

Design Assumptions for
Nebraska Base Drawing NE100-40-007
Concrete Base Metal Pipe Support for 15", 18", 21"
and 24" Diameter Pipe Barrels

Revised: 8/05 Replaces: 5001-11

Concrete Base Metal Pipe Support for 15", 18", 21" and 24" Diameter Pipe Barrels

Rust Preventative – the following types are considered equal to the specified type:

Zinc coated as per specification, or
Paint System C of paint specification.

Instructions for
Nebraska Base Drawing NE100-40-007
Concrete Base Metal Pipe Support for 15", 18", 21"
and 24" Diameter Pipe Barrels

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

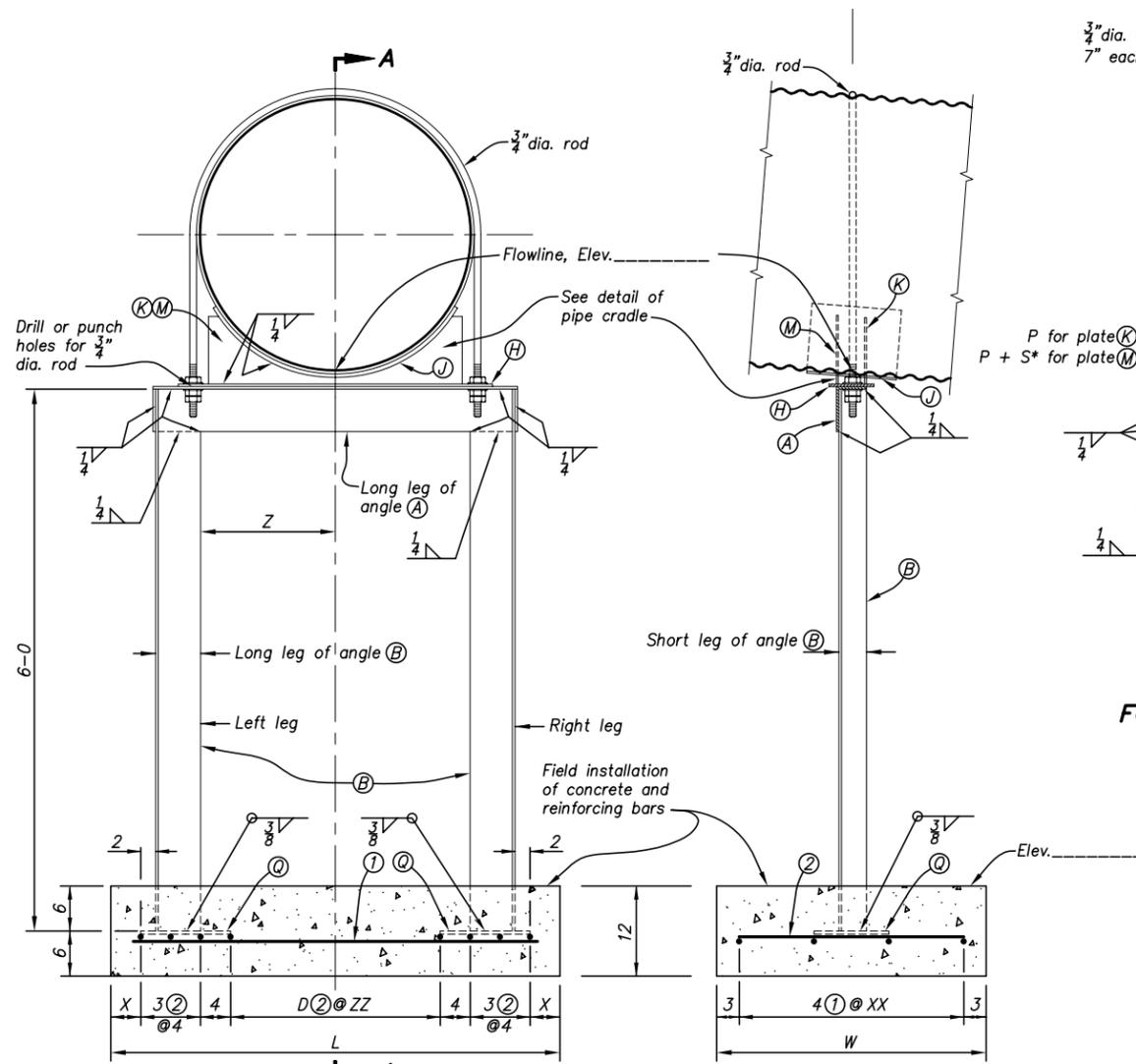
Designed

Drawn

Checked

Enter directly on drawing

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



FRONT ELEVATION
Looking Upstream
PIPE SUPPORT FOR 15" THRU 24" DIA. PIPE BARRELS

TABLE OF QUANTITIES

ITEM	UNIT (STEEL)	PIPE BARREL DIAMETER			
		15"	18"	21"	24"
STR. SHAPES	LBS.	164.4	171.5	202.2	209.9
**3/4" DIA. ROD	LBS.	7.1	7.9	9.0	9.8
TOTAL WEIGHT	LBS.	171.5	179.4	211.2	219.7

