

Manufactured Housing Board Qualifying Education

(207) 624-8612 Office

(207) 624-8637 Fax

Web Address:

www.maine.gov/professionallicensing

Qualifying Education for Licensees

- * The training shall consist of but not limited to training in the following areas:
 - A. Statutes and rules relevant to all types of Manufactured Housing regulated by the board;
 - B. The installation and servicing of HUD-code homes; and
 - C. The installation and servicing of state certified modular homes.

Course Objectives

- * Rules & Regulations
- * Manufactured Housing Warranties
- * Modular Housing
- * HUD Installation Standards

Reference Materials

- * 10 M.R.S., Chapter 951 Manufactured Housing Act
- * 02 385 Chapter 320-381 Rules for Licensing Manufacturers, Dealers, Developer Dealers, Installers and Mechanics
- * 10 M.R.S., Chapter 213 Manufactured Housing Warranties
- * 11 M.R.S., Implied Warranty Law
- * 02 385 Chapter 890 New Manufactured Home Installation Standard
- * 02 385 Chapter 110 Rules for State Certification of Modular Housing

PFR Mission Statement

The mission of the Department of Professional and Financial Regulation is to protect the citizens of Maine through the regulation of numerous professions and occupations providing services to the public.

The Department protects consumers through its licensing, examining, and auditing activities; by conducting programs aimed at increasing voluntary compliance with State Laws; by investigation possible violations of law; and by undertaking enforcement actions. The Department responds to consumer complaints and requests for information and conducts educational and outreach programs to make consumers aware of their rights under Maine laws.

In order to encourage the development of sound ethical businesses which serve the needs of Maine citizens, the Department fosters a healthy business environment through competent, impartial and efficient regulation.

When are licenses required?

Any person who engages in the business of manufacturing, selling, installing and servicing State Certified Modular, HUD, and Pre-HUD manufactured homes shall first obtain a license issued by the board.

License Categories

Dealers

M.R.S. 10, §9022 (1)

- * Dealers who are licensed may sell, install or service, or may have their employees install or service any manufactured housing in compliance with the Manufactured Housing Act.
- * This applies to HUD, Pre-HUD and State Certified Modular homes.

Developer Dealer

M.R.S. 10 §9002 (2-A)

- * A person who purchases state-certified modular housing from a licensed manufacturer or dealer for placement on property owned by the developer dealer and who offers modular housing for sale to the initial purchaser. The developer dealer may not install such modular housing but may contract with the manufacturer or dealer for the installation.

Manufacturer

M.R.S. 10, §9022 (2)

- * A manufacturer who is licensed may manufacture, sell to licensed dealers, install and service both HUD and State Certified Modular homes.

Mechanics

M.R.S. 10, §9022 (3)

- * Licensed mechanics may install or service HUD and Pre-HUD manufactured homes.

Installers

M.R.S. 10, §9022 (4)

- * Licensed installers may install or service State Certified Modular homes.

Department Functions


- * Administration/licensing
- * Complaint processing
- * Complaint/license investigations
- * Technical assistance/training
- * Inspections

Board Functions


- * Consumer protection
- * Rule-making
- * Final complaint resolution
- * Adjudicatory hearings
- * Enforcement of rules


Complaint Procedure


- * If a consumer files a written complaint with the board against the manufacturer, dealer or installer within one year after occupancy of new manufactured housing, **it tolls the statute of limitations for purposes of bringing action to enforce any applicable warranty.**



When a consumer complaint is received staff contacts the dealer and/or the manufacturer to try to resolve the issues prior to it becoming an official complaint. *(The staff realizes that there are two sides to every situation and the consumer is not always right!)*

- 
- * If no resolution or agreement is reached, a copy of the complaint is sent to the dealer, manufacturer, and/or installer.
 - * Licensees must respond in writing within 20 days upon receipt of the complaint.


- 
- * When the response is received all documents will be reviewed. If a reasonable agreement is reached and then resolved, no further action is required.



If no resolution is reached we will schedule an inspection of the home to view the alleged warranty violations. (*The manufactured housing board has no authority to enforce contractual issues.*)

Order of Correction

- * If warranty violations are found, an “order of correction” will be issued to all licensees involved.
- * Licensees must respond in writing within 30 days upon receipt of the “order of correction” outlining their actions necessary to address the conditions cited.

- 
- * Licensees have 45 days from receipt of the order of correction to make all the required repairs.
 - * Licensees have the right to appeal an “order of correction” to the Manufactured Housing Board. A written appeal must be received within 30 days.


Disciplinary Action


- * If the “order of correction” is not resolved within the 45 days, disciplinary action may be taken against the licensees.


Prohibited Practices

02-385, Chapter 350 (3)

- * No licensee may engage in the practice of fraud or deceit in connection with the manufacture, sales, offering for sale, brokering, distribution or service of manufactured housing.

- 
- * No licensee may engage in conduct that evidences a lack of ability or fitness to discharge the duty owed by the licensee.
 - * No licensee may engage in conduct that evidences a lack of knowledge or inability to apply principles or skills to carry out the practice for which the license was issued.

- 
- * No licensee may fail to maintain a good business reputation.
 - * No licensee may engage in conduct that demonstrates a lack of trustworthiness or financial responsibility.

- 
- * No licensee may contract for electrical, plumbing, oil burner or propane work in connection with the installation or servicing of a home unless the contractor is properly licensed to perform the work by the appropriate licensing board within the Department of Professional & Financial Regulation, Office of Professional & Occupational Regulation. To verify whether or not a license is active go to:

<http://pfr.informe.org/almsonline/almsquery/SearchCompany.aspx>

State Certification Seal

- * Purchased by the manufacturer.
- * To be affixed only on State Certified Modular Housing (one seal is required per home).
- * Affixed at the factory under the supervision of the third party inspection agency.
- * Affixing the seal signifies that the modular home is built in compliance with the rules and codes adopted by the Maine Manufactured Housing Board.

This SEAL remains the
property of
THE STATE OF MAINE
MANUFACTURED
HOUSING BOARD

SAMPLE



This seal certifies compliance with the Regulations for the State
Certification of Manufactured Housing. Manufacturer certifies to
compliance.

LIC #	OP	D
MSN	DSN 15028	IA

New Home Warranty Seal

- * Purchased by the manufacturer.
- * Affixed at the factory on both HUD and State Certified Modular Homes.



MHB No 27573

SAMPLE
STATE OF MAINE

NEW MANUFACTURED HOME WARRANTY

This SEAL remains the property of THE STATE OF MAINE MANUFACTURED HOUSING BOARD

10 M.R.S.A., Section 1404. Written warranty; contents

A statutory warranty is established under which both the manufacturer and the dealer certify that to the best of their knowledge, the new home is free from any substantial defects in materials and workmanship. Specifically, this warranty provides the following:

1. **Defects.** That the new home is free from any substantial defects in materials or workmanship;
2. **Corrective action.** That the manufacturer or dealer or both shall take appropriate corrective action at the site of the new home in instances of substantial defects in materials or workmanship, which become evident within one year from the date of delivery of the new home to the consumer, provided the consumer or his transferee gives written notice of such defects to the manufacturer or dealer at their business address not later than one year and ten days after date of delivery;
3. **Liability.** That the manufacturer and dealer shall be jointly and severally liable to the consumer for the fulfillment of the terms of warranty, and the consumer may notify either one or both of the need for appropriate corrective action in instances of substantial defects in materials or workmanship;
4. **Name, address and phone number of manufacturer.** That the name, address and phone number of the manufacturer and the dealer where the consumer must mail or deliver written notice of defects to either the dealer or the manufacturer, or both, shall be provided to the consumer;
5. **Responsibility.** That while the manufacturers of any or all appliances may also issue their own warranties, the primary responsibility for appropriate corrective action under the warranty rests with the dealer and manufacturer, and the consumer should report all complaints to the dealer and manufacturer initially; and
6. **Warranty supplemental.** That this statutory warranty is in addition to any express warranty provided by the manufacturer or dealer and any warranty created by state or federal law, including the implied warranties of merchantability and fitness for a specific purpose (11 M.R.S.A., Section 2-316(5)). This warranty shall be in addition to and not in derogation of all other rights and privileges which such consumer may have under any other law or instrument. The manufacturer or dealer shall not require the consumer to waive any of the rights provided by this warranty.

If after contacting both the dealer and manufacturer concerning potential defects in your home, and these defects remain unresolved, you may contact the **DEPARTMENT OF PROFESSIONAL AND FINANCIAL REGULATION, MANUFACTURED HOUSING BOARD, 35 STATE HOUSE STATION, AUGUSTA, MAINE 04333, TELEPHONE (207) 624-8612.**

Installation Warranty Seal

- * Purchased by the manufacturer, dealer, installer or mechanic.
- * To be affixed by the installer of HUD and State Certified Modular homes at the time of installation.
- * A copy of the completed seal (yellow copy) must be submitted to the Manufactured Housing Program monthly.

INSTALL NO 15322

STATE OF MAINE



MANUFACTURED HOUSING BOARD

35 STATE HOUSE STATION, AUGUSTA, ME 04333

HOME INSTALLATION WARRANTY

THIS SEAL REMAINS THE PROPERTY OF THE MANUFACTURED HOUSING BOARD

☐ New Mobile (HUD Code) ☐ Modular (State Certified)

- A. HUD label number (if applicable) and Serial number: _____
- B. State seal number or compact number (if applicable): _____
- C. Maine State Sales Tax number: _____
- D. Dealer name: _____
- E. Installer's name: _____
- F. Installer's address: _____
- G. Installer's license #: _____ Telephone #: () _____
- H. Date Installed: _____
- I. Customer Name and physical address where home is installed: _____
_____, Maine

I, _____, of _____, duly attest
that the above manufactured home has been installed to conform to the Installation Standards required by the State of Maine
Manufactured Housing Board.

SIGNATURE OF INSTALLER: _____

10 M.R.S.A. §1404-A. Installation Warranty

The installer or the installer and the dealer, when the dealer is responsible for the installation, shall provide a written warranty with each new manufactured housing unit installed for a buyer. The installer shall complete and affix this seal to the home at the time of installation.


- 1. Materials and workmanship.** That the installation is free from any substantial defects in materials or workmanship;
- 2. Corrective action.** That the installer or the installer and the dealer, when the dealer is responsible for the installation, shall take appropriate correction action at the site of the manufactured housing in instances of substantial defects in materials or workmanship that become evident within one year from the date of the installation of the manufactured housing if the buyer or the buyer's transferee give written notice of the defects to the installer or the installer and the dealer, when the dealer is responsible for installation, at the installer's and the dealer's business addresses no later than one year and 10 days after the date of installation;
- 3. Liability.** That the installer or the installer and the dealer, when the dealer is responsible for the installation, are liable to the buyer for fulfillment of the terms of the warranty; and
- 4. Name, address, and phone number of installer.** The name, address and phone number of the installer or the installer and the dealer, when the dealer is responsible for the installation, to whom written notice of defects must be mailed or delivered by the buyer.

If you have a problem with your home, you should first contact your installer or dealer. If the problem is not resolved by the installer or dealer, you can contact the **Manufactured Housing Board at (207) 624-8612.**

General Provisions

M.R.S. 10, Chapter 951

- * The production and utilization of manufactured housing and the use of new and improving technologies, techniques, methods and materials have and will increase the available supply of housing at prices that residents of the State can afford.

- 
- * The intent is to provide protection to the public against hazards from poorly constructed or installed manufactured housing.
 - * To provide and enforce uniform performance standards for construction and installation of manufactured housing.

Exemption

Manufactured Housing as defined in M.R.S. 10, 9002 (7) (A-C) which is manufactured, sold, installed or serviced in compliance with these rules shall be exempt from all state or other political subdivision codes, standards or regulations which regulate the same matters.

Exemption for Modular Housing

M.R.S. 30-A, 4358(2)(E)

Notwithstanding any other provision of law, any modular home that meets construction standards for state-certified manufactured homes adopted pursuant to M.R.S. 10, 9042 must be allowed in all zones where other single-family homes are allowed.

WARRANTY

Manufactured Housing Warranties

- * There are 3 warranties that pertain to **all new manufactured homes** sold in the State of Maine that may be applied to determine a substantial defect:
 1. Express
 2. Statutory
 3. Implied

Express Warranty

- * Provided by the manufacturer or dealer.
- * Not enforced by the Manufactured Housing Board.
- * It is important to the consumer when making a big purchase, such as a home.

Express Warranty

- * It is based on the Purchase and Sale Agreement and is typically in a written format.
- * The length of the express warranty can vary.

Statutory Warranty

- * Set forth in M.R.S. 10, Chapter 213.
- * Provides a warranty on the home and the installation of the home.
- * The manufacturer and dealer must certify that the home and the installation are free from any substantial defects in material and workmanship.

Implied Warranty


- * Set forth in Title 5.
- * It is not widely known by the consumer.
- * Has three qualifying conditions to be considered a violation:
 - The item must be seriously defective;
 - The item must not have been abused, and
 - The item must not have exceeded its useful life.


Implied Warranty

- * The statute of limitations for the implied warranty is maximum of four years from the date of allowable occupancy.
- * This is in addition to any statutory warranty.

Warranty Liability and Responsibility

- * The manufacturer and dealer are jointly and severally liable to the consumer for the fulfillment of the terms of the warranties related to the correction of substantial defects in materials and workmanship.

- 
- * The dealer and installer are liable to the consumer for the fulfillment of the terms of the warranties related to the correction of substantial defects in materials and workmanship of the installation of the home.
 - * The dealer is ultimately responsible for the supervision of its employees and/or subcontractors.

- 
- * The warranty on housing also provides that the dealer and manufacturer are responsible for any corrective action related to all appliances.
 - * The consumer should report all complaints to the licensees.

Substantial vs. Cosmetic Defects

- * A **substantial** defect is being of considerable importance, value, degree, amount or extent.
- * A **cosmetic** defect is ornamental rather than functional having little or no significance.

Defects

- * It is the inspectors' determination whether a defect is considered a substantial or a cosmetic defect.

Warranty Guidelines

- * The applicability of the warranty standards is conditioned upon the fact that the home is constructed in compliance with:
 - HUD Standards for HUD homes
 - 2015 International Residential Code (IRC) for Modular homes

Journeyman Quality Workmanship

- * Workmanship that equates to the second or intermediate level of development of proficiency in a particular trade or skill, and reflects the work of a skilled worker but without the perfection of a master craftsman.

Freezing Warranty Rights

- * In order to preserve the statutory warranty rights for corrective action on possible defects, a **written notice** to the dealer and manufacturer must be sent within one year.
- * In order to preserve the implied warranty rights for corrective action of possible defects, a **written notice** to the dealer and manufacturer must be sent as soon as possible when the defect or defects are noticed.
- * Only the items complained about in writing will be “frozen” for any future corrective action.

Modular Homes

Also called:

- * State-certified manufactured housing
- * 2015 International Residential Code (IRC) homes.

Identification of Modular Homes

- * State certification seal vs. HUD label
- * Almost never designed for installation on a simple concrete slab
- * Occasionally constructed on a permanent steel frame

Standards for Construction

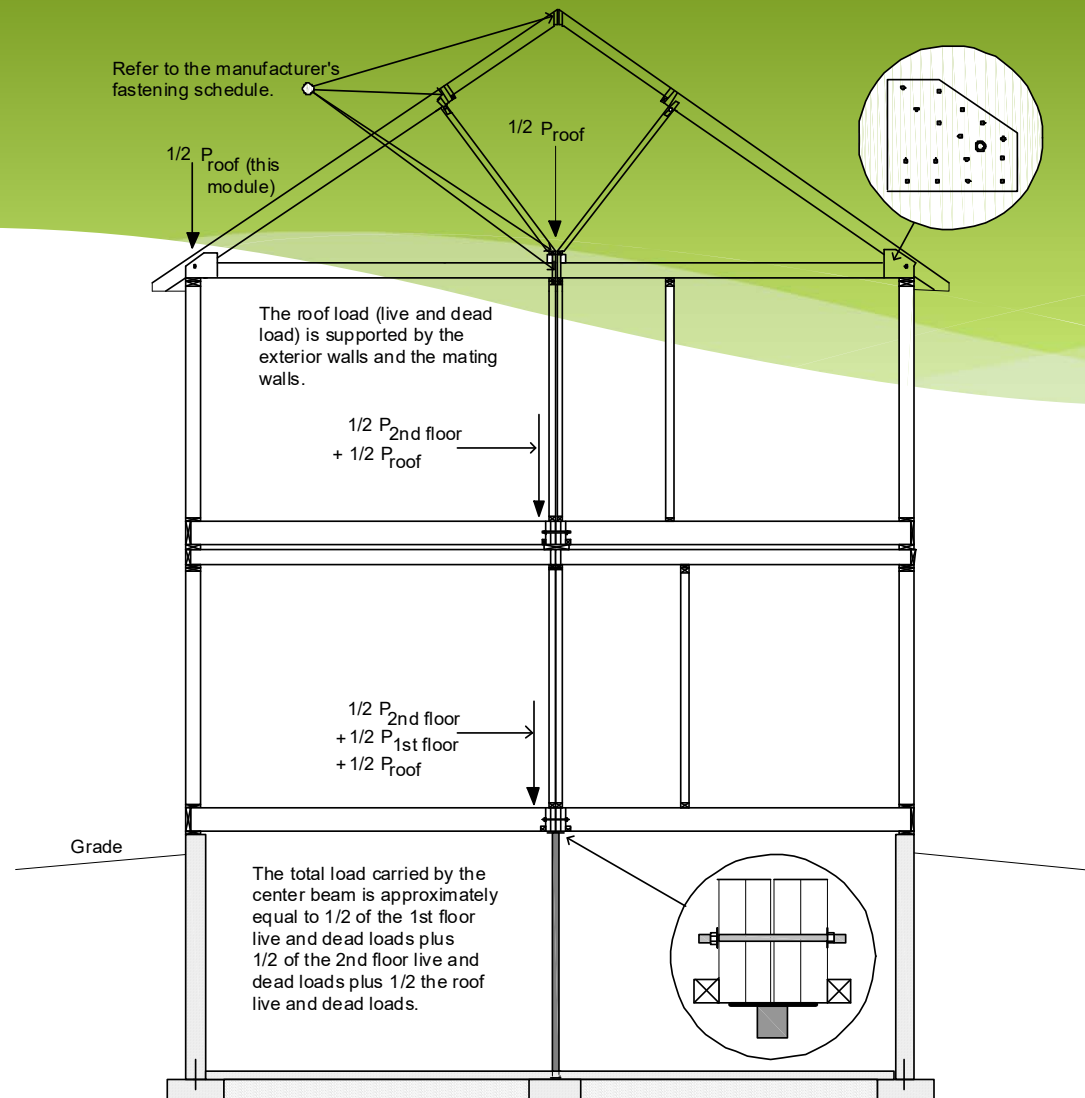
- * 2015 International Residential Code (IRC).

