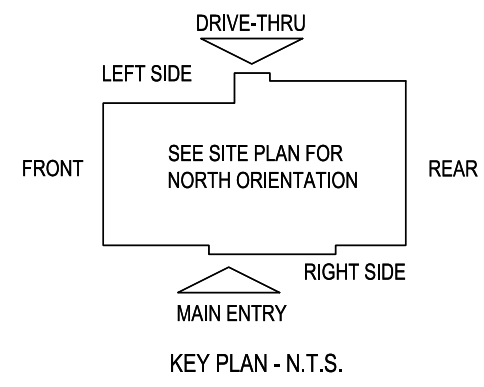


E5 HVAC PLAN
SCALE: 1/4" = 1'-0"

SUPPLY DUCTWORK SIZING TABLE*			
ROUND		RECTANGULAR	
SIZE	CFM RANGE	SIZE	CFM RANGE
8"	115 - 235	8"x8"	205 - 300
10"	240 - 435	10"x8"	305 - 400
12"	440 - 710	10"x10"	405 - 550
14"	715 - 1,070	12"x10"	555 - 700
16"	1,075 - 1,530	12"x12"	705 - 900
18"	1,535 - 2,090	14"x12"	905 - 1,105
20"	2,095 - 2,760	16"x12"	1,110 - 1,315
22"	2,765 - 3,550	18"x12"	1,320 - 1,520
24"	3,555 - 4,470	20"x12"	1,525 - 1,740
*CONTRACTOR MAY SUBSTITUTE RECTANGULAR FOR ROUND DUCTWORK ON MAIN RUNS AT THEIR DISCRETION. BRANCHES TO DIFFUSERS TO REMAIN ROUND.			
		22"x12"	1,745 - 1,950
		24"x12"	1,955 - 2,170
		26"x12"	2,175 - 2,400
		28"x12"	2,405 - 2,610
		30"x12"	2,615 - 2,840
		32"x12"	2,845 - 3,070
		34"x12"	3,075 - 3,290
		36"x12"	3,295 - 3,520
		36"x14"	3,525 - 4,420

NOTE: ALL DUCTWORK TO BE LOCATED IN TRUSS SPACE WHERE POSSIBLE. SEE FRAMING PLAN.
HVAC SETPOINTS RECOMMENDED BY CORPORATE OPERATIONAL GUIDELINES:
1. DINING: HEATING 70 DEGF. COOLING 72 DEGF.
2. KITCHEN: HEATING 68 DEGF. COOLING 74 DEGF.

DIFFUSER, REGISTER, AND GRILLE SCHEDULE									
TAG	SERVICE	TYPE	MATERIAL	THROW	FACE	NECK	MOUNTING	MANUFACTURER/MODEL	Notes
SD-1	SUPPLY	LOUVERED	STEEL	4-WAY	24X24	SEE PLAN	LAY-IN	RAYMON PRO2	2, 4
SD-2 - NOT USED									
SD-3	SUPPLY	LOUVERED	STEEL	3-WAY	12X12	SEE PLAN	SURFACE	RAYMON PRO2/QMF/DAG	2, 4
SD-4	SUPPLY	LOUVERED	STEEL	4-WAY	12X12	SEE PLAN	SURFACE	RAYMON PRO2/QMF	2, 4
SD-5	SUPPLY	PERFORATED	STEEL	PERFORATED	24X24	SEE PLAN	LAY-IN	RAYMON RPR	2, 4
RG-1	RETURN	SQUARE EGGRATE	ALUMINUM	N/A	24X24	22x22	LAY-IN	RAYMON FGEC-TB1	2, 3, 4
EG-1	EXHAUST	LOUVERED GRILLE	ALUMINUM	N/A	12X12	SEE PLAN	SURFACE	RAYMON RA-RVD	1, 2, 4
TG-1	TRANSFER	LOUVERED GRILLE	ALUMINUM	N/A	SEE PLAN	SEE PLAN	SURFACE	RAYMON RA-RH	2, 4
DIFFUSER NOTES:									
1. PROVIDE w/ ADJUSTABLE OPPOSED BLADE DAMPER									
2. VERIFY ALL DIFFUSERS AND RETURN GRILLE COLORS WITH OWNER AND ARCHITECT									
3. PROVIDE w/ 22X22 PLENUM BOX.									
4. ALL DIFFUSERS AND RETURNS LOCATED IN BLACK CEILING SHALL BE FLAT BLACK FINISH.									



NEW CULVER'S RESTAURANT
200 19th AVE. N
Princeton, MN 55371
County of MILLE LACS

© 2024
Culver Franchising System, Inc.
1240 Water St.
Prairie du Sac, WI 53578
608-643-7980

OWNER:
19TH AVE CULVERS PRINCETON LLC
2720 Fairview Ave, Suite 200
Roseville, MN 55113

Signature: _____
Date: _____
Typed or Printed Name: LOWELL LARSON Reg. No. 91224

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Signature: _____
Date: _____
Typed or Printed Name: LOWELL LARSON Reg. No. 91224

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HVAC PLAN, DIFFUSER SCHEDULE

Revision: _____
Date: 5-3-2024

2024-035

M101

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 CODE & 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.
- VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION (DRAWINGS ARE DIAGRAMMATIC IN NATURE & 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 W/ COLOR CHOICES FOR SWITCHES & OTHER APPARATUSSES WHERE APPLICABLE.
- VENT OWNER WATER HEATER AS REQUIRED.
- VENT DRYER THRU SIDEWALL TO EXTERIOR AS REQUIRED. MAINTAIN CLEARANCE FROM INTAKES AS NOTED.
- HANG & SUPPORT MATERIALS SHALL BE INSTALLED THE LATEST EDITION OF THE ASHRAE HANDBOOK OF FUNDAMENTALS.
- MAINTAIN AT LEAST 10 FEET CLEARANCE FROM INTAKES OR WINDOWS ON ALL EXHAUST VENTS.
- TEST, ADJUST, & CALIBRATE CONTROL SYSTEMS AS REQUIRED. PROVIDE SCHEMATICS / DESCRIPTION TO THE OWNER PRIOR TO INSTALLATION.
- INSTALLER RESPONSIBLE FOR FINAL TEST & BALANCING DURING TRAINING WEEK. PROVIDE WRITTEN REPORT BY THIRD PARTY INDEPENDENT TAB CONTRACTOR.
- VERIFY W/ OWNER EXACT HEATER LOCATION TO AVOID BUILDING FUNCTION INTERFERENCE.
- REPLACE ALL AIR FILTERS PRIOR TO TURNING SYSTEM OPERATIONS OVER TO OWNER.
- HVAC CONTRACTOR IS RESPONSIBLE FOR A COMPLETE & FULLY WORKING SYSTEM.
- DUCT DIMENSIONS LISTED ARE NET FREE - CLEAR INSIDE DIMENSIONS.
- VERIFY DUCT LOCATIONS PRIOR TO FABRICATION. (VERIFY LIMITED AREA FOR DUCTWORK & OTHER APPARATUSSES.)
- INSULATE DUCT WORK TO SMACNA GUIDELINES & STATE CODES.
- INSTALL VOLUME CONTROL DAMPERS AS INDICATED ON PLANS.
- FLEXIBLE ROUND DUCT WORK NOT TO EXCEED 8 FEET IN LENGTH. AVOID UNNECESSARY TURNS & SLACK.
- RETURN AIR DUCT WORK TO BE LINED FOR SOUND ATTENUATION.
- DUCT WORK TO BE STANDARD GAUGE SHEET METAL (FIBROUS DUCT NOT ALLOWED.)
- INSULATE EXHAUST DUCT FOR EXHAUST FAN TO EXTERIOR TERMINATION.
- COORDINATE WORK W/ GENERAL CONTRACTOR & OWNER TO MAXIMIZE CEILING HEIGHT & AVOID CONFLICTS.
- SS 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 A103 DRAWING.
- EXHAUST FANS AND FURNACE FANS TO RUN CONTINUOUSLY DURING OCCUPIED MODE.
- NIGHT SET BACK THERMOSTATS TO BE INSTALLED ON ALL HVAC EQUIPMENT.

NATIONAL ACCOUNT PROGRAM

- LENNOX INDUSTRIES, INC.** - ROOFTOP HVAC EQUIPMENT
SALES: LennoxNationalAccounts@Lennoxind.com copy to Dave.Ebner@Lennoxind.com
NATIONAL ACCOUNT TECHNICAL SUPPORT: (800) 367-4285 Option #2 Lennoxind.com
- ACCUREX/ GREENHECK FAN CORPORATION** - KITCHEN HOODS, EXHAUST FANS, ROOF CURBS, ANSUL SYSTEMS, ACCESSORIES AND TEST AND BALANCE
CONTACT PHILIP KRAFT: 1-262-227-7865 philip.kraft@accurex.com
SECONDARY CONTACT BRAD BORCHARDT: 1-715-551-0809 brad.borchardt@accurex.com
SECONDARY CONTACT 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
- RAYMON AIR DISTRIBUTION EQUIPMENT** - DIFFUSERS AND GRILLES
NATIONAL ACCOUNTS SALES: HUNZICKER LLC, MARIE WILSON - (608) 845-9551 marie@hunzickercfl.com

2024-035 CULVER'S OF PRINCETON, MN PRINCETON, MN

RTU SCHEDULES		SUPPLY FAN				COOLING						HEATING				ELECTRICAL (1)		MANUFACTURER, MODEL			
		SUPLY FAN TYPE	SA FAN VFD	SUPPLY CFM	MIN OA CFM	ESP	OA TEMP °FDB	°FWB	MIXED AIR TEMP °FDB	°FWB	SUPPLY TEMP COIL LAT °FDB	COIL LAT °FWB	COIL CAPACITY SENSIBLE MBH	LATENT MBH	GAS OR ELEC	OUTPUT MBH	OAT °FDB		HEATING STAGES	VOLTAGE	PHASE
RTU-1	DINING ROOM	MSAV	YES	6,150	1,750	0.75"	88	74	78.70	66.39	55.00	54.80	154	60	GAS	248	-32	2	208	3	LENNOX, ENLIGHT LGT
RTU-2	KITCHEN	MSAV	YES	6,150	1,700	0.75"	88	74	78.59	66.29	55.00	54.79	154	59	GAS	202	-32	2	208	3	LENNOX, ENLIGHT LGT

ADDITIONAL FACTORY INSTALLED OPTIONS FOR BOTH UNITS:

- WEATHERPROOF DISCONNECT
- FACTORY INSTALLED/FIELD POWERED GFCI
- RETURN SMOKE DETECTOR
- DRAIN PAN OVERFLOW SWITCH
- SINGLE ENTHALPY ECONOMIZER W/ FAULT DETECTION DIAGNOSTICS
- BAROMETRIC RELIEF
- HAIL GUARDS
- 2" MERV 13 FILTERS
- SS HEAT EXCHANGER
- HOT GAS REHEAT

ADDITIONAL FIELD INSTALLED OPTIONS FOR BOTH UNITS:

- 14" DOWNFLOW HYBRID CURB
- PVC DRAIN TRAP KIT
- REMOTE TEMPERATURE AND HUMIDITY SENSORS
- LENNOX MODEL CS7500 PROGRAMMABLE THERMOSTAT
- OUTDOOR AIR CFM CONTROL

NOTES:

