## City of Portland, Maine – Building or Use Permit Application 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

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	Carn Caller	· ~	<u></u>		
Location of Construction:	Owner: Gury 20172	- g.	Phone:		Permit No:
Owner Address:	Leasee/Buyer's Name:	Phone:	Busines	Ma he Ve ov	910119
Contractor Name:	Address:	Phone Phone	e:		Poper Materia
Past Use:	Proposed Use:	COST OF WOR \$	K:	PERMIT FEE:	FEB   3 1997
(a) (a) (a) <sup>2</sup> − 2i <sub>2</sub> <sup>2</sup> (b).		FIRE DEPT.	Approved Denied	INSPECTION: Use Group 3 Type 5 B BOCA 96 Signature:	CITY OF PORTLAND
Proposed Project Description:	•	PEDESTRIAN A	CTIVITIE	ES DISTRICT (P.U.D.)	Zoning Approval:
		Action:	Approved Approved v Denied	with Conditions:	Special Zone or Reviews: <ul> <li>Shoreland</li> <li>Wetland</li> <li>Flood Zone</li> </ul>
		Signature:		Date:	□ Subdivision □ Site Plan, mai⊡ minor □ mm □
Permit Taken By:	Date Applied For:	He water in	12		
<ol> <li>Building permits do not include plumbing, set</li> <li>Building permits are void if work is not started tion may invalidate a building permit and stop</li> </ol>	ptic or electrical work. I within six (6) months of the date of iss p all work	uance. False informa-	PERI WATTLI RI	WIT ISSUED	Conditional Use Conditional Use Interpretation Denied Historic Preservation Not in District or Landmark Does Not Require Review Requires Review Action:
I hereby certify that I am the owner of record of the authorized by the owner to make this application a if a permit for work described in the application is areas covered by such permit at any reasonable ho	e named property, or that the proposed w as his authorized agent and I agree to co ssued, I certify that the code official's a pur to enforce the provisions of the code	york is authorized by the onform to all applicable authorized representaties (s) applicable to such	ne owner of le laws of th we shall hav permit	record and that I have been nis jurisdiction. In addition, we the authority to enter all	Approved     Approved with Conditions     Denied     Date:
		•	ale dia Nan 1912		
SIGNATURE OF APPLICANT	ADDRESS:	DATE:		PHONE:	
RESPONSIBLE PERSON IN CHARGE OF WORK	K, TITLE			PHONE:	
White-Pe	rmit Desk Green–Assessor's Can	ary–D.P.W. Pink–Pເ	ıblic File	Ivory Card-Inspector	D, Powers

•

Location of Construction: 23 Willow Lane (1	Phone: 970110		Permit No:		
Owner Address:	Leasee/Buyer's Name:	Phone:	BusinessNan	ne:	
Contractor Name: Ric Weinschenk Builde	Address: ers 91 Summer Place Ptld	Phone , ME 04103	: 828–3900		PPmRsauge:SSUED
Past Use:	Proposed Use:	COST OF WORL	K: PE	RMIT FEE:	
		\$ 82,500	.00 \$	435.00	<b>HEB 3</b> 1997
Vacant Land	l-fam	<b>FIRE DEPT.</b> $\Box$	Approved INS	$\begin{array}{c} \text{SPECTION:} \\ \text{O}  \text{P} 2^{-1} \\ \end{array}$	
			Denied Use	CA96	LITY OF PORTLAND
Proposed Project Description:	· · · · · · · · · · · · · · · · · · ·	PEDESTRIAN A	<u> </u>	nature: ISTRICT (PUD)	Zoning Approval:
		Action:	Approved	[] []	OK-SWIACondit
Construct 1 for the lifes			Approved with	Conditions:	Special Zone of Heviews:
Construct 1-ram dwelling		Í	Denied	E	U Wetland
		Signature		Date	□ Flood Zone '
Permit Taken By:	Date Applied For:	Signature.		Date.	Site Plan maj 🗆 minor 🗆 mm 🕩
Mary Gresik		14 January 19	97		
1. This permit application doesn't preclude the A	Applicant(s) from meeting applicable Stat	e and Federal rules.			□ Variance
2. Building permits do not include plumbing, se	ptic or electrical work.				
3. Building permits are void if work is not started	d within six (6) months of the date of issue	ance. False informa-			
tion may invalidate a building permit and sto	p all work				□ Approved
			JED		
		RERMIT ISS	MENTE		Historic Preservation
		REQUITE			Provide the District or Landmark
		WIII			Requires Review
					Action:
	CERTIFICATION				Appoved
I hereby certify that I am the owner of record of the	e named property, or that the proposed wo	rk is authorized by the	e owner of recor	rd and that I have bee	n Approved with Conditions
authorized by the owner to make this application a	as his authorized agent and I agree to con essued. I certify that the code official's au	form to all applicable	e laws of this juit	risdiction. In addition	
areas covered by such permit at any reasonable ho	bur to enforce the provisions of the code	s) applicable to such	permit	c autionity to enter a	Date:
	•	20 Тот	1007	D	
Kill Worth		14 Janu	arv 1997 -	Permit Routed	
SIGNATURE OF APPLICANT Rick Wortle	ey ADDRESS:	DATE:	PH	ONE:	- D. HUMWS
RESPONSIBLE PERSON IN CHARGE OF WOR	K, IIILE		PH	UNE:	
White-Pe	ermit Desk Green-Assessor's Canal	ry–D.P.W. Pink–Pu	blic File Ivory	Card-Inspector	
					A. fower

## City of Portland, Maine – Building or Use Permit Application 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

Factory Built Fire place and Factory have been approved under U.L. #127. Inspected hole, placing forms for footings, verified location according to Hor's survey stakes. Will be adding Calcium chlonide to convex mix, Supplied ragon. Have hay on site, to protect from freezing 12- Forms in pine 24 Y. 114 / w/2 projections on cu. side 6×10/5 Interprets 1/Insp Rey for 2-18 M prior to bakilil / 8 walls clear topour 97 Have requested photocopy of specification for fireplace unit. Framing Inspection -ok as Minor change in 1st floor bathroom layout. Have verified bond out for power vent to 4a sace is in appropriate place. Green tagged by Electrical Inspector- ok to insulate. Temp @ sink in Kitchen 112°. DW stabilized Exhaust fan @ range top ·97 ble and stable, Temos Fireplace Unit TIC 34. 114° temp @ 2nd foor bathroom. to raise hand/quardrail @ staircase to achieve 36 4. Exhaust fan 2nd floor bath not vented directly to the outside. 2nd floor bath exhaust fan verted w/ some penetration fre to waste vent. raised stairwell handrail to 30" State al furnace laspector on Bob Seclair) or with Installation. Temporary Propane on site as N.441440 to install Natural Gas Main. Park's Semi-Gloss Poly used as intenor Ainish 'uct. Smokes - ok

Inspection Record	
Туре	Date
Foundation:	2-13#2-14/91
Framing: DK sev Suburi Hed	3-24-97
Plumbing: Rough - lu - ok	3-24-97
Final: Temp Coto	6-19-91
Dther:	



DeLUCA HOFFMAN ASSOCIATES, INC. CONSULTING ENGINEERS

778 MAIN STREET SUITE 8 SOUTH PORTLAND, MAINE 04106 TEL 207 775 1121 FAX 207 879 0896

ROADWAY DESIGN

ENVIRONMENTAL ENGINEERING

■ TRAFFIC STUDIES AND MANAGEMENT

■ PERMITTING

■ AIRPORT ENGINEERING ■ SITE PLANNING

■ CONSTRUCTION ADMINISTRATION

### **MEMORANDUM**

TO:	Code Enforcement
FROM:	Jim Wendel, Development Review Coordinator
DATE:	June 19, 1997
RE:	Request for Certificate of Occupancy S Willow Lane (lot 1) 5

On June 18, 1997 I reviewed the site for compliance with the conditions of approval dated 1/28/97; my comments are:

- 1. Planting of trees and bushes on the lot has not been performed.
- 2. Final grading around the snow plow turnaround has not been completed since the turnaround has not been completed.
- 3. The street address number needs to be placed on the house.
- 4. The sidewalk along the project entrance drive is presently being constructed; the grading along the sidewalk needs to be completed.

It is my opinion that a temporary certificate of occupancy could be issued assuming Code Enforcement has no outstanding issues.

ames T. Wendel, P.E.

Kandi Talbot, Planning Department c:

JN1350.1023willow.doc



Unit 4 Wall Construction Review

### Examples of Required Firestopping, Continued



### Examples of Required Firestopping in Concealed Spaces in Stud Walls and Partitions





# CITY OF PORTLAND, MAINE

DEPARTMENT OF PLANNING & URBAN DEVELOPMENT 389 CONGRESS STREET PORTLAND, MAINE 04101 FAX # (207) 874-8716

DATE: 6-17-97

TO: BICK H.

COMPANY/BUSINESS:

TIME: 2:59

# FAX # 776-7703

FROM: AP

PHONE # (207)874-8300

EXT 8707

DIVISION: IN-SP.

TOTAL # OF PAGES INCLUDING COVER SHEET: 4

- SECTION 721.0 FREEPLOCKING & DEAFTSTOPPING (2 Pbs) AS RED'D FOR AMPROVAL ON ORIG. BUDG. PERMIT -POLER VENT CLEARANCES (196) AS REQUESTED MESSAGE:

![](_page_8_Figure_0.jpeg)

CAUTION:

The power venter should never be installed with the venter motor in the vertical position, because this position traps heat in the venter housing and this WILL cause damage to the motor. The venter should be installed with at least a 90 deg, elbow off the heating appliance. For maximum bearing life, install in the horizontal position. For a typical installation See Diagram A.

![](_page_8_Figure_3.jpeg)

4

![](_page_8_Figure_4.jpeg)

**721.7.2.1 Use Group R:** In occupancies in Use Group R, in *attics*, mansards, overhangs or other concealed roof spaces, *draftstopping* shall be installed above, and in line with, tenant and *dwelling unit* separation walls that do not extend to the underside of the roof sheathing above.

#### Exceptions

- 1. Where *corridor* walls provide a tenant or *dwell-ing unit* separation, *draftstopping* shall only be required above one of the *corridor* walls.
- 2. Flat roofs with solid joist construction are not required to be provided with *draftstopping* over tenant and *dwelling unit* separation walls if the joists form a *draftstop*.
- 3. *Draftstopping* is not required in buildings equipped throughout with an *automatic sprinkler* system installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic sprinklers are also installed in *attics*, mansards, overhangs and other concealed roof spaces of combustible concealed space.
- 4. Draftstopping is not required in detached oneand two-family dwellings.
- 5. In occupancies in Use Group R-2 which do not exceed four stories in *height*, the *attic* space shall be subdivided by *draftstops* into areas not exceeding 3,000 square feet (279 m<sup>2</sup>) or above every two *dwelling units*, whichever is smaller.

