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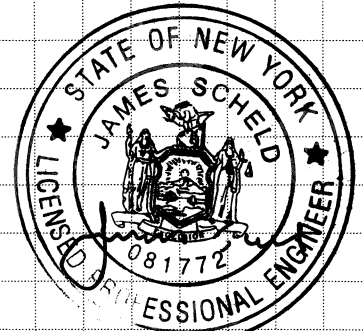
SHEET NO. 1 OF 1

CALCULATED BY JS DATE 23 AUG 18

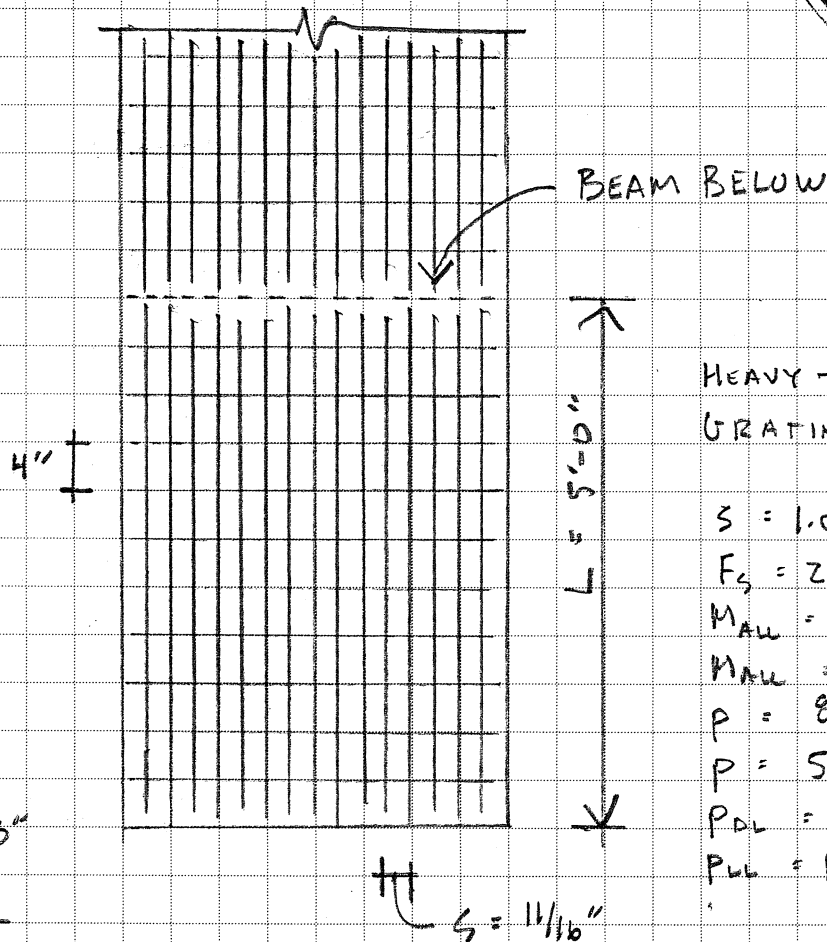
CHECKED BY DATE

SCALE 1/8" = 1'-0"

GRATING CAPACITY CHECK



8/23/18



HEAVY-DUTY BAR

GRATING TYPE 11W4'

$$S = 1.091 \text{ IN}^3/\text{FT}$$

$$F_y = 20 \text{ KSI A36 STEEL}$$

$$M_{ALL} = F_y \cdot S = 21.8 \text{ K}'/\text{FT}$$

$$M_{ALL} = 1.82 \text{ K}'/\text{FT}$$

$$P = 8 \text{ K}/\text{L}^2 \times 1000$$

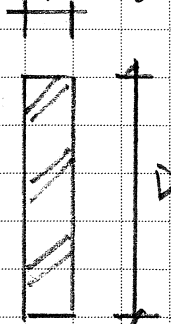
$$P = 581 \text{ PSF}$$

$$P_{DL} = 16 \text{ PSF}$$

$$P_{LL} = P - P_{DL} = 565 \text{ PSF}$$

$$P_{LL} = 565 \text{ PSF}$$

$$T = 3/8"$$



INDIVIDUAL
BAR

WEIGHT OF WHEELBARROW LOAD: 6 CFT X 120 PCF

$$P = 720 \text{ LB}$$

$$M = PL/4 = 0.72(5')/4$$

$$M = 0.90 \text{ K}'/\text{FT}$$

$$\text{CHECK: } M_{ALL} \geq M$$

$$1.82 \text{ K}' \geq 0.90 \text{ K}'$$

CONCLUSION: GRATING HAS ADEQUATE STRENGTH
FOR HAND DEMOLITION OPERATION