MECHANICAL GENERAL NOTES

1. MECHANICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH MIAMISBURG, OH BUILDING CODES, 2017 OHIO MECHANICAL CODE WITH AMENDMENTS.
2. COORDINATE WITH GENERAL CONTRACTOR FOR ALLOWABLE DAYS OF WEEK AND TIMES OF DAY FOR SYSTEM SHUT-DOWNS AS REQUIRED FOR THE CONSTRUCTION WORK.
3. THE MECHANICAL CONTRACTOR SHALL COORDINATE DUCTWORK INSTALLATION WITH ARCHITECTS/OWNER'S REPRESENTATIVE IN FIELD AND OTHER TRADES. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND HEIGHTS.
4. CORE DRILL OR SAW CUT FLOOR, WALL, ROOF, ETC.. AS REQUIRED FOR PIPING OR DUCTWORK AND FIRE STOP OPENING AROUND PIPE OR DUCTWORK. VERIFY LOCATION OF STRUCTURAL BEAMS, JOISTS, ETC.. BEFORE DRILLING OR CUTTING. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
5. WHEREVER FOUNDATION WALLS, OUTSIDE WALLS, ROOFS, ETC.. ARE CUT FOR INSTALLATION OF SYSTEMS, THEY SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND SEALED WEATHER TIGHT. WORK SHALL BE PERFORMED BY CRAFTSMEN SKILLED IN THEIR RESPECTIVE TRADES.
6. THE CONTRACTOR SHALL WARRANTEE ALL MATERIAL AND GUARANTEE ALL WORKMANSHIP FOR ONE YEAR FROM SUBSTANTIAL COMPLETION.
7. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MECHANICAL SPECIFICATIONS..
8. THE MECHANICAL CONTRACTOR SHALL INSTALL MECHANICAL SYSTEMS AS SHOWN, NOTED AND SPECIFIED. EQUIPMENT MAY NOT BE SUBSTITUTED UNLESS WRITTEN APPROVAL BY THE ARCHITECT, ENGINEER, OR OWNER'S REPRESENTATIVE IS OBTAINED. ANY CHANGES TO THE DUCTWORK LAYOUT WILL NECESSITATE SUBMISSION OF SHEET METAL SHOP DRAWINGS FOR ENGINEER'S REVIEW. ANY UNAUTHORIZED CHANGES WILL BE REMOVED AT CONTRACTOR'S EXPENSE, IF DEEMED NECESSARY BY ARCHITECT, ENGINEER, OR OWNER'S REPRESENTATIVE.
9. DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS AS REQUIRED. FURNISH AND INSTALL DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS AND MATERIALS NECESSARY TO FACILITATE THE SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED. THE WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES AND SUBJECT TO INSPECTION.
10. ALL DUCTWORK AND PIPING SHALL BE ROUTED ABOVE THE SUSPENDED CEILING SPACE, UNLESS OTHERWISE NOTED ON THE PLANS.
11. ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED IRON SHEETMETAL AND BE FABRICATED ACCORDING TO THE S.M.A.C.N.A. HVAC DUCT CONSTRUCTION STANDARDS, ASHRAE 1996 HANDBOOK VOLUME "HVAC SYSTEMS AND EQUIPMENT", AND TYPICAL DUCTWORK DETAILS SHOWN IN THESE DRAWINGS. ALL ELBOWS SHALL HAVE PROPER RADIUS, OR MECHANICAL CONTRACTOR SHALL PROVIDE DOUBLE THICKNESS, AIRFOIL TURNING VANES REQUIRED BY S.M.A.C.N.A. NO SQUARE THROAT ELBOWS SHALL BE INSTALLED WITHOUT DOUBLE THICKNESS TURNING VANES.
13. ALL FLEXIBLE DUCTWORK SHALL BE FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOR BARRIER. FLEX DUCT SHALL MEET NFPA 90A WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50, AND SHALL BE RATED FOR 2" W.C. PRESSURE AND 0 TO 250 DEGREE TEMPERATURE. MAXIMUM STRETCHED OUT LENGTH SHALL BE AS PER CODES.
14. ALL BRANCH SUPPLY DUCTS SHALL HAVE (VD) MANUAL VOLUME DAMPERS INSTALLED FOR BALANCING, SEE SYMBOL LIST.
15. PROVIDE A VOLUME DAMPER FOR EVERY INLET AND OUTLET (DIFFUSERS, REGISTERS, GRILLES, ETC..) OF THE DUCTWORK DISTRIBUTION SYSTEMS WHETHER SHOWN OR NOT ON THE PLANS. PROVIDE ADDITIONAL VOLUME DAMPERS OR EXTRACTORS AT BRANCH TAKE-OFFS FROM DUCTWORK MAINS AS REQUIRED TO ACHIEVE AIR VOLUME DISTRIBUTION AND BALANCING.
16. ALL DUCTWORK TRANSITIONS SHALL BE (FOT) "FLAT ON TOP", UNLESS OTHERWISE SPECIFIED ON PLAN.
17. ALL DUCT CONNECTIONS TO EQUIPMENT SHALL BE MADE WITH NEOPRENE, DOUBLE COATED, HEAVY GLASS FABRIC, VIBRATION ELIMINATION CONNECTIONS, (F.C.) FLEXIBLE CONNECTIONS, EQUAL TO VENTFABRICS, INC.. TYPE VENTGLAS, UNLESS NOTED OTHERWISE.
18. PROVIDE INSULATION FOR ALL VENTILATION WORK AS PER THE SPECIFICATIONS.
19. ALL SUPPLY, RETURN AND OUTSIDE AIR RECTANGULAR/SQUARE DUCTWORK SHALL BE INSULATED WITH 1-1/2" THICK, 3 PCF DUCT LINER. DUCT LINER SHALL BE FASTENED TO INSIDE OF DUCTWORK AS PER MANUFACTURER'S DIRECTIONS AND S.M.A.C.N.A. "DUCT LINER APPLICATION STANDARD". SIZE OF DUCTS SHALL BE INCREASED FOR DUCT LINER INSULATION. SIZES SHOWN ON PLAN ARE INSIDE FREE AREA. ALL SUPPLY, RETURN AND OUTSIDE AIR ROUND/OVAL DUCTWORK SHALL BE INSULATED WITH 2" THICK FLEXIBLE INSULATION, 1 PCF DENSITY FOIL REINFORCED KRAFT FACING. DUCT WRAP SHALL BE FASTENED TO DUCTWORK AS PER MANUFACTURER'S DIRECTIONS. ROUND DIFFUSER BRANCHES SHALL BE INSULATED WITH 1" THICK FIBERGLASS SLEEVE WITH REINFORCED FOIL JACKET AND ALL JOINTS AND TERMINATIONS SEALED WITH 4" WIDE FOIL TAPE. ROUND DIFFUSER BRANCHES SHALL BE INSULATED WITH 1" THICK FIBERGLASS SLEEVE WITH REINFORCED FOIL JACKET AND ALL JOINTS AND TERMINATIONS SEALED WITH FOIL OR DUCT TAPE. ROUND/OVAL SUPPLY AND RETURN DUCTWORK EXPOSED TO VIEW AND LOCATED IN THE CONDITIONED SPACE SHALL NOT BE INSULATED. ALL INSULATION SHALL CONFORM TO ENERGY CODE.
20. PROVIDE HEAVY DENSITY (MINIMUM 6 PCF) INSULATION AT DUCTWORK TRAPEZE HANGERS FOR EXTERNALLY INSULATED DUCTWORK.
21. PROVIDE INSULATION FOR ALL CONDENSATION DRAINAGE, ETC.. PIPING AS SPECIFIED FOR COLD WATER PIPE INSULATION IN THE SPECIFICATIONS.
22. PROVIDE HALF ROUND 18 GAUGE GALVANIZED SHEET METAL HANGER SHIELDS FOR INSULATION PROTECTION AT ALL PIPE HANGERS.
23. THE MECHANICAL SYSTEMS SHALL BE COMPLETE WITH ALL NECESSARY APPURTENANCES FOR A COMPLETE OPERATING SYSTEM.
24. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING AS REQUIRED. THERMOSTATS SHALL BE AS SPECIFIED IN THE SPECIFICATIONS, OR AS FURNISHED WITH THE EQUIPMENT. PROVIDE TRANSFORMERS AS REQUIRED.
25. PROVIDE UL APPROVED FIRE DAMPERS FOR ALL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS, CEILINGS, AND FLOORS. INSTALL FIRE DAMPERS AS PER MANUFACTURER'S DIRECTIONS AND AS PER UL GUIDE LINES. PROVIDE ACCESS DOORS IN DUCTWORK AND ACCESS PANELS IN BUILDING CONSTRICTION AS REQUIRED FOR SERVICING OF FIRE DAMPERS.
26. ALL ROOF PENETRATIONS EXCEEDING 12" X 12" IN SIZE SHALL BE FURNISHED WITH BURGLAR BARS.
27. MECHANICAL CONTRACTOR SHALL BALANCE SYSTEM TO AIR QUANTITIES SHOWN ON PLAN. BALANCING CONTRACTOR SHALL USE DUCT MOUNTED MANUAL DAMPERS FOR AIR SYSTEM BALANCING. USE OF TERMINAL DAMPER IS NOT ACCEPTABLE.
28. THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED 48 HOURS OR MORE PRIOR TO ALL FINAL TESTING AND BALANCING WORK SO THAT THEY AND/OR THE ENGINEER MAY BE PRESENT TO OBSERVE THIS WORK. THE MECHANICAL CONTRACTOR SHALL SUBMIT WRITTEN REPORTS OF ALL AIR FLOW READINGS, STATIC PRESSURES, GPM RATES, PRESSURE READINGS, TEMPERATURE READINGS, MOTOR AMPERAGE, ETC.. TO DOCUMENT PROPERLY OPERATING AND BALANCED MECHANICAL SYSTEMS IN ALL AREAS. REFER TO SPECIFICATIONS FOR DETAILED SCOPE OF WORK.
29. ALL MECHANICAL EQUIPMENT TO BE SUSPENDED MUST BE SUSPENDED FROM THE TOP CHORD OF THE BAR JOISTS UNLESS SPECIFICALLY STATED OTHERWISE FROM THE STRUCTURAL ENGINEER.

MECHANICAL ABBREVIATIONS

A.D.	ACCESS DOOR
A.C.C.	AIR COOLED CONDENSER
A.F.F.	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ACCU	AIR COOLED CONDENSING UNIT
B.I.	BLACK IRON
EF	EXHAUST AIR FAN
ET	EXPANSION TANK
E.T.R.	EXISTING TO REMAIN
F.C.	FLEXIBLE CONNECTION
F.O.B.	FLAT ON BOTTOM
F.O.T.	FLAT ON TOP
G.I.	GALVANIZED IRON
MOD	MOTOR OPERATED CONTROL DAMPER
N.C	NEW CONNECTION TO EXISTING
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
RTU	ROOF TOP HVAC UNIT
S.S.	STAINLESS STEEL
T	THERMOSTAT
T.V.	AIRFOIL TURNING VANES
U.C.D.	UNDER CUT DOOR, SEE ARCH. DWG'S
U.N.O.	UNLESS NOTED OTHERWISE
ARCH	ARCHITECT OR ARCHITECTURAL
BLD'G	BUILDING
BOT.	BOTTOM
CL'G.	CEILING
COL.	COLUMN
DET.	DETAIL
DN.	DOWN
DWG.	DRAWING
E.A.T.	ENTERING AIR TEMPERATURE
FL'R	FLOOR
GA.	GAUGE
H/AC	HEATING AND AIR CONDITIONING
L.A.T.	LEAVING AIR TEMPERATURE
REQ'D	REQUIRED
W/	WITH
Ø	DIAMETER/ROUND

MECHANICAL SYMBOLS

	RUSKIN MODEL NO. MD-35 OPPOSED BLADE DAMPER OR NO. MDRS-25 MANUAL VOLUME DAMPER (VD) WITH LOCKING HAND QUADRANT HANDLE (RAISED PLATFORM FOR EXTERNALLY INSULATED DUCTWORK) AND AIR-TIGHT END BEARINGS.
	MANUAL VOLUME DAMPER WITH OPERATOR (VDO), SAME DAMPER AS ABOVE WITH VENTFABRICS, INC.. NO. 677 CONCEALED DAMPER REGULATOR WITH 1/2" ROD NO. 680 RIGHT ANGLE GEAR ASSEMBLY AND CHROME CEILING COVER PLATE.
T DEVICE	THERMOSTAT WITH DEVICE CONTROLLED.
S DEVICE	REMOTE TEMPERATURE SENSOR WITH DEVICE CONTROLLER.
C DEVICE	REMOTE CO2 SENSOR WITH DEVICE CONTROLLER.
H DEVICE	REMOTE HUMIDITY SENSOR WITH DEVICE CONTROLLER.
	TYPICAL SUPPLY DIFFUSER. DIFFUSER TAG: 14"Ø NECK SIZE; A IDENTIFIER; 850 CFM CFM
	TYPICAL RETURN OR EXHAUST GRILLE. DIFFUSER TAG: 14"Ø NECK SIZE; A IDENTIFIER; 850 CFM CFM
	AIRFOIL TURNING VANES, TYPICAL FOR ALL SQUARE TURNS.
	FLEXIBLE DUCTWORK, FLEXMASTER TRIPLE LOCK ALUMINUM DUCTWORK, MAXIMUM 2'-0" LONG.
CD	CONDENSATE DRAINAGE PIPING
G	GAS PIPING
	LINE SIZE GATE VALVE
	LINE SIZE BALL VALVE (2" & SMALLER) OR LINE SIZE BUTTERFLY VALVE (2-1/2" & LARGER)
	LINE SIZE BALANCING VALVE
	LINE SIZE CHECK VALVE
	LINE SIZE UNION

AIR BALANCE SCHEDULE

EQUIPMENT TAGS	SUPPLY AIR (CFM)	RETURN AIR (CFM)	OUTDOOR AIR (CFM)	EXHAUST AIR (CFM)	PRESSURE
RTU-1 (ETR)	1600	1400	200	0	+200
RTU-2	2400	2000	500	0	+500
MUA-1	2530	0	2530	0	+2530
KEF-1	0	0	0	2875	-2875
EF-1	0	0	0	70	-70
EF-2	0	0	0	70	-70
TOTALS					+215 CFM POSITIVE

MECHANICAL DRAWING INDEX

DIFFUSER AND GRILLE SCHEDULE

PLAN MARK	SERVICE	MODULE	BLADE	MOUNTING LOCATION	FASTENING	MOUNTING FRAME	MATERIAL	FINISH	MANUFACTURER	MODEL NO.	NOTES
S-1	SUPPLY	24"x24"	PLAQUE	CEILING	LAY-IN	TYPE-3	ALUMINUM	#26 WHITE	TITUS	OMNI	1
S-2	SUPPLY	12"x12"	PLAQUE	CEILING	SURFACE MOUNT	TYPE-1	ALUMINUM	#26 WHITE	TITUS	OMNI	1, 2
S-3	SUPPLY	24"x24"	PLAQUE	CEILING	LAY-IN	TYPE-3	ALUMINUM	#84 BLACK	TITUS	OMNI	1
R-1	RETURN	24"x24"	EGG-CRATE	CEILING	LAY-IN	TYPE-3	ALUMINUM	#26 WHITE	TITUS	50 F	
R-2	RETURN	24"x24"	EGG-CRATE	CEILING	LAY-IN	TYPE-3	ALUMINUM	#84 BLACK	TITUS	50 F	

NOTES:
1. INSULATE BACK OF ALL SUPPLY AIR DEVICES.
2. PROVIDE MODEL TRM PLASTER MOUNTING FRAME FOR DIFFUSER INSTALLATION IN HARD CEILING.

EXHAUST FAN SCHEDULE

DESIG'N	SERVICE	MFG'R	MODEL NO.	TYPE	CFM	STATIC PRESSURE ("W.C.)	DRIVE	ELECTRICAL H.P. (WATTS)	ELECTRICAL PHASE (Ø)	ELECTRICAL VOLTAGE	ROOF CURB	BACKDRAFT DAMPER	OPER. WEIGHT (LBS.)	NOTES
EF-1	RESTROOM	CAPTIVEAIRE	CAPTIVEAIRE CFA-D90-CA	CEILING MOUNTED	70	0.25	DIRECT	0.043	1	115	NA	INTEGRAL	24	1
EF-2	RESTROOM	CAPTIVEAIRE	CAPTIVEAIRE CFA-D90-CA	CEILING MOUNTED	70	0.25	DIRECT	0.043	1	115	NA	INTEGRAL	25	1
KEF-1	EXHAUST	CAPTIVEAIRE	DU180HFA	ROOFTOP	2875	1.7000	DIRECT	2	3	208	YES	-	188	2

NOTE:
1. INTERLOCK WITH LIGHT SWITCH.
2. REFER TO CAPTIVEAIRE DRAWINGS FOR ADDITIONAL INFORMATION.

