

Engineering Online America

Structural Engineers & Solution Developers
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Job _____

Sheet # 1 of 2

Calculated By _____ Date _____

Reviewed by _____ Date _____

Material SS 316, $F_y = 35 \text{ ksi}$

Guard rail height = 42" Max.

Post Spacing = 4'-6" Max

Post Size 2" X 1" $S_x = 0.67 \text{ in}^3$

Loading as per OBC

1 KN (225 lbs) Horizontal at top rail, or 0.75 kN/meter (50 lbs/lin ft) Whichever cause greater effect.

Factored Loading = $1.5 \times 225 \text{ lbs} = 337.5 \text{ lbs}$ point load or 75 lbs/lin. ft

Max possible M = 14175"lbs

Max possible Bending Stress = 21.2 ksi

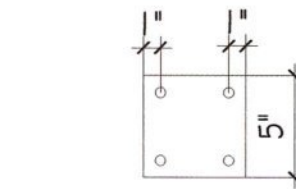
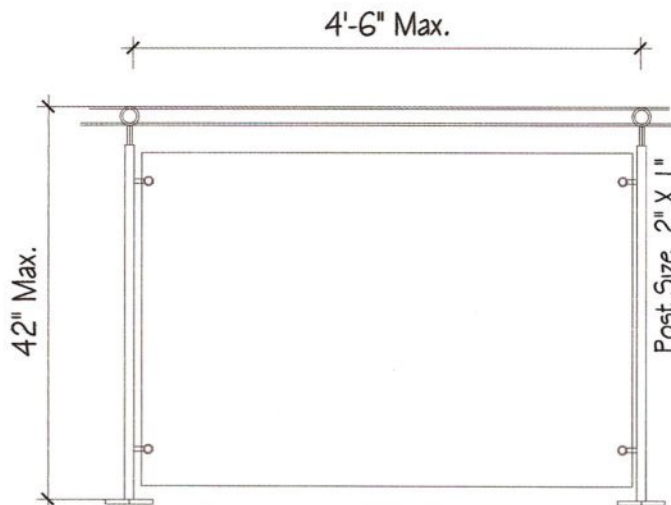
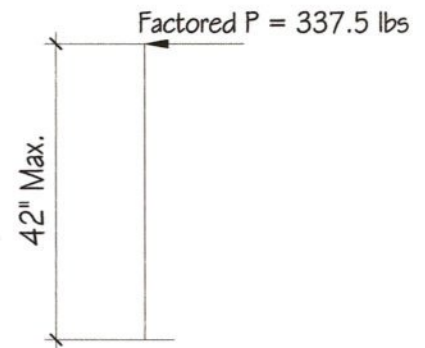
Allowable Bending = 31.5ksi

Post Size Shall be adequate.

Hand rail Size = 2" \varnothing 0.09" Wall Thickness

Max possible M on Hand rail = 2290"lbs

Hand Rail Size Shall be adequate.



Base Pl. = 5"X1/2"X5"

4 1/2" \varnothing A.B

Min. Bolt Tension Capacity = 2500 lbs