

HOOD INFORMATION - JOB#5821150

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				MUA CFM	AC CFM	HOOD CONSTRUCTION	HOOD CONFIG				
										WIDTH	LENG	HEIGHT	DIA				CFM	VEL	SP	END TO	ROW
1		5430 ND-2-ACPSP-F	CAPTIVEAIRE	12' 6"	600 DEG	I	HEAVY	224	2800			4'	16"	2800	2005	-1.083'	2250	750	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT		
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE			ELECTRICAL MODEL #	SWITCHES QUANTITY
1		CAPTRATE SOLD FILTER	9	20"	16"	85% SEE FILTER SPEC	4	L55 SERIES E26	NO	LEFT	12"x54"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1306 LBS

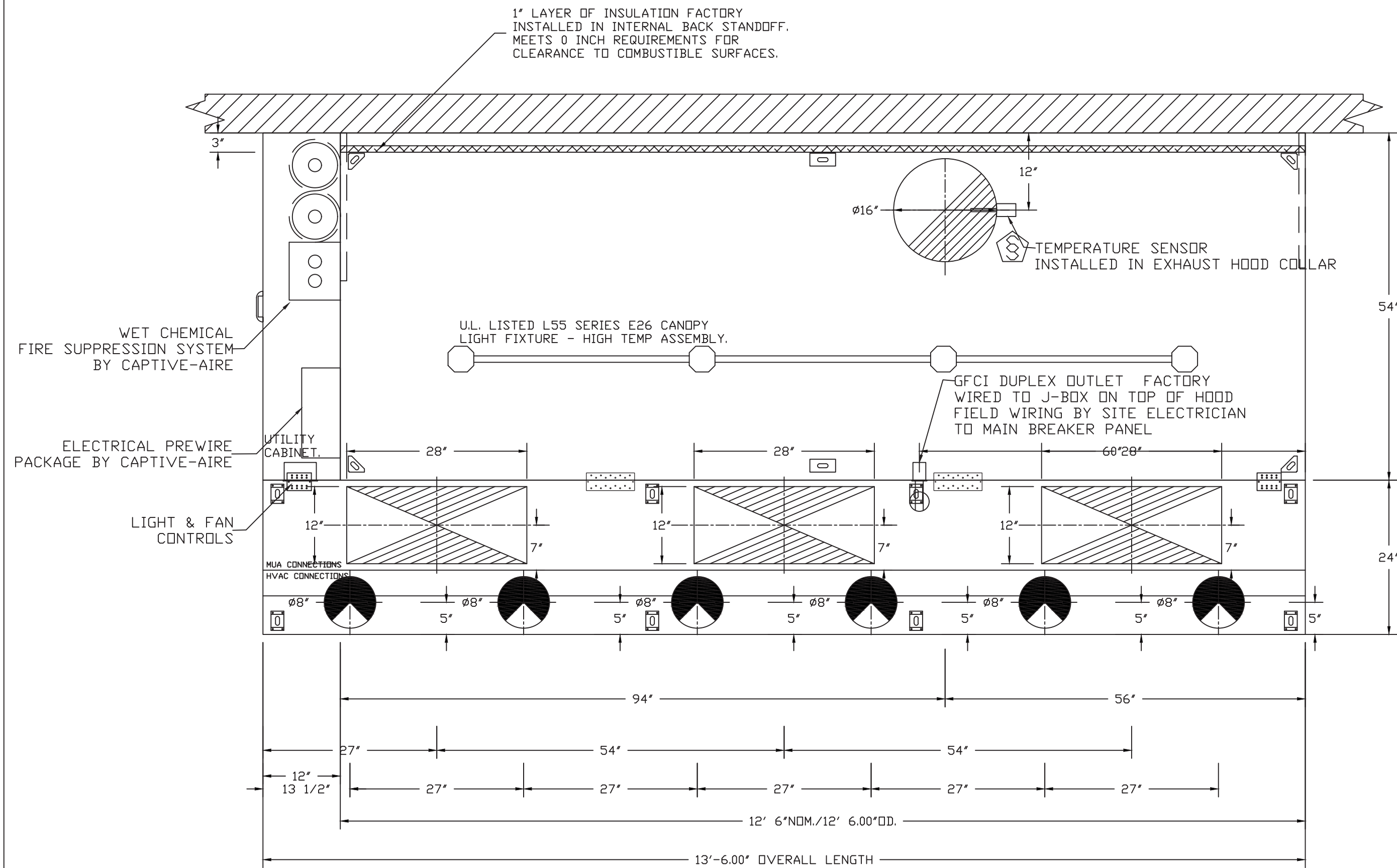
HOOD OPTIONS

HOOD NO	TAG	OPTION
1		RIGHT END PANEL 21" TOP WIDTH, 18" BOTTOM WIDTH, 44" HIGH 430 SS. LEFT QUARTER END PANEL 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. INSULATION FOR TOP OF HOOD. STRUCTURAL FRONT PANEL. INSULATION FOR BACK OF HOOD. RISER SENSOR INSTALL 3IN DBL. GFCI DUPLEX OUTLET, 20A 125V - HOOD FRONT RIGHT - VERTICAL - DIST FROM END: 60.00 DIST FROM BOTTOM: 4.75.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)			
							WIDTH	LENG	DIA	CFM
1		Front	162'	24'	6'	MUA	12"	28"	750	0.182'
						MUA	12"	28"	750	0.182'
						MUA	12"	28"	750	0.182'
						AC		8"	125	0.049"
						AC		8"	125	0.049"
						AC		8"	125	0.049"
						AC		8"	125	0.049"
						AC		8"	125	0.049"
						AC		8"	125	0.049"

STAINLESS STEEL BACKSPLASH WALL PANELING EXCLUDED FROM HOOD PACKAGE. TO BE PROVIDED BY OTHERS.



ACPSP SHIPS LOOSE FOR FIELD INSTALLATION

2700 CFM IN 16" DIA. EXHAUST COLLAR = 1934 FPM
HOOD CONSTRUCTION OF 18 GAUGE AND 20 GAUGE METAL

CALCULATIONS UTILIZED

Calculations utilized are based on the hood's ETL Listing
Exhaust CFM = 12.5 foot X 224 CFM/lin. Ft. (load) = 2800 cfm
Supply CFM = 2800 Exhaust CFM X 80 percent = 2250 cfm

$$\text{Total Duct Area} = 144 \times \frac{\text{CFM}}{\text{FPM (note 1)}}$$

$$\text{Duct Length} = \frac{\text{Total Duct Area}}{\text{Duct Depth (note 2)}}$$

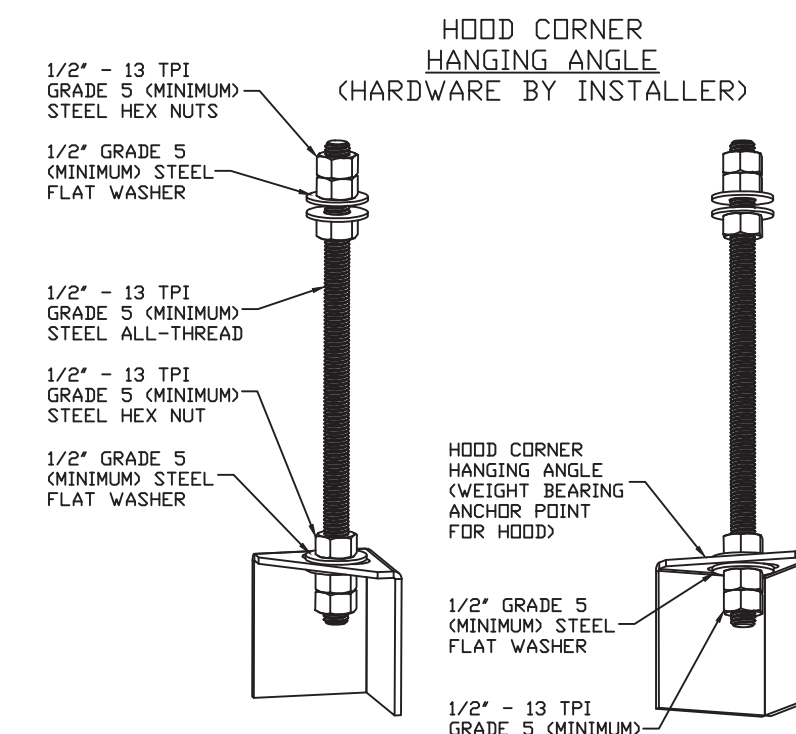
1) Captive-Aire ventilator duct sizes are calculated using an Exhaust velocity of 1500 - 1800 FPM and a Supply velocity of 800 - 1000 FPM.
2) Please consult Factory for maximum allowable duct sizes.

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH



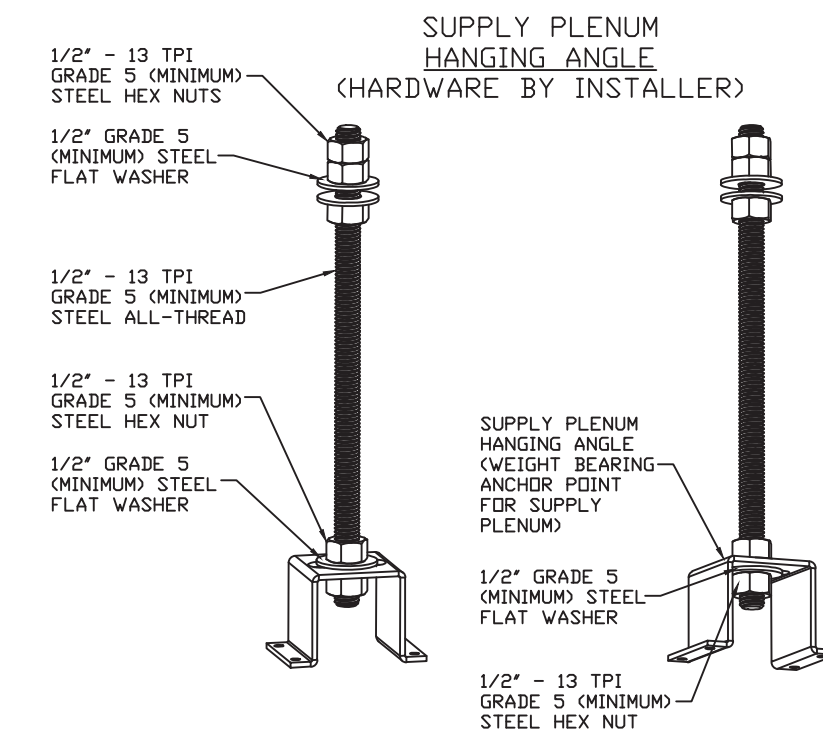
NFPA #96
NSF
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001

FOR QUESTIONS, EMAIL THE
CaptiveAire Dallas Sales Office
Colin Prewitt
PHONE: (214) 220-3999
EMAIL: reg45@captiveaire.com



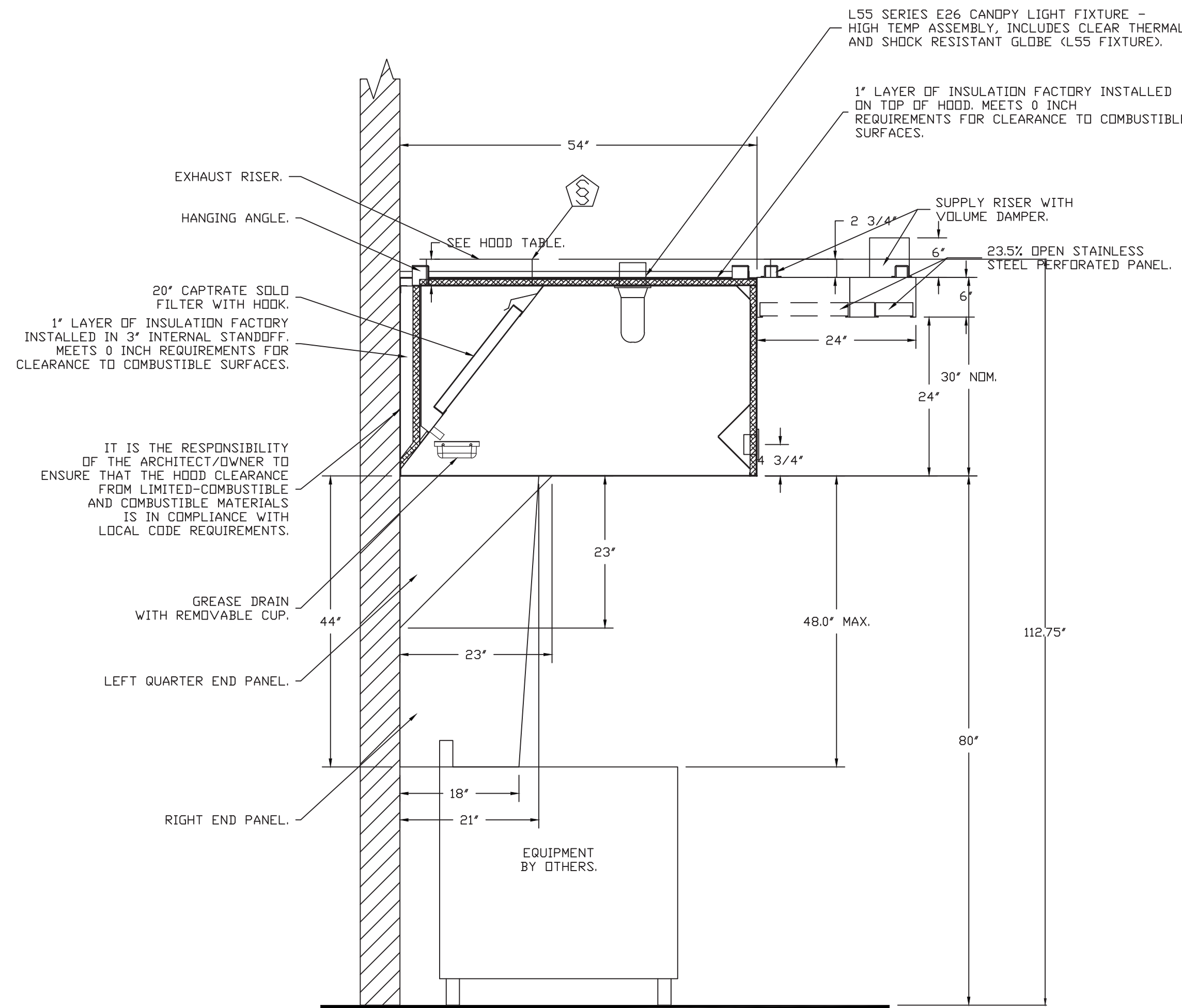
ASSEMBLY INSTRUCTIONS

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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SECTION VIEW - MODEL 5430ND-2-ACPSP-F HOOD - #1

ALL HVAC SUPPLY DIFFUSERS WITHIN 10' OF THE EXHAUST HOOD MUST BE PERFORATED SCREEN STYLE WITH NO DIRECTIONAL VANES. HVAC AIR MUST NOT BLOW AT THE EXHAUST HOOD OR THE APPLIANCES.

