OUTSIDE AIR CALCULATIONS:

RESTAURANT DINING ROOM OCCUPANCY:
NET OCCUPIABLE SPACE = 1,835 SQ. FT.
TOTAL PERSONS X 7.5 + .18 x NET SQ. FT. = REQ'D CFM.
1,838 X .18 = 330.3 CFM
CUSTOMER SEATING: 80 PERSONS
STAFF: 20 PERSONS
TOTAL PERSONS X 7.5 + .18 x NET SQ. FT. = REQ'D CFM.
(100 X 7.5) + (.18 x 1,835) = 1,080.3 CFM REQUIRED.
OUTSIDE AIR PROVIDED:
RTU-1 - 2,000 CFM
TOTAL: 2,000 CFM - IN COMPLIANCE.

RESTAURANT KITCHEN OCCUPANCY:
NET OCCUPIABLE SPACE = 1,415 SQ. FT.
TOTAL PERSONS X 7.5 + .12 x NET SQ. FT. = REQ'D CFM.
1,415 X .12 = 169.8 CFM
KITCHEN STAFF: 20 PERSONS
TOTAL PERSONS X 7.5 + .12 x NET SQ. FT. = REQ'D CFM.
(20 X 7.5) + (.12 x 1,415) = 319.8 CFM REQUIRED.
OUTSIDE AIR PROVIDED:
RTU-2 - 2,000 CFM
TOTAL: 2,000 CFM - IN COMPLIANCE.

REGISTERED ENGINEER'S OUTSIDE AIR DESIGN NOTE:

TABLE 403.3 DEFAULT OCCUPANCY IS NOT USED BECAUSE THE OCCUPANCY IS A KNOWN FACTOR AND HENCE, USED IN THIS CALCULATION AS DEMONSTRATED ABOVE AND CERTIFIED HEREIN.
SECTION 403.3.1.1 EXCEPTION STATES: *"The occupant load is not required to be determined based on the estimated maximum occupant load rate indicated in Table 403.3.1.1 where approved statistical data document the accuracy of an alternate anticipated occupant density."*
THIS OCCUPANCY IS DEMONSTRATED AND CERTIFIED BY THE REGISTERED ENGINEER IN THE BODY OF THIS CALCULATION.

ENGINEER'S ADDITIONAL NOTE:
THE DINING ROOM SEATING IS A KNOWN FACTOR THROUGH THE SEATING SHOWN WHICH JUSTIFIES THE OUTSIDE AIR CALCULATION AS SHOWN COMPLIES WITH CODE. THE DINING SQUARE FOOTAGE SHOWN IS THE TOTAL SQUARE FOOTAGE NOT THE NET OCCUPIABLE SPACE ALTHOUGH CODE ALLOWS "NET OCCUPIABLE SPACE". THE KITCHEN SQUARE FOOTAGE IS ALSO THE TOTAL SQUARE FOOTAGE. THE NUMBER OF STAFF SHOWN IN THE KITCHEN (20) IS ALMOST DOUBLE THE ACTUAL AND IS EXAGGERATED TO MORE CLEARLY DEMONSTRATE THAT THE OUTSIDE AIR REQUIREMENT IS BEING MET. FINALLY, THE DINING OUTSIDE AIR IS 1,920 CFM WHICH IS 834.16 CFM MORE THAN REQUIRED. THE KITCHEN OUTSIDE AIR IS 1,950 CFM WHICH IS 1,630.08 CFM MORE THAN REQUIRED. TOTAL OUTSIDE AIR FOR BOTH ZONES IS EXCEEDED.

PLAN NOTES

1. INSTALLATION SHALL COMPLY WITH 2012 IMC AND 2009 IECC AND ALL APPLICABLE LAWS, CODES AND ORDINANCES.
2. DUCTWORK HAS BEEN COORDINATED WITH THE PROPOSED TRUSS LAYOUT. ACTUAL INSTALLED CONFIGURATION MAY DIFFER FROM ORIGINAL PLANS. COORDINATE WITH THE GENERAL CONTRACTOR AS TRUSSES ARE INSTALLED TO CONFIRM DUCT LAYOUT AS DESIGNED WILL WORK WITH THE INSTALLED TRUSS CONFIGURATION. MINOR MODIFICATIONS IN LOCATIONS MAY BE REQUIRED.
3. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT TO THE OWNER AS REQUIRED PER 2009 IECC.
4. THE ENTIRE BUILDING IS CONDITIONED EXCEPT FOR THE COOLER AND FREEZER. TOTAL BUILDING SQUARE FOOTAGE IS 4232. AREA OF COOLER/FREEZER IS 278 SQ. FT. TOTAL CONDITIONED SQUARE FOOTAGE IS 3954 SQ. FT.

NOTE:
THE DESIGN, INSTALLATION, OPERATION, INSPECTION, AND MAINTENANCE OF ALL PUBLIC AND PRIVATE COMMERCIAL COOKING EQUIPMENT SHALL COMPLY WITH CHAPTER FFPC 1:561.1 AND NFPA 96, STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. KITCHEN HOOD PLANS, COMPLIANT WITH THE ABOVE, SHALL BE PERMITTED SEPARATELY.

NOTE:
A SEPARATE PERMIT HAS BEEN SUBMITTED FOR THE MECHANICAL EXHAUST HOODS AND ANSUL SYSTEM BY THE MECHANICAL CONTRACTOR.

KEYED NOTES:

1. EXHAUST DUCTS FROM CEILING EXHAUST FANS TO GREENHECK ROOF EXHAUST VENTILATOR. TRANSITION FROM THROAT TO 14x14 PLENUM DUCT AND EXTEND DOWN 12" BELOW JOISTS FOR CONNECTION OF EXHAUST DUCT(S).
2. PRV-2 ON ROOF. TRANSITION FROM FAN OPENING TO 12x12 WELDED STEEL EXHAUST DUCT AND EXTEND DOWN TO HOOD EXHAUST OPENING. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
3. PRV-3 ON ROOF. TRANSITION FROM FAN OPENING TO 12x12 WELDED STEEL EXHAUST DUCT AND EXTEND DOWN TO HOOD EXHAUST OPENING. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
4. EXTEND 4" GALVANIZED SNAP-LOK DRYER VENT FROM DRYER UP TO ABOVE CEILING AND UP TO ROOF. TOTAL DEVELOPED LENGTH IS LESS THAT 25 FEET AND WELL UNDER THE MANUFACTURER'S MAXIMUM VENTING DISTANCE.
5. PROVIDE SURFACE MOUNT FRAME FOR INSTALLATION IN GYP/HARD CEILING.
6. UNIT WEIGHTS ARE LISTED FOR COORDINATION. VERIFY EXACT LOCATION WITH GC.
7. INSTALL THERMOSTATS FOR RTU-1 & RTU-2 IN MANAGERS OFFICE WITH SENSORS AT INDIVIDUAL ZONES AS INDICATED.
8. FLEX CONNECTION FROM RETURN AIR DOWN DUCT THROUGH TRUSS WEBBING.
9. TRANSITION FROM RTU-2 RETURN AIR OPENING TO 38x20 AND EXTEND DOWN TO ELEVATION WHICH WILL ALLOW FOR EXTENDING THE CONNECTIONS WITH VOLUME DAMPERS TO RETURN GRILLES AS INDICATED. FIELD COORDINATE PRIOR TO INSTALLATION.
10. RIGID CONNECTIONS FOR TYPE 'E' DIFFUSERS ON COOK LINE AND DIFFUSER OVER ICE MACHINE. SEE DETAIL 5 ON SHEET M2.
11. STAINLESS STEEL WALL PANEL AT HOOD. FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
12. PRV-4 ON ROOF. TRANSITION FROM FAN OPENING TO 7x7 SHEET METAL EXHAUST DUCT AND EXTEND TO HOOD 3 EXHAUST OPENING. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
13. PROVIDE INDEPENDENT ON/OFF SWITCH FOR EF-2 ABOVE MOP BASIN.

HVAC GENERAL NOTES

1. DUCT SIZES ARE CLEAR INSIDE DIMENSIONS. VERIFY ALL DIMENSIONS AND LOCATIONS PRIOR TO FABRICATION OR INSTALLATION. ALL RECTANGULAR/SQUARE DUCTWORK SHALL BE FINEST QUALITY GALVANIZED SHEET STEEL WITH 2" ¾ LB. DENSITY FOIL FACED EXTERNAL INSULATION WITH AN 'R' VALUE OF 6.0. COORDINATE DUCTS WITH STRUCTURE PRIOR TO INSTALLATION. ALL DUCT SHALL BE CONSTRUCTED AND INSTALLED PER SMACNA REQUIREMENTS.
2. ALL FLEXIBLE DUCT CONNECTIONS SHALL BE CLASS ONE TYPE. PROVIDE TAB COLLARS AT MAIN DUCT WITH MANUAL VOLUME DAMPER WITH LOCKING QUADRANT.
3. AN IONIZATION PRINCIPLE SMOKE DETECTOR SHALL BE INSTALLED IN THE SUPPLY & RETURN DUCTWORK OF ALL RTU'S AND PROVIDED BY LENNOX WITHIN UNIT. THE DETECTOR SHALL BE WIRED TO APPLICABLE FIRE ALARM SYSTEM BY THE FIRE ALARM CONTRACTOR. PROVIDE L.E.D. AND HORN ALARM STATIONS (DUCT SMOKE DETECTOR'S REMOTE TEST SWITCH) LOCATED IN NORMALLY OCCUPIED AREA MOUNTED AT 48" A.F.F.
4. ALL ROOF AND WALL PENETRATIONS SHALL BE SEALED BY THE GENERAL CONTRACTOR.
5. CONTRACTOR SHALL COORDINATE WITH STRUCTURAL PLANS PRIOR TO BID TO VERIFY EXISTING CLEARANCES FOR DUCT. COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO TRUSS ORDER AND AS STRUCTURE IS BEING CONSTRUCTED TO ASSURE ALL CLEARANCES FOR DUCTWORK ARE COORDINATED.
6. DEVIATION FROM MATERIALS, METHODS, OR PROCEDURES SET FORTH HEREIN MUST BE APPROVED, IN WRITING, BY ENGINEER PRIOR TO SUBMISSION OF BID, ORDER, FABRICATION OR INSTALLATION.
7. ANY AND ALL QUESTIONS AS TO THE INTENT OF OR PROCEDURES SET FORTH IN THESE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMISSION OF A BID. LACK OF KNOWLEDGE OR UNDERSTANDING OF THE PLANS SHALL NOT JUSTIFY ANY CLAIMS OR ADDITIONAL COMPENSATION.
8. INSTALLATION SHALL COMPLY WITH 2012 IMC AND 2009 IECC AND ALL APPLICABLE LAWS, CODES AND ORDINANCES.
9. THE HVAC CONTRACTOR SHALL COORDINATE ALL EQUIPMENT, DUCT, PIPING, LOUVERS, DIFFUSERS, ETC. INCLUDING LOCATIONS AND CLEARANCES, WITH ALL OTHER TRADES ON PROJECT IN PRE-CONSTRUCTION MEETING, PRIOR TO ANY ORDER, FABRICATION OR INSTALLATION.
10. COORDINATE WITH ELECTRICAL CONTRACTOR AND EQUIPMENT NATIONAL ACCOUNTS ON ALL ELECTRICAL DATA PRIOR TO ORDER.
11. SUPPLY DUCTWORK SHALL BE CONSTRUCTED, FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA REQUIREMENTS FOR A 1" POSITIVE PRESSURE CLASSIFICATION.
12. RETURN AND EXHAUST DUCTWORK SHALL BE CONSTRUCTED, FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA REQUIREMENTS FOR A 1" NEGATIVE STATIC PRESSURE.
13. ALL EXHAUST FAN DISCHARGES AND PLUMBING VENTS SHALL BE A MINIMUM OF 10'-0" FROM FRESH-AIR INTAKES. COORDINATE WITH PLUMBING PLANS PRIOR TO INSTALLATION.
14. THE MECHANICAL CONTRACTOR SHALL BALANCE ALL SYSTEMS TO WITHIN TEN PERCENT OF DESIGN VALUES SPECIFIED HEREIN.
15. EXTEND CONDENSATE DRAIN LINES FROM RTU'S TO ROOF DRAINS AND/OR DOWNSPOUTS WHICH DRAIN TO STORM SEWER. REFER TO DETAILS ON SHEET M2.
16. HOOD EXHAUST DUCT SHALL BE MINIMUM 16 GAUGE GALVANIZED SHEET STEEL WITH ALL SEAMS WELDED LIQUID-TIGHT. PROVIDE 3M FIREMASTER DUCT WRAP FROM HOOD TO TOP OF ROOF CURB.
17. CONTROLS SHALL BE PER LENNOX NATIONAL ACCOUNTS. COORDINATE WITH LENNOX REPRESENTATIVE ON ALL NECESSARY CONTROLS PRIOR TO BID SUBMISSION.

BUILDING AIR BALANCE SCHEDULE

POSITIVE SOURCES:		NEGATIVE SOURCES:	
RTU-1	2,000 CFM	EF-1	220 CFM
RTU-2	2,000 CFM	EF-2	50 CFM
		(3) EF-3 - 70 EA.	210 CFM
		PRV-2	1500 CFM
		PRV-3	1500 CFM
		PRV-4	350 CFM
TOTAL:	4,000 CFM	TOTAL:	3,830 CFM

RESULTING TOTAL AIR BALANCE: 170 CFM POSITIVE

HVAC LEGEND

- CEILING SUPPLY DIFFUSER
- CEILING RETURN
- CEILING EXHAUST FAN
- SENSOR
- SMOKE DETECTOR
- VOLUME DAMPER
- NEW RIGID DUCT
- CLASS 1 FLEXIBLE DUCT

REFER TO SHEET M2, DETAIL ONE FOR AIR DISTRIBUTION LEGEND SHOWING DIFFUSER TYPE AND HOW TO DETERMINE DUCT CONNECTION SIZE FROM THIS DESIGNATION, TYPICAL.

EXTEND 3"ø CONCENTRIC VENT KIT UP THROUGH ROOF. WASHER & DRYER BY OWNER.

EXTEND 4"ø DRYER VENT UP THRU ROOF TO ROOF CAP. 4

PROVIDE 18"x12" DOOR LOUVER.

