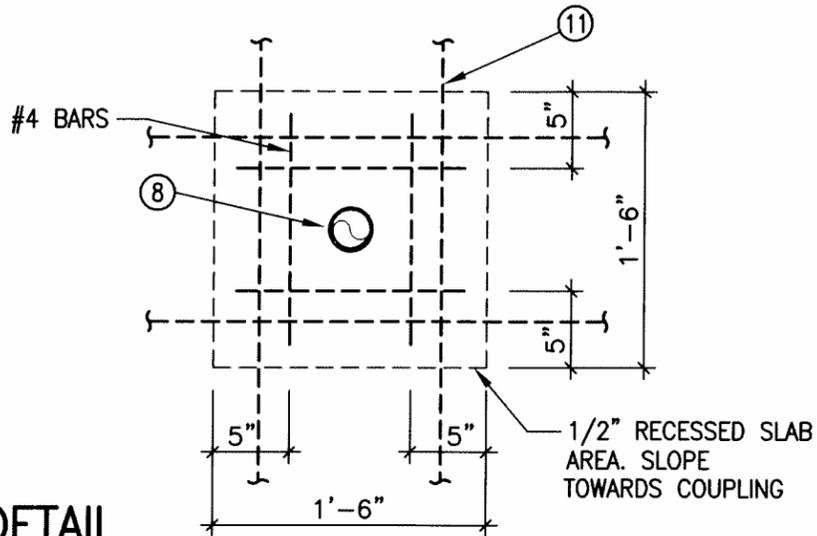


STORAGE IN GALLONS

H HEIGHT (FEET)	D WATER DEPTH (FEET)	D INSIDE DIAMETER (FEET)								
		10	15	20	25	30	35	40	45	50
2	1.58	928	2,089	3,713	5,802	8,355	11,371	14,852	18,798	23,207
2	1.75	1,028	2,313	4,113	6,426	9,253	12,595	16,451	20,820	25,704
4	3.75	2,203	4,957	8,813	13,770	19,829	26,989	35,251	44,615	55,080
6	5.75	3,378	7,601	13,513	21,114	30,404	41,383	54,052	68,409	84,456



