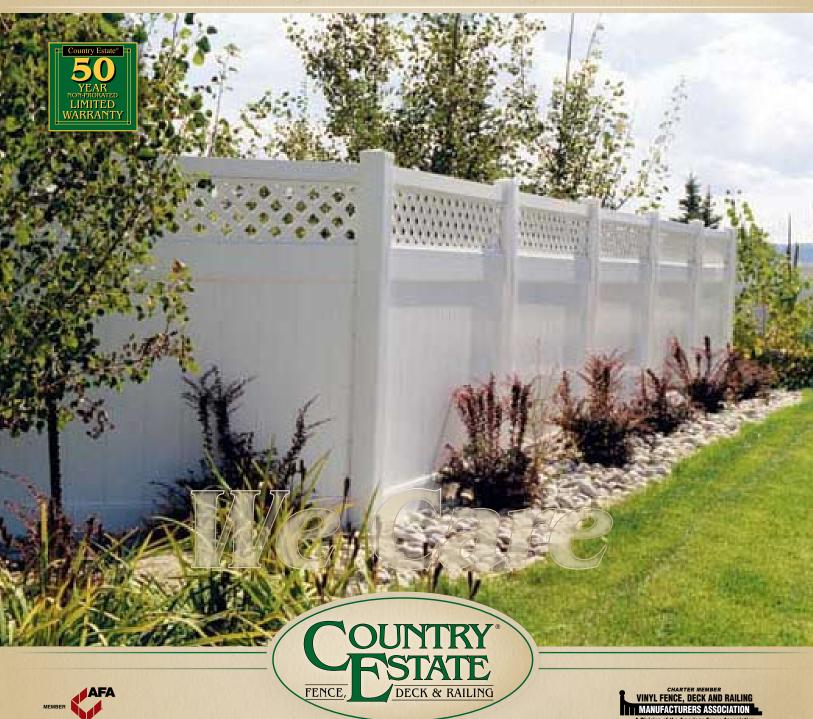
From the people who care as much as you do.

We strive for 100% customer satisfaction.





Fencing solutions for High Velocity Hurricane Zones.

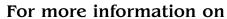


This Miami/Dade County High Velocity Hurricane Zone (HVHZ) certification is contingent upon the use of specified profiles installed as designed. Material specifications, design and proper installation are integral parts of this certification.

NOA: 07-0820.11 Approval Date: November/29/2007 Expiration Date: November/29/2012 Page 1 of 8 NOA: 08-0125.01 Approval Date: February/29/2008 Expiration Date: November/29/2012 Page 1 of 8

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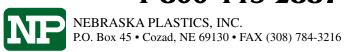
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GENERAL INFORMATION

Country Estate Fencing is known for its ease of installation. Other than the need to allow for greater expansion and contraction than is typical with traditional fencing materials, all of the techniques used by experienced fence installers are directly applicable to Country Estate Fencing products. This guide shares techniques developed by experienced installers and is offered to make your installation as easy and as professional as possible.

PLANNING YOUR PROJECT

There are a number of decisions you must make before ordering your Country Estate Fence. Although each project is different, there are some considerations which are common to every project. The following information is offered to assist you. If you have questions not covered here, please ask your Country Estate representative for assistance.

SKETCH A LAYOUT

Drive stakes to locate proposed corner posts and gate posts. Look for obstacles in the proposed fence line (trees, bushes, structures, etc.). Measure the distances between the stakes and take a few moments to sketch a layout of your project. Consider which direction you want your gates to swing. Some neighborhoods have building codes which restrict fence height and set back from property lines. If you are planning a property line fence, you will want to confirm your property lines before ordering your fence.

KNOW ABOUT LOCAL ORDINANCES

Building permits are typically required in most new installations. Local codes may require clearances or have height restrictions. Where an existing fence is being replaced, permits are not usually required — but it is good to investigate before beginning.

CHECK WITH YOUR LOCAL UTILITY COMPANIES

As a safety precaution, allow the utility companies to mark the location of buried lines, pipes and/or cables. Most companies will do this free of charge.



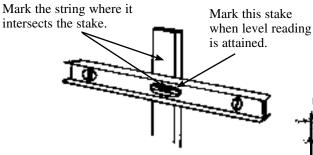
All Country Estate® PVC Products may be Recycled.

