

**HOOD INFORMATION – JOB#5947161**

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG				
										WIDTH	LENG	HEIGHT	DIA			CFM	VEL	SP	END TO END	ROW
1	HD 1 A	5424 ND-2-PSP-F	CAPTIVEAIRE	7' 0"	600 DEG	I	HEAVY	220	1540			4'	14"	1540	1441	-0.756"	1275	430 SS WHERE EXPOSED	LEFT	ALONE
2	HD 1 B	5424 ND-2-PSP-F	CAPTIVEAIRE	9' 6"	600 DEG	I	HEAVY	200	1900			4'	14"	1900	1777	-0.990"	1482	430 SS WHERE EXPOSED	RIGHT	ALONE
3	HD 2 OVEN	5424 VHB-G	CAPTIVEAIRE	5' 0"	700 DEG	II	N/A	125	625			4'	10"	625	1146	-0.079"	0	430 SS 100%	ALONE	ALONE

**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**

HOOD NO	TAG	TYPE	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT	
			QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #			SWITCHES QUANTITY
1	HD 1 A	CAPTRATE SOLID FILTER	5	16"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0/4.0			YES	840 LBS
2	HD 1 B	CAPTRATE SOLID FILTER	7	16"	16"	85% SEE FILTER SPEC	5	L55 SERIES E26	NO	RIGHT	12"x54"x24"			DCV-2111	1 LIGHT 1 FAN	YES	698 LBS
3	HD 2 OVEN						0								NO	217 LBS	

**HOOD OPTIONS**

HOOD NO	TAG	OPTION
1	HD 1 A	FIELD WRAPPER 17.00' HIGH FRONT, LEFT.
		BACKSPLASH 80.00" HIGH X 222.00" LONG 430 SS VERTICAL.
		BACKSPLASH 80.00" HIGH X 222.00" LONG 430 SS VERTICAL.
		BACKSPLASH 80.00" HIGH X 222.00" LONG 430 SS VERTICAL.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS. SENSOR-CV.
2	HD 1 B	FIELD WRAPPER 17.00' HIGH FRONT, RIGHT.
		BACKSPLASH - OUTSIDE CORNER 120.00" HIGH X 2.00" LEG LENGTH 430 SS VERTICAL.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS. SENSOR-CV.
3	HD 2 OVEN	FIELD WRAPPER 18.00' HIGH FRONT, LEFT, RIGHT.

**SPECIFICATION: CAPTRATE® GREASE-STOP® SOLID FILTER**

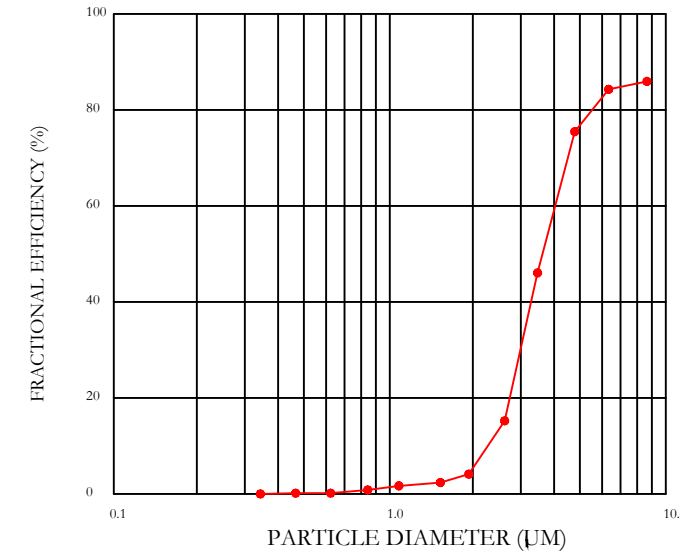
THE CAPTRATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

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

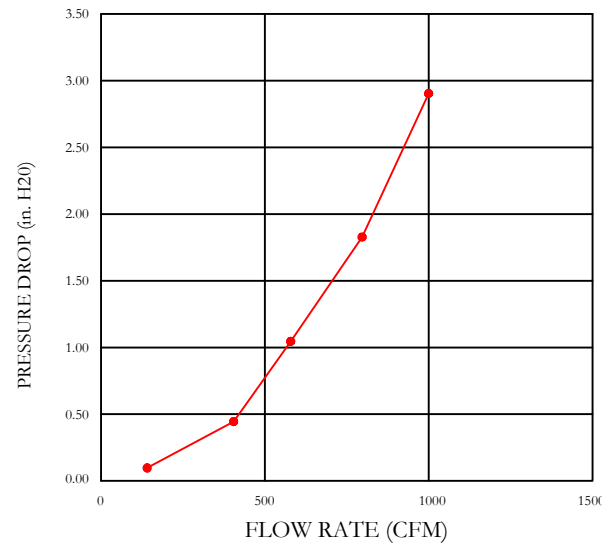
UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

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.

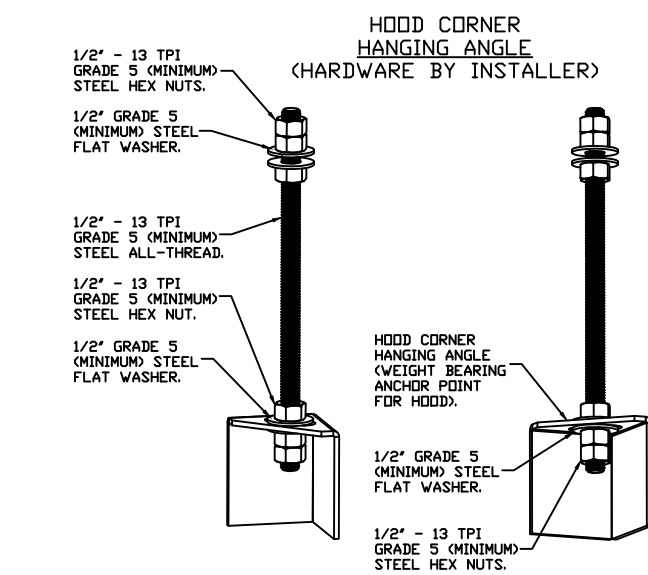
EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE

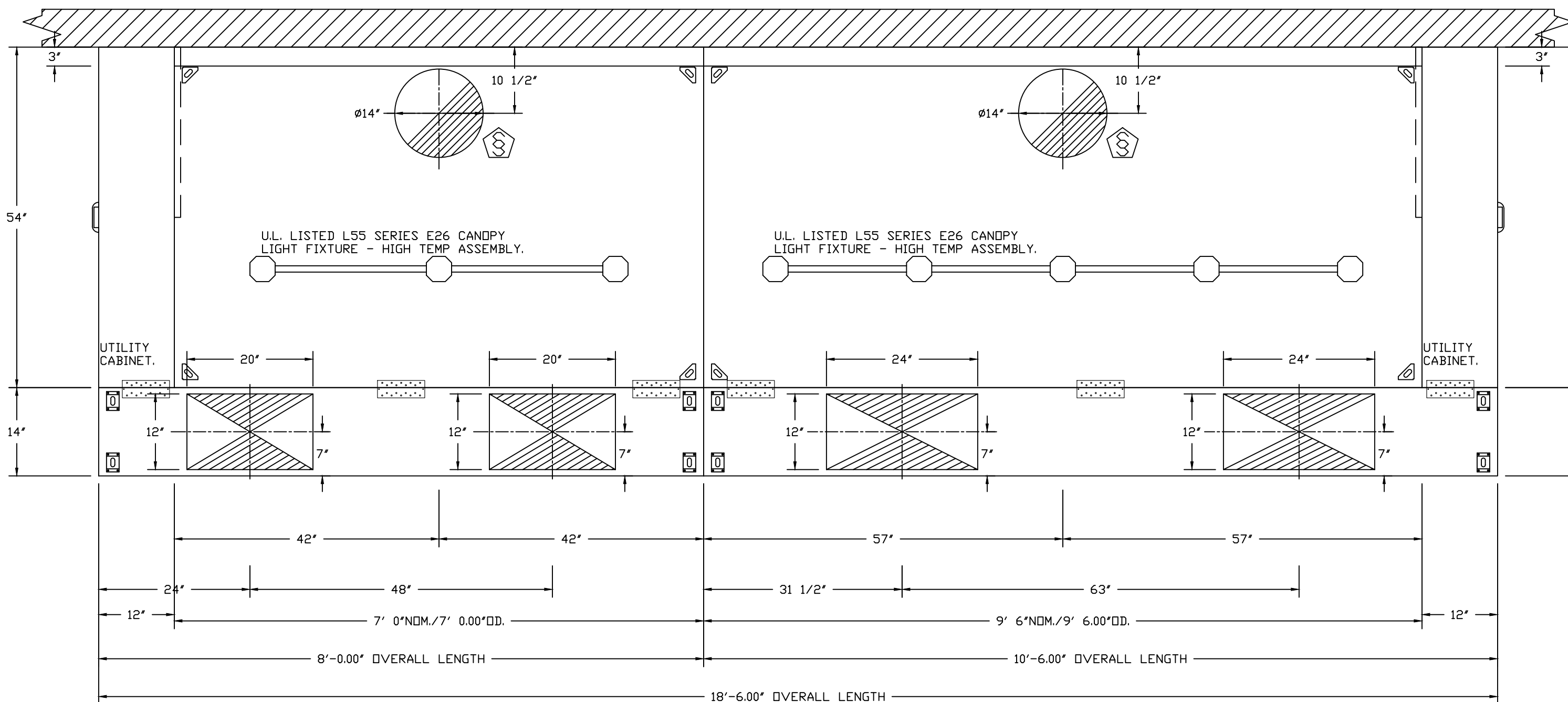


CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:  
 NFPA #96.  
 NSF STANDARD #2.  
 UL STANDARD #1046.  
 INT. MECH. CODE (IMC).  
 ULC-S649.

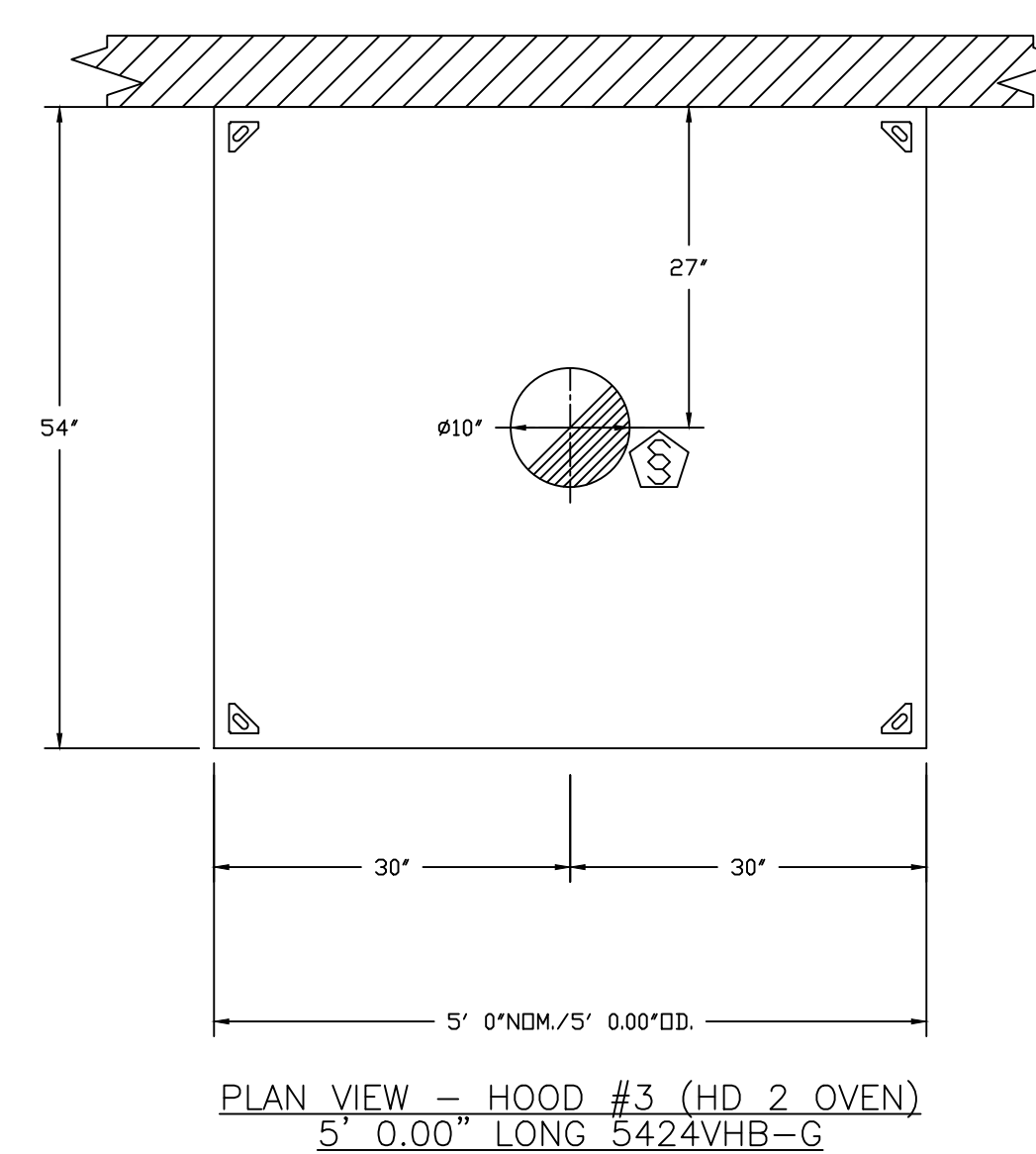


**ASSEMBLY INSTRUCTIONS**

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.



PLAN VIEW – HOOD #1 (HD 1 A)  
 7' 0.00" LONG 5424ND-2-PSP-F

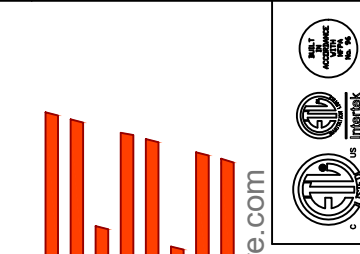


PLAN VIEW – HOOD #3 (HD 2 OVEN)  
 5' 0.00" LONG 5424VHB-G

PLAN VIEW – HOOD #2 (HD 1 B)  
 9' 6.00" LONG 5424ND-2-PSP-F

**REVISIONS**

DESCRIPTION	DATE



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 PHONE: (513) 860-5555  
 EMAIL: req12@captivaire.com  
 www.captivaire.com

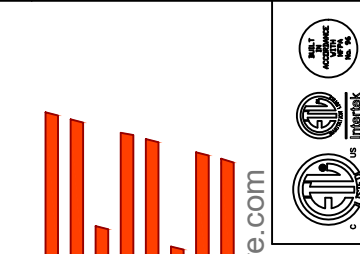
50 West (Deerfield)  
 CINCINNATI, OH, 45246

DATE: 4/12/2023  
 DWG.#: 5947161  
 DRAWN BY: jcirilli  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING

SHEET NO.  
 1

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**CAPTIVE AIR SOLUTIONS**  
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 CINCINNATI, OH, 45246

