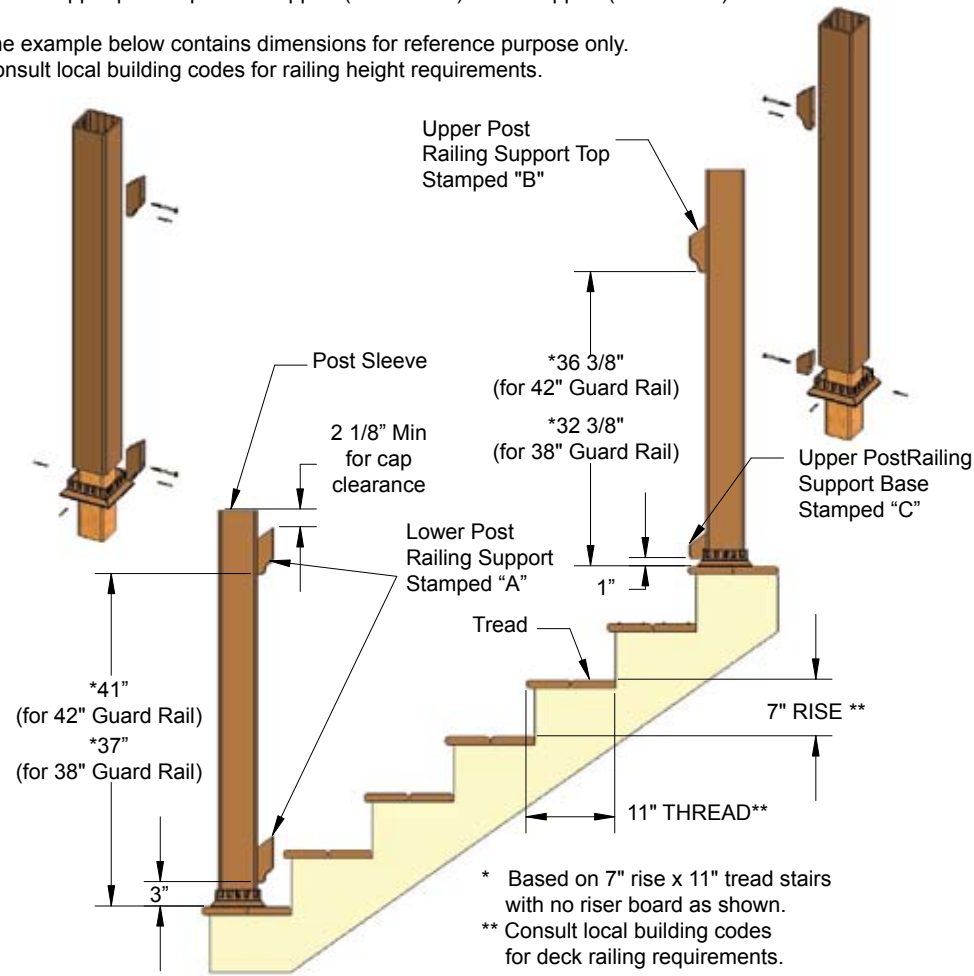


## Step 1 – Posts

Cut Post Sleeves to appropriate height and slide sleeves over 4x4 wood posts. Post sleeves are 49" prior to cut. Determine the post length required based on rail height restrictions per local building code. The upper and lower post sleeves should be cut to the same height. The top and bottom can be shimmed to restrict movement of sleeves.

Slide Post Skirt over Post Sleeve and secure on two sides with #8 X 2" Trim Head Screws. Attach Post Railing Supports at the appropriate heights and center using 5/16" x 4" Structural Screws and #8 x 2" Trim Head Screws. Note that the lower post requires 2 supports (labeled "A") and the upper post requires 1 support (labeled "B") and 1 support (labeled "C").

The example below contains dimensions for reference purpose only. Consult local building codes for railing height requirements.



