



### ROOFTOP UNIT SCHEDULE (DX COOLING /W GAS HEAT)

TAG	AREA SERVED	S.A. CFM	O.A. CFM	E.S.P. (IN.WC)	COOLING CAPACITY			HEATING CAPACITY (GAS)		IFM	COMPRESSOR (EA)		ELECTRICAL DATA			OPERATING WEIGHT	MANUFACTURER TRANE & MODEL	NOMINAL TONS	ADDITIONAL OPTIONS	
					TC (MBH)	SC (MBH)	EFFICIENCY	INPUT (MBH)	OUTPUT (MBH)		HP	NO.	RLA	LRA	MCA					MOCP
RTU-1	KITCHEN	3750	825	1.2	116.26	92.50	EER 11.2	150.0	120.0	2.75	2	19.6/13.1	---	49.0	60	208V-3Ø	1300 LBS	YSC120H3ELA	10.0	S
RTU-2	KITCHEN	3600	825	1.2	116.26	92.50	EER 11.2	150.0	120.0	2.75	2	19.6/13.1	---	49.0	60	208V-3Ø	1300 LBS	YSC120H3ELA	10.0	S
RTU-3	SEATING AREA	3200	500	1.2	92.5	71.16	EER 11.2	120.0	97.2	1.0	1	25.0	---	48.0	60	208V-3Ø	1100 LBS	YSC090H3ELA	7.5	S,V
RTU-4	SEATING AREA	4000	500	1.2	116.26	92.50	EER 11.2	150.0	120.0	2.75	2	19.6/13.1	---	49.0	60	208V-3Ø	1300 LBS	YSC120H3ELA	10.0	S,V

**OPTIONS (ALL UNITS)**

- 14" HIGH PREFAB. ROOF CURB
- STANDARD EFFICIENCY
- SINGLE POINT ELEC. CONN.
- DX COOLING, GAS HEAT
- 2000+ CFM DUCT SMOKE DETECTOR, SEE NOTE #3
- STANDARD CONDENSER COIL
- BIRD/INSECT SCREENS
- PHASE MONITOR

**ADDITIONAL OPTIONS (UNITS AS NOTED)**

- A: BAGNET/ONTALK CONTROLS
- B: DEMAND CONTROL VENTILATION
- C: CO2 SENSOR, WALL MOUNTED
- D: CO2 SENSOR, DUCT MOUNTED
- E: HUMIDITY SENSOR, WALL MOUNTED
- F: HUMIDITY SENSOR, DUCT MOUNTED
- G: HINGED ACCESS PANELS

**NOTES:**

- ALL UNITS SHALL BE AGA CERTIFIED AND U.L. LABELED.
- ALL UNITS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE.
- ELECTRICAL CONTRACTOR SHALL PROVIDE EACH UNIT WITH A SMOKE DETECTOR. THE SMOKE DETECTOR SHALL BE IONIZATION TYPE WIRED TO SHUT-DOWN UNIT WHEN ACTIVATED. THE SMOKE DETECTOR SHALL BE INSTALLED IN THE RETURN DUCT BY THE MECHANICAL CONTRACTOR. THE SMOKE DETECTOR SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR TO AN AHVAC MONITORING PANEL. THE PANEL SHALL PROVIDE VISUAL AND AUDIBLE SIGNAL. THE SIGNAL SHALL INDICATE AND BE LABELED AS AIR DETECTOR TROUBLE. THE PANEL SHALL BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE SMOKE DETECTOR WITH REMOTE ALARM OR SUPERVISORY INDICATING DEVICES. EACH REMOTE DEVICE SHALL BE PERMANENTLY LABELED TO ACCURATELY IDENTIFY THE UNIT SERVED.

### FAN SCHEDULE

TAG	AREA SERVED	FAN TYPE	CFM	E.S.P. (IN.WC)	DRIVE TYPE	RPM	ELECTRICAL DATA			SONES	OPERATING WEIGHT	MANUFACTURER & MODEL NO.	OPTIONS
							H.P.	WATTS	VOLTAGE				
EF-1	RESTROOM	CEILING EXHAUST	150	0.25	DIRECT	1400	---	52.4	115V-1Ø	1.5	17 LBS	SP-A190L	A,B,F,K,S
KEF-1	HOOD (BY MC)	ROOF EXHAUST	2220	1.25	DIRECT	1120	2	---	208V-3Ø	13.6	160 LBS	CAPTIVEAIRE DU180HFA	G,U
KEF-2	HOOD (BY MC)	ROOF EXHAUST	2880	1.25	DIRECT	1200	2	---	208V-3Ø	17.4	185 LBS	CAPTIVEAIRE DU180HFA	G,U
MUA-1	MAKE-UP AIR FAN	HOOD MAKE-UP AIR	4069	0.50	DIRECT	1679	3	---	208V-3Ø	17.6	1620LBS	CAPTIVEAIRE A2-D.250-20D-MPU	A,C,G

**OPTIONS**

- A: DISCONNECT SWITCH
- B: BACKDRAFT DAMPER
- C: PREFAB. ROOF CURB
- D: BIRDSCREEN
- E: SHORT BASE OPTION
- F: HANGING BRACKETS WITH VIBRATION ISOLATION

**NOTES:**

- ALL FANS SHALL BE U.L. LABELED.
- ALL FANS SHALL BE SUPPLIED BY ONE MANUFACTURER UNLESS NOTED OTHERWISE.
- BACKDRAFT DAMPER ON ROOF SUPPLY FANS SHALL BE MOTORIZED.

### SEQUENCE OF OPERATION

**RTU-1:** THE SA FANS IN THE RTUS SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS. THE SA FANS SHALL BE INTERLOCKED TO RUN WHEN KEF-1, KEF-2 AND MUA-1 ARE ENERGIZED. KEF-1 AND KEF-2 SHALL BE INTERLOCKED WITH RTU-3 MUA-1 TO RUN SIMULTANEOUSLY.

**RTU-2:** INTERLOCKED TO RUN WHEN KEF-1, KEF-2 AND MUA-1 ARE ENERGIZED. KEF-1 AND KEF-2 SHALL BE INTERLOCKED WITH RTU-3 MUA-1 TO RUN SIMULTANEOUSLY.

**RTU-3:** MUA-1 TO RUN SIMULTANEOUSLY.

**RTU-4:** MUA-1 TO RUN SIMULTANEOUSLY.

ALL AREAS - THE FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS. ON A CALL FOR COOLING, THE 1ST STAGE OF COOLING SHALL ENERGIZE. IF THE THERMOSTAT CALLS FOR ADDITIONAL COOLING, THE SECOND STAGE SHALL ENERGIZE IF THE THERMOSTAT CONTINUES TO RISE AND CALLS FOR MORE COOLING, THE FIRST STAGE OF COOLING SHALL ENERGIZE AND CONTINUE TO RUN UNTIL THE THERMOSTAT IS SATISFIED. AS THE NEED FOR COOLING DECREASES, THE COMPRESSOR SHALL UNLOAD IN A SIMILAR STEP PROCESS.

OFF-HOURS OPERATION - RTU-1, RTU-2, RTU-3 AND RTU-4 SHALL BE FIELD WIRED TO STILL HAVE OPERATION DURING UNOCCUPIED HOURS AND WHEN HOOD SYSTEM IS NOT IN OPERATION. RTUS SHALL BE CAPABLE OF VENTILATING, COOLING AND/OR HEATING AS SYSTEM THERMOSTAT DEMANDS WHETHER HOOD SYSTEM IS IN OPERATION OR NOT TO MAINTAIN MINIMUM SET BACK TEMPS DURING UNOCCUPIED HOURS.

ON WINTER OPERATION - ON A CALL FOR HEATING, FIRST STAGE OF HEAT SHALL ENERGIZE TO HEAT THE SPACE. AS THE SPACE TEMPERATURE CONTINUES TO FALL, THE SECOND STAGE, IF APPLICABLE, SHALL ENERGIZE AS NEEDED TO MAINTAIN TEMPERATURE SET POINT.

OUTSIDE AIR DAMPERS - THE NORMALLY CLOSED MOTOR OPERATED OUTSIDE AIR DAMPER SHALL OPEN WHEN THE FAN IN THE ROOF TOP UNITS ARE ENERGIZED EITHER DURING OCCUPIED HOURS OR WHEN KEF-1, KEF-2 ARE ENERGIZED. THE DAMPER SHALL BE CLOSED DURING UNOCCUPIED TIMES.

### GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE

TAG	SERVICE	CFM RANGE	FACE SIZE (IN)	NECK SIZE (IN)	TYPE	OBD	MANUFACTURER PRICE & MODEL	ADDITIONAL OPTIONS
(A)	SUPPLY	50 - 125	24x24	6"	SQUARE PLAQUE	NO	SPD	
(B)	SUPPLY	180 - 270	24x24	10"	SQUARE PLAQUE	NO	SPD	
(C)	SUPPLY	275 - 425	24x24	12"	SQUARE PLAQUE	NO	SPD	
(D)	SUPPLY	430 - 950	24x24	14"	SQUARE PLAQUE	NO	SPD	
(E)	SUPPLY	600 - 850	24x24	14"	CAPTIVEAIRE DI-PSP (LAMINAR FLOW)	NO	--	
(F)	SUPPLY	200 - 260	24x24	14"	SPIRAL DUCT GRILLE	NO	SDG-ST	
(G)	SUPPLY	335 - 400	24x24	14"	SPIRAL DUCT GRILLE	NO	SDG-ST	
(A)	RETURN	600 - 1500	24x24	18"x18"	PERFORATED FACE	NO	PDDR	
(A)	EXHAUST	665	24x24	14"	PERFORATED FACE	NO	PDDR	

**ADDITIONAL OPTIONS (AS NOTED)**

A: ADJUST FROM HORIZONTAL DISCHARGE TO VERTICAL DISCHARGE. PROVIDE DIFFUSER WITH SQUARE TO ROUND NECK ADAPTOR, MODEL #SR  
B: PROVIDE REGISTER WITH ROUND NECK ADAPTOR WHERE REQUIRED.

**NOTES:**

- ALL DEVICES SHALL BE FINISHED WITH AN ENAMEL FINISH, COLOR BY ARCHITECT. COORDINATE DEVICE COLOR(S) WITH ARCHITECT PRIOR TO ORDERING. COLOR COORDINATION SHALL INCLUDE BUT NOT BE LIMITED TO DIFFUSER FACE, CENTER TEE, FRAME INTERIOR, PATTERN CONTROLLER, ETC.
- ALL DEVICES SHALL BE FURNISHED WITH FRAMES SUITABLE FOR TYPE OF INSTALLATION REQUIRED, NO EXCEPTIONS.
- PROVIDE EXTERNAL BACK INSULATION, FACTORY INSTALLED FOR ALL DIFFUSER/GRILLE HOUSING.
- PROVIDE TAPERED TRANSITIONS FOR ALL SUPPLY DIFFUSERS WITH NECK SIZES DIFFERENT THAN SUPPLY DUCT RUN-OUT SIZES.
- ALL DEVICES INSTALLED IN HARD CEILINGS, WALLS, OR DIRECTLY ATTACHED TO DUCTS SHALL BE PROVIDED WITH OBD'S.
- COORDINATE GRILLES/DIFFUSERS WITH ARCHITECTURAL CEILING AND STRUCTURAL FRAMING LAYOUTS PRIOR TO ORDERING. COORDINATION SHALL INCLUDE TYPE OF INSTALLATION, MOUNTING REQUIREMENTS, T-BAR SPACING/SIZE, GYPBOARD FRAMING, INSTALLATION CLEARANCES, ETC.
- CONTRACTOR SHALL PAINT ALL VISIBLE SURFACES THROUGH GRD'S FLAT BLACK. PLENUM BOX INSULATION SHALL BE COLOR BLACK FROM FACTORY.
- PROVIDE SPIN-IN TAP WITH MANUAL VOLUME DAMPER AT EACH BRANCH TAKE-OFF. SEE DETAILS SHEET AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- SEE AIR DEVICE TAG FOR DUCT INLET SIZE. ALL DUCT RUNOUTS TO BE SIZED PER GRD AIR TERMINAL NECK SIZE ON SCHEDULE AND/OR AS INDICATED ON PLANS IN CONJUNCTION WITH REQUIREMENTS BY GRD MANUFACTURER. COORDINATE ALL DUCT SIZES PRIOR TO BIDDING, NO EXCEPTIONS. DUCT SIZE SHALL MATCH GRILLE/DOVER SIZE IF NO DUCTWORK SIZE INDICATED ON PLANS. CONTRACTOR SHALL REFERENCE DUCTWORK INSULATION SCHEDULE FOR ALL DUCTWORK INSULATION REQUIREMENTS.
- TEE-BAR CEILING GRID IS USED. GENERAL CONTRACTOR SHALL MAKE SURE THE GRILLES/DIFFUSERS/LIGHTING FIXTURES WILL FIT PROPERLY IN THE NARROW GRID.

