



# Manufactured Home Update

Oregon Department of Consumer & Business Services Building Codes Division

January 1997

## From the editor

There've been some personnel changes at the Building Codes Division (BCD). At OSU we work closely with the Installation Monitoring Program coordinator, Mark Campion. But in October, Mark moved to a new position with BCD and Allen Rust was hired to take his place as coordinator. We've enjoyed working with Mark and we'll miss him. But he's still with BCD, so we'll see him around, and we expect him to continue contributing to *Manufactured Home Update*.

And we're looking forward to working with Allen. He has a great deal of experience in the industry and he's already contributing articles to *Manufactured Home Update*, so you'll hear from him often.

We continue to encourage contributions from our readers. Inside you'll find a guest editorial from an Oregon manufactured home dealer on a subject you may have thought about from time to time.

Our OSU installation inspectors continue to expand their efforts to be more than inspectors. They've been providing on-site training to local inspectors, dealers, and installers throughout Oregon. If you could use on-site assistance with meeting the Oregon Manufactured Dwelling Standards, call us.

Remember, if you have stories or ideas for *Manufactured Home Update*, contact:

**Ted Haskell**

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## Tips from the Installation Monitoring Program

Mark Campion, Building Codes Division

### Roof staples concern installers

Recently, while we were on a site visit, an installer pointed out to us that there were an awful lot of staples used to attach protective plastic sheeting to the dormer of homes. These staples, which hold the wood battens that secure the sheeting, penetrate the shingles to reach the roof sheathing. Although this reduces the likelihood of wind damage during transport, the installer noted that "it's a heck of a lot of holes to put in a new roof."

Since the hole made by the staple is so small, it's easily overlooked by even the most careful installer. It may not get sealed. If a rainwater leak develops, it may go unnoticed for years. The potential for wood rot is real.

Part of the solution is for factories to review their procedures for securing shipping materials, making sure there are only as many holes as necessary.

Tips continued on Page 2

# Buying and selling flood-damaged manufactured homes

Nearly a year later we're still feeling the effects of last winter's flood. At the Building Codes Division (BCD), we receive calls regarding rules for buying and selling flood-damaged manufactured homes. The rules are as follows:

## "As is" sales

A home can be sold "as is." This means that the buyer accepts responsibility for the home's performance and quality. Oregon law (ORS 446.155(5)(d)) requires that the seller disclose on the bill of sale that the home is being sold "as is" or "with all faults."

## Salvage sales

When flood damage is more severe, a home may be declared salvage by an insurance company. When a home is declared salvage it can't be sold except as salvage and is considered non-habitable. However, the buyer may remanufacture a home that has been declared salvage.

## Remanufacturing

The first step is to contact the BCD for an inspection to determine whether the home can be remanufactured. If the inspection finds that the home can be remanufactured, the work must follow these guidelines:

1. Obtain a permit from BCD (the cost is \$95).
2. Before remanufacturing begins, an inspector from the Division must examine the home to identify items in need of repair or replacement.
3. Leave repaired areas open for inspection.

4. Replace all wet insulation.
5. Replace all damaged material.
6. Sanitize all exposed surfaces with a 1:10 ratio of bleach to water.
7. Remanufacture the home to the codes in effect at the time of original manufacture.
8. Replace all electrical devices and appliances that were submerged.
9. Replace any fiberglass ducts and sanitize any metal ducts that were submerged.
10. Install smoke detectors.
11. Contact the BCD for final inspection.

## Labels and insignias

If the HUD labels or state insignias are still on the home, passing the final inspection by BCD will be considered recertification of those labels. If the labels are missing, BCD will issue an "Oregon Insignia of Compliance" to be attached to each section of the home once it has passed the final inspection. The Oregon Insignia of Compliance labels cost \$25 each.

## Beyond salvage

BCD may consider badly damaged homes unsalvageable. In these cases BCD cannot recertify the home, and the labels must be returned to BCD. ■

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*Tips continued from Page 1*

## Location of utility access panels conflicting with supports

In recent field inspections we've found some utility access panels located where they conflict with centerline, perimeter, entry door and slider piers. We've asked factory engineering departments to make sure that location of water and electrical access panels doesn't conflict with pier supports required by the OMDS. Factories should pay special attention to floor plan changes for custom orders or new models.

Under the OMDS, centerline piers can't be moved left or right along the marriage line. The installer is left with only two options when there is a conflict with an electrical or plumbing crossover: 1) Move the crossover so it's routed around the pier, or 2) drill through the marriage line joist to route the crossover through the joist. (Note that this requires checking with the factory's engineering department regarding size and placement of holes.)

The maximum allowable inset for perimeter sidewall piers is 10 inches from the sidewall, so avoid access locations that require larger insets.

## Final site grading responsibility

Final site grading and drainage can be a hidden cost for new home buyers. They're often caught by surprise when the local building official requires corrective action to control water runoff. Adding culverts, low-point drains, retaining walls, and french drains can be expensive and time consuming.

Even if a dealer doesn't offer these services, the service manager or other dealer representative should check the site and should inform the buyer of any problems. ■

## Installation certification tag reports to be more closely monitored

*Allen Aschim, Building Codes Division*

Building Codes Division recently announced it will more closely monitor information submitted by dealers, installers, and limited skirting installers on monthly installation certification tag report forms.

Information on the reports must be accurate and complete. This information is critical to BCD's ability to investigate, track, and resolve problems. We'll return incomplete reports to the firms submitting them and we will issue additional tags only when the forms are properly completed.

BCD recently revised its report form to make it easier to read and use. Submit reports by the 10th of each month, covering any tags used in the previous month.

Oregon Administrative Rule (OAR) 918-515-0340 establishes requirements for reporting of installation certification tags. Failure to meet these requirements can result in possible civil penalties, loss of license, or both.

To get copies of the new reporting form, call BCD at (503) 378-4133. For help, call Allen Aschim, at (503) 373-1256. ■

## Input requested on new park trailer standard

TAG is working with a special task force to consider adoption of the 1997 ANSI Standard A-119.5, which affects how park trailers are manufactured. The Division currently uses the 1993 edition of the standard.

The main difference between the two editions is the 1997 edition has a new requirement for structural standards in park trailers more than 8 1/2 feet wide. The structural standards are based on the Canadian Standards Association (CSA) park trailer standard and were proposed to ANSI by the Recreational Park Trailer Industry Association, Inc.

In addition, the Division is considering amending the 1997 ANSI standard to include energy conservation standards in park trailers. Currently the standard permits single-glazed windows and requires only R-7 insulation in the ceiling and R-5 in the walls and floors.

The new standards will be reviewed by the Manufactured Structures and Parks Advisory Board in January 1997 and, if approved, will go into effect on September 1, 1997.

If you have suggestions concerning adoption of ANSI Standard A-119.5 or the proposed amendments, or have questions about shims and prefabricated piers or heat pump listings, contact Pat Lewis, OMDS program specialist, BCD, 1535 Edgewater NW, Salem, OR 97310, phone: (503) 373-1266, fax: (503) 378-2322. ■

## What's an IPIA?

Sometimes it seems like we live in a world of initials. One more and we'll overload. But would you rather say "IPIA" or "Production Inspection Inplant Primary Inspection Agency?" If you're in the manufactured home industry, you'll often see or hear about an IPIA.

IPIAs came into being in 1976, when the U.S. Department of Housing and Urban Development (HUD) assumed regulatory responsibility for the manufactured home industry. At that time, HUD began to require that all factories acquire the services of an IPIA to help insure that homes built in that factory were constructed according to HUD standards. An IPIA could be either a private company or a state organization.

IPIA inspectors evaluate the ability of a factory to follow preapproved quality control procedures and inspect homes as they are manufactured. In addition, the IPIA inspects homes to evaluate whether they conform to the manufacturer's design package, known as the DAPIA. Inspections are performed on each floor in the production

line. Since homes are at various stages of completion, the inspector gets a good sample of each step in the construction process on any given day. If the inspector finds deviations from the design, he will note the non-compliance and require that it be corrected.

But IPIA inspectors do more than require corrections. They also track down the source of the problem and work directly with the people in the manufacturing process to eliminate it. IPIA inspectors evaluate the entire manufacturing process, including systems testing, products used in construction, and personnel to make sure a safe and durable home is being produced.

In Oregon, the IPIA is the Oregon Building Codes Division, which employs IPIA inspectors. Each IPIA inspector in Oregon is assigned to one of the 12 manufacturing plants for six months. At the end of this period they are rotated to another plant.

For further information about the IPIA, please contact Mike Goettl, at (503) 378-6065.

# What's new in the '97 OMDS

The 1996 Oregon Manufactured Dwelling Standard (OMDS) was the first uniform installation standard for the entire state of Oregon. The 1997 OMDS will be a minor revision of the standard. It'll incorporate suggestions from installers, inspectors, dealers, customers, and manufacturers. The 1997 edition is due to be printed by March 1997 and goes into effect April 1, 1997.

