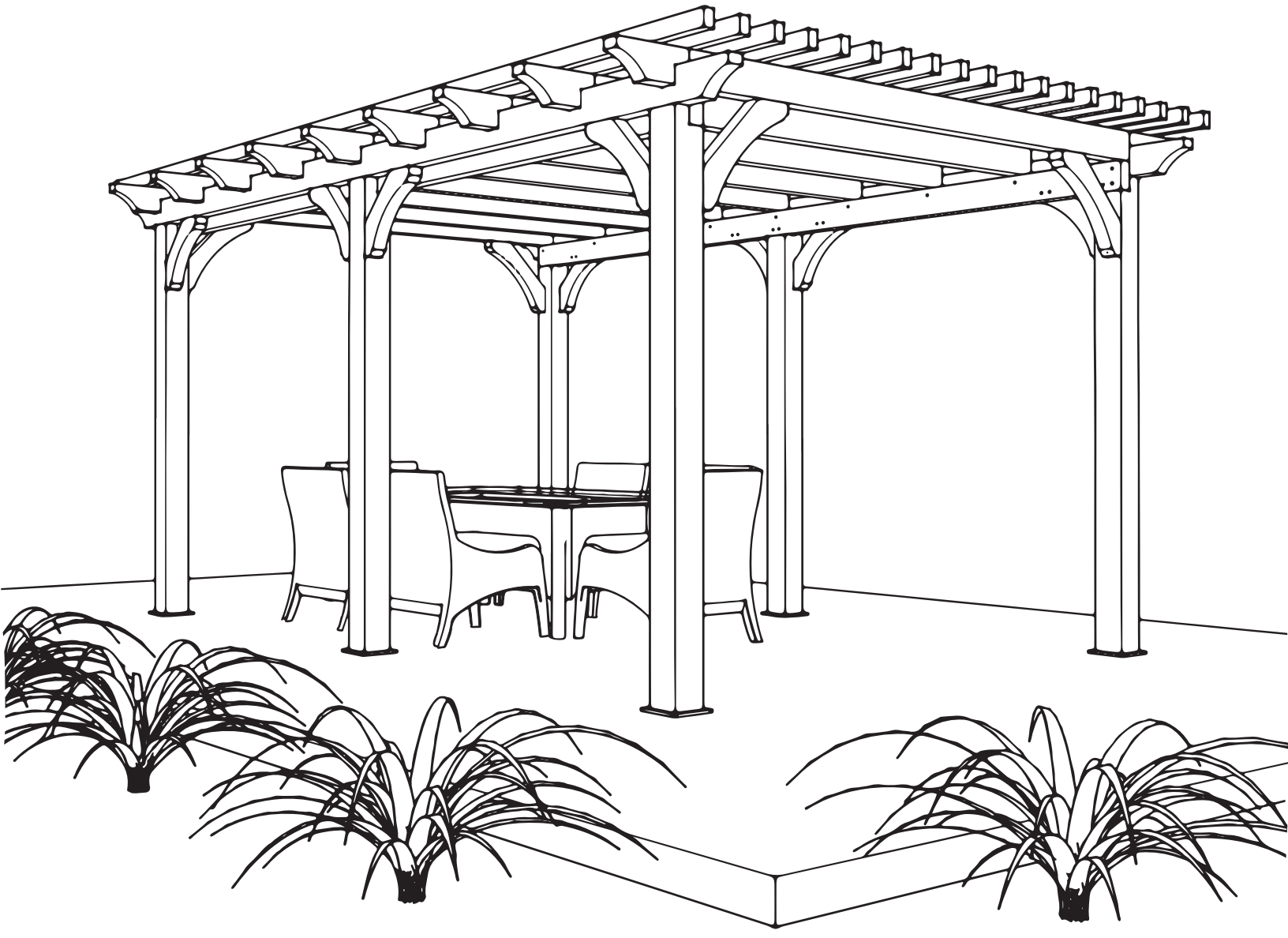
THE DECK SUPERSTORE

Installation Guide



Rough-Sawn Pergola System

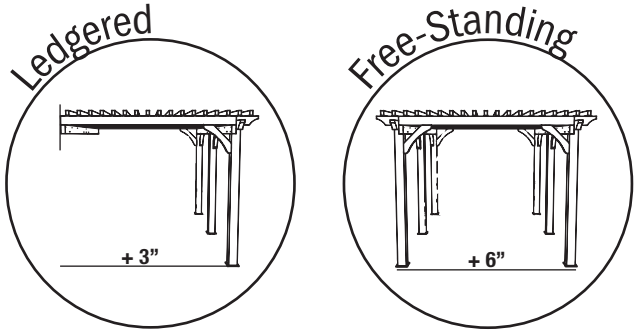
Sizing & Span Chart

Measured at centers of posts: add 2 1/2' for total shade coverage

Measured at outsides of posts: add 2' for total shade coverage

Beam \ Rafter	8'	10'	12'	14'	16'
10'	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 4 Max rafter spacing: 16" OC
12'	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 16" OC
14'	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 4 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 16" OC
16'	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 16" OC
18'	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 16" OC
20'	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 16" OC
22'	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 8 Max rafter spacing: 16" OC	# Posts: 8 Max rafter spacing: 16" OC
24'	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 6 Max rafter spacing: 24" OC	# Posts: 8 Max rafter spacing: 16" OC	# Posts: 8 Max rafter spacing: 16" OC

This chart assumes a 30 lb. snow load, which applies to most of the Denver Metro Area; check with your building department for snow load requirements in your area.



For Free-Standing systems, Rafter Tails, Outer Beams, and Purlins overhang the outsides-of-posts dimensions by one foot on each side.

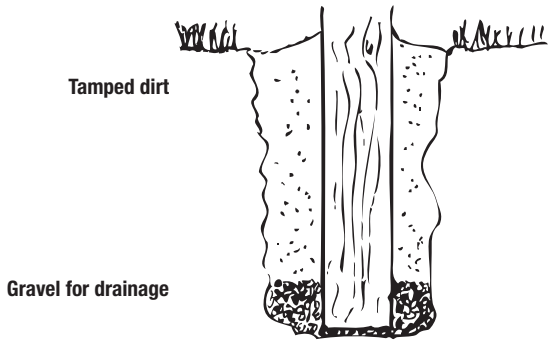
Posts

Check with your local building department for post foundation and/or ledger requirements.

