Waynesville Code Enforcement Department
280 Georgia Ave · Waynesville, NC 28786
Phone: 828-456-8647 Fax: 828-452-1492

Township:
PIN Number: 8615-17-9081
Permit Number: 08-166
Occupancy: A-2
Application Date:
Permit Fee: $ 4017 00 .00

Commercial Building Permit Application

PLEASE PRINT CLEARLY OR TYPE	NAME	MAILING ADDRESS--NUMBER, STREET, CITY, STATE, AND ZIP CODE	PHONE NUMBER
	PROPERTY ADDRESS: NUMBER AND STREET: 37 CHURCH ST.	CITY: WAYNESVILLE	TENANT: THE GATEWAY CLUB
APPLICANT	LAST: TAFT / FIRST: CHARLES	37 CHURCH St.	828-768-6275
		WAYNESVILLE, N.C. 28786	
PROPERTY OWNER	LAST: JON / FIRST: MOSTROM	14902 HICKORY CT.	952-891-7882
		EDEN PRAIRIE, MN 55346	
GENERAL CONTRACTOR	COMPANY: RCE, MACKEY MCKAY / LICENSE NUMBER: 29140	560 HAZELWOOD AVE	828-456-9570
		WAYNESVILLE, N.C. 28786	
ELECTRICAL CONTRACTOR	COMPANY: BELK ELECTRIC, NEILBELK / LICENSE NUMBER: 18283-L	OLD CLYDE RD.	828-734-7576
		CLYDE, NC 28721	
PLUMBING CONTRACTOR	COMPANY: JH PLUMBING CONT. JOSEPH HILL / LICENSE NUMBER: 13194	1640 CHANDLER CREEK RD.	828-206-1838
		MARS HILL, N.C. 28754	
MECHANICAL CONTRACTOR	COMPANY: HAYWOOD HEATING + AIR DAVID MOODY / LICENSE NUMBER:	1275 ASHEVILLE RD.	828-452-2235
		WAYNESVILLE, N.C. 28786	

PROVIDE INFORMATION REQUESTED. INCOMPLETE APPLICATIONS CANNOT BE PROCESSED.

TYPE OF IMPROVEMENT
- ☐ New Building
- ☐ Addition
- ☑ Alteration
- ☐ Describe Other
- ☐ Change of Occupancy

FIRE PROTECTION FEATURES
- Sprinklers: ☑ Yes ☐ No
- Fire Alarm: ☑ Yes ☐ No

BUILDING AREAS
- Total Area: 16,335 sq. ft.
- Under Construction: 16,335 sq. ft.
- Stories Above Grade: 3 1/2
- Stories Below Grade: 1

TYPE OF USE
- ☐ Amusement, Recreational
- ☐ Church
- ☐ Factory, Industrial
- ☐ Service Station, Repair Garage
- ☐ Hospital, Institutional
- ☐ Office, Bank, Professional
- ☐ School, Day Care
- ☐ Stores, Mercantile
- ☐ Restaurant
- ☑ Describe Other Dining + Social Club with offices and event space

UTILITIES
- Sanitary Sewer Permit Number:
- Sanitary Sewer District: Downtown
- Electrical Service Provider: ☑ Way. ☐ Progress

TYPE OF CONSTRUCTION
☐ I ☑ II ☐ III ☐ IV ☐ V

TYPE OF OCCUPANCY
- Assembly ☐ 1 ☑ 2 ☐ 3 ☐ 4 ☐ 5
- Business ☐
- Educational ☐
- Factory ☐ 1 ☐ 2
- Hazardous ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- Institutional ☐ 1 ☐ 2 ☐ 3 ☐ 4
- Mercantile ☐
- Residential ☐ 1 ☐ 2 ☐ 3 ☐ 4
- Storage ☐ 1 ☐ 2

COST OF PROJECT
$ 310,000 .00

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction shall conform to the regulations in the North Carolina Building Code and all other codes and regulations or private building restrictions, if any, which may be imposed on the above property by deed.

Signature (of owner or Authorized Agent) — Address: 37 Church St., Waynesville, N.C. 28786

Printed Name: CHARLES W. TAFT — Company Name: THE GATEWAY CLUB

Waynesville Code Enforcement Department
280 Georgia Ave · Waynesville, NC 28786
Phone: 828-456-8647 Fax: 828-4152-1492

AFFIDAVIT AS TO STATUS OF LICENSURE
N.C.G.S. § 87-1

To Permit Applicant: Please check the appropriate lines, provide the requested information, and sign and date below.

☐ **I propose to construct a new building.**

☐ **I propose to set-up a properly labeled modular building.**

☑ **I am a North Carolina licensed general contractor.** My license number is 29140.

☐ **I am <u>not</u> a North Carolina licensed general contractor.** The cost of the project I am entering into does not exceed $30,000.00 per N.C.G.S. § 87-1.

☐ **I am <u>not</u> a North Carolina licensed general contractor.** I am providing to the local inspection jurisdiction a $5,000 surety bond in accordance with **N.C.G.S. § 143-139.1.** **<u>(Modular set-up only)</u>**

☐ **I am the owner of the proposed building.** It is my intention to act as my own general contractor for constructing the proposed building or for setting up the proposed modular building. I have entered into a construction project where the cost of the undertaking exceeds $30,000; I have read G.S. Section § 87-1. I certify that I am not allowing an unlicensed general contractor to perform the duties of a general contractor, which, I understand from reading G.S. Section § 87-1 include construction superintending and managing in addition to, among other things, signing written contracts. I intend to retain the finished house (or other project) exclusively for my own use, and to be occupied by me or my family for a minimum of one year after completion. I am not building a "speculation" project with the intention of selling the project once it is completed. I understand that building a "spec" project without proper licensure is a violation of G.S. § 87-13; this may be a criminal offense. Also, I understand that problems which may arise due to construction of the building or set-up of the properly labeled modular building, such as inaccurate or insufficient foundation, improper or inadequate marriage line connections, improper plumbing, mechanical, or electrical connections between the units, etc., will be solely my responsibility, and I will be left with no recourse and must assume total liability for correction of the problems. I personally have a thorough knowledge of the requirements of the NC State Building Code with regard to construction and/or setting up modular buildings.

R.C.F. INC,
By: Jay D McCarty
Signature of Permit Applicant

5/5/08
Date

Sworn to and subscribed before me this 5th day of May 2008.

Jane McKay Toomey
Signature of Notary

Official Seal Notary Public

My commission expires May 18, 2010.

Waynesville Code Enforcement Department
280 Georgia Ave · Waynesville, NC 28786
Phone: 828-456-8647 Fax: 828-452-1492

AFFIDAVIT OF WORKERS' COMPENSATION COVERAGE

N.C.G.S. § 87-14

The undersigned applicant for Building Permit Number _____ being the

☑ Contractor ☐ Owner ☐ Officer/Agent of the Contractor or Owner

do hereby aver under penalties of perjury that the person(s), firm(s) or corporation(s) performing the work set forth in the permit:

☑ has/have three (3) or more employees and have obtained workers' compensation insurance to cover them,

☐ has/have one or more subcontractor(s) and have obtained worker's compensation insurance covering them,

☐ has/have one or more subcontractor(s) who has/have their own policy of workers' compensation covering themselves,

☐ has/have not more than two (2) employees and no subcontractors,

while working on the project for which this permit is sought. It is understood that the Inspection Department issuing the permit may require certificates of coverage of workers' compensation insurance prior to issuance of the permit and at any time during the permitted work from any person, firm or corporation carrying out the work.

Firm name: R. C. F., INC.

By: GARY D. McKAY

Title: PRESIDENT

Date: 5/5/08

Sworn to and subscribed before me this 5th day of May 2008.

Official Seal
Notary Public

Signature of Notary

My commission expires May 18, 2012.

PAYMENT SUMMARY RECEIPT

TOWN OF WAYNESVILLE
16 S MAIN ST
WAYNESVILLE NC 28786

DATE: 06/16/08 CUSTOMER#: 000000000
TIME: 10:26
CLERK: fr

RECPT#: 985055 PREV BAL:
TP/YR: MS/2008 AMT PAID: 4017.00
BILL: ADJSTMNT:
EFF DT: 06/16/08 BAL DUE:
MISCELLANEOUS PAYMENT

----------TOTALS----------

PRINCIPAL PAID:	4017.00
INTEREST PAID:	.00
ADJUSTMENTS:	.00
DISC TAKEN:	.00
AMT TENDERED:	4017.00
AMT APPLIED:	4017.00
CHANGE:	.00

PAID BY: Gateway Club
PAYMENT METH: CHECK
PAYMENT REF: 1050

GATEWAY CLUB

PLUMBING FIXTURE REQUIREMENTS

OCCUPANCY	WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/	DRINKING FOUNTAINS	
A2	MALE	FEMALE		MALE	FEMALE	TUBS	REGULAR	ACCESSIBLE
Existing	2	2		2	2		1	1
New	5	8	5	5	8			
Required	6	6		3	3		0	0

ACCESSIBLE PARKING

****LOCATED IN THE CENTRAL BUSINESS DISTRICT – NO PARKING REQUIRED****

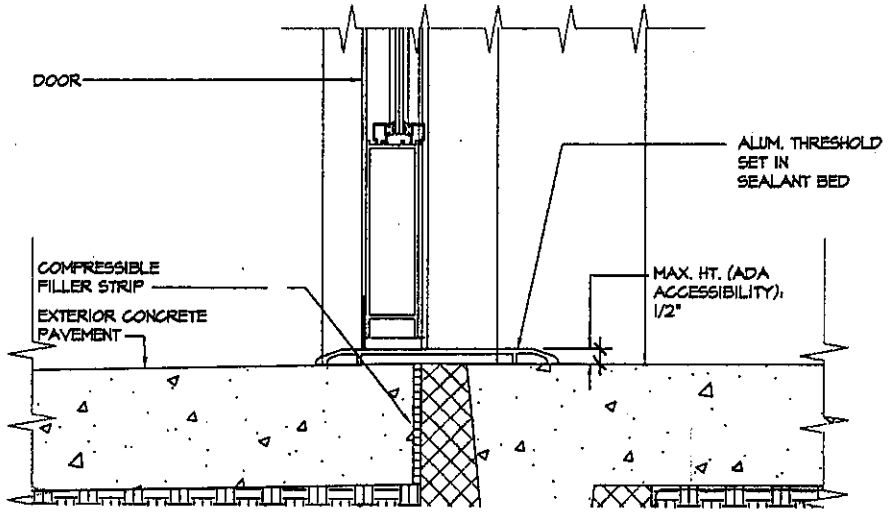
LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
	0	20	1		1
TOTAL		20			

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DFS, ICC, etc., describe below)

_____

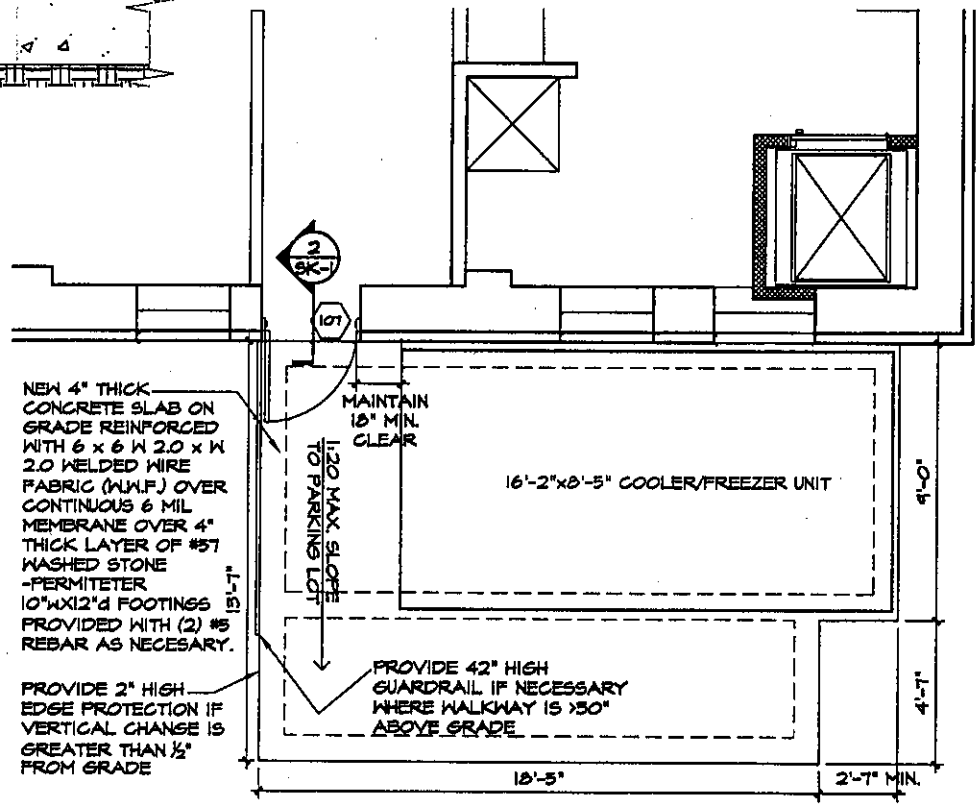
_____



THRESHOLD SECTION

2 / SK-1

SCALE: 3" = 1'-0"



ENLARGED PLAN

1 / SK-1

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

GLAZER ARCHITECTURE, PA
78½ Patton Avenue, Asheville, NC 28801
828.254.5853

GLAZER ARCHITECTURE, P.A. REGISTERED ARCHITECTURAL CORPORATION NORTH CAROLINA CERT.NO. 51109 ASHEVILLE, N.C.

PATTI LEE GLAZER REGISTERED ARCHITECT 3851 NORTH CAROLINA ASHEVILLE, N.C.

8/14/0

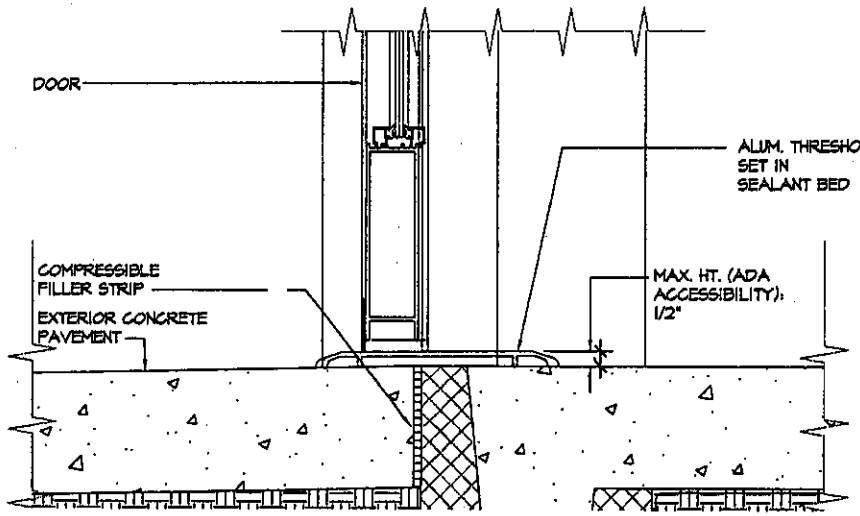
The Gateway Ch

37 Church Street
Waynesville, NC

Project Number: 0803
Revisions:

Drawing:
Date: 08/14/08

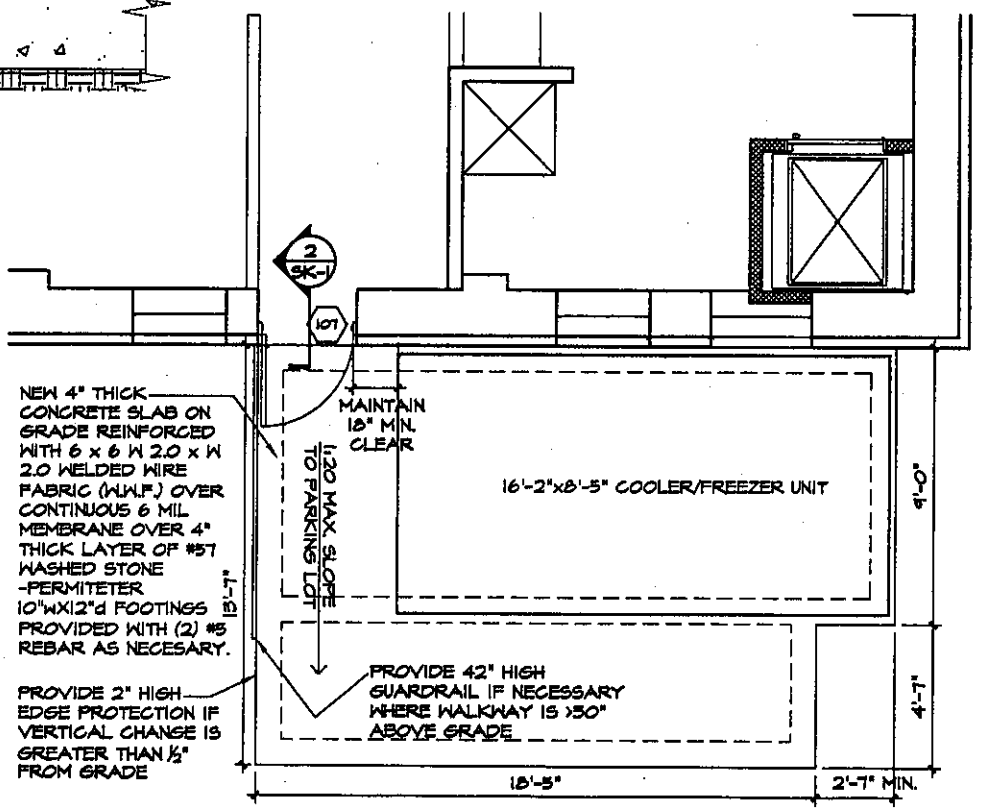
Sheet Number:
SK-1



THRESHOLD SECTION

2 / SK-1

SCALE: 3" = 1'-0"



ENLARGED PLAN

1 / SK-1

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

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PATTI LEE GLAZER REGISTERED ARCHITECT 13851 NORTH CAROLINA ASHEVILLE, N.C.

