

FOR QUESTIONS, CALL THE
 Florida National Accounts
 REGION 60
 PHONE: (407) 682-3100
 EMAIL: reg60@captiveaire.com

HOOD INFORMATION - JOB#5146053

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)						HOOD CONSTRUCTION	HOOD CONFIG		
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL		SP	END TO END	ROW
1	GRIDDLE HOOD	3347 BD-2	CAPTIVEAIRE	5' 6"	600 DEG	I	HEAVY	273	1500			4'	12'	1500	1910	-1.412'	430 SS WHERE EXPOSED	ALONE	ALONE
2	FRYER HOOD	3347 BD-2	CAPTIVEAIRE	7' 0"	600 DEG	I	HEAVY	214	1500			4'	12'	1500	1910	-1.090'	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	ELECTRICAL		
1	GRIDDLE HOOD	CAPTRATE SOLO FILTER	4	16"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO					YES	228 LBS
2	FRYER HOOD	CAPTRATE SOLO FILTER	5	16"	16"	85% SEE FILTER SPEC	3	L55 SERIES E26	NO					YES	266 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	GRIDDLE HOOD	FIELD WRAPPER 14.00' HIGH FRONT, LEFT, RIGHT.
		RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
		LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
2	FRYER HOOD	FIELD WRAPPER 14.00' HIGH FRONT, LEFT, RIGHT.
		RIGHT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.
		LEFT QUARTER END PANEL 23' TOP WIDTH, 0' BOTTOM WIDTH, 23' HIGH 430 SS.

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.

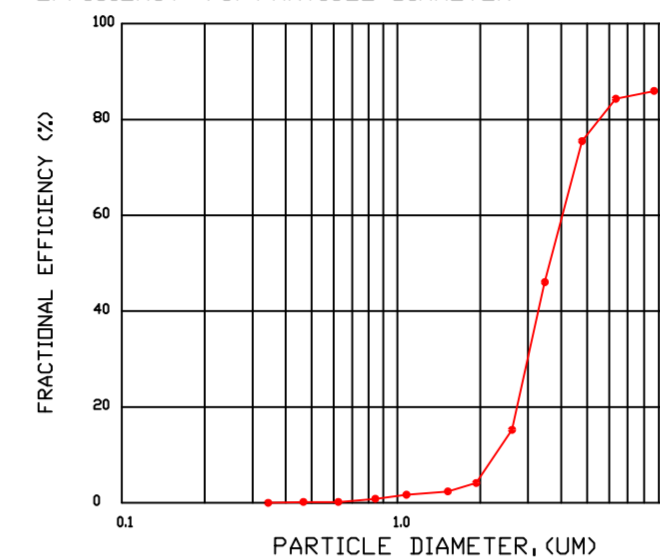
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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

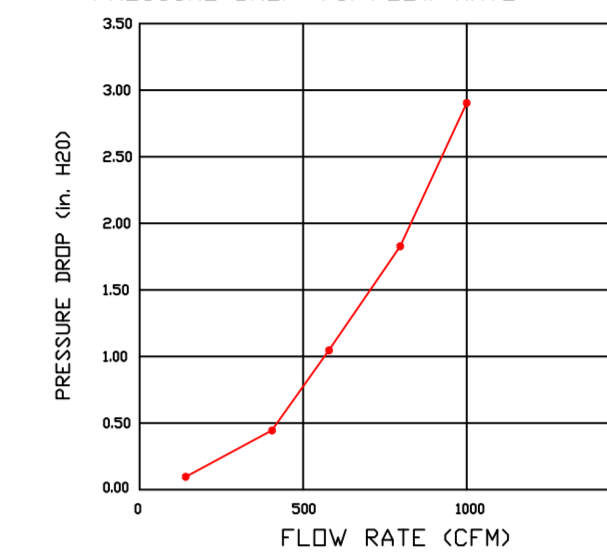
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

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.

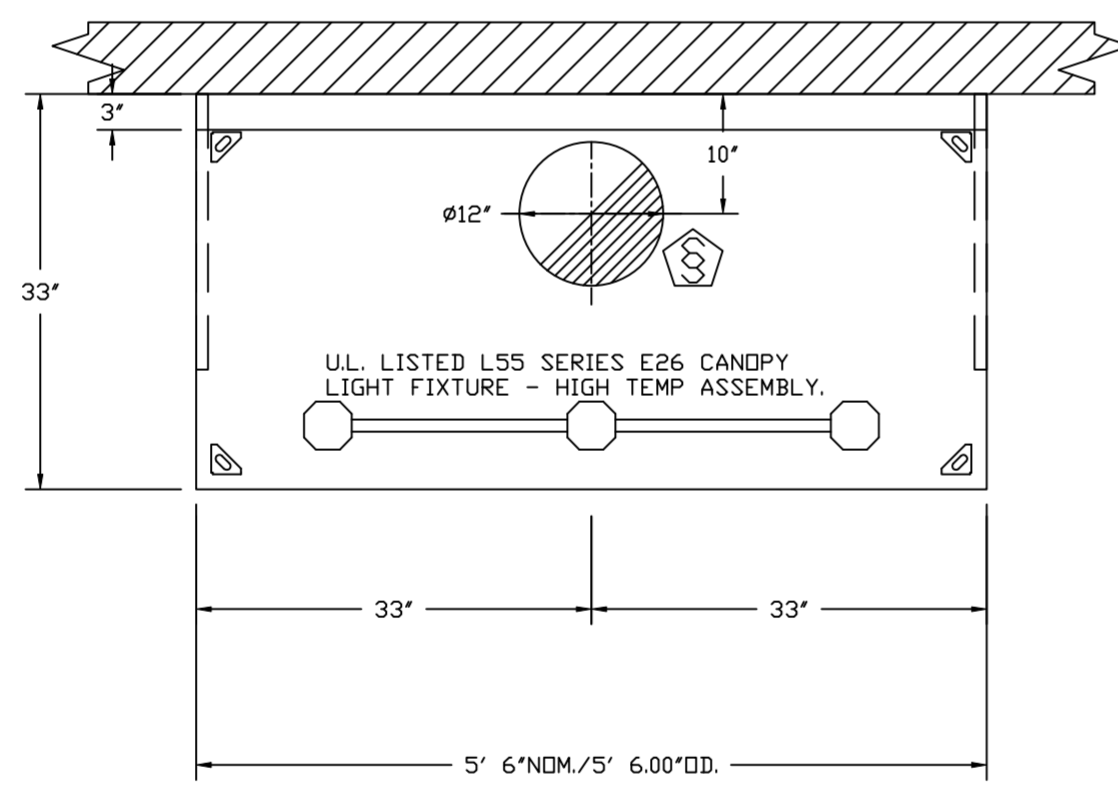
EFFICIENCY VS. PARTICLE DIAMETER



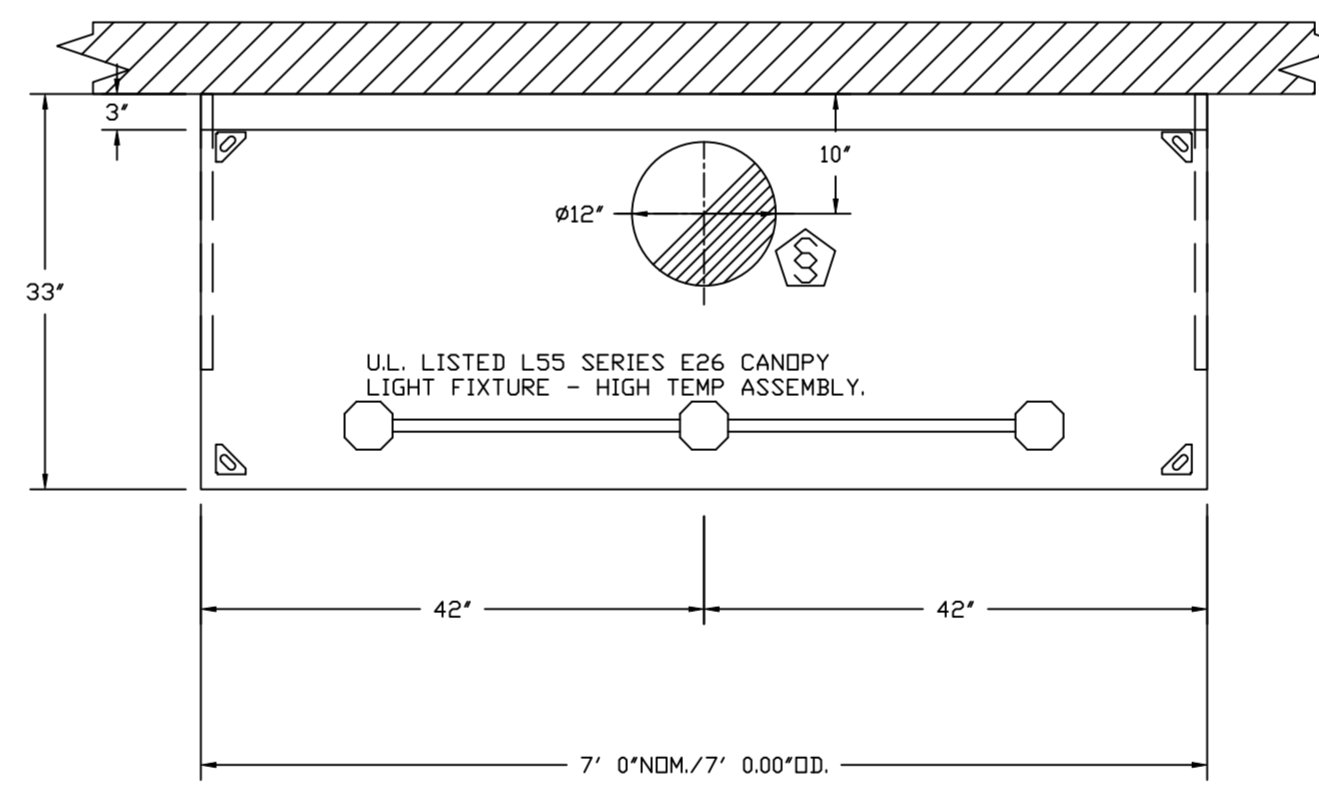
PRESSURE DROP VS. FLOW RATE



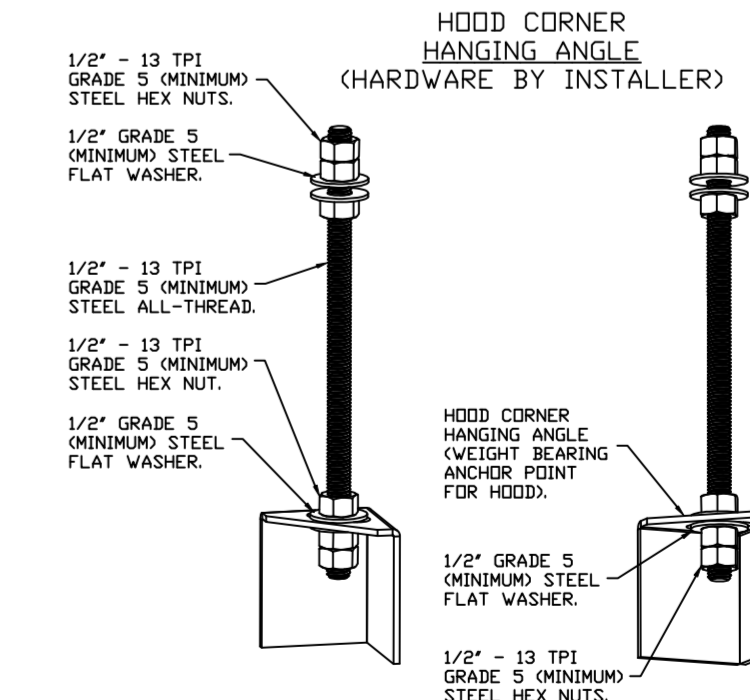
CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
 NFPA #96.
 NSF STANDARD #2.
 UL STANDARD #1046.
 INT. MECH. CODE (IMC).
 ULC-S649.



PLAN VIEW - HOOD #1 (GRIDDLE HOOD)
 5' 6.00" LONG 3347BD-2



PLAN VIEW - HOOD #2 (FRYER HOOD)
 7' 0.00" LONG 3347BD-2



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) STEEL HEX NUTS. 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.

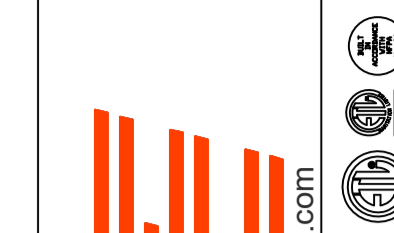
CAPTIVE-AIRE HOODS ARE ETL SANITATION LISTED AND BUILT IN COMPLIANCE WITH NSF/ANSI STANDARD 2, AND TO UL 710 & ULC710 STANDARDS.



E.T.L. LISTED 102900319PRT-001

REVISIONS

DESCRIPTION	DATE



Florida National Accounts
 www.captiveaire.com

239 N Hunt Club Blvd., STE 201, Longwood, FL 32779 PHONE: (407) 682-3100 FAX: (919) 227-5913 EMAIL: reg60@captiveaire.com

Culvers Shelbyville IN
 1930 North Morristown rd,
 Shelbyville, IN, 46176

DATE: 1/12/2022

DWG.#:
 5146053

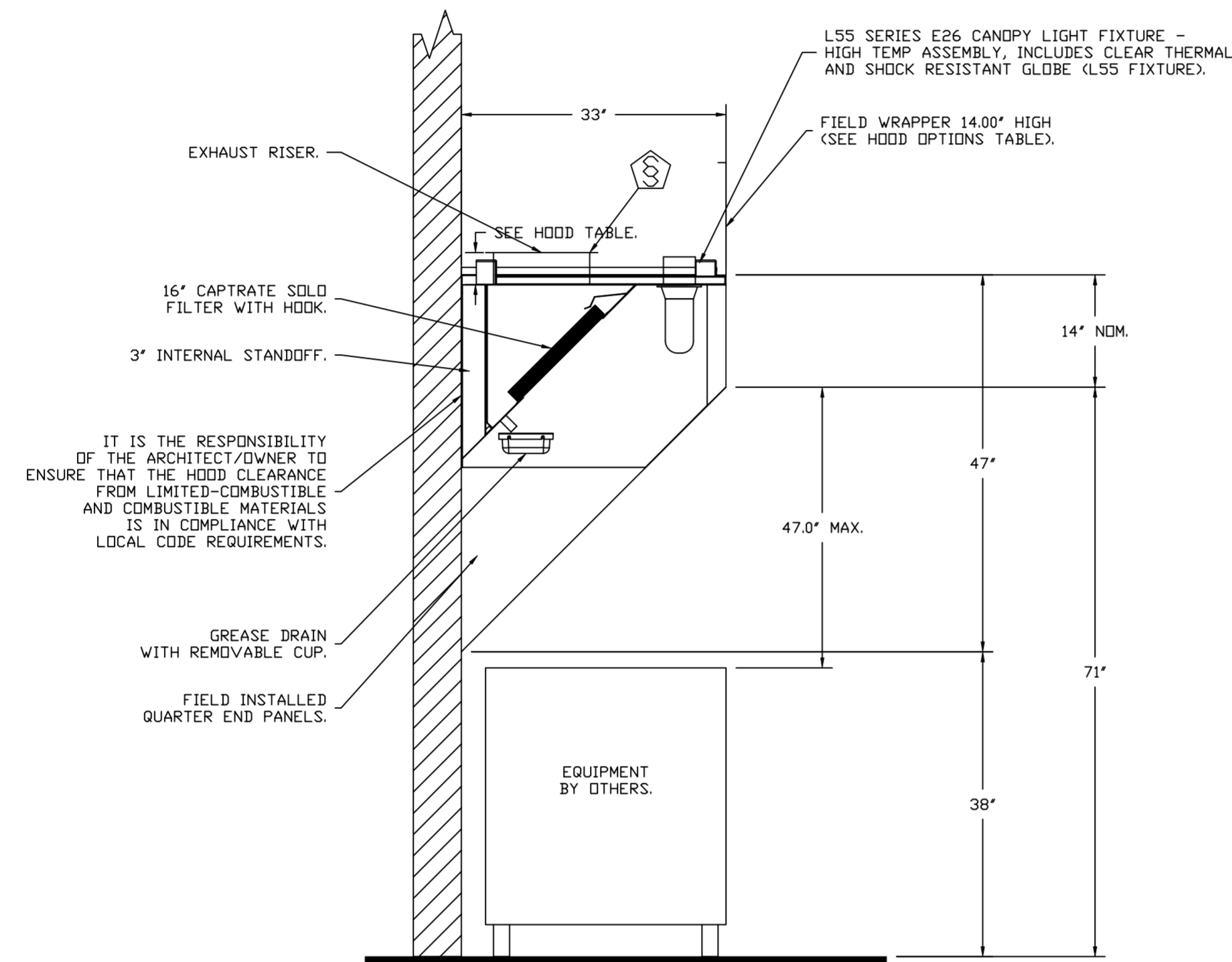
DRAWN BY: studdyjr

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

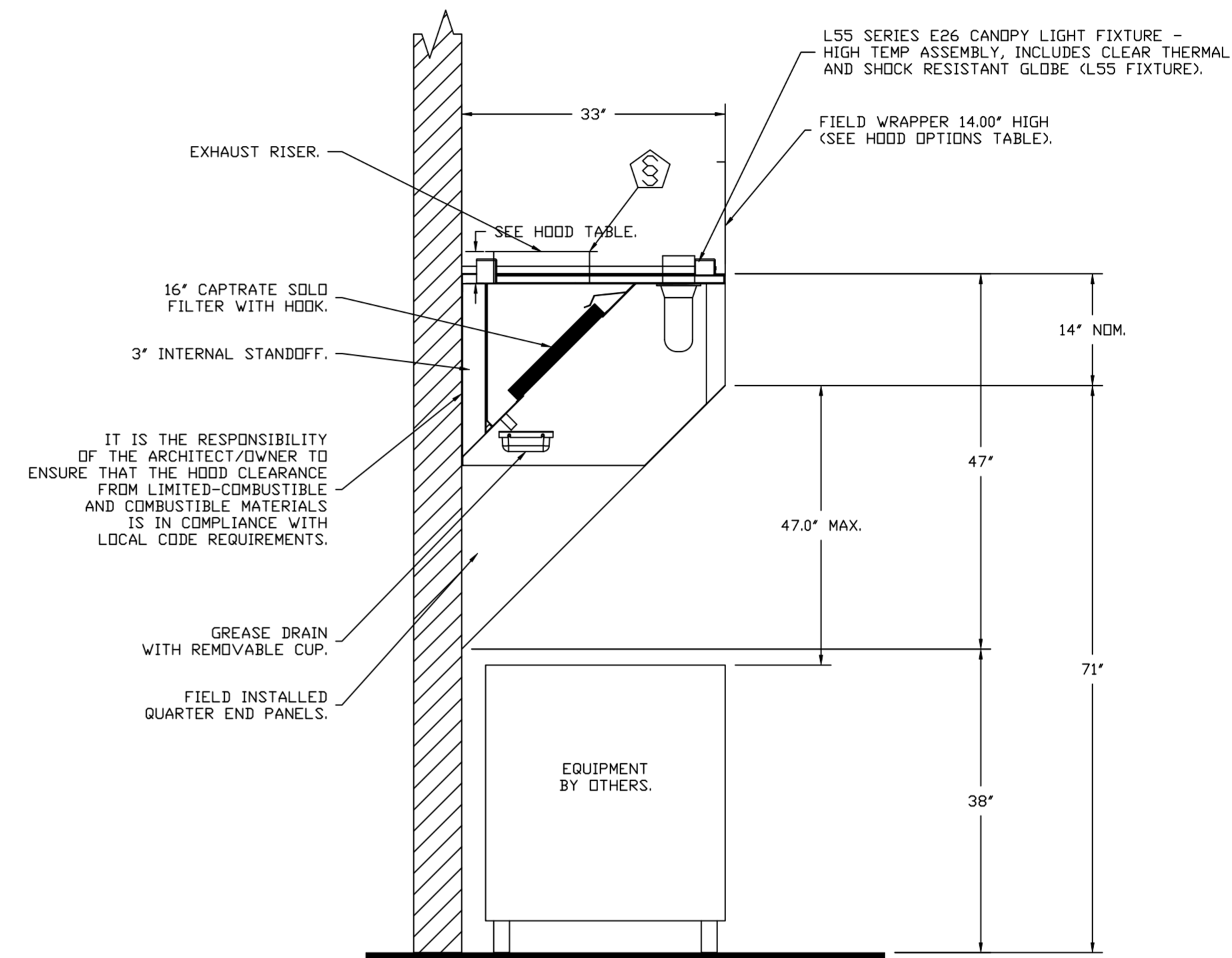
MASTER DRAWING

SHEET NO.