**721.7.2.2 Other use groups:** *Draftstopping* shall be installed in *attics* and concealed roof spaces, such that any horizontal area does not exceed 3,000 square feet (279,m<sup>2</sup>).

#### Exceptions

- 1. Flat roofs with solid joist construction are not required to be provided with *draftstopping* over tenant separation walls if the joists form a *draftstop*.
- 2. Draftstopping is not required in buildings equipped throughout with an *automatic sprinkler* system installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic sprinklers are also installed in *attics* and other concealed roof spaces of combustible construction.

**721.8 Ventilation:** *Ventilation* of concealed roof spaces shall be maintained in accordance with Section 1210.0.

#### SECTION 722.0 FIRERESISTIVE REQUIREMENTS FOR PLASTER

**722.1 Thickness of plaster:** The required thickness of fireresistance rated plaster protection shall be determined by the prescribed fire tests for the specified use group and type of construction and in accordance with the provisions of Section 2505.0 for interior plastering and Section 2506.0 for exterior plastering. The thickness in all cases shall be measured from the face of the lath where applied to gypsum lath or metal lath.

**722.2 Plaster equivalents:** For fireresistive purposes,  $\frac{1}{2}$  inch (13 mm) of unsanded gypsum plaster shall be deemed equivalent to  $\frac{3}{4}$  inch (19 mm) of one-to-three sanded gypsum or 1 inch (25 mm) of portland cement sand plaster.

**722.3 Noncombustible furring:** In buildings of Types 1 and 2 construction, plaster shall be applied directly on concrete or masonry or on approved noncombustible plastering base and furring.

**722.4 Double reinforcement:** Except in solid plaster partitions, or where otherwise determined by the prescribed fire tests, plaster protection more than 1 inch (25 mm) in thickness shall be reinforced with an additional layer of approved lath embedded at least  $\frac{3}{4}$  inch (19 mm) from the outer surface and fixed securely in place.

**722.5 Plaster alternatives for concrete:** In reinforced concrete construction, gypsum or portland cement plaster is permitted to be substituted for  $\frac{1}{2}$  inch (13 mm) of the required poured concrete protection, except that a minimum thickness of  $\frac{3}{8}$  inch (10 mm) of poured concrete shall be provided in all reinforced concrete floors and 1 inch (25 mm) in reinforced concrete columns in addition to the plaster finish. The concrete base shall be prepared in accordance with Section 2506.0.

#### SECTION 723.0 THERMAL- AND SOUND-INSULATING MATERIALS

**723.1 General:** Insulating batts, blankets, fills or similar types of materials — other than fiberboard, cellulosic and foam plastic insulation — including *vapor retarders* and breather papers or other coverings which are incorporated in construction elements, shall be installed as required by this section. Fiberboard insulation shall be installed as required by Section 2309.0, cellulosic insulation shall comply with Section 723.5, and foam plastic insulation shall be installed as required by Section 2603.0.

**723.2 Exposed installations:** Such materials, where exposed as installed in rooms or spaces, including *attics* and crawl spaces of buildings of any type construction, shall have a flame spread rating of 25 or less and a smoke-developed rating of 450 or less when tested in accordance with ASTM E84 listed in Chapter 35. Plenum installations shall comply with the requirements of Section 2805.0 and the mechanical code listed in Chapter 35.

**723.3 Concealed installations:** Insulating materials, where concealed as installed in buildings of any type of construction, shall have a flame spread rating of 75 or less and a smoke-developed rating of 450 or less when tested in accordance with ASTM E84 listed in Chapter 35.

**723.3.1 Facings:** All *vapor retarders*, whether integral or applied separately, shall be installed on the warm side of the building element, and shall have a permeance not exceeding I perm. Where insulation materials are installed in concealed spaces (such as wall, floor or ceiling cavities), *attics* or crawl spaces in buildings of Types 3, 4 and 5 construction, the flame spread and smoke-developed rating limitations do not apply to facings, provided that the facing is installed behind and in substantial contact with the unexposed surface of the ceiling, floor or wall finish.

**723.4 Loose-fill insulation testing:** Loose-fill insulation which requires a screen or artificial support for the test arrangement required in the test tunnel of ASTM E84, listed in Chapter 35, shall be tested in the following mounting method. Loose-fill insulation shall be placed on the floor of the ASTM E84 test tunnel in a thickness of 57 mm  $\pm$ 6 mm for the length of the tunnel. A specimen, including density, shall be representative of the

#### SECTION 721.0 FIREBLOCKING AND DRAFTSTOPPING

**721.1 General:** To prevent the free passage of flame and products of combustion through concealed spaces or openings in the event of fire, provisions shall be made to provide effective *fireblocks* or *draftstops* as herein specified.

**721.2 Fireblocking materials:** All *fireblocking* shall consist of approved noncombustible materials securely fastened in place. *Fireblocks* of approved noncombustible materials or of materials of two thicknesses of 1-inch lumber with broken lap-joint, or one thickness of  $2^{3}/_{32}$ -inch wood structural panel with *joints* backed by  $2^{3}/_{32}$ -inch wood structural panel, or of 2-inch lumber installed with tight *joints*, shall be installed in open spaces of wood framing.

**721.3 Draftstopping materials:** *Draftstopping* materials shall not be less than  $\frac{1}{2}$ -inch gypsum board,  $\frac{3}{8}$ -inch plywood or other approved materials adequately supported.

721.4 Integrity: The integrity of all *fireblocking* and *draftstopping* shall be continuously maintained.

721.5 Required inspection: *Fireblocking* and *draftstopping* shall not be concealed from view until inspected and approved.

**721.6 Fireblocking required:** *Fireblocking* shall be installed in the locations specified in Sections 721.6.1 through 721.6.7.

**721.6.1** Concealed wall spaces: *Fireblocking* shall be installed in concealed spaces of stud walls and partitions, including furred or studded-off spaces of masonry or concrete walls, and at the ceiling and floor or roof levels. *Fireblocking* is not required at the ceiling level of walls, partitions and furred spaces constructed of noncombustible materials as defined by Section 704.4.

**721.6.2** Connections between horizontal and vertical spaces: *Fireblocking* shall be installed at all interconnections between vertical and horizontal spaces such as occur at soffits over cabinets, drop ceilings, cove ceilings and similar locations. *Fireblocking* is not required at the interconnections between vertical and horizontal spaces where such spaces are constructed of noncombustible materials as defined by Section 704.4.

**721.6.3 Stairways:** *Fireblocking* shall be installed in concealed spaces between *stairway* stringers at the top and bottom of the run.

**721.6.4 Ceiling and floor openings:** Where permitted by Exception 7 of Section 713.3, or by Section 714.2.6 or 714.3, *fireblocking* shall be installed at openings around vents, pipes, ducts, chimneys and fireplaces at ceiling and floor levels, with approved noncombustible materials. Factory-built chimneys and fireplaces shall be *fireblocked* in accordance with UL 103 and UL 127 listed in Chapter 35. Where ceilings or floors are required to be fireresistance rated, the openings around vents, pipes, ducts, chimneys and fireplaces shall be protected in accordance with the requirements of Sections 714.2 through 714.2.6.5.

**721.6.5** Architectural trim: *Fireblocking* shall be installed within concealed spaces of *exterior wall finish* and other exterior architectural elements where permitted of combustible construction in Section 1406.0, or where erected with

combustible frames, at maximum intervals of 20 feet (6096 mm). If noncontinuous, such elements shall have closed ends, with at least 4 inches (102 mm) of separation between sections.

**721.6.6 Combustible finish and trim:** *Fireblocking* shall be installed in the space behind combustible trim and finish where permitted under this code and all other hollow spaces where permitted in fireresistance rated construction at 10-foot (3048 mm) intervals; or the space shall be solidly filled with approved noncombustible materials.

**721.6.7** Concealed sleeper spaces: *Fireblocking* shall be installed in concealed spaces formed by floor sleepers in areas of not more than 100 square feet  $(9 \text{ m}^2)$ ; or the space shall be solidly filled with approved noncombustible materials.

**721.7 Draftstopping required:** *Draftstopping* shall be installed in buildings of Types 3, 4 and 5 construction in the locations specified by Sections 721.7.1 and 721.7.2.

**721.7.1 Floors:** Where ceilings are suspended below solid wood joists or suspended or attached directly to the bottom of open-web wood floor trusses, the space between the ceiling and the floor above shall be divided by *draftstopping* as specified in Sections 721.7.1.1 through 721.7.1.3.

**721.7.1.1 Use Groups R-1 and R-2:** In occupancies in Use Groups R-1 and R-2, *draftstopping* shall be installed in line with tenant and *dwelling unit* separation walls where the walls do not extend to the underside of the floor sheathing above.

**Exception:** *Draftstopping* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic *sprinklers* are also installed in the combustible concealed space.

**721.7.1.2 Use Group R-3:** In occupancies in Use Group R-3, the space shall be divided into approximately equal areas not greater than 500 square feet (46 m<sup>2</sup>). The *draft-stopping* shall be installed parallel to the main framing members.

**Exception:** Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic sprinklers are also installed in the combustible concealed space.

**721.7.1.3 Other use groups:** In all other use groups, *draftstopping* shall be installed so that horizontal areas do not exceed 1,000 square feet  $(93 \text{ m}^2)$ .

**Exception:** *Draftstopping* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic *sprinklers* are also installed in the combustible concealed space above the ceiling.

**721.7.2 Attics and concealed spaces:** *Attics* and concealed roof spaces shall be provided with *draftstopping* as specified in Sections 721.7.2.1 and 721.7.2.2.

INVOLVING EXTERIOR WALL FINISHES ON EXTERIOR SIDE./HOT APPLICABLE

BUILDING PERMIT REPORT
DATE: 7/Feb./97 ADDRESS: 23 Willow Lane (LoTEI)
REASON FOR PERMIT: TO CONSTRUCT a SINGLE Family duelling
BUILDING OWNER: R, C. Weinschank
CONTRACTOR: Ric Weinschenk Builders
PERMIT APPLICANT: <u>RICK Wo-TLey</u> APPROVAL: <u>*1, 2 × 3 × 5 × 6 × 7 × 8</u> DENIED: <u>*9 ×10×11 × 15 × 20 × 24</u> × 25

### CONDITION OF APPROVAL OR DENIAL

2.

