

Wood-Base Exterior Sidings for Houses

Exterior sidings influence the appearance and maintenance of a house. Careful selection of the type and pattern of siding is very important. Wood-base siding materials include lumber, plywood, shingles, shakes, hardboard, and particleboard. Siding can be furnished with a smoothly planed or rough-sawn surface, and can be obtained unfinished, preprimed, or completely prefinished. Materials suitable for either vertical or horizontal applications are available.

Lumber Siding

The preferred species of wood for siding are those that:

- are dimensionally stable
- exhibit minimum surface checking
- possess natural durability
- take finishes well
- work easily

The cedars and redwoods have ideal characteristics for use as exterior siding. The soft pines also have favorable characteristics.

Use vertical-grain lumber rather than flat-grain to promote good performance. Expose the bark side of flat-grain lumber to the weather (fig. 1).

Always use well-seasoned lumber siding. Material kiln-dried to 12-percent moisture content is recommended. Avoid siding with excessive defects such as knots if a painted finish is desired.

A variety of patterns and sizes is available for horizontal and vertical applications (fig. 2). Smoothly planed or sanded surfaces are available and are most appropriate for painting. Rough or re-sawn surfaces are also on the market and are particularly suitable for finishing with water-repellent preservatives and stains. More details on finishing exterior wood surfaces are contained in the Iowa State University extension pamphlet Pm-362, "Finishing Exterior Wood Surfaces."

Always use corrosion-resistant nails (galvanized, aluminum, or stainless steel) to fasten wood siding. Use

Prepared by Dean R. Prestemon, extension forester.

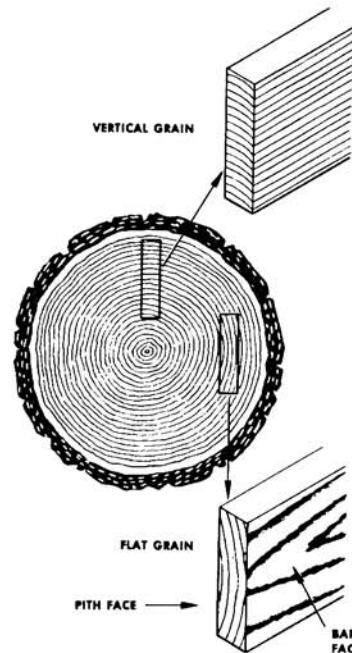


Fig. 1. Vertical and flat-grain lumber and how they are cut from a log.

the correct nailing procedure to minimize splitting and warping (fig. 2). Provide the minimum lap recommended when installing horizontal siding. For example, the minimum lap for bevel siding is one inch. Minimize moisture penetration by caulking joints and capping corners. Maintain at least 8 inches between the siding and the soil. More information on minimizing moisture problems is contained in the Iowa State University extension pamphlet Pm-882, "Minimizing Moisture Problems."

Plywood Siding

Plywood siding from numerous species is available in a wide variety of patterns and surface textures. Plywood with an overlay of resin-treated wood fiber is also on the

