

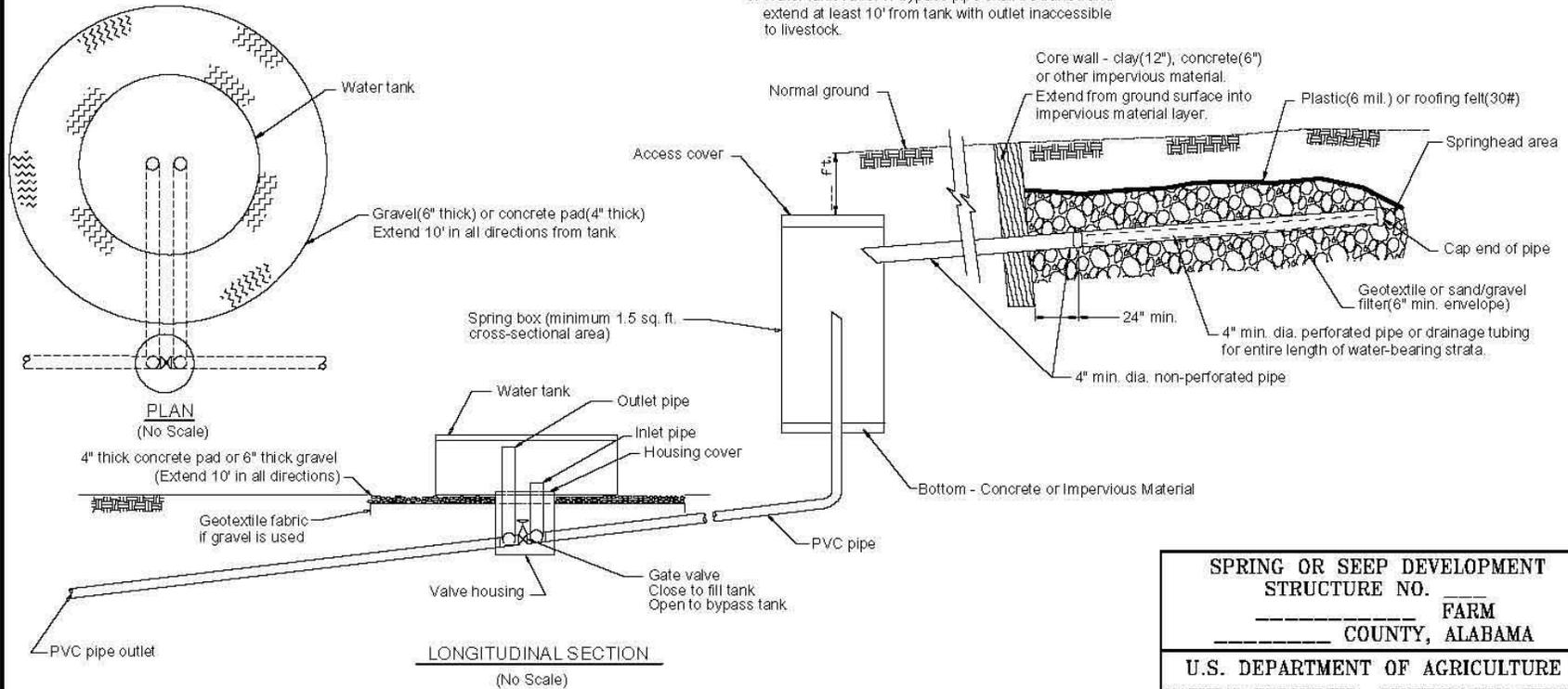
**BILL OF MATERIALS**

- \_\_\_' of \_\_\_" dia. PVC(non-perforated)
- \_\_\_' of \_\_\_" dia. PVC(perforated)
- \_\_\_ sq. yds. geotextile
- \_\_\_ cu. yds. concrete
- \_\_\_ cu. yds. gravel for pad ( \_\_\_ size stone)
- \_\_\_ cu. yds. sand/gravel filter
- \_\_\_ gate valve(s)
- Spring box description \_\_\_\_\_
- Valve housing description \_\_\_\_\_