SLOPE

All properties have some slope. On nearly level properties, the top rail of the fence is kept level and the adjustment for slope is made by varying the post height. Rail and picket fencing will

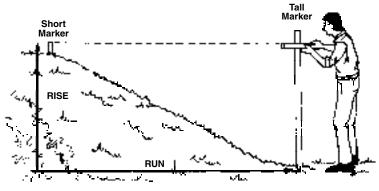
conform more easily to sloping or rolling terrain than will privacy fencing. If the drop is significant (2"+), your privacy fence may need to be installed using the stair-step method.

How to check for slope.



During the planning stage, this simple and inexpensive slope-gauging method may be used to determine the need for slope allowance. During construction, your installer will use a transit or laser.





POST CENTERING

There are regional differences regarding preferred post spacing. On most residential fencing, posts are spaced on 4', 6' or 8' centers. If you're planning an installation in rocky soil, 6' and 8' centers will reduce labor considerably. If your property is in a windy or hurricane area, 4' centers will provide added support. This is particularly true if you are erecting a solid privacy fence. In high traffic areas, 4' centers may be better. Please check with regional installers for their suggestions.



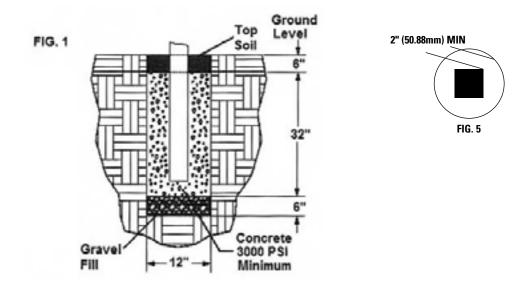
HEAVING:

Heaving occurs when the ground freezes to a depth below the bottom of the post while the soil in that area is saturated with water. Fencing may have been installed several years with no misalignment having occurred due to heaving. Then, if for some reason the soil freezes to a greater than usual depth or freezes with an increased amount of water in the soil, heaving can occur. The increased soil moisture can come from heavy rains, flooding, or having the ground water level rise. When heaving occurs, check the soil moisture and determine if excess water can be drained away from the post areas.

POST FOOTINGS-INSTALLATION OF POSTS

Adequate post footings are required to assure a straight and level fence for the life of the material. The following sketch shows four different accepted footings, for specific conditions. Due to the added stability provided, concrete is generally preferred. You may use either wet concrete or a dry-pre-mix concrete. Dry-pre-mix has the advantage that it can be backfilled and tamped like dirt. This allows installers to continue working and not have to wait for the concrete to set. Dry-pre-mix concrete draws moisture form the earth and after seven to ten days it will be as strong as wet concrete.

Due to the added stability provided, concrete is generally preferred:



Preparation of Post Holes:

Set posts in concrete in holes of diameter and depth as follows. Intended use and local conditions shall determine post-footing dimensions, that is, under normal conditions the diameter shall be 4 in. (101 mm) greater than the largest cross section of the post. The depth shall be a minimum of 34 in. (864 mm).

Preparation of Post – To secure post vertically, provide a means such as, but not limited to, notching, drilling, roughing, pinning, etc.

Installation of Posts:

Please refer to figure one.

Figure 1 – Partially fill bottom holes with 6" of gravel fill as shown in figure 1. Gravel fill will allow water to drain away from the base of the post and improve stability. Continue filling the hole with concrete to within 6 to 9 in. (152.4 to 228.6 mm) of the top. Fill the remainder of the hole with soil or fine rocks. Where frost is not likely, the hole may be filled to ground level with concrete (see Note 1). The post shall extend a minimum of 28 in. (711.2 mm) into the concrete (see FIG. 1). Check to see that the post remains plum until the concrete has set.

Note 1 – Filling hole to top with concrete in frost areas will enhance upheaval of post and footers as concrete freezes faster than fill.

For extra fence post stability,

the following suggestions should be considered:

- The option of a double-wall post versus a single-wall post.
- When longer (wider) gates are used, additional concrete should be placed around base of posts.
- Remember, all sections should be in place before securing posts with rebar and concrete (such as end posts, corner posts, or gate posts).

Note: The recommendation of filling posts with concrete is for end posts, corner posts, and gate posts only. Filling the inside of all posts with concrete will restrict the expansion and contraction of the rails!

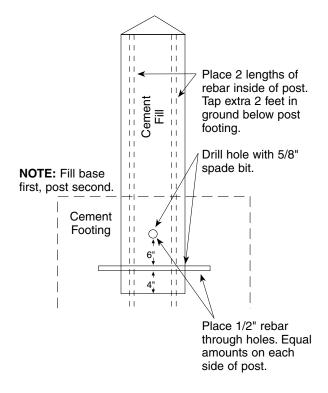
The following method of securing an end post, corner post or gate post will improve stability and prevent sagging gates.

