City of Portland, Maine – Building or Use Permit Application

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

Location of Construction: ~~31 Jackson Street~~ 13 Kenneth St	Owner: ** Timothy A. Higgins	Phone: 776-2268 773-2040	Permit No: 990702
Owner Address: ** 106 Caron Street Portland, ME 04103	Lessee/Buyer's Name: Same	Phone:	BusinessName:
Contractor Name: Owner	Address:	Phone:	Permit Issued: PERMIT ISSUED JUL 1 1999 CITY OF PORTLAND
Past Use: Vacant	Proposed Use: 1-Family	COST OF WORK: $ 12,000	PERMIT FEE: $ 80.00
		FIRE DEPT. ☐ Approved ☐ Denied Signature:	INSPECTION: Use Group: Type: Signature:
			Zone: CBL: ~~382 B 022~~
			Zoning Approval: 382-B-022

Proposed Project Description:

Foundation work only for a 24x34 Colonial with 22 x 22 garage.

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: Approved ☐ Approved with Conditions: ☐ Denied ☐

Signature: Date:

Permit Taken By: GD/MW

Date Applied For: June 22, 1999

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

PERMIT ISSUED WITH REQUIREMENTS

CERTIFICATION

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

June 23, 1999

SIGNATURE OF APPLICANT | ADDRESS: | DATE: | PHONE:

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE | PHONE:

Special Zone or Reviews:

☐ Shoreland
☐ Wetland
☐ Flood Zone
☐ Subdivision
☐ Site Plan maj ☐ minor ☐ mm ☐

Zoning Appeal

☐ Variance
☐ Miscellaneous
☐ Conditional Use
☐ Interpretation
☐ Approved
☐ Denied

Historic Preservation

☑ Not in District or Landmark
☐ Does Not Require Review
☐ Requires Review

Action:

☐ Appoved
☐ Approved with Conditions
☐ Denied

Date:

CEO DISTRICT 1

ub

White–Permit Desk Green–Assessor's Canary–D.P.W. Pink–Public File Ivory Card–Inspector

COMMENTS

12/14/99 - Lot Cleared - Fencing Removed - Pool Removed - Lot graded out - Will start Foundation when weather Cleans -

3/17/00 - Pre Con - discussed Tight Setbacks front & sides, other well here lines out B/4 Pour, discussed Tread/Riser, Bedroom windows Guardrails etc - Foundation Walls to Be 8" (R)

Inspection Record

Type	Date
Foundation:	
Framing:	
Plumbing:	
Final:	
Other:	

FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT
HEATING OR POWER EQUIPMENT

MAY 23 2000

332-B-022 000530

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location 13 Kenneth St Use of Building Res Date 5-19-00

Name and address of owner of appliance Tim Niggins 13 kenneth st.

Installer's name and address Jim Godbout P&H 183 Granite St. Rdd. Me 04005

Telephone 207 283 1200

Location of appliance:

- ☑ Basement
- ☐ Floor
- ☐ Attic
- ☐ Roof

Type of Fuel:

- ☐ Gas
- ☑ Oil
- ☐ Solid

Appliance Name:

U.L. Approved ☑ Yes ☐ No

Will appliance be installed in accordance with the manufacture's installation instructions? ☑ Yes ☐ No

IF NO Explain:

The Type of License of Installer:

- ☑ Master Plumber # 05913
- ☐ Solid Fuel #
- ☑ Oil # 9547
- ☑ Gas # PNT 1440
- ☐ Other

Type of Chimney:

- ☑ Masonry Lined
  Factory built
- ☐ Metal
  Factory Built U.L. Listing #
- ☐ Direct Vent
  Type UL#

Type of Fuel Tank

- ☑ Oil
- ☐ Gas

Size of Tank 275 gal.

Number of Tanks 1

Distance from Tank to Center of Flame 8 **feet.**

30.00*

Approved

Fire: 10 Hours

Ele.:

Bldg.:

Approved with Conditions

☐ See attached letter or requirement

Signature of Installer James M. Godbout

White - Inspection Yellow - File Pink - Applicant's Gold - Assessor's Copy

Form # P 01

UB

ELECTRICAL PERMIT
City of Portland, Me.

382 B 022

1-family (2)

To the Chief Electrical Inspector, Portland Maine:
The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the City of Portland Electrical Ordinance, National Electrical Code and the following specifications:

Date 4/12/00
Permit # 323
CBL# 382 B 022

SITE LOCATION: 13 Kenneth St.

OWNER Tim Higgins **TENANT** _____

								TOTAL	EACH FEE
OUTLETS	Receptacles	42	Switches	12	Smoke Detectors	6	60	.20	12.00
FIXTURES	incandescent	11	fluorescent		Strips	3	14	.20	2.80
SERVICES	Overhead		Underground		TTL AMPS	<800		15.00	
	Overhead		Underground	V	100	>800	1	25.00	25.00
Temporary Service	Overhead		Underground		TTL AMPS			25.00	
								25.00	
METERS	(number of)	1					1	1.00	1.00
MOTORS	(number of)							2.00	
RESID/COM	Electric units							1.00	
HEATING	oil/gas units		Interior		Exterior			5.00	
APPLIANCES	Ranges	1	Cook Tops		Wall Ovens		1	2.00	2.00
	Insta-Hot		Water heaters		Fans	1	1	2.00	2.00
	Dryers	1	Disposals	1	Dishwasher	1	3	2.00	6.00
	Compactors		Spa		Washing Machine	1	1	2.00	2.00
	Others (denote)							2.00	
MISC. (number of)	Air Cond/win							3.00	
	Air Cond/cent				Pools			10.00	
	HVAC		EMS		Thermostat			5.00	
	Signs							10.00	
	Alarms/res							5.00	
	Alarms/com							15.00	
	Heavy Duty(CRKT)							2.00	
	Circus/Carnv							25.00	
	Alterations							5.00	
	Fire Repairs							15.00	
	E Lights							1.00	
	E Generators							20.00	
PANELS	Service		Remote		Main			4.00	
TRANSFORMER	0-25 Kva							5.00	
	25-200 Kva							8.00	
	Over 200 Kva							10.00	
					TOTAL AMOUNT DUE				
	MINIMUM FEE/COMMERCIAL 35.00				**MINIMUM FEE**		**25.00**		52.80

INSPECTION: Will be ready _____ or will call _____

CONTRACTORS NAME Breggia Electric **MASTER LIC. #** 03931
ADDRESS Box 9739 Portland 04104 **LIMITED LIC. #** _____
TELEPHONE 797-8888

SIGNATURE OF CONTRACTOR _____

INSPECTION: Service 6/8/22 by J Ruiz

Service called in _____

Closing-in 5/25/00 by D Caddell

PROGRESS INSPECTIONS: _____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

_____ / _____ / _____

ELECTRICAL INSTALLATIONS—

Permit Number _____

Location _____

Owner _____

Date of Permit _____

Final Inspection _____

By Inspector _____

DATE:	REMARKS:
4/14	Trench not ready
4/21	Trench & Conduit OK to Backfill DC

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

382 A 005

DC

TO: Code Enforcement
Kandi Talbot, Planner

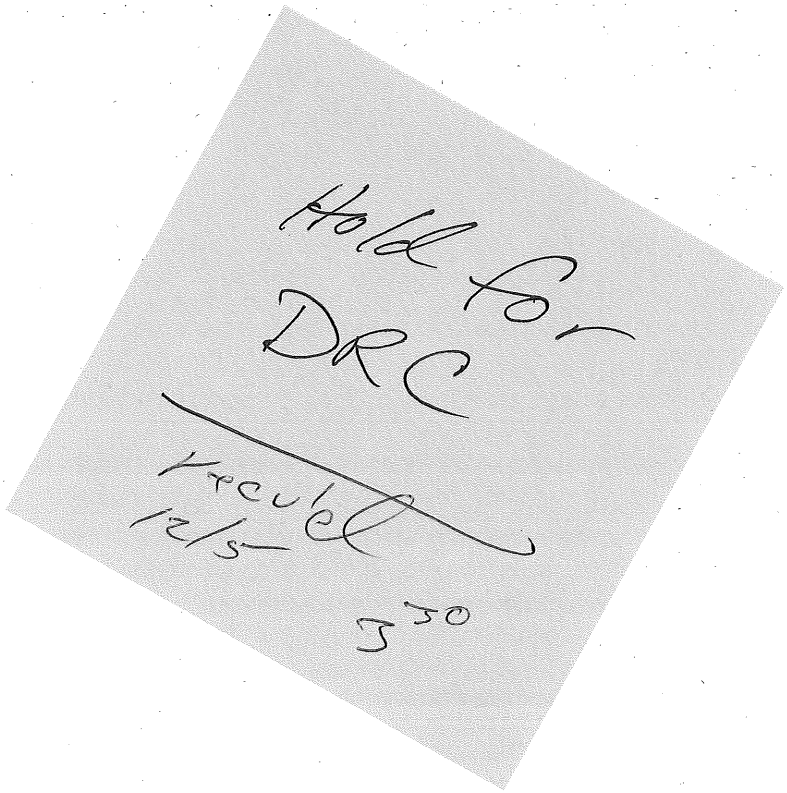
FROM: Chris Earle, Construction Representative
Reviewed by Steve Bushey, P.E., Acting Development Review Coordinator

DATE: November 30, 2000

RE: Certificate of Occupancy – 13 Kenneth Street

On November 29 and November 30, 2000, the site was reviewed for compliance with the conditions of approval.

It is our opinion that a **permanent certificate of occupancy could be issued**, assuming neither Code Enforcement nor Public Works has any outstanding issues.



Applicant: Timothy Higgins Date: 6/28/99

Address: Jackson St / Kennedy St C-B-L: ~~PAUL~~ 382-B-22

CHECK-LIST AGAINST ZONING ORDINANCE

Date - New

Zone Location - R-3

Interior or corner lot -

Proposed Use/Work - Foundation only - 24'x34' Colonial with 22x22 garage ~~26'x30'~~ on revised plans

Sewage Disposal - private

Lot Street Frontage - 50' req 85' shown

Front Yard - 25' req - 25' shown

Rear Yard - 25' req - x45' shown

Side Yard - 14' req - 14.5' shown both sides

Projections - rear bulk head

Width of Lot - 75' req - 85' shown

Height - 2 Story

Lot Area - 6,500# req - ~~9,880#~~ 1380 / 8500 shown

Lot Coverage/ Impervious Surface - 25% MAX

Area per Family - 6,500#

Off-street Parking - 2 req - 2 shown

Loading Bays - N/A

Site Plan - minor/minor

Shoreland Zoning/ Stream Protection - N/A

Flood Plains - ~~Zone C~~ Zone X panel 2C

revised 12/8/99

BUILDING PERMIT REPORT

DATE: 5 APRIL 2000 ADDRESS: 13 Kenneth ST. CBL: 382-B-022

REASON FOR PERMIT: Increase Foundation size only/Amend. Permit #99362

BUILDING OWNER: Tim Higgins.

PERMIT APPLICANT: /CONTRACTOR Owner

USE GROUP: Foundation only CONSTRUCTION TYPE: CONSTRUCTION COST: PERMIT FEES: $30.00

The City's Adopted Building Code (The BOCA National Building code/1999 with City Amendments)
The City's Adopted Mechanical Code (The BOCA National Mechanical Code/1993)

CONDITION(S) OF APPROVAL

This permit is being issued with the understanding that the following conditions are met: *1 *2 *3 *4 *31

X 1. This permit does not excuse the applicant from meeting applicable State and Federal rules and laws.
X 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) "ALL LOT LINES SHALL BE CLEARLY MARKED BEFORE CALLING."
X 3. Foundation drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. The drain shall extend a minimum of 12 inches beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2" of gravel or crushed stone, and shall be covered with not less than 6" of the same material. Section 1813.5.2
X 4. Foundations anchors shall be a minimum of ½" in diameter, 7" into the foundation wall, minimum of 12" from corners of foundation and a maximum 6' O.C. between bolts. Section 2305.17
5. Waterproofing and dampproofing shall be done in accordance with Section 1813.0 of the building code.
6. Precaution must be taken to protect concrete from freezing. Section 1908.0
7. 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.
8. Private garages located beneath habitable rooms 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 side. (Chapter 4, Section 407.0 of the BOCA/1999)
9. 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). Chapter 12 & NFPA 211
10. Sound transmission control in residential building shall be done in accordance with Chapter 12, Section 1214.0 of the City's Building Code.
11. Guardrails & 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". 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. (Handrails shall be a minimum of 34" but not more than 38". Exception: Handrails that form part of a guard shall have a height not less than than 36" and not more than 42". Handrail grip size shall have a circular cross section with an outside diameter of at least 1 ¼" and not greater than 2". (Sections 1021 & 1022.0). Handrails shall be on both sides of stairway. (Section 1014.7)
12. Headroom in habitable space is a minimum of 7'6". (Section 1204.0)
13. Stair construction in **Use Group R-3 & R-4 is a minimum of 10" tread and 7 ¾" maximum rise.** All other Use Group minimum 11" tread, 7" maximum rise. (Section 1014.0)
14. The minimum headroom in all parts of a stairway shall not be less than 80 inches. (6'8") 1014.4
15. 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 (508)mm, and a minimum net clear opening of 5.7 sq. ft. (Section 1010.4)
16. Each apartment shall have access to two (2) 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. (Section 1010.1)
17. All vertical openings shall be enclosed with construction having a fire rating of at least one (1) hour, including fire doors with self closer's. (Over 3 stories in height requirements for fire rating is two (2) hours. (Section 710.0)
18. The boiler shall be protected by enclosing with (1) hour fire rated construction including fire doors and ceiling, or by providing automatic extinguishment. (Table 302.1.1)

19. 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 920.3.2 (BOCA National Building Code/1999), 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**
20. A portable fire extinguisher shall be located as per NFPA #10. They shall bear the label of an approved agency and be of an approved type. (Section 921.0)
21. The Fire Alarm System shall be installed and maintained to NFPA #72 Standard.
22. The Sprinkler System shall be installed and maintained to NFPA #13 Standard.
23. All exit signs, lights and means of egress lighting shall be done in accordance with Chapter 10 Section & Subsections 1023.0 & 1024.0 of the City's Building Code. (The BOCA National Building Code/1999)
24. Section 25 – 135 of the Municipal Code for the City of Portland states, "No person or utility shall be granted a permit to excavate or open any street or sidewalk from the time of November 15 of each year to April 15 of the following year".
25. The builder of a facility to which Section 4594-C of the Maine State Human Rights Act Title 5 MRSA refers, shall obtain a certification from a design professional that the plans commencing construction of the facility, the builder shall submit the certification the Division of Inspection Services.
26. Ventilation and access shall meet the requirements of Chapter 12 Sections 1210.0 and 1211.0 of the City's Building Code. (Crawl spaces & attics).
27. All electrical, plumbing and HVAC permits must be obtained by a Master Licensed holders of their trade. **No closing in of walls until all electrical** (min. 72 hours notice) **and plumbing inspections have been done.**
28. All requirements must be met before a final Certificate of Occupancy is issued.
29. All building elements shall meet the fastening schedule as per Table 2305.2 of the City's Building Code (The BOCA National Building Code/1996).
30. Ventilation of spaces within a building shall be done in accordance with the City's Mechanical code (The BOCA National Mechanical Code/1993). (Chapter M-16)
31. Please read and implement the attached Land Use Zoning report requirements.
32. Boring, cutting and notching shall be done in accordance with Sections 2305.3, 2305.3.1, 2305.4.4 and 2305.5.1 of the City's Building Code.
33. Bridging shall comply with Section 2305.16.
34. Glass and glazing shall meet the requirements of Chapter 24 of the building code. (Safety Glazing Section 2406.0)
35. All signage, shall be done in accordance with Section 3102.0 signs of the City's Building Code, (The BOCA National Building Code/1999).
36.

P. Samuel Hoffses, Building Inspector
Cc: Lt. McDougall, PFD
Marge Schmuckal, Zoning Administrator

PSH 1/26/00

****On the basis of plans submitted and conditions placed on these plans any deviations shall require a separate approval.**

*****THIS PERMIT HAS BEEN ISSUED WITH THE UNDERSTANDING THAT ALL THE CONDITIONS OF THE APPROVAL SHALL BE COMPLETED. THEREFORE, BEFORE THE WORK IS COMPLETED A REVISED PLAN OR STATEMENT FROM THE PERMIT HOLDER SHALL BE SUBMITTED TO THIS OFFICE SHOWING OR EXPLAINING THAT THE CONDITIONS HAVE BEEN MET. IF THIS REQUIREMENT IS NOT RECEIVED YOUR CERTIFICATE OF OCCUPANCY SHALL BE WITHHELD.**

******CERTIFICATE OF OCCUPANCY FEE $50.00**

****** All PLANS THAT REQUIRE A PROFESSIONAL DESIGNER'S SEAL,(AS PER SECTION114.0 OF THE BUILDINGCODE) SHALL ALSO BE PRESENTED TO THIS DIVISION ON AUTO CAD LT.2000, OR EQUIVALENT.**

THIS IS NOT A PERMIT/CONSTRUCTION CANNOT COMMENCE UNTIL THE PERMIT IS ISSUED

Minor/Minor Site Review, Building or Use Permit Pre-Application

Detached Single Family Dwelling

In the interest of processing your application in the quickest possible manner, please complete the Information below for a Building or Use Permit.

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

Location/Address of Construction: 13 Kenneth St 04103		
Total Square Footage of Proposed Structure 2132	Square Footage of Lot 9384	
Tax Assessor's Chart, Block & Lot Number Chart# 382 Block# B Lot# 022	Owner: Tim Higgins	Telephone#: 773-2040
Lessee/Buyer's Name (If Applicable) Tim Higgins	Owner's/Purchaser/Lessee Address:	Cost Of Work: $ 0 Fee: $ 30.00
Proposed Project Description:(Please be as specific as possible) Permit #990702 ~~Add~~ Amend to Building Permit		
Contractor's Name, Address & Telephone Timothy A. Higgins		Rec'd By:

Separate permits are required for Internal & External Plumbing, HVAC and Electrical installation.

•All construction must be conducted in compliance with the 1996 B.O.C.A. Building Code as amended by Section 6-Art II.

•All plumbing must be conducted in compliance with the State of Maine Plumbing Code.

•All Electrical Installation must comply with the 1996 National Electrical Code as amended by Section 6-Art III.

•HVAC(Heating, Ventilation and Air Conditioning) installation must comply with the 1993 BOCA Mechanical Code.

You must Include the following with you application:

1) A Copy of Your Deed or Purchase and Sale Agreement
2) A Copy of your Construction Contract, if available
3) A Plot Plan (Sample Attached)

A "minor/minor" site plan review is required prior to permit issuance. The Site plan must be prepared and sealed by a registered land surveyor **(2 copies are required)**. A complete plot plan (Site Plan)includes:

- The shape and dimension of the lot, all existing buildings (if any), the proposed structure and the distance from the actual property lines. Structures include decks porches, a bow windows cantilever sections and roof overhangs, as well as, sheds, pools, garages and any other accessory structures.
- Scale and North arrow; Zoning District & Setbacks
- First Floor sill elevation (based on mean sea level datum);
- Location and dimensions of parking areas and driveways;
- Location and size of both existing utilities in the street and the proposed utilities serving the building;
- Location of areas on the site that will be used to dispose of surface water.
- Existing and proposed grade contours

4) Building Plans (Sample Attached)

A complete set of construction drawings showing all of the following elements of construction:

- Cross Sections w/Framing details (including porches, decks w/ railings, and accessory structures)
- Floor Plans & Elevations
- Window and door schedules
- Foundation plans with required drainage and dampproofing
- Electrical and plumbing layout. Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review must be included.

Certification

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

Signature of applicant: T. G. Higgins	**Date:** 4-4-00

Site Review Fee: $300.00/Building Permit Fee: $30.00 for the 1st $1000.cost plus $6.00 per $1,000.00 construction cost thereafter.

Inspection Services
Michael J. Nugent
Manager

Department of Urban Development
Joseph E. Gray, Jr.
Director

CITY OF PORTLAND

Minor/Minor Site Review, Building or Use Permit Pre-Application
Detached Single Family Dwelling

As an applicant for a building permit, you are about to enter into a relationship with our Office. We welcome any questions, comments or suggestions that will make the process more efficient. Attached you will find an application and some samples of the submissions you will provide at application time. Please read ***ALL*** of the information and if you need any further assistance please call 874-8703 or 874-8693.

389 Congress St Portland, Maine 04101 (207) 874-8700 FAX 874-8716 TTY 874-8936

BUILDING PERMIT REPORT

DATE: 24 June 99 ADDRESS: 51 Jackson ST. CBL: 382-B-~~001~~ 22 (New CBL #)

REASON FOR PERMIT: To Construct Foundation only 24X34

BUILDING OWNER: Higgins

PERMIT APPLICANT: Owner

USE GROUP R-3 (Found Only) BOCA 1996 CONSTRUCTION TYPE _____

CONDITION(S) OF APPROVAL

This permit is being issued with the understanding that the following conditions are met:

Approved with the following conditions: #1, #2 #3 #4, #34, #31

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)
3. Foundation drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. The drain shall extend a minimum of 12 inches beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2" of gravel or crushed stone, and shall be covered with not less than 6" of the same material. Section 1813.5.2
4. Foundations anchors shall be a minimum of ½" in diameter, 7" into the foundation wall, minimum of 12" from comers of foundation and a maximum 6' o.c. between bolts. (Section 2305.17)
5. Waterproofing and dampproofing shall be done in accordance with Section 1813.0 of the building code.
6. Precaution must be taken to protect concrete from freezing. Section 1908.0
7. 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.
8. Private garages located beneath habitable rooms 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)
9. 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). Chapter 12 & NFPA 211
10. Sound transmission control in residential building shall be done in accordance with Chapter 12, Section 1214.0 of the City's Building Code.
11. Guardrails & 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. (Handrails shall be a minimum of 3e4" but not more than 38". Use Group R-3 shall not be less than 30", but not more than 38".) Handrail grip size shall have a circular cross section with an outside diameter of at least 1 ¼" and not greater than 2". (Sections 1021 & 1022.0) - Handrails shall be on both sides of stairway. (Section 1014.7)
12. Headroom in habitable space is a minimum of 7'6". (Section 1204.0)
13. Stair construction in Use Group R-3 & R-4is a minimum of 10" tread and 7 ¾" maximum rise. All other Use Group minimum 11" tread, 7" maximum rise. (Section 1014.0)
14. The minimum headroom in all parts of a stairway shall not be less than 80 inches. (6'8") 1014.4
15. 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. (Section 1018.6)
16. Each apartment shall have access to two (2) 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. (Section 1010.1)
17. All vertical openings shall be enclosed with construction having a fire rating of at least one (1) hour, including fire doors with self closer's. (Over 3 stories in height requirements for fire rating is two (2) hours.) (Section 710.0)
18. The boiler shall be protected by enclosing with (1)hour fire rated construction including fire doors and ceiling, or by providing automatic extinguishment. (Table 302.1.1)
19. 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 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 I-1 shall receive power from a battery when the AC primary power source is interrupted. (Interconnection is required) Section 920.3.2.

20. A portable fire extinguisher shall be located as per NFPA #10. They shall bear the label of an approved agency and be of an approved type. (Section 921.0)
21. The Fire Alarm System shall maintained to NFPA #72 Standard.
22. The Sprinkler System shall maintained to NFPA #13 Standard.
23. All exit signs, lights and means of egress lighting shall be done in accordance with Chapter 10 Section & Subsections 1023.0 & 1024.0 of the City's Building Code. (The BOCA National Building Code/1996)
24. Section 25-135 of the Municipal Code for the City of Portland states, "No person or utility shall be granted a permit to excavate or open any street or sidewalk from the time of November 15 of each year to April 15 of the following year".
25. The builder of a facility to which Section 4594-C of the Maine State Human Rights Act Title 5 MRSA refers, shall obtain a certification from a design professional that the plans commencing construction of the facility, the builder shall submit the certification the Division of Inspection Services.
26. Ventilation shall meet the requirements of Chapter 12 Sections 1210.0 of the City's Building Code. (Crawl spaces & attics).
27. All electrical, plumbing and HVAC permits must be obtained by a Master Licensed holders of their trade. No closing in of walls until all electrical (min. 72 hours notice) and plumbing inspections have been done.
28. All requirements must be met before a final Certificate of Occupancy is issued.
29. All building elements shall meet the fastening schedule as per Table 2305.2 of the City's Building Code (the BOCA National Building Code/1996).
30. Ventilation of spaces within a building shall be done in accordance with the City's Mechanical Code (The BOCA National Mechanical Code/1993). (Chapter M-16)
31. Please read and implement the attached Land Use Zoning report requirements. — see ATTACHED
32. Boring, cutting and notching shall be done in accordance with Sections 2305.4.4, 2305.5.1 and 2305.5.3 of the City's Building Code.
33. Glass and glazing shall meet the requirements of Chapter 24 of the building code.
34. This permit is being issued with the understanding that the proposed foundation be covered and the lot graded to prevent any damage to the foundation or the public health, safety and welfare.
35.
36.

P. Samuel Hoffses, Building Inspector
cc: Lt. McDougall, PFD
Marge Schmuckal, Zoning Administrator

PSH 12-14-98

**On the basis of plans submitted and conditions placed on these plans any deviations shall require a separate approval.

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

19990083
I. D. Number

Timothy Higgins
Applicant

6/23/99
Application Date

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Jackson St
Project Name/Description

Consultant/Agent

13 Kenneth St
Address of Proposed Site

776-2268
Applicant or Agent Daytime Telephone, Fax

382-B-022
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☐ Building Addition ☐ Change Of Use ☒ Residential
☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☒ Other (specify) **Foundation only**

2116	9384	R-3
Proposed Building square Feet or # of Units	Acreage of Site	Zoning

Check Review Required:

☒ Site Plan (major/minor)
☐ Subdivision # of lots ____
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other ____

Fees Paid: Site Plan **$300.00** Subdivision ____ Engineer Review ____ Date: **6/23/99**

DRC Approval Status:

Reviewer **Jim Wendel**

☐ **Approved**
☒ **Approved w/Conditions** see attached
☐ **Denied**

Approval Date **6/29/99** Approval Expiration **6/29/00** Extension to ____ ☒ Additional Sheets Attached

☒ Condition Compliance **Jim Wendel** (signature) **6/29/99** (date) ____

Performance Guarantee ☐ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☐ Performance Guarantee Accepted	date	amount	expiration date
☐ Inspection Fee Paid	date	amount	
☐ Building Permit	date		
☐ Performance Guarantee Reduced	date	remaining balance	signature
☐ Temporary Certificate Of Occupancy	date	☐ Conditions (See Attached)	
☐ Final Inspection	date	signature	
☐ Certificate Of Occupancy	date		
☐ Performance Guarantee Released	date	signature	
☐ Defect Guarantee Submitted	submitted date	amount	expiration date
☐ Defect Guarantee Released			

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
ADDENDUM

19990083
I. D. Number

Timothy Higgins
Applicant

6/23/99
Application Date

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Jackson St
Project Name/Description

Consultant/Agent

13 Kenneth St
Address of Proposed Site

776-2268
Applicant or Agent Daytime Telephone, Fax

382-B-022
Assessor's Reference: Chart-Block-Lot

DRC Conditions of Approval

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 (2"-2 1/2" caliper for deciduous or 6'-7' evergreen)

Your new street address is now 13 Kenneth Street , the number must be displayed on the street frontage of your house prior to issuance of a 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. Please 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. Please 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 you 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.

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

As-built record information for sewer and stormwater service connections must be submitted to Public Works Engineering Section (55 Portland Street) and approved prior to issuance of a Certificate of Occupancy.

The site contractor shall establish finish grades at the foundation, bulkhead and basement windows to be in conformance with the first floor elevation (FFE) and sill elevation (SE) set by the building contractor to provide for positive drainage away from entire footprint of building.

A drainage plan shall be submitted to and approved by Development Review Coordinator showing first floor elevation (FFE), sill elevation (SE), finish street/curb elevation, lot grading, existing and proposed contours, drainage patterns and paths, drainage swales, grades at or near abutting property lines, erosion control devices and locations and outlets for drainage from the property.