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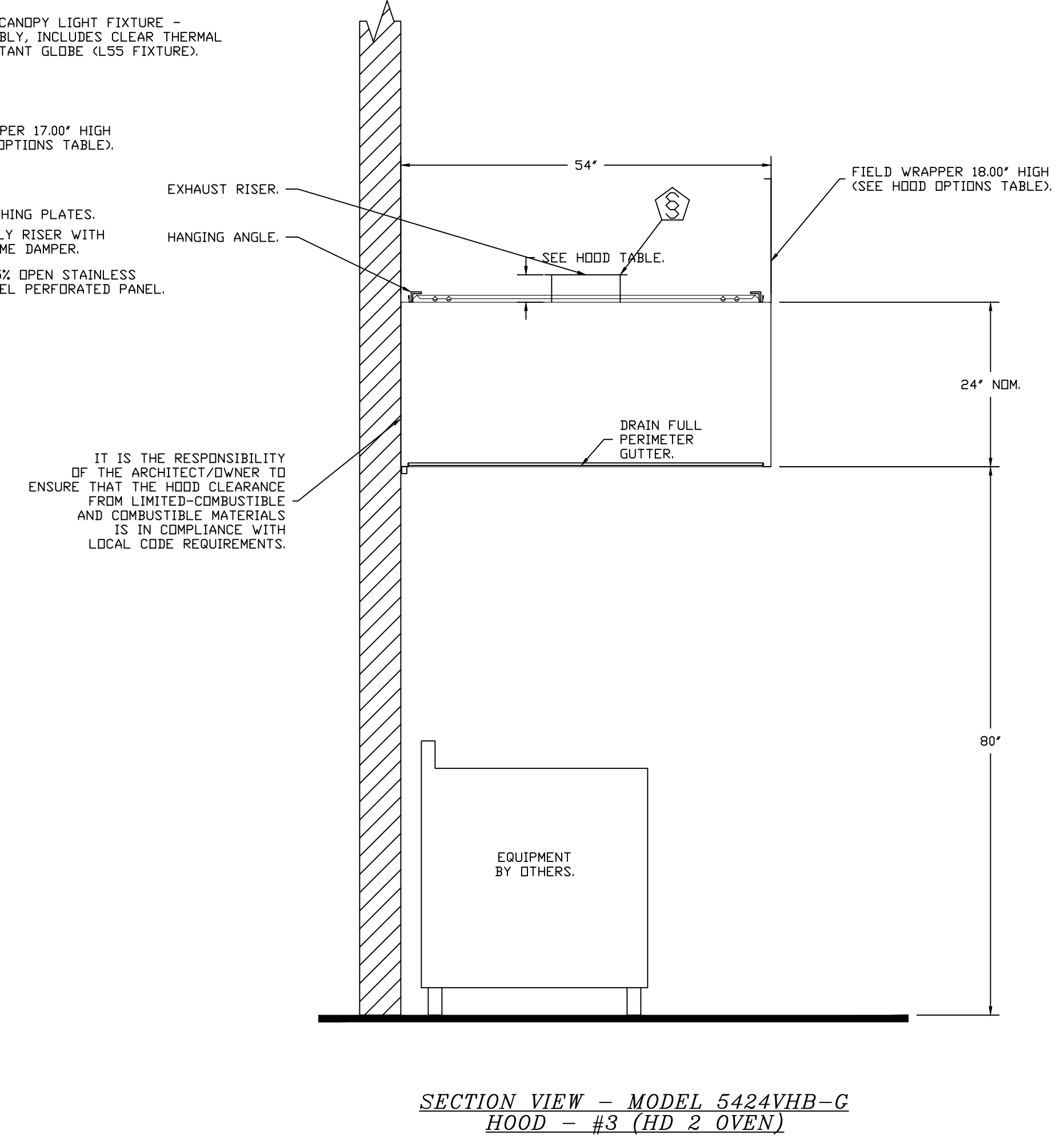
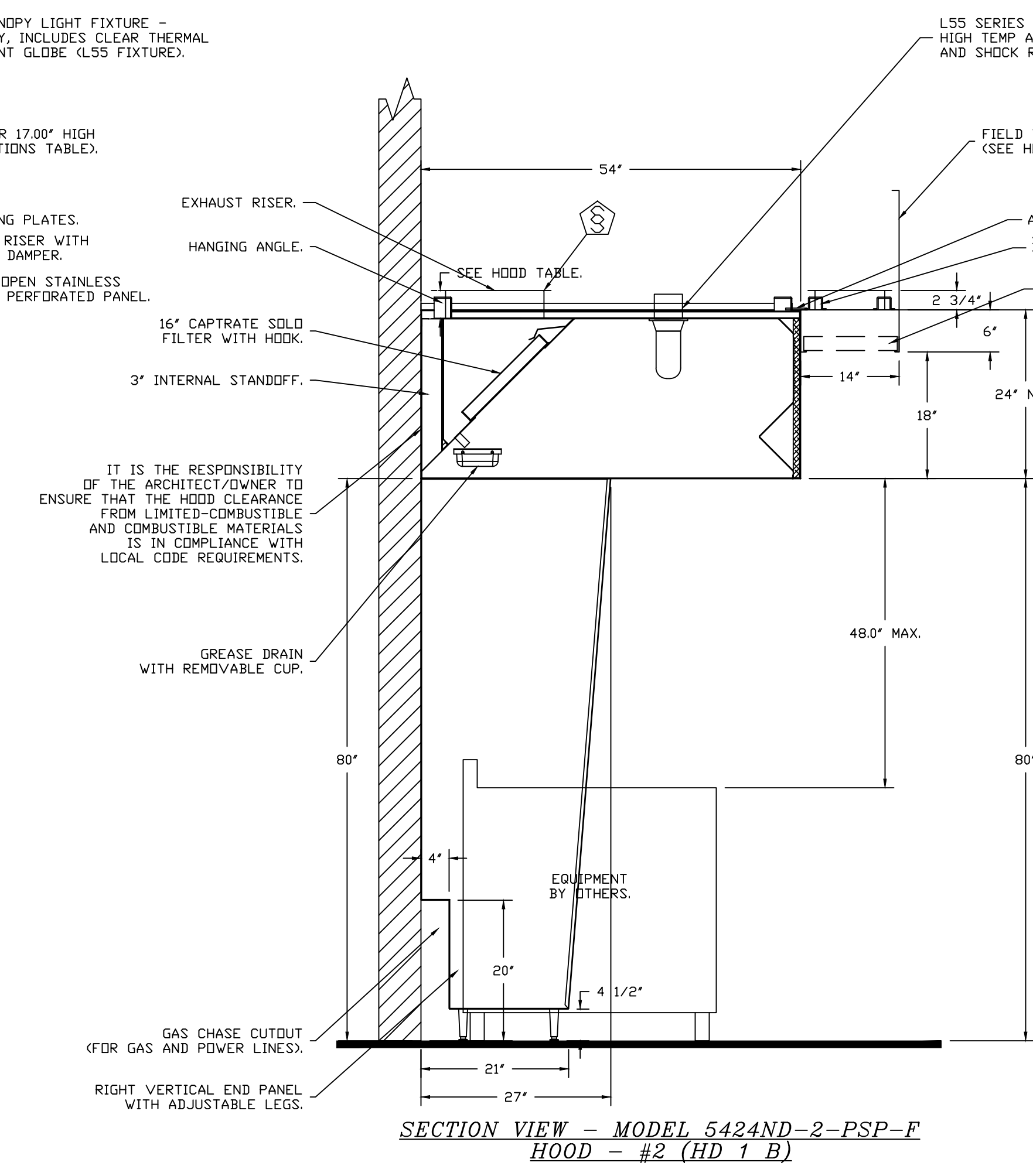
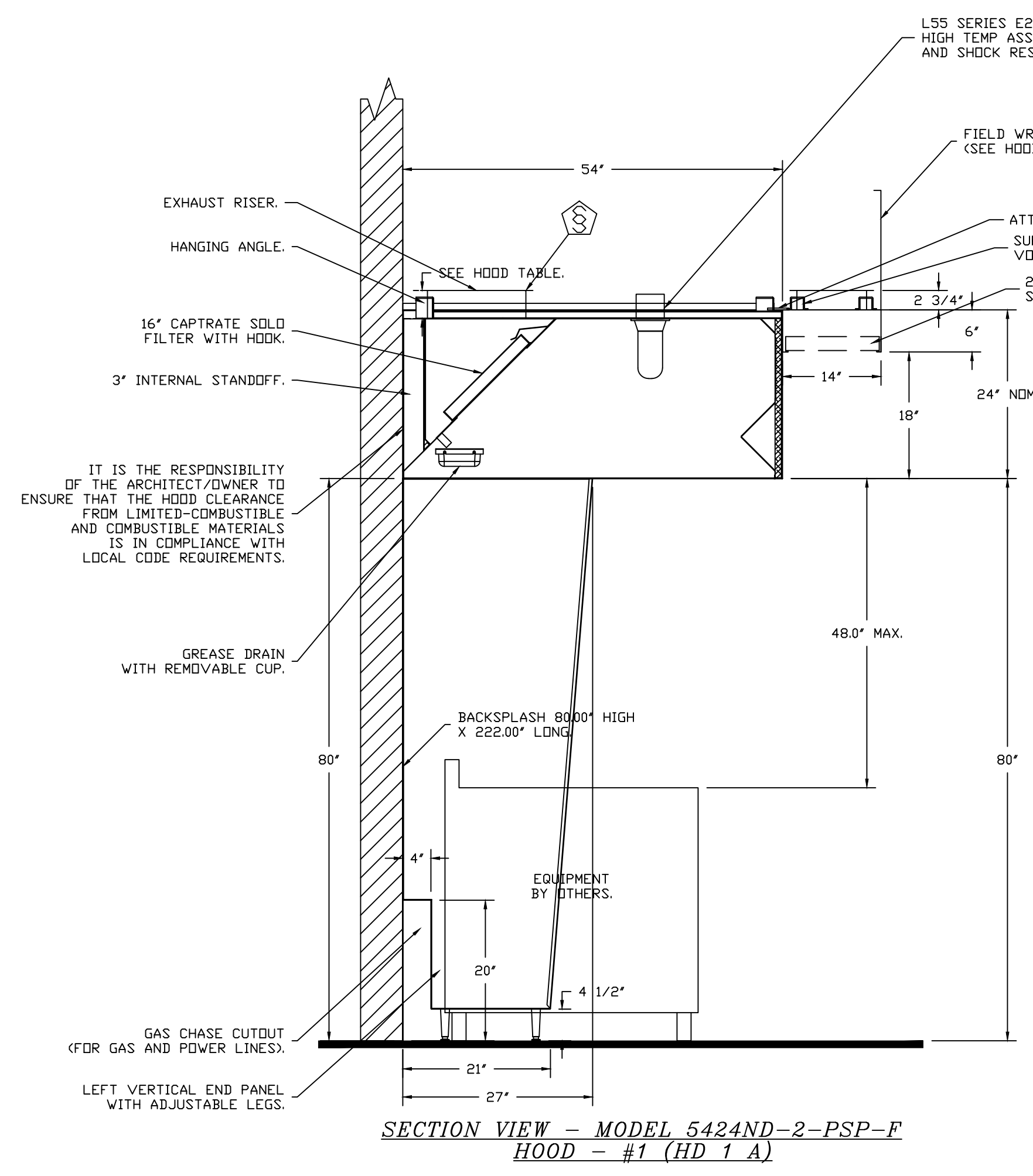
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**MASTER DRAWING**