Method 1 – Steps

- **1. Dig Post Hole** (12" dia.)
 - NOTE: When using larger heavier gates, hole diameters should be kept at 12" or bigger.
- 2. Drill holes near bottom of post, spaced approximately 4" from bottom, 6" apart. Place 1' lengths of 1/2" rebar in holes. (Allow approximately equal amounts on each side of post).
- 3. Set post and place concrete around post base.
- **4.** Put sections together and fill post with concrete. NOTE: Cover ends of rails or section rails with duct tape to prevent concrete seepage into rails.
- 5. Push rebar down through wet concrete inside of post. (5" x 5" post, 2 lengths of 1/2" rebar; 4" x 4" and 3 1/2" x 3 1/2" post, 1 length of 1/2" rebar)

 NOTE: Rebar should be as long as post.
- 6. Mount all hardware and/or place brackets on post while concrete is wet.

NOTE: by doing this step last, it will help prevent air pockets in concrete around screws and rebar.



Method 2 – Country Estate Fence carried aluminum post inserts that greatly assist in post stability, also by using aluminum post inserts there is less time needed for concrete to set as it is only at the base of the post. This really helps reduce installation times generally as a rule by one day.

Infill is the material placed around the post at and above ground level. Infill aids in water drainage and runoff. This is sometimes called crowning. Keeping water away from the posts aids in maintaining alignment.

IMPORTANT: The installation of posts on the exact centers recommended for each fence style is the most critical step in vinyl fence construction because exact centers will allow for expansion and contraction. The second most critical step is proper alignment.

GATES

Give considerable thought to the convenient location, adequate width, and proper installation of your gates. They will be the most visible part of your fence project. Gates are the high traffic point. If they are the wrong size, or if they do not swing conveniently, they can be an annoyance. The following items are provided to help you plan the appropriate gate size and hardware.

- Will you need both walk-through and drive-through gates?
- Check the width of vehicles, wheelbarrows, lawn mowers, etc. Openings for gates for automobiles should be a minimum of 8' wide. In high traffic areas, you will want the gate opening to be 10' or 12' wide.
- For an opening wider than 5', double gates may be preferred.
- Which direction do you want the gate to swing?
- If your fence uses heavy wall posts as the "standard post" in its design, a regular wall 5"x5" post must be specified for any post where an Aluminum Gate Post insert is desidred.

GATE POSTS

Your gate will be not better than the post on which it is hung. If the weight of the gate causes it to shift in the soil, it will appear that your gate is sagging and it may not open properly. To assure a trouble-free installation, the gatepost must be extremely stable. It should be mounted in an extra amount of concrete. Fill the inside of the post with concrete reinforced with rebar, or aluminum post inserts are available for 5" gate posts, rather than using concrete and rebar. If an aluminum post insert is used, extend it well below the concrete used to stabilize the post in the posthole. You may also wish to use these same installation procedures on your latch posts.

When hanging gates, CEF recommends the use of aluminum posts insert inside the gatepost as discussed above. As an alternative method, we have seen the use of a gate post which extends above the gate and a supporting cable is strung from the top of the gate post to the far end of the gate. You may have a rust problem with the cable system. CAUTION: The cable system should not be used where animals are present because it is possible for them to get their heads wedged in the angle created where the cable attaches to the top of the gate. EXTREME CAUTION: The cable system is also a hazard for small children who may play on the gate.

Remember: If your gate requires a bolt/screw through the post and/or latch or if the hardware screws into the gate and/or latch post, mount your hardware on the posts while the concrete is still wet. If you are using aluminum inserts this will not be necessary, but the pre-drilling of screw holes will be, to help facilitate securing hardware.

Country Estate® installation practices and recommendations does not purport to address all of the safety concerns and/or local code requirements, associated with it's use. It is the responsibility of the user of these prescribed installation practices to establish appropriate safety, health, and installation practices and determine the applicability of regulatory limitations prior to use.

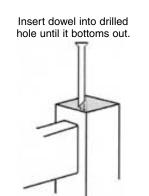
Safety — All work shall be performed in safe and orderly fashion in accordance with the Williams-Steiger Occupational Safety and Health Act of 1970.