The Development Review Coordinator reserves the right to require additional lot grading or other drainage improvements as necessary due to field conditions.

Eroded sol shall be contained on-site. A crushed stone construction entrance shall be located within the curb cut. Silt fence shall be installed down gradient of all disturbed areas.

The site shall be graded to drain the rear yard to Kenneth Street at a minimum of 2% grade.

A separate foundation drain pipe shall be installed from the house to the right of way of Jackson Street and then connected to the sanitary sewer service for the house.

All disturbed areas shall be permanently stabilized with 4" loam, seeded and mulched.

Planning Conditions of Approval

Inspections Conditions of Approval

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

19990083
I. D. Number

Timothy Higgins
Applicant

6/23/99
Application Date

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Jackson St
Project Name/Description

Consultant/Agent

Jackson St
Address of Proposed Site

776-2268
Applicant or Agent Daytime Telephone, Fax

382-B-022
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☐ Building Addition ☐ Change Of Use ☒ Residential
☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☒ Other (specify) **Foundation only**

2116	**9384**	**R-3**
Proposed Building square Feet or # of Units	Acreage of Site	Zoning

Check Review Required:

☒ Site Plan (major/minor)
☐ Subdivision # of lots ____
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other ____

Fees Paid: Site Plan **$300.00** Subdivision ____ Engineer Review ____ Date: **6/23/99**

Inspections Approval Status:

Reviewer **Marge Schmuckal**

☐ **Approved**
☒ **Approved w/Conditions** see attached
☐ **Denied**

Approval Date **6/29/99** Approval Expiration ____ Extension to ____ ☒ Additional Sheets Attached

☒ Condition Compliance ____ (signature) ____ (date) ____

Performance Guarantee ☐ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☐ Performance Guarantee Accepted	____ date	____ amount	____ expiration date
☐ Inspection Fee Paid	____ date	____ amount	
☐ Building Permit Issued	____ date		
☐ Performance Guarantee Reduced	____ date	____ remaining balance	____ signature
☐ Temporary Certificate of Occupancy	____ date	☐ Conditions (See Attached)	
☐ Final Inspection	____ date	____ signature	
☐ Certificate Of Occupancy	____ date		
☐ Performance Guarantee Released	____ date	____ signature	
☐ Defect Guarantee Submitted	____ submitted date	____ amount	____ expiration date
☐ Defect Guarantee Released			

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
ADDENDUM

19990083
I. D. Number

Timothy Higgins
Applicant

6/23/99
Application Date

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Jackson St
Project Name/Description

Consultant/Agent

Jackson St
Address of Proposed Site

776-2268
Applicant or Agent Daytime Telephone, Fax

382-B-022
Assessor's Reference: Chart-Block-Lot

DRC Conditions of Approval

Planning Conditions of Approval

Inspections Conditions of Approval

1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
2. This permit is for a foundation only. A separate permit and approvals are needed for the actual construction.
3. Please note that you are showing a 2 story building. The setbacks reflect that given. The future structure shall be no higher than 2 stories.
4. Separate permits shall be required for future decks, sheds, pool, and/or garage.

Fire Conditions of Approval

THIS IS NOT A PERMIT/CONSTRUCTION CANNOT COMMENCE UNTIL THE PERMIT IS ISSUED

Minor/Minor Site Review, Building or Use Permit Pre-Application

Detached Single Family Dwelling

In the interest of processing your application in the quickest possible manner, please complete the Information below for a Building or Use Permit.

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

Location/Address of Construction: 51 Jackson St		Pleasant Hill's
Total Square Footage of Proposed Structure 2116	Square Footage of Lot 9384	776-2268
Tax Assessor's Chart, Block & Lot Number Chart# 382 Block# B Lot# 27	Owner: Timothy A. Higgins	Telephone#: 773-2040
Lessee/Buyer's Name (If Applicable) SAME	Owner's/Purchaser/Lessee Address: #106 Caron St. Portland	Cost Of Work: $ 12,000 Fee: $ 80.00
Proposed Project Description:(Please be as specific as possible) Foundation For 24x34 colonial with 22x22 Garage	currently there is an existing POBI they will be filling in	
Contractor's Name, Address & Telephone SAME		Rec'd By:

Separate permits are required for Internal & External Plumbing, HVAC and Electrical installation.

- **All construction must be conducted in compliance with the 1996 B.O.C.A. Building Code as amended by Section 6-Art II.**
- **All plumbing must be conducted in compliance with the State of Maine Plumbing Code.**
- **All Electrical Installation must comply with the 1996 National Electrical Code as amended by Section 6-Art III.**
- **HVAC(Heating, Ventilation and Air Conditioning) installation must comply with the 1993 BOCA Mechanical Code.**

DEPT. OF BUILDING INSPECTION CITY OF PORTLAND, ME
JAN 22 1999
RECEIVED

You must Include the following with you application:

1) A Copy of Your Deed or Purchase and Sale Agreement
2) A Copy of your Construction Contract, if available
3) A Plot Plan (Sample Attached)

A "minor/minor" site plan review is required prior to permit issuance. The Site plan must be prepared and sealed by a registered land surveyor **(2 copies are required)**. A complete plot plan (Site Plan)includes:

- The shape and dimension of the lot, all existing buildings (if any), the proposed structure and the distance from the actual property lines. Structures include decks porches, a bow windows cantilever sections and roof overhangs, as well as, sheds, pools, garages and any other accessory structures.
- Scale and North arrow; Zoning District & Setbacks
- First Floor sill elevation (based on mean sea level datum);
- Location and dimensions of parking areas and driveways;
- Location and size of both existing utilities in the street and the proposed utilities serving the building;
- Location of areas on the site that will be used to dispose of surface water.
- Existing and proposed grade contours

Minor 300
80.00
380.00

4) Building Plans (Sample Attached)

A complete set of construction drawings showing all of the following elements of construction:

- Cross Sections w/Framing details (including porches, decks w/ railings, and accessory structures)
- Floor Plans & Elevations
- Window and door schedules
- Foundation plans with required drainage and dampproofing
- Electrical and plumbing layout. Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review must be included.

Certification

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

Signature of applicant: Timothy A. Higgins	**Date:** 6-21-99

Site Review Fee: $300.00/Building Permit Fee: $25.00 for the 1st $1000.cost plus $5.00 per $1,000.00 construction cost thereafter.

Inspection Services
Michael J. Nugent
Manager

Department of Urban Development
Joseph E. Gray, Jr.
Director

CITY OF PORTLAND

Minor/Minor Site Review, Building or Use Permit Pre-Application
Detached Single Family Dwelling

As an applicant for a building permit, you are about to enter into a relationship with our Office. We welcome any questions, comments or suggestions that will make the process more efficient. Attached you will find an application and some samples of the submissions you will provide at application time. Please read ***ALL*** of the information and if you need any further assistance please call 874-8703 or 874-8693.

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

19990083
I. D. Number

Timothy Higgins
Applicant

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Consultant/Agent

776-2268
Applicant or Agent Daytime Telephone, Fax

6/23/99
Application Date

Jackson St
Project Name/Description

Jackson St
Address of Proposed Site

382-B-001 W
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☐ Building Addition ☐ Change Of Use ☒ Residential
☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☒ Other (specify) **Foundation**

2116
Proposed Building square Feet or # of Units

9384
Acreage of Site

Zoning

Check Review Required:

☒ Site Plan (major/minor)
☐ Subdivision # of lots
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other

Fees Paid: Site Plan **$300.00** Subdivision Engineer Review Date: **6/23/99**

Inspections Approval Status:

Reviewer

☐ **Approved**
☐ **Approved w/Conditions** see attached
☐ **Denied**

Approval Date Approval Expiration Extension to ☐ Additional Sheets Attached

☐ Condition Compliance signature date

Performance Guarantee ☐ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☐ Performance Guarantee Accepted — date / amount / expiration date
☐ Inspection Fee Paid — date / amount
☐ Building Permit Issued — date
☐ Performance Guarantee Reduced — date / remaining balance / signature
☐ Temporary Certificate of Occupancy — date ☐ Conditions (See Attached)
☐ Final Inspection — date / signature
☐ Certificate Of Occupancy — date
☐ Performance Guarantee Released — date / signature
☐ Defect Guarantee Submitted — submitted date / amount / expiration date

THIS IS NOT A PERMIT/CONSTRUCTION CANNOT COMMENCE UNTIL THE PERMIT IS ISSUED

Minor/Minor Site Review, Building or Use Permit Pre-Application

Detached Single Family Dwelling

In the interest of processing your application in the quickest possible manner, please complete the Information below for a Building or Use Permit.

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

Location/Address of Construction: 13 Kenneth St.		
Total Square Footage of Proposed Structure 9044	Square Footage of Lot 9487 +-	
Tax Assessor's Chart, Block & Lot Number Chart# 382 Block# B Lot# 022	Owner: Timothy A. Higgins	Telephone#: 773-2040
Lessee/Buyer's Name (If Applicable) Timothy A. Higgins	Owner's/Purchaser/Lessee Address: 242 Vermont St	Cost Of Work: $80,000 Fee: $504.00
Proposed Project Description:(Please be as specific as possible) Single Family Home w/ att garage		
Contractor's Name, Address & Telephone SAME		Rec'd By:

Separate permits are required for Internal & External Plumbing, HVAC and Electrical installation.

•All construction must be conducted in compliance with the 1996 B.O.C.A. Building Code as amended by Section 6-Art II.

•All plumbing must be conducted in compliance with the State of Maine Plumbing Code.

•All Electrical Installation must comply with the 1996 National Electrical Code as amended by Section 6-Art III.

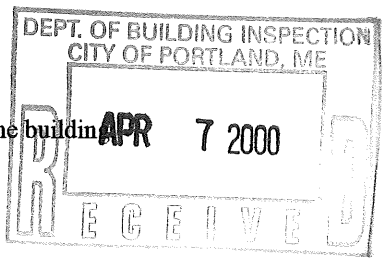
•HVAC(Heating, Ventilation and Air Conditioning) installation must comply with the 1993 BOCA Mechanical Code.

You must Include the following with you application:

1) A Copy of Your Deed or Purchase and Sale Agreement
2) A Copy of your Construction Contract, if available
3) A Plot Plan (Sample Attached)

A "minor/minor" site plan review is required prior to permit issuance. The Site plan must be prepared and sealed by a registered land surveyor **(2 copies are required)**. A complete plot plan (Site Plan)includes:

- The shape and dimension of the lot, all existing buildings (if any), the proposed structure and the distance from the actual property lines. Structures include decks porches, a bow windows cantilever sections and roof overhangs, as well as, sheds, pools, garages and any other accessory structures.
- Scale and North arrow; Zoning District & Setbacks
- First Floor sill elevation (based on mean sea level datum);
- Location and dimensions of parking areas and driveways;
- Location and size of both existing utilities in the street and the proposed utilities serving the building
- Location of areas on the site that will be used to dispose of surface water.
- Existing and proposed grade contours



4) Building Plans (Sample Attached)

A complete set of construction drawings showing all of the following elements of construction:

- Cross Sections w/Framing details (including porches, decks w/ railings, and accessory structures)
- Floor Plans & Elevations
- Window and door schedules
- Foundation plans with required drainage and dampproofing
- Electrical and plumbing layout. Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review must be included.

Certification

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

Signature of applicant: Timothy A. Higgins	**Date:** 4-5-00

Site Review Fee: $300.00/Building Permit Fee: $30.00 for the 1st $1000.cost plus $6.00 per $1,000.00 construction cost thereafter.

Inspection Services
Michael J. Nugent
Manager

Department of Urban Development
Joseph E. Gray, Jr.
Director

CITY OF PORTLAND

Building or Use Permit Application
Additions/Alterations/Accessory Structures
To Detached Single Family Dwelling

As an applicant for a building permit, you are about to enter into a relationship with our Office. We welcome any questions, comments or suggestions that will make the process more efficient. Attached you will find an application and some samples of the submissions you will provide at application time. Please read ***ALL*** of the information and if you need any further assistance please call 874-8703 or 874-8693.

1.

BUILDING PERMIT REPORT

DATE: 12 June 2000 ADDRESS: 13 Kenneth St CBL: 382-B-002

REASON FOR PERMIT: To Construct a 10'x 12' deck.

BUILDING OWNER: Timothy A. Higgins

PERMIT APPLICANT: /CONTRACTOR Timothy A. Higgins

USE GROUP: R-3 CONSTRUCTION TYPE: 5B CONSTRUCTION COST: 500.00 PERMIT FEES: $20.00

The City's Adopted Building Code (The BOCA National Building code/1999 with City Amendments)
The City's Adopted Mechanical Code (The BOCA National Mechanical Code/1993)

CONDITION(S) OF APPROVAL

This permit is being issued with the understanding that the following conditions are met: *1, *2, *11, *13 *29 *32 *34 *36 #37

*1. This permit does not excuse the applicant from meeting applicable State and Federal rules and laws.
*2. Before concrete for foundation is placed, approval from the ~~Development Review Coordinator and~~ Inspection Services must be obtained. (A 24 hour notice is required prior to inspection) "ALL LOT LINES SHALL BE CLEARLY MARKED BEFORE CALLING."
3. Foundation drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. The drain shall extend a minimum of 12 inches beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2" of gravel or crushed stone, and shall be covered with not less than 6" of the same material. Section 1813.5.2
4. Foundations anchors shall be a minimum of ½" in diameter, 7" into the foundation wall, minimum of 12" from corners of foundation and a maximum 6' O.C. between bolts. Section 2305.17
5. Waterproofing and dampproofing shall be done in accordance with Section 1813.0 of the building code.
6. Precaution must be taken to protect concrete from freezing. Section 1908.0
7. 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.
8. Private garages located beneath habitable rooms 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 side. (Chapter 4, Section 407.0 of the BOCA/1999)
9. 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). Chapter 12 & NFPA 211
10. Sound transmission control in residential building shall be done in accordance with Chapter 12, Section 1214.0 of the City's Building Code.
*11. Guardrails & 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". 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. (Handrails shall be a minimum of 34" but not more than 38". Exception: Handrails that form part of a guard shall have a height not less than than 36" and not more than 42". Handrail grip size shall have a circular cross section with an outside diameter of at least 1 ¼" and not greater than 2". (Sections 1021 & 1022.0). Handrails shall be on both sides of stairway. (Section 1014.7)
12. Headroom in habitable space is a minimum of 7'6". (Section 1204.0)
*13. Stair construction in **Use Group R-3 & R-4 is a minimum of 10" tread and 7 ¾" maximum rise.** All other Use Group minimum 11" tread, 7" maximum rise. (Section 1014.0)
14. The minimum headroom in all parts of a stairway shall not be less than 80 inches. (6'8") 1014.4
15. 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 (508)mm, and a minimum net clear opening of 5.7 sq. ft. (Section 1010.4)
16. Each apartment shall have access to two (2) 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. (Section 1010.1)
17. All vertical openings shall be enclosed with construction having a fire rating of at least one (1) hour, including fire doors with self closer's. (Over 3 stories in height requirements for fire rating is two (2) hours. (Section 710.0)
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19. 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 920.3.2 (BOCA National Building Code/1999), 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**
20. A portable fire extinguisher shall be located as per NFPA #10. They shall bear the label of an approved agency and be of an approved type. (Section 921.0)
21. The Fire Alarm System shall be installed and maintained to NFPA #72 Standard.
22. The Sprinkler System shall be installed and maintained to NFPA #13 Standard.
23. All exit signs, lights and means of egress lighting shall be done in accordance with Chapter 10 Section & Subsections 1023.0 & 1024.0 of the City's Building Code. (The BOCA National Building Code/1999)
24. Section 25 – 135 of the Municipal Code for the City of Portland states, "No person or utility shall be granted a permit to excavate or open any street or sidewalk from the time of November 15 of each year to April 15 of the following year".
25. The builder of a facility to which Section 4594-C of the Maine State Human Rights Act Title 5 MRSA refers, shall obtain a certification from a design professional that the plans commencing construction of the facility, the builder shall submit the certification the Division of Inspection Services.
26. Ventilation and access shall meet the requirements of Chapter 12 Sections 1210.0 and 1211.0 of the City's Building Code. (Crawl spaces & attics).
27. All electrical, plumbing and HVAC permits must be obtained by a Master Licensed holders of their trade. **No closing in of walls until all electrical** (min. 72 hours notice) **and plumbing inspections have been done.**
28. All requirements must be met before a final Certificate of Occupancy is issued.
29. All building elements shall meet the fastening schedule as per Table 2305.2 of the City's Building Code (The BOCA National Building Code/1996).
30. Ventilation of spaces within a building shall be done in accordance with the City's Mechanical code (The BOCA National Mechanical Code/1993). (Chapter M-16)
31. Please read and implement the attached Land Use Zoning report requirements. All previous req. or conditions Apply
32. Boring, cutting and notching shall be done in accordance with Sections 2305.3, 2305.3.1, 2305.4.4 and 2305.5.1 of the City's Building Code.
33. Bridging shall comply with Section 2305.16.
34. Glass and glazing shall meet the requirements of Chapter 24 of the building code. (Safety Glazing Section 2406.0)
35. All signage, shall be done in accordance with Section 3102.0 signs of the City's Building Code, (The BOCA National Building Code/1999).
36. Fastens shall be used between piers, columns, and columns and deck Framing.

P. Samuel Hoffses, Building Inspector
Cc: Lt. McDougall, PFD
Marge Schmuckal, Zoning Administrator

PSH 1/26/00

**On the basis of plans submitted and conditions placed on these plans any deviations shall require a separate approval.

***THIS PERMIT HAS BEEN ISSUED WITH THE UNDERSTANDING THAT ALL THE CONDITIONS OF THE APPROVAL SHALL BE COMPLETED. THEREFORE, BEFORE THE WORK IS COMPLETED A REVISED PLAN OR STATEMENT FROM THE PERMIT HOLDER SHALL BE SUBMITTED TO THIS OFFICE SHOWING OR EXPLAINING THAT THE CONDITIONS HAVE BEEN MET. IF THIS REQUIREMENT IS NOT RECEIVED YOUR CERTIFICATE OF OCCUPANCY SHALL BE WITHHELD.

****CERTIFICATE OF OCCUPANCY FEE $50.00

**** All PLANS THAT REQUIRE A PROFESSIONAL DESIGNER'S SEAL,(AS PER SECTION114.0 OF THE BUILDINGCODE) SHALL ALSO BE PRESENTED TO THIS DIVISION ON AUTO CAD LT.2000, OR EQUIVALENT.

THIS IS NOT A PERMIT/CONSTRUCTION CANNOT COMMENCE UNTIL THE PERMIT IS ISSUED

Building or Use Permit Pre-Application
Additions/Alterations/Accessory Structures
To Detached Single Family Dwelling

In the interest of processing your application in the quickest possible manner, please complete the Information below for a Building or Use Permit.

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

Location/Address of Construction: 13 Kenneth St.		
Tax Assessor's Chart, Block & Lot Number Chart# 382 Block# ~~002~~ B Lot# 002	Owner: Timothy A. Higgins	Telephone#: 773-8362
Owner's Address: 242 Veranda St	Lessee/Buyer's Name (If Applicable) Timothy A. Higgins	Cost Of Work: $ 500.- Fee $ 30.00
Proposed Project Description:(Please be as specific as possible) 10X12 Deck		
Contractor's Name, Address & Telephone Timothy A. Higgins 242 Veranda St. 773-8362		Rec'd By:

Separate permits are required for Internal & External Plumbing, HVAC and Electrical installation.

- **All construction must be conducted in compliance with the 1996 B.O.C.A. Building Code as amended by Section 6-Art II.**
- **All plumbing must be conducted in compliance with the State of Maine Plumbing Code.**
- **All Electrical Installation must comply with the 1996 National Electrical Code as amended by Section 6-Art III.**
- **HVAC(Heating, Ventilation and Air Conditioning) installation must comply with the 1993 BOCA Mechanical Code.**

RECEIVED BUILDING INSPECTION
JUN 12 2000

You must Include the following with you application:

1) A Copy of Your Deed or Purchase and Sale Agreement
2) A Copy of your Construction Contract, if available
3) A Plot Plan (Sample Attached)

If there is expansion to the structure, a complete plot plan (Site Plan) must include:

- The shape and dimension of the lot, all existing buildings (if any), the proposed structure and the distance from the actual property lines. Structures include decks porches, a bow windows cantilever sections and roof overhangs, as well as, sheds, pools, garages and any other accessory structures.
- Scale and required zoning district setbacks

4) Building Plans (Sample Attached)

A complete set of construction drawings showing all of the following elements of construction:

- Cross Sections w/Framing details (including porches, decks w/ railings, and accessory structures)
- Floor Plans & Elevations
- Window and door schedules
- Foundation plans with required drainage and dampproofing
- Electrical and plumbing layout. Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review must be included.

Certification

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

Signature of applicant: Timothy A. Higgins	**Date:** 6-12-00

Building Permit Fee: $30.00 for the 1st $1000.cost plus $6.00 per $1,000.00 construction cost thereafter.

O:\INSP\CORRESP\MNUGENT\APADSFD.WPD

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

19990083
I. D. Number

Timothy Higgins
Applicant

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Consultant/Agent

776-2268
Applicant or Agent Daytime Telephone, Fax

6/23/99
Application Date

Jackson St
Project Name/Description

13 Kenneth St
Address of Proposed Site

382-B-022
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☐ Building Addition ☐ Change Of Use ☒ Residential
☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☒ Other (specify) **Foundation only**

2116	**9384**	**R-3**
Proposed Building square Feet or # of Units	Acreage of Site	Zoning

Check Review Required:

☒ Site Plan (major/minor)
☐ Subdivision # of lots
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other

Fees Paid: Site Plan **$300.00** Subdivision Engineer Review Date: **6/23/99**

DRC Approval Status:

Reviewer **Jim Wendel**

☐ **Approved**
☒ **Approved w/Conditions** see attached
☐ **Denied**

Approval Date **6/29/99** Approval Expiration **6/29/00** Extension to ☒ Additional Sheets Attached

☒ Condition Compliance **Jim Wendel** signature **6/29/99** date

Performance Guarantee ☐ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☐ Performance Guarantee Accepted	date	amount	expiration date
☐ Inspection Fee Paid	date	amount	
☐ Building Permit	date		
☐ Performance Guarantee Reduced	date	remaining balance	signature
☐ Temporary Certificate Of Occupancy	date	☐ Conditions (See Attached)	
☐ Final Inspection	date	signature	
☐ Certificate Of Occupancy	date		
☐ Performance Guarantee Released	date	signature	
☐ Defect Guarantee Submitted	submitted date	amount	expiration date

BUILDING PERMIT REPORT

DATE: 7 APRIL 2000 **ADDRESS:** 13 Kenneth ST. **CBL:** 382-B-002

REASON FOR PERMIT: Single Family dwelling with attached garage

BUILDING OWNER: Tim Higgins

PERMIT APPLICANT: _____ **/CONTRACTOR** SAO

USE GROUP: R-3 **CONSTRUCTION TYPE:** 5-B **CONSTRUCTION COST:** ~~$80,000.00~~ **PERMIT FEES:** $504.00

The City's Adopted Building Code (The BOCA National Building code/1999 with City Amendments)
The City's Adopted Mechanical Code (The BOCA National Mechanical Code/1993)

CONDITION(S) OF APPROVAL

This permit is being issued with the understanding that the following conditions are met: *1, *2, *3, *4, *5, *7, *8, *9, *11, *13, *14, *15, *19, *27, *28, *29, *30, *32, *34, #31

*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) **"ALL LOT LINES SHALL BE CLEARLY MARKED BEFORE CALLING."**
*3. Foundation drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. The drain shall extend a minimum of 12 inches beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2" of gravel or crushed stone, and shall be covered with not less than 6" of the same material. Section 1813.5.2
*4. Foundations anchors shall be a minimum of ½" in diameter, 7" into the foundation wall, minimum of 12" from corners of foundation and a maximum 6' O.C. between bolts. Section 2305.17
*5. Waterproofing and dampproofing shall be done in accordance with Section 1813.0 of the building code.
6. Precaution must be taken to protect concrete from freezing. Section 1908.0
*7. 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.
*8. Private garages located beneath habitable rooms 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 side. (Chapter 4, Section 407.0 of the BOCA/1999)
*9. 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). Chapter 12 & NFPA 211
10. Sound transmission control in residential building shall be done in accordance with Chapter 12, Section 1214.0 of the City's Building Code.
*11. Guardrails & 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". 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. (Handrails shall be a minimum of 34" but not more than 38". Exception: Handrails that form part of a guard shall have a height not less than than 36" and not more than 42". Handrail grip size shall have a circular cross section with an outside diameter of at least 1 ¼" and not greater than 2". (Sections 1021 & 1022.0). Handrails shall be on both sides of stairway. (Section 1014.7)
12. Headroom in habitable space is a minimum of 7'6". (Section 1204.0)
*13. Stair construction in **Use Group R-3 & R-4 is a minimum of 10" tread and 7 ¾" maximum rise.** All other Use Group minimum 11" tread, 7" maximum rise. (Section 1014.0)
*14. The minimum headroom in all parts of a stairway shall not be less than 80 inches. (6'8") 1014.4
*15. 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 (508)mm, and a minimum net clear opening of 5.7 sq. ft. (Section 1010.4)
16. Each apartment shall have access to two (2) 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. (Section 1010.1)
17. All vertical openings shall be enclosed with construction having a fire rating of at least one (1) hour, including fire doors with self closer's. (Over 3 stories in height requirements for fire rating is two (2) hours. (Section 710.0)
18. The boiler shall be protected by enclosing with (1) hour fire rated construction including fire doors and ceiling, or by providing automatic extinguishment. (Table 302.1.1)

19. 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 920.3.2 (BOCA National Building Code/1999), 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**
20. A portable fire extinguisher shall be located as per NFPA #10. They shall bear the label of an approved agency and be of an approved type. (Section 921.0)
21. The Fire Alarm System shall be installed and maintained to NFPA #72 Standard.
22. The Sprinkler System shall be installed and maintained to NFPA #13 Standard.
23. All exit signs, lights and means of egress lighting shall be done in accordance with Chapter 10 Section & Subsections 1023.0 & 1024.0 of the City's Building Code. (The BOCA National Building Code/1999)
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30. Ventilation of spaces within a building shall be done in accordance with the City's Mechanical code (The BOCA National Mechanical Code/1993). (Chapter M-16)
31. Please read and implement the attached Land Use Zoning report requirements. All previous requirements & Conditions are still in effect.
32. Boring, cutting and notching shall be done in accordance with Sections 2305.3, 2305.3.1, 2305.4.4 and 2305.5.1 of the City's Building Code.
33. Bridging shall comply with Section 2305.16.
34. Glass and glazing shall meet the requirements of Chapter 24 of the building code. (Safety Glazing Section 2406.0)
35. All signage, shall be done in accordance with Section 3102.0 signs of the City's Building Code, (The BOCA National Building Code/1999).

P. Samuel Hoffses, Building Inspector
Cc: Lt. McDougall, PFD
Marge Schmuckal, Zoning Administrator

PSH 1/26/00

****On the basis of plans submitted and conditions placed on these plans any deviations shall require a separate approval.**

*****THIS PERMIT HAS BEEN ISSUED WITH THE UNDERSTANDING THAT ALL THE CONDITIONS OF THE APPROVAL SHALL BE COMPLETED. THEREFORE, BEFORE THE WORK IS COMPLETED A REVISED PLAN OR STATEMENT FROM THE PERMIT HOLDER SHALL BE SUBMITTED TO THIS OFFICE SHOWING OR EXPLAINING THAT THE CONDITIONS HAVE BEEN MET. IF THIS REQUIREMENT IS NOT RECEIVED YOUR CERTIFICATE OF OCCUPANCY SHALL BE WITHHELD.**

******CERTIFICATE OF OCCUPANCY FEE $50.00**

****** All PLANS THAT REQUIRE A PROFESSIONAL DESIGNER'S SEAL,(AS PER SECTION114.0 OF THE BUILDINGCODE) SHALL ALSO BE PRESENTED TO THIS DIVISION ON AUTO CAD LT.2000, OR EQUIVALENT.**

CITY OF PORTLAND, ME
BOCA 1996 Plan Review Record
One and Two Family Dwelling

Valuation: $80,000.00 **Plan Review #** 00482/2K
Fee: $504.00 **Date:** 7 APRIL 2000

Building Location: 13 Kenneth ST. **CBL:** 382-B-002

Building Description: Single Family dwelling/with attached garage.

