Perennial Wood™

Perennial Wood™ Decking Installation Guide

⚠WARNING **Read this entire Installation Guide prior to installing your Perennial Wood decking. Leave this guide at the job site.**

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Perennial Wood™ Decking Installation Guide

Section One: General

Glossary

All terms listed below are *underlined* on their first appearance in the installation guide. If you see an unfamiliar term in this guide, refer to the following glossary.

Baluster—Vertical component of a deck guardrail system that spans between the top rail and bottom rail at regular intervals between posts.

DCA-6—Short name for the publically available reference document: "Design for Code Acceptance 6, Prescriptive Residential Wood Deck Construction Guide," based on 2009 International Residential Code (IRC), copyright 2010 American Forest & Paper Association, Inc.

End-butted—The joint created when two deck boards are placed end-to-end.

Fascia—Horizontal decorative trim board typically installed on the edge of a deck covering the band joists, deck board end cuts, and the start and finish deck board edges to provide a finished appearance.

Flashing—Thin metal or plastic sheeting or strips used to channel precipitation away from interior components of a structure at angular transition points such as wall-to-deck ledger board.

Guardrail—The horizontal top component of the railing system that attaches between the posts or on top of the posts.

Handrail—A graspable horizontal or sloping rail intended for guidance or support.

Hidden fasteners—A class of deck board installation hardware that typically fits into grooved edges of deck boards and in the gap between deck boards, essentially disappearing from casual view, thus providing an alternative to through-face fasteners that insert down through the top face and leave visible holes with screw heads showing.

Joist—A horizontal deck structural support on which deck boards rest and are directly attached.

Ledger board—A horizontal deck structural support board that is attached directly to an existing structure.

Mitered—The angled end cuts used at joints as an alternative to square end butted joints.

Pilot holes—Holes drilled specifically to guide the insertion path of a screw, nail, or possibly a larger drill bit.

Rail-to-post connector—Bracket-like hardware component used to attach the top and bottom railing assembly to the deck rail post.

Stair riser—The vertical portion of a set of stairs between each tread. The riser will be missing if stairs are "open."

Stair stringer—The inclined structural member of stairs that supports the stair treads and the risers.

Stair tread—The horizontal part of the stair that is stepped on.

Stair tread nose—The edge part of the stair tread that protrudes over the riser.

Through-face fasteners—Screws that are installed in the exposed face of boards and that typically leave visible fastener heads and associated holes in the finished work (as opposed to *hidden fasteners).*

Congratulations

Congratulations on your purchase of Perennial Wood decking. This guide provides you with step-by-step instructions on how to install Perennial Wood decking, as well as recommendations for railing systems, stairway treads, and risers.

This document is very important and should be followed closely during decking installation. Keep a copy for your records.

As you enjoy your Perennial Wood decking, always abide by the following care and safety precautions. This product is meant for construction of single-story, residential, above-ground structures only. Because Perennial Wood decking is not rated for ground contact, decks must be supported by a substructure.

Important Safety Precautions

Please read and follow all safety precautions and information installation guides for specific installation details and requirements prior to installing Perennial Wood decking. Failure to do so may result in serious injury or death.

⚠WARNING **To reduce the risk of trip/fall hazards and/or serious injury or death:**

- **Always secure and properly store boards on a dry, level, covered surface.**
- **Never leave loose boards scattered at the site.**
- **Always be sure all deck boards are firmly secured to the framing structure before walking on them.**
- **Always use standard protective gear including eye and hearing protection, hardhats, dust mask, work gloves and boots when transporting and/or cutting boards.**

⚠WARNING **Perennial Wood guardrail posts are not rated for ground or concrete contact. Direct contact of this product with the ground or concrete may lead to structural damage of this product. To reduce the risk of serious injury or death from a collapse hazard, Perennial Wood decking should be installed only on a substructure rated for direct contact with the ground.**

NOTICE **Use only stainless steel fasteners and connectors. Fasteners and connectors made with corrosive metals may cause cosmetic damage and may over time degrade Perennial Wood products.**

NOTICE **Do not pressure wash Perennial Wood products. Pressure washing may cause damage to the deck and deck finish.**

A Material Safety Data Sheet (MSDS) for Perennial Wood is available at www.PerennialWood.com.

Tools

Perennial Wood requires no specialized equipment and can be installed using standard carpentry tools such as saws, drills, etc.

Storage and Handling
(before and during construction)

⚠WARNING To reduce risk of death and/or serious injury from crushing or tripping:

- **Never allow Perennial Wood to be dumped off a vehicle. Exercise caution when lifting and bending during loading/unloading to help avoid injury from strain and/or falling.**
- **Always operate forklifts, cranes, and other special handling equipment in accordance with manufacturer instructions.**

NOTICE To reduce the risk of property damage such as breaking, chipping, and scuffing:

- **Elevate the wood above ground level and cover with plastic to protect against mud and debris prior to and during construction.**
- **Exercise care when offloading from a vehicle to prevent excessive bending and falling impact.**

Information for Building Officials

Jurisdictional building officials may consult ICC Evaluation Services report number ESR-1690 for additional information on Perennial Wood products at www.icc-es.org.

Deck Substructure

It is recommended the deck design be prepared or approved by a structural engineer or architect, and decks must meet the requirements of your local jurisdiction's building codes. Always obtain required permits prior to construction. Structural support requirements are the same when constructing a new deck or resurfacing an existing structure with Perennial Wood decking. The substructure must be constructed to adequately support the required loads. In some cases, local snow loads may govern substructure requirements. Check with the local building official.

Specifications for deck construction are found in building codes and in the *"Design for Code Acceptance 6"* (DCA-6). The deck substructure must be constructed of preservative-treated lumber rated for exterior use or the heartwood of an approved naturally decay resistant wood species. The *flashing*, fasteners, connectors, and hanger hardware for the substructure must be made of corrosion resistant metals, such as hot-dipped galvanized or stainless steel.

