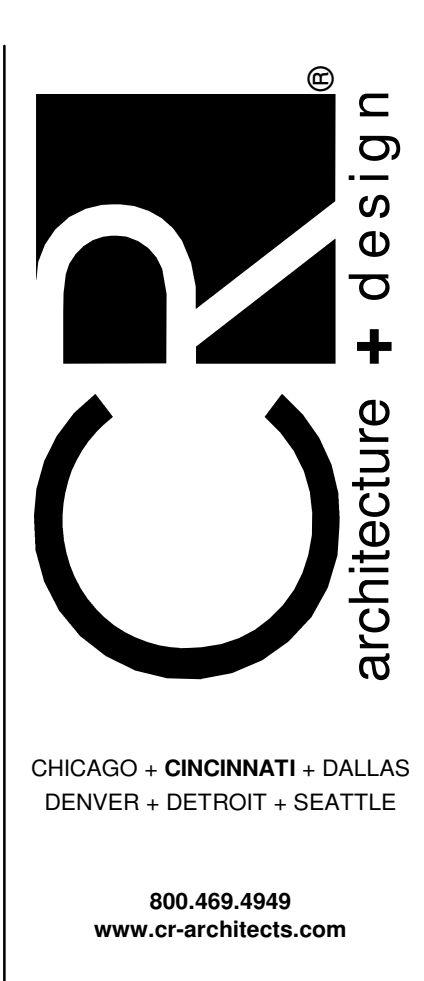


MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
DRAWING SET APPEARANCE	
<p>TO BETTER COMMUNICATE SCOPE TO PERMIT AGENCIES AND CONTRACTORS, EACH DRAWING IN THIS DRAWING SET HAS BEEN CREATED IN BOTH "COLOR" AND "BLACK AND WHITE". THERE EXISTS A COLOR LAYER WITHIN EACH DRAWING WHERE VISIBILITY IS CONTROLLED THROUGH THE PDF LAYER MANAGER. THIS LAYER VISIBILITY CAN BE TOGGLED DISPLAYING EITHER "COLOR" OR "BLACK AND WHITE". TO MAINTAIN SCOPE BASED SHADING WHEN PRINTING TO PAPER, BLACK AND WHITE NEEDS TO BE VISIBLE. FOR FURTHER INSTRUCTIONS, REFER TO CONTRACTOR RESOURCES ON OUR WEBSITE AND DOWNLOAD "DRAWING COLOR INSTRUCTIONS" WWW.KUHENGERS.COM - CONTRACTOR RESOURCES (RIGHT HAND SIDE OF PAGE).</p>	
PIPING LINE TYPES	
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	CONDENSATE DRAIN
	SUPPLY MAIN OR BRANCH
	RETURN MAIN OR BRANCH
MECHANICAL AIR DEVICES	
	SUPPLY REGISTER
	RETURN REGISTER
	EXHAUST REGISTER
	RETURN GRILLE
	CEILING DIFFUSER
	2'x2' SQUARE CEILING DIFFUSER WITH 10" NECK
	ROUND CEILING DIFFUSER
MECHANICAL DUCTWORK	
	SUPPLY DUCT WITH ELBOW TURNED UP
	SUPPLY DUCT WITH ELBOW TURNED DOWN
	RETURN DUCT WITH ELBOW TURNED UP
	RETURN DUCT WITH ELBOW TURNED DOWN
	EXHAUST DUCT WITH ELBOW TURNED UP
	EXHAUST DUCT WITH ELBOW TURNED DOWN
	SUPPLY DUCT
	RETURN DUCT
	EXHAUST DUCT
	FLEXIBLE DUCTWORK CONNECTION
	BRANCH TAKEOFF
	REDUCER, CONCENTRIC
	REDUCER, NONCONCENTRIC
MECHANICAL DUCTWORK ACCESSORIES	
	DUCT WITH MANUAL VOLUME DAMPER
	ROUND ELBOW WITH TURNING VANES
	ELBOW WITH TURNING VANES
	DUCT MOUNTED SMOKE DETECTOR (HARD WIRE INTERLOCK TO FAN MOTOR BY E.C.) FURNISHED BY E.C., INSTALLED BY M.C.
MECHANICAL STATS & SENSORS	
	TEMPERATURE SENSOR
	LOW VOLTAGE THERMOSTAT
	REVERSE ACTING THERMOSTAT
	HUMIDITY SENSOR
	CARBON DIOXIDE SENSOR
MECHANICAL MISCELLANEOUS	
	ANSUL PULL STATION

- GENERAL NOTES**
- REFER TO HEATING, VENTILATING & AIR CONDITIONING SPECIFICATIONS AND GENERAL CONDITIONS FOR ADDITIONAL REQUIREMENTS.
 - ALL DIFFUSERS AND CEILING GRILLES SHALL BE COORDINATED WITH LAY-IN CEILING GRID AND PROVIDED BY MECHANICAL CONTRACTOR. REFER TO DETAILS 230713.00.21 AND 230713.00.04 ON SHEET MS.2 FOR INSTALLATION INFORMATION.
 - PROVIDE BALANCING DAMPERS FOR EACH DIFFUSER, REGISTER AND GRILLE AT POINTS ON SUPPLY, RETURN, AND EXHAUST SYSTEMS WHERE BRANCHES LEAD OFF FROM LARGER DUCTS OR IN DIFFUSERS AS REQUIRED FOR AIR BALANCING. INSTALL AT A MINIMUM OF TWO DUCT WIDTHS FROM BRANCH TAKEOFF WHERE PRACTICAL. REFER TO DETAIL 230500.00.01 ON SHEET MS.2 FOR ADDITIONAL INFORMATION.
 - ALL NEW EXHAUST FANS AND RTUS SPECIFIED ARE INCLUDED IN KROGER'S DIRECT BUY PROGRAM AND SHALL BE FURNISHED BY KROGER AND INSTALLED BY HVAC CONTRACTOR, UNLESS OTHERWISE NOTED.
 - ALL HVAC DUCT SMOKE DETECTORS ARE TO BE PROVIDED BY HVAC CONTRACTOR.
 - PROVIDE BACKDRAFT DAMPERS FOR NON-KITCHEN EXHAUST FANS.
 - SUPPLY AND RETURN DUCTWORK FROM ROOFTOP UNITS TO BE INTERNALLY INSULATED A MINIMUM OF TEN FEET FOR SOUND ATTENUATION.
 - PROVIDE TURNING VANES IN ALL RECTANGULAR MITERED ELBOWS.
 - ALL DIFFUSERS ARE 4-WAY UNLESS OTHERWISE INDICATED. RUNOUTS TO CEILING DIFFUSERS ARE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE.
 - SUPPLY, RETURN AND OUTSIDE AIR DUCT TO BE EXTERNALLY INSULATED WHERE LOCATED ABOVE CEILING SPACE. REFER TO SPECIFICATION 230700.

DESIGN AMBIENT TEMP'S:
**SUMMER: 102 DEG DRY BULB
 75 DEG WET BULB
 WINTER: 22 DEG DRY BULB**



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 FT. THOMAS, KENTUCKY 41075
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 502.442.8028 FAX

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10/17/2023	BID/PERMIT ISSUE

PROJECT TITLE
**KING SOOPERS
 KS154**

HWY 52 & COLORADO BLVD
 FREDERICK, CO 80643

COMMISSION NO. **522401**

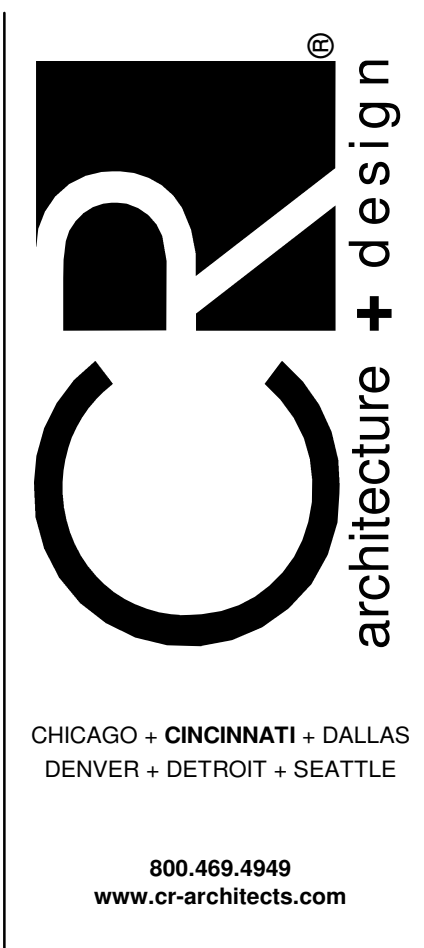
ISSUE DATE **10/17/23**

SHEET TITLE
**MECHANICAL
 ABBREVIATIONS,
 SYMBOLS, AND
 GENERAL NOTES**

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MO.1

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7/08/2024	BULLETIN NO. 5

PROJECT TITLE
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HWY 52 & COLORADO BLVD
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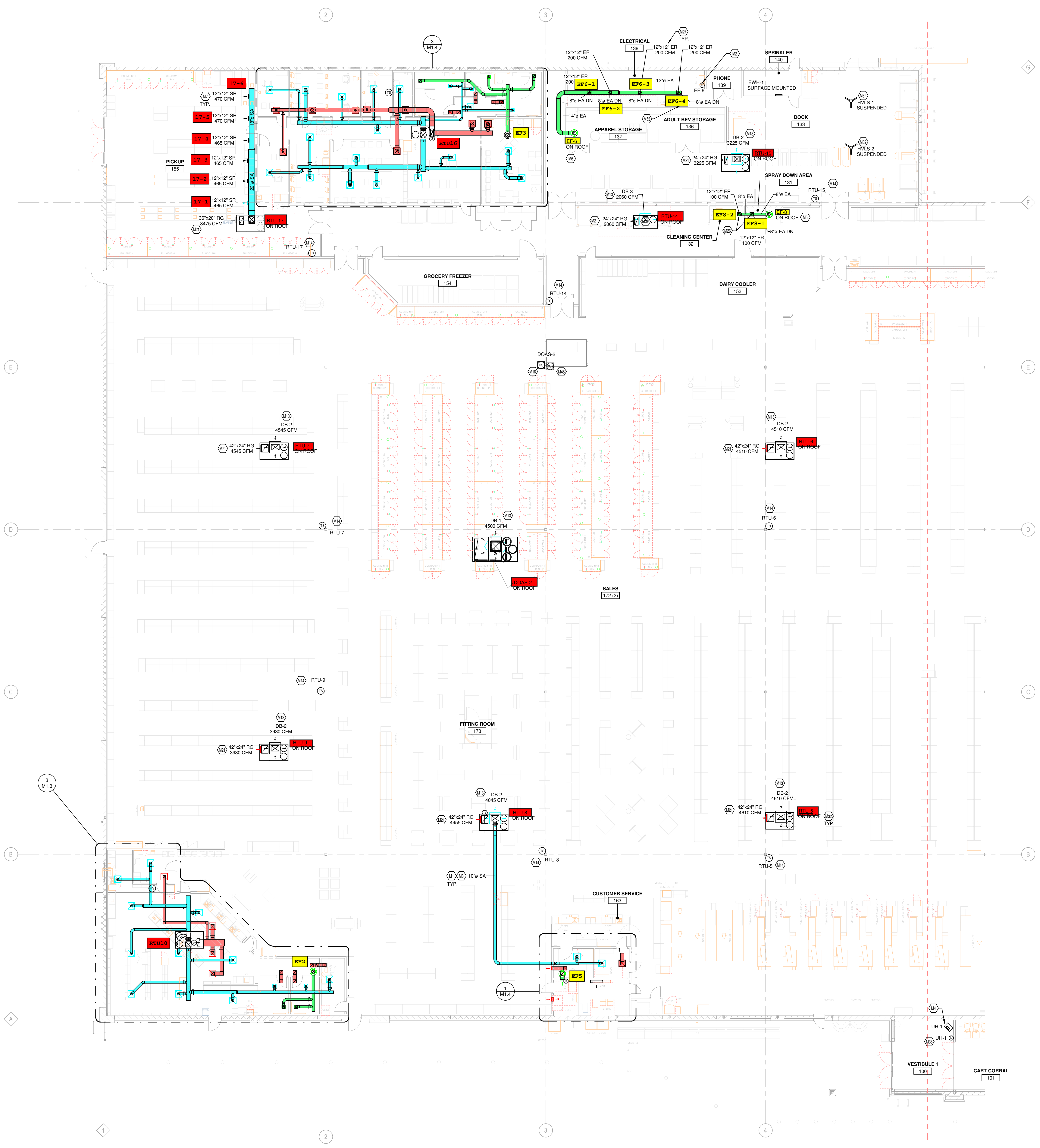
COMMISSION NO. 522401
 ISSUE DATE 10/17/23
 SHEET TITLE
HVAC FLOOR PLAN - LEFT

SHEET NO.
M1.1a
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KEYED NOTES

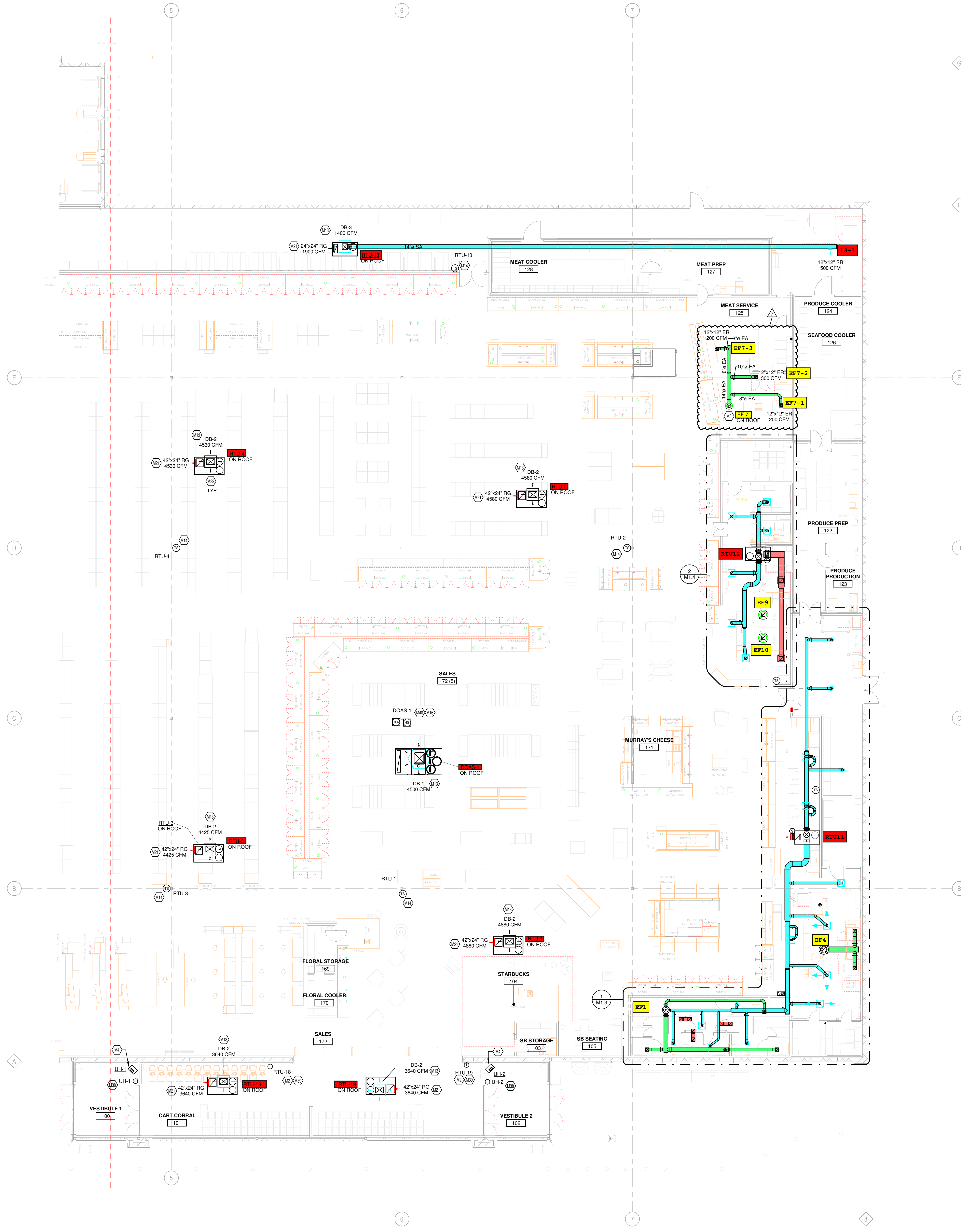
- M1 CONTRACTOR TO REFER TO HSD-3 FOR DUCTWORK INSTALLATION INFORMATION.
- M2 THERMOSTAT TO BE MOUNTED AT 4'0" AFF. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
- M4 SUSPENDED ELECTRIC HEATER USING THREADED ROD TO UNISTRUIT CHANNEL OR APPROVED EQUAL. MOUNT 18" AFF TO BOTTOM OF UNIT. VERIFY LOCATION AND REQUIREMENTS TO OWNER PRIOR TO INSTALLATION. REFER TO 238289.00-01 ON M5.2 AND M6.1 FOR MORE INFORMATION.
- M5 DUCT UP TO OPENING THROUGH ROOF CAPPED WITH CURB AND KROGER FURNISHED EXHAUST FAN.
- M6 DUCT UP TO OPENING THRU ROOF. CONTRACTOR TO PROVIDE REVERSE ACTING THERMOSTAT FOR FAN. FAN TO ENERGIZE WHEN ROOM REACHES 80 DEG F.
- M7 SIDEWALL DIFFUSERS TO BE INSTALLED AT 45 DEGREES DOWNWARD. REFER TO 233713.00-02 ON M5.2 FOR INSTALLATION INFORMATION.
- M8 DUCTWORK TO BE HELD TIGHT TO STRUCTURE.
- M13 DROP BOX DIFFUSER SYSTEM. REFER TO DIFFUSER SCHEDULE FOR AES MODEL NUMBERS AND QUANTITIES. REFER TO FLOOR PLANS FOR THROW DIRECTIONS AND AIRFLOW. REFER TO DETAIL HSD-1 FOR INSTALLATION.
- M14 TEMPERATURE SENSOR FOR RTU FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL.
- M16 HUMIDITY/TEMPERATURE SENSOR FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURER. INSTALL PROBE AT 7'-8" AFF ON COLUMN. REFER TO EM SERIES OF DRAWINGS FOR FURTHER INFORMATION.
- M21 RETURN AIR GRILLE IN SIDE OF DUCT DROP. TITUS 50F WITH 1 INCH OPENINGS OR APPROVED EQUAL.
- M26 MOUNT GRILLE/REGISTER 8" AFF.
- M27 MOUNT GRILLE/REGISTER 10" AFF.
- M28 ROOFTOP UNIT FURNISHED BY KROGER AND INSTALLED BY MECHANICAL CONTRACTOR. BALANCE TO SCHEDULED AIRFLOW. REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION. REFER TO HSD-10 FOR INFORMATION REGARDING BRACING FOR WIND RESISTANCE.
- M38 THERMOSTAT TO BE CONFIGURED WITH AUTOMATIC HEATING SHUTOFF ACTIVATING WHEN OUTDOOR AIR TEMPERATURE REACHES 45 DEG F.
- M48 PROVIDE CO2 SENSOR WHERE SHOWN. ROUTE CONTROL WIRING TO BUILDING CONTROL PANEL.
- M53 LOCATION OF EMS PANEL.
- M62 FAN PROVIDED BY CONTRACTOR AND CONTROLLED BY LOCAL SWITCH. MOUNT FAN PER MANUFACTURER'S RECOMMENDATIONS.

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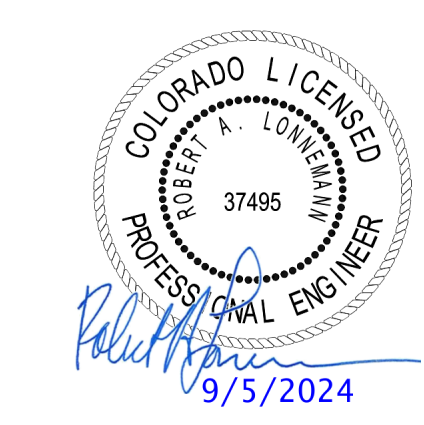
2 HVAC FLOOR PLAN - LEFT
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KEYED NOTES

- M2 THERMOSTAT TO BE MOUNTED AT 4" AFF. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
- M4 SUSPENDED ELECTRIC HEATER USING THREADED ROD TO UNISTRUT CHANNEL OR APPROVED EQUAL. MOUNT 16" AFF TO BOTTOM OF UNIT. VERIFY LOCATION AND REQUIREMENTS TO OWNER PRIOR TO INSTALLATION. REFER TO 238239.00-01 ON M5.2 AND M6.1 FOR MORE INFORMATION.
- M5 DUCT UP TO OPENING THROUGH ROOF CAPPED WITH CURB AND KROGER FURNISHED EXHAUST FAN.
- M13 DROP BOX DIFFUSER SYSTEM. REFER TO DIFFUSER SCHEDULE FOR AES MODEL NUMBERS AND QUANTITIES. REFER TO FLOOR PLANS FOR THROW DIRECTIONS AND AIRFLOW. REFER TO DETAIL HSD-1 FOR INSTALLATION.
- M14 TEMPERATURE SENSOR FOR RTU FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL.
- M16 HUMIDITY/TEMPERATURE SENSOR FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURER. INSTALL PROBE AT 7' 6" AFF ON COLUMN. REFER TO EM SERIES OF DRAWINGS FOR FURTHER INFORMATION.
- M21 RETURN AIR GRILLE IN SIDE OF DUCT DROP. TITUS 50F WITH 1 INCH OPENINGS OR APPROVED EQUAL.
- M32 ROOFTOP UNIT FURNISHED BY KROGER AND INSTALLED BY MECHANICAL CONTRACTOR. BALANCE TO SCHEDULED AIRFLOW. REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION. REFER TO HSD-10 FOR INFORMATION REGARDING BRACING FOR WIND RESISTANCE.
- M38 THERMOSTAT TO BE CONFIGURED WITH AUTOMATIC HEATING SHUTOFF ACTIVATING WHEN OUTDOOR AIR TEMPERATURE REACHES 45 DEG F.
- M39 THERMOSTAT TO BE CONFIGURED WITH AUTOMATIC CONTROLS TO LIMIT HEATING TO A 60 DEG F MAXIMUM AND COOLING TO AN 85 DEG F MINIMUM.
- M48 PROVIDE CO2 SENSOR WHERE SHOWN. ROUTE CONTROL WIRING TO BUILDING CONTROL PANEL.



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FT. THOMAS, KENTUCKY 41075
859.442.8058 FAX



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KING SOOPERS
KS154

HWY 52 & COLORADO BLVD
FREDERICK, CO 80643

COMMISSION NO. 522401
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1 HVAC FLOOR PLAN - RIGHT
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KEYED NOTES

M3 REFER TO SHEETS M3.1.8 AND M3.1.9 FOR DETAILED INFORMATION REGARDING DOAS UNITS.

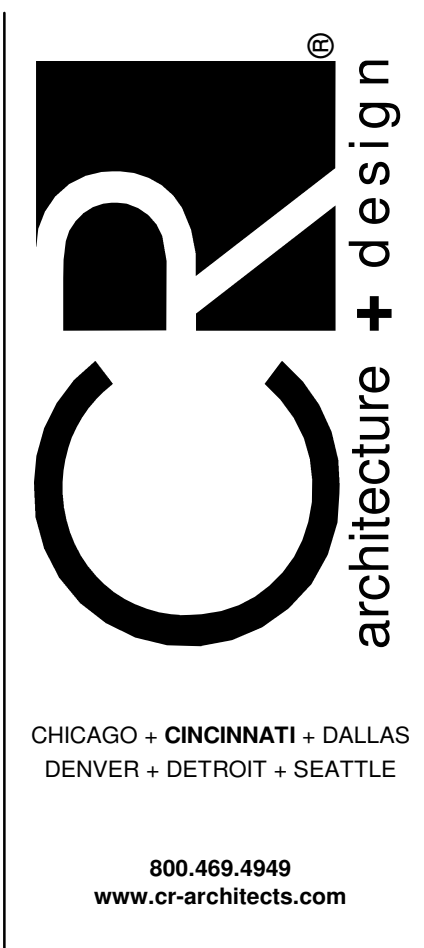
M20 ROOF HATCH

M23 ROOF HATCH
KROGER FURNISHED SPLIT SYSTEM PROVIDED WITH LOW AMBIENT KIT AND WIND BAFFLES. MOUNT PER MANUFACTURER'S RECOMMENDATIONS. INDOOR UNIT (SI) TO BE MOUNTED A MINIMUM OF 7'-0" AFF TO BOTTOM OF UNIT. ROUTE REFRIGERANT LINES THROUGH ROOF TO CONDENSING UNIT PER MANUFACTURER'S GUIDELINES. ROUTE INSULATED 3/4" CONDENSATE TO HUB DRAIN IN AREA. COORDINATE ORDERING OF REFRIGERANT LINES WITH OWNER'S PROJECT MANAGER. REFERENCE HSD-11 FOR ADDITIONAL INFORMATION.

M29 INSTALL FLUES AND EXHAUST FANS A MINIMUM OF 10 FEET FROM OUTSIDE AIR INTAKE OF ROOFTOP UNITS.

M32 ROOFTOP UNIT FURNISHED BY KROGER AND INSTALLED BY MECHANICAL CONTRACTOR. BALANCE TO SCHEDULED AIRFLOW. REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION. REFER TO HSD-10 FOR INFORMATION REGARDING BRACING FOR WIND RESISTANCE.

M42 ROOF MOUNTED REFRIGERATION CONDENSER SHOWN FOR COORDINATION PURPOSES.



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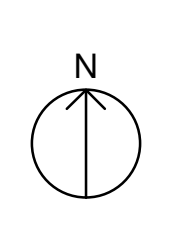


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1 HVAC ROOF PLAN - LEFT
3/32" = 1'-0"



PROJECT TITLE
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COMMISSION NO. 522401
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PREMISE ALARM - RIGHT

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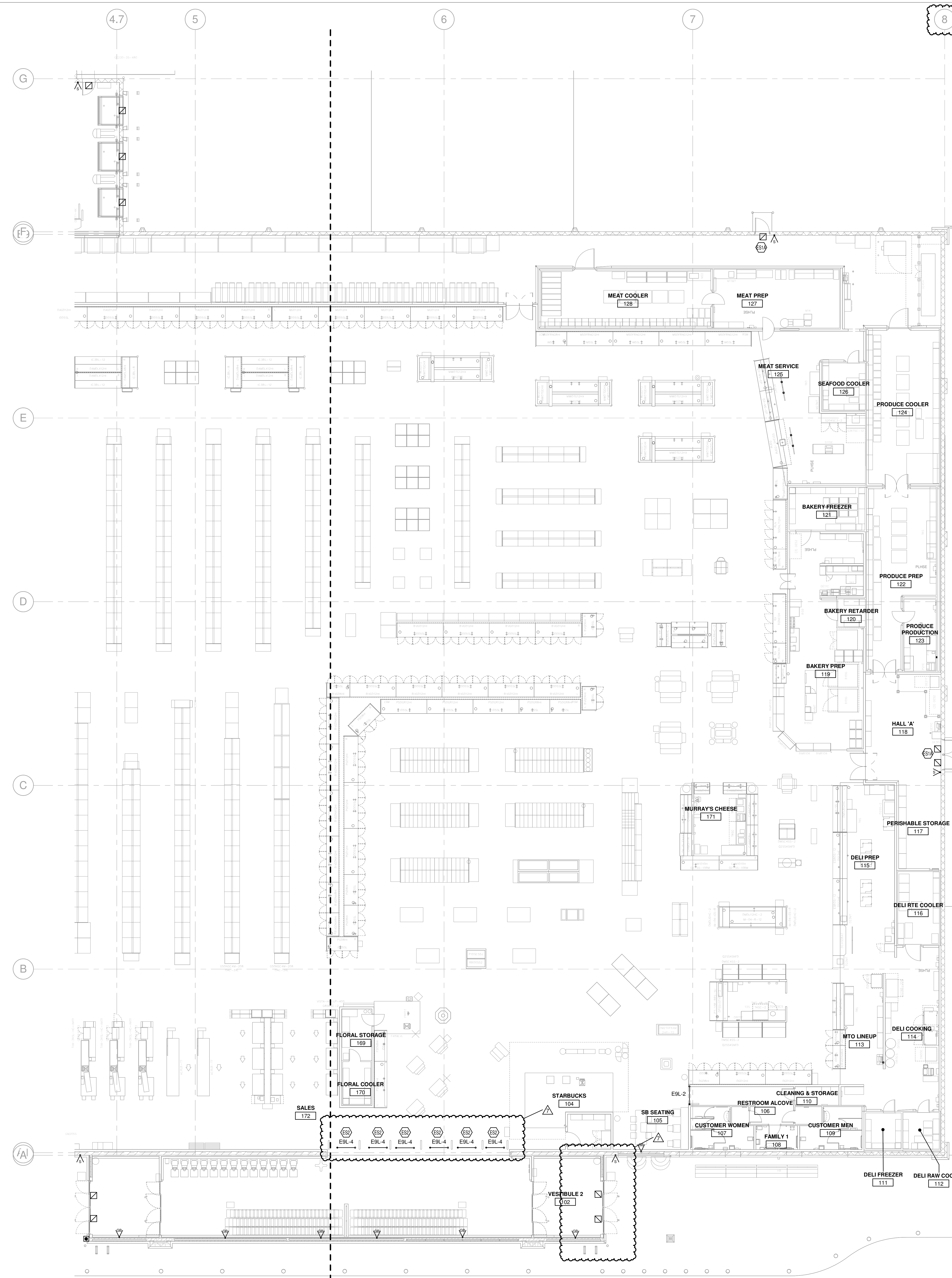
KEYED NOTES

ES1A PROVIDE JUNCTION BOX FOR PREMISE ALARM AT ALARMED EXIT DOOR AS INDICATED ON DETAIL ESD-22 ON ES-SERIES DRAWINGS. PROVIDE (1) 1/2" EMPTY CONDUIT FROM JUNCTION BOX UP TO 4" X 4" JUNCTION BOX IN JOIST SPACE. COORDINATE LOCATION WITH DECOR ELEMENTS AT ALL DOORS IN SALES & VESTIBULE AREAS. PROVIDE CONNECTION TO AUTOMATICALLY UNLATCH THE LOCK INSTANTLY IN THE EVENT OF A FIRE EMERGENCY OR LOSS OF POWER. SEE FIRE ALARM AND SECURITY SPEC SECTION FOR MORE DETAIL. REFER TO DETAILS 12, ESD-22 (ES.1.2), 12_ESD-22A.

ES2 PROVIDE (1) 1" EMPTY CONDUIT BENEATH FLOOR SLAB FOR INTERCONNECTION OF THEIR DETECTION SECURITY EQUIPMENT COMPONENTS. PROVIDE (1) 3/4" EMPTY CONDUIT FROM FIRST (WALL) LOCATION (LOCAL CONTROLLER UP TO JOIST SPACE. PROVIDE (1) 1/2" EMPTY CONDUIT FROM WALL MOUNTED CONTROLLER TO LOCAL FLUSH WALL MOUNTED CONTROL INTERFACE KEYPAD. PROVIDE (1) 3/4" CONDUIT FROM CONTROLLER TO FIRST PEDESTAL AND (1) 1/2" EMPTY CONDUIT FROM FIRST PEDESTAL TO SECOND PEDESTAL. INSTALL CONDUITS BELOW SLAB WHERE APPLICABLE FOR CONCREMENT. LOCAL CONTROLLER SHALL BE INSTALLED ON VESTIBULE SIDE OF WALL (ABOVE CEILING AT LOCATIONS WITH ACCESSIBLE ACOUSTICAL TILE CEILINGS), OR AT 68" AT LOCATIONS WHERE THERE IS NO FINISHED CEILING. PROVIDE FLUSH WALL MOUNTED BACK BOXES FOR ALL APPLICABLE EQUIPMENT OUTLETS. FIELD COORDINATE ALL LOCATIONS AND SPECIFICS. SEE DETAIL ESD-52 AND ESD-52A ON ES-SERIES DRAWINGS. COORDINATE WORK WITH DECOR ELEMENTS AT ALL DOORS IN SALES & VESTIBULE AREAS.

TECHNOLOGY LEGEND

SYMBOL	DESCRIPTION
SECURITY SYSTEMS	
	CEILING MOTION SENSOR
	WALL INTRUSION DETECTION SYSTEM SIREN
	DOOR STATUS SENSOR
ABBREVIATIONS	
(R)	RELOCATE FIXTURE, EQUIPMENT OR DEVICE
42"	DISTANCE ABOVE FINISHED FLOOR / GRADE / PAVEMENT
ACC	ADMINISTRATIVE CONTROL CONSOLE
ADA	AMERICANS WITH DISABILITIES ACT
AFP	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AVR	AUDIO VISUAL SYSTEM EQUIPMENT RACK
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
C	CONDUIT
CH	COUNTER HEIGHT OR SPECIAL HEIGHT DEVICE
DCL	DOUBLE FACE CLOCK
DS	DIGITAL STORAGE
DVR	DIGITAL VIDEO RECORDER
EC	ELECTRICAL CONTRACTOR
EF	ENTRANCE FACILITY
ELEV	ELEVATOR
EMR	ELECTRONIC MEDICAL RECORDS
EQR	EQUIPMENT RACK
ER	EQUIPMENT ROOM
ETR	EXISTING TO REMAIN
EX	EXISTING
FACP	FIRE ALARM CONTROL PANEL
OFI	OWNER FURNISHED CONTRACTOR INSTALLED
OPB	OWNER PROVIDED BUSBAR
PED	PEDESTAL
PLY	PLYWOOD BACKBOARD
PM	PATIENT MONITOR
PS	PATIENT STATUS
R	ROUGH-IN ONLY
SBB	SECONDARY GROUNDING BUSBAR
SCL	SINGLE FACE CLOCK
SEC	SECURITY SYSTEM EQUIPMENT RACK
SER	SECURITY SYSTEM EQUIPMENT RACK
SME	STRUCTURED MEDIA ENCLOSURE
SSR	SOUND SYSTEM EQUIPMENT RACK
TAAC	TO ABOVE ACCESSIBLE CEILING
TAHC	TO ABOVE ACCESSIBLE HALLWAY CEILING
TR	TELECOMMUNICATIONS ROOM
WP	WEATHERPROOF
WG	WIRE GUARD
PLAN-VIEW LINE TYPES	
WORK SHOWN BOLD/CONTINUOUS INDICATES NEW WORK (UNLESS INDICATED OTHERWISE)	
WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE (UNLESS INDICATED OTHERWISE)	

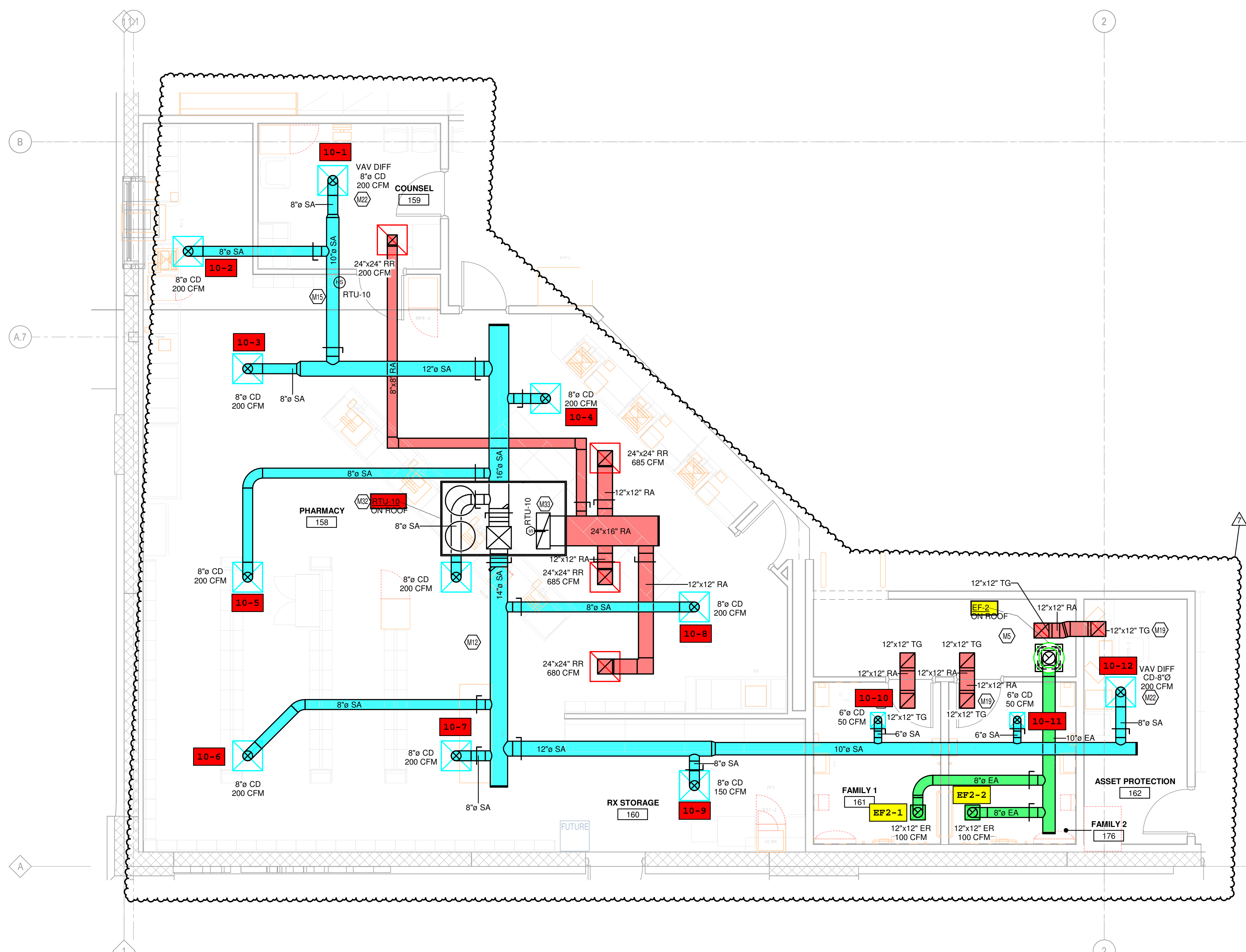


1 PREMISE ALARM - RIGHT
3/32" = 1'-0"

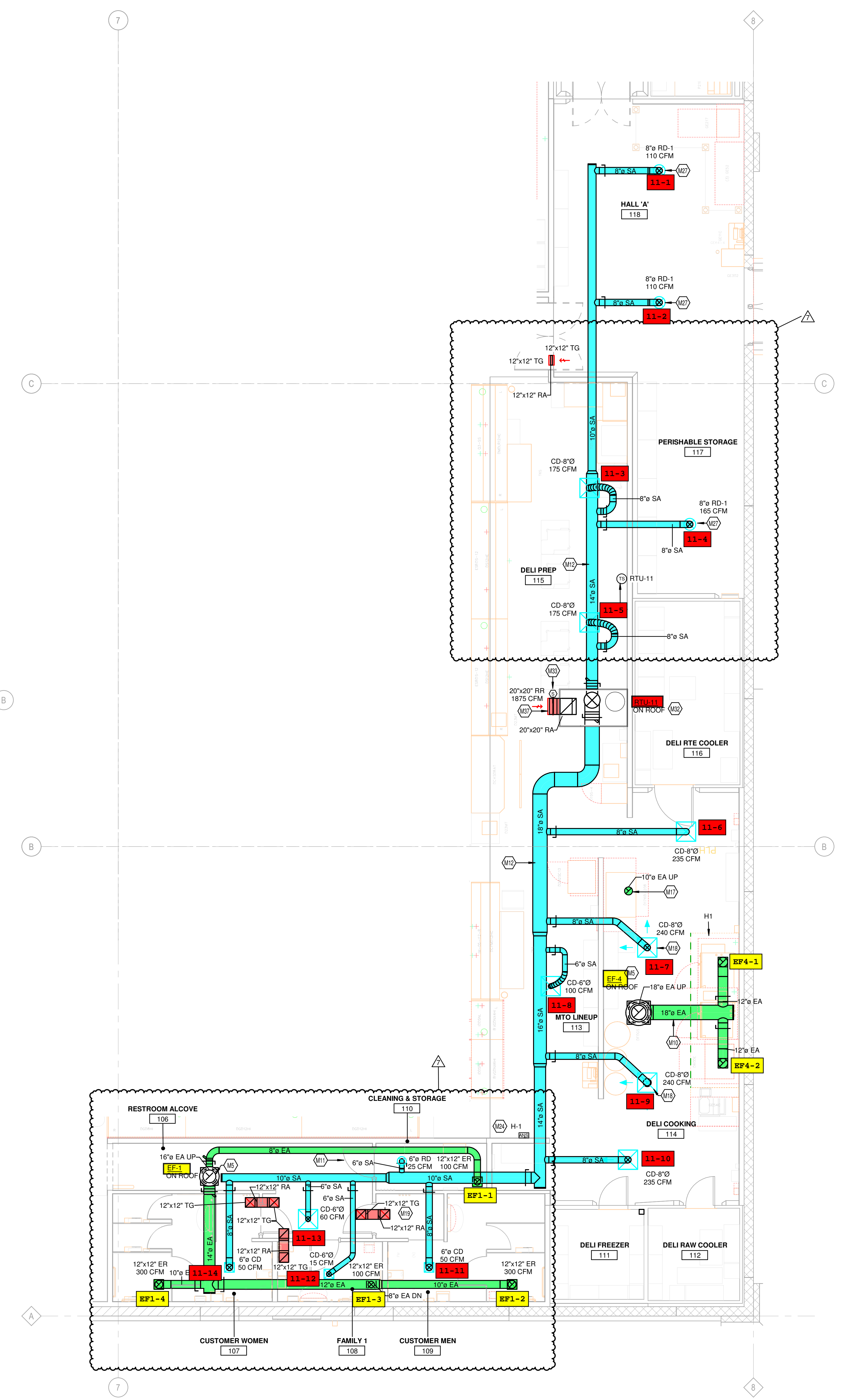
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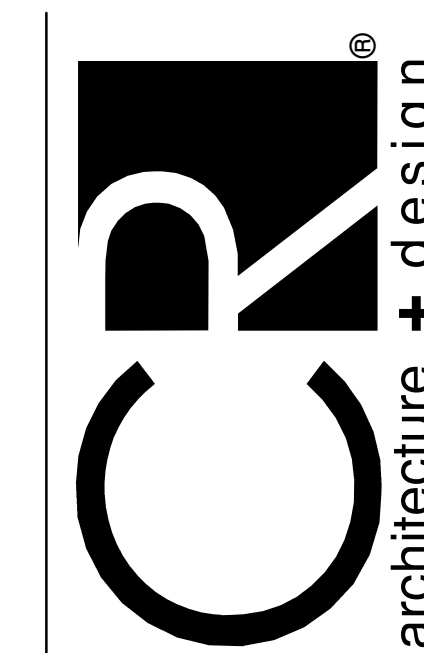
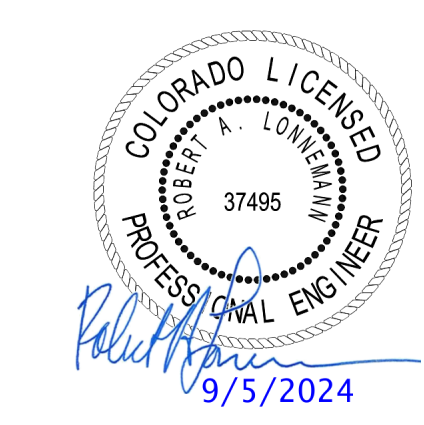
- M5 DUCT UP TO OPENING THROUGH ROOF CAPPED WITH CURB AND KROGER FURNISHED EXHAUST FAN.
- M10 GREASE DUCT FROM EXHAUST HOOD TO OPENING THROUGH ROOF PER NFPA 96. MECHANICAL CONTRACTOR TO INSTALL PROVIDED HINGE KIT. DUCTWRAP IS TO RUN THE ENTIRE LENGTH OF GREASE DUCT FROM CEILING PENETRATION TO FAN. REFER TO HSD-4 AND HSD-4B ON M5.1, AND BOTH 233813.00-04 AND 233813.00-02 ON M5.2 FOR ADDITIONAL INFORMATION.
- M11 UNDERCUT DOOR 1" TO ALLOW FOR RETURN AIRFLOW.
- M12 ROUTE SUPPLY AND RETURN DUCTWORK ROUGHLY 2" ABOVE THE CEILING FOR EASE OF FUTURE ACCESS. CONFIRM FINAL HEIGHT WITH OWNER.
- M14 TEMPERATURE SENSOR FOR RTU FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL.
- M15 COMBINATION TEMPERATURE/RELATIVE HUMIDITY SENSOR FOR RTU FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL.
- M17 LW-50 VENT KIT INCLUDED WITH UNIT AND SUPPLIED BY HOBART. VENT KIT AUTOMATICALLY REMOVES STEAM CONDENSATION AT THE COMPLETION OF THE WAREWASH CYCLE. WAREWASH DOOR WILL NOT OPEN UNTIL THIS PROCESS IS COMPLETED. MECHANICAL CONTRACTOR TO CONNECT STAINLESS STEEL DUCT TO THE VENT KIT OPENING THROUGH ROOF. REFER TO HSD-8 FOR ADDITIONAL INFORMATION.
- M18 DIFFUSER AROUND HOOD TO BE A 2-WAY DIFFUSER FACING AWAY FROM THE HOOD TO PREVENT INTERFERENCE WITH THE HOOD'S CONTAIN AND CAPTURE.
- M19 INSTALL TRANSFER GRILLES IN WALL USING NOTES FROM DETAIL 233713.00-19 ON M5.2. CONFIRM FINAL LOCATION AND FINISH WITH ARCHITECT AND OWNER.
- M22 MECHANICAL CONTRACTOR TO PROVIDE VAV DIFFUSER, ACCUTHERM THERMA-FUSE MODEL TF-HC OR APPROVED EQUAL.
- M24 HOOD ANSUL PULL STATION LOCATION, COORDINATE FINAL LOCATION WITH ELECTRICAL PLANS. PROVIDE NAMEPLATE AT STATION WITH HOOD NUMBER AND LOCATIONS. REFERENCE HSD-4A FOR ADDITIONAL INFORMATION.
- M27 MOUNT GRILLE/REGISTER 10" AFF.
- M32 ROOFTOP UNIT FURNISHED BY KROGER AND INSTALLED BY MECHANICAL CONTRACTOR. BALANCE TO SCHEDULED AIRFLOW. REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION. REFER TO HSD-10 FOR INFORMATION REGARDING BRACING FOR WIND RESISTANCE.
- M33 DUCT MOUNTED SMOKE DETECTOR TO BE INSTALLED IN THE RETURN DUCTWORK, DOWNSTREAM OF FILTERS AND UPSTREAM OF ANY BRANCH CONNECTIONS. INSTALL SAMPLING TUBES AND DETECTOR HOUSING IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. DETECTOR, FAN SHUTDOWN WIRING, AND CONTROLS BY OTHERS.
- M37 INSTALL TOP OF RETURN GRILLE 15" AFF IN SOFFIT. COORDINATE FINAL LOCATION WITH ARCHITECT AND WITH DECOR. LOCATION OF DECOR TAKES PRECEDENCE OVER LOCATION OF RETURN GRILLE.