## Step 2 – Preparing for Railing Assembly

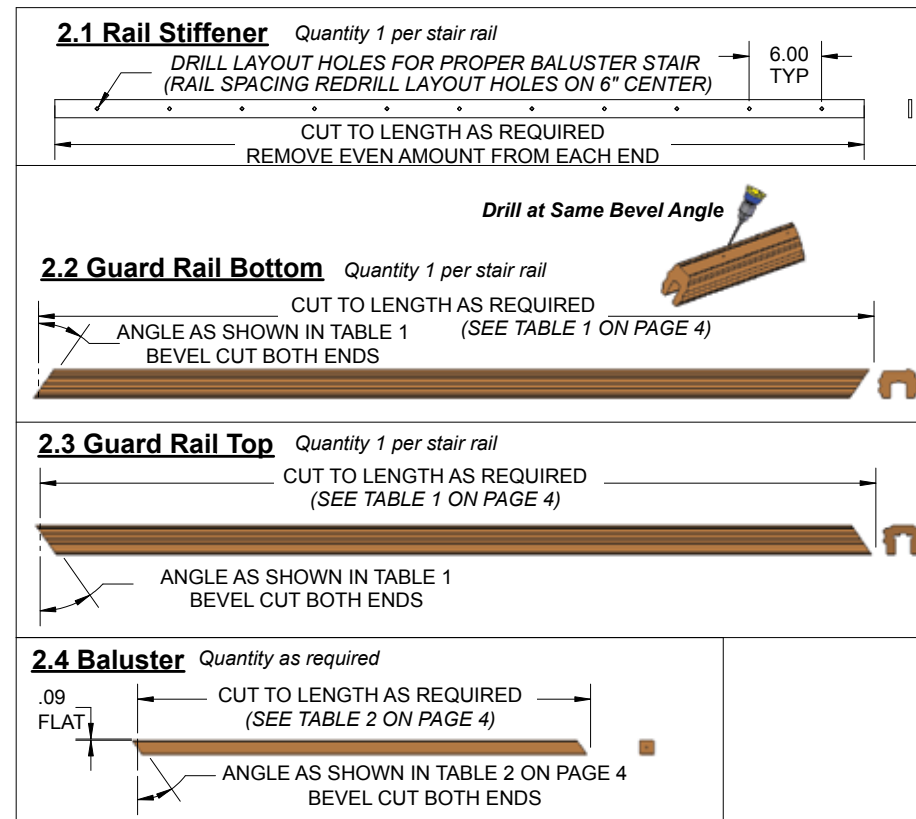
**2.1 Rail Stiffener** Trim the Rail Stiffener to required length by cutting off equal amounts from both ends. Trimming from both ends will ensure Balusters are spaced evenly across the railing assembly. See table 1 on page 4 for sample lengths based on riser height and tread depth. Add 1/8" layout holes on center of stiffener with 6" spacings. Please note that standard stiffeners comes with holes on 4.875" spacings (not to be used for stair rails).

**2.2 Guard Rail Bottom** Trim the Bottom Guard Rail to length and bevel cut both ends. Angles are affected by the rise and tread depth of stairs\*. Sample angles are provided in Table 1 on page 4.

Mark the Baluster positions on the Bottom Guard Rail with a pencil. Do this by centering the Stiffener on the rail and marking the hole locations using the 6" spacings holes (see step 2.1). Pre-Drill Baluster pilot holes on the Bottom Guard Rail using a 1/8" bit.