**SHEET NO.**  
2



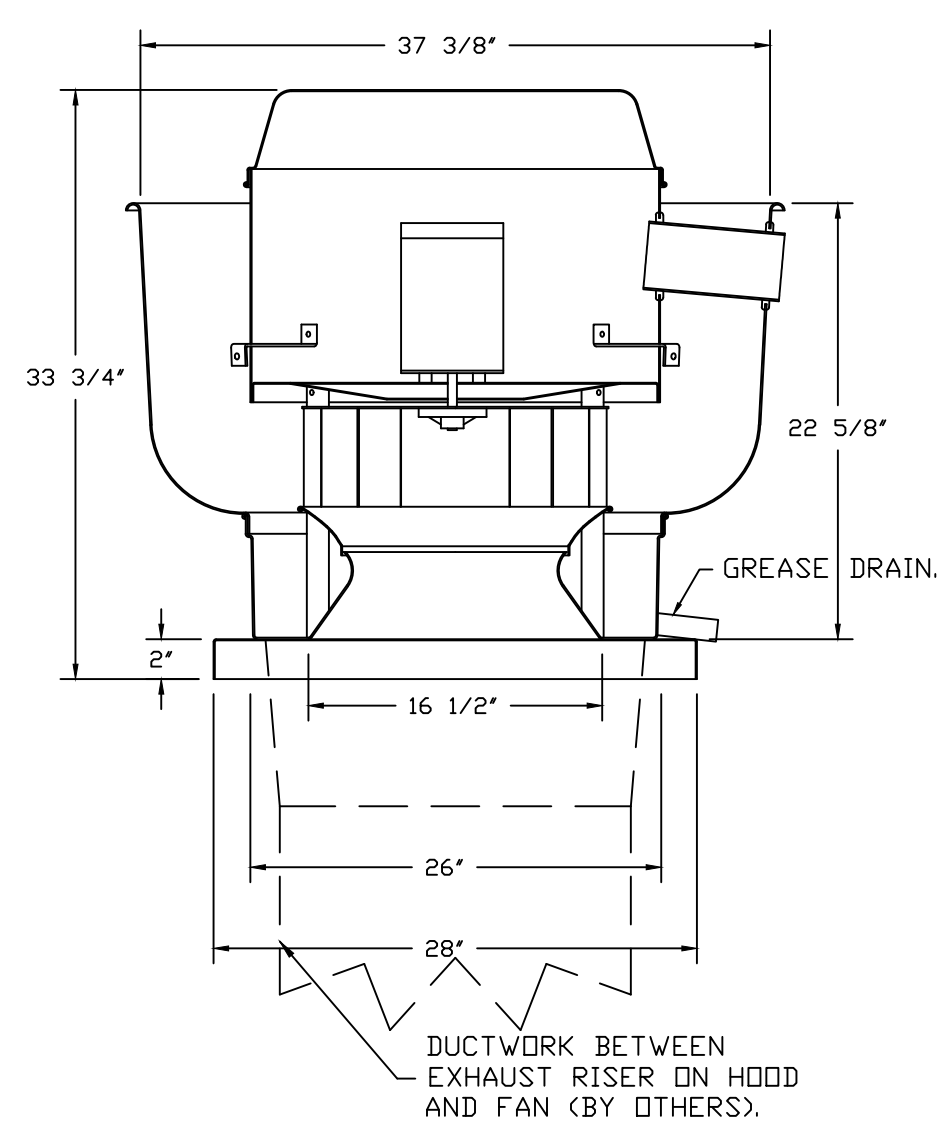
**EXHAUST FAN INFORMATION – JOB#5947161**

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	KEF1	1	DUI80HFA	CAPTIVEAIRE	1540	1.200	1045	DDP,PREMIUM	1.500	0.6920	3	208	4.4	356 FPM	166	10.8
2	KEF2	1	DUI80HFA	CAPTIVEAIRE	1900	1.250	1088	DDP,PREMIUM	2.000	0.8400	3	208	6.1	439 FPM	164	11.8
3	KEF3-DVEN	1	DU33HFA	CAPTIVEAIRE	625	0.850	1517	TEAD-ECM	0.333	0.2110	1	115	4.3	309 FPM	64	15.9

**FAN OPTIONS**

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – SHIP LOOSE – FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
2	KEF2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL – SHIP LOOSE – FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
3	KEF3-DVEN	1	ECM WIRING PACKAGE – MANUAL DR 0-10VDC REFERENCE SPEED CONTROL –RTC- (TELCD MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
		1	INLET PRESSURE GAUGE, 0-35"
4	KMUA	1	MANIFOLD PRESSURE GAUGE, -5 TO 15" WC
		1	BUTTERFLY MOD VALVE OPTION FOR MOD SIZE 2 (1" MOD VALVE)
		1	MOTORIZED BACKDRAFT DAMPER FOR A2-D HOUSING – MEETS AMCA CLASS 1A RATING
		1	5 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 2 DF/EH MUA (2,000 TO 3,000 CFM), 208V/230V, 3 PHASE. COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION
		1	DOWNTURN PLENUM FOR SIZE 2 DX COIL MODULE
		1	SIZE 2 DIRECT FIRED HEATER LOW CFM PROFILE PACKAGE – USED ON HEATERS UNDER 2500 CFM
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) – THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY

FANS #1 (KEF1), #2 (KEF2) – DUI80HFA EXHAUST FAN



**FEATURES:**

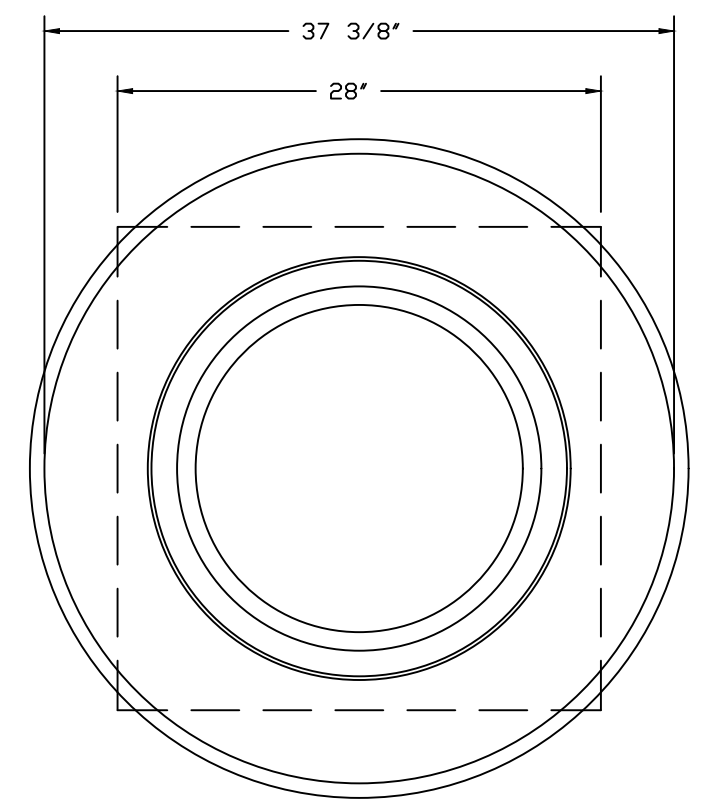
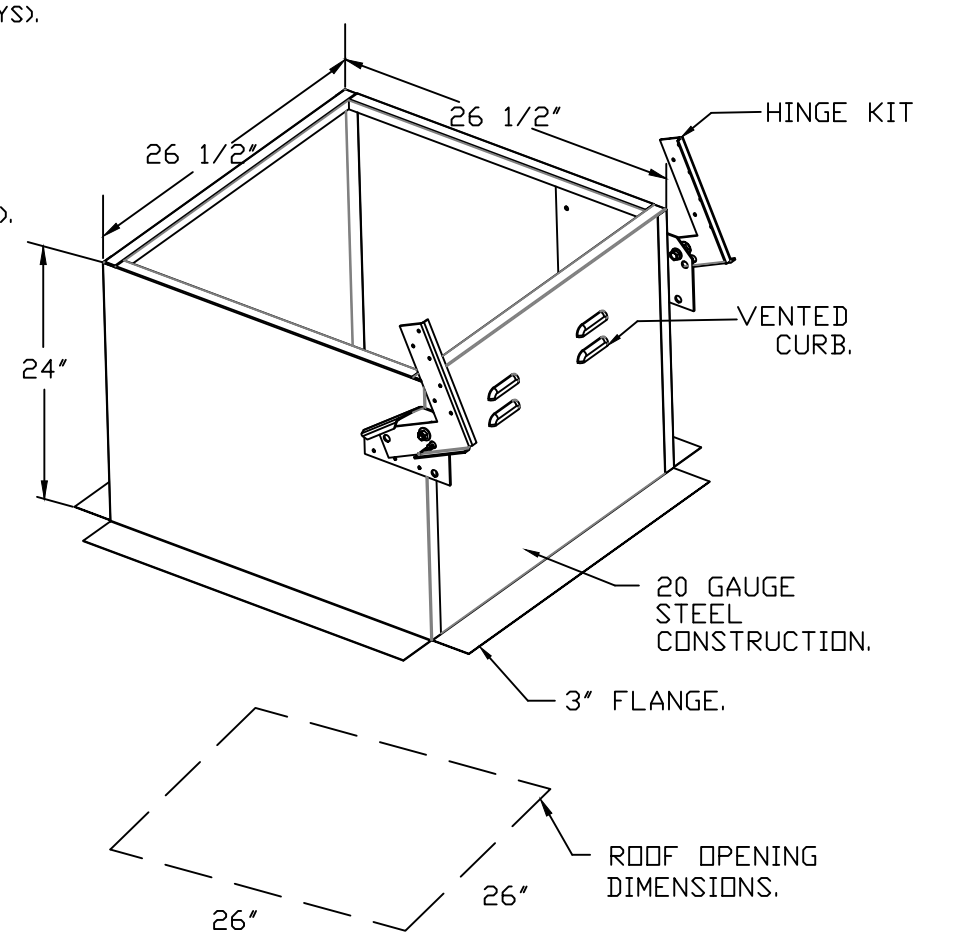
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

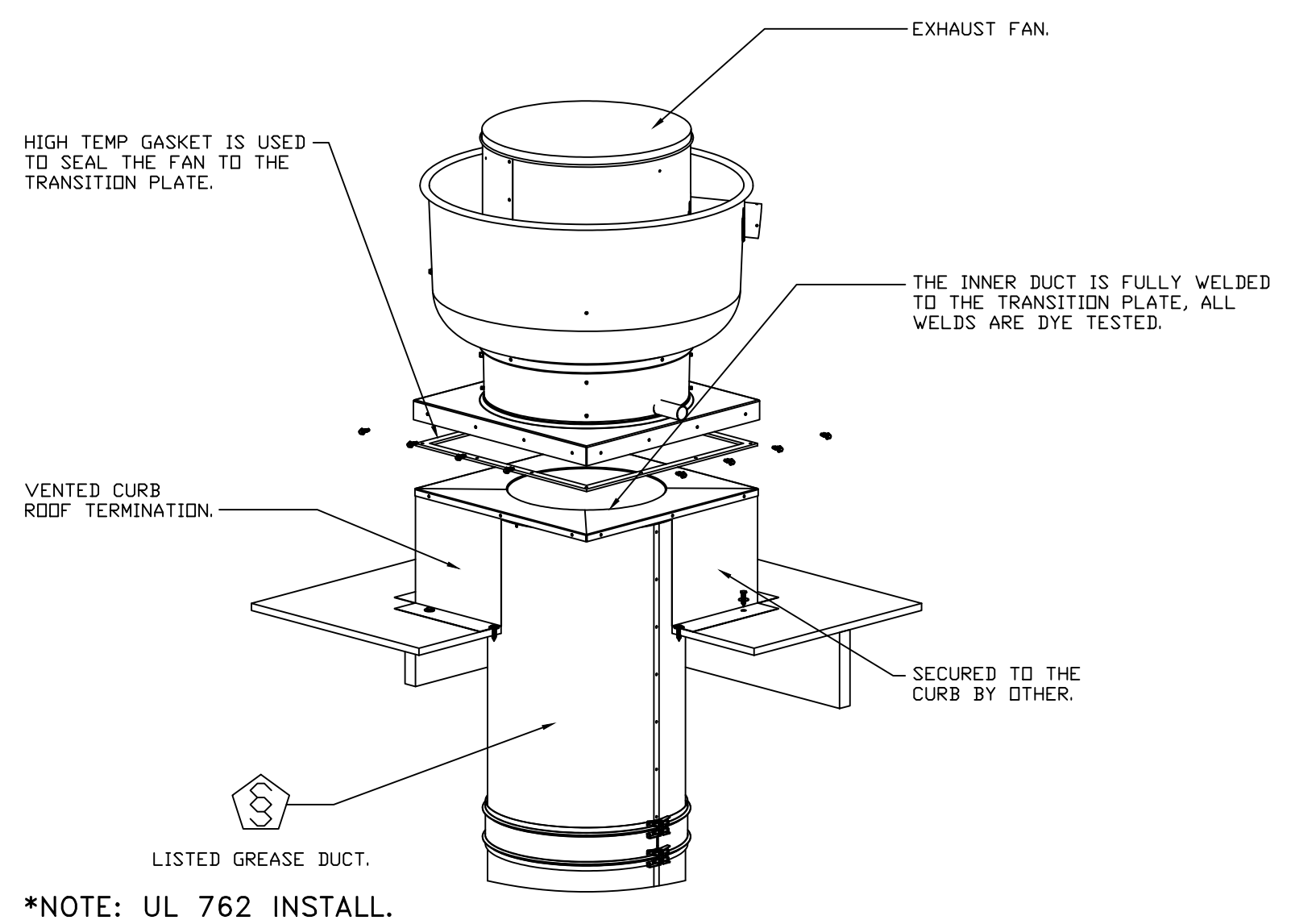
**ABNORMAL FLARE-UP TEST**  
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

**OPTIONS**

- GREASE BOX.
- FAN BASE CERAMIC SEAL – SHIP LOOSE
- FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.