3 HVAC ENLARGED PLAN - PHARMACY
1/4" = 1'-0"



1 HVAC ENLARGED PLAN - DELI
3/16" = 1'-0"



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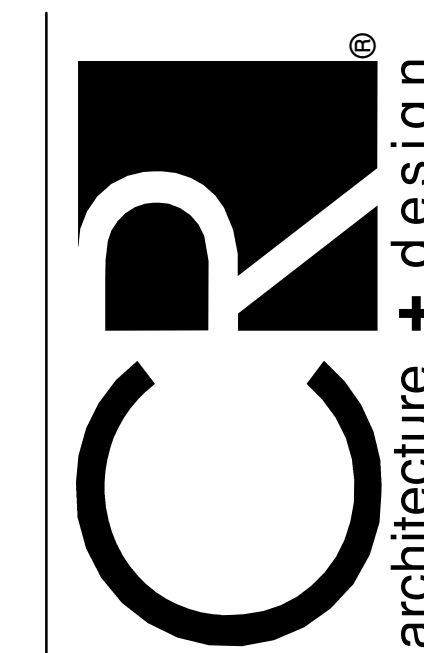
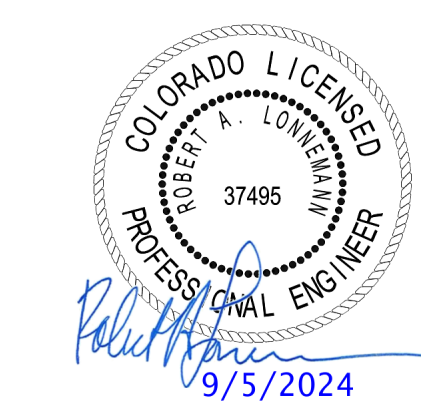
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KEYED NOTES

- M2 THERMOSTAT TO BE MOUNTED AT 4'0" AFF. PROVIDE LOCKABLE PROTECTIVE COVER OVER DEVICE.
- M5 DUCT UP TO OPENING THROUGH ROOF CAPPED WITH CURB AND KROGER FURNISHED EXHAUST FAN.
- M6 DUCT UP TO OPENING THRU ROOF. CONTRACTOR TO PROVIDE REVERSE ACTING THERMOSTAT FOR FAN. FAN TO ENERGIZE WHEN ROOM REACHES 80 DEG F.
- M9 B'VENT DUCT UP FROM RACK OVEN VENT COLLAR THROUGH ROOF. DUCTS ARE ONLY TO OFFSET ABOVE ACT TILES. DUCTS ARE TO BE RUN STRAIGHT AND VERTICAL WHEN VISIBLE TO SALES FLOOR. REFER TO DETAIL HSD-7 FOR ADDITIONAL INFORMATION.
- M12 ROUTE SUPPLY AND RETURN DUCTWORK ROUGHLY 2'0" ABOVE THE CEILING FOR EASE OF FUTURE ACCESS. CONFIRM FINAL HEIGHT WITH OWNER.
- M14 TEMPERATURE SENSOR FOR RTU FURNISHED BY ORIGINAL EQUIPMENT MANUFACTURER. ROUTE CONTROL WIRING THROUGH RTU AND BACK TO BUILDING CONTROL PANEL.
- M19 INSTALL TRANSFER GRILLES IN WALL USING NOTES FROM DETAIL 233713-00-19 ON MS.2. CONFIRM FINAL LOCATION AND FINISH WITH ARCHITECT AND OWNER.
- M22 MECHANICAL CONTRACTOR TO PROVIDE VAV DIFFUSER, ACCUTERM THERMA-FUSE MODEL TF-HC OR APPROVED EQUAL.
- M23 KROGER FURNISHED SPLIT SYSTEM PROVIDED WITH LOW AMBIENT KIT AND WIND BAFFLES. MOUNT PER MANUFACTURER'S RECOMMENDATIONS. INDOOR UNIT DS-1 TO BE MOUNTED A MINIMUM OF 7'-0" AFF TO BOTTOM OF UNIT. ROUTE REFRIGERANT LINES THROUGH ROOF TO CONDENSING UNIT PER MANUFACTURER'S GUIDELINES. ROUTE INSULATED 3/4" CONDENSATE TO HUB DRAIN IN AREA. COORDINATE ORDERING OF REFRIGERANT LINES WITH OWNER'S PROJECT MANAGER. REFERENCE HSD-11 FOR ADDITIONAL INFORMATION.
- M32 ROOFTOP UNIT FURNISHED BY KROGER AND INSTALLED BY MECHANICAL CONTRACTOR. BALANCE TO SCHEDULED AIRFLOW. REFER TO ARCHITECTURAL ROOF PLAN FOR HVAC ROOFTOP DIMENSIONAL INFORMATION. REFER TO STRUCTURAL DRAWINGS FOR JOIST AND BEAM LOCATIONS AND DIMENSIONAL INFORMATION. REFER TO HSD-10 FOR INFORMATION REGARDING BRACING FOR WIND RESISTANCE.
- M33 DUCT MOUNTED SMOKE DETECTOR TO BE INSTALLED IN THE RETURN DUCTWORK, DOWNSTREAM OF FILTERS AND UPSTREAM OF ANY BRANCH CONNECTIONS. INSTALL SAMPLING TUBES AND DETECTOR HOUSING IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. DETECTOR, FAN SHUTDOWN WIRING, AND CONTROLS BY OTHERS.



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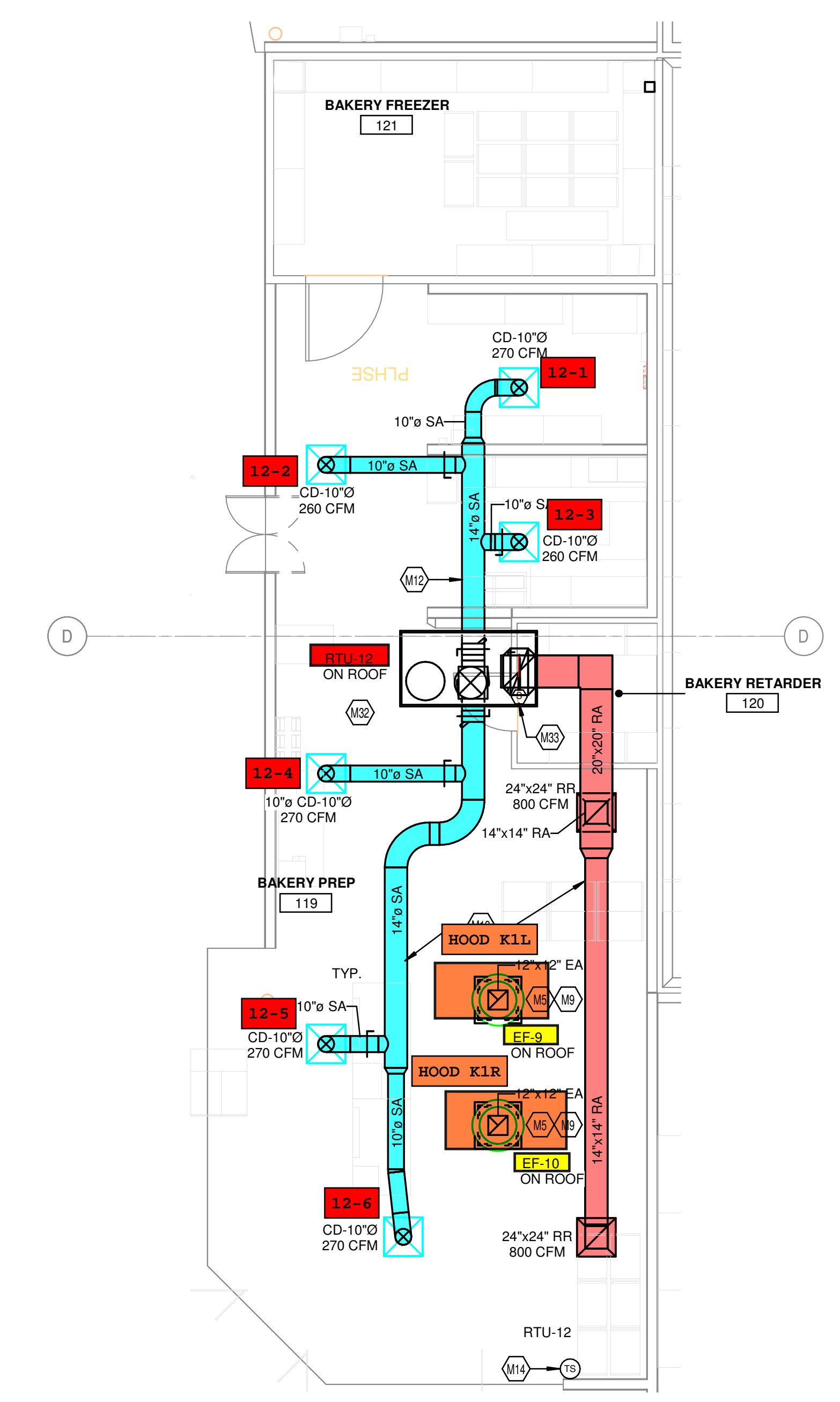
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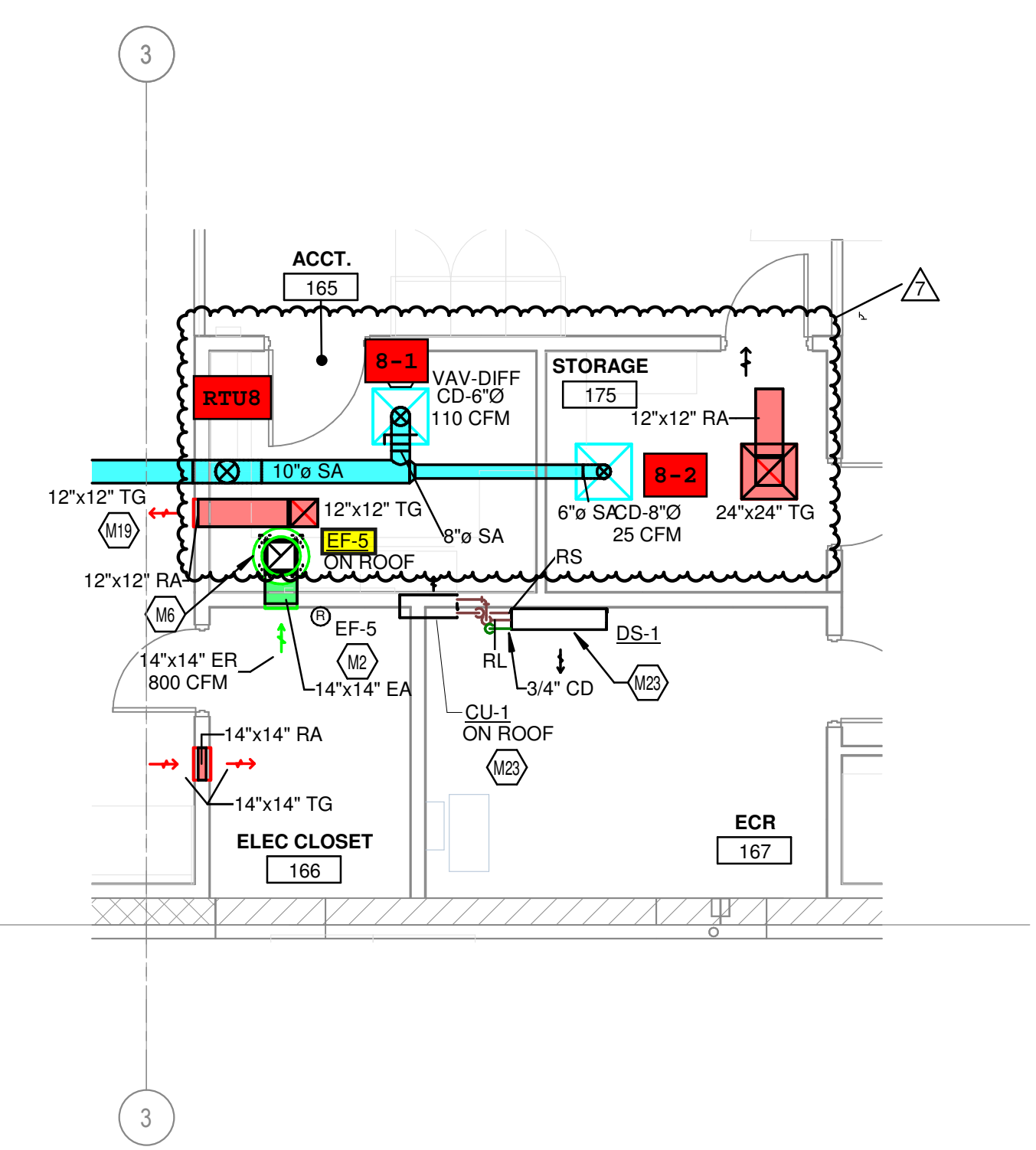


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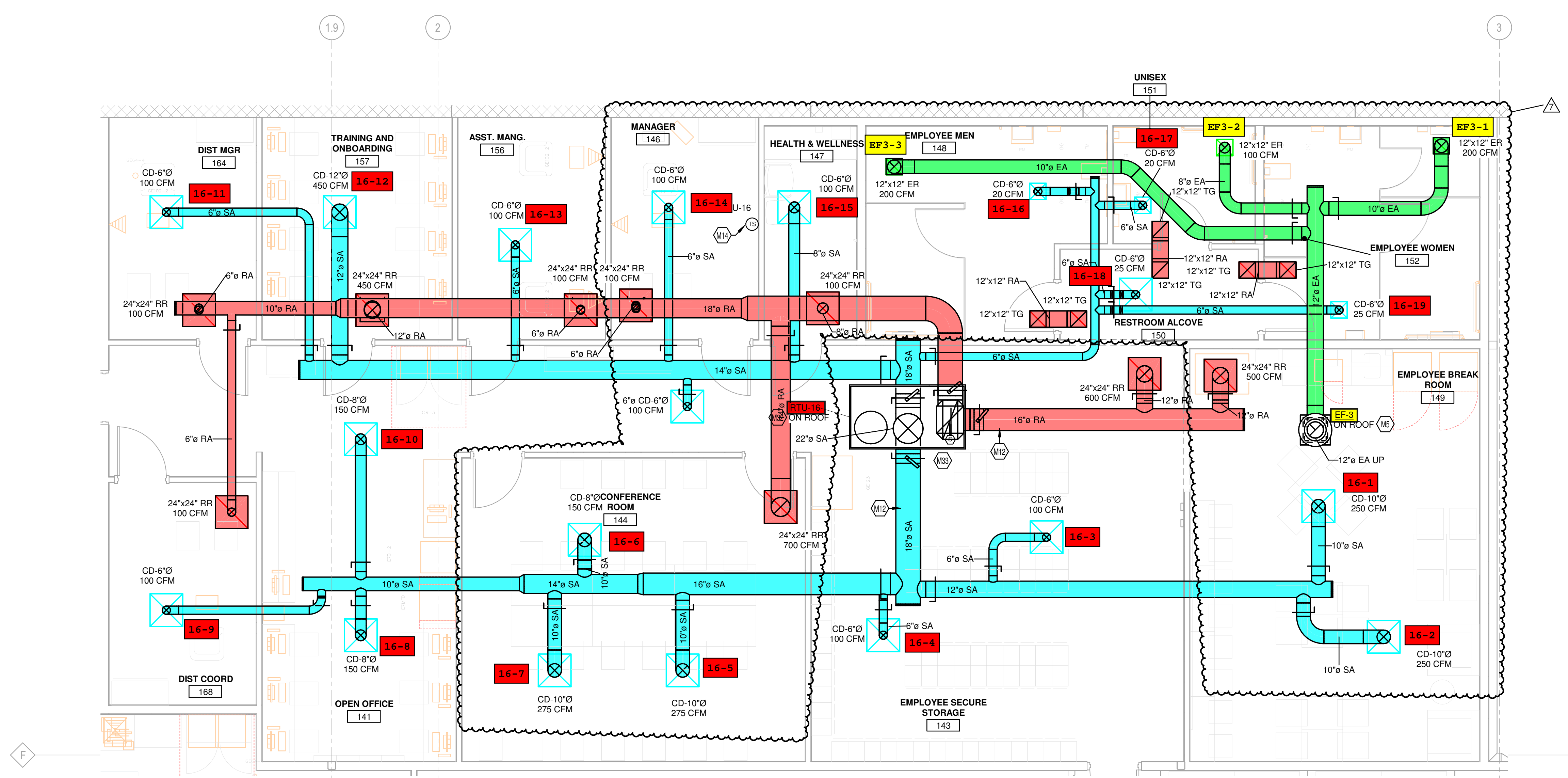
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② HVAC ENLARGED PLAN - BAKERY
3/16" = 1'-0"



① HVAC ENLARGED PLAN - CUSTOMER SERVICE
3/16" = 1'-0"



③ HVAC ENLARGED PLAN - BACK OFFICES
1/4" = 1'-0"

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SHEET TITLE
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PLANS**

SHEET NO.
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HOOD INFORMATION - JOB#6181964

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST FLENUM (RISERS)				HOOD CONSTRUCTION	HOOD CONFIG			
										WIDTH	LENG	HEIGHT	DIA		CFM	VEL	SP	END TO END
1	KIL - K-0002317	6024 ND-2	CAPTIVEAIRE	8' 0"	450 DEG	I	MEDIUM	150	1200		4'	12"	1200	1528	-0.294"	304 SS WHERE EXPOSED	LEFT	ALINE
2	KIR - K-0002317	6024 ND-2	CAPTIVEAIRE	8' 0"	450 DEG	I	MEDIUM	150	1200		4'	12"	1200	1528	-0.294"	304 SS WHERE EXPOSED	RIGHT	ALINE

HOOD INFORMATION

HOOD NO	TAG	TYPE	FILTERS			LIGHTS			WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S)		FIRE SYSTEM	ELECTRICAL	SWITCHES	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
			QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE				TYPE	SIZE					
1	KIL - K-0002317	SS BAFFLE WITH HANDLES	5	16"	16"	30%	3	L55 SERIES E26	ND								YES	418 LBS
2	KIR - K-0002317	SS BAFFLE WITH HANDLES	5	16"	16"	30%	3	L55 SERIES E26	ND	RIGHT	12"x60"x24"	TANK FS	4.0/4.0	SC-310110MA	1 LIGHT 1 FAN		YES	742 LBS

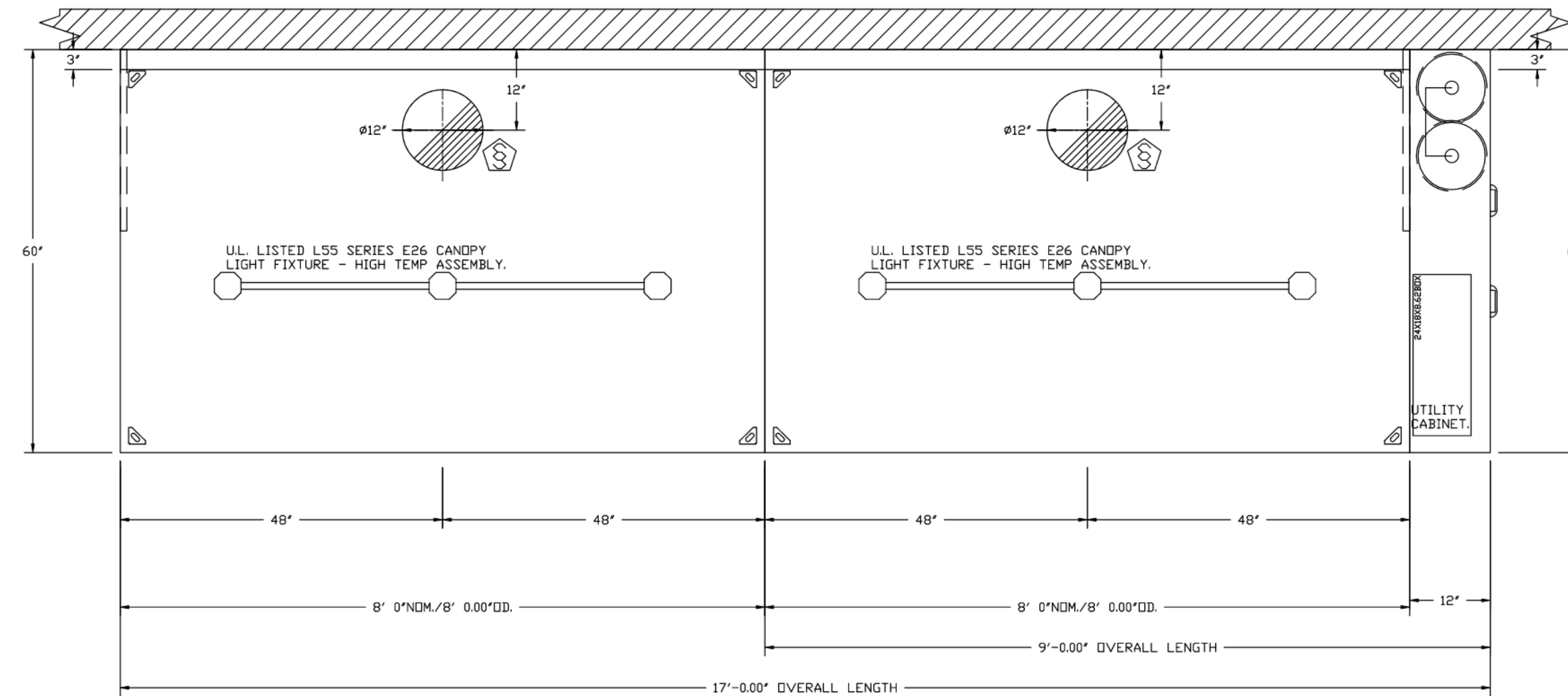
HOOD OPTIONS

HOOD NO	TAG	OPTION
1	KIL - K-0002317	FIELD WRAPPER 17.00" HIGH FRONT, LEFT. LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS. SENSOR-CV.
2	KIR - K-0002317	FIELD WRAPPER 17.00" HIGH FRONT, LEFT. RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 304 SS. SENSOR-CV.

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH UL 710 AND NFPA 96 AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:

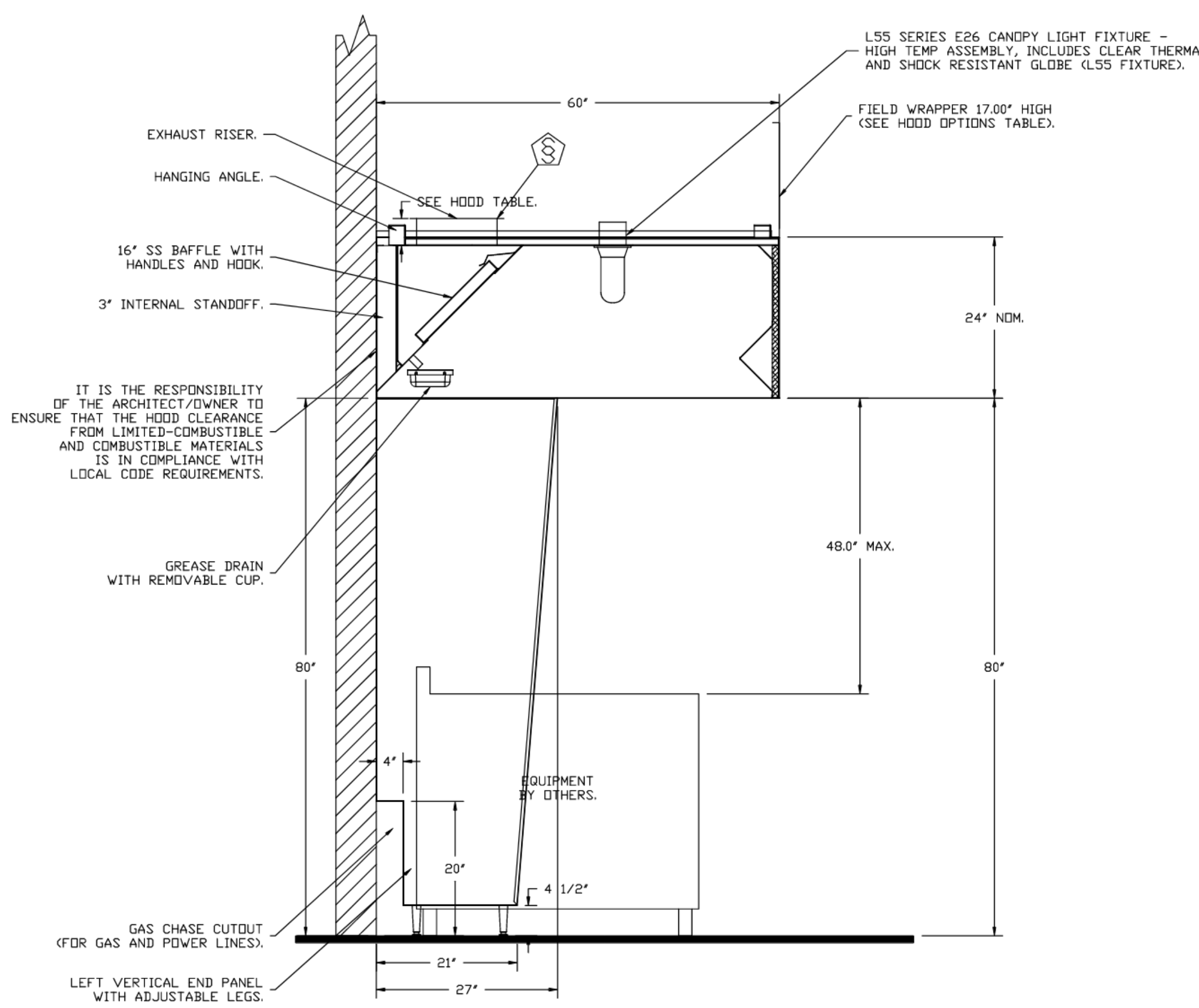
ETL SANITATION LISTED
ETL LISTED
FILE# 102900319PRT-001

HVAC DISTRIBUTION NOTE
IT IS RECOMMENDED NOT TO INSTALL HIGH VELOCITY DIFFUSERS OR HVAC RETURNS WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

