DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND BUILDING PERMIT



This is to certify that A & D REALTY, LLC - LITTLE CAESAR'S PIZZA

Located At 91 AUBURN ST

CBL: 375- C-001-001

Job ID: 2011-10-2436-CH OF USE

has permission to Renovate for fit-up of vacant space to Retail w/food Prep. Little Caesar's Pizza provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a sertificate of occupancy is required, it must be

Fire Prevention Officer

Code Enforcement Officer / Plan/Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

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

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE

Job No: 2011-10-2436-CH OF USE	Date Applied: 10/11/2011		CBL: 375- C-001-001				
Location of Construction: 91 AUBURN ST	Owner Name: A & D REALTY, LLC	Owner Address: 5 MILITIA DR LEXINGTON, 02421 MA - MASSACHUSETTS				Phone:	
Business Name: Little Ceasar's Pizza	Contractor Name: Otto Food ervices, Inc	Contractor Ad 34 Barnfield Lan		actor Address: nfield Lane, Gorham, ME 04038			
Lessee/Buyer's Name:	Phone:		Permit Type: BLDG - Building	•			
Past Use: Proposed Use: Retail – Little Caesar' fit up new space creat larger space.		_	Cost of Work: 49000.00 Fire Dept:	### Approved 1./ Co Denied N/A		CEO District: Inspection: Use Group: IM Type: 2 B IBC-200 Signature:	
Proposed Project Description fit-up of vacant space to Retail w			Pedestrian Activ	ities District (P.A.I		14/11	
Permit Taken By:				Zoning Appro		·	
 This permit application Applicant(s) from meet Federal Rules. Building Permits do no septic or electrial work Building permits are vo within six (6) months of False informatin may in permit and stop all work 	ting applicable State and of include plumbing, bid if work is not started of the date of issuance. Invalidate a building	Shoreland Wetland Flood Z Subdivide Site Pla	is sone sion MinMM	Zoning Appeal Variance Miscellaneous Conditional Use Interpretation Approved Denied	Not in D. Does not Requires Approve		
hereby certify that I am the owner on the owner to make this application as the appication is issued, I certify that the enforce the provision of the code(s	his authorized agent and I agree the code official's authorized re	or that the projecto conform to	all applicable laws of	this jurisdiction. In addi	ition, if a permit for we	authorized by ork described in	
IGNATURE OF APPLICAN	NT AI	DDRESS		DAT	TE	PHONE	

DATE

PHONE

BUILDING PERMIT INSPECTION PROCEDURES

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

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.
- Permits expire in 6 months. If the project is not started or ceases for 6 months.
- If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.

Close In Elec/Plmb/Frame prior to insulate or gyp

Final Inspection / Certificate of Occupancy

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.



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Director of Planning and Urban Development Penny St. Louis

Job ID: 2011-10-2436-CH OF USE

Located At: 91 AUBURN ST

CBL: <u>375- C-001-001</u>

Conditions of Approval:

Zoning

- 1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
- 2. Separate permits shall be required for any new signage.
- 3. With the issuance of this permit and the certificate of occupancy the use of this space shall remain as retail. Any change of use shall require a separate permit application for review and approval.

Fire

- 1. All construction shall comply with City Code Chapter 10.
- 2. The Fire alarm and Sprinkler systems shall be reviewed by a licensed contractor[s] for code compliance. Compliance letters are required.
- 3. Fire alarm system requires a wireless master box connection per city ordinance.
- 4. The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property, including requirement that the fire alarm system cover the entire plaza, have a remote annunciator on the front of the plaza with revolving red light, and AES master box updates.
- 5. A model 4100 Knox box shall be located at the annunciator and a model 3200 hinged Knox Box is required at the fire alarm and sprinkler room.
- 6. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.
- 7. A separate Fire Alarm Permit is required.
- 8. Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576. Master box design and installation shall be as approved be City Electrical Division.
- 9. The sprinkler system shall be installed in accordance with NFPA 13.
- 10. A separate Suppression System Permit is required for all new suppression systems or sprinkler work effecting more than 20 heads.
- 11. Sprinkler protection shall be maintained. Where the system is to be shut down for maintenance or repair, the system shall be checked at the end of each day to insure the system has been placed back in service.
- 12. System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

- Located At: <u>91 AUBURN ST</u> CBL: <u>375- C-001-001</u>
- 13. Private fire mains and fire hydrants shall be maintained, tested and painted in accordance with NFPA 25 and City Code Chapter 10, Art IV.
- 14. Fire extinguishers are required per NFPA 10.
- 15. Emergency lights and exit signs are required. Emergency lights and exit signs are required to be labeled in relation to the panel and circuit and on the same circuit as the lighting for the area they serve.
- 16. Any cutting and welding done will require a Hot Work Permit from Fire Department.
- 17. Walls in structure are to be labeled according to fire resistance rating. IE; 1 hr. / 2 hr. / smoke proof.
- 18. A single source supplier should be used for all through penetrations.
- 19. Separate permits are required for hood and suppression systems.

Building

- 1. Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.
- 2. Equipment must be installed in compliance per the manufacturer's specifications
- 3. All penetrations through rated assemblies must be protected by an approved firestop system installed in accordance with ASTM E 814 or UL 1479, per IBC 2009 Section 713.
- 4. New cafe, restaurant, lounge, bar or retail establishment where food or drink is sold and/or prepared shall meet the requirements of the City and State Food Codes.
- 5. Approval of City license is subject to health inspections per the Food Code.
- Separate permits are required for any electrical, plumbing, sprinkler, fire alarm, HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.

6.3

JOHC-01-110C

entraliolizmi

General Building Permit Application

3,540 sf renovation	1 12 005 2 2 2 2	
A ! Class Disable Tas	12.095 acre	shone:
'ax Assessor's Chart, Block & Lot Chart# Block# Lot#	Applicant *must be owner, Lesse	snone:
Hartin Diockin Lotti	Name A & D Realty LLC c/o Winslow Prov	2020 x214
375 C 1-15-17	Address 5 Militia Dr	
	City, State & Zip Lex	
essee/DBA (If Applicable)	Owner (if different	
OTTO GOOD SERVICES, INC.	Name	
1161a Little CACSANS PIZZA	Address	
	City, Stat	
urrent legal use (i.e. single family)		
f vacant, what was the previous use? Retail	M	
roposed Specific use: Mercantile sproperty part of a subdivision? No.	If yes, please in	
roject description:	11 yes, please is	
Renovation of 3,540 sf of	vacant retail space for a	
franchise.		
Contractor's name: OTTO FOOD		
ddress: 34 BARNField (•	•
lity, State & Zip Gorham	ME 04038	Telephone: 2074152067
Who should we contact when the permit is rea	ady: Jonathan Smith	781-674-2020 x214
Mailing address: Winslow Property Man	agement, 5 Militia Dr., Lexing	

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

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

this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections

authorized representative shall have the authority to enter all areas covered b provisions of the codes applicable to this permit.	by this permit at any reasonable have to en	forcethe E
Signature: Date: /	10-11-11	. 8 25°
This is not a permit; you may not commence AN	NY work until the permit is issue	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\



Accessibility Building Code Certificate

Designer:	Michael Charek Architects						
Address of Project:	91 Auburn Street						
Nature of Project:	Renovation of existing vacant retail space into						
ŕ	new Little Caesars franchise.						

To the best of my knowledge and belief,



Signature:	· Late
Title:	Principal
Firm:	Michael Charek Architects
Address:	25 Hartley Street
	Portland, ME 04103
Phone:	207~761-0556



Certificate of Design Application

From Design	ner:	Michael Charek Arch	itects	
Date:		October 3, 2011		
lob Name:		Little Caesars		
•	Construction:	91 Auburn Street, P	ortland. ME 0	4103
riddicss of C	construction.		_	
		2009 International		
	Const	2003 International ruction project was designed to the	•	ria listed below:
Building Code	e & YearIBC	2009 Use Group Classification	n(s) M Mercant	ile
Type of Cons	truction <u>II</u>	-B		
Will the Struch	ire have a Fire sur	pression system in Accordance with	Section 903.3.1 of the	2003 IRC Yes
	-	•		ed (section 302.3) Non separated
		es Geotechnical/Soils report r	~	•
supervisory ara	im Systems	Geotechnical/ Sons report i	equited: (See Section	1802.2)
Structural Des	sign Calculations		N/A	Live load reduction
N/A		structural members (106.1 - 106.11)		Roof live loads (1603.1.2, 1607.11)
				Roof snow loads (1603.7.3, 1608)
	on Construction to the buted floor live load	Documents (1603)		Ground snow load, Pg (1608.2)
Floor Area U N/A		Loads Shown		If Pg > 10 psf, flat-roof snow load pr
N/A		N/A		If Pg > 10 psf, snow exposure factor, G
***************************************				If $P_g > 10$ psf, snow load importance factor, I_c
				Roof thermal factor, G(1608.4)
				Sloped roof snowload, p(1608.4)
Wind loads (10	603.1.4, 1609)			Seismic design category (1616.3)
N/A	Design option utiliz	zed (1609.1.1, 1609.6)		Basic seismic force resisting system (1617.6.2)
	Basic wind speed (1	809.3)		Response modification coefficient, Ry and
	Building category a	nd wind importance Factor,		deflection amplification factor (2 (1617.6.2)
	Wind exposure cate	table 1604.5, 1609.5) gory (1609.4)		Analysis procedure (1616.6, 1617.5)
	Internal pressure coef	ficient (ASCE 7)		Design base shear (1617.4, 16175.5.1)
	•	ing pressures (1609.1.1, 1609.6.2.2)	Flood loads (
		ures (7603.1.1, 1609.6.2.1)	N/A	Flood Hazard area (1612.3)
	data (1603.1.5, 161	•	***************************************	Elevation of structure
N/A	Design option utiliz		Other loads	LACTAGON OF SECURE
	Seismic use group (N/A	Consequent Hands (1997 to
····	•	pefficients, SDs & SDI (1615.1)		Concentrated loads (1607.4) Partition loads (1607.5)
	Site class (1615.1.5)			Misc. loads (Table 1607.8, 1607.6.1, 1607.7,
				1607.12, 1607.13, 1610, 1611, 2404



Certificate of Design

Date:	October 3, 2011	
From:	Michael Charek Architects	
	my knowledge and belief, r specifications covering construction work on:	
Renovation of exi	sting vacant retail space into new Little Caesars franchise.	
	and drawn up by the undersigned, a Maine registered Architect / to the 2003 International Building Code and local amendments. 2009 International Building Code	
	Signature:	
MICHAEL R. CHAREK	Title: Principal	
MICHAEL R. CHAREK	Firm: Michael Charek Architects	
No. 1174	Address: 25 Hartley Street	

Phone:

Portland, ME 04103

207-761-0556

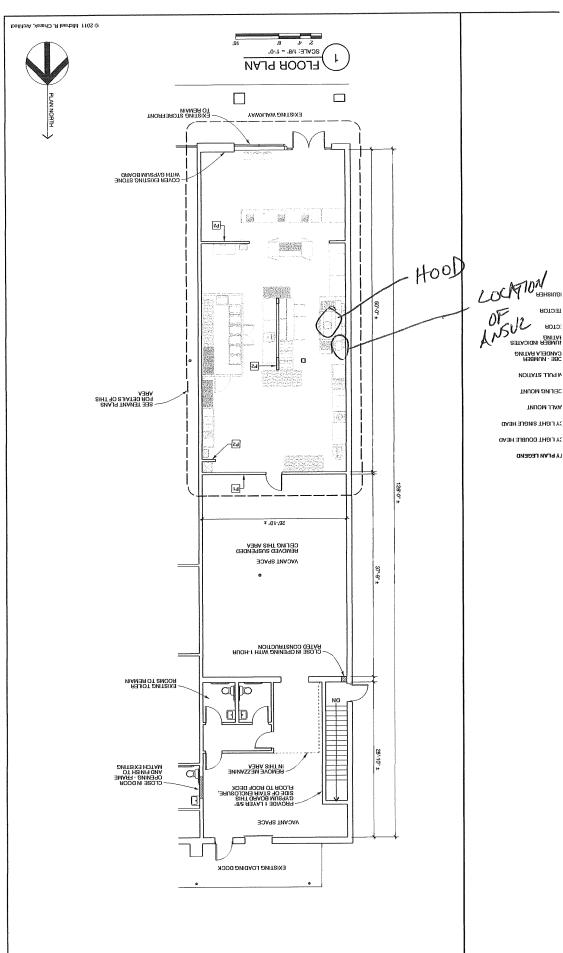




91 Auburn Street Portland, ME 04103



Michael Charek Architects 25 Hartley Street Portland, Maine 04103 (207) 761-0556





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Lee Urban - Director of Planning and Development Jeanie Bourke - Inspection Division Services Director