ROOFTOP UNIT SCHEDULE

DESIG'N	MANUFACTURER AND MODEL NO.	NOMINAL TONS	SUPPLY CFM	O.A. CFM	E.S.P. W.C.	COOLING CAPACITY E.A.T. (F° DB/WB)	COOLING CAPACITY TOTAL (MBH)	COOLING CAPACITY SENSIBLE (MBH)	HEATING CAPACITY GAS INPUT (MBH)	HEATING CAPACITY HEAT OUTPUT (MBH)	ELECTRICAL MAX. SUPPLY FAN H.P.	ELECTRICAL VOLTS	ELECTRICAL PHASE	ELECTRICAL MCA	ELECTRICAL MOCP	E.E.R.	APPROXIMATE WEIGHT (LBS)	REMARKS
RTU-1 (BY LANDLORD)	BRYANT 580FPV048115AB	4.0	1600	200	1.0	80/67	47	41.1	115	92	1.0	208	3	35	50	10	482	EXISTING ROOFTOP UNIT FURNISHED BY LANDLORD. BALANCE TO CFM SHOWN..
RTU-2	TRANE YSC072H3	6.0	2400	500	1.0	80/67	75	66.1	120	96	1.0	208	3	35	50	11.2	1045	

- 14" HIGH ROOF CURB
- FACTORY PROVIDED DIFFERENTIAL ENTHALPY, HIGH PERFORMANCE OUTSIDE AIR ECONOMIZER WITH FAULT DIAGNOSTICS PER CODE.
- 7 DAY PROGRAMMABLE THERMOSTAT LOCATED ON PLANS.
- LOUVERED CONDENSER COIL HAIL GUARDS.
- FACTORY INSTALLED NON-FUSED DISCONNECT.
- FACTORY INSTALLED NON-POWERED GFI WEATHERPROOF CONVENIENCE OUTLET.
- FACTORY INSTALLED SMOKE DETECTORS, SMOKE DETECTOR TO BE MOUNTED IN RETURN AIR DUCT OR AS REQUIRED BY LOCAL CODE.
- FACTORY START-UP
- EACH UNIT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- INSTALL FACTORY FURNISHED ITEMS SHIPPED LOOSE FOR FIELD INSTALLATION.
- MINIMUM MERV 8 FILTERS.
- OA DAMPERS TO REMAIN CLOSED DURING UNOCCUPIED HOURS. OA DAMPERS TO OPEN DURING OCCUPIED HOURS AND WHEN KITCHEN EXHAUST FANS ARE OPERATING.
- 2-STAGE COOLING

MAKE-UP AIR UNIT SCHEDULE

DESIG'N	MFG'R	MODEL NO.	FAN SECTION CFM	FAN SECTION S.P. ("W.C.)	FAN SECTION RPM	COOLING COIL TYPE	COOLING TOTAL CAPACITY (MBH)	COOLING SENSIBLE CAPACITY (MBH)	COOLING E.A.T. (DB/WB) (°F)	COOLING L.A.T. (DB/WB) (°F)	ELECTRICAL FAN (H.P.)	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	UNIT WEIGHT (LBS)	REMARKS
MAU-1	CAPTIVEAIRE	A2-D.250-20D-MPU	2530	.5	1228	DX	57	34	91/76	75.7/69.9	1.5	208	3	1352	REFER TO CAPTIVEAIRE DRAWINGS FOR ADDITIONAL INFORMATION.

TERIYAKI MADNESS

SEAL:

STATE OF OHIO · JOSEPH G. THOMAS · E-64942 · REGISTERED PROFESSIONAL ENGINEER

Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 45342

SHEET TITLE:
MECHANICAL NOTES, LEGEND AND ABBREVIATIONS

DATE:

REVISIONS:

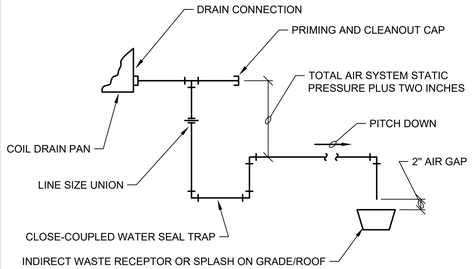
NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

PROJECT NUMBER:

DRAWN BY: BH

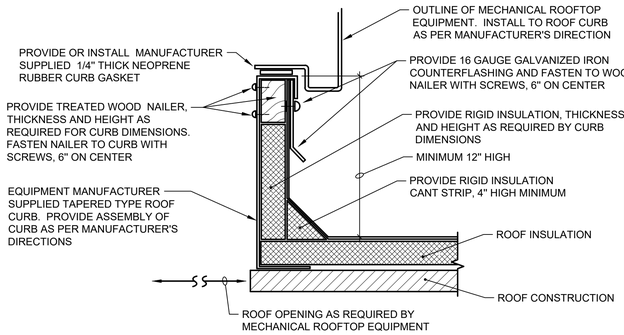
CHECKED BY: JT

M001



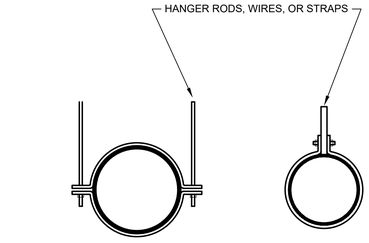
NOTES:
1. SCHEDULE 40, GALVANIZED STEEL PIPE AND FITTINGS OR PVC PIPE AND FITTINGS IF ALLOWED BY CODE.
2. SEE PLANS FOR PIPE SIZES.

TYPICAL COIL CONDENSATE DRAIN PIPING DETAIL (DRAW-THRU)
NOT TO SCALE

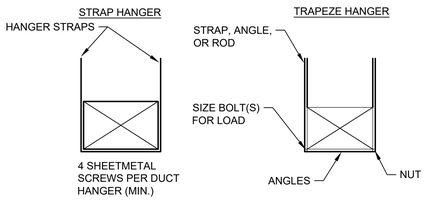


NOTES:
1. CURB SHALL BE TAPERED TYPE AND MATCH THE PITCH OF THE ROOF.
2. CUT AND PATCH EXISTING ROOFING AS REQUIRED FOR NEW CURB INSTALLATION.
3. SECURELY INSTALL CURB TO ROOF; USE FASTENERS AS REQUIRED BY ROOF CONSTRUCTION.

TYPICAL MECHANICAL EQUIPMENT ROOF CURB INSTALLATION DETAIL
NOT TO SCALE

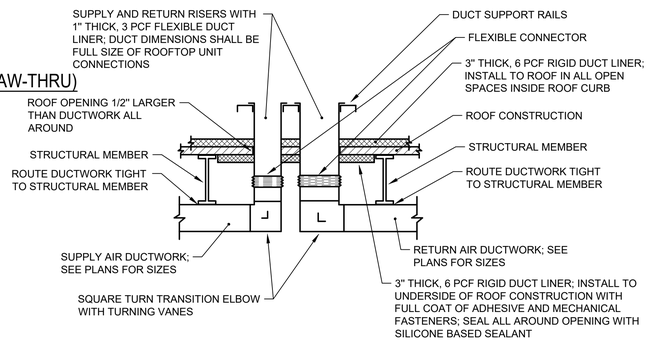


HANGER SIZES FOR ROUND DUCT			
ROUND DIAMETER	ROUND HANGERS	STRAP HANGERS	MAX. SPACING
UP THRU 18"	8 GAUGE WIRE OR 1/4" ROD	1"x16 GAUGE	10'–0"
UP THRU 18"	TWO 8 GAUGE WIRE OR 3/8" ROD	1"x12 GAUGE	10'–0"

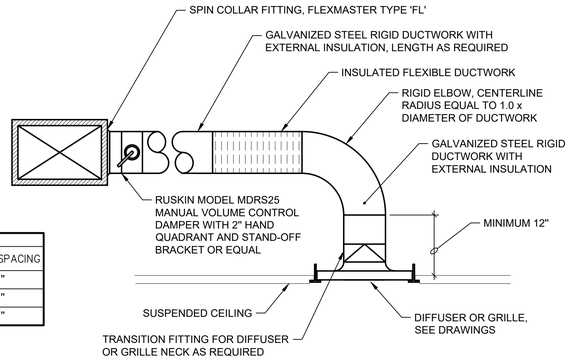


HANGER SIZES FOR RECTANGULAR DUCT				
LONGEST DIM. OF DUCT	ROUND HANGERS	STRAP HANGERS	TRAPEZE SHELF HANGERS	MAXIMUM SPACING
UP THRU 18"	8 GAUGE WIRE	1"x18 GAUGE	1"x1"x1/8"	10'–0"
19" THRU 30"	8 GAUGE WIRE	1"x18 GAUGE	1"x1"x1/8"	10'–0"
31" THRU 42"	3/8" ROD	1"x16 GAUGE	1–1/2"x1–1/2"x1/8"	10'–0"

DUCTWORK HANGER DETAILS
NOT TO SCALE

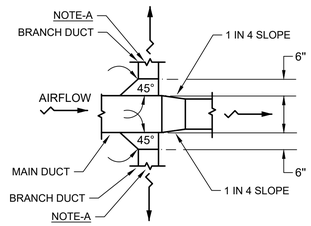


ROOFTOP UNIT DUCT DROP DETAIL
NOT TO SCALE



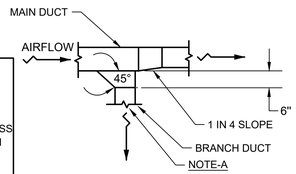
DUCT CONNECTION TO CEILING DIFFUSER OR GRILLE DETAIL
NOT TO SCALE

NOTES:
1. ALL DUCTWORK CONSTRUCTED IN ACCORDANCE WITH ASHRAE HANDBOOK AND PRODUCT DIRECTORY 1988 EQUIPMENT VOLUME, CHAPTER NO. 1.
2. ALL CONTRACTOR FABRICATED AND MANUFACTURER FABRICATED COMPONENTS OF THE OUTSIDE AIR, SUPPLY AIR, RETURN AIR AND EXHAUST SYSTEMS SHALL BE CONSTRUCTED AND INSTALLED AIR-TIGHT. REFER TO DUCTWORK SEALANT DETAILS ON THIS SHEET. PIPE OPENINGS IN SYSTEM COMPONENTS SHALL HAVE SHEET METAL BAFFLES, SET IN SEALANT, TO PREVENT LEAKAGE.

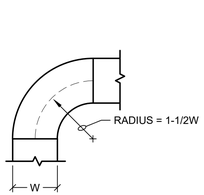


TYPICAL DOUBLE BRANCH TAKE-OFF
NOT TO SCALE

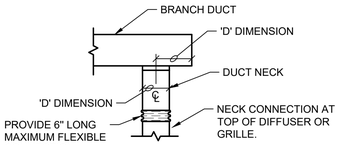
NOTE-A:
BRANCH TAKE-OFF TRANSITION FITTING DEPTH AT CONNECTION TO MAIN SHALL BE 1" LESS THAN MAIN DUCT DEPTH AND TRANSITION TO BRANCH DUCT DIMENSION.



TYPICAL SINGLE BRANCH TAKE-OFF
NOT TO SCALE



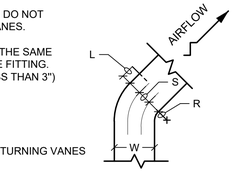
TYPICAL 30° TO 90° RADIUS ELL TURN FITTING
NOT TO SCALE



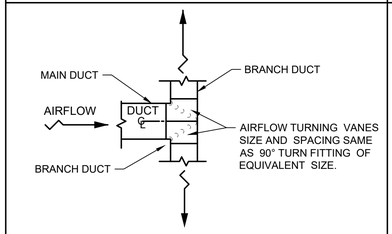
1. DUCT BRANCH AND DUCT NECK SHALL BE RIGID SHEET METAL CONSTRUCTION.
2. FLEXIBLE CONNECTION SHALL BE METAL-EDGE VENTILATION FABRIC OR TRIPLE-LOK FLEXIBLE ALUMINUM AIR DUCT.

TYPICAL TOP CONNECTION TO DIFFUSER OR GRILLE DETAIL
NOT TO SCALE

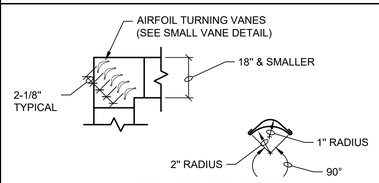
NOTES:
1. FITTING 29° AND LESS DO NOT REQUIRE TURNING VANES.
2. TURNING VANE IS OF THE SAME GAUGE METAL AS THE FITTING.
   R = 1/3 'W' (W/NOT LESS THAN 3")
   S = 1/3 'W'
   L = 1/3 'W'



TYPICAL 30° TO 89° TURN FITTINGS
NOT TO SCALE

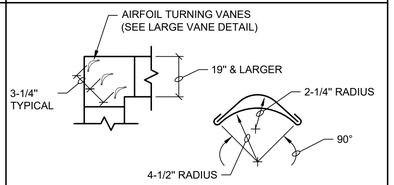


TYPICAL DOUBLE 90° TURN FITTING
(EQUAL CFM SPLIT SHOWN, UNEQUAL CFM SPLIT SIMILAR)
NOT TO SCALE



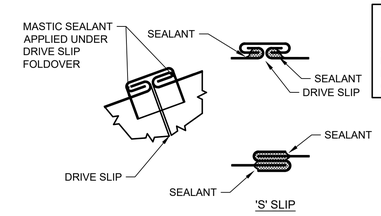
SMALL DOUBLE AIRFOIL TURNING VANE

TYPICAL 90° TURN FITTING
18" AND SMALLER
NOT TO SCALE



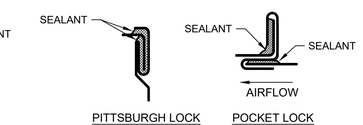
LARGE DOUBLE AIRFOIL TURNING VANE

TYPICAL 90° TURN FITTING
19" AND LARGER
NOT TO SCALE

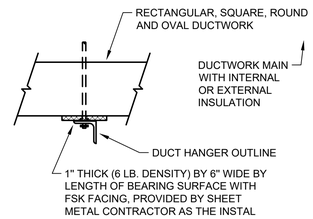


DUCTWORK SEALANT DETAIL NO. 1
NOT TO SCALE

IMPORTANT NOTE
SEALANT SHALL BE APPLIED TO DUCTWORK BEFORE ASSEMBLY.
EXCESS LIQUID OR MASTIC SHALL BE REMOVED WITH PROPER SOLVENT WHEREVER DUCTWORK IS EXPOSED IN OCCUPIED AREAS.