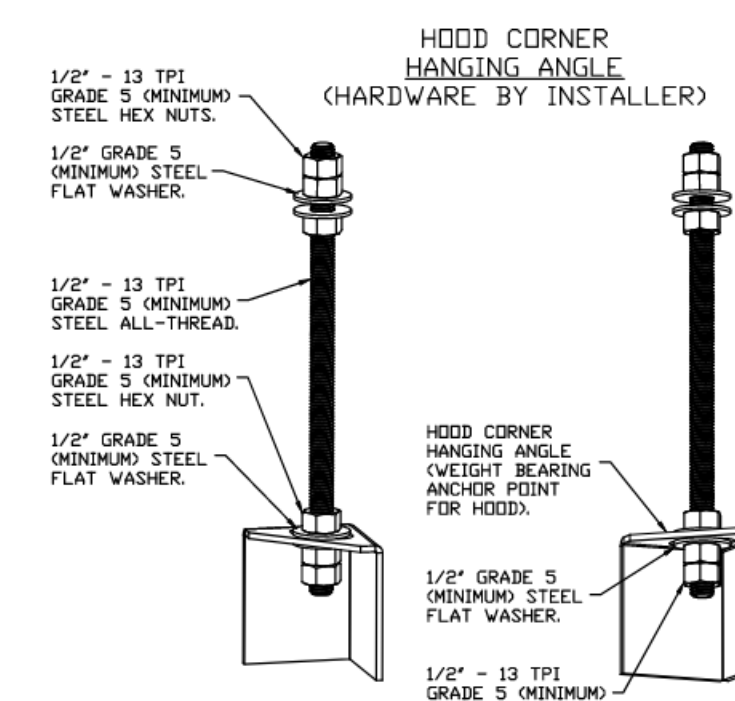


PLAN VIEW - HOOD #1 (KIL - K-0002317)
8' 0.00\"/>

PLAN VIEW - HOOD #2 (KIR - K-0002317)
8' 0.00\"/>



SECTION VIEW - MODEL 6024ND-2



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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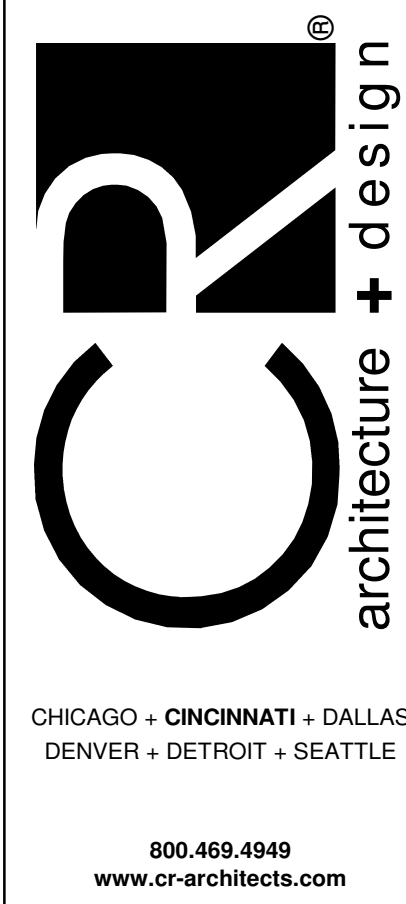
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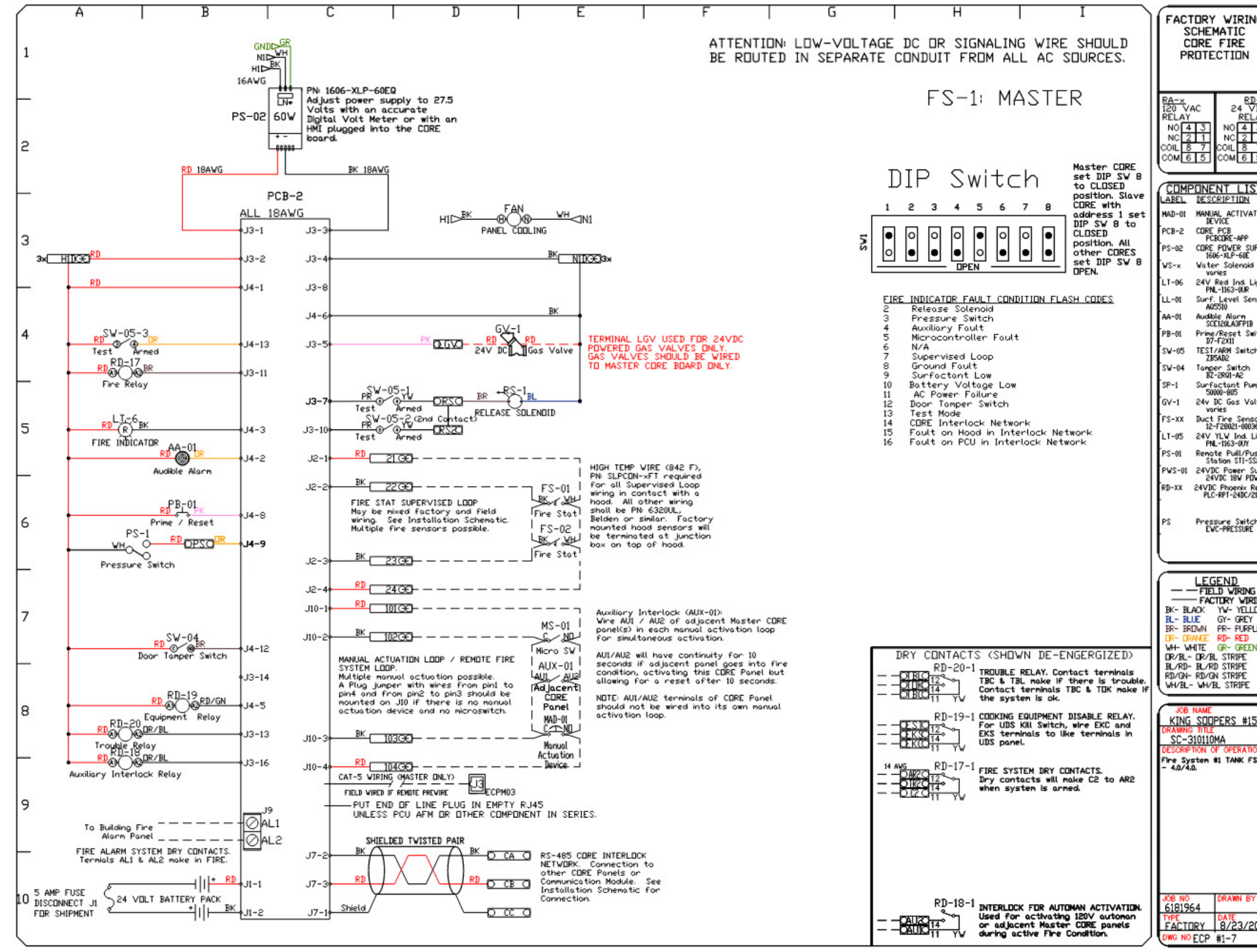
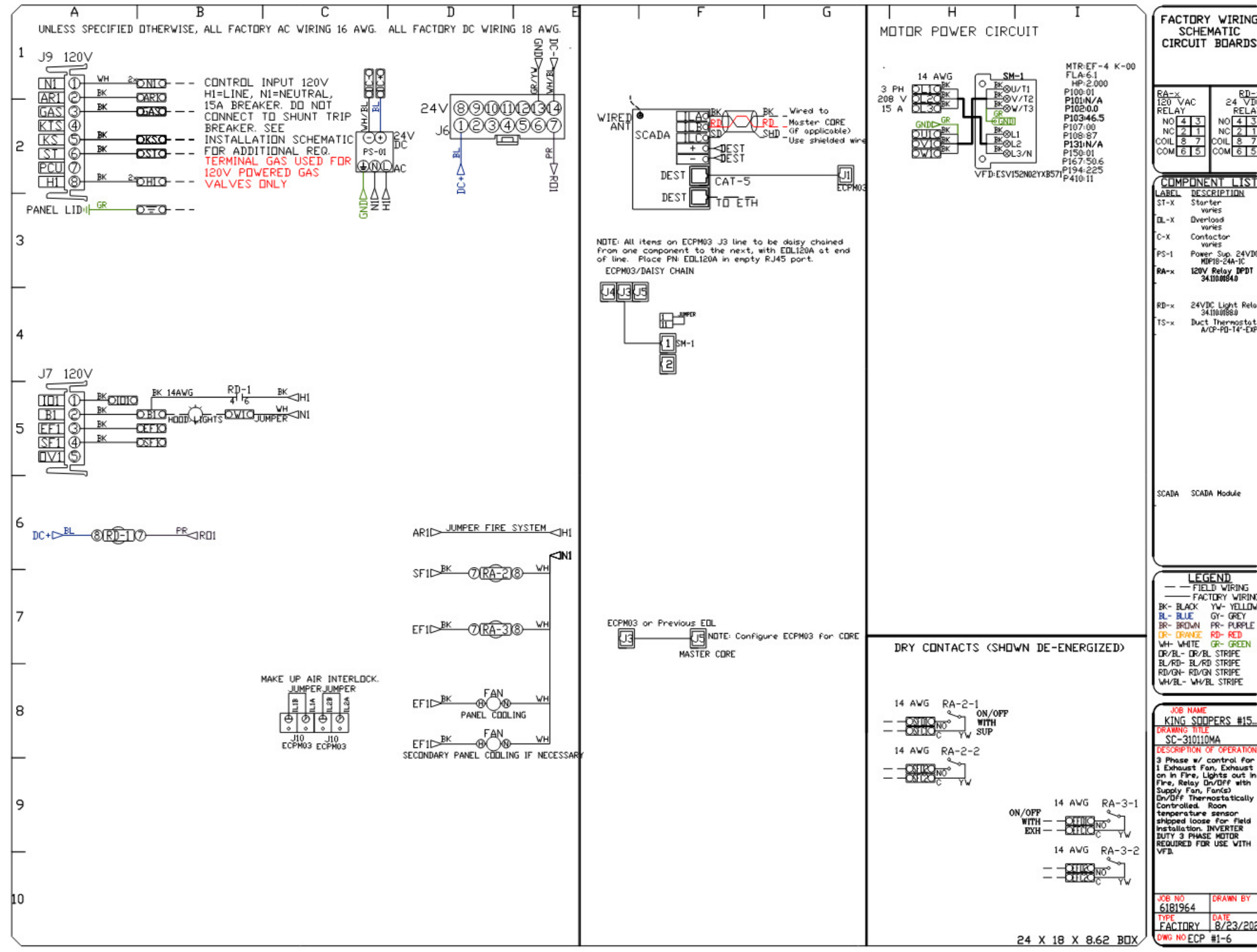
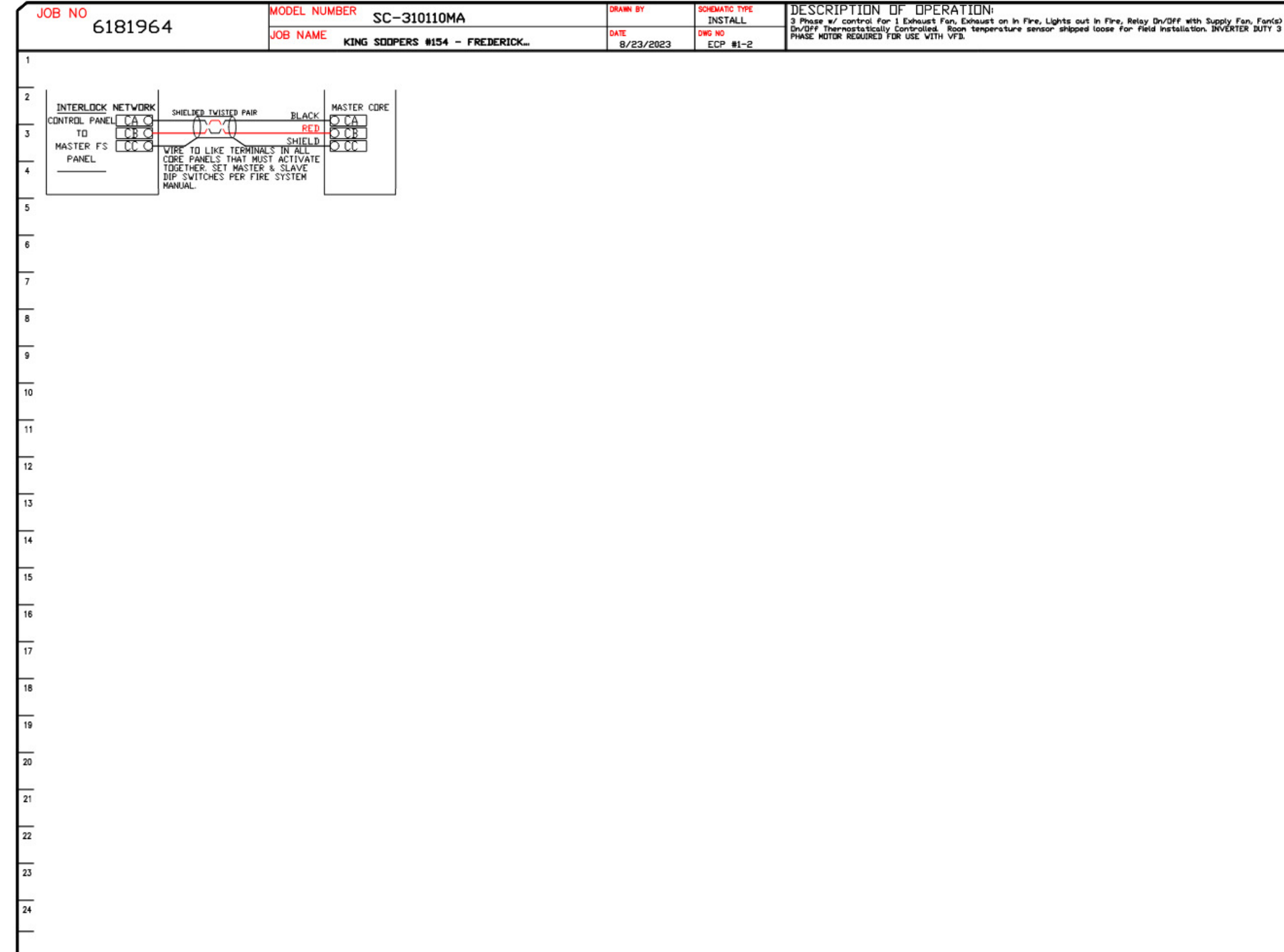
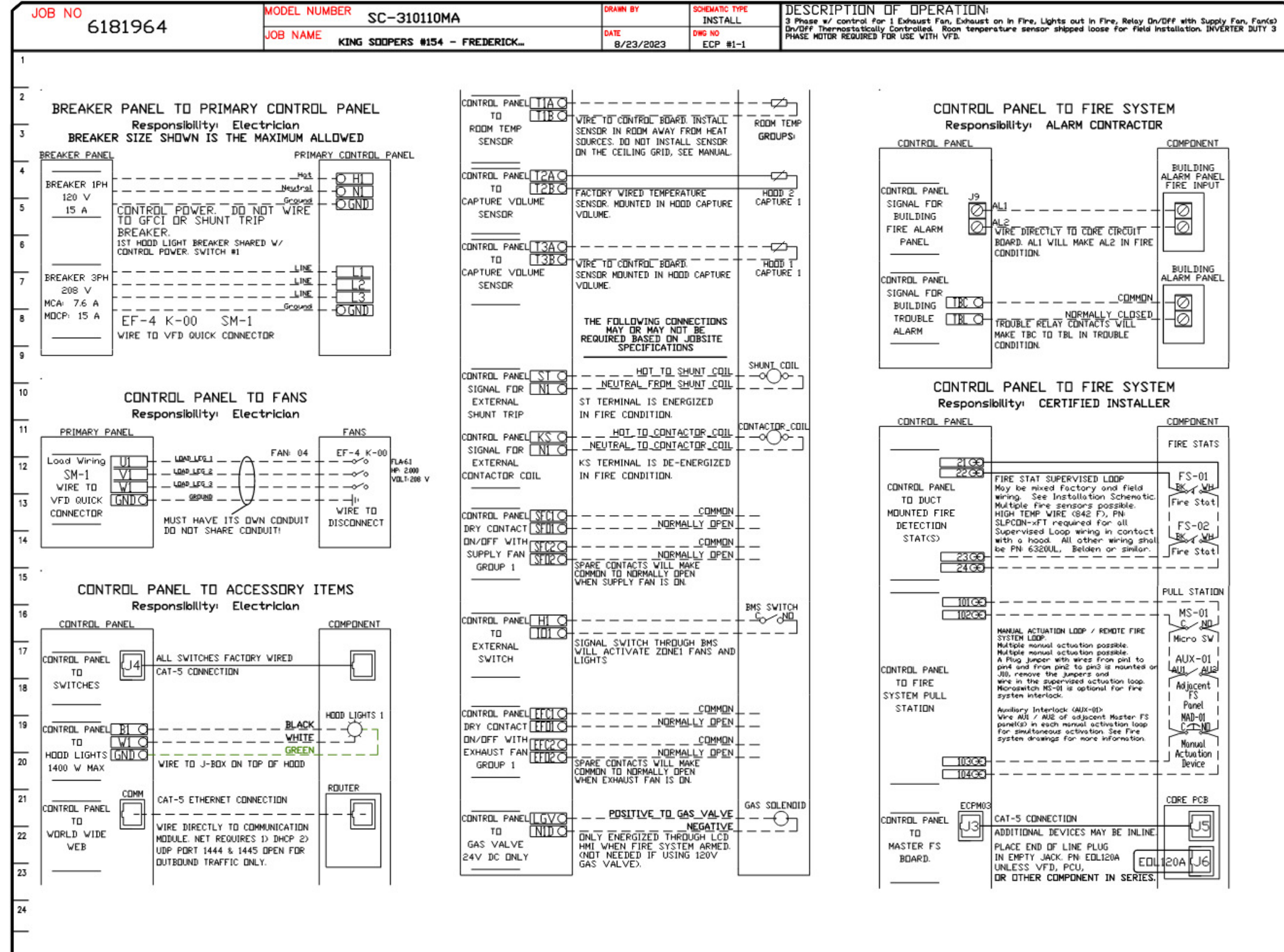
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GAS CHASE OUTLET (FOR GAS AND POWER LINES).
LEFT VERTICAL END PANEL WITH ADJUSTABLE LEGS.
EQUIPMENT BY OTHERS.
GREASE DRAIN WITH REMOVABLE CUP.
21" 20" 4" 1/2"

ELECTRICAL PACKAGE - JOB#6181964

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED						
				LOCATION	QUANTITY		FAN TAG	TYPE	#	HP	VOLT FLA		
1		SC-31010MA	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT HOOD # 2	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EF-4	K-069365	EXHAUST	3	2000	208	6.1



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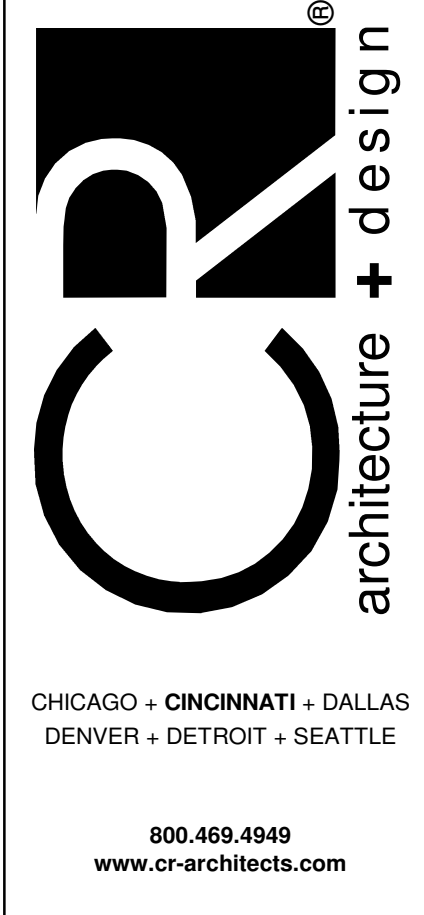
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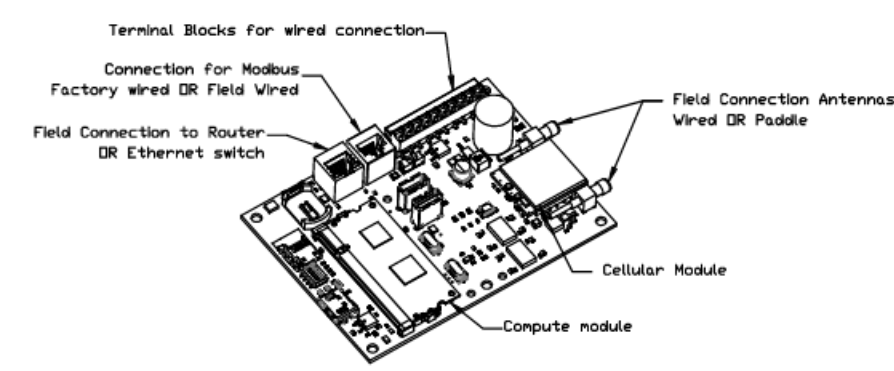
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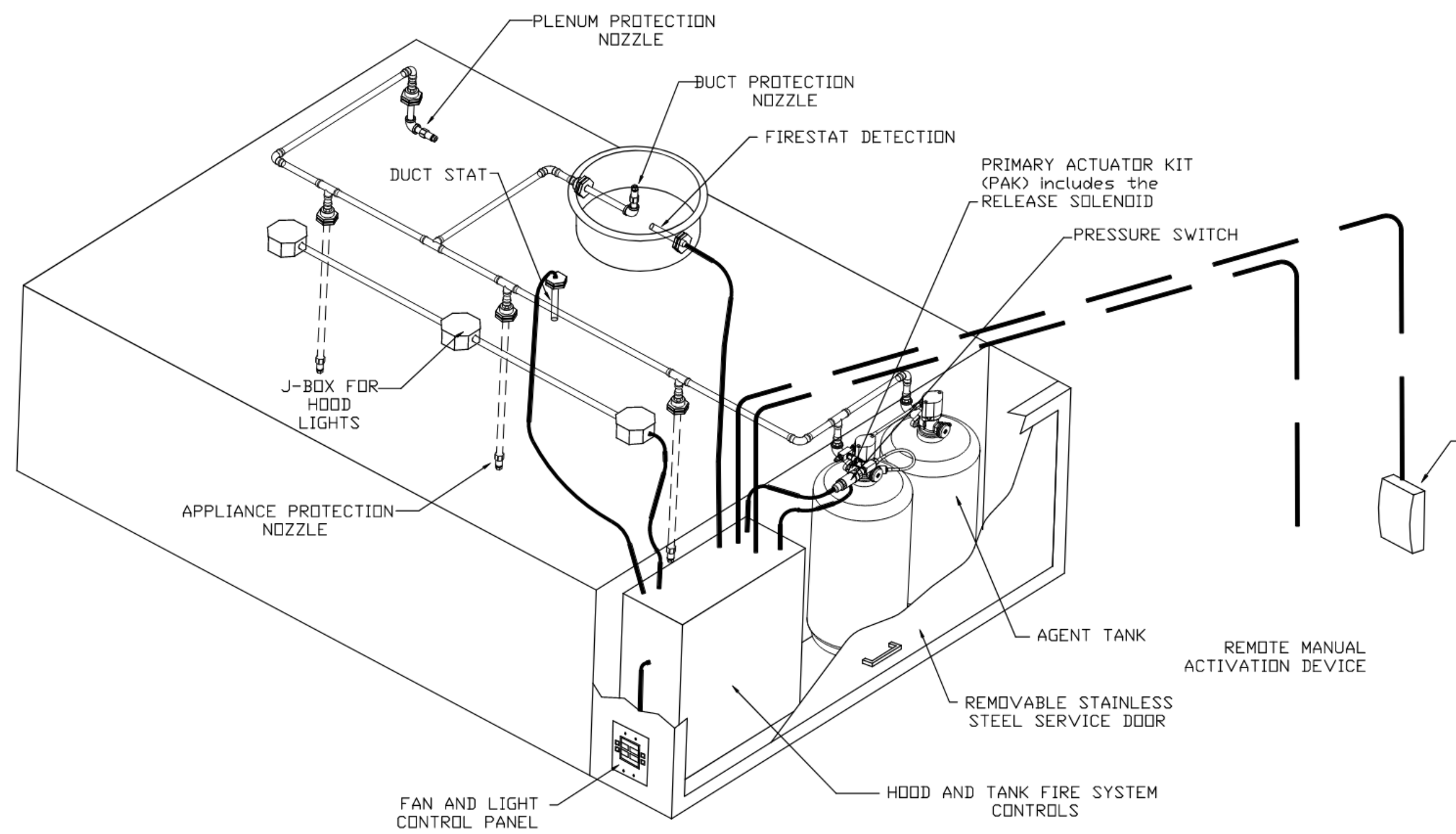


CASlink Monitor and Control

Hood control panel to support communications to cloud-based Building Management System.
 Hood Control Panel is allow cloud-based Building Management System to monitor and control parameters outlined as MONITOR in the project list.
 Hood Control Panel is allow cloud-based Building Management System to control parameters outlined as CONTROL in the project list.
 Hood Control Panel is allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

IC Package	Function	IC Package	Function
Room Temperature	#000708	Room Temperature(s)	#000708
Duct Temperature(s)	#000708	Duct Temperature(s)	#000708
WCU Discharge Temperature	#000708	WCU Discharge Temperature	#000708
Blower WCU Discharge Temperature	#000708	Blower WCU Discharge Temperature	#000708
Fan Speed	#000708	Coil-blow Fan	#000708
Fan Ampage	#000708	Fan Fault	#000708
Fan Power	#000708	Fan Status	#000708
WCU Faults	#000708	WCU Fault	#000708
Coil-blow Faults	#000708	WCU Filter Clog Percentage	#000708
Fan Fault	#000708	Fan Condition	#000708
Fan Status	#000708	CO2 Fan System	#000708
WCU Fault	#000708	Building Pressure	#000708
WCU Filter Clog Percentage	#000708	Fan Status(s)	#000708 & CONTROL
Fan Condition	#000708	Light Bulb(s)	#000708 & CONTROL
CO2 Fan System	#000708	Wash Button	#000708 & CONTROL
Building Pressure	#000708		
Prop Flow Button	#000708 & CONTROL		
Fan Button	#000708 & CONTROL		
Light Bulb(s)	#000708 & CONTROL		
Wash Button	#000708 & CONTROL		



TYPICAL HOOD and TANK FIRE SYSTEM LAYOUT
 THIS DETAIL IS GENERIC AND IS NOT INTENDED TO COVER ALL POSSIBLE, ACCEPTABLE SCENARIOS.
 REFER TO PROJECT DRAWINGS/SCHEMATICS FOR DETAILS.