Cooperative Extension Service
Iowa State University

Ames, Iowa 50011

Pm-959 | July 1980

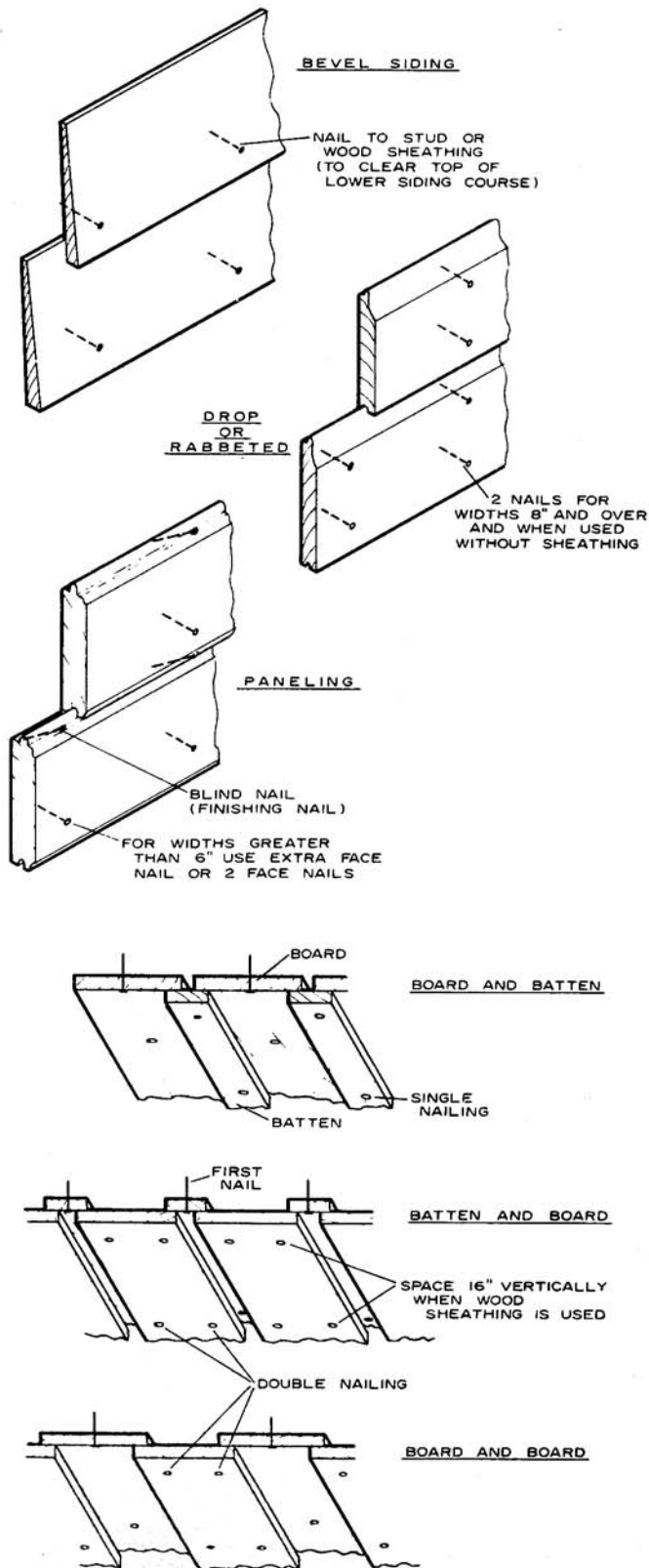


Fig. 2. Types of lumber siding and proper placement of nails.

market. Plywood used for siding should always be "exterior" grade. Siding panel width and length dimensions are usually 4 feet by 8 feet, although 9- and 10-foot lengths are obtainable. Plywood strips are available as lap siding in lengths up to 16 feet. Thickness ranges from 1 1/32 inches to 3/4 inches.

Surfaces may be repaired by using either wood or synthetic patches. The grade mark on the panel designates the number and type of repairs allowed. For example, the designation "6-S/W" indicates that six synthetic or wood repairs are permitted per panel.

The grade mark also indicates whether plywood siding panels are designed to be attached to framing members either 16 or 24 inches apart. An example of a grade mark from the American Plywood Association is shown in figure 3. The siding grade trademark shows the type of siding, number, and type of repairs allowed, the species group, the maximum span, the grade, the Voluntary Product Standard number, and the mill number.

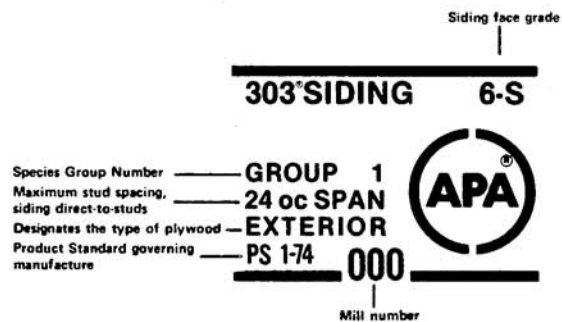


Fig. 3. Typical grademark on plywood siding from the American Plywood Association.

