



SANDURA[®] SHINGLES

PREMIUM HARDWOOD WALLABA SHINGLES INSTALLATION GUIDE

Roofing Application



Sandura® Wallaba Shingles Roof Installation Introduction

The guidelines set forth in the manual are intended for use with the application of Sandura® Wallaba Shingles. Wallaba specie (Eperua Falcata) shingles manufactured by Durable Wood Products and distributed by Woods Direct International are labeled with the Sandura® Wallaba Shingles brand name. We have utilized many sources in order to provide you with various construction techniques and methods that are technically sound and conform to most building code requirements. The specifications in this guide apply to the installation of Sandura® Wallaba Shingles. While the information contained in this guide is informative, it is not intended to supersede municipal building codes. Consult your local building code official for proper preparation and installation requirements unique to your municipality.

PRODUCT WARRANTY: Durable Wood Products provides a 20-year limited manufacturer's warranty for Sandura® Wallaba Shingles. The product warranty covers Premium Grade and Number 1 grade materials only. Failure to comply with local building codes will void any warranty.

GENERAL GUIDELINES - Shingle Application: Regardless of style, the following basic application details apply. Install flashing and metal drip edge. Shingles must be doubled or tripled at all eaves and installed in straight shingle course butts of first course shingles should project 1 1/2" beyond the fascia and minimum 3/4" beyond gable end. Spacing between adjacent shingles (joints) should be a minimum of 1/8" and a maximum of 1/4". Joints in any one course should be separated not less than 1 1/2" from joints in adjacent courses; and in any three courses, no two joints should be in direct alignment. Underlayment shall be minimum

No. 30 perforated asphalt-saturated felt conforming to ASTM D226. Fasten one ply No.

with sufficient nails to hold in place. Side laps should be a minimum 2 inches and end laps a minimum of 6 inches.

USES: Sandura® Wallaba Shingles are used for roofing and sidewall applications where a premium wood shingle product is preferred.

DESCRIPTION: Sawn on both sides for a uniform tailored appearance, Sandura® 18" shingles feature a 1/2-inch butt thickness tapered to 1/8 inch and comes in random widths from 3-9 inches. Sandura® Wallaba Shingles are graded in accordance with CSSB-97 and the UBC 15-4 standard for wood shingles.

To enhance the longevity of the shingle, we recommend that the shingle be installed over a ventilated roof deck.

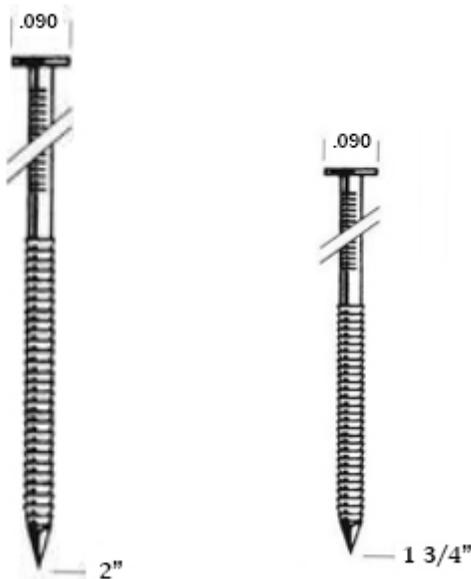
Sandura® Shingles are perhaps one of the densest natural wood shingles available, providing decades of strength and protection in various climates. However, even with their increased density Sandura® Wallaba Shingles may be cut with a chop or jig saws or with a utility knife at the tapered end.



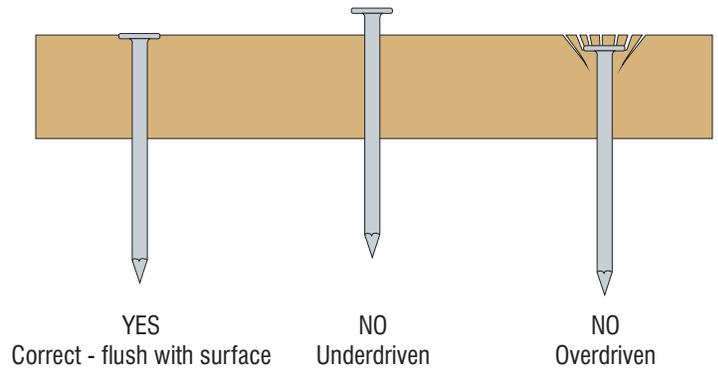
FASTENERS

All fasteners used to attach Sandura® Wallaba Shingles shall be corrosion resistant 0.090 - 0.092 stainless steel type 304 ring shank blunt diamond tip fasteners. The use of 316 stainless steel ring shank blunt diamond tip fasteners is recommended if within 15 miles of salt water. The fasteners utilized shall be of sufficient length to penetrate 3/4 of an inch into the sheathing; if sheathing is less than 1/2 inch, fastener shall fully penetrate the sheathing. If utilizing pneumatic nailers, set pressure to 100 psi. Please account for a pressure drop of 5 psi for every 50 ft. of hose. Whether you are utilizing a hammer or pneumatic nailer, be sure to drive the fasteners flush with the shingle surface.

NOTE: Over driven fasteners can be detrimental to the shingles, Do not over drive fasteners. Care should be taken to drive fasteners flush to the wood surface without crushing the wood surface or over penetrating the nail head.



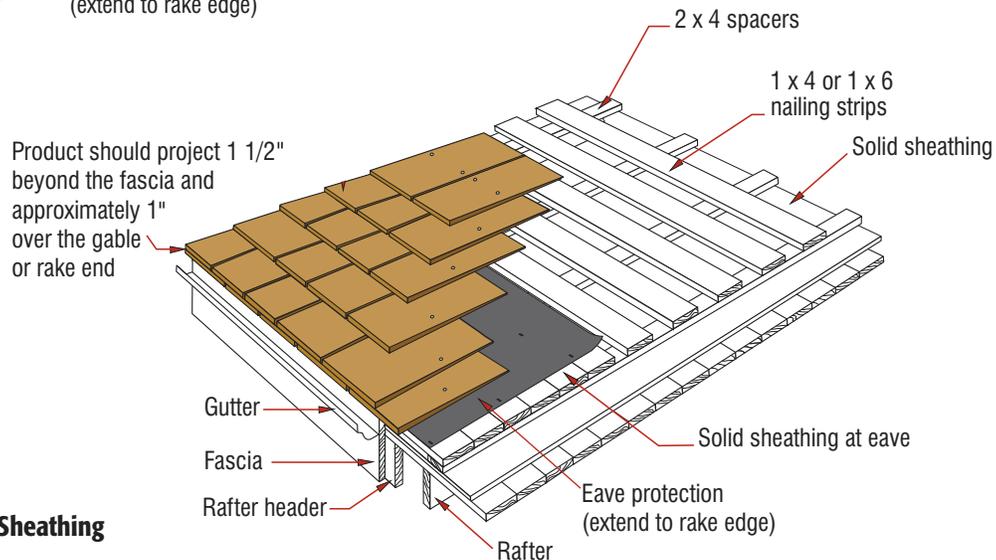
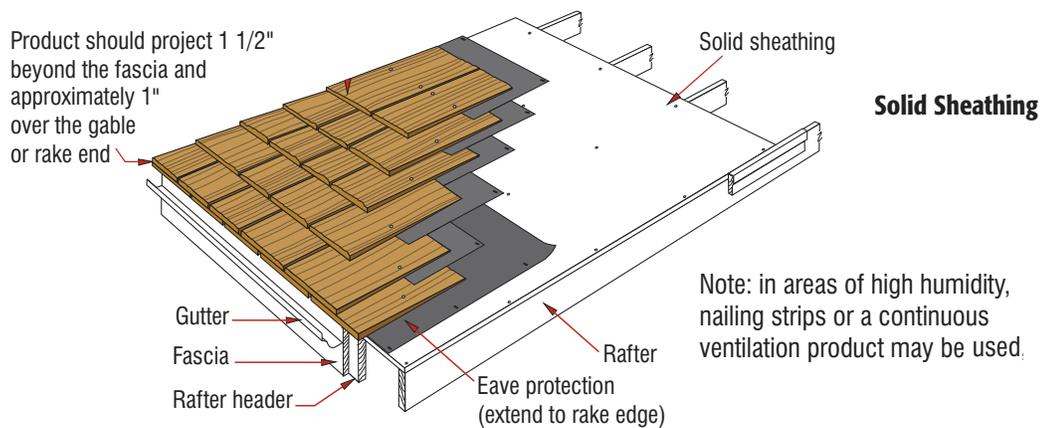
Note: DO NOT USE Electro Galvanized Fasteners



UNDERLAYMENT: Type D-226 #30 Roofing Felt; or Self Adhering Water Proofing Underlayment (Ice & Water Shield)

SANDURA® - SHINGLE INSTALLATION

Shingles shall be doubled or tripled at eaves and installed in straight rows or "courses". A side lap of 1 1/2 inches and should project beyond the fascia and approximately 1 - 1 1/2 inches over the gable end. Spacing between shingles shall be a minimum 1/8 inch to a maximum 1/4 inch. Shingles shall be laid with a side lap not less than 1 1/2 inches between joints in courses and no two joints in any three adjacent courses shall be in direct alignment. Fasten shingles to the roof sheathing with two fasteners per shingle positioned between 3/4 inch - 1 inch from the edge and no more than 1 inch from the exposure line. Fasteners for Sandura® Shingles shall be 304 stainless steel ring shank diamond tip nails with sufficient length to penetrate 3/4 inch into the sheathing. Type 316 stainless steel ring shank diamond tip fasteners shall be used if with 15 miles of salt water. Weather exposure for 18" Sandura® Wallaba Shingles shall not exceed 5 1/2 inches on roofs.



This is the preferred system for shingle application, in areas with high humidity or where additional ventilation is required.

SPACED SHEATHING OVER SOLID DECKING: Shingles shall be installed on solid or spaced sheathing. In regions where wind driven precipitation is a concern utilizing spaced sheathing, over solid decking is good practice.

Fasten minimum 1/2 -inch exterior grade plywood to the rafters. Then apply appropriate underlayment over plywood deck per applicable building code. A bituminous eaves membrane is applied to the solid sheathing and extends 24 inches inside of interior surface of exterior wall.

Attach minimum 1" X 4" battens vertically from the eaves to the ridge. The vertical battens shall be fastened 16" on center to the rafters with fasteners of sufficient length to penetrate 3/4 of an inch into the rafter through the underlayment and plywood deck.

Where spaced sheathing is used, sheathing boards shall not be less than 1" X 4"; furring strips shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners.

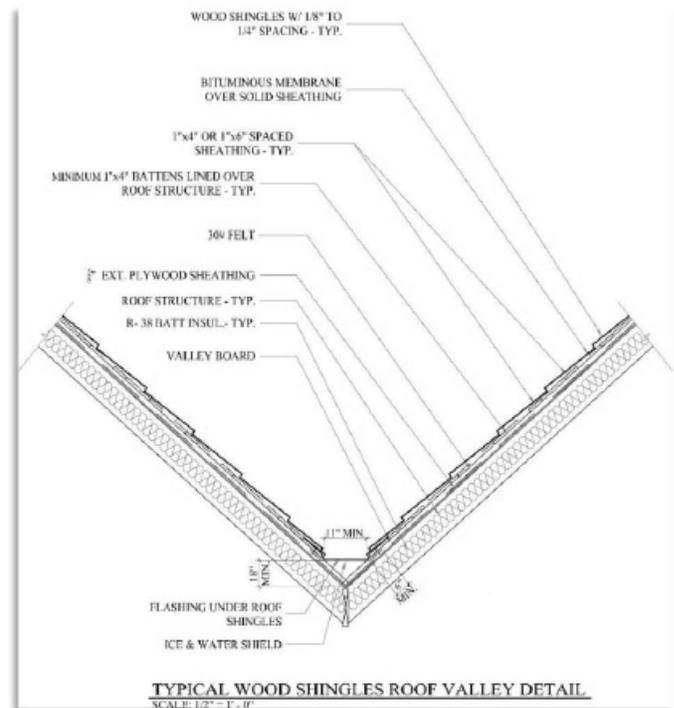
(Weather exposure for 18" Sandura® Wallaba Shingles shall not exceed 5 1/2" on roofs.)

FLASHING: At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.019-inch (0.48 mm) stainless steel/corrosion-resistant metal flashing best suited for your region.

The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of either one layer of Type 1 underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment installed over the sheathing and under the metal valley.

Metal valleys should be center-crimped, painted, galvanized steel, stainless steel or aluminum and should extend no less than 11 inches on each side of the valley centerline. In some areas, however, flashing width requirements may vary; be sure to consult the local building code officials. Take note that when applying shingles, the grain should not be parallel to the centerline of the valley and those extending into the valley should be cut at the proper angle to ensure proper drainage.

In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.



12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.