- NOTIFY ELECTRICAL CONTRACTOR OF BREAKER REQUIREMENTS AFTER SELECTION

PRV-1 RESTROOM EXHAUST FAN - REFER TO SHEET M204

PRV-2 GRIDDLE EXHAUST FAN - REFER TO SHEET M202

PRV-3 FRYER EXHAUST FAN - REFER TO SHEET M203

EF-1A MOP ROOM EXHAUST FAN - REFER TO SHEET M204

ITEM #49A GRIDDLE HOOD - REFER TO SHEET M202

ITEM #59A FRYER HOOD - REFER TO SHEET M203

CONTROL NOTES

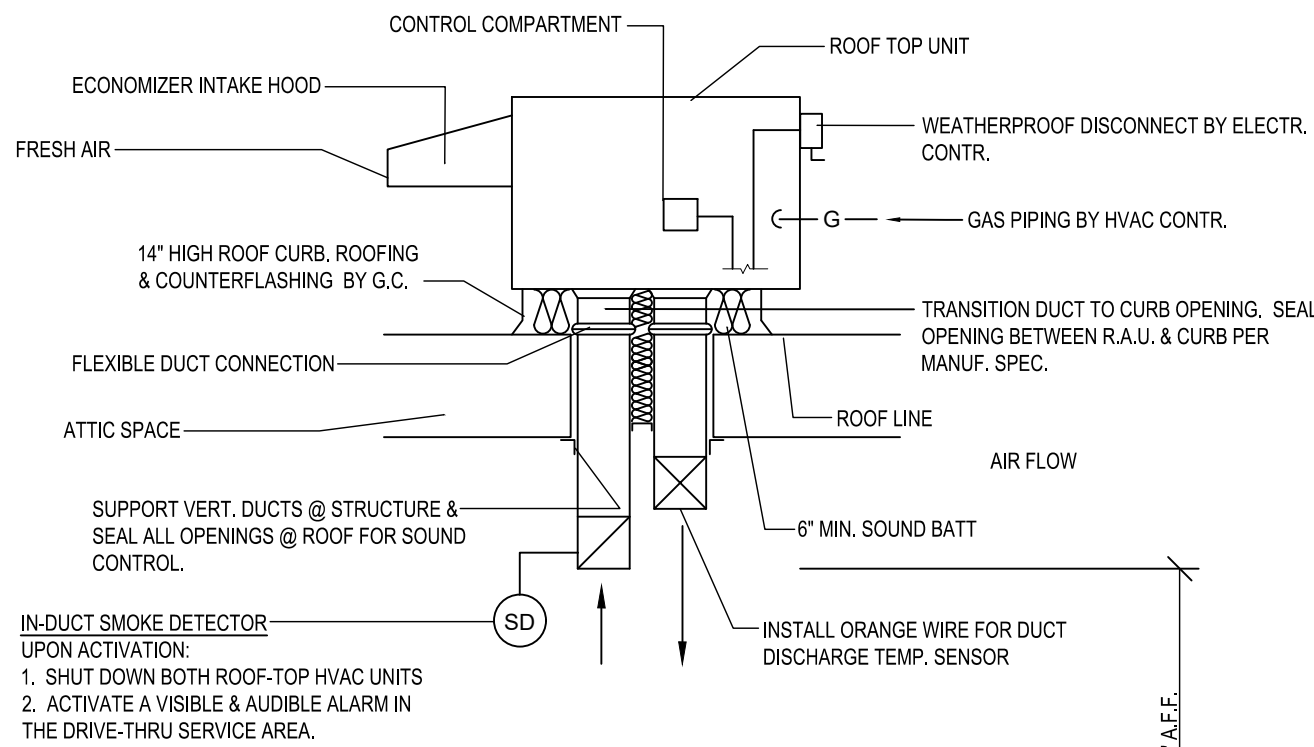
NOTE: KITCHEN HOODS SUPPLIED AND INSTALLED BY HVAC CONTRACTOR

- 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, PRV-2, PRV-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.

TEST & BALANCE NOTES

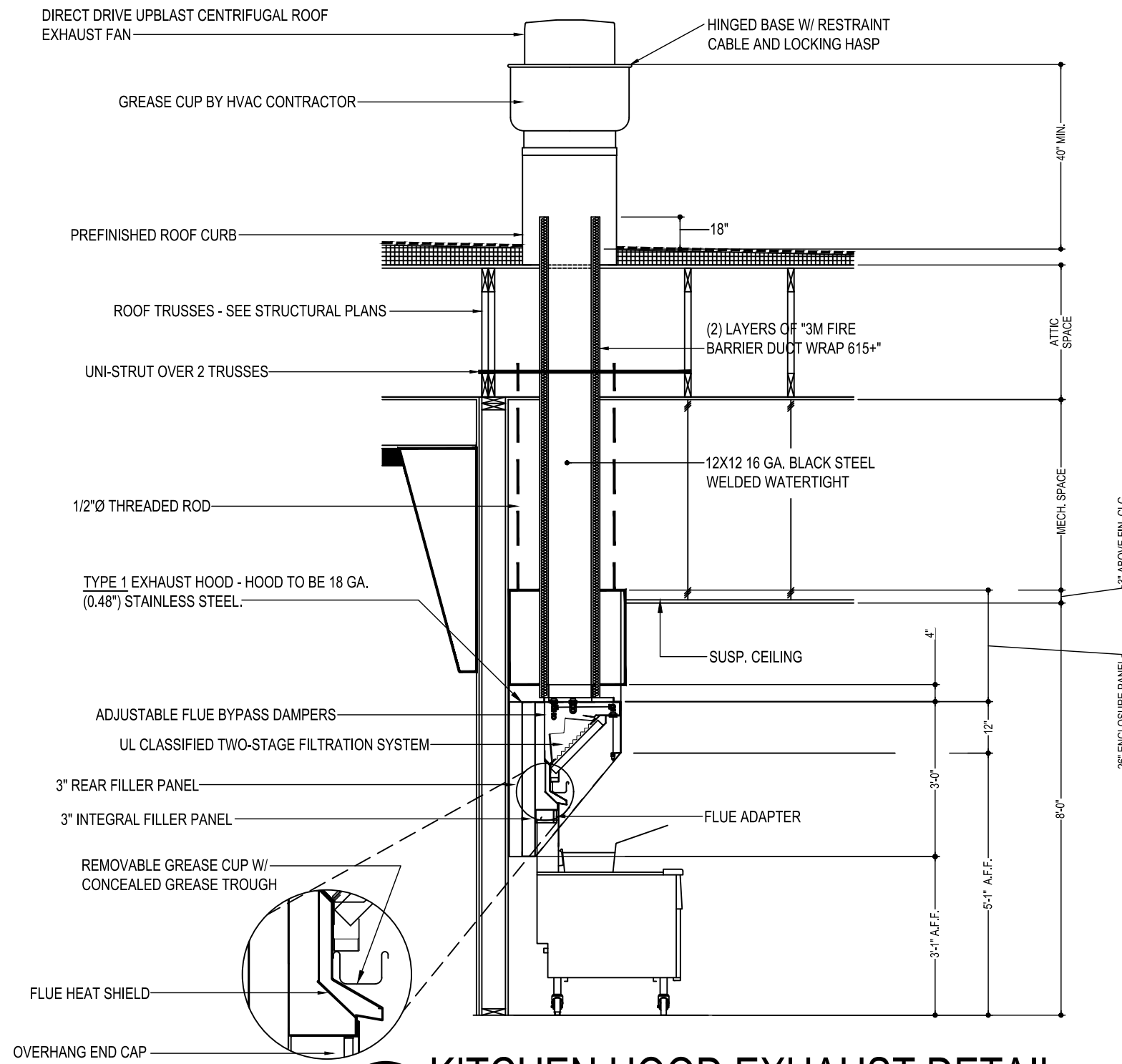
- ACCUREX WILL PROVIDE BALANCED AIRFLOW & FUNCTIONAL CHARACTERISTICS OF THE HVAC SYSTEM AS THEY RELATE TO AIRFLOW & AIR PRESSURE ONLY. SERVICES TO BE PERFORMED BY A CERTIFIED NEBB FIRM & ITS MANAGING GROUP NATIONAL TAB.
- SERVICES NOT INCLUDED: PULLEY / SHEAVE CHANGES, MOTOR CHANGE OUTS, OR RETURN TRIPS DUE TO DELAYS CAUSED BY JOB INCOMPLETENESS.
- ESTABLISH MINIMUM OUTSIDE AIR FLOW INDICATED ON SCHEDULES AT ALL SUPPLY FAN SPEEDS.

AIR BALANCE TABLE				
EXHAUST AIR FLOW				
EQUIPMENT TAG	SERVICE	CFM		
PRV-1	RESTROOMS	375		
PRV-2	ITEM #49	1,500		
PRV-3	ITEM #59	1,500		
EF-1A	MOP ROOM	75		
TOTAL =			3,450	
VENTILATION REQUIRED PER 2020 MINNESOTA MECHANICAL AND FUEL GAS CODE				
EQUIPMENT TAG	SERVICE	CFM		
RTU-1	DINING ROOM	1,320		
RTU-2	KITCHEN	215		
TOTAL =			1,535	
3,450 > 1,535 -> USE 3,450 CFM FOR OUTSIDE AIR CFM				
OVERALL AIRFLOW SUMMARY				
EQUIPMENT TAG	SERVICE	SUPPLY CFM	RETURN CFM	OUTSIDE AIR CFM
RTU-1	DINING ROOM	6,150	4,400	1,750
RTU-2	KITCHEN	6,150	4,450	1,700
TOTAL OUTSIDE AIR CFM =			3,450	



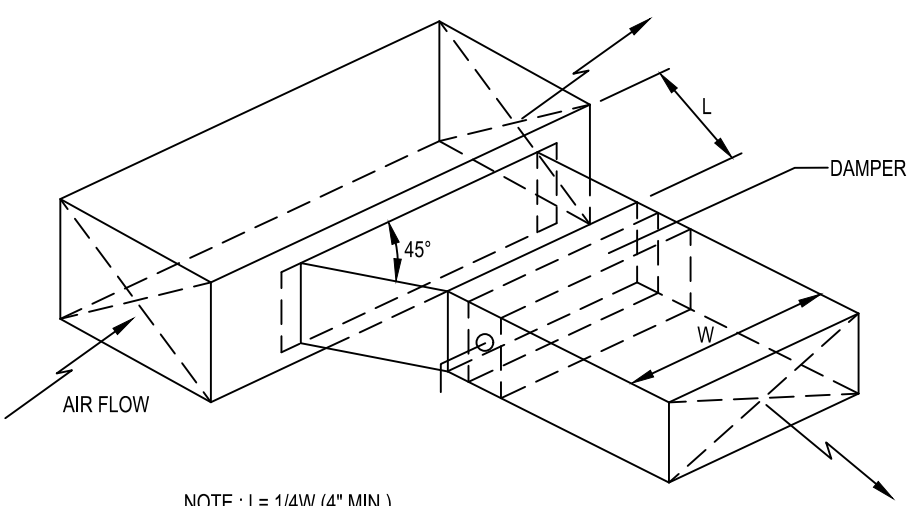
A6 ROOFTOP HVAC UNIT

SCALE: N.T.S.



C3 KITCHEN HOOD EXHAUST DETAIL

SCALE: N.T.S.
VERIFY MOUNTING HEIGHTS W/ OWNER AND GENERAL CONTRACTOR



C6 BRANCH DUCT TAKEOFF DETAILS

SCALE: N.T.S.

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 P868 IN THE CORE CONTROLLER AND CHANGED IN THE APP AS SHOWN IN THE MENU PATH BELOW. DEFAULT IS SET AT 3000 SECONDS.
- 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 69-77 DEGREES F. VERIFY WITH ENGINEER

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 69-77 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 FAHFAC TO OPERATE PROPERLY.

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

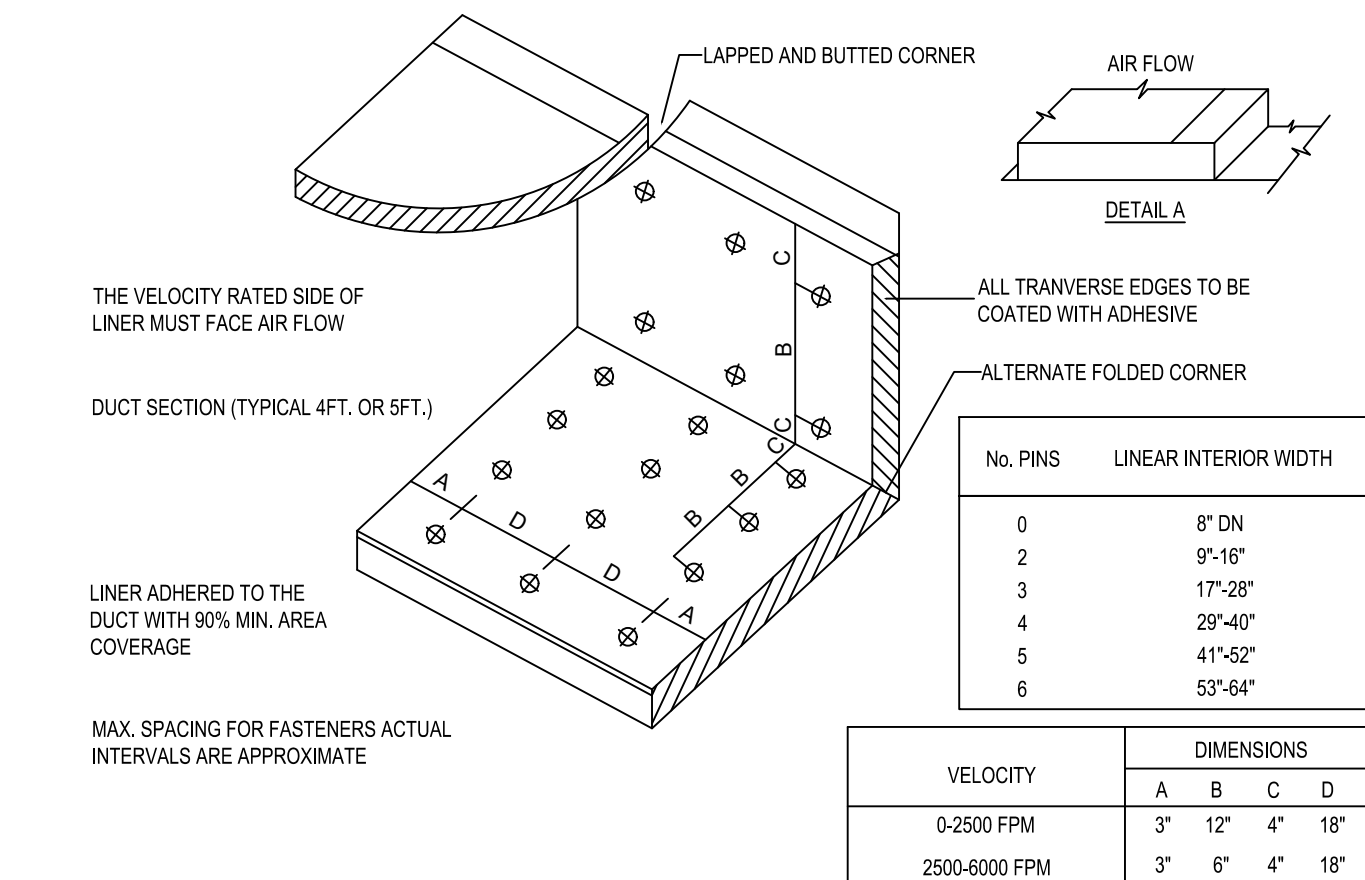
CHECK FOR CORRECT OPERATION AND WIRING OF ALL SENSORS

COOKING APPLIANCE / TYPE 1 HOOD INTERLOCK

- REMOTE SWITCH ON - POWER TO KITCHEN FAN CONTROL CENTER (KFCC)
- KFCC CONTROLS:
 - EXHAUST FANS PRV-2 (GRILLE) & PRV-3 (FRYERS) ARE STARTED.
 - OPENS OUTSIDE AIR INTAKE ON RTU-1 & RTU-2 TO MINIMUM FRESH AIR OPENING.
 - POWER TO OUTLETS #51 (GRILLE) & #60 (FRYERS).
- GRILLE & FRYER CAN BE STARTED.
- IN CASE OF FIRE:
 - SHUNT TRIP BREAK FOR GRILLE & FRYERS OUTLET TRIPS.
 - ANSUL SYSTEM IS ACTIVATED.
 - THE MECHANICAL GAS VALVES CLOSES.
 - SHUT DOWN RTU-1 & RTU-2 & CLOSE OUTSIDE AIR.
 - EXHAUST FANS PRV-2 & PRV-3 CONTINUE TO RUN.

GREASE HOOD FIRE SUPPRESSION SYSTEM

WET-CHEMICAL EXTINGUISHING SYSTEMS SHALL BE INSTALLED, MAINTAINED, PERIODICALLY INSPECTED AND TESTED IN ACCORDANCE WITH NFPA 17A AND THEIR LISTING.



E5 DUCT LINER INSTALLATION DETAIL

SCALE: 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.

HVAC SCHEDULE & DETAILS

Date: 5-3-2024

Revision:

M201

2024-035

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NEW CULVER'S RESTAURANT
200 19th AVE. N
Princeton, MN 55371
County of MILLE LACS

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OWNER:
19TH AVE CULVERS PRINCETON LLC
2720 Fairview Ave, Suite 200
Roseville, MN 55113

Culver Franchising System, Inc.
1240 Water St.
Prairie du Sac, WI 53578
608-643-7980

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST					SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION	
			LENGTH	WIDTH	HEIGHT			TOTAL CFM	COLLAR(S)			MUA CFM	AC CFM				
1	GRIDDLE HOOD	XGEP-64-S	64	TOP 23 BOT 8	FRT 12 BACK 36	430 SS WHERE EXPOSED	MEDIUM	1500	12	12		1500	1.918			136.8	SINGLE

HOOD NO.	MARK	LIGHTING DETAILS			GREASE FILTRATION DETAILS			UTILITY CABINET(S)				
		FIXTURE TYPE	QTY	FOOT CANDLES	TYPE / MODEL MATERIAL	QTY	SIZE (IN.)	LOCATION	FIRE SYSTEM TYPE	SIZE	MODEL	CONTROLS INTERFACE
1	GRIDDLE HOOD				GREASE GRABBER	4	16					
					STAINLESS STEEL	0	20	16				

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 #K1100145 - FLUE BYPASS HOOD
 SDR #K1800144 - CULVERS 4VAT 2FIRE PROCESS - GRIDDLE HOOD

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-2 Griddle Fan	XCUE-140-VG	1,500	1.801	1,725	0.83	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"