TYPICAL FASTENING TECHNIQUES:

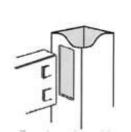
POST TO HORIZONTAL (RAIL):

ROUTED POST / INSERTED RAIL:

Our most popular rail-mounting method. The central mounting makes the fence appear the same from either side. In this technique, the post is routed and the rail inserted. Twin notches are made on both sides of each rail and as the illustration shows, the horizontals are easily inserted, but will not slip out after snapping into the post.



(Top horizontal insertion with dowel & notches)



(Post insertion with notches Middle or bottom horizontals only.)

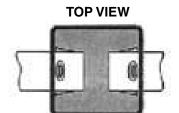


(Line Post — Bottom Horizontal) (Note: Notches only, no dowel)



END VIEW

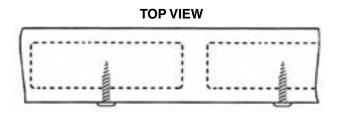
Verticals secured in horizontal.

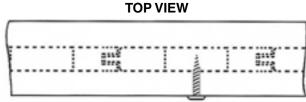


Line Post — (Top horizontal with notches & dowel insert.)

SECURING VERTICAL (PICKET) TO HORIZONTAL (RAIL):

In the HVWZ CEF privacy fence designs every other vertical (picket) in each fence section is secured with a No. 14 x 3/4" SMS (stainless), top and bottom. (Note: these are not optional.) A small pilot hole may be drilled to ease facilitation and insertion of each screw.





INSTALLATION GUIDE:

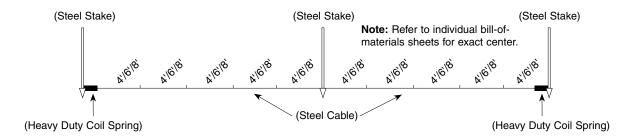
(For all HVHZ styles) Some styles will need to be installed on level ground or stair stepped and others will work good on uneven ground. Your dealer will be able to assist you with your choices.

Note: A list of tools needed for the installation of each fence style is shown above the respective drawings which are shown on pages 12 through 17.

Steps:

1. Set a String Line at the outer edge of the desired post location.

Important: Due to the expansion and contraction caused by temperature changes, it is very important that your posts are set on exact centers. This is more easily accomplished if you use a string line with the spacing pre-marked on the string line. Some professional installers use a pre-marked, spring-loaded cable with hooks on the ends so that the cable can be easily unhooked and pulled aside as the post hole is dug. See sketch.



With either a conventional string line or the steel cable, the stakes should be very secure to maintain accuracy.

- **2. Mark the location of each post hole.** A can of brightly colored spray paint works well for marking post holes.
- **3.** Dig Post Holes and Set Posts. In ground-frost areas, dig the post hole a few inches deeper than the desired post depth. Backfill the first few inches with gravel. This will reduce frost heave.

In ground-frost-free areas, dig the post hole slightly shallow. Set the post in the hole, place a block of wood on the top of the post, and use a mallet to tap the post down to the desired height. This provides a solid base for the post.

Use your string line, carpenter's level, and tape measure to make certain that each post is set exactly on center, that each post is exactly perpendicular, and that both the top and the bottom of each post center is on exact centers.

If you backfill with dry-mix concrete, tamp and pack the backfill tightly. If you backfill with wet concrete, use care not to slop the concrete onto the post. Make certain each post is the correct height.

- **4. Pop the Rails of Pre-assembled Picket Sections (Routed Sections) into Routed Post Holes.** The rail-ends are notched to hold the rails into the posts. If your posts are spaced on exact centers, the rails will appear to be slightly longer than necessary. Do not allow the rail-ends to abut on the inside of the post. When properly installed, rails will have a small amount of side to side "float". This "float" allows for the expansion and contraction of the rails.
- **5.** Install Lattice on fences using lattice with the stainless-steel screws provided. Install lattice in pre-slotted rails (horizontals) and posts and secure with screws provided.
- **6. Install Caps and Rail Plugs.** On external caps, place a small bead of PVC cement on the inside of the cap lip. On internal caps, place a small bead of PVC cement on the inside of the post.
- **7. Clean Fence.** During installation, your fence will have collected dirt and finger marks. These may be wiped off with "Soft Scrub" or a comparable product. Light solutions of bleach and water will work. Some professional installers wipe down the fence with rags and lacquer thinner. Lacquer thinner works very well, but use it sparingly and do not let it pool on the PVC.



Post placement is important, using a stringline and level to assure vertical alignment.



