

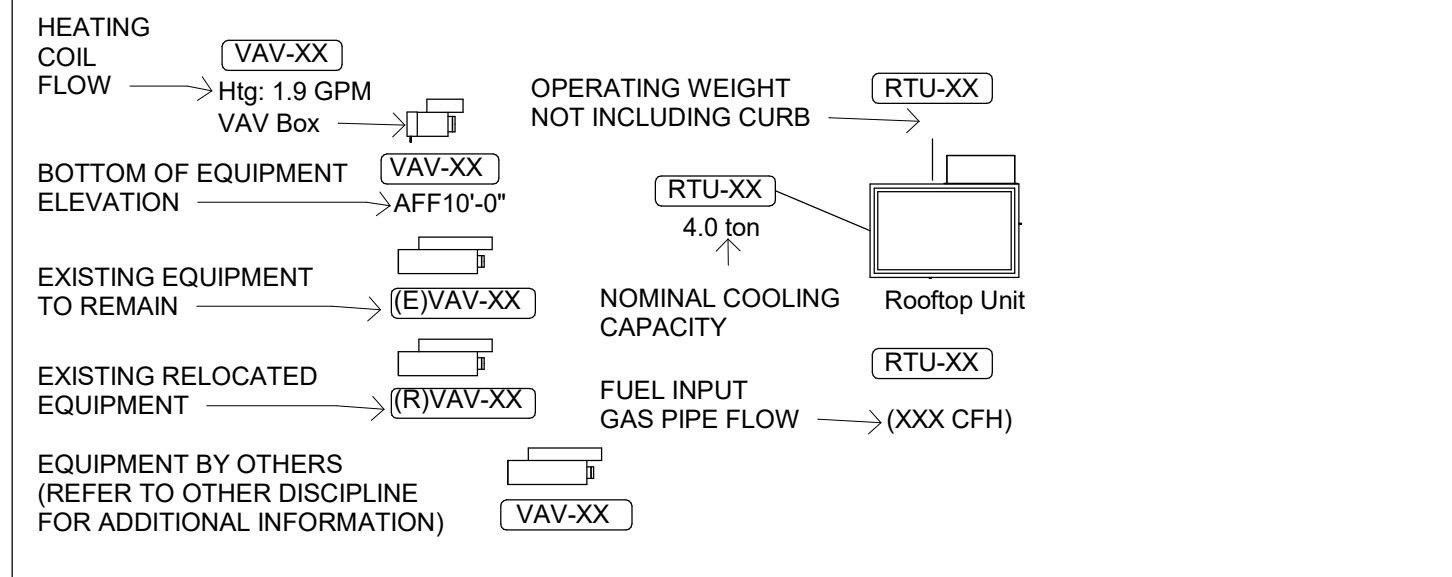
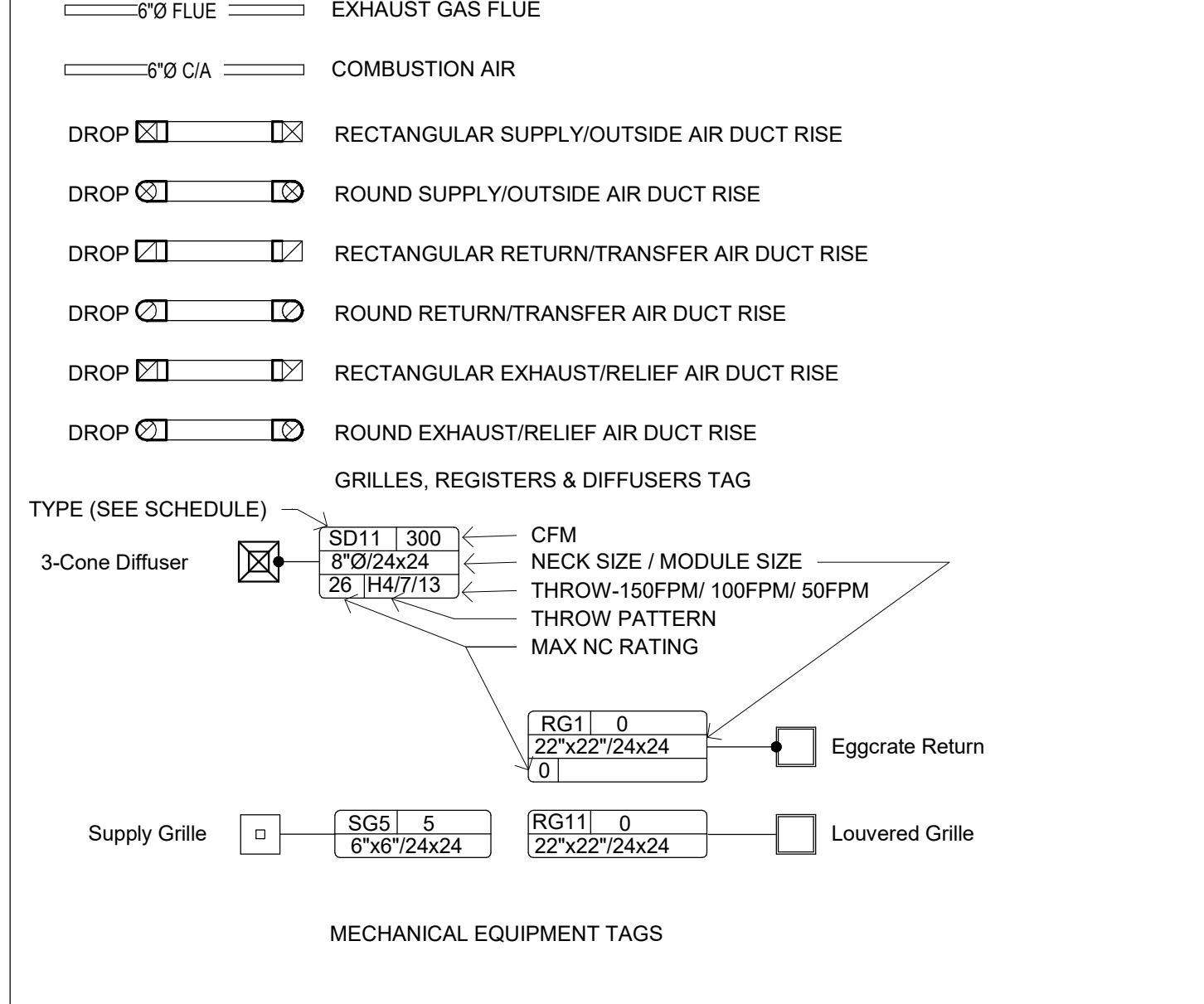
GENERAL MECHANICAL SYMBOLS	
	REVISION NUMBER - SHOWN ON PLANS
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	NUMBER OF DETAIL ON SHEET NUMBER OF SHEET WHERE DETAIL APPEARS
	KEYNOTE
	CONTINUATION SYMBOL
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	PIPE SIZE TAG (DIAMETER)
	ABOVE GROUND PIPING
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	PIPE INVERT ELEVATION TAG
	EXISTING PIPE TAG
	PIPING BEING DEMOLISHED

ABBREVIATIONS	
Ø	ROUND
ABV	ABOVE
AC	AIR CONDITIONING
AD	AREA DRAIN
ADD	ADDENDUM
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
ALT	ALTERNATE
AP	ACCESS PANEL
ARCH	ARCHITECT/ARCHITECTURAL
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	CLEAN OUT
CW	COLD WATER
D	DEGREE
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DW	DISTILLED WATER
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
EW	ELECTRIC WATER COOLER
EW	ENTERING WATER TEMPERATURE
E/A	EXHAUST AIR
EXIST	EXISTING
EX	EXISTS
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOOR
FO	FUEL OIL
FOV	FUEL OIL VENT
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FS	FLOOR SINK
FT	FOOT/FEET
FTR	FIN TUBE RADIATION
GAL	GALLON
GF	GAS-FIRED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIB
HP	HORSE POWER
HTG	HEATING
HTR	HEATER
HW	HOT WATER
HYD	HYDRANT
ID	INDIRECT
IN	INCH
INV	INVERT
LB	POUND
LB/HR	POUNDS PER HOUR
LAT	LEAVING AIR TEMPERATURE
LP	LOW PRESSURE
LPG	LIQUEFIED PETROLEUM GAS
LVT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAX	MAXIMUM
MBH	ONE THOUSAND BTU PER HOUR
MCF	ONE THOUSAND CUBIC FEET
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTR	MOTOR
MUA	MAKE-UP AIR
NC	NORMALLY CLOSED
NO	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	OXYGEN
O/A	OUTSIDE AIR
ORD	OVERFLOW ROOF DRAIN
PD	PRESSURE DROP
PV	POST INDICATOR VALVE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PWR	POWER
R	RISER
R/A	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REC	RECESSED
RED	REDUCER
RH	RELATIVE HUMIDITY
R/LA	RELIEF AIR
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RW	RAIN WATER
SF	SQUARE FOOT
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SP	STATIC PRESSURE
STM	STEAM
T	THERMOSTAT
TD	TEMPERATURE DROP
TDR	TRENCH DRAIN
TEMP	TEMPERATURE
TYP	TYPICAL
UG	UNDERGROUND
VAC	VACUUM
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VAV	VARIABLE AIR VOLUME
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VTR	VENT THROUGH ROOF
W	WASTE
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WH	WALL HYDRANT

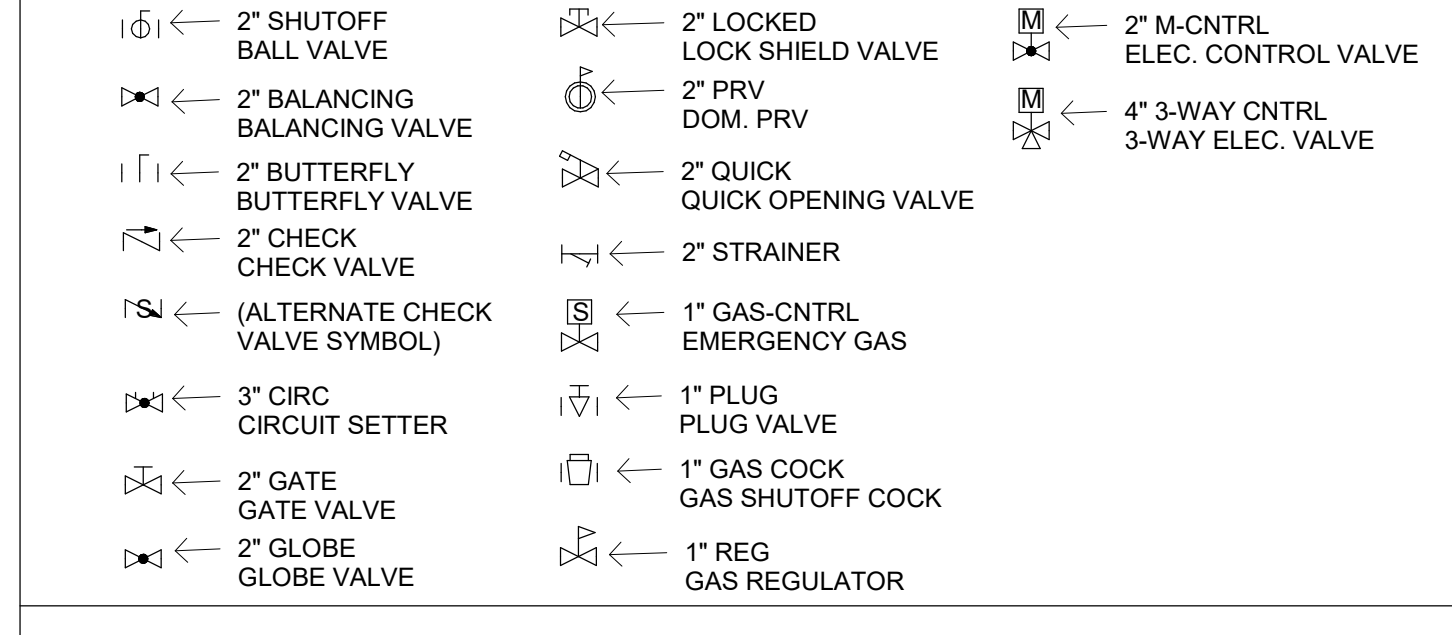
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AC	AIR CONDITIONING UNIT
ACCU	AIR COOLING CONDENSING UNIT
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
B	BOILER
CH	CHILLER
CUH	COOLING TOWER
CUH	CABINET UNIT HEATER
CHWP	CHILLED WATER PUMP
DBP	DOMESTIC WATER BOOSTER PUMP
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FCU	FAN COIL UNIT
FP	FIRE PUMP
GI	GREASE INTERCEPTOR
GRV	GRAVITY ROOF VENTILATOR
HWP	HEATING WATER PUMP
HRLU	HEAT RECOVERY UNIT
PRV	POWER ROOF VENTILATOR
RE	RETURN/EXHAUST FAN
RTU	ROOFTOP UNIT
RTU	ROOFTOP UNIT
SP	SUMP PUMP
UH	UNIT HEATER
WH	WATER HEATER

*** NOTE ***
 ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

HVAC SYMBOLS	
	SQUARE DUCT SIZE TAG (WIDTH X HEIGHT)
	OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
	ROUND DUCT SIZE TAG (DIAMETER)
	EXISTING DUCT TAG
	DUCT BEING DEMOLISHED
	SUPPLY AIR
	CONDITIONED OUTSIDE AIR
	OUTSIDE AIR
	RETURN AIR
	TRANSFER AIR
	EXHAUST AIR
	RELIEF AIR
	GREASE EXHAUST AIR
	CONDENSATE EXHAUST AIR
	SMOKE EXHAUST AIR
	EXHAUST GAS FLUE
	COMBUSTION AIR



PIPING SYMBOLS	
	CHILLED WATER RETURN
	CHILLED WATER SUPPLY
	CONDENSATE DRAINAGE
	CONDENSER WATER RETURN
	CONDENSER WATER SUPPLY
	GEOTHERMAL WATER RETURN
	GEOTHERMAL WATER SUPPLY
	HEATING WATER RETURN
	HEATING WATER SUPPLY
	NATURAL GAS
	PROPANE GAS
	REFRIGERANT-LIQUID
	REFRIGERANT-SUCTION
	REFRIGERANT-HOT GAS
	STEAM
	CONDENSATE RETURN



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M-301	MECHANICAL HOOD PLANS
M-302	MECHANICAL HOOD PLANS
M-303	MECHANICAL HOOD PLANS
M-304	MECHANICAL HOOD PLANS
MP-000	MECHANICAL AND PLUMBING SPECIFICATIONS
MP-001	COMMISSIONING SPECIFICATIONS

HVAC GENERAL NOTES

A SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE.

B CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 5'-0" AFF. A MINIMUM OF 8" FROM LIGHT SWITCH.

C REFER TO HVAC DRAWINGS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS.

D CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE 'L' COPPER.

E ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.

F COORDINATE THE EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH NEW AND EXISTING LIGHTING.

G PROVIDE DIFFUSERS AND REGISTERS WITH 4-WAY BLOW PATTERN UNLESS OTHERWISE NOTED.

H PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.

I THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

J INSTALL, SUPPORT, AND BRACE ALL HVAC DUCTWORK AND ACCESSORIES PER HVAC DUCT CONSTRUCTION STANDARDS BY SMACNA, ANSISMACNA 006-2006 AND "SEISMIC RESTRAINT MANUAL, GUIDELINES FOR MECHANICAL SYSTEMS" BY SMACNA, ANSISMACNA 001-2008.

K A COPY OF "SEISMIC RESTRAINT MANUAL, GUIDELINES FOR MECHANICAL SYSTEMS" BY SMACNA, ANSISMACNA 001-2008 SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE AT ALL TIMES.

L ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTION 1614.1.18 THROUGH 1614.1.25 AND ASCE 7-10 CHAPTERS 13.2, 13.3, AND 13.5.

M PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.7, 13.6.7, AND 2019 CBC, SECTION 1616.1.23, 1616.1.24, 1616.1.25 AND 1616.1.26.

N MAINTAIN MINIMUM SEPARATION BETWEEN OUTSIDE AIR INTAKES OR OTHER OPENINGS INTO THE BUILDING AND OTHER ELEMENTS AS REQUIRED AND AS FOLLOWS:

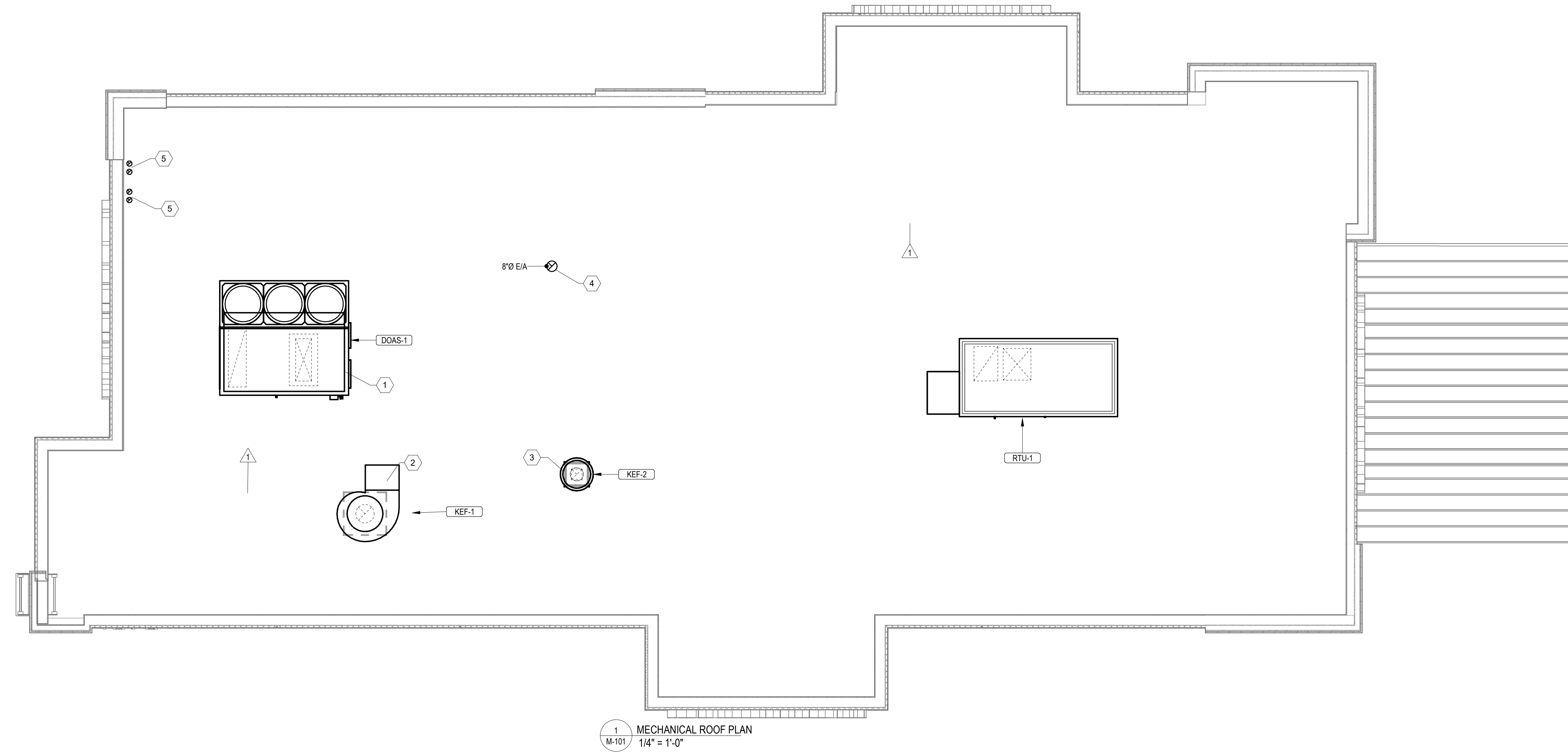
O PLUMBING VENTS AND EXHAUST OUTLETS: 10'-0" SEPARATION

P ENVIRONMENTAL AIR OUTLETS AND DOMESTIC DRYER VENTS: 3'-0" SEPARATION

Q EXCEPT AS OTHERWISE NOTED, ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL PER 2019 CALIFORNIA CHAPTER 6 AND "HVAC DUCT CONSTRUCTION STANDARDS" BY SMACNA, ANSISMACNA 006-2006.

R IN HIGH-HUMIDITY AREAS, INCLUDING SHOWER ROOMS, ALL DUCTWORK SHALL BE CONSTRUCTED OF ALUMINUM.

S INSULATE ALL SUPPLY AND RETURN AIR DUCTWORK AS REQUIRED BY THE CALIFORNIA ENERGY CODE.



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

MECHANICAL PLAN NOTES

- 1 PROVIDE RTU/DOAS IN LOCATION AS SHOWN ON PLANS. COORDINATE EXACT RTU LOCATION AND DUCT DROPS WITH STRUCTURAL TRUSS LAYOUT. MAINTAIN MINIMUM 10'-0" CLEARANCE BETWEEN OUTDOOR AIR INTAKES AND EXHAUST TERMINATIONS.
- 2 PROVIDE TYPE I EXHAUST FAN IN LOCATION AS SHOWN ON PLANS. CONNECT 14" DIAMETER EXHAUST DUCT FROM EXHAUST HOOD UP TO KEF-1 ON ROOF. COORDINATE EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
- 3 PROVIDE TYPE I EXHAUST FAN IN LOCATION AS SHOWN ON PLANS. CONNECT 10" DIAMETER EXHAUST DUCT FROM EXHAUST HOOD UP TO KEF-2 ON ROOF. COORDINATE EXHAUST DUCT ROUTING WITH STRUCTURAL TRUSS LAYOUT.
- 4 8" EXHAUST DUCT ROUTED TO ROOF CAP AS REQUIRED.
- 5 PROVIDE MANUFACTURER'S CONCENTRIC TERMINATION VENT KIT SERVING HOT WATER HEATER BELOW. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ENSURE AT LEAST 10'-0" DISTANCE BETWEEN OUTDOOR AIR INTAKES.