Reviewed by: S. Hoffses

Use or Occupancy: R-3 **Type of Construction:** 5-B

*NR: Not Required NA: Not Applicable SR: See Report X: OK per plan

	Correction List	
NO:	Description	Code Section
1.	All Site Plan and building Code require-	111.0
	ments shall be completed before a Certificate	
	of occupancy can or will be issued.	
2.	Foundation drainage shall comply with	1813.5.2
	section 1813.5.2	
3.	Waterproofing & dam proofing shall comply	1813.0
	with section 1813.0	
4.	Anchorage bolting of sill to Foundation	
	shall comply with section 2305.17	2305.17
5.	Access to Crawl or attic spaces shall	
	comply with section 1211.0	1211.0
6.	Bridging shall comply with section 2305.16	2305.16
7.	Boring, Cutting & Notching shall comply with	see sections
	Sections 2305.3, 2305.3.1, 2305.4.4 & 2305.5.1	
	Manufactured beam, Joist and Trussues as per manf.	
	requirements.	

Revised PSH 6-10-98

	Correction List	
NO:	Description	Code Section
8.	Fastening shall Comply with Table 2305.2	Table 2305.2
9.	Concrete Floors shall comply with Section 1905	1905
10.	Chimney & Vent Shall Comply with NFPA211	NFPA211
11.	Sleeping room egress & rescue windows Shall Comply with section 1010.4	1010.4
12	Glass & Glazing Shall Comply with Sections	2406.0
13.	Guardrails & handrails Shall comply with sections 1021.0 1022.0	1021.0 1022.0
14	Private garages Shall comply with Section 407.0	407.0 407.0
15	Smoke detectors Shall comply with sections 920.3.2	920.3.2
16.		

rev:PSH 6-28-98

Foundations (Chapter 18)

Wood Foundation (1808)

NA Design
NA Installation

Footings (1807.0)

X Depth below (outside) grade 4' minimum;
but below frost line except for insulated footings.
NA Insulated footing provided
X Soil bearing value (table 1804.3)
X Footing width
X Concrete footing (1810.0) .3.1, 3.2
_____
_____
_____
_____
_____

Foundation Walls

X Design (1812.1)
X Minimum thickness Tables 1812.3.2.(1) & 1812.3.2 (2)
SA Water proofing and damp proofing Section 1813
X Sill plate (2305.17)
SA Anchorage bolting in concrete (2305.17)
X Columns (1912)
X Crawl space (1210.2) Ventilation
X Crawl opening size (1210.2.1)
SA Access to crawl and attic space (1211.0)
_____

Floors (Chapter 16-23)

X Joists - Non sleeping area LL40PSF (Table - 1606)
X Joists - Sleeping area LL30PSF (Table - 1606)
X Grade
X Spacing
X Span
_____ Girder 4" bearing 2305

Floors (contd.)

X Bearing (11/2" minimum on wood or steel 3" on masonry) and lapped (3")
SR Bridging (2305.16)
SR Boring and notching (2305.5.1)
SR Cutting and notching (2305.3)
SR Fastening table (2305.2)
NA Floor trusses (AFPANDS Chapter 35)
X Draft stopping (721.7)
X Framing of openings (2305.11) (2305.12)
X Flooring - (2304.4) 1" solid - 1/2" particle board
SR Concrete floors (1905) 3 1/2" 6 mil polyethylene vapor retarder
_____
_____
_____
_____
_____

Wall Construction (Chapter 2300)

X Design (1609) wind loads
X Load requirements
X Grade
SR Fastening schedule (Table 2305.2)
X Wall framing (2305.4.1)
X Double top plate (2305.4.2)
X Bottom plates: (2305.4.3)
SR Notching and boring: (2305.4.4) studs
_____ Non load bearing walls (2305.5)
SR Notching and boring (2305.5.1)
X Wind bracing (2305.7)
X Wall bracing required (2305.8.1)
X Stud walls (2305.8.3)
X Sheathing installation (2305.8.4)
X Minimum thickness of wall sheathing (Table 2305.13)
NA Metal construction
NA Masonry construction (Chapter 21)
NA Exterior wall covering (Chapter 14)
X Performance requirements (1403)
X Materials (1404)
NA Veneers (1405)
X Interior finishes (Chapter 8)

Roof-Ceiling Construction (Chapter 23)

N/A Roof rafters - Design (2305.15) spans
X Roof decking ans sheathing (2305.15.1) 5/8" boards and (2307.3) (Table 2307.3.1(2))
X Roof trusses (2313.3.1)

Roof Coverings (Chapter 15)

X Approved materials (1404.1)
X Performance requirement (1505)
X Fire classification (1506)
X Material and installation requirements (1507)
N/A Roof structures (1510.0)
X Type of covering (1507)

Chimneys and Fireplaces
BOCA Mechanical/1993

SR Masonry (1206.0)
Factory - built (1205.0)
Masonry fireplaces (1404)
Factory - built fireplace (1403)
X NFPA 211

Mechanical
1993 BOCA Mechanical Code

State Plumbing Code

Public Water
Public Sewer

Load Design Criteria

Floor live load sleeping	30 PSF	X
Floor live load non sleeping	40 PSF	X
Roof live load	42 PSF	X
Roof snow load	46 PSF	X
Seismic Zone	2	X
Weathering area	S	X
Frost line depth	4' MIN	X

Glazing (Chapter 24)

SA Labeling (2402.1)
Louvered window or jalousies (2402.5)
Human impact loads (2405.0)
Specific hazardous locations (2405.2)
Sloped glazing and skylights (2404)

Private Garages (Chapter 4)

SA General (407)
Beneath rooms (407.3)
Attached to rooms (407.4)
Door sills (407.5)
Means of egress (407.8)
Floor surface (407.9)

Egress (Chapter 10)

X One exit from dwelling unit (1010.2)
SR Sleeping room window (1010.4)
X EXIT DOOR (1017.3) 32" W 80" H
X Landings (1014.3.2) stairway
NA Ramp slope (1016.0)
SR Stairways (1014.3) 36" W
SR Treads (1014.6) 10" min.
SR Riser (1014.6) 7 3/4" max.
SR Solid riser (1014.6.1)
NA Winders (1014.6.3)
NA Spiral and Circular (1014.6.4)
SR Handrails (1022.2.2.) Ht.
SR Handrail grip size (1022.2.4) 1 1/4" to 2"
SR Guards (1012.0) 36" min.
_____
_____
_____

Smoke Detectors (920.3.2)

SR Location and interconnection
SR Power source

Dwelling Unit Separation
Table 602

N/A

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
ADDENDUM

19990083
I. D. Number

Timothy Higgins
Applicant

6/23/99
Application Date

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Jackson St
Project Name/Description

Consultant/Agent

13 Kenneth St
Address of Proposed Site

776-2268
Applicant or Agent Daytime Telephone, Fax

382-B-022
Assessor's Reference: Chart-Block-Lot

DRC Conditions of Approval

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 (2"-2 1/2" caliper for deciduous or 6'-7' evergreen)

Your new street address is now 13 Kenneth Street , the number must be displayed on the street frontage of your house prior to issuance of a 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. Please 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. Please 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 you 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.

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

As-built record information for sewer and stormwater service connections must be submitted to Public Works Engineering Section (55 Portland Street) and approved prior to issuance of a Certificate of Occupancy.

The site contractor shall establish finish grades at the foundation, bulkhead and basement windows to be in conformance with the first floor elevation (FFE) and sill elevation (SE) set by the building contractor to provide for positive drainage away from entire footprint of building.

A drainage plan shall be submitted to and approved by Development Review Coordinator showing first floor elevation (FFE), sill elevation (SE), finish street/curb elevation, lot grading, existing and proposed contours, drainage patterns and paths, drainage swales, grades at or near abutting property lines, erosion control devices and locations and outlets for drainage from the property.

The Development Review Coordinator reserves the right to require additional lot grading or other drainage improvements as necessary due to field conditions.

Eroded sol shall be contained on-site. A crushed stone construction entrance shall be located within the curb cut. Silt fence shall be installed down gradient of all disturbed areas.

The site shall be graded to drain the rear yard to Kenneth Street at a minimum of 2% grade.

A separate foundation drain pipe shall be installed from the house to the right of way of Jackson Street and then connected to the sanitary sewer service for the house.

All disturbed areas shall be permanently stabilized with 4" loam, seeded and mulched.

Planning Conditions of Approval

Inspections Conditions of Approval

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
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382-B-022
Assessor's Reference: Chart-Block-Lot

1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
2. This permit is for a foundation only. A separate permit and approvals are needed for the actual construction.
3. Please note that you are showing a 2 story building. The setbacks reflect that given. The future structure shall be no higher than 2 stories.
4. Separate permits shall be required for future decks, sheds, pool, and/or garage.

Fire Conditions of Approval

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM

19990083
I. D. Number

Timothy Higgins
Applicant

6/23/99
Application Date

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Jackson St
Project Name/Description

Consultant/Agent

13 Kenneth St
Address of Proposed Site

776-2268
Applicant or Agent Daytime Telephone, Fax

382-B-022
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☐ Building Addition ☐ Change Of Use ☒ Residential
☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☐ Parking Lot ☒ Other (specify) **Foundation only**

2116	**9384**	**R-3**
Proposed Building square Feet or # of Units	Acreage of Site	Zoning

Check Review Required:

☒ Site Plan (major/minor)
☐ Subdivision # of lots ____
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other ____

Fees Paid: Site Plan **$300.00** Subdivision ____ Engineer Review ____ Date: **6/23/99**

DRC Approval Status:

Reviewer **Jim Wendel**

☐ **Approved**
☒ **Approved w/Conditions** see attached
☐ **Denied**

Approval Date **5/2/00** Approval Expiration **5/2/01** Extension to ____ ☒ Additional Sheets Attached

☒ Condition Compliance **Steve Bushey** (signature) **5/2/00** (date) ____

Performance Guarantee ☐ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☐ Performance Guarantee Accepted	____ date	____ amount	____ expiration date
☐ Inspection Fee Paid	____ date	____ amount	
☒ Building Permit	**4/25/00** date		
☐ Performance Guarantee Reduced	____ date	____ remaining balance	____ signature
☐ Temporary Certificate Of Occupancy	____ date	☐ Conditions (See Attached)	
☐ Final Inspection	____ date	____ signature	
☐ Certificate Of Occupancy	____ date		
☐ Performance Guarantee Released	____ date	____ signature	
☐ Defect Guarantee Submitted	____ submitted date	____ amount	____ expiration date
☐ Defect Guarantee Released			

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
ADDENDUM

19990083
I. D. Number

Timothy Higgins
Applicant

106 Caron St, Portland, ME 04101
Applicant's Mailing Address

Consultant/Agent

776-2268
Applicant or Agent Daytime Telephone, Fax

6/23/99
Application Date

Jackson St
Project Name/Description

13 Kenneth St
Address of Proposed Site

382-B-022
Assessor's Reference: Chart-Block-Lot

DRC Conditions of Approval

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 (2"-2 1/2" caliper for deciduous or 6'-7' evergreen)

The Development Review Coordinator (874-8300 ext.8722) must be notified five (5) working days prior to date required for final site inspection. Please 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. Please 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 you 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.

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

As-built record information for sewer and stormwater service connections must be submitted to Public Works Engineering Section (55 Portland Street) and approved prior to issuance of a Certificate of Occupancy.

The site contractor shall establish finish grades at the foundation, bulkhead and basement windows to be in conformance with the first floor elevation (FFE) and sill elevation (SE) set by the building contractor to provide for positive drainage away from entire footprint of building.

A drainage plan shall be submitted to and approved by Development Review Coordinator showing first floor elevation (FFE), sill elevation (SE), finish street/curb elevation, lot grading, existing and proposed contours, drainage patterns and paths, drainage swales, grades at or near abutting property lines, erosion control devices and locations and outlets for drainage from the property. This must be provided prior to a certificate of occupancy.

The Development Review Coordinator reserves the right to require additional lot grading or other drainage improvements as necessary due to field conditions.

Eroded sol shall be contained on-site. A crushed stone construction entrance shall be located within the curb cut. Silt fence shall be installed down gradient of all disturbed areas.

The site shall be graded to drain the rear yard to Kenneth Street at a minimum of 2% grade.

A separate foundation drain pipe shall be installed from the house to the right of way of Jackson Street and then connected to the sanitary sewer service for the house.

All disturbed areas shall be permanently stabilized with 4" loam, seeded and mulched.

Planning Conditions of Approval

Inspections Conditions of Approval

CITY OF PORTLAND, MAINE
PUBLIC NOTICE

To All Building Permit Applicants and/or Contractors:

Effective immediately all temporary erosion control measures as shown on submitted site plans or as made part of a conditional approval of a site plan shall be installed, maintained, and inspected for proper functioning. Erosion control measures include but are not limited to silt fencing hay bales, stone check dams, earthen berms, stone lined swales, riprap embankments, riprap inlet/outlets of any pipe channel or culvert, sodded or grass strips, hay mulch cover on exposed soils, jute matting or erosion control blanket/matting, geotextile grids or webbing, and any provision approved by the City Engineer or Development Review Coordinator to decrease erosion or sedimentation.

All temporary and permanent erosion control measures shall be in conformance with the Maine Erosion and Sediment Control Handbook for construction: Best Management Practices as published by Cumberland County SWCD and the Maine Department of Environmental Protection. Consistent failure to install, maintain, or construct in an acceptable manner will result in a stop work order on the building permit. All erosion control measures shall be established in proposed areas of disturbed soils resulting from construction activities prior to actual construction unless a specific deadline has been made a condition of approval or agreed to by a Public Works Engineer or the Development Review Coordinator.

Effective immediately any request for Certificate of Occupancy will be denied if the above measures have not been addressed or completed. Only under extreme conditions, due to weather, shall the omission of the erosion control standards be included on the conditions for a Certificate of Occupancy, otherwise the request for a Certificate will be refused.

The City of Portland Planning Department and Public Works Department consider Erosion and Sediment Control Planning to be an absolutely necessary initial construction activity that requires as much attention and enforcement as building construction. For the protection of sensitive waterbodies, undisturbed lands, neighboring properties, established vegetated areas, and municipal drainage systems please pay careful attention to erosion and sediment control measures and conform to the notes, details, and conditions of approval as noted on your approved site plan. These controls must be installed and maintained continuously throughout the construction period. The City may inspect the site at any time to ensure compliance, and violations could result in work stoppage orders as indicated above.

We appreciate your prompt compliance with these requirements.

CITY OF PORTLAND
Planning and Urban Development Department

MEMORANDUM

TO: Joseph E. Gray, Jr., Director of Planning and Urban Development
Alexander Jaegerman, Chief Planner

FROM: James Seymour, Acting Development Review Coordinator

DATE: April 5, 1995

SUBJECT: Disclaimer Statement of Existing Poorly Drained Areas

It is the responsibility of the lot owner/homebuilder to assess drainage and provide for appropriate stormwater management design and engineering in an area which has evidence of poor hydrologic soil conditions, and/or a history of poor drainage, ponding, or soils saturation due to topography, fluctuation of seasonal ground water tables creating surface flooding, or as a result from rainfall events or snow/ice melts. The City of Portland is not responsible for resolving the drainage of land areas which could be described in any one of the above conditions.

The City of Portland Development Review Coordinator reviews lot grading for all single family homes to assure that field elevations will conform to the grades which exist at the abutting property line or to the grades which have been previously approved at the abutting property lines. The construction standards require that final foundation elevations be provided on site plans which are a minimum of 2 1/2 feet higher than street grades established at the frontage of the lot and provide positive drainage away from the entire foundation perimeter, including garage, and all basement accesses (ie. bulkheads, doorways and windows). As long as these standards are strictly enforced, most water problems on single family lots will be avoided. However, in locations with clear evidence of hydric soils, the following note shall be placed on all approved site plans:

> "The City of Portland Development Review Coordinator has reviewed and approved this plan. The lot is located in an areas that is subject to seasonal conditions of saturation by surface or groundwater. Approval of this plan does not constitute a guarantee that no water problems will be experienced by the homeowners in this vicinity. Homeowners are advised to exercise care and diligence to ensure that their home and yard is adequately constructed and graded for localized drainage conditions."

SBC

Shipping Order

05/08/00

44859

Sprowl Building Components, Inc.
P O Box 130, Searsmont, ME 04973-0130
800-439-5211 207-342-5211
FAX 207-342-5713

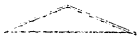
SOLD TO	Job: Tim Higgins
RUFUS DEERING COMPANY P.O. BOX 880 PORTLAND, ME 04104 (207) 772-6505	
SHIP TO	**Notes:**
13 KENNETH STREET Portland, ME	PO# 13246

Roof Trusses

LOADING INFORMATION

TCLL-TCDL-BCLL-BCDL	STRESS INCR.
42.0-7.0-0.0-10.0	1.15

ROOF TRUSS SPACING: 24.0 IN. O.C. (TYP.)
GABLE STUD SPACING: 24.0 IN.

PROFILE	QTY	PITCH TOP	PITCH BOT	ID	TYPE	SPAN FT-IN-16	LUMBER TOP	LUMBER BOT	CANTILEVER LEFT	CANTILEVER RIGHT	OVERHANG LEFT	OVERHANG RIGHT	QTY SHIPPED	COUNTED BY
	13	5.00	0.00	22	STOCK	22-00-00	2 X 4	2 X 3			01-00-00	01-00-00		
	2	5.00	0.00	22G	STOCK	22-00-00	2 X 4	2 X 3			01-00-00	01-00-00		
	14	5.00	0.00	26	STOCK	26-00-00	2 X 4	2 X 3			01-00-00	01-00-00		
	2	5.00	0.00	26G	STOCK	26-00-00	2 X 4	2 X 3			01-00-00	01-00-00		

Installation Information (Contained In Red Construction Drawings Book)

QTY	DESCRIPTION	QTY SHIPPED	COUNTED BY
1	General Roof Truss Data Sheet		
1	General Floor Truss Data Sheet		
1	HIB-91 Summary Sheet		
1	WTCA Warning Poster		
1	Standard Gable End Detail		
1	Piggyback Truss Connection Detail		
1	Standard "T" Brace Detail		
1	Ceiling Floor Partition Seperation Information		
1	TPI Mark		
1	Roof Truss Drawing Key		
1	Floor Truss Drawing Key		
1	WTCA 1-1995 - Standard Responsibilities		
1	Placement Plans (as required)		

RECEIVED IN GOOD CONDITION BY:_____ DATE:_____

ATTENTION!

IMPORTANT CONSTRUCTION DRAWINGS

SPROWL BUILDING COMPONENTS INC.
P.O. BOX 130
SEARSMONT, ME 04973
1-800-439-5211 • FAX (207) 342-5713

Tim Higgins

Project # 44859
Prepared by Ralph Littlefield

Roof Trusses	QTY	PROFILE	PITCH TOP	PITCH BOT	TYPE	SPAN FT-IN-16
22	13		5.00	0.00	STOCK	22-00-00
22G	2		5.00	0.00	STOCK	22-00-00
26	14		5.00	0.00	STOCK	26-00-00
26G	2		5.00	0.00	STOCK	26-00-00

Installation Information

General Roof Truss Data Sheet
General Floor Truss Data Sheet
HIB-91 Summary Sheet
WTCA Warning Poster
Standard Gable End Detail
Piggyback Truss Connection Detail
Web Bracing Recommendations
Standard "T" Brace Detail
Ceiling Floor Partition Seperation Information
TPI Mark
Roof Truss Drawing Key
Floor Truss Drawing Key
WTCA 1-1995 - Standard Responsibilities
Placement Plans (as required)

Thank You!

SBC
SPROWL BUILDING COMPONENTS, INC.
P. O. Box 130, Searsmont, ME 04973-0130
1-800-439-5211 207-342-5211
FAX 207-342-5713

Job	Truss	Truss Type	Qty	Ply	STOCK	Y700274
STOCKS	22	STOCK	100	1	22' 5/12 Stock	

SPROWL BUILDING COMPONENTS, SEARSMONT , ME.

4.0-32 s Jan 20 1999 MiTek Industries, Inc. Fri Apr 23 08:56:43 1999 Page 1

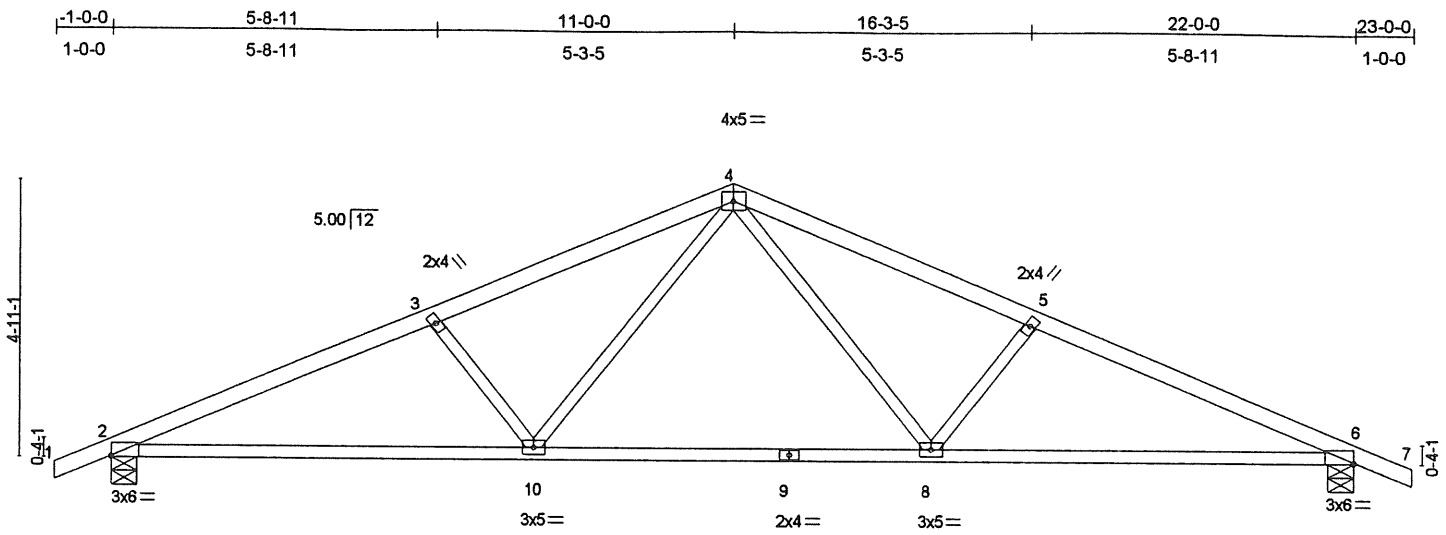


Plate Offsets (X,Y): [2:0-0-0,0-0-4], [6:0-0-0,0-0-4]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	(in)	(loc)	l/defl	PLATES	GRIP
TCLL	42.0	Plates Increase	1.15	TC	0.71	Vert(LL)	-0.15	10	>999	M20	197/144
TCDL	7.0	Lumber Increase	1.15	BC	0.92	Vert(TL)	-0.40	8-10	>658		
BCLL	0.0	Rep Stress Incr	YES	WB	0.39	Horz(TL)	0.09	6	n/a		
BCDL	10.0	Code	BOCA/ANSI95			1st LC LL Min l/defl = 360				Weight: 62 lb	

LUMBER
TOP CHORD 2 X 4 SPF No.2
BOT CHORD 2 X 3 SPF 1650F 1.5E
WEBS 2 X 3 SPF Stud

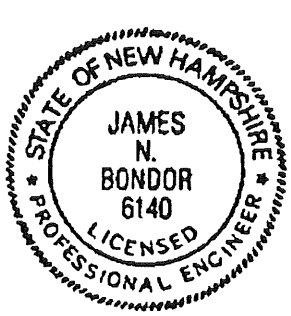
BRACING
TOP CHORD Sheathed or 2-11-4 on center purlin spacing.
BOT CHORD Rigid ceiling directly applied or 10-0-0 on center bracing.

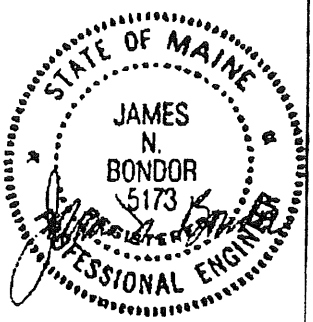
REACTIONS (lb/size) 2=1393/0-5-8, 6=1393/0-5-8

FORCES (lb) - First Load Case Only
TOP CHORD 1-2=16, 2-3=-2325, 3-4=-2003, 4-5=-2003, 5-6=-2325, 6-7=16
BOT CHORD 2-10=2127, 9-10=1466, 8-9=1466, 6-8=2127
WEBS 3-10=-458, 4-10=635, 4-8=635, 5-8=-458

NOTES
1) This truss has been checked for unbalanced loading conditions.
2) All plates are M20 plates unless otherwise indicated.
3) This truss has been designed with ANSI/TPI 1-1995 criteria.

LOAD CASE(S) Standard



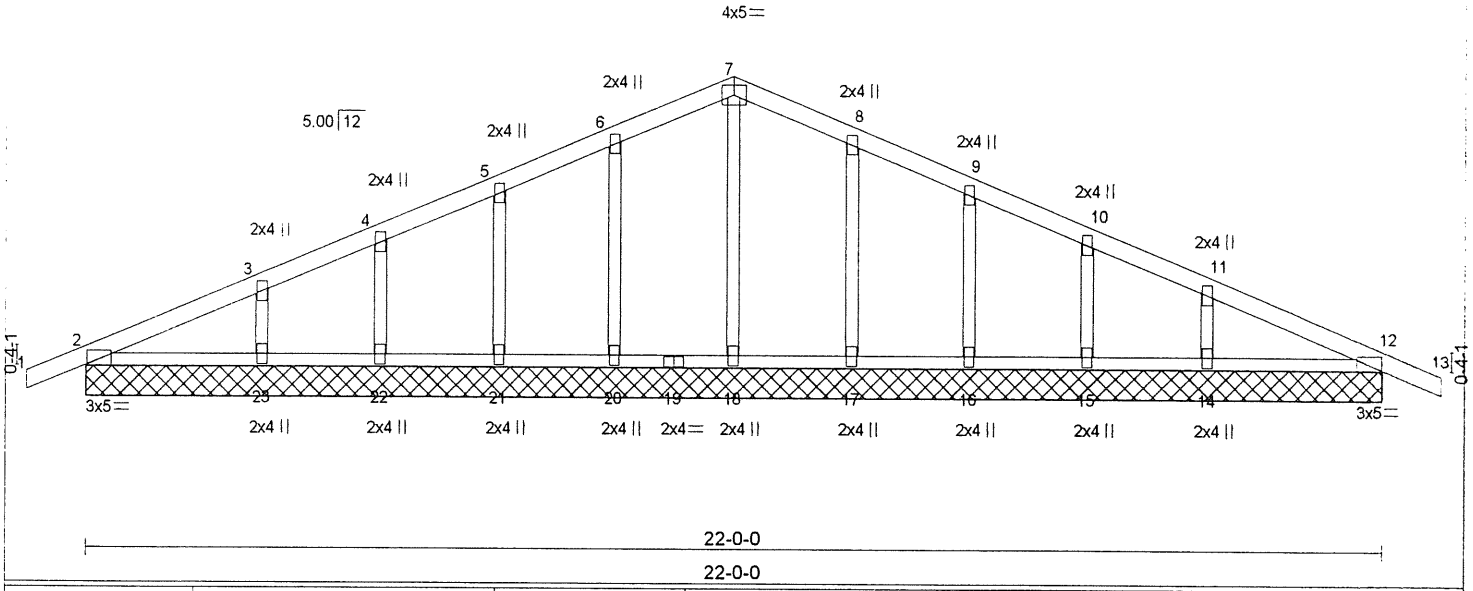


April 23,1999

Job	Truss	Truss Type	Qty	Ply	Stocks
STOCKS	22G	STOCK	10	1	22' 5/12 Stock Gable

SPROWL BUILDING COMPONENTS, SEARSMONT , ME. 4.0-32 s Jun 9 1998 MiTek Industries, Inc. Mon Nov 02 13:18:29 1998 Page 1

-1-0-0 11-0-0 22-0-0 23-0-0
1-0-0 11-0-0 11-0-0 1-0-0



LOADING (psf)	SPACING 2-0-0	CSI	DEFL (in) (loc) l/defl	PLATES GRIP
TCLL 42.0	Plates Increase 1.15	TC 0.16	Vert(LL) n/a - n/a	M20 197/144
TCDL 7.0	Lumber Increase 1.15	BC 0.14	Vert(TL) 0.02 13 >903	
BCLL 0.0	Rep Stress Incr YES	WB 0.11	Horz(TL) 0.00 n/a	
BCDL 10.0	Code BOCA/ANSI95	(Matrix)	1st LC LL Min l/defl = 360	Weight: 67 lb

LUMBER
TOP CHORD 2 X 4 SPF No.2
BOT CHORD 2 X 3 SPF Stud
OTHERS 2 X 3 SPF Stud

BRACING
TOP CHORD Sheathed or 6-0-0 on center purlin spacing.
BOT CHORD Rigid ceiling directly applied or 6-0-0 on center bracing.

