

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

SURFACE DRAINAGE, FIELD DITCH, (FEET)

Code 607

DEFINITION

A graded ditch for collecting excess water in a field.

PURPOSE

This practice is to:

- collect or intercept excess surface water, such as sheet flow, from natural and graded land surfaces or channel flow from furrows and carry it to an outlet;
- collect or intercept excess subsurface water and carry it to an outlet.

CONDITIONS WHERE PRACTICE APPLIES

Applicable sites are flat or nearly flat and:

1. Have soils that are slowly permeable (low permeability) or that are shallow over barriers, such as rock or clay, which hold or prevent ready percolation of water to a deep stratum.
2. Have surface depressions or barriers that 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 the 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. Have soils that are productive as cropland or pasture after drainage.
9. Have soils which can support the planned crop or crops after the planned drainage system is installed.
10. All drainage shall be in accordance with Iowa drainage laws.

CRITERIA

General Criteria Applicable To All Purposes

Drainage field ditches shall be planned as integral parts of a drainage system for the field served and shall collect and intercept water and carry it to an outlet with continuity and without ponding.

Investigations. An adequate investigation shall be made of all sites.

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

On extensive areas of uniform topography, collection or interception ditches shall be installed as required for effective drainage.

Design. The required capacity as a ditch will be determined in accordance with criteria contained in the Iowa Drainage Guide. The size, depth, side slopes, and

cross section area shall:

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

with, the landowner(s) before the practice is installed.

The plan shall adequately guide the landowner(s) in the routine maintenance and operational needs of the ditch(es). The plan shall also include guidance on periodic inspections and post-storm inspections to detect and minimize damage to the ditch(es).

CONSIDERATIONS

Potential impacts on wetlands need to be evaluated.

Follow local policies on protection of cultural resources.

Water quality impacts for soluble pollutants and attached sediment pollutants should be addressed.

The need for riparian buffers, filter strips and fencing shall be considered.

Potential offsite impacts should be evaluated.

PLANS AND SPECIFICATIONS

Plans and specifications for constructing drainage field ditches shall be in keeping with this standard and shall describe the requirements for properly installing the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

A site-specific operation and maintenance plan shall be provided to, and reviewed