



DETAILS—REINFORCING STEEL
(See Schedule For Quantities)
n.t.s.

STEEL SCHEDULE AND CONCRETE QUANTITY

All Steel, Size 4, Straight Bars

| Riser Diam. Ft. | Base Dimesions | Concrete Cu. Yds. |
|-----------------|----------------|-------------------|
| | L1=____Ft. | |
| | L2=____Ft. | |

| No. | Qty. | Length Feet | Total Length Feet | Spacing Inches | Wt. Lbs |
|-------|------|-------------|-------------------|----------------|---------|
| D1 | | | | | |
| D2 | | | | | |
| D3 | | | | | |
| Total | | | | | |

RISER BASE CALCULATIONS

B- Buoyant Force of Riser, _____Lbs./Ft.
W- Weight of Riser, _____Lbs./Ft.
h- Height of Riser, _____ft.
Sub- Submerged Weight of Soil, 2 _____Lbs./Cu. Ft.
T- Thickness of Concrete Base, _____Ft. (min. 1 Ft.)
H- Height of Soil Above Riser Base, _____Ft.

D- Riser Diam. _____Ft.
SF- Safety Factor, _____
Use 1.2 On Bases with out earth Load.
Use 1.5 On bases with earth Load
L1- Dimension of Base _____Ft.
L2- Dimension of Base _____Ft.

Without Earth Load

$$\text{Required area of Footing} = \frac{(B-W)(h)(SF)}{(87.6)(T)} = \text{____ Ft}^2 \leq L1 \times L2$$

With Earth Load

$$(0.5 *Sub.) (D) H + [(L1)(L2) - .25(D^2)] (H) (*Sub.) + (L1)(L2)(T)(87.6) \geq (B-W)(h)(SF)$$

____Lbs. \geq ____Lbs.

2* In Absence of Specific Soils Data. Use the Sub for the Following Soil Types.

SP, SC, SW, SM-----*Sub.= 65 Lbs./Ft?
CH, MH-----*Sub.= 50 Lbs./Ft?

NOTES

- Corrugated steel pipe and aluminum pipe shall be in conformance with ASTM A742, A760, A761, A762, A849, A875, A885, and A929 for the specified type, class, fabrication of pipe and coating.
- Weld a minimum 4'-0" section of principal spillway conduit into the inlet as indicated for a starter section. This starter section shall have the same grade as the conduit except that when the grade of the conduit is less than 5% (5.0 ft./100 Ft.) a perpendicular connection may be made. Weld starter section to inlet on inside and outside, then cut inside for a smooth connection. After cutting and welding damaged coatings shall be repaired as recommended by the manufacturer. Shop fabrication required. Field welding is prohibited.
- Portland cement concrete (type II recommended) for the inlet base shall have a minimum compressive strength of 4000 psi.
- Where corrugated aluminum or aluminized steel pipe is used, all areas where the pipe is to be in contact with concrete shall be painted with a black bituminous enamel paint.

Date _____
Designed _____
Drawn _____
Checked _____
Approved _____

Corrugated Metal Riser
Structural Details



File No.
FL-410C1(Rev).dwg

Drawing No.

| Revisions | | |
|-----------|-----------|------------|
| Date | Approved | Title |
| 07/11 | JT Wilson | SI Con Eng |

5/24/2011

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