"S" DIM. TABLE

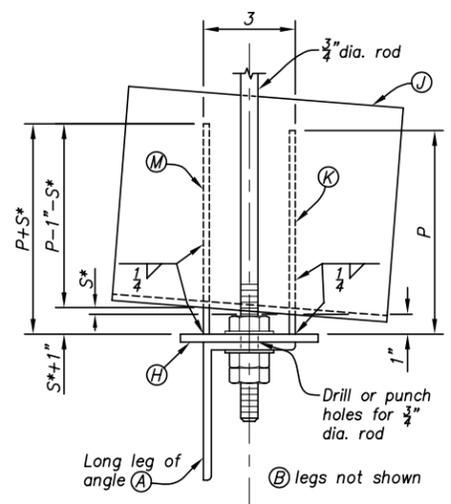
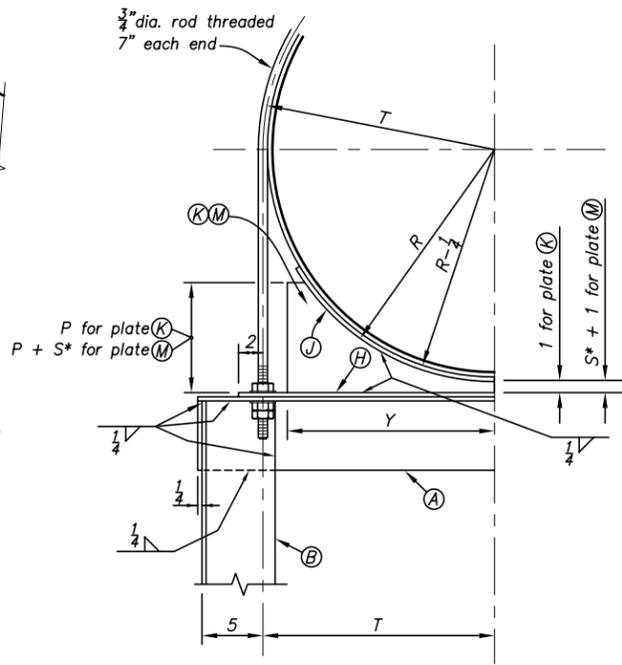
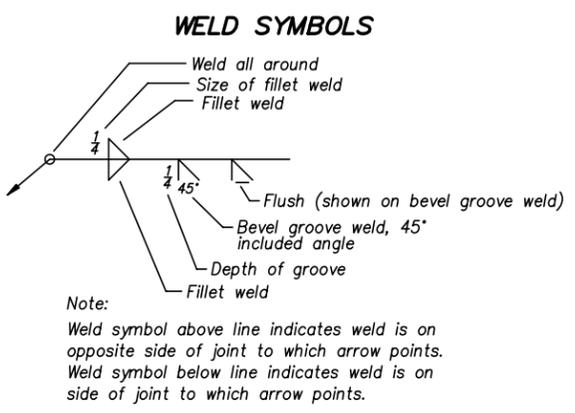
PIPE GRADE (%)	* S (INCHES)
0	0
1	1/32
2	1/16
3	3/32
4	1/8
5	5/32
6	3/16
7	7/32

DIMENSIONS

DIM.	PIPE BARREL DIAMETER			
	15"	18"	21"	24"
L	3-0	3-6	3-6	4-0
P	0-3 3/4	0-4 1/2	0-5 1/4	0-6
R	0-8 3/8	0-9 7/8	0-11 3/8	1-0 7/8
T	0-8 1/2	0-10	0-11 1/2	1-1
W	2-0	2-0	2-6	2-6
X	0-2 3/4	0-4 1/4	0-2 3/4	0-4 1/4
Y	0-6 1/2	0-8	0-9 1/2	0-11
Z	0-8 1/4	0-9 3/4	0-11 1/4	1-0 3/4
ZZ	0-6 1/2	0-9 1/2	0-6 1/4	0-7 3/4
XX	0-6	0-6	0-8	0-8