Joist Spacing

While Perennial Wood decking is suitable for joist spacing up to 24″ on center when deck boards are installed perpendicular to the joists, joist spacing of 16″ on center is recommended. When deck boards are at an angle to the joists (up to 45 degrees), joist spacing of 16″ on center or less is necessary for proper support.

Figure A

Joist spacing (end view)

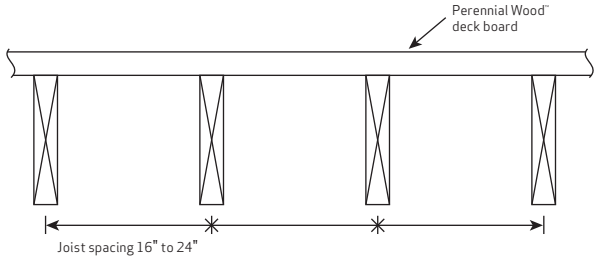
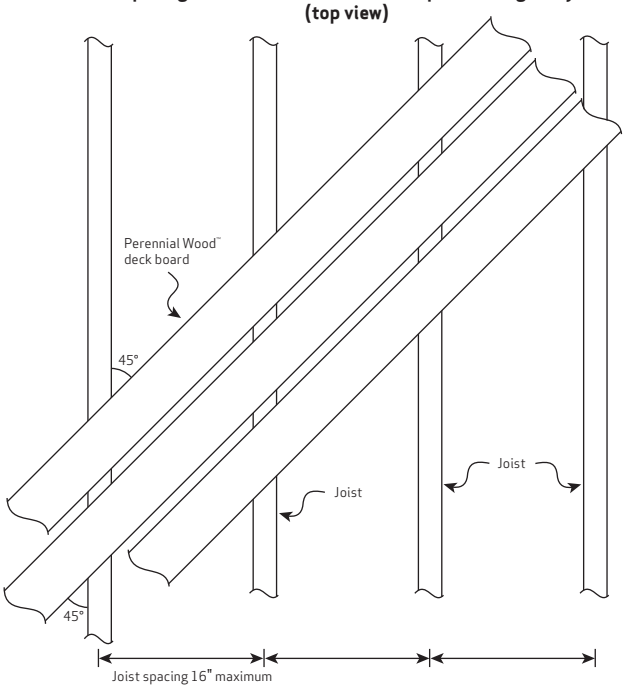


Figure B

Joist spacing for deck board installed at up to 45° angle to joists (top view)



Guardrail Post Installation

Consider post placement and attachment prior to installing deck boards, because access to the substructure is typically better at that point.

⚠WARNING **Perennial Wood guardrail posts are not rated for ground or concrete contact. Direct contact of this product with the ground or concrete may lead to structural damage of this product. To reduce the risk of serious injury or death from a collapse hazard, Perennial Wood decking should be installed only on a substructure rated for direct contact with the ground.**

⚠WARNING **To reduce the risk of serious injury or death from collapse hazard, never notch Perennial Wood guardrail posts. Notching reduces strength and prevents the structure from meeting load requirements specified in DCA-6.**

a) Install posts no farther apart than 6 feet on center for both code compliance and to accommodate the Perennial Wood railing system.

b) Perennial Wood posts are glue laminated in the factory. During installation, orient the post so that the bolts pass through the face of the post that has no glue lines.

c) Guardrail posts must be attached to the joists with stainless steel connectors and fasteners. The Simpson Strong-Tie® DTT2SS is a recommended connector. Always follow the connector manufacturer's guidelines for proper installation.

d) Perennial Wood posts can be used to give a maximum guardrail height of 42". Install blocking using Simpson Strong-Tie® SDS25300SS (or comparable $^{1}/_{4}$" × 3" stainless steel screws) to secure the Simpson Strong-Tie® DTT2SS connector to the joist. Outside washers used with the $^{1}/_{2}$" thru-bolts should be stainless steel with a minimum outer diameter of 1.99". Properly installing post-to-joist connectors can provide guardrail post attachment strong enough to meet the code requirements stated in DCA-6.

Figure C

Guardrail post installation

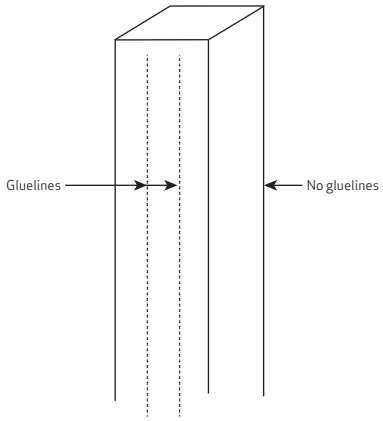


Figure D

Guard post to rim joist example

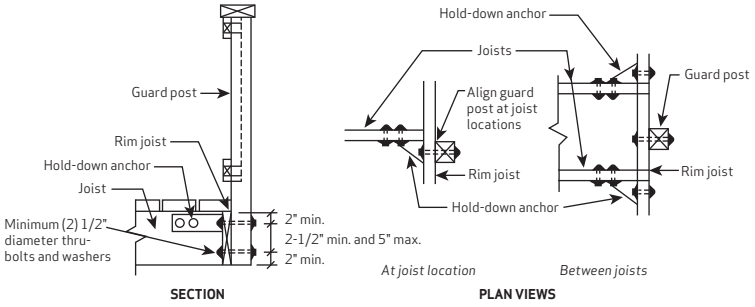
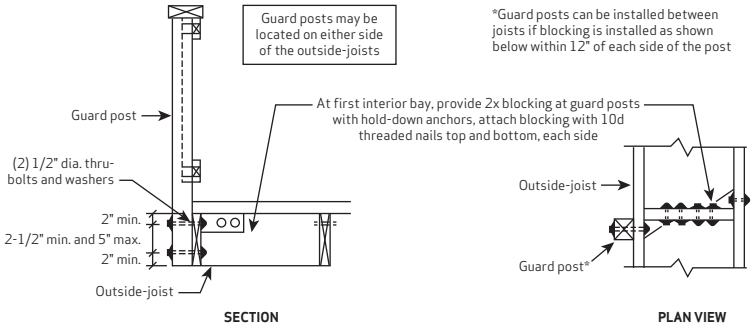


Figure E

Guard post to outside joist example



(DCA-6 drawings provided with permission by American Wood Council)

Section Two: Decking

General

To maximize the integrity, appearance, and performance of your decking, use the correct *stainless steel fasteners* and *connectors*. Properly attach the deck boards to the substructure. Consider using *hidden fasteners* made of stainless steel or plastic components for a clean, professional look.