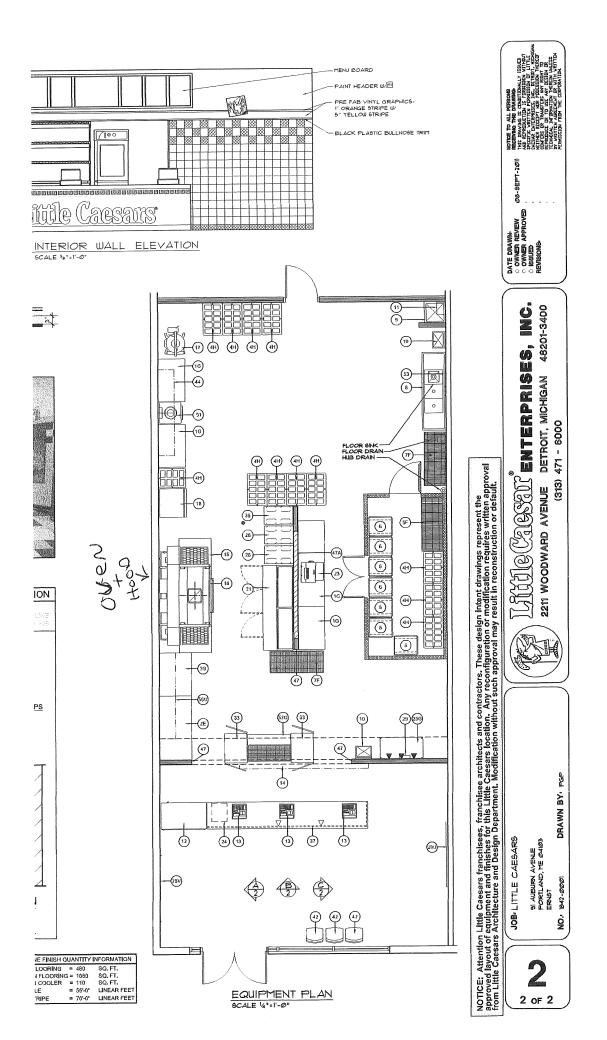
Kitchen Exhaust System Checklist and code Provisions

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.

	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.
0	of Materials:
	Is the hood Stainless steel or other type of steel? <u>STAINLESS</u> If Other, what
	Type?
	Is the duct work Stainless steel or other type of steel? Stainless If Other
	what type? 16" X16" X16 guage wolded
	Thickness of the steel for the hood3/16"
	Thickness of the duct for the hood 16 GUAGE "See plan"
	Type of Hood and Duct Supports
	Hoop sets on oven. Duct supports welded steel

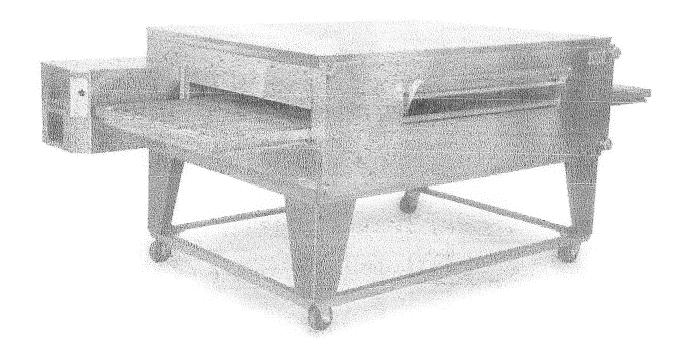
	Grease Gutters provided? Grease that at each end of hood
	Hood Clearance reduction to Combustibles design /specs:
	312" to Ceiling, 16" to wall-
	Duct Clearance reduction to Combustibles design /specs:
	Duct through daywall ceiling tile fire waap 18" Above Vibration Isolation System:
	NIA
	Air Velocity within the duct system
	Grease accumulation prevention system:
	No grease a Hood has grease trap at each end. Cleanouts At hood, EXHAUST FAN has grease trap + drain
	Cleanouts A+ hood, EXHAUST FAN has greasetrap + drain
	Grease Duct enclosure Nin
	Exhaust Termination Roof Wall
	Fire Suppression System ANSUL, See attached FAN
	Exhaust fan mounting and clearance from the roof / wall or Combustibles:
	10 feet Minimum
	Exhaust fan distance from property lines 130' to REAR
	Exhaust fan distance from other vents or openings 10 Feet minimum.
	Exhaust fan distance from adjacent buildings
	Exhaust fan height above adjoining grade
Hood	Specs
	Style of Hood HALTON
	Type of Filter Alumnum baffel
	Height of filter above nearest cooking surface
	Capacity of hood CFM
	Make up Air system description and capacity
	ACCUREX. See Attached Plan.
	1140 to 1725 RPM. 742 FRPM



Oven



XLT 3270-TS3 Quiet Fire Natural Gas or Light Propane

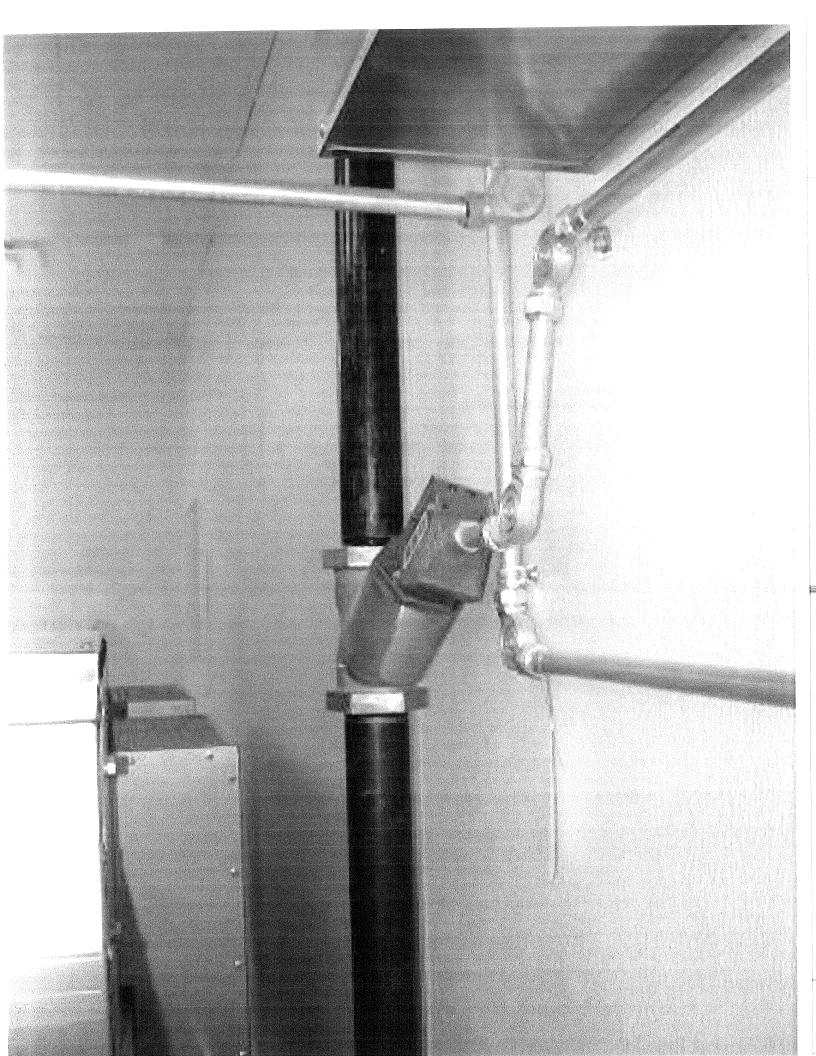






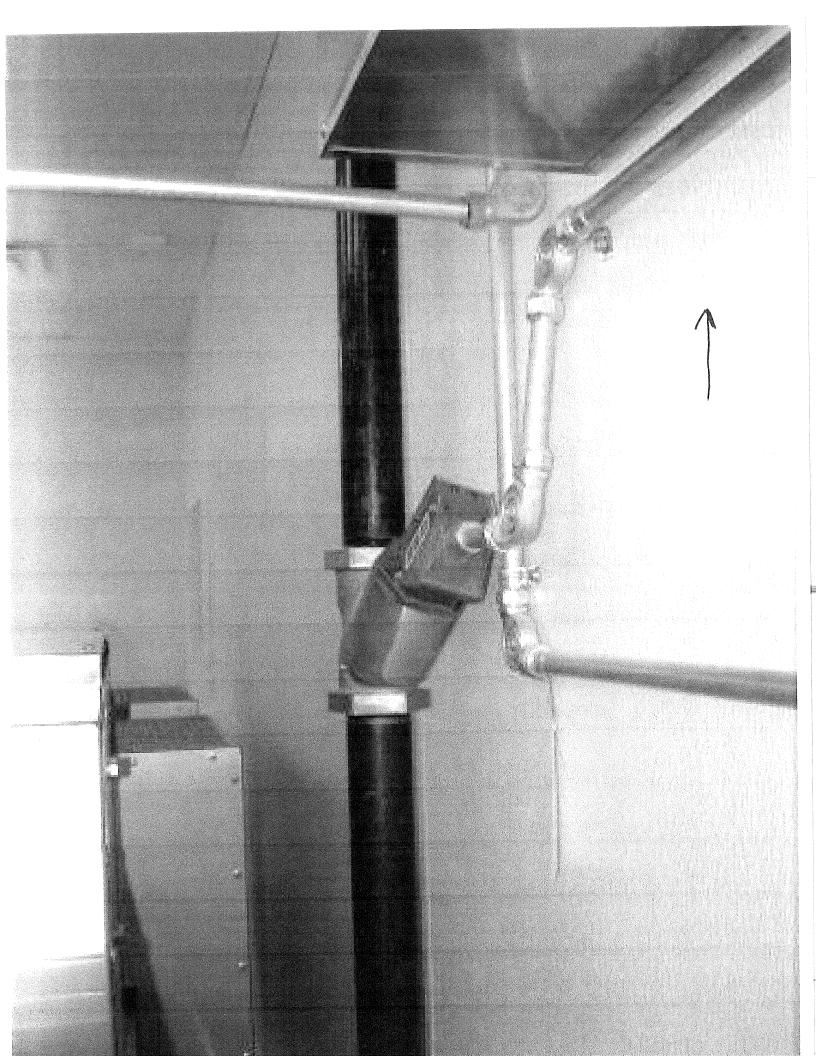


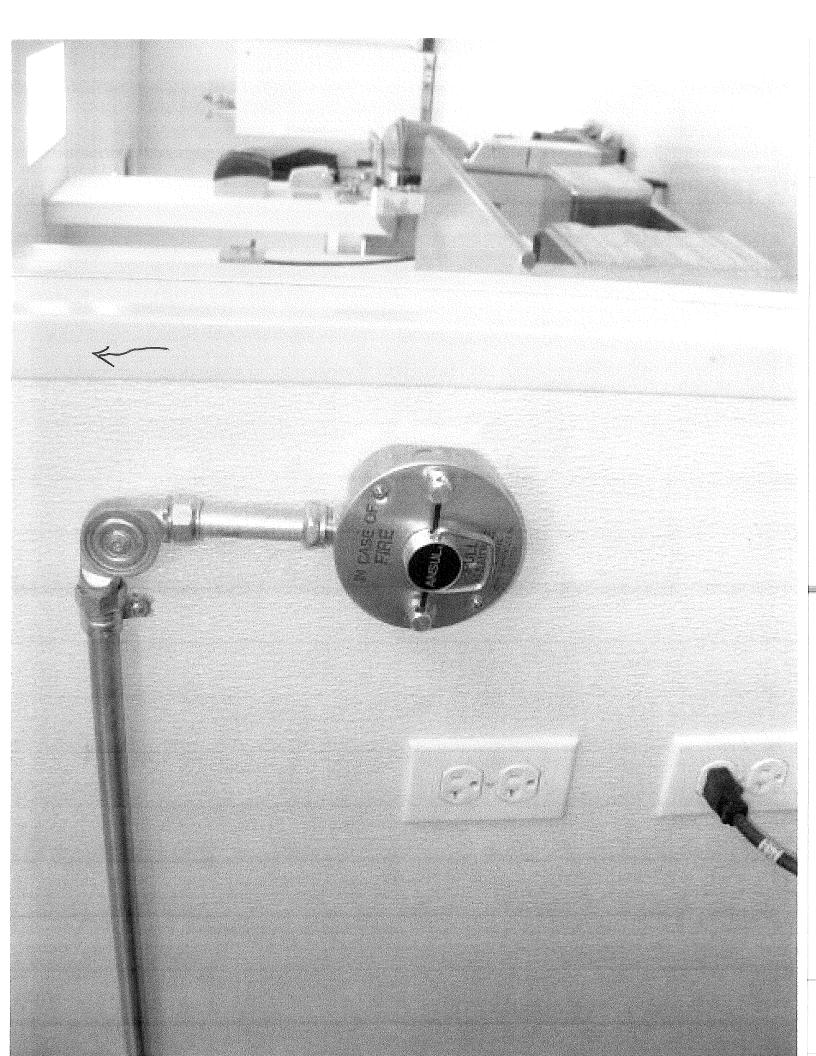










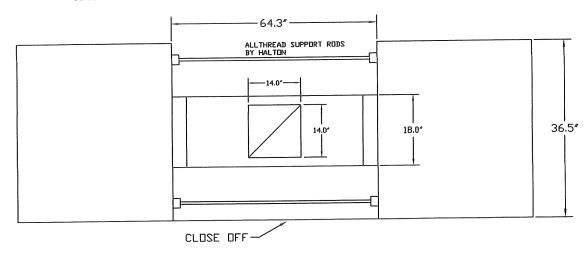


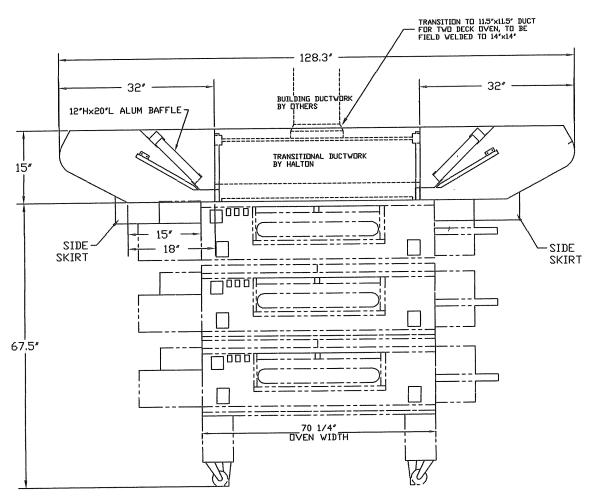
MODEL: P2

ITEM # 697100

HOOD

* FACTORY MUST BE ADVISED OF ANY SPECIAL REQUIREMENTS OF THE "AUTHORITY HAVING JURISDICTION" AT TIME OF QUOTE





EXHAUST INFORMATION

OVEN TYPE	DESIGN CFM	T.A.B READING	LISTING MIN CFM	T.A.B READING	DUCT
SINGLE DECK OVEN	500	.06″	396	.04*	
DOUBLE DECK OVEN	1100	.36″	1021	,26*	.50*
TRIPLE DECK OVEN	1600	.88"	1460	.53″	1.2"







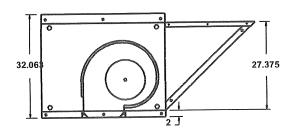


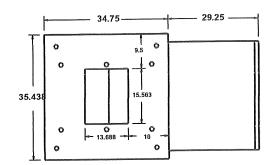




Printed Date: 12/3/2008 Job: LITTLE CAESARS Product Type: Fan

Mark: 699134





NOTES: All dimensions shown are in units of inches Fan weight is without accessories

XRSW

Supply Air Fan

Tag: 699134

STANDARD CONSTRUCTION FEATURES

• Galvanized steel construction with removable hood cover • Curb cap with prepunched mounting holes • Blower and motor assembly isolated on shock mounts • Forward curved steel fan wheel • Adjustable motor pulley • Adjustable motor plate • Ball bearing motor • Fan shaft mounted in ball bearing pillow blocks • Static free belts • Corrosion resistant fasteners • 1 inch washable aluminum filters • downward facing duct collar • Nema 1 disconnect switch mounted and wiring is...

SELECTED OPTIONS & ACCESSORIES

Switch - Nema-3R, Toggle, Ship With Unit, Field Mounted Standard -1 in Washable Aluminum Filters UL/cUL-705 - "Power Ventilators" Motor w/ Thermal Overloads

DIMENSIONS

Approx. Fan	Recommended				
Weight (lb)	Roof/Wall Opening: (in)				
194	20.5 x 20.5				

(Elevation ft = 650, Airstream Temperature F = 70) PERFORMANCE

ſ						Operating			Moto	or Information		
	Qty	Model	Volume (CFM)	SP (in wg)	FRPM		Size (hp)	V/C/P	Encl:	Motor RPM:	Windings	NEC FLA (A)
ŀ	1	XRSW-112-7	2,200	0.5	742	0.46	3/4	115/60/1	ODP	1725/1140	2	13.8

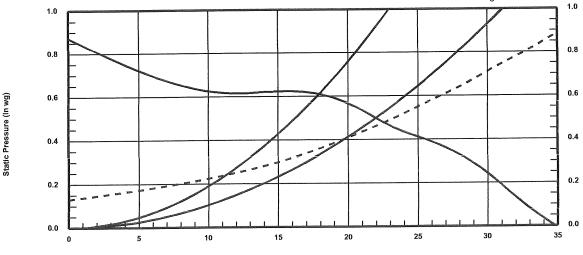
SOUND

		Inlet Sou	and Powe	r by Octa	ve Band			Lwa	dBA	Sones
62.5	125	250	500	1000	2000	4000	8000	LWG	uD.	
90	90	75	72	68	66	64	55	77	66	17.5

FLA - Based on tables 148 or 150 of National Electrical Code 2002. Actual motor FLA may vary, for sizing thermal overload, consult factory.

LwA - A weighted sound power level, based on ANSI S1.4 dBA - A weighted sound pressure level, based on 11.5 dB attenuation per octave band at 5.0 ft. Sones calculated using AMCA 301 at 5.0 ft.

Power (hb)



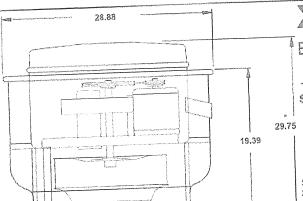
Volume (CFM) x 100



EXHAUST FAN

Printed Date: 12/3/2008 Job: LITTLE CAESARS Product Type: Fan

Mark: 699127



May be greater depending on motor

XRUB

Belt Drive Upblast Centrifugal Roof Exhaust Fan

Tag: 699127

STANDARD CONSTRUCTION FEATURES

Aluminum housing • Backward inclined aluminum wheel • Curb cap with
prepunched mounting holes • Motor and drives isolated on shock mounts • Drain
trough • Ball bearing motors • Adjustable motor pulley • Adjustable motor plate •
Fan shaft mounted in ball bearing pillow blocks • Bearings meet or exceed
temperature rating of fan • Static resistant belts • Corrosion resistant fasteners

SELECTED OPTIONS & ACCESSORIES

Switch - Nema-3R, Toggle, Ship With Unit, Field Mounted

Curb GPI-22-G24

Heat Baffle

1.75

Grease Trap with Drain Connection

Mounted Hinged Base

Lifting Lugs

UL/cUL-762 - "Power Vent. for Rest. Exh. Appliances"

Hinged Curb Cap Mounted with Cables

Curb Seal

NOTES: All dimensions shown are in units of inches Fan weight is without accessories

22

DIMENSIONS

Approx, Fan	Recommended
Weight (lb)	Roof/Wall Opening: (in)
87	18.5 x 18.5

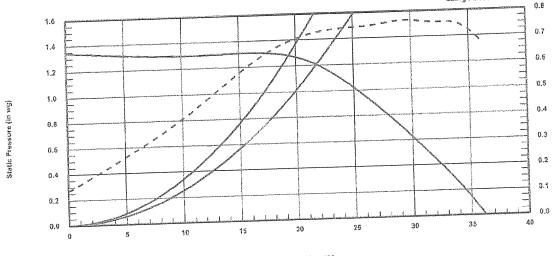
UPDATE

446iAi	it hot I man i											
8	7 18.5 x 18.	5				1.6	5 VOL	7	1 PHAS	2	LACE	1215
nentol	RMANCE (Elevation ft	= 650, Airs	tream Ter	nperatu	re F = 70)		5 000	Moto	or Information			1
City	Model	Volume (CFM)	an tim	FRPM	Operating	Size (hp)	VICIP	Encl:	Motor RPM:	Windings	NEC FLA (A)	
Carry.				4 050	0.72	1	200167573	ODP	1725/1140	2	4.6	
4	XRUB-161-10	2,175	1.2	1,259	0.72			lesson es	Λ - Rased on tables	148 or 150	of National Ele	ctrical

SOUND Inlet Sound Power by Octave Band dBA Sones Lwa 8000 4000 1000 2000 250 62.5 125 15.3 78 67 63 66 68 79 73 79 75

FLA - Based on tables 148 or 150 of National Electrical Code 2002. Actual motor FLA may vary, for sizing thermal overload, consult factory.

LwA - A weighted sound power level, based on ANSI S1.4. dBA - A weighted sound pressure level, based on 11.5 dB attenuation per octave band at 5.0 ft, Sones calculated using AMCA 301 at 5.0 ft.





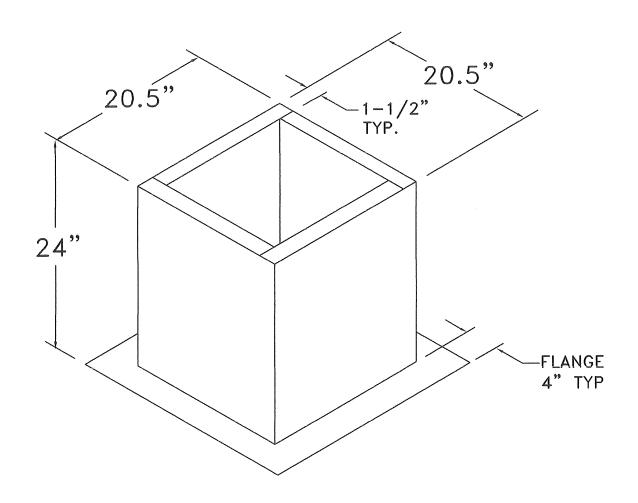
OMEO OMENIA PATRAL

round

air

VENT TECH INC.

16521 EASTLAND ROSEVILLE, MI 48066 PH: (800) 557-8368 FAX: (586) 779-0888 www.vent-tech.com



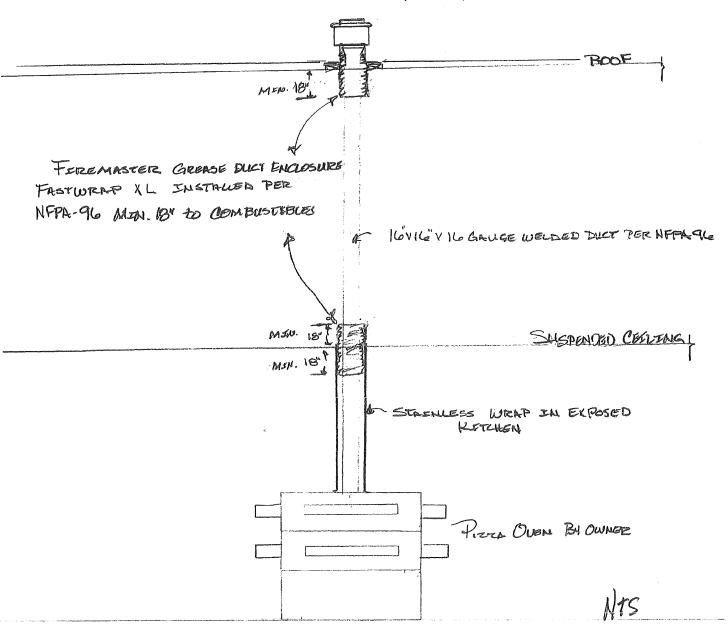
ITEM # 699116
FLAT ROOF CURB
LITTLE CAESARS PIZZA

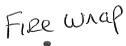
MATERIAL: 18ga GALVANIZED STEEL

OWNER : TOM ERNST

LETTLE CAESARS
851 CENTRAL AUE;
DOUBL N. H.