**2.3 Guard Rail Top** Trim Top Guard Rail to size and cut end angles (see Table 1 on page 4)\*.

**2.4 Baluster** Trim Balusters on both ends to required length and angles\*.

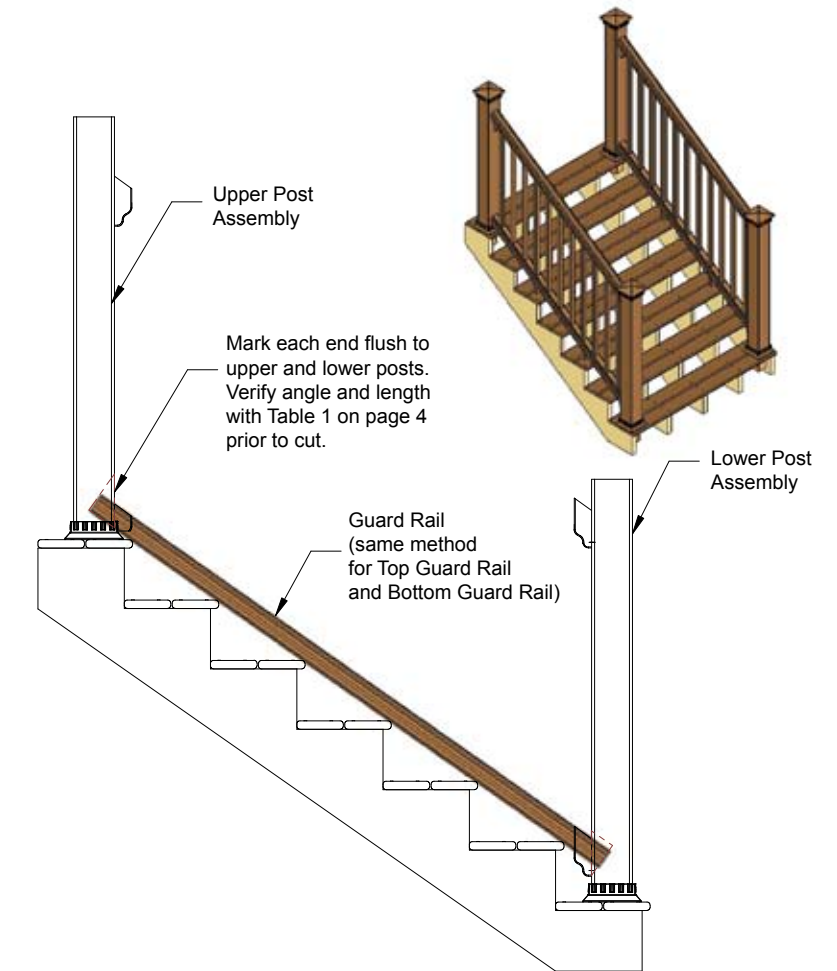


\* Check with local building codes for rail height, rise and tread requirements.

## Carpenter's Trick

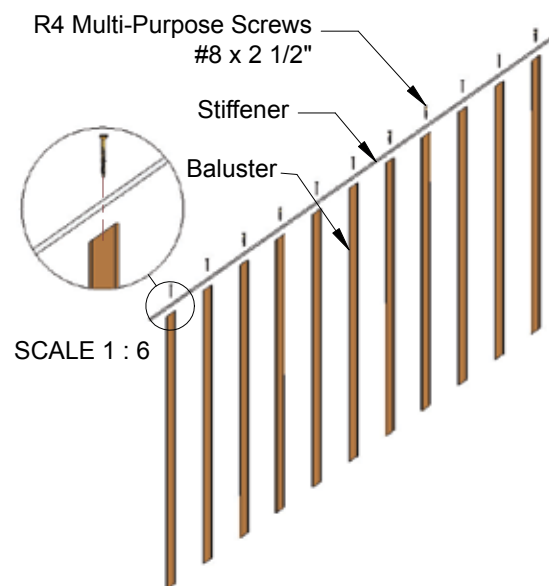
You can calculate the required lengths and angles of your rails. Another way to get your lengths and angles is to follow the steps illustrated below.

1. Place rail on stairs and mark the cutting lines at both ends of rail.
2. Be sure to use a straight edge to improve accuracy and watch for the round edges on the post sleeves.
3. Double check your marking by referencing angles and lengths of rails with Table 1 on page 4.
4. This method will help you get actual finish lengths and angles required.