### AIR BALANCE CALCULATION (W/ HOOD)

TAG	TYPE	SUPPLY AIR (CFM)	RETURN AIR (CFM)	OUTSIDE AIR (CFM)	EXHAUST (CFM)
RTU-1	NEW RTU	3750	2925	825	N/A
RTU-2	NEW RTU	3600	2775	825	N/A
RTU-3	NEW RTU	3200	2700	500	N/A
RTU-4	NEW RTU	4000	3500	500	N/A
MUA-1	NEW MAKE-UP AIR UNIT	4069	0	4069	N/A
EF-1 (2)	GENERAL EXHAUST	N/A	N/A	N/A	-300
KEF-1	KITCHEN HOOD EXHAUST FAN	N/A	N/A	N/A	-2220
KEF-2	KITCHEN HOOD EXHAUST FAN	N/A	N/A	N/A	-2880
EF-3	DELETED	--	--	--	--
TOTAL		18,619	11,900	6,719	-5,400
TOTAL DIFFERENTIAL (CFM):		6719 (OA) - 5,400 (EA) = +1319 (POSITIVE)			

NOTE: AIR BALANCE BASED ON ALL HVAC SYSTEMS, AND KITCHEN HOOD RUNNING SIMULTANEOUSLY. EXCESS POSITIVE CFM WILL BE RELIEVED THRU RTU-3 AND RTU-4, TO MAINTAIN A POSITIVE PRESSURE OF 200 CFM (TARGET POINT).

### EXHAUST AIR CALCULATION

2018 NORTH CAROLINA BUILDING CODE: MECHANICAL - TABLE 403.3

ROOM NAME	AREA (SQ.FT) NET	NUMBER OF UNIT	CFM/UNIT	NET AREA O.A. RATE (CFM/SQ.FT)	REQUIRED EXHAUST (CFM)	PROVIDED EXHAUST (CFM)	SERVED BY
MEN 110	153	2	70	---	140	150	EF-1
WOMEN 111	153	2	70	---	140	150	EF-1
KITCHEN	1128	--	--	0.7	653	5100	KEF-1, KEF-2

UNIT = WATER CLOSET OR URINAL

### NORTH CAROLINA ENERGY CODE

(2018 North Carolina Energy Conservation Code)

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:  
 PRESCRIPTIVE  ENERGY COST BUDGET

THERMAL ZONE: 3A  
 EXTERIOR DESIGN CONDITIONS  
 winter dry bulb 18° F.  
 summer dry bulb 93° F.  
 INTERIOR DESIGN CONDITIONS  
 winter dry bulb 72° F.  
 summer dry bulb 75° F.  
 relative humidity 50% R.H.  
 BUILDING HEATING LOAD 121 MBH (PEAK)  
 BUILDING COOLING LOAD 247 MBH (PEAK)

MECHANICAL SPACING CONDITIONING SYSTEM

UNITARY  
 description of unit heating efficiency cooling efficiency heat output of unit cooling output of unit  
 GAS ROOF TOP PACKAGED UNITS SEE SCHEDULES SEE SCHEDULES SEE SCHEDULES

BOILER  
 total boiler output of unit N/A

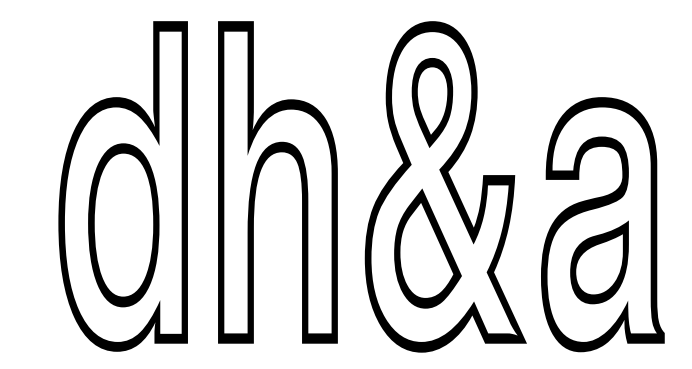
CHILLER  
 total chiller capacity N/A

LIST EQUIPMENT EFFICIENCIES  
 Equipment schedules with motors (mechanical systems)  
 motor horsepower N/A  
 number of phases N/A  
 minimum efficiency N/A  
 motor type N/A  
 # of poles N/A

501.2 APPLICATION COMPLIANCE / 506 ADDITIONAL PRESCRIPTIVE COMPLIANCE:  
 506.2.1 MORE EFFICIENT MECH. EQUIPMENT  506.2.4 HIGHER EFF DOMESTIC HW  
 506.2.2 REDUCED LTG DENSITY  506.2.5 ON-SITE RENEWABLE ENERGY  
 506.2.3 ENERGY RECOVERY SYSTEM  506.2.6 DAYLIGHT CONTROLS

DESIGNER STATEMENT: 1  
 To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the 2018 North Carolina Energy Conservation Code.

SIGNED: *M. Michael Schon*  
 NAME: M. MICHAEL SCHON, P.E.  
 TITLE: MECHANICAL ENGINEER



1208 CURTIS STREET  
 MONROE, NORTH CAROLINA  
 28112, TELE: 704-283-2908  
 FAX: 704-291-7909  
 cha.architects@frontier.com



RESTAURANT  
 AY CARAMBA I

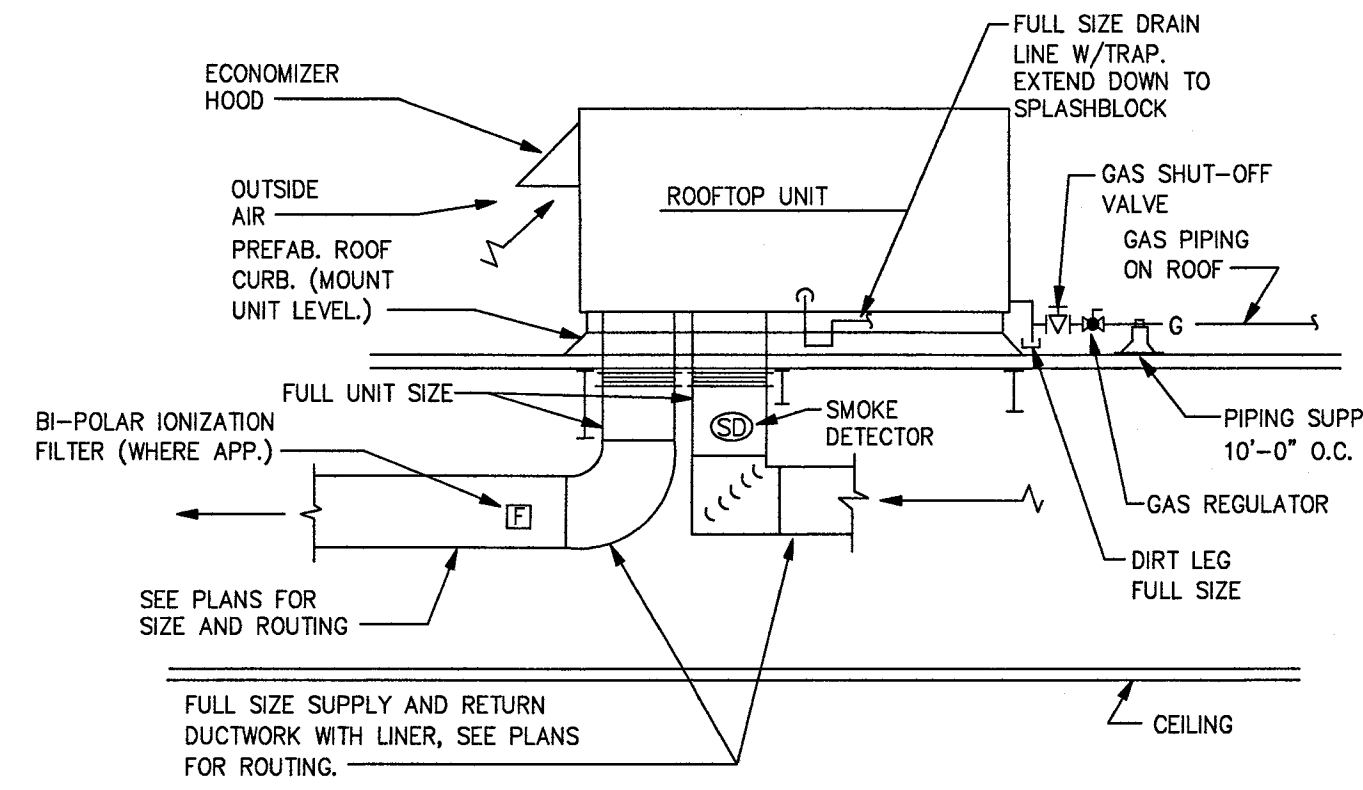
650 WEST ROOSEVELT BLVD.  
 MONROE, NC 28110

MARK	DATE	DESCRIPTION
△	08/17/23	OWNER CHANGES
△	12/20/22	OWNER VE CHANGES
MARK	DATE	DESCRIPTION
		ISSUE: 08/29/2022
		PROJECT NO: 22159
		CAD DWG FILE: SEE DRAWINGS
		DRAWN BY: MMS
		CHECKED BY: MMS

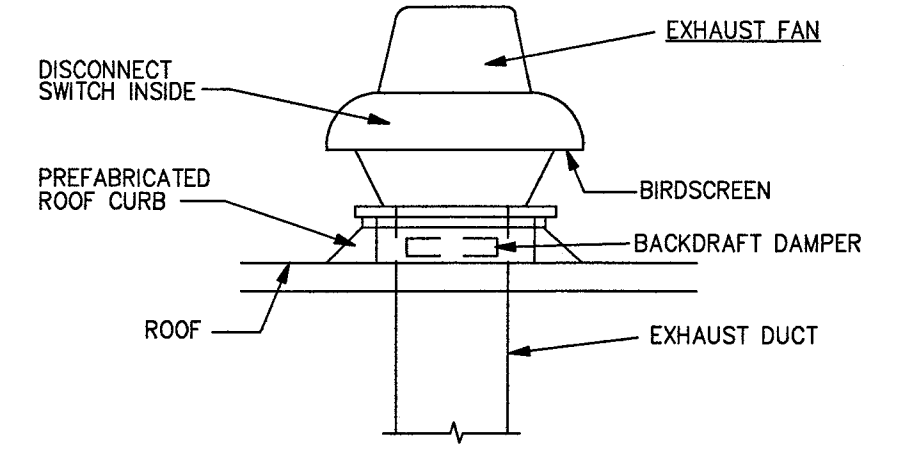
## MECHANICAL SCHEDULES

# M0.2

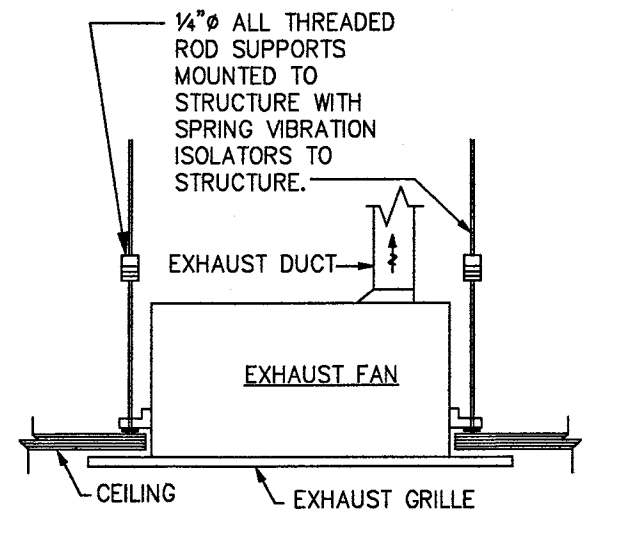
- NOTES:  
 1. PROVIDE OPENING IN ROOF SIZED FOR SUPPLY AND RETURN DUCTS. ALL OTHER AREAS UNDER UNIT SHALL HAVE ANGLES AND SHEET METAL ACROSS UNDER UNIT WITH BATT INSULATION FILLING VOID.  
 2. ROOF CURBS SHALL MATCH SLOPE OF ROOF.  
 3. SMOKE DETECTORS SHALL BE IONIZATION TYPE WIRED TO SHUT DOWN THE UNIT UPON ACTIVATION. SMOKE DETECTORS SHALL BE PROVIDED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED IN THE DUCT BY THE MECHANICAL CONTRACTOR.



