

**CITY OF WINNEMUCCA
AND
HUMBOLDT COUNTY
BUILDING DEPARTMENTS**

**SETTING UP YOUR MANUFACTURED
HOME**

THE INFORMATION CONTAINED IN THIS HANDOUT IS FOR SETTING UP MOBILE
HOMES/MANUFACTURED HOUSES FOR ALL AGES

Please utilize the checklist on the back of this handout. Review checklist and complete
all items before calling for an inspection

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part 1

INTRODUCTION AND PURPOSE

This handout is for the set-up of all mobile homes/manufactured houses.

Note: MH abbreviation refers to manufactured home/mobile home thru out this manual.

The purpose of this handout is to provide the owner's of mobile homes/manufactured houses with a simple guide to what is required to set up your mobile home/manufactured house in Humboldt County.

The regulations covering mobile homes/manufactured homes (sales, service, and installation) are instituted by the State of Nevada and adopted pursuant to Chapter 489 of the Nevada Revised Statutes. The current regulations went into effect March 2009.

Under an agreement between Humboldt County and the State of Nevada NRS 461.24 the County has assumed administrative authority for mobile home/manufactured house regulations, enforcement, and inspection.

On the following pages we have excerpted sections from the State regulations. Other information has been added by the Humboldt County Building Department.

Full sets of State regulations are available at our office or from Manufactured Housing Division, Nevada Department of Commerce, Carson City, Nevada. The entire set of State Regulations should be read for a "full" understanding of the requirements.

MH proposed to be placed in flood zones are required to have a Nevada engineered designed foundation and tie down system per Humboldt County Code Chapter 15.16

Every figure used in this standard pertains specifically to the Section(s) or Subsection(s); which it references. Figures will not show every method described by the narrative in the referencing Section or Subsection. They are intended to aid the user of this handout by visually describing requirements of the referencing Section or Subsection. The requirements that are prescribed in the text of referencing Section or Subsection must be complied with regardless of specific details, which may be shown in the figures.

Real property conversion requirements must be completed at the final inspection of the house.

GENERAL INFORMATION

Once submitted, your permit application may require review and approval from the following County and State Agencies:

Zoning Approval
Humboldt County Planning & Zoning Department
(Site Plan/Zoning Codes)
There may be age restrictions for the home and foundation requirements
623-6393

Street Excavation/Encroachment
Humboldt County Road Department
623-6416

Excavation/Encroachment permits are required from the Road Department for any encroachment in a county road easement or right of way. This includes driveways.

Highway Encroachment
Nevada Department of Transportation
(775) 623-8000

Flood Zone Area Review
Humboldt County Building Department

Water/Domestic Well Installation
Shall be approved by Nevada State Water Resources
(775) 687-2800

Nevada State Manufactured Housing Division
(775) 486 – 4138 - Las Vegas

Prior to final inspection, the applicant will need to contact the Bureau of Health Protection Services for septic approval. Written approval shall be submitted to this office. Approval from water district or sewer districts is also required.

We recommend you contact the following utility companies for their regulations and plan approval (if required) before you begin your project.

Power:

NV Energy– (775) 623-3667
Harney Electric – (775) 272-3336 (Orovada area)

Gas:

Natural Gas: Southwest Gas Company – (800) 832-2555
Propane: Amerigas – (775) 623-3055
Western States Propane – (775) 623-9555

Telephone:

AT&T—(800)-288-2020
Humboldt Telephone – (775) 272-6008

PERMITS

Permits are required to set-up all MH's and are obtained from the Humboldt County Building and Safety Department, 25 W. 4th Street, Winnemucca, NV (County Annex) in accordance with the following schedule. Permits are required before any construction activity begins on site.

Set Up in a park or where utility services are already installed and only connections are made. \$250.00

Set Up on a private lot requiring service runs and/or new services:

Set Up & Installation Seal	\$250.00
Electrical (up to 200 amp service)	\$ 18.50
Electrical – Miscellaneous Elect/Conduit	\$ 11.00
Water Line	\$ 7.00
Sewer Line	\$ 15.00
Temporary Gas (L.P. or Natural)	\$ 25.00
Temporary Power	\$ 25.00
*Poured Concrete Runners (Optional)	\$ 35.00
*Conversion of mobile home/manufactured house for real property	\$ 35.00
Re-inspection	\$ 80.00

Foundations may be obtained separate or with the manufactured home permit. Fees are assessed base on square footage size of the home. This office recommends that the owner consider a permanent foundation where the home is located on a private lot. Future financing and sales of the property may be an issue if a foundation is not installed.