Standards for Installation

- * 2015 International Residential Code
- * Manufacturer's installation instructions

Structural Difference between Modular and Stick-built

- * The modules of modular homes are split along the longitudinal center and must be connected at every horizontal plane.
- * A portion of the roof load for most modular homes bears at the mate line. This load must be transferred to the basement column support system.



Beam Loading in a Modular Home

Advantages of Modular Homes

- * Built in a controlled environment
- * “Instant” housing
- * Consumer may be able to view home before purchasing
- * Generally, most code-compliant homes in Maine?
- * Regulation (Manufactured Housing Board)

THE 3 BIG PROBLEMS

- * Contractual – no Board jurisdiction
- * Installation – compliance and quality of
- * Service – timeliness and quality of

Misconception

- * “I’ve always wanted to be a builder. I’ll just purchase modular homes and put the halves together.”

“A” Work vs. “B” Work

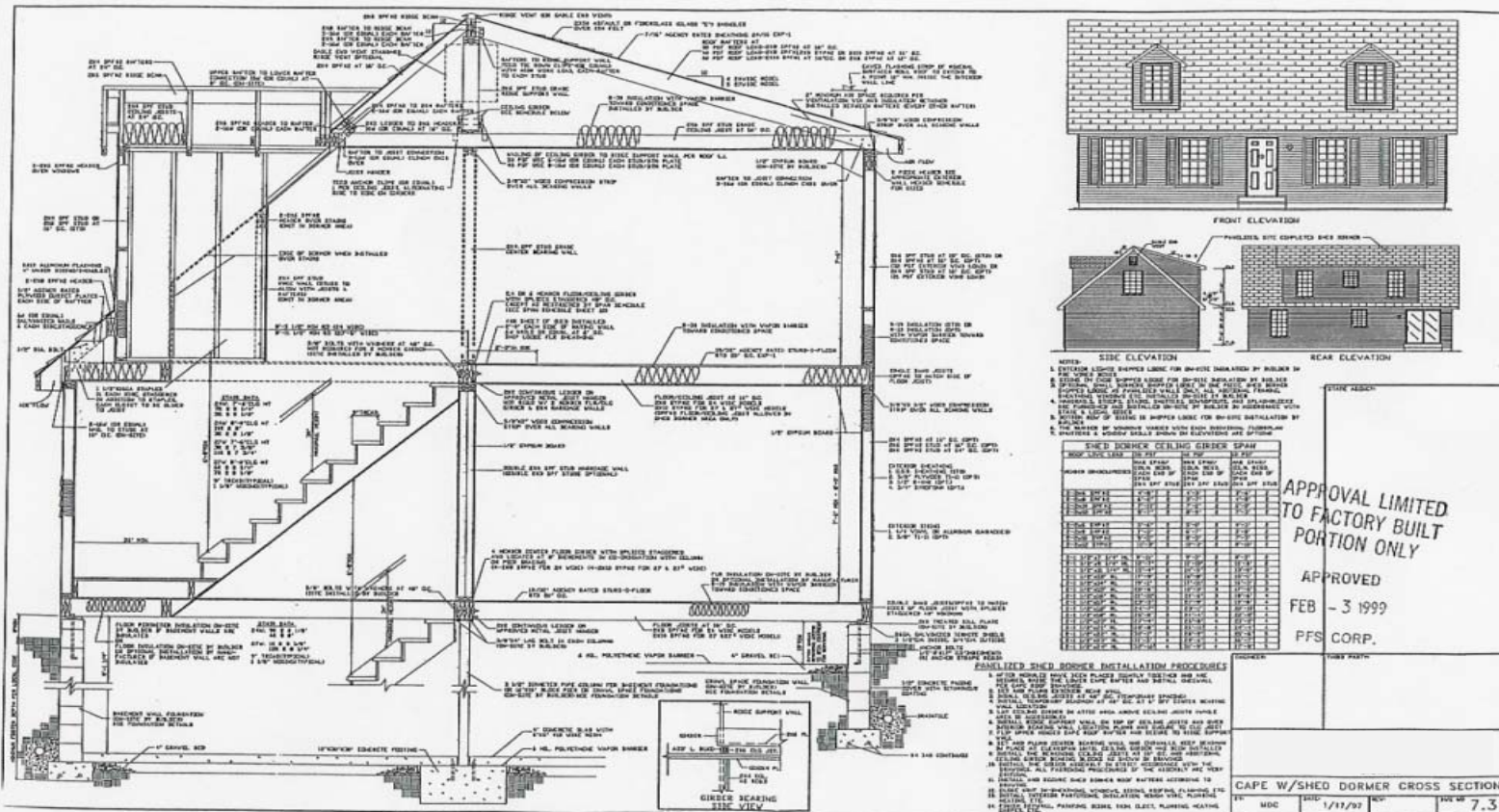
- * **“A” work = structural – requires Board license**
 1. Completed fastening schedule
 2. Basement support columns
 3. Completed roof system (when supplied by the manufacturer)
 4. Weather tight (field-installed siding not included)
- * **“B” work = non-structural – no Board license required (trade licenses required where applicable)**

Inspection of Closed Construction

- * 3rd party (PFS, TRA, NTA, RADCO, UL)
 1. Plans
 2. Quality assurance program
 3. Manufacturer's installation instructions
 4. In-plant inspections

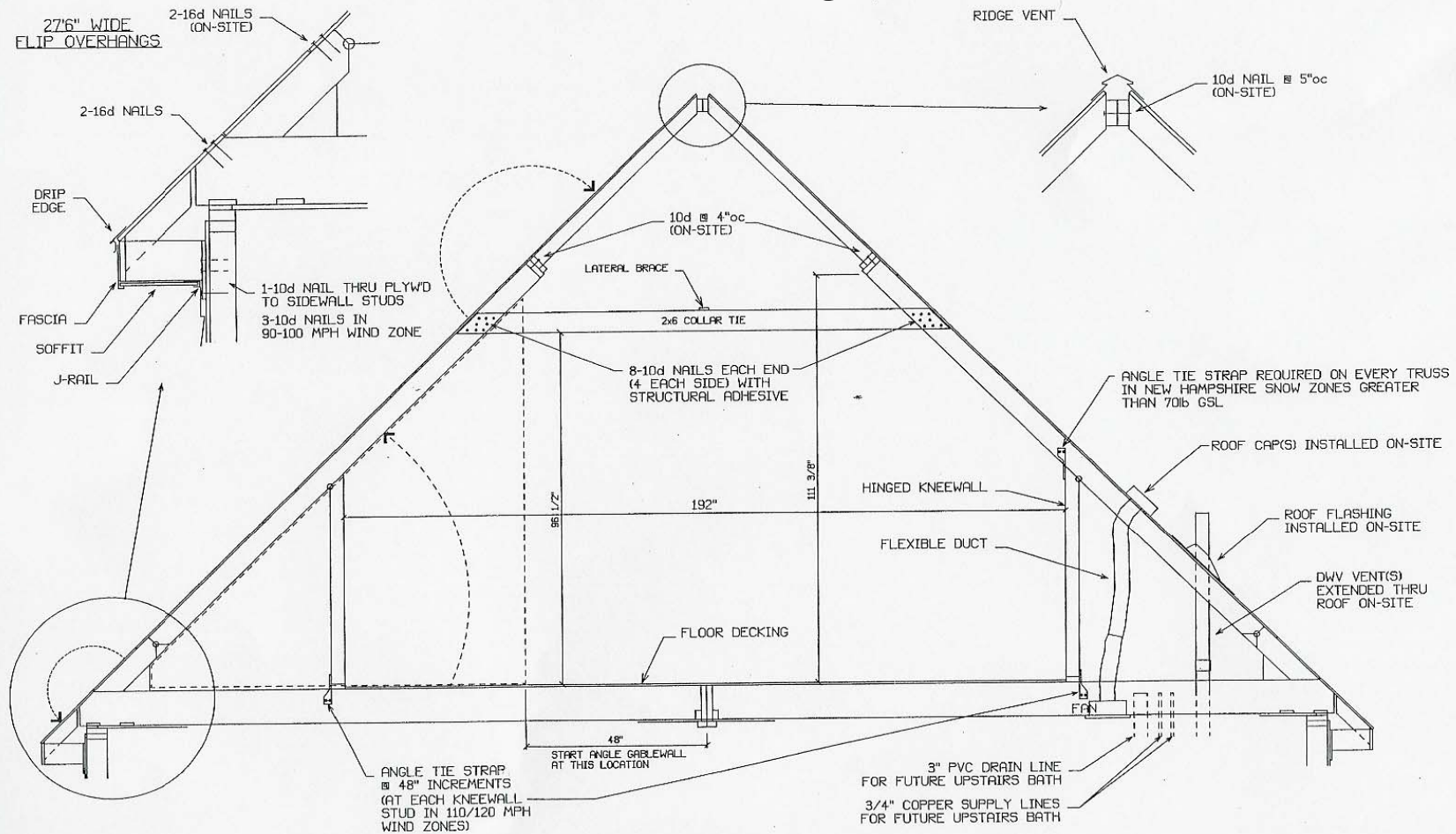
Set-up Manual/Manufacturer's Instructions

Cape w/Shed Dormer Cross Section



Installation/set-up manual will be detailed.

Fastening Detail

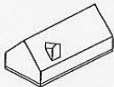




12/12 ROOF - 26'-0" & 27'-6" WIDE
DRAWING #7B

Rules: Chapter 350 (2) (C)

- * A copy of the manufacturer's installation instructions and, for a state certified modular home, a copy of the manufactured home plans, shall be left with the installed home.

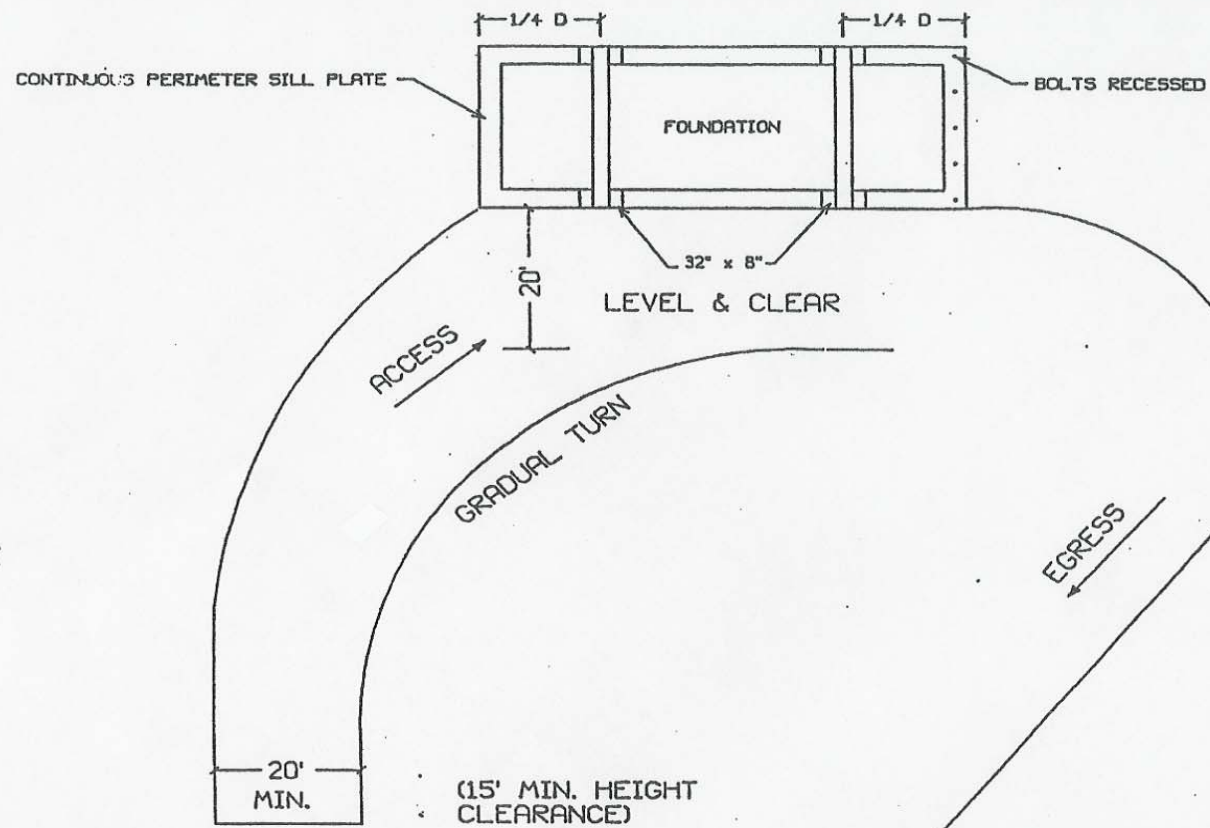
Approved Plans – Complete Set

 		 <p>PFS CORPORATION</p> <p>Plans certified to comply with all applicable codes and regulations of:</p> <p><u>MAINE</u></p> <p><u>2-3-99</u> Date</p> <p><u>Mark Wagoner</u> Signature <u>R/A Insp.</u> Title</p> <p>Approval Limited to Factory Built Portion Only</p>																																							
<p>DESIGN BASIS</p> <p>TRUSSES (AS PER STATE REQUIREMENTS)</p> <p>1000 LB. PSF. 4" TOP CHORD LINE 1000</p> <p>1000 PSF. 4" BOTTOM CHORD LINE 1000</p> <p>RAFTERS:</p> <p>12" x 16" @ 24" P.C. + LIVE LOAD</p> <p>CEILING JOISTS (STORAGE):</p> <p>12" x 16" @ 24" P.C. + LIVE LOAD</p> <p>FLOORS (NON-SLEEPING AREAS):</p> <p>12" x 16" @ 24" P.C. + LIVE LOAD</p> <p>FLOORS (SLEEPING AREAS):</p> <p>12" x 16" @ 24" P.C. + LIVE LOAD</p> <p>WIND LOAD:</p> <p>15-30 PSF / 112 MPH</p>	<h2 style="margin: 0;">TO BE LEFT WITH THE HOME!</h2>		<p>DRAWING INDEX</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>#</th><th>DESCRIPTION</th></tr> <tr><td>1</td><td>COVER SHEET</td></tr> <tr><td>2</td><td>TYPICAL ELEVATIONS</td></tr> <tr><td>3</td><td>ELEVATIONS & NOTES</td></tr> <tr><td>4</td><td>MASTER FLOOR PLAN</td></tr> <tr><td>5</td><td>TYPICAL FOUNDATION</td></tr> <tr><td>6</td><td>TYPICAL CROSS SECTION</td></tr> <tr><td>7</td><td>TYPICAL SECTION & DETAILS</td></tr> <tr><td>8</td><td>ROOF SYSTEMS</td></tr> <tr><td>9-5</td><td>OPTIONAL BARRIER WALL SYSTEM</td></tr> <tr><td>9</td><td>OPTIONAL ROOF SYSTEM</td></tr> <tr><td>10</td><td>MASTER ELECTRICAL PLAN</td></tr> <tr><td>11</td><td>TYPICAL HEATING MASTER</td></tr> <tr><td>12</td><td>TYPICAL KITCHENS & ELECTRICAL</td></tr> <tr><td>13</td><td>FIRE SEPARATION DETAILS</td></tr> <tr><td>14</td><td>TYPICAL BATHROOMS</td></tr> <tr><td>15</td><td>SPECIFICATIONS</td></tr> <tr><td>16</td><td>DOOR & WINDOW SCHEDULES</td></tr> <tr><td>17</td><td>OPTIONAL HIP ROOF</td></tr> </table>	#	DESCRIPTION	1	COVER SHEET	2	TYPICAL ELEVATIONS	3	ELEVATIONS & NOTES	4	MASTER FLOOR PLAN	5	TYPICAL FOUNDATION	6	TYPICAL CROSS SECTION	7	TYPICAL SECTION & DETAILS	8	ROOF SYSTEMS	9-5	OPTIONAL BARRIER WALL SYSTEM	9	OPTIONAL ROOF SYSTEM	10	MASTER ELECTRICAL PLAN	11	TYPICAL HEATING MASTER	12	TYPICAL KITCHENS & ELECTRICAL	13	FIRE SEPARATION DETAILS	14	TYPICAL BATHROOMS	15	SPECIFICATIONS	16	DOOR & WINDOW SCHEDULES	17	OPTIONAL HIP ROOF
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<p>DESIGN CRITERIA</p> <p>CONSTRUCTION TYPE:</p> <p>SB - CT, DE, VT, WV, ME, NH, MA, ME, NY, IA, OH, MI, IN, PA, RI, VA, NJ</p> <p>SB CONSTRUCTION - WOOD FRAME UNPROTECTED</p> <p>VI - MC, SC, TN, GA</p> <p>OCCUPANCY:</p> <p>R - CARD - (MC, SC, TN, GA)</p> <p>AL - AS - NY</p> <p>ONE & TWO FAMILY DWELLINGS DETACHED:</p> <p>KA - CARD - CT, DE, VT, ME, NH, MA, OH, NY, NJ, PA, RI, VA, IN</p> <p>OCCUPANT</p> <p>ONE AND TWO FAMILY DWELLINGS</p>	<p>GENERAL NOTES</p> <p>1. THE OWNER SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES. ANY UNDESIRABLE USE OF THESE UTILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER. THE OWNER SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES. ANY UNDESIRABLE USE OF THESE UTILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER.</p> <p>2. ALL EXISTING UTILITIES SHALL BE PROTECTED. THE OWNER SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES. ANY UNDESIRABLE USE OF THESE UTILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER.</p>		<p>MODELS</p> <p>1. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION</p> <p>2. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION WITH A SPLIT STAIR</p> <p>3. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION</p> <p>4. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION WITH A SPLIT STAIR</p> <p>5. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION</p> <p>6. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION WITH A SPLIT STAIR</p> <p>7. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION</p> <p>8. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION WITH A SPLIT STAIR</p> <p>9. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION</p> <p>10. TYPES OF HOME SINGLE LEVEL HOME PLACED ON EITHER A GRAVEL SPREAD OR FULL BASEMENT FOUNDATION WITH A SPLIT STAIR</p>																																						
<p>CAPE COVER SHEET</p> <p>DATE: 5/1/98</p> <p>REV: 1</p>			<p>THE HOME OF TOMORROW</p> <p>APPLY HOMES, INC.</p> <p>1000 ROUTE 100, SUITE 100, BOSTON, MA 02110</p> <p>TEL: 617-261-1000</p>																																						

General Set-up Method

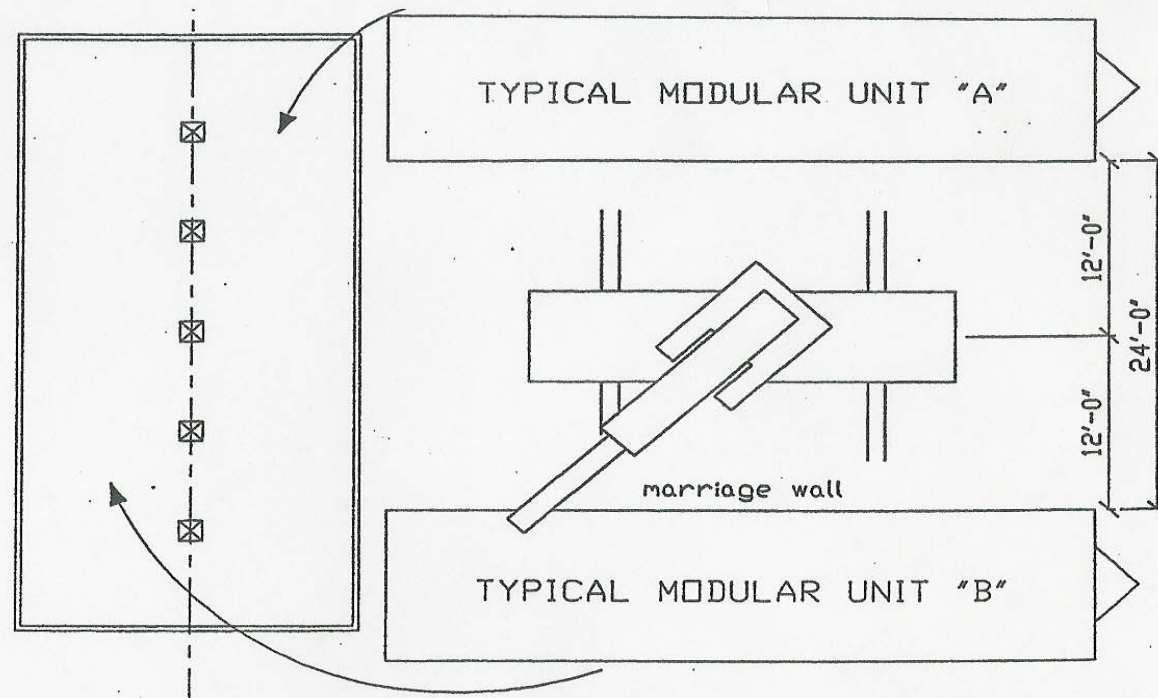
- * Crane Installation

Access



DRAWING #2

Crane Location Relative to Modules and Foundation

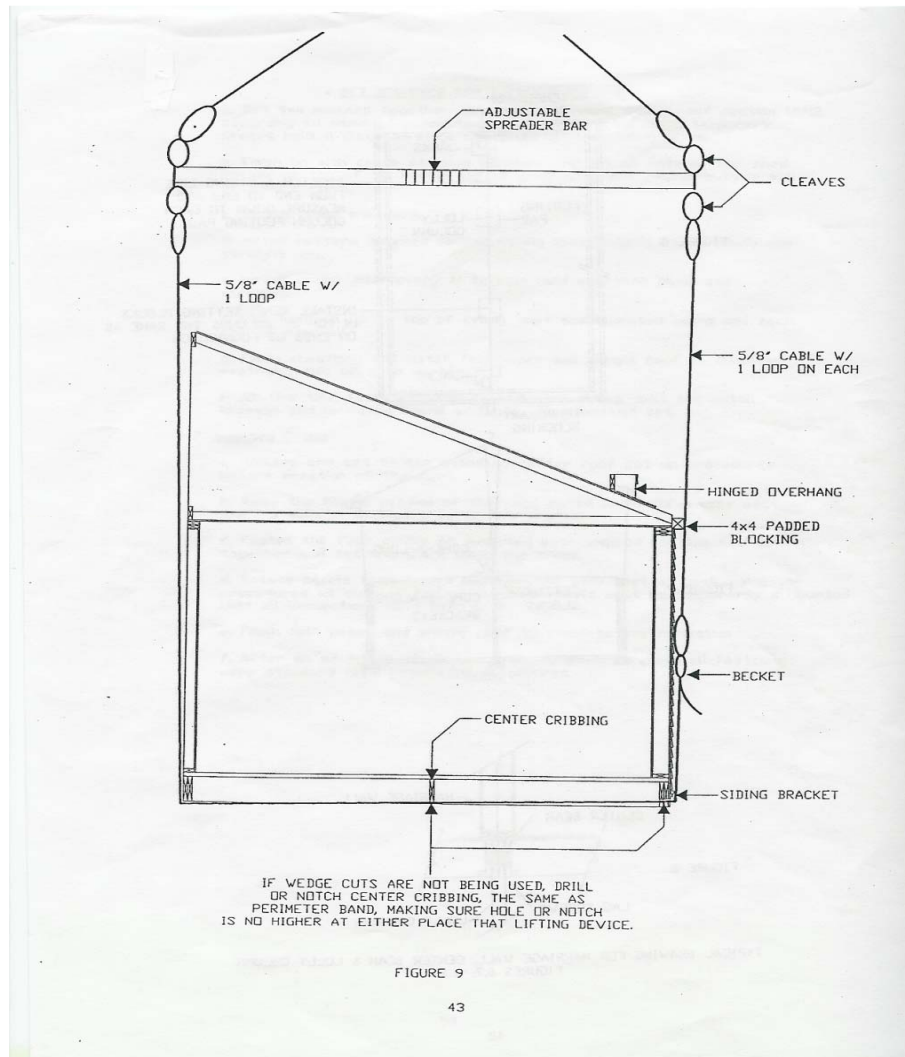


IDEAL CRANE AND MODULAR LOCATIONS
SEE FIGURE 3 FOR TYPICAL

FIGURE 3

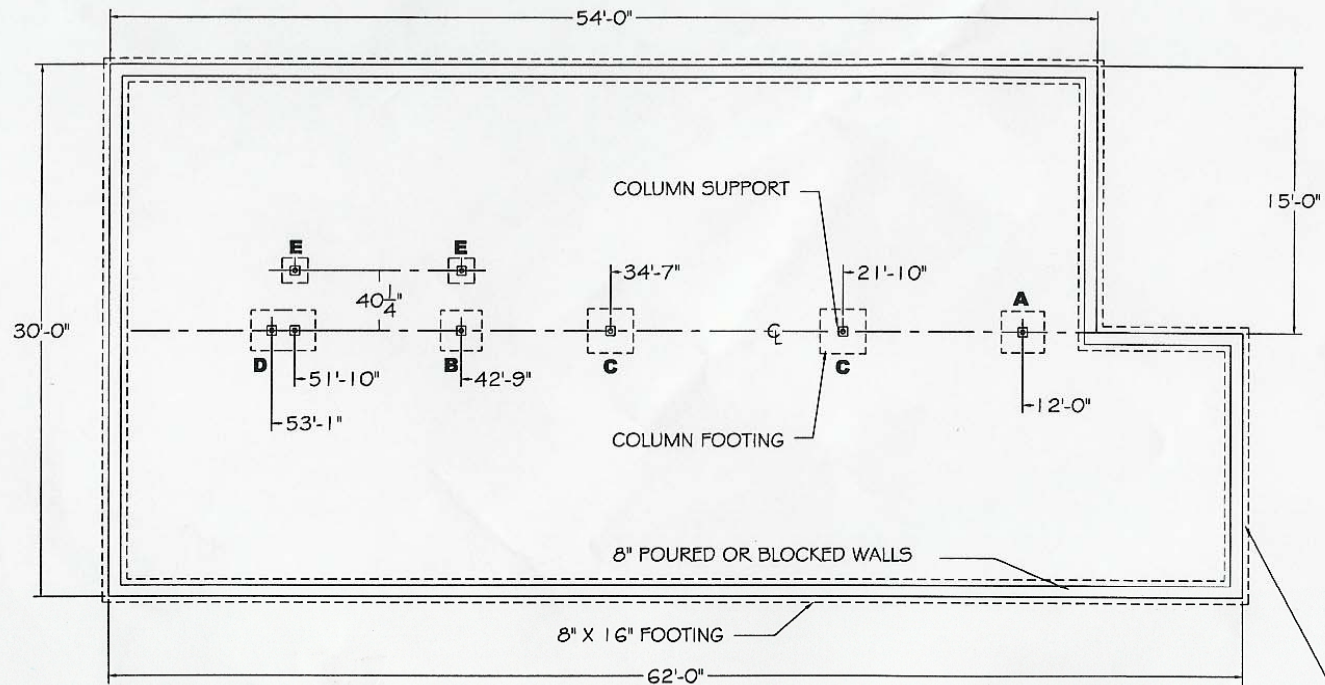
Crane Installation

End View



Foundation Plan

Note: specific column spacing



FOOTING SIZES:

- A = 28" X 28" X 14"
- B = 27" X 27" X 14"
- C = 30" X 30" X 15"
- D = 42" X 27" X 14"
- E = 17" X 17" X 9"

FOR COLUMN SIZES, ETC., REFER TO
INSTALLATION & HOMEOWNERS MANUAL.
FOOTING SIZES BASED ON 2000 PSI SOIL.

ALL DIMENSIONS FROM THIS END

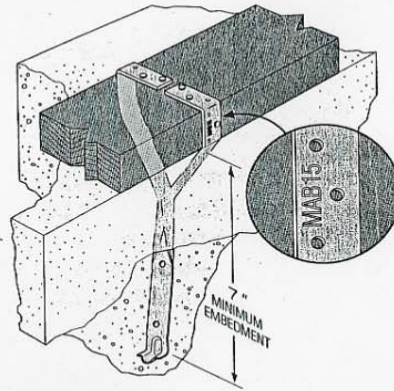
NOTE:
IF THERE ARE QUESTIONS
REGARDING THIS PRINT,
PLEASE CONTACT LEE HOLTON
AT HART HOUSING.
PHONE 574-862-4461

HART HOUSING GROUP, INC.
TITLE: PERIMETER SPAN BASEMENT FRAME

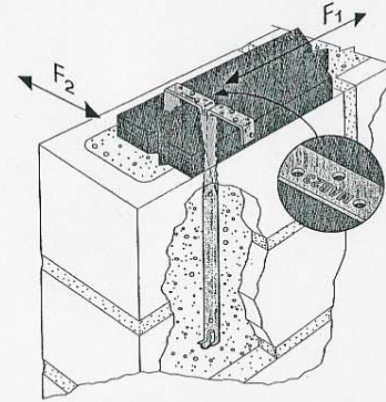
10-22-03

40004-17

Approved Anchors

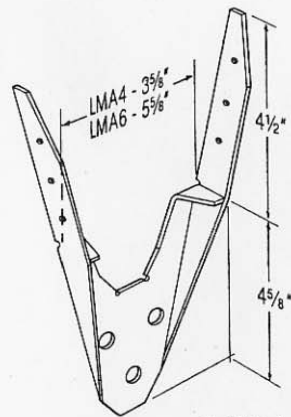


Typical MAB15 Installation
in Concrete (MAB23 similar,
with 15 minimum
embedment)

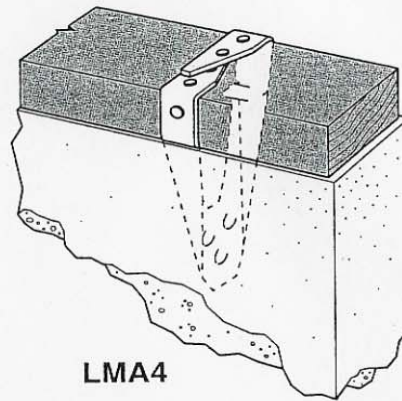


Typical MAB23 Installation
in Concrete Block
(MAB15 similar)
MAB23 provides a two
block embedment, if
required by the local
code jurisdiction.