BC PROJECT #: 24387
 TEXAS PE COA #F-15978

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www.tessere.com

PROJECT NO: 24387
 ARCHITECT: TESSERE ARCHITECTS
 17866626666666

PROJECT TYPE:
 New Construction

PROJECT NO: 24387
 ARCHITECT: TESSERE ARCHITECTS
 17866626666666

CONTACT INFO:
 530 McCall Rd Suite 110, Manhattan, TX
 Tel: (781) 370-6842

HCi Hospitality
 CONTACT INFO:
 530 McCall Rd Suite 110, Manhattan, TX
 Tel: (781) 370-6842

1970 N HIGHWAY US 77
 WAXAHACHIE, TX 75165, ELLIS COUNTY

DATE: 02/14/2025

DRAWN BY: AKFO

CHECKED BY: DSEK

MECHANICAL ROOF PLAN

M-101

PERMIT

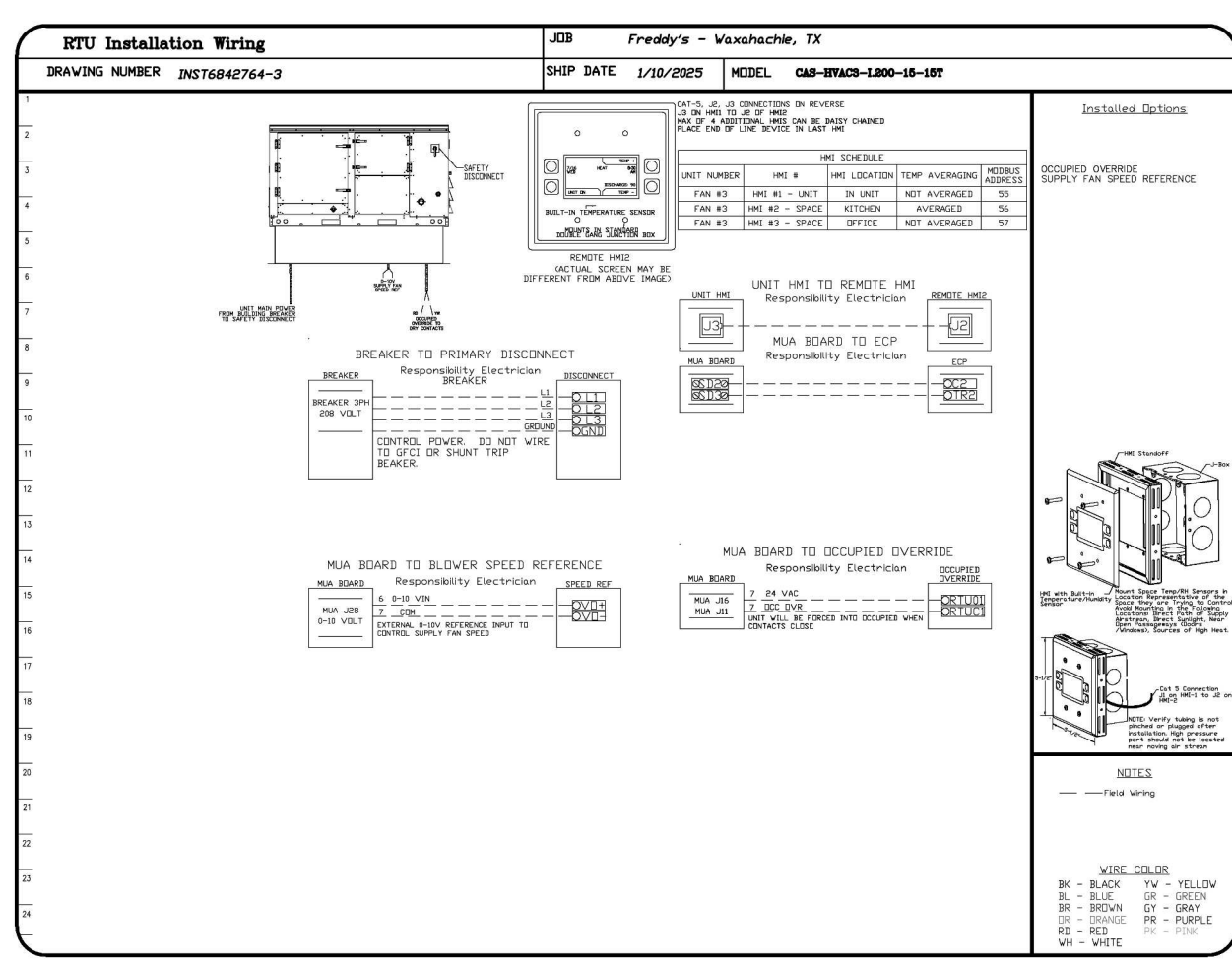
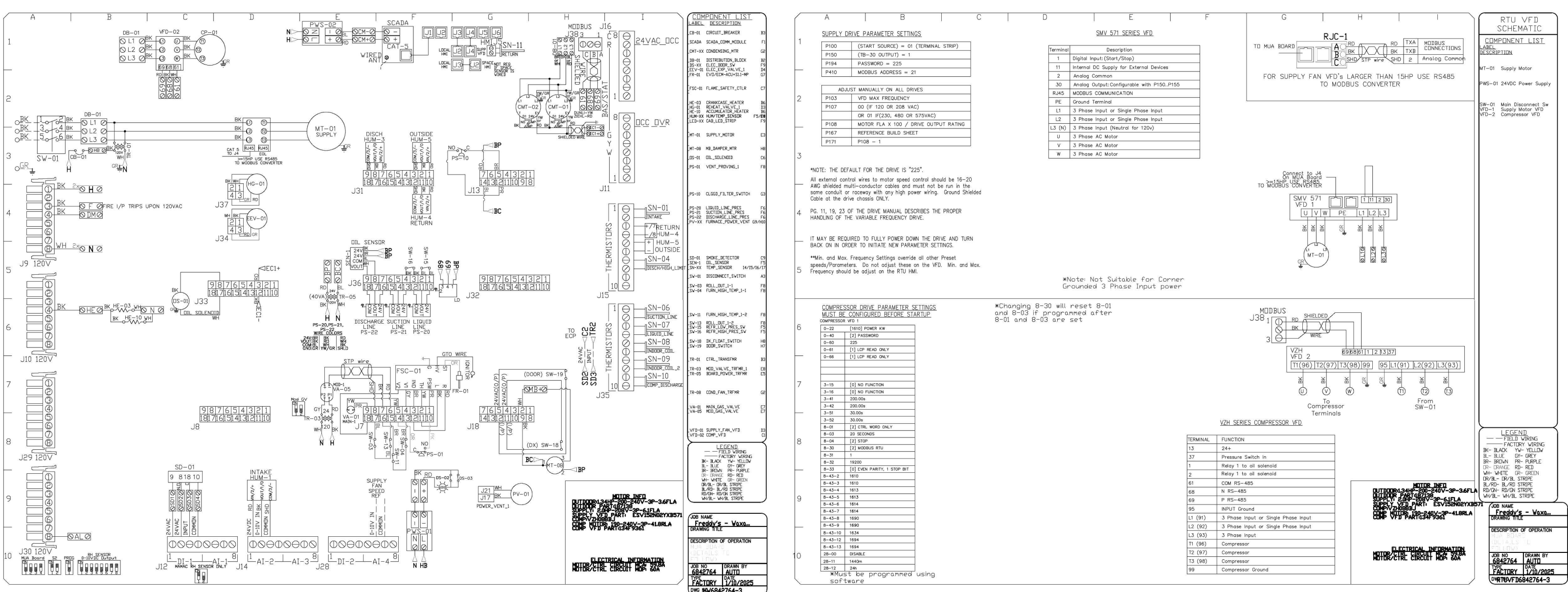
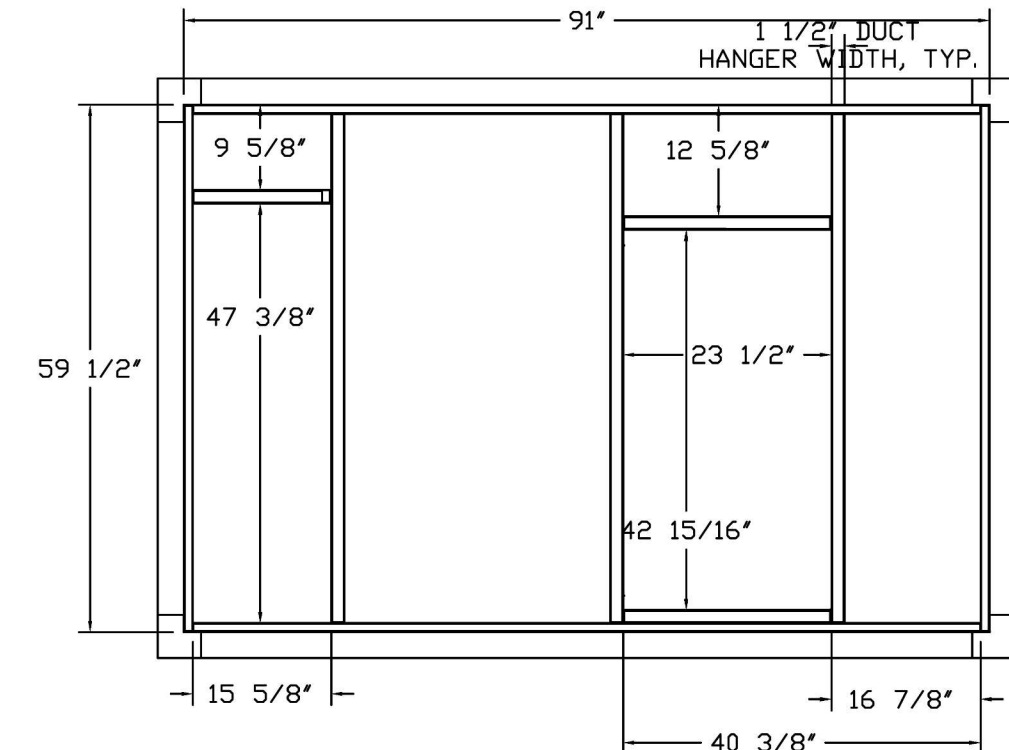
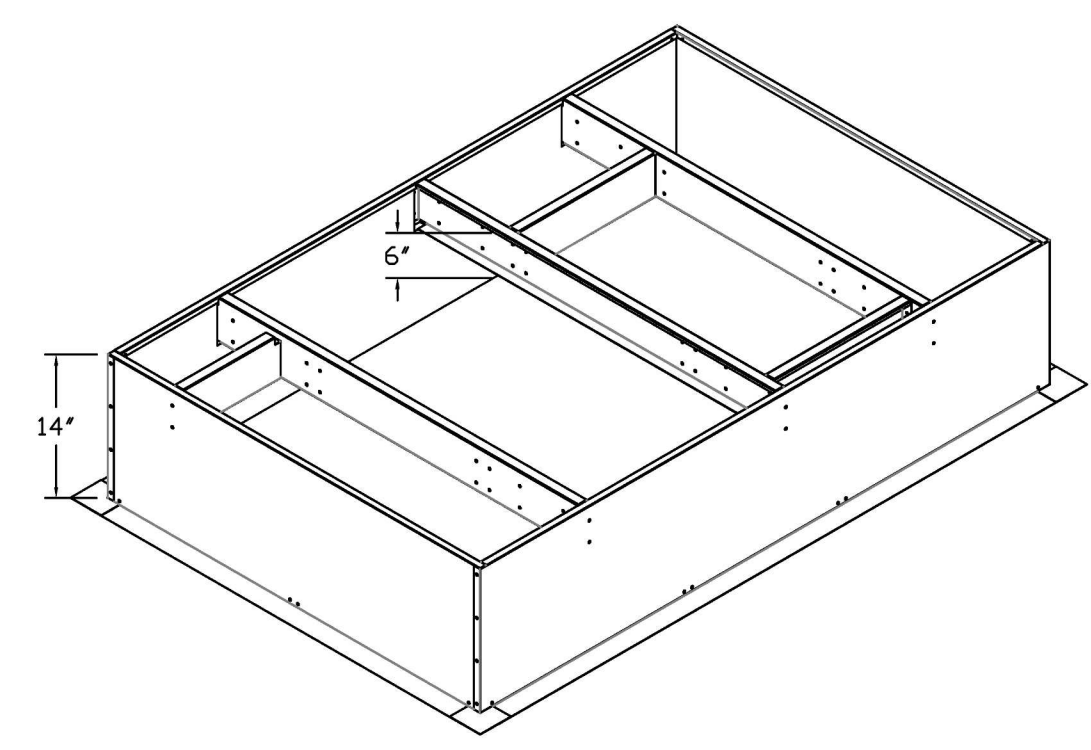
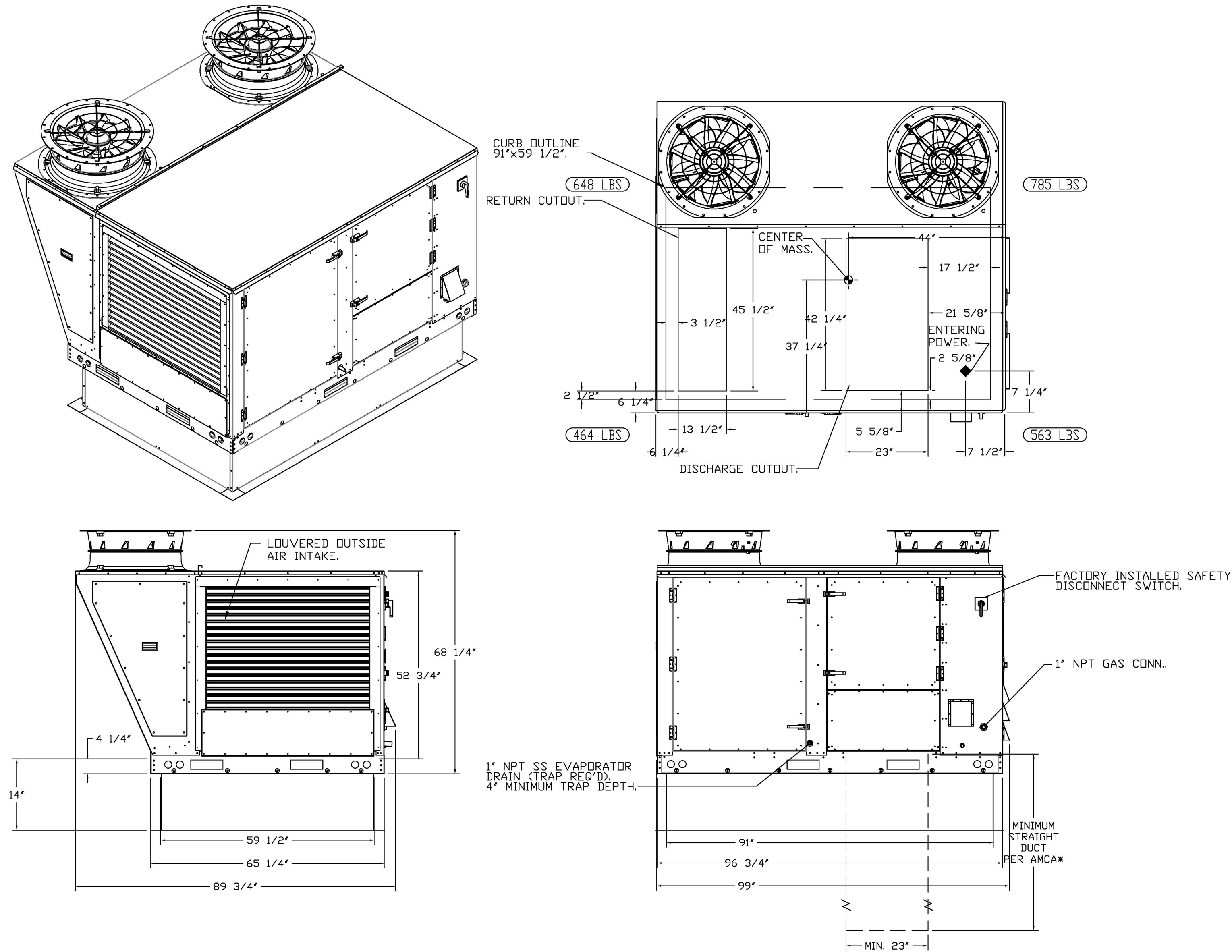
FAN #3 CAS-HVAC3-1200-15-15T - HEATER (ITEM 74.3)

NOTES:

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

*NOTE: INTEGRAL CO2 MONITORING AND CONTROL CAPABILITIES FOR ALL SPACE MOUNTED THERMOSTATS.

*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 23" x 39".



REVISIONS	DESCRIPTION	DATE
1		
2		
3		
4		
5		

CAPTIVE

www.captiveair.com

HBT Foodservice

104 W 9th St Suite 204, Kansas City, MO, 64105 PHONE: (816) 221-8575 FAX: (816) 221-8511 EMAIL: reg@hbt.com

Freddy's - Waxahachie, TX
WAXAHACHIE, TX, 75165

DATE: 6/7/2024
DWG #: 6842764
DRAWN BY: michael.co
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 4

BC PROJECT #: 24387
TEXAS PE COA #F-15978

BC ENGINEERS
INCORPORATED

5720 Reeder Shawnee, KS 66203 (913)262-1772

TESSERE
www.tessere.com

BC ENGINEERS
INCORPORATED

MEP ENGINEER

MKEC
STRUCTURE

21/10/25
STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER
117553
Michael Co

CONSTRUCTION SET 2/18/2025

PROJECT NUMBER:
PROJECT NO. 24387
ARCHITECT #:
ARCHITECT FIRM:
TESSERE # 23310R24001
178626266696

PROJECT TYPE:
New Construction

HCi
hospitality
CONTACT INFO:
530 McCall Rd Suite 110, Manhattan, MO
Tel: (785) 370-6842

DATE: 09/14/2025
DRAWN BY: AKFO
CHECKED BY: DSEK

MECHANICAL HOOD PLANS

M-303

PERMIT

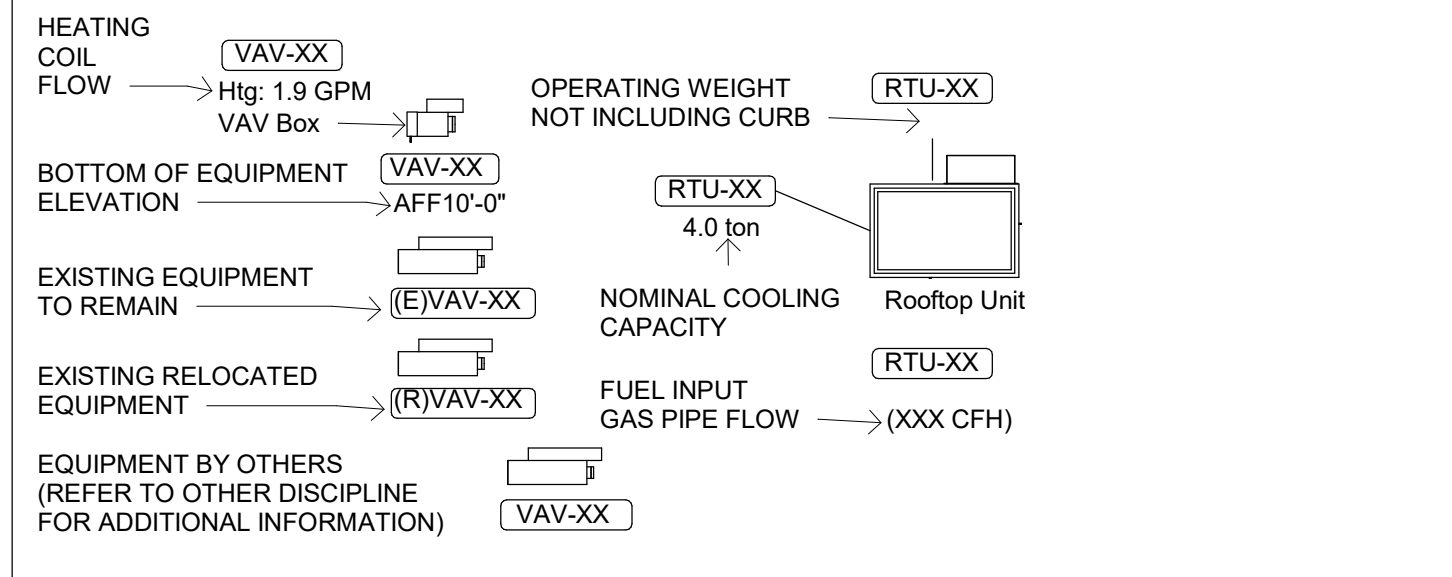
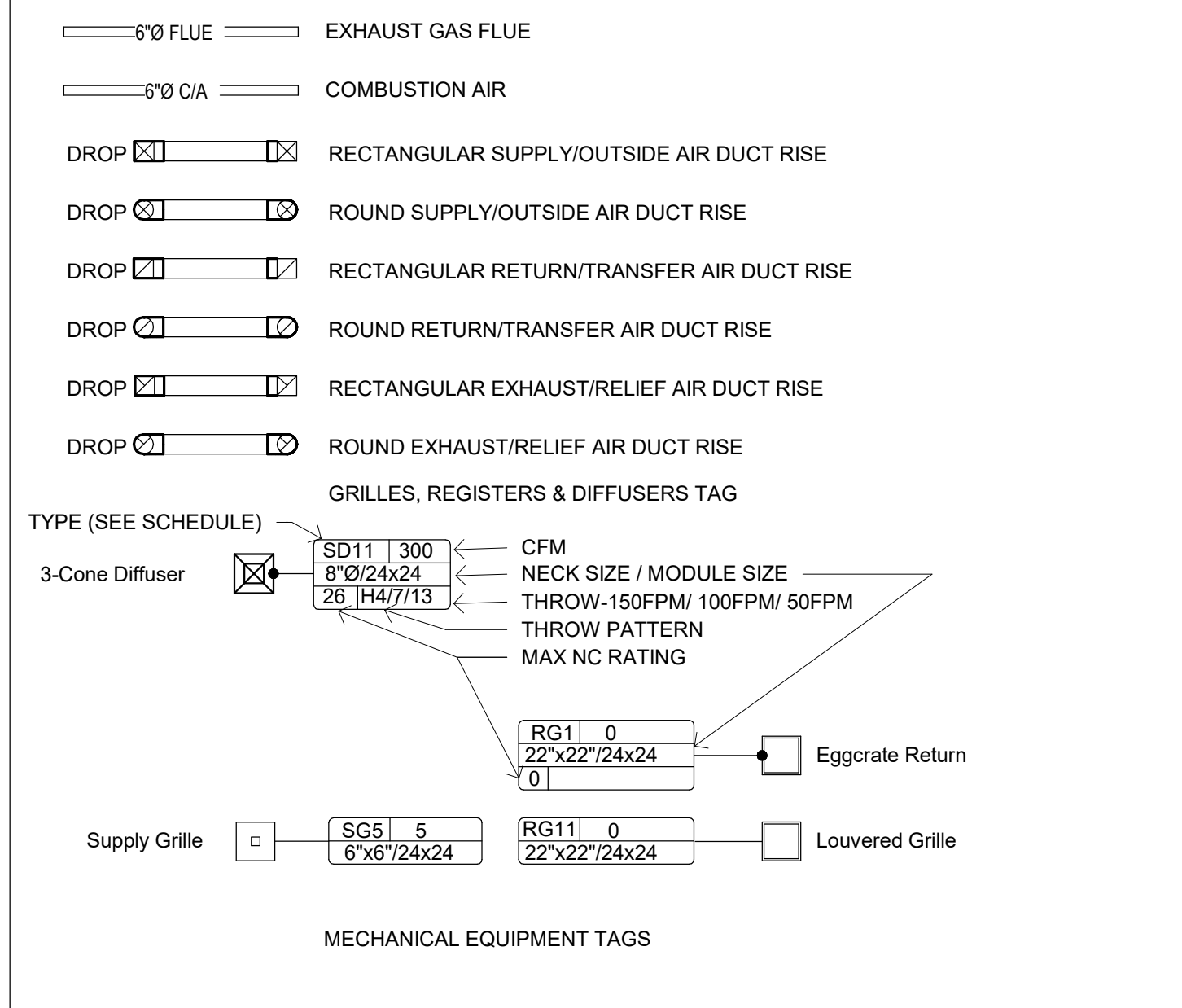
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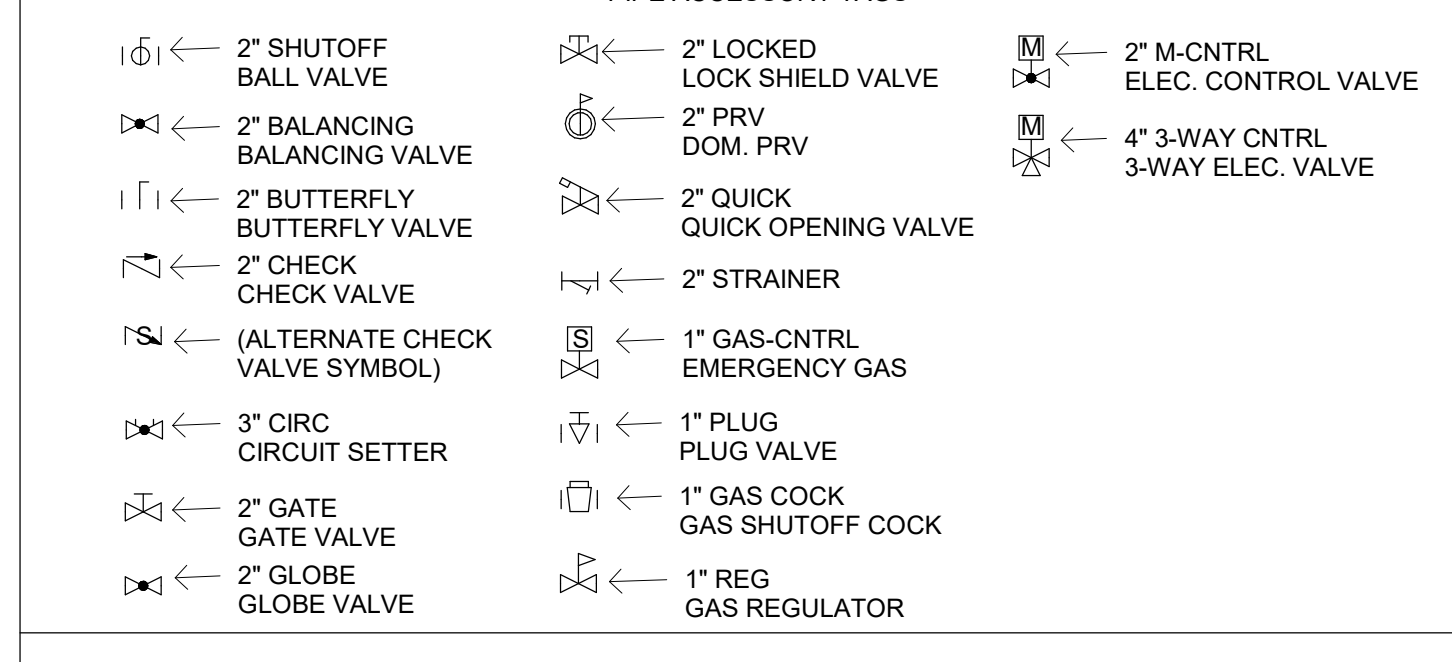
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	COMBUSTION AIR