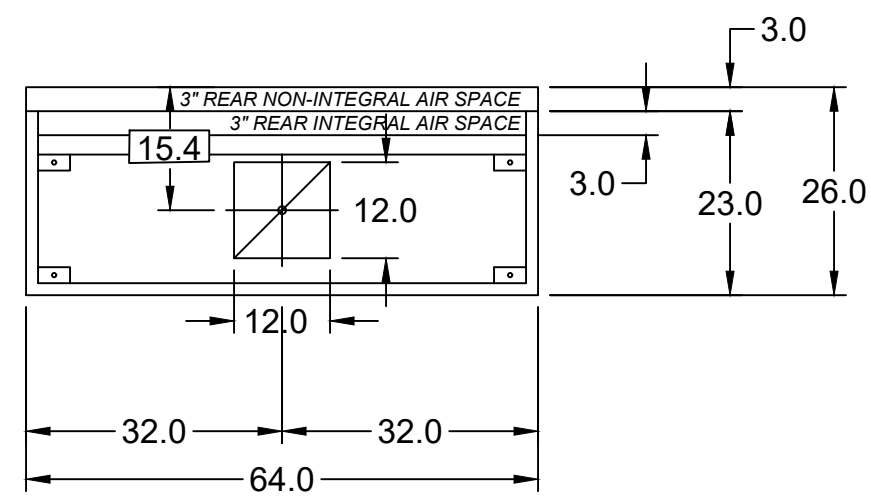
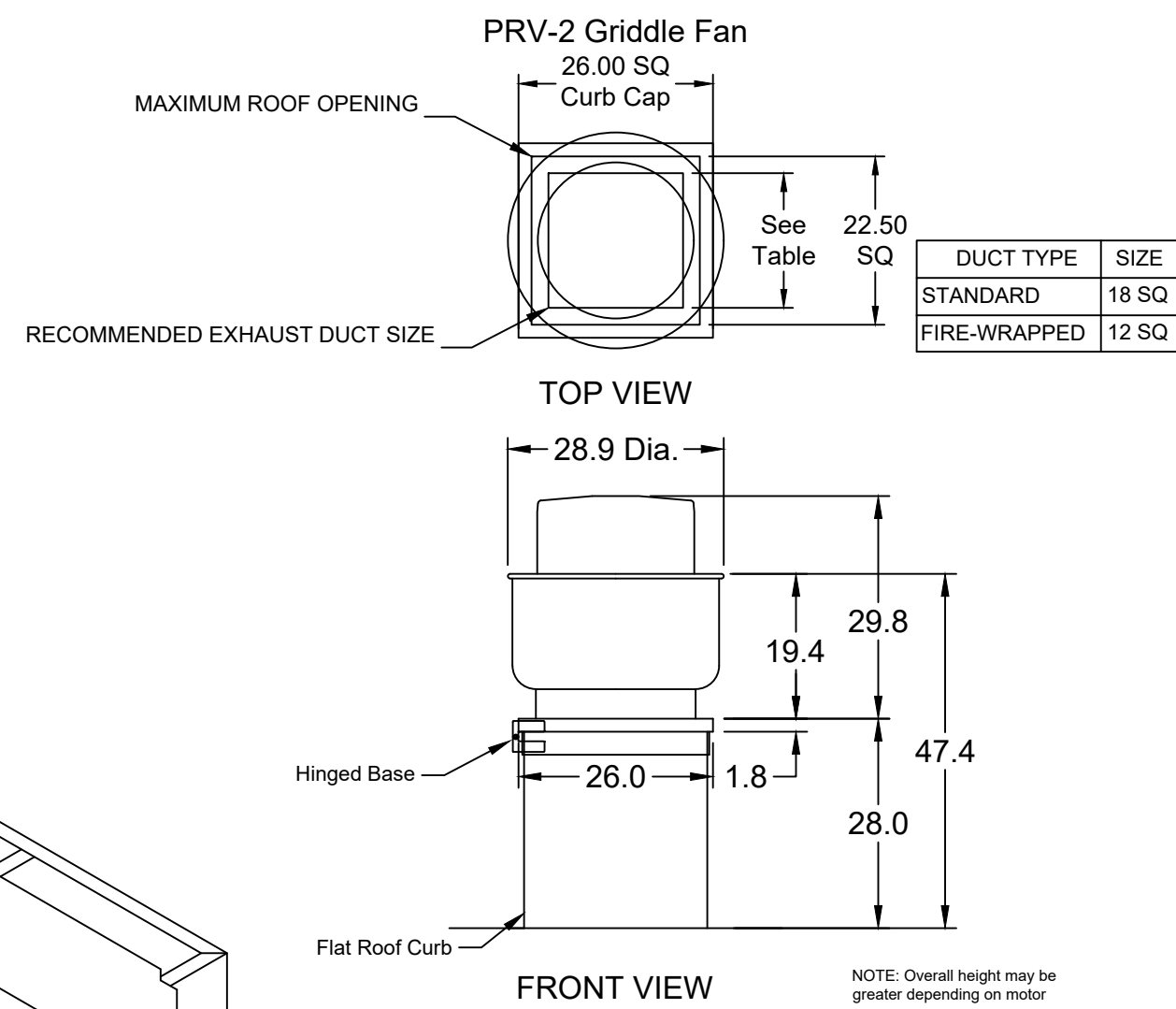
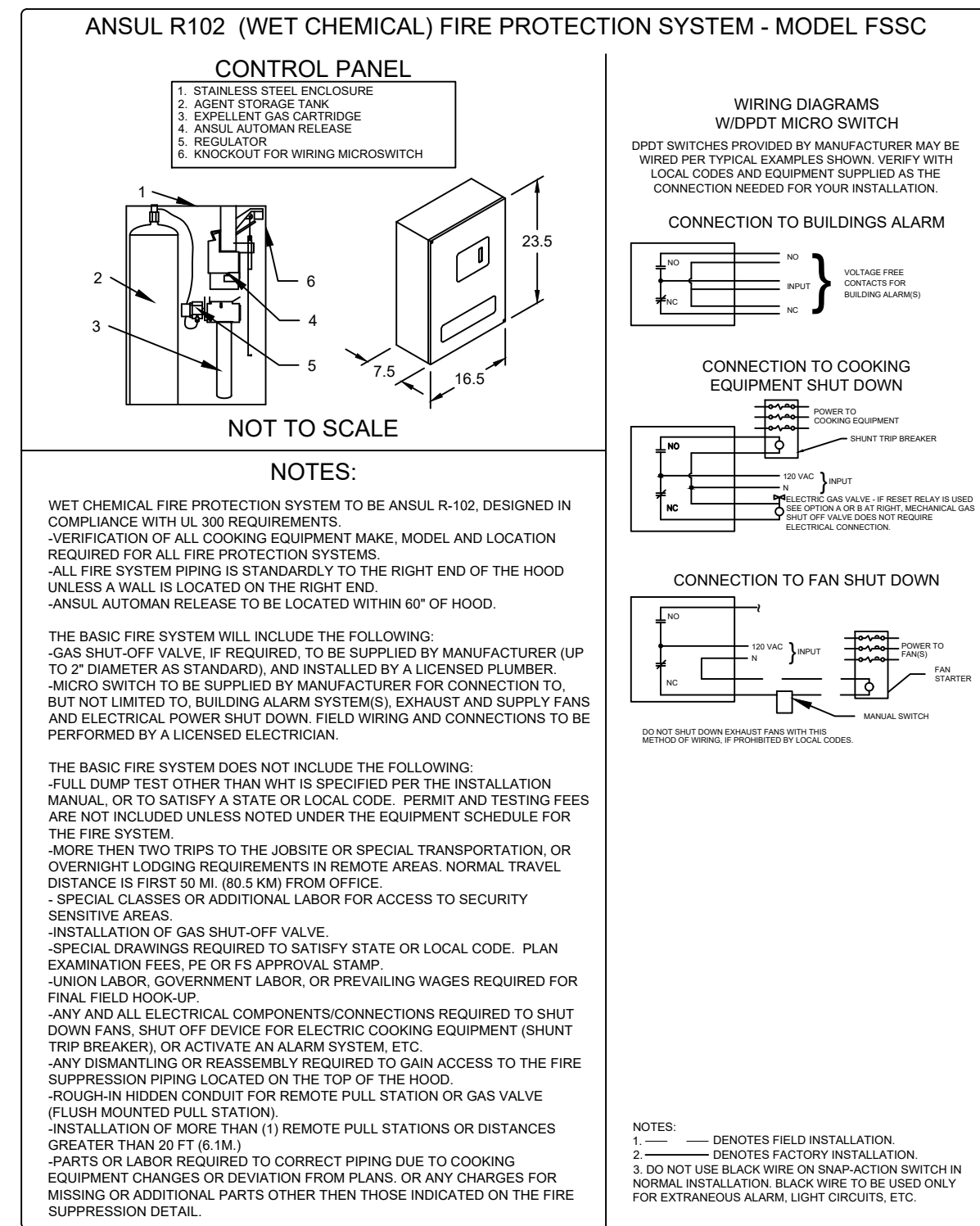
PRV-2 Griddle Fan - SELECTED OPTIONS AND ACCESSORIES

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 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
 Switch, NEMA-3R, Toggle, Shipped with Unit
 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

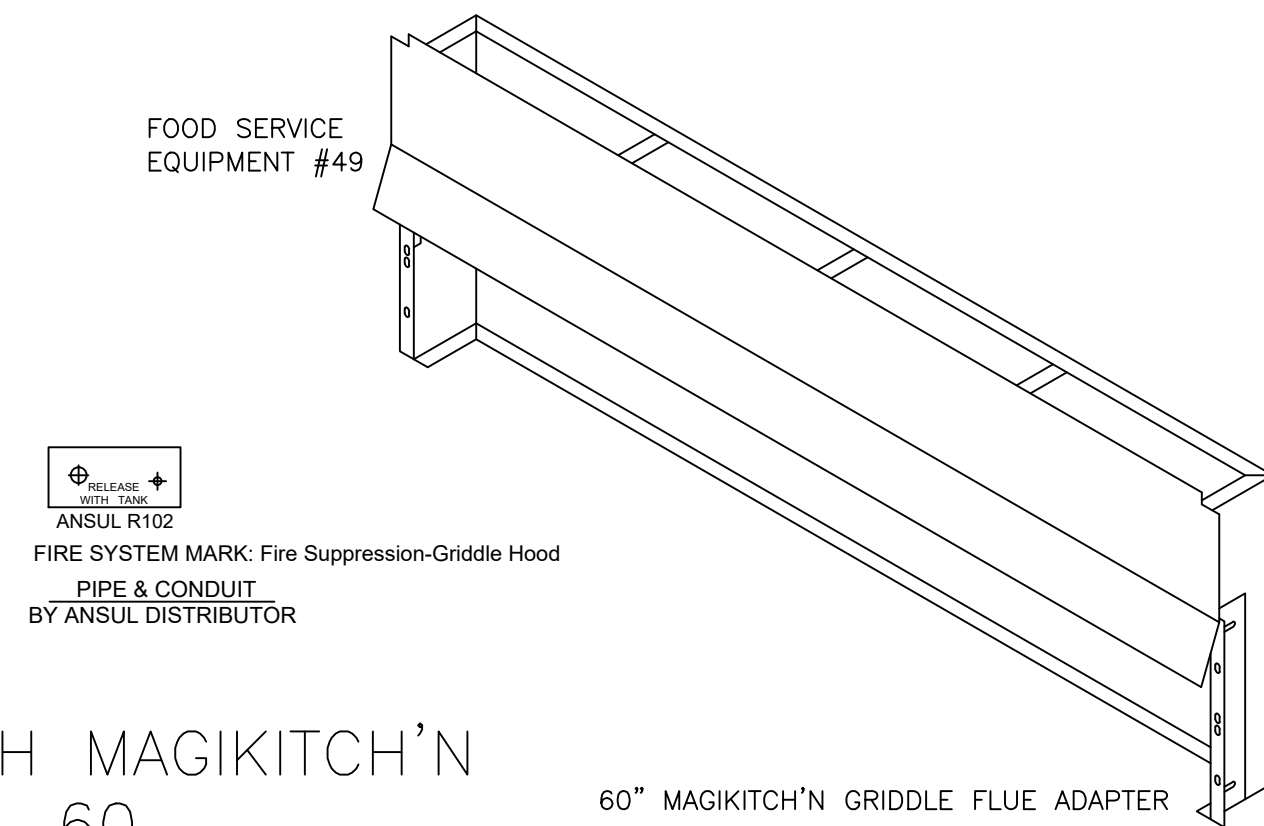
MARK	MODEL	LOCATION	FLOW POINTS		SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
			HOODS	PCU			
FIRE SUPPRESSION-GRIDDLE HOOD	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	6 UTILIZED	11 AVAILABLE	CONTINUOUS	FUSIBLE LINK	GRIDDLE HOOD SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES
 FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
 CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
 METAL BLOW-OFF CAPS - INCLUDED
 HOOD SUPPRESSION TANK - INCLUDED - 3 GAL. - ((1) 3.0 TANK(S))
 REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS

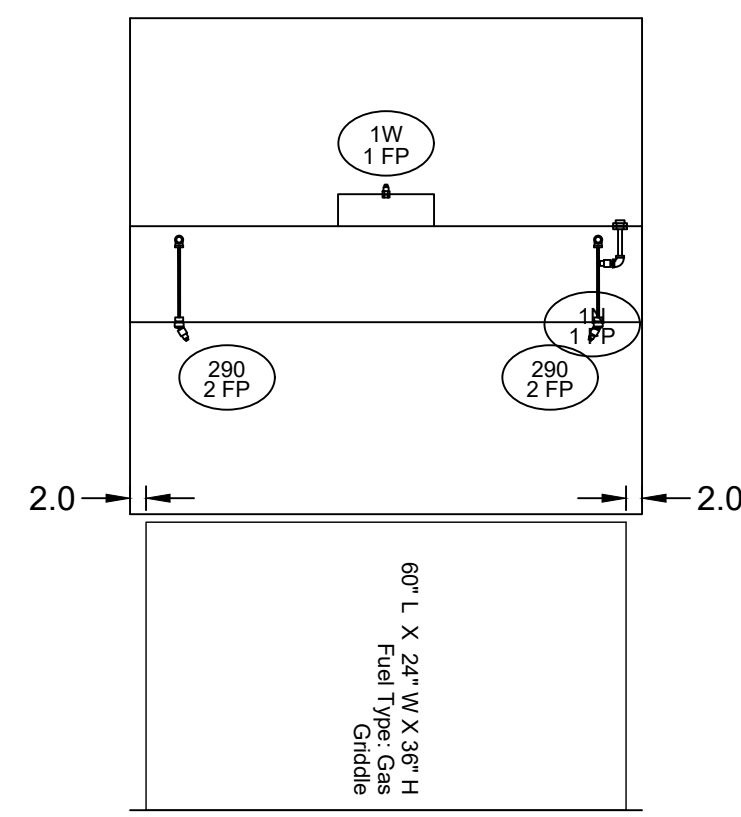
SPECIAL DESIGN REQUESTS
 SDR #K1800144 - CULVERS 4VAT 2FIRE PROCESS - GRIDDLE HOOD