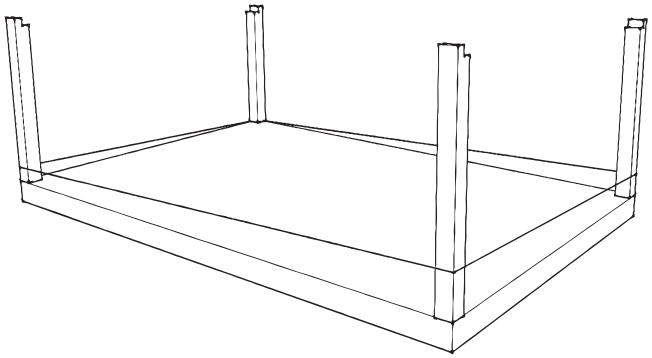
Sturdiest:
DIG post HOLES
ABOUT 2 FEET DEEP

OR

INSTALL POST ANCHORS
ONTO EXISTING CONCRETE*

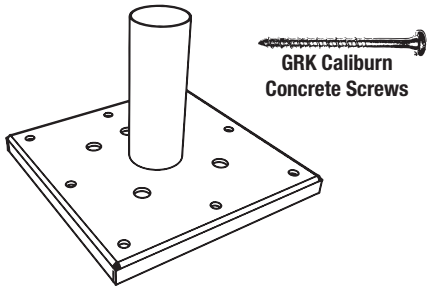


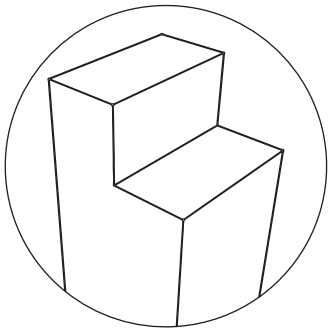
Adjust the holes to make the bottoms level in elevation. Do not fill & tamp till after you complete the step on page 7.



Measure the differences in elevation, and cut the bottoms of the posts to accomodate for any slope

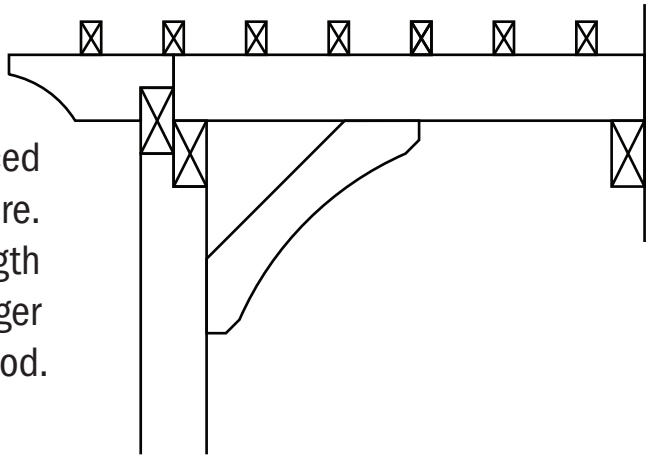
Titan Post Anchors are optional with each kit. They provide increased vertical support, especially for free-standing pergolas. Initially, install with only 2 screws and not all the way tight (see page 7).





Set posts with 3x3 notches "stepping down" toward the inside of the pergola.

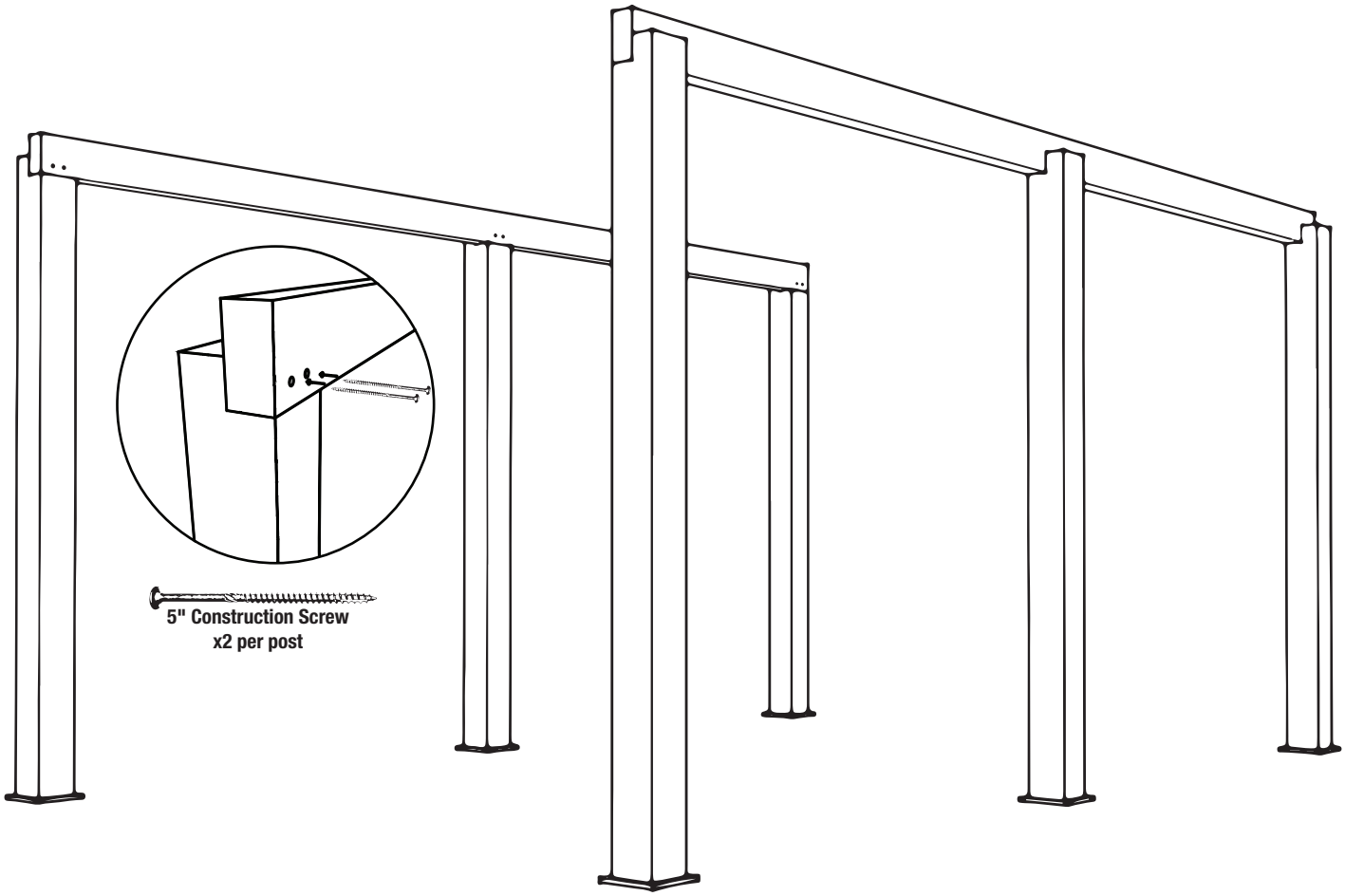
For ledgered pergolas, half of the posts are replaced by a ledger beam attached to your structure. You will need to determine the strength of your foundation and/or ledger attachment method.



