

Sure-Lock Lap Siding Concealed Nailing System

- IMPORTANT -

- Nail 16" O.C. with recommended nails.
- Gap all abutments 1/8" to 3/16" and caulk.
- Use appropriate vapor barrier.
- Follow nailing schedules.
- Follow painting instructions carefully.
- Ventilate attics & crawl spaces.

Codes and Standards

Weyerhaeuser hardboard siding meets the requirements of the following codes and standards:

Uniform Building Code
ICBO 2319 and 3567
Basic/National Building Code
Standard Building Code
HUD Minimum Property Standard
Federal Mobile Home Code
American National Standard ANSI-ANA 135.6
City of Los Angeles General Approval Report #24881

Warranty Requirements

Satisfactory performance requires adherence to these instructions. Failure to comply with the following instructions may void all warranties, including implied warranties of merchantability and fitness. Deviations from these instructions must be approved in writing by the Hardboard Siding Customer Service Manager.

Storage

Store siding flat and well supported on stringers to avoid sagging.

The siding must be covered and protected from the elements.

Do not apply the siding when wet (moisture content exceeds 10%).

Basic Structure

The structure shall be constructed to meet applicable local building requirements, HUD minimum property standards, or HUD mobile home construction and safety standards.

The nailing schedule shall not exceed 16" o.c.

If 24" o.c. vertical framing is used, the siding must be applied over sheathing (7/16" oriented strand board, 1/2" exterior grade plywood, or equivalent). Our normal nailing schedule must be followed, nailing 24" o.c. into the studs and then intermediate nailing through the sheathing with a 6d galvanized ring shank nail or equivalent. This effectively creates a 12" o.c. nailing schedule.

Wet blown insulation is not allowed.

Allow at least 6" between the bottom of the siding and the soil.

Siding should not be in direct contact with concrete.

Where siding meets a roof, it must be spaced a minimum of 2" from the plane of the roof, and be properly flashed.

The design of the structure should be such that water does not accumulate against the siding.

Leave at least a 1/8" to 3/16" gap around door and window frames and where the siding abuts other materials. Caulk gaps thoroughly.

Foam sheathing: If foam sheathing or other soft sheathing is used, nails must penetrate the framing at least 1 1/2". Sheathing manufacturer's instructions must be followed.

Weyerhaeuser Company will not be responsible for problems related to crushing of the foam during or after siding applications, or moisture accumulation in the wall cavity.

Vapor Barriers and Ventilation

A vapor barrier rated 1 perm or less, applied so that it is continuous across the interior side of the entire wall, is required on all walls with hardboard siding. Examples include 6 mil polyethylene, foil-backed gypsum, and kraft-backed insulation stapled so that the tabs are overlapped and stapled to the studs.

A vapor barrier rated 1 perm or less must be installed between the wood sill and the foundation wall.

A vapor barrier ground cover must be used in crawl spaces.

Crawl spaces, attics, and living spaces must be ventilated at least to the minimum specified in the HUD Standards.

Nailing

Use corrosion resistant boxhead type nails, with a minimum head diameter of 1/4" (10% variance). DO NOT USE STAPLES.

Nailing must follow the instructions specified on the back of this sheet.

Nails must penetrate the framing at least 1 1/2". Do not nail at an angle.

Nail from end to end, or from center to end, so that internal stresses are not built into the siding.

Drive all nails so that the bottom of the nail head is flush with the siding surface. DO NOT COUNTERSINK OR RUPTURE THE SIDING SURFACE.

Caulking

Caulk all overdriven nails and around all openings such as window and door frames. Use nonhardening, paintable, mildew-resistant exterior grade caulking material. High quality acrylic latex caulk or equal is recommended.

