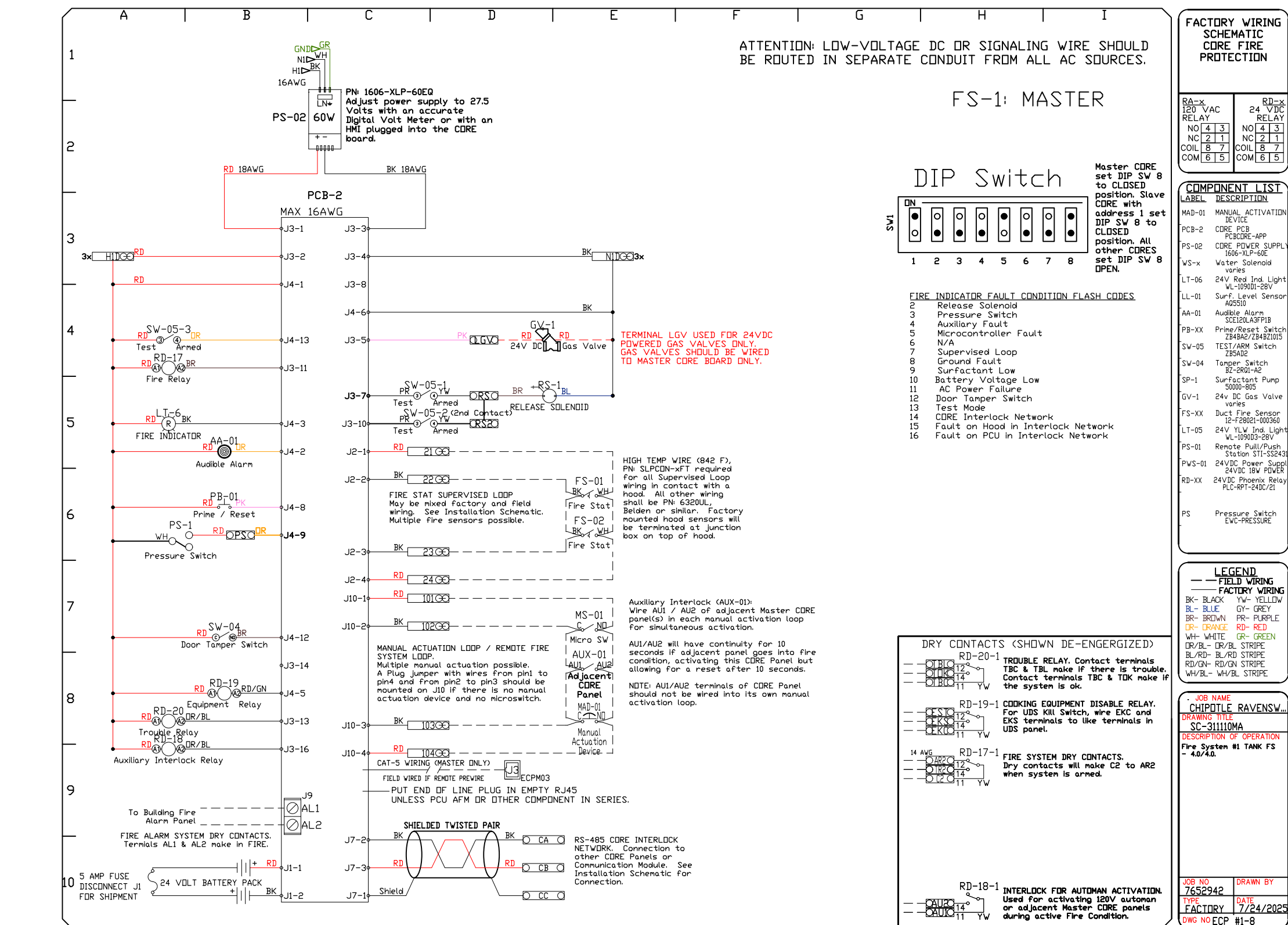
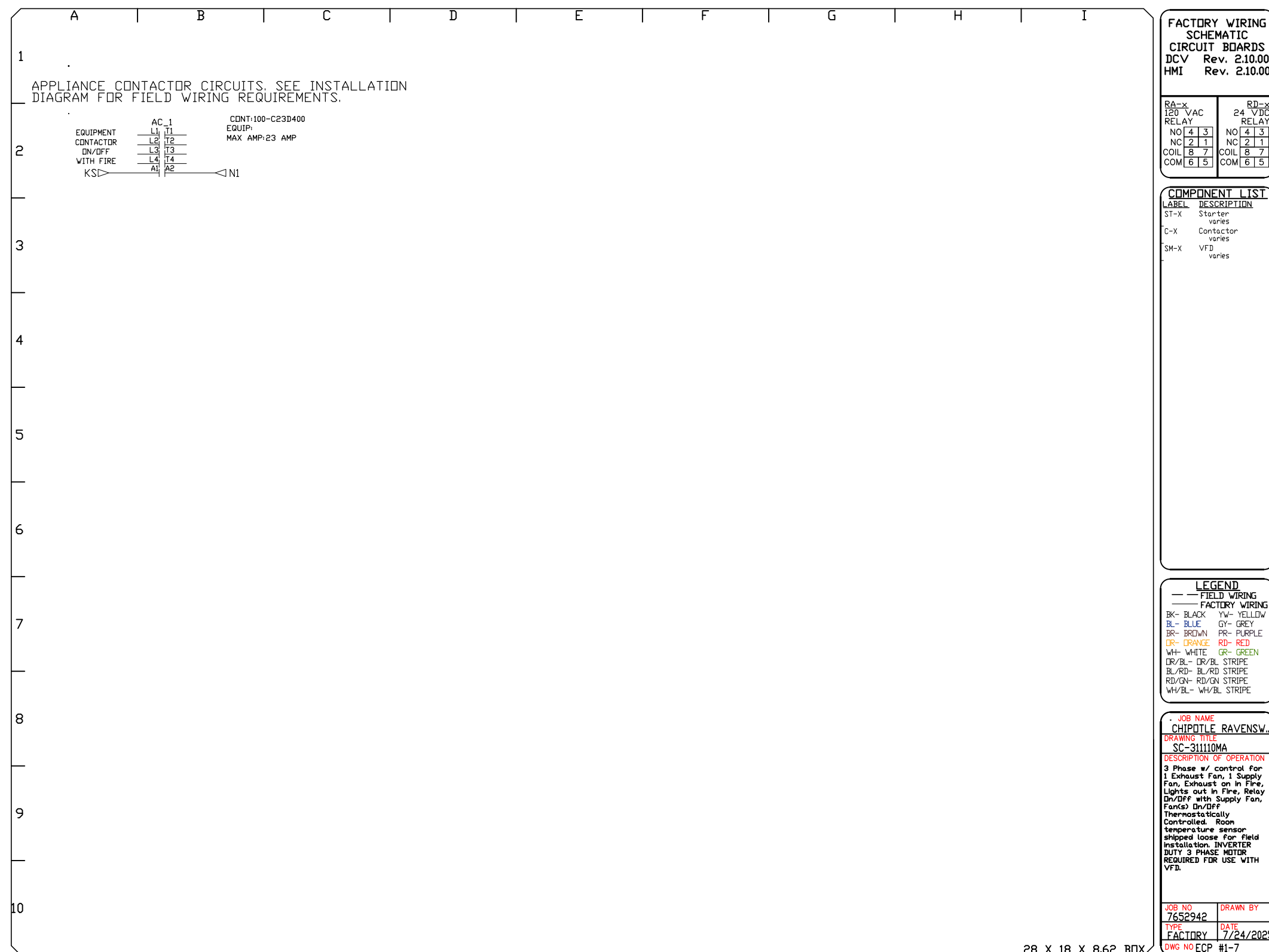