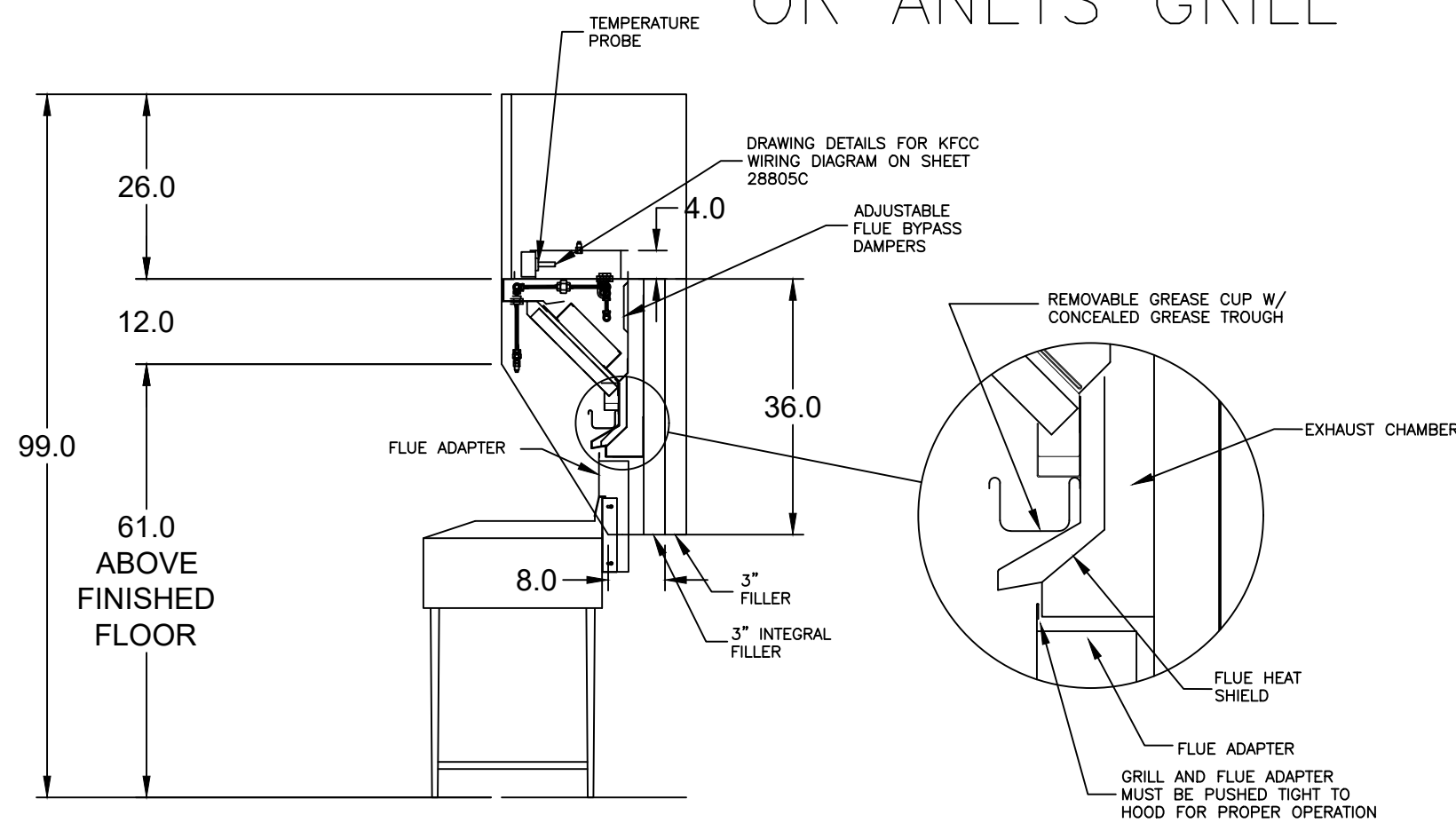
MARK: Griddle Hood - SECTION 1 PLAN VIEW



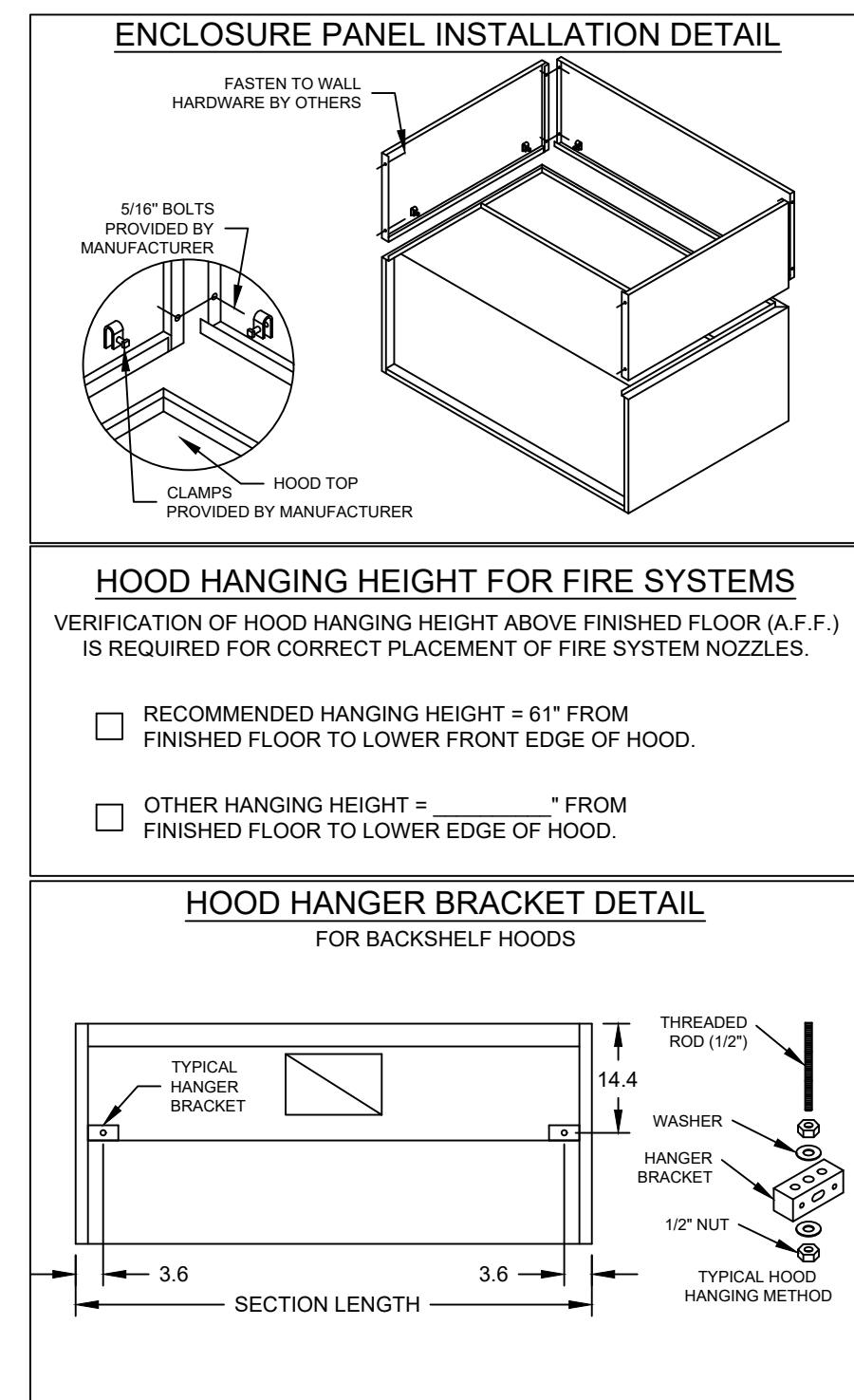
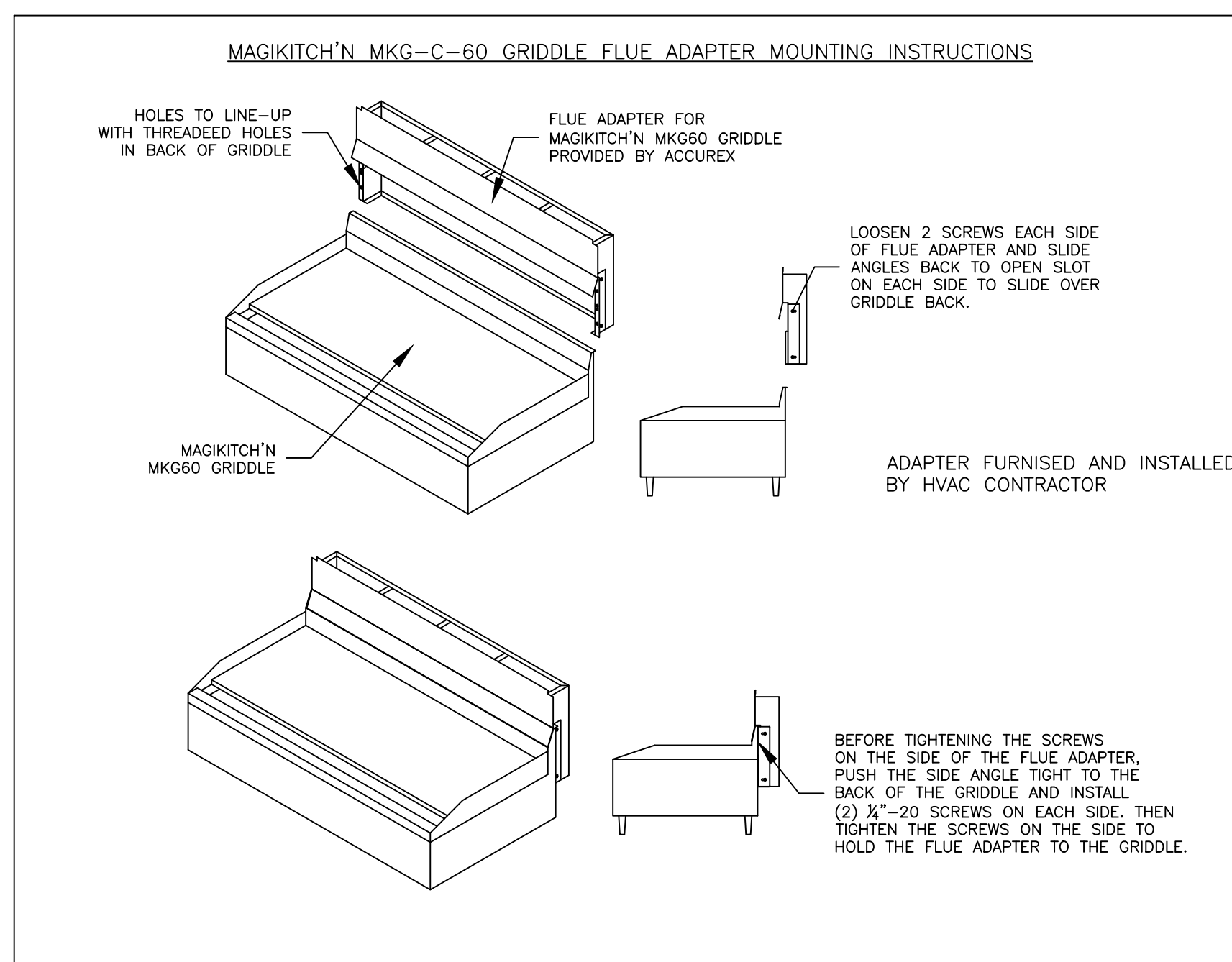
MUST USE WITH MAGIKITCH'N MODEL MKG-C-60
 VERIFY MAGIKITCHEN OR ANETS GRILL



SECTION 1 ELEVATION VIEW



MARK: Griddle Hood SECTION VIEW



ACCUREX

PROJECT: 12/4/2019
 MARK: GRIDDLE HOOD
 FIRE SUPPRESSION-GRIDDLE HOOD

ACCUREX - WI, IA
 PHILLIP KRAFT
 PHILLIP.KRAFT@ACCUREX.COM
 262-227-7865

CULVERS - METRO L 2021 (NC)
 1-27-2023

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NEW CULVERS RESTAURANT
 200 19th AVE. N
 Princeton, MN 55371
 County of MILLE LACS

OWNER:
 19TH AVE CULVERS PRINCETON LLC
 2720 Fairview Ave, Suite 200
 Roseville, MN 55113

HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Signature: _____
 Date: _____
 Typed or Printed Name: LOWELL LASSON Reg. No. 91224

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GRIDDLE HOOD/EXHAUST SCHEDULE & DETAILS

Date: 5-3-2024
 Revision:

2024-035
 M202

HOOD INFORMATION

HOOD NO.	MARK	MODEL	HOOD DIMENSIONS (IN.)			HOOD CONSTR.	COOKING LOAD / DUTY RATING	EXHAUST COLLAR(S)					SUPPLY		TOTAL WEIGHT LBS.	SECTION LOCATION	
			LENGTH	WIDTH	HEIGHT			TOTAL CFM	WIDTH	LENGTH	DIA.	CFM	S.P.	MJA CFM			AC CFM
1	FRYER HOOD	XXEP-83-S	83	TOP 23 BOT 3	FRT 12 BACK 36	400 SS W/HERE EXPOSED	MEDIUM	1500	12	12		1500	0.518			169.1	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 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

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 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
 Switch, NEMA-3R, Toggle, Shipped with Unit
 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

FIRE SYSTEM INFORMATION

MARK	MODEL	LOCATION	FLOW POINTS HOODS	PCU	SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
FIRE SUPPRESSION-FRYER HOOD	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	18 UTILIZED 22 AVAILABLE		CONTINUOUS	FUSIBLE LINK	FRYER HOOD SECTION 1

FIRE SYSTEM OPTIONS AND ACCESSORIES

FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)
 CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS - INCLUDED
 METAL BLOW-OFF CAPS - INCLUDED
 GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 1.5", (ANSUL) - PART# ANSULMECHSHUTOFFVALVE150
 HOOD SUPPRESSION TANK - INCLUDED - 6 GAL. - [(2) 3.0 TANK(S)]
 REMOTE PULL STATION - STANDARD - FIELD INSTALLATION AT SINGLE POINT OF EGRESS
 TANK ENCLOSURES (STAINLESS STEEL) FOR REMOTE MOUNTING - INCLUDED

SPECIAL DESIGN REQUESTS

SDR #K1700974 - CULVERS 4VAT 2FIRE PROCESS - FRYER HOOD
 SDR #K1800795 - FIRE SYSTEM DEDUCT

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

CONTROL PANEL

WIRING DIAGRAMS

WIDPDT MICRO SWITCH
 DRIFT SWITCHES PROVIDED BY MANUFACTURER MAY BE WIRED PER TYPICAL EXAMPLES SHOWN. VERIFY WITH LOCAL CODES AND EQUIPMENT SUPPLIER AS THE CONNECTION NEEDED FOR YOUR INSTALLATION.

CONNECTION TO BUILDINGS ALARM
 CONNECTION TO COOKING EQUIPMENT SHUT DOWN
 CONNECTION TO FAN SHUT DOWN

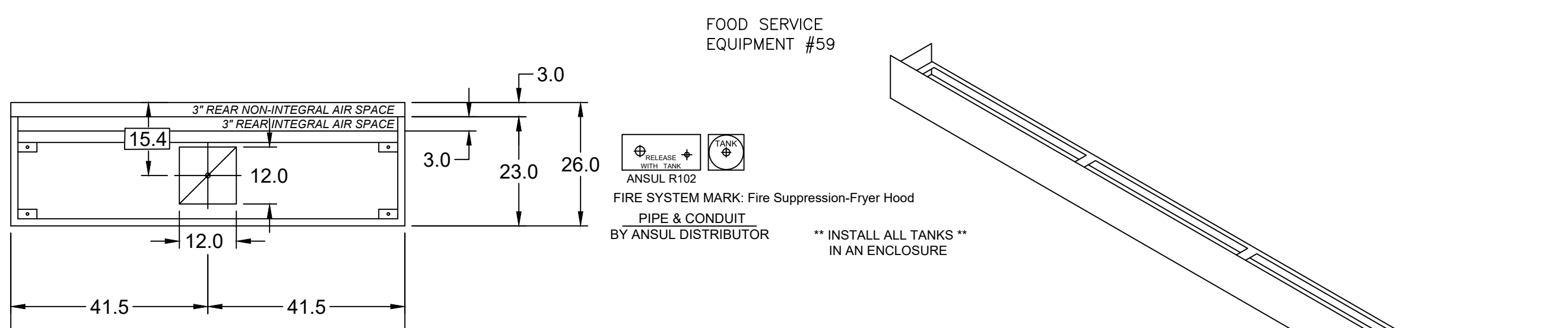
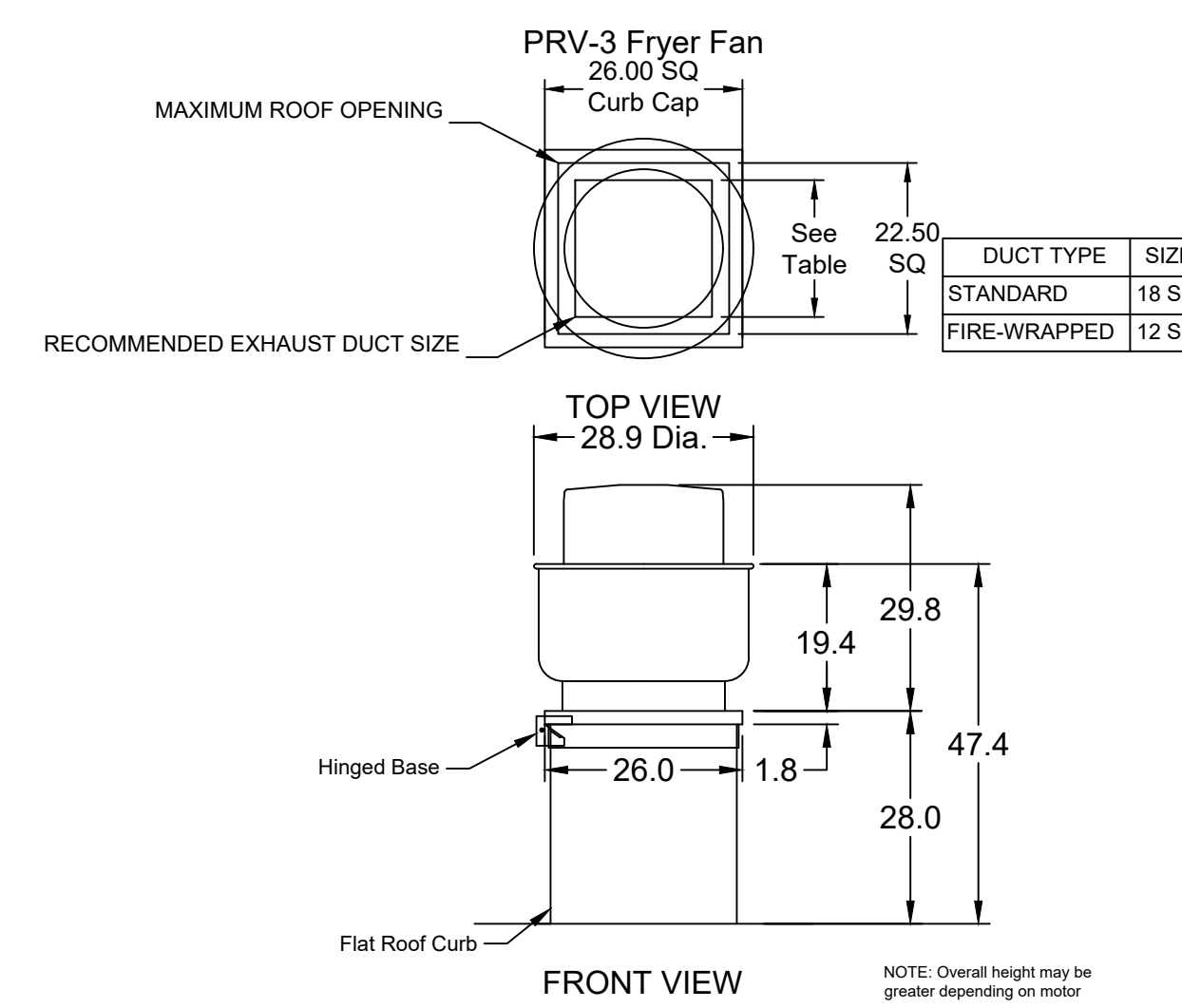
NOTES:

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 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 SYSTEMS, 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 WHAT 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 LOGGING 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 PS 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 25 FT (8.1 M).
 -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.

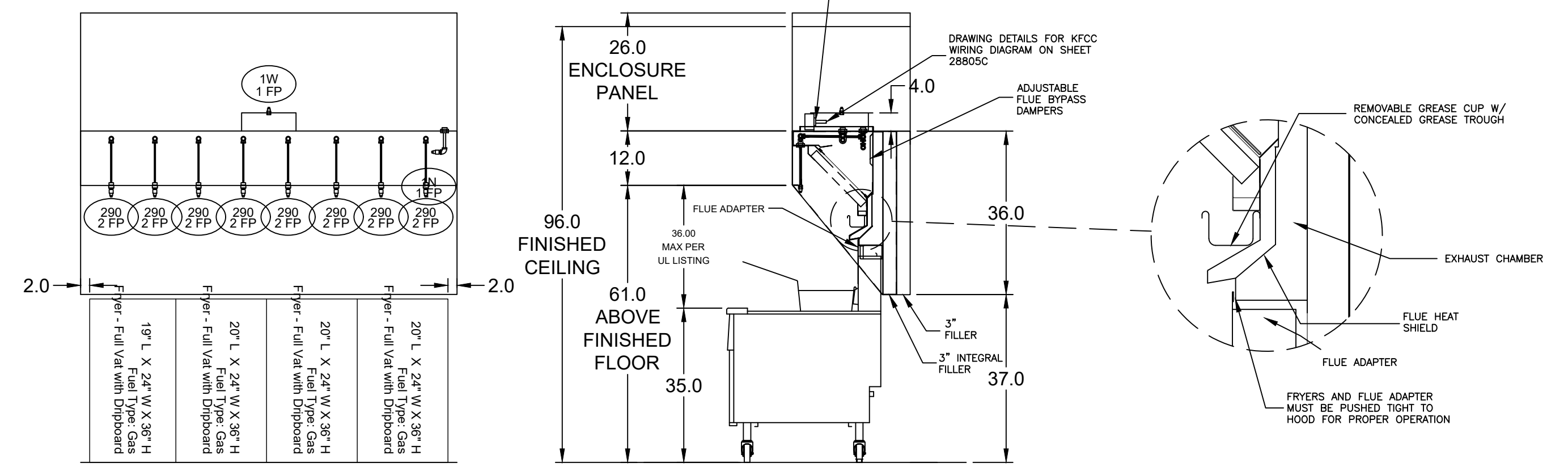
NOTES:
 1 --- DENOTES FIELD INSTALLATION
 2 --- DENOTES FACTORY INSTALLATION
 3 DO NOT USE BLACK WIRE ON ON-OFF SWITCH IN NORMAL INSTALLATION. BLACK WIRE TO BE USED ONLY FOR EXTRANEOUS ALARM LIGHT CIRCUITS, ETC.