8/14/0

The Gateway Ch

37 Church Street
Waynesville, NC

Project Number: 0803
Revisions:

Drawing:
Date: 08/14/08

Sheet Number:

SK-1

1st Step
Submit with Lt. Chuck Way
(828) 456-5363 ext. 105

NORTH CAROLINA
ALCOHOLIC BEVERAGE CONTROL COMMISSION
4307 MAIL SERVICE CENTER
RALEIGH NC 27699-4307
(919) 779-0700 FAX: (919) 662-3583

INSPECTION/ZONING COMPLIANCE

IMPORTANT: The Applicant will complete SECTION A, below. *SECTION B through SECTION E, below, are to be completed by the appropriate Inspection/Zoning Official.* To request inspections and zoning certifications, please contact the city or county building and fire inspection and zoning departments for your area. Failure to submit this form in a timely manner to these local authorities may result in delays in processing of an ABC permit application. This form *must* be completed by the building, fire and zoning officials before a permit will be issued.

SECTION A - APPLICANT TO COMPLETE

Name of Applicant Patrick Tinsley
Trade Name of Business Gateway Club
Address of Business 37 Church Street
City Waynesville County Haywood
Phone # (828) 646-7741

SECTION B - BUILDING INSPECTOR TO COMPLETE

Building Code:

Building is in - ☐ *Compliance* ☐ *Non-compliance** ☐ *Not Applicable*

Building Inspector's Name (printed) and Signature _____

Phone # ( ) _____ *Date of Inspection* _____

SECTION C - FIRE INSPECTOR TO COMPLETE

Fire Code:

Building is in - ☐ *Compliance* ☐ *Non-compliance** ☐ *Not Applicable*

Fire Inspector's Name (printed) and Signature _____

Phone # ( ) _____ *Date of Inspection* _____

SECTION D - ZONING OFFICIAL TO COMPLETE

Zoning:

Business is in - ☒ *Compliance* ☐ *Non-compliance** ☐ *Not Applicable*

Business is located in CBD
Zoning Classification Same
Permitted uses in this zone Restaurants
Zoning Official's Name (printed) and Signature Byron Hickox Byron Hickox
Phone # (828-452-0401 *Date of Inspection* 9/30/08

**** Please state reasons for "Noncompliance" in SECTION E on back of this page.***

Range Hood Systems Report

SERVICE COMPANY

PYE BARKER FIRE & SAFETY, INC.
703 Sugarloaf Road
Hendersonville, NC 28792
828-692-1676 or 253-FIRE
Fax: 828-692-1922

DATE OF SERVICE	TIME	A.M.	P.M.
11-10-05	7:00		X

ANNUAL	SEMI-ANNUAL	RECHARGE	INSTALLATION	RENOVATION
			X	

LOCATION OF SYSTEM CYLINDERS	UL 300
In Right of Hood	☑ YES ☐ NO

MANUFACTURER	MODEL NUMBER	WET	DRY CHEMICAL
Ansul	R-102	X	

CYLINDER SIZE - MASTER	CYLINDER SIZE - SLAVE	CYLINDER SIZE - SLAVE
3 Gal.	3 Gal.	3 Gal. - 1.5 Gal

FUSE LINKS 360°	FUSE LINKS 450°	FUSE LINKS 500°	OTHER
9			

FUEL SHUT-OFF	ELECTRIC	GAS	SIZE
X		X	

SERIAL NUMBER	LAST HYDRO TEST DATE	LAST RECHARGE DATE

CUSTOMER

Name The Gateway Club

Address 37 Church St.

City Waynesville State NC Zip 28786

Phone 828-456-6759 Store #

Owner or Manager

COOKING APPLIANCE LOCATIONS: LEFT TO RIGHT

10 Burner	Deep Fryer	Char Grill	Flat Grill
6 Burner	Tilt Skillet	Oven	

1. All appliances properly covered w/correct nozzles	✓	20. Replace fuse links	✓
2. Duct and plenum covered w/correct nozzles	✓	21. Check travel of cable nuts/S-hooks	✓
3. Check positioning of all nozzles	✓	22. Piping and conduit securely bracketed	✓
4. System installed in accordance w/MFG UL listing	✓	23. Proper separation between fryers & flame	✓
5. Hood/duct penetrations sealed w/weld or UL device	✓	24. Proper clearance-flame to filters	✓
6. Check if seals intact, evidence of tampering	✓	25. Exhaust fan in operating order	✓
7. If system has been discharged, report same	N/A	26. All filters replaced	✓
8. Pressure gauge in proper range (if gauged)	N/A	27. Fuel shut-off in position	✓
9. Check cartridge weight (if applicable)	✓	28. Manual & remote set/seals in place	✓
10. Hydrostatic test date	2020	29. Replace systems covers	✓
11. 6 year maintenance date	2014	30. System operational & seals in place	✓
12. Inspect cylinder and mount	✓	31. Slave system operational	✓
13. Operate system from terminal link	✓	32. Clean cylinder & mount	✓
14. Test for proper operation from remote	✓	33. Fan warning sign on hood	✓
15. Check operation of micro switch	✓	34. Personnel instructed in manual operation of system	✓
16. Check operation of gas valve	✓	35. Proper hand portable extinguishers	✓
17. Clean nozzles	✓	36. Portable extinguishers properly serviced	✓
18. Proper nozzle covers in place	✓	37. Service & Certification tag on system	✓
19. Check fuse links and clean	✓	NOTE DISCREPANCIES OR DEFICIENCIES BELOW	

COMMENTS: Asst Code Administrator 11.10.8

On this date, the above system was tested and inspected in accordance with procedures of the presently adopted editions of NFPA 17, 17A, 96 and the manufacturer's manual and was operated according to these procedures with results indicated above.

X [signature] H14 [signature]

SERVICE TECHNICIAN PERMIT NO. CUSTOMER'S AUTHORIZED AGENT

The above service technician certifies that the system was personally inspected and found conditions to be as indicated on this report.

White - Customer Copy Yellow - Distributor Pink - Authority Having Jurisdiction

RCF
CONSTRUCTION
COMPANY

R.C.F., INC.
GENERAL CONTRACTOR - CRANE SERVICE
P. O. Box 3157 - 560 Hazelwood Avenue
Waynesville, North Carolina 28738
828-456-9570 FAX 828-452-5904
EMAIL: rcf@primeline.com

Gary D. McKay, P.E.
President

November 4, 2008

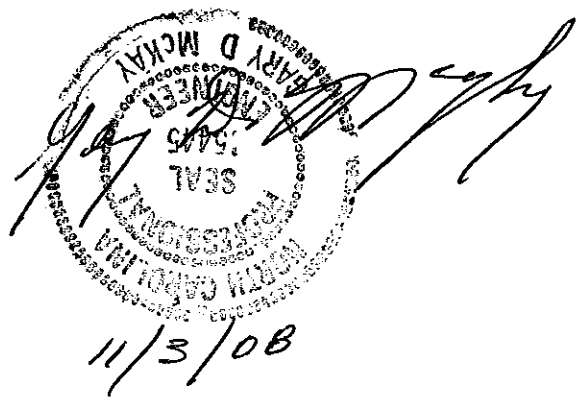
Memo To: Town of Waynesville Building Inspections

From: Gary McKay, PE

Subject: Wall Openings Gateway Club

New wall openings in the exterior walls (kitchen and basement) for the Gateway Club were installed with lintels to carry the existing imposed loads.

The floor in the dining room was reinforced to carry the proposed water feature.



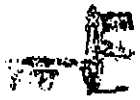
11/3/08

2

Seven of our HVAC Tapes Contribute to LEED® Points.

AF 100
Aluminum Foil Tape
UL 181A-P/B-FX

AF 973
Aluminum Foil Tape



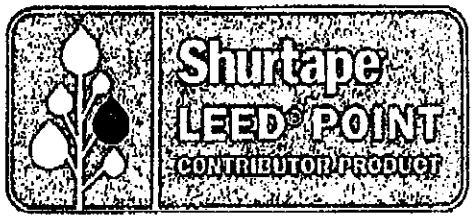
AF 982
FSK Tape

DC 181
Flex Film Duct Tape
UL 181B-FX

PC 857
HVAC Professional Grade Duct Tape
UL 181B-FX

PC 609
Industrial Grade Cloth Duct Tape

LS 300
Line Set Tape
UV Resistant



When our HVAC tapes are combined with other reduced VOC adhesives and sealants used throughout a building, that building is eligible to receive credit toward LEED certification. In commercial buildings the credit is one point; in residential construction, the credit is one-half point. That may not seem like a lot but at Shurtape, we believe it takes everyone doing their part to protect and preserve our environment.**

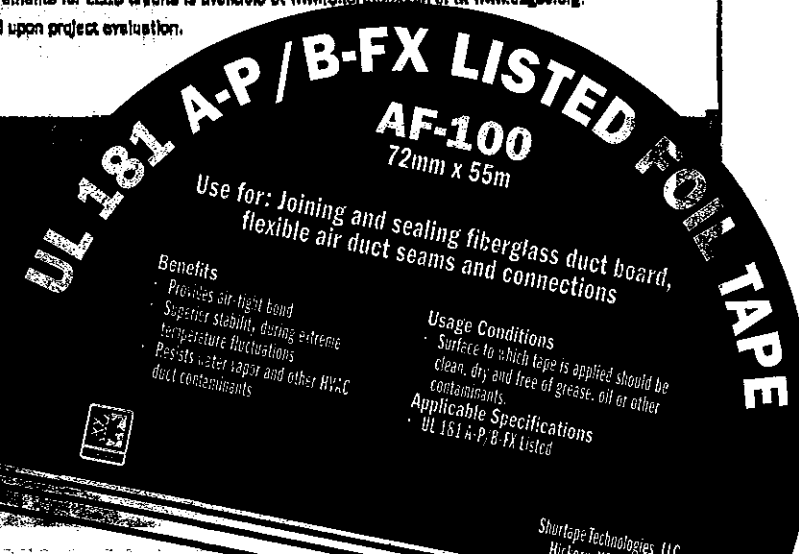
It's Good To Go Green.

It's the right thing to do for your project, your customer, and our future. We believe that specifying green materials should be easy, effective and convenient. So for your next building project, spec Shurtape HVAC tape.

LEED is a registered trademark owned by the U.S. Green Building Council.

*Leadership in Energy and Environmental Design (LEED) is a voluntary, consensus-based program sponsored by the U.S Green Building Council (USGBC) for developing high-performance, sustainable buildings. Based on well-founded scientific standards, LEED emphasizes state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. Based on a system of prerequisites and credits, LEED projects earn points during the certification process and then are awarded one of the four certification levels: Certified, Silver, Gold, and Platinum. Detailed information about requirements for LEED credits is available at www.Shurtape.com or at www.usgbc.org.

**Final credits are awarded by the U.S. Green Building Council upon project evaluation.



Shurtape HVAC–
a spec that says a lot about your business.

Building Green Is Here.

If your clients haven't been asking about it – you've been reading about it or hearing about it on the news. After years of promise, green is a reality.

Now, Shurtape can help your projects earn credits from the U.S. Green Building Council (USGBC), because Shurtape has seven HVAC tapes that meet requirements for LEED® points.

Today, many municipal, state, and national building codes require environmentally-friendly building materials that qualify for green credits. Specifying engineers and construction contractors who know which materials and components qualify for green credits get the job.

Green Production: It's How We Do Business.

Since our beginning in 1955, Shurtape's goal has been to eliminate solvent-based adhesives wherever possible. We are closer now than ever before because of our production process. In fact, our production process is the main reason our HVAC tapes are credit-eligible.

You see, we predominately use 100% solids or water-based adhesives to make tape. When coating adhesives to the tape backing, the only byproduct of water-based adhesives is steam (hydrogen and oxygen) unlike solvent-based adhesives which emit volatile organic compounds (VOCs).

When specifications require the use of solvent-based adhesives, we've taken the extra step to capture VOC emissions and destroy them through a process called regenerative thermal oxidization (RTO) which greatly reduces emissions.

Eliminating emissions is good for our environment and good for business. Protecting our environment has been part of our core values since we started making tape more than 50 years ago.

SENDING REPORT

Oct. 15 2008 12:40PM

YOUR LOGO : SUNHEATING
YOUR FAX NO. : 828 2534704

NO.	OTHER FACSIMILE	START TIME	USAGE TIME	MODE	PAGES	RESULT
01	279233	Oct. 15 12:36PM	03'59	SND	03	OK

TO TURN OFF REPORT, PRESS 'MENU' #04.
THEN SELECT OFF BY USING '+' OR '-'.

FOR FAX ADVANTAGE ASSISTANCE, PLEASE CALL 1-800-HELP-FAX (435-7329).

Thermal Ceramics

FIREMASTER Fire Protection Systems

Product Data and Installation Guide

FastWrap+ 1½"
Commercial Kitchen Grease Duct Air Ventilation Duct

NFPA 96 **IMC**

1. Product Description - New and Improved FastWrap+

Thermal Ceramics FireMaster FastWrap+ is a one-layer, totally foil-encapsulated, non-combustible 2000°F rated, low biopersistence, flexible fireproofing wrap specifically tested to provide a 1 or 2 hour fire rated enclosure for horizontal and vertical commercial kitchen grease, hazardous chemical exhaust ducts including chemical fume ducts and air ventilation ducts. The core blanket chemistry is alkaline-earth silicate wool free of binders and lubricants. FireMaster FastWrap+ is classified by Omega Point Laboratories and Underwriter's Laboratories Listing and Follow-up Service Program to ensure uniform thickness and density specifications, thus providing consistency in end physical properties for required fire ratings. FireMaster FastWrap+ is a proven performance alternative through extensive testing to 1 or 2 hour fire-resistance rated shaft enclosures. With its excellent insulating capability of withstanding fire condition temperatures up to 2000°F, it protects combustible constructions at zero clearance throughout the entire enclosure system. When the duct penetrates fire rated walls and floors, an approved silicone firestop sealant used in combination with FireMaster FastWrap+ provides an alternate means of protection to rigid shafts by maintaining the integrity of the 1 or 2 hour fire rated wall and floor assembly. FireMaster FastWrap+ is resistant to mold growth in test conditions of 75-95% relative humidity (ASTM D6329).

Product Features

- One-layer system with 3 optional installation techniques
- Low biopersistent insulation blanket
- Does not contain low temperature fiberglass or mineral wool
- Shaft alternative to rigid board systems
- Zero clearance to combustibles protection throughout the entire enclosure system
- Lightweight, flexible wrap saves labor
- Passive fire proof material does not shrink, become brittle, or lose fire fighting capabilities with age
- Totally foil encapsulated system protects against material degradation, and potential fire hazards
- Product markings on foil ensure proper material identification for easy inspections
- Wide variety of through-penetration systems
- Resistant to mold growth

2. Applications

- 1 or 2 Hour Commercial Kitchen Grease Duct Enclosure
- 1 or 2 Hour Air Ventilation Duct Enclosure
- 1 or 2 Hour Hazardous Chemical Exhaust Ducts

3. Physical Characteristics

Duct FireMaster Fire Protection Product	Unit	Size	Units/ Ctn.	Wt./ Ctn.
FastWrap+	Roll	1 1⁄4" x 24" x 25'	1	37.5 lbs.
FastWrap+	Roll	1 1⁄4" x 48" x 25'	1	75 lbs.
FastWrap+ Collar	Roll	1 1⁄4" x 6" x 25'	4	37.5 lbs.
Color	White blanket with silver foil encapsulation			

4. Specifications

This specification guide covers the application of Thermal Ceramics FastWrap+ Duct FireMaster Fire Protection Product and an approved silicone firestop sealant.

Application	Fire Resistive Rating	Enclosure System	Through Penetration System
Grease Ducts	1 or 2 hours	1 layer, 1½" FastWrap+, perimeter and longitudinal overlap 3", GD 544 F, GD 562 F, UL G-14	OPL FS 587F UL C-AJ-7098
Air Ducts	2 hours	1 layer, 1½" FastWrap+, perimeter and longitudinal overlap 3" UL V-19	C-AJ-7095, UL-W-L-7121 UL-F-C-7036 UL-F-C-7037

5. Performance

A. Thermal Ceramics FastWrap+ Duct FireMaster Fire Protection Product

Flammability (ASTM # 84/UL 723)		
Foil:	Flame spread	5
	Smoke developed	10
Blanket:	Flame spread	0
	Smoke developed	0
Thermal Resistance	R value per ASTM C 518 4.15 per inch at 70°F *(21°C)*	

B. Fire Stop Sealants

Tremco Inc.	Fyre Sil sealant or Fyre-Sil S/L Sealant (for floor assemblies only)
Specified Technologies Inc.	Pensil 300
Rectoseal	835+ Sealant
HILTI Construction Chemicals, Division of HILTI Inc.	FS One Sealant

6. Listings

Agency	Reference Standard/File No.
Omega Point Laboratories, Inc.	Listing # 11660-3
Underwriters Laboratory	Grease Duct Enclosures (HNKT): G-14; Fire Resistive Ventilation Duct Assemblies (HNLJ): V-19; Through-Penetration FireStop System (XHEZ): C-AJ-7095, C-AJ-7098
NFPA 96	2001 Edition
International Mechanical Code	Section 506.3.10 Commercial Kitchen Grease Ducts and Exhaust Equipment, Section 507 Commercial Kitchen Hoods, 2003 Edition
New York MEA	412-02-M, 413-02-M
International Code Council	SBCCI Legacy Report No. 9424E BOCA Legacy Report No. 22.25
City of Los Angeles	RR8425 - Air; RR8456 - Grease
California State Fire Marshal	2440-1361:103 2440-1361:105

7. Installation

A qualified contractor in accordance with manufacturer's instructions and referenced standards shall install the new or original FireMaster FastWrap+ system using the installation methods as described in sections A-D. See Figures 1 - 4 complete drawing details.

