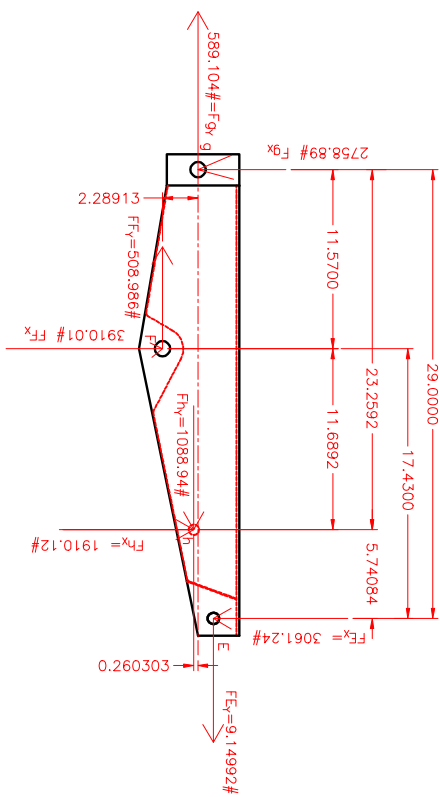


$$\begin{aligned} \Sigma M_G^0 &= +(F_{Ex} * 29.0000) + F_{Ey} * 1.00000 - (F_{FD} * 11.1777) - (F_{Fj} * 20.3352) = 0 \\ M_G^0 &= +(3061.24 * 29.0000) + 9.14992 * 1.00000 - (3943.00 * 11.1777) - (F_{Fj} * 20.3352) = 0 \\ 2198.72 &= F_{Fj} \end{aligned}$$

$$\begin{aligned} \Sigma F_x &= +F_{Ex} - F_{DF} \cos 7.4168^\circ + h_j \cos 29.6870^\circ - F_{Gx} = 0 \\ +3061.24 - 3943.00 \cos 7.4168^\circ - 2198.72 \cos 29.6870^\circ + F_{Gx} &= 0 \\ 2758.89 &= F_{Gx} \end{aligned}$$

$$\begin{aligned} \Sigma F_y &= +F_{Ey} - F_{DF} \sin 7.4168^\circ + h_j \sin 29.6870^\circ - F_{Gy} = 0 \\ +9.14992 - 3943.00 \sin 7.4168^\circ + 2198.72 \sin 29.6870^\circ - F_{Gy} &= 0 \\ 589.104 &= F_{Gy} \end{aligned}$$



$$\begin{aligned} \text{SHEAR DIAGRAM CALCULATIONS} \\ F_{Gy} + F_{Fj} + F_{Fy} + F_{Ey} &= 0 \\ -2758.89\# + 3910.01\# + 1910.12\# - 3061.24\# &= 0 \\ 3910.01\# & \end{aligned}$$

$$\begin{aligned} -2758.89\# \\ -31920.4\# \\ -30755.2\# \\ -17289.6\# \\ -10974.7\# \end{aligned}$$

$$\begin{aligned} \text{MOMENT CALCULATIONS} \\ M_{11.5700} &= -2758.89\# * 11.5700 = -31920.4\# \\ M_{11.5700} &= -2758.89\# * 11.5700 + (508.986\# * 2.28913) = -30755.2\# \\ M_{23.2592} &= -2758.89\# * 23.2592 + (508.986\# * 2.28913) + 3910.01\# * 1.6892 = -17289.6\# \\ M_{23.2592} &= -2758.89\# * 23.2592 + (508.986\# * 2.28913) + 3910.01\# * 1.6892 = -10974.7\# \\ M_{29.0000} &= -2758.89\# * 29.0000 + (508.986\# * 2.28913) + 3910.01\# * 1.6892 = -89616.3\# \end{aligned}$$