

TruGrain – Gold, Platinum and Jetty Decking Installation Guidelines

NOTE: Proper planning of the deck layout is essential for ease of installation of deck boards and deck components. Thoroughly read the following deck assembly instructions and obtain all necessary building permits prior to starting your installation. Decide finishing and trimming options prior to starting the project to ensure deck projections and finishing detail is uniform for all sides of the deck. Installation is the sole responsibility of the installer. Westech assumes no responsibility whatsoever with respect to the installation. The information contained herein is provided for guidance purposes only and should not be relied upon as any absolute representation by Westech.

Safety Tips:

1. Always check for power, gas, and water lines before digging.
2. Always wear safety glasses when operating power equipment.

Assembly Tips:

1. Substructure should be plumbed and square.
2. Ensure firm soil and adequate water drainage.
3. Use table 1.1 “Joist Spacing Requirements” as a guide in determining joist spacing for decking installation.
4. Overhang deck boards to a maximum of 1”.
5. All holes should be pre-drilled
6. Ensure firm soil and adequate water drainage.
7. Flashing is necessary if decking is to be attached to a dwelling. Uncovered decks should be sloped approximately 2 degrees away from dwelling or other walls for adequate water drainage.
8. Only use construction fastening material and hardware suitable for outdoor use (e.g. stainless steel screws).
9. Always consider the linear expansion of Resysta, which is dependent on the temperature but not air humidity. See Table 1.2 “TruGrain Expansion” for more information.
10. Cut-off pieces and/or abrasive dust must be disposed separately. Please comply with regulations of your local waste management provider. You may under no circumstances burn Resysta yourself.
11. “Window shims” are a good way to maintain consistent spacing between abutting boards. Not only will this add to the visual appeal, but it will also allow natural board expansion to occur without interference. The illustration on the next page represents an end to end condition.

Code Compliant Joist Spacing

Part Number	Part Description	Joist Span (in)
DPL010055	Platinum Decking 1" x 5½" (1" x 5.51")	16
DPL010075	Platinum Decking 1" x 7½" (1" x 7.48")	16
DGD010055	Gold Decking 1" x 5½" (.976" x 5.51")	16
DJY015055	Jetty Decking 1½" x 5½" (1.5" x 5.51")	20

Table 1.1 "Joist Spacing Requirements"

Requirement for Joist Spacing – If the decking is being installed in a location where the air gap below the decking is equal to or less than 6" from the underside of the decking substructure to the ground / solid structure the joist spacing must be reduced to 12" center-to-center for all decking profiles.

Recommendation for Joist Spacing – If the decking is being installed in hot climates in the southern states it is recommended to reduce the spacing to 12" center-to-center.

Expansion / Contraction of Decking

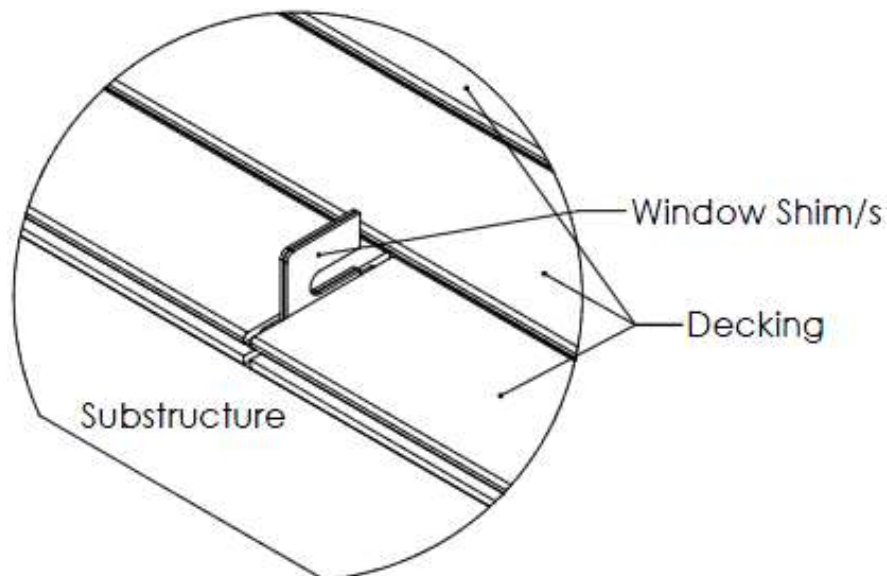


Figure 1 - Window Shims are the preferred method for creating and maintaining consistent spacing between boards.



TruGrain Expansion – Contraction Guide				
Profile Length	8 ft	12 ft	16 ft	20 ft
Expansion / Contraction amount (approx.. 0.3% over 90⁰F variation in temperature)	5/16" (0.288")	7/16" (0.432")	9/16" (0.576")	3/4" (0.720")

Expansion – Contraction: Average expected expansion – contraction (this can vary based on geographical region)

TruGrain Decking Board Gap Guide					
Temperature at Installation	End-to-End of Decking Boards				Wall Gap
	Below 30 ⁰F	60 ⁰F	90 ⁰F	120 ⁰F	
Amount for Decking Profile Length of 12 ft.	7/16"	1/4"	1/16"	0"	1/4"
Amount for Decking Profile Length of 16 ft.	9/16"	3/8"	3/16"	0"	5/8"

Table 1.2 "TruGrain Expansion" – Ensure a steady material temperature when cutting the boards to size, i.e. the cutting has to be done under constant conditions, e.g. inside or in shade.

Always consider linear expansion of TruGrain profiles during the installation of decking products. If temperatures fluctuate during the installation the gaps placed between the ends of the boards and the ends of a wall or fascia board must change with the temperature. Use the guide above to gap boards during installation.

Expansion – Contraction Tips:

- 1) Control Piece – at the start of the day cut a length of board that is desired to be installed and keep this board in the same area as the cutting and storage of the remaining boards. This board will be a “Control Piece” to reference to when cutting other boards to be installed. Throughout the day the “Control Piece” can be referenced to and the saw cuts adjusted accordingly as the boards expand and/or contract. Heat from the sun will cause TruGrain boards to expand so if the material is stored in the shade keep the “Control Piece” in the shade as well.
 Example: If 8ft boards and 12ft boards are being installed cut one 8ft board and one 12ft board at the start of the day. Reference these boards throughout the day and adjust the cutting of the other boards to match

- 2) Control Gap – at the start of the installation place the decking gap according to Table 1.2 and mark the first gap made. This gap will be a “Control Gap” to reference to when gapping the remaining boards to be installed. Throughout the installation reference back to this “Control Gap” to match the other gaps being installed. This will ensure that all the gaps installed are the same.



Installation – Procedure

SECTION 1 – Substructure

Frame the substructure and secure the post supports in compliance with local building codes. Ensure that the joist structure provides for deck boards attachment on centers not exceeding the requirements laid out in table 1.1 “Joist Spacing Requirements.” On decks where two deck boards will be used end-to-end, a minimum of two joists must be used to accommodate the fastening of the deck boards to the substructure where the boards meet. Prior to installing the TruGrain deck boards, fasten the railing post supports to the wood substructure. (Do not mount the post supports on top of the TruGrain decking). When using VinylGard® code compliant railing kits do not exceed 100” on center for railing post supports. Please refer to the railing installation instruction manual for suggested railing post support attachment options.

SECTION 2 – Selecting Fastener Options

TruGrain decking allows the installer freedom in choosing a fastening technique. This information is outlined below in table 2.1.

Decking Profile	Non-Visible Screw & Dowel Method	Metal Clip	Plastic Clip
Gold Decking	✓	✓	✓
Platinum 5-1/2”	✓	✓	✓
Platinum 7-1/2”	✓	✓	✓
Jetty Decking	✓	✓	✓

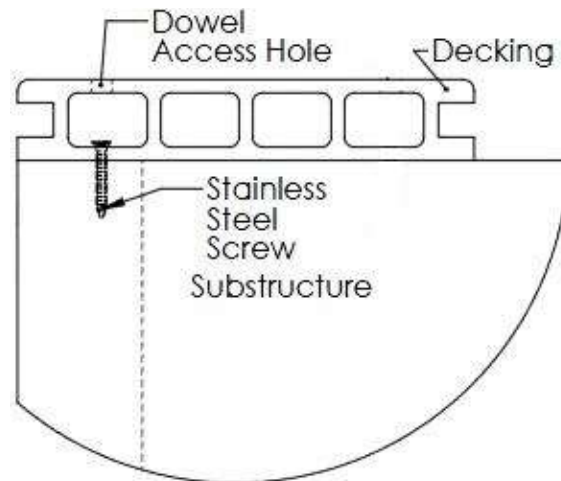
Table 2.1 - Installation with non-visible screw and TruGrain dowel (see Section 4). Installation with TruGrain metal clip (see Section 5). Installation with TruGrain plastic clip (see Section 6).

SECTION 3 – Selecting Starting Options

TruGrain decking allows the installer to choose from three different starting and finishing techniques. The type of installation and location of the installation will affect which starting condition can be used. If installing a deck where the ends of the deck boards will be against a house or wall, use the proper wall gap spacing before securing the deck boards to the substructure.

STEP 3.1 – Dowel Start Condition

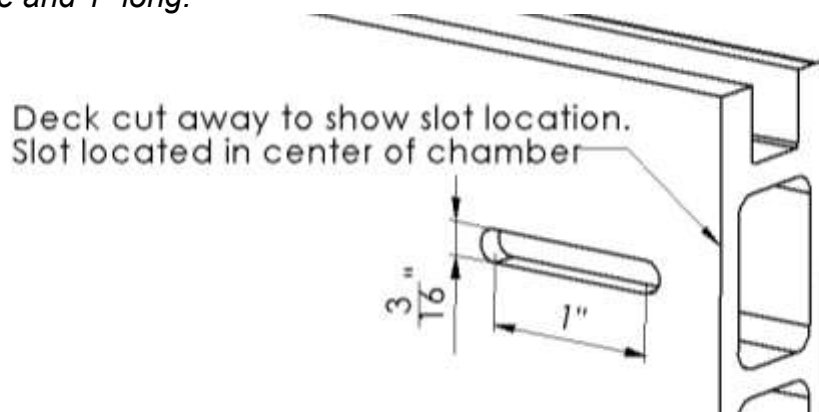
It is recommended to pre-cut the dowels to your specific needs to prevent unnecessary cutting after installation which may damage the decking surface. Pre-Drill the deck board at the screw location using a 1/8" drill bit, drill through both top and bottom walls. Drill a larger hole through the top wall only with a drill bit sized for the TruGrain dowel; 29/64" (12mm) drill bit works best. Screw in the #10 x 2-1/2" stainless steel screw through the bottom.



Do this for every joist location making sure that the screw is installed into the open cavity closest to the starting edge of the deck board. Do not install a screw closer than 1" from the end of the deck board.

Note – If using a metal clip or plastic clip the dowel for the start condition only needs to be installed into the first channel nearest the edge of the deck board. The clips will hold down the other side of the deck board.

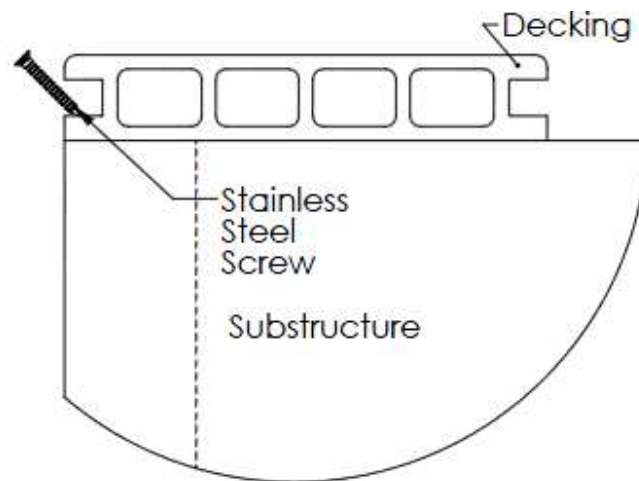
Requirement – If using a metal or plastic clip, the location where the dowel is will need to be slotted to allow the deck board to expand/contract with temperature changes. It is recommended to drill the 1/8" hole through both walls and flip the deck board over to make the slot. The 1/8" hole can be used as a guide to mark and cut the slot in the bottom wall of the deck board. Use the 1/8" hole as the center of the deck and make the slot 3/16" wide and 1" long.



Recommendation – A 3/16” slot cutter or router bit can be used to make the slot in the deck board. If a larger slot is used a washer needs to be used and can be inserted into the cavity of the end of the deck board after the board is prepared for installation. In either case it is recommended to use a button head or other style screw head that will sit flat against the wall of the deck board.