- 🔏 1. 🔨 This permit does not excuse the applicant from meeting applicable State and Federal rules and laws.
- 2. Before concrete for foundation is placed, approvals from the Development Review coordinator and Inspection Services must be obtained. (A 24 hour notice is required prior to inspection)
- X 3. Precaution must be taken to protect concrete from freezing.
- 4. It is strongly recommended that a registered land surveyor check all foundation forms before concrete is placed. This is done to verify that the proper setbacks are maintained.
- 5. Private garages located <u>beneath habitable rooms</u> in occupancies in Use Group R-1, R-2, R-3 or I-1 shall be separated from adjacent interior spaces by fire partitions and floor/ceiling assembly which are constructed with not less than 1-hour fire resisting rating. Private garages attached side-by-side to rooms in the above occupancies shall be completely separated from the interior spaces and the attic area by means of ½ inch gypsum board or the equivalent applied to the garage means of ½ inch gypsum board or the equivalent applied to the garage side. (Chapter 4 Section 407.0 of the BOCA/1996)
- **K** 6. All chimneys and vents shall be installed and maintained as per Chapter 12 of the City's Mechanical Code. (The BOCA National Mechanical Code/1993) UL 103.
- 47. Guardrail & Handrails A guardrail system is a system of building components located near the open sides of elevated walking surfaces for the purpose of minimizing the possibility of an accidental fall from the walking surface to the lower level. Minimum height all Use Groups 42", except Use Group R which is 36". In occupancies in Use Group A, B, H-4, I-1, I-2 M and R and public garages and open parking structures, open guards shall have balusters or be of solid material such that a sphere with a diameter of 4" cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect.
- $3 \times 8$ . Headroom in habitable space is a minimum of 76°.
- X 9. Stair construction in Use Group R-3 & R-4 is a minimum of 10" tread and 7 3/4" maximum rise. All other Use group minimum 11" tread. 7" maximum rise.
- $\star$  10. The minimum headroom in all parts of a stairway shall not be less than 80 inches.
- ↓ 11. Every sleeping room below the fourth story in buildings of use Groups R and I-1 shall have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside without the use of special knowledge or separate tools. Where windows are provided as means of egress or rescue they shall have a sill height not more than 44 inches (1118mm) above the floor. All egress or rescue windows from sleeping rooms shall have a minimum net clear opening height dimension of 24 inches (610mm). The minimum net clear opening width dimension shall be 20 inches (508mm), and a minimum net clear opening of 5.7 sq. ft.
- 12. Each apartment shall have access to two (20 separate, remote and approved means of egress. A single exit is acceptable when it exits directly from the apartment to the building exterior with no communications to other apartment units.
- 13. All vertical openings shall be enclosed with construction having a fire rating of at lest one (1)hour, including fire doors with self closer's.
- 14. The boiler shall be protected by enclosing with (1) hour fire-rated construction including fire doors and ceiling, or by providing automatic extinguishment.
- X 15. All single and multiple station smoke detectors shall be of an approved type and shall be installed in accordance with the provisions of the City's building code Chapter 9, Section 19, 920.3.2 (BOCA National Building Code/1996), and NFPA 101 Chapter 18 & 19. (Smoke detectors shall be installed and maintained at the following locations):
  - In the immediate vicinity of bedrooms
  - In all bedrooms
  - In each story within a dwelling unit, including basements

In addition to the required AC primary power source, required smoke detectors in occupancies in Use Groups R-2, R-3 and

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**721.3 Draftstopping materials:** *Draftstopping* materials shall not be less than  $\frac{1}{2}$ -inch gypsum board,  $\frac{3}{8}$ -inch plywood or other approved materials adequately supported.

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**721.7.1** Floors: Where ceilings are suspended below solid wood joists or suspended or attached directly to the bottom of open-web wood floor trusses, the space between the ceiling and the floor above shall be divided by *draftstopping* as specified in Sections 721.7.1.1 through 721.7.1.3.

721.7.1.1 Use Groups R-1 and R-2: In occupancies in Use Groups R-1 and R-2, *draftstopping* shall be installed in line with tenant and *dwelling unit* separation walls where the walls do not extend to the underside of the floor sheathing above.

**Exception:** *Draftstopping* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic *sprinklers* are also installed in the combustible concealed space.

**721.7.1.2 Use Group R-3:** In occupancies in Use Group R-3, the space shall be divided into approximately equal areas not greater than 500 square feet (46  $m^2$ ). The *draft-stopping* shall be installed parallel to the main framing members.

**Exception:** *Draftstopping* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic *sprinklers* are also installed in the combustible concealed space.

**721.7.1.3** Other use groups: In all other use groups, *draftstopping* shall be installed so that horizontal areas do not exceed 1,000 square feet  $(93 \text{ m}^2)$ .

**Exception:** *Drafistopping* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic *sprinklers* are also installed in the combustible concealed space above the ceiling.

**721.7.2** Attics and concealed spaces: *Attics* and concealed roof spaces shall be provided with *draftstopping* as specified in Sections 721.7.2.1 and 721.7.2.2.

**721.7.2.1 Use Group R:** In occupancies in Use Group R, in *attics*, mansards, overhangs or other concealed roof spaces, *draftstopping* shall be installed above, and in line with, tenant and *dwelling unit* separation walls that do not extend to the underside of the roof sheathing above.

#### Exceptions

- 1. Where *corridor* walls provide a tenant or *dwell-ing unit* separation, *draftstopping* shall only be required above one of the *corridor* walls.
- 2. Flat roofs with solid joist construction are not required to be provided with *draftstopping* over tenant and *dwelling unit* separation walls if the joists form a *draftstop*.
- 3. Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic sprinklers are also installed in attics, mansards, overhangs and other concealed roof spaces of combustible concealed space.
- 4. Draftstopping is not required in detached oneand two-family dwellings.
- 5. In occupancies in Use Group R-2 which do not exceed four stories in *height*, the *attic* space shall be subdivided by *draftstops* into areas not exceeding 3,000 square feet (279 m<sup>2</sup>) or above every two *dwelling units*, whichever is smaller.

**721.7.2.2 Other use groups:** *Draftstopping* shall be installed in *attics* and concealed roof spaces, such that any horizontal area does not exceed 3,000 square feet (279,m<sup>2</sup>).

#### Exceptions

- 1. Flat roofs with solid joist construction are not required to be provided with *draftstopping* over tenant separation walls if the joists form a *draftstop*.
- 2. Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 906.2.1 or 906.2.2, provided that automatic sprinklers are also installed in attics and other concealed roof spaces of combustible construction.

**721.8 Ventilation:** *Ventilation* of concealed roof spaces shall be maintained in accordance with Section 1210.0.

#### SECTION 722.0 FIRERESISTIVE REQUIREMENTS FOR PLASTER

**722.1 Thickness of plaster:** The required thickness of fireresistance rated plaster protection shall be determined by the prescribed fire tests for the specified use group and type of construction and in accordance with the provisions of Section 2505.0 for interior plastering and Section 2506.0 for exterior plastering. The thickness in all cases shall be measured from the face of the lath where applied to gypsum lath or metal lath.

**722.2 Plaster equivalents:** For fireresistive purposes,  $\frac{1}{2}$  inch (13 mm) of unsanded gypsum plaster shall be deemed equivalent to  $\frac{3}{4}$  inch (19 mm) of one-to-three sanded gypsum or 1 inch (25 mm) of portland cement sand plaster.

**722.3 Noncombustible furring:** In buildings of Types 1 and 2 construction, plaster shall be applied directly on concrete or masonry or on approved noncombustible plastering base and furring.

**722.4 Double reinforcement:** Except in solid plaster partitions, or where otherwise determined by the prescribed fire tests, plaster protection more than 1 inch (25 mm) in thickness shall be reinforced with an additional layer of approved lath embedded at least  $\frac{3}{4}$  inch (19 mm) from the outer surface and fixed securely in place.

**722.5** Plaster alternatives for concrete: In reinforced concrete construction, gypsum or portland cement plaster is permitted to be substituted for  $\frac{1}{2}$  inch (13 mm) of the required poured concrete protection, except that a minimum thickness of  $\frac{3}{8}$  inch (10 mm) of poured concrete shall be provided in all reinforced concrete floors and 1 inch (25 mm) in reinforced concrete columns in addition to the plaster finish. The concrete base shall be prepared in accordance with Section 2506.0.

#### SECTION 723.0 THERMAL- AND SOUND-INSULATING MATERIALS

**723.1 General:** Insulating batts, blankets, fills or similar types of materials — other than fiberboard, cellulosic and foam plastic insulation — including *vapor retarders* and breather papers or other coverings which are incorporated in construction elements. shall be installed as required by this section. Fiberboard insulation shall be installed as required by Section 2309.0, cellulosic insulation shall comply with Section 723.5, and foam plastic insulation shall be installed as required by Section 2603.0.

**723.2 Exposed installations:** Such materials, where exposed as installed in rooms or spaces, including *attics* and crawl spaces of buildings of any type construction, shall have a flame spread rating of 25 or less and a smoke-developed rating of 450 or less when tested in accordance with ASTM E84 listed in Chapter 35. Plenum installations shall comply with the requirements of Section 2805.0 and the mechanical code listed in Chapter 35.

**723.3 Concealed installations:** Insulating materials, where concealed as installed in buildings of any type of construction, shall have a flame spread rating of 75 or less and a smoke-developed rating of 450 or less when tested in accordance with ASTM E84 listed in Chapter 35.

**723.3.1 Facings:** All *vapor retarders*, whether integral or applied separately, shall be installed on the warm side of the building element, and shall have a permeance not exceeding 1 perm. Where insulation materials are installed in concealed spaces (such as wall, floor or ceiling cavities), *attics* or crawl spaces in buildings of Types 3, 4 and 5 construction, the flame spread and smoke-developed rating limitations do not apply to facings, provided that the facing is installed behind and in substantial contact with the unexposed surface of the ceiling, floor or wall finish.

**723.4 Loose-fill insulation testing:** Loose-fill insulation which requires a screen or artificial support for the test arrangement required in the test tunnel of ASTM E84, listed in Chapter 35, shall be tested in the following mounting method. Loose-fill insulation shall be placed on the floor of the ASTM E84 test tunnel in a thickness of 57 mm  $\pm 6$  mm for the length of the tunnel. A specimen, including density, shall be representative of the

Applicant: Rick Wortley Address: 23 Willow the (47#1) C-B-L: 191-B-031 CHECK-LIST AGAINST ZONING ORDINANCE Date - New Zone Location - R-S PRUD DEV. Interior or corner lot -Proposed Use/Work - I family dwelling with CANFORT Sewage Disposal - City/privately pumped to City Lot Street Frontage -Front Yard - Minimin Setback from the Subdivision property ins Rear Yard - Note There is No Min distance from other dwelling unite Side Yard - Breefen there is hold be booted At least 25 freq. Projections - dwelling in the None Shown That close from Width of Lot -Height - 1/2 Stores 8,802# Lot Area - 6 500+ Lot Coverage/ Impervious Surface -Area per Family -Off-street Parking - 7\_6how Loading Bays -Site Plan - mmor/mmor Shoreland Zoning/Stream Protection - N/AFlood Plains - NA Zone C parel 13 17

![](_page_15_Figure_0.jpeg)

	CITY OF PO DEVELOPMENT R PLANNING DEPARTM	RTLAND, MAINE EVIEW APPLICATION IENT PROCESSING FORM	I. D. Number
Ric Weinschenl	k Builders		<u>14 January 1997</u>
.pplicant 91 Summer Plac	ce Ptld, ME 04103		Willow
pplicant's Mailing Address	k = 828 = 3900	23 Willow Land	Project Name/Description
Consultant/Agent	<u>K</u>	Address of Proposed Site	
Applicant or Agent Daytime Teleph	none, Fax	Assessor's Reference: Ch	art-Block-Lot
roposed Development (check all th Office Retail 1,536 GFC 2,182 To proposed Building Square Feet or #	hat apply): X New Building Manufacturing Warehous otal of Units Acreage	Building Addition 0 e/Distribution Other (spec 8,808 Sq Ft e of Site	Change of Use <u>X</u> Residential hify) <u><u>R-5</u> PRUD Zoning</u>
hock Review Required:			
Site Plan (major/minor)	Subdivision # of lots	PAD Review	14-403 Streets Review
Flood Hazard	Shoreland	Historic Preservation	DEP Local Certification
Zoning Conditional Use (ZBA/PB)	Zoning Variance	X Single-Family Minor	Other
ees paid: site plan 50	.00 subdivision	100.00 En	ngineer Review Fee
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Applicant: Rick Wortley Address: 23 Willow LANE (Lot#1) C-B-L: 191-B-031 CHECK-LIST AGAINST ZONING ORDINANCE Date - New Zone Location - R-S PRUD DEV. Interior or corner lot -Proposed Use/Work - I family dwelling with CANFORT Servage Disposal - City/privately pumped to City Lot Street Frontage -Front Yard - Minimin Setback from External Subdivision property In (Bedg is 50's in langth) - 25'reg - over 30'shown Rear Yard - Note There is No min distance from other dwelling unite Side Yard - & Fecrention Areas Shall be located At loast 25. fra Projections - dwelling units - None Shown That close the Width of Lot -Height - 1/2 Stories 8,8027 Dany Point between, Lot Area - 6 580+ Lot Coverage/ Impervious Surface -Area per Family -Off-street Parking - 2 - 2 how Loading Bays -Site Plan - mmov/mmor Shoreland Zoning/Stream Protection - N/AFlood Plains - NA Zone C panel 13 17

Inspection Services P. Samuel Hoffses Chief

![](_page_18_Picture_1.jpeg)

Planning and Urban Development Joseph E. Gray Jr. Director

## **CITY OF PORTLAND**

February 11,1997

Ric Wienschenk Builders 91 Summer Place Portland, Me. 04103

RE: 23 Willow Lane (lot # 1)

Dear Sir,

i

Your application to construct a single family dwelling has been reviewed and a permit is herewith issued subject to the following requirements. This permit does not excuse the applicant from meeting applicable State and Federal laws.

### NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL REQUIREMENTS OF THIS LETTER ARE MET.

#### Site Plan Review Requirements

Building Inspection : Approved with connection. Separate permit shall be required fpr future decks and / or full garage. M. Schmuckal

Development Review Coordinator : Approved with condition, see attached conditions. Mr. J. Wendel

#### **Building Code Requirements**

1. Please read and implement items 1,2,3, 5, 6,7,8,9,10,11,15,20,24,25 of the attached Building Permit Report.

anguer Hoffses

c: M. Schmuckal, Mr. J. Wendel

CITY OF PORTLAND, MAINE SITE PLAN REVIEW (ADDENDUM) CONDITIONS OF APPROVAL
APPLICANT: RIC WEINSCHENK BUILDERS
ADDRESS: 91 SUMMER PLACE, PONTLAND, ME 04107
SITE ADDRESS/LOCATION: 23 WILLOW LANG LOT 1
DATE: $1/28/97$

Review by the Development Review Coordinator is for General Conformance with ordinances and standards only and does not relieve the applicant, his contractors or agents from the responsibility to provide a completely finished site, including but not limited to: increasing or concentrating of all surface runoff onto adjacent or downstream properties, issues regarding vehicle sight distance, location of public utilities and foundation elevations.

#### CONDITIONS CHECKED OFF BELOW WILL BE ENFORCED FOR YOUR SITE PLAN

1. \_\_\_\_\_

All damage to sidewalk, curb, street, or public utilities shall be repaired to City of Portland Standards prior to issuance of a Certificate of Occupancy.

Two (2) City of Portland approved species and size trees must be planted on your street frontage prior to issuance of a Certificate of Occupancy.

Your new street address is now  $\underline{C3}$   $\underline{W_{1}}$   $\underline{W_{2}}$   $\underline{W_{2}}$   $\underline{W_{2}}$   $\underline{W_{2}}$   $\underline{W_{2}}$   $\underline{W_{2}}$   $\underline{W_{2}}$  number must be displayed on the street frontage of your house prior to issuance of Certificate of Occupancy.

- The Development Review Coordinator (874-8300 ext. 8722) must be notified five (5) working days prior to date required for final site inspection. <u>Please</u> make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. <u>Please</u> schedule any property closing with these requirements in mind.
  - Show all utility connections: water, sanitary sewer, storm drain, electric, telephone, cable.

A sewer permit is required for your project. Please contact Carol Merritt at 874-8300, ext. 8828. The Wastewater and Drainage section of Public Works must be notified five (5) working days prior to sewer connection to schedule an inspector for your site.

7. \_\_\_\_\_ A street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

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## **RIC WEINSCHENK/BUILDERS,Inc.**

91 SUMMER PLACE PORTLAND MAINE 04107 (207)828-3900 Fax:: (207) 775-7705

TO: Amy Powers/ City of Portland

FROM: Rick Wortley

DATE: 3/25/97

SUBJECT: Photocopy of fireplace manual used at Lot 1 Willow

23 Willow Lane

DEPT. OF BUILDING INSPECTION CITY OF PORTLAND, ME								
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![](_page_21_Picture_0.jpeg)

35" Louvered Heat Circulating Firenlace

42" Flush Face Heat Circulating Fireplace

This book contains your installation instructions and should be kept in a safe place. It will be a handy reference guide to operating your fireplace after installation. For you to realize all the advantages and use of the reliable service that has been engineered into your TEMCO fireplace, you must carefully follow all of the instructions contained in this book regarding installation and operation of the fireplace. These instructions should be read carefully in their entirety before beginning firstallation of the fireplace.

It is suggested that you wear work gloves and safety glasses to protect your hands and eyes when installing your fireplace. NOTE: Authorities having jurisdiction (i.e. building inspectors, fire marshals, etc.) should be consulted before installation to determine the need to obtain a permit.

All models are listed for use in residential construction in the United States with TEMCO double-wall 8" diameter air-cooled chimney and components listed below and on p. 2.

BE SURE TO FOLLOW EXACTLY THE SPECIFIC INSTALLATION RESTRICTIONS THAT APPLY TO THE MODEL YOU ARE INSTALLING. The model number of the fireplace is located on a metal label behind the firescreen in the upper right corner of the front of the fireplace. Be sure you follow these rules exactly.

Listed in the United States by Underwriters' Laboratorias, Inc., #MH10105. ICBO Report #NER-492. SBCCI Report #8809. BOCA Report #87-31.

### 8" Diameter Double Wall Chimney System

#### Chimney Sections

8212D 12" Section 8218D 18" Section 8224D 24" Section 3236D 36" Section 8248D 48" Section

#### 8204S Flue Support SC1215-1 Storm Collar 8232E 30° Elbow Set 8204F 1 Round Firestop Spacer 8230F-1 30° Firestop Spacer 8206F 0-6/12 Hoot Flashing 8212F 7-12/12 Root Flashing HSS-1 Hearth Safety Strip

FarmInations 8203D Round Tarmination Cap STD-22 Round Chase Cap ARC 52 Architectural Cap ARC-12 Architectural Cap PRC-12 Pyramid Cap LPC-12 Long Pyramid Cap TCS-12 Conical Cap AS-8-2 Shieldod Slip Section

![](_page_21_Picture_13.jpeg)

#### **BEFORE YOU BEGIN ... A FEW BASIC RULES**

- The instructions on the following pages were designed to make the installation of your TEMCO Fireplace as quick as possible. It is important that they be followed. This fireplace should be installed by a skilled craftsman.
- 2. Use only TEMCO manufactured components, listed under 8" Diameter Chimney System (above), when installing a TEMCO fireplace. Substituting other manufacturers' components for or altering TEMCO parts will void the UL listing and the warranty.
- Check local building codes for restrictions which may not be contained in this manual.
- 4. The fireplace design permits installation and framing adjacent to combustible materials. Do not set the fireplace on vinyl flooring or carpets. COMBUSTIBLE MATERIALS MAY NOT BE PLACED ON THE BLACK FACE SURROUNDING THE FIREPLACE.
- 5. ALL CHIMNEY SECTIONS, ELBOWS AND FLUE SUPPORTS REQUIRE AN ABSOLUTE MINIMUM OF 1"AIR SPACE CLEARANCE TO AII COMBUSTIBLES.
- 6. The minimum distance from the fireplace opening to an adjacent combustible wall is 15½". See page 5 for alternative wall shields and required R-factors.
- 7. If the floor in front of the fireplace is combustible, a protective hearth extension must be used. Raised or floor level extensions may be constructed. On flush face models only, a raised hearth extension may be flush with the fireplace hearth. For a raised hearth on louvered models, the fireplace must also be installed on a platform.