1



SECTION VIEW - MODEL 3347BD-2
HOOD - #1 (GRIDDLE HOOD)



SECTION VIEW - MODEL 3347BD-2
HOOD - #2 (FRYER HOOD)

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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Florida National Accounts

CAPTIVE AIR

Culvers Shelbyville IN
1930 North Morrystown rd,
Shelbyville, IN, 46176

DATE: 1/12/2022

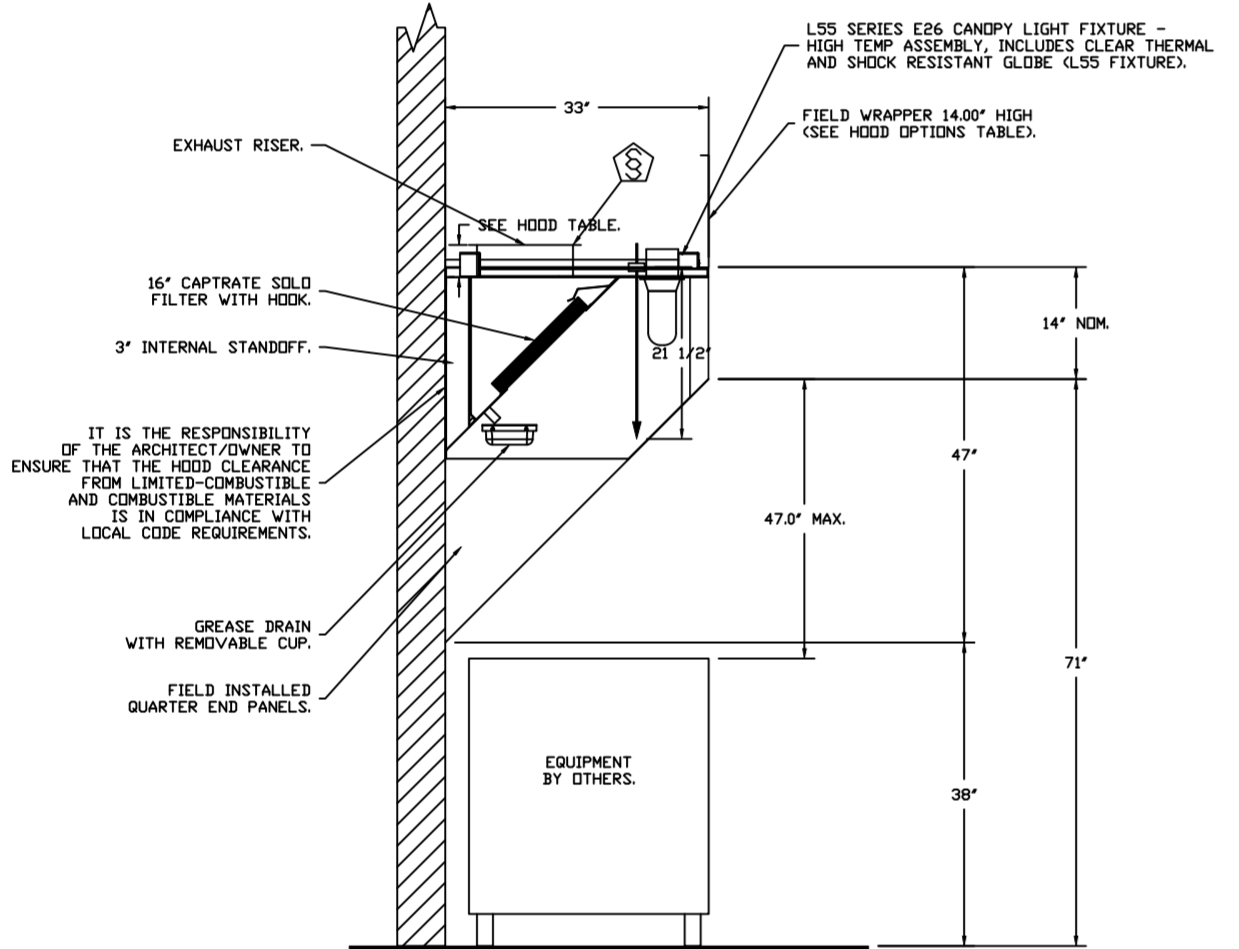
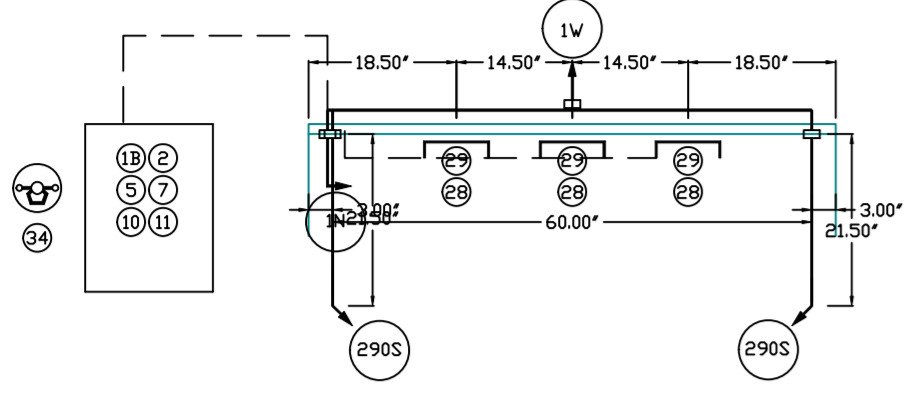
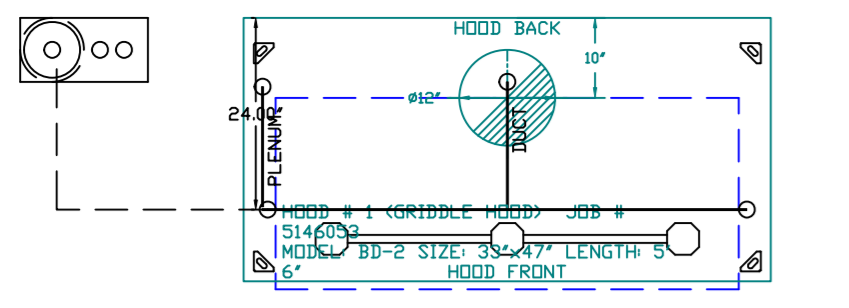
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DRAWN BY: studdy jr

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

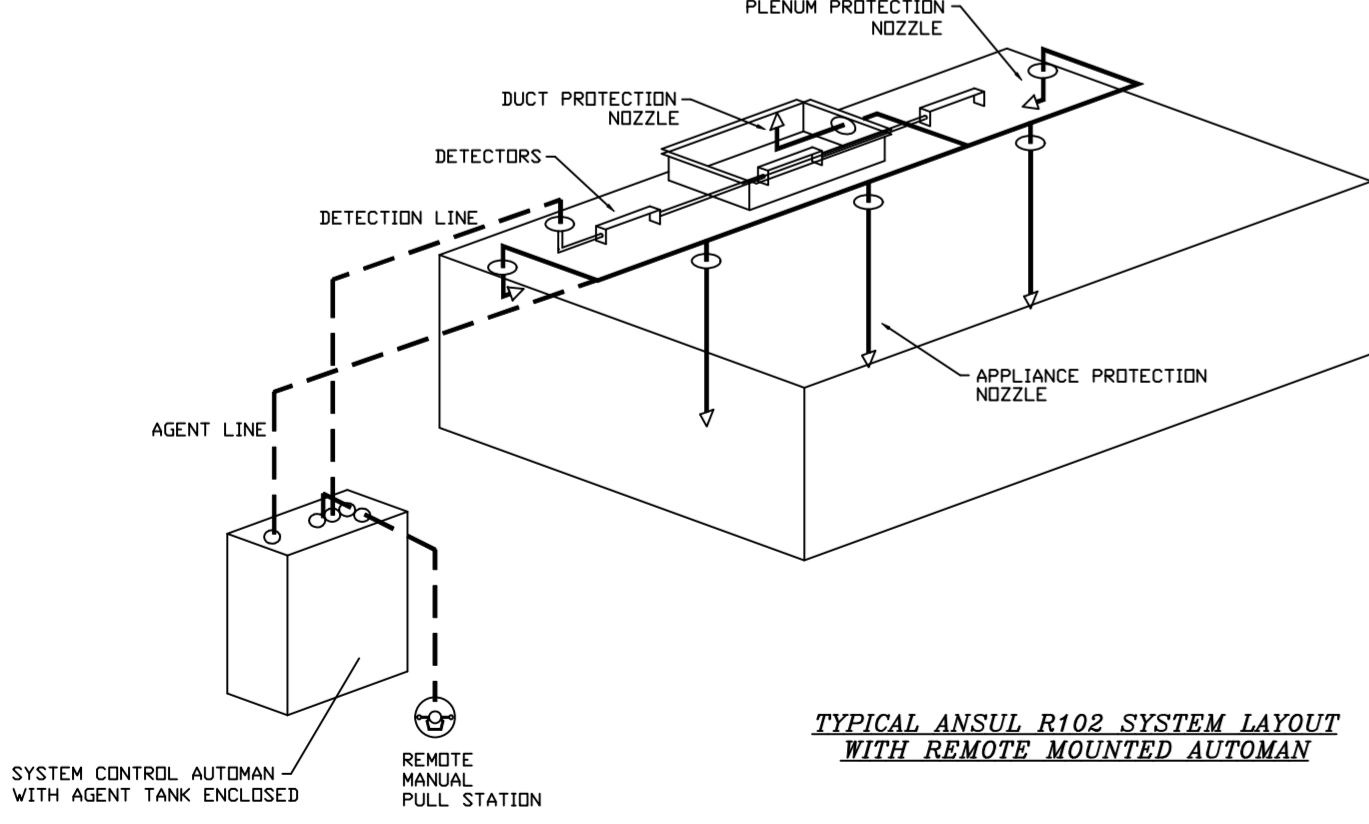
MASTER DRAWING

SHEET NO.
2



SECTION VIEW - MODEL 3347BD-2 HOOD - #1

DUCT NOZZLE AND PLENUM SPRAY BAR LOCATION



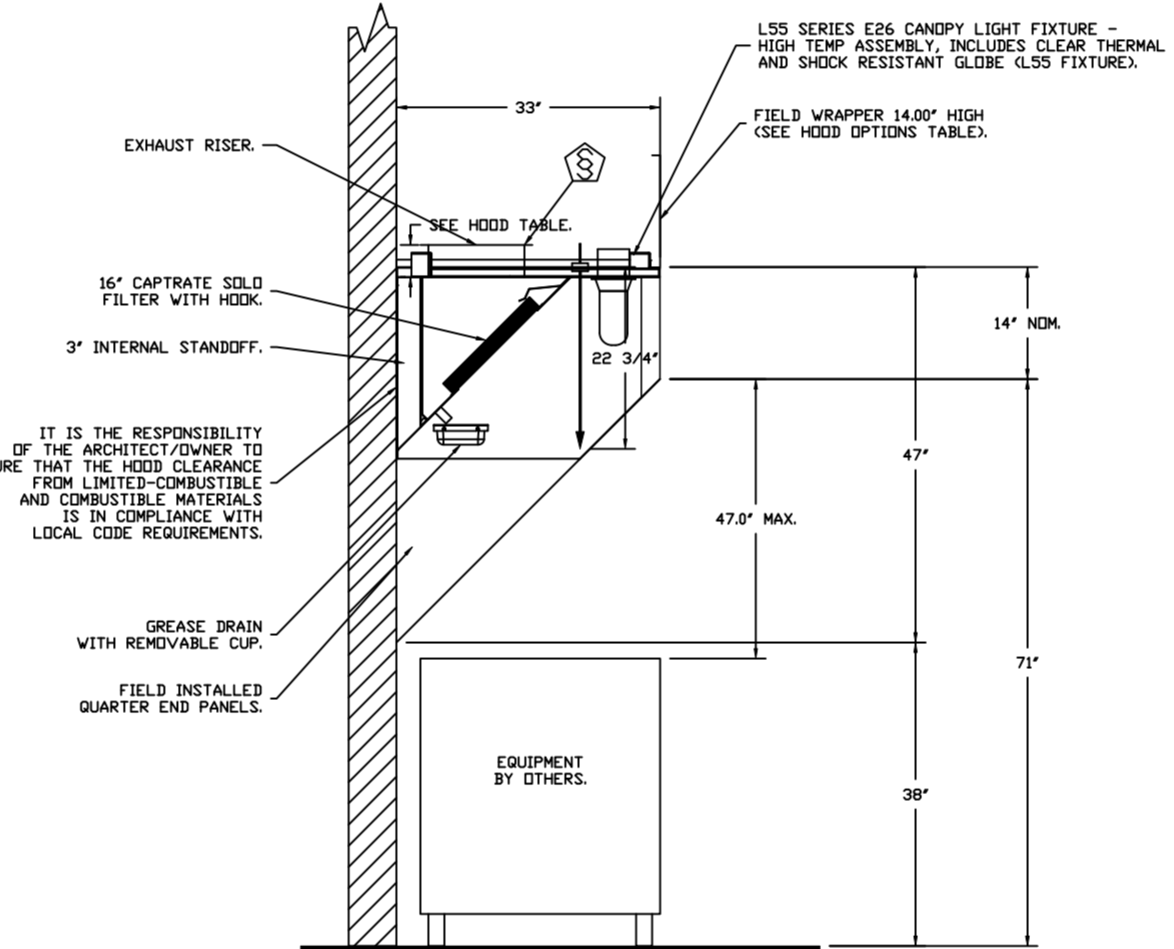
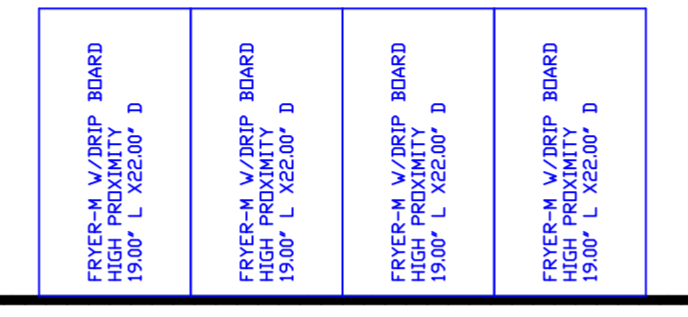
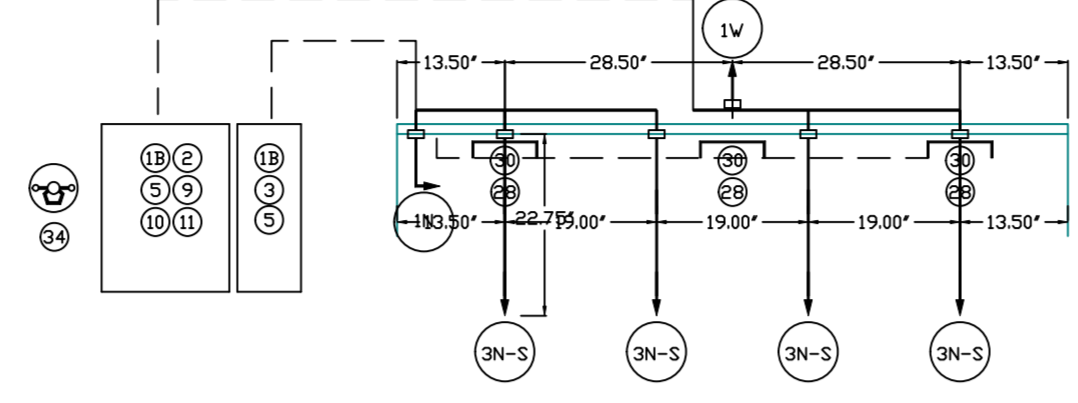
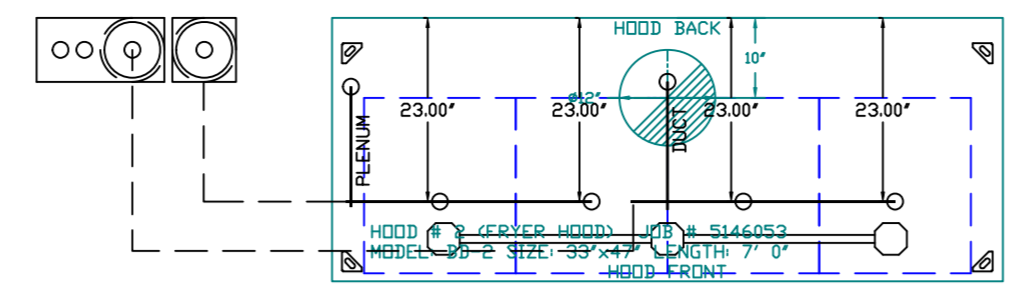
TYPICAL ANSUL R102 SYSTEM LAYOUT WITH REMOTE MOUNTED AUTOMAN

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 COVERING A RANGE, FRYER, OR WOK TO REFLECT GENERAL PIPING REQUIREMENTS.
 - 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 UL 300 REQUIREMENTS.

JOB #: 5146053
 JOB NAME: CULVERS SHELBYVILLE IN.
 SYSTEM SIZE: ANSUL-3.0 TOTAL FP REQUIRED: 6.
 HOOD # 1 5' 6.00" LONG x 33" WIDE x 47" HIGH.
 RISER # 1 SIZE: 12" DIA.
 HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

LEGEND - WALL MOUNTED ANSUL SYSTEM

- 1A 15 GALLON TANK
- 1B 3.0 GALLON TANK
- 2 AUTOMAN RELEASE
- 3 3 GALLON TANK ENCLOSURE
- 3A 6 GALLON TANK ENCLOSURE
- 4 REGULATED ACTUATOR
- 5 ANSULEX LIQUID AGENT (3 GAL.)
- 6 ANSULEX LIQUID AGENT (1.5 GAL.)
- 7 CARTRIDGE (101-20)
- 8 CARTRIDGE (101-10)
- 9 CARTRIDGE (101-30)
- 9A CARTRIDGE (LT-A-101-30)
- 9B DOUBLE TANK CARTRIDGE
- 10 TEST LINK
- 11 DOUBLE MICROSWITCH
- 2W DUCT NOZZLE (419337)
- 1W NOZZLE ASSEMBLY (419336)
- 1F NOZZLE ASSEMBLY (419333)
- 1N NOZZLE ASSEMBLY (419335)
- 1/2N NOZZLE ASSEMBLY (419334)
- 3N NOZZLE ASSEMBLY (419338)
- 24S NOZZLE ASSEMBLY (419340)
- 230 NOZZLE ASSEMBLY (419339)
- 2120 NOZZLE ASSEMBLY (419343)
- 290 NOZZLE ASSEMBLY (419342)
- 260 NOZZLE ASSEMBLY (419341)
- 28 DETECTOR BRACKET
- 29 LOW TEMP FUSIBLE LINK
- 30 HIGH TEMP FUSIBLE LINK
- MGV MECHANICAL GAS VALVE
- EGV ELECTRICAL GAS VALVE
- 34 REMOTE MANUAL PULL STATION
- S SWIVEL ADAPTOR



SECTION VIEW - MODEL 3347BD-2 HOOD - #2

DUCT NOZZLE AND PLENUM SPRAY BAR LOCATION

INCLUDES FIELD INSTALLATION AND HOOKUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE. TWO SITE VISITS ONLY (ONE VISIT TO SET PULL STATION & SYSTEM HOOKUP AND ONE VISIT FOR ONE TEST). ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES. ONE MECHANICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2" PERMIT, AND SYSTEM TEST.
 EXCLUDES: UNION LABOR & PREVAILING WAGE (LABOR & WAGES WILL BE ADDED IF APPLICABLE), GAS VALVE INSTALLATION, ELECTRICAL HOOKUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHUNT TRIP, HANDHELD EXTINGUISHERS, ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

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 COVERING A RANGE, FRYER, OR WOK TO REFLECT GENERAL PIPING REQUIREMENTS.
 - 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.

SPECIFICATIONS

THE RESTAURANT FIRE SUPPRESSION SYSTEM SHALL BE THE PRE-ENGINEERED TYPE WITH A FIXED NOZZLE AGENT DISTRIBUTION NETWORK. IT SHALL BE LISTED WITH UNDERWRITERS LABORATORIES, INC. (UL).
 THE SYSTEM SHALL BE CAPABLE OF AUTOMATIC DETECTION AND ACTUATION WITH LOCAL OR REMOTE MANUAL ACTUATION. ACCESSORIES SHALL BE AVAILABLE FOR MECHANICAL OR ELECTRICAL GAS LINE SHUT-OFF APPLICATIONS.
 THE EXTINGUISHING AGENT SHALL BE A POTASSIUM CARBONATE, POTASSIUM ACETATE-BASED FORMULATION DESIGNED FOR FLAME KNOCKDOWN AND SECUREMENT OF GREASE RELATED FIRES. IT SHALL BE AVAILABLE IN PLASTIC CONTAINERS WITH INSTRUCTIONS FOR LIQUID AGENT HANDLING AND USAGE.
 THE REGULATED RELEASE MECHANISM SHALL BE COMPATIBLE WITH A FUSIBLE LINK DETECTION SYSTEM. THE FUSIBLE LINK SHALL BE SELECTED AND INSTALLED ACCORDING TO THE OPERATING TEMPERATURE IN THE VENTILATING SYSTEM. THE FUSIBLE LINK SHALL BE SUPPORTED BY A DETECTOR BRACKET/LINKAGE ASSEMBLY.

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.
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 - APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.
 - THIS FIRE SYSTEM COMPLIES WITH UL 300 REQUIREMENTS.

JOB #: 5146053
 JOB NAME: CULVERS SHELBYVILLE IN.
 SYSTEM SIZE: ANSUL-3.0/3.0 TOTAL FP REQUIRED: 14.
 HOOD # 2 7' 0.00" LONG x 33" WIDE x 47" HIGH.
 RISER # 1 SIZE: 12" DIA.
 HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.

LEGEND - WALL MOUNTED ANSUL SYSTEM

- 1A 15 GALLON TANK
- 1B 3.0 GALLON TANK
- 2 AUTOMAN RELEASE
- 3 3 GALLON TANK ENCLOSURE
- 3A 6 GALLON TANK ENCLOSURE
- 4 REGULATED ACTUATOR
- 5 ANSULEX LIQUID AGENT (3 GAL.)
- 6 ANSULEX LIQUID AGENT (1.5 GAL.)
- 7 CARTRIDGE (101-20)
- 8 CARTRIDGE (101-10)
- 9 CARTRIDGE (101-30)
- 9A CARTRIDGE (LT-A-101-30)
- 9B DOUBLE TANK CARTRIDGE
- 10 TEST LINK
- 11 DOUBLE MICROSWITCH
- 2W DUCT NOZZLE (419337)
- 1W NOZZLE ASSEMBLY (419336)
- 1F NOZZLE ASSEMBLY (419333)
- 1N NOZZLE ASSEMBLY (419335)
- 1/2N NOZZLE ASSEMBLY (419334)
- 3N NOZZLE ASSEMBLY (419338)
- 24S NOZZLE ASSEMBLY (419340)
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- 290 NOZZLE ASSEMBLY (419342)
- 260 NOZZLE ASSEMBLY (419341)
- 28 DETECTOR BRACKET
- 29 LOW TEMP FUSIBLE LINK
- 30 HIGH TEMP FUSIBLE LINK
- MGV MECHANICAL GAS VALVE
- EGV ELECTRICAL GAS VALVE
- 34 REMOTE MANUAL PULL STATION
- S SWIVEL ADAPTOR

JOB #: 5146053
 JOB NAME: CULVERS SHELBYVILLE IN.
 SYSTEM SIZE: ANSUL-3.0 TOTAL FP REQUIRED: 6.
 HOOD # 1 5' 6.00" LONG x 33" WIDE x 47" HIGH.
 RISER # 1 SIZE: 12" DIA.

