Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

B[illegible]CTION

PERMIT

Please Read Application And Notes, If Any, Attached

PERMIT ISSUED

Permit Number: 071418

JAN 3 1 2008

CITY OF PORTLAND

This is to certify that MACFAYDEN LUKE S /A[illegible] Heating [illegible]ilating

has permission to Install Range Hood w/ fire s[illegible]ression s[illegible]em

AT 90 CONGRESS ST [illegible] L 016 A006002

provided that the person or persons, [illegible]m or [illegible]epting this permit shall comply with all of the provisions of the Statutes of M[illegible]ne and of th[illegible]nances of the City of Portland regulating the construction, maintenance and u[illegible] of buildings and st[illegible]tures, 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.

N[illegible]ication[illegible] inspec[illegible]n must [illegible] gi[illegible] and wr[illegible]n permis[illegible]n procu[illegible] b[illegible]e this b[illegible]ding or [illegible]t thereo[illegible] la[illegible]d or c[illegible]closed-in. H[illegible]R NOTICE IS REQUIRED.

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

OTHER REQUIRED APPROVALS

Fire Dept. Greg Gast

Health Dept. _____

Appeal Board _____

Other _____
Department Name

Jeanne Bourke 1/31/08
Director - Building & Inspection Services

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 No:	Issue Date:	CBL:
07-1418		016 A006002

Location of Construction:	Owner Name:	Owner Address:	Phone:
90 CONGRESS ST	MACFAYDEN LUKE S	90 CONGRESS ST	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
Hill Top Coffee	Aero Heating and Ventilating	378 Presumpscot Portland	2077612092
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
Luke MacFadyen	207-871-1075	Hood Systems, Commerical	B-1

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
Commercial - Hill Top Coffee unit #2 use under permit #07-0869	Commercial - Hill Top Coffee - Install Range Hood w/ fire suppression system	$90.00	$6,300.00	1

FIRE DEPT: ☑ Approved ☐ Denied

NFPA 96

Signature: Greg Cass

INSPECTION:

Use Group: A-2 Type: Hood TYPE 1

IMC-2003

Signature: JMB 1/31/08

Proposed Project Description:

Install Range Hood w/ fire suppression system

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	11/19/2007

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..

PERMIT ISSUED

JAN 3 1 2008

CITY OF PORTLAND

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: OK 11/20/07	Date:	Date:

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

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
07-1418	11/19/2007	016 A006002

Location of Construction:	Owner Name:	Owner Address:	Phone:
90 CONGRESS ST	MACFAYDEN LUKE S	90 CONGRESS ST	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
Hill Top Coffee	Aero Heating and Ventilating	378 Presumpscot Portland	(207) 761-2092
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
Luke MacFadyen	207-871-1075	Hood Systems, Commerical	

Proposed Use:	Proposed Project Description:
Commercial - Hill Top Coffee - Install Range Hood w/ fire suppression system	Install Range Hood w/ fire suppression system

Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 11/20/2007

Note: **Ok to Issue:** ☑

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:** 01/31/2008

Note: **Ok to Issue:** ☑

1) Separate permits are required for any electrical, plumbing, or HVAC systems.
Separate plans may need to be submitted for approval as a part of this process.

2) The Hood shall be installed per IMC 2003 and NFPA 96
This permit is approved based on the plans submitted and updated for reductions in the cleaances based on the application of a UL approved fire wrap or equivalent assembly per code.

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Capt Greg Cass **Approval Date:** 11/20/2007

Note: **Ok to Issue:** ☑

1) Install shall comply with NFPA 96.
A compliance letter is required

Comments:

11/20/2007-mes: This is unit #2 - use permit for the "Hill TopCoffee" under permit #07-0868.

12/18/2007-jmb: Left voicemsg for Luke M. To confrim which walls will be treated for clearance reductions.

12/19/2007-jmb: Pete Collard sent an email referring to the 3" built in space at the rear of the hood. The attachment was not readable, but it's will the submitted permit. I emailed back needing informaiton on which walls would be treated for clearance reduction.

1/9/2008-jmb: Luke Mac left voicemsg inquiring about status of permit

1/10/2008-jmb: I left voicemsg w/Pete C. That the IMC 2003 requires 18" to combustibles per Sec.507.9 or clearance reduction materials, may need to fax a copy

1/14/2008-jmb: Pete C. Sent attachment from Captivaire with new language on the 3" standoff to combustibles. I called him to discuss the info and asked that the UL listing of the hood be sent for review.

1/17/2008-jmb: Met with Greg C. And MC to review the captivaire specs. This is not enough information, we need the design and UL testing information. Spoke with Pete C., he will provide the info

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

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.**

N/A **CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED**

Victor L. Allen

Signature of Applicant/Designee — Date

Jim Bard — 1/31/08

Signature of Inspections Official — Date

CBL: 16-A-6002 Building Permit #: 07-1418

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: 90 Congress St. Portland		
Total Square Footage of Proposed Structure/Area	Square Footage of Lot	
Tax Assessor's Chart, Block & Lot Chart# 16 Block# A Lot# 6002	Applicant *must be owner, Lessee or Buyer* Name Luke MacFadyen Address Hilltop Coffee Shop 90 Congress City, State & Zip Portland ME	Telephone: 871-1075
Lessee/DBA (If Applicable)	Owner (if different from Applicant) Name Luke MacFadyen Address City, State & Zip	Cost Of Work: $ ~~6,300~~ 0 C of O Fee: $ Total Fee: $ 90

Current legal use (i.e. single family) Coffee Shop Hilltop

If vacant, what was the previous use?