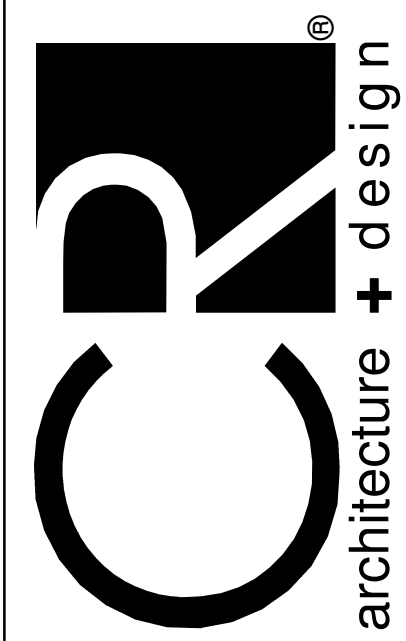
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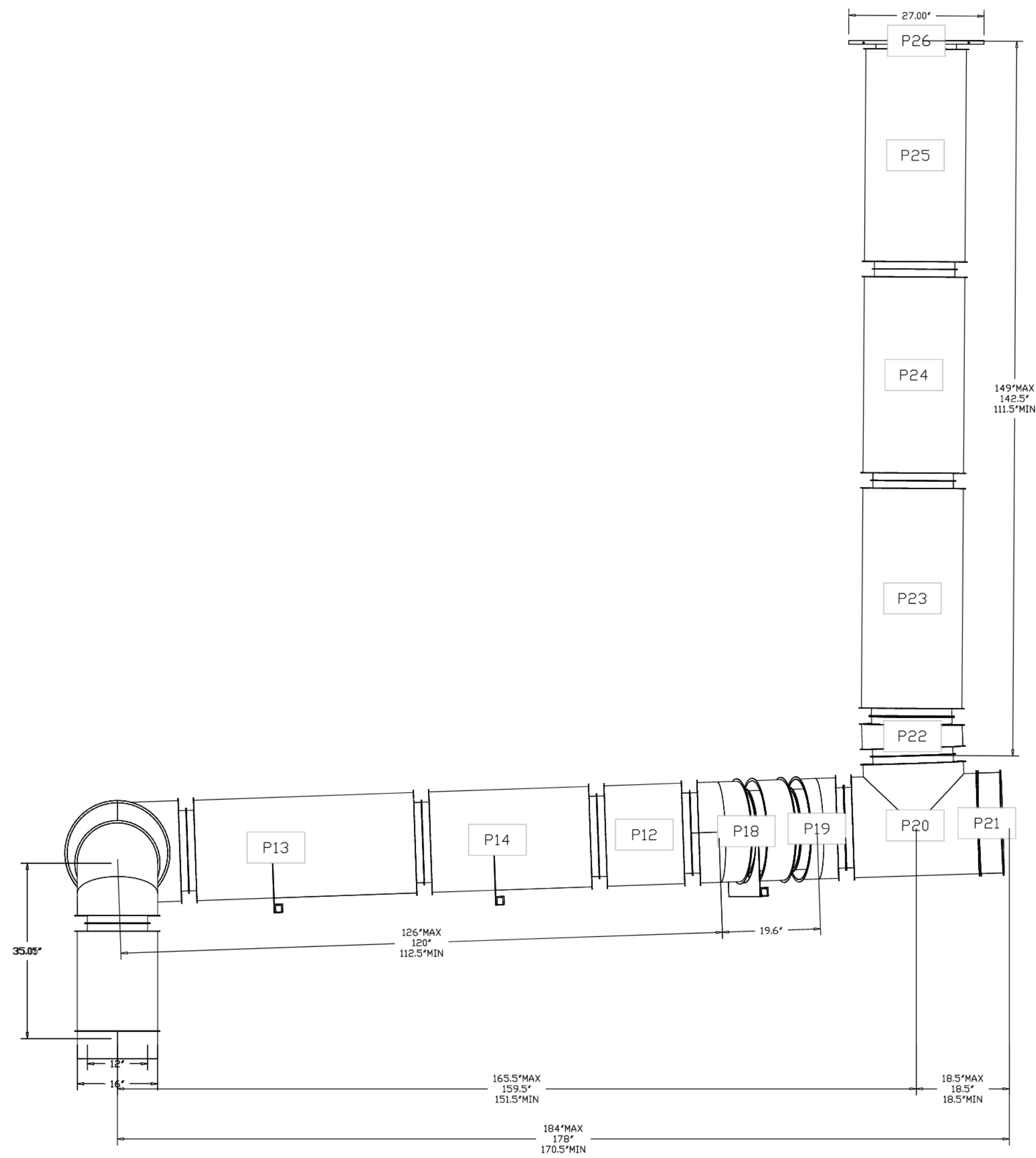
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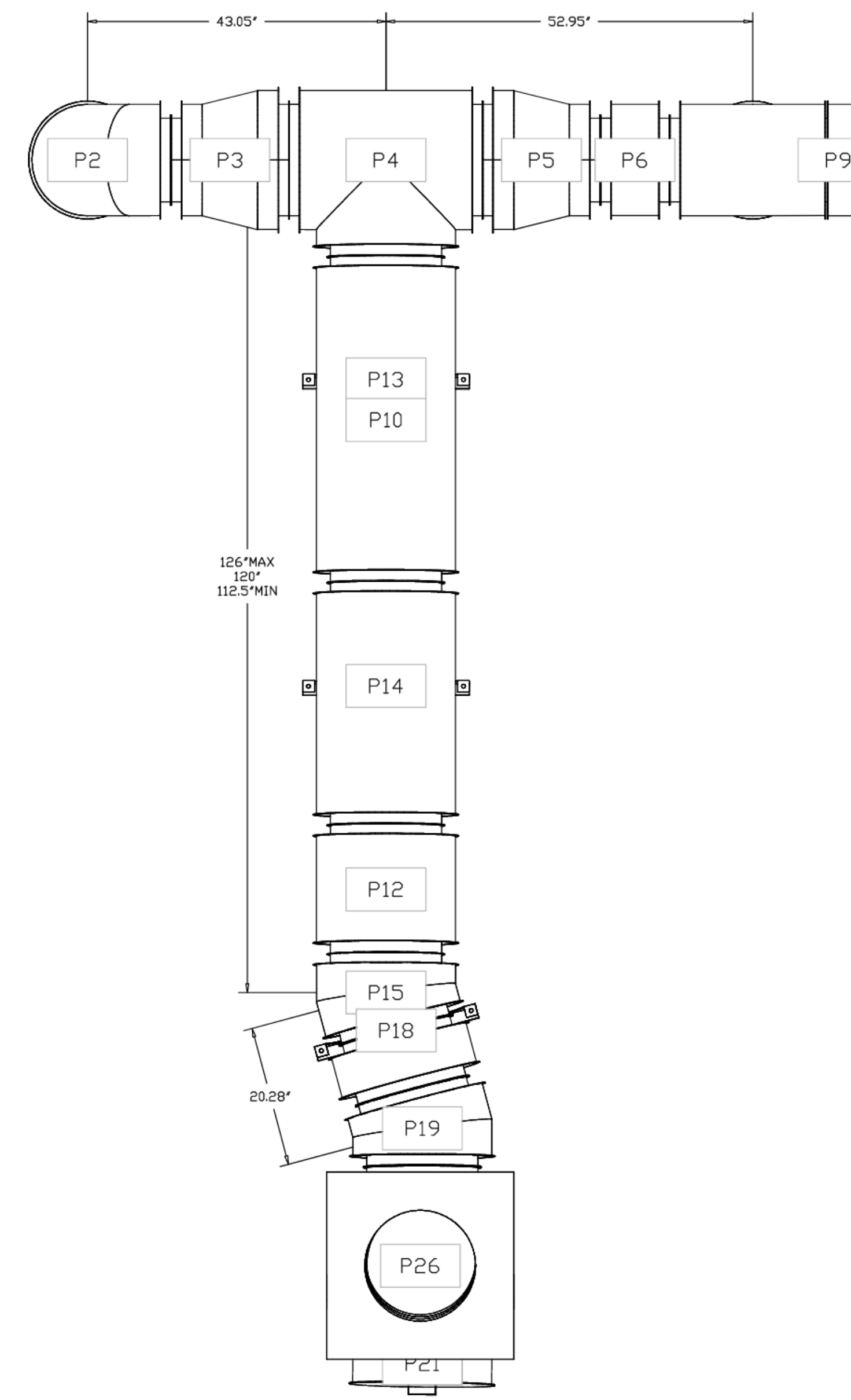
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DUCTWORK #1 SIDE VIEW



DUCTWORK #1 TOP VIEW



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2		
3		

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 PROJECT: 10/2023/1024-04 FILE LOCATION: C:\Users\mpt1\Documents\Projects\1024-04\1024-04.dwg

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FT. THOMAS, KENTUCKY 41075
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OWNER

Kroger

ISSUE/REVISION	DATE	DESCRIPTION
08/31/2023	90% OWNER REVIEW	
10/17/2023	BID/PERMIT ISSUE	

PROJECT TITLE
KING SOOPERS
KS154

HWY 52 & COLORADO BLVD
FREDERICK, CO 80643

COMMISSION NO. 522401
ISSUE DATE 10/17/23
SHEET TITLE
HVAC SECTIONS
AND DETAILS

SHEET NO.
M3.1.8

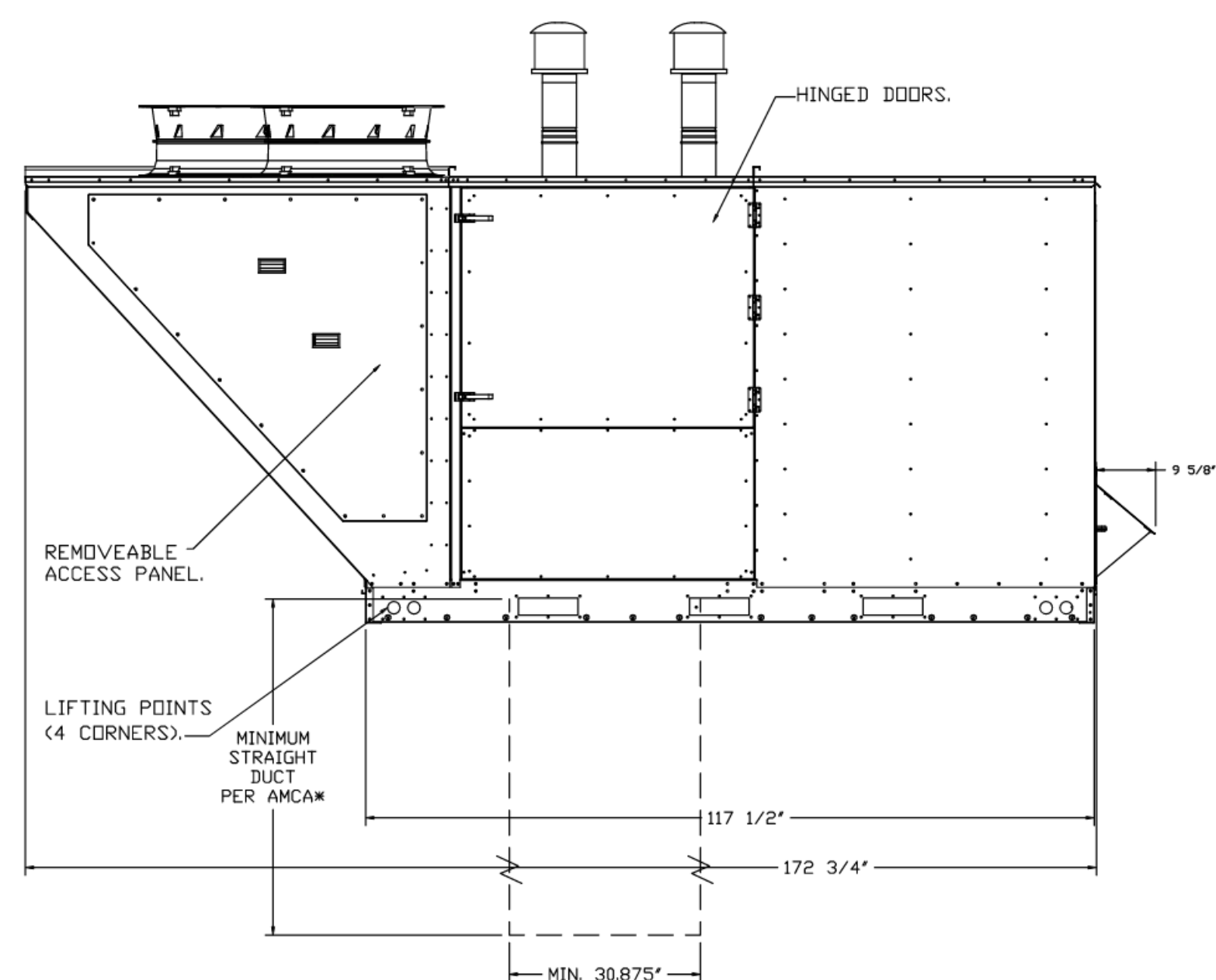
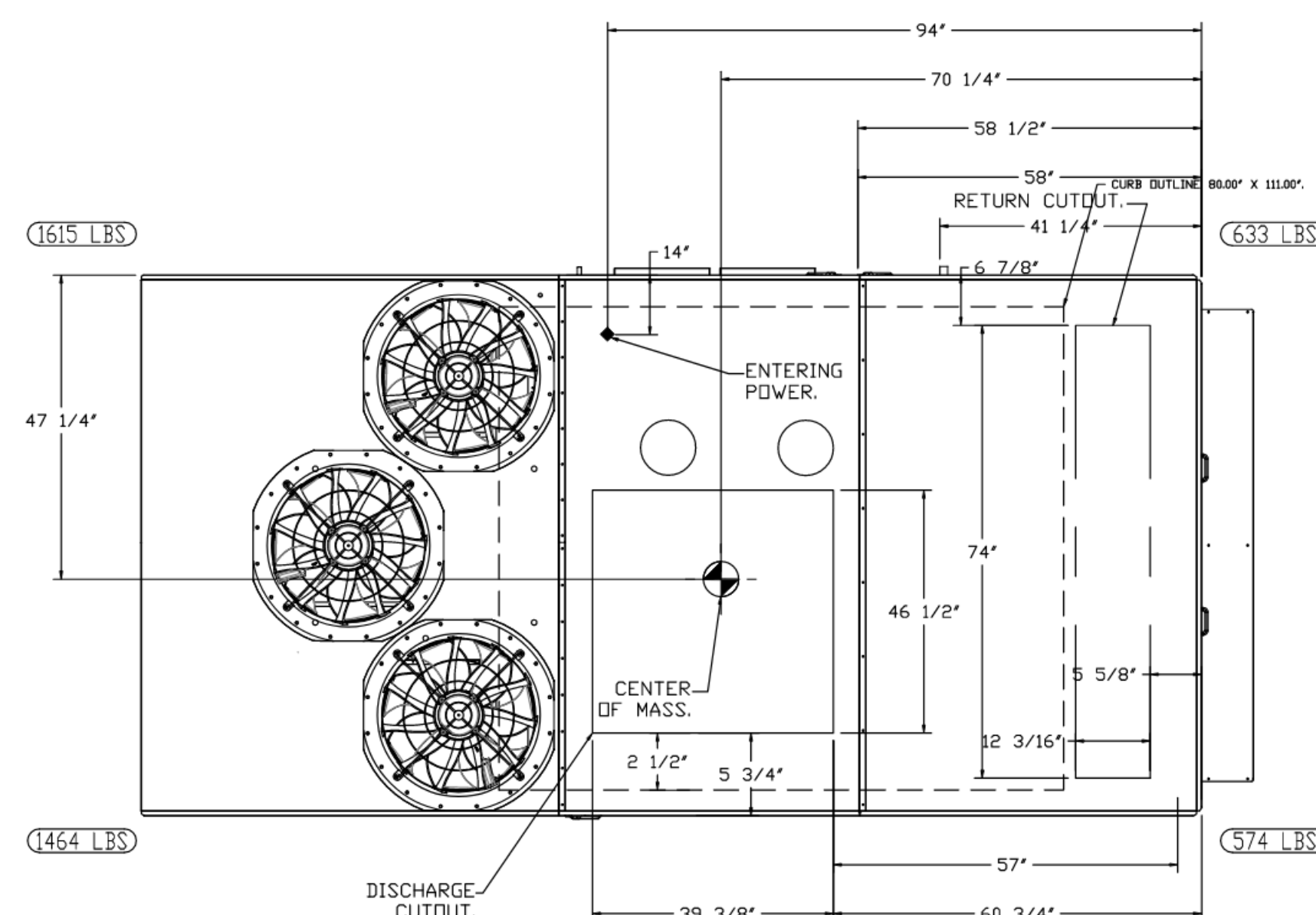
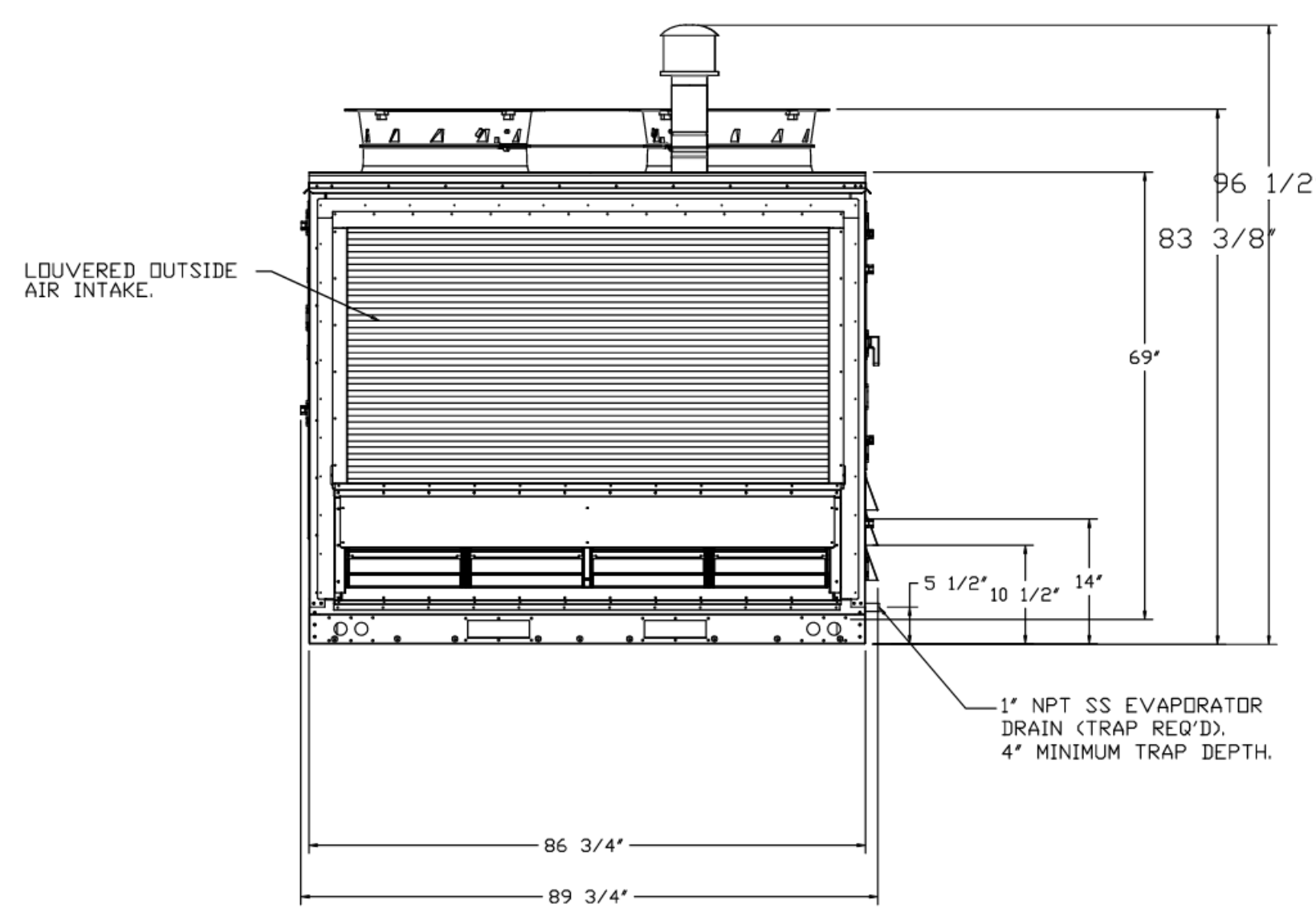
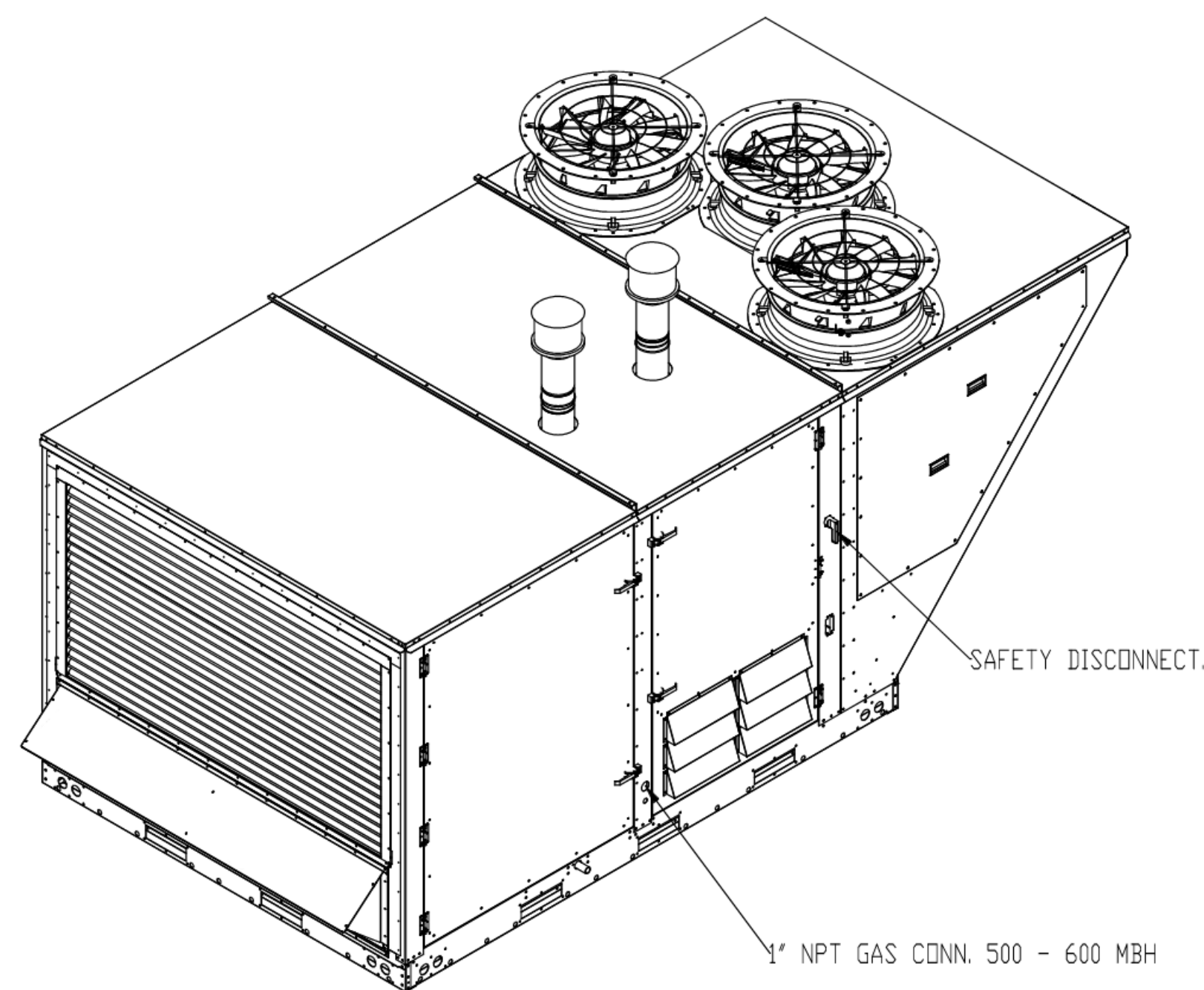
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FAN #1 (DDAS-1), FAN #2 (DDAS-2) CASRTU4-1800-24-22T - HEATER

NOTES:

- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
- DENOTES CORNER WEIGHT.

NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 30.875" x 39.75".



REVISIONS	
DESCRIPTION	DATE

CAPTIVE

National Accounts
4641 Paragon Park Rd., Raleigh, NC 27616 PHONE: (919) 852-2410 FAX: 9192275948 EMAIL: nrg15@captivair.com

KING SOOPERS #154 - FREDERICK, CO - DDAS
13TH + COLORADO BLVD,
FREDERICK, CO, 80220

DATE: 8/24/2023

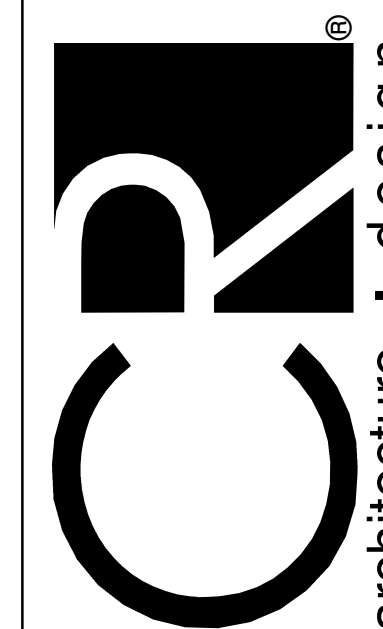
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6182760

DRAWN BY:

SCALE:
1/2" = 1'-0"

MASTER DRAWING

SHEET NO.
2



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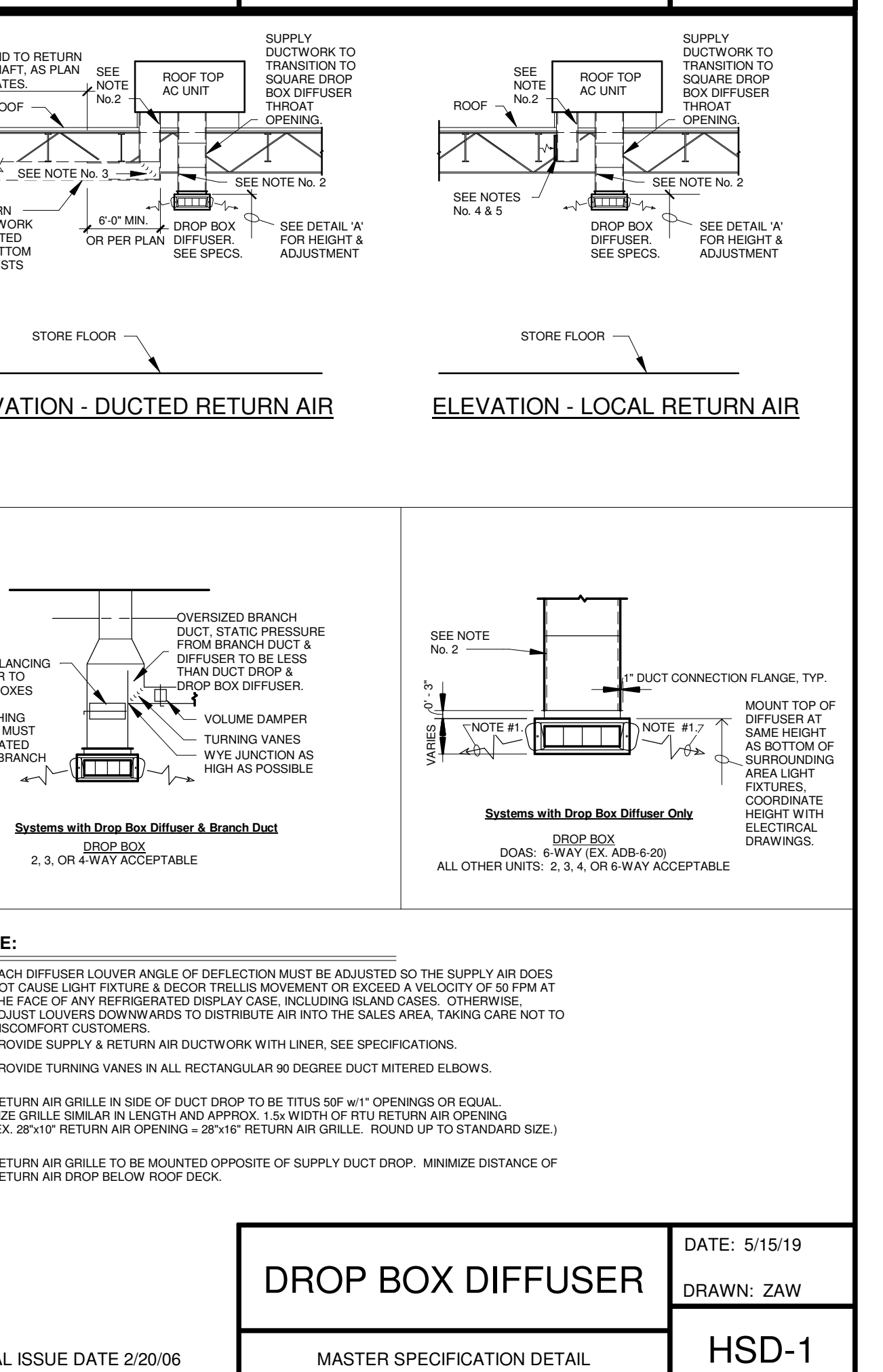
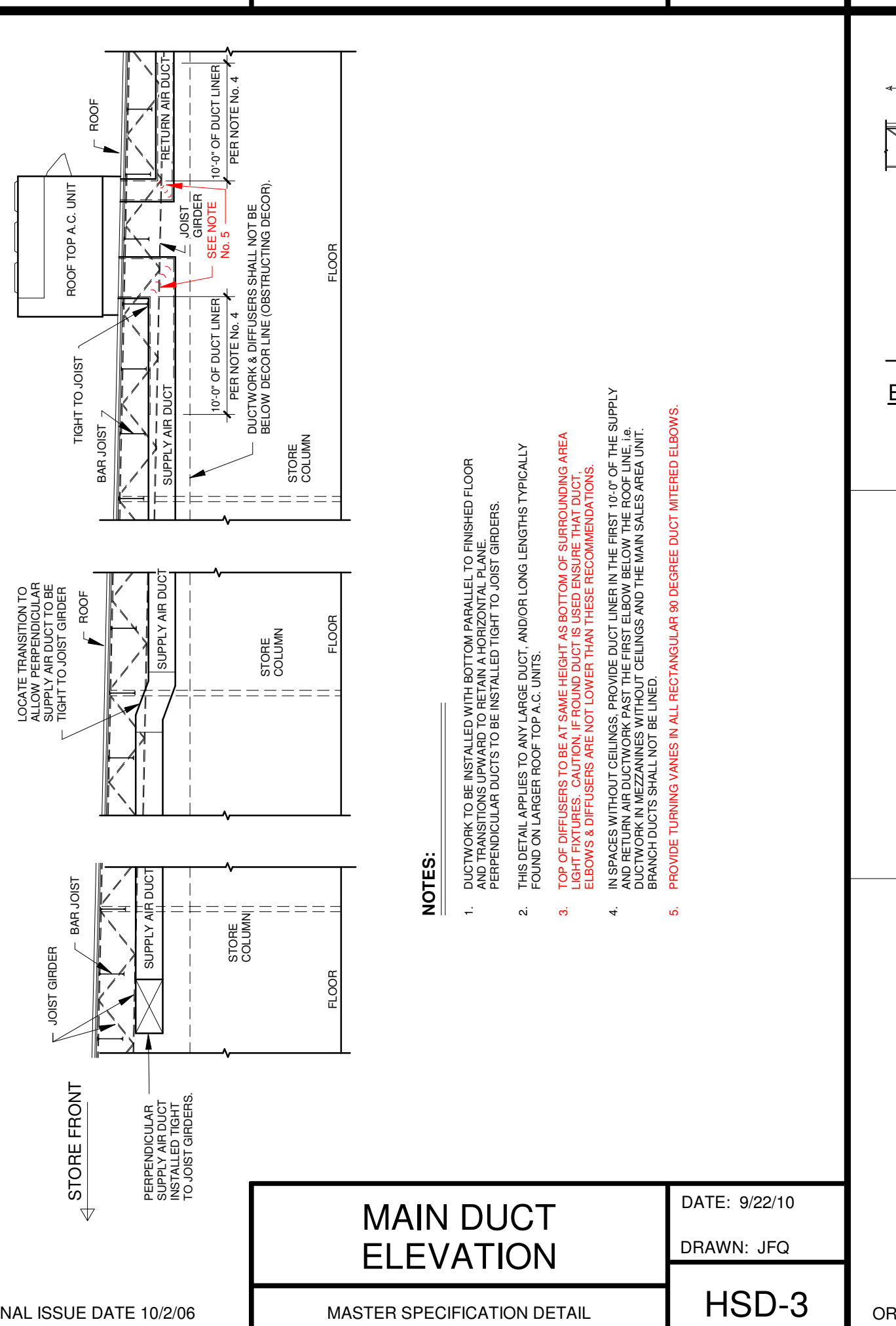
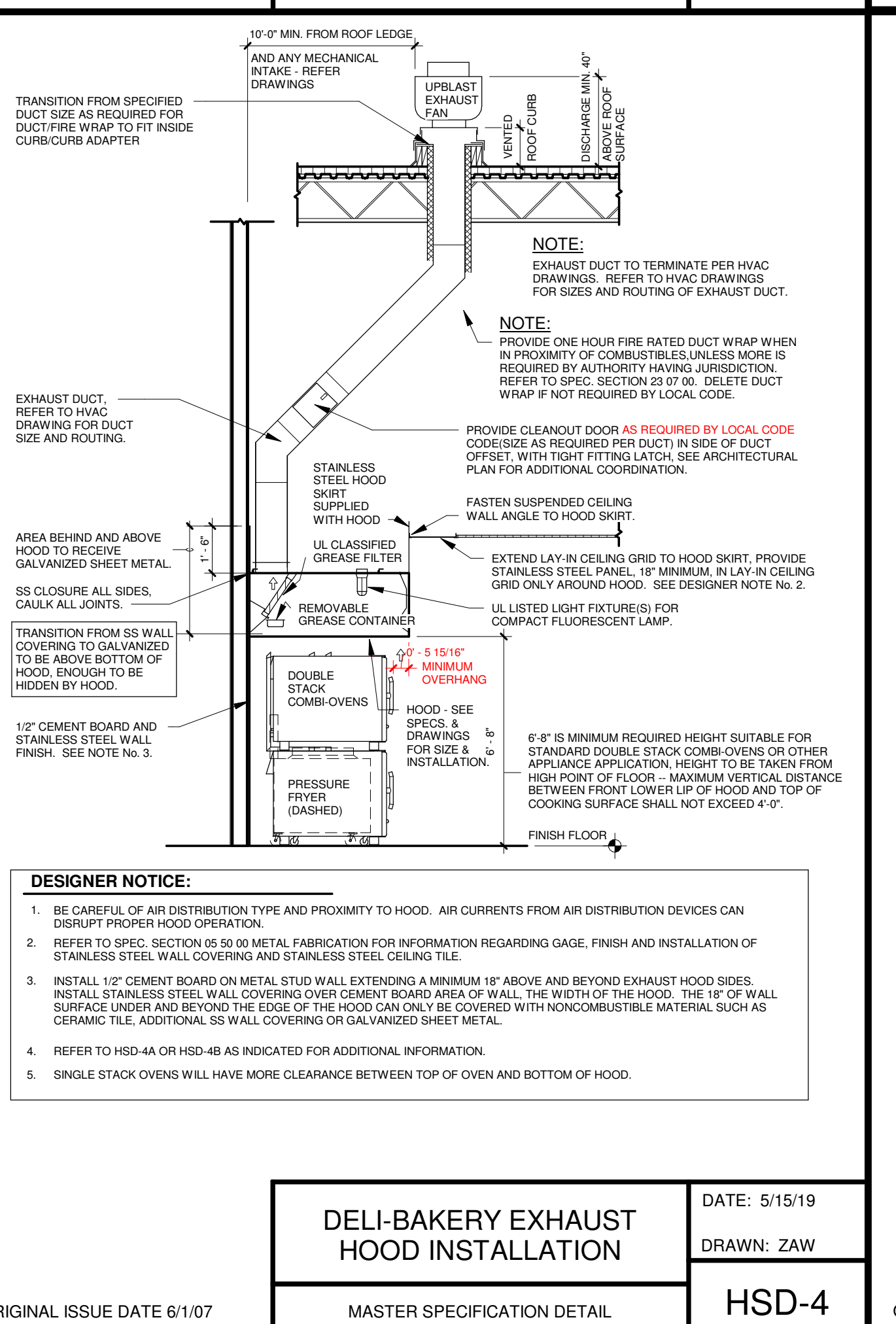
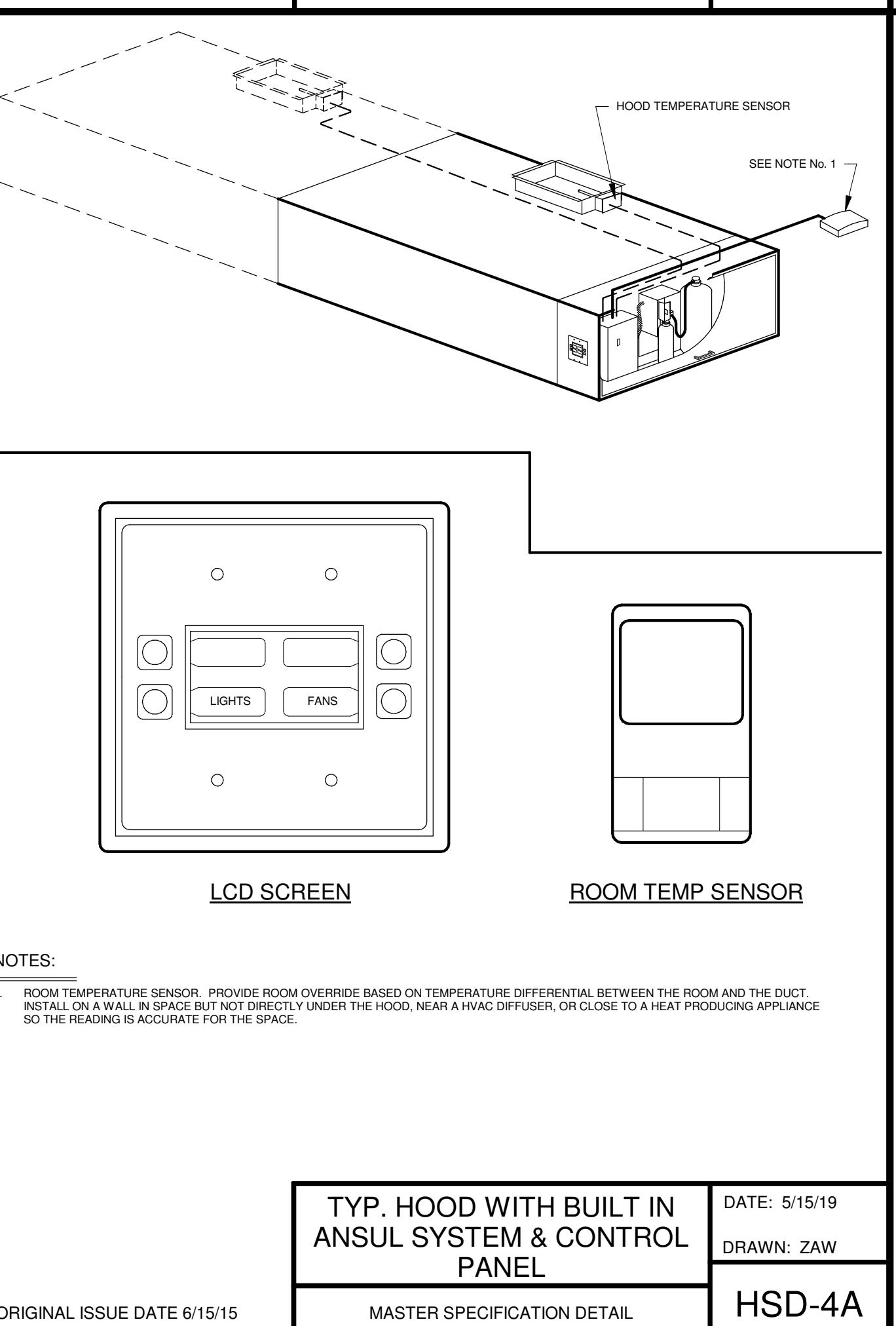
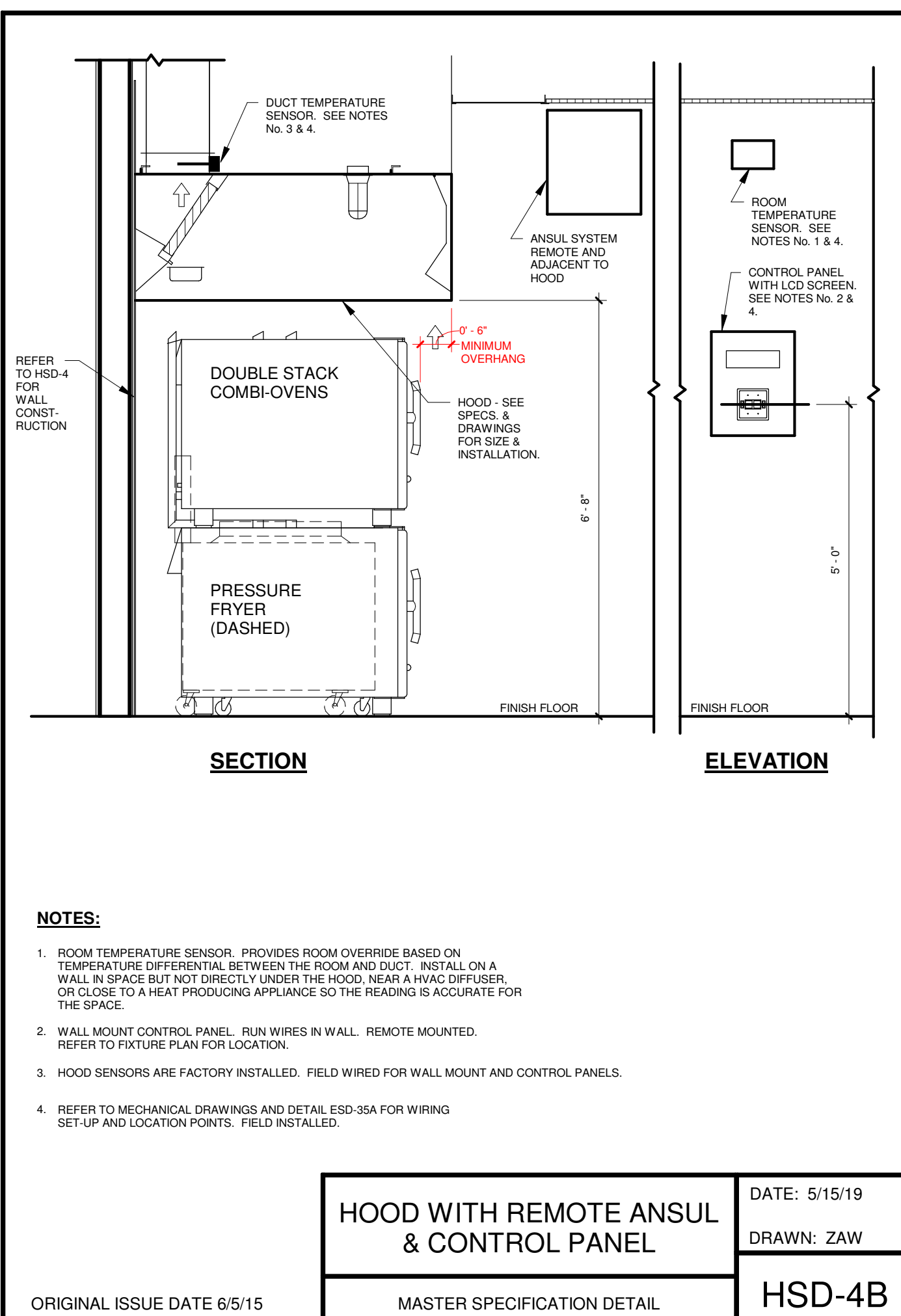
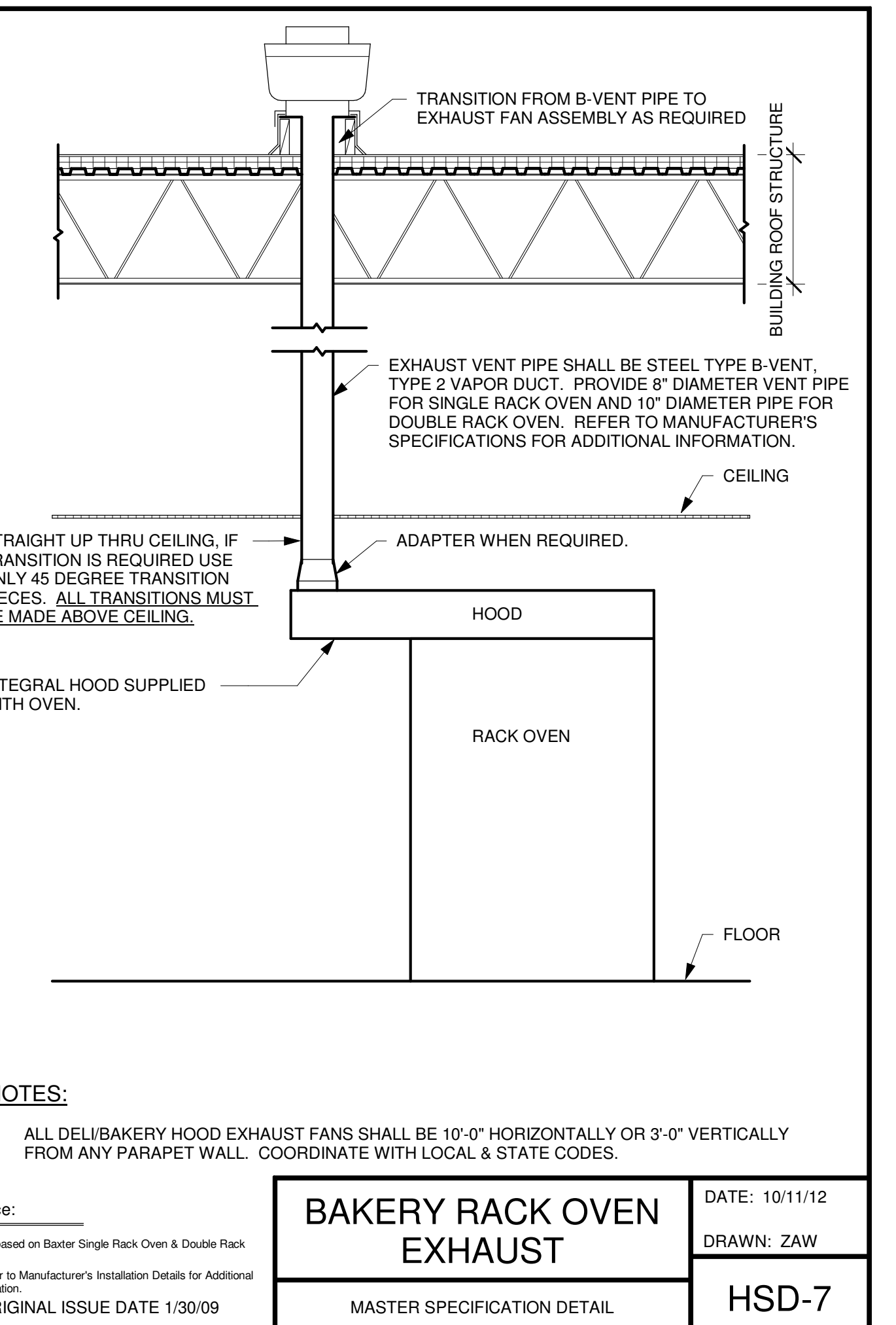
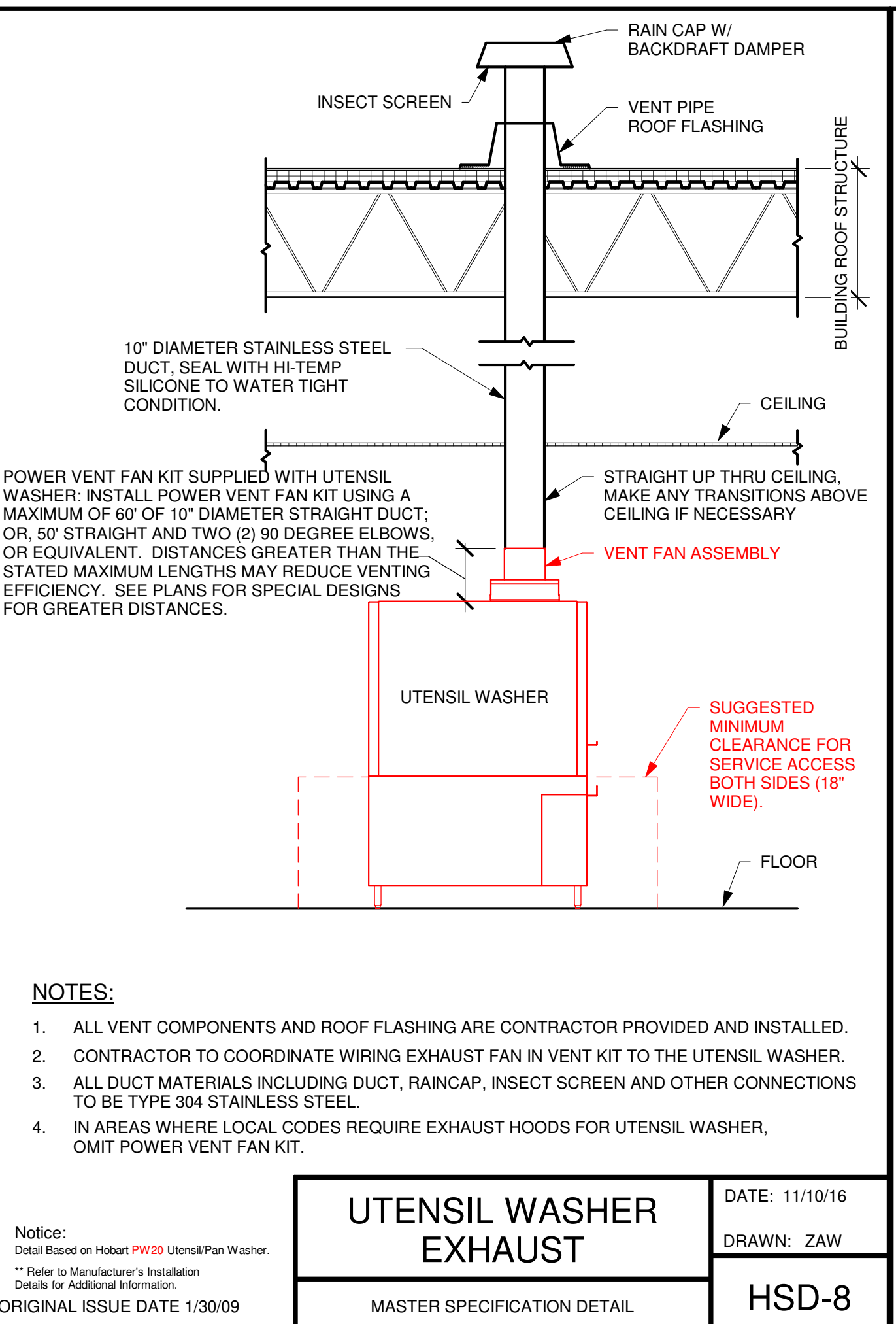
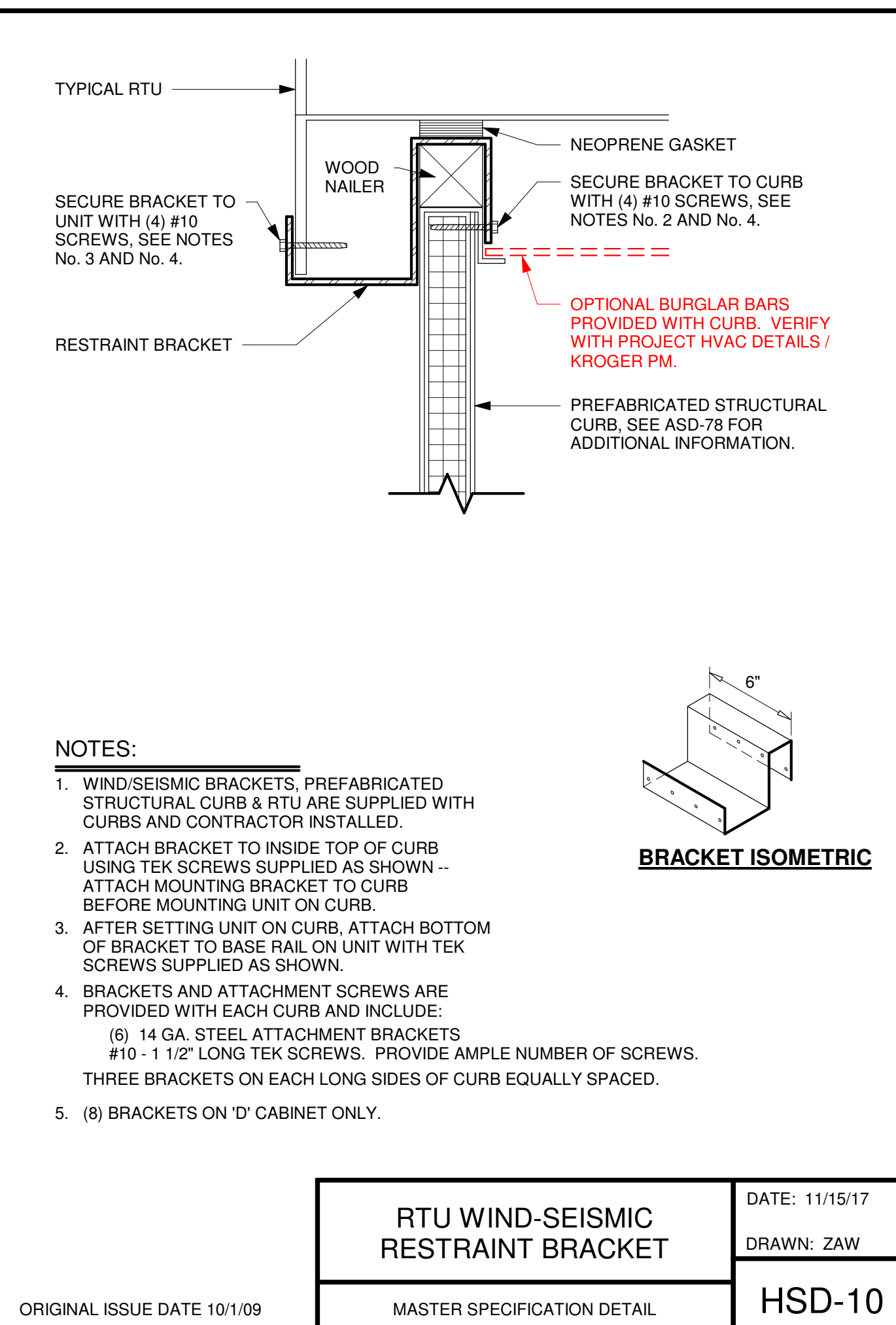
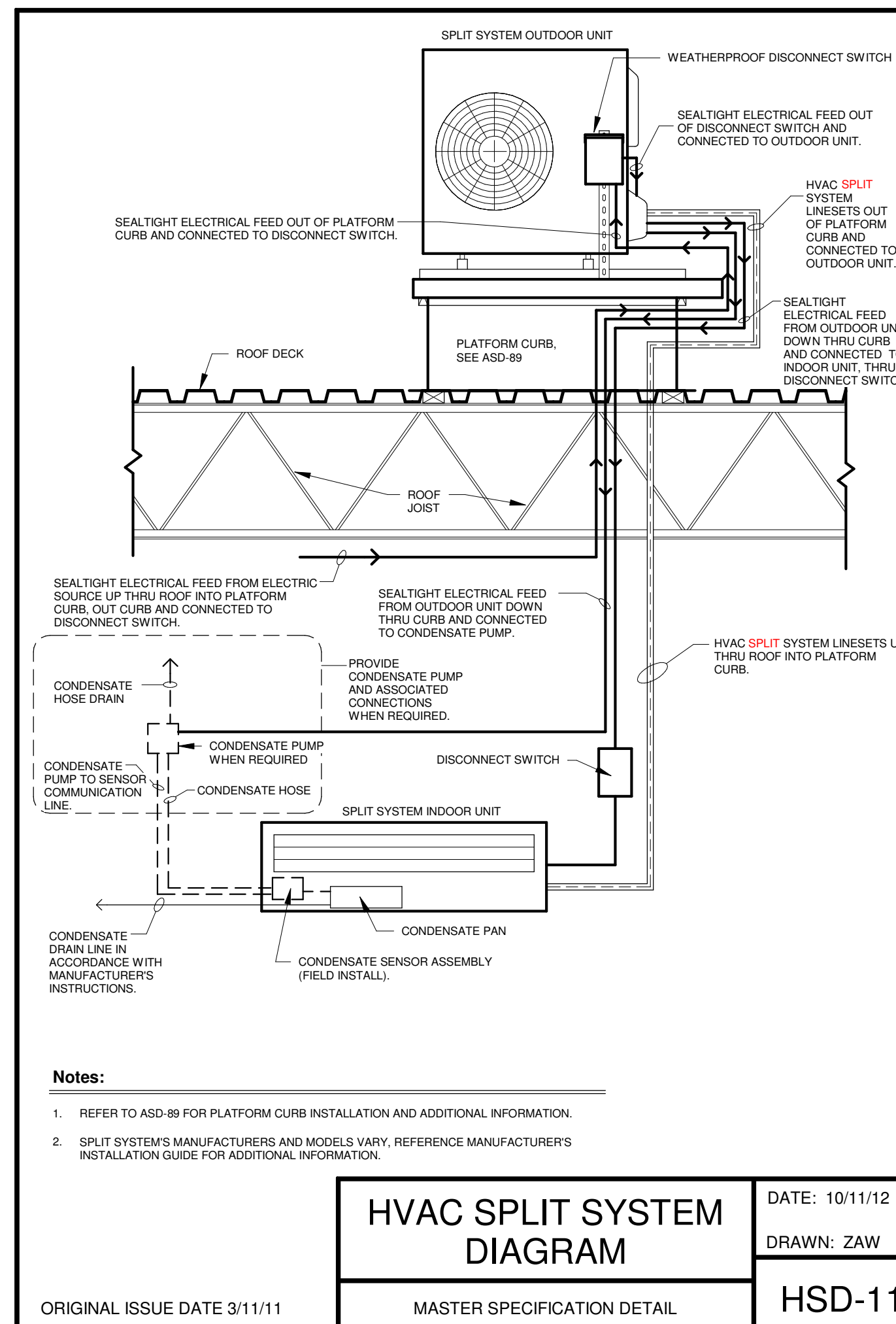
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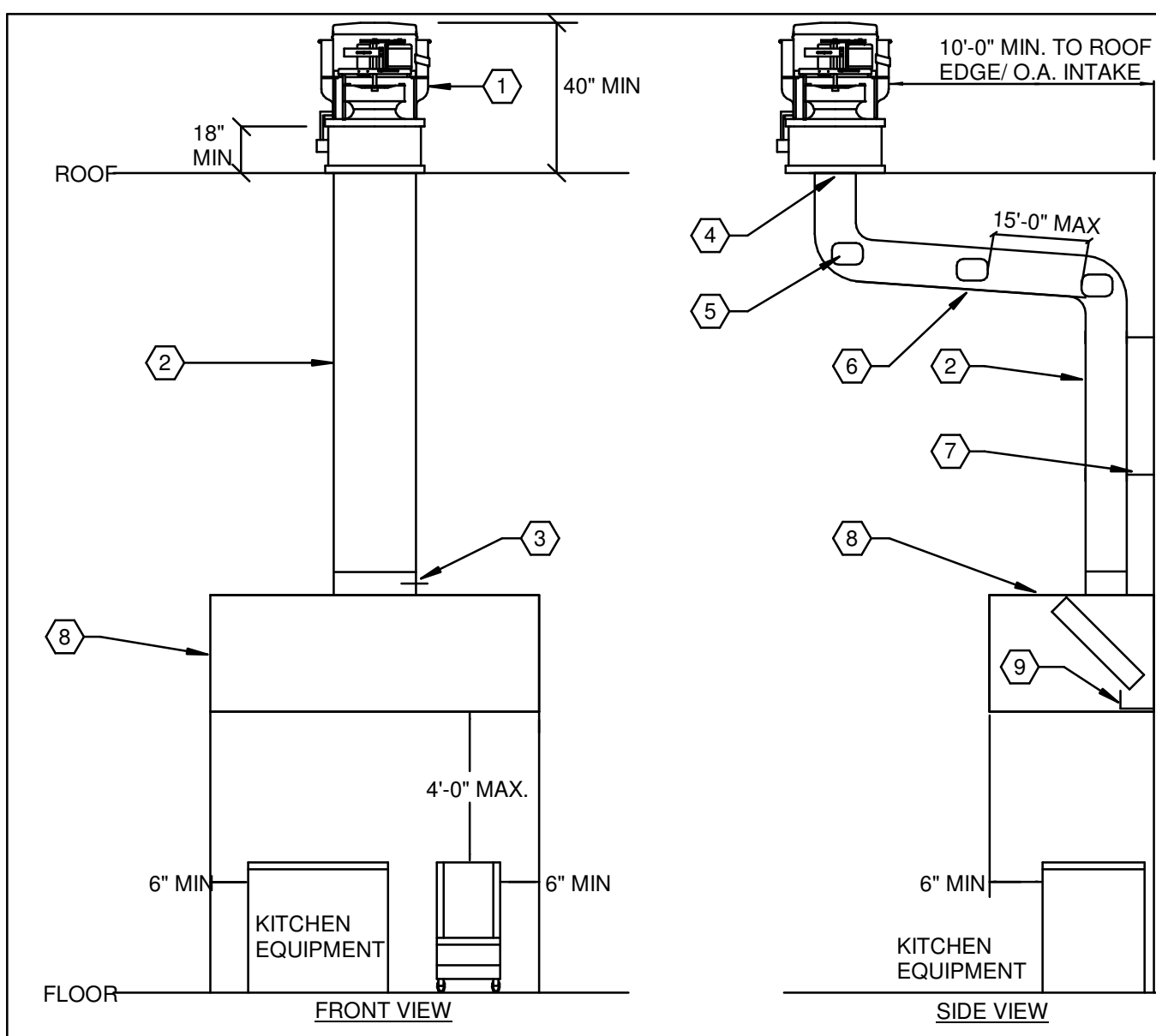
HVAC SECTIONS
AND DETAILS

