

SECTION 15732 - PACKAGED ROOFTOP AIR-CONDITIONING UNITS

- PART 1 - GENERAL
- 1.1 SECTION REQUIREMENTS
- A. Submittals: Product Data and Shop Drawings.
 - B. Comply with ASHRAE 15.
 - C. EER: Equal to or greater than prescribed by the energy code adopted by the Authority Having Jurisdiction.
 - D. Warranties: Submit a written warranty, signed by the manufacturer, agreeing to the repair or replacement of components that fail within 5 years of Substantial Completion.

- PART 2 - PRODUCTS
- 2.1 PACKAGED UNITS, 5 TO 20 TONS
- A. Factory assembled and tested, consisting of compressors, condensers, evaporator coils, condenser and evaporator fans, refrigeration and temperature controls, filters, and dampers.
 1. Refer to Rooftop Heating/Cooling Unit Schedule on drawing M600 for capacities, and manufacturers.
 2. Evaporator Fans: Belt or direct driven, forward curved centrifugal.
 3. Exhaust/Relief Fans: Direct drive, forward curved centrifugal or propeller.
 4. Condenser Fans: Direct drive propeller.
 5. Refrigerant Coils: Aluminum fins and copper coil.
 6. Compressors: Serviceable hermetic or fully hermetic, with safety controls, hot gas bypass, and timed off controls.
 7. Heat Exchangers: Gas fired, with gas controls, electronic ignition, high limit cutout, and forced draft proving switch.
 - B. Economizer controls [Comparative Enthalpy, 100% capacity].
 - 9. Smoke Detectors: Photoelectric in supply and/or return as called for in schedule on sheet M600.
 - 10. Operating Controls: Two stage heating and two stage cooling on units 7-1/2 tons and over.
 - 11. Roof curb.
 - 12. Control Wiring from T-stat to rooftop unit: Shall be 18ga / 7 conductor, rated for plenum applications.
 - 13. Control Wiring from T-stat to remote sensor: Shall be a separate 18ga / 2 conductor shielded, rated for plenum applications.

- PART 3 - EXECUTION
- 3.1 INSTALLATION
- A. Install units level and plumb and firmly anchored.
 - B. Connect gas piping to burner with pipe same size as gas train inlet, and provide union with sufficient clearance for burner removal and service.
 - C. Install ducts to termination in roof mounting frames. Terminate ducts through roof structure.
 - D. Connect units to wiring systems and to ground.
- END OF SECTION 15732

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 flexible 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

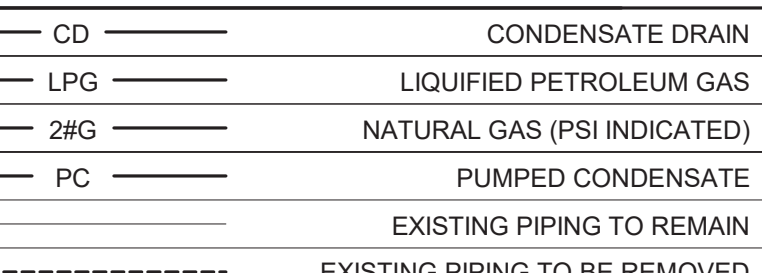
SECTION 15855 - DIFFUSERS, REGISTERS, AND GRILLES

- 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

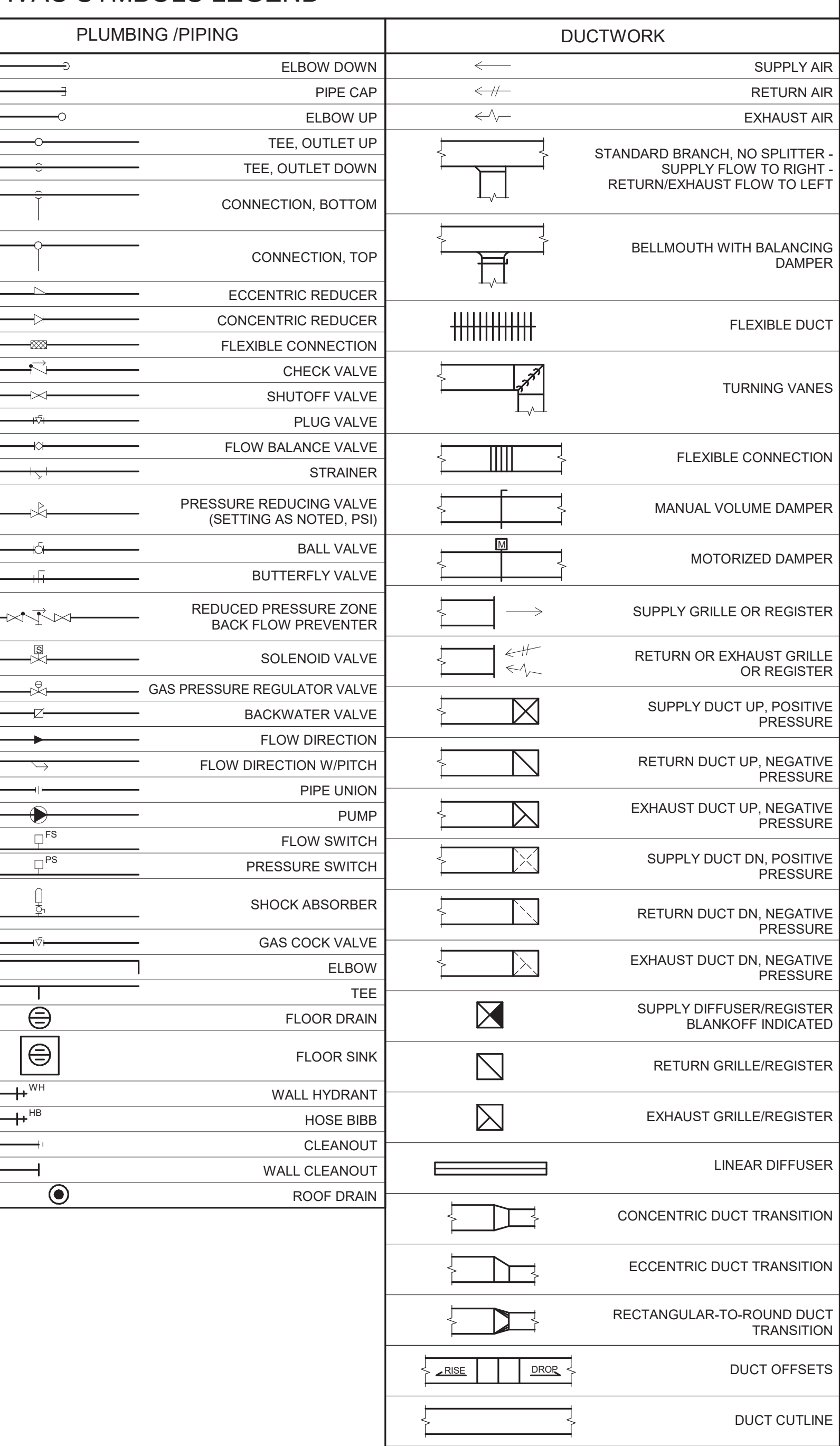
MECHANICAL ABBREVIATIONS

AD	AREA DRAIN	LAV	LAVATORY
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
ADA	AMERICANS W/ DISABILITIES ACT	MBH	BTU PER HOUR (THOUSANDS)
A.F.F.	ABOVE FINISHED FLOOR	MCF	THOUSAND CUBIC FEET
AHU	AIR HANDLING UNIT	NC	NOISE CRITERIA OR NORMALLY CLOSED
AHJ	AUTHORITY HAVING JURISDICTION	NEG	NEGATIVE
AP	ACCESS PANEL	NIC	NOT IN CONTRACT
ARCH	ARCHITECT	NO	NORMALLY OPEN
BD	BUTTERFLY DAMPER	NTS	NOT TO SCALE
BFF	BELOW FINISHED FLOOR	OA	OUTSIDE AIR
B/G	BELOW GRADE	OBD	OPPOSED BLADE DAMPER
BOH	BACK OF HOUSE	ORD	OVERFLOW ROOF DRAIN
BTU	BRITISH THERMAL UNIT	PD	PRESSURE DROP OR DIFFERENCE
CFH	CUBIC FEET PER HOUR	PLBG	PLUMBING
CFM	CUBIC FEET PER MINUTE	PRV	PRESSURE REDUCING VALVE OR POWER ROOF VENTILATOR
CL	CENTER LINE	PSIA	POUNDS/SQ INCH ABSOLUTE
CLG	CEILING	PSIG	POUNDS/SQ INCH GAUGE
CO	CLEAN OUT	PVC	POLY VINYL CHLORIDE
CONTR	CONTRACTOR	RA	RETURN AIR
CUH	CABINET UNIT HEATER	RD	ROOF DRAIN
CW	COLD WATER	RECIRC	RECIRCULATING
DIA	DIAMETER	REG	REGISTER
DIFF	DIFFUSER	RET	RETURN
DISCH	DISCHARGE	RH	RELATIVE HUMIDITY
DMPR	DAMPER	RHW	RECIRCULATED HOT WATER
DN	DOWN	RLF	RELIEF
DR	DRAIN	RM	ROOM
DS	DOWNSPOUT	RPM	REVOLUTIONS PER MINUTE
(E)	EXISTING	RPZ	REDUCED ZONE BACKFLOW PREVENTER
EAT	ENTERING AIR TEMPERATURE	SA	SUPPLY AIR
EWT	ENTERING WATER TEMPERATURE	SAN	SANITARY
EXH	EXHAUST	SCFM	CFM, STANDARD CONDITIONS
F	FAHRENHEIT	SD	SMOKE DAMPER
FCO	FLOOR CLEAN OUT	SP	STATIC PRESSURE
FD	FLOOR DRAIN	SPECS	SPECIFICATIONS
FLR	FLOOR	SUP	SUPPLY
FLEX	FLEXIBLE	SQ	SQUARE
FOH	FRONT OF HOUSE	TD	TEMPERATURE DIFFERENCE
FPM	FEET PER MINUTE	TEMP	TEMPERATURE
FPS	FEET PER SECOND	TONS	TONS OF REFRIGERATION
FS	FLOOR SINK	T-STAT	THERMOSTAT
FT	FEET OR FOOT	TYP	TYPICAL
FV	FACE VELOCITY	UG	UNDERGROUND
FW	FILTERED WATER	UH	UNIT HEATER
GA	GAUGE	UR	URINAL
GAL	GALLON	V	SANITARY VENT
GEXH	GREASE EXHAUST	VAV	VARIABLE AIR VOLUME
GPH	GALLONS PER HOUR	VD	VOLUME DAMPER
GPM	GALLONS PER MINUTE	VEL	VELOCITY
GR	GRILLE	VFD	VARIABLE FREQUENCY DRIVE
GYP	GYPSUM BOARD	VOL	VOLUME
HB	HOSE BIBB	VSC	VARIABLE SPEED CONTROLLER
HD	HEAD	VTR	VENT THROUGH ROOF
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	W	SANITARY WASTE
HYD	HYDRANT	W/	WITH
HW	HOT WATER	W/O	WITHOUT
GCO	GRADE CLEANOUT	WC	WATER CLOSET
GI	GREASE INTERCEPTOR	WCO	WALL CLEANOUT
GT	GREASE TRAP	WH	WALL HYDRANT
GW	GREASE WASTE	WIC	WALK-IN COOLER
KW	KILOWATT		
LAT	LEAVING AIR TEMPERATURE		