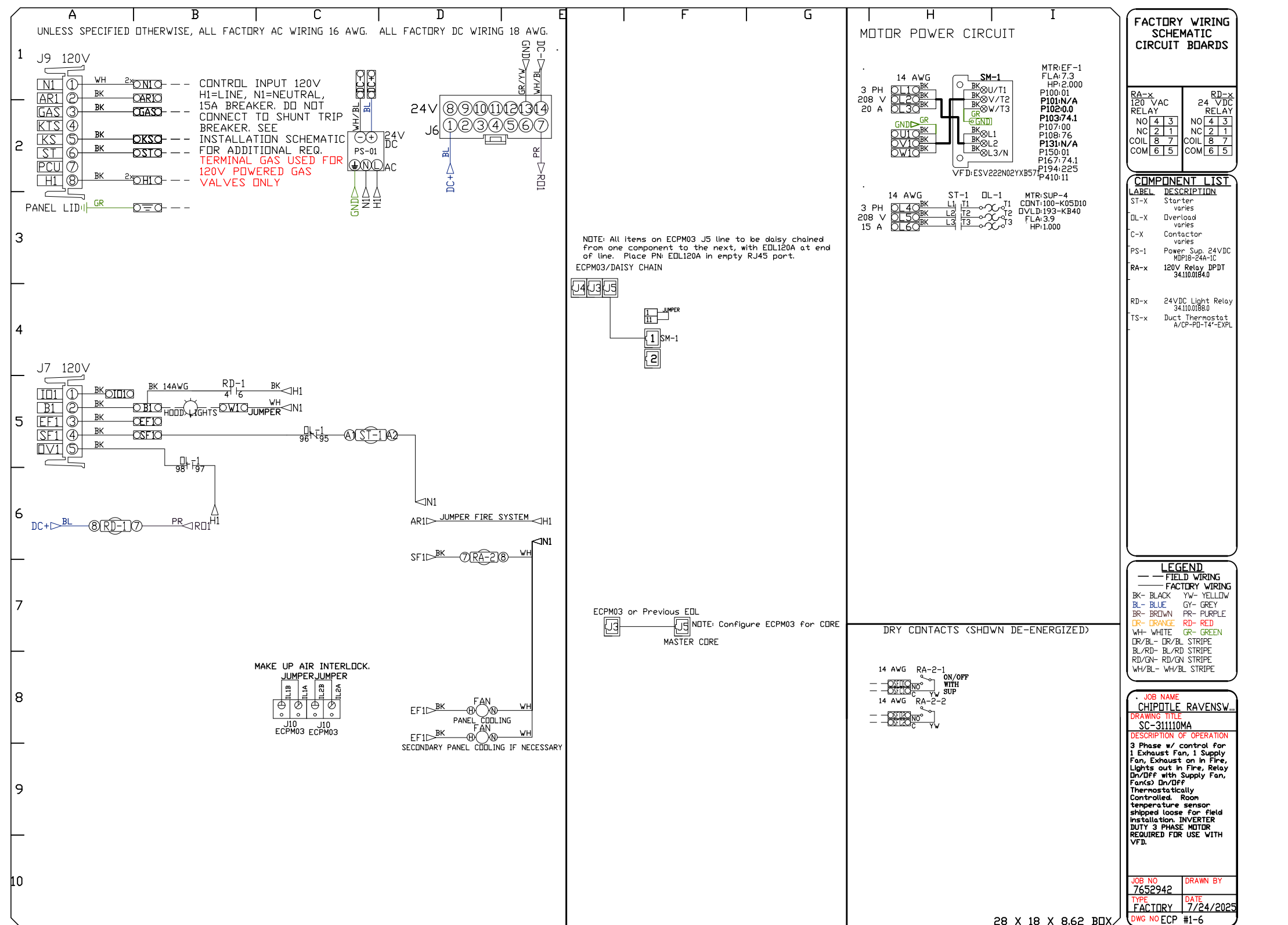
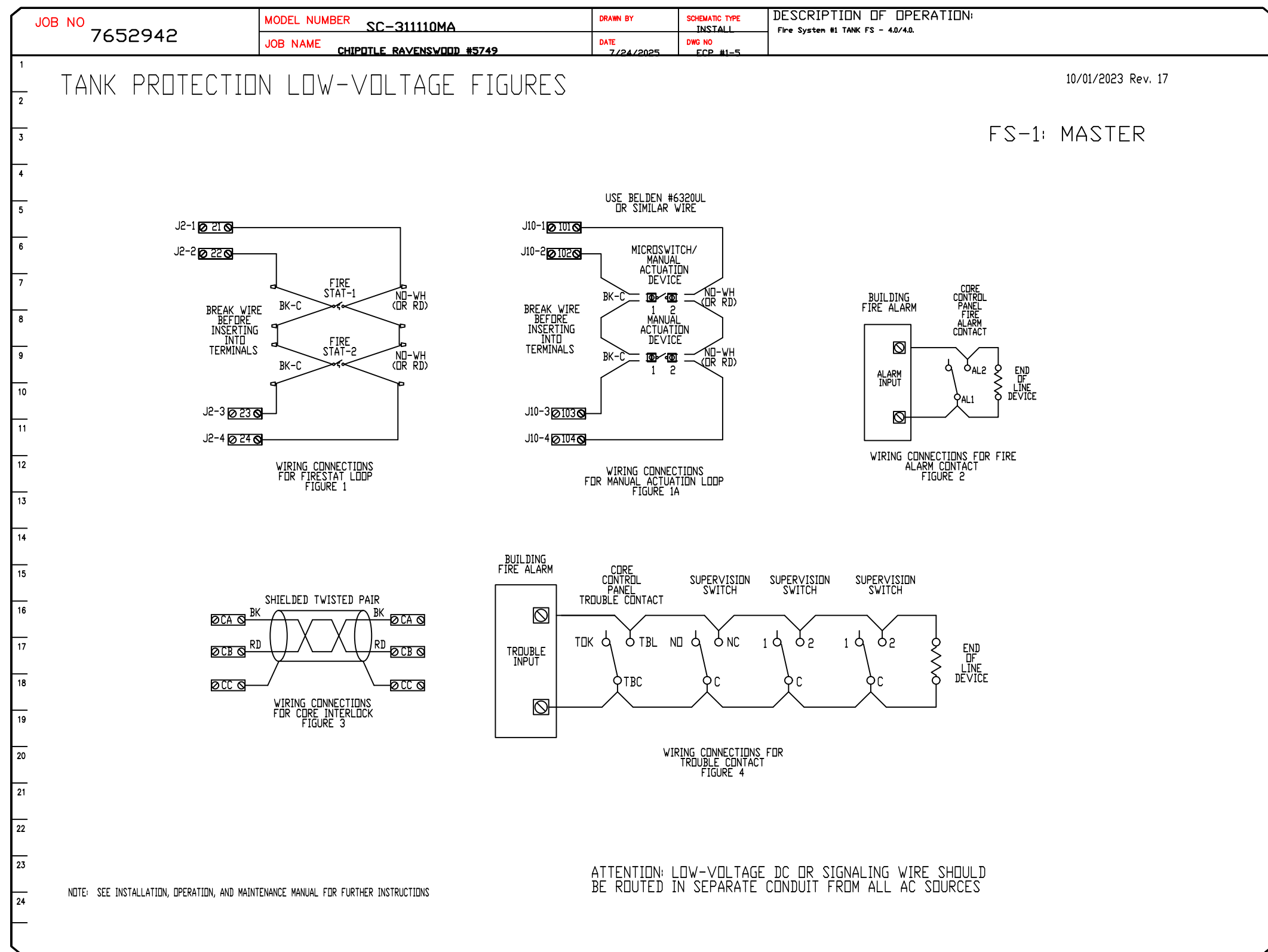
NO.	DESCRIPTION	DATE

