

CITTY SOCIAL BAR & GRILL

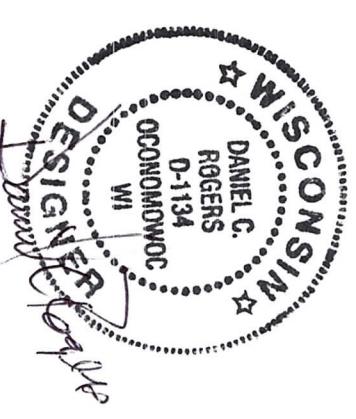
530 NORTH WATER STREET
MILWAUKEE, WI 53202

HVAC SYSTEM
REVISED PERMIT SET DRAWINGS - OCTOBER 3, 2023

WALTERS

SHEET METAL CORP

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FAX: 414-443-1985
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CUSTOMER INFO:

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BAR & GRILL**

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MILWAUKEE, WI 53202

PROJECT NOTES:

INDEX

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REVISIONS	
#	DESCRIPTION
0	05/1/23 PERMIT SET
1	02/03/23 REVISED PERMIT SET

CUSTOMER: CITY SOCIAL BAR & GRILL
PROJECT #:
DRAWN BY: J. SUKKERT
SCALE: AS MARKED
FILE SAVE AS: CITY SOCIAL BAR & GRILL

PROJECT NAME:
HVAC SYSTEM

SHEET TITLE:
INDEX SHEET

DWG NUMBER:
M0.0

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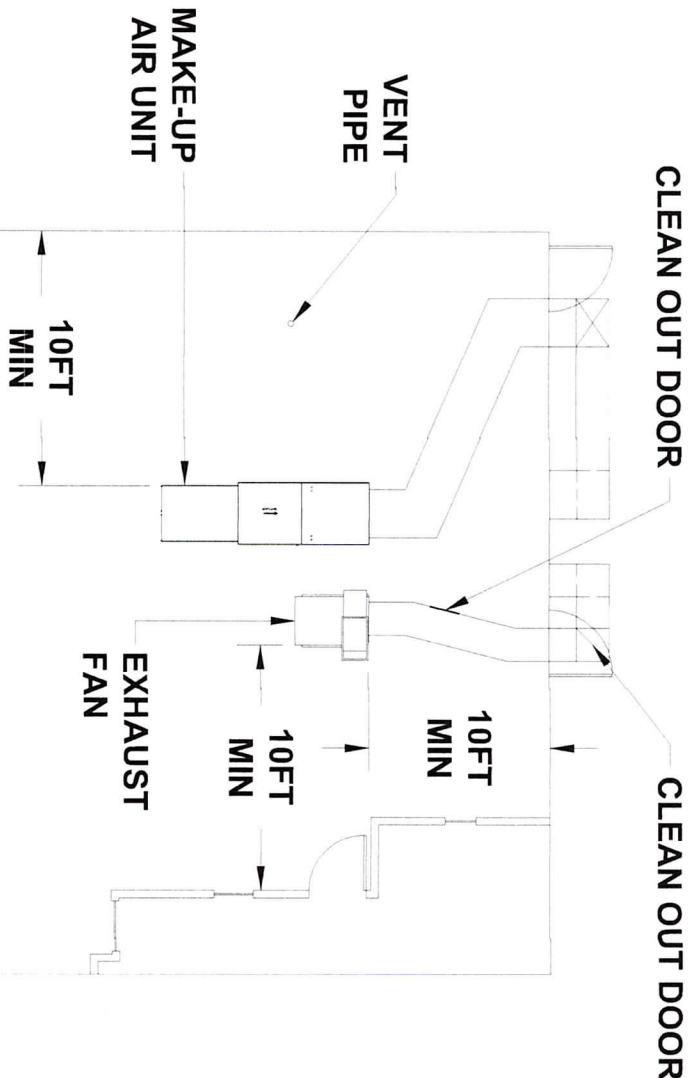
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PROJECT NOTES:



**NOTE:
EXHAUST FAN DISCHARGE IS 3FT
ABOVE MAKE-UP AIR INTAKE.**

REVISIONS

#	DATE	DESCRIPTION
0	05/1/23	PERMIT SET
1	02/03/23	REVISED PERMIT SET

CUSTOMER: CITY SOCIAL BAR & GRILL
PROJECT #:
DRAWN BY: J. SUKKERT
SCALE: 3/32" = 1'
FILE SAVE AS: CITY SOCIAL BAR & GRILL
PROJECT NAME:

HVAC SYSTEM

SHEET TITLE:

SITE PLAN

DWG NUMBER:

M1.0



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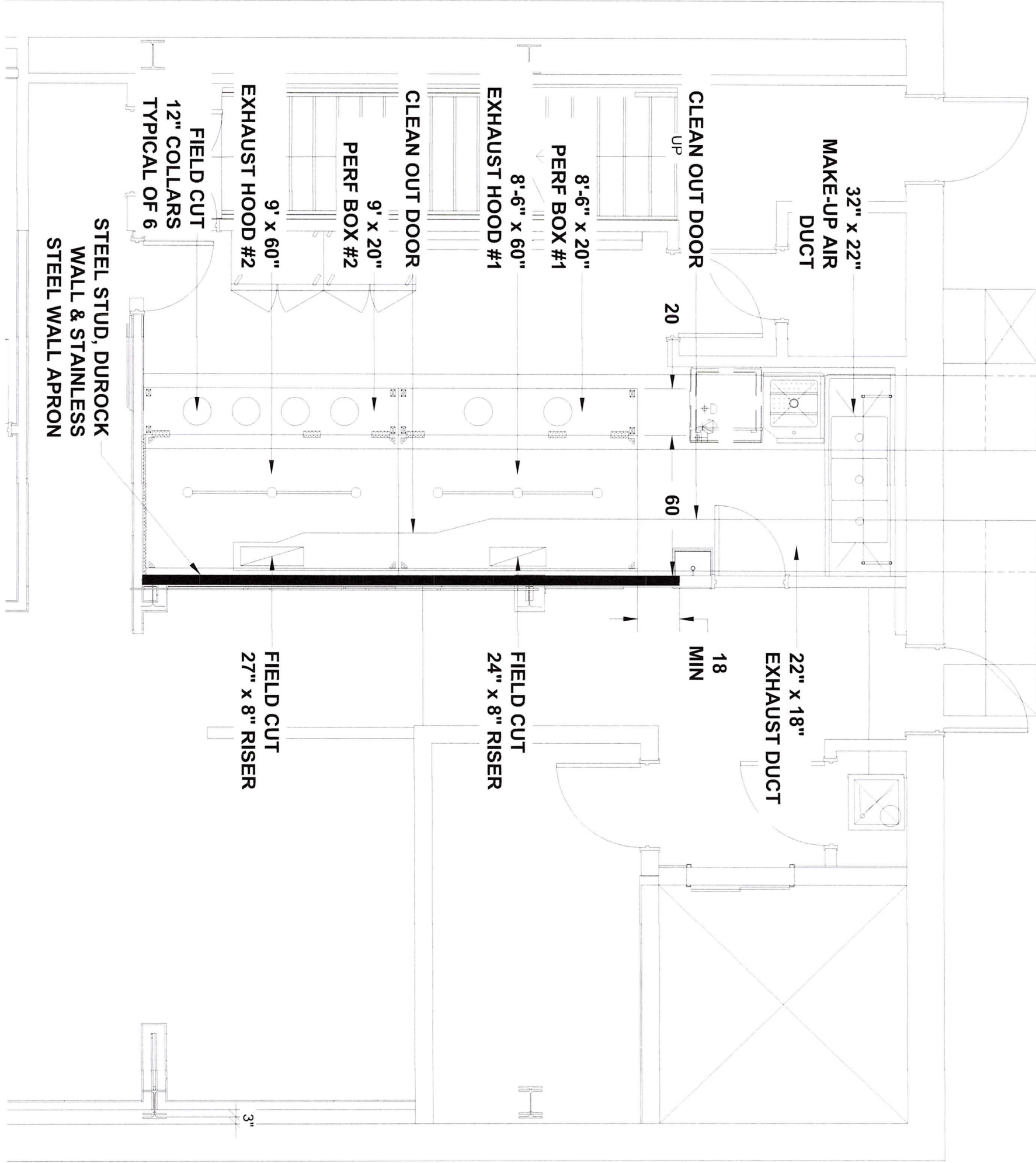
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PROJECT NOTES:



REVISIONS

#	DATE	DESCRIPTION
0	05/31/23	PERMIT SET

CUSTOMER: CITY SOCIAL BAR & GRILL
PROJECT #:
DRAWN BY: J. SUKKERT
SCALE: 1/4" = 1'
FILE SAVE AS: CITY SOCIAL BAR & GRILL

PROJECT NAME:
HVAC SYSTEM

SHEET TITLE:
**ENLARGED
 FLOOR PLAN LAYOUT**

DWG NUMBER:
M2.0

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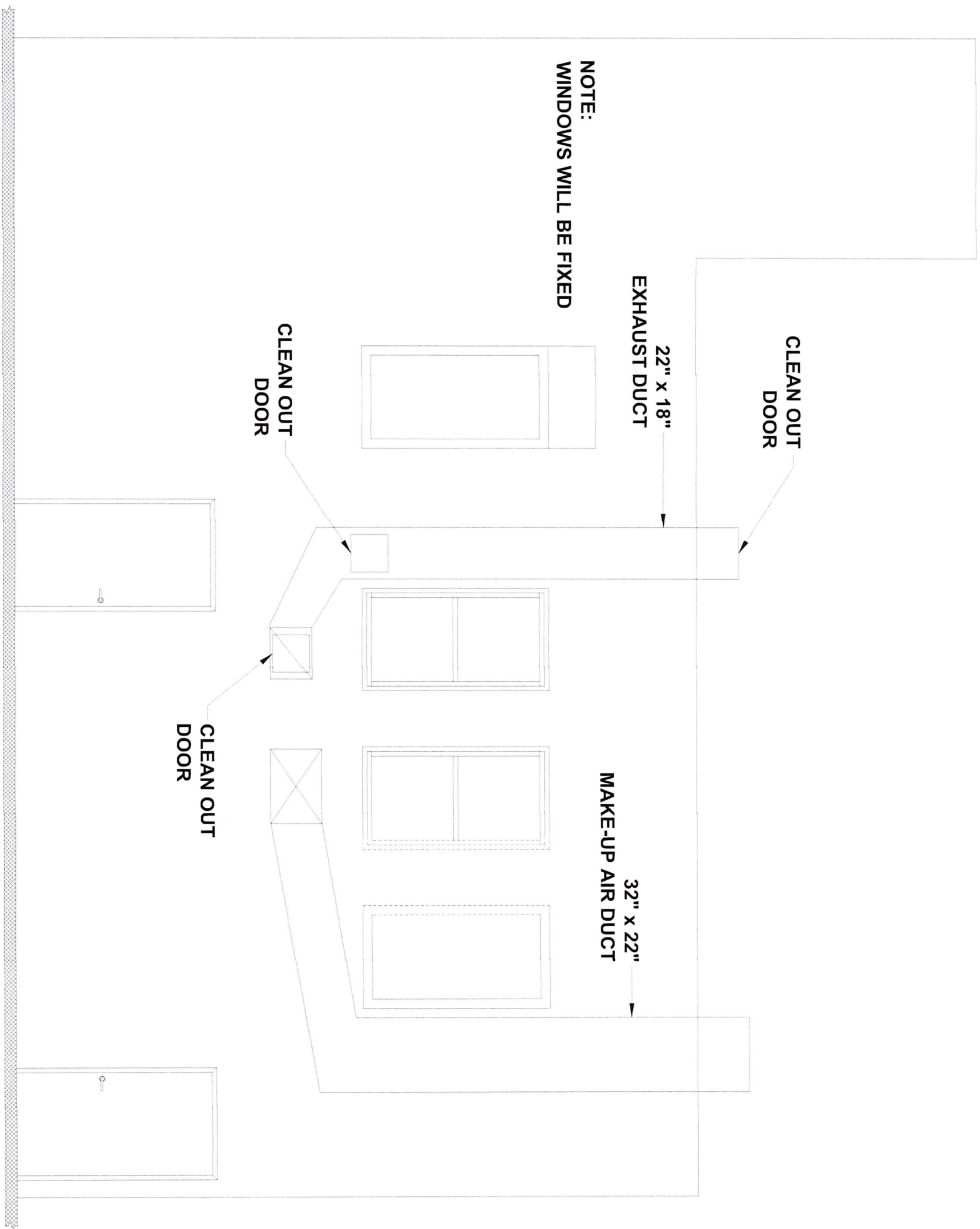
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PROJECT NOTES:

**NOTE:
WINDOWS WILL BE FIXED**



CLEAN OUT
DOOR

CLEAN OUT
DOOR

22" x 18"
EXHAUST DUCT

32" x 22"
MAKE-UP AIR DUCT

CLEAN OUT
DOOR

REVISIONS		
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SCALE: 1/4" = 1'
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HVAC SYSTEM

SHEET TITLE:
ELEVATION LAYOUT

DWG NUMBER:
M3.0

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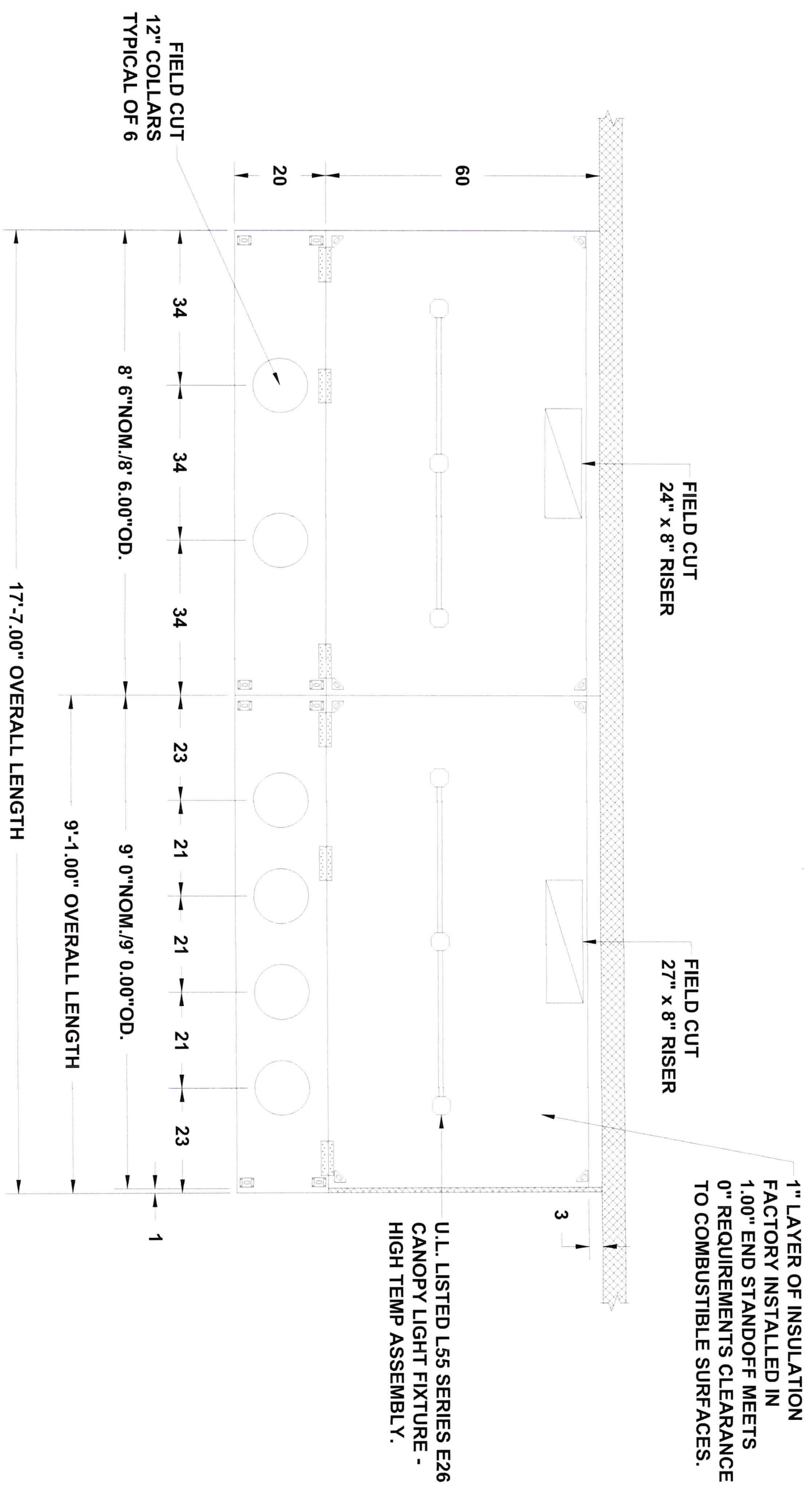
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PROJECT NOTES:



**HOOD #1
MODEL #: 6024 EX-2-PSP-F**

REVISIONS	#	DATE	DESCRIPTION
	0	09/31/23	PERMIT SET

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HVAC SYSTEM

SHEET TITLE:
HOOD #1 & #2 DETAILS

DWG NUMBER:
M4.0

L55 SERIES E26 CANOPY LIGHT FIXTURE - HIGH TEMP ASSEMBLY, INCLUDES CLEAR THERMAL AND SHOCK RESISTANT GLOBE (L55 FIXTURE).

1" LAYER OF INSULATION FACTORY INSTALLED ON TOP OF HOOD. MEETS 0 INCH REQUIREMENTS FOR CLEARANCE TO COMBUSTIBLE SURFACES.

FIELD CUT
27" x 8" RISER

HANGING ANGLE

16" SS BAFFLE WITH HANDLES AND HOOK

3" INTERNAL STANDOFF

GREASE DRAIN WITH REMOVABLE CUP

60"

48.0" MAX.

ATTACHING PLATES

FIELD CUT SUPPLY RISER WITH VOLUME DAMPER

20"

24" NOM.

2 3/4"

6"

23.5% OPEN STAINLESS STEEL PERFORATED PANEL

80"

EQUIPMENT BY OTHERS

SECTION VIEW

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HVAC SYSTEM

SHEET TITLE:
HOOD #1 DETAILS

DWG NUMBER:

M5.0

HOOD #1
MODEL #: 6024 EX-2-PSP-F

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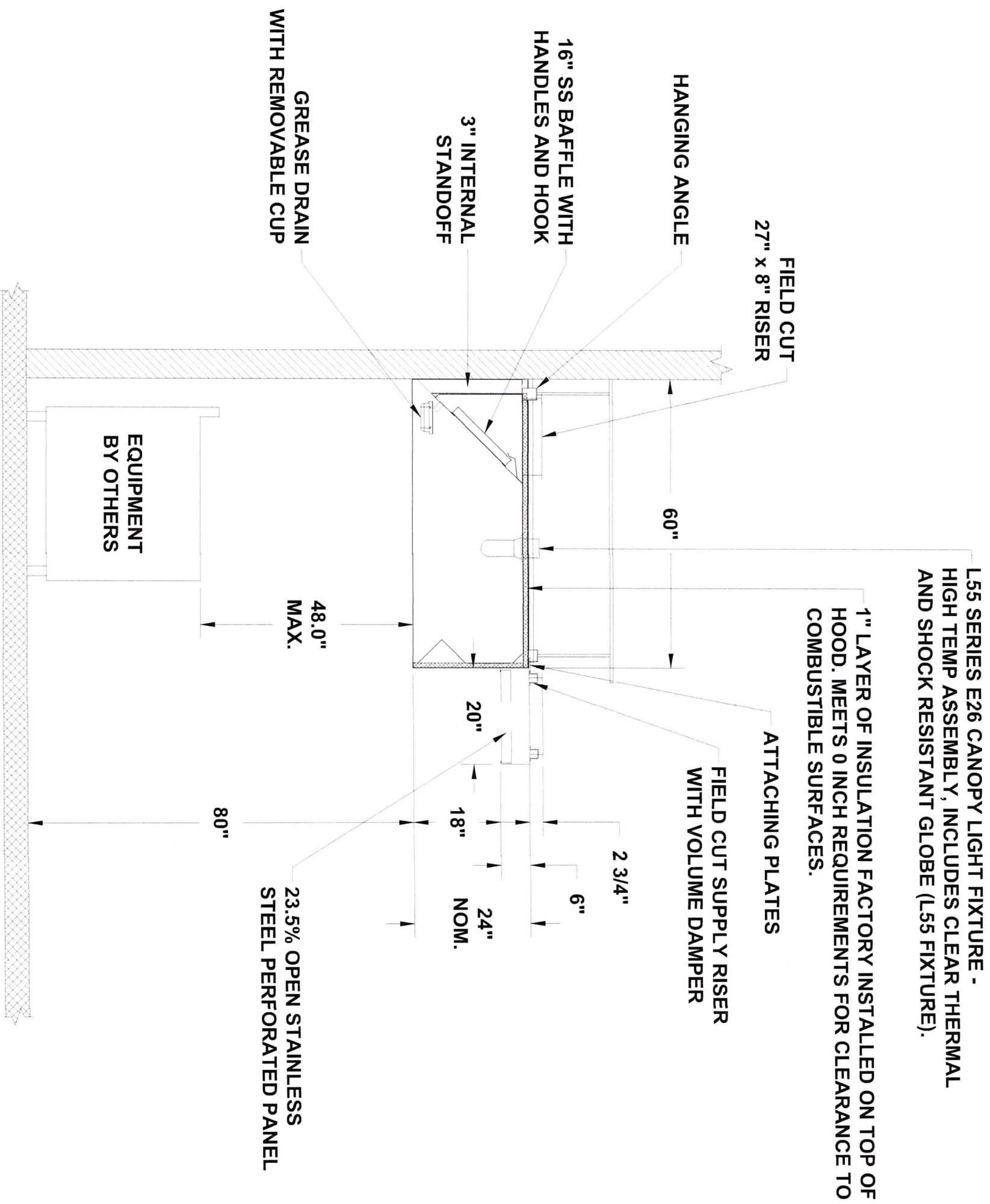
HVAC SYSTEM

SHEET TITLE:

HOOD #2 DETAILS

DWG NUMBER:

M6.0



**HOOD #2
MODEL #: 6024 EX-2-PSP-F**

HOOD INFORMATION - JOB#5981501

HOOD NO	TAG	MODEL	MANUF	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM					TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG	
										WIDTH	LENG	HEIGHT	DIA	CFM			VEL	SP
1		6024 EX-2-PSP-F	ECON-AIR	8'6"	600 DEG	1	MEDIUM	250	2125	4"	16"	2125	1522	-0.489"	1912	430 SS WHERE EXPOSED	LEFT	ALONE
2		6024 EX-2-PSP-F	ECON-AIR	9'0"	600 DEG	1	MEDIUM	250	2250	4"	16"	2250	1611	-0.525"	2025	430 SS WHERE EXPOSED	RIGHT	ALONE

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

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PROJECT NOTES:

HOOD NO	TAG	TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	FIRE SYSTEM	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1		SS BAFFLE WITH HANDLES	6	16"	16"	30%	3	L55 SERIES E26	NO								NO	557 LBS
2		SS BAFFLE WITH HANDLES	6	16"	16"	30%	3	L55 SERIES E26	NO								NO	615 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		INSULATION FOR TOP OF HOOD. RIGHT END STANDOFF (FINISHED) 1" WIDE 60" LONG INSULATED.
2		INSULATION FOR TOP OF HOOD.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				CFM	SP
							WIDTH	LENG	DIA			
1		Front	102"	20"	6"	MUA	12"	24"			637	0.181"
2		Front	109"	20"	6"	MUA	12"	28"			675	0.173"

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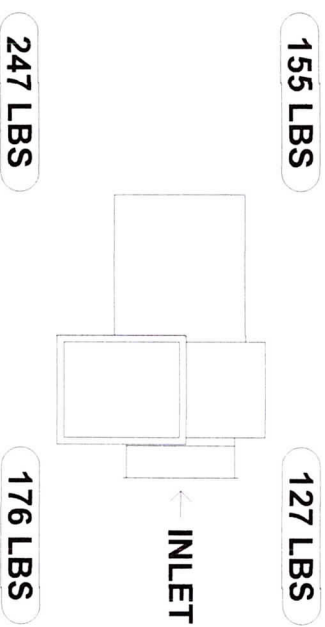
SHEET TITLE:
HOOD #1 & #2 NOTES

DWG NUMBER:

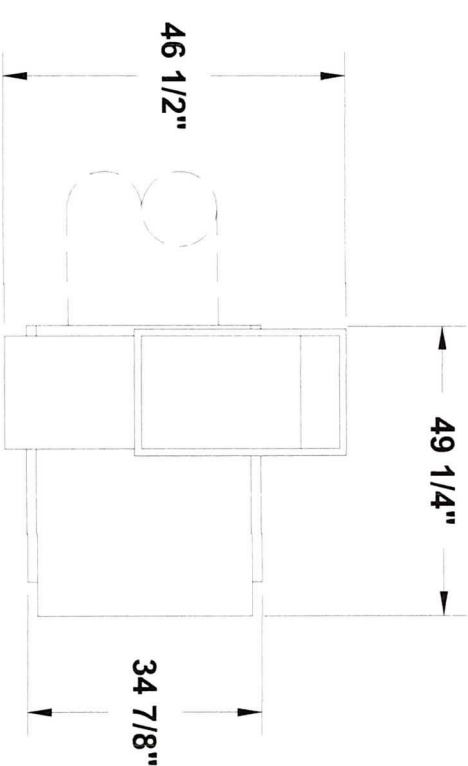
M7.0

CORNER WEIGHTS ARE CALCULATED BASED ON VERTICAL DISCHARGE. SUPPORT DUCT PROPERLY BEFORE FAN TO ENSURE CORNER WEIGHTS ARE NOT AFFECTED.

UNIT PLAN VIEW CORNER WEIGHTS:



*** 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.



TOP VIEW

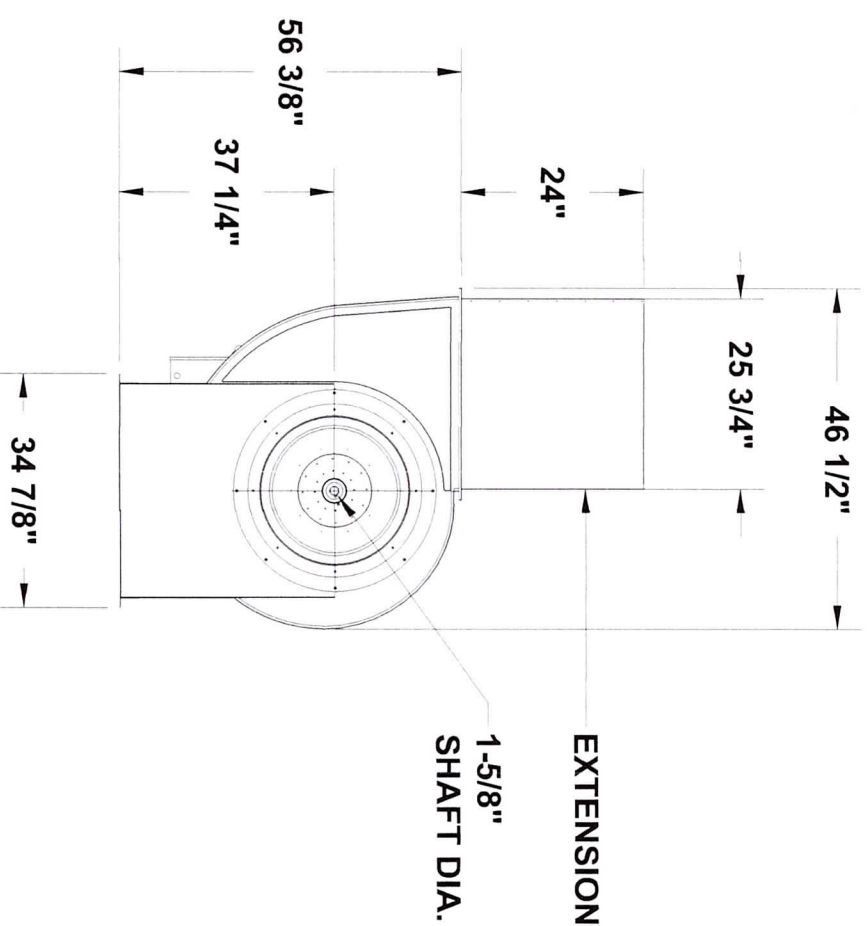
FEATURES:

- 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"

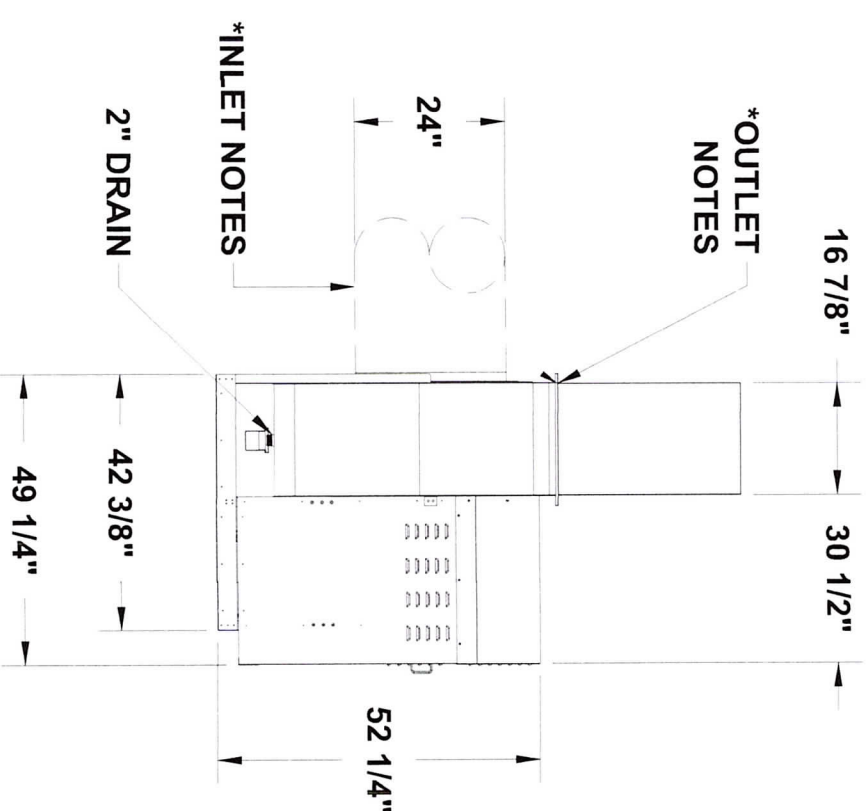
OPTIONS

- UTILITY SET GREASE CUP.
- BI24 - 24" DISCHARGE EXTENSION.
- BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE.
- BI24 - INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT.
- 2 YEAR PARTS WARRANTY.

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.



SIDE VIEW



FRONT VIEW

**EXHAUST FAN
 MODEL #: EA-USBI24DD-RM**

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HVAC SYSTEM

SHEET TITLE:
EXHAUST FAN DETAILS

DWG NUMBER:

M8.0

EXHAUST FAN INFORMATION - JOB#5981501

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1		1	EA-USBI24DD-RM	ECON-AIR	4375	2.000	1071	ODP, PREMIUM	5.000	2.7870	3	208	15.8	1450 FPM	706	22.7

MUA FAN INFORMATION - JOB#5981501

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES	
2		1	EA2-D.500-20D	20MF-2-MOD	A2-D.500	2500	4375	0.500	1629	ODP, PREMIUM	5.000	2.4030	3	208	15.0	18.8A	30A	685	16.6

GAS FIRED MAKE-UP AIR UNIT(S)

FAN #1 EA-USBI24DD-RM-S - EXHAUST FAN

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2		434128	399398	90°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	UTILITY SET GREASE CUP
		1	B124 - 24" DISCHARGE EXTENSION
		1	BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE
		1	B124 - INLET CONNECTION STANDARD 24" FLANGED GREASE DUCT
		1	2 YEAR PARTS WARRANTY
		1	INLET PRESSURE GAUGE, 0-.35"
		1	MANIFOLD PRESSURE GAUGE, .5 TO 15" WC
		1	BUTTERFLY MOD VALVE OPTION FOR MOD SIZE 2 (1" MOD VALVE)
		1	SHIP LOOSE GAS STRAINER 1"
		1	MOTORIZED BACKDRAFT DAMPER FOR A2-D HOUSING - MEETS AMCA CLASS 1A RATING
2		1	OPPOSITE SIDE HEATER CONTROLS
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

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

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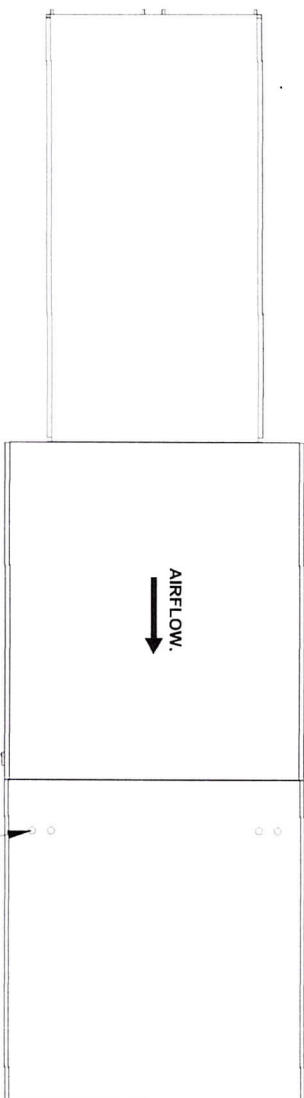
SHEET TITLE:
EXHAUST FAN & MAKE-UP AIR NOTES

DWG NUMBER:

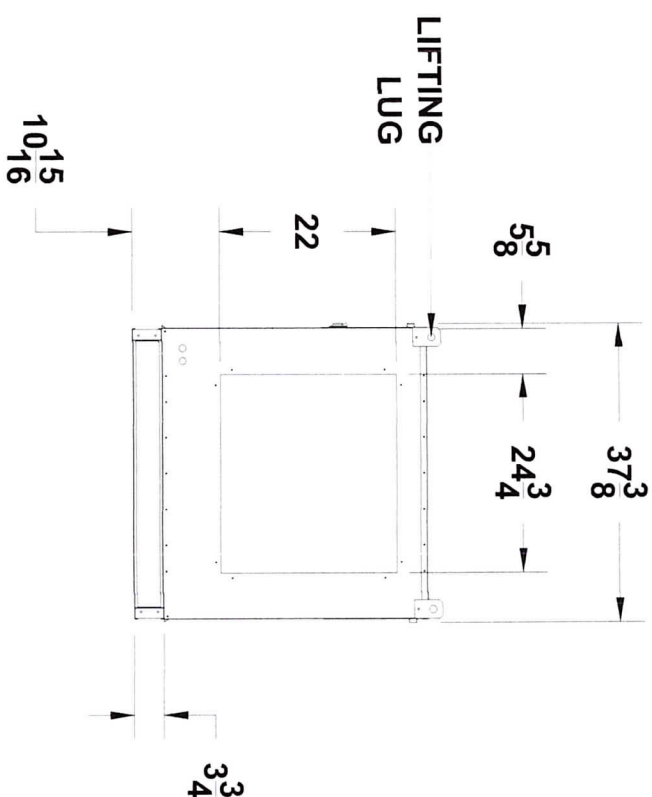
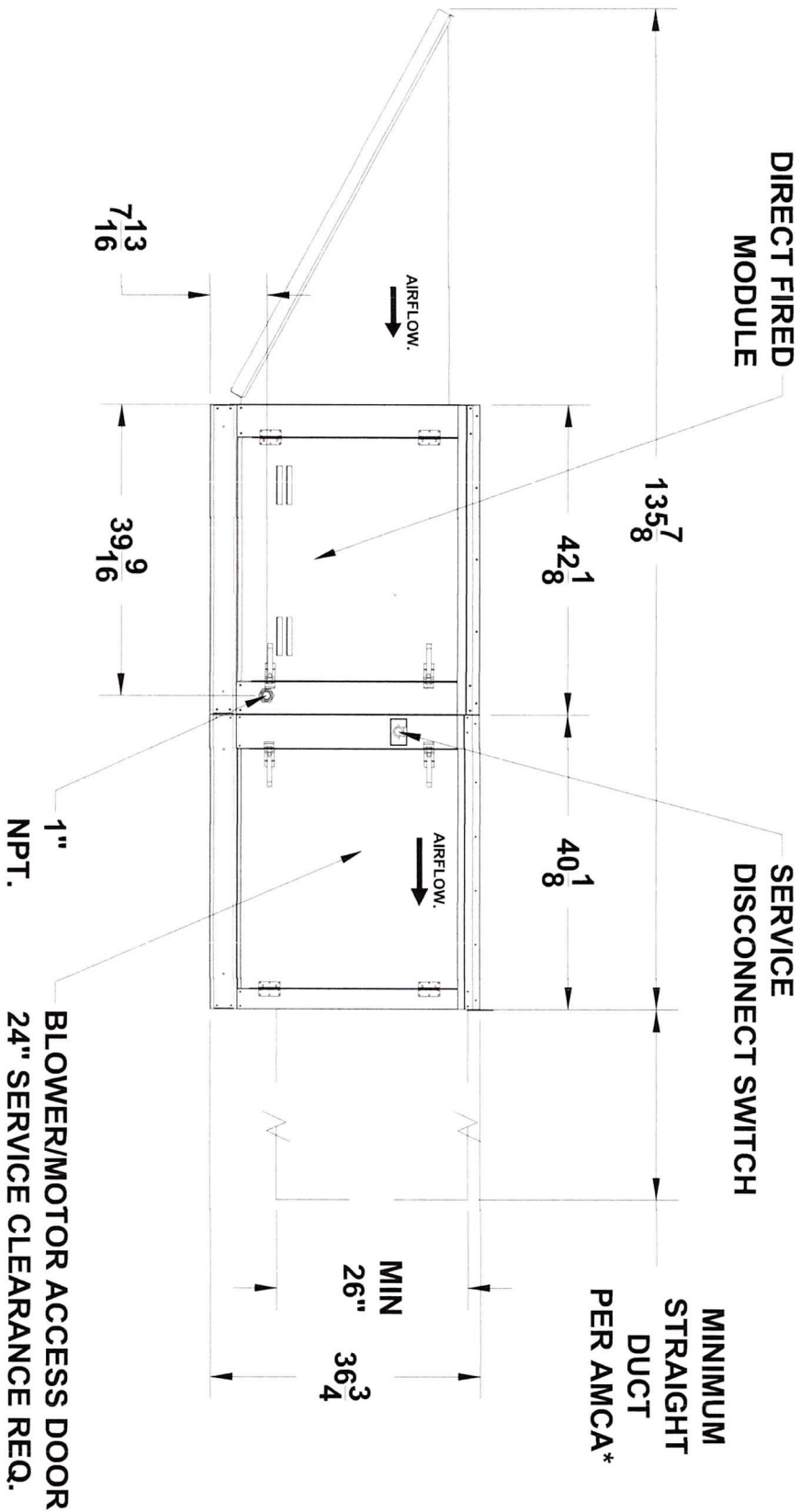
M9.0

SUPPLY SIDE HEATER INFORMATION:

WINTER TEMPERATURE = 0°F. TEMP. RISE = 90°F.
 BTUS CALCULATED OFF ACTUAL AIR DENSITY.
 OUTPUT BTUS AT ALTITUDE OF 0.0 FT. = 409179.
 INPUT BTUS AT ALTITUDE OF 0.0 FT. = 444760.
 OUTPUT BTUS AT ALTITUDE OF 668 FT. = 399398.
 INPUT BTUS AT ALTITUDE OF 668 FT. = 434129.



FLEX CONDUIT FOR
FIELD WIRING



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 MAKE-UP AIR DETAILS

DWG NUMBER:

M10.0

FAN #2 EA2.D.500-20D - HEATER

1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN.
2. INTAKE HOOD WITH EZ FILTERS.
3. SIDE DISCHARGE - AIR FLOW LEFT -> RIGHT.
4. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
5. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE.
6. BUTTERFLY MOD VALVE OPTION FOR MOD SIZE 2 (1" MOD VALVE).
7. SHIP LOOSE GAS STRAINER. TO BE INSTALLED UPSTREAM OF UNIT CONNECTION. 1" CONNECTION.
8. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED.
9. MOUNT MOTOR AND CONTROLS ON OPPOSITE SIDE OF HEATER.
10. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
11. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
12. 2 YEAR PARTS WARRANTY

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS 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 26" x 26".

DIRECT FIRED PROFILE PLATE SPECIFICATIONS:

DESCRIPTION:

DIRECT FIRED BURNERS SHALL HAVE PATENTED (US PATENT NO.: US6629523B2), SELF-ADJUSTING PROFILE PLATES DESIGNED TO ENSURE PROPER AIR VELOCITY AND PRESSURE DROP ACROSS THE BURNER. PROFILE PLATES SHALL ALLOW BURNERS TO ACHIEVE CLEAN COMBUSTION BY LIMITING BY-PRODUCT LEVELS TO A MAXIMUM OF 5PPM OF CARBON MONOXIDE (CO), AND 0.5PPM OF NITROGEN DIOXIDE (NO2). DIRECT FIRED UNITS SHALL BE CONFIGURED WITH THE BLOWER MOUNTED DOWNSTREAM OF THE BURNER. THIS ARRANGEMENT WILL ENSURE A CONSISTENT AIRFLOW, REGARDLESS OF INLET AIR TEMPERATURE.

APPLICATION:

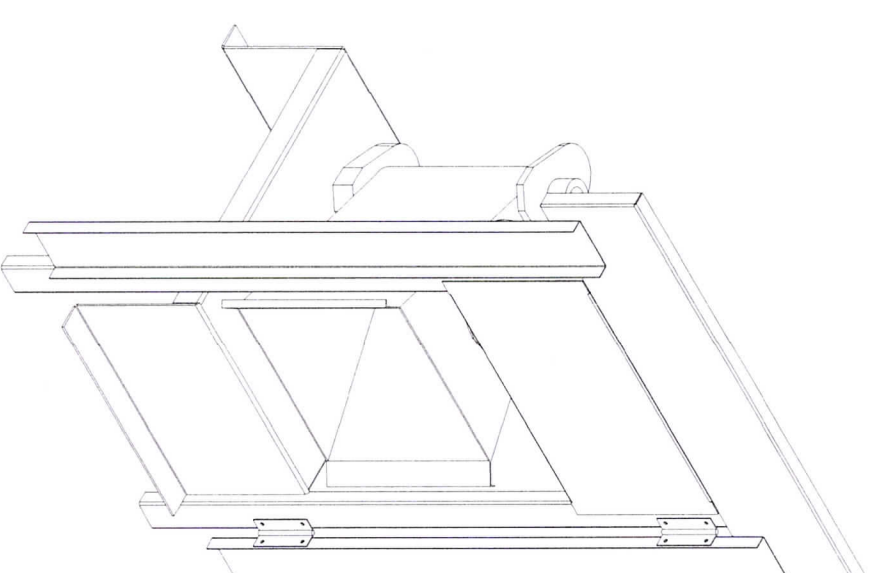
SPRING-LOADED BURNER PROFILE PLATES ARE ENGINEERED TO AUTOMATICALLY REACT TO THE MOMENTUM OF A FRESH AIR STREAM, WITHOUT THE NEED FOR ANY MOTORS OR ACTUATORS TO MECHANICALLY ADJUST THEM. WITH THIS FEATURE, ALL DF UNITS ARE DESIGNED FOR DEMAND CONTROL VENTILATION (DCV) REQUIREMENTS.

CERTIFICATIONS:

ALL PROFILE PLATE ASSEMBLIES SHALL BE INCLUDED IN THE DF UNIT'S ETL LISTING AND COMPLY WITH COMBINED SAFETY STANDARDS ANSI Z83.4 AND CSA 3.7 (NON-RECIRCULATING DF HEATERS) AND ANSI Z83.18 (RECIRCULATING DF HEATERS).

GENERAL CONSTRUCTION:

- PROFILE PLATES SHALL BE FORMED FROM G90 GALVANIZED STEEL.
- PROFILE PLATES SHALL VARY IN SIZE PER UNIT.
- PROFILE PLATES SHALL BE MOUNTED ALONG THE SAME PLANE AS THE DISCHARGE OF THE BURNER.
- DESIGN SHALL INCORPORATE PROPERLY TORQUED, PERMANENTLY MOUNTED SPRING HINGES.
- SPRING HINGES SHALL BE MADE FROM PLATED STEEL.



**DIRECT FIRED (DF) PROFILE
PLATE ASSEMBLY**

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CORP**

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MILWAUKEE WI 53214
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FAX: 414-443-1985
WWW.WALTERSSHEETMETAL.COM

CUSTOMER INFO:
**CITY SOCIAL
BAR & GRILL**

530 NORTH WATER STREET
MILWAUKEE, WI 53202

PROJECT NOTES:

REVISIONS	#	DATE	DESCRIPTION
	0	05/31/23	PERMUT SET

CUSTOMER: CITY SOCIAL BAR & GRILL

PROJECT #:

DRAWN BY: J. SUKKERT

SCALE: AS MARKED

FILE SAVE AS: CITY SOCIAL BAR & GRILL

PROJECT NAME:

HVAC SYSTEM

SHEET TITLE:

MAKE-UP AIR DETAILS

DWG NUMBER:

M11.0

**WALTERS
SHEET METAL
CORP**

533 SOUTH 9TH STREET
MILWAUKEE, WI 53214
PHONE: 414-443-1980
FAX: 414-443-1985
WWW.WALTERSSHEETMETAL.COM

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PROJECT NOTES:

IMC 506.3.7 - PROVIDE TYPE I COMMERCIAL KITCHEN EXHAUST SYSTEMS WITH A MINIMUM SLOPE OF 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL TOWARD THE HOOD OR AN APPROVED GREASE RESERVOIR. WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE MUST A HAVE A MINIMUM SLOPE OF 1 UNIT VERTICAL IN 12 UNITS HORIZONTAL.

IMC 506.3.8 & 9 - DUCT CLEAN-OUT OPENINGS FOR COMMERCIAL KITCHEN GREASE EXHAUST DUCTS OF SIZE AND LOCATIONS AS REQUIRED BY THIS CODE SECTION. ADDITIONALLY, A CLEANOUT SHALL BE PROVIDED FOR BOTH THE INLET SIDE AND OUTLET SIDE OF ANY INLINE FAN. SUCH CLEANOUTS ARE TO BE LOCATED WITHIN 3FT OF THE FAN DUCT CONNECTIONS.

IMC 603.9 - DUCTWORK SHALL BE SEALED AT ALL JOINTS, TRANSVERSE AND LONGITUDINAL SEAMS AND CONNECTIONS IN DUCTWORK USING LISTED PRODUCTS AS REFERENCED IN THE CODE. THE REFERENCED DUCTWORK INCLUDES ALL SUPPLY, EXHAUST AND RETURN DUCTS. THIS IS APPLICABLE TO ALL DUCTWORK OTHER THAN THAT USED AS PART OF THE KITCHEN HOOD EXHAUST DUCT.

IMC 506.3.12 - GREASE DUCT FIRE RESISTIVE ACCESS OPENINGS PROVIDED WITH APPROVED SIGNAGE WITH THE WORDING "ACCESS PANEL. DO NOT OBSTRUCT".

IMC 506.3.13.1 - PROVIDE A TYPE I KITCHEN EXHAUST OUTLET, WHICH TERMINATES ABOVE THE ROOF, WITH A DISCHARGE A MINIMUM OF 40" ABOVE THE ROOF SURFACE.

IMC 506.5.3 - UPBLAST FANS ASSOCIATED WITH TYPE I COMMERCIAL KITCHEN HOODS SHALL BE HINGED AND SUPPLIED WITH A FLEXIBLE WEATHER PROOF ELECTRICAL CABLE TO PERMIT INSPECTION AND CLEANING. THE DUCTWORK SHALL EXTEND A MINIMUM OF 18" ABOVE THE ROOF SURFACES.

IMC 507.4.1 - ALL TYPE I AND II COMMERCIAL KITCHEN HOODS SHALL OVERHANG OR EXTEND A HORIZONTAL DISTANCE OF NOT LESS THEN A 6" BEYOND THE EDGE OF THE COOKING SURFACE ON ALL OPEN SIDES.

IBC 906/IFC 904.12.5 - PROVIDE PORTABLE K-RATED FIRE EXTINGUISHERS WITHIN 30FT TRAVEL DISTANCE OF COMMERCIAL TYPE COOKING EQUIPMENT.

IMC/SPS 364.0313 (3) - ALL OPERATING MANUALS CONCERNING THE HVAC EQUIPMENT AND ITS MAINTENANCE SHALL BE PRESENTED TO THE OWNER AND SHALL BE MADE AVAILABLE TO A DEPARTMENT REPRESENTATIVE UPON REQUEST.

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TYPICAL NOTES

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EXHAUST HOOD NOTES

EXHAUST RATE IS SIZED IN ACCORDANCE WITH IMC-2015 SEC. 507.1 WHICH ALLOWS SIZING THROUGH THE HOODS' UL-710 LISTING AND LABELING. EACH EXHAUST HOOD IS UNDERWRITERS LABORATORIES (UL) LISTED AND LABELED. EXHAUST RATE IS SIZED TO MEET OR EXCEED THE U.I. TESTING AND LISTING LEVELS.

HOOD #1

MODEL #: 6024 EX-2-PSP-F IS UL LISTED FOR AN EXHAUST RATE OF 250 CFM/LINEAR FOOT OF HOOD.
TOTAL HOOD LENGTH = 8' .6"
8FT 6IN x 250 CFM/FT = 2,125 CFM. ACTUAL EXHAUST = 2,125 CFM

HOOD #2

MODEL #: 6024 EX-2-PSP-F IS UL LISTED FOR AN EXHAUST RATE OF 250 CFM/LINEAR FOOT OF HOOD.
TOTAL HOOD LENGTH = 9' .0"
9FT 0IN x 250 CFM/FT = 2,250 CFM. ACTUAL EXHAUST = 2,250 CFM

100% OF EXHAUSTED AIR IS SUPPLIED BACK INTO KITCHEN AREA THROUGH HOOD MOUNTED PERFORATED PLENUMS AND DIFFUSERS. DIRECT FIRED MAKE-UP AIR UNIT PROVIDED TO TEMPER AIR TO A MIN. OF 70 DEG. F. SEE SUPPLY UNIT NOTES.

FIRE SYSTEM BY OTHERS.
EVIDENCE OF APPROVAL TO BE AVAILABLE AT JOBSITE.

SUPPLY UNIT NOTES

MAKE-UP AIR IS PROVIDED THROUGH AN ECON-AIR UNIT - MODEL #: EA2-D.500-20D DIRECT FIRED MAKE-UP AIR UNIT.

UNIT OUTPUT = 4,375 CFM. AND 434,128 BTUH.
CALC = 4,375 CFM x 1.08 x 90 DEGREE RISE = 434,128 BTUH.
UNIT OUTPUT = 4,375 CFM. AND 434,128 BTUH.

FLAME SAFETY, AIR FLOW, HIGH TEMP SAFETY DEVICES INCLUDED.
DISCHARGE DUCTSTAT PROVIDED.

UNIT INTERLOCK WITH EXHAUST FANS BY JOBSITE ELECTRICIAN.

AIR INTAKE IS A MINIMUM OF 10' - 0" FROM ALL EXHAUSTS.

AIR BALANCE

- EXHAUST FAN = 4,375 CFM
+ MAKE-UP AIR UNIT = 4,375 CFM

= BALANCE = 0 CFM

DUCT SPECS

EXHAUST TO BE 16GA BLACK IRON WITH ALL SEAMS AND JOINTS LIQUID TIGHT. ASTM E-2336 2-LAYER UL-LISTED GREASE DUCT INSULATION PROVIDED WHERE WITH 18" OF COMBUSTIBLES.

HIGH TEMP. GASKETED CLEAN-OUTS PROVIDED AT EACH CHANGE IN DUCT DIRECTION PER IMC-2015. SUPPLY DUCT TO BE GALVANIZED AND FLEX WITH INSULATION PROVIDED IN UNHEATED SPACES.

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M14.0