MECHANICAL PIPING



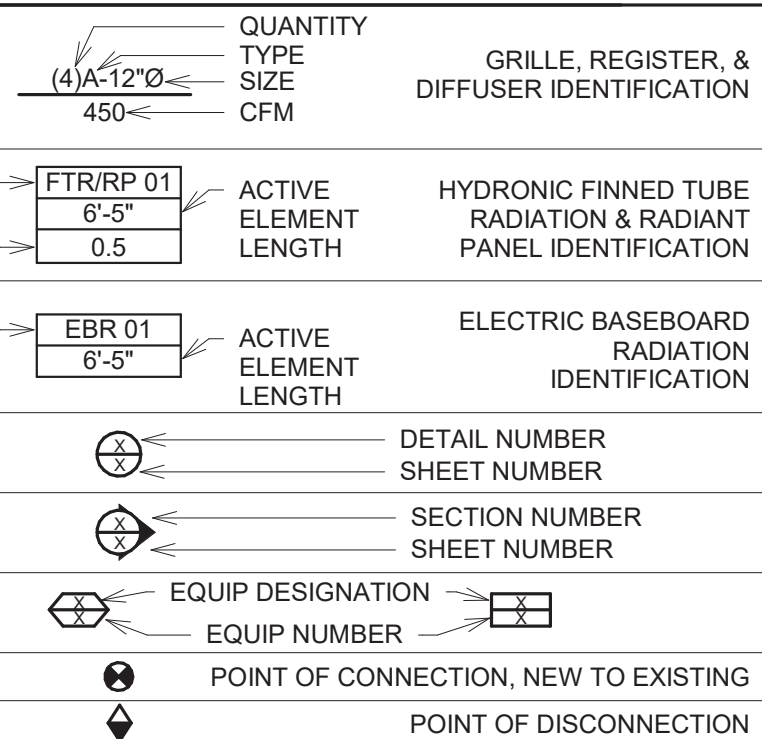
HVAC SYMBOLS LEGEND



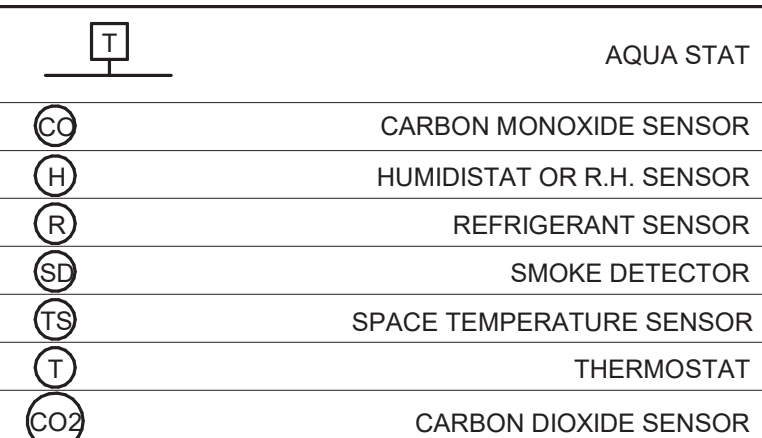
CHIPOTLE ABBREVIATIONS

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
LL	LANDLORD
MSS	TENANT'S MUSIC SYSTEM SUPPLIER
SPS	TENANT'S SODA POP 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

ANNOTATION



CONTROLS



HVAC MATERIAL SCHEDULE

DUCT	APPLICATION	ALLOWABLE MATERIAL
	CONCEALED, GENERAL EXHAUST	RECT. OR ROUND AS SHOWN
	CONCEALED, RETURN	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	CONCEALED, SUPPLY	RECT. OR ROUND AS SHOWN, LINED OR INSULATED
	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)
	EXPOSED GENERAL EXHAUST	RECTANGULAR, NO EXPOSED DUCT-SEALING MASTIC
	EXPOSED RETURN	RECTANGULAR, NO EXPOSED DUCT-SEALING MASTIC
	EXPOSED SUPPLY	RECT. LINED OR ROUND AS SHOWN, NO EXPOSED DUCT-SEALING MASTIC

GENERAL NOTES: HVAC

- 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).
- 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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PROJECT INFORMATION:

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SEAL:

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Digitally signed by Todd Barnes
Date: 2024.09.27 13:18:05 -0500

Signature
Todd A. Barnes
Typed or Printed Name
49039 09/27/2024
License # Date

PROJECT NO.	2022-0498
DRAWN BY	TSSB
CHECKED BY	TAB

ISSUE RECORD:

06.03.2024	CHECK SET
06.10.2024	PERMIT SET
09.27.2024	CONSTRUCTION SET

REVISIONS:

TITLE:
HVAC
SPECIFICATIONS

SHEET NUMBER:
M010

CLIENT:



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PROJECT INFORMATION:

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SIGNATURE:

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Digitally signed by Todd Barnes
Date: 2024.09.27 13:15:54 -0500

Signature
Todd A. Barnes
Typed or Printed Name
49039 09/27/2024
License # Date

PROJECT NO. 2022-0498
DRAWN BY TSB
CHECKED BY TAB

ISSUE RECORD:
06.03.2024 CHECK SET
06.10.2024 PERMIT SET
09.27.2024 CONSTRUCTION SET

REVISIONS:
2 09.27.2024 Construction Set

TITLE:
HVAC PLAN

SHEET NUMBER:

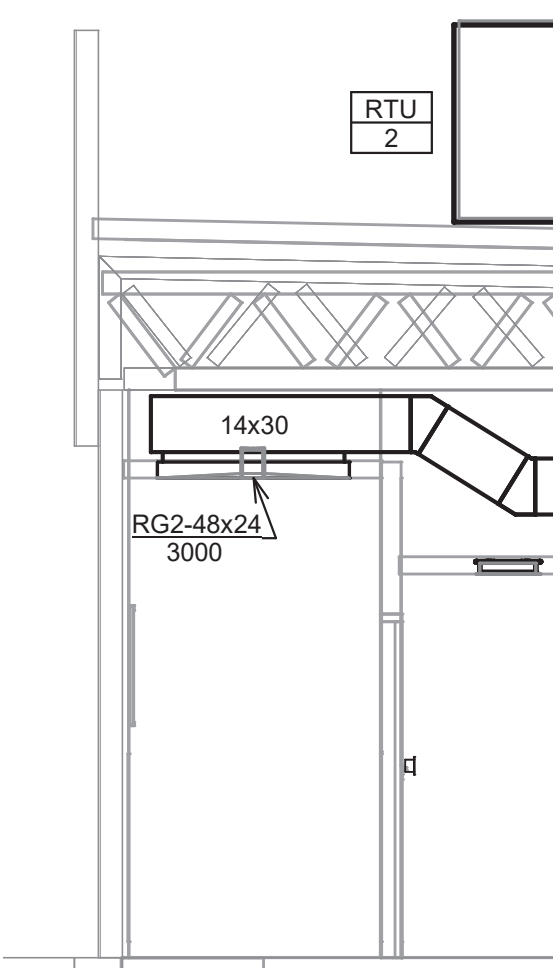
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KEY NOTES:

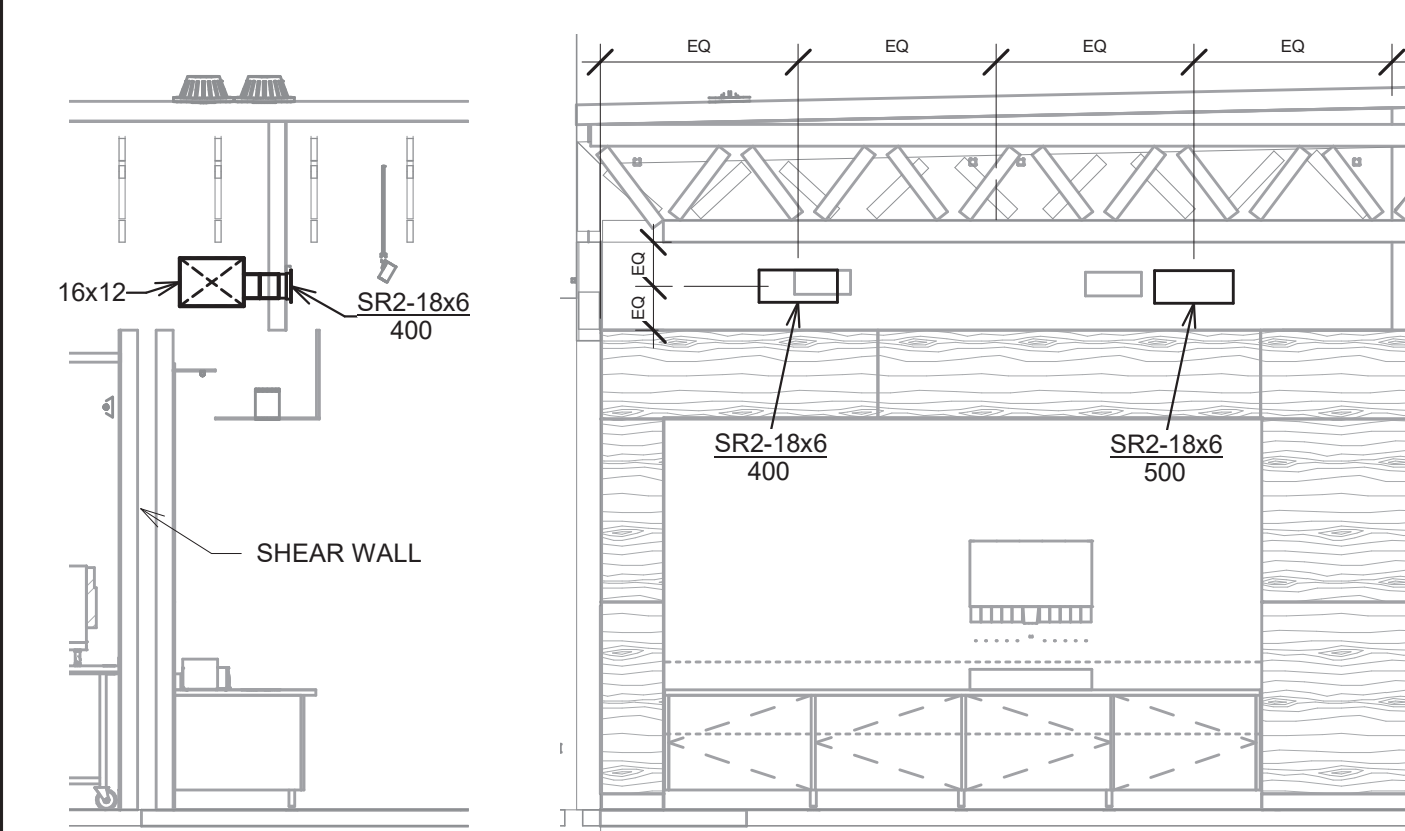
- 1 SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION. TYPICAL.
- 2 PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS BLACK. TYPICAL.
- 3 PENETRATIONS THROUGH SHEAR WALL SHALL BE LIMITED TO 10" DIAMETER (OR A GROUP OF PENETRATIONS ALL CONTAINED WITHIN 10" DIAMETER). IF LARGER PENETRATIONS OR GROUPS OF PENETRATIONS ARE REQUIRED COORDINATE WITH STRUCTURAL ENGINEER FOR APPROPRIATE BRACING. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATION.
- 4 36/12 DUCT UP FOR TRANSITION TO RTU-1 RETURN CONNECTION IN ROOF CURB. RTU-1 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-1 OPERATION.
- 5 36/12 DUCT UP FOR TRANSITION TO RTU-2 RETURN CONNECTION IN ROOF CURB. RTU-2 SHALL HAVE AN INTEGRAL SMOKE DETECTOR MOUNTED IN THE RETURN AIR STREAM. INTERLOCK SMOKE DETECTOR TO RTU-2 OPERATION.
- 6 28/14 DUCT UP FROM BUILDING SUPPLY THROUGH ROOF. TRANSITION TO RTU-1 SUPPLY CONNECTION IN ROOF CURB.
- 7 28/14 DUCT UP FROM BUILDING SUPPLY THROUGH ROOF. TRANSITION TO RTU-2 SUPPLY CONNECTION IN ROOF CURB.
- 8 14/14 DUCT UP THROUGH ROOF. TRANSITION TO MAU-1 SUPPLY CONNECTION IN ROOF CURB.
- 9 18/18 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.
- 10 8/6 DUCT UP THROUGH ROOF TO EF-2.
- 11 28/6 DUCT DOWN TO MAKEUP AIR PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL FOR 3.
- 12 8" DIA. DUCT DOWN TO AC PSP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL. CAP UNUSED DUCT CONNECTIONS. TOTAL SUPPLY AIR TO THE PLENUM SHALL BE 700 CFM.
- 13 INSTALL SINGLE-GANG VERTICAL J-BOX FOR GRIDPOINT THERMOSTATS FURNISHED BY TEMS FOR RTU-1 AND RTU-2 AT THIS LOCATION AT 48" AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 14 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-1 AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 15 INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-2 AT THIS LOCATION 60" AFF DIRECTLY TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 16 INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 17 INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-2 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/E710.
- 18 INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION 66" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.