FIRE SYSTEM INFORMATION - JOB#5146053

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW PRINTS	INSTALLATION SYSTEM	LOCATION ON HOOD
1		ANSUL R102	3.0	6	WALL MOUNT LEFT	N/A
2		ANSUL R102	3.0/3.0	14	WALL MOUNT LEFT	N/A

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST	
1	0 - 0	439861 LARGE BLOWOFF CAP, METAL, TO FIT NEW LASER-ETCHED ANSUL NOZZLES, A002400.	4	0	
	1 - 1	AT - 3.0 TANK(R1B) - 3.0 GALLON SS TANK (FOR USE WITH AUTOMAN RELEASE, ACTUATOR, OR SS ENCLOSURE (UL/LULC) MACDLA # 01-429856.	0	1	
	2 - 2	AP - AR AUTOMAN RELEASE - ANSUL AUTOMAN MECHANICAL RELEASE (UL). TANK SOLD SEPARATELY. ANSUL PART # 429853; MACDLA # 01-429853.	0	1	
	5 - 5	L10-3.0 AGENT - ANSULEX LOW PH WET CHEMICAL AGENT, 3 GALLON (UL) 79372.	0	1	
	7 - 7	101-20 CARTRIDGE - CARBON DIOXIDE 101-20, 3 GALLON CARTRIDGE (R-102).	0	1	
	10 - 10	TLINK LINK - TEST LINK (I TEST LINK) ANSUL PART # 24916, MACDLA # 20-24916.	0	1	
	11 - 11	MICRO-SDA MICROSWITCH KIT - INCLUDES 2 SWITCHES AND MOUNTING HARDWARE. SINGLE DUAL ELECTRIC SWITCH, ONE STANDARD SWITCH, ONE ALARM DUTY SWITCH ANSUL PART # 437155, MACDLA # 08-437155.	0	1	
	14 - 14	419336 NOZZLE - 1W NOZZLE, DUCT/APPLIANCE (REPLACES ANSUL PART# 419347, CAS PART# 419335) A0001265.	1	0	
	16 - 16	419335 NOZZLE - IN NOZZLE, PLENUM/APPLIANCE (REPLACES ANSUL PART# 419346, CAS PART# 419335) A0001265.	1	0	
	23 - 23	419342 NOZZLE - 290 NOZZLE, APPLIANCE (REPLACES ANSUL PART# 419353, CAS PART# 419342) A0001275.	2	0	
	25 - 25	418569 NOZZLE ADAPTOR - SWIVEL NOZZLE ADAPTOR (REPLACES CAS PART # 418569) A0001274.	2	0	
	26 - 26	05A-3/8 OJIK SEAL - 3/8" (UL).	4	0	
	27 - 27	05SA-1/2 PULLEY SEAL - 1/2" HOOD SEAL (UL) ANSUL PART # 423253, MACDLA # 32-79768.	1	0	
	28 - 28	S-DET DETECTOR - SERIES (SCISSOR LINKAGE) ANSUL PART # 435547/435548 (ULD # 417369/434400) MACDLA # 05-417369.	3	0	
	29 - 29	ANS-360FL FUSIBLE LINK - 360DEG F, R-102 AND PIRANHA, ANSUL PART # 439088.	3	0	
	34 - 34	RPS-A REMOTE PULL STATION - RED COMPOSITE (WITHOUT WIRE ROPE) 434618 (ULD MACDLA #06-4835).	0	1	
	35 - 35	PE-LT PULLEY ELBOW - LOW TEMP. PULLEY ELBOW, SET SCREW TYPE ANSUL PART # 418570, MACDLA # 11-418571.	0	10	
	36 - 36	PE-HT PULLEY ELBOW - HIGH TEMP PULLEY ELBOW, COMPRESSION TYPE, ANSUL PART # 423251, MACDLA # 10-45771.	1	0	
	2	0 - 0	439861 LARGE BLOWOFF CAP, METAL, TO FIT NEW LASER-ETCHED ANSUL NOZZLES, A002400.	6	0
		1 - 1	AT - 3.0 TANK(R1B) - 3.0 GALLON SS TANK (FOR USE WITH AUTOMAN RELEASE, ACTUATOR, OR SS ENCLOSURE (UL/LULC) MACDLA # 01-429856.	0	2
		2 - 2	AP - AR AUTOMAN RELEASE - ANSUL AUTOMAN MECHANICAL RELEASE (UL). TANK SOLD SEPARATELY. ANSUL PART # 429853; MACDLA # 01-429853.	0	1
		3 - 3	AE ENCLOSURE - STAINLESS STEEL ENCLOSURE ASSEMBLY (UL), ANSUL PART # 429870, MACDLA # 01-429870.	0	1
		5 - 5	L10-3.0 AGENT - ANSULEX LOW PH WET CHEMICAL AGENT, 3 GALLON (UL) 79372.	0	2
		9 - 9	101-30 CARTRIDGE - CARBON DIOXIDE, 101-30, CARTRIDGE (R-102) 19-15851.	0	1
		10 - 10	TLINK LINK - TEST LINK (I TEST LINK) ANSUL PART # 24916, MACDLA # 20-24916.	0	1
		11 - 11	MICRO-SDA MICROSWITCH KIT - INCLUDES 2 SWITCHES AND MOUNTING HARDWARE. SINGLE DUAL ELECTRIC SWITCH, ONE STANDARD SWITCH, ONE ALARM DUTY SWITCH ANSUL PART # 437155, MACDLA # 08-437155.	0	1
12 - 12		H05GRDMMET HOSE - HOSE/GRDMMET PACKAGE.	0	1	
14 - 14		419336 NOZZLE - 1W NOZZLE, DUCT/APPLIANCE (REPLACES ANSUL PART# 419347, CAS PART# 419335) A0001265.	1	0	
16 - 16		419335 NOZZLE - IN NOZZLE, PLENUM/APPLIANCE (REPLACES ANSUL PART# 419346, CAS PART# 419335) A0001265.	1	0	
19 - 19		419338 NOZZLE - 3N NOZZLE, APPLIANCE (REPLACES ANSUL PART# 419349, CAS PART# 419338) A0001268.	4	0	
25 - 25		418569 NOZZLE ADAPTOR - SWIVEL NOZZLE ADAPTOR (REPLACES CAS PART # 418569) A0001274.	4	0	
26 - 26		05A-3/8 OJIK SEAL - 3/8" (UL).	6	0	
27 - 27	05SA-1/2 PULLEY SEAL - 1/2" HOOD SEAL (UL) ANSUL PART # 423253, MACDLA # 32-79768.	1	0		
28 - 28	S-DET DETECTOR - SERIES (SCISSOR LINKAGE) ANSUL PART # 435547/435548 (ULD # 417369/434400) MACDLA # 05-417369.	3	0		
30 - 30	ANS-S00FL FUSIBLE LINK - 500DEG F, R-102 AND PIRANHA, ANSUL PART # 439232.	3	0		
34 - 34	RPS-A REMOTE PULL STATION - RED COMPOSITE (WITHOUT WIRE ROPE) 434618 (ULD MACDLA #06-4835).	0	1		
35 - 35	PE-LT PULLEY ELBOW - LOW TEMP. PULLEY ELBOW, SET SCREW TYPE ANSUL PART # 418570, MACDLA # 11-418571.	0	10		
36 - 36	PE-HT PULLEY ELBOW - HIGH TEMP PULLEY ELBOW, COMPRESSION TYPE, ANSUL PART # 423251, MACDLA # 10-45771.	1	0		

REVISIONS

DESCRIPTION	DATE

DATE: 1/12/2022

DWG.#: 5146053

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

MASTER DRAWING

SHEET NO. 3

Culvers Shelbyville IN
 1930 North Morristown rd,
 Shelbyville, IN, 46176

Florida National Accounts
 www.captive.com
 (919) 227-5913 EMAIL: reg6@captiveware.com

EXHAUST FAN INFORMATION – JOB#5146053

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	PRV-1 RESTROOM	1	DR12HF8A	CAPTIVEAIRE	375	0.500	1364	TEAD-ECM	0.250	0.1090	1	115	2.9		49	8.1
2	PRV-2	1	DUB5HF8A	CAPTIVEAIRE	1500	1.500	1438	DDP	0.750	0.5710	3	208	2.6	475 FPM	99	13.9
3	PRV-3	1	DUB5HF8A	CAPTIVEAIRE	1500	1.250	1348	DDP	0.750	0.4700	3	208	2.6	475 FPM	99	12.4
4	EF-1	2	CFA 100CA	CAPTIVEAIRE	75	0.125	493	GENERALPURPOSE	0.116	0.0510	1	115	1.1		26	N/A

DOAS/RTU FAN SCHEDULE – JOB#5146053

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	ESP	HP	BHP	PHASE	VOLT	MCA	MDCP	WEIGHT (LBS)
5	RTU-1 DINING	1	CASRTU3-1.400-24-20T-DDAS	CAPTIVEAIRE	24MF-3-RTU	4400	1750	6150	0.500	10.000	5.6070	3	208	103.1A	125A	2754
6	RTU-2 KITCHEN	1	CASRTU3-1.400-24-20T-DDAS	CAPTIVEAIRE	24MF-3-RTU	4450	1700	6150	0.500	10.000	5.6100	3	208	103.1A	125A	2754

DOAS/RTU COOLING SCHEDULE

FAN UNIT NO	TAG	COMPRESSOR			OUTDOOR FAN				INDOOR COIL		OUTSIDE AIR DB TEMP	OUTSIDE AIR WB TEMP	MIXED AIR DB TEMP	MIXED AIR WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	LEAVING DP TEMP	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	REHEAT LEAVING DB TEMP	REHEAT LEAVING WB TEMP	DESIRED REHEAT CAPACITY	MAX REHEAT CAPACITY	REHEAT LEAVING RELATIVE HUMIDITY	MOISTURE REMOVAL RATE	IEER
		TONNAGE	VOLTAGE	PHASE	MOTOR VOLTAGE	MOTOR Ø	MOTOR FREQUENCY	MOTOR QTY	ROWS	FACE AREA																	
5	RTU-1 DINING	20	190-240	3	200-240	3	60	3	7	11.9 SQFT	83.4°F	77.4°F	77.4°F	66.9°F	53.2°F	53.2°F	53.3°F	247.8 MBH	155.7 MBH	92.1 MBH	70.0°F	59.8°F	113.2 MBH	129.6 MBH	56	84.5 LBS/HR	18.2
6	RTU-2 KITCHEN	20	190-240	3	200-240	3	60	3	7	11.9 SQFT	83.4°F	77.4°F	77.4°F	66.9°F	53.2°F	53.2°F	53.3°F	247.9 MBH	155.5 MBH	92.4 MBH	70.0°F	59.8°F	112.9 MBH	129.6 MBH	56	84.7 LBS/HR	18.2

DOAS/RTU HEATING SCHEDULE

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
5	RTU-1 DINING	275190	220152	30°F	7 IN. W.C. – 14 IN. W.C.	NATURAL	80
6	RTU-2 KITCHEN	392651	314121	43°F	7 IN. W.C. – 14 IN. W.C.	NATURAL	80

REVISIONS

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Culvers Shelbyville IN
 1930 North Morrystown rd,
 Shelbyville, IN, 46176

DATE: 1/12/2022
DWG.#: 5146053
DRAWN BY: sluddy jr
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO.
 4

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION		
1	PRV-1 RESTROOM	1	1 12-BDD DAMPER		
		1	ECM WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION		
2	PRV-2	1	2 YEAR PARTS WARRANTY		
		1	GREASE BOX		
3	PRV-3	1	FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS		
		1	2 YEAR PARTS WARRANTY		
4	EF-1	1	GREASE BOX		
		2	MGI - METAL GRILLE KIT		
		2	FAN CONTROL - IVDRY FAN & LIGHT CONTROL		
		2	WALL CAP - ACCEPTS 6" ROUND DUCT		
5	RTU-1 DINING	2	2 YEAR PARTS WARRANTY		
		1	INLET PRESSURE GAUGE, 0-35"		
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE		
		1	RTU TOTAL CFM MONITORING		
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", 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	LOW AMBIENT COOLING OPERATION - DOWN TO 15F AMBIENT		
		1	RTU3 DOWN DISCHARGE		
		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	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED		
		1	OCCUPIED SCHEDULING		
		1	RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX		
		1	RTU ECONOMIZER - FIXED ENTHALPY CONTROL		
		1	RTU3 ECONOMIZER BAROMETRIC RELIEF		
		1	RTU3 HAIL GUARD		
		1	RTU3 DOWN RETURN		
		1	FREEZESTAT		
		1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR		
		1	VAV PACKAGE W/ MANUAL/DDC CONTROL (S71 VFD INCLUDED)		
		1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS		
		1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL		
		1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI		
		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)		
		6	RTU-2 KITCHEN	1	INLET PRESSURE GAUGE, 0-35"
				1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
				1	RTU TOTAL CFM MONITORING
				1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", 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	LOW AMBIENT COOLING OPERATION - DOWN TO 15F AMBIENT				
1	RTU3 DOWN DISCHARGE				
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	OCCUPIED SCHEDULING				
1	FREEZESTAT				
1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED				
1	RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX				
1	RTU3 HAIL GUARD				
1	RTU3 DOWN RETURN				
1	VAV PACKAGE W/ MANUAL/DDC CONTROL (S71 VFD INCLUDED)				
1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS				
1	RTU3 ECONOMIZER BAROMETRIC RELIEF				
1	RTU ECONOMIZER - FIXED ENTHALPY CONTROL				
1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL				
1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR				
1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI				
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)				

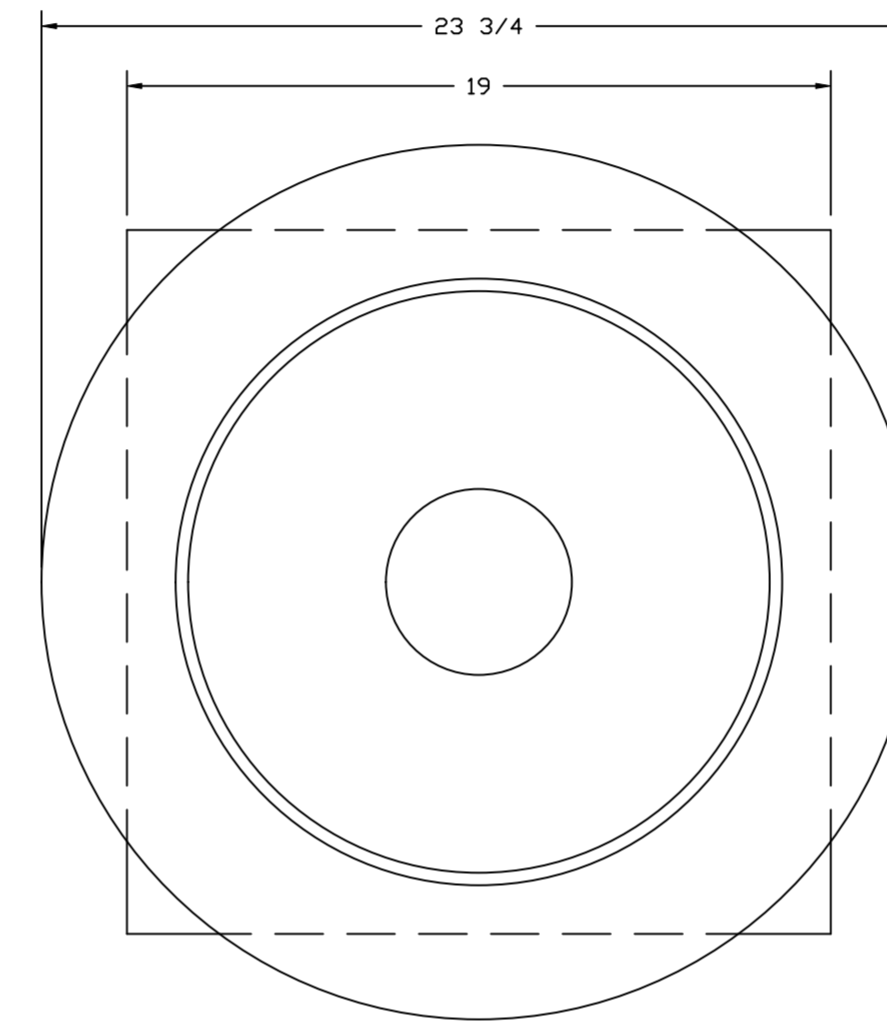
FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	PRV-1 RESTROOM		YES					
2	PRV-2	YES						
3	PRV-3	YES						
4	EF-1							

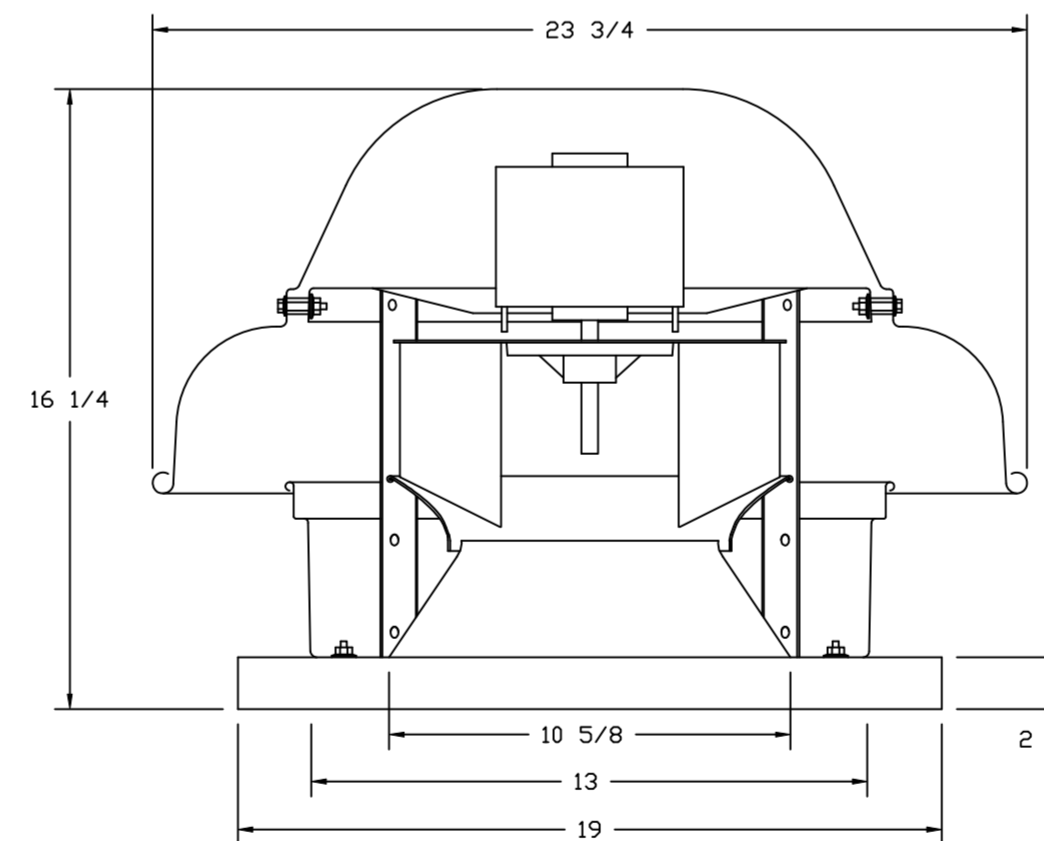
CURB ASSEMBLIES

NO	DN FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	PRV-1 RESTROOM	25 LBS	CURB	17.500"W X 17.500"L X 20.000"H ALONG LENGTH, RIGHT.
2	# 2	PRV-2	49 LBS	CURB	23.000"W X 23.000"L X 28.000"H ALONG LENGTH, RIGHT HINGED.
3	# 3	PRV-3	49 LBS	CURB	23.000"W X 23.000"L X 28.000"H ALONG LENGTH, RIGHT HINGED.
5	# 5	RTU-1 DINING	78 LBS	CURB	59.500"W X 91.000"L X 14.000"H 0.250:12.000 PITCH ALONG WIDTH, LEFT INSULATED.
6	# 6	RTU-2 KITCHEN	78 LBS	CURB	59.500"W X 91.000"L X 14.000"H 0.250:12.000 PITCH ALONG WIDTH, LEFT INSULATED.

FAN #1 DR1RHFA - EXHAUST FAN (PRV-1 RESTROOM)



TOP VIEW

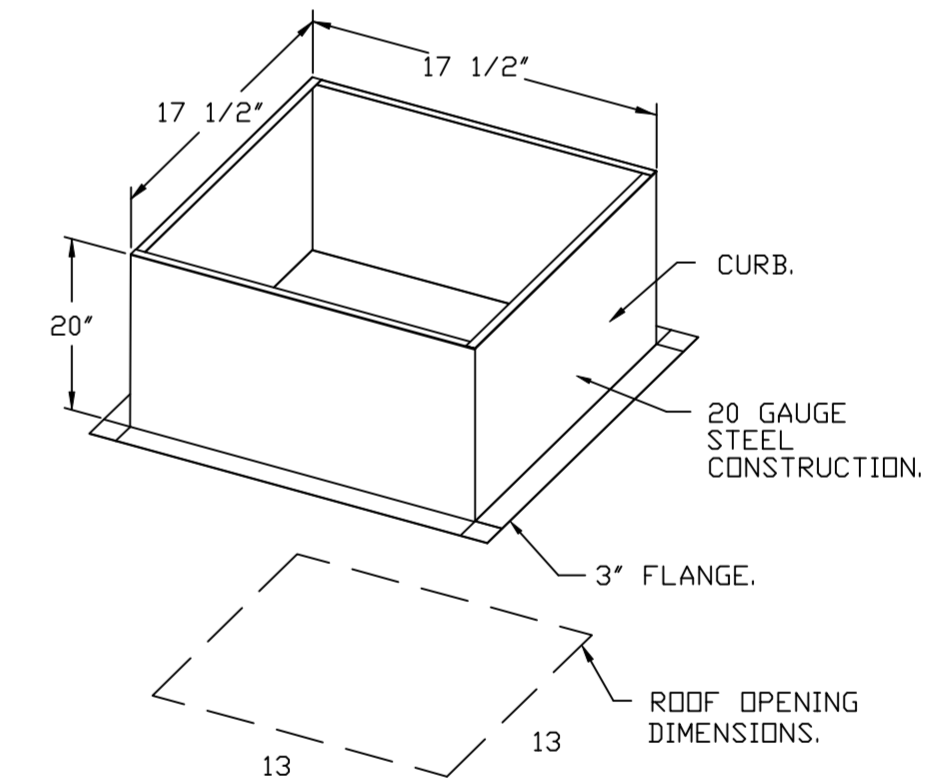


FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.

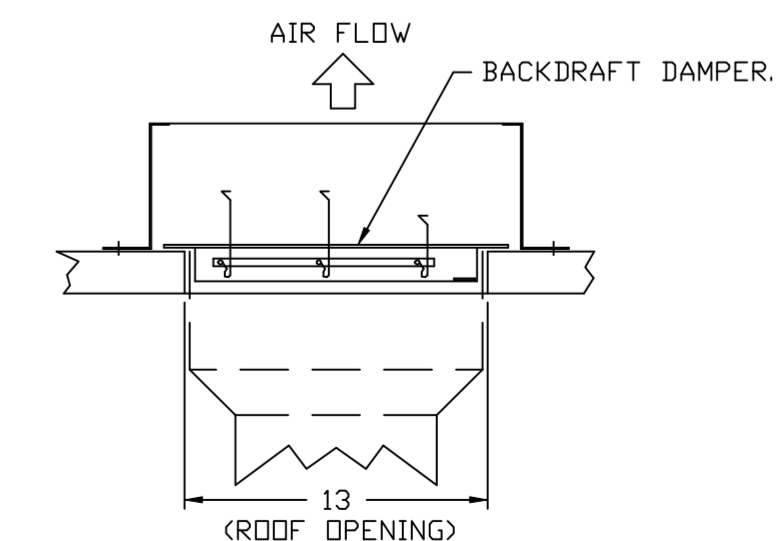
OPTIONS

- 1 12-BDD DAMPER.
- ECM WIRING PACKAGE - MANUAL DR 0-10VDC REFERENCE SPEED CONTROL (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.

BACKDRAFT DAMPER INSTALLATION



REVISIONS

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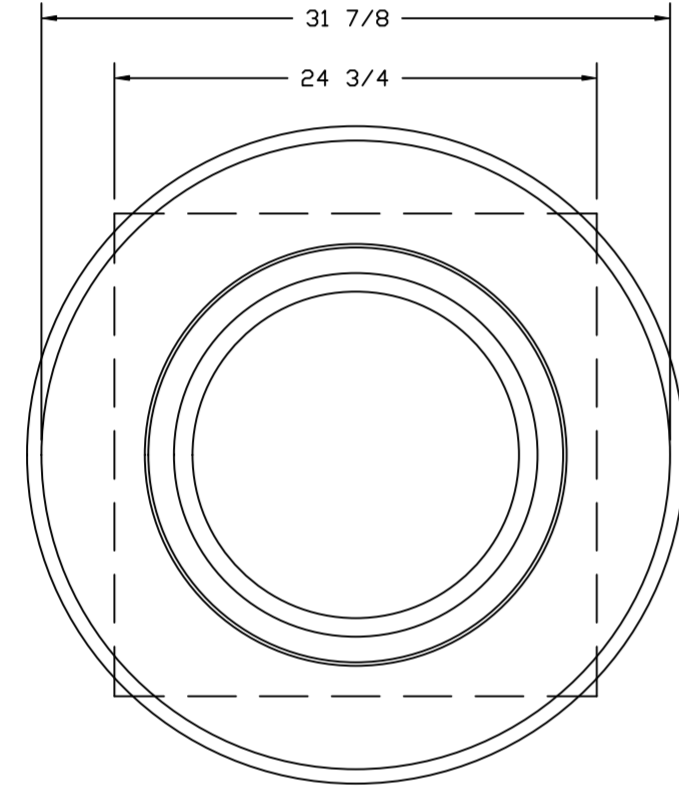
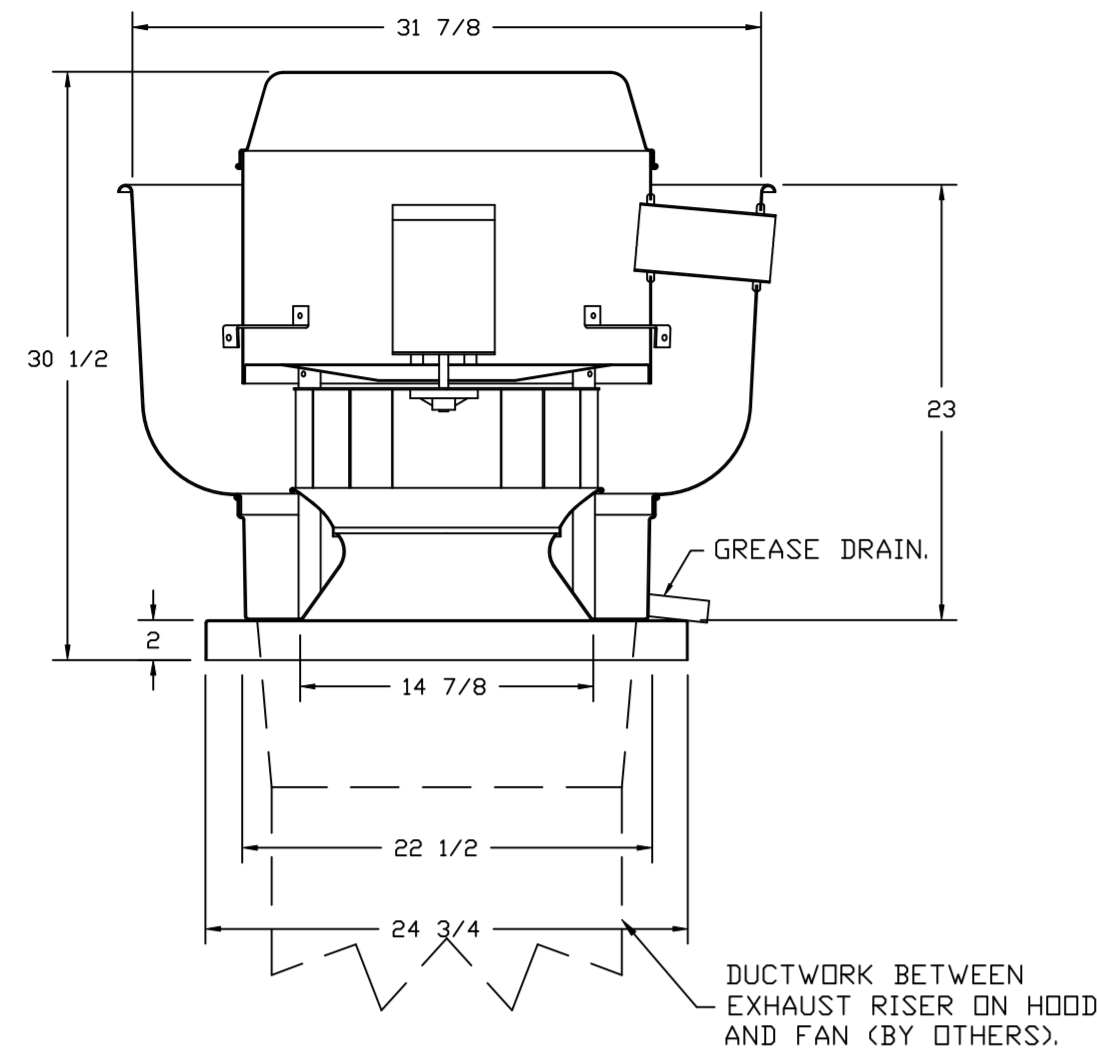
DRAWN BY: studdyjr

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

MASTER DRAWING

SHEET NO.
5

FANS #2 (PRV-2), #3 (PRV-3) - DUBSHEA EXHAUST FAN



TOP VIEW

FEATURES:

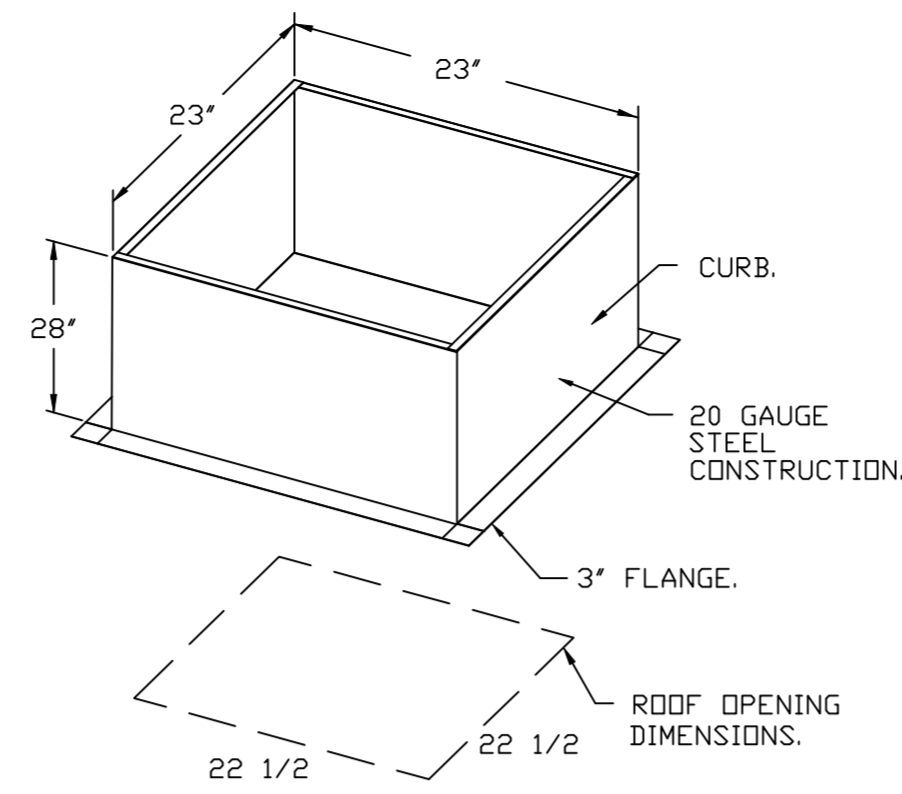
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

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

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

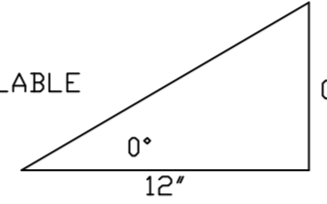
OPTIONS

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

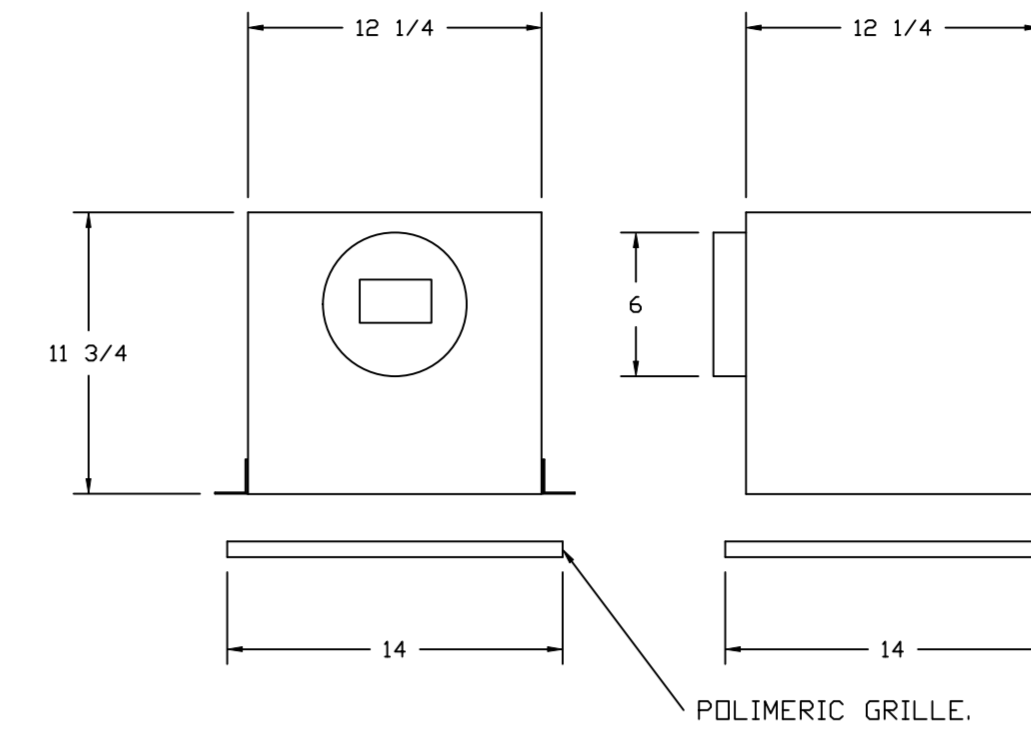


PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE.



FAN #4 CFA 100CA - EXHAUST FAN (EF-1)



FEATURES:

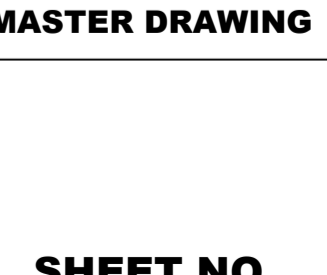
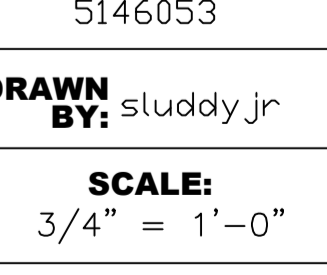
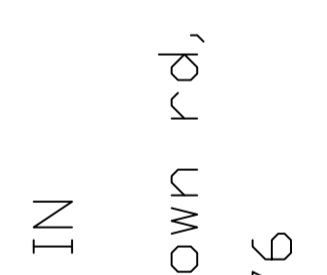
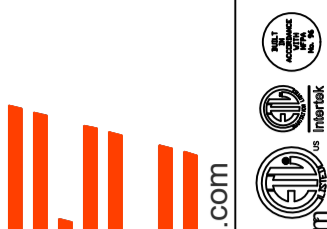
- 1/2" ACOUSTIC HOUSING INSULATION.
- 20 GA. GALVANIZED STEEL HOUSING.
- PLUG TYPE DISCONNECT.
- BUILD IN AUTOMATIC BACKDRAFT DAMPER.
- AMCA SOUND & AIR CERTIFIED.
- UL LISTED.
- CAN BE INSTALLED IN CEILING OR WALL.
- 8 POSITION MOUNTING BRACKETS.

OPTIONS

- MG1 - METAL GRILLE KIT.
- FAN CONTROL - IVORY FAN & LIGHT CONTROL.
- WALL CAP - ACCEPTS 6" ROUND DUCT.
- 2 YEAR PARTS WARRANTY.

REVISIONS

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DRAWN BY: sluddy jr

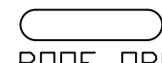
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MASTER DRAWING

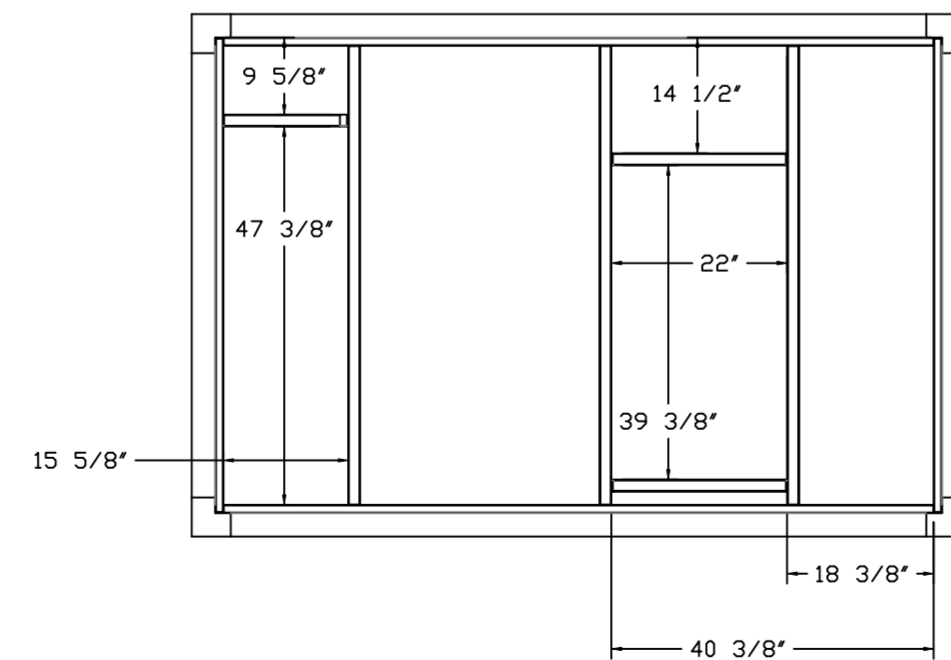
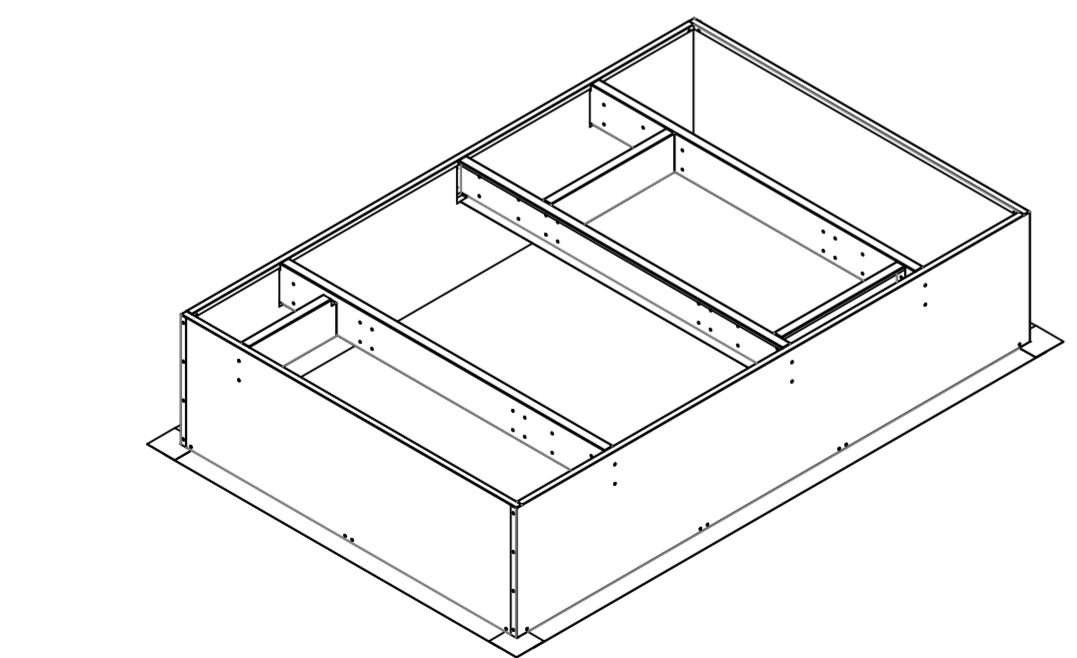
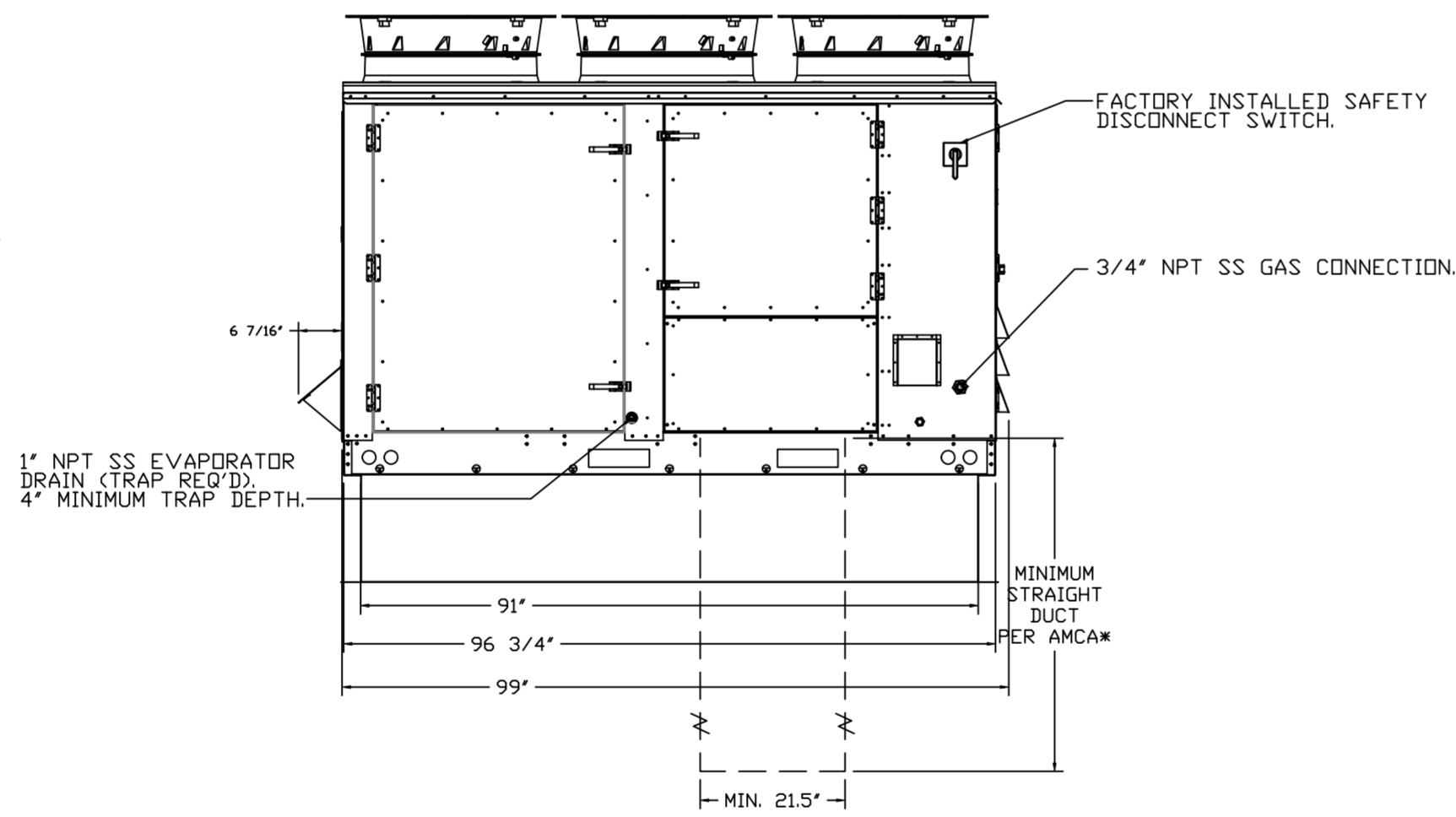
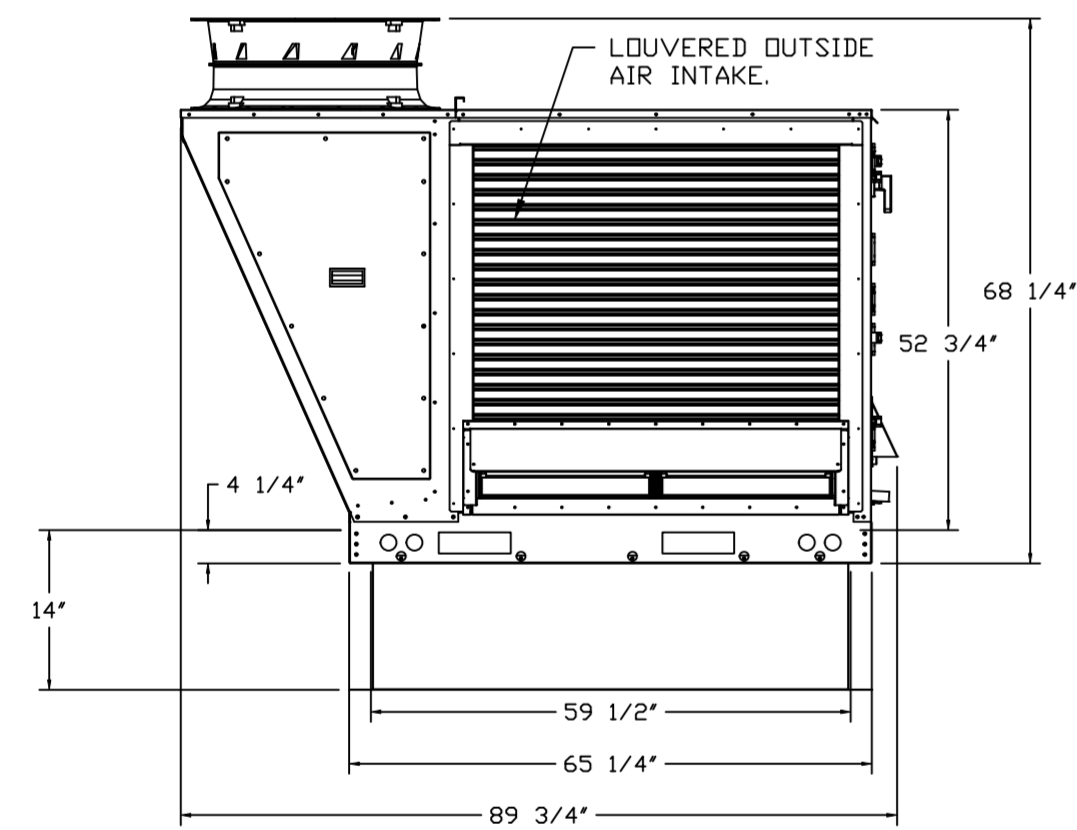
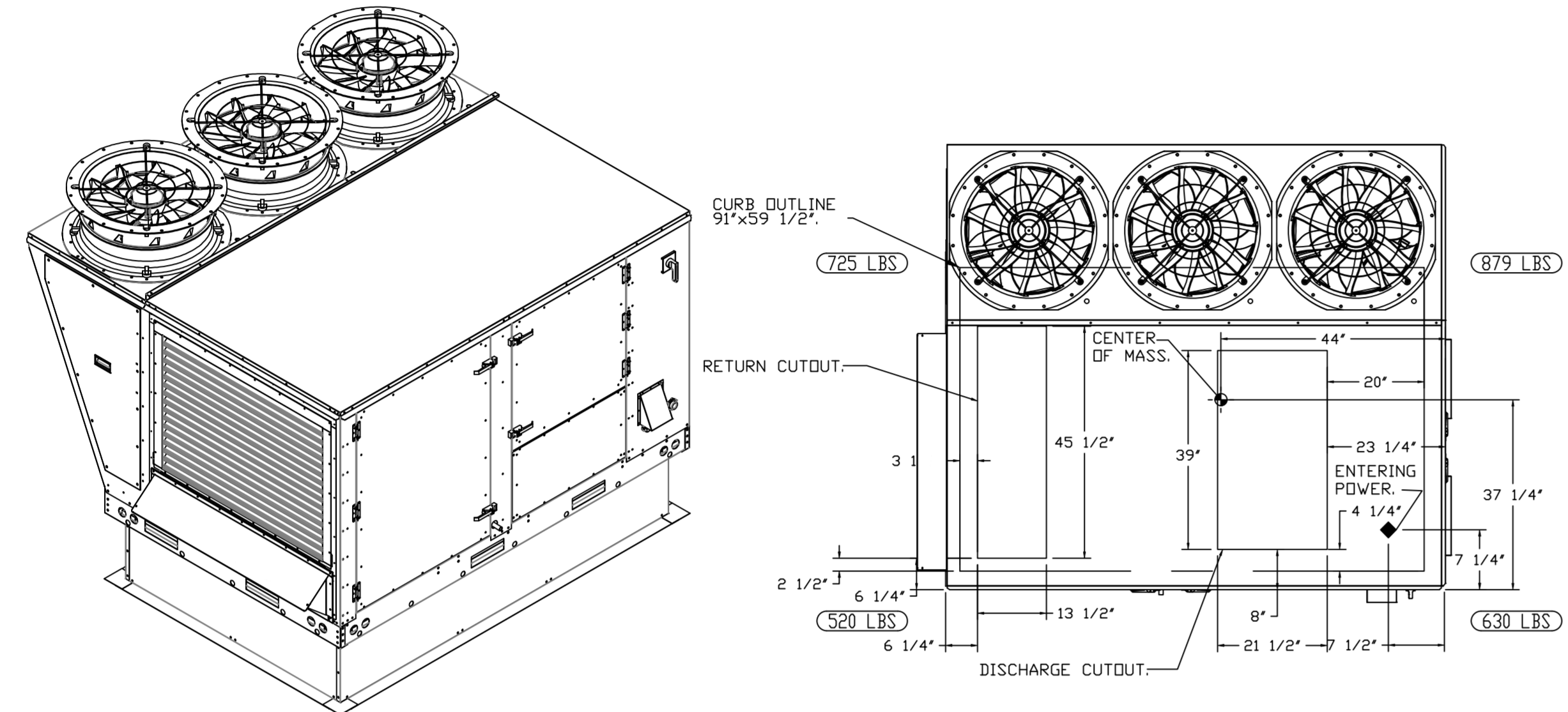
SHEET NO.

FAN #5 CASRTU3-1.400-24MF-20T-DOAS - HEATER (RTU-1 DINING)

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.

*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 21.5" x 39".



OPTIONS

- INLET PRESSURE GAUGE, 0-35".
- MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE.
- RTU TOTAL CFM MONITORING.
- SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE.
- CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED.
- LOW AMBIENT COOLING OPERATION - DOWN TO 15F AMBIENT.
- RTU3 DOWN DISCHARGE.
- 2" MERV 13 FILTERS FOR RTU3 (QTY. 4).
- 2" MERV 8 FILTERS FOR RTU3 (QTY. 4).
- OVERHEAT STAT.
- VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE.
- RTU3 CURB DUCT HANGER.
- RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED.
- OCCUPIED SCHEDULING.
- RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX.
- RTU ECONOMIZER - FIXED ENTHALPY CONTROL.
- RTU3 ECONOMIZER BAROMETRIC RELIEF.
- RTU3 HAIL GUARD.
- RTU3 DOWN RETURN.
- FREEZESTAT.
- REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR.
- VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED).
- 20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS.
- 20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL.
- RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI.
- 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).

REVISIONS	
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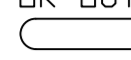
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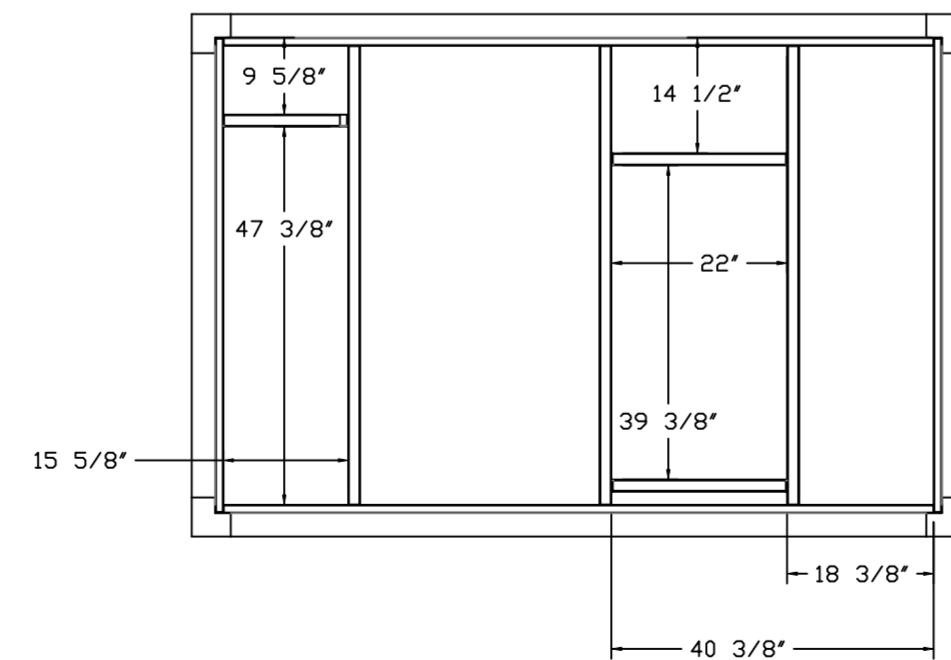
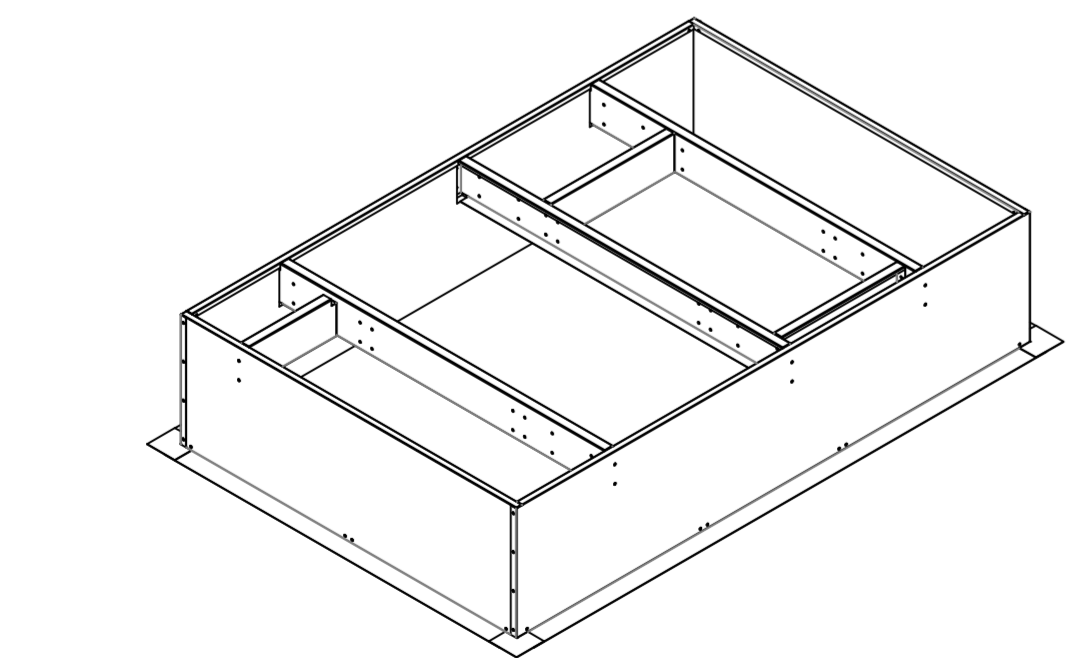
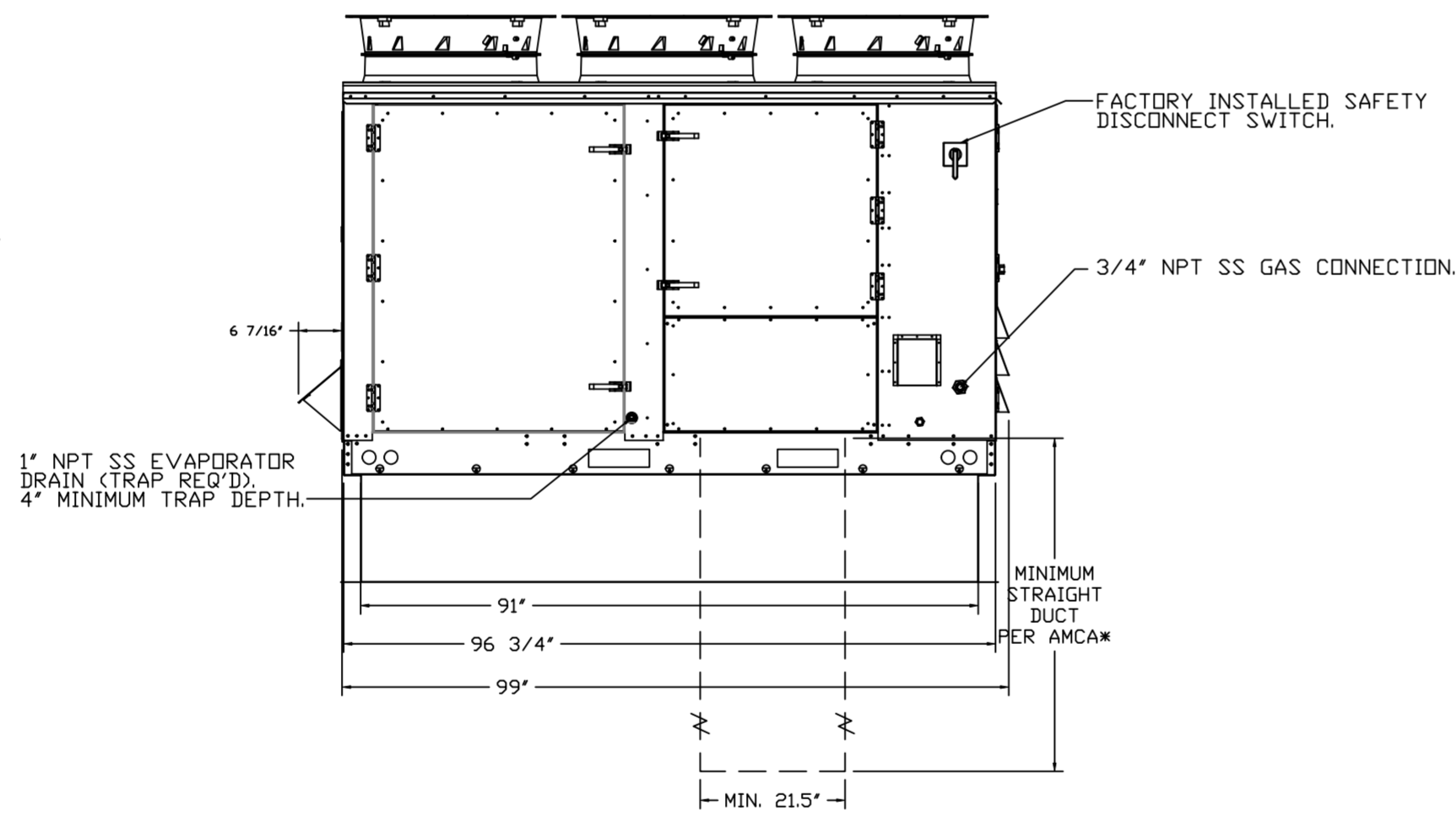
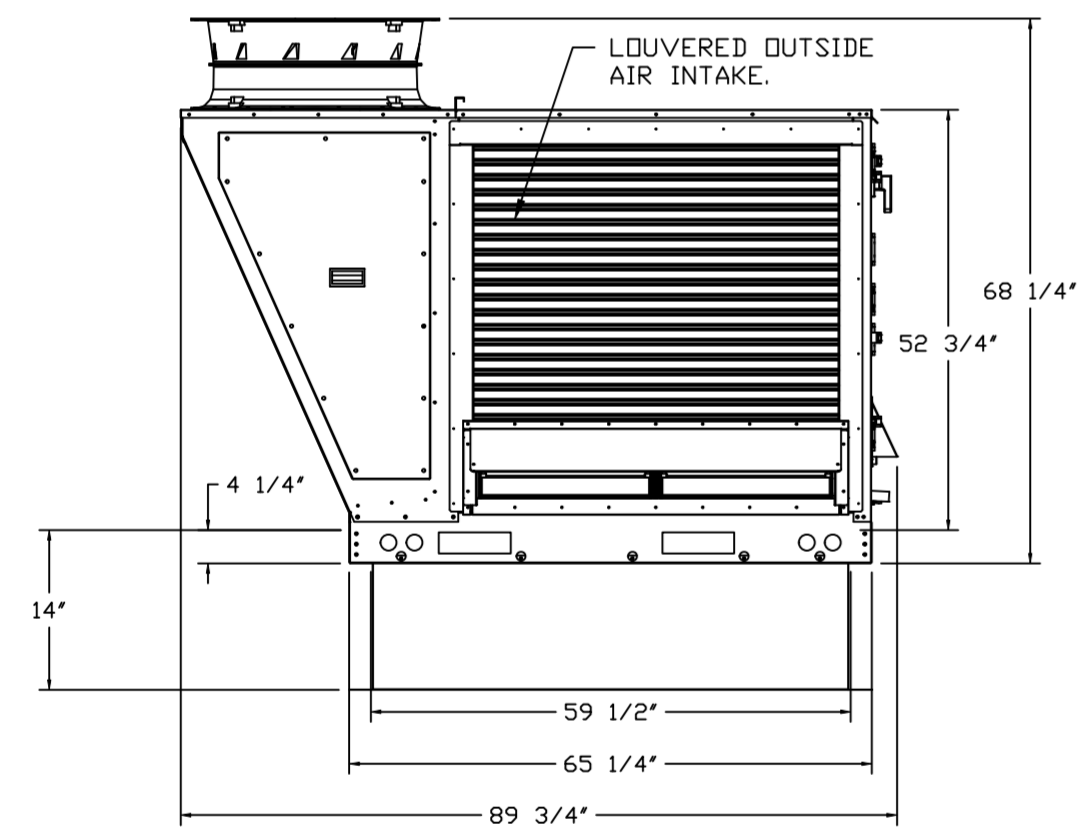
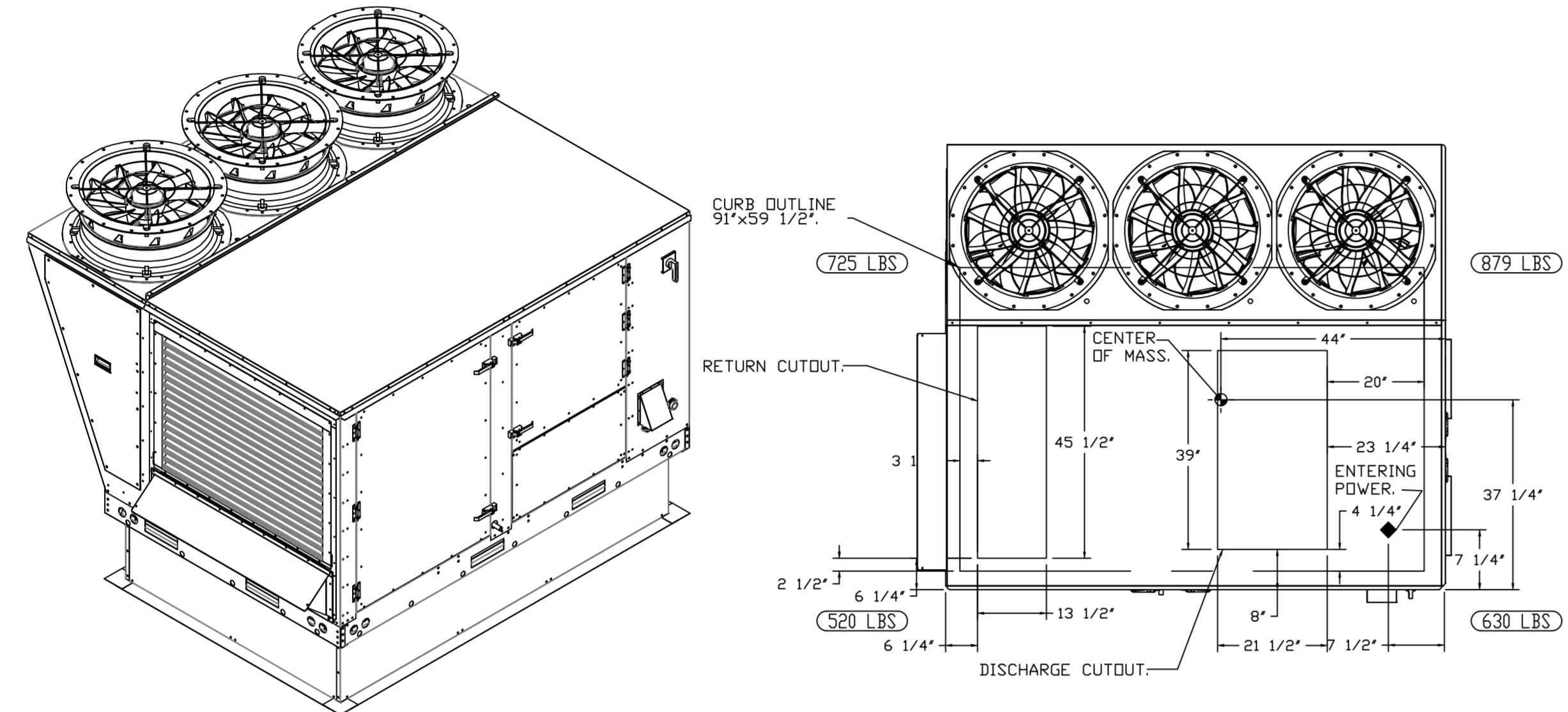
DATE: 1/12/2022
DWG.#: 5146053
DRAWN BY: sluddy jr
SCALE: 1/2" = 1'-0"
MASTER DRAWING

FAN #6 CASRTU3-1.400-24MF-20T-DDAS - HEATER (RTU-2 KITCHEN)

NOTES:

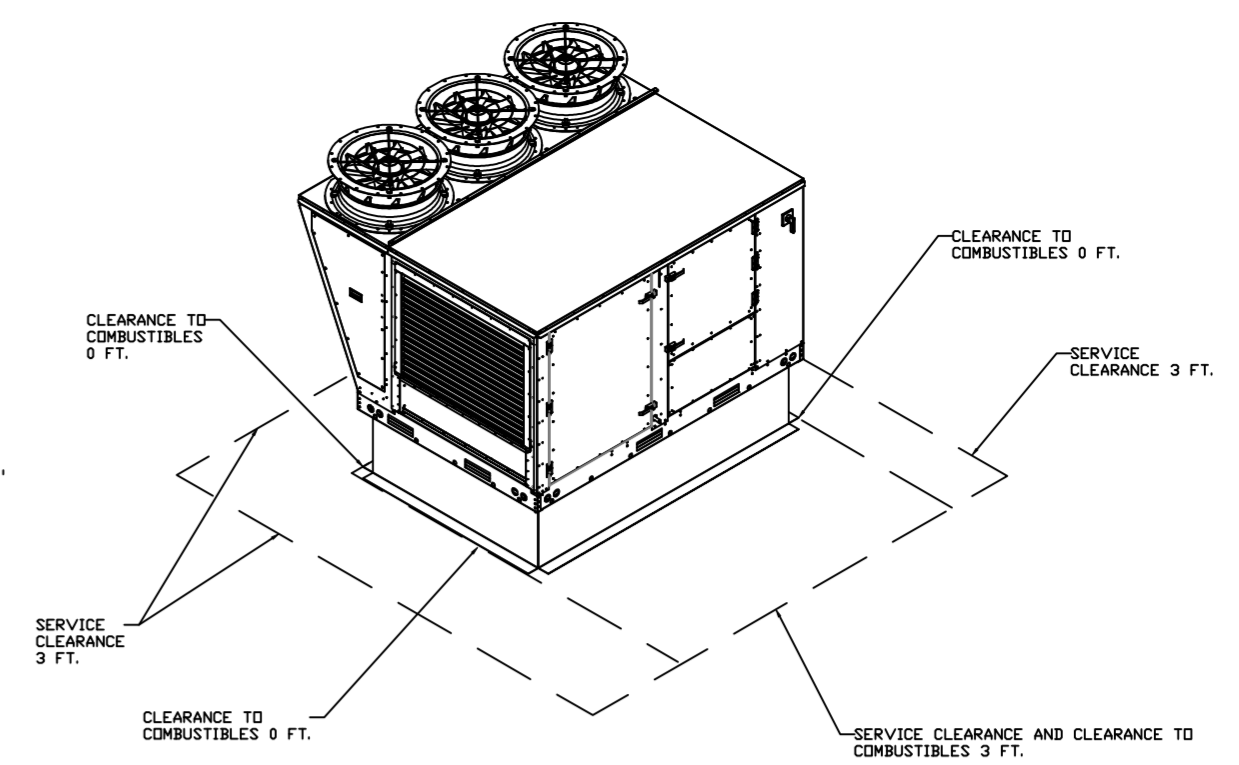
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
-  DENOTES CORNER WEIGHT.
- ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

*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 21.5" x 39".