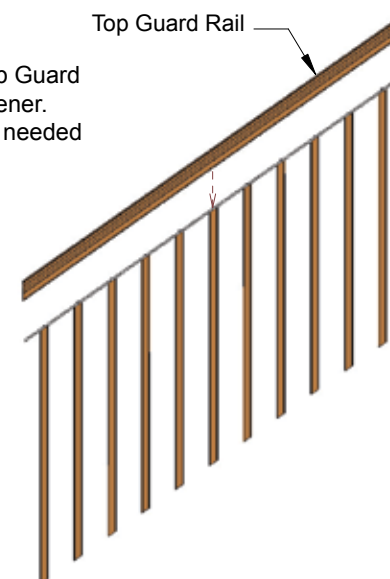


## Step 3 – Railing Assembly

**3A** - On a flat surface, attach Balusters to Stiffener using R4 Multi-Purpose Screw #8 x 2 1/2".

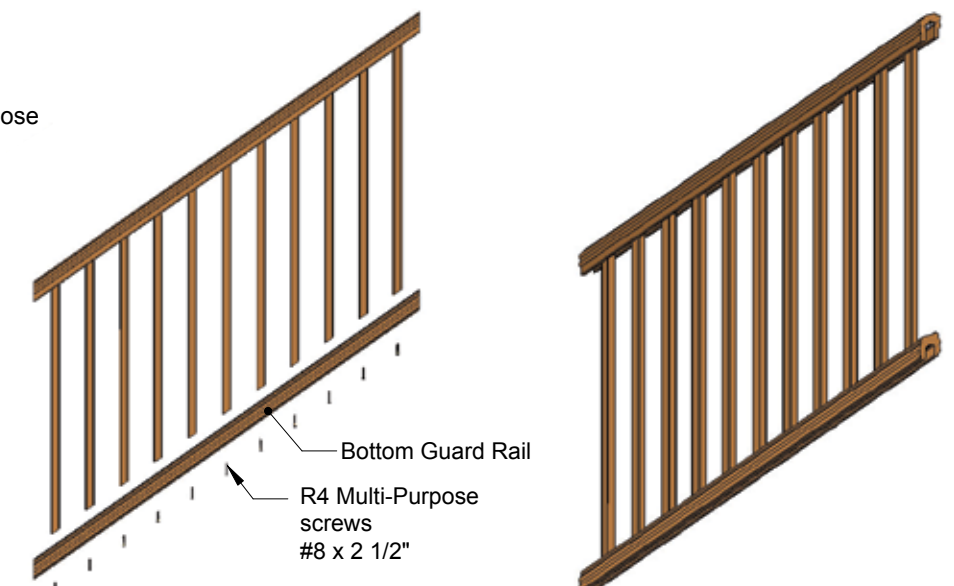


**3B** - Slide the Top Guard Rail onto the Stiffener. Tapping lightly as needed to secure fit.



**3C** - Attach Bottom Guard Rail to Balusters using R4 Multi-Purpose screws #8 x 2 1/2" through the pilot holes drilled in Step 2.

\* Redrill Pilot Holes on cut end.



## Step 4 – Putting it all together

Place the pre-assembled railing onto the railing supports located on corner posts.

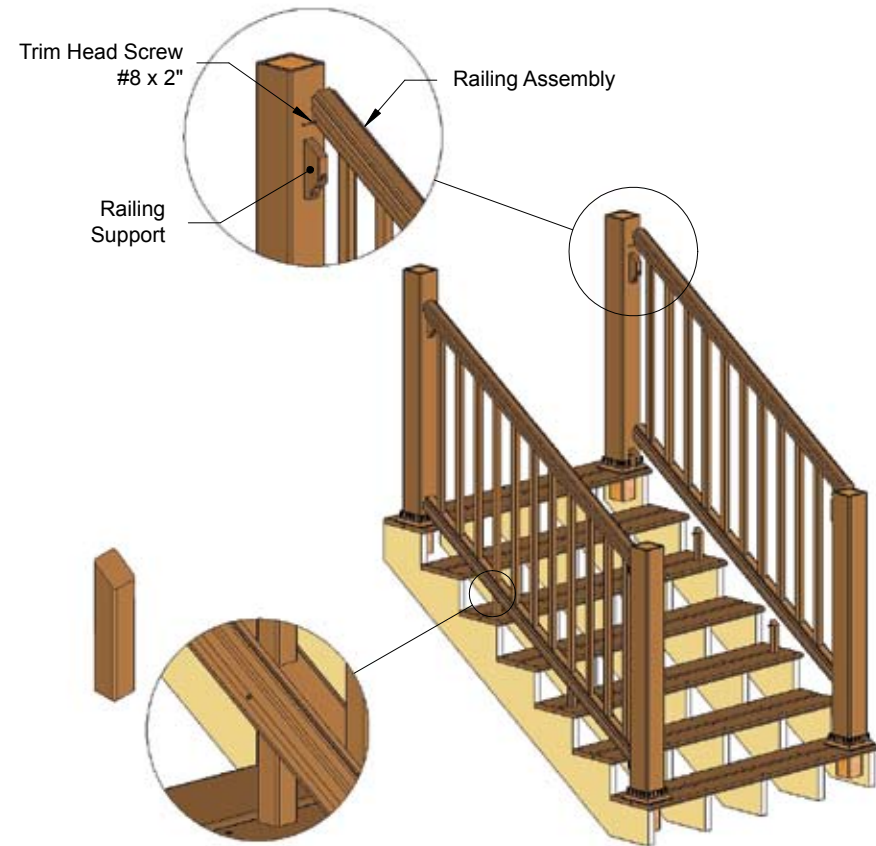
Attach railing to support blocks with Trim Head Screws #8 x 2".

