



Manufactured Home Update

Oregon Department of Consumer & Business Services ■ Building Codes Division

October 2007

Winter is coming again _____

By Albert Endres

Once again it is time to start thinking about winter weather. Manufacturers, dealers, and installers can do the following to ensure the homes stay dry:

- Add anti-freeze to p-traps and toilets.
- Make certain shipping closeup is tight.
- Blow out water lines.
- Hand tab shingles.
- Hand tab marriage line shingles.
- Check delivery routes and access points.
- Respond to roof leaks quickly.
- Park homes in secure locations.

If you have any questions, please contact me at albert.g.endres@state.or.us or (503) 378-5975. ■

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Proper duct connections boost energy efficiency _____

By Gary Hart

Remember when the heating system consisted of a main duct running directly below the furnace so the only connections being made were at the furnace plenum and the register boots? Being an old floor dog, I can remember the first time we had to install a branch arm for an off-line register. Boy, did that ever slow down production.

Homes constructed today have perimeter register, offset furnaces with v-box connections, multiple off-line drops with flex ducting, and crossover branch ducts at the marriage line rim joists. The more connections being made at the plant and during installation, the greater potential for air leaks.

The Oregon Manufactured Dwelling and Park Specialty Code section 6-3.5 addresses the requirements for these connections. This includes the use of metal extensions, elbows, tees, and wyes that the manufacturer is required to provide for the completion of the heating system for each design.

Both flex ducting installed at the plant and during installation “shall not have sharp bends, shall not have excessive lengths, shall not have stress at the connections, and shall not be crushed, dented or compressed.” Any of these conditions may have an adverse effect on the heating performance.

Proper duct connections, *continued from Page 1*

Another way to prevent air leaks and make your home more energy efficient is to be certified by the Northwest Energy Efficient Manufactured Home Program (NEEM). Many homes in Oregon have the NEEM label. Workers certified by the Oregon Department of Energy are required to perform a duct leakage test on each one of these homes.

Remember to use mastic, mechanical fasteners and strapping where required. Members of NEEM program perform routine plant and field audits to evaluate energy performance.

This program, with your help, has made homes produced in the Northwest the most energy-efficient homes in the nation. ■

Rims, wheels, and tires are key to transportation safety__

By Dan Jones

As we all know, there is nothing more important than safety.

If you are a manufacturer or a contractor involved with moving a home, the installation of both new or recycled transportation components is very important. Take a moment to check that components are complete, in proper working order, and that they get installed properly.

Focus on the following key areas:

- Tires should have a minimum tread depth of 2/32" with no visible damage, such as bumps, cuts, or splits.
- Valve cores and stems are in proper order and tires will hold rated air pressure.

- Rims are not bent or broken and will allow tires to seal
- Chokes are fully seated, installed correctly, with rim to rim and wheel to wheel
- Lug bolts are installed in proper sequence, torque to the required specifications, and fully seated. Please take note: Overtightening may cause the choke to split or strip the threads of the bolt. See examples below.
- Tires are inflated according to the rating on the sidewall and dust caps are installed. ■



Reviewing items installed in the field

By Kurt Pugh

In the last issue, we reviewed standard product installation requirements. I would like to review a few more field installation items.

I recently conducted 2 AC field inspections. In both cases, the HUD labels were removed from the home. These red labels are at the rear of the home and are required to be left in place. The problem appears to be on the lap sided homes. The factories leave the siding off the ends of the homes so installers can line it up on site. Factories put a small piece of siding on and attach the label to it. I believe the installers are removing the small section of siding so they can install the full-size pieces, but they are not putting the labels back on. The HUD standards require the labels, and the homeowner needs them. So if you remove the labels, please put them back on. Looking from the hitch end of the home, they go on the rear, right-hand portion of each section (1 foot in and 1 foot up).

