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MODERN TWO-BOARD & THREE-BOARD RANCH RAIL INSTALLATION GUIDE (03/26)

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BEFORE YOU BEGIN

Verify Underground Utilities

Use aids such as local building departments, utility companies, or utility location services to ensure the area is free from underground lines or hazards.

1. **Locate Property Lines**
Ensure the fence is installed within your property boundaries to avoid encroachment and comply with legal requirements.
2. **Consult Local Building Codes**
Review local codes to ensure the fence and gate installation meets all requirements. Obtain any necessary permits before starting the installation.
3. **Wear Appropriate Safety Equipment**
Always wear gloves, safety goggles, and work boots to avoid injuries during installation.

TOOLS REQUIRED

Tools for Preparing the Fence and Post Burial

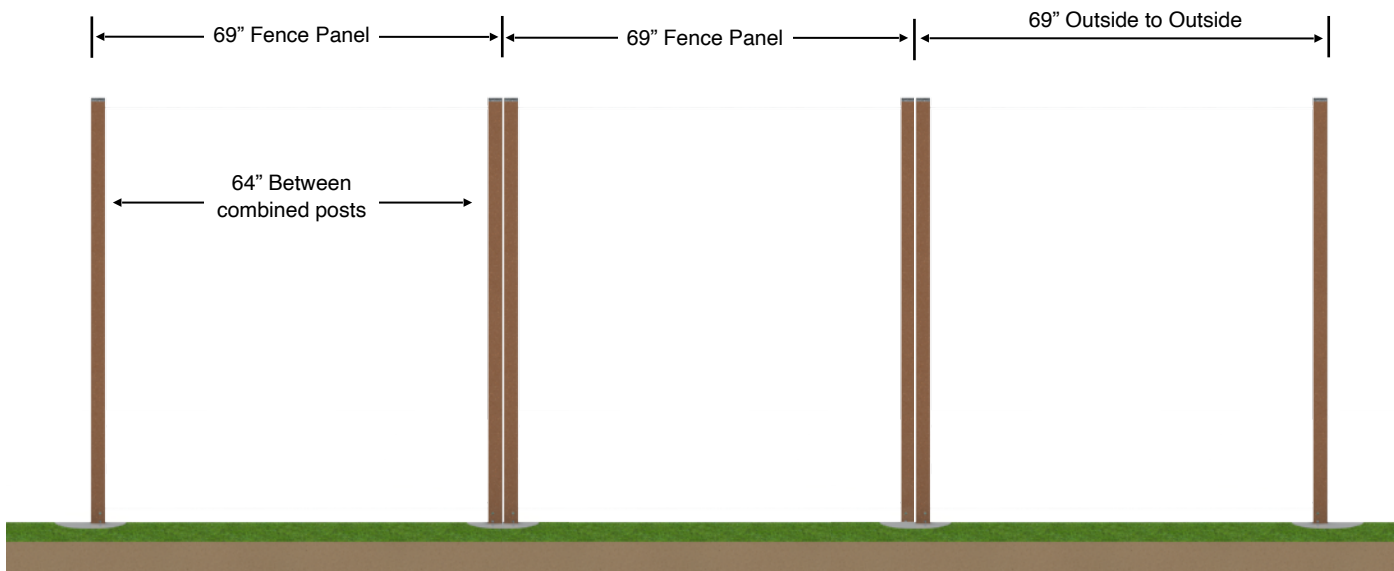
- Tape Measure
- Post Hole Digger & Shovel
- **Post Bubble Level** (for ensuring posts are vertically aligned at 90 degrees)
- Level and String Line
- Wheelbarrow
- Stakes or Markers
- **Torx T20 Bit** (for fastening the self-drilling composite screws provided by NC for both securing the posts and attaching the post cap)
- We recommend using a **power tool** for both operations to ensure proper installation of the fasteners.

FENCE LOCATION

1. **Mark the Fence Layout:** Use stakes and a string line to outline the fence location. The string helps ensure the fence remains straight during installation.
2. **Locate Gate Placement:** Mark the post hole locations for gate posts according to the gate installation instructions.
3. **Mark Corners and Ends:** Identify the locations of corner and end posts.
4. **Mark Intermediate Fence Posts:** Posts should be placed no wider than **69 inches (5.75 feet)** outside to outside posts for each fence panel.

STOP! Are you adding gate? How should you space your posts?