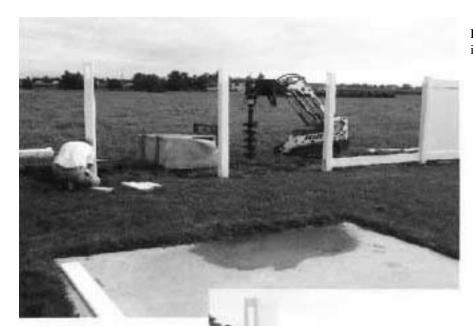
Once the post is aligned, cement or a cement-water mix will make it permanent.



Failure to follow recommended installation procedures will result in loss of Manufacturer's Warranty. Alternate procedures or post spacing in excess of 8' will require a Written Authorization from Nebraska Plastics, Inc. to retain warranty rights.

Country Estate® installation practices and recommendations does not purport to address all of the safety concerns and/or local code requirements, associated with it's use. It is the responsibility of the user of these prescribed installation practices to establish appropriate safety, health, and installation practices and determine the applicability of regulatory limitations prior to use.

Safety — All work shall be performed in safe and orderly fashion in accordance with the Williams-Steiger Occupational Safety and Health Act of 1970.



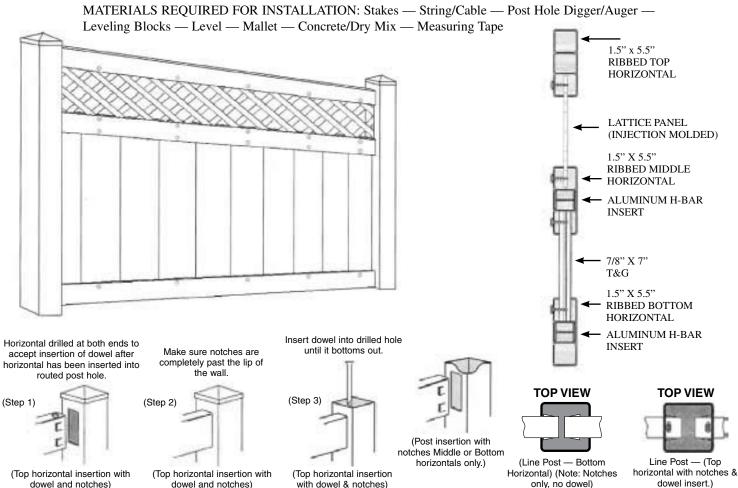
Posts are set for the entire installation.

Prebuilt fence sections or horizontals are then mounted to or through the routed posts.



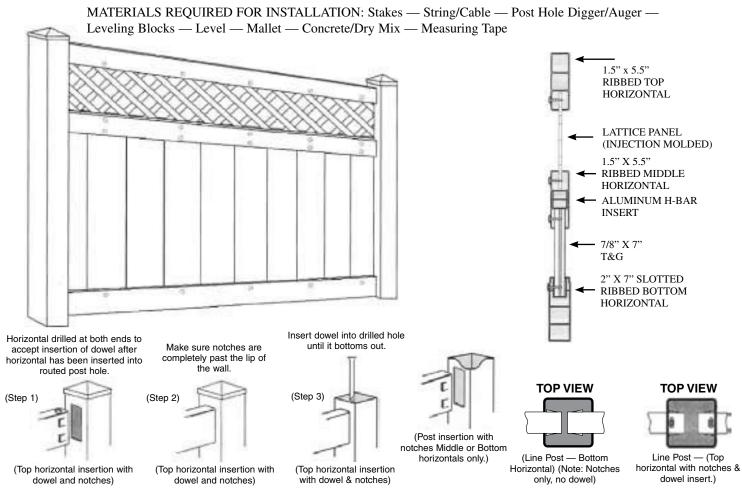
Sections or rails are added until the fence is complete.

The Hollingsworth II[™] (HVHZ)



