

2/12/20

8

2/2

- 10 VIEW POINT RD McCRAE

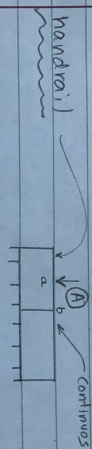
baluster
@ 1350 c/s

0.35 kN/m
design for 0.6 kN point

$$Z = \frac{bh^2}{6} = \frac{0.092^3}{6} = 1.3 \times 10^{-4}$$

$$\sigma = \frac{M}{Z} = \frac{0.6 \times 1.0}{1.3 \times 10^{-4}} = 4.6 \text{ MPa}$$

baluster
92x92 F7



(A) = 0.9 kN point

$$M_A = \frac{5}{16} (0.9) \times 0.68 = 0.2 \text{ kNm}$$

$$M_A = \frac{PL}{4} = 0.3 \text{ kNm}$$

$$\bar{z} = \frac{0.116 \times 0.042^2}{6} = 3.4 \times 10^{-5}$$

$$\sigma = \frac{M}{Z} = \frac{0.3 \text{ (max)}}{3.4 \times 10^{-5}} = 8.8 \text{ MPa}$$

5.9 MPa
continuous

handrail
116 x 42 F8

footings (x2)

$$\begin{aligned} LL &= 4 \text{ kPa} \\ DL &= 0.35 \text{ kPa} \end{aligned} \quad \left. \vphantom{\begin{aligned} LL &= 4 \text{ kPa} \\ DL &= 0.35 \text{ kPa} \end{aligned}} \right\} 4.35 \text{ kPa LL+DL}$$

Refer 1st page "loading"

$$\text{Area per column} = (1.74 \text{ m} \times 1.35 \text{ m}) \times 4.35 \text{ kPa} = 10.2 \text{ kN}$$

$$\phi 500 \text{ base concrete pier, } A = \pi r^2 = 0.196 \text{ m}^2 \quad \sigma = 52 \text{ kPa}$$

footing
500 \phi