HOT WATER CABINET UNIT HEATER

UNIT NO.	CUH-1		
LOCATION	SEE PLANS		
NOMINAL SIZE	02		
CAPACITY (MBH)	12.2		
AIRFLOW (CFM)	185		
GPM	1.5		
EWT/LWT (°F)	140/120		
WPD (FT)	0.2		
EAT (°F)	60		
MOTOR HP	1/15		
FAN SPEED	875		
INVERTED FLOW	NO		
MOUNTING	CEILING		
RECESS (IN)	9-1/16"		
TCV SIZE	2-WAY		
REMARKS			

AIR DEVICE SCHEDULE

EG - 1
300
- UNIT NUMBER
- CFM

SG = SUPPLY GRILLE
RG = RETURN GRILLE
EG = EXHAUST GRILLE

LD = LINEAR DIFFUSER (SUPPLY)
CD = CEILING DIFFUSER (SUPPLY)
TG = TRANSFER GRILLE

UNIT NO.	CD-1	CD-2	CD-3	CD-5	CD-6	SG-1	SG-2	TG-1	RG-1	EG-1
MANUFACTURER	CARNES	CARNES	CARNES	CARNES	CARNES	CARNES	CARNES	CARNES	CARNES	CARNES
MODEL NO.	SFPA	SFPA	SFPA	SFPA	SFPA	RSDBH	RSDBH	RAPA	RSLAH	RSLAH
FACE STYLE	PLAQUE	PLAQUE	PLAQUE	PLAQUE	PLAQUE	DOUBLE DEFLECTION	DOUBLE DEFLECTION	EGGCRATE	LOUVERED	LOUVERED
MATERIAL	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL	STEEL	ALUMINUM	ALUMINUM	ALUMINUM
SIZE (FACE/NECK)	24x24/8"ø	24x24/10"ø	24x24/14"ø	12x12/6"ø	12x12/8"ø	14x10/12x8	32x14/30x12	24x24/22x22	32x14/30x12	10x10/8x8
CFM RANGE	75-200	220-300	305-600	75-100	105-200	100-310	315-850	–	SEE PLANS	75-150
MOUNTING	CEILING	CEILING	CEILING	CEILING	CEILING	SIDEWALL	SIDEWALL	CEILING	SIDEWALL	CEILING
DAMPER	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
REMARKS	①	①	①	①	①					

GENERAL NOTES:
1. CONTRACTOR SHALL VERIFY MOUNTING SURFACE / FRAME REQUIREMENTS.
2. BRANCH DUCT SIZE TO DIFFUSER SHALL BE THE NECK SIZE OF THE DIFFUSER UNLESS NOTED OTHERWISE.
3. SEE SPECIFICATION FOR GRILLE, REGISTER, AND DIFFUSER FINISHES.
4. MAXIMUM STATIC PRESSURE DROP THROUGH GRILLE, REGISTER, OR DIFFUSER SHALL NOT EXCEED 0.1".
5. MAXIMUM NC LEVELS FOR GRILLES, REGISTERS, OR DIFFUSERS SHALL NOT EXCEED 25.
6. UNLESS THROW IS NOTED OR INDICATED OTHERWISE, ALL DIFFUSERS SHALL BE 4-WAY THROW.

KEYED NOTES:

① PROVIDE OPTIONAL DIRECTIONAL BLOW CLIPS AS INDICATED BY FLOW ARROWS ON PLANS.

PUMP SCHEDULE

UNIT NO.	P-1	P-2
SERVICE	B-1	HW SYSTEM
LOCATION	RM 116	RM 116
TYPE	IN-LINE	IN-LINE
CAPACITY GPM	45.0	45.0
PRESSURE HEAD (FT)	15.0	20.0
INLET/OUTLET (IN)	2.5/2.5	2.5/2.5
RPM	3450	3450
HP	0.5	0.5
VOLTAGE/PHASE	230/1	230/1
UNIT WEIGHT (LBS)	25.0	25.0
REMARKS		

HOT WATER COIL

UNIT NO.	HC-1	HC-2
SERVICE	RTU-1	RTU-2
AIR FLOW (CFM)	5925	5600
COIL FACE SIZE	102x14	84x14
EAT (°F)	46.1	44.5
LAT (°F)	87.0	89.0
CAPACITY (MBH)	273.0	271.0
FINS PER IN / ROWS	10.0/3.0	12.0/3.0
AIR PD (IN WC)	0.35	0.5
GLYCOL (%)	30.0	30.0
GPM	20.0	20.0
EWT/LWT (°F)	140.0/110.0	140.0/110.0
WPD (FT)	6.0	5.0
TCV SIZE	2-WAY	2-WAY
REMARKS		

HOT WATER FIN TUBE RADIATION

UNIT NO.	WF-1	
LOCATION	SEE PLANS	
TYPE	SLOPED TOP	
ENCLOSURE HEIGHT (IN)	14.0	
ENCLOSURE DEPTH (IN)	4.375	
ENCLOSURE LENGTH (IN)	SEE PLANS	
NO. OF TIERS	1	
MOUNTING HEIGHT (IN AFF)	18	
EAT (F)	65	
AVG. WATER TEMP (F)	130	
WATER TEMPERATURE DROP (°F)	20	
CAPACITY (BTU/HR)/LINEAR FT.)	560	
TUBE SIZE	3/4"	
TUBE MATERIAL	COPPER	
FIN SIZE	4.25x3.625	
FIN MATERIAL	ALUMINUM	
FPF	50	
TCV	2-WAY	
REMARKS		

HOT WATER BOILER SCHEDULE

UNIT NO.		B-1	
SERVICE		HTG HOT WATER	
LOCATION		RM 116	
MANUFACTURER		WEIL MCLAIN	
MODEL NO.		ULTRA 750	
TYPE		CONDENSING	
GAS TYPE		NATURAL	
NATURAL GAS INPUT (CFH)		750.0	
RATED IBR/AGA OUTPUT (MBH)		702.0	
EWT (F)		110.0	
LWT (F)		140.0	
HOT WATER (GPM)		45.0	
GLYCOL (%)		30.0	
VENT/INTAKE DIAMETER		6/6	
WATER CONNECTION DIA (IN)		2/2	
ELECTRICAL REQUIREMENTS	VOLTS	120	
	AMPS	18	
	PHASE	1	
	MAX OVERCURRENT PROT. (MOCP)	25-30	
UNIT WEIGHT (LBS)		550.0	
REMARKS		①②	

KEYED NOTES:

① HOT WATER SYSTEM TO BE FILLED WITH A PREMIX OF 30% GLYCOL SOLUTION. SOLUTION TO BE A MIX OF INHIBITED PROPYLENE GLYCOL AND DISTILLED WATER. DON NOT MAKE HARD CONNECTION FROM THE DOMESTIC WATER SUPPLY TO THE BOILER SYSTEM. CAP FILL CONNECTION ON BOILER SYSTEM AFTER SYSTEM HAS BEEN FILLED.

② PROVIDE GAS REGULATOR AS REQUIRED.

ROOFTOP AIR HANDLING UNIT

UNIT NO.	RTU-1	RTU-2
SERVICE	DINING	KITCHEN
LOCATION	ROOF	ROOF
ARI RATED CAPACITY (TONS)	17.5	20.0
AIR FLOW (CFM)	5925	5600
OUTSIDE AIR (CFM)	1900	1900
SUPPLY FAN		
MOTOR BHP	3.6	3.6
MOTOR HP	5.0	5.0
EXT. SP (IN WC)	1.0	1.2
TOTAL SP (IN WC)	1.3	1.5
UNIT ELECTRICAL		
VOLT / PHASE	208/3	208/3
MCA	90.0	90.0
MOCP	100.0	100.0
AIR FILTER		
TYPE	2"TA	2"TA
FACE VELOCITY (FPM)	500	500
EFFICIENCY @ 0.12 MICRONS	13	13
SP DROP (IN) CLEAN/DIRTY	0.08/0.6	0.08/0.6
HEATING DATA		
GAS TYPE	NATURAL	NATURAL
HEATING INPUT (MBH)	360.0	360.0
HEATING OUTPUT (MBH)	288.0	288.0
HEATING STAGES	2	2
COOLING DATA		
EAT (F) DB/WB	80.1/66.2	80.4/66.4
LAT (F) DB/WB	55.0/54.0	55.0/54.0
TOTAL CAPACITY (MBH)	204.0	238.0
SENSIBLE CAPACITY (MBH)	198.0	230.0
REMARKS	①	①

KEYED NOTES:

① PROVIDE GAS REGULATOR AS REQUIRED.

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 PARAMETER 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.

HOT WATER RADIANT CEILING PANEL SCHEDULE

UNIT NO.	RCP-1	RCP-2	RCP-3	RCP-4	RCP-5
LOCATION	RM 107	RM 108	RM 108	RM 119	RM 104
NOMINAL LENGTH (IN)	150 ①	66 ①	96 ①	84 ①	3 @ 48
NOMINAL WIDTH (IN)	24	24	24	24	24
PANEL MATERIAL	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM
PANEL FINISH	POWDER COAT	POWDER COAT	POWDER COAT	POWDER COAT	POWDER COAT
PANEL COLOR	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT	BY ARCHITECT
ROOM TEMP (°F)	70	70	70	70	70
AVG. WATER TEMP (°F)	125	125	125	125	125
NO. OF PASSES	4	4	4	4	4
CAPACITY ((BTU/HR)/LINEAR FT)	183.0	183.0	183.0	183.0	183.0
TCV SIZE	2-WAY	2-WAY	SEE RCP-2	2-WAY	2-WAY
REMARKS	②	②	②	②	②

KEYED NOTES:

① RCP TO BE WALL TO WALL FIELD VERIFY EXACT LENGTH OF ROOM/AREA.

② INSULATION AS SPECIFIED ON TOP OF "RCP" TO BE BY DIVISION 23 CONTRACTOR.

PIPING SYSTEMS

- GENERAL SHUTOFF VALVE SEE SPECIFICATIONS FOR TYPE
- CALIBRATED BALANCE/SHUTOFF VALVE (FLOW MEASURING)
- 2-WAY TEMPERATURE CONTROL VALVE (PNEUMATIC OR ELECTRIC)
- 3-WAY TEMPERATURE CONTROL VALVE (PNEUMATIC OR ELECTRIC)
- CHECK VALVE
- CAP
- CONNECTION, BOTTOM
- CONNECTION, TOP
- ELBOW, TURNED UP
- ELBOW, TURNED DOWN
- PUMP
- FLOW DIRECTION IN PIPES
- GLYS — GLYCOL SUPPLY
- GLYR — GLYCOL RETURN

GENERAL SYMBOLS

- (T) THERMOSTAT OR TEMPERATURE SENSOR
- (H) HUMIDISTAT OR HUMIDITY SENSOR

ABBREVIATIONS

AD	ACCESS DOOR
ADJ	ADJUSTABLE
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ASC	ABOVE SUSPENDED CEILING
B	BOILER
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
CCC	COOLING COIL CONDENSATE
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CUH	CABINET UNIT HEATER
D	DRAIN
DB	DRY BULB
DCO	DOOR CUTOFF BY GC
DIA	DIAMETER
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EER	ENERGY EFFICIENCY RATIO
EG	EXHAUST GRILLE
ELEC	ELECTRICAL
EQUIP	EQUIPMENT
ET	EXPANSION TANK
EWH	ELECTRIC WALL HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
°F	DEGREES FAHRENHEIT
FC	FORWARD CURVED
FD	FLOOR DRAIN OR FIRE DAMPER
FLEX	FLEXIBLE
FPM	FEET PER MINUTE
FSC	FAN SPEED CONTROLLER
FT	FOOT OR FEET
G	GAS
GAL	GALLON
GC	GENERAL CONTRACTOR
GLYR	GLYCOL RETURN
GLYS	GLYCOL SUPPLY
HC	HEATING CONTRACTOR
HP	HORSEPOWER
HR	HOUR
HVAC	HEATING VENTILATING AND AIR CONDITIONING
HZ	HERTZ
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MBH	1000 BRITISH THERMAL UNITS/HOUR
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OED	OPEN ENDED DUCT WITH SCREEN
P	PUMP
PC	PLUMBING CONTRACTOR
PLBG	PLUMBING
RA	RETURN AIR
RCP	RADIANT CEILING PANEL
RG	RETURN GRILLE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
S	SUPPLY
SA	SUPPLY AIR
SG	SUPPLY GRILLE
SM	SHEET METAL
T	THERMOSTAT/TEMPERATURE SENSOR
TA	THROWAWAY
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TCV	TEMPERATURE CONTROL VALVE
TEMP	TEMPORARY
TG	TRANSFER GRILLE
TYP	TYPICAL
VB	VACUUM BREAKER
VSC	VARIABLE SPEED CONTROL

DUCTWORK SYSTEMS

- 20/12 — DUCT SIZE, (FIRST FIGURE IS SIDE SHOWN)
- 12" ø — ROUND DUCT
- UP/DN — CHANGE OF ELEVATION IN DIRECTION OF AIR FLOW
- AD — ACCESS DOOR, VERTICAL OR HORIZONTAL
- FLEXIBLE CONNECTION
- DUCT TRANSITION (DOUBLE LINE)
- DUCT TRANSITION (RECT. TO ROUND)
- DUCT TRANSITION (SINGLE LINE)
- HIDDEN DUCTWORK
- BDD — BACK DRAFT DAMPER
- M — MOTOR OPERATED DAMPER
- MANUAL VOLUME DAMPER
- S — SMOKE DETECTOR
- STANDARD BRANCH, SUPPLY, RETURN, OR EXHAUST, NO SPLITTER
- ROOF VENTILATOR OR HOOD ON ROOF ABOVE
- ROOF VENTILATOR OR HOOD ON ROOF
- DUCT CAP

EXISTING / EXISTING / NEW / NEW
- POSITIVE PRESSURE DUCT SECTION
- POSITIVE PRESSURE DUCT (DOWN OR AWAY)
- NEGATIVE PRESSURE DUCT SECTION
- NEGATIVE PRESSURE DUCT (DOWN OR AWAY)
- FLEXIBLE DUCT DIFFUSER CONNECTION
- OR — SIDEWALL AIR DEVICE
- EXHAUST, RETURN, OR TRANSFER AIR DEVICE
- SUPPLY AIR DEVICE
- SIZE — TRANSFER GRILLE ASSEMBLY
- DG, X.X @ FA — DOOR GRILLE
- DCO — 3/4" DOOR CUTOFF (UNDERCUT) BY GC
- ELBOW WITH TURNING VANES
- HEATING COIL
- AIR FLOW
- SQUARE FEET

PLENUM NOTE:
RETURN AIR CEILING PLENUMS ARE UTILIZED ON THIS PROJECT IN THE DINNING AREA. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL ASCERTAIN THAT ALL ROOMS TO WHICH AIR IS SUPPLIED, HAVE RETURN AIR PATHS BACK TO AND THRU THE CEILING PLENUM. ANY SPACES OBSERVED WHICH DO NOT HAVE SUCH OPENINGS SHALL BE REPORTED TO A/E IMMEDIATELY FOR RESOLUTION. PIPING AND DUCTWORK SHALL BE INSTALLED IN SUCH A MANNER SO AS NOT TO BLOCK THE RETURN AIR PATH, RETURN AIR OPENINGS INTAKE DUCTWORK.

HVAC SHEET INDEX

DRAWING SET	
01-07-11	LEED Online Set
02-03-11	COMMERCE REVIEW and BID PACKAGE 1

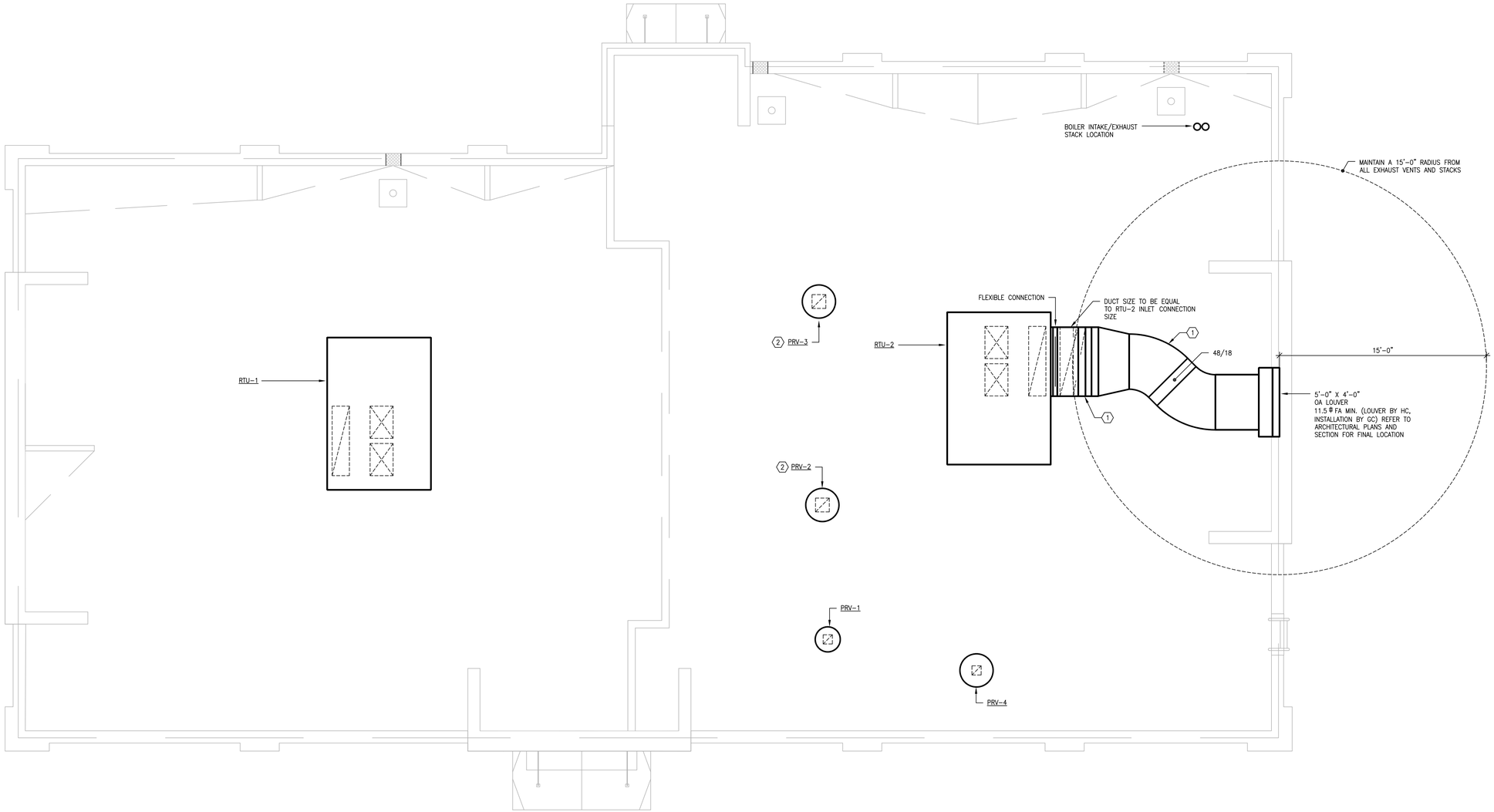
Culver Franchising System, Inc.
1240 Water Street
Prairie du Sac, WI 53578
608-643-7980

CULVER FRANCHISING SYSTEM, INC.
CULVER'S OF BARABOO

Sheet Contents:
HVAC NOTES

Project No. 100153
Drawn By: CRR/TDM
Date: 2/3/11

Sheet
M-0



1 / M-1.1 ROOF PLAN – HVAC DUCTWORK

SCALE: 1/4"=1'-0"

NORTH

KEYED NOTES:

1. ALUMINUM OUTSIDE AIR DUCT, PITCH DUCT TO LOUVER TO ALLOW ANY MOISTURE INSIDE DUCT TO BE DRAINED BACK TO LOUVER. PROVIDE SUPPLEMENTAL ALUMINUM COVER OVER OUTSIDE AIR DUCT, COVER TO BE PITCHED FROM CENTER TO EDGES OF DUCT TO FACILITATE DRAINAGE, PROVIDE CENTER SUPPORT TO MAINTAIN PITCH.
2. PRV-2 AND PRV-3 SHALL BE A MINIMUM OF 30'-0" AWAY FROM RTU-1 AND RTU-2 OUTSIDE AIR INTAKES.