OPTIONS

- INLET PRESSURE GAUGE, 0-35".
- MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE.
- RTU TOTAL CFM MONITORING.
- SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE.
- CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED.
- LOW AMBIENT COOLING OPERATION - DOWN TO 15F AMBIENT.
- RTU3 DOWN DISCHARGE.
- 2" MERV 13 FILTERS FOR RTU3 (QTY. 4).
- 2" MERV 8 FILTERS FOR RTU3 (QTY. 4).
- OVERHEAT STAT.
- VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE.
- RTU3 CURB DUCT HANGER.
- OCCUPIED SCHEDULING.
- FREEZESTAT.
- RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED.
- RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX.
- RTU3 HAIL GUARD.
- RTU3 DOWN RETURN.
- VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED).
- 20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS.
- RTU3 ECONOMIZER BAROMETRIC RELIEF.
- RTU ECONOMIZER - FIXED ENTHALPY CONTROL.
- 20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL.
- REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR.
- RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI.
- 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).



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DESCRIPTION	DATE



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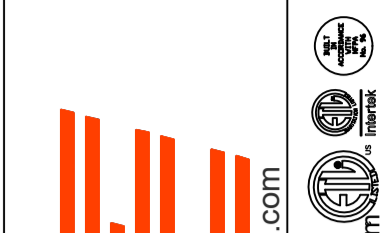
Culvers Shelbyville IN
 1930 North Morrystown rd,
 Shelbyville, IN, 46176

DATE: 1/12/2022
DWG.#: 5146053
DRAWN BY: sluddy jr
SCALE: 1/2" = 1'-0"
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 1930 North Morristown rd,
 Shelbyville, IN, 46176

DATE: 1/12/2022

DWG.#:
5146053

DRAWN BY: sluddy jr

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

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SHEET NO.
9

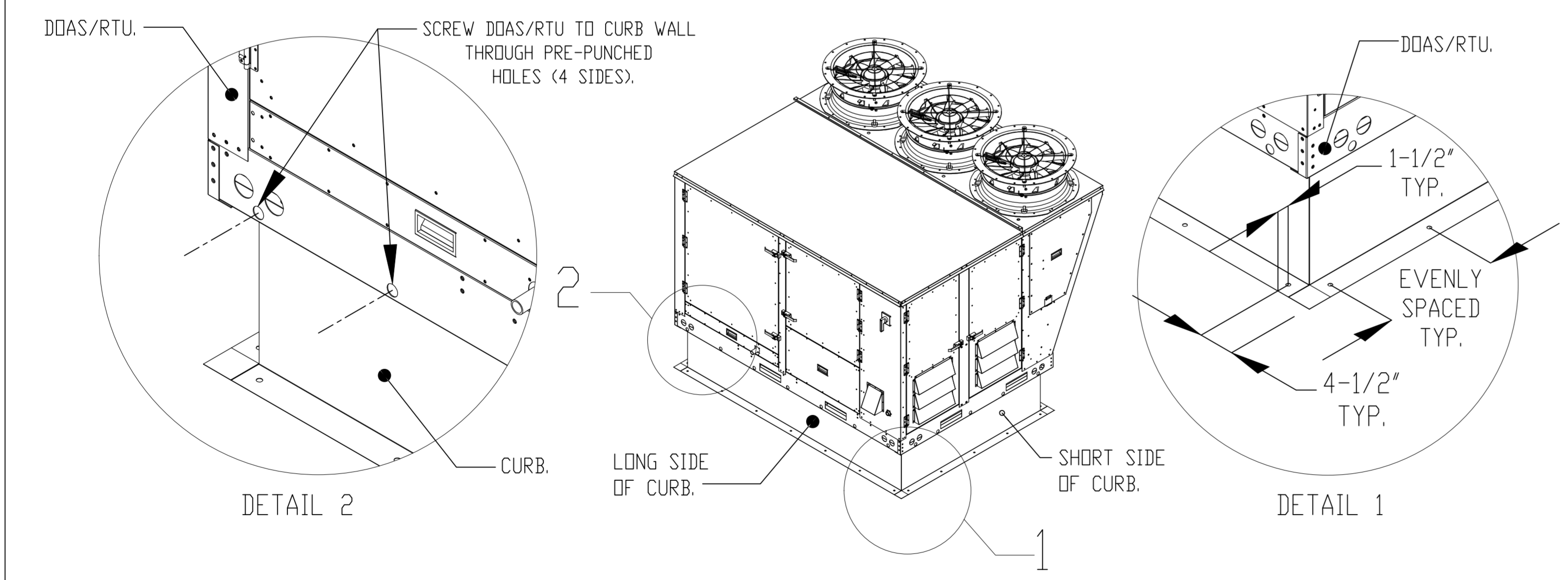
AIR DIFFUSION SUPPLY DUCT SPECIFICATIONS:
 PROVIDE AIR DIFFUSION SUPPLY DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL DW-S0(HC), DW-S90(HC), & DW-S180(HC).
 THREE DISTINCT HOLE PATTERN OPTIONS TO COVER A VARIETY OF CEILING HEIGHTS.
 NO ADDITIONAL DIFFUSERS REQUIRED, AS THE DUCT ITSELF PROVIDES AIR DIFFUSION.
 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.

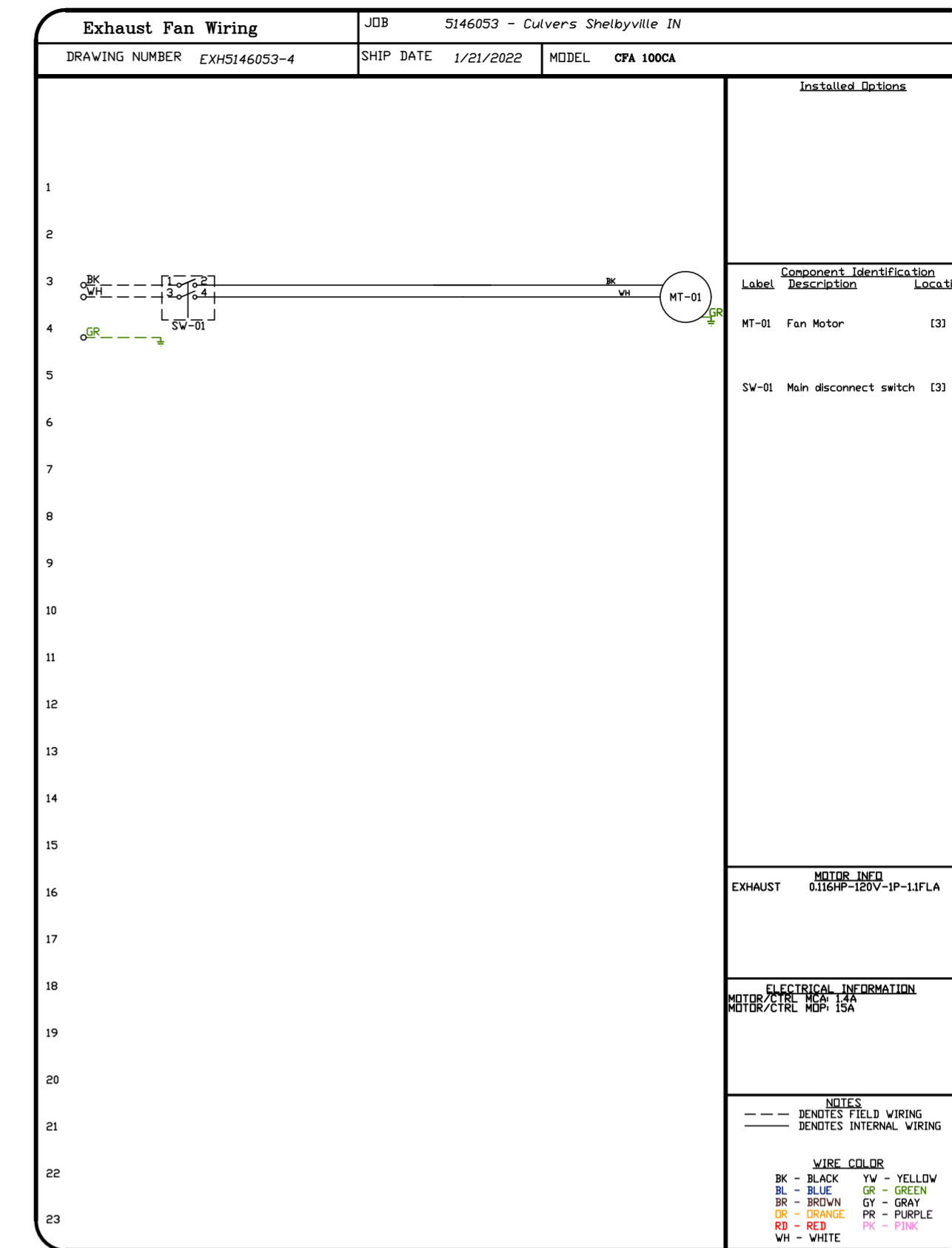
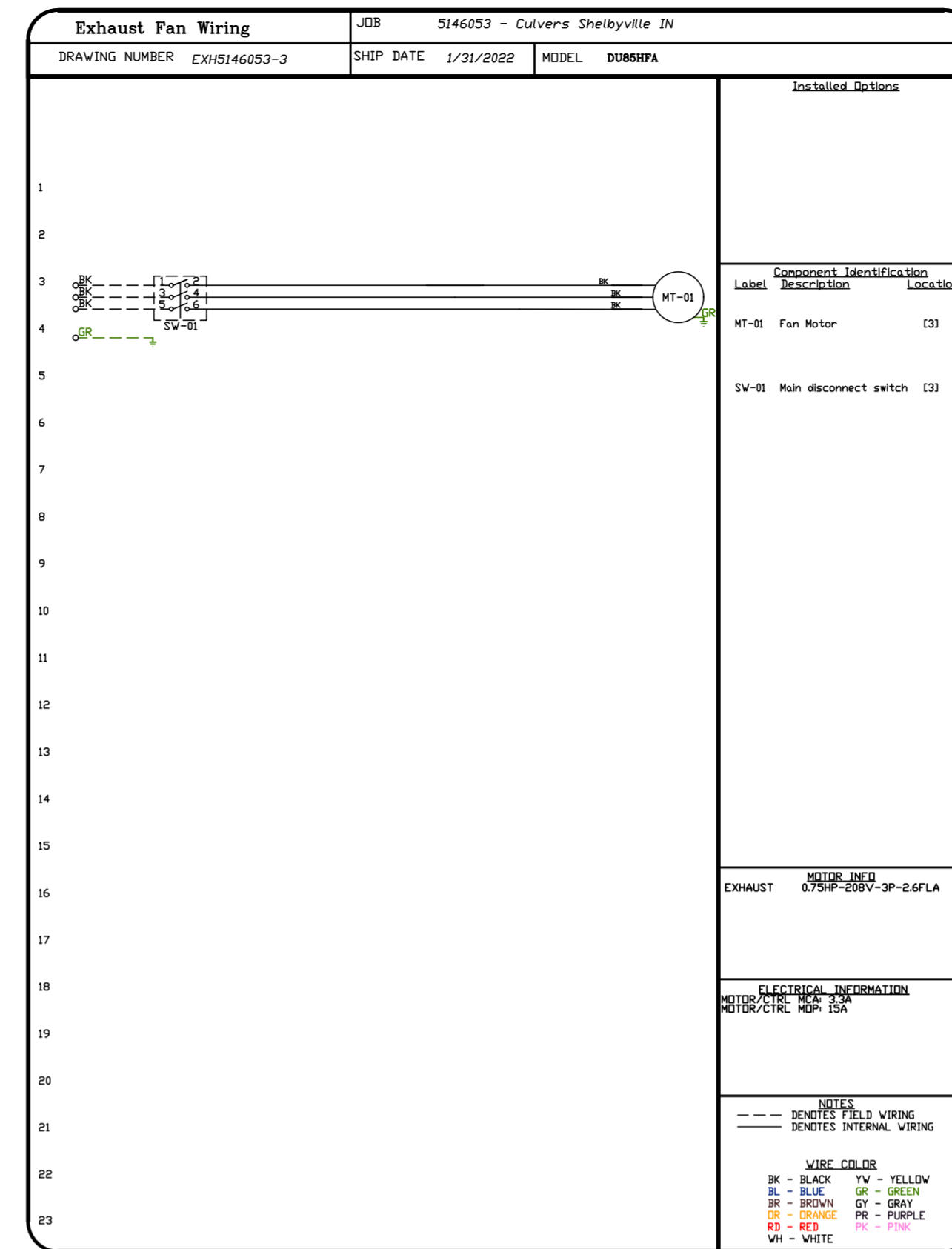
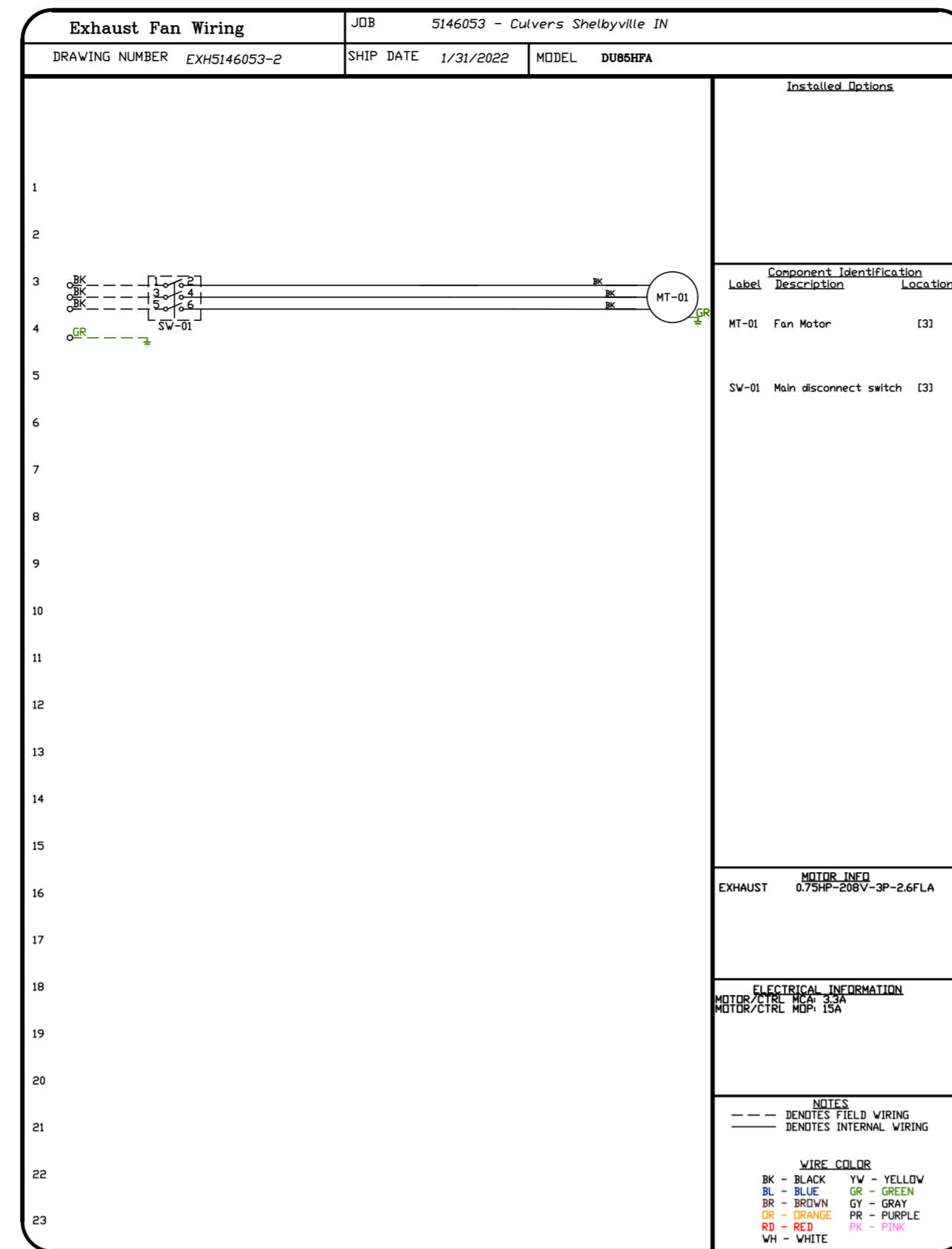
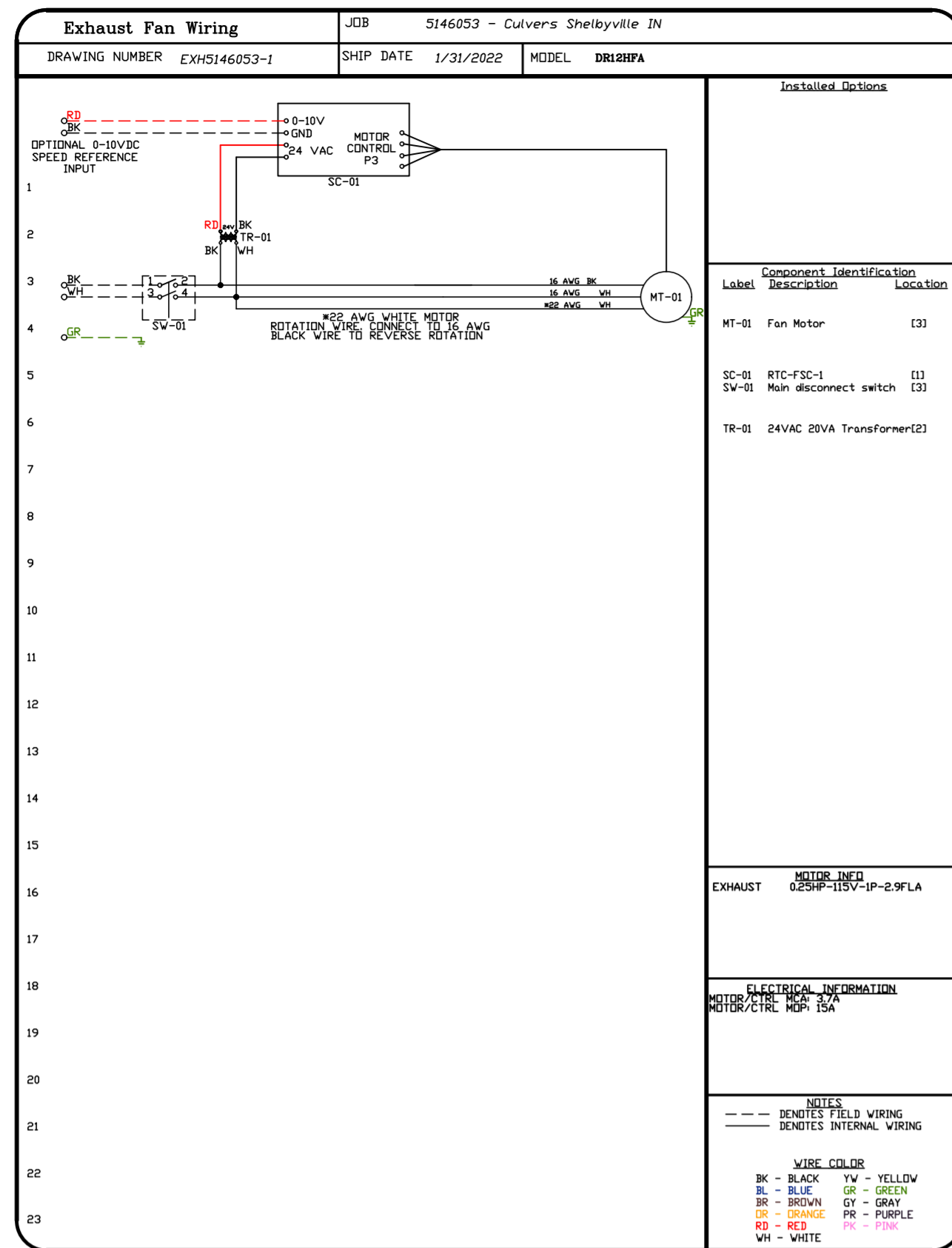
Supply Duct Type	Minimum R-value	Space Type
Single Wall - S & -HC	N/A	Conditioned Space Only
Double Wall - 1S	R-4	Unconditioned Interior Space Only
Double Wall - 2S	R-8	Unconditioned Space Climate Zones 1-4
Double Wall - 3S	R-12	Unconditioned Space Climate Zones 5-8

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 DOAS/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.