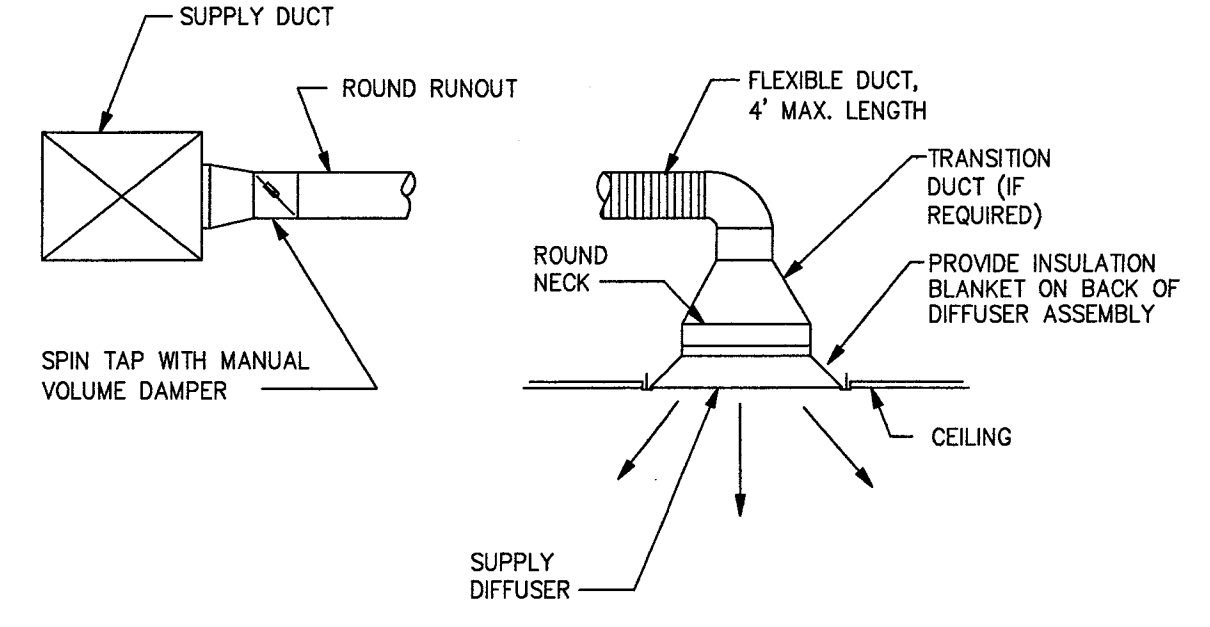
**1 GAS-FIRED ROOFTOP UNIT DETAIL**  
 SCALE: NONE



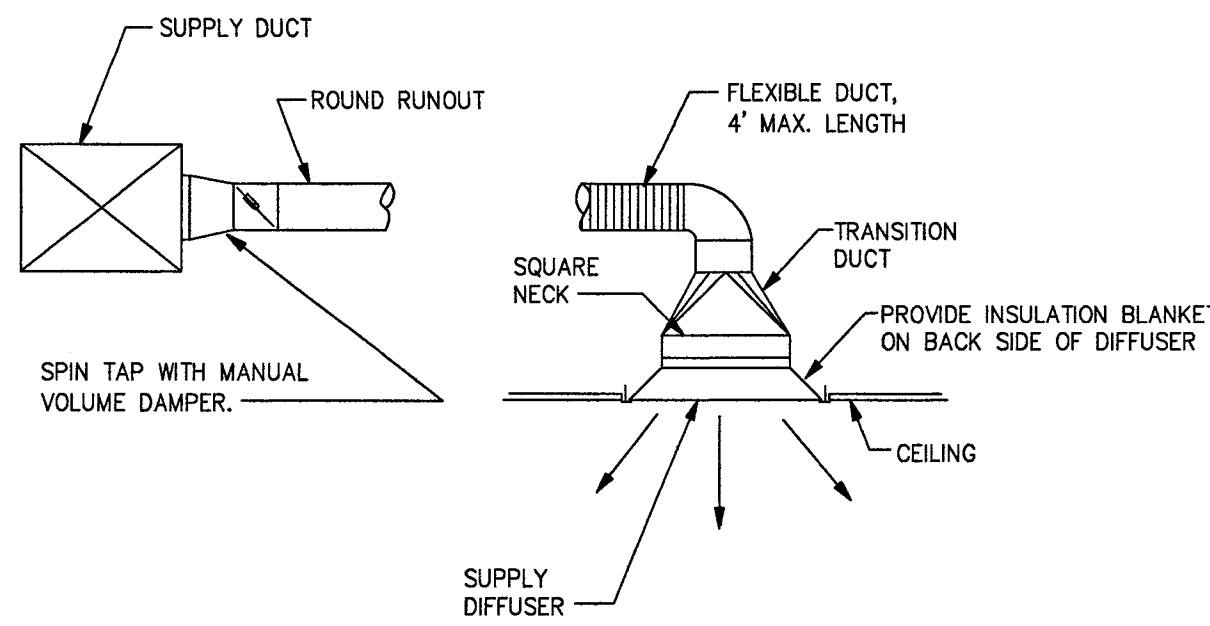
**2 ROOF-MOUNTED EXHAUST FAN DETAIL**  
 SCALE: NONE



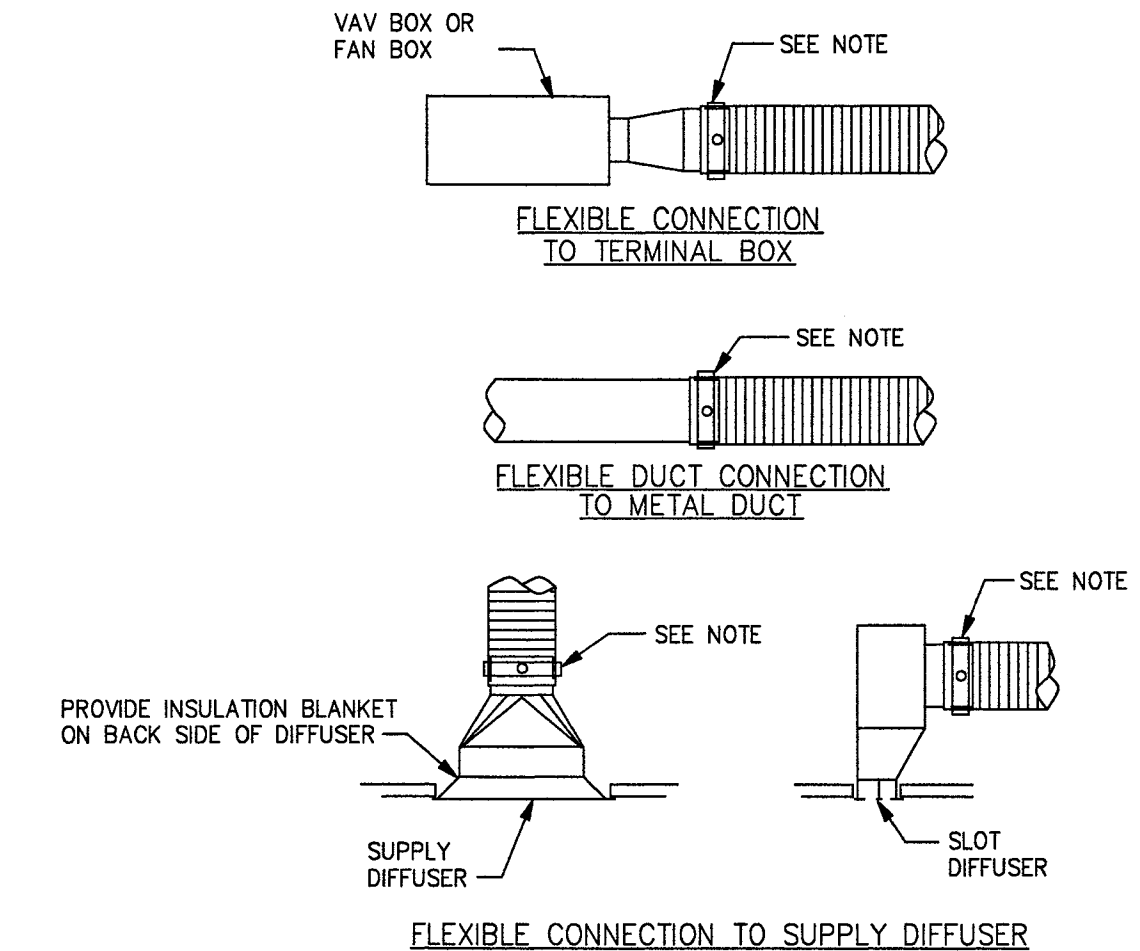
**3 CEILING MOUNTED FAN DETAIL**  
 SCALE: NONE



**4 SPIN TAP TO ROUND NECK DIFFUSER**  
 SCALE: NONE



**5 SPIN TAP TO SQUARE NECK DIFFUSER**  
 SCALE: NONE



**6 TYPICAL FLEX. CONNECTION DETAILS**  
 SCALE: NONE

**PlasmaSoft**  
 Ay Caramba 1 - Restaurant Seating

PlasmaSoft calculations are exclusively for Plasma Air products and should not be used for any other manufacturers.

ASHRAE 62.1  
 Space Contaminant Calculations Using Appendix D Equations

USER INPUT FIELDS

Green colored fields need user input. Yellow colored fields are constants provided by Plasma Air. Pink fields are auto-calculated based on user selection. Grey values are auto-calculated but also editable.

ASHRAE Equation: Equation 5 - Filter return air and outside air, Constant Volume Supply Air, Constant Volume Outside Air

Space Type: Restaurant dining rooms  
 Area (Sq Ft.): 1705  
 Number of People: 155  
 Supply Air (CFM): 655  
 Emission Rate/ Person (cpm): 10

Calculation of Space Contaminants Using Ventilation Rate Procedure (VRP) OA

Variable	Description	Value	Units
N	Contaminant Generation Rate	0.560	µg/min
Ex	Zone Air Distribution Effectiveness	0.8	
Voa	Outdoor Air Flow Rate	2,282.26	L/min
EF	Filter Efficiency	0.98	
Ce	Contaminant Concentration, OA	0.2	µg/m³
R	Recirculation Flow Variable = Vx/(Vx+Vr)	0.47	
Vr	Return Air Flow Rate	6,548.22	L/min
Cbr	Contaminant Concentration, zone	0.386	µg/m

Is the Cbr for the IAQP equal or less than Cbr for the VRP? **NO**

**PlasmaSoft**  
 Ay Caramba 1 - Bar Area

PlasmaSoft calculations are exclusively for Plasma Air products and should not be used for any other manufacturers.

ASHRAE 62.1  
 Space Contaminant Calculations Using Appendix D Equations

USER INPUT FIELDS

Green colored fields need user input. Yellow colored fields are constants provided by Plasma Air. Pink fields are auto-calculated based on user selection. Grey values are auto-calculated but also editable.

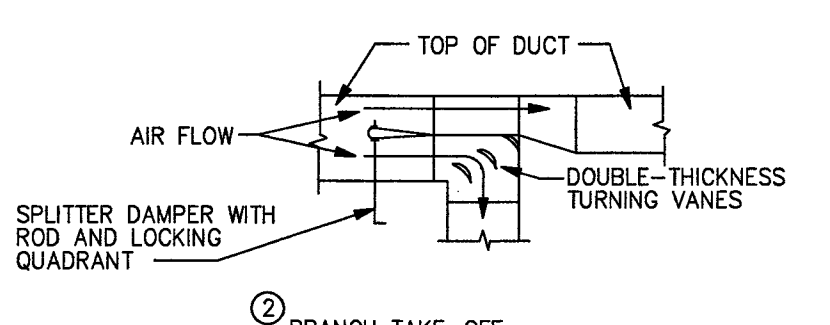
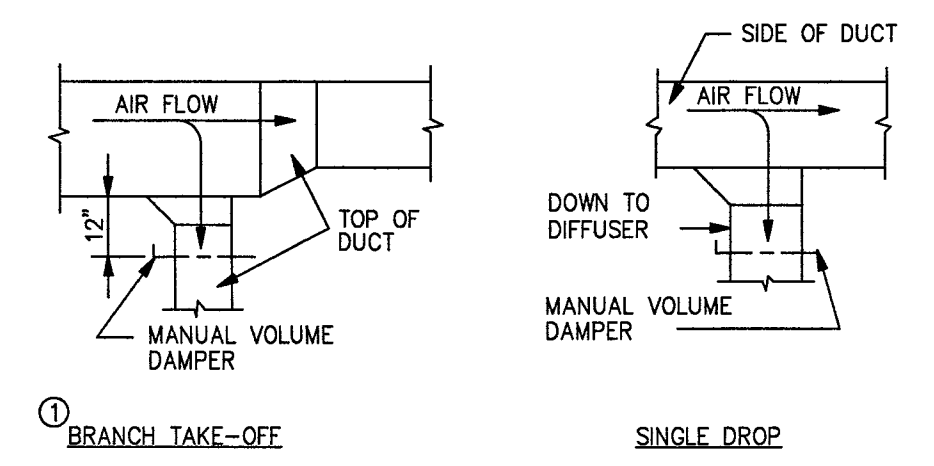
ASHRAE Equation: Equation 5 - Filter return air and outside air, Constant Volume Supply Air, Constant Volume Outside Air

Space Type: Bar, cocktail lounge  
 Area (Sq Ft.): 655  
 Number of People: 58  
 Supply Air (CFM): 655  
 Emission Rate/ Person (cpm): 10