Beginning in 1997, the OMDS will be subject to the standard three-year code revision cycle. This means that the Building Codes Division (BCD) will ask for suggested changes during 1998 and 1999 to go into effect in 2000. Suggestions for changes can be submitted any time.

Because the 1997 changes are minor, continuing education for installers is not required. Instead, BCD will send a description of the changes to each inspector and contractor holding a manufactured dwelling certification or license, including limited skirting installers.

To reserve a copy of the 1997 OMDS, call the Building Tech Bookstore at 1-800-ASK-BOOK or the OSU Extension Energy Program at (541) 737-3004.

Many of the 1997 changes are designed to improve the readability and user friendliness of the standard. And some are designed to increase the number of methods available to meet the standard. Here are the most significant changes for 1997:

## Chapter two: Permits and inspections

- Adds that skirting may not be installed on a manufactured dwelling until after the installation inspection has been performed (with three exceptions).

## Chapter three: Installation standards

- Adds new standards for the support of manufactured dwellings in storage.
- Requires smoke detectors on every manufactured dwelling regardless of age.
- Reduces requirements for, and allows alternative methods for, holding down the crawl space vapor retarder.
- Allows use of wood-polymer composite footing, shim, pier cap, and skirting material.
- Reduces the number of piers under the centerline column supports.
- Eliminates perimeter pier requirements for manufactured dwellings with floor widths less than 11 feet.
- Allows 4-inch and 8-inch block to be used in perimeter support walls.
- Increases the minimum clearance under the floor from 12 inches to 18 inches.
- Adds tie-down requirements for recessed porches and decks larger than 70 square feet.

- Raises the minimum floor elevation and under-floor vent area in designated flood planes.
- Allows slabs to continue at the same level beyond the perimeter of the dwelling with an approved water stop.
- Permits use of prefabricated piers in recessed sidewall pier applications.
- Allows manufactured dwellings to be installed over height to DAPIA-approved plans.
- Clarifies retaining wall and perimeter support wall requirements.
- Adds exception to dwelling elevation requirements inside parks.

## Chapter four: Electrical connections

- Allows field installation of electrical service equipment.

## Chapter five: Plumbing connections

- Requires main water valves and sewer cleanouts to be located on the exterior of the dwelling (or accessible through hand-hole).
- Requires plumbing utility connections to be made within 15 feet of dwelling.

## Chapter six: Mechanical connections

- Clarifies the standard that heat pumps and air conditioners must meet.
- Allows flexible duct for dryer exhausts.
- Allows dryer ducts to dip when a drip leg or low-point drain is installed.
- Increases the allowable length of the dryer duct from 14 feet to 25 feet.

## Chapter seven: Fuel gas piping systems

- Changes gas piping test pressure from 14 inches water column to 6 to 8 ounces.

## Chapter eight: Accessory buildings and structures

- Allows alternate skirting material under recessed porches.
- Requires a 25 percent reduction in area for skirting vents to account for area taken up by louvers and screens.
- Eliminates requirements for skirting access panels to be near utilities.
- Increases crawl space access well size by 6 inches for ground-level installations.
- Reduces required thickness for gypsum board between attached garages and dwellings from  $\frac{5}{8}$  inch to  $\frac{1}{2}$  inch.

What's new *continued on Page 8*

# Help from the OMDS Technical Advisory Group (TAG)

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Pat Lewis, Building Codes Division

## ***Does the 1996 OMDS allow shims to be used with metal prefabricated piers in the foundation support system of a manufactured dwelling?***

Prefabricated piers are a listed product and are required to be installed according to the listing and the manufacturer's instructions. While it's possible for a metal pier to be listed with shimming devices, the Division doesn't know of any that are so listed.

Because prefabricated piers are usually adjustable, you shouldn't need shims. Piers are manufactured in several lengths, so if a pier is too short to reach the beam or floor it supports, you need a different pier. However, if the pier is only a few inches short, OMDS Section 303(a)(1) allows double footings that would raise the pier another 4 inches to eliminate the gap. Piers adjusted to heights exceeding the manufacturer's installation instructions are extremely unstable and dangerous. You must install piers according to the manufacturer's instructions as required by OMDS Section 303 (j). Only piers listed with shims can be shimmed.

## ***To what standard must heat pumps and air conditioners be listed when installed with manufactured dwellings?***

There are two different standards used depending on when the equipment is installed.

Heat pumps and air conditioners installed by the home manufacturer or dealer during or before the initial sale to the first customer are installed to federal standards. They are required to be listed for manufactured home use and listed for use with the specific manufactured dwelling heating or air handling equipment they are connected to.

