

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING INSPECTION

PERMIT

Permit Number: 061614

Please Read Application And Notes, If Any, Attached

PERMIT ISSUED

NOV 29 2006

CITY OF PORTLAND

This is to certify that DOUKAS ANDREW J & WILLIAM B DOUKAS ITS/Builder &

has permission to Install new grease hood replacing existing system

AT 671 CONGRESS ST 046 C013001

provided that the person or persons firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and when permission procedure before this building or part thereof is closed or services closed-in 4 HOUR NOTICE REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. Jay Kelley 11/21/06
Health Dept. _____
Appeal Board _____
Other _____
Department Name

William J. Sullivan
Director - Building & Inspection Services
11/27/06

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

PERMIT ISSUED

Permit No: 06-1614	Issue Date: NOV 29 2006	CBL: 046 C013001
Owner Name: DOUKAS ANDREW J & WILLIA	Owner Address: PO BOX 4185	Phone: 2077491878
Business Name:	Contractor Name: Bourgoin & Sons	Contractor Address: 123 Davis Road Durham
Lessee/Buyer's Name	Phone:	Permit Type: Hood Systems, Commerical
		Zone: B3

Location of Construction: 671 CONGRESS ST	Owner Name: DOUKAS ANDREW J & WILLIA	Owner Address: PO BOX 4185
Business Name:	Contractor Name: Bourgoin & Sons	Contractor Address: 123 Davis Road Durham
Lessee/Buyer's Name	Phone:	Permit Type: Hood Systems, Commerical
		Zone: B3

Past Use: Commercial - Bangkok Thai	Proposed Use: Bangkok Thai- Install new grease hood replacing existing system
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Permit Fee: \$190.00	Cost of Work: \$16,940.00	CEO District: 2
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FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: <i>A2</i> Type: <i>I</i> <i>IMC 2003 Hood</i>
Signature: <i>Jay Kelley 11/21/06</i>	Signature: <i>MM 11/27/06</i>

Proposed Project Description: Install new grease hood replacing existing system
--

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied
Signature: _____ Date: _____

Permit Taken By: Idobson	Date Applied For: 11/02/2006
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Zoning Approval

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Special Zone or Reviews
<input type="checkbox"/> Shoreland
<input type="checkbox"/> Wetland
<input type="checkbox"/> Flood Zone
<input type="checkbox"/> Subdivision
<input type="checkbox"/> Site Plan
Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/>
Date: <i>11/21/06</i> <i>APM</i>

Zoning Appeal
<input type="checkbox"/> Variance
<input type="checkbox"/> Miscellaneous
<input type="checkbox"/> Conditional Use
<input type="checkbox"/> Interpretation
<input type="checkbox"/> Approved
<input type="checkbox"/> Denied
Date: _____

Historic Preservation
<i>yo</i>
<input type="checkbox"/> Not in District or Landmark
<input type="checkbox"/> Does Not Require Review
<input checked="" type="checkbox"/> Requires Review
<input checked="" type="checkbox"/> Approved
<input type="checkbox"/> Approved w/Conditions
<input type="checkbox"/> Denied
Date: <i>11/15/06</i>

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE	DATE	PHONE	

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

- Footing/Building Location Inspection: Prior to pouring concrete
- Re-Bar Schedule Inspection: Prior to pouring concrete
- Foundation Inspection: Prior to placing ANY backfill
- Framing/Rough Plumbing/Electrical: Prior to any insulating or drywalling
- Final Certificate of Occupancy: Prior to any occupancy of the structure or use. NOTE: There is a \$75.00 fee per inspection at this point.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects **DO** require a final inspection

If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.

~~CERTIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED~~

Shelley M. Pickett
Signature of Applicant/Designee

11-29-06
Date

[Signature]
Signature of Inspections Official

11.29.06
Date

CBL: 46 C 13

Building Permit #: 061614

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 06-1614	Date Applied For: 11/02/2006	CBL: 046 C013001
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Location of Construction: 671 CONGRESS ST	Owner Name: DOUKAS ANDREW J & WILLIA	Owner Address: PO BOX 4185	Phone:
Business Name:	Contractor Name: Bourgoin & Sons	Contractor Address: 123 Davis Road Durham	Phone (207) 749-1878
Lessee/Buyer's Name	Phone:	Permit Type: Hood Systems, Commerical	

Proposed Use: Bangkok Thai- Install new grease hood replacing existing system	Proposed Project Description: Install new grease hood replacing existing system
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Dept: Historic **Status:** Approved **Reviewer:** Deborah Andrews **Approval Date:** 11/15/2006
Note: **Ok to Issue:**

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Ann Machado **Approval Date:** 11/02/2006
Note: **Ok to Issue:**

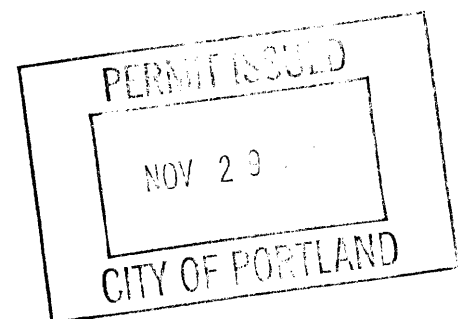
- 1) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
- 2) ANY exterior work requires a separate review and approval thru Historic Preservation. This property is located within an Historic District.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Michael A. Collins **Approval Date:** 11/27/2006
Note: **Ok to Issue:**

- 1) Equipment must be installed in compliance with the manufacturer's specifications

Dept: Fire **Status:** Approved **Reviewer:** Jay Kelley **Approval Date:** 11/21/2006
Note: **Ok to Issue:**