EVALUET FAN BYOWNER MODEL KRUB-161-10





Thermal Ceramics Commercial Kitchen Grease Duct Enclosure System

Fire Protection Products

Product Data & Installation Guide

1. Product Description

Thermal Ceramics' new FireMaster® FastWrap XL is the thinnest and lightest flexible wrap material available that passes the ASTM E 2336 test standard required by the 2006 IMC and NFPA 96 for reduced clearance enclosure materials used to provide 1 or 2 hour fire rating for kitchen exhaust ducts. FastWrap XL is also UL Classified and Labeled per ISO 6944 as an alternative to a 1 or 2 hour rated enclosure for air ventilation ducts. The FastWrap XL core blanket is manufactured using Thermal Ceramics patented Superwool[®] fiber, a 2000°F rated, non-combustible, alkaline-earth silicate wool with low biopersistence. FastWrap XL is the product of extensive research and development resulting in break-through improvements in fiberization technology with significant enhancements in thermal properties beneficial to fire protection applications. FastWrap XL when used in combination with an approved firestop sealant provides an effective through penetration firestop in rated floor and wall assemblies. FastWrap XL is UL Classified and is part of UL's Listing and Follow-Up Service Program to ensure the consistent quality essential to the critical nature of this life-safety application.

Product Features

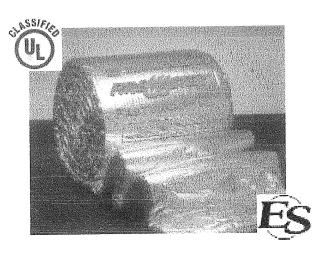
- · Zero clearance to combustibles at any location
- Thin and Lightweight at 1-1/2 inch thick, 6 pcf density
- Contours easily to complex duct designs
- Butt Joints on inside layer save labor, space, and material
- Fully foil encapsulated for fast and clean installation
- · Completely inorganic and non-combustible
- Contains 2000°F rated fibers for added safety margin
- · Contains no low temperature mineral or glass fibers
- Wide variety of through penetration systems
- · Resistant to mold growth
- Extensive Listings and detailed installation instructions
- · Offered in 50 and 100 square foot rolls
- Available in 48 inch widths for less joints and installation labor

2. Applications

- · Applied in 2 layers to provide 1 or 2 hour fire protection to grease ducts exhausting Type 1 hoods per 2006 IMC, NFPA 96 and 2006 IAPMO UMC
- · Applied in 1 layer as an alternative to a 1 or 2 hour rated enclosure for air ventilation ducts

3. Physical Characteristics

Product	Unit	Size	Units/ Ctn.	Wt./ Ctn.
FastWrap XL	Roll	1-1/2" x 24" x 25'	1	37.5 lbs.
FastWrap XL	Roll	1-1/2" x 48" x 25'	1	75 lbs.
FastWrap XL Collar	Roll	1-1/2" x 6" x 25'	4	37.5 lbs.
Color	White	blanket with silver foil	encap	sulation



4. Performance Specifications

Reference Standard	Standard No.	Performance
Grease Duct Enclosure System	ASTM E2336	Pass
Section 16.1 - Non- Combustibility	ASTM E136	Pass
Section 16.2-Fire Resistance (wall)	ASTM E119	Pass
Section 16.3 - Durability Test	ASTM C518	Pass
Section 16.4 - Internal Fire Test	ASTM E2336	Pass
Section 16.5 - Fire Engulfment (duct)	ASTM E814/E119	Pass
Surface Burning Characteristics		
Flame Spread (foil/blanket)	ASTM E84	5/0
Smoke Developed (foil/blanket)	ASTM E84	5/0
Thermal Resistance (R-value @ 70°F)	ASTM C518	4.2 per inch
Mold Growth (75% -95% humidity)	ASTM D6329	Resistant
Air Ventilation Duct Enclosure	ISO 6944	Pass
Grease Duct Enclosure System	UL 1978*	Pass
* Laboratory Listings will be withdrawn January 1, 200	9 forcing systems to be tested	to ASTM E2336.

5. Listings/Building Code Reports

Listed Uses	Agency	Listing
Grease Duct Enclosure System (Zero Clearance) - AC101 (ASTM E2336)	UL	G18
Clearance) - ASTM E2336		ESR 2213
Through Penetration FireStop System - ASTM E814/UL 1479	UL	See Figure 2
Ventilation Duct Enclosure System - ISO 6944	UL	V19
· International Code Council - Engineering Service		

6. Storage

FastWrap XL must be stored in a dry warehouse environment on pallets. Pallets should not be stacked.

7. Installation

FastWrap XL shall be installed by a qualified contractor in accordance with manufacturer's instructions and design listings. See figures 1 to 5 for complete details.

Materials and Equipment

- * FastWrap XL blanket
- · Aluminum foil tape
- Minimum 1/2" wide filament tape (optional)
- Carbon steel or stainless steel banding material, minimum 1/2" wide, minimum 0.015" thick, with steel banding clips
- Hand banding tensioner and crimping tool
- Minimum 12 gage steel insulation pins; steel speed clips, minimum 1-1/2" x 1-1/2" square or 1-1/2" dia., or equivalent sized cup-head pins;
- Capacitor discharge stud gun
- FireMaster F2-HT-XL3 Prefabricated Door or Field Fabricated Door Hardware
- · An approved firestop sealant

General

To minimize waste, FastWrap XL blanket should be rolled out tautly before measuring. Cut edges of the blanket shall be taped with aluminum foil tape to prevent exposed edges of the insulation absorbing grease and moisture in the event of a compromised grease duct joint. Overlaps are used to block heat transfer in the event of duct deformation resulting from thermal expansion.

A. First Layer

- 1) Butt Joint for ASTM E2336 compliant grease duct enclosure (Figure 1) The first layer of FastWrap XL is cut to completely wrap around the perimeter of the duct with enough excess to provide a tight butt joint where the blanket ends meet. The joints of adjacent blankets are firmly butted against each other. This interior layer can be held temporarily in place with filament tape unitl either the second layer is installed, or permanent attachment as described in Section D is accomplished. While not required, the inside layer can be installed with 3" overlaps along perimeter and adjacent blankets.
- 2) Overlap for ISO 6944 compliant air ventilation duct enclosure (Figure 1) - For single layer enclosure systems, the first layer of FastWrap XL is cut to completely wrap around the perimeter of the duct with enough excess to overlap itself by a minimum of 3". The joints of adjacent blankets must overlap each other by a minimum 3". Filament tape is suggested to temporarily hold the blanket in place until steel banding or pinning is installed to permantely secure the blanket.

B. Second Layer - 3" Overlap, or 6" Collar (Figure 1)

The second layer of FastWrap XL is cut to completely wrap around the perimeter of the first layer, with enough excess to overlap itself not less than 3". Joints in the second layer should be staggered a minimum of 12 inches from joints on the inner layer. Adjacent blankets on the second layer must

overlap each other by not less than 3". As an alternative to overlaps on adjacent blankets installed on the second layer, adjacent blankets can be tightly butt jointed and wrapped with a 6" wide FastWrap XL collar centered over the butt joint. This outside layer can be held temporarily in place with filament tape spaced 1-1/2" from each blanket edge, and spaced on nominal 10-1/2" centers along the center of the blanket. Mechanical attachment as described in Section D must be used to make the installation permanent.

C. 2 & 3 Sided Wrap Installation (Figure 5)

When space does not allow for a complete wrap applied to the duct on all four sides, the FastWrap XL is approved for 2 or 3 sided installations with mechanical attachment to a concrete or CMU assembly. The FastWrap XL is installed on the 2 or 3 sides of the duct as described in one of the installation methods described in sections A or B with the starting edge of the blanket attached to the concrete or CMU assembly and then wrapped around the duct until the other end can be attached to the other concrete or CMU assembly, thus encapsulating the duct with insulation around all accessible sides. The blanket is to flange out onto the concrete or CMU assembly. It shall be secured to the adjoining assembly with min 3/16" diameter, 4" long concrete anchors, footed to a minimum 1-1/2" wide x 3/16" thick steel strip/strap with predrilled holes spaced a maximum 10" on center. The steel strip is to be placed around the entire perimeter of the duct in the exposure area. The FastWrap XL insulation wrap is secured to the duct with minimum 1/2" wide steel banding 10-1/2" centers. The ends of the banding are to loop into the steel strips/straps that foot the blanket to the concrete floor or wall, and tightened down.

D. Mechanical Attachment Methods for Insulation Wrap

- 1) Banding (Figure 1) Minimum 1/2" wide carbon steel or stainless steel banding, 0.015" thick, is placed around the entire perimeter of the insulated duct with maximum 10-1/2" spacing centers and 1-1/2" from each blanket edge or 1-1/2" from each collar edge when using the butt joint and collar method. When banding, filament tape can be used to temporarily hold the blanket in place until the banding is applied. The banding is placed around the blanket and tightened so as to firmly hold the FastWrap XL in place against the duct, but not cause any cutting or damage to the blanket.
- 2) Pinning (Figure 4) For duct spans larger than 24", min. 12 gage, 3 or 5" long steel insulation pins are welded to the duct in columns spaced 12" apart, 6" 12" from each edge and on 10-1/2" centers along bottom horizontal and outside vertical runs to prevent blanket sag. Pins are also required 1" from the end of a duct and 1" from any edge near a 90° bend, spaced on 6" centers. Pins are locked into place with 1-1/2" diameter round or square, galvanized steel, speed clips or cup head pins. Pins that extend beyond the outer blanket wrap layer shall be turned down to eliminate sharp edges or the excess length cut off. Cup head pins should only be used in conjunction with banding.
- E. Grease Duct Access Door Installation (Figure 3)

Four galvanized steel threaded rods, 1/4" diameter by 4-1/2" to 5" long are welded to the duct at the corners of the door opening. Four 4" long steel tubes fit over the threaded rods to hold the door to the duct and protect the wrap from damage as the door is removed. Four 5" long 12 gage insulation pins are welded to the door panel for installation of the blanket. Three layers of FastWrap XL are impaled over the 12 gage insulation pins on the 16 gauge door panel and held in place with speed clips. Each layer must have minimum 1" overlap over the previous layer. When the door is installed, this first and second layer must fit tightly against the wrap surrounding the door opening to form tight butt joints. Pins that extend beyond the outer layer of FastWrap XL shall be turned down to avoid sharp points on the door. The steel tubes are placed over the threaded rods. The insulated door panel is placed over the threaded rods covered by the steel tubes and held in place with washers and wing nuts. FireMaster F2-HT-XL3 Access Doors are tested and approved per ESR 2213 as alternatives to field fabricated doors. Installations instructions for the FireMaster F2-HT-XL3 door are included with the complete assembly.

F. Through-Penetration Fire Stop System (Figure 2)

When the duct penetrates a fire rated wall, ceiling, or floor, an approved fire stop system must be employed. Prior to installing this firestop system the surfaces of all openings and penetrating items needs to be clean and dry. Cut the aluminum scrim facing off FastWrap XL blanket to expose the core blanket. FastWrap XL scrap blanket must be packed into the annular space at minimum 50% compression. The packing material must be recessed a minimum 1/4" from the surface of the concrete or gypsum wall. Install a minimum of 1/4" of approved firestop sealant into the recessed opening. When there is no room in the remaining annular space to wrap the duct with FastWrap XL material, the enclosure may terminate above and below the floor/ceiling or wall assembly as shown in figure 2 by mechanically attaching the FastWrap XL to the termination point above and below the termination area with bands or pins.

G. Support Hanger Systems

Support hanger systems do not need to be wrapped provided that the hanger rods are at least a minimum of 3/8" diameter and spaced a maximum of 60" on center along the length of the duct, and the angle iron is a minimum of 2" x 2" x 1/8" or SMACNA equivalent support system (excludes band strap support systems). Horizontal trapeze support system may be incorporated into the wrap enclosure.

8. Maintenance and Repair

No maintenance is required when installed in accordance with Thermal Ceramics installation instructions.

If damage is limited to the foil facing, aluminum foil tape can be used to repair the foil facing.

