

EQUIPMENT SCHEDULE

Item No.	Qty	Equipment Category	Manufacturer	Model Number
1	1	Shk. Map	By Contractor	CUSTOM
2	1	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-242VG
3	1	Ice Maker w/ Ice Bin	Whisper Ice	WT000A
4	1	Blk. Ice	Whisper Ice	LI1400
5	3	Shk. Unit, Wall Mount	John Boos & Co.	BR500-1410
6	1	Mixer, Floor	Vorwerk	V30
7	1	Coffee Maker, Airtop, Automatic	Bunn-O-Matic	230010003
8	1	Coffee/Tea Brewer	Bunn-O-Matic	500001100
9	2	Table, Work	John Boos & Co.	ST800-3040SK
10	1	Shk. Unit, Wall Mount	John Boos & Co.	BR5168
11	1	Shk. Unit, Wall Mount	John Boos & Co.	BR5184
12	1	Shk. Scullery, 2 Compartments	John Boos & Co.	281824
13	1	Table, Work	John Boos & Co.	ST800-3070SK
14	1	Shk. Unit, Wall Mount	John Boos & Co.	BR5172
15	1	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-242VG
16	1	Refrigerator/Freezer, Walk-in Unit	Herford Walk-In	CUSTOM
17	3	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-244BG
18	3	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-1860VG
19	2	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-1840VG
20	1	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-242VG
21	1	Over-Steamer, Combination, Gas	NATIONAL USA	COMB CLASSIC 10-WALF SIZE
22	2	Salamander Broiler, Gas	Gorham	GR3M
23	2	Range, Restaurant, Gas	Gorham	GR-8C
24	1	Broiler, Under-Fired/Gas	MogStach'n	FR-800-636-H
25	1	Freezer, Deep Freezer, Side	Frymaster	DF14
26	1	with Fire Suppression	Cogitex Air	15' Hood System
27	1	Freezer, Worktop	True Mfg. - General Foodservice	RF1-237-HC
28	1	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-242VG
29	1	Ice Cream Dipping Cabinet	Excellence	IFT-2HC
30	1	Pastry Cabinet w/ DOE	True Mfg.	CST000
31	1	Refrigerator, Pizza Prep	True Mfg. - General Foodservice	RFP-AT-442-2-HC
32	1	Refrigerator, Pizza Prep	True Mfg. - General Foodservice	RFP-AT-670-6-HC
33	2	Warmer, Food Overhead	Hottop	HT00-18
34	1	Table, Hot Food, Electric	Defield	EH30C
35	1	Refrigerator, Worktop	True Mfg. - General Foodservice	RFP-36-HC
36	1	Shk. Drop-in	Edge Group/Metal Masters	SR10-14-9.5-1
37	1	Table, Work	John Boos & Co.	ST800-30120SK
38	1	Underbar Ice Chest, Drop-in	Kovena	UC1712
39	1	Refrigerator, Worktop	True Mfg. - General Foodservice	RFP-27-HC
40	1	Over-Steamer	John Boos & Co.	ST8-2000
41	1	Shk. Solid Sorting	John Boos & Co.	PS-200-42
42	1	Over-Steamer	John Boos & Co.	ST8-18850V-1
43	1	Wastewater, Door Type, Low Temp.	Eco Lin	EL-200
44	1	Condensate Hood	Cogitex Air	Type 2 Hood
45	1	Shk. Labor Sorting	John Boos & Co.	BR1640-78
46	1	Shk. Scullery, Clean	John Boos & Co.	CR16-16000R-8
47	1	Shk. Scullery, 3 Compartments	John Boos & Co.	281824-2024
48	1	Pastry, Flat & Pop, Double Bar	John Boos & Co.	PR20A
49	1	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-182VG
50	1	Back Bar Cooler	Kovena	BC500
51	1	Back Bar Cooler	Kovena	BC500
52	1	Back Bar Cooler	Kovena	BC500
53	1	Underbar Ice Chest w/ Top & Front	Propaner/Star	KR19-1201
54	2	Underbar Ice Chest	Kovena	KR19-300P
55	2	Underbar Glass Rack	Kovena	KR24-030P
56	1	Underbar Storage w/ Dish	Kovena	KR24-140C
57	1	Glasswasher	Eco Lin	Drage SE
58	1	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-242VG
59	1	Shelving Unit, Starter, Metal, Wire	Edge Group/Metal Masters	SS-74-242VG

EQUIPMENT SCHEDULE

Item No.	Qty	Equipment Category	Manufacturer	Model Number
60	1	Display Case, Refrigerated	Amana USA	CR6-46
61	1	Rapid Cook Service	TurboChef	TCO-6500-1
62	1	Express Machine	SE-C2 Earth	E2-S-EARTH

HAYNES HOTEL
Roanoke, VA

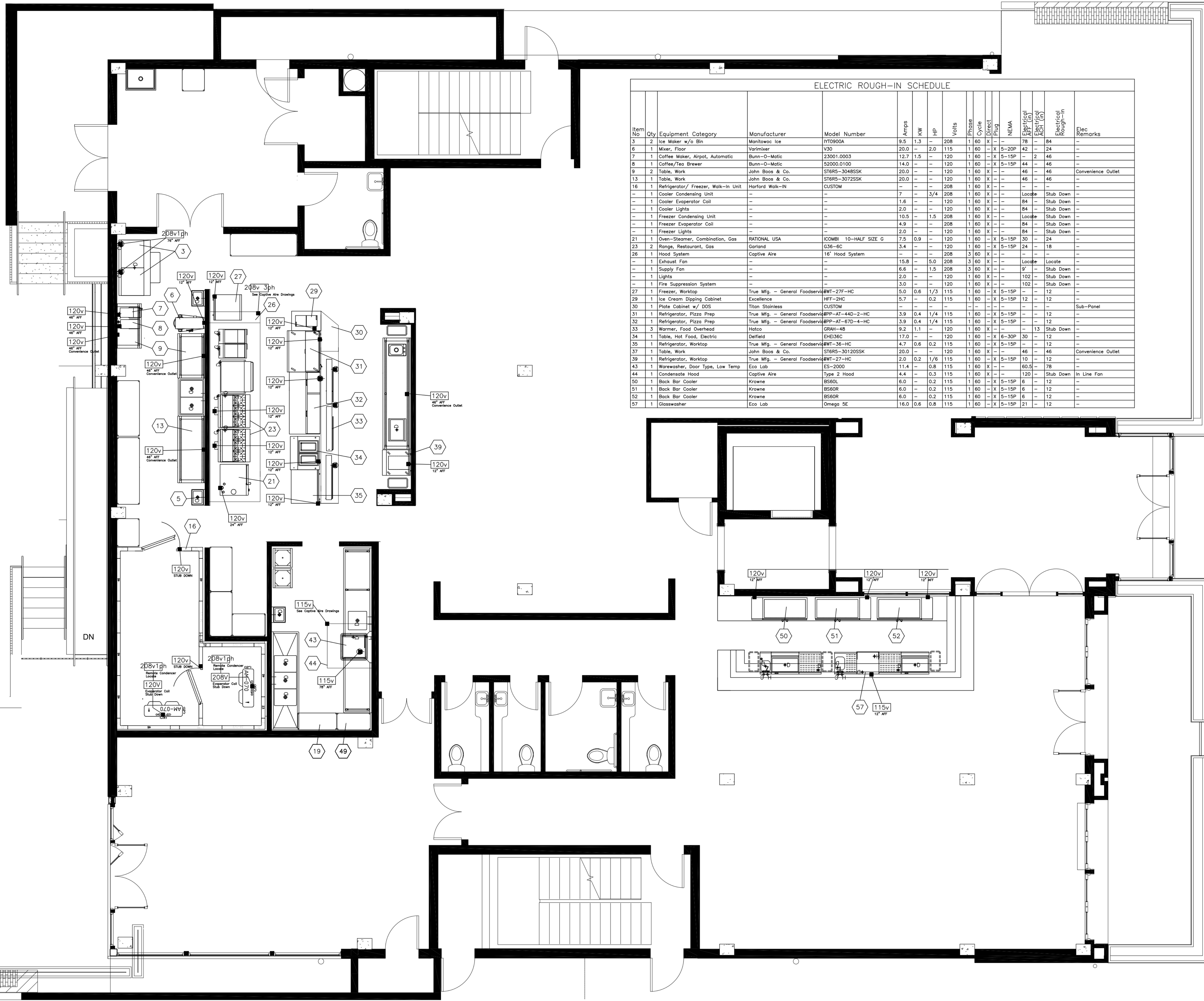
Chesapeake Design
13325 Bay St.
Sebastian, FL 32958
PHONE: (804)514-3132

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 4-24-23
SCALE: 1/4"=1'
DRAWN BY: J. TOMSIC
JOB NO.
SHEET # 1 OF 4

K1.01



ELECTRIC ROUGH-IN SCHEDULE

Item No	Qty	Equipment Category	Manufacturer	Model Number	Amps	KW	HP	Volts	Phase	Cycle	Direct Plug	NEPA	Electrical AFCI (in)	Electrical AFCI (ft)	Electrical Rough-in	Spec Remarks	
3	2	Ice Maker w/o Bin	Manitowoc Ice	HT0900A	9.5	1.3		208	1	60	X		78		84		
6	1	Mixer, Floor	Vor mixer	V30	20.0		2.0	115	1	60	X						
7	1	Coffee Maker, Airpot, Automatic	Bunn-O-Matic	23001.0003	12.7	1.5		120	1	60	X				2	46	
8	1	Coffee/Tea Brewer	Bunn-O-Matic	52000.0100	14.0			120	1	60	X					46	
9	2	Table, Work	John Boos & Co.	ST6R5-304BSSK	20.0			120	1	60	X					46	
13	1	Table, Work	John Boos & Co.	ST6R5-307ZSSK	20.0			120	1	60	X					46	
16	1	Refrigerator/ Freezer, Walk-In Unit	Harford Walk-In	CUSTOM				208	1	60	X						
	1	Cooler Condensing Unit			7		3/4	208	1	60	X				84	Stub Down	
	1	Cooler Evaporator Coil			1.6			120	1	60	X				84	Stub Down	
	1	Cooler Lights			2.0			120	1	60	X				84	Stub Down	
	1	Freezer Condensing Unit			10.5		1.5	208	1	60	X				84	Stub Down	
	1	Freezer Evaporator Coil			4.9			208	1	60	X				84	Stub Down	
	1	Freezer Lights			2.0			120	1	60	X				84	Stub Down	
21	1	Oven-Steamer, Combination, Gas	RATIONAL USA	ICOMBI 10-HALF SIZE G	7.5	0.9		120	1	60	X				5-15P	30	
23	2	Range, Restaurant, Gas	Garland	G36-6C	3.4			120	1	60	X				5-15P	18	
26	1	Hood System	Captive Aire	18' Hood System				208	3	60	X						
	1	Exhaust Fan			15.8		5.0	208	3	60	X				Locate	Locate	
	1	Supply Fan			6.6		1.5	208	3	60	X				9'	Stub Down	
	1	Lights			2.0			120	6	60	X				102	Stub Down	
	1	Fire Suppression System			3.0			120	1	60	X				102	Stub Down	
27	1	Freezer, Worktop	True Mfg. - General Foodserv.	BWT-27F-HC	5.0	0.6	1/3	115	1	60	X				5-15P	12	
29	1	Ice Cream Dipping Cabinet	Excellence	HFF-2HC	5.7		0.2	115	1	60	X				5-15P	12	
30	1	Plate Cabinet w/ DOS	Titan Stainless	CUSTOM												Sub-Panel	
31	1	Refrigerator, Pizza Prep	True Mfg. - General Foodserv.	PPP-AT-44D-2-HC	3.9	0.4	1/4	115	1	60	X				5-15P	12	
32	1	Refrigerator, Pizza Prep	True Mfg. - General Foodserv.	PPP-AT-67D-4-HC	3.9	0.4	1/4	115	1	60	X				5-15P	12	
33	3	Warmer, Food Overhead	Hatco	GRAM-48	9.2	1.1		120	1	60	X					13	Stub Down
34	1	Table, Hot Food, Electric	Defield	EDH36C	17.0			120	1	60	X					6-30P	30
35	1	Refrigerator, Worktop	True Mfg. - General Foodserv.	BWT-36-HC	4.7	0.6	0.2	115	1	60	X				5-15P	12	
37	1	Table, Work	John Boos & Co.	ST6R5-30120SSK	20.0			120	1	60	X					46	Convenience Outlet
39	1	Refrigerator, Worktop	True Mfg. - General Foodserv.	BWT-27-HC	2.0	0.2	1/6	115	1	60	X				5-15P	10	
43	1	Wardensher, Door Type, Low Temp	Eco Lab	ES-2000	11.4		0.8	115	1	60	X					60.5	78
44	1	Condensate Hood	Captive Aire	Type 2 Hood	4.4		0.3	115	1	60	X					120	Stub Down
50	1	Back Bar Cooler	Krowne	BS60L	6.0		0.2	115	1	60	X				5-15P	6	
51	1	Back Bar Cooler	Krowne	BS60R	6.0		0.2	115	1	60	X				5-15P	6	
52	1	Back Bar Cooler	Krowne	BS60R	6.0		0.2	115	1	60	X				5-15P	6	
57	1	Glosswasher	Eco Lab	Omega 5E	16.0	0.6	0.8	115	1	60	X				5-15P	21	

HAYNES HOTEL
Roanoke, VA

Chesapeake Design
13325 Bay St.
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1		
2		
3		
4	4-24-23	
DATE:	4-24-23	
SCALE:	1/4" = 1'	
DRAWN BY:	J. TOMSIC	
JOB NO.		
SHEET #	1 OF 4	

FOR QUESTIONS, CALL THE
Southern Virginia Office
REGION 28
PHONE: (804) 684 - 2700
EMAIL: reg28@captiveaire.com

PATENT NUMBERS

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

HOOD INFORMATION - JOB#5845754

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		5424 ND-2-PSP-F	CAPTIVEAIRE	16' 0"	600 DEG	I	HEAVY	235	3760			3'	18"	3760	2128	-1.325'	3196	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 SOLO FILTER	12	20"	16"	85% SEE FILTER SPEC	4	RECESSED ROUND	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0/4.0			YES	1363 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 18.00' HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 78.00' HIGH X 204.00' LONG 430 SS VERTICAL.
		RISER SENSOR INSTALL 6IN PLEN.
		LEFT VERTICAL END PANEL 27' TOP WIDTH, 21' BOTTOM WIDTH, 78" HIGH INSULATED 430 SS.
		RIGHT VERTICAL END PANEL 27' TOP WIDTH, 21' BOTTOM WIDTH, 78" HIGH INSULATED 430 SS.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1		Front	204'	18'	6'	MUA	12"	28"		799	0.237"
						MUA	12"	28"		799	0.237"
						MUA	12"	28"		799	0.237"
						MUA	12"	28"		799	0.237"

GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE
HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT
____' - ____"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED

APPROVED WITH NO EXCEPTION TAKEN

REVISE AND RESUBMIT

SIGNATURE _____

YOUR TITLE _____ DATE _____

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO 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.

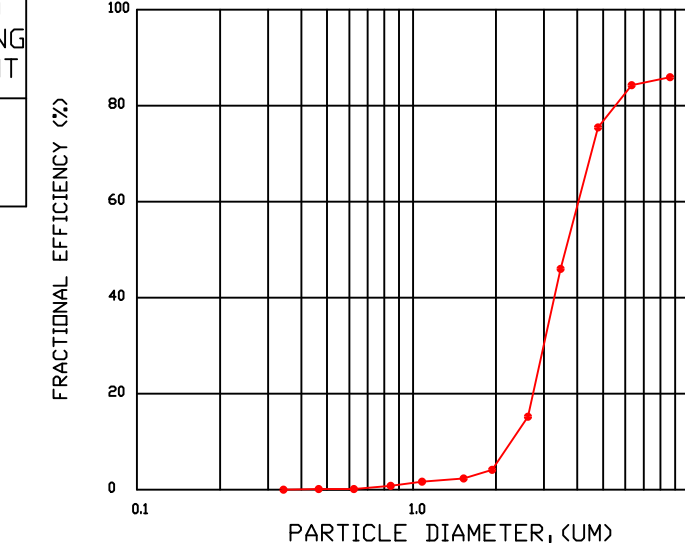
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

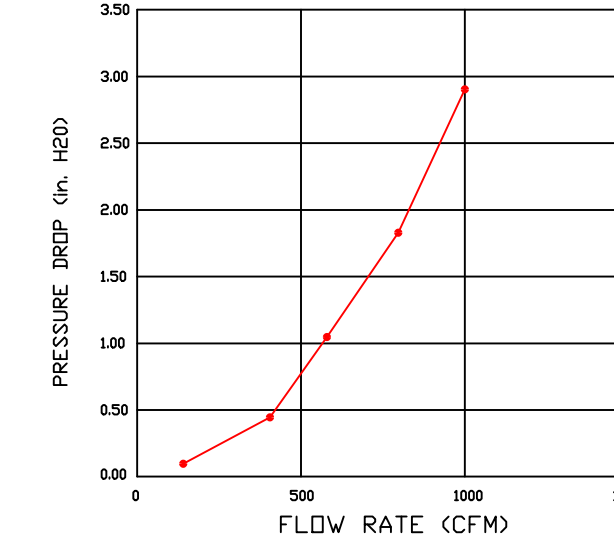
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO 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.



REVISIONS

DESCRIPTION	DATE:

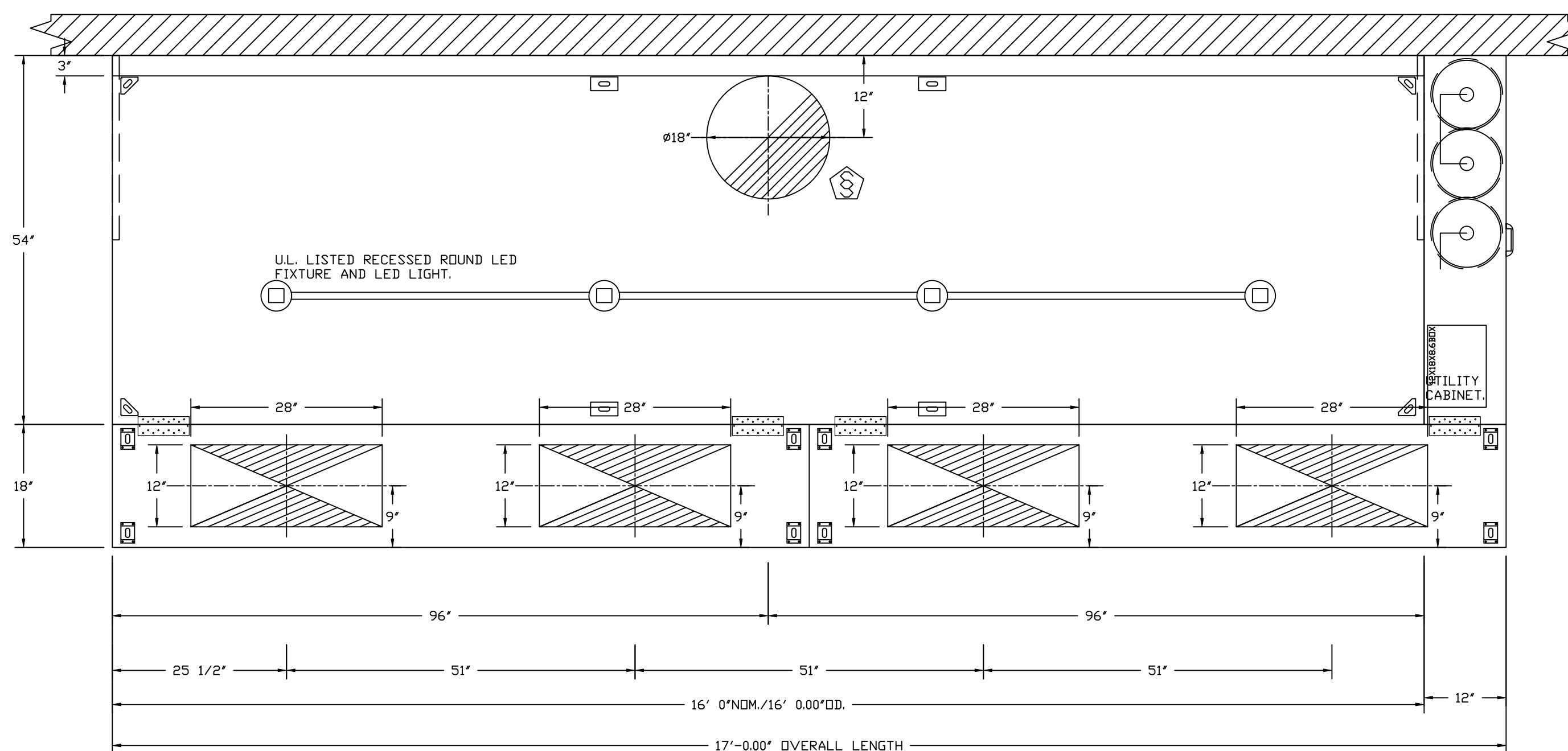
CAPTIVEAIRE

Southern Virginia Office
www.captiveaire.com
700 Tech Center Parkway, Suite 200 Unit 127 PO 131, Newport News, VA, 23606 PHONE: (804) 684 - 2700 FAX: 9192275911 EMAIL: reg28@captiveaire.com

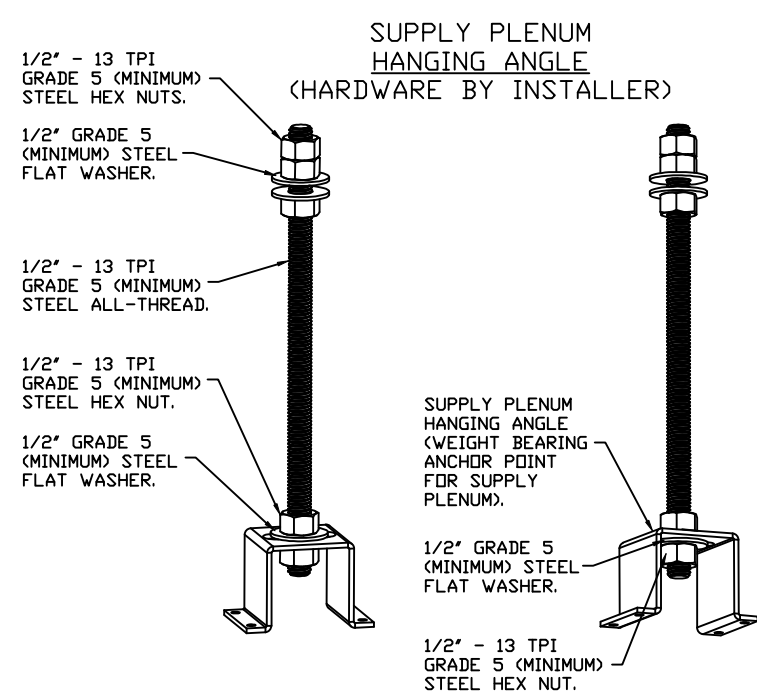
Haynes Building Roanoke Hotel
RICHMOND, VA, 23230

DATE: 8/20/2024
DWG.#: 5845754
DRAWN BY: JMN-28
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
1



PLAN VIEW - HOOD #1
 16' 0.00" LONG 5424ND-2-PSP-F
 NOTE: ADDITIONAL HANGING ANGLES PROVIDED FOR HOODS 12" AND LONGER.