Position screws carefully to be certain that each Trim Head screw is actually fastened to the railing support.

Railing Mid Support should be at an increment of every other stairs, as shown below.

Cut Railing mid supports to required length. Bevel cut one end to match angle of guard rail.

Place Railing mid support under railing and fasten with Trim Head Screws #8 x 2".



## Step 5 – The Finishing Touch

Slide a Post Cap over each Post Sleeve and attach with Trim Head Screws #8 x 2" on two sides.

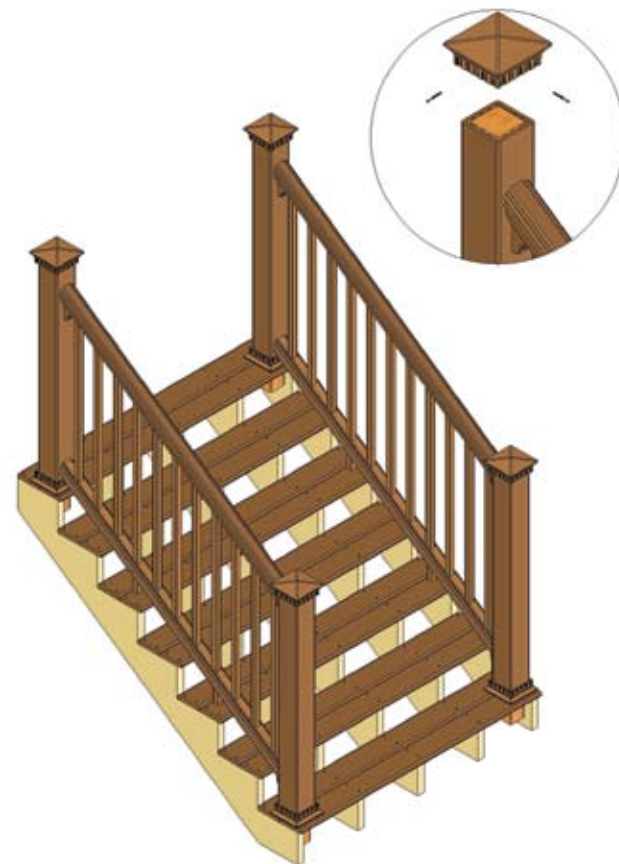


TABLE 1 - RAILS & STIFFENER CUTS

RISE*	TREAD*	STIFFENER LENGTH with angle	RAIL LENGTH no angle	ANGLE
7"	11"	69 1/8"	67"	37 DEG
7 1/4"	11"	70"	67 7/8"	36 DEG
7 1/2"	11"	71"	68 7/8"	35 DEG

length is based on rail assembly with 5 stair steps between posts

TABLE 2- BALUSTER CUTS

RAIL HEIGHT*	BALUSTER LENGTH
42"	37 1/2"
38"	33 1/2"