Plywood siding may be applied directly to the wall framing or over sheathing (fig. 4). A 1/16-inch space is recommended at all panel end and edge joints to accommodate shrinking and swelling of the lumber framing and plywood. Always use corrosion-resistant nails to fasten plywood siding. Nail at 6-inch intervals around the perimeter and at 12-inch intervals elsewhere. Stain finishes are particularly appropriate for most plywood sidings. Overlaid plywood provides an excellent substrate for painting. Remember to caulk all joints and around openings before finishing.

Shingles and Shakes

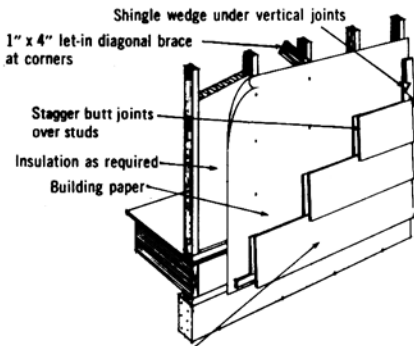
Western red cedar is the most common species used for shingles and shakes. Redwood, northern white cedar, and bald cypress also may perform satisfactorily. Only heartwood, vertical-grain, and knot-free material is used for top grades.

Wood shingles are available in standard lengths of 16, 18, and 24 inches. Shingles are tapered with a butt

thickness ranging from 0.4 to 0.5 inches. Shakes are usually available in several types. The most popular is the "handsplit and re-sawn" type. Length is either 18 or 24 inches with a butt thickness generally between 1/2 and 3/4 inches.

Single-course and double-course are the two basic application methods for shingle siding. Single-course application is shown in figure 5. Shingles or shakes may be used over wood or plywood sheathing. For

Plywood Lap Siding



EXTERIOR plywood siding
Maximum width 24"
Minimum head lap 3/4"

Leave 1/16" space at all panel end and edge joints.

Siding Regular Vertical Application

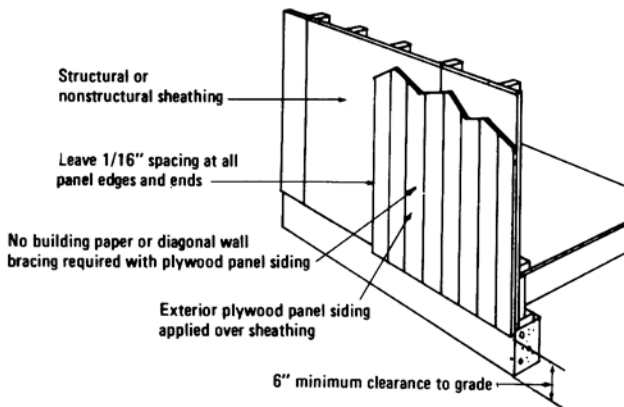
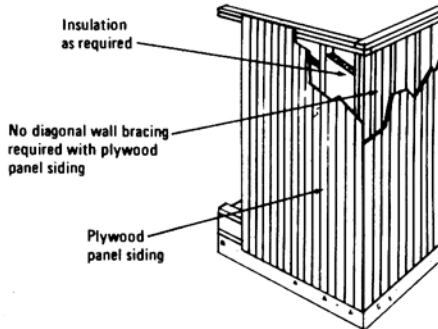


Fig. 4. Types of plywood siding and application methods.