CHIPOTLE RAVENSWOOD #5749
1825 West Lawrence Avenue,
Chicago, IL, 60640

DATE: 7/24/2025
DWG.#: 7652942
DRAWN BY: JMB-40
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
9

Highwoods Group
www.captivate.com
4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 975 - 0420 FAX: 9198750577 EMAIL: reg40@captivate.com



REVISIONS

DESCRIPTION	DATE

CHIPOTLE RAVENSWOOD #5749

1825 West Lawrence Avenue,
Chicago, IL, 60640

DATE: 7/24/2025

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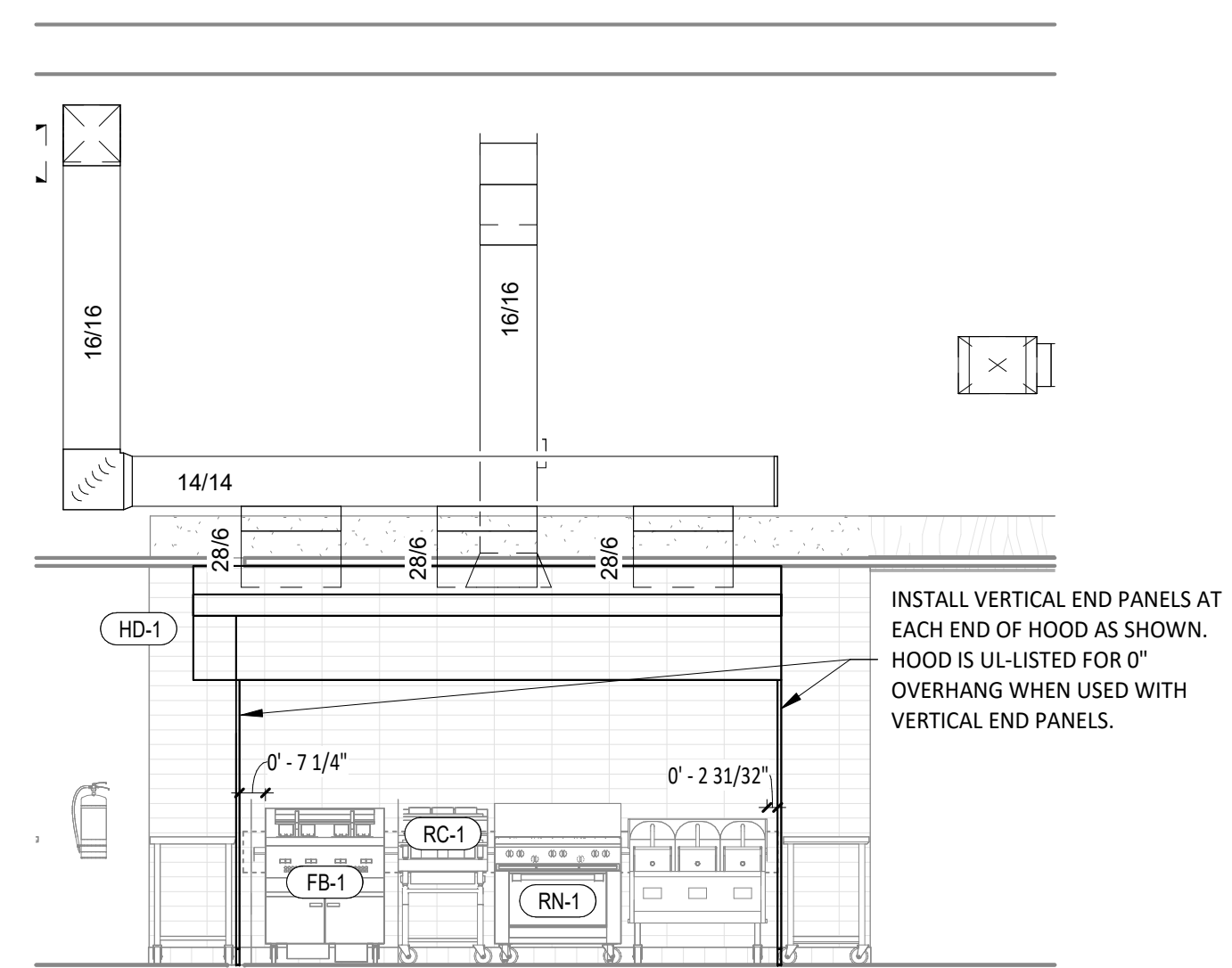
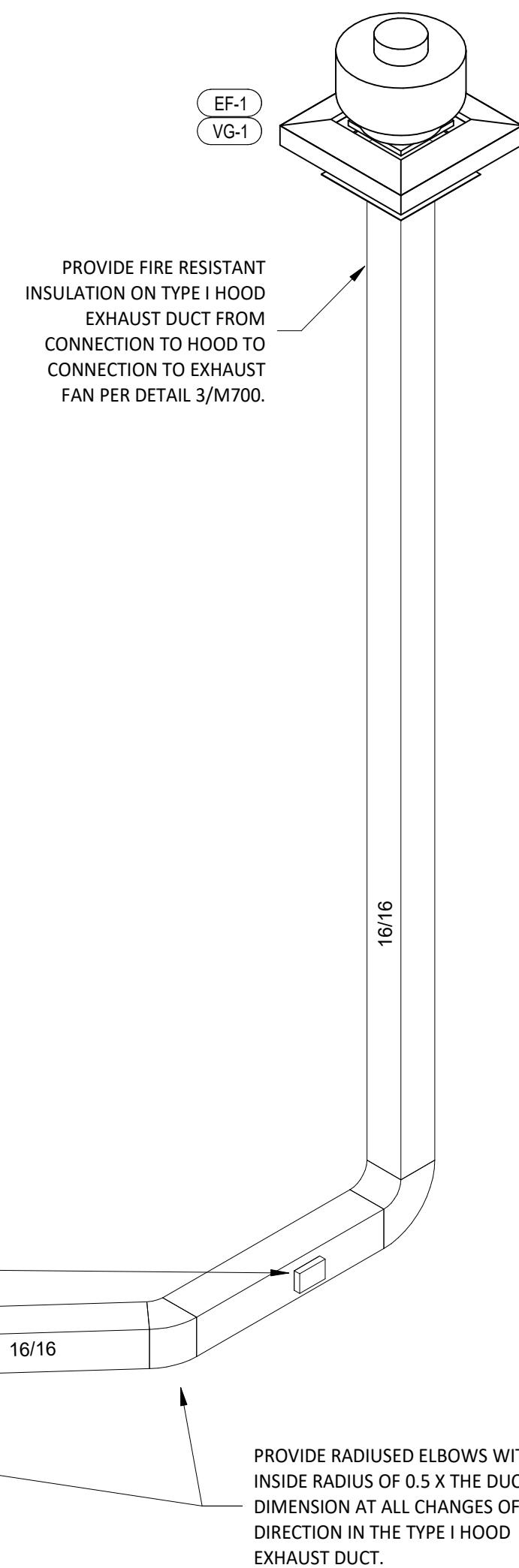
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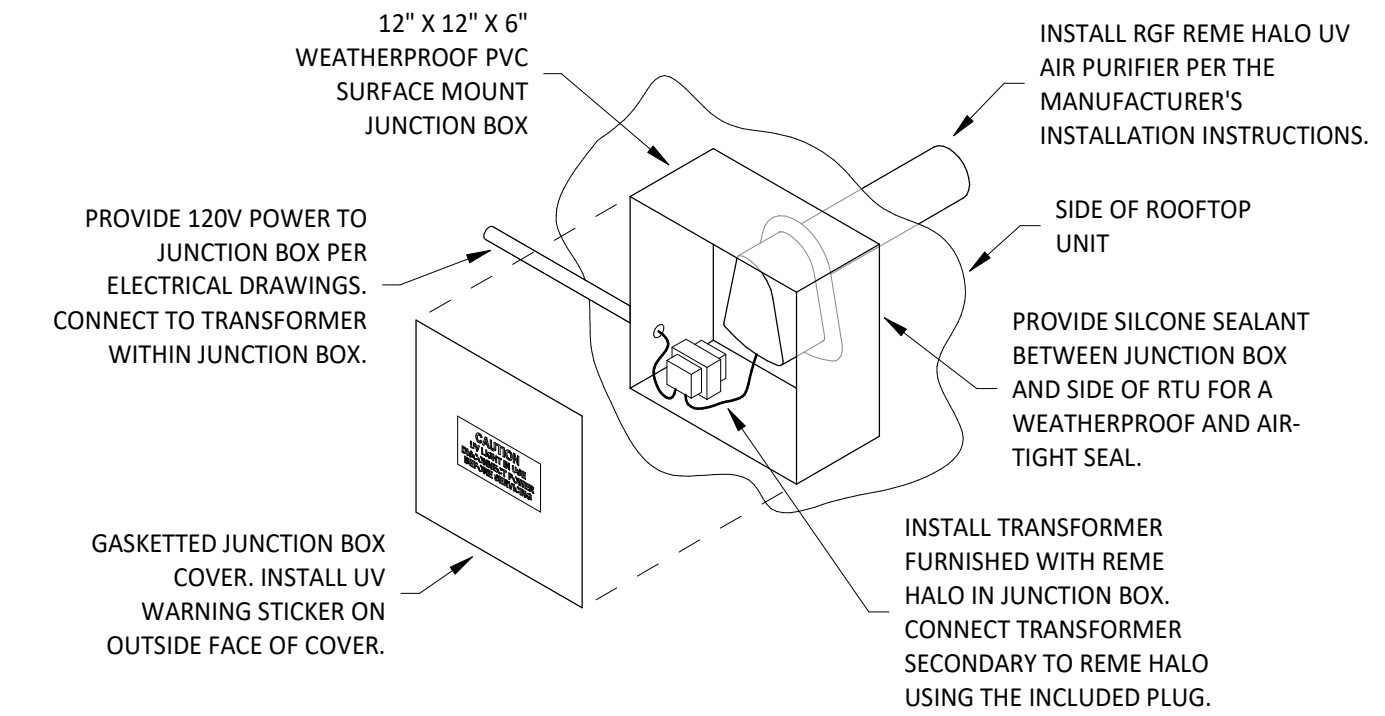
SHEET NO. 10

CAPTIVE

Highwoods Group
4641 Paragon Park Rd., Raleigh, NC, 27616 PHONE: (919) 375 - 0420 FAX: 9198750577 EMAIL: reg40@captiveware.com