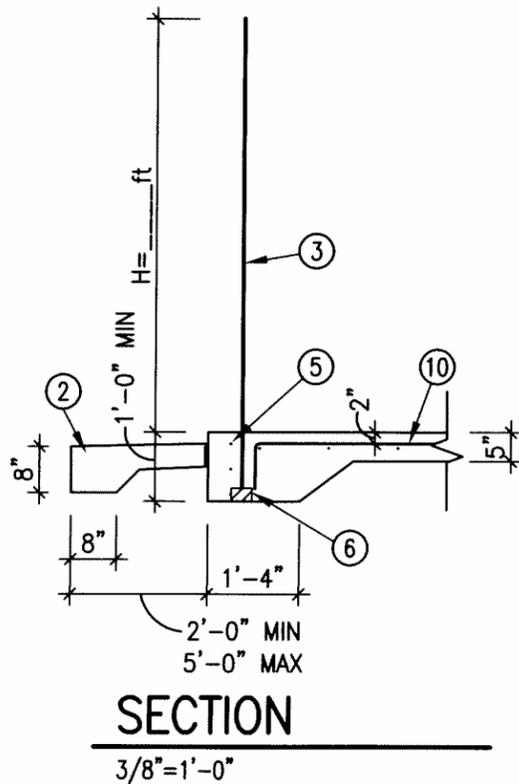
DETAIL

NO SCALE

KEYED NOTES

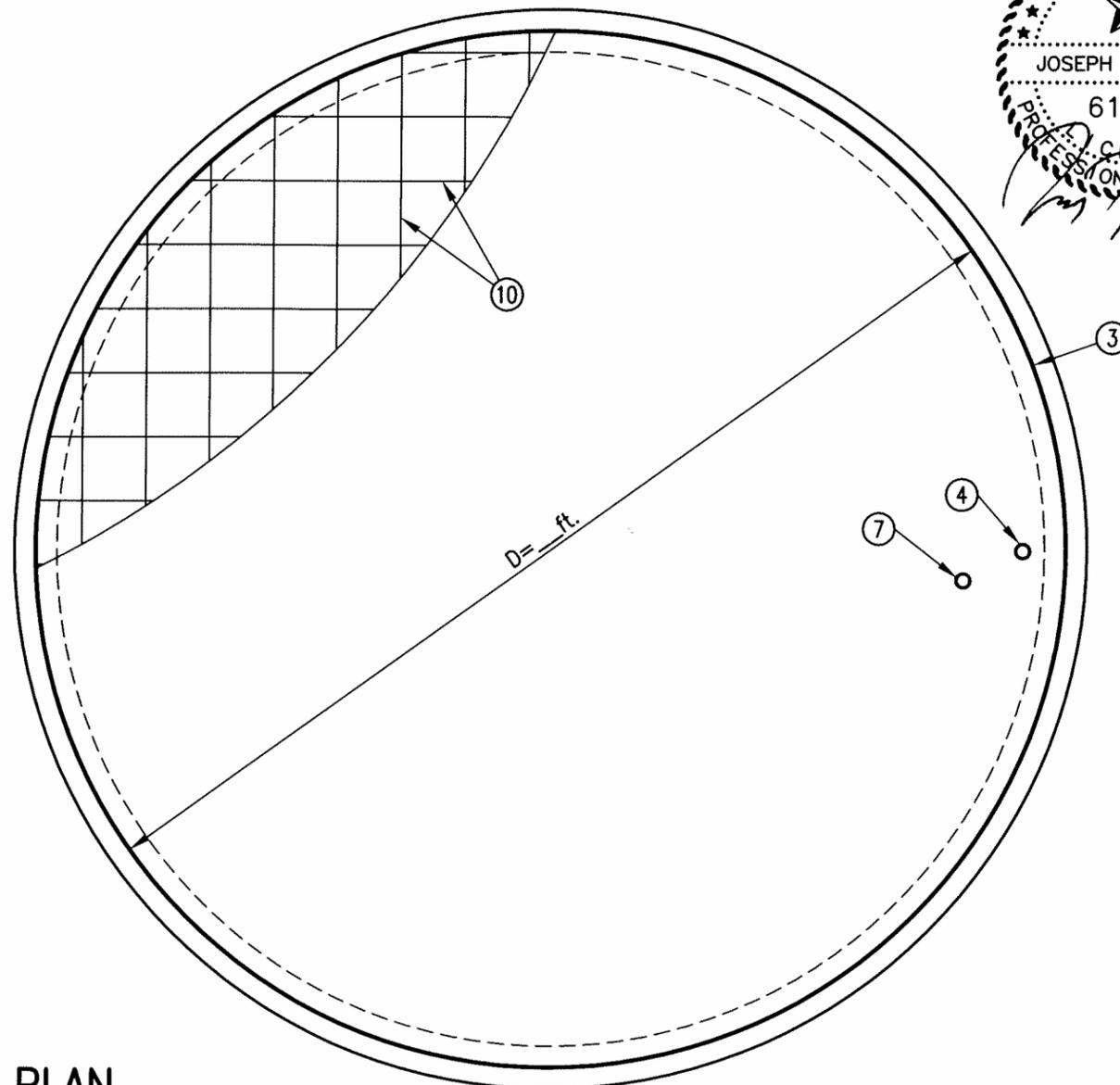
AS INDICATED BY:

- ① LEAD-IN PIPE FROM WINDMILL OR OTHER SOURCE OF WATER SUPPLY
- ② 4" THICK CONCRETE APRON - PROVIDE CONCRETE MIX WITH 1.0 POUNDS PER CUBIC YARD OF POLYPROPYLENE FIBERS SPECIFICALLY INTENDED FOR USE AS SECONDARY CONCRETE REINFORCEMENT.
- ③ 3/16" STEEL PLATE
- ④ 2" OUTLET PIPE
- ⑤ 3-#4 REINFORCING BARS
- ⑥ COMMON BRICK OR CONCRETE BLOCK SPACED 4' APART AROUND CIRCUMFERENCE OF TANK TO SUPPORT STEEL WHILE CONCRETE IS BEING POURED
- ⑦ 2" OVERFLOW & DRAIN PIPE
- ⑧ 2" COUPLING
- ⑨ SMALL SUMP-- REF DETAIL THIS SHEET
- ⑩ 5" FLOOR SLAB W/ #3 BARS AT 18" EACH WAY OR 4x4- W1.4xW1.4 WWF
- ⑪ DRAIN PIPE IS REQUIRED AND MUST DISCHARGE AT A POINT AWAY FROM THE WATERING FACILITY THAT IS STABLE AND SUITABLE FOR RELEASE OF DRAIN AND/OR OVERFLOW WATER.
 PLANNED MINIMUM LENGTH: _____ FT.
 INSTALLED LENGTH: _____ FT.



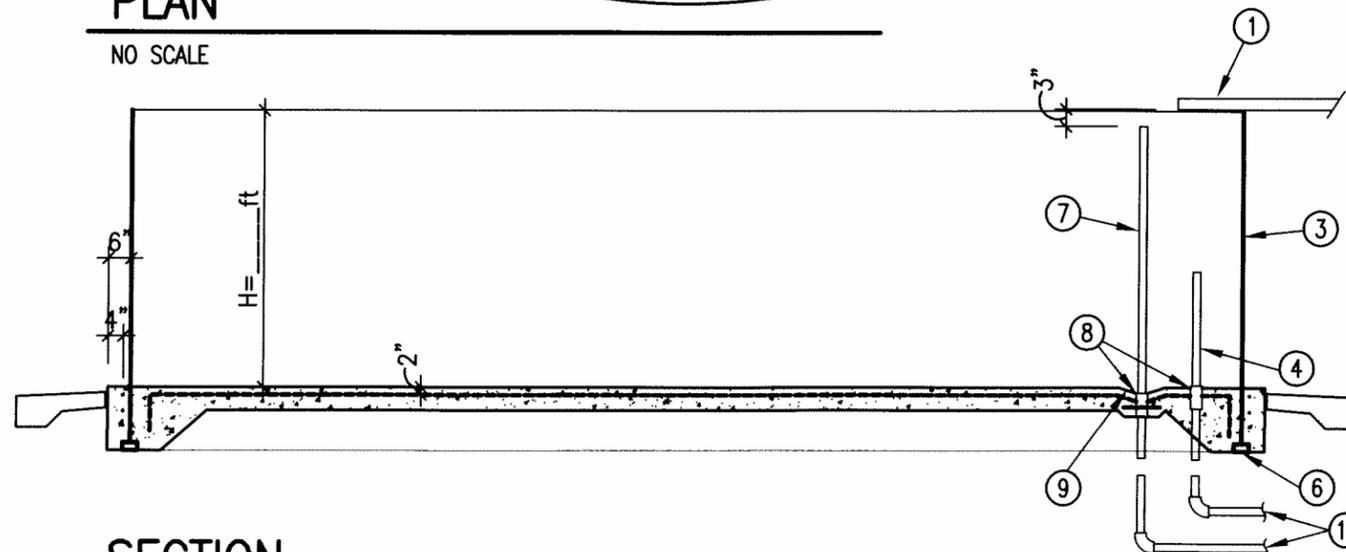
SECTION

3/8"=1'-0"



PLAN

NO SCALE



SECTION

NO SCALE



DESIGNED BY: SRS
 DRAWN BY: AND
 CHECKED BY: EED
 FILE NAME: TX-EN-0493.DWG
 DATE PLOTTED: 25 MAY 2005

WATERING FACILITY FLOOR
 WITH REINFORCED CONCRETE WALLS
 WITH STEEL PLATE WALLS
 (MAXIMUM 6' HEIGHT AND
 MAXIMUM 50' DIAMETER)