DRAWING SET	
01-07-11	LEED Online Set
02-03-11	COMMERCE REVIEW and BID PACKAGE 1

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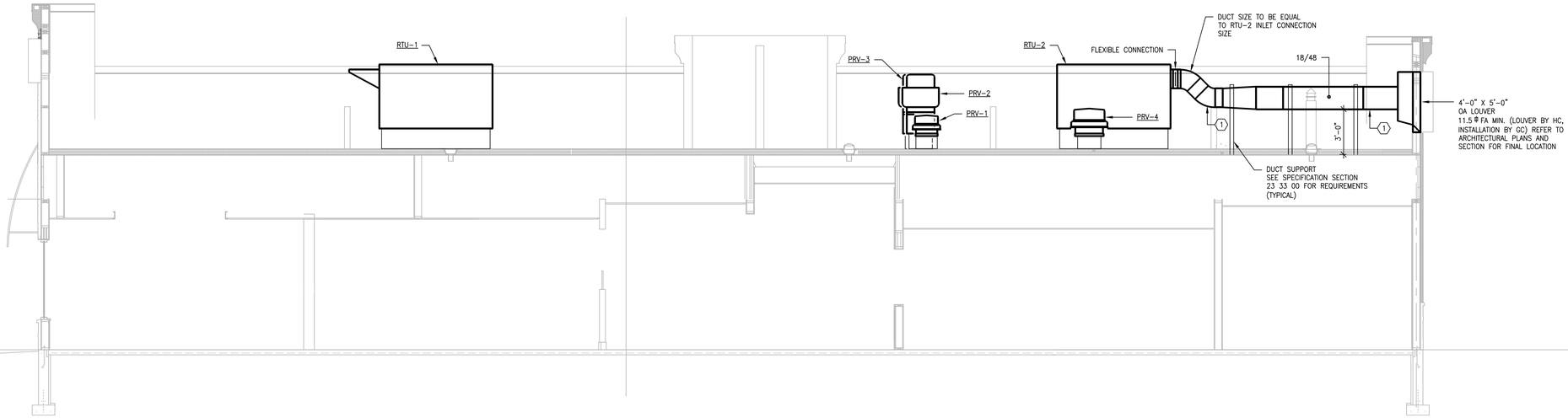
M-1.1

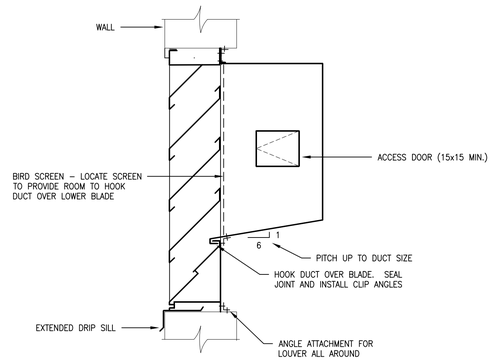


1 / M-1.2 SECTION – HVAC DUCTWORK

SCALE: 1/4"=1'-0"

KEYED NOTES:

1. ALUMINUM OUTSIDE AIR DUCT, PITCH DUCT TO LOUVER TO ALLOW ANY MOISTURE INSIDE DUCT TO BE DRAINED BACK TO LOUVER. PROVIDE SUPPLEMENTAL ALUMINUM COVER OVER OUTSIDE AIR DUCT, COVER TO BE PITCHED FROM CENTER TO EDGES OF DUCT TO FACILITATE DRAINAGE, PROVIDE CENTER SUPPORT TO MAINTAIN PITCH.



LOUVER INSTALLATION DETAIL

SCALE: NONE

DRAWING SET	
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HVAC PLAN

Project No.	100153
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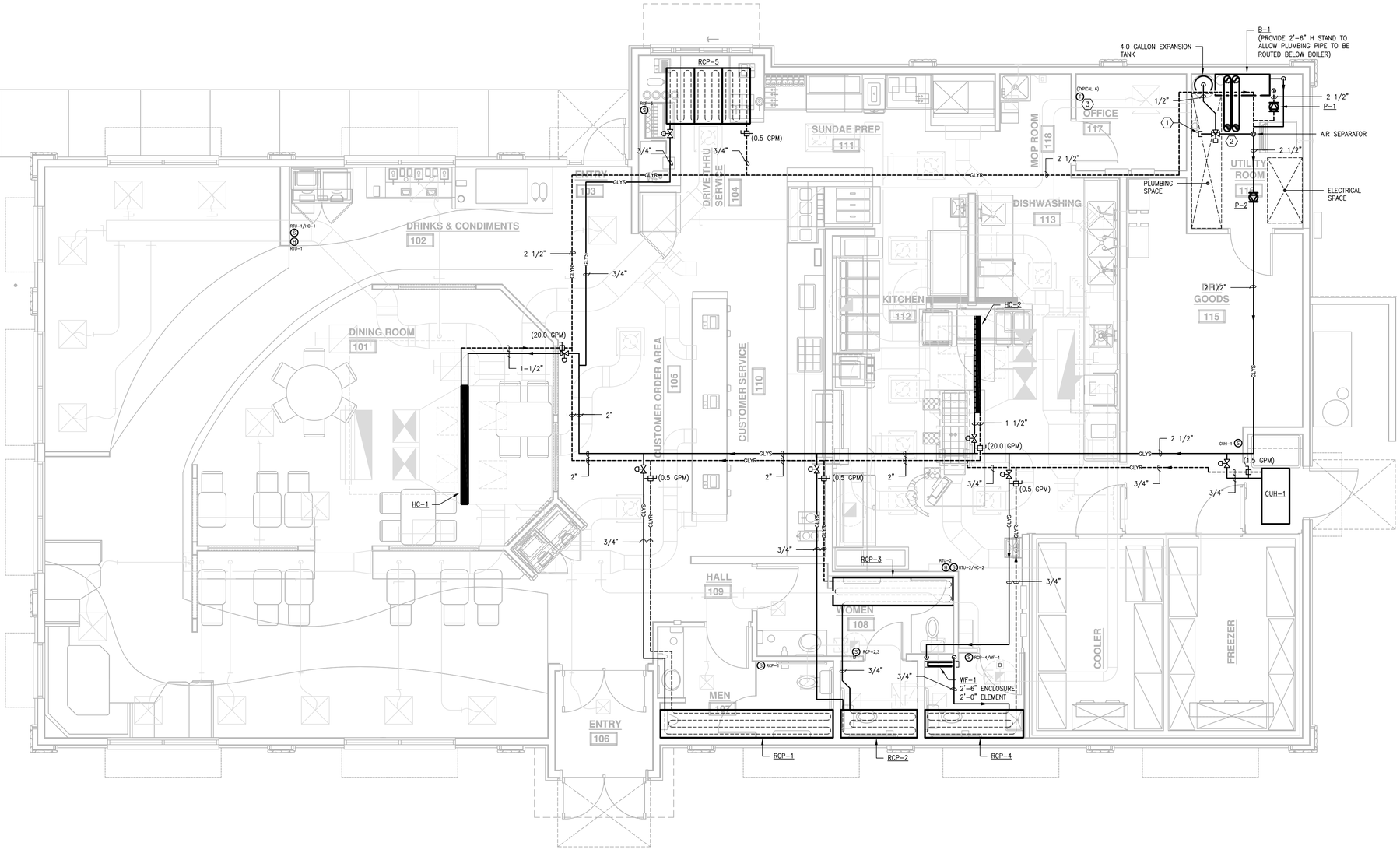
Date:	2/3/11

Sheet
M-1.2



1/M-2 FLOOR PLAN – HVAC PIPING

SCALE: 1/4"=1'-0"

NORTH

KEYED NOTES:

1. GLYCOL SUPPLY CONNECTION, CAP OFF AFTER SYSTEM IS OPERATIONAL.
2. 6" BOILER INTAKE AND VENT UP THROUGH ROOF. MAINTAIN 15'-0" DISTANCE FROM RTU-2 INTAKE.
3. THERMOSTATS FOR RTU-1, RTU-2, RCP-1. RCP-2/3, RCP-4 AND RCP-5.

DRAWING SET	
01-07-11	LEED Online Set
02-03-11	COMMERCE REVIEW and BID PACKAGE 1

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HVAC PLAN

Project No.	100153
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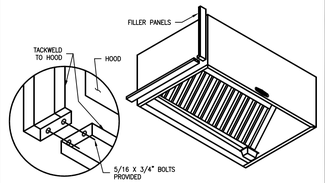
Date:	2/3/11

Sheet

M-2

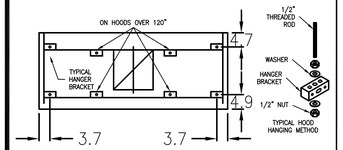
NOTES:
1. FAN MUST BE ELECTRONICALLY INTERLOCKED WITH COOKING EQUIPMENT.
2. THIS HOOD IS DESIGNED SPECIFICALLY FOR USE OVER PITCO MODEL SG14 FRYER.
3. FLUE ADAPTER MUST BE ATTACHED TO FRYER.

FILLER PANEL INSTALLATION DETAIL



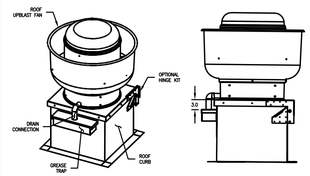
HOOD HANGER BRACKET DETAIL

FOR ALL PROXIMITY HOODS WITH 3" INTEGRAL AIRSPACE

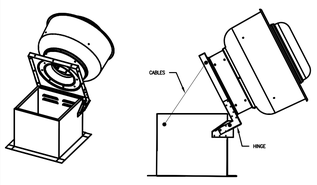


SEE ACCUREX.COM FOR ADDITIONAL INFORMATION

GREASE TRAP INSTALLATION DETAIL



HINGE KIT INSTALLATION DETAIL



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 OFC 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

Accurex 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 greaseextraction. 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.

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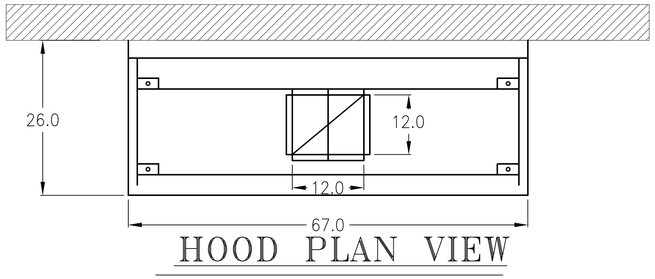
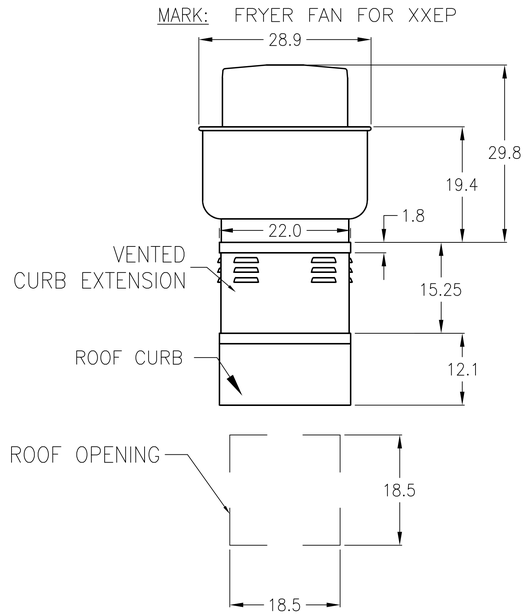
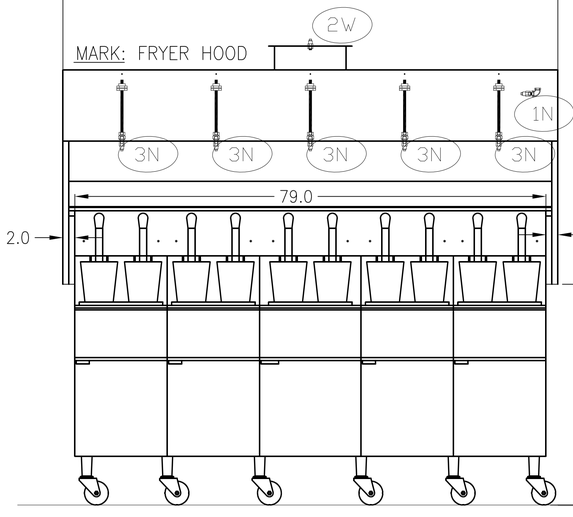


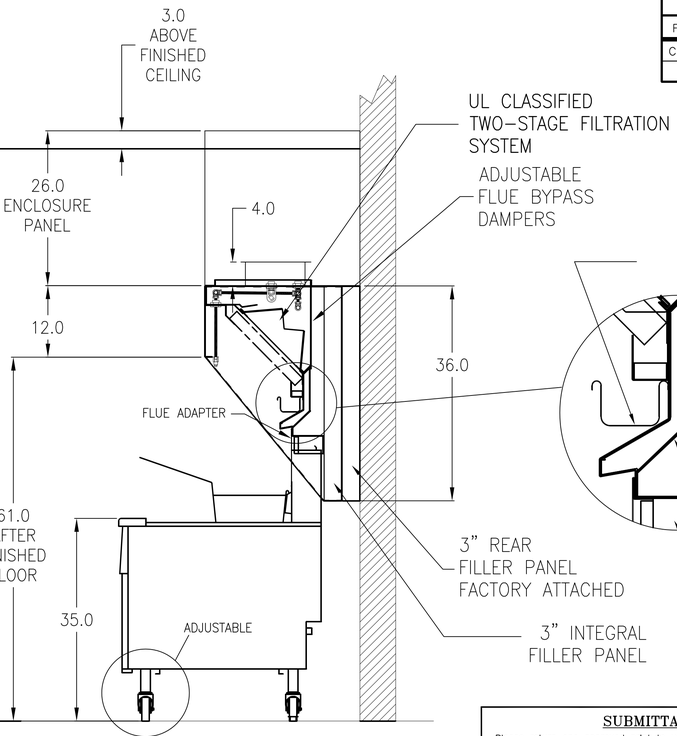
HOOD PLAN VIEW

MARK: FRYER FAN FOR XXEP





HOOD ELEVATION VIEW



HOOD SECTION VIEW

EQUIPMENT SCHEDULE

EXHAUST FAN (PRV-3) — MARK: FRYER FAN FOR XXEF — QTY. 1

MODEL NO.	VOLUME (CFM)	SP (IN WC)	FAN RPM	WEIGHT (LB)	MOTOR SPECS HP	V/C/P	RPM
XRUB-141-7	1500	1.0	1348	84	3/4	208/60/3	1725

SWITCH - NEMA-1, TOGGLE, MOUNTED & WIRED
HEAT BAFFLE
UL/CUL-762 - 'POWER VENT. FOR REST. EXH. APPLIANCES'
HINGED CURB CAP KIT WITH CABLES
VENTED CURB EXT. VCE-22-G15.25
GREASE TRAP WITH DRAIN CONNECTION
ALUMINUM WHEEL CONSTRUCTION
MOTOR COMPATIBLE FOR USE W/ VFD
CURB GPI - 22 - G12

KITCHEN HOOD — MARK: #59 (FRYERS) — QTY. 1

MODEL NO.	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LB)
XXEP	83	26	36	268

PERFORMANCE	VOLUME (CFM)	SP (IN WC)	DUCT COLLAR SIZE (IN)	DUCT COLLAR VEL. (FT/M)	FILTER FACE VEL. (FT/M)
EXHAUST (TOTAL)	1500	0.637	(1)12"x12"	1650	196
SUPPLY (TOTAL)	0	0.000	(0)0" X0"	0	N/A

18 GAUGE TYPE 430 STAINLESS STEEL WHERE EXPOSED
U.L. LISTED WITHOUT FIRE DAMPER
U.L. TEMPERATURE RATING (600 DEGREES F)
(4) 16" X 16" STAINLESS STEEL UL CLASSIFIED TWO STAGE FILTRATION SYSTEM
GREASE CUP MOUNTED ON RIGHT END OF HOOD
INTEGRAL 3" AIR SPACE ON HOOD BACK ONLY
26" HIGH ENCLOSURE PANELS FRONT, LEFT & RIGHT END
3" REAR FILLER PANEL-FACTORY ATTACHED

FIRE SUPPRESSION SYSTEM

MARK	MODEL NO.	GAS VALVE	VALVE SIZE	FLOW POINTS
FSS-1	FSSC-18-1	MECHANICAL	1.5	18.0

CHROME APPLIANCE DROPS

CONSTRUCTION COMPLIES WITH NFPA 96

SUBMITTAL

Please return one approved print to your Accurex 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 ENGINEERED RESTAURANT SYSTEMS

CULVER'S FRYER HOOD

DRAWN BY: -
DATE: -
SCALE: 1" = 1'
DRAWING NUMBER: S6352-1

DRAWING SET	
01-07-11	LEED Online Set
02-03-11	COMMERCE REVIEW and BID PACKAGE 1

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

CULVER FRANCHISING SYSTEM, INC.
CULVER'S OF BARABOO

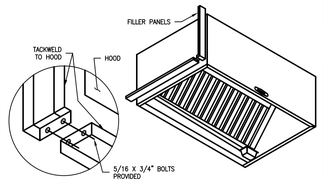
Sheet Contents: HVAC NOTES

Project No.: Baraboo 2010
Drawn By:
Date: 2/3/11

Sheet M-3

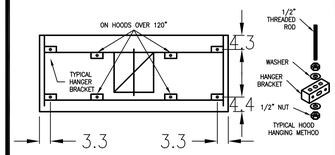
NOTES:
1. FAN MUST BE ELECTRONICALLY INTERLOCKED WITH COOKING EQUIPMENT.
2. THIS HOOD IS DESIGNED SPECIFICALLY FOR USE OVER MAGIC KITCH'N MKG60 GRIDDLE.
3. FLUE ADAPTER MUST BE ATTACHED TO GRIDDLE.

FILLER PANEL INSTALLATION DETAIL



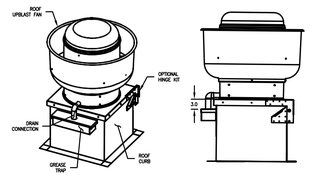
HOOD HANGER BRACKET DETAIL

FOR ALL PROXIMITY HOODS WITH 3" INTEGRAL AIRSPACE

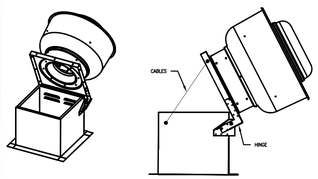


SEE ACCUREX.COM FOR ADDITIONAL INFORMATION

GREASE TRAP INSTALLATION DETAIL



HINGE KIT INSTALLATION DETAIL



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 OFC 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

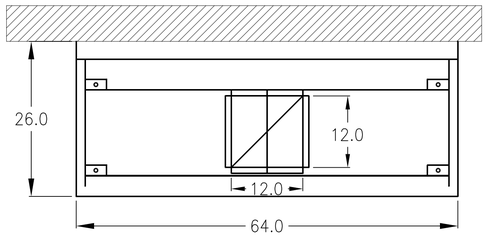
Accurex ventilators are designed in compliance with all national codes: NFPA # 96, national electric code. BOCA, uniform mechanical code, international mechanical code, and southern building conference. See national evaluation report #436 for allowable values, and/or conditions of use concerning material 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.

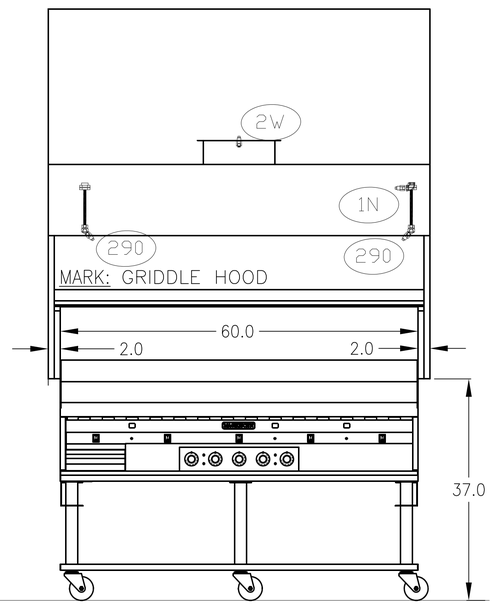
The grease filter face velocities are based on the filter manufacturers recommendations for maximum greaseextraction. Inlet opening air velocities for waterwash, dry cartridge and high velocity cartridge filters manufactured by Accurex are designed to deliver maximum grease extraction.