KEY NOTES: CONT.

- 19 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.
- 20 INSTALL REMOTE CONDENSING UNIT FOR WALK-IN COOLER ON ROOF 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.
- 21 INSTALL REMOTE CONDENSER FOR ICE MACHINE ON ROOF 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. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE CONDENSER. IF REFRIGERANT PIPING TO ICE MAKER IS EXPOSED TO PUBLIC VIEW CONCEAL WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS.
- 22 INSTALL ROOFTOP EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- 23 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.
- 24 PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 1/M700. TYPICAL.
- 25 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.
- 26 INSTALL REME HALO AIR PURIFIER FURNISHED BY TUV IN RTU 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.
- 27 MAINTAIN 10' 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.
- 28 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. TYPICAL OF ALL SR REGISTERS.
- 29 AIR CURTAIN HUNG FROM STRUCTURE ABOVE. INSTALL PER MANUFACTURER INSTRUCTIONS. SEE SCHEDULE ON SHEET M600.
- 30 CEILING UNIT HEATER. INSTALL PER MANUFACTURER INSTRUCTIONS.

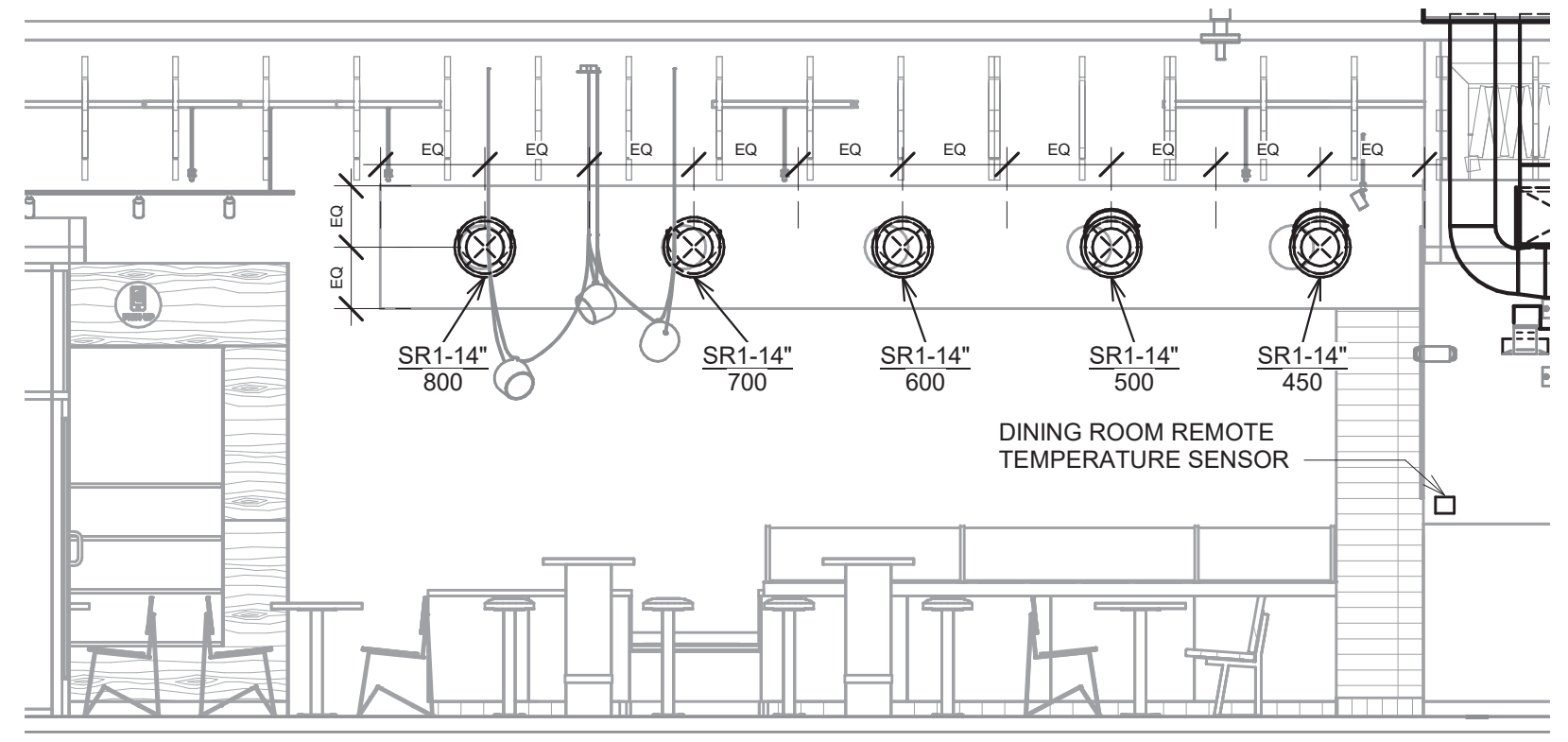


6 HVAC DINING ROOM RETURN SECTION
1/4" = 1'-0"

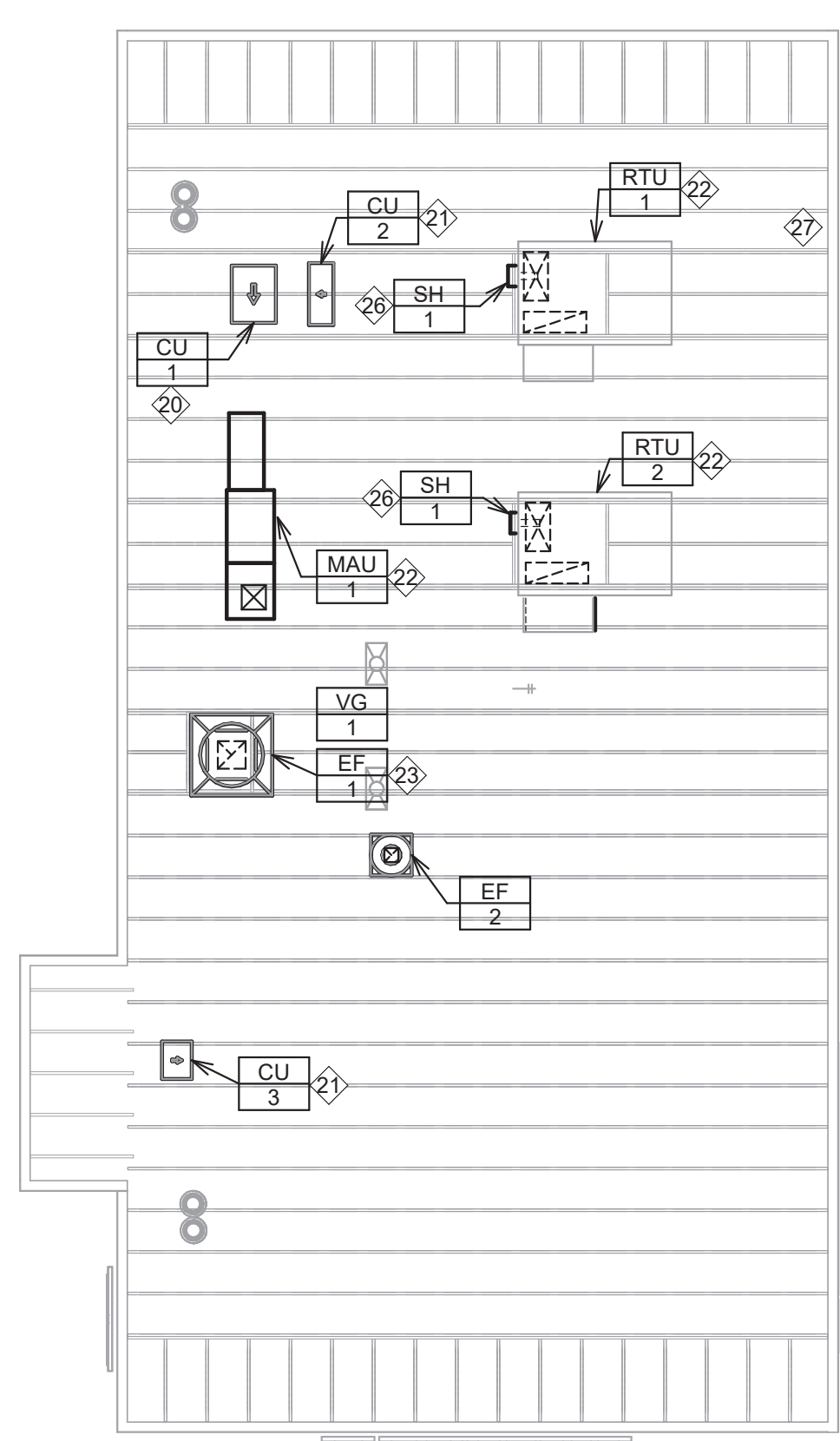


5 HVAC DINING ROOM SECTION
1/4" = 1'-0"

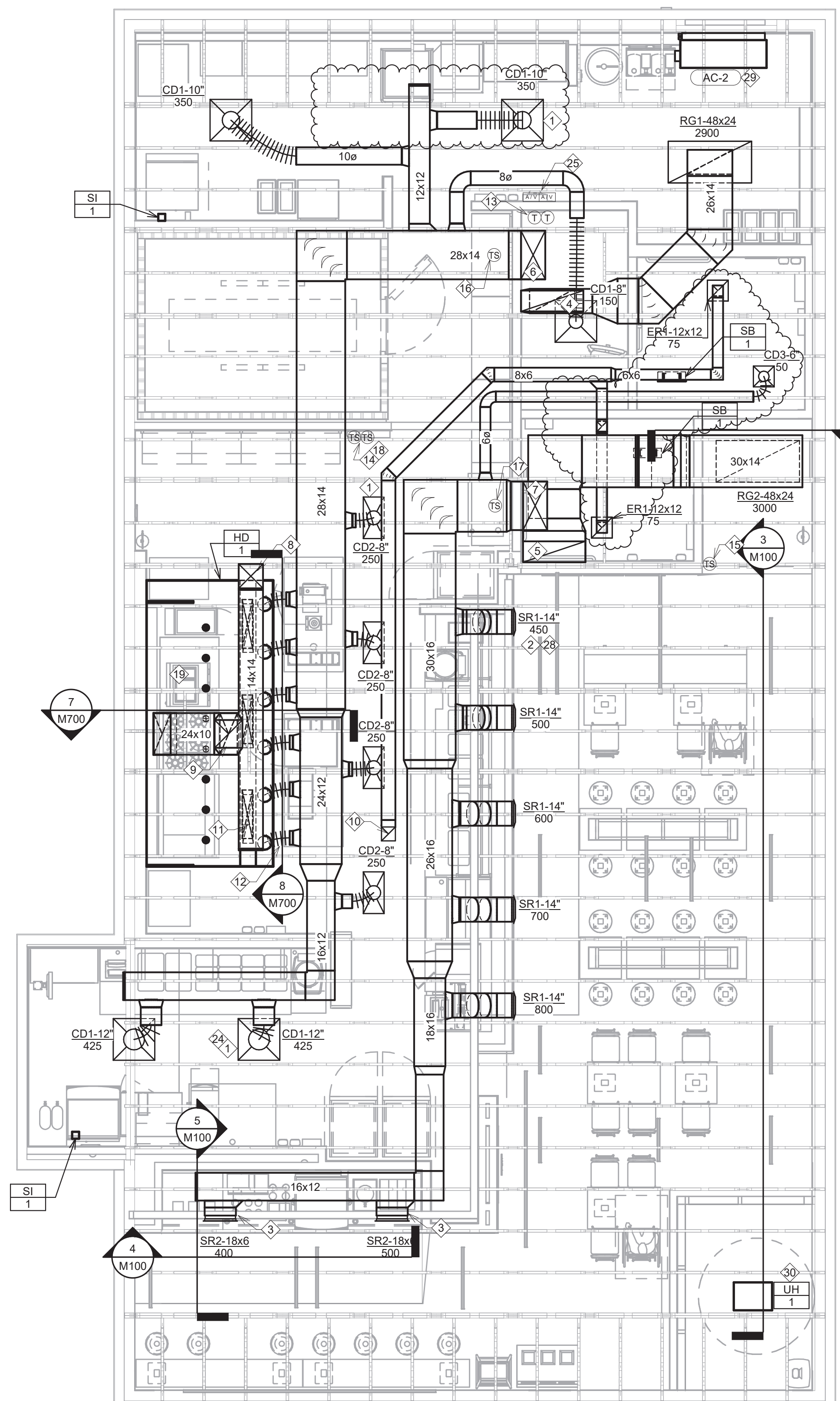
4 HVAC DINING ROOM SECTION
1/4" = 1'-0"



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



2 HVAC ROOF PLAN
1/8" = 1'-0"



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



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CONTROL FUNCTIONS

A. 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.

B. 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. OUTSIDE AIR DAMPERS SHALL BE OPEN CONTINUOUSLY WHEN EITHER IN OCCUPIED MODE OR WHEN THE HOOD SYSTEM IS ON AND SHALL BE CLOSED DURING UNOCCUPIED PERIODS.

C. THE THERMOSTATS SHALL DETERMINE OCCUPIED/UNOCCUPIED STATUS BASED ON THE SCHEDULE IN THE ENERGY MANAGEMENT SYSTEM.

OUTDOOR AIR CALCULATION BASED ON 2018 INTERNATIONAL MECHANICAL CODE

SPACE NAME	SPACE AREA Az (FT2)	OCCUPANCY CLASSIFICATION	ZONE POPULATION Pz(1)	O.A. RATE Rp (CFM/PERSON)	OCCUPANT O.A. Rp x Pz (CFM)	AREA O.A. RATE Ra (CFM/FT2)	AREA O.A. Ra x Az (CFM)	BREATHING ZONE O.A. Vbz=RpPz + RaAz (CFM)	ZONE DISTRIBUTION EFFECTIVENESS (Ez)	ZONE O.A. Voz=Vbz/Ez (CFM)
DINING + ENTRY	770	FOOD AND BEVERAGE: DINING ROOMS	37	7.5	277.5	0.18	138.6	416.1	0.8	520.1
PASSAGE	39	PUBLIC SPACES: CORRIDORS	0	0	0	0.06	2.3	2.3	0.8	2.9
KITCHEN + SCULLERY	995	FOOD AND BEVERAGE: KITCHENS (COOKING)	6	7.5	45	0.12	119.4	164.4	0.8	205.5
OFFICE	49	OFFICES: OFFICE SPACES	1	5	5	0.06	2.9	7.9	0.8	9.9
TOTAL O.A. REQUIRED										738.4