- 1) Install hood to manufactures specifications

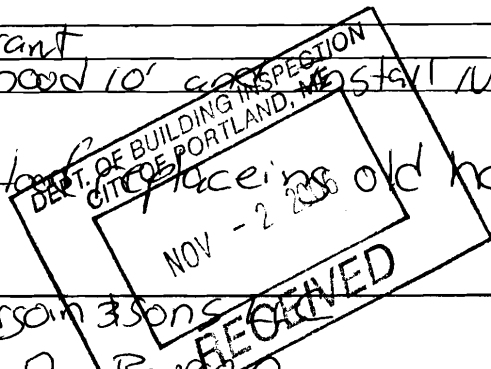




General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: <u>671 Congress</u>		
Total Square Footage of Proposed Structure		Square Footage of Lot
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# <u>46</u> <u>C</u> <u>13</u>	Owner: <u>Douglas</u> <u>PO Box 4185</u> <u>Port ME 04105</u>	Telephone:
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone: <u>Bourgoin & Sons LLC</u> <u>123 Davis Rd</u> <u>Durham ME 04222</u>	Cost of Work: \$ <u>16,940</u> Fee: \$ _____ C of O Fee: \$ _____
Current Specific use: <u>Restaurant</u> If vacant, what was the previous use? <u>Restaurant</u> Proposed Specific use: <u>Taking out hood 10' and install New 12'</u>		
Project description: <u>Install New grease hood replacing old hood system</u>		
Contractor's name, address & telephone: <u>Bourgoin & Sons</u>		
Who should we contact when the permit is ready: <u>Don Bourgoin</u> Mailing address: <u>123 Davis rd Durham</u> <u>me. 04222</u> Phone: <u>749-1978</u>		



Please submit all of the information outlined in the Commercial Application Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information visit us on-line at www.portlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: <u>Don Bourgoin</u>	Date: <u>11/2/06</u>
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This is not a permit; you may not commence ANY work until the permit is issued.



PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Lee Urban- Director of Planning and Development
Michael J. Nugent- Inspections Division Director

Kitchen Exhaust System Checklist and Code Provisions

Dear Applicant,

The following is a checklist to assist you in filing for a permit for a Kitchen Exhaust system. The applicable Mechanical Code provisions have also been attached. Please complete this and submit job specific construction documents that demonstrate compliance with the attached information.

Type of System:

Type I Type II

(Type I systems are systems that vent fryers, grills, broilers, ovens or woks. Type II systems are systems that vent steamers and other non grease producing appliances)

Type of Materials:

Is the hood Stainless steel or other type of steel? Stainless If Other, what Type? _____

Is the duct work Stainless steel or other type of steel? CRS If Other, what type? _____

Thickness of the steel for the hood 18ga

Thickness of the duct for the hood 16ga

Type of Hood and Duct supports
Grease battle canopy hood

Type of seams and Joints welded

Grease Gutters provided? N/A

Hood Clearance from Combustibles materials 18"

Duct Clearance from Combustibles materials wrap 3m fire barrier duct

Vibration Isolation System:

N/A

Air Velocity within the duct system 1800 CFM .525 S.P.

Grease accumulation prevention system

Cleanouts slight run approx 6'

Grease Duct enclosure 3m fire barrier duct wrap

Exhaust Termination roof

Fire Suppression

system wet

Exhaust fan mounting and clearance from the roof or wall 18" at base 40" top
10' walls

Exhaust fan distance from other vents or openings 10'

Exhaust fan height above adjoining grade 40"

Hood Specs

Style of hood Canopy

Type of Filter: Grease baffle

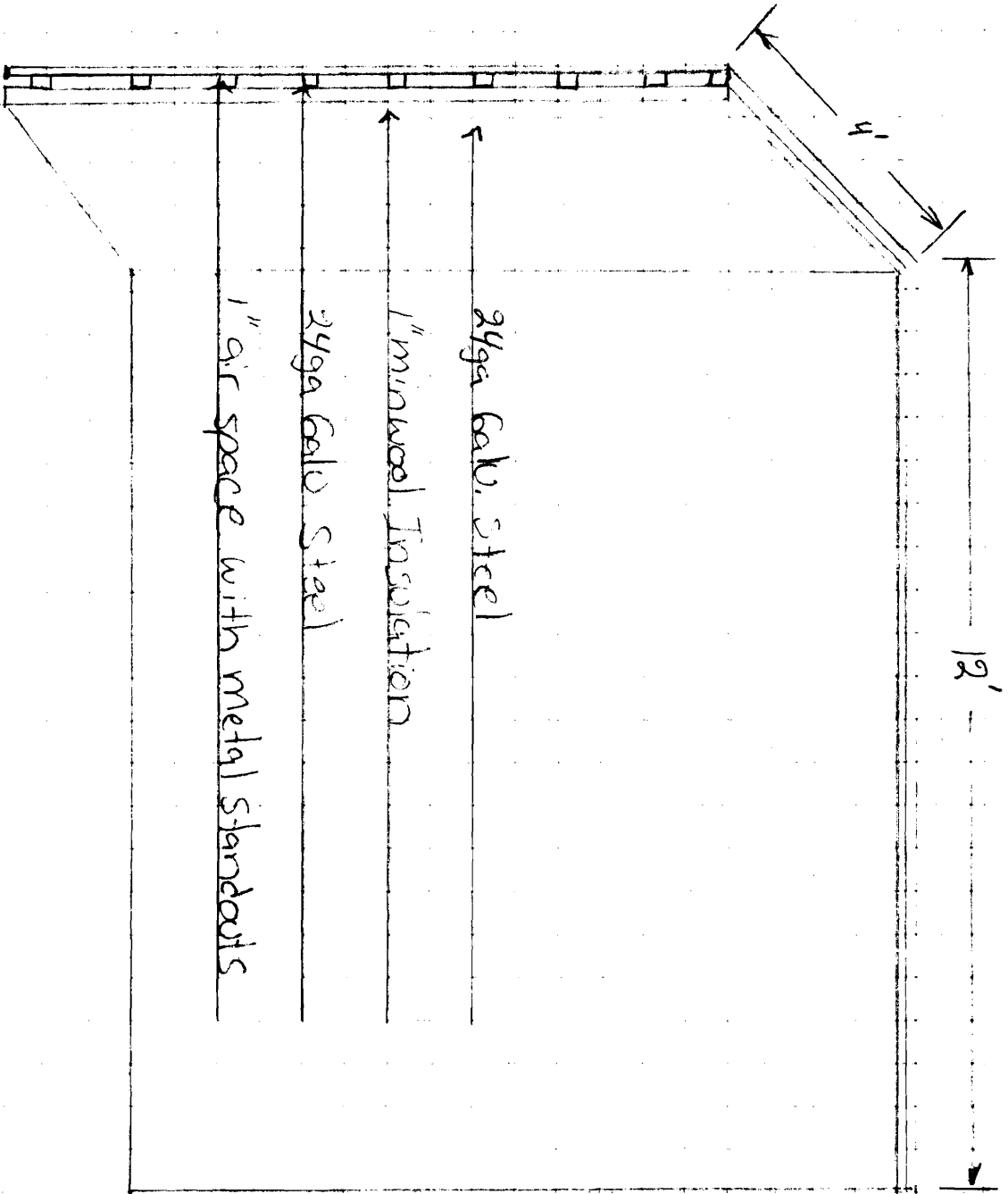
Height of filter above nearest cooking surface: 36"