1 MECHANICAL PLAN
SCALE: 3/16" = 1'-0"

REVISIONS	BY
1 04. 06. 23	BMD
4 09. 27. 23	BMD

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GARLAND PATTERSON
LICENSE PE 14175
STATE OF FLORIDA
PROFESSIONAL ENGINEER

GARLAND PATTERSON, P.E.
FL Lic. No.: 14175
SEPT. 27, 2023

MDCI FLORIDA, INC.
405 2nd Street South • Suite B
St. Petersburg, Florida 33701
Engineering Business No. 9004
Ph. 727.698.0398 Fax 727.797.8225

4

New Free Standing Owners
2620 Stratton Boulevard
Saint Augustine, Florida 32084
St. Johns County

Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22-173

Sheet
M1

CONTROL NOTES

1. RTU-1, RTU-2, & RTU-OA WILL SHUT-DOWN UPON ACTIVATION OF FIRE SUPPRESSION SYSTEM.
2. RTU-1, RTU-2, & RTU-OA WILL SHUT-DOWN ON ACTIVATION OF ANY DUCT DETECTOR.
3. OCCUPIED MODE: FANS IN RTU-1 & RTU-2, EXHAUST FANS PRV-2, 3, & 4 TO RUN CONTINUOUSLY. RESTROOM EXHAUST TO BE INTERLOCKED WITH RR LIGHTS.
4. UNOCCUPIED MODE: FANS IN RTU-1 & RTU-2 TO RUN ONLY WHEN COOLING OR HEATING IS CALLED FOR.
5. RTU-OA SHALL BE INTERLOCKED WITH RTU-1 AND RTU-2 VIA LENNOX CONTROLS TO ASSURE SIMULTANEOUS OPERATION. COORDINATE ALL CONTROLS REQUIREMENTS WITH LENNOX PRIOR TO BID SUBMISSION.

LENNOX SETTINGS FOR CULVERS

Kitchen Unit

Parameter 3.01 HEAT DELAY NEEDS TO BE SET TO "DISABLED". CONTROL PARAMETER 3.01=0 Pg. 92
ECONOMIZER DIP SWITCHES A56 (EM1) NEED TO BE SET TO "GLOBAL" MODE. 1=ON 2=OFF (PG. 5 FIG 8)
ECONOMIZER MIN POSITION POTENTIOMETER NEEDS TO BE DETERMINED AND SET BY AIR BALANCER. (Pg. 52 FIG 33)
BOTH THE THERMOSTAT AND THE HOOD FANS MUST BE TIED INTO TB1 TERMINAL 8&9 FOR OCC/UNOCC CONTROL.
FRESH AIR TEMPERING (HEATING) CONTROL PARAMETER 6.20=160 "-55F" (KITCHEN IS USUALLY IN COOLING MODE)
(PARAMETER 6.20 Pg 99± x CHARTS Pg 109)

Dining Room Unit

PARAMETER 3.01 HEAT DELAY NEEDS TO BE SET TO "DISABLED". CONTROL PARAMETER 3.01=0 Pg 92
ECONOMIZER DIP SWITCHES A56 (EM1) NEED TO BE SET TO ECONOMIZER TYPE PURCHASED/INSTALLED. 1=? 2=?
(Pg 5 FIGURE 8)
ECONOMIZER MIN POSITION POTENTIOMETER NEEDS TO BE DETERMINED AND SET BY AIR BALANCER. (Pg 52 FIGURE 33)
THE THERMOSTAT MUST BE TIED INTO TB1 TERMINAL 8&9 FOR OCC/UNOCC CONTROL
FRESH AIR TEMPERING (HEATING) CONTROL PARAMETER 6.20=142 "68F" (ROOM NEUTRAL)
(PARAMETER 6.20 PAGE 99± x CHARTS PAGE 109)

OTHER PARAMETERS THAT WE DIDN'T SET, BUT ARE PART OF START-UP:
- ROOM SET POINT
- REMOTE SENSOR OPERATION
- TEMP DEADBANDS

CHECK FOR CORRECT OPERATION AND WIRING OF ALL SENSORS.

NOTE : VERIFY ALL COLORS WITH OWNER AND ARCHITECT

NATIONAL ACCOUNT PROGRAM

1. **CAPTIVEAIRE - ROOFTOP HVAC EQUIPMENT**
   National Accounts Sales: (866) 784-6900
   National Account Technical Support: support@captiveaire.com
2. **ACCRUREX/ GREENHECK FAN CORPORATION - KITCHEN HOODS, EXHAUST FANS, ROOF CURBS, ANSUL SYSTEMS, AND ACCESSORIES**
   CONTACT Patrick Smith @ 1-612-670-2938 OR patrick.smith@accurex.com
3. **CARNES COMPANY - DIFFUSERS AND GRILLES**
   National Accounts Rep: Brian Baker @ (608) 845-6411 bbaker@carnes.com
   National Accounts Sales: Chris Stratton @ (608) 845-6411 cstratton@carnes.com

6 MECHANICAL EQUIPMENT SPECIFICATIONS

SCALE: NONE

RTU - 1 — **CAPTIVEAIRE CASRTU3-E.452-24-20T-DOAS** COMBINATION GAS HEATING AND ELECTRIC COOLING ROOFTOP UNIT w/HUMIDITROL **264,000 NET. COOLING** CAPACITY, 18.2 EER. 208 / 230 VOLT, 3 PHASE, 87.9A MCA & 150A MOCP. 244039 BTU INPUT FOR GAS HEAT. UNIT WEIGHT IS 2,130lbs. **BLOWER MOTOR SET FOR NOMINAL 5,200 CFM** & FRESH AIR INTAKE DAMPER SET FOR MINIMUM **2,000 CFM.** PROVIDE MANUFACTURES' 18" HIGH ROOF CURB, TWO STAGE CONTROL, DUCT DISCHARGE CONTROL, IN-DUCT SMOKE DETECTORS, BELT TENSIONER WITH SPARE BELT, MERV 4 FILTERS, LOOSE SHIPPED CONDENSATE TRAP AND HONEYWELL OR EQUAL T7350 NIGHT SET BACK THERMOSTAT AND DISCONNECT SWITCH. MOTORIZED OUTSIDE AIR INTAKE DAMPER. NO ECONOMIZER. **NO SUBSTITUTIONS.** PROVIDE BOTTOM TAP FOR GAS COONECTION.

RTU - 2 — **CAPTIVEAIRE CASRTU3-E.452-24-20T-DOAS** COMBINATION GAS HEATING AND ELECTRIC COOLING ROOFTOP UNIT w/HUMIDITROL **264,000 NET. COOLING** CAPACITY, 18.2 EER. 208 / 230 VOLT, 3 PHASE, 87.9A MCA & 150A MOCP. 244039 BTU INPUT FOR GAS HEAT. UNIT WEIGHT IS 2,130lbs. **BLOWER MOTOR SET FOR NOMINAL 5,000 CFM** & FRESH AIR INTAKE DAMPER SET FOR MINIMUM **2,000 CFM.** PROVIDE MANUFACTURES' 18" HIGH ROOF CURB, TWO STAGE CONTROL, DUCT DISCHARGE CONTROL, IN-DUCT SMOKE DETECTORS, BELT TENSIONER WITH SPARE BELT, MERV 4 FILTERS, LOOSE SHIPPED CONDENSATE TRAP AND HONEYWELL OR EQUAL T7350 NIGHT SET BACK THERMOSTAT AND DISCONNECT SWITCH. MOTORIZED OUTSIDE AIR INTAKE DAMPER. NO ECONOMIZER. **NO SUBSTITUTIONS.** PROVIDE BOTTOM TAP FOR GAS COONECTION.

GRV - 1 — GREENHECK MODEL **FGR** GRAVITY RELIEF VENTILATOR WITH INTEGRAL FACTORY BIRDSCREEN. PROVIDE FACTORY CURB, MINIMUM 12" HIGH, 12"x12" THROAT WITH 12x12 PLENUM DUCT DOWN FOR EXHAUST DUCT CONNECTION. **NO SUBSTITUTIONS.**

PRV - 2 (ITEM #49) — ACCUREX MODEL **XCUE-140-VG KITCHEN FAN** UPBLAST EXHAUST FAN W/CLEAN-OUT PORT, MOUNTED HINGE BASE AND ROOF CURB WITH CURB EXTENSION. **1500 CFM** AT **1.8" SP, 1 HP MOTOR,** 115 VOLTS SINGLE PHASE FAN TO RUN CONTINUOUSLY DURING OCCUPIED MODE. **NO SUBSTITUTIONS.**

PRV - 3 (ITEM #59) — ACCUREX MODEL **XCUE-140-VG KITCHEN FAN** UPBLAST EXHAUST FAN W/CLEAN-OUT PORT, MOUNTED HINGE BASE AND ROOF CURB WITH CURB EXTENSION. **1500 CFM** AT **1.0" SP, 1 HP MOTOR,** 115 VOLTS SINGLE PHASE FAN TO RUN CONTINUOUSLY DURING OCCUPIED MODE. **NO SUBSTITUTIONS.**

PRV - 4 (ITEM #25) — ACCUREX MODEL **XRED-090-D** CONDENSATE DOWNBLAST EXHAUST FAN WITH ROOF CURB AND BACKDRAFT DAMPER. **350 CFM** AT **.6" SP, .0667 HP MOTOR,** 115 VOLTS, SINGLE PHASE. FAN TO RUN w/STARTING OF DISHWASHER & FOR ONE MINUTE AFTER THE CYCLE IS COMPLETE. **NO SUBSTITUTIONS.**

EF - 1 — ACCUREX MODEL **XCR-A200** CEILING EXHAUST FAN, BACK DRAFT DAMPER. EXTEND EXHAUST DUCT TO GRAVITY RELIEF VENTILATOR. **220 CFM** AT **.125" SP**, 115 VOLT, SINGLE PHASE. FAN TO BE INTERLOCKED WITH RESTROOM LIGHTS. NO SUBSTITUTIONS.

EF - 2 — ACCUREX MODEL **XCR-B50** CEILING EXHAUST FAN, BACK DRAFT DAMPER. EXTEND EXHAUST DUCT TO GRAVITY RELIEF VENTILATOR, WALL CAP FOR MOP BASIN FAN. **50 CFM** AT **.125" SP**, 115 VOLT, SINGLE PHASE. INDEPENDENT SWITCH FOR FAN OVER MOP BASIN. NO SUBSTITUTIONS.

EF - 3 — ACCUREX MODEL **XCR-B70** CEILING EXHAUST FAN, BACK DRAFT DAMPER. EXTEND EXHAUST DUCT TO GRAVITY RELIEF VENTILATOR. **70 CFM** AT **.100" SP**, 115 VOLT, SINGLE PHASE. FAN TO BE INTERLOCKED WITH RESTROOM LIGHTS. NO SUBSTITUTIONS.

EF - 4 — ACCUREX MODEL **XRED-065** CENTRIFUGAL EXHAUST FAN WITH ROOF CURB AND BACKDRAFT DAMPER. **200 CFM** AT **.125" SP, 1/100 HP MOTOR,** 115 VOLTS, SINGLE PHASE. FAN TO RUN CONTINUOUSLY. **NO SUBSTITUTIONS.**

ITEM #49 (HOOD 2) — **GRIDDLE EXHAUST HOOD -** ACCUREX MODEL **XGEP-5.33S** 64" X 26" X 36" HIGH, LOW PROXIMITY w/FLUE BYPASS. **1500 CFM** AT **1.918" SP, 12" x 12" DUCT COLLAR.** INCLUDES THE 3" INTEGRAL AIR SPACE ON BACK OF HOOD & AN ADDITIONAL 3" REAR FILLER PANEL. STAINLESS STEEL WHERE EXPOSED, w/ **GREASE GRABBER** TWO-STAGE FILTRATION SYSTEM. 26" HIGH ENCLOSURE PANELS, FRONT, LEFT AND RIGHT SIDES. GREASE TROUGH SHALL BE PITCHED TO THE LEFT END OF THE HOOD. APPROVALS SHALL INCLUDE UL LISTING AND THE NSF SEAL. THE VENTILATOR SHALL CONFORM TO THE REQUIREMENTS OF **NFPA-96** & TO ALL PREVAILING LOCAL CODE REQUIREMENTS. **NO SUBSTITUTIONS.**

ITEM #59 (HOOD 1) — **FRYER EXHAUST HOOD -** ACCUREX MODEL **XXEP-FB-6.92-S** 83" X 26" X 36" HIGH, LOW PROXIMITY w/FLUE BYPASS. **1500 CFM** AT **.518" SP, 12" x 12" DUCT COLLAR.** INCLUDES THE 3" INTEGRAL AIR SPACE ON BACK OF HOOD & AN ADDITIONAL 3" REAR FILLER PANEL. STAINLESS STEEL WHERE EXPOSED, w/ **X-TRACTOR STAINLESS STEEL FILTERS** TWO-STAGE FILTRATION SYSTEM. 26" HIGH ENCLOSURE PANELS, FRONT, LEFT AND RIGHT SIDES. GREASE TROUGH SHALL BE PITCHED TO THE LEFT END OF THE HOOD. APPROVALS SHALL INCLUDE UL LISTING AND THE NSF SEAL. THE VENTILATOR SHALL CONFORM TO THE REQUIREMENTS OF **NFPA-96** **NO SUBSTITUTIONS.**

