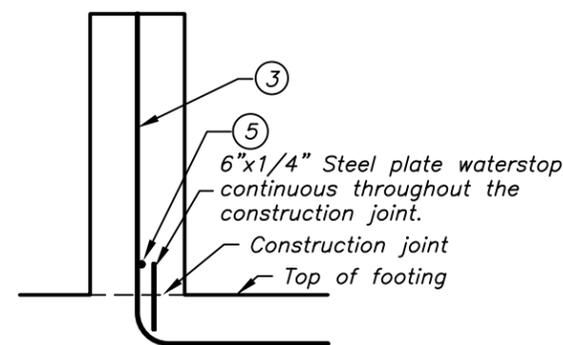


FOUNDATION DRAIN PIPE DETAIL

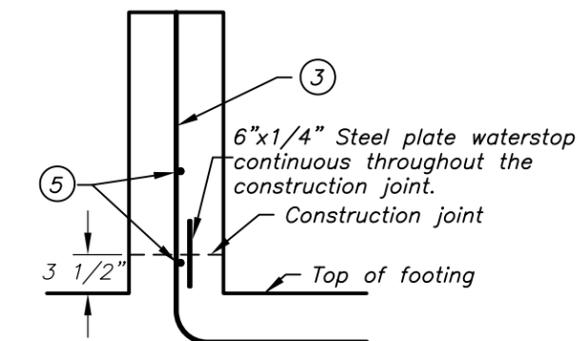
TYPICAL CROSS SECTION INCLUDING PUSHOFF RAMP

Notes:

1. Pushoff slab is 5" thick with #4 @ 12" OC both directions for a minimum of 12' back from tank or to existing concrete.
2. Guard rail posts and rails shall be 2 inches (min) standard weight galvanized steel pipe conforming to ASTM A-53 or equivalent.
3. Posts shall be on maximum 5 foot spacings. Posts will be a minimum 6.5' long and buried 36 inches deep with a minimum 4 inches of concrete all around.
4. Rails shall be bolted to posts with minimum 7/16 inch diameter bolt with nut and lock washer. Rails will be spaced a maximum of 18 inches apart. The lower rail will be located 18" above the concrete slab.



CONSTRUCTION JOINT
Detail View



ALTERNATE CONSTRUCTION JOINT
Detail View

NOTE:

1. Foundation drain pipe is to be routed around the tank and to a protected outlet.
2. Foundation drain pipe shall be 4 inch diameter schedule 40(SDR=19) PVC pipe conforming to ASTM D1785 or equivalent plastic pipe. Perforations shall be 1/4 inch diameter in two rows separated by an arc of not less than 60°. Opening area shall be greater than 0.22 square inch per lineal foot. Perforations shall be clean cut and free of obstructions.
3. Geotextile shall be nonwoven with an apparent opening size from 0.2 to 0.4 millimeters and permittivity greater than 50 gallon per minute per square foot. Fabric weight shall be a minimum of 6 ounce per square yard.
4. Drainfill shall be clean, well graded gravel with maximum size of 3 inches and less than 5 percent finer than 200 sieve size.
5. Saw joint 1 1/4" deep is to be made as soon as concrete sets enough to not dislodge aggregate and before any drying stress cracks start to form. Fill saw joint with pourable polyurethane immediately. The saw joint may be replaced by the groove made by an edging tool if the floor is poured separately from the footing. The groove would be approximately 1/2 inch wide by 3/4 inch deep and would be filled with pourable polyurethane immediately.
6. Dowel to be 30 inches long and embedded 15 inches in each direction. One side to be covered with snug fitting plastic pipe, rubber hose or equivalent as needed to prevent bond with concrete.
7. Splices in waterstop may be made by butt welding or lapping 3 inches and fillet welding or bolting.
8. A safety fence shall be constructed around the tank.
9. For additional details see Missouri Construction Specification 313-A.
10. This drawing and design is only to be utilized on tanks with opposing walls.

Date	
Designed	
Drawn	
Checked	
Approved	

4 FT REINFORCED CONCRETE WALL FOR ANIMAL WASTE STORAGE



DRAFT

NOT FOR
CONSTRUCTION

File Name	
Drawing Name	29-N-601
Sheet	of