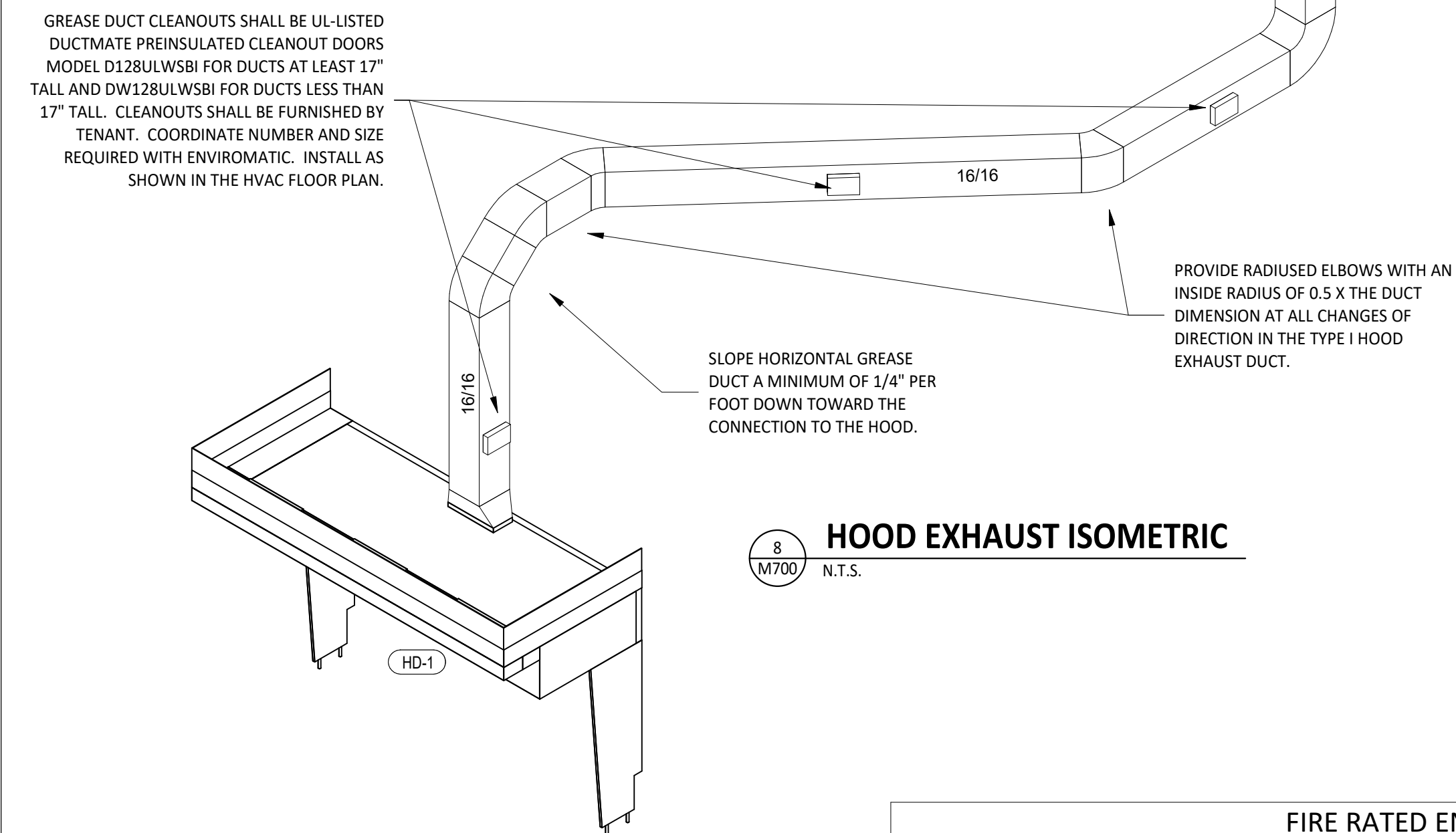


7 HOOD ELEVATION
1/4" = 1'-0"

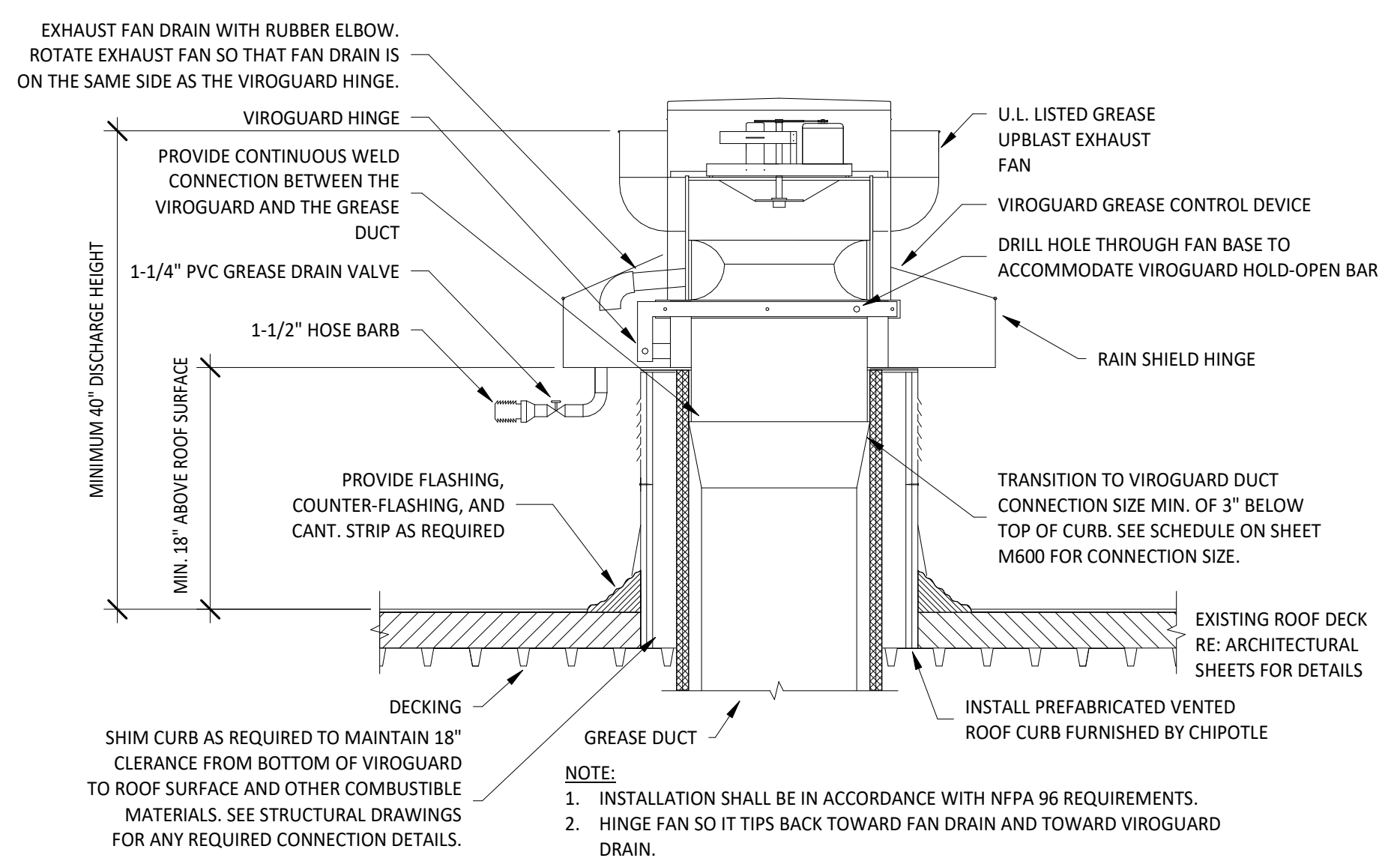


INSTALLATION LOCATION
INSTALL AIR PURIFIER WITH JUNCTION BOX ON OUTSIDE FACE OF SUPPLY DUCTWORK AND WITH UV LAMP TUBE EXTENDING INTO THE INTERIOR OF THE SUPPLY DUCTWORK. FIELD VERIFY EXACT LOCATION TO AVOID DAMAGING, TOUCHING, OR INTERFERING WITH ANY RTU INTERIOR COMPONENTS. INSTALLATION LOCATION SHALL BE AS FOLLOWS:
TRANE: INSTALL INTO THE SUPPLY AIR STREAM THROUGH THE REMOVABLE PANEL COVERING THE HORIZONTAL DISCHARGE SUPPLY AIR OPENING.
YORK: INSTALL INTO THE SUPPLY AIR PLENUM FROM THE BACK SIDE OF THE UNIT JUST ABOVE THE HEAT EXCHANGER.