If an area of blanket is found to be damaged the following procedure must be incorporated.

 If the damaged area is larger than 8" x 8" the entire wrap section must be removed and replaced according to Thermal Ceramics installation instructions.

• If the damaged area is small (less than 8" x 8"), the damaged area must be cut away and replaced with a new section 1" larger in length and width than the cut out are, such that the new section can be compressed tightly into the cut out area. All cut edges of the new section must be taped and sealed wth aluminum foil tape. The new section must be held in place with either pinning or banding per Thermal Ceramics installation instructions.

9. Limitations

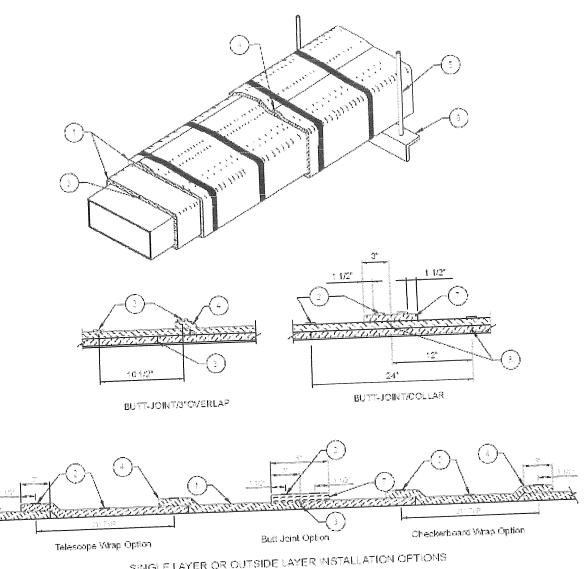
Thermal Ceramics FastWrap XL shall be installed in accordance with these installation instructions. The integrity of FastWrap XL systems is limited to the quality of the installation.

*For personal protective equipment recommendations see the MSDS.

Thermal Ceramics is a trademark of Morgan Crucible Company plc. FireMaster and FastWrap are trademarks of Thermal Ceramics Inc. FastWrap products are manufactured by Thermal Ceramics Inc. and are distributed by authorized distributors.

Tremco and Fyre-Sil are trademarks of Tremco Inc.

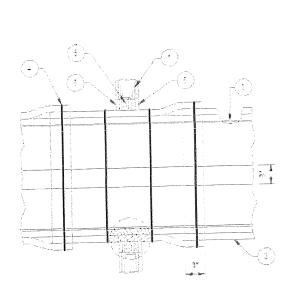
FireMaster FastWrap XL Commercial Kitchen Grease Duct Enclosure System Air Ventilation Duct Enclosure System 1 or 2 Hour Shaft Alternative/Zero Clearance to Combustibles



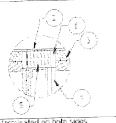
SINGLE LAYER OR OUTSIDE LAYER INSTALLATION OPTIONS

igi	nte ,
a construction	Two layers FastWrap XL for grease duct enclosure system One layer FastWrap XL for air ventilation duct enclosure system
)	Steel banding minimum1/2" wide by 0.015" thick
3.	Tight Butt Joints on inner layer
ļ.	Minimum 3" overlap on perimeter and between adjacent blankets on outside layer
5.	Minimum 3/8" diameter hanger rod
6.	Minimum 2" x 2" x 1/8" angle for grease duct enclosure system Minimum 1-1/2" x 1-1/2" x 1/8" angle or SMACNA equivalent for air ventilation duct enclosure system
7	Optional 6" FastWrap XL collar

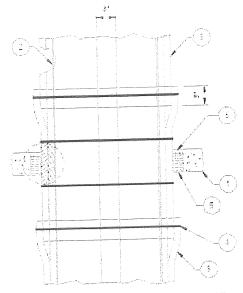
FireMaster FastWrap XL Commercial Kitchen Grease Duct Enclosure System Air Ventilation Duct Enclosure System Through Penetration System



Fastwrap XI, correspons through rated wall assembly



Fastwipp XI (empirated on both sides of the rated well assembly



Fastwap At continuous turough rated socribaling assertion



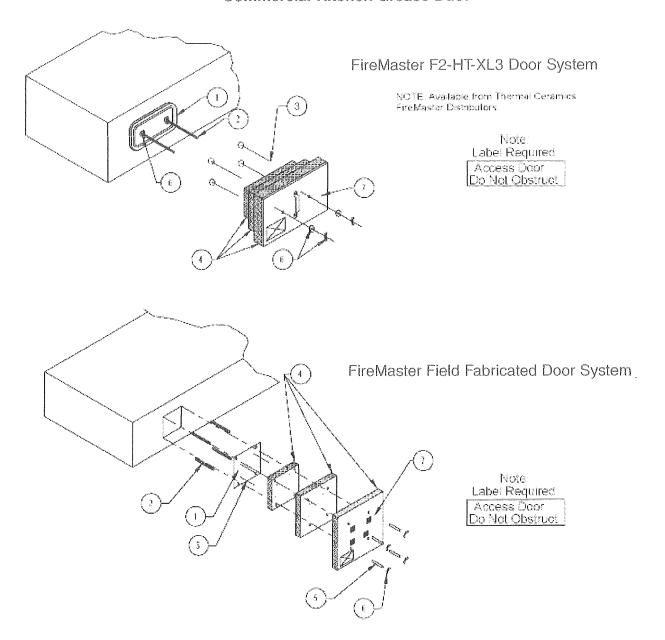
Fastwap XI terminated at the top and testom surface of the floor/ceiling assembly

Fig	ure 2
1.	Rated floor/ceiling or wall assembly
2.	Duct
3.	Two layers FastWrap XL for grease duct enclosure system One layer FastWrap XL for air ventilation duct enclosure system
4.	Steel banding minimum1/2" wide by 0.015" thick or pinning
5.	FastWrap XL (packing material)
6.	Approved through penetration firestop sealant

	UL Listings per E 814/UL 1479					
Through I	Penetration					
C-AJ-1562	C-AJ-7004					
C-AJ-7012	C-AJ-7014					
C-AJ-7019	C-AJ-7021					
C-AJ-7047	C-AJ-7095					
C-AJ-7098	C-AJ-7119					
F-A-1093	F-A-1094					
F-A-3048	F-C-7036					
F-C-7037	W-L-7009					
W-L-7121	W-L-7145					
W-J-7086						
AND THE PERSON NAMED IN COLUMN TWO						

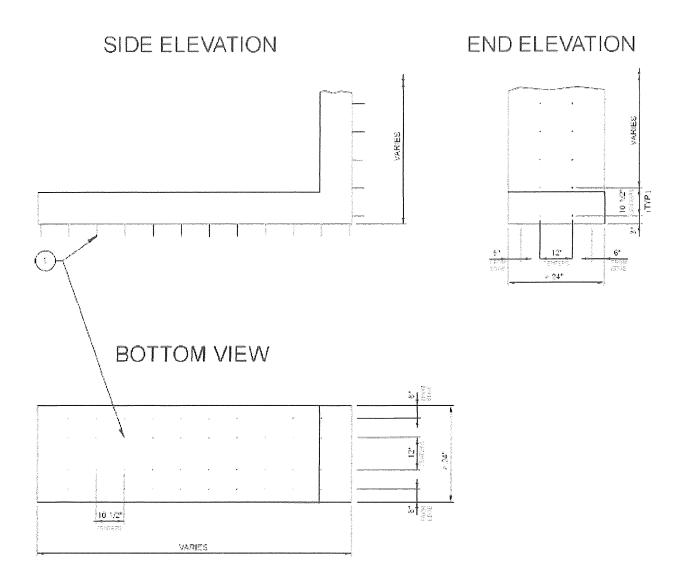
Go to www.ul.com and select <u>Certifications</u> to find design details.

FireMaster FastWrap XL Access Door Systems Commercial Kitchen Grease Duct



Figi	ure 3
1.	DuctMate [®] F2-HT Access Door or 16 gauge field fabricated access door cover plate
2.	All thread rods
3.	Installation pins with speed clips
4.	Three layers FastWrap XL with minimum 1" overlaps and all edges sealed with aluminum tape
5.	Spool pieces
6.	Wing nuts and washers
7.	Outer cover plate labeled "ACCESS DOOR - DO NOT OBSTRUCT"

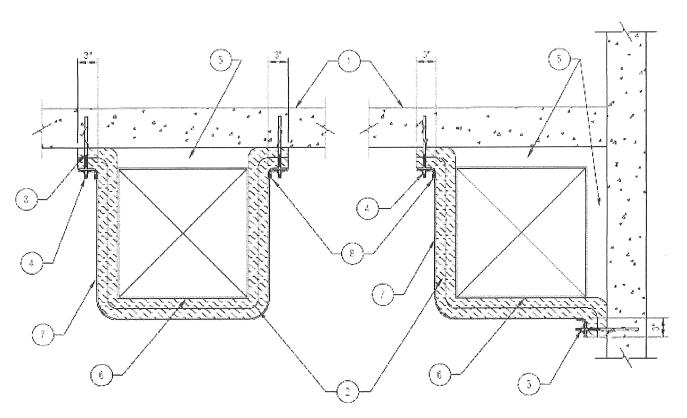
FireMaster FastWrap XL Typical Insulation Pin Layout for Duct Spans > 24" Wide to Prevent Blanket Sag



Figu	re 4	TENNEN MEN MEN MEN MEN MEN MEN MEN MEN ME	ELECTRONIC SERVICES	DESCRIPTION OF VALUE		WHEN YOU WIND STREET COME		THE PROPERTY OF THE PROPERTY O
1.	Minimum	12 gauge	steel ir	nsulation	n pin			-

FireMaster FastWrap XL Commercial Kitchen Grease Duct Enclosure System Air Ventilation Duct Enclosure System

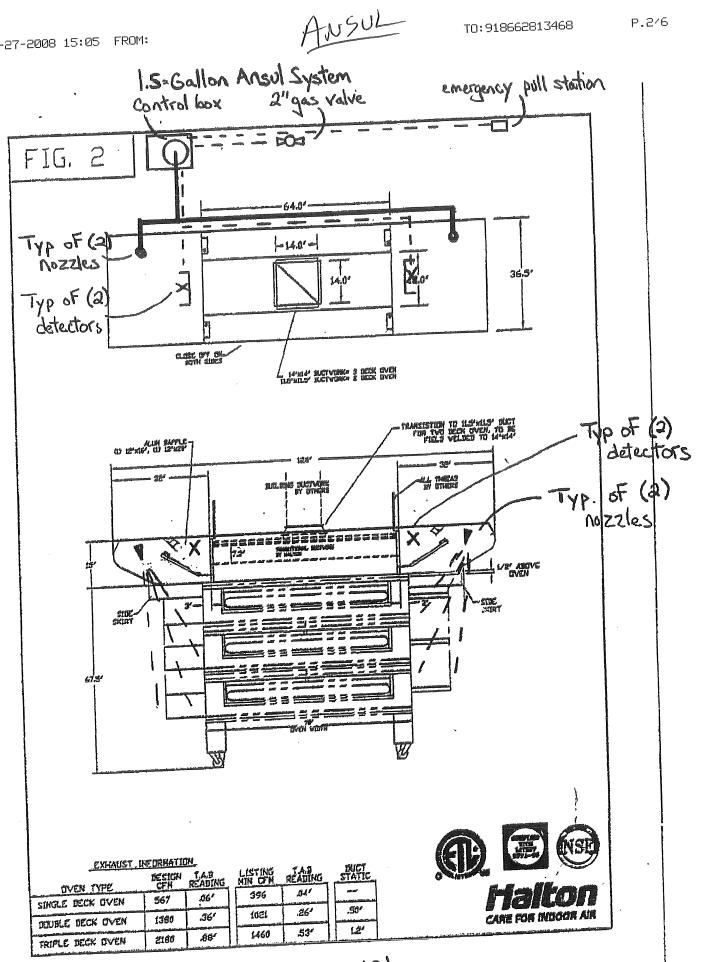
1 or 2 Hour Shaft Alternative / Zero Clearance to Combustibles 2 and 3 Sided Wrap Detail for Attaching to Walls and/or Ceilings



Note: Ducts must be independently supported per code

Fig	ure 5
1.	1 or 2 hour rated concrete floor, ceiling or wall
2.	Two layers FastWrap XL for grease duct enclosure system One layer FastWrap XL for air ventilation duct enclosure system
3.	Concrete fastener system
4.	3/16" thick x 2-3" wide bar stock perforated 12" o.c.
5.	Air gap (8" max.)
6.	Duct
7.	Steel banding minimum 1/2" wide by 0.015" thick
8.	Banding clip

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LITTLE CAESAR'S TOPSHAM

SECTION III - SYSTEM COMPONENTS UL EX. 3470 ULC CEX747 Page 3-9 4-1-06 REV. 4

PULLEY TEE

The Pulley Tee (Part No. 427929) is used to change the direction of two wire ropes by 90°. It must be used in areas where the temperatures are within the range of 32 °F to 130 °F (0 °C to 54 °C). Pulley tees can be used in mechanical gas valve actuation lines and remote manual pull station lines. Pulley tees cannot be used within a detection line.