DAMPER TAGS	
	Smoke Damper
	Fire Damper
	Comb. Fire/Smoke Damper
	Manual Damper
	Motorized Damper
	Backdraft Damper

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	CHILLED WATER SUPPLY
	CONDENSATE DRAINAGE
	CONDENSER WATER RETURN
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M-301	MECHANICAL HOOD PLANS
M-302	MECHANICAL HOOD PLANS
M-303	MECHANICAL HOOD PLANS
M-304	MECHANICAL HOOD PLANS
MP-000	MECHANICAL AND PLUMBING SPECIFICATIONS
MP-001	COMMISSIONING SPECIFICATIONS

HVAC GENERAL NOTES

A. SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE.

B. CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 5'-0" AFF. A MINIMUM OF 8" FROM LIGHT SWITCH.

C. REFER TO HVAC DRAWINGS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS.

D. CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE 'L' COPPER.

E. ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.

F. COORDINATE THE EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH NEW AND EXISTING LIGHTING.

G. PROVIDE DIFFUSERS AND REGISTERS WITH 4-WAY BLOW PATTERN UNLESS OTHERWISE NOTED.

H. PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.

I. THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

J. INSTALL, SUPPORT, AND BRACE ALL HVAC DUCTWORK AND ACCESSORIES PER HVAC DUCT CONSTRUCTION STANDARDS BY SMACNA, ANSISMACNA 006-2006 AND "SEISMIC RESTRAINT MANUAL, GUIDELINES FOR MECHANICAL SYSTEMS" BY SMACNA, ANSISMACNA 001-2008.

K. A COPY OF "SEISMIC RESTRAINT MANUAL, GUIDELINES FOR MECHANICAL SYSTEMS" BY SMACNA, ANSISMACNA 001-2008 SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE AT ALL TIMES.

L. ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTION 1614.1.18 THROUGH 1614.1.25 AND ASCE 7-10 CHAPTERS 13.2, 13.3, AND 13.5.

M. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.7, 13.6.7, AND 2019 CBC, SECTION 1616.1.23, 1616.1.24, 1616.1.25 AND 1616.1.26.

N. MAINTAIN MINIMUM SEPARATION BETWEEN OUTSIDE AIR INTAKES OR OTHER OPENINGS INTO THE BUILDING AND OTHER ELEMENTS AS REQUIRED AND AS FOLLOWS:

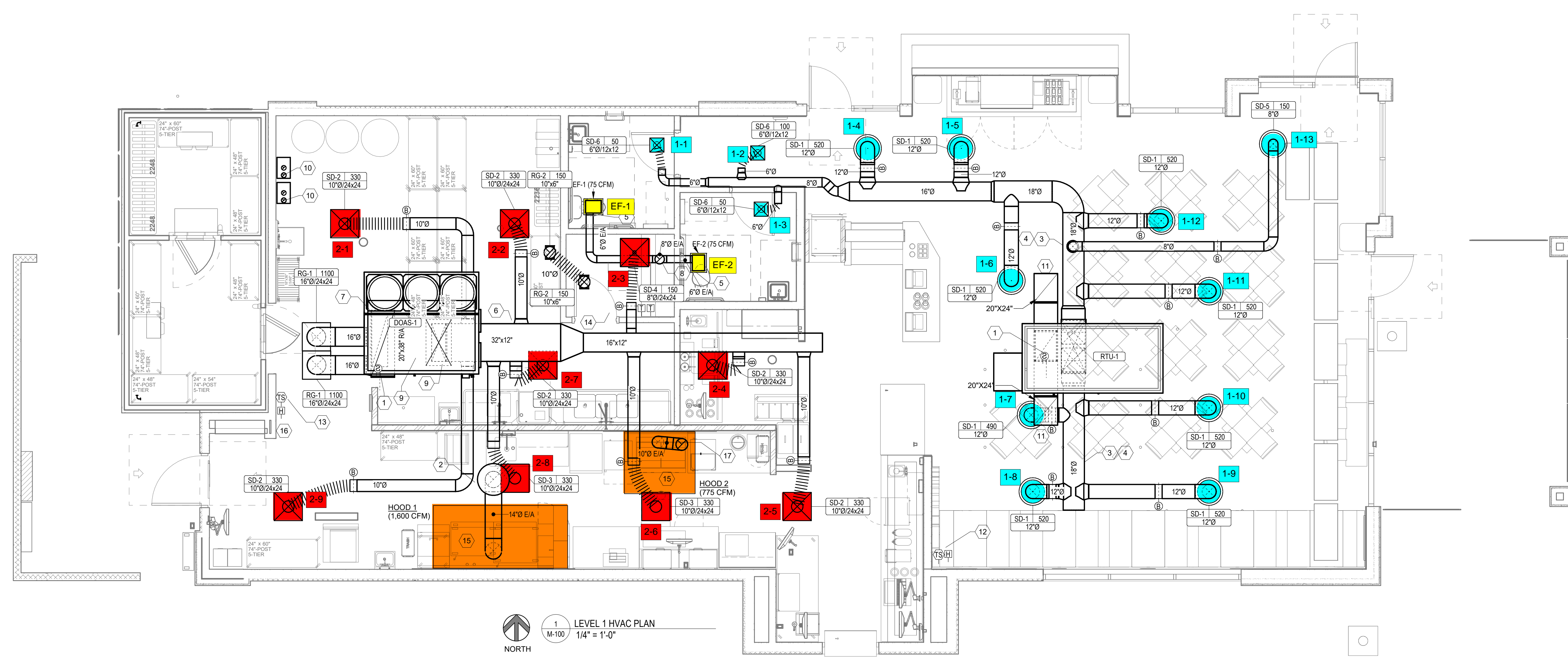
O. PLUMBING VENTS AND EXHAUST OUTLETS: 10'-0" SEPARATION

P. ENVIRONMENTAL AIR OUTLETS AND DOMESTIC DRYER VENTS: 3'-0" SEPARATION

Q. EXCEPT AS OTHERWISE NOTED, ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL PER 2019 CALIFORNIA CHAPTER 6 AND "HVAC DUCT CONSTRUCTION STANDARDS" BY SMACNA, ANSISMACNA 006-2006.

R. IN HIGH-HUMIDITY AREAS, INCLUDING SHOWER ROOMS, ALL DUCTWORK SHALL BE CONSTRUCTED OF ALUMINUM.

S. INSULATE ALL SUPPLY AND RETURN AIR DUCTWORK AS REQUIRED BY THE CALIFORNIA ENERGY CODE.



OUTDOOR AIR CALCULATIONS

UNIT	Area (sqft)	OCCUPANCY CLASSIFICATION	Occupant Density #/1000 sqft	People outdoor air flow rate in breathing zone (Pb) cfm/psf	Area outdoor air flow rate in breathing zone (Pb) cfm/sqft	Exhaust air flow rate cfm/sqft	Breathing zone outdoor air flow (Vbz) cfm/sqft	Zone air distribution effectiveness (Ez)	Zone outdoor air flow (cfm)
RTU-1	1100	Dining rooms	70	7.5	0.18		776	0.8	969
	150	Corridors	0	0	0.06		9	0.8	11
Total									981

AIR BALANCE SCHEDULE

SUPPLY AIR UNIT	OUTSIDE AIRFLOW (CFM)	RETURN AIRFLOW (CFM)	SUPPLY AIRFLOW (CFM)	OA/SA %	EXHAUST AIR UNIT	EXHAUST AIRFLOW (CFM)
RTU-1	980	4,020	5,000	19.6%	KEF-1	1600
DOAS-1	2,200	0	2,200	100.0%	KEF-2	775
					EF-1, EF-2	150
TOTAL					TOTAL	
3,180					4,200	
7,200					2,525	
RESULTING BUILDING PRESSURIZATION					658 CFM	

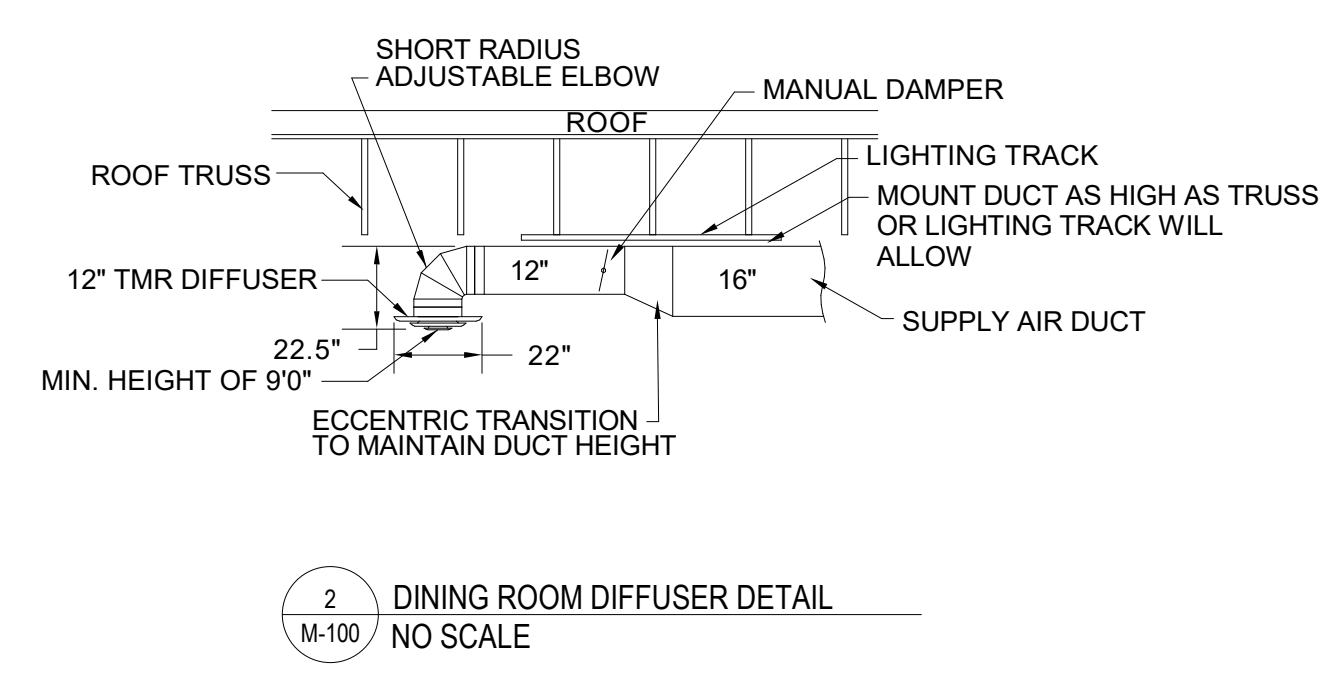
THE BUILDING HVAC SYSTEM SHALL BE BALANCED BY NATIONAL TAB HIRED BY THE OWNER. CONTACT Dan Hertenstein - National TAB at: 816-215-1593 - DAN@NATIONALTAB.COM

THE RTU SUPPLY FANS SHALL OPERATE IN SINGLE ZONE VAV MODE WITH 2 STAGES OF FAN CONTROL. LOW SPEED SHALL BE USED DURING PERIODS OF LOW COOLING LOAD AND VENTILATION ONLY OPERATION PER 2018 IECC REQUIREMENTS.

THE ECONOMIZER DAMPERS SHALL HAVE TWO POSITIONS DEPENDENT ON THE FAN SPEED TO MAINTAIN CONSTANT OUTDOOR AIR VOLUME AND BUILDING PRESSURE. REFER TO THE BUILDING AIR BALANCE SCHEDULE ON SHEET M-200.

THE UNIT SHALL HAVE ITS FRESH AIR HEATING OPTION ENABLED TO HEAT VENTILATION AIR TO A NEUTRAL VALUE DURING COLD WEATHER OPERATION. REFER TO THE MANUFACTURERS PROGRAMMING DOCUMENTATION FOR SETUP INSTRUCTIONS.

- MECHANICAL PLAN NOTES**
- LOCATION OF FACTORY DUCT MOUNTED SMOKE DETECTOR IN RETURN OF RTU. PROVIDE REMOTE ENUNCIATOR AUDIOVISUAL. VERIFY LOCATION WITH FIRE MARSHAL PRIOR TO INSTALLATION. REFER TO SPEC SHEET MP0 FOR ADDITIONAL INFORMATION.
 - TRANSITION AND CONNECT 14" DIAMETER GREASE DUCT TO EXHAUST HOOD. ROUTE DUCT UP AND CONNECT TO EXHAUST FAN. OFFSET AS NECESSARY TO MISS ROOF STRUCTURE, AND TO MAINTAIN 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES AND 5'-0" FROM PARAPET WALLS. ALL GREASE DUCT IS TO BE INSTALLED WITH DUCT WRAP AND ACCESS DOORS AS DETAILED AND PER THE MANUFACTURERS REQUIREMENTS FOR 0" CLEARANCE TO COMBUSTIBLES. REFER TO ROOF PLAN M-101 FOR CONTINUATION.
 - COORDINATE DUCT ROUTING WITH LIGHTING. REFER TO SHEET E200.
 - EXPOSED DUCTWORK SHALL BE OF PAINTLOCK CONSTRUCTION AND PAINTED PER THE DIRECTION OF ARCHITECT.
 - SUPPORT EXHAUST FAN FROM STRUCTURE AS REQUIRED BY THE MANUFACTURER.
 - COORDINATE WITH STRUCTURAL TO BLOCK OUT JOISTS AS REQUIRED TO RUN DUCT THROUGH THE STRUCTURE.
 - RETURN DUCT TO BE ROUTED BETWEEN JOISTS, AS HIGH AS STRUCTURE WILL ALLOW.
 - ROUTE EXHAUST DUCT UP THROUGH ROOF TO ROOF CAP. MAINTAIN 10'-0" CLEARANCE TO ALL OUTDOOR AIR INTAKES. SEAL PENETRATION WEATHERTIGHT.
 - DUCT UP THROUGH ROOF. SEE SHEET M101 FOR CONTINUATION. OPENING TO BE CUT BETWEEN TRUSSES AS REQUIRED. FIELD VERIFY EXACT LOCATION PRIOR TO CUTTING THE ROOF. SEAL PENETRATION WEATHERTIGHT AS REQUIRED.
 - PROVIDE 3" PVC FLUE AND COMBUSTION AIR INTAKE PIPE FOR HOT WATER HEATER THROUGH ROOF. PROVIDE MANUFACTURERS TERMINATION KIT. SEAL PENETRATION WEATHERTIGHT. VERIFY 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES.
 - RETURN AIR DUCT LOCATED BETWEEN ROOF TRUSSES. OPEN END OF DUCTWORK TURNED UP TOWARD STRUCTURE WITH A MINIMUM 8" CLEARANCE TO DECK.
 - LOCATION OF REMOTE TEMPERATURE AND HUMIDITY SENSOR FOR RTU. INSTALL AT 9' AFF.
 - LOCATION OF DOAS TEMPERATURE SENSOR AND HUMIDISTAT MOUNTED AT 7' AFF.
 - LOCATION OF RTU/DOAS THERMOSTATS. GC TO LABEL EACH THERMOSTAT.
 - EXHAUST HOOD PROVIDED BY OTHERS. INSTALLED BY THIS CONTRACTOR PER THE MANUFACTURERS INSTRUCTIONS.
 - LOCATION OF MANUAL PULL STATION. INSTALL PER THE MANUFACTURERS REQUIREMENTS. CONFIRM LOCATION WITH LOCAL FIRE MARSHAL PRIOR TO INSTALLATION.
 - TRANSITION AND CONNECT 10" DIAMETER GREASE DUCT TO EXHAUST HOOD. ROUTE DUCT UP AND CONNECT TO EXHAUST FAN. OFFSET AS NECESSARY TO MISS ROOF STRUCTURE, AND TO MAINTAIN 10'-0" CLEARANCE FROM ALL OUTDOOR AIR INTAKES AND 5'-0" FROM PARAPET WALLS. ALL GREASE DUCT IS TO BE INSTALLED WITH DUCT WRAP AS DETAILED AND PER THE MANUFACTURERS REQUIREMENTS FOR 0" CLEARANCE TO COMBUSTIBLES. REFER TO ROOF PLAN M-101 FOR CONTINUATION.