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

PROPRIETARY INFORMATION NOTICE

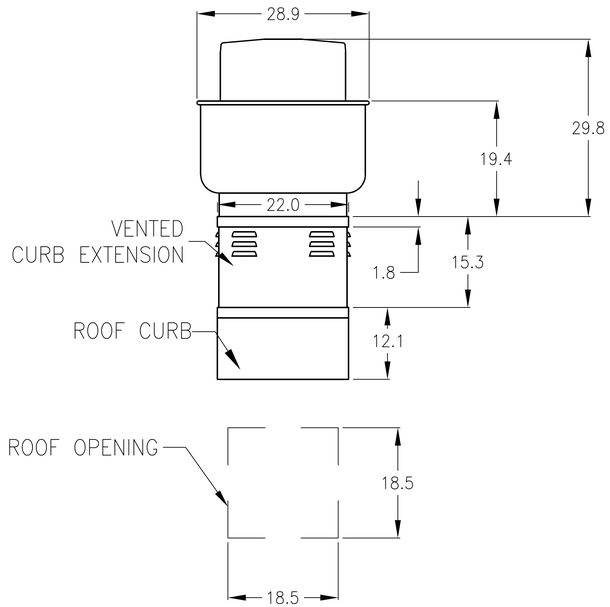


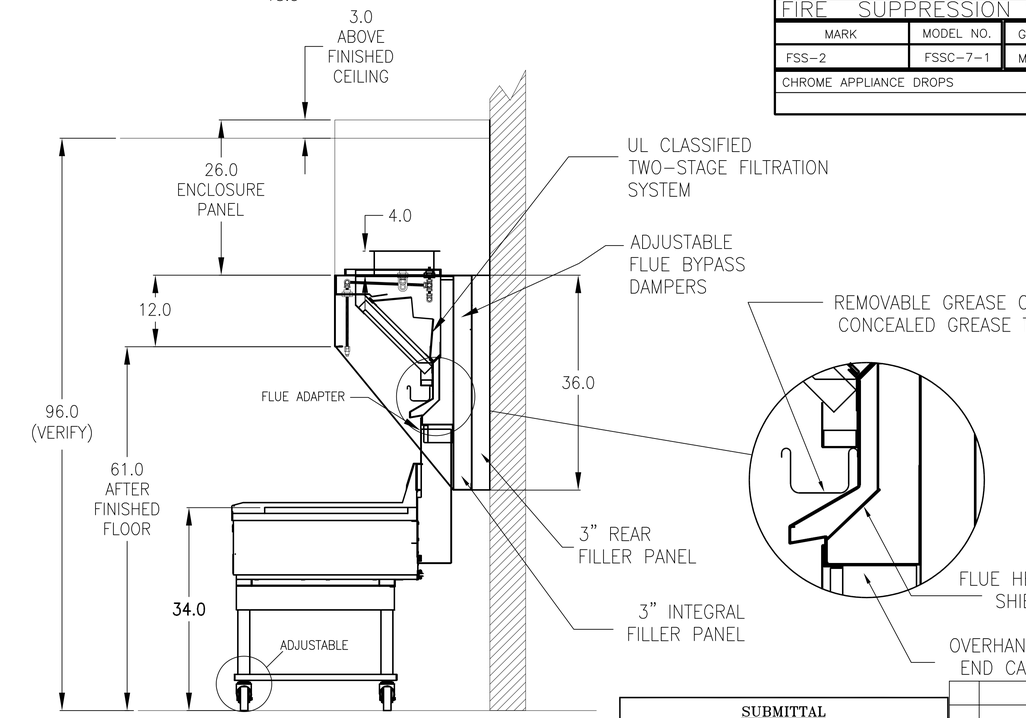
HOOD PLAN VIEW



HOOD ELEVATION VIEW

MARK: GRIDDLE FAN FOR XGEP-FB





HOOD SECTION VIEW

EQUIPMENT SCHEDULE

EXHAUST FAN (PRV-2)

MARK: GRIDDLE FAN FOR XGEP-FB | QTY. 1

MODEL NO.	VOLUME (CFM)	SP (IN WC)	FAN RPM	WEIGHT (LB)	MOTOR SPECS HP	V/C/P	RPM
XRUB-161XP-15	1500	2.4	2337	87	1.5	208/60/3	1725

- SWITCH - NEMA-1, TOGGLE, MOUNTED & WIRED
- HEAT BAFFLE
- UL/CUL-762 - 'POWER VENT. FOR REST. EXH. APPLIANCES'
- HINGED CURB CAP KIT WITH CABLES
- VENTED CURB EXT. VCE-22-G15.25
- GREASE TRAP WITH DRAIN CONNECTION
- ALUMINUM WHEEL CONSTRUCTION
- MOTOR COMPATIBLE FOR USE W/ VFD
- CURB GPI - 22 - G12

KITCHEN HOOD

MARK: #49 GRIDDLE HOOD | QTY. 1

MODEL NO.	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LB)
XGEP-FB-5.33S	64	26	36	259

PERFORMANCE	VOLUME (CFM)	SP (IN WC)	DUCT COLLAR SIZE (IN)	DUCT COLLAR VEL. (FT/M)	FILTER FACE VEL. (FT/M)
EXHAUST (TOTAL)	1500	2.0	(1)12" X 12"	1560	201
SUPPLY (TOTAL)	0	0.000	(0) 0" X 0"	0	N/A

- 18 GAUGE TYPE 430 STAINLESS STEEL WHERE EXPOSED
- U.L. LISTED WITHOUT FIRE DAMPER
- U.L. TEMPERATURE RATING (600 DEGREES F)
- (4) 16" X 16" STAINLESS STEEL UL CLASSIFIED TWO STAGE FILTRATION SYSTEM
- GREASE CUP MOUNTED ON LEFT END OF HOOD
- INTEGRAL 3" AIR SPACE ON HOOD BACK ONLY
- 26" HIGH ENCLOSURE PANELS FRONT, LEFT & RIGHT SIDES
- 3" REAR FILLER PANEL

FIRE SUPPRESSION SYSTEM

MARK	MODEL NO.	GAS VALVE	VALVE SIZE	FLOW POINTS
FSS-2	FSSC-7-1	MECHANICAL	1.5	7.0

- CHROME APPLIANCE DROPS

CONSTRUCTION COMPLIES WITH NFPA 96

SUBMITTAL

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- ☐ APPROVED AS NOTED
- ☐ REJECTED - REVISE AND RESUBMIT

SIGNATURE DATE

REV	DESCRIPTION	DATE

ACCUREX ENGINEERED RESTAURANT SYSTEMS

CULVERS GRIDDLE HOOD

DRAWN BY: -
DATE: -
SCALE: 1" = 1'
DRAWING NUMBER: S6144B-5

DRAWING SET	
01-07-11	LEED Online Set
02-03-11	COMMERCE REVIEW and BID PACKAGE 1

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

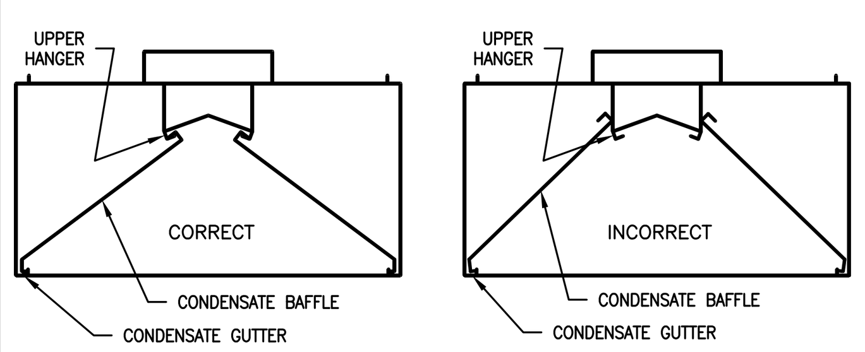
CULVER FRANCHISING SYSTEM, INC.
CULVER'S OF BARABOO

Sheet Contents: HVAC NOTES

Project No.: Baraboo 2010
Drawn By:
Date: 2/3/11

Sheet M-4

CONDENSATE HOOD BAFFLE INSTALLATION DETAIL



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

GENERAL HOOD NOTES

Verify building entry conditions or limitations for hood(s) access to space.

Verify type and height of finished ceiling.

Verify if hood(s) may extend above finished ceiling (if required).

Seismic installation and bracing by others.

VENTILATION SYSTEM NOTES

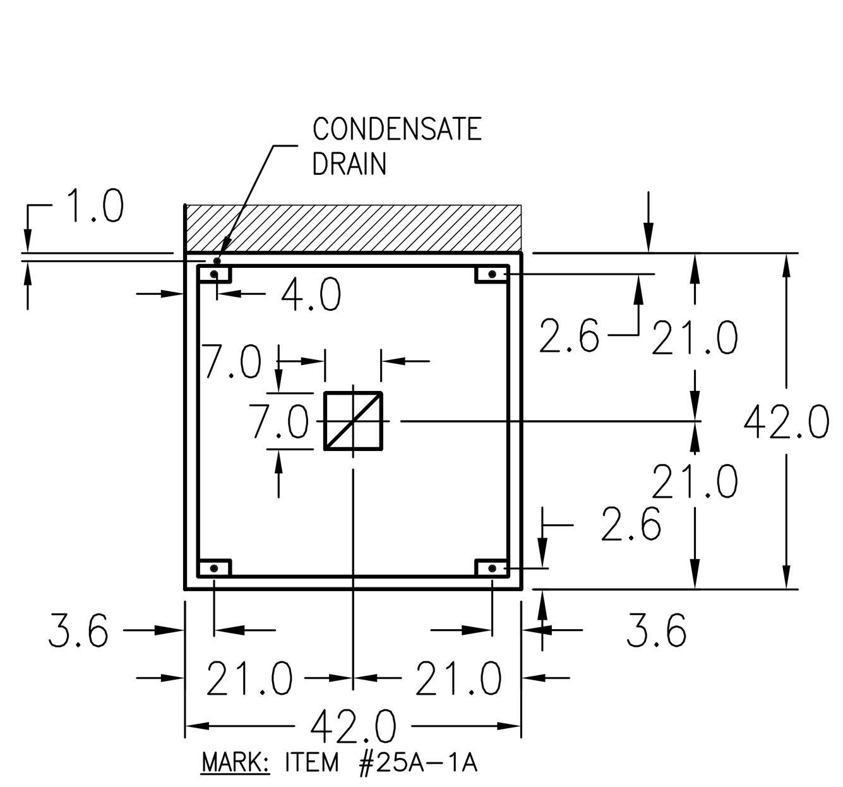
Accurex ventilators are designed in compliance with all national codes: NFPA # 96, national electric code. BOCA, uniform mechanical code, international mechanical code, and southern building conference. See national evaluation report #436 for allowable values, and/or conditions of use concerning material 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.

