Pipes 4" & Schedule 40.
What loads can this pipe support

4" Schedule 40 Pipe

\[ A = 3.17 \text{ ft}^2 \]
\[ S = 3.22 \text{ kips/ft}^3 \]
\[ F_1 = 42 \text{ kips} \]
\[ F_0 = 0.6 \times 42 = 25 \text{ kips} \]
\[ R = 1.51 \text{ ft} \]

\[ M = \frac{5.22 \times 25}{12} = 6.7 \text{ kips-ft} \]
\[ \text{Arm} = (13-10\text{"}) - (1.5\text{")} = 12.5\text{"} = 12.42 \text{ ft} \]
\[ T = \frac{36.7}{12.42} = 0.54 \text{ kips/ft} \]
\[ T_{\text{max}} = 318^\circ \]

Max Tension = 300 lb
**Foundation**

\[ p = \frac{6.7}{2.5} = 2.68 \]

\[ p \times 0.75 \times 3 = 2.68 \]

\[ p = \frac{2.68}{2.25} = 1.2 \text{ ksf} \quad \text{ok} < 1.62 \]

\[ p' = \frac{2.68}{3} \times 0.5 = 0.45 \text{ ksf} \quad \text{ok} < 0.64 \]

\[ \frac{Kp}{F} = \frac{1.0 \times 149}{1.51} = 99 < 120 \quad \text{ok} \]

**Passive**

\[ 3 \times \text{Active} = 3 \times 1.2 \times 3 \times 1.8 \times 3 = 0.54 \]

\[ 12 \times 4.5 \times 3 = 1.62 \]
FOUNDATION DETAIL

- P10" Ø COLUMN, SEE SECTION/DETAILS DRAWING
- ANCHOR BOLTS, SEE ANCHOR BOLT PLAN. EMBED MIN. 12" IN CONC.
- 4-#4 VERTICALS
- 36" x 4'-6" DEEP PIER AT COLUMNS
- 5-#3 TIES: 3 @ TOP, 1 @ BOTTOM & MID-HEIGHT

Templates & bolts by CDI contact Tom Dufficy (303) 433-3180

ELEVATION

PLAN VIEW

BASE PLATE W/ ANCHOR BOLTS (RE: TO SHEET AB-1)

4-#4 VERTICALS