ROOFTOP UNIT SCHEDULE																							
MARK	MANUFACTURER	MODEL NO.	EVAP CFM	EXT. STATIC P. IN. WG.	COOLING				HEATING (GAS)			ELECTRICAL				TOTAL WEIGHT (LBS)	NOTES						
					COOLING STAGES	TOTAL	SENSIBLE	AMB	EVAP EAT DB/WB	HOT GAS REHEAT	INPUT	OUTPUT	HEATING STAGES	VOLTPH/Hz	BLOWER MOTOR			POWER EXHAUST	MCA	MOCP	SUPPLY FAN TYPE	MINIMUM OUTDOOR AIR	IEER
RTU-1	YORK	K150N24	5000	1.000	2	150100 Btu/h	108000 Btu/h	115.0 °F	80.0 °F / 67.0 °F	Yes	240000 Btu/h	194400 Btu/h	2	208 V / 3 / 60 Hz	5.00 hp	Yes	82.9 A	100.0 A	VFD	980	15.2	1545 lb	1-8

ALTERNATE ROOFTOP UNIT MANUFACTURER																							
MARK	MANUFACTURER	MODEL NO.	EVAP CFM	EXT. STATIC P. IN. WG.	COOLING				HEATING (GAS)			ELECTRICAL				TOTAL WEIGHT (LBS)	NOTES						
					COOLING STAGES	TOTAL	SENSIBLE	AMB	EVAP EAT DB/WB	HOT GAS REHEAT	INPUT	OUTPUT	HEATING STAGES	VOLTPH/Hz	BLOWER MOTOR			POWER EXHAUST	MCA	MOCP	SUPPLY FAN TYPE	MINIMUM OUTDOOR AIR	IEER
RTU-1	Trane	YSK-150	5000	1.000	3	130100 Btu/h	103700 Btu/h	115.0 °F	80.0 °F / 67.0 °F	Yes	250000 Btu/h	202500 Btu/h	2	208 V / 3 / 60 Hz	4.60 hp	Yes	67.0 A	90.0 A	VFD	980	14	1540 lb	1-8

- NOTES:**
- PROVIDE DIGITAL CONTROLS, HIGH PERFORMANCE WITH FDD OUTDOOR AIR ECONOMIZER WITH DRY BULB CONTROL, SINGLE ZONE VAV (MSAV), BAROMETRIC RELIEF DAMPER, TIME DELAY ON COMPRESSOR RE-START, CRANKCASE HEATER, BAROMETRIC RELIEF DAMPER, DRAIN PAN OVERFLOW SWITCH, DISCHARGE AIR TEMPERATURE SENSING, HINGED ACCESS DOORS, SMOKE DETECTOR MOUNTED IN RETURN, AND STANDARD COOLING DOWN TO 0°F FOR EACH UNIT. OUTDOOR AIR DAMPER TO FULLY CLOSE W/ FAN SHUTDOWN FOR ALL UNITS.
 - EXTERNAL STATIC PRESSURE LISTED REPRESENTS STATIC PRESSURE REQUIRED FOR DUCTWORK AND DIFFUSERS OUTSIDE THE HVAC UNIT COMPLETELY INDEPENDENT OF ANY PRESSURE DROP THROUGH THE HVAC EQUIPMENT INCLUDING BUT NOT LIMITED TO FILTERS, COILS AND ECONOMIZERS. THE FAN AND MOTOR SHALL BE SIZED APPROPRIATELY TO MEET THIS DEFINITION OF EXTERNAL STATIC PRESSURE.
 - PROVIDE COMMERCIAL 7-DAY PROGRAMMABLE HEAT/COOL/AUTO CHANGEOVER THERMOSTAT WITH ECONOMIZER OUTPUT AND REMOTE, TEMPERATURE AND HUMIDITY SENSOR FOR EACH UNIT (HONEYWELL VISION PRO 8000 OR EQUAL), ECONOMIZER/OUTDOOR AIR DAMPER IS TO CLOSE DURING UNOCCUPIED HOURS.
 - PROVIDE 14" HIGH (AT LOWEST POINT) PRE-FABRICATED INSULATED ROOF CURB.
 - PROVIDE HAIL GUARDS FOR EACH UNIT.
 - PROVIDE FACTORY INSTALLED UNIT MOUNTED CIRCUIT BREAKERS.
 - MECHANICAL CONTRACTOR SHOULD PROVIDE ALL NEW FILTERS ON DAY OF TURNOVER.
 - PROVIDE HOT GAS REHEAT FOR HUMIDITY CONTROL, AND ALL ASSOCIATED ACCESSORY COMPONENTS.
 - PROVIDE NEW 2" MERV 8 FILTERS UPON COMPLETION OF CONSTRUCTION.
 - REFRIGERATION DETECTION SYSTEM (RDS)
 - FUNCTION: REFRIGERANT DETECTION SYSTEM (RDS) IS INSTALLED IN THIS EQUIPMENT TO DETECT ANY A/L LEAKAGE IN THE COIL AND TAKE ACTION TO MITIGATE ANY RISK OF IGNITION/FIRE OPERATION. WHEN THERE IS A LEAK DETECTED, THE RDS SHALL SEND SIGNALS FOR THE UNIT TO MITIGATE LEAK AS REQUIRED BY MANUFACTURER TO:
 - TURN OFF THE THERMAL STATS.
 - TURN ON THE BLOWER FOR AIR CIRCULATION.
 - SWITCH OFF HEATER.

NATIONAL ACCOUNT INFORMATION

FREDDY'S FROZEN CUSTARD HAS NATIONAL ACCOUNT AGREEMENTS FOR ROOF TOP UNITS WITH YORK AND TRANE. NO ALTERNATE MANUFACTURERS ARE ALLOWED.

FOR YORK EQUIPMENT CONTACT:
CHARLIE FITCOCK, NATIONAL ACCOUNT MANAGER, (216)-598-4396
Charlie.fitcock@york.com

FOR TRANE EQUIPMENT EQUAL TO THE UNITS SPECIFIED CONTACT:
SHANE LAFLEUR, NATIONAL ACCOUNT EXECUTIVE, (919) 279-0964
Shane.Lafleur@tranetechnologies.com

FAN SCHEDULE													
ID	LOCATION	MANUFACTURER	MODEL NO.	TYPE	DESIGN AIRFLOW	ESP	FAN DRIVE			VOLT	PH	REMARKS	
							TYPE	POWER	RPM				
EF-1	Ceiling	Greenheck	SP-A200-390	Premium (Constant Ch)	75	0.250	Direct	0.08 hp	900	Yes	120 V	1	SEE NOTE 1.
EF-2	Ceiling	Greenheck	SP-A200-390	Premium (Constant Ch)	75	0.250	Direct	0.08 hp	900	Yes	120 V	1	SEE NOTE 1.

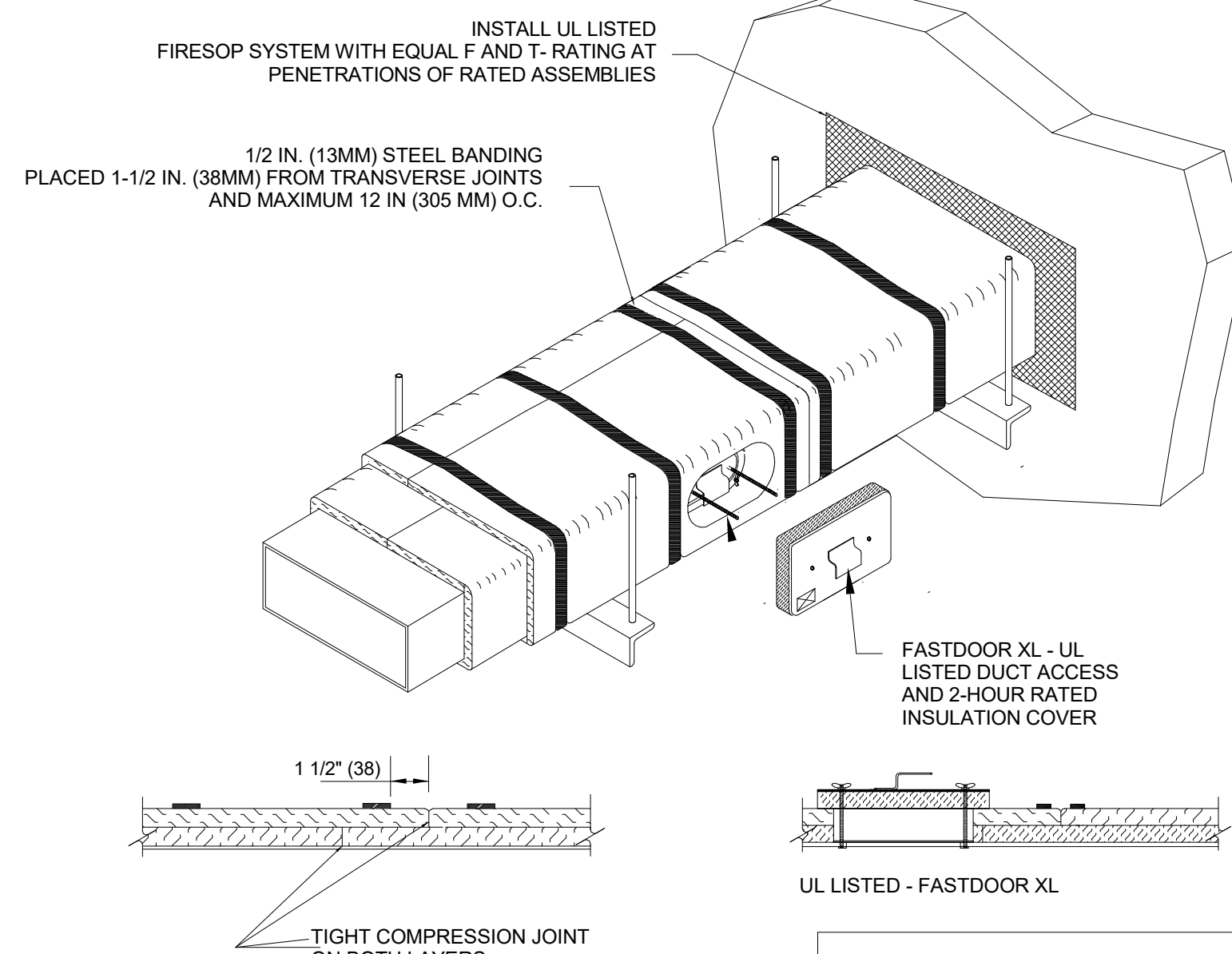
NOTES: 1. PROVIDE CEILING GRILLE, INTEGRAL BACKDRAFT DAMPER, AND ROOF CAP.

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE									
ID	MANUFACTURER	MODEL	MATERIAL	FINISH	NECK			NOTES	
					DIAMETER	WIDTH	HEIGHT		
RG-1	AMER. LOUVER CO	STRATUS	Aluminum	White Enamel	16"	0"	0"	SEE NOTE 1.	
RG-2	Titus	350RL	Steel	White Enamel	0"	10"	6"	PROVIDE RECTANGULAR TO ROUND TRANSITION	
SD-1	Titus	TMR	Steel	White Enamel	12"	0"	0"	FIELD PREP FOR PAINTING	
SD-2	Titus	TMS-AA	Aluminum	WHITE ENAMEL	10"	0"	0"		
SD-3	Titus	PAR	Steel	White Enamel	10"	0"	0"	NO DEFLECTOR	
SD-4	Titus	T332-A	Steel	WHITE ENAMEL	8"	0"	0"	THERMAL VAV DIFFUSER	
SD-5	Titus	TMR	Steel	White Enamel	8"	0"	0"	FIELD PREP FOR PAINTING	
SD-6	Titus	TMS	Steel	White Enamel	6"	0"	0"	WITH O.B. DAMPER AND TRIM KIT	

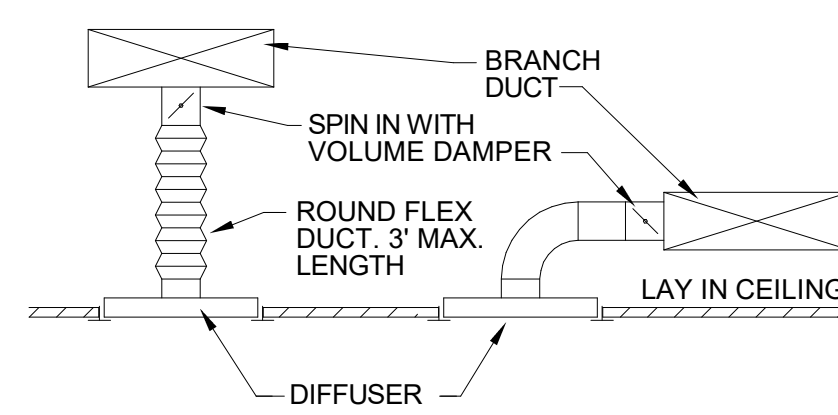
NOTES: 1. RETURN GRILLE TO BE PLASTIC FILTER RETURN, FILTER TO BE AMERICAN AIR FILTER (AAF) FRONTLINE GREEN 1", WITH AAF AMERIFRAME SIZE 20X20X1.

FIRE RATED ENCLOSURE - GREASE DUCTS

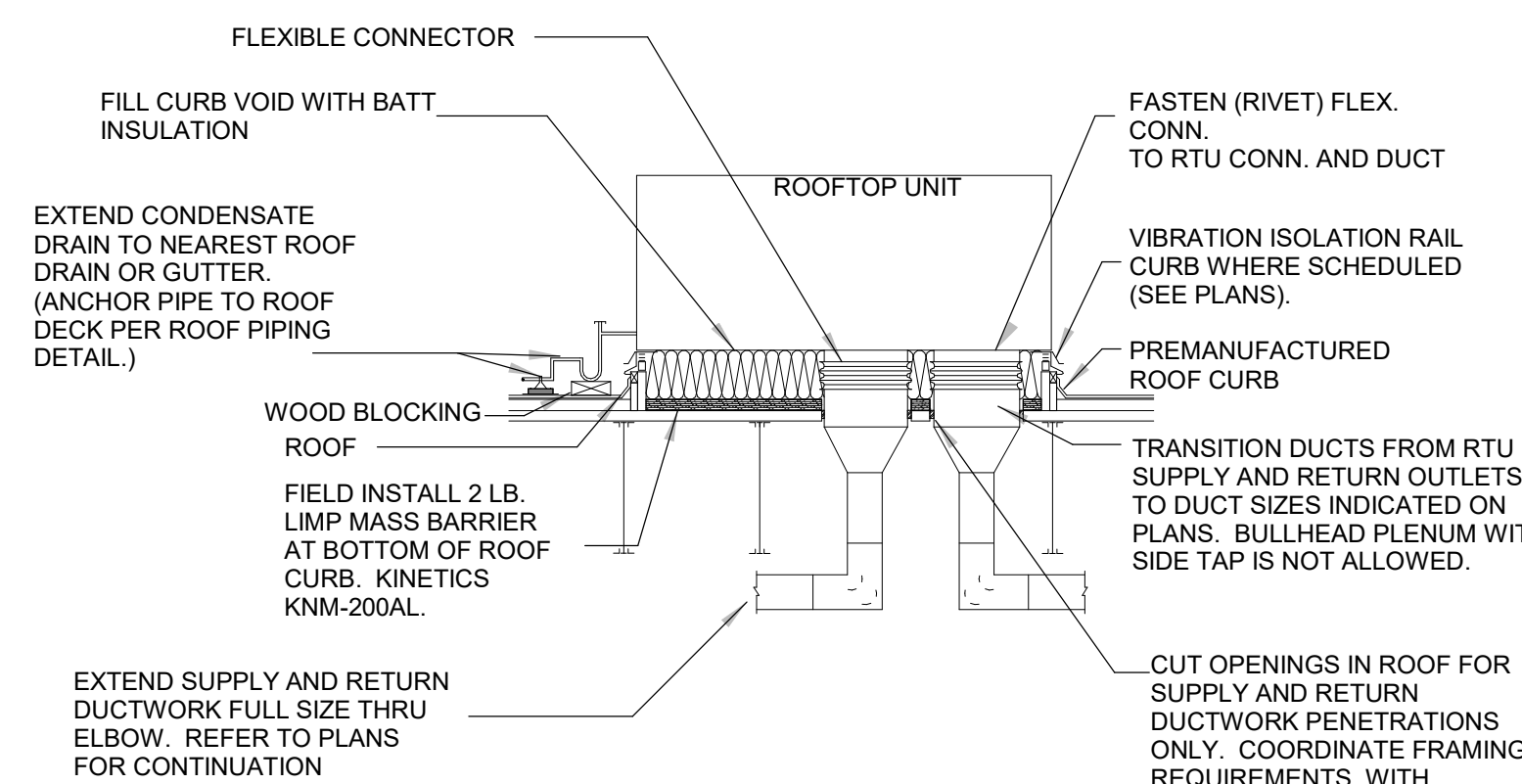
- THERMAL CERAMICS FIREMASTER FASTWRAP XL IS TESTED TO ASTM E238 AND UL LISTED PER HNK.T.G18 TO PROVIDE ZERO CLEARANCE TO COMBUSTIBLES AND TO PROVIDE A 1- OR 2- HOUR ENCLOSURE, THROUGH PENETRATIONS FIRESTOP SYSTEMS ARE TESTED IN ACCORDANCE WITH ASTM E 814 (UL 1479), ICC-ES APPROVAL PER REPORT ESR 2213 OR ESR 2832.
- COMPLIANT TO THE FOLLOWING CODES:
NFPA 96
INTERNATIONAL MECHANICAL CODES
UNIFORM MECHANICAL CODE
CALIFORNIA MECHANICAL CODE
- INSULATION APPLIED IN TWO LAYERS WITH TIGHT COMPRESSION JOINT ON BOTH LAYERS AT ALL JOINTS.
- MINIMUM 16 GAUGE CARBON STEEL (OR 18 GAGE STAINLESS STEEL) RECTANGULAR OR ROUND GREASE EXHAUST DUCT
- INSTALL UL LISTED AND LIQUID TIGHT THERMAL CERAMICS FASTDOOR XL ACCESS DOORS AT ALL CHANGES IN DIRECTION AND AT MINIMUM EVERY 20 FT ON HORIZONTAL RUNS.
- SUPPORT HANGER SYSTEMS DO NOT NEED TO BE WRAPPED PROVIDED THE HANGER RODS ARE MINIMUM OF 3/8 IN. DIAMETER AND SUPPORTS ARE MINIMUM 2 X 2 X 1/8 IN. STEEL ANGLE OR SMACNA EQUIVALENT SUPPORT SYSTEM.
- THERMAL CERAMICS DUCT WRAP SHALL BE INSTALLED DIRECTLY ONTO THE DUCT AND APPLIED FROM THE HOOD CONNECTION TO THE CONNECTION TO THE FAN.
- THERMAL CERAMICS DUCT ENCLOSURE SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND UL LISTINGS.



Morgan ThermalCeramics
P.O. Box 923
Augusta, Georgia 30903-0923
Phone: (706) 560-4038

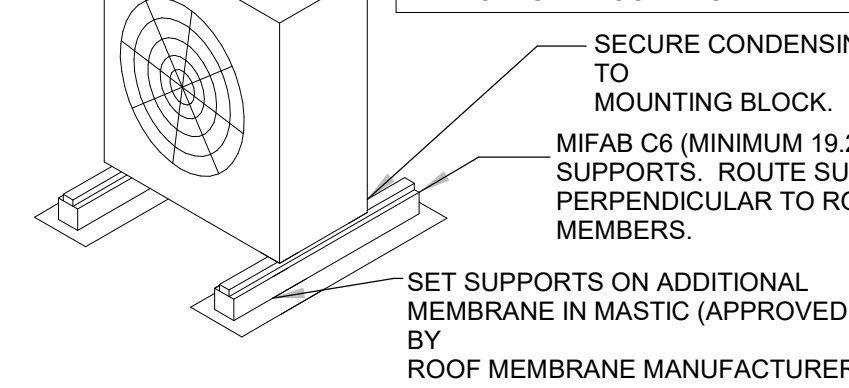


6 M-200 DIFFUSER DETAIL

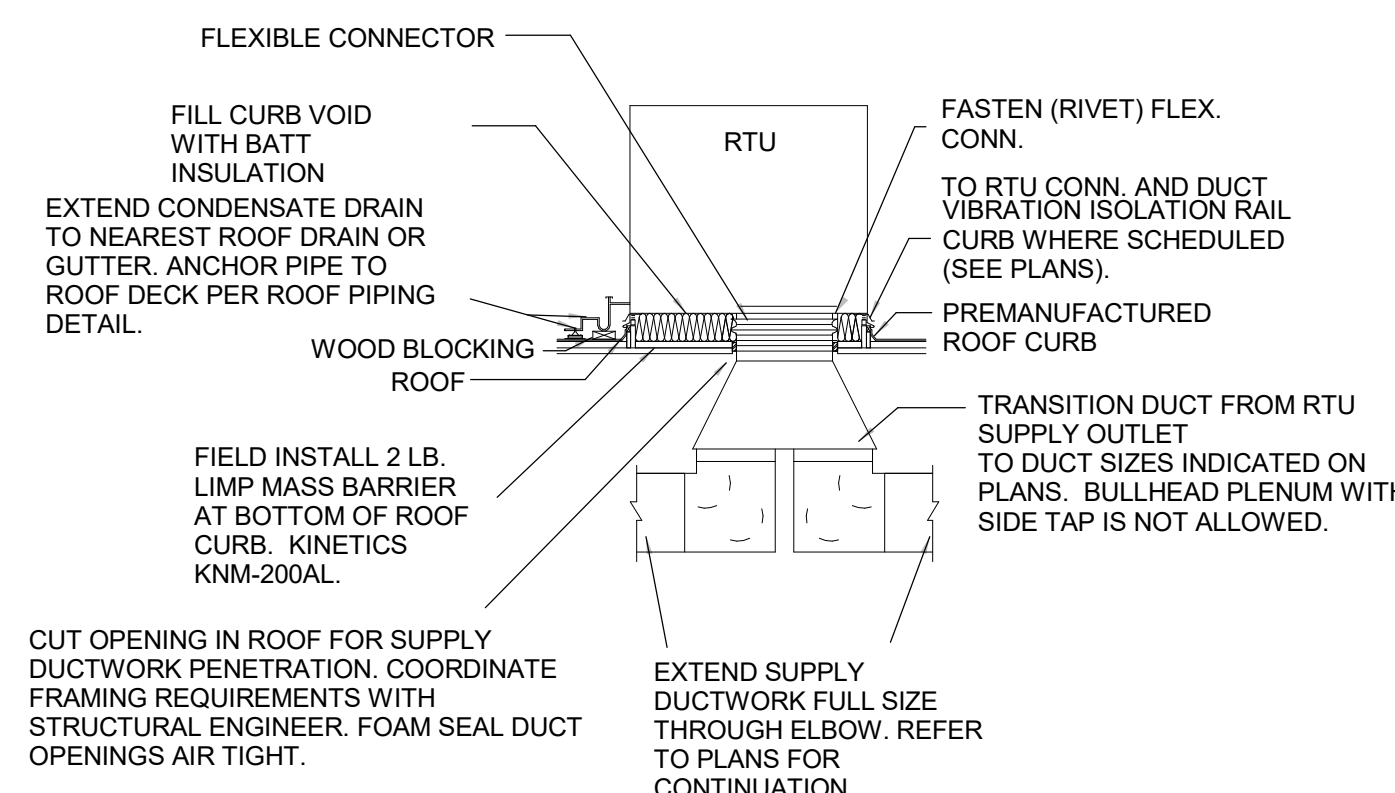


7 M-200 DOWNFLOW DOAS UNIT DETAIL

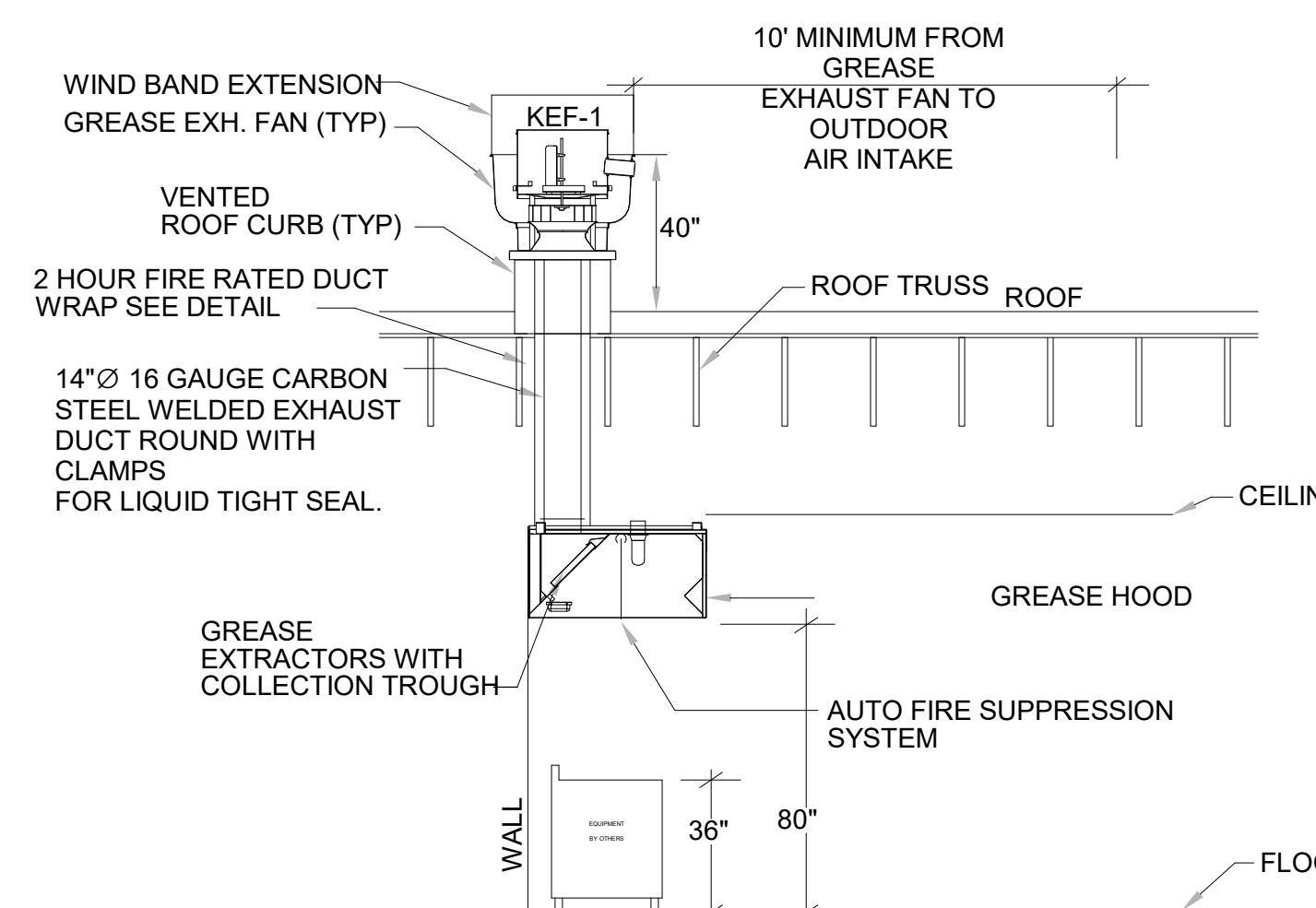
- NOTES:**
- PROVIDE MANUFACTURERS RECOMMENDED CLEARANCES BETWEEN CU & HP UNITS.
 - PROVIDE ADDITIONAL SUPPORTS AS REQUIRED IF UNITS ARE NOT SAME WIDTH.
 - PAINT EXPOSED INSULATION WITH MANUFACTURER RECOMMENDED ULTRAVIOLET PROTECTIVE COATING.