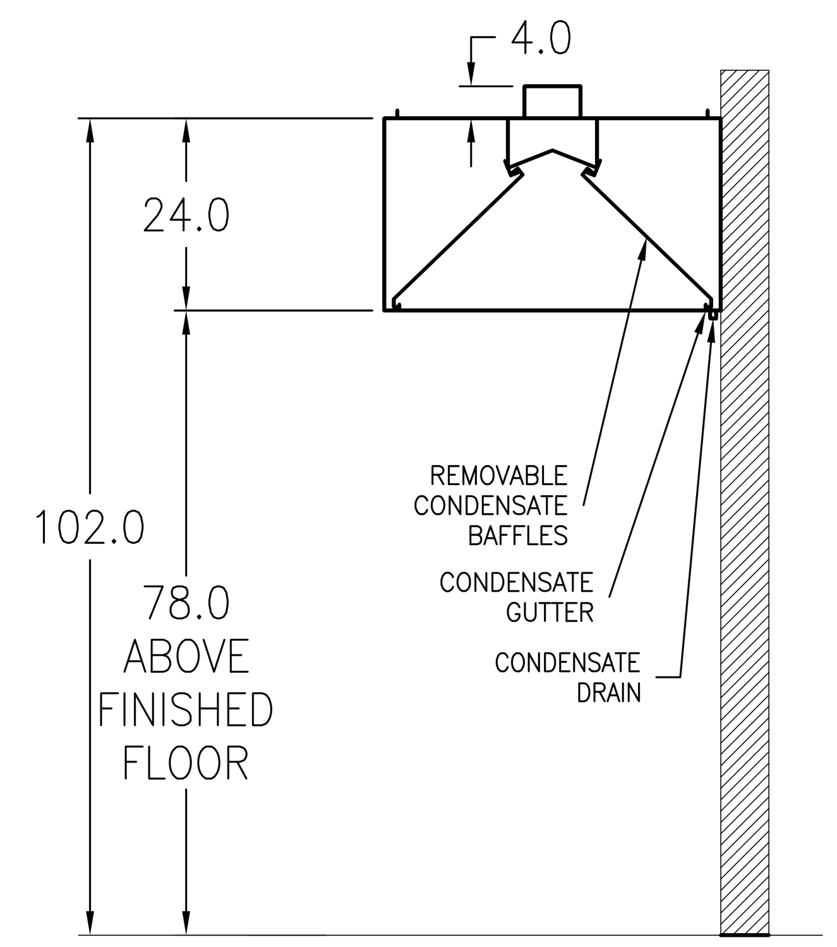
The grease filter face velocities are based on the filter manufacturers recommendations for maximum greaseextraction. Inlet opening air velocities for waterwash, dry cartridge and high velocity cartridge filters manufactured by Accurex are designed to deliver maximum grease extraction.

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

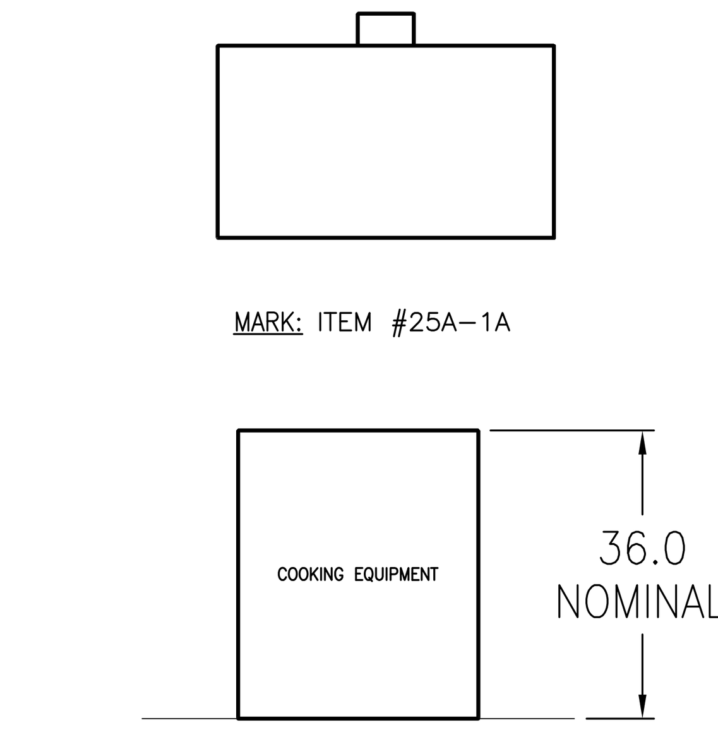
PROPRIETARY INFORMATION NOTICE



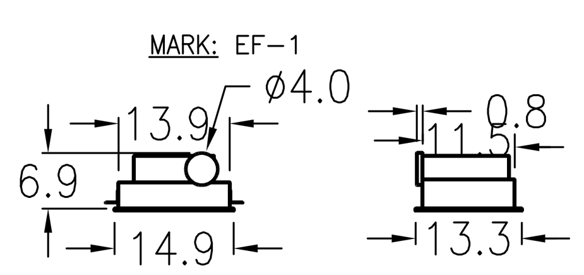
HOOD PLAN VIEW

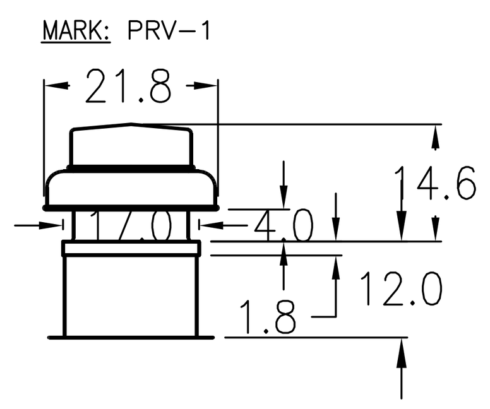


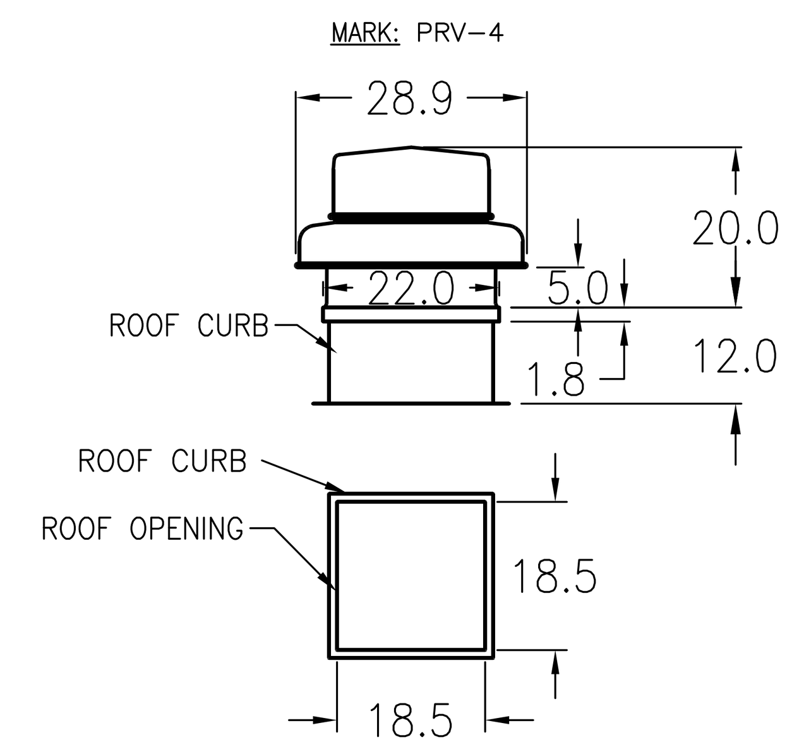
HOOD SECTION VIEW



HOOD ELEVATION VIEW







CONSTRUCTION COMPLIES WITH NFPA 96

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SIGNATURE DATE

EQUIPMENT SCHEDULE

KITCHEN HOOD	MARK: ITEM #25A				QTY. 1
MODEL NO.	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LB)	
XD3	42	42	24	224	
PERFORMANCE	VOLUME (CFM)	SP (IN WC)	DUCT COLLAR SIZE (IN)	DUCT COLLAR VEL. (FT/M)	FILTER FACE VEL. (FT/M)
EXHAUST (TOTAL)	350	0.127	(1) 7" X 7"	1851	0
SUPPLY (TOTAL)	0	0.000	(0) 0" X 0"	0	N/A
18 GAUGE TYPE 304 STAINLESS STEEL					
0.5" CONDENSATE DRAIN CONNECTION					

EXHAUST FAN	MARK: PRV−4						QTY. 1
MODEL NO.	VOLUME (CFM)	SP (IN WC)	FAN RPM	WEIGHT (LB)	MOTOR SPECS HP	V/C/P	RPM
XRED−090−D	350	0.600	1530	25	1/15	115/60/1	1550
SWITCH − NEMA−1, TOGGLE, MOUNTED & WIRED							
ALUMINUM RUB RING							
UL/CUL−705 − 'POWER VENTILATORS'							
CURB GPI−22−16−G12, TRAY							
DAMPER WD−100−PB−16X16, GRAVITY OPERATED							