Capacity of hood in CFM 1800 per hood

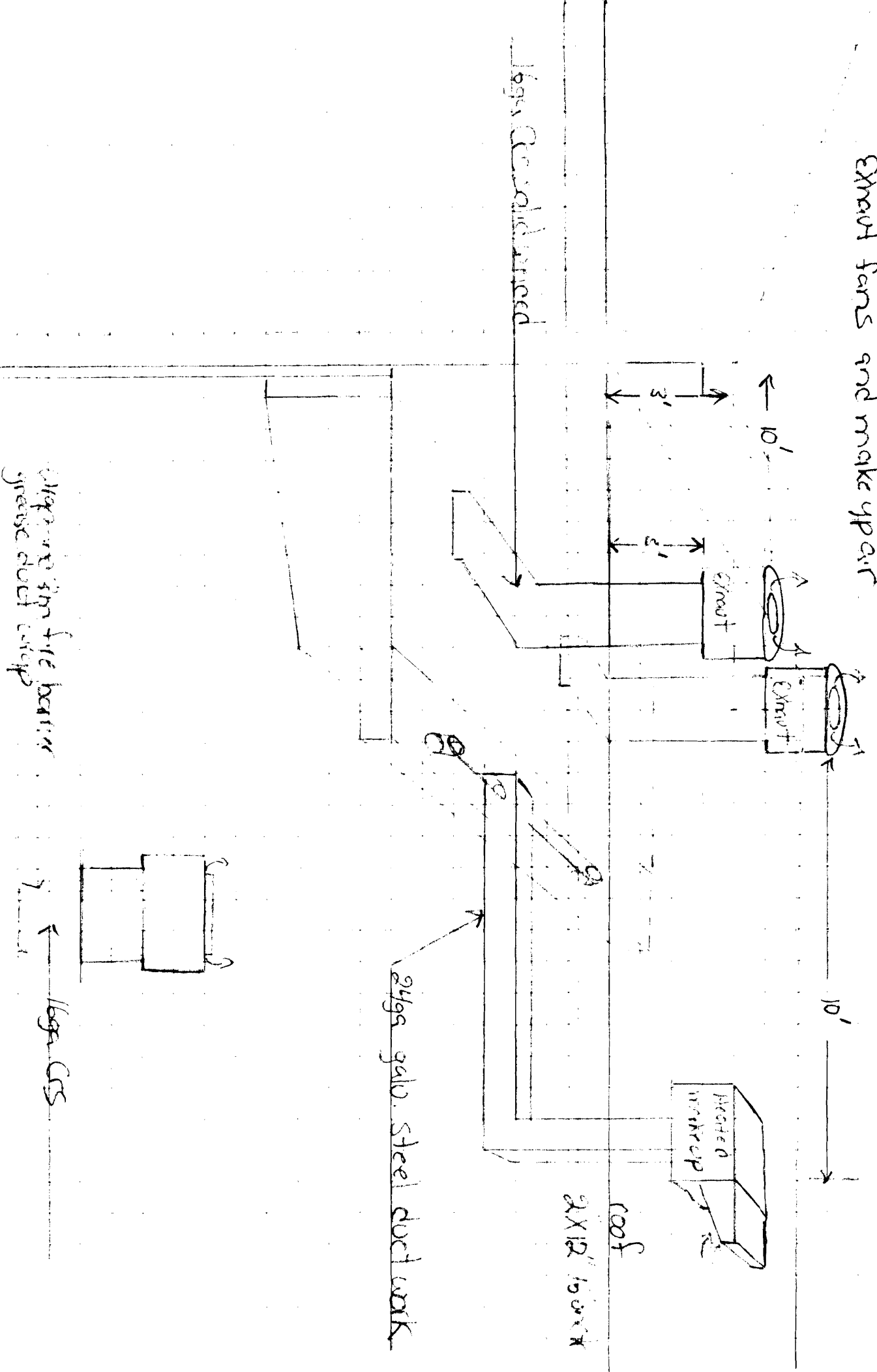
Make up Air system description and capacity