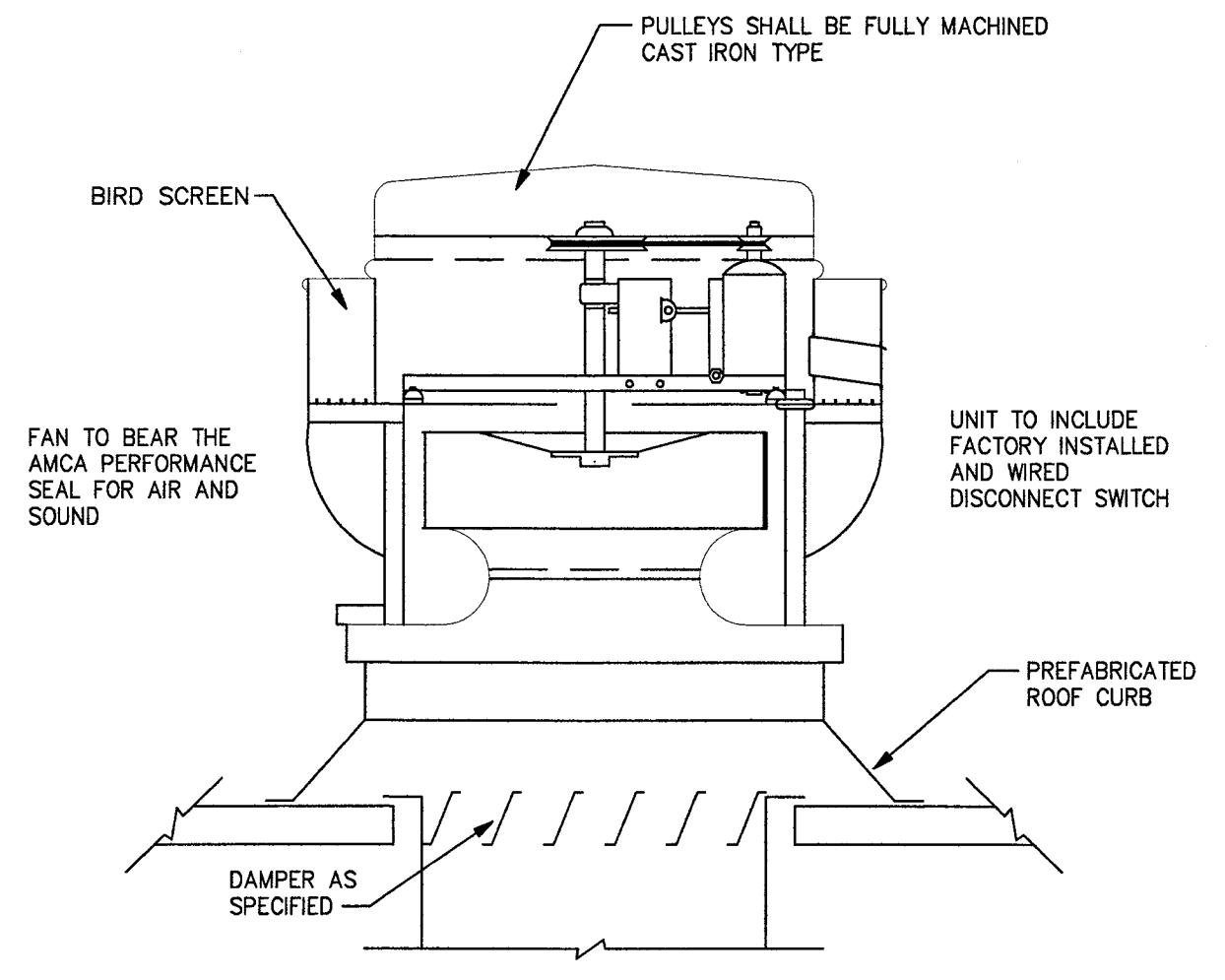
Calculation of Space Contaminants Using Ventilation Rate Procedure (VRP) OA

Variable	Description	Value	Units
N	Contaminant Generation Rate	0.560	µg/min
Ex	Zone Air Distribution Effectiveness	0.8	
Voa	Outdoor Air Flow Rate	6,758.78	L/min
EF	Filter Efficiency	0.98	
Ce	Contaminant Concentration, OA	0.2	µg/m³
R	Recirculation Flow Variable = Vx/(Vx+Vr)	0.47	
Vr	Return Air Flow Rate	6,443.30	L/min
Cbr	Contaminant Concentration, zone	0.386	µg/m

Is the Cbr for the IAQP equal or less than Cbr for the VRP? **NO**



**7 DUCTWORK DETAIL**  
 SCALE: NONE



**8 CENTRIFUGAL UPBLAST ROOF EXHAUST FAN**  
 SCALE: NONE

NOTE:  
 FANS HANDLING GREASE LADEN AIR SHALL BE PROVIDED WITH GREASE DRIP TRAYS/GUTTERS AND HINGED FAN ACCESS. GREASE GUTTER SHALL DRAIN TO A COLLECTION CONTAINER. CONTAINER SHALL BE DRAINED AS PART OF MAINTENANCE SCHEDULE BASED ON THE COLLECTION RATE AND SIZE OF THE CONTAINER.

**dh&a**

ARCHITECTURE, PA

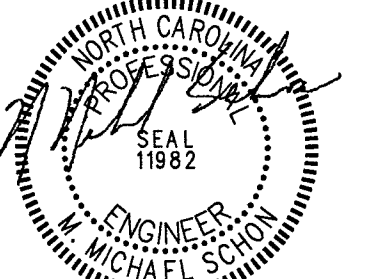
1208 CURTIS STREET  
 MONROE, NORTH CAROLINA 28112, TELE: 704-283-2408  
 FAX: 704-291-7909  
 cha.architects@frontier.com

CONSULTANTS



**WOLF TRAIL**  
 ENGINEERING

P-1817  
 1001 LANCASTER AVE.  
 MONROE, NC 28112  
 704-282-0826



12/20/22

RESTAURANT  
 AT CARAMBA 1

650 WEST ROOSEVELT BLVD.  
 MONROE, NC 28110

MARK	DATE	DESCRIPTION
ISSUE:	08/29/2022	
PROJECT NO:	22159	
CAD DWG FILE:	SEE DRAWINGS	
DRAWN BY:	MMS	
CHECKED BY:	MMS	

SHEET TITLE

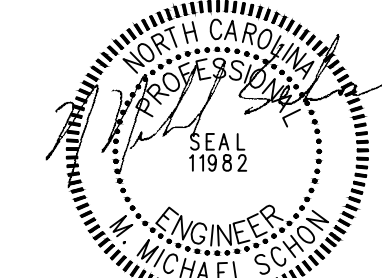
**MECHANICAL DETAILS**

**M0.3**



**WOLF TRAIL**  
ENGINEERING

P-1817  
1001 LANCASTER AVE.  
MONROE, NC 28112  
704-282-0826



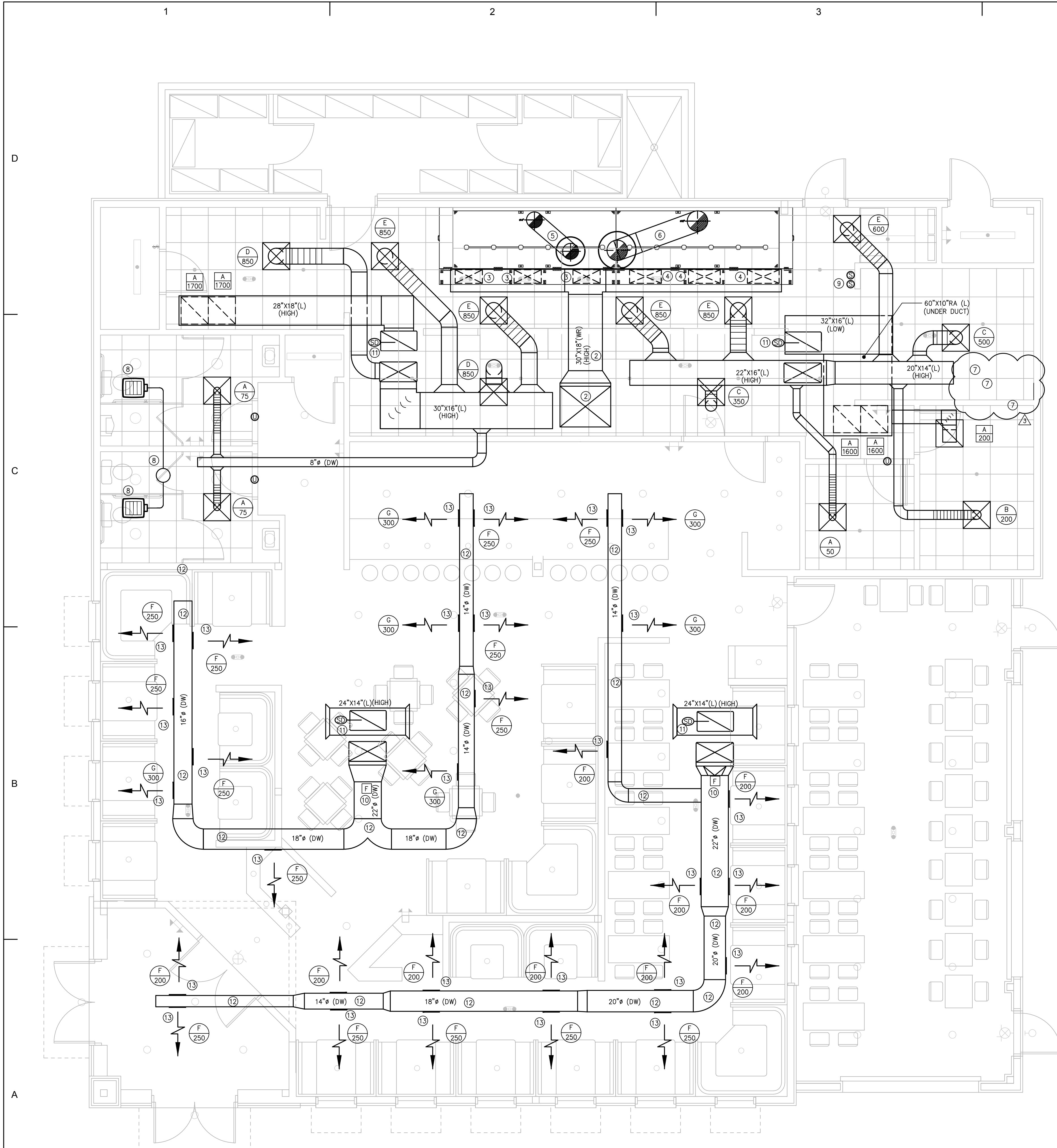
8/17/23

**RESTAURANT  
AY CARAMBA I**

650 WEST ROOSEVELT BLVD.  
MONROE, NC 28110

### NOTES THIS SHEET

- ① SEE SHEETS M0.1 - M0.3 FOR SCHEDULES, DETAILS AND SPECIFICATIONS.
- ② NEW 30"x18" SA FROM MUA-1 UNIT, TRANSITION TO UNIT CONNECTION SIZE AS REQUIRED. ROUTE NEW DUCT TO 20"x18" MAU DUCT THAT PROVIDES AIR TO THE SA PLENUM AT HOOD.
- ③ 24"x12" MUA CONNECTION FROM 20"x18" MUA DUCT TO CONNECTION AT HOOD, TYPICAL OF THREE, BALANCE AIR TO 636 CFM EACH. PROVIDE MANUAL BALANCING DAMPER AT HOOD CONNECTION.
- ④ 28"x12" MUA CONNECTION FROM 20"x18" MUA DUCT TO CONNECTION AT HOOD, TYPICAL OF THREE, BALANCE AIR TO 720 CFM EACH. PROVIDE MANUAL BALANCING DAMPER AT HOOD CONNECTION.
- ⑤ 14" GREASE DUCT (16 GAUGE, CARBON STEEL, WELDED CONTINUOUSLY), TIE INTO CONNECTION AT HOOD AND ROUTE AS INDICATED TO KITCHEN HOOD EXHAUST FAN, KEF-1. PROVIDE 2 LAYERS OF FIRE MASTER INSULATION WHERE THE EXHAUST DUCT IS CLOSER THAN 18" TO COMBUSTIBLES. PROVIDE UL LISTED CLEANOUTS AT ALL 90 DEGREE ELBOWS AND EVERY 20 FEET OF LENGTH. FIELD VERIFY EXACT LOCATION/CONDITIONS.
- ⑥ 18" GREASE DUCT (16 GAUGE, CARBON STEEL, WELDED CONTINUOUSLY), TIE INTO CONNECTION AT HOOD AND ROUTE AS INDICATED TO KITCHEN HOOD EXHAUST FAN, KEF-2. PROVIDE 2 LAYERS OF FIRE MASTER INSULATION WHERE THE EXHAUST DUCT IS CLOSER THAN 18" TO COMBUSTIBLES. PROVIDE UL LISTED CLEANOUTS AT ALL 90 DEGREE ELBOWS AND EVERY 20 FEET OF LENGTH. FIELD VERIFY EXACT LOCATION/CONDITIONS.
- ⑦ DELETED
- ⑧ CEILING EXHAUST FAN, EE-1. ROUTE 8" EXHAUST DUCT TO COMMON 10" EXHAUST DUCT THAT EXTENDS UP TO ROOF CAP. FIELD VERIFY EXACT LOCATION. MAINTAIN 10 FEET BETWEEN ANY EXHAUST TERMINATION AND OUTSIDE AIR INTAKE.
- ⑨ EMERGENCY SHUT DOWN BUTTON FOR KITCHEN HOOD, FIELD VERIFY EXACT LOCATION.
- ⑩ PROVIDE PLASMA FILTER, EQUAL TO PLASMA AIR 7000 SERIES IN SA DUCT MAIN. SEE CALCULATIONS ON SHEET M0.3.
- ⑪ PROVIDE EACH UNIT WITH A UL LISTED, SMOKE DETECTOR IN RETURN AIR DUCT MAIN TO SHUT UNIT DOWN UPON ACTIVATION. PROVIDE AND INSTALL REMOTE ANNUNCIATING DEVICE WITH A KEYED OVERRIDE. REMOTE ANNUNCIATING DEVICE SHALL BE LOCATED IN A ROUTINELY OCCUPIED AREA AND SHALL IDENTIFY ASSOCIATED EQUIPMENT IN ALARM.
- ⑫ SPIRAL DUCT SHALL BE DOUBLED WALL (DW). THE DUCT SHALL BE SUPPORTED FROM STRUCTURE WITH ALL THREAD RODS PER MANUFACTURER'S AND SMACNA STANDARDS.
- ⑬ GRILLES IN THE SPIRAL DUCT SHALL BE MOUNTED AT 30 DEGREES DOWNWARD FROM HORIZONTAL.



