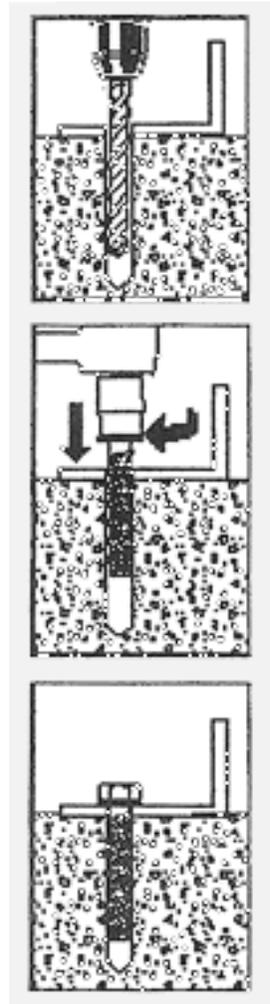


# VALUERAIL™

## COLUMN INSTALLATION INSTRUCTIONS

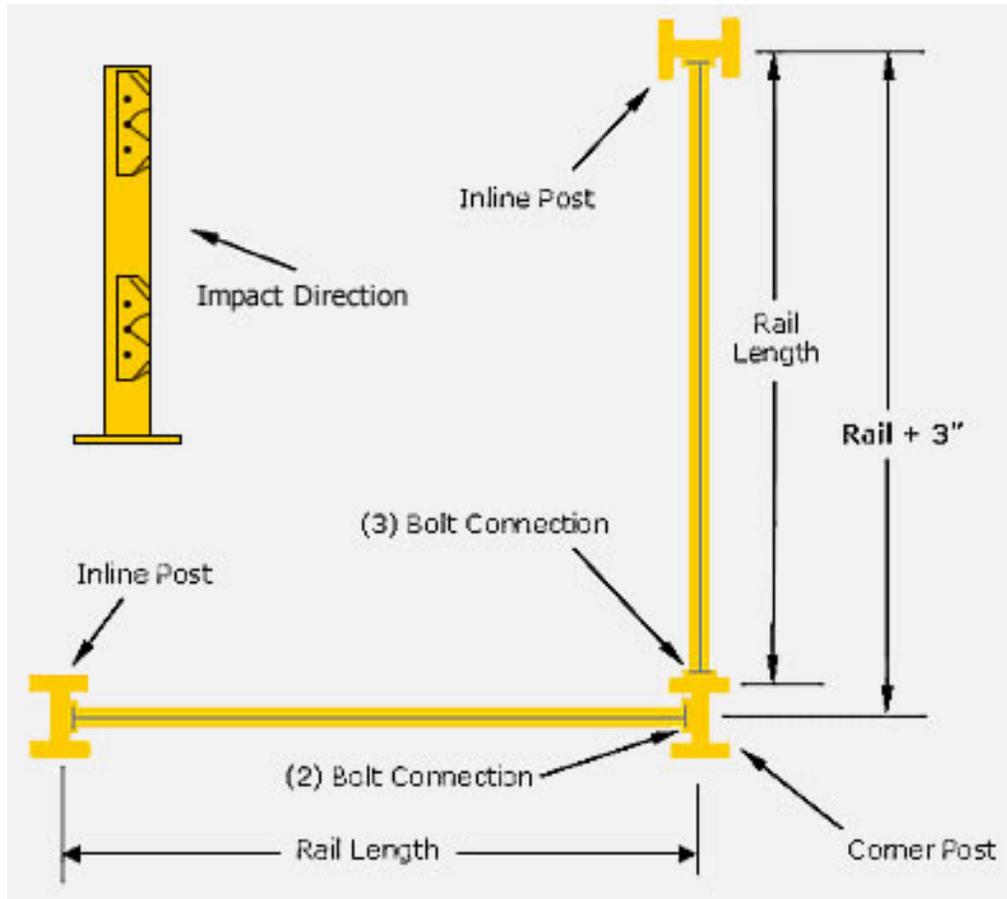
### Section 1

1. Locate guard rail columns in approximate position required.
2. Attach the rail starting with the lower rail using the provided 1/2" diameter bolts, nuts, and washers. Refer to the Section 2 diagram to determine when to use a two (2) bolt connection or a three (3) bolt connection. If a multiple rail system was selected continue installing the rail assemblies using the 1/2" bolts, nuts, and washers. Tighten to a snug condition (See Section 3).
3. With rail system in the desired location, install the four (4) – 3/8" x 4" anchors. Using an ordinary ANSI 3/8" rotary drill bit, drill a 3/8" hole into the base materials to a depth of at least 3/8" or one anchor diameter deeper than the embedment required (Minimum embedment depth 2").
4. Clean the hole of dust and other material and insert the anchor through the base plate into the anchor hole.
5. Begin tightening the 3/8" x 4" anchor bolt by rotating clockwise and applying forward pressure in towards the base plate. This will engage the first few threads as the anchor bolt begins to advance. Continue tightening the anchor bolt until the head is firmly seated against the base plate. For extremely dense materials, use of an impact wrench is recommended.
6. Be sure the anchor bolt is at the required embedment depth and the maximum torque (50 ft. lbs.) has not been exceeded.
7. Finish by tightening all rail bolts using the turn of the nut method described in Section 3.



## Section 2

### ValueRail™ System Diagram



## Section 3

### Turn-of-Nut Bolt Tightening

It is recommended the installer read AISC's "Specifications for Structural Joints using ASTM A-325 or A490 Bolts."

1. Bring all bolts to a snug condition (this allows the plate to come in firm contact with the column.) *Snug Tight* is defined as the tightness attained in the full effort of the installer using an ordinary spud wrench (an 18" wrench).
2. After all bolts are snug tight, nuts must be turned 1/3 of a turn without movement of the bolt head.
3. On A-325 bolts, washers may be used, but are not necessary. If you choose to use washers, they should be positioned behind the nut.