Painting

1. Touch up damaged areas with a high quality oil or alkyd-based primer. Siding must be finish-painted within 90 days after installation. If siding is exposed for a longer period, reprime the siding with a high quality exterior-grade primer. Siding must be clean and dry when paint is applied.
2. Use high-quality exterior acrylic latex or alkyd-based paints containing appropriate amount of mildewcide for local moisture conditions. For best performance, 100% acrylic latex paints are recommended. Do not use shake and shingle paints, flat oil or flat alkyd paints, vinyl acetate (PVA), vinyl acrylic, or vinyl acetate-acrylic co-polymer paints.
3. A total of 4 dry mils, including factory primer, is required. This is best achieved with 2 coats of finish paint. For best performance of smooth-faced siding, one coat of high-quality oil or alkyd-based primer plus one coat (minimum) of acrylic latex paint is recommended. Drip edges on lap siding must be covered.
4. All surfaces and edges must be painted if they are exposed to weather in place.
5. Follow paint manufacturer's recommendations for hardboard siding.

Finished Homes - Ventilation

Finished homes (conventional and mobile) should be ventilated to avoid excessive moisture buildup within the structure.

Sure-Lock Lap Siding Concealed Nailing System Instructions

Sheathing is strongly recommended but not required. If no sheathing is used, apply appropriate building paper or air infiltration barrier beneath the siding. See Figure 1.

Apply these lap siding products horizontally on walls and gables that meet racking requirements.

Start application by ripping 7/8" to 15/16" off the top edge of sufficient lengths of Sure-Lock to provide an interlock starter strip. See detail 8 in Figure 1. The bottom portions of the ripped pieces may be used for top courses. Optional metal starter clips are available from your siding supplier. Place 16" o.c.

Sure-Lock requires one nail per lap piece on all studs. **Make sure each nail is placed as precisely as possible on the scored nailing guide line.** This insures that the nail head is properly concealed or kept from penetrating the interlock groove. See detail 3 in Figure 1.

Use corrosion resistant 8d boxhead type nails on lap siding, nailed 16" o.c.

Periodic leveling checks are necessary to assure the horizontal lap remains level. Make minor adjustments as necessary.

Some areas such as top courses, under windows, etc. may require exposed nailing. It is optional to nail through both courses at any butt joints. See detail 9 of Figure 1. In all of the above exposed nailing situations, it is permitted to countersink the nail no more than 1/16" and fill with caulk,

exterior spackling, or equal. If desired, the face nailing may be performed as normal — bottom of nailhead flush to surface of siding, with no filling necessary.

Concealed nails may be countersunk up to 1/16" without caulk or spackling compound filler. It is recommended that **concealed nails be nailed with top of the nail flush or slightly countersunk** to insure ease of interlock during application.

Vertical butt joints are to be located only at studs. Stagger vertical butt joints on successive courses. **Nail on both sides of the joint at nail scribe.** See Figure 1.

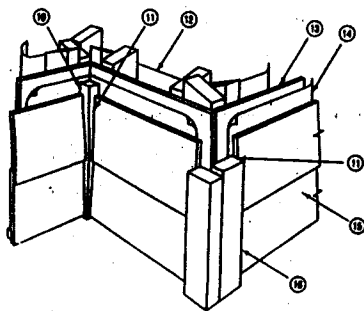
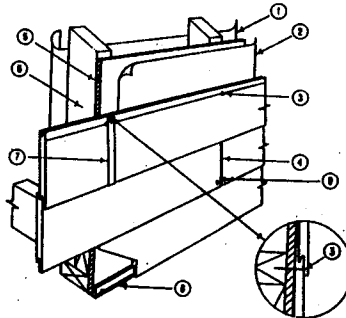
Vertical butt joint covers are recommended. They are available from your siding supplier. Do not butt ends together snugly. Leave a 3/16" gap to allow room for expansion within the vertical joint covers. See Figure 1. Caulking the butt end gaps in lieu of joint covers is allowed, but requires a higher degree of maintenance over the life of the siding.

When butting siding to inside or outside wood corners, use at least 1 1/8" thick dry wood material. Wood corner trim may not be applied over siding. Metal corners may also be applied over siding. See Figures 2 & 3.

Sure-Lock may require special treatment in such areas as beneath windows or beneath gable soffits. Suggested treatments would include trimming off part of the lower back interlock lip or the upper front interlock lip, adding surface trim, or face nailing.