TOTAL O.A. PROVIDED										1500

FOOTNOTES:
 (1) - ZONE POPULATION BASED ON NET OCCUPIABLE FLOOR AREA, OR NUMBER OF FIXED SEATS IN RESTAURANT DINING AREAS

EXHAUST AIR CALCULATION BASED ON 2018 INTERNATIONAL MECHANICAL CODE

SPACE NAME	SPACE AREA (FT2) OR PER WC/URINAL	OCCUPANCY CLASSIFICATION	EXHAUST AIRFLOW RATE (CFM/FT2) OR PER WC/URINAL	REQUIRED EXHAUST (CFM)	PROVIDED EXHAUST (CFM)
KITCHEN	995	FOOD AND BEVERAGE: KITCHENS (COOKING)	0.7	696.5	2550
TOILETS	2	PUBLIC SPACES: TOILET ROOMS (INTERMITTENT EXHAUST)	70	140	150
TOTALS				836.5	2700

AIR CURTAIN SCHEDULE - ELECTRIC

EQUIPMENT TAG	APPLICATION	FURNISHED BY	INSTALLED BY	TYPE	NOZZLE WIDTH (IN)	AIR VELOCITY @ NOZZLE (FPM)	FAN NUMBER OF FANS	MOTOR HP (EACH)	TOTAL CFM	TEMP RISE (F)	CAPACITY (KW)	ELECTRICAL DATA	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
AC 2	REAR SERVICE DOOR	GC	GC	ELECTRIC	42"	5305	1	0.5	1040	N/A	N/A	208/3/60	POWERED AIRE INC	CED-1-42	PROVIDE WITH FACTORY ON/OFF SWITCH, THERMOSTAT, MAGNETIC DOOR SWITCH, AND TIME DELAY RELAY.

SANITIZING EQUIPMENT SCHEDULE

TAG	DESCRIPTION	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN	MECHANICAL NOTES
SB 1	BATHROOM AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	SEE ELECTRICAL SHEETS FOR CONNECTION INFORMATION.
SH 1	HVAC AIR PURIFICATION UNIT	TUV	GC	RGF ENVIRONMENTAL GROUP	SEE DETAIL 6M700 FOR INSTALLATION INFORMATION.
SI 1	ICE MACHINE TREATMENT SYSTEM	TUV	GC	RGF ENVIRONMENTAL GROUP	SEE PLUMBING DRAWINGS FOR INSTALLATION INFORMATION.

FAN SCHEDULE

TAG	DESCRIPTION	AIRFLOW	ESP (IN W.C.)	WEIGHT (LBS)	ELECTRICAL MOTOR POWER (HP)	V / P / H	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN	MECHANICAL NOTES
EF 1	EXHAUST FAN - HOOD	2550 CFM	1.20 IN-WG	400LB	2.0 HP	208/3/60	HS	GC	MANUFACTURER: DU180HFA	DIRECT DRIVE UL762 UPBLAST EXHAUST FAN FURNISHED WITH WEATHERPROOF DISCONNECT AND VENTED ROOF CURB
EF 2	DOWNBLAST RESTROOM EXHAUST FAN	150 CFM	0.60 IN-WG	100LB	0.18 HP	120/1/60	HS	GC	MANUFACTURER: DR12HFA	DIRECT DRIVE DOWNBLAST RESTROOM EXHAUST FAN FURNISHED WITH INTEGRAL DISCONNECT, SPEED CONTROL, BACKDRAFT DAMPER, AND CURB

VIROGUARD SCHEDULE

TAG	DESCRIPTION	DUCT CONNECTION SIZE	FAN	FURNISHED BY	INSTALLED BY	MANUFACTURER
VG 1	VIROGUARD HOOD EXHAUST FAN ROOFTOP CONTAINMENT SYSTEM	16"x16"	CAPTIVE-AIRE DU-190HFA	TDC	GC	ENVIROMATIC

CONDENSING UNIT SCHEDULE

TAG	DESCRIPTION	NUMBER OF COMPRESSORS	CIRCUITS	MCA	FLA	V/PH	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN	MECHANICAL NOTES
CU 1	CONDENSING UNIT - WALK-IN COOLER	1	1	15	9	208/3/60	WCS	GC	MANUFACTURER: HARFORD	FURNISHED WITH WALK-IN COOLER
CU 2	REMOTE CONDENSER - LOW CAPACITY ICE MAKER	1	1			120/1/60	KES	GC	MANUFACTURER: HOSHIZAKI	FURNISHED WITH ICE MAKER
CU 3	REMOTE CONDENSER - SODA MACHINE ICE MAKER	1	1			120/1/60	KES	GC	MANUFACTURER: HOSHIZAKI	FURNISHED WITH ICE MAKER