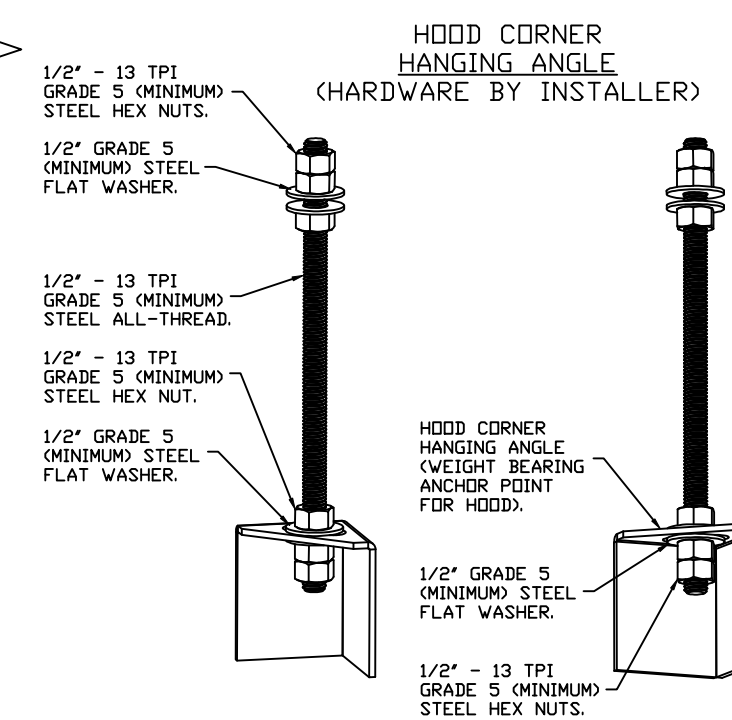
ASSEMBLY INSTRUCTIONS

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 ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

CLEARANCE TO COMBUSTIBLES

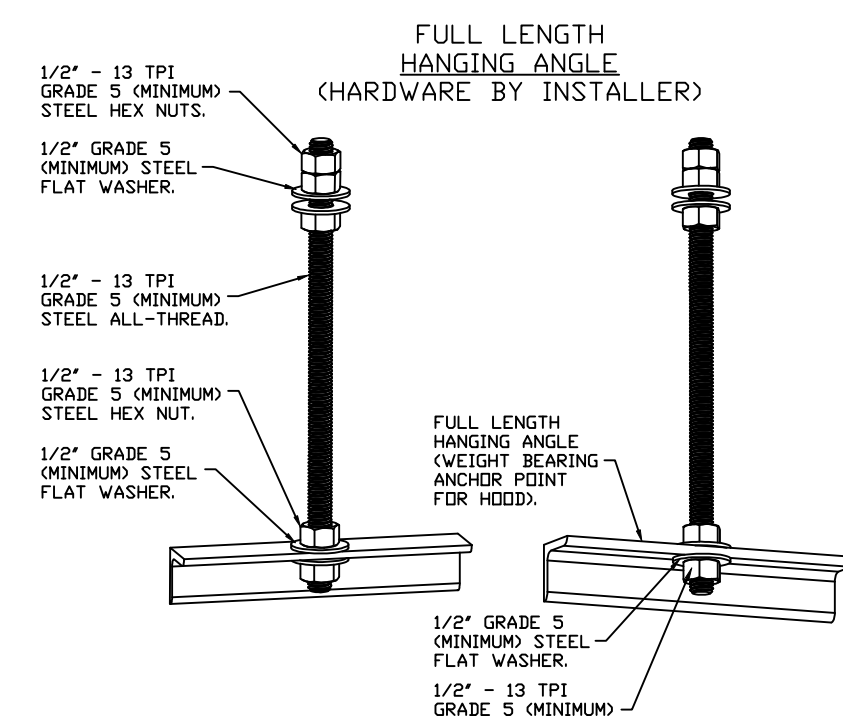
HOODS #	SURFACE	*CLEARANCE
1	TOP	18"
	FRONT	0"
	BACK	18"
	LEFT	18"
	RIGHT	0"

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



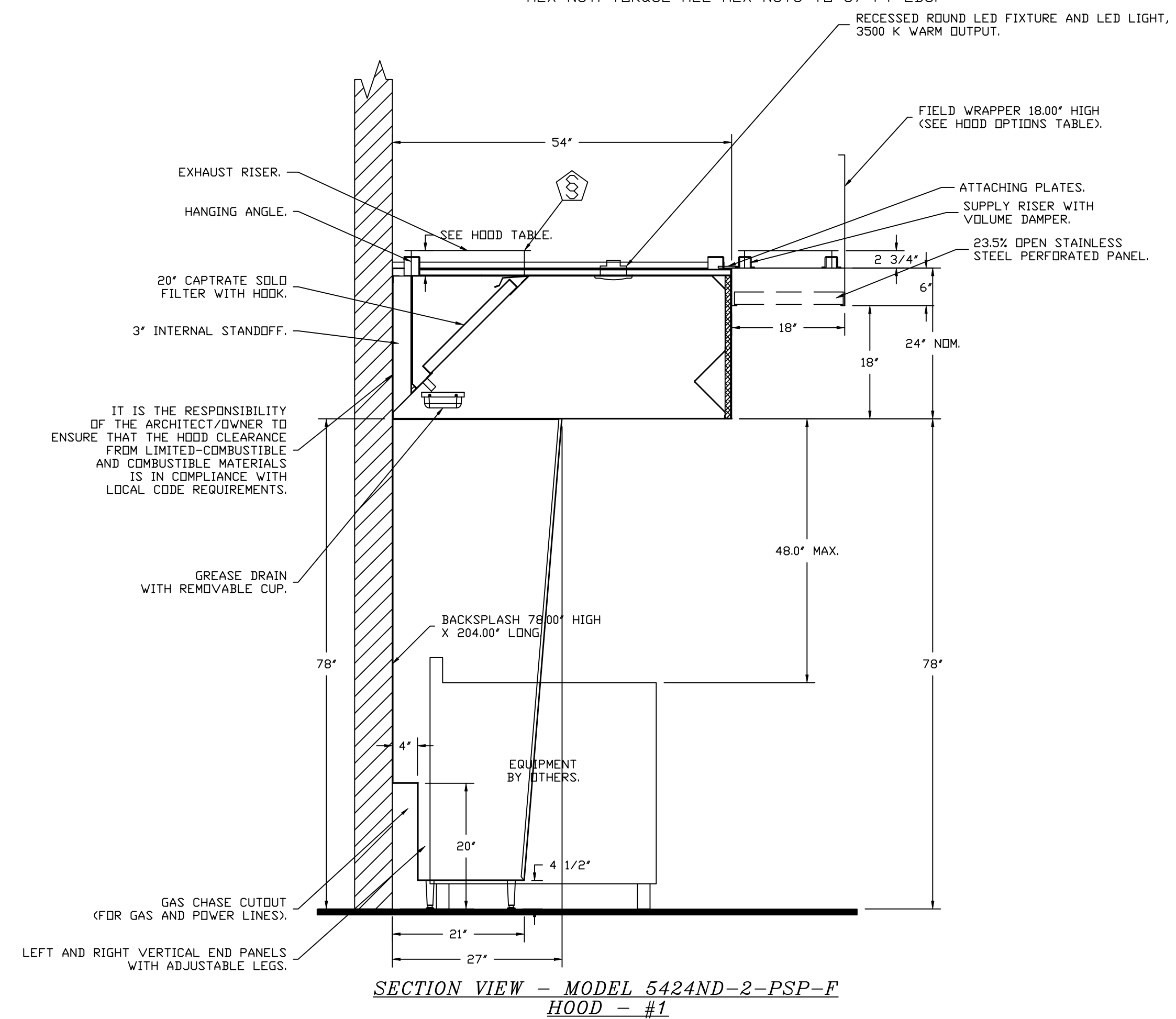
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SECTION VIEW - MODEL 5424ND-2-PSP-F
 HOOD - #1

REVISIONS

DESCRIPTION	DATE

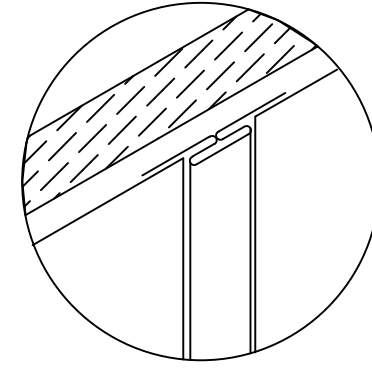
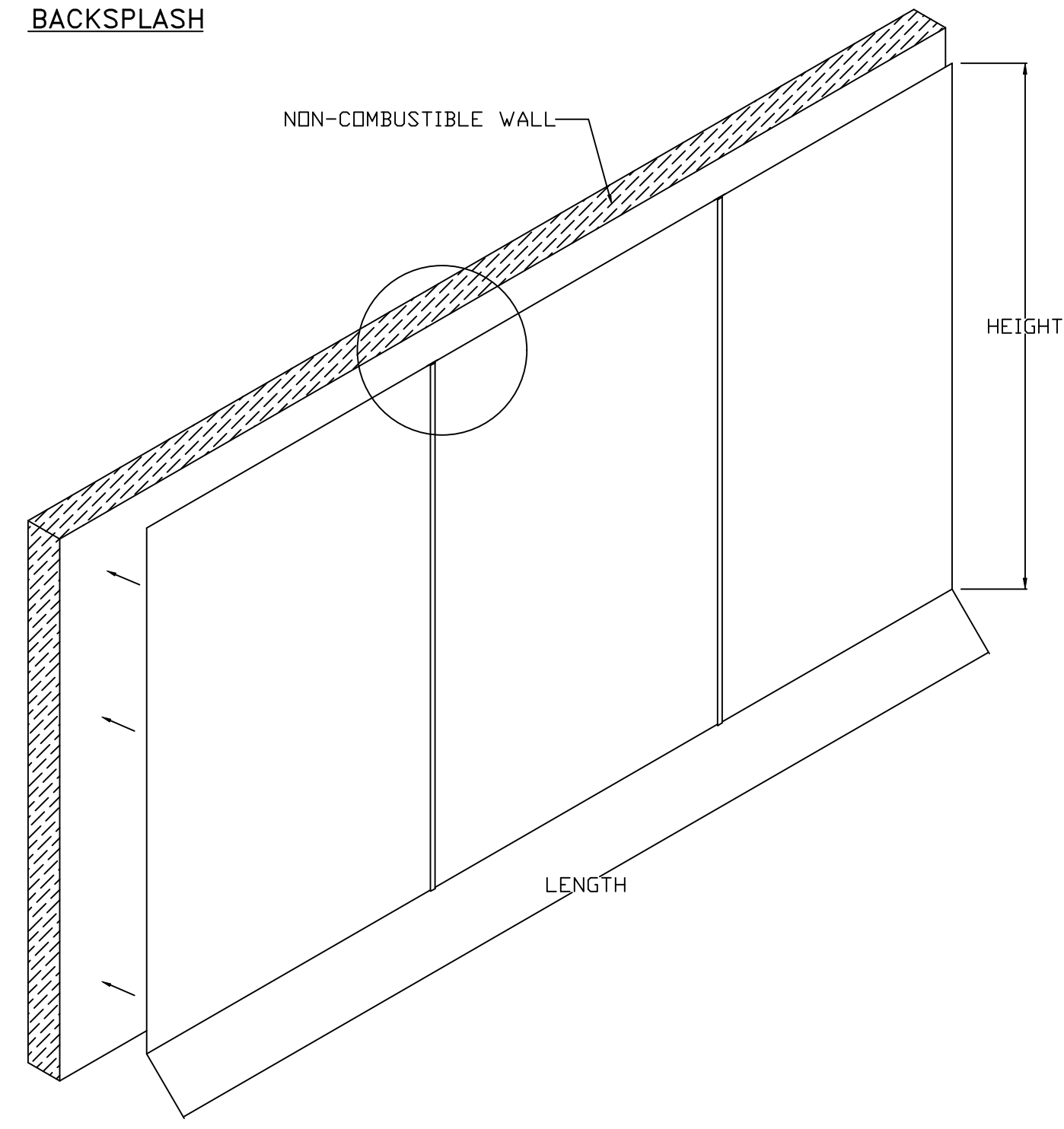
www.captiveusa.com
 Southern Virginia Office
 700 Tech Center Parkway, Suite 200 Unit 127 PO 131, Newport News, VA, 23606 PHONE: (804) 684-2700 FAX: 9192275911 EMAIL: reg28@captiveusa.com

Haynes Building Roanoke Hotel
 RICHMOND, VA, 23230

DATE: 8/20/2024
DWG.#: 5845754
DRAWN BY: JMN-28
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
2

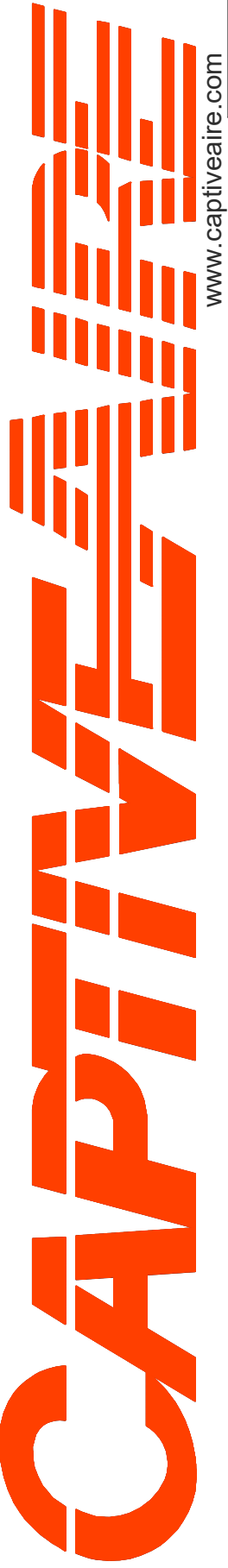
BACKSPLASH



BACKSPLASH PANELS
SLIDE INTO DIVIDER
BAR

- BACKSPLASH IS NOT
INSULATED AND IS UNSUITABLE
FOR INSTALL AGAINST
COMBUSTIBLE WALLS

REVISIONS	
DESCRIPTION	DATE



Southern Virginia Office
www.captive.com
700 Tech Center Parkway, Suite 200 Unit 127 PO 131, Newport News, VA, 23606 PHONE: (804) 684-2700 FAX: 9192275911 EMAIL: reg28@captive.com

Haynes Building Roanoke Hotel
RICHMOND, VA, 23230

DATE: 8/20/2024

DWG.#:
5845754

DRAWN BY: JMN-28

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

MASTER DRAWING

SHEET NO.
3

FIRE SYSTEM INFORMATION – JOB#5845754

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0/4.0	60	47	FIRE CABINET RIGHT	RIGHT, HOOD 1

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F. (A0034310).	1	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	3	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	2	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2" NPT FEMALE CONNECTION, VIEGA.	3	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	3	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	12	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	6	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	2	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	9	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	3	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0
		ADDITIONAL PARTS TO BE DETERMINED...		

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 RICHMOND, VA, 23230

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EXHAUST FAN INFORMATION - JOB#5845754

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		1	USB124DD-RM	CAPTIVEAIRE	3760	2.000	1016	DDP,PREMIUM	5.000	2.3790	3	208	15.8	1246 FPM	747	20.3

DOAS/RTU FAN SCHEDULE - JOB#5845754

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	FAN INFORMATION				ELECTRICAL INFORMATION					COOLING INFORMATION					GAS HEAT INFORMATION				NOTES							
					BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	MCA	MOCP	OUTSIDE AIR		LEAVING AIR			CAPACITY			IEER	ISMRE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE
2		1	EARTU3-1.300-18-12.5T-DOAS	ECON-AIR	18P-3	0	3760	3760	2390	0.400	5.00	3	208	67.2A	80A	83.2°F	77.8°F	68.2°F	67.2°F	66.8°F	154.0 MBH	60.3 MBH	21.3	4.1	NATURAL	295672	239494	54°F	7 IN. W.C. - 14 IN. W.C.	1,2,3,4,5,6,7,8,9,10,11,12,13,14

NOTES:

1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. 61% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 6:1 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP
12. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
13. FACTORY INSTALLED COMPRESSOR SOUND BLANKET
14. SIDE DISCHARGE/NO RETURN

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	B124 - INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 24" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER
		1	UTILITY SET GREASE CUP
		1	B124 - 24" DISCHARGE EXTENSION
		1	B1 - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE
		1	B124 - INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT
		1	UTILITY SET - SPRING VIBRATION ISOLATORS - B124 THRU B130 / EQUIVALENT SIZED UTILITY SET / SIF 24-30 + FILTER BANK - INDOOR/OUTDOOR USE
		1	2 YEAR PARTS WARRANTY
2		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	TOTAL CFM MONITORING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREEZESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	SHIP LOOSE GAS STRAINER 1"
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, #A, OR #E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	RTU3 CURB DUCT HANGER
		1	24VAC FIRE INPUT
		1	RTU3 SIDE DISCHARGE
		1	12.5 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	RTU SIZE 3 INTAKE HOOD, SHIPPED LOOSE
		1	VAV PACKAGE W/ MANUAL/DDC CONTROL (S71 VFD INCLUDED)
		1	RTUVZH065 COMPRESSOR SOUND BLANKET 230/460/575V - FACTORY INSTALLED
	1	RTU3 NO RETURN - 100% OA	
	1	RTU FIXED 100% OA INTAKE CONTROL	
	1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)	
	1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET	

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	47 LBS	RAIL	4.000"W X 60.000"L X 14.000"H COMES AS A SET OF 2.
2	# 2	130 LBS	CURB	59.500"W X 91.000"L X 20.000"H INSULATED.

HMI SCHEDULE				
UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #2	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	55
FAN #2	HMI #2 - SPACE		AVERAGED	56

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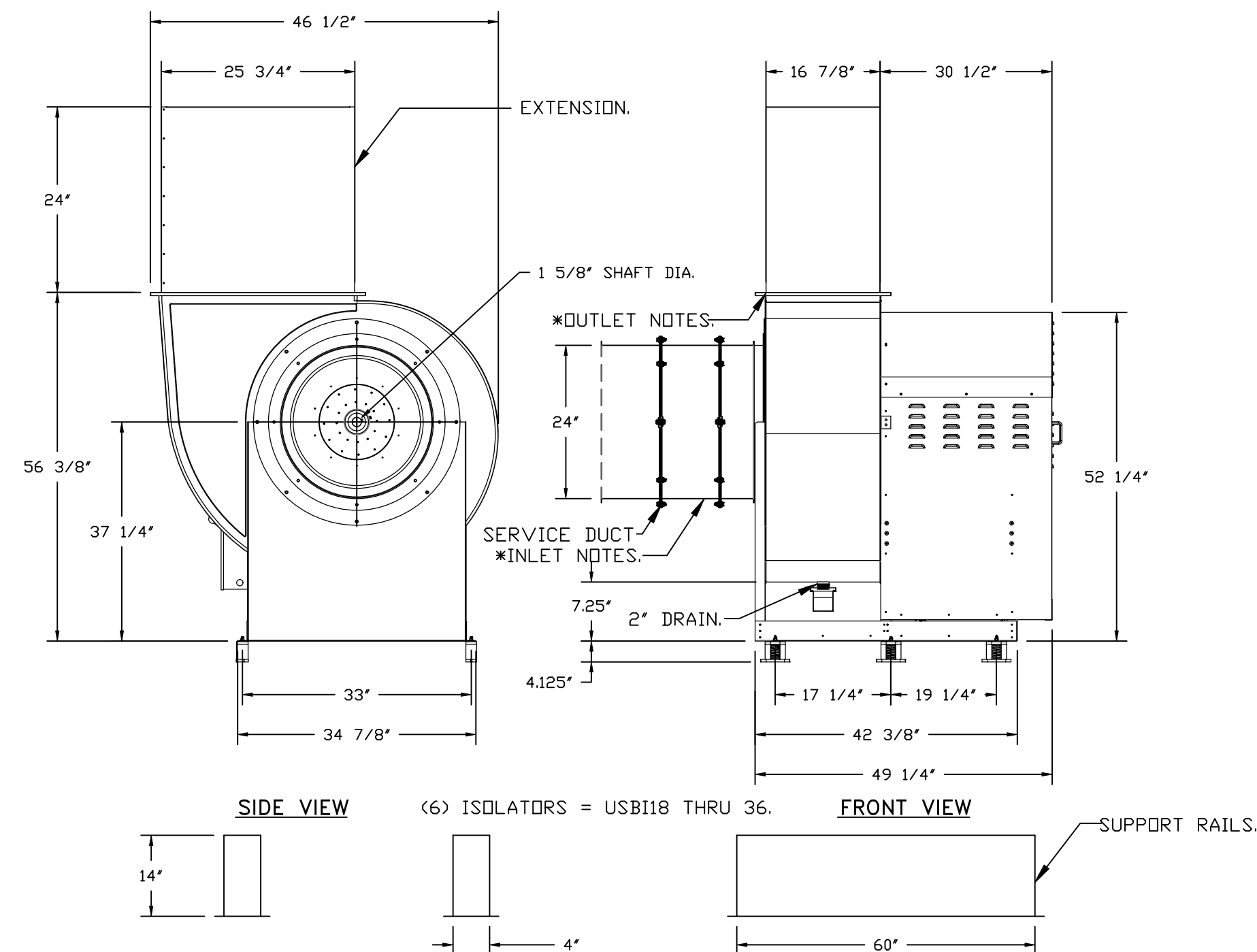
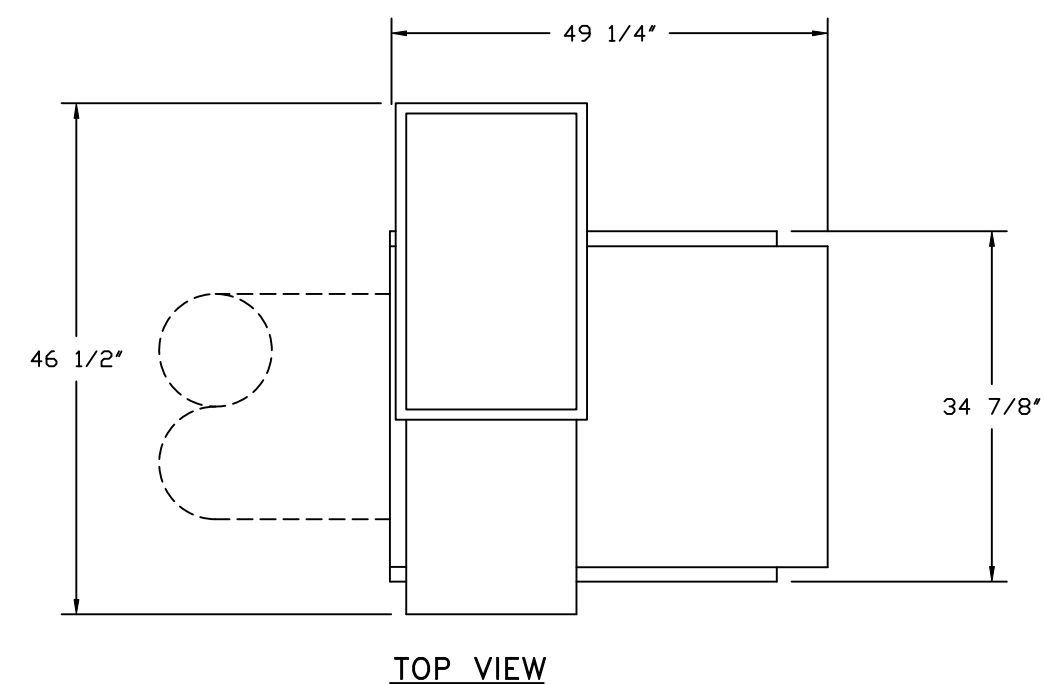
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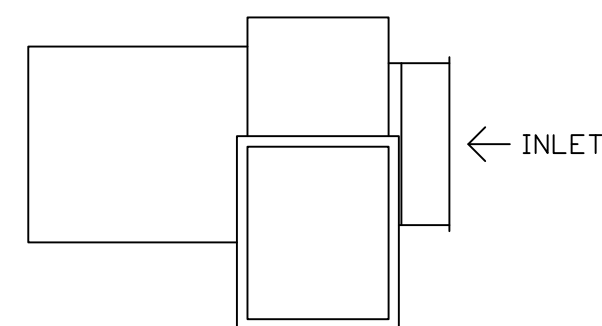


* INLET/OUTLET NOTES:
 LENGTH OF THE STRAIGHT DUCT ON THE INLET AND OUTLET TO BE 3 TIMES THE EQUIVALENT DUCT DIAMETER BEFORE CONNECTING TO ANY FITTINGS SUCH AS ELBOWS TO AVOID SYSTEM EFFECT.

UNIT PLAN VIEW CORNER WEIGHTS:

164 LBS

134 LBS



261 LBS

187 LBS

NORMAL TEMPERATURE TEST DIRECT DRIVE EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 350°F (176°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

FEATURES:

- ROOF MOUNTED FANS.
- UL705.
- UL762 AND ULC-S645 (RESTAURANT MODEL).
- HIGH HEAT OPERATION DIRECT DRIVE 350°F (176°C).
- HEAT SLINGER.
- NEMA 3R SAFETY DISCONNECT SWITCH.
- GREASE CLASSIFICATION TESTING.
- 2" DRAIN.
- MOTOR WEATHER COVER.
- FULLY SEALED SCROLL HOUSING.
- SCROLL ACCESS DOOR.
- FLANGE 2".

OPTIONS

- B124 - INLET SERVICE DUCT CONNECTION, USED TO CONNECT TO STANDARD 24" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7' RISERS BOLTED TO STANDARD INLET RISER.
- UTILITY SET GREASE CUP.
- B124 - 24" DISCHARGE EXTENSION.
- B1 - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE.
- B124 - INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT.
- UTILITY SET - SPRING VIBRATION ISOLATORS - B124 THRU B130 / EQUIVALENT SIZED UTILITY SET / SIF 24-30 + FILTER BANK - INDOOR/OUTDOOR USE.
- 2 YEAR PARTS WARRANTY.

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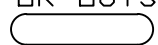
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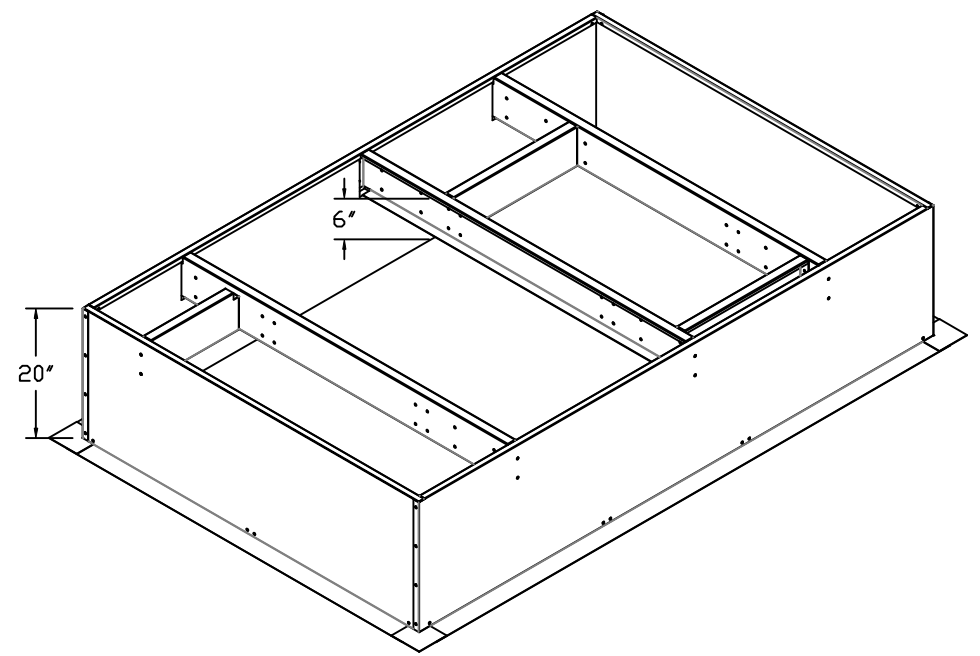
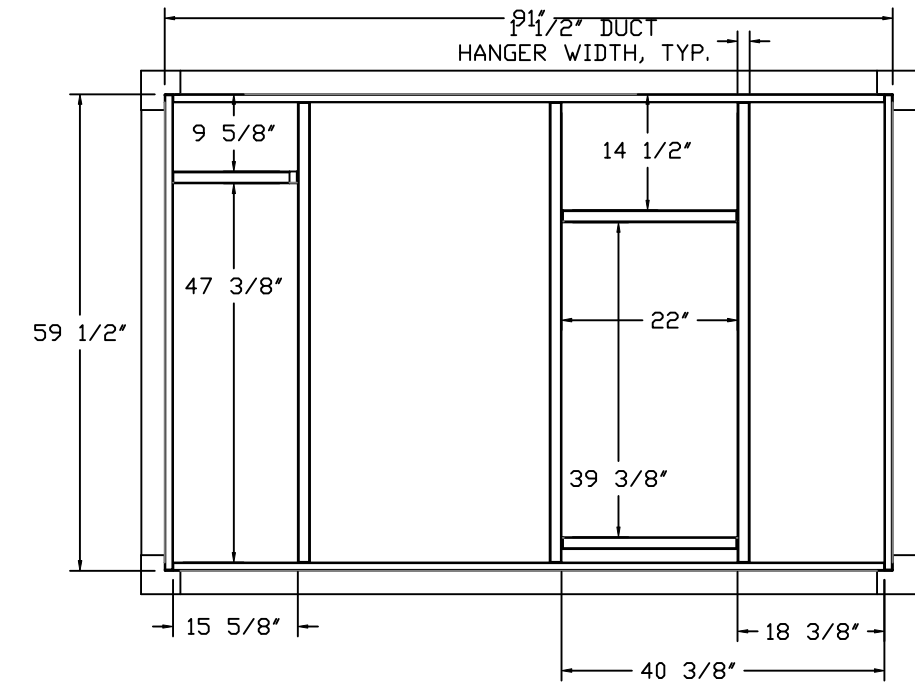
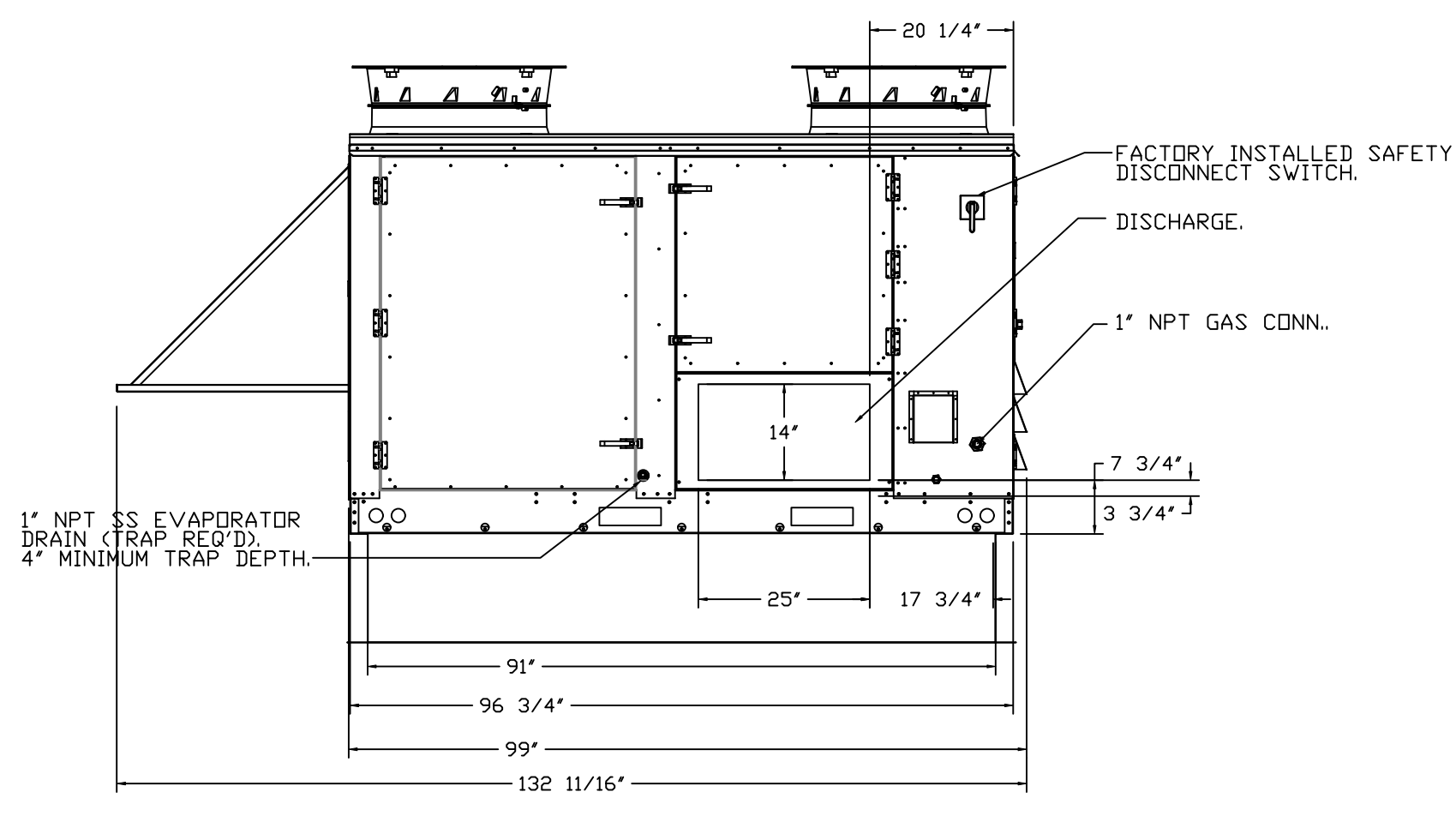
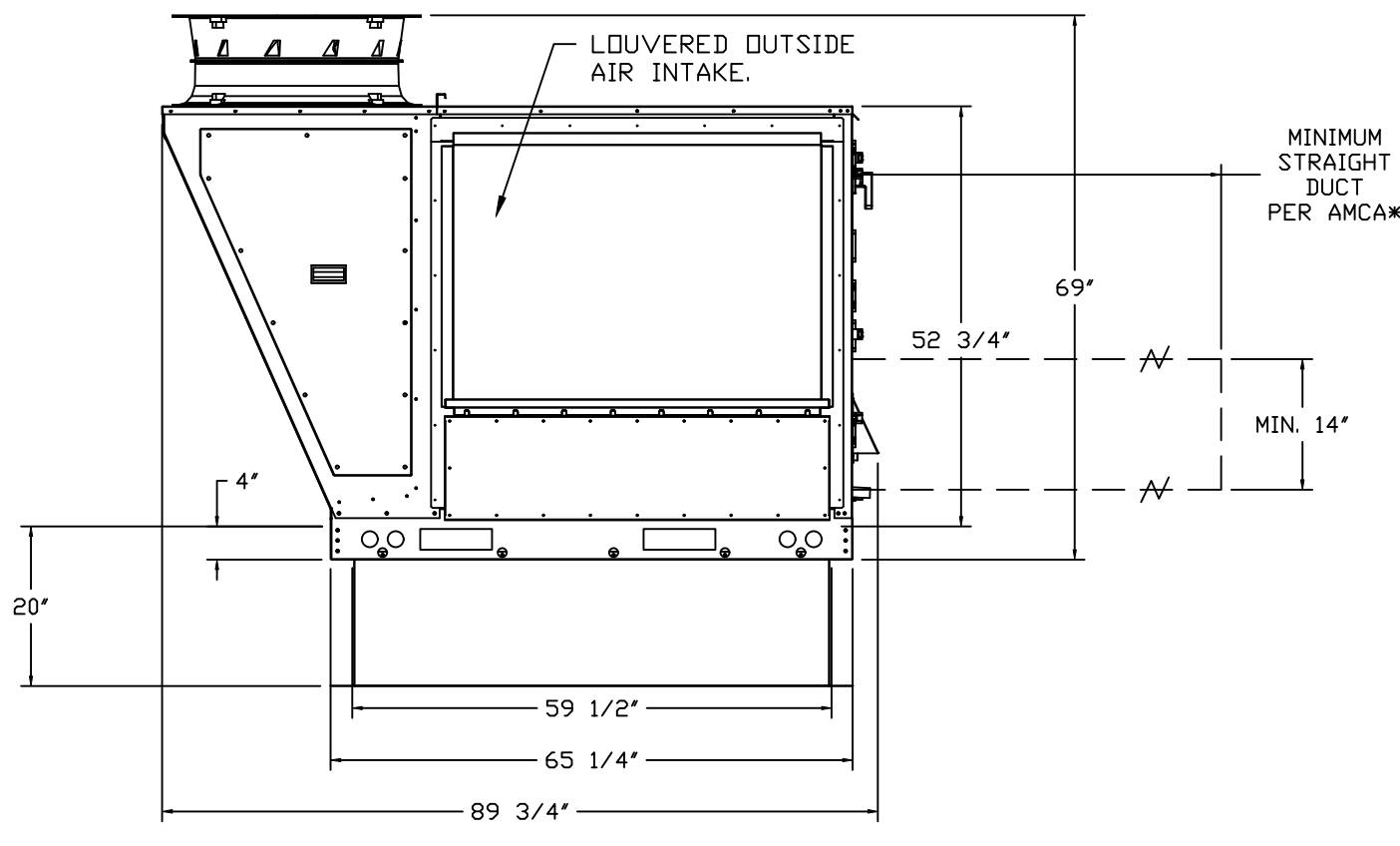
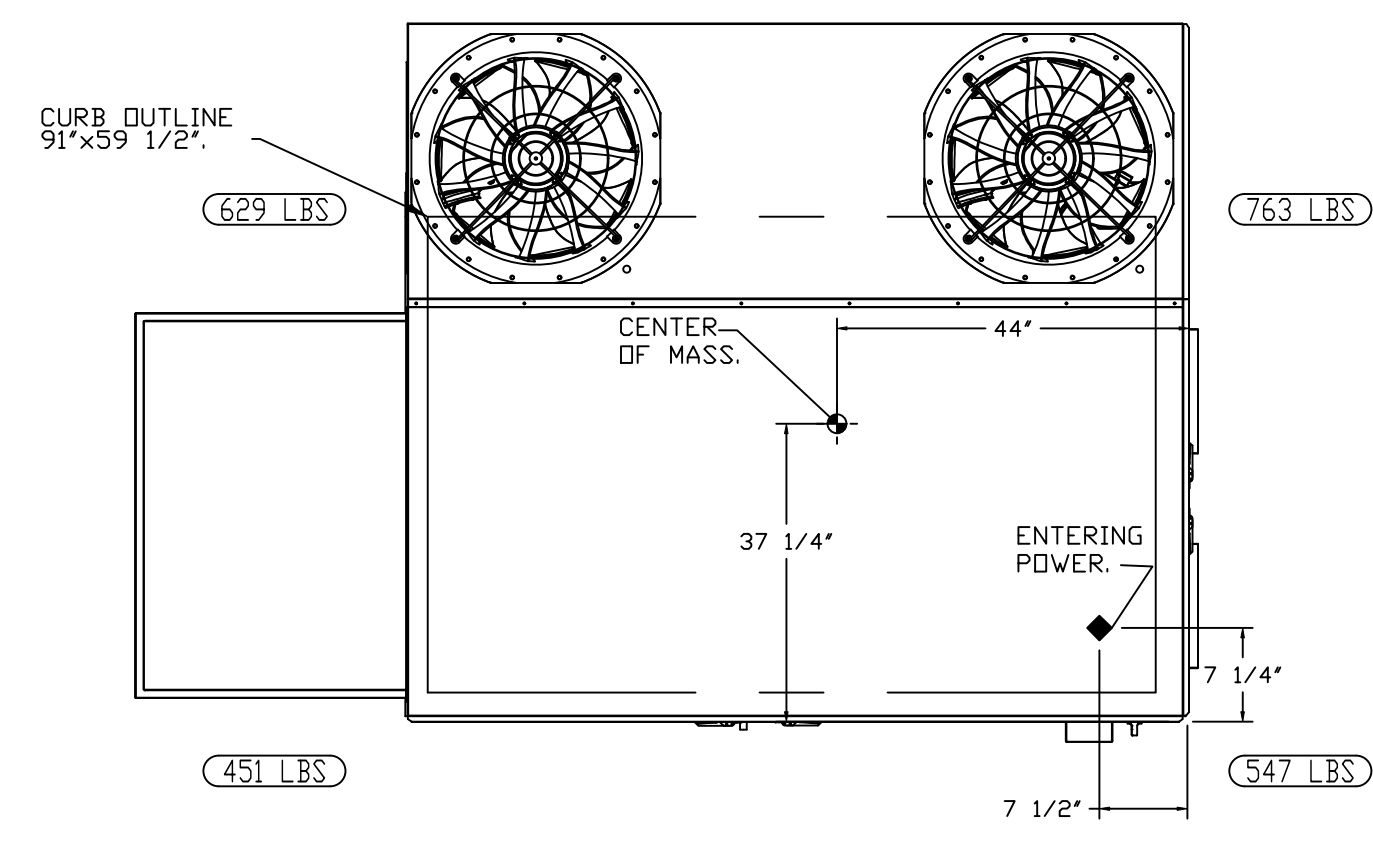
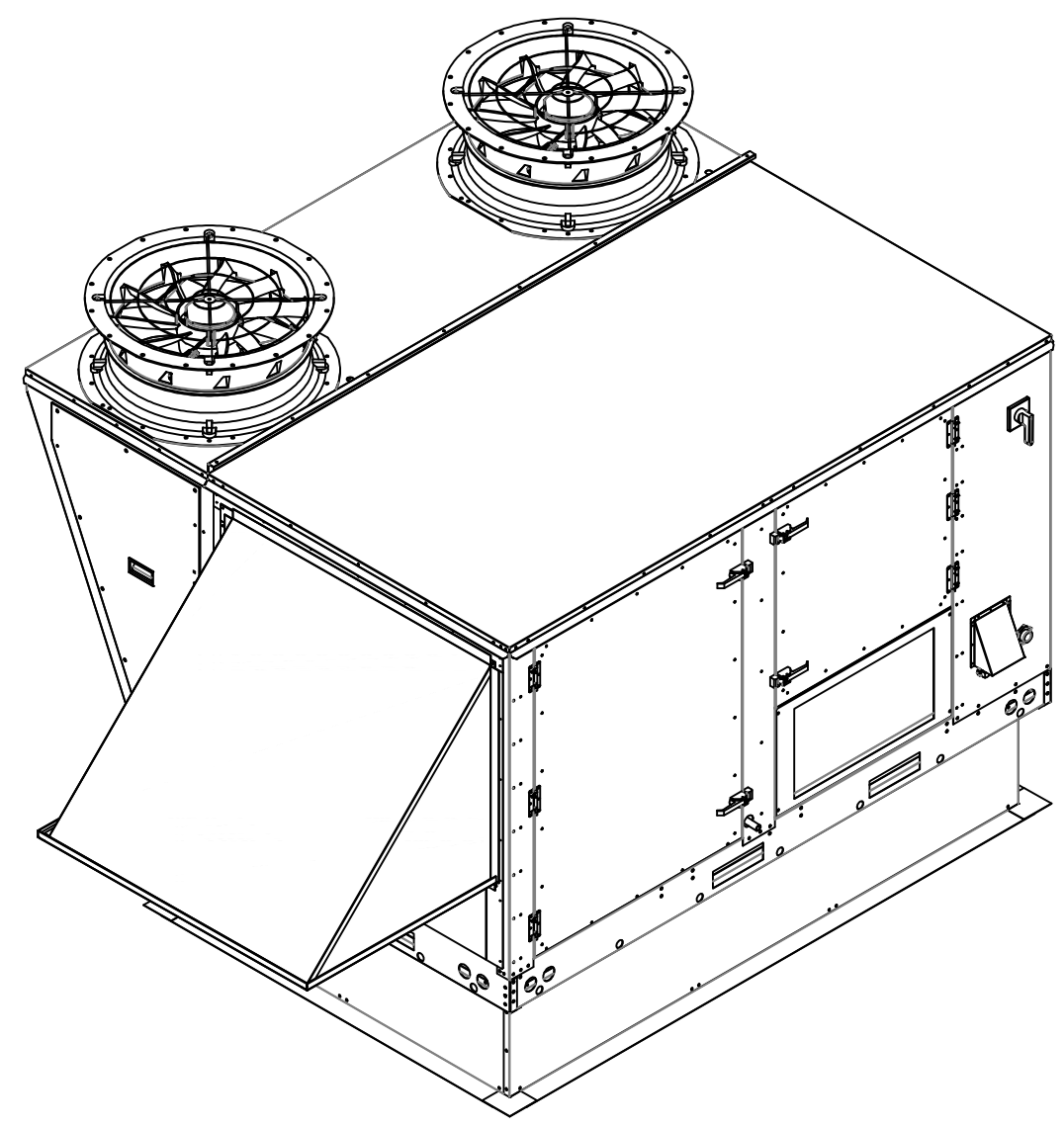
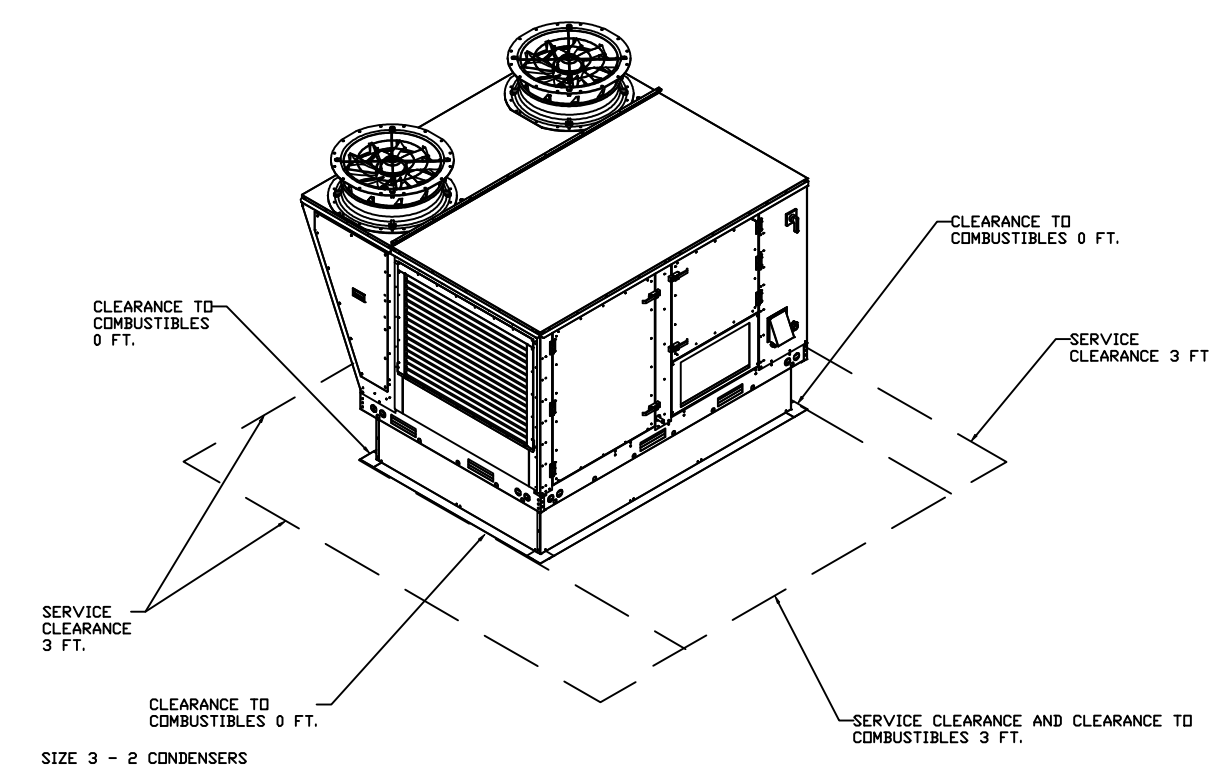
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FAN #2 EARTU3-1.300-18-12.5T-DOAS - HEATER

- NOTES:
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
 -  DENOTES CORNER WEIGHT.
 - ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.
 - CONNECTION FROM BREAKER TO UNITS SAFETY DISCONNECT SWITCH TO BE COPPER WIRE ONLY.
 - EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET.

*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 25" x 14".



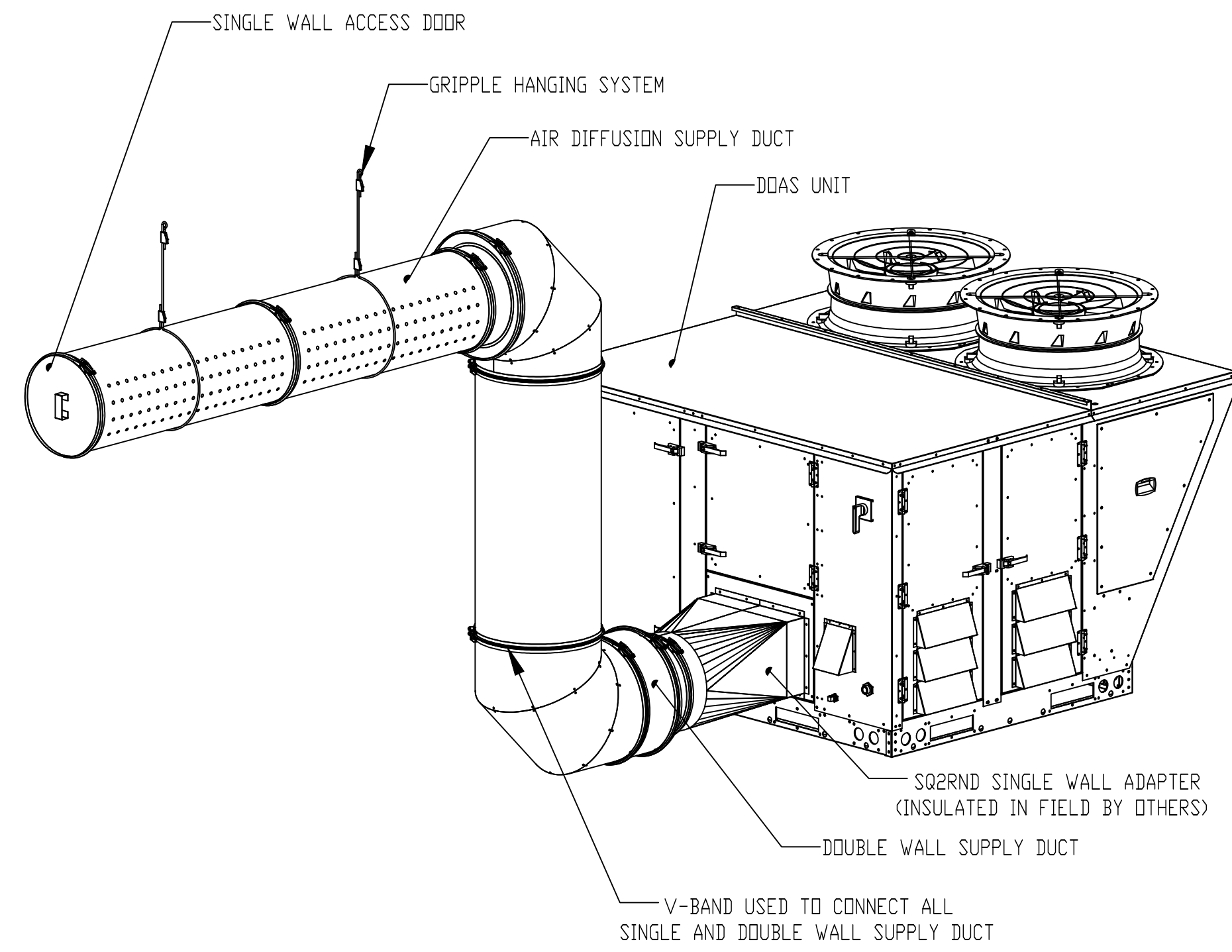
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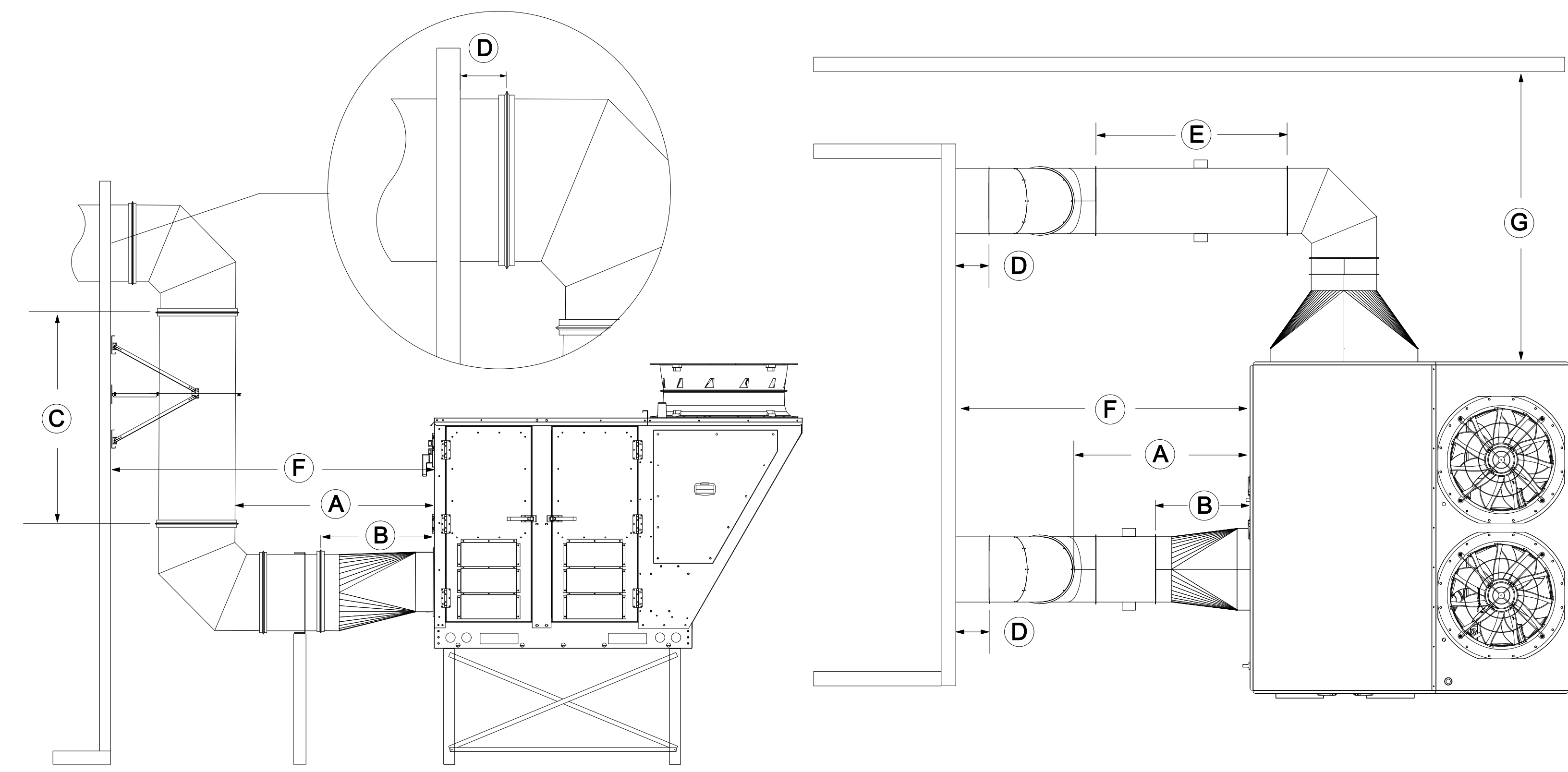
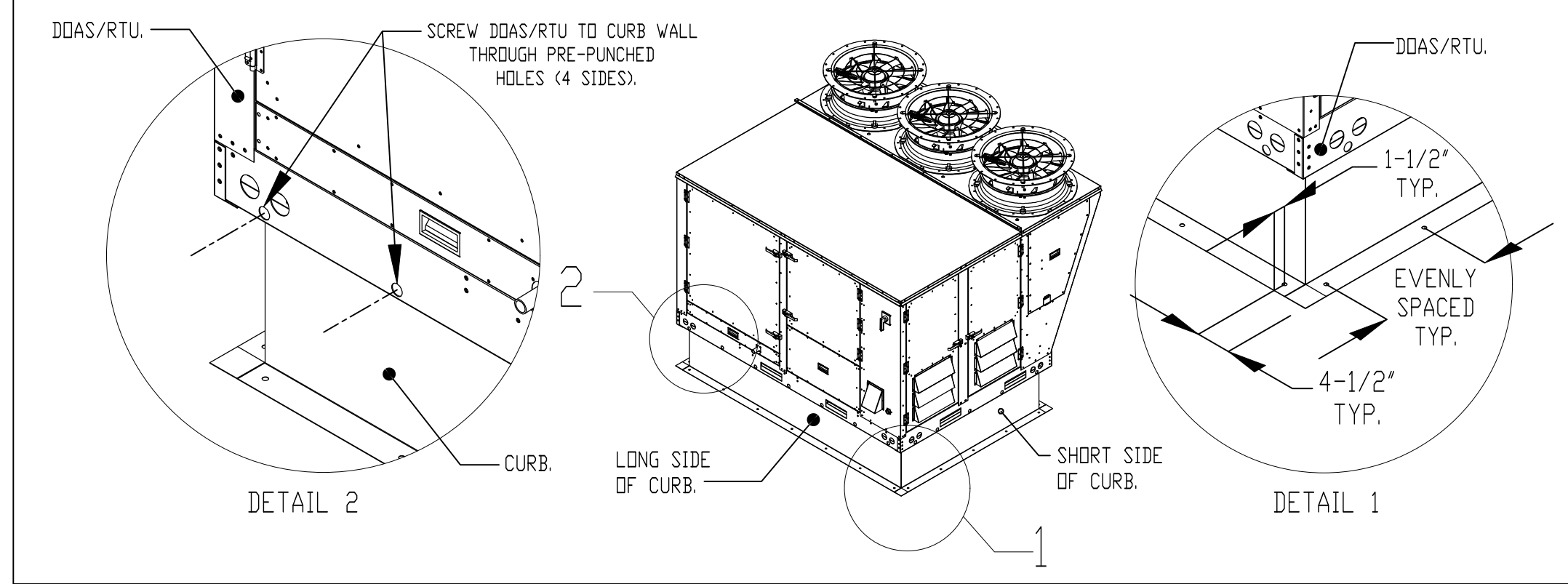
8 AIR DIFFUSION SUPPLY DUCT SPECIFICATIONS:
 PROVIDE AIR DIFFUSION SUPPLY DUCT EQUAL TO CAPTIVEAIR SYSTEMS MODEL DW-S0(K)C, DW-S90(K)C, & DW-S180(K)C. THREE DISTINCT HOLE PATTERN OPTIONS TO COVER A VARIETY OF CEILING HEIGHTS. NO ADDITIONAL DIFFUSERS REQUIRED, AS THE DUCT ITSELF PROVIDES AIR DIFFUSION. MADE OF HIGH QUALITY STAINLESS STEEL DESIGNED TO LAST 20+ YEARS. HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 24 GAUGE, 430 SS - 5' THRU 24'. HIGH INDUCTION SUPPLY DUCT IS CONSTRUCTED USING 20 GAUGE, 430 SS - 26' THRU 36'. QUICK ONSITE ASSEMBLY USING EPDM GASKETS & UNIVERSAL V-BANDS. DOUBLE WALL SUPPLY DUCT AVAILABLE FOR INTERIOR AND EXTERIOR SPACES, EITHER CONDITIONED OR UNCONDITIONED. DOUBLE WALL SUPPLY DUCT AVAILABLE IN DW-1S, DW-2S, & DW-3S TO MEET SPECIFIC REGIONAL "R" VALUE REQUIREMENTS.

Supply Duct Type	Minimum R-value	Space Type
Single Wall - S & -HC	N/A	Conditioned Space Only
Double Wall - 1S	R-4	Unconditioned Interior Space Only
Double Wall - 2S	R-8	Unconditioned Space Climate Zones 1-4
Double Wall - 3S	R-12	Unconditioned Space Climate Zones 5-8

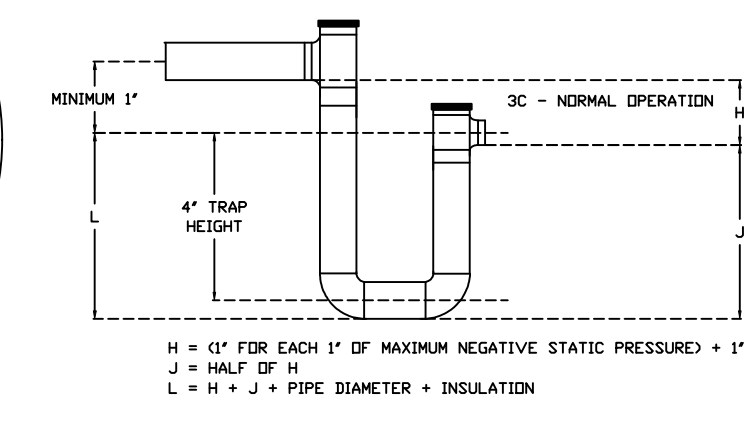
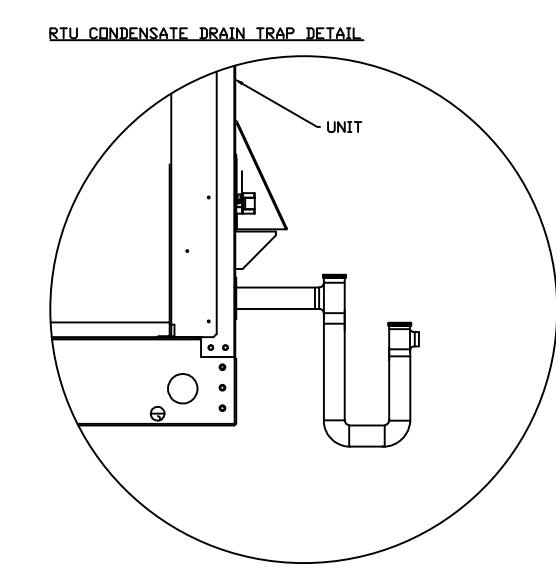
DOUBLE WALL SUPPLY DUCT IS INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL. AIR DIFFUSION SUPPLY DUCT COMPLIES WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTORS) BEST PRACTICES. POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION TO DISCHARGE, SEE NFPA 13, TABLE 8.12.5.1.1.