STEP 3.2 – 45 Degree Start Condition

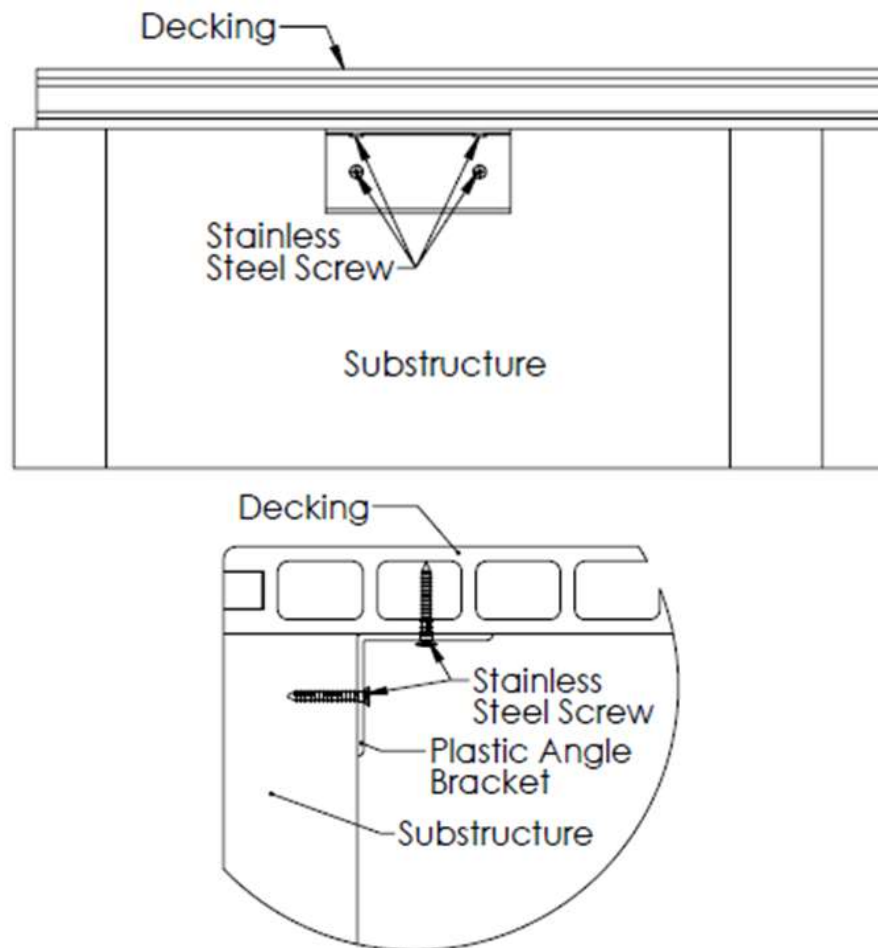
Pre-drill the deck board in the groove at the side of the deck board using a 1/8” drill bit. Install the #10 x 2-1/2” stainless steel screw to secure the deck board to the substructure. Do this for every joist location. Do not install a screw closer than 2” from the edge of the deck board.



Note – This method can be used for either the metal clip or plastic clip installation but cannot be used if installing the deck board against a house or wall.

STEP 3.3 – Under Deck Bracket Start Condition

Attach the plastic angle bracket to the frame substructure running parallel to the deck board using a quantity of two (2) #10 x 3/4" stainless steel screws. Place the deck board in the desired location for installation and pre-drill through the plastic clip and bottom wall of the deck board. Secure the plastic angle bracket to the bottom of the deck board with a quantity of two (2) #10 x 3/4" stainless steel screws. Do this between every joist.

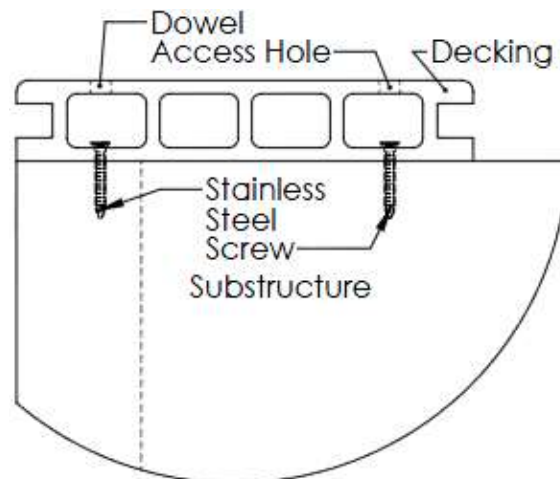


Note – This method can be used for either the metal clip or the plastic clip installation but cannot be used if the underside of the deck board is not accessible during installation.

SECTION 4 – Installation of Deck Boards **“Non-Visible Screw & Dowel Method”**

STEP 4.1 – Place the first deck board in the desired location on the frame. Make sure to follow the Gap Guide in Table 1.2 if the deck board is against a house or wall.

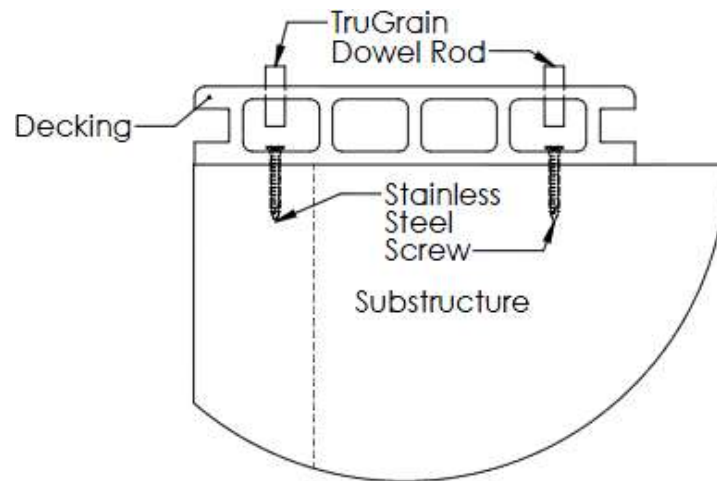
STEP 4.2 - Pre-cut the dowels to your specific needs to prevent unnecessary cutting after installation which may damage the decking surface. Pre-Drill the board at the screw location using a 1/8” drill bit, drill through both top and bottom walls. Drill a larger hole through the top wall only with a drill bit sized for the TruGrain dowel; 29/64” (12mm) drill bit works best for dowel hole. Screw in the stainless steel screw through the bottom, securing the board to the substructure.



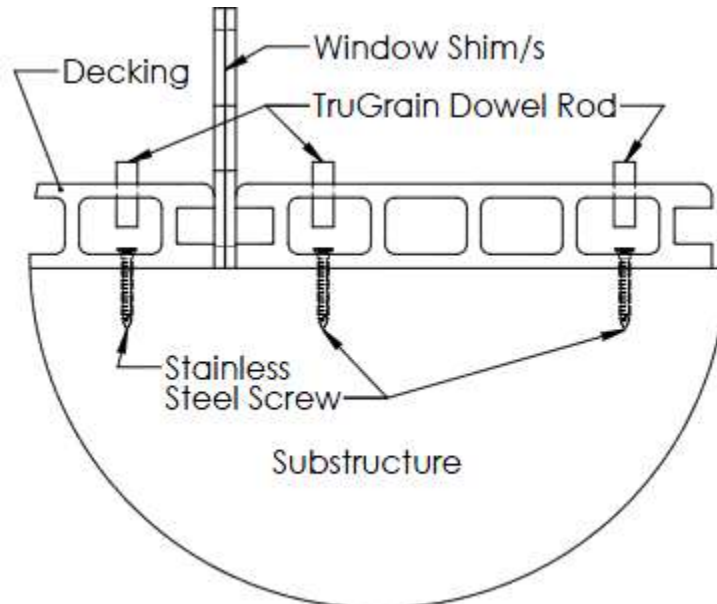
Do this for every joist location making sure that the screw is installed into the far most open cavities of the deck board. Do not install a screw closer than 1” from the end of the deck board.