To add a gate, you must use two NC 5x5 Commercial Posts—standard posts won't support the weight. For added strength, insert a 4x4 pressure treated wood post inside each composite post. The gate is 45.5" wide, with 1.25" spacing on each side, total of 48" wide, and each post is 5" wide, so space them 58" apart (outside to outside) to ensure proper hinge and latch function.



COMPONENTS

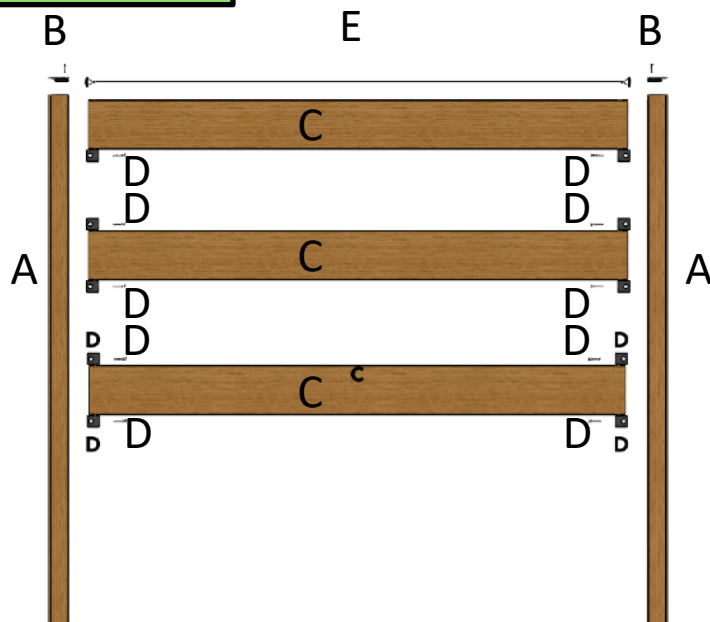
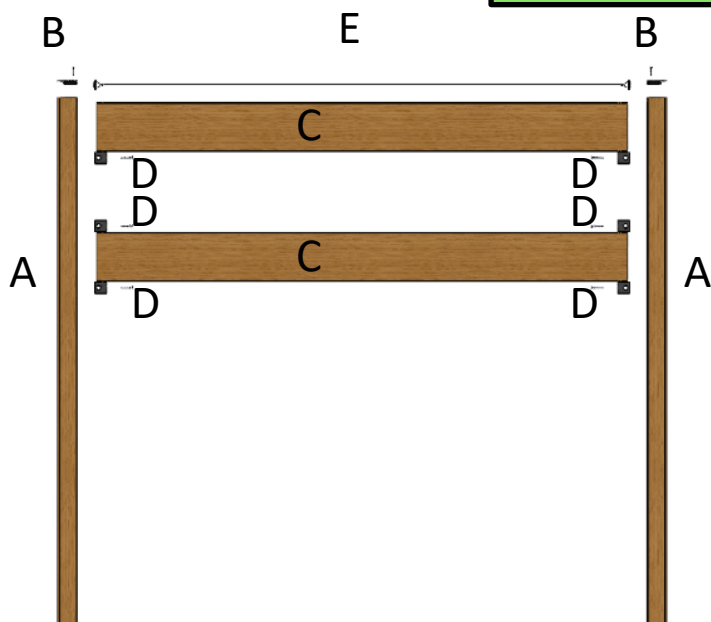
Composite Modern Two Board Ranch Rail (3 ft. H x 69 in. W) - *Nominal: 36 in. x 69 in.*

ITEM	QTY	DESCRIPTION	NC PART
Complete Product	1	Composite Modern Two Board Ranch Rail (3 ft. H x 5.75 ft. W)	100323XX30600
A	2	U-Post - 2.5" X 2.5" X 64"	300722XX064
B	1	Top Cap 2025 Pack (2 Caps & 4 Screws)	200721BK00000
C	2	Square Edge Board - Hollow Profile, 67" X 6" X 7/8"	300341XX067
D	1	X Spacer Pack (Includes 8 Spacers And 8 Screws)	200721XS0000
E	1	Top Cable Spacer Assembly	200030GV06900
F	6	#8 1-5/8" Bronze Star Truss Head Screw	ACSCR#8X1-5/8BR ONXET RUSS