The next two areas deal with gas furnace installation. At one time, every plant will install a transit mode roof cap because of height restrictions. This is part of the listing of the product. There are four warning labels attached to the home: gas inlet, thermostat, furnace shutoff valve, and roof cap. The roof jack should be in the ship-loose material of the home. You need to remove the flat transit mode cap and install the supplied roof jack. It requires three sheet metal screws. If the cap is not removed, the furnace will not operate. Some of the furnaces are shipped without the flue pipes connected to the furnace (AC homes). We need to ensure that no foreign material has fallen into the top of the furnace. An example would be blown insulation. The flue pipes are double walled. The outside is for combustion air and the inside is for exhaust. If there is material inside the flue, it will be pulled into the

furnace when it is started. This could damage some of the internal parts of both the combustion and exhaust that would need to be replaced. So if it is a gas house, check the roof to see if there is a roof jack. If you are connecting the flue to the furnace, check for any debris and remove as needed.

Some gas water heaters pull their combustion air through a metal tube attached to the bottom of water heater. This is extended past the bottom board. On many models the water heater is located in the axle area. This does not allow the combustion air inlet to be installed. Again, most factories include it in the ship-loose material. This pipe needs to be slid over the one coming out the bottom of the water heater. Use two sheet metal screws to secure it. The joint between the two sections needs to be foil taped or you need to install a rubber sleeve. The sleeve should be on the factory-installed section of the inlet. It needs to extend past the bottom board.

The last item I would like to discuss is down-draft cook tops. We see more and more of these every year. All mechanical exhaust systems installed on homes need to be vented to the exterior of the home. There is not a manufacturer in Oregon that completes a down-draft venting system at the factory. Standard pipe size should be 6 inches. The factory must provide all required material to complete the installation. Ship-loose material should include lengths of pipe, required elbows, and a termination cap. You can find the requirements for this in the installation instructions for that appliance. If there is a down-draft cook top in the home, make sure it gets vented to the exterior. If the required materials are not with the home, contact the manufacturer. ■

Bills prompt LOIS changes

By Coleen Hanson

The 2007 Legislature passed two bills that affect the recording of manufactured structures ownership documents: Senate Bill 440 and House Bill 2233.

Senate Bill 440 changes the required information that must be recorded on manufactured structure ownership documents. Beginning Jan. 1, 2008, all new ownership documents must include:

- Manufacturer's name
- Model name
- Total square footage of the living area
- Type of siding
- Type of roof
- Number of bedrooms
- Number of bathrooms
- Types of heating and cooling systems
- Most recent sales price
- Date of sale

A manufactured structures dealer shall enter this information into the LOIS system unless the purchaser instructs the dealer to provide the

information to a lender, escrow agent, title company, or other designee of the purchaser. This information also must be recorded on new ownership documents, so dealers should ensure that the information has been recorded when they issue the ownership document.

The recording of this additional information will provide important information to the general public, county assessors office, manufactured structures dealers, and title/escrow companies.

House Bill 2233 also affects manufactured structures ownership documents by changing the recording of senior tax-deferral property tax liens. Currently, these liens are recorded as liens on ownership documents. Beginning Jan. 1, 2008 all new and existing senior tax deferral property tax liens will be recorded as security interests on manufactured structures ownership documents.

To view Senate Bill 440 or House Bill 2233 in their entirety, please refer to the 2007 Regular Legislative Session Bills at:

http://www.leg.state.or.us/bills_laws

For more information, contact me at (503) 373-1309. ■

Take steps to prevent site-drainage problems

By Dwight West

Site drainage issues continue to be at the upper end of the top 10 complaints that BCD deals with during consumer assistance inspections.

Granted, it's difficult to tell during the push out and site prep at some sites whether there will be a drainage problem. But other sites have all the indicators for drainage or water-table problems. For example, pit-set homes on flat land commonly have water problems.

When we get involved, there are several issues to sort out: Contracts are not clear, owners say they didn't know there would be a problem, contractors don't inform owners, inspectors don't take action, and owners don't want to pay for additional preventative measures.