DUCTWORK SEALANT DETAIL NO. 2
NOT TO SCALE



DETAIL OF INSULATION AT DUCT HANGER
NOT TO SCALE

DUCTWORK DETAILS
NOT TO SCALE

TERIYAKI MADNESS

SEAL:
STATE OF OHIO
JOSEPH G. THOMAS
E-64942
REGISTERED PROFESSIONAL ENGINEER
Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 35342

SHEET TITLE:
MECHANICAL DETAILS

DATE:

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

PROJECT NUMBER:

DRAWN BY: BH

CHECKED BY: JT

M002

PLAN NOTES

1. SUPPLY AND RETURN DUCT RISERS UP TO LANDLORD PROVIDED ROOFTOP UNIT RTU-1, SEE ROOF PLAN FOR CONTINUATION. PROVIDE FITTINGS AS NECESSARY
2. SUPPLY AND RETURN DUCTS UP TO RTU-2. SEE ROOF PLAN FOR CONTINUATION.
3. SUPPLY DUCT UP THRU ROOF TO MAU-1, SEE ROOF PLAN FOR CONTINUATION. PROVIDE FITTINGS AS NECESSARY
4. INSTALL TYPE 1 EXHAUST HOOD H-1 FURNISH BY OTHERS. SEE FOOD SERVICE/ CAPTIVEAIRE DRAWINGS FOR SPECIFICATION AND ADDITIONAL INFORMATION.
5. 24x12 MAKE UP AIR DUCT DOWN TO HOOD H-1 WITH MANUAL VOLUME DAMPER IN DROP, BALANCE TO 633 CFM.
6. ALL KITCHEN GREASE HOOD DUCTWORK SHALL BE CONSTRUCTED OF 16 GAUGE BLACK IRON. ALL JOINTS INCLUDING THE CONNECTION TO THE EXHAUST HOOD SHALL BE CONTINUOUSLY WELDED LIQUID TIGHT. ALL GREASE DUCTWORK SHALL BE ROUTED A MINIMUM OF 18" FROM COMBUSTIBLE MATERIALS OR BE COVERED WITH 2 LAYERS OF APPROVED FIRE WRAP IN ACCORDANCE WITH ASTM E 2336 FOR 0" CLEARANCE TO COMBUSTIBLES. GREASE DUCT SHALL BE CONTINUOUSLY COVERED WITH FIRE WRAP ON ALL SIDES FROM THE POINT AT WHICH THE GREASE DUCT ORIGINATES TO THE OUTLET TERMINAL. PROVIDE ACCESS DOORS IN GREASE DUCTS FOR GREASE CLEAN OUT PER CODE. ACCESS DOOR SHALL BE RATED FOR GREASE SERVICE.
7. 16"Ø KITCHEN EXHAUST DUCT UP THRU ROOF TO EXHAUST FAN KEF-1.
8. PROVIDE SMOKE DETECTOR IN RETURN DROP OF RTU AS INDICATED.
9. 8"Ø TOILET EXHAUST THRU ROOF, EXHAUST SHOULD BE MINIMUM 10' FROM ANY OUTSIDE AIR INTAKES.
10. CONCENTRIC VENTS FROM TANK-LESS WATER HEATERS THRU ROOF.
11. 2" PVC VENTS AND COMBUSTION AIR INTAKES FROM TANK-LESS WATER HEATERS. CONFIRM MATERIALS AND SIZES WITH MANUFACTURERS INSTALLATION MANUAL.
12. PROVIDE THERMOSTAT IN LOCATION INDICATED AT 48" AFF. COORDINATE WITH ARCHITECT AND FURNITURE AS REQUIRED.

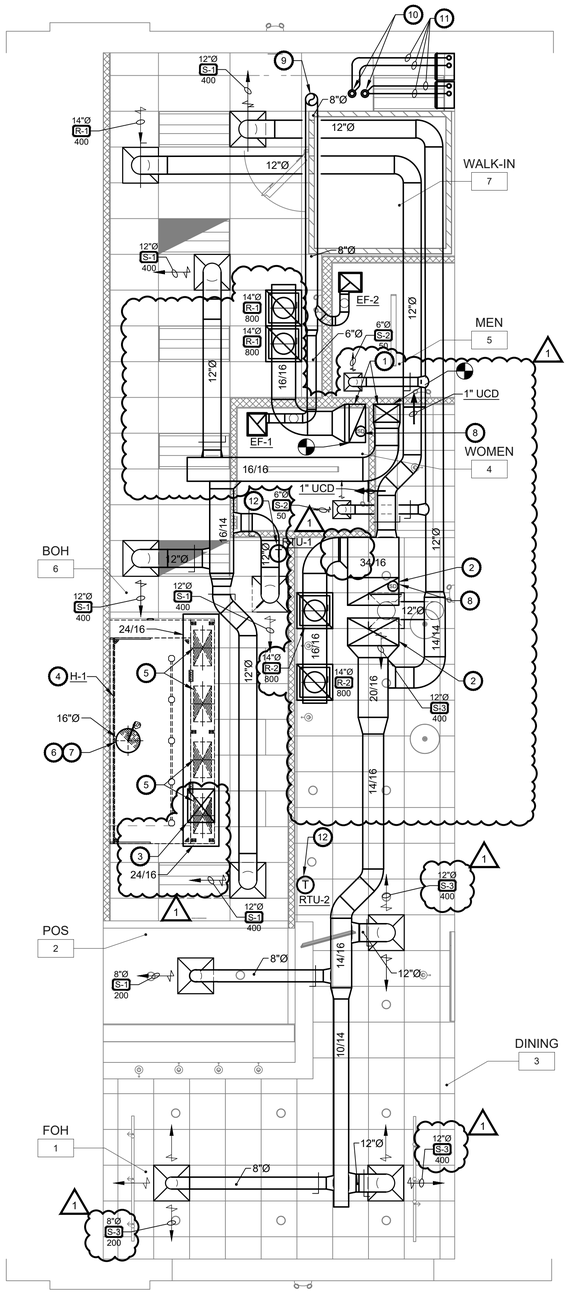
1

LANDLORD NOTES

NO PENETRATIONS THROUGH THE EXTERIOR WALL WILL BE PERMITTED, E.G. CO2 FILL VALVES, GREASE EVACUATION/EXTRACTION PIPING CONNECTIONS, ETC.

ALL EQUIPMENT MUST BE LOCATED WITH THE PREMISES.

NO EXTERIOR BUILDING MODIFICATIONS ARE PERMITTED.



MECHANICAL CEILING PLAN
SCALE: 1/4" = 1'-0"

NORTH

TERIYAKI MADNESS

SEAL:

STATE OF OHIO
JOSEPH G. THOMAS
E-64942
REGISTERED PROFESSIONAL ENGINEER

Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 35342

SHEET TITLE:
MECHANICAL CEILING PLAN

DATE:

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

PROJECT NUMBER:

DRAWN BY: BH

CHECKED BY: JT

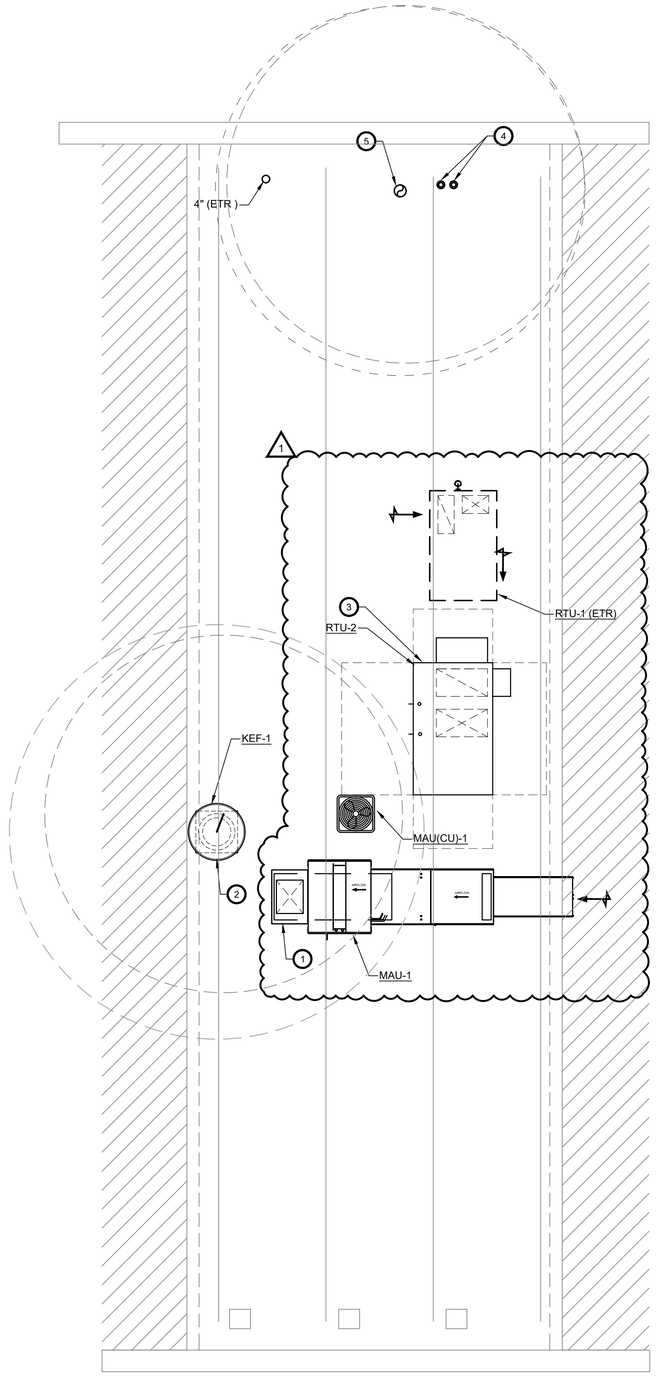
M100

PLAN NOTES

1	INSTALL MAKE-UP AIR UNIT FURNISHED BY CAPTIVEAIRE. SEE CAPTIVAIRE DRAWINGS FOR MORE INFORMATION. PROVIDE DUCT DROP WITH TRANSITION AS REQUIRED TO FIT BETWEEN THE ROOF JOISTS.
2	INSTALL KITCHEN EXHAUST FAN FUNRISHED BY CAPTIVEAIRE. SEE CAPTIVEAIRE DRAWINGS FOR MORE INFORMATION. EXHAUST FAN DISCHARGE SHALL BE 10' MINIMUM FROM ANY OUTSIDE AIR INTAKE INCLUDING ADJACENT TENANT OR BE INSTALLED WITH ITS DISCHARGE 3' ABOVE ANY OUTSIDE AIR INTAKE WITHIN 10'
3	INSTALL ROOF TOP UNIT BY TRAIN.
4	PROVIDE CONCENTRIC PVC/CPVC WATER HEATER INTAKE AND EXHAUST PIPING ALONG WITH ROOF PENETRATION AND TERMINATIONS. PIPING MATERIAL TO BE CODE APPROVED. TERMINATION TO BE 12" ABOVE MAXIMUM SNOW LEVEL, MINIMUM 24".
5	8"Ø TOILET EXHAUST THRU ROOF.

LANDLORD NOTES

ALL ROOF-MOUNTED EQUIPMENT SHALL BE SCREENED BY THE PARAPET WALL.



MECHANICAL ROOF PLAN
SCALE: 1/4" = 1'-0"

NORTH

TERIYAKI MADNESS

SEAL:

STATE OF OHIO
JOSEPH G. THOMAS
E-64942
REGISTERED PROFESSIONAL ENGINEER

Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 35342

SHEET TITLE:
MECHANICAL ROOF PLAN

DATE:

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

PROJECT NUMBER:

DRAWN BY: BH

CHECKED BY: JT

M101

FOR QUESTIONS, CALL THE
Denver Office
REGION 42
PHONE: (720) 570-0981
EMAIL: reg42@captiveaire.com

HOOD INFORMATION – JOB#5994450

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	HD-1	5430 ND-2-PSP-F	CAPTIVEAIRE	11' 6"	600 DEG	I	HEAVY	250	2875			4"	16"	2875	2059	-1.178"	2530	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	SIZE	FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	HD-1	CAPTRATE SOLO FILTER	8	20"	16"	85% SEE FILTER SPEC	5	L55 SERIES E26	NO	RIGHT	12"x54"x30"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	1113 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	HD-1	FIELD WRAPPER 12.00" HIGH FRONT, LEFT, RIGHT.
		BACKSPLASH 128.00" HIGH X 186.00" LONG 430 SS VERTICAL.
		INSULATION FOR BACK OF HOOD.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	LENG	DIA	CFM	SP
1	HD-1	Front	150"	16"	6"	MUA	12"	24"		632	0.178"
						MUA	12"	24"		632	0.178"
						MUA	12"	24"		632	0.178"
						MUA	12"	24"		632	0.178"

SPECIFICATION: CAPTRATE® GREASE-STOP® SOLO FILTER

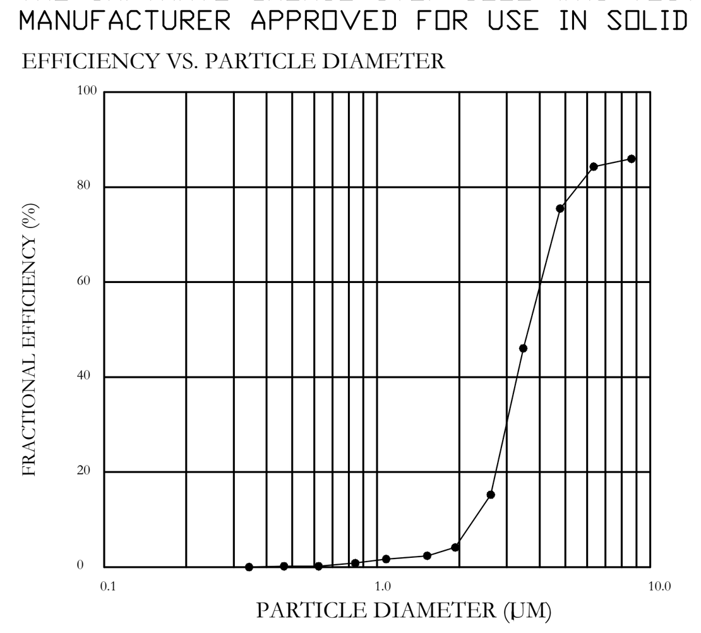
THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

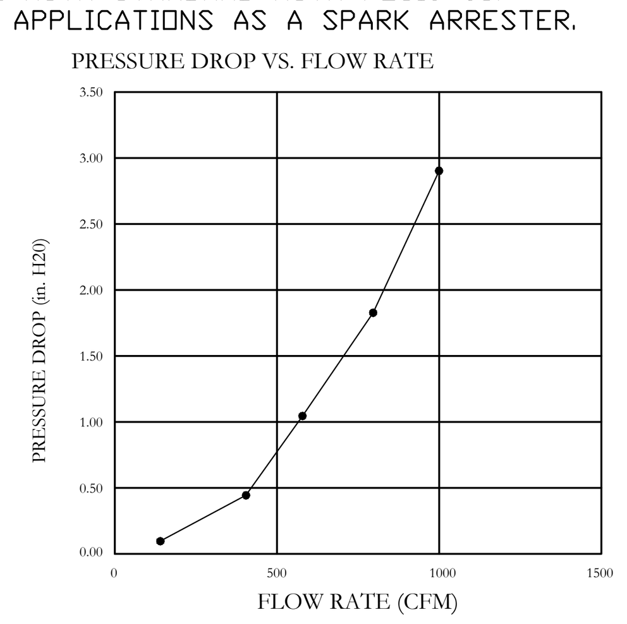
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

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.

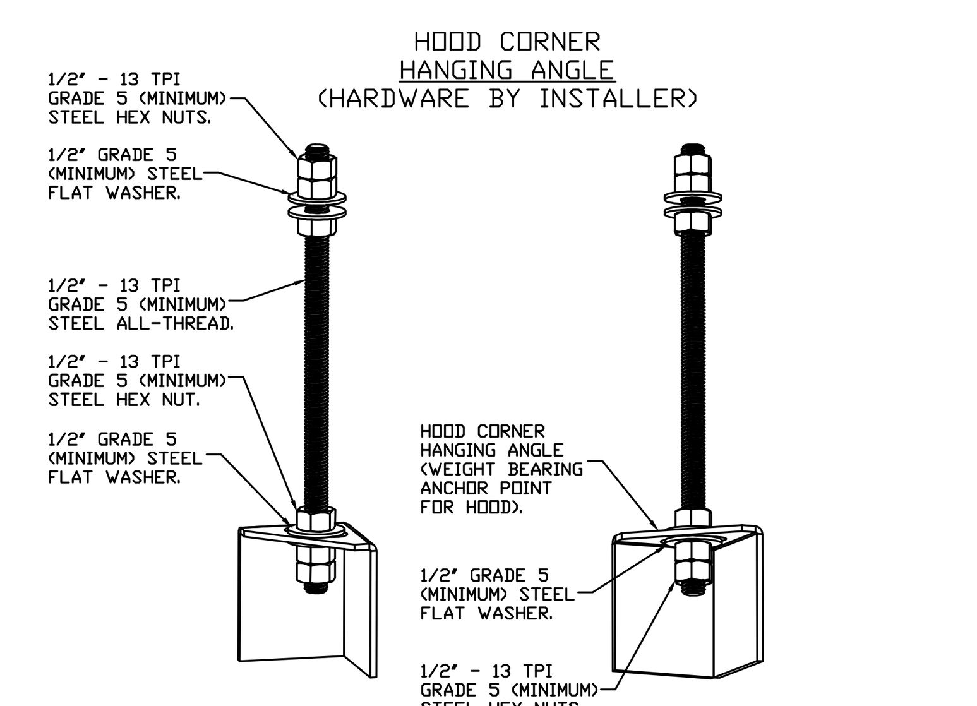




CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

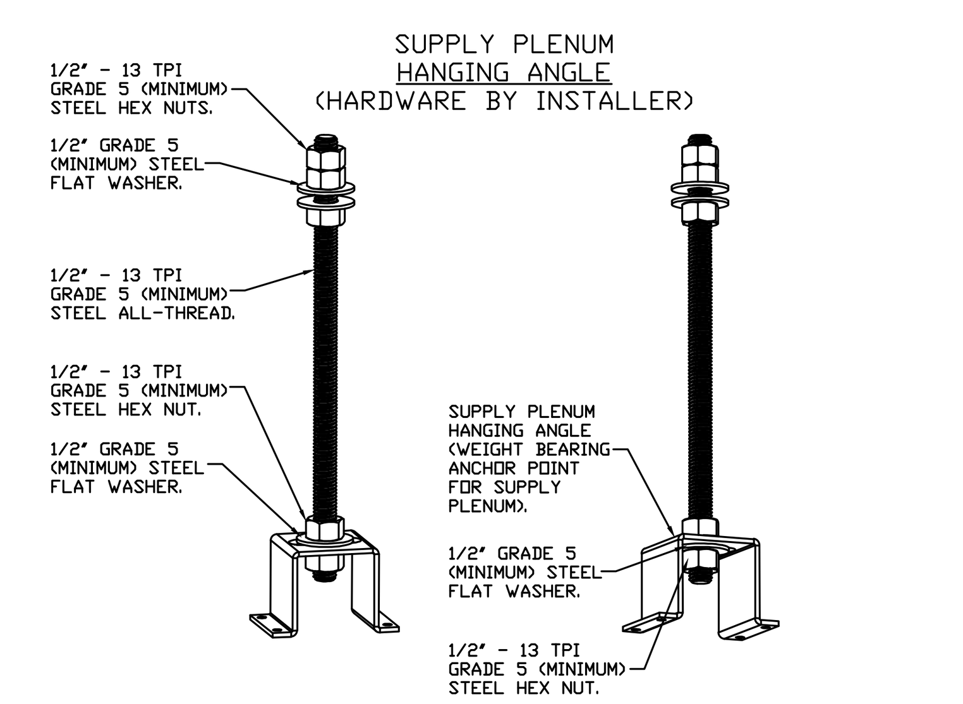
CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH
UL 710 AND NFPA 96
AND ARE RECOGNIZED BY ONE OR MORE OF THE FOLLOWING:
ETL SANITATION LISTED
ETL LISTED FILE# 3054804-001

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH
NFPA #96
NSF
ETL LISTED #3054804-001



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



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.

NOTE: THIS DRAWING IS FOR REFERENCE ONLY. DRAWINGS ARE FROM AN OUTSIDE SOURCE AND ARE NOT SCALED. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

REVISIONS
DESCRIPTION | DATE:

CAPTIVEAIRE
Denver Office
www.captiveaire.com
7300 S Alton Way Building 5, Suite B, Centennial, CO, 80112 PHONE: (720) 570-0981 FAX: (919) 227-5999 EMAIL: reg42@captiveaire.com

Teriyaki Madness - Miamisburg, OH
MIAMISBURG, OH, 45342

DATE: 6/9/2023
DWG.#: 5994450
DRAWN BY: RJC - 42
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 1

TERIYAKI MADNESS

SEAL:
STATE OF OHIO
JOSEPH G. THOMAS
E-64942
REGISTERED PROFESSIONAL ENGINEER
Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 35342

SHEET TITLE:
HOOD DETAILS

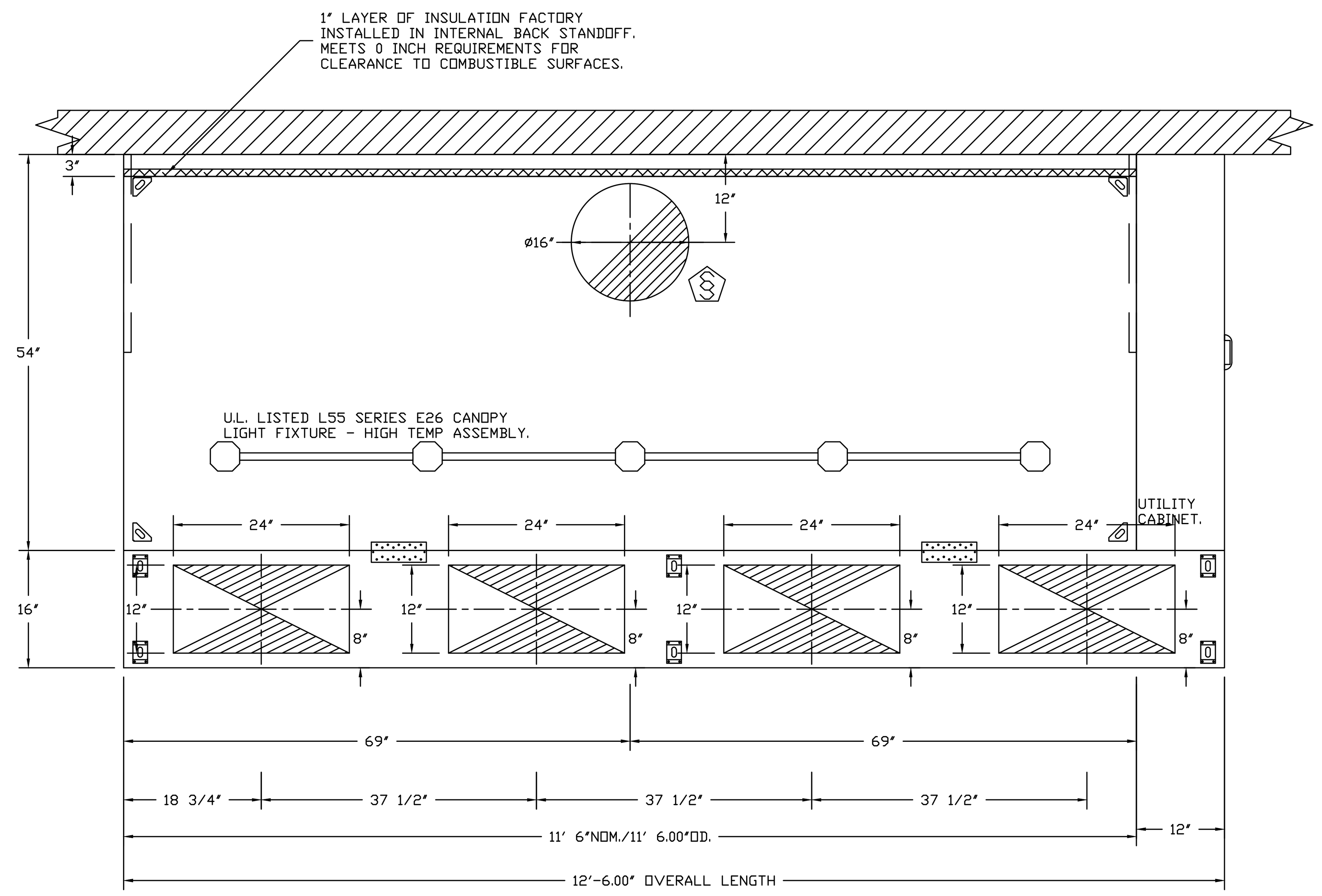
DATE:
REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

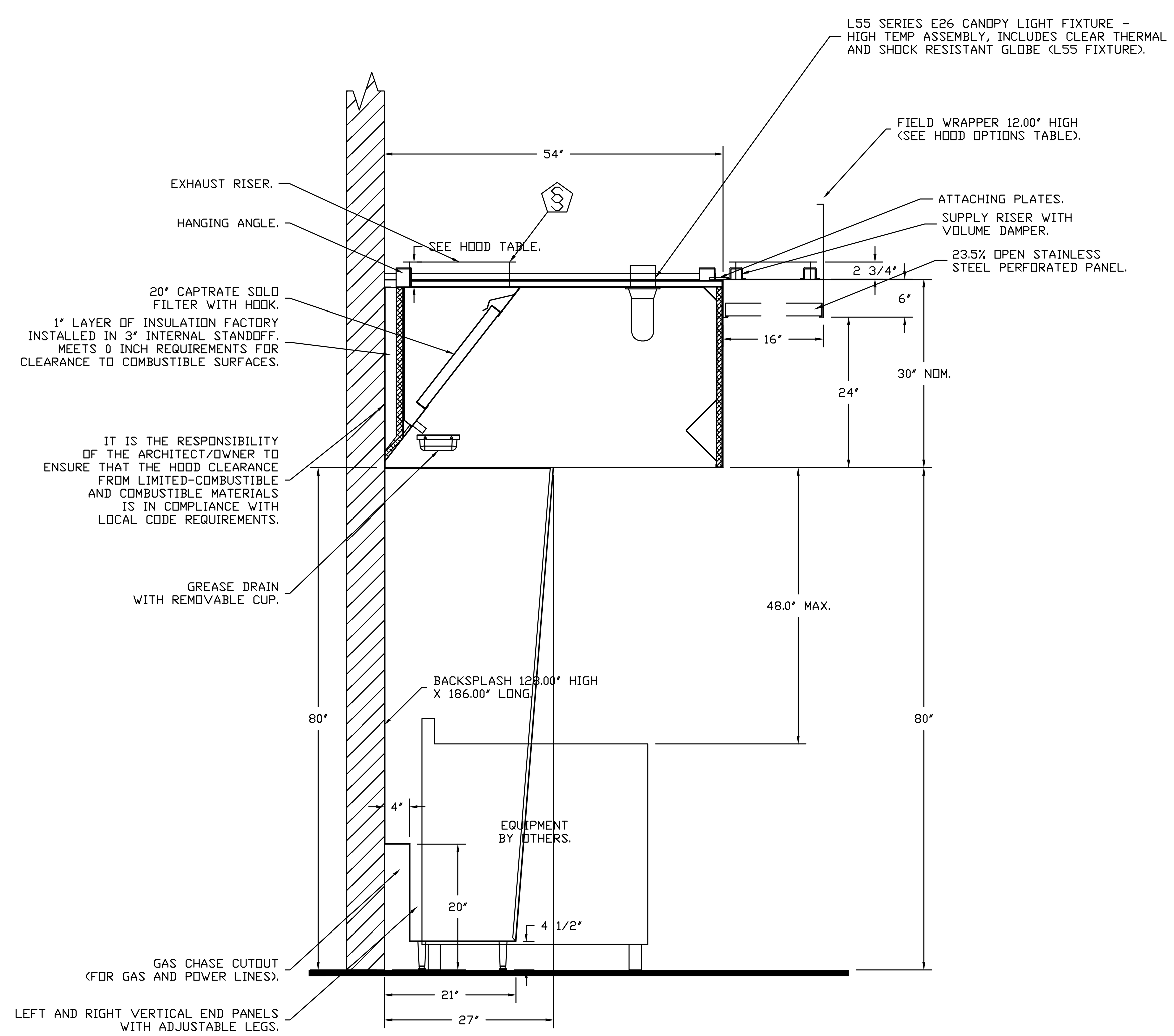
PROJECT NUMBER:
DRAWN BY: BH
CHECKED BY: JT

M200

23237\Dwg\23237_M000-205.dwg, M200, 6/28/2023 7:47:45 AM, 1:1

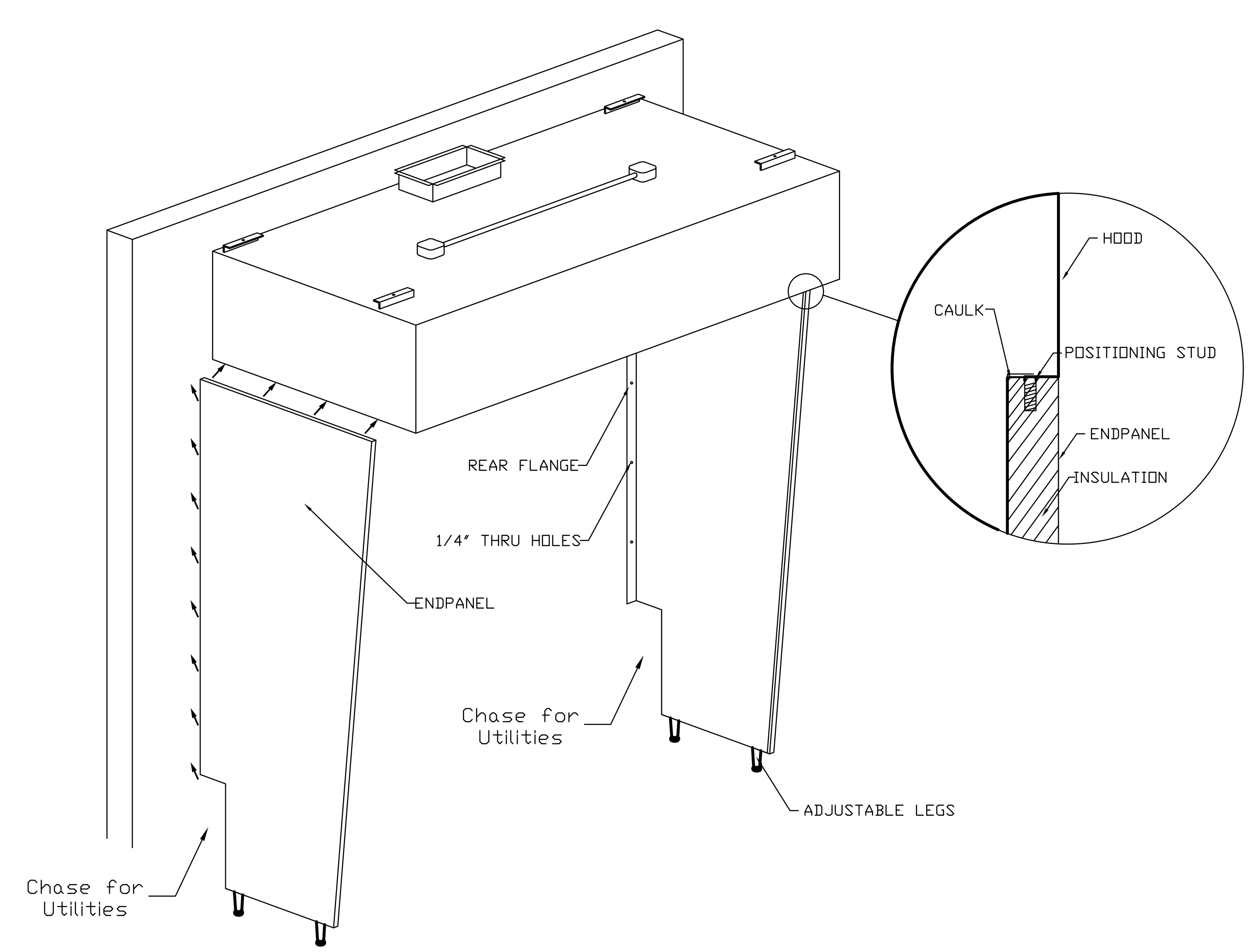


PLAN VIEW – HOOD #1 (HD-1)
11' 6.00" LONG 5430ND-2-PSP-F



SECTION VIEW – MODEL 5430ND-2-PSP-F
HOOD – #1 (HD-1)

ND-2 VERTICAL ENDPANEL



NOTE: THIS DRAWING IS FOR REFERENCE ONLY. DRAWINGS ARE FROM AN OUTSIDE SOURCE AND ARE NOT SCALED. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

REVISIONS

DESCRIPTION	DATE:

CAPTIVEAIRE
Denver Office
www.captiveaire.com

7300 S Alton Way Building 5, Suite B, Centennial, CO, 80112 PHONE: (720) 570-0981 FAX: (919) 227-5999 EMAIL: reg42@captiveaire.com

Teriyaki Madness - Miamisburg, OH
MIAMISBURG, OH, 45342

DATE: 6/9/2023
DWG.#: 5994450
DRAWN BY: RJC - 42
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 2

TERIYAKI MADNESS

SEAL:
STATE OF OHIO
JOSEPH G. THOMAS
E-64942
REGISTERED
PROFESSIONAL ENGINEER
Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE MIAMISBURG, OH, 35342