TYPICAL DDAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2' ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.
2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2' SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.



Unit Size	Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Dim. F	Dim. G
Size 3	2'-1 1/2"	2'-0"	10'-0"	0'-4"	15' SW / 8' DW	5'-10"	5'-10"



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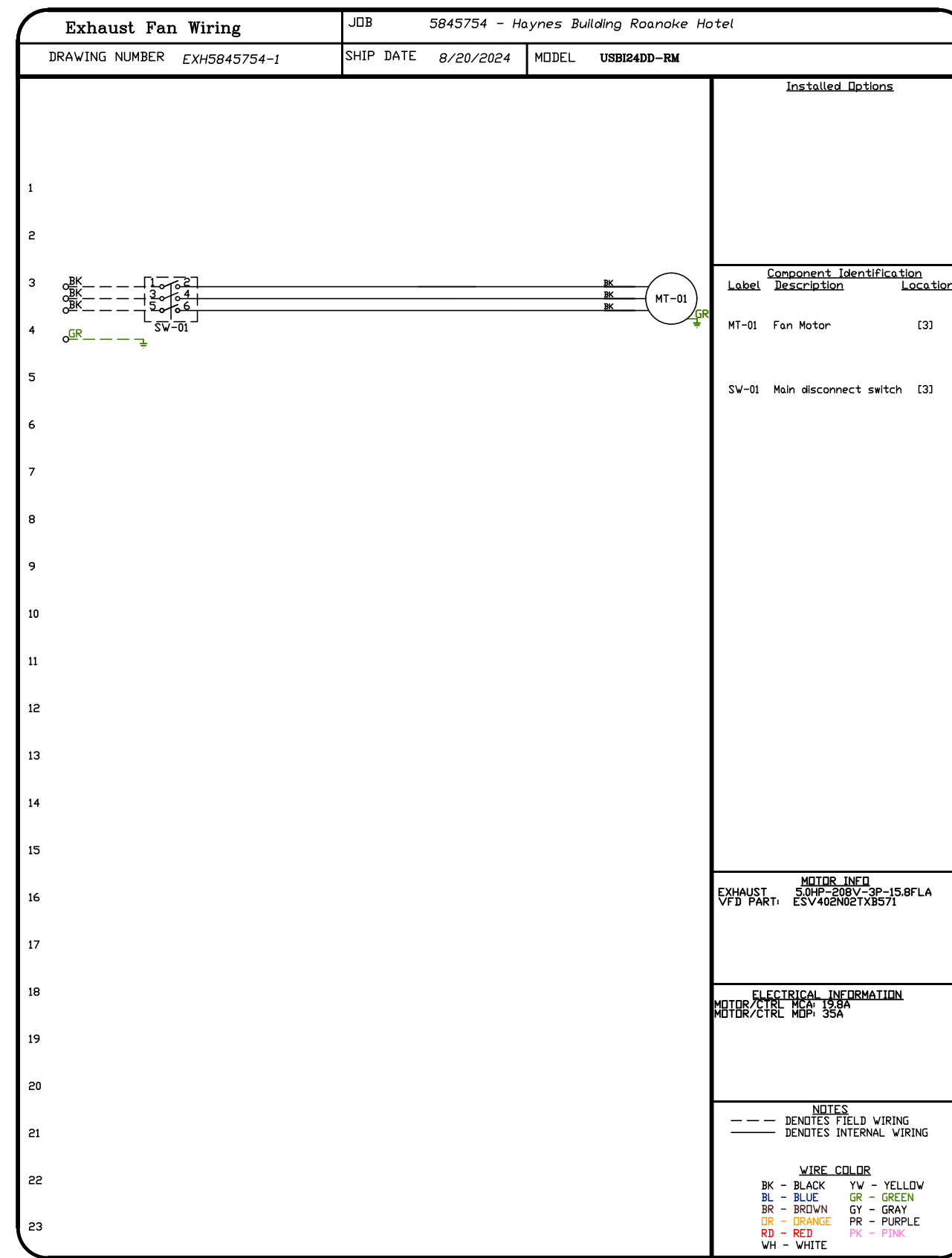
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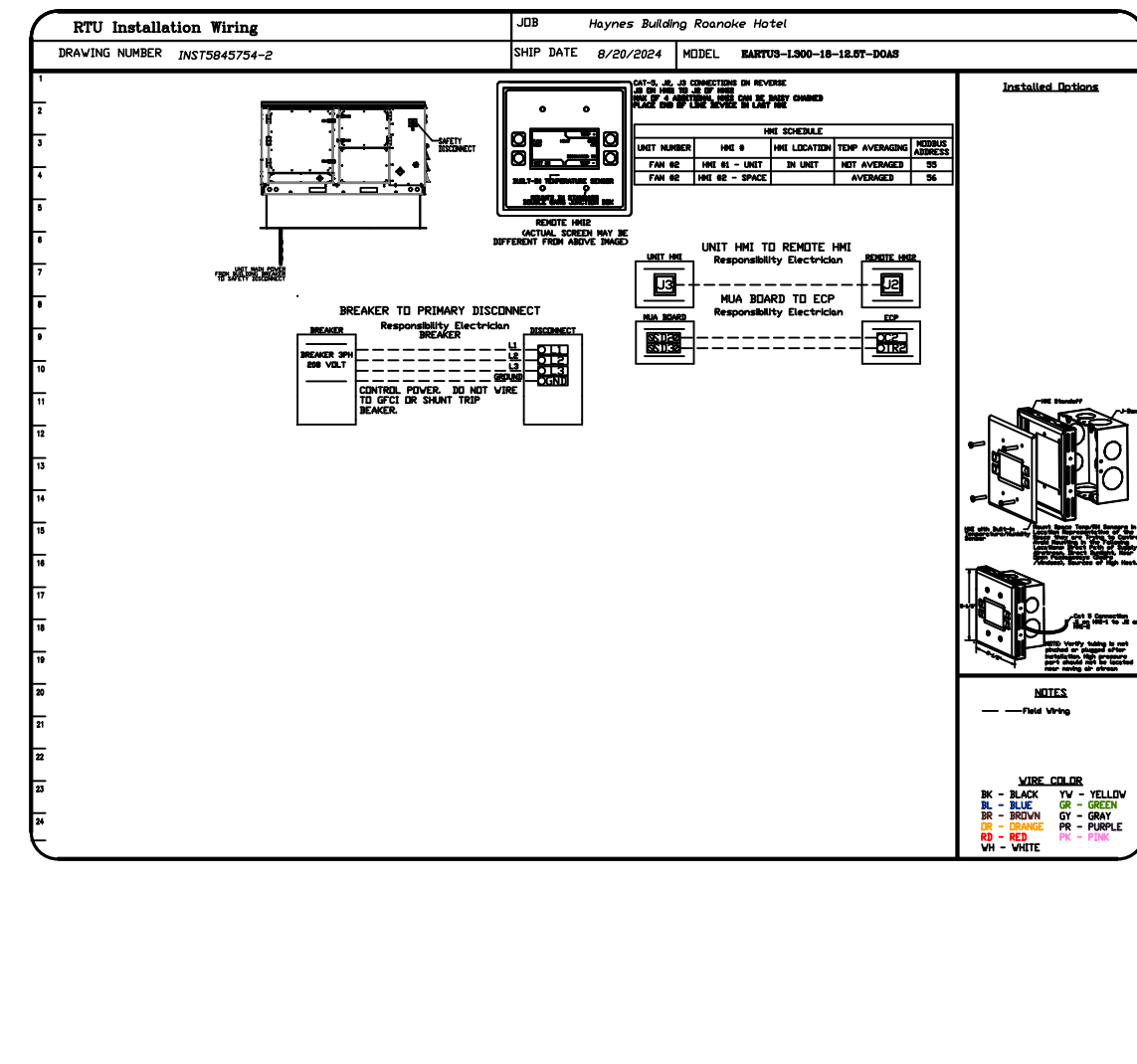
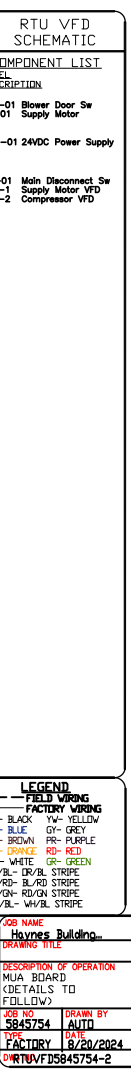
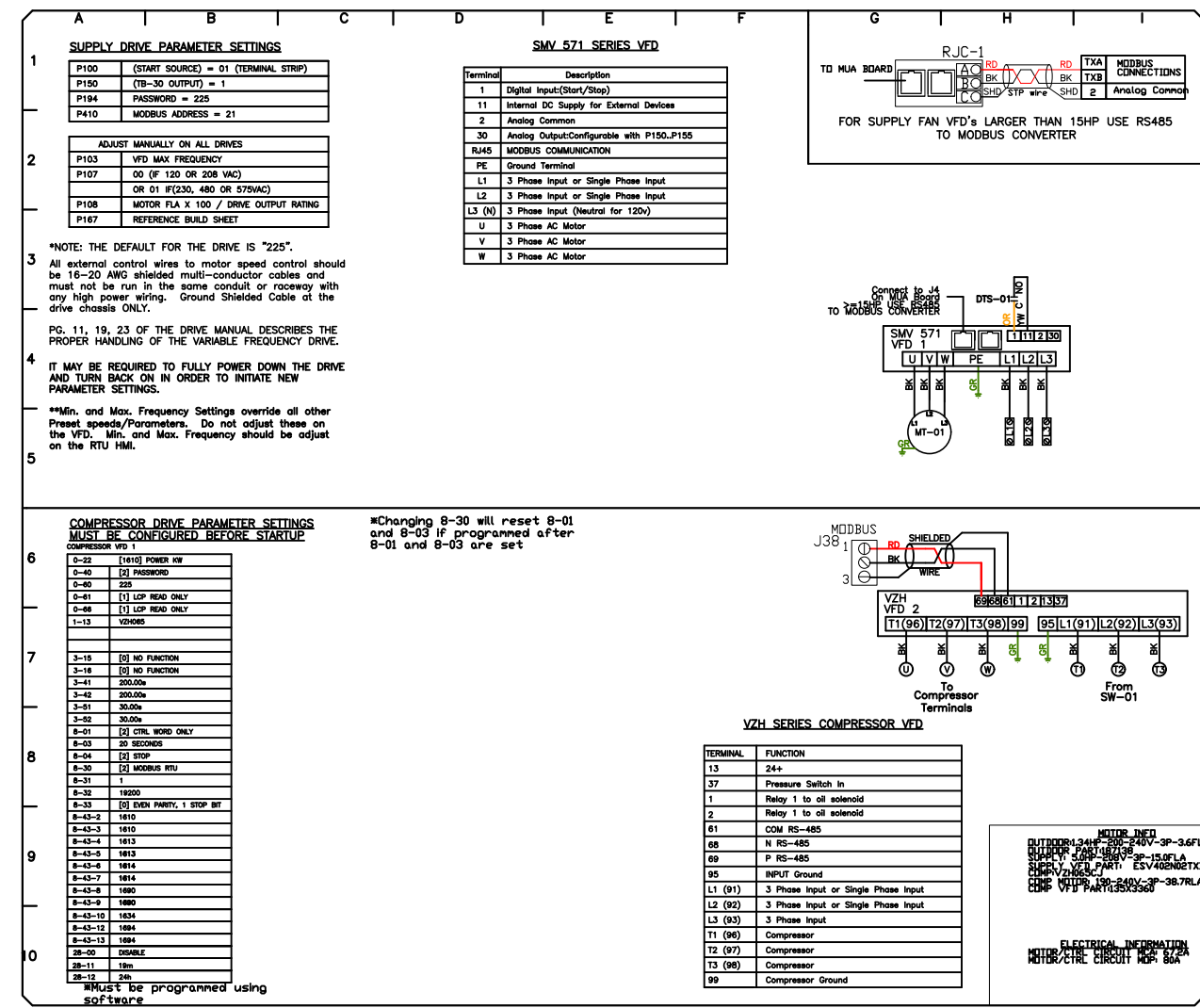
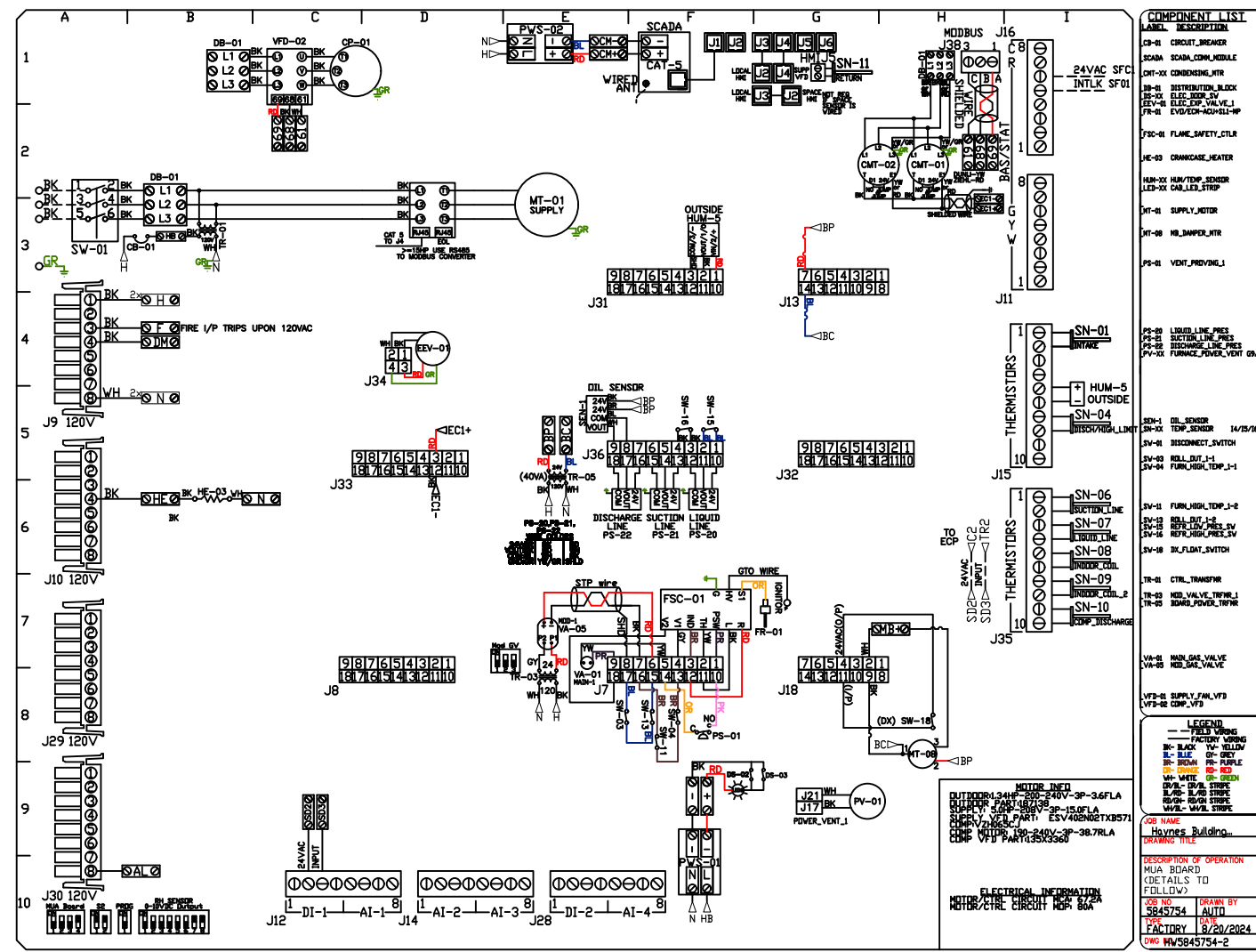
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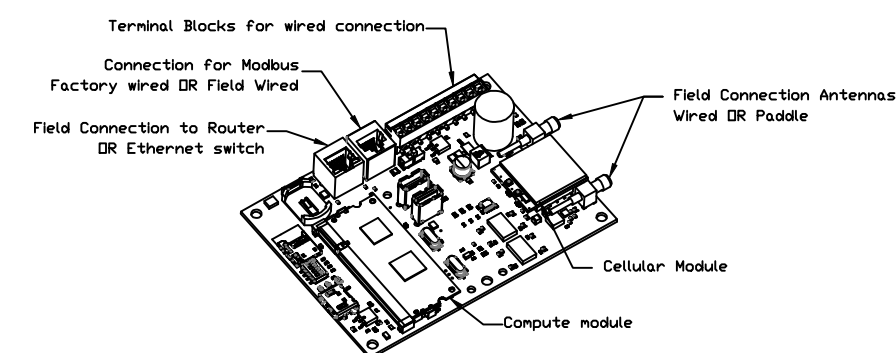
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10

ELECTRICAL PACKAGE -- JOB#5845754

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	#	HP	VOLT	FLA
1		DCV-1111	WALL MOUNT IN SS BOX	UTILITY CABINET RIGHT	1 LIGHT 1 FAN	SMART CONTROLS DCV	EXHAUST	3	5.000	208	15.8