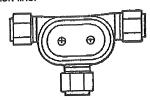


FIGURE 24

STAINLESS STEEL CABLE

The 1/16 in. stainless steel cable is run from the terminal detector, through conduit, all series detectors and pulley elbows, and into the regulated release mechanism trip lever. When any fusible link separates, the tension on the cable is relaxed, and the trip lever actuates the regulated release mechanism. The cable can also be used for mechanical gas valves and remote manual pull stations. The cable is available in 50 ft. (15 m) (Part No. 15821) and 500 ft. (152.4 m) (Part No. 79653) lengths.

REMOTE MANUAL PULL STATION

The remote manual pull station (Part No. 4835 or Part No. 54011) is required for manual actuation of the regulated release assembly. The remote manual pull station should be mounted at a point of egress and positioned at a height determined by the authority having jurisdiction. Trim rings, Part No. 427074 (pack of 10), are available.

PART NO. 4635 (WITHOUT CABLE) PART NO. 54011 (WITH 50 FT. OF CABLE)



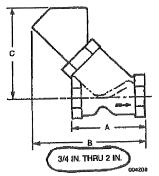
FIGURE 25

MECHANICAL GAS VALVES

The mechanical gas valves are designed to shut off the flow of gas to the appliances upon actuation of the regulated release assembly. The valves are available in sizes of 3/4 in., 1 in., 1 1/4 in., 1 1/2 in., and 2 in. ANSUL style; and 2 1/2 in. and 3 in. Asco style. The valves are rated for natural and LP gas. Both styles are UL Listed and includes the air cylinder, tubing, and fittings for connection to the release mechanism.

Part No.	Description	Maximum Operating Pressure						
55598 55601 55604 55607 55610 25937 25938	3/4 in. Gas Valve (ANSUL) 1 in. Gas Valve (ANSUL) 1 1/4 in. Gas Valve (ANSUL) 1 1/2 in. Gas Valve (ANSUL) 2 in. Gas Valve (ANSUL) 2 1/2 in. Gas Valve (ASCO) 3 in. Gas Valve (ASCO)	10 psi (.69 bar) 10 psi (.69 bar) 10 psi (.69 bar) 10 psi (.69 bar) 10 psi (.69 bar) 5 psi (.35 bar) 5 psi (.35 bar)	*					

	Α		В	С		
Valve Size in.	(mm)	in.	(mm)	in.	(mm)	
3/4 in. 3 3/4 1 in. 3 3/4 1 1/4 in. 4 7/8 1 1/2 in. 4 7/8 2 in. 5 7/8 2 1/2 in. 7 13/	(95.3) (95.3) (123.8) (123.8) (149.2)	6 3/8 6 3/8 7 3/8 7 3/8 7 7/8	(161.9) (161.9) (187.3) (187.3) (200.0)	5 1/2 5 1/2 6 3/8 6 3/8 6 11/16 9 1/16	(139.7) (139.7) (161.9) (161.9) (169.9) (230.2) (230.2)	*



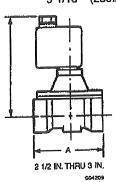


FIGURE 26

SECTION IV — SYSTEM DESIGN UL EX. 3470 ULC CEx747 Page 4-55 4-1-06 REV. 3

MANUAL PULL STATION REQUIREMENTS

A remote manual pull station allows the R-102 system to be manually operated at some point distant from the regulated release assembly. The pull station should be installed at a height of 42-48 in. (107-122 cm), in accordance with the requirements of the American Disabilities Act (ADA) and the Authority having Jurisdiction, and located in the path of egress. The pull station is the only source of manual actuation of the regulated release assembly.

The total length of the cable used for each manual pull station within a system must not exceed 150 ft. (46 m).

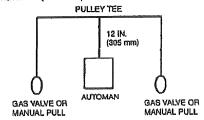
The maximum number of pulley elbows that may be used per pull station is 20.

One pulley tee, Part No. 427929, is allowed per system.

The maximum length of cable from the AUTOMAN to a pull station is 150 ft. (45.7 m) with a maximum of 20 pulley elbows used per side of the tee. As the tee is located farther from the AUTOMAN, the 150 ft. (45.7 m) maximum must be observed but as pulley elbows are placed between the AUTOMAN and the tee, they must be deducted from the available pulley elbows (20) allowed on each side

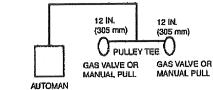
Example: If 10 pulley elbows are placed between the AUTOMAN and the pulley tee, the maximum available pulley elbows left for use on each side of the tee is 10 per side. See Figure 103 for three different examples. (Note: Both must be gas valves or both must be pull stations. Mixing is not allowed.)

TEE CLOSE TO AUTOMAN (EXAMPLE)



149 FT. (45.4 m) AND 20 PULLEY ELBOWS MAXIMUM PER EACH SIDE OF TEE

TEE CLOSE TO GAS VALVES OR MANUAL PULL (EXAMPLE)



149 FT. (45.4 m) AND 20 PULLEY ELBOWS BETWEEN AUTOMAN AND TEE

TEE HALFWAY BETWEEN AUTOMAN AND GAS VALVES OR MANUAL PULL (EXAMPLE)
75 FT. (22.9 m) AND 10 PULLEY ELBOWS

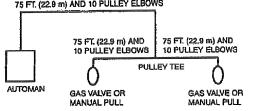


FIGURE 103

Metal Stamped Style - Part No. 4835 or 54011

Parts that may be used for installation of a metal stamped remote manual pull station are:

Description	Part No.
Remote Manual Pull Station Assembly*	54011
Remote Manual Pull Station Assembly	4835
Pulley Elbow	423250
Pullcy Elbow	415670
Pulley Tee	427929
*Assembly includes parts listed below:	
1/16 in. Stainless Steel Cable 50 ft. (15 m)	15821
Oval Press-To-Crimp Sleeves	4596
Glass Break Rod (1)	4834

MECHANICAL GAS VALVE REQUIREMENTS

An ANSUL or ANSUL approved mechanical gas shut-off valve system can be attached to the R-102 system. The system works both mechanically and pneumatically by use of an air cylinder located inside the regulated release assembly. Upon actuation of the fire suppression system, a pneumatically-operated air cylinder assembly will mechanically close the gas shut-off valve.

The total length of the cable for each mechanical gas valve must not exceed 150 ft. (46 m). The maximum number of pulley elbows that may be used is 20 for each valve.

One pulley tee (Part No. 427929) is allowed per system.

The maximum length of cable from the AUTOMAN to a gas valve is 150 ft. (45.7 m) with a maximum of 20 pulley elbows used per side of the tee. As the tee is located farther from the AUTOMAN, the 150ft. (45.7 m) maximum must be observed but as pulley elbows are placed between the AUTOMAN and the tee, they must be deducted from the available pulley elbows (20) allowed on each side.

Example: If 10 pulley elbows are placed between the AUTOMAN and the pulley tee, the maximum available pulley elbows left for use on each side of the tee is 10 per side. See Figure 103 for three by different examples.

Parts that may be used for installation of a Mechanical Gas Shutoff Valve are:

	QII VAIVE AIE.	
*	Description Gas Valve/Actuator 3/4 in. Assembly (ANSUL)* Gas Valve/Actuator 1 in. Assembly (ANSUL)* Gas Valve/Actuator 1 1/4 in. Assembly (ANSUL)* Gas Valve/Actuator 1 1/2 in. Assembly (ANSUL)* Gas Valve/Actuator 2 in. Assembly (ANSUL)* Gas Valve/Actuator 2 1/2 in. Assembly (ASCO)* Gas Valve/Actuator 3 in. Assembly (ASCO)*	Part No. 55598 55601 55604 55607 55610 25937 25938 423250
	Pulley Elbow	415670
	Pulley Elbow Pulley Tee	427929
	1/16 in. Stainless Steel Cable	15821 or
	50 ft. (15 m) or 500 ft. (152 m) roll	79653
	Oval Press-To-Crimp Sleeve	4596
	Stop Sleeve (2)	26317
	Assembly includes parts listed below:	
	Air Cylinder Assembly	15733
	Air Cylinder	15521
	Tubing Assembly	15529
	Copper Tubing, 1/8 in.	15525
	Male Elbow	15523
ı	Male Connector	15522
,	Machine Screw (2)	15421
	Hex Nut (2)	15527
	Lockwasher (2)	4141
	Visual Inspection Seal (2)	197



MECHANICAL GAS VALVE REQUIREMENTS (Continued)

All valves above are UL listed and approved. They may be mounted in any position. Pipe threads are type NPT. Ambient operating temperature range of all valves is 32 °F to 120 °F (0 °C to 49 °C). The valves are not weatherproof and must be located indoors in areas approved by the "authority having jurisdiction."

ELECTRICAL GAS VALVE REQUIREMENTS

A UL Listed electrically-operated gas shut-off valve can be attached to the R-102 system to provide an electrical means of shutting off the gas line at a predetermined point. If an electric gas shut-off valve is used in the system it must be attached with both an electric (snap-action) switch and a manual reset relay. For more information on the types of electric (snap-action) switches, refer to the Electrical Switch, Field Installation section. The manual reset relay is reviewed in this section.

All electrical connections should be performed by a QUALIFIED ELECTRICIAN and in accordance with authority having jurisdiction.

The following is a brief explanation of how the R-102 system operates with an Electric Gas Shut-off Valve attached:

With the regulated release cocked in the ready condition, the normally closed contacts in the snap-action switch allow current to flow to the manual reset relay. With the relay coil energized, normally open contacts in the reset relay close, allowing the solenoid in the gas valve to be energized.

Once the R-102 system is activated, the normally closed contacts in the snap-action switch will open, de-energizing the reset relay. This will, in turn, open the contacts in the relay which will cause the gas valve to become de-energized and close.

The system must be re-armed and the "push to reset" button on the reset relay must be operated to reopen the gas valve.

It is important to note that a power failure or an electrical power interruption will cause the gas valve to close even though the system was not fired.

In either case, whether in a fired condition or when a power failure has occurred, the manual reset relay and electric gas shut-off valve must be reset to resume a normal operating condition. For resetting, refer to the "Recharge and Resetting Procedures" section in this manual.

Approvals

ANSUL gas valves listed in this section are UL listed and approved for 110 VAC. If more information is required, refer to the Gas and Oil Equipment List of Underwriters Laboratories, Inc. under "Electrically Operated Valves Guide No. 440 A5" or consult Ansul Incorporated, Marinette, Wisconsin 54143-2542.

If other gas valves are used, they shall be "UL listed electrically-operated safety valves for natural or LP gas as required, of appropriate pressure and temperature rating, 110 VAC/60 Hz." The information on temperature and type of gas that the valves are suitable for may be found in the Gas and Oil Equipment List of Underwriters Laboratories, Inc. under "Electrically Operated Valves Guide No. 440 A5."

The electrically operated gas valve must be of the type that needs to be energized to remain open.

Parts that may be used for installation of a 110 VAC Gas Shut-off Valve are:

Description	Part No.
Electric Solenoid Valve, 3/4 in. NPT*	13707
Electric Solenoid Valve, 1 in. NPT*	13708
Electric Solenoid Valve, 1 1/2 in. NPT*	13709
Electric Solenold Valve, 2 In. NPT*	13710
Electric Solenoid Valve, 3 In. NPT*	17643
Manual Reset Relay (110 VAC)	14702

^{&#}x27;Valves are normally closed when de-energized.

