

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

ANIMAL TRAILS AND WALKWAYS

(Ft.)

CODE 575

DEFINITION

Established lanes or travel ways that facilitate animal movement.

PURPOSES

- Provide or improve access to forage, water, working/handling facilities, and/or shelter,
- Improve grazing efficiency and distribution, and/or
- Protect ecologically sensitive, erosive and/or potentially erosive sites.

CONDITIONS WHERE THIS PRACTICE APPLIES

On lands where control of animal movement is needed to facilitate access, improve grazing, prevent erosion, and/or protect ecologically sensitive areas.

On marsh rangelands and grazing lands susceptible to overflow by water.

CRITERIA

General Criteria Applicable to All Purposes

The landowner shall obtain all necessary permits prior to construction or any land clearing activities.

Animal trails or walkways shall be constructed wide enough to accommodate movement of animals and access by operator for management and maintenance. Trails or walkways shall be constructed in such a manner that accelerated erosion will not occur.

Where necessary, diversions with a stable outlet will be provided.

Adequate water bars, culverts, bridges or low water crossings shall be provided to control and direct water drainage where needed. All drainage structures shall meet the applicable portions of the practice standard Access Road, Code 560 and or practice standard Structure for Water Control, Code 587. The capacity of the drainage structures shall be in keeping with sound engineering practices, but as a minimum pass the runoff determined by use of the following equation:

$$Q = CM^{5/6}$$

- Q is runoff in cubic feet per second (cfs)
- C is Cypress Creek runoff coefficient
- M is the drainage area in square miles

Adequate openings shall be provided under walkways for drainage purposes where needed.

The marsh range curve, $Q = 10M^{5/6}$, plus 50%, shall be used on marshland in determining the size of opening to be left in the walkway. Bridges shall have a minimum of 8 foot opening and culverts shall have a minimum of 3 square feet opening.

All structures shall be located in a natural drain and set with the top of the opening at or below normal marsh water level. If a natural drain is not available, the structure shall be located such that two alternate borrow pits can be connected.

Sensitivity of the animal's feet, with respect to the intended purpose of the trail or walkway, will be included as a design parameter in

selecting the surface material for trails or walkways.

Construction operations shall be carried out in a manner that minimizes air and water pollution and destroys as little vegetation as possible. Bare areas shall be revegetated as soon as possible after construction operations are completed.

Vegetative cover shall be established in accordance with Critical Area Planting, Code 342. Where maintaining vegetative cover is necessary but not possible, Heavy Use Area Protection, Code 561 will be used to provide adequate surface protection.

Trails or walkways seeded or planted to vegetative cover will not be accessed until the vegetation is fully established and capable of withstanding grazing and/or trampling. A minimum 60% vegetative cover is required before use.

Conservation practice standard 382, Fence, will be used when needed to keep animals confined to the trail or walkway until the desired destination is reached.

Additional Criteria Applicable to Providing or Improving Access to Forage, Water, Working/Handling Facilities and/or Shelter

Trails and Walkways. Trails and walkways will be designed and constructed of sufficient size to accommodate the expected frequency of use and animal type(s) planned for the operation. For upland sites the minimum width shall be as shown in Table 1. For marsh land sites the minimum walkway dimensions shall be as specified in this practice standard under “Additional Criteria Applicable to Improving Grazing Efficiency and Distribution, Marsh Land Walkways”.

| Number of Animals | Cattle & Horses | Goats & Sheep |
|--------------------------|----------------------------|--------------------------|
| <100 | 15 | 8 |
| 100 to 200 | 30 | 15 |
| >200 | 40 | 20 |

When needed to facilitate movement of animals through a series of paddocks or pastures, gate openings and lane layouts shall allow for efficient flow of animals with the least amount of stress.

Livestock Water Access Points. Ramps may be used to allow animal access to a fenced pond. Studies of the pond or stream area shall be conducted to determine the best location for the ramp. Existing fences, grazing patterns, shoreline slope, and water depth should be considered when choosing the optimum location for the ramp.

Ramps shall be planned and designed based on approved standard drawings. The slope of the ramp shall match as close as practical the shoreline slope of the pond to aid in construction. However, in no case shall the slope of the ramp be steeper than 5:1 (horizontal to vertical) or flatter than 10:1. If excavation is required, the areas to the sides of the ramp below shall be sloped to 2:1 or flatter.

The width of the ramp shall be adequate to provide animals with easy access to the pond and for maintenance purposes. The minimum ramp widths shall be as shown in Table 2.

| Animal Type | Min Width 8 Feet | Add 1 foot |
|--------------------|-------------------------|-----------------------|
| Cattle (1000# Wt.) | 80 or less | Each Additional 10 |
| Horses (1000# Wt.) | 80 or less | Each Additional 10 |
| Goats (100# Wt.) | 800 or less | Each Additional 100 |
| Sheep (100# Wt.) | 800 or less | Each Additional 100 |
| Other | 8 AU or less | Each Additional 10 AU |

AU – Animal Unit, 1 AU = 1000 pounds

The length of the ramp shall be sufficient to maintain access to water at varying water depths and to provide a stable base at the lower end of the ramp. A minimum water depth of 5 feet, measured from the designed permanent water level, is recommended. Where the pond depth is greater than 5 feet at the ramp location, excavation may be required to provide a stable base at the lower end. Additionally, the ramp shall extend a minimum of 0.5 feet above the designed permanent water level for freeboard.