REACTIONS (lb/size) 2=297/22-0-0, 19=10/22-0-0, 12=297/22-0-0, 18=200/22-0-0, 20=228/22-0-0, 21=243/22-0-0, 22=213/22-0-0, 23=305/22-0-0, 17=235/22-0-0, 16=242/22-0-0, 15=213/22-0-0, 14=305/22-0-0
Max Horz 2=40(load case 4), 12=-40(load case 4)
Max Uplift19=-8(load case 4)
Max Grav 19=10(load case 2), 12=297(load case 1), 18=254(load case 4), 20=237(load case 2), 21=246(load case 4), 22=213(load case 2), 23=346(load case 4), 17=277(load case 4), 16=242(load case 1), 15=213(load case 3), 14=346(load case 4)

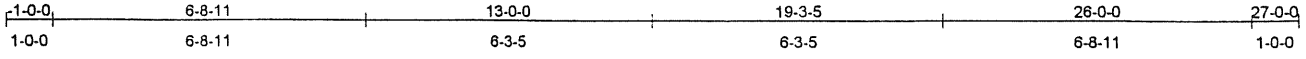
FORCES (lb) - First Load Case Only
TOP CHORD 1-2=32, 2-3=-101, 3-4=-85, 4-5=-78, 5-6=-80, 6-7=-79, 7-8=-79, 8-9=-80, 9-10=-78, 10-11=-85, 11-12=-101, 12-13=32
BOT CHORD 2-23=0, 22-23=0, 21-22=0, 20-21=0, 19-20=0, 18-19=0, 17-18=0, 16-17=0, 15-16=0, 14-15=0, 12-14=0
WEBS 7-18=-165, 6-20=-194, 5-21=-201, 4-22=-178, 3-23=-251, 8-17=-194, 9-16=-201, 10-15=-178, 11-14=-251

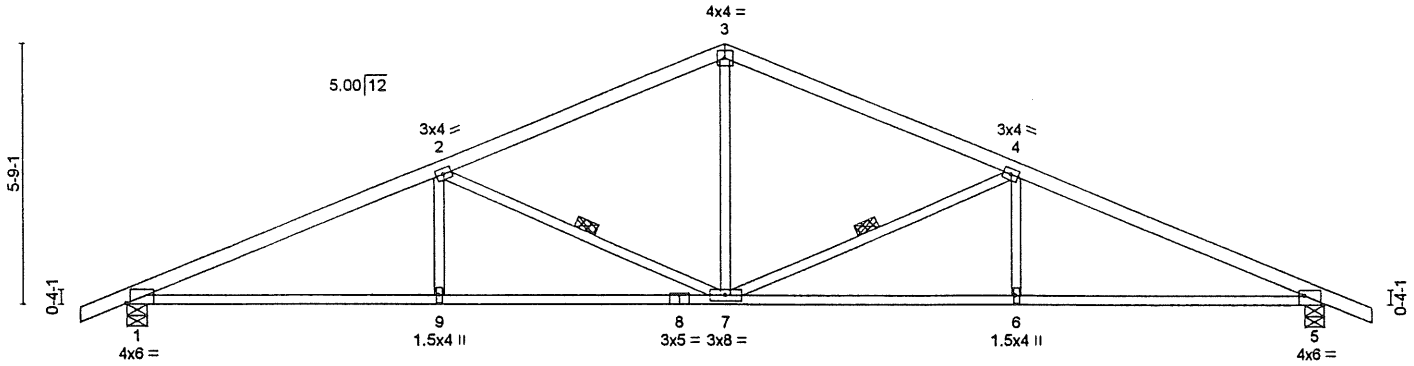
NOTES
1) This truss has been checked for unbalanced loading conditions.
2) All plates are M20 plates unless otherwise indicated.
3) Gable requires continuous bottom chord bearing.
4) Gable studs spaced at 2-0-0 on center.
5) For studs exposed to wind, see MiTek "Standard Gable End Detail"
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 8 lb uplift at joint 19.
7) This truss has been designed with ANSI/TPI 1-1995 criteria.

LOAD CASE(S) Standard Except:
4) User defined: Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (plf)
Vert: 2-23=-20.0, 22-23=-20.0, 21-22=-20.0, 20-21=-20.0, 19-20=-20.0, 18-19=-20.0, 17-18=-60.0, 16-17=-20.0, 15-16=-20.0, 14-15=-20.0, 12-14=-20.0, 2-3=-98.0, 3-4=-98.0, 4-5=-98.0, 5-6=-98.0, 6-7=-98.0, 7-8=-98.0, 8-9=-98.0, 9-10=-98.0, 10-11=-98.0, 11-12=-98.0
Concentrated Loads (lb)
Vert: 2=-98 12=-98

Job	Truss	Truss Type	Qty	Ply	
STOCKS	26	COMMON TRUSS	100	1	Y257890

SPROWL BUILDING COMPONENTS 3.3T s Dec 27 1996 MiTek Industries, Inc. Mon Feb 03 13:29:56 1997 Page 1





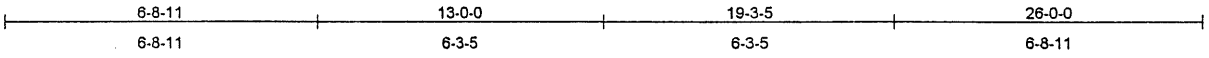


Plate Offsets (X,Y): [1:0-1-0,0-0-0], [5:0-1-10,0-0-0], [8:0-0-0,0-2-8]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	(in)	(loc)	l/defl	PLATES	GRIP
TCLL	40.0	Plates Increase	1.15	TC	0.76	Vert(LL)	0.27	9/8	999	M20(20ga)	197/190
TCDL	10.0	Lumber Increase	1.15	BC	0.93	Vert(TL)	0.41	9/8	748		
BCLL	0.0	Rep Stress Incr	YES	WB	0.59	Horz(TL)	0.14	5	n/a		
BCDL	10.0	Code	TPI			Min Length / LL defl = 360				Weight: 70 (lbs)	

LUMBER
TOP CHORD 2 X 4 SPF 1650F 1.5E
BOT CHORD 2 X 3 SPF 1650F 1.5E
WEBS 2 X 3 SPF Stud

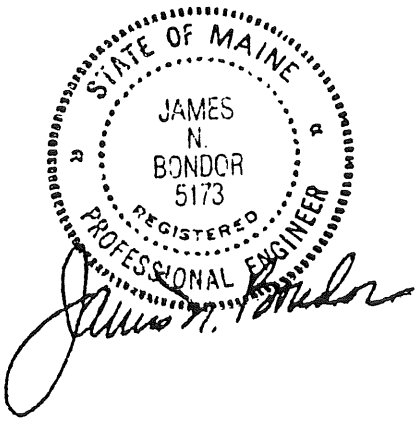
BRACING
TOP CHORD Sheathed or 2-7-8 on center purlin spacing.
BOT CHORD Rigid ceiling directly applied, or 10-00-00 on center bracing.
WEBS 1 Row at midpt 2-7, 7-4

REACTIONS (lbs/size) 1=1633/0-5-8, 5=1632/0-5-8

FORCES
TOP CHORD 1-2=-2822, 2-3=-1931, 3-4=-1931, 4-5=-2822
BOT CHORD 5-6=2580, 6-7=2580, 7-8=2580, 8-9=2580, 1-9=2580
WEBS 2-9=128, 2-7=-878, 3-7=858, 4-7=-878, 4-6=128

NOTES
1) This truss has been designed with ANSI/TPI 1-1995 criteria.

LOAD CASE(S) Standard

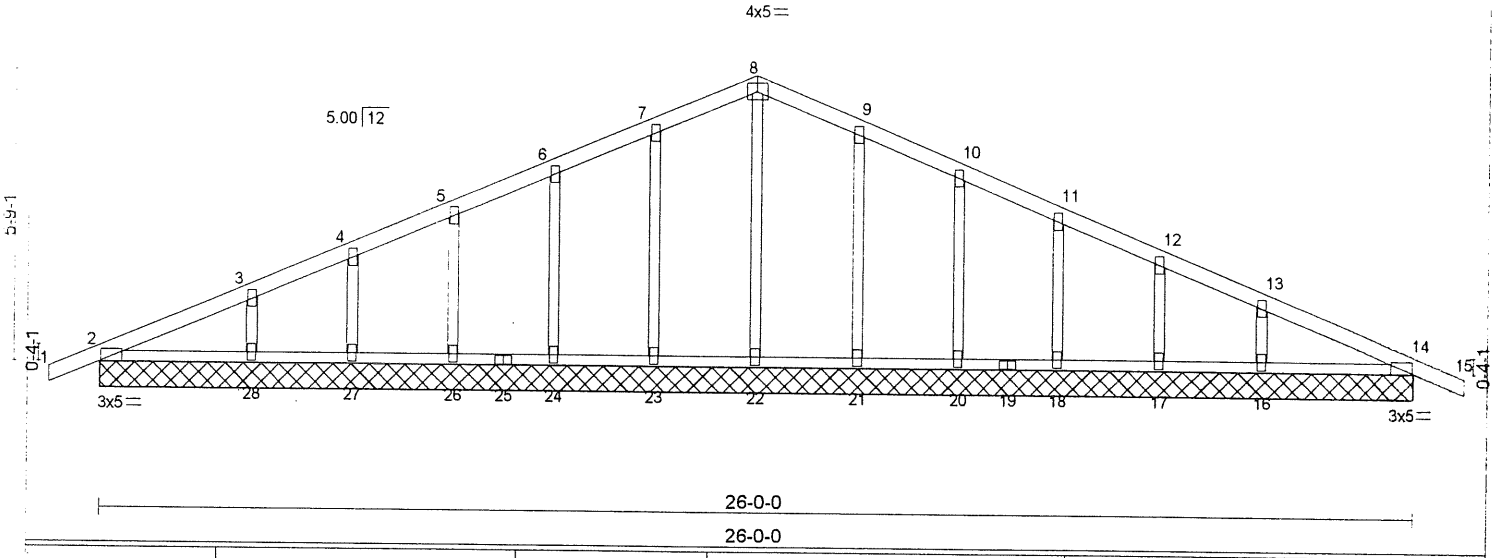


Job	Truss	Truss Type	Qty	Ply	Stocks
STOCKS	26G	STOCK	40	1	STOCK

SPROWL BUILDING COMPONENTS, SEARSMONT , ME. 4.0-32 s Jun 9 1998 MiTek Industries, Inc. Mon Nov 02 13:20:10 1998 Page 1

-1-0-0 | 13-0-0 | 26-0-0 | 27-0-0

1-0-0 | 13-0-0 | 13-0-0 | 1-0-0



LOADING (psf)	SPACING 2-0-0	CSI	DEFL (in) (loc) l/defl	PLATES GRIP
TCLL 42.0	Plates Increase 1.15	TC 0.18	Vert(LL) n/a - n/a	M20 197/144
TCDL 7.0	Lumber Increase 1.15	BC 0.11	Vert(TL) 0.00 15 >999	
BCLL 0.0	Rep Stress Incr NO	WB 0.15	Horz(TL) 0.00 n/a	
BCDL 10.0	Code BOCA/ANSI95	(Matrix)	1st LC LL Min l/defl = 360	Weight: 83 lb

LUMBER
TOP CHORD 2 X 4 SPF No.2
BOT CHORD 2 X 3 SPF Stud
OTHERS 2 X 3 SPF Stud

BRACING
TOP CHORD Sheathed or 6-0-0 on center purlin spacing.
BOT CHORD Rigid ceiling directly applied or 6-0-0 on center bracing.

REACTIONS (lb/size) 2=297/26-0-0, 25=9/26-0-0, 19=9/26-0-0, 14=297/26-0-0, 22=205/26-0-0, 23=236/26-0-0, 24=230/26-0-0, 26=236/26-0-0, 27=214/26-0-0, 28=304/26-0-0, 21=236/26-0-0, 20=230/26-0-0, 18=236/26-0-0, 17=214/26-0-0, 16=304/26-0-0
Max Horz 2=38(load case 1), 14=-38(load case 1)
Max Grav 25=9(load case 3), 19=9(load case 2), 14=297(load case 1), 22=205(load case 1), 23=245(load case 2), 24=230(load case 1), 26=236(load case 2), 27=214(load case 1), 28=305(load case 2), 21=245(load case 3), 20=230(load case 1), 18=236(load case 3), 17=214(load case 1), 16=305(load case 3)

FORCES (lb) - First Load Case Only
TOP CHORD 1-2=32, 2-3=-101, 3-4=-85, 4-5=-78, 5-6=-79, 6-7=-79, 7-8=-79, 8-9=-79, 9-10=-79, 10-11=-79, 11-12=-78, 12-13=-85, 13-14=-101, 14-15=32
BOT CHORD 2-28=0, 27-28=0, 26-27=0, 25-26=0, 24-25=0, 23-24=0, 22-23=0, 21-22=0, 20-21=0, 19-20=0, 18-19=0, 17-18=0, 16-17=0, 14-16=0
WEBS 8-22=-165, 7-23=-195, 6-24=-196, 5-26=-200, 4-27=-178, 3-28=-251, 9-21=-195, 10-20=-196, 11-18=-200, 12-17=-178, 13-16=-251

NOTES
1) This truss has been checked for unbalanced loading conditions.
2) All plates are M20 plates unless otherwise indicated.
3) All plates are 2x4 M20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spaced at 2-0-0 on center.
6) For studs exposed to wind, see MiTek "Standard Gable End Detail"
7) This truss has been designed with ANSI/TPI 1-1995 criteria.

LOAD CASE(S) Standard

GENERAL ROOF TRUSS DATA SHEET

THESE NOTES ARE IN ADDITION TO THE NOTES THAT APPEAR ON EACH OF THE INDIVIDUAL TRUSS DRAWINGS. FURNISH A COPY OF THIS SHEET TO THE ERECTION CONTRACTOR.

The following trusses were designed/reviewed by MiTek Industries, Inc. based on information provided by specified truss fabricator. All information on the truss drawings should be reviewed by the overall building designer/engineer to insure proper building codes and project requirements have been complied with before fabrication.

Design is based substantially on TPI and NDS standards in effect on the dated specified on the drawing.

Erection, Handling, Safety Precautions, Temporary or Permanent Bracing of trusses are not the responsibility of the Truss Designer, Metal Connector Plate Manufacturer or the Truss Manufacturer and therefore are not a part of these engineered drawings. Trusses are designed as individual components. All lateral bracing specified on these truss drawings is intended to provide lateral restraint for individual truss members only. The design, amount and proper installation of additional permanent bracing is the sole responsibility of the designer of the complete structure. Adequate temporary bracing is the sole responsibility of the truss erector. Competent professional advice should always be obtained relative to truss bracing, erection requirements and connections. See HIB-91.

The top chord shall be laterally supported with properly attached sheathing, unless noted otherwise.

The bottom chord shall be laterally supported with properly attached continuous lateral bracing at 10'-0" maximum intervals, unless noted otherwise.

Interior ceiling members (not exceeding 10' in length) on attic type trusses may be braced by placing the specified number of rows of continuous lateral bracing on each truss or by directly attaching a rigid ceiling to the underside of the members.

⊠ Denotes location of continuous lateral bracing designed by others.

Provisions for adequate drainage should be met on all trusses with any top chords slopes less than a 1/12.

All connector plates are 20-ga. M20 plates applied on both faces, centered and oriented so that the second plate dimension is parallel to the truss chord, unless noted otherwise. All connector plates must be manufactured by MiTek Industries, Inc. or its auxiliaries: Gang-Nail, Hydro-Air, or Panel Clip

Connector Plate Code Approvals: BOCA 86-93, 85-75,91-28; HUD/FHA TCB 17.08; ICBO 1591, 1329, 4922; SBCCI 87206,86217,9190; WISC/DILHR 870040-N, 930013-N, 910080-N.

The drilling of holes, notching, cutting or removing any cross sectional area of any truss member, unless noted otherwise, will VOID the drawing.

The effect of lateral thrust (force) and horizontal movement on the supports of scissors type trusses is not a consideration of this design. The designer and/or builder of the structure must give due consideration to the lateral thrust and horizontal movement created by scissors trusses in the design and construction of adequate truss supports. Neither the truss designer, metal plate manufacturer nor the truss fabricator assumes any responsibility for the design and construction of the truss supports. Professional advice should be obtained relative to the strength, construction and design of the truss supports.

Truss to bearing connection to be designed by others.

Trusses should be inspected prior to and after erection to insure their structural integrity. Trusses should be inspected for plate embedment, damage to the lumber (cracks, breaks, crushing, etc.), bow, variation from plumb etc.. For a full list of guidelines see HIB-91 and QST-86.

All gable type (non-structural) trusses are to have all vertical studs exceeding 8'-0" in height L-braced to provide lateral restraint. In addition, all these type trusses are not designed for wind exposure to the gable face, unless noted otherwise.

Trusses requiring the usage of a cap (piggyback) truss are to be field spliced together where the base truss meets the cap truss with 2x4x48"#2 scabs on one face only and fastened with 6-10D nails each half, unless noted otherwise on the individual truss drawing. There is a minimum of two scabs required for each truss-cap combination.

MiTek Industries, Inc.

Dwg.# _____

FORM SDGN-002-102095 REVISED 073198

GENERAL FLOOR TRUSS DATA SHEET

THESE NOTES ARE IN ADDITION TO THE NOTES THAT APPEAR ON EACH OF THE INDIVIDUAL TRUSS DRAWINGS. FURNISH A COPY OF THIS SHEET TO THE ERECTION CONTRACTOR

The following trusses were designed/reviewed by MiTek Industries, Inc. based on information provided by Specified truss fabricator. All information on the truss drawings should be reviewed by the overall building designer/engineer to insure proper building codes and project requirements have been complied with before fabrication.

Design is based substantially on TPI and NDS standards in effect on the date specified on the drawing.

Erection, Handling, Safety Precautions, Temporary or Permanent Bracing of trusses are not the responsibility of the Truss Designer, Metal Connector Plate Manufacturer or the Truss Manufacturer and therefore are not a part of these engineered drawings. Trusses are designed as individual components. All lateral bracing specified on these truss drawings is intended to provide lateral restraint for individual truss members only. The design, amount and proper installation of additional permanent bracing is the sole responsibility of the designer of the complete structure. Adequate temporary bracing is the sole responsibility of the truss erector. Competent professional advice should always be obtained relative to truss bracing, erection requirements and connections. See HIB-91.

The top chord shall be laterally supported with properly attached sheathing, unless noted otherwise.

Continuous cross (lx3) or horizontal (2x6 strongbacks on edge) bridging is required at 8'-0" to 10'-0" maximum intervals. See HIB-91 for proper nailing.

⊠ Denotes location of continuous lateral bracing designed by others.

Provisions for adequate drainage should be met on all trusses with any top chords slopes less than a 1/12.

All connector plates are 20-ga. M20 plates applied on both faces, centered and oriented so that the second plate dimension is parallel to the truss chord, unless noted otherwise. All connector plates must be manufactured by MiTek Industries, Inc. or its auxiliaries: Gang-Nail, Hydro-Air, or Panel Clip

Connector Plate Code Approvals: BOCA 86-93, 85-75,91-28; HUD/FHA TCB 17.08; ICBO 1591, 1329, 4922; SBCCI 87206,86217,9190; WISC/DILHR 870040-N, 930013-N, 910080-N.

The drilling of holes, notching, cutting or removing any cross sectional area of any truss member, unless noted otherwise, will VOID the drawing.

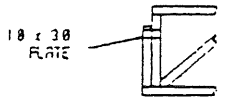
Floor trusses are designed to support the listed uniform loads only. Floor trusses are not designed to support concentrated loads from the roof or any other tributary system unless noted.

Truss to bearing connection to be designed by others.

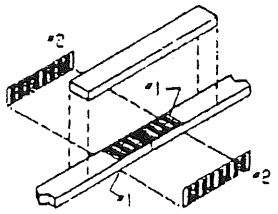
Trusses should be inspected prior to and after erection to insure their structural integrity. Trusses should be inspected for plate embedment, damage to the lumber (cracks, breaks, crushing, etc.), bow, variation from plumb etc.. For a full list of guidelines see HIB-91 and QST-86.

All gable type (non-structural) trusses are to have all vertical studs exceeding 8'-0" in height L-braced to provide lateral restraint. In addition, all these type trusses are not designed for wind exposure to the gable face, unless noted otherwise.

Trusses with ribbon details on the end(s) should have the end vertical connected to the truss by placing a lx3 20-ga. plate on each face as shown in the following detail, or use an equivilent nailed connection.



Trusses requiring splice Joints labeled: ((plate size#1) f.p.w/(plate size#2)s.p. W/B should use the following detail as a guide.



STATE OF MAINE
JAMES N. BONDOR 5173
REGISTERED PROFESSIONAL ENGINEER

MiTek Industries, Inc.

Dwg.# 081498

FORM SDGN-001-102095

This safety alert symbol is used to attract your attention! PERSONAL SAFETY IS INVOLVED! When you see this symbol - BECOME ALERT - HEED ITS MESSAGE.

DANGER: A DANGER designates a condition where failure to follow instructions or heed warning will most likely result in serious personal injury or death or damage to structures.

CAUTION: A CAUTION identifies safe operating practices or indicates unsafe conditions that could result in personal injury or damage to structures.

WARNING: A WARNING describes a condition where failure to follow instructions could result in severe personal injury or damage to structures.

HIB-91 Summary Sheet

COMMENTARY and RECOMMENDATIONS for HANDLING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES ©

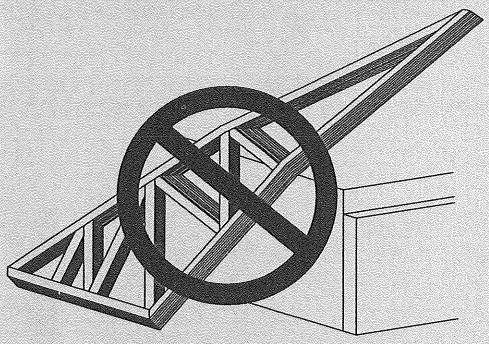
TRUSS PLATE INSTITUTE
583 D'Onofrio Dr., Suite 200
Madison, Wisconsin 53719
(608) 833-5900

It is the responsibility of the installer (builder, building contractor, licensed contractor, erector or erection contractor) to properly receive, unload, store, handle, install and brace metal plate connected wood trusses to protect life and property. The installer must exercise the same high degree of safety awareness as with any other structural material. TPI does not intend these recommendations to be interpreted as superior to the project Architect's or Engineer's design specification for handling, installing and bracing wood trusses for a particular roof or floor. These recommendations are based upon the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented as a guide for the use of a qualified building designer or installer. Thus, the Truss Plate Institute, Inc. expressly disclaims any responsibility for damages arising from the use, application or reliance on the recommendations and information contained herein by building designers, installers, and others.

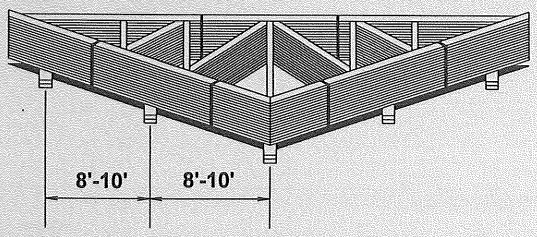
CAUTION: The builder, building contractor, licensed contractor, erector or erection contractor is advised to obtain and read the entire booklet "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses, HIB-91" from the Truss Plate Institute.

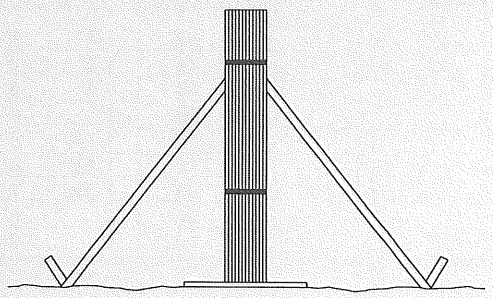
CAUTION: All temporary bracing should be no less than 2x4 grade marked lumber. All connections should be made with minimum of 2-16d nails. All trusses assumed 2' on-center or less. All multi-ply trusses should be connected together in accordance with design drawings prior to installation.

TRUSS STORAGE



CAUTION: Trusses should not be unloaded on rough terrain or uneven surfaces which could cause damage to the truss.





CAUTION: Trusses stored horizontally should be supported on blocking to prevent excessive lateral bending and lessen moisture gain.

CAUTION: Trusses stored vertically should be braced to prevent toppling or tipping.

WARNING: Do not break banding until installation begins. Care should be exercised in banding removal to avoid shifting of individual trusses.

DANGER: Do not store bundles upright unless properly braced. Do not break bands until bundles are placed in a stable horizontal position.

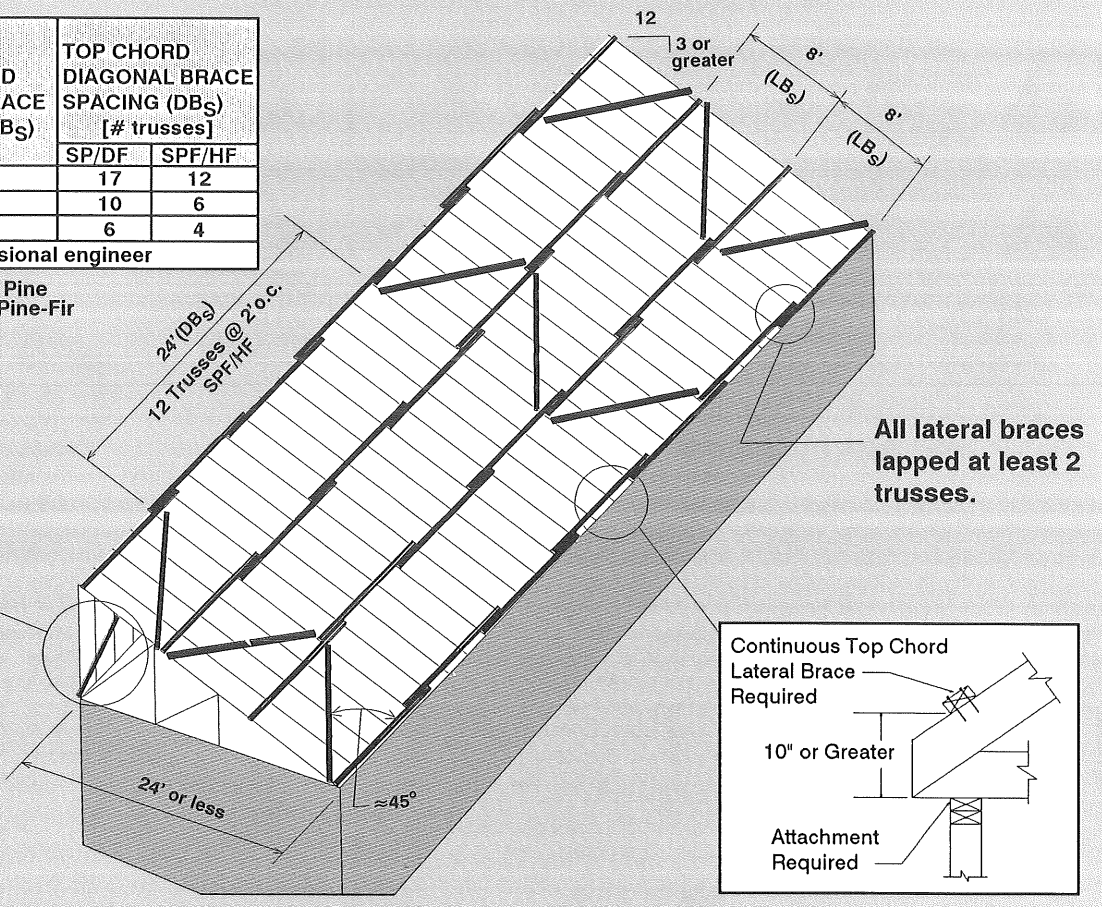
WARNING: Do not lift bundled trusses by the bands. Do not use damaged trusses.

DANGER: Walking on trusses which are lying flat is extremely dangerous and should be strictly prohibited.

SPAN	MINIMUM PITCH	TOP CHORD LATERAL BRACE SPACING (LB_S)	TOP CHORD DIAGONAL BRACE SPACING (DB_S) [# trusses]	
			SP/DF	SPF/HF
Up to 24'	3/12	8'	17	12
Over 24' - 42'	3/12	7'	10	6
Over 42' - 54'	3/12	6'	6	4
Over 54'	See a registered professional engineer			

DF - Douglas Fir-Larch
HF - Hem-Fir

SP - Southern Pine
SPF - Spruce-Pine-Fir



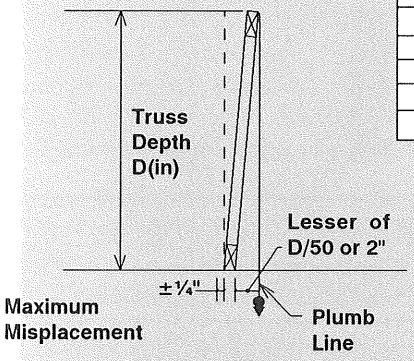
Top chords that are laterally braced can buckle together and cause collapse if there is no diagonal bracing. Diagonal bracing should be nailed to the underside of the top chord when purlins are attached to the topside of the top chord.

MONO TRUSS

WARNING: Failure to follow these recommendations could result in severe personal injury or damage to trusses or buildings.

INSTALLATION TOLERANCES

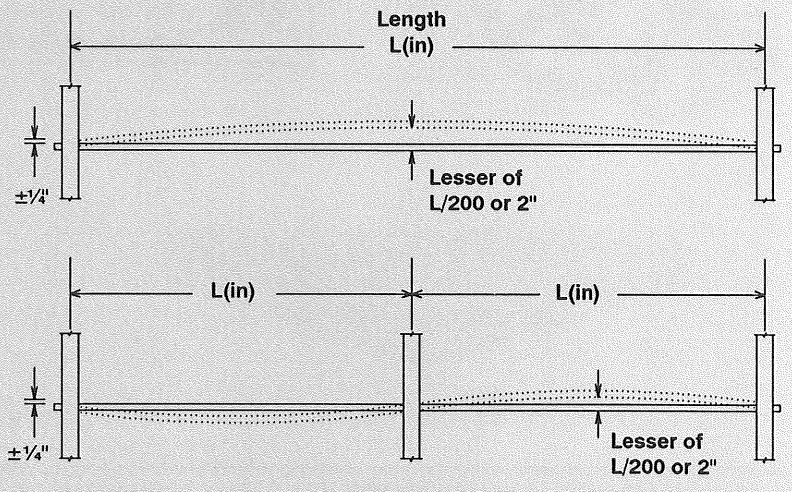
PLUMB



D(in)	D/50	D(ft)
12"	1/4"	1'
24"	1/2"	2'
36"	3/4"	3'
48"	1"	4'
60"	1-1/4"	5'
72"	1-1/2"	6'
84"	1-3/4"	7'
96"	2"	8'
108"	2"	9'

OUT-OF-PLUMB INSTALLATION TOLERANCES.

BOW



L(in)	L/200	L(ft)
50"	1/4"	4.2'
100"	1/2"	8.3'
150"	3/4"	12.5'

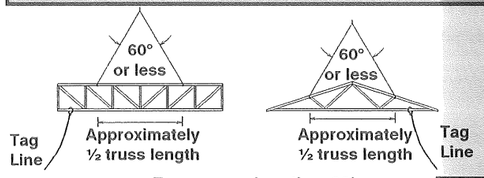
L(in)	L/200	L(ft)
200"	1"	16.7'
250"	1-1/4"	20.8'
300"	1-1/2"	25.0'

OUT-OF-PLANE INSTALLATION TOLERANCES.

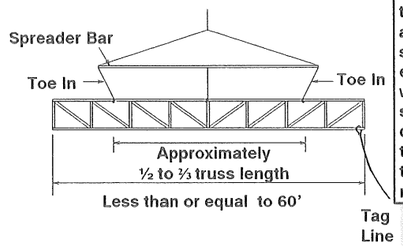
WARNING: Do not cut trusses.

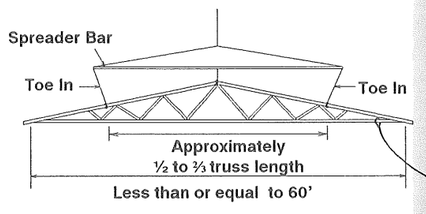
DANGER: Under no circumstances should construction loads of any description be placed on unbraced trusses.

WARNING: Do not attach cables, chains, or hooks to the web members.



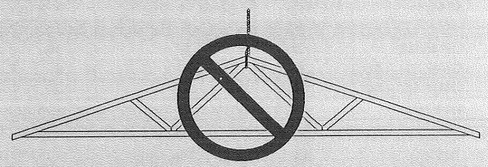
Truss spans less than 30'.



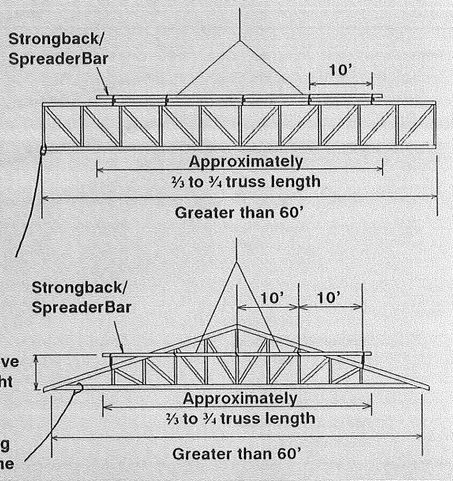


WARNING: Do not lift single trusses with spans greater than 30' by the peak.

MECHANICAL INSTALLATION

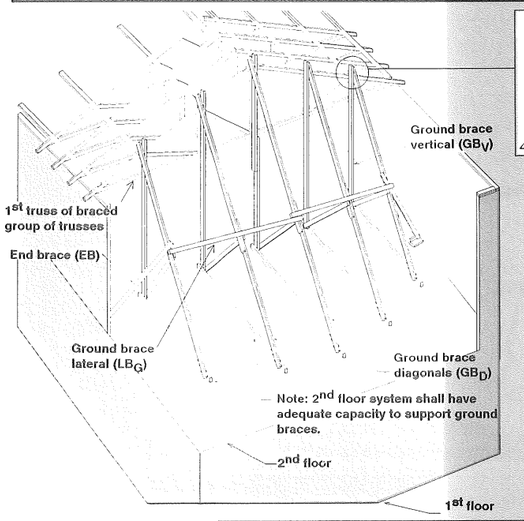


Lifting devices should be connected to the truss top chord with a closed-loop attachment utilizing materials such as slings, chains, cables, nylon strapping, etc. of sufficient strength to carry the weight of the truss. Each truss should be set in proper position per the building designer's framing plan and held with the lifting device until the ends of the truss are securely fastened and temporary bracing is installed.

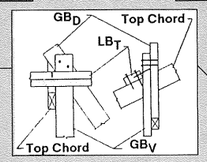


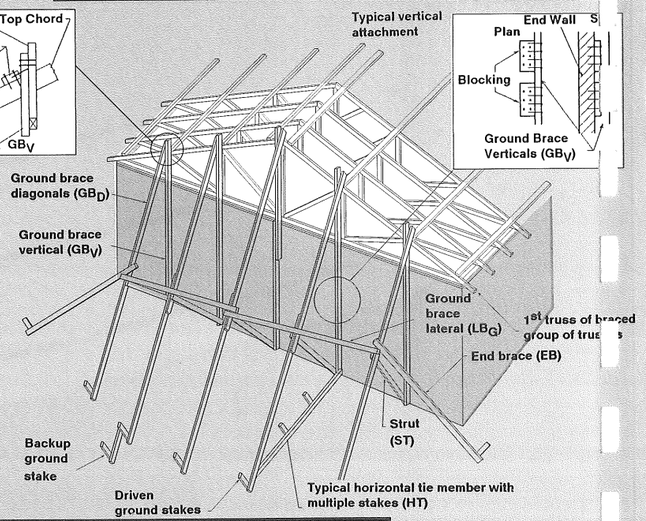
CAUTION: Temporary bracing shown in this summary sheet is adequate for the installation of trusses with similar configurations. Consult a registered professional engineer if a different bracing arrangement is desired. The engineer may design bracing in accordance with TPI's *Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses, DSB-89*, and in some cases determine that a wider spacing is possible.

GROUND BRACING:BUILDING INTERIOR



GROUND BRACING: BUILDING EXTERIOR



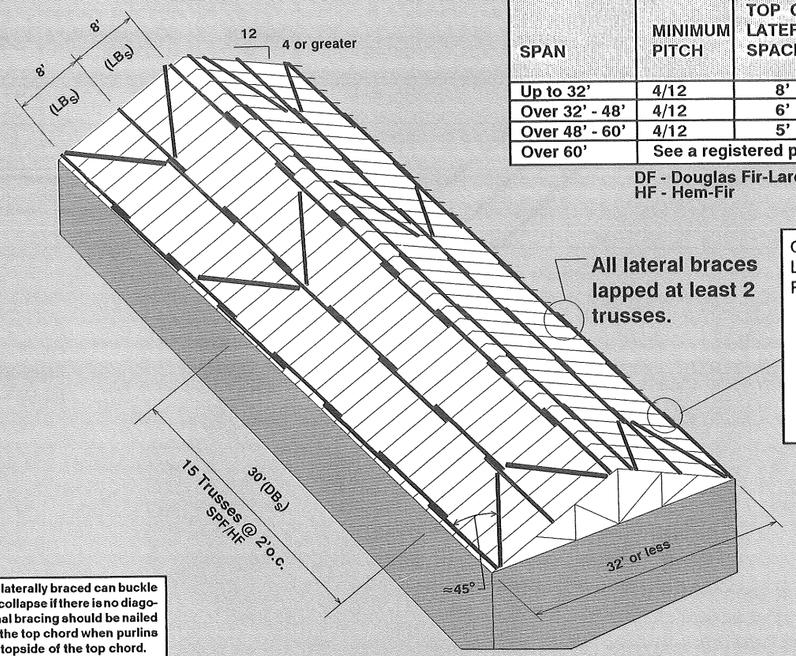


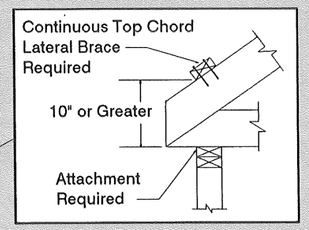
CAUTION: Ground bracing required for all installations.

Frame 2

SPAN	MINIMUM PITCH	TOP CHORD LATERAL BRACE SPACING(LB_S)	TOP CHORD DIAGONAL BRACE SPACING (DB_S) [# trusses]	
			SP/DF	SPF/HF
Up to 32'	4/12	8'	20	15
Over 32' - 48'	4/12	6'	10	7
Over 48' - 60'	4/12	5'	6	4
Over 60'	See a registered professional engineer			

DF - Douglas Fir-Larch SP - Southern Pine
HF - Hem-Fir SPF - Spruce-Pine-Fir





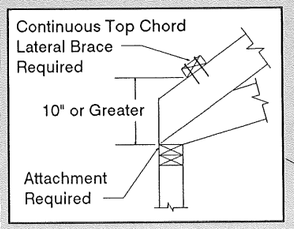
Top chords that are laterally braced can buckle together and cause collapse if there is no diagonal bracing. Diagonal bracing should be nailed to the underside of the top chord when purlins are attached to the topside of the top chord.

PITCHED TRUSS

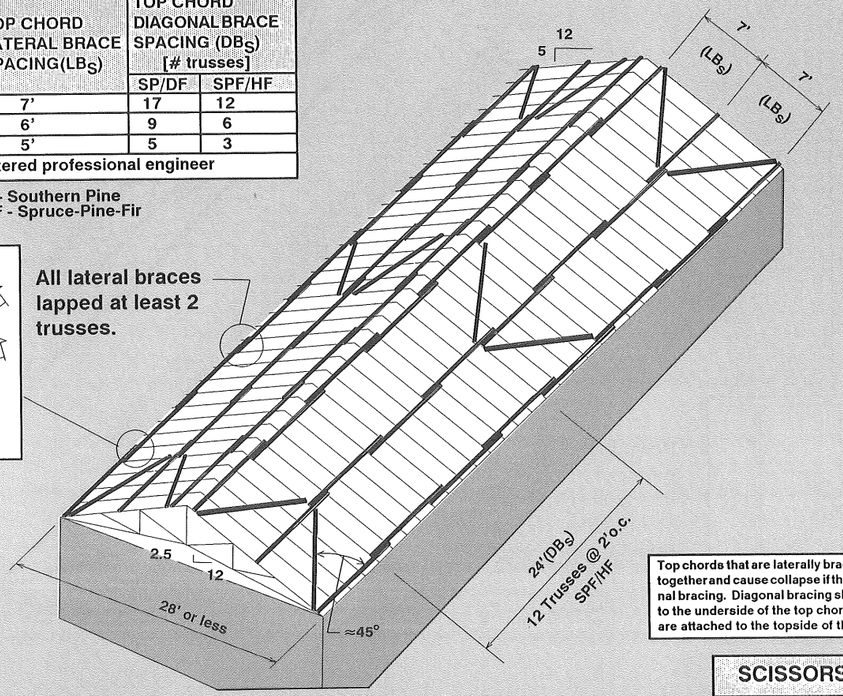
WARNING: Failure to follow these recommendations could result in severe personal injury or damage to trusses or buildings.

SPAN	MINIMUM PITCH DIFFERENCE	TOP CHORD LATERAL BRACE SPACING(LB_S)	TOP CHORD DIAGONAL BRACE SPACING (DB_S) [# trusses]	
			SP/DF	SPF/HF
Up to 28'	2.5	7'	17	12
Over 28' - 42'	3.0	6'	9	6
Over 42' - 60'	3.0	5'	5	3
Over 60'	See a registered professional engineer			

DF - Douglas Fir-Larch SP - Southern Pine
HF - Hem-Fir SPF - Spruce-Pine-Fir



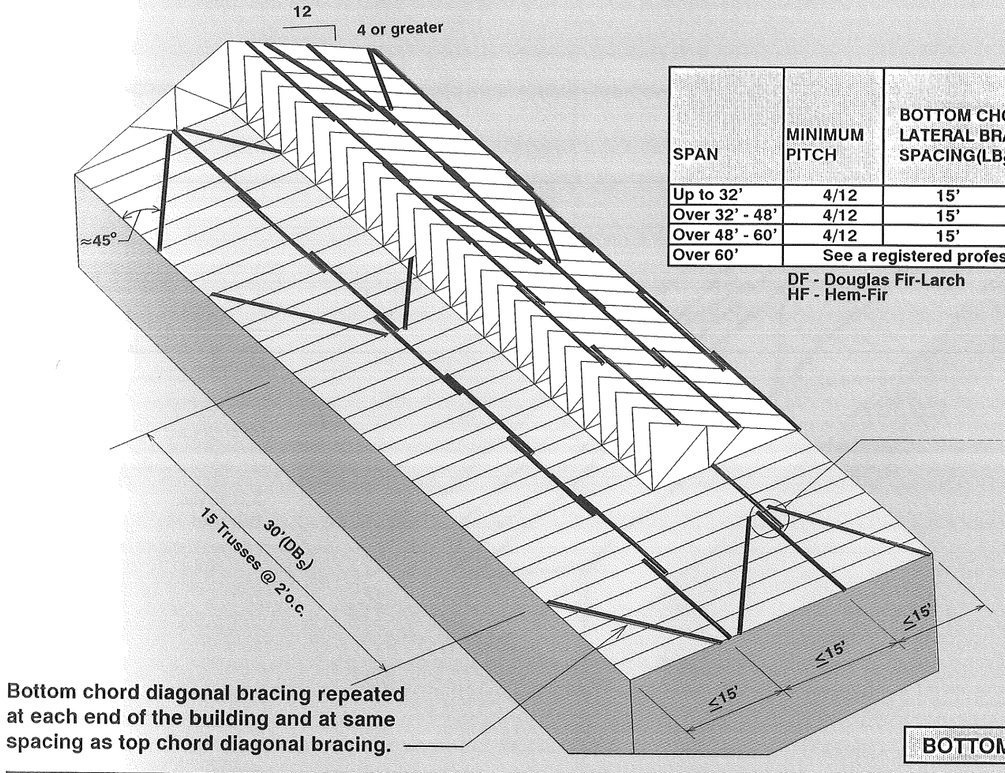
All lateral braces lapped at least 2 trusses.



Top chords that are laterally braced can buckle together and cause collapse if there is no diagonal bracing. Diagonal bracing should be nailed to the underside of the top chord when purlins are attached to the topside of the top chord.

SCISSORS TRUSS

Frame 3

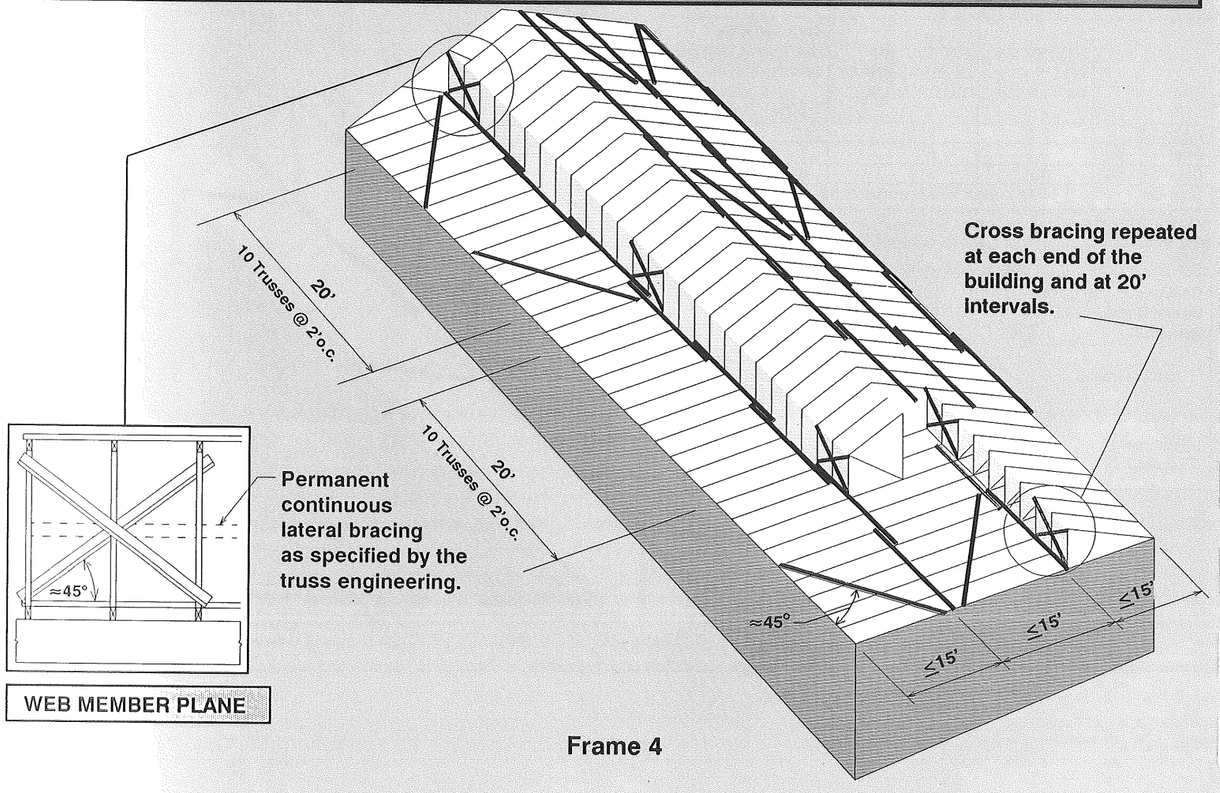


SPAN	MINIMUM PITCH	BOTTOM CHORD LATERAL BRACE SPACING(LB_S)	BOTTOM CHORD DIAGONAL BRACE SPACING (DB_S) [# trusses]	
			SP/DF	SPF/HF
Up to 32'	4/12	15'	20	15
Over 32' - 48'	4/12	15'	10	7
Over 48' - 60'	4/12	15'	6	4
Over 60'	See a registered professional engineer			

DF - Douglas Fir-Larch SP - Southern Pine
HF - Hem-Fir SPF - Spruce-Pine-Fir

BOTTOM CHORD PLANE

WARNING: Failure to follow these recommendations could result in severe personal injury or damage to trusses or buildings.



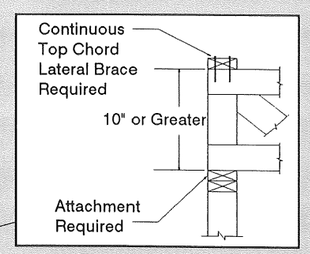
WEB MEMBER PLANE

Frame 4

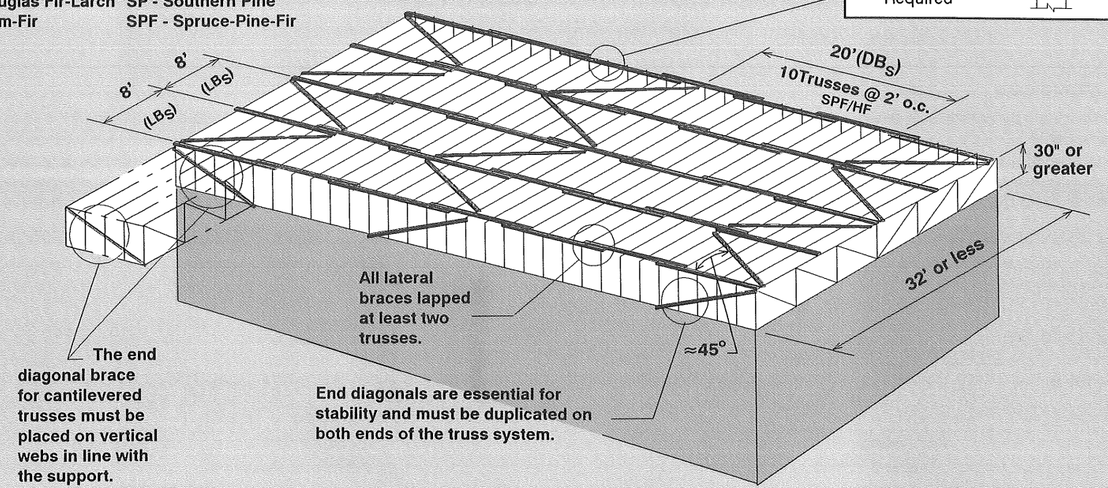
2x4/2x6 PARALLEL CHORD TRUSS

SPAN	MINIMUM DEPTH	TOP CHORD LATERAL BRACE SPACING(LB_S)	TOP CHORD DIAGONAL BRACE SPACING (DB_S) [# trusses]	
			SP/DF	SPF/HF
Up to 32'	30"	8'	16	10
Over 32' - 48'	42"	6'	6	4
Over 48' - 60'	48"	5'	4	2
Over 60'	See a registered professional engineer			

Top chords that are laterally braced can buckle together and cause collapse if there is no diagonal bracing. Diagonal bracing should be nailed to the underside of the top chord when purlins are attached to the topside of the top chord.



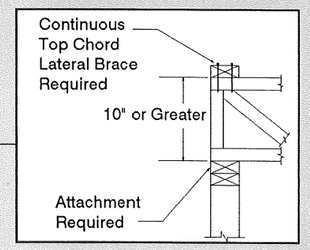
DF - Douglas Fir-Larch SP - Southern Pine
HF - Hem-Fir SPF - Spruce-Pine-Fir

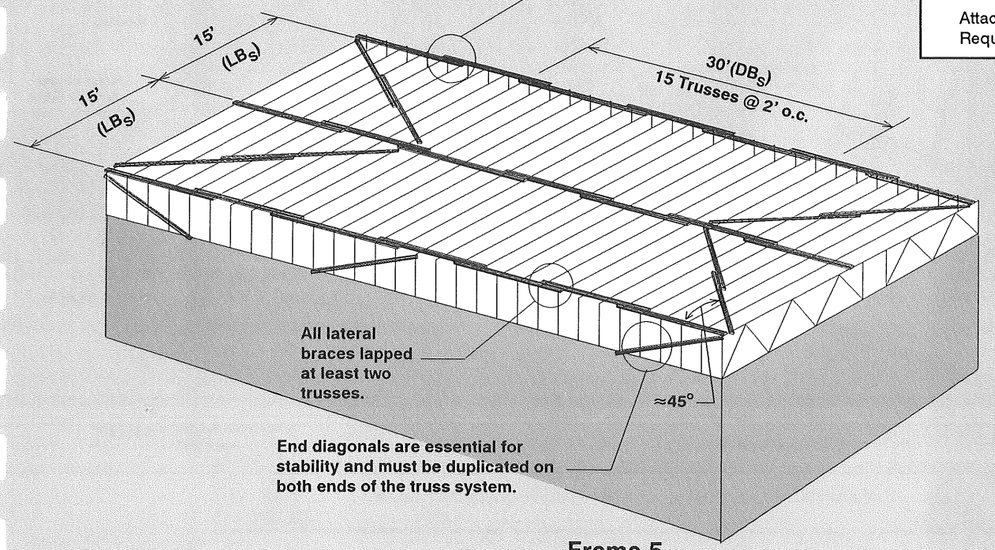


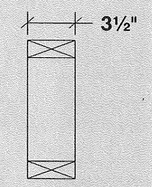
WARNING: Failure to follow these recommendations could result in severe personal injury or damage to trusses or buildings.

4x2 PARALLEL CHORD TRUSS:TOP CHORD

Top chords that are laterally braced can buckle together and cause collapse if there is no diagonal bracing. Diagonal bracing should be nailed to the underside of the top chord when purlins are attached to the topside of the top chord.







Trusses must have lumber oriented in the horizontal direction to use this brace spacing.

Frame 5

Warning

GENERAL

Familiarity with the CONSTRUCTION DESIGN DOCUMENTS, the TRUSS DESIGN DRAWINGS, and TRUSS PLACEMENT PLANS (if required by the CONSTRUCTION DESIGN DOCUMENTS) is required to properly erect, brace, and connect the trusses to the building system.

All of the care and quality involved in the design and manufacture of wood trusses can be jeopardized if the trusses are not properly handled, erected, and braced. **THE CONSEQUENCES OF IMPROPER HANDLING, ERECTING, AND BRACING MAY BE A COLLAPSE OF THE STRUCTURE, WHICH AT BEST IS A SUBSTANTIAL LOSS OF TIME AND MATERIALS, AND AT WORST IS A LOSS OF LIFE. THE MAJORITY OF TRUSS ACCIDENTS OCCUR DURING TRUSS INSTALLATION AND NOT AS A RESULT OF IMPROPER DESIGN OR MANUFACTURE.**

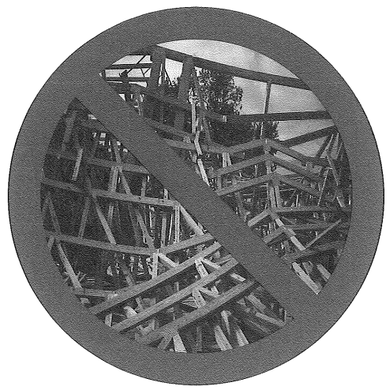
Prior to truss erection, the builder/erector shall meet with the erection crew for a safety and planning meeting, making sure each crew member understands his or her roles and responsibilities during the erection process.

TEMPORARY ERECTION BRACING

Trusses are not marked in any way to identify the frequency, or location of temporary erection bracing. All temporary bracing shall comply with the latest edition of *Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses* (HIB), published by the Truss Plate Institute, and/or as specified in the CONSTRUCTION DESIGN DOCUMENTS prepared by the building designer.

PERMANENT TRUSS BRACING

Permanent bracing for the roof or floor trusses is the responsibility of the building designer and should be shown on the CONSTRUCTION DESIGN DOCUMENTS. Permanent bracing locations for individual compression members of a wood truss are shown on the TRUSS DESIGN DRAWINGS, and shall be installed by the building or erection contractor. This bracing is needed for the proper performance of individual trusses within the roof or floor system. The design and connection of the bracing to the truss and then to the overall building system is the responsibility of the building designer, and is in addition to the permanent bracing plan, which is also specified by the building designer.

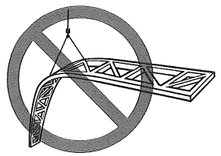


SPECIAL DESIGN REQUIREMENTS

Special design requirements, such as wind bracing, portal bracing, seismic bracing, diaphragms, shear walls, or other load transfer elements and their connections to wood trusses must be considered separately by the building designer, who shall determine size, location, and method of connections for all bracing as needed to resist these forces.

UNLOADING & LIFTING

AVOID LATERAL BENDING



NEVER HANDLE TRUSSES FLAT

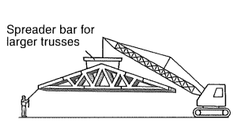
Beginning with the unloading process, and throughout all phases of construction, care must be taken to avoid LATERAL BENDING of trusses, which can cause damage to the lumber and metal connector plates at the joints.

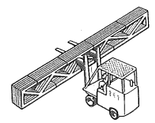
USE SPECIAL CARE IN WINDY WEATHER.

IF USING A CRANE WITHIN 10 FEET OF AN ELECTRIC LINE, CONTACT THE LOCAL POWER COMPANY.

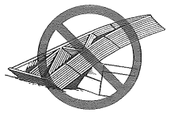
IF USING A CRANE WITHIN 5 MILES OF AN AIRPORT, CONTACT THE AIRPORT 30 DAYS PRIOR TO ERECTION TO LEARN ABOUT ANY SAFETY REGULATIONS THAT MUST BE FOLLOWED.

JOB SITE HANDLING



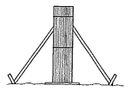


ALL TRUSSES SHOULD BE PICKED UP AT THE TOP CHORDS IN A VERTICAL POSITION ONLY
Proper banding and smooth ground allow for unloading of trusses without damage. This should be done as close to the building site as possible to minimize handling. DO NOT break banding until installation begins. Hand erection of trusses is allowed, provided excessive lateral bending is prevented.



DO NOT STORE UNBRACED BUNDLES UPRIGHT

DO NOT STORE ON UNEVEN GROUND



If trusses are stored vertically, they shall be braced in a manner that will prevent tipping or toppling. Generally, cutting of the banding is done just prior to installation.

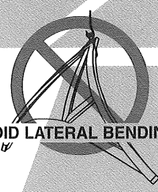
If trusses are stored horizontally, blocking should be used on eight to ten foot centers, or as required, to minimize lateral bending and moisture gain.

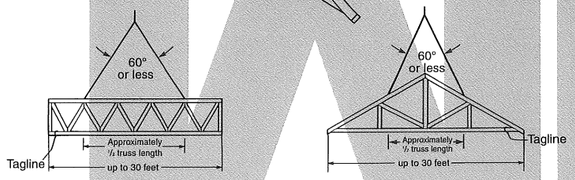
CARE SHOULD BE EXERCISED WHEN REMOVING BANDING TO AVOID DAMAGING TRUSSES.

During long term storage, trusses shall be protected from the environment in a manner that provides for adequate ventilation of the trusses. If tarpaulins or other material is used, the ends shall be left open for ventilation. Plastic is not recommended, since it can trap moisture.

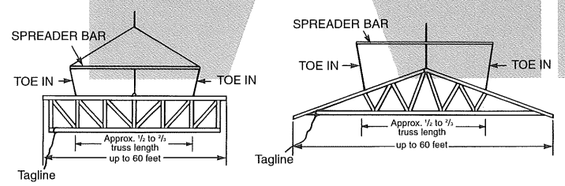
HOISTING

ALL TRUSSES THAT ARE ERECTED ONE AT A TIME SHALL BE HELD SAFELY IN POSITION BY THE ERECTION EQUIPMENT UNTIL SUCH TIME AS ALL NECESSARY BRACING HAS BEEN INSTALLED AND THE ENDS OF THE TRUSSES ARE SECURELY FASTENED TO THE BUILDING.

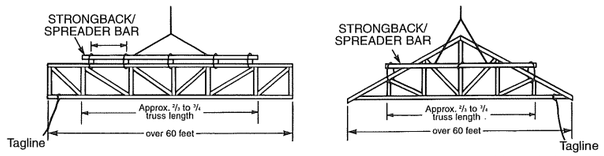




Truss sling is acceptable where these criteria are met.



Use spreader bar in ALL other cases. It should be noted that the lines from the ends of the spreader bar "TOE IN"; if these lines should "TOE OUT" the truss may fold in half.



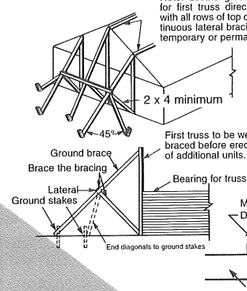
For lifting trusses with spans in excess of 60 feet, it is recommended that a strongback/spreader bar be used as illustrated. The strongback/spreader bar should be attached to the top chord and web members at intervals of approximately 10 feet. Further, the strongback/spreader bar should be at or above the mid-height of the truss to prevent overturning. The strongback/spreader bar can be of any material with sufficient strength to safely carry the weight of the truss and sufficient rigidity to adequately resist bending of the truss.

BEGINNING THE ERECTION PROCESS

It is important for the builder or erection contractor to provide substantial bracing for the first truss erected. The two or more trusses making up the rest of the first set are tied to and rely upon the first truss for stability. Likewise, after this first set of trusses is adequately cross-braced, the remaining trusses installed rely upon this first set for stability. Thus, the performance of the truss bracing system depends to a great extent on how well the first group of trusses is braced.

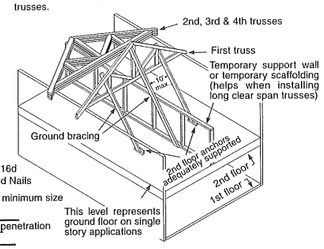
GROUND BRACE - EXTERIOR

One satisfactory method ties the first unit of trusses off to a series of braces that are attached to a stake driven into the ground and securely anchored. The ground brace itself should be supported as shown below or it is apt to buckle. Additional ground braces in the opposite direction, inside the building, are also recommended.



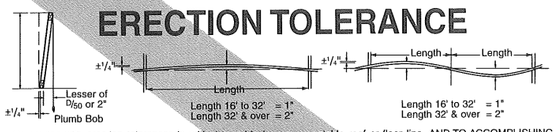
GROUND BRACE - INTERIOR

Another satisfactory method where height of building or ground conditions prohibit bracing from the exterior is to tie the first truss rigidly in place from the interior at the floor level, provided the floor is substantially completed and capable of supporting the ground bracing forces. Securely fasten the first truss to the middle of the building. Brace the bracing similar to exterior ground bracing shown at left. Set trusses from the middle toward the end of the building. Properly cross-brace the first set of trusses before removing floor braces and setting remaining trusses.



INADEQUATE SIZE OF BRACING MATERIAL OR INADEQUATE FASTENING IS A MAJOR CAUSE OF ERECTION DOMINOING.

ERECTION TOLERANCE



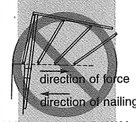
Complying with erection tolerances is critical to achieving an acceptable roof or floor line, AND TO ACCOMPLISHING EFFECTIVE BRACING. Setting trusses within tolerance the first time will prevent the need for the **hazardous practice** of respacing or adjusting trusses when roof sheathing or roof purlins are installed. Trusses leaning or bowing can cause nails to miss the top chords when sheathing is applied, and create cumulative stresses on the bracing, which is a frequent cause of dominoing. **WHEN SHEATHING, MAKE SURE NAILS ARE DRIVEN INTO THE TOP CHORD OF THE TRUSSES.**

BRACING

DO NOT INSTALL TRUSSES ON TEMPORARILY CONNECTED SUPPORTS

DO NOT WALK ON UNBRACED TRUSSES

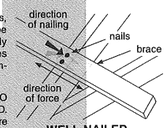
DO NOT WALK ON TRUSSES OR GABLE ENDS LYING FLAT



NAILS IN WITHDRAWAL (PARALLEL TO FORCE)

All anchors, hangers, tie-downs, seats, bearing ledgers, etc., that are part of the supporting structure shall be accurately and properly placed and permanently attached before truss installation begins. No trusses shall ever be installed on anchors or ties that have temporary connections to the supporting structure.

NAILING SCABS TO THE END OF THE BUILDING TO BRACE THE FIRST TRUSS IS NOT RECOMMENDED. All nailing of bracing should be done so that nails are driven perpendicular to the direction of force, as shown at right.

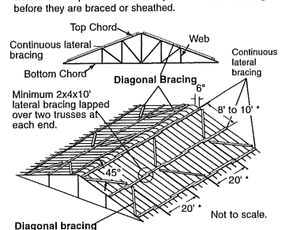


WELL NAILED (PERPENDICULAR TO FORCE)

BRACING REQUIREMENTS FOR 3 PLANES OF ROOF

Temporary erection bracing must be applied to three planes of the roof system to ensure stability: Plane 1) **Top Chord** (sheathing), Plane 2) **Bottom Chord** (ceiling plane), and Plane 3) **Web Member** plane or vertical plane perpendicular to trusses.

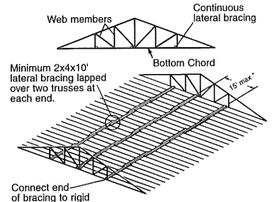
1) **TOP CHORD PLANE.** Most important to the builder or erection contractor is bracing in the plane of the top chord. Truss top chords are susceptible to lateral buckling before they are braced or sheathed.



Diagonal bracing repeated every 20' at 45° angle to trusses *

EXACT SPACING BETWEEN TRUSSES SHOULD BE MAINTAINED AS BRACING IS INSTALLED to avoid the **hazardous practice** of removing bracing to adjust spacing. This act of "adjusting spacing" can cause trusses to topple if connections are removed at the wrong time.

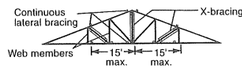
2) **BOTTOM CHORD PLANE.** In order to hold proper spacing on the bottom chord, temporary bracing is recommended on the top of the bottom chord.



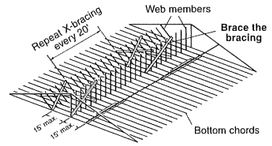
* Long spans, heavy loads or other spacing configurations may require closer spacing between lateral bracing and closer intervals between diagonals. Consult the building designer or HIB and DSB (*Recommended Design Specification for Temporary Bracing of Metal-Plate Connected Wood Trusses*) for details.

DIAGONAL OR CROSS-BRACING IS VERY IMPORTANT!

3) **WEB MEMBER PLANE.** "X" BRACING, AS SHOWN, IS CRITICAL IN PREVENTING TRUSSES FROM LEANING OR DOMINOING. REPEAT AS SHOWN TO CREATE A SUCCESSION OF RIGID UNITS.

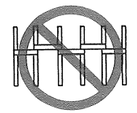


X-bracing should be installed on vertical web members wherever possible, at or near lateral bracing. Plywood sheathing may be substituted for X-bracing.



Note: Top chords and some web members are not shown, in order to make drawings more readable.

DO NOT USE SHORT BLOCKS TO BRACE INDIVIDUAL TRUSSES WITHOUT A SPECIFIC BRACING PLAN DETAILING THEIR USE

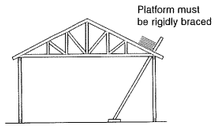


BRACING REQUIREMENTS USING THE SAME PRINCIPLES APPLY TO PARALLEL CHORD TRUSSES

STACKING MATERIALS

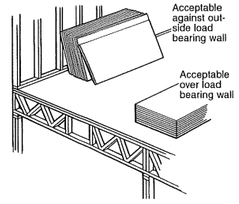
DO NOT PROCEED WITH BUILDING COMPLETION UNTIL ALL BRACING IS SECURELY AND PROPERLY IN PLACE

NEVER STACK MATERIALS ON UNBRACED OR INADEQUATELY BRACED TRUSSES



Proper distribution of construction materials is a must during construction.

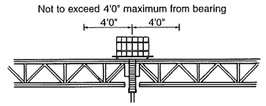
NEVER STACK MATERIALS NEAR A PEAK

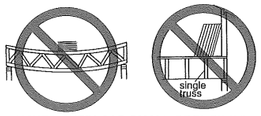


Always stack materials over two or more trusses.

NEVER STACK MATERIALS ON THE CANTILEVER OF A TRUSS

Not to exceed 4'0" maximum from bearing

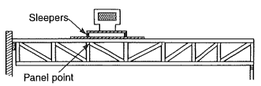




NEVER OVERLOAD SMALL GROUPS OR SINGLE TRUSSES. POSITION LOAD OVER AS MANY TRUSSES AS POSSIBLE.

Roofing and mechanical contractors are cautioned to stack materials only along outside supporting members or directly over inside supporting members. Trusses are not designed for dynamic loads (i.e., moving vehicles). Extreme care should be taken when loading and stacking construction materials (rolled roofing, mechanical equipment, etc.) on the roof or floor system.

NEVER CUT ANY STRUCTURAL MEMBER OF A TRUSS.



Sleepers for mechanical equipment should be located at panel points (joints) or over main supporting members, and only on trusses that have been designed for such loads.

CAUTION NOTES

Errors in building lines and/or dimensions, or errors by others shall be corrected by the contractor or responsible construction trade subcontractor or supplier BEFORE erection of trusses begins.

Cutting of nonstructural overhangs is considered a part of normal erection and shall be done by the builder or erection contractor.

Any field modification that involves the cutting, drilling, or relocation of any structural truss member or connector plate shall not be done without the approval of the truss manufacturer or a licensed design professional.

The methods and procedures outlined are intended to ensure that the overall construction techniques employed will put floor and roof trusses SAFELY in place in a completed structure. These recommendations for bracing wood trusses originate from the collective experience of leading technical personnel in the wood truss industry, but must, due to the nature of responsibilities involved, be presented only as a GUIDE for use by a qualified building designer, builder, or erection contractor. Thus, the Wood Truss Council of America expressly disclaims any responsibility for damages arising from the use, application, or reliance on the recommendations and information contained herein.

Selected text and figures referenced or reproduced from HIB and DSB by permission of the Truss Plate Institute, Madison, WI.

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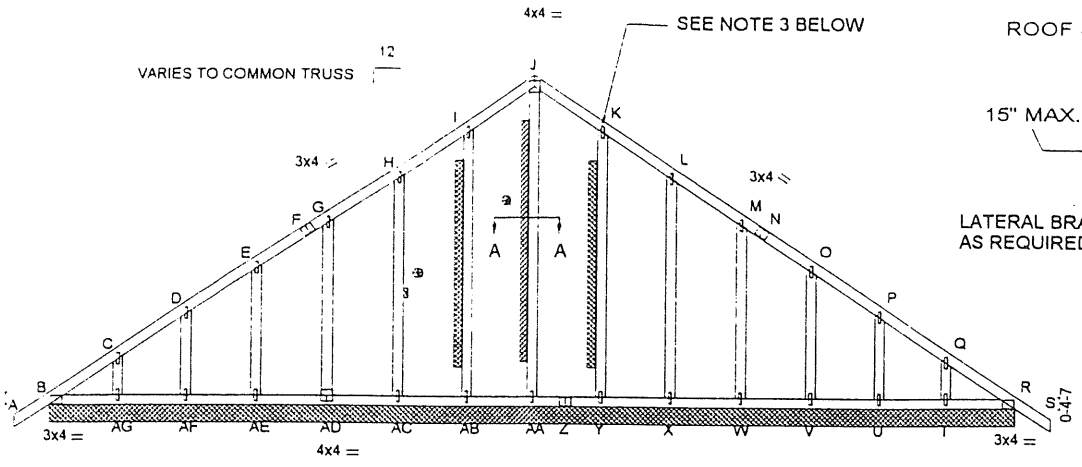
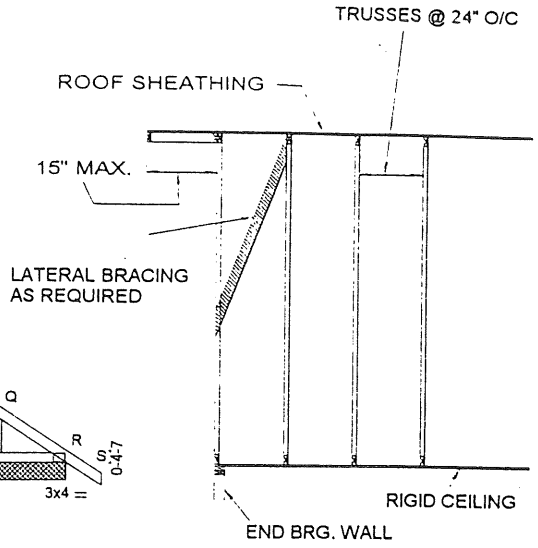
6425 Normandy Lane
Madison, WI 53719-1133
608/274-4849 • 608/274-3329 fax
wtca@woodtruss.com • www.woodtruss.com

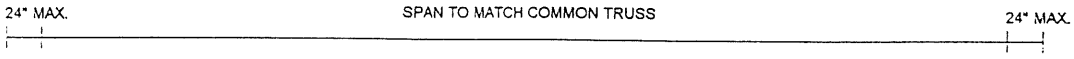
Job	Truss	Truss Type	Qty	Ply
STD_GABLE	st_gbl	FINK	1	1

MiTek Youngstown, Engr. (DJR), Youngstown, OH 44514 — 4.0-32 e Dec 16 1997 MiTek Industries, Inc. Fri Mar 06 12:34:40 1998 Page 1





③ Denotes diagonal or L-Bracing
Refer to table below

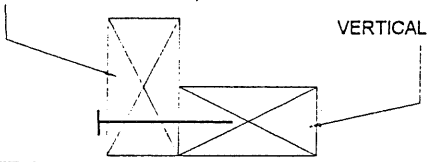


LOADING (psf)		LUMBER	SPACING	2-0-0	PLATES	[P]
TCLL	40.0	TOP CHORD 2 X 4 SPF No.2	Plates Increase	1.15	M20	
TCDL	10.0	BOT CHORD 2 X 4 SPF No.2	Lumber Increase	1.15		
BCLL	0.0	OTHERS 2 X 3 SPF Stud	Rep Stress Incr	YES		
BCDL	10.0		Code	BOCA/ANSI95		

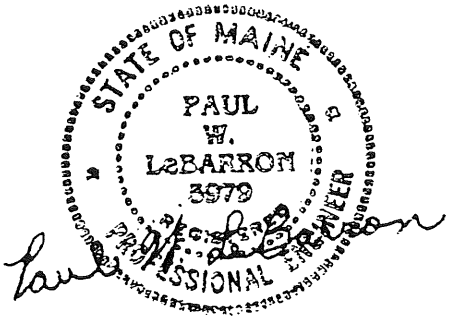
SECTION A - A

STUD SPACING	W/OUT BRACE	1x4 L-BRACE	2x4 L-BRACE	DIAG. BRACE	ATTACH DIAG. BRACE AT EACH END FOR:
	MAXIMUM DISTANCE BETWEEN LATERAL RESTRAINT				
12" O/C	4-11-10	6-5-12	8-8-0	9-4-8	600 lb.
16" O/C	4-2-2	5-5-6	7-3-7	7-10-10	600 lb.
24" O/C	3-2-4	4-1-14	5-6-9	6-0-1	600 lb.

TYPICAL _x4 L-BRACE NAILED TO 2x_ VERTICALS W/ 10d NAILS, 8" O/C



BRACING
TOP CHORD Sheathed or 6-0-0 on center purlin spacing.
BOT CHORD Rigid ceiling directly applied or 10-0-0 on center bracing.
WEBS _x4 L-Brace or Diag. Brace (See chart above)
Fasten T and I braces to narrow edge of web with 10d common wire nails 8in o.c., with 3in minimum end distance. Brace must cover fullf web length.



NOTES
1) This truss has been checked for unbalanced loading conditions.
2) All plates are M20 plates unless otherwise indicated.
3) All plates are 1x4 M20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Gable studs spacing (See chart above).
6) For studs exposed to wind, see MiTek "Standard Gable End Detail"
7) Provide mechanical connection (by others) of truss to bearing plate.
8) This truss has been designed with ANSI/TPI 1-1995 criteria.
9) This truss has been designed for the loads generated by 120 mph winds at 25 ft. above ground level located 0.00 mi. from the hurricane oceanline. ASCE 7-95 components and cladding external pressure coefficients for the exterior zone and 5.0 psf top chord and 5.0 psf bottom chord dead load are being used. The design assumes occupancy category 1terrain, exposure C and internal pressure coefficient condition 1. The lumber DOL increase is 1.6, and the plate grip increase is 1.6.

LOAD CASE(S) Standard

PIGGYBACK TRUSS CONNECTION DETAIL

YT - PB01

MiTek Industries, Inc.
April 22, 1999
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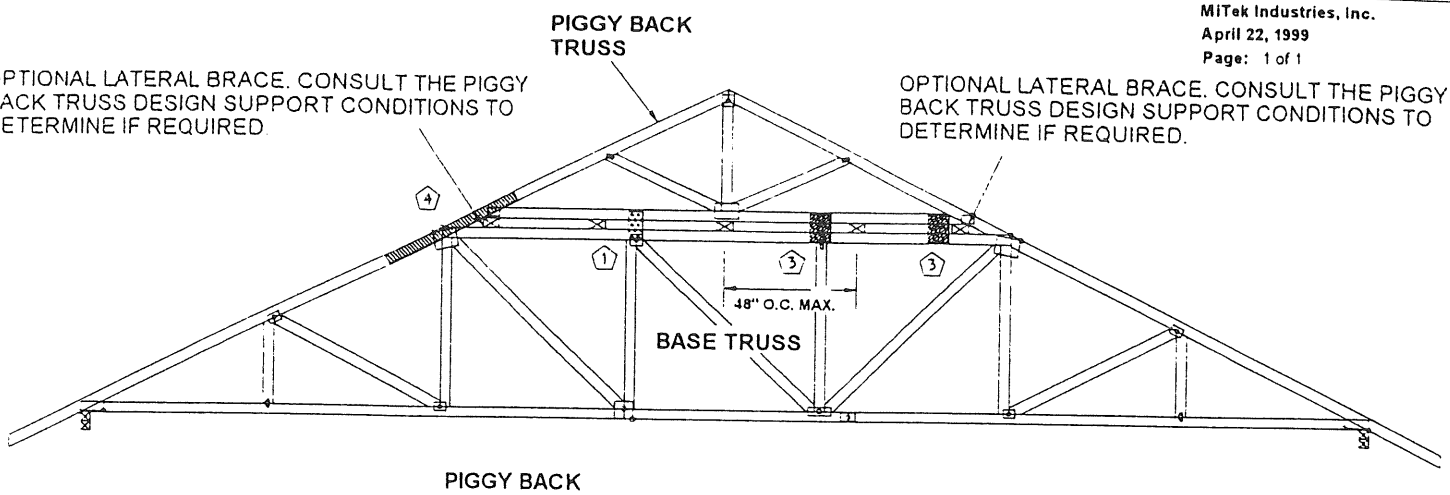
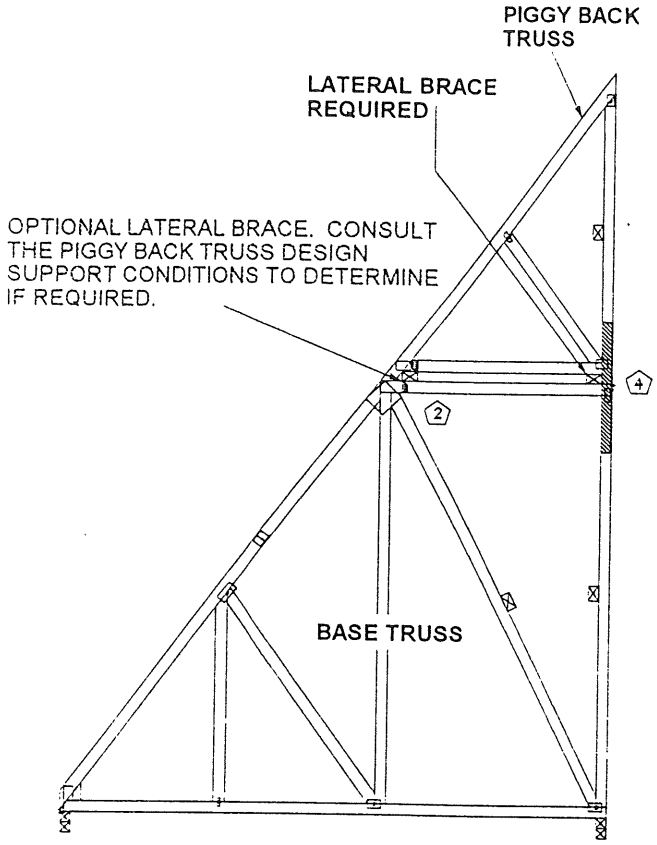




USE ANY OF THE THESE FOUR CONNECTION OPTIONS.

1. ATTACH MITEK 18 ga. 7H HAMMER-ON PLATES ON EACH FACE AT EACH BASE TRUSS JOINT.

2. SIMPSON H2.5 (OR EQUIVILENT) FRAMING ANCHOR. ONE CONNECTING PURLIN TO PIGGYBACK TRUSS AND ONE CONNECTING PURLIN TO BASE TRUSS AT EACH BASE TRUSS JOINT.

3. 1/2" x 6" x 8" PLYWOOD (OR 7/16" OSB) GUSSETS, ONE EACH FACE AT EACH BASE TRUSS JOINT. ATTACH W/ (4) - 12d NAILS (0.131" DIAM. x 3.25" LONG) (DRIVEN AND CLINCHED) INTO EACH CHORD (TOTAL - 8 NAILS).

4. 2 x ___ x 4'-0" SIZE TO MATCH TOP CHORD OF PIGGYBACK. ATTACH TO ONE FACE OF TOP CHORD WITH 10d NAILS AT 6" O.C. STAGGERED (TYP. EACH END OF CAP TRUSS). THE PIGGYBACK TRUSS MUST BE SECURED TO EACH PURLIN WITH 2 -16d TOE NAILS. TOE NAILS TO BE DRIVEN IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATIONS 1997 EDITION. OPTIONS 1, 2, OR 3 MAY BE SUBSTITUTED IN PLACE OF THE TOE NAILS.

(POSITION SCABS ON EACH OUTSIDE FACE OF MULTI - PLY TRUSSES).

NOTE: TRUSS DRAWINGS SHOWN ARE FOR GRAPHICAL REPRESENTATION ONLY. SEE THE INDIVIDUAL CAP AND BASE TRUSS DESIGNS FOR LUMBER, PLATES AND ALL OTHER DESIGN INFORMATION.