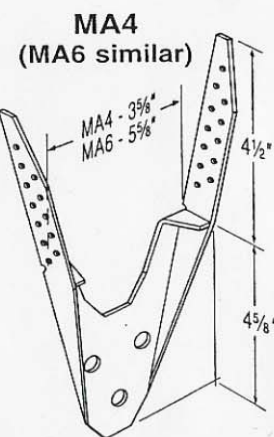
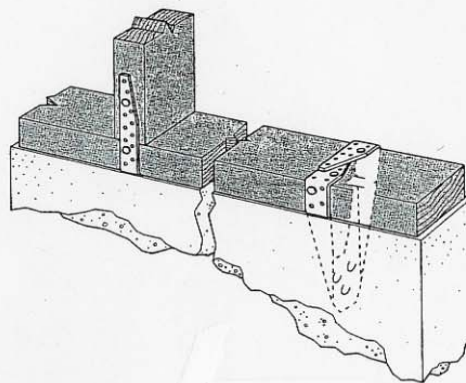
Approved Anchors



LMA4
(LMA6 similar)

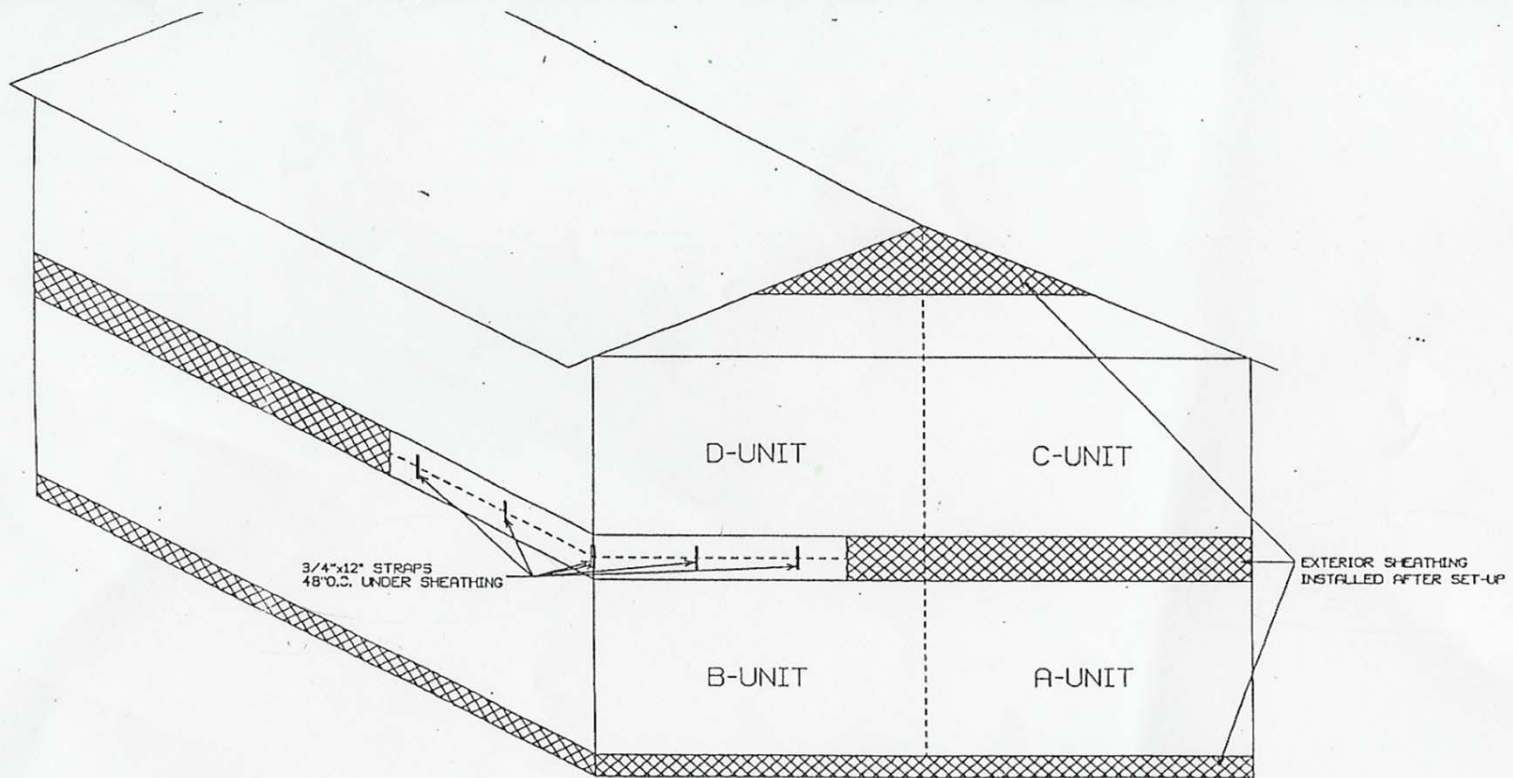


LMA4



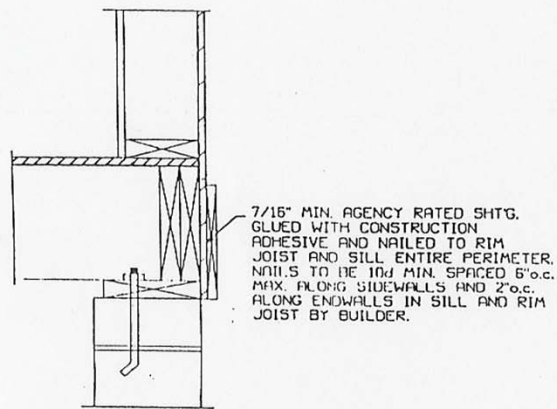
MA4
(MA6 similar)

Vertical Mating for 2-story Homes

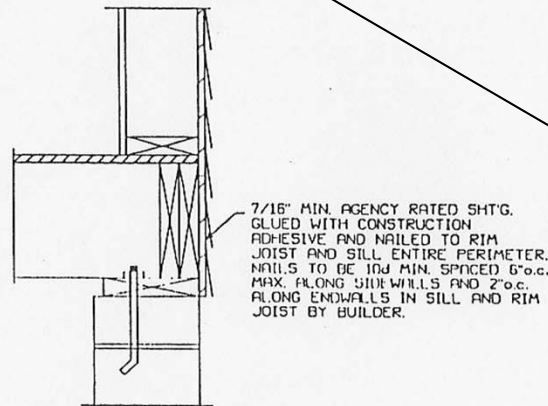


DRAWING #20

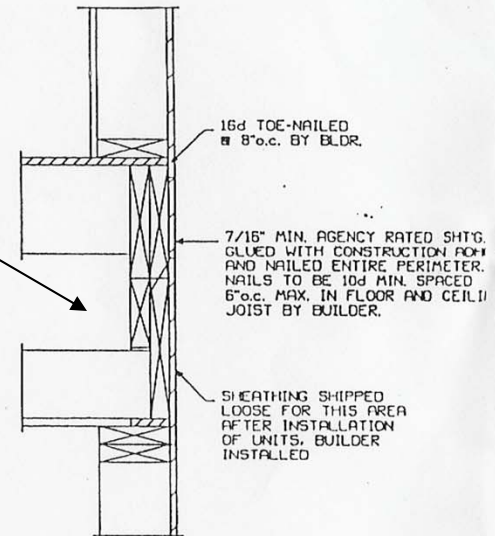
Don't Forget the Perimeter Insulation



SIDEWALL DETAIL
CAPE & TWO STORY
(W/ T1-11 SIDING)



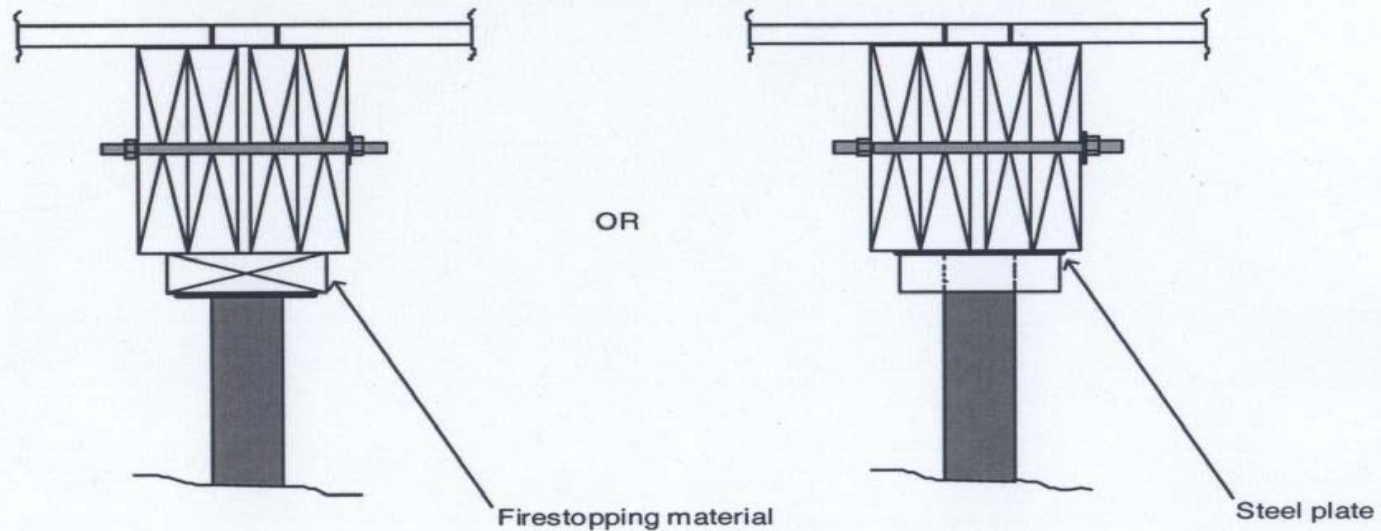
SIDEWALL DETAIL
CAPE & TWO STORY



SIDEWALL DETAIL - TWO STORY

90 - 100 MPH WIND ZONE -- DRAWING #39

Firestopping at the bottom of the main carrying beam.



2003 IRC, Sections R602.8 and R602.8.1

Acceptable firestopping materials:

2" lumber installed with tight joints

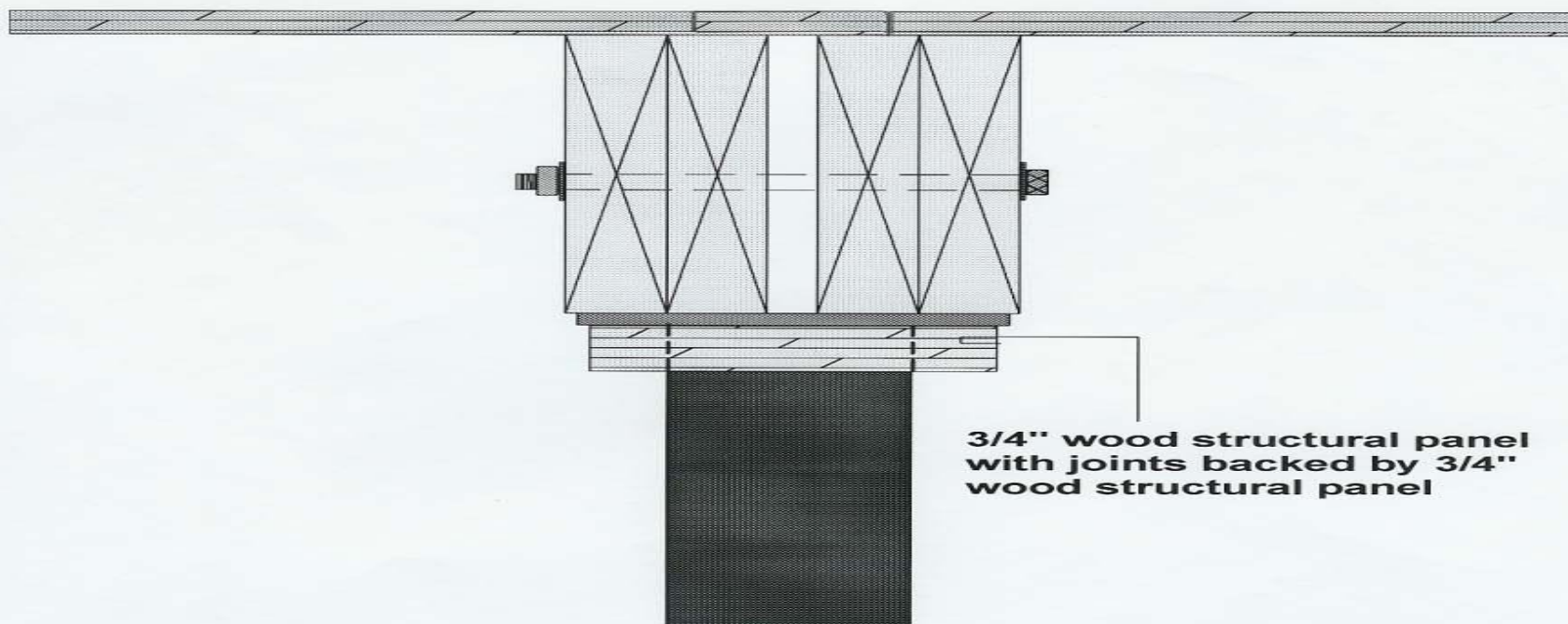
Two thicknesses of 1" lumber with broken lap-joint

One thickness of 23/32" wood structural panel with joints backed by 23/32" wood structural panel

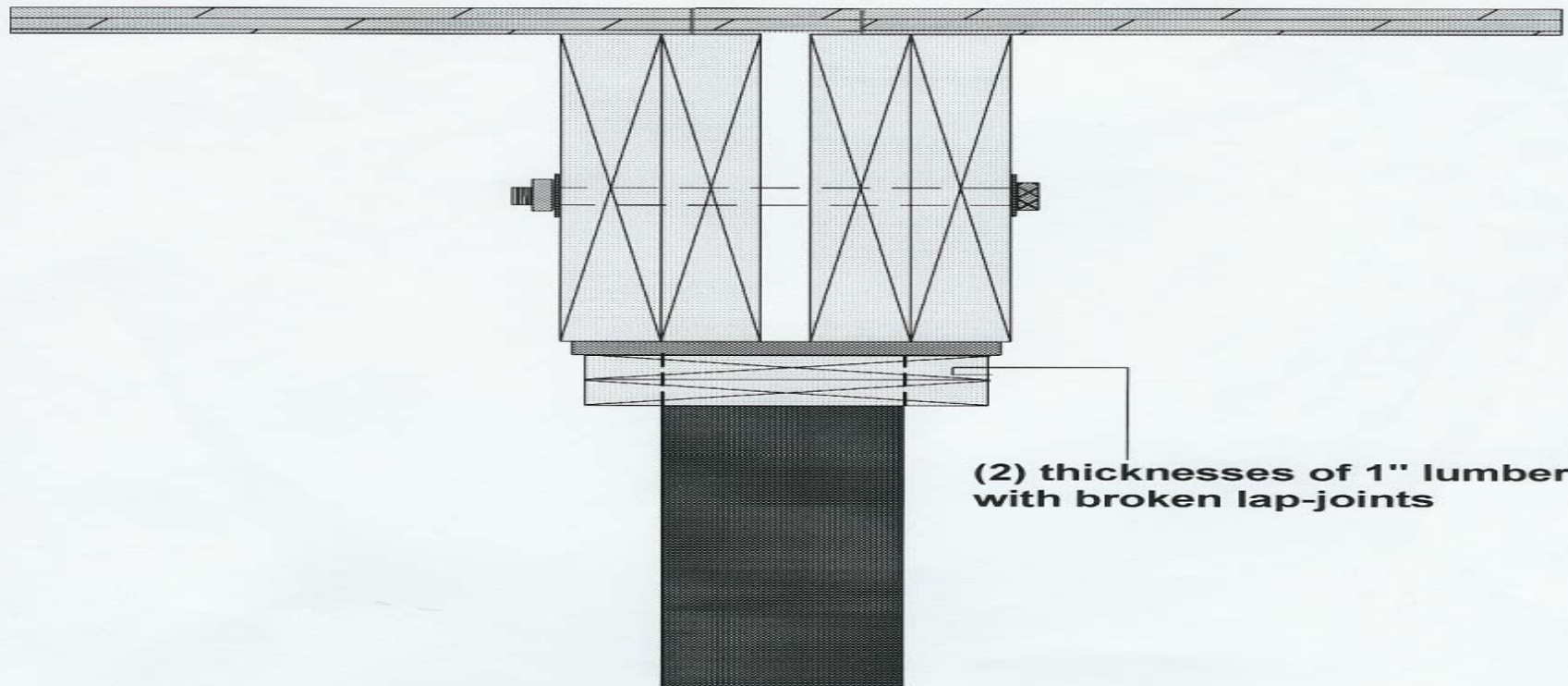
3/4" particleboard with joints backed by 3/4" particleboard

1/2" gypsum board

Other approved noncombustible materials



FIRESTOPPING



Firestopping

Stair Geometry

- * 8 ¼" Riser
- * 9" Tread
- * Applies also to basement stairs when part of the factory design, and the necessary basement height is stated.

CAUTION



Wire notches covered with a metal plate are allowed by code, however you must use caution when using nail guns on the exterior sheathing.

Installation Standards

For New HUD Homes

24 CFR Part 3285

Federal Standards mandate that all states implement a new installation standard that meets or exceeds the Model Installation Standards adopted by HUD.

Pre-occupancy Inspections

- * Board staff are required to conduct pre-occupancy inspections on 30% of all new manufactured HUD homes. The 30% will be selected randomly from locations throughout the state.

Pre-occupancy Inspections

Inspection Costs

The licensed dealer will be charged an inspection fee, which will be the actual cost of the inspection. The fee is currently \$300 statewide.

Pre-occupancy Inspections

For homes that pass inspection, a label will be placed under the kitchen sink cabinet certifying that the installation is in compliance with this standard.

Pre-occupancy Inspections

- * For homes that do not pass inspection, a notice of violation and order of correction will be issued to the dealer or mechanic who performed the installation in the manner described in Chapter 370, Section 5(A) of the board's rules. The licensee shall respond to the notice of violation and order of correction as set forth in Chapter 370.
- * If a violation was found upon initial inspection and an order of correction was issued, a re-inspection will be conducted. If the violation was found to be corrected in its entirety, there will be no charge for the re-inspection.

SUBCHAPTER A

GENERAL

Scope

This standard provides minimum requirements for the initial installation of new manufactured homes wherever located in the State.

Intended Usage

This standard applies to new manufactured homes (single section, multiple section or expanded types) for the use as a single family dwelling.

Manufacturer Installation Instructions

- * A manufacturer must provide with each new manufactured home, installation designs and instructions that have been approved by the HUD Secretary or the Design Approval Primary Inspection Agency (DAPIA).

Variations to Installation Instructions

- * Before an installer provides support or anchorage that are different than those methods specified in the manufacturer's installation instructions or when the installer encounters site or other conditions that prevent the use of the instructions, the installer must obtain an alternative design prepared & certified by a professional engineer or registered architect for the support and anchorage of the manufactured home.

Installer Certification

The installer must certify that the completed installation is in compliance with either the manufacturer's installation instructions or with an engineered alternative installation design by affixing a completed Maine Installation Warranty Seal to the home.

SUBCHAPTER B

PRE-INSTALLATION CONSIDERATIONS

Installation in Flood Hazard Areas

Prior to the initial installation of a new manufactured home, the installer is responsible for determining whether the manufactured home site lies within a special flood hazard area.