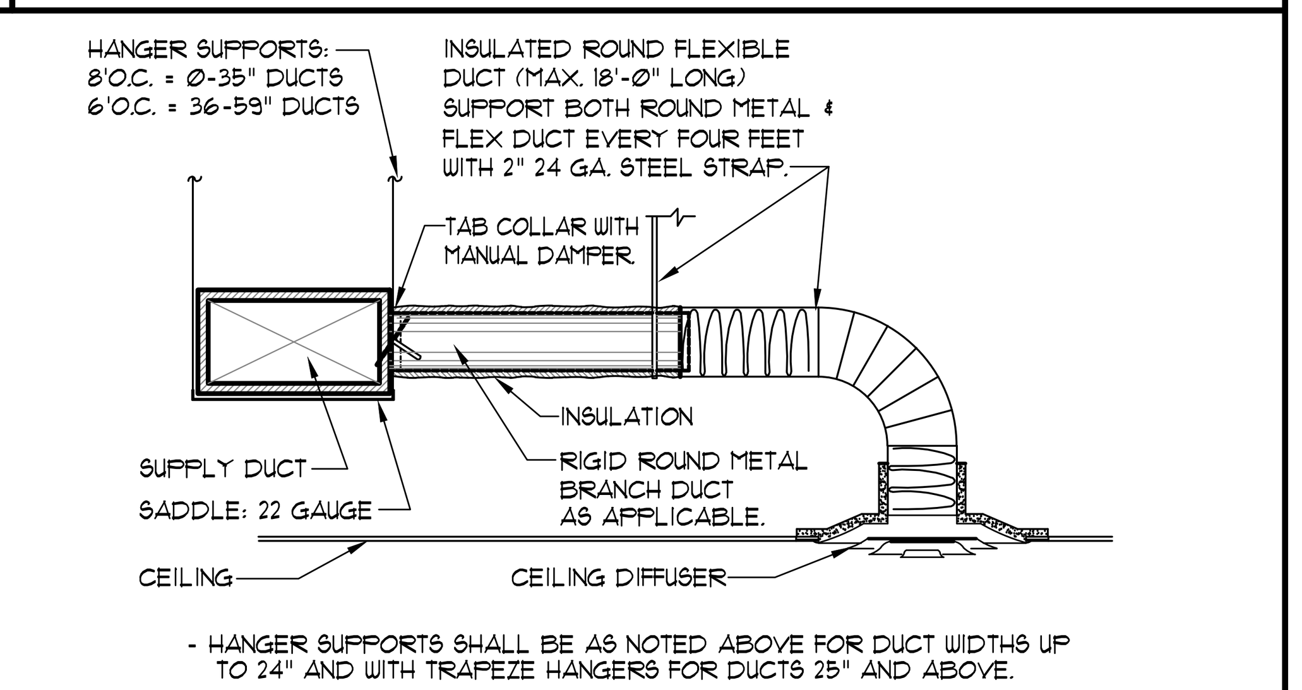
ITEM #25A (HOOD 3) — **DISHWASHER CONDENSATE HOOD -** ACCUREX MODEL **XD3-3.5-S** CONDENSATE HOOD w/BAFFLE, 42" X 42" X 24" HIGH, STAINLESS STEEL WHERE EXPOSED. **350 CFM** AT **.127 SP, 7 x 7 DUCT COLLAR.** COLLAR. APPROVALS SHALL INCLUDE THE NSF SEAL. (UL LABEL NOT REQUIRED FOR NON-GREASE APPLICATION). THE VENTILATOR SHALL CONFORM TO THE REQUIREMENTS OF **NFPA-96** & TO ALL PREVAILING LOCAL CODE REQUIREMENTS. **NO SUBSTITUTIONS.**

1 AIR DISTRIBUTION SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	SIZE	CFM	NECK	LOCATION	MATERIAL	NOTES:
A	PRICE	ASCD	24 X 24	SEE PLAN	SEE PLAN	CEILING	ALUMINUM	1,2
B	CARNES	RAPMF	24 X 24	SEE PLAN	24 X 24	CEILING	ALUMINUM	1,2,7,8
C	PRICE	ACVD	10 X 6	SEE PLAN	10 X 6	CEILING	ALUMINUM	1,2,4,5,6
D	PRICE	ACVD	12 X 8	SEE PLAN	12 X 8	CEILING	ALUMINUM	1,2,4,5
E	CARNES	SPRB	24 X 24	SEE PLAN	PER PLAN	CEILING	STEEL	1,2,9
F	PRICE	630	12 X 12	SEE PLAN	12 X 12	CEILING	ALUMINUM	1,2

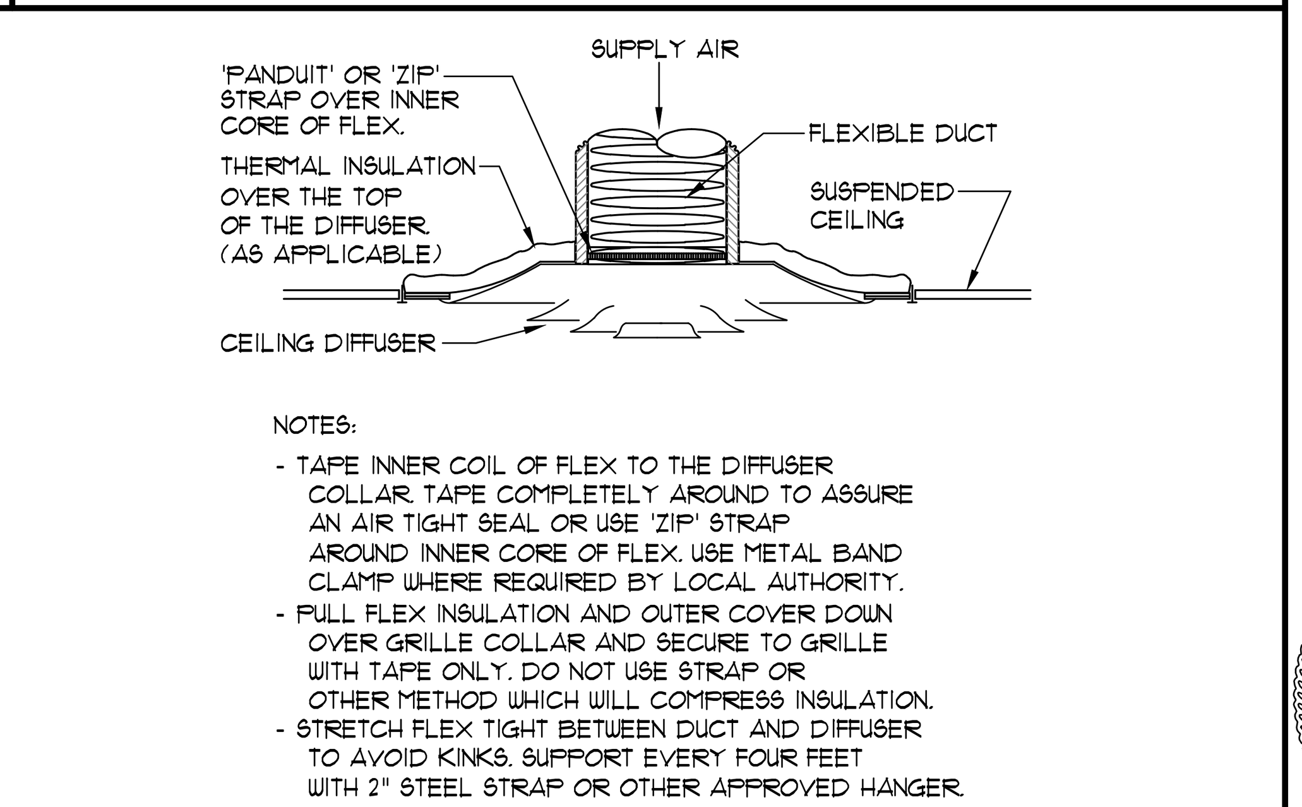
A4/400/10"RND — SIZE, THROW, CFM, NECK/FLEX CONNECTION SIZE

NOTES:
1. PROVIDE MANUAL VOLUME DAMPER AT MAIN TRUNK FOR BALANCING.
2. GRILLE FACE FINISH SHALL BE OFF-WHITE.
3. GRILLE FACE SHALL BE FIXED BLADE ON ¾" SPACING WITH FILTER BACK.
4. PROVIDE PRE-FAB R-6 INSULATED GRILLE BOX WITH TAB COLLAR.
5. GRILLE FACE SHALL BE ADJUSTABLE CURVED BLADE. NO STAMPED GRILLES ACCEPTED.
6. PROVIDE SURFACE MOUNT FRAME AND INSTALL IN GYP CEILING.
7. FLAT BLACK FINISH.
8. GRILLE FACE SHALL BE ½" x ½" ALUMINUM CUBE CORE.
9. GRILLE SHALL BE PERFORATED FACE LAY-IN TYPE, NON-DIRECTIONAL.