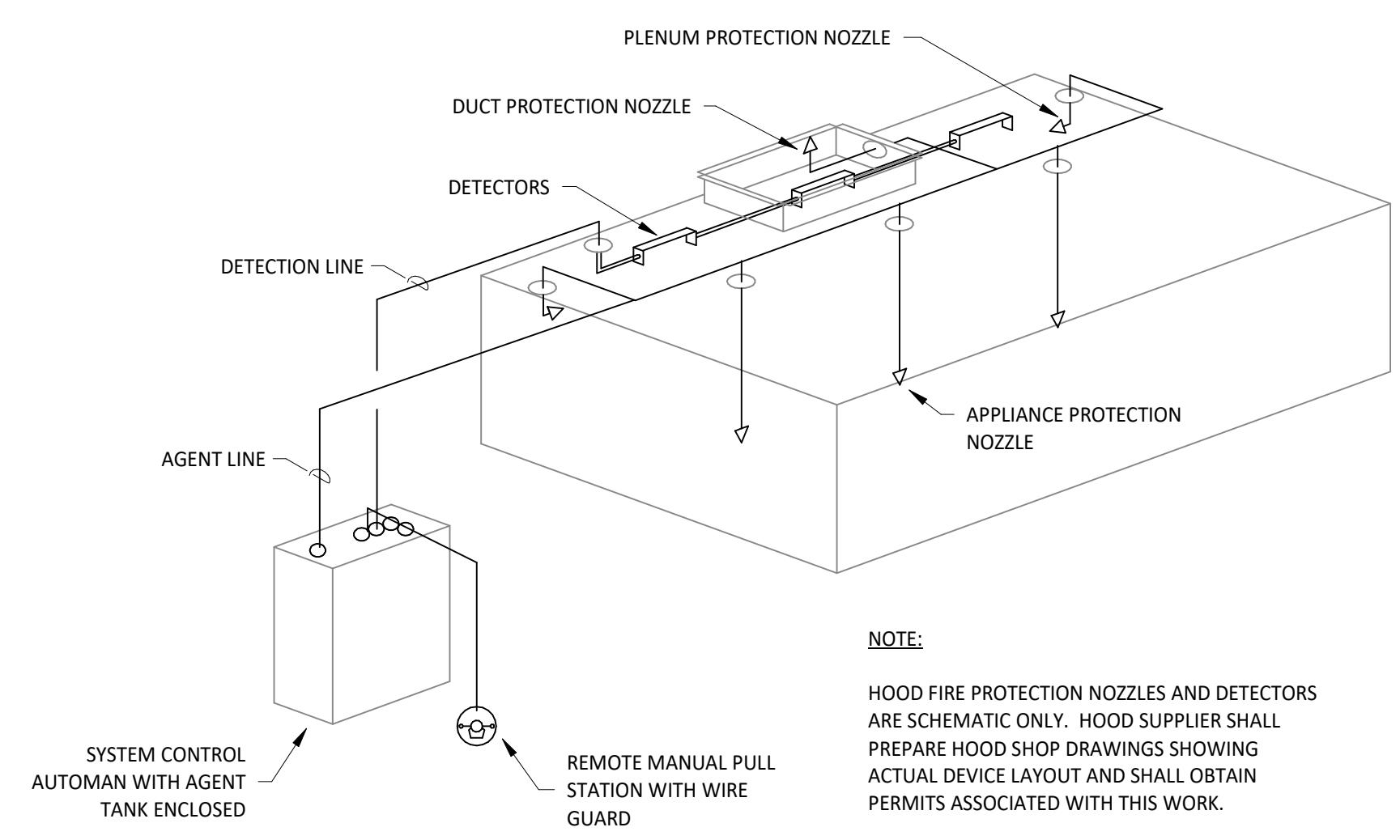
6 UV AIR PURIFIER INSTALLATION
N.T.S.



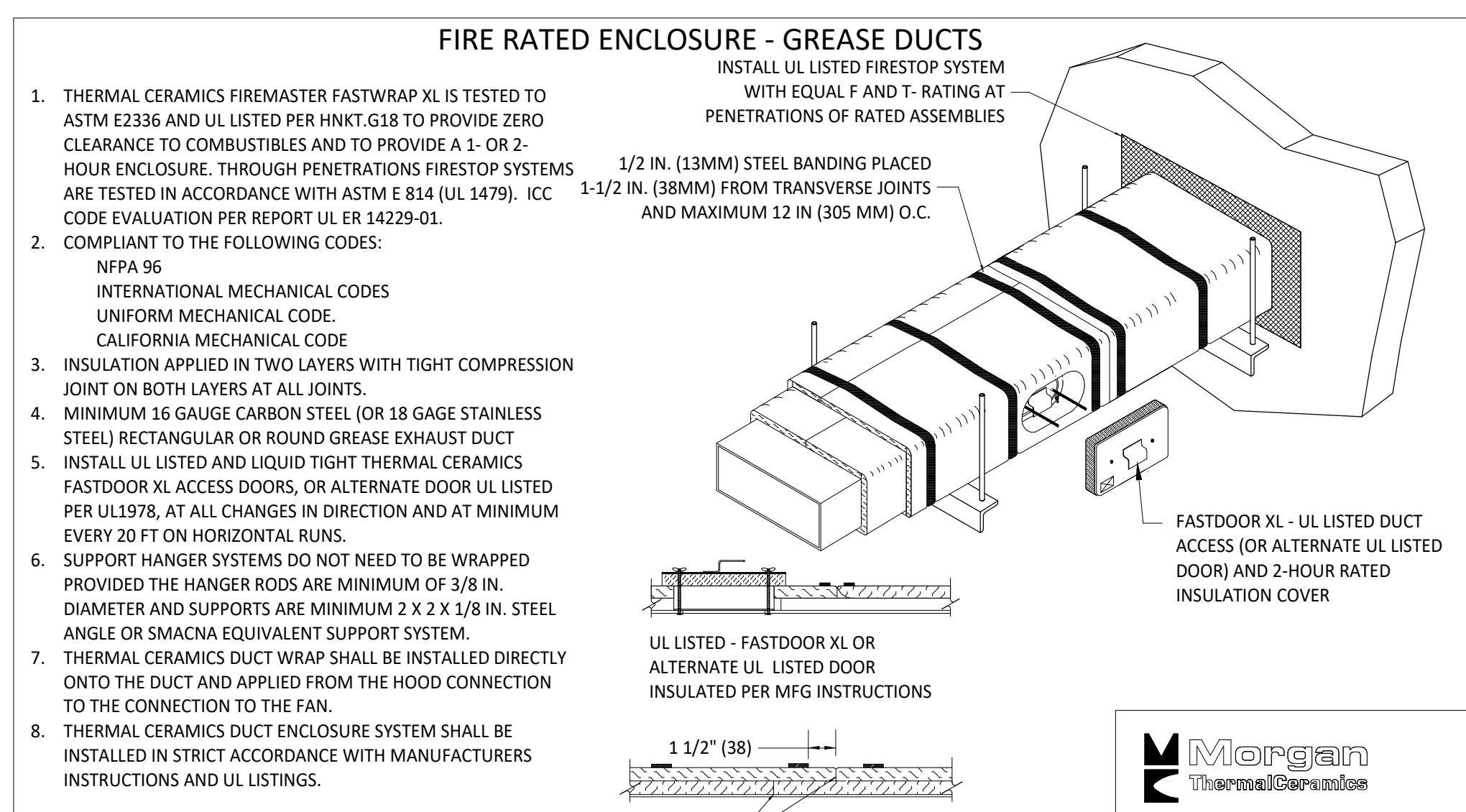
8 HOOD EXHAUST ISOMETRIC
N.T.S.