Installation Zones

- A. Sites prepared in Washington, Hancock, Aroostook, Somerset, Waldo, Penobscot, Knox, and Piscataquis counties require 24 inches of compacted fill as part of the engineered foundation.

- B. Sites prepared in York, Cumberland, Kennebec, Sagadahoc, Lincoln, Franklin, Oxford and Androscoggin counties require 18 inches of compacted fill as part of the engineered foundation.

Wind Zone

Manufactured homes must not be installed in a wind zone that exceeds the design wind loads for which the home has been designed, as evidenced by the wind zone indicated on the home's data plate.

Wind Zones

A. Wind Zone I

Aroostook, Somerset, Waldo, Franklin, Penobscot, Oxford, Piscataquis, York, Cumberland, Kennebec, Sagadahoc, Knox, Lincoln and Androscoggin counties.

B. Wind Zone II... 100 mph

Hancock and Washington counties.

Roof Load Zone

Manufactured Homes must not be located in a roof load zone that exceeds the design roof load for which the home has been designed as evidenced by the roof load zone indicated on the home's data plate.

Roof Load Zones

- A. Counties with 40 psf roof load:
Washington, Hancock, Aroostook, Somerset,
Waldo, Penobscot, Knox, and Piscataquis.

- B. Counties with 30 psf roof load:
York, Cumberland, Kennebec, Sagadahoc, Lincoln,
Franklin, Oxford and Androscoggin.

SUBCHAPTER C

SITE PREPARATION

Soil Conditions

- * To help prevent settling or sagging, the foundation must be constructed on firm, undisturbed soil or fill compacted to at least 90 percent of its maximum relative density.

Soil Conditions

- * All organic materials such as grass, roots, twigs, and wood scraps must be removed in areas where footings are to be placed.
- * After removal of organic material, the home site must be graded or otherwise prepared to ensure adequate drainage.

Soil Classifications and Bearing Capacity

The soil classification and bearing capacity of the soil must be determined before the foundation is constructed and anchored. The soil classification and bearing capacity must be determined by one or more of the following methods:

Soil Classifications and Bearing Capacity

- A. Soil tests. Soil tests that are in accordance with generally accepted engineering practice; or
- B. Soil records. Soil records of the applicable Local Authority Having Jurisdiction (LAHJ); or
- C. A pocket penetrometer; or

Soil Classifications and Bearing Capacity

- D. If the soil appears to be composed of peat, organic clays or uncompacted fill, or appears to have unusual conditions, a registered professional geologist, registered professional engineer, or registered architect must determine the soil classification and maximum allowable soil bearing capacity.

Site Drainage

- * All drainage must be diverted away from the home and must slope a minimum of one-half inch per foot away from the foundation for the first 10 feet.

Ground Moisture Control Vapor Retarder & Materials

- * When a home is installed on an approved engineered designed gravel pad, a vapor retarder must be installed to cover the ground under the home.
- * A minimum of six mil polyethylene sheeting or its equivalent must be used.

Ground Moisture Control Proper Installation

- * The entire area under the home must be covered with the vapor retarder except for areas under open porches, decks, and recessed entries. Joints in the vapor retarder must be overlapped at least 12 inches.

SUBCHAPTER D

FOUNDATIONS

FOUNDATIONS

- * GENERAL
- * PIERS
- * FOOTINGS

GENERAL

- * All systems must be designed by an engineer or architect.

TYPES

- * Manufacturer's
- * Alternative
- * Flood Hazard Areas

PIERS

- * CONCRETE BLOCK

- * MANUFACTURED

MANUFACTURED PIERS

ALLOWED... BUT

- * Piers must be listed by a nationally recognized listing agency.
- * Design (exact pier, listing, location, etc.) must be engineered for each home
- * Must have a complete stamped design on site prior to installation

CONCRETE PIERS

STRAIGHTFORWARD

- * Standard designs in the rule
- * Only need pier locations supplied by manufacturer or engineer

CONCRETE PIERS

GENERAL REQUIREMENTS IN THE RULES

- * Construction
- * Caps
- * Gaps
- * Clearance under Home (12 inches)
- * Height

FIGURE A-SECTION VI

Design Procedures for Concrete Pier Blocks

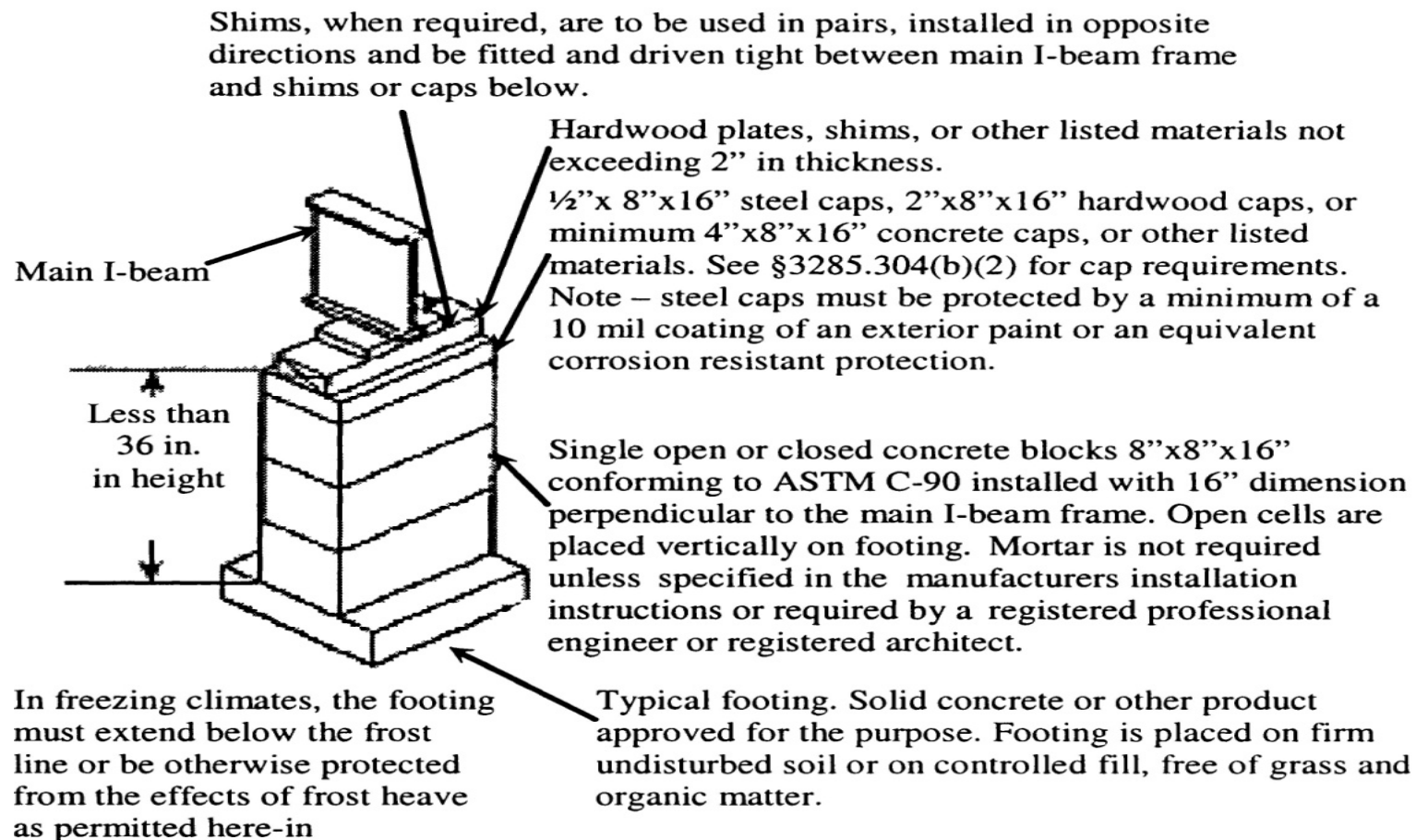
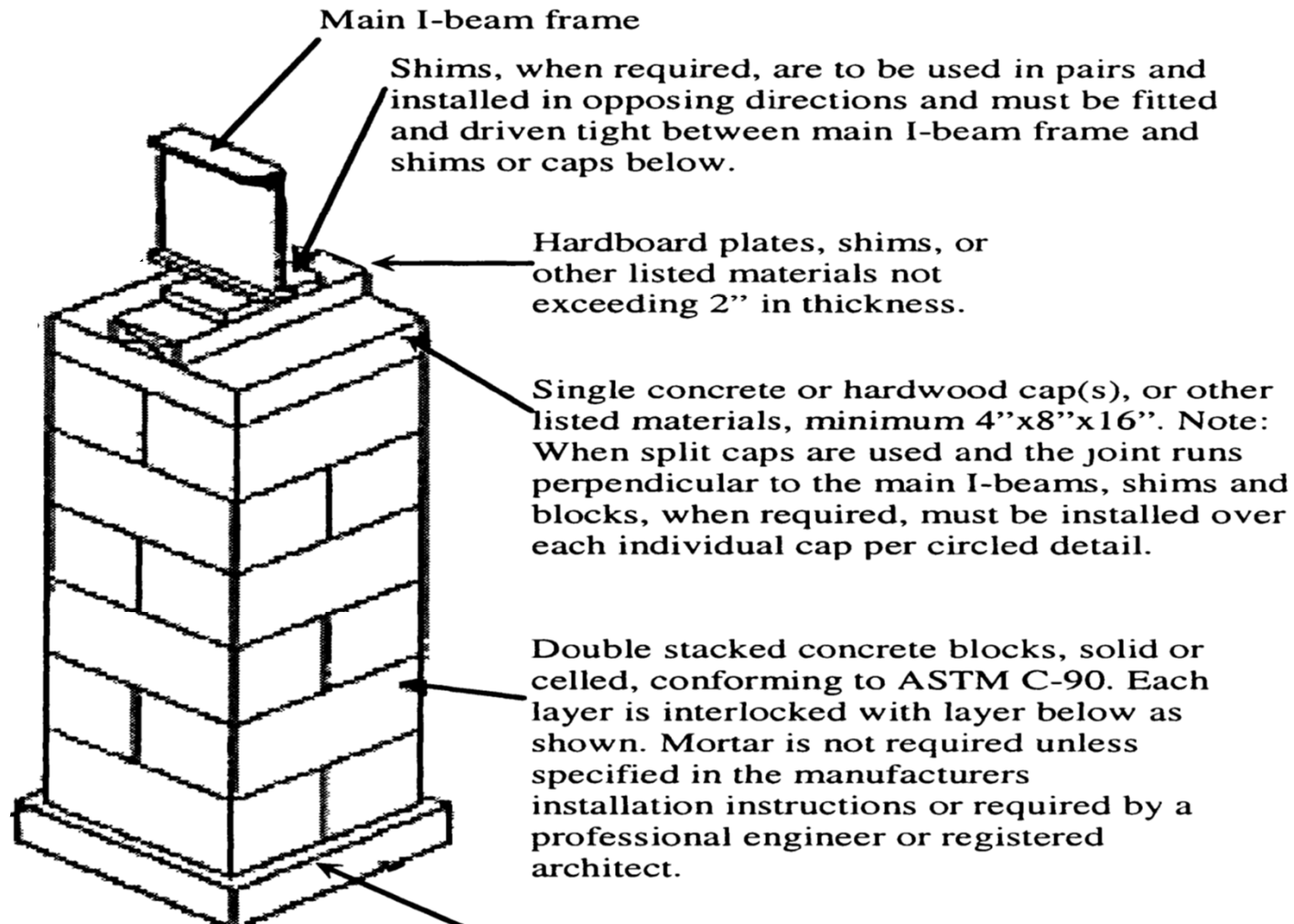


FIGURE B-SECTION VI

Design Procedures for Concrete Pier Blocks

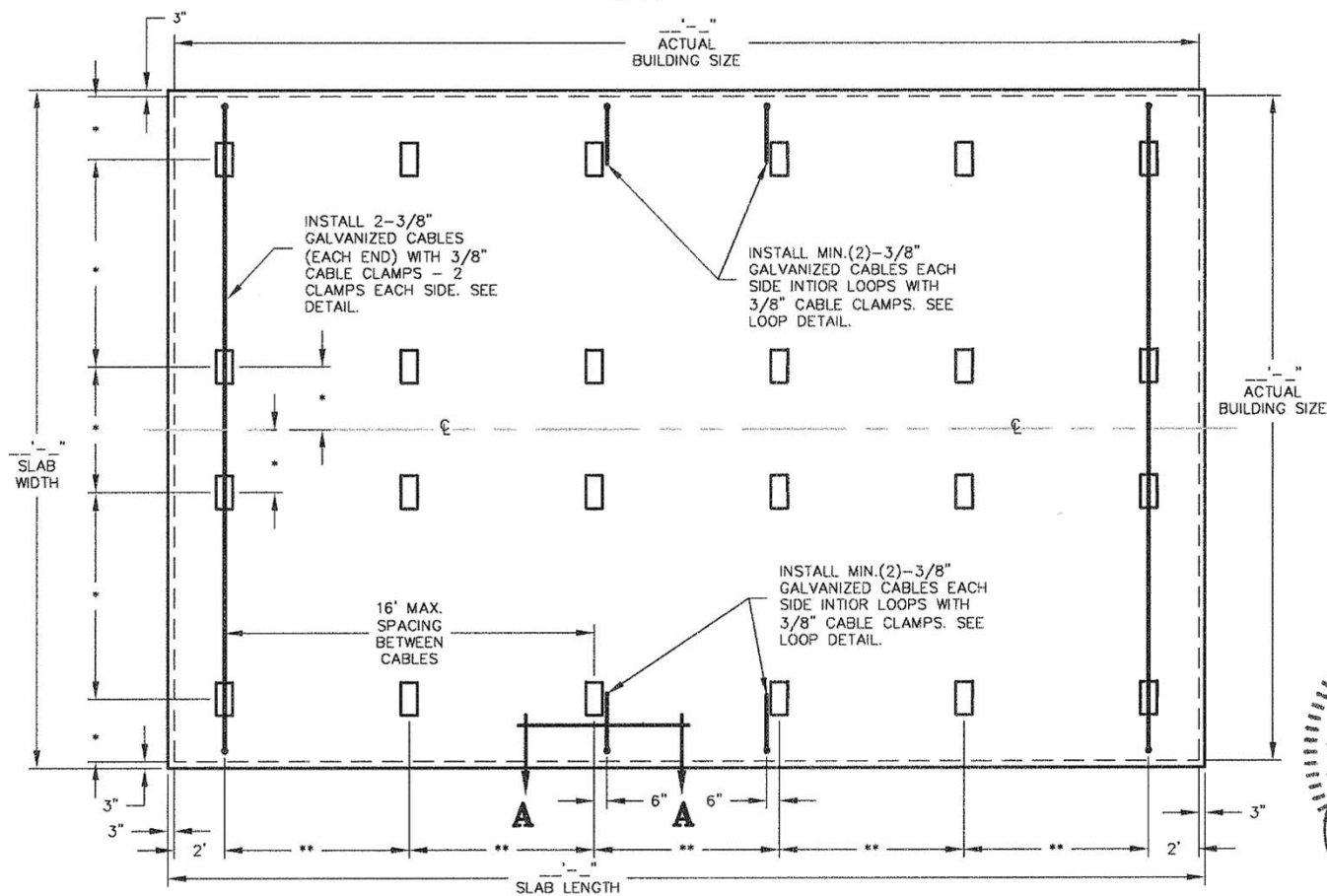


Other Pier Requirements

- * All piers over 48 inches must be designed by an engineer or architect.
- * Piers must be installed within 2 feet from both ends and no more than 10 feet apart under main beams.
- * Piers are required at side wall openings greater than 48 inches, porch posts, and fireplaces/stoves.

Engineer Approved Slabs and tie-downs

- * Examples of engineer approved slab and tie-down designs that meet the standard.

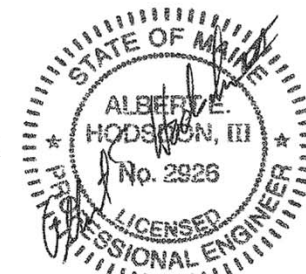


SLAB PLAN

NOTE:
OVERALL DIMENSIONS AND
PENETRATIONS OF SLAB (SEWER,
WATER, ELECTRICAL, ETC.) TO BE
CONFIRMED WITH MANUFACTURER
BEFORE CONSTRUCTION.

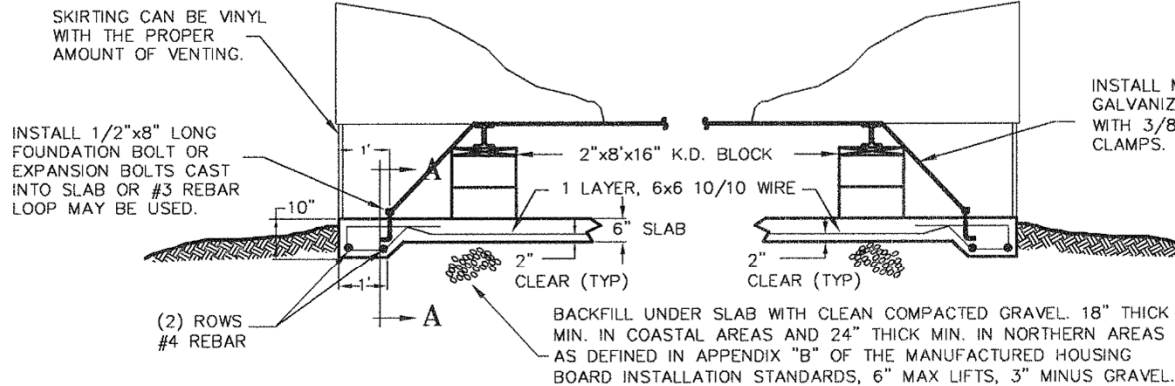
* COLUMNS TO BE CONSTRUCTED DIRECTLY
UNDER THE STEEL BEAMS. (CONSULT WITH
BUILDING MANUFACTURER).

