

Design Assumptions for
Nebraska Base Drawing NE100-10-001
Concrete Base Metal Pipe Riser

Revised: 5/6/09 Replaces: 5001-31

Concrete Base Metal Pipe Riser

The riser gauge is determined by criteria contained in Table 3, FOTG, Pond 378.

Coating requirements criteria is contained in FOTG Pond (378) Standard.

Corrosion control design procedures contained in EFH NB 6-34a-h.

All pipe lengths and coupling bands shall be watertight. The installation is to be used where the riser is surrounded by embankment to protect it from ice action and to conform to assumptions made in the buoyancy analysis.

Corrugation size (3 x 1) and (5 x 1) are only available in 36" dia. pipe and larger.

If the PI of the soil in the embankment is less than 15, the inlet area will be armor coated or have a concrete apron.

Armor coating or a concrete apron surrounding the inlet area shall be considered in all applications where a 36" diameter riser or larger is specified.

Instructions for
Nebraska Base Drawing NE100-10-001
Concrete Base Metal Pipe Riser

Fill in the following data fields to automatically fill in the necessary data fields on the drawing.

Title block

Title line(s)

Subtitle line

County, State

Sheet number of

Who / When

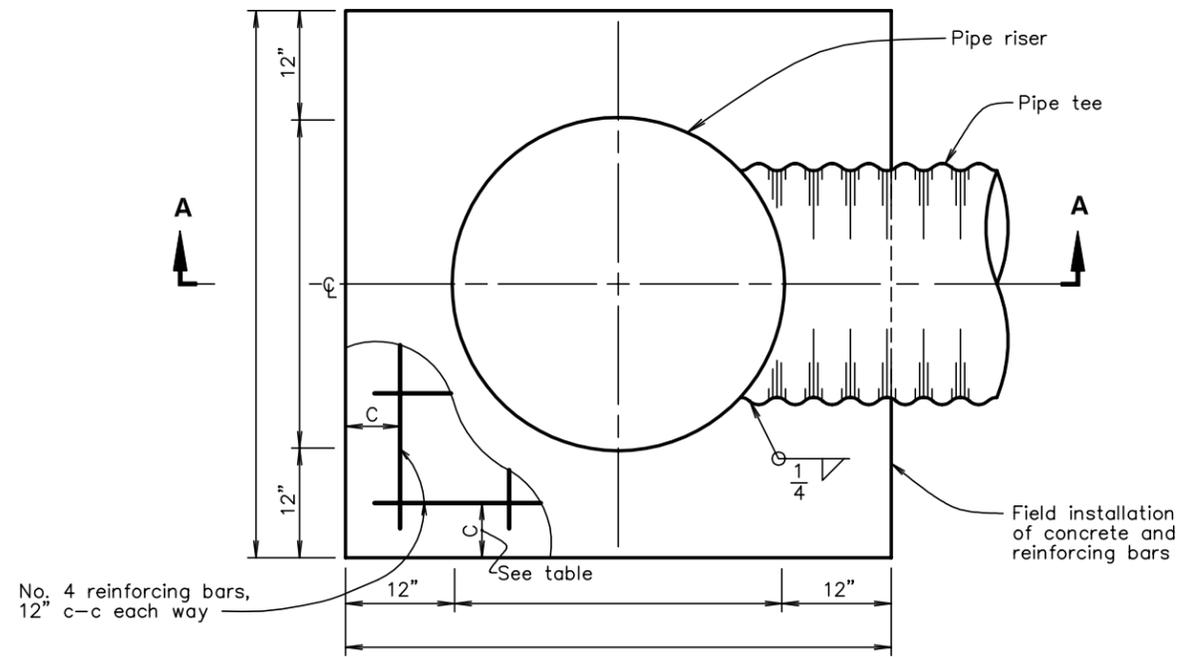
Designed

Drawn

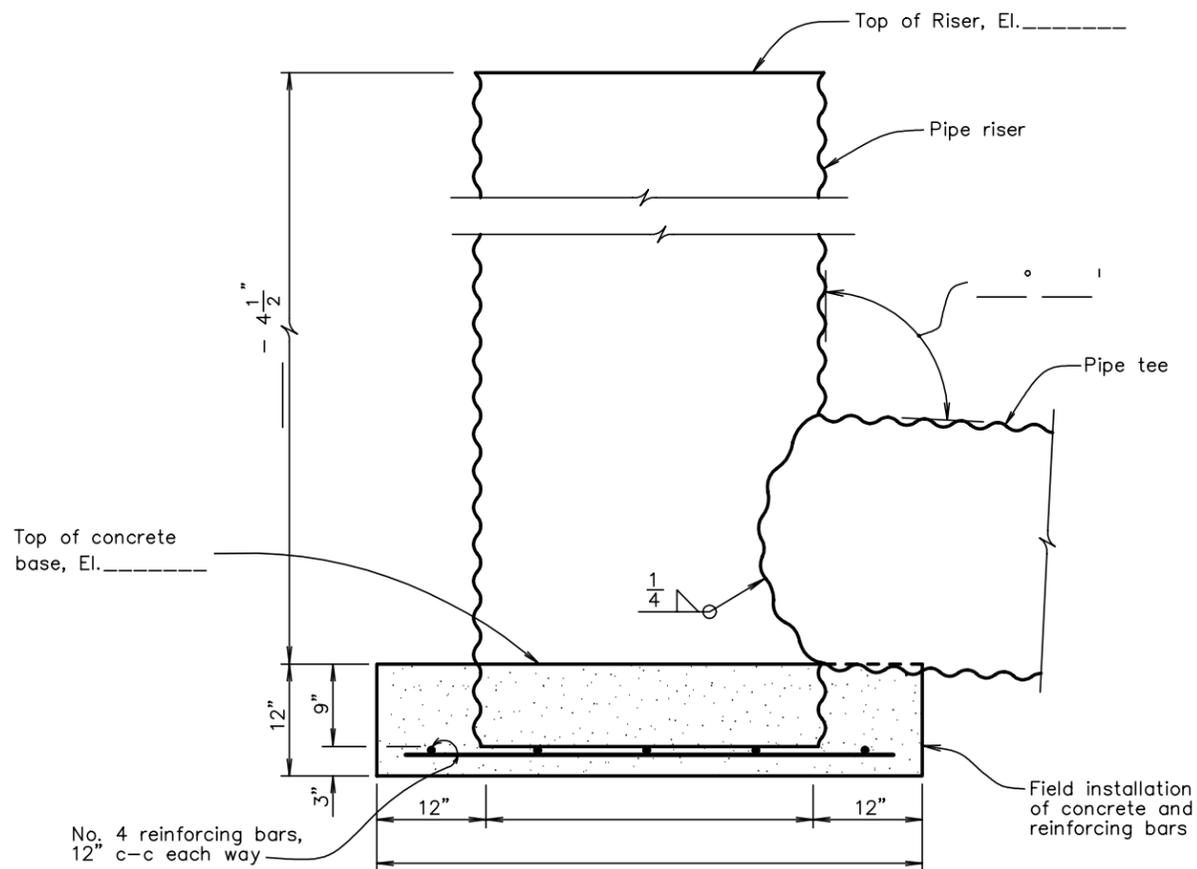
Checked

Enter directly on drawing

Left click on yellow boxes on drawing to mark with X as required.
Left click data blue data fields to enter required information.



PLAN



SECTIONAL ELEVATION A-A
RISER DETAIL

TABLE OF QUANTITIES FOR CONCRETE RISER BASE

DIA. OF RISER IN INCHES	15	18	21	24	30	36	42	48	54	60	66	72
CONCRETE, CU.YDS.	0.40	0.45	0.52	0.59	0.75	0.93	1.12	1.33	1.56	1.81	2.08	2.37
NO. 4 REINFORCING BAR, LIN.FT.	24	24	26	28	40	45	60	66	84	91	112	120
LENGTH OF EACH BAR, FT.-IN.	3-0	3-0	3-3	3-6	4-0	4-6	5-0	5-6	6-0	6-6	7-0	7-6
TOTAL NUMBER OF BARS	8	8	8	8	10	10	12	12	14	14	16	16
TOTAL WEIGHT - NO. 4 BARS, LBS.	16.0	16.0	17.4	18.7	26.7	30.0	40.1	44.1	56.1	60.8	74.8	80.2

TABLE FOR DIMENSION C

DIA. OF RISER IN INCHES	15	18	21	24	30	36	42	48	54	60	66	72
C SPACING IN INCHES	1 1/2	3	4 1/2	6	3	6	3	6	3	6	3	6

NO. 4 REINFORCING BAR = 1/2 IN. DIA. = 0.668 LBS./LIN.FT.