Heat pumps and air conditioners added to a manufactured dwelling after the initial sale to the first customer are installed to the Oregon One and Two Family Dwelling Specialty Code. They are **not** required to be listed for manufactured dwelling use and may be used in conjunction with existing manufactured dwelling heating or air handling equipment if the authority having jurisdiction determines the two pieces of equipment are compatible.

In either case, the local authority having jurisdiction is responsible for all heat pump or air conditioner installation inspections, if the manufactured dwelling installation and alteration programs have been delegated to that authority. ■

# Changes to language on Installation Survey Site Notices

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Allen Rust, Building Codes Division

When inspectors look at a home for the statewide manufactured dwelling installation survey, they write a site notice identifying items that don't comply with the 1996 Oregon Manufactured Dwelling Standard.

The main goals of the site notices are:

- 1) To identify problems to be corrected;
- 2) To list items that aren't complete, but must be addressed by the installer or inspecting authority;
- 3) To provide additional information as an instructional tool; and
- 4) To make other pertinent observations about the installation.

Sometimes site notices are unclear about whether repairs are required. To avoid confusion, future site notices will contain the following language:

- Repair and written response required. This applies to non-compliances that could have a major influence on the performance of the home or those items repeatedly identified as being improperly completed. Repairs are required. When repairs are complete, you should check off the item and fax the notice to Allen Rust, fax: (503) 378-4101.
- Other non-compliances — written response not required. This applies to less important items in need of repair or completion. There is no need to for written response.
- General notes and observations. These are general notes that are pertinent to the installation.

The new approach reduces paperwork, but if an item is listed as a non-compliance, it must be repaired.

The inspector will leave one copy of the site notice on-site in the inspection packet and send or fax one copy to the dealership. One copy goes to the local jurisdiction and one copy goes to Building Codes Division along with the installation data sheets.

If the notice is confusing, call the monitoring inspector. His or her name and phone number are listed on the site notice. ■

# Clarifying dealer and factory responsibilities for the customer

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Brian Lamb, *Building Codes Division*

Manufactured home dealers could avoid a lot of criticism if they would communicate more clearly about how to resolve problems encountered during home installation. Home installation is a complicated process. It's no wonder that homeowners get lost and frustrated.

When homeowners complain to me, most of them don't know the difference between items that are the responsibility of the dealership and items that are covered under the factory warranty. In most cases, homeowners assume that the dealer is responsible for fixing anything that goes wrong.

Communication at the beginning of the sales transaction is essential. Dealers need to take extra time to explain to

customers what part of the process they cover and what parts are covered by the factory. And since there may be items of shared responsibility, they need to tell homeowners how those will be resolved. For instance, there may be times when the dealer service department will repair or replace an item, but the factory must supply parts.

The manufacturer should be clear with its dealerships about what the factory will cover. If a customer has a problem with an appliance, he should contact the appliance manufacturer, not the home manufacturer. Sometimes it's the homeowner's responsibility to make the call, not the dealer's.

Educating the homeowner about how the process works and clearly defining the various roles and responsibilities reduces stress for everyone. ■

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## One manufacturer's way of reducing home problems and increasing customer satisfaction

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Tom Nicolai, *SAA oversight coordinator*

As part of my job, I meet with service managers of each manufacturing plant throughout the state. From listening to them I've learned that one of their main concerns is customer satisfaction. This concern is not something that has just cropped up. It has always been part of the industry.

At one facility I observed a program they had recently initiated to help eliminate some of the problems that occur after the homes are sold. This program consists of a thorough final inspection, conducted after the home has been pulled out of the plant.

Each home is set up and leveled, and a quality control inspector (let's call him Bob) goes through it with a checklist to ensure that each item on the list has been correctly installed and is operating correctly.

Bob tests the electrical system and operation of all appliances. He checks the plumbing system, including all faucets, hot and cold water, and drains. He looks at other important items, including operation of all interior doors and windows. After checking each item, Bob initials the list.

I asked Bob how he likes his job. He said, "I like my job. I test each home as if it were to be my own." This positive attitude makes it possible to reduce problems and make big gains in customer satisfaction.

In the next issue, I'll share ideas from other factories. ■

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## Customer assistance investigations

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Tom Nicolai, *SAA oversight coordinator*

Recently the Customer Assistance Section of BCD heard that a home manufactured in Oregon had a potentially serious problem. When this happens, we take the following steps to make sure this problem doesn't exist in other homes built by the same manufacturer.

The first thing we do is study the evidence presented to determine if further investigation is necessary. If further investigation is called for, each section coordinator does an additional investigation.