length is based on stairs with 7" Rise and 11" Tread and no riser boards\*

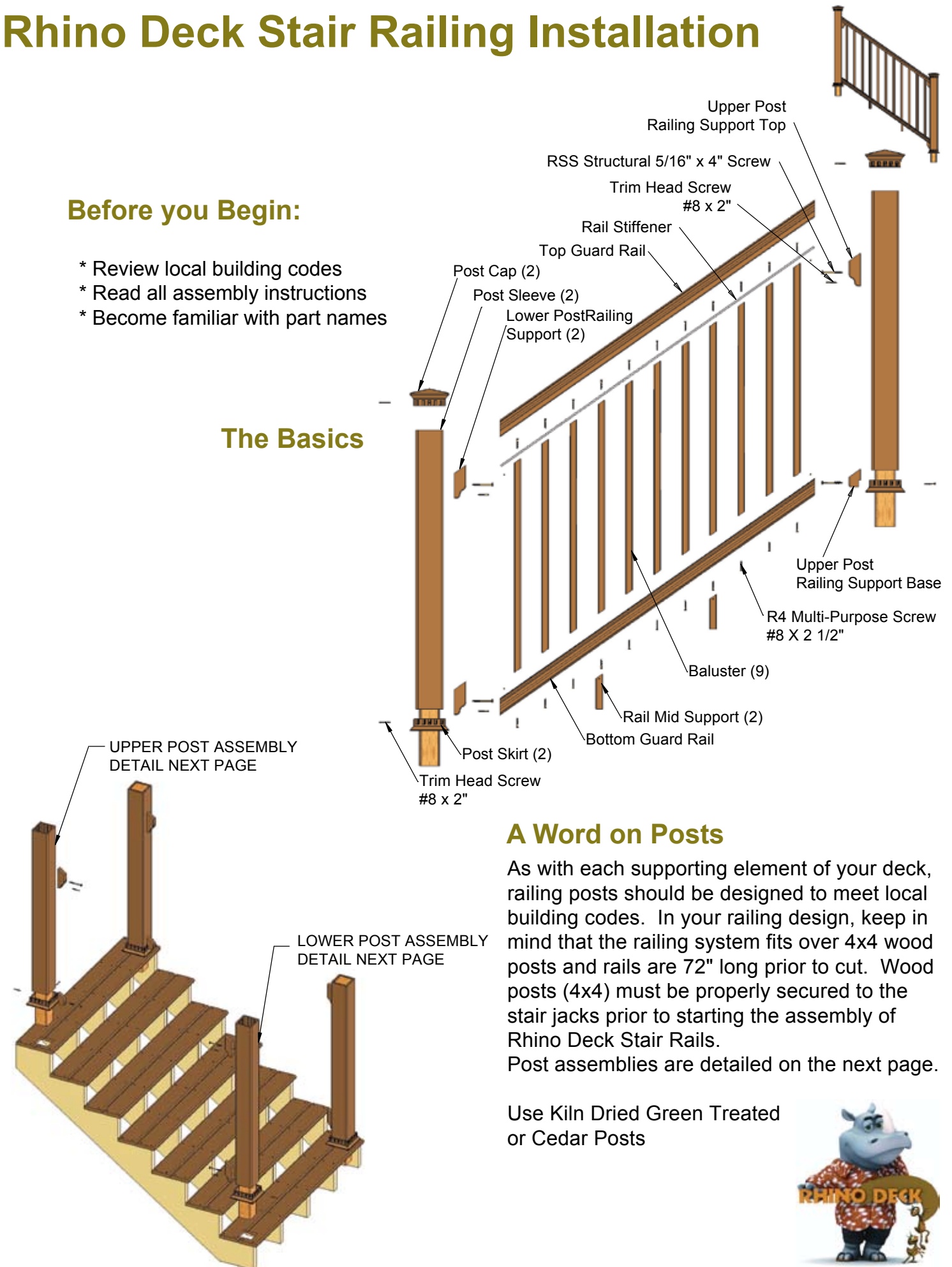
Redrill Pilot Holes

# Rhino Deck Stair Railing Installation

## Before you Begin:

- \* Review local building codes
- \* Read all assembly instructions
- \* Become familiar with part names

## The Basics



## A Word on Posts

As with each supporting element of your deck, railing posts should be designed to meet local building codes. In your railing design, keep in mind that the railing system fits over 4x4 wood posts and rails are 72" long prior to cut. Wood posts (4x4) must be properly secured to the stair jacks prior to starting the assembly of Rhino Deck Stair Rails. Post assemblies are detailed on the next page.

Use Kiln Dried Green Treated or Cedar Posts