ALL HVAC RETURN GRILLS MUST BE AT LEAST 10' FROM THE EXHAUST HOOD
THE BACK OF THE FRYERS SHOULD BE NO MORE THAN 6" FROM THE WALL
REFER TO HOOD MANUAL FOR PROPER INSTALLATION

CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

REVISIONS

DESCRIPTION	DATE



Wingstop Oakland CA #Y345
10700 MacArthur Boulevard,
Oakland, CA, 94605

DATE: 1/23/2023

DWG.#: 5821150

DRAWN BY: CJP-REG45

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. H.1

FIRE SYSTEM INFORMATION - JOB#5821150

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	37	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

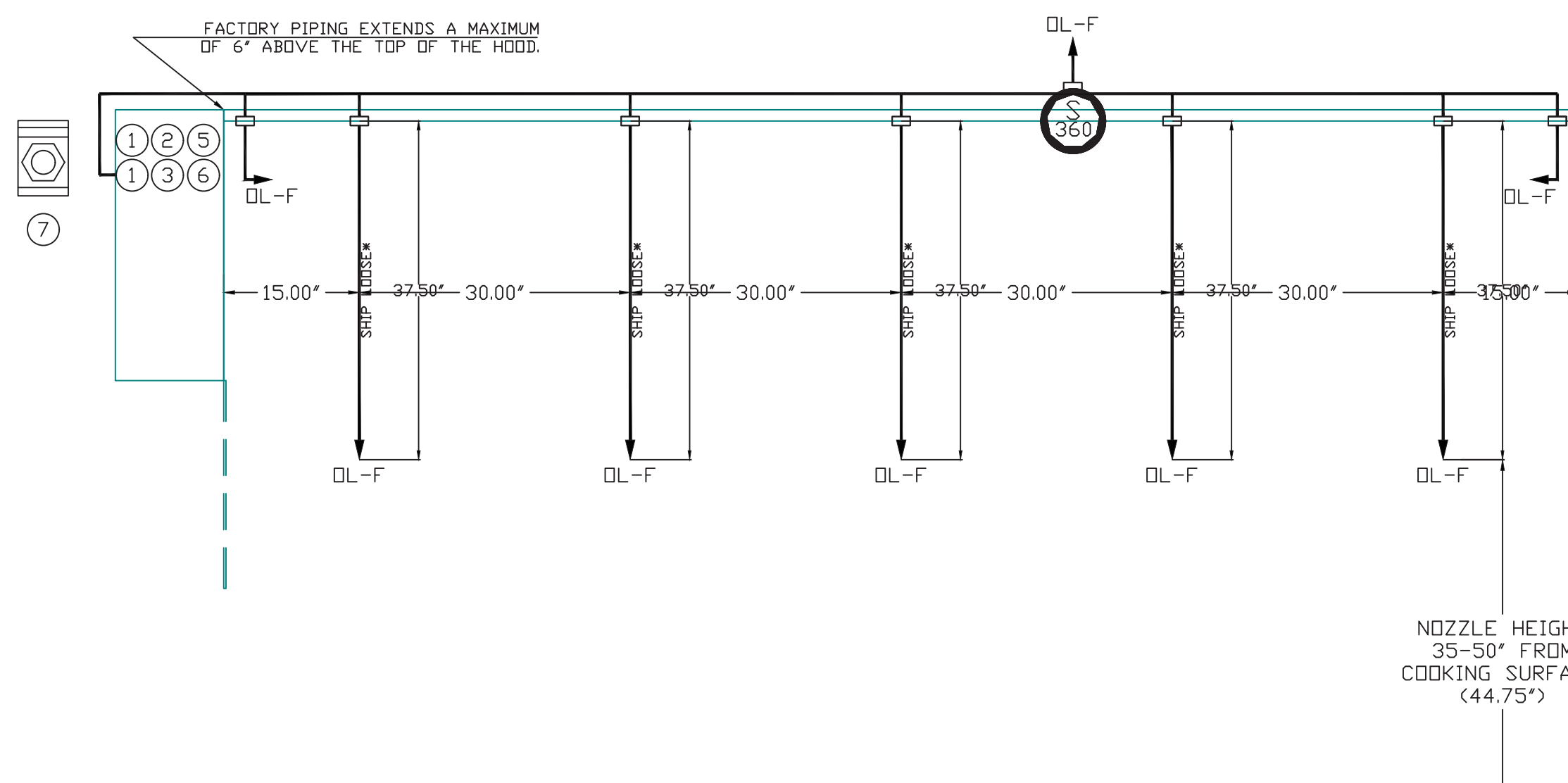
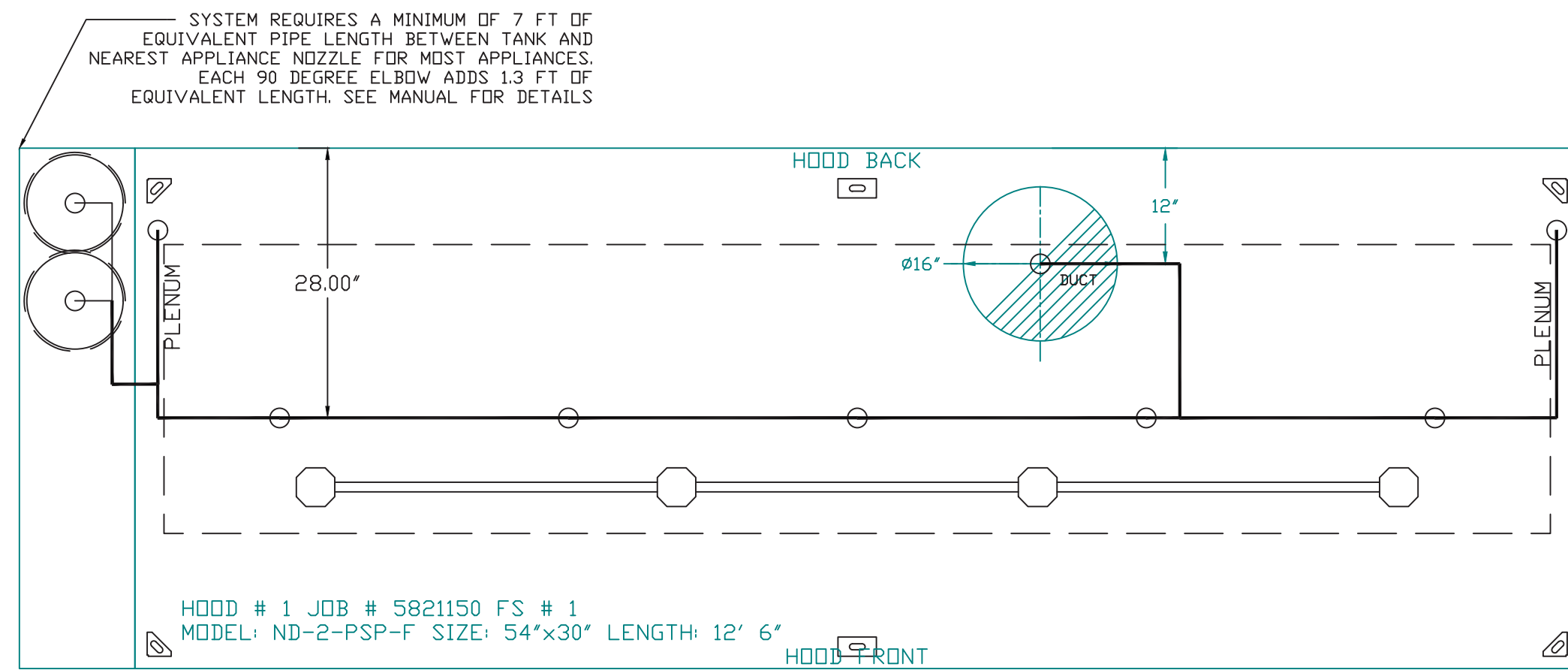
FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY

INCLUDES: FIELD INSTALLATION AND CHECKUP SYSTEMS FIRE SUPPRESSION SYSTEM DURING NORMAL BUSINESS HOURS ONLY, TWO SITE VISITS ONLY (ONE VISIT FOR SYSTEM HOOKUP/INSTALL AND ONE VISIT FOR ONE TEST/FINAL WITH FIRE MARSHAL), PERMIT, AND ONE SYSTEM TEST.
 EXCLUDES: GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND ALL ELECTRICAL CONNECTIONS, HANGING OF WALL MOUNTED FIRE & ELECTRICAL CABINET(S) (IF APPLICABLE), RECESSING PULL STATION, SHUNT TRIP, HANDHELD EXTINGUISHER(S), ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES, ADDITIONAL SITE VISITS DUE TO CONDITIONS OUTSIDE THE INSTALLERS RESPONSIBILITY, RETEST DUE TO CONDITIONS OUTSIDE THE INSTALLERS RESPONSIBILITY, UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), CERTIFIED PAYROLL, ENGINEER STAMPING OF DRAWINGS, HORN STROBE(S), CARBON MONOXIDE DETECTOR(S).

JUNCTION BOX AND CONDUIT TO BE RECESS MOUNTED BY JOB SITE ELECTRICIAN - OTHERWISE JUNCTION BOX AND CONDUIT WILL BE SURFACE MOUNTED ON TOP OF THE WALL.

NOTES

- FIELD PIPE DROPS AS SHOWN
- SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.
- MINIMUM 72 INCHES OF AGENT LINE FROM TANK TO FIRST NOZZLE.
- IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS



TANK OVERLAPPING PROTECTION - 30 HIGH PROXIMITY 144.00\"/>

NOTES

- FIELD PIPE DROPS AS SHOWN
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- FIELD INSTALLED DROP: FACTORY WILL PROVIDE QTY 2 60IN LONG PIECES OF CHROME PLATED PIPING SHIPPED LOOSE TO BE FIELD-INSTALLED.
- SHIP LOOSE DROP: FACTORY WILL PROVIDE THE EXACT CHROME PIPE LENGTH NEEDED SHIPPED LOOSE TO BE FIELD-INSTALLED.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6' ABOVE THE TOP OF THE HOOD.
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

- DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 5821150.
 JOB NAME: WINGSTOP OAKLAND CA #Y345.