Materials and Equipment:

FireMaster FastWrap+ blanket, 1 1/2" thick, 6 pcf, 24", or 48" wide, and 25' long rolls; optional 6" wide x 20' long rolls

- FireMaster FastWrap+: 25' standard length, 48" wide blanket helps to minimize waste
- Aluminum foil tape
- Minimum 1 1/2" wide filament tape *(optional)*
- Carbon steel or stainless steel banding material, minimum 1 1/2" wide, minimum 0.015" thick, with steel banding clips
- Hand banding tensioner and crimping tool
- Minimum 12 gage steel insulation pins; galvanized 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
- Access door hardware: four galvanized steel threaded rods, 1/2" diameter by 4 1/2" to 5" long with 1/2" wing nuts and 1/2" washers; 4" long steel tubing to fit threaded rods
- An approved silicone firestop sealant

Storage:

The FireMaster FastWrap+ and an approved silicone firestop sealant must be stored in a dry warehouse environment on pallets. Pallets should not be stacked.

Preparatory Work:

FireMaster FastWrap+ is installed with common tools, such as knives, banders and capacitor discharge guns for applying insulation pins. In order to install the duct fire stop system, the surfaces of all openings and penetrating items need to be clean, dry, frost free, and free of dust.

Installation techniques for Thermal Ceramics FireMaster FastWrap+ (Figures 1 and 3):

- **3" Overlap Wrap Telescope** - Each blanket overlaps one adjacent blanket, and each blanket has one edge exposed and one edge covered by the next blanket as shown in Figures 1 and 3. The visible edges of the longitudinal overlaps all point in the same direction.
- **Overlap Checkerboard Pattern** - Blankets with both edges exposed alternate with blankets with covered edges, as shown in Figures 1 and 3. The visible edges of the longitudinal overlaps alternate their directions and appear on every other blanket.
- **Butt Joint & Collar System** - Adjacent blankets are butted tightly together and a 6" wide collar of FireMaster FastWrap+ is centered over the joint, overlapping each blanket by 3" as shown in Figures 1 and 3.
- **2 & 3 Sided Enclosure System** - When space does not allow for full wrap enclosure on all four sides of the duct, the FastWrap+ may be installed on 2 or 3 sides of the duct and mechanically attached to a concrete or CMU assembly on the unexposed side of the duct.

General:

To minimize waste, material 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 from wicking moisture from condensation or grease from a compromised leaking duct joint into the material and causing degradation of the fire barrier. The FireMaster FastWrap+ material may be installed with either a mechanical banding system or insulation pins and clips (see Mechanical Attachment Methods below and Figures 1 and 3). When using the banding technique, caution shall be taken to ensure that the bands are not fitted too snug as which could result in cutting into the blanket. To prevent blanket sag on ducts with dimensions greater than or equal to 24", insulation pins, long enough to extend through the layers of blanket insulation, are welded to the duct in columns spaced 12" apart, between 6" and 12" from each edge and 10 1/2" on center along the bottom horizontal and outside vertical duct runs. Insulation pins that extend beyond the blanket wrap shall be tuned down to eliminate sharp points. Support hanger systems do not need to be wrapped provided that the steel hanger rods are at least a minimum of 3/8" diameter and the steel angle is a minimum of 1 1/2" x 1 1/2" x 1/8", or SMACNA equivalent support system (SMACNA band strap support systems do not apply). Horizontal trapeze support systems may be incorporated into the wrap enclosure.

A. Overlap Wrap Telescope Installation

FireMaster FastWrap+ includes a one-layer wrap construction applied directly to all surfaces of the duct (Figures 1 and 3). The FireMaster FastWrap+ blanket is wrapped one layer 1½" or 2" thick around the perimeter of the duct with a length cut to provide enough excess to overlap itself not less than 3". Adjacent blankets are placed to overlap the previous blanket not less than 3". The overlap made by adjacent blankets forms the "longitudinal" overlap. The overlap a blanket makes with itself is called the "perimeter" overlap. The wrap layer may be held temporarily in place with filament tape 1 1/2" from each blanket edge and in the center of the blanket until the mechanical banding or pinning and clip attachment method is secured.

B. Checkerboard Wrap Installation

FireMaster FastWrap+ is cut to completely wrap around the perimeter of the duct with enough excess to provide an overlap of not less than 3" (Figures 1 and 3). The blankets with both edges exposed alternate with blankets with covered edges as shown in Figures 1 and 3. The visible edges of the longitudinal overlaps alternate their directions and appear on every other blanket. A 3" longitudinal overlap is installed onto the previous adjacent wrap forming a "checkerboard" construction. The wrap layer may be held temporarily in place with filament tape 1 1/2" from each blanket edge and in the center of the blanket until the mechanical banding or pinning and clip attachment method is secured.

C. Butt Joint / Collar Installation
FireMaster FastWrap+ is installed in a single layer directly to the duct with a tight butt joint construction (Figures 1 and 3). The FireMaster FastWrap+ material may be held in place with filament glass tape 1"½" from each blanket edge and in the center of the blanket temporarily until the mechanical banding or pinning and clip attachment method is secured. A 6" wide FireMaster FastWrap+ Collar is centered over the joints overlapping on each side of the blanket joint 3".

D. 2 & 3 Sided Wrap System
When space does not allow for a complete wrap applied to the duct on all four sides, the FireMaster FastWrap+ can be installed in a single layer on the 2 or 3 sides of the unexposed duct and mechanically attached to a concrete or CMU assembly. The FireMaster FastWrap+ is installed on the duct as described in one of the three installation methods described above 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 affixed 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 should be secured to the adjoining assembly with minimum 3/16" diameter, 4" long concrete anchors, footed to a minimum 1"½" wide x 3/16" thick steel strip/strap with pre-drilled holes spaced a maximum 10" on center. The FireMaster FastWrap+ insulation wrap is secured to the duct with banding (see Mechanical Attachment Methods for Insulation Wrap section below or Figures 1 and 3). The ends of the banding are to loop into the steel strips/straps that foot the blanket to the concrete floor or wall, and are tightened down. The trapeze support system may be incorporated within the wrap system.

Mechanical Attachment Methods for Insulation Wrap
1. Banding - ½" wide carbon steel or stainless steel banding, 0.015" thick, is placed around the entire perimeter of the insulated duct with maximum 10"½" spacing centers and 1"½" from each blanket edge or 1" 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 material and tightened so as to firmly hold the FireMaster FastWrap+ in place against the duct, but not cause any cutting or damage to the blanket.

2. Pinning - Min. 12 gage, 5" long steel insulation pins are welded to the duct at all blanket overlap locations (see Figures 1 and 3) spaced in rows max. 10"½" on center and maximum 8" apart. An insulation pin is located in the middle of the perimeter overlap and center spaced between the pins. Pins are locked into place with 1"½" diameter square or round, galvanized steel, speed clips or cup head pins. Pins that extend beyond outer blanket wrap layer shall be turned down to eliminate sharp edges or the excess length cut off.

NOTE: Pinning is required for grease ducts larger than 24" x 48".

Through-Penetration Firestop System
When the duct penetrates a concrete or drywall fire rated wall, ceiling, or floor, an approved fire stop system must be employed. (Figures 2 and 4). FireMaster FastWrap+ approved through penetration fire stop systems are listed in Section 4, Specifications.

To fire stop the through penetration void area, cut strips of FireMaster FastWrap+ 4"½" wide and as long as the opening and install at a minimum 50% compression. Install the strips so that they are recessed ½" from the top surface of the wall or floor. Install a minimum ½" depth of an approved firestop sealant into the opening to the recess around the top surface of the floor or wall through-penetration opening.

Grease Duct Access Door Installation
Four galvanized steel threaded rods, ¼" diameter by 4"½" to 5" long are welded to the duct at the corners of the door opening. Four 5" long 12 gage insulation pins are welded to the door panel for installation of the blanket. Two layers of FastWrap+ are installed on the door. The first layer is cut and placed on the pins and over the access opening with a ½" overlap. When the door is installed, this first layer is compresses and fitted against the wrap surrounding the door opening to form a tight butt joint. The second layer is centered over the first piece so that a minimum 1" overlap exists around the perimeter. It is essential that this layer fit tightly against the wrap surrounding the access door opening with no through openings. The second layer is impaled over the pins and both layers are locked in place with speed clips. Pins that extend beyond the outer layer of FireMaster FastWrap+ shall be turned down to avoid sharp points on the door.

The insulated door panel and the steel tubes are placed over the threaded rods and held in place with washers and wing nuts. The steel tubes hold the door to the duct and protect the wrap from damage as the door is removed. Alternatively, insulated pre-fabricated access doors are available from dealers. See the Thermal Ceramics FireMaster FastWrap+ Design and Installation Manual for complete installation and drawing details.

8. Maintenance
No maintenance is required when installed in accordance with Thermal Ceramics installation instructions. Once installed, if any section that is greater that 8" x 8" is damaged or if the overlap area is damaged, the following procedures will apply:

- The damaged section should be removed by cutting the steel banding or removing the clips holding it in place
- A new section of the same dimension should be cut from a roll of FireMaster FastWrap+, either 24" r 48" wide. Cut edges of the blanket shall be taped to prevent exposed edges of the insulation from wicking moisture or grease into the material and degradation of the fire barrier
- The new section should be placed per Thermal Ceramics manufacturer's Installation Instructions ensuring the same overlap that existed previously
- The steel banding should be placed around the material and tensioned so as to sufficiently hold the FireMaster FastWrap+ in place without cutting the blanket
- If the blanket has not been damaged but the foil has ripped, seal the opening with aluminum foil tape

For damaged areas less than or equal to 8" X 8" the following procedure may be used.

- The damaged section should be removed by cutting out a square or rectangular that includes the damaged area and does not exceed 8" in width or length.
- A repair section should be cut from a section of FireMaster FastWrap+ that is 1" wider and 1" longer than the damaged area that has been removed. Cut edges of the blanket shall be taped to prevent the exposed edges of the insulation from wicking moisture or grease into the material.
- A single min. 12 Gauge insulation pin min. 3" long should be welded to the grease duct in the center of the repair area. (Note: Cup head pins may also be used.)
- The repair section is to be centered on the opening and impaled upon the insulation pins. All overlaps should be tucked into the repair opening to provide a tight fitting joint. Insulation is held in place with a 1½" square or round galvanized or stainless steel speed clip or a minimum 1" diameter cup head pin. The excess portion of the pin shall be cut off and/or turned down to eliminate sharp edges.
- The joint should be sealed using aluminum foil tape.

9. Limitations

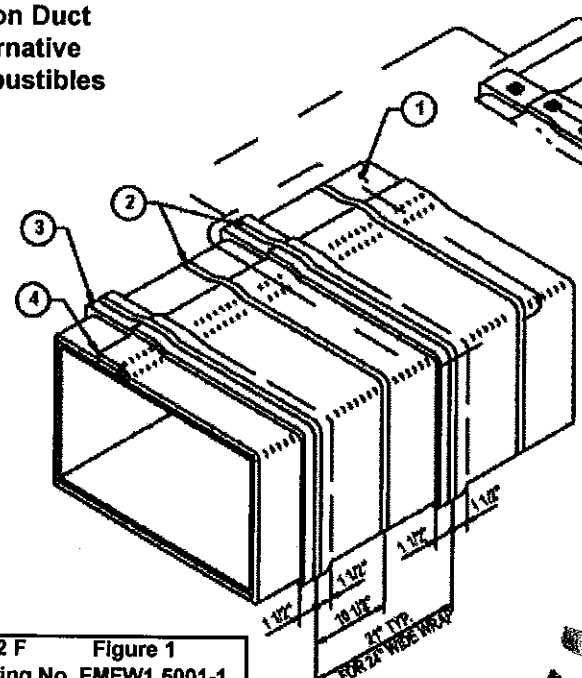
- FireMaster FastWrap+ shall be installed in accordance with Thermal Ceramics - Installation Instructions
- Multiple steel ducts in a single FireMaster FastWrap+ enclosure system are not permitted for commercial kitchen grease ducts. Multiple steel ducts in a single enclosure are permitted for air ventilation ducts
- Grease Duct Sizes > 24"x48" insulation is attached using steel pins
- Air Ducts: when maximum duct size dimensions are greater than 84" x 21" in cross section, reinforce the duct with steel angles sufficient to support the total weight of the duct assembly and the FireMaster FastWrap+ enclosure
- Minimum ⅜" diameter all thread steel rods do not have to be insulated
- Horizontal support members may be incorporated into the enclosure wrap
- The integrity of FireMaster FastWrap+ system is limited to the quality of the installation

**For personal protective equipment recommendations see the MSDS.*

Thermal Ceramics

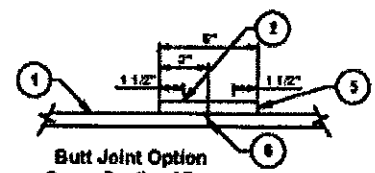
FIREMASTER
Fire Protection Systems

FastWrap+ 1½" Commercial Kitchen Grease or Air Ventilation Duct 1 or 2 Hour Shaft Alternative Zero Clearance to Combustibles

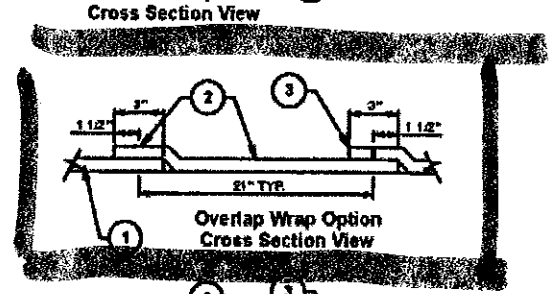


Alternate Pinning Technique

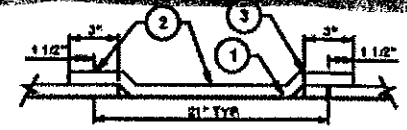
Grease Ducts Only: Sizes ≥ 24"x48" In Cross Section Pinning Technique Required.



Butt Joint Option Cross Section View



Overlap Wrap Option Cross Section View



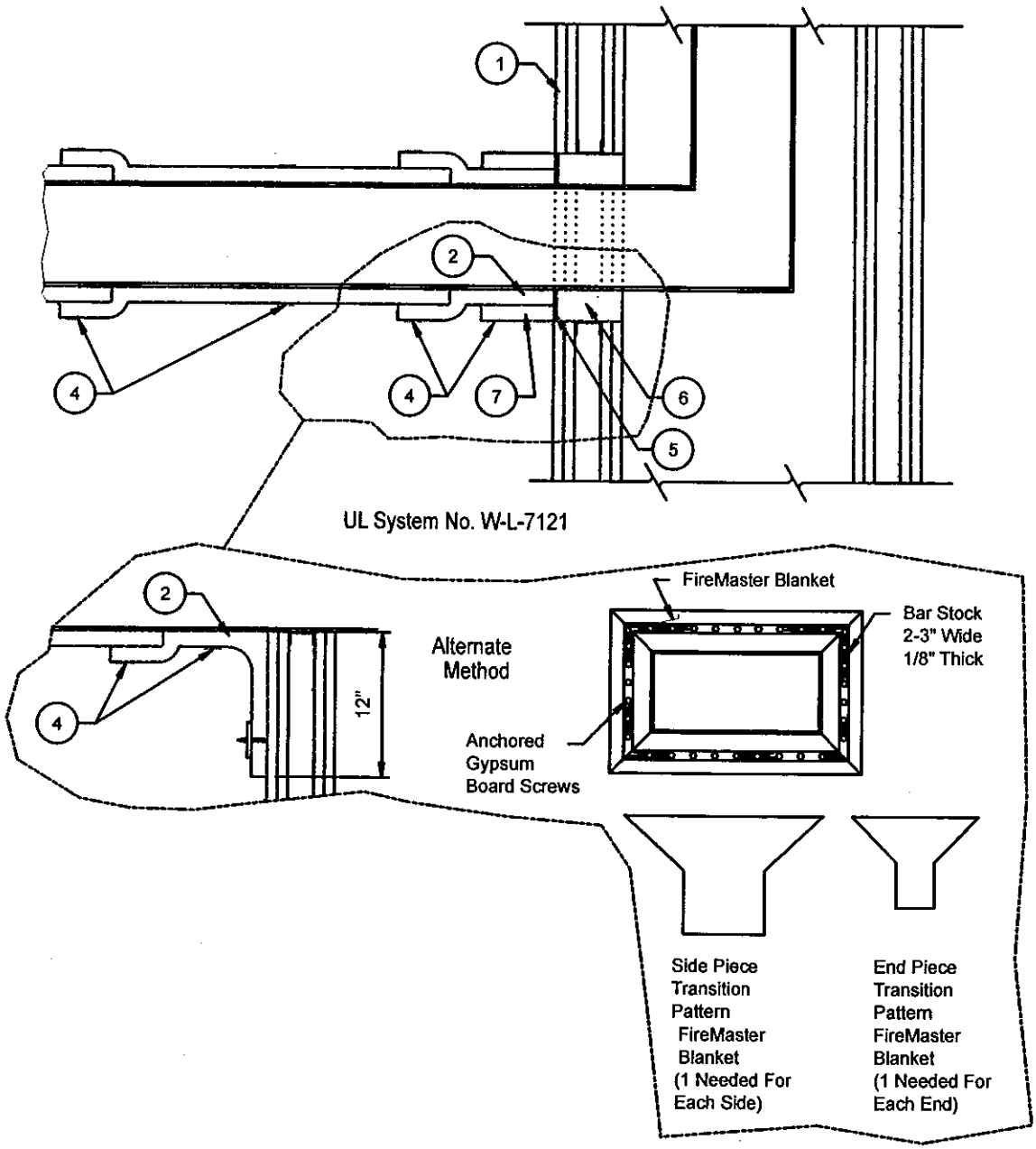
Checkerboard Wrap Option

OPL Design No. GD 544 F and GD 562 F Figure 1 UL Design No. G-14 and V-19 Drawing No. FMFW1.5001-1	
1	One layer FastWrap+ 1½" thick
2	Steel banding ¹⁵⁄₁₆" wide minimum
3	3" minimum longitudinal overlap
4	3" minimum perimeter overlap
5	6" wide FastWrap+ collar (for Butt Joint option)
6	Firmly butted joint (for Butt Joint option)
7	10 or 12 gauge steel insulation pin with 1¹⁵⁄₁₆" x 1¹⁵⁄₁₆" or 1¹⁵⁄₁₆" diameter galvanized speed clips (for alternate pinning)

Note: The integrity of Firemaster duct wrap product is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Shaft Transition 2 Hour Grease Duct or Air Ventilation Duct



FireMaster Duct System	
1	Shaft Wall
2	One Layer FastWrap+, 1 1/2" thick
3	3" Minimum Overlap
4	Steel Banding 1/2" Wide Min.
5	1/4" Approved Through-Penetration Firestop System
6	Scrap Pieces Of FastWrap+
7	FastWrap+ Collar (Optional)

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FIREMASTER
Fire Protection Systems

Product Data and Installation Guide

FastWrap+ 1½"
Commercial Kitchen Grease Duct Air Ventilation Duct

NFPA 96 **IMC**

1. Product Description - New and Improved FastWrap+

Thermal Ceramics FireMaster FastWrap+ is a one-layer, totally foil-encapsulated, non-combustible 2000°F rated, low biopersistence, flexible fireproofing wrap specifically tested to provide a 1 or 2 hour fire rated enclosure for horizontal and vertical commercial kitchen grease and air ventilation ducts. The core blanket chemistry is alkaline-earth silicate wool free of binders and lubricants. FireMaster FastWrap+ is classified by Omega Point Laboratories and Underwriter's Laboratories Listing and Follow-up Service Program to ensure uniform thickness and density specifications, thus providing consistency in end physical properties for required fire ratings. FireMaster FastWrap+ is a proven performance alternative through extensive testing to 1 or 2 hour fire-resistance rated shaft enclosures. With its excellent insulating capability of withstanding fire condition temperatures up to 2000°F, it protects combustible constructions at zero clearance throughout the entire enclosure system. When the duct penetrates fire rated walls and floors, an approved silicone firestop sealant used in combination with FireMaster FastWrap+ provides an alternate means of protection to rigid shafts by maintaining the integrity of the 1 or 2 hour fire rated wall and floor assembly. FireMaster FastWrap+ is resistant to mold growth in test conditions of 75-95% relative humidity (ASTM D6329).

Product Features

- One-layer system with 3 optional installation techniques
- Low biopersistent insulation blanket
- Does not contain low temperature fiberglass or mineral wool
- Shaft alternative to rigid board systems
- Zero clearance to combustibles protection throughout the entire enclosure system
- Lightweight, flexible wrap saves labor
- Passive fire proof material does not shrink, become brittle, or lose fire fighting capabilities with age
- Totally foil encapsulated system protects against material degradation, and potential fire hazards
- Product markings on foil ensure proper material identification for easy inspections
- Wide variety of through-penetration systems
- Resistant to mold growth

2. Applications

- 1 or 2 Hour Commercial Kitchen Grease Duct Enclosure
- 1 or 2 Hour Air Ventilation Duct Enclosure

3. Physical Characteristics

Duct FireMaster Fire Protection Product	Unit	Size	Units/ Ctn.	Wt./ Ctn.
FastWrap+	Roll	1½" x 24" x 25'	1	37.5 lbs.
FastWrap+	Roll	1½" x 48" x 25'	1	75 lbs.
FastWrap+ Collar	Roll	1½" x 6" x 25'	4	37.5 lbs.
Color	White blanket with silver foil encapsulation			

4. Specifications

This specification guide covers the application of Thermal Ceramics FastWrap+ Duct FireMaster Fire Protection Product and an approved silicone firestop sealant.

Application	Fire Resistive Rating	Enclosure System	Through Penetration System
Grease Ducts	1 or 2 hours	1 layer, 1½" FastWrap+, perimeter and longitudinal overlap 3", GD 544 F, GD 562 F, UL G-14	OPL FS 587F UL C-AJ-7098
Air Ducts	2 hours	1 layer, 1½" FastWrap+, perimeter and longitudinal overlap 3" UL V-19	C-AJ-7095, UL-W-L-7121 UL-F-C-7036 UL-F-C-7037

5. Performance

A. Thermal Ceramics FastWrap+ Duct FireMaster Fire Protection Product

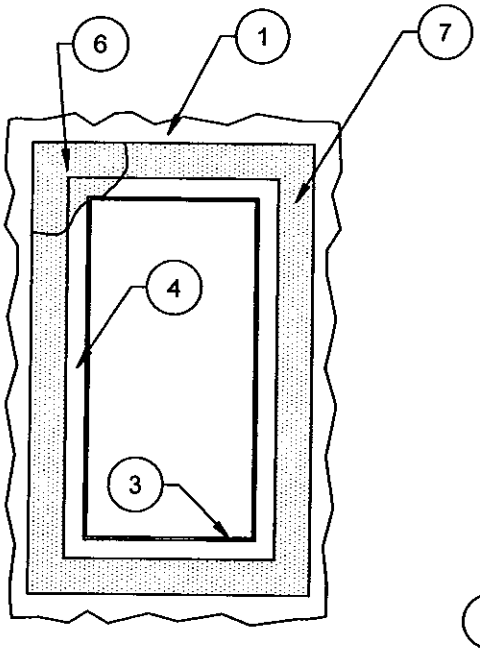
Flammability (ASTM # 84/UL 723)		
Foil:	Flame spread	5
	Smoke developed	10
Blanket:	Flame spread	0
	Smoke developed	0
Thermal Resistance	R value per ASTM C 518 4.15 per inch at 70°F *(21°C)*	

B. Fire Stop Sealants

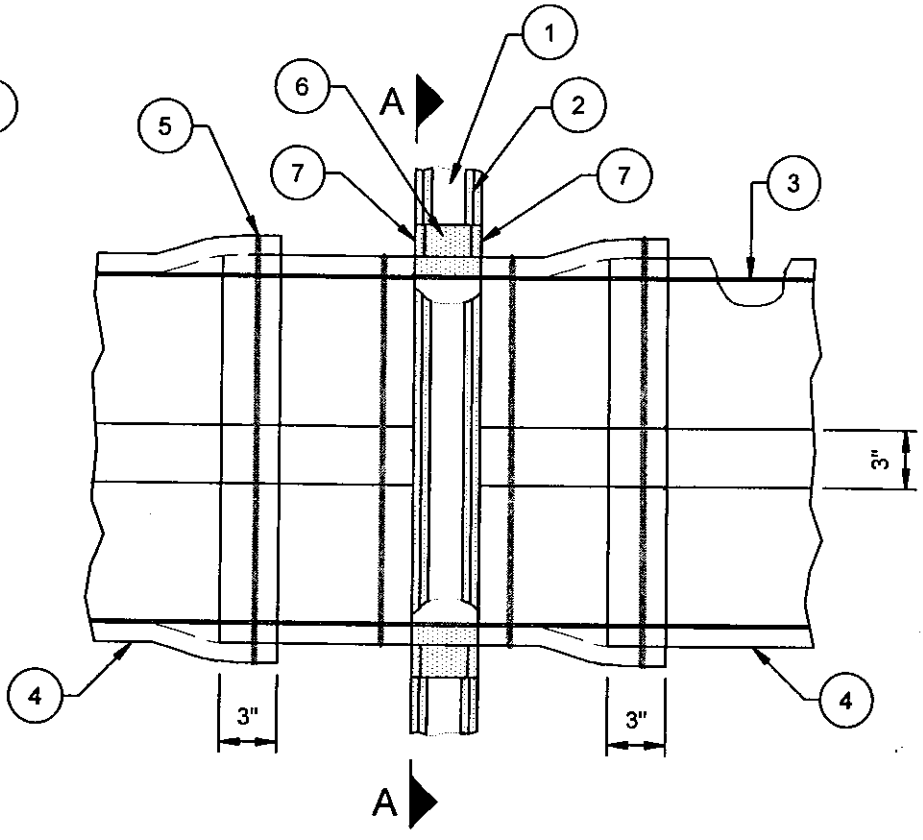
Tremco Inc.	Fyre Sil sealant or Fyre-Sil S/L Sealant (for floor assemblies only)
Specified Technologies Inc.	Pensil 300
Rectoseal	835+ Sealant
HILTI Construction Chemicals, Division of HILTI Inc.	FS One Sealant

Thermal Ceramics

FireMaster® Duct Products
Installation for Through Penetration System
Gypsum Wall 1 or 2 Hour Grease Duct or Air Ventilation Duct



SECTION A-A

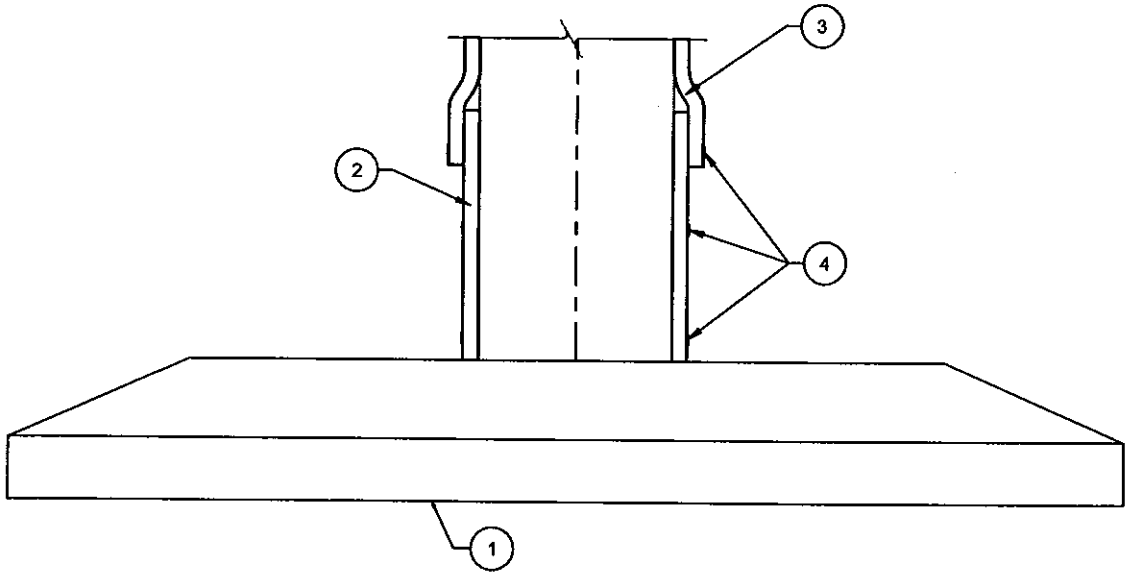


UL Sysytem Nos. W-L-7121, W-L-7145	
1	Wall
2	Gypsum Wallboard
3	Duct
4	One Layer FastWrap+, 1 1/2" thick
5	Steel Banding 1/2" Wide Min. or Pinning
6	Fastwrap+ (Packing Material)
7	Approved Through-Penetration Firestop System

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation for Termination of Wrap at Hood Location
(Overlap Wrap Technique)

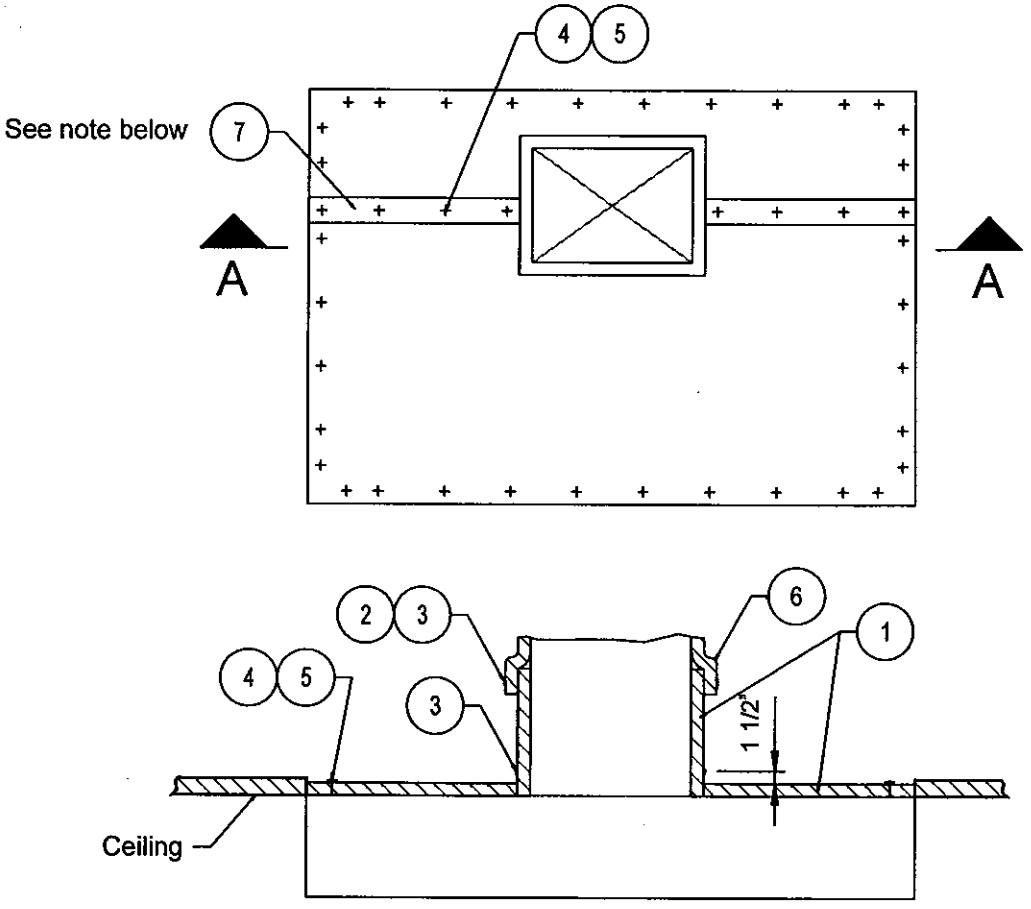


FireMaster Duct System	
1	Hood
2	One layer FastWrap+, 1 1/2" thick
3	3" min overlap
4	Steel banding 1/2" wide min.

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Grease Hood At Ceiling
1 or 2 Hour System (Overlap Wrap Technique)



SECTION A-A

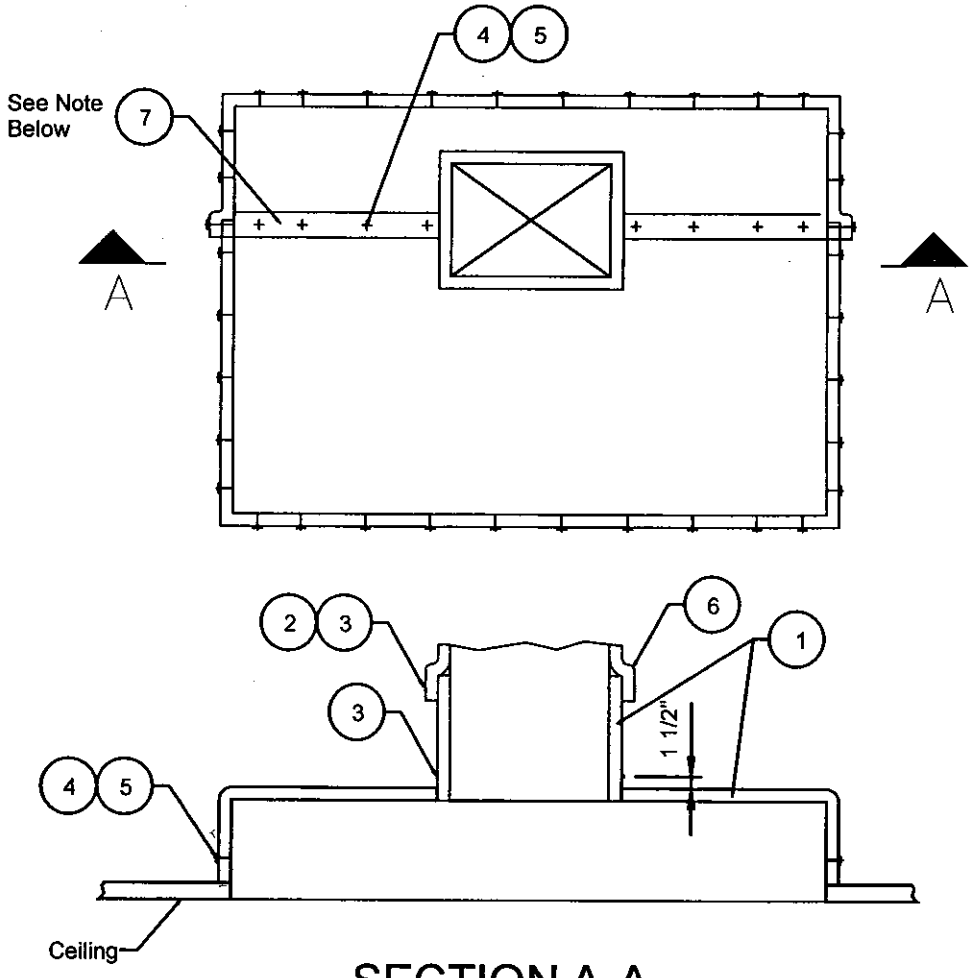
FireMaster Duct System	
1	One layer FastWrap+, 1 1/2" thick
2	Filament tape
3	Steel banding 1/2" wide min.
4	10 or 12 gauge steel insulation pins
5	Speed clips
6	3" min perimeter overlap
7	3" min seam overlap

lotes:
ll joints should be installed with a 3" overlap and anchored in place with insulation pins and speed clips.
in pattern for overlap construction should be 10 1/2" o.c.
lood installation must be approved and in compliance with the code.