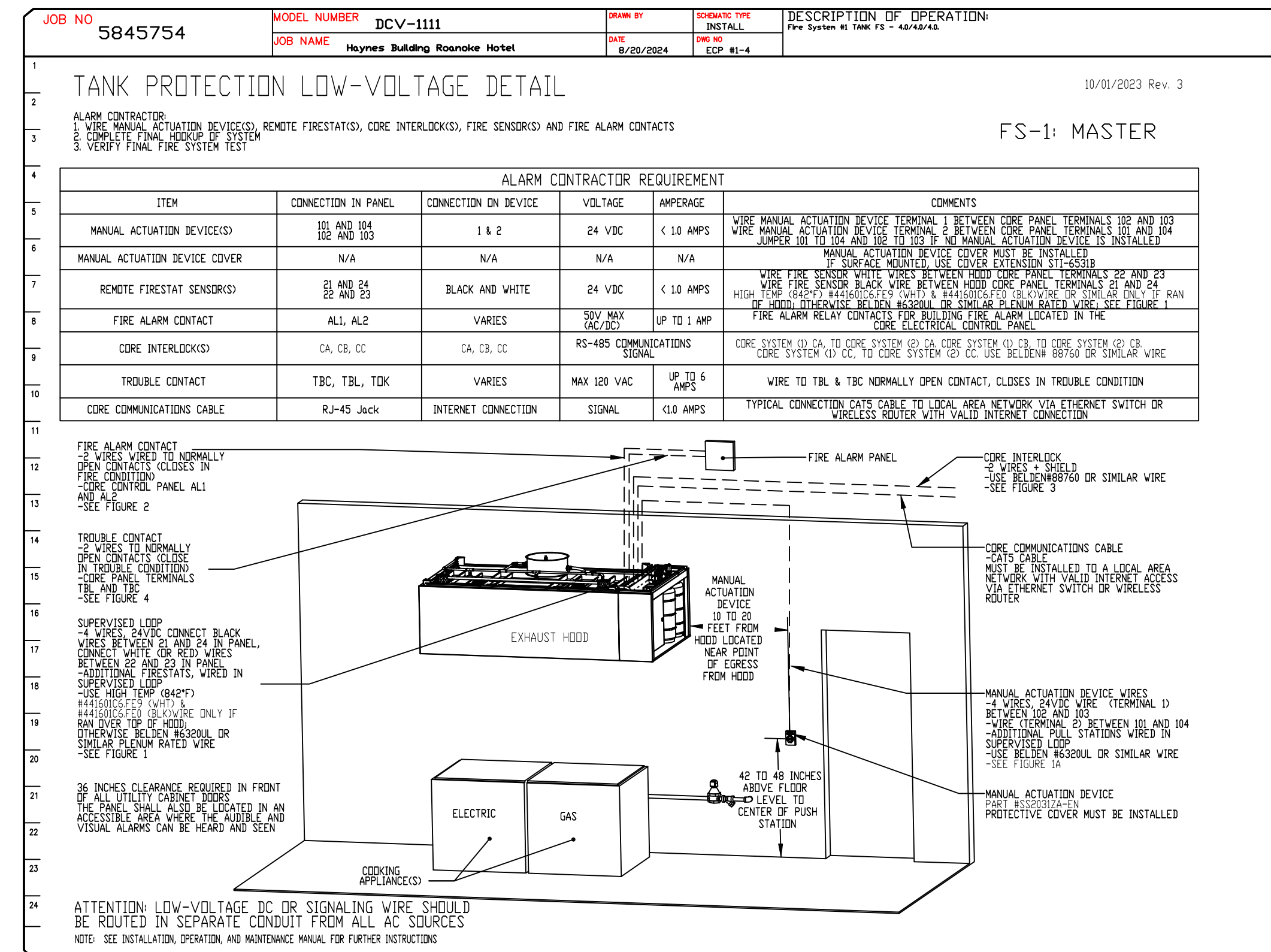
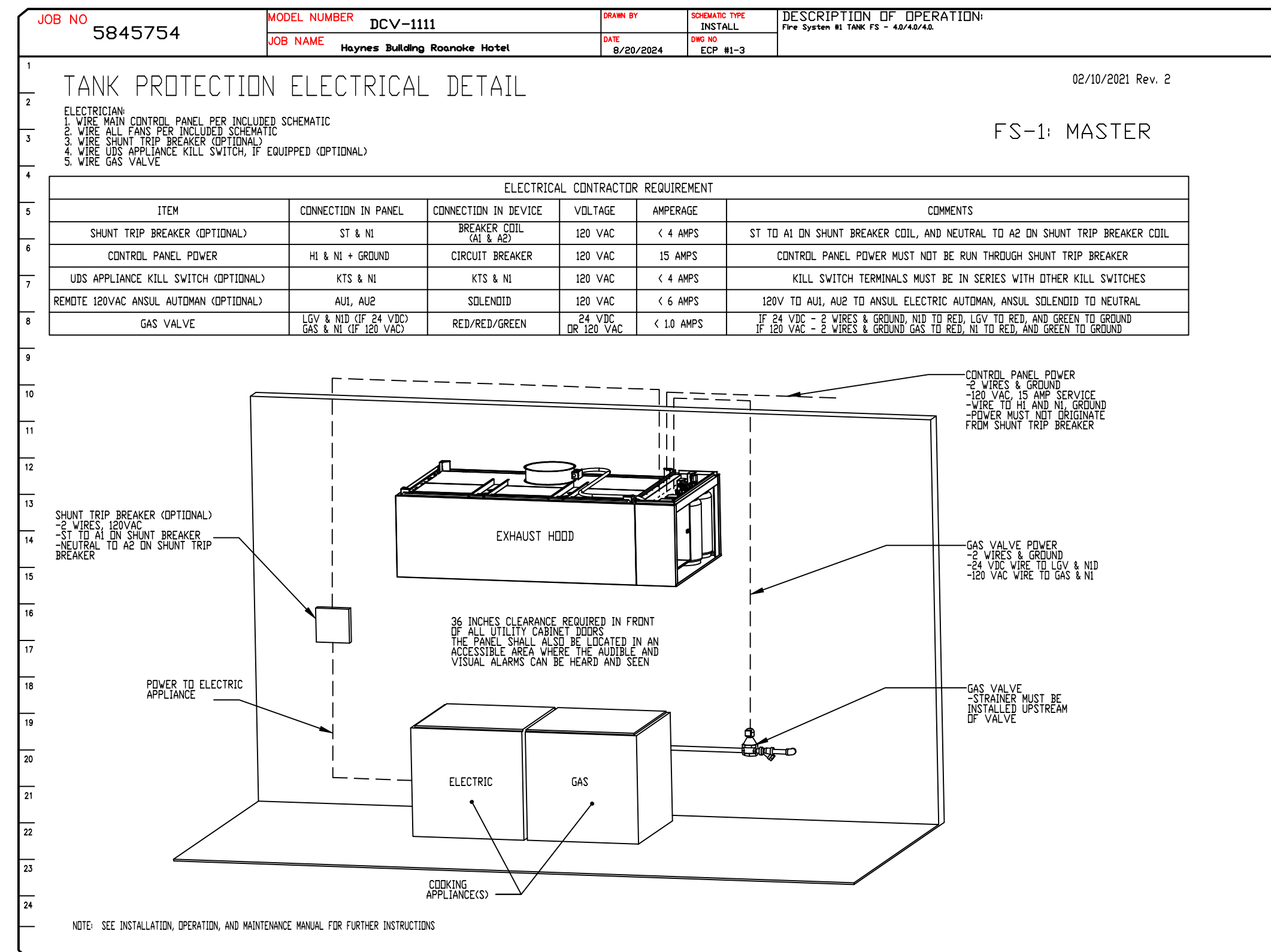
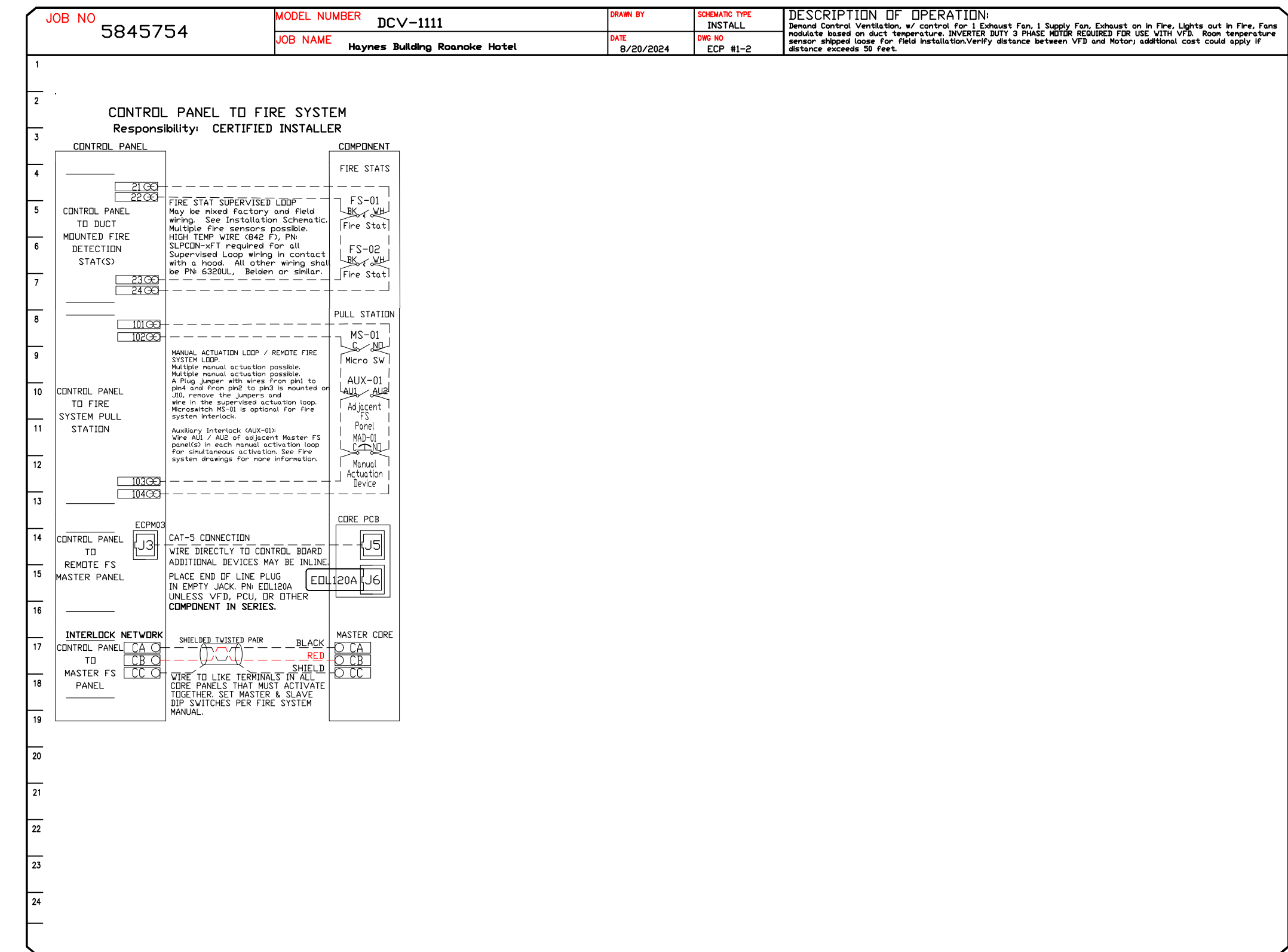
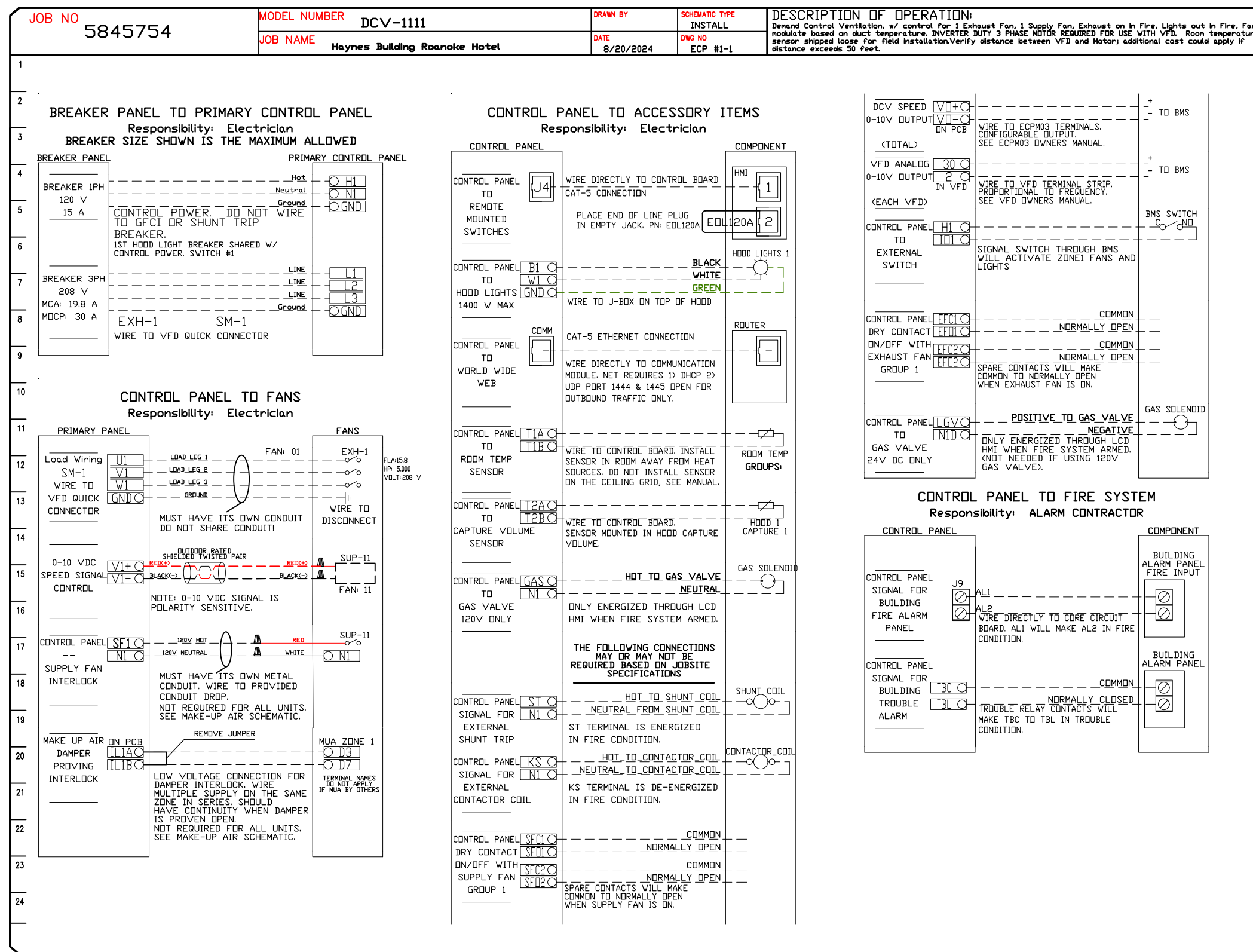


CASlink Monitor and Control

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

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR	MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Status	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCU Faults	MONITOR
Controller Faults	MONITOR	PCU Filter Clog Percentages	MONITOR
Fan Faults	MONITOR	Fire Condition	MONITOR & CONTROL
Fan Status	MONITOR	CORE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressures	MONITOR & CONTROL
PCU Filter Clog Percentages	MONITOR	Pana Button(s)	MONITOR & CONTROL
Fire Condition	MONITOR	Lights Button(s)	MONITOR & CONTROL
CORE Fire System	MONITOR	Wash Button	MONITOR & CONTROL
Building Pressures	MONITOR		
Prep Time Button	MONITOR & CONTROL		
Pana Button	MONITOR & CONTROL		
Lights Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



REVISIONS	
NO.	DESCRIPTION

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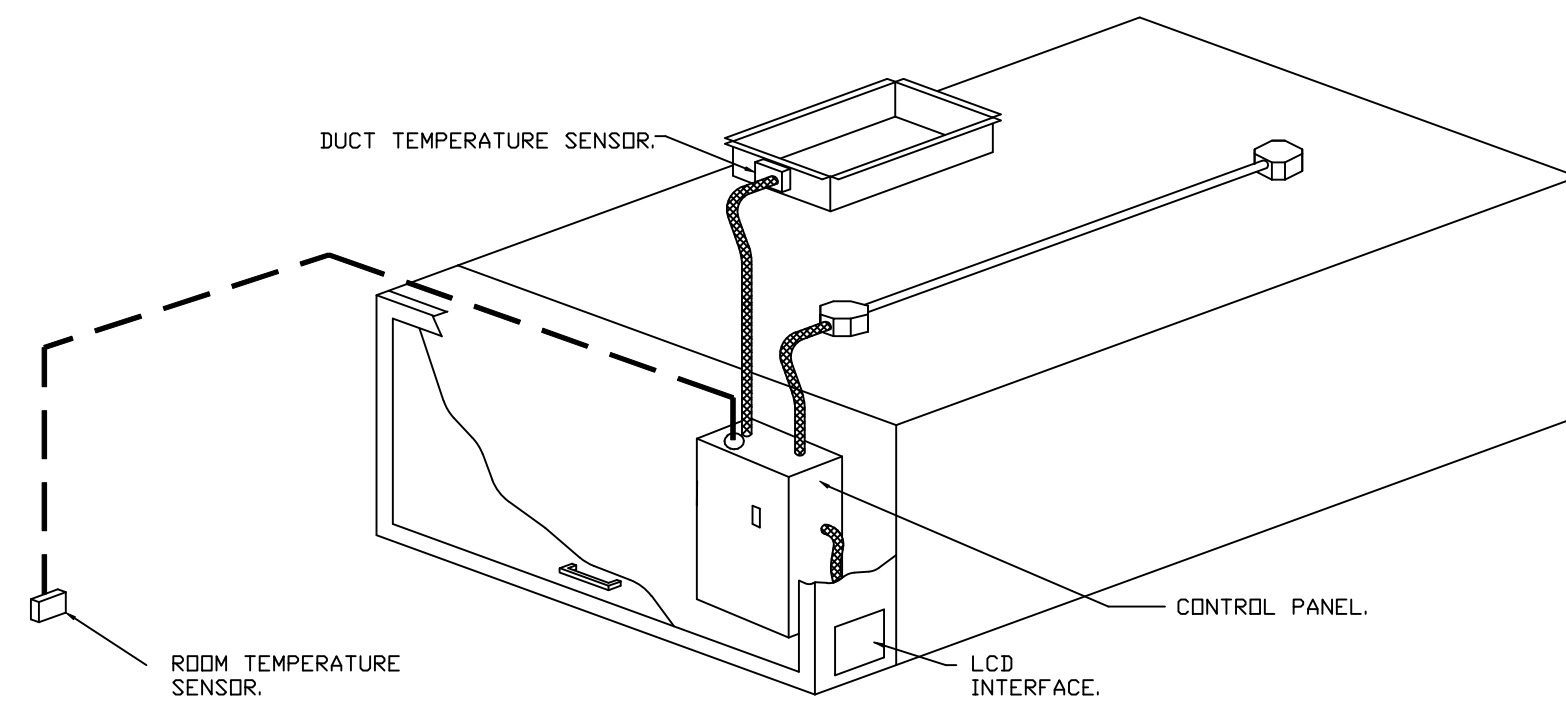
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DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDs) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDs BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
 - A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
 - B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
 - C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
 - F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
 - G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDs.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS:

- THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:
- **AUTOMATIC:** THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC", FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
 - **MANUAL:** THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
 - **SCHEDULE:** A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
 - **OTHER:** THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
 - **FIRE:** UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

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SCALE:
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DUCTWORK #1 PARTS - JOB#5845754 DOUBLE WALL EXHAUST

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
H1-E1	DW24DWRISER-3Z-S	3760				-1.325	11.62	0.00	1	DOUBLE WALL RISER COVER - USED ON 18" INNER RISER, 4' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
P1	DW1845DWASY-3Z-S	3760				-0.0735	32.67	2127.72	1	DOUBLE WALL DUCT - 18" INNER 45 DUCT - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P2	DW1847DWAJD-3Z-S	3760				-0.012	132.73	2127.72	1	DOUBLE WALL ADJUSTABLE DUCT - 18" INNER DUCT - 3 LAYERS ZERO CLEARANCE - 24" 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.
P3	DW2428SADKIT						9.61		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 24" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW2428SAD, & HARDWARE BAG 4.
P4	DW1845DWASY-3Z-S	3760				-0.105	32.67	2127.72	1	DOUBLE WALL DUCT - 18" INNER 45 DUCT - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P5	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P6	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P7	DW24DWVESU						117.68		1	DOUBLE WALL DUCT VERTICAL SUPPORT KIT, 24" SHELL, FOR REDUCED AND ZERO CLEARANCE. PARTS ARE ZINC COATED. HARDWARE KIT #7 FOR ASSEMBLY. MOUNTING HARDWARE SOLD SEPARATELY PER WALL CONSTRUCTION.
P8	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P9	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P10	DW24DWVESU						117.68		1	DOUBLE WALL DUCT VERTICAL SUPPORT KIT, 24" SHELL, FOR REDUCED AND ZERO CLEARANCE. PARTS ARE ZINC COATED. HARDWARE KIT #7 FOR ASSEMBLY. MOUNTING HARDWARE SOLD SEPARATELY PER WALL CONSTRUCTION.
P11	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P12	DW24DWVESU						117.68		1	DOUBLE WALL DUCT VERTICAL SUPPORT KIT, 24" SHELL, FOR REDUCED AND ZERO CLEARANCE. PARTS ARE ZINC COATED. HARDWARE KIT #7 FOR ASSEMBLY. MOUNTING HARDWARE SOLD SEPARATELY PER WALL CONSTRUCTION.
P13	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P14	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P15	DW24DWVESU						117.68		1	DOUBLE WALL DUCT VERTICAL SUPPORT KIT, 24" SHELL, FOR REDUCED AND ZERO CLEARANCE. PARTS ARE ZINC COATED. HARDWARE KIT #7 FOR ASSEMBLY. MOUNTING HARDWARE SOLD SEPARATELY PER WALL CONSTRUCTION.
P16	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P17	DW1847DWAJD-3Z-S	3760				-0.009	132.73	2127.72	1	DOUBLE WALL ADJUSTABLE DUCT - 18" INNER DUCT - 3 LAYERS ZERO CLEARANCE - 24" 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.
P18	DW24DWVESU						117.68		1	DOUBLE WALL DUCT VERTICAL SUPPORT KIT, 24" SHELL, FOR REDUCED AND ZERO CLEARANCE. PARTS ARE ZINC COATED. HARDWARE KIT #7 FOR ASSEMBLY. MOUNTING HARDWARE SOLD SEPARATELY PER WALL CONSTRUCTION.
P19 ASSEMBLED W/P20	DW18DWTEASY-3Z-S	3760		1		-0.141	67.91	2127.72	1	DOUBLE WALL DUCT - 18" INNER TEE DUCT - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P20 ASSEMBLED W/P19 D=S	DW18DWACCDORCOV-3Z-S						28.64		1	DOUBLE WALL DUCT - 18" INNER ACCESS DOOR & 24" ACCESS DOOR COVER WITH CLAMPS - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P21	DW1802DWOFFSETASY-3Z-S	3760				-0.003	17.79	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT RISER & 2 DEGREE OFFSET - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P22	DW1847DWLT-3Z-S	3760				-0.018	94.70	2127.72	1	DOUBLE WALL DUCT - 18" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER SHELL.
P23	DW2428SADKIT						9.61		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 24" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW2428SAD, & HARDWARE BAG 4.
P24	DW2428SADKIT						9.61		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 24" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW2428SAD, & HARDWARE BAG 4.
P25	DW1824DWRNDADPEC3ASY21-3Z-S	3760				-0.087	62.41	2127.72	1	DOUBLE WALL DUCT ECCENTRIC - 18" X 24" RND2RND ADAPTER - 21" TALL - 3 LAYERS ZERO CLEARANCE - 24" X 30" STAINLESS STEEL OUTER SHELL. STANDARD ADAPTER.
P26	DW2447DWLT-3Z-S	3760				-0.004	121.74	1196.85	1	DOUBLE WALL DUCT - 24" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 30" STAINLESS STEEL OUTER SHELL.
P27	DW3034SADKIT						12.23		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 30" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW3034SAD, & HARDWARE BAG 4.
P28	DW3034SADKIT						12.23		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 30" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW3034SAD, & HARDWARE BAG 4.
P29	DW2447DWLT-3Z-S	3760				-0.004	121.74	1196.85	1	DOUBLE WALL DUCT - 24" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 30" STAINLESS STEEL OUTER SHELL.
P30	DW2447DWLT-3Z-S	3760				-0.004	121.74	1196.85	1	DOUBLE WALL DUCT - 24" INNER DUCT, 47' LONG - 3 LAYERS ZERO CLEARANCE - 30" STAINLESS STEEL OUTER SHELL.
P31	DW3034SADKIT						12.23		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 30" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW3034SAD, & HARDWARE BAG 4.
P32	DW3034SADKIT						12.23		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 30" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW3034SAD, & HARDWARE BAG 4.
P33	DW2447DWAJD-3Z-S	3760				-0.004	168.09	1196.85	1	DOUBLE WALL ADJUSTABLE DUCT - 24" INNER DUCT - 3 LAYERS ZERO CLEARANCE - 30" 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.
P34	DW3034SADKIT						12.23		1	DUCT - HORIZONTAL SADDLE SUPPORT KIT, USED WITH 30" DD - INCLUDES UNI-STRUT CUT TO LENGTH, DW3034SAD, & HARDWARE BAG 4.
P35	DW2402DWOFFSETASY-3Z-S	3760				-0.001	22.51	1196.85	1	DOUBLE WALL DUCT - 24" INNER DUCT RISER & 2 DEGREE OFFSET - 3 LAYERS ZERO CLEARANCE - 30" STAINLESS STEEL OUTER SHELL.
SYSTEM AT P35						-1.9345	0.00			
RC1	DW24DWRISER-3Z-S						11.62		1	DOUBLE WALL RISER COVER - USED ON 18" INNER RISER, 4' LONG - 3 LAYERS ZERO CLEARANCE - 24" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
	3M-2000PLUS						0.80		8	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW18DWCLASY-3Z-S						7.85		11	DUCT - 18" DUCT - 24" DOUBLE 'V' CLAMP - 3Z INSULATION & SINGLE 'V' CLAMP INCLUDED - ZERO CLEARANCE.
	DW24DWCLASY-3Z-S						9.84		4	DUCT - 24" DUCT - 30" DOUBLE 'V' CLAMP - 3Z INSULATION & SINGLE 'V' CLAMP INCLUDED - ZERO CLEARANCE.
TOTAL WEIGHT							2749.40			

REVISIONS

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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.