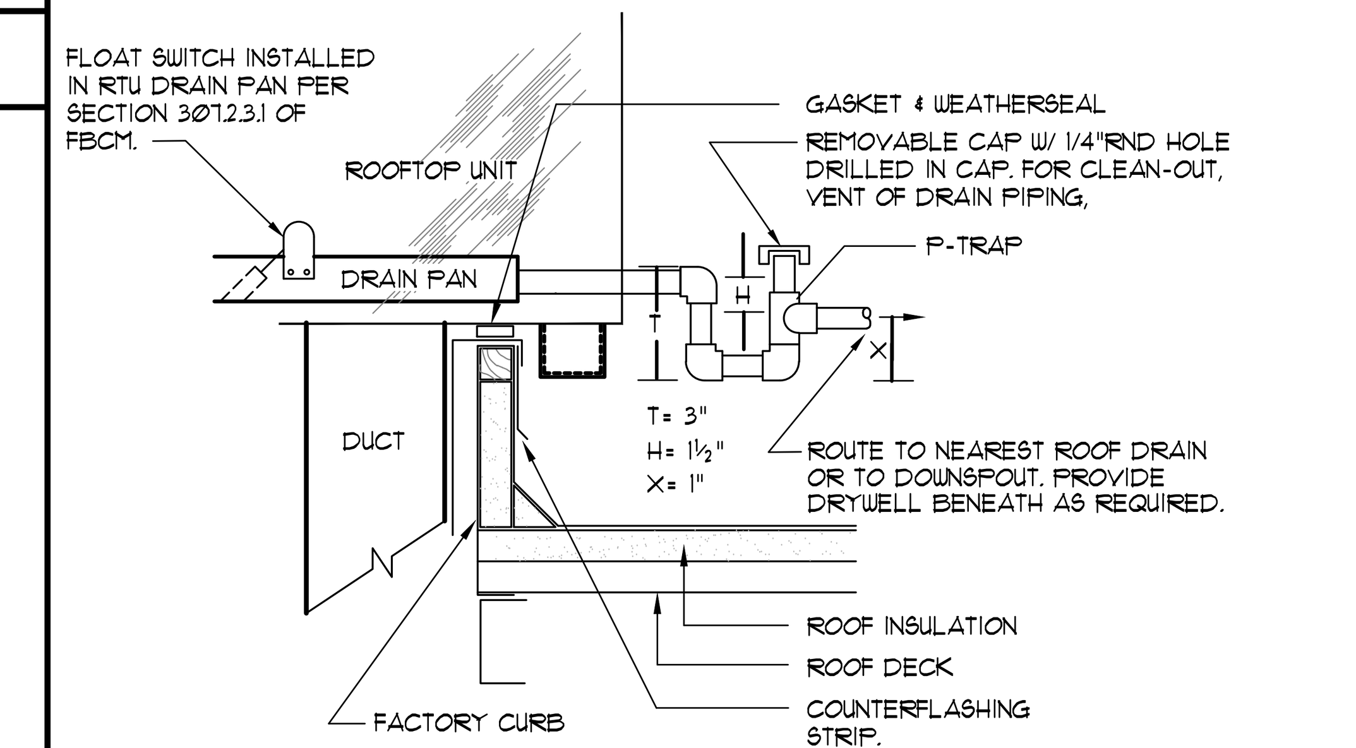
2 CEILING DIFFUSER RUN-OUT DETAIL

SCALE: NONE



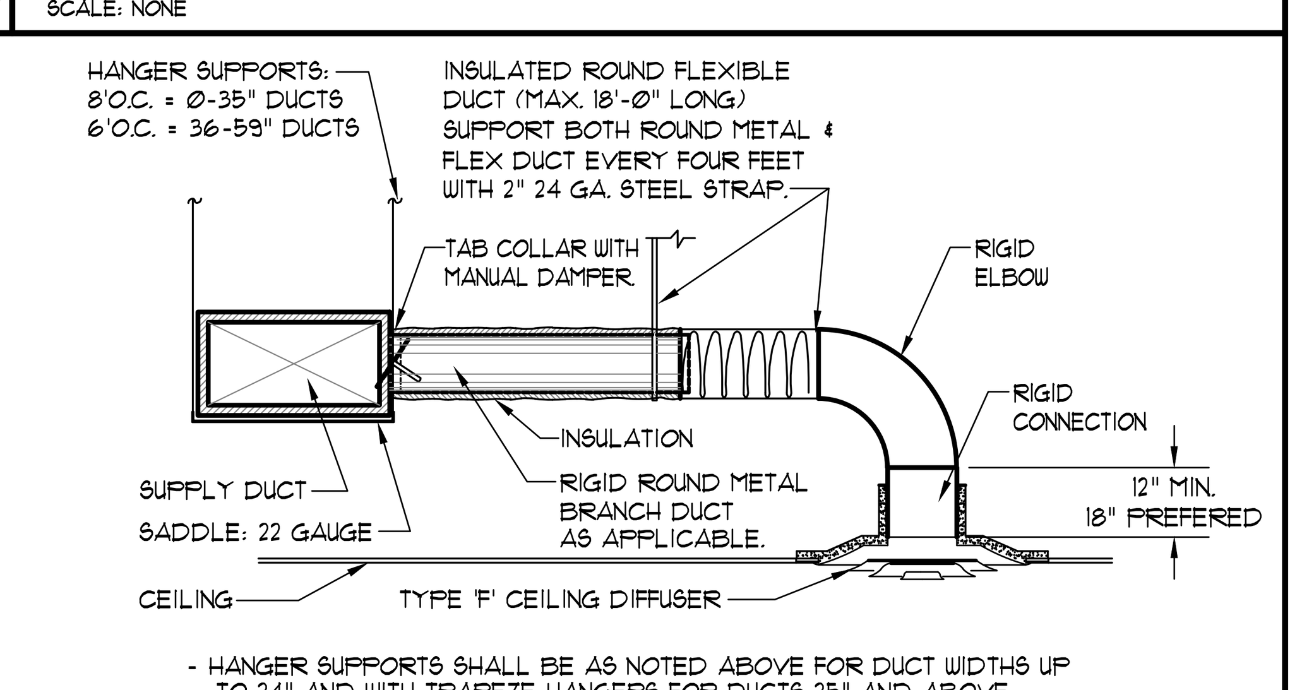
3 CEILING DIFFUSER DETAIL

SCALE: NONE



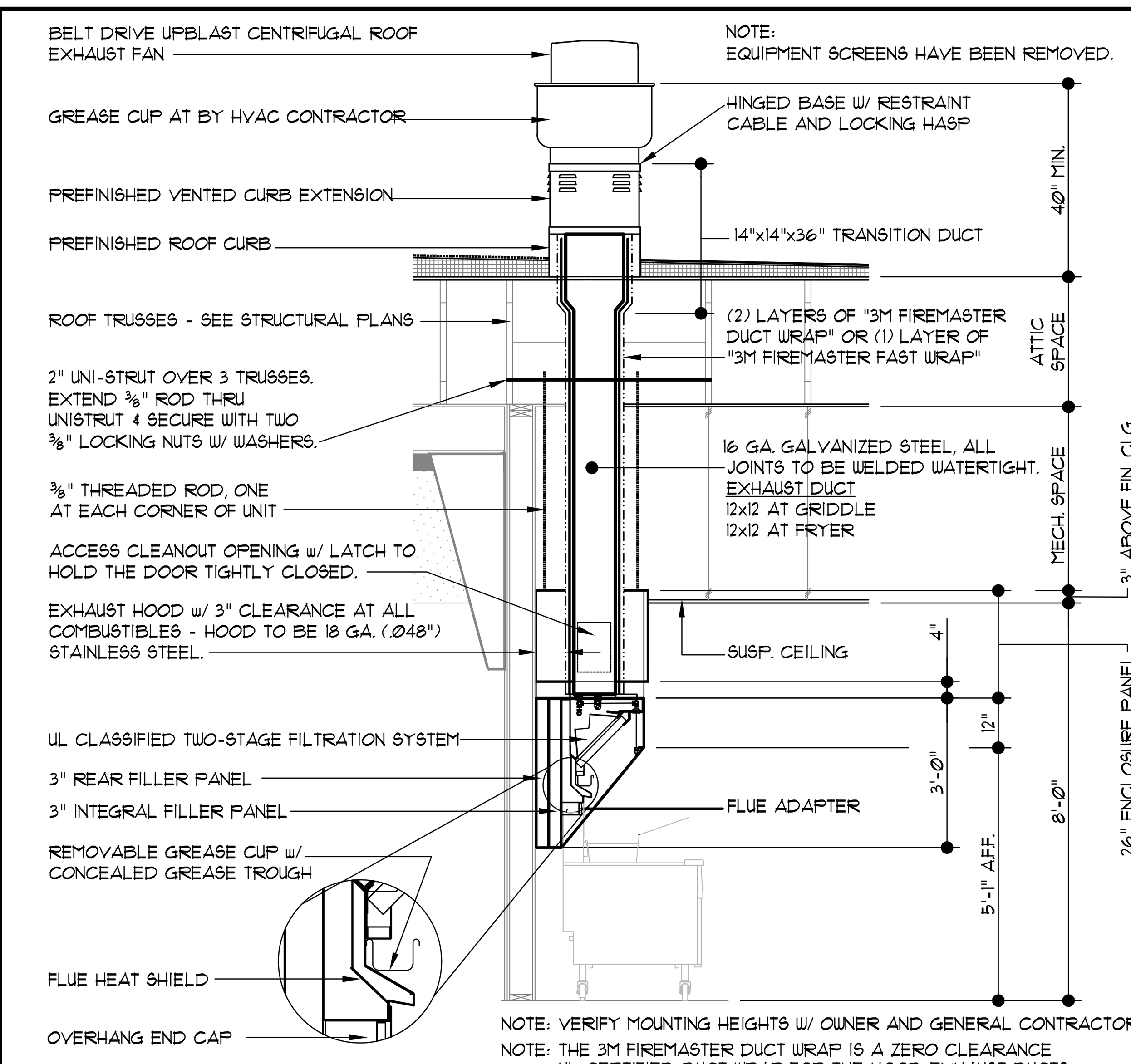
4 RTU CONDENSATE DETAIL

SCALE: NONE



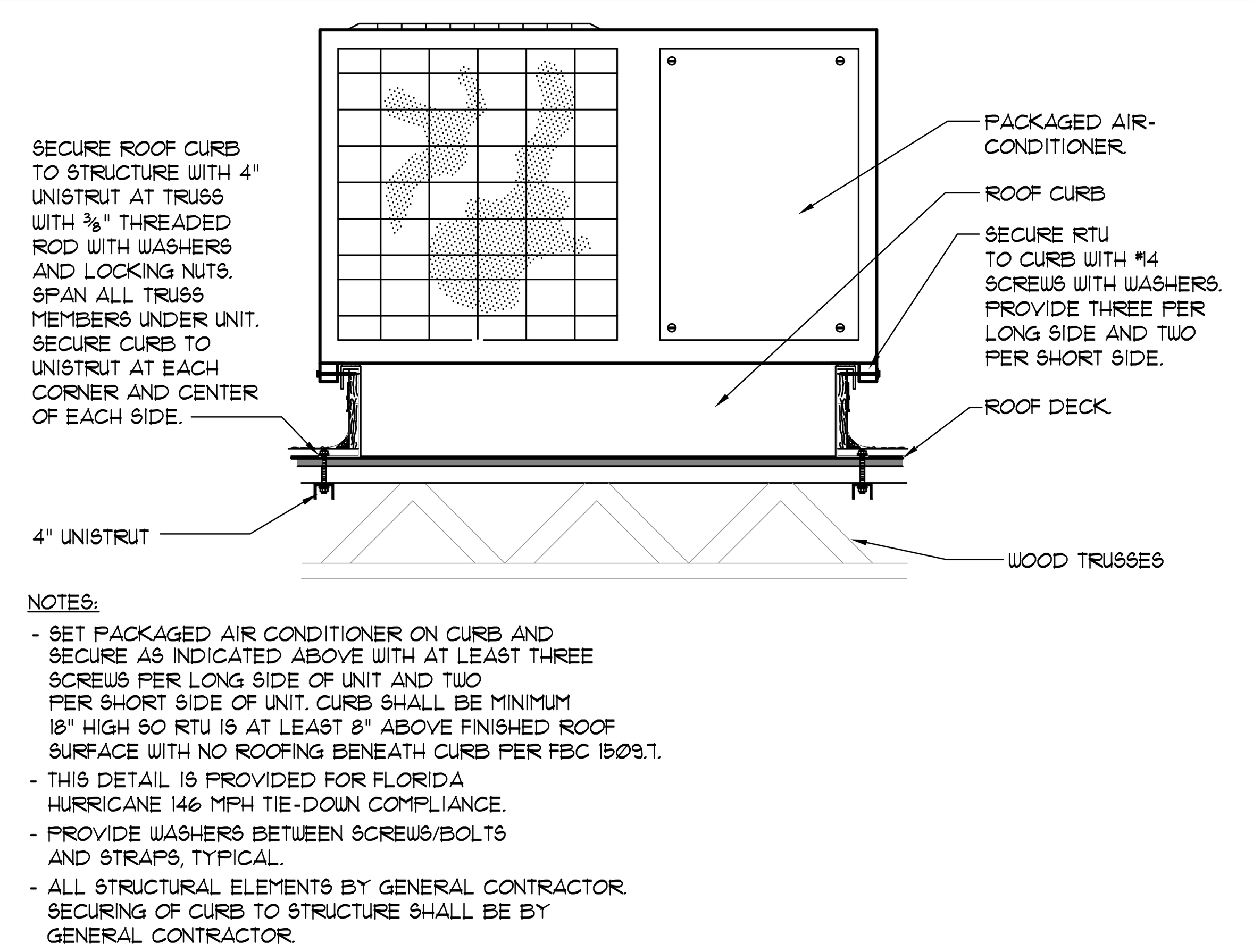
5 TYPE 'E' CEILING DIFFUSER RUN-OUT DETAIL

SCALE: NONE



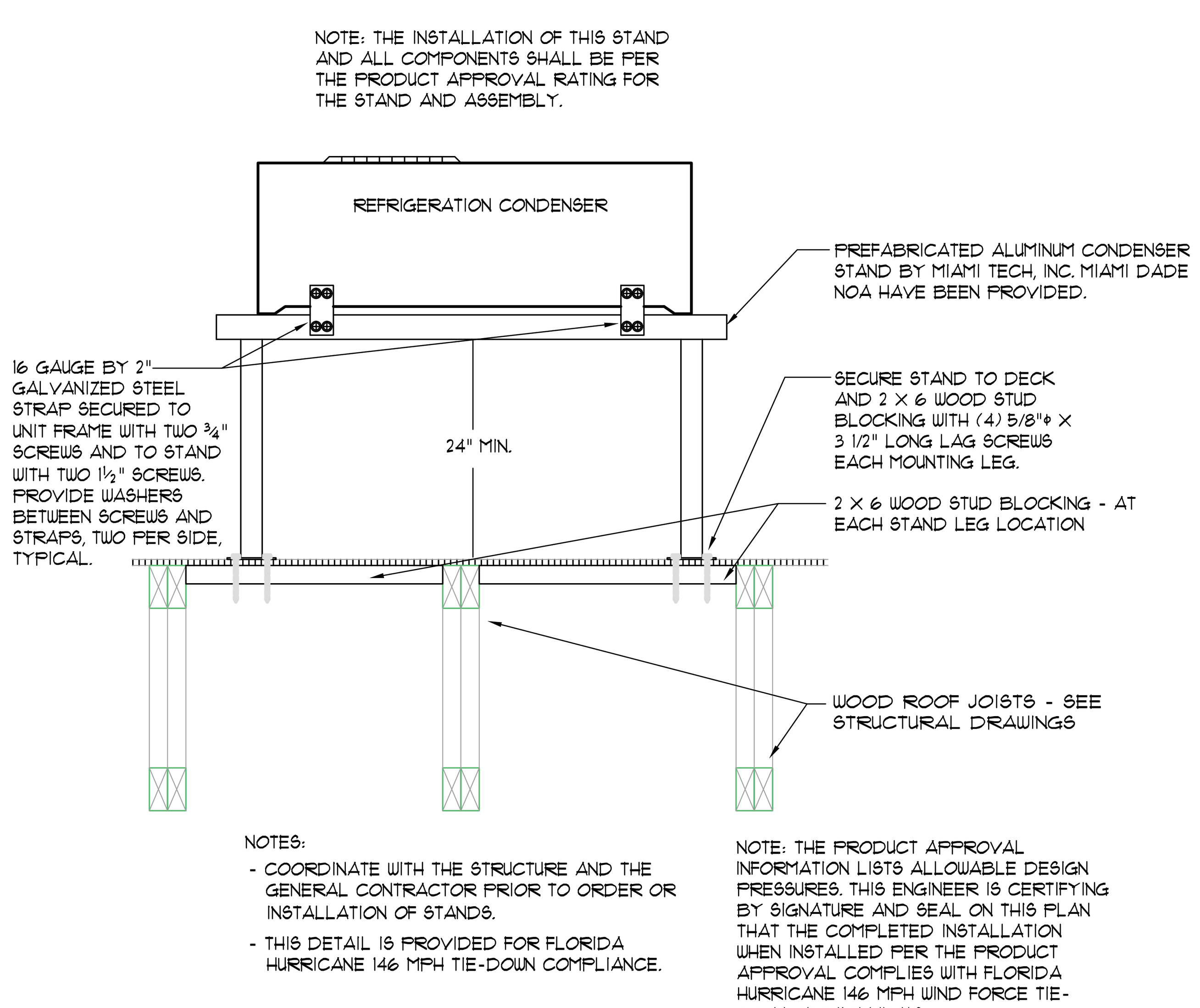
7 KITCHEN HOOD DETAIL

SCALE: NONE



8 RTU TIE-DOWN DETAIL

SCALE: NONE



9 REFRIGERATION CONDENSER TIE-DOWN DETAIL

SCALE: NONE

REVISIONS	BY
2 04. 25. 23	BMD
4 09. 27. 23	BMD

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GARLAND PATTERSON, P.E. FL Lic. No.: 14175 SEPT. 27, 2023

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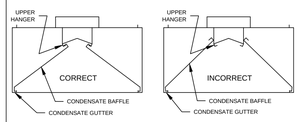
4

New Free Standing Culver's
2620 Stratton Boulevard
Saint Augustine, Florida 32084
St. Johns County

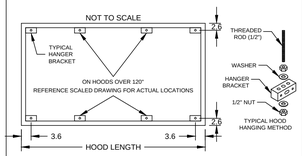
Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22-173
Sheet M2

CONDENSATE HOOD BAFFLE INSTALLATION DETAIL

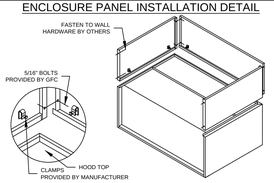


NOTES:
1. THE CONDENSATE BAFFLES MUST HOOK ONTO THE UPPER HANGER AND REST IN THE CONDENSATE GUTTER FOR PROPER OPERATION.

HOOD HANGER BRACKET DETAIL



ENCLOSURE PANEL INSTALLATION DETAIL



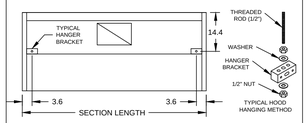
HOOD HANGING HEIGHT FOR FIRE SYSTEMS

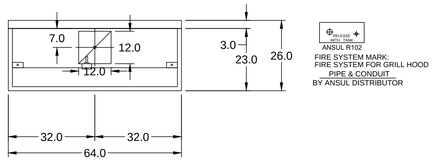
VERIFICATION OF HOOD HANGING HEIGHT ABOVE FINISHED FLOOR (A.F.F.) IS REQUIRED FOR CORRECT PLACEMENT OF FIRE SYSTEM NOZZLES.

☐ RECOMMENDED HANGING HEIGHT = 72" FROM FINISHED FLOOR TO LOWER FRONT EDGE OF HOOD.

☐ OTHER HANGING HEIGHT = _____" FROM FINISHED FLOOR TO LOWER EDGE OF HOOD.