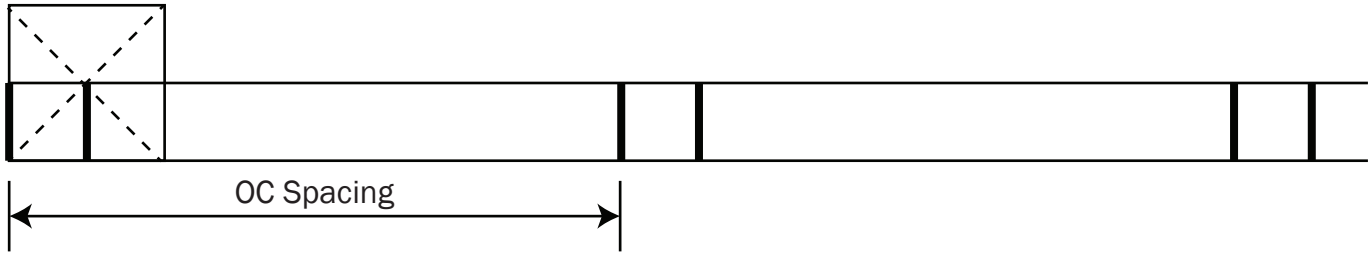
Inner Beam

4

Inner Beams sit in the notch at the top of the 6x6 posts, and should be flush to the ends of the posts. Attach with two 5” screws at each post. Pre-drilling is not necessary for all of the 5” screws unless going through a knot.



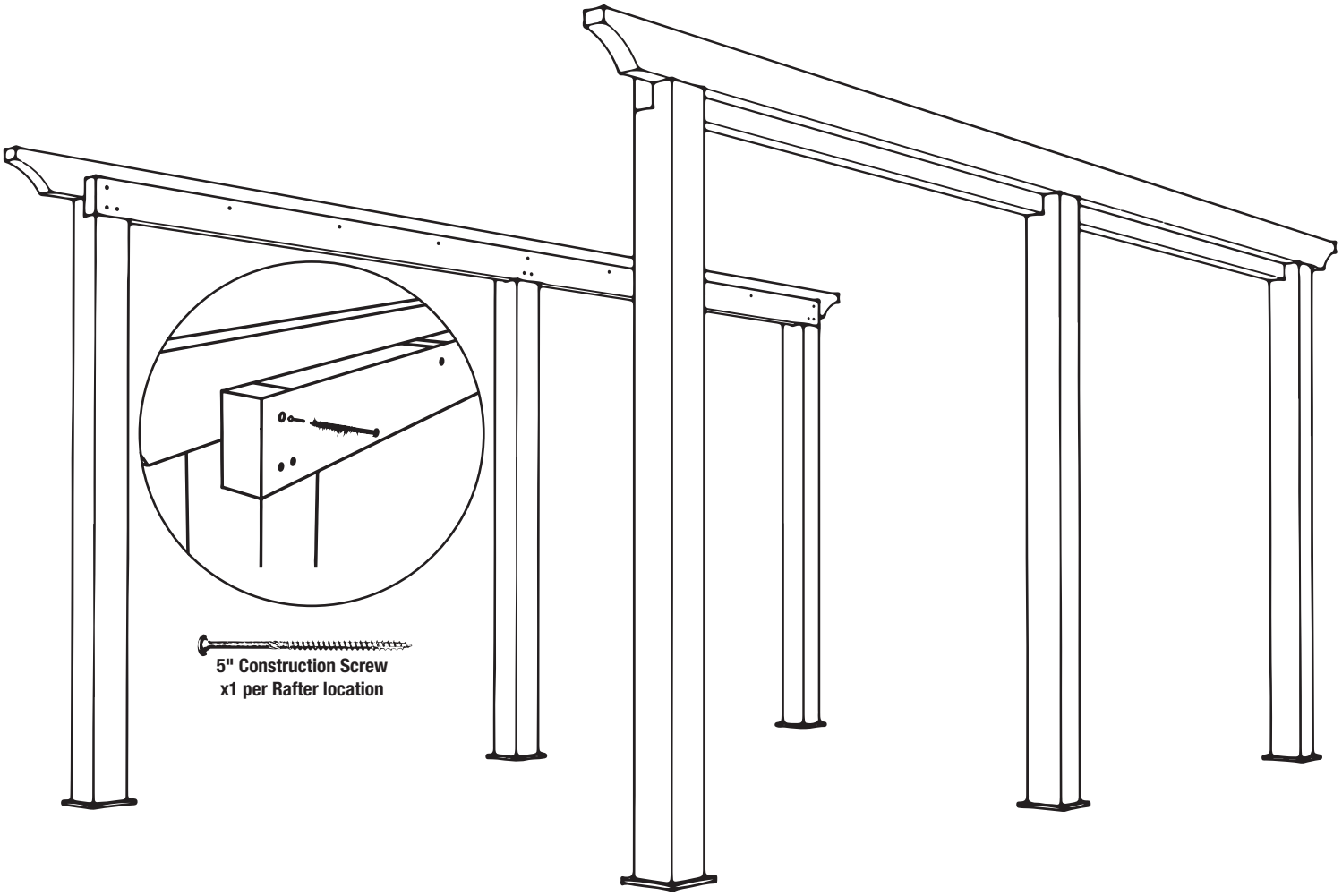
Mark your rafter spacing on top of the inner beam, before placing your inner beam.