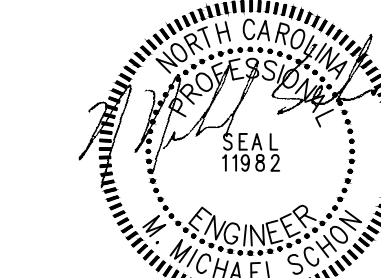
**1 FLOOR PLAN - MECHANICAL**  
SCALE: 1/4" = 1'-0"

MARK	DATE	DESCRIPTION
△	08/17/23	OWNER CHANGES
△	12/20/22	OWNER VE CHANGES

ISSUE: 08/29/2022  
PROJECT NO: 22159  
CAD DWG FILE: SEE DRAWINGS  
DRAWN BY: MMS  
CHECKED BY: MMS

SHEET TITLE  
**FLOOR PLAN  
MECHANICAL**

**M1.1**

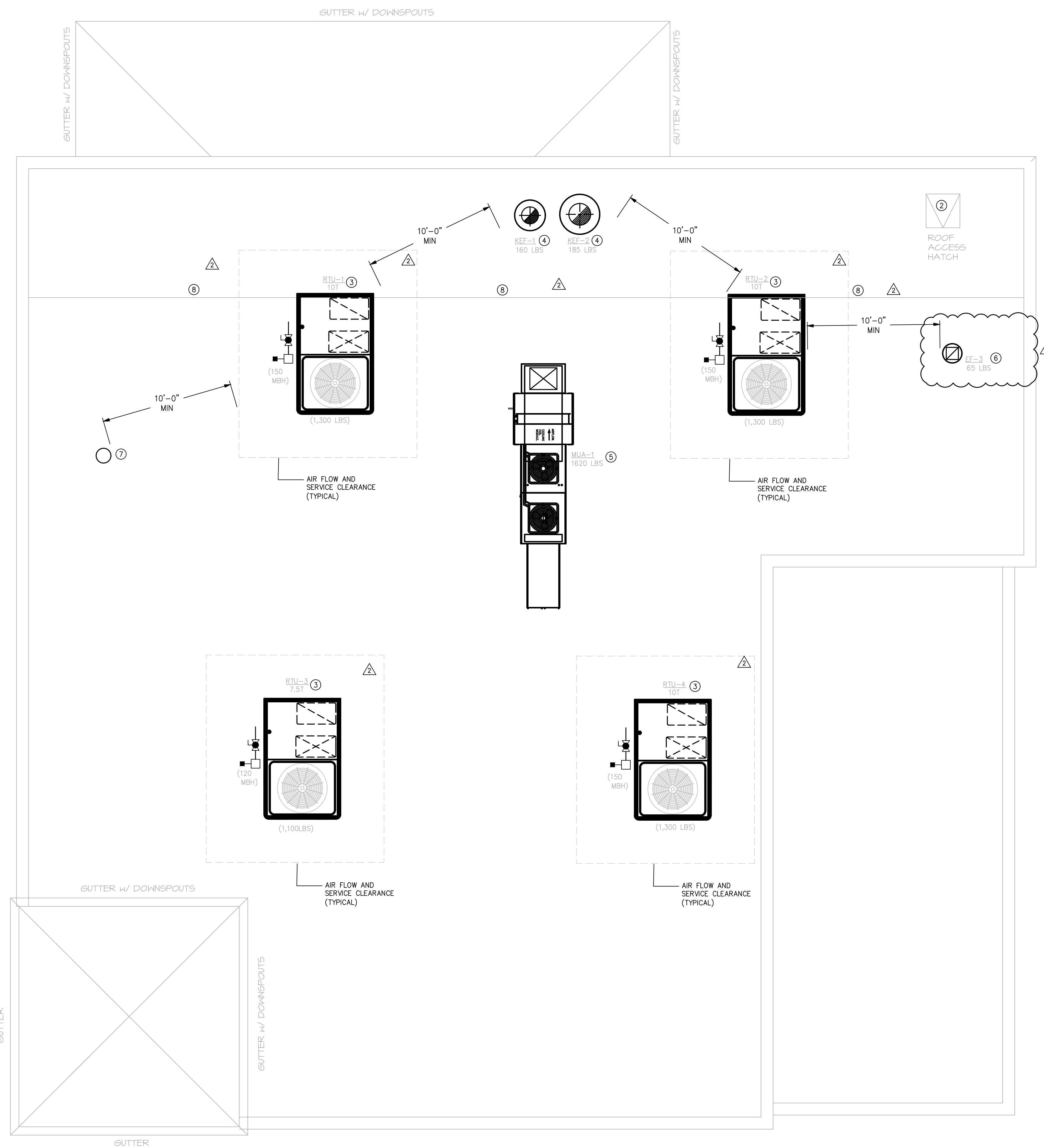


**RESTAURANT  
AY CARAMBA I**

650 WEST ROOSEVELT BLVD.  
MONROE, NC 28110

**NOTES THIS SHEET**

- ① SEE SHEETS M0.1 - M0.3 FOR SCHEDULES, DETAILS AND SPECIFICATIONS.
- ② PERMANENT ROOF HATCH, ACCESSABLE THRU MECHANICAL ROOM. FIELD VERIFY EXACT LOCATION.
- ③ NEW ROOF TOP UNIT ON FACTORY ROOF CURB, FIELD VERIFY EXACT LOCATION WITH STRUCTURAL PLANS. PROVIDE EACH UNIT WITH A UL LISTED, SMOKE DETECTOR IN RETURN AIR DUCT MAIN TO SHUT UNIT DOWN UPON ACTIVATION. PROVIDE AND INSTALL REMOTE ANNUNCIATING DEVICE WITH A KEYPAD OVERRIDE, REMOTE ANNUNCIATING DEVICE SHALL BE LOCATED IN A ROUTINELY OCCUPIED AREA AND SHALL IDENTIFY ASSOCIATED EQUIPMENT IN ALARM.
- ④ ROOF MOUNTED KITCHEN HOOD EXHAUST FANS, KEF-1 & KEF-2, ON FACTORY ROOF CURB. OFFSET HOOD EXHAUST DUCT AS INDICATED TO MAINTAIN 10 FEET BETWEEN EXHAUST AND ANY OA INTAKE AT THE UNITS. INTERLOCK HOOD EXHAUST FAN WITH MAKE-UP AIR UNIT, MUA-1 SO THAT THE MUA UNIT IS ENERGIZED WHEN THE EXHAUST FANS ARE ENERGIZED.
- ⑤ MAKE-UP AIR UNIT, MUA-1, ON FACTORY ROOF CURB. COORDINATE EXACT LOCATION WITH STRUCTURAL DRAWINGS. MUA-1 UNIT SHALL BE INTERLOCKED WITH KITCHEN HOOD EXHAUST FANS TO ENERGIZE WHEN THE HOOD EXHAUST FANS ARE ENERGIZED.
- ⑥ DELETED
- ⑦ 10" EXHAUST DUCT FROM RESTROOM FANS, TERMINATING WITH FACTORY ROOF CAP, FIELD VERIFY EXACT LOCATION.
- ⑧ ROOF DRAIN - DELETED



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

MARK	DATE	DESCRIPTION
△	08/17/23	OWNER CHANGES
△	12/20/22	OWNER VE CHANGES
ISSUE: 08/29/2022		
PROJECT NO: 22159		
CAD DWG FILE: SEE DRAWINGS		
DRAWN BY: MMS		
CHECKED BY: MMS		

**ROOF PLAN  
MECHANICAL**

**M2.1**

FOR QUESTIONS, CALL THE  
 CITY ENGINEER  
 REGION 30  
 PHONE: (704) 844-9088  
 EMAIL: [eng30@capliveaire.com](mailto:eng30@capliveaire.com)

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

**HOOD INFORMATION - JOB#5574303**

HOOD NO.	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG					
										WIDTH	LENG	HEIGHT	DIA			CFM	VEL	SP	END TO	ROW	
1		5424 ND-2-PSP-F	CAPTIVEAIRE	12' 0"	450 DEG	I	MEDIUM	185	2220				4"	14"	2220	2077	-0.947"	1909	430 SS WHERE EXPOSED	LEFT	ALONE
2		5424 ND-2-PSP-F	CAPTIVEAIRE	12' 0"	600 DEG	I	HEAVY	240	2880				4"	18"	2880	1630	-0.876"	2160	430 SS WHERE EXPOSED	RIGHT	ALONE

**HOOD INFORMATION**

HOOD NO.	TAG	TYPE	FILTER(S)			EFFICIENCY @ 7 MICRONS	QTY	LIGHT(S)			UTILITY CABINET(S)			FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
			QTY	HEIGHT	LENGTH			TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM	SIZE		
1		CAPTRATE SOLO FILTER	9	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO	LEFT	12"x54"x24"		SC-321110MA	1 LIGHT 1 FAN	782 LBS
2		CAPTRATE SOLO FILTER	9	20"	16"	85% SEE FILTER SPEC	6	L55 SERIES E26	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0/4.0/4.0		1181 LBS

**HOOD OPTIONS**

HOOD NO.	TAG	OPTION
1		FIELD WRAPPER 18.00" HIGH FRONT, LEFT. BACKSPLASH 80.00" HIGH X 312.00" LONG 430 SS VERTICAL. RISER SENSOR INSTALL 6IN PLEN.
2		FIELD WRAPPER 18.00" HIGH FRONT, RIGHT. RISER SENSOR INSTALL 6IN PLEN.

**FIRE SYSTEM INFORMATION - JOB#5574303**

FIRE SYSTEM NO.	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0/4.0/4.0	74	FIRE CABINET RIGHT	RIGHT, HOOD 2

**PERFORATED SUPPLY PLENUM(S)**

HOOD NO.	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)		
							WIDTH	LENG	SP
1		F7491en916	156"	14"	6"	MUA	12"	24"	636 0.181"
							12"	24"	636 0.181"
							12"	24"	636 0.181"
							12"	28"	720 0.195"
2		F7491en916	156"	14"	6"	MUA	12"	28"	720 0.195"
							12"	28"	720 0.195"
							12"	28"	720 0.195"
							12"	28"	720 0.195"

CAPTIVE-AIRE HOODS ARE ETL LISTED AND LABELED IN COMPLIANCE WITH

**NSF** **ETL** **UL**

BUILT IN ACCORDANCE WITH NFPA #96

NFPA #96  
 NSF  
 UL 710 & ULC710 STANDARDS  
 E.T.L. LISTED 3054804-001

**SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER**

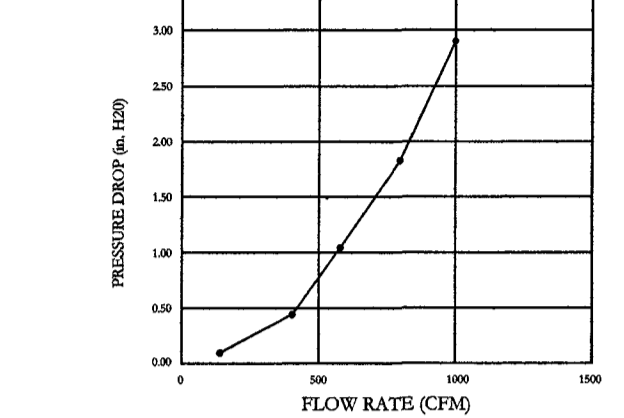
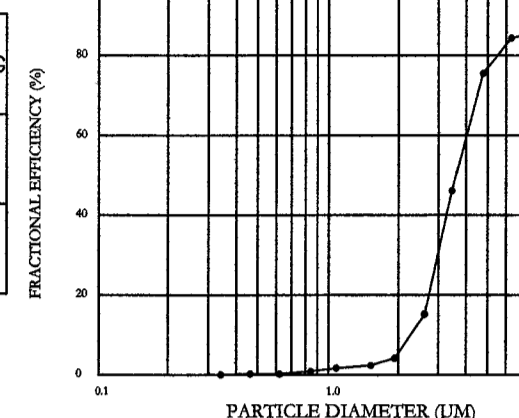
THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-Baffle DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

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 (MC).  
 ULC-5849.