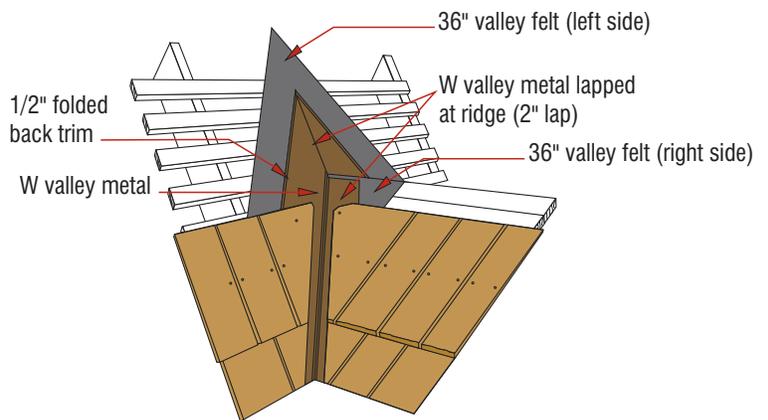


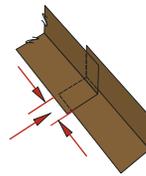
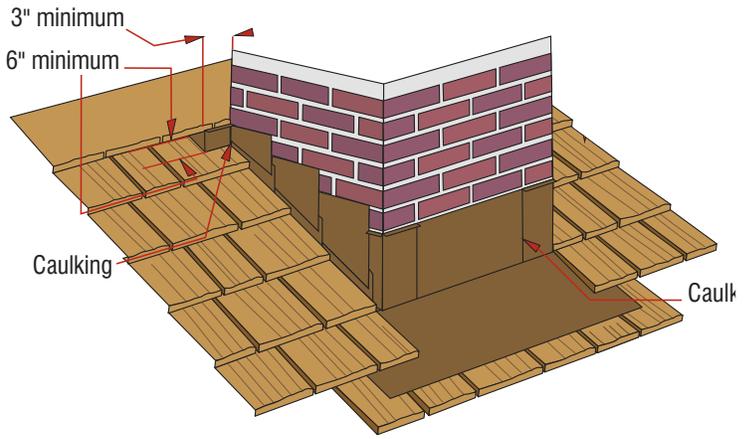
Figure 7c: Typical Saddle Flashing

Where saddles or crickets are formed in back of chimneys, curves or similar vertical surfaces, they shall be carried not less than 10" under the shingles.

Where vertical surfaces intersect with slopes such as chimneys etc. step flashing shall be used. They shall be constructed of individual pieces and shall extend horizontally not less than 3 inches and up the vertical wall. They shall be lapped by the counter flashing not less than 4 inches. Installed in the step fashion, each piece shall lap not less than 3 inches (one flashing installed on each course concealed under the covering course). If other than masonry is used, the flashing shall extend up the wall not less than 3 inches behind the sheathing paper.

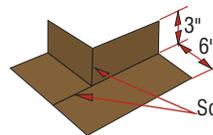
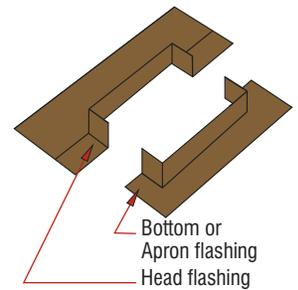
Dormer flashings shall run 3" up under the sheathing paper and not less than 3 horizontally.

Window caps and all other projections at points where rain water accumulates must be provided with flashing; such flashings must extend a distance of at least 3 inches up the wall behind the sheathing paper.



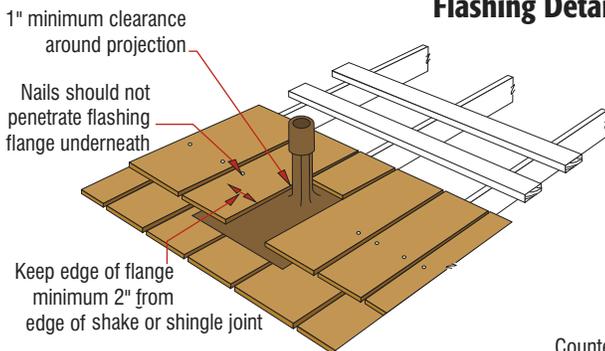
Typical chimney flashing not requiring soldering
Step flashing 3" minimum overlap

Typical Projection Flashing

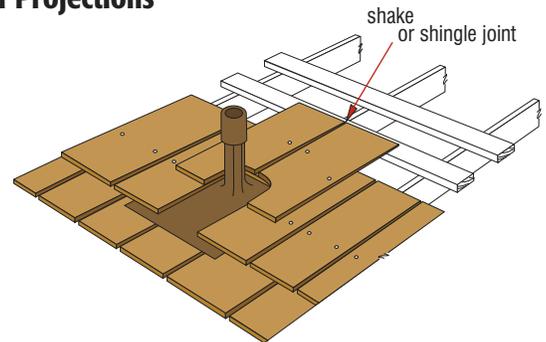


Typical chimney flashing requiring soldering
Solder joints

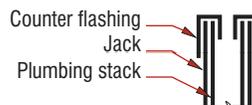
Flashing Details for Typical Roof Projections



Typical Projection Flashing



Typical Projection Flashing



4e: Flashing Details for Typical Roof Projections

HIP & RIDGE CAPS

To protect against water penetration, the intersecting joints at the hips and ridges should be capped. Regardless as to where the caps are manufactured, constructed on site or factory-assembled, hip and ridge caps must have alternating overlaps and the fasteners must be covered by the overlying unit. It is important to note that when manufacturing hip and ridge caps with roofing shingles of similar length and grade, the weather exposure will remain the same.

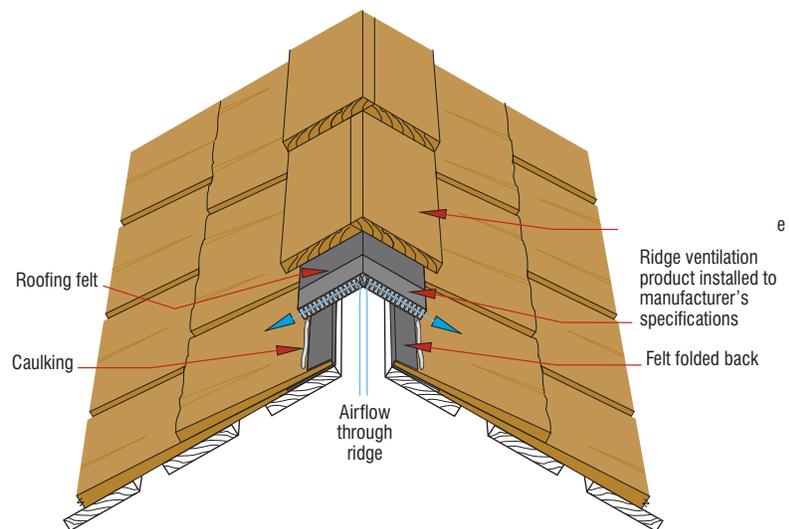
Fasteners must be longer than those used to fasten the shingles to the roof deck and be of sufficient length to penetrate 3/4" into or completely through the sheathing. Install a strip of felt, eave protection material or corrosion resistant metal over hip or ridge under the ridge or hip cap course.

VENTING

Check with your local building official for requirements in your area. The amount of venting required varies with roof size, structural configuration as well as geographic, seismic and climate conditions. Where wind driven snow is prevalent, the proper ridge ventilation product should have screens to prevent snow and insect infiltration at soffit vent and ridge vent (not louvered or baffled)

CLASS A - Fire Rated Installation

Sandura® Wallaba Shingles are a Class A roof assembly when installed per the guidelines set forth in this section. The roof deck shall be minimum 1/2-inch thick exterior grade plywood or 1" X 6" TG spaced sheathing. Georgia Pacific DensDeck® material and into the roof sheathing a minimum of 3/4-inch. The remainder of the installation shall be in accordance with the installation requirements for wood shingles in IBC Section 1507.8, IRC Section R905.7 or UBC Section 1507.13.



: Ridge Ventilation Detail

PROPER CARE AND MAINTENANCE

Keep roof clear and clean. Be sure to prune low hanging branches and remove excess debris that may accumulate on roof surface. Rinse debris from roof surface with "garden hose pressure" less than 100 psi.

This guide provides only general guidelines for choosing and installing Sandura® Wallaba Shingles, Although it's content is accurate, it does not cover all situations. Moreover, since building codes vary by municipality and are subject to change, it is always best to consult with your local building code official for construction code requirements unique to your municipality. Furthermore, the manufacturer, Durable Wood Products, in conjunction with Woods Direct Int'l, LLC, shall not be held liable for any damage resulting from the use of its products or any information found in this guide.