MUST USE WITH PITCO MODEL CU-SSH60W

PITCO FRYER 4-VAT FLUE ADAPTER

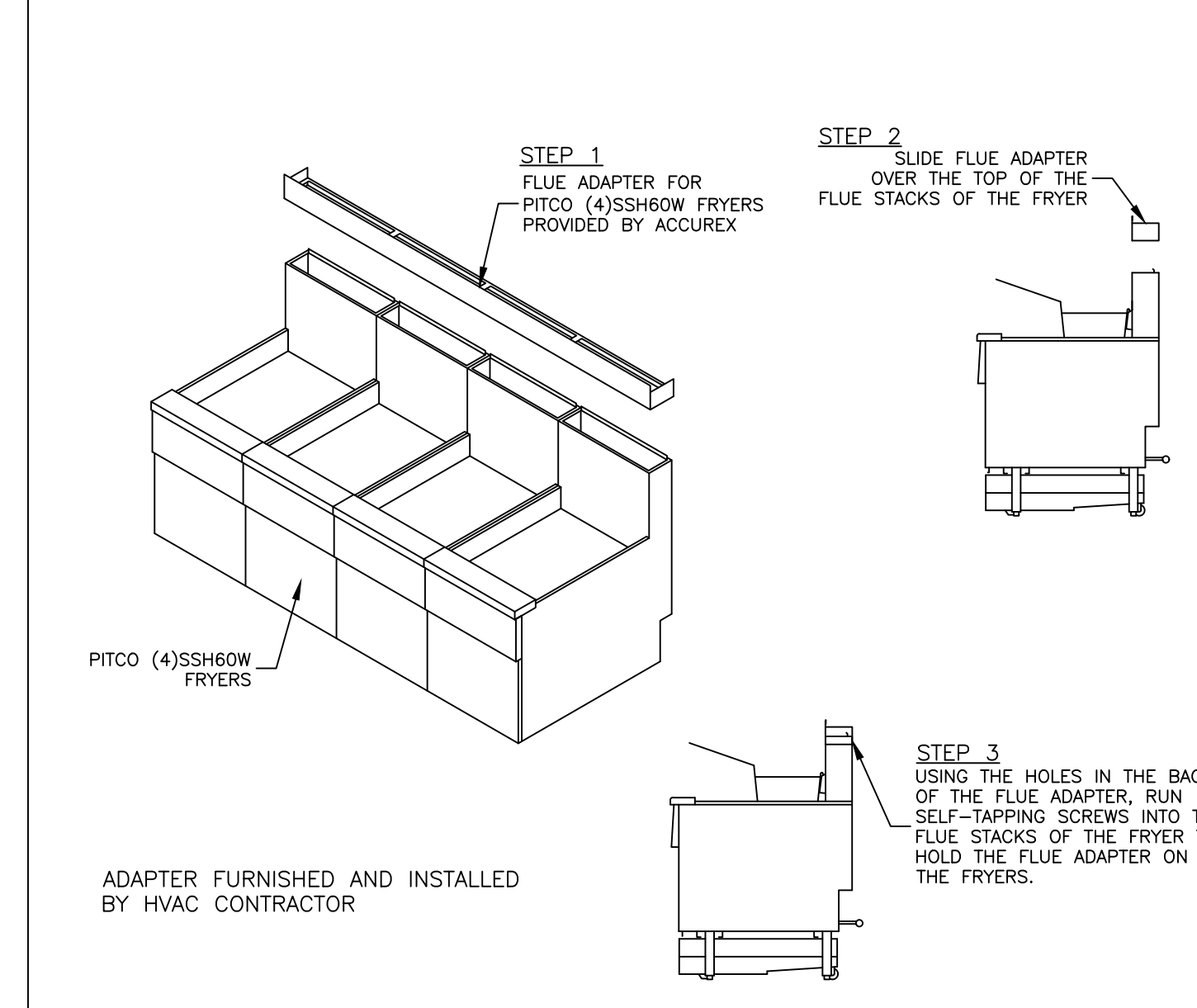
VERIFY 4-VAT OR 5-VAT FRYER BATTERY



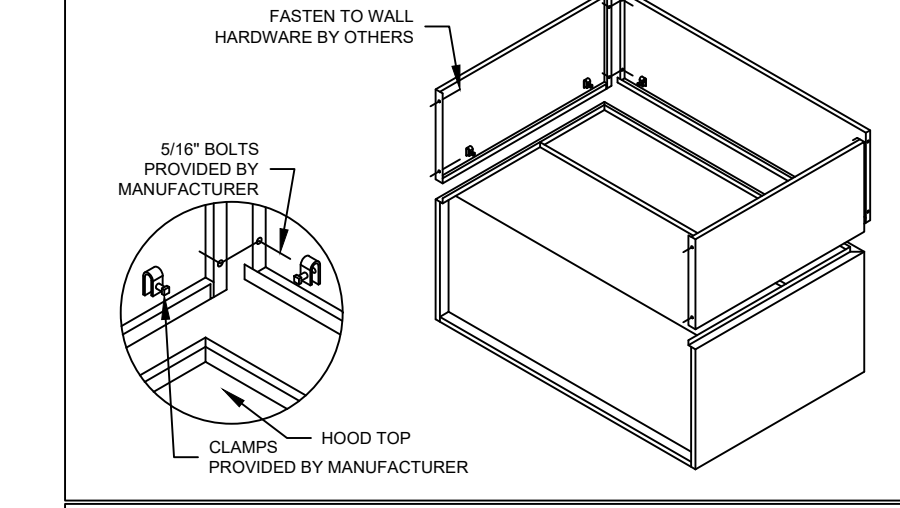
SECTION 1 ELEVATION VIEW

MARK: ITEM #59 SECTION VIEW

PITCO CU-SSH60W FRYERS FLUE ADAPTER MOUNTING INSTRUCTIONS



ENCLOSURE PANEL INSTALLATION DETAIL

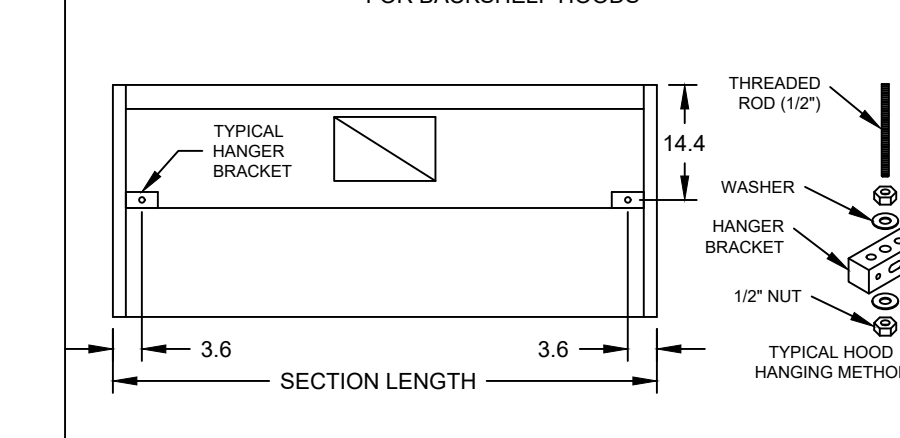


HOOD HANGING HEIGHT FOR FIRE SYSTEMS

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

- RECOMMENDED HANGING HEIGHT = 61" 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



ACCUREX

PROJECT 12/4/2019
 MARK
 ACCUREX - WI, IA
 PHILLIP KRAFT
 PHILLIP.KRAFT@ACCUREX.COM
 262-227-7865

OWNER:
 NEW CULVERS RESTAURANT
 19TH AVE CULVERS PRINCETON LLC
 2720 Fairview Ave, Suite 200
 Roseville, MN 55113

DESIGNED BY:
 OLLMANN ERNEST MARTIN ARCHITECTS
 200 South State Street
 Baltimore Illinois 61008
 815-544-7790 Phone
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FRYER HOOD/EXHAUST SCHEDULE & DETAILS

Date: 5-3-2024

Revision:

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 NEW CULVERS RESTAURANT
 200 19th AVE. N
 Princeton, MN 55371
 County of MILLE LACS
 Culver Franchising System, Inc.
 1240 Water St.
 Prairie du Sac, WI 53578
 608-643-7980
 HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 Signature: _____
 Date: _____
 Typed or Printed Name: LOWELL LASSON Reg. No. 51224
 2024-035
 M203

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
1	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

SPECIAL DESIGN REQUESTS

(1)-WC-4 Wall Cap (F1600858)

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	40	0.1	115/60/1	TN	1725	1	NA

*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

Standard Curb Cap Size - 17 Square
 UL/cUL 705 Listed - "Power Ventilators"
 Switch, NEMA-1, Toggle, Shipped with Unit
 Hinge, Factory Installed
 Damper Shipped Loose, BD-100-PB-10X10, Gravity Operated, Not Coated
 Birdscreen: Galvanized, nom. 84% Free Area
 Composite Wheel Material