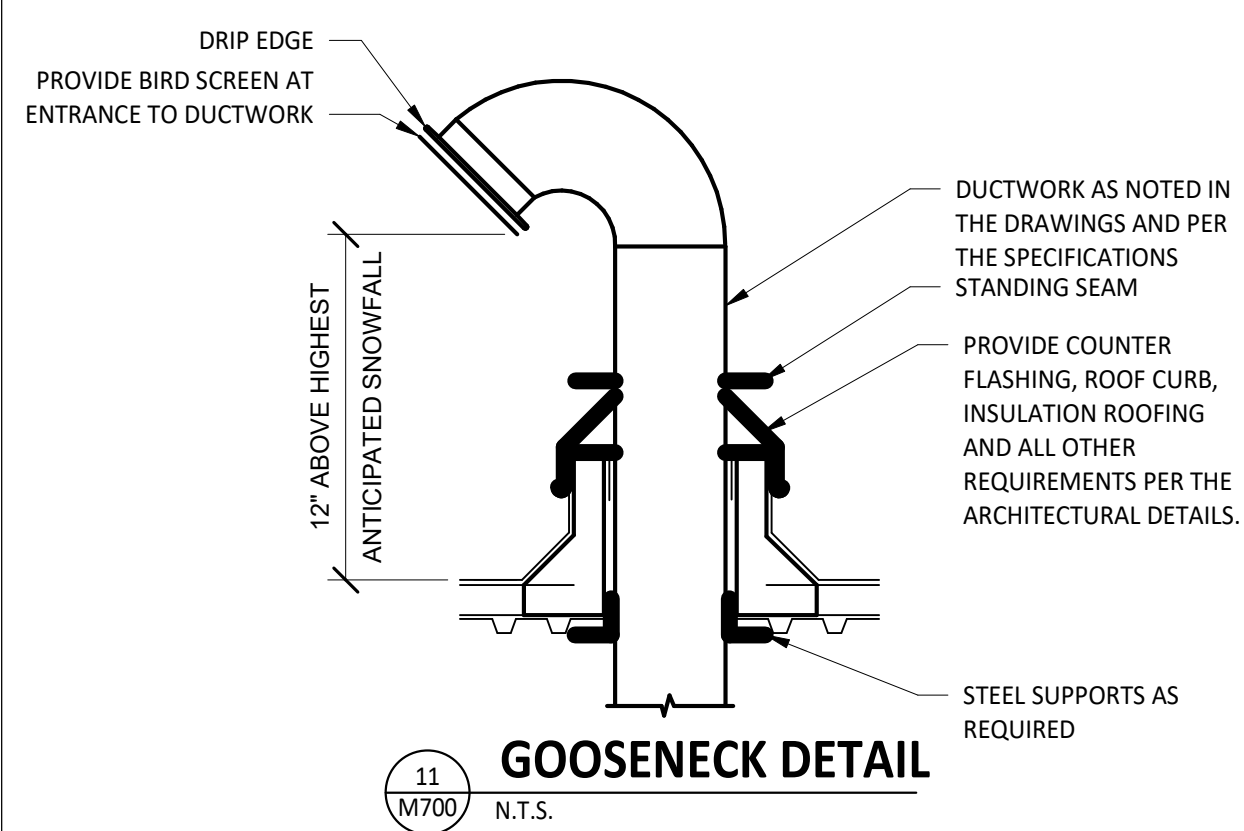
5 GREASE EXHAUST FAN
N.T.S.