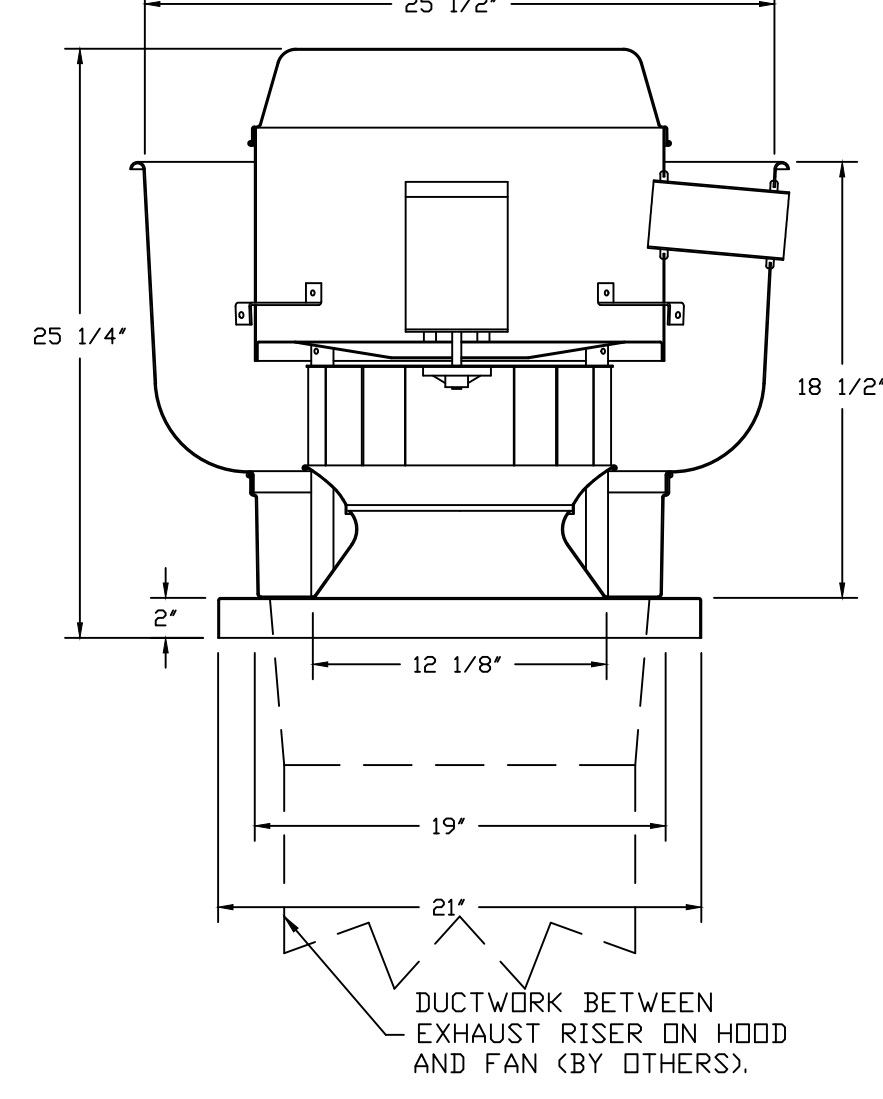


TOP VIEW



\*NOTE: UL 762 INSTALL.

FAN #3 DU33HFA – EXHAUST FAN (KEF3-DVEN)



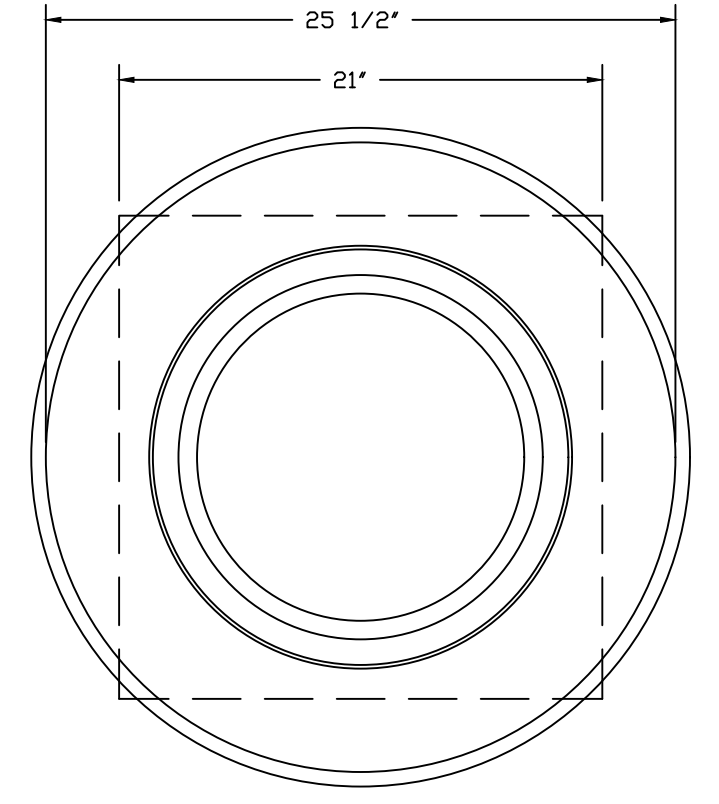
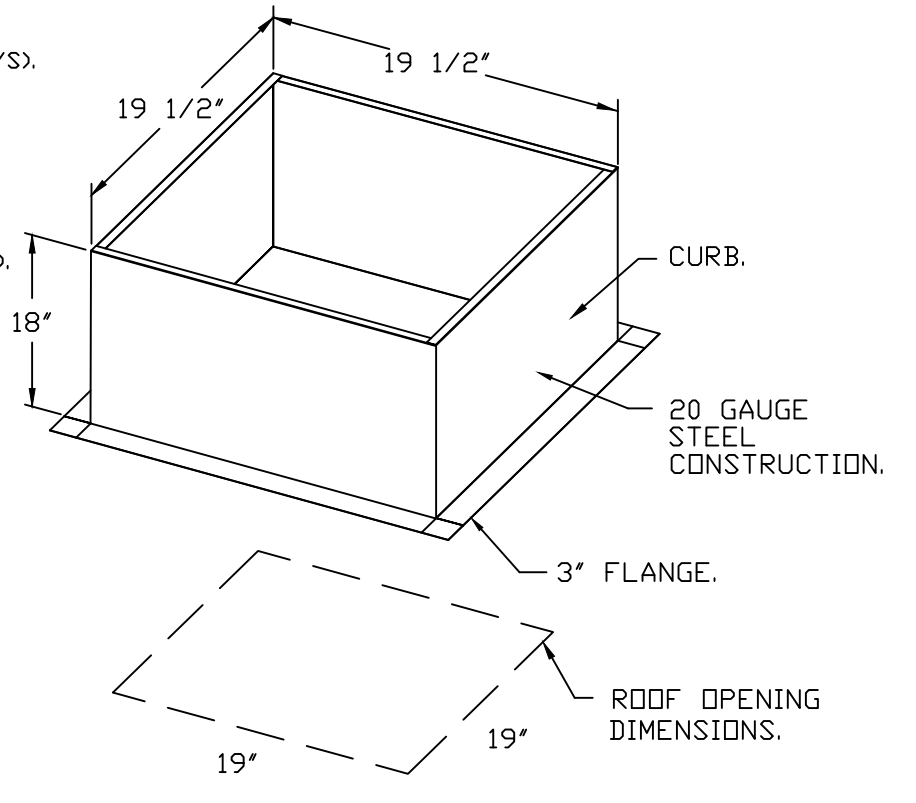
**FEATURES:**

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- 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.

**OPTIONS**

- ECM WIRING PACKAGE – MANUAL DR 0-10VDC REFERENCE SPEED CONTROL –RTC- (TELCD MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



TOP VIEW

**FAN ACCESSORIES**

FAN UNIT NO	TAG	EXHAUST				SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT	
1	KEF1	YES							
2	KEF2	YES							
3	KEF3-DVEN								
4	KMUA					YES			

**CURB ASSEMBLIES**

NO	DN FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF1	52 LBS	CURB	26.500"W X 26.500"L X 24.000"H ALONG LENGTH, RIGHT VENTED HINGED.
2	# 2	KEF2	52 LBS	CURB	26.500"W X 26.500"L X 24.000"H ALONG LENGTH, RIGHT VENTED HINGED.
3	# 3	KEF 2 DVEN	20 LBS	CURB	19.500"W X 19.500"L X 18.000"H ALONG LENGTH, RIGHT.
4	# 4	KMUA	96 LBS	CURB	31.000"W X 79.000"L X 16.000"H ALONG WIDTH, RIGHT INSULATED.
	# 4			RAIL	6.000"W X 31.000"L X 16.000"H RIGHT.

**REVISIONS**

DESCRIPTION	DATE

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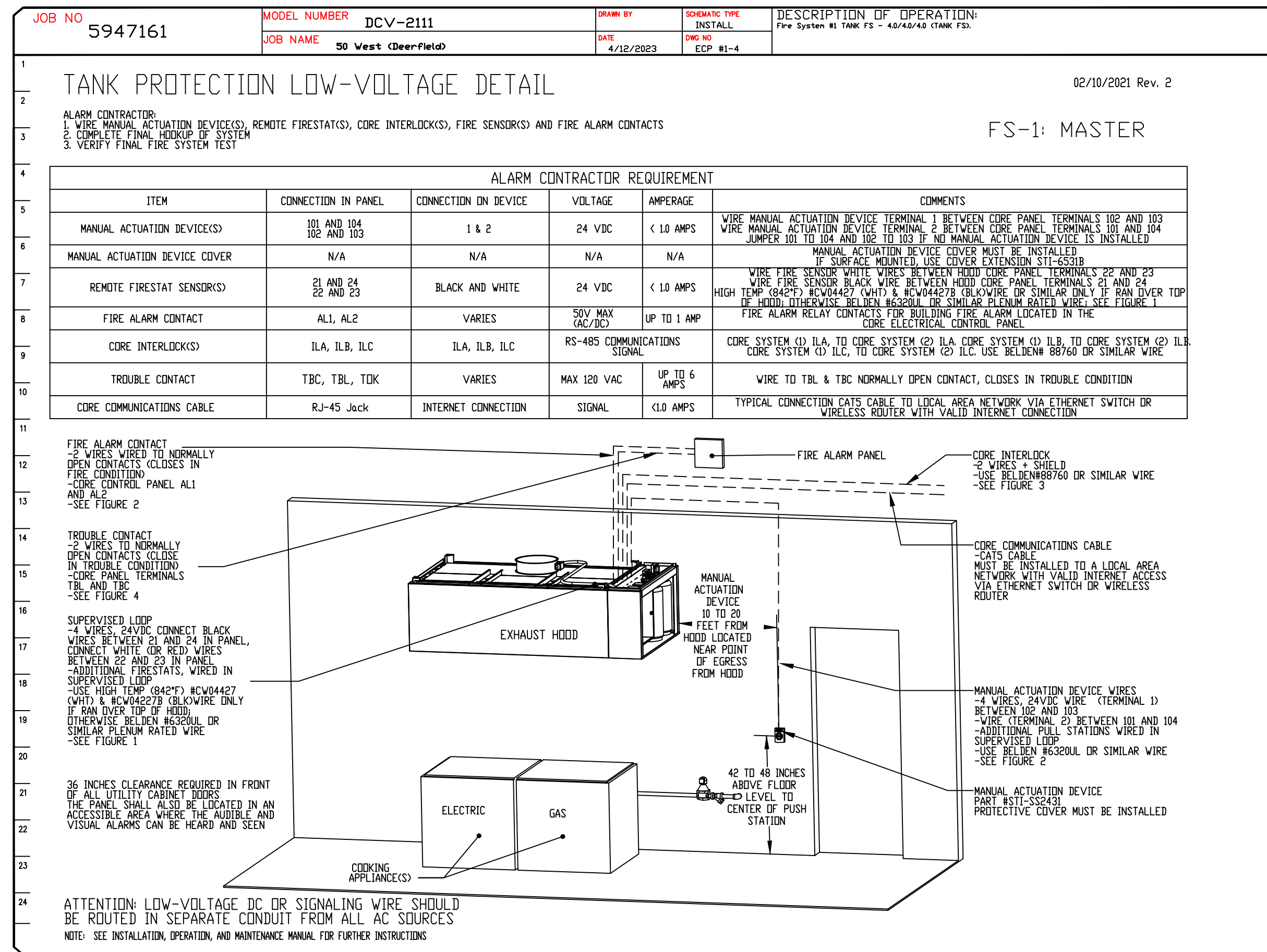
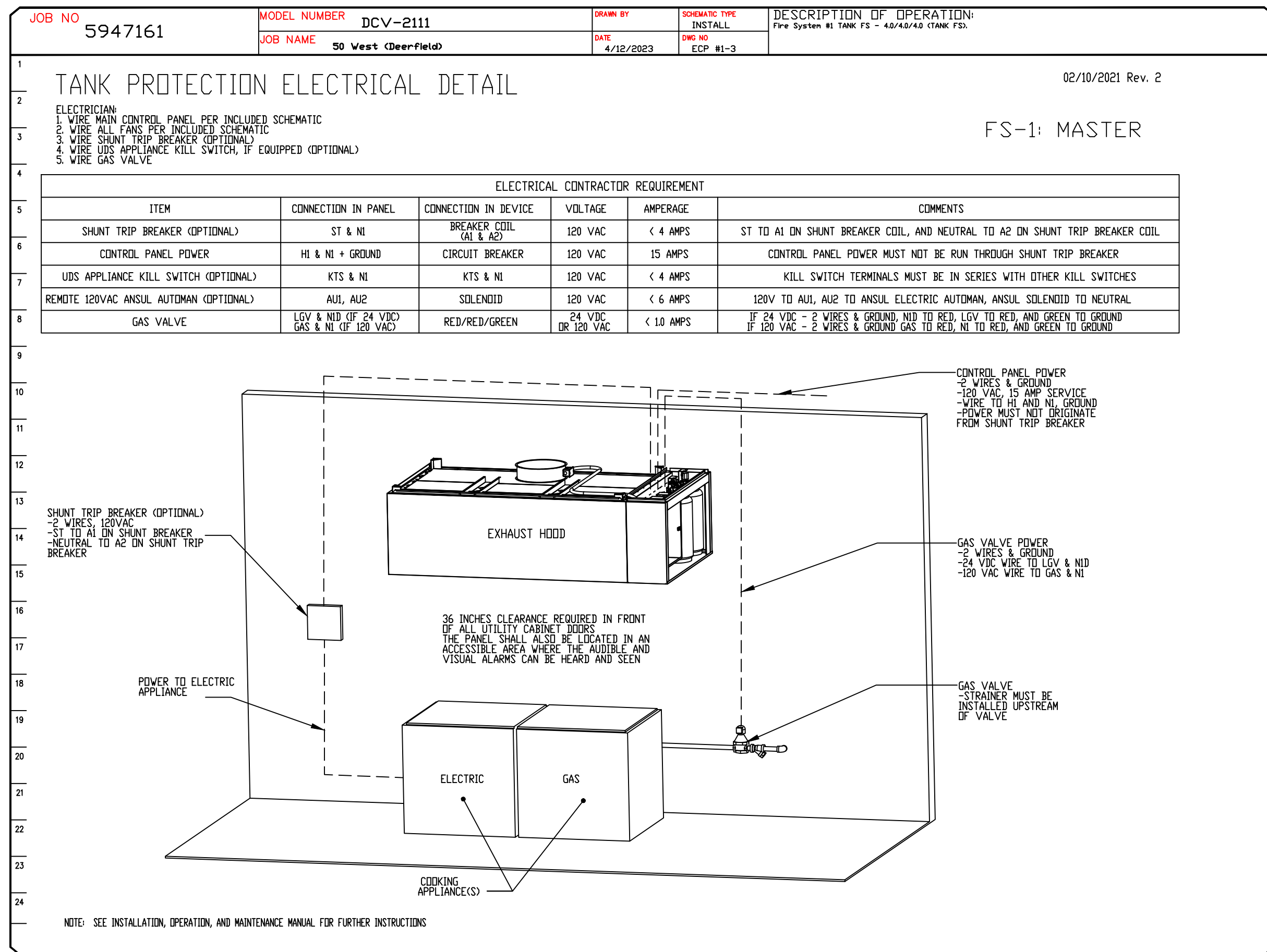
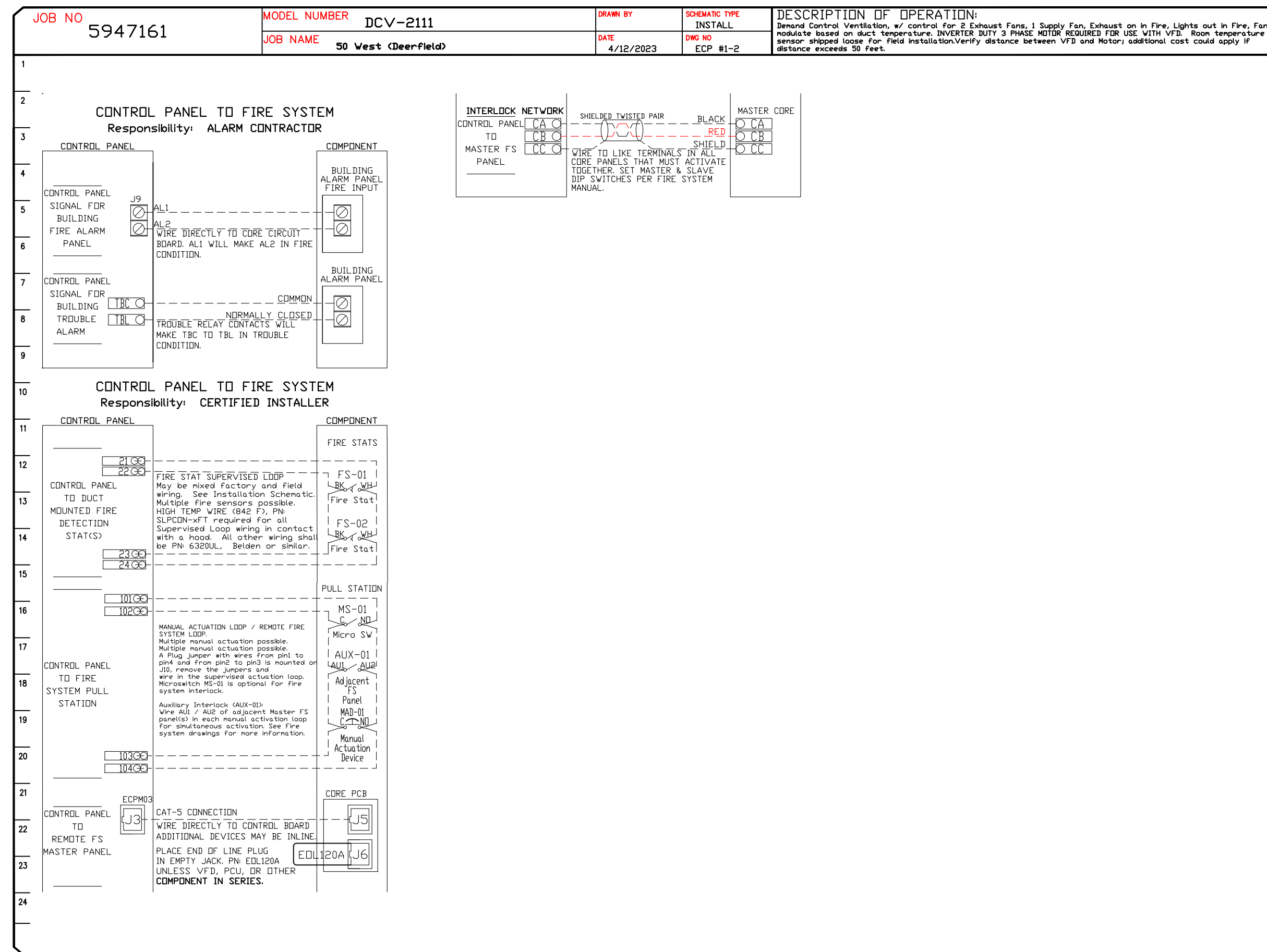
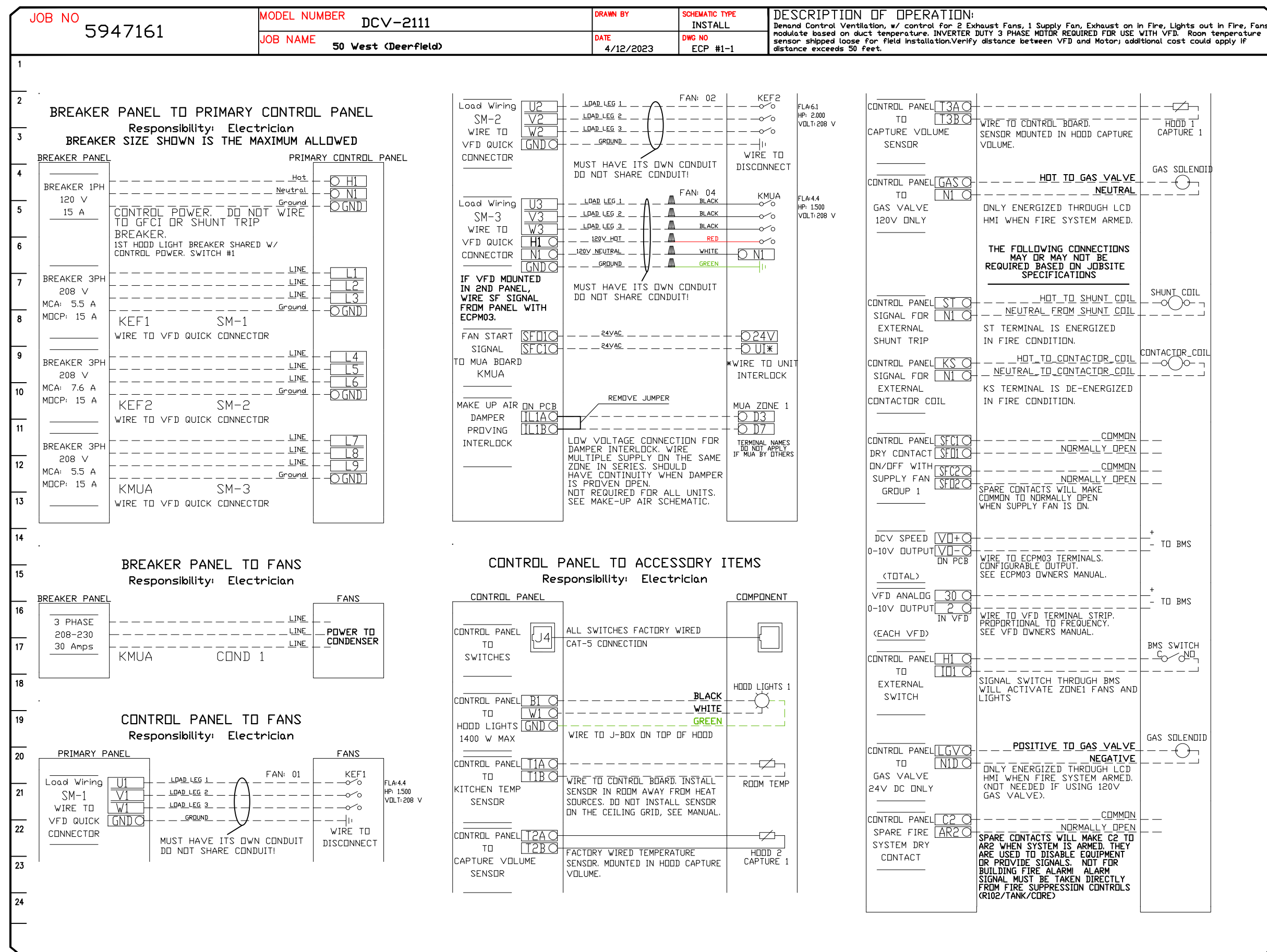
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ND	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Ø	HP	VOLT	FLA
1	ECP 1	DCV-2111	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT		KEF1	EXHAUST	3	1,500	208	4.4
				HOOD # 2	1 FAN	SMART CONTROLS DCV	KEF2	EXHAUST	3	2,000	208	6.1
							KMUA	SUPPLY	3	1,500	208	4.4



**REVISIONS**

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**SHEET NO.** 5