REVISIONS DATE

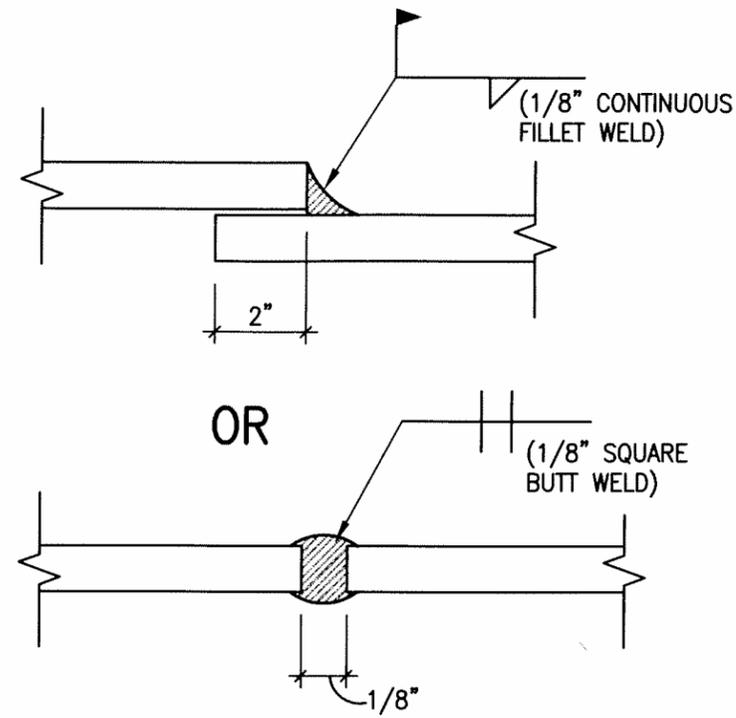
DRAWING NO.
 TX-EN-0493

SHEET

1 OF 2

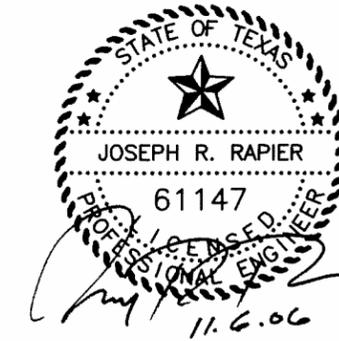
GENERAL NOTES

1. DIMENSIONS MAY VARY AS FOLLOWS: DIAMETER 31 TO 50 FEET; MAXIMUM HEIGHT 6 FEET.
2. MATERIAL PROPERTIES
 - STEEL
WATER STORAGE FACILITY WALL: ASTM A36KSI
BOLTS: ASTM A325 (3/8"Ø MINIMUM)
 - CONCRETE
SLAB AND FOUNDATION 3000 PSI AT 28 DAYS
 - PIPING
NEW GALVANIZED, BRONZE, COPPER OR PLASTIC PVC. PVC SHALL BE SCHEDULE 40 OR SCHEDULE 80 IF THREADED.
3. OVERFLOW MAY BE PASSED THROUGH WATERING TROUGH TO KEEP SCUM REMOVED FROM TROUGH.
4. VALVES OR PIPES SHALL BE PROTECTED BY SHEILDS OR COVERS TO PREVENT DAMAGE BY LIVESTOCK.
5. CONSTRUCTION PROCEDURES:
 - A. PREPARE FOUNDATION BY LEVELING AND SMOOTHING AREA WHERE FACILITY IS TO BE CONSTRUCTED. EXCAVATE TRENCH FOR WALL FOOTING. A MINIMUM OF A 4" LAYER OF SAND IS REQUIRED BETWEEN BOTTOM OF THE CONCRETE FLOOR SLAB AND SUBGRADE WHEN SUBGRADE IS HIGH CLAY SOIL SUBJECT TO SIGNIFICANT SWELLING AND SHRINKING WITH WETTING AND DRYING. THE OUTLET AND DRAIN PIPES SHOULD BE POSITIONED BEFORE FINAL SMOOTHING OF THE FOUNDATION.
 - B. IN THE CENTER AND THE BOTTOM OF THE WALL FOOTING TRENCH, PLACE COMMON BRICKS 4' APART TO SUPPORT THE STEEL PLATE WALL WHILE CONCRETE IS BEING POURED.
 - C. PLACE REINFORCING BARS AS SHOWN. LAPPED SPLICES SHALL NOT BE LESS THAN 15".
 - D. THE JOINTS FOR THE STEEL PLATES MAY BE MADE BY BUTT WELDING, OR BY PUNCHING AND BOLTING. PUNCHED HOLES SHOULD BE FREE OF BURRS THAT WOULD INTERFERE WITH WATER TIGHT CONNECTION. BOLTS WILL BE PLACED A MAXIMUM DISTANCE OF 2 INCHES APART. JOINTS WILL BE COATED WITH AN ASPHALT MASTIC OF KNIFING CONSISTENCY BEFORE ASSEMBLY, OR ASSEMBLED WITH GASKETS MADE FOR THIS PURPOSE.
 - E. AFTER THE LOWER OR FIRST PORTION OF THE STEEL PLATE WALL HAS BEEN ASSEMBLED AND IS IN PLACE THE CONCRETE FOR THE FLOOR SLAB AND WALL FOOTING MAY BE POURED. THE CONCRETE MUST BE WORKED FIRMLY AROUND AND UNDER THE WALL. CARE SHOULD BE USED IN PLACING THE CONCRETE TO AVOID SEGREGATION. THE TOP OF THE FLOOR SLAB SHOULD BE TROWELED TO A REASONABLY SMOOTH FINISH.