Rock for the ramp shall be as specified in the Specification Guide Sheet for this practice standard. The rock placed on the ramp shall be a minimum of 6 inches thick. A non-woven geotextile shall be installed under the rock.

If needed for containment of rock, a Geocell containment system shall be used.

Additional Criteria Applicable to Improving Grazing Efficiency and Distribution

Fenced or unfenced animal trails or walkways will be used to distribute grazing to overcome terrain features causing uneven grazing distribution and pressure.

Marsh Land Walkways. In the marsh, walkways shall be located so that cattle will not have to graze more than ¼ mile (approximate) from high ground when water is on the marsh. Walkways shall be spaced approximately ½ mile apart when two or more parallel walkways are needed in an area.

A determination of embankment supportability shall be made by probing along the centerline of the proposed walkway and by observation of marsh vegetation and other significant natural conditions.

The crown of the walkways shall be slanting or slightly crowned with a minimum design top width of 10 feet and a maximum top width of 12 feet.

The minimum design height of the walkway shall be 2 feet above the normal marsh water elevation. The allowance for settlement shall be a minimum of 30 percent of the design fill height.

Side slopes shall be 1½ horizontal to 1 vertical or flatter, with a minimum berm width of 10' from the toe of the walkway to the top of the borrow pit.

Borrow pits shall be staggered to provide grazing access from either side of the walkway. When walkways are located inside the range unit, borrow pits shall be staggered to permit cattle movement on both sides of the walkway. When walkways are located adjacent to property lines, borrow pits may be located only on one side of the walkway provided earth plugs not less than 50 feet in length are left at intervals to prevent flow of

water in the pits. Length of borrow pits will be determined by the designer but shall not be more than 660 feet in length.

If the walkway ends in the marsh without connecting to an existing ridge or levee, a "T" at least 40 feet long will be provided to reduce bogging of cattle. If the trail is built adjacent to a property line, an "L" at least 30 feet in length will be provided.

Additional Criteria Applicable to Protection of Ecologically Sensitive Areas.

Cultural resources, threatened or endangered species, wetlands, streambanks, floodways or other ecologically sensitive areas, and areas of special scenic value will be protected through the proper design of trail(s) or walkway(s).

When necessary, structures will be installed to prevent interference with natural water movement or to control salt water intrusion.

CONSIDERATIONS

Travelways should be laid out to allow for the smooth flow of livestock. Corners sharper than 90 degrees should be avoided.

When possible avoid locating trails and walkways on highly erodible or potentially highly erodible soils. Trails and walkways should be located along the contour so they do not go directly up or down the slope.

Gateways into alleys should be placed in paddock corners to facilitate animal movement. If the water source is outside the paddock locate the gate in the corner nearest the water facility. Gateways should be a minimum of 15 feet across and if possible the same width as the alley. This will allow the gate to be used as a barrier across the travelway to better control animal movement into the desired pasture.

Depending on the situation, trails or walkways may be constructed using Conservation Practice Standard 382, Fence for permanent or temporary fencing. When accessing permanent pastures, a permanent walkway should be built. For temporary walkways such as may be used to improve utilization of annual forages, a temporary walkway should be built.

When possible, avoid locating trails and walkways through wetlands, streams, and other low-lying areas to reduce impacts to wetlands.

In order to provide a buffer along watercourses for soil erosion considerations, use the following guidance in Table 3 to maintain minimum distances from the watercourse.

| % Slope | Hydrologic Soil Group | | | |
|---------|-----------------------|----|----|----|
| | A | B | C | D |
| 0-1 | 20 | 20 | 22 | 24 |
| 1-3 | 20 | 25 | 28 | 30 |
| 3-5 | 24 | 30 | 33 | 36 |
| 5-8 | 28 | 35 | 40 | 42 |
| 8-10 | 32 | 40 | 44 | 48 |

% Slope - Percent slope of land on which the trail or walkway is located

Conservation Practice Standard 528A, Prescribed Grazing, can be used to further improve grazing distribution and pressure.

Other conservation practices, such as Use Exclusion, Code 472 can be used in conjunction with trails or walkways to minimize the impact on sensitive areas.

For areas of high livestock concentration, such as around ponds, tanks, troughs, or other feeding areas, use Heavy Use Area Protection, Code 561.

For travelways used by vehicles or equipment for purposes other than management and maintenance of animal trails or walkways, use Access Road, Code 560.

PLANS AND SPECIFICATIONS

Plans and specifications for installing animal trails or walkways shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose. Plans and specifications shall include construction plans, drawings, specification guide sheets, job sheets or other similar documents. These documents shall specify the requirements for installing the

practice, including the location and the kind, amount, and quality of materials to be used.

OPERATION AND MAINTENANCE

The operation and maintenance (O&M) plan shall specify that the trails or walkways and associated practices be inspected annually and after significant storm events to identify repair and maintenance needs.

The O&M plan shall detail the level of repairs needed to maintain the effectiveness and useful life of the practice. These repairs should include, