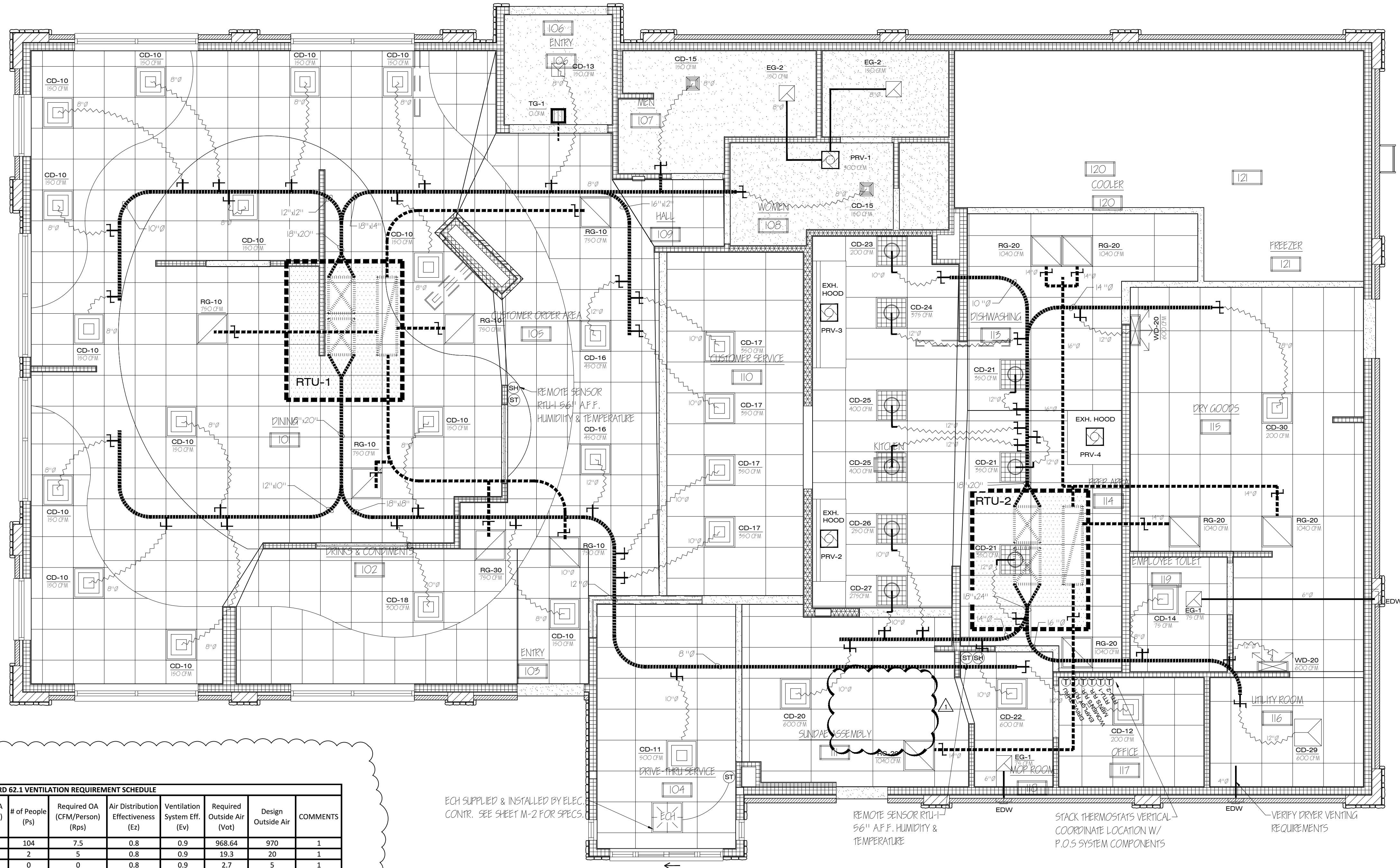


H.V.A.C. LEGEND:

WD-20	←	DIFFUSER DESIGNATION
600 CFM	←	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 DIFFUSER - 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:
- VERIFY ALLOWABLE FLEX DUCT LENGTHS WITH LOCAL CODES AND MODIFY ACCORDINGLY. ATTACH FLEXIBLE AIR CONNECTOR TO RIGID DUCT W/ STEEL DRAW BANDS ONLY. CLASS 1 FLEXIBLE AIR CONNECTOR PER UL 181 - MAX LENGTH 8'-0". PROVIDE SUPPORT AT 4'-0" O.C.
  - VENTING OF ANY COMBUSTIBLE BY-PRODUCTS IS PROHIBITED WITHIN 10 FEET OF ROOF TOP UNITS. VERIFY WITH LOCAL BUILDING INSPECTOR.
  - ALL SUPPLY AND RETURN DUCTWORK TO BE LOCATED IN TRUSS SPACE. COORDINATE WITH TRUSS SUPPLIER.
  - DIFFUSERS AND RETURN GRILLES IN BLACK ACT TO BE BLACK, ALL OTHERS TO BE WHITE.

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



ASHRAE STANDARD 62.1 VENTILATION REQUIREMENT SCHEDULE

Zone Name	Room Name/#	Area	Required OA (CFM/SQ FT) (Ras)	# of People (Ps)	Required OA (CFM/Person) (Rps)	Air Distribution Effectiveness (Ez)	Ventilation System Eff. (Ev)	Required Outside Air (Vot)	Design Outside Air	COMMENTS
RTU-1	DINING ROOM 101	1048	0.18	104	7.5	0.8	0.9	968.64	970	1
RTU-1	DRINKS & CONDIMITS 102	155	0.06	2	5	0.8	0.9	19.3	20	1
RTU-1	ENTRY 103	45	0.06	0	0	0.8	0.9	2.7	5	1
RTU-1	DRIVE-THRU SERVICE 104	141	0.06	2	5	0.8	0.9	18.46	20	1
RTU-1	CUSTOMER ORDER AREA 105	285	0.06	5	7.5	0.8	0.9	54.6	55	1
RTU-1	ENTRY 106	50	0.06	0	0	0.8	0.9	3	5	1
RTU-1	HALL 109	25	0.06	0	0	0.8	0.9	1.5	5	1
RTU-1	CUSTOMER SERVICE 110	190	0.06	5	5	0.8	0.9	36.4	40	1
RTU-2	SUNDAE PREP 111	160	0.06	2	5	0.8	0.9	19.6	20	1
RTU-2	KITCHEN 112	220	--	--	0.7	--	--	164.5	165	2
RTU-2	DISHWASHING 113	150	0.18	2	7.5	0.8	0.9	42	45	1
RTU-2	PREP AREA 114	160	0.18	2	7.5	0.8	0.9	43.8	45	1
RTU-2	DRY GOODS 115	325	0.06	0	0	0.8	0.9	19.5	20	1
RTU-2	UTILITY ROOM 116	70	0.06	0	0	0.8	0.9	4.2	5	1
RTU-2	OFFICE 117	66	0.06	1	5	0.8	0.9	8.96	10	1
RTU-2	MOP ROOM 118	47	0.06	0	5	0.8	0.9	2.82	5	1

NOTES:  
 1.) VALUES CALCULATED ACCORDING TO TABLE 403.3 OF THE 2015 MICHIGAN MECHANICAL CODE  
 2.) 0.7 CFM/SQ FT EXHAUST REQUIRED

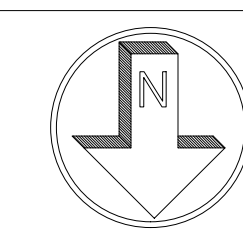
ECH SUPPLIED & INSTALLED BY ELEC CONTR. SEE SHEET M-2 FOR SPECS

REMOTE SENSOR RTU-1 56" A.F.F. HUMIDITY & TEMPERATURE

STACK THERMOSTATS VERTICAL COORDINATE LOCATION W/ P.O.S SYSTEM COMPONENTS

VERIFY DRYER VENTING REQUIREMENTS

HVAC PLAN - MIRRORED METRO M - 2021 PROTOTYPE  
 SCALE: 1/4" = 1'-0"

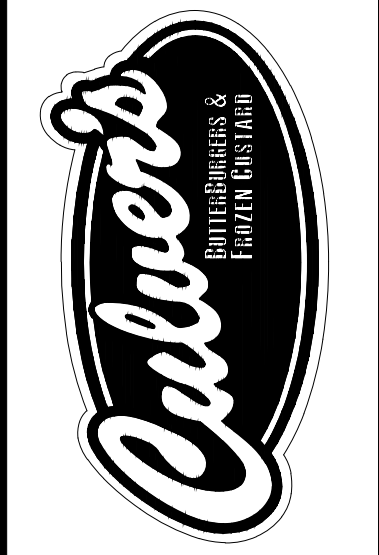


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**CULVER'S RESTAURANT**  
**66233 VAN DYKE**  
**WASHINGTON TWP., MI. 48095**

Revision	Date	Description
03-18-2022	FOR CONSTRUCTION	
06-22-2022	BULLETIN #1	
07-06-2022	BULLETIN #2	
07-27-2022	REVISED PER PLAN REVIEW	

Sheet  
**M-1**

## 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 APPARATUS.)
- PROVIDE SHOP DRAWINGS TO THE ARCHITECT/DESIGNER FOR EQUIPMENT, FANS, REGISTERS ETC. PRIOR TO PROCUREMENT
- PROVIDE OWNER WITH COLOR CHOICES FOR SWITCHES AND OTHER APPARATUS WHERE APPLICABLE
- VENT WATER HEATER 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 ASHRAE 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 SET & BALANCING DURING TRAINING WEEK & PROVIDE A WRITTEN REPORT TO OWNER.
- HVAC CONTRACTOR TO INSTALL #2 GAS w/ 1/4" 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 APPARATUS.
- 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 A-6 AND A-8.1 DRAWING.
- COMMERCIAL KITCHEN HOOD VENTILATION DUCTS AND EXHAUST EQUIPMENT SHALL BE IN COMPLIANCE WITH NFPA-96-2014, WHICH IS THE STANDARD OF THE NATIONAL FIRE PROTECTION ASSOCIATION LISTED IN CHAPTER 15 OF THE CODE.

## MECHANICAL EQUIPMENT SPECIFICATIONS

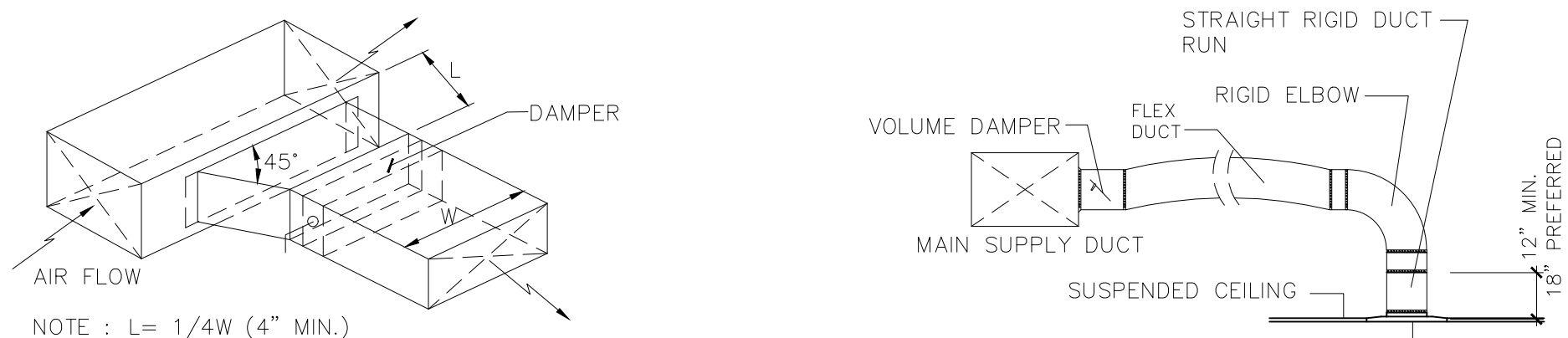
- RTU - 1 LENNOX EMERGENCE SERIES PACKAGED ROOFTOP UNITS WITH PRODIGY CONTROLLER**  
COMBINATION GAS WITH HIGH TWO STAGE HEATING AND COOLING ROOFTOP UNIT WITH HUMIDITROL AND S/S HEAT EXCHANGERS. LOW HEAT 135,000 BTU/HR AND HIGH HEAT 208,000 BTU/HR OUTPUT HEATING CAPACITY. 80% AFUE THERMAL EFF. 180,000 NET COOLING CAPACITY. 12.0 EER MINIMUM. BLOWER MOTOR SET FOR NOMINAL 6,150 CFM & FRESH AIR INTAKE DAMPER SET FOR MINIMUM 1,900 CFM. UNIT TO BE 208/3, 71 MCA, 80 MOC&P & DRIVE KIT 1. VERIFY AMPERAGE AND COORDINATE WITH ELECTRICAL CONTRACTOR. IN ADDITION TO OPTIONS LISTED ABOVE INCLUDE THE FOLLOWING FACTORY INSTALLED OPTIONS: TWO STAGE CONTROL, WEATHERPROOF DISCONNECT SWITCH, FACTORY INSTALLED/FIELD POWERED GFCI, RETURN SMOKE DETECTOR, DRAIN PAN OVERFLOW SWITCH, SINGLE ENTHALPHY ECONOMIZER WITH BAROMETRIC RELIEF AND HOODS, BLOWER BELT AUTO TENSIONER. INCLUDE THE FOLLOWING FIELD INSTALLED OPTIONS: 2" MERV8 FILTERS, SPARE BELT, DOWN FLOW HYBRID CURB, PVC DRAIN TRAP KIT, REMOTE HUMIDITY SENSOR, MESH HAIL GUARD, LENNOX MODEL 13H15 PROGRAMMABLE THERMOSTAT. **NO SUBSTITUTIONS.**
- RTU - 2 LENNOX EMERGENCE SERIES PACKAGED ROOFTOP UNITS WITH PRODIGY CONTROLLER**  
COMBINATION GAS WITH HIGH TWO STAGE HEATING AND COOLING ROOFTOP UNIT WITH HUMIDITROL AND S/S HEAT EXCHANGER. LOW HEAT 135,000 BTU/HR AND HIGH HEAT 208,000 BTU/HR OUTPUT HEATING CAPACITY. 80% AFUE THERMAL EFF. 210,000 NET COOLING CAPACITY. 12.0 EER MINIMUM. BLOWER MOTOR SET FOR NOMINAL 6,150 CFM & FRESH AIR INTAKE DAMPER SET FOR MINIMUM 1,900 CFM. UNIT TO BE 208/3, 87 MCA, 100 MOC&P & DRIVE KIT 1. VERIFY AMPERAGE AND COORDINATE WITH ELECTRICAL CONTRACTOR. IN ADDITION TO OPTIONS LISTED ABOVE INCLUDE THE FOLLOWING FACTORY INSTALLED OPTIONS: TWO STAGE CONTROL, WEATHERPROOF DISCONNECT SWITCH, FACTORY INSTALLED/FIELD POWERED GFCI, RETURN SMOKE DETECTOR, DRAIN PAN OVERFLOW SWITCH, SINGLE ENTHALPHY ECONOMIZER WITH BAROMETRIC RELIEF AND HOODS, BLOWER BELT AUTO TENSIONER. INCLUDE THE FOLLOWING FIELD INSTALLED OPTIONS: 2" MERV8 FILTERS, SPARE BELT, DOWN FLOW HYBRID CURB, PVC DRAIN TRAP KIT, REMOTE HUMIDITY SENSOR, MESH HAIL GUARD, LENNOX MODEL 13H15 PROGRAMMABLE THERMOSTAT. **NO SUBSTITUTIONS.**
- PRV - 1 ACCUREX MODEL XRED-090-D DOWNBLAST EXHAUST FAN WITH ROOF CURB AND BACKDRAFT DAMPER. 375 CFM AT .6" SP, .0667 HP MOTOR, 115 VOLTS, SINGLE PHASE. FAN TO RUN CONTINUOUSLY DURING OCCUPIED MODE. **NO SUBSTITUTIONS.****
- PRV - 2 ACCUREX MODEL XCUE-140-VG KITCHEN FAN** UPBLAST EXHAUST FAN W/CLEAN-OUT PORT, MOUNTED HINGE BASE, & AUTO BELT TENSIONER, SPARE BELT, & ROOF CURB WITH CURB EXTENSION. 1500 CFM AT 0.518" SP, 1.0 HP MOTOR, 115 VOLTS SINGLE PHASE FAN TO RUN CONTINUOUSLY DURING OCCUPIED MODE. **NO SUBSTITUTIONS.**
- PRV - 3 ACCUREX MODEL XCUE-140-VG KITCHEN FAN** UPBLAST EXHAUST FAN W/CLEAN-OUT PORT, MOUNTED HINGE BASE, & AUTO BELT TENSIONER, SPARE BELT, & ROOF CURB WITH CURB EXTENSION. 1500 CFM AT 0.518" SP, 1.0 HP MOTOR, 115 VOLTS SINGLE PHASE FAN TO RUN CONTINUOUSLY DURING OCCUPIED MODE. **NO SUBSTITUTIONS.**
- EF1-A 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-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-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 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 & TO ALL PREVAILING LOCAL CODE REQUIREMENTS. **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. 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 AND INSTALLED BY ELECTRICAL CONTRACTOR)**

AIR BALANCE TABLE			
Mark	Vent. Air CFM	Exh. Air CFM	Net Balance
RTU-1	+1900	--	+1900
RTU-2	+1900	--	+3800
PRV-1	--	-300	+3500
PRV-2	--	-1500	+2000
EF1-A	--	-1500	+500
PRV-4	--	-350	+150
EF-1	--	-75	+75

## NATIONAL ACCOUNT PROGRAM

- LENNOX INDUSTRIES, INC. - ROOFTOP HVAC EQUIPMENT**  
National Accounts Sales: (800) 367-6285 Option #1 lennoxind.com  
National Account Technical Support: (800) 367-6285 Option #2 lennoxind.com
- ACCUREX/GREENHECK FAN CORPORATION - KITCHEN HOODS, EXHAUST FANS, ROOF CURBS, ANSUL SYSTEMS, AND ACCESSORIES**  
CONTACT Andy Jacobs @ 1-715-301-6022 or andrew.jacobs@accurex.com  
Secondary contact Sara Block @ 1-877-377-2548
- CARNES COMPANY - DIFFUSERS AND GRILLES**  
National Accounts Sales: Chris Stratton @ (608) 845-6411 cstratton@carnes.com  
National Accounts Rep: Brian Baker @ (608) 845-6411 bbaker@carnes.com

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



## BRANCH DUCT TAKEOFF DETAILS

N.T.S.

## DIFFUSER/GRILLE SCHEDULE

QNTY	Mark	Manuf.	Model	Type	Mounting	Diffuser	Neck	CFM	Zone	Notes
14	CD-10	CARNES	SFTB24	SUPPLY	GRID	4-WAY	8"	150	RTU-1	2
1	CD-11	CARNES	SJT24	SUPPLY	GRID	4-WAY	10"	500	RTU-1	1
1	CD-12	CARNES	SJT24	SUPPLY	GRID	4-WAY	10"	200	RTU-1	1
1	CD-13	CARNES	SKSA	SUPPLY	CEILING	3-WAY	8"	150	RTU-1	3
1	CD-14	CARNES	SFTB24	SUPPLY	GRID	4-WAY	8"	75	RTU-2	
2	CD-15	CARNES	SKSA	SUPPLY	CEILING	4-WAY	8"	150	RTU-1	3
2	CD-16	CARNES	SFTB24	SUPPLY	GRID	4-WAY	12"	450	RTU-1	
1	CD-18	CARNES	SFTB24	SUPPLY	GRID	4-WAY	10"	300	RTU-1	6
1	CD-20	CARNES	SFTB24	SUPPLY	GRID	4-WAY	10"	600	RTU-2	
3	CD-21	CARNES	SPRB22412	SUPPLY	GRID	PERFORATED	12"	350	RTU-2	7
1	CD-22	CARNES	SFTB24	SUPPLY	GRID	4-WAY	10"	600	RTU-2	
1	CD-23	CARNES	SPRB22410	SUPPLY	GRID	PERFORATED	10"	200	RTU-2	7
1	CD-24	CARNES	SPRB22412	SUPPLY	GRID	PERFORATED	12"	375	RTU-2	7
2	CD-25	CARNES	SPRB22412	SUPPLY	GRID	PERFORATED	12"	400	RTU-2	7
1	CD-26	CARNES	SPRB22410	SUPPLY	GRID	PERFORATED	10"	250	RTU-2	7
1	CD-27	CARNES	SPRB22410	SUPPLY	GRID	PERFORATED	10"	275	RTU-2	7
1	CD-29	CARNES	SKEA	SUPPLY	GRID	3-WAY	12"	600	RTU-2	
1	CD-30	CARNES	SKSA	SUPPLY	CEILING	4-WAY	8"	200	RTU-2	
2	EG-1	CARNES	RAPAH	EXHAUST	GRID	12" x 12"	6"	75	RTU-2	
2	EG-2	CARNES	RTLAH	EXHAUST	CEILING	12" x 12"	6"	150	RTU-1	4
5	RG-10	CARNES	RAPMF	RETURN	GRID	RETURN	12 x 12"	750	RTU-1	8
6	RG-20	CARNES	RAPMF	RETURN	GRID	RETURN	14"	1040	RTU-2	8
1	RG-30	CARNES	RAPMF	RETURN	GRID	RETURN	10"	750	RTU-1	6,8
1	TG-1	CARNES	RSABH	TRANSFER	WALL	12 x 4"	12" x 4"	0	RTU-1	5
2	WD-20	CARNES	RTDBH	SUPPLY	WALL	24 x 6"	12"	600	RTU-2	

### DIFFUSER NOTES:

- PROVIDE KXDA EXTENSION ROD WITH KNOB
- 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

## 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

### 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)

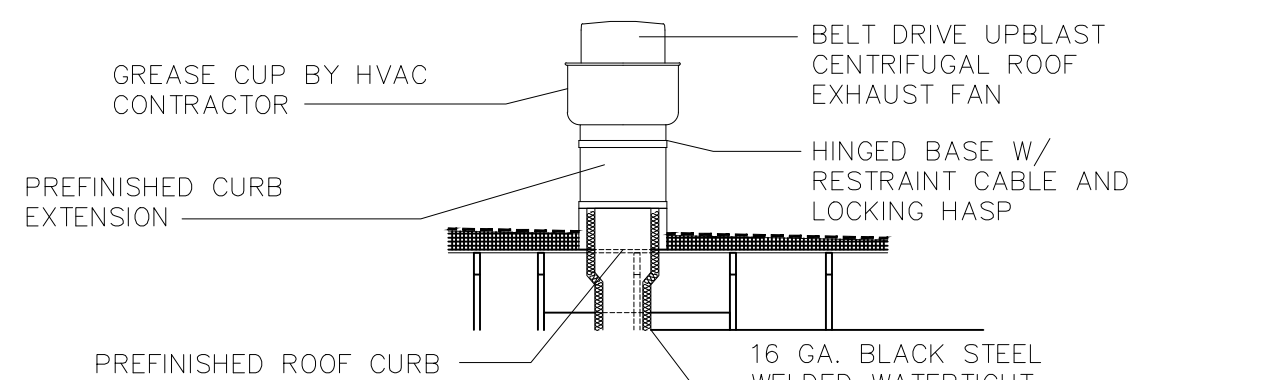
### Dining Room Unit

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:

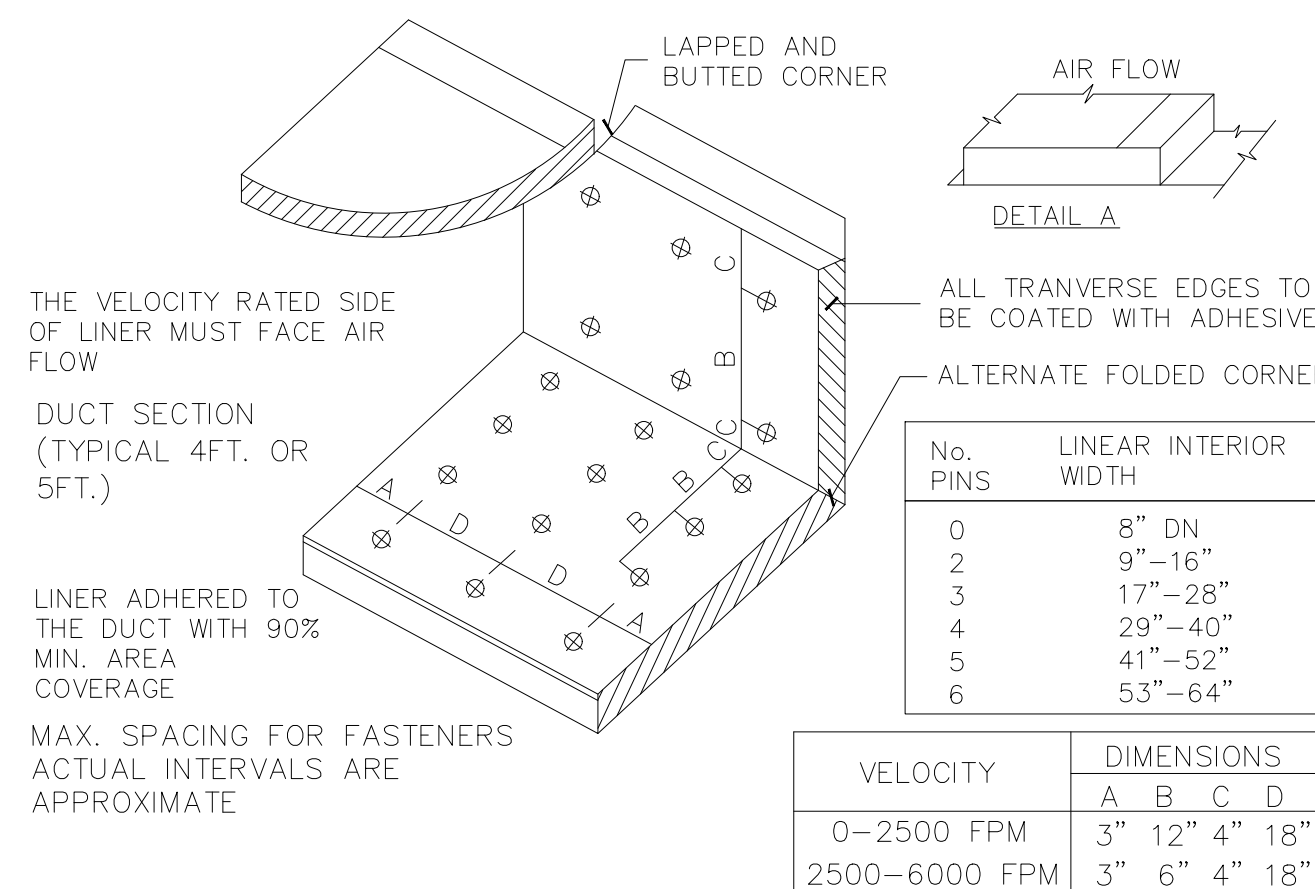
- ROOM SET POINT
- REMOTE SENSOR OPERATION
- TEMP DEADBANDS

CHECK FOR CORRECT OPERATION AND WIRING OF ALL SENSORS.



## KITCHEN HOOD EXHAUST FAN DETAIL

N.T.S.



## DUCT LINER INSTALLATION DETAIL

N.T.S.

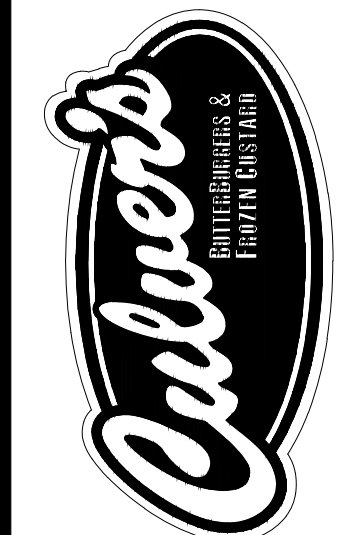
NOTE: USE ONLY ON VERTICAL DROP FROM RTU TO WITHIN 9'-10" A.F.F., DUCT LINER WILL NOT BE PERMITTED ON ANY HORIZ. RUNS.



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Prairie du Sac, WI 53578  
608-643-7980

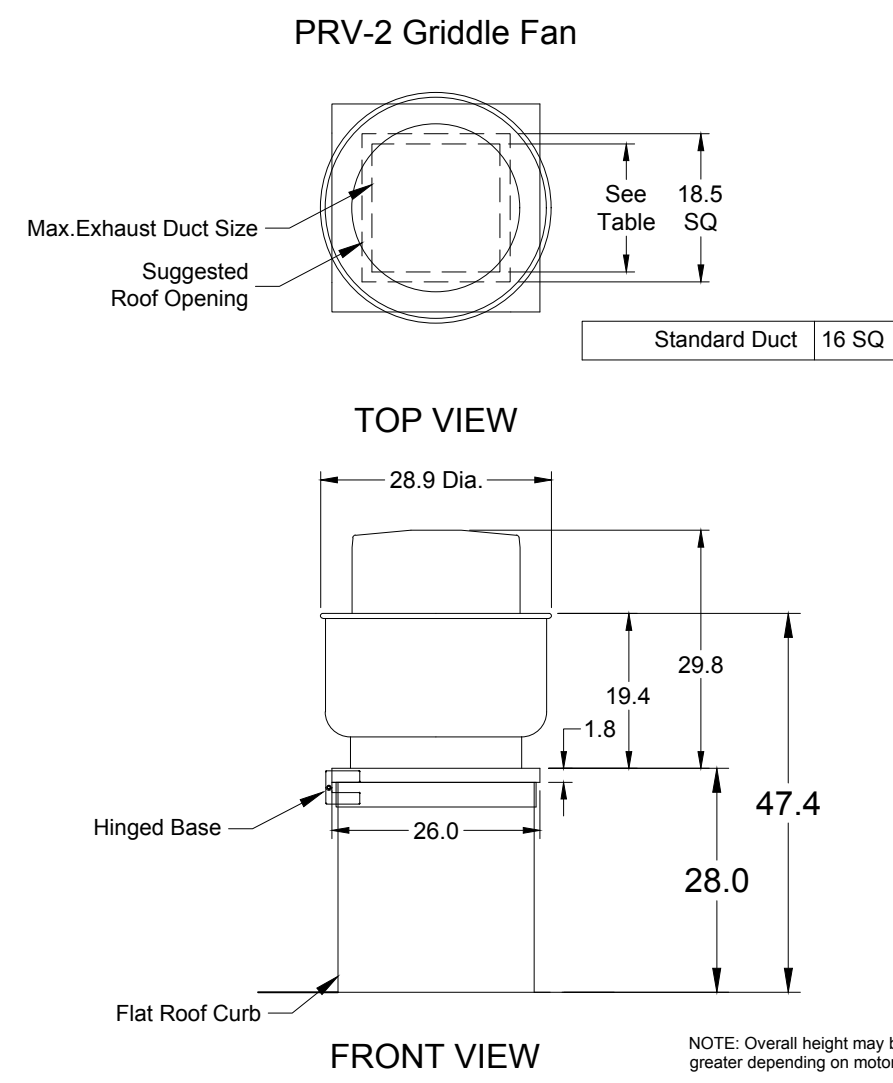


**CULVER'S RESTAURANT**  
**66233 VAN DYKE**  
**WASHINGTON TWP., MI. 48095**

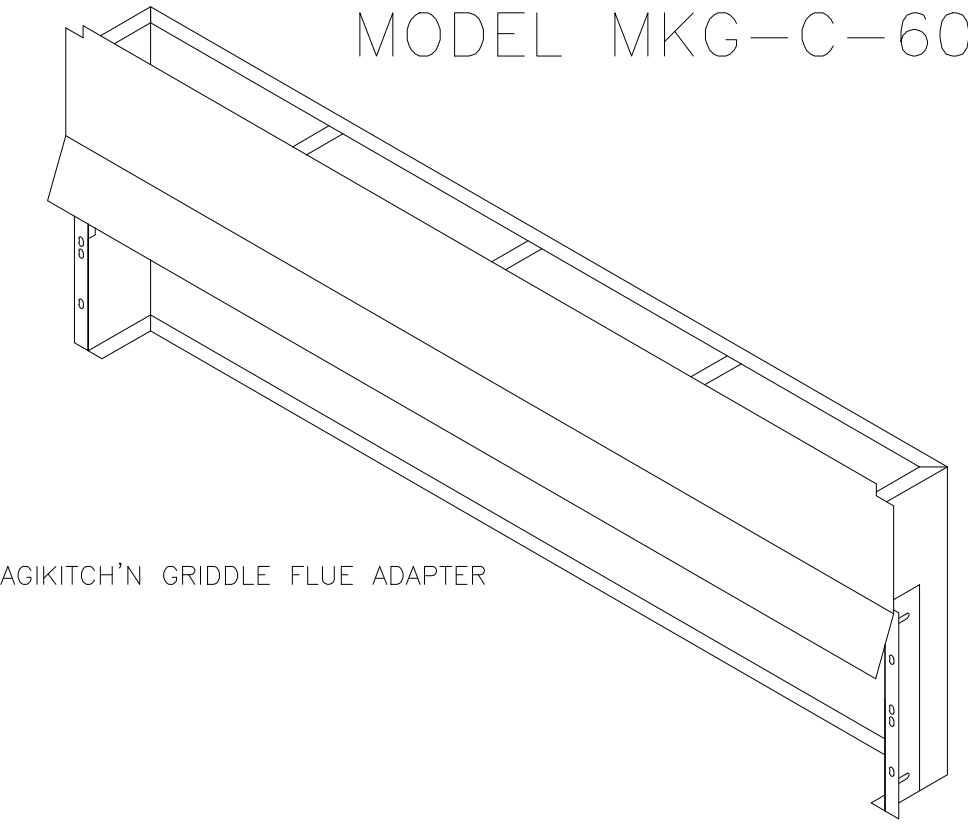
Date	Revision
03-18-2022	FOR CONSTRUCTION
06-22-2022	BULLETIN #1
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**M-2**

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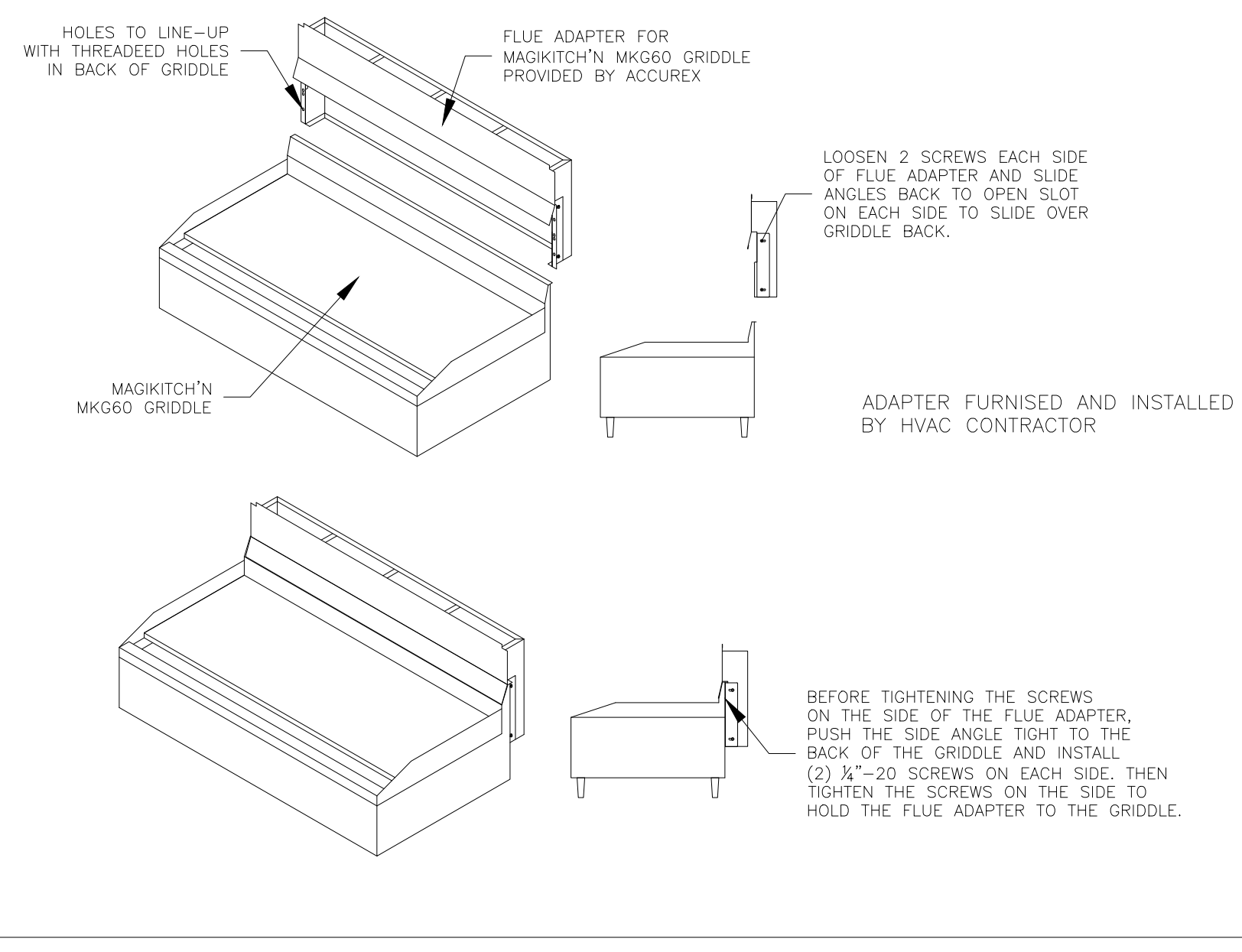


MUST USE WITH MAGIKITCH'N MODEL MKG-C-60



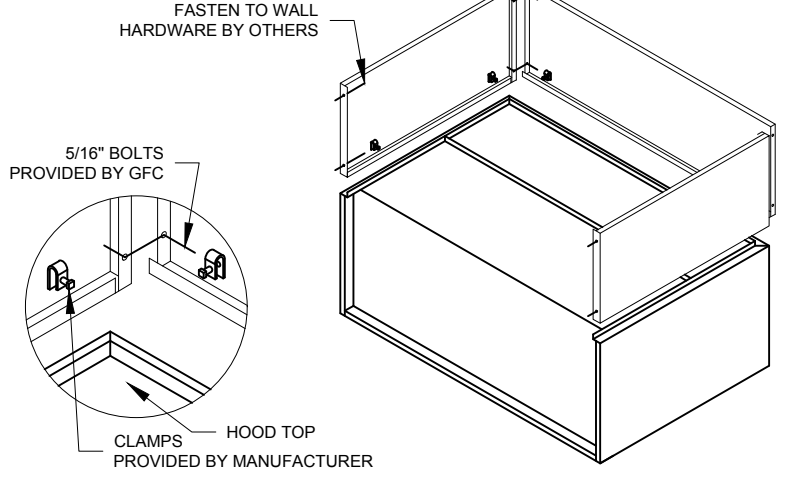
60" MAGIKITCH'N GRIDDLE FLUE ADAPTER

MAGIKITCH'N MKG-C-60 GRIDDLE FLUE ADAPTER MOUNTING INSTRUCTIONS



EQUIPMENT SCHEDULE														
TYPE 1 KITCHEN HOOD					MARK: ITEM#49									
HOOD NO.	ACCUREX MODEL STYLE / CONFIGURATION	HOOD DIMENSIONS			GREASE CUP OR DRAIN	HOOD TEMP. RATING	TOTAL WEIGHT	SECTION LOCATION	MARK: ITEM#49					
		SECTION LENGTH	WIDTH	HEIGHT					SECTION	LOCATION				
1	XGEP44-S SINGLE WALL EXHAUST ONLY LOW PROXIMITY	64 IN.	TOP 23 IN. FRONT 12 IN. BOT 8 IN. BACK 36 IN.	12 IN.	RIGHT	600 DEG F	190.0 LBS.	SINGLE						
ILLUMINATION DETAILS														
HOOD NO.	FIXTURE TYPE	BULB / LAMP INFO	QTY	INTENSITY FT CANDLES	TYPE / MODEL MATERIAL	QTY	LENGTH	HEIGHT						
1	NONE	NA	0	0 / 0 IN. OC	GREASE GRABBER STAINLESS STEEL	4	16 IN.	16 IN.						
EXHAUST PLENUM COLLARS														
HOOD SECTION #	COLLAR #	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 #25625														
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														
EQUIPMENT SPECIFIC S/S FLUE ADAPTER														
SPECIAL DESIGN REQUESTS														
SDR #K1100145 - FLUE BYPASS HOOD														
FIRE SUPPRESSION SYSTEM														
MARK: FS 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 INSTALLATION														
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED														
SUPPRESSION AGENT - INCLUDED - 3 GAL. - (1) 3 TANK(S)														
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, SUPPLIED UP TO 2"														
REMOTE PULL STATION - STANDARD - INSTALLATION AT SINGLE POINT OF EGRESS														
METAL BLOW-OFF CAPS - INCLUDED														
FIRE SYSTEM PERMIT - REQUIRED - FEE INCLUDED														
360°F. FUSIBLE LINK OR AS TESTED AND INSTALLED BY LOCAL INSTALLER PER UL MANUAL														
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														
Beit Drive Upblast Centrifugal Roof Exhaust Fan														
Qty	Accurex Model	Volume (CFM)	SP (in wg)	FRPM	Operating Power (hp)	Weight (Lb.)	Size (hp)	V/C/P	End.	Motor RPM	Windings	FLA	MARK: PRV-2	
1	XCLUE-140-VG	1500	1.8	1,702	0.83	92	1.0	115/0/1	OP	1725	1	18		
OPTIONS AND ACCESSORIES														
Switch, NEMA-1, (PN) NTSND-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 50,000 hrs)														

ENCLOSURE PANEL INSTALLATION DETAIL



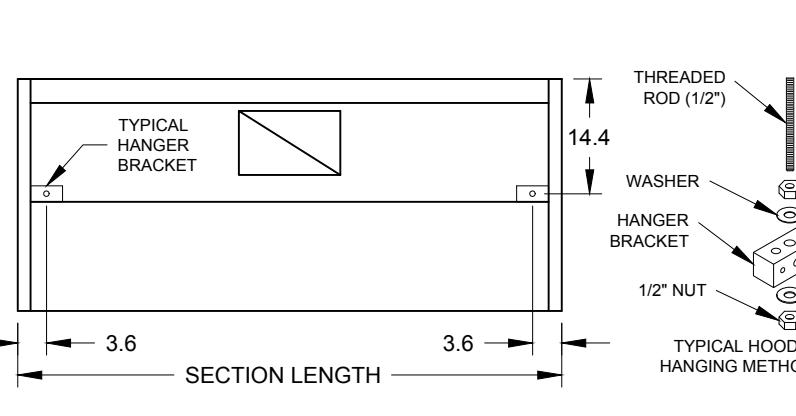
HOOD HANGING HEIGHT FOR FIRE SYSTEMS

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

RECOMMENDED HANGING HEIGHT = 60" 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



GENERAL DRAWING NOTES

Verify building entry conditions or limitations for equipment access to space.

Verify type and height of finished ceiling and if hood(s) may extend above finished ceiling (if required).

Seismic installation and bracing of equipment is by others.

Greenheck will not accept liability for problems that result from sub-standard installation, including field electrical wiring that deviates from supplied diagrams.

Installation and start-up information is shipped with all equipment via the Installation, Operation and Maintenance Manual (OM), also included is a troubleshooting guide. Have all start-up info available prior to any warranty claims and/or factory technical support.

VENTILATION SYSTEM NOTES

Greenheck ventilators are designed in compliance with all national codes: NFPA # 96, national electric code, BOCA, uniform mechanical code, international mechanical code, and southern building conference. See national evaluation report #436 for allowable values, and/or conditions of use concerning material presented in this document. Local codes may vary. It is the responsibility of the purchaser to submit drawings to local authorities.

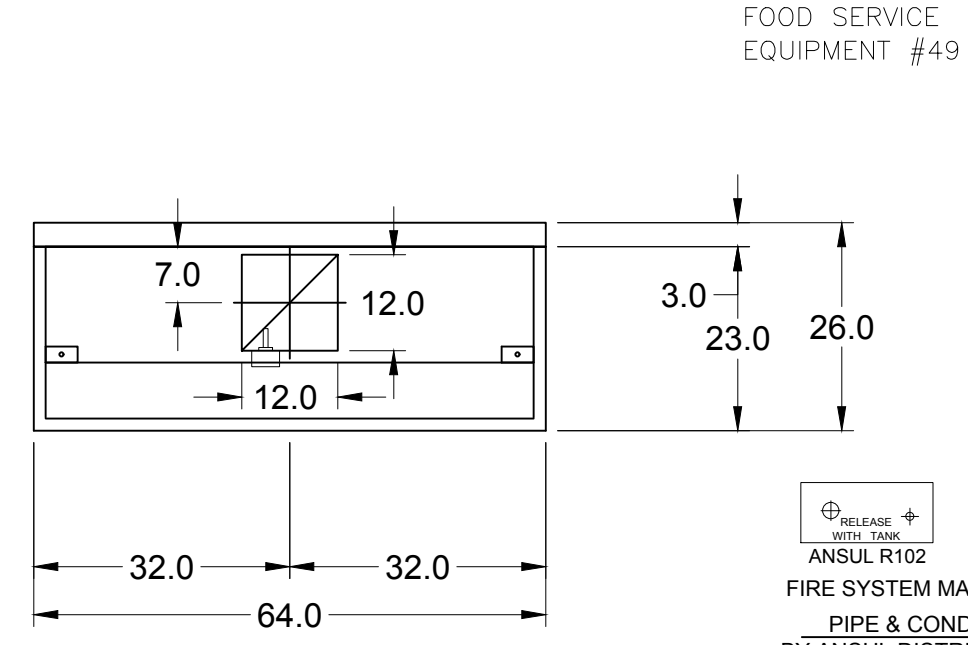
Exhaust and supply air volumes are to be maintained within -5% to +10% tolerance of values indicated. Static pressure(s) indicated are for the ventilator at the duct connection(s) only.

The grease filter face velocities are based on the filter manufacturers recommendations for maximum grease extraction. Inlet opening air velocities for waterwash, dry cartridge and high velocity cartridge filters manufactured by Greenheck are designed to deliver maximum grease extraction.

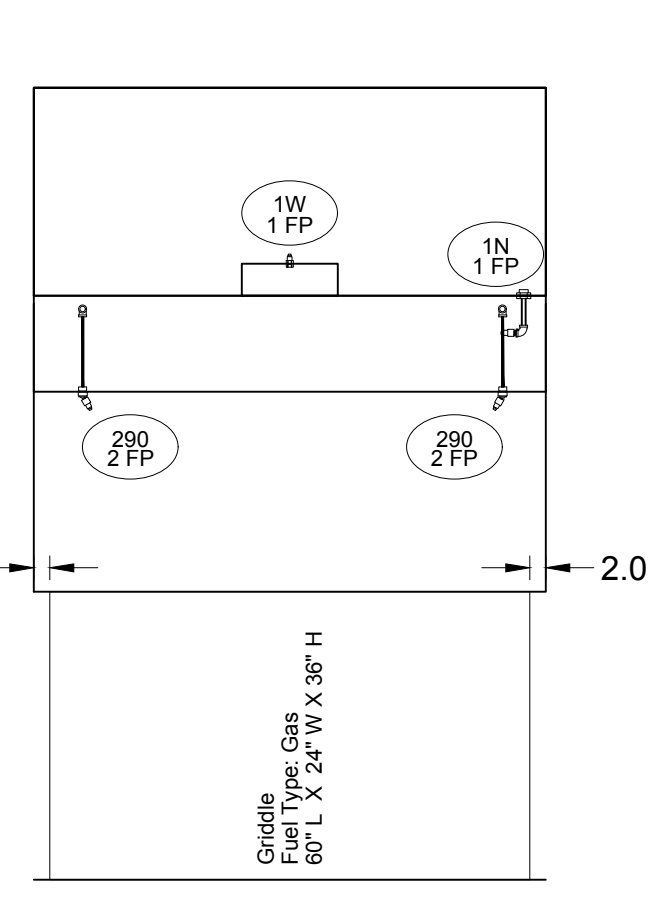
Hoods installation (by others unless otherwise noted) shall be in accordance with NFPA # 96 and applicable building codes.

PROPRIETARY INFORMATION NOTICE

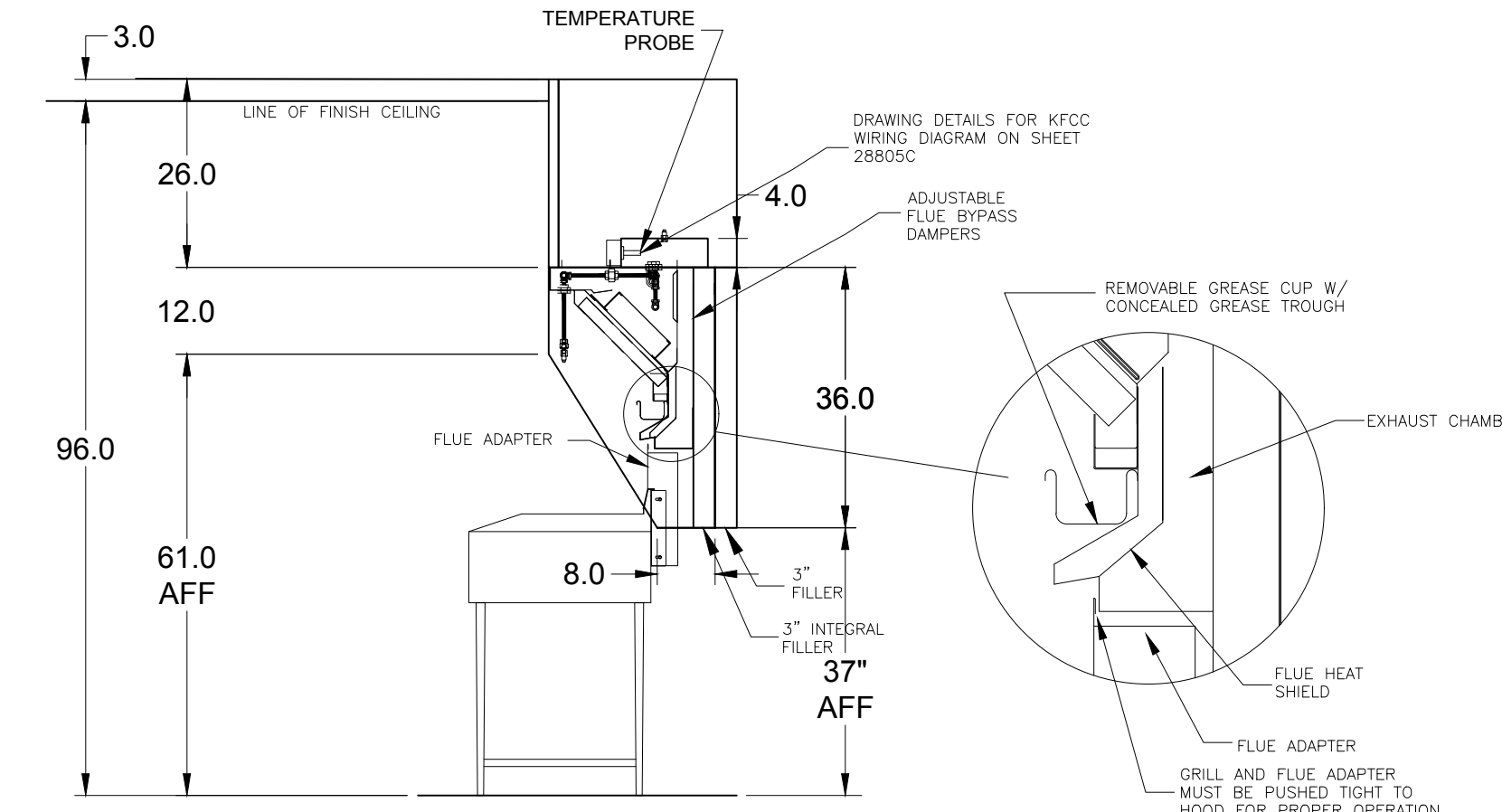
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MARK: ITEM #49 PLAN VIEW



MARK: ITEM #49 ELEVATION VIEW



MARK: ITEM #49 SECTION VIEW

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

**CONTROL PANEL**

- STAINLESS STEEL ENCLOSURE
- AGENT STORAGE TANK
- EXPULSION GAS CARTRIDGE
- ANSUL AUTOM RELEASE
- REGULATOR
- MANU-OFF FOR WIRING MICROSWITCH

**WIRING DIAGRAMS**  
WIDPOT MICRO SWITCH

DROPT 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:**

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 standard to the right end of the hood unless a wall is located on the right end.

-Ansul Autom 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 other than that which 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 than 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 (shut 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 than those indicated on the Fire Suppression Detail.

**NOTES:**

- DENOTES FIELD INSTALLATION
- DENOTES FACTORY INSTALLATION
- DO NOT USE BLACK WIRE ON SHUT-ACTION SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTREMELY ALARM, LIGHT CIRCUITS, ETC.

CONSTRUCTION COMPLIES WITH NFPA 96

Thank you for your interest in Accurex

**SUBMITTAL**

Please return one approved print to your Greenheck Representative including signature, date, and answers to all submittal "verify" notes and questions. Fabrication will not begin until after approved drawings are received.

APPROVED AS SUBMITTED

APPROVED AS NOTED

REJECTED - REVISE AND RESUBMIT

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

REV DESCRIPTION DATE

**ACCUREX**

CULVER'S MASTER TEMPLATE

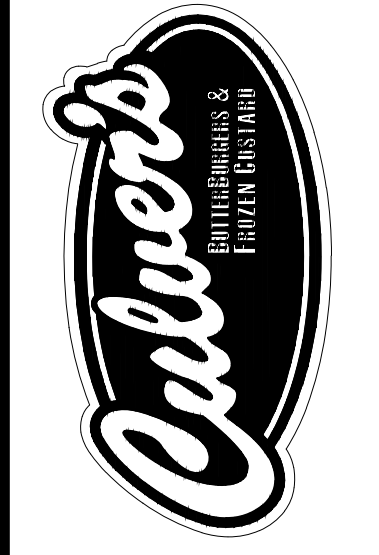
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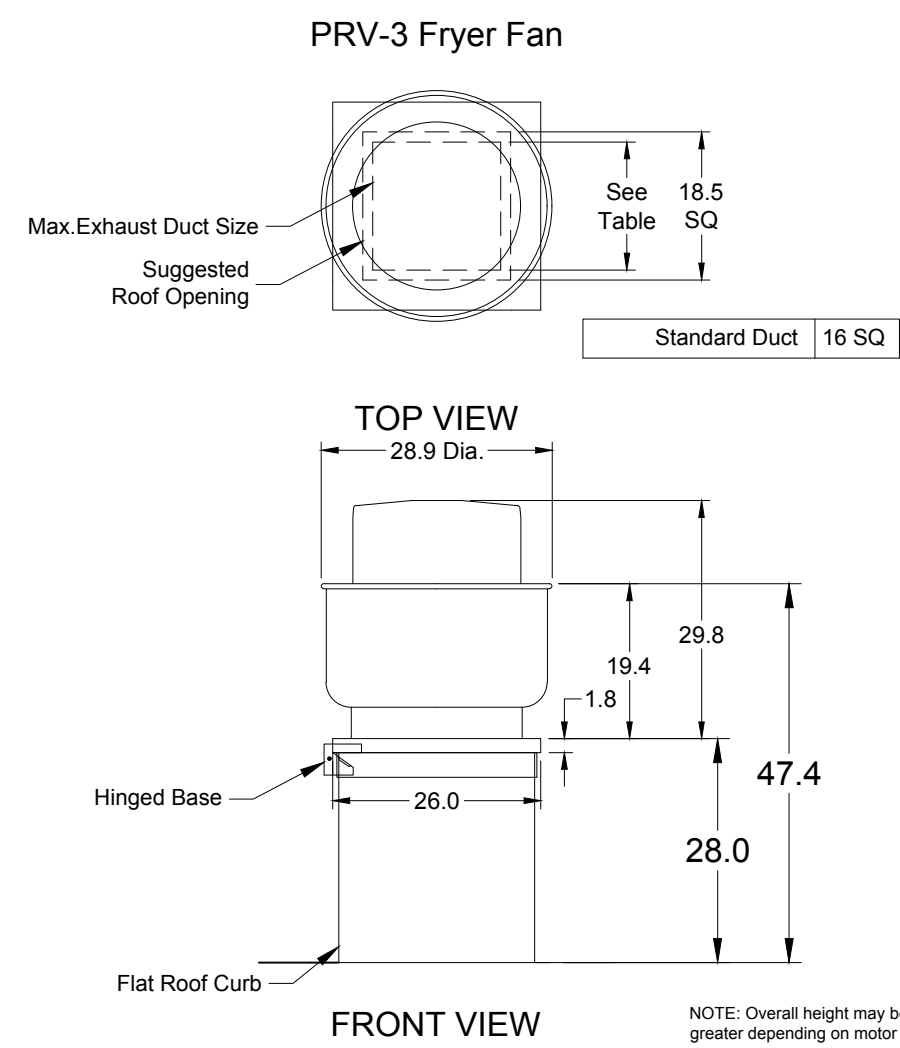
Culver Franchising System, Inc.  
540 Water Street  
Prairie du Sac, WI 53578  
608-643-7980



CULVER'S RESTAURANT  
66233 VAN DYKE  
WASHINGTON TWP., MI. 48095

Date	Revision	FOR CONSTRUCTION	BULLETIN #1	BULLETIN #2
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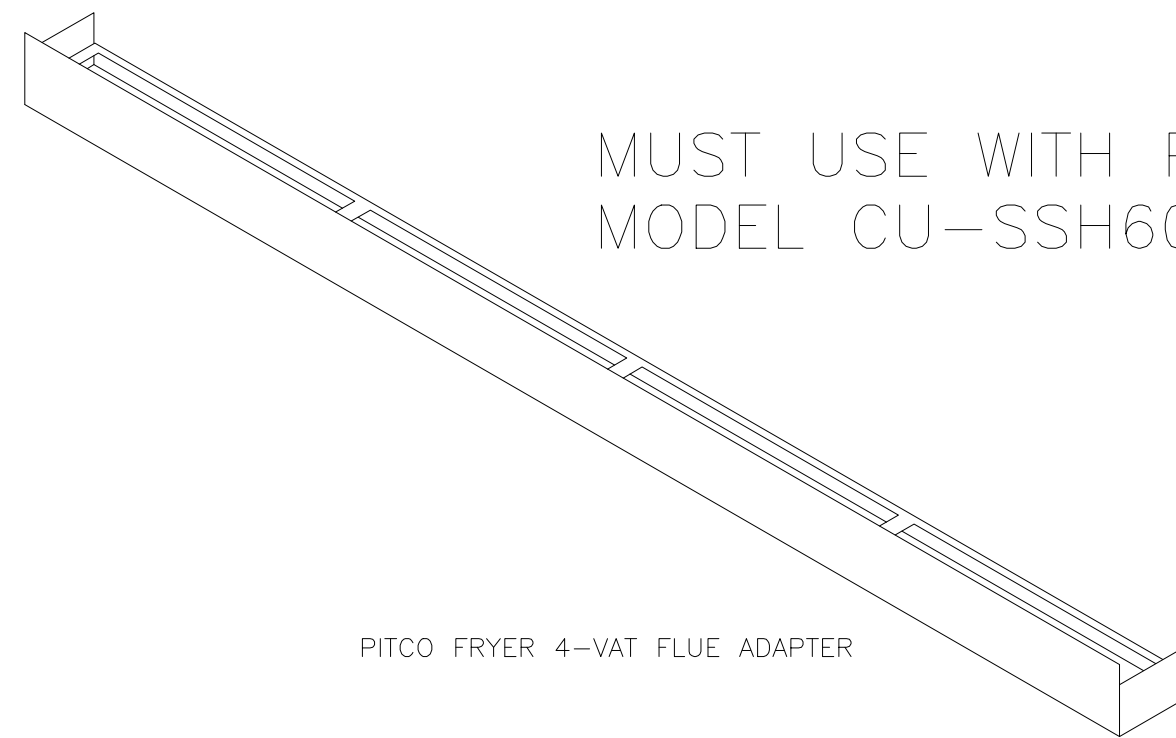
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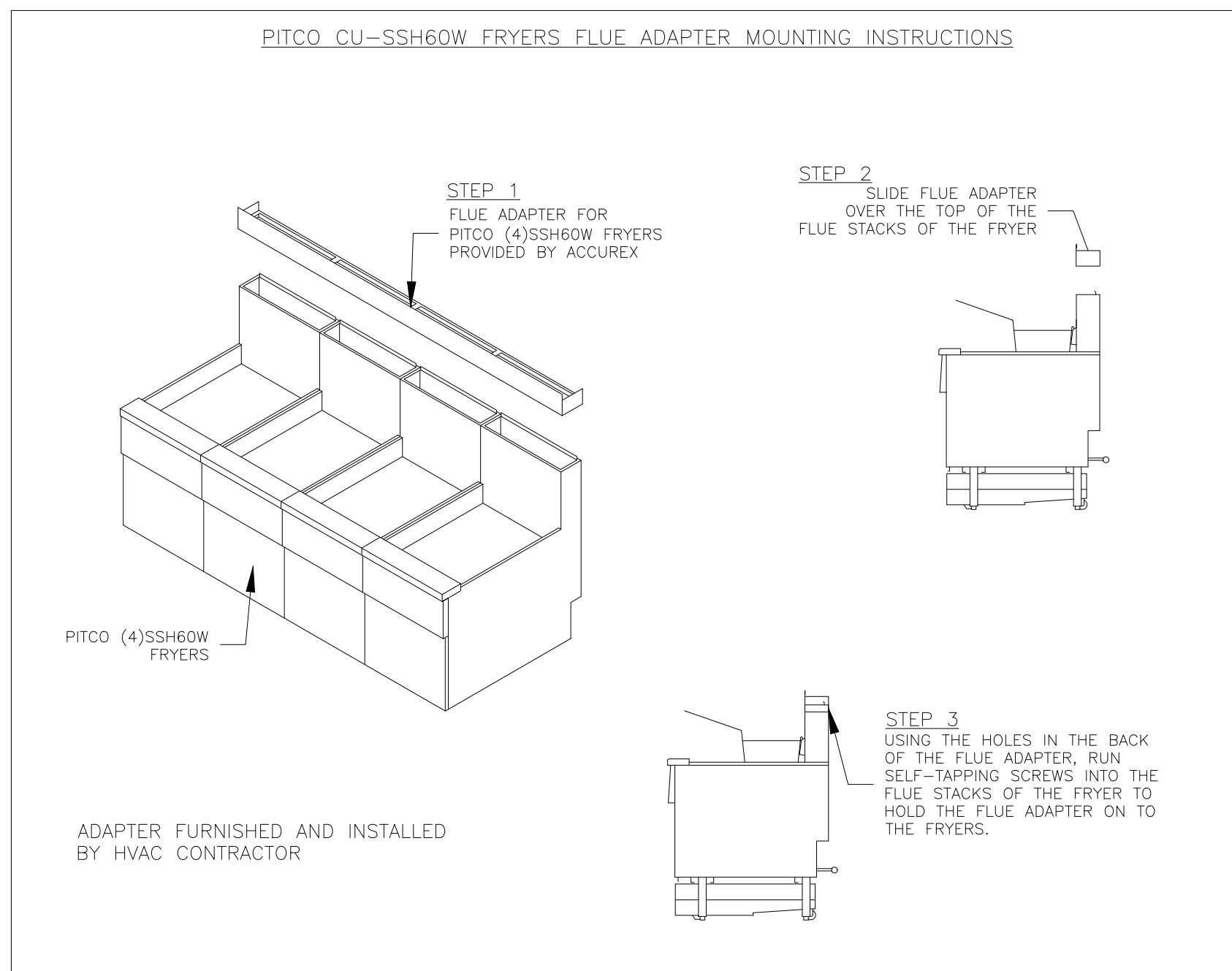
FOOD SERVICE EQUIPMENT #59

# 4-VAT FRYER BATTERY

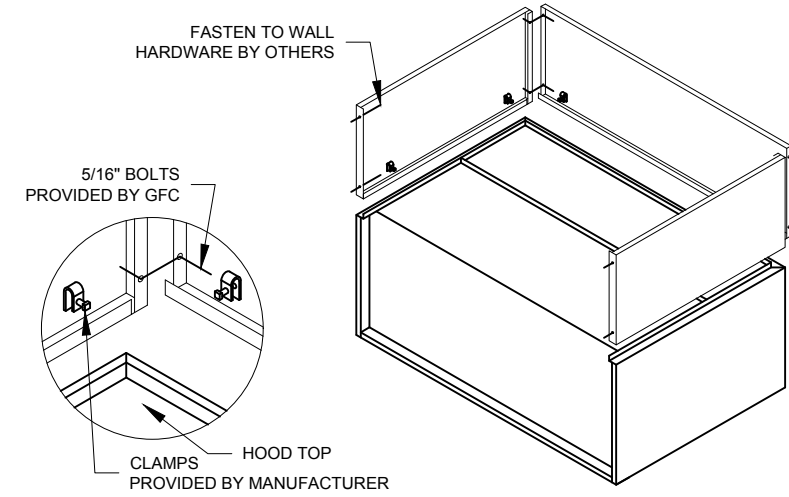
MUST USE WITH PITCO MODEL CU-SSH60W



## PITCO CU-SSH60W FRYERS FLUE ADAPTER MOUNTING INSTRUCTIONS



### ENCLOSURE PANEL INSTALLATION DETAIL

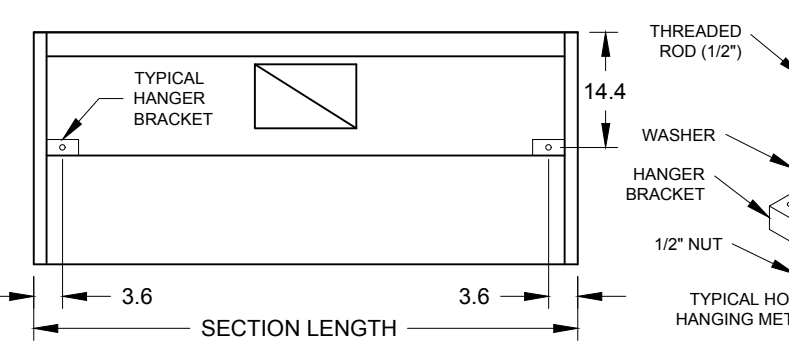


### HOOD HANGING HEIGHT FOR FIRE SYSTEMS

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- RECOMMENDED HANGING HEIGHT = 60" 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



### GENERAL DRAWING NOTES

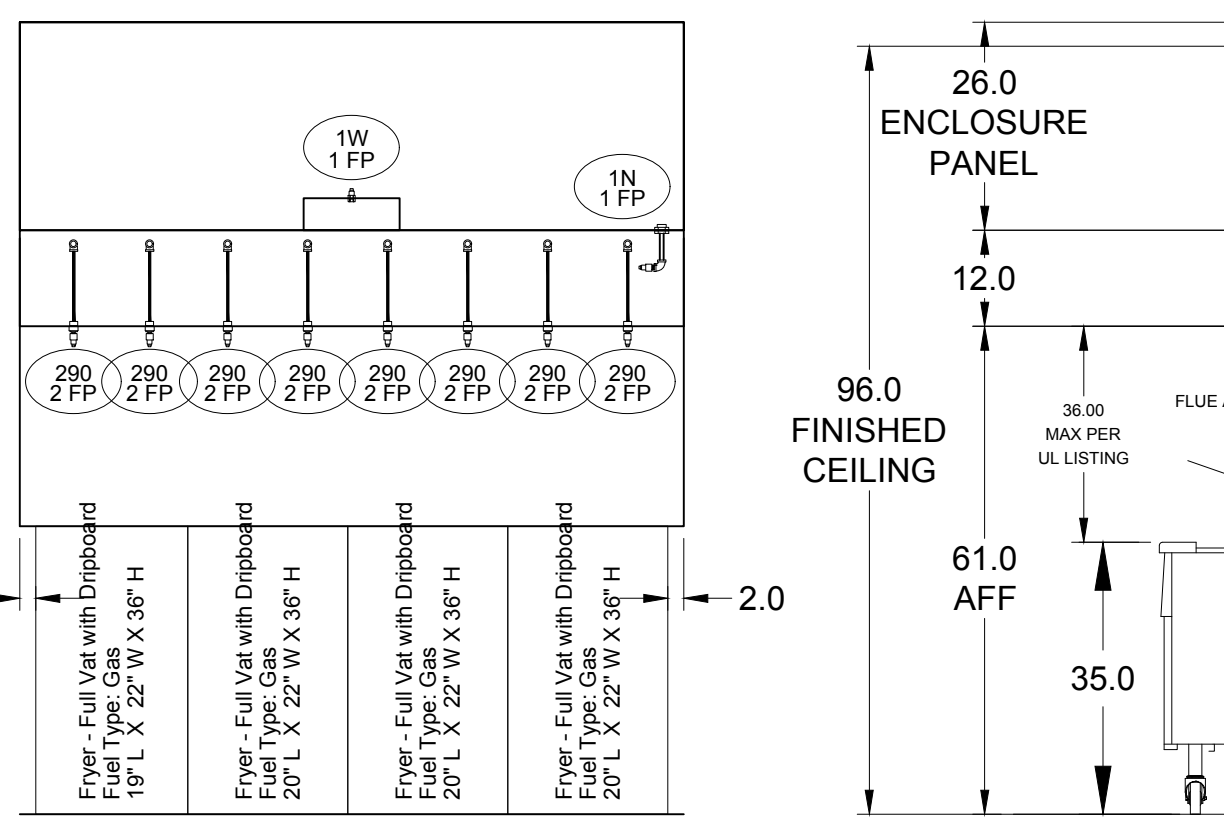
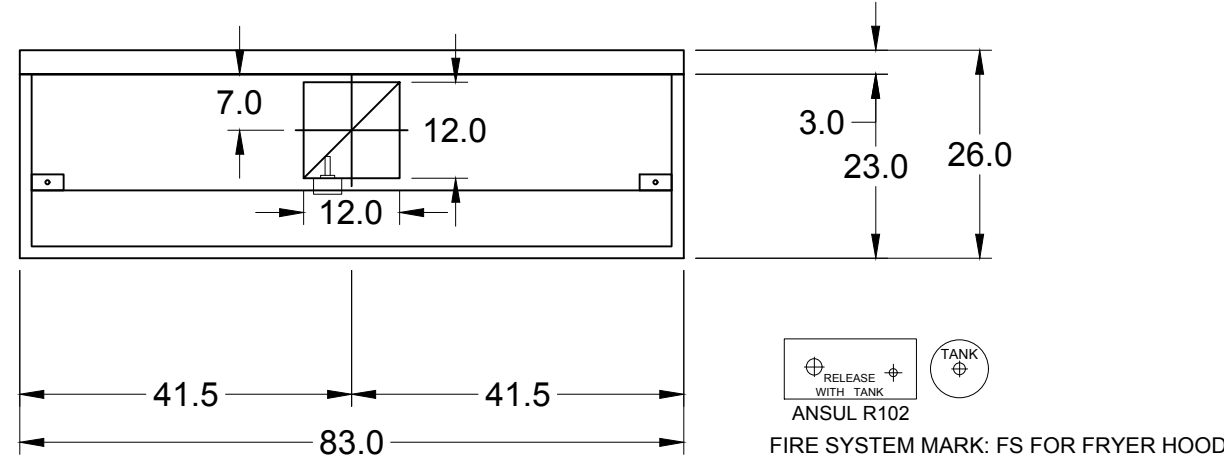
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Verify type and height of finished ceiling and if hood(s) may extend above finished ceiling (if required).  
Seismic installation and bracing of equipment is by others.  
Greenheck will not accept liability for problems that result from sub-standard installation, including field electrical wiring that deviate from supplied diagrams, site conditions (ductwork, fuel types and structural conditions) that GFC has not been notified of at the time of ordering. Or use of this equipment other than that for which it is designed.  
It is the responsibility of the purchaser to hire qualified personnel for installation and start-up of all equipment. Installation and start-up information is shipped with all equipment via the Installation, Operation and Maintenance Manual (OM), also included is a troubleshooting guide. Have all start-up info available prior to any warranty claims and/or factory technical support.

### VENTILATION SYSTEM NOTES

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Hoods installation (by others unless otherwise noted) shall be in accordance with NFPA # 96 and applicable building codes.

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### EQUIPMENT SCHEDULE

TYPE 1 KITCHEN HOOD		HOOD DIMENSIONS		MARK: ITEM #59		
HOOD NO.	ACCUREX MODEL STYLE / CONFIGURATION	SECTION LENGTH	WIDTH	HEIGHT	TOTAL WEIGHT	SECTION LOCATION
1	XXEP-83-S SINGLE WALL EXHAUST ONLY LOW PROXIMITY	83 IN.	TOP 23 IN. FRONT 12 IN. BOT 3 IN.	BACK 36 IN.	RIGHT 800 DEG F	189.0 LBS. SINGLE

HOOD NO.	FIXTURE TYPE	QTY	INTENSITY FT CANDLES	TYPE / MODEL MATERIAL	QTY	LENGTH	HEIGHT
1	NONE	NA	0 / 0 IN. OC	X-TRACTOR STAINLESS STEEL	5	16 IN.	16 IN.

HOOD SECTION #	COLLAR #	DISTANCE TO END (IN.)	WIDTH (IN.)	LENGTH (IN.)	DIAMETER (IN.)	VOLUME (CFM)	S.P. (IN. WC)	VELOCITY (FT/MIN)
1	1	17.1	41.5	12	12	1500	0.518	1500

430 STAINLESS STEEL WHERE EXPOSED  
UL 710 LISTED W/O UT 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 (PE) TECHNOLOGY  
STANDING SEAM CONSTRUCTION FOR SUPERIOR STRENGTH  
EMBOSSED STAINLESS STEEL FINISH FOR HIGH CORROSION RESISTANCE  
EQUIPMENT SPECIFIC S/S FLUE ADAPTER

SPECIAL DESIGN REQUESTS

SDR #K1100559 - NEW 4L FRYER SYSTEM

FIRE SUPPRESSION SYSTEM MARK: FS FOR FRYER HOOD

MANUFACTURER / MODEL	FLOW POINTS	SUPPLY LINE	DETECTION	MOUNTING
ANSUL R-102 WET CHEMICAL	18 UTILIZED 22 AVAILABLE	CONTINUOUS	FUSIBLE LINK	RIGHT END REMOTE MOUNTED

FULL INSTALLATION (INCLUDES PRE-PIPED HOODS) WITH DETECTION AND FACTORY COORDINATED INSTALL  
CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED  
SUPPRESSION AGENT - INCLUDED - 6 GAL. - (2) 3.0 TANK(S)  
GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, SUPPLIED UP TO 2"  
REMOTE PULL STATION - STANDARD - INSTALLATION AT SINGLE POINT OF EGRESS  
METAL BLOW-OFF CAPS - INCLUDED  
FIRE SYSTEM PERMIT - REQUIRED - FEE INCLUDED  
500' F. FUSIBLE LINK OR AS TESTED AND INSTALLED BY LOCAL INSTALLER PER UL MANUAL

FIRE SYSTEM PROTECTED HOOD(S) (UL-300) (MARK NAME / SECTION)

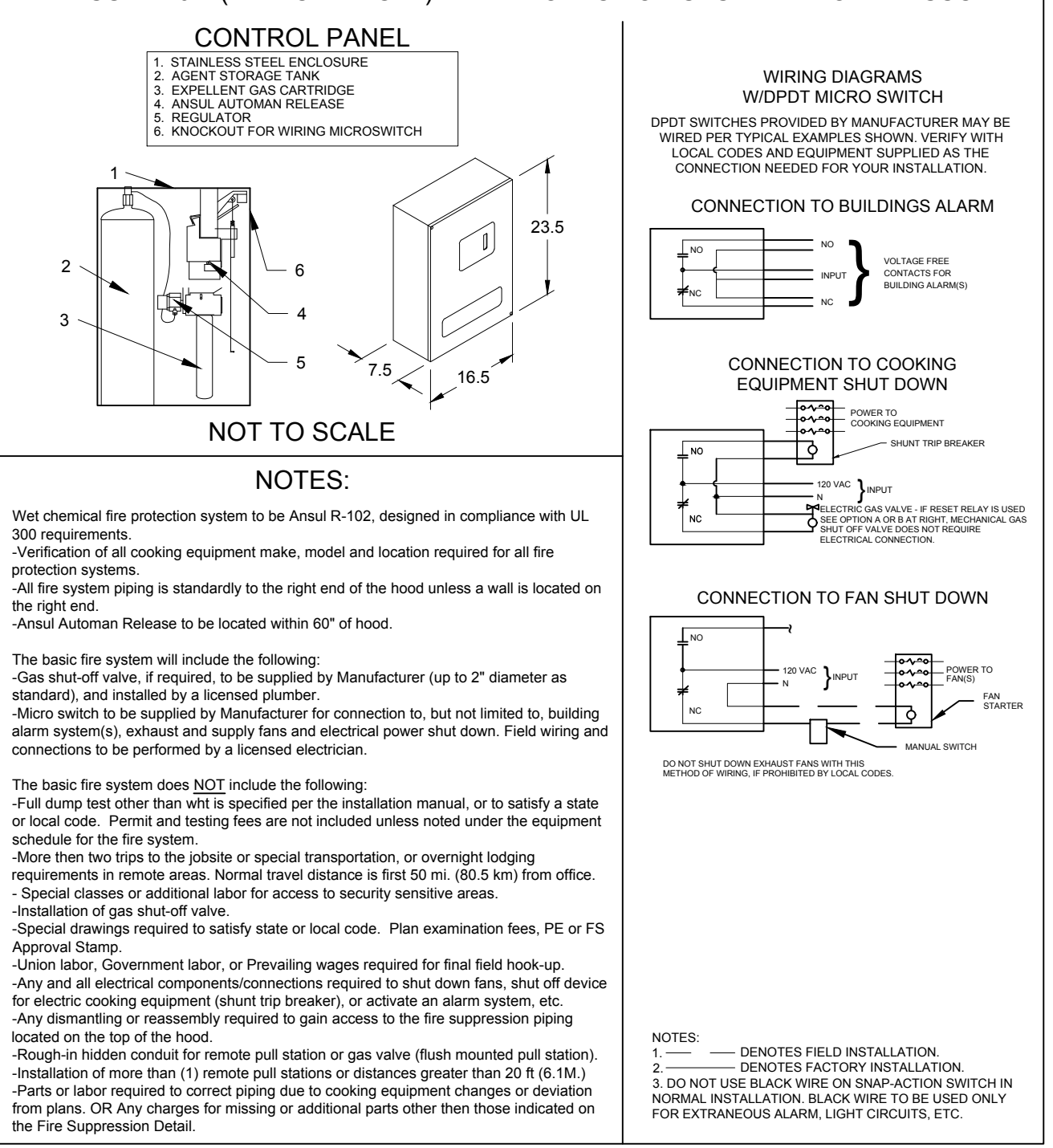
FRYER HOOD SECTION 1 - (LENGTH 83.0 IN.) - LOW PROXIMITY HOOD

### 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.)	Size (hp)	V/C/P	Enc.	Motor RPM	Windings	FLA
1	XCUE-140-VG	1500	1	1349	0.46	92	0.1	115/60/1	OP	1725	1	18

UL/ULC 762 Listed - "Power Ventilators for Rest. Exh. Appliances"  
Switch, NEMA-1, Toggle, Shipped with unit  
Larger curb cap size - 28" 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)

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



Thank you for your interest in Accurex

**SUBMITTAL**

Please return one approved print to your Greenheck Representative including signature, date, and answers to all submittal "verify" notes and questions. Fabrication will not begin until after approved drawings are received.

APPROVED AS SUBMITTED  
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SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

REV DESCRIPTION DATE

**ACCUREX**

CULVER'S MASTER TEMPLATE

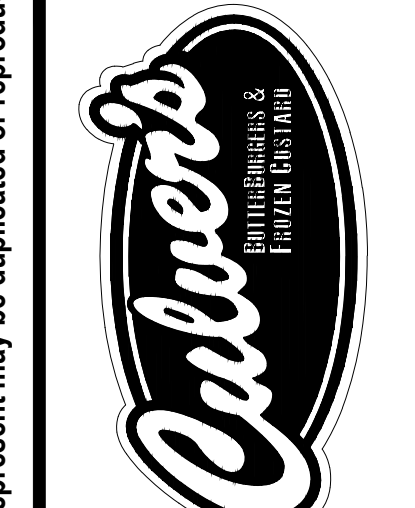
SCALE \_\_\_\_\_

CAD DRAWING NO. \_\_\_\_\_

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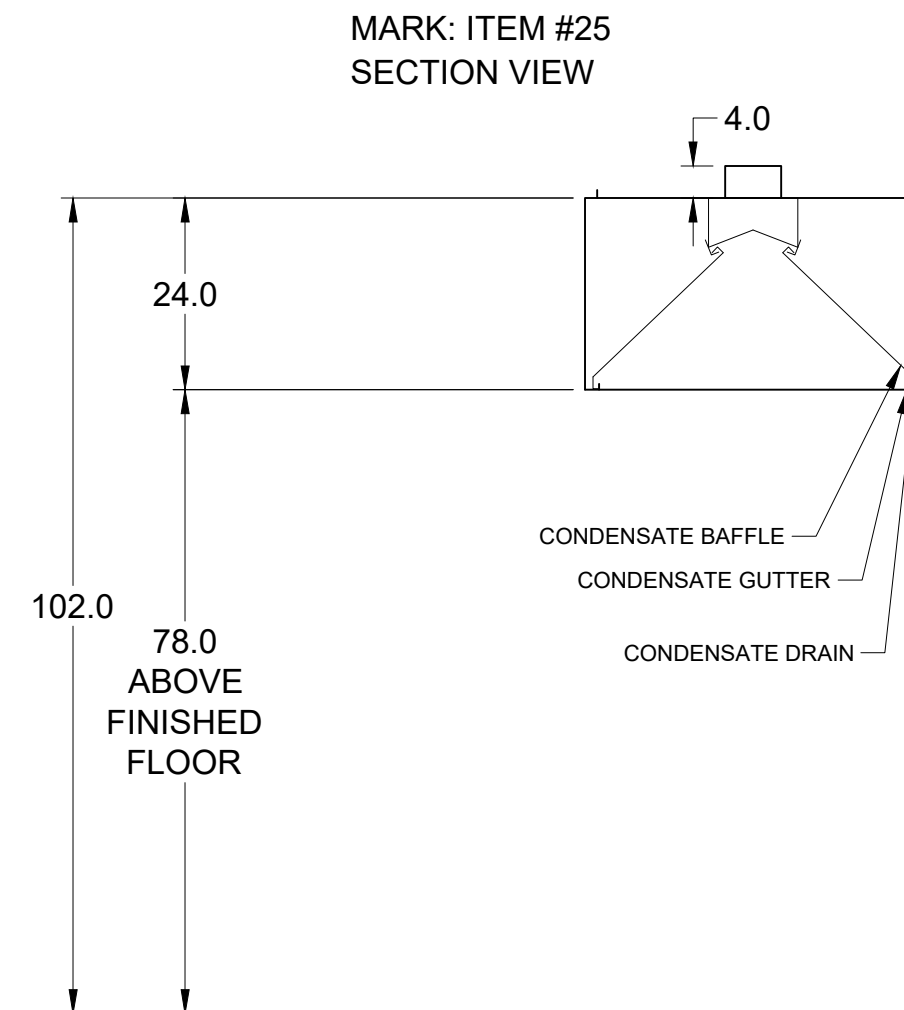
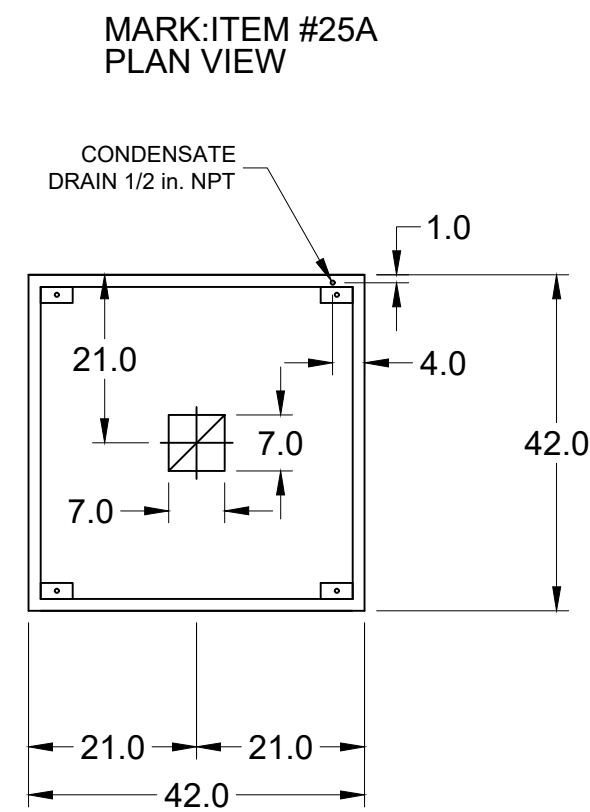
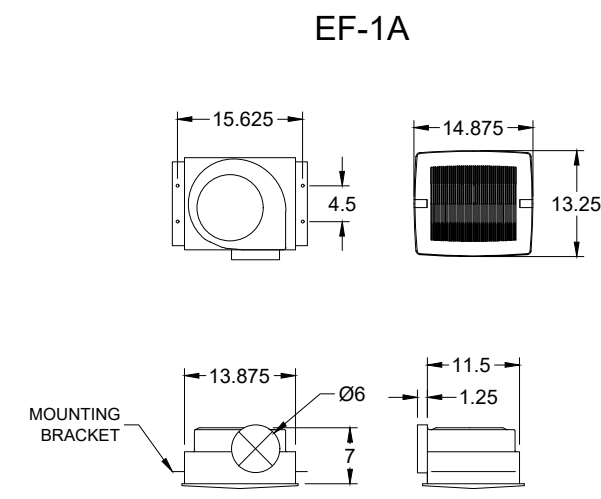
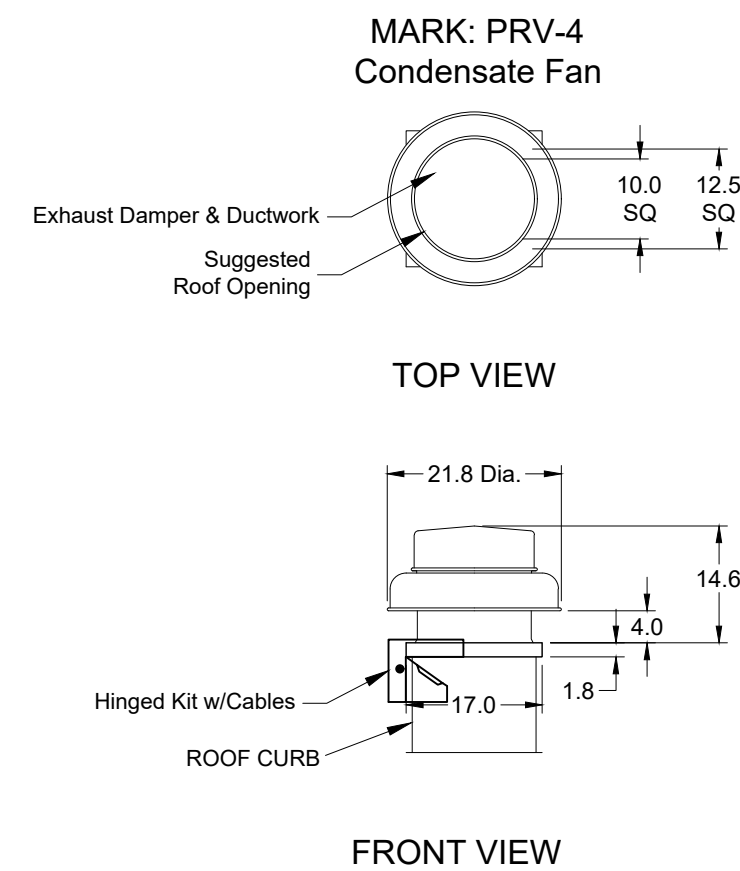
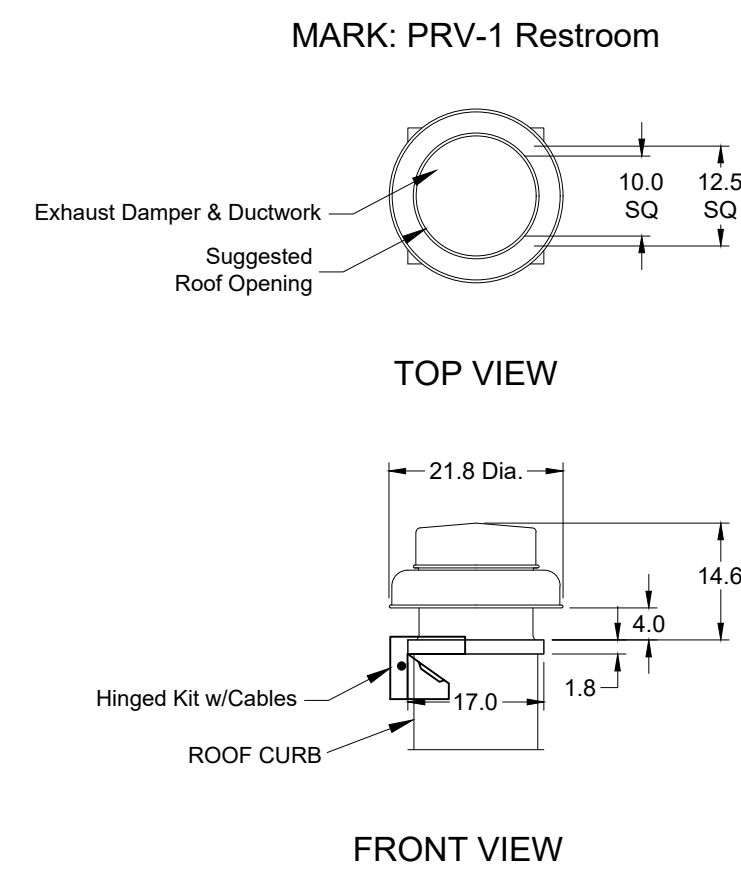


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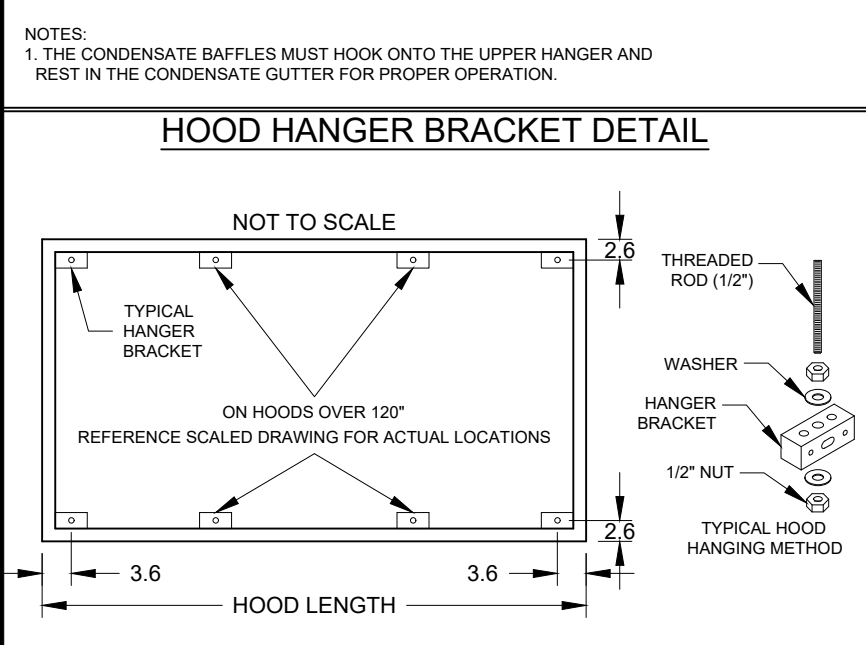
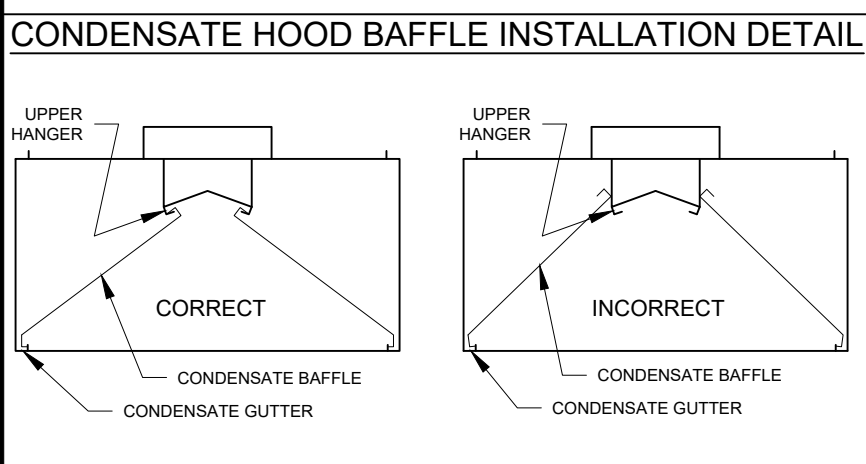
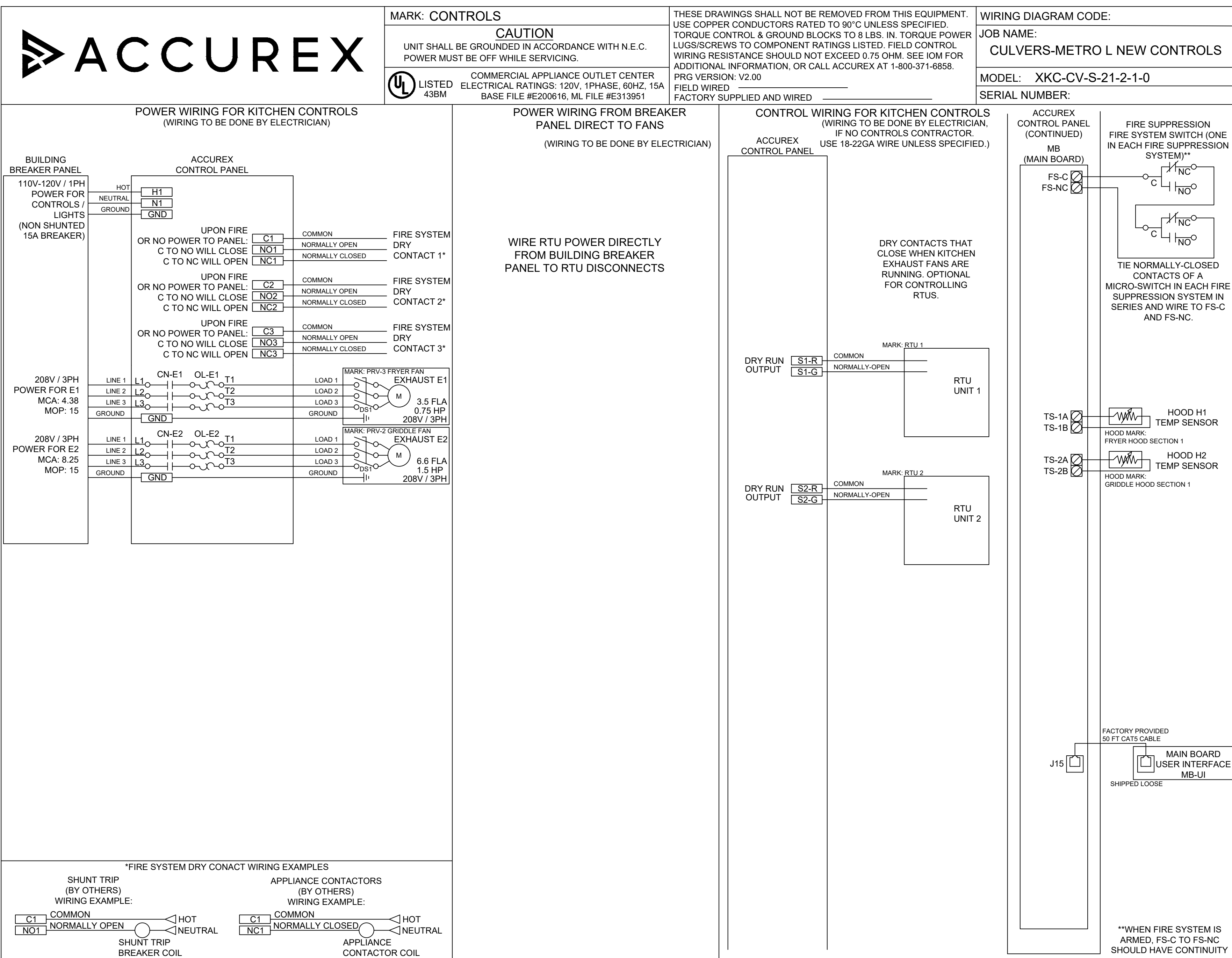


EQUIPMENT SCHEDULE				
ELECTRICAL CONTROL BOX		EXHAUST FAN QTY	SUPPLY FAN QTY	MARK: KFCC
DESCRIPTION / ACCUREX MODEL MOUNTING LOCATION (CONTROL PANEL / SWITCHES)		2	0	60 CYCLE
KITCHEN FAN CONTROL CENTER / XFCC SHIP LOOSE / SHIP LOOSE FOR REMOTE MOUNTING				
CONTROL PANEL ENCLOSURE - 16 GA 304 STAINLESS STEEL ENCLOSURE (NEMA-1) - DIMENSIONS 12 X 18 X 6				
WIRING DIAGRAM # 7100-2 - 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 INTERNATIONAL MECHANICAL CODE 2008 SECTION 507.2.1.1				
TURN ON EXHAUST IN FIRE THERMAL OVERLOADS IN CABINET 1 SPEED FANS)				
SPECIAL DESIGN REQUESTS				
SDR #K800240 - USE KIT #852883, WIRING DIAG. #22905336				
TYPE 2 KITCHEN HOOD		MARK: ITEM #25		
HOOD NO.	ACCUREX MODEL STYLE / CONFIGURATION	SECTION LENGTH	WIDTH	HEIGHT
1	XCR-880	42.0 IN.	42 IN.	24 IN.
		GREASE CUP OR DRAIN	HOOD TEMP. RATING	TOTAL WEIGHT
		RIGHT	NA	224.0 LBS.
		SECTION LOCATION		
		NA		

EQUIPMENT SCHEDULE					
Direct Drive Centrifugal Roof Exhaust Fan		MARK: PRV-1 Restroom			
Qty	Accurex Model	Volume (CFM)	SP (in wg)	FRPM	
1	XRED-095-D	375	0.5	1470	
		Operating Power (hp)	Weight (Lb.)	Size (hp)	
		0.060	43	0.0667	
		V/C/P	End:	Motor RPM	
		115/60/1	OP	1550	
		Windings	FLA		
		1	NA		

EQUIPMENT SCHEDULE					
Direct Drive Centrifugal Roof Exhaust Fan		MARK: PRV-4 Condensate Fan			
Qty	Accurex Model	Volume (CFM)	SP (in wg)	FRPM	
1	XRED-095-D	350	0.5	1455	
		Operating Power (hp)	Weight (Lb.)	Size (hp)	
		0.07	43	0.0667	
		V/C/P	End:	Motor RPM	
		115/60/1	OP	1550	
		Windings	FLA		
		1	NA		

EQUIPMENT SCHEDULE					
Ceiling Exhaust Fan		MARK: EF-1 Condensate Fan			
Qty	Accurex Model	Volume (CFM)	SP (in wg)	FRPM	
2	XCR-880	75	0.125	885	
		Operating Power (hp)	Weight (Lb.)	Size (hp)	
		0.01	10	0.0	
		V/C/P	End:	Motor RPM	
		115/60/1	OP	900	
		Windings	FLA		
		1	NA		



**GENERAL DRAWING NOTES**

Verify building entry conditions or limitations for equipment access to space.

Verify type and height of finished ceiling and if hood(s) may extend above finished ceiling (if required).

Seismic installation and bracing of equipment is by others. Accurex will not accept liability for problems that result from sub-standard installation. Including field electrical wiring that deviate from supplied diagrams, jobsite conditions (ductwork, fuel types and structural conditions) that Accurex has not been notified of at the time of ordering. Or use of this equipment other than that for which it is designed.

It is the responsibility of the purchaser to hire qualified personnel for installation and start-up of all equipment. Installation and start-up information is shipped with all equipment via the Installation, Operation and Maintenance Manual (IOM), also included is a troubleshooting guide. Have all start-up info available prior to any warranty claims and/or factory technical support.

**VENTILATION SYSTEM NOTES**

Greenheck ventilators are designed in compliance with all national codes: NFPA # 96, national electric code, BOCA, uniform mechanical code, international mechanical code, and southern building conference. See national evaluation report #436 for allowable values, and/or conditions of use concerning material presented in this document. Local codes may vary. It is the responsibility of the purchaser to submit drawings to local authorities.

Exhaust and supply air volumes are to be maintained within -5% to +10% tolerance of values indicated. Static pressure(s) indicated are for the ventilator at the duct connection(s) only.

The grease filter face velocities are based on the filter manufacturers recommendations for maximum grease extraction. Inlet opening air velocities for waterwash, dry cartridge and high velocity cartridge filters manufactured by Greenheck are designed to deliver maximum grease extraction.

Hoods installation (by others unless otherwise noted) shall be in accordance with NFPA # 96 and applicable building codes.

**PROPRIETARY INFORMATION NOTICE**

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FOR TECHNICAL SUPPORT ON ACCUREX CONTROLS PLEASE CALL ACCUREX TECHNICAL SUPPORT: 1-800-371-6858  
 SECONDARY CONTACTS ARE: AARON VAN KREY 715.841.8521 TYLER SCHILLING 715.841.8749



Thank you for your interest in Accurex

**SUBMITTAL**

Please return one approved print to your Accurex Representative including signature, date, and answers to all submitted "verify" notes and questions. Fabrication will not begin until after approved drawings are received.

APPROVED AS SUBMITTED  
 APPROVED AS NOTED  
 REJECTED - REVISE AND RESUBMIT

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

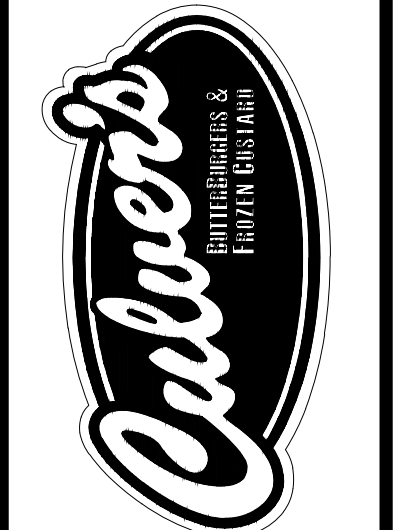
REV DESCRIPTION DATE

ACCUREX  
 CULVER'S MASTER TEMPLATE  
 C28805C

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Culver Franchising System, Inc.  
 540 Water Street  
 Prairie du Sac, WI 53578  
 608-643-7980



CULVER'S RESTAURANT  
 66233 VAN DYKE  
 WASHINGTON TWP., MI. 48095

Date	Revision	FOR CONSTRUCTION
03-18-2022		

Sheet  
**M-5**

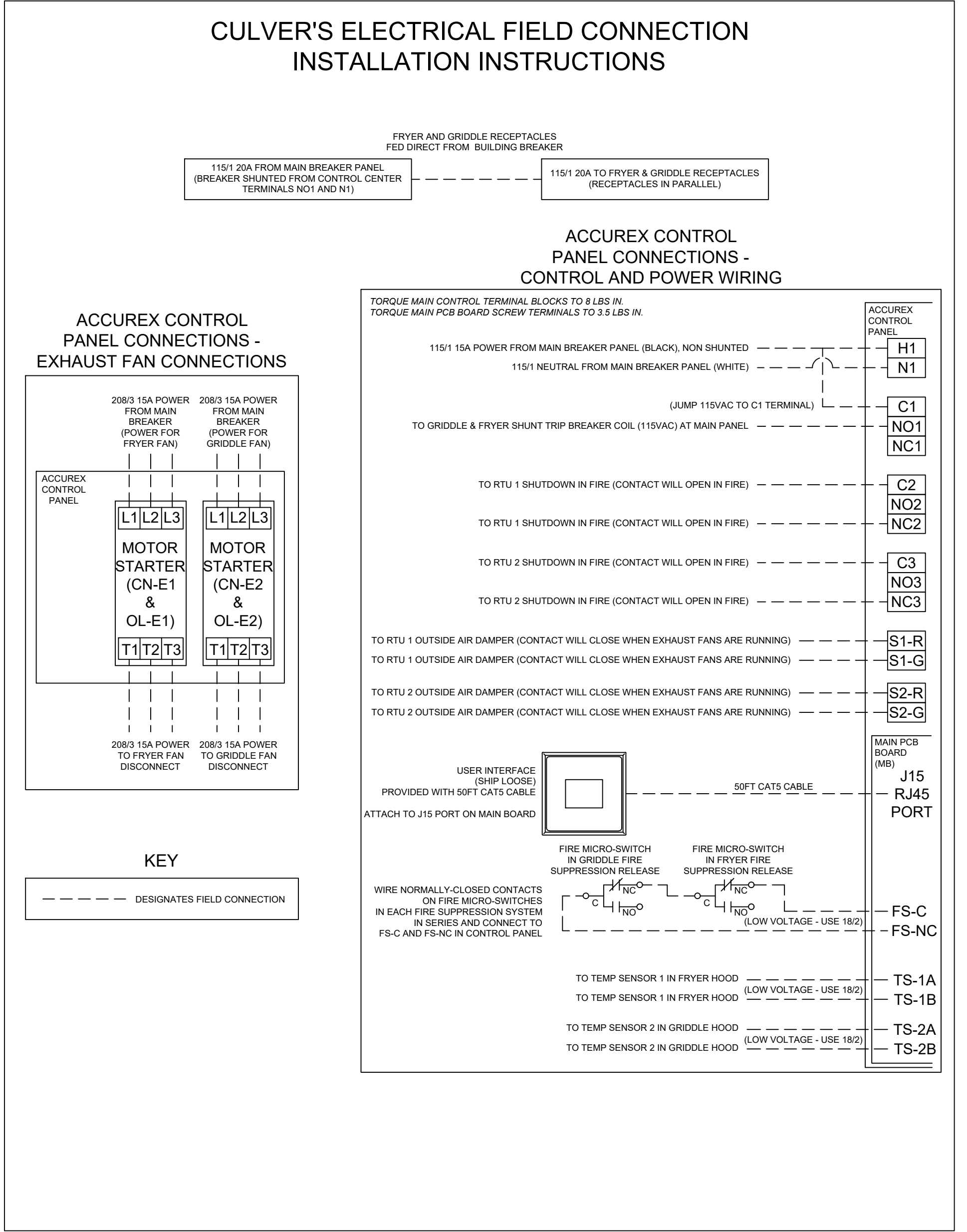


**SUBMITTAL**

Please return one approved print to Greenheck including signature, date, and answers to all submittal "verify" notes and questions. Fabrication will not begin until after approved drawings are received.

APPROVED AS SUBMITTED  
 APPROVED AS NOTED  
 REJECTED - REVISE AND RESUBMIT

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_



### CULVER'S INSTALLATION AND OPERATION GUIDE

*Accurex Control Panel, Fans, Appliance Receptacles*

**Mechanical Scope of Work**

- 1) Mechanical Contractor to mount Accurex Control Panel (Model XKC, 18" W x 20" H x 6" D) in specified location above drop ceiling.
- 2) Assuming all electrical has been completed by Electrical Contractor, Mechanical Contractor to start up fans by pressing "Fans" button on user interface. Verify power to exhaust fans.

**Electrical Scope of Work**

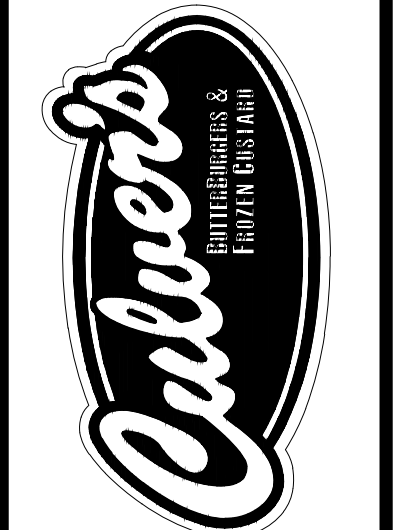
- 1) Electrical Contractor shall provide one 115VAC 20A circuit with shunt trip breaker (115VAC trip coil) for fryer and griddle receptacles. This circuit will have two receptacles, one for the fryer and one for the griddle. Circuit to be powered directly from circuit breaker.
- 2) Electrical Contractor to install Accurex user interface on wall (user interface provided by Accurex, recess into wall). Connect user interface back to Accurex control panel using factory-provided CAT5 cable (connect to J15 port on main board in Accurex control panel).
- 3) Electrical Contractor to run a separate 115VAC 15A circuit (from non-shunted breaker) to Accurex control panel terminal blocks H1 and N1 to power controls.
- 4) Electrical Contractor to run two 208/60/3 15A circuits from main breaker panel to each motor starter in the Accurex control panel (L1, L2, L3). Run power from T1, T2, T3 on each motor starter in Accurex control panel to kitchen exhaust fan disconnects.
- 5) Electrical Contractor to connect jumper wire from terminal block H1 to terminal block C1 in Accurex control panel, and then run wires from NO1 and N1 in Accurex control panel back to 115VAC shunt-trip breaker coil for fryer and griddle receptacles.
- 6) Electrical Contractor to wire a normally-closed contact off of a micro-switch in each fire suppression system release (one FS for fryer hood, and one FS for griddle hood) in series, and tie this series circuit loop back to FS-C and FS-NC on the main control board (MB) in the Accurex control panel.
- 7) Electrical Contractor to wire RTU 1 & 2 damper control to Accurex control panel terminal blocks S1-R / S1 - G and S2-R / S2-G as indicated on wiring diagram.
- 8) Electrical Contractor to wire RTU 1 & 2 control (8 amp max) circuits to Accurex control panel terminal blocks C2 and NC2 for RTU1 and C3 and NC3 for RTU 2 to shut down units in a fire.
- 9) Electrical Contractor to wire temp sensor in fryer hood collar back to Accurex control panel and land on TS-1A / TS-1B on main PCB board (use 18 to 22ga plenum rated cable)
- 10) Electrical Contractor to wire temp sensor in griddle hood collar back to Accurex control panel and land on TS-2A / TS-2B on main PCB board (use 18 to 22ga plenum rated cable)

**Sequence of Operation**

- 1) Make sure fryer and griddle receptacles are receiving power (breaker feeding appliance outlets is on).
- 2) Make sure RTU 1 & RTU 2 are both receiving power (breaker feeding RTUs are on and RTU disconnects are on).
- 3) Turn fans on via "Fans" button on user interface. Both fryer and griddle fans should turn on, and RTU 1 & 2 outside air dampers should open/adjust to bring in design OA.
- 4) Before fire system agent tanks are installed, manually trigger fire system while fan switch is on. This should accomplish the following:
  - Display on user interface should stated "FIRE DETECTED"
  - 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 & 2 will shut down
- 5) Put fire system in the "cocked" position and reset shunt trip breaker. Breakers feeding appliance outlets should be able to be reset manually, and RTU's power should be restored.
- 6) Press "Fans" button on the user interface to turn the fans off. This will shut down power to the fans. RTU outside air dampers will close. RTUs will remain operational providing 100% return air only.



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