Recommendation – *It is recommended to apply an adequate amount of PVC/PL Premium glue into the dowel hole prior to inserting the TruGrain dowel.*

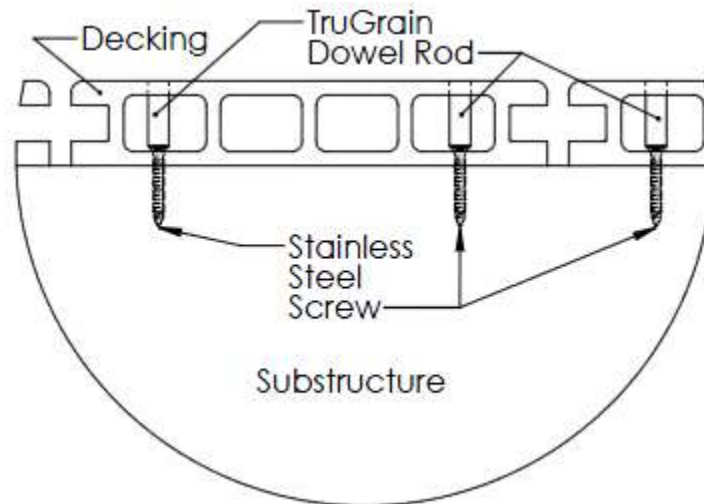
STEP 4.3 – Install the dowels into the drilled holes using a rubber mallet. Lightly hammer the dowels into the hole until they seat to the bottom of the deck board.



STEP 4.4 – Begin to attach the next board using the same method outlined in Step 4.1 and 4.2. To prevent future interference due to decking expansion, place a window shim between each board during installation. Using a window shim to space the deck boards will also allow for consistent spacing; gap to desired spacing.



STEP 4.5 - If any excess dowel remains sand the dowel with 24 grit sandpaper even with the deck surface. If staining the boards prior to installation each dowel install area will need to be finished with stain and/or sealer after installation is complete to achieve a matching surface finish.



Note - When sanding the dowels flush with the surface they will blend into the deck boards. However, it is possible to control how visible the dowels are after installation to achieve different installation appearances.

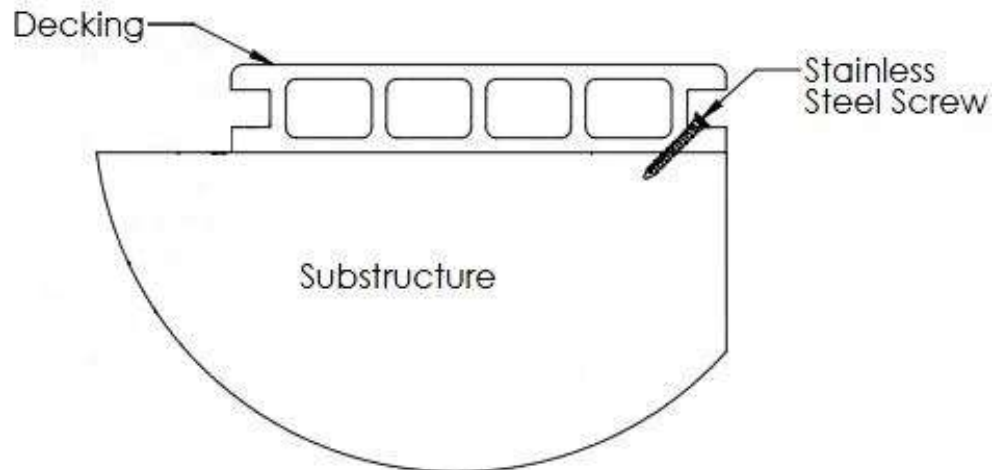
STEP 4.6 – Continue installing deck boards as outlined in Section 4 until deck is finished. If installing a deck with end-to-end joints make sure that a minimum of two joists are installed at each end-to-end joint. To properly gap the end-to-end joints see Table 1.2 at the beginning of this document. Window shims can be used to help gap the joints of deck boards to provide an even gap throughout installation.

SECTION 5 – Installation of Deck Boards “Metal Clip Method”

Note – Only 4 guns can be used to install the metal clips; Menards® 208-5016, Pneu-Tools RNS-150, GripRite® GRSB150 and Fasco® America F36-RHN-33-38MTL.

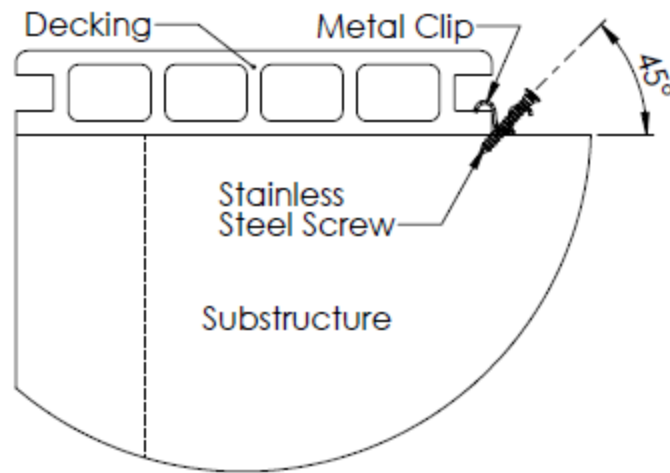
STEP 5.1 – Follow one of the start conditions in Section 3 to secure the first board to the framing joist. Make sure to follow the Gap Guide in Table 1.2 if the deck board is against a house or wall.

STEP 5.2 – Locate the joist closest to the center of the deck board. Pre-drill the deck board in the groove at the side of the deck board using a 1/8” drill bit. Install a #10 x 2-1/2” stainless steel screw to secure the deck board to the substructure. Do this for the center joist only to allow for expansion/contraction of the deck board in both directions.



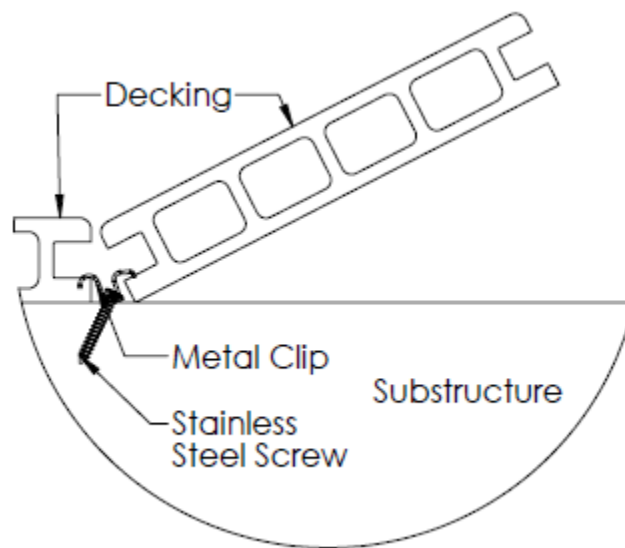
Note – The “Dowel Method” as described in 3.1 can also be used here to secure the board to the substructure and control expansion/contraction.

STEP 5.3 – Set the metal clip onto the clip pocket of the deck board with the clip teeth first and in the same position as shown in the picture below. Set the screw into the metal clip at a 45 degree angle and secure the clip to substructure to hold down that end of the deck board.



CAUTION: *The metal clips can only be installed onto wood substructures.*

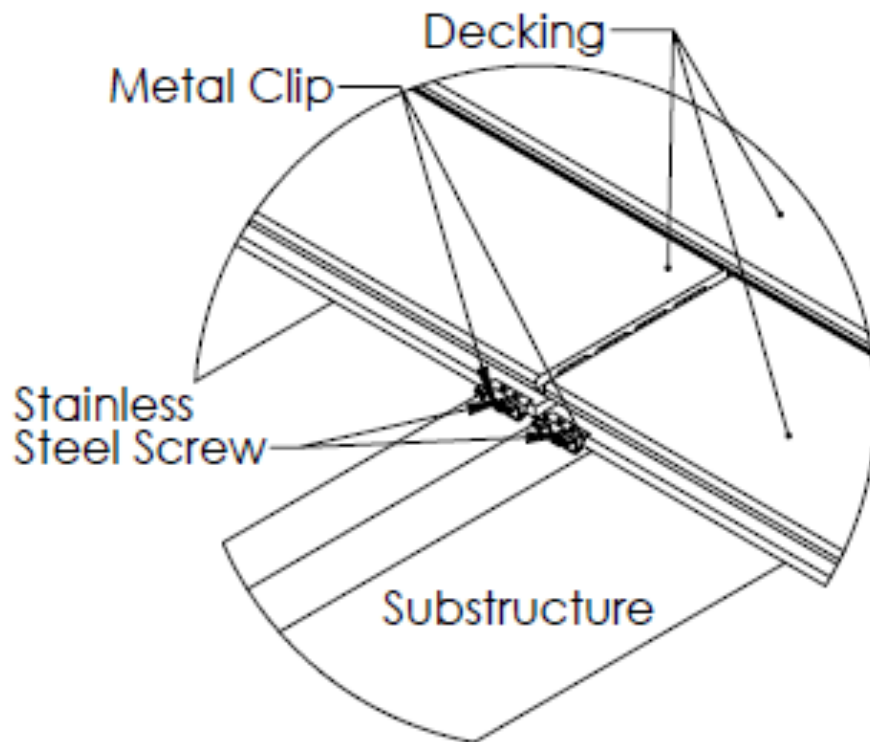
STEP 5.4 – Install the next deck board at an angle to the first making sure that the deck board sets fully into the installed clip. If necessary, lightly tap the deck board with a rubber mallet.



STEP 5.5 – Once the deck board is seated properly repeat Step 5.2 to install the center screw into the deck board. Finish installing the next deck board by following Step 5.3 as before.

STEP 5.6 – Continue installing deck boards as outlined in Section 5 until deck is finished. A metal clip must be installed onto each joist to properly secure the deck boards down to the substructure.

STEP 5.7 – If installing a deck with end-to-end joints make sure that a minimum of two joists are installed at each end-to-end joint. Install two metal clips at each joint, one clip onto each deck board. Never install one metal clip across two deck boards. To properly gap the end-to-end joints see Table 1.2 at the beginning of this document. Window shims can be used to help gap the joints of deck boards to provide an even gap throughout installation.

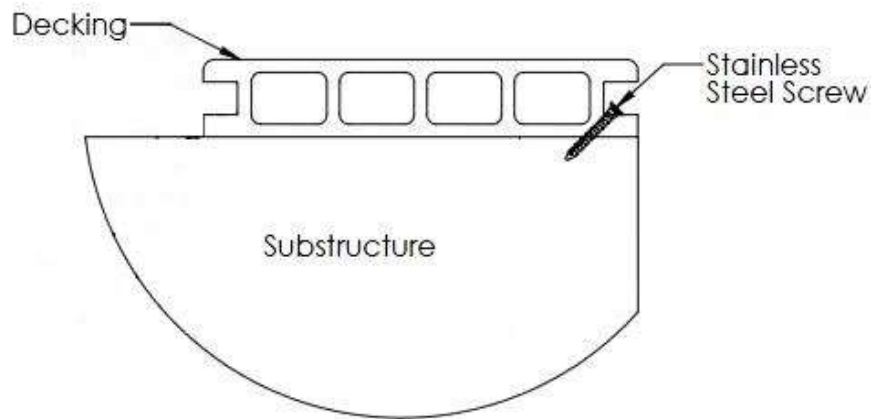


SECTION 6 – Installation of Deck Boards

“Vinyl Clip Method”

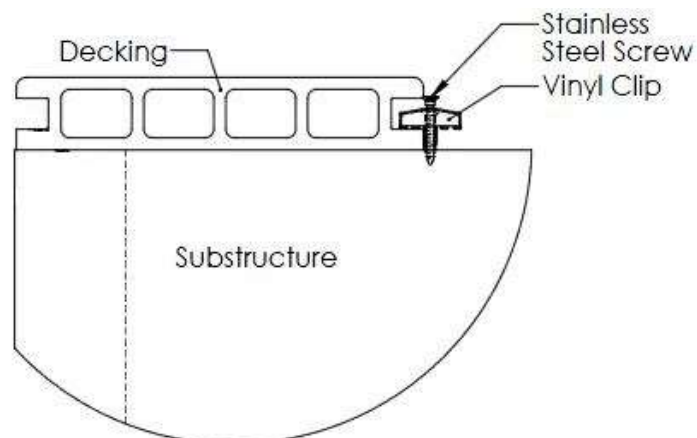
STEP 6.1 – Follow one of the start conditions in Section 3 to secure the first board to the framing joist. Make sure to follow the Gap Guide in Table 1.2 if the deck board is against a house or wall.

STEP 6.2 – Locate the joist closest to the center of the deck board. Pre-drill the deck board in the groove at the side of the deck board using a 1/8” drill bit. Install a #10 x 2-1/2” stainless steel screw to secure the deck board to the substructure. Do this for the center joist only to allow for expansion/contraction of the deck board in both directions.

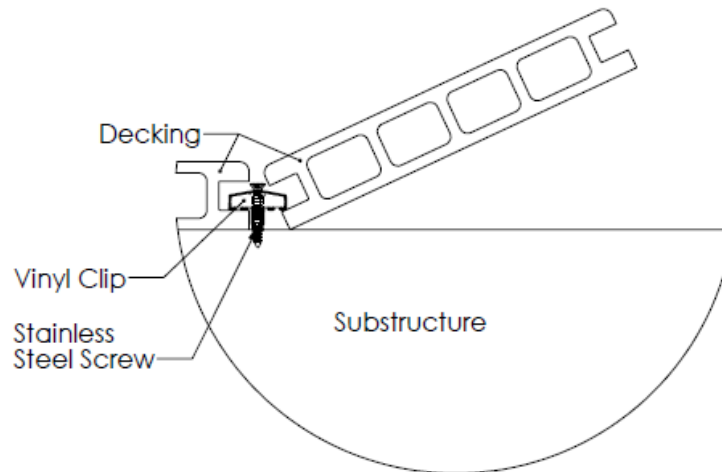


Note – The “Dowel Method” as described in 3.1 can also be used here to secure the board to the substructure and control expansion/contraction.

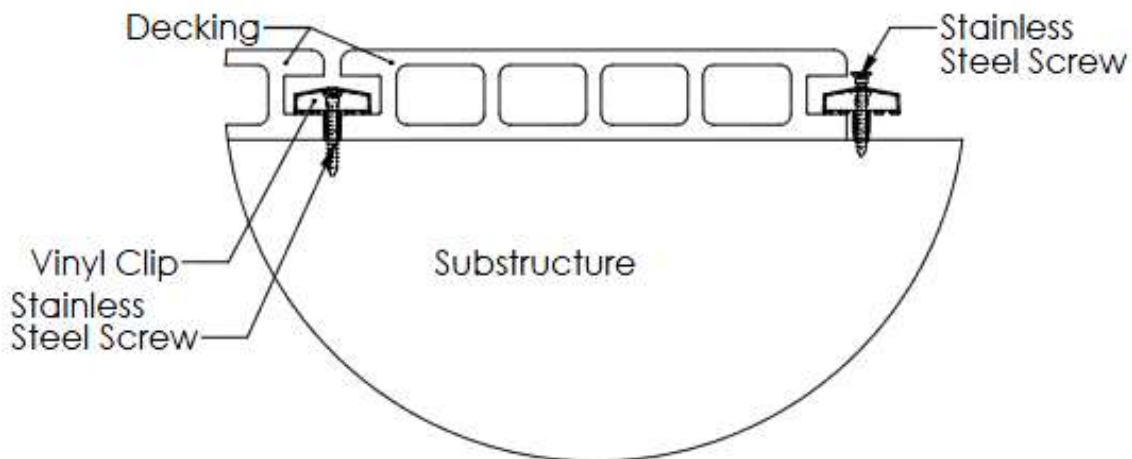
STEP 6.3 – Pre-set the screw into the clip, securing the screw into the frame substructure but do not tighten the screw onto the clip. Only set the screw half way into the clip so that the next deck board can be installed.



STEP 6.4 – Install the next deck board at an angle to the first making sure that the deck board is fully rested under the part-way installed clip. If necessary, lightly tap the deck board with a rubber mallet.



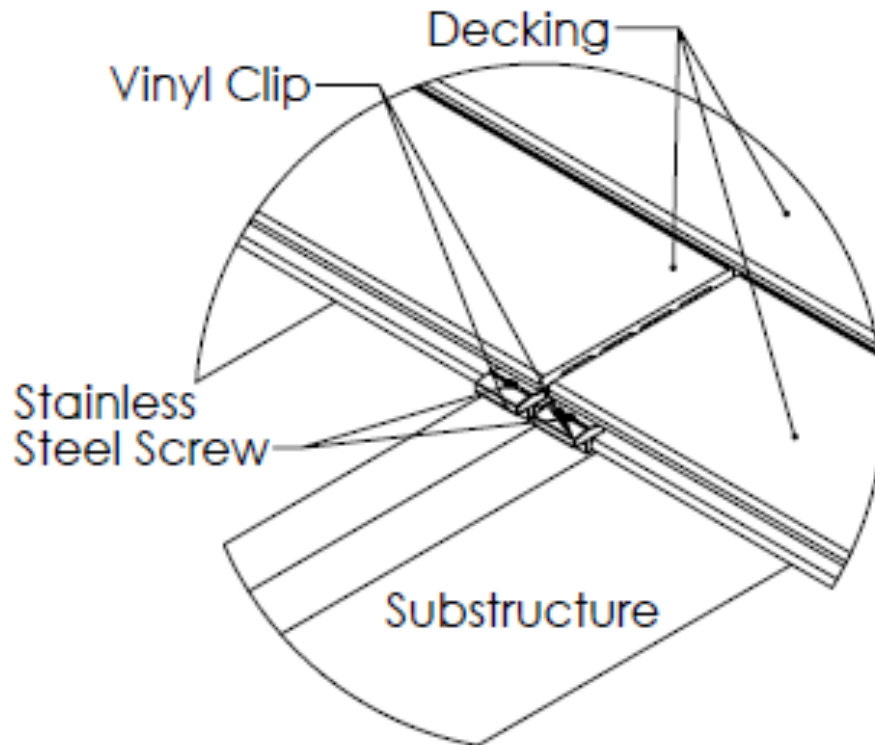
STEP 6.5 – Once the deck board is seated properly repeat Step 6.2 to install the center screw into the deck board. Install the next clip as show in Step 6.3 to hold the deck board in place. Next, go back to the previously installed deck board and tighten the screw onto the clip to hold down both deck boards.



Note – Recommend using a narrow head bit to secure the screw between the two boards. If a narrow bit is not used the bit could damage the boards when securing the screws.

STEP 6.6 – Continue installing deck boards as outlined in Section 6 until deck is finished. A plastic clip must be installed onto each joist to properly secure the deck boards down to the substructure.

STEP 6.7 – If installing a deck with end-to-end joints make sure that a minimum of two joists are installed at each end-to-end joint. Install two plastic clips at each joint, one clip onto each deck board. Never install one plastic clip across two deck boards. To properly gap the end-to-end joints see Table 1.2 at the beginning of this document. Window shims can be used to help gap the joints of deck boards to provide an even gap throughout installation.



SECTION 7 – Selecting Finishing Options

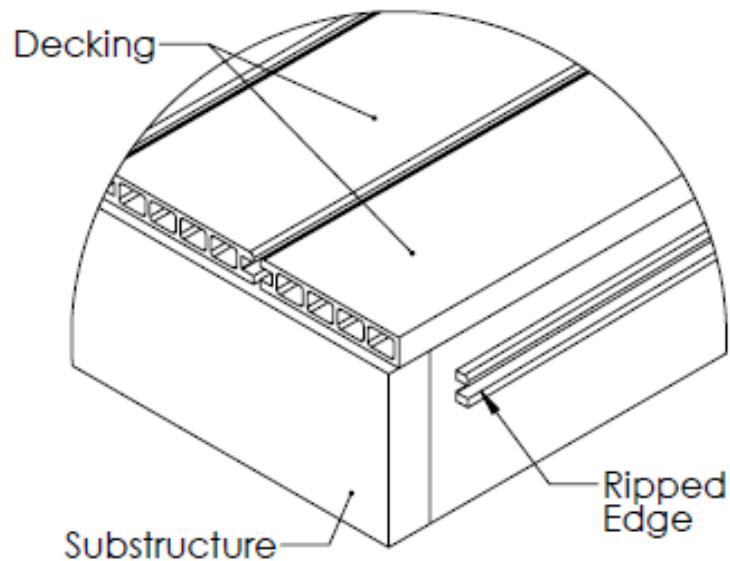
TruGrain decking allows the installer to choose from three different starting and finishing techniques. The type of installation, including Location, Finishing, and Trimming options, will affect which finish condition can be used to secure the deck board. If installing a deck where the ends of the deck boards will be against a house or wall, use the proper wall gap spacing before securing the deck boards to the substructure.