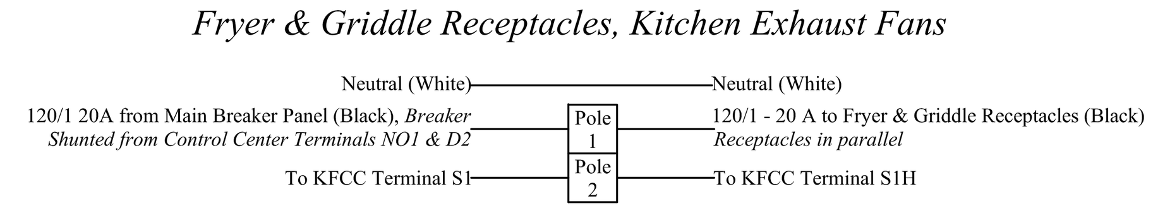
EXHAUST FAN	MARK: EF−1						QTY. 1
MODEL NO.	VOLUME (CFM)	SP (IN WC)	FAN RPM	WEIGHT (LB)	MOTOR SPECS HP	V/C/P	RPM
XCR−B80	75	0.125	871	9	0.0509	115/60/1	625
UL/CUL−507 − 'ELECTRIC FANS'							
MOTOR W/ THERMAL OVERLOADS							
SOLID STATE SPEED CONTROL − 5WSSC, MOUNTED & WIRED							
DESIGNER GRILLE							
MODEL SIDEWALL WITH BACKDRAFT DAMPER							

EXHAUST FAN	MARK: PRV−1						QTY. 1
MODEL NO.	VOLUME (CFM)	SP (IN WC)	FAN RPM	WEIGHT (LB)	MOTOR SPECS HP	V/C/P	RPM
XREB−090−D	375	0.500	1550	23	1/15	115/60/1	1550
SWITCH − NEMA−1, TOGGLE, MOUNTED & WIRED							
ALUMINUM RUB RING							
UL/CUL−705 − 'POWER VENTILATORS'							
MOTOR W/ THERMAL OVERLOADS							
DAMPER WD−100−PB−10X10, GRAVITY OPERATED							
CURB GPI−17−10−G12, TRAY							

CULVER'S ELECTRICAL FIELD CONNECTION INSTALLATION INSTRUCTIONS

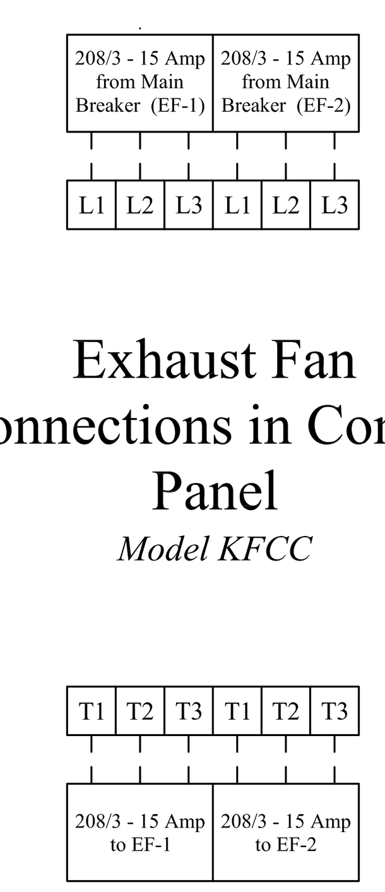
Remote Mount DPST Switch

Fryer & Griddle Receptacles, Kitchen Exhaust Fans



Exhaust Fan Connections in Control Panel

Model KFCC



Key

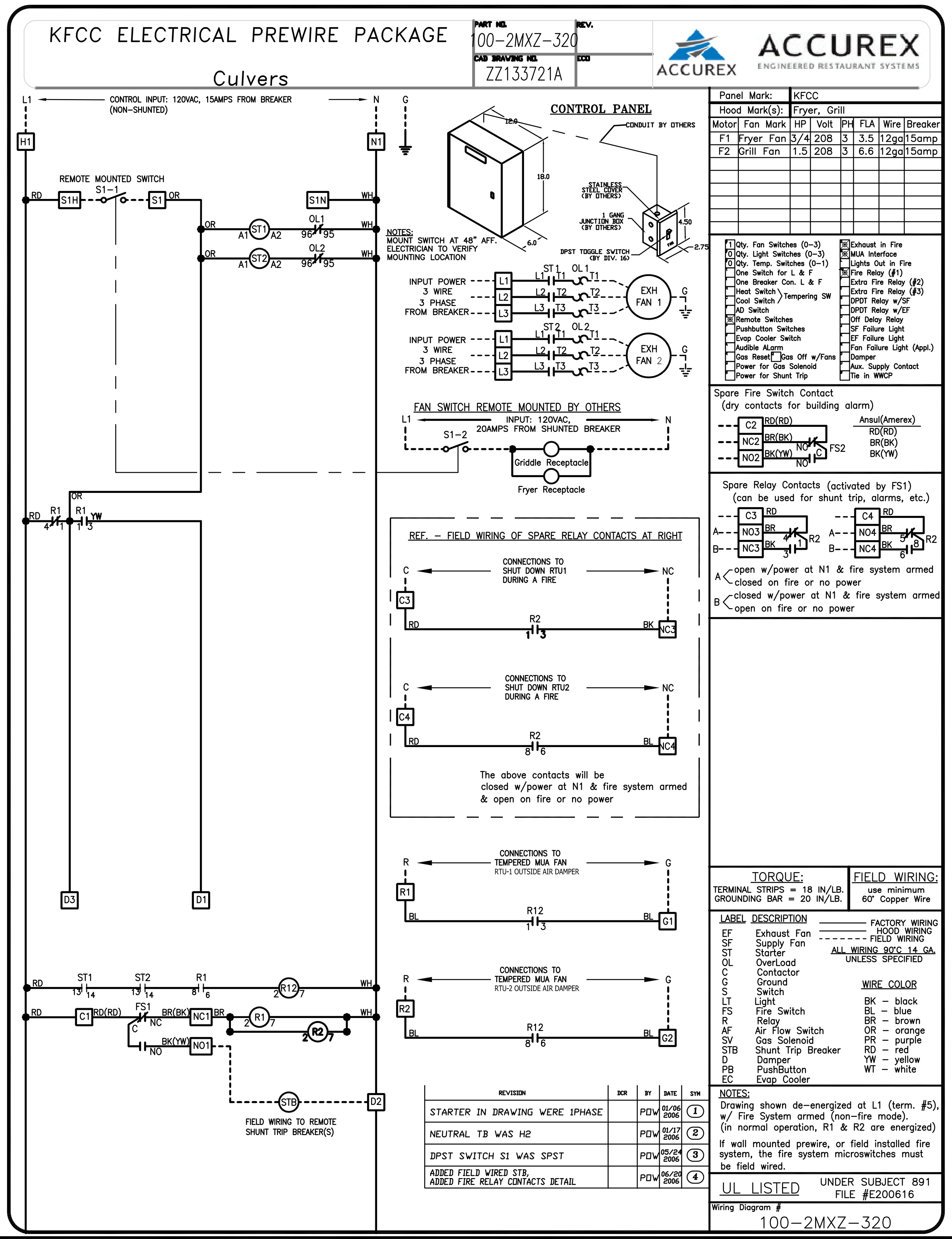
— — –Designates Field Connection

Control Panel Connections

Model KFCC

Field connection	Terminal	Torque to 18 in-lbs	Terminal
Power from Main Breaker Panel (Black), *Non-shunted*	H1	**120/1 - 15 Amp**	H1
Neutral from Main Breaker Panel (White)	N1	NEUTRAL	N1
	H2	NOT USED	H2
	N2	NOT USED	N2
	W2	NOT USED	W2
	B2	NOT USED	B2
To Pole 2 of Remote Mount DPST Switch	S1	Fan Switch Connection	S1
To Pole 2 of Remote Mount DPST Switch	S1H	Fan Switch Connection	S1H
	S1N	NOT USED	S1N
To Fire Sytem Microswitch (Red)	C1	Fire System Common	C1
To Fire System Microswitch (Black)	NO1	Fire System N/O	NO1
To Fire System Mircoswitch (Brown)	NC1	Fire System N/C	NC1
	C2	Spare Fire Sys. Common	C2
	NO2	Spare Fire Sys. N/O	NO2
	NC2	Spare Fire Sys. N/C	NC2
To RTU 1 Shutdown in Fire (*Contact will open in fire*)	C3	RTU 1 Fire Shutdown	C3
	NO3	OPEN	NO3
To RTU 1 Shutdown in Fire (*Contact will open in fire*)	NC3	RTU 1 Fire Shutdown	NC3
To RTU 2 Shutdown in Fire (*Contact will open in fire*)	C4	RTU 2 Fire Shutdown	C4
	NO4	OPEN	NO4
To RTU 2 Shutdown in Fire (*Contact will open in fire*)	NC4	RTU 2 Fire Shutdown	NC4
	D1	120/1 "Off in Fire"	D1
To Griddle & Fryer Shunt Trip Breaker at Main Panel	D2	120/1- Shunt Trip Breaker	D2
	D3	120/1	D3
To RTU 1 Outside Air Damper (*Contact will close when exhaust fans are running*)	R1	RTU-1 Outside Air Damper	R1
To RTU 1 Outside Air Damper (*Contact will close when exhaust fans are running*)	G1	RTU-1 Outside Air Damper	G1
To RTU 2 Outside Air Damper (*Contact will close when exhaust fans are running*)	R2	RTU-2 Outside Air Damper	R2
To RTU 2 Outside Air Damper (*Contact will close when exhaust fans are running*)	G2	RTU-2 Outside Air Damper	G2

To Griddle & Fryer Shunt Trip Breaker at Main Panel (from NO1)



Culver's Installation and Operation Guide

Accurex Control Panel and Exhaust Fan & Receptacle Switch

Mechanical Scope of work

1) Mechanical contractor to mount Accurex Control Panel (*Model KFCC, 12"W x 18"H x 6"W*) in specified location above drop ceiling.
2) Mechanical Contractor to start up fans and electrical outlet by turning fan switch to the "ON" position. Verify power to fryer & griddle receptacles and exhaust fans.