INSPECTIONS

- ◇ Runner and stemwall footing (If manufactured home is being placed on runners or a full foundation) before pouring of concrete.
- ◇ Stemwall
- ◇ Underground utilities (water, sewer, and electrical lines). All three utilities shall be installed at the same time. This inspection also includes the electrical wiring for the well.
- ◇ Set-Up Inspection. Includes blocking, tiedowns, crossovers, marriage line lagging, continuity test, gas test, temporary electric and temporary gas. Temporary electric and gas will be a required inspection as power and gas need to be to the home at the final inspection.
- ◇ Final inspection of manufactured home. Includes appliance test, smoke detector test, GFCI outlet test, running water test, drywall complete, home weathertight, steps and grade.

IMPORTANT: Only (1) final inspection is made on a mobile home/manufactured home

All set-up requirements and all utilities must be connected to the mobile home/manufactured home before inspection can be made. No occupancy permitted before final inspection.

INSTALLATION OF MOBILE HOME/MANUFACTURED HOME AND COMMERCIAL COACHES

1. General Requirements

- A. The manufactured home must be adequately leveled prior to completion of the installation, so that the home's performance will not be adversely affected. The home will be considered adequately leveled if there is no more than 1/8" difference in floor level within 10 feet radius of any point and the exterior doors and windows of the home do not bind and can be properly opened.
- B. Installations shall not be approved until all applicable provisions of this handout have been met, including but not limited to, site preparation, support system, structural connections, tie-down requirements, access and egress requirements, under floor enclosures (when used) with ventilation and access, all utility connections and crossovers and completion of operational checks and adjustments.

2. Installation Requirements

All MH and commercial coaches must be installed in accordance with the provisions of Nevada Manufactured Home/Mobile Home & Commercial Coach Installation Standard effective March 2009. All the equipment utilized in the set-up shall be installed per their listing by the manufacturer and approved by State of Nevada Manufactured Housing Division. The data plate located in the home should be reviewed for any specific set-up requirements. If the manufacturer's installation instructions are used for a special purpose the installation instructions shall be on site during the inspection. A MH shall not be installed in a manner that takes the home out of compliance with State and Federal standards. The inspector can request manufacturer instructions for equipment used in the installation. All materials used in the installation must be listed and approved by recognized agencies. The house shall be leveled within an acceptable range.

Any MH set in a park is required to be set by a Nevada licensed installer.

3. Site Preparation/Grading:

- A. Before setting house review tie down regulations. Anchors may need to be set before house is placed.
- B. Grading shall not begin at any site until permits have been obtained.
- C. Each site shall be suitable for the intended use and must comply with all zoning or other restrictions. It is the responsibility of the applicant/owner to verify restrictions before beginning the installation.
- D. All footings shall be installed on undisturbed soil.
- E. Provide a minimum grade of 5% from the house for homes on runners or foundations. Houses soft set may have 2% grade. In order to provide adequate grade on a block set a raised pad shall be installed using gravel & road base. The gravel and road base shall be compacted 90%. Typically grade is required to slope a minimum of 10 feet from the house.
- F. If slabs or sidewalks are installed near the house they shall be sloped away a minimum of 2% to drain away from house.
- G. The home blocking system may not be set below finished grade unless an approved perimeter foundation & runners are installed per County standards. The only exception is the perimeter blocking required to be to frost line.
- H. All organic material (grass, brush, etc) must be removed from the MH set-up area

4. Vapor Retarder

The ground within the enclosed crawl space shall be covered with black .006" thick continuous membrane for all MH. Install to the following requirements.

- A. Membrane sheeting seams shall be overlapped by at least 12".
- B. Edges of the membrane sheeting shall not extend beyond the perimeter of the MH.
- C. All holes, tears, and penetrations in the membrane sheeting shall be adequately sealed or patched with durable tape.
- D. Under floor membrane sheeting shall not be in contact with wood unless the wood is pressure treated.
- E. Black polyethylene membrane sheeting shall be installed over the ground. Clear sheeting may be installed under gravel or concrete.

- F. When the manufactured home has a recessed entry, porch, or deck, and the floor in the recessed area is constructed of opening decking, the membrane sheeting shall not be installed below the open decking floor. (Section 7-K for separation requirements)

5. Footing (See Figure 303)

- A. A minimum of 18" must be maintained between the lowest member of the main frame and grade or runner under all areas of the home.
- B. Pier support footing shall be a minimum of 256 square inches and not less than the width of the pier being support.
- C. Precast and poured concrete pads must be able to withstand a minimum pressure of 3,000 psi after 28-day cure time as prescribed by ASTM C-39
 - 1. Precast Pads (Figure 303.1) – 16"x16"x4" required. May use (2) 8"x16"x4" only with concrete block piers. The piers shall be perpendicular to the joint of the pad. Note: Section 5 – only concrete block piers may be set on precast pads.
 - 2. Poured concrete pads (Figure 303.2) – 4" thick either square or round (256 sq in). Note: cannot be used to convert to real property.
 - 3. Lumber or polymer stacked pads (Figure 303.3) - Pads fastened together in (2) to (4) layers, of 2" nominal size thick foundation grade lumber, pressure and insect treated on all six sides, or pads of (2) to (4) layers of 2" nominal size thick polymer composite. Each layer shall be laid perpendicular to the layer below it.
 - 4. Lumber pads (303.4) –Pads of two layers 2" thick pressure treated. If used with concrete piers, the grain shall be parallel with the long sides of the block with no more than 1" of wood exposed beyond the long sides of the block. A single 2x12x18 will not meet the minimum 256 sq. in. requirement. Cut ends of pressure treated lumber must be field treated, in accordance with AWPA Standard M4-06.
 - 5. Runners (Figure 303.6) – Runners & perimeter foundations requirements are on separate handouts.
- D. Perimeter Blocking Footing - Required on all MHs that measure over 11' in width from sidewall to sidewall. (See Figure 303)
 - 1. Perimeter blocking footing shall be installed to the following guidelines:
 - a. If runners are installed a continuous footing to frost line is required to support the perimeter blocking (see separate handout)
 - 2. The footings for block set under the perimeter shall be any of the following:
 - a. Pier support footing shall be a minimum of 256 square inches and not less than the width of the pier being support.
 - b. Precast and poured concrete pads must be able to withstand a minimum pressure of 3,000 psi after 28-day cure time.
 - 1. Precast Pads – 16"x16"x4" required. May use (2) 8"x16"x4" only with concrete block piers. The piers shall be perpendicular to the joist of the pad
 - 2. Poured concrete pads – 4" thick either square or round (256 sq in). Note these cannot be used to convert to real property.
 - c. Lumber or polymer stacked pads. Pads fastened together in (2) to (4) layers, of 2" nominal size thick foundation grade lumber, pressure and insect treated on all six sides, or pads of (2) to (4) layers of 2" nominal size thick polymer composite. Each layer shall be laid perpendicular to the layer below it.
 - d. Lumber pads – 2" thick pressure treated. If used with concrete piers, the grain shall be parallel with the long sides of the block with no more than 1" of wood exposed beyond the long sides of the block. A single 2x12x18 will not meet the minimum 256 sq. in. requirement.
 - e. Full perimeter foundation (see separate handout)

5. Piers: (Figure 304)

All materials or products for support of a MH must be approved by State of Nevada Manufactured Housing Division or listed specifically as a support or pier system. The maximum height shall be 36". Real property requires minimum 16" pier height.

A. Block Piers (Figure 304.1- 304.3)

1. Concrete blocks

- a. Blocks shall be either open or closed cell pre-cast of nominal size 8"x8"x16". Open cell blocks shall be positioned vertically. Blocks used on a poured footing must have a minimum 1/2" pressure treated wood pad between the block and the top of the footing. Single stack block piers shall be used for loads not to exceed 5,000 lbs. Double stack block piers shall be used for loads not to exceed 16,000 lbs. Double and single piers may be combined for higher loads.