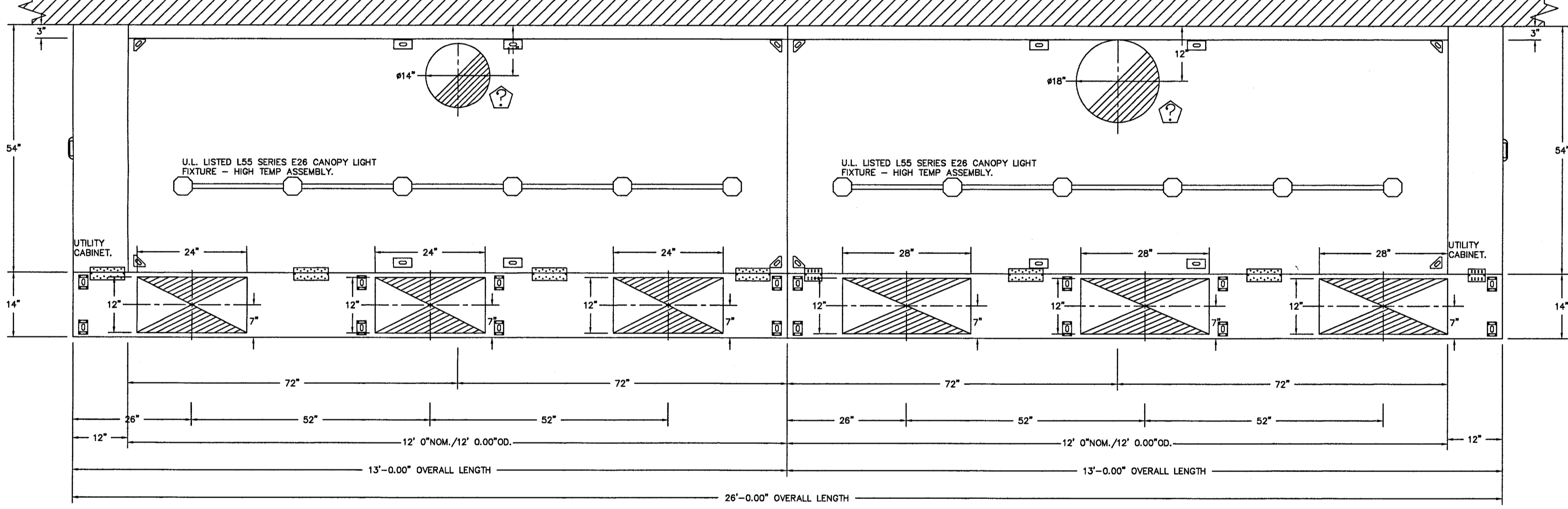


**REVISIONS**

NO.	DESCRIPTION	DATE

**CAPTIVEAIRE**

CharlotterPiedmont  
 www.captiveaire.com  
 6303 Carmel Road, Suite 105, Charlotte, NC, 28226 PHONE: (704) 844-9088 FAX: (919) 227-5952 EMAIL: [eng30@captiveaire.com](mailto:eng30@captiveaire.com)



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

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

AY CARAMBA - MONROE NC  
 MONROE, NC, 28110

DATE: 7/27/2022  
 DWG.#: 5574303  
 DRAWN BY: [mms@aycaramba.com](mailto:mms@aycaramba.com)  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING

SHEET NO.  
 1

**dh&a**  
 ARCHITECTURE, PA  
 1208 CURTIS STREET  
 MONROE, NORTH CAROLINA  
 28112, TEL: 704-283-2908  
 FAX: 704-291-7909  
[cha.architects@frontier.com](mailto:cha.architects@frontier.com)

CONSULTANTS

**WOLF TRAIL**  
 ENGINEERING  
 P-1817  
 1001 LANCASTER AVE.  
 MONROE, NC 28112  
 704-282-0826

12/20/22

**RESTAURANT  
 AY CARAMBA I**

650 WEST ROOSEVELT BLVD.  
 MONROE, NC 28110

MARK	DATE	DESCRIPTION

ISSUE: 08/29/2022  
 PROJECT NO: 22159  
 CAD DWG FILE: SEE DRAWINGS  
 DRAWN BY: MMS  
 CHECKED BY: MMS

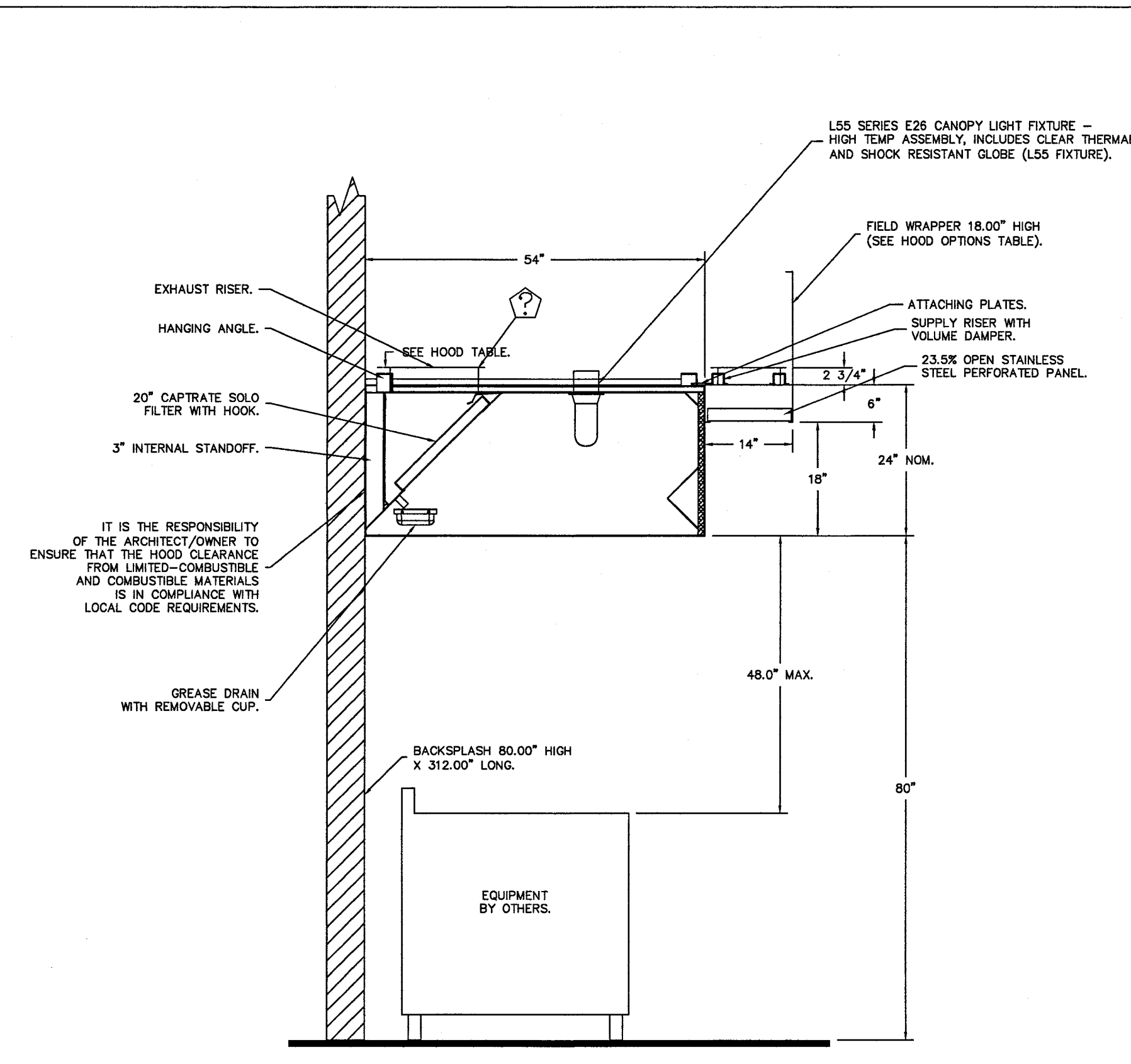
SHEET TITLE

**KITCHEN HOOD  
 INFORMATION**

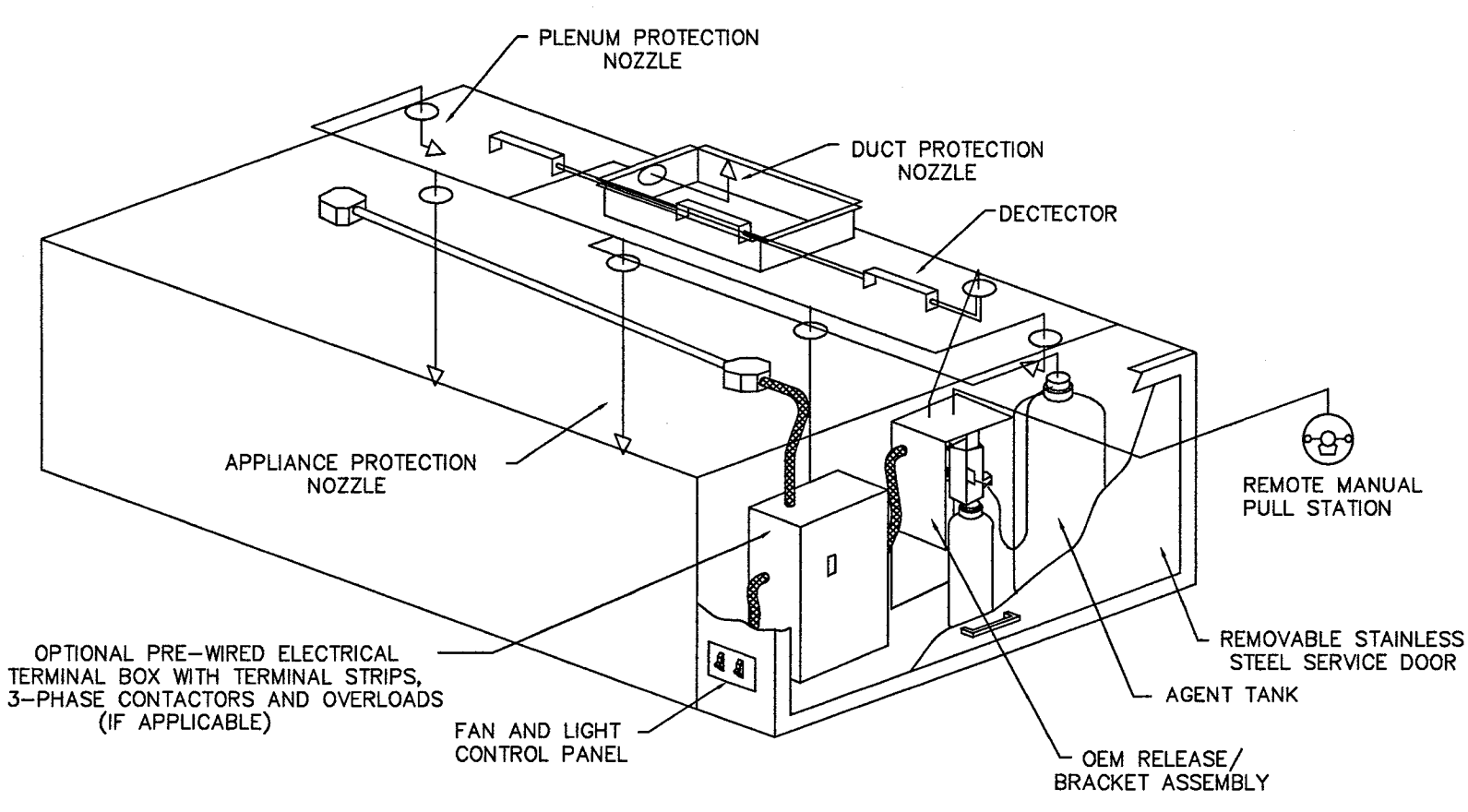
**M3.1**

Reviewed for Code Compliance  
 City of Monroe Building Standards  
 This project owner is responsible for compliance  
 with all applicable Local, State and Federal Laws.  
 This professional does not provide a guarantee of any  
 kind.  
 Plans Expiration: DATE: 04/02/2023