**FIGURE 1
TYPICAL SURE-LOCK LAP SIDING
WALL SECTION**

- 1 Vapor barrier
- 2 Building paper or air infiltration barrier
- 3 Nails on scribed line
- 4 Vertical butt joint with 3/16" gap
- 5 Sheathing
- 6 Stud
- 7 Vertical butt joint cover.
- 8 Starter strip
- 9 Optional face-nailing at butt joint

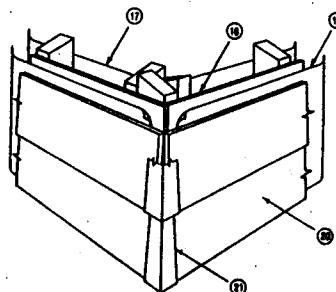


**FIGURE 2
WOOD CORNERS**

- 10 1 1/8"x1 1/8" corner strip
- 11 Caulk 3/16" gap
- 12 Vapor barrier
- 13 Sheathing
- 14 Building paper or air infiltration barrier
- 15 Siding
- 16 Corner boards

**FIGURE 3
METAL OUTSIDE CORNERS**

- 17 Vapor barrier
- 18 Sheathing
- 19 Building paper or air infiltration barrier
- 20 Siding
- 21 Metal outside corner



Panel Siding – Shiplap and Square Edge Instructions

Sheathing is strongly recommended, but not required. Start at a corner of the structure and position the panel square on the wall so that the nailing area of the next vertical joint will fall over studs or other framing members. See Figure 12.

Never force panels into place. Nail panels into place. Nail panels 1/2" to 5/8" from the overlap edge. See Figure 13.

Panels with the 3/8" striated groove (808 and 404) must be butted to the stop so that there is a 1/16" gap on the back side of the vertical joint after installation. See Figure 14.

Nail panels according to the Nailing Schedule. Use corrosion-resistant nails. See special nailing instructions for racking requirements.

Butt panels at inside and outside corners, leaving a 3/16" gap. Caulk and cover inside corners with a minimum 3/4" x 3/4" dry wood strip. Install trim boards at outside corners. Make sure the corner trim covers the gap between panels at the corner. See Figure 15.

At horizontal joints with other types of siding or at stacked-panel butt joints, use z-flashing or overlap siding at least 1". Caulk the gap between the top piece and the z-flashing. See Figures 16 & 17.

When horizontal joints are overlapped or flashed, the panels can be nailed 16" o.c. at the joint.

The shiplap joint on Adobe panels will be visible unless covered with a batten.

Vertical butt joints on square edge products are to be covered with battens with nails spaced not more than 12" on center.

HARDBOARD TRIM

Hardboard trim at the base of panels is **not recommended** because of a tendency to trap water. If hardboard strips are used as base trim, be sure to thoroughly caulk the top of the trim. All raw edges on the panel and all raw edges of the trim must be painted. See Figure 18.

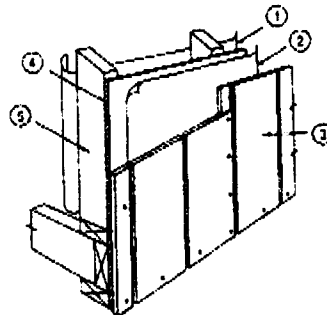


FIGURE 12
TYPICAL PANEL SIDING
WALL SECTION

- 1 Vapor barrier
- 2 Building paper or air infiltration barrier
- 3 Siding
- 4 Sheathing
- 5 Stud

FIGURE 13
SHIPLAP PANEL SIDING

- 6 Nail 1/2" to 5/8" from edge
- 7 Engineered 1/16" gap
- 8 Siding
- 9 Sheathing
- 10 Stud

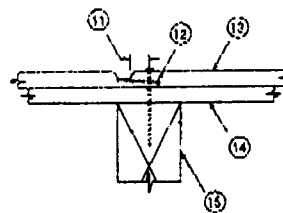
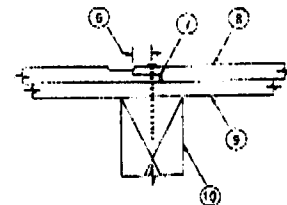


FIGURE 14
808 & 404 PANEL SIDING

- 11 Nail 1/2" to 5/8" from edge
- 12 Engineered 1/16" gap
- 13 Siding
- 14 Sheathing
- 15 Stud