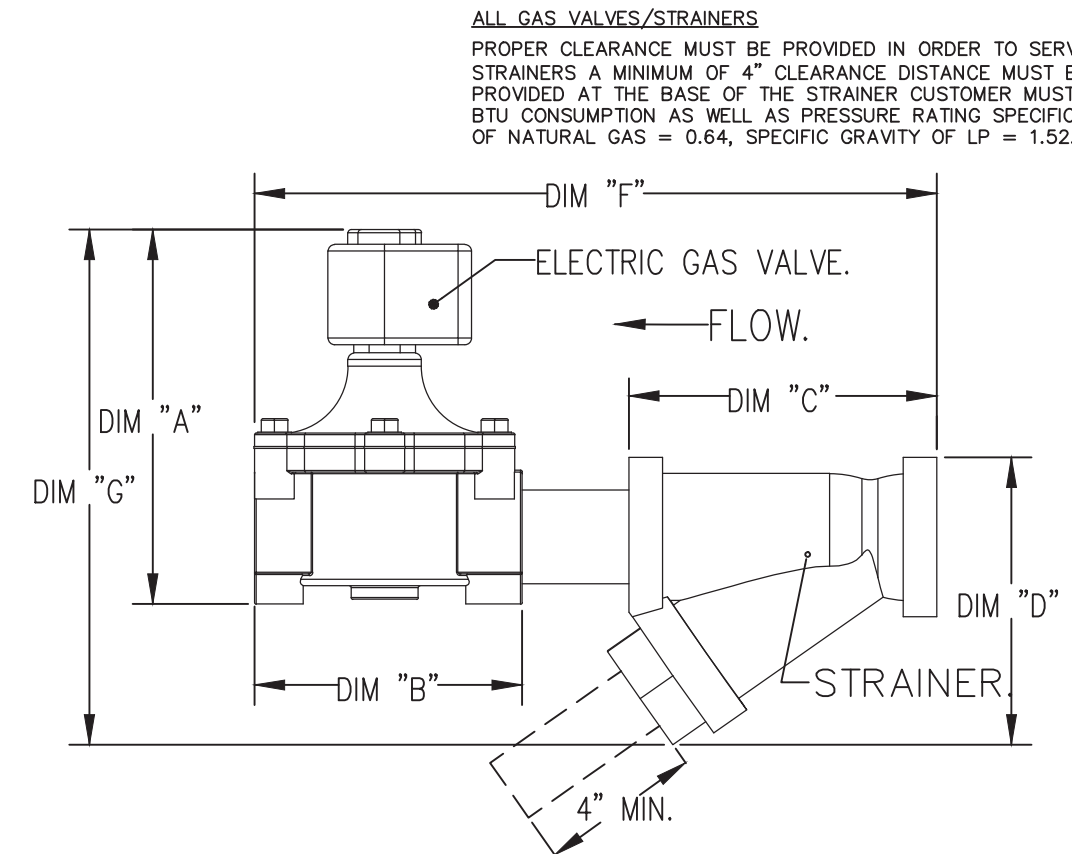
SYSTEM SIZE: TANK-SP-2 TOTAL FP REQUIRED: 37.
 HOOD # 1 12' 6.00\"/>

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

LEGEND - FIRE CABINET TANK SYSTEM

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

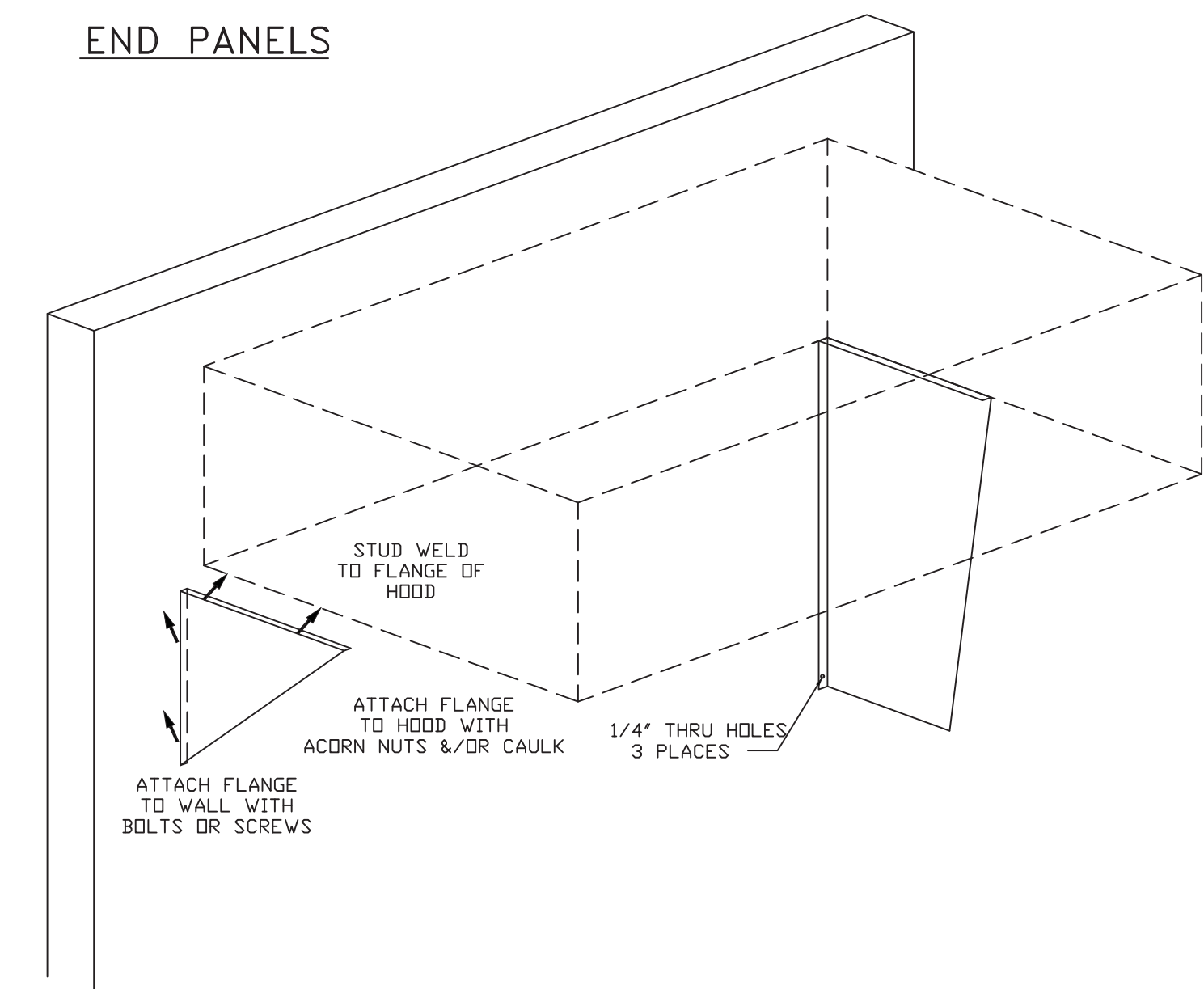
GAS VALVES AND STRAINERS																
TYPE	SIZE	VOLTAGE	GAS VALVE SIZING			GAS VALVE DIMENSIONS					INSTALLATION	PART NUMBERS				
			MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"		DIM "E"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
ELECTRICAL	2"	120 VAC	0 PSI (0 IN.W.C.)	5 PSI (138 IN.W.C.)	2,940,500 BTU/HR	1,908,048 BTU/HR	7-5/8"	6-3/8"	7-1/4"	7-13-16"	15-5/8"	13-15/16"	HORIZONTAL/VERTICAL	8214280	4417K68	(SC)EJGVA2



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

CALCULATIONS
 TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) x NEW PRESSURE DROP^{0.5}
 TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY NEW BTU/HR = (BTU/HR AT 0.64) x (0.64 / NEW SPECIFIC GRAVITY)^{0.5}.

END PANELS



SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

REVISIONS

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 10700 MacArthur Boulevard,
 Oakland, CA, 94605

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DWG.#: 5821150

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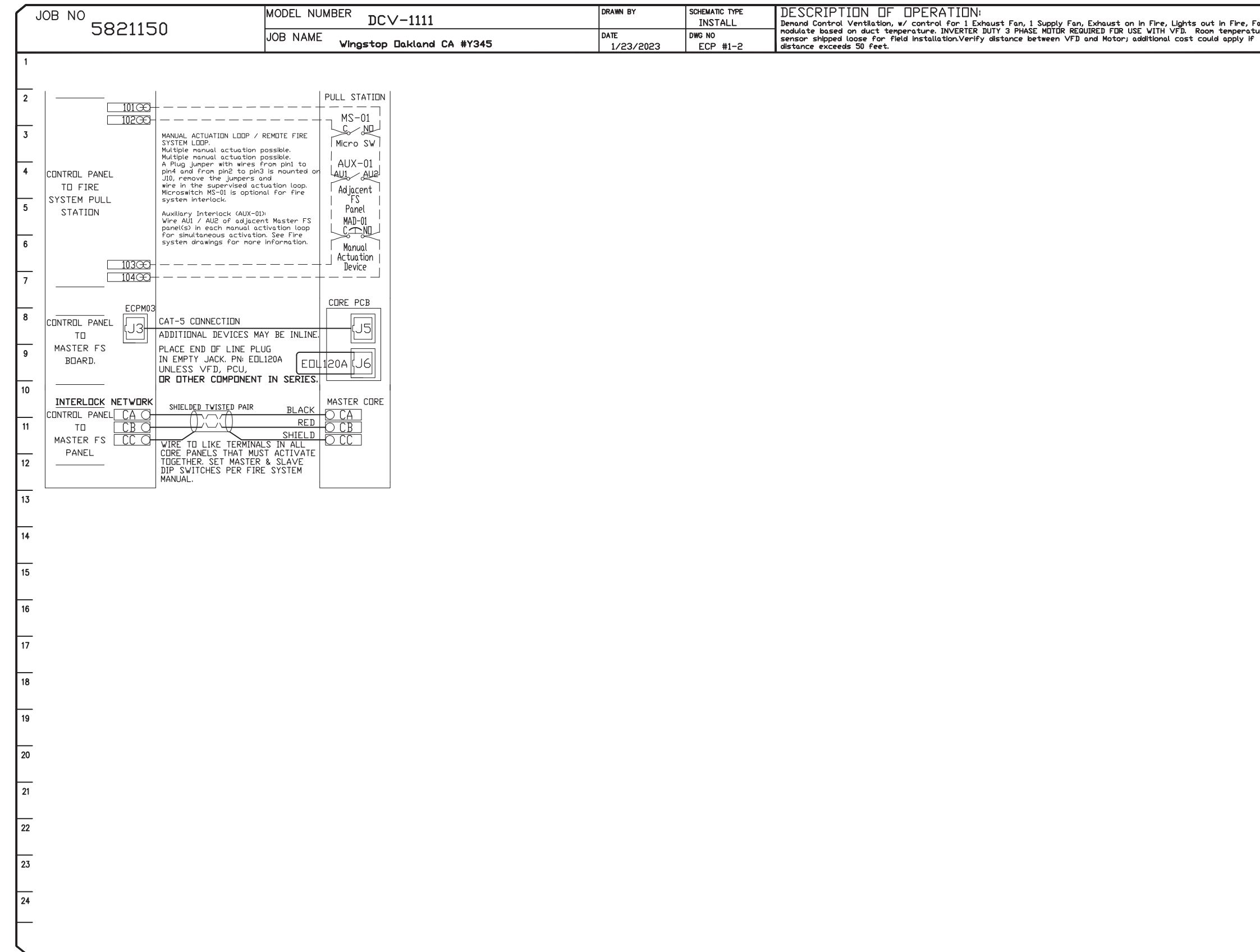
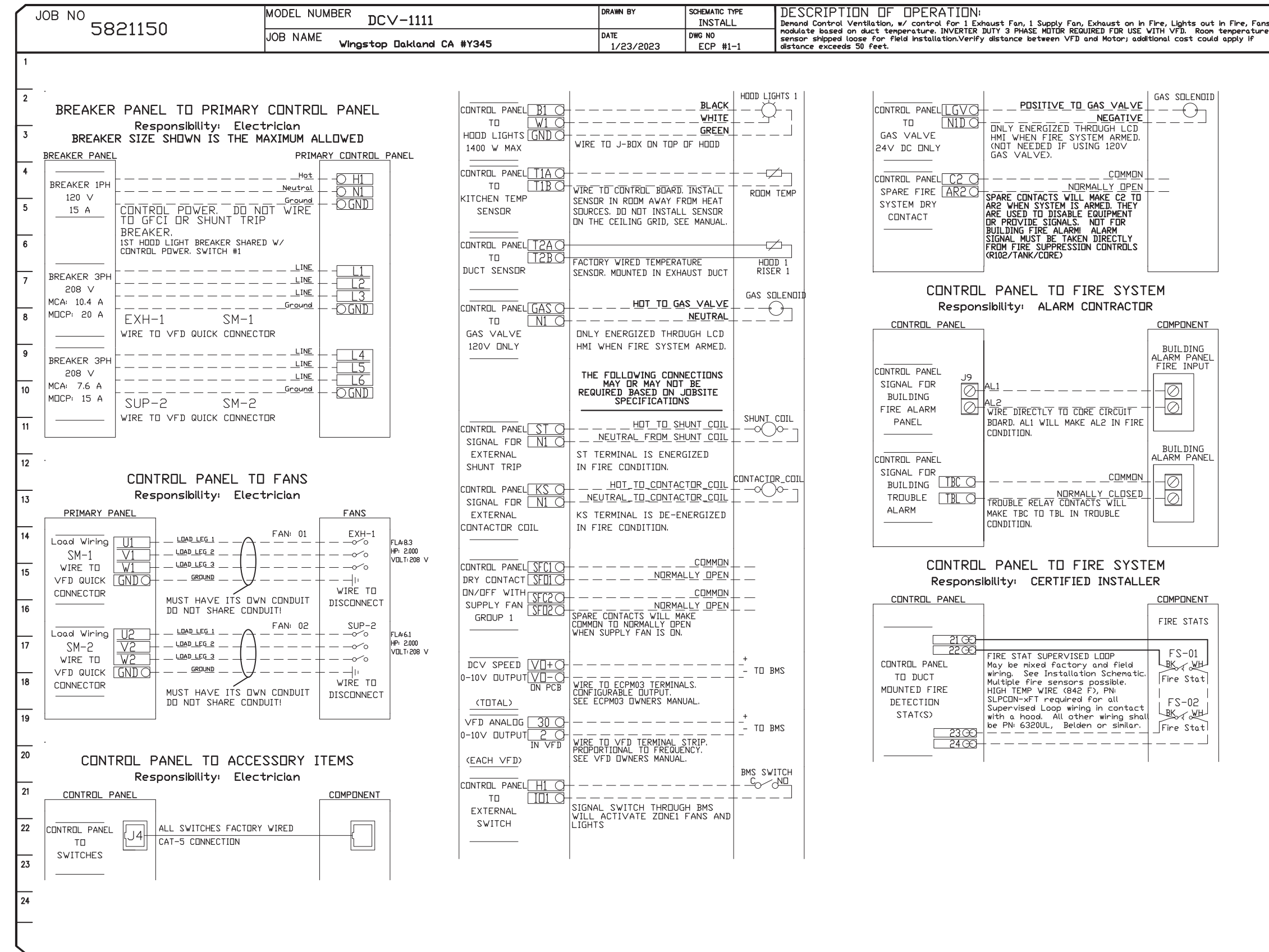
SCALE: 3/4" = 1'-0"