b. Frame piers less than 36" high

1. Constructed of single, open, or closed-cell concrete blocks, 8"x8"x16", when the design capacity is not exceeded.
2. The frame piers must be installed so that the long sides are at right angles to the support I-beam as shown in Figure 303.7.
3. The concrete blocks must be stacked with their hollow cells aligned vertically and must be positioned at right angles to the footings.
4. Horizontal offsets from the top to the bottom of the pier must not exceed 1/2"

c. Frame piers 36" to 67" high

1. All piers and all corner piers over three blocks high must be constructed out of double, interlocked concrete blocks, as show in Figure 303.8, when the design capacity of the block is not exceeded. Mortar is not required for concrete block piers, unless other specified in a) installation instructions or required by a professional engineer or registered architect; b) horizontal offsets from the top to the bottom of the pier must not exceed one inch.

d. Frame piers over 67" high

1. Must be designed by a registered professional engineer or registered architect, in accordance with acceptable engineering practice.

B. Perimeter Support Piers

1. Piers required at mate-line supports, perimeter piers, and piers at exterior wall openings are permitted to be constructed of single open-cell or closed-cell concrete blocks, with nominal dimensions of 8"x8"x16" to a maximum height of 54", when the design capacity of the block is not exceeded.

C. Block Pier Caps (Figures 304.1, 304.2, 304.3) Each block pier shall be capped with a pier cap equal in area to the pier blocking. Pier caps shall be one or more of the following. When split caps are used on double-stacked blocks, the caps must be installed with the long dimensions across the joint in the blocks below.

1. Pre-cast block – a solid concrete block with a nominal thickness of 4".
2. Lumber – (1) 2" nominally thick #2 or better grade lumber
3. Polymer – (1) 2" nominally thick wood polymer composite
4. Other – Listed or equivalent materials approved by Manufactured Housing.

D. Block Pier Shims (Figures 304.1, 304.2, 304.3)

1. Precast concrete – 2" thick solid concrete blocks equal in area to the pier cap
2. Plywood – 3/4" or thicker plywood equal in area to the pier cap
3. Lumber – 2" nominally thick #2 or better grade lumber not less than 5 1/2" in width and 16" long
4. Polymer – 1 1/4" min. thickness wood polymer not less than 5 1/2" in width and 16" long. Maximum 2 layers permitted.
5. Other – listed or equivalent materials approved by Manufactured Housing

- E. Block Pier Wedges
 - 1. No more than two sets of wedges nominal 4"x6"x1" shims to level the home and fill any gaps between the base of the main chassis beam and the top of the pier cap may be used. They must be fitted perpendicular with, and driven tight to, the bottom of the main frame or floor to transfer loads uniformly to the pier. See Figure 303.9. Wedges must be driven in tightly so they do not occupy more than 1" of vertical height.
- F. Prefabricated Piers (Figure 304.4)
 - 1. Shall be placed on approved footings. They shall not exceed the size of the footing and shall be used in a manner consistent with its listing.
 - 2. All prefabricated piers shall be tested and listed to be used as 4,000 lbs.
 - 3. The installation of piers shall be in compliance with pier manufacturer's instructions, which shall be present at the time of inspection.
 - 4. No shims shall be used with prefabricated piers
 - 5. All piers shall be of the type fitting with an adjustable head and nut. The extension of the head adjustment shall not exceed 2" when finally positioned.
 - 6. The heads of prefabricated piers shall alternate at the frame support.
 - 7. Shall not be installed on precast concrete footing pads.
- G. Block/Pier Spacing (Figure 305)
 - 1. Spacing of Main Frame Support Pier & Footing (Figure 306)
 - a. 12" from the ends of the frames on standard homes
 - b. 30" on perimeter foundation set homes
 - c. The footings and pier stands shall continue to be set a maximum of 6' o.c. the full length of the frame.
 - d. For home less than 11' in width and perimeter supports are not being used, the maximum pier spacing of 5' on center for the full length of the frame is to be used.
 - e. A 6" variance is allowable to clear obstructions.
 - 2. Spacing of Perimeter Supports for Piers and Footings for homes over 11' in width (Figure 305)
 - a. 6" or less from each corner
 - b. 8' o.c. for roof loads up to 30 psf.
 - c. 6' o.c. for roof loads of 40 psf.