MAKE UP AIR UNIT SCHEDULE

TAG	DESCRIPTION	AIRFLOW (CFM)	E.S.P. IN W.G.	GAS INPUT (MBH)	GAS OUTPUT (MBH)	EAT DB (F)	WEIGHT (LBS)	FAN HP	V/PH	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN	MECHANICAL NOTES
MAU 1	DIRECT-FIRED MAKEUP AIR UNIT	1300	0.50 IN-WG	225	220	21	850	1	208/3/60	HS	GC	MANUFACTURER: CAPTIVE-AIRE	12.5:1 MAX TURNDOWN, FURNISHED WITH DISCONNECT, ROOF CURB, SCREEN INTAKE, AND WASHABLE ALUMINUM FILTERS

KITCHEN EXHAUST HOOD SCHEDULE

TAG	DESCRIPTION	MAX COOKING TEMP.	AIRFLOW	E.S.P. (IN W.G.)	EXHAUST PLENUM DUCT COLLARS	PERFORATED SUPPLY PLENUMS	AC PLENUM DUCT COLLARS	NO. OF LIGHT FIXTURES	WEIGHT (LBS)	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN	MECHANICAL NOTES	
HD 1	TYPE I CANOPY HOOD WITH PEERFORATED MAU AND AC SUPPLY PLENUMS	600°F	2550 CFM	0.97 IN-WG	NO. 1 WIDTH 10" LENGTH 2'-0"	NO. 3 WIDTH 6" LENGTH 2'-4"	NO. 6 DIAMETER 8"	8	1150	HS	GC	MANUFACTURER: CAPTIVE-AIRE	MODEL NUMBER: 5424 ND-2-ACSPSP-F	MATL: 18 GA. TYPE 430 SS. FURNISHED WITH VERTICAL END PANELS, 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.

ROOFTOP UNIT SCHEDULE

EQUIPMENT TAG	DESCRIPTION	NOMINAL TONS	EER (IEER)	TOTAL CFM	OA CFM	ESP (IN W.C.)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT DB (F)	EAT WB (F)	AMBIENT TEMPERATURE (F)	NUMBER OF COMPRESSORS & CIRCUITS	GAS INPUT (MBH)	GAS OUTPUT (MBH)	EAT (F)	REFRIGERANT TYPE AND CHARGE	WEIGHT (LBS)	ELECTRICAL MOCP	MCA	ELEC	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN	MECHANICAL NOTES	
RTU 1	ROOF TOP UNIT - KITCHEN	8.5	11.2 (15.0)	3400	500	0.5	100.8	78.2	80	67	95	2 & 1	180/224	146/181	55	R410A & 21.0LB	1162	50	44	208/3/60	HES	GC	MANUFACTURER: CARRIER	MODEL NUMBER: 48FCFN0903M5	FURNISHED WITH COMP. ENTHALPY ECON., BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, M.O.D., MERV-8 FILTERS, CURB, HAIL GUARD, TOOLLESS HINGED ACCESS PANELS, DISCONNECT, & UNIT-MOUNTED CONVENIENCE RECEPTACLE
RTU 2	ROOF TOP UNIT - DINING	10	11.0 (15.0)	4000	1000	0.5	125.8	96.2	80	67	95	2 & 1	200/250	164/205	55	R410A & 23.2LB	1162	60	51	208/3/60	HES	GC	MANUFACTURER: CARRIER	MODEL NUMBER: 48FCFN12D3M5	FURNISHED WITH COMP. ENTHALPY ECON., BAROMETRIC RELIEF, RET. SMOKE DETECTOR W/ REMOTE KEYED ANNUNCIATOR/RESET, M.O.D., MERV-8 FILTERS, CURB, HAIL GUARD, TOOLLESS HINGED ACCESS PANELS, DISCONNECT, & UNIT-MOUNTED CONVENIENCE RECEPTACLE

UNIT HEATER SCHEDULE

EQUIPMENT TAG	APPLICATION	MOUNTING	CAPACITY (KW)	ELECTRICAL DATA	FURNISHED BY	INSTALLED BY	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
UH 1	CEILING-MOUNTED UNIT HEATER	CEILING	3.0	208/1/60	GC	GC	INDEECO	931U04000V	PROVIDE WITH CONTROLS REQUIRED TO MEET MN ENERGY CODE.

AIR BALANCE SCHEDULE

TAG	SUPPLY FLOW (CFM)	RETURN FLOW (CFM)	EXHAUST FLOW (CFM)	SUBTOTAL (CFM)
EF-1	0	0	2550	-2550
EF-2	0	0	150	-150
MAU-1	1300	0	0	1300
RTU-1	3400	2900	0	500
RTU-2	4000	3000	0	1000
NET PRESSURIZATION (CFM)				100

AIR TERMINAL SCHEDULE

TAG	DESCRIPTION	FACE SIZE	MATERIAL	FINISH	MOUNTING	FURNISHED BY	INSTALLED BY	BASIS FOR DESIGN	MECHANICAL NOTES	
CD1	PERFORATED CEILING DIFFUSER	24" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	MANUFACTURER: NAILOR	MODEL: 4320A TYPE L	PROVIDE WITH INTEGRAL OBD
CD2	PERFORATED CEILING DIFFUSER	24" X 12"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	MANUFACTURER: NAILOR	MODEL: 4320A TYPE L	PROVIDE WITH INTEGRAL OBD, REMOVE 4-WAY DEFLECTORS
CD3	PERFORATED CEILING DIFFUSER	24" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	MANUFACTURER: NAILOR	MODEL: 4320A TYPE S	PROVIDE WITH INTEGRAL OBD
ER1	PERFORATED CEILING EXHAUST	12" X 12"	ALUMINUM	WHITE	SURFACE MOUNT	GC	GC	MANUFACTURER: NAILOR	MODEL: 4330R TYPE S	PROVIDE WITH INTEGRAL OBD
RG1	PERFORATED CEILING RETURN	48" X 24"	ALUMINUM	WHITE	LAY-IN CEILING	GC	GC	MANUFACTURER: NAILOR	MODEL: 4330R TYPE L	-
RG2	PERFORATED CEILING RETURN	48" X 24"	ALUMINUM	WHITE	SURFACE MOUNT	GC	GC	MANUFACTURER: NAILOR	MODEL: 4330R TYPE S	-
SR1	ADJUSTABLE TURBO NOZZLE	SEE NECK SIZE	ALUMINUM	WHITE	WALL	GC	GC	MANUFACTURER: AIR CONCEPTS	MODEL: ANR-14	PROVIDE WITH CONCEALED MOUNTING AND FACE-ACCESSIBLE OBD
SR2	DOUBLE DEFLECTION SUPPLY REGISTER	SEE NECK SIZE	ALUMINUM	WHITE	WALL	GC	GC	MANUFACTURER: NAILOR	MODEL: 51DH	PROVIDE WITH INTEGRAL OBD



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PROJECT INFORMATION:
 STORE NO.: 5052
 "MONTICELLO"
 779 CHELSEA ROAD EAST
 MONTICELLO, MN 55362

SEAL:
 I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
 Digitally signed by Todd Barnes
 Date: 2024.09.27 13:15:05 -0500
 Signature
 Todd A. Barnes
 Typed or Printed Name
 49039 09/27/2024
 License # Date

PROJECT NO. 2022-0498
 DRAWN BY TSB
 CHECKED BY TAB

ISSUE RECORD:
 06.03.2024 CHECK SET
 06.10.2024 PERMIT SET
 09.27.2024 CONSTRUCTION SET

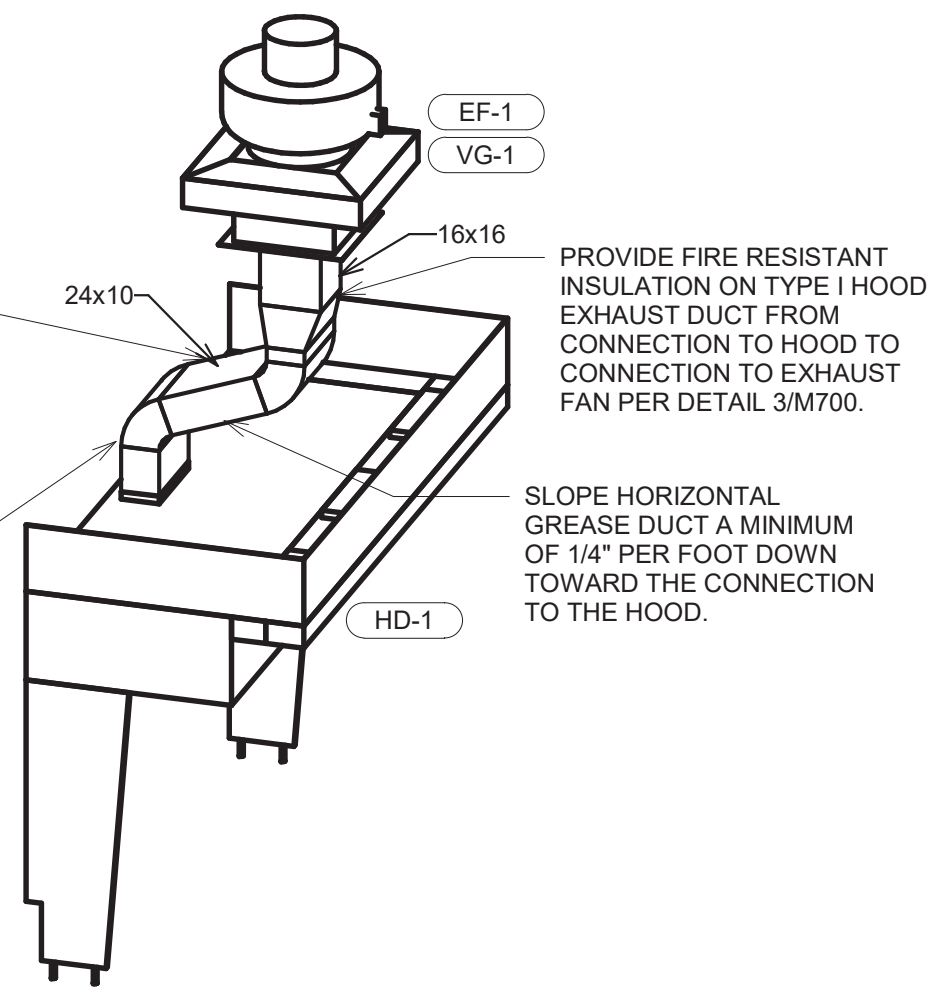
REVISIONS:
 2 09.27.2024 Construction Set

