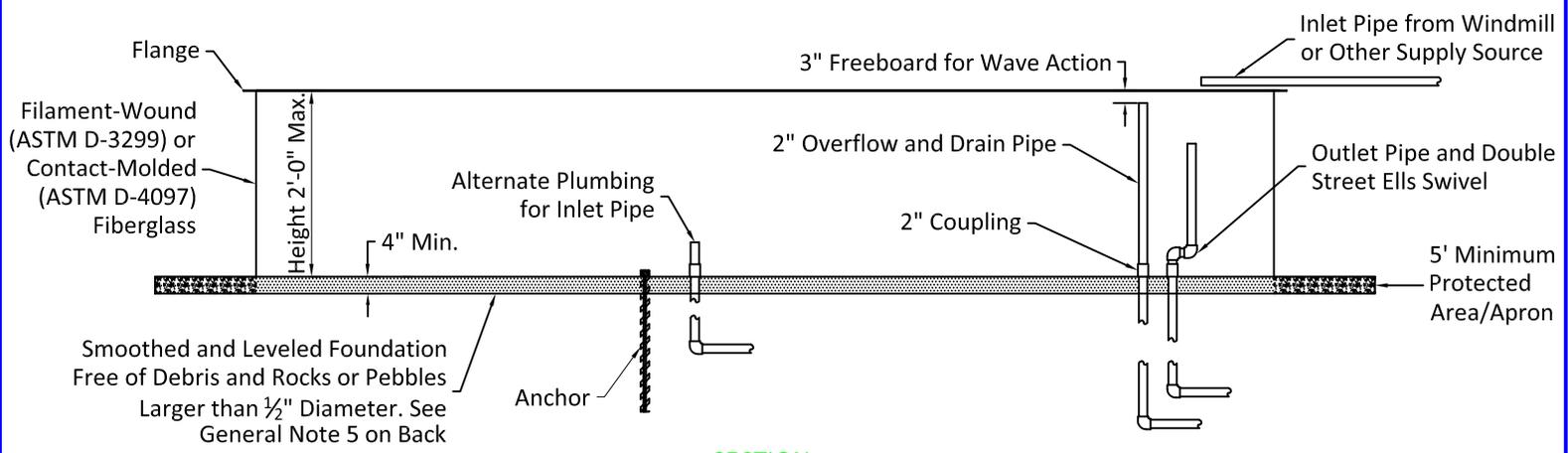


PLAN



SECTION

GENERAL NOTES:

1. Dimensions may vary as follows: diameter from 4-feet to 30-feet; 2-foot maximum height.
2. All fiberglass watering facilities shall be manufactured in accordance with ASTM D-4097 or ASTM D-3299, and the manufacturer of the watering facility shall furnish to the contractor or buyer a certification that the watering facility supplied meets these material and manufacturing requirements.
3. Plumbing shall be new 2-inch galvanized steel, copper, bronze, or PVC plastic Sch-40 unthreaded or Sch-80 threaded, PE (160 PSI minimum) pipe. All fittings shall comply with ASTM standard for the type of fitting and material used.
 - a. Watering facilities shall be equipped with a water inlet pipe, drainage outlet and overflow outlet as either individual outlets or in combination. Overflow shall be piped to a stable or suitable point of release.
 - b. Control devices shall be installed to regulate the water level in the watering facility and prevent unnecessary overflows
 - c. All piping may either be plumbed through the bottom or side of the watering facility.
 - d. 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.
4. For watering facilities where anchors are used to protect against overturning and sliding from wind forces and animals.
 - a. For one piece drinking facilities, the anchors shall be attached to the flange (lip) of the facility. This can be accomplished by drilling a circular hole through the flange, looping wire (9-gage smooth malleable galvanized, 12-½-gage galvanized HTS, or double stranded barbed or smooth) or equivalent between the flange and anchor, and twisting the wire, or by equivalent methods.
 - b. For multiple piece drinking facilities, it is recommended to attach at least one anchor to a joint between pieces by tying the wire to a bolt in the joint instead of the flange (lip). The remaining anchors should be attached to other joints or to the flange (lip) as described previously to achieve equal spacing on the perimeter.
5. Foundation & Adjacent Area Construction Procedures:
 - a. The foundation is prepared by leveling, smoothing, and compacting the area where the watering facility is to be placed. The foundation shall be free of debris and rocks or pebbles larger than ½-inch in diameter. All plumbing used in the floor shall be positioned prior to final smoothing of the foundation. The foundation shall support the watering facility such that the finished, settled facility does not vary from the high point to the low point around its flange (lip) more than 2-inches for facilities 14-feet and less in diameter and 3-inches for all other facility diameters. When the watering facility is not level around its flange (lip), the top of the overflow outlet shall be a minimum of 1-inch below the lowest point along the flange (lip).
 - b. Areas adjacent to the watering facility (5-feet minimum) that will be trampled by livestock shall be protected with a minimum of 4-inch thick concrete, 6-inch thick compacted gravel or caliche, or otherwise treated to provide a firm footing and reduce erosion. The required protected area shall be left in a uniformly smooth, workmanlike condition with no piles of soil or protection material remaining.

Concrete shall be constructed from a concrete mix producing a minimum compressive strength of 3,000-PSI at 28-days. The concrete shall be reinforced with 6-inch X 6-inch, No. 10-gage wire welded mesh and shall be placed so that it will be 2-inches below the finished surface and joints shall be overlapped not less than 8-inches.

Watering Facility Capacities (Gallons)			
Diameter (Ft.)	Capacities Based on 1.75' Water Depth	Diameter (Ft.)	Capacities Based on 1.75' Water Depth
4	165	20	4,113
6	370	22	4,977
8	658	24	5,923
10	1,028	25	6,426
12	1,481	26	6,951
14	2,015	28	8,061
16	2,632	30	9,254
18	3,331		

$$\text{Capacity} = [(3.1415 * D^2) / 4] * [(1.75)(7.481)]$$

D = Diameter of watering facility, in feet