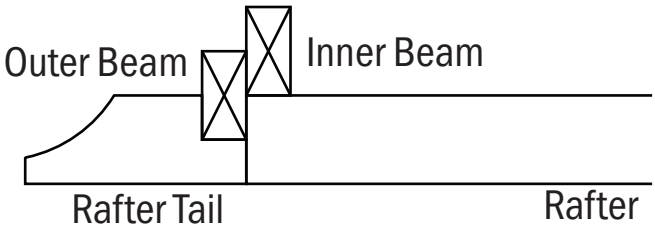


Rafter spacing (in inches) = (length of Inner Beam - 3”) ÷ (# of Rafters - 1)

Outer Beam

Outer Beams extend one foot past the Inner Beams on each side and feature decorative cuts to match the Rafter Tails. Attach the Outer Beam to the Inner Beam with one 5” screw at every Rafter location. Offset from the center of your markings so the 10’ screw will not hit it.

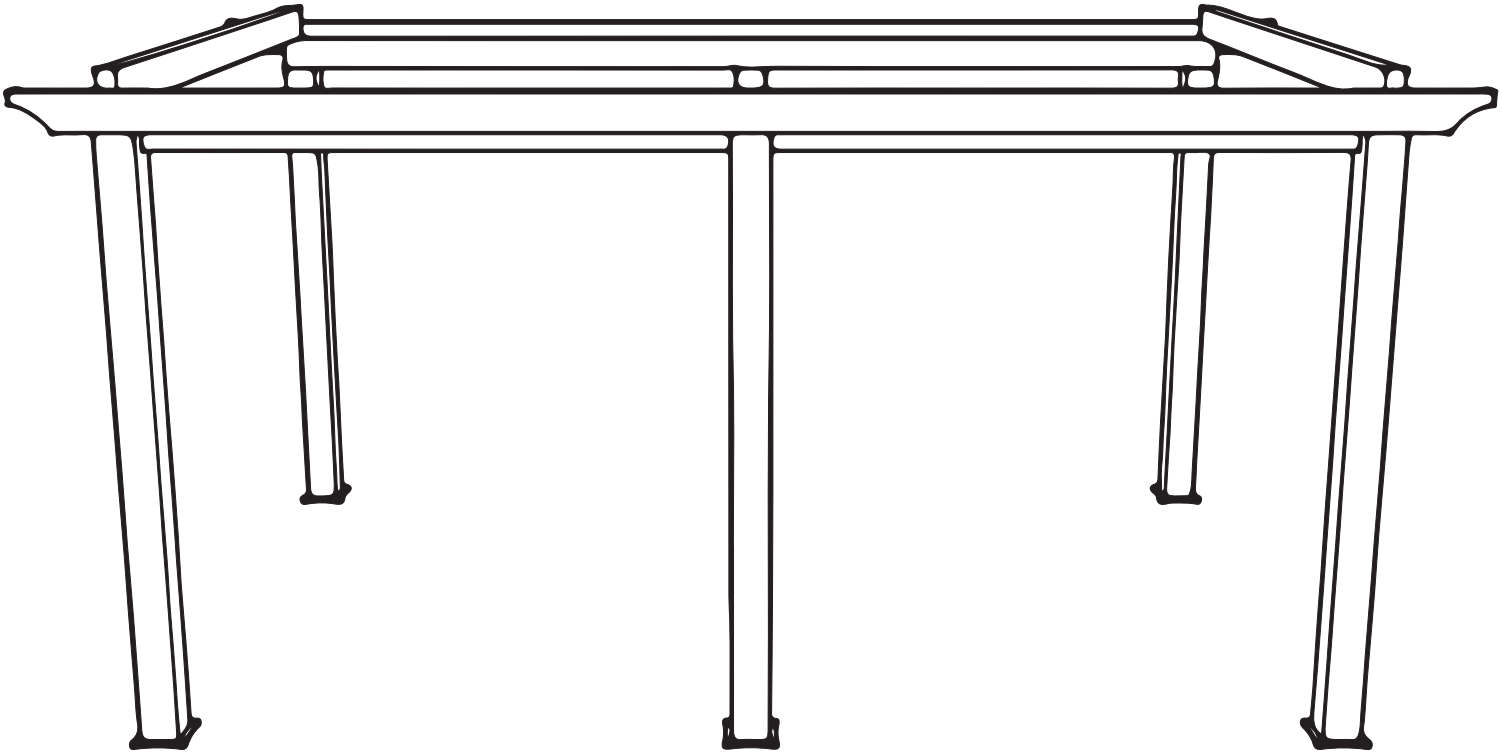




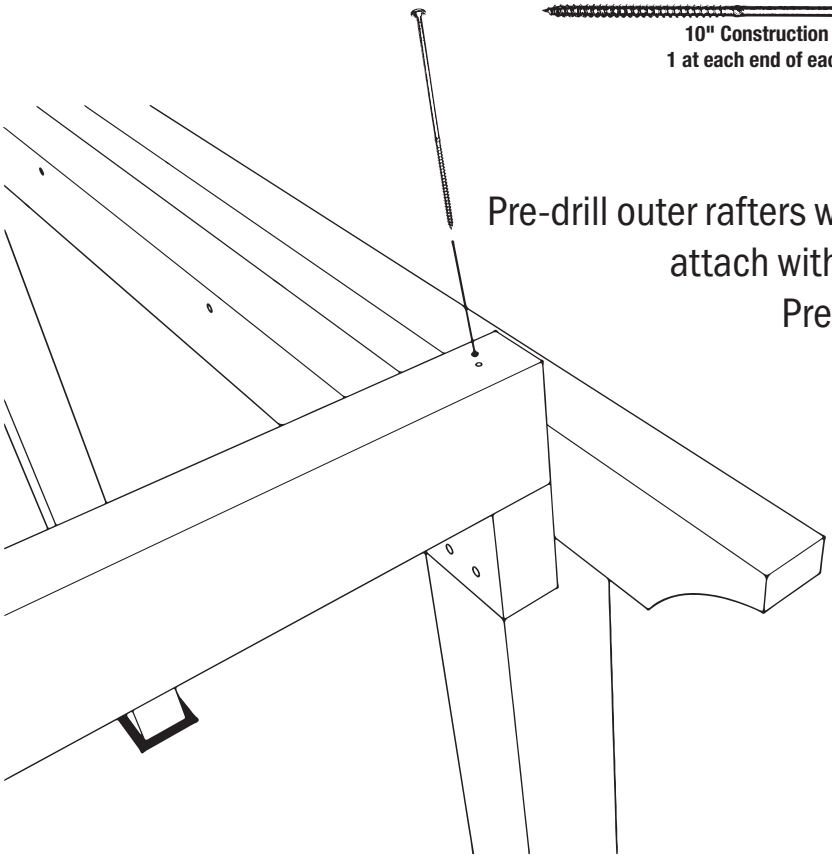
*An alternative method for joining the Inner and Outer Beams so that the Rafters and Rafter tails are flush to each other