TABLE OF QUANTITIES FOR CONCRETE BASE

BARREL DIA.	MARK	NO. D BARS REQD.	TOTAL NO. 4 BARS REQD.	LENGTH	TOTAL LENGTH	LBS.	CONCRETE BASE		
							L	W	CU. YD.
15"	1	---	4	2-6	10-0	6.7	3-0	2-0	0.22
	2	2	8	1-6	12-0	8.0	3-6	2-0	0.26
18"	1	---	4	3-0	12-0	8.0	3-6	2-0	0.26
	2	2	8	1-6	12-0	8.0	3-6	2-6	0.32
21"	1	---	4	3-0	12-0	8.0	3-6	2-6	0.32
	2	3	9	2-0	18-0	12.0	4-0	2-6	0.37
24"	1	---	4	3-6	14-0	9.4	4-0	2-6	0.37
	2	3	9	2-0	18-0	12.0	4-0	2-6	0.37



MATERIAL LIST

MARK	DESCRIPTION	15" DIA. BARREL		18" DIA. BARREL		21" DIA. BARREL		24" DIA. BARREL	
		NO. REQD.	LENGTH	NO. REQD.	LENGTH	NO. REQD.	LENGTH	NO. REQD.	LENGTH
A	5 x 3 x 5/16 ANGLE	1	2-3	1	2-6	---	---	---	---
A	5 x 3 x 3/8 ANGLE	---	---	---	---	1	2-9	1	3-0
B	5 x 3 x 5/16 ANGLE	2	6-0	2	6-0	---	---	---	---
B	5 x 3 x 3/8 ANGLE	---	---	---	---	2	6-0	2	6-0
H	4 x 1/4 PLATE	1	1-9	1	2-0	1	2-3	1	2-6
J	12 x 1/4 PLATE	1	1-3	1	1-6	1	1-9	1	2-0
K	1/4" PLATE	1	0-3 3/4	1	0-4 1/2	1	0-5 1/4	1	0-6
M	1/4" PLATE PER DETAIL	1	---	1	---	1	---	1	---
**	3/4" DIA. ROD	1	4-9	1	5-3	1	6-0	1	6-6
Q	3/8" x 10" PLATE	2	12	2	12	2	12	2	12

** INCLUDING 6 NUTS AND 4 WASHERS. INCREASE LENGTH OF 3/4" DIA. ROD, AS REQUIRED, WHEN HELICAL PIPE IS USED.
3/4" DIA. ROD=1.5 LBS. PER FT.
3/8" DIA. ROD=0.376 LBS. PER FT.
NO. 4 REINFORCING BAR=1/2" DIA.=0.668 LBS. PER FT.
(ALUMINUM ALLOY=1/3 WEIGHT OF STEEL)

REQUIREMENT TABLE

<input checked="" type="checkbox"/> X In box indicates details which apply to structure
SUPPORT(S) REQUIRED _____
PIPE BARREL DIAMETER <input type="checkbox"/> 15" <input type="checkbox"/> 18" <input type="checkbox"/> 21" <input type="checkbox"/> 24"
TYPE METAL <input type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM ALLOY

- DESIGNERS NOTES:**
- When steel pipe is used, all major component parts shall be of steel. When aluminum alloy pipe is used, all major component parts shall be aluminum alloy.
 - Aluminum alloy will not be used in soils that have a pH greater than 9 or less than 4, or where rapid corrosion of similar metal is known to have occurred.
 - Steel rods, nuts and washers may be used with aluminum alloy only when properly insulated with two (2) thicknesses of 12 mil. (minimum) plastic tape.
- NOTES:**
- All rods, nut and washers to be galvanized.
 - All angles and sheets to be securely welded as shown on the drawings in accordance with specifications.
 - All welds and heat affected areas on galvanized metal to be treated in accordance with specifications.
 - When materials used are not galvanized, all parts shall be painted according to paint system "C" of paint specifications.
 - The R-1/4 (See detail of pipe cradle) must be adequate for the outside diameter of the pipe, which must include the thickness of the coating.
 - *6. Increase the vertical dimensions of plate (M) by the dimension "S" to place the pipe cradle on the same grade as the outlet pipe (as shown on detailed end elevation of pipe cradle). The value of "S" changes with pipe grade according to the X'd value marked in the "S" Dim. table.

Date _____

Designed _____

Drawn _____

Checked _____

Approved _____

NCRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No. _____

CAD Dwg.
NE100-40-007.dwg

Sheet _____ of _____

CONCRETE BASE METAL PIPE SUPPORT FOR 15", 18", 21" AND 24" DIAMETER PIPE BARRELS