

Siding Installation Information

Application, Priming, Nailing & Pattern Selection

The following information is a compilation of best known building practices from a variety of sources. Please contact your local knowledgeable builder for additional recommendations that may apply to the siding product you have chosen for your particular area.

Moisture Content & Climate Acclimation

Wood shrinks and swells with change in moisture content. To minimize dimensional change after installation, install siding at a moisture content that matches with local climate as closely as possible. If climate in a particular region causes wood to maintain 8% to 13% moisture content annually, then the most ideal siding would be installed at a moisture content within that range, and the material would be stored, stickered and protected for a week to ten days prior to application.

If unseasoned materials are used, the following considerations are suggested: 1) allow for shrinkage; 2) use as narrow width as possible; 3) use patterns which allow for some shrinkage (board and batten, channel rustic with an adequate tongue, board on board, narrow bevel, etc); 4) and in-place seasoning before application of finish or 5) prestaining.

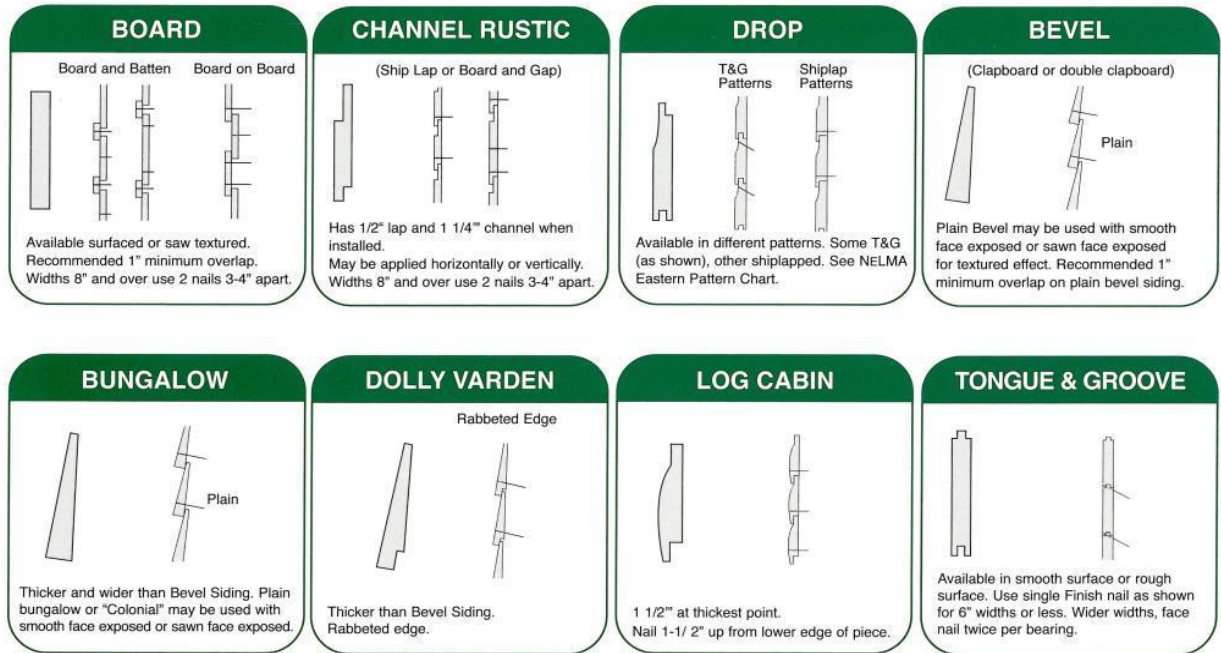
Priming

Often material which has been properly seasoned, stored and handled, will pick up moisture after installation and prior to painting. Later, when the siding releases its moisture, joints may open up or buckling may occur.

Extra protection can be given to the siding by priming or prefinishing all sides, edges and ends after it has reached climatic balance and *before* it is installed. Prefinishing can also minimize objectionable unfinished lines where joints open up due to face width shrinkage.

Siding Patterns and Nailing

The proper application and nailing of wood siding does much to improve the appearance and durability of both wood and paint by reducing the tendency of the siding to split, crack, and, cup with changes in moisture content. When possible, depending on the siding pattern, siding boards should be fastened so boards are free to shrink and swell, thereby reducing the tensile stresses that develop at fasteners. The following images provide further details for a sampling of siding patterns that include suggested nailing information and placement:



NOTES:

1. Some patterns allow for greater dimensional change than others. Patterns such as bevel siding and channel rustic have the capability of greater joint movement than patterns such as tongue and groove.
2. Apply siding over building paper.