Electrical Scope of Work

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

Sequence of Operation

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

DRAWING SET
01-07-11 LEED Online Set
02-03-11 COMMERCE REVIEW and BID PACKAGE 1

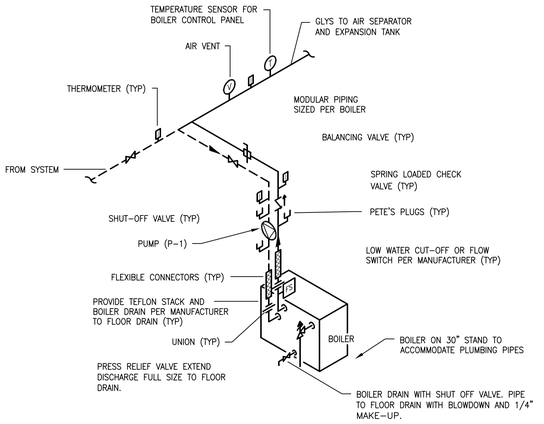
Culver Franchising System, Inc.
1240 Water Street
Prairie du Sac, WI 53578
608-643-7980

CULVER FRANCHISING SYSTEM, INC.
CULVER'S OF BARABOO

Sheet Contents:
HVAC NOTES

Project No. Baraboo 2010
Drawn By:
Date: 2/3/11

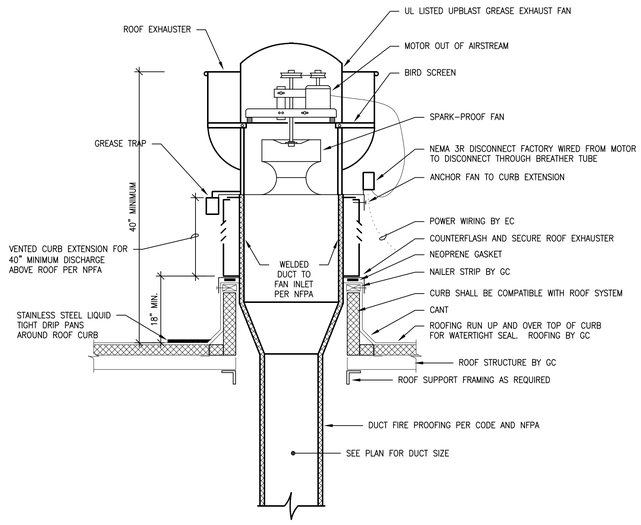
Sheet
M-5



NOTE:
PIPING SPECIALTIES AS SHOWN AND PER MANUFACTURER'S RECOMMENDATIONS.

13 M-6 HIGH EFFICIENCY BOILER PIPING DETAIL

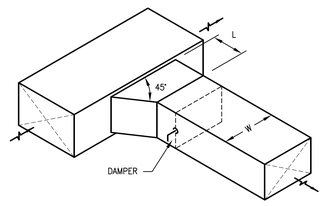
SCALE: NONE



NOTE: ELECTRICAL CONTRACTOR SHALL NOT WIRE UNIT THROUGH CURB.

10 M-6 UPBLAST GREASE EXHAUST FAN

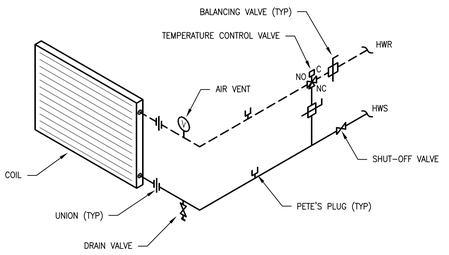
SCALE: NONE



NOTE: L = 1/4W (4" MINIMUM)

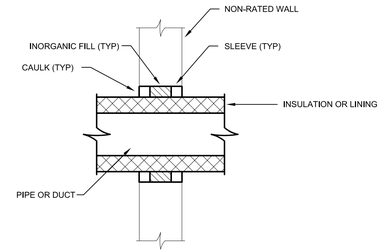
6 M-6 BRANCH DUCT TAKEOFF

SCALE: NONE (REVERSE FLOW ARROWS FOR EXHAUST AND RETURN)



1 M-6 HOT WATER COIL PIPING DETAIL

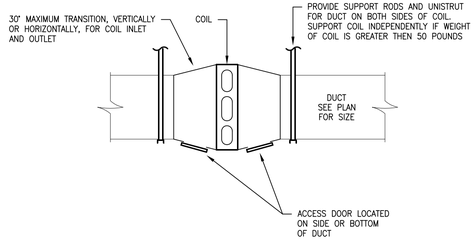
SCALE: NONE (WITH 3-WAY TCV)



NOTE: CAULKING SHALL BE 1/2" DEEP BUTYL RUBBER.

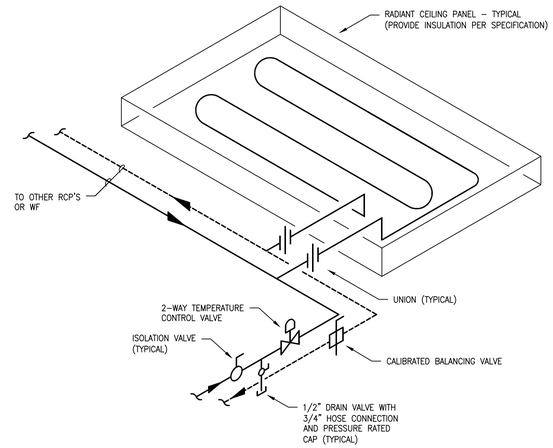
7 M-6 PIPE OR DUCT SLEEVE DETAIL

SCALE: NONE



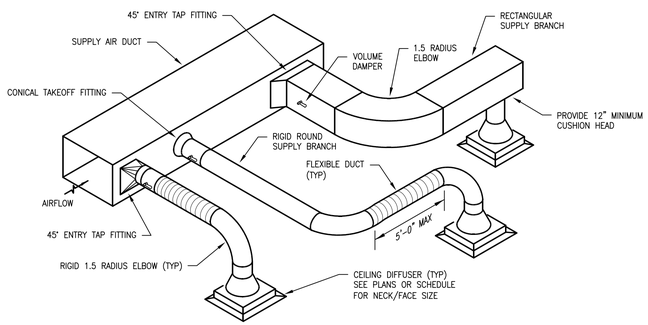
2 M-6 HEATING COIL DETAIL

SCALE: NONE



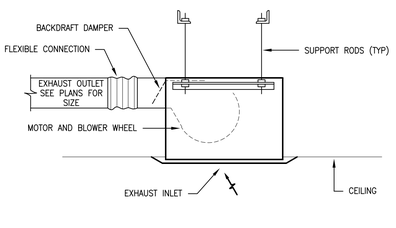
14 M-6 HOT WATER RADIANT CEILING PANEL DETAIL

SCALE:



11 M-6 BRANCH DUCT & DIFFUSER CONNECTION

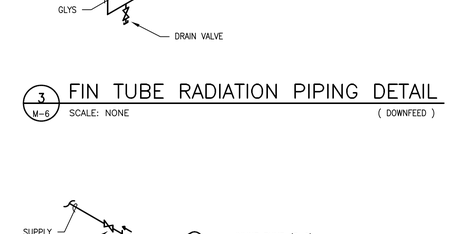
SCALE: NONE



NOTE: VERTICAL DISCHARGE WHERE INDICATED ON DRAWINGS.

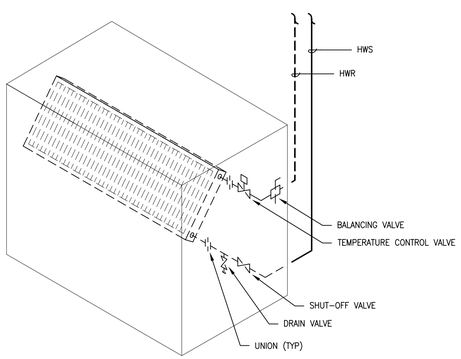
8 M-6 CEILING MOUNTED EXHAUST FAN

SCALE: NONE



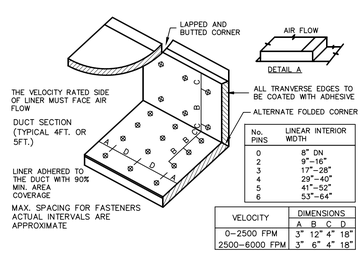
3 M-6 FIN TUBE RADIATION PIPING DETAIL

SCALE: NONE (DOWNFEED)



15 M-6 HOT WATER CABINET UNIT HEATER PIPING DETAIL

SCALE: NONE



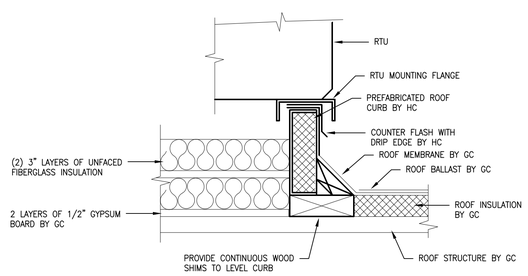
No. PINS	LINEAR INTERIOR WIDTH
0	8" DN
2	9"-16"
3	17"-28"
4	29"-40"
5	41"-52"
6	53"-64"

VELOCITY	DIMENSIONS A	B	C	D
0-2500 FPM	3"	12"	4"	18"
2500-6000 FPM	3"	6"	4"	18"

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.

12 M-6 DUCT LINER INSTALLATION DETAIL

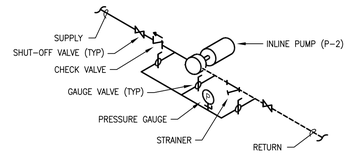
SCALE: NONE



NOTE: CAULK AND SEAL AROUND DUCT PENETRATIONS AND PROVIDE FLEXIBLE CONNECTION BY HC.

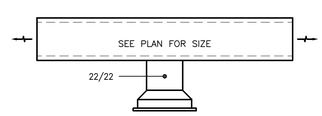
9 M-6 RTU ROOF CURB DETAIL

SCALE: NONE



4 M-6 INLINE PUMP DETAIL

SCALE: NONE



5 M-6 TRANSFER DETAIL

SCALE: NONE

DRAWING SET	
01-07-11	LEED Online Set
02-03-11	COMMERCE REVIEW and BID PACKAGE 1

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

CULVER FRANCHISING SYSTEM, INC.
CULVER'S OF BARABOO

Sheet Contents:
HVAC DETAILS

Project No.	100153
Drawn By:	CRR/TDM
Date:	2/3/11

Sheet
M-6