The finish options to secure the deck last deck board are identical to the start options of 3.1, 3.2, and 3.3. Some restrictions do apply depending on the finishing and trimming of the decking desired. See the notes in Section 8 for the start/finish restrictions of securing the last deck board.

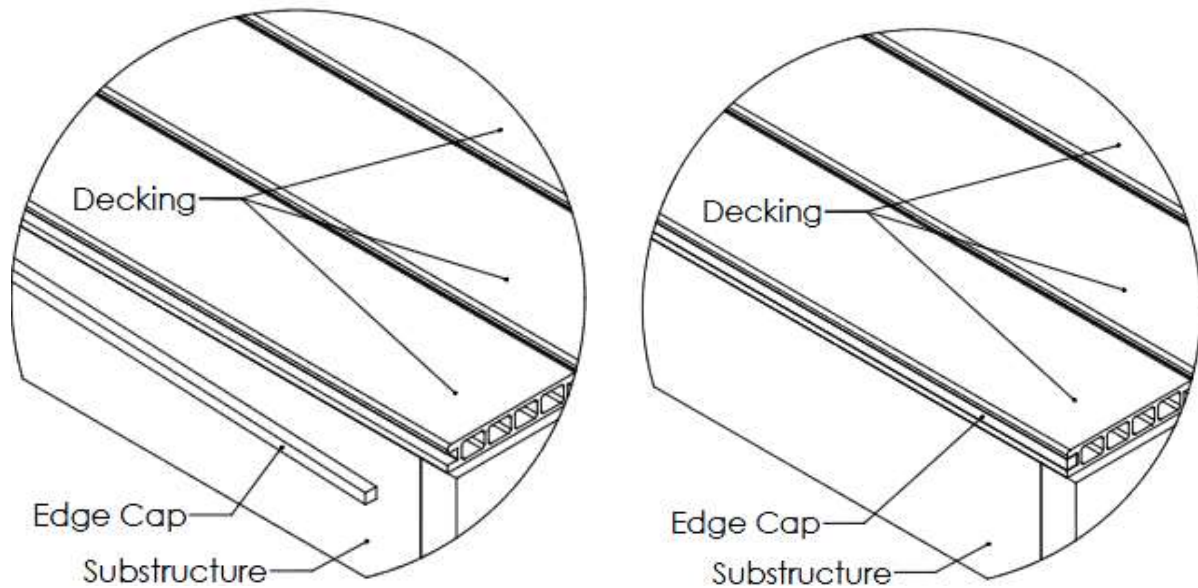
SECTION 8 – Finishing and Trimming Suggestions

TruGrain decking offers many different methods to trim and finish decking that includes covering exposed ends of deck boards, finishing the last board, and covering substructure framing. In addition, TruGrain can be installed in patterns to minimize the difficulty of trimming while enhancing the look and appeal of the decking surface. Due to the number of possibilities with TruGrain decking only a few finishing options are displayed in the Installation Guide. These finishing and trimming suggestions are not required and are not compressive in this guide.

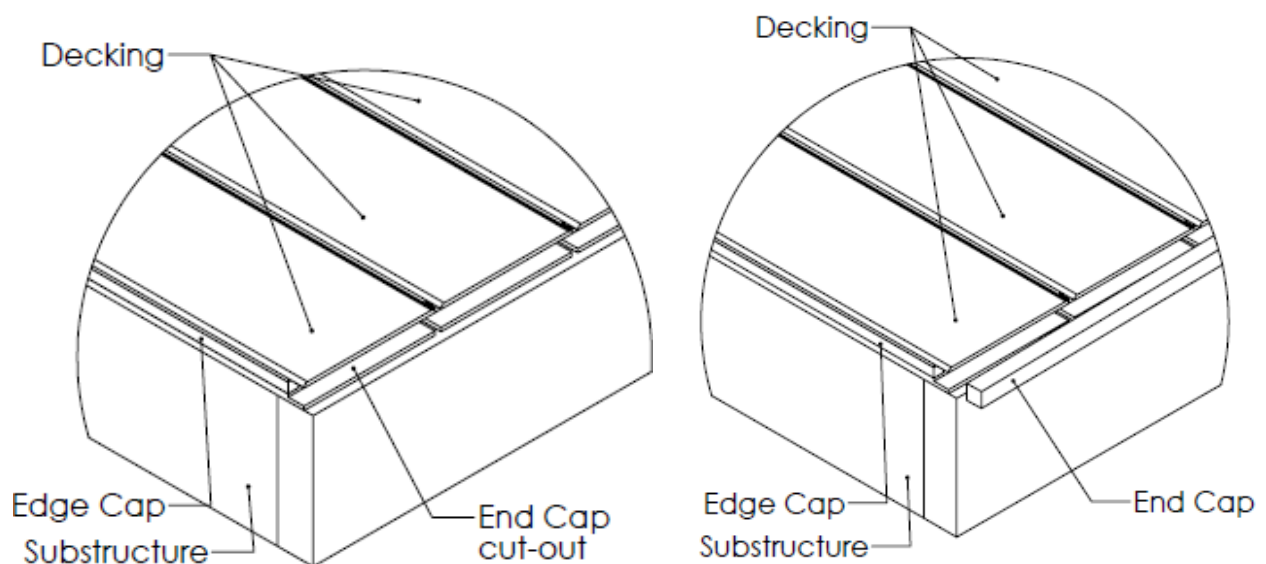
- 1) All deck boards can be ripped close to a center support and sanded smooth to finish the last board of a decking system. If this is used only start/finish conditions 3.1 and 3.3 can be used to secure the deck board to the substructure.