Construction Details

House construction features that will minimize water damage of outside paint are: (a) Wide roof overhang, (b) wide flashing under shingles at roof edges, (c) effective vapor barriers, (d) adequate eave troughs and properly hung downspouts, (e) exhaust fans to remove excessive moisture, and (f) adequate insulation and ventilation of the attic. If these features are lacking in a new house, persistent paint blistering and peeling may occur and the structure then would best be finished with penetrating pigmented stains.

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Coverage Estimator

The following estimator provides factors for determining the exact amount of material needed for basic types of wood siding.

Multiply square footage to be covered by factor (length x width x factor):

	Nominal Size	Dress	Width Face	Area Factor*
SHIPLAP	1 x 6	5 ½	5 1/8	1.17
	1 x 8	7 ¼	6 7/8	1.16
	1 x 10	9 ¼	8 7/8	1.13
	1 x 12	11 ¼	10 7/8	1.10
TONGUE AND GROOVE	1 x 4	3 3/8	3 1/8	1.28
	1 x 6	5 3/8	5 1/8	1.17
	1 x 8	7 1/8	6 7/8	1.16
	1 x 10	9 1/8	8 7/8	1.13
S4S	1 x 12	11 1/8	10 7/8	1.10
	1 x 4	3 ½	3 ½	1.14
	1 x 6	5 ½	5 ½	1.09
	1 x 8	7 ¼	7 ¼	1.10
	1 x 10	9 ¼	9 ¼	1.08
PANELING PATTERNS	1 x 12	11 ¼	11 ¼	1.07
	1 x 6	5 7/16	5 1/16	1.19
	1 x 8	7 1/8	6 ¾	1.19
	1 x 10	9 1/8	8 ¾	1.14
BEVEL SIDING (1" lap)	1 x 12	11 1/8	10 ¾	1.12
	1 x 4	3 ½	3 ½	1.60
	1 x 6	5 ½	5 ½	1.33
	1 x 8	7 ¼	7 ¼	1.28
	1 x 10	9 ¼	9 ¼	1.21
	1 x 12	11 ¼	11 ¼	1.17

*Allowance for trim and waste should be added

Information obtained from USDA Agriculture Handbook, No. 72, Published by the U.S. Forest Products Laboratory, Madison, Wisconsin. As good results depend upon workmanship and subsurface upon which siding is applied, NeLMA is in no way responsible for performance of wood siding.

Nails and Nailing

Good nails and nailing practices are a must in proper application of wood siding. Nail locations are included under individual patterns. However, the following data about nails will be very helpful in the selection and use of the right nail for the right use.

Requirements

The following requirements are essential for nails used on wood siding:

1. Rust-resistant, preferable rust-proof. See "types of nails recommended."
2. Should not cause splitting even when driven near end or edge of siding.
3. Should have adequate strength to avoid the need for pre-drilling.
4. Nails should be able to be driven easily and rapidly.
5. A nail should not emerge or "pop" at any time after being driven flush with siding.
6. The nail head should not cause an unsightly visible pattern on the sidewall.

7. Nail butt joints at the stud or blocking.
8. Nailing is preferred over stapling.

Types of Nail Recommended

1. Stainless Steel
2. High Tensile Strength Aluminum Nail. This nail is corrosive-resistant and will not tend to discolor or deteriorate the wood siding. It is an economical nail when the nail count per pound is considered, although it is somewhat more expensive than the common galvanized.
3. Galvanized Nail.
 - a. Hot-dipped galvanizing. Degree of coating protection varies.

Common iron nails or poor-quality galvanized nails corrode easily and will cause unsightly staining of the wood and paint. When the wood is to be left unfinished to weather or finished naturally with light-colored penetrating stains or water-repellent preservatives, only aluminum or stainless steel nails should be used.

Nail penetration and Spacing

Suggested sizes are minimal and should be longer when siding is installed over other than wood sheathing and/or sheathing and studs. Recommended penetration into a solid wood base is 1 ½", 1 ¼" with ring shank nails.

Vertical siding should be nailed to blocking or other wood framing members not over 36" on center when face nailed, and 32" on center when blind nailed.

Horizontal siding should be nailed to studs at 24" o.c. maximum when applied over solid sheathing and 16" o.c. maximum when applied without sheathing.

Nail Shanks

Many nails are smooth shanked and will loosen under extremes in temperature changes. Increased holding power may be obtained by using a ring-threaded or spiral-threaded nail shank. These particular shanks are readily available.

Nail Points

The most commonly used nail points include:

- Blunt – reduces splitting
- Diamond – most commonly used
- Needle – tops in holding but tendency to cause splitting

For the best possible holding power with the least splitting, a blunt or medium diamond and a blunt or medium needle with a ring-threaded shank are recommended.