** PIERS TO BE SPACED ACCORDING TO
MANUFACTURER'S SPECIFICATIONS
AND 8' MAX.



04-09-TYPICAL

No.	Revisions	Date	App'd.
MINIMUM H.U.D. SLAB DESIGN			
Seller: _____ Maine			
—'—" x —'—" SLAB (NORTHERN ZONE)			
© AEHodsdon CONSULTING ENGINEERS 10 Common St. Waterville, Me. 04901 (207) 873-5164			Sheet No. 1
Drawn By: BB	Scale: NOT TO SCALE		
Checked By:	Date:		
Approved By:	Date:		
File No. 04-09-TYPICAL.DWG			Project No. 04-09-AA Of 2



- OPTIONAL SKIRTING:
1. PRESSURE TREATED WOOD
 2. CONCRETE
 3. MASONRY

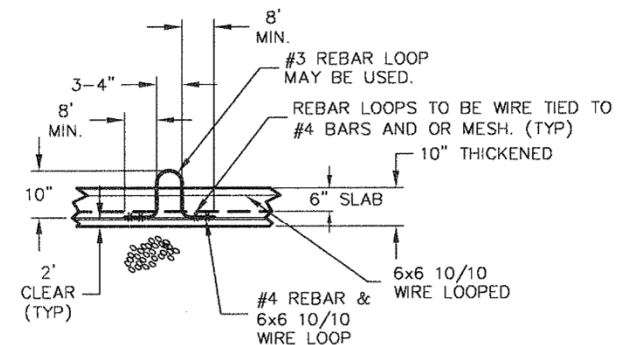
SLAB AND CONCRETE BLOCK DETAIL

Not To Scale

INSTALL MIN.(2)-3/8" GALVANIZED CABLES EACH END WITH 3/8" CABLE CLAMPS - 2 CLAMPS. CABLES MUST BE TIGHT.

NOTES:

1. THIS SLAB AND TIE DOWN SYSTEM IS SUITABLE FOR USE IN HURRICANE ZONES.
2. CONCRETE IS 3000 psi AT 28 DAYS.

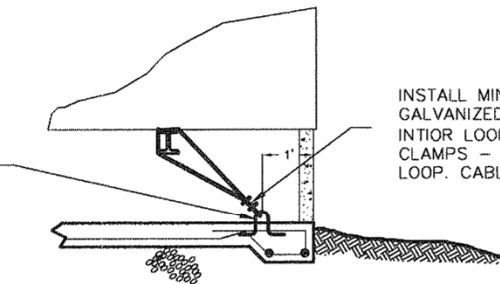


SECTION A-A

TYPICAL REBAR LOOP TIE DOWN DETAIL

Not To Scale

INSTALL 1/2"x8" LONG FOUNDATION BOLT OR EXPANSION BOLTS CAST INTO SLAB OR #3 REBAR LOOP MAY BE USED.



INTERIOR LOOP DETAIL

Not To Scale

INSTALL MIN.(2)-3/8" GALVANIZED CABLES EACH SIDE INTERIOR LOOPS WITH 3/8" CABLE CLAMPS - 2 CLAMPS EACH LOOP. CABLES MUST BE TIGHT.

NOTES:

1. THIS SLAB AND TIE DOWN SYSTEM IS SUITABLE FOR USE IN HURRICANE ZONES.
2. CONCRETE IS 3000 psi AT 28 DAYS.
3. OTHER SPECIFICALLY MANUFACTURED ANCHORING SYSTEMS ARE ACCEPTABLE SUCH AS "1100V SERIES" BY OLIVER TECHNOLOGIES INC. MUST FOLLOW MFG INSTALLATION/INSTRUCTIONS.

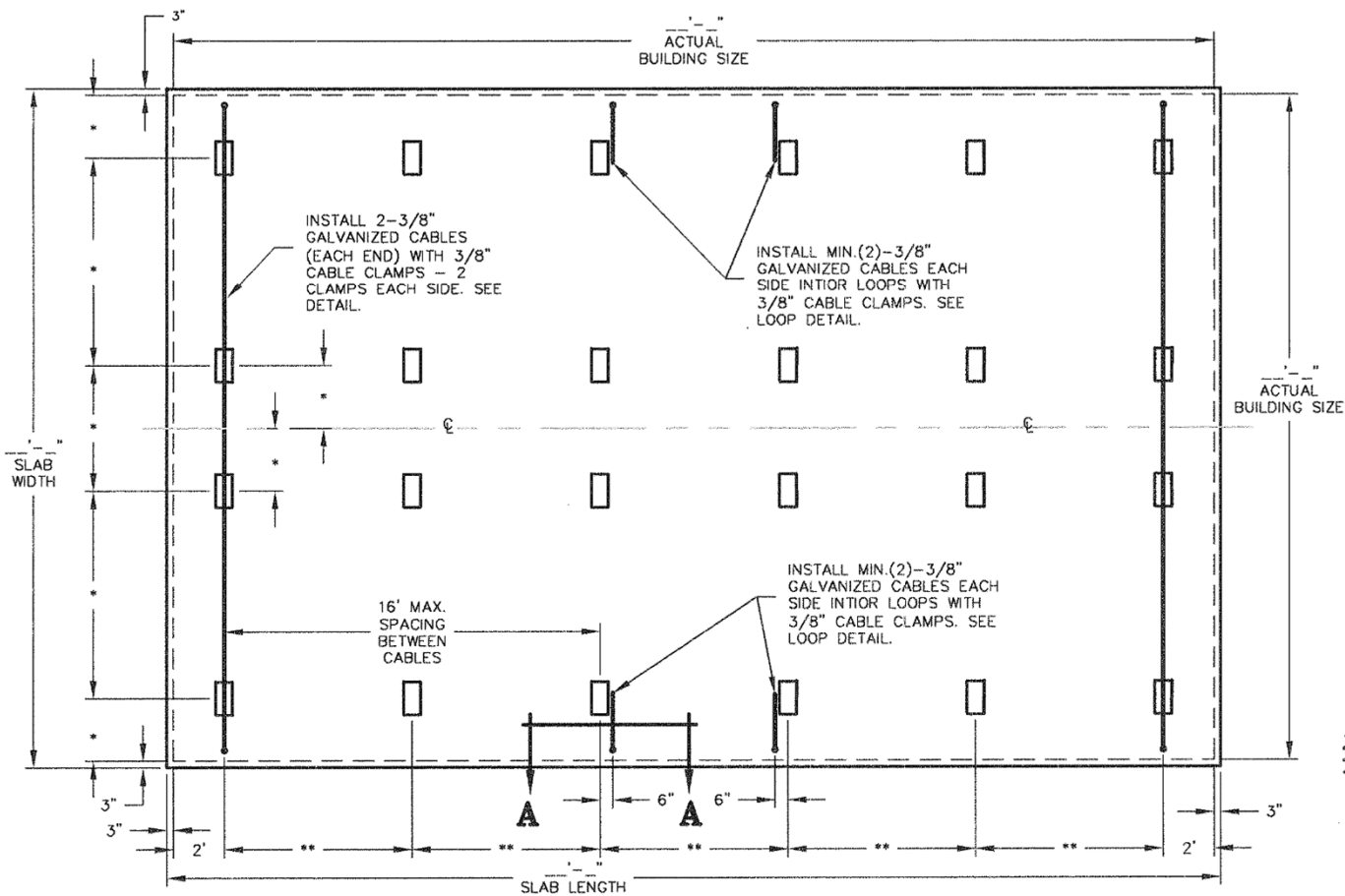
04-09-TYPICAL

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DETAILS (NORTHERN ZONE)			
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Checked By:		Date:	
Approved By:		Date:	
File No. 04-09-TYPICAL.DWG		Project No. 04-09-AA	

Sheet No.

2

Of 2

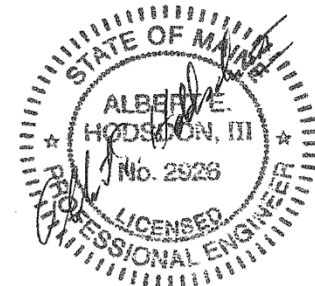


SLAB PLAN

NOTE:
OVERALL DIMENSIONS AND
PENETRATIONS OF SLAB (SEWER,
WATER, ELECTRICAL, ETC.) TO BE
CONFIRMED WITH MANUFACTURER
BEFORE CONSTRUCTION.

*
COLUMNS TO BE CONSTRUCTED DIRECTLY
UNDER THE STEEL BEAMS. (CONSULT WITH
BUILDING MANUFACTURER).

**
PIERS TO BE SPACED ACCORDING TO
MANUFACTURERS SPECIFICATIONS
AND 8' MAX.

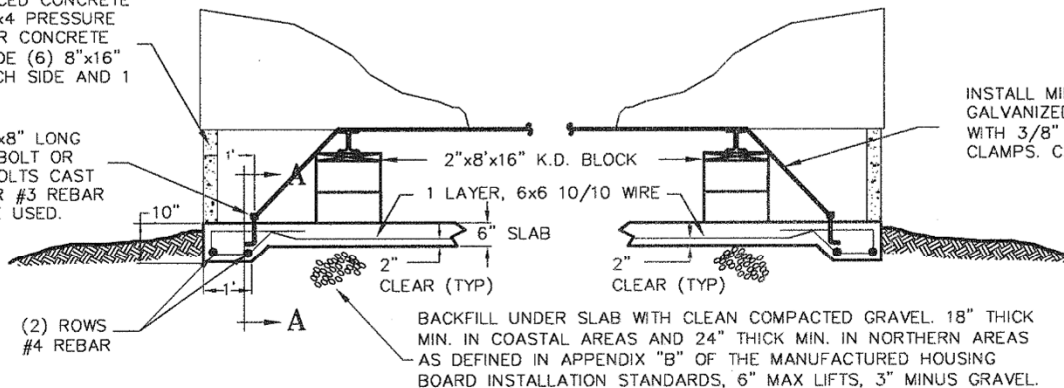


04-09-TYPICAL

No.	Revisions	Date	App'd.
F.H.A. FINANCED H.U.D. SLAB DESIGN			
Seller: _____ Name: _____			
'-' x '-' SLAB (NORTHERN ZONE)			
AEHodsdon CONSULTING ENGINEERS 10 Common St. Waterville, Me. 04901 (207) 873-5164			Sheet No. 1
Drawn By: BB		Scale: NOT TO SCALE	
Checked By:		Date:	
Approved By:		Date:	
File No. 04-09-TYPICAL.DWG		Project No. 04-09-AA Of 2	

8" WIDE REINFORCED CONCRETE
POURED WALL, 2x4 PRESSURE
TREATED WALL OR CONCRETE
BLOCKING. PROVIDE (6) 8"x16"
VENTS. 2 ON EACH SIDE AND 1
ON EACH END.

INSTALL 1/2"x8" LONG
FOUNDATION BOLT OR
EXPANSION BOLTS CAST
INTO SLAB OR #3 REBAR
LOOP MAY BE USED.



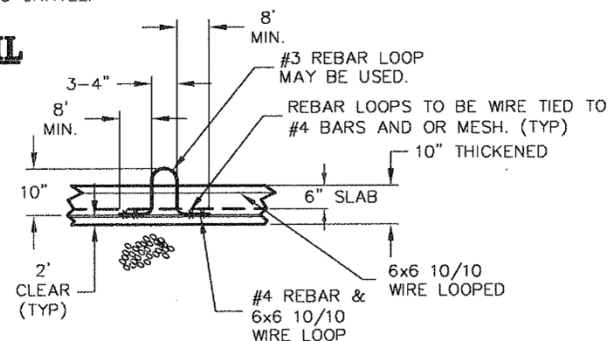
INSTALL MIN. (2)-3/8"
GALVANIZED CABLES EACH END
WITH 3/8" CABLE CLAMPS - 2
CLAMPS. CABLES MUST BE TIGHT.

NOTES:

1. THIS SLAB AND TIE DOWN SYSTEM IS SUITABLE FOR USE IN HURRICANE ZONES.
2. CONCRETE IS 3000 psi AT 28 DAYS.

SLAB AND END CONCRETE BLOCK DETAIL

Not To Scale

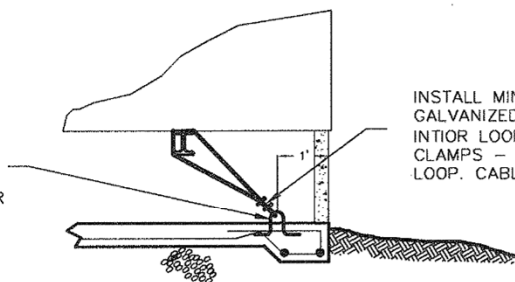


SECTION A-A

TYPICAL REBAR LOOP TIE DOWN DETAIL

Not To Scale

INSTALL 1/2"x8" LONG
FOUNDATION BOLT OR
EXPANSION BOLTS CAST
INTO SLAB OR #3 REBAR
LOOP MAY BE USED.



INTERIOR LOOP DETAIL

Not To Scale

INSTALL MIN. (2)-3/8"
GALVANIZED CABLES EACH SIDE
INTERIOR LOOPS WITH 3/8" CABLE
CLAMPS - 2 CLAMPS EACH
LOOP. CABLES MUST BE TIGHT.

NOTES:

1. THIS SLAB AND TIE DOWN SYSTEM IS SUITABLE FOR USE IN HURRICANE ZONES.
2. CONCRETE IS 3000 psi AT 28 DAYS.
3. OTHER SPECIFICALLY MANUFACTURED ANCHORING SYSTEMS ARE ACCEPTABLE SUCH AS "1100V SERIES" BY OLIVER TECHNOLOGIES INC. MUST FOLLOW MFG INSTALLATION/INSTRUCTIONS.

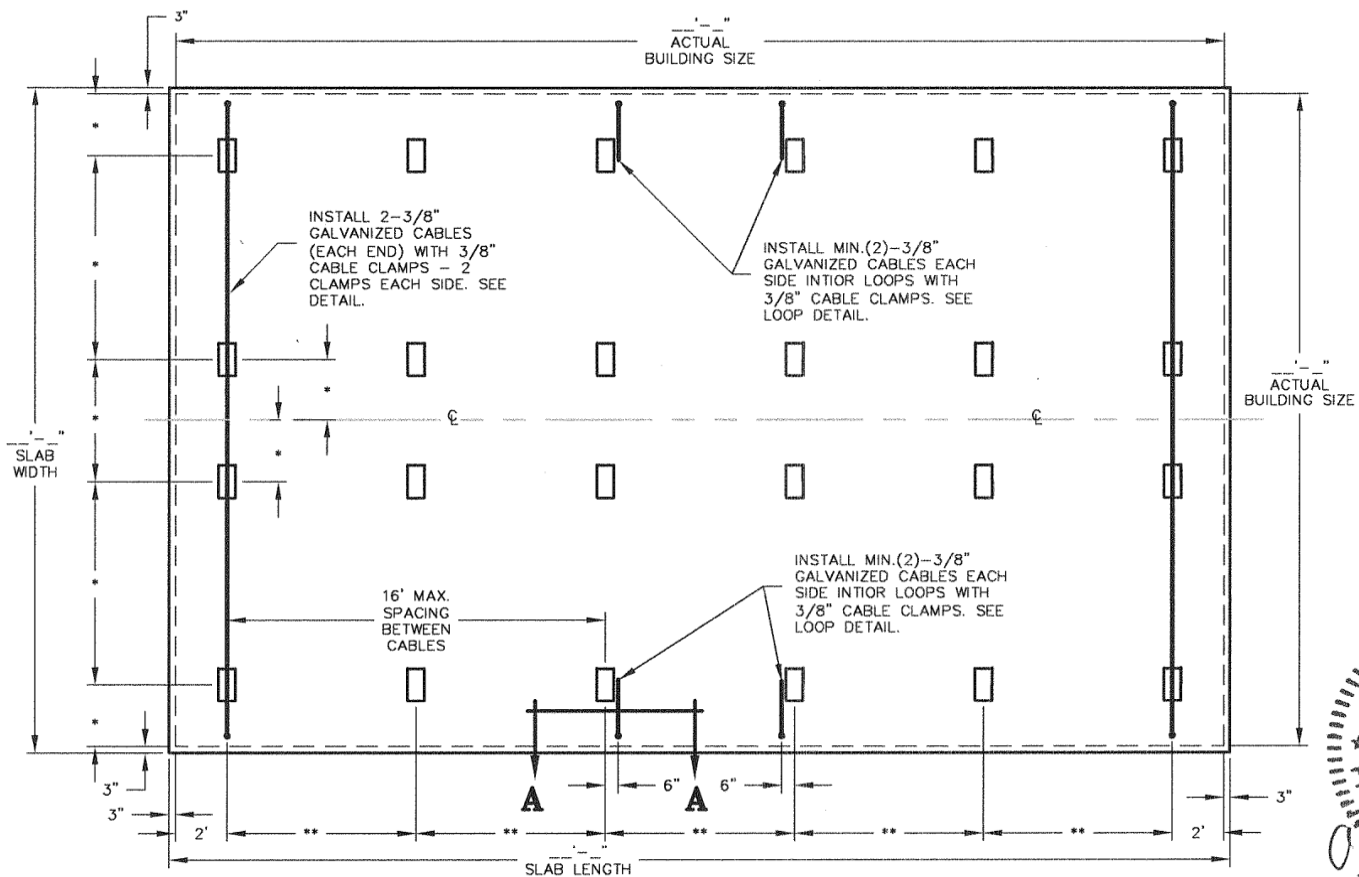
04-09-TYPICAL

No.	Revisions	Date	App'd.
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DETAILS (NORTHERN ZONE)			
<div style="display: flex; justify-content: space-between;"> <div> <p>STATE OF MAINE</p> <p>ALBERT E. HODSDON, III</p> <p>No. 2926</p> <p>PROFESSIONAL ENGINEER</p> </div> <div> <p>A E Hodsdon CONSULTING ENGINEERS 10 Common St. Waterville, Me. 04901 (207) 873-5164</p> </div> </div>			
Drawn By: BB		Scale: NOT TO SCALE	
Checked By:		Date:	
Approved By:		Date:	
File No. 04-09-TYPICAL.DWG		Project No. 04-09-AA	

Sheet No.