TITLE:
 HVAC SCHEDULES

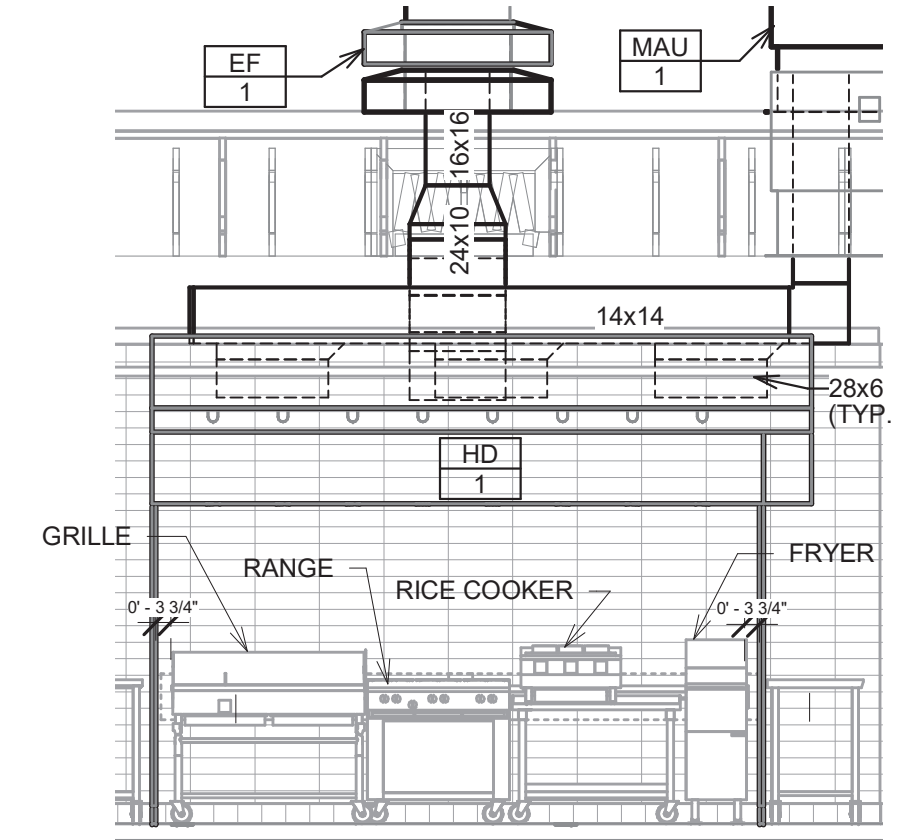
SHEET NUMBER:
 M600

GREASE DUCT CLEANOUTS SHALL BE UL-LISTED DUCTMATE PREINSULATED CLEANOUT DOORS MODEL D128ULWSBI FOR DUCTS AT LEAST 17" TALL AND DW128ULWSBI FOR DUCTS LESS THAN 17" TALL. CLEANOUTS SHALL BE FURNISHED BY TENANT. COORDINATE NUMBER AND SIZE REQUIRED WITH ENVIROMATIC. INSTALL AS SHOWN IN THE HVAC FLOOR PLAN.

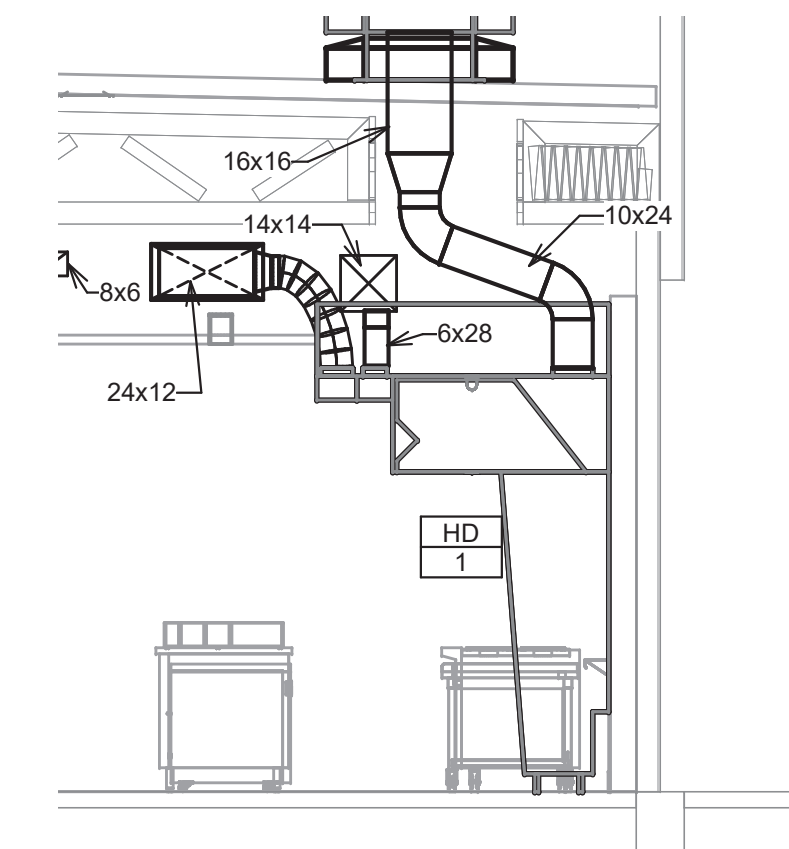
PROVIDE RADIUS ELBOWS WITH AN INSIDE RADIUS OF 0.5 X THE DUCT DIMENSION AT ALL CHANGES OF DIRECTION IN THE TYPE I HOOD EXHAUST DUCT.