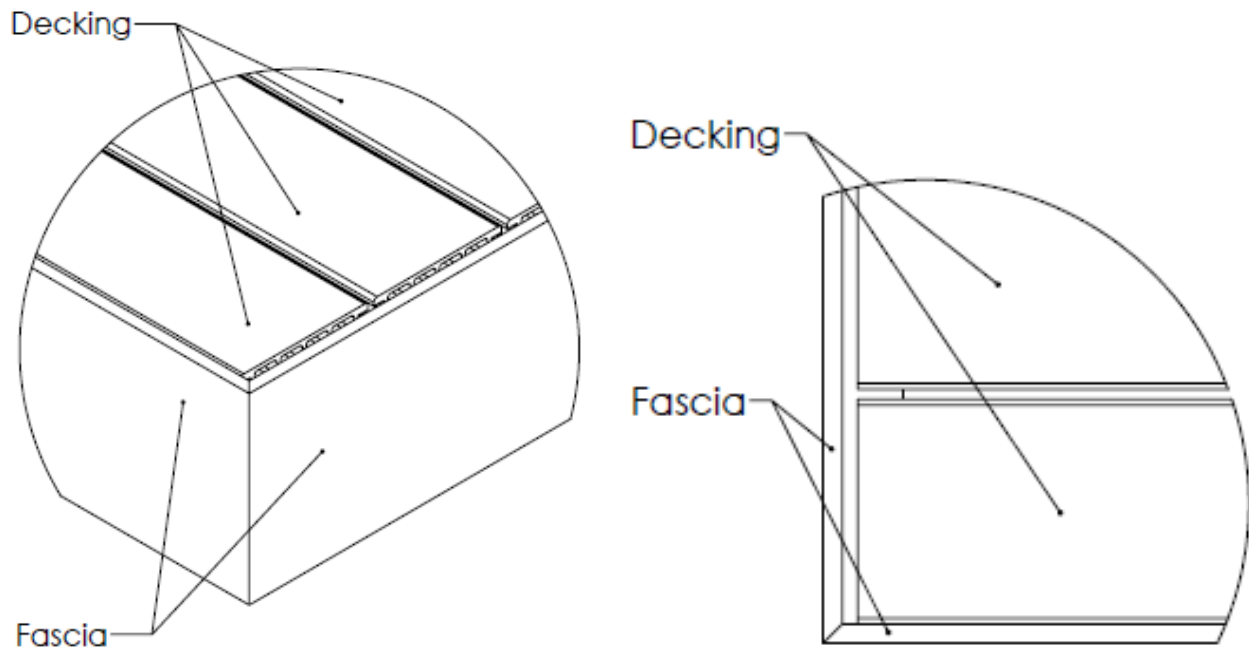
- 2) An Edge Cap profile will fit in the clip pocket of the Gold and Platinum boards to finish out the outside edge of the deck boards. To attach apply UV protected glue in the clip pocket of the deck board. Firmly insert the Edge Cap profile into the clip pocket groove, tap with a rubber mallet if necessary. Once the glue is cured the edge can be sanded to create a seamless finish.



- 3) An End Cap profile can be used to cover the ends of the Gold and Platinum boards and finish the open hollow edge of the deck boards. Route a space to insert the End Cap into the end of the deck board using a 5/8" router bit. Route 1/2" deep into the profile. To attach apply UV protected glue in the routed space of the deck board. Firmly insert the full length of the End Cap profile, covering multiple deck boards, into the routed space, tap with a rubber mallet if necessary. Once the glue is cured the end of the board can be sanded to create a seamless finish. Finally, cut the gapping between the boards so that the boards can move independently of each other.

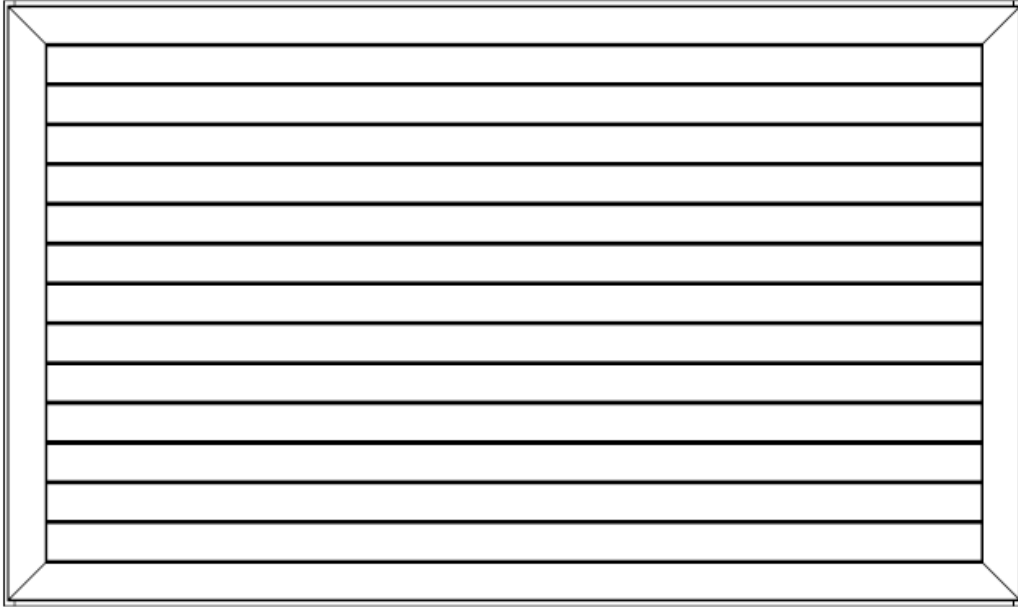


- 4) Fascia board can be used to cover the substructure as well as the ends of the deck board and/or the last board. The fascia board can be used to picture frame the deck by miter cutting the ends of the fascia board at a 45 degree angle. To use this technique properly and cover both the substructure and deck boards, use the gap guide in Table 1.2 to properly Gap the boards with the fascia board. Treat the fascia board as a solid wall when gapping. Fascia board can be secured by counter sinking the screws and attaching into the substructure. Recommend using #6 x 1-1/2" stainless steel screw and attaching 2 screws every 12" to secure fascia board to the substructure. If desired the screws can be counter sunk enough to allow a 1/4" long dowel to be placed over the screws. This will cover the screws to give a smooth look and feel.



Note – If you do not want a gap at the corners of the fascia board it is recommended to install without mitering the corners and using an overlapping joint.

- 5) Patterns can also be made with the TruGrain decking to minimize the difficulty of trimming the deck or to enhance the look of the decking. A simple picture frame pattern can be made where the clip pocket of the decking is exposed on all sides of the deck. By doing this the Edge Cap method (#2) can be used to trim the deck without having to rip or route any boards.



SECTION 9 – Stain and Sealant System

Westech Building Products recommends using approved water based stain and sealant system.



Safety Warning

TruGrain® Products do not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as sawing, sanding, or machining which result in the generation of airborne particulate. This product contains crystalline silica. Respirable crystalline silica limits are specified by OSHA. Exposure to respirable (fine) silica dust depends on a variety of factors, including activity rate (e.g. cutting rate), method of handling, ventilation, environmental conditions (e.g. weather conditions, workstation orientation), and engineering control measures used. Exposures to respirable crystalline silica above limits established by OSHA are not expected during the normal use of this product. Crystalline silica, has been shown to cause silicosis, and has been identified by the State of California, IARC and NTP as a known human carcinogen. The risk of developing silicosis is dependent upon the exposure intensity and duration. It is recommended that a NIOSH approved particulate respirator be worn whenever working with this product results in airborne dust exposure.



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