

## Guardrail Stanchion GRS-1

Use Ellis Guardrail Systems to protect walking/working surfaces in accordance with O.S.H.A. code 1926.500.

### **FAST**

Easily and quickly adjusts with the handle to fit slabs 4" to 36" thick. Wrench adjustment is optional. Just 20 Ft. / Lbs. of torque is needed to secure guardrail to slab edge.

### **STRONG**

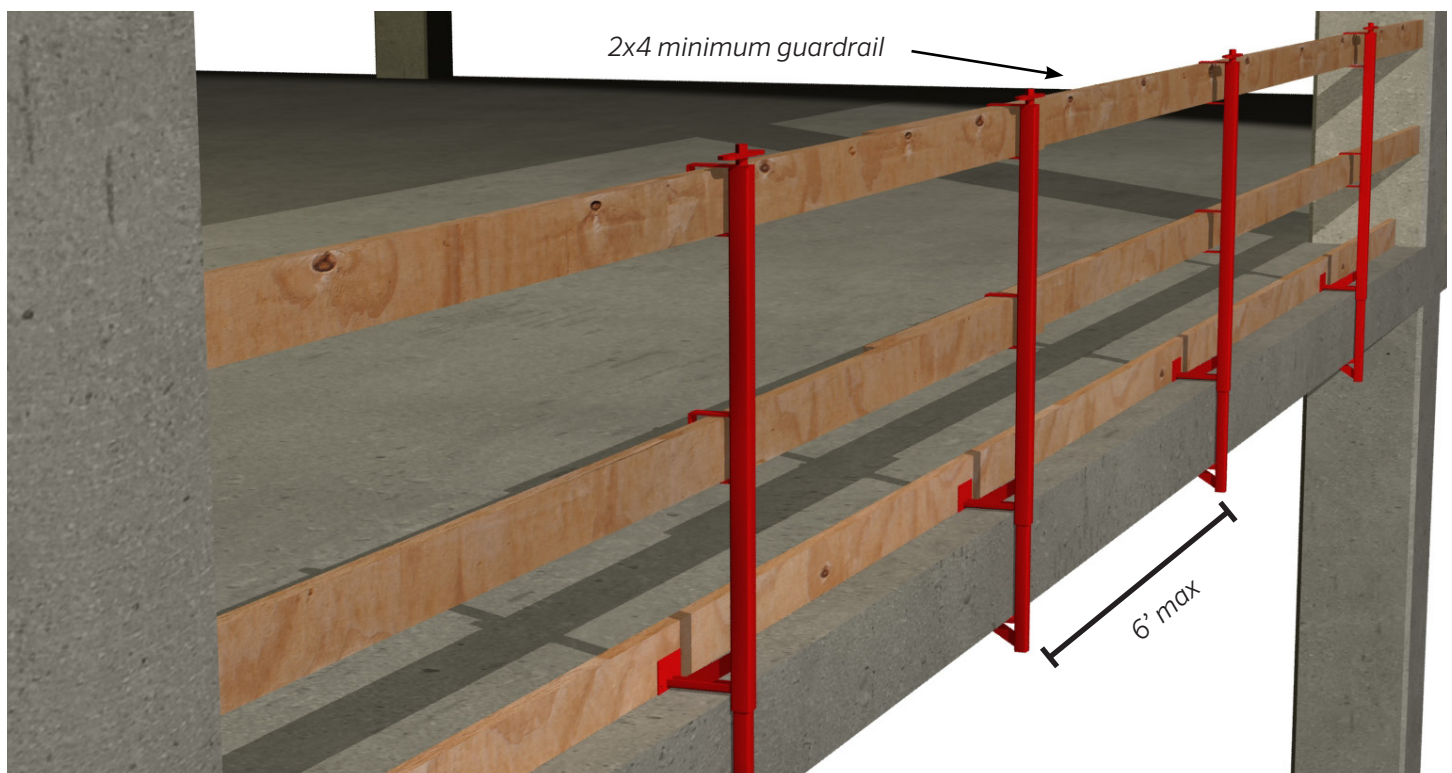
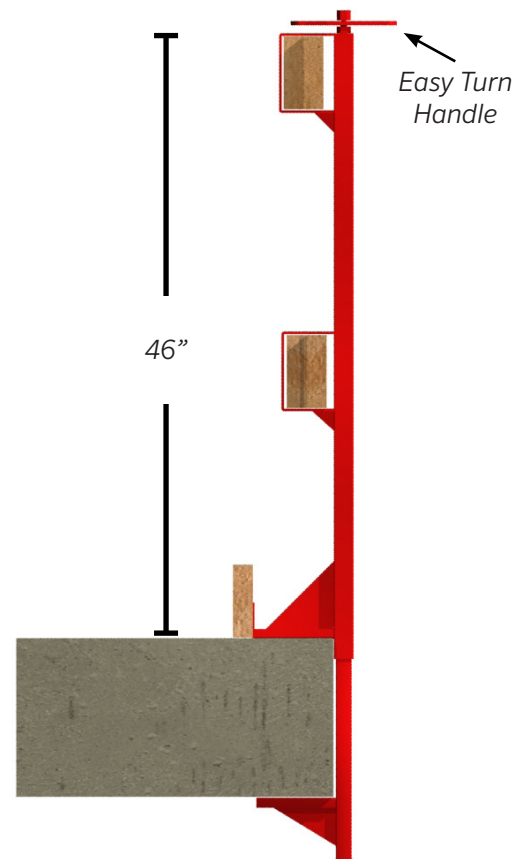
Constructed with 5/8" Acme Screw inside for firm grip on slab. Will withstand horizontal loads in excess of 250 lbs. Accommodates wood, cable, or chain guardrails. GRS-1 weight is 24 lbs.

### **SAFE & RELIABLE**

Meets and exceeds OSHA standards. Manufactured with quality welds and durable steel. Height of Guardrail Stanchion from top of slab to top rail is 46". Toeboard nail plate provided.

### **AFFORDABLE**

Like all Ellis Manufacturing Products, this one is built to last and only requires a minimal investment.



# Guardrail Stanchion GRS-1 INSTALLATION

## PLACEMENT:

Install Ellis MFG Guardrail Stanchion no more than 6' apart on center with rail brackets facing to the inside of the work area. Guardrail should rest directly on top of the flat, clean and stable slab.

## SECURE:

Adjustment handle turns easily to open and close the Guardrail and secure it to the slab. Hand tightening usually produces enough force to firmly grip the slab. At least 20 Ft. / Lbs. of torque is needed to safely tighten. This can usually be accomplished by hand; however, adjustments can also be made with a wrench if more leverage is required. The end of a short screw driver can also be placed in one of two holes on the adjustment handle for faster adjustment.

## BUILDING WOOD RAILING:

Use 2x4 or 2x6 lumber as horizontal rails and toeboard. Lumber should overlap at least 12" at Ellis MFG Guardrail Stanchion and secure with #10 double headed nails or screws through the nail holes provided. 9/16" hole provided in guardrail brackets for use with cable or chain in place of wood.

# Guardrail Stanchion GRS-1 LOAD TEST

The following load tests confirm the Ellis MFG Guardrail Stanchion (GRS-1) comply with OSHA's requirement that the "Guardrail System shall be capable of with standing, without failure, a force of at least 200 pounds (890N) applied within 2 inches (5.1 cm) of the top edge, in any outward or downward direction, at any point along the top edge".

It is recommended that spacing of the Ellis MFG Guardrail Stanchion (GRS-1) not exceed 6' center to center. Wood rails should overlap a minimum of 12" at the rail bracket of the Ellis MFG Guardrail Stanchion.

Guardrail Stanchion / Slab Grabber - (GRS-1) Load Test at 36" Opening

Load PSI	Multiplier	Load Lbs.	Deflection
0	1.1	0	0"
200	1.1	220	5/8"
250	1.1	275	1-1/8"
300	1.1	330	3" (started slipping)

The GRS-1 Guardrail Stanchion was set into the testing frame at a 36" opening. The handle was tightened by hand onto the concrete surface. Gradual pressure was applied by a hydraulic jack. The load was removed and the guardrail returned to its original position.