MASTER DRAWING

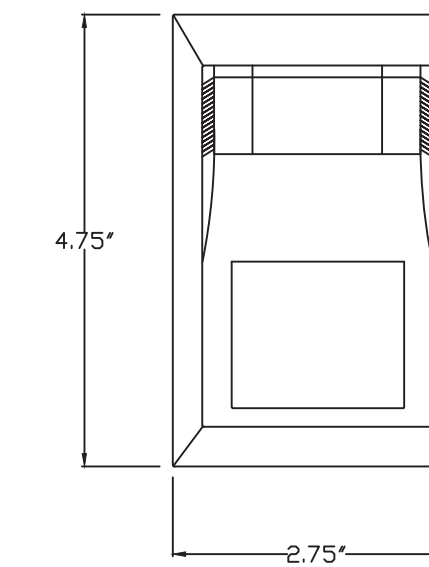
SHEET NO. H.2

ELECTRICAL PACKAGE - JOB#5821150

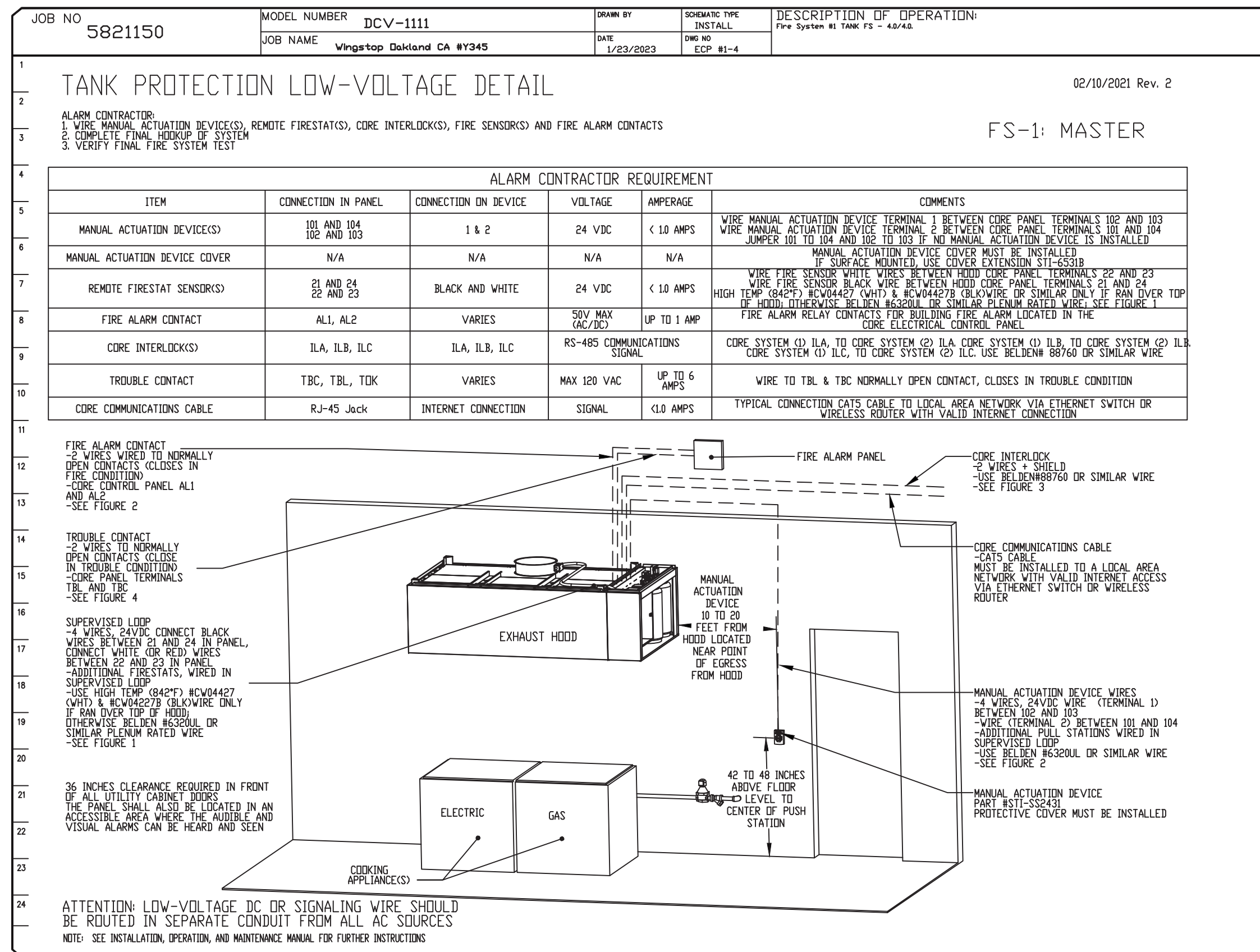
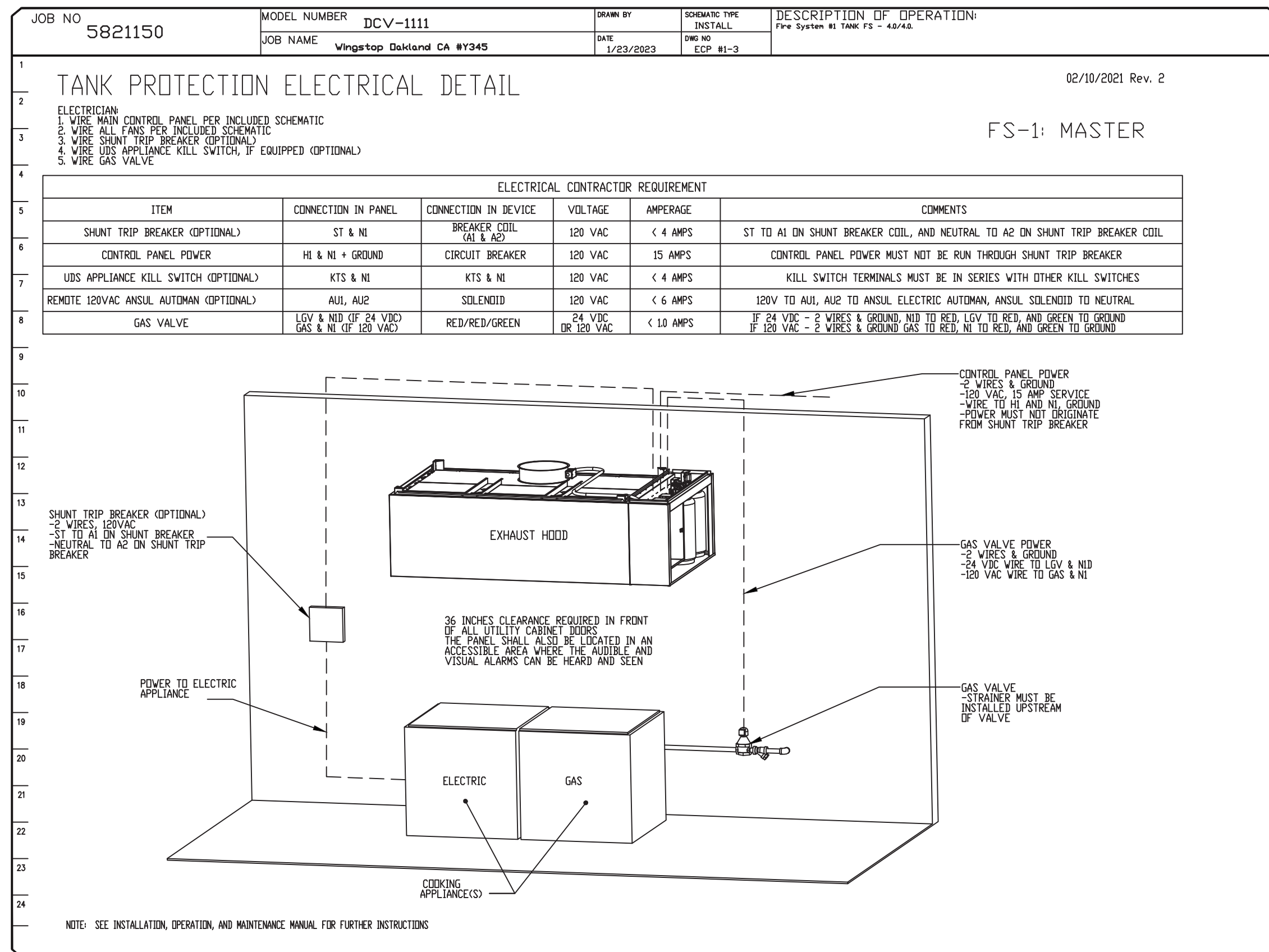
NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	Φ	HP	VOLTS	FLA
1		DCV-1111	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS DCV	EXHAUST	3	2,000	208	8.3
				HOOD # 1	1 FAN		SUPPLY	3	2,000	208	6.1



ROOM TEMPERATURE SENSOR



ROOM TEMPERATURE SENSOR:
To be installed on the wall 48" to 60" AFF to read the ambient temperature of the kitchen. Do not install close to the hood or near other heat/cold producing appliances or under a HVAC supply grill. Ideal location provides an ambient temperature of the kitchen.



CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

REVISIONS

NO.	DESCRIPTION	DATE

www.captiveaire.com

CAPTIVE-AIRE

Dallas Office
1901 Royal Lane Suite 101, DALLAS, TX, 75229 PHONE: (214) 220-3989 FAX: (214) 220-0099 EMAIL: reg45@captiveaire.com

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10700 MacArthur Boulevard,
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DRAWN BY: CJP-REG45
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. H.3

EXHAUST FAN INFORMATION – JOB#5821150

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1		1	DUI80HFA	CAPTIVEAIRE	2800	1.500	1272	DDP,PREMIUM	2.000	1.4640	3	208	8.3	647 FPM	183	18.3

MUA FAN INFORMATION – JOB#5821150

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MCCP	WEIGHT (LBS)	SONES
2		1	A1-15D	15MF-1-MDD	A1	-	2250	0.500	2047	DDP,PREMIUM	2.000	1.3610	3	208	6.1	7.7A	15A	268	29.3

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX
		1	2 YEAR PARTS WARRANTY
2		1	SIZE 1 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	2 YEAR PARTS WARRANTY

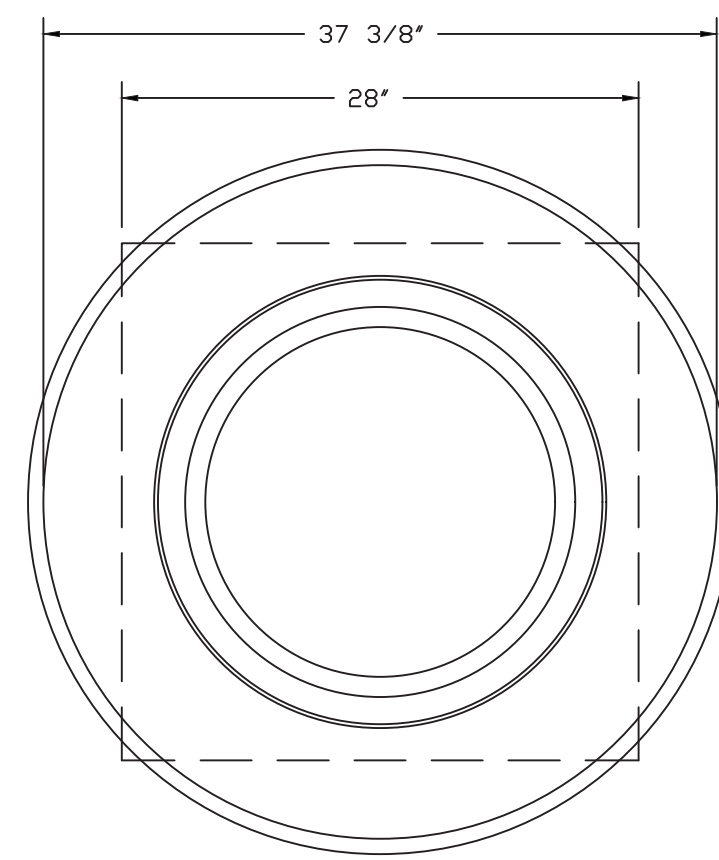
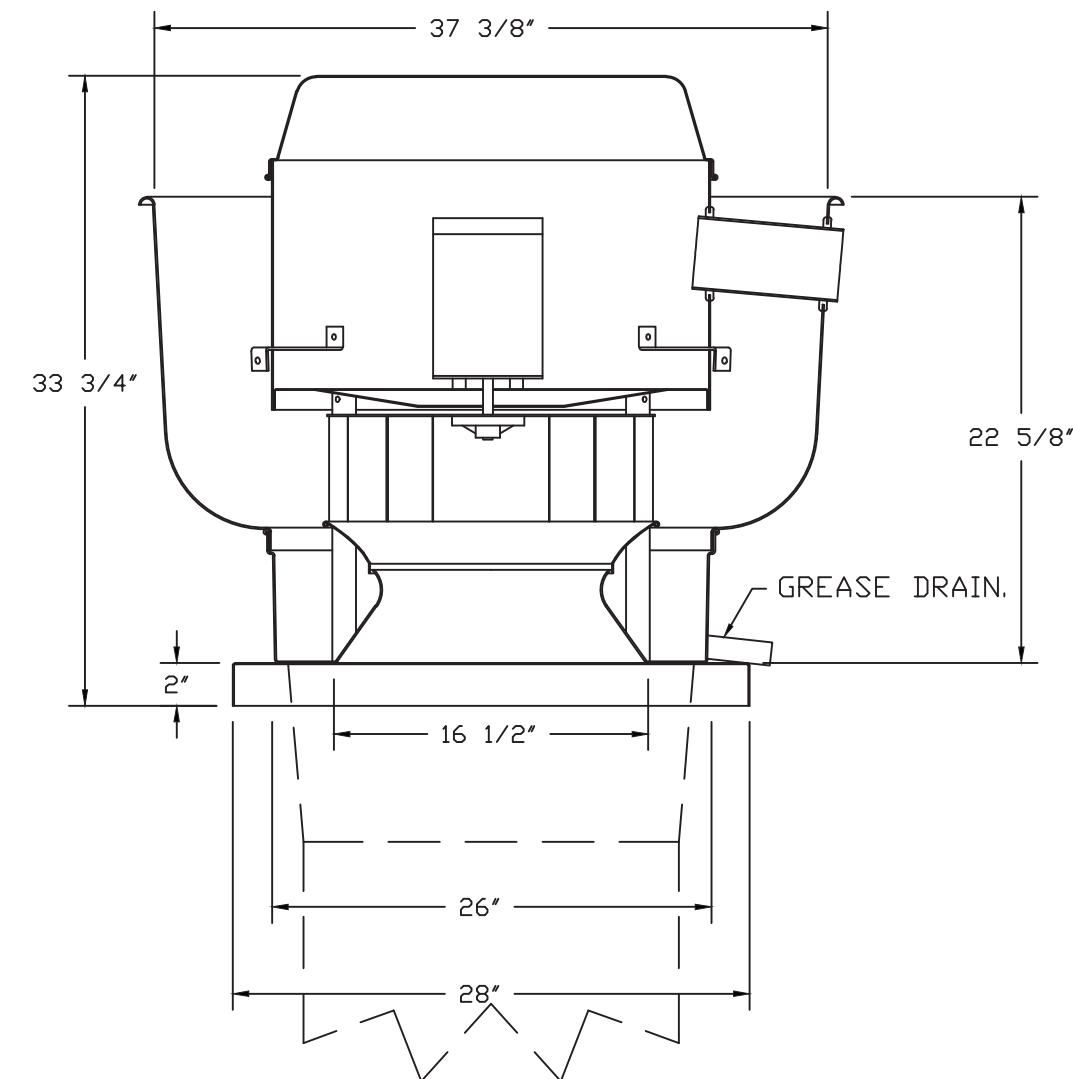
FAN ACCESSORIES

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

CURB ASSEMBLIES

NO	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	52 LBS	CURB	26.500"W X 26.500"L X 24.000"H ALONG LENGTH, RIGHT VENTED HINGED.
2	# 2	29 LBS	CURB	21.000"W X 21.000"L X 20.000"H ALONG LENGTH, RIGHT.

FAN #1 DUI80HFA – EXHAUST FAN



TOP VIEW

REFER TO FAN MANUALS REGARDING PROPER STARTUP AND INSTALLATION

CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

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

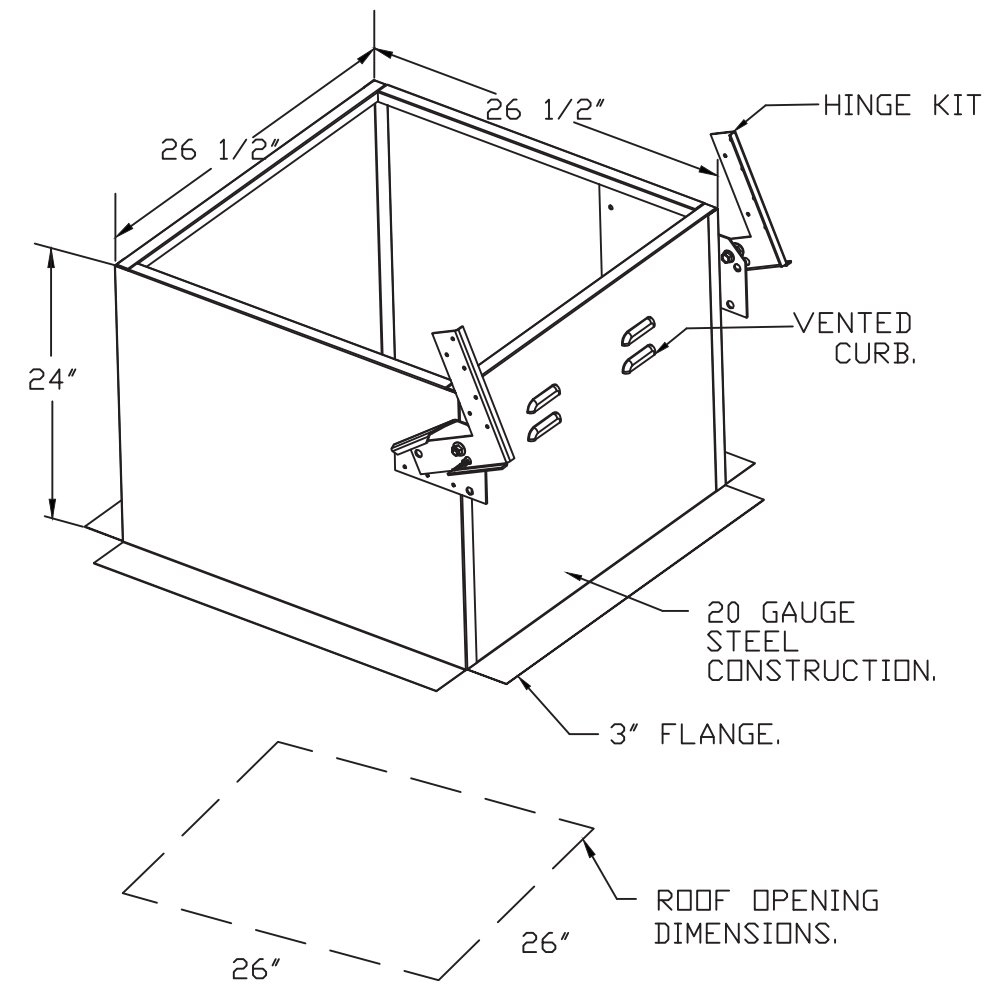
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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.

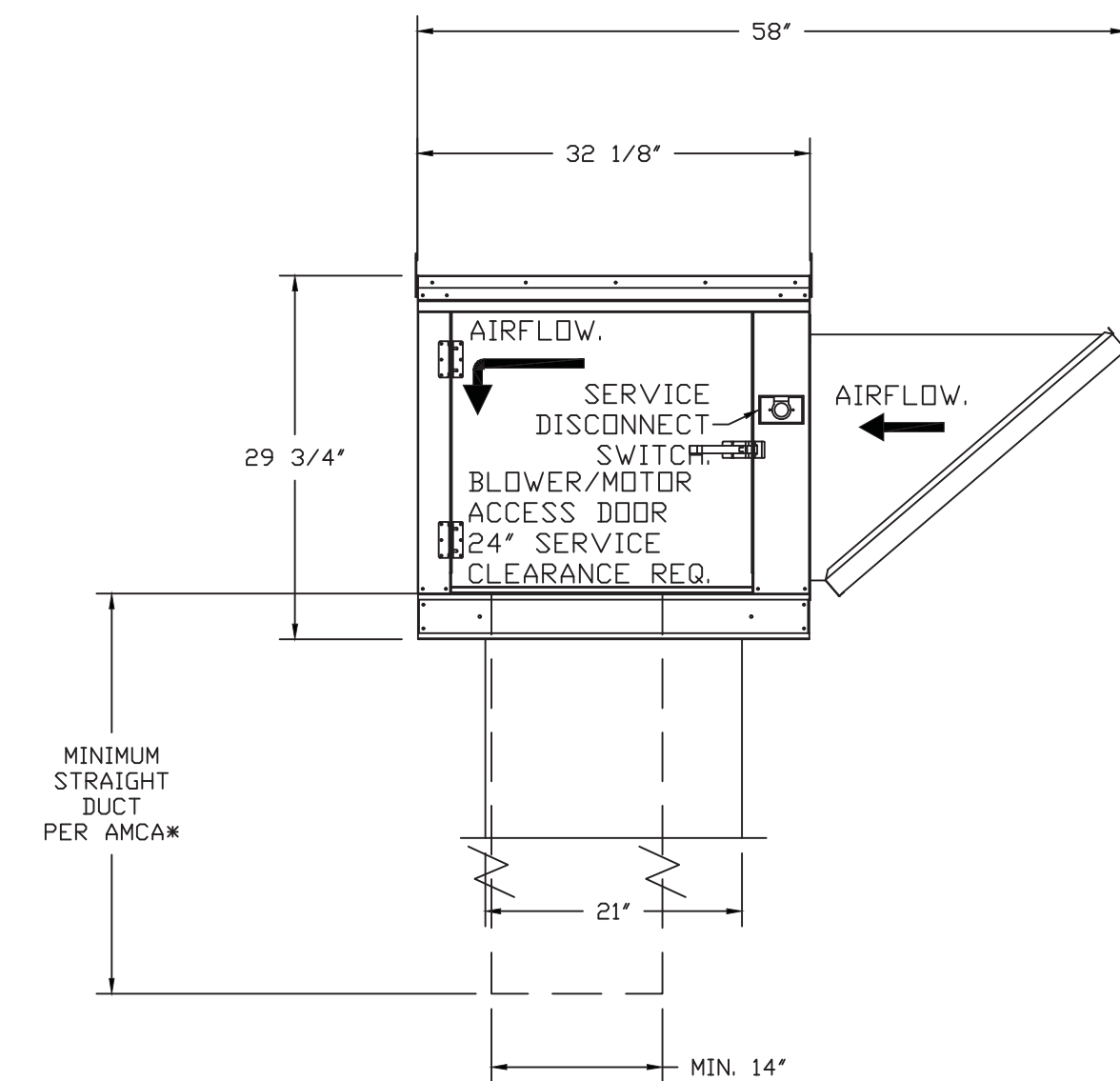
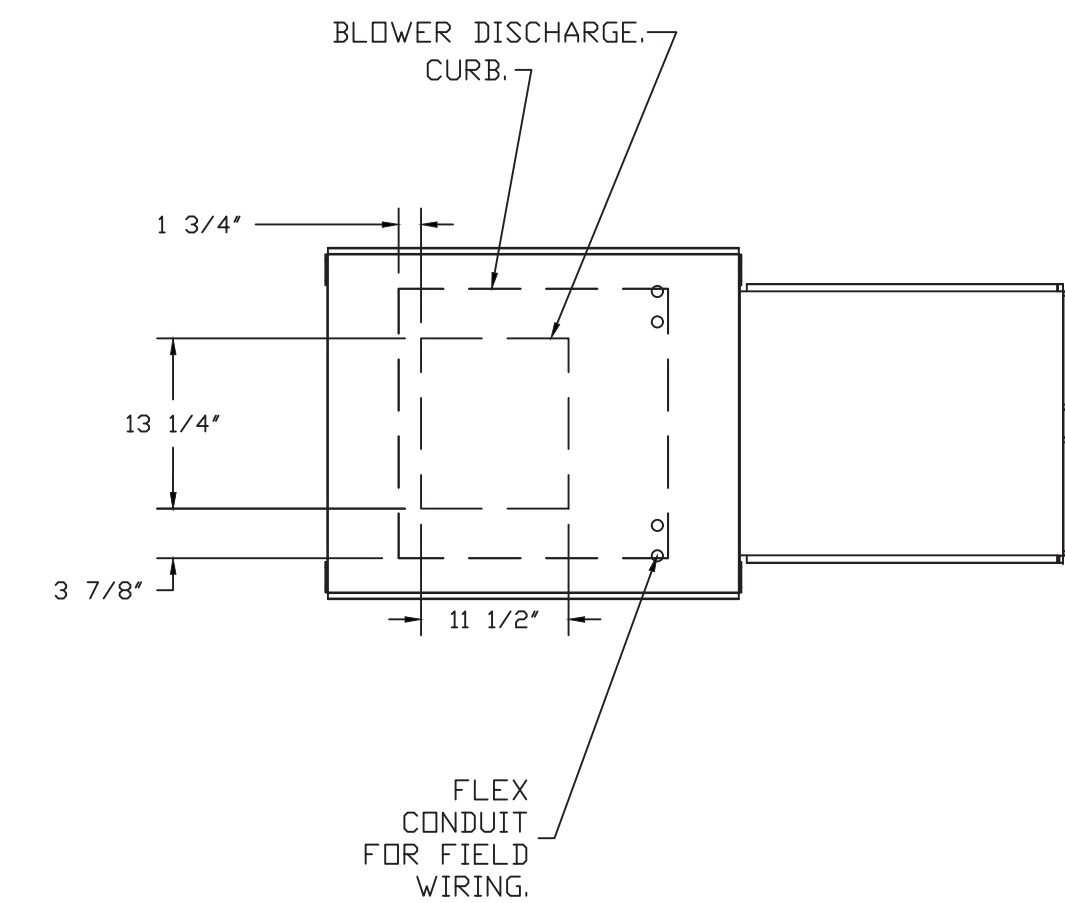
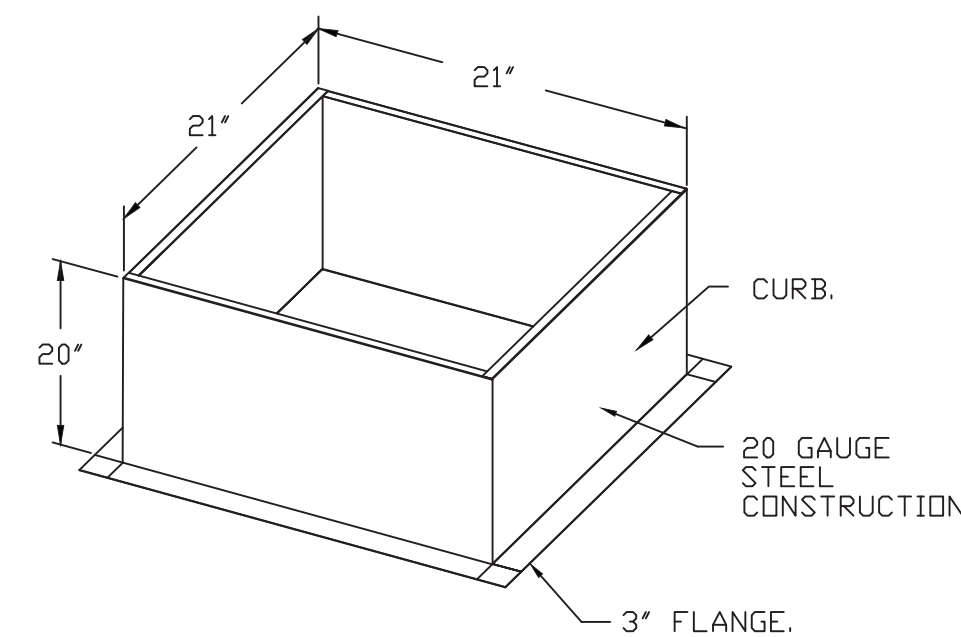
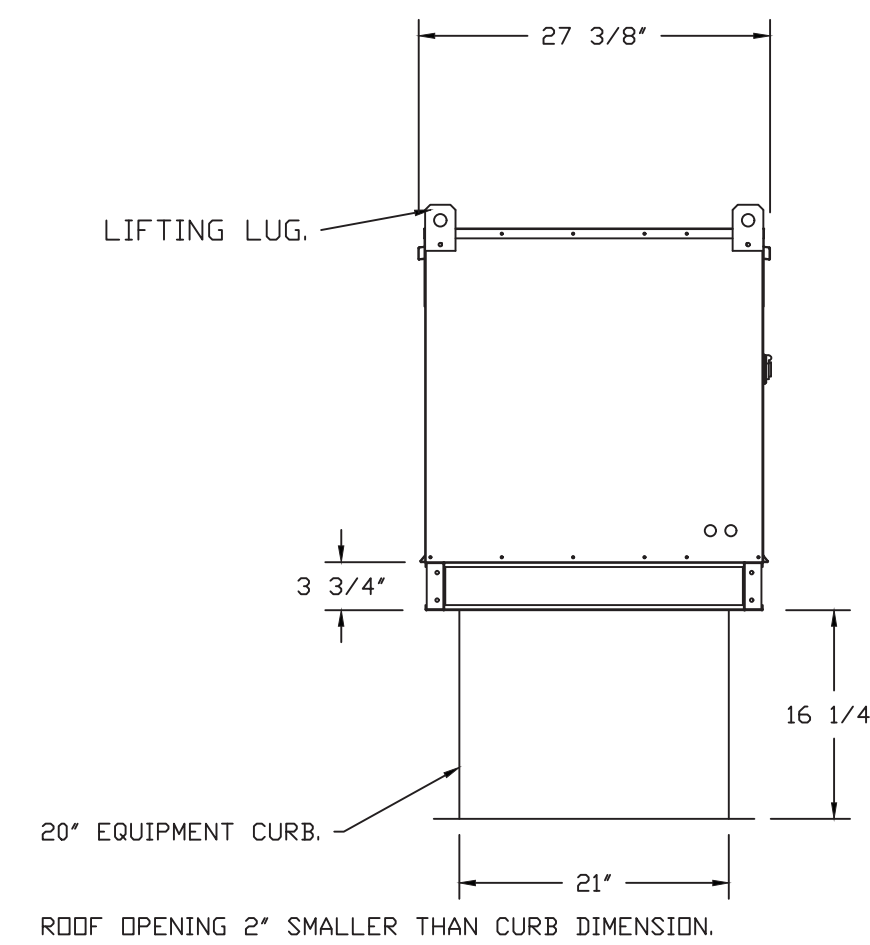
OPTIONS

- GREASE BOX.
- 2 YEAR PARTS WARRANTY.



- FAN #2 A1-15D – SUPPLY FAN
1. UNTEMPERED SUPPLY UNIT WITH 15" MIXED FLOW DIRECT DRIVE FAN IN SIZE #1 HOUSING.
 2. INTAKE HOOD WITH EZ FILTERS-LOW CFM.
 3. DOWN DISCHARGE – AIR FLOW RIGHT → LEFT.
 4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 1 UNTEMPERED DIRECT DRIVE AHUS.
 5. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
 6. 2 YEAR PARTS WARRANTY

*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 SHOULD 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 14" x 14".



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DWG.#: 5821150

DRAWN BY: CJP-REG45

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. H.5

DUCTWORK #1 PARTS - JOB#5821150 DOUBLE WALL FOR 16' ROOF DECK

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1611DWLT-2R-S	2800				-0.006	16.52	2005.35	1	DOUBLE WALL DUCT - 16" INNER DUCT, 11' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P2 ASSEMBLED W/P3	DW16DWTEASY-2R-S	2800		1		-0.18	49.32	2005.35	1	DOUBLE WALL DUCT - 16" INNER TEE DUCT - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P3 ASSEMBLED W/P2 D=S	DW16DWACDDORCOV-2R-S						21.48		1	DOUBLE WALL DUCT - 16" INNER ACCESS DOOR & 20" ACCESS DOOR COVER WITH CLAMPS - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P4	DW1602DWOFFSETASY-2R-S	2800				-0.004	14.03	2005.35	1	DOUBLE WALL DUCT - 16" INNER DUCT RISER & 2 DEGREE OFFSET - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P5	DW1647DWLT-2R-S	2800				-0.0245	70.12	2005.35	1	DOUBLE WALL DUCT - 16" INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P6	DW1647DWAJD-2R-S	2800				-0.0195	103.34	2005.35	1	DOUBLE WALL ADJUSTABLE DUCT - 16" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P7	DW2024SADKIT						8.01		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 20" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW2024SAD, & HARDWARE BAG 4.
P8	DW2024SADKIT						8.01		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 20" OD - INCLUDES UNI-STRUT CUT TO LENGTH, DW2024SAD, & HARDWARE BAG 4.
P9 ASSEMBLED W/P10	DW16DWTEASY-2R-S	2800		1		-0.144	49.32	2005.35	1	DOUBLE WALL DUCT - 16" INNER TEE DUCT - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P10 ASSEMBLED W/P9 D=S	DW16DWACDDORCOV-2R-S						21.48		1	DOUBLE WALL DUCT - 16" INNER ACCESS DOOR & 20" ACCESS DOOR COVER WITH CLAMPS - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P11	DW1602DWOFFSETASY-2R-S	2800				-0.004	14.03	2005.35	1	DOUBLE WALL DUCT - 16" INNER DUCT RISER & 2 DEGREE OFFSET - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL.
P12	DW1647DWAJD-2R-S	2800				-0.016	103.34	2005.35	1	DOUBLE WALL ADJUSTABLE DUCT - 16" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P13 ASSEMBLED W/P14	DW162150DWLTP-2R-S	2800				-0.011	32.92	2005.35	1	DOUBLE WALL DUCT - 16" INNER DUCT, 21.5' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER SHELL - USED WITH TRANSITION PLATE.
P14 ASSEMBLED W/P13	DW2616TPDBEX	2800					9.00	2005.35	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
SYSTEM AT P14						-1.492	0.00			
	3M-2000PLUS						0.80		3	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	735602000						52.00		3	DUCT - DUCT INSULATION FOR ZERO CLEARANCE TO COMBUSTIBLES - 300" X 24" X 1-1/2" ROLL. UNIFRAX Fyrewrap ELITE 1.5.
	BANDING.5						5.00		1	DUCT - FIRE BARRIER WRAP STAINLESS STEEL BANDING .5" WIDTH - 200 FT PER ROLL.
	DW16DWCLASY-2R-S						7.96		4	DUCT - 16" DUCT - 20" DOUBLE 'V' CLAMP - 2R INSULATION & SINGLE 'V' CLAMP INCLUDED - REDUCED CLEARANCE.
	SEAL.50-50						0.50		1	DUCT - FIRE BARRIER WRAP STAINLESS STEEL BANDING SEAL .5" WIDTH. QUANTITY OF 50.
	TAPEALUM						0.25		1	DUCT - FIRE BARRIER WRAP ALUMINUM FOIL TAPE - 3" X 150' ROLL.
ADDITIONAL PARTS										
EXTRA-1	DW1607LT						4.14		2	SINGLE WALL DUCT 16" DIAMETER, 7' LONG, FLANGE AT BOTH ENDS. STAINLESS STEEL.
EXTRA-2	DW16CLASY						1.18		2	DUCT 'V' CLAMP WITH NEW DESIGN 14 GA BRACKETS, 16" DUCT, ASSEMBLY.
TOTAL WEIGHT							727.55			

DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-16')	20'	24'	24'
2R (18')	18'	24'	24'
3R & 3Z (5'-24')	10'	24'	24'
3Z (26' -36')	10'	20'	20'

Model DW Series is ETL Listed under file number 3114021, and complies with UL-1978, as well as CAN/ULC-S662.

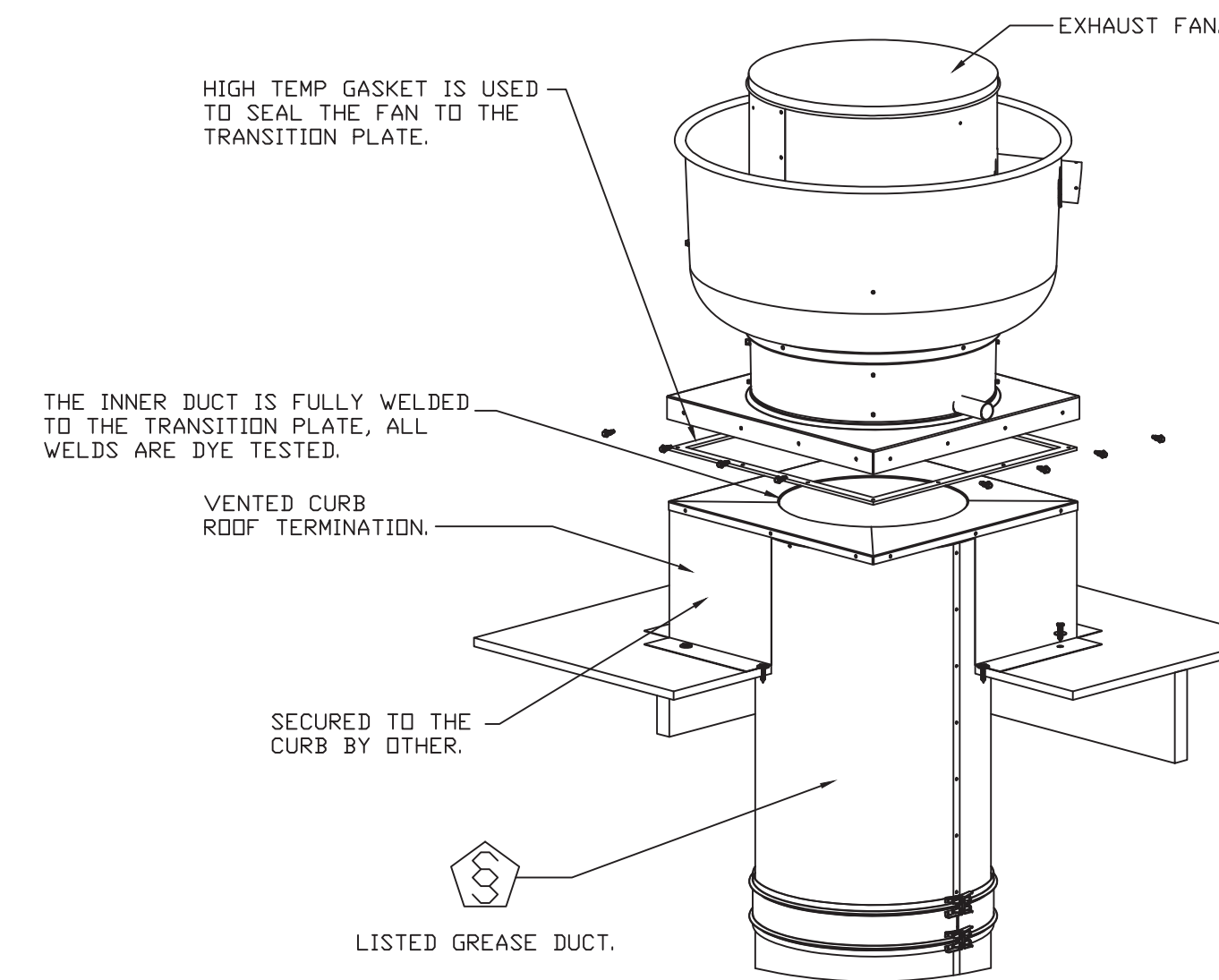
The DW Series has been certified by ITS. This certification mark indicates that the product has been tested to and has met the minimum requirements of a widely recognized (consensus) U.S. and Canadian products safety standard, that the manufacturing site has been audited, and that the applicant has agreed to a program of periodic factory follow-up inspections to verify continued performance.



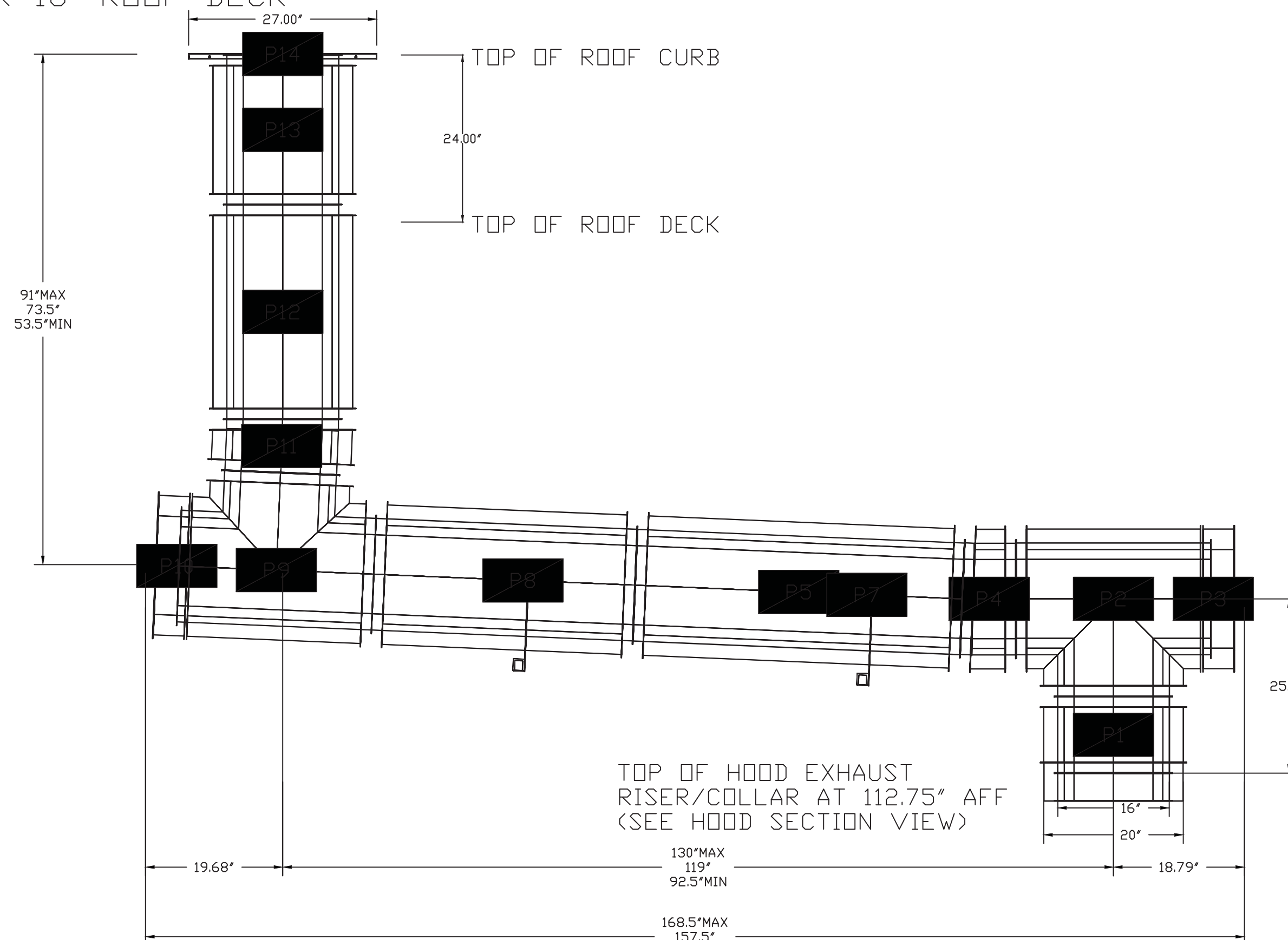
UL 1978 -Standard for Grease Duct
 UL 2221 -Fire Resistive Grease Duct Enclosure Assemblies
 NFPA 96 -Installation Standard
 ASTM E2336 -Test Method for Fire Resistive Grease Duct Enclosure System

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

MINIMUM CLEARANCE TO COMBUSTIBLES			
DUCT DIAMETER	COMBUSTIBLES	LIMITED COMBUSTIBLES	NON COMBUSTIBLES
8"	18"	3"	0"
10"	18"	3"	0"
12"	18"	3"	0"
14"	18"	3"	0"
16"	18"	3"	0"
18"	18"	3"	0"
20"	18"	3"	0"
24"	18"	3"	0"



DUCTWORK #1 SIDE VIEW FOR 16' ROOF DECK



CAPTIVE-AIRE HOOD PACKAGE AS SHOWN IS OWNER PROVIDED

REVISIONS	
DESCRIPTION	DATE

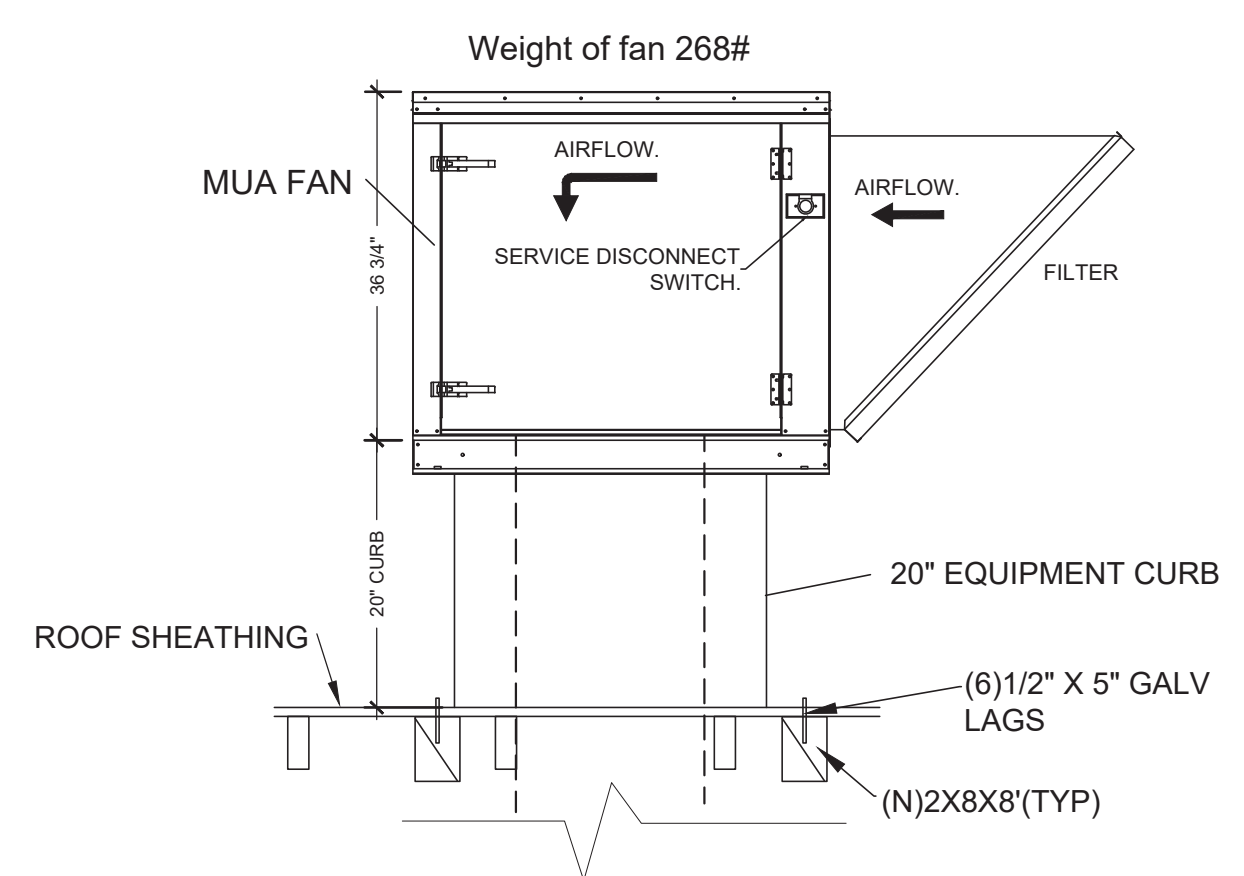
www.captiveaire.com
 Dallas Office
 1901 Royal Lane Suite 101, DALLAS, TX, 75229 PHONE: (214) 220-0099 FAX: (214) 220-0099 EMAIL: reg45@captiveaire.com

Wingstop Oakland CA #Y345
 10700 MacArthur Boulevard,
 Oakland, CA, 94605

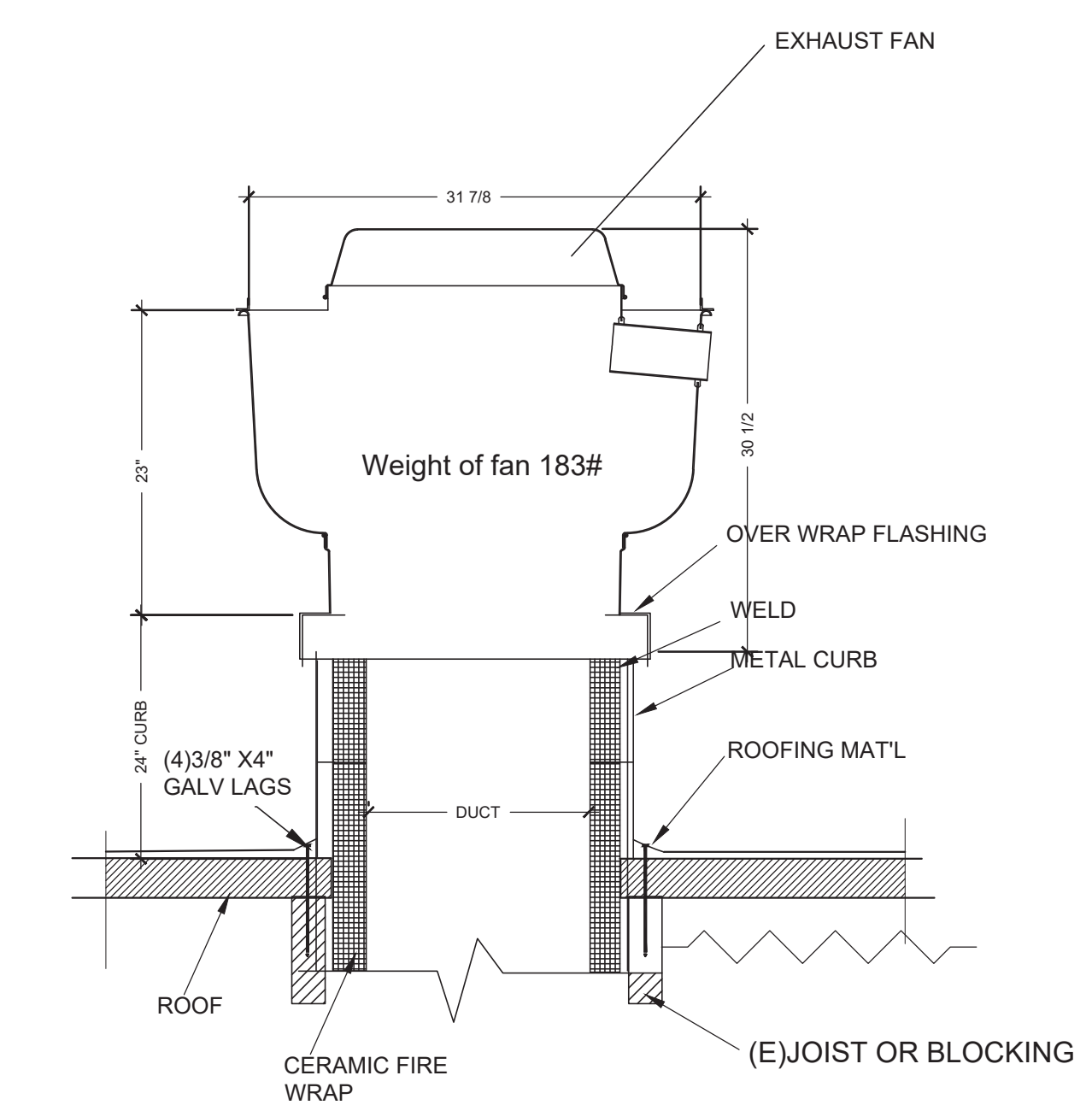
DATE: 1/23/2023
 DWG.#: 5821150
 DRAWN BY: CJP-REG45
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING

SHEET NO. H.6

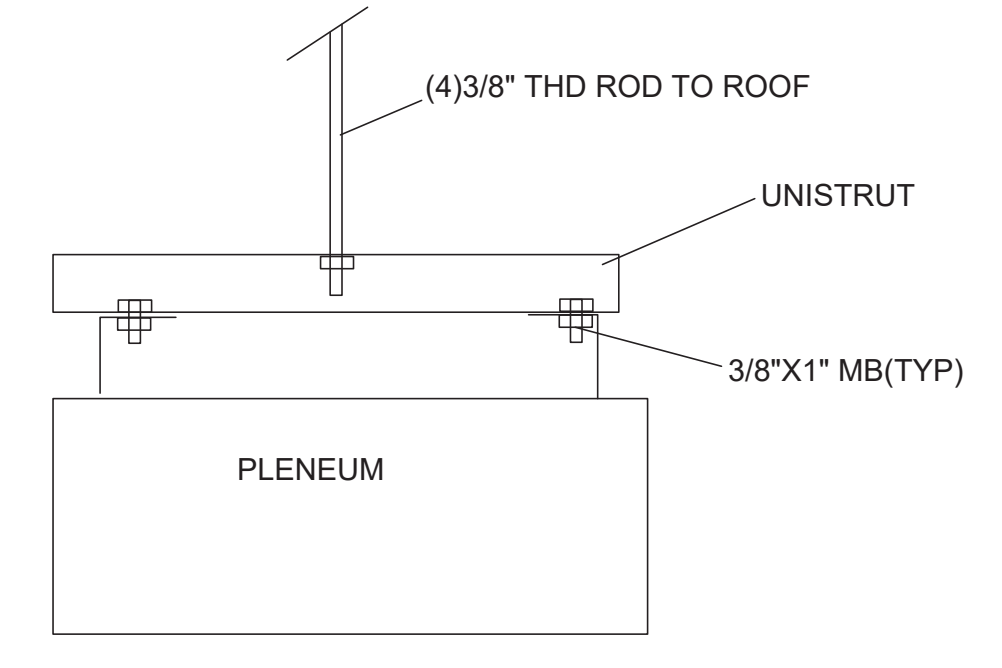
REV. DATE	NO.
5/26/23	1



2
H.7
MUA FAN ROOF SUPPORT DETAIL
NTS

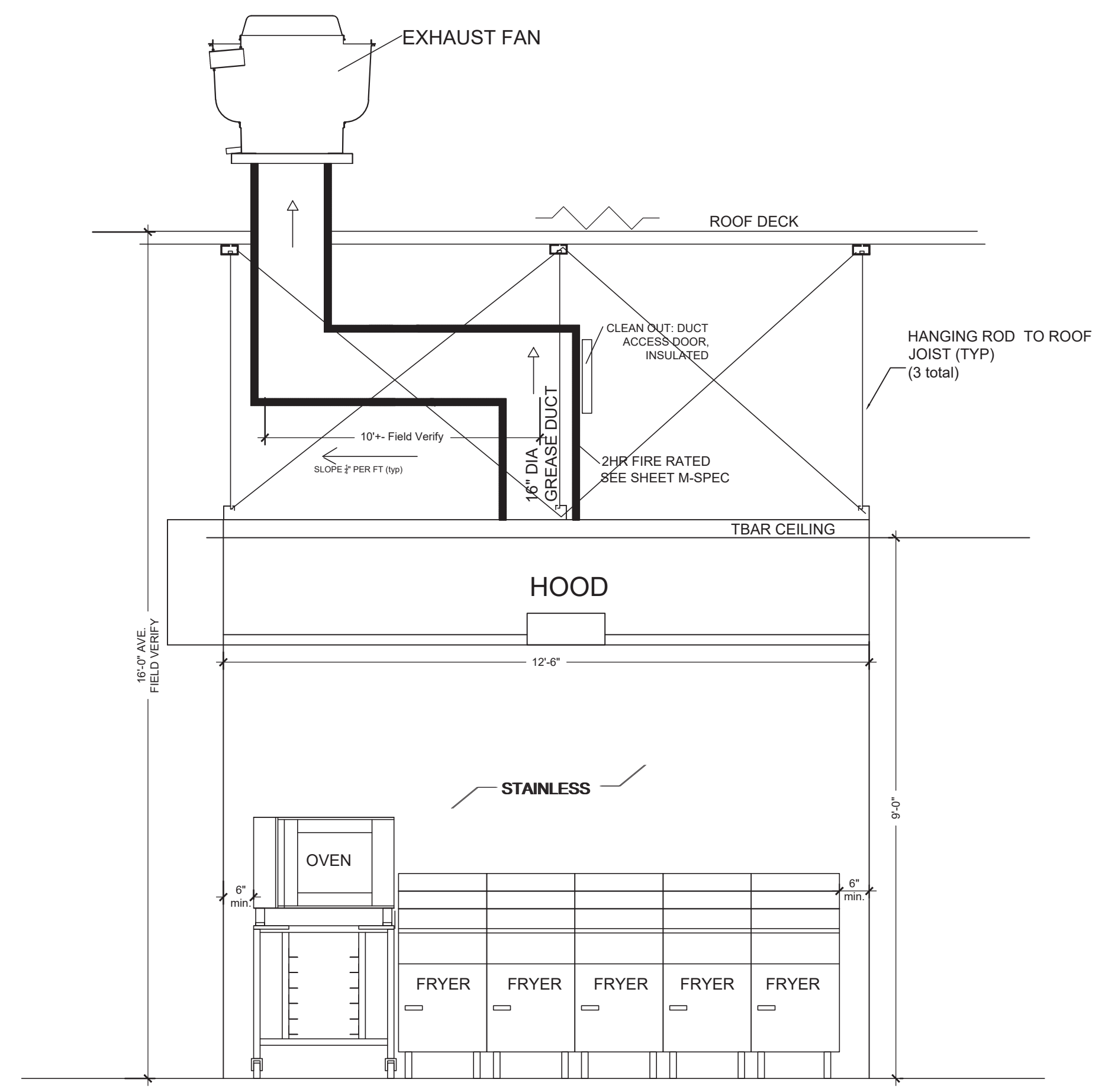


3
H.7
EXHAUST FAN ROOF SUPPORT DETAIL
NTS



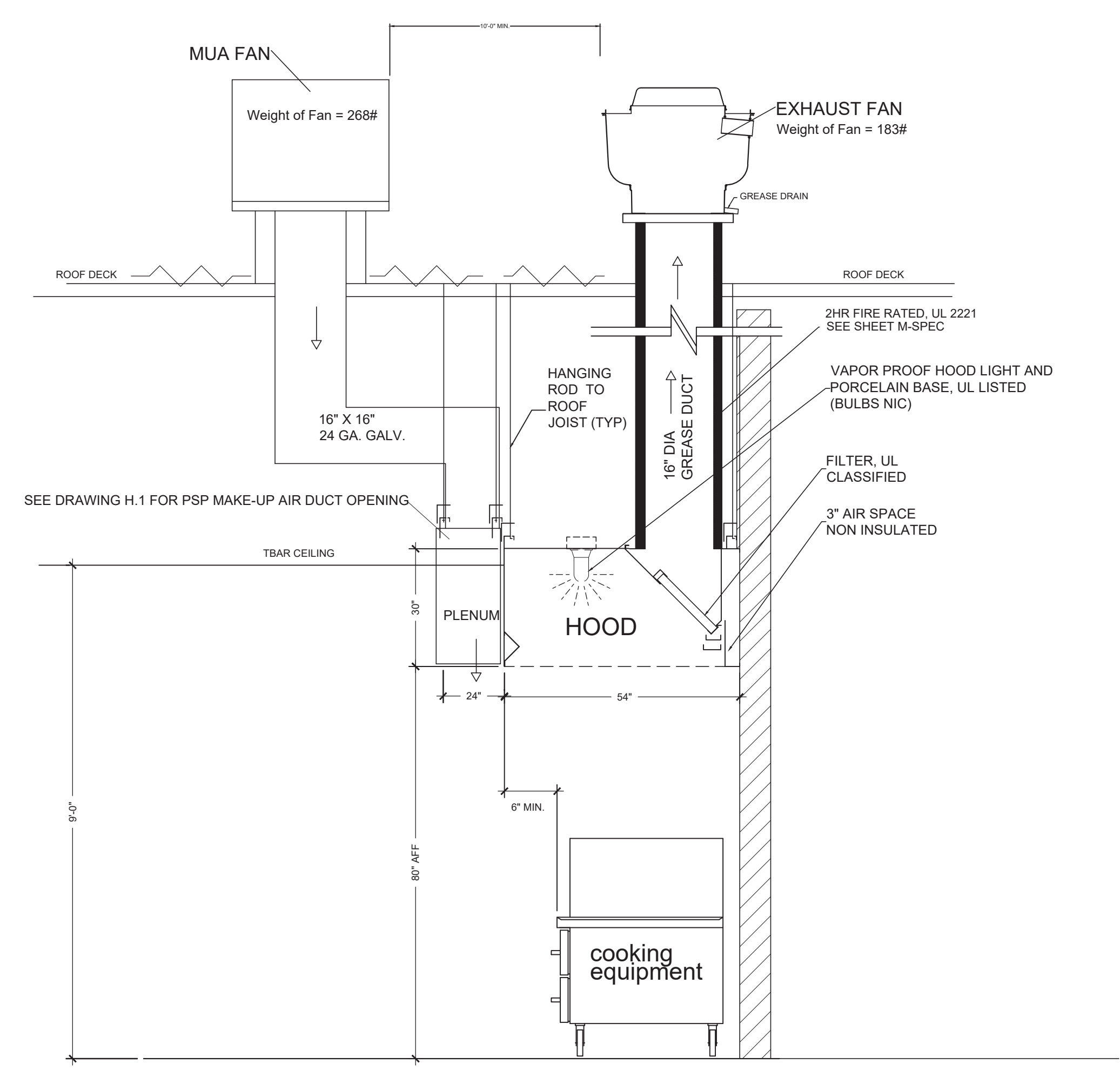
4
H.7
AIR PLENUM SUPPORT
NTS

SEE CAPTIVE AIRE TYPE I HOOD SYTEM DETAILS ON SHEET H.1 THRU H.6
SEE SHEET M.1 FOR EQUIPMENT ROOF PLAN
SEE SHEET S.1 FOR HOOD INSTALLATION

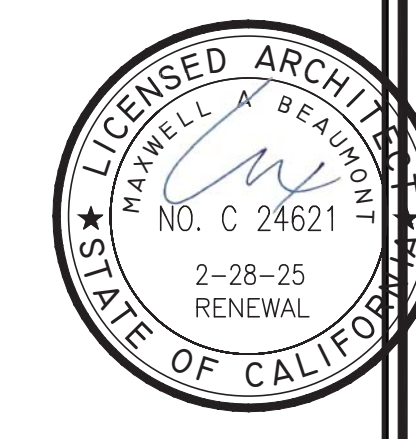


NOTE: UP BLAST GREASE EXHAUST FANS SHALL HAVE A HINGED BASE FOR CLEANING AT ROOF LEVEL.

HOOD & DUCT ELEVATION-FRONT VIEW
NTS



HOOD & DUCT ELEVATION-SIDE VIEW
NTS



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925-818-4132

WING STOP RESTAURANT
FOOTHILL SQUARE
10700 MACARTHUR BLVD. #2A
OAKLAND, CA 94605
STORE #17345



DWG DATE:
2/6/23
DRAWN BY:
MSD

HOOD
INSTALLATION

H.7

Factory Built Double Wall Grease Duct Specification

Furnish double wall, factory built grease duct for use with Type I kitchen hoods, which conforms to the requirements of NFPA-96. Products shall be ETL listed to UL-1978 and UL-2221 for venting air and grease vapors from commercial cooking operation. Models DW-2R, 3R and 3Z are used for grease duct applications when installed in accordance with these instructions and National Fire Protection Association "NFPA 96", Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. Double wall grease ducts are listed for a continuous internal temperature of 500 degrees F and intermittent temperatures of 2000 degrees F.

The duct sections shall be constructed of an inner duct wall and an outer wall with insulation in between. The inner duct wall shall be constructed of .036 inch thick, 430 type stainless steel and be available in diameters 8" through 24". The outer wall shall be constructed of stainless steel at a minimum of .024 inch thickness. The duct, based on model number, shall include layers of Super Wool 607 Plus insulation between the inner and outer wall. Grease duct joints shall be held together by means of formed V clamps and sealed with 3M Fire Barrier 2000+. The duct wall assembly shall be tested and listed at 3/4" or zero inch clearance, according to classifications.

Classifications and Clearances

UL 2221: Standard for Fire Resistive Grease Duct Enclosure Assemblies. Chapter 7 of this standard references a test labeled Internal Fire Test. Section 7.1.1 references two installation conditions, Condition A and Condition B. Condition A represents all installation condition except for installation within non-ventilated combustible enclosures. Condition B represents installation within a non-ventilated combustible enclosure.

Model DW-3Z is classified under UL2221 (Test of Fire Resistive Duct Enclosure Assemblies) as an alternate to 2-Hr. fire resistive shaft enclosures with a minimum zero clearance to combustibles (sizes 8" to 24" diameter). Model 3Z is listed in accordance with the requirements for duct enclosure Condition A and B.

Model DW-3R is classified under UL2221 (Test of Fire Resistive Duct Enclosure Assemblies) as an alternate to 2-Hr. fire resistive shaft enclosures with a reduced clearance to combustibles (sizes 8" to 24" diameter). Model 3R is listed in accordance with the requirements for duct enclosure Condition B.

Model DW-2R is classified under UL2221 (Test of Fire Resistive Duct Enclosure Assemblies) as an alternate to 2-Hr. fire resistive shaft enclosures with a reduced clearance to combustibles (sizes 8" to 16" diameter). Model 2R is listed in accordance with the requirements for duct enclosure Condition B.

DUCT MODEL	INNER DIAMETER (ID)	OUTSIDE DIAMETER	CLEARANCE TO COMBUSTIBLES	CLEARANCE TO NON-COMBUSTIBLES
DW - 2R	8" - 16"	ID + 4	3/4"	0"
DW - 3R	8" - 24"	ID + 6	3/4"	0"
DW - 3Z	8" - 24"	ID + 6	0"	0"

*DW - 2R: 3/4" clearance to combustibles from the surface of the duct outer shell; zero inch clearance from combustibles from the tip of the outer V Band.

**DW - 3R: 3/4" clearance to combustibles from the surface of the duct outer shell; zero inch clearance from combustibles from the tip of the outer V Band.

Classifications and Clearances

Through floor fire stop support assembly are used to support duct sections that penetrate a fire resistant floor(s). The full support ring is installed under the double V band; the struts are connected to the support ring with supplied 5/16-18 hardware. Once the struts have been connected they are secured to the floor using appropriate type and size fasteners supplied by others. When duct systems penetrate a fire resistance rated floor, ceiling and/or a wall, a fire stop kit is used to retain the fire resistance rating on the floor and/or wall. The double wall grease duct (2R, 3R and 3Z) and the fire stop assemblies detailed below have achieved 2-hour ratings for integrity, insulation and stability. Testing was conducted in accordance with the applicable requirements UL 2221, Test of Fire Resistive Grease Duct Enclosure Assemblies.

DUCT MODEL	INNER DIAMETER	OUTER DIAMETER	SQUARE / ROUND OPENING MIN/MAX
DW - 2R	8"	12"	14" - 15"
DW - 2R	10"	14"	16" - 17"
DW - 2R	12"	16"	18" - 19"
DW - 2R	14"	18"	20" - 21"
DW - 2R	16"	20"	22" - 23"
DW - 3R / 3Z	8"	14"	16" - 17"
DW - 3R / 3Z	10"	16"	18" - 19"
DW - 3R / 3Z	12"	18"	20" - 21"
DW - 3R / 3Z	14"	20"	22" - 23"
DW - 3R / 3Z	16"	22"	24" - 25"
DW - 3R / 3Z	18"	24"	26" - 27"
DW - 3R / 3Z	20"	26"	28" - 29"
DW - 3R / 3Z	24"	30"	32" - 33"

Double Wall Grease Duct shall be installed in accordance with the manufacturer's "Installation, Operation and Maintenance Manual," ETL listing, state codes and local codes. Fans shall be supported independently from the grease duct sections. Protect grease duct from twisting or movement caused by fan torque or vibration.

Additional Information Available

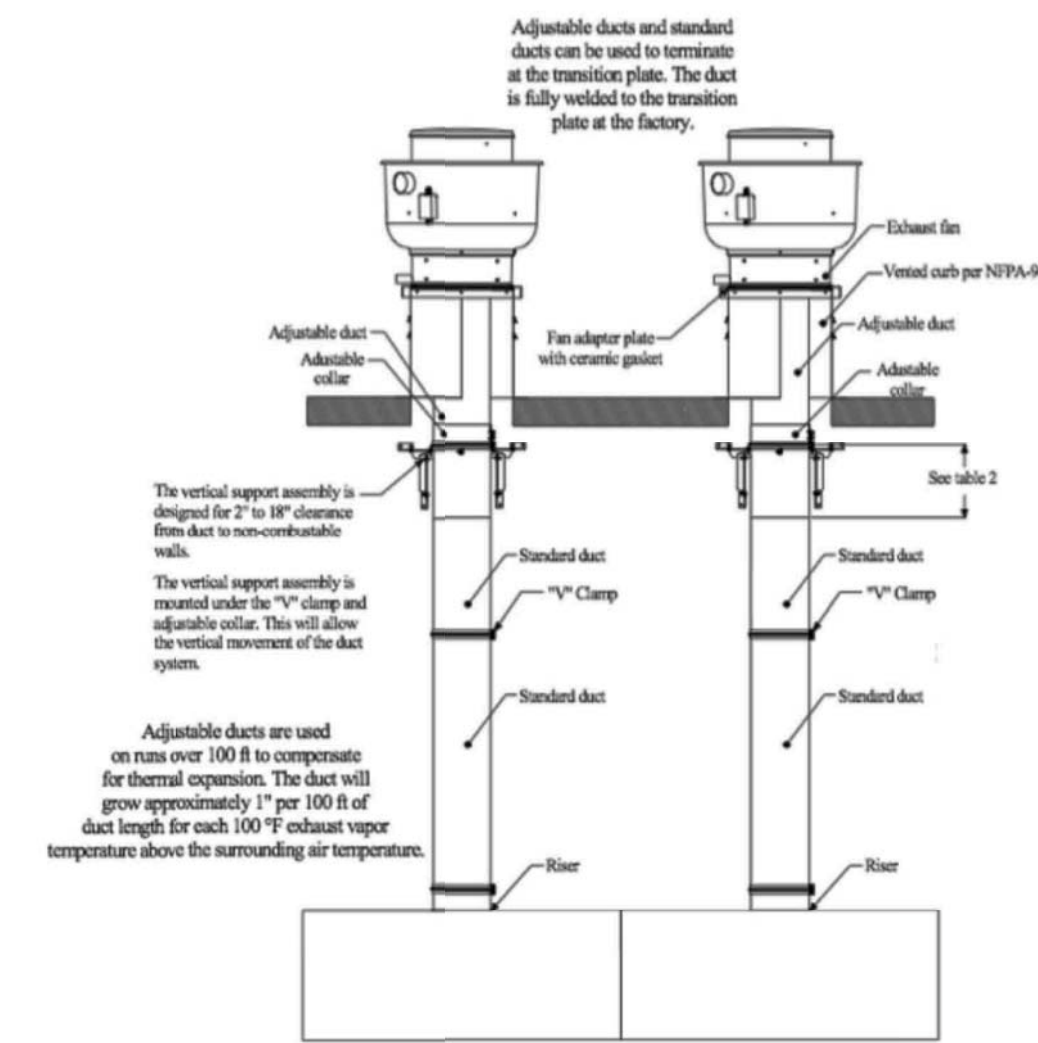
Operation, Installation, and Maintenance Manual

Copy of the manual is sent with every duct order from our manufacturing facility. Additional copies, if needed, are available for download at: <https://www.captiveaire.com/CATALOGCONTENT/DUCTWORK/INSTALLATION.ASP?catId=308&Model=GREASE+DUCT> Available also at the link above are recommendations for vertical and guy line support guides.

Grease Duct Design Guide

The Grease Duct Design Guide gives specifics for all parts available for order including Elbows, Straight Pieces, etc. Formulas and other information to calculate static pressure through a pre-engineered system is also available. Design Guide is available for download at <https://www.captiveaire.com/catalog/genpartCatalog.asp?catId=306> or as a hard copy from your local CaptiveAire sales office.

Sample Duct Drawing



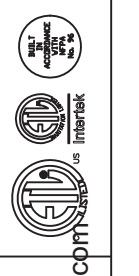
Certifications

The DW Series has been certified by ITS. This certification mark indicates that the product has been tested to and has met the minimum requirements of a widely recognized (consensus) U.S. and Canadian products safety standard, that the manufacturing site has been audited, and that the applicant has agreed to a program of periodic factory follow-up inspections to verify continued performance.

Model Double Wall Series is ETL Listed and complies with UL Listings

REVISIONS

DESCRIPTION	DATE



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 1665 GEARY RD, WALNUT CREEK, CA, 94597 PHONE: (925) 330-9880 FAX: (919) 227-5940 EMAIL: linstallations@captiveaire.com

CENTRAL CA

ETL DUCT SPEC PAGE

DATE: --

DWG. #:

DRAWN BY:

SCALE:

MASTER DRAWING

SHEET NO.
 M-SPEC