ALARM INITIATING SWITCH REQUIREMENTS

The Alarm Initiating Switch can be field mounted within the ANSUL AUTOMAN release. The switch must be used to close a supervised alarm circuit to the building main fire alarm panel when the ANSUL AUTOMAN release actuates. This action will signal the fire alarm panel that there was a system actuation in the kitchen area. The switch kit contains all necessary mounting components along with a mounting instruction sheet. See Page 5-25 for wiring

information.

The switch is rated 50 mA, 28VDC.

Part No.	Description	•
428311	Alarm Initiating	Switch Kit

ELECTRICAL SWITCH REQUIREMENTS

The electric (snap-action) switches for the R-102 system are specially designed to fit the regulated release assembly. The switches are Intended for use with electric gas valves, alarms, contactors, lights, contractor supplied electric power shut-off devices, and other electrical devices that are designed to shut off or turn on when the fire suppression system is actuated. (See Figures 104 through 106 for reference.)

Contractors shall supply "UL listed, enclosed industrial control equipment or magnetic switch having a rating matching that of the cooking appliance, coil 110 VAC/60 Hz or 24 VAC/60 Hz."

All electrical connections should be performed by a QUALIFIED ELECTRICIAN and in accordance with authority having jurisdiction.

Electric (Snap-Action) Switches that may be field installed are:

Part No.	Description
423878	One Switch Kit
423879	Two Switch Kit
423880	Three Switch Kit
423881	Four Switch Kit

Each switch has a set of single-pole, double throw contacts rated at 21 amp, 1 HP, 125, 250, 277 VAC or 2 HP, 250, 277 VAC.

Note: A relay must be supplied by others if the equipment load exceeds the rated capacity of the switch.

Electrical wiring and equipment shall be installed in accordance with NFPA 70 (National Electrical Code) or the requirements of the authority having jurisdiction.

if a fire alarm system is provided, the fire extinguishing system shall be connected to the alarm system in accordance with the requirements of NFPA 72, National Fire Alarm Code, so that the actuation of the extinguishing system will sound the fire alarm as well as provide the extinguishing function of the system.

If supervision of the electrical detection, electrical actuation or electrical power supply circuit is provided, it shall give prompt audible or visual indication of trouble and shall be distinctive from alarms or indicators indicating operation or hazardous conditions as specified in NFPA 17A.

SECTION V - INSTALLATION INSTRUCTIONS

UL EX. 3470 L REV. 3 3-1-04

ULC CEx747

Page 5-22

INSTALLING MECHANICAL GAS VALVE (Continued)

- Install 1/2 in. conduit, and pulley elbow(s) from the mechanical gas valve to regulated release assembly enclosure as necessary.
- Beginning at the regulated release assembly, thread the end of the wire rope through hole provided in air cylinder rod. See Figure 58.
- 10. Feed end of wire rope through conduit and each pulley elbow. Make certain that wire rope rides on top and in center of pulley sheave. If the 50 ft. (15 m) wire rope has been spliced to accommodate a longer run, do not allow the spliced ends to be within 12 in. (30 cm) of any pulley elbow or conduit adaptor.
- 11. Remove side cover on gas valve and thread end of wire rope through hole in cocking lever. Silde stop sleeve (Part No. 26317) on to wire rope and crimp. (Use the National Telephone Supply Company Nicopress Sleeve Tool Stock No. 51-C-887 or equal to properly crimp stop sleeve.) Make certain crimp is on top of trigger, with wire rope curled under lever.

See Figure 62.

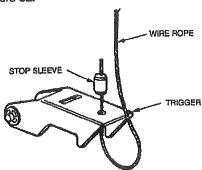
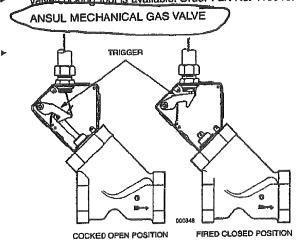
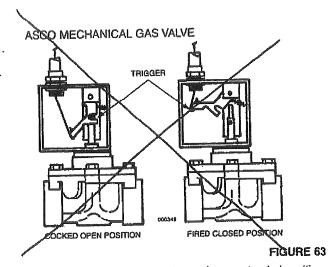


FIGURE 62

- With the end of wire rope already threaded through hole in air cylinder rod, slide stop sleeve (Part No. 26317) onto wire rope and leave loose. Do not crimp stop sleeve at this time. See Figure 58.
- ► 13. Cock mechanical gas valve as shown in Figure 63. Note: A
 ► valve cocking tool is available. Order Part No. 416018.





- Raise air cylinder rod "UP" to its maximum extended position. See Figure 58.
- 15. Manually pull wire rope to remove excess slack.

NOTICE

DO NOT ACTUATE THE MECHANICAL GAS VALVE. Each Mechanical Gas Valve System must have gas valve cocked and air cylinder rod extended "UP" to its maximum extension before completing next step.

- Slide stop sieeve against air cylinder rod, make certain all slack is removed from wire, and crimp stop sleeve. See Figure 58
- Cut off any excess wire rope approximately 3/4 in. (2 cm) from end of stop sleeve.
- 18. Note: If utilizing a pulley tee to operate a single mechanical gas valve from two (2) ANSUL AUTOMAN releases, see Figure 64 for installation instructions. Maximum length of wire rope to each ANSUL AUTOMAN release must not exceed 150 ft. (45.7 m) and maximum number of elbows must not exceed 20.

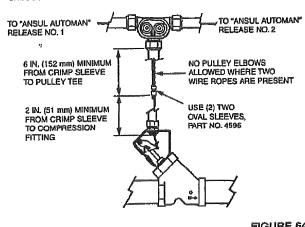


FIGURE 64



Certificate of Occupancy



CITY OF PORTLAND, MAINE

Department of Planning and Urban Development Building Inspections Division

Location: 91 Auburn St

Issued to: A & D Realty LLC

CBL: 375- C-001-001

Date Issued: December 19, 2011

This is to certify that the building, premises, or part thereof, at the above location, built-altered-changed as to use under Building Permit No. 2011-10-2436-CH OF USE, has had a final inspection, has been found to conform substantially to the requirements of the Building Code and the Land Use Code of the City of Portland, and is hereby approved for occupancy or use, limited or otherwise, as indicated below.

PORTION OF BUILDING OR PREMISES

Suite W

Limiting Conditions: NONE

Approved:

ate) // Inspec

APPROVED OCCUPANCY

Retail/Little Caesars Pizza
Use Group M
Type 2B
IBC-2009

Inspections Division Director

Notice: This certificate identifies the legal use of the building or premises, and ought to be transferred from owner to owner upon the sale of the property.



Certificate of Occupancy



CITY OF PORTLAND, MAINE

Department of Planning and Urban Development Building Inspections Division

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PORTION OF BUILDING OR PREMISES

Suite W

APPROVED OCCUPANCY

Retail/Little Caesars Pizza
Use Group M
Type 2B
IBC-2009

Limiting Conditions: NONE

Approved

(Date)

Inspector

Inspections Division Director

Notice: This certificate identifies the legal use of the building or premises, and ought to be transferred from owner to owner upon the sale of the property.

NORTHGATE SHOPPING CENTER A B RN STREET PORTLAND, MAINE O ERALL SITE PLAN APPLEDORE ENGINEERING E GRAPHIC SCALE (603) 433-8818 4, 2009

DEMOLITION NOTES

- A ITEMS INDICATED TO BE REMOVED AND SALVAGED REMAIN OWNERS PROPERTY. REMOVE, CLEAN, AND DELIVER TO OWNER'S DESIGNATED STORAGE AREA.
- B. COMPLY WITH EPA REGULATIONS AND HAULING AND DISPOSAL REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- C. OWNER WILL OCCUPY PORTIONS OF BUILDING IMMEDIATELY ADJACENT TO SELECTIVE DEMOLITION AREA. CONDUCT SELECTIVE DEMOLITION SO OWNER'S OPERATIONS WILL NOT BE DISRUPTED.
- D. IT IS NOT EXPECTED THAT HAZARDOUS MATERIALS WILL BE ENCOUNTERED IN THE WORK, IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURE, MAREDIAGE VOTEY ARCHITECT AND OWNER, OWNER WILL REMOVE HAZARDOUS MATERIALS UNDER A SEPARATE CONTRACT.
- E. MANTAIN SERVICES/BYSTEMS NOICATED TO REMAIN AND PROTECT THEM ACAINST DAMAGE DURING SELECTIVE DEMOLITION OPERATIONS. BEFORE PROCEEDING WITH DEMOLITION, PROVIDE TEMPORARY SERVICES/BYSTEMS THAT BYPASS ARE AOF SELECTIVE
- F. LOCATE, DENTIFY, SHUT OFF, DISCONNECT, AND CAP OFF UTLITY SERVICES AND MECHANICAL FLECTRICAL SYSTEMS SERVING AREAS TO BE SELECTIVELY DEMOLISHED.
- PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN.
- H. PROVIDE AND MAINTAIN SHORING, BRACING, AND STRUCTURAL SUPPORTS AS REQUIRED TO PRESERVE STABLITY AND PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF CONSTRUCTION AND FINISHES TO REMAIN OR CONSTRUCTION BEING DEMOLISHED.
- PROVIDE TEMPORARY WEATHER PROTECTION TO PREVENT WATER LEAKAGE AND DAMAGE TO STRUCTURE AND INTERIOR AREAS.
- J. PROTECT WALLS, CELINGS, FLOORS, AND OTHER EXISTING FINISH WORK THAT ARE TO REMAIN. ERECT AND MAINTAIN DUSTPROOF PARTITIONS. COVER AND PROTECT FURNITURE, FURNISHINGS, AND EQUIPMENT THAT HAVE NOT BEEN REMOVED.
- K. NEATLY CUT OPENINGS AND HOLES PLUMB, SOLIARE, AND TRUE TO DMEMBIONS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION.
- L PROMPTLY REMOVE DEMOLISHED MATERIALS FROM OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM. DO NOT BURN DEMOLISHED MATERIALS.
- M. ITEMS TO BE REMOVED:
- SPECIFIC ITEMS AS INDICATED BY NOTE AND LEGEND.
 SUSPENDED CEILINGS IN ALL AREAS.

PARTITION TYPES

- PI 3 5/8" 20 GAGE STEEL STUD FRAMING 16" O.C.
 5/8" OYPSUM BOARD BOTH SIDES
 ACQUISTIC MSULATION FILL HEIGHT
 PARTITION HEAD UP TO ROOF DECK
 SUP TRACK AT HEAD
 ACQUISTICAL SEALANT AT FLOOR TRACK
- P2 3 5/6" 20 GAGE STEEL STUD FRAMING 16" O.C. ACOUSTIC INSULATION FULL HEIGHT PARTITION HEAD UP TO 6" ABOVE CEILING BRACE TO STRUCTURE ABOVE ACOUSTICAL SEALANT AT FLOOR TRACK

NOTE: PARTITIONS AND WALLS NOT OTHERWISE NOTED BY PARTITION TYPE OR BY NEW WORK KEYNOTE ARE EXISTING TO REMAIN, PATCH AS NECESSARY AND PAINT,

GENERAL NOTES

- BEFORE BEGINNING WORK AT THE SITE, AND THROUGHOUT THE COURSE OF THE WORK, INSPECT AND VERIFY THE LOCATION AND CONDITION OF EVERY TIEM AFFECTED BY THE WORK LINDER THIS CONTRACT AND REPORT DISCREPANCES TO ARCHITECT BEFORE BEGINNING WORK RELATED TO THAT BEING INSPECTED.
- 2. THE ARCHITECTURAL DRAWINGS SHOW PRINCIPAL AREAS WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT, INCDENTIAL WORK MAY ALSO BE MECESSARY BY AREAS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS DUE TO CHANGES AFFECTING EXIST INCOMECHANICAL, ELECTRICAL, PLUMBING, OR OTHER SYSTEMS SUCH INCORDITAL WORK IS ALSO PART OF THIS CONTRACT. INSPECT THOSE AREAS, ASCENTAM WORK NEEDED, AND DO THAT WORK IN ACCORDINGE WITH THE CONTRACT REQUIREMENTS, AT NO ADDITIONAL COST.
- DO NOT DRILL OR CUT EXISTING FLOOR JOSTS, BEAMS, COLUMNS, OR OTHER STRUCTURAL MEMBERS UNLESS SPECIFICALLY INDICATED.
- PROTECT EXISTING WORK TO REMAIN FROM DAMAGE.
- 5. REPAIR, PATCH, AND FINISH, OR REFINISH AS APPLICABLE, TO MATCH ADJACENT EXISTING FINISHES, THOSE EXISTING SURFACES DAMAGED OR NEWLY EXPOSED DURING PERFORMANCE OF THE WAYSE
- PATCH EXISTING WALL SURFACES AS MEEDED TO PROVIDE A SMOOTH SURFACE FOR FINISHES.
- EXCEPT IN SPACES WHERE NO WORK UNDER THIS CONTRACT IS REQUIRED, ENCLOSE EXISTING AND NEW CONDUITS, DUCTS, PPES, AND SMILAR ITEMS IN FURRING WHERE SUCH ITEMS PASS THROUGH FINSHED SPACES WHETHER OR NOT FURRING IS INDICATED. INSULATE IN UNHEATED SPACES
- WHERE CONDUITS, WIRES, PIPES, AND SIMILAR ITEMS ARE TO BE NOTALLED IN EXISTING WALLS OR PARTITIONS, HE ATLY CHASE THE WALLS OR PARTITIONS, HE WALLS OR PARTITIONS, HOW DAY THE WALLS OR PARTITIONS TO MAKE THE INSTALLATION NOT DISCERMENE IN THE FINISHED WORK.
- WHERE *MATCH EXISTING! IS INDICATED, NEW CONSTRUCTION OR FINISHES, AS APPROPRIATE TO THE NOTE, SHALL MATCH THE EXISTING IN EVERY PARTICULAR.
- DIMENSIONS ARE TO FINISH WALL SURFACE AND TO OPENING CENTERLINE UNLESS NOTED OTHERWISE.
- 11. TENANT PLANS BY LITTLE CAESAR ENTERPRISES ARE NCORPORATED BY REFERENCE.