Chapter 3 of the Oregon Manufactured Dwelling and Park Specialty Code covers the requirements fairly well for what one must do if the site is

suspected to have poor drainage or a high water table or if the home is to be pit set. Retailers and contractors should go over this with owners during the preparatory stage so they can arrange funding, take preventative measures, or at least disclose the potential problems to the owner. From there, the site inspection or plot plan review should also consider the possibility of a wet stand.

Skirting masons should consider informing the owners that block skirting should be waterproofed if the site looks like a wet area and the home is to be pit set or backfilled, and they should bid the job accordingly.

Water under the home is a serious issue that can cause health problems and deterioration of the home and the foundation system. Water under the home can cause energy inefficiency. It is not something to ignore, and it is far easier to prevent than to cure. ■

Foundation inspectors need more information

By Albert Endres

During a recent field investigation about manufactured home skirting enclosures, it became evident to me that inspectors of foundations in many cases are not getting enough information about the plan for skirting and final grading. Inspectors cannot ensure the foundation is correct if they do not know what the final grading will be.

For example, imagine you are looking at a typical 3-pad arrangement with what looks like a 4-inch thick fiber reinforced concrete pad. The stand is cut into a bank a bit. Will the backfill be greater than 8 inches? If so, the enclosure will now become a retaining wall. Once the skirting becomes a retaining wall, the footing requirements are different. See Section 3-9.8 of the Manufactured Dwelling and Park Specialty Code. Subparagraph (c) requires the footing to be 12 inches wide and 5 inches deep (the book shows 8 inches but it is in error). Rebar is also required in the footing.

So, the inspector needs to know what the contractor, dealer, or homeowner is planning on the final site layout. Is there really going to be more than 8 inches of backfill or are they planning on putting a sidewalk around the perimeter of the home?

Another concern is what type of retaining wall will be used. Is it going to be 8-inch block or 6-inch block? Block size less than 8 inches requires vertical and horizontal rebar in the wall as well as mortar and grout filled cells. Inspectors need to be aware of this. Other questions that must be answered are: Is this enclosure going to be a structural wall used to support the perimeter of the home? Is it also going to be used to anchor the home? Or is the enclosure going to be a foundation wall, which can hold up to 48 inches of backfill?

Contractors, dealers, homeowners, installers, and inspectors all need to know these things before the work is done. I imagine many jurisdictions have a system that relays this information, but many may not. The plan should be made clear to all parties during the permit-issuing process to ensure a proper installation.

If you have any questions, please e-mail me at albert.g.endres@state.or.us or call me at (503) 378-5975. ■

Occupancy changes take several steps

By Albert Endres

The Building Codes Division frequently receives calls from customers who want to convert a mobile home or manufactured home to a storage building or other non-habitable purposes. There are several steps a person must take.

1. Contact your local building/planning department to make certain you can do what you want. There may be ordinances about additional buildings on the property, and you may need to relocate the structure.
2. If you obtain permission, you must remove the certification labels, i.e., HUD labels or a state insignia of compliance. Once removed, you must send the label to the Building Codes Division. Include a letter stating your name, the manufacturer of the home, serial number, and address of where the home is decertified.
3. Contact the County Tax Assessor's office in the county in which the home is located. This is to ensure that the tax assessor knows the home is no longer a residence and can change the tax rate accordingly.

4. If you are going to relocate the home to a different site, obtain a trip permit from the county tax assessor. This trip permit is for taxing purposes, not oversize vehicle movement.
5. If you are relocating the home, the transporter may need to obtain an oversize vehicle permit from the Department of Transportation.
6. If you are going to take the home to a landfill, you may need to comply with the landfill requirements for recycling and identification of components in the home.
7. Refer to the local building/planning department for further guidance.

If you have any questions, please contact me at albert.g.endres@state.or.us or (503) 378-5975. ■

Oregon celebrates 500,000th HUD label

By Tom Nicolai

Oregon's 500,000th HUD label was issued during August 2007. This label represents the 500,000 floors or about 265,000 homes that Oregon manufacturers have built since HUD's inception on June 15, 1976. The industry has progressed from producing mainly single-wide homes, to double-wide, triple-wide, four-section and five-section homes with two stories.