2

Of 2

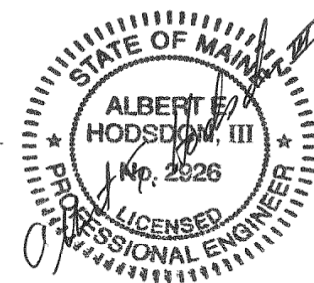



SLAB PLAN

NOTE:
OVERALL DIMENSIONS AND
PENETRATIONS OF SLAB (SEWER,
WATER, ELECTRICAL, ETC.) TO BE
CONFIRMED WITH MANUFACTURER
BEFORE CONSTRUCTION.

* COLUMNS TO BE CONSTRUCTED DIRECTLY
UNDER THE STEEL BEAMS. (CONSULT WITH
BUILDING MANUFACTURER).

** PIERS TO BE SPACED ACCORDING TO
MANUFACTURERS SPECIFICATIONS
AND 8' MAX.



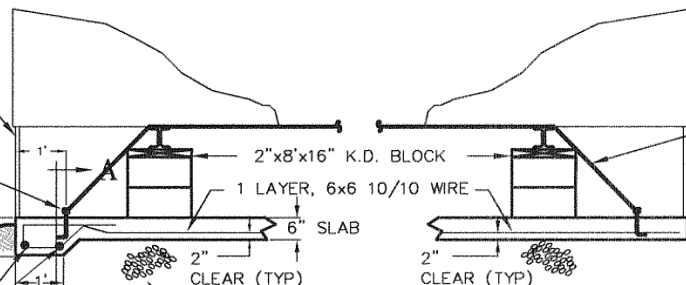
No.	Revisions	Date	App'd.
MINIMUM H.U.D. SLAB DESIGN			
Seller: _____ Maine			
____'____' x ____'____' SLAB (24" MIN. GRAVEL BASE)			
 AEHodsdon CONSULTING ENGINEERS 10 Common St. Waterville, Me. 04901 (207) 873-5164		Sheet No. 1	
Drawn By: BB		Scale: NOT TO SCALE	
Checked By:		Date:	
Approved By: <i>AEH</i>		Date: <i>1/4/10</i>	
File No. TYPICAL.DWG		Project No. TYPICAL	
		of 2	

SKIRTING CAN BE VINYL WITH THE PROPER AMOUNT OF VENTING.

INSTALL 1/2"x8" LONG FOUNDATION BOLT OR EXPANSION BOLTS CAST INTO SLAB OR #3 REBAR LOOP MAY BE USED.

10" THICKENED SLAB RECOMMENDED
(2) ROWS #4 REBAR

OPTIONAL SKIRTING:
1. PRESSURE TREATED WOOD
2. CONCRETE
3. MASONRY



BACKFILL UNDER SLAB WITH CLEAN COMPACTED GRAVEL. 18" THICK MIN. IN COASTAL AREAS AND 24" THICK MIN. IN NORTHERN AREAS AS DEFINED IN APPENDIX "B" OF THE MANUFACTURED HOUSING BOARD INSTALLATION STANDARDS, 6" MAX LIFTS, 3" MINUS GRAVEL.

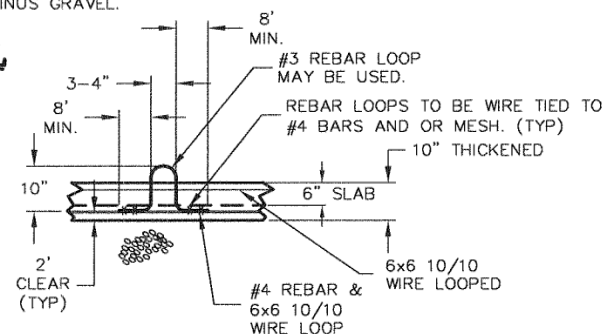
INSTALL MIN.(2)-3/8" GALVANIZED CABLES EACH END WITH 3/8" CABLE CLAMPS - 2 CLAMPS. CABLES MUST BE TIGHT.

NOTES:

1. THIS SLAB AND TIE DOWN SYSTEM IS SUITABLE FOR USE IN HURRICANE ZONES.
2. CONCRETE IS 3000 psi AT 28 DAYS.

SLAB AND CONCRETE BLOCK DETAIL

Not To Scale



SECTION A-A

TYPICAL REBAR LOOP TIE DOWN DETAIL

Not To Scale

INSTALL 1/2"x8" LONG FOUNDATION BOLT OR EXPANSION BOLTS CAST INTO SLAB OR #3 REBAR LOOP MAY BE USED.

MIN. 6" SLAB REQUIRED, 10" THICKENED SLAB RECOMMENDED.

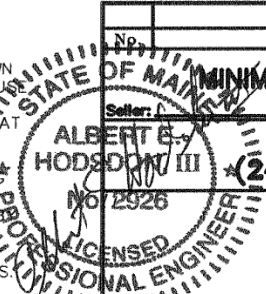
INTERIOR LOOP DETAIL

Not To Scale

INSTALL MIN.(2)-3/8" GALVANIZED CABLES EACH SIDE INTERIOR LOOPS WITH 3/8" CABLE CLAMPS - 2 CLAMPS EACH LOOP. CABLES MUST BE TIGHT.

NOTES:

1. THIS SLAB AND TIE DOWN SYSTEM IS SUITABLE FOR USE IN HURRICANE ZONES.
2. CONCRETE IS 3000 psi AT 28 DAYS.
3. OTHER SPECIFICALLY MANUFACTURED ANCHORING SYSTEMS ARE ACCEPTABLE SUCH AS "1100V SERIES" BY OLIVER TECHNOLOGIES INC. MUST FOLLOW MFG INSTALLATION/INSTRUCTIONS.



Revisions		Date	App'd.
MINIMUM H.U.D. SLAB DESIGN			
DETAILS			
(24" MIN. GRAVEL BASE)			
AEHodsdon CONSULTING ENGINEERS 10 Common St. Waterville, Me. 04901 (207) 873-5164			Sheet No.
Drawn By: BB	Scale: NOT TO SCALE	2	
Checked By:	Date:		
Approved By: PH	Date: 1/4/10		
File No. TYPICAL.DWG	Project No. TYPICAL	of 2	

SUBCHAPTER F

OPTIONAL FEATURES

INSTALLER'S DUTY

- * Know the listing
- * Install to the listing and manufacturer's instructions
- * Know the dryer vent requirements
- * Know the ventilation requirements
- * Know the skirting requirements

DRYER EXHAUST SYSTEM

- * Installation of the exhaust system must be in accordance with the dryer manufacturer instructions.
- * Dryer exhaust system must not contain reverse slope or terminate under the home.

Skirting

- * Skirting, if used, must be of weather-resistant materials or provided with protection against weather deterioration.
- * Skirting must not be attached in a manner that can cause water to be trapped between the siding and trim or forced up into the wall cavities trim to which it is attached and must not impede the contraction and expansion characteristics of the homes exterior.

Skirting

- * All wood skirting within 6 inches of the ground must be pressure-treated in accordance with AWWPA Standard U1 for Use Category 4A, Ground Anchor Contact Applications, or be naturally resistant to decay and termite infestations.

Crawlspace Ventilation

- * A crawlspace with skirting must be provided with ventilation openings. The total area of ventilation openings may be reduced where a uniform 6-mil polyethylene sheet material or over vapor barrier is installed.

Crawlspace Ventilation

- * Ventilation openings must be placed as high as practicable above the ground.
- * Openings must be located on at least two opposite sides to provide cross-ventilation.

Crawlspace Ventilation

Dryer Vent & Combustion Air Inlets

- * Dryer vents and combustion air inlets must pass through the skirting to the outside. Any surface runoff from the furnace, air conditioning or water heater drains must be directed away from under the home.

SUBCHAPTER G

DUCTWORK AND PLUMBING & FUEL SUPPLY SYSTEMS

Field Assembly

Home manufacturers must provide specific installation instructions for the proper field assembly of manufacturer-supplied and shipped loose ducts, plumbing, and fuel supply system parts that are necessary to join all sections of the home and are designed in accordance with applicable requirements.

Water Supply

Maximum Supply Pressure & Reduction

- * When the local water supply pressure exceeds 80 psi to the manufactured home, a pressure-reducing valve must be installed.

Water Supply Mandatory Shutoff Valve

- * An identified and accessible shutoff valve must be installed between the water supply and the inlet.
- * The water riser for the shutoff valve connection must be located underneath the home. The shutoff valve must be a full-flow gate or ball valve, or equivalent valve.

Water Supply Mandatory Shutoff Valve

- * Water riser pipes shall be a minimum $\frac{3}{4}$ in. nominal diameter and extend a minimum of 6 in. above ground elevation. Surface water shall be diverted from the riser.

Water Supply Wells as a Source of Supply

- * A well shall not be located within the boundaries of a manufactured home pad.

Water Supply Freezing Protection

- * Water line crossovers completed during installation must be protected from freezing.
 1. If subject to freezing temperatures, the water connection must be wrapped with insulation or otherwise protected to prevent freezing.
 2. Only pipe heating cable listed for manufactured home use is permitted to be used, and it must be installed in accordance with the cable manufacturer installation instructions.

Water Supply Testing Procedures

- * The water system must be inspected and tested for leaks after completion at the site.

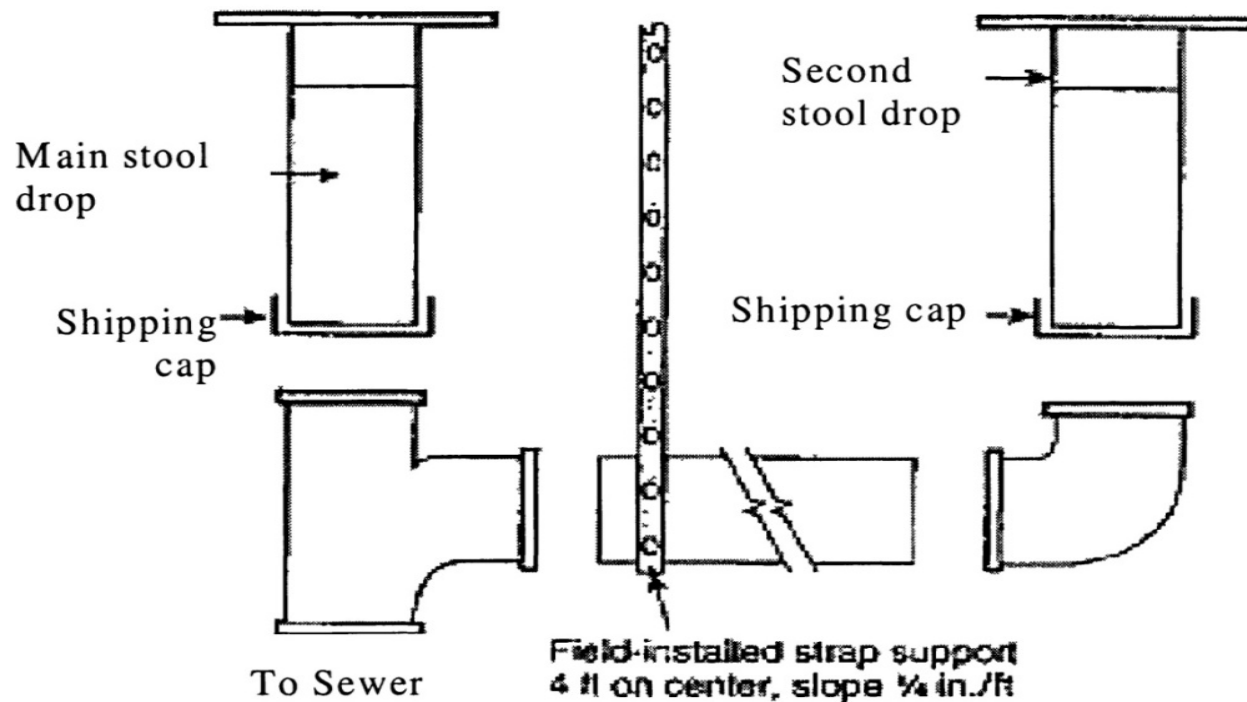
Drainage Systems

Proper Slopes

- * Drain lines must not slope less than one-quarter inch per foot, unless otherwise noted on the schematic diagram.
- * A slope of one-eighth inch per foot may be permitted when a clean-out is installed at the upper end of the run.

Drain Pipe Slope & Connections

Pipe Slope and Connections.



Drainage System Testing Procedures

- * The drainage system must be inspected and tested for leaks after the completion at the site.

Fuel Supply System Testing Procedures

- * The gas system must be inspected and tested for leaks after the completion at the site.

Ductwork Connections

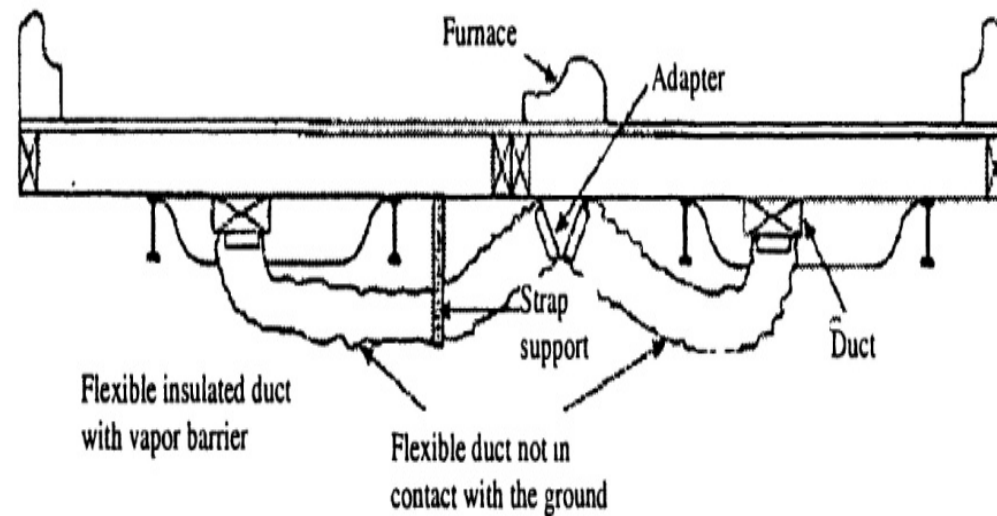
- * Multi-section homes with ductwork in more than one section require crossover connections to complete the duct system of the home. All ductwork connections, including duct collars, must be sealed to prevent air leakage. Galvanized metal straps or tape and mastics must be used around the duct collar and secured tightly to make all connections.

Ductwork Connections

- * Crossover ducts outside the thermal envelope must be insulated with listed materials.
- * In-floor or ceiling crossover duct connections must be installed and sealed to prevent air leakage.

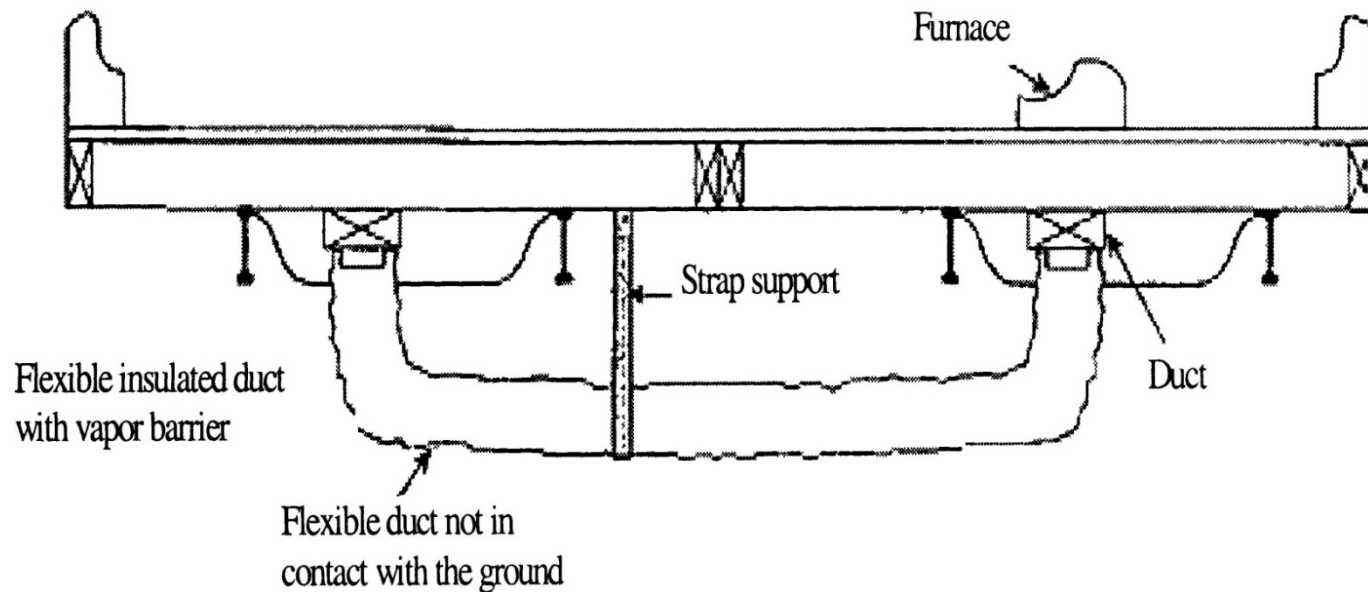
Crossover Duct Installation with Two Connecting Ducts

Crossover Duct Installation with Two Connecting Ducts.



Crossover Duct Installation with One Connecting Duct

Crossover Duct Installation with One Connecting Duct.



SUBCHAPTER H

ELECTRICAL SYSTEMS AND EQUIPMENT

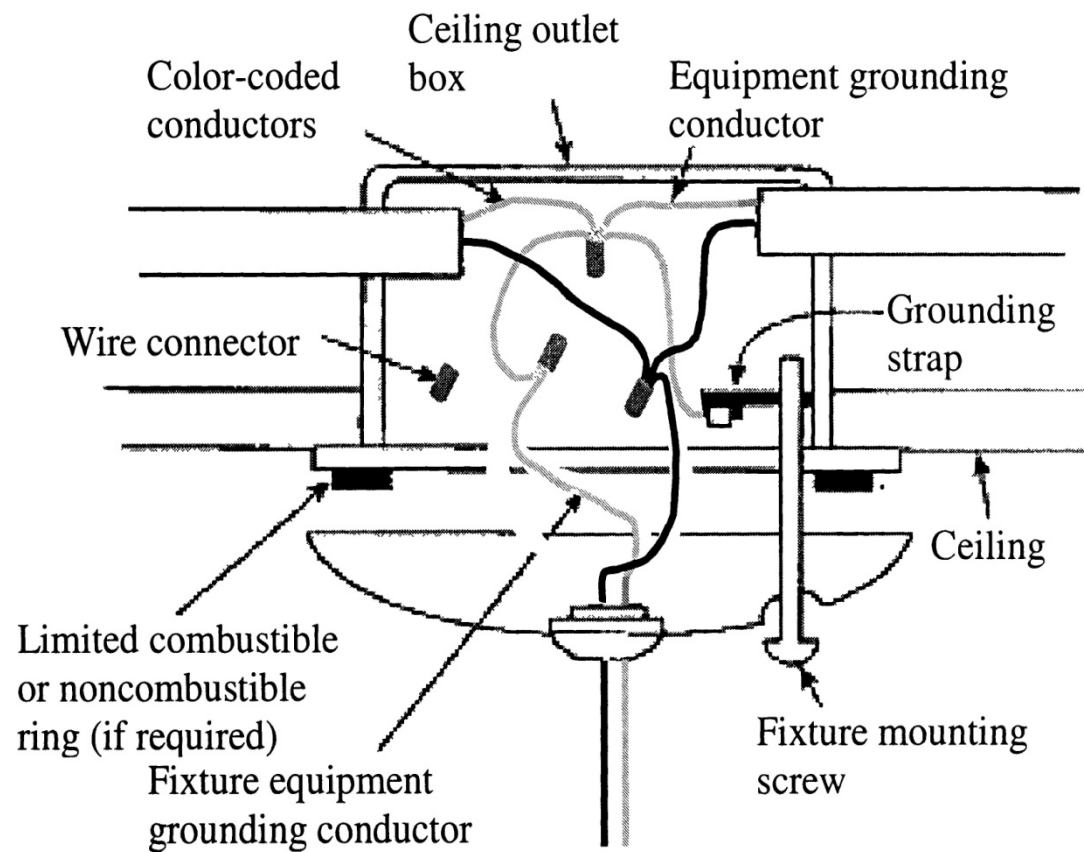
Electrical Crossovers

- * Multi-section homes with electrical wiring in more than one section require crossover connections to join all sections of the home. The crossover must be designed and completed in accordance with the directions provided in the installation instructions.

Miscellaneous Lights and Fixtures Grounding

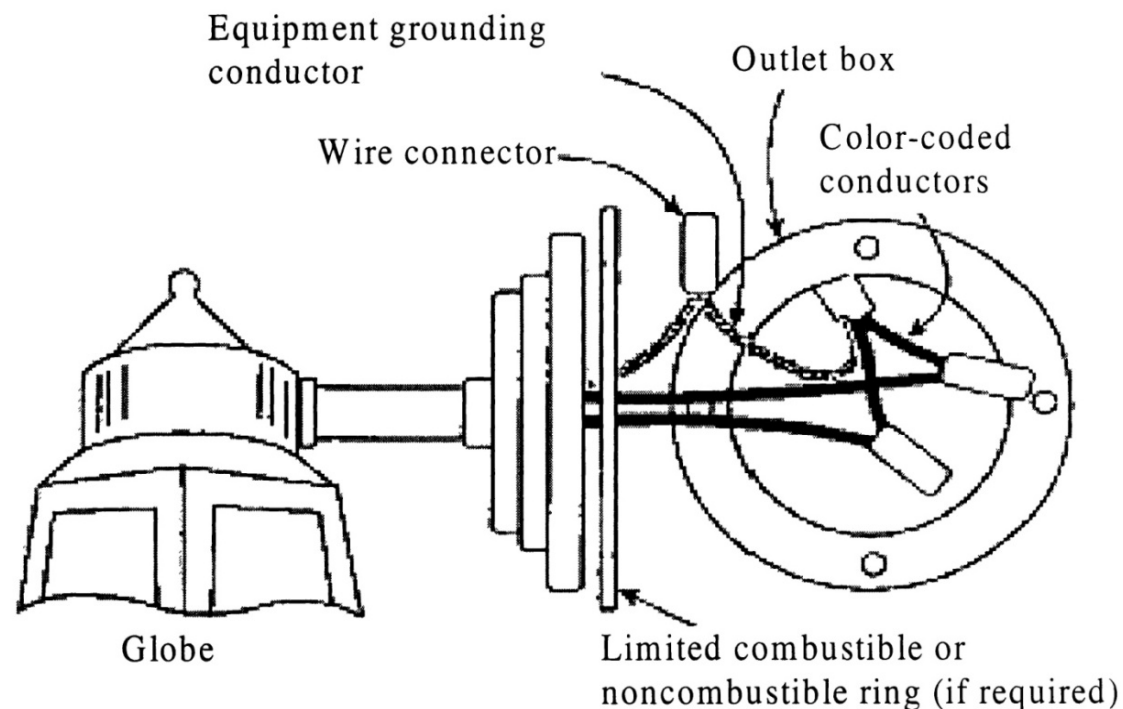
- * All the exterior lighting fixtures and ceiling fans installed must be grounded by a fixture-grounding device or by a fixture-grounding wire.
- * For chain-hung lighting fixtures both a fixture-grounding device and a fixture-grounding wire must be used. The identified conductor must be the neutral conductor.

Typical Installation of a Chain-Hung Lighting Fixture



Typical Installation of a Surface-Mount Exterior Lighting Fixture

Typical Installation of Surface-Mounted Exterior Lighting Fixture.



Miscellaneous Lights and Fixtures

Exterior Lights

- * The lighting fixture must be caulked around its base to ensure a watertight seal to the sidewall.

Miscellaneous Lights and Fixtures

Ceiling Fans

- * Ceiling-suspended (paddle) fans must be connected to the junction box listed and marked for ceiling fan application.
- * The ceiling fan must be installed with the trailing edges of the blades at least 6'4" above the finished floor.

Miscellaneous Lights and Fixtures Testing

- * After completion of all electrical wiring and connections, including crossovers, electrical lights, and ceiling fans, the electrical system must be inspected and tested at the site.
- * The installation instructions must indicate that each manufactured home must be subjected to the following tests:

Electrical Testing

1. An electrical continuity test to ensure that metallic parts are properly bonded;
2. Operational test to demonstrate that all equipment, except water heaters, electric furnaces, electric ranges, dishwashers, clothes washers/dryers, and portable appliances are connected and in working order; and
3. For electrical equipment installed or completed during installation, polarity checks to determine that connections have been made properly made. Visual verification is an acceptable electrical polarity check.

Smoke Alarms

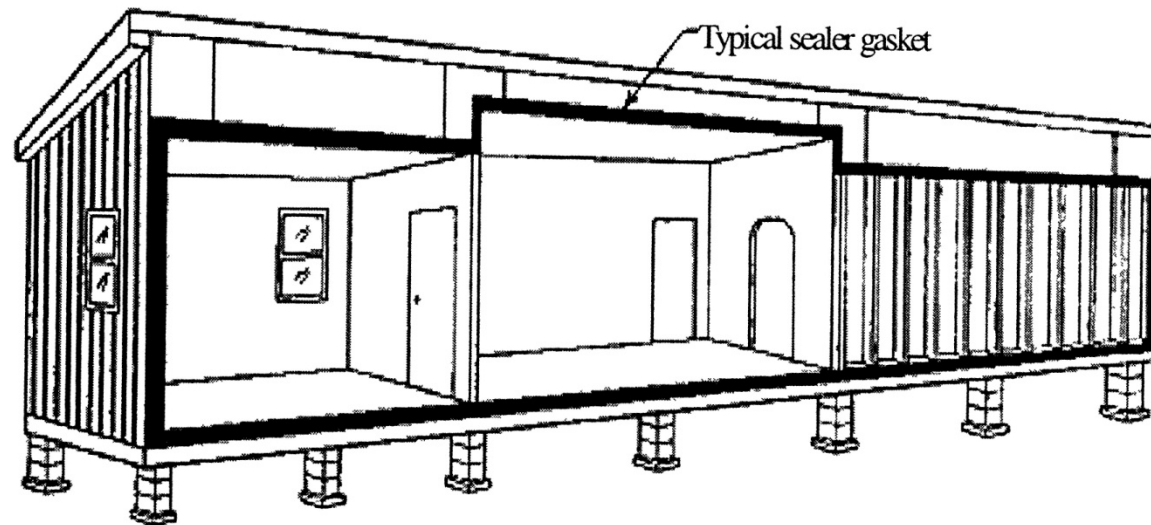
- * Smoke alarms must be functionally tested in accordance with applicable requirements of the smoke alarm manufacturer instructions.
- * Home manufacturers must provide specific written instructions for installers on how to inspect and test the operation of smoke alarms during the installation of the home.

SUBCHAPTER I

EXTERIOR AND INTERIOR CLOSE-UP

Mate-Line Gasket

- * On multi-section manufactured homes, install the sealer gasket on the ceiling, end walls, and floor mate-line prior to joining the sections together.



Bottom Board Repair

- * The bottom board covering must be inspected for any loosening or areas that might have been damaged or torn during installation or transportation. Any missing insulation is to be replaced prior to closure and repair of the bottom board.

Bottom Board Repair

- * Any splits or tears in the bottom board must be resealed with tape or patches in accordance with methods provided in the manufacturer's installation instructions.

SUBCHAPTER J

ADDITIONAL REQUIREMENTS

General Exemption

Manufactured homes, which are installed in compliance with this standard, are exempt from all state or political subdivision codes, standards or regulations covering the same matters. Other matters are under the authority of the LAHJ.

General Installation of On-Site Structures

- * Onsite structures attached to the home shall be installed according to the home manufacturer's installation instructions or be designed and approved by a registered engineer or registered architect.
- * Onsite structures which support their own live load and dead loads and are not attached to the home are not covered by this standard and come under the jurisdiction of the LAHJ.

General

- * The home shall be leveled so that all doors and windows operate as intended and plumbing drains function in a safe and sanitary manner.

Drainage

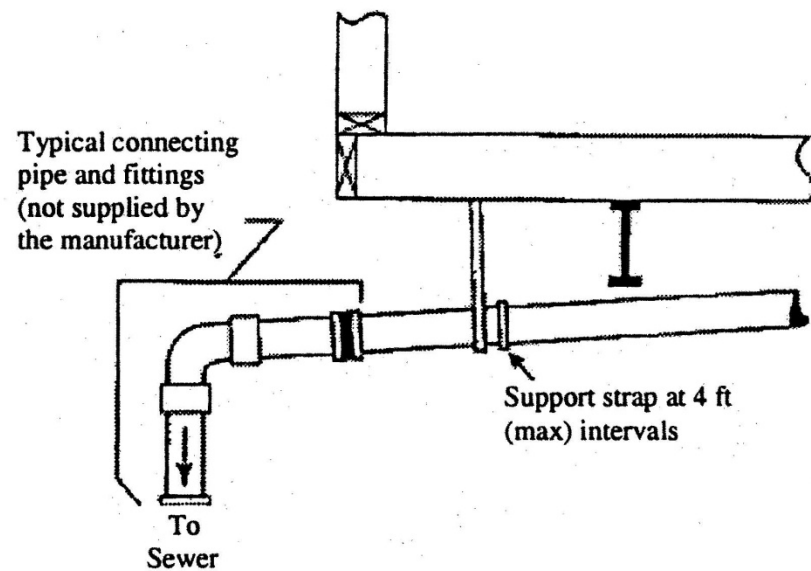
- * Drainage parts shall be installed only by a licensed installer or a plumber licensed by the Plumbers' Examining Board.
- * All drainage parts shipped loose with the home shall be installed according to the manufacturer's instructions.

Drainage

- * All other drainage shall be installed in compliance with the Maine State Internal Plumbing Code as adopted by the Plumbers' Examining Board.
- * The main drain line shall be connected to the site's sewer hook-up using an elastomeric coupling, acceptable under the Maine State Internal Plumbing Code adopted by the Plumbers' Examining Board.

Drainage

Connection to the site sewer



Gas Systems

- * All gas system work shall be performed in compliance with NFPA 54-National Fuel Gas Code; and other appropriate rules and codes as adopted by the Maine Fuel Board.
- * Licensed dealers and/or mechanics are prohibited from performing any gas system work.

Fuel Oil Systems

- * Licensed dealers and/or mechanics may install, in compliance with manufacturer's instructions, loose shipped fuel oil appliance items.
- * All other fuel oil system work, not described in the manufacturer's instructions, including oil supply tanks and fuel oil piping, shall be performed only by a licensed limited tank installer or other technician licensed by the Maine Fuel Board.

Fuel Oil Systems

- * All fuel oil system work, not described in the manufacturer's instructions, shall be done in compliance with NFPA 31, Installation of Oil Burning Equipment.

Electrical

Licensed dealers and/or mechanics may:

1. Install, in accordance with the manufacturer's instructions, electrical equipment shipped loose with the home; and
2. Connect to the main panel to an existing service disconnect.

Electrical

- * All other electrical work, not described in the manufacturer's instructions, shall be performed by an electrician licensed by the Electrician's Examining Board.
- * All other electrical work, not described in the manufacturer's instructions, shall be done in compliance with NFPA 70, the 2017 National Electrical Code.

APPENDIX A

ROOF LOAD, WIND AND INSTALLATION ZONES

Roof Load Zones

- * Counties with 40 psf roof load zones: Washington, Hancock, Aroostook, Somerset, Waldo, Penobscot, Knox, and Piscataquis.
- * Counties with 30 psf roof zones: York, Cumberland, Kennebec, Sagadahoc, Lincoln, Franklin, Oxford and Androscoggin.

Wind Zones

- * Wind Zone I counties: Aroostook, Somerset, Waldo, Franklin, Penobscot, Oxford, Piscataquis, York, Cumberland, Kennebec, Sagadahoc, Knox, Lincoln, and Androscoggin.
- * Wind Zone II (100 mph) counties: Hancock and Washington

Installation Zones

- * Sites prepared in Washington, Hancock, Aroostook, Somerset, Waldo, Penobscot, Knox, and Piscataquis counties require 24 inches of compacted fill as part of the engineered foundation.
- * Sites prepared in York, Cumberland, Kennebec, Sagadahoc, Lincoln, Franklin, Oxford and Androscoggin counties require 18 inches of compacted fill as part of the engineered foundation.