SHEET TITLE:
HOOD DETAILS

DATE:
REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

PROJECT NUMBER:
DRAWN BY: BH
CHECKED BY: JT

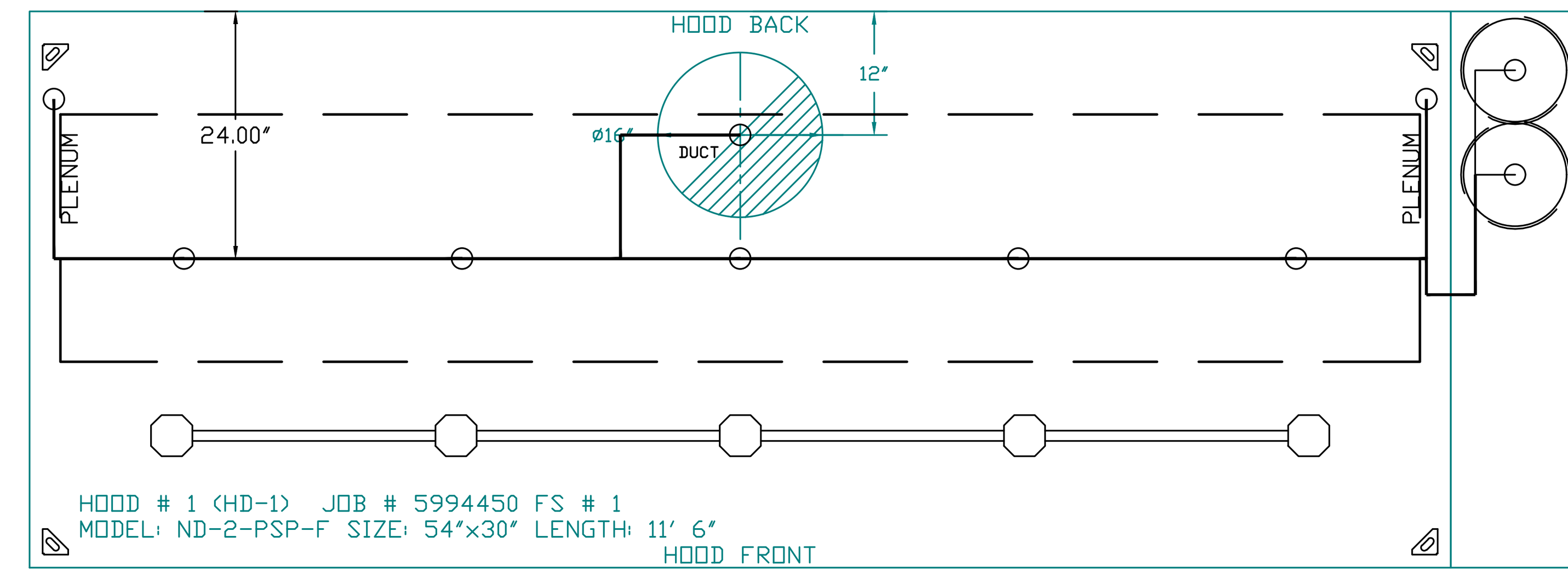
M201

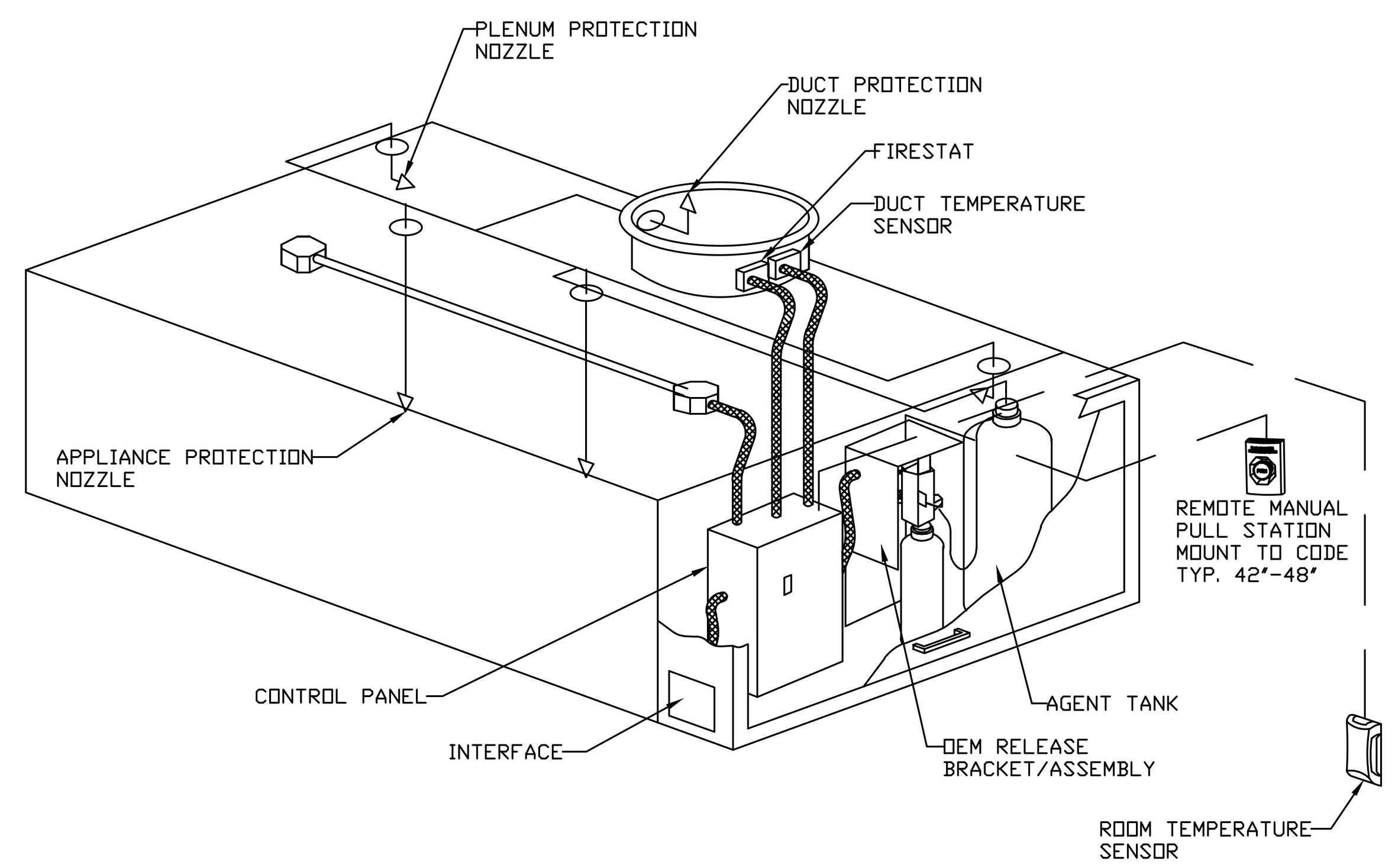
FIRE SYSTEM INFORMATION – JOB#5994450

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

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS





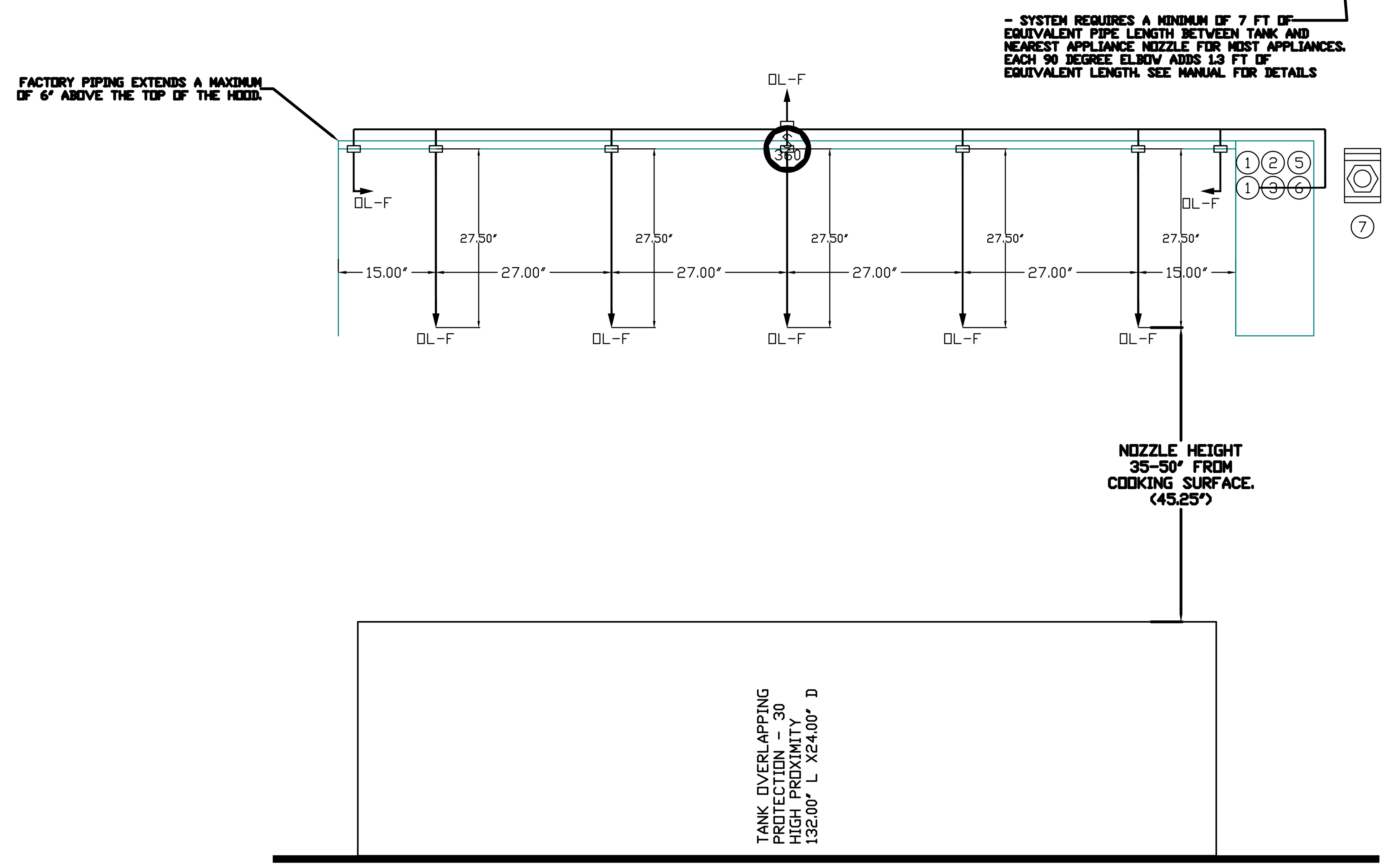
TYPICAL TANK SYSTEM LAYOUT

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 CONTROLS SHALL PROVIDE ALL NECESSARY MONITORING, TIMING AND SUPERVISION FUNCTIONS REQUIRED FOR THE RELIABLE OPERATION OF THE WET CHEMICAL FIRE SUPPRESSION SYSTEM. ALL DEVICES THAT ARE CRITICAL TO PROPER OPERATION SHALL BE SUPERVISED. THE SYSTEM SHALL INCLUDE A BATTERY BACK UP SYSTEM. IN THE EVENT OF A LOSS OF POWER TO THE BUILDING, THE BACKUP SYSTEM SHALL POWER ALL SYSTEMS NECESSARY FOR PROPER OPERATION.

THE SYSTEM SHALL BE CAPABLE OF AUTOMATIC DETECTION AND ACTUATION WITH LOCAL OR REMOTE MANUAL ACTUATION. THE DETECTION PORTION OF THE FIRE SUPPRESSION SYSTEM ALLOWS FOR AUTOMATIC DETECTION BY MEANS OF AN ELECTRIC THERMAL DETECTOR(S) LOCATED IN THE HOOD DUCT CONNECTION(S).



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 EXTINGUISHER(S), 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.

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

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS.

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

JOB #: 5994450.
JOB NAME: TERIYAKI MADNESS - MIAMISBURG, OH.

SYSTEM SIZE: TANK-SP-2 TOTAL FP REQUIRED: 37.
HOOD # 1 11' 6.00" LONG x 54" WIDE x 30" HIGH.
RISER # 1 SIZE: 16" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.

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

LEGEND – FIRE CABINET TANK SYSTEM

1 4 GALLON TANK.
2 PRIMARY ACTUATOR RELEASE.
3 SECONDARY ACTUATOR RELEASE.
4 PRESSURE SUPERVISION SWITCH.
5 PRIMARY HOSE ASSEMBLY.
6 SECONDARY HOSE ASSEMBLY.
7 REMOTE MANUAL ACTUATION DEVICE.

REVISIONS	
DESCRIPTION	DATE:

CAPTIVEAIRE
Denver Office
7300 S Alton Way Building 5, Suite B, Centennial, CO, 80112 PHONE: (720) 570-0981 FAX: (919) 227-5999 EMAIL: reg42@captiveaire.com
www.captiveaire.com

Teriyaki Madness - Miamisburg, OH
MIAMISBURG, OH, 45342

DATE: 6/9/2023
DWG.#: 5994450
DRAWN BY: RJC - 42
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 3

SEAL:
STATE OF OHIO
JOSEPH G. THOMAS
E-64942
REGISTERED PROFESSIONAL ENGINEER
Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 35342

SHEET TITLE:
HOOD DETAILS

DATE:
REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/2023	REVISION #1

PROJECT NUMBER:
DRAWN BY: BH
CHECKED BY: JT

M202

NOTE: THIS DRAWING IS FOR REFERENCE ONLY. DRAWINGS ARE FROM AN OUTSIDE SOURCE AND ARE NOT SCALED. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

EXHAUST FAN INFORMATION – JOB#5994450

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	KEF-1	1	DU180HFA	CAPTIVEAIRE	2875	1.700	1430	ODP,PREMIUM	2.000	1.6900	3	208	8.3	664 FPM	188	23.5

CONDENSER DETAILS

FAN UNIT NO	TAG	FAN UNIT MODEL #	CONDENSER NO	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX FUSE SIZE	MIN WIRE SIZE	SEER
2	MAU-1 (HEAT/ DX)	A2-D.250-20D-MPU	1	5	208-230	3 PHASE	60 HZ	21.4 AMPS	17.4 AMPS	30 AMPS	10 AWG	14

MUA FAN INFORMATION – JOB#5994450

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONES
2	MAU-1 (HEAT/ DX)	1	A2-D.250-20D-MPU	20MF-2-MOD	A2-D.250	2000	2530	0.500	1178	ODP,PREMIUM	1.500	0.8770	3	208	6.6	8.3A	15A	1363	9.2

COILS – JOB#5994450

FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	COOLING											HEATING								
				ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	ENTERING DB TEMP	LEAVING DB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	STEAM PRESSURE	TOTAL CAPACITY	SENSIBLE CAPACITY
2	MAU-1 (HEAT/ DX)	DX	2530	89.0°F	73.0°F	76.3°F	67.6°F	---	---	---	---	49.0 MBH	33.1 MBH	15.9 MBH	---	---	---	---	---	---	---	---	---

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	MAU-1 (HEAT/ DX)	188226	173168	66°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	92

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
2	MAU-1 (HEAT/ DX)	1	MOTORIZED BACKDRAFT DAMPER FOR A2-D HOUSING - MEETS AMCA CLASS 1A RATING
		1	LOW FIRE START
		1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, -5 TO 15" WC
		1	5 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 2 DF/EH MUA (2,000 TO 3,000 CFM), 208V/230V, 3 PHASE. COOLING THERMOSTAT OR PROGRAMMABLE STAT REQUIRED FOR PROPER OPERATION
		1	DOWNTURN PLENUM FOR SIZE 2 DX COIL MODULE
		1	BUTTERFLY MOD VALVE OPTION FOR MOD SIZE 2 (1" MOD VALVE)
		1	SIZE 2 DIRECT FIRED HEATER LOW CFM PROFILE PACKAGE - USED ON HEATERS UNDER 2500 CFM
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	SHIP CONDENSER LOOSE - SINGLE CONDENSER, THREE PHASE - CONDENSER DISCONNECT SHIPPED LOOSE. ALL PIPING AND WIRING BETWEEN INDOOR AND OUTDOOR UNITS BY OTHERS
		1	2 YEAR PARTS WARRANTY