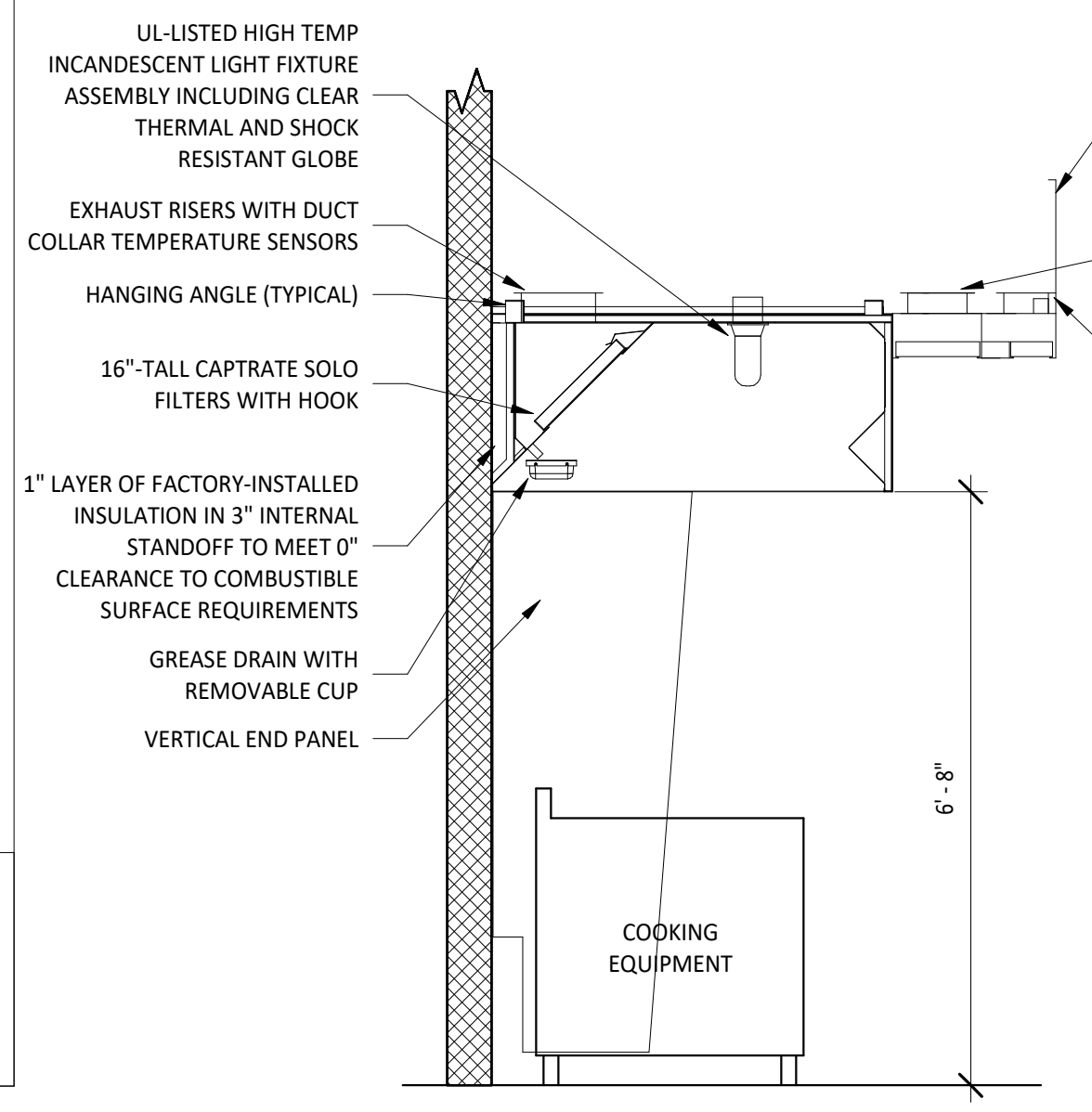
4 FIRE SUPPRESSION SYSTEM SCHEMATIC
N.T.S.



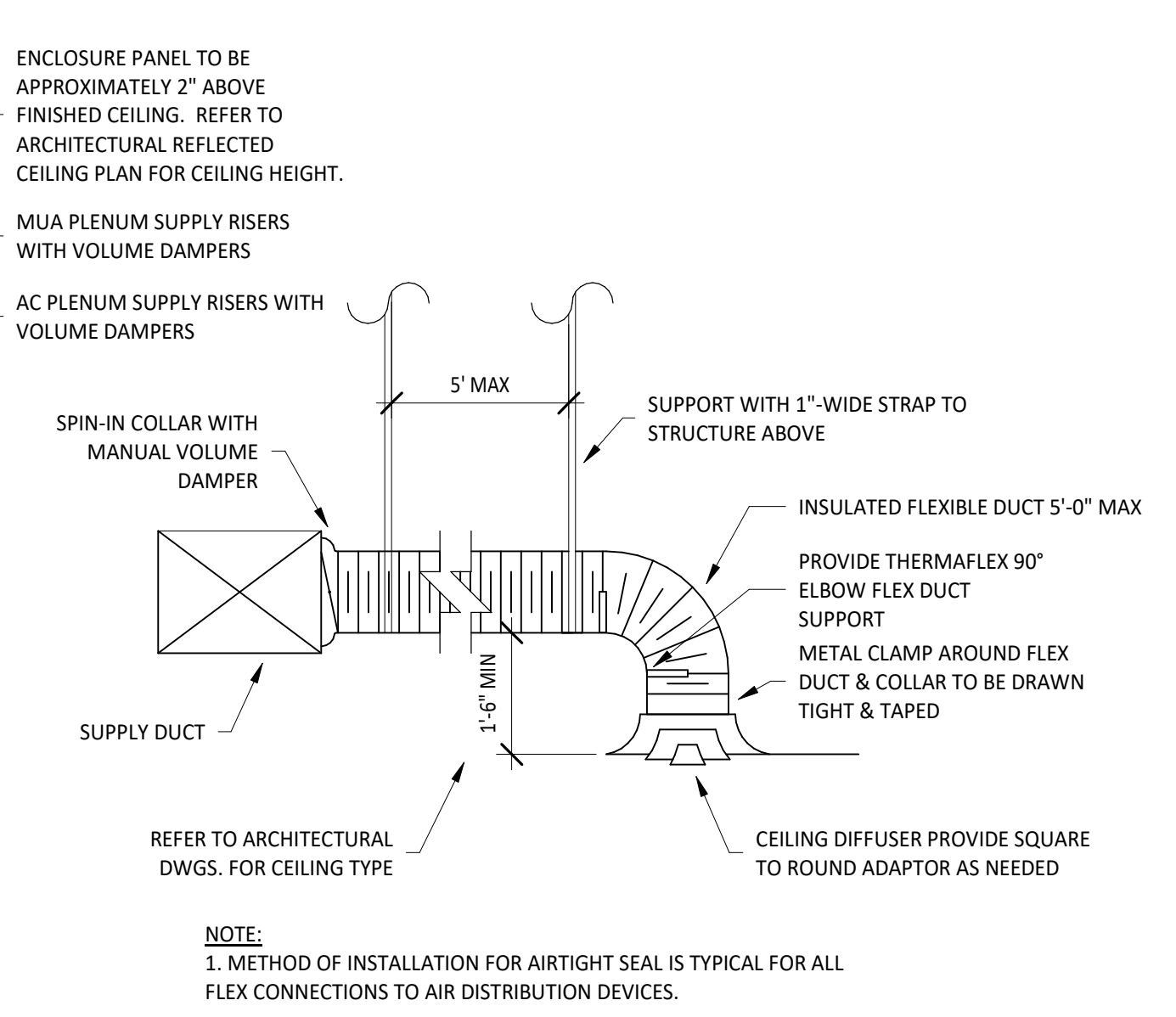
3 FIREMASTER DUCT WRAP - UL HNKT-G18
N.T.S.



11 GOOSENECK DETAIL
N.T.S.



2 HOOD SECTION VIEW
N.T.S.



1 DIFFUSER CONNECTION
N.T.S.

Consultant:
NATIONAL ENGINEERING
4635 Trueman Blvd, Suite 250
Hilliard, Ohio 43026
Phone: (614) 751-9610
Fax: (614) 552-5240
Contact: Joe Jones (614) 328-2024
jones@nationalengineering.com

FOR CONSTRUCTION

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STORE NO.: 5749
RAVENSWOOD
1825 W. LAWRENCE AVE
CHICAGO, IL 60640

Issue Record:	CLIENT REVIEW
2025/07/01	
2025/08/18	PERMIT ISSUE
2025/10/07	IFC SET

Revisions:	

Drawn: JEJ Checked: RTJ

Project No:
2401135

Contents:
HVAC DETAILS

M700