NOTICE **Use only stainless steel fasteners and connectors. Fasteners and connectors made with corrosive metals may cause cosmetic or structural damage to Perennial Wood products.**

The end of each deck board must be adequately supported by a joist.

Before You Begin

Read the following section before the Step-by-Step Installation Guide (beginning on page 10).

Deck Board Attachment

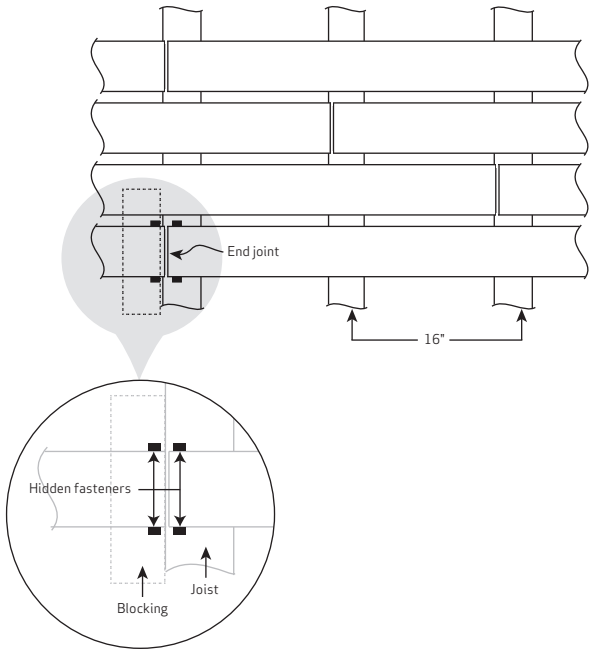
Fasten Perennial Wood deck boards to the substructure joists.

⚠WARNING **Perennial Wood guardrail posts are not rated for ground or concrete contact. Direct contact of this product with the ground or concrete may lead to structural damage of this product. To reduce the risk of serious injury or death from a collapse hazard, Perennial Wood decking should be installed only on a substructure rated for direct contact with the ground.**

- Each deck board must span a minimum of four joists and be connected to each joist with either two hidden fasteners or two stainless steel *through-face fasteners* according to the fastener manufacturer's instructions.
- Space deck boards to allow about a 1/4" gap between parallel boards when using through-face fastening.
- When using hidden fasteners, the space between deck boards will be determined by the hidden fastener system.
- For best appearance and deck strength, *end-butted* joints should be staggered to prevent direct alignment of the ends.

Figure F

Staggered end joints (top view)



Note: End butted joints should be staggered to prevent direct alignment of the ends. Blocking may be required at butted joints when using hidden fasteners.

Fasteners

NOTICE **Use only stainless steel fasteners and connectors. Fasteners and connectors made with corrosive metals may cause cosmetic damage and may over time degrade Perennial Wood products.**

- Fasteners made with corrosive metals can cause deck stain and coating to leach. All metal hardware used with this product must be stainless steel to avoid this risk. Hidden fasteners must be either stainless steel or plastic. All metal fasteners or connectors in contact with Perennial Wood must be stainless steel.
- Fasteners used in coastal regions must be 316 stainless steel. Two methods can be used to fasten deck boards: hidden fasteners or through-face fastening with screws.

- Perennial Wood deck board edges are designed with a groove to accommodate hidden fasteners.
- Hidden fasteners must be installed per fastener manufacturer's instructions.
- Some hidden fastener systems provide start/stop clips to be used for attaching the starting deck board and the final deck board to the *ledger board* and band joist. Start/stop clips must also be installed per fastener manufacturer instructions.
- If you are not using start/stop clips, see Step-by-Step Installation Guide on p.11 for attachment with stainless steel screws.

Step-by-Step Installation Guide

Please read the Before You Begin portion of this installation guide (beginning on pg. 9) before proceeding with the step-by-step installation process here.

Perennial Wood decking is specifically designed to be installed with hidden fasteners. For hidden fasteners, proceed with Option 1 of the following instructions.

Alternatively, for traditional through-face fastening using stainless steel screws, proceed to the instructions for Option 2 (beginning on page 11).

Option 1: Hidden Fasteners

Only use hidden fasteners with stainless steel screws.

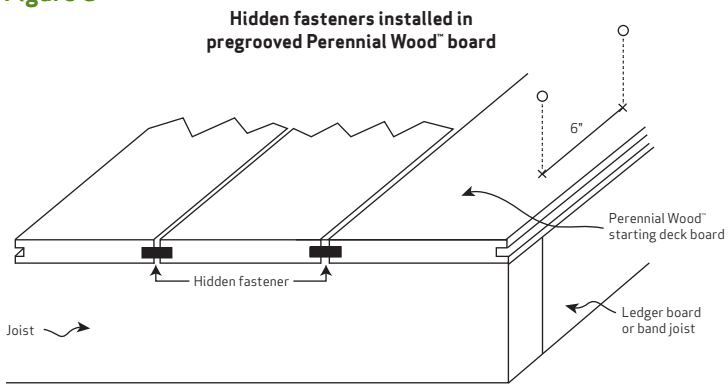
Step 1

Some hidden fastener systems include start/stop clips to be used with the starting deck board and the final deck board. If the chosen hidden fastener system includes start/stop clips, follow the fastener manufacturer's instructions.

Attach the starting deck board to the joist using start/stop clips.

If start/stop clips are not included, stainless steel screws can be used. Attach the starting deck board to the joist using #10 × 3″ stainless steel screws into the face of the starting deck board 1″ from the outside edge. Predrill *pilot holes* through the deck board with a 7/64″ bit before installing screws. Install the screws into the joist every 6″ along the length of the deck board.

Figure G



Step 2

To attach the other edge of the *starting deck board*, install the hidden fasteners by engaging the grooved edge of the deck board and fastening to the center of each joist. (See Figure G.)

Step 3

Continue installation of deck boards following fastener manufacturer's instructions.

Step 4

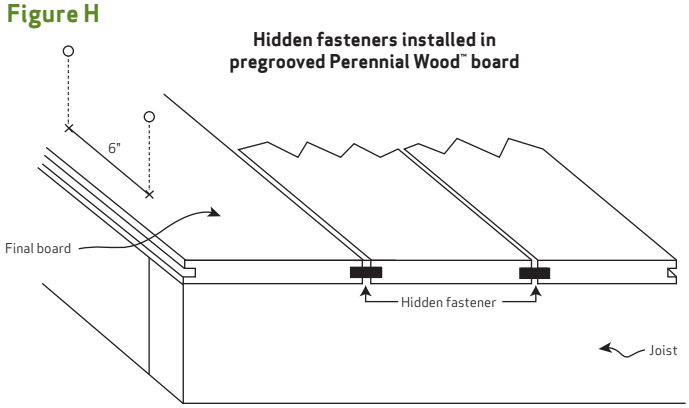
Repeat step 3 until you reach final deck board.

Step 5

To attach the *final deck board*, engage the first edge onto the hidden fasteners. Then attach the other edge to the joist using start/stop clips (follow start/stop clip manufacturer instructions).

If start/stop clips are not included, use stainless steel screws to engage the first edge onto the hidden fasteners. Then attach the other edge to the joist using #10 × 3″ stainless steel screws 1″ from the outside edge. Predrill pilot holes through the deck board with a 7/64″ bit before installing screws. Install the screws every 6″ along the length of the deck board into the joist.

Figure H



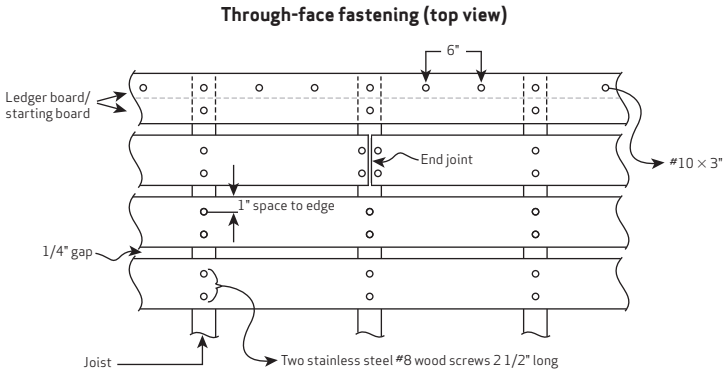
Option 2: Through-face Fasteners

NOTICE **Predrill pilot holes for all screws to prevent splitting and cracking. All screws must be stainless steel.**

Step 1

Attach the *starting deck board* to the joist by installing a #10× 3″ stainless steel screw (predrill pilot holes through the deck board with a 7/64″ diameter bit) 1″ from the outside edge. Install the screws every 6″ along the length of the deck board into the joist.

Figure I



Note: When attaching end-butted joints, screws will be 3/8″ from end of joint.

Step 2

To attach the other edge of the *starting deck board*, insert a #8 × 2 1/2″ stainless steel screw (predrill *pilot holes* through the deck board with a 3/32″ diameter bit) 1″ from the edge and into each joist. (See Figure I.)

Step 3

Attach additional deck boards by inserting two #8 × 2 1/2″ stainless steel screws per deck board (predrill pilot holes through the deck board with 3/32″ diameter bit) 1″ from each edge and into the center of the joist. (See Figure I.)

Space the deck boards to allow about a 1/4″ gap. At end of butted joints, use two screws on ends of each board.

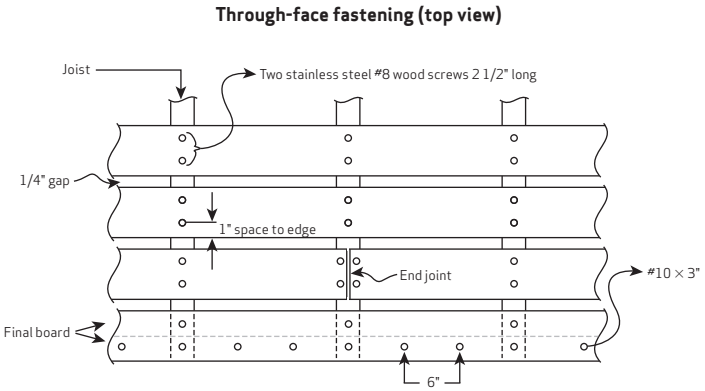
Step 4

Repeat step 3 until you reach final deck board.

Step 5

To attach the *final deck board*, install a #10 × 3″ stainless steel screw (predrill pilot holes through the deck board with a 7/64″ diameter bit) 1″ from the outside edge and every 6″ and into the rim/band joist or ledger.

Figure J



Note: When attaching end-butted joints, screws will be 3/8″ from end of joint.

Step 6

To attach the inside edge of the *final deck board*, insert a #8× 2 1/2″ stainless steel screw (pre-drill pilot holes through the deck board with a 3/32″ diameter bit) 1″ from the edge and into each joist. (See Figure J.)

Section Three: Fascia

General

Installing Perennial Wood fascia board to the band joists creates a streamlined, attractive appearance.

– The fascia ends can be *mitered* or end butted.

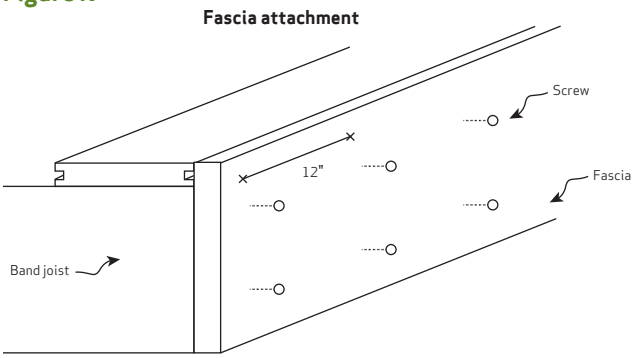
Step-by-Step Fascia

a) Align the top edge of the fascia board with the top edge of the deck board.

b) Using a 3/32″ drill bit, predrill *pilot holes* through the fascia board.

c) Screw the fascia board to the band joists with two #8 × 2″ stainless steel screws spaced every 12″ along the board.

Figure K



Section Four: Railing

General

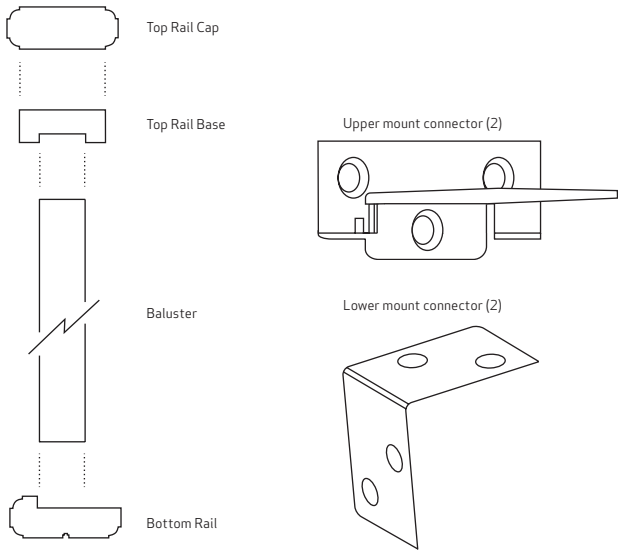
This section refers only to the Perennial Wood railing system. When installed properly, the Perennial Wood railing system meets or exceeds the requirements outlined in DCA-6. For installation of railing systems other than the Perennial Wood railing system, refer to that manufacturer's installation guide.

Railing Components needed to build 6′ section (Some parts sold separately)

Item	Description	Quantity
1	Top rail cap	1
2	Top rail base	1
3	Bottom rail base	1
4	Balusters	15
5	Rail-to-post connector set (1 upper mounting bracket; 1 lower mounting bracket; 10 #10 × 1 3/4″ stainless steel screws; 2 #8 × 3/4″ stainless steel screws)	2
6	Screws: #8 × 2″ stainless steel (for balusters)	30
7	Screws: #10 × 1 3/4″ stainless steel (for top rail cap)	6

6′ Railing Kit

Includes top rail cap, top rail base, bottom rail, 2 upper mount connectors, 2 lower mount connectors (balusters sold separately).



Screws for fastening balusters and top rail cap sold separately.

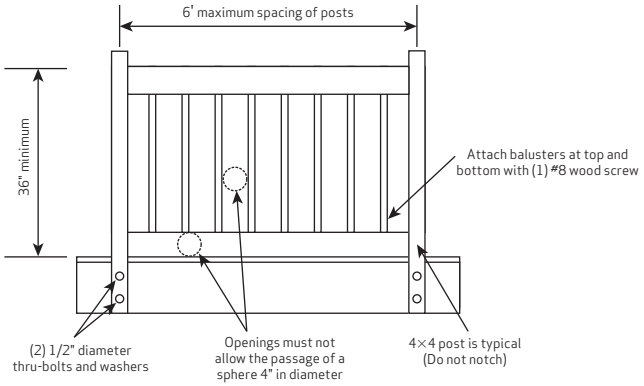
Requirements

⚠WARNING To reduce the risk of serious injury or death from falling or entrapment hazards:

- **Guardrails must be installed on any deck that is greater than 30″ above the ground.**
- **Guardrail height should stand at least 36″ above the deck surface as required by DCA-6.**
- **Guardrail balusters shall be spaced to prevent passage of a 4″ sphere as required by DCA-6. Therefore the maximum center-to-center spacing for Perennial Wood balusters is 5 3/16″.**
- **Both guardrails and *handrails* should be used at stairs. Stairs with four or more *stair risers* require a handrail on at least one side. Handrails, unlike guardrails, must be graspable. Perennial Wood guardrails cannot be used as handrails. For more information, consult the Stair Handrail section of DCA-6 or your local building codes.**

Figure L

Deck guardrail requirements



Step-by-Step Railing

Please note that the following Step-by-Step Installation Guide is specifically designed to be used with the Perennial Wood railing system. The following step-by-step instructions below specify how a complete railing system section is to be attached between Perennial Wood guardrail posts that are installed 6 feet on center. Since actual post spacing can vary slightly, Perennial Wood horizontal railing components are provided longer than necessary so that they can be cut to the lengths needed and give a precise finished fit. Repeat the steps as required for each railing section.

Step 1: Preparation of the Top Rail Cap and Bottom Rail

a) Measure the distance between the inside face of the two posts where this section of railing is to be installed.

b) Cut top rail cap and bottom rail to the measured length. (Preparation of the top rail base will be completed in Step 3: Baluster Spacing.)