across the top (see page 8) is to layout the Rafters and Rafter Tails upside-down on a flat surface. Then, place the Outer Beams upside-down into the grooves created by the rafter tails, then attach the Inner and Outer Beams together at each rafter location with 5”screws, before installing this beam assembly on the posts.

Outer Rafters

6



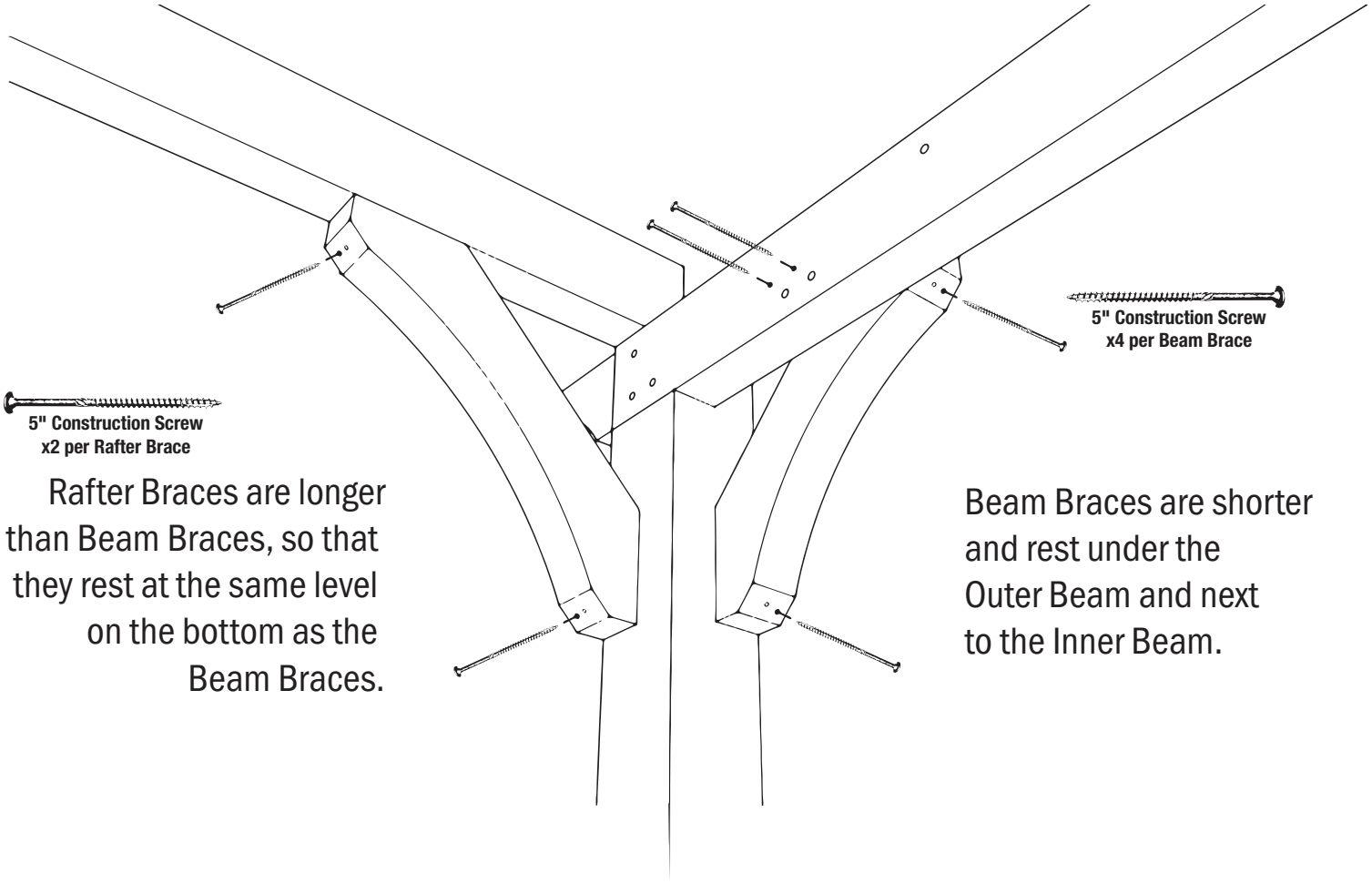
10" Construction Screw
1 at each end of each Rafter



Pre-drill outer rafters with a 1/4” x 6“ drill bit, then set and attach with 10” screws with the T-40 driver bit. Pre-drill at a slight angle from the rafter into the inner beam.