Minimum hearth dimensions: 36" models 16" x 52"

39" models 16" x 55"

42" models 20" x 66"

materials, a layer of non-combustible inorganic insulating material must be used also. See Figure 4 for R-factor requirements.

- 8. Adhere to the 10'Rule of Thumb for chimney height. See page 8.
- 9. Chimney supports:
  - a. Flue support is required for every 35' of vertical system height.
  - b. Flue support is required for every 6'of offset chimney.
  - c. Guy wire stabilizer is required for chimneys extending more than 6' above roof line.
- 10. Only TEMCO model glass doors (see chart below) may be installed on these fireplaces.
- 11. Barometric damper on the Combustion Air Kit allows air to be drawn from above, below, or behind the fireplace, but air must never be drawn from the attic or garage spaces. Refer to the air kit installation manual for complete installation and use information.
- 12. Check your local building code to determine if grounding is required and what procedure should be followed. Grounding is recommended by the manufacturer if you live in an area of high risk due to electrical storms.
- System specifications: MInImum system height (site-built construction): no elbows, 12'6"; two elbows: 13'6"; four elbows, 21' Maximum system height: 60'

Maximum 30° elbows per system: four Maximum distance between elbows without support: 6' Maximum run of inclined chimney: 20'.

14. On louvered models, when installing a blower or fan kit, it is necessary to bring a power source to the fireplace before it is enclosed. See separate installation instructions.

Since many hearth extension materials are not insulating 1

15. For mobile home installation requirements, see p. 13.

Models with Features and Listed Accessories							
model	face/opening	doons	fan	trim kits	notes		
TLC42-4 A42L-4	louvered 42"x 21%"	CLS-6, CX-61	BL-1* FAN-5*	LPB42-4			
TLC42-41	louvered 42"x 21%"	CLS-6, CX-61	BL-1" FAN-5"	LPB42-4	insulated outer wrap		
TLC42-4MB	louvered 42"x 21%"	CLS-6, CX-61	BL-1 FAN-5	LPB42-4	For mobile home installations. Includes CX-61 doors and AIR-3 air kit.		
TFC42-4 A42F-4	flush 42"x 21%"	CLS-6, CX-61	NA	LPB42-4			
TLC39-3 A39L-3	louvered 39"x 21%"	CLS-4, CX-41	BL-1* FAN-5*	LPB39-3			
TLC39-31	louvered 39"x 21%"	CLS-4, CX-41	BL-1* FAN-5*	LPB39-3	insulated outer wrap		
TFC39-3 A39F-3	flush 39"x 21%"	CLS-4, CX-41	NA	LPB39-3			
TLC36-3 A36L-3	louvered 36"x 21%"	CLS-2, CX-21	BL-1* FAN-5*	LPB36, SPB36			
TLC36-3I	louvered 36"x 21%"	CLS-2, CX-21	BL-1* FAN-5*	LPB36, SPB36	insulated outer wrap		
TLC36-3MB	louvered 36"x 21%"	CLS-2, CX-21	BL-1* FAN-5*	LPB36, SPB36	For mobile home installations. Includes CX-21 doors and AIR-3 air kit.		
TFC36-3 A36F-3	flush 36" x 21%"	CLS-2, CX-21	NA	LPB36, FPB36, SPB36			

Combustion Air Kits: All models except TLC36-3MB and TLC42-4MB accept combustion air kits AIR-5, AIR-5A, AIR-5B, and AIR-7. TLC36-3MB and TLC42-4MB include AIR-3 air kit.

\* BL-1 and FAN-5 installation requires installation of junction box JB-2 or JB-21.

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## PLANNING AHEAD

## CHOOSING THE LOCATION FOR YOUR

#### FIREPLACE:

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Figure 1 shows some of the many ways your fireplace may be installed. Consider the traffic pattern in your room and the location of doors and windows. A corner location may be best where space is limited.

Your fireplace weighs no more than some of your fine furniture. If the fireplace is located near a load bearing wall, additional supports to the foundation will not be necessary. HEAVY FACINGS SUCH AS BRICK, STONE, ETC., MAY REQUIRE ADDITIONAL FOUNDATION SUPPORT.

#### ALTHOUGH THIS UNIT MAY BE INSTALLED ON COM-BUSTIBLE SURFACES, IT MUST NOT BE INSTALLED ON CARPET OR VINYL.

![](_page_23_Figure_6.jpeg)

![](_page_23_Figure_7.jpeg)

3

#### **OUTSIDE AIR KIT AND GLASS DOOR ACCESSORIES**

A fireplace needs a steady supply of air in order to draw properly. Many houses and apartments which are well sealed lack sufficient air for normal operation. IN SUCH HOUSES IT IS RECOMMENDED THAT A COMBUSTION AIR KIT BE INSTALLED. A combustion air kit will improve the efficiency of any fireplace, especially if used in conjunction with glass doors, because it allows you to use outside air for combustion instead of heated room air.

Installing the fireplace on an outside wall will simplify the installation of the combustion air kit and reduce the amount of necessary duct work. Install the air kit according to the separate installation instructions packed with it. If an air kit is to be installed, IT MUST BE INSTALLED AT THE TIME THE FIREPLACE IS INSTALLED, before its enclosure is finished.

The fireplace includes an integral barometric damper. The control lever is located on the left side behind the mesh screen.

#### GAS LOG

If you plan to install a gas log, the gas line must be installed before framing in the fireplace. The gas line must be installed by a licensed gas line installer. See p.12 for installation instructions.

#### DRAFTS

The location for the fireplace should be away from objects such as frequently opened doors and central heat air outlets and inlets that will create drafts and possibly hamper the normal flow of air into the fire.

## LOCATING AREA WHERE FLUE PIPE WILL PASS THROUGH CEILING AND ROOF

It is very important that you determine where the flue (chimney) will go through the ceiling and roof. Check the structure of your home to see that the location you have chosen will make installation as easy as possible. Using a plumb bob, hold the string from the ceiling and drop the it, moving the string until the plumb bob is in the center of the flue collar opening. See Figure 3. Mark the spot on the ceiling. You may wish to drive a nail through the ceiling at this spot. Then go into the attic and find the nail. Using the plumb bob with the ceiling nail as the center point of the flue, mark the center of the area on the roof through which the flue will pass. This is to see if it is possible to cut your opening for the flue in both the ceiling and roof without cutting either roof rafters or ceiling joists. A location that requires cutting the least number of joists and rafters will simplify the installation and reduce the cost. The structural integrity of a home's floor, walls and ceiling roof must be maintained. It is not recommended to cut roof trusses.

#### CHIMNEY OUTLET

Thought should be given to the proposed location of the chimney outlet on the roof. Objects such as trees, adjacent buildings or embankments that are too close to the chimney can create air circulation problems during windy weather that could affect the way the fireplace draws air.

After careful consideration, choose the location for your fireplace to achieve the simplest installation for maximum efficiency.

![](_page_24_Figure_13.jpeg)

#### FIREBOX AND CHIMNEY SYSTEM CLEARANCES

The fireplace may be placed directly on a combustible floor, against a combustible wall at marked clearances, or on a raised wooden platform.

If the fireplace is to be installed on a raised platform, the platform must be a continuous level surface.

The fireplace must be secured in place so it cannot shift positions. The nailing flanges on the sides of the firebox make securing the firebox to the frame quick and easy. The nailing flanges were designed to allow the installation of  $\frac{1}{2}$  wallboard or plywood flush with the face of the fireplace.

Only the header (see Figure 4) may rest on the standoffs on top of the firebox.

**Combustible materials may not cover any part of the black metal surrounding the firebox opening.** See Figure 4. Do not install the firebox over vinyl floors or carpet.

Combustible floors in front and to the sides of the firebox opening must be protected by a non-combustible hearth extension as shown in Figure 4.

![](_page_25_Figure_0.jpeg)

THE CAUTIONS BELOW RELATE TO LOCATIONS ON FIGURE 4.

- A. The hearth safety strip must be used under the crack between the fireplace and the hearth extension when the fireplace is installed on a combustible floor. Seal the crack with a non-combustible material such as mortar, grout, etc.
- B. COMBUSTIBLE MATERIALS MUST NOT BE INSTALLED OVER OR TOUCH ANY BLACK PAINTED SURFACE.

#### DO NOT BLOCK HEAT CIRCULATING AIR INLETS OR OUTLETS OR LOUVERED VENTS. DOING SO MAY RESULT IN A POTENTIAL FIRE HAZARD.

C. If the floor in front of the fireplace is combustible, either a raised or floor-level protective hearth extension must be constructed. For flush face models only, a raised hearth extension may be flush with the fireplace hearth. To construct a raised hearth extension with louvered models the fireplace must rest on a raised platform. A raised hearth extension must have minimum dimensions as follows:

![](_page_25_Figure_6.jpeg)

and be constructed of materials with an R-factor equal to or greater than 1.20.

A hearth extension installed directly on the floor must have the minimum dimensions shown above and be constructed of materials with an R-factor equal to or greater than .80.

If combustible materials are used to construct the hearth extension, they must not touch the black surface of the fireplace. The same material that is used to protect the top of the hearth extension must be placed between the combustible and the black face of the fireplace. The hearth extension must be fastened to the floor to prevent shifting and the gap between the fireplace and the hearth extension sealed with a non-combustible material. These materials (listed below) may be used for a wall shield as well.

D. Framing header must rest on top of standoffs.

E. The minimum distance from the fireplace opening to an adjacent combustible wall is  $15\frac{1}{2}$ ". The minimum distance to an adjacent combustible wall may be reduced to 12" when an approved wall shield is used on the wall. The wall shield must be 40" x 40" and constructed of a non-combustible inorganic material having a thermal resistance of R = 1.49.

#### **Determining the R-Values**

The hearth extension must be constructed of non-combustible materials which have a total thermal resistance (R factor) equal to or greater than .80 for floor level hearth extensions or 1.20 for raised hearth extensions. Choose the desired materials and obtain the K value at 75° mean temperature. The C value and the R value may be calculated with the following formulas:

- K = Thermal conductivity. K = BTU's-ins./hrs.-ft.2-°F
- T = thickness C = Thermal conductance
- R = Thermal resistance K/T = C; 1/C = R

#### Example: 3/4" Marble with 3/8" Micore

Determine the R value for each material used as follows:

- Marble: K/T = 11/.75 = 14.66.
- 1/C = 1/14.66 = 0.068 (R factor)
- Micore 300: K/T = .458/.375 = 1.22.
- 1/C = 1/1.22 = 0.82 (R factor)

After the R value is obtained on each material in this hearth, add the R values to obtain total thermal resistance (R). Total R factor = 0.068 + 0.82 = 0.89

The total must be equal to or greater than specified above. Typical materials: Micore 300 has a K of .458; Micore 230 has a K of .43; Micore 180 has a K of .34; Ceraboard has a K of .34; common brick has a K of 5; cement mortar has a K of 5; marble has a K of 11; limestone has a K of 6.5; tile has a K of 12; slate has a K of 21; Wonder Board has a K value of 3.2.