REQUIREMENT TABLE

X IN BOX INDICATES THE REQUIREMENTS THAT APPLY TO STRUCTURE <input type="checkbox"/> INDICATES - NOT APPLICABLE		
CONCRETE: CLASS <input type="checkbox"/> 3000 <input type="checkbox"/> 3000M <input type="checkbox"/> 4000 _____ CU.YD.		
REINFORCING STEEL: _____ LB.		
CORRUGATED METAL PIPE RISER, _____" DIA., _____GA., _____FT.		
NOMINAL LENGTH WITH A _____" DIA., _____GA., PIPE TEE _____FT. NOMINAL LENGTH WELDED TO IT 9" FROM THE LOWER END.		
PIPE CLASSIFICATION	RISER	PIPE TEE
ANNULAR CORRUGATION _____	<input type="checkbox"/>	<input type="checkbox"/>
HELICAL CORRUGATION _____	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> TYPE I, FULL CIRCULAR CROSS-SECTION FABRICATED _____	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> TYPE II, THIS IS TYPE I PIPE WHICH HAS BEEN REFORMED INTO A PIPE ARCH HAVING APPROXIMATELY A FLAT BOTTOM _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CORRUGATION REQUIREMENTS - NOMINAL SIZE (INCH)		
<input type="checkbox"/> 2 2/3 x 1/2 _____	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 3 x 1 _____	<input type="checkbox"/>	<input type="checkbox"/>
COATINGS AND FABRICATION		
SEE METAL PIPE REQUIREMENTS AND COUPLING BAND SHEET		

NOTE:

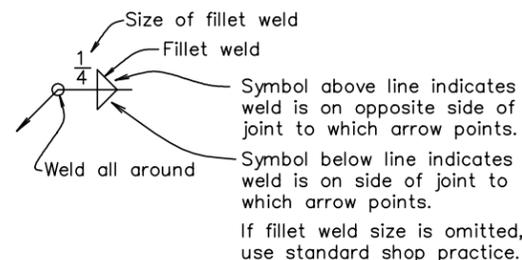
THE FOLLOWING DESIGNATIONS FOR PIPE CLASSIFICATIONS, CORRUGATIONS AND COATINGS WHEN REFERRED TO ON THE DRAWINGS ARE IN ACCORDANCE WITH CURRENT ASTM'S:

- A760 STANDARD SPECIFICATION FOR CORRUGATED STEEL PIPE, METALLIC-COATED FOR SEWERS AND DRAINS.
- A761 STANDARD SPECIFICATION FOR CORRUGATED STEEL STRUCTURAL PLATE, ZINC-COATED, FOR FIELD BOLTED PIPE, PIPE ARCHES, AND ARCHES.
- A762 STANDARD SPECIFICATION FOR CORRUGATED STEEL PIPE, POLYMER PRECOATED FOR SEWERS AND DRAINS.
- A849 STANDARD SPECIFICATION FOR POST-APPLIED COATINGS, PAVINGS, AND LININGS FOR CORRUGATED STEEL SEWER AND DRAINAGE PIPE.
- A885 STANDARD SPECIFICATION FOR STEEL SHEET, ZINC AND ARAMID FIBER COMPOSITE-COATED FOR CORRUGATED STEEL SEWER, CULVERT AND UNDERDRAIN PIPE.

FABRICATION AND INSTALLATION NOTES:

1. FOR FABRICATION OF RISERS ON HELICAL PIPE A FILLER STRIP MAY BE USED TO INSURE A WATERTIGHT SEAL BETWEEN THE RISER AND TEE.
2. WHEN MORE THAN ONE COATING IS CHECKED IN THE COLUMN BOXES EACH TYPE IS ACCEPTABLE BUT ONLY ONE TYPE OF COATING SHALL BE USED IN EACH INSTALLATION.

WELD SYMBOLS



NOTE:

ALL WELDS AND HEAT AFFECTED AREAS TO BE TREATED IN ACCORDANCE WITH SPECIFICATIONS.
MATERIALS NOT COATED OR GALVANIZED SHALL BE PAINTED ACCORDING TO PAINT SYSTEM "C" OF PAINT SPECIFICATIONS.

CONCRETE BASE METAL
PIPE RISER

Date _____
Designed _____
Drawn _____
Checked _____
Approved _____



File No. _____

CAD Dwg.
NE100-10-001.dwg

Sheet _____ of _____