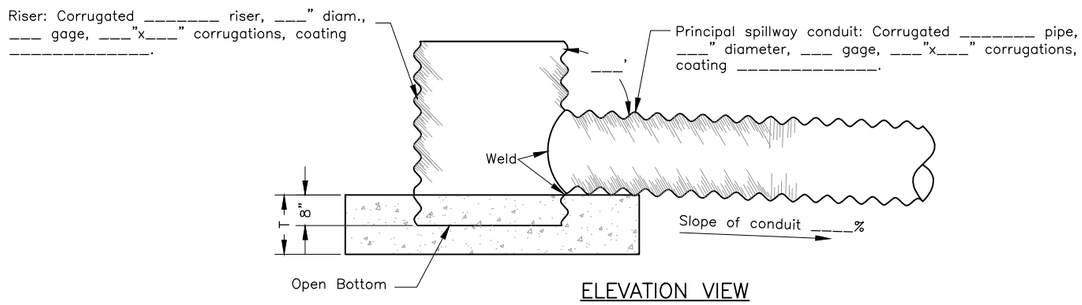
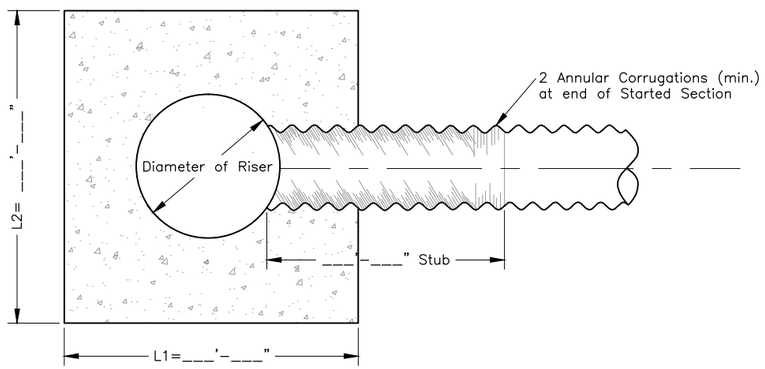
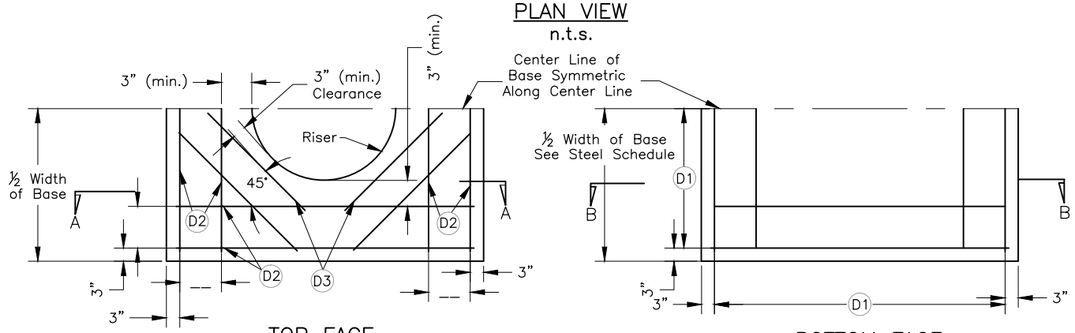


ELEVATION VIEW
n.t.s.

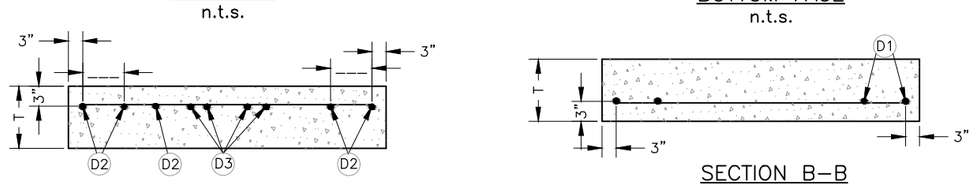


PLAN VIEW
n.t.s.



TOP FACE
n.t.s.

BOTTOM FACE
n.t.s.



SECTION A–A
n.t.s.

SECTION B–B
n.t.s.

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

Required area of Footing= $\frac{(B-W)(h)(SF)}{(87.6)(T)}$ =____$Ft^2 \leq$ L1xL2

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

1. 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.
2. 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.
3. Portland cement concrete (type II recommended) for the inlet base shall have a minimum compressive strength of 4000 psi.
4. 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

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.
FL–410C1(Rev).dwg

Drawing No.

5/24/2011

Sheet of

Revisions		
Date	Approved	Title
07/11	JT Wilson	ST Con Eng

Corrugated Metal Riser
Structural Details

Standard DWG. No. FL–410C1(Rev).dwg

Date 5/24/2011 | Sheet 1 of 1