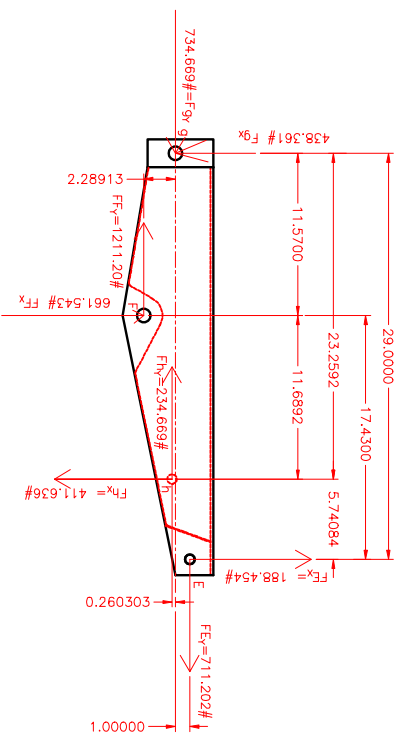


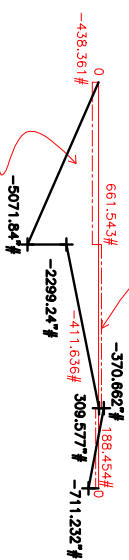
$$\begin{aligned} \sum \vec{G} &= -(F_{gx} * 29.0000) + F_{gx} * 1.00000 - (F_D * 3.53704) + (F_h * 20.3352) = 0 \\ M_g^B &= -(188.454 \# * 29.0000) + 711.202 \# * 1.00000 - (1380.09 \# * 3.53704) + (F_h * 20.3352) = 0 \\ 473.829 &= F_h \end{aligned}$$

$$\begin{aligned} \sum \vec{F}_x &= F_{gx} - F_D \cos 61.3572 + h_j \cos 29.6870 - F_{gx} = 0 \\ -188.454 \# &- 1380.09 \# * \cos 61.3572 + 473.829 \# * \cos 29.6870 + F_{gx} = 0 \\ 438.361 \# &= F_{gx} \end{aligned}$$

$$\begin{aligned} \sum \vec{F}_y &= F_{Ey} - F_D \sin 61.3572 + h_j \sin 29.6870 - F_{gy} = 0 \\ 711.202 \# &- 1380.09 \# * \sin 61.3572 - 473.829 \# * \sin 29.6870 + F_{gy} = 0 \\ 734.669 \# &= F_{gy} \end{aligned}$$



$$\begin{aligned} \text{SHEAR DIAGRAM CALCULATIONS} \\ F_{gx} + F_{F_x} + F_{h_x} + F_{E_x} &= 0 \\ -438.361 \# + 661.543 \# - 411.636 \# + 188.454 \# &= 0 \end{aligned}$$



$$\begin{aligned} \text{MOMENT CALCULATIONS} \\ M_{1.5700} &= -438.361 \# * 11.5700 = -5071.84 \# \\ M_{1.5700} &= -438.361 \# * 11.5700 + (1211.20 \# * 2.28913) = -2299.24 \# \\ M_{23.2592} &= -438.361 \# * 23.2592 + (1211.20 \# * 2.28913) + 661.543 \# * 11.6892 = 309.577 \# \\ M_{23.2592} &= -438.361 \# * 23.2592 + (1211.20 \# * 2.28913) + 661.543 \# * 11.6892 + (234.669 \# * 0.260303) = 370.662 \# \\ M_{29.0000} &= -438.361 \# * 29.0000 + (1211.20 \# * 2.28913) + 661.543 \# * 17.4300 + (234.669 \# * 0.260303) - 411.636 \# * 5.74084 = -711.232 \# \\ M_{29.0000} &= -438.361 \# * 29.0000 + (1211.20 \# * 2.28913) + 661.543 \# * 17.4300 + (234.669 \# * 0.260303) - 411.636 \# * 5.74084 + 711.202 \# * 1.00000 = -0.02962 \# \end{aligned}$$