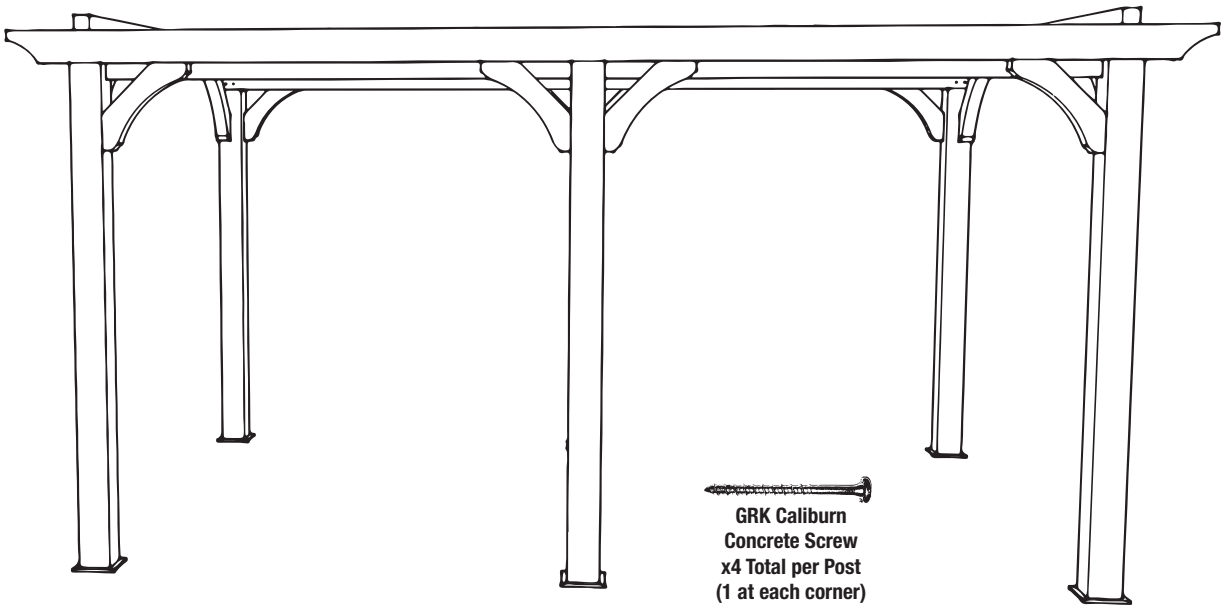
Square the frame and level the posts before attaching the braces.

Braces



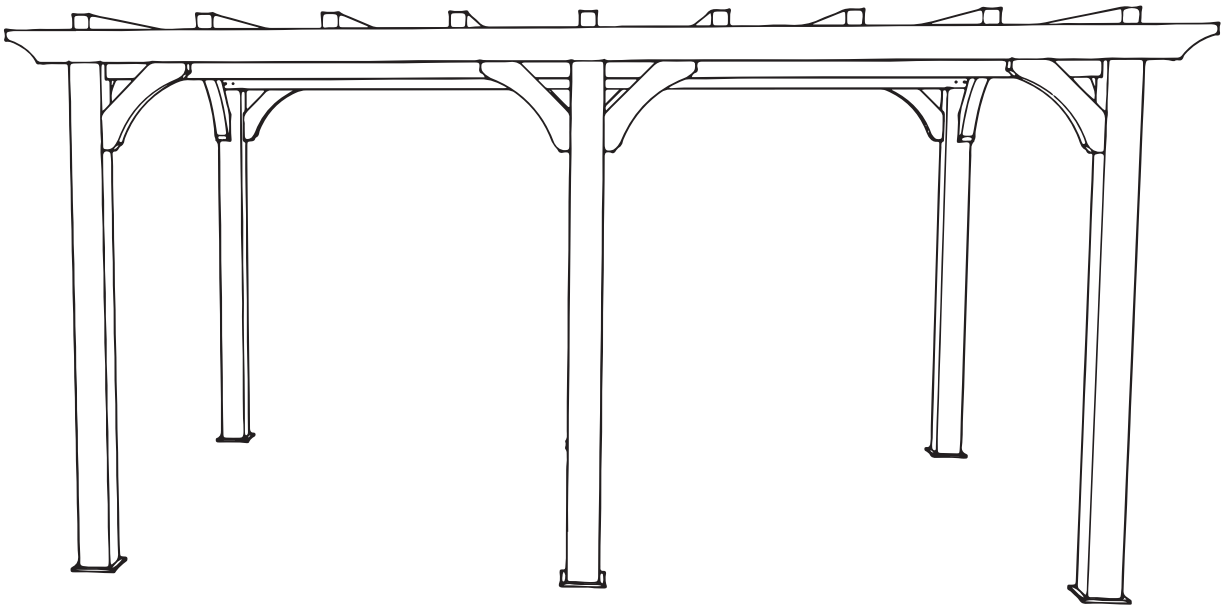
Rafter Braces are longer than Beam Braces, so that they rest at the same level on the bottom as the Beam Braces.

Beam Braces are shorter and rest under the Outer Beam and next to the Inner Beam.



After attaching the outside rafters and braces, secure the posts to the ground, or tamp dirt around post evenly, checking for level as you go.

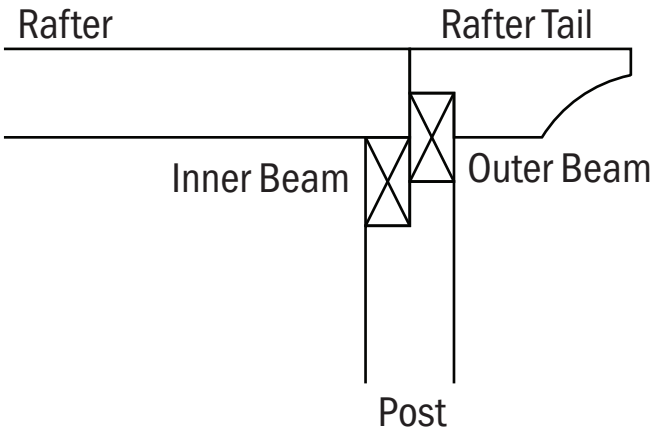
Inner Rafters



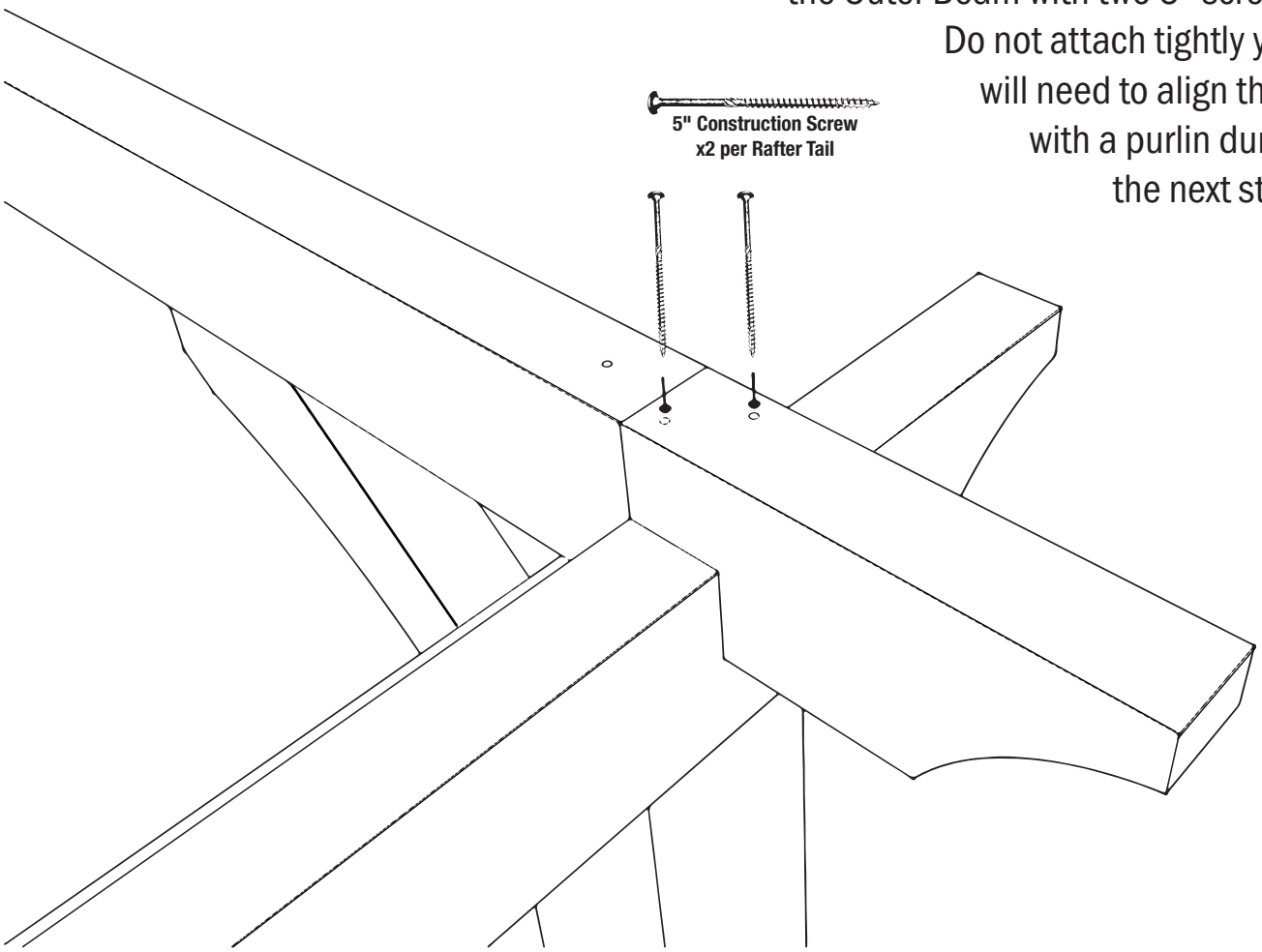
Pre-drill remaining rafters, then set and attach with 10” screws.
Pre-drill at a slight angle from the rafter into the inner beam.

10" Construction Screw
1 at each end of each Rafter

Rafter Tails

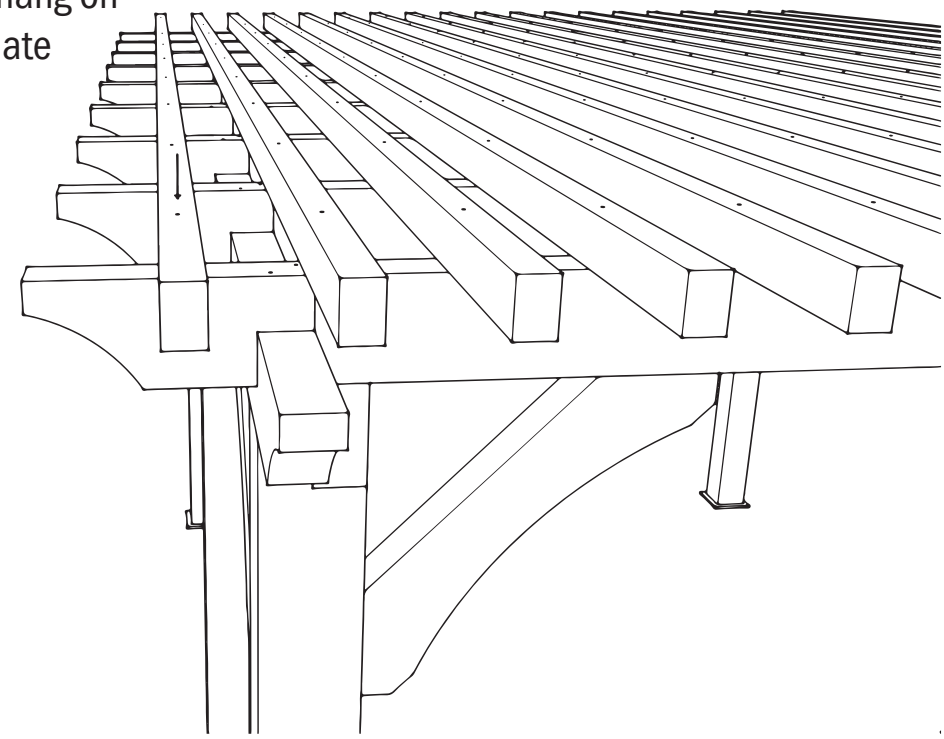


Rafter Tails sit on the Outer Beam, aligned with the Rafters. They are pre-drilled through the notch and attach to the Outer Beam with two 5” screws. Do not attach tightly you will need to align them with a purlin during the next step.