SHEET NO.

M3.1.10

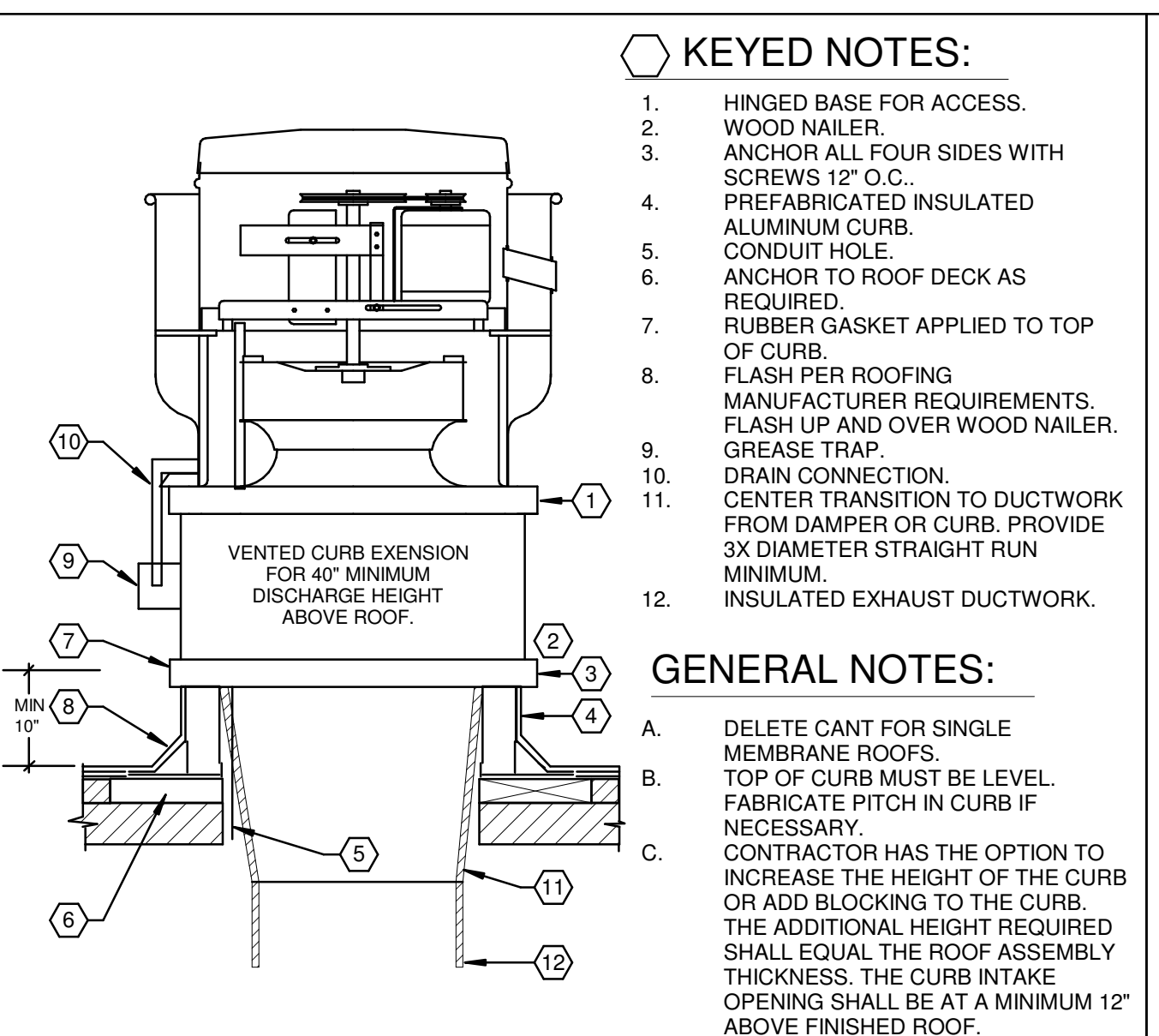
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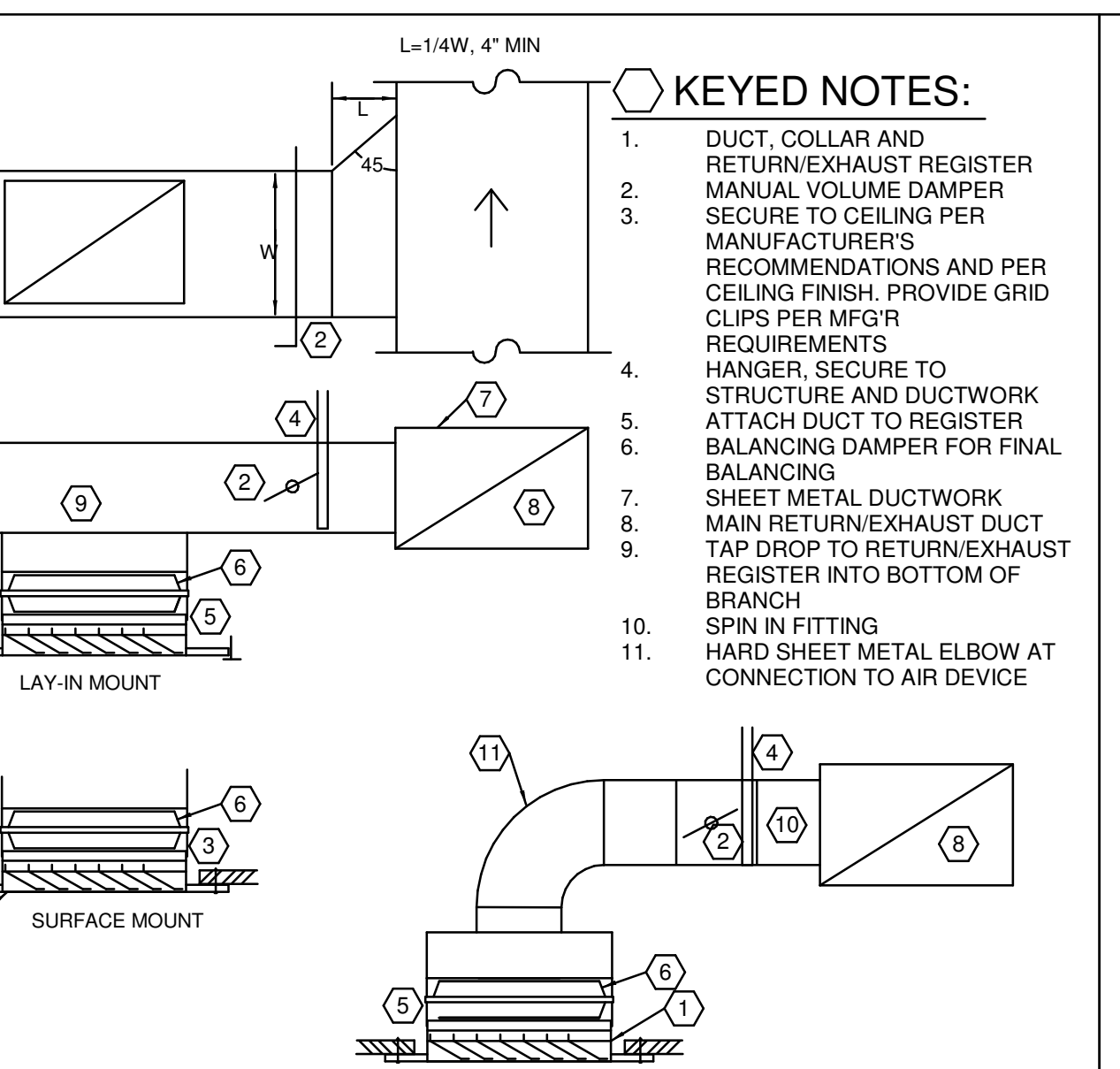