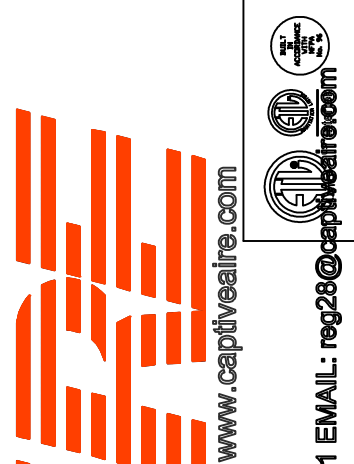
HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5'	7'
6'	7'
7'	7'
8'	7'
10'	7'
12'	7'
14'	7'
16'	7'
18'	5'
20'	5'
22'	5'
24'	5'
26'	5'
28'	5'
30'	5'
32'	5'
34'	5'
36'	5'

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'

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

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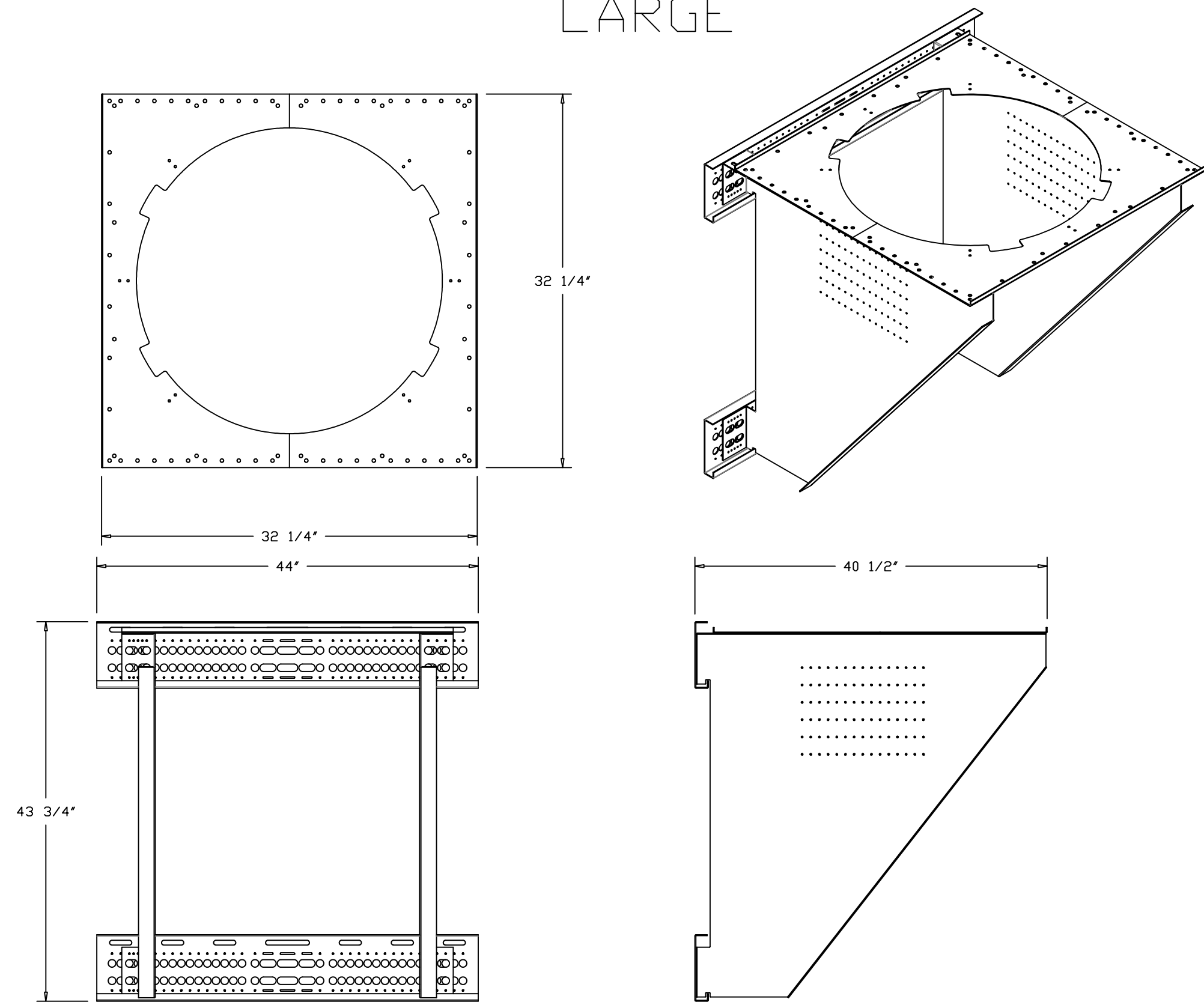
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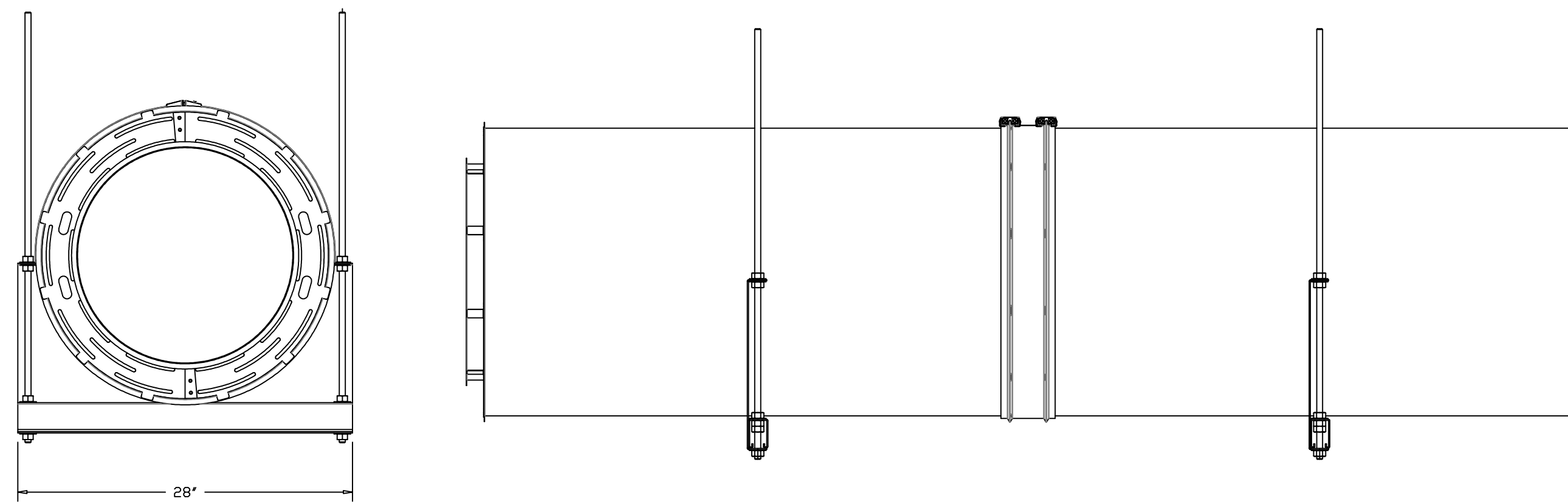
SHEET NO.
15

SUPPORT SYSTEM DETAILS #1

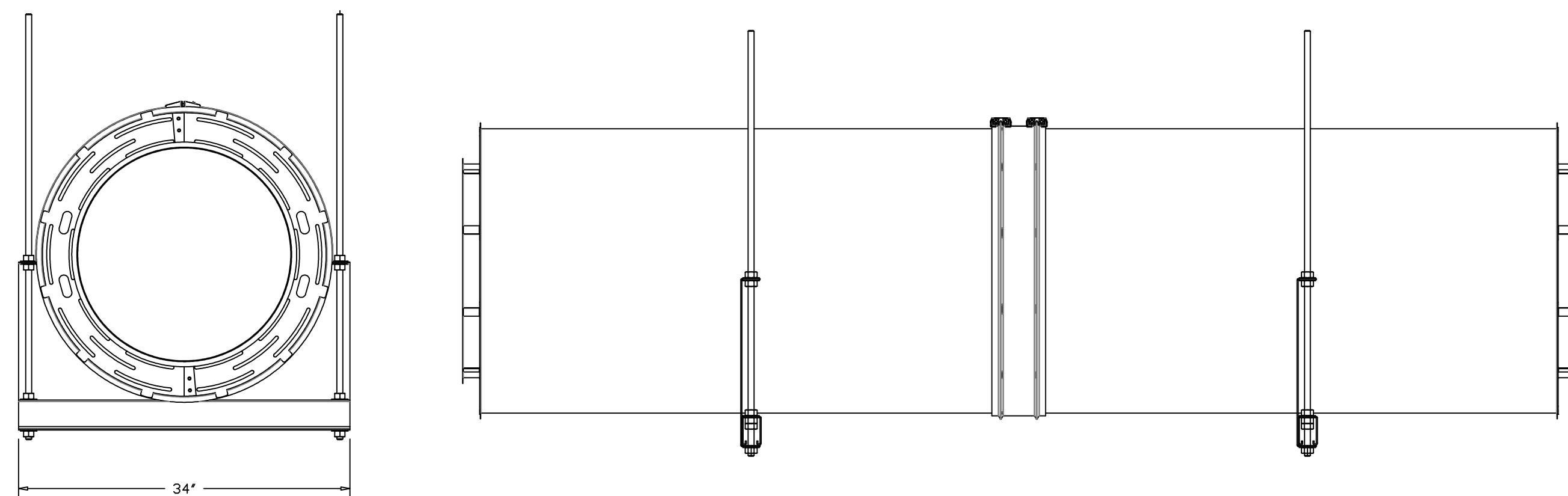
DW24DWVESU - VERTICAL WALL SUPPORT - LARGE



DW2428SADKIT - HORIZONTAL SUPPORTS



DW3034SADKIT - HORIZONTAL SUPPORTS



REVISIONS	
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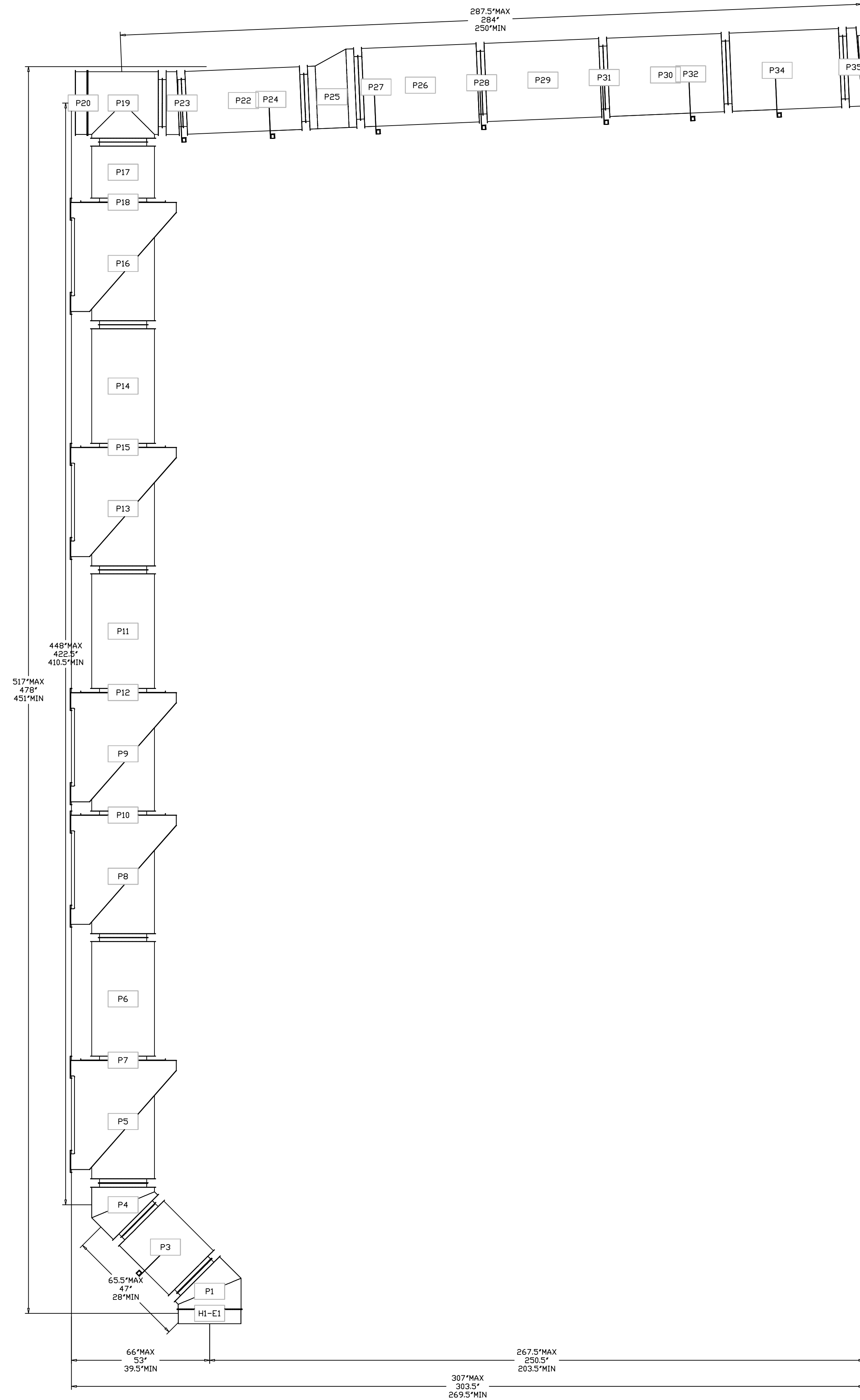
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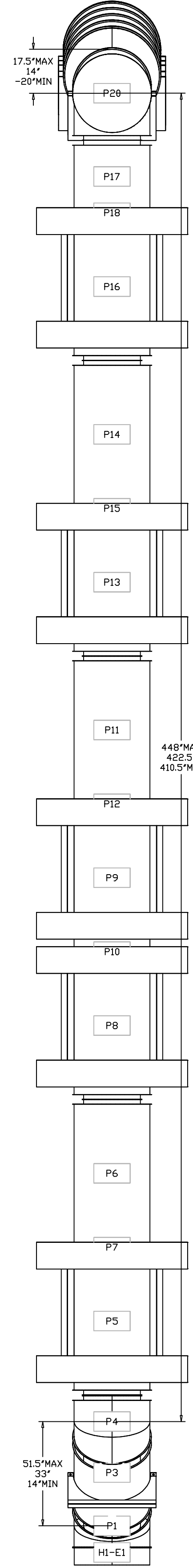
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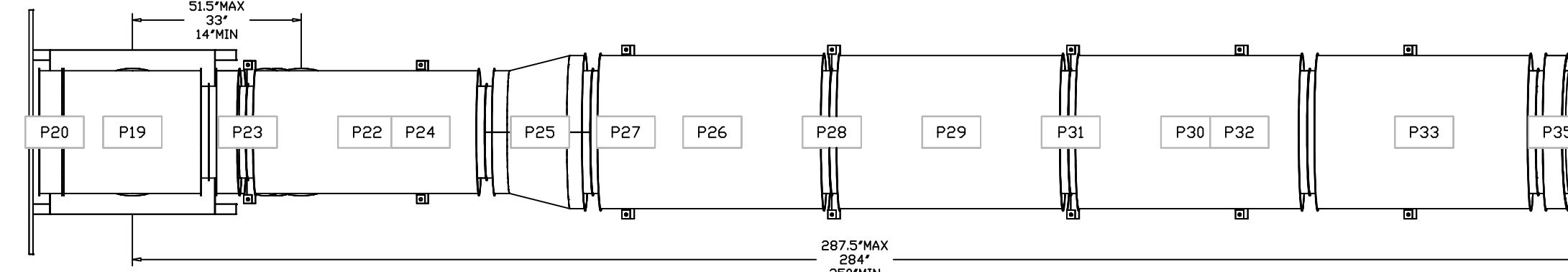
DUCTWORK #1 FRONT VIEW
EXHAUST