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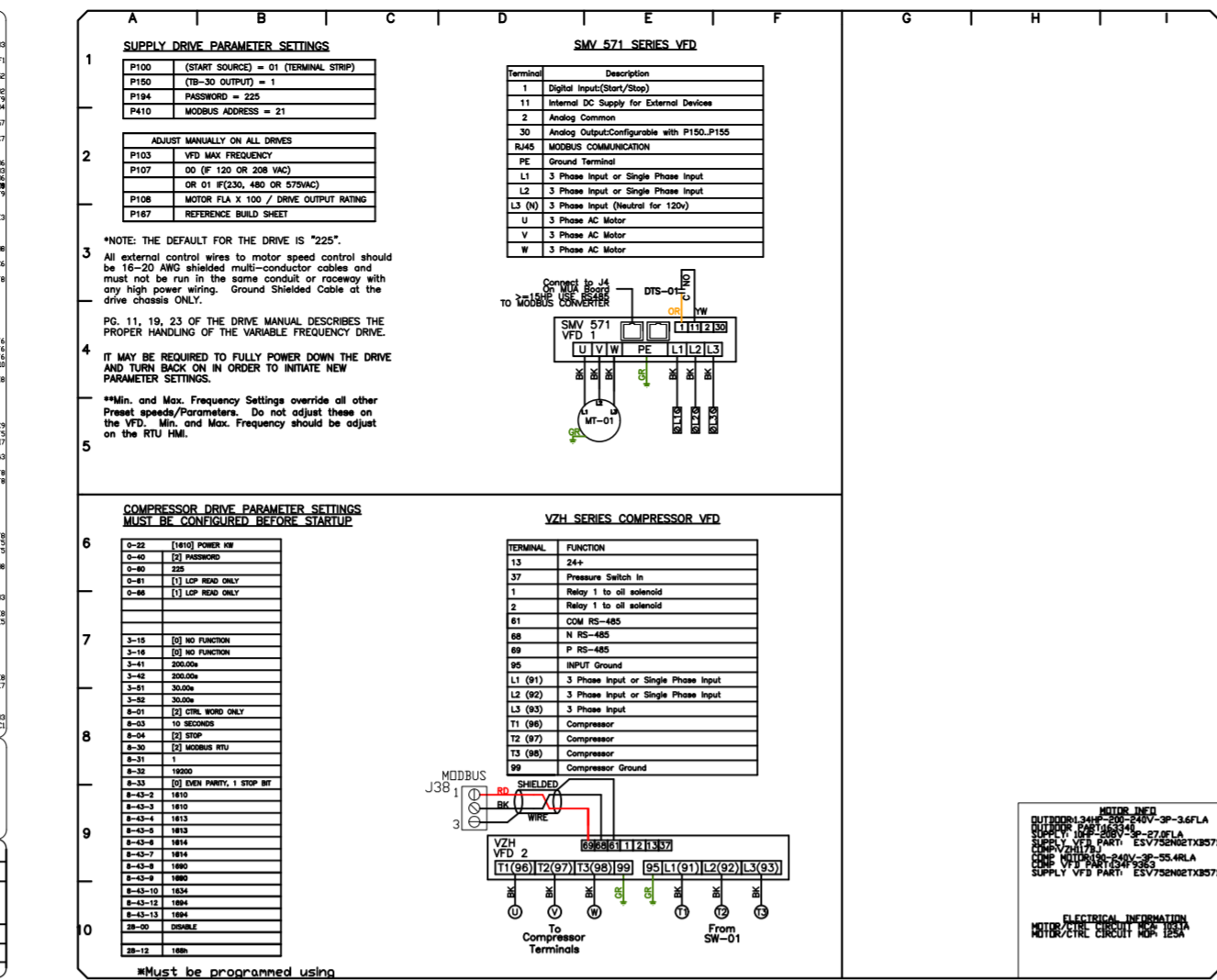
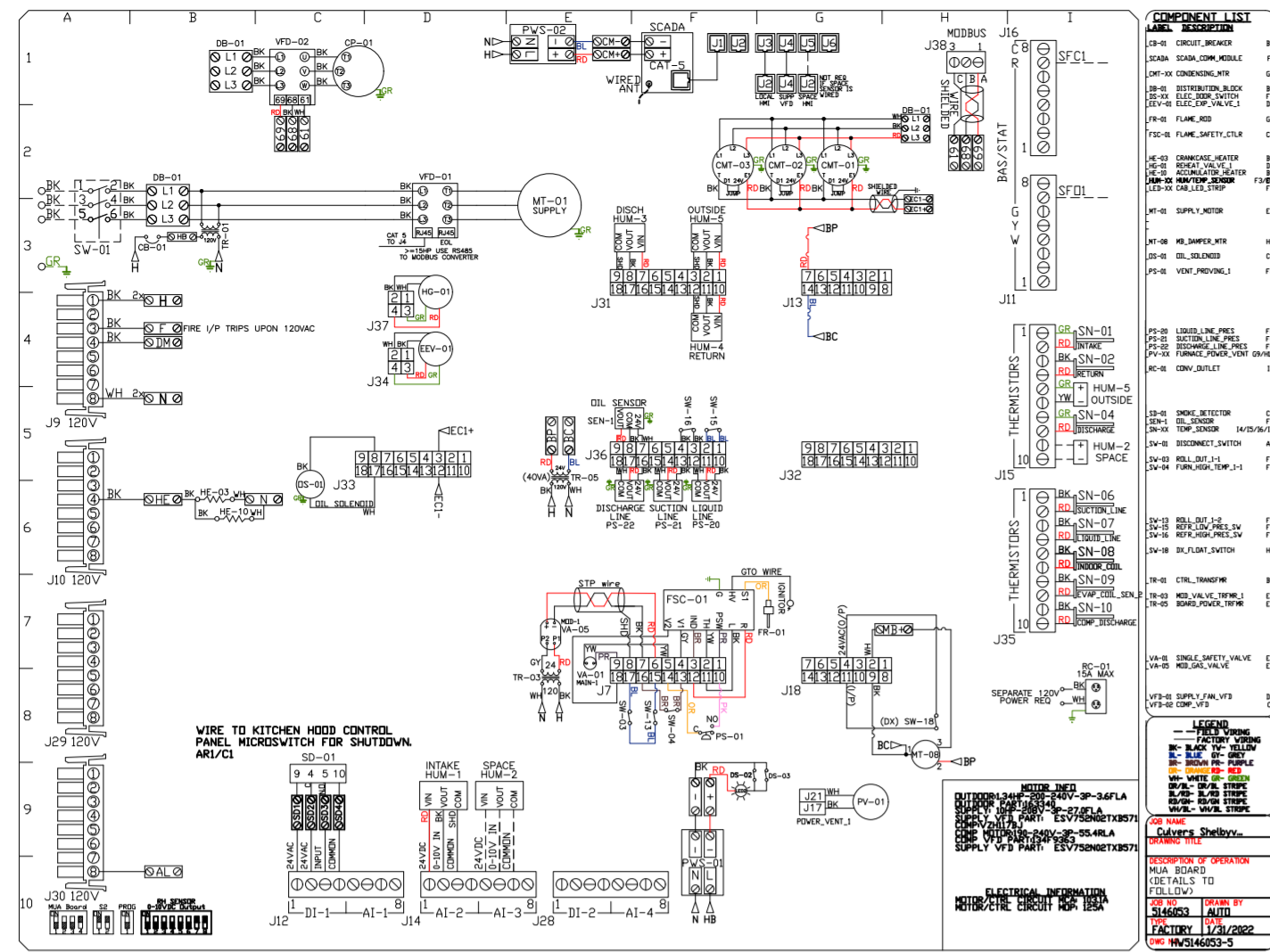
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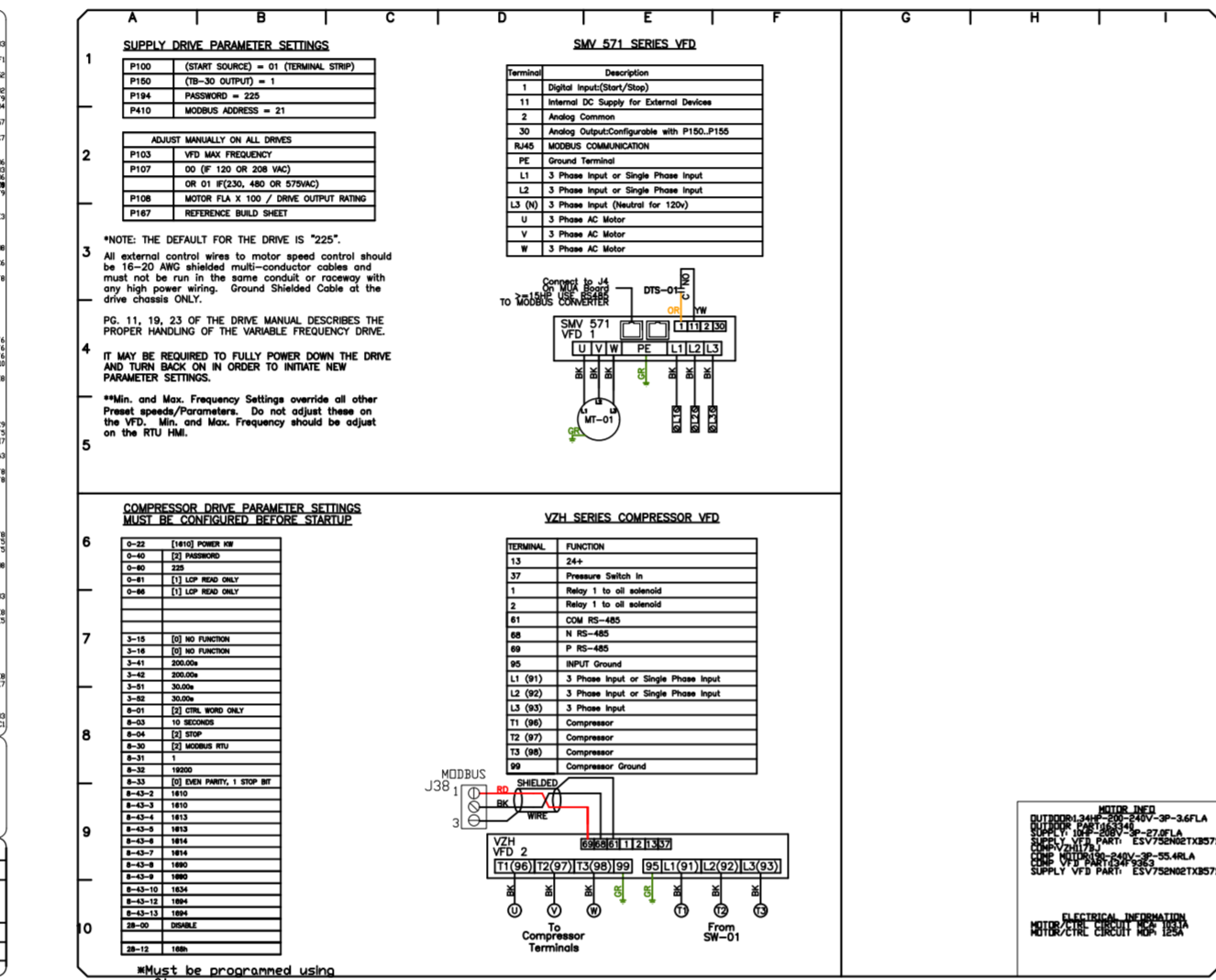
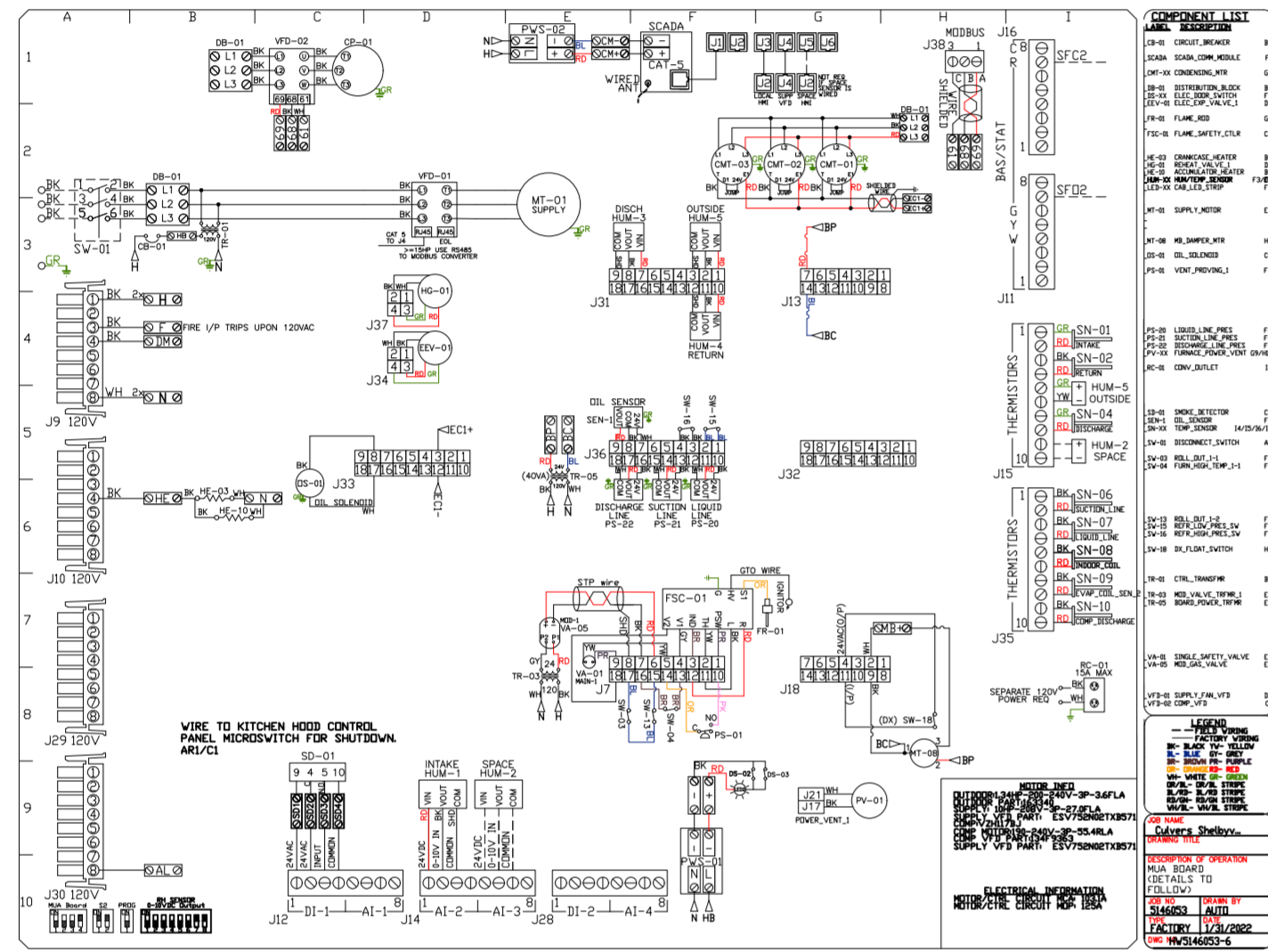
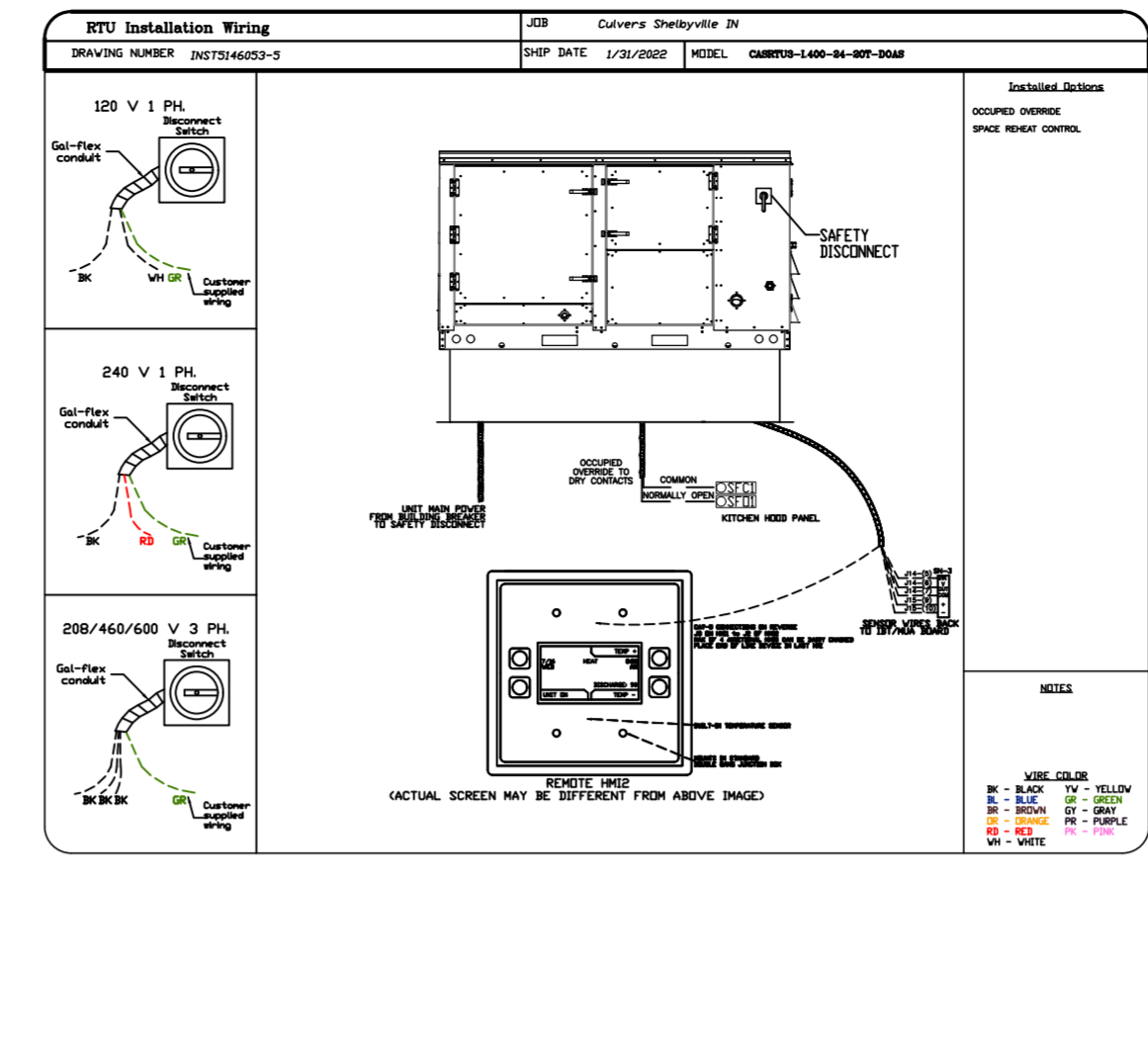
DRAWN BY: studdy jr

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

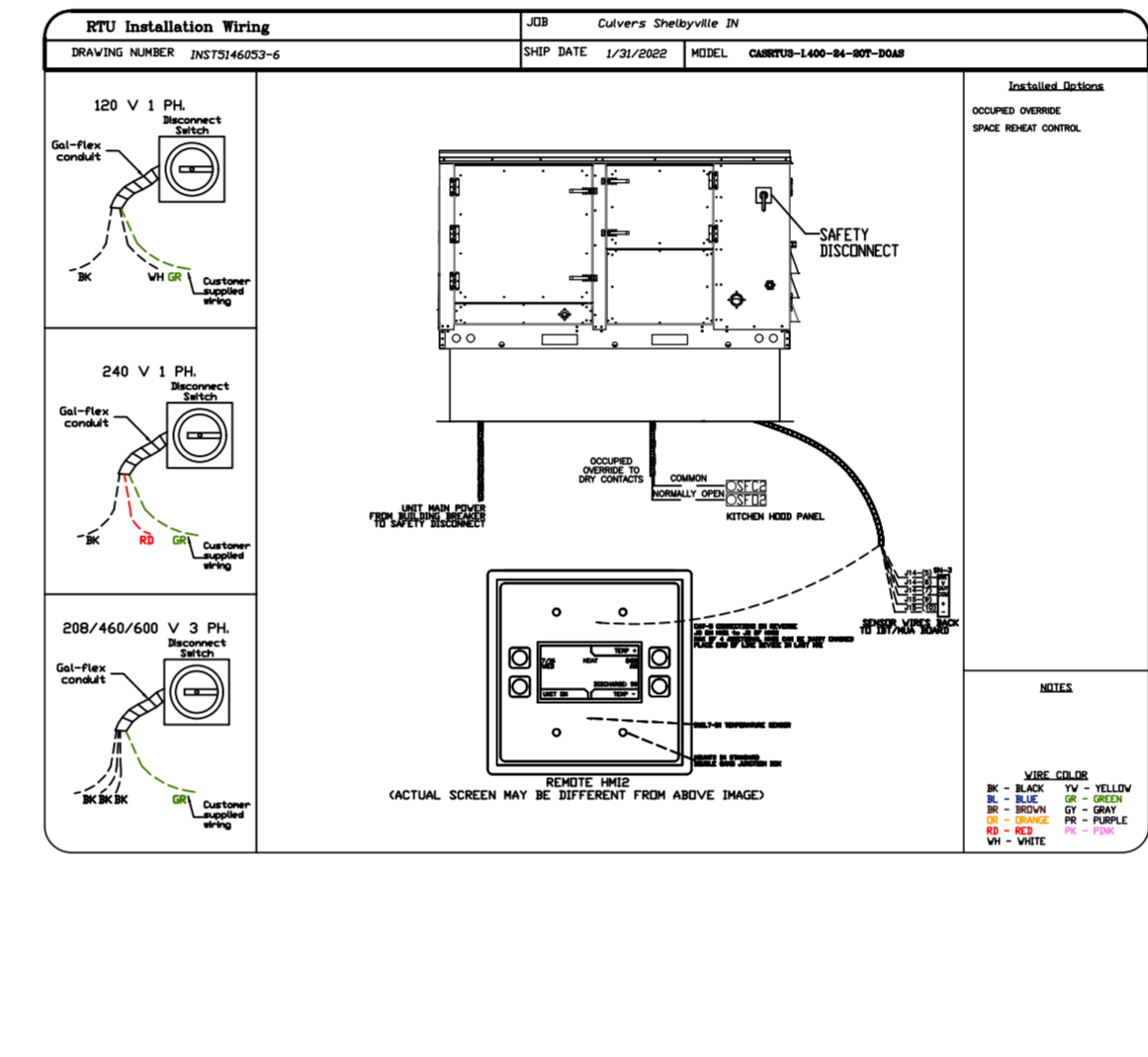
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RTU VFD SCHEMATIC
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RTU VFD SCHEMATIC
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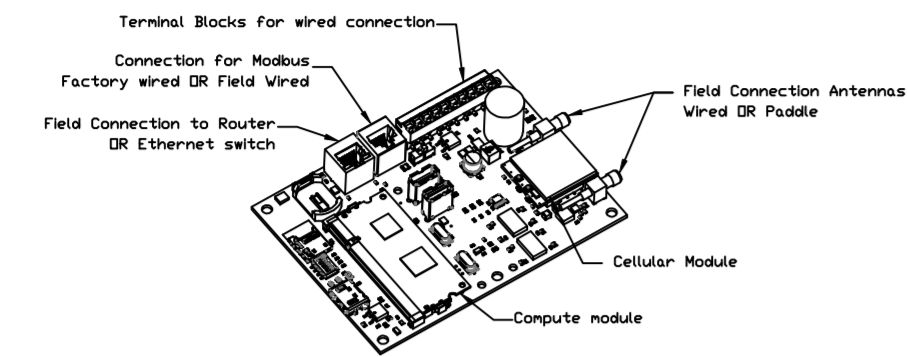
SCALE:
1/2" = 1'-0"