MICORE NC 180-300, manufactured by U.S. GYP-SUM CORPORATION

CONWED SPEC 300, manufactured by CONWED CORPORATION

- CERA FORM TYPE 106R board, manufactured by JOHNS-MANVILLE.
- WONDER BOARD, manufactured by GOLD BOND BUILDING PRODUCTS.

## FIREPLACE INSTALLATION

This list of specific instructions will help you make certain that every installation operation is done correctly. Complete the installation steps in the sequence shown.

Local building codes should be consulted in all cases as to the particular requirements concerning the installation of factory built fireplaces. Select the location for the fireplace by taking into consideration the factors previously outlined in the **Planning Ahead** section of the manual.

#### INSTALLING THE FIREBOX STEP 1. FRAMING THE FIREBOX

When framing the opening for the fireplace, make certain that the header is the correct height above the surface upon which the fireplace will sit as shown in Figure 5. The header must be level. The header and framing may be installed as shown in Figure 5 or Figure 7 according to the installer's preference.

The entire fireplace can be elevated above the floor to achieve a raised hearth effect. This can be done by adding a small platform to achieve the desired height.

The nailing flanges on the side of the firebox were designed to allow the installation of  $\frac{1}{2}$  wallboard or plywood flush with the face of the firebox.

#### **STEP 2. HEARTH SAFETY STRIP**

A Hearth Safety Strip must be installed under the fireplace when the fireplace is installed on a combustible floor. This strip must be positioned on the floor to extend 2"under the fireplace, 2"under hearth extension, and 6" on either side of the fireplace opening at the point where the hearth extension meets the fireplace. See Figure 6.

#### **STEP 3. INSTALL FIREBOX**

Install fireplace into the framed opening by setting the unit directly in front of the opening and then sliding it into the proper position.

![](_page_26_Figure_11.jpeg)

![](_page_26_Figure_12.jpeg)

![](_page_26_Figure_13.jpeg)

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#### **STEP 4. LEVEL FIREBOX**

Check the level of the fireplace by placing a level on the top edge of the fireplace face. Shim with sheet metal if necessary.

#### **STEP 5. SECURE FIREBOX**

Secure the fireplace to the framing. The nailing flanges on the firebox will make securing the firebox to the frame quick and easy. Use appropriate size nails or screws to secure the firebox.

STEP 6 . FRAMING CEILING AND ROOF OPENING SEE FIGURE 13 FOR INSTRUCTIONS IF THE FLUE-PIPE WILL BE OFFSET BELOW THE FIRST CEILING LEVEL.

If you are not using elbows in this installation frame, the ceiling and roof opening directly above one another in the locations you chose in the **Planning Ahead** section of this manual. The flue should go straight up to the chimney termination. Firestops must be used at each ceiling level. A firestop is not required at the roof line. The roof framing must be 2 x 6's or 2 x 4's and must be securely nailed because the chimney termination and flashing are anchored to this construction and must withstand heavy loads. The opening in

![](_page_27_Figure_6.jpeg)

![](_page_27_Figure_7.jpeg)

gure a. noor rraining	Dimensi	ons (Ins.)			Ň	
See table.		14° min.	mbar Siza	·See t	able 12	framing 1" min. air space
			2 × 6	2 × 8	2 x 10	2 x 12
	0/12	14 x 14	14 x 14	14 x 14	14 x 14	14 x 14
	1/12	12 x 14 <sup>1</sup> /2	14 x 145/a	14 x 14 <sup>3</sup> / <sub>4</sub>	14 x 14 <sup>7</sup> /a	14 x 15 <sup>1</sup> /8
Pitch	2/12	14 x 15	14 x 15¼	14 x 15½	14 x 15¾	14 x 16¼
(x	3/12	14 x 15½	14 x 16	14 x 16¼	14 x 16¾	14 x 17½
	4/12	14 x 16¼	14 x 167/8	14 x 17¼	14 x 171/8	14 x 18¾
1.21	5/12	14 x 17	14 x 17¼	14 x 175⁄8	14 x 18½	14 x 19¼
	6/12	14 x 17 <sup>7</sup> /8	14 x 187/8	14 x 193/8	14 x 203/8	14 x 21¾
	7/12	14 x 18¾	14 x 195⁄8	14 x 20½	14 x 215⁄8	14 x 23¼
	8/12	14 x 19¾	14 x 21	14 x 21¾	14 x 23	14 x 247/8
	9/12	14 x 20¾	14 x 22¼	14 x 23	14 x 24½	14 x 26½
	10/12	14 x 21¾	14 x 23½	14 x 243⁄8	14 x 26	14 x 28¼
	11/12	14 x 23	14 x 24¾	14 x 25¾	14 x 27½	14 x 30
	12/12	14 x 241/8	14 x 261/8	14 x 271⁄8	14 x 281/8	14 x 317/8

#### **STEP 7. INSTALLING FIRESTOP SPACER**

Install a firestop at each ceiling level. The angles on the firestop are to maintain clearances. Nail the firestop to the joist and headers around the ceiling opening. No firestop is to be used at the roof level. The firestop should be installed from the underside of the ceiling (See Figure 10.) except at the attic level where it should be installed on top at the framing members. (See Figure 10.) A MINIMUM OF 1"AIR SPACE CLEARANCE MUST BE MAINTAINED FROM THE CHIMNEY PIPE TO ALL COMBUSTIBLES.

When chimney penetrates ceiling at a 90° angle, use firestop spacer 8204F-1, 14½" x 14½" framed opening. When chimney penetrates ceiling at a 30° angle, use firestop spacer 8230F-1, 14½" x 22" framed opening.

![](_page_28_Figure_3.jpeg)

#### INSTALLING THE CHIMNEY

Double Wall Chimney pipe has two sections: the inner and outer. It is very important that both sections be installed for each length of chimney used in the system.

#### STEP 8

Insert the inner (8") pipe with the male end pointing DOWN into the inner collar. The inner flue section fits Inside the inner collar. Push the pipe until it bottoms and the snap locks engage. Check each joint to ensure that the sections are securely locked together.

#### STEP 9

Slip the outer (12") pipe with the male end UP over the other pipe and over the outer collar. The outer flue section fits on the outside of the outer flue collar. Push the pipe until it bottoms and the snap locks engage. Screws may be used only in the outer pipe for additional support if desired.

#### STEP 10

Continue this process of adding chimney pipe sections on top of each other until the pipe penetrates the roof opening enough to allow you to install the flashing and storm collar. Chimney sections must be supported by either guy wires or  $\frac{3}{4}$  conduit flattened on the ends when the chimney extends 6'or more above the roof. The chimney may be extended to a maximum of 12' above the roof. A flue support must be used when the system is 35' high or higher.

![](_page_28_Figure_12.jpeg)

### CHIMNEY TERMINATION HEIGHT 10 FOOT RULE OF THUMB

Under most conditions the fireplace system will draw properly if the chimney height is determined in accordance with the following guidelines:

- If your chimney penetrates the roof within 10' of its peak, it must extend at least 24" above your roof's peak and be at least 36" above the highest point of the roof opening (See below).
- 2. If the chimney penetrates the roof farther than 10' from its peak, measure from the center line of the chimney to a point 10' away, between the chimney and the peak of the roof. The top of the chimney must be at least 24" above this point and at least 36" above the highest point of the roof opening. (See below).
- 3. When figuring required chimney height, the termination counts as 6" of effective chimney height. The balance of the required height will consist of chimney sections and the effective height of the firebox.
- 4. The 10' Rule of Thumb is a guide for calculating chimney height that works under most conditions. However, many factors can cause the need for additional chimney height beyond what the 10'Rule of Thumb would indicate. Topographical factors can cause high pressure zones which prevent a chimney from drawing. This can occur if the house is located in a low lying area, in a valley, or near the base of a cliff or hillside. The same situation can occur if the chimney is near other steep roof lines or tall buildings. Areas with high winds also frequently require higher than normal chimneys. Certain styles of architecture tend to interfere with a fireplace's proper draw. If the room in which the fireplace is located has a very high ceiling, smoke may enter the room unless the chimney is terminated at a level higher than that of the ceiling, even if the 10' Rule of Thumb indicates a shorter chimney height.

![](_page_28_Figure_19.jpeg)

Installation Requirements	Lineal Gain Chart			
Maintain a 1" min. air space	Model#	Lineal Gai		
clearance to all combustibles	36 " fireplaces	36%" L		
from the chimney sections	39" & 42" fireplaces	411/2"		
Minimum system height without	8212D Chimney	10%"		
elbows: 12'6"	8218D Chimney	16%"		
with two elbows: 13'6"	8224D Chimney	22%		
with four elbows: 21'	8236D Chimney	34%"		
Maximum beight: 60'	8248D Chimney	46¾"		
	8232E Elbow set	14%"		
Four 30° eldows maximum per	8204S Flue Support	3"		
system	8203D Round			
	termination	6*		

consider the direction that your offset will incline. To achieve the minimum offset (see Table B) attach the return elbow to the first elbow. To achieve further offset, you may install various lengths of pipe (12", 18", 24", 36"

and/or 48") between the elbows to a maximum length of 72" inches without a flue support.

6. When the flue penetrates the ceiling at a 30° angle, install firestop spacer 8230F. (See Step 7 for construction detail.)

![](_page_29_Picture_4.jpeg)

#### RULES GOVERNING OFFSET INSTALLATIONS Sometimes it is necessary to use elbows to create an

**OFFSET INSTALLATIONS** 

inclined run of pipe (offset installation) that will make installation easier by avoiding plumbing, wiring or other obstructions. The following rules apply to offset installations.

A. 60' maximum system height.

- B. Four 30° elbows (two pairs) maximum per system. Each offset elbow must be used with a return elbow. The chimney pipe must be vertical when it penetrates the roof.
- C. The chimney offset is to be a maximum of 30° from vertical.