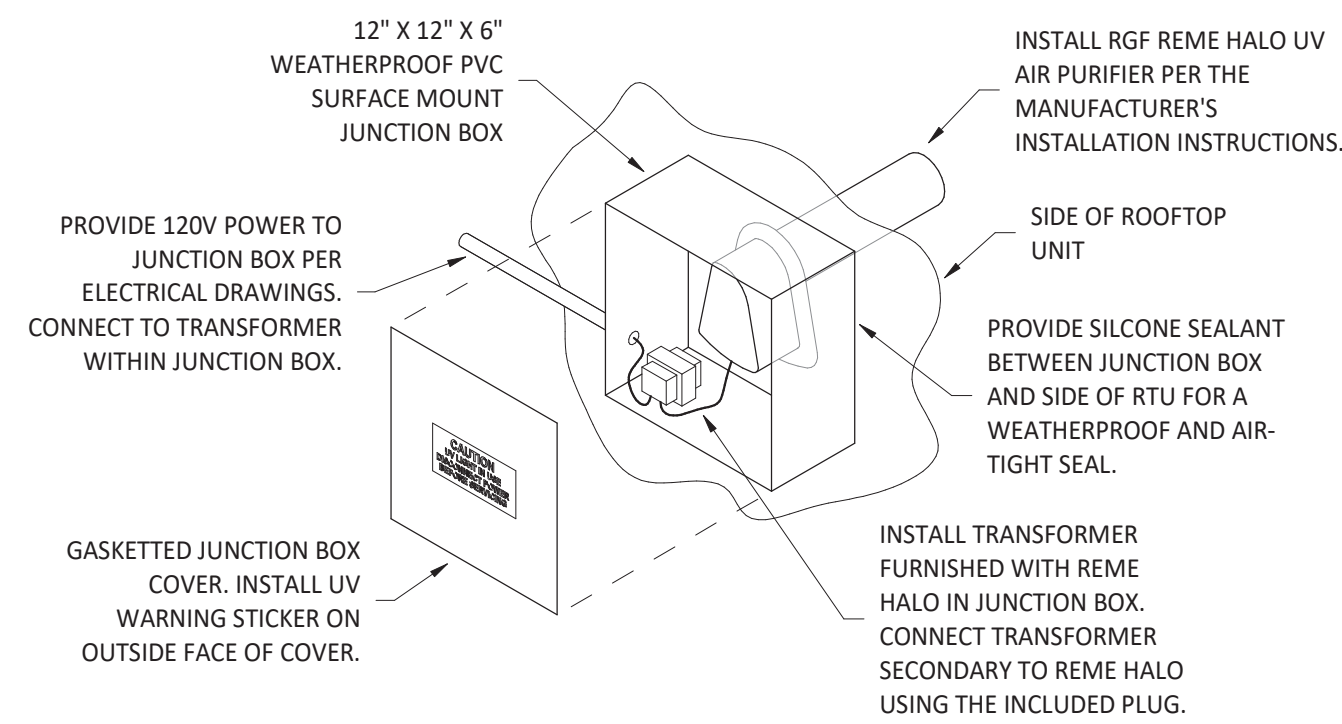
9 Riser - Grease exhaust



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



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

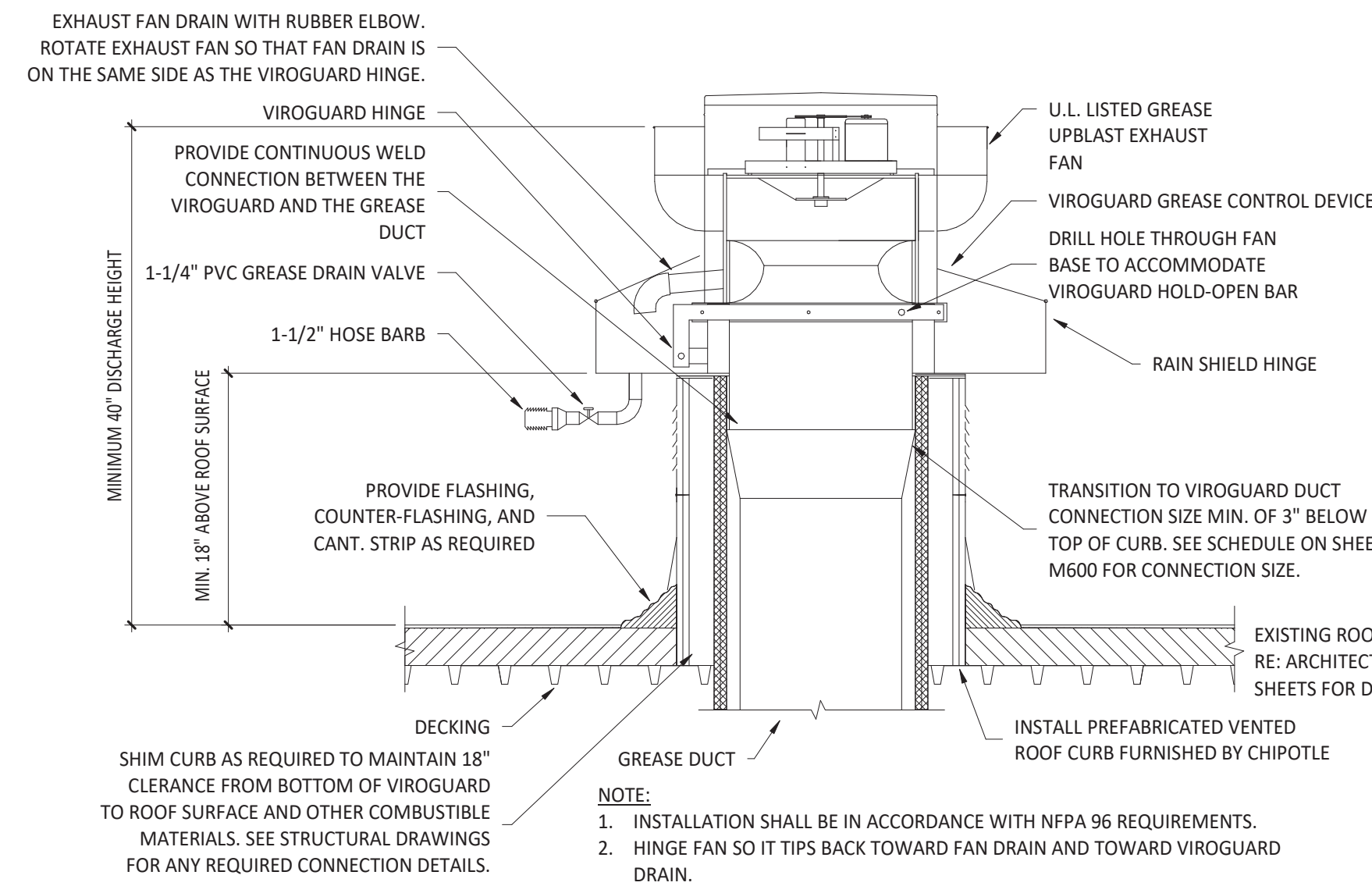


INSTALLATION LOCATION

INSTALL AIR PURIFIER WITH JUNCTION BOX ON OUTSIDE FACE OF ROOFTOP UNIT AND WITH UV LAMP TUBE EXTENDING INTO THE INTERIOR OF THE ROOFTOP UNIT. FIELD VERIFY EXACT LOCATION TO AVOID DAMAGING, TOUCHING, OR INTERFERING WITH ANY RTU INTERIOR COMPONENTS. INSTALLATION LOCATION SHALL BE AS FOLLOWS:

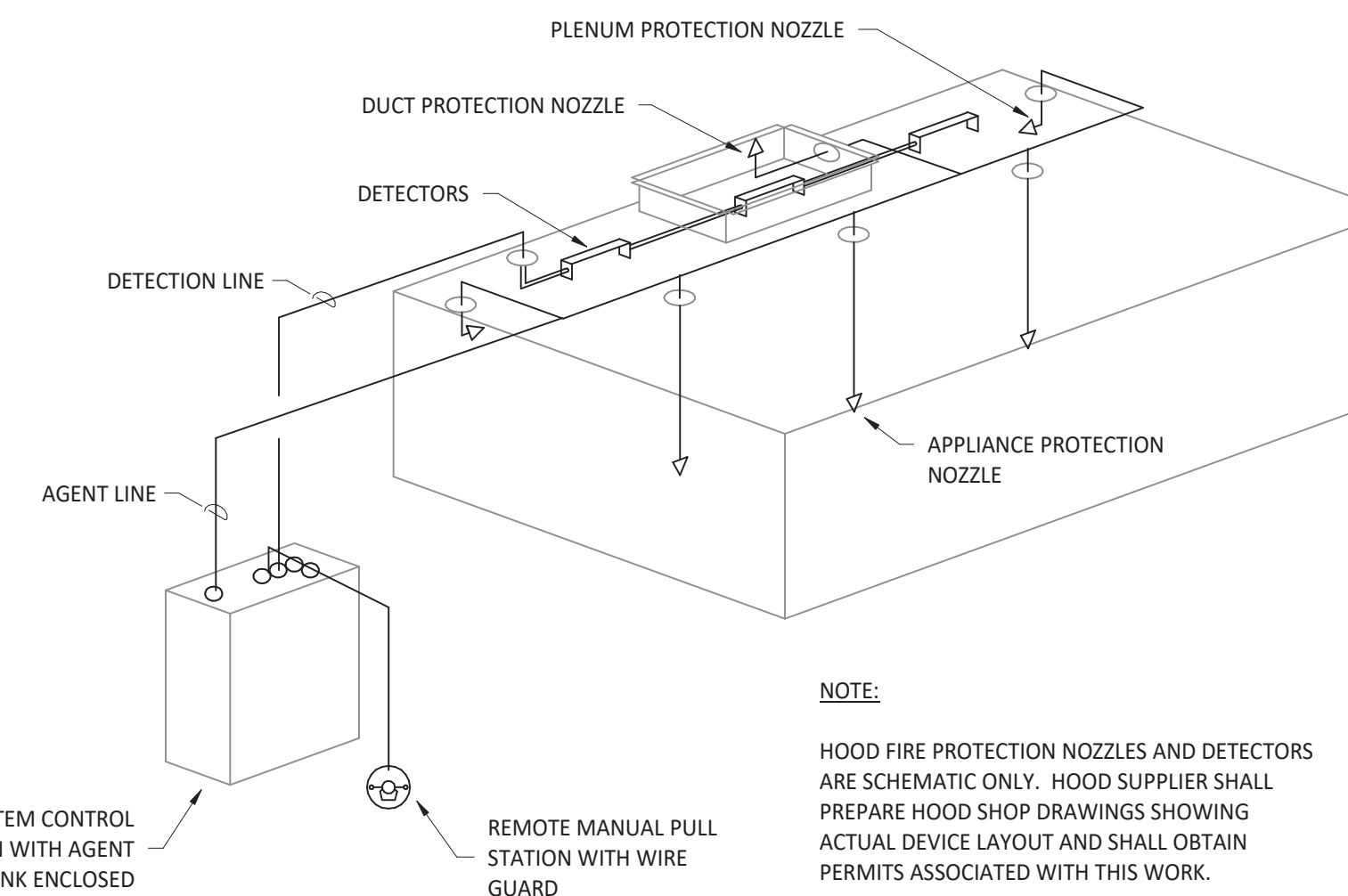
- TRANE:** INSTALL INTO THE SUPPLY AIR STREAM THROUGH THE REMOVABLE PANEL COVERING THE HORIZONTAL DISCHARGE SUPPLY AIR OPENING.
- YORK:** INSTALL INTO THE SUPPLY AIR PLENUM FROM THE BACK SIDE OF THE UNIT JUST ABOVE THE HEAT EXCHANGER.

6 UV AIR PURIFIER INSTALLATION
NO SCALE



- NOTE:**
- INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 96 REQUIREMENTS.
 - HINGE FAN SO IT TIPS BACK TOWARD FAN DRAIN AND TOWARD VIROGUARD DRAIN.