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Grease Hood Above Ceiling
1 or 2 Hour System (Overlap Wrap Technique)



SECTION A-A

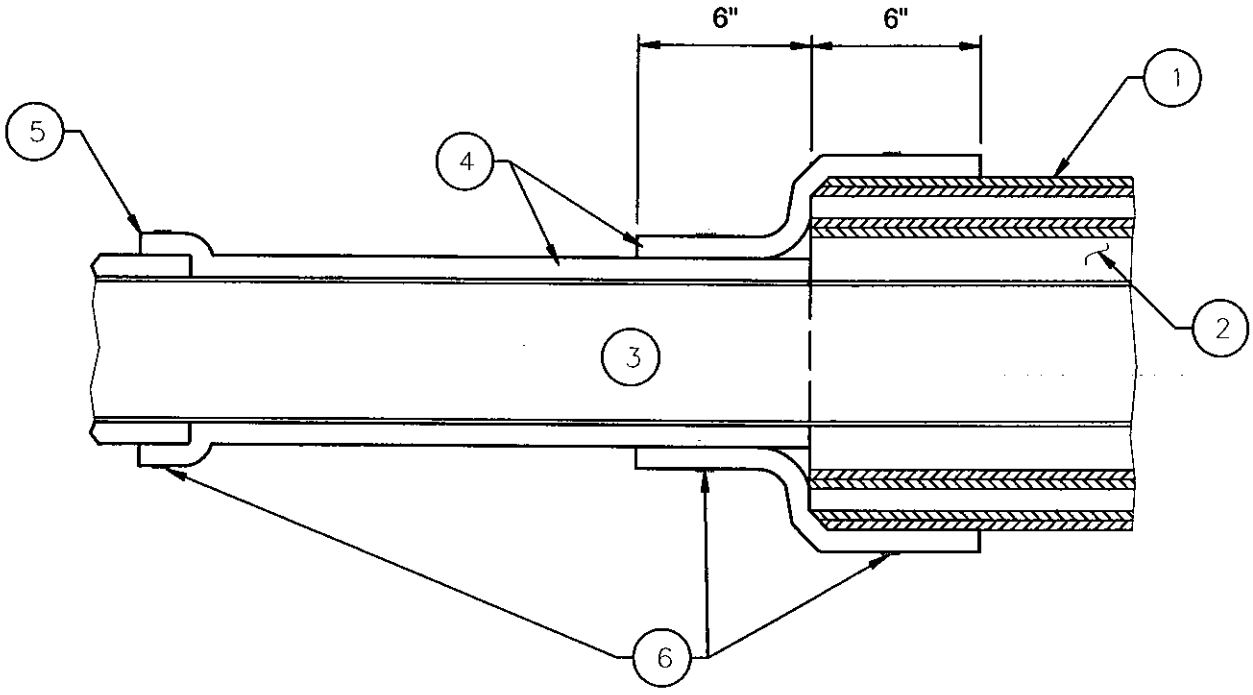
FireMaster Duct System	
1	One Layer FastWrap+, 1 1/2" thick
2	Filament Tape
3	Steel Banding 1/2" Wide Min.
4	10 or 12 Gauge Steel Insulation Pins
5	Speed Clips
6	3" Min Perimeter Overlap
7	3" Min Seam Overlap

lotes:
.ll joints should be installed with a 3" Or 6" overlap and anchored in place with insulation pins and speed clips.
in pattern for overlap construction should be 10 1/2" O.C.
lood installation must be approved and in compliance with the code.

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Transition to Shaft Wall

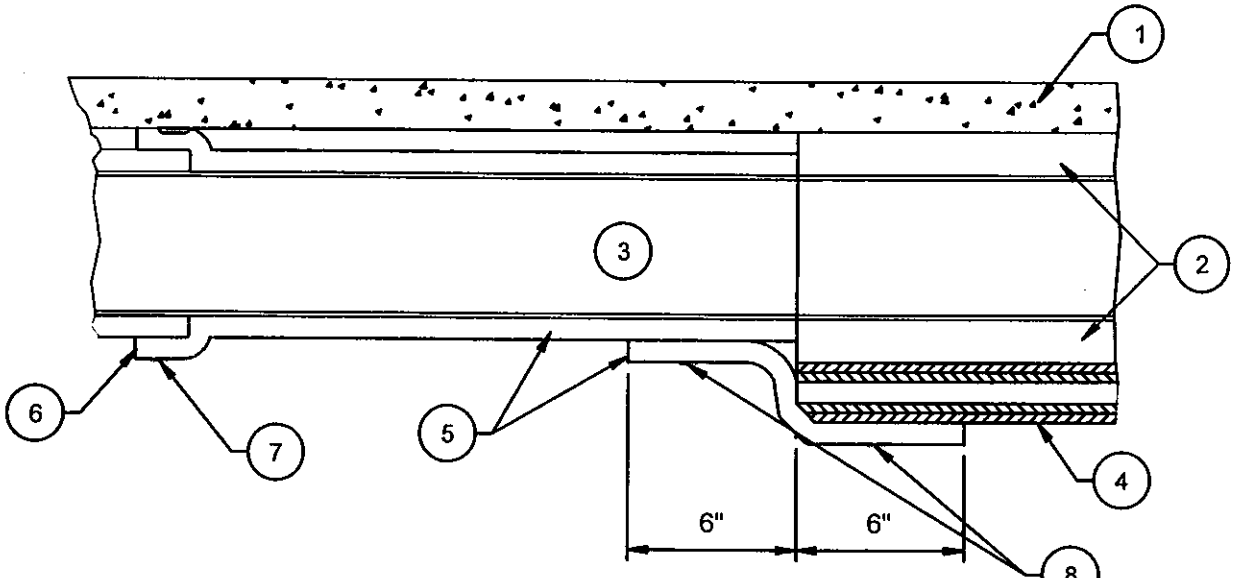


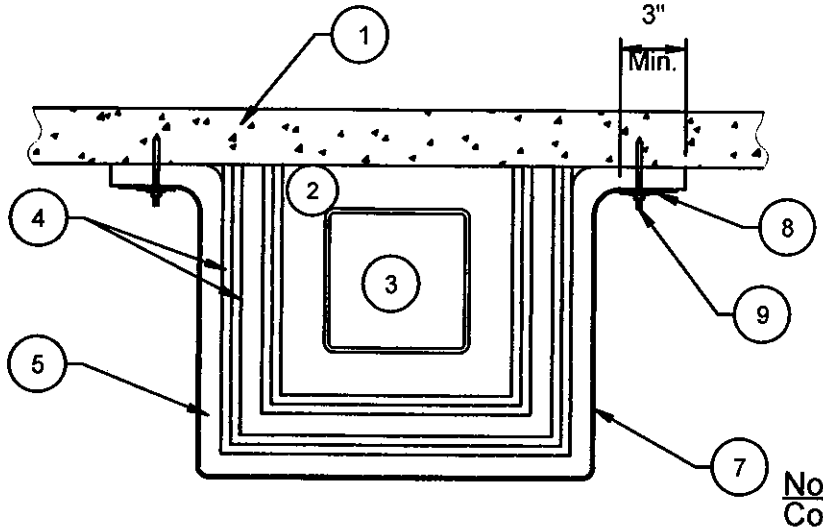
FireMaster Duct System	
1	Rated Shaft Wall
2	Air Gap
3	Duct
4	One Layer FastWrap+, 1 1/2" Thick
5	3" Minimum Overlap
6	Steel Banding 1/2" Wide Min.

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail For
3 Sided Horizontal Shaft Transitions With Air Gap at Ceiling





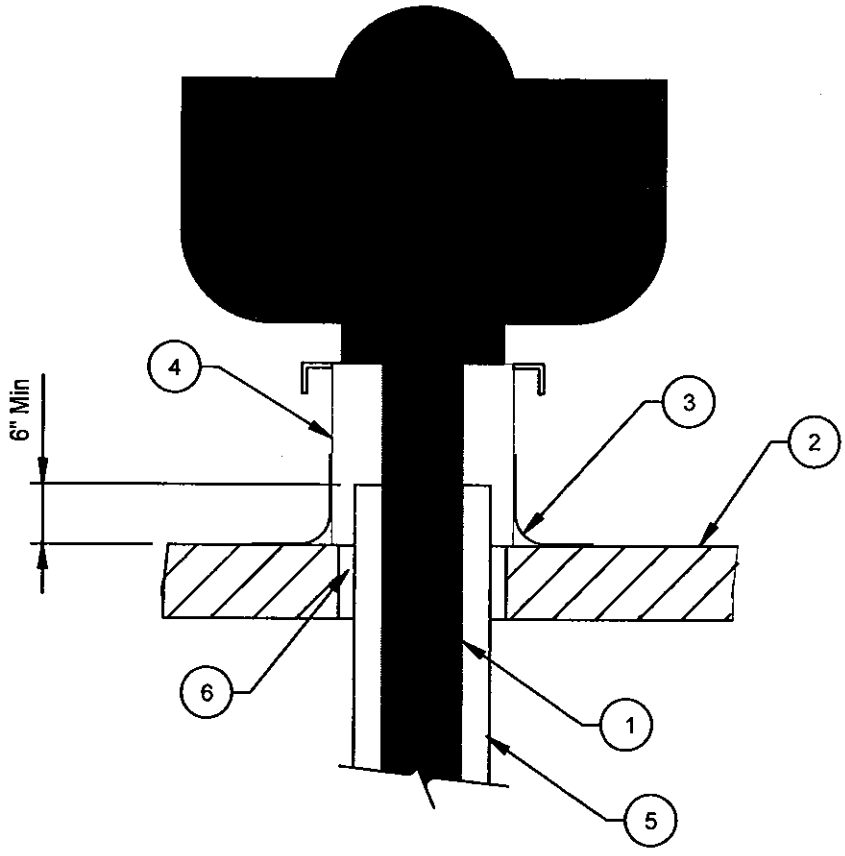
Note:
Concrete Fasteners = 12" O.C.

FireMaster Duct System	
1	Concrete Ceiling
2	Air Gap
3	Duct
4	Shaft Wall
5	One Layer FastWrap+, 1 1/2" thick
6	3" Minimum Overlap
7	Steel Banding 1/2" Wide Min.
8	1/8" Thick x 2"-3" Wide Bar Stock Perforated 12" O.C.
9	1/4" Dia. Threaded Rod With Nut & Washer

ıe integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail For Duct Exiting Roof

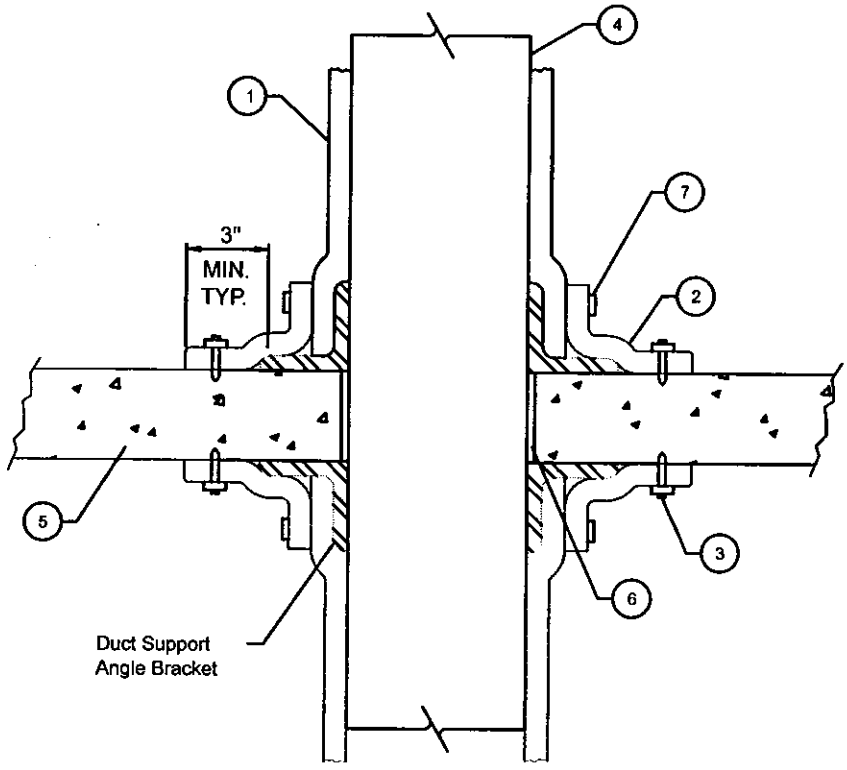


FireMaster Duct System	
1	Duct
2	Roof
3	Roof Over-Flashing
4	Vent Flashing
5	One Layer FastWrap+, 1 1/2" thick
6	FireMaster Firestop System Only Needed For Rated Roofs

ıe integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Typical Vertical Duct Support



FireMaster Duct System	
1	One Layer FastWrap+, 1 1/2" thick
2	One Layer FastWrap+, 1 1/2" thick
3	Mechanical Fasteners & Washers
4	Duct
5	Rated Floor
6	Approved Through-Penetration Firestop System
7	Steel Banding 1/2" Wide Min.

Note:

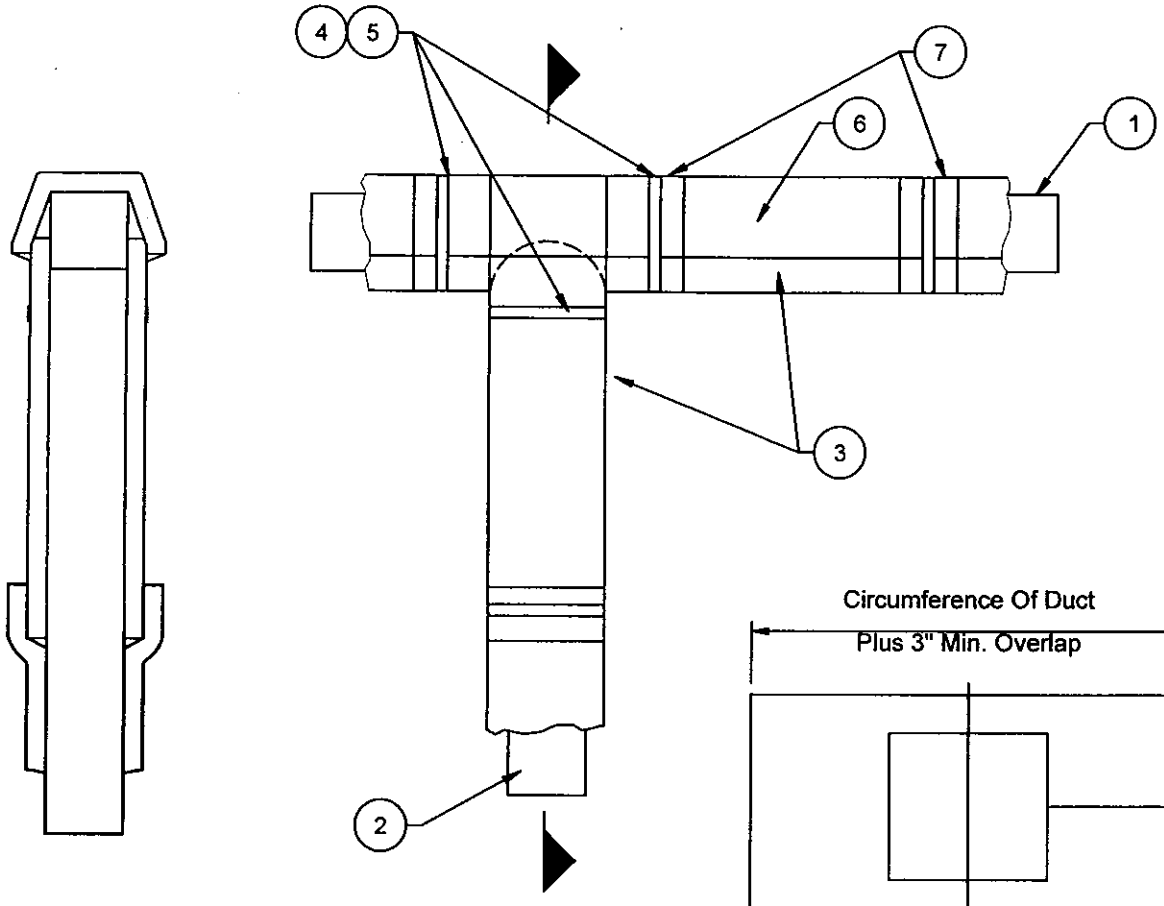
. Support Mechanism Should Be In Compliance With The Code.