The 500,000th HUD label was issued to Palm Harbor Homes of Millersburg. To celebrate this industry milestone, Palm Harbor hosted a presentation at the Millersburg factory Aug. 24, 2007. The home receiving the 500,000th label was a Timber Ridge Elite, sold by the Palm Harbor Village dealership of Millersburg to owners Jeff and Jill Pridegon, who will site the home in Newport.

Attendees at the presentation include the entire management team and employees of Palm Harbor Homes, Dallas Boggs and John McKiernan

representing the Palm Harbor Village Dealership, and Clayton Wood, the Mayor of Millersburg. Also attending were State Representative Andy Olson of District 15, Senator Frank Morse of District 8, Jeannie Berg, representing 5th District Congresswomen Hooley's office, and Dan Whelan, representing 4th District Congressman Peter Defazio's office.

Palm Harbor marked the event with a banner for all Palm Harbor associates and guests to sign. Palm Harbor will place the banner in its factory for all employees and guests to see. After the ceremony, Palm Harbor treated employees and guests to a BBQ luncheon, cooked by its management team.



State Representative Andy Olson and State Senator Frank Morse

Clarifying requirements for park trailers

By Brian Lamb

Over the years there have been many questions about the requirements for installing a park trailer that is more than 8 1/2 feet wide. Oregon Administrative Rule 918-525-037 (2) requires a permit for this type of installation from the authority with jurisdiction.

Installers do not need to have a manufactured dwelling installers license to install park models; however licensees may do so, according to Oregon Administrative Rule 918-525-0055. The installer is required to be licensed by the Construction Contractors Board and comply with all applicable provisions of ORS chapters 316, 656, 657, and 701. People making on-site electrical or plumbing connections on the trailers must be licensed by the Building Codes Division, according to ORS 479.620, 693.030, 447.060, and 446.400. A licensed manufactured dwelling installer may make the electrical feeder connection, building drain connection, and water utility connection.

Oregon Administrative Rule 9128-530-0005 through 918-530-0340 contains all applicable requirements for park trailer and cabana installations in Oregon.

In addition to the permit and set-up requirements for park trailers more than 8 1/2 feet wide, Oregon Administrative Rule 918-525-0045 requires park

trailer dealers and distributors to provide each potential buyer of a new park trailer with a Building Codes Division disclosure statement before completing the sale. Before presenting disclosures to potential buyers, dealers and distributors shall complete the disclosure in writing indicating the date, dealer's or distributor's name, address, and manufactured structures dealer license number. Dealers and distributors shall give one signed copy to of the disclosure to the buyer and retain one signed copy in their file for at least five years from the date of sale. Dealers and distributors must make copies of the signed disclosure available to the Building Codes Division upon request.

Dealers or distributors may reprint the Building Code Division's disclosure form or include the disclosure statement in their own contract. If a dealer or distributor prints its own disclosure, the content shall be identical to the division's disclosure statement and the type must be at least 11-point in size.

You can view all of the above mentioned rules, statutes, and disclosure forms on the Building Code Division's Web site at www.bcd.oregon.gov. If you have any questions, you may contact Brian Lamb at (503) 510-2732. ■

Four percent surcharge effective Jan. 1

By Albert Endres

The Department of Consumer and Business Services is developing the Statewide ePermitting System at the direction of House Bill 2405, passed by the 2007 Oregon Legislature. The system will streamline the current permitting and plan review processes used by the 130 local building departments that issue thousands of permits annually. It will allow customers to apply for, pay for, and receive permits online; submit plans electronically for review and tracking; and schedule, track, and receive inspection reports electronically.

Beginning Jan. 1, 2008, the surcharge on all permit fees and hourly inspection rates will increase by 4 percent. The 4 percent increase in the surcharge will defray the costs of developing and administering the Statewide ePermitting System.

Local government building programs shall collect and remit the surcharge increase in the same manner they use to submit the current state surcharge. ■

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