CONTROL INFORMATION

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

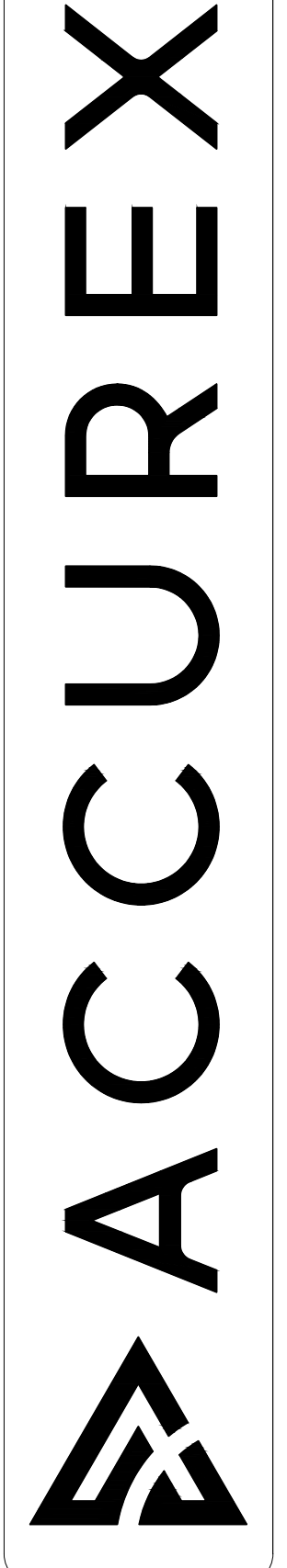
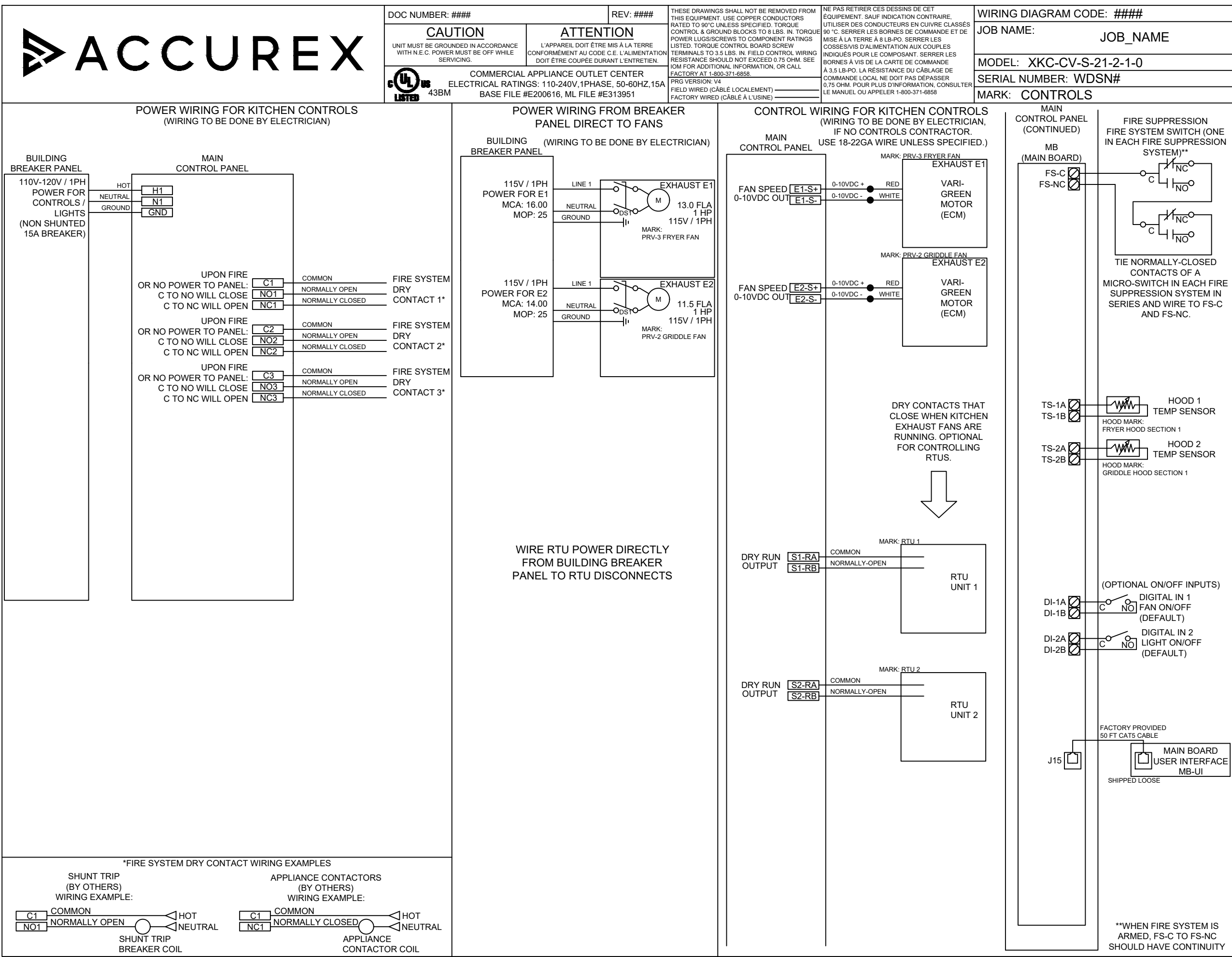
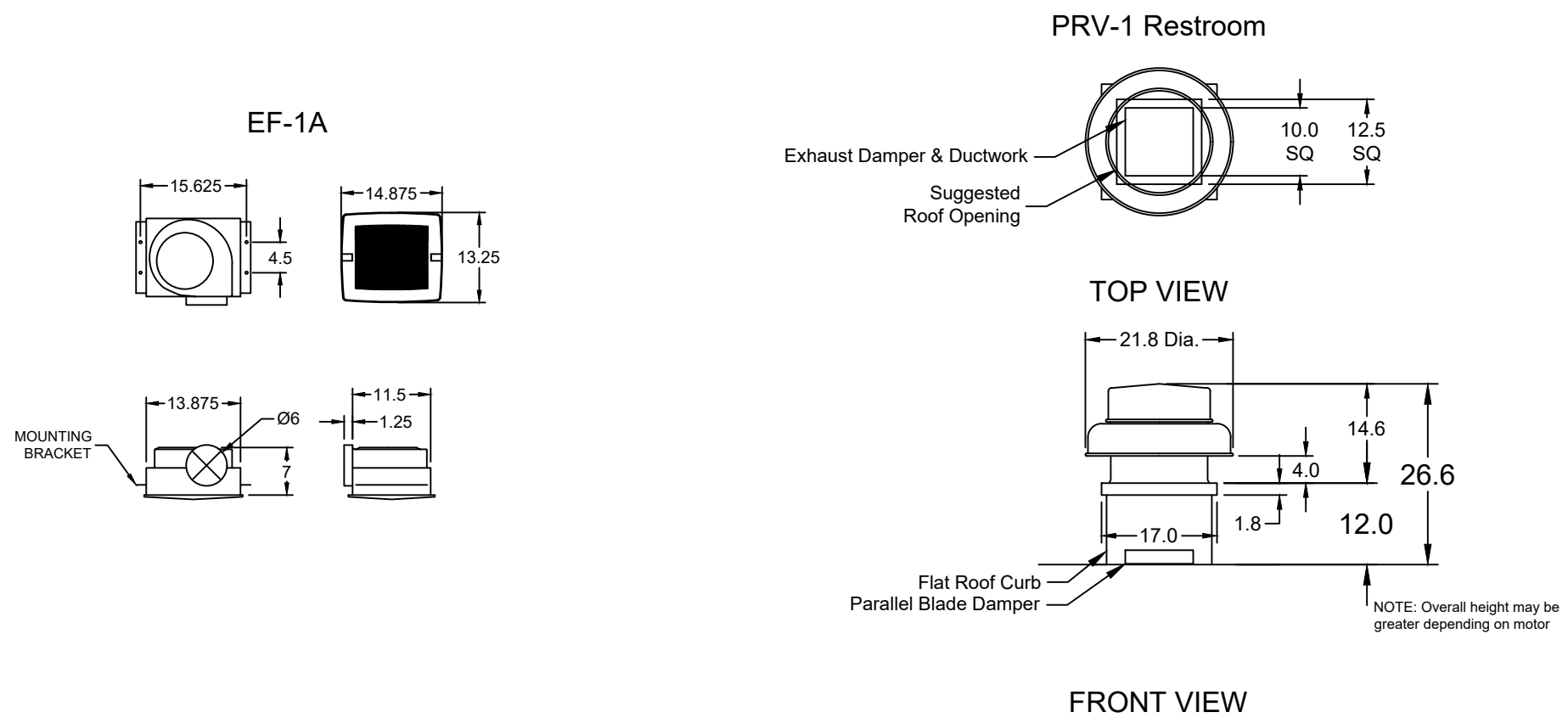
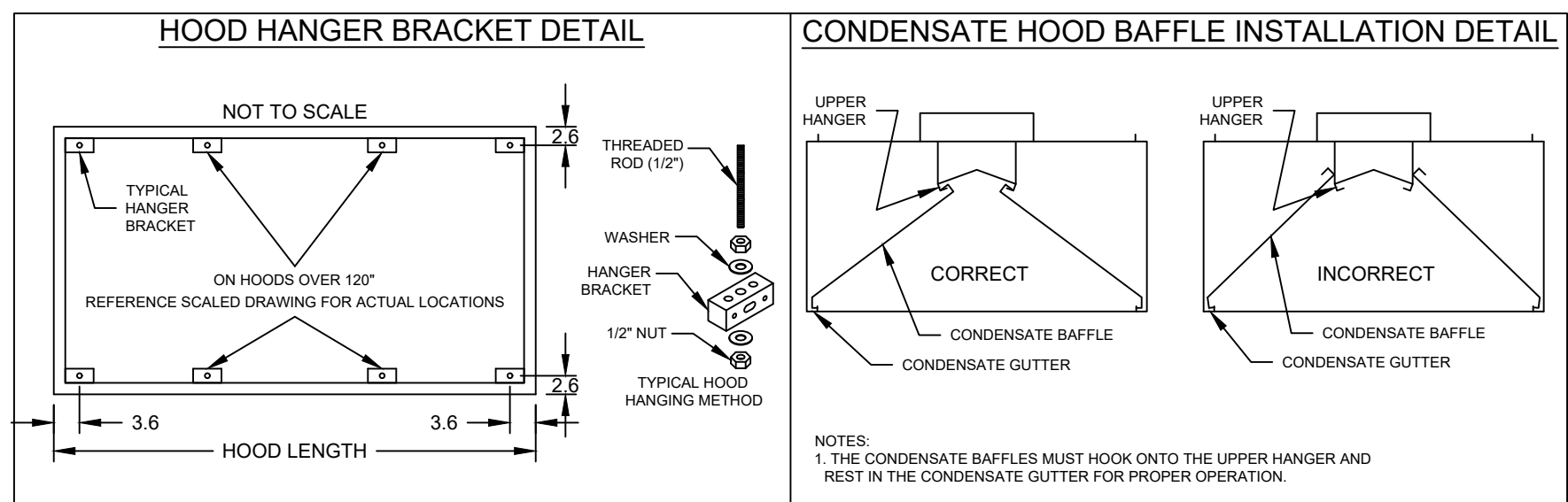
FANS CONTROLLED											
FAN #	TYPE	FAN	FAN MARK	ZONE	CFM	MOTOR HP	MOTOR VOLT	CYCLE	MOTOR PHASE	MOTOR STARTER IN PANEL	VFD IN PANEL
1	SUPPLY	S1	RTU-1	1	1500	1	208	60	3	NO	NO
2	SUPPLY	S2	RTU-2	2	1500	1	208	60	3	NO	NO
3	EXHAUST	E1	PRV-2 GRIDDLE FAN	2	1497	1	115	60	1	NO	NO
4	EXHAUST	E2	PRV-3 FRYER FAN	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

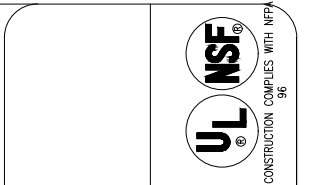
SPECIAL DESIGN REQUESTS

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



CULVERS - METROL 2021 (NC)
 1.27.2023
 ITEM 25 CONDENSATE HOOD
 PRV-1 RESTROOM
 CONTROLS

ACCUREX - W/LIA
 PHILLIP KRAFT
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FAN SCHEDULE & DETAILS

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NEW CULVERS RESTAURANT
 200 19th AVE. N
 Princeton, MN 55371
 County of MILLE LACS

OWNER:
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Date: 5-3-2024 Revision: _____

2024-035

M204