PROVIDE ADDITIONS AND MODIFICATIONS TO EXISTING HWAC SYSTEM TO PROVIDE ADEQUATE HEAT, COOLING, AND VENTILATION TO REMOVATED SPACES, PROVIDE SPIRAL DUCT IN EXPOSED STRUCTURE CELLING AREAS.

PLUMBING SYSTEM NOTES

- PROVIDE ADDITIONS AND MODIFICATIONS TO EXISTING SUPPLY AND WASTE PIPING AS NECESSARY TO CONNECT NEW FORTURES.
- 2. PLUMBING FIXTURES: PROVIDE FIXTURES INDICATED ON TENANT PLANS.

SPRINKLER SYSTEM NOTES

PROVIDE MODIFICATIONS TO EXISTING SPRINKLER SYSTEM AS NECESSARY TO PROVIDE COVERAGE TO RENOVATED AREAS.

LIFE SAFETY SYSTEM NOTES

PROVIDE MODIFICATIONS TO EXISTING LIFE SAFETY SYSTEM AS NECESSARY TO PROVIDE COVERAGE TO RENOVATED AREAS: FIRE ALARM, EXIT SIGNS, AND EMERGENCY LIGHTING.

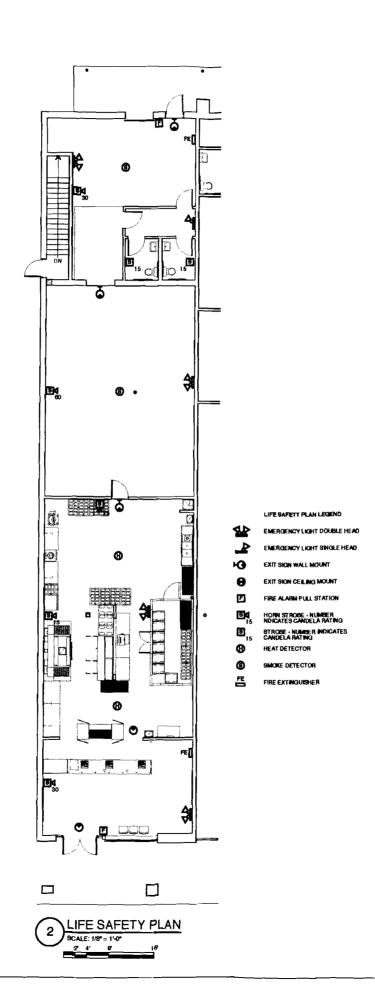
ELECTRICAL SYSTEM NOTES

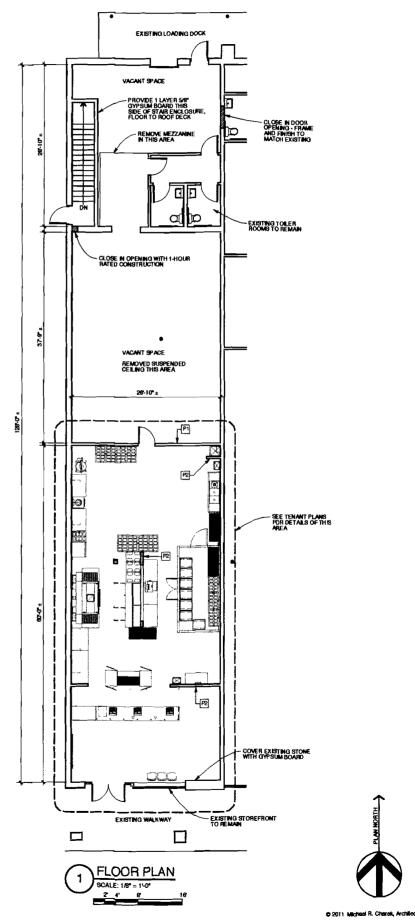
- PROVIDE MODIFICATIONS TO ELECTRICAL SYSTEM AS SHOWN ON TENANT PLANS AND AS NEEDED IN RENOVINGED SPACES, INCLUDING NEW DISTRIBUTION PANEL.
- PROVIDE NEW LIGHT FOXTURES OF TYPE SPECIFIED IN TENANT PLANS AND ELSEWHERE IN SUFFICIENT QUANTITIES TO PROVIDE SPECIFIED LIGHTING LEVELS.
- PROVIDE POWER WIRING AND DEVICES AS SPECIFIED IN TENANT PLANS.
- PROVIDE J BOXES AND CONDUITS AT LOCATIONS SPECIFIED IN TENANT PLANS FOR DATA WIRING BY OTHERS.

DOOR NOTES

ALL INTERIOR DOOR LEAVES ARE 3" O" X 7"-0" SOLID CORE WOOD, IN HOLLOW METAL FRAMES, WITH LEVER HANDLE HARDWARE.

1. FINISH MATERIALS AND COLORS AS SPECIFIED IN TENANT PLANS.







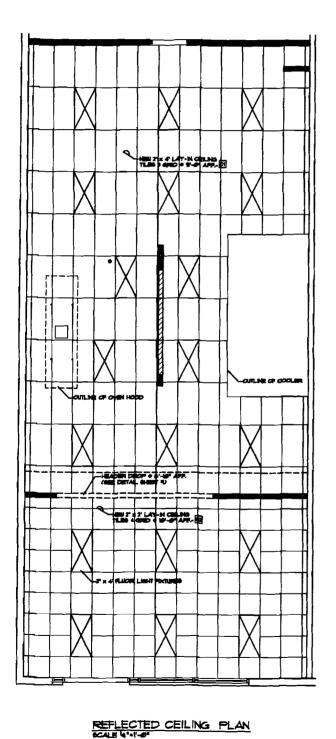
Michael Charek Architects

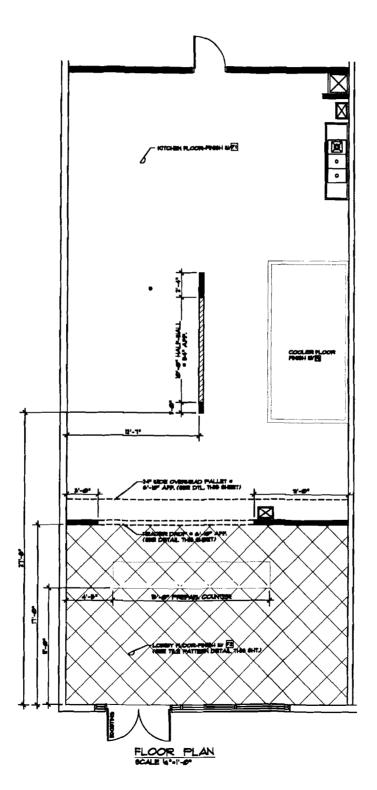


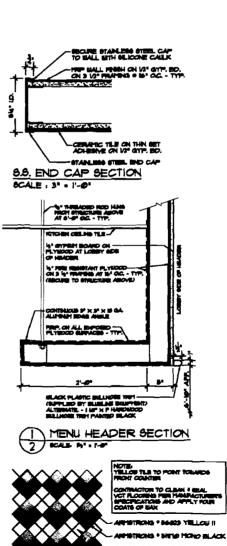
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COMMAND: WWw.bodik.com 600-728-7666
CONTACT: www.bodik.com 600-728-7666

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onecompodies.com 800-405-0080

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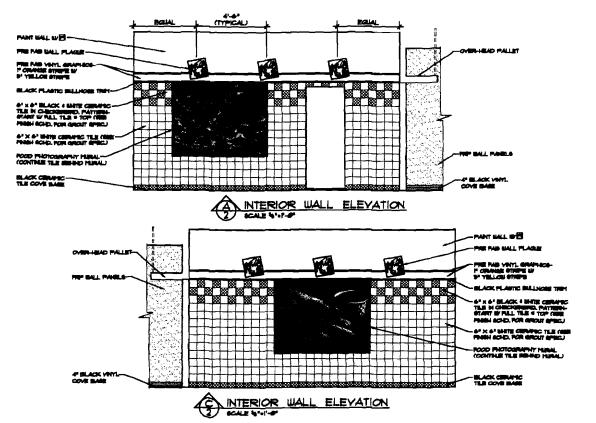
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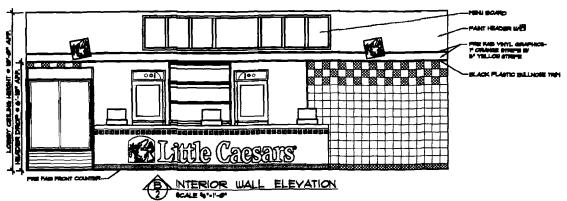
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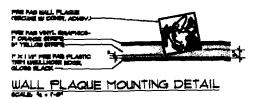
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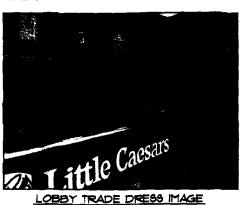
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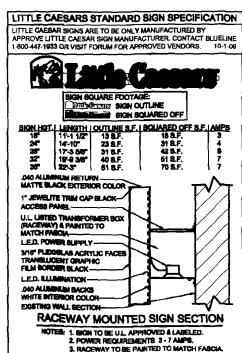


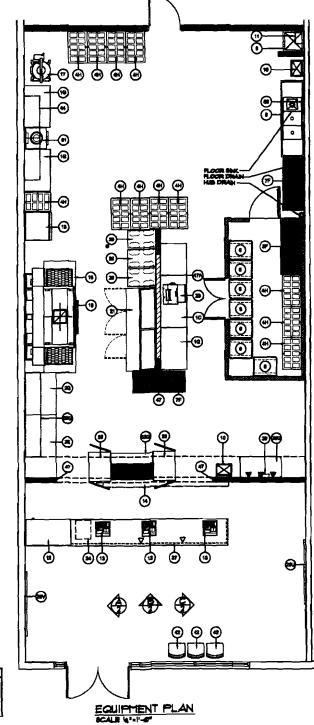
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14	SLAME, MARKY PROMISE, (F-2' x 12'-6')	NATIONAL SIGN	HOT-N-READY	O-Lamps	246			(30)	-		×				匚		
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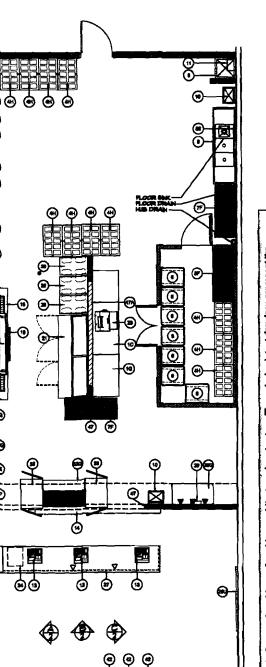














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