Heat make up air 1260 per hood

Wall System

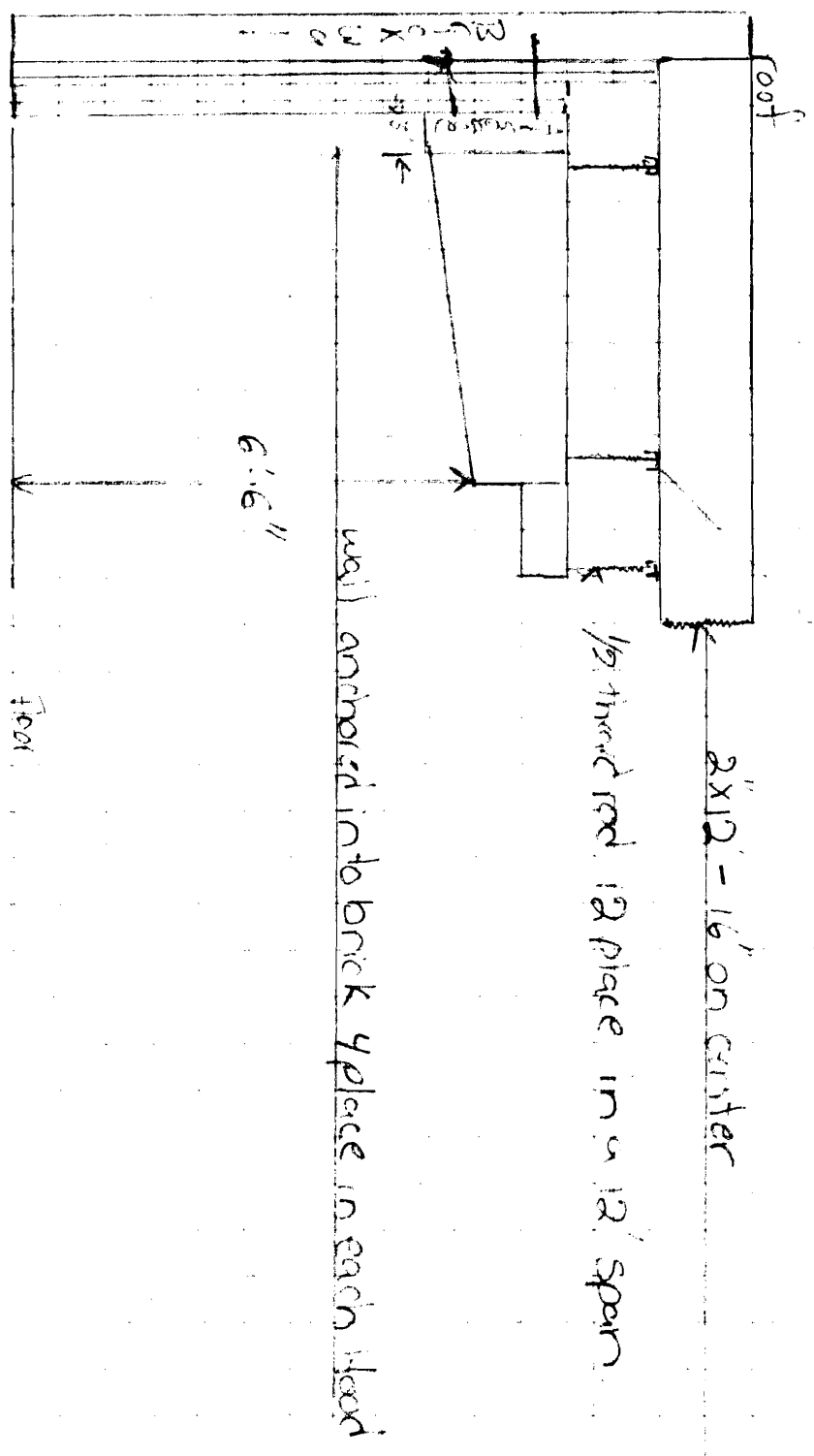


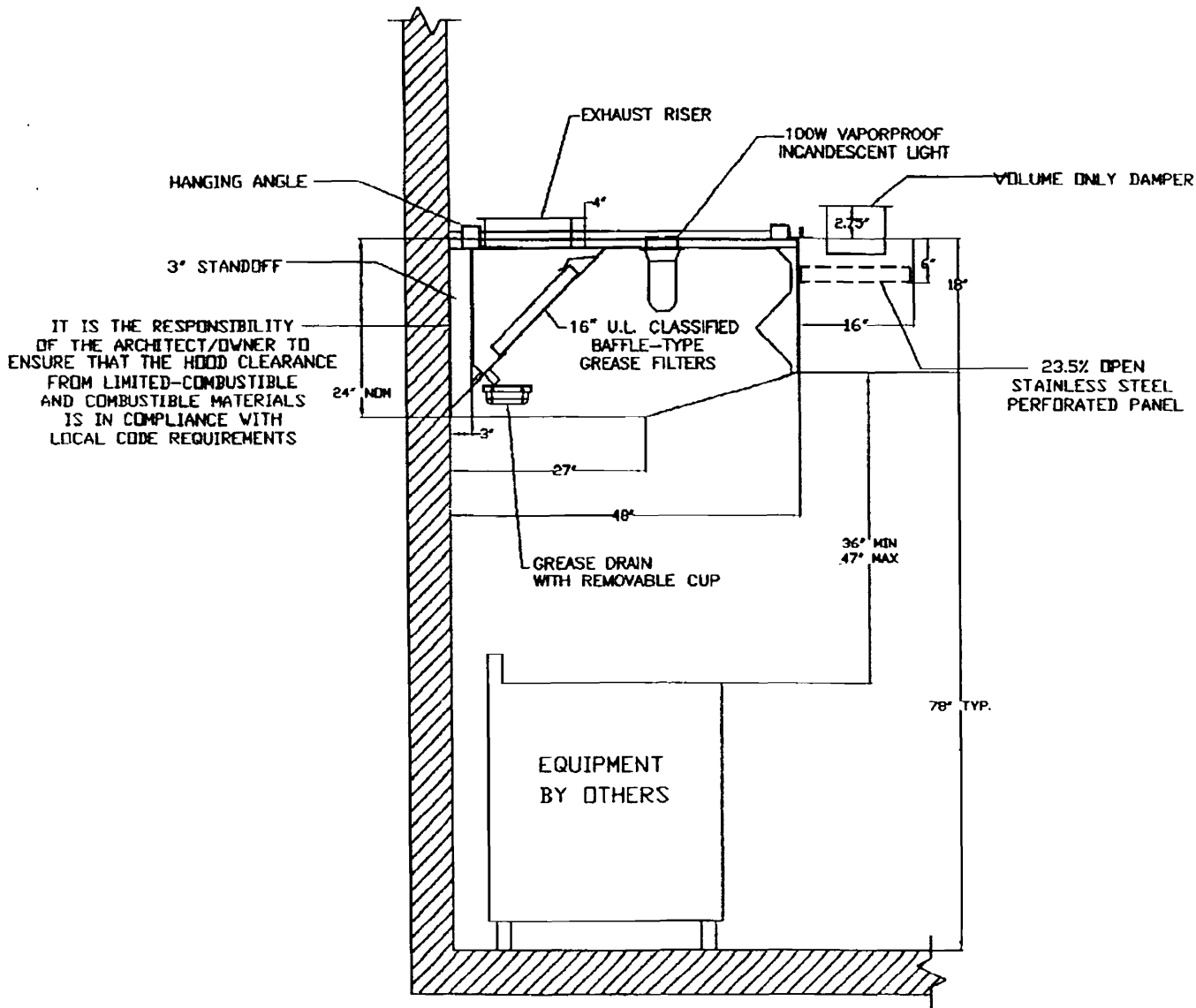
Exhaust fans and make up air



Wood Langer

U Channel Lags into roof rafter





SECTION VIEW - MODEL 4818-SND-2 with PSP Accessory

CUSTOMER APPROVAL TO MANUFACTURE:

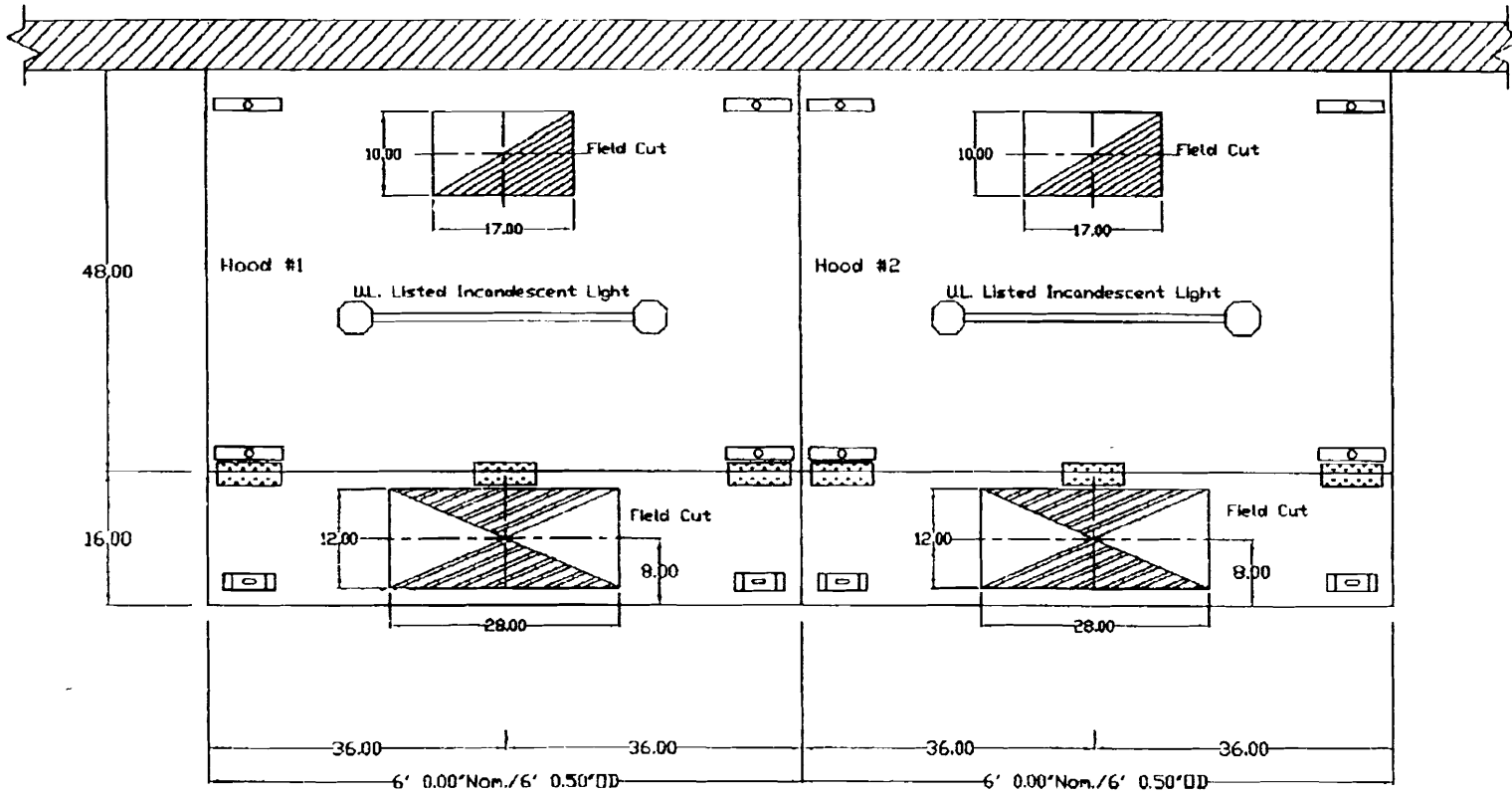
- Approved as Noted
- Approved with NO Exception Taken
- Revise and Resubmit

SIGNATURE _____

Your Title _____ Date _____

CAPTIVE AIR

JOB Portland Heated MUA	
LOCATION	
DATE 10/30/2006	JOB # 513598
DWG # Portland	DRAWN BY BFC
REV. 1.00	SCALE 8.5" x 11"



PLAN VIEW - 6' 0.00' LONG 4818SND-2-PSP-F

PLAN VIEW - 6' 0.00' LONG 4818SND-2-PSP-F

CUSTOMER APPROVAL TO MANUFACTURE:

- Approved as Noted
- Approved with NO Exception Taken
- Revise and Resubmit

SIGNATURE _____

Your Title _____ Date _____



JOB Portland Heated MUA	
LOCATION	
DATE 10/30/2006	JOB # 513598
DWG # Portland	DRAWN BY BFC
REV. 1.00	SCALE 8.5' x 11'

HOOD INFORMATION

HOOD NO.	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM						SUPPLY PLENUM						HOOD CONSTRUCTION	HOOD CONFIG.	
				TOTAL EXH. CFM	RISER(S)					TOTAL SUP. CFM	RISER(S)						END TO END	RDW
					WIDTH	LENG.	DIA.	CFM	S.P.		WIDTH	LENG.	DIA.	CFM	S.P.			
1	4818 SND-2-PSPF	6' 0.00"Nom. 6' 0.50"OD	600 Deg.	1800	10"	17"		1800	-0.525"	1260						430 SS 100%	LEFT	N/A
2	4818 SND-2-PSPF	6' 0.00"Nom. 6' 0.50"OD	600 Deg.	1800	10"	17"		1800	-0.525"	1260						430 SS 100%	RIGHT	N/A

HOOD INFORMATION

HOOD NO.	FILTER(S)					LIGHT(S)				UTILITY CABINET(S)						FIRE SYSTEM PIPING	HOOD WEIGHT
	TYPE	QTY	HEIGHT	LENGTH	QTY	TYPE	WIRE GUARD	LOCATION	FIRE SYSTEM		ELECTRICAL	SWITCHES					
									TYPE	SIZE		MODEL #	QUANTITY	LOCATION			
1	Alum. Baffle w/ Handle	2	16"	16"	2	Incandescent Light	NO								NO	218 LBS.	
		2	16"	20"													
2	Alum. Baffle w/ Handle	2	16"	16"	2	Incandescent Light	NO								NO	218 LBS.	
		2	16"	20"													