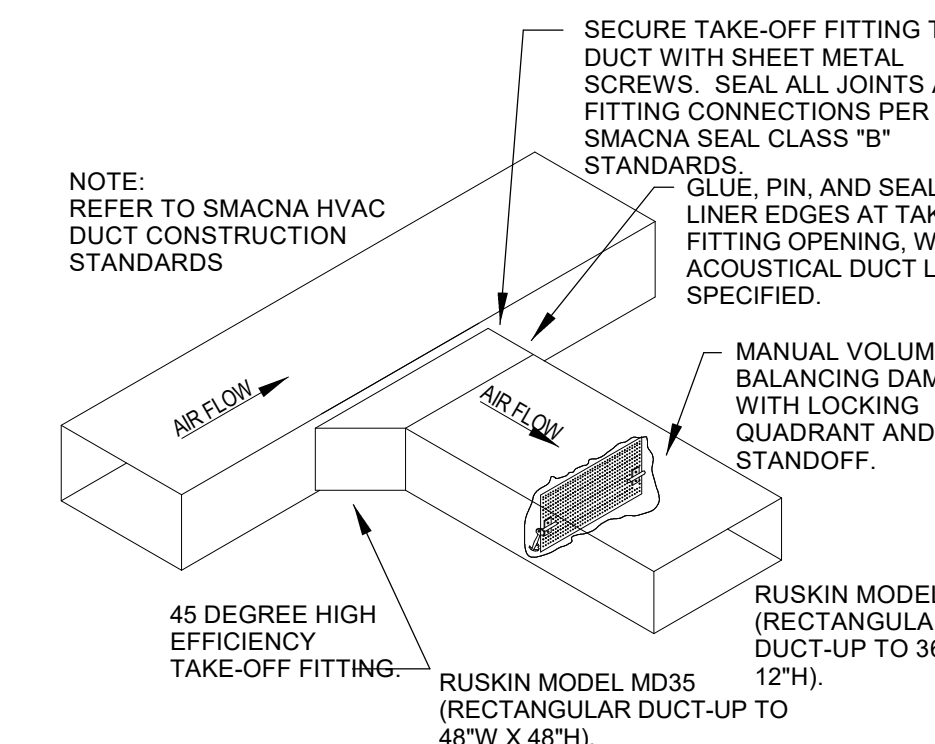
5 M-200 ROOFTOP CONDENSING UNIT DETAIL



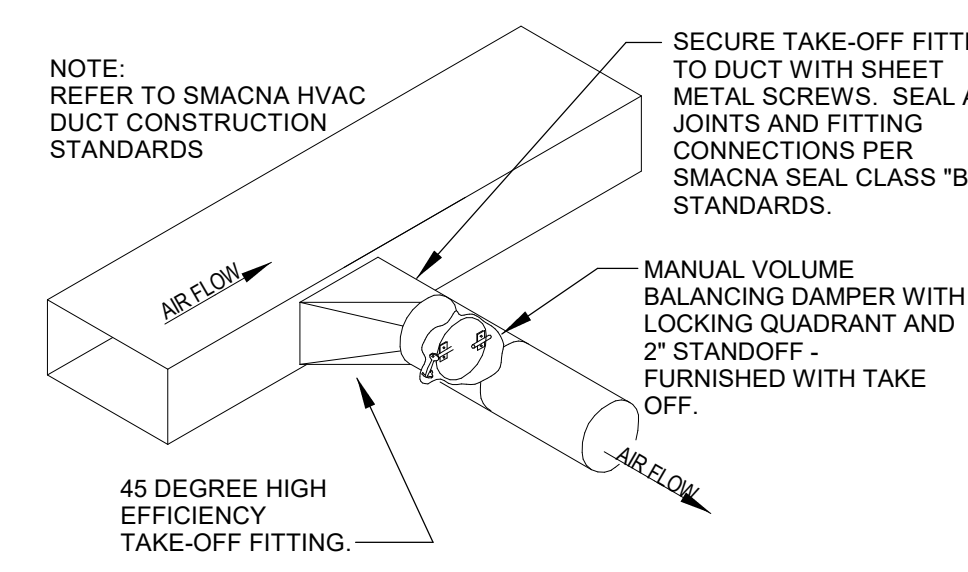
10 M-200 DOWNFLOW ROOFTOP UNIT DETAIL



4 M-200 GREASE HOOD DETAIL



9 M-200 RECTANGULAR DUCT TAKE OFF DETAIL

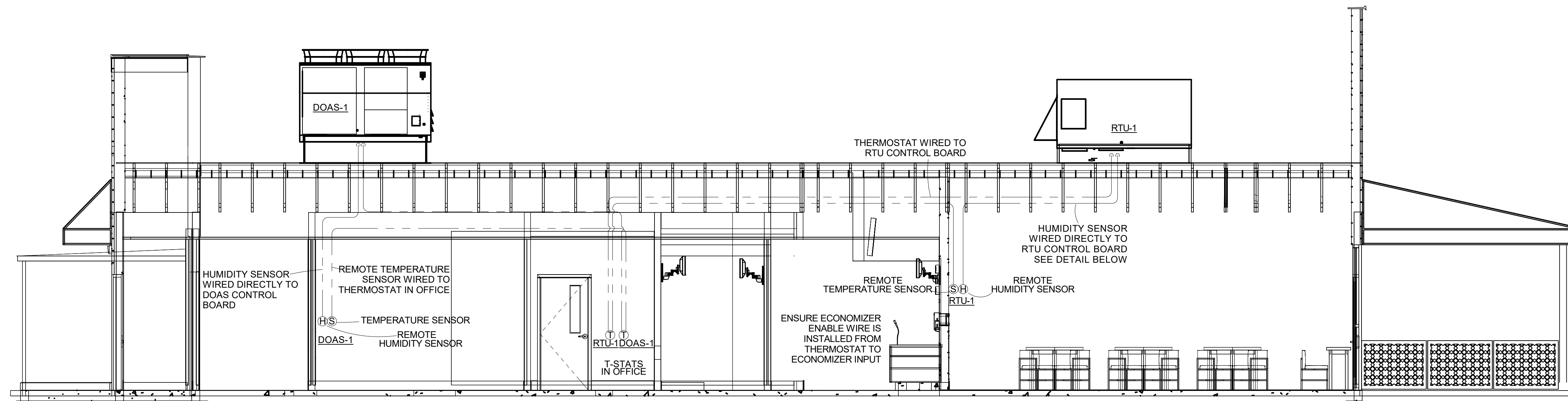


8 M-200 ROUND DUCT TAKE OFF DETAIL

BC PROJECT #: 24387
TEXAS PE COA #F-15978

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BC ENGINEERS INCORPORATED
5720 Reeder Shawnee, KS 66203 (913)262-1772



REMOTE TEMPERATURE AND HUMIDITY SENSOR WIRING
 ALL LOW VOLTAGE WIRING FOR THE HVAC SYSTEM IS TO BE PROVIDED AND INSTALLED BY THE HVAC CONTRACTOR.

Installation

DC Conductors

Table 11. Zone sensor module wiring

Distance from Unit to Control	Recommended Wire Size
0 - 150 feet	22 gauge
0 - 45.7 m	0.33 mm ²
151 - 240 feet	20 gauge
46 - 73.1 m	0.50 mm ²
241 - 385 feet	18 gauge
73.5 - 117.3 m	0.75 mm ²
386 - 610 feet	16 gauge
117.7 - 185.9 m	1.3 mm ²
611 - 970 feet	14 gauge
186.2 - 295.7 m	2.0 mm ²

Figure 58. Typical field wiring diagrams for electromechanical

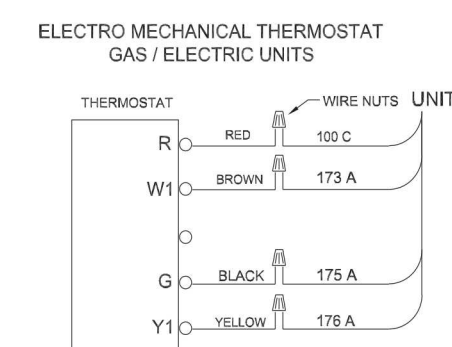


Figure 59. ReliaTel™ conventional thermostat field wiring diagram

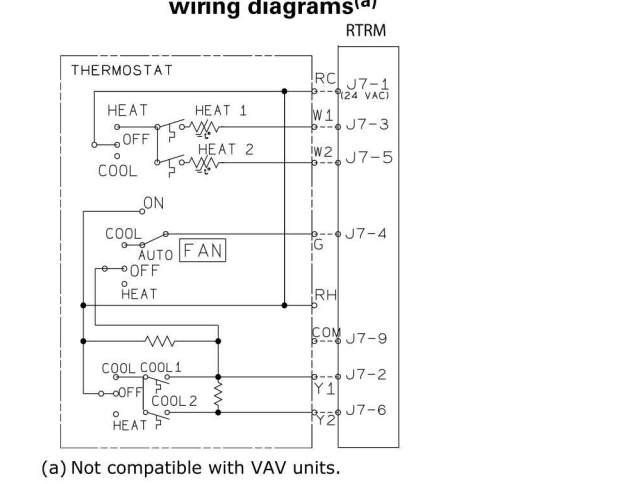


Figure 60. ReliaTel™ options module (RTOM board)

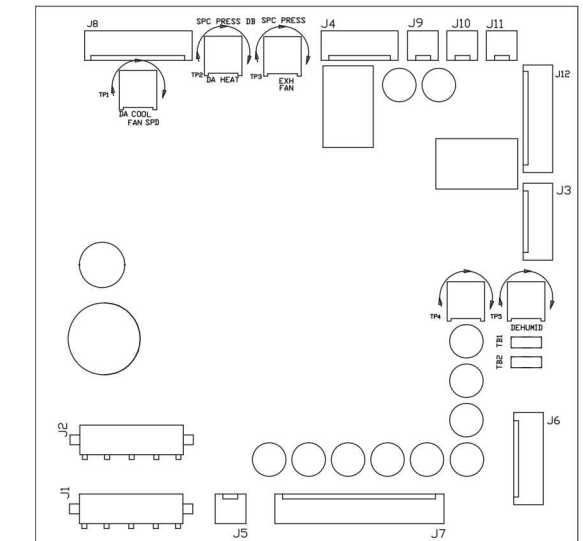


Figure 61. ReliaTel™ relative humidity sensor (dehumidification option)

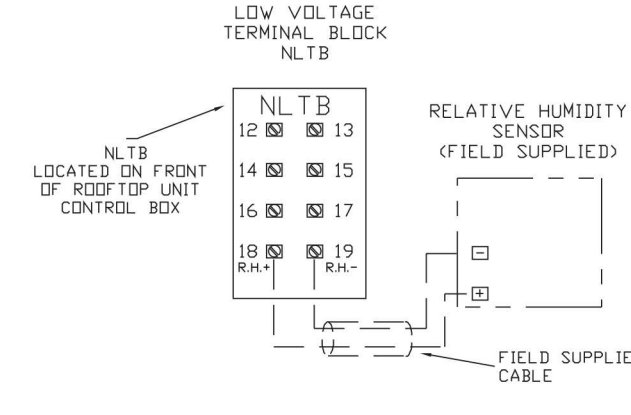
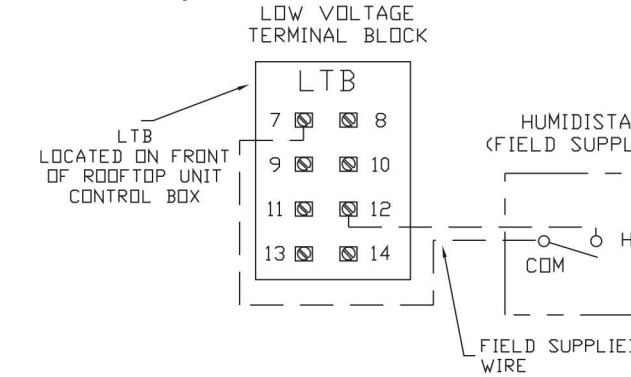


Figure 62. ReliaTel™ humidistat (dehumidification option)



40

RTSVX21YEN

TRANE HUMIDITY SENSOR WIRING

FOR GENERAL INFORMATION ONLY
 REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS
 PROVIDED WITH THE EQUIPMENT FOR EXACT INSTALLATION INSTRUCTIONS AND
 REQUIREMENTS.

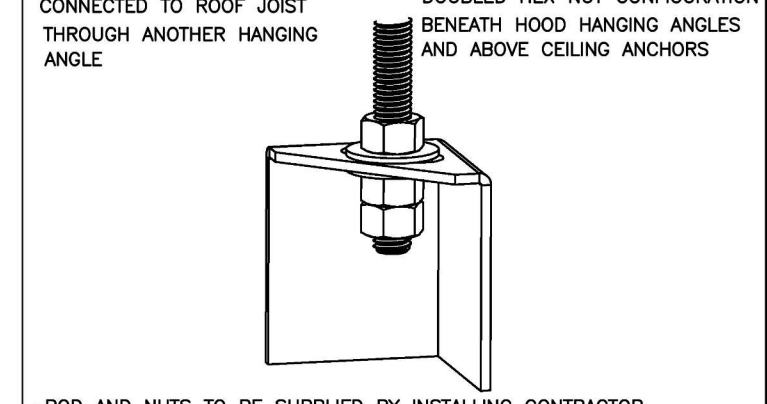
BC PROJECT #: 24387
 TEXAS PE COA #F-15978

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BC ENGINEERS INCORPORATED

5720 Reeder Shawnee, KS 66203 (913)262-1772

ND-2 HANGING ANGLE DETAIL



*ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR. HANGING ANGLE IS PRE-FINISHED AT FACTORY.

HANGING ANGLE LOCATIONS

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24\"/>	
CANOPY ND2	4.166"	2.246"	2.246"
ND2-PSP-F	4.166"	2.246"	2.246"
BACKSHELF BD-2	4.166"	2.246"	-
VHB/VHB-G	36"x36"	42"x42"	48"x48"
FRONT/BACK DIMS BY SIZE	2.246"	2.246"	2.246"

CALCULATIONS UTILIZED

EXHAUST CAPACITY OF HOOD X CFM/AJLFT. (LOAD)
 SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED
 TOTAL DUCT AREA=144 X
 DUCT LENGTH= TOTAL DUCT AREA
 DUCT DEPTH= DUCT DEPTH

BUILDING CODES

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:
 LISTED UNDER ETL FILE NUMBER 3054804-001/002

CLEARANCE TO COMBUSTIBLES
 CAPTIVE-AIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:

MATERIAL	CLEARANCE REDUCTION SYSTEM
NON-COMBUSTIBLE	NONE REQUIRED
LIMITED-COMBUSTIBLE	3" UNINSULATED STANDOFF
COMBUSTIBLE	1" INSULATED STANDOFF

GENERAL NOTES

- INSTALLATION**
- ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.
 - ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.
 - HANGING BRACKETS LOCATED AND WELDED AS SHOWN ON PLANS. ALL OTHER HANGER MATERIALS PROVIDED BY INSTALLING CONTRACTORS.
 - ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER MECHANICAL CONTRACTORS' PLANS.
 - COOKING EQUIPMENT TO SHUT-OFF IN EVENT OF FIRE.
 - EXHAUST FANS TO TURN ON IN EVENT OF FIRE.
 - ALL LIGHTS/FIXTURES SHOWN INSTALLED BY CAPTIVE-AIRE ARE FACTORY PREWIRED. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.
 - LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
 - SEISMIC RESISTANT ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
 - INSTALLING CONTRACTORS ASSUME ALL RELATED RESPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.

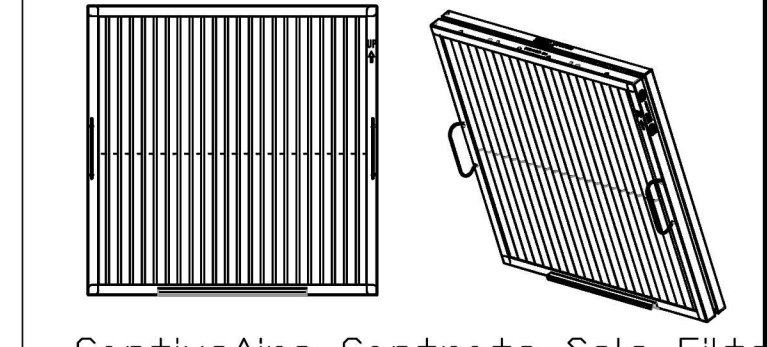
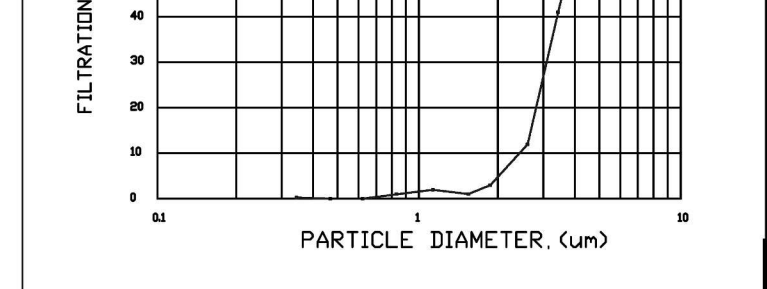
BALANCE

- KITCHEN HOODS MUST BE BALANCED WITH KITCHEN.
- KITCHEN SHALL BE NEGATIVE WITH RESPECT TO DINING AREA.
- RESTAURANT SHALL BE POSITIVE WITH RESPECT TO AMBIENT PRESSURE.

ADDITIONAL

- WRITTEN HOOD DIMENSIONS HAVE PRECEDENCE OVER SCALE.
- SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.