D. Maximum inclined chimney run of 20'.

- E. Additional support to be provided every 6' of inclined run of chimney. Use flue support 8204S.
- F. Minimum height of fireplace using two elbows (one pair) is 13'6"; four elbows (two pairs) is 21'.
- G. Elbows may be used directly off the top of the firebox and may be mounted with the return elbow directly on top of the offset elbow.
- H. A MINIMUM OF 1" AIR SPACE CLEARANCE MUST BE MAINTAINED FROM THE CHIMNEY PIPE AND ELBOWS TO ALL COMBUSTIBLES.
- I. Local building codes must be followed in all cases as to the particular requirements concerning the installation of factory built fireplaces.

#### TO INSTALL ELBOWS

- 1. Place the offset elbow (no straps) on top of the firebox or chimney section and point the upper half in the direction you require the chimney to incline. Snap lock all sections permanently in place.
- Adjust the inner section of the elbow into the inside of the inner collar of the firebox or the inner section of the chimney pipe.
- 3. Adjust the outer section of the elbow over the outer section of the flue collar or outer section of the chimney pipe. Snap-lock all sections permanently into place.
- 4. The return elbow has 18" support straps. The support straps should be nailed to the framing in the manner indicated in Figure 12. It may be necessary to add framing or lengthen the straps with hanger iron to support chimney pipe and elbows.
- 5. See Figure 13 for offset calculation: Locate the center point of the flue on the ceiling with a plumb bob as shown on page 3. The center of the correct location for the ceiling opening will be the amount of the offset dimension away from the ceiling nail. See Figure 13. The "X" dimension in the drawing is the amount of the offset. Be sure to

![](_page_29_Figure_22.jpeg)

#### Lineal Gain of Offset with Two Elbows

Offset (ins.) Components	Rise (Ins.) Dimension "X	." Dimension "R"	NOTES: Rise dimension " firebox height (373/4" for 36	R" (except for line 1, elbor 6" models, 411/2" for 39" an	ws only) includes d 42" models). If
Elbows only	37⁄8	145/8	one of the elbows is not m	ounted on the firebox as p	ictured in Figure
Elbows with firebox	31/8	495%	18, subtract the appropriat	te amount for your fireplac	e form the "R"
One 12" section	91/4	581/18	dimension in the table to g	jet the actual rise when elt	ows are mounted
One 18" section	121/4	64	anywhere else in the syste	em.	
Two 12" sections	145%	681/4	If the required offset is not	shown in this table but is l	less than the max-
One 12" and one 18"	'section 175%	731/4	imum allowed (125"), addi	tional chimney sections ca	in be added to any
Two 18" sections	205/8	785⁄8	of the listed combinations	by adding to the dimension	ns as follows:
One 36" section	211/4	795/8		Add to	Add to
One 12" and one 36"	section 265%	887/8	Components	Dimension "X"	<b>Dimension "R"</b>
One 48" section	271/4	90	12" section	55	93
One 18" and one 36"	section 295/8	94	18" section	83	141/2
One 12" and one 48"	section 325/8	991/4	36" section	17%	30
One 18" and one 48"	section 35%	1043⁄a	48" section	23%	40%
Two 36" section	385/8	109%	Flue Support	17	29
One 36" and one 48' and one flue supp	"section ort 481∕∌	122%			-

#### STEP 11. INSTALLING FLASHING

Place the flashing over the chimney pipe where it penetrates the roof and mark the outline of the flashing on the roof. Remove the nails from the shingles inside this outline and to the bottom edge of the roof cutout. Coat the roof area under the shingles with roofing cement. Slide the flashing under the shingles on the sides of the flashing and re-nail the top and side shingles. DO NOT nail through the lower portion of flashing. If necessary, cover the side and top of the flashing with the salvaged shingles. The flashing should cover the lower side of the roof opening as pictured in Figure 14.

#### STEP 12. INSTALLING THE STORM COLLAR

The storm collar is assembled to the chimney system next. Holding the adjustable storm collar with the tab of the collar in your right hand, put the collar around the flue pipe. Push the tab on the collar through the slot provided. Pull the tab through and bend it just enough so that the collar may be raised upward. Apply waterproof caulking around the flash-

![](_page_30_Figure_6.jpeg)

ing where the collar fits around the top of the flashing. Push the storm collar down securely on the sealer and flashing. To secure the collar, pull the tab through the slot as far as possible and bend the tab over to hold it in place.

#### **STEP 13. INSTALLING THE TERMINATION CAP**

A chimney termination is required to finish the installation. The following instructions are for the 8203D termination. Refer to the instructions packed with the termination for additional information.

![](_page_30_Picture_10.jpeg)

### CHASE INSTALLATIONS

- A chase is an enclosure for the fireplace and/or chimney that is attached to the outside of the house. It may start at the basement floor line, at the first level or at some point on the side of the wall. A chase may also be used to enclose a chimney from the point where it penetrates the roof to slightly below the termination cap.
- 2. The floor under the fireplace must be a solid continuous level surface. Many local building codes also require a firestop spacer in the chase at the ceiling level in the house. Consult your local building codes to determine the requirements for chase installations in your area. Remember that all chimney components must have an absolute minimum of 1" air space from combustible materials. Plan the dimensions of your chase accordingly.
- 3. A chase should be constructed and insulated like any other exterior wall in your home.
- 4. A metal cover made by a local sheet metal shop is required to complete a chase installation. This cover becomes a flashing that prevents water from entering the chase. The chase cover should be sealed at the corners. A minimum 1 "high collar is required at the point where the chimney pipe or slip section will penetrate the chase cover. It requires a 12% "diameter collar for 36" models, 13% "for 39" and 42" models. The seam at the base of the collar must be watertight. It may be necessary to Support the chase cover with framing members if the cover is large or has multiple caps. Required clearance to combustibles must be maintained. Spacers (¼" high) should be used to space the chase cover above the wood framing to minimize conduction of heat to the wood.
- 5. These fireplaces may be installed in a chase using Model 8203D termination cap. All sections of the chimney must extend 6" above the chase cover when the 8203D termination is used. Install the storm collar over the 1" collar on the chase cover and caulk between storm collar and pipe. The termination is installed to the chimney pipe above the chase cover as described in Figure 14.
- 6. If a flush mount is desired, model STD-22 Round Chase Cap, ARC-52 or ARC-12 Architectural Caps, PRC-12 or LPC-12 Pyramid Caps, or TCS-12 Conical Cap may be used. When used, the last chimney section must be no more than 12" below the chase cover collar. All slip sections require a minimum 3" lap into the last chimney section. With 39" and 42" models, an AS-8-2 shield slip section must be used. Refer to separate installation instructions for each termination for details.
- 7. It is recommended but not required, that you insulate underneath the fireplace and between the studs on the outside wall of the chase to reduce heat loss in cold climates. Be sure to use non-combustible insulation without paper or plastic backing. Never use blown-In type insulation in a chase. Insulation should never cover the top or sides of the fireplace or any part of the chimney system. To further reduce heat loss, it is recommended that ½ "gypsum wallboard be installed over the insulation on the inside of the chase. Plan chase dimensions accordingly.

8. Chases with two or more chimneys should be constructed wide enough to allow chimneys to be spaced at least 24" on center from each other. When chimneys are closer than this, smoke from one may be drawn down the flue of the adjacent chimney. When chimneys must be installed closer than this smoke transfer may be prevented by vertically offsetting adjacent terminations by 12" to 18" or by installing 12" to 18" high sheet metal shields between terminations.

#### WARNING: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS.

![](_page_31_Figure_10.jpeg)

**Construction note:** If it is necessary to cut a hole in the exterior load bearing wall to install the firebox in the chase, be sure to adequately frame the opening to support the structure. Consult your local building codes for detailed requirements.

Warning: The openings in the outer collar on the top of the fireplace must not be obstructed. Never use blown-in insulation in the chimney enclosure.

#### **INSTALLING A GAS LINE**

All TEMCO fireplaces are designed to accept a ½" gas line for a decorative gas appliance complying with Z21.60 Standard for decorative gas appliances for installation in vented fireplaces. The decorative appliance must be installed in accordance with its installation instructions and the National Fuel Gas Code ANSI Z223.1. The fireplace has a factory-installed tube for insertion of the gas line. Refer to page 3 for gas line inlet location.

NOTE: A minimum 1/2" clearance from the gas pipe must be maintained within 4" of the fireplace. See Figure 17.

To install gas line, gently use a hammer and punch to knock a hole through the refractory at the emboss. Remove insulation from the inlet tube. Run the line to just outside the gas inlet hole of the fireplace. Slide a ½" gas line nipple through the tube and attach to the line. Finish installation by either capping gas line inside fireplace or by attaching an approved gas appliance in accordance with its installation instructions. Re-install insulation around the gas line to seal between it and gas conduit. Seal around the gas line and the refractory with refractory cement.

CAUTION: When using a decorative appliance, the fireplace damper must be set in the fully open position. Installations to install a firestop at the first ceiling level above the fireplace and seal the remaining area with either sheet metal or ½" gypsum wallboard. Insulation may then be installed above the sheeting material. Required clearances to the chimney pipe must be maintained. Lining the interior walls of the fireplace enclosure with gypsum wallboard will further reduce cold air infiltration. (See Figure 16.)

#### INSULATE TO SEAL UNDER THE FIREPLACE

Insulating under the fireplace is beneficial for installations on a concrete slab. The fireplace should be placed on insulating board. It is important that a hard, rigid surface be maintained so do not use fiberglass insulation for this purpose. In a chase that cartilevers outside the house, it is beneficial to insulate between the floor joists. See page 11 for chase construction.

CAUTION: When installing a fireplace in an insulated enclosure, be sure to maintain all marked air spaces.

#### SEAL SEAMS

Seal between the fireplace and finishing materials. Use high temperature caulk. See Figures 18 and 20 for details of sealing spaces between the fireplace and finishing materials. Note the small amount of insulation installed across the top of the fireplace and down the sides as a backing for the caulk.

![](_page_32_Figure_11.jpeg)

## RECOMMENDED COLD CLIMATE INSTALLATIONS

The insulation and sealing of the enclosure around the fireplace is very important in cold climates. If the enclosure is insulated and sealed properly, you can avoid future cold air problems. The time taken to install the firebox correctly is well worthwhile. The following steps are recommended to stop potential cold air problems.