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SHEET NO.
11

ELECTRICAL PACKAGE - JOB#5146053

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	#	HP	VOLT	FLA
1		SC-320110MA	WALL MOUNT IN SS BOX	01 - FACE MOUNT LEFT SIDE OF HOOD HOOD # 2	1 LIGHT 1 FAN	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	PRV-2	EXHAUST	3	0.750	208	2.6
							PRV-3	EXHAUST	3	0.750	208	2.6

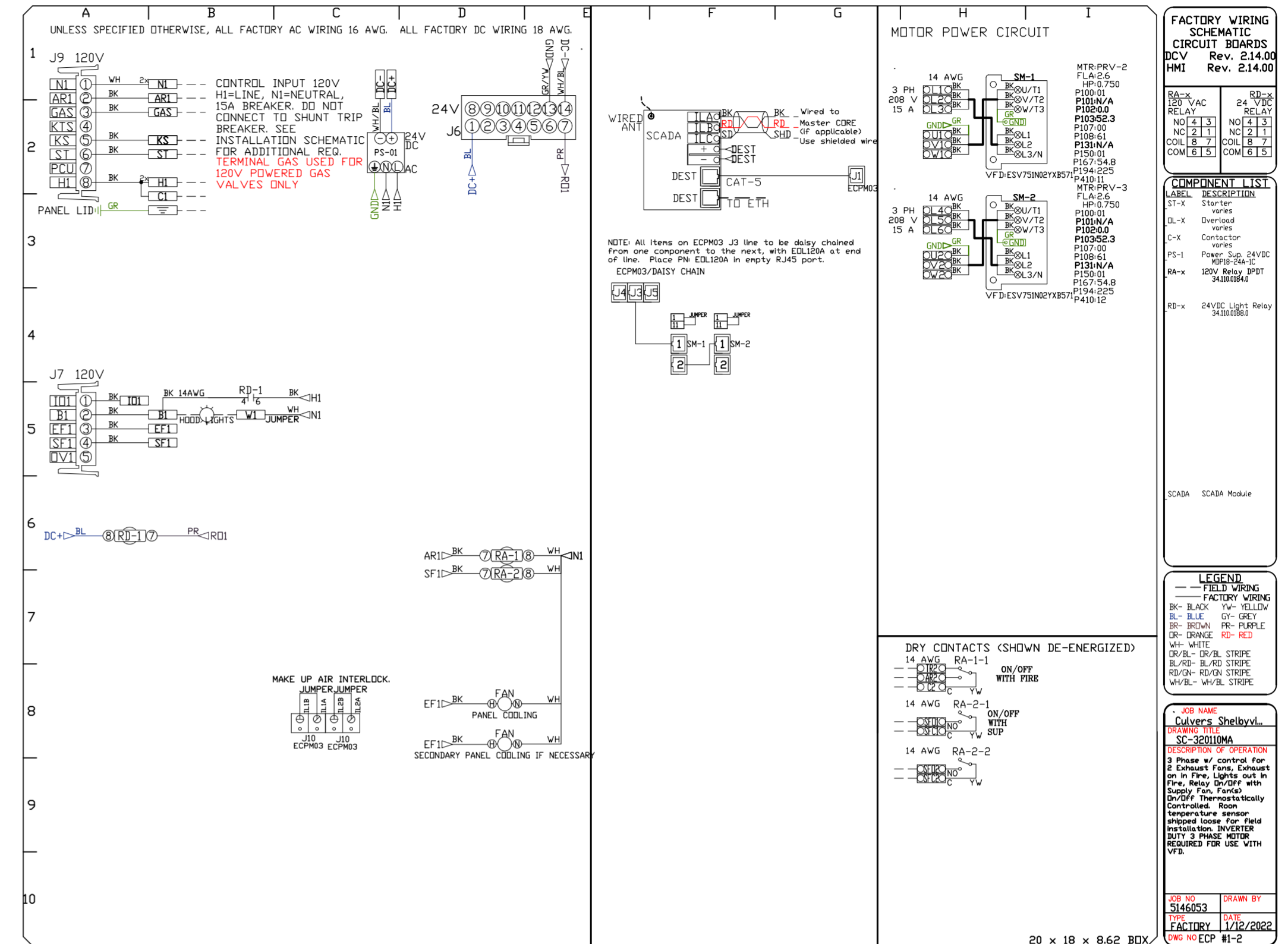
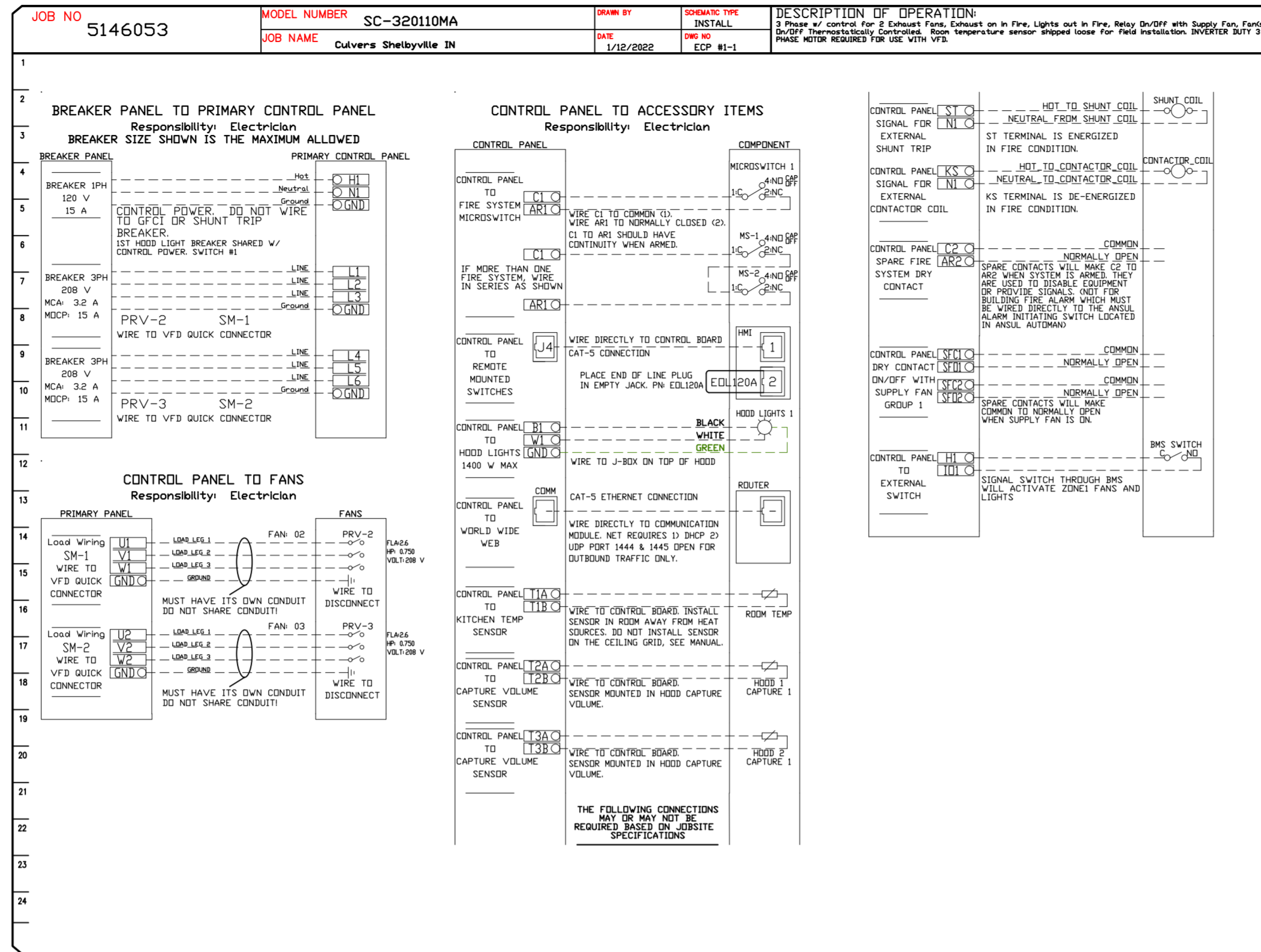


CASlink Monitor and Control

- 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 Ampereage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VPD Faults	MONITOR	PCU Faults	MONITOR
Controller Faults	MONITOR	PCU Filter Clog Percentages	MONITOR
Fan Faults	MONITOR	Fire Condition	MONITOR
Fan Status	MONITOR	CORE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressures	MONITOR
PCU Filter Clog Percentages	MONITOR	Fans 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		
Fans Button	MONITOR & CONTROL		
Lights Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



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Shelbyville, IN, 46176

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DRAWN BY: studdyjr

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

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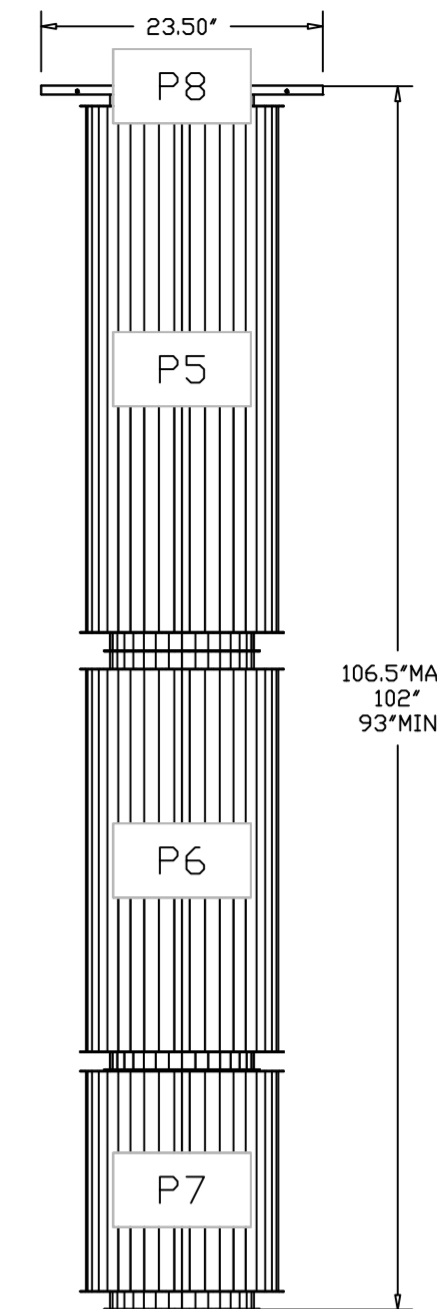
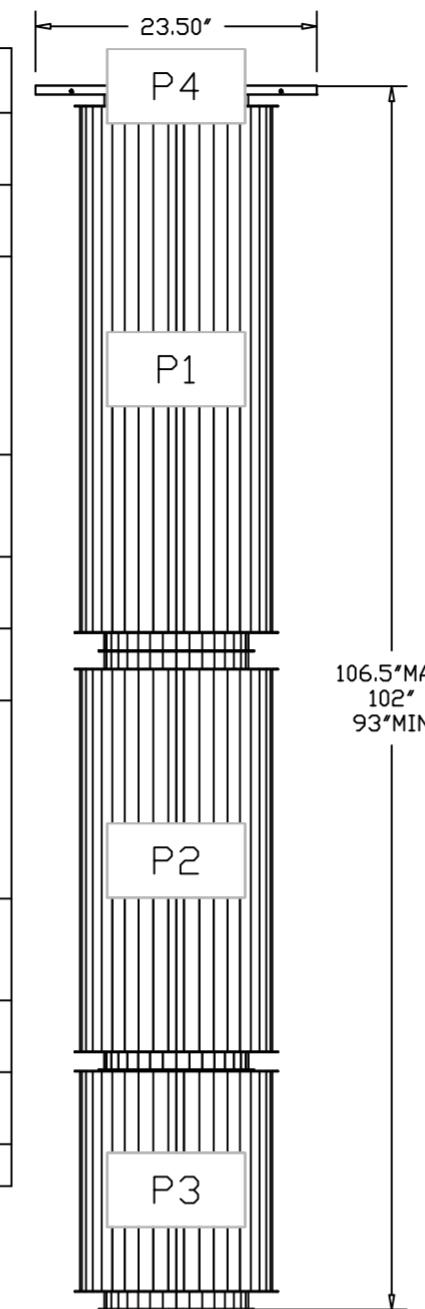
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FOR QUESTIONS, CALL THE
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 EMAIL: reg60@captiveaire.com

DUCTWORK #1 FRONT VIEW

DUCTWORK #1 PARTS - JOB#5263035 DOUBLE WALL

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P1	DW1247DWLT-2R-S						54.71		1	DOUBLE WALL DUCT - 12" INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P2	DW1235DWLT-2R-S						40.86		1	DOUBLE WALL DUCT - 12" INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P3 ASSEMBLED W/P4	DW1227DWAJDP-2R-S						45.74		1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 12" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 24.5' / ADJUSTMENT = 6.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P4 ASSEMBLED W/P3	DW2312TPDBEX						8.00		1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED. USED ON NCA14FA & NCA14HPFA. TRANSITION PLATE OD IS 23.5" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
P5	DW1247DWLT-2R-S						54.71		1	DOUBLE WALL DUCT - 12" INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P6	DW1235DWLT-2R-S						40.86		1	DOUBLE WALL DUCT - 12" INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL.
P7 ASSEMBLED W/P8	DW1227DWAJDP-2R-S						45.74		1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 12" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 16" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 24.5' / ADJUSTMENT = 6.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P8 ASSEMBLED W/P7	DW2312TPDBEX						8.00		1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 23" CURB TO 12" DUCT, 16 GA ALUMINIZED. USED ON NCA14FA & NCA14HPFA. TRANSITION PLATE OD IS 23.5" DESIGNED FOR USE WITH EXHAUST FAN. NON-STANDARD PART.
	3M-2000PLUS						0.80		2	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW12DWCLASY-2R-S						6.44		4	DUCT - 12" DUCT - 16" DOUBLE "V" CLAMP - 2R INSULATION & SINGLE "V" CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT							325.98			



DUCTWORK #1 SIDE VIEW

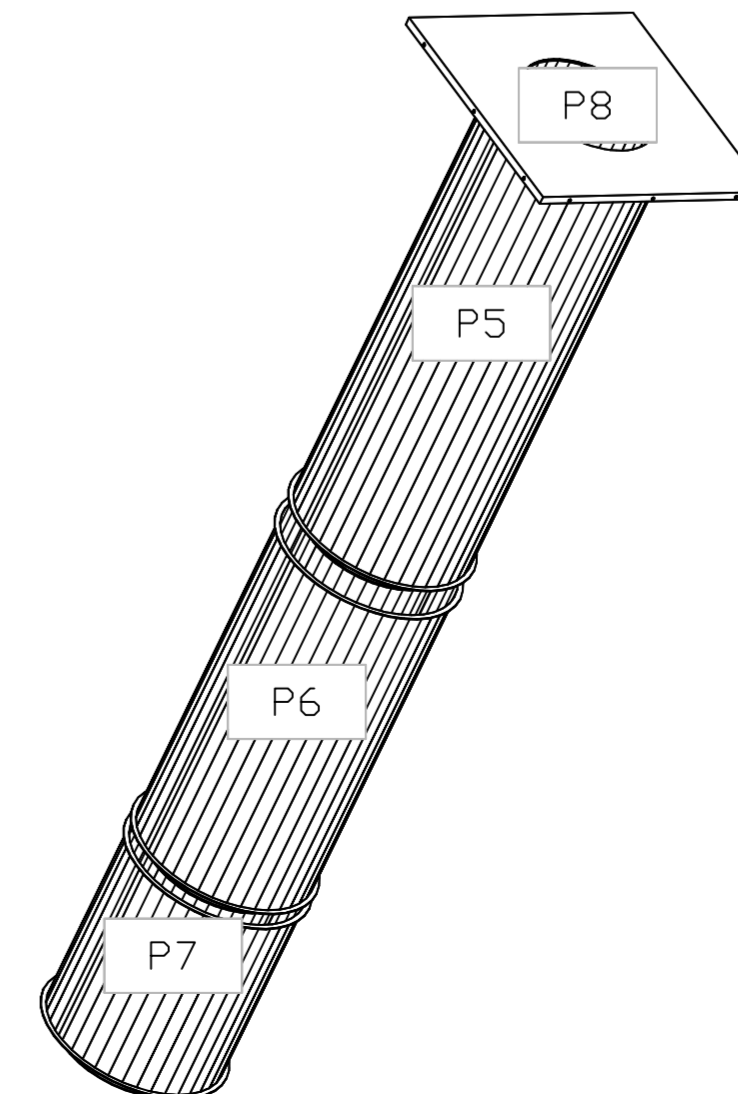
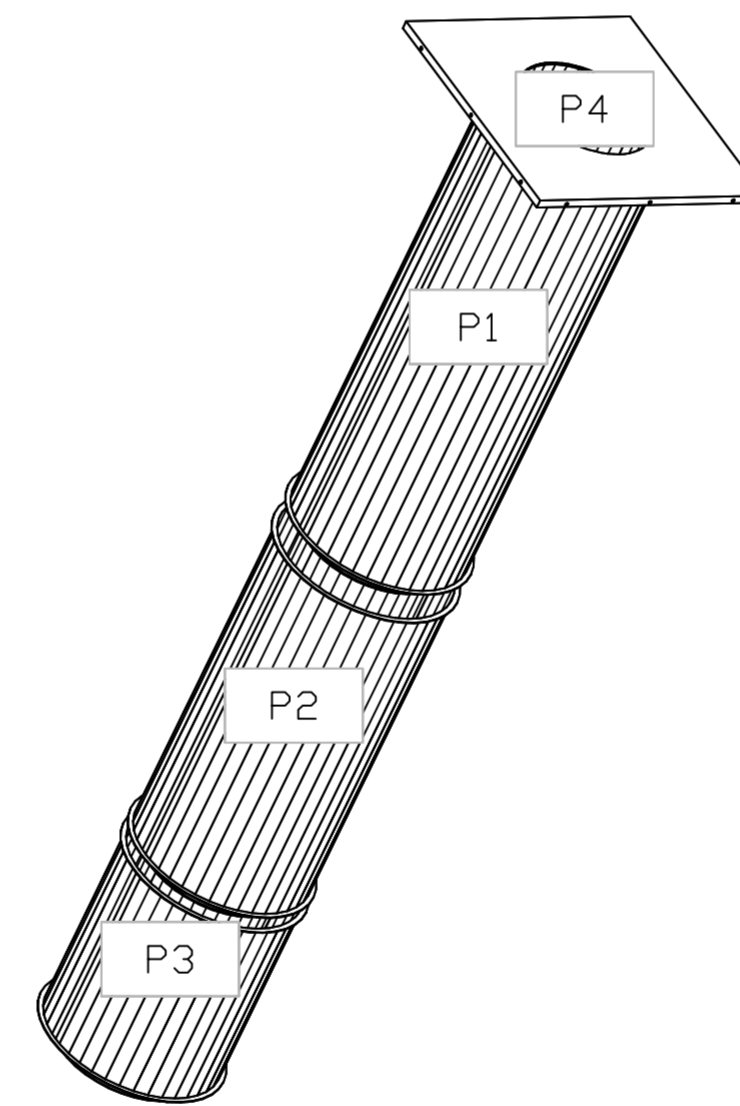
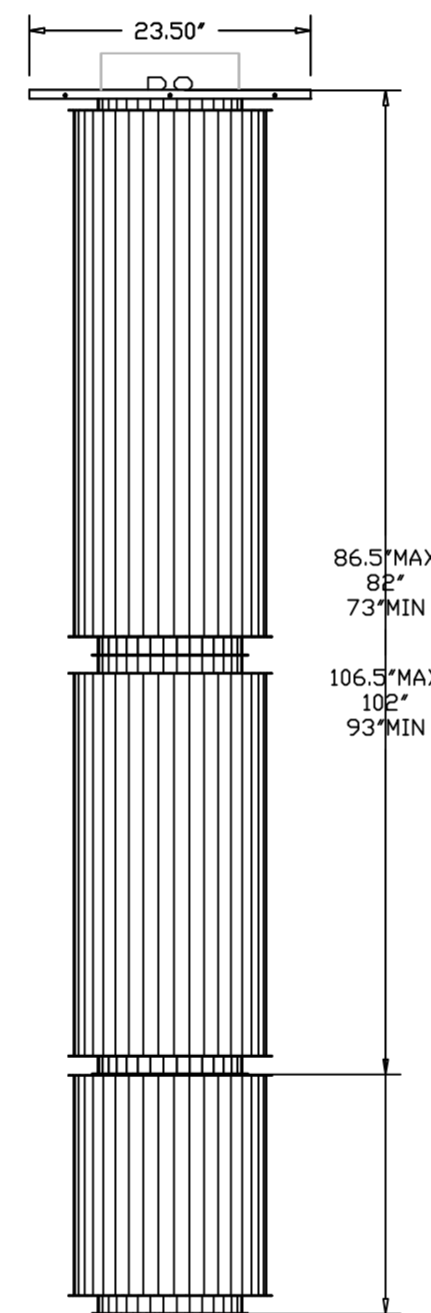
DUCTWORK #1 SE VIEW

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.

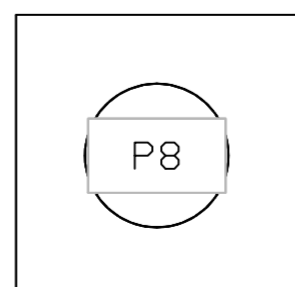
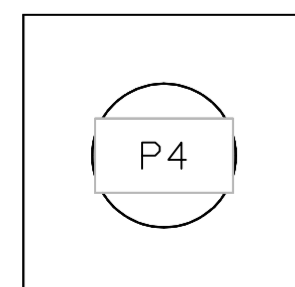
HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

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.

DUCTWORK #1 TOP VIEW



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CAPTIVEAIRE

CULVERS SHELBYVILLE IN ductwork
 Shelbyville, IN,

DATE: 1/12/2022

DWG.#: 5263035

DRAWN BY: sluddy jr

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

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SHEET NO. 13