

H.V.A.C. LEGEND:

WD-20 600 CFM	←	DIFFUSER DESIGNATION
←		DIFFUSER C.F.M.
	CD	CEILING DIFFUSER W/ C.F.M. - 4 WAY
	CD	PERFORATED CEILING DIFFUSER
	CD	CEILING DIFFUSER W/ C.F.M. - 3 WAY
	CD	CEILING DIFFUSER W/ C.F.M. - 2 WAY
	RG	RETURN GRILLE - SUSP. CEILING
	EG	EXHAUST GRILLE
	PRV	POWER ROOF VENT
	ECH	ELECTRIC CEILING HEATER
	WD	WALL OR BULKHEAD SUPPLY GRILLE - LINEAR
	TG	TRANSFER GRILL
	SH	SENSOR HUMIDITY
	ST	SENSOR TEMPERATURE

- GENERAL NOTES:
1. VERIFY ALLOWABLE FLEX DUCT LENGTHS WITH LOCAL CODES AND MODIFY ACCORDINGLY. ATTACH FLEXIBLE AIR CONNECTOR TO RIGID DUCT W/ STEEL DRAW BANDS N-ONLY. CLASS I FLEXIBLE AIR CONNECTOR PER UL 181 - MAX LENGTH 8'-0". PROVIDE SUPPORT AT 4'-0" O.C.
  2. VENTING OF ANY COMBUSTIBLE BY-PRODUCTS IS PROHIBITED WITHIN 10 FEET OF ROOF TOP UNITS. VERIFY WITH LOCAL BUILDING INSPECTOR.
  3. ALL SUPPLY AND RETURN DUCTWORK TO BE LOCATED IN TRUSS SPACE. COORDINATE WITH TRUSS SUPPLIER.
  4. DIFFUSERS AND RETURN GRILLES IN BLACK ACT TO BE BLACK, ALL OTHERS TO BE WHITE.

- RECOMMENDED HVAC SET POINTS:
1. DINING HEATING 70°, COOLING 72°
  2. KITCHEN HEATING 68°, COOLING 74°

WARNING:  
THESE ARE PROTOTYPE PLANS AND MAY NOT BE VALID FOR CONDITIONS AND CODES APPLICABLE IN YOUR AREA. IT IS THE RESPONSIBILITY OF THE PROJECT ARCHITECT AND THEIR CONSULTANT TO VERIFY THE HEATING, VENTILATING, AND AIR CONDITIONING REQUIREMENTS FOR EACH PROJECT. DESIGN MUST BE ADJUSTED TO MEET LOCAL CONDITIONS AND CODES. CULVER FRANCHISING SYSTEM, LLC ASSUMES NO RESPONSIBILITY OR LIABILITY FOR THE CORRECTNESS OF THESE PLANS OR THEIR APPLICABILITY TO ANY PARTICULAR PROJECT OR SITE.



- RTU-1
  - RTU-2
  - DRIVE-THRU
- STACK THERMOSTATS VERTICAL COORDINATE LOCATION W/ P.O.5 SYSTEM COMPONENTS

A/E TEAM TO VERIFY DRYER VENTING REQUIREMENTS

revisions:  
03-06-25



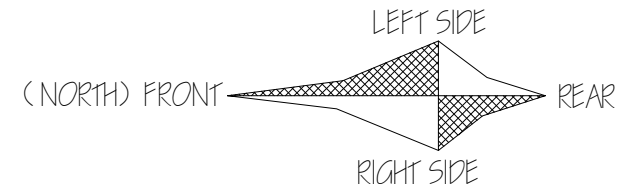
PROPOSED NEW BUILDING FOR  
**CULVER'S RESTAURANT**  
RANGE ROAD, MARYSVILLE, MICHIGAN

**HVAC PLAN**

drawn by: RLE  
date: 01-15-25  
job number: 2504  
Sheet

**M-1**

**HVAC PLAN - METRO M - 2025 PROTOTYPE**  
SCALE: 1/4" = 1'-0"

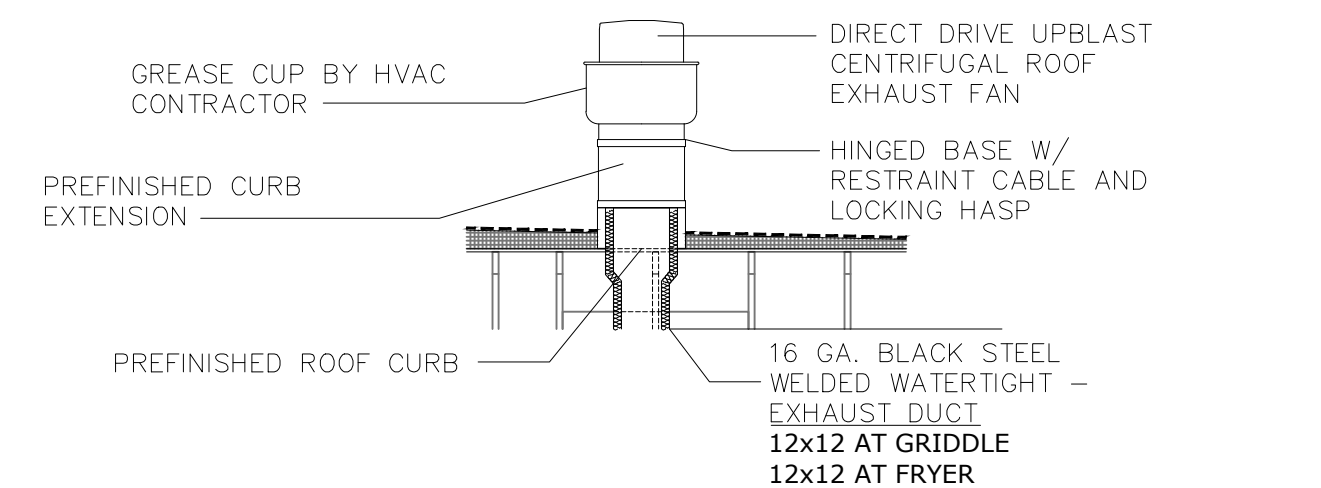


## GENERAL NOTES

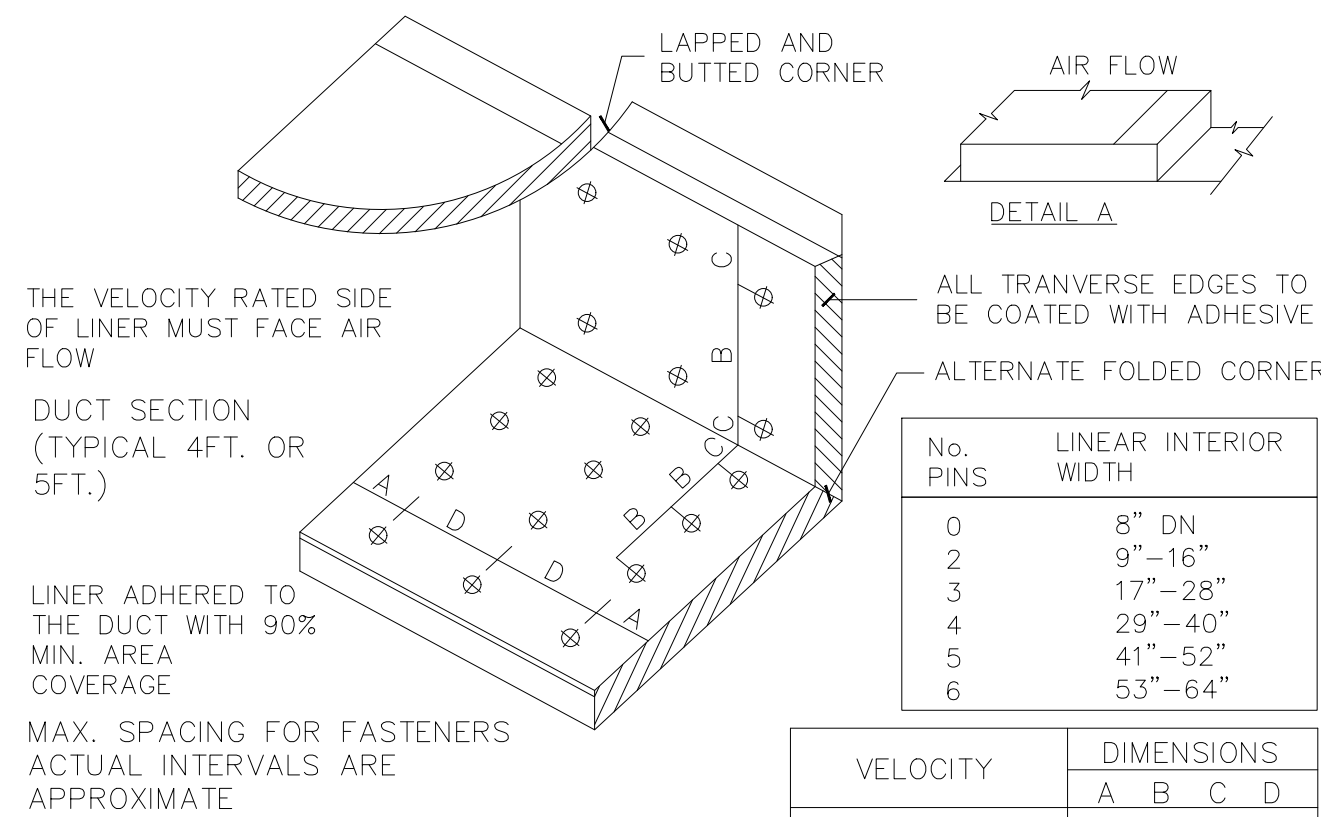
- DEVIATIONS FROM THE HVAC PLANS ARE THE RESPONSIBILITY OF THE HVAC CONTRACTOR & WILL NOT RESULT IN ADDITIONAL COSTS TO THE OWNER UNLESS WRITTEN CHANGE ORDERS ARE APPROVED BY THE OWNER.
- ALL WORK TO BE PERFORMED TO STATE AND LOCAL CODES & SMACNA GUIDELINES.
- INSTALL UNITS ACCORDING TO MANUFACTURERS GUIDELINES.
- PROVIDE OWNER w/OPERATION & MAINTENANCE MANUALS & SYSTEM SCHEMATICS.
- CONTRACTOR TO CONFIRM VOLTAGES & PHASES OF EQUIPMENT PRIOR TO INSTALLATION
- EXHAUST FANS AND FURNACE FANS TO RUN CONTINUOUSLY DURING OCCUPIED MODE.
- VERIFY w/ OWNER EXACT HEATER LOCATION TO AVOID BUILDING FUNCTION INTERFERENCE.
- NIGHT SET BACK THERMOSTATS TO BE INSTALLED ON ALL HVAC EQUIPMENT.
- INSULATE DUCT WORK TO SMACNA GUIDELINES AND STATE CODES.
- INSTALL VOLUME CONTROL DAMPERS AS INDICATED ON PLANS.
- MAINTAIN AT LEAST 10 FEET CLEARANCE FROM INTAKES OR WINDOWS ON ALL EXHAUST VENTS
- RETURN AIR DUCT WORK TO BE LINED FOR SOUND ATTENUATION
- FLEXIBLE ROUND DUCT WORK NOT TO EXCEED 8 FEET IN LENGTH. AVOID UNNECESSARY TURNS & SLACK.
- DUCT WORK TO BE STANDARD GAUGE SHEET METAL (FIBROUS DUCT NOT ALLOWED).
- COORDINATE WORK & GENERAL CONTRACTOR & OWNER TO MAXIMIZE CEILING HEIGHT & AVOID CONFLICTS
- TEST, ADJUST & CALIBRATE CONTROL SYSTEMS AS REQUIRED. PROVIDE SCHEMATICS & DESCRIPTION TO THE OWNER PRIOR TO INSTALLATION.
- INSULATE EXHAUST DUCT FOR EXHAUST FAN TO EXTERIOR TERMINATION.
- CONTRACTOR TO VERIFY GAS METER CAPACITY WITH LOCAL GAS SUPPLIER.
- VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION (DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT REFLECT EXACT LOCATIONS OF EQUIPMENT OR OTHER APPARATUSSES.)
- PROVIDE SHOP DRAWINGS TO THE ARCHITECT/DESIGNER FOR EQUIPMENT, FANS, REGISTERS ETC. PRIOR TO PROCUREMENT
- PROVIDE OWNER WITH COLOR CHOICES FOR SWITCHES AND OTHER APPARATUSSES WHERE APPLICABLE
- VENT OWNERS WATER HEATERS AS REQUIRED
- VENT DRYER TO EXTERIOR AS REQUIRED. MAINTAIN CLEARANCES FROM INTAKES AS NOTED ABOVE.
- HANG AND SUPPORT MATERIALS SHALL BE INSTALLED THE LATEST EDITION OF THE ASHREA HANDBOOK OF FUNDAMENTALS
- HVAC CONTRACTOR RESPONSIBLE FOR A COMPLETE AND FULLY WORKING SYSTEM
- REPLACE ALL AIR FILTERS PRIOR TO TURNING SYSTEM OPERATIONS OVER TO OWNER.
- INSTALLER IS RESPONSIBLE FOR FINAL TEST & BALANCING DURING TRAINING WEEK & PROVIDE A WRITTEN REPORT TO OWNER.
- HVAC CONTRACTOR TO INSTALL #2 GAS w/ 14" WATER COLUMN MAX. PER STATE CODE & AGA GUIDELINES (LABEL AS REQUIRED).
- DUCT DIMENSIONS LISTED ARE NET FREE - CLEAR INSIDE DIMENSIONS.
- VERIFY DUCT LOCATIONS PRIOR TO FABRICATION. VERIFY LIMITED AREA FOR DUCTWORK & OTHER APPARATUSSES.
- S/S WALL PANELS FOR THE KITCHEN AREA ARE TO BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. PANELS ARE TO BE 18 GA. TYPE 304 S/S. SEE DETAILS AND LOCATIONS ON THE A6 DRAWING.

## MECHANICAL EQUIPMENT SPECIFICATIONS

- RTU - 1 LENNOX ENLIGHT SERIES PACKAGED ROOFTOP UNITS WITH CORE CONTROLLER**  
COMBINATION GAS WITH TWO STAGE HEATING AND THREE STAGE COOLING, (15 TON) OR FOUR STAGE COOLING (17.5 AND 20 TON) CAPABILITY WITH HUMIDITROL AND S/S HEAT EXCHANGERS. HEATING CAPACITY DESIGNED PER LOCATION. 81% AFUE THERMAL EFF. COOLING CAPACITY DESIGNED PER LOCATION. 12 EER AND 15 IEER MINIMUM. VARIABLE AIR VOLUME SUPPLY FAN. SUPPLY AND OUTSIDE AIR REQUIREMENTS DESIGNED PER LOCATION. UNIT TO BE 208/3/60 POWER. VERIFY AMPERAGE AND COORDINATE WITH ELECTRICAL CONTRACTOR. IN ADDITION TO OPTIONS LISTED ABOVE INCLUDE THE FOLLOWING FACTORY INSTALLED OPTIONS: WEATHERPROOF DISCONNECT SWITCH, FACTORY INSTALLED/FIELD POWERED GFCI, RETURN AND/OR SUPPLY SMOKE DETECTORS AS REQUIRED BY LOCAL CODES, DRAIN PAN OVERFLOW SWITCH, HIGH PERFORMANCE SINGLE ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF AND HOODS AND HAIL GUARDS, MERV 13 FILTERS. INCLUDE THE FOLLOWING FIELD INSTALLED OPTIONS: DOWN FLOW HYBRID CURB, PVC DRAIN TRAP KIT, REMOTE HUMIDITY SENSOR, LENNOX MODEL CS7500 PROGRAMMABLE THERMOSTAT  
**NO SUBSTITUTIONS. PROJECT ENGINEER TO SIZE ACCORDING TO LOCAL CONDITIONS AND CODES**
- RTU - 2 LENNOX ENLIGHT SERIES PACKAGED ROOFTOP UNITS WITH CORE CONTROLLER**  
COMBINATION GAS WITH TWO STAGE HEATING AND THREE STAGE COOLING, (15 TON) OR FOUR STAGE COOLING (17.5 AND 20 TON) CAPABILITY WITH HUMIDITROL AND S/S HEAT EXCHANGERS. HEATING CAPACITY DESIGNED PER LOCATION. 81% AFUE THERMAL EFF. COOLING CAPACITY DESIGNED PER LOCATION. 12 EER AND 15 IEER MINIMUM. VARIABLE AIR VOLUME SUPPLY FAN. SUPPLY AND OUTSIDE AIR REQUIREMENTS DESIGNED PER LOCATION. UNIT TO BE 208/3/60 POWER. VERIFY AMPERAGE AND COORDINATE WITH ELECTRICAL CONTRACTOR. IN ADDITION TO OPTIONS LISTED ABOVE INCLUDE THE FOLLOWING FACTORY INSTALLED OPTIONS: WEATHERPROOF DISCONNECT SWITCH, FACTORY INSTALLED/FIELD POWERED GFCI, RETURN AND/OR SUPPLY SMOKE DETECTORS AS REQUIRED BY LOCAL CODES, DRAIN PAN OVERFLOW SWITCH, HIGH PERFORMANCE SINGLE ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF AND HOODS AND HAIL GUARDS, MERV 13 FILTERS. INCLUDE THE FOLLOWING FIELD INSTALLED OPTIONS: DOWN FLOW HYBRID CURB, PVC DRAIN TRAP KIT, REMOTE HUMIDITY SENSOR, LENNOX MODEL CS7500 PROGRAMMABLE THERMOSTAT  
**NO SUBSTITUTIONS. PROJECT ENGINEER TO SIZE ACCORDING TO LOCAL CONDITIONS AND CODES**
- PRV - 1 ACCUREX MODEL XRED-090-VG CONDENSATE DOWNBLAST EXHAUST FAN WITH ROOF CURB AND BACKDRAFT DAMPER. 375 CFM AT .5" SP, .1 HP MOTOR, 115 VOLTS, SINGLE PHASE. FAN TO RUN CONTINUOUSLY DURING OCCUPIED MODE. NO SUBSTITUTIONS.**
- PRV - 2 ACCUREX MODEL XCUJE-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 ACCUREX MODEL XCUJE-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 ACCUREX MODEL XRED-095-VG CONDENSATE DOWNBLAST EXHAUST FAN WITH ROOF CURB AND BACKDRAFT DAMPER. 350 CFM AT .6" SP, .167 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-B80 CEILING EXHAUST FAN, SPEED CONTROL & MODEL WC-4 HOODED WALL CAP. PAINT WALL CAP TO MATCH EXTERIOR FINISH. 75 CFM AT .125" SP, 115 VOLT, SINGLE PHASE. FAN TO RUN CONTINUOUSLY DURING OCCUPIED MODE. NO SUBSTITUTIONS.**
- ITEM #49 GRIDDLE EXHAUST HOOD - ACCUREX MODEL XGEP-64-S** 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/ **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 #59 FRYER EXHAUST HOOD - ACCUREX MODEL XXEP-83-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** 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 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.**
- ECH ELECTRIC CEILING HEATER -** 0-MARK OR EQUAL CDF-548 ELECTRIC CEILING HEATER & CDF RECESSED MOUNTING FRAME, CDF-TR4 TRANSFORMER & THERMOSTAT. 208/240 VOLT SINGLE PHASE. **19.2 AMPS.** (SUPPLIED & INSTALLED BY ELECTRICAL CONTRACTOR)



**KITCHEN HOOD EXHAUST FAN DETAIL**  
N.T.S.



### DUCT LINER INSTALLATION DETAIL

**N.T.S.** NOTE: USE ONLY ON VERTICAL DROP FROM RTU TO WITHIN 9'-10" A.F.F. DUCT LINER WILL NOT BE PERMITTED ON ANY HORIZ. RUNS.

### WARNING: HVAC EQUIPMENT HAS NOT BEEN SIZED FOR YOUR LOCATION!

NOTE: These plans may or may not be valid for conditions and codes applicable in your area. It is the responsibility of the project architect and consultants to verify the Heating, Ventilation and Air Conditioning requirements for each project and to adjust this design to meet those conditions and codes. Culver Franchising System, LLC assumes no responsibility or liability for the correctness of these plans or their applicability to any particular project or site.

## NATIONAL ACCOUNT PROGRAM

### 1. LENNOX INDUSTRIES, INC. - ROOFTOP HVAC EQUIPMENT

Sales: LennoxNationalAccounts@Lennoxind.com copy to Dave.Ebner@Lennoxind.com

National Account Technical Support: (800) 367-6285 Option #2 lennoxind.com

### 2. ACCUREX/ GREENHECK FAN CORPORATION - KITCHEN HOODS, EXHAUST FANS, ROOF CURBS, ANSUL SYSTEMS, ACCESSORIES AND TEST AND BALANCE

CONTACT Phillip Kraft @ 1-262-227-7865 or phillip.kraft@accurex.com

Secondary contact Brad Borchardt 1-715-551-0809 brad.borchardt@accurex.com or Andy Jacobs andy.jacobs@accurex.com

ACCUREX WILL PROVIDE BALANCED AIRFLOW AND FUNCTIONAL CHARACTERISTICS OF THE HVAC AS THEY RELATE TO AIRFLOW AND RESISTANCE ONLY. SERVICES TO BE PERFORMED BY A CERTIFIED NEBB FIRM AND ITS MANAGING GROUP - NATIONAL TAB

### 3. RAYMON AIR DISTRIBUTION EQUIPMENT - DIFFUSERS AND GRILLES

National Accounts Sales: Hunzicker LLC Marie Wilson (608) 845-9551 marie@hunzickerllc.com

### NOTE : KITCHEN HOODS AND FANS SUPPLIED AND INSTALLED BY HVAC CONTRACTOR - MINIMUM FOUR WEEK LEAD TIME.



NOTE : L = 1/4W (4" MIN.)

### BRANCH DUCT TAKEOFF DETAILS

N.T.S.

## DIFFUSER/GRILLE SCHEDULE

QNTY	Mark	Manuf.	Model	Type	Mounting	Diffuser	Neck	CFM	Zone	Notes
16	CD-10	RAYMON	PRO2	SUPPLY	GRID	4-WAY	8"	150	RTU-1	2
1	CD-11	RAYMON	PRO2	SUPPLY	GRID	4-WAY	10"	500	RTU-1	
1	CD-12	RAYMON	PRO2	SUPPLY	GRID	4-WAY	8"	200	RTU-1	
1	CD-13	RAYMON	PRO2/DAG	SUPPLY	CEILING	3-WAY	8"	150	RTU-1	3
1	CD-14	RAYMON	PRO2	SUPPLY	GRID	4-WAY	8"	75	RTU-1	
2	CD-15	RAYMON	PRO2/DAG	SUPPLY	CEILING	4-WAY	8"	150	RTU-1	3
2	CD-16	RAYMON	PRO2	SUPPLY	GRID	4-WAY	12"	450	RTU-1	
1	CD-18	RAYMON	PRO2	SUPPLY	GRID	4-WAY	10"	300	RTU-1	
4	CD-17	RAYMON	PRO2	SUPPLY	GRID	4-WAY	10"	350	RTU-1	6
2	CD-20	RAYMON	PRO2	SUPPLY	GRID	4-WAY	12"	600	RTU-2	
3	CD-21	RAYMON	RPR	SUPPLY	GRID	PERFORATED	12"	350	RTU-2	7,9
1	CD-22	RAYMON	PRO2	SUPPLY	GRID	4-WAY	12"	600	RTU-2	
1	CD-23	RAYMON	RPR	SUPPLY	GRID	PERFORATED	10"	200	RTU-2	7,9
1	CD-24	RAYMON	RPR	SUPPLY	GRID	PERFORATED	12"	375	RTU-2	7,9
2	CD-25	RAYMON	RPR	SUPPLY	GRID	PERFORATED	12"	400	RTU-2	7,9
1	CD-26	RAYMON	RPR	SUPPLY	GRID	PERFORATED	10"	250	RTU-2	7,9
1	CD-27	RAYMON	RPR	SUPPLY	GRID	PERFORATED	10"	275	RTU-2	7,9
1	CD-28	RAYMON	RPR	SUPPLY	GRID	PERFORATED	8"	125	RTU-2	7,9
1	CD-29	RAYMON	PRO2/DAG	SUPPLY	GRID	3-WAY	12"	600	RTU-2	
			RAYMON	ECR-TB						
2	EG-1	RAYMON	RA-HVD	EXHAUST	GRID	12" x 12"	6"	75	RTU-1	4
2	EG-2	RAYMON	FGEC-TB1	EXHAUST	CEILING	12" x 12"	6"	150	RTU-1	8
5	RG-10	RAYMON	FGEC-TB1	RETURN	GRID	RETURN	12" x 12"	1170	RTU-1	8
5	RG-20	RAYMON	RA-HVD	RETURN	GRID	RETURN	14"	1215	RTU-2	
1	RG-30	RAYMON	RA-HVD	RETURN	GRID	RETURN	10"	600	RTU-2	5
1	TG-1	RAYMON	RA-RH	TRANSFER	WALL	12" x 4"	12" x 4"	0	RTU-1	
2	WD-20			SUPPLY	WALL	24" x 6"	12"	600	RTU-2	

**DIFFUSER NOTES:**

- REMOVED NOTE
- 4 OF THE CD-10 DIFFUSERS ARE TO BE FLAT BLACK. ALL OTHERS TO BE WHITE. SEE REFLECTED CEILING PLAN FOR LOCATIONS.
- 12X12 NOMINAL PANEL SIZE.
- PROVIDE WITH ADJUSTABLE OPPOSED BLADE DAMPER
- MOUNT SO THE OCCUPANT CAN NOT SEE INTO THE DUCT
- FLAT BLACK FINISH
- DESIGN CFM MUST BE MAINTAINED FOR PROPER HOOD OPERATION
- REMOVABLE CORE DIFFUSERS
- WITHOUT PATTERN CONTROLLERS

## CONTROL NOTES

- WIRE RTU-1, RTU-2 TO SHUT-DOWN & EXHAUST HOOD FANS TO CONTINUE TO RUN UPON ACTIVATION OF THE ANSUL SYSTEM.
- WIRE RTU-1 & RTU-2 TO SHUT-DOWN UPON ACTIVATION OF ANY IN-DUCT SMOKE DETECTOR.
- OCCUPIED MODE: FANS IN RTU-1 & RTU-2, EXHAUST FANS PRV-1, 2 & 3 AND EF-1 TO RUN CONTINUOUSLY.
- UNOCCUPIED MODE: FANS IN RTU-1 & RTU-2 TO RUN ONLY WHEN COOLING OR HEATING IS CALLED FOR.

## LENNOX SETTINGS FOR CULVERS

IN ORDER TO SET UP THE RTU'S YOU WILL NEED TO DOWNLOAD LENNOX CORE SERVICE APP. AND PAIR YOUR DEVICE WITH THE CORE CONTROLLER. ONCE PAIRED YOU WILL SEE THE OPERATION OVERVIEW SCREEN. SEE INSTALLATION MANUAL FOR INSTRUCTIONS ON DOWNLOADING THE APP. OR SCAN THE QR CODE ON THE FRONT COVER OF THE CONTROLLER

### HEAT DELAY ADJUSTMENT

- HEAT DELAY WILL BE PR65 IN THE CORE CONTROLLER AND CHANGED IN THE APP AS SHOWN IN THE MENU PATH BELOW. DEFAULT IS SET AT 3600 SECONDS.
- TAP THE MENU BUTTON, (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU. SCROLL DOWN AND TAP ON RTU OPTIONS
  - TAP EDIT PARAMETER. CHOOSE FROM THE CATEGORY OF PARAMETERS LISTED. (FOR HEAT DELAY CHOOSE HEATING)
  - CHOOSE THE PARAMETER TO ADJUST (65). SELECT "0" FOR NO HEAT DELAY (0 SECONDS)

### GLOBAL ECONOMIZER MODE (KITCHEN UNIT ONLY)

- THIS IS SET BY CHANGING CONFIGURATION ID#1 CHARACTER 2 TO G
- FROM THE MAIN SCREEN (OPERATION OVERVIEW) TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU
  - TAP INSTALL
  - TAP NEXT ON DATE AND TIME
  - TAP NEXT ON RTU NAME, MODEL NUMBER, SERIAL NUMBER AND CATEGORY IF ALREADY ENTERED, IF NOT PLEASE ENTER
  - TAP CONFIGURATION ID 1 AND CHANGE 2ND CHARACTER TO G

### ECONOMIZER MINIMUM POSITION SET-UP

- THIS IS ADJUSTED THROUGH THE MENU FROM THE MAIN SCREEN
- TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN)
  - SCROLL DOWN AND TAP RTU OPTIONS
  - TAP EDIT PARAMETERS
  - CHOOSE FROM THE CATEGORY OF PARAMETERS LISTED (AIRFLOW)
  - CHOOSE THE PARAMETER TO ADJUST (132) MINIMUM FRESH AIR DAMPER POSITION DURING OCCUPIED OPERATION

### OCCUPIED AND UNOCCUPIED

- USING 24v THERMOSTAT CONTROL OCCUPIED/ UNOCCUPIED WILL BE DETERMINED BY INPUT ON P297-8 ON THE M4 BOARD
- FOR (KITCHEN UNIT ONLY) BOTH THE THERMOSTAT AND HOOD FANS MUST BE TIED INTO P297-8 ON THE M4 CONTROL BOARD

### FRESH AIR TEMPERING (HEATING)

- THIS IS ADJUSTED THROUGH THE MENU FROM THE MAIN SCREEN
- TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU
  - TAP SETUP
  - TAP TEST AND BALANCE
  - TAP DAMPER
  - THERE ARE SEVERAL SETTINGS TO SELECT IN THIS MENU PATH BEFORE REACHING THE DESIRED SETTING. FRESH AIR HEATING ENABLED -YES OR NO. AFTER ENABLING FAH THE NEXT SCREEN WILL ALLOW THE FAH SET POINT TO BE CONFIGURED. SUGGESTED FAH TEMPERATURE RANGES 65-67 DEGREES F. VERIFY WITH ENGINEER

### FRESH AIR TEMPERING (COOLING)

- THIS IS ADJUSTED THROUGH THE MENU FROM THE MAIN SCREEN
- TAP THE MENU BUTTON (THREE LINES IN THE UPPER LEFT OF THE SCREEN) TO OPEN THE MENU
  - TAP SETUP
  - TAP TEST AND BALANCE
  - TAP DAMPER
  - THERE ARE SEVERAL SETTINGS TO SELECT IN THIS MENU PATH BEFORE REACHING THE DESIRED SETTING. FRESH AIR HEATING ENABLED -YES OR NO. AFTER ENABLING FAH THE NEXT SCREEN WILL ALLOW THE FAH SET POINT TO BE CONFIGURED. SUGGESTED FAH TEMPERATURE RANGES 73-75 DEGREES F. VERIFY WITH ENGINEER

ENSURE THAT THE PROBE STYLE SENSOR GETS INSTALLED IN THE SUPPLY DUCTWORK FOR FAH/FAC TO OPERATE PROPERLY

FOR HELP PLEASE CALL LENNOX NATIONAL ACCOUNT TECH SUPPORT AT 1-800-367-6285

CHECK FOR CORRECT OPERATION AND WIRING OF ALL SENSORS



revisions:  
03-06-25



PROPOSED NEW BUILDING FOR

CULVER'S RESTAURANT

RANGE ROAD, MARYSVILLE, MICHIGAN

### HVAC NOTES

drawn by: RLE  
date: 01-15-25  
job number: 2504

Sheet

# M-2



**HOOD INFORMATION**

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	TOTAL CFM	EXHAUST COLLAR(S)					SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION
			LENGTH	WIDTH	HEIGHT				WIDTH	LENGTH	DIA.	CFM	S.P.	MUA CFM	AC CFM		
1	FRYER HOOD	XXEP-83-S	83	TOP 23 BOT 3	FRT 12 BACK 36	430 SS WHERE EXPOSED	MEDIUM	1500	12	12		1500	0.689			169	SINGLE

**HOOD INFORMATION**

HOOD NO.	MARK	LIGHTING DETAILS			GREASE FILTRATION DETAILS			UTILITY CABINET(S)				
		FIXTURE TYPE BULB / LAMP INFO	QTY	FOOT CANDLES	TYPE / MODEL MATERIAL	QTY	SIZE (IN.) L H	LOCATION	FIRE SYSTEM TYPE	SIZE	MODEL	CONTROLS INTERFACE
1	FRYER HOOD				X-TRACTOR (SPARK ARRESTOR INCL.) STAINLESS STEEL	5 0	16 20					

**HOOD OPTIONS**

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)  
 PERFORMANCE ENHANCING LIP (PEL) TECHNOLOGY  
 STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH

**SPECIAL DESIGN REQUESTS**

SDR #K1100559 - NEW PITCO 4L FRYER FLUE BYPASS SYSTEM  
 SDR #K1700974 - CULVERS 4VAT 2FIRE PROCESS - FRYER HOOD  
 SDR #K2000140 - IF FRYMASTER FRYER FLUE BYPASS

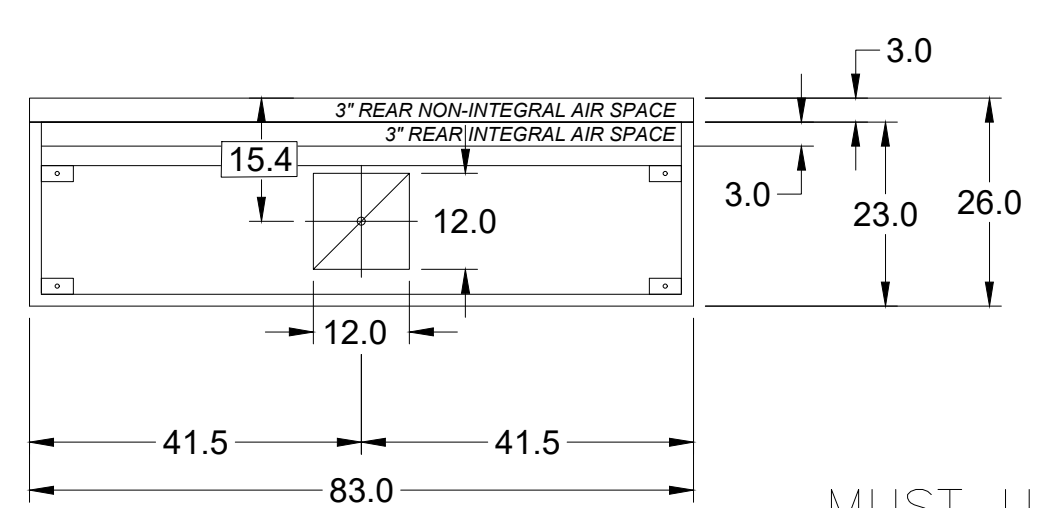
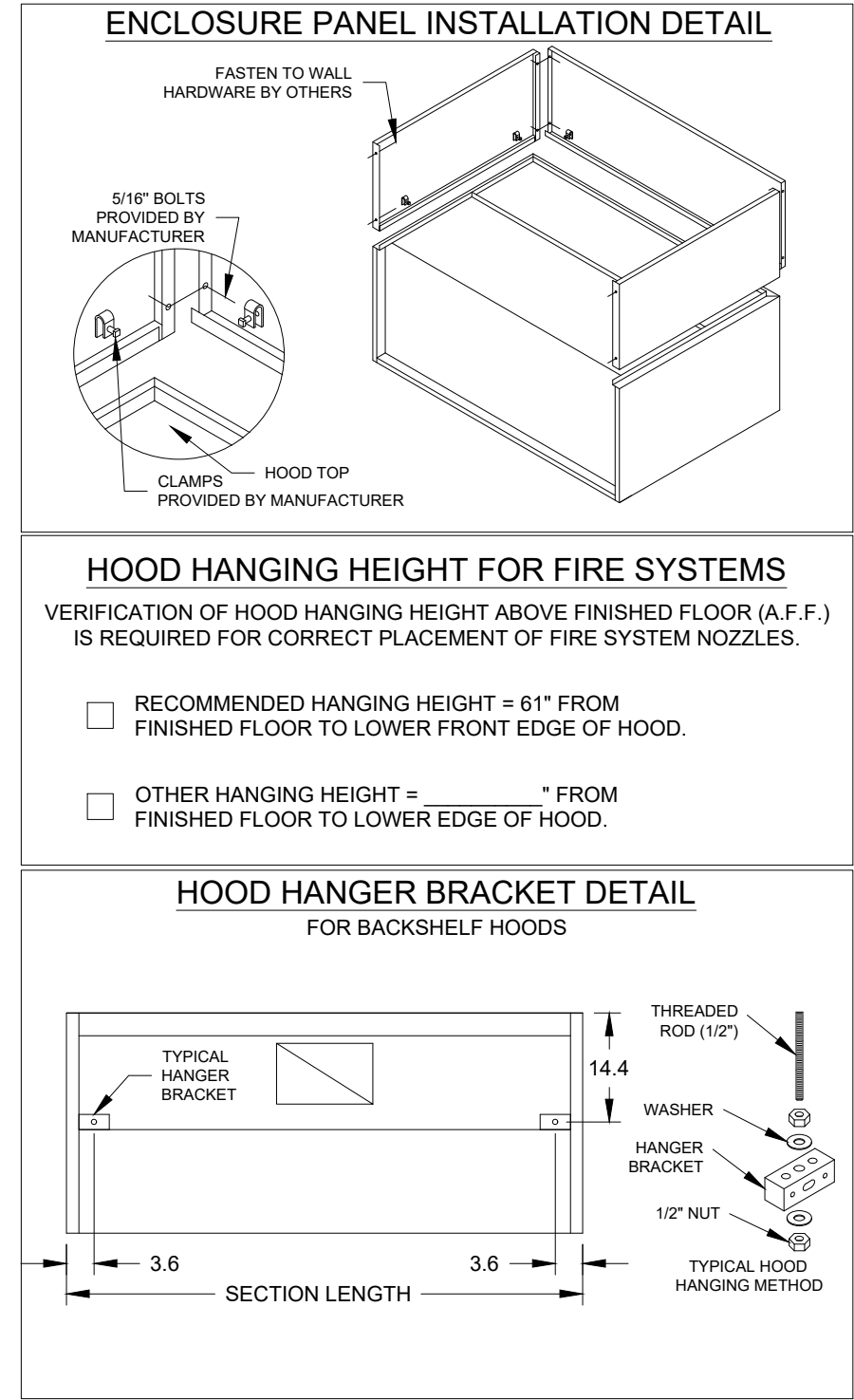
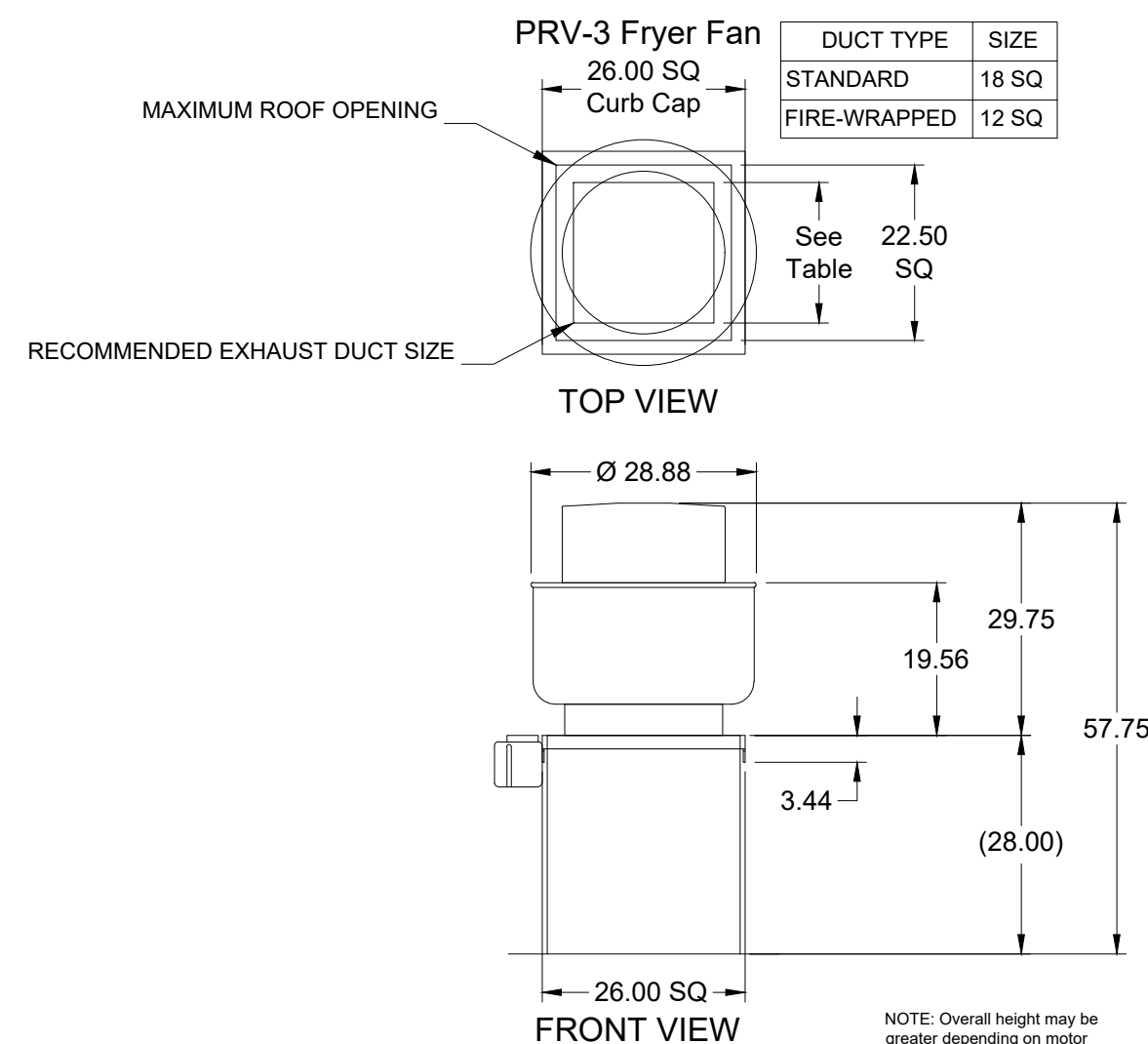
**Direct Drive Upblast Centrifugal Roof Exhaust Fan**

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	PRV-3 Fryer Fan	XCUE-140-VG	1,500	1	1,365	0.46	92	1	115/60/1	OP	1725	1	16

\*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

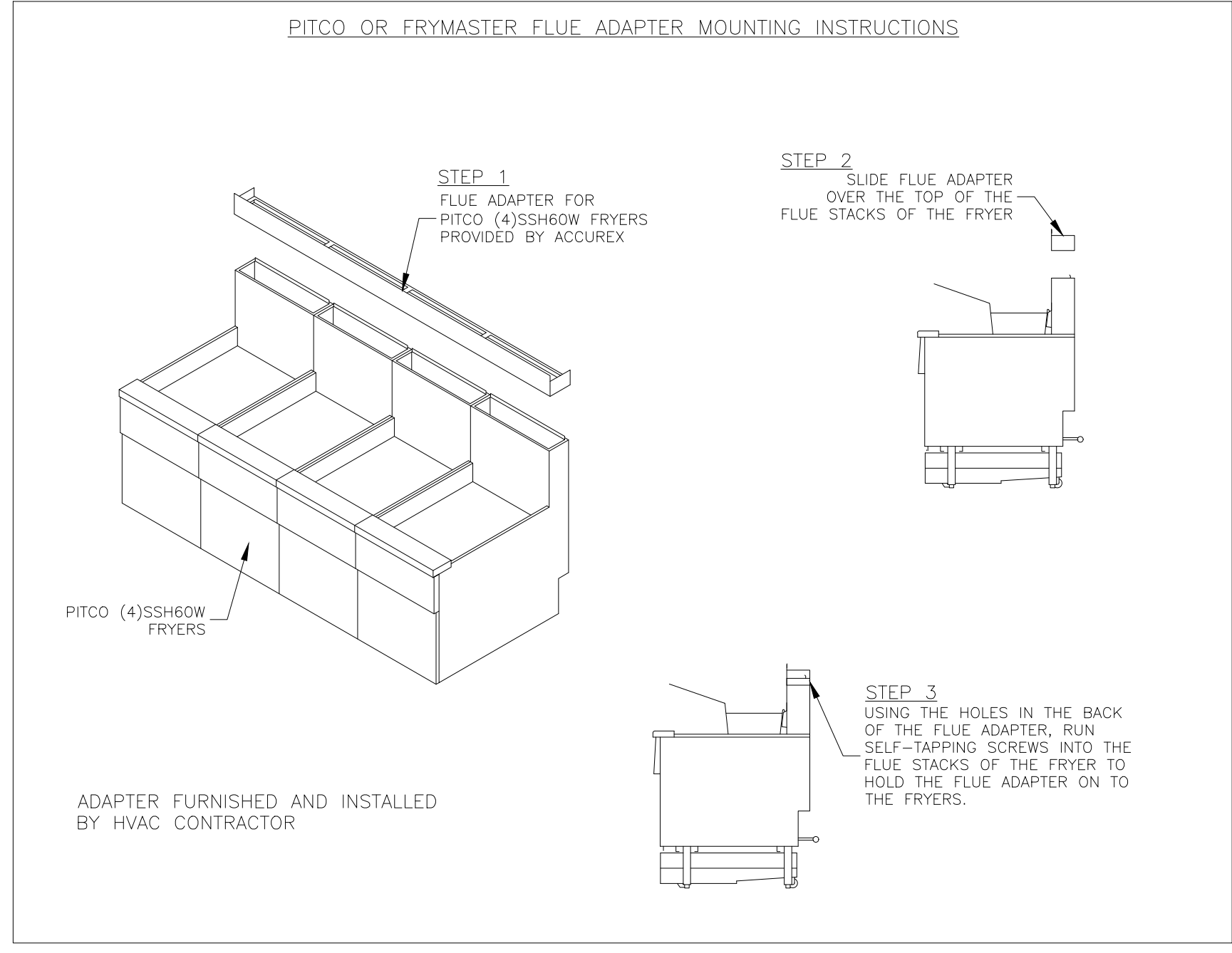
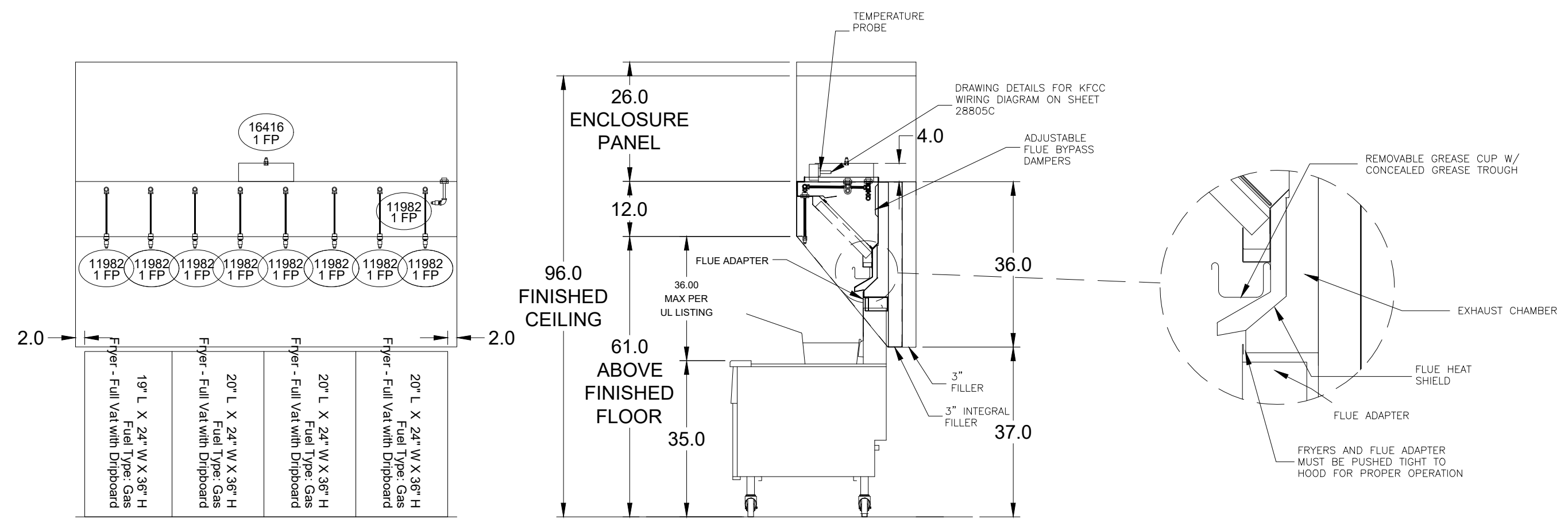
**PRV-3 Fryer Fan : SELECTED OPTIONS AND ACCESSORIES**

One piece fully welded windband  
 Tapered bushing wheel hub  
 Breather tube outlet area min. 4.4 sq. in. (sizes 99-480), 2.0 sq. in. (sizes 60-95)  
 Min. windband material thickness: 0.051" aluminum (060-240), 0.064" aluminum (240HP, 240XP), 0.080" aluminum (sizes 300-480)  
 Larger Curb Cap Size - 26 Square  
 UL/cUL 705 Listed - Supplement SC - "Power Ventilators for Restaurant Exh. Appliances" (Formerly UL 762)  
 Switch, NEMA-3R, Toggle, Hinge, Factory Installed  
 High Temp Curb Seal Rated for Continuous Duty at 1500 F (Factory Attached)  
 Grease Trap (PN 475538)  
 Clean-out Port - Factory Installed  
 Conduit Chase Qty 1



MUST USE WITH PITCO MODEL CU-SSH60W/WR 4VAT FRYER IF FRYMASTER MODEL 41814GF-CFS IS BEING USED, NOTIFY ACCUREX REP

PITCO MODEL CU-SSH60W/WR 4-VAT FRYER FLUE ADAPTER OR FRYMASTER MODEL 41814GF-CFS

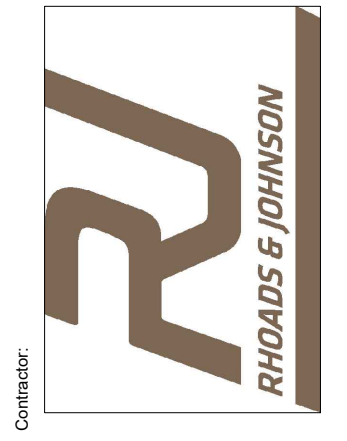


PROJECT 7/11/2024  
 ACCUREX - W, IA  
 PHILLIP KRAFT  
 PHILLIP.KRAFT@ACCUREX.COM  
 262-227-7865

MARK  
 CULVERS METRO M 2025 (S)  
 FRYER HOOD  
 PRV-3 FRYER FAN

PHILLIP KRAFT  
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 262-227-7865

**ACCUREX**



revisions  
 03-06-25



PROPOSED NEW BUILDING FOR  
**CULVER'S RESTAURANT**  
 RANGE ROAD, MARYSVILLE, MICHIGAN

**HVAC HOOD, FAN & FIRE SUP.**

drawn by: RLE  
 date: 01-15-25  
 job number: 2504  
 Sheet

**M-4**

HOOD INFORMATION																	
HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST					SUPPLY		HANGING WEIGHT LBS.	SECTION LOCATION	
			LENGTH	WIDTH	HEIGHT			TOTAL CFM	WIDTH	LENGTH	DIA.	CFM	S.P.	MUA CFM			AC CFM
1	CONDENSATE HOOD	XD3-42-S	42.00	42	24	300 SS 100%		350.0	7	7		350	0.127			110	SINGLE

HOOD INFORMATION																	
HOOD NO.	MARK	LIGHTING DETAILS			BAFFLE FILTRATION DETAILS			UTILITY CABINET(S)									
		FIXTURE TYPE	BULB / LAMP INFO	QTY	FOOT CANDLES	TYPE / MODEL	MATERIAL	QTY	SIZE (IN.)	LOCATION	FIRE SYSTEM	CONTROLS					
1	CONDENSATE HOOD																

HOOD OPTIONS  
FACTORY MOUNTED EXHAUST COLLAR(S)

Direct Drive Centrifugal Roof Exhaust Fan

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	PRV-1 Restroom	XRED-090-VG	375	0.5	1,466	0.06	31	0.1	115/60/1	TN	1725	1	NA
1	PRV-4 Condensate Fan	XRED-095-VG	350	0.6	1,487	0.09	34	0.167	115/60/1	TN	1725	1	4.4

\*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2020. Actual motor FLA may vary for sizing thermal overload, consult factory"

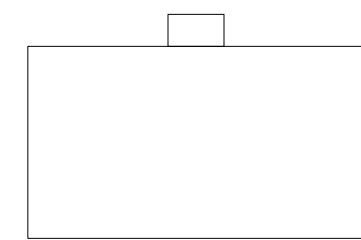
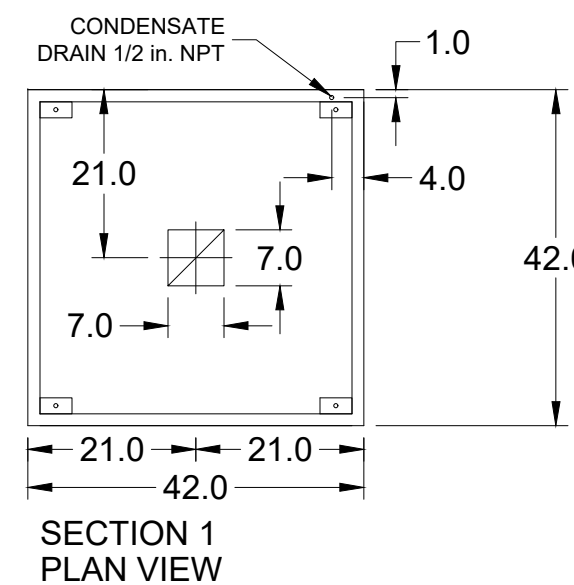
PRV-1 Restroom : SELECTED OPTIONS AND ACCESSORIES				PRV-4 Condensate Fan : SELECTED OPTIONS AND ACCESSORIES			
Standard Curb Cap Size - 17 Square UL/cUL 705 Listed - "Power Ventilators" Switch, NEMA-1, Toggle, Shipped with Unit Damper Shipped Loose, BD-100-PB-10X10, Gravity Operated, Not Coated, Nominal Size Birdscreen: Galvanized, nom. 84% Free Area Composite Wheel Material				Standard Curb Cap Size - 17 Square UL/cUL 705 Listed - "Power Ventilators" Switch, NEMA-1, Toggle, Shipped with Unit Damper Shipped Loose, BD-100-PB-10X10, Gravity Operated, Not Coated, Nominal Size Birdscreen: Galvanized, nom. 84% Free Area Composite Wheel Material			

Ceiling Exhaust Fan

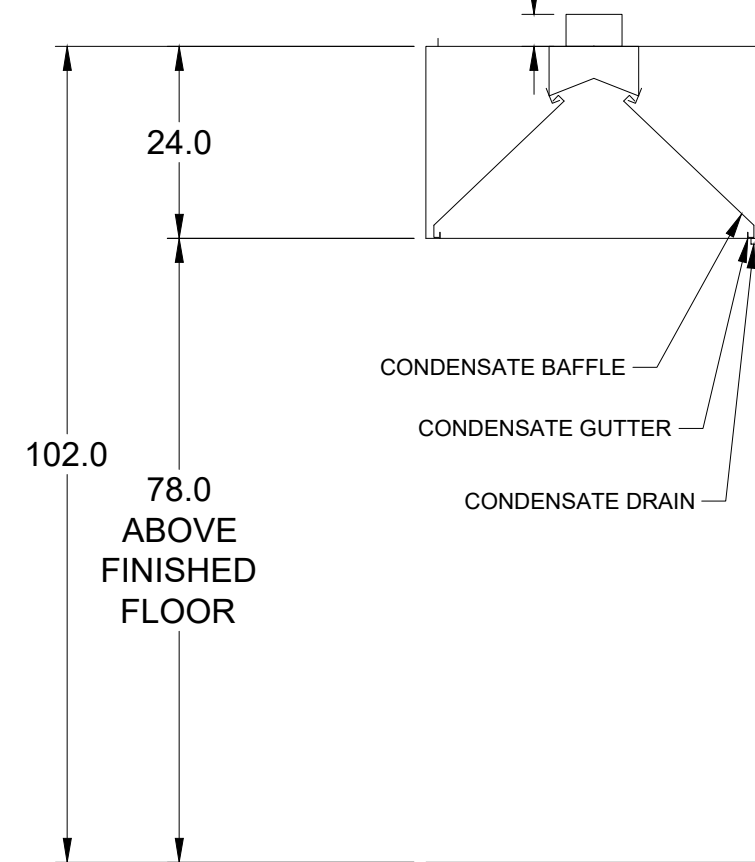
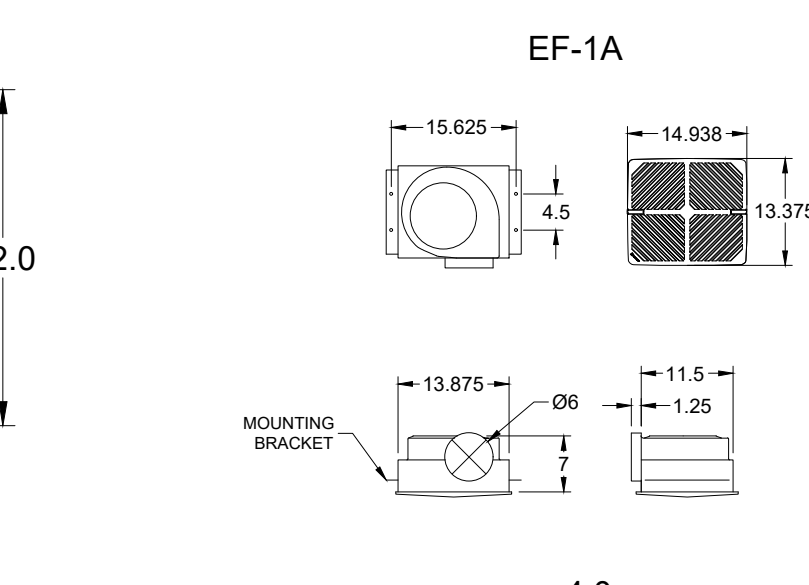
MARK INFORMATION		FAN INFORMATION				MOTOR INFORMATION						
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS
2	EF-1A	XCR-B80	75	0.125	881	0.01	10	0	115/60/1	OP	900	1

EF-1A : SELECTED OPTIONS AND ACCESSORIES

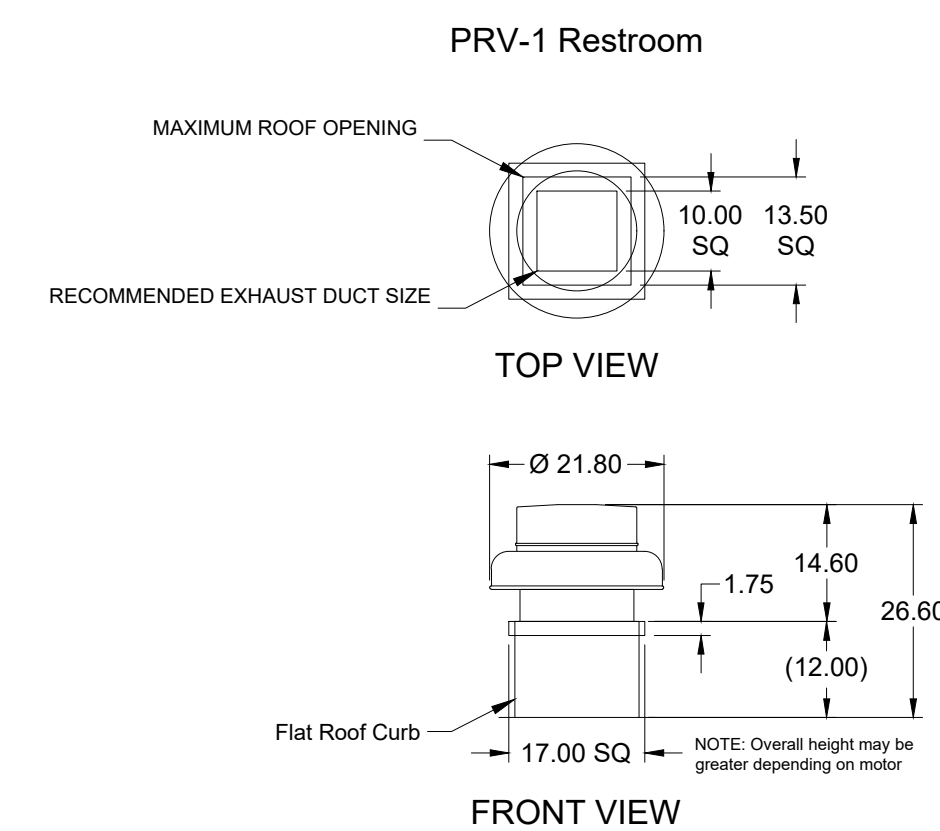
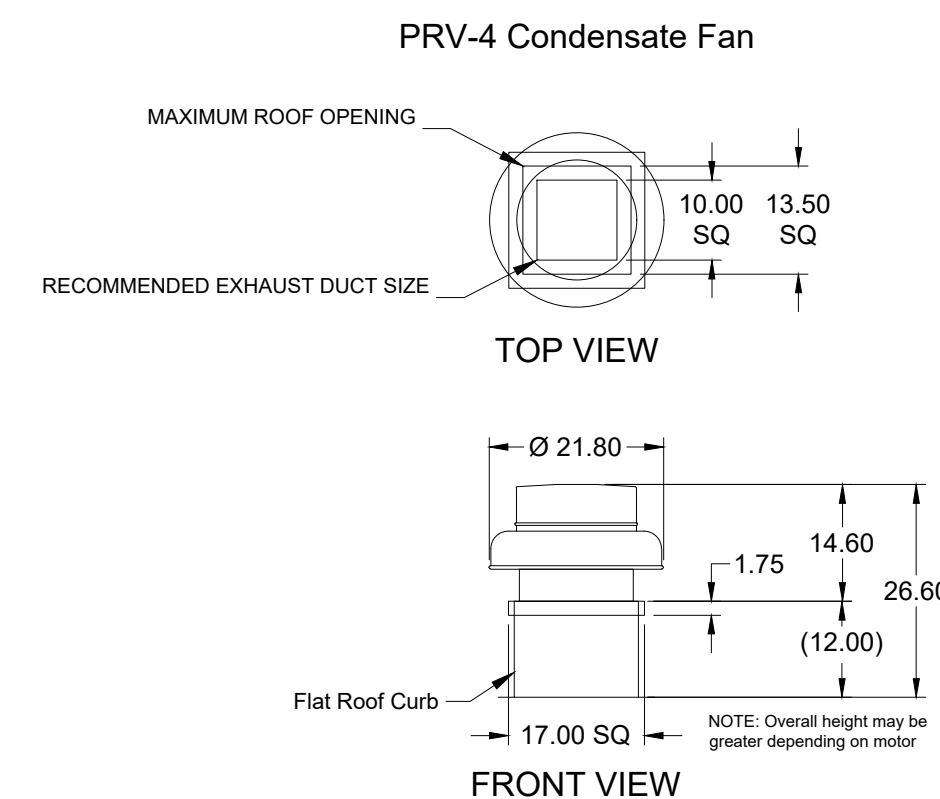
UL/cUL 507 Listed - Electric Fan  
Solid State Speed Control, 6 Amp, Mounted and Wired Internally  
Round Hooded Wall Cap, (PN: WC-6) Shipped Loose  
Round Duct Connection  
Adjustable easy installation mounting bracket  
Standard Grille  
Polypropylene Wheel Material  
Can Be Used to Comply with: ASHRAE 62.2 and Washington State Energy Code



SECTION 1 ELEVATION VIEW



MARK: Item 25 Condensate Hood SECTION VIEW

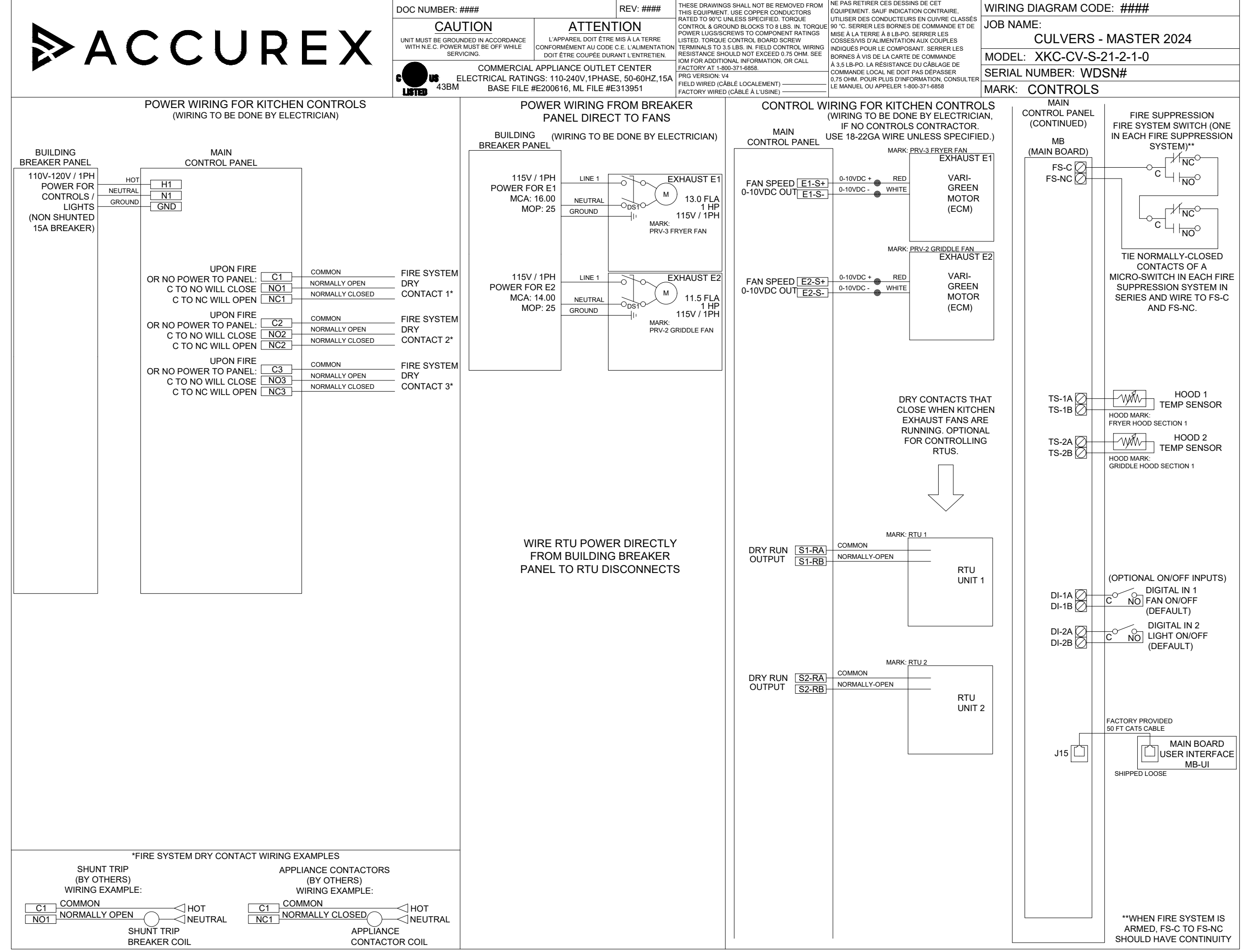
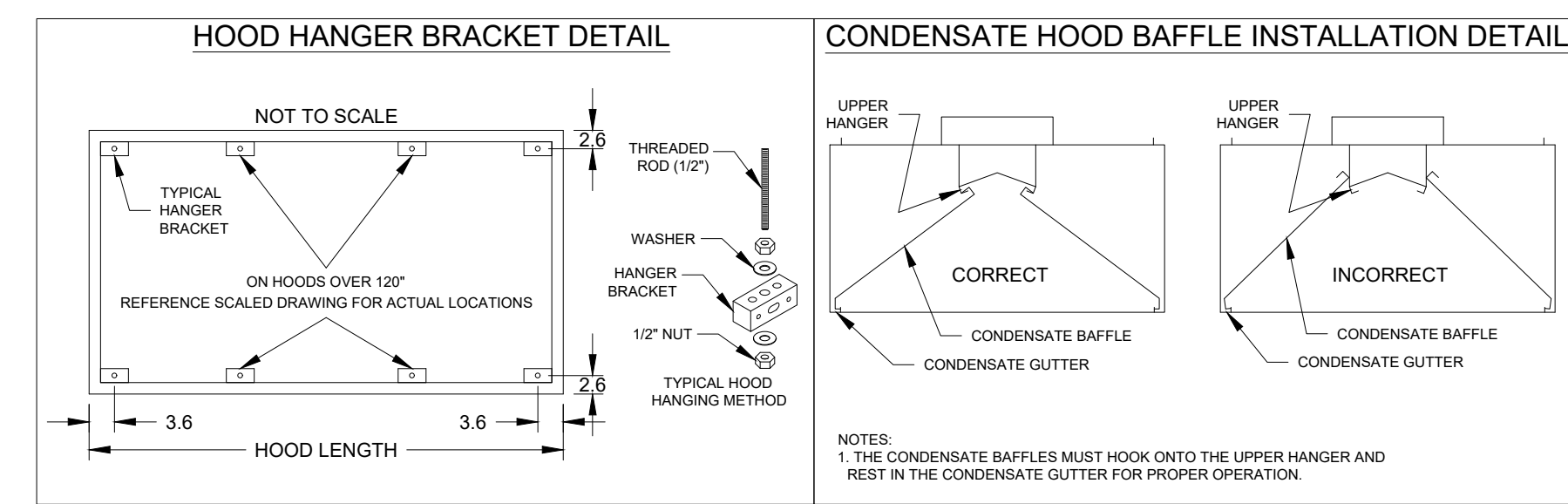


CONTROL INFORMATION									
MARK	ELECTRICAL CONTROL PACKAGE				USER INTERFACE				
	MODEL	LOCATION	TYPE	LOCATION	FULL COLOR TOUCHSCREEN	SHIP LOOSE			
CONTROLS	XKC-CV-S-22-2-1-0	SHIP LOOSE ENCLOSURE				SHIP LOOSE			

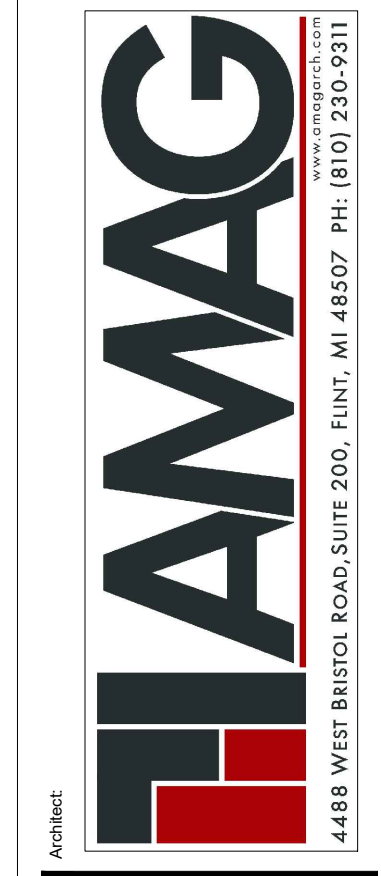
FANS CONTROLLED												
FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL	
1	SUPPLY	S1	RTU-1	1	1500	1	208	60	3	NO	NO	
2	SUPPLY	S2	RTU-2	2	1500	1	208	60	3	NO	NO	
3	EXHAUST	E1	PRV-2 GRIDDLE FAN	2	1500	1	115	60	1	NO	NO	
4	EXHAUST	E2	PRV-3 FRYER FAN	1	1500	1	115	60	1	NO	NO	

CONTROL FEATURES  
TEMP SENSORS (FACTORY INSTALLED) - QTY. 2  
DRY FIRE CONTACTS - QTY. 2  
EXHAUST MAX DURING FIRE  
SUPPLY OFF DURING FIRE

SPECIAL DESIGN REQUESTS  
SDR #K2000462 - CULVERS CONTROL PANEL - EXTRA SET OF FIRE CONTACTS - REVISE WIRING DIAGRAMS



PROJECT: 7/11/2024  
CULVERS METRO M 2025 (S)  
MARK: EF-1A  
CONDENSATE HOOD  
PRV-4 CONDENSATE FAN  
PRV-1 RESTROOM FAN  
ACCUREX - WI, IA  
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revisions:  
03-06-25



PROPOSED NEW BUILDING FOR  
CULVER'S RESTAURANT  
RANGE ROAD, MARYSVILLE, MICHIGAN

HVAC HOOD, FAN & FIRE SUP.

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M-5