FIGURE 15
WOOD CORNERS

- 16 3/4" x 3/4" corner strip
- 17 Caulk
- 18 Vapor barrier
- 19 Sheathing
- 20 Building paper or air infiltration barrier
- 21 Siding
- 22 Outside corner wood trim

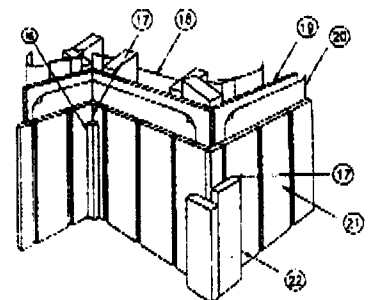
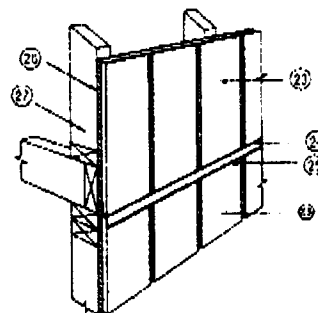


FIGURE 16
HORIZONTAL Z-FLASHING JOINT

- 23 Siding
- 24 Caulk
- 25 Z-Flashing
- 26 Sheathing
- 27 Stud

FIGURE 17
HORIZONTAL OVERLAP JOINT

- 28 Siding
- 29 1" Overlap
- 30 Sheathing
- 31 Stud
- 32 Optional spacer

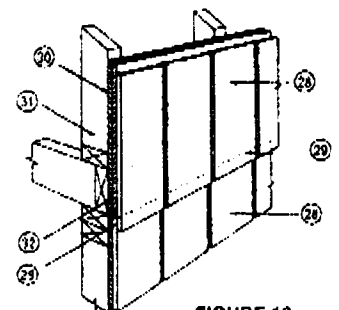
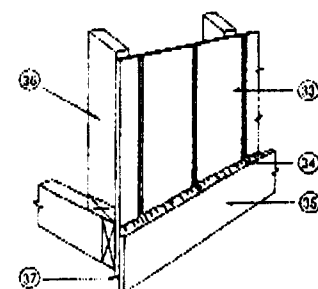


FIGURE 18
HARDBOARD TRIM

- 33 Siding
- 34 Caulk or flash
- 35 Trim
- 36 Stud
- 37 Painted panel edge

PANEL NAILING SCHEDULE

Siding	How to apply	Minimum Nail Size (Box Nail)	Edge Nailing Location	Nail Spacing	
				Racking NOT provided by Siding ¹	Racking provided by Siding ²
Square edge panel	Direct to studs	6d	3/8"-1/2" vertical	6" O.C. edges	4" O.C. edges
	Over sheathing	8d	1/2"-2" horizontal	12" O.C. intermediate	8" O.C. intermediate
Shiplap edge panel	Direct to studs	6d	1/2"-5/8" vertical	6" O.C. edges	4" O.C. edges
	Over sheathing	8d	1/2"-2" horizontal	12" O.C. intermediate	8" O.C. intermediate

NOTE:
¹Racking resistance per Section 500 Appendix D HUD-MPS 4900 1(FHA Circular 12) provided by sheathing or corner brace.
²Racking resistance per Section 500 Appendix D HUD-MPS 4900 1(FHA Circular 12) provided by siding. Test data based on 2" x 4" framing. Nail all edges 4" O.C.

6", 8", 9 1/2" and 12" Lap Siding Instructions

Sheathing is strongly recommended but not required. If no sheathing is used, apply appropriate building paper or air infiltration barrier beneath the siding. See Figure 19.

Apply these lap siding products horizontally on walls and gables that meet racking requirements. Lap siding does not provide shear value.

Start application by nailing a starter strip (approximately 1-1/2" x 3/8" thick) aligned with the bottom edge of the sill plate. Level and install the first course of siding so that its lower edge is 1/8" to 1/4" below the starter strip. Overlap successive courses at least 1". See Figure 19.

Nail lap products 5/8" to 3/4" up from the drip edge. Be sure nails penetrate through both pieces of siding.

Use corrosion-resistant 8d boxhead type nails on lap siding, nailed 16" o.c.