Step 2: Attach the Top Rail-to-Post Connector to Post–This step is only to install the connector

a) Measure up 40 5/8″ from the top of the deck board surface on the post and lightly mark the inside face of the post. This will establish the height for the top of the rail-to-post connector used for the top rail base.

b) Find the center of the post and mark it on the line established above.

c) Center the top edge of the top rail connector on the center mark on the line.

d) Mark the location of the pilot holes on the post, using the connector holes as a guide. (The two holes will be at the top.)

e) Drill three pilot holes into the post using a 5/32″ diameter bit to a depth of 1 1/2″.

f) Repeat for installation of top rail connector on other post.

Step 3: Determining Baluster Spacing

a) Measure the distance from the inside of the top rail connectors and cut the top rail base to length.

b) Place the top rail base on the top rail connectors. Do not attach at this time.

c) Determine the center-to-center spacing for the balusters from post to post. Spacing will be used for determining pilot hole locations in both the bottom rail and the top rail base.

d) Locate the shallow groove on the underside of the bottom rail. This groove indicates the centerline of the bottom rail and will aid in locating the pilot holes for baluster screws.

e) Mark the locations of the pilot holes for balusters in the centerline groove of the bottom rail.

f) Mark the locations of pilot holes for balusters in the centerline groove of the top rail base. These will be used in Step 7.

g) Using a 1/8″ diameter drill bit, predrill pilot holes through the bottom of the bottom rail as marked. Repeat this process until all pilot holes are complete.

h) Repeat the preceding step G for the top rail base.

Step 4: Railing Assembly

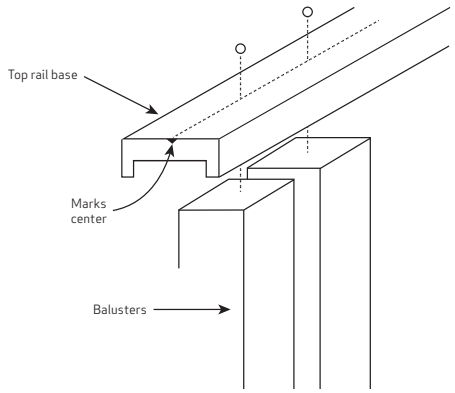
a) The ends of the balusters have factory pre-drilled pilot holes. Align pilot holes in the top rail base with pilot holes in the end of the balusters.

b) Attach the balusters to the top rail base using #8 × 2″ stainless steel screws.

c) Continue until all balusters are attached to the top rail base.

Figure M

Attach top rail base to balusters



d) Stand the assembly with the top rail base resting on a flat surface.

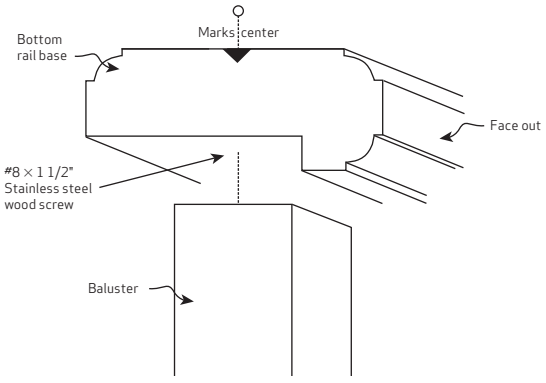
e) Place the bottom rail into position on the ends of the balusters. Make sure the bottom rail is resting flat against all baluster ends.

f) Attach the middle baluster to the bottom rail using a #8 × 2″ stainless steel screw, then attach the other balusters working from the middle toward the ends.

g) Continue until all balusters are attached to the bottom rail.

Figure N

Attach bottom rail base to balusters (wide part of bottom rail faces out)



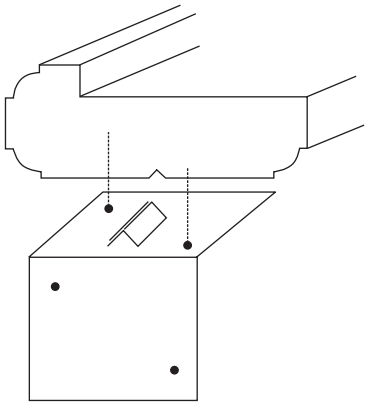
Step 5: Installation of the Rail-to-Post Connector to Bottom Rail

NOTICE **Do not drill completely through the top rail cap. It is easy to overdrill. This will result in damage to your Perennial Wood railing system.**

a) Using the rail-to-post connector as a guide, place the tab on the top of the bottom rail connector in the groove located on the bottom of the rail. Make sure the connector is flush with the end of the bottom rail and mark the location of the pilot holes. The vertical leg of the connector should be pointing down when oriented to the final installed position.

Figure O

Installation of the post connector onto bottom rail



b) Using a 1/8″ diameter drill bit, predrill 1/2″ deep pilot holes in the bottom of the bottom rail as marked.

c) Attach the connector using #8 × 3/4″ stainless steel wood screws.

Step 6: Attach the Bottom Rail to Post

a) Place the railing assembly on the top rail connectors (which were attached to the posts in Step 2).

b) Center the bottom rail connector on the post.

c) Using the bottom rail connector holes as a guide, drill pilot holes into each post using a 5/32″ diameter drill bit to a depth of 1 1/2″.

d) Attach the bottom rail to the post by using two #10 × 1 3/4″ stainless steel screws.

e) Repeat Step B through Step D of this section on the other end of the bottom rail.