233813.00-04 - KITCHEN HOOD DETAIL UP BLAST
SCALE: NONE

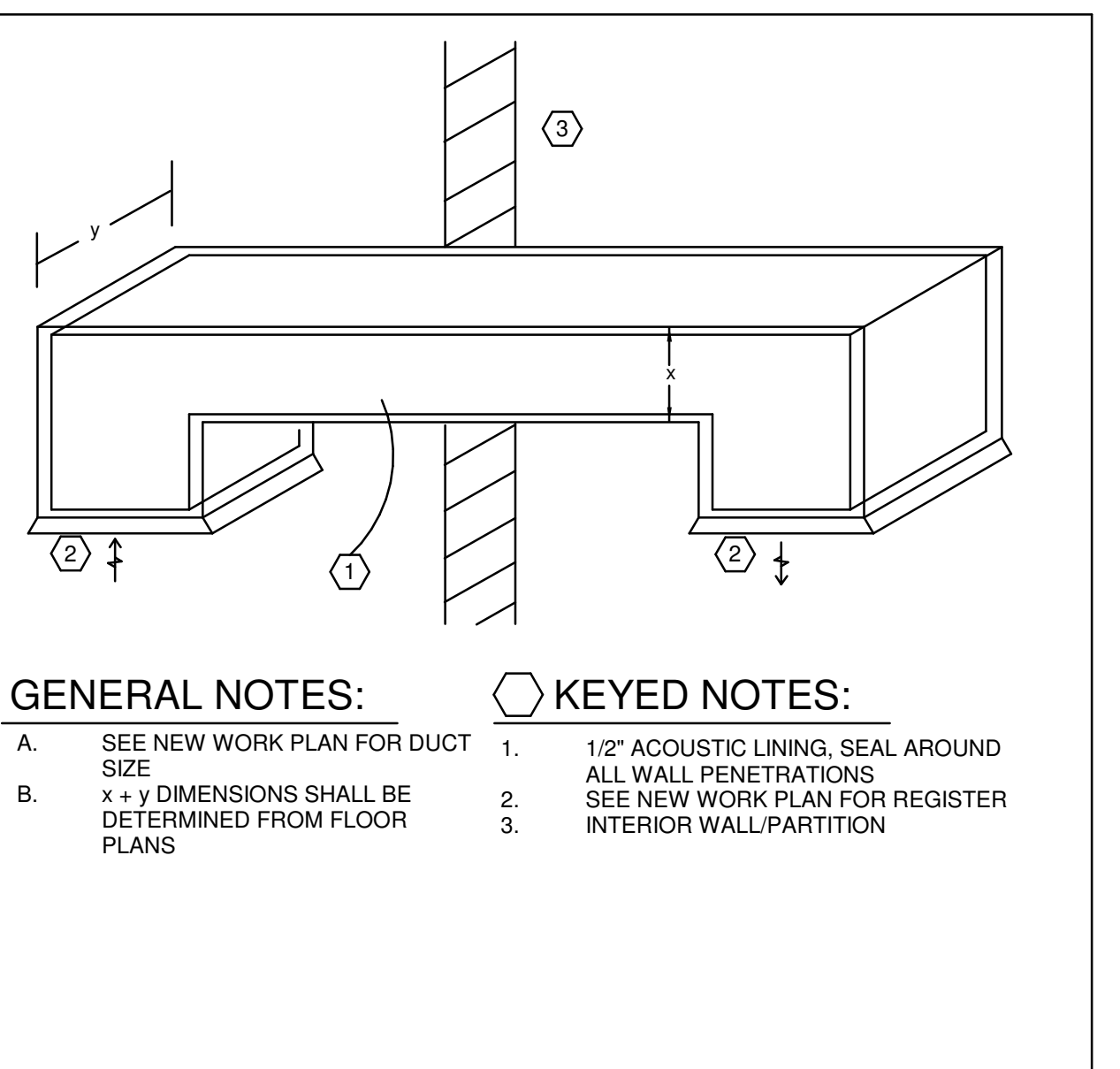
- KEYED NOTES:**
- KITCHEN EXHAUST FAN U.L. LISTED FOR GREASE (SEE KITCHEN EXHAUSTER DETAIL). FAN MOTOR SHALL BE OUT OF AIRSTREAM. PROVIDE GREASE CUP AND DRAIN.
 - 18 GAUGE INSULATED WELDED BLACK IRON OR 18 GAUGE INSULATED WELDED STAINLESS STEEL DUCTWORK WRAPPED WITH 2 LAYERS OF ZERO CLEARANCE DUCT WRAP (TYPICAL).
 - HEAT SENSOR IN EACH COLLAR INTERLOCKED TO VENTILATION SYSTEM. FLANGED & GASKETED DUCT TO EXHAUST FAN CONNECTION.
 - CLEANOUT DOOR/LATCH (12"x12" MIN.) MADE OF 16 GAUGE WELDED BLACK IRON OR 18 GAUGE WELDED STAINLESS STEEL (TYPICAL).
 - MINIMUM 2% SLOPE TOWARD HOOD WITH CLEANOUTS A MINIMUM OF EVERY 15 FEET AND CHANGE IN DIRECTION.
 - GREASE DUCT SUPPORT IS TO BE SIZED, SPACED, AND INSTALLED BY CODE.
 - HOOD WITH ANSUL SYSTEM. MAINTAIN 1" CLEARANCE TO COMBUSTIBLES.
 - GREASE DRIP TRAY.
- GENERAL NOTES:**
- TYPE HOOD SHALL BE STAINLESS STEEL, 18 GAUGE, WITH WELDED SEAMS AND U.L. LISTED EXHAUST DUCT SHALL BE 18 GA. BLACK IRON OR 18 GA. STAINLESS STEEL, FINISH #3, WITH CONTINUOUS LIQUID TIGHT WELDED JOINTS AND SEAMS.
 - AIR VELOCITY SHALL BE PER CODE AND AHJ.
 - PROVIDE INSULATION WRAP EQUAL TO 3M FIRE MASTER DUCT WRAP WITH U.L. LISTINGS OF 723, 1978, AND 1479.
 - INSULATION SHALL BE A LIGHTWEIGHT, NON-ASBESTOS, HIGH TEMPERATURE, INORGANIC, CERAMIC FIBER BLANKET TOTALLY ENCAPSULATED IN FOLIOSCRIM HAVING A SERVICE TEMPERATURE RANGE UP TO 2300 DEGREE F.
 - INSULATION SHALL BE A 2-HOUR FIRE RESISTIVE RATED GREASE AIR DUCT ENCLOSURE AS A SHAFT ALTERNATIVE AND A METHOD FOR PROVIDING ZERO INCH CLEARANCE AROUND COMMERCIAL KITCHEN GREASE DUCT EXHAUST SYSTEMS TO COMBUSTIBLE MATERIALS.
 - ALUMINUM GREASE FILTER WITH TROUGH; SHALL BE INSTALLED IN THE HOOD IN COMPLIANCE WITH CODE. FILTERS SHALL BE MOUNTED AT AN ANGLE OF 45 DEGREES MINIMUM.
 - PROVIDE STAINLESS STEEL ENCLOSURE PANEL BETWEEN TOP OF KITCHEN HOOD AND CEILING, PER LOCAL CODE REQUIREMENTS.



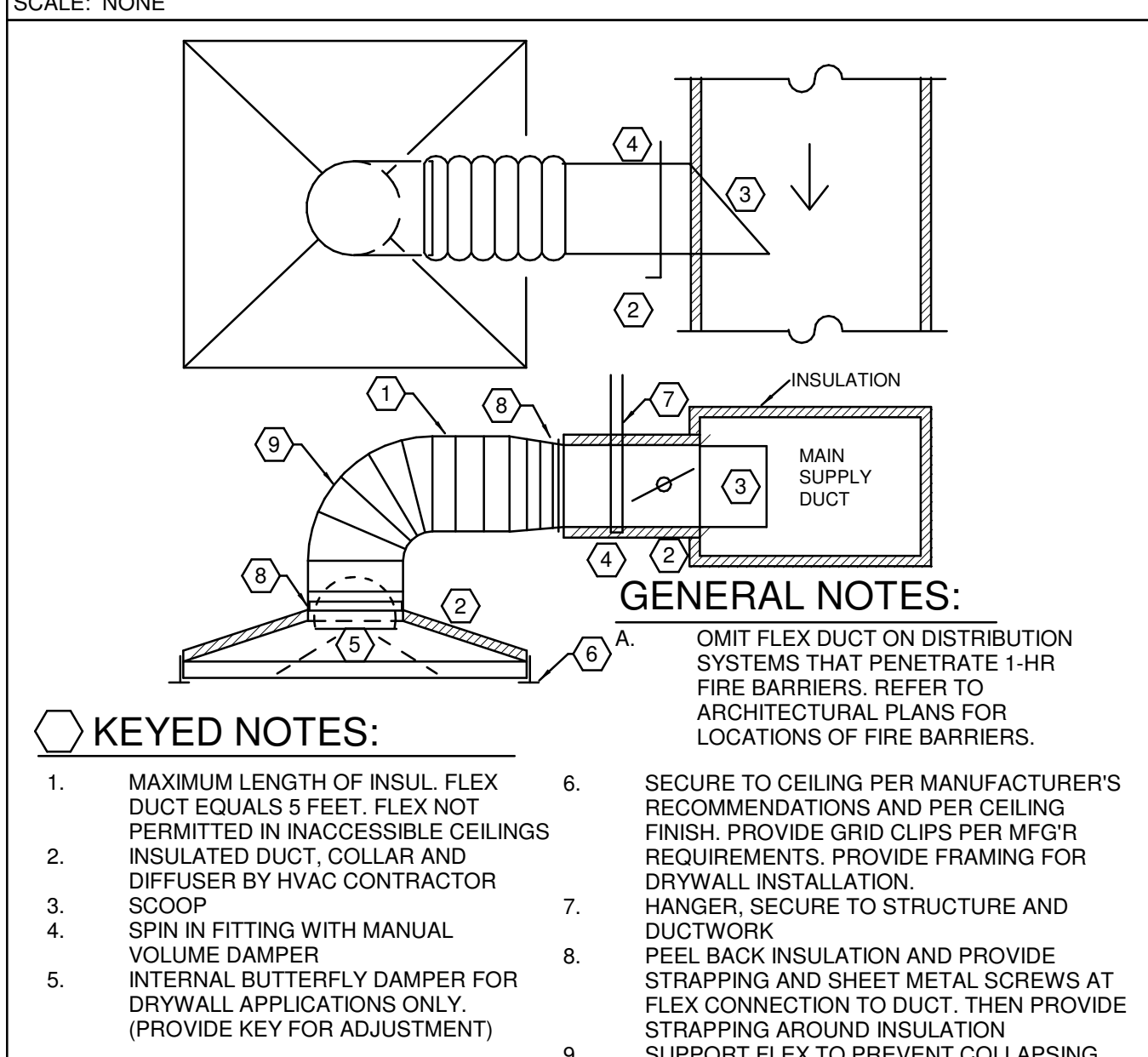
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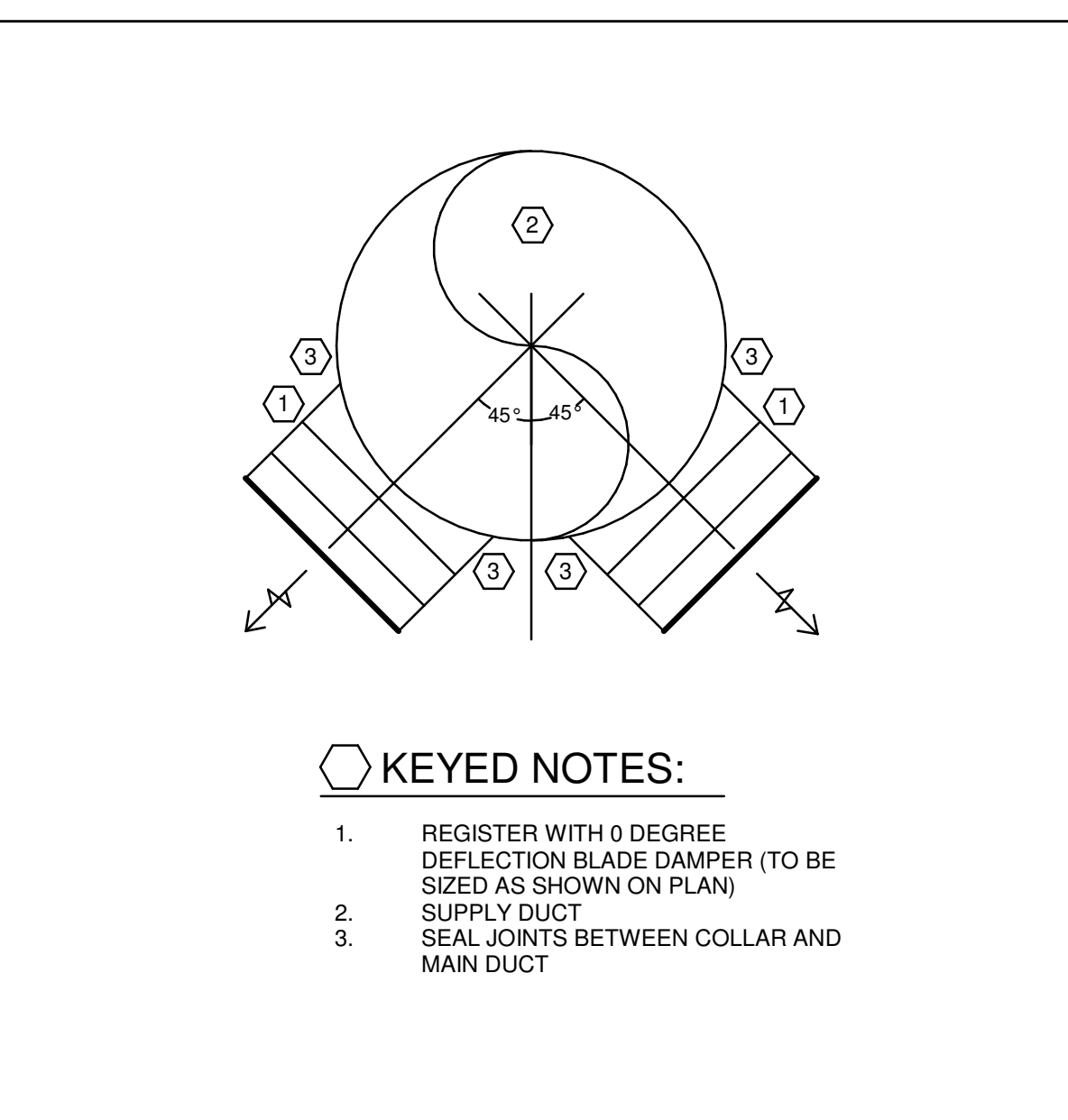
233713.00-21 - RETURN/EXHAUST REGISTER INSTALLATION
SCALE: NONE



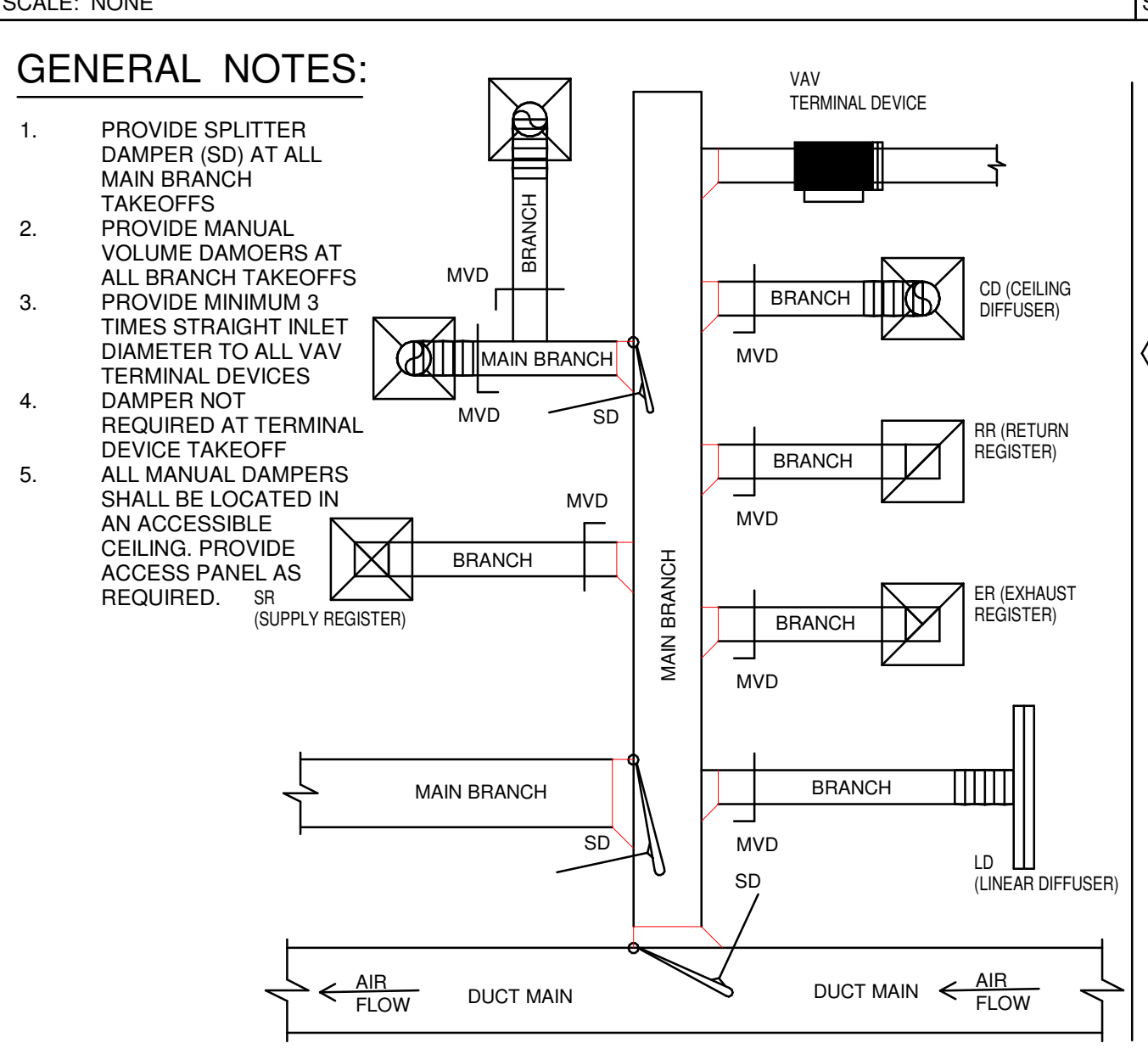
233713.00-19 - TRANSFER GRILLE
SCALE: NONE



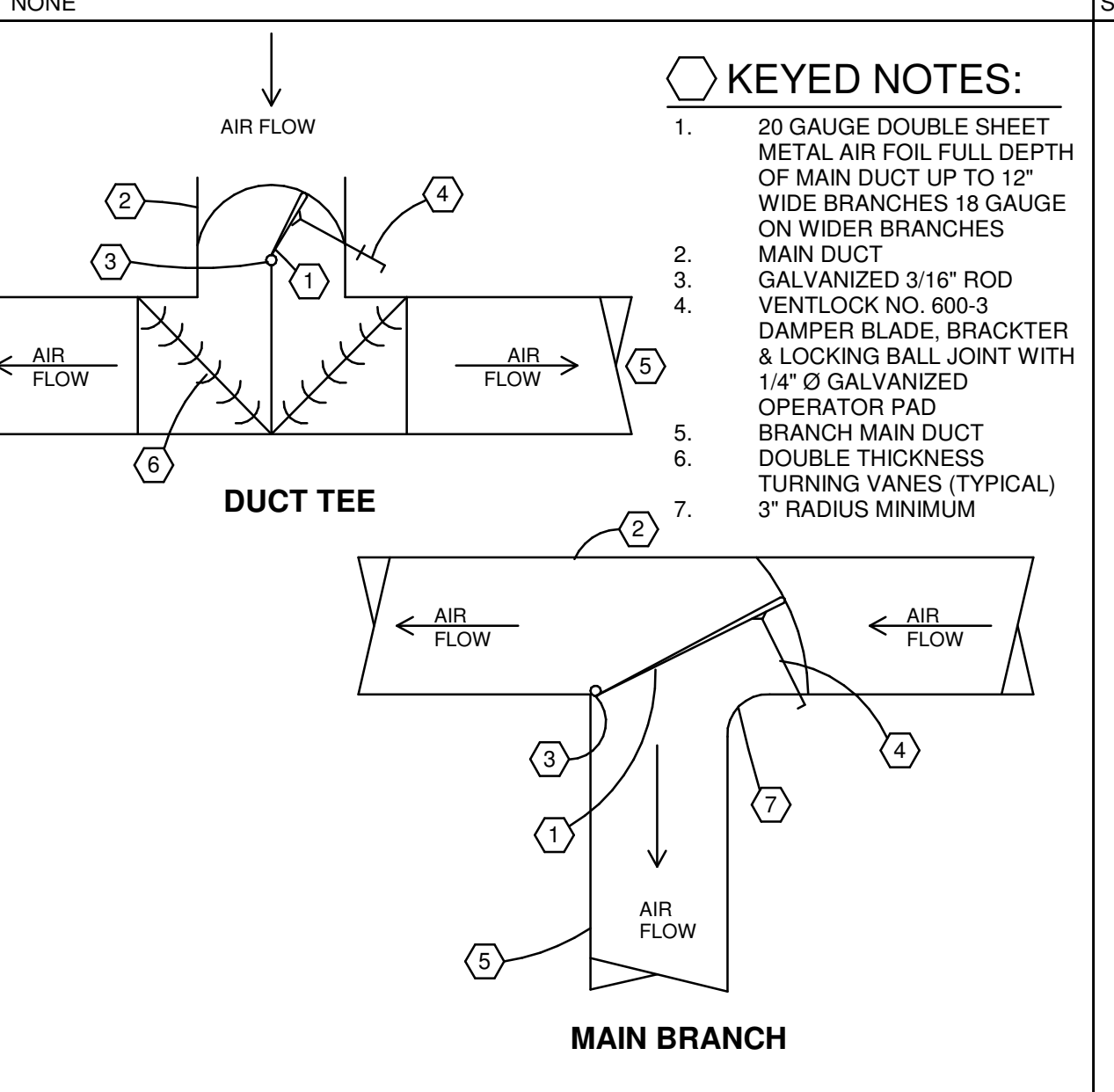
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SCALE: NONE



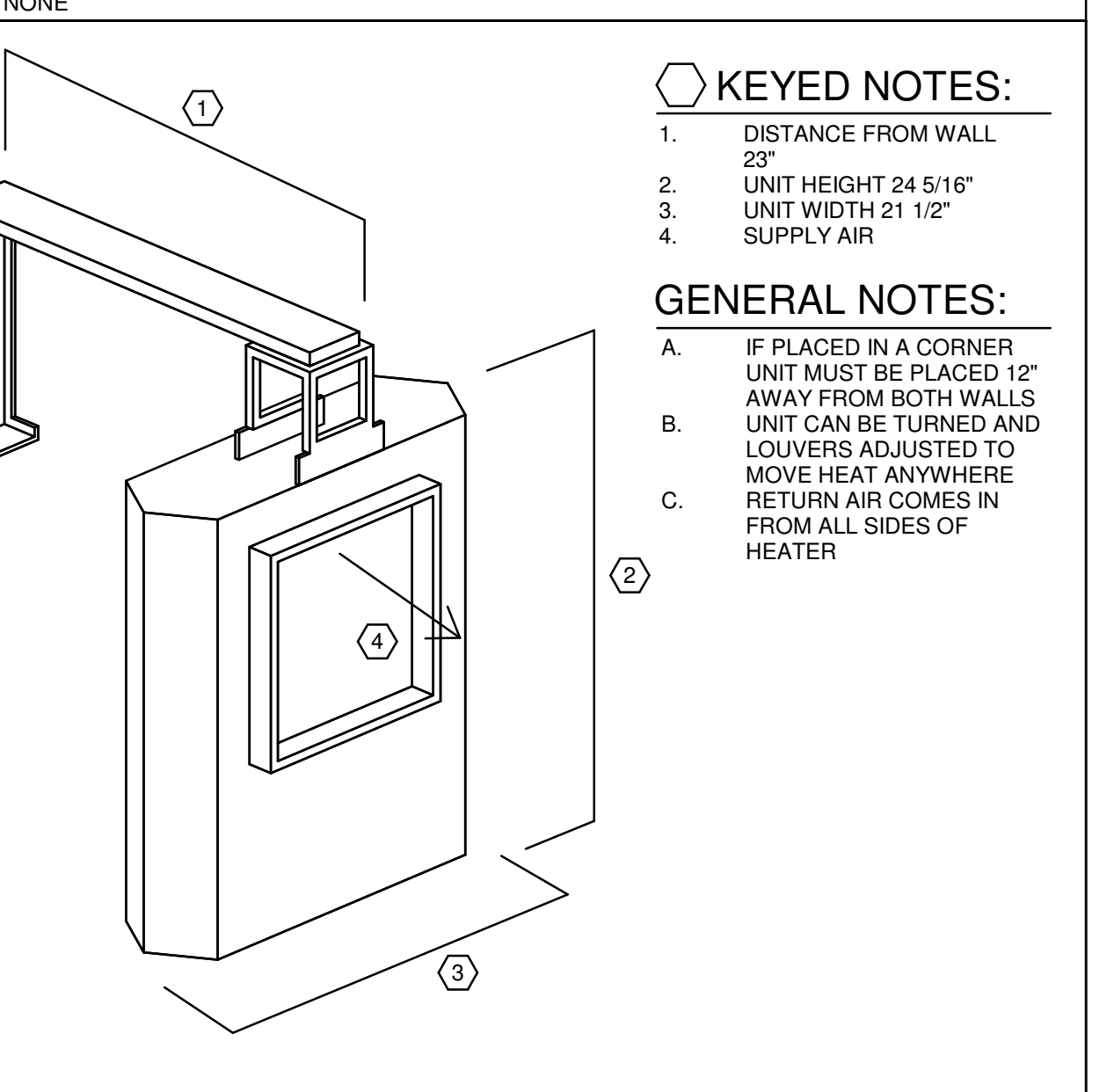
233713.00-02 - ANGLED REGISTER INSTALLATION
SCALE: NONE



233300.00-01 - MANUAL DAMPER DETAIL
SCALE: NONE



233300.00-01 - MANUAL DAMPER DETAIL
SCALE: NONE



238239.00-01 - ELECTRIC UNIT HEATER MOUNTING A
SCALE: NONE

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