



QUANTITIES

_____	Ft. _____	" PVC Pipe for outflow line
1	Ea.	_____ " elbow
_____	Ft. _____	" PVC Pipe for inflow line
1	Ea.	_____ " tee
1	Ea.	_____ " end cap for inflow line stub
1	Ea.	Backflow Prevention Valve
_____	C.Y.	Gravel
_____	C.Y.	Concrete 5 1/2 bag mix
_____	Ea.	Used heavy equipment tire
_____	Ft.	Trenching

CONCRETE REQUIREMENTS

- _____ Fiber mesh concrete is required
- _____ Floor of tank is reinforced with steel bars
- _____ Pad is reinforced

TIRE TANK WITH CONCRETE FLOOR AND CONCRETE OR GRAVEL PAD

GENERAL NOTES:

1. Pipe shall conform to Missouri Construction Specification 516, Pipeline, and be rated a minimum of 150 PSI. For additional details, see Missouri Construction Specification 614, Tank or Trough.
2. The outflow pipe shall not be smaller than the inflow pipe. Minimum two inch is suggested for gravity systems and minimum three inch for pressure systems. A larger pipe facilitates draining the tank. On larger pipes, a bolt or rod eases removal.
3. The collector's inflow and outflow lines shall be buried below frost line as needed to prevent freezing.
4. Flow from stock watering systems through earth dams or pressure systems may be regulated by a valve to ensure the desired quantity of water.
5. A backflow prevention valve shall be installed on the inflow line that is connected to any water supply that is providing water for human consumption. Backflow prevention valve shall be located where it can be serviced or replaced. Local codes and regulations shall be followed.
6. See adjoining sheet for pipe, float valve and ice prevention recommendations.
7. After the inflow and outflow lines are in position, thoroughly tamp or compact the trenches as they are filled in the area where the tank and pad are located to minimize settlement and the possibility of leakage. The finished surface shall be level.
8. The heavy equipment tire shall be free from breaks or other defects that would cause excessive leakage. For sheep and other small animals, 19.5x24 12 ply backhoe tires work well. For large animals, 23.1x25 loader or larger scraper tires work well. (NOTE: Narrower tires may not have enough depth for the float to operate properly.) Prepare the tire by cutting the top bead and part of the sidewall from the tire. For smaller tires, a utility knife may work. All fabric ply tires may be cut with a reciprocating saw and

- wood blade. NOTE: steel belted and cut resistant tires may be difficult to get saw cut started. A starting hole can be bored with an electric drill. After starting the cut, a wedge or other device inserted into the cut will help provide clearance for the blade. Liquid dishwashing detergent can be used to lubricate the blade. After cutting about one quarter the way around, support or lift the sidewall in such a manner as to prevent kinking the blade. **WARNING! Tires and their sidewalls can be quite heavy and dangerous. Use all necessary precautions to prevent personal injury.** In addition, tire cut fibers may cause digestive problems in horses.
9. Concrete shall conform to Missouri Construction Specification 750, Reinforced Concrete, except 5 1/2 bags of cement per cubic yard or Sackcrete is adequate. Mix the concrete wetter than usual to ensure good tire contact. Take appropriate measures to eliminate all air spaces in the concrete, especially under the bead.
 10. Steel bar reinforcement may be used inside of tire if landowner desires. Normal cracking of concrete pad should not be a problem. If reinforcing steel is required inside of tire it shall be # 4 steel deformed bars at 12 inches Center to Center. Steel reinforcement is not required for pad but # 4 bars at 18" C.C. or equivalent is acceptable. All steel shall have minimum 2 1/2 inch clearance from top of concrete.
 11. Install float and ice prevention valves. Allow the concrete to dry several days before filling with water.
 12. The pad surrounding the tank may be either concrete or gravel. Exercise care when backfilling with gravel. Distortion of the tire can cause leaks.

PRESSURE WATER SYSTEMS WITH HEAVY EQUIPMENT TIRE TANK

Date _____

Designed _____

Drawn _____

Checked _____

Approved _____



DRAFT

NOT FOR CONSTRUCTION

File Name _____

Drawing Name
29-N-78C

Sheet _____ of _____