Step 7: Attach Top Rail Base & Top Rail Cap

NOTICE **Do not drill completely through the top rail cap. It is easy to overdrill. This will result in damage to your Perennial Wood railing system.**

a) Place the top rail cap onto the top rail base and secure. Make sure the edges of the cap and base are flush at both ends of the railing. (Clamps may be used to hold the pieces in place.)

b) Using the connector as a guide, use a 5/32″ diameter drill bit and predrill the pilot holes no more than 1 1/2″ deep through the top rail base and into the top rail cap. (This will result in drilling only 3/4″ deep into the top rail cap.)

c) Use the #10× 1 3/4″ stainless steel screws and attach the top rail cap to the top rail base.

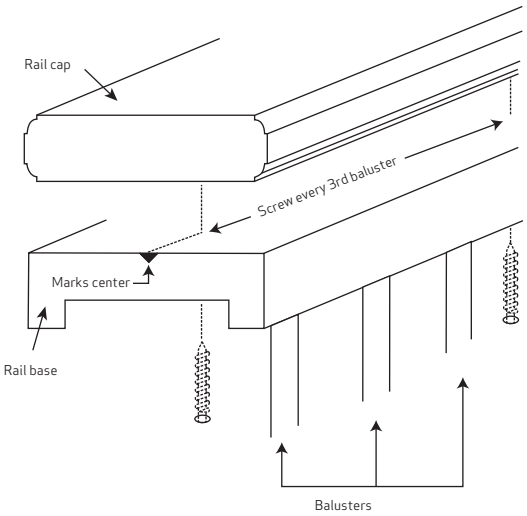
d) Repeat Step B and Step C for other end of railing.

e) From the underside of the top rail base, use a 5/32″ drill bit to predrill 1 1/2″ deep pilot holes up through the top rail base and into the top rail cap. Do not drill completely through the top rail cap. Repeat the predrilling about every 12″ or between every third baluster along the length of the rail.

f) Attach the top rail cap by using #10 × 1 3/4″ stainless steel wood screws.

Figure P

Complete attachment of top rail cap to top rail base



Section Five: Stairway Guardrails

General

Please note that the following Step-by-Step Installation Guide is specifically designed to be used with the Perennial Wood railing system. Assembly of stairway guardrails is similar to railing installation because the same components will be used. The main differences in assembly are noted in the following requirements section. Repeat the steps as required for each section of stairway railing.

Requirements

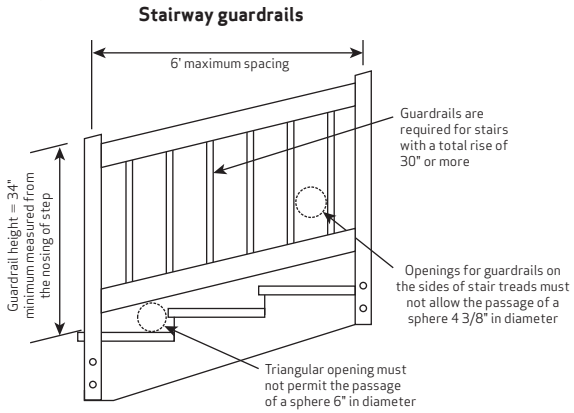
- Perennial Wood *stair stringers* and handrails are not yet available.

⚠WARNING **Do not use other Perennial Wood pieces for stair stringers or handrails. Handrails must be graspable and Perennial Wood pieces are not. Other Perennial Wood pieces do not meet the length requirements of stair stringers. Using other Perennial Wood pieces as stair stringers or handrails could result in death or serious injury from a fall and collapse hazard.**

- Stairways with a total rise of 30″ or more require guardrails.
- Stairway guardrails made from Perennial Wood should be installed to meet requirements of DCA-6.
- The minimum stair guardrail height is 34″ as measured from the top surface of the *stair tread* at the *stair nose*.
- The maximum spacing between stair guardrail posts is 6 feet.
- The maximum opening between stair balusters is 4 3/8″.
- The maximum triangle opening between the stair tread and the bottom rail is 6″.

⚠WARNING **Do not attempt to use Perennial Wood rail-to-post connectors to install stairway guardrails. Rail-to-post connectors are the wrong shape and size for this function and therefore cannot be used to properly secure stairway guardrails. Attempt to use this hardware incorrectly could result in death or serious injury from a collapse hazard.**

Figure Q



Instructions

⚠WARNING **To reduce the risk of serious injury or death from collapse hazard, never notch Perennial Wood guardrail posts. Notching reduces strength and prevents the structure from meeting load requirements specified in DCA-6.**

a) Install Perennial Wood guardrail posts onto the outside face of the stair stringers using two 1/2″ diameter stainless steel bolts in each.

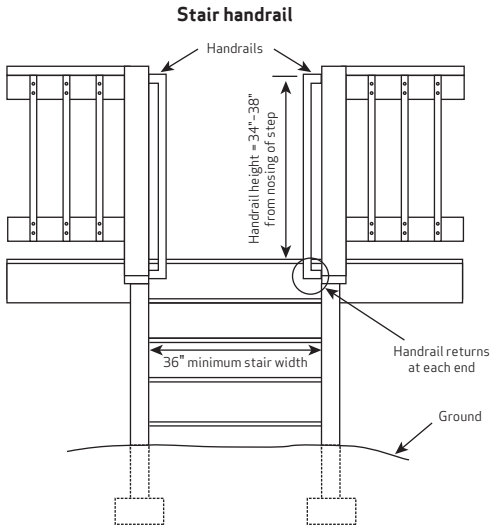
b) Perennial Wood posts are glue laminated in the factory. During installation, orient the post so that the bolts pass through the face of the post that has no glue lines.

c) Install stair treads using the guidelines in Section Seven.

d) Install stairway guardrail using Perennial Wood railing components following steps in Section Four with the following modifications:

1. Rail ends will have to be miter cut.
2. Top rail attachment height measurements up onto posts will be from the stair tread top surface at the *stair tread nose*.
3. Bottom rail attachment height must be set to not allow passage of 6″ diameter sphere, as specified in DCA-6 guidelines.
4. Pilot holes will no longer be drilled perpendicular to the board faces but on angles as required.
5. A different “angled” rail-to-post connector is required for stairway guardrails. Check local hardware stores for this stainless steel hardware.