FILTER DETAIL



CaptiveAire Captrate Solo Filter, ETL Listed Grease Extracting Filter, Made From 430 Stainless Steel

HOOD INFORMATION - JOB#6842764

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/WT	TOTAL EXH. CFM	WIDTH	LENG	HEIGHT	DIA	VEL	SP	HOOD CONSTRUCTION	HOOD CONFIG	PATENT NUMBERS
1	ITEM 33A	5424	CAPTIVEAIRE	8' 0"	450 DEG	I	MEDIUM	200	1600	4'	14'	1600	1497	-0.734"		430 SS	ALONE FRONT	EXHAUST HOODS ND-2/BD-2/SND-2 (CANADA) - CA PATENT 2306345 C.
2	ITEM 33B	5424	CAPTIVEAIRE	5' 0"	450 DEG	I	MEDIUM	155	775	4'	10'	775	1481	-0.436"		430 SS	WHERE EXPOSED	

HOOD INFORMATION

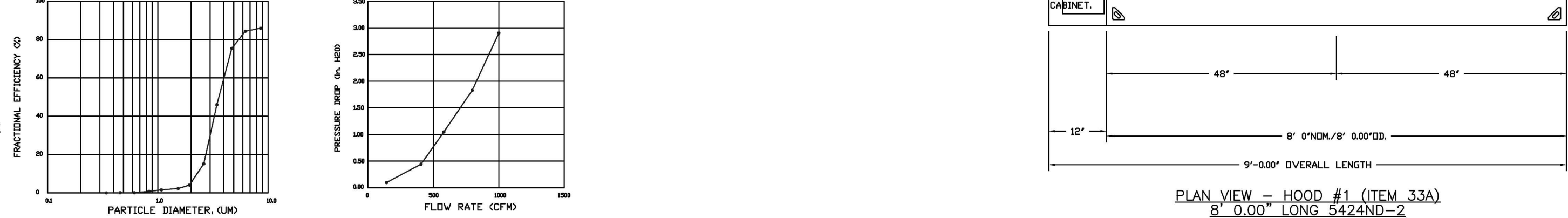
HOOD NO	TAG	TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	LOCATION	SIZE	TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE HOOD SYSTEM/HANGING PIPING WEIGHT
1	ITEM 33A	CAPTIVATE SOLID FILTER	5	16"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0/4.0		878 LBS
2	ITEM 33B	CAPTIVATE SOLID FILTER	3	16"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO						299 LBS

HOOD OPTIONS

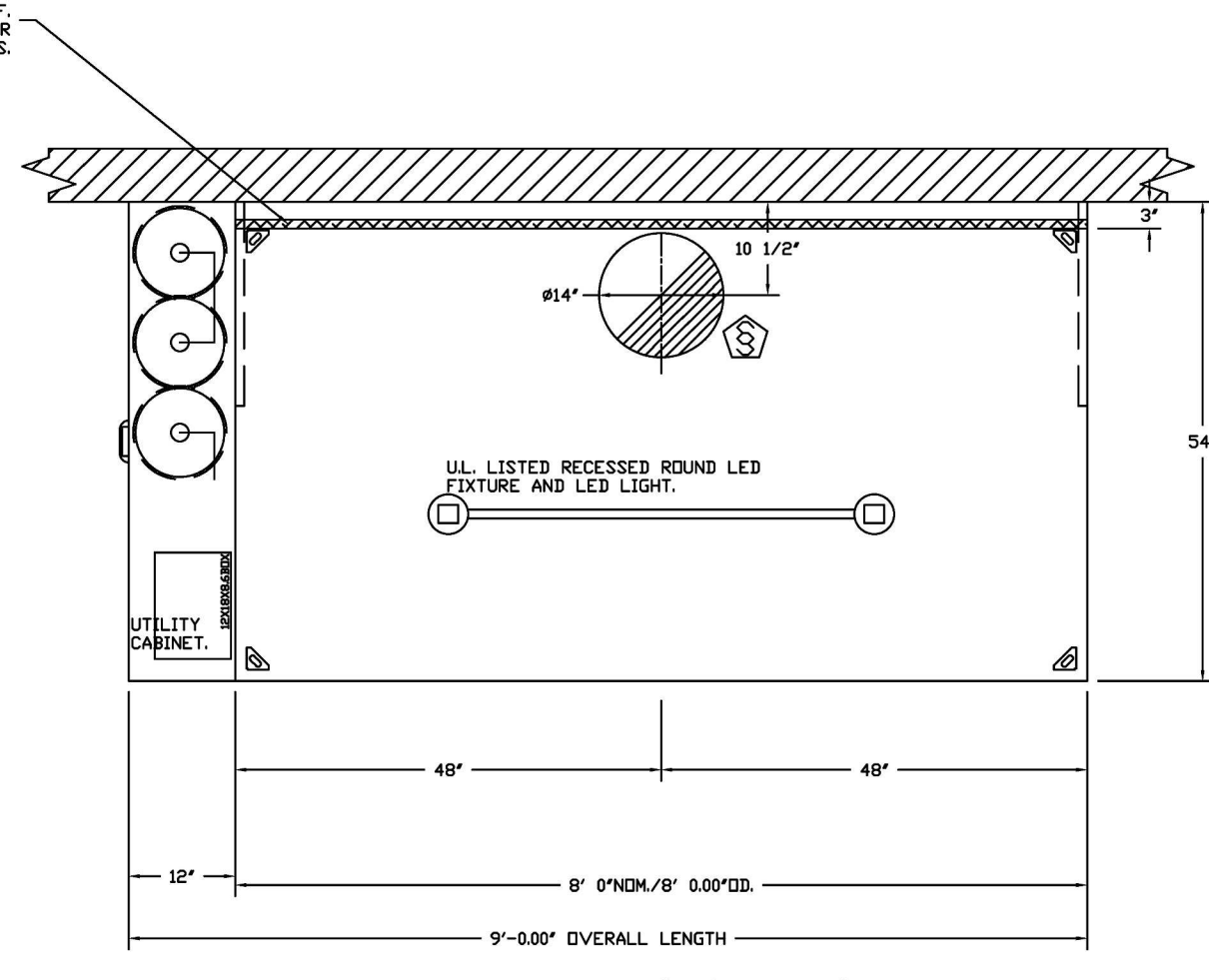
HOOD NO	TAG	OPTION
1	ITEM 33A	FIELD WRAPPER 1800" HIGH FRONT, LEFT, RIGHT. LEFT QUARTER END PANEL, 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. RIGHT QUARTER END PANEL, 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. INSULATION FOR TOP OF HOOD. INSULATION FOR BACK OF HOOD.
2	ITEM 33B	FIELD WRAPPER 1800" HIGH FRONT, LEFT, RIGHT. LEFT QUARTER END PANEL, 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. RIGHT QUARTER END PANEL, 23" TOP WIDTH, 0" BOTTOM WIDTH, 23" HIGH 430 SS. RISER SENSOR INSTALL, 6IN. PLEN.

SPECIFICATION: CAPTIVATE GREASE-STOP SOLID FILTER

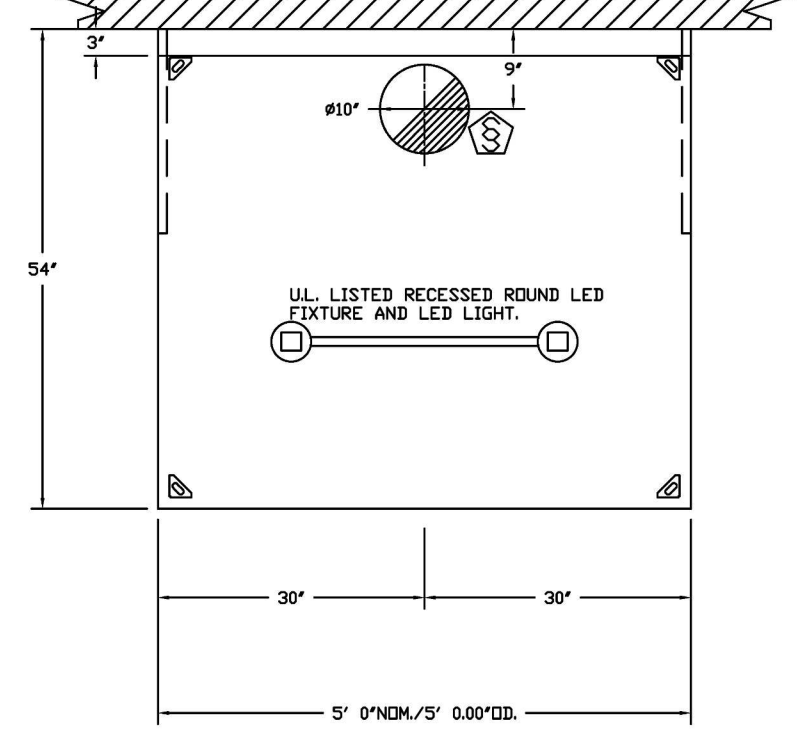
THE CAPTIVATE GREASE-STOP SOLID FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-Baffle Design in conjunction with a slotted rear baffle design, to deliver exceptional filtration efficiency. FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 6-INCH DEEP HOOD CHANNEL(S). UNITS 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 CAPTIVATE GREASE-STOP SOLID WAS TESTED TO ASTM STANDARD ASTM F2019-02, MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER. EFFICIENCY VS. PARTICLE DIAMETER. PRESSURE DROP VS. FLOW RATE.



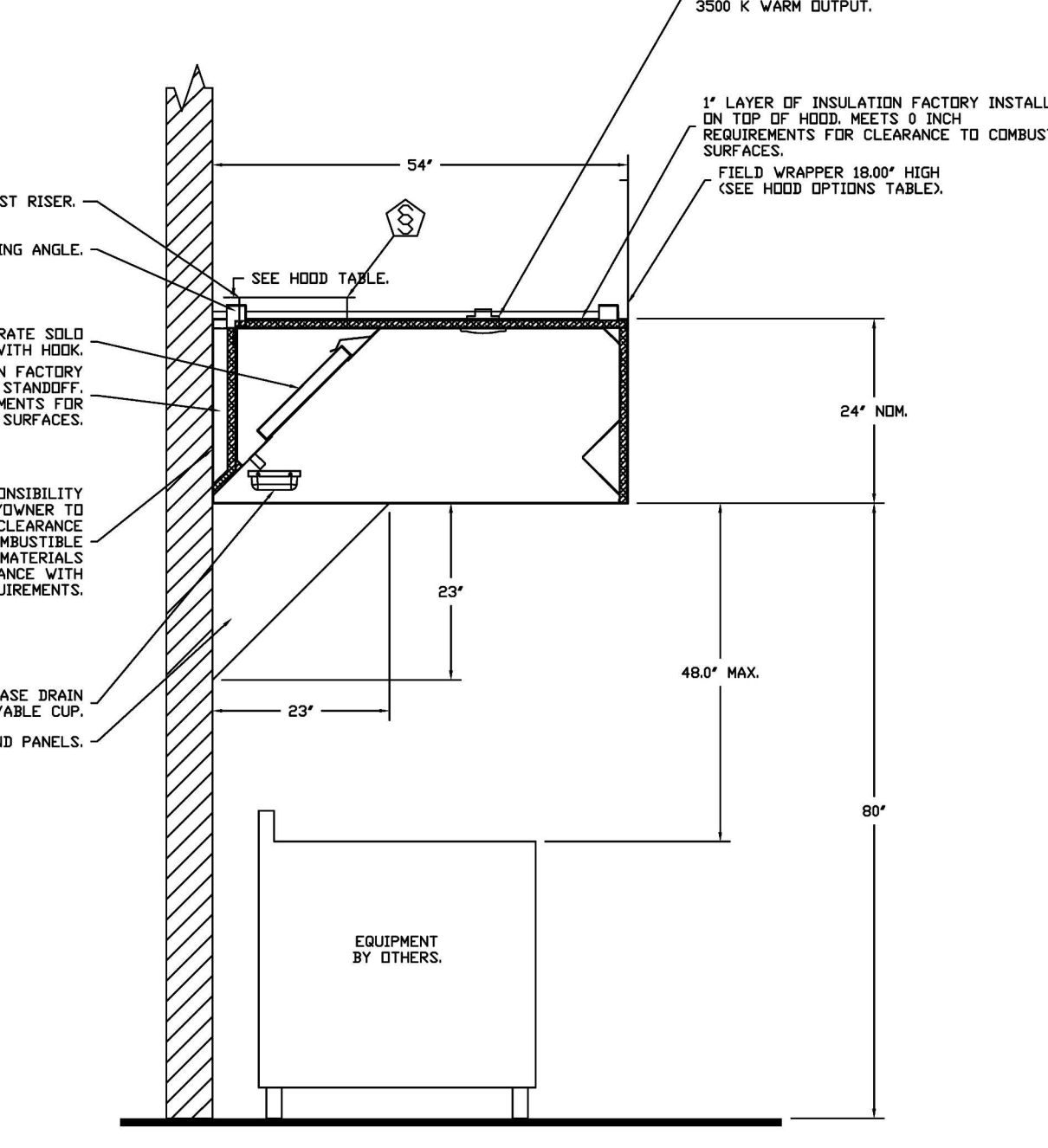
CAPTIVATE FILTERS ARE BUILT IN COMPLIANCE WITH:
 NSF INTERNATIONAL NSF STANDARD #2.
 UL STANDARD #3646.
 INT. MECH. CODE (IMC).
 ILC-5645.



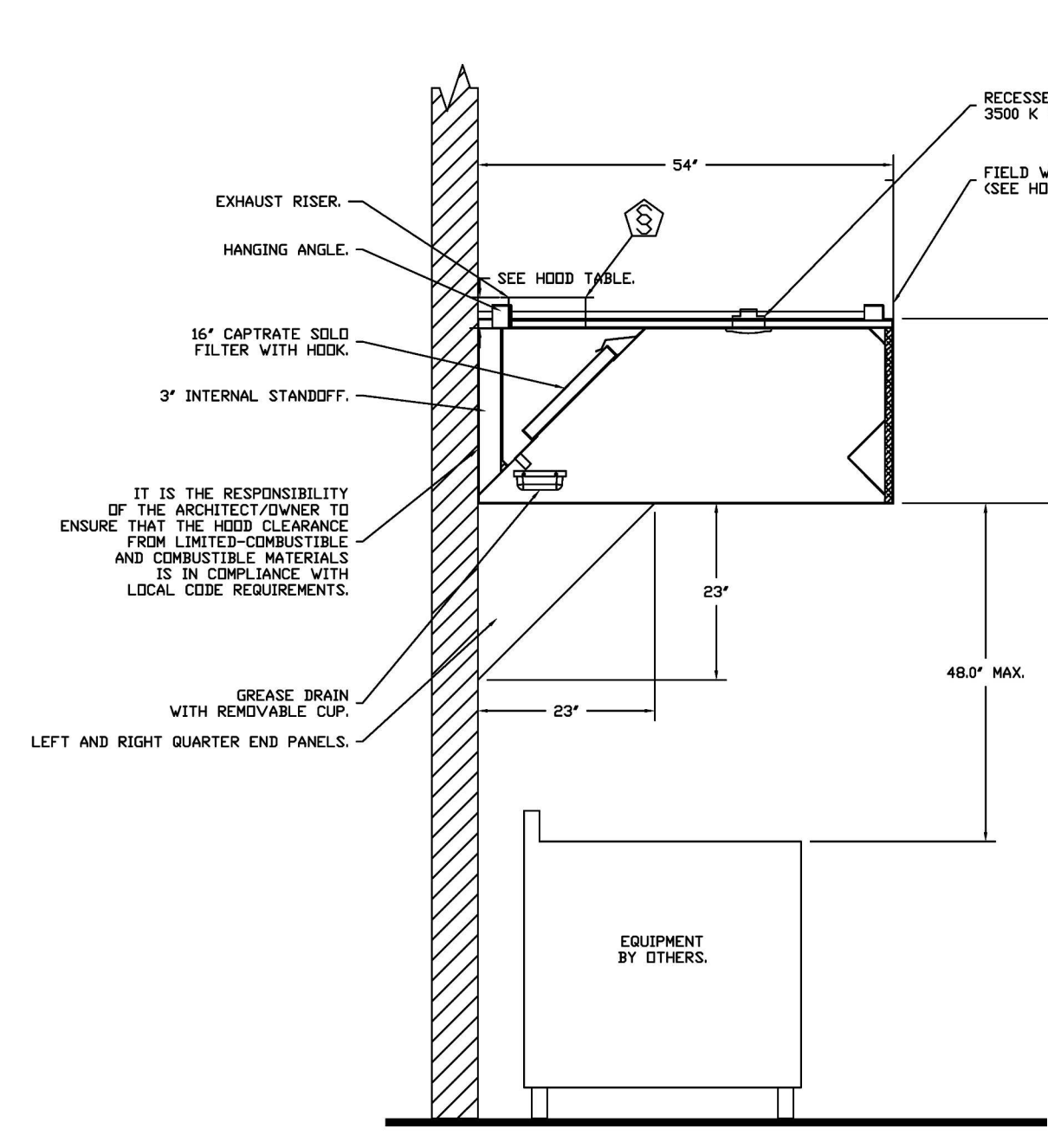
PLAN VIEW - HOOD #1 (ITEM 33A)
 9'-0.00" OVERALL LENGTH
 8'-0.00" LONG 5424ND-2



PLAN VIEW - HOOD #2 (ITEM 33B)
 5'-0.00" LONG 5424ND-2



SECTION VIEW - MODEL 5424ND-2
 HOOD - #1 (ITEM 33A)



SECTION VIEW - MODEL 5424ND-2
 HOOD - #2 (ITEM 33B)

CLEARANCE TO COMBUSTIBLES

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

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

FOR QUESTIONS, CALL THE:
 KANSAS CITY REGIONAL OFFICE
 1128 SWIFT STREET, KANSAS CITY, MO 64116
 PHONE: (816) 221-8575
 FAX: (816) 221-8511

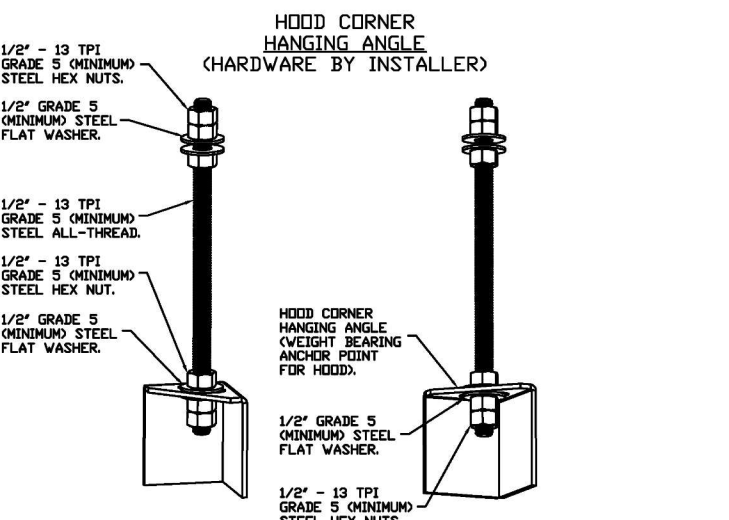
CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted
 Approved with ND Exception Taken
 Revise and Resubmit
 SIGNATURE _____ Date _____
 Your Title _____

***** NOTE *****
 ALL WALLS AND STRUCTURES THAT COME WITHIN 18" OF HOOD MUST BE METAL STUDS AND SHEETROCK. WOOD STUDS OR ANY OTHER COMBUSTIBLE MATERIAL WITHIN 18" OF HOOD NO ALLOWED.

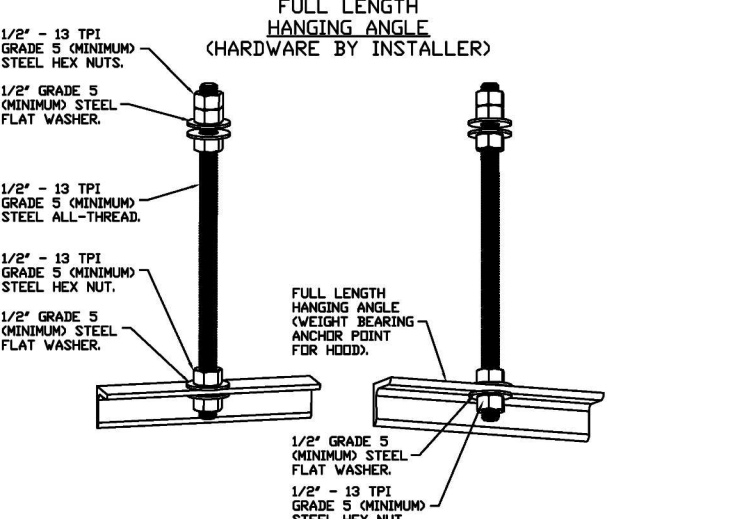
***** NOTE *****
 HOOD MANUFACTURER RECOMMENDS NO RETURNS OR 4-WAY DIFFUSERS WITHIN 10 FEET OF HOOD IN ALL DIRECTION.

***** NOTE *****
 MAKEUP AIR SHALL BE DELIVERED INTO SPACE IN MANNER THAT WILL NOT DISRUPT HOOD'S ABILITY TO CAPTURE AND CONTAIN.



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 OXINUMINO ALL-THREAD SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 OXINUMINO STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 OXINUMINO 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 HOOD HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



ASSEMBLY INSTRUCTIONS

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

REVISIONS

NO.	DESCRIPTION	DATE

CAPTIVEAIRE
 HBT Foodservice
 104 W 9th St Suite 204, Kansas City, MO, 64105 PHONE: (816) 221-8575 FAX: (816) 221-8511 EMAIL: reg98@captiveaire.com

Freddy's - Waxahachie, TX
 WAXAHACHIE, TX, 75165

DATE: 1/10/2025
DWG.#: 6842764
DRAWN BY: michael.co
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 1

BC PROJECT #: 24387
 TEXAS PE COA #F-15978

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BC ENGINEERS INCORPORATED
 5720 Reeder Shawnee, KS 66203 (913)262-1772

TESSERE
 www.tessere.com

BC ENGINEERS INCORPORATED
 MECHANICAL HOOD PLANS

MEP ENGINEER
MKEC STRUCTURE

2/14/25
 STATE OF TEXAS
 ARCHITECT & ENGINEER
 117553
 PROJECT NO. 2310042401
 PROJECT TYPE: New Construction

HCI hospitality
 CONTACT INFO:
 530 McCall Rd Suite 110, Manhattan, MO
 Tel: (785) 370-6842