The Dealer Monitoring Section does field work by visiting dealer lots, inspecting display models and researching dealer files to see if there is any record of similar problems.

The SAA Section investigates service records at the manufacturing facility to see if other homes built during the same period have similar problems.

The Plant Monitoring Section investigates production of the homes to determine if the problem still exists and if it lies in the design or workmanship, or if it's field related.

We notify the IPIA inspectors of this problem so they can research their inspection reports to see if it has been recorded for other homes built at the same time.

If the problem is field related, the Installation Section will also investigate the problem and act accordingly.

Once the process is completed, we usually know how and why a problem is occurring and can help make sure it is isolated and resolved. ■

## Guest editorial

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*Submitted by an Oregon manufactured home dealer*

### **Editor's note:**

*The Manufactured Home Update has solicited contributions from the manufactured home industry. In this editorial, a dealer voices his views on how we could better serve the home buyer.*

The abyss that separates the "I wanna" orders and the "you gotta" replacement parts that show up on the factory delivery truck is very deep and wide. There are no guarantees that the recipient of your parts request is going to be able to identify what you are asking for based on your brief description. Sometimes it can be similar to playing a game of written charades! As Clyde Abel so aptly put it, "All is perspective . . .," and we all know that perspective doesn't have perimeters of standardization.

Unfortunately, at times the manufactured home industry lags behind the auto and other related industries, in providing their dealerships with written reference materials as related to pictorial parts identification and/or reorder numbers. In an effort to decrease the amount of time spent writing descriptions, I have compiled and computerized the description off of the "hard copies" that accompany parts delivered from the factory. This helps, and if the factory liaison is also familiar with the description of the items requested, it helps that much more. This would alleviate much of the added time invested in follow-up phone calls and faxes. Poorly utilized time and efforts equate to poorly invested service dollars. Factories, dealerships, and homeowners would benefit from better invested service dollars.

Sometimes what you receive is not always what you ordered when it comes to manufactured home parts. And to the dealer's service department, this is the type of thing that holds up the repair of the customer's home, and causes unnecessary friction between the dealer and the homeowners. ■

## Call customer assistance with your problems

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Okay, we're not Dear Abby, but we can help with your manufactured home problems. The Building Codes Division's Customer Assistance Program is now up to full strength with the reassignment of Mark Campion and the addition of Allen Rust. We now can tackle problems more quickly and follow up more completely. Because we're now fully staffed, we expect that inspectors will be available to research specific problems without as many distractions.

We'll be looking at issues that have been on the section's agenda for a while (such as inadequate close-up material, and conflicts between utility crossovers and required pier locations), and we're hoping for lots of input from dealers, manufacturers, inspectors and installers. Please contact Mark Campion at (503) 378-4530 if you have problems. We'll investigate any problem regarding a manufactured home and help all parties work toward resolution.

### **Allen Rust joins customer assistance staff**

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We are pleased to announce that we have added a new staff member to the Customer Assistance Section of the Manufactured Dwelling Program. Allen Rust joined the Division in October 1996. He has taken over the duties as installation monitoring coordinator. Mark Campion, the former coordinator, has transferred within the section to head the Inplant Operations Monitoring Program.

Allen comes to us with more than 20 years' experience in the industry. He worked for two manufacturers and spent the past 12 years as Fleetwood of Oregon's quality assurance manager. Allen has served on the committee that developed the Oregon Manufactured Dwelling Standard and on the work group that directs the installation monitoring program operated by the Oregon State University Extension Service.

He will continue with this work and will also be working closely with installers. His role will involve customer assistance inspection, training, and other manufactured home-related issues. You can reach Allen at (503) 378-8053. ■

**What's new** *continued from Page 4*

- Allows ramps, stairs, porches, decks and landings to be attached directly to manufactured dwellings.
- Requires guardrails to be installed on factory-built decks, porches and landings.

**Chapter nine: Fire protection and set-backs**

- Establishes retrofit smoke detector.

**Chapter ten: Alterations, repairs, conversions, and re-manufacturing**

- Adds smoke detector requirements on all manufactured dwellings being altered regardless of age.
- Adds a new section specifically for roof additions and repairs.
- Adds a new section specifically to address the Americans with Disabilities Act.

**Chapter eleven: Heat-producing appliances**

- Addresses electric appliances, as well as fuel-burning appliances.

**Chapter twelve: Alternate manufactured dwelling uses**

- Clarifies which types of occupancy are allowed for manufactured dwellings.
- Specifies when certificates of occupancy are required.

If you have questions concerning the 1997 OMDs, call Patrick Lewis, at (503) 373-1266. ■



**Building Codes Division**

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