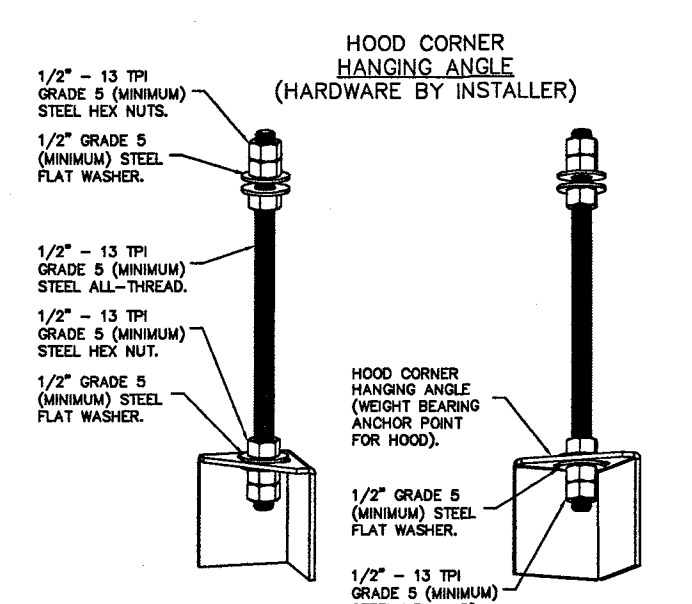
1 2 3 4 5



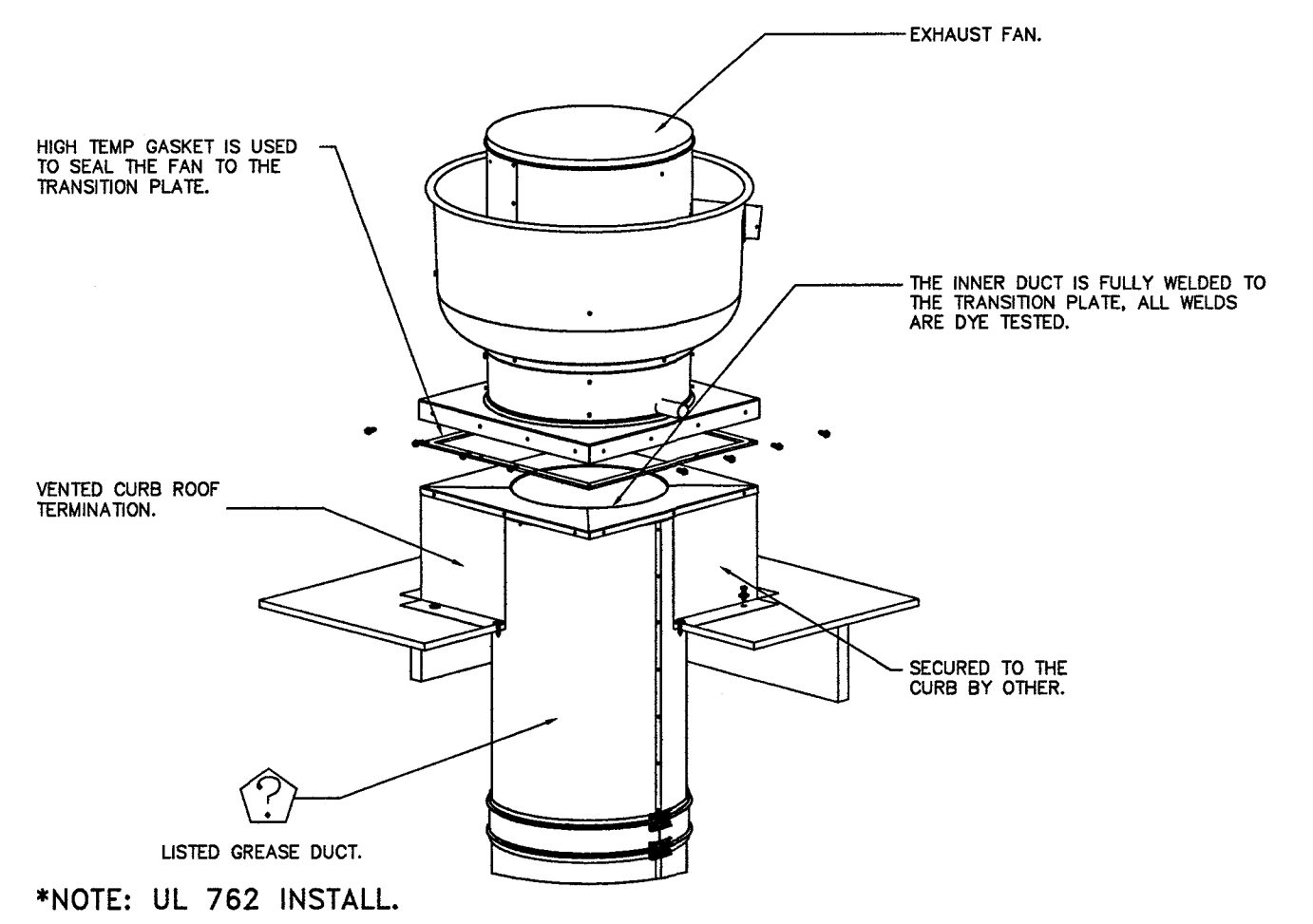
SECTION VIEW - MODEL 5424ND-2-PSP-F  
 HOOD - #1



TYPICAL UL300 LIQUID FIRE SYSTEM LAYOUT



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.



REVISIONS	
DESCRIPTION	DATE

CAPPIVARE  
 Charlotte/Piedmont  
 6303 Carmel Road, Suite 105, Charlotte, NC 28226 PHONE: (704) 844-9088 FAX: (919) 227-5952 EMAIL: mg3@capivare.com  
 www.capivare.com

AY CARAMBA - MONROE NC  
 MONROE, NC, 28110

DATE: 7/27/2022  
 DWG.#:  
 5574303  
 DRAWN BY: 1/16/19/14/1/16/19/14  
 SCALE:  
 3/4" = 1'-0"  
 MASTER DRAWING

SHEET NO.  
 2

**dh&a**

ARCHITECTURE, PA

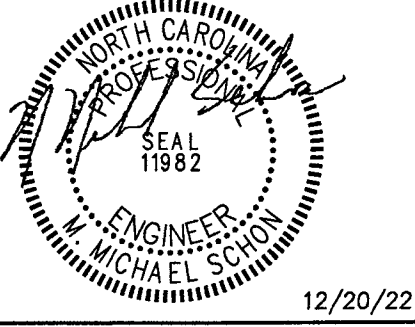
1208 CURTIS STREET  
 MONROE, NORTH CAROLINA  
 28112, TELE: 704-283-2908  
 FAX: 704-291-7909  
 cha.architects@frontier.com

CONSULTANTS



**WOLF TRAIL**  
 ENGINEERING

P-1817  
 1001 LANCASTER AVE.  
 MONROE, NC 28112  
 704-282-0826



RESTAURANT  
 AY CARAMBA I

650 WEST ROOSEVELT BLVD.  
 MONROE, NC 28110

MARK	DATE	DESCRIPTION

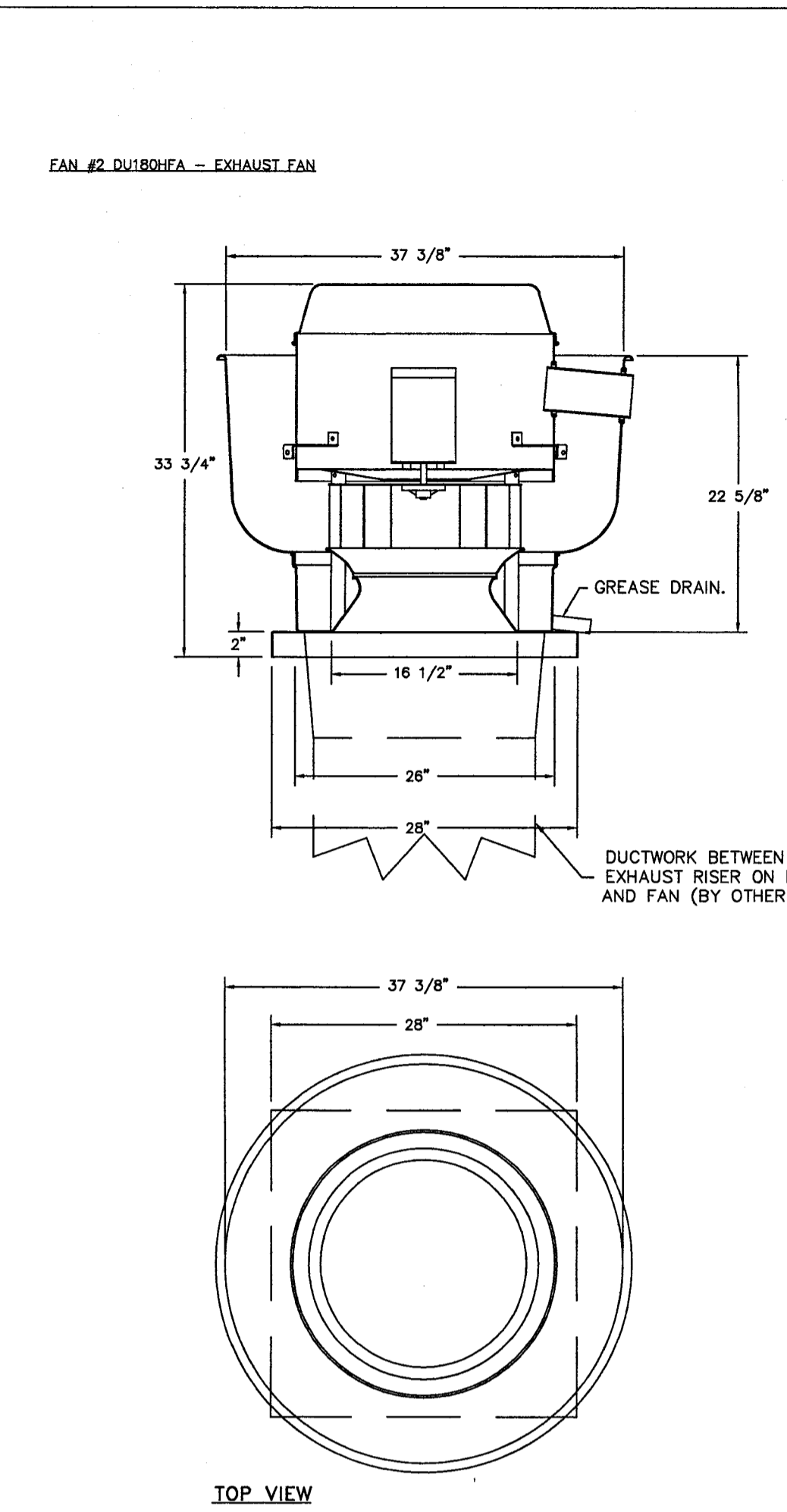
SHEET TITLE  
**KITCHEN HOOD  
 INFORMATION**

**M3.2**

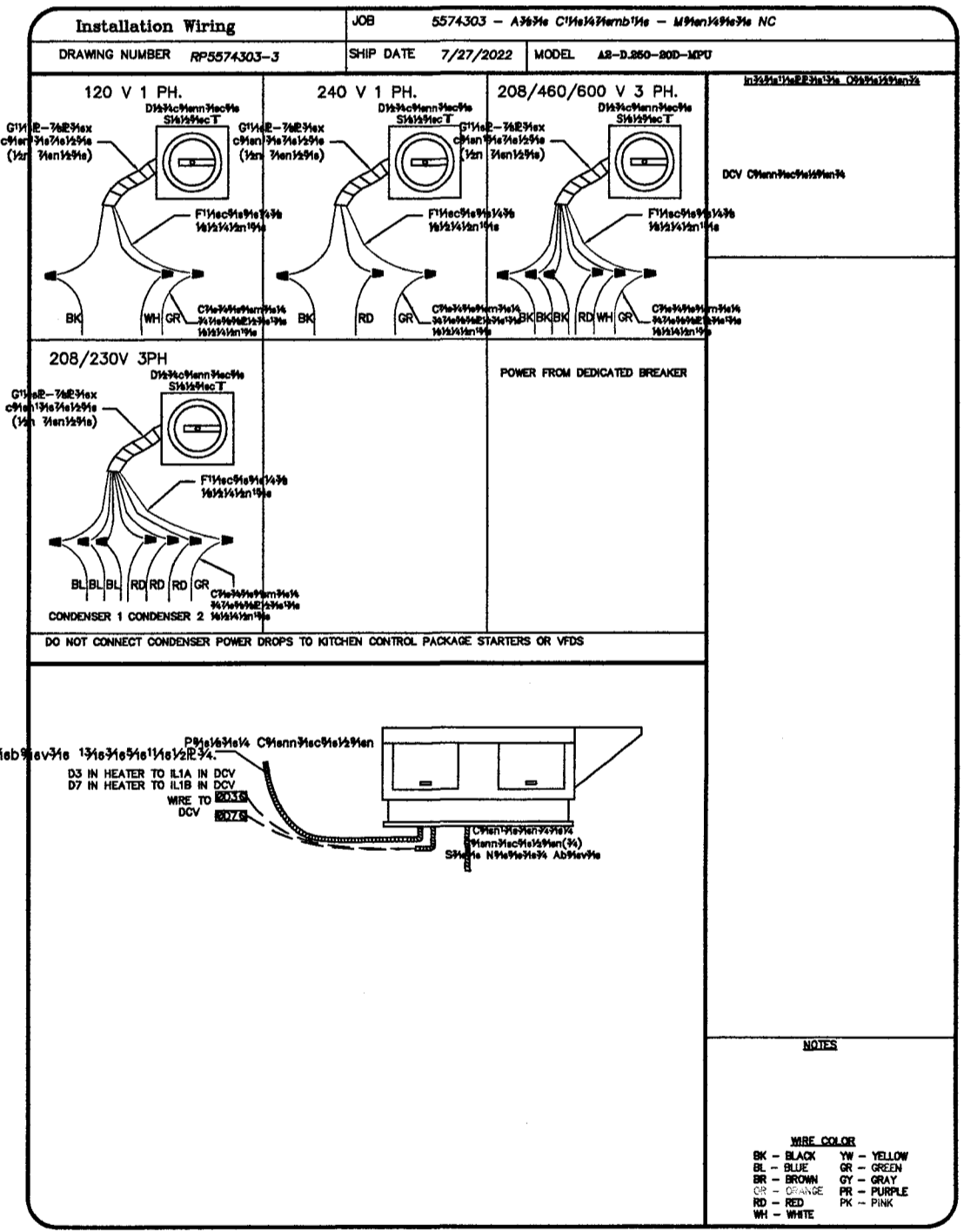
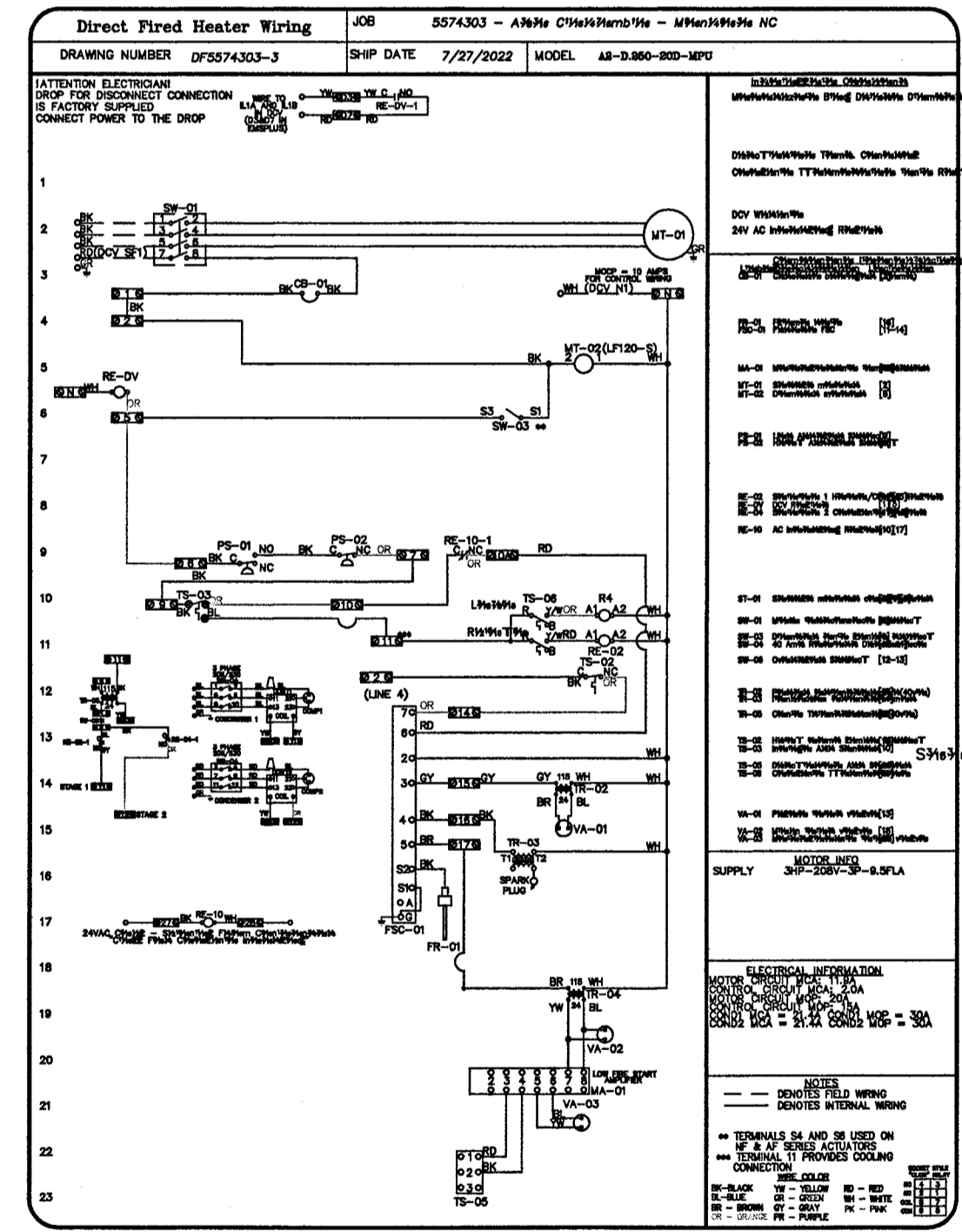
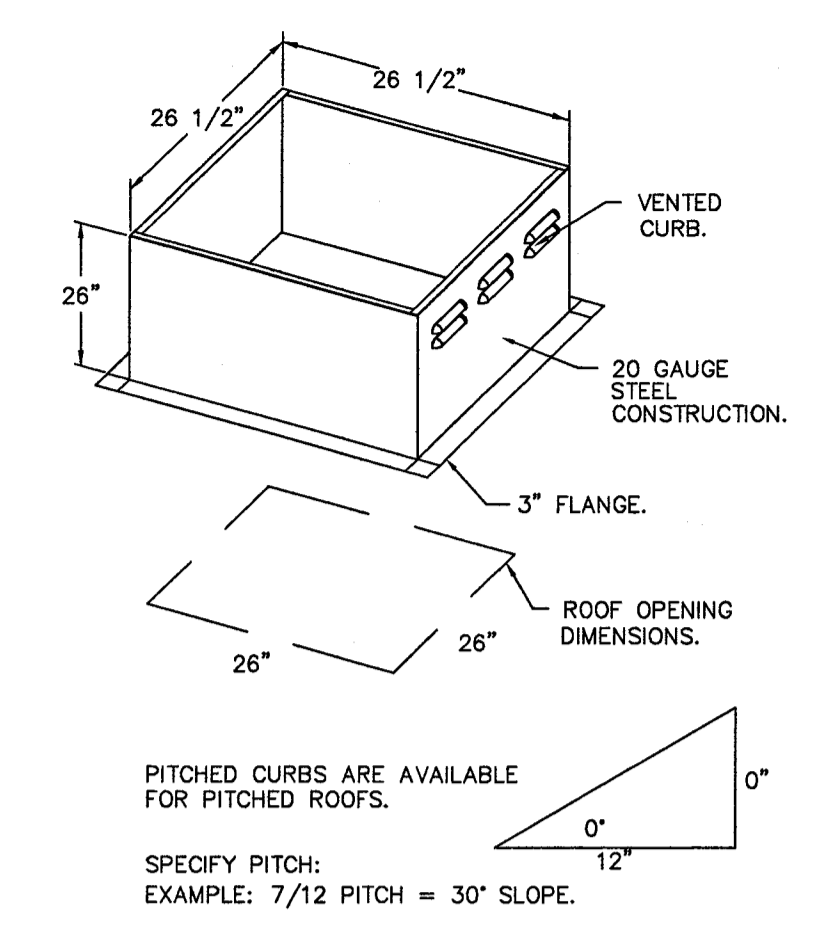
1 2 3 4 5







- 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.  
 2 YEAR PARTS WARRANTY.



**REVISIONS**

NO.	DESCRIPTION	DATE

**CAPTIVE**

Charlotte Piedmont  
 www.captivevaire.com  
 6303 Carnell Road, Suite 105, Charlotte, NC, 28226 PHONE: (704) 844-9088 FAX: (704) 277-6962 EMAIL: rpg3@captivaire.com

AY CARAMBA - MONROE NC  
 MONROE, NC, 28110

DATE: 7/27/2022  
 DWG.#: 5574303  
 DRAWN BY: MMS  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING

SHEET NO. 4

**dh&a**  
 ARCHITECTURE, PA  
 1208 CURTIS STREET  
 MONROE, NORTH CAROLINA  
 28112, TELE: 704-283-2408  
 FAX: 704-241-7909  
 cha.architects@frontier.com

CONSULTANTS

**WOLF TRAIL**  
 ENGINEERING  
 P-1817  
 1001 LANCASTER AVE.  
 MONROE, NC 28112  
 704-282-0826

Professional Engineer Seal for Michael Schmitt, State of North Carolina, License No. 11982.

12/20/22

RESTAURANT  
 AY CARAMBA I

650 WEST ROOSEVELT BLVD.  
 MONROE, NC 28110

MARK	DATE	DESCRIPTION

SHEET TITLE

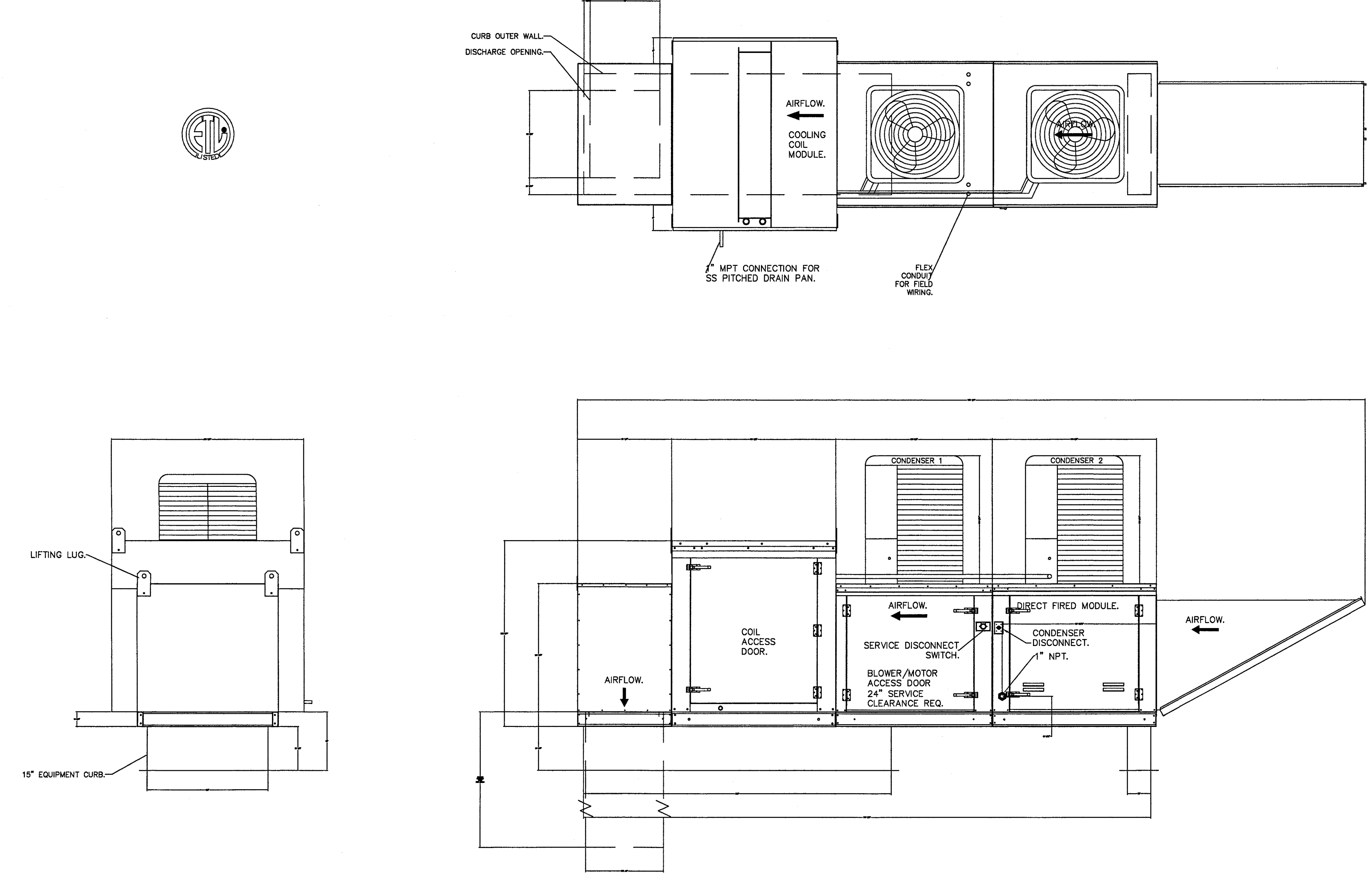
**KITCHEN HOOD INFORMATION**

**M3.4**

- FAN #3 A2-D-250-20D-MPU - HEATER
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. GAS PRESSURE GAUGE, 0-30", 2.5" DIAMETER, 1/4" THREAD SIZE.
  5. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2.5" DIAMETER, 1/4" THREAD SIZE.
  6. LOW FIRE START - ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
  7. SHIP LOOSE GAS STRAINER, TO BE INSTALLED UPSTREAM OF UNIT CONNECTION, 1" CONNECTION.
  8. COOLING INTERLOCK RELAY, 24VAC COIL, 120V CONTACTS. LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED.
  9. MOTORIZED BACK DRAFT DAMPER 22.75" X 24" FOR SIZE 2 STANDARD IN MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, LF120S ACTUATOR INCLUDED.
  10. 10 TON, DUAL CIRCUIT (S/S) 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. (3,600 TO 5,000 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 CJI. CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL # 3Z208020.
  11. DOWNTURN PLENUM FOR SIZE 2 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS.
  12. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING YTD 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. DX COOLING INTAKE AIR THERMOSTAT AND RELAYS MOUNTED IN UNIT - SET POINT FOR THERMOSTAT SHOULD BE 85F.
  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".

SUPPLY SIDE HEATER INFORMATION:  
 WINTER TEMPERATURE = 25F. TEMP. RISE = 50F.  
 BTUH<sub>9</sub> CALCULATED OFF ACTUAL AIR DENSITY.  
 OUTPUT BTUH<sub>9</sub> AT ALTITUDE OF 0.0 FT. = 217354  
 INPUT BTUH<sub>9</sub> AT ALTITUDE OF 0.0 FT. = 236254  
 OUTPUT BTUH<sub>9</sub> AT ALTITUDE OF 572 FT. = 212899  
 INPUT BTUH<sub>9</sub> AT ALTITUDE OF 572 FT. = 231411.



REVISIONS	
NO.	DESCRIPTION

**CAPTIVE**  
 Charlotte/Piedmont  
 6803 Carmel Road, Suite 105, Charlotte, NC 28226 PHONE: (704) 844-9088 FAX: (919) 227-5532 EMAIL: info@captivemc.com  
 www.captivemc.com

AY CARAMBA - MONROE NC  
 MONROE, NC, 28110

DATE: 7/27/2022  
 DWG.#: 5574.303  
 DRAWN BY: 1/16 1/16 1/4 1/16 1/16  
 SCALE: 3/4" = 1'-0"  
 MASTER DRAWING  
 SHEET NO. 5

**dh&a**  
 ARCHITECTURE, PA  
 1208 CURTIS STREET  
 MONROE, NORTH CAROLINA  
 28112, TEL: 704-283-2908  
 FAX: 704-291-7909  
 cha.architects@frontier.com

CONSULTANTS

**WOLF TRAIL™**  
 ENGINEERING  
 P-1817  
 1001 LANCASTER AVE.  
 MONROE, NC 28112  
 704-282-0826

12/20/22

RESTAURANT  
 AT CARAMBA I

650 WEST ROOSEVELT BLVD.  
 MONROE, NC 28110

MARK	DATE	DESCRIPTION

SHEET TITLE

**KITCHEN HOOD  
 INFORMATION**

**M3.5**