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	POS.	LENGTH	WIDTH	HEIGHT	RISER(S)				
					WIDTH	LENG.	DIA.	CFM	S.P.
1	Front	72"	16"	6"	12"	28"		1260	0.155"
2	Front	72"	16"	6"	12"	28"		1260	0.155"

CUSTOMER APPROVAL TO MANUFACTURE:


Approved as Noted

Approved with MD Exception Taken

Revise and Resubmit

SIGNATURE: _____

Your Title _____ Date _____



JOB Portland Heated MUA	
LOCATION	
DATE 10/30/2006	JOB # 513598
DWG # Portland	DRAWN BY BFC
REV. 1.00	SCALE R5' x 11'

THE HOOD MAY BE INSTALLED WITH A 0 INCH CLEARANCE TO COMBUSTIBLE MATERIALS IF CONSTRUCTED IN ONE OF THE FOLLOWING METHODS:

- 3" UNINSULATED STANDOFF
- 1" INSULATED STANDOFF
- 1" INSULATED BACKPLASH
- BACK RETURN SUPPLY PLENUM

TABLE 1

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH



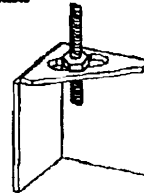
NFPA #96
NSF
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001

1. ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTORS.
2. ALL PLUMBING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY PLUMBING CONTRACTORS.
3. ALL ASSOCIATED HANGER MATERIALS BY INSTALLING CONTRACTORS.
4. 8" LONG FACTORY LOCATED AND WELDED HANGER BRACKETS AS SHOWN ON PLANS.
5. ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER THE PLANS BY MECHANICAL CONTRACTORS.
6. ALL LIGHTS SHOWN INSTALLED BY CAPTIVE-AIRE, ARE FACTORY PROVIDED PER THE PLANS. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTOR.
7. LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
8. SEISMIC RESTRAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
9. INSTALLING CONTRACTORS ASSUME ALL RELATED RESPONSIBILITY FOR VERIFICATION OF DIMENSIONAL DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, INTEGRATION, AND ADMINISTRATION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.
10. SIGNED AND "APPROVED" COPIES OF THIS DOCUMENT MUST BE RECEIVED BY THE FACTORY PRIOR TO COMMENCEMENT OF FABRICATION.
11. NOMINAL HOOD DIMENSIONS AS SHOWN ON DRAWINGS.

GENERAL NOTES

1/2" DIA. ALL THREAD ROD CONNECTED TO ROOF JOIST THROUGH ANOTHER HANGING ANGLE

1/2" DIA. HEAVY DUTY NUT ONE ABOVE AND ONE BELOW HANGING ANGLE



*ROD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR
HANGING ANGLE IS PRE-PANCHED AT FACTORY

SND2 HANGING ANGLE DETAIL

EXHAUST CFM=LENGTH OF HOOD X CFM/LIN.FT. (LOAD)

SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED

$$\text{TOTAL DUCT AREA} = 144 \times \frac{\text{CFM}}{\text{FPM}(\%)}$$

$$\text{DUCT LENGTH} = \frac{\text{TOTAL DUCT AREA}}{\text{DUCT DEPTH}}$$

*CAPTIVE-AIRE VENTILATOR DUCT SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OF 1400-1800 FPM AND A SUPPLY VELOCITY OF 900 FPM. PLEASE CONSULT FACTORY FOR MAXIMUM ALLOWABLE DUCT SIZES.

CALCULATIONS UTILIZED

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted

Approved with NO Exception Taken

Revise and Resubmit

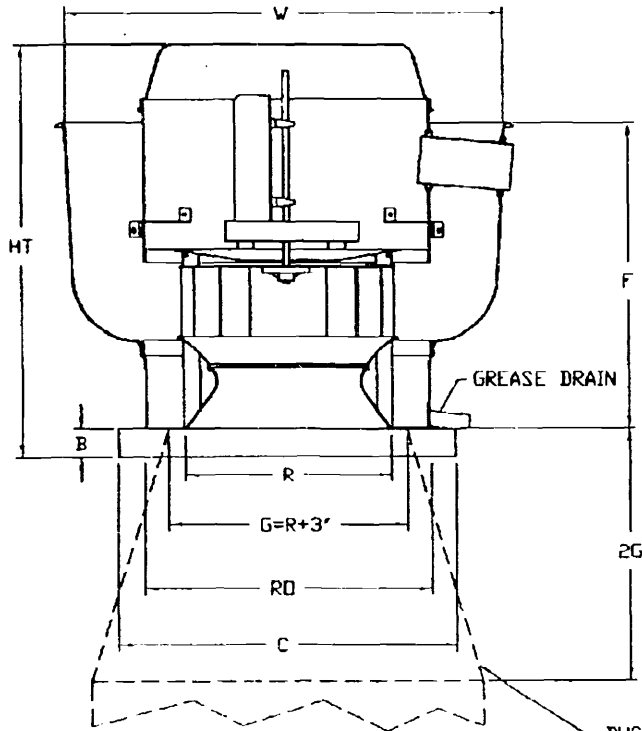
SIGNATURE _____

Your Title _____ Date _____



JOB Portland Heated MUA	
LOCATION	
DATE 10/30/2006	JOB # 513598
DWG # Portland	DRAWN BY BFC
REV. 1.00	SCALE 8 1/2" x 11"

NCAFA SERIES UPBLAST EXHAUST FANS (UL762)



NCAFA BELT DRIVE
CENTRIFUGAL UP-BLAST EXHAUST FANS DIMENSIONAL DATA

FAN MODEL	HT	W	B	C	F	R	RD	WEIGHT LB
NCA14FA	30 1/2	31 7/8	2	24 3/4	23	14 7/8	21	140

FEATURES:

- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL762
- AMCA SOUND AND AIR CERTIFIED
- WIRING FROM MOTOR TO DISCONNECT SWITCH
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