TYPICAL TANK WALL JOINT

NO SCALE



FRIABLE MATERIAL QUANTITY (CUBIC YARDS) 4" THICK BEDDING BELOW SLAB									
	DIAMETER - FEET								
	10	15	20	25	30	35	40	45	50
QUANTITY- cy	1	3	4	6	9	12	16	20	25

SLAB AND FOOTING CONCRETE QUANTITY (CUBIC YARDS) WATERING FACILITY DRAWING NO. TX-EN-0493									
	DIAMETER - FEET								
DIAMETER - FEET	10	15	20	25	30	35	40	45	50
CONCRETE - CY	3	5	8	12	16	20	26	31	38

APRON CONCRETE QUANTITY (CUBIC YARDS) WATERING FACILITY DRAWING NO. TX-EN-0493									
	DIAMETER - FEET								
DIAMETER - FEET	10	15	20	25	30	35	40	45	50
APRON WIDTH - FEET	2	1	1	2	2	2	3	3	4
	3	1	2	2	3	3	4	4	5
	4	2	2	3	3	4	4	5	6
	5	2	3	3	4	4	5	6	7

REINFORCING QUANTITY (LENGTH-Feet) WATERING FACILITY DRAWING NO. TX-EN-0493									
	DIAMETER - FEET								
	10	15	20	25	30	35	40	45	50
SLAB wwf (sf)	85	191	340	532	766	1042	1361	1723	2127
SLAB #3 bar (lf)	164	370	659	1031	1484	2020	2638	3340	4123
PERIMETER #4 bar (lf)	34	53	72	91	106	125	144	162	181

NOTES:

1. QUANTITIES DO NOT INCLUDE AN ALLOWANCE FOR WASTE
2. QUANTITIES ARE ROUNDED UP TO THE NEAREST WHOLE YARD OR FOOT

THIS DRAWING WAS PREPARED FOR PLOTS BY: **ESG**
 DESIGNED BY: **ERS**
 DRAWN BY: **AND**
 CHECKED BY: **ED**
 FILE NAME: **TX-EN-0493**
 DATE PLOTTED: **28 MAY 2008**

WATERING FACILITY REINFORCED CONCRETE FLOOR WITH STEEL PLATE WALLS (MAXIMUM 6' HEIGHT AND MAXIMUM 50' DIAMETER)



REVISIONS	DATE

DRAWING NO. TX-EN-0493

SHEET **2** OF 2