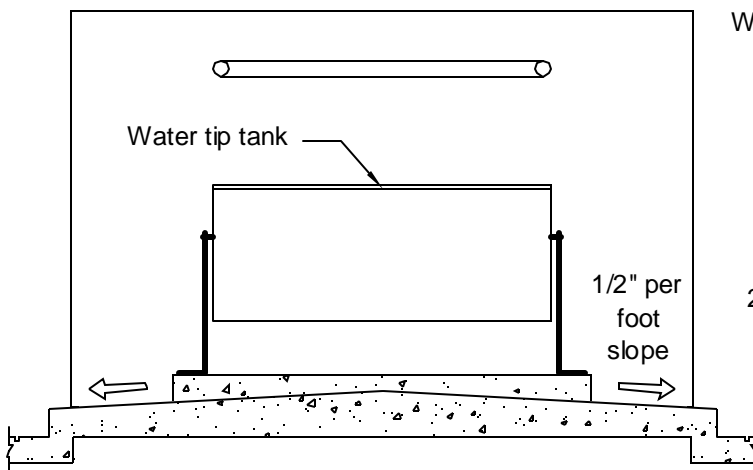


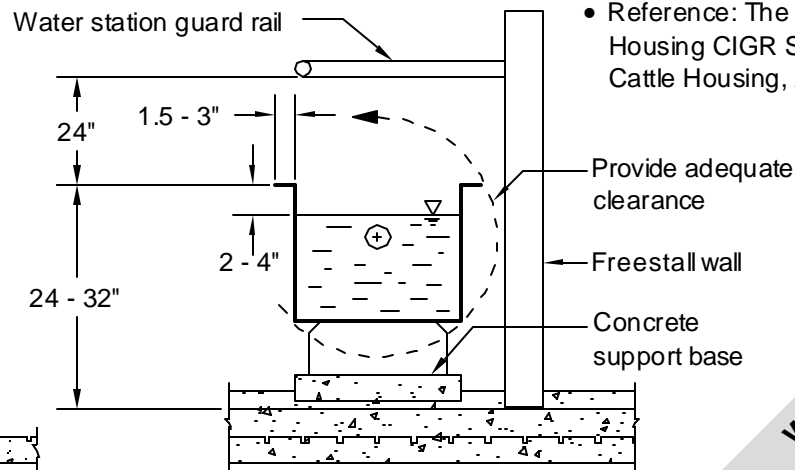
Space Required for Mature Cows Around Waterers

Notes :

- Provide one waterer position or 3' of accessible trough perimeter for every 10 - 15 cows.
- Provide at least 2 watering locations for each cow group.
- Provide minimum 3 - 5 gallons per minute water supply delivery to each water location.
- Supply each location with a separate supply pipe (1" minimum) and shut-off valve.
- Install water meter to allow monitoring of intake for each production group.
- Locate water positions every 60 - 80 feet along barn.
- Provide minimum 3" water depth where cows drinks.
- Provide minimum 0.65 sq. ft. (94 sq. in.) surface area per cow with single or double position waterer.
- Provide minimum of 50 gallons of water capacity at water troughs.
- Allow easy quick drainage for cleaning of water vessel.
- Clean water vessel daily.
- Dimensions shown are for mature cattle.
- Reference: The Design of Dairy Cow Housing CIGR Section II, Working Group Cattle Housing, August 1994.

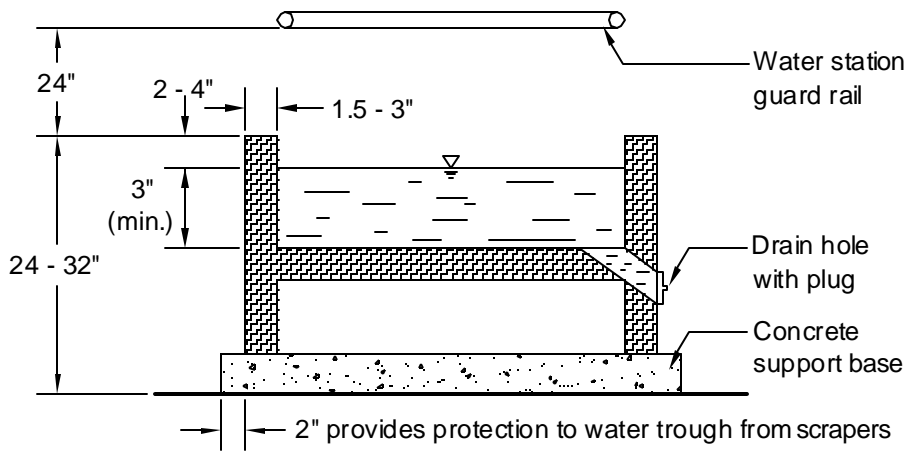


Metal Tip-Tank 1
Front View 2

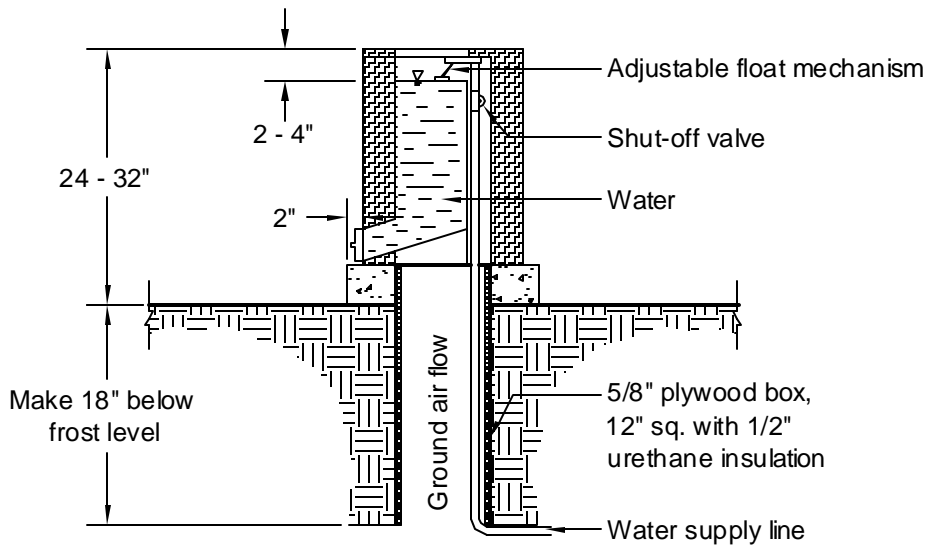


Metal Tip-Tank 1
Cross Section View 3

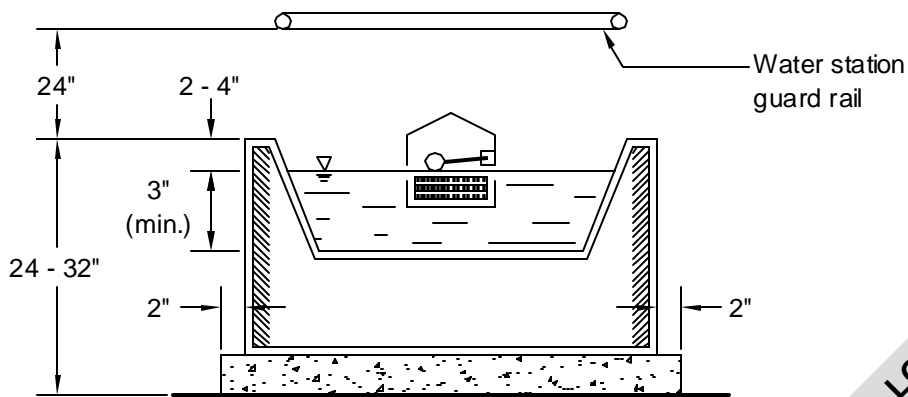
WATERER LOCATIONS FOR DAIRY CATTLE
Graves, McFarland, Tyson, Wilson
Date: 10/19/07 Sheet #1 of 2



Concrete or Polyethylene Water Trough 2
1
Cross Section View



"Energy Free" Insulated Waterer 3
1
Cross Section View



Two Position Heated Waterer 4
1
Cross Section View