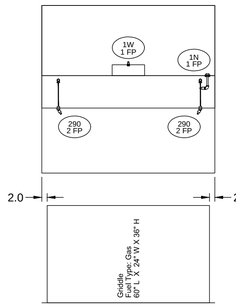
HOOD HANGER BRACKET DETAIL
FOR BACKSHELF HOODS



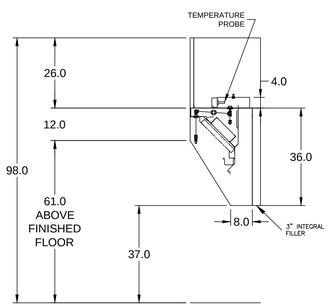


ANSUL R102
FIRE SYSTEM MARK:
FIRE SYSTEM FOR GRILL HOOD
PIPE & CONDUIT
BY ANSUL DISTRIBUTOR

MARK: GRILL HOOD - SECTION 1
PLAN VIEW



MARK: GRILL HOOD - SECTION 1
ELEVATION VIEW



MARK: GRILL HOOD
SECTION VIEW

EQUIPMENT SCHEDULE

TYPE 2 KITCHEN HOOD — MARK: ITEM # 25

HOOD NO.	ACCUREX MODEL STYLE / CONFIGURATION	HOOD DIMENSIONS: SECTION LENGTH	WIDTH	HEIGHT	GREASE CUP OR DRAIN	HOOD TEMP. RATING	TOTAL WEIGHT	SECTION LOCATION
3	XD3-3.5-S CONDENSATE HOOD - DOUBLE BAFFLE	42.0 IN.	42 IN.	24 IN.	RIGHT	NA	224.0 LBS.	NA

HOOD SECTION # COLLAR #	EXHAUST PLENUM COLLARS: DISTANCE TO END (IN.)	WIDTH (IN.)	LENGTH (IN.)	DIAMETER (IN.)	VOLUME (CFM)	S.P. (IN. WC)	VELOCITY (FT/MIN)
1 / 1	21	7	7	NA	350	0.127	1029
TOTAL EXHAUST CFM - SECTION 1					350.0	≈	100.0 CFM / FT

OPTIONS AND ACCESSORIES
300 SERIES STAINLESS STEEL 100% CONSTRUCTION
FACTORY MOUNTED EXHAUST COLLAR(S)

TYPE 1 KITCHEN HOOD (HOOD #2) — MARK: GRILL HOOD

HOOD NO.	ACCUREX MODEL STYLE / CONFIGURATION	HOOD DIMENSIONS: SECTION LENGTH	WIDTH	HEIGHT	GREASE CUP OR DRAIN	HOOD TEMP. RATING	TOTAL WEIGHT	SECTION LOCATION
2	XGEP-5.33-S SINGLE WALL EXHAUST ONLY LOW PROXIMITY	64 IN.	TOP 23 IN. BOT 9 IN.	FRONT 12 IN. BACK 36 IN.	RIGHT	600 DEG F	136.0 LBS.	SINGLE

HOOD NO.	ILLUMINATION DETAILS: FIXTURE TYPE BULB / LAMP INFO	QTY	INTENSITY FT CANDLES	GREASE FILTRATION DETAILS: TYPE / MODEL MATERIAL	QTY	LENGTH	HEIGHT
2	NONE	NA	0 / 0 IN. OC	GREASE GRABBER STAINLESS STEEL	4 0	16 IN. 20 IN.	16 IN.

HOOD SECTION # COLLAR #	EXHAUST PLENUM COLLARS: DISTANCE TO END (IN.)	WIDTH (IN.)	LENGTH (IN.)	DIAMETER (IN.)	VOLUME (CFM)	S.P. (IN. WC)	VELOCITY (FT/MIN)
1 / 1	32	12	12	NA	1500	1.918	1500
TOTAL EXHAUST CFM - SECTION 1					1500	≈	281 CFM / FT

OPTIONS AND ACCESSORIES
430 STAINLESS STEEL WHERE EXPOSED
UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
BACK NON-INTEGRAL AIR SPACE - 3 IN WIDE
26 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
FACTORY MOUNTED EXHAUST COLLAR(S)
THIS HOOD IS PART OF A TEMPERATURE INTERLOCK CONTROL SYSTEM
INCLUDES PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH
EMBOSSED STAINLESS STEEL FINISH FOR HIGH CORROSION RESISTANCE

SPECIAL DESIGN REQUESTS
SDR #K1100145 - FLUE BYPASS HOOD

FIRE SUPPRESSION SYSTEM — MARK: FIRE SYSTEM FOR GRILL HOOD

MANUFACTURER / MODEL SUPPRESSANT TYPE	FLOW POINTS	SUPPLY LINE	DETECTION	MOUNTING
ANSUL R-102 WET CHEMICAL	6 UTILIZED 11 AVAILABLE	CONTINUOUS	FUSIBLE LINK	RIGHT END REMOTE MOUNTED

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
SUPPRESSION AGENT - INCLUDED - 3 GAL. - ((1) 3 TANK(S))
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2 IN. (ANSUL) - PART# 55610
REMOTE PULL STATION - STANDARD - INSTALLATION AT SINGLE POINT OF EGRESS
FIRE SYSTEM PERMIT - REQUIRED - FEE INCLUDED

FIRE SYSTEM PROTECTED HOOD(S) (UL-300) (MARK NAME / SECTION#)
GRILL HOOD SECTION 1 - (LENGTH 64.0 IN.) - LOW PROXIMITY HOOD - GREASE GRABBER FILTRATION SYSTEM

TYPE 1 KITCHEN HOOD (HOOD #1) — MARK: FRYER HOOD

HOOD NO.	ACCUREX MODEL STYLE / CONFIGURATION	HOOD DIMENSIONS: SECTION LENGTH	WIDTH	HEIGHT	GREASE CUP OR DRAIN	HOOD TEMP. RATING	TOTAL WEIGHT	SECTION LOCATION
1	XXEP-6.92-S SINGLE WALL EXHAUST ONLY LOW PROXIMITY	83 IN.	TOP 23 IN. BOT 3 IN.	FRONT 12 IN. BACK 36 IN.	RIGHT	600 DEG F	169.0 LBS.	SINGLE

HOOD NO.	ILLUMINATION DETAILS: FIXTURE TYPE BULB / LAMP INFO	QTY	INTENSITY FT CANDLES	GREASE FILTRATION DETAILS: TYPE / MODEL MATERIAL	QTY	LENGTH	HEIGHT
1	NONE	NA	0 / 0 IN. OC	X-TRACTOR STAINLESS STEEL	5 0	16 IN. 20 IN.	16 IN.

HOOD SECTION # COLLAR #	EXHAUST PLENUM COLLARS: DISTANCE TO END (IN.)	WIDTH (IN.)	LENGTH (IN.)	DIAMETER (IN.)	VOLUME (CFM)	S.P. (IN. WC)	VELOCITY (FT/MIN)
1 / 1	41.5	12	12	NA	1500	0.518	1500
TOTAL EXHAUST CFM - SECTION 1					1500	≈	217 CFM / FT

OPTIONS AND ACCESSORIES
430 STAINLESS STEEL WHERE EXPOSED
UL 710 LISTED W/ OUT EXHAUST FIRE DAMPER - UL #R25625
BACK NON-INTEGRAL AIR SPACE - 3 IN WIDE
26 IN HIGH CEILING ENCLOSURES - FRONT LEFT RIGHT - FIELD INSTALLED
FACTORY MOUNTED EXHAUST COLLAR(S)
THIS HOOD IS PART OF A TEMPERATURE INTERLOCK CONTROL SYSTEM
INCLUDES PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH
EMBOSSED STAINLESS STEEL FINISH FOR HIGH CORROSION RESISTANCE

SPECIAL DESIGN REQUESTS
SDR #K1100559 - NEW PITCO 4L FRYER FLUE BYPASS SYSTEM

FIRE SUPPRESSION SYSTEM — MARK: FIRE SYSTEM FOR FRYER HOOD

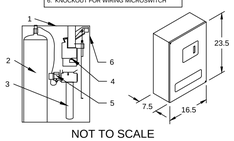
MANUFACTURER / MODEL SUPPRESSANT TYPE	FLOW POINTS	SUPPLY LINE	DETECTION	MOUNTING
ANSUL R-102 WET CHEMICAL	14 UTILIZED 16 AVAILABLE	CONTINUOUS	FUSIBLE LINK	RIGHT END REMOTE MOUNTED

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
SUPPRESSION AGENT - INCLUDED - 3 GAL. - ((1) 3 TANK(S) (1) 1.5 TANK(S))
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2 IN. (ANSUL) - PART# 55610
REMOTE PULL STATION - STANDARD - INSTALLATION AT SINGLE POINT OF EGRESS
FIRE SYSTEM PERMIT - REQUIRED - FEE INCLUDED

FIRE SYSTEM PROTECTED HOOD(S) (UL-300) (MARK NAME / SECTION#)
FRYER HOOD SECTION 1 - (LENGTH 83.0 IN.) - LOW PROXIMITY HOOD

ANSUL R102 (WET CHEMICAL) FIRE PROTECTION SYSTEM - MODEL FSSC

CONTROL PANEL
1. STAINLESS STEEL ENCLOSURE
2. AGENT STORAGE TANK
3. EXPELLENT GAS CARTRIDGE
4. MANUAL/ AUTOMAN RELEASE
5. REGULATOR
6. KNOCKOUT FOR WIRING MICROSWITCH



NOT TO SCALE

NOTES:
Wet chemical fire protection system to be Ansul R-102, designed in compliance with UL 300 requirements.
-Verification of all cooking equipment make, model and location required for all fire protection systems.
-All fire system piping is standardly to the right end of the hood unless a wall is located on the right end.
-Ansul Automan Release to be located within 60" of hood.

The basic fire system will include the following:
-Gas shut-off valve, if required, to be supplied by Manufacturer (up to 2" diameter as standard), and installed by a licensed plumber.
-Micro switch to be supplied by Manufacturer for connection to, but not limited to, building alarm system(s), exhaust and supply fans and electrical power shut down. Field wiring and connections to be performed by a licensed electrician.

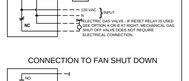
The basic fire system does NOT include the following:
-Full dump test rather than wfe is specified per the installation manual, or to satisfy a state or local code. Permit and testing fees are not included unless noted under the equipment schedule for the fire system.
-More then two trips to the jobsite or special transportation, or overnight lodging requirements in remote areas. Normal travel distance is first 50 mi. (80.5 km) from office.
- Special classes or additional labor for access to security sensitive areas.
-Installation of gas shut-off valve.
-Special drawings required to satisfy state or local code. Plan examination fees, PE or FS Approval Stamp.
-Union labor, Government labor, or Prevailing wages required for final field hook-up.
-Any and all electrical components/connections required to shut down fans, shut off device for electric cooking equipment (shunt trip breaker), or activate an alarm system, etc.
-Any dismantling or reassembly required to gain access to the fire suppression piping located on the top of the hood.
-Rough-in hidden conduit for remote pull station or gas valve (flush mounted pull station).
-Installation of more than (1) remote pull stations or distances greater than 20 ft (6.1M.)
-Parts or labor required to correct piping due to cooking equipment changes or deviation from plans. OR Any charges for missing or additional parts other then those indicated on the Fire Suppression Detail.

WIRING DIAGRAMS
W/DPDT MICRO SWITCH

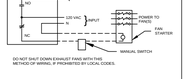
DPDT SWITCHES PROVIDED BY MANUFACTURER MAY BE WIRED PER TYPICAL EXAMPLES SHOWN. VERIFY WITH LOCAL CODES AND EQUIPMENT SUPPLIED AS THE CONNECTION NEEDED FOR YOUR INSTALLATION.

CONNECTION TO BUILDINGS ALARM

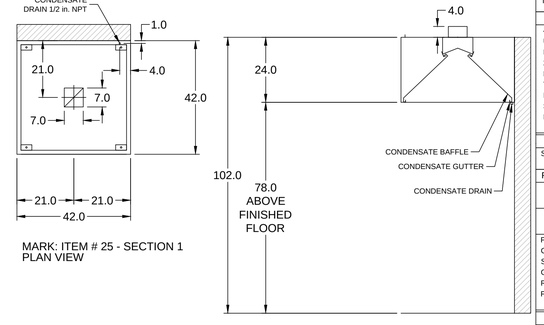
CONNECTION TO COOKING EQUIPMENT SHUT DOWN



CONNECTION TO FAN SHUT DOWN



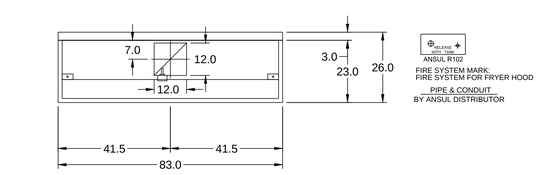
NOTES:
1. – – – – – DENOTES FIELD INSTALLATION.
2. ——— DENOTES FACTORY INSTALLATION.
3. DO NOT USE BLACK WIRE ON SNAP-ACTION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM, LIGHT CIRCUITS, ETC.



MARK: ITEM # 25 - SECTION 1
PLAN VIEW

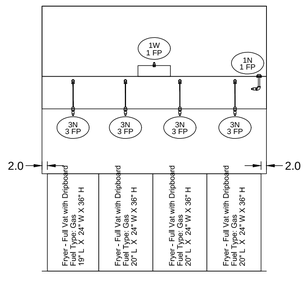
MARK: ITEM # 25
SECTION VIEW

EXTEND TO NEAREST FLOOR RECEPTOR. SEE PLUMBING DWGS.

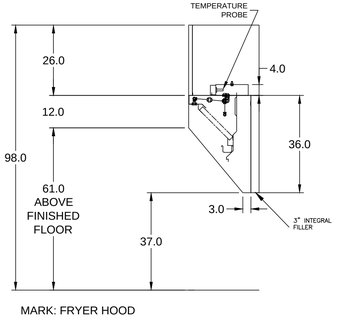


ANSUL R102
FIRE SYSTEM MARK:
FIRE SYSTEM FOR FRYER HOOD
PIPE & CONDUIT
BY ANSUL DISTRIBUTOR

MARK: FRYER HOOD - SECTION 1
PLAN VIEW



MARK: FRYER HOOD - SECTION 1
ELEVATION VIEW



MARK: FRYER HOOD
SECTION VIEW

NOTE: ALL HOODS SHALL HAVE 3" WALL STANDOFF PER DETAIL ON SHEET M2.

NOTE:
THE DESIGN, INSTALLATION, OPERATION, INSPECTION, AND MAINTENANCE OF ALL PUBLIC AND PRIVATE COMMERCIAL COOKING EQUIPMENT SHALL COMPLY WITH CHAPTER FFPC 1:50.11 AND NFPA 96, STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. KITCHEN HOOD PLANS, COMPLIANT WITH THE ABOVE, SHALL BE PERMITTED SEPARATELY.

NOTE: COOKING EQUIPMENT SHALL BE INSTALLED AND VENTED IN ACCORDANCE WITH FBCM & NFPA 96.