X - BRACING IS REQUIRED TO TRANSFER THE CUMULATIVE LATERAL BRACE FORCE INTO THE ROOF AND/OR CEILING DIAPHRAGM. COMPETENT PROFESSIONAL ADVICE SHOULD BE OBTAINED RELATIVE TO THE DESIGN OF THE ENTIRE BRACING SYSTEM.

ALL LATERAL BRACING SHOWN THAT IS NOT SPECIFIED AS OPTIONAL OR REQUIRED IS TO BE POSITIONED AS PER THE BRACING SPECIFICATIONS ON THE BASE TRUSS DESIGN, BUT SHALL NEVER EXCEED 48" ON CENTER.

Mitek Industries, Inc.

WEB BRACING RECOMMENDATIONS

X-BRACE BAY SIZE	MAXIMUM WEB FORCE (lbs.)									
	24"O.C.				48"O.C.				72" O.C.	
	BRACING MATERIAL TYPE				BRACING MATERIAL TYPE				BRACING MATERIAL TYPE	
	A	B	C	D	A	B	C	D	C	D
10'-0"	4600 *	4600 *	4600 *	6900 *	1344	4600 *	4600 *	6900 *	4034	5382
12'-0"	3942 *	3942 *	3942 *	5914 *	1344	3942 *	3942 *	5914 *	3942 *	5914 *
14'-0"	3450 *	3450 *	3450 *	5175 *	1344	3450 *	3450 *	5175 *	3450 *	5175 *
16'-0"	3066 *	3066 *	3066 *	4600 *	1344	3066 *	3066 *	4600 *	3066 *	4600 *
18'-0"	2760 *	2760 *	2760 *	4140 *	1344	2760 *	2760 *	4140 *	2760 *	4140 *
20'-0"	2509 *	2509 *	2509 *	3763 *	1344	2509 *	2509 *	3763 *	2509 *	3763 *

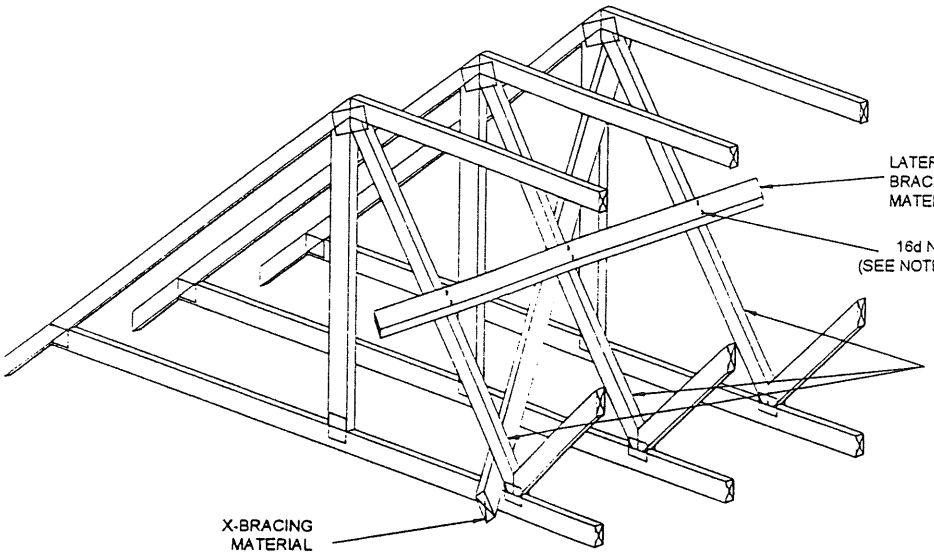
* -CONTROLLED BY CONNECTION

TYPE	BRACING MATERIALS
A	1 X 4 IND. 45 SYP -OR- 1 X 4 #2 SRB (DF, HF, SPF)
B	2 X 3 #3, STD, CONST (SPF, DF, HF, OR SYP)
C	2 X 4 #3, STD, CONST (SPF, DF, HF, OR SYP)
D	2 X 6 #3 OR BETTER (SPF, DF, HF, OR SYP)

GENERAL NOTES

1. X-BRACING IS REQUIRED TO TRANSFER THE CUMULATIVE LATERAL BRACE FORCE INTO THE ROOF AND/OR CEILING DIAPHRAGM. THE DIAPHRAGM IS TO BE DESIGNED BY A QUALIFIED PROFESSIONAL.
2. THESE CALCULATIONS BASED ON LATERAL BRACE CARRYING 2% OF THE WEB FORCE.
3. X-BRACING MATERIAL MUST BE SAME SIZE AND GRADE OR BETTER, AS THE LATERAL BRACE MATERIAL, AND SHALL BE INSTALLED IN SUCH A MANNER THAT IT INTERSECTS WEB MEMBERS AT APPROX. 45 DEGREES AND SHALL BE NAILED AT EACH END AND EACH INTERMEDIATE TRUSS WITH 2-16d COMMON WIRE NAILS. (3-16d NAILS FOR 2X6 MATERIAL)
4. CONNECT LATERAL BRACE TO EACH TRUSS WITH TWO 16d COMMON WIRE NAILS. (THREE 16d NAILS FOR 2X6 LATERAL BRACES)
5. LATERAL BRACE SHOULD BE CONTINUOUS AND SHOULD OVERLAP AT LEAST ONE TRUSS SPACE FOR CONTINUITY.
6. FOR ADDITIONAL GUIDANCE REGARDING DESIGN AND INSTALLATION OF BRACING, CONSULT DSB-89 TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES AND HIB-91 HANDLING INSTALLING AND BRACING FOR RECOMMENDATIONS FROM TRUSS PLATE INSTITUTE, 583 D'ONOFRIO DRIVE, MADISON, WI. 53719.
7. SEE SEPERATE TRUSS ENGINEERING FOR DESIGN OF WEB MEMBER.
8. THE 16d NAILS SPECIFIED SHOULD BE 3.5" LONG AND 0.162" IN DIAMETER, IN ACCORDANCE WITH NDS 1991.

NOTE: FOR A SPACING OF 24" O.C. ONLY, MITEK STABILIZER TRUSS BRACING SYSTEMS CAN BE SUBSTITUTED FOR TYPE A, B, C AND D BRACING MATERIAL. CROSS BRACING FOR STABILIZERS ARE TO BE PROVIDED AT BAY SIZE INDICATED ABOVE. WHERE DIAPHRAGM BRACING IS REQUIRED AT PITCH BREAKS, STABILIZERS MAY BE REPLACED WITH WOOD BLOCKING. SEE STABILIZER TRUSS BRACING INSTALLATION GUIDE AND PRODUCT SPECIFICATION.



STATE OF NEW HAMPSHIRE PAUL W. LE BARRON 9155 LICENSED PROFESSIONAL ENGINEER

COMMONWEALTH OF MASSACHUSETTS PAUL W. LeBARRON STRUCTURAL No. 34206 REGISTERED PROFESSIONAL ENGINEER

STATE OF CONNECTICUT PAUL W. LeBARRON 17537 LICENSED PROFESSIONAL ENGINEER

STATE OF MAINE PAUL W. LeBARRON 5070 REGISTERED PROFESSIONAL ENGINEER

STATE OF VERMONT PAUL W. LICENSED PROFESSIONAL ENGINEER

PAUL LeBARRON No. 5260 REGISTERED PROFESSIONAL ENGINEER

August 10,1999

T - BRACING DETAIL

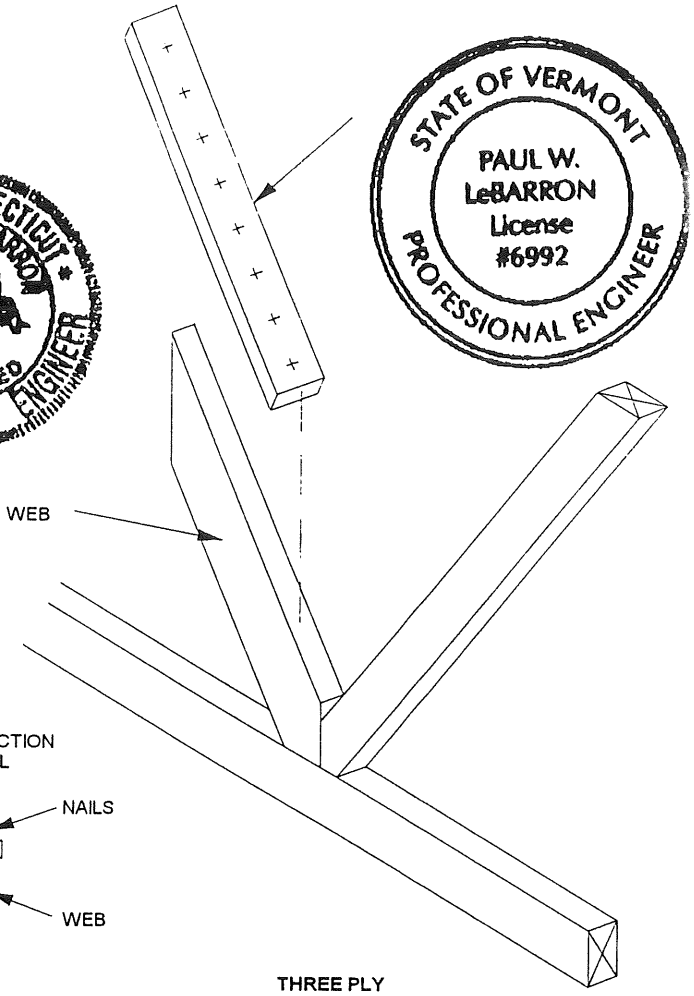
YT-T-BRACE

NOTE: T - BRACING IS TO BE USED WHEN CONTINUOUS LATERAL BRACING IS IMPRACTICAL. T - BRACE MUST COVER 90% OF THE WEB LENGTH.

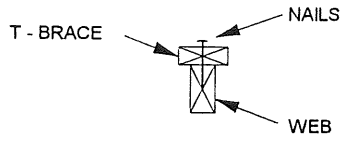
NAILING PATTERN		
T - BRACE SIZE	NAIL SIZE	NAIL SPACING
1 x 4 or 1 x 6	10d	8" O. C.
2 x 4, 6, or 8	12d	8" O. C.
USE 0.131" DIAM. x 3" LONG 10d NAILS USE 0.131" DIAM. x 3.25" LONG 12d NAILS		

NOTE: NAIL ALONG THE ENTIRE LENGTH OF T-BRACE (ON MULTI - PLIES NAIL TO ALL PLIES)

NOTE: T - BRACE MUST BE SAME SPECIES AND GRADE (OR BETTER) AS THE MEMBER BEING BRACED.



CROSS SECTION DETAIL



ONE PLY

TWO PLY

THREE PLY

	T - BRACE SIZE		T - BRACE SIZE		T - BRACE SIZE	
	SPECIFIED ROWS OF REQUIRED CONTINUOUS LAT. BRACING					
WEB SIZE	1	2	1	2	1	2
2 x 3 or 2 x 4	1 x 4	2 x 4	2 x 4	2 x 4	2 x 6	2 x 6
2 x 6	1 x 6	2 x 6	2 x 6	2 x 6	2 x 6	2 x 6
2 x 8	2 x 8	2 x 8	2 x 8	2 x 8	2 x 8	2 x 8

FOUR PLY

FIVE PLY

	T - BRACE SIZE		T - BRACE SIZE	
	SPECIFIED ROWS OF REQUIRED CONTINUOUS LAT. BRACING			
WEB SIZE	1	2	1	2
2 x 3 or 2 x 4	2 x 6	2 x 6	2 x 8	2 x 8
2 x 6	2 x 6	2 x 6	2 x 8	2 x 8
2 x 8	2 x 8	2 x 8	2 x 8	2 x 8

August 10,1999

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult QST-88 Quality Standard, DSB-89 Bracing Specification, and HIB-91 Handling Installing and Bracing Recommendation available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

MiTek®

Prepared by Don Percival
Small Homes Council, University of Illinois

CFPS - What Is It and Why Is It Occurring?

(A summary up-date on Ceiling-Floor Partition Separation)

In recent years we have seen an increase in a phenomenon which I call Ceiling-Floor Partition Separation (CFPS). Generally, CFPS can be described as cracking or breaking of the drywall joints at the juncture of the ceiling and an interior partition, a phenomenon usually associated with heavily insulated truss roof-framing in houses and other light-frame construction. The great majority of reported cases have been the roof truss; however, a number of cases have been recorded for heavily insulated floor trusses deflecting in the opposite direction from the arching roof truss. Heavily insulated ceiling joists have also exhibited "arching".

Suffice it to say, many cracking conditions found in light-frame construction cannot be attributed to an arching truss. It must also be emphasized that all trusses do not "arch" but if it does occur, all the trusses in the structure do not necessarily move. On the other hand, there are instances of several sets of trusses in a single housing development "arching".

Several studies have been undertaken to pin-point the causes of CFPS. I have arbitrarily separated the causes of partition separation into the following categories:

1. Shrinkage of floor girders, floor joists, sill and wall plates, etc. Excessive shrinkage of these members can and have given the impression that the truss is moving up off the partition.
2. Settlement of the floor girder columns, especially in crawl-space construction, and/or freezing and thawing action of the foundation. Either case can give the impression of the truss is "arching".
3. "Pulling Out" the camber when attaching the trusses to the partitions. Subsequent relaxing and stabilizing of the lumber can cause the truss to return to the original cambered position thereby cracking the drywall joints.
4. Shrinkage of the truss lumber. Even though the lumber may be kiln-dried, it can pick up excessive moisture if stored and transported without adequate protection from the elements. This also applies to trusses, especially those dumped on the ground at the building site for lengthy periods of time. Occasionally twisted, warped or bowed lumber will be used by straightening in the truss jig during fabrication. Then in reaching an equilibrium with the temperature and humidity conditions of the attic, the lumber will want to return to its shape before fabrication. This can cause the truss to twist or bow. Included in this fourth general category are the characteristics of abnormally high longitudinal lengthening and shortening found in lumber containing a high percentage of juvenile and compression wood. Shortening of the lower chord, lengthening of the top chords, or both, during periods of humidity and temperature changes in the attic can sometimes cause a truss to arch. Subsequently a reversal of the attic conditions can cause the truss to return to the original position. An annual occurrence of rising and lowering constitutes about 25 percent of the arching cases.

Over

CFPS - What Is It and Why Is It Occurring?

Following are some comments on juvenile wood and several references pertaining to CFPS, longitudinal shrinkage, and juvenile and compression wood.

Juvenile Wood: Juvenile wood in trees constitutes the first stages of growth. Loblolly pine: The first 7-11 years; Slash pine: 5-8 years for example. The younger the tree, the higher the percentage of juvenile wood and it should be pointed out that fast growth is not equivalent to juvenile growth. In terms of lumber and wood products, there is a quicker moisture take-up and let-off than non-juvenile wood.

There are three additions to lumber grading which considers limitations of juvenile wood: AITC for laminations, WCLIB for scaffolding planks, and truss-joint corp. no pith in the lumber. There is also a grade FOHC, free of heart center. This eliminates the biggest percentage of juvenile wood.

Following are several references of CFPS, longitudinal shrinkage and juvenile and compression wood:

1. Ceiling-floor Partition Separation Phenomenon - A Survey of the Problem. The 1979 Metal Plate Wood Truss Conference. FPRS, 2801 Marshall Court, Madison, WI 53705.

2. Upward Deflection of Wood Trusses in Winter. W. G. Plewes, Division of Building Research, National Research Council of Canada, Ottawa, Canada.

3. Ceiling-Floor Partition Separation Studies. D. H. Percival, S. K. Suddarth, Q. B. Comus. Research Report 82-2, Small Homes Council, University of Illinois, One E. St.Mary's Rd., Champaign, IL 61820.

4. Longitudinal Moisture Response in Truss Lumber - A Potential Cause of Ceiling or Floor Partition Separation. D H. Percival, S. K. Suddarth. FPRS Journal, Nov/Dec 1983. 2801 Marshall Court, Madison, WI 53705.

5. Longitudinal Shrinkage of Wood. Report No. 1093. U.S. Forest Products Laboratory, One Gifford Pinchot Dr., Madison, WI 53705.

6. Juvenile Wood as a Source of Seasonal Arching in Trusses. Thomas M. Gorman. Forest Products Journal Nov/Dec. 1985. FPRS, 2801 Marshall Court, Madison, WI 53705.

7. The Mechanism of Ceiling-Floor Partition Separation. Stephen Quarles and Robert Erickson. Forest Products Journal, August 1987. FPRS, 2801 Marshall Court, Madison, WI 53705.

Prepared by Don Percival
Small Homes Council, University of Illinois

REPRINT

WOOD WORDS

A PERIODIC PUBLICATION OF THE WTCA WOOD TRUSS COUNCIL OF AMERICA

April 1989

Tech Time

Understanding and Designing Light-Frame Structures to Reduce the Possibilities of "Ceiling-Floor Partition Separation"

Route to:

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111 EAST WACKER DRIVE • CHICAGO, ILLINOIS 60601 • (312) 644-6610

Understanding and Designing Light-Frame Structures to Reduce the Possibilities of "Ceiling-Floor Partition Separation"

by Don Percival
Small Homes Council
University of Illinois
voluntary member,
WTCA Engineering Review Comittee

This short technical note was suggested to help in the understanding of a condition which can occasionally occur in light-frame wood construction: cracking or separation developing in the finish materials from settlement or movement or shrinking and swelling of some of the wood elements of the structure. Although unsightly and a nuisance to some, one can safely say such cracking or separation causes no structural problem and therefore no danger to the homeowner or the public in general.

In recent years, along with the increased popularity of roof trusses, the use of heavy amounts of insulation has become commonplace. At about the same time a confounding problem evolved which has generally been referred to as Ceiling-Floor Partition Separation (CFPS). Cracks can randomly occur in the finish materials, separations can develop between the ceiling and the partitions and walls, or between the floor and the partitions. The separation cannot be associated entirely with the use of wood trusses because other types of wood construction, such as joist and rafter construction, can show cracking or bowing. In any case CFPS is not considered a structural problem. It is merely cosmetic in nature and can be the result of one or a combination of things happening at the same time. Because cracking or separation is a temporary nuisance, corrective measures should not be construed as requiring the replacement of the roof system. CFPS is not common to all parts of the United States but for those instances associated with wood trusses it occurs predominately in the colder climates where heavier amounts of insulation have been installed. Along with Alaska, several countries such as Denmark, Sweden, England and Canada have experienced CFPS.

Research has shown that some ceiling joists and trusses actually bow or arch upward. However, there are several reasons not necessarily associated with trusses which can cause CFPS to occur. Following is a list of known causes, with some recommendations to reduce the possibility of cracks and separations.

1. **Settlement of the floor girder support pads and freezing/thawing action of the perimeter foundation walls.**

■ Foundation details are important. Footings below the frost or freeze line are essential to prevent a freezing/thawing action of the perimeter walls.

■ In truss roof structures with partitions essentially near the center, cracks can occur at the ceiling line of the perimeter walls if the slab bows up, Figure 1a. On the other hand, if the soil around the perimeter expands, one or both ends of the truss can be raised, causing cracks to develop at the ceiling line of the partition walls and the truss, Figure 1b. As the soil becomes stabilized once again, the slab returns to its normal position.

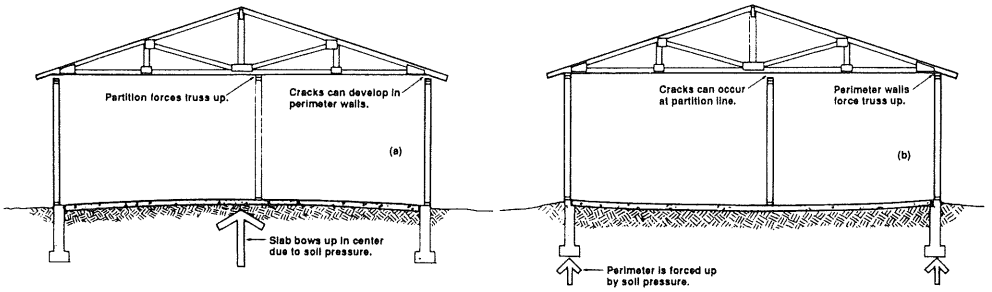


Figure 1. Concrete floor slab on an expansive type clay soil can bow up in the center (a) or rise at the perimeter (b) causing cracks at the ceiling line.

■ Attention should be given to the methods of supporting the floor girders in crawlspace construction, especially in high water table sites. The support pads should be substantial enough to prevent vibrational action from causing settlement in the soft soil.

2. **Movement of concrete slabs built on expansive type clay soils can cause cracks and separations.**

■ Shrinking or swelling of expansive type clay soils can cause a concrete slab to either bow upward near the center or raise around the perimeter of the structure. This is caused by differences in the pick-up or loss of moisture by the soil. These expansive soils are most prevalent in the semi-arid regions of the country running from the eastern two-thirds of Texas into Louisiana and northwest through the great plains. They also occur in some parts of California. Expansive clay soils exhibit the most extreme movement in areas of relatively heavy rainfall for short periods of time followed by lengthy periods of dryness or only slight rainfall.

3. **Excessive shrinkage of the wood framing members: the girders, the girder shims, the sill and wall plates and the floor joists and partition wall plates.** Figure 2 shows elements of crawl-space construction where accumulative shrinkage and settlement can cause cracks and separations.

■ Use lumber that has been properly dried, then properly protected during shipment, storage and handling.

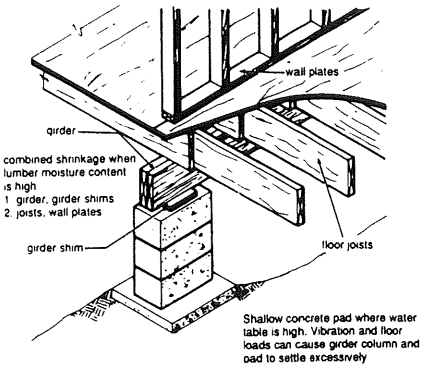


Figure 2. Crawl space details with potential for cracks and separations.

■ When pressure treated lumber is used for sill plates, less shrinkage occurs if the material is re-dried after treatment.

■ At fabrication plants, planning delivery to the job site is recommended to reduce the length of time the components are exposed to the elements. The higher the moisture content of the lumber at the time the building is covered, the greater the percentage of shrinkage and the greater the possibility of CFPS. The use of joist hangers can reduce accumulative shrinkage if the joists are in the same plane as the girder and not stacked as shown in Figure 2.

4. **"Pulling out" the camber when fastening the trusses to the partition.** Some truss firms fabricate trusses with a slight upward bow or camber into the lower chord which is supposed to flatten out from the weight of the construction materials but rarely does for roof trusses.

If the field carpenters pull out the camber during attachment of the truss to the partition, the truss may tend to return to its cambered position during the first heating season. If the attachment has been substantial, a separation could occur at the partition-floor line.

■ Recommended practice is to install thin shims or spacer blocks under the trusses to prevent pulling out the camber, Figure 3.

■ Camber is not recommended for shorter span roof trusses.

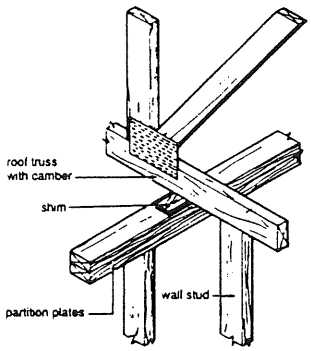


Figure 3. For roof trusses fabricated with a camber, insert shims under bottom chords to prevent pulling out camber.

5. **Excessive humidity in the attic space causes the top chord and other exposed wood members to pick up moisture as condensation occurs.** Humidity build-up can be caused from improperly venting the bathroom and kitchen vents into the attic space. Even more serious is the discharge of moisture from the clothes dryer into the attic space. The wood absorbs the moisture and swells or expands as condensation occurs.

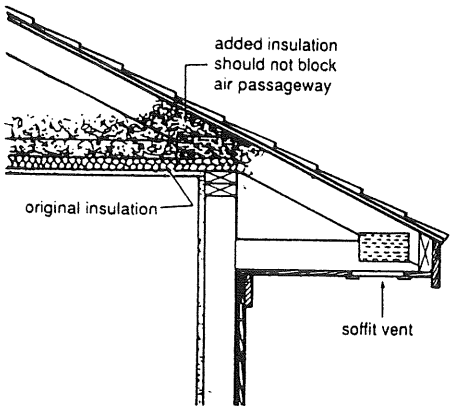


Figure 4. Blocked air passageway restricts air movement.

During retrofitting with additional insulation in the attic, soffit vents are often inadvertently closed off or covered, which blocks the path of air movement through the attic, Figure 4.

As condensation occurs, the top chord of a truss can pick up moisture and expand, while at the same time, the bottom chord, buried in insulation and absorbing heat from the living areas below, can dry to low levels and shrink longitudinally. Therefore, the combination of these two opposing actions, reduction of moisture in the bottom chord and pick-up in the upper chord, can cause the truss to bow or arch upward. The same action can occur in ceiling joists partially buried in insulation.

■ Adequate ventilation of the attic is essential to reduce the influence of condensation of moisture on the cold surfaces of the wood elements. Venting the clothes dryer, bathroom and kitchen exhaust vents into the attic should not be allowed. This recommendation also includes the crawl-space.

■ For the crawl-space, venting the foundation walls and covering the soil with a ground cover is recommended. Providing a proper outside grade line slope will move rain water away from the structure.

These provisions will protect the wood subframing members from excessive shrinking and swelling and subsequent cracking and separations.

6. **Attaching the ceiling drywall to the truss too close to the partition. If shrinkage or movement occurs, cracks can develop at the partition line.**

■ Construction practices in some parts of the country suggest installing "dead-wood" blocking to the top of the wall plates between the trusses. These blocks provide a surface to attach the edges of the drywall. Attachment of the drywall can then be held back 12 to 16 inches on the trusses, Figures 5 and 6.

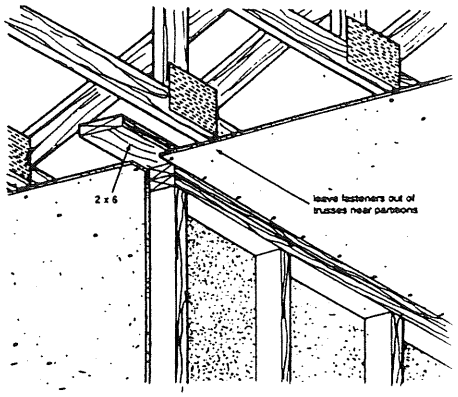


Figure 5. For trusses parallel to partitions, install 2 x 6 nailers for fastening ceiling materials. Leave fasteners out of trusses close to partitions.

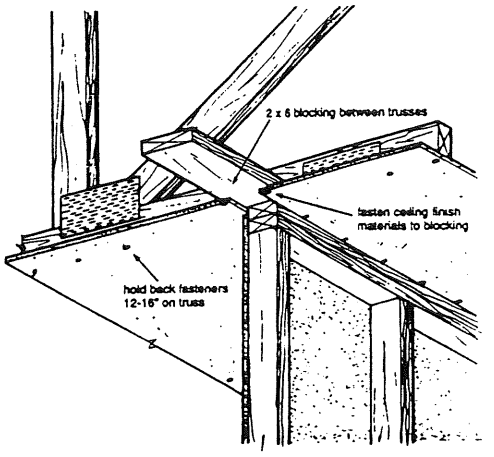


Figure 6. For trusses perpendicular to partitions, install "dead wood" blocking for attaching ceiling finish materials.

■ To reduce the amount of heat absorbed by the lower chord of the truss or ceiling joist, install rigid insulation board under the drywall. Also fasten the insulation to the blocking.

1. Recommendations suggest waiting through at least the first heating season, preferably two, to determine what is causing the cracks or separations to develop.

2. Check the attic and crawl space for adequate ventilation. Remove any exhaust openings vented into the attic or crawl space. Vent them to the outside. Move any insulation covering the soffit vent system in the attic.

3. If the truss is arching or bowing upward, remove the ceiling drywall fasteners 12-16 inches from the wall and install blocking for re-attaching the edges of the drywall.