FIGURE 303 - FOOTINGS

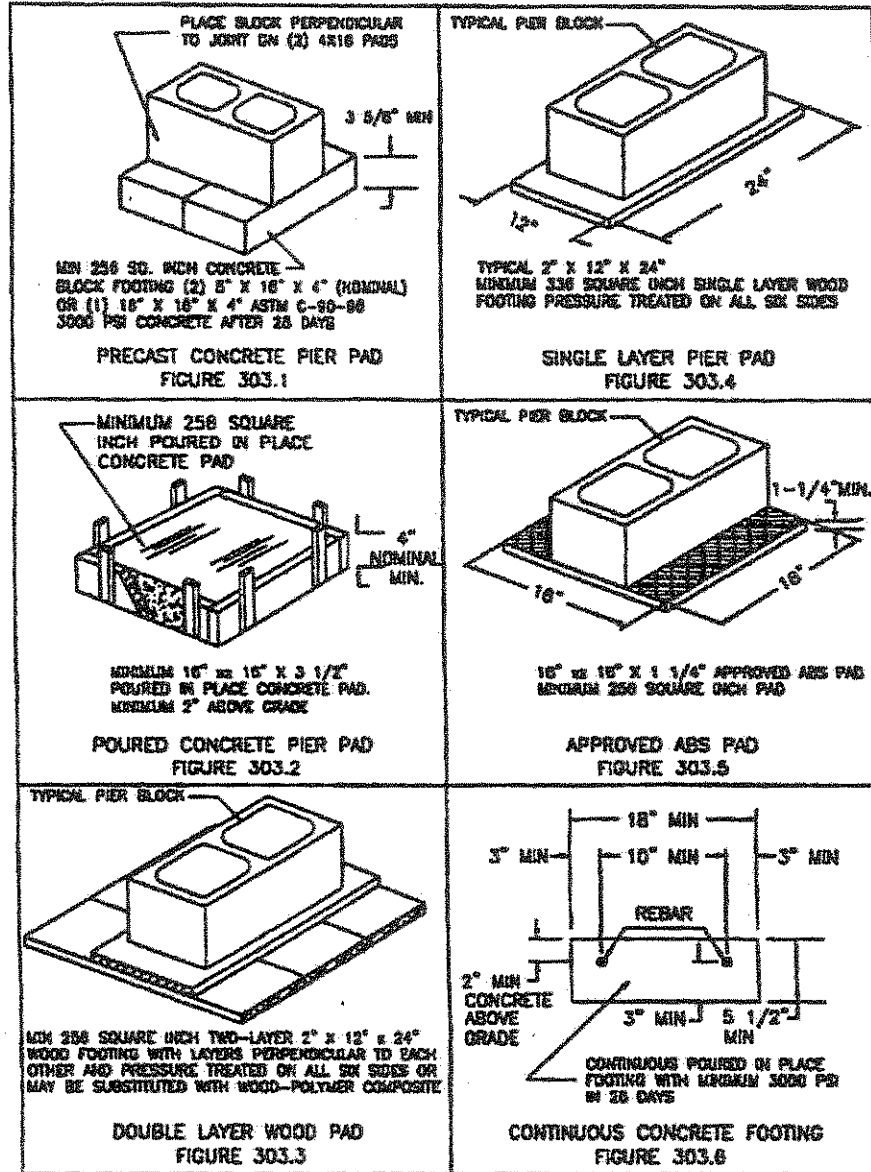


FIGURE 304 - PIERS

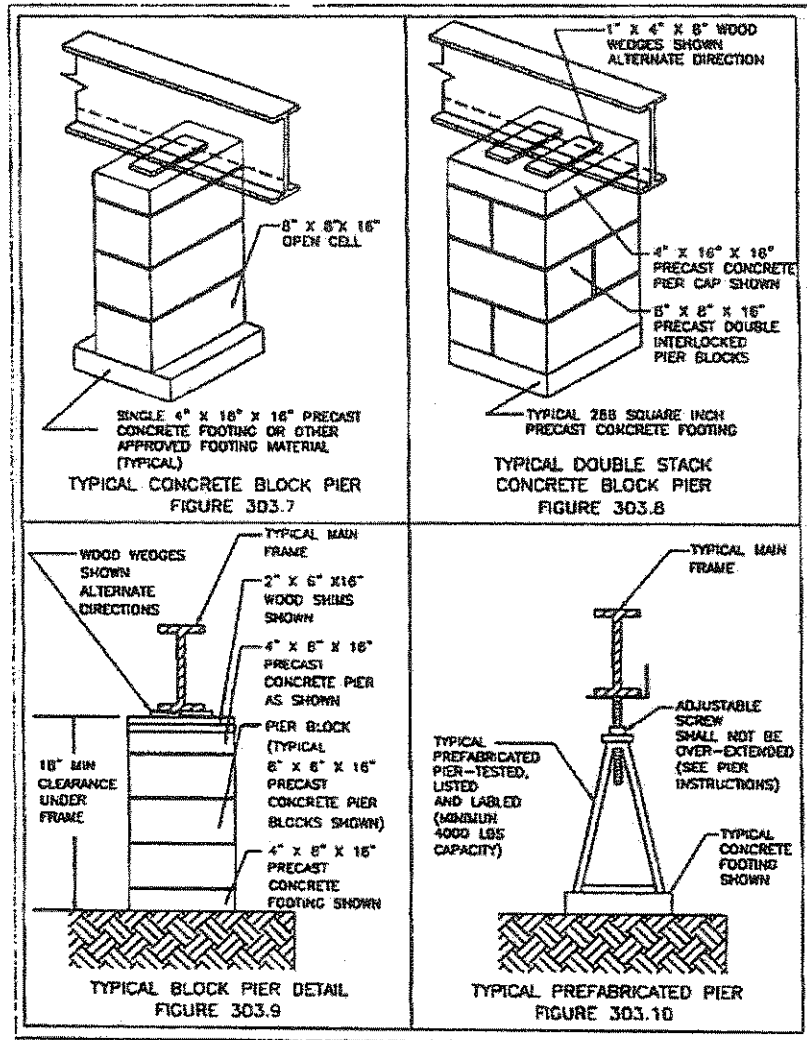
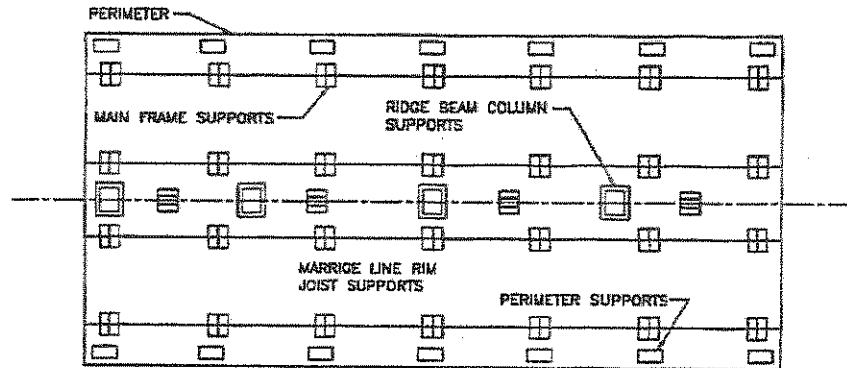






FIGURE 305
BLOCK/PIER SPACING



 PERIMETER SUPPORTS	LOCATED WITHIN 6 INCHES OF CORNER (PERIMETER SUPPORTS NOT REQUIRED ON FOUNDATIONS) AND 8 FEET O.C. FOR ROOF LOAD UP TO 30 PSF; 6 FT O.C. FOR 40 PSF; 4 FT O.C. FOR 80 PSF; FOUNDATIONS FOR 100 PSF AND OVER
 MAIN BEAM SUPPORTS	LOCATED WITHIN 12 INCHES OF EACH END (36" FOR FOUNDATIONS) AND 8 FT O.C. FOR ALL ROOF LOADS
 RIDGE BEAM SUPPORTS	LOCATED WITHIN 6 INCHES OF EACH END AND AS REQUIRED AND MARKED BY THE MANUFACTURER (END SUPPORTS NOT REQUIRED ON FOUNDATIONS)
 MARRIAGE LINE RIM JOIST SUPPORTS	LOCATED 7 FT O.C. FOR ROOF LOADS FROM 20 TO 40 PSF; 6 FT FOR 40 PSF; 4 FT O.C. FOR 80 TO 80 PSF; 3 FT O.C. FOR 80 TO 100 PSF; 2FT OVER 100

SUPPORT SYSTEM