1 HOOD SCHEDULES AND DETAILS
SCALE: NONE

REVISIONS		BY
4	09. 27. 23	BMD

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PROFESSIONAL ENGINEER

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SEPT. 27, 2023

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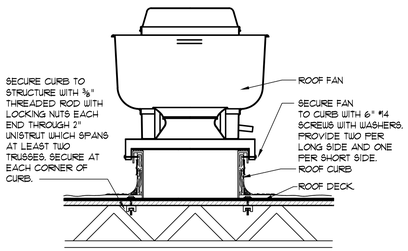
4
New Free Standing Cultivers
2620 Stratton Boulevard
Saint Augustine, Florida 32084
St. Johns County

Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22–173
Sheet M3

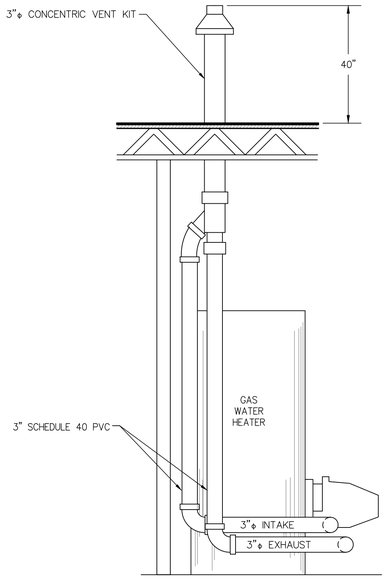


ROOF-TOP FAN TIE-DOWN DETAIL

NOT TO SCALE

NOTES:

- THIS DETAIL IS PROVIDED FOR FLORIDA HURRICANE 146 MPH TIE-DOWN COMPLIANCE.
- PROVIDE WASHERS BETWEEN SCREWS/BOLTS.

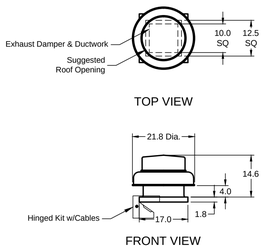


WATER HEATER VENT DETAIL

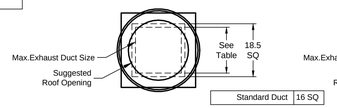
N.T.S.

NOTE:
THE DESIGN, INSTALLATION, OPERATION, INSPECTION, AND MAINTENANCE OF ALL PUBLIC AND PRIVATE COMMERCIAL COOKING EQUIPMENT SHALL COMPLY WITH CHAPTER FFPC 1:509.1 AND NFPA 96, STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. KITCHEN HOOD PLANS, COMPLIANT WITH THE ABOVE, SHALL BE PERMITTED SEPARATELY.

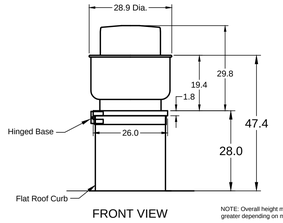
MARK: PRV-4



PRV-2 Griddle Fan



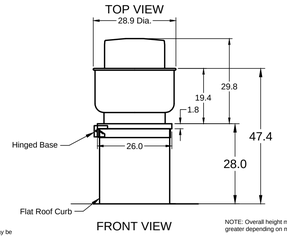
Standard Duct	16 SQ



NOTE: Overall height may be greater depending on motor

PRV-3 Fryer Fan

Standard Duct	16 SQ



NOTE: Overall height may be greater depending on motor

EQUIPMENT SCHEDULE

ELECTRICAL CONTROL BOX — MARK: CONTROLS

DESCRIPTION / ACCUREX MODEL MOUNTING LOCATION (CONTROL PANEL / SWITCHES)	EXHAUST FAN QTY	SUPPLY FAN QTY	POWER FREQUENCY
KITCHEN FAN CONTROL CENTER / XFCC SHIP LOOSE / SHIP LOOSE FOR REMOTE MOUNTING	2	0	60 CYCLE

CONTROL PANEL ENCLOSURE - 16 GA 304 STAINLESS STEEL ENCLOSURE (NEMA-1) - DIMENSIONS 12 X 18 X 6
WIRING DIAGRAM #: T100- 2 - 20
STARTERS PROVIDED IN CONTROL PANEL - QTY 2
2 POSITION FAN SWITCH - QTY 1
INTEGRATED EXHAUST TEMPERATURE INTERLOCK SYSTEM
-FACTORY MOUNTED EXHAUST TEMPERATURE SENSORS - QTY 2
-COMPLIES WITH FLORIDA BUILDING CODE - MECHANICAL 2010 SECTION 507.2.1.1
TURN ON EXHAUST IN FIRE
THERMAL OVERLOADS IN CABINET
1 SPEED FAN(S)

SPECIAL DESIGN REQUESTS

ZZ905336
SDR #K0800240 - USE KIT # 852883, WIRING DIAG. # ZZ133721A

Direct Drive Centrifugal Roof Exhaust Fan — MARK: PRV-4

Qty	Accurex Model	Volume (CFM)	SP (in wg)	FRPM	Operating Power (hp)	Weight (Lb.)	Motor Information: Size (hp)	V/C/P	Encl:	Motor RPM	Windings	FLA
1	XRED-090-D	350	0.6	1532	0.072	27	0.0667	115/60/1	OP	1550	1	NA

OPTIONS AND ACCESSORIES

UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle, Junction Box Mounted & Wired
Hinged Curb Cap Kit w/Cables (PN 851018) (Shipped Loose)
Curb Seal (Attached)
Damper, WD-100-PB-10X10, Gravity Operated (Loose)
Solid State Speed Control, Shipped Loose (PN 5WSSC)
CURB GPI-17-G12

EQUIPMENT SCHEDULE

Belt Drive Upblast Centrifugal Roof Exhaust Fan — MARK: PRV-2

Qty	Accurex Model	Volume (CFM)	SP (in wg)	FRPM	Operating Power (hp)	Weight (Lb.)	Motor Information: Size (hp)	V/C/P	Encl:	Motor RPM	Windings	FLA
1	XRUB-161XP-15	1500	2.337	2,411	1.29	171	1.5	208/60/3	OP	1725	1	6.6

OPTIONS AND ACCESSORIES

UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
Switch, NEMA-1, (PN:N1TSNO-3-30) Toggle, Shipped with unit
Larger curb cap size - 26" Square
Roof curb-Galv., GPF-26-G28, Under sized 1.5" Total
Hinged Base (Attached)
High Temp Curb Seal Rated for Continuous duty at 2000F (Attached)
Clean-out Port
Grease Trap with Drain Connection (PN 475538)
Heat Baffle (Attached)
Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs)

EQUIPMENT SCHEDULE

Belt Drive Upblast Centrifugal Roof Exhaust Fan — MARK: PRV-3

Qty	Accurex Model	Volume (CFM)	SP (in wg)	FRPM	Operating Power (hp)	Weight (Lb.)	Motor Information: Size (hp)	V/C/P	Encl:	Motor RPM	Windings	FLA
1	XRUB-141-7	1500	1	1377	0.5	160	0.75	208/60/3	OP	1725	1	3.5

OPTIONS AND ACCESSORIES

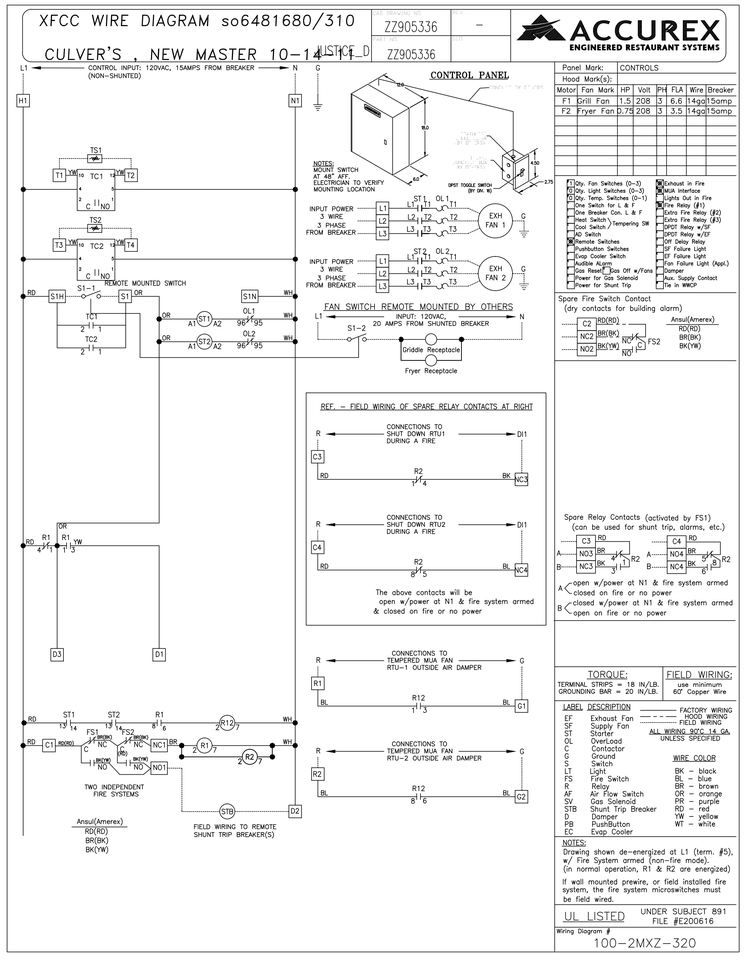
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
Switch, NEMA-1, Toggle, Shipped with unit
Larger curb cap size - 26" square
Roof curb-Galv., GPF-26-G28, Undersized 1.5" total
Hinged Base (Attached)
Curb Seal (Attached)
Clean-out Port
Grease Trap with Drain Connection (PN 475538)
Heat Baffle (Attached)

EQUIPMENT SCHEDULE

XCR — MARK: EF-1, EF-2 — QTY. 1 EA.

MODEL NO.	VOLUME (CFM)	SP (IN WC)	FAN RPM	WEIGHT (LB)	MOTOR SPECS: AMPS	V/C/P	RPM
SPA-110	100	0.10	700	9	.31	115/60/1	---

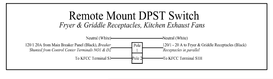
UL/CUL-507 - "ELECTRIC FANS"
MOTOR W/ THERMAL OVERLOADS
INTERLOCK WITH RESTROOM LIGHTS.



CULVER'S ELECTRICAL FIELD CONNECTION INSTALLATION INSTRUCTIONS

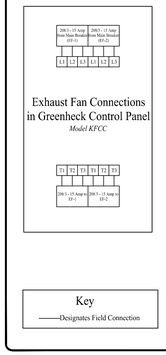
Remote Mount DPST Switch

Fryer & Griddle Receptacles, Kitchen Exhaust Fans

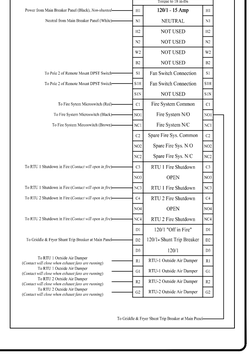


Greenheck Control Panel Connections

Model KFCC



Key
——Designates Field Connection



Culver's Installation and Operation Guide

Greenheck Control Panel and Exhaust Fan & Receptacle Switch

Mechanical Scope of work

1) Mechanical contractor to mount Greenheck Control Panel (Model KFCC, 12"W x 18"H x 6"W) in specified location above drop ceiling. (PROVIDE DIFFERENT PANEL MODEL IF MODEL #KFCC CANNOT ACCOMADATE RTU-OA) Mechanical Contractor to start up fans and electrical outlet by turning fan switch to the "ON" position. Verify power to fryer & griddle receptacles and exhaust fans.
2) Mechanical Contractor to start up fans and electrical outlet by turning fan switch to the "ON" position. Verify power to fryer & griddle receptacles and exhaust fans.

Electrical Scope of Work

1) Electrical contractor shall provide one 120 Volt – 20 Amp circuit with shunt trip breaker (120V trip) for fryer and griddle receptacles. This circuit will have two receptacles, one for the fryer and one for the griddle. Circuit will be controlled using a DPST (Double Pole Single Throw) switch for exhaust fan and electrical outlet control. Switch to be mounted on wall where specified on drawings.
2) Electrical Contractor to provide and install DPST switch on wall. Wire one pole of switch to the receptacle outlet circuit. Wire other pole of DPST switch to terminals S1H and S1 in Greenheck Control Panel (Model KFCC) to complete fan control circuit.
3) Electrical Contractor to run a separate 120 Volt – 15A circuit to terminals H1 and N1 to power THE panel controls.
4) Two 208/60/3 – 15A circuits must be run from the main breaker panel to each motor starter in the GREENHECK PANEL (L1, L2, & L3) Run power from Terminals T1, T2, & T3 on the bottom of motor starter in the panel to kitchen exhaust fans.
5) Electrical Contractor to make connections from terminals NO1 and D2 (120 Volt normally open contact) to shunt-trip breaker for fryer and griddle receptacles.
6) Electrical Contractor to wire fire system mircoswitch in fire system cabinet to terminals C1, NC1, and NO1 as indicated on Greenheck drawing.
7) Electrical Contractor to wire RTU 1 & 2 damper control to terminals R1 and G1 and R2 and G2 as indicated on Greenheck drawing. PROVIDE SIMILAR CONTACTS FOR RTU-OA.
8) Electrical Contractor to wire RTU 1 & 2 RTU-OA control (10 amp max) circuits to panel dry contacts C3 and NC3 for RTU 1 and C4 and NC4 for RTU 2 to shutdown units in a fire. PROVIDE CONTACTS FOR RTU-OA.

Sequence of Operation

1) Turn fan switch on. Fans and fryer and griddle receptacles will be energized.
2) Turn on RTU 1 & RTU 2, RTU-OA.
3) Before fire system agent tanks are installed, manually trigger fire system while fan switch is on. This should accomplish the following:
   Shunt trip breaker will trip causing a loss of power to fryer and griddle receptacles.
   Gas valve will close shutting gas off to the fryer and griddle.
   Exhaust fans will remain on.
   RTU-1, RTU-2, & RTU-OA will shut down.
1) Put fire system in the "cocked" position and reset shunt trip breaker. Power will be restored to equipment and RTUs.
2) Turn fan switch to "OFF" position. This will shut down power to receptacles and exhaust fans. RTU-OA will shut down and outside air dampers will close. RTUs 1 & 2 will remain operational providing 100% return air only.