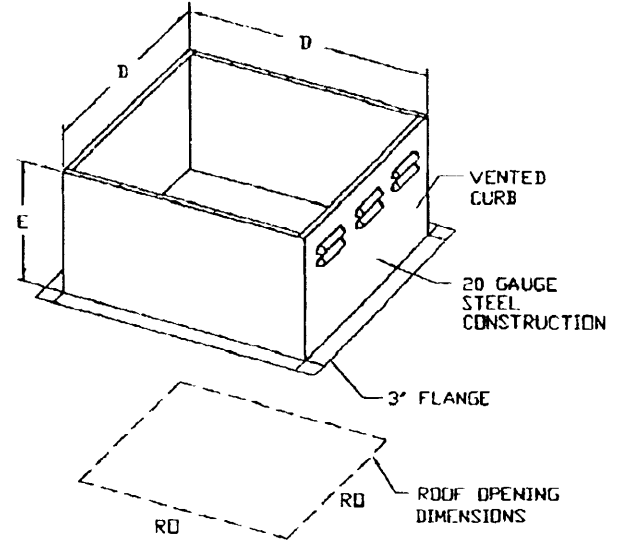
ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

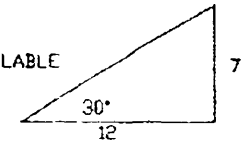
OPTIONS:

- GREASE BOX
- HINGED FAN

DUCTWORK BETWEEN EXHAUST RISER ON HOOD AND FAN (BY OTHERS)



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.



SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

CURB DIMENSIONAL DATA

FAN MODEL	D	E
NCA14FA	23	20

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted

Approved with NO Exception Taken

Revise and Resubmit

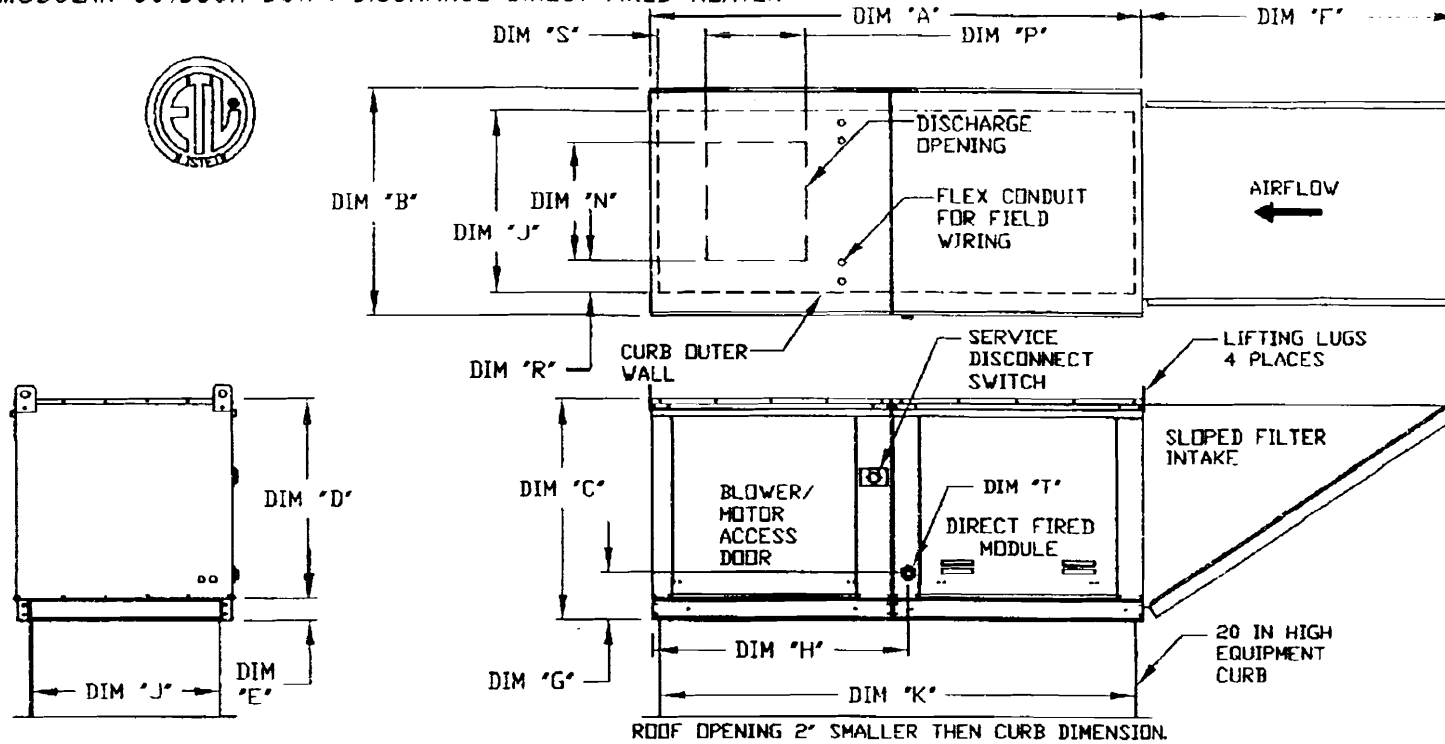
SIGNATURE _____

Your Title _____ Date _____



JOB Portland Heated MUA	
LOCATION	
DATE 10/30/2006	JOB # 513598
DWG # Portland	DRAWN BY BFC
REV. 1.00	SCALE 8.5" x 11"

MODULAR OUTDOOR DOWN DISCHARGE DIRECT FIRED HEATER



DATE: 10/30/06
REV: 00

ALL DIMENSIONS ARE NOMINAL AND GIVEN IN INCHES.

MODEL	WEIGHT	UNIT DIMENSIONS								CURB		DISCHARGE OPENING			
		A	B	C	D	E	F	G	H	J	K	N	P	R	S
D.250-G10	595 LBS	74-3/8	27-3/8	29-3/4	26-1/16	3-3/4	44-3/8	7-13/16	34-13/16	21	71	13-1/4	11-1/2	3-7/8	5-9/16

UNIT INFORMATION.