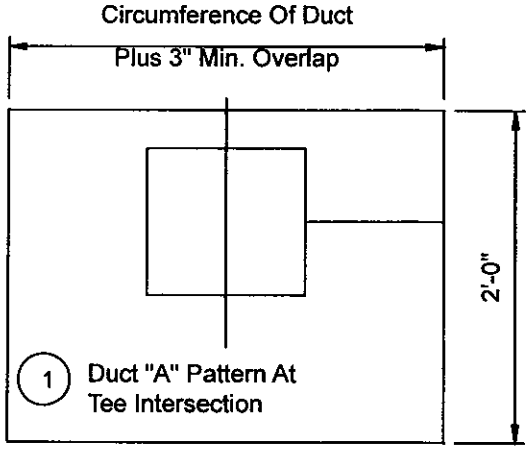
:. Optional Bracket On Bottom Per Mechanical Designer Requirements.

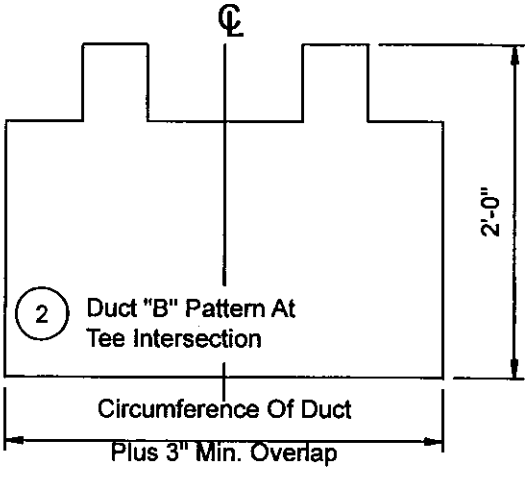
he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Square or Rectangular Duct Tee Section





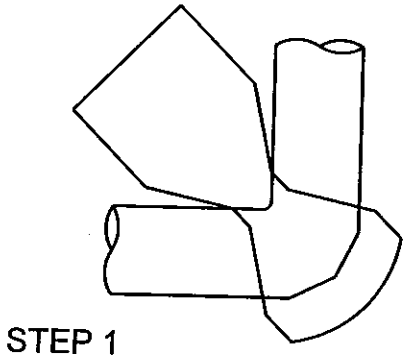


FireMaster Duct System	
1	Duct "A"
2	Duct "B"
3	One Layer FastWrap+, 1 1/2" thick
4	Filament Tape
5	Steel Banding 1/2" Wide Min.
6	3" Minimum Overlap
7	3" Minimum Overlap

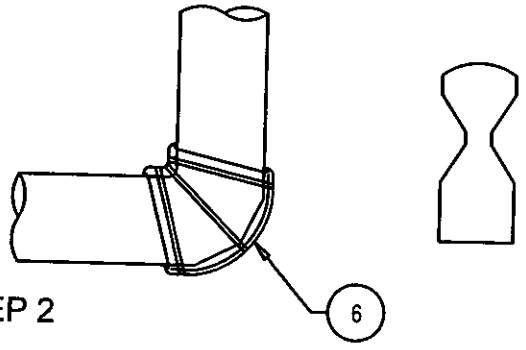
he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

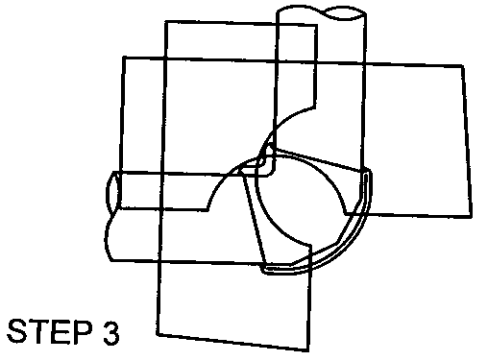
FireMaster® Duct Products
Suggested Installation Detail
For 90° Duct Turn



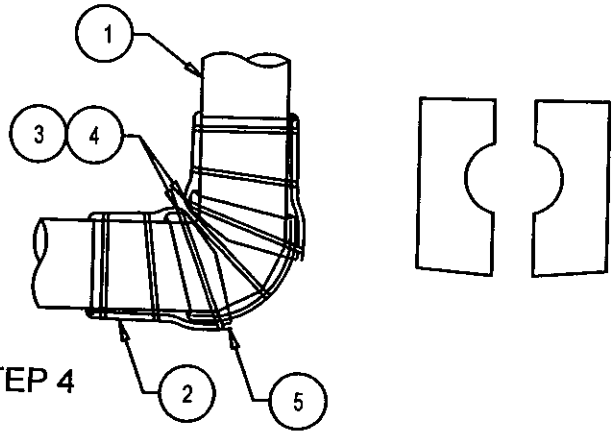
STEP 1



STEP 2



STEP 3



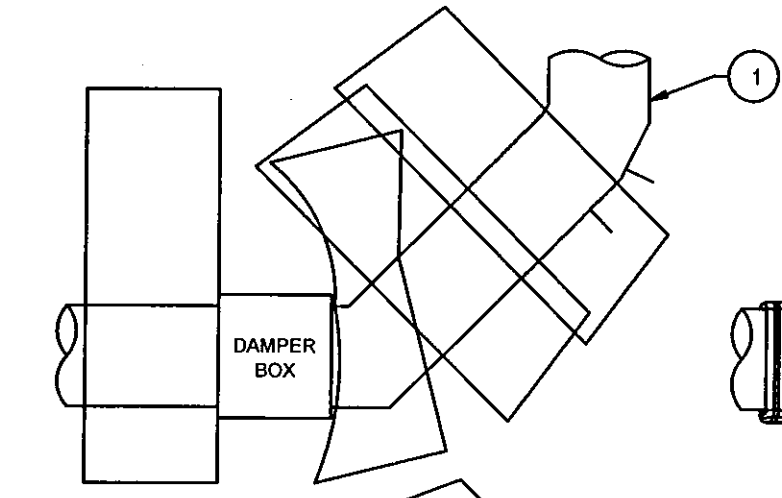
STEP 4

FireMaster Duct System	
1	Duct
2	One Layer FastWrap+, 1 1/2" thick
3	Filament Tape
4	Steel Banding 1/2" Wide Min.
5	3" Minimum Perimeter Overlap
6	3" Minimum Longitudinal Overlap

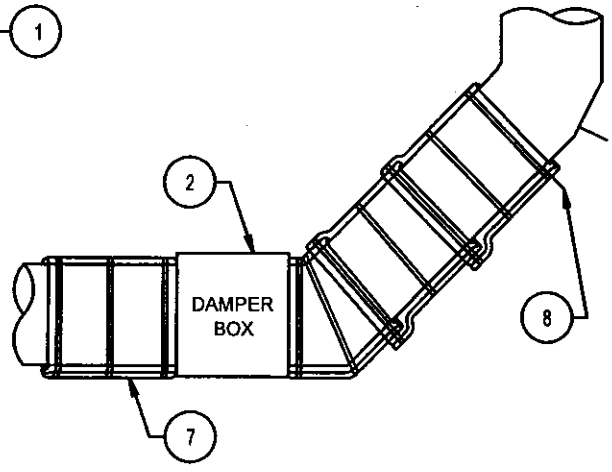
he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

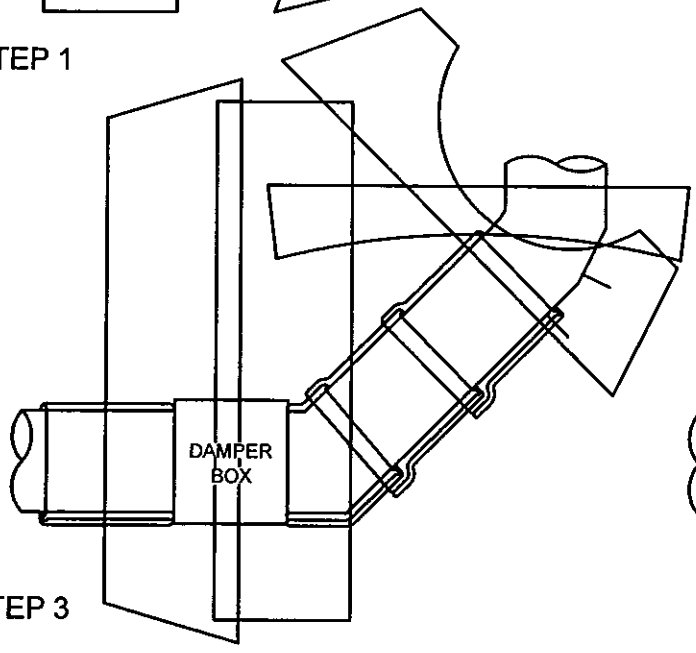
FireMaster® Duct Products
Suggested Installation Detail
For Fire Damper Box



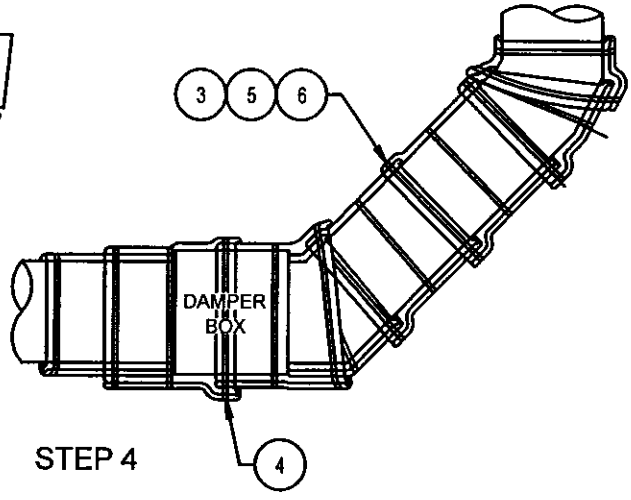
STEP 1



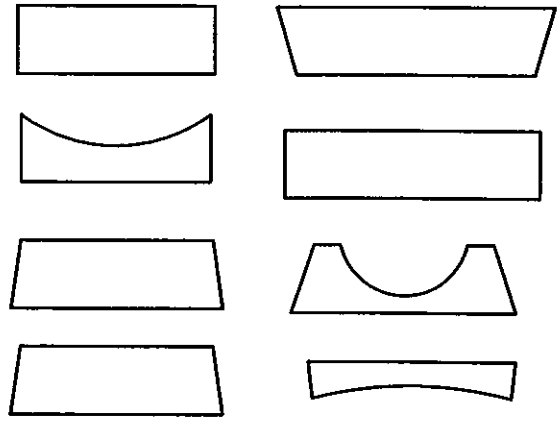
STEP 2



STEP 3



STEP 4

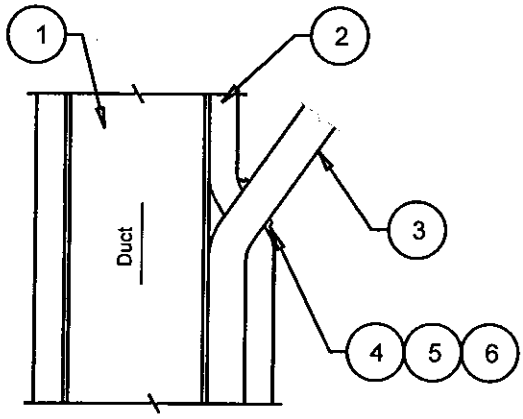


FireMaster Duct System	
1	Duct
2	Fire Damper Box
3	One Layer FastWrap+, 1 1/2" thick
4	Filament Tape
5	Steel Banding 1/2" Wide Min.
6	3" Minimum Perimeter Overlap
7	3" Minimum Longitudinal Overlap
8	Insulation Pin

he integrity of Firemaster duct systems is limited to the quality of the installation.

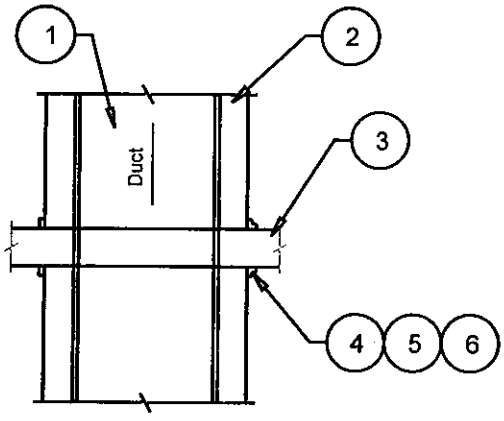
Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Pipe, Conduit, or Support Hanger Rod
Penetration of Wrap 1 or 2 Hour



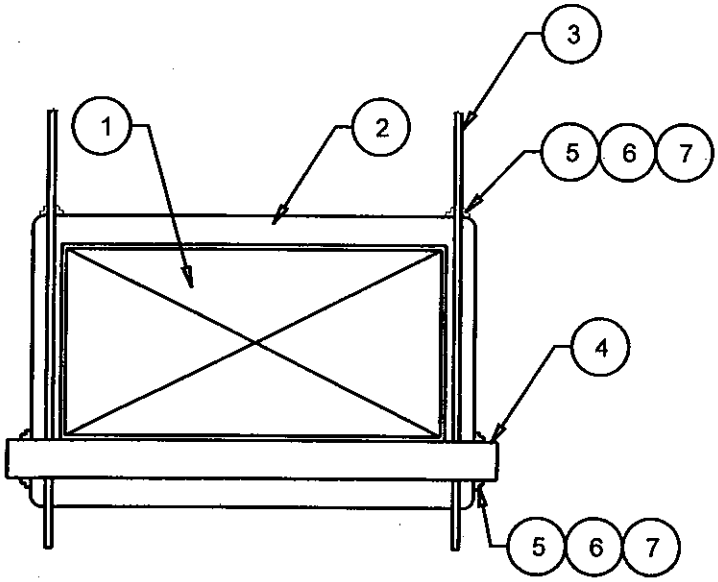
FireMaster Duct System	
1	Duct
2	One Layer FastWrap+, 1 1/2" thick
3	Non Combustible Pipe or Conduit
4	Filament Tape
5	Approved Through-Penetration Firestop System
6	Aluminum Tape

Note:
Adjacent Blanket Overlaps Must Be Installed
To Cover The Seams To The Penetrating Item/s.



FireMaster Duct System	
1	Duct
2	One Layer FastWrap+, 1 1/2" thick
3	Non Combustible Pipe or Conduit
4	Filament Tape
5	Approved Through-Penetration Firestop System
6	Aluminum Tape

Note:
Adjacent Blanket Overlaps Must Be Installed
To Cover The Seams To The Penetrating Item/s.



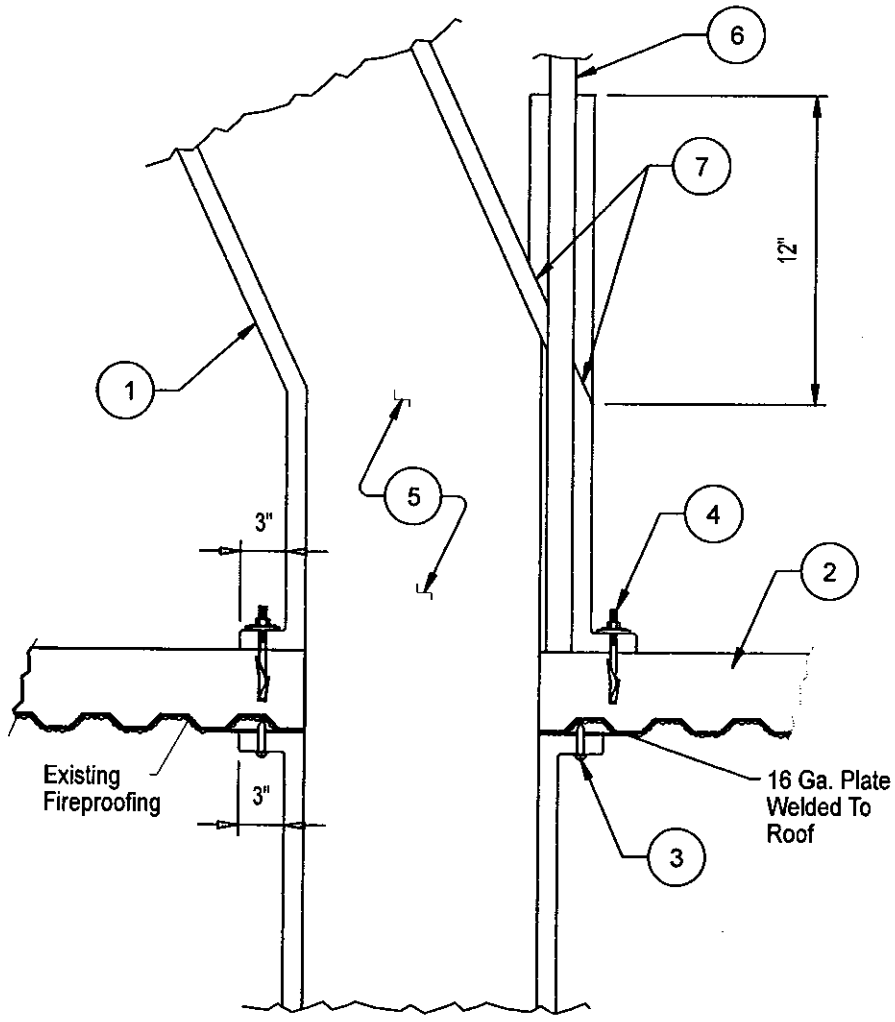
FireMaster Duct System	
1	Duct
2	One Layer FastWrap+, 1 1/2" thick
3	Hanger Support Rod
4	Support Hanger Brackets
5	Filament Tape
6	Approved Through-Penetration Firestop System
7	Aluminum Tape

Note:
Adjacent Blanket Overlaps Must Be Installed
To Cover The Seams To The Penetrating Item/s.