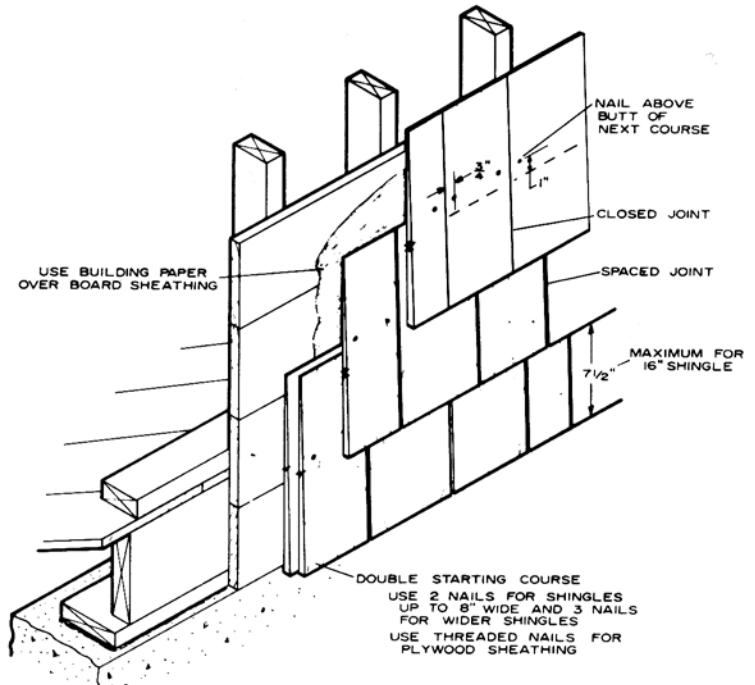


Fig. 5. Single-course application of shingle siding.

non-wood sheathing, 1-inch by 3-inch or 1-inch by 4-inch wood nailing strips are used as a base. Exposure distances are based upon length of shingle or shake and by method of application. Use corrosion-resistant nails long enough to penetrate well into the sheathing or backing strip. Wood shingles or shakes may be stained, painted, or allowed to weather naturally.

Hardboard Siding

Hardboard is made from interfelted wood fibers that are consolidated under heat and pressure to a specified density. Sidings are covered by Product Standard PS60 and are available in a wide variety of sizes, surface textures, and finishes. For application purposes, siding can be classified into three basic types: lap siding, square edge panels, and shiplap edge panel siding.

Lap siding is 3/8 or 7/16 inches thick, 8 to 12 inches wide, and up to 16 feet long. It may be supplied either with a factory primer or completely prefinished. Each piece should be nailed top and bottom at each stud with corrosion-resistant nails. The nails should penetrate at least 1 1/2 inches into the stud. Lap siding is usually applied over sheathing.

Panel hardboard siding is 1/4, 3/8, or 7/16 inches thick, 4 feet wide, and up to 12 feet long. It may be supplied with a square edge or a shiplap edge. The surface may be smooth and unfinished, textured and unfinished, patterned, factory primed, or prefinished. It may be applied over sheathing or directly to the wall framing. Fasten with corrosion-resistant nails penetrating 1 1/2 inches into the framing member. Nail 4 inches apart

around the perimeter and 8 inches apart at intermediate points. Leave 1/16 inch of space between panels and 1/8 inch of space around wall openings. Caulk around all openings and joints before finishing.

Unfinished hardboard siding should be finished within two weeks after installation. Factory-primed siding should be painted within 30 days after installation. Only textured hardboard siding should be stained. The American Hardboard Association recommends use of an opaque exterior acrylic latex stain.

Particleboard Siding

The National Particleboard Association indicates that particleboard siding is a highly specialized market.

Currently, two products are being made. One is an overlaid particleboard called "Cladwood;" the other product is a type of flakeboard called "waferboard."

Only exterior-grade particleboard should be considered for siding applications; 5/8-inch thickness is required for 16-inch stud spacing and 3/4-inch thickness for 24-inch spacing. Paint is the exterior finish recommended for particleboard.

Summary

There are a variety of wood-base siding materials available. Care in selection, installation, and finishing can promote long service life and minimize maintenance.

ISUP 69-22696

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