MODEL	BTU RANGE (MBH)			GAS PRESSURE		GAS CONNECTION "T" (NPT)	CFM RANGE		FILTER SIZE & QTY	MAX. FILTER VELOCITY
	BURNER LENGTH	BTU LOW	BTU HIGH	MIN	MAX		MIN	MAX		
D.250-G10	6'	18	275	7" WC	14" WC	3/4	1000	3000	16"x20"x2" (3)	@3000 CFM = 572 FPM

CUSTOMER APPROVAL TO MANUFACTURE:

- Approved as Noted
- Approved with NO Exception Taken
- Revise and Resubmit
- SIGNATURE _____



JOB	Portland Heated MUA		
LOCATION			
DATE	10/30/2006	JOB #	51359
DWG #	Portland	DRAWN BY	BFC

FAN INFORMATION

FAN UNIT NO.	FAN UNIT MODEL #	EXHAUST FAN										SUPPLY FAN								
		MODEL	TAG	CFM	S.P.	RPM	H.P.	Ø	VOLT	FLA	BLOWER	HOUSING	TAG	CFM	S.P.	RPM	H.P.	Ø	VOLT	FLA
1	NCA14FA	NCA14FA		1800	0.750	1077	0.750	1	115	12.0										
2	NCA14FA	NCA14FA		1800	0.750	1077	0.750	1	115	12.0										
3	A1-D.250-G10										G10	A1-D.250		2520	0.450"	1206	1.500	1	115	20.4

FAN OPTIONS

FAN NO.	OPTION (Qty. - Descr.)
1	1 - Grease Box
2	1 - Grease Box
3	1 - Pressure Gauge, 0-35"
	1 - Motorized Backdraft Damper for A1-D Housing

GAS FIRED MAKE-UP AIR UNIT(S)

FAN UNIT NO.	BTU's	TEMP. RISE	GAS TYPE
3	203213	80 deg F	Natural

FAN ACCESSORIES

FAN UNIT NO.	FAN UNIT TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1		YES						
2		YES						
3							YES	

VERIFY GAS TYPE FOR MAKE UP AIR UNIT
PLEASE CHECK ONE:

LP NATURAL

CURB ASSEMBLIES

NO.	ON FAN	ITEM	SIZE
1	# 1	Curb	23.000"W x 23.000"L x 20.000"H Vented Hinged
2	# 2	Curb	23.000"W x 23.000"L x 20.000"H Vented Hinged
3	# 3	Curb	21.000"W x 71.000"L x 20.000"H Insulated

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted
 Approved with NO Exception Taken
 Revise and Resubmit
 SIGNATURE _____
 Your Title _____ Date _____



JOB Portland Heated MUA	
LOCATION	
DATE 10/30/2006	JOB # 513598
DWG # Portland	DRAWN BY BFC
REV. 1.00	SCALE 8.5' x 11'



High Temperature Flexible Batt Insulations

1230, 1260, 1280



Type 1230
Type 1260
Type 1280

Description

Owens Corning High Temperature Flexible Batts are made of inorganic fibers derived from basalt, a volcanic rock, with a thermosetting resin binder. Advanced manufacturing technology ensures consistent product quality for excellent performance in high temperature thermal control and fire resistance applications.

Uses

Owens Corning High Temperature Flexible Batts provide excellent thermal performance for tanks, boilers, ducts and mechanical equipment and systems operating with continuous use surface temperatures from sub-ambient to 1200°F (649°C). These insulation batts are easily shaped and fitted, even to extremely irregular surfaces. They will not slump or gap; this property helps to control operating costs by preventing costly thermal leaks.

Features/Benefits

Excellent Thermal Performance

Good thermal conductivity values help maximize control of heat loss, contributing to reduced operating costs and greater energy savings. High dimensional stability and low shrinkage reduces the potential for gaps forming at joints.

Excellent Acoustic Performance

These lightweight, flexible insulation batts are excellent sound absorbers, efficiently reducing sound transmission.

Lightweight, Low Dust

Easy to handle and fabricate, these insulations are readily cut with a knife. No sawing is required. Their clean handling properties help to reduce irritation and to minimize job clean-up time and expense. They may be installed directly to heated surfaces; system shut-down and staged heat-up are not necessary.

Excellent Fire-Related Performance

These high temperature insulation products have flame spread ratings of 5 and smoke developed ratings of 0 when tested in

accordance with UL 723, ASTM E 84 or CAN/ULC-S102-M. They are rated noncombustible when tested in accordance with ASTM E 136.

Good Physical Properties

There's no loss of thermal integrity from blister burn-out when thickness is maintained. Low water vapor sorption reduces the likelihood that these insulations will mold or mildew.

Availability

Owens Corning High Temperature Flexible Batts are available in three nominal densities in accordance with ASTM C 612 procedures, and in a range of standard thicknesses, as follows:

Type 1230	2 lb/ft ³ (48 kg/m ³)
Type 1260	6 lb/ft ³ (96 kg/m ³)
Type 1280	8 lb/ft ³ (128 kg/m ³)
Standard size	24" (0.6m) x 48" (1.2m)
Standard thicknesses	1" (25mm) to 6" (127mm) in 1/2" (13mm) increments

Custom sizes are available on a made-to-order basis.

Specification Compliance

- ASTM C 553, Mineral Fiber Blanket, Thermal Insulation for Commercial and Industrial Applications, all types
- U. S. Coast Guard Approval No. 164-509, Noncombustible Materials
- CAN/CGSB-51.11, Type 1, Class 5 - Type 1230, Type 2, Class 5 - Types 1260, 1280

For application to asbestos surfaces, steel, please contact your Owens Corning Representative or for testing requirements.

Physical Property Data

Property	Test Method	Value
Maximum service temperature	ASTM C 611	Continuous use to 1200°F (649°C)
In-service shrinkage	ASTM C 636	3% at 1050°F (566°C) 1% at 1200°F (649°C)
Water vapor sorption	ASTM C 1194	<1.0% by weight at 120°F (49°C), 95% R.H.
Shot content	ASTM C 1335	<20%
Surface burning characteristics	UL 723, ASTM E 84* or CAN/ULC-S102-M*	Flame spread: 5* Smoke developed: 0
Noncombustibility	CAN-5.14-M	Not combustible

* The surface burning characteristics of these products have been determined in accordance with UL 723, ASTM E 84 or CAN/ULC-S102-M. These standard tests have used a 100 mm wide flame source. The physical properties of materials, particularly in assemblies in response to heat and flame under other fire scenarios, vary from 100 mm and should be used as the design or appropriate fire life hazard with the use of materials products assuming fire scenarios. However, results of this test may be used as elements of a fire risk assessment when a more accurate fire hazard assessment is done by those who are performing an assessment of the fire hazard for particular use. Values are reported to the nearest 5 mm.