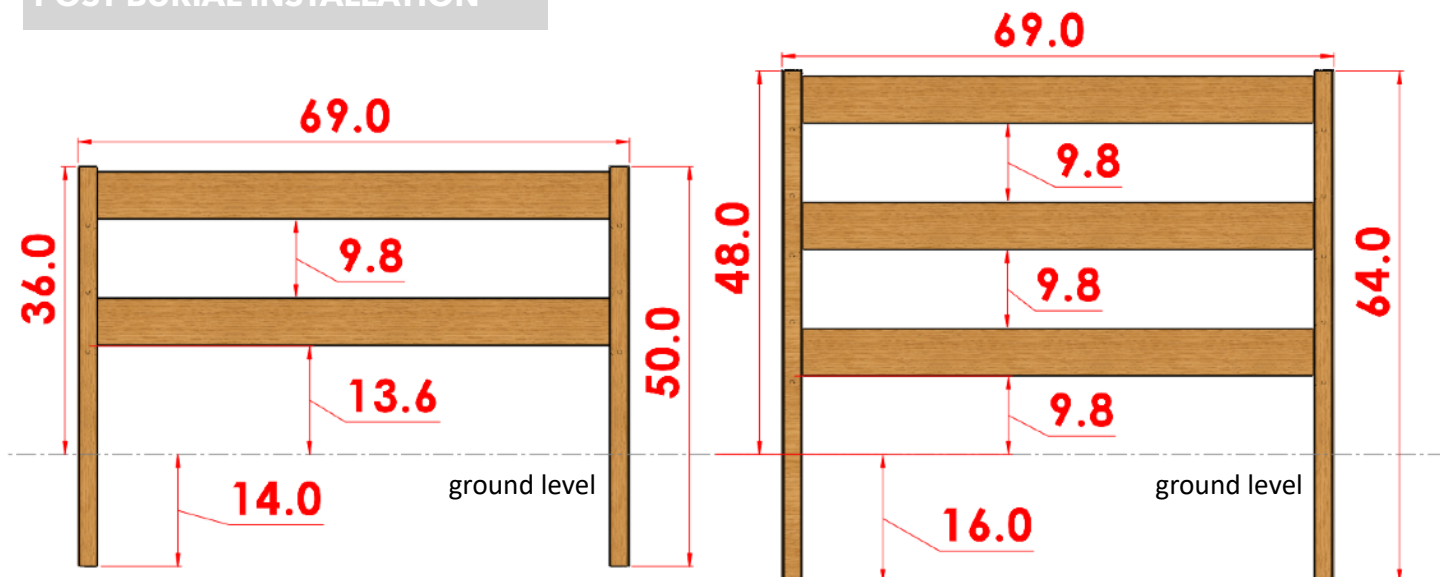
Composite Modern Three Board Ranch Rail (4 ft. H x 69 in. W) - *Nominal: 48 in. x 69 in.*

ITEM	QTY	DESCRIPTION	NC PART
Complete Product	1	Composite Modern Three Board Ranch Rail (3 ft. H x 5.75 ft. W)	100321XX30600
A	2	U-Post - 2.5" X 2.5" X 64"	300722XX064
B	1	Top Cap 2025 Pack (2 Caps & 4 Screws)	200721BK00000
C	3	Square Edge Board - Hollow Profile, 67" X 6" X 7/8"	300341XX067
D	2	X Spacer Pack (Includes 8 Spacers And 8 Screws)	200721XS0000
E	1	Top Cable Spacer Assembly	200030GV06900
F	6	#8 1-5/8" Bronze Star Truss Head Screw	ACSCR#8X1-5/8BR ONXET RUSS