1

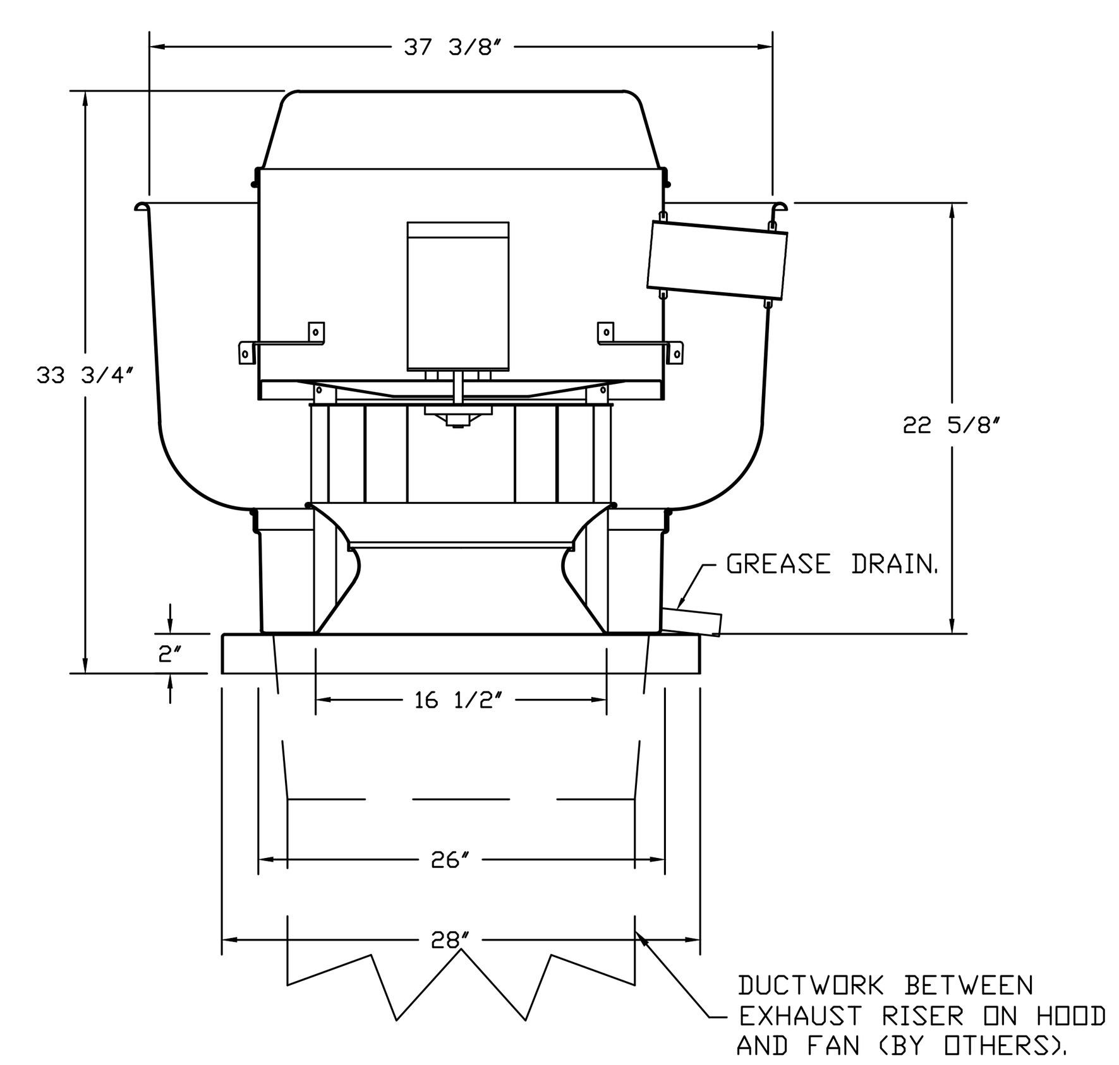
FAN ACCESSORIES

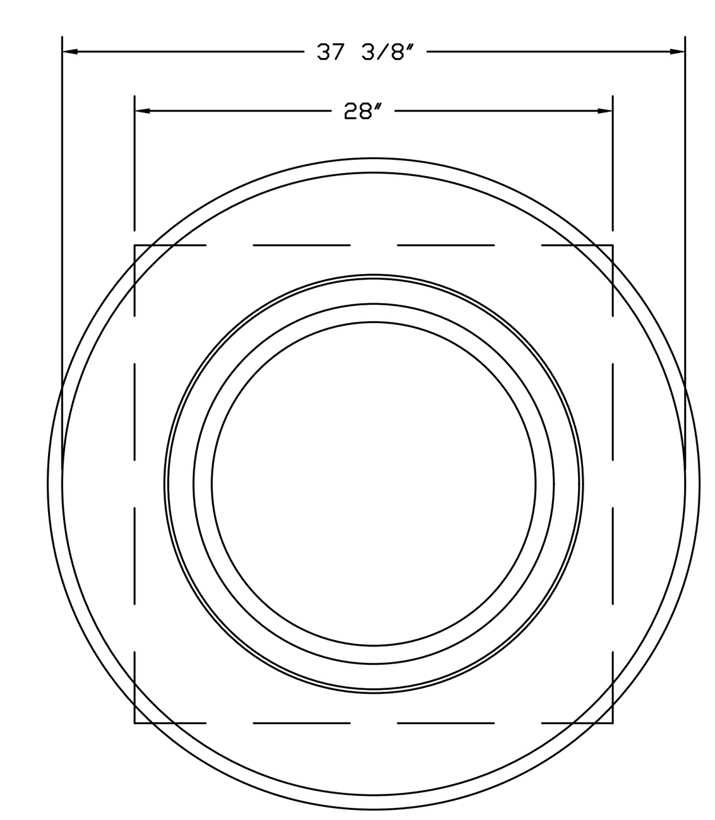
FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						
2	MAU-1 (HEAT/ DX)						YES	

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	34 LBS	CURB	26.500"W X 26.500"L X 26.000"H VENTED HINGED.
2	# 2		107 LBS	RAIL	6.000"W X 31.000"L X 20.000"H.
2	# 2	MAU-1 (HEAT/ EVAP)	107 LBS	CURB	31.000"W X 79.000"L X 20.000"H INSULATED.

FAN #1 DU180HFA – EXHAUST FAN (KEF-1)





TOP VIEW

FEATURES:

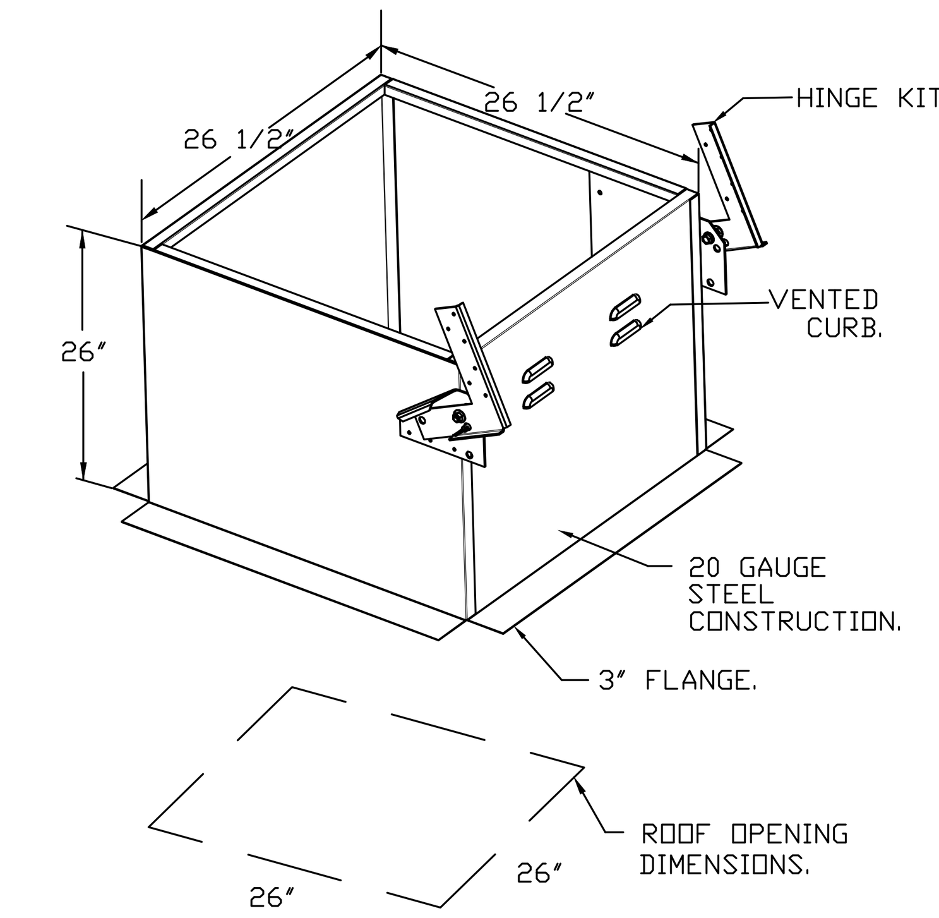
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT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

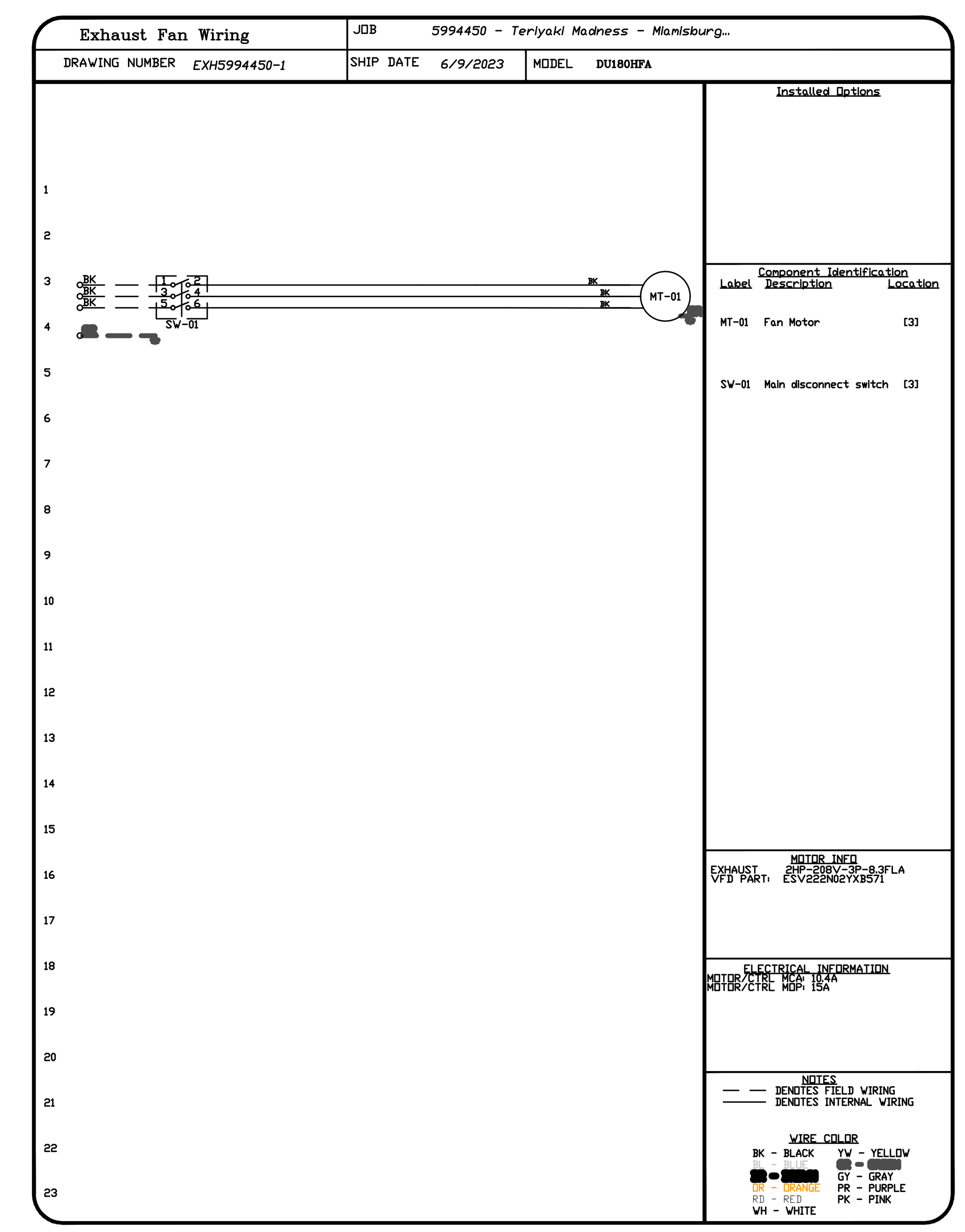
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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 - INSTALLED AT PLANT - FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.





REVISIONS

DESCRIPTION	DATE:

Denver Office
7300 S Alton Way Building 5, Suite B, Centennial, CO, 80112 PHONE: (720) 570-0981 FAX: (919) 227-5999 EMAIL: reg42@captiveaire.com
www.captiveaire.com

Teriyaki Madness - Miamisburg, OH
MIAMISBURG, OH, 45342

DATE: 6/9/2023
DWG.#: 5994450
DRAWN BY: RJC - 42
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 4

SEAL:
STATE OF OHIO JOSEPH G. THOMAS E-64942 REGISTERED PROFESSIONAL ENGINEER
Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 35342

SHEET TITLE:
HOOD DETAILS

DATE:

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

PROJECT NUMBER:
DRAWN BY: BH
CHECKED BY: JT

M203

NOTE: THIS DRAWING IS FOR REFERENCE ONLY. DRAWINGS ARE FROM AN OUTSIDE SOURCE AND ARE NOT SCALED. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

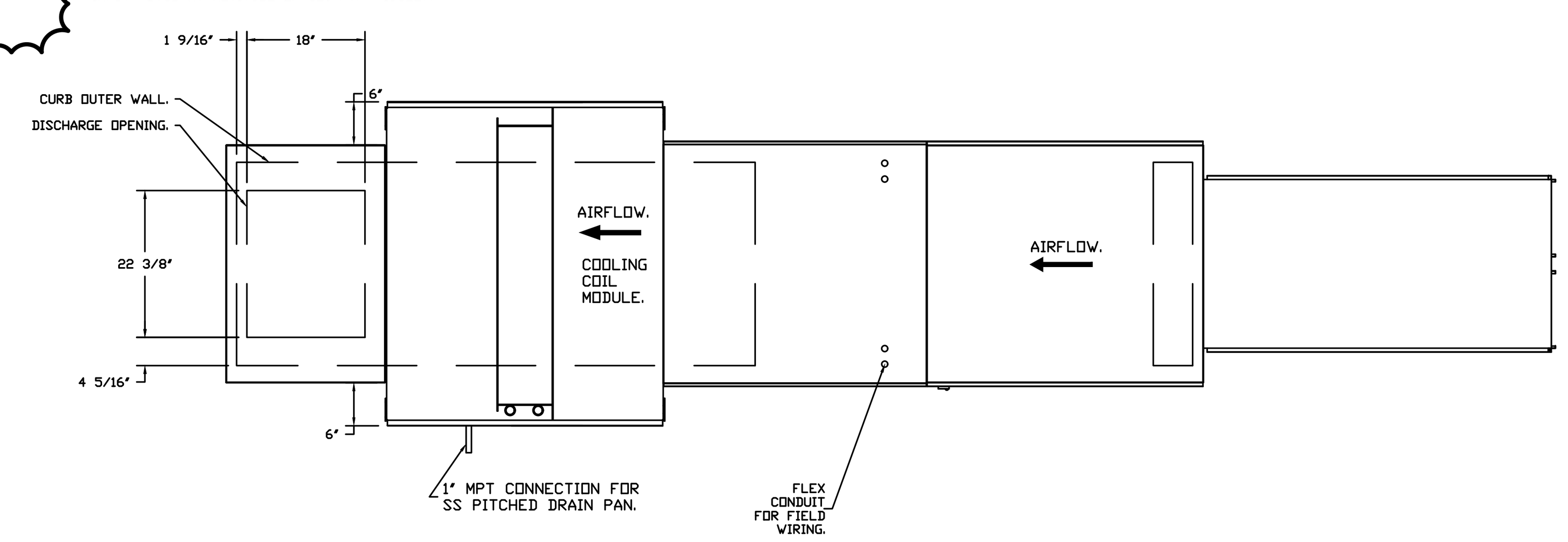
FAN #2 A2-D.250-20D-MPU - HEATER (MAU-1 (HEAT/ DX))
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN.
2. INTAKE HOOD WITH EZ FILTERS.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED.
5. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
6. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE.
8. 5 TON, SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 2 DF/EH MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER/DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING. (2,000 TO 3,000 CFM) WHEN ORDERED WITH OPPOSITE AIRFLOW CONDENSERS ACCESS AND COIL PIPING WILL REMAIN IN STANDARD POSITION. DRAIN AND SLEDS WILL MOVE TO THE OPPOSITE SIDE. ANY OTHER CHANGE WILL REQUIRE CLI. CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL = 3EZ1001R.
9. DOWNTURN PLENUM FOR SIZE 2 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS.
10. BUTTERFLY MOD VALVE OPTION FOR MOD SIZE 2 (1" MOD VALVE).
11. PROFILE PLATE CONFIGURATION FOR SIZE 2 DIRECT FIRED UNIT FOR LOW CFM APPLICATIONS.
12. 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.
13. SHIP CONDENSER LOOSE. THE REFRIGERATION LINES WILL NEED TO BE STUBBED OUT 12 INCHES. THE SUCTION LINE NEEDS TO BE INSULATED INSIDE THE COIL MODULE. ROTARY DISCONNECT SHOULD NOT BE INSTALLED ON THE POST, BLANK POST SHOULD BE USED IN PLACE. ALL PIPING AND WIRING BETWEEN INDOOR AND OUTDOOR UNITS BY OTHERS.
14. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/MPU SECTION).
15. 2 YEAR PARTS WARRANTY

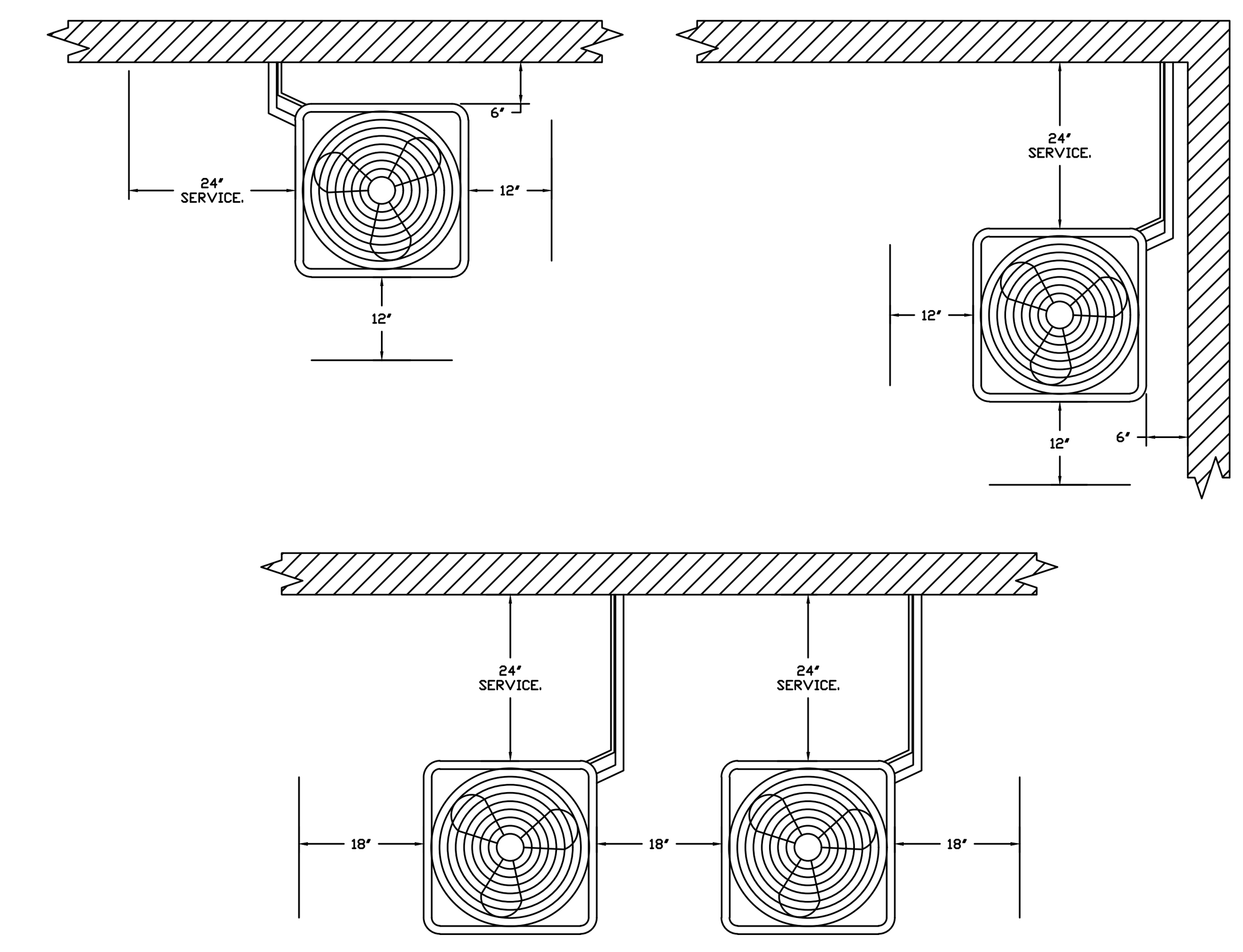
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE 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 20" x 20".

**NOTE: CONDENSERS SHIPPED LOOSE FOR REMOTE MOUNTING. ALL WIRING AND PIPING BETWEEN INDOOR AND OUTDOOR UNIT TO BE COMPLETED BY OTHERS.

SUPPLY SIDE HEATER INFORMATION:

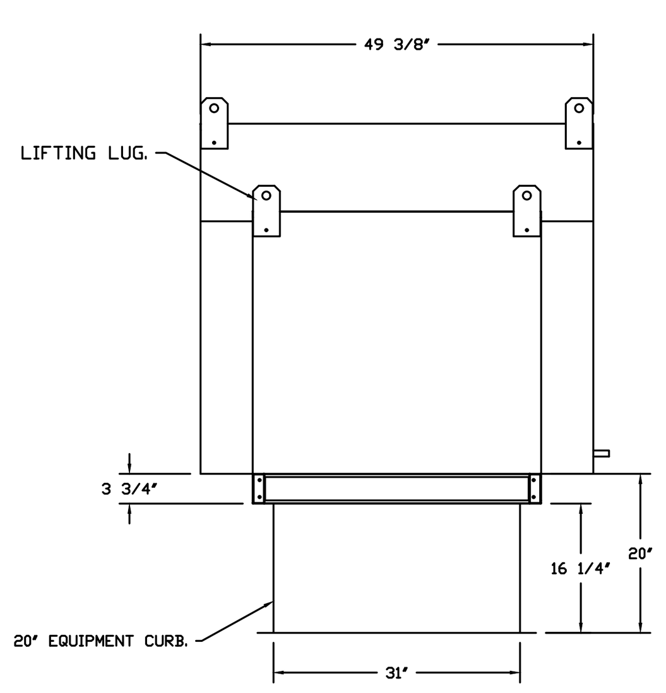
WINTER TEMPERATURE = 9°F. TEMP. RISE = 66°F.
BTUs CALCULATED OFF ACTUAL AIR DENSITY.
OUTPUT BTUs AT ALTITUDE OF 0.0 FT. = 178391.
INPUT BTUs AT ALTITUDE OF 0.0 FT. = 193904.
OUTPUT BTUs AT ALTITUDE OF 820 FT. = 173168.
INPUT BTUs AT ALTITUDE OF 820 FT. = 188227.

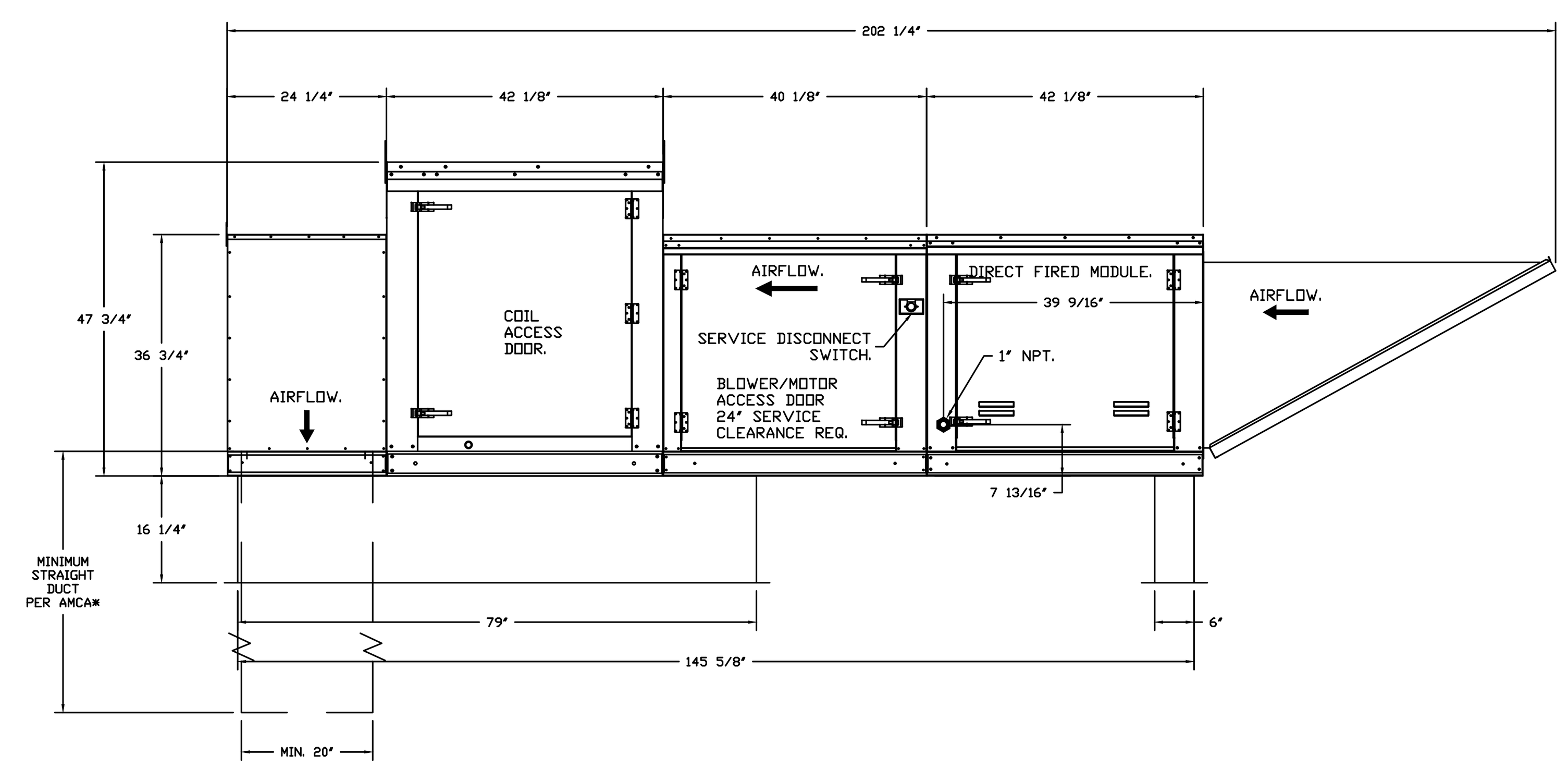




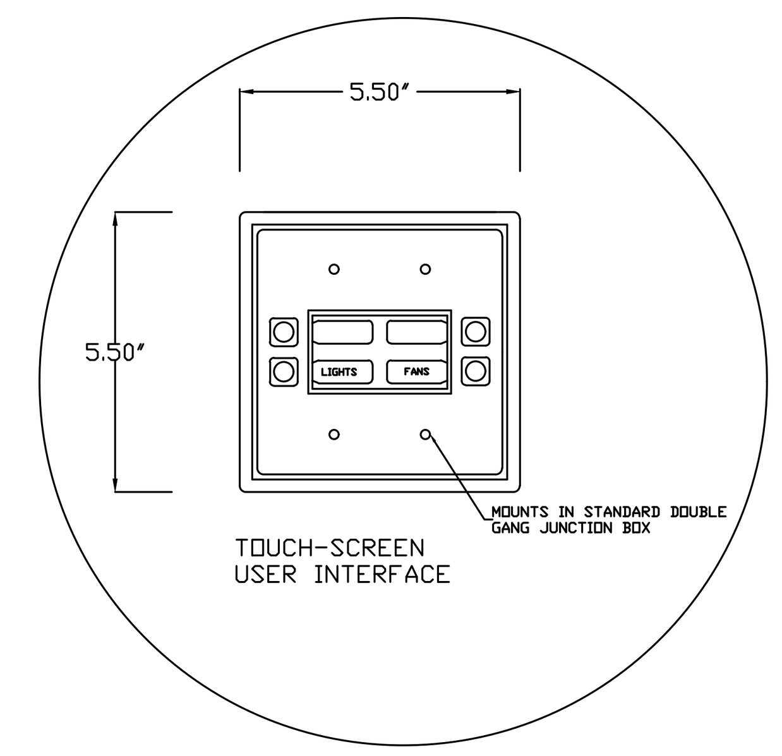
CONDENSER CLEARANCES

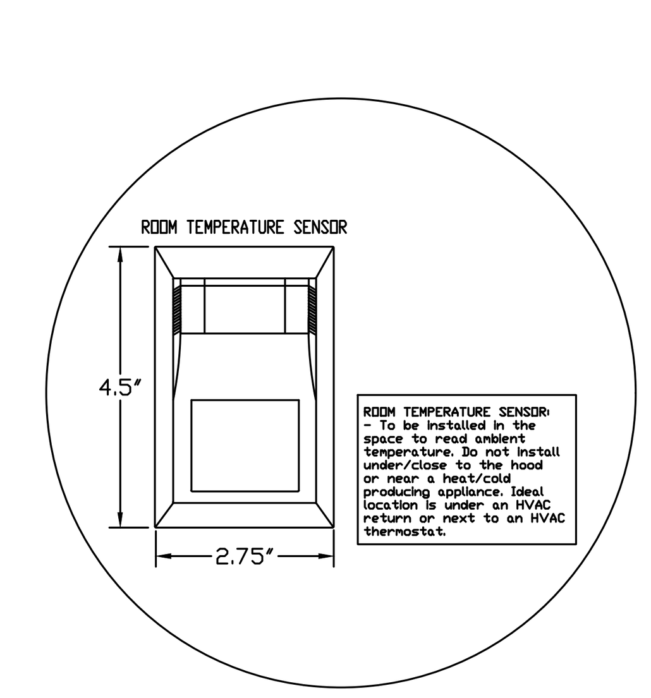
48" CLEARANCE REQUIRED ABOVE CONDENSERS.
(NOTE: **CONDENSERS SHOWN HERE ARE NOT DRAWN AT SCALE).

