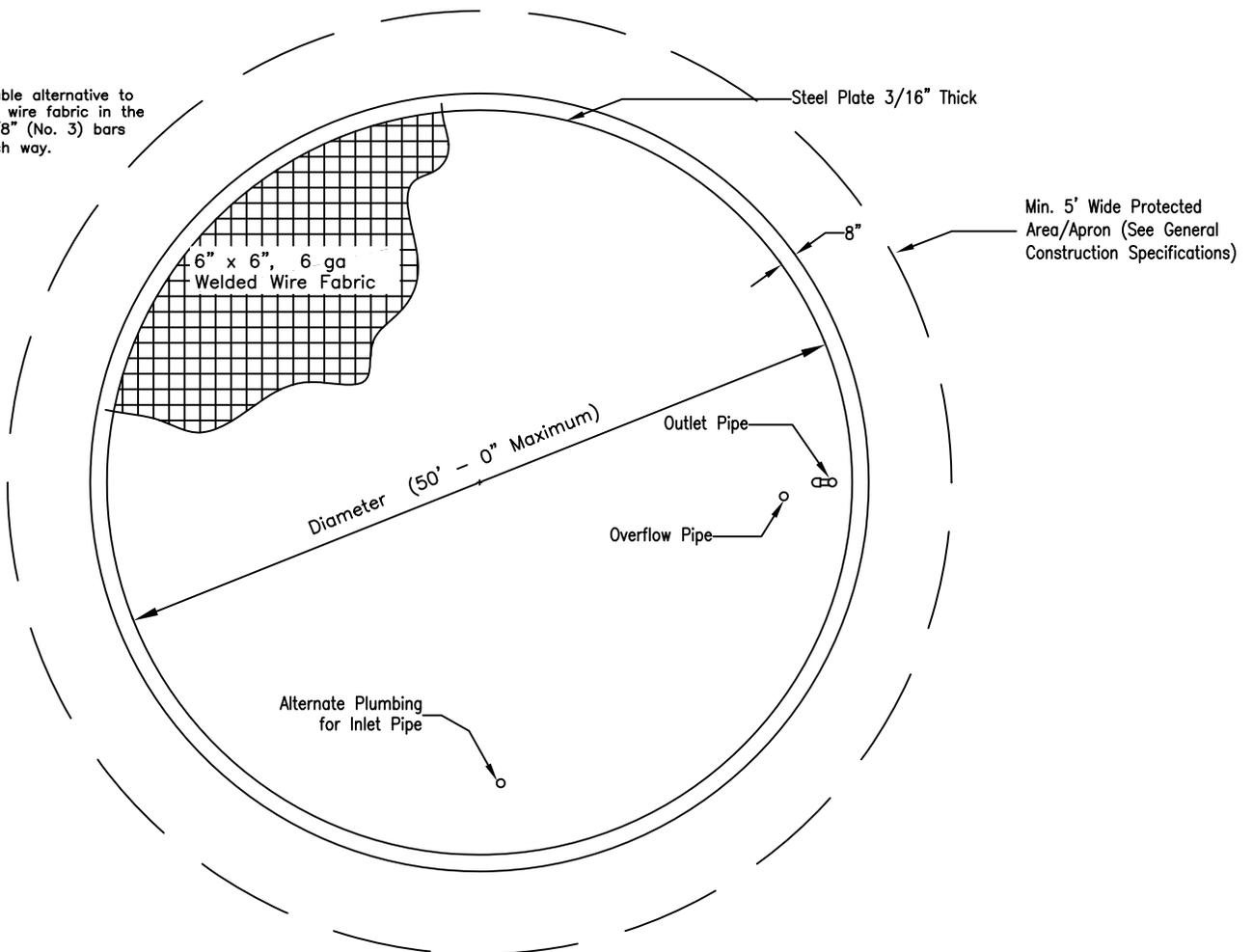
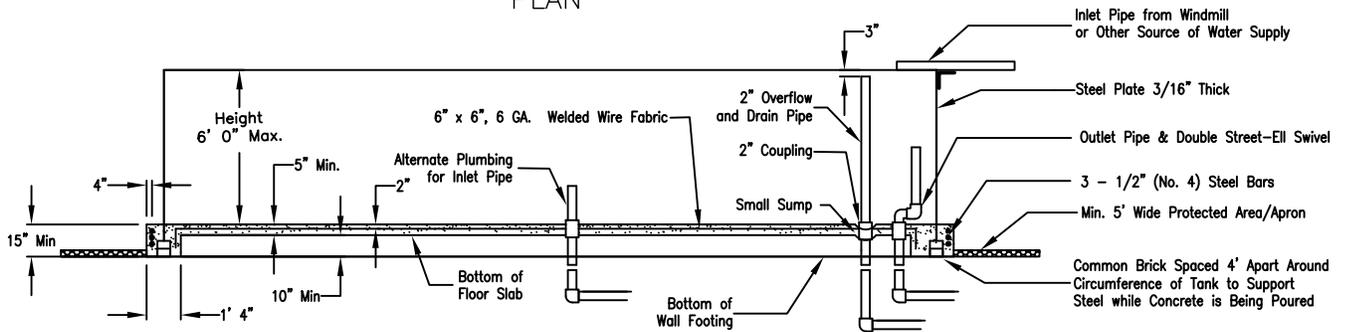