**please note top cap kit is included in-between U-Posts in box*



POST BURIAL INSTALLATION

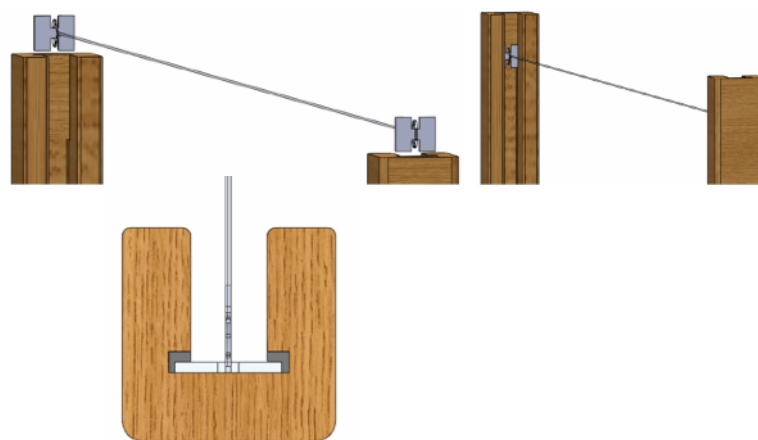
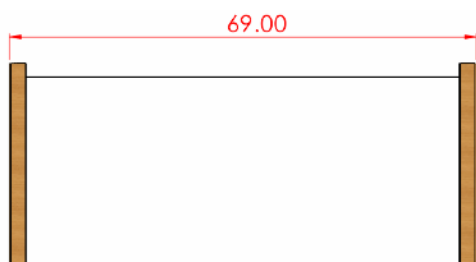


1. Dig the Post Holes

- Diameter: 12 in.
- Burial depth: 14 in. for the 2-board and 16 in. for the 3-board.

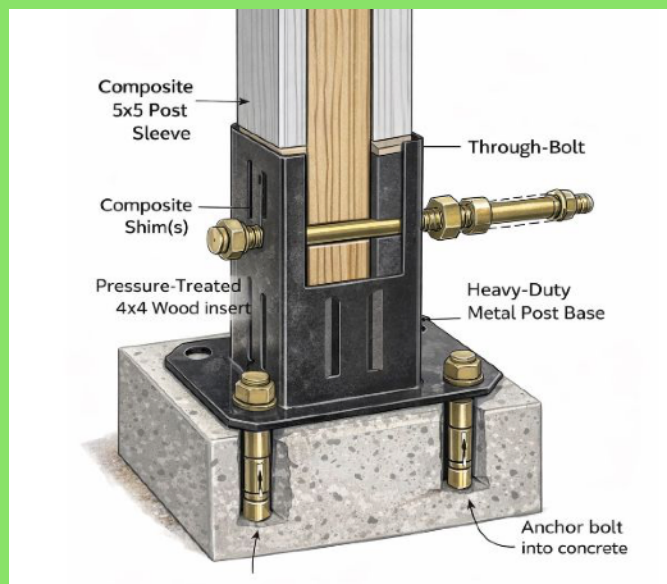
2. Install the Top Cable

- Insert the NC Top Cable into the top cavity of both posts
- Ensures exact 69 in. spacing while posts are buried.



Can my fence be Surface Mounted or only Buried?

Our fence systems are engineered for maximum stability when posts are buried in the ground. If burial is not possible, the fence may be surface mounted using a metal bracket system. For surface mounting, **NC Commercial-Grade 5x5 posts must be used between each panel** and secured with a **bracket designed for a nominal 4x4 post** (such as the E-Z Base Post Base). Because the bracket is designed for a 4x4 and our post is a **5x5 composite sleeve**, a **pressure-treated 4x4 wood insert** should be placed inside the composite post in the bracket area to provide structural support. If any gap remains between the bracket and the composite post, **composite shims** should be used to ensure a tight fit. Fasteners must pass through the **composite post, wood insert, and bracket** so the entire assembly is secured together. The post must be **fully rigid with no movement at the base**, as any play will transfer to the fence panels. **Surface-mounted installations may void the warranty for structural issues.**

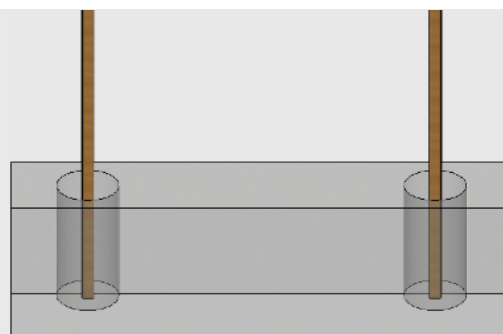


Can I cut my fence to adjust the length?

Yes, our proprietary wheat-based composite formula can be cut just like wood using standard wood-cutting tools. When cutting, make sure to cut all boards at the same place to avoid creating an uneven alignment. First, you must remove the bottom cable by cutting it at the board stop. Then, you will need to adjust the Top Cable Assembly. To do this, cut the top cable to the desired length and remove the top cable bracket at the end, as it will need to be replaced. You will need to purchase an aluminum ferrule (we recommend the Everbilt 1/16 in. Aluminum Ferrule and Stop Set) and reattach it by hitting it with a hammer to crimp it back into place. Following these steps will help maintain proper spacing and stability during your fence installation.