Proposed Specific use:

Is property part of a subdivision? NO If yes, please name

Project description: Instal Range Hood w/Fire Suppression System

Contractor's name: Aero Heating + Venting	761-7014
Address: 57½ Presumpscott St	
City, State & Zip Portland ME. 04103	Telephone:
Who should we contact when the permit is ready: Luke MacFadyen	Telephone: 871-1075
Mailing address:	

Please submit all of the information outlined on the applicable 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 or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division 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: Luke G. MacFadyen Date: 11/19/07

This is not a permit; you may not commence ANY work until the permit is issue

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

Lee Urban - Director of Planning and Development
Jeanie Bourke - Inspection Division Services 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? YES If Other, what Type? _____

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

Thickness of the steel for the hood _____

Thickness of the duct for the hood 16 GAUGE

Type of Hood and Duct Supports

_____

_____

Type of seams and Joints WELDED

_____

Grease Gutters provided? Yes

Hood Clearance reduction to Combustibles design /specs:

3"/OR NFPA 96 - 4.2.3.2 CLEARANCE REDUCTION SYSTEM

Duct Clearance reduction to Combustibles design /specs:

3M FIRE WRAP / WHERE REQUIRED

Vibration Isolation System:

N/A

Air Velocity within the duct system 1700 FPM

Grease accumulation prevention system:

BAFFLE TYPE GREASE FILTERS

Cleanouts PER NFPA 96 AS REQUIRED

Grease Duct enclosure N/A.

Exhaust Termination Roof ✓ Wall _____

Fire Suppression System AS REQUIRED BY QUALIFIED CONTRACTOR

Exhaust fan mounting and clearance from the roof / wall or Combustibles:

VENTILATED CURB @ 22" + FAN TERMINATION @ 24 3/4"

Exhaust fan distance from other vents or openings 10 FT. MIN

Exhaust fan distance from adjacent buildings 25 FT +

Exhaust fan height above adjoining grade 44 3/4"

Hood Specs

Style of Hood CAPTIVE AIRE

Type of Filter GREASE FILTERS

Height of filter above nearest cooking surface 36" MIN

Capacity of hood CFM 800

Make up Air system description and capacity

N/A.

4.1.3 The following equipment shall be kept in good working condition:

(1) Cooking equipment

(2) Hoods

(3) Ducts (if applicable)

(4) Fans

(5) Fire-extinguishing systems

(6) Special effluent or energy control equipment

4.1.4 All airflows shall be maintained.

4.1.5 Maintenance and repairs shall be performed on all components at intervals necessary to maintain these conditions.

4.1.6* All solid fuel cooking equipment shall comply with the requirements of Chapter 14.

4.1.7 Multiple tenancy applications shall require the concerted cooperation of design, installation, operation, and maintenance responsibilities by tenants and by the building owner.

4.1.8 All interior surfaces of the exhaust system shall be accessible for cleaning and inspection purposes.

4.1.9* Cooking equipment used in fixed, mobile, or temporary concessions, such as trucks, buses, trailers, pavilions, tents, or any form of roofed enclosure, shall comply with this standard unless all or part of the installation is exempted by the authority having jurisdiction.

4.2* Clearance.

4.2.1 Where enclosures are not required, hoods, grease removal devices, exhaust fans, and ducts shall have a clearance of at least 457 mm (18 in.) to combustible material, 76 mm (3 in.) to limited-combustible material, and 0 mm (0 in.) to noncombustible material.

4.2.2 Where a hood, duct, or grease removal device is listed for clearances less than those required in 4.2.1 the listing requirements shall be permitted.

4.2.3 Clearance Reduction.

4.2.3.1 Where a clearance reduction system consisting of 0.33 mm (0.013 in.) (28-gauge) sheet metal spaced out 25 mm (1 in.) on noncombustible spacers is provided, there shall be a minimum of 229 mm (9 in.) clearance to combustible material.

4.2.3.2 Where a clearance reduction system consisting of 0.69 mm (0.027 in.) (22-gauge) sheet metal on 25 mm (1 in.) mineral wool bats or ceramic fiber blanket reinforced with wire mesh or equivalent spaced out 25 mm (1 in.) on noncombustible spacers is provided, there shall be a minimum of 76 mm (3 in.) clearance to combustible material.

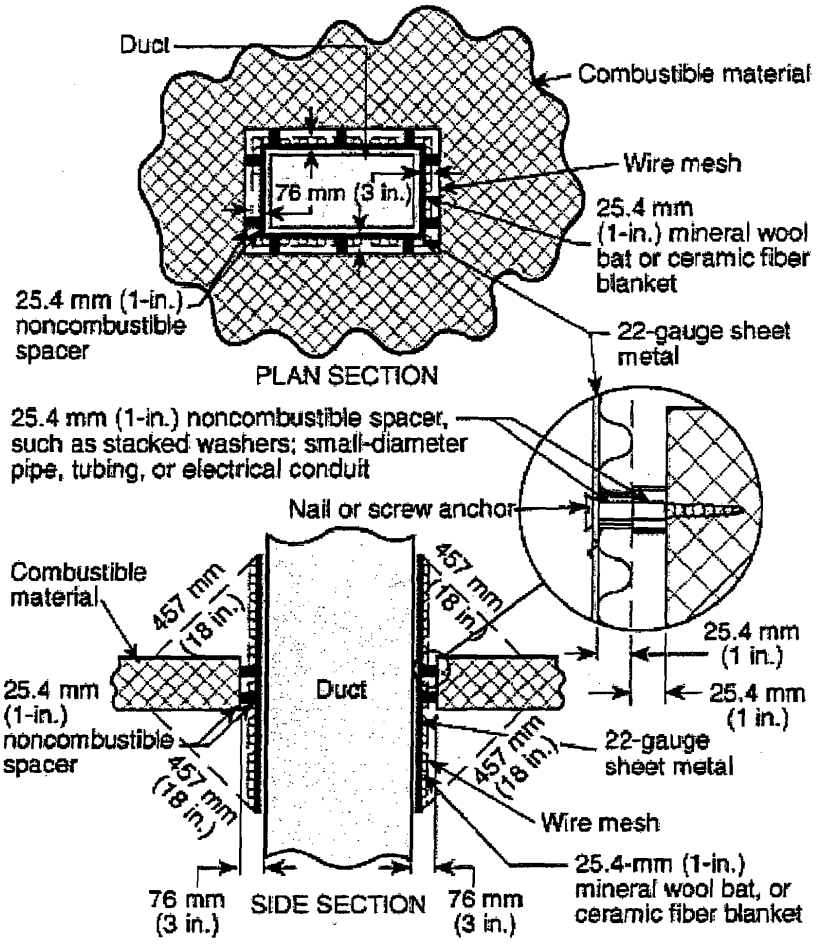


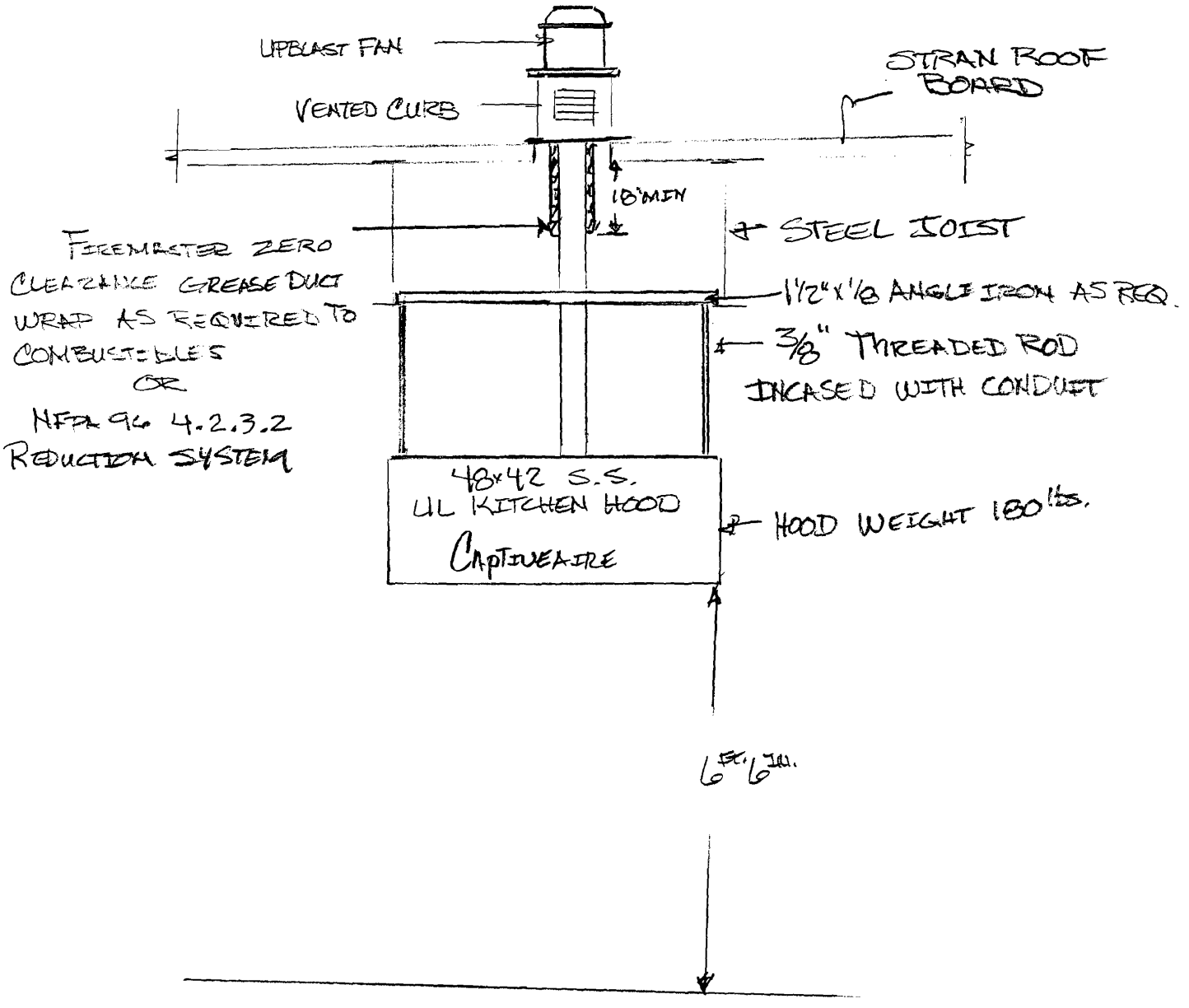
FIGURE A.4.2(g) Example of clearance reduction system: 76.2-mm (3-in.) clearance to combustible material.

A.4.2.4.2 The intent of this section is to maintain the systems and their function in accordance with the requirements of the edition of NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations,* that the system were designed and installed under.

A.5.1.4 Welding is one acceptable method.

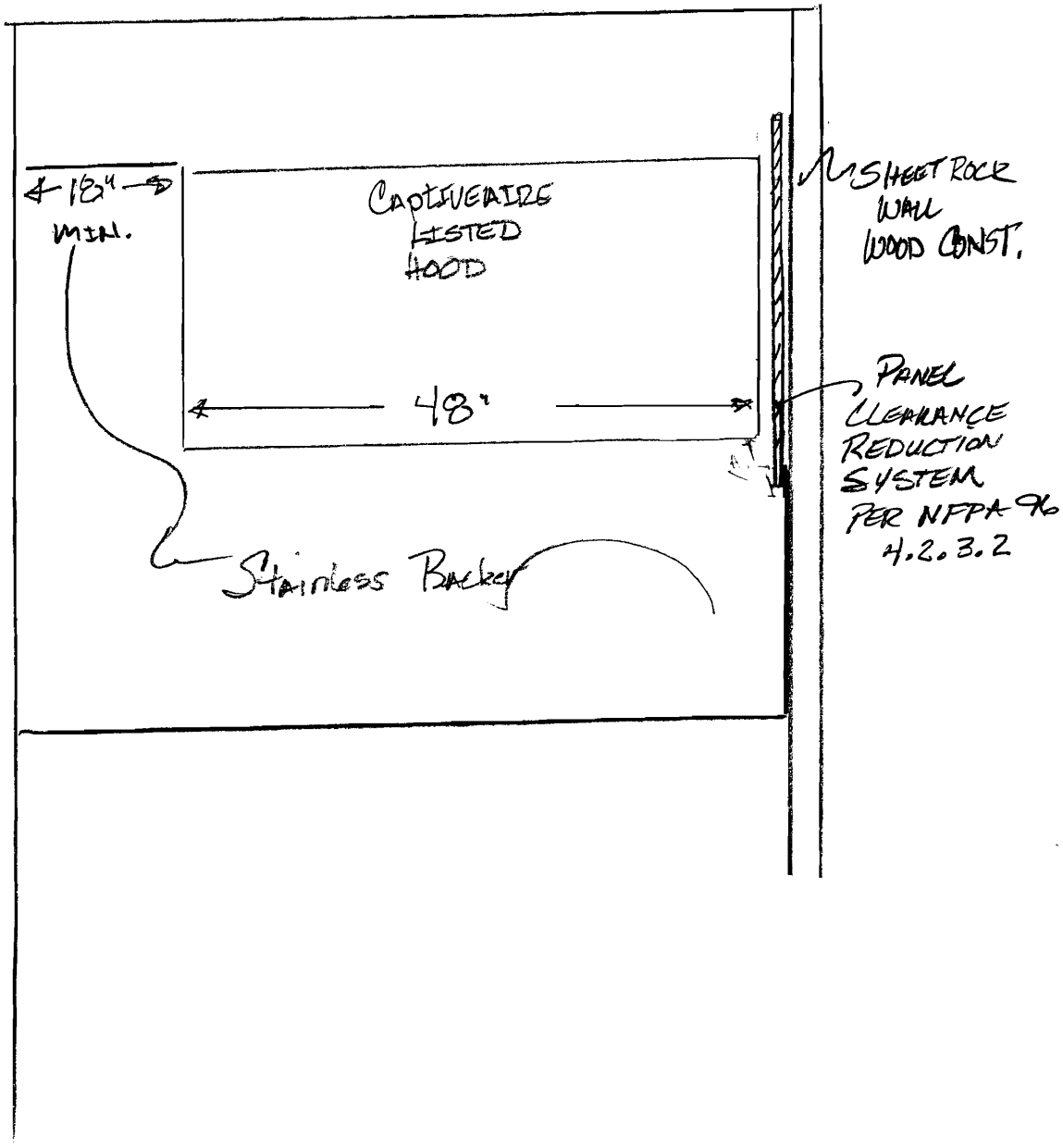
A.5.3.4 Figure A.5.3.4 provides examples of exhaust hood assemblies with integrated supply air plenums.

88 CONGRESS St.



1/31/08 Meeting w/ Greg. Pete & Jeanie

Per Pete Collard panel reduction will be continued on back wall 18" around hood to The Floor Joists



LISTING REPORT
INTERTEK TESTING SERVICES NA INC.

3933 US Route 11 Cortland, NY 13045

Project No.: 3054804-421

Issued: November 3, 2004
Revised: June 19, 2006

REPORT NO. 3054804-001

INSPECTION, TESTS AND EVALUATION
OF AN
EXHAUST HOOD WITHOUT EXHAUST DAMPER

RENDERED TO
CAPTIVE-AIRE SYSTEMS, INC.

GENERAL: This Report gives the results of the inspection, tests and evaluation of an exhaust hood without exhaust damper for compliance with applicable requirements of the Standard for Exhaust Hoods for Commercial Cooking Equipment UL 710 5th Edition, Issued 12/28/95, Revised 04/14/99 & ULC Subject C710-1980. This investigation was authorized by Purchase Order No. 5944—01, dated 01/23/04. The investigation was begun on October 11, 2004 and completed on November 3, 2004. A representative sample in good condition was provided by the client, and tested at the clients facility located in Youngsville, NC on the date of October 11, 2004.

This report replaces Captive-Aire Systems Inc. report number J98027662-003.

Standard for Exhaust Hoods for Commercial Cooking Equipment
UL 710 5th Edition, Issued 12/28/95, Revised 04/14/99 & ULC Subject C710-1980

Applicant	Captive-Aire Systems, Inc. 4641 Paragon Park Raleigh, NC 27616 USA	Manufacturers	Captive Aire Systems, Inc. 360 Northbrook Drive Youngsville, NC 27596 USA
	Contact: Bill Griffin Phone: 717-285-3332 Fax: 919-554-1227		Captive Aire Systems, Inc. 4031 Tull Avenue Muskogee, OK 74403 USA
			Rupp Air Management Systems 101 North Industrial PKWY West Union, IA 52175
			Captive-Aire Systems, Inc. 6856 Lockheed Drive Redding, CA 96002
			Captive-Aire Systems, Inc. 100 Jeffrey Way, Suite C Youngsville, NC 27596

TEST PERFORMANCE

A representative sample of the product was tested in accordance with the Standard for Exhaust Hoods for Commercial Cooking Equipment UL 710 5th Edition, Issued 12/28/95, Revised 04/14/99 & ULC Subject C710-1980

The following tests were performed:

Description	Standard(s)/Clause
Temperature Test	UL 710 / 30
Cooking Smoke and Flare-Up Test	UL 710 / 31
Abnormal Flare-Up Test	UL 710 / 32

Results of the tests indicate the specimens conform to applicable test criteria.

GENERAL INFORMATION

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.

2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.

3. Manufacturing changes.

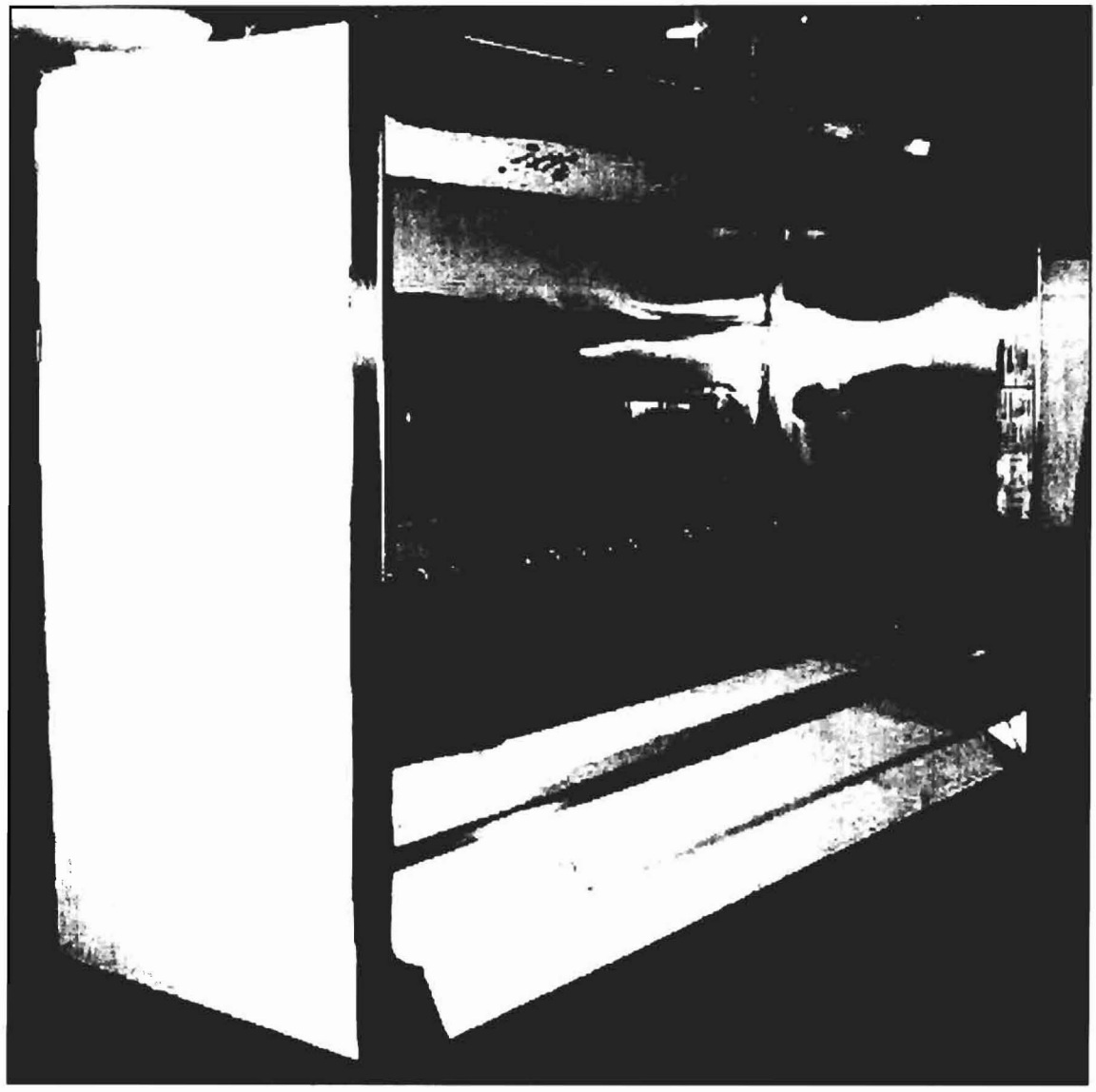
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

PHOTO NO. 1

General - Photo 1 shows an overall view of the Exhaust hood without exhaust damper for commercial cooking equipment enclosure, which is representative of all models except where indicated.



Exhaust hood without exhaust damper **PHOTO NO. 1**

General - Photo 1 shows an overall view of the Exhaust hood without exhaust damper for commercial cooking equipment enclosure, which is representative of all models except where indicated.

Note: Reference Illustration numbers 1 and 5 for unit dimensions.

General Requirements And Definitions

Installation:
All hoods may be installed in wall or island cooking configurations. These exhaust hoods are intended for use in accordance with the Standard of the National Fire Protection Association for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment, NFPA No. 96.

CONSTRUCTION DETAILS:

CASING:
The casing shall be constructed either of galvanized steel, aluminum-coated steel, or stainless steel. Material shall be No. 20 gauge, (032 in.) minimum.

Stainless steel shall be either Type 301, 302, 304, or 430 and shall be No. 20 gauge, (0.032 in.) minimum.

All seams and joints shall have a liquid-tight, continuous external weld, unless otherwise noted in this report.

FILTERS:
UL Classified grease filters shall be provided as part of each unit. Filters may be constructed of aluminum, or stainless steel. Model HVC (HSF) type cartridge filters may be substituted for grease baffle filters. Captrate bead bed filters manufactured by Phillips Plastics may be used as second source of grease extraction. Waterwash and dry slot configurations are permitted where indicated. Non grease rated hoods may or may not contain metal mesh filters.

SEALANT:
Recognized component manufactured by Dow Corning Corporation, designated Dow Corning RTV Type 732 or equivalent listed component.

Alternate: 3M Type 4941
Alternate: 3M Type 9473
Alternate: Component Hardware Type M90

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 BACKSPLASH
BACK RETURN SUPPLY PLENUM

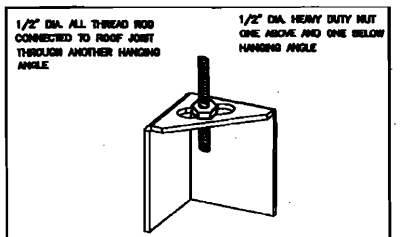
TABLE 1

ETL LISTING DESCRIPTION

THE CAPTIVE AIRE MODEL ND-2 HAS BEEN E.T.L. TESTED, LISTED, AND APPROVED TO EXHAUST A MINIMUM OF 150 CFM PER LINEAR FOOT OVER 450 DEGREE COOKING EQUIPMENT

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. 6" 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 PREWIRED PER THE PLANS. INTERCONNECTIONS BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTOR.
7. LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
8. SEISMIC RESTAINTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
9. INSTALLING CONTRACTORS ASSUME ALL RELATED REPONSIBILITY 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



ND-2 HANGING ANGLE DETAIL

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

SUPPLY CFM=EXHAUST CFM X PERCENTAGE REQUIRED

$$\text{TOTAL DUCT AREA} = 144 \times \frac{\text{CFM}}{\text{FMP}(*)}$$

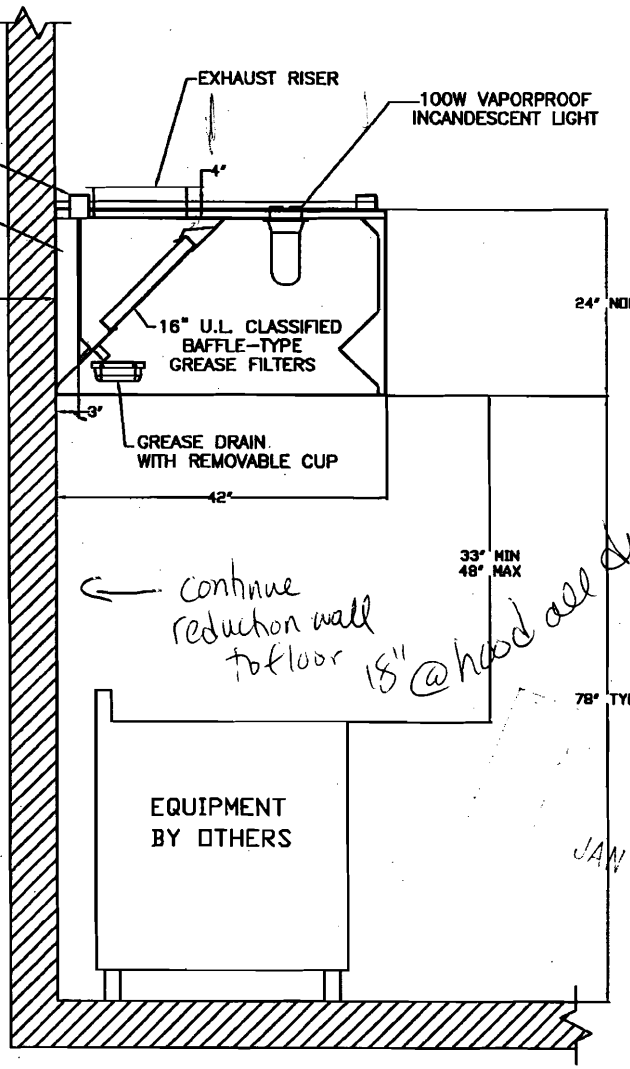
$$\text{DUCT LENGTH} = \frac{\text{TOTAL DUCT AREA}}{\text{DUCT DEPTH}}$$

*CAPTIVE-AIRE VENTILATOR DUCT SIZES ARE CALCULATED USING AN EXHAUST VELOCITY OG 1600-1800 FPM AND A SUPPLY VELOCITY OF 1000 FMP. PLEASE CONSULT FACTORY FOR MAXIMUM ALLOWABLE DUCT SIZES

CALCULATIONS UTILIZED

IT IS THE RESPONSIBILITY OF THE ARCHITECT/OWNER TO ENSURE THAT THE HOOD CLEARANCE FROM LIMITED-COMBUSTIBLE AND COMBUSTIBLE MATERIALS IS IN COMPLIANCE WITH LOCAL CODE REQUIREMENTS

ok fastened to combustible wall per spec of ul testing



SECTION VIEW - MODEL 4224-ND-2

JAN 14 2008

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted ☐
Approved with NO Exception Taken ☒
Revise and Resubmit ☐

SIGNATURE Peter T. Allard

Your Title GM Date 11/12/07

CAPTIVE-AIRE

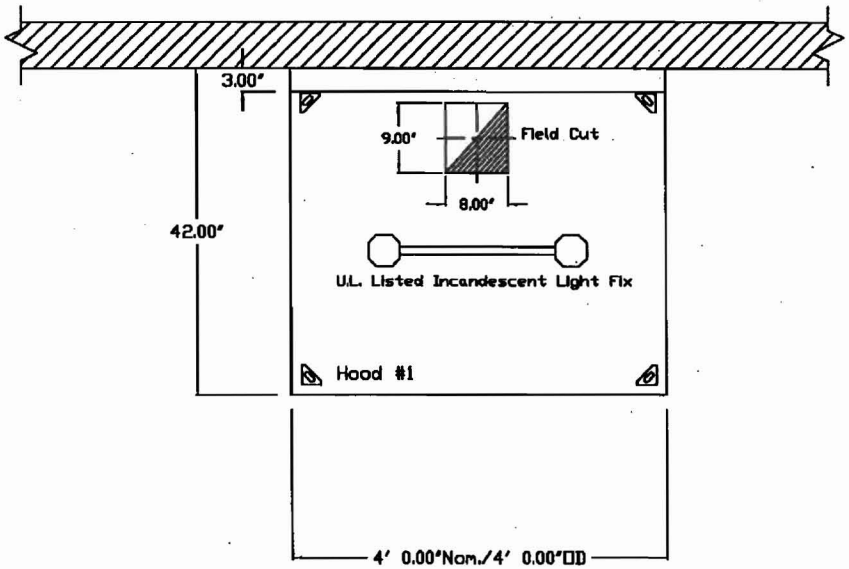
JOB	Hilltop Coffee		
LOCATION			
DATE	11/9/2007	JOB #	685504
DWG #	HilltopCoffee	DRAWN BY	BFC
REV.	1.00	SCALE	8.5" x 11"

HOOD INFORMATION

HOOD NO.	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM						SUPPLY PLENUM						HOOD CONSTRUCTION	HOOD CONFIG.	
				TOTAL EXH. CFM	RISER(S) WIDTH	RISER(S) LENG.	RISER(S) DIA.	RISER(S) CFM	RISER(S) S.P.	TOTAL SUP. CFM	RISER(S) WIDTH	RISER(S) LENG.	RISER(S) DIA.	RISER(S) CFM	RISER(S) S.P.		END TO END	ROW
1	4224 ND-2	4' 0.00"Nom. 4' 0.00"OD	450 Deg.	800	9"	8"		800	-0.307"	0						430 SS Where Exposed	ALONE	N/A

HOOD INFORMATION

HOOD NO.	FILTER(S) TYPE	FILTER(S) QTY.	FILTER(S) HEIGHT	FILTER(S) LENGTH	LIGHT(S) QTY.	LIGHT(S) TYPE	WIRE GUARD	UTILITY CABINET(S) LOCATION	FIRE SYSTEM TYPE	FIRE SYSTEM SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	SWITCHES LOCATION	FIRE SYSTEM PIPING	HOOD WEIGHT
1	Alum. Baffle w/ Handles	3	16"	16"	2	Incandescent Light Fix	NO							NO	180 LBS.



PLAN VIEW - Hood #1 - 4' 0.00" LONG 4224ND-2

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH

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

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted ☐
Approved with NO Exception Taken ☒
Revise and Resubmit ☐

SIGNATURE Peter T. Bellard
Your Title GM Date 11/12/07

CAPTIVE-AIRE

JOB	Hilltop Coffee		
LOCATION			
DATE	11/9/2007	JOB #	685504
DWG #	HilltopCoffee	DRAWN BY	BFC
REV.	1.00	SCALE	8.5" x 11"

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	NCA8FA	NCA8FA		800	- 0.500"	1240	0.250	1	115	4.8										

FAN OPTIONS

FAN NO.	OPTION (Qty. - Descr.)
1	1 - Grease Box

CURB ASSEMBLIES

NO.	ON FAN	ITEM	SIZE
1	# 1	Curb	19.500"W x 19.500"L x 22.000"H Vented Hinged (FLAT ROOF)

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted ☐

Approved with NO Exception Taken ☒

Revise and Resubmit ☐

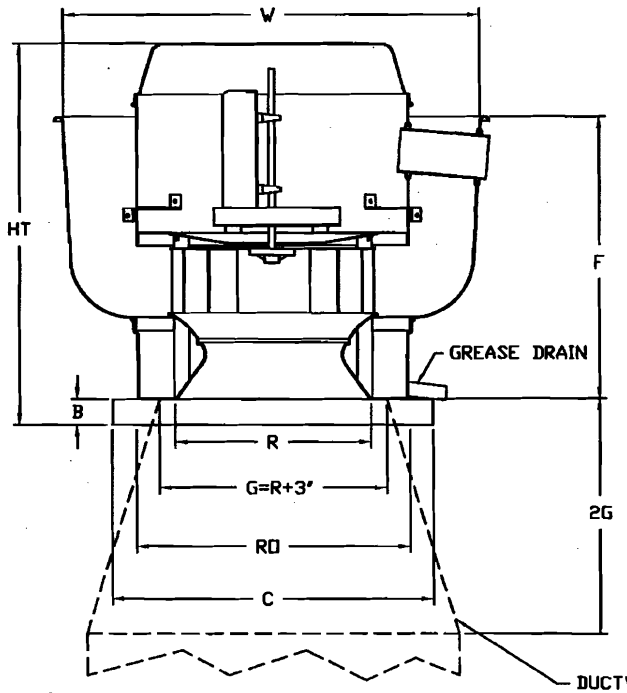
SIGNATURE Peter L. Allard

Your Title CM Date 11/12/07

CAPTIVE-AIRE

JOB Hilltop Coffee	
LOCATION	
DATE 11/9/2007	JOB # 685504
DWG # HilltopCoffee	DRAWN BY BFC
REV. 1.00	SCALE 8.5" x 11"

NCAFA SERIES UPBLAST EXHAUST FANS (UL762)



FEATURES:

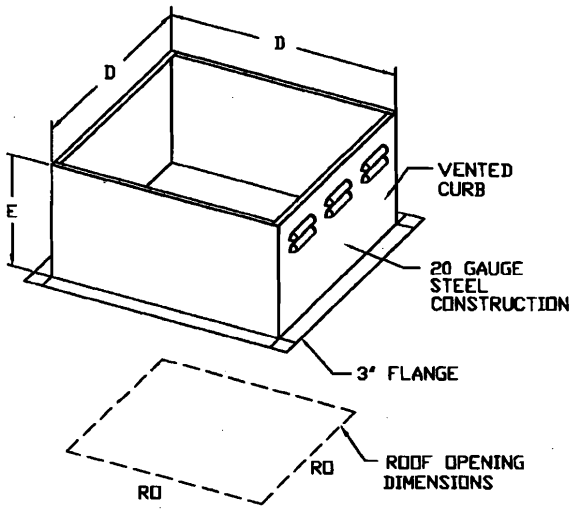
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL762
- AMCA SOUND AND AIR CERTIFIED
- WIRING FROM MOTOR TO DISCONNECT SWITCH
- WEATHERPROOF DISCONNECT
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

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



NCAFA BELT DRIVE
CENTRIFUGAL UP-BLAST EXHAUST FANS DIMENSIONAL DATA

FAN MODEL	HT	W	B	C	F	R	RD	WEIGHT LB
NCA08FA	24 3/4	25 1/2	1 1/2	21	18 1/2	12 1/8	17 1/2	105

CURB DIMENSIONAL DATA

FAN MODEL	D	E
NCA08FA	19 1/2	22

CUSTOMER APPROVAL TO MANUFACTURE

Approved as Noted ☐
Approved with NO Exception Taken ☐
Revise and Resubmit ☐
SIGNATURE Peter L. Ballard
Your Title Pres. Date 11/12/07

CAPTIVE-AIRE

JOB Hilltop Coffee	
LOCATION	
DATE 11/9/2007	JOB # 685504
DWG # HilltopCoffee	DRAWN BY BFC
REV. 1.00	SCALE 8.5" x 11"

CLEARANCE REDUCTION METHODS:
The hood may be installed with a 0 inch clearance to combustible materials if constructed in one of the following methods:

- 1 inch layer of insulation of type indicated in Insulation Section of this report or approved Kitchen Exhaust Duct Insulation.
- 1 inch insulated backsplash
- 3 inch un-insulated airspace
- Back Return (BR) supply plenum

These ratings apply to the top, ends, back and front of the exhaust hood.

END PANELS (OPTIONAL):
Hood end panels or walls may be field installed or shipped loose from the factory. End panels allow the clearance from the cooking appliance to the end of the hood to be reduced to 0 inches.

A 30% reduction in total airflow may be applied to any hood when end panels are installed. End panels must be installed below the hood and must have a minimum height of 20 inches vertically along the wall and a minimum width of 20 inches along the hood. They are permitted to be angled between these two dimensions

WRAPPER (ENCLOSURE) PANELS (OPTIONAL):
Wrapper panels may be field or factory installed on the hood to form an aesthetic covering of the top of the hood.

UTILITY CABINET (OPTIONAL):
As an optional construction, these exhaust hoods may incorporate a utility cabinet at either end of the hood. The cabinet shall be constructed of materials the same as that of the hood. The utility cabinets may contain control systems, fire system components and other hood and fan controls.

ELECTRICAL EQUIPMENT:(OPTIONAL)

Lighting Fixtures (Optional) - The lighting fixtures utilized are to be Listed and bear the wording "For use within commercial cooking hoods". The lighting fixtures are to be securely mounted in the hood and the enclosure of the fixture shall not have unused openings. The lighting fixtures are to be listed fluorescent or incandescent type. Multiple Lighting Fixtures may be wired in parallel to a common field wiring junction box.

Conduit:
The conduit used in wiring the exhaust hood is to be listed. When conduit is routed within the exhaust hood, the use of Listed "Hood and Duct Accessories" conduit connection is used to complete a liquid tight connection.