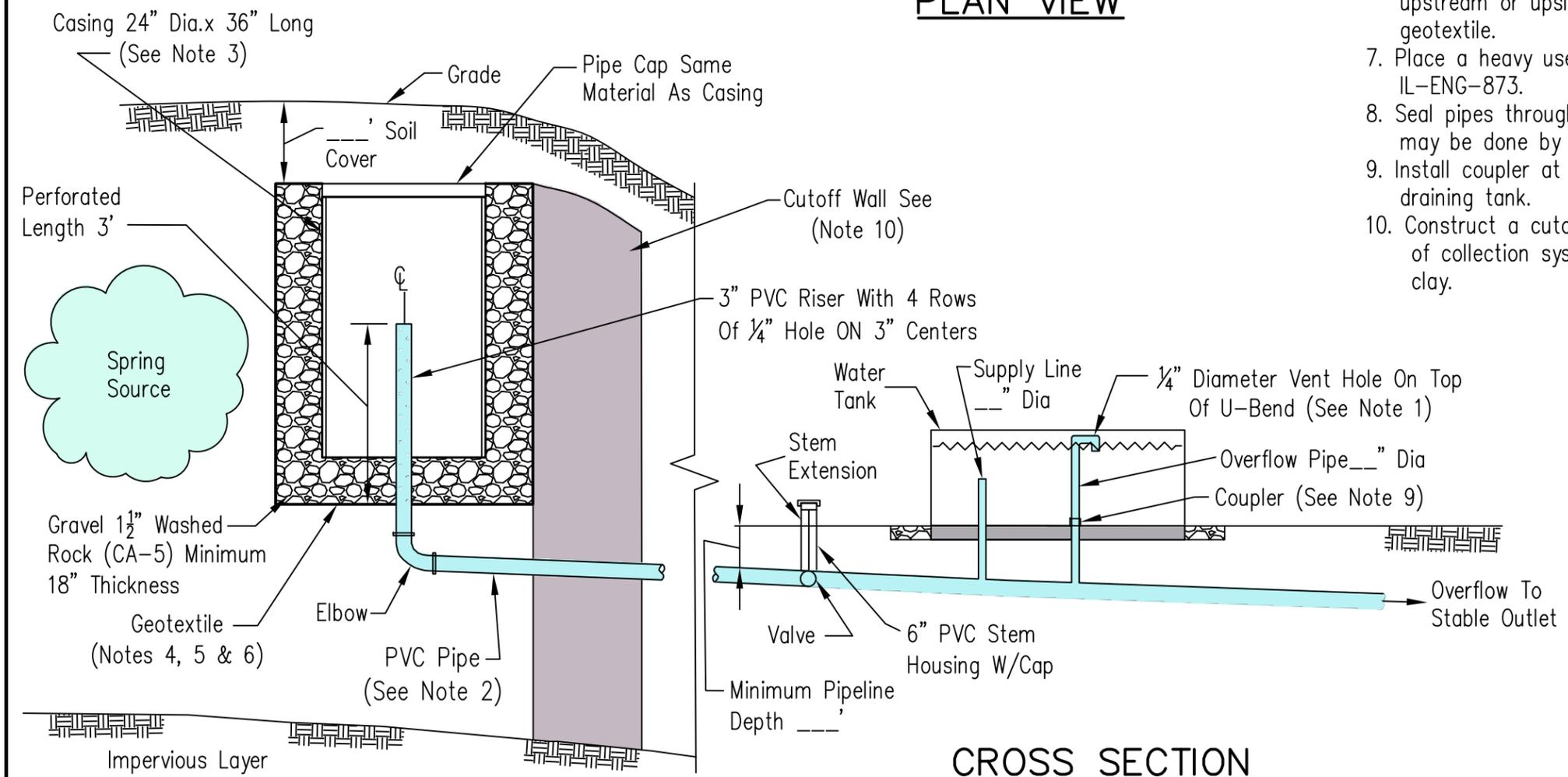


PLAN VIEW



CROSS SECTION

NOTES:

1. Set tank water level lower in elevation than spring water level. Set bottom of U-bend at designated tank water level.
2. Minimum PVC pipe diameter is 1 1/2" ; minimum pipe slope 0.2%.
3. Casing material may be corrugated metal, 1/4" welded steel, Schedule 40 PVC pipe, dual wall plastic pipe, or equivalent. Make holes or slits in any un-perforated casing, maximum 1/2" diameter or slot width.
4. Place geotextile at all soil-rock interfaces.
5. Geotextile (non-woven, needle punched) min. criteria:
 Grab Tensile strength (lb) ASTM D 4632 _____ 202
 Elongation at failure (%) ASTM D 4632 _____ ≥50
 Trapezoidal tear strength (lb) ASTM D 4533 _____ 79
 Puncture strength (lb) ASTM D 6241 _____ 433
 Ultraviolet light (% retained strength) ASTM 4355 _____ min 50
 Apparent opening size (AOS) ASTM D 4751 _____
 max 0.22 mm (US sieve size 70)
 Permittivity sec-1 ASTM D 4491 _____ min 0.70
6. Any geotextile splices shall overlap a minimum of 18 inches, with upstream or upslope geotextile overlapping the abutting downslope geotextile.
7. Place a heavy use pad around and under the water tank. See IL-ENG-873.
8. Seal pipes through the bottom of water tank against leakage. Sealing may be done by embedding tank and pipes in concrete.
9. Install coupler at floor level so overflow pipe can be removed for draining tank.
10. Construct a cutoff wall made of impervious material downstream of collection system. Cutoff may be 2 foot thickness of compacted clay.

ELEVATIONS	
Top Of Riser	
Bottom Of Casing	
Tank Water	
Top Of Supply Line	
Bottom Of Water Tank	
Minimum Spring Capacity (GPM)	
Water Tank Size (Gal)	

Designed	Date
Drawn	10/1/14
Checked	M. QUINONES
Approved	

**SPRING OR SEEP DEVELOPMENT
LIVESTOCK WATERING TANK**

United States Department of Agriculture
USDA
 Natural Resources Conservation Service

Landuser	Location
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Not To Scale