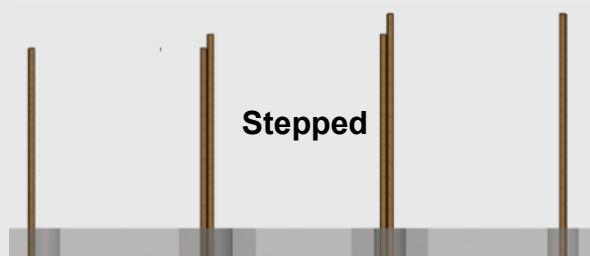
3. Single Panel Installation

- For a single panel, posts are buried individually.
- No pre-assembly is required before burial



4. Multiple-Panel Installation

- For multiple panels, line posts must be screwed back-to-back before burial.
- On uneven terrain, determine and set the required step height prior to burial.

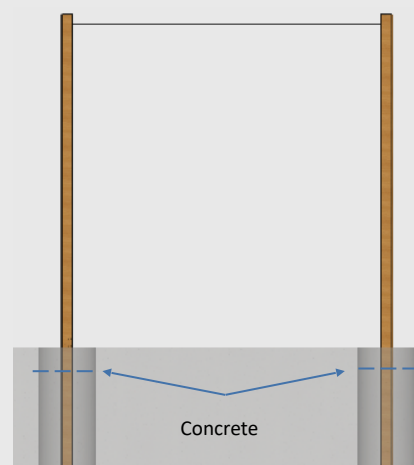


6. Plumb and Align

- Set all posts perfectly vertical (plumb).
- Align posts with the string line before concrete is poured.

7. Fill with Concrete

- Once spacing, depth, and plumb are verified, fill holes with concrete. Backfill the hole using 1-2 bags of concrete (60-80 lb.).
- Adjust quantity for hole size and soil: sandy/loam soils often need more, clay/rock can require less. Re-check plumb during curing.
- After the concrete cures, please remove the top cable to allow for the continuance of the remaining installation.



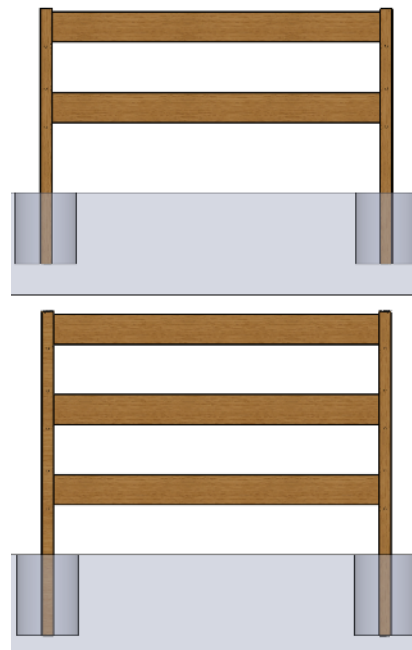
PREPARING NC POSTS BEFORE BURIAL

All NC Fence Panels Include Two Posts

Each panel comes with its own pair of NCU-channel posts. This patented design eliminates the need for different post types (start/ end, line, or corner). The same U-post can be configured for any use.

A. Single Panel Installation

For a single panel, there is no need to prepare or assemble posts before burial. Each post is buried individually in its final position.

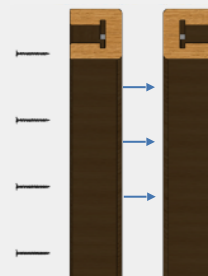
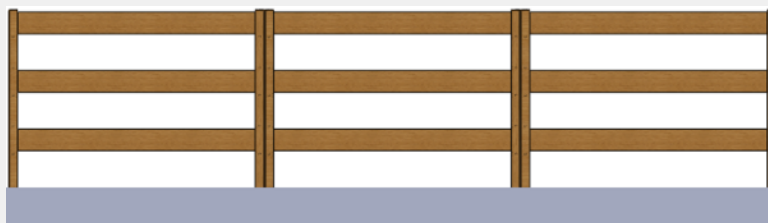


B. Multiple Panel Installation

When installing two or more panels in a row, the posts must be assembled (screwed together) before burial. If you are placing panels next to the other it is important to screw the posts together for maximum stability. Use the included four #8 1-5/8" Truss Head Screws (F) to secure the posts.