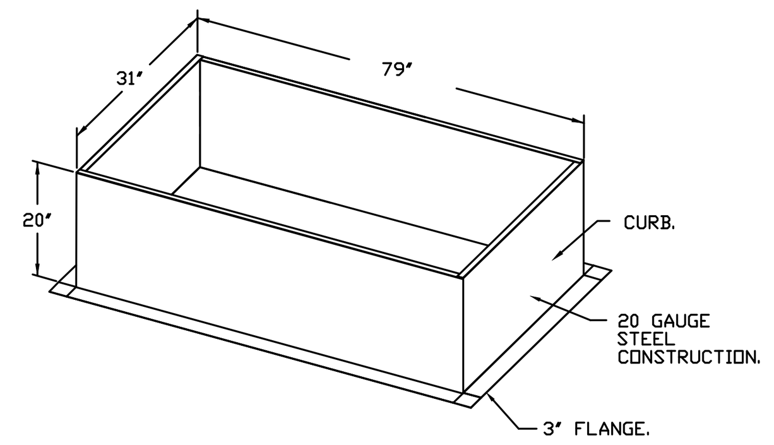


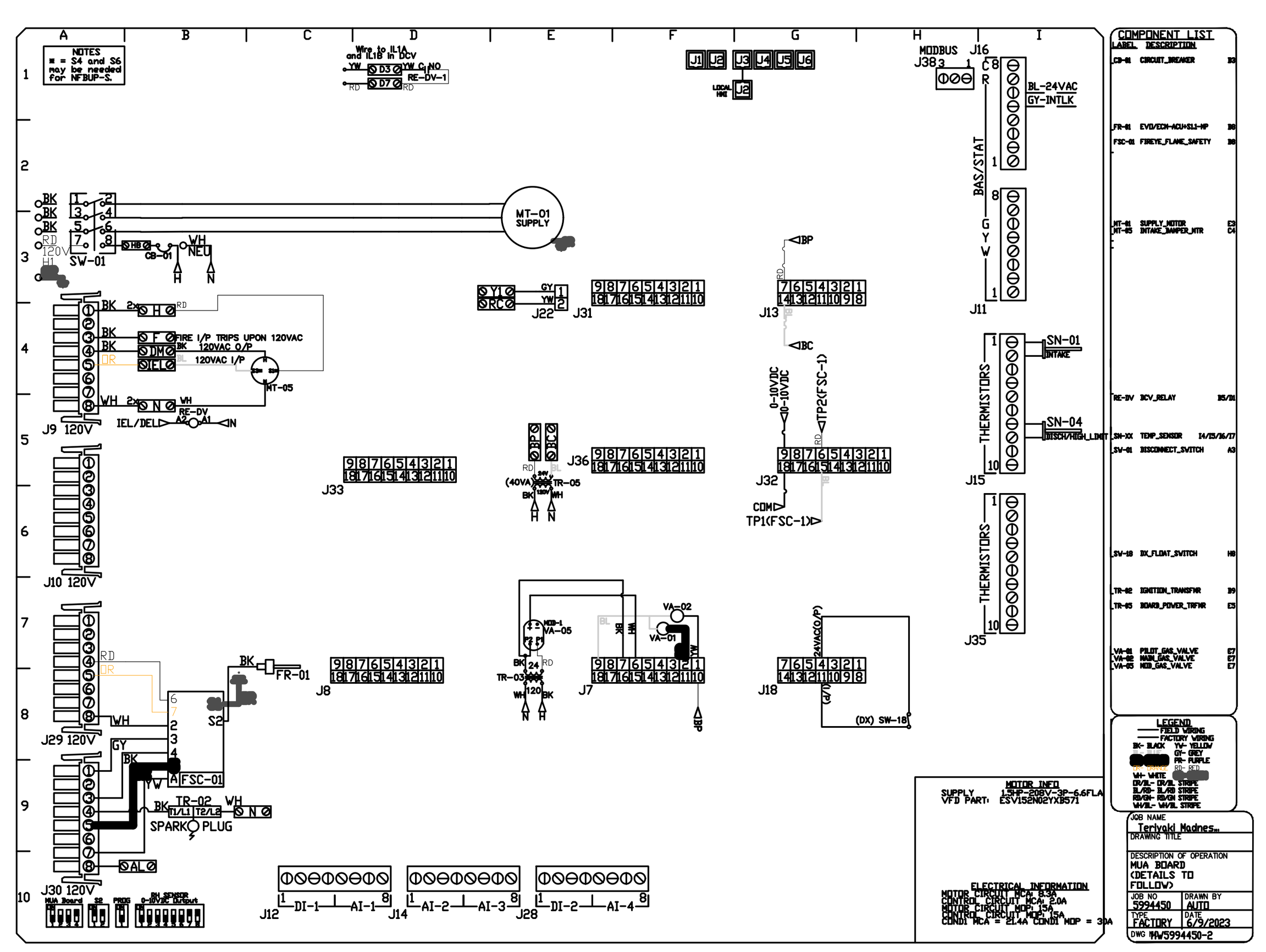


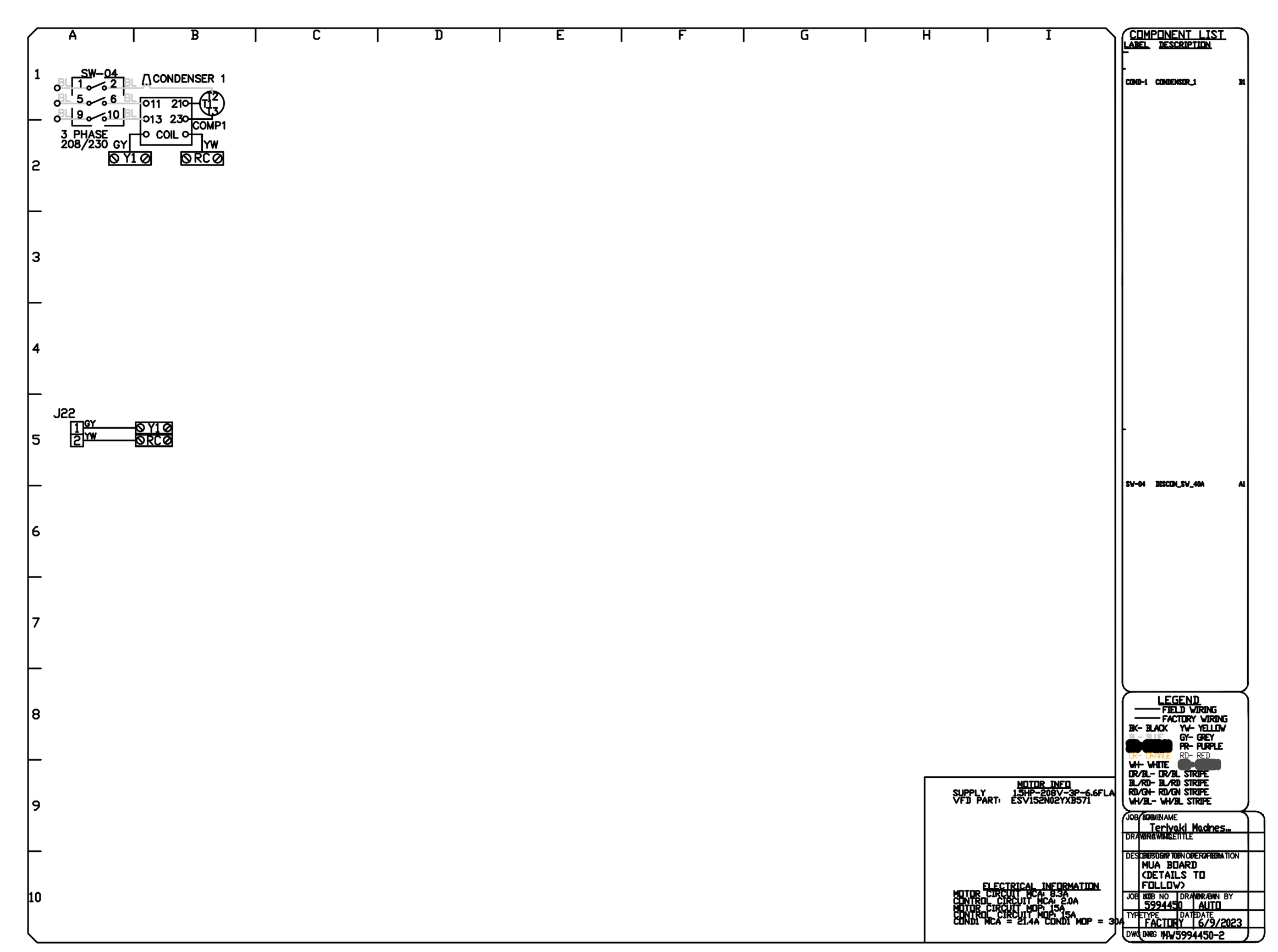
OPTIONS:
- FULL BOTTOM CORNERS.

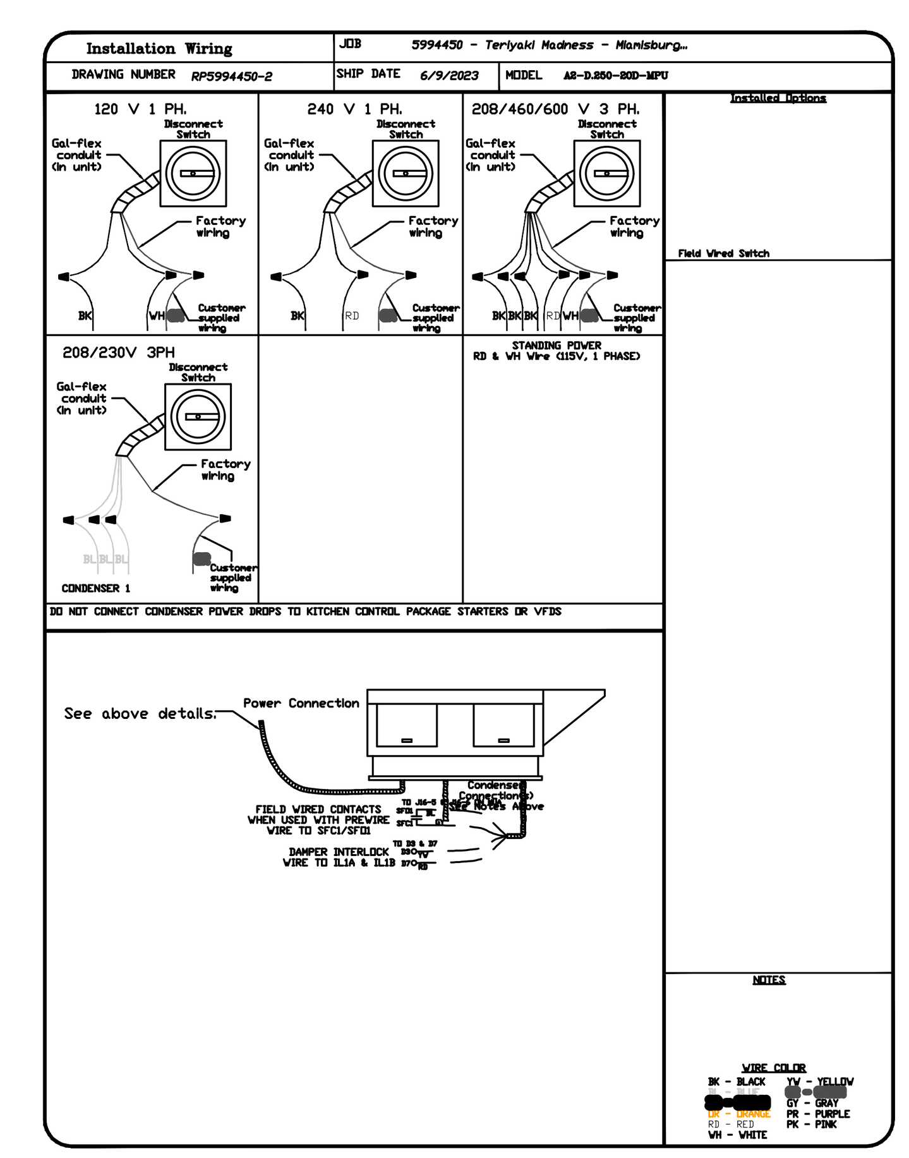












NOTE: THIS DRAWING IS FOR REFERENCE ONLY. DRAWINGS ARE FROM AN OUTSIDE SOURCE AND ARE NOT SCALED. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

REVISIONS

DESCRIPTION	DATE:
△	
△	
△	
△	

CAPTIVEAIRE
Denver Office

7300 S Alton Way Building 5, Suite B, Centennial, CO, 80112 PHONE: (720) 570-0981 FAX: (919) 227-5999 EMAIL: reg42@captiveaire.com
www.captiveaire.com

Teriyaki Madness - Miamisburg, OH
MIAMISBURG, OH, 45342

DATE: 6/9/2023

DWG.#: 5994450

DRAWN BY: RJC - 42

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

MASTER DRAWING

SHEET NO. 5

SEAL:

STATE OF OHIO
JOSEPH G. THOMAS
E-64942
REGISTERED PROFESSIONAL ENGINEER

Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE
MIAMISBURG, OH, 35342

SHEET TITLE:
HOOD DETAILS

DATE:

REVISIONS:

NO.	DATE	DESCRIPTION
1	6/30/23	REVISION #1

PROJECT NUMBER:

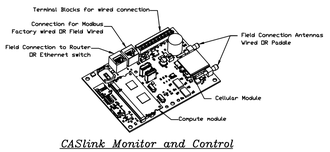
DRAWN BY: BH

CHECKED BY: JT

M204

ELECTRICAL PACKAGE – JOB#5994450

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
1		DCV-1111	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS DCV	KEF-1	EXHAUST	3	2.000	208	8.3
				HOOD # 1	1 FAN		MAU-1 (heat/ DX)	SUPPLY	3	1.500	208	6.6



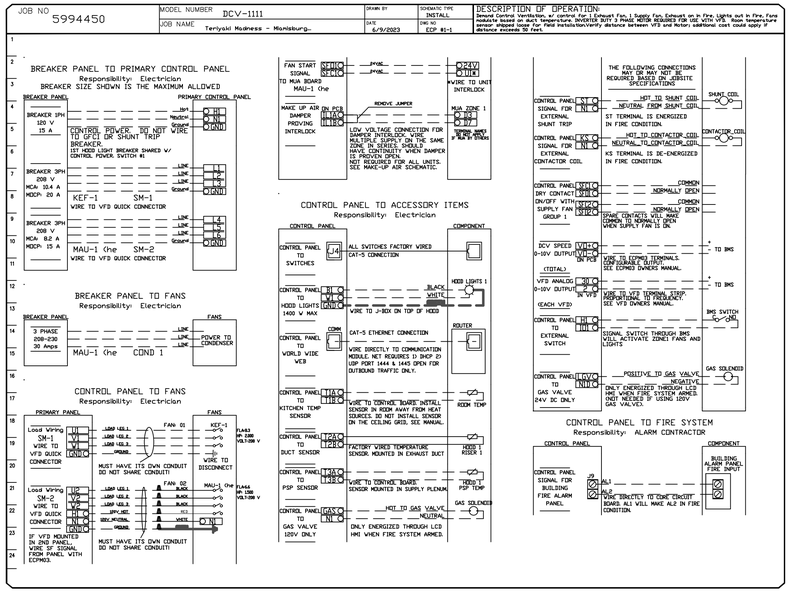
CASlink Monitor and Control

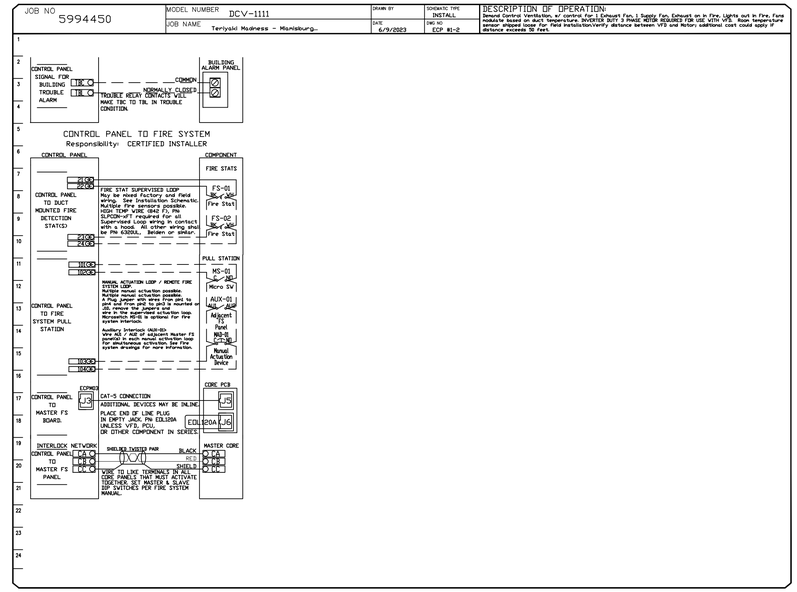
- *Hood control panel to support communications to cloud-based Building Management System.*
- *Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.*
- *Hood Control Panel to allow cloud-based Building Management System 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
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Prep Time Button	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

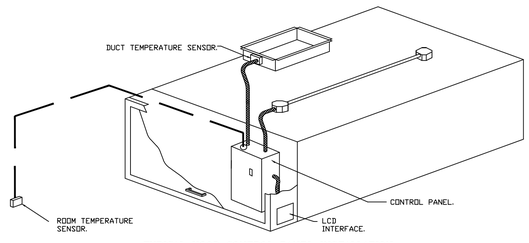
SC Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Fans Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL





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 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.

NOTE: THIS DRAWING IS FOR REFERENCE ONLY. DRAWINGS ARE FROM AN OUTSIDE SOURCE AND ARE NOT SCALED. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

REVISIONS

	DESCRIPTION	DATE:
△		
△		
△		
△		

CAPTIVE AIRE
www.captiveaire.com
Denver Office
7300 S Alton Way Building 5, Suite B, Centennial, CO, 80112 PHONE: (720) 570-0981 FAX: (919) 227-5999 EMAIL: reg42@captiveaire.com

Teriyaki Madness - Miamisburg, OH
MIAMISBURG, OH, 45342

DATE: 6/9/2023

DWG.#: 5994450

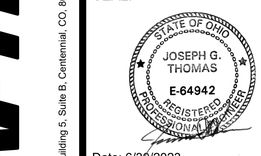
DRAWN BY: RJC - 42

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

MASTER DRAWING

SHEET NO. 6

SEAL:



Date: 6/30/2023
Expiration Date 12/31/2023

9474 N. SPRINGBORO PIKE MIAMISBURG, OH 35342

SHEET TITLE:
HOOD DETAILS

DATE:

REVISIONS:

NO.	DATE	DESCRIPTION REVISION #1
1	6/30/23	

PROJECT NUMBER:

DRAWN BY: BH

CHECKED BY: JT

M205