

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**SURFACE DRAINAGE**

**FIELD DITCH**

(Ft.)

CODE 607

**DEFINITION**

A graded ditch for collecting excess water in a field.

**SCOPE**

This standard applies to drainage ditches installed to collect water from a field. It does not apply to SURFACE DRAINAGE, MAIN or LATERAL (608) or GRASSED WATERWAYS or OUTLET (412).

**PURPOSE**

Surface Drainage, Field Ditch are installed to:

1. Drain surface depressions.
2. Collect or intercept excess surface water such as sheet flow from natural and graded land surfaces or channel flow from furrows for removal to an outlet.
3. Collect or intercept excess subsurface water for removal to an outlet.

**CONDITIONS WHERE PRACTICE APPLIES**

Applicable sites are flat or nearly flat lands that:

1. Have soils of low permeability or shallowness over barriers, such as rock or clay, which hold or prevent ready percolation of water to a deep stratum.
2. Have surface depressions or which trap rainfall.

3. Have insufficient land slope for ready movement of runoff across the surface.
4. Receive excess runoff or seepage from uplands.
5. Require removal of excess irrigation water.
6. Require control of the water table.
7. Have adequate outlets available for disposal of drainage water by gravity flow or pumping.
8. Meet the requirements in SCS policy for wet lands.

**DESIGN CRITERIA**

Drainage field ditches shall be planned as integral parts of a drainage system for the field served and shall collect, intercept, and remove water to an outlet with continuity and without ponding. Field investigation, layout and design shall be as outlined in Chapter 2 & 3, Section 16 of SCS National Engineering Handbook - Drainage of Agricultural Land, and Chapter 14 of SCS Engineering Field Manual.

**Investigations**

An investigation of soils, water source, topography and outlet conditions shall be made of all sites. Soil to be drained shall be suitable for agricultural use.

**Location**

Ditches shall be established, insofar as topography and property boundaries permit, in straight or nearly straight courses. Random alignment may be used to follow depressions and isolated wet areas of irregular or undulating

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resource Conservation Service.

## **SURFACE DRAINAGE (607)-2**

### **Statewide**

topography. Excessive cuts, and the creation of small irregular fields , should be avoided.

#### **Design**

The size, depth, side slopes and cross section area shall:

1. Be adequate to provide the required drainage for the sites.
2. Permit free entry of water from adjacent land surfaces without causing excessive erosion.
3. Provide effective disposal or reuse of excess irrigation water (where applicable).
4. Conduct flow without excessive erosion.
5. Provide stable side slopes based on soil characteristics.
6. Permit crossing by farm equipment where feasible.
7. Permit construction and maintenance with available equipment.

#### **PLANS AND SPECIFICATIONS**

Plans and specifications for construction of Drainage Field Ditches shall be in keeping with this standard and shall describe the requirements for proper installation of the practice to achieve its intended purpose.

Refer to S-607 for Guide Specifications.