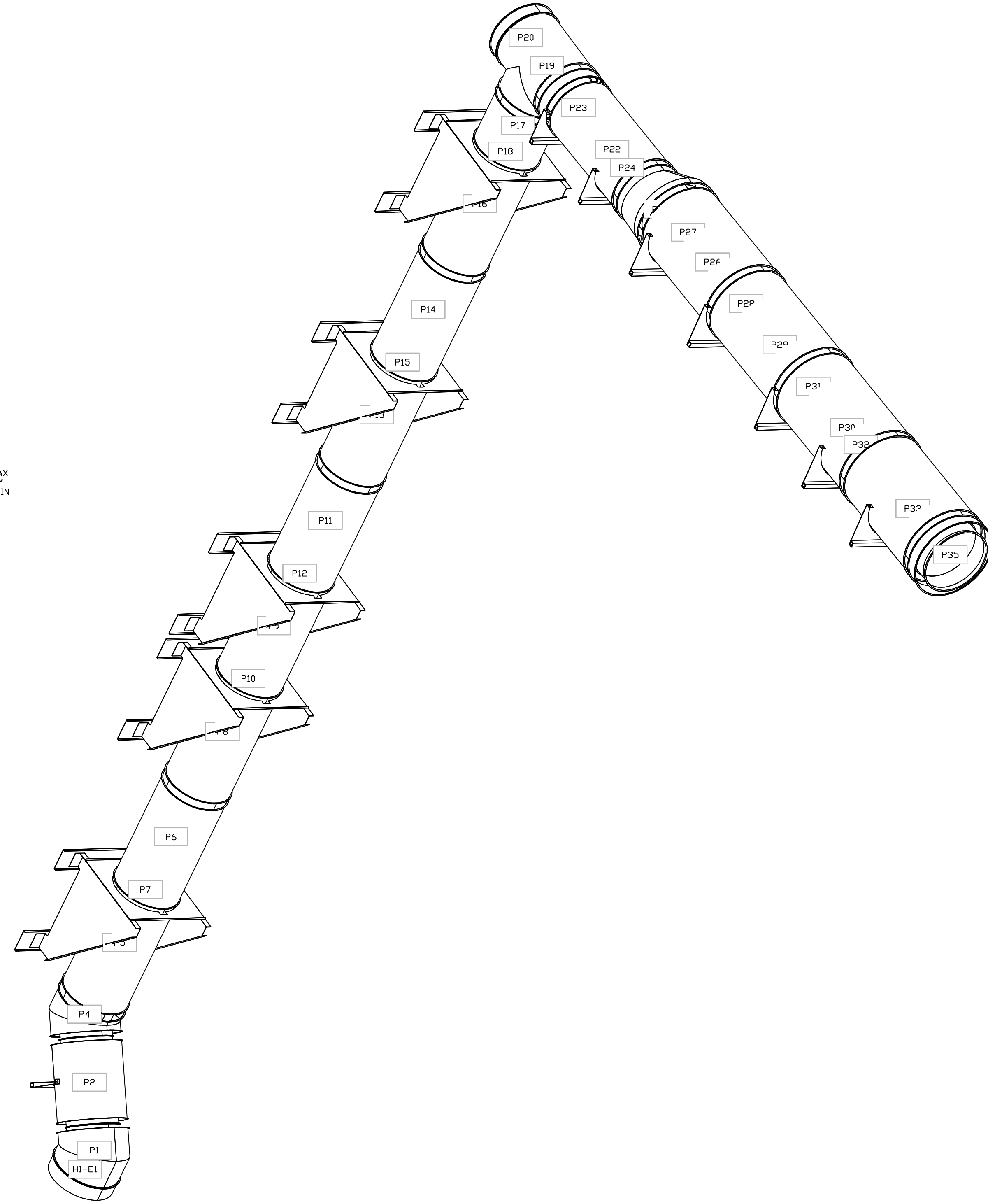
DUCTWORK #1 SIDE VIEW
EXHAUST



DUCTWORK #1 TOP VIEW
EXHAUST



DUCTWORK #1 SE VIEW
EXHAUST



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DRAWN BY: JMN-28

SCALE: NOT TO SCALE

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SHEET NO. 17

DUCTWORK #2 PARTS - JOB#5845754 DOUBLE WALL SUPPLY

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	THROW	WEIGHT	VELOCITY	QTY	DESCRIPTION
RTU	DW1250X2725T030DWSQRDADPOS-RTU3SD	3760						48.66	0.00	1	RTU3 DOUBLE WALL DUCT SIDE DISCHARGE OFFSET ADAPTER - OFFSET 9.282' ALONG THE 12.5' WIDTH - SQUARE TO ROUND - 12.5' X 27.25' TO 30" - 24" TALL - 5000 CFM - VELOCITY 1018 FPM - 2" FLANGE ON TOP SIDE, 1" FLANGES ON BOTTOM & SIDES, 1/2" ON ROUND SIDE - STAINLESS STEEL. FSK INSULATION, VENTURE CLAD, & VENTURE TAPE SHIP LOOSE.
P1	DW3007LTEC-3S	3760						24.36	765.98	1	SINGLE WALL SUPPLY DUCT 30" DIAMETER, 7' LONG, FLANGED ON BOTH ENDS WITH END CAP WELDED ON ONE END, USED TO TRANSITION FROM 3" DOUBLE WALL SUPPLY DUCT TO SINGLE WALL SUPPLY DUCT.
P2 [SEALED]	DW3044DWLT-3S-S	3760						92.00	765.98	1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P3 [SEALED]	DW3044DWLT-3S-S	3760				5.4232	555.0117	92.00	765.98	1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P4 [SEALED]	DW3044DWLT-3S-S	3008				5.4222	554.9604	92.00	612.78	1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P5 [SEALED]	DW3044DWLT-3S-S	2256				5.4212	554.9091	92.00	459.59	1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P6 [SEALED]	DW3090DWASY-3S-S	1504						82.00	306.39	1	DOUBLE WALL SUPPLY DUCT 90 DEGREE ELBOW, 30" DUCT, ASSEMBLY. 3" INSULATED - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P7 [SEALED]	DW3044DWLT-3S-S	1504				5.4172	554.7039	92.00	306.39	1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P8	HF3-LG-20FT-EACH							2.00		1	SUPPLY DUCT CABLE SUSPENSION SYSTEM - UL APPROVED - GRIPPLE NO.3 (200 LBS) SINGLE LOOP HANGER - GALVANIZED STEEL.
P9 [SEALED]	DW3044DWLT-3S-S	752				5.4172	554.7039	92.00	153.20	1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P10	HF3-LG-20FT-EACH							2.00		1	SUPPLY DUCT CABLE SUSPENSION SYSTEM - UL APPROVED - GRIPPLE NO.3 (200 LBS) SINGLE LOOP HANGER - GALVANIZED STEEL.
P11 [SEALED]	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P12	HF3-LG-20FT-EACH							2.00		1	SUPPLY DUCT CABLE SUSPENSION SYSTEM - UL APPROVED - GRIPPLE NO.3 (200 LBS) SINGLE LOOP HANGER - GALVANIZED STEEL.
P13	DW3047DWAJD-3S-S					5.4172		149.01		1	DOUBLE WALL SUPPLY ADJUSTABLE DUCT - 30" INNER DUCT - 3" INSULATION - R VALUE 12 - 36" 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.
SYSTEM AT P13								0.00			
P14	HF3-LG-20FT-EACH							2.00		1	SUPPLY DUCT CABLE SUSPENSION SYSTEM - UL APPROVED - GRIPPLE NO.3 (200 LBS) SINGLE LOOP HANGER - GALVANIZED STEEL.
P15	HF3-LG-20FT-EACH							2.00		1	SUPPLY DUCT CABLE SUSPENSION SYSTEM - UL APPROVED - GRIPPLE NO.3 (200 LBS) SINGLE LOOP HANGER - GALVANIZED STEEL.
P16	HF3-LG-20FT-EACH							2.00		1	SUPPLY DUCT CABLE SUSPENSION SYSTEM - UL APPROVED - GRIPPLE NO.3 (200 LBS) SINGLE LOOP HANGER - GALVANIZED STEEL.
P17	HF3-LG-20FT-EACH							2.00		1	SUPPLY DUCT CABLE SUSPENSION SYSTEM - UL APPROVED - GRIPPLE NO.3 (200 LBS) SINGLE LOOP HANGER - GALVANIZED STEEL.
P2	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P3	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P4	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P5	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P6	DW3090DWASY-3S-S							82.00		1	DOUBLE WALL SUPPLY DUCT 90 DEGREE ELBOW, 30" DUCT, ASSEMBLY. 3" INSULATED - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P7	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P9	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
P11	DW3044DWLT-3S-S							92.00		1	DOUBLE WALL SUPPLY DUCT 30 DIAMETER 44' LONG, FLANGE AT BOTH ENDS - 3" INSULATION - R VALUE 12 - 36" STAINLESS STEEL OUTER SHELL.
	20100MNE+9485PC-BLACK							0.50		4	SUPPLY DUCT GASKET - LIGHT DUTY BLENDED EPDM FOAM GASKET - 20100MNE + 9485PC BLACK 1/8" X 1/2" X 50'.
	DW30CLASY							2.01		1	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 30" DUCT, ASSEMBLY.
	DW36CLASY							2.37		8	DUCT "V" CLAMP WITH NEW DESIGN 14 GA BRACKETS, 36" DUCT, ASSEMBLY.
	SEALDUCTEXT							0.01		8	SEAL DUCT EXTERIOR - SF 685 BUTYL WATERPROOF ALUMINUM TAPE IS USED TO SEAL THE EXTERIOR OF THE DOUBLE WALL DUCT. SEALDUCTEXT QUANTITY SHOULD BE PER QUANTITY OF PARTS THAT NEED TO BE SEALED. DOUBLE V CLAMP WILL NEED TO BE SEALED IN THE FIELD ORDER "TAPESF-685" SEPARATE.
	TAPESF-685							1.00		3	DOUBLE WALL DUCT TAPE - USED TO SEAL DOUBLE WALL DUCT SHELLS - 2" X 100' SF-685 BUTYL WATERPROOF ALUMINUM TAPE.
TOTAL WEIGHT								1714.08			

SINGLE WALL FACTORY BUILT SUPPLY 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 INSTALLATION AND OPERATION MANUAL.

DUCT DIAMETER	HORIZONTAL SUPPORT (FT)	HORIZONTAL STANDARD LOOP(FT)	VERTICAL WALL SUPPORT (FT)	VERTICAL CURB SUPPORT (FT)	VERTICAL FLOOR SUPPORT (FT)
5' - 36"	10'	5'	10'	20'	20'

DOUBLE WALL FACTORY BUILT SUPPLY DUCTWORK

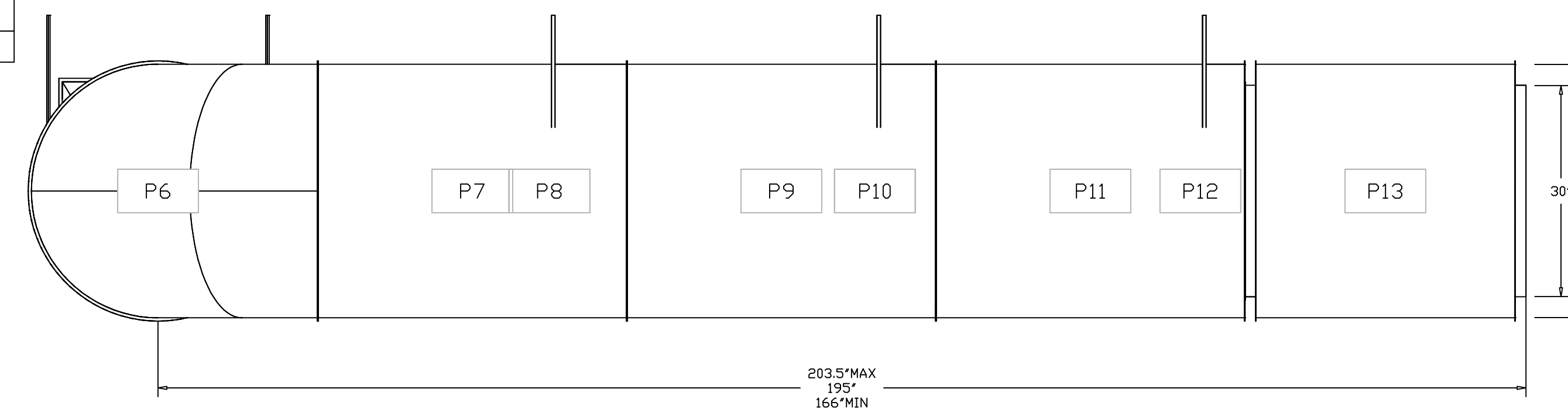
- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5' - 36"	5

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
1S, 2S, 3S	10'	20'	20'

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

DUCTWORK #2 FRONT VIEW SUPPLY



REVISIONS	
DESCRIPTION	DATE

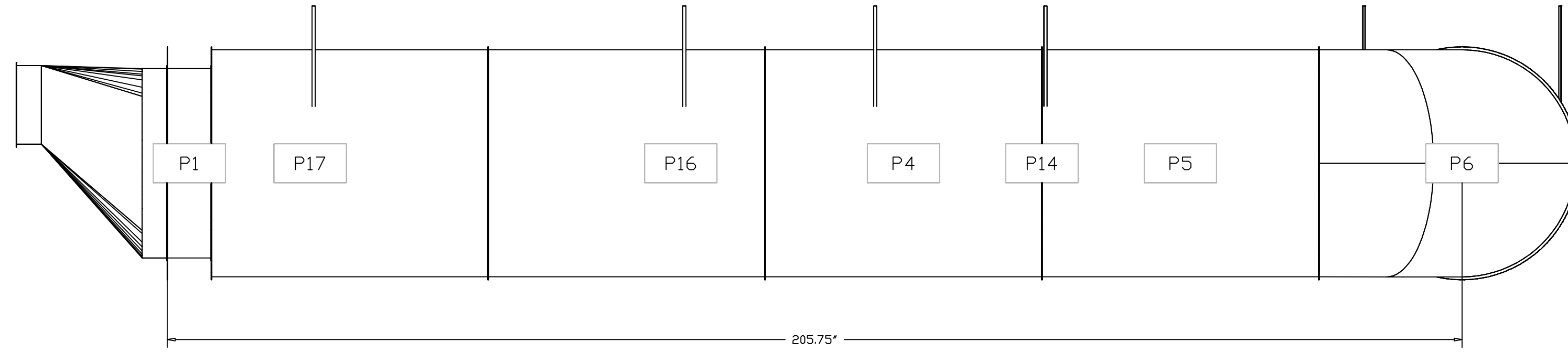
www.captiveaire.com
Southern Virginia Office
700 Tech Center Parkway, Suite 200 Unit 127 PO 131, Newport News, VA, 23608 PHONE: (804) 684-2700 FAX: 8192275911 EMAIL: rep23@capair.com

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RICHMOND, VA, 23230

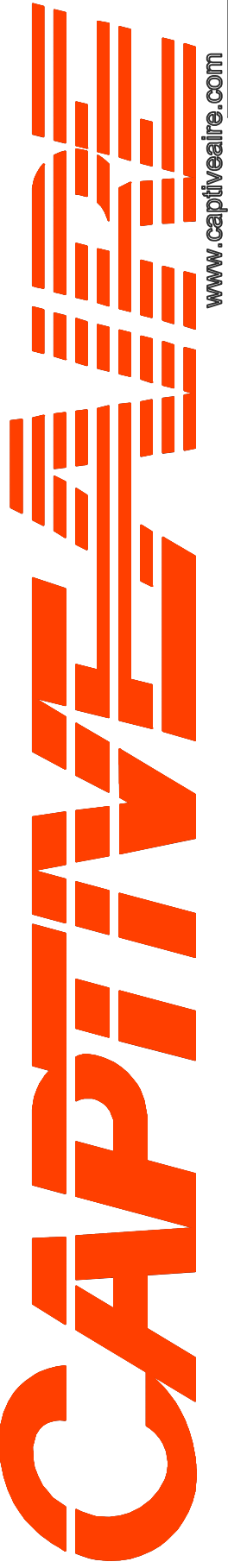
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DUCTWORK #2 SIDE VIEW
SUPPLY



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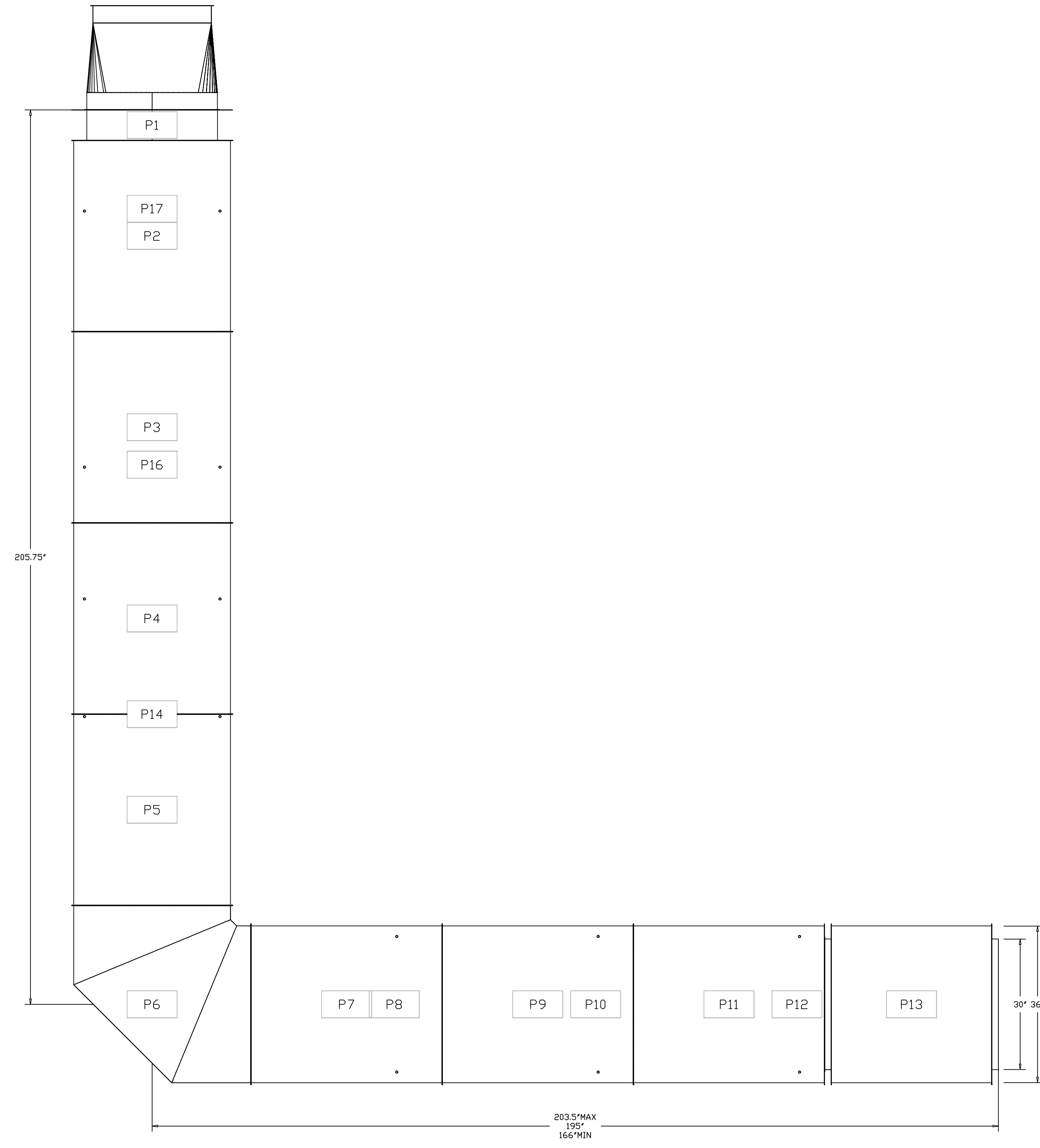
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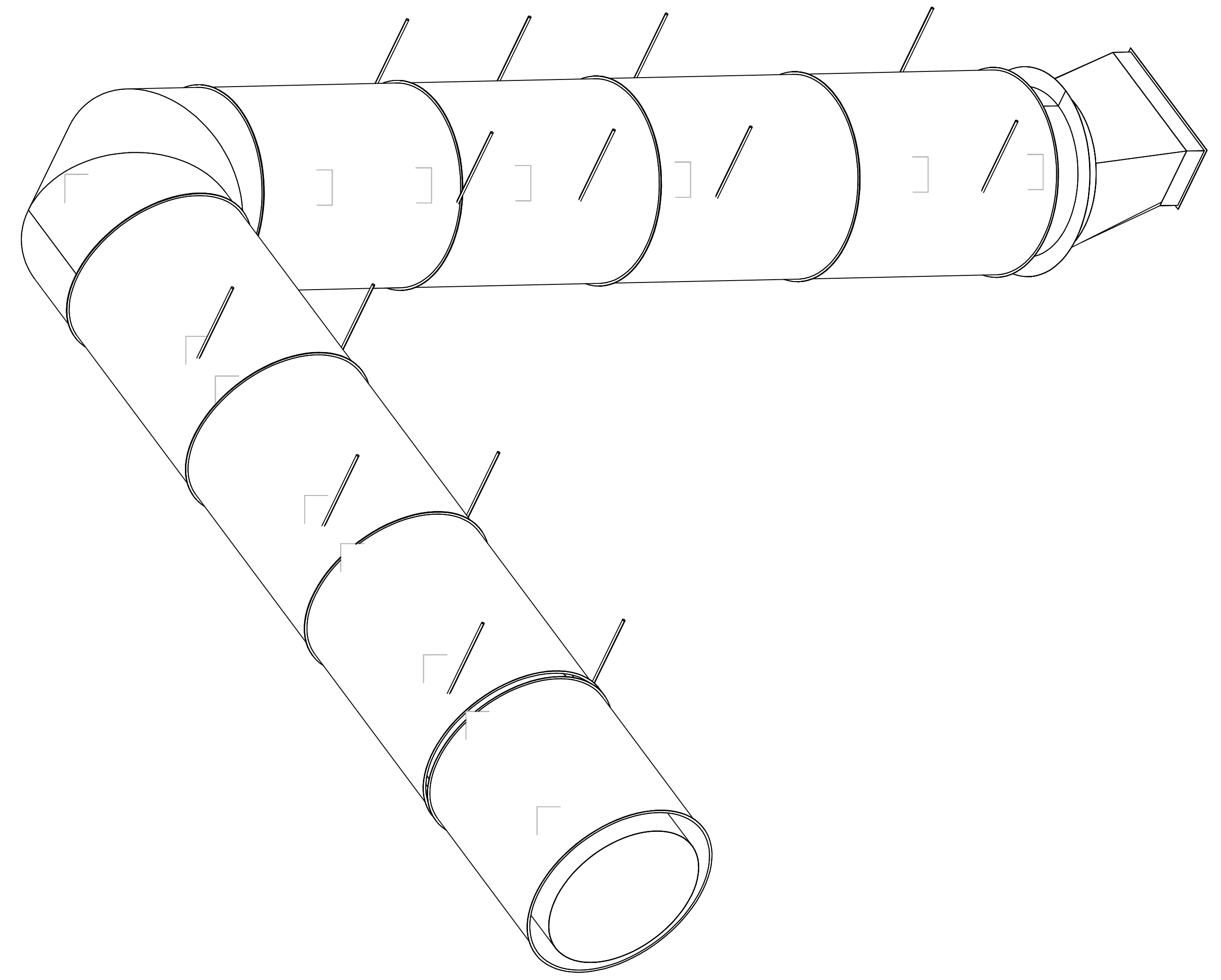
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 SCALE: 3/4" = 1'-0"
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 19

DUCTWORK #2 TOP VIEW
SUPPLY



DUCTWORK #2 SE VIEW
SUPPLY



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 20

SYSTEM DESIGN VERIFICATION (SDV)

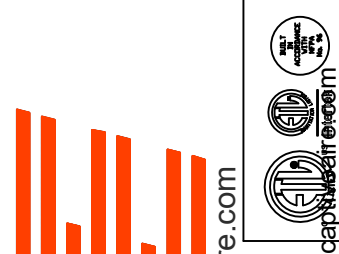
IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

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.

REVISIONS

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

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21