**\*NOTES:**

1. Minimum PVC pipe diameter shall be 1 1/4".
2. Minimum pipe slope shall be 0.2%.
3. Water level in the water tank shall be 4' min. lower in elevation than spring water level.
4. Geotextile fabric must be under all fill and under water tank.
5. Outlet pipe can be located to exit bottom of spring box or on side with intake a minimum of 6" from bottom and no higher than inlet pipe from spring.
6. Locate inlet pipe a minimum of 6" from bottom of spring box and not lower than the outlet pipe intake.
7. Water level in tank shall be a minimum of 1.5" below top of tank.
8. Water tank outlet or bypass pipe shall be buried and extend at least 10' from tank with outlet inaccessible to livestock.

Bottom of Spring box elev. = \_\_\_\_\_  
 Water elev. = \_\_\_\_\_  
 PVC pipe outlet elev. = \_\_\_\_\_  
 Bottom of water tank elev. = \_\_\_\_\_  
 Spring capacity (GPM) \_\_\_\_\_



\* This typical drawing should be modified to meet specific site conditions. Spring Development Standard 574, Guide Sheet AL 574, Alabama Engineering Field Manual (Chapter 12) and the National Engineering Handbook, Part 560 (Chapter 12) should be utilized.

<b>SPRING OR SEEP DEVELOPMENT</b>	
STRUCTURE NO. _____	
FARM _____	
COUNTY, ALABAMA	
<b>U.S. DEPARTMENT OF AGRICULTURE</b>	
<b>NATURAL RESOURCES CONSERVATION SERVICE</b>	
Designed _____	Date _____
Drawn _____	Approved by _____
Traced _____	Title _____
Checked _____	Sheet No. 1 of _____

## GENERAL

Engineering plans of the proposed spring development on the reverse side of this sheet are part of these specifications.

All facilities for water shall comply strictly with all rules and regulations of the Alabama State Board of Health Laws.

## RESPONSIBILITIES OF

- A. LANDOWNERS: The landowner should acquaint himself with these plans and specifications to determine that the completed structure will fulfill the present and future needs. Inspection during construction will be the responsibility of the landowner. The landowner may request inspection by NRCS employees during construction and upon completion of work.
- B. CONTRACTORS: The contractor will be acquainted with the provisions of these plans and specifications, conditions at the site, location, and meaning of all stakes on the site. All benchmarks, grade, and line stakes must be left undisturbed and protected by the contractor to facilitate construction and inspection.
- C. U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE: The United States and its employees are in no manner a party to any verbal or written contract between the landowner and the contractor. NRCS employees, within limits of personnel available, will assist the landowner with inspection and advise on techniques during construction to assure satisfactory compliance with the plans and specifications.

## SPECIFICATIONS FOR CONSTRUCTION OF SPRING DEVELOPMENT

Location. The spring development shall be installed at the location as shown on the plans or as staked in the field.

Materials. All materials required for the installation shall be equal in size, quality, and specified on the plans. The spring box shall be constructed of concrete or other durable material. The access cover shall be concrete or other durable material and make a tight fit with the spring box.

Crush rock or gravel for collection systems, and sand-gravel mixtures for filters shall be composed of clean hard particles.

Installation. The materials shown on the plans as necessary for proper installation will be on hand or available to the site before installation is started. When work is started, it will be carried through to completion as rapidly as good workmanship and available labor will permit. Materials shall be approved by the technician prior to installation.

All loose rock, sediment, logs, vegetation, or other undesirable material that would obstruct the free discharge of the spring shall be removed and disposed of to insure proper functioning of development.

Collection trenches, drain tiles, perforated pipe lines, spring boxes, outlet pipes, and other components shall be constructed to the lines, elevations, and grades shown on the plans or as staked in the field.

The pipe should be laid on a continuous uniform grade below the frost line. Sags or high spots usually create air blocks which may stop or restrict the flow.

Protection. Protection should be afforded to the spring and its appurtenant structures to permit use without contamination or continuous maintenance. Diversions properly located will provide adequate protection in most instances.