1 HOOD FAN SCHEDULES AND DETAILS
SCALE: NONE

REVISIONS	BY
4 09. 27. 23	BMD

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SEPT. 27, 2023

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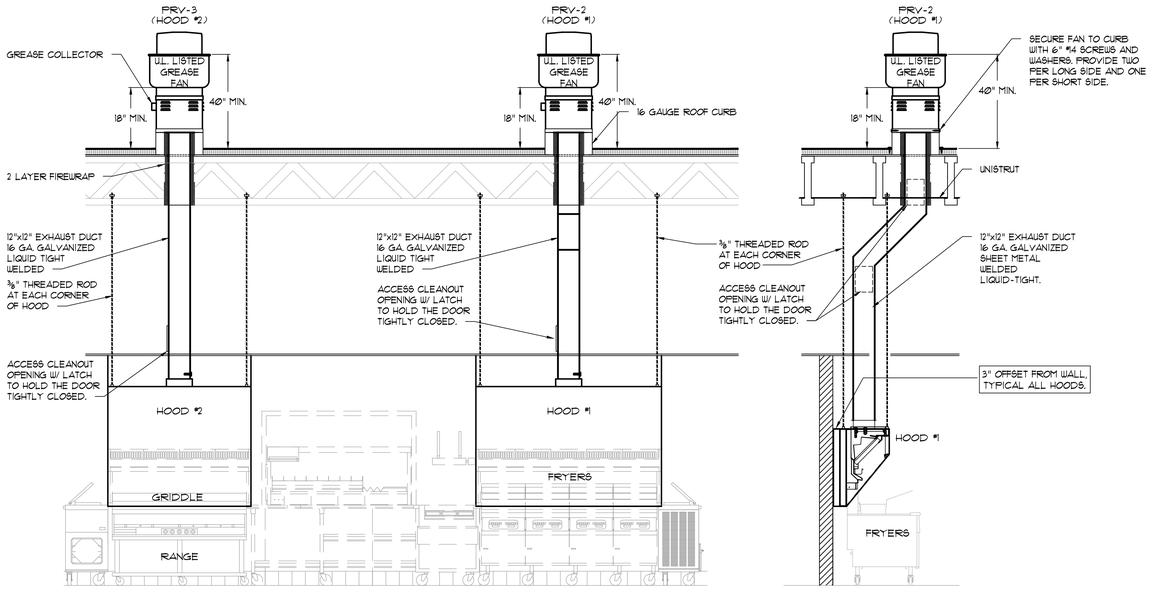
4
New Free Standing Culver's
2620 Stratton Boulevard
Saint Augustine, Florida 32084
St. Johns County

Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22-173
Sheet M4

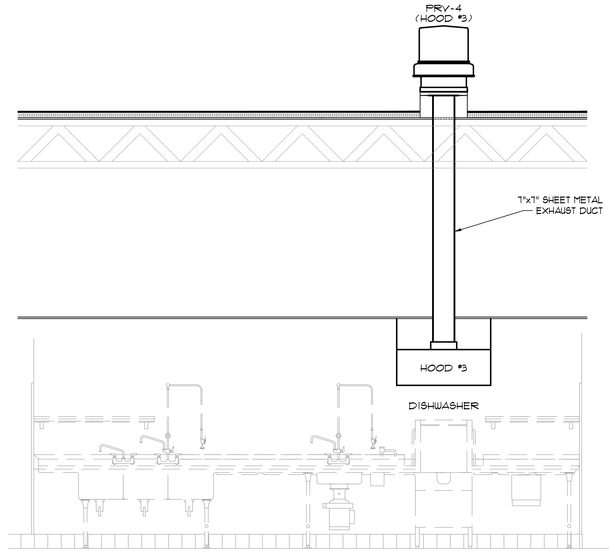


FRONT VEIW

NOT TO SCALE, FOR DIAGRAMMATICAL PURPOSE ONLY

SIDE VEIW

NOT TO SCALE, FOR DIAGRAMMATICAL PURPOSE ONLY



FRONT VEIW

NOT TO SCALE, FOR DIAGRAMMATICAL PURPOSE ONLY

NOTE:
THE DESIGN, INSTALLATION, OPERATION, INSPECTION, AND MAINTENANCE OF ALL PUBLIC AND PRIVATE COMMERCIAL COOKING EQUIPMENT SHALL COMPLY WITH CHAPTER FFPC 1.5@1.1 AND NFPA 96, STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. KITCHEN HOOD PLANS, COMPLIANT WITH THE ABOVE, SHALL BE PERMITTED SEPARATELY.

1 HOOD SECTIONS
SCALE: NONE

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4

New Free Standing
Culver's
2620 Stratton Boulevard
Saint Augustine, Florida 32084
St. Johns County

Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22-173

Sheet
M5

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

DOAS/RTU FAN SCHEDULE – JOB#5522771

FAN INFORMATION											ELECTRICAL INFORMATION				
FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	WEIGHT (LBS)	ESP	HP		VOLT	MCA	MOCP
1	RTU-1	1	CASRTU3-E.452-24-20T-DOAS	CAPTIVEAIRE	24MF-3-RTU	3200	2000	5200	2593	0.500	5.00	3	208	87.9A	150A
2	RTU-2	1	CASRTU3-E.452-24-20T-DOAS	CAPTIVEAIRE	24MF-3-RTU	3000	2000	5000	2593	0.500	5.00	3	208	87.9A	150A

		COOLING INFORMATION											REHEAT INFORMATION					ELECTRIC HEAT INFORMATION					
		OUTSIDE AIR		MIXED AIR		LEAVING AIR			CAPACITY		IEER	ISMRE	DISCHARGE		CAPACITY		MOISTURE REMOVAL RATE	DSGN. KW'S	MAX. KW'S	VOLTS	AMPS	TEMP RISE	NOTES
FAN UNIT NO	TAG	DB	WB	DB	WB	DB	WB	DP	TOTAL	SENS.			DB	WB	DESIRED	MAX							
1	RTU-1	84.8 F	80.0 F	78.7 F	69.7 F	53.3 F	53.2 F	53.2 F	264.0 MBH	142.7 MBH	18.2	6.0	70.0 F	59.8 F	97.7 MBH	129.6 MBH	110.2 LBS/HR	35	45	208	108.3	21 F	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18
2	RTU-2	84.8 F	80.0 F	78.9 F	70.1 F	53.1 F	53.0 F	53.0 F	264.0 MBH	139.3 MBH	18.2	6.0	70.0 F	59.8 F	95.1 MBH	129.6 MBH	113.4 LBS/HR	34	45	208	108.3	21 F	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18

NOTES:
1. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL
2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE
3. INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE
5. EC MOTOR CONDENSING FANS
6. ELECTRONIC EXPANSION VALVE. TXV NOT ACCEPTABLE
7. SUCTION LINE ACCUMULATOR
8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY
9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE
11. SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE
12. FULLY MODULATING HOT GAS REHEAT
13. 15 DEGREE LOW AMBIENT OPERATION
14. MIAMI DADE RATED
15. HAIL GUARD FOR CONDENSING COIL
16. RTU ECONOMIZER WITH FIXED ENTHALPY CONTROL
17. BAROMETRIC RELIEF DAMPER
18. DOWN DISCHARGE/DOWN RETURN

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	RTU-1	1	RTU TOTAL CFM MONITORING
		1	SEPARATE ELECTRIC HEAT CONNECTION - RTU. 750VA TRANSFORMER USED FOR CONTROLS. TWO PRIMARY CONNECTIONS REQUIRED FOR RTU WITH ELECTRIC HEAT. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DO NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 15F AMBIENT
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	RTU3 DOWN DISCHARGE ELECTRIC HEAT, 15-60KW
		1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL
		1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR
		1	RTU3 CURB DUCT HANGER
		1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED
		1	RTU3 MIAMI DADE CERTIFICATION
		1	OCCUPIED SCHEDULING
		1	RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	RTU3 ECONOMIZER BAROMETRIC RELIEF
		1	RTU3 HAIL GUARD
		1	RTU ECONOMIZER - FIXED ENTHALPY CONTROL
		1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
		1	VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED)
		1	RTU3 DOWN RETURN
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT
2	RTU-2	1	RTU TOTAL CFM MONITORING
		1	SEPARATE ELECTRIC HEAT CONNECTION - RTU. 750VA TRANSFORMER USED FOR CONTROLS. TWO PRIMARY CONNECTIONS REQUIRED FOR RTU WITH ELECTRIC HEAT. IF A NON-DCV PREWIRE CONTROLS THIS UNIT, THE #28, #47, "MA", OR "E2" PREWIRE OPTION MUST BE SELECTED. DO NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	LOW AMBIENT COOLING OPERATION - DOWN TO 15F AMBIENT
		1	2" MERV 13 FILTERS FOR RTU3 (QTY. 4)
		1	2" MERV 8 FILTERS FOR RTU3 (QTY. 4)
		1	OVERHEAT STAT
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	RTU3 DOWN DISCHARGE ELECTRIC HEAT, 15-60KW
		1	20 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	20 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL
		1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR
		1	RTU3 CURB DUCT HANGER
		1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED
		1	RTU3 MIAMI DADE CERTIFICATION
		1	OCCUPIED SCHEDULING
		1	RTU3 CONVENIENCE OUTLET (GFCI), 15 AMP - REQUIRES SEPARATE 120V CONNECTION. INCLUDES RECEPTACLE, COVER AND J-BOX
		1	RTU3 ECONOMIZER BAROMETRIC RELIEF
		1	RTU3 HAIL GUARD
		1	RTU ECONOMIZER - FIXED ENTHALPY CONTROL
		1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
		1	VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED)
		1	RTU3 DOWN RETURN
		1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT

CURB ASSEMBLIES

NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	RTU-1	78 LBS	CURB	59.500"W X 91.000"L X 14.000"H 0.250:12.000 PITCH ALONG WIDTH, RIGHT INSULATED.
2	# 2	RTU-2	78 LBS	CURB	59.500"W X 91.000"L X 14.000"H 0.250:12.000 PITCH ALONG WIDTH, RIGHT INSULATED.

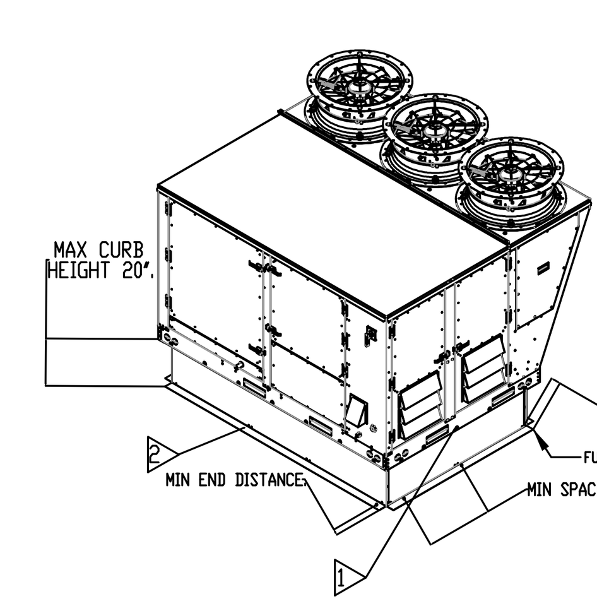
SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, CAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF CAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, CAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED. THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

MIAMI-DADE NOA6 RTU



GENERAL NOTES:

1. THIS APPROVAL IS FOR THE STRUCTURAL CAPACITY AND IMPACT RATING OF THE EXTERIOR HOUSING ONLY; IT DOES NOT INCLUDE ANY INTERIOR MECHANISM OR ELECTRICAL PART.
2. THESE FANS HAVE NOT BEEN WIND TESTED FOR WIND DRIVEN RAIN TEST PER FLORIDA BUILDING CODE, TAS100 (A)-95.
3. TESTED IN ACCORDANCE TO FLORIDA BUILDING CODE TEST PROTOCOL TAS201, TAS202, TAS203.
4. TESTED FOR AREAS INCLUDING HIGH VELOCITY HURRICANE ZONES.
5. TESTED UNDER MIAMI-DADE COUNTY NOTIFICATION NUMBER ATI-15071.

INSTALLATION INSTRUCTIONS:

1. SECURE CASRTU BASE TO CURB USING 5/16"-18 X 2" ZINC PLATED STEEL SELF DRILLING SCREWS (ELCO DRIL-FLEX OR BETTER) THROUGH PRE-PUNCHED HOLES IN THE SUPPORT RAILS. SEE TABLE BELOW FOR FASTENER QTY.
2. SECURE CURB TO ROOF BY DRILLING 1/4" DIA. PILOT HOLES IN THE CURB FLANGE AT LOCATIONS SHOWN IN THE DIAGRAM. SEE TABLE BELOW FOR FASTENER TYPE. SEE TABLE BELOW FOR FASTENER QTY.

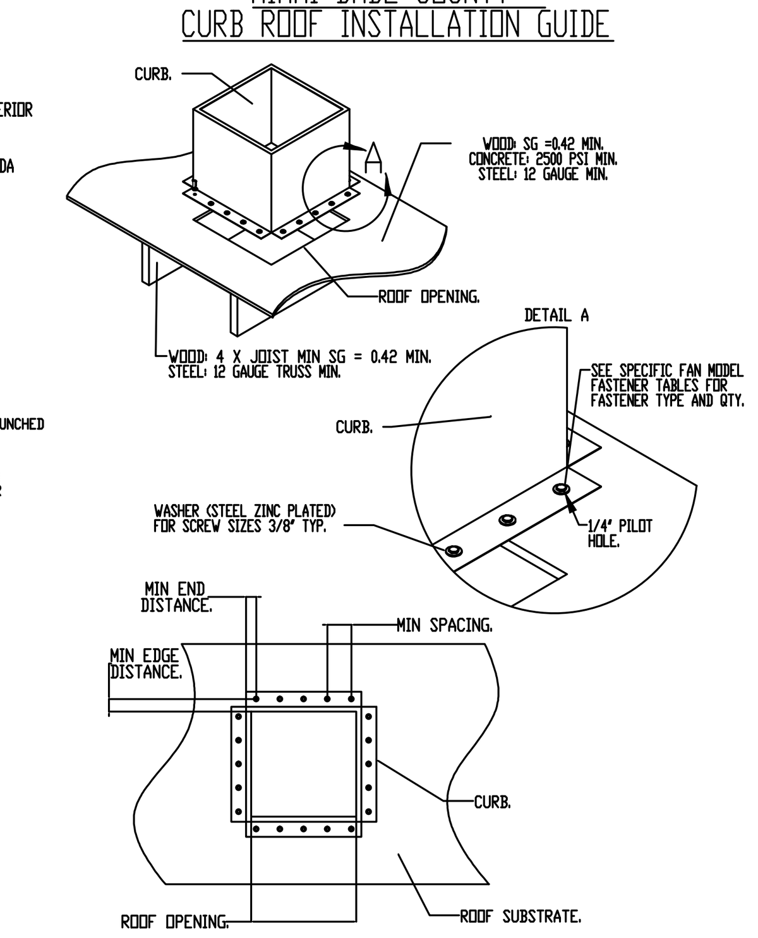
CURB MATERIAL:
20" HIGH & LESS = 18 GA. STEEL.

DESIGN PRESSURE: +150.0 / -150.0 PSF.
LARGE MISSILE IMPACT RESISTANT.

INSTALLATION FASTENER TYPES				
	FAN TO CURB	WOOD (SG = 0.42 MIN.)	STEEL (12 GAUGE MIN.)	CONCRETE (2500 PSI MIN. CRACKED CONCRETE)
FASTENER	5/16"-18 X 2" SELF DRILLING SCREW (ELCO DRIL-FLEX OR BETTER)	3/8" DIA. ZINC PLATED LAG BOLT	1/4"-14 DRIL-FLEX SELF DRILLING SCREW	3/8" DIA. SS HILTI KWIK BOLT TZ EXPANSION ANCHOR
MINIMUM THREAD PENETRATION	N/A	2-1/2"	12 GAUGE	2"
MINIMUM EDGE DISTANCE	N/A	1-1/2"	3/8"	3"
MINIMUM END DISTANCE	N/A	4-1/2"	4-1/2"	4-1/2"
MINIMUM SPACING	N/A	1-1/2"	6"	6"

INSTALLATION FASTENER QTY												
	CURB TO FAN			WOOD			STEEL			CONCRETE		
FAN MODEL	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL	LONG SIDE	SHORT SIDE	TOTAL
RTU3	7	5	24	14	10	48	12	8	40	12	9	42

MIAMI-DADE COUNTY - CURB ROOF INSTALLATION GUIDE



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4
New Free Standing Culver's
2620 Stratton Boulevard
Saint Augustine, Florida 32084
St. Johns County

Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22-173
Sheet
M6

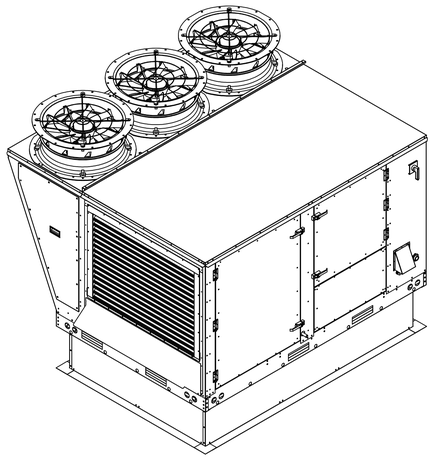
1 RTU SCHEDULE
SCALE: NONE

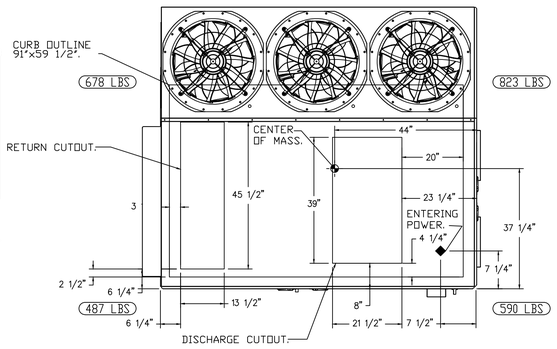
FAN #1 CASRTU3-E.152-24MF-20T-DOAS - HEATER (RTU-1)

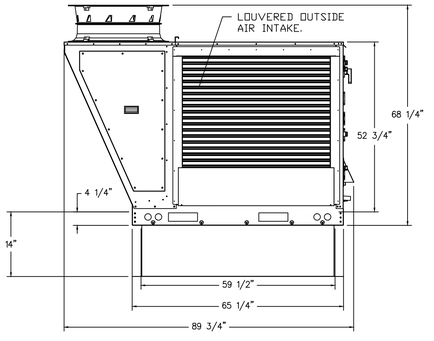
NOTES:

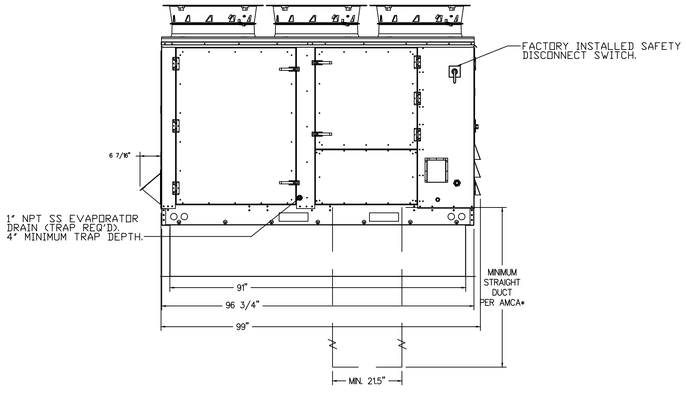
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

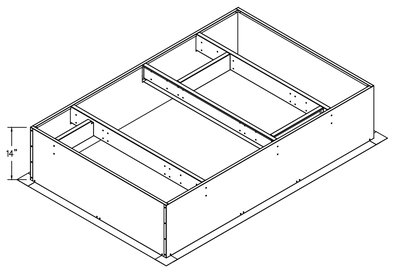
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 21.5" x 39".

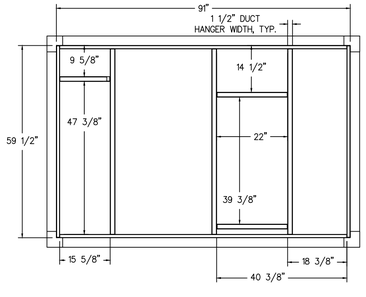










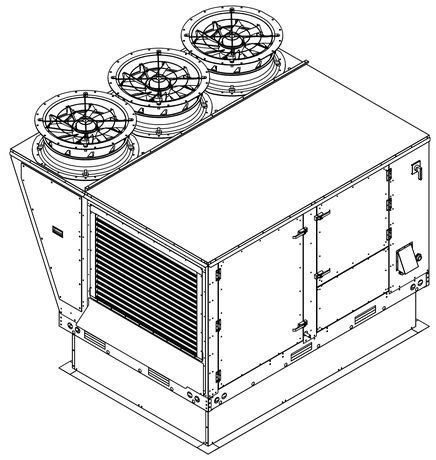


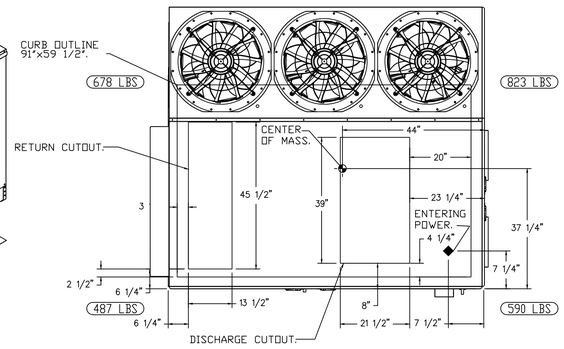
FAN #2 CASRTU3-E.152-24MF-20T-DOAS - HEATER (RTU-1)

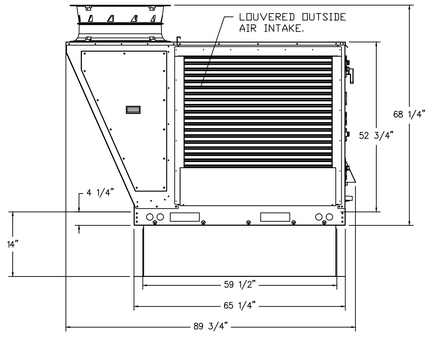
NOTES:

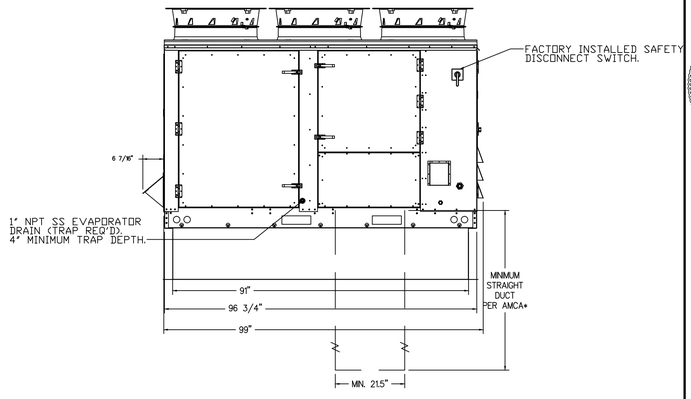
1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2. ( ) DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

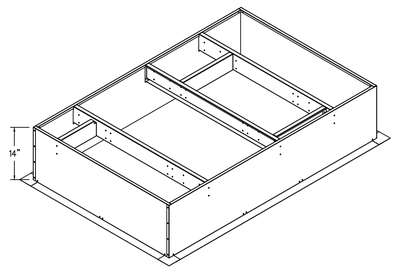
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 21.5" x 39".

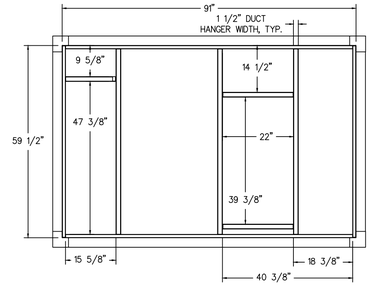












1 RTU DETAILS
SCALE: NONE

REVISIONS	BY
4 09. 27. 23	BMD

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SEPT. 27, 2023

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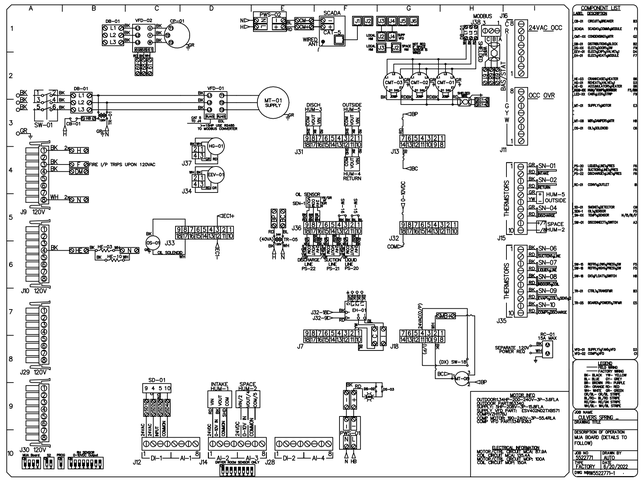
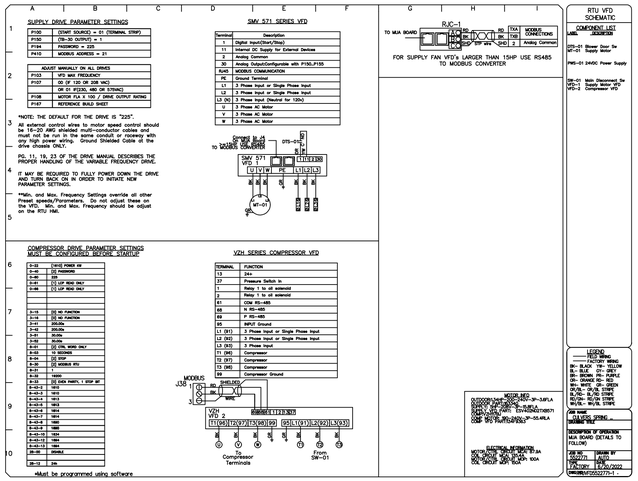
4

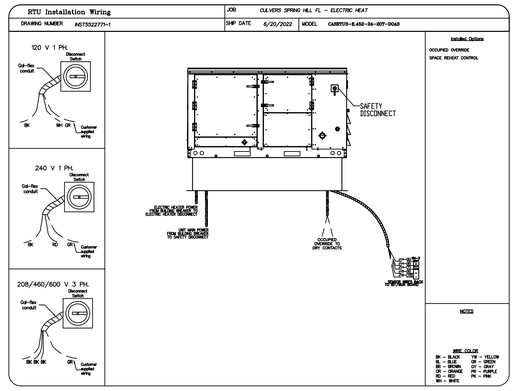
New Free Standing Owners
2620 Stratton Boulevard
Saint Augustine, Florida 32084
St. Johns County

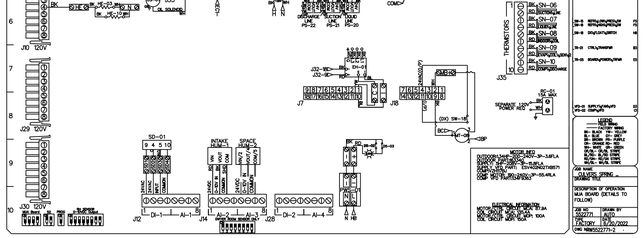
Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22-173

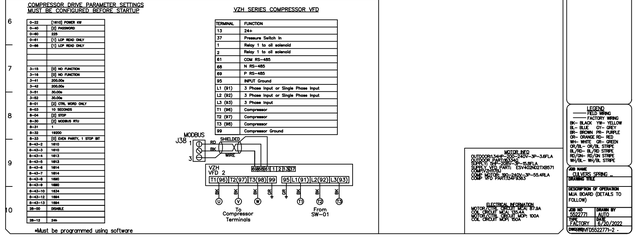
Sheet
M7











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SEPT. 27, 2023

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4

New Free Standing
Culvers
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Saint Augustine, Florida 32084
St. Johns County

Date: 04. 03. 23
Scale: AS NOTED
Project Mgr: DG
Drawn: BMD
Job: 22-173

Sheet
M8

1 RTU WIRING
SCALE: NONE