Figure R



Note: Guardrail/balusters shown are not representative of Perennial Wood railing system.

Section Six: Handrails

General

Perennial Wood graspable handrails are not yet available. Choose an available high-quality alternative and install it according to manufacturer's guidelines and in compliance with local building codes.

Requirements

- Both guardrails and handrails should be used at stairs. Stairs with four or more risers require a handrail on at least one side. Handrails, unlike guardrails, must be "graspable." Perennial Wood guardrails cannot be used as handrails. For more information, see the stair handrail section of DCA-6 or your local building code.
- The handrail height shall be between 34" and 38".
- Attach the handrail to the guardrail posts or the top rail base with stainless steel hardware.

(See Figure R)

Section Seven: Stairway Treads and Risers

General

⚠WARNING **To reduce the risk of serious injury or death from fall/trip/collapse hazard, consult applicable codes and local offices to ensure stairways comply with all requirements.**

⚠WARNING **To reduce the risk of serious injury or death from trip/fall hazard, stairways and landings must have lighting controlled by electrical switches operated from within the home, motion detectors, or timers.**

Perennial Wood stair treads are available with rounded nose and grooved surface. Perennial Wood decking can also be used for stair treads and risers. The basic requirements are shown in DCA-6. However, check with local code officials to ensure code compliance and to reduce risk of serious injury.

Perennial Wood decking is not suitable for use as stringers.

Predrill pilot holes ($^{3}/_{32}$" diameter through the boards) and use through-face fasteners (#8 × 2 $^{1}/_{2}$" stainless steel screws) as described under "Decking Installation Option 2: Through-face Fasteners" to attach deck boards or stair treads to the *stair stringers.*

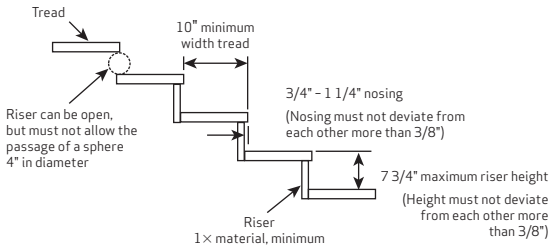
Requirements

- The minimum stair width is 36".
- The minimum tread width must be 10" from *stair tread nosing* to tread nosing.
- The nose must extend between $^{3}/_{4}$" to 1 $^{1}/_{4}$" beyond the face of the riser.
- The tread widths and stair tread nose length must not deviate from one another by more than $^{3}/_{8}$".
- The maximum stair height from the top of one tread to the top of the next must not exceed 7 $^{3}/_{4}$".
- Stair heights must not deviate from each other by more than $^{3}/_{8}$".

- The maximum stringer spacing from the outside face of the stair stringer to the center of middle stringer must not exceed 18″. Each Perennial Wood stair tread should always be attached to three or more stringers.
- An open riser must not allow passage of a 4″ diameter sphere, as specified in DCA-6.

Figure S

Stair height and width



Section Eight: Finishes and Maintenance

General: Finishes

Perennial Wood decking components come prefinished to promote an attractive appearance and durability. While it is not necessary to apply a preservative to cut ends of Perennial Wood decking, there may be a few exposed cut ends, as the result of installation, whose appearance will improve if stained. See your Perennial Wood dealer for Perennial Wood™ Deck Finish that will match the product pre-finished colors and keep your deck looking like new. See coating product label for proper application.

General: Maintenance

NOTICE **To reduce the risk of damage to your decking:**

- ***Never use harsh cleaners.*** **Commercially available deck cleaners may contain concentrations of bleach and other chemicals that may damage the surface.**
- ***Never pressure wash.*** **Pressure washing can result in serious surface damage.**
- **When removing snow or ice, always use tools that will not scratch or damage the surface finish. Use a broom or plastic-edged shovel.**
- Routinely keep your Perennial Wood deck free of debris such as leaves and grass clippings by sweeping or blowing them off.
- Clean your Perennial Wood deck with water and a mild soap (neutral pH) as needed.

Section Nine: Legal and Contact Information

Disclaimer

Read all safety precautions and information in this guide before beginning construction and be sure that a copy of this manual is available at each jobsite where Perennial Wood products are used. Installation of Perennial Wood must conform to the specifications provided in this manual. Perennial Wood decking should only be used for single-story, above-ground, residential decks and balconies. Perennial Wood components are not intended for use in primary structural elements of the deck such as joists, girders, columns, stair stringers, etc. All fasteners and connectors shall be stainless steel, with the exception of hidden fasteners, which may be stainless steel or plastic, to maintain resistance to corrosion.

This installation guide does not modify or otherwise enlarge the limited warranty that accompanies this Perennial Wood product. It is the builder's responsibility to inspect the Perennial Wood at the time of purchase and/or delivery. If questions arise about the suitability of this product for a project, consult a properly qualified professional such as an engineer or architect for an evaluation and recommendations.

It is recommended that the builder obtain a copy of the current Prescriptive Residential Wood Deck Construction Guide (DCA-6) published by the American Wood Council (AWC) in conjunction with the American Forest & Paper Association, Inc. It is available as a free pdf download from the AWC website at http://www.awc.org/Publications/DCA/DCA6/DCA6-09.pdf.

Contact Information

For additional information or questions, contact Perennial Wood customer service at 1-800-530-7495 or info@PerennialWood.com, or visit our website at www.PerennialWood.com.

TruLast™ Technology has been developed and is backed by Eastman Chemical Company, a Fortune 500 company with more than 80 years of history in acetylating cellulose and wood fiber.

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29 Industrial Park Drive • Binghamton, NY 13904

PerennialWood.com • 1-800-530-7495