4. Install crown molding at the ceiling line. (Note: fasten the molding to the ceiling, not the walls.) During subsequent repainting or decorating, where molding has been installed, do the painting during the height of the heating season or when the cracking or separation is at the maximum.

5. Do not cut the web members of the truss. This action destroys the structural integrity of the truss. Furthermore, there are known incidents where CFPS has occurred after web members had been cut. □

Further reading on this subject can be found in the following technical publications:

1. Ceiling-Floor Partition Separation Phenomenon - A Survey of the Problem. The 1979 Metal Plate Wood Truss Conference. FPRS, 2801 Marshall Court, Madison, WI 53705.

2. Upward Deflection of Wood Trusses in Winter. W.G. Plewes, Division of Building Research, National Research Council of Canada, Ottawa, Canada.

3. Ceiling-Floor Partition Separation Studies, D.H. Percival, S.K. Suddarth, Q.B. Comus. Research Report 82-2, Small Homes Council, University of Illinois, One E. St. Mary's Rd., Champaign, IL 61820, 217-333-1910.

4. Longitudinal Moisture Response in Truss Lumber - A Potential Cause of Ceiling or Floor Partition Separation. D.H. Percival, S.K. Suddarth. FPRS Journal, Nov/Dec 1983. 2801 Marshall Court, Madison, WI 53705.

5. Longitudinal Shrinkage of Wood. Report No. 1093. U.S. Forest Products Laboratory, One Gifford Pinchot Dr., Madison, WI 53705.

6. Juvenile Wood as a Source of Seasonal Arching in Trusses. Thomas M. Gorman. Forest Products Journal Nov/Dec 1989. FPRS, 2801 Marshall Court, Madison, WI 53705.

7. The Mechanism of Ceiling-Floor Partition. Stephen Quarles and Robert Erickson. Forest Products Journal, August 1987. FPRS, 2801 Marshall, Madison, WI 53705.

8. Movement in Wood Structures. David B. Brakeman. Spring 1988, Peaks, Lumbermate Co., St. Louis, Mo.

9. Weak Wood - Fast Grown Trees Make Problem Lumber. J.F. Senft, B. Alan Bendtsen, W.L. Galligan. Journal of Forestry, August 1985.

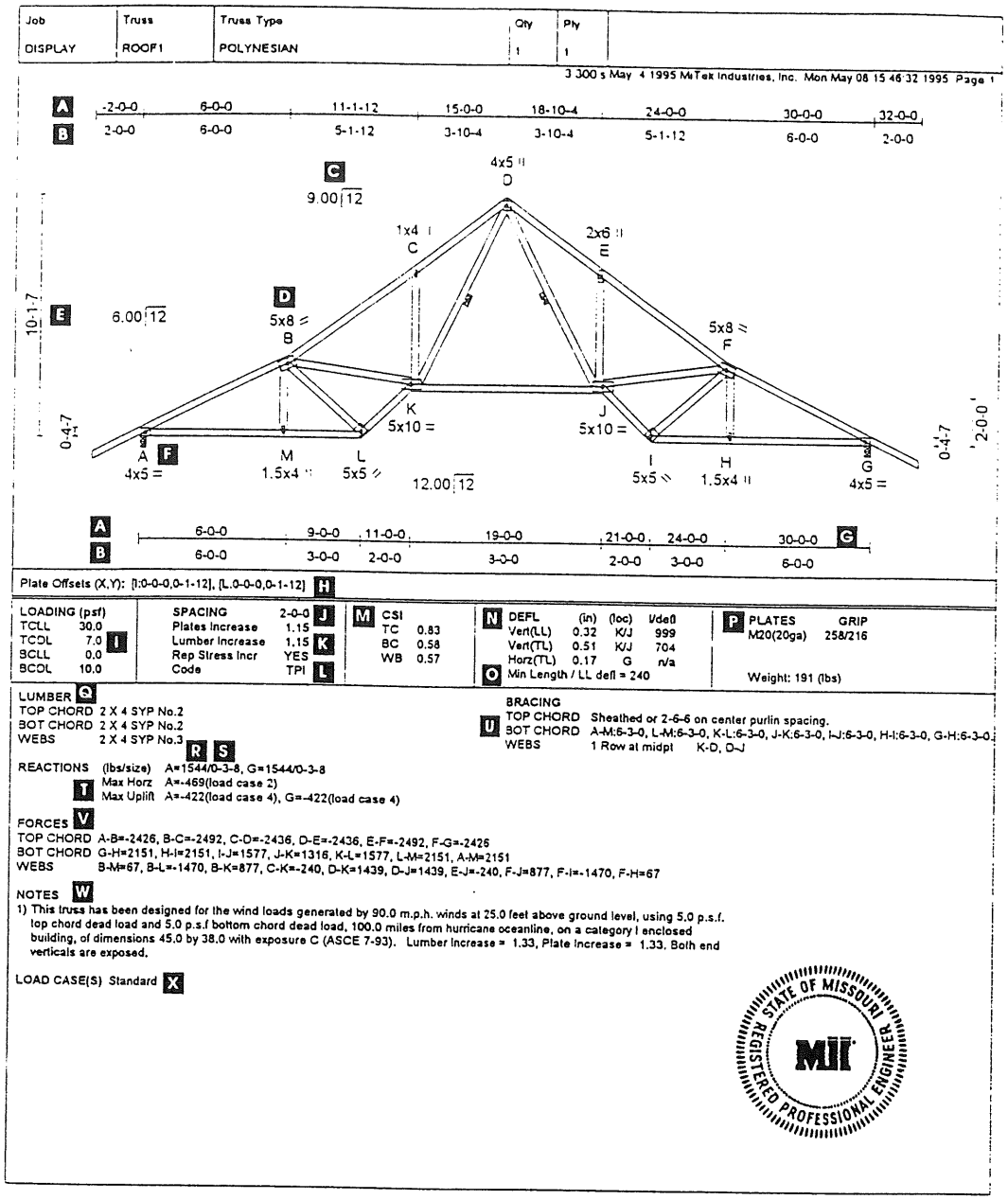
10. Design and Construction of Post Tension Slabs on Grade. Post Tension Institute, 302 W. Osbourne, Suite 3500, Phoenix, AZ 85013.

QUALITY INSPECTED

CABO
NER-QA430

TPI-85
PCT-80

SPROWL BLDG. COMPONENTS
SEARSMONT, ME -- #446
(207) 342-5711



SAMPLE:
NOT FOR
PRODUCTION

- A Cumulative Dimensions
- B Panel Length (feet-inches-sixteenths)
- C Slope
- D Plate Size and Orientation
- E Overall Height
- F Bearing Location
- G Truss Span (feet-inches-sixteenths)
- H Plate Offsets
- I Design Loading (PSF)
- J Spacing O.C. (feet-inches-sixteenths)
- K Duration of Load for Plate and Lumber Design
- L Code
- M Top Chord, Bottom Chord and Web. Maximum Combined Stress Indices.
- N Deflections (inches) and Span to Deflection Ratio
- O Input Span to Deflection Ratio
- P MiTek Plate Allowables (PSI)
- Q Lumber Requirements
- R Reaction (pounds)
- S Minimum Bearing Required (inches)
- T Maximum Uplift and/or Horizontal Reaction if Applicable
- U Required Member Bracing
- V Member Axial Forces for Load Case 1
- W Notes
- X Additional Loads/Load Cases

TYPICAL ROOF TRUSS DRAWING

MiTek

Job	Truss	Truss Type	Qty	Ply
DISPLAY	FLOOR1	FLOOR	1	1

3.300 s May 4 1995 MiTek Industries, Inc. Mon May 08 14:53:44 1995 Page 1

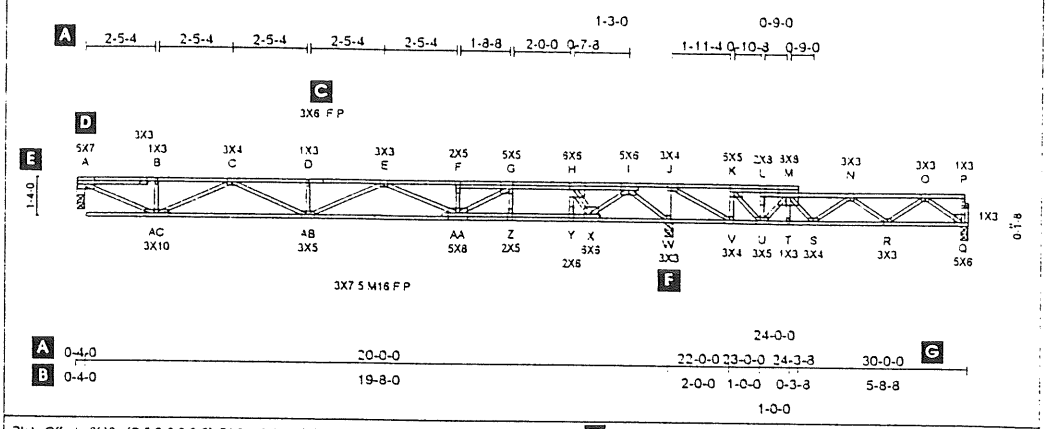


Plate Offsets (X,Y): [G.0-3-8,0-3-0], [H.0-1-8,0-3-0], [J.0-1-8,0-1-8], [K.0-1-8,0-3-0], [V.0-2-8,0-1-8] H

LOADING (psf)		SPACING	2-0-0 J	M CSI		N DEFL	(in)	(loc)	l/defl
TCLL	40.0	Plates Increase	1.00	TC	0.87	Vert(LL)	0.41	Z/AA	361
TCDL	10.0 I	Lumber Increase	1.00 K	BC	0.38	Vert(TL)	0.57	Z/AA	626
BCLL	0.0	Rep Stress Incr	YES	WB	0.77	Horz(TL)	-0.05	Q	n/a
BCDL	5.0	Code	TPI L	(Matrix)		O Min Length / LL defl = 480			

P PLATES GRIP

Weight: 201 (lbs)

LUMBER Q
TOP CHORD 4 X 2 SYP No.2
BOT CHORD 4 X 2 SYP 2400F 2.0E
WEBS 4 X 2 SYP No.3
OTHERS 4 X 4 SYP Stud

BRACING U
TOP CHORD Sheathed or 5-6-4 on center purlin spacing, except end verticals.
BOT CHORD Rigid ceiling directly applied, or 10-00-00 on center bracing.

R S
REACTIONS (lbs/size) A=921/0-3-8, Q=260/0-3-8, W=2040/0-3-8
T Max Uplift Q=-100(load case 2)
Max Vert A=938(load case 2), Q=431(load case 3), W=2040(load case 1)

FORCES V
TOP CHORD A-B=-1697, B-C=-1697, C-D=-3332, D-E=-3332, E-F=-2904, F-G=-2901, G-H=-1415, H-I=-168, I-J=2198, J-K=1080, K-L=674, L-M=671, M-N=92, N-O=-278, O-P=0, P-Q=-35
BOT CHORD Q-R=294, R-S=220, S-T=-300, T-U=-300, U-V=-1078, V-W=-2194, W-X=-1110, X-Y=1457, Y-Z=1415, Z-AA=1411, AA-AB=3323, AB-AC=2766
WEBS A-AC=1885, B-AC=-281, C-AC=1187, C-AB=629, D-AB=-254, E-AB=11, E-AA=-465, F-AA=-416, G-AA=1741, G-Z=-659, H-Y=1388, H-X=-2442, I-X=1716, I-W=-1454, J-W=-992, J-V=1293, K-V=-664, K-U=633, L-U=20, M-U=-607, M-T=-0, M-S=361, N-S=-411, N-R=69, O-R=-28, O-Q=-364

NOTES W
1) Required 2x6 strongbacks, on edge, spaced at 10 feet on center and fastened to each truss with 3-10d nails. Strongbacks to be attached to walls at their outer ends or restrained by other means.
2) CAUTION, Do not erect truss backwards.
3) All plates are M20 plates unless otherwise indicated.

LOAD CASE(S) X
2) Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lbs per ft)
Vert:A-B=-100.0, B-C=-100.0, C-D=-100.0, D-E=-100.0, E-F=-100.0, F-G=-100.0, G-H=-100.0, H-I=-100.0, I-J=-100.0, J-K=-20.0, K-L=-20.0, L-M=-20.0, M-N=-20.0, N-O=-20.0, O-P=-20.0, Q-R=-10.0, R-S=-10.0, S-T=-10.0, T-U=-10.0, U-V=-10.0, V-W=-10.0, W-X=-10.0, X-Y=-10.0, Y-Z=-10.0, Z-AA=-10.0, AA-AB=-10.0, AB-AC=-10.0
3) Lumber Increase=1.00, Plate Increase=1.00
Uniform Loads (lbs per ft)
Vert:A-B=-20.0, B-C=-20.0, C-D=-20.0, D-E=-20.0, E-F=-20.0, F-G=-20.0, G-H=-20.0, H-I=-20.0, I-J=-20.0, J-K=-100.0, K-L=-100.0, L-M=-100.0, M-N=-100.0, N-O=-100.0, O-P=-100.0, Q-R=-10.0, R-S=-10.0, S-T=-10.0, T-U=-10.0, U-V=-10.0, V-W=-10.0, W-X=-10.0, X-Y=-10.0, Y-Z=-10.0, Z-AA=-10.0, AA-AB=-10.0, AB-AC=-10.0

STATE OF MISSOURI REGISTERED PROFESSIONAL ENGINEER MII

SAMPLE:
NOT FOR
PRODUCTION

- A Cumulative Dimensions
- B Panel Length (feet-inches-sixteenths)
- C Pre-splice face plate
- D Plate Size and Orientation
- E Truss Depth
- F Bearing Location
- G Truss Span (feet-inches-sixteenths)
- H Plate Offsets
- I Design Loading (PSF)
- J Spacing O.C. (feet-inches-sixteenths)
- K Duration of Load for Plate and Lumber Design
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- U Required Member Bracing
- V Member Axial Forces for Load Case 1
- W Notes
- X Additional Loads/Load Cases

TYPICAL FLOOR TRUSS DRAWING

Wood Truss Council of America

Standard Responsibilities in the Design Process Involving Metal Plate Connected Wood Trusses

WTCA 1-1995

Developed by the WTCA Engineering Review Committee
in cooperation with the Truss Plate Institute

One WTCA Center • 6425 Normandy Ln. • Madison, WI 53719 • 608/274-4849 • 608/274-3329 fax • www.woodtruss.com • wtca@woodtruss.com

5.0 TRUSS MANUFACTURER RESPONSIBILITIES

5.1 Communicate the design criteria from the Construction Design Documents to the Truss Designer.

5.2 Where required by the Construction Design Documents, prepare the Truss Placement Plan, providing as a minimum the location assumed for each Truss based on the Truss Manufacturer's interpretation of the Construction Design Documents.

5.3 Submit to the Contractor the Truss Placement Plan, as may be required, and each Truss Design Drawing for review and approval.

5.4 Manufacture the Trusses in accordance with the final approved Truss Design Drawings using the quality criteria for Metal Plate Connected Wood Trusses established by the ANSI/TPI 1-1995 "National Design Standard for Metal Plate Connected Wood Truss Construction."

6.0 TRUSS DESIGNER RESPONSIBILITIES

6.1 Prepare the Truss Design Drawings in conformance with the requirements set forth in the latest approved edition of ANSI/TPI 1-1995 "National Design Standard for Metal Plate Connected Wood Truss Construction."

6.2 For each Truss Design Drawing, set forth as a minimum the following:

6.2.1 Slope or depth, span and spacing;

6.2.2 Location of all joints;

6.2.3 Required bearing widths;

6.2.4 Design loads as applicable:

6.2.4.1 Top chord live load (including snow loads);

6.2.4.2 Top chord dead load;

6.2.4.3 Bottom chord live load;

6.2.4.4 Bottom chord dead load;

6.2.4.5 Concentrated loads and their points of application; and

6.2.4.6 Controlling wind and earthquake loads;

6.2.5 Adjustments to lumber and metal connector plate design values for conditions of use;

6.2.6 Each reaction force and direction;

6.2.7 Metal connector plate type, size, thickness or gage, and the dimensioned location of each metal connector plate except where symmetrically located relative to the joint interface;

6.2.8 Lumber size, species, and grade for each member;

6.2.9 Connection Requirements for:

(a) Truss to Truss girder;

(b) Truss ply to ply; and

(c) Field splices;

6.2.10 Calculated deflection ratio and/or maximum deflection for live and total load;

6.2.11 Maximum axial compression forces in the Truss members to enable the Building Designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces may be shown on the Truss Design Drawing or on supplemental documents; and

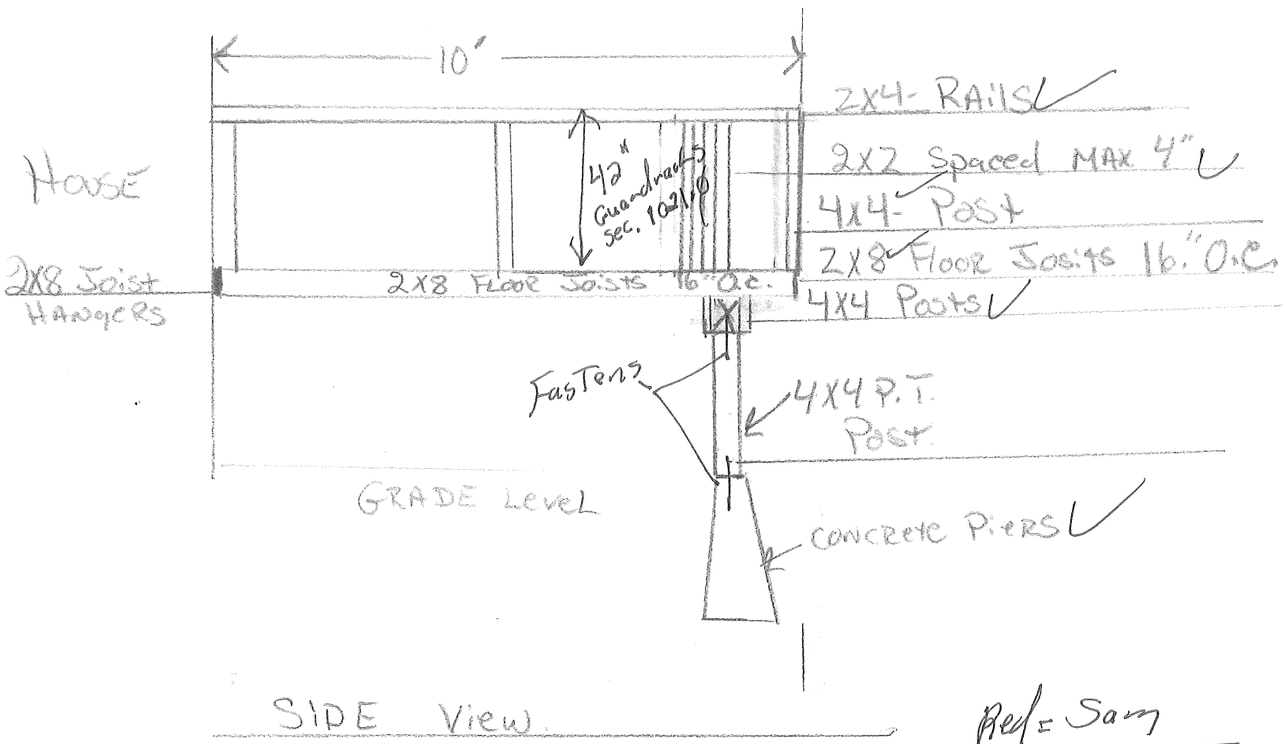
6.2.12 Required permanent Truss member bracing location.

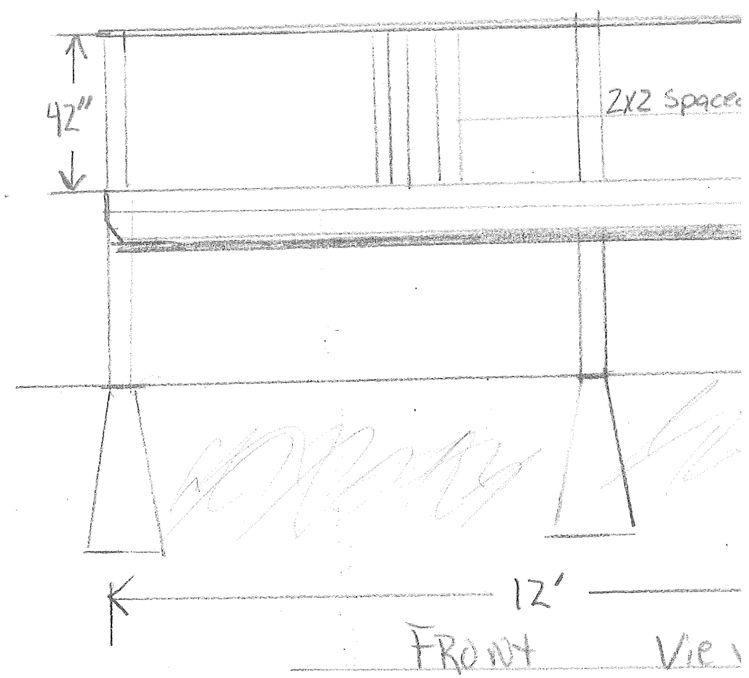
7.0 OTHER RESPONSIBILITIES

7.1 Any party who cuts or damages a truss shall be responsible for securing the engineering required for the repair and for subsequent costs.

Wood Truss Council of America's Objective

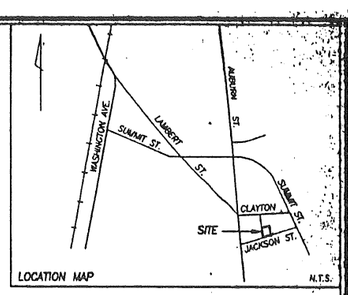
WTCA is committed to promoting the common interests of all engaged in the manufacture of wood trusses and related components to ensure growth, continuity, and increased professionalism in our industry. Fundamental to this is promoting the safe, economic, and structurally sound use of trusses in all applications.

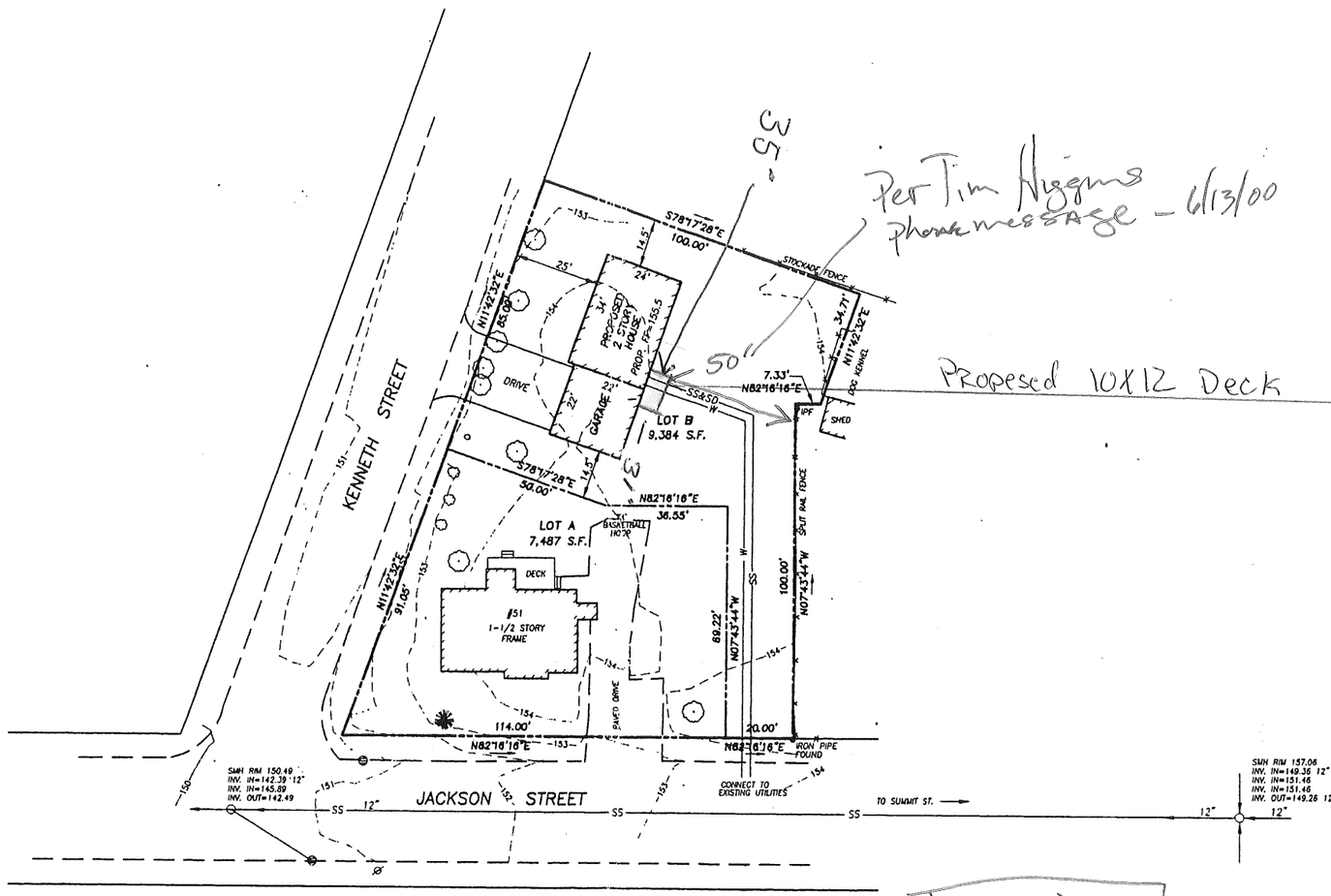




Proposed 10X12 Deck. @ 13 Kennenth St.
CBL - 382-B-002 - owner - Builder
Tim Higgins - Building Permit # 000366
issued April 25-00

NAME : Tim
Address : 13
Proposal :





Per Tim Higgins phone message - 6/13/00

50'

Proposed 10X12 Deck

R-3 Zone

rear: 25' req - 50' shown

sides: 8' req - 31' & 35' shown

front: N/A

LEGEND:

- IRON PIPE OR ROD FOUND
- MANHOLE
- CATCH BASIN
- DECIDUOUS TREE
- CONIFEROUS TREE
- FENCE
- W — WATER LINE
- SS — SANITARY SEWER
- 154 — 1' CONTOUR

GRAPHIC SCALE

0' 10' 20' 40' 60'

NOTES:

1. OWNERS OF RECORD: STEVEN J. AND JANEL BECKWITH, C.C.R.D. BOOK 6930 PAGE 60.
2. PROPERTY IS SHOWN AS LOT 1 BLOCK B ON CITY OF PORTLAND ASSESSOR'S MAP 382.
3. ZONING: ZONE R-3
   MINIMUM LOT SIZE: 6,500 SQ. FT.
   MINIMUM SETBACKS: FRONT 25' FT., REAR 25 FT.
   SIDE: 14 FT. 2 STORY BLDG, 8 FT. 1 STORY BLDG, 8 FT. 1-1/2 STORY
   20 FT. SIDE SETBACK ON SIDE STREET
   FRONTAGE: 50 FT.
4. BENCH MARK: MONUMENT AT SOUTHEAST CORNER OF JACKSON STREET AND AUBURN STREET, ELEV. 140.44, CITY DATUM.

PLAN REFERENCE:

STANDARD BOUNDARY SURVEY ON JACKSON STREET, PORTLAND, MAINE, MADE FOR HIGGINS CONSTRUCTION, FEB. 25, 1999 BY OWEN HASKELL, INC.

REV. 1	3/25/99	CONTOURS ADDED

SITE PLAN

ON

JACKSON STREET, PORTLAND, MAINE

MADE FOR

HIGGINS CONSTRUCTION

CARON STREET, PORTLAND, MAINE

OWEN HASKELL, INC.
16 CASCO ST., PORTLAND, ME 04101 (207)774-0424
PROFESSIONAL LAND SURVEYORS

Drwn By: EC	Date: MARCH 1, 1999	Job No.: 98367P
Trace By: JLW	Scale: 1" = 20'	Dwg. No.: 3
Check By: JWS		
Book No.: 606		