dowel and notches) with dowel & notches)	only, no dowel) dowel
Standard Height Options:	71 1/2"
Post Spacing Options: (Notice - Posts must be exactly centered to allow for expansion.)	96" & 75" center-to-center
Post Dimensions:	72" High Fence = 5" x 5" x 108" (D-Post .170-205/6'3" Ctr.) (Heavy Wall Post .280/8' Ctr.)
Screw Dimensions:	#14 x 3/4" SMS SS (28ea-8' / 20ea-6' 3")
Standard Post Depth: (Local conditions may require additional depth.)	72" High Fence = 34 1/2" Depth
Horizontal Dimensions:	1 1/2" Thick × 5 1/2" Wide (T, M & B)
U-Channel Dimensions:	1 ea - 1" x 1 1/2" x 41 1/2" (8' & 6' 3" Ctr.)
Aluminum Inserts:	H-Bar (Mid & Bottom)
Latice Dimensions:	15" x 95" & 15" x 74" (8' & 6' 3" Ctr.)
Pickets Dimensions (Verticals): (For additional strength, these verticals are tongue and groove. The width is	7" Wide x 7/8" Thick 57" + the tongue.)
Ground Clearance: (Grade variations will cause inconsistent ground clearance measurements.)	1 1/2"
	Standard Height Options: Post Spacing Options: (Notice - Posts must be exactly centered to allow for expansion.) Post Dimensions: Screw Dimensions: Standard Post Depth: (Local conditions may require additional depth.) Horizontal Dimensions: U-Channel Dimensions: Aluminum Inserts: Latice Dimensions: Pickets Dimensions (Verticals): (For additional strength, these verticals are tongue and groove. The width is Ground Clearance:

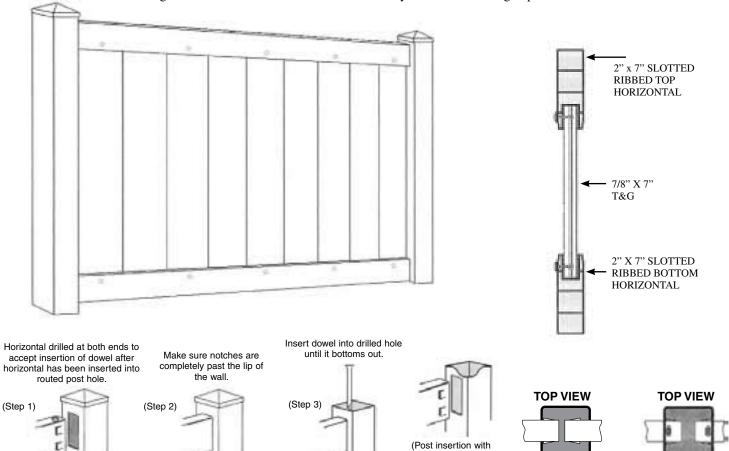
The Hollingsworth IIa[™] (HVHZ)



Standard Height Options:	71"
Post Spacing Options: (Notice - Posts must be exactly centered to allow for expansion.)	96" & 75" center-to-center
Post Dimensions:	72" High Fence = 5" x 5" x 108" (D-Post .170-205/6'3" Ctr.) (Heavy Wall Post .280/8' Ctr.)
Screw Dimensions:	#14 x 3/4" SMS SS (28ea-8' / 20ea-6' 3")
Standard Post Depth: (Local conditions may require additional depth.)	72" High Fence = 35" Depth
Horizontal Dimensions:	1 1/2" Thick ×5 1/2" Wide (Top & Mid) 2" Thick × 7" Wide (Bottom)
U-Channel Dimensions:	1 ea - 1" x 1 1/2" x 41" (8' & 6' 3" Ctr.)
Aluminum Inserts:	H-Bar (Middle Horizontal Only!)
Latice Dimensions:	13 1/2" x 95" & 13 1/2" x 74" (8' & 6' 3" Ctr.
Pickets Dimensions (Verticals): (For additional strength, these verticals are tongue and groove. The width	7" Wide x 7/8" Thick i is 7" + the tongue.)
Ground Clearance: (Grade variations will cause inconsistent ground clearance measurements	1 1/2" ·)

The Lakeland IIa[™] (HVHZ)

MATERIALS REQUIRED FOR INSTALLATION: Stakes — String/Cable — Post Hole Digger/Auger — Leveling Blocks — Level — Mallet — Concrete/Dry Mix — Measuring Tape



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dowel and notches)

(Top horizontal insertion with

dowel and notches) with dowel & notches)	only, no dowel)
Standard Height Options:	72"
Post Spacing Options: (Notice - Posts must be exactly centered to allow for expansion.)	96" & 75" center-to-center
Post Dimensions:	72" High Fence = 5" x 5" x 108" (D-Post .170-205/6'3" Ctr.) (Heavy Wall Post .280/8' Ctr.)
Screw Dimensions:	#14 x 3/4" SMS SS (12ea-8' / 10ea-6' 3")
Standard Post Depth: (Local conditions may require additional depth.)	72" High Fence = 34" Depth
Horizontal Dimensions:	2" Thick × 7" Wide (Top) 2" Thick × 7" Wide (Bottom)
U-Channel Dimensions:	1 ea - 1" x 1 1/2" x 56 1/4" (8' & 6' 3" Ctr.)
Pickets Dimensions (Verticals): (For additional strength, these verticals are tongue and groove. The width i	7" Wide × 7/8" Thick is 7" + the tongue.)
Ground Clearance: (Grade variations will cause inconsistent ground clearance measurements.)	1 3/4"

notches Middle or Bottom

horizontals only.)