#### INSULATION OF THE FIREPLACE ENCLOSURE

When in a chase or on an outside wall, the fireplace enclosure should be insulated like any other outside wall. Insulation should be installed on the outside walls and the wall above the fireplace. It is also recommended in chase

![](_page_32_Figure_16.jpeg)

#### MOBILE HOME INSTALLATION

Fireplace models TLC36-3MB and TLC42-4MB are Underwriters' Laboratories listed for installation in mobile homes with TEMCO double-wall 8" air cooled chimney and components. The installation of this fireplace in a mobile homes is similar to its installation in site construction with the following exceptions:

- 1. The fireplace must be secured to the floor of the mobile or manufactured home by means of tabs on each side.
- Only one set of elbows may be used per fireplace system. A minimum height of 13'6" must be maintained when elbows are used.
- 3. TEMCO glass doors, firestop thimble, and model AIR-3B combustion air kit must be installed for mobile home use. The duct for the combustion air kit may go through the floor or the side wall of the mobile home.
- See figure 17 for minimum system height. The height of the system is measured from the base of the fireplace and includes 6" of the chimney cap.
- 5. A firestop thimble is required in all mobile home installations. The TEMCO Model UFT8-1 universal firestop thimble may be used for flat and vaulted mobile home ceilings (0° to 30°).

The firestop thimble is designed to eliminate the need to cut trusses when installing the 8" chimney between standard mobile home roof trusses fabricated on 16" centers. Locate and mark the center of chimney on the mobile home ceiling. Cut a 141/2" square in the ceiling. Position the firestop thimble with the flanges up and with the cylindrical portion extending up into the hole. Nail the firestop thimble securely to the framing. The firestop thimble has a 10" sleeve that functions as a heat shield. This collar must extend from the ceiling level into the roof flashing. A firestop thimble extension model TE-1 is required if the thickness of the ceiling is such that the heat shield on the thimble does not extend into the roof flashing. The thimble extension slips into the firestop thimble and is fastened to the thimble with sheet metal screws, A model 8206F roof flashing, storm collar, and the TEMCO 8203D termination cap are required to complete the installation.

6. See BL-1 instructions for wiring procedures. WARNING: Do not install a fireplace in a sleeping room of a mobile home.

CAUTION: The structural integrity of the mobile home floor, wall, ceiling and roof trusses, and any other structural members must be maintained.

![](_page_33_Figure_10.jpeg)

## FINISHING YOUR FIREPLACE

There are a wide variety of finishing materials available for your TEMCO fireplace from formal wall treatments with marble and mantels to rustic wood paneling, stone or brick. It is important that the black face of the fireplace not be covered with any type of combustible material. Non-combustible facing materials such as marble, brick, or ceramic tile may overlap the black face of the fireplace but must not cover louvered vents above and below the opening on louvered models or the air intake vent below the opening on flush face 39" and 42" models. Seal all joints between the black fireplace face and the wall covering with a heat-resistant material such as rock wool insulation or mortar. Be sure to use high temperature adhesive or mortar when anchoring brick, stone, or tile to the face of the fireplace. Check to see whether man-made brick and stone are made of non-combustible materials before using them on the face of the fireplace. Some of these products contain combustible materials. Combustible wall coverings such as paneling or wallboard may not overlap the black face of the fireplace. The space between the wall covering and the fireplace should be sealed with a heat-resistant material such as rock wool insulation or mortar.

NOTE: An "L" shaped steel lintel must be installed across the top of the firebox opening where facing materials such as brick or stone is used on the face of the firebox. It acts as a support/firestop. It should be attached to the face of the fireplace with screws and sealed to the fireplace with a heat-resistant sealer.

#### Figure 20: Wall Treatments

Louvered Models: Non-combustible decorative facing materials may cover the black face up the louvered ar inlets and outlets. Louvers above and below the the screened opening and air inlets behind the screened opening must not be blocked. Flush Face Models: Non-combustible decorative facing materials may cover the black face up the screened opening except for the air inlets below the opening on 39" and 42" models. All inlets below and behind the screened opening must not be blocked.

![](_page_34_Figure_7.jpeg)

![](_page_35_Figure_0.jpeg)

Description	Qty.	42″	39″	36″	Description	Qty.	42″	39″	36″
Firescreen rod, straight	2	3T65864	3T65730	3T65648	Screws for refractory retainers	2	1A68188	1A68188	1A6818
Screws for screen rods	2	1A68188	1A68188	1A68188	Right side refractory	1	2D70355	2D70355	2D6833
Firescreen with rings	2	1T62197	1T66146	1T66146	Left side refractory	1	2D70355	2D70355	2D6833
Screen retainer	4	1 A62222	1 <b>A</b> 62222	1 A62222	Back refractory	1	2D70357	2D70425	2D6699
Refractory retainer, right side	1	2B70358	2B70358	2B68316	Bottom refractory	1	2D70354	2D70424	2D6833
lefractory retainer, left side	1	2B70358	2B70358	2B68339	Integral grate	1	1D70361	1D68373	1D6837
efractory retainer, front	1	-	-	2C68372	Grate retaining bracket	2	2B66130	2B66130	2B66134

## - USING YOUR FIREPLACE

- 1. Open the firescreen by grasping handles and pushing them back to each side.
- The flue damper rod is located behind the mesh screens. To open the damper, slide the rod to the right. To close, slide the rod to the left.
- 3. If the combustion air kit has been installed, the inlet air damper should be in a full open position before you start a fire. Reach behind the screen and release the control rod on the front of the left side of the firebox. To open, turn the control until it is pointing down. To close the damper, rotate the control rod counterclockwise until it is pointing to the three o'clock position. The control rod will lock in the closed position and swing free in the open position.
- 4. A TEMCO fireplace grate must be used in this fireplace. It is preinstalled at the factory as an integral part of the fireplace.
- 5. Light a piece of crumpled paper and hold it high inside the fireplace This will warm the flue and start the chimney "drawing."
- Light the paper in the grate and add kindling. As the kindling catches, add more or heavier wood until the fire is well established. Be careful not to "smother" the fire.
- 7. WARNING: NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR FRESHEN UP A FIRE IN THIS FIRE-PLACE. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE FIRE-PLACE WHILE IT IS IN USE.
- Close the right firescreen first and then the left firescreen, being sure that they overlap. Keep the firescreens closed at all times except when adding fuel.
- 9. Ashes that build up from burning logs must be removed periodically to allow space for air to move under and up through the luel for combustion. If these ashes are allowed to accumulate until the air flow is blocked the grate may become badly warped from excessive heat
- 10. A fireplace needs a steady supply of air in order to draw properly Many houses or apartments which are well sealed lack sufficient air for normal operation. Ventilating fans, exhaust hoods, or central heating systems often cause fireplaces to smoke by stealing the fireplace's combustion air. If the volume is enough, it can reverse the flow of air in the fireplace and cause smoking.
- 11. Use solid wood for fuel. Use dry and well seasoned wood. Do not burn scrap construction lumber; it produces excessive sparks. Never use woods dipped in tar, pitch, creosote, etc. as this produces sputtering, smoking fires with toxic fumes. Do not use wood products with synthetic binders like plywood or artificial logs as these produce abnormally high temperatures and may cause deterioration of chimney material.
- 12. DO NOT OVER-FIRE WITH EXCESSIVE FUEL LOADS SUCH AS LUMBER, WRAPPING PAPER, CHRISTMAS TREES, ETC THE FIREPLACE IS OVER-FIRED IF THE TOP OF THE FLAMES ARE GOING UP INTO THE CHIMNEY OR LICKING OUT OF THE FIREBOX.

OVER-FIRING WITH THE GLASS DOORS IN THE CLOSED POSI-TION CAN CAUSE THE GLASS TO SHATTER RESULTING IN PROPERTY DAMAGE. TEMCO DOES NOT WARRANT THE GLASS AND IS NOT RESPONSIBLE FOR CONSEQUENTIAL PROPERTY DAMAGE, AS STATED IN THE SEPARATE GLASS DOOR WARRANTY.

- 13. Creosole Formation and Need for Removal: When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosole. The creosole vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosole residue accumulates on the flue lining. If ignited this creosole makes an extremely hot fire. The chimney should be inspected at least twice a year during the heating season to determine if a creosole buildup has occurred. If creosole has accumulated it should be removed to reduce the risk of a chimney fire.
- 14 CHARCOAL AND COAL MAY NOT BE BURNED IN THIS FIRE-PLACE.
- 15 NEVER CLOSE ANY DAMPERS UNTIL YOU ARE CERTAIN THAT THERE ARE NO WARM EMBERS.
- 16 When the fire has gone completely out, close all dampers. This will prevent excessive heat loss up the chimney and excessive water on the hearth. Il combustion air kit is installed, close inlet air damper.
- 17 The brick-like refractory on the floor, back and sides is reinforced with steel, but can be cracked and broken. Don't drop logs or build lines directly against refractories. A careful "burn-in" of your fireplace is recommended during initial use. For the first few fires, build modest lines. This will cure the refractories properly. Hairline cracks may appear in the refractories but do no harm to their performance.
- 18 It is important for the chimney to be high enough to draw property. The chimney should extend 3' above the highest point where it passes through the roof and 2' above any portion of the roof horizontally within 10'. See pages 8 and 9.
- 19 Disposal of Ashes: Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be rotained in the closed container until all cinders have thoroughly cooled.
- 20. WARNING: THIS FIREPLACE IS NOT INTENDED TO BE USED WITH ANY COMPONENTS OTHER THAN THOSE SPECIFIED IN THIS MANUAL (I.e. FIREPLACE INSERTS, BLOWERS, GLASS DOOR EXTENSIONS, HEAT CIRCULATORS). USE OF THESE ITEMS COULD RESULT IN A SERIOUS FIRE HAZARD.
- 21. Access to chimney for cleaning: To remove the termination cap remove the three #10A x 7 hex head screws from the termination brackets. Grasp the skirt with one hand on each side and pull up. To replace the cap, reposition the termination cap on the chimney pipe and align the termination brackets with the holes in the pipe. Securely attach the termination cap to the chimney with the three screws removed earlier.
- 22 WARNING: FIREPLACES EQUIPPED WITH DOORS SHOULD BE OPERATED ONLY WITH DOORS FULLY OPEN OR DOORS FULLY CLOSED. IF DOORS ARE LEFT PARTLY OPEN, GAS AND FLAME MAY BE DRAWN OUT OF THE FIREPLACE OPENING, CREATING RISKS OF BOTH FIRE AND SMOKE.

![](_page_36_Picture_24.jpeg)

23. Keep all combustibles, such as furniture, draperies, papers and stored wood away from the front of the fireplace.

![](_page_37_Figure_0.jpeg)