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Vertical Duct Support Systems

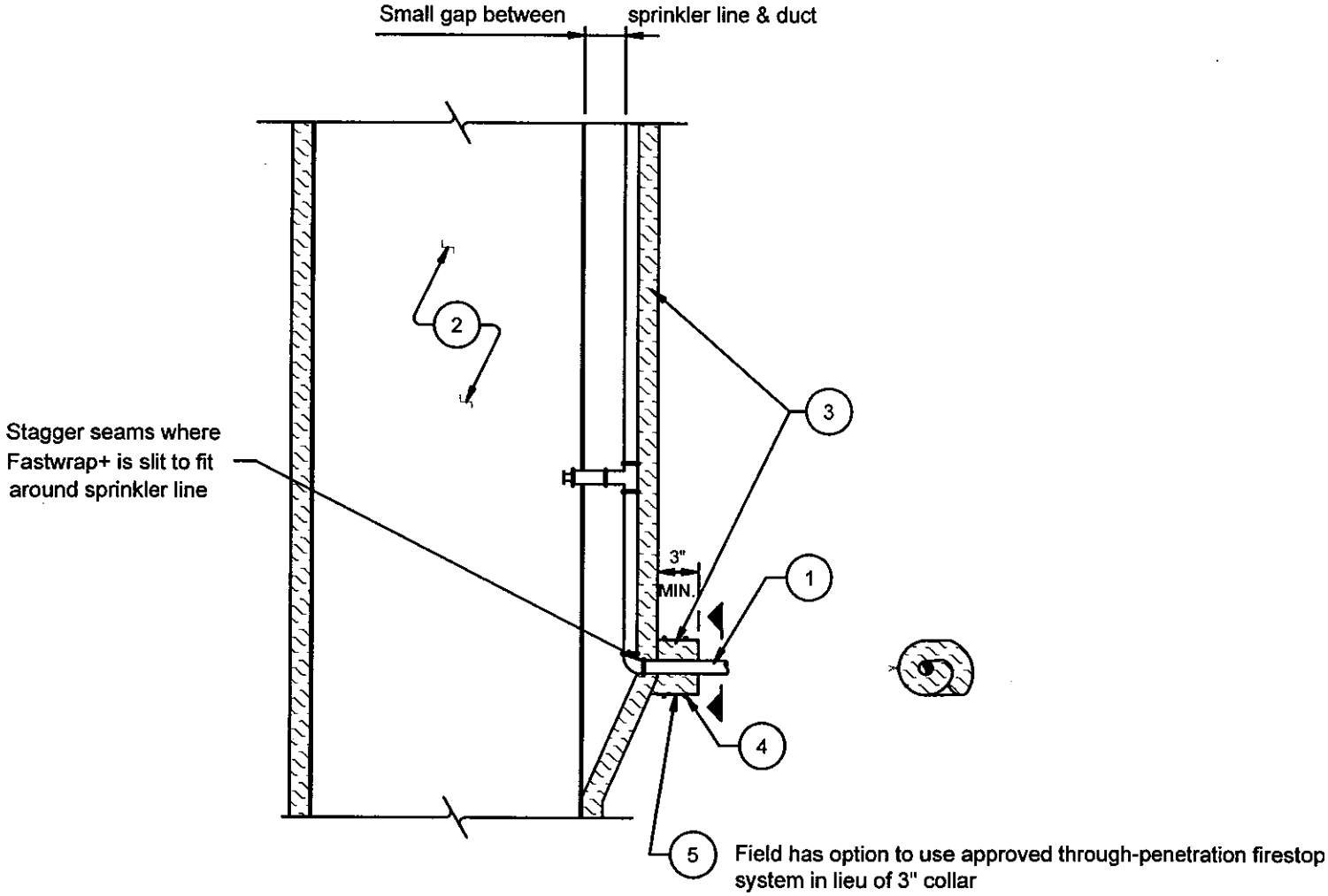


FireMaster Duct System	
1	One Layer FastWrap+, 1 1/2" thick
2	Concrete Floor/Ceiling
3	Perforated 12" O.C. Bar Stock
4	Concrete Fasteners & Washers
5	Duct
6	DWV Pipe
7	Approved Through-Penetration Firestop System

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Incorporating Sprinkler Lines into Grease Duct Systems

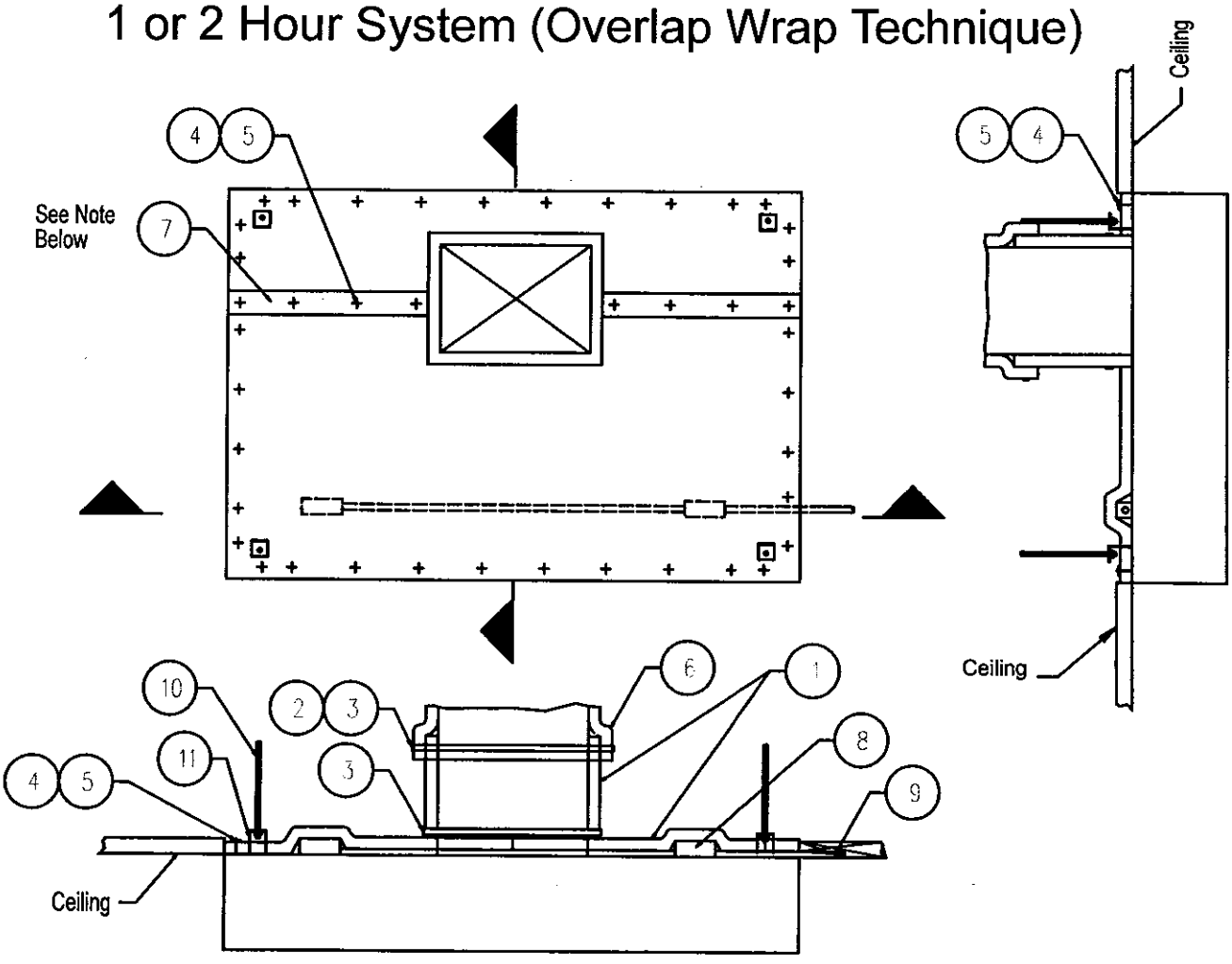


FireMaster Duct System	
1	Steel sprinkler line
2	Duct
3	One layer FastWrap+, 1 1/2" thick
4	SS wire ties min. 16 ga.
5	One layer FastWrap+ 3" min. collar

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Grease Hood At Ceiling
1 or 2 Hour System (Overlap Wrap Technique)



FireMaster Duct System	
1	One Layer FastWrap+ 1 1/2" Thick
2	Filament Tape
3	Steel Banding 1/2" Wide Min.
4	10 OR 12 Gauge Steel Insulation Pins
5	Speed Clips
6	3" Min Perimeter Overlap
7	3" Min Seam Overlap
8	Electrical Junction Box - Incandescent Lighting Fixtures
9	Conduit
10	All-Threaded Rod
11	Hanging Bracket

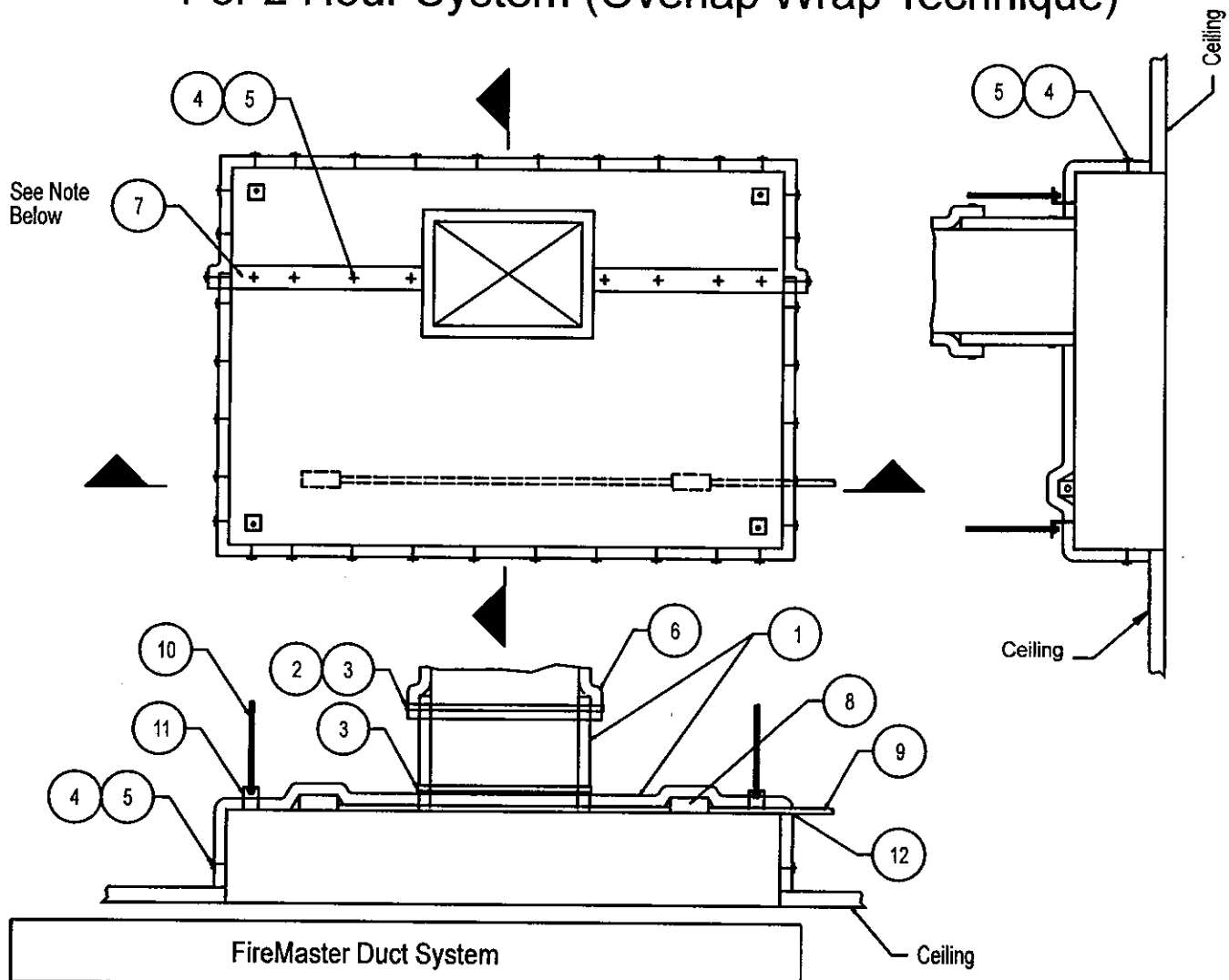
lotes:

ll joints should be installed with a 3" overlap and anchored in place with insulation pins and speed clips.
in pattern for overlap construction should be 10 1/2" o.c.
lood installation must be approved and in compliance with the code.

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Grease Hood Above Ceiling
1 or 2 Hour System (Overlap Wrap Technique)



FireMaster Duct System	
1	One Layer FastWrap+ 1 1/2" Thick
2	Filament Tape
3	Steel Banding 1/2" Wide Min.
4	10 OR 12 Gauge Steel Insulation Pins
5	Speed Clips
6	3" Min Perimeter Overlap
7	3" Min Seam Overlap
8	Electrical Junction Box - Incandescent Lighting Fixtures
9	Conduit
10	All-Threaded Rod
11	Hanging Bracket
12	Approved Through-Penetration Firestop System

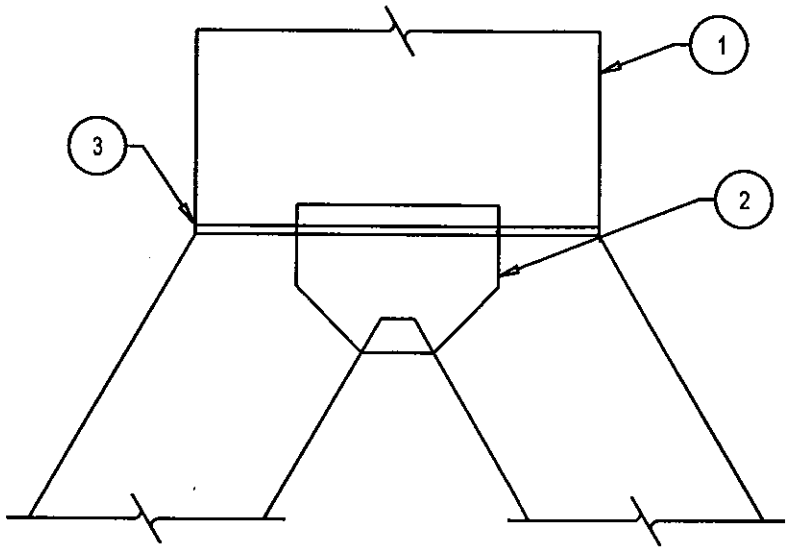
lotes:

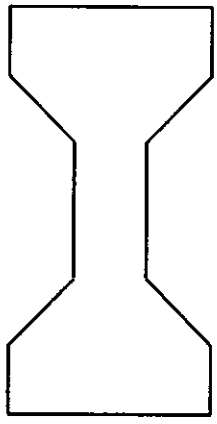
ll joints should be installed with a 3" overlap and anchored in place with insulation pins and speed clips.
in pattern for overlap construction should be 10 1/2" o.c.
lood installation must be approved and in compliance with the code.

he integrity of Firemaster duct systems is limited to the quality of the installation.

Thermal Ceramics

FireMaster® Duct Products
Suggested Installation Detail
For Branching Duct





FireMaster Duct System	
1	Duct
2	One Layer FastWrap+, 1 1/2" thick
3	Steel Banding 1/2" Wide Min.

he integrity of Firemaster duct systems is limited to the quality of the installation.

INSTALLATION INSTRUCTIONS FOR FIRE RATED APPLICATIONS USING T-BAR

1. Install No. 12 SWG Galv. Steel Hanger Wire (28) on Main Runners (29) at four corners of grid module containing Luminaire (30). When Main Runners are spaced greater than 24 in. on center, Cross Tees (31) forming sides of grid module containing Luminaire to be supported by Steel Hanger Wire at Cross Tee midspan.

2. Place the Luminaire (30) on the ceiling grid with the "T" Bars running through the Hanger Bar Notches (32). Fold the Hanger Bar ends closed to engage the integral Tabs (33). Secure with pliers if necessary.

3. Install two No. 12 SWG Galv. Steel Hanger Wires (34) secured to each end of Luminaire (30) plaster frame at Lanced Openings (35) in hanger bar support channels. Steel Hanger Wires to be installed vertically and secured to structural members of floor or roof assembly.