Vertical butt joints are to be located only at studs. Stagger vertical butt joints on successive courses. Nails must penetrate through both siding courses and **be nailed both top and bottom on each side of the joint**. See Figure 20. Butt joints may be eliminated by installing vertical trim that abuts the siding every 16' or less.

Vertical butt joint covers are recommended. They are available from your siding supplier. Do not butt ends together snugly. Leave a 3/16" gap to allow room for expansion within the vertical joint covers. See Figure 20. Caulking the butt end gaps in lieu of joint covers is allowed, but requires a higher degree of homeowner maintenance over the life of the siding.

When butting siding to inside or outside wood corners, use at least 1-1/8" thick dry wood material. Metal corners may also be applied over siding. See Figures 21 & 22.

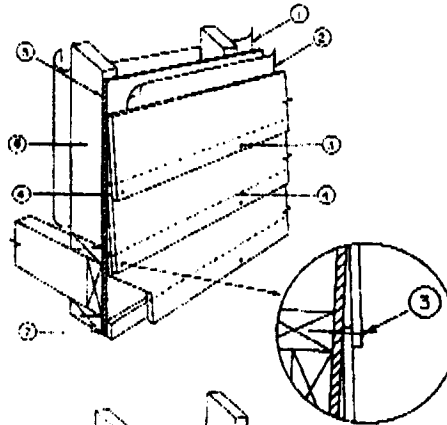


FIGURE 19
TYPICAL LAP SIDING
WALL SECTION

- 1 Vapor barrier
- 2 Building paper or air infiltration barrier
- 3 Nails 5/8" or 3/4" from drip edge
- 4 1" overlap
- 5 Sheathing
- 6 Stud
- 7 Starter strip

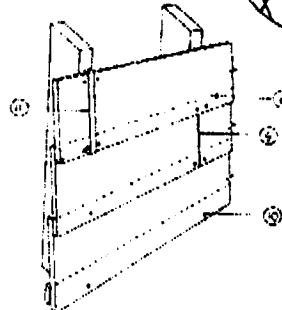


FIGURE 20
LAP SIDING JOINTS & COVERS

- 8 1" overlap
- 9 Vertical butt joint with 3/16" gap
- 10 Nails 5/8" to 3/4" from drip edge
- 11 Vertical butt joint cover

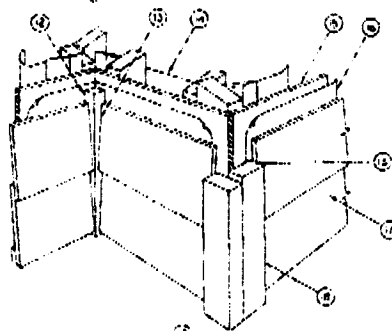


FIGURE 21
WOOD CORNERS

- 12 1-1/8" x 1-1/8" corner strip
- 13 Caulk 3/16" gap
- 14 Vapor barrier
- 15 Sheathing
- 16 Building paper or air infiltration barrier
- 17 Siding
- 18 Corner boards

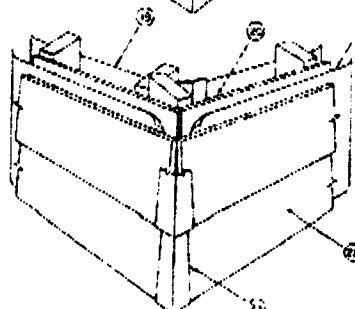
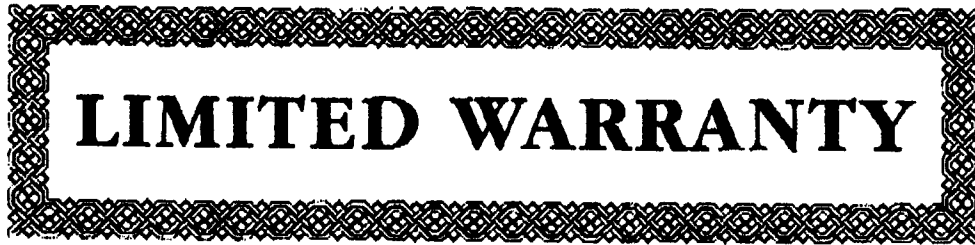