1970 N HIGHWAY US 77
 WAXAHACHIE, TX 75165, ELLIS COUNTY

M-300

DATE: 02/14/2025 CHECKED BY: DSEK DRAWN BY: AKFO

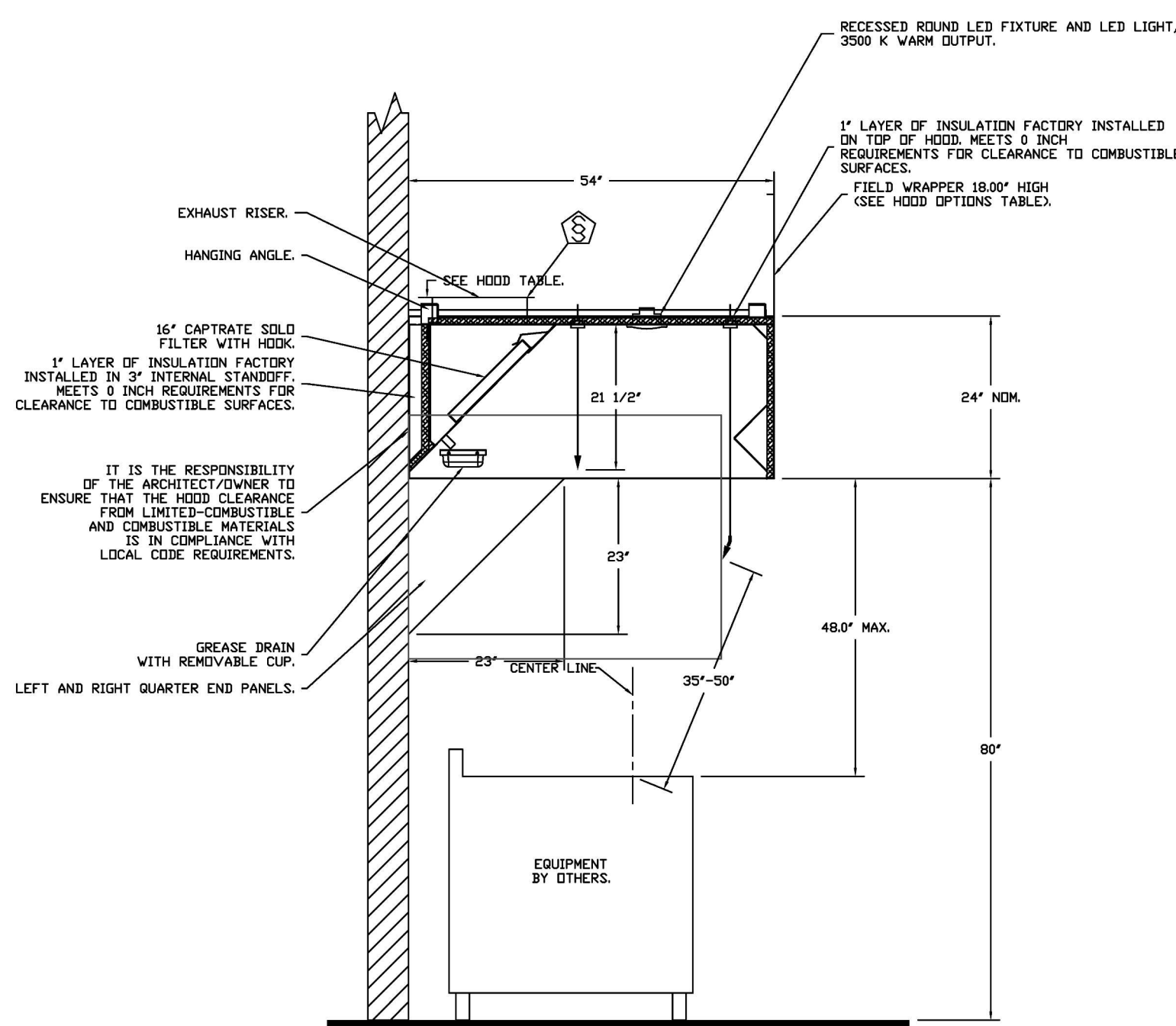
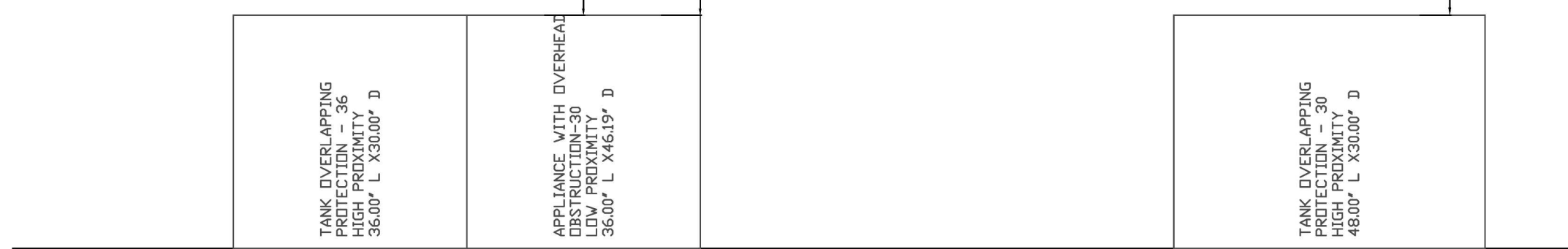
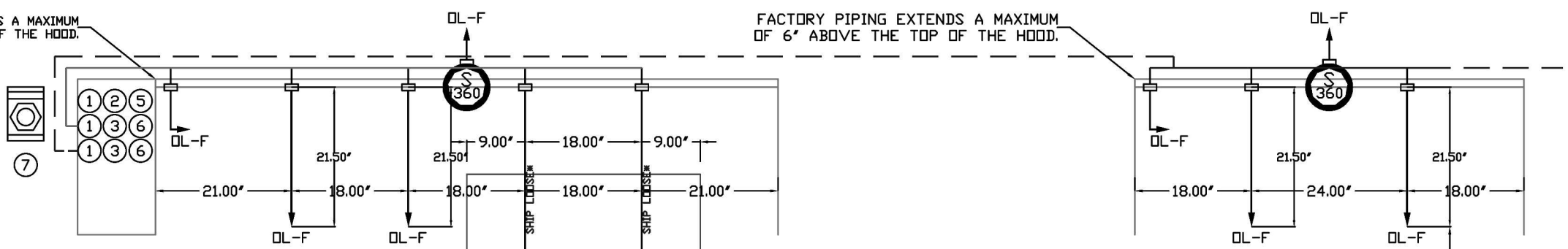
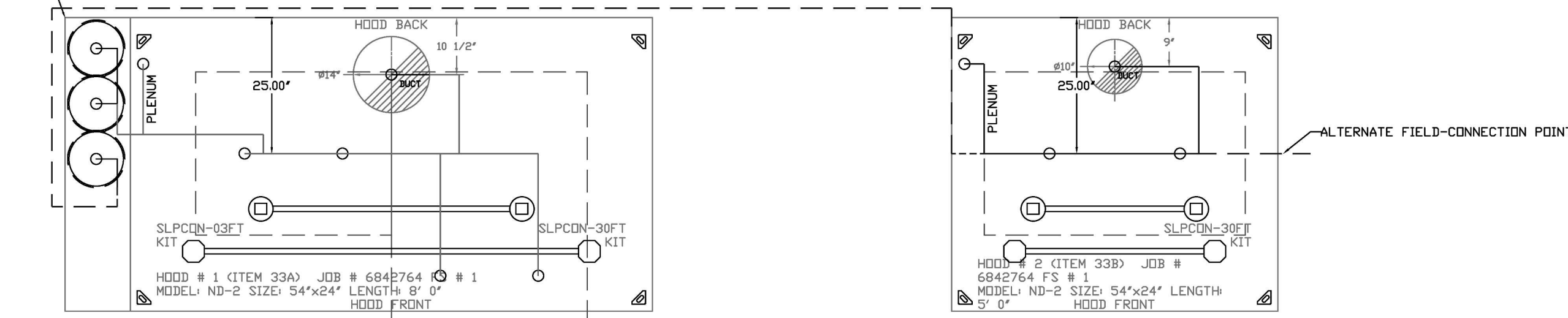
FIRE SYSTEM INFORMATION - JOB#6842764						
FIRE SYSTEM NO.	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION
1		TANK FS	48/48/4.0	60	42	FIRE CABINET LEFT, HOOD 1

GAS VALVES			
FIRE SYSTEM NO.	TAG	TYPE	SUPPLIED BY
1		SC ELECTRICAL	1250 CAPTIVEAIRE SYSTEMS

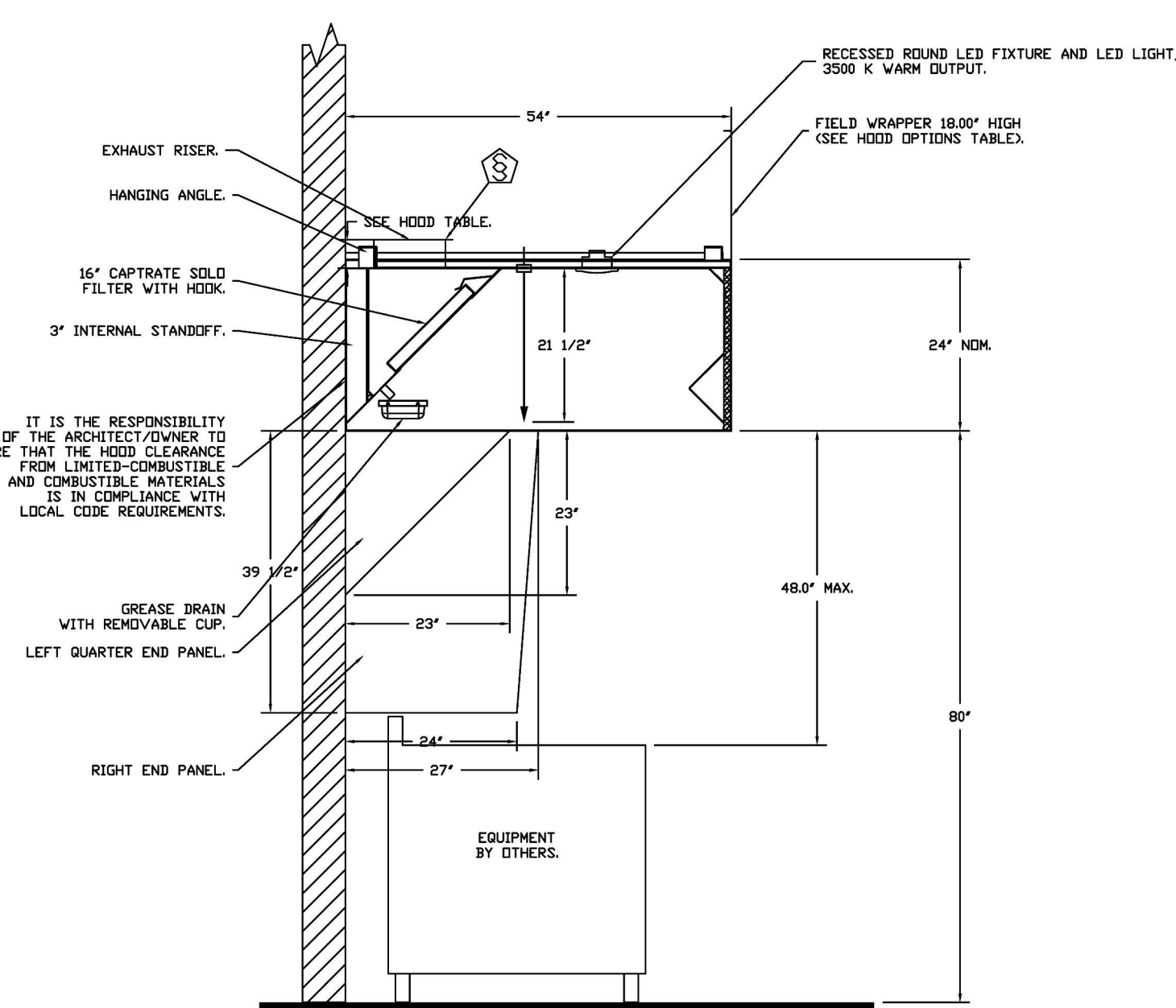
FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO.	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
0	0	TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
0	0	TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
0	0	18-F88021-32144-01-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. ND, CLOSE ON TEMP RISE AT 360°F. (6802430).	2	0
0	0	38-00000 GASK SEAL - 1/2" O.D.S.	2	0
0	0	361091 3/8" BRASS PLUG.	3	0
0	0	4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	3	0
0	0	4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	2	0
0	0	79425 3/8" NPT FEMALE TO 1/2" MALE PROGRESS ADAPTER.	3	0
0	0	79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2" NPT FEMALE CONNECTION, VIEGA.	2	0
0	0	79590 1/2" X 1/2" PRO-PRESS T X 1/2" NPT FEMALE CONNECTION, VIEGA.	3	0
0	0	87-10004-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	2	0
0	0	87-10045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	2	0
0	0	87-30001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	3	0
0	0	87-30002-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
0	0	87-30015-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	12	0
0	0	9052505 PRO PRESS 1/2 PRESS X PRESS 90 ELBOW LB.	9	0
0	0	90972000 PRO PRESS P5611 1/2 PRESS TEE LB.	9	0
0	0	98694415 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	6	0
0	0	A093432 JUNCTION BOX FOR MANUAL PULL STATION 1.5" DEEP BACK BOX, RED COLOR.	1	0
0	0	A31484 1/4" NPT SCHRAEDER VALVE AND CAP, JB INDUSTRIES 1/4" FLARE X 1/4" NPT HALF UNION USED ON TANK SERVICE PORT.	2	0
0	0	B3145 3/8" BLACK IRON 90 ELL.	4	0
0	0	CB1-22.5 CHROME PLATED PIPE FITTING 3/8" NPT 22.5 DEGREE ELBOW.	2	0
0	0	DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
0	0	SLPCDN-03FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN 4 FT GAP. KIT CONTAINS 5 FEET OF BLACK MG WIRE, 5 FEET OF TAN MG WIRE, 3 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
0	0	SLPCDN-30FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UP TO 29' GAP. KIT CONTAINS 32 FEET OF BLACK MG WIRE, 32 FEET OF TAN MG WIRE, 30 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	2	0
0	0	TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	9	0
0	0	TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	3	0
0	0	WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	3	0
16	16	79210 1/2" X 3/8" NPT MALE ADAPTER, VIEGA.	10	0
16	16	DL-F NOZZLE - TANK PROTECTION APPLIANCE COVERAGE NOZZLE (INCLUDES METAL BLDW OFF CAP, LANYARD, USED WITH CHROME-PLATED PIPE).	10	0
26	26	02A-3/8 BULK SEAL - 3/8" O.D.S.	10	0
34	34	A093433 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT, RED COLOR.	1	0

* SYSTEM REQUIRES A MINIMUM OF 7 FT OF EQUIVALENT PIPE LENGTH BETWEEN TANK AND NEAREST APPLIANCE NOZZLE FOR MOST APPLIANCES (EACH TO BE ARIE ELBOW AND 1.5 FT OF EQUIVALENT LENGTH SEE MANUAL FOR DETAILS)



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

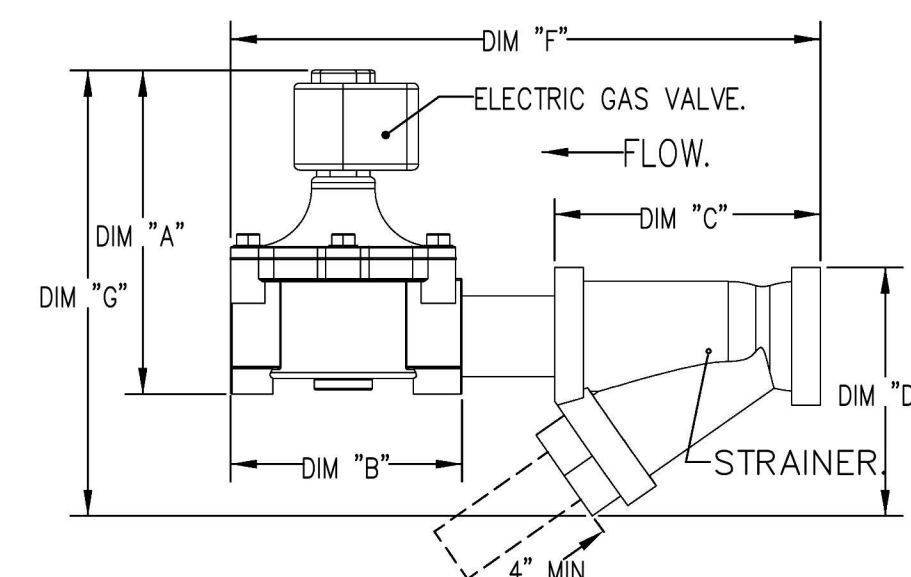


SECTION VIEW - MODEL 5424ND-2
HOOD - #2

GAS VALVES AND STRAINERS																
TYPE	SIZE	VOLTAGE	GAS VALVE SIZING		GAS VALVE DIMENSIONS				INSTALLATION		PART NUMBERS					
			MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DM "A"	DM "B"	DM "C"	DM "D"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT		
ELECTRICAL	1-1/4"	120 VAC	0 PSIG (0 IN.W.C.)	5 PSIG (1.38 IN.W.C.)	1,925,000 BTU/HR	1,248,105 BTU/HR	7-5/8"	6-3/8"	5-1/8"	5-15/16"	13-1/2"	12-1/16"	HORIZONTAL/VERTICAL	8214265	4417698	(SIC)DVAI-1/4

ALL GAS VALVES/STRAINERS TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINER A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING, SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52.

TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP:
 NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) x NEW PRESSURE DROP^{1.75}
 TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY:
 NEW BTU/HR = (BTU/HR AT 0.64) x (0.64 / NEW SPECIFIC GRAVITY)^{1.75}



- 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 SHELVEING, 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 UL 300 REQUIREMENTS.
 - DL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS
 - JOB # 6842764
 - JOB NAME: FREDDY'S - WAXAHACHIE, TX.
 - SYSTEM SIZE: TANK-SP-3 DESIGN FP: 42, MAXIMUM FP: 60.
 - HOOD # 1: 18' 0.00' LONG x 54' WIDE x 24' HIGH.
 - HOOD # 1: SIZE: 14" DIA.
 - HOOD # 1: METAL BLDW-OFF CAPS INCLUDED.
 - HOOD # 2: 5' 0.00' LONG x 54' WIDE x 24' HIGH.
 - RISER # 1: SIZE: 10" DIA.
 - HOOD # 2: METAL BLDW-OFF CAPS INCLUDED.
 - HEAVY-DUTY APPLIANCES (RATED 600°F) WILL REQUIRE AN ADDITIONAL DOWNSTREAM FRESTAT IN THE EVENT THAT THE DUCTWORK CONTAINS ANY HORIZONTAL RUNS OVER 25 FT IN LENGTH.
 - MEDIUM TO LIGHT-DUTY APPLIANCES (RATED 450°F) WILL NOT REQUIRE ANY ADDITIONAL DOWNSTREAM DETECTION.

LEGEND - FIRE CABINET TANK SYSTEM

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

INCLUDES FIELD INSTALLATION AND HOODUP DURING NORMAL BUSINESS HOURS BY CERTIFIED INSTALLERS ONLY IN THE LOCATION NOTED ABOVE. TWO SITE VISITS ONLY ONE VISIT TO TEST PULL STATION & SYSTEM HOODUP AND ONE VISIT FOR ONE TEST. ADDITIONAL VISITS WILL RESULT IN ADDITIONAL CHARGES. ONE MECHANICAL OR ELECTRICAL GAS VALVE PER SYSTEM AT A MAXIMUM SIZE OF 2" PERMIT, AND SYSTEM TEST. STANDARD UNION LABOR & PREVAILING WAGE CLAUSE & WAIVES WILL BE ADDED IF APPLICABLE. GAS VALVE INSTALLATION, ELECTRICAL HOODUP AND CONNECTIONS, HANGING OF FIRE CABINET, SHIRT TIGHT, HANGING EXTINGUISHER(S) ON-SITE RE-PIPING DUE TO EQUIPMENT LAYOUT CHANGES.

REVISIONS	
DESCRIPTION	DATE



CAPTIVEAIRE

104 W 8th St Suite 204, Kansas City, MO 64108 PHONE: (816) 221-8311 EMAIL: reg@98@captiveaire.com
www.captiveaire.com

HBT Foodservice

2014/25
STATE OF TEXAS
EXPIRES 08/25/2025
117953
REGISTRATION NO.

CONSTRUCTION SET 2/18/2025

PROJECT NUMBER: 1970 N HIGHWAY US 77
ARCHITECT # : 23310R24001
TESSERA # : 268666696

PROJECT TYPE: New Construction

Freddy's - Waxahachie, TX
WAXAHACHIE, TX, 75165

DATE: 1/10/2025
DWG.#: 6842764
DRAWN BY: michael.co
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 2

BC PROJECT #: 24387
TEXAS PE COA #F-15978

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MKEC
STRUCTURE

2014/25
STATE OF TEXAS
EXPIRES 08/25/2025
117953
REGISTRATION NO.

CONSTRUCTION SET 2/18/2025

PROJECT NUMBER: 1970 N HIGHWAY US 77
ARCHITECT # : 23310R24001
TESSERA # : 268666696

PROJECT TYPE: New Construction

HCI
hospitality

CONTACT INFO:
530 McCall Rd Suite 110, Mesquite, TX
Tel: (786) 370-6842

HCI HOSPITALITY
1970 N HIGHWAY US 77
WAXAHACHIE, TX 75165, ELLIS COUNTY

DATE: 02/14/2025
DRAWN BY: AKFO
CHECKED BY: DSEK

MECHANICAL HOOD PLANS

M-301

PERMIT

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL.	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY (LBS)	WEIGHT (LBS)	SDNES
1	ITEM 74.1	1	CASRE18DD	CAPTIVEAIRE	1600	1.400	1105	ICDP/PREMIUM	1.000	0.6270	3	208	3.8	928 FPM	295	15.7
2	ITEM 74.2	1	DUS9HFA	CAPTIVEAIRE	775	1.250	1585	TEAD-ECM	0.500	0.4040	1	115	6.3	295 FPM	80	17.5

FAN UNIT NO	TAG	QTY	DGAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP	PHASE	VOLT	HCA	HDCP	OUTSIDE AIR DB WB DB WB	MIXED AIR DB WB DB WB	LEAVING AIR DB WB DB WB	CAPACITY DB WB DESIRED	ICEER	ISHRC	DISCHARGE DB WB	CAPACITY DESIRED	MOISTURE RICHVAL RATE	GAS TYPE	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	ROOM AREA (FT ²)	ROOM AIRFLOW (CFM)	HEIGHT (FT)	NOTES							
3	ITEM 74.3	1	CAS-HVAC3-1200-1S-1ST	CAPTIVEAIRE	15P-3	0	2200	2200	2460	0.500	2.00	3	208	59.8A	60A	88.7°F	78.3°F	88.7°F	78.3°F	51.0°F	49.4°F	48.2°F	204.7 MBH	86.9 MBH	18.8	5.7	70.0°F	57.3°F	46.3 MBH	129.6 MBH	106.2 LBS/HR	NATURAL	169288	137123	54°F	7 IN. W.C. - 14 IN. W.C.	587.4	1057	7.2	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17

NOTES:

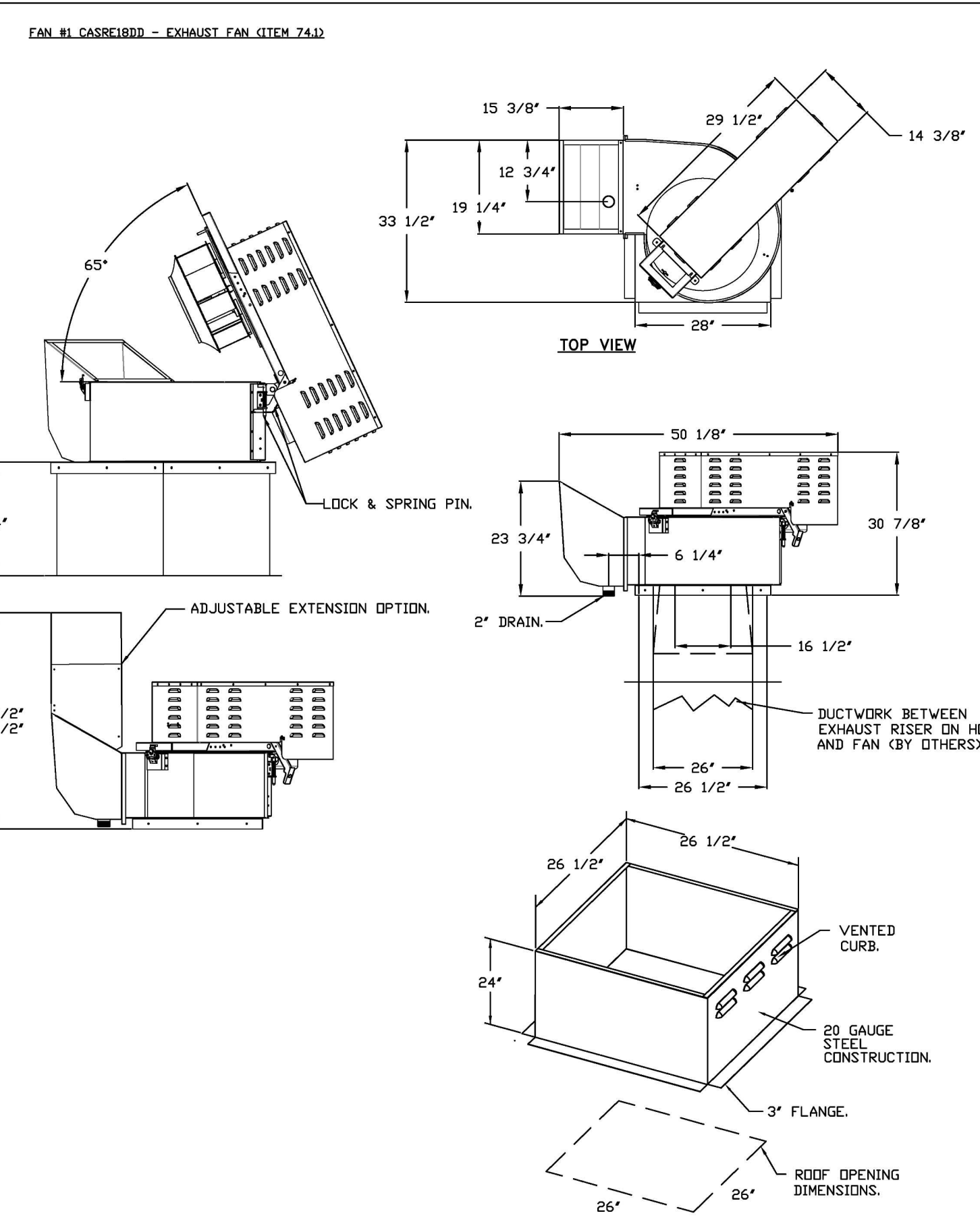
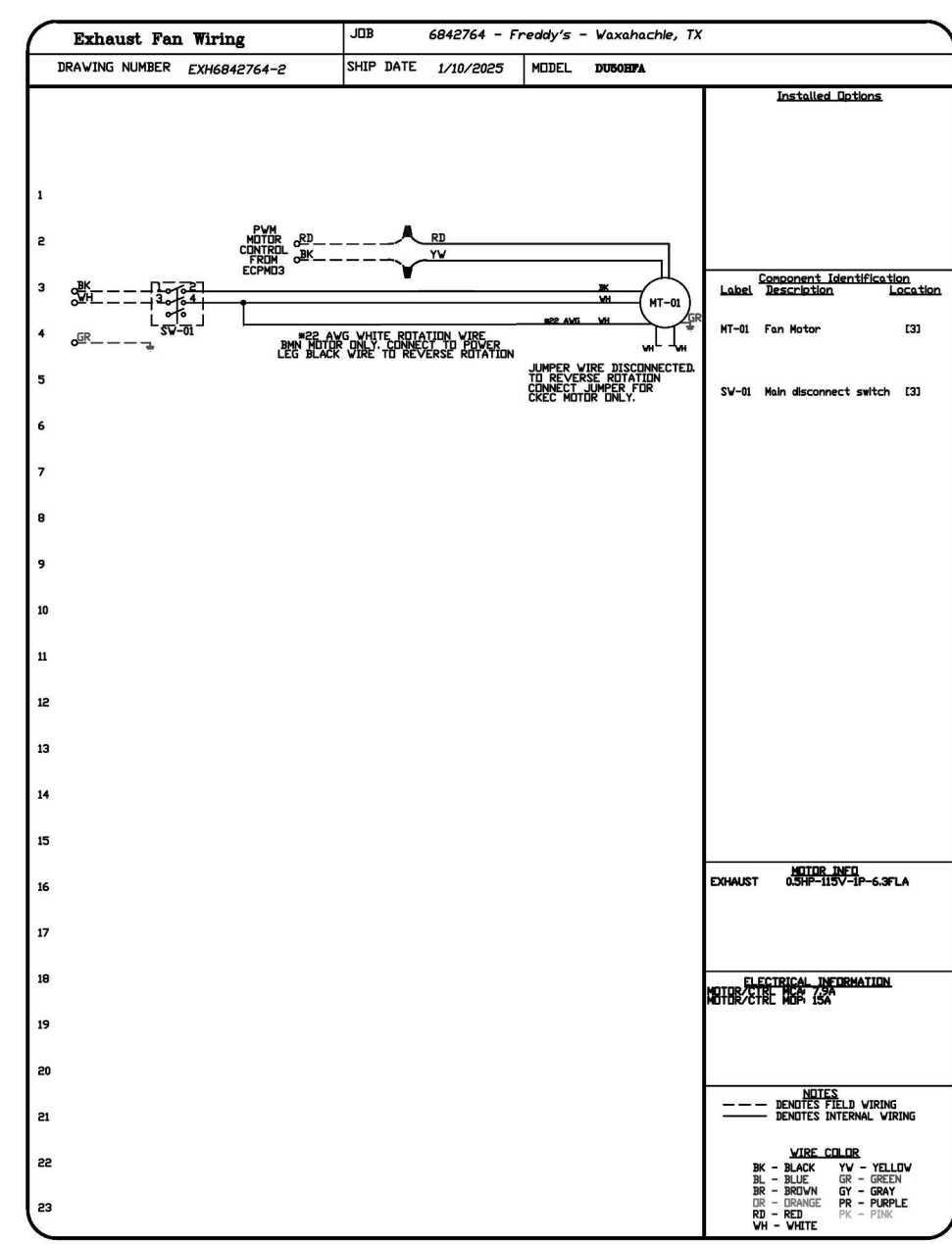
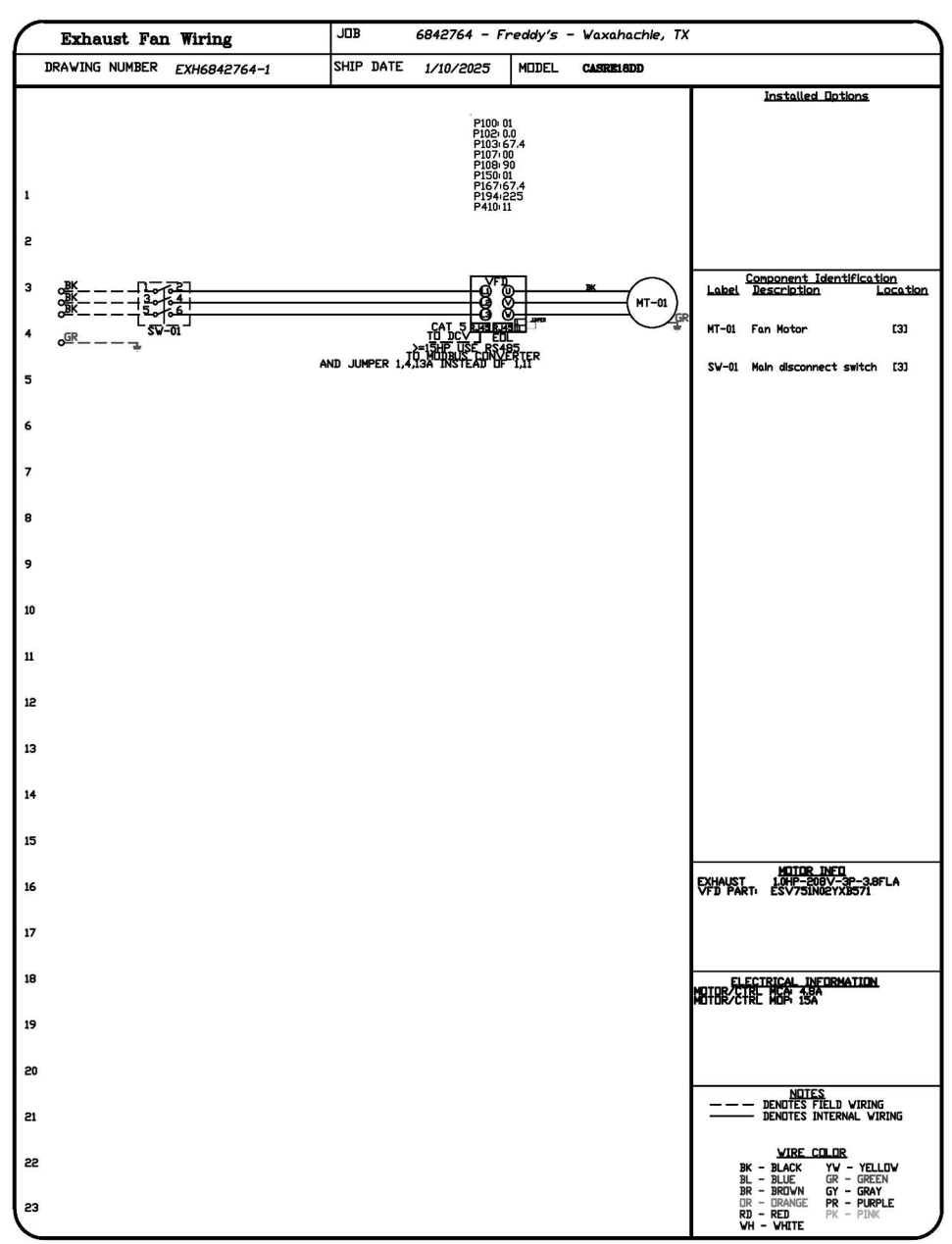
- INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL.
- DIRECT DRIVE FLEWM BLOWERS. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE.
- INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER.
- REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE.
- EC MOTOR CONDENSING FANS.
- ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE.
- SUCTION LINE ACCUMULATOR.
- FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY, 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER.
- AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT).
- 4" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 50GA EXTERIOR W/ 1/4GA BASE.
- BIX EFFICIENT FURNACE WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE. 61 TURNDOWN WITH NG AND 5:1 TURNDOWN WITH LP.
- SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.
- FULLY MODULATING HOT GAS REHEAT.
- 15 TON LOW AMBIENT OPERATION.
- HAIL GUARD FOR CONDENSING COIL.
- DOWN DISCHARGE/DOWN RETURN.
- MINIMUM ROOM AREA ASSUMED 7.2' SUPPLY DIFFUSER HEIGHT AND IS CALCULATED PER IAQ6395-2-40 4TH ED. VALUES BASED ON FACTORY CHARGE. ACTUAL SITE CHARGE MAY DIFFER.

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	ITEM 74.1	1	UTILITY SET GREASE CUP
		1	REIS - DISCHARGE EXTENSION ASSEMBLY WITH HARDWARE
		1	UNIT MOUNTED VFB FOR USE WITH ECM3D
		1	VFB MOUNTING BRACKET FOR CASRE18D
		1	2 YEAR PARTS WARRANTY
		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - IUL/BS05HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	EXHAUST FAN HEAT BAFFLE
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECM3D PREWIRE (TELED MOTOR), CCV ROTATION
		1	2 YEAR PARTS WARRANTY
2	ITEM 74.2	1	INLET PRESSURE GAUGE, 0-35"
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	TOTAL CFM MONITORING
		1	INTAKE FIRESTAT SET TO 135°F
		1	FREESTAT
		1	DISCHARGE FIRESTAT SET TO 240°F
		1	SHIP LOOSE GAS STRAINER 3/4"
		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #8B, #47, #48, OR #22 PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE.
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	RTUS DOWN DISCHARGE
3	ITEM 74.3	1	2" MERV 13 FILTERS FOR RTUS (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTUS (QTY. 4)
		1	OVERHEAT STAT
		1	OCCUPIED SCHEDULING
		1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
		1	RTUS DOWN RETURN
		1	24VAC FIRE INPUT
		1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED
		1	CLOGGED FILTER SWITCH - NOTIFICATION ON HMI
		1	RTUS HAIL GUARD
4	DUSD CURB	1	RTU CURB BUILT HANGER
		1	RTU BLOWER DOOR SWITCH
		1	15 TON MODULATING COOLING OPTION, 208/230V, R454B REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	R454B LEAK DETECTOR OPTION FOR RTUS
		1	LDV AMBIENT COOLING OPERATION - DOWN TO OF AMBIENT
		1	15 TON MODULATING REHEAT OPTION - SPACE SWEEPPOINT CONTROL - R454B
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)
		1	EXTERIOR GAS CONNECTION PROVIDED BY FACTORY WITH QUICK SEAL AND ANTI-ROTATION BRACKET
		1	2 YEAR PARTS WARRANTY

FAN UNIT NO	TAG	EXHAUST	SUPPLY
1	ITEM 74.1	GRAVITY DAMPER	GRAVITY DAMPER
2	ITEM 74.2	WALL DISCHARGE	MOTORIZED WALL MOUNT

NO	QTY	TAG	WEIGHT	ITEM	SIZE
1	1	ITEM 74.1	30 LBS	CURB	26.500"V X 26.500"X 24.000" VENTED.
2	2	ITEM 74.2	31 LBS	CURB	19.500"V X 19.500"X 20.000" VENTED HINGED.
3	3	ITEM 74.3	104 LBS	CURB	59.500"V X 91.000"X 14.000" INSULATED.
4	1	DUSD CURB	34 LBS	CURB	19.500"V X 19.500"X 22.000" VENTED HINGED.

UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #3	HMI #1 - UNIT	IN UNIT	NOT AVERAGED	35
FAN #3	HMI #2 - SPACE	KITCHEN	AVERAGED	56
FAN #3	HMI #3 - SPACE	OFFICE	NOT AVERAGED	57



FEATURES:

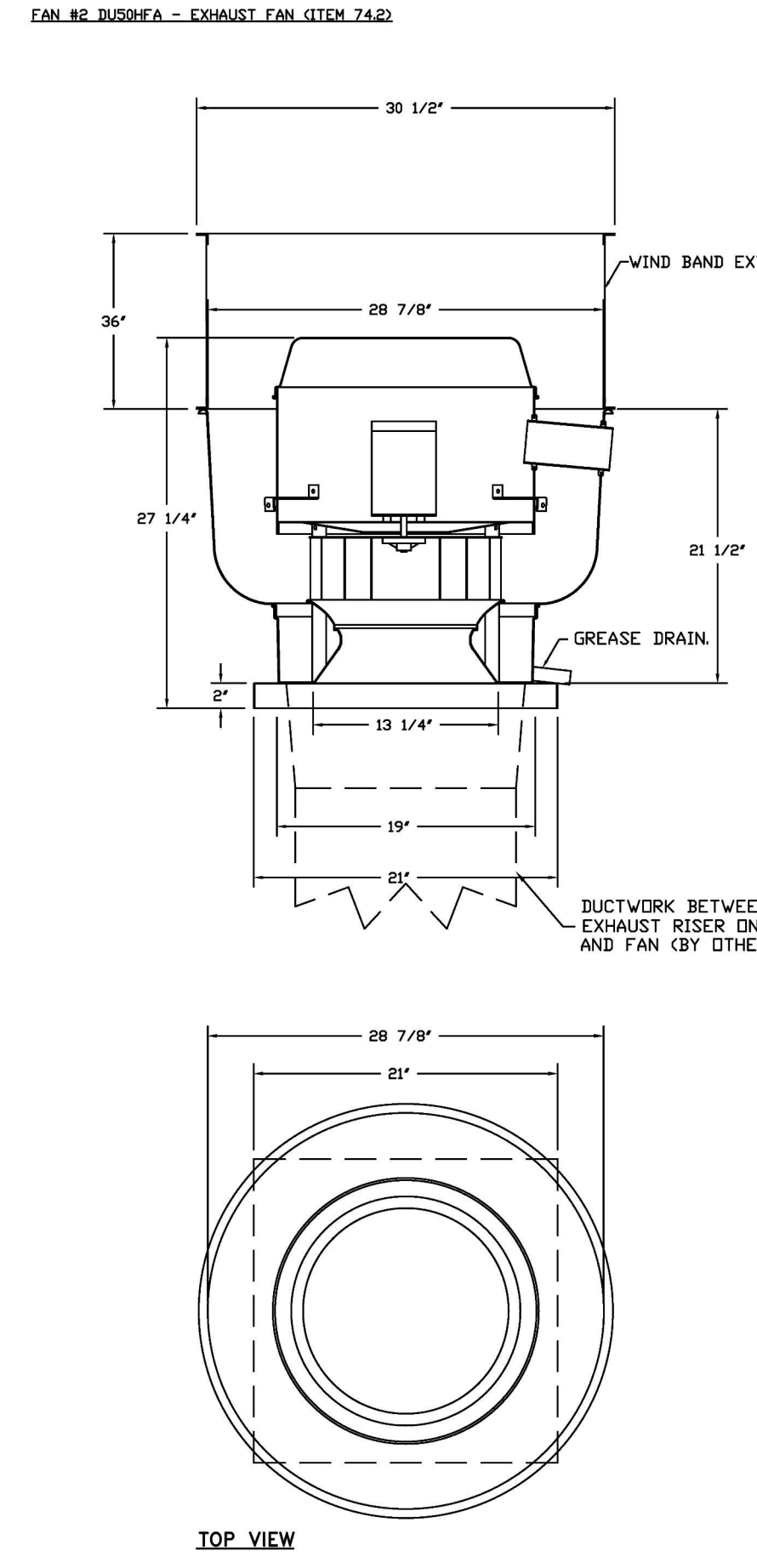
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL756 AND UL3084S.
- HIGH HEAT OPERATION DIRECT DRIVE 300°F (149°C).
- HEAT SLINGER.
- GREASE CLASSIFICATION TESTING.
- TILT OUT WHEEL.
- LOCKING PIN FOR POWER PACK.
- MOTOR WEATHER COVER.
- INTERLOCKED DISCONNECT SWITCH.
- NEHA 4X SAFETY DISCONNECT SWITCH.

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

ABNORMAL FLAME-UP TEST - BELT & DIRECT DRIVE
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (315°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS:

- UTILITY SET GREASE CUP
- REIS - DISCHARGE EXTENSION ASSEMBLY
- UNIT MOUNTED VFB FOR USE WITH ECM3D
- VFB MOUNTING BRACKET FOR CASRE18D
- 2 YEAR PARTS WARRANTY



FEATURES:

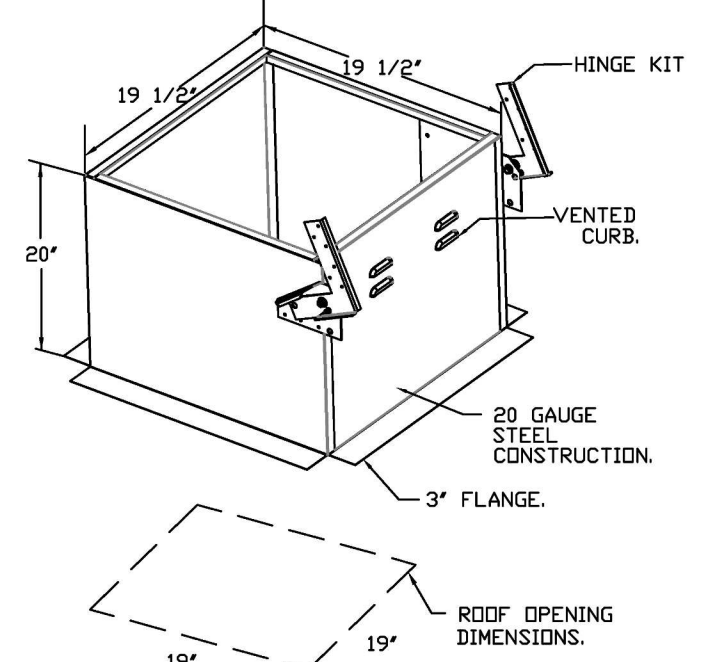
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL756 AND UL3084S AND UL3084S.
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (ENGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEHA 3K SAFETY DISCONNECT 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 DETRIMENTARY EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

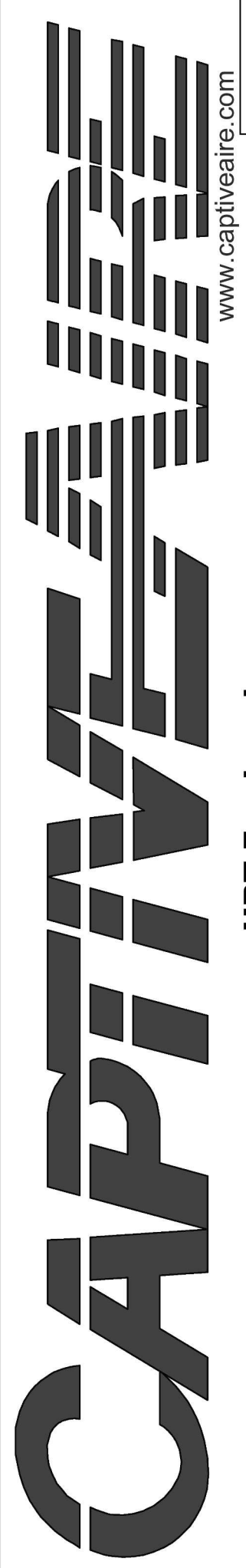
ABNORMAL FLAME-UP TEST
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (315°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS:

- GREASE BOX
- UPRAISE FAN WHEEL ACCESS PORT.
- 30" TILT OUT WHEEL
- EXTENSION OF DRIVE SHAFTS
- OUTLINE TYPE BELTS - USES FOR 3 GAY LINE TIE OFF POSSES.
- ECM WIRING PACKAGE - PWM SIGNAL FROM ECM3D PREWIRE (TELED MOTOR), CCV ROTATION
- 2 YEAR PARTS WARRANTY.



REVISIONS	DESCRIPTION	DATE



Freddy's - Waxahachie, TX
 WAXAHACHIE, TX, 75165

DATE: 1/10/2025
DWG.#: 6842764
DRAWN BY: michael.co
SCALE: 1/2" = 1'-0"
MASTER DRAWING
SHEET NO. 3

BC PROJECT #: 24387
 TEXAS PE COA #F-15978

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MEP ENGINEER

MKEC
STRUCTURE

2014/25
STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER
117553
MECHANICAL

CONSTRUCTION SET 2/18/2025

PROJECT NUMBER: 24387
 ARCHITECT: HCI
 TESSERE # 23310R24001
 78626268696

PROJECT TYPE: New Construction

DATE: 02/14/2025

DRAWN BY: AKFO

CHECKED BY: DSEK

MECHANICAL HOOD PLANS

M-302

PERMIT