4. Tighten bar hanger Locking Screws (5) in ends of Plaster Frame (2) to prevent lateral movement of the Frame.

5. See Steps 2 through 6 on Page 1 to complete installation.

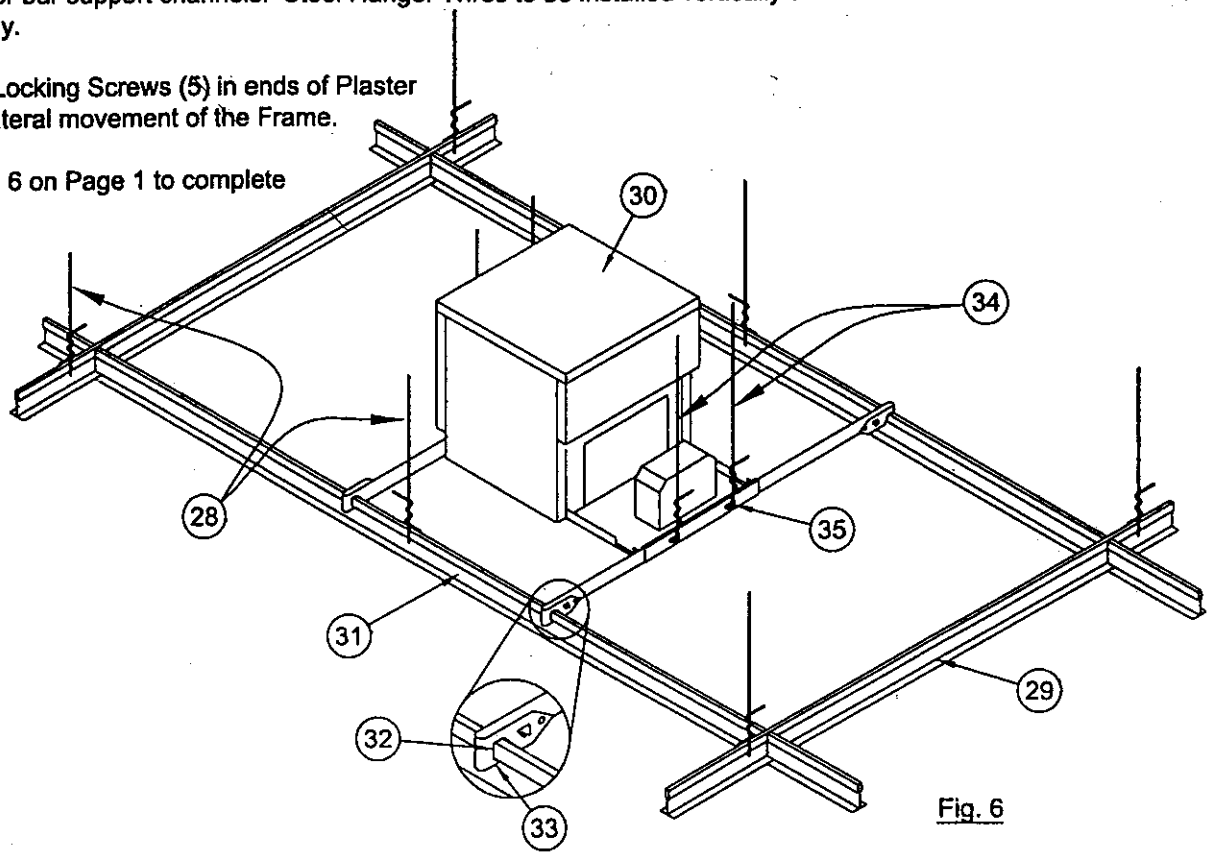


Fig. 6

Installation Instructions for the OPTIONAL Progress P8511-01 Furring Channel Clips to be used in fire rated applications using Furring Channels

1. Attach one Furring Channel Bracket (36) to each Hanger Bar (37) as shown in Fig. 7 and 8.
CAUTION: Maintain a firm hold on Luminaire until Steps 2 and 3 are complete.
2. Lift Luminaire (30) to position Furring Channel Brackets over Furring Channels (38) and secure in place by bending Tabs (39) over as shown in Fig. 9.
3. Once all Brackets are in place bend Hanger Bar End (40) around to secure Brackets to the Channels as shown in Figure 10. NOTE: Nailer Tab (41) should lodge under edge of Furring Channel.
4. Tighten bar hanger Locking Screws (5) in ends of Plaster Frame (2) to prevent lateral movement of the Frame.
5. Install two No. 12 SWG Galv. Steel Hanger Wires (34) secured to each end of Luminaire (30) plaster frame at Lanced Openings (35) in hanger bar support channels. Steel Hanger Wires to be installed vertically and secured to structural members of floor or roof assembly. (See Fig. 6)
6. See Steps 2 through 6 on Page 1 to complete installation.

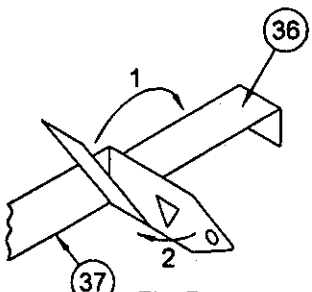


Fig. 7

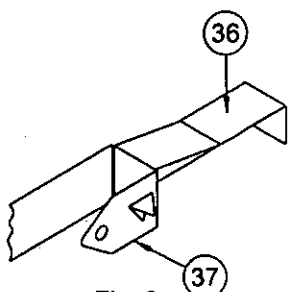


Fig. 8

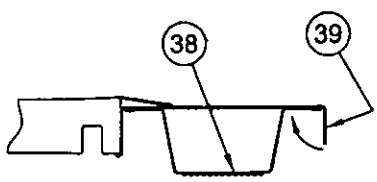


Fig. 9

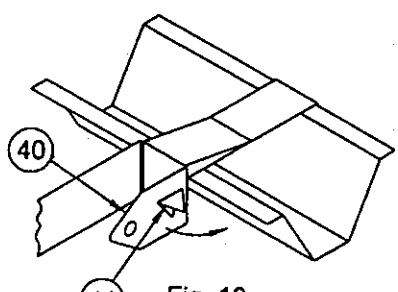


Fig. 10

SPEC.NO. 023587 01-15-03

PROGRESS LIGHTING

Assembly & Installation Instructions

CAUTION: Read instructions carefully and turn electricity off at main circuit breaker panel before beginning installation.

P821-FB & P821-FBT

WARNING: - if any Special Control Devices are used with this fixture, follow the instructions carefully to assure full compliance with N.E.C. requirements. If there are any questions, contact a Qualified Electrical Contractor.
WARNING: Use only those Trims, Lamps and maximum Wattage's proper for this Fixture, as indicated on the Label within the Fixture Housing.
WARNING: The National Electrical Code, Article 110-3 (b), states that "Listed or Labeled equipment shall be used or installed in accordance with any Instructions included in the listing or labeling". Use only with Progress UL listed Trims. Use of other Trims not listed in this Fixture, including those that are UL classified, is a violation of N.E.C. 110-3 (b) and voids all warranties.

When installed according to the instructions provided and as specified in Volume 1 of the UL Fire Resistance Directory, Progress P821-FB & P821-FBT luminaires may be used in fire resistant Floor-Ceiling and Roof-Ceiling designs. See File #R19217 under Fire Classified Directory CDHW.

Follow this Instruction Sheet Carefully. Be sure Electricity is OFF before starting Installation.

INSTALLATION IN WOOD JOISTS

1.- Slip Bar Hangers (1) through slots in Plaster Frame (2). Hold Frame in desired position between Joists (3) and drive Bar Hanger Tabs (4) into Joists. Use a minimum 1" lg. steel Nail or Screw (26) through holes in Bar Hanger ends for additional support. Tighten bar hanger Locking Screws (5) in ends of Plaster Frame to prevent lateral movement of Plaster Frame. (See Fig. 1 and 2)
2.- Remove Cover Plate (9) from Junction Box (10). Slip Type NM Cable (Romex) (11) through desired hole in Junction Box (10) above Retaining Plate (13). Cable (11) is secured by Retaining Plate (13). (See Fig. 3)
3.- If other than Type NM Cable (Romex) is to be used, remove one Large Knockout (15) at desired location on top or sides of Junction Box (10). Bring appropriate Electrical Supply Cable into Junction Box and secure in place with proper UL listed Connector (NOT FURNISHED).
4.- Connect Fixture Wires (27) to Supply Wires (16) as shown in Wiring Diagram. Use UL listed Wirenuts (NOT FURNISHED).
5.- After ceiling is finished, lower Housing (6) until flush with Ceiling.
6.- To gain access to Junction Box (10), after Ceiling is finished, remove three Screws (24) that hold Housing (6) in place. Lower the Housing. Remove Screw (21) and Access Door (22) located inside Fixture. Junction Box Cover Plate (9) can now be removed for service.
7.- Plaster Frame (2) and Gasket (25) must be in contact with Ceiling (23).
8.- If joists are spaced greater than 16 inches on center, 2x4 (4 inch dimension vertical) or greater lumber shall be used to span between joists at the plane of the ceiling to create a 16 inch on center space to mount the fixture as shown in Fig. 4.
9.- If steel furring channels are used in the ceiling, Plaster Frame (2) must be lowered until Gasket (25) contacts Ceiling (23) as shown in Fig. 5.

*** This is a Non-IC Housing. Insulation must be kept 3" away from fixture to prevent lights from blinking

(Ceiling Opening is to be 6 7/8" Dia.)

This Instruction sheet is also intended to be used as a Paint Shield.

Upon completion of installation, crumple this sheet up and insert it up into the housing to protect the socket and labels from being spray painted.

Spec. No. 023567 01-15-03

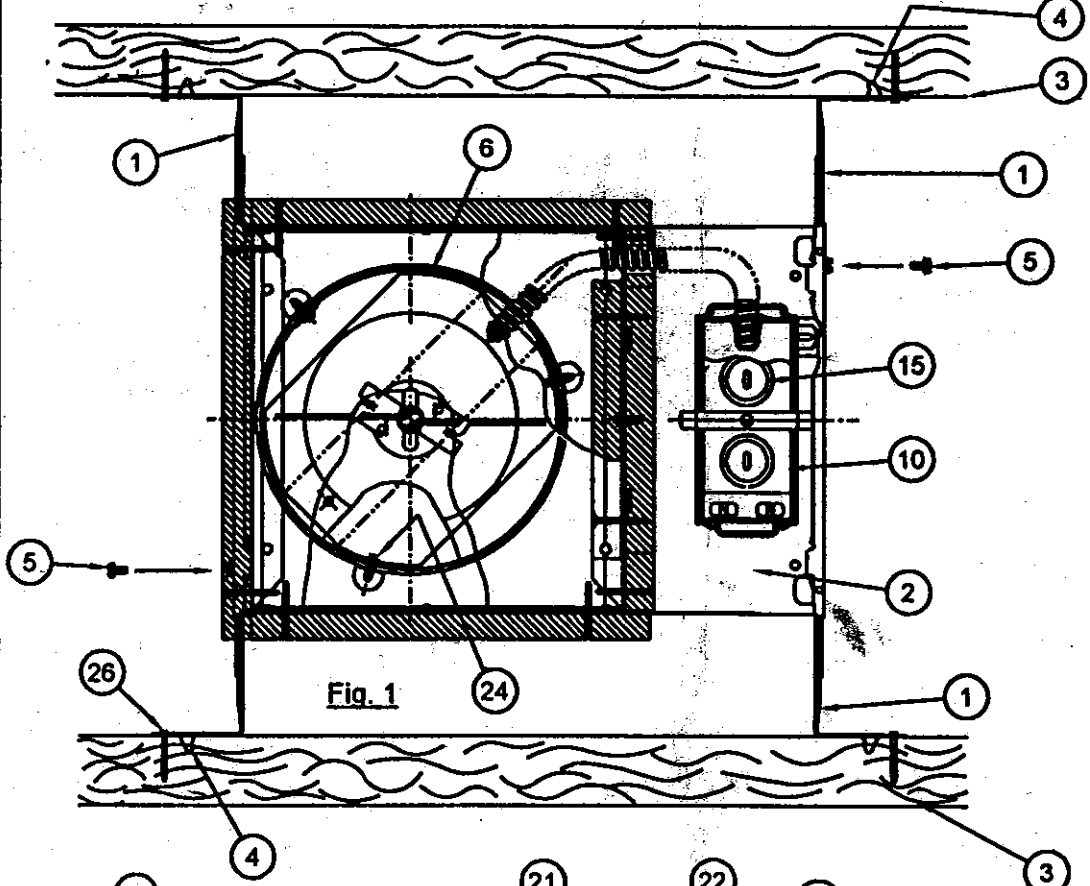
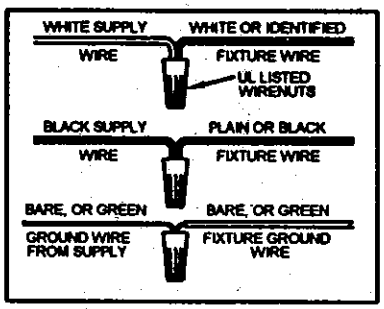


Fig. 1



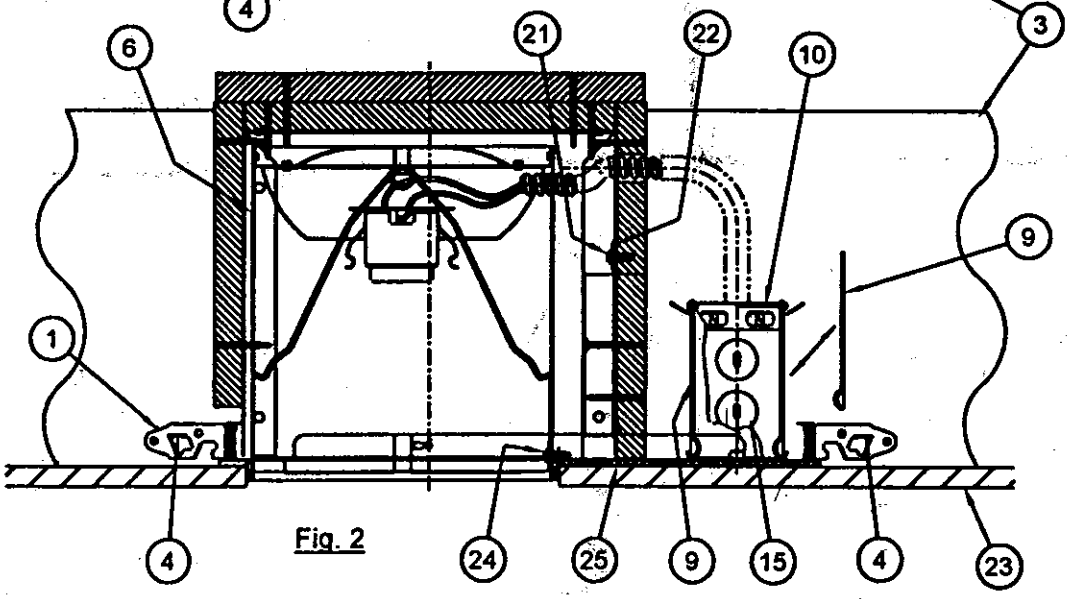


Fig. 2

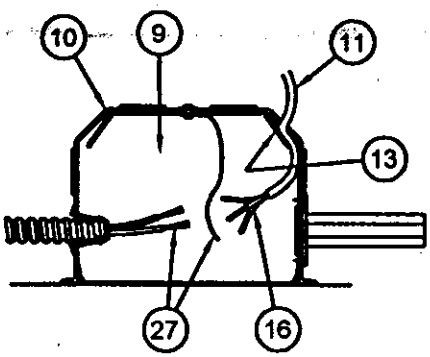


Fig. 3

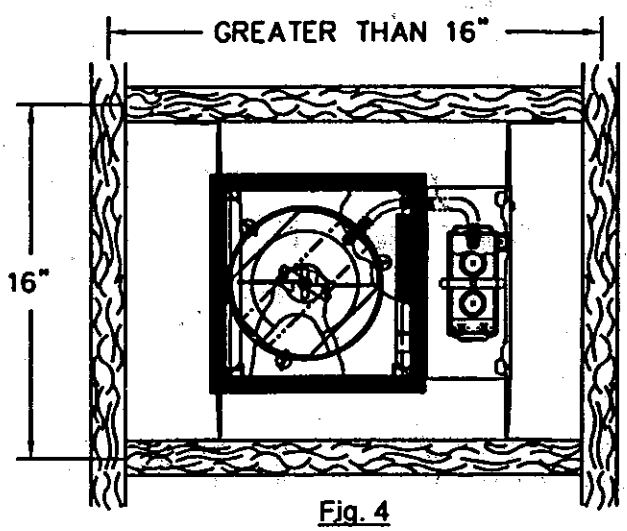


Fig. 4

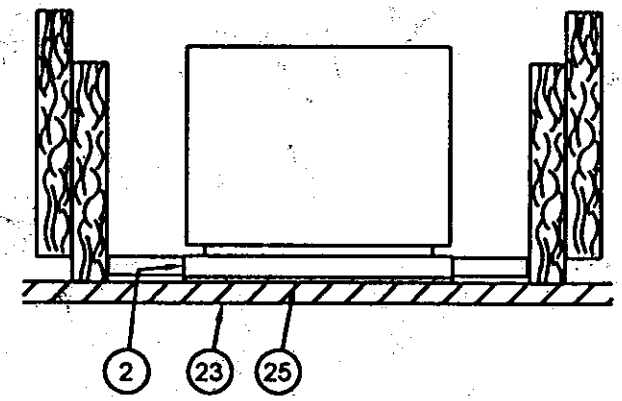


Fig. 5