FIGURE 22
METAL OUTSIDE CORNERS

- 19 Vapor barrier
- 20 Sheathing
- 21 Building paper or air infiltration barrier
- 22 Siding
- 23 Metal outside corner



LIMITED WARRANTY

LIMITED 30-YEAR WARRANTY ON 1/2" HARDBOARD SIDING

Weyerhaeuser 1/2" thick Hardboard Siding will be free from defects in materials and workmanship, will comply with the Voluntary Product Standard in effect at the time of manufacture and will not buckle due to a siding defect. The term "buckle" in this warranty means warping more than one-quarter inch out of plane between studs. If Weyerhaeuser has determined that the product is found not to comply with this warranty within 30 years from installation, Weyerhaeuser will offer labor and materials necessary to replace the defective siding, or the cash equivalent, not to exceed 3 times the original purchase price of the siding during the first five years of the warranty period. Thereafter, during the 6th through 30th year, using the method prescribed above, any warranty payments shall be reduced by 4% each year such that after 30 years have elapsed since installation of the siding, no warranty shall apply.

LIMITED 25-YEAR WARRANTY ON 7/16" HARDBOARD SIDING

Weyerhaeuser 7/16" thick Hardboard Siding will be free from defects in materials and workmanship and will comply with the Voluntary Product Standard in effect at the time of manufacture. If Weyerhaeuser has determined that the product is found not to comply with this warranty within 25 years from installation, Weyerhaeuser will offer labor and materials necessary to replace the defective siding, or the cash equivalent, not to exceed 2½ times the original purchase price of the siding during the first five years of the warranty period. Thereafter, during the 6th through the 25th year, using the method prescribed above, any warranty payments shall be reduced by 5% each year such that after 25 years have elapsed since installation of the siding, no warranty shall apply.

LIMITED 5-YEAR WARRANTY ON FACTORY-APPLIED COATINGS

The factory applied primed coatings will not peel, blister or wear through due to normal weathering for 5 years from date of installation. If Weyerhaeuser has determined that the factory-applied coatings have failed to perform as stated above, Weyerhaeuser will offer the reasonable cash equivalent for the labor and materials to refinish the product with one coat of a single color of acrylic latex coating.

CONDITIONS AND EXCEPTIONS

All claims should be submitted to the installer, who must be afforded a reasonable opportunity to take corrective action or to notify responsible parties. If a claim is not resolved within 30 days after notice to the installer, written notice would be given directly to Weyerhaeuser Company at the address shown below. Weyerhaeuser Company must be afforded a reasonable opportunity to investigate before corrective action is taken.

These warranties do not cover: (a) damage from physical forces such as impact, abrasion, abuse; (b) prolonged contact with accumulated water due to roof leaks, ineffective vapor barriers, or failure to maintain caulking, finish coatings, or other normal weather protection; (c) use of ripped hardboard siding as trim; (d) reject or economy grades; (e) buckling or waviness caused by improper installation or construction (studs out of plane, wet blown insulation, localized wall movement and crushed foams); (f) performance of field applied finishes; (g) performance of 7/16" thick siding in Alaska, Hawaii, Northern California and west of the Cascades in Washington, Oregon and Canada; (h) mildew; (i) performance of any product outside of the U.S. and Canada; or (j) other causes beyond the siding manufacturer's control.

THESE WARRANTIES REQUIRE STRICT COMPLIANCE WITH WEYERHAEUSER'S STORAGE, HANDLING, INSTALLATION AND MAINTENANCE INSTRUCTIONS. WEYERHAEUSER IS NOT RESPONSIBLE FOR DAMAGE OR UNSATISFACTORY PERFORMANCE CAUSED BY OTHERS. ITS SOLE RESPONSIBILITY IS AS STATED HEREIN, AND IT SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.)

NOTE: This warranty supersedes all other warranties including the General Guaranty and Limitations defined in paragraph 2 of the General Terms of Sales.

KPHBS-550 5/96

For Mill Service: WEYERHAEUSER COMPANY • P.O. Box 9 • Klamath Falls, Oregon 97601 • 1-800-547-5201 • 1-541-883-4853