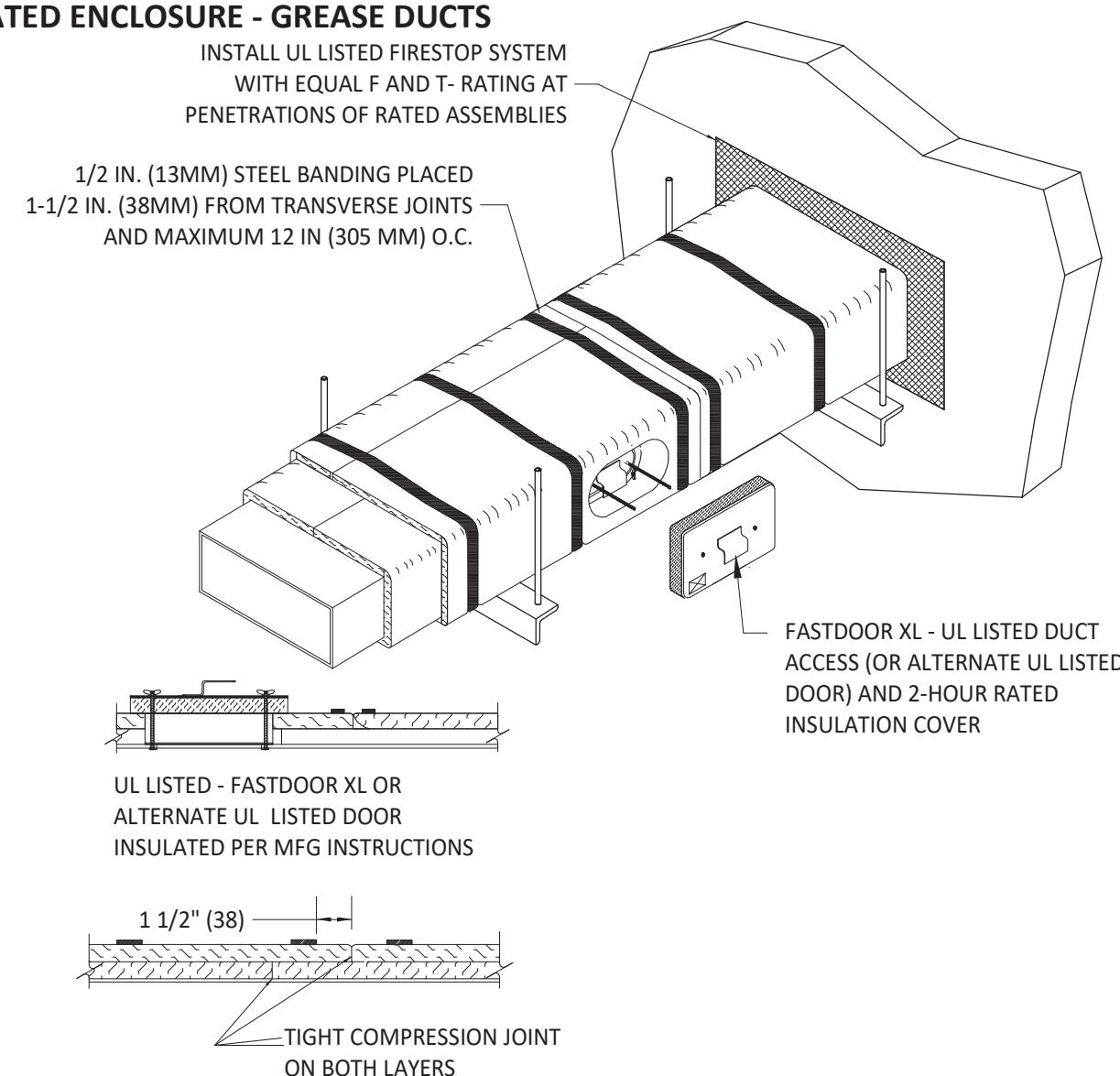
5 GREASE EXHAUST FAN
NO SCALE



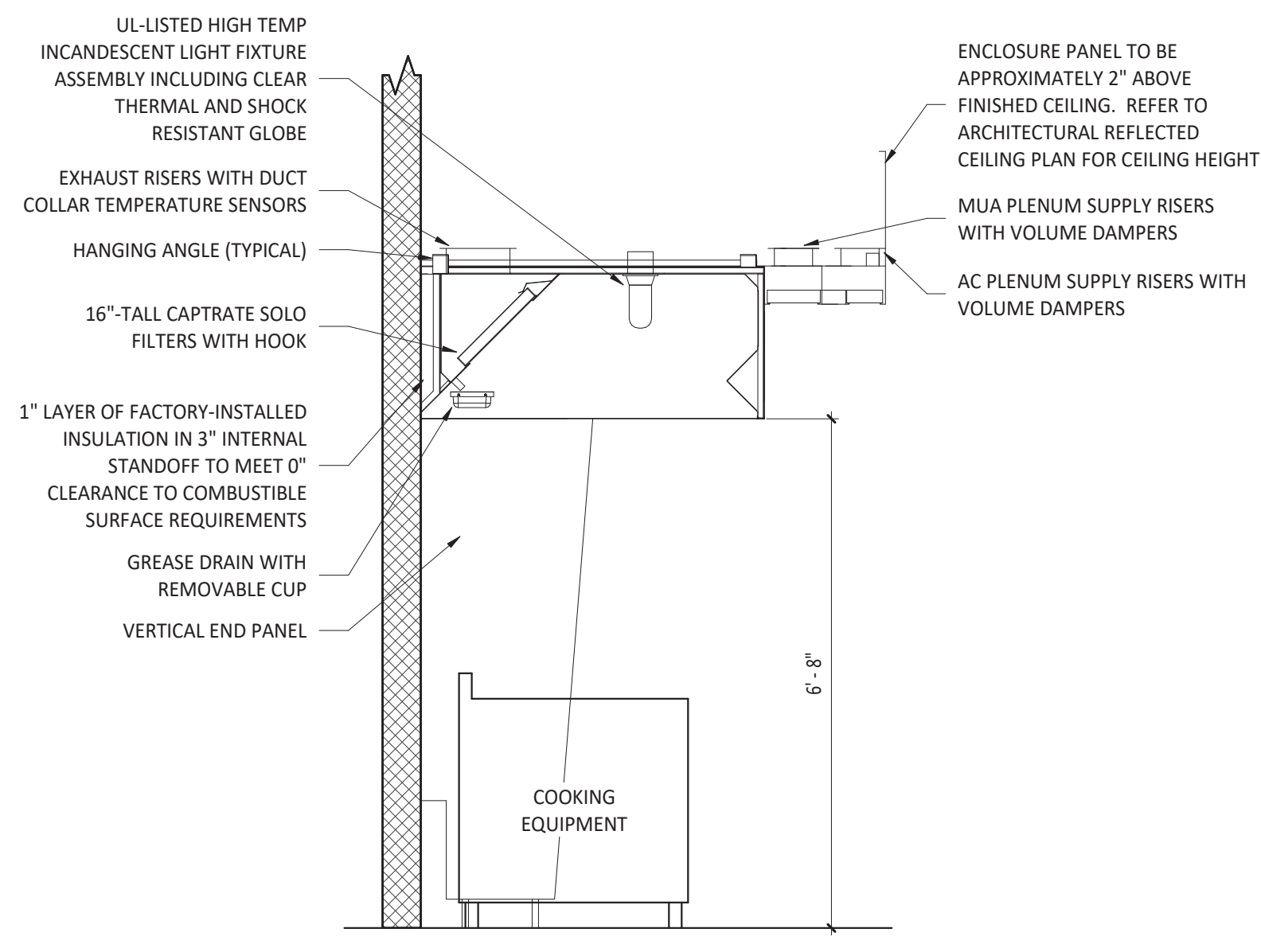
NOTE:
HOOD FIRE PROTECTION NOZZLES AND DETECTORS ARE SCHEMATIC ONLY. HOOD SUPPLIER SHALL PREPARE HOOD SHOP DRAWINGS SHOWING ACTUAL DEVICE LAYOUT AND SHALL OBTAIN PERMITS ASSOCIATED WITH THIS WORK.

4 FIRE SUPPRESSION SYSTEM SCHEMATIC
NO SCALE

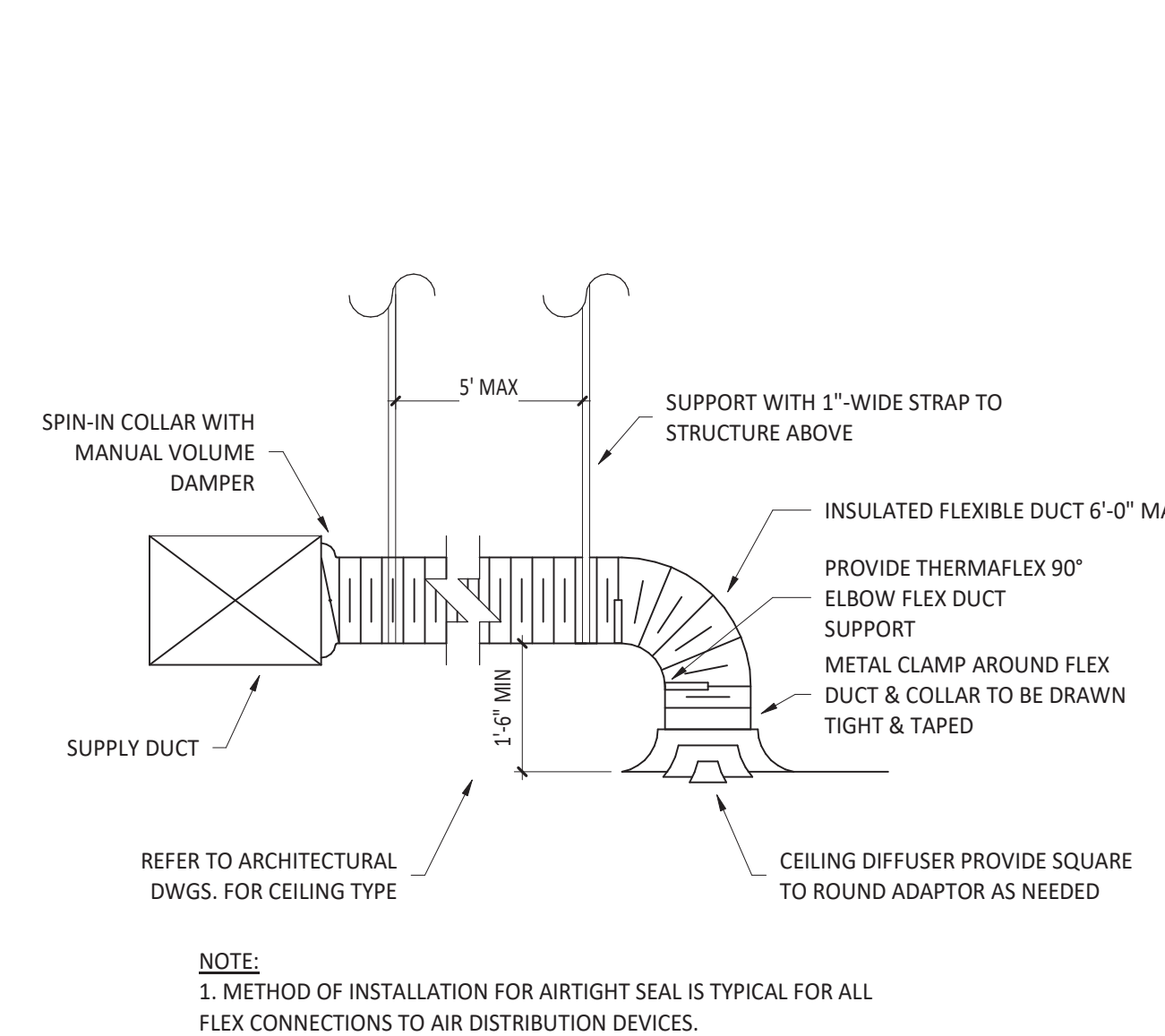
- FIRE RATED ENCLOSURE - GREASE DUCTS**
- THERMAL CERAMICS FIREMASTER FASTWRAP XL IS TESTED TO ASTM E2336 AND UL LISTED PER HNK1-G18 TO PROVIDE ZERO CLEARANCE TO COMBUSTIBLES AND TO PROVIDE A 1- OR 2-HOUR ENCLOSURE. THROUGH PENETRATIONS FIRESTOP SYSTEMS ARE TESTED IN ACCORDANCE WITH ASTM E 814 (UL 1479). ICC CODE EVALUATION PER REPORT UL ER 14229-01.
 - COMPLIANT TO THE FOLLOWING CODES:
NFPA 96
INTERNATIONAL MECHANICAL CODES
UNIFORM MECHANICAL CODE
CALIFORNIA MECHANICAL CODE
 - INSULATION APPLIED IN TWO LAYERS WITH TIGHT COMPRESSION JOINT ON BOTH LAYERS AT ALL JOINTS.
 - MINIMUM 16 GAUGE CARBON STEEL (OR 18 GAGE STAINLESS STEEL) RECTANGULAR OR ROUND GREASE EXHAUST DUCT
 - INSTALL UL LISTED AND LIQUID TIGHT THERMAL CERAMICS FASTDOOR XL ACCESS DOORS, OR ALTERNATE DOOR UL LISTED PER UL1978, AT ALL CHANGES IN DIRECTION AND AT MINIMUM EVERY 20 FT ON HORIZONTAL RUNS.
 - SUPPORT HANGER SYSTEMS DO NOT NEED TO BE WRAPPED PROVIDED THE HANGER RODS ARE MINIMUM OF 3/8 IN. DIAMETER AND SUPPORTS ARE MINIMUM 2 X 2 X 1/8 IN. STEEL ANGLE OR SMACNA EQUIVALENT SUPPORT SYSTEM.
 - THERMAL CERAMICS DUCT WRAP SHALL BE INSTALLED DIRECTLY ONTO THE DUCT AND APPLIED FROM THE HOOD CONNECTION TO THE CONNECTION TO THE FAN.
 - THERMAL CERAMICS DUCT ENCLOSURE SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND UL LISTINGS.



3 FIREMASTER DUCT WRAP - UL HNK1-G18
NO SCALE



2 HOOD SECTION VIEW
NO SCALE



NOTE:
1. METHOD OF INSTALLATION FOR AIRTIGHT SEAL IS TYPICAL FOR ALL FLEX CONNECTIONS TO AIR DISTRIBUTION DEVICES.

1 DIFFUSER CONNECTION
NO SCALE

CLIENT:



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PROJECT INFORMATION:

STORE NO.: 5052
"MONTICELLO"
779 CHELSEA ROAD EAST
MONTICELLO, MN 55362

SEAL:

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Digitally signed by Todd A. Barnes
Date: 2024.09.27 13:53:56 CDT
Todd A. Barnes
Signature
Todd A. Barnes
Typed or Printed Name
49039 09/27/2024
License # Date

PROJECT NO. 2022-0498
DRAWN BY TSB
CHECKED BY TAB

ISSUE RECORD:
06.03.2024 CHECK SET
06.10.2024 PERMIT SET
09.27.2024 CONSTRUCTION SET

REVISIONS:

TITLE:
HVAC DETAILS

SHEET NUMBER:

M700