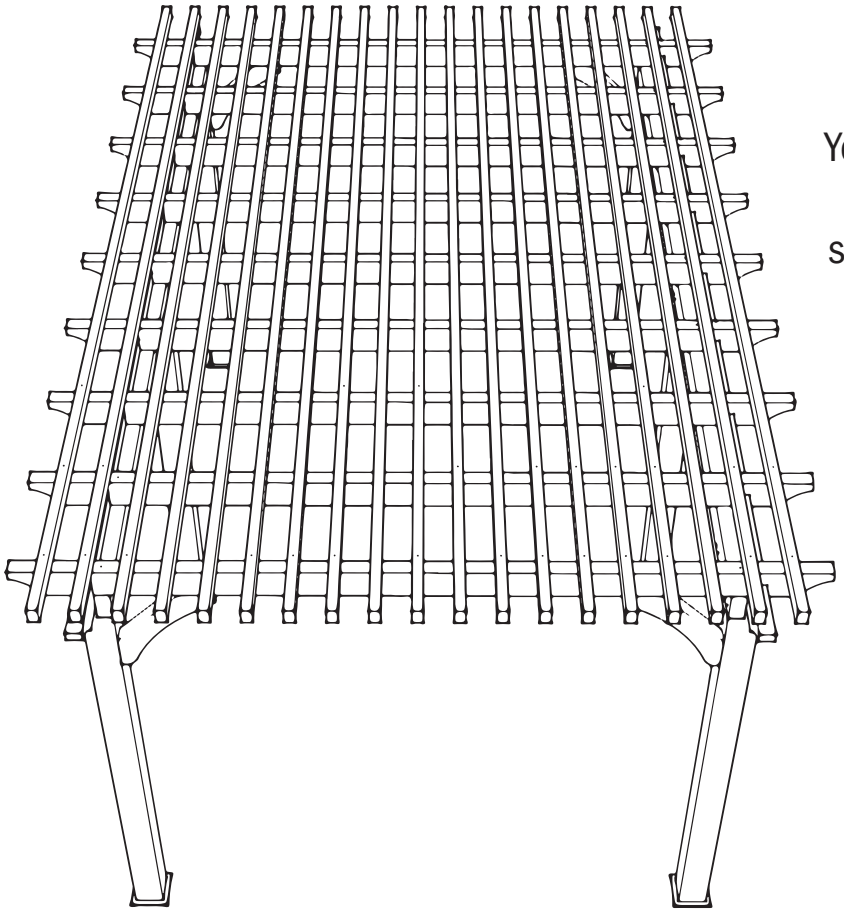


Shade Purlins

Attach Shade Purlins with a 12” overhang on each side. It helps to measure, calculate spacing, and mark the Shade Purlin locations on the Outer Rafters.It also helps to pre-drill and pre-load the Shade Purlins with 5” screws on the ground before installation. Purlins are usually spaced 8” OC.



5" Construction Screw per Purlin/Rafter connection



You can put fewer screws as long as the purlins are secured at each end and staggered at least at every-other rafter. Be sure to calculate, measure out, and then mark your spacing so it looks even on both end of the rafters.

Sketch Pad

Order Form

303-287-0233

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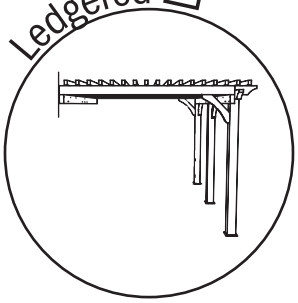
Dimensions:

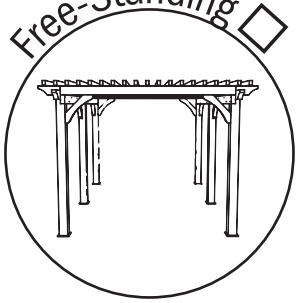
_____x_____
(Rafter) (Beam)

System Type (Mark One):

Ledgered ☐



Free-Standing ☐



Posts:

_____@_____' (see Sizing & Span chart on page 2)
(#) (Length)

3x6

(#)_____@_____' Rafters (OC Spacing) _____
(#)_____@_____' Inner Beams
(#)_____@_____' Outer Beams

Total Linear
Feet of 3x6:_____

Aspen ☐

Santa Fe ☐

Detail Style (Mark One)

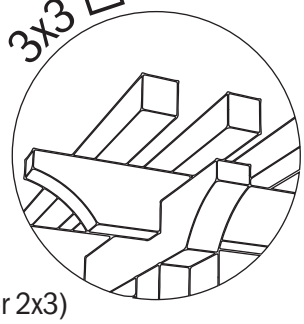
Outer Beam Detail Cuts:
_____ with cuts on (one / both) ends
(# of beams) (circle one)

(#)_____Rafter Tails

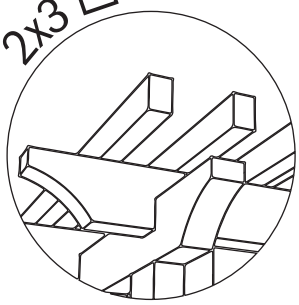
(#)_____Rafter Braces

(#)_____Beam Braces

3x3 ☐



2x3 ☐



Shade Purlins:

(Length of outer beam)
Size 2x3 or 3x3 (Mark one)
OC_____ (8" OC recommended for 2x3)
Number of Purlins _____
rafter length"÷OC Spacing" (+3 for free standing systems, +2 for ledgered systems)

Hardware

(#)_____Titan Anchor Post Kits (6x6)
(#)_____10 " Screws
(#)_____GRK RSS 6"
(For Ledgered Systems)

5" Screw Calculator

x2 per post
_____
x2 per rafter
_____

x2 per rafter tail
_____
x2 per rafter brace
_____
x4 per beam brace
_____

x1 per rafter/purlin connection _____
x1 per purlin splice
_____

TOTAL: _____