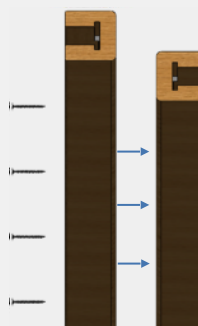
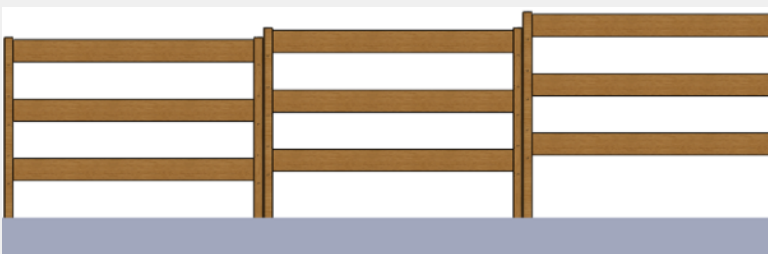
B1: Level Ground:

Posts are assembled evenly and remain at the same height.

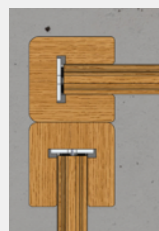
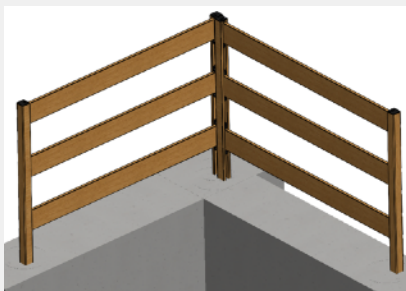


B2: Sloped / Uneven Terrain (Step Method):

Posts are assembled at different heights to create steps that follow the slope. Each step must match the grade of the terrain.



Corner Post



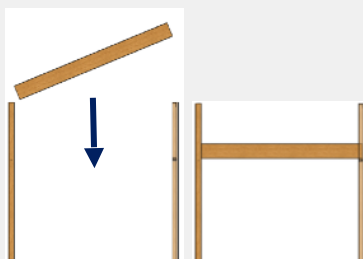
I. X-Spacer and Board Installation

Composite Modern Two Board Ranch Rail (3 ft. H x 69 in. W) - Nominal: 36 in. x 69 in..

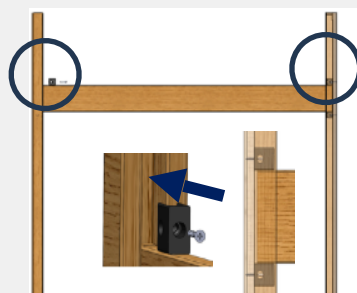
1. Install the first X-Spacer (D) inside the groove of the post (A) and secure it with the included screw. **Position it 22.4 in. from the top of the post**, then repeat on the other U-Post so both X-Spacers align.



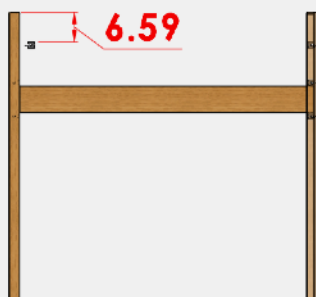
2. Position the first Edge Square Board (C) between the two U-Posts (A). Lower it carefully until it is fully seated and resting firmly on the X Spacer.



3. Place the next two X-Spacers (D), one on each post (A), on top of the first square edge board (C). Secure each spacer to its post using the provided screw.

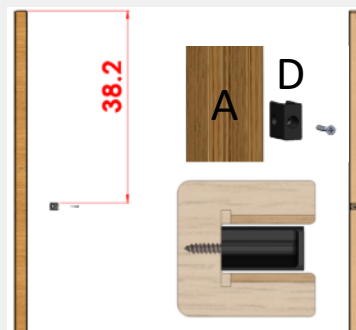


4. Place the final two X-Spacer (D) inside the groove of each U-Post (A) and secure them with the included screw. **Position it 6.59 inches from the top of the post.**

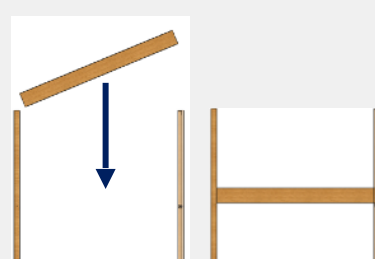


Composite Modern Three Board Ranch Rail (4 ft. H x 69 in. W)- Nominal: 48 in. x 69 in.

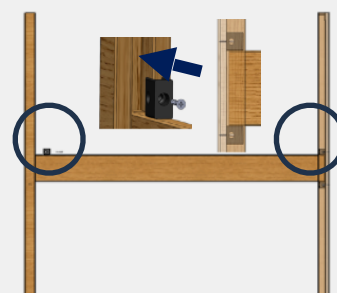
1. Install the first X-Spacer (D) inside the groove of the post (A) and secure it with the included screw. **Position it 38.2 in. from the top of the post**, then repeat on the other U-Post so both X-Spacers align.



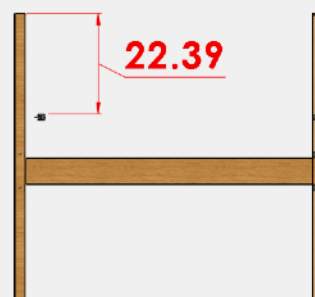
2. Position the first Edge Square Board between the two vertical posts. Lower it carefully until it is fully seated and resting firmly on the X Spacer.



3. Place the next two X-Spacers (D), one on each post (A), on top of the first square edge board (C). Secure each spacer to its post using the provided screw.



4. Place the next two X-Spacer (D) inside the groove of each U-Post (A) and secure them with the included screw. **Position it 22.39 inches from the top of the post.**



Composite Modern Two Board Ranch Rail (3 ft. H x 69 in. W) - Nominal: 36 in. x 69 in..

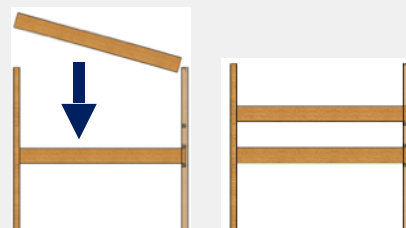
Note: Do not install the final board yet, as the top cable must be installed in the last board before insertion.



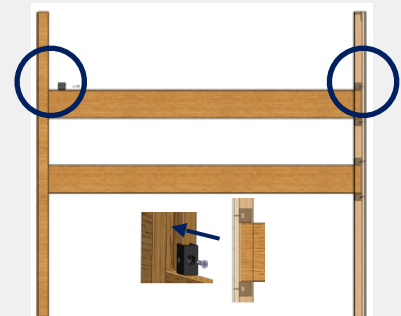
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Composite Modern Three Board Ranch Rail (4 ft. H x 69 in. W)- Nominal: 48 in. x 69 in.

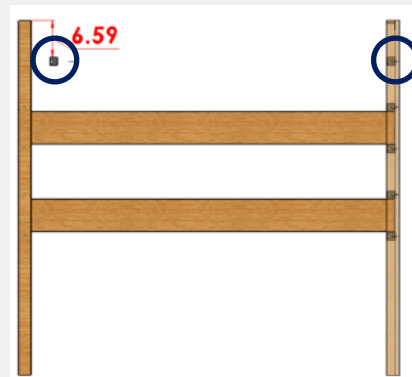
5. Position the second Edge Square Board (C) between the two U-Posts (A). Lower it carefully until it is fully seated and resting firmly on the X Spacer.



6. Place the next round of X-Spacers (D) on top of the second Square Edge Board and secure them both posts using the provided screw.



7. Place the final two X Spacers (D) inside the groove of both posts (A) and secure them with the included screw. **Position them 6.59 inches from the top of the post.**



Note: Do not install the final board yet, as the top cable must be installed in the last board before insertion.



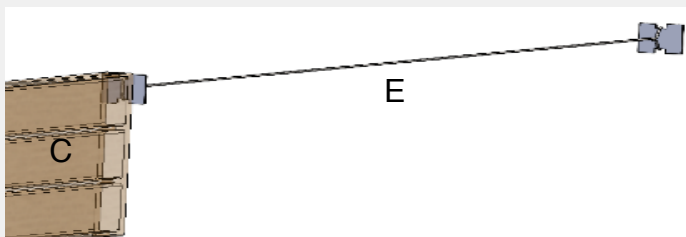
I. INSTALLING THE TOP CABLE

Can I paint my fence?

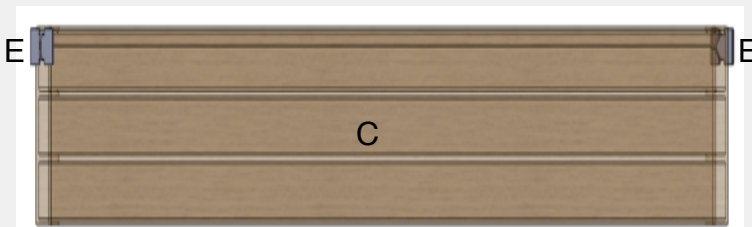
No! Painting is not advisable. Our products come pre-finished with durable, lasting color and a textured, non-reflective surface. They're designed to maintain their appearance without the need for painting, staining, or sealing—just occasional cleaning with soap and warm water.

The Top Cable (E) keeps the posts in the correct position and secures the boards inside the U-Posts (C). It comes fully assembled with two H-fasteners and a steel cable.

1. This image shows how to slide the top cable (E) inside the top cavity of the final Square Edge Board (C).



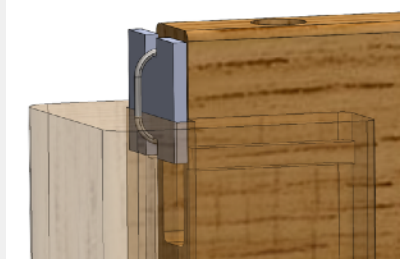
2. On this image the Top Cable (E) is inside the top cavity of the last board (C) with the H fasteners (part of E) outside the boards (as ears).



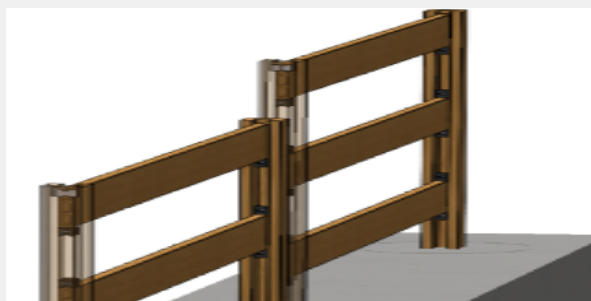
3. This image shows the grooves on the U-Post where the H-fasteners will slide in.



4. On this image the last board is being inserted into the U Channel and the H Fastener is aligned with the U Post Groove.

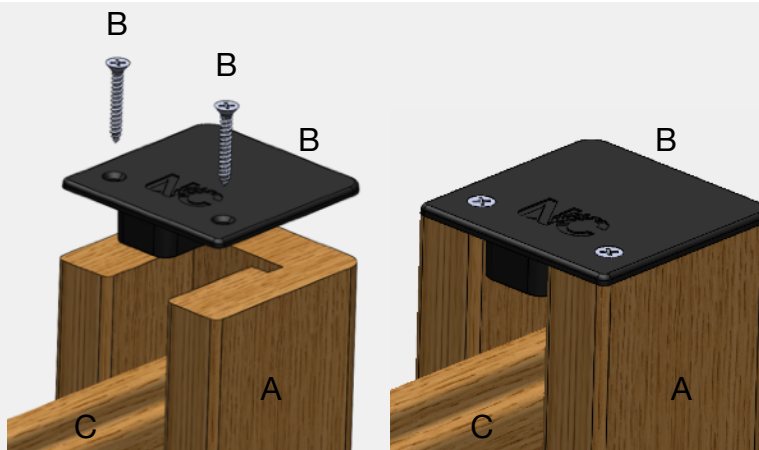


5. This last image shows the last board (C) positioned correctly where the H-Fasteners are inserted into the U-Post grooves and the cable tensioned.



TOP CAP INSTALL

1. Position the top cap (B) directly on top of each U-post (A).
2. Insert and tighten the two Top Caps (B) using two 1-5/8 Torx Composite Screws (B) each with a Torx T20 Bit and power tool. Top cap and screws come in the same bag.
3. Repeat for both U-Channel Posts (A).



Congratulations! You did it!

QUESTIONS?

Check out our Frequently Asked Questions PDF in our Resource Center at www.naturescomposites.com/pages/resources or scan the QR code on the right.

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