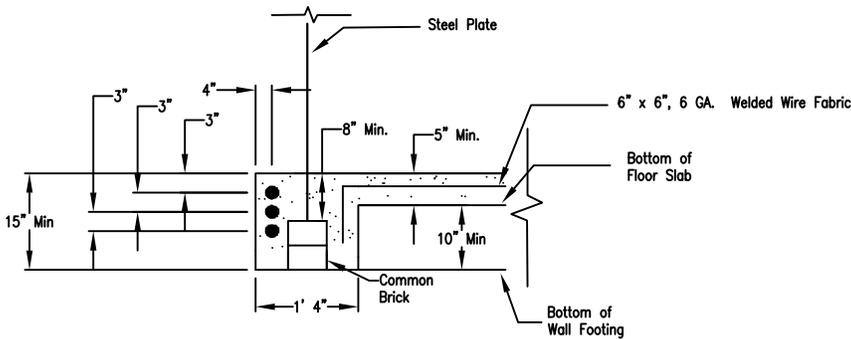
NOTE:  
An Acceptable alternative to  
the welded wire fabric in the  
floor is 3/8" (No. 3) bars  
at 12" each way.



PLAN



SECTION



See General Notes on Sheet 2  
Drawing Not to Scale  
Plumbing Location may Vary

GENERAL NOTES:

1. Dimensions may vary as follows: Diameter from 30+ feet to 50 feet; Height from 2 feet to 6 feet. Tanks of this size shall not be used except on rock or other uniform, essentially non-yielding foundations.
2. The wall of the water storage facility will be steel plate not less than 3/16 inch (7 gauge) in thickness.
3. Plumbing shall be new 2-inch galvanized steel, copper, bronze, PVC plastic Sch-40 unthreaded or Sch-80 threaded, or PE (160 psi minimum) pipe. All fittings shall comply with the ASTM standard for the type of fitting and material used.
4. Double check valves or other measures prescribed in local plumbing codes are required at watering facility inlets when watering facilities are connected to waterlines that have domestic users.
5. Watering facilities shall be equipped with water inlet pipe, drainage outlet and overflow outlets, as either individual outlets or combinations of outlets. Overflow outlets will be piped to a stable point of release.
6. All valves and pipes shall be protected by shields or covers, or designed to prevent damage by livestock and be protected from freezing and ice damage. PVC pipe shall be made of ultraviolet resistant material or shall have a durable coating of ultraviolet resistant paint to protect from deterioration due to sunlight.
7. Concrete watering facilities and concrete aprons shall be constructed from a concrete mix producing a minimum compressive strength of 3,000 psi at 28 days.
8. Construction Procedures:
  - a. Foundation is prepared by leveling, compacting and smoothing area where facility is to be installed. The foundation area shall be free from debris and rocks or pebbles larger than 1/2 inch in diameter. Fill material under or around the water facility shall be compacted to the density of the existing natural materials. A Trench is excavated for wall footing. A minimum of a 6 inch 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. All plumbing used in the floor shall be positioned prior to final smoothing of the foundation.
  - b. Concrete floor shall be reinforced using 3/8 inch (No. 3) bars at 12 inches each way or 6" x 6", 6 gauge welded wire fabric placed so that it will be 2 inches below the finished surface of the floor. Outer edges of the wire fabric are to be bent to project 6 inches vertically downward, with this part clearing the metal wall by approximately 2 inches. Joints in the wire fabric are to be overlapped not less than 8 inches.
  - c. In the center and bottom of the wall footing trench, place common bricks about 4 feet apart to support the metal wall while concrete is being poured. Walls must be imbedded in concrete a minimum of 8 inches.
  - d. The 1/2 inch (No. 4) reinforcing bars in the wall footing shall be placed in the footing as shown. Lapped splices in reinforcing bars shall not be less than 15 inches. Bars shall be accurately held in position by driving bars or rods into the foundation material and securely tying the horizontal bars to the verticals thus formed.
  - e. The joints for the steel plates may be made by butt welding, lap welding with a 2 inch overlap welded on the inside and outside, or by punching and bolting with a 2 inch overlap. Punched holes should be free of burrs that would interfere with a water tight connection. Bolts will be placed a maximum distance of 2 inches apart using 3/8 inch bolts. Bolted joints will be coated with an asphalt mastic of knifing consistency before assembly, or assembled with gaskets made for this purpose.
  - f. After the lower or first portion of the 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 trowled to a reasonably smooth finish.

STORAGE AFFORDED, GALLONS (Based on Water Depth)					
Wall Height, Feet	Water Depth, Feet	Inside Diameter, Feet			
		35	40	45	50
1.83	1.58 *	11,372	14,853	18,799	23,208
2	1.75	12,596	16,452	20,822	25,706
3	2.75	19,791	25,849	32,715	40,389
4	3.75	26,987	35,249	44,612	55,076
5	4.75	34,184	44,648	56,508	69,763
6	5.75	41,380	54,048	68,404	84,450

\* Water Depth of 1.58' Corresponds to 30" Steel Plate Embedded 8" in Concrete