(Line Post — Bottom

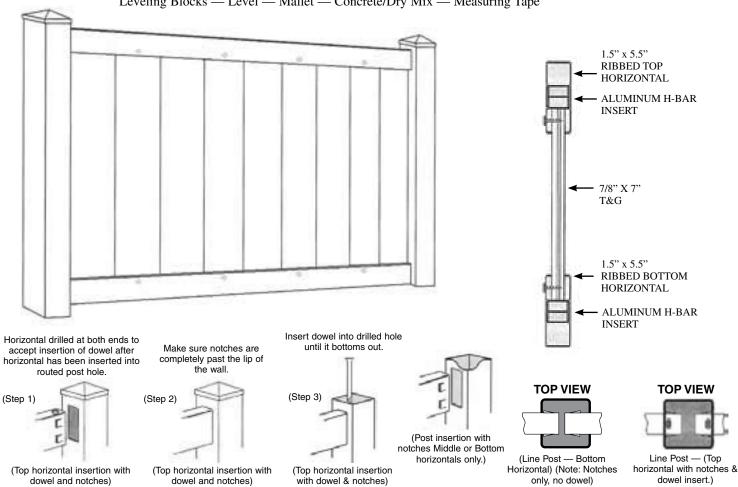
Horizontal) (Note: Notches

Line Post -

horizontal with notches &

The Lakeland II[™] (HVHZ)

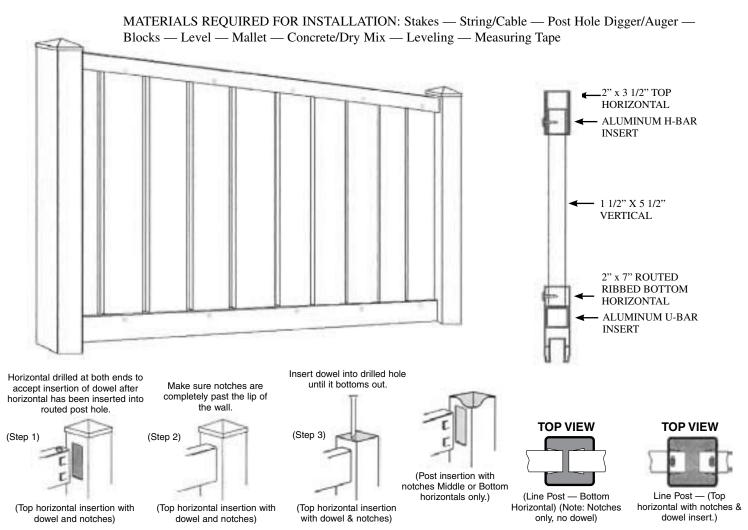
MATERIALS REQUIRED FOR INSTALLATION: Stakes — String/Cable — Post Hole Digger/Auger — Leveling Blocks — Level — Mallet — Concrete/Dry Mix — Measuring Tape



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dower and notches) with dower a notches)	only, no dowely
Standard Height Options:	69 1/2"
Post Spacing Options: (Notice - Posts must be exactly centered to allow for expansion.)	96" & 75" center-to-center
Post Dimensions:	72" High Fence = 5" x 5" x 108" (D-Post .170-205/6'3" Ctr.) (Heavy Wall Post .280/8' Ctr.)
Screw Dimensions:	#14 x 3/4" SMS SS (12ea-8' / 10ea-6' 3")
Standard Post Depth: (Local conditions may require additional depth.)	72" High Fence = 36 1/2" Depth
Horizontal Dimensions:	1 1/2" Thick × 5 1/2" Wide (Top & Bottom)
Aluminum Inserts:	H-Bar (Top and Bottom rail)
U-Channel Dimensions:	1 ea - 1" x 1 1/2" x 56 3/4" (8' & 6' 3" Ctr.)
Pickets Dimensions (Verticals): (For additional strength, these verticals are tongue and groove. The width is	7" Wide x 7/8" Thick 7" + the tongue.)
Ground Clearance: (Grade variations will cause inconsistent ground clearance measurements.)	1 3/4"

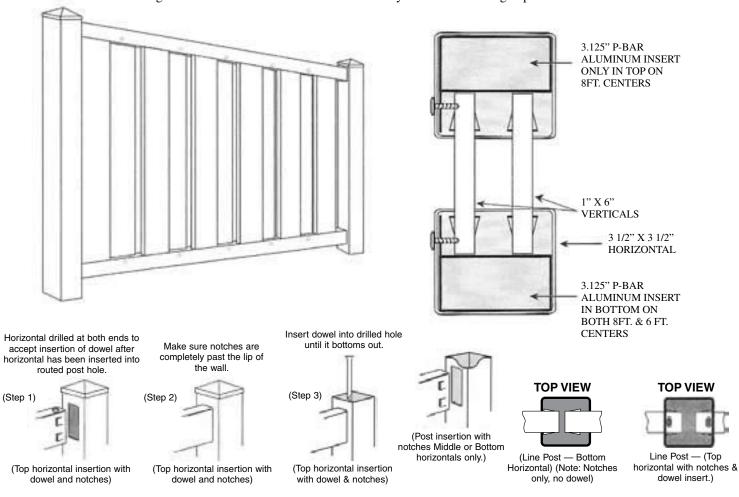
The Lakeview IIa[™] (HVHZ)



Standard Height Options:	72"
Post Spacing Options: (Notice - Posts must be exactly centered to allow for expansion.)	96" & 72" center-to-center
Post Dimensions:	72" High Fence = 5" x 5" x 108" (D-Post .170-205/6'3" Ctr.) (Heavy Wall Post .280/8' Ctr.)
Screw Dimensions:	#14 x 3/4" SMS SS (14ea-8' / 10ea-6' 3")
Standard Post Depth: (Local conditions may require additional depth.)	72" High Fence = 34" Depth
Horizontal Dimensions:	2" Thick × 3 1/2" Wide (Top) 2" Thick × 7" Wide (Bottom)
Aluminum Inserts:	H-Bar (Top/8') — U-Bar (Bottom/8') (6'-no inserts)
Pickets Dimensions (Verticals):	5 1/2" Wide x 1 1/2" Thick Approximate 1" Between Pickets
Ground Clearance: (Grade variations will cause inconsistent ground clearance measurements.)	2"

The Melbourne IIa[™] (HVHZ)

MATERIALS REQUIRED FOR INSTALLATION: Stakes — String/Cable — Post Hole Digger/Auger — Leveling Blocks — Level — Mallet — Concrete/Dry Mix — Measuring Tape



Standard Height:	72"
Post Spacing Options: (Notice - Posts must be exactly centered to allow for expansion.)	96" & 72" center-to-center
Post Dimensions:	72" High Fence = 5" x 5" x 108" (Heavy Wall Post .280/8' Ctr.) (Heavy Wall Post .280/6' Ctr
Screw Dimensions:	#14 x 3/4" SMS SS (16ea-8' / 12ea-6' 3")
Standard Post Depth: (Local conditions may require additional depth.)	72" High Fence = 34" Depth
Horizontal Dimensions:	3 1/2" Thick × 3 1/2" Wide (Top & Bottom Horizontals)
Aluminum Inserts:	3.125" P-Bar (Top 8' Ctrs. only & Bottom 8' & 6' Ctrs.)
Pickets Dimensions (Verticals):	6" Wide x 1" Thick Approximate 5 3/8" Between Pickets
Ground Clearance: (Grade variations will cause inconsistent ground clearance measurements.)	2"

MATERIAL SPECIFICATIONS

Cell Classification - ASTM D-4216 1-43332-32-0101

Typical values:

ASTM D256 Izod Impactr (Ft. lbs./inch notch)

23°C-5.0 0°C2.0
ASTM D638 Tensile Strength 6500 psi
ASTM D638 Tensile Modulus 545,000 psi*

ASTM D648 Deflection Temp. 71°C

ASTM D4226 Drop Dart Procedure A
ASTM D4226 Drop Dart Procedure B
2.51 (in.-lb/mil)
4.50 (in.-lb/mil)

ASTM D695 Compressive (Yield) Strength 8,780 psi

ASTM D696 Thermal Expansion 4.4 x 10-5 in./in./°F

ASTM D732 Shear Strength 6,780 psi ASTM D790 Flexural Strength 11,400 psi

^{*}Tensile Modulus should be used for design purposes with caution. Values listed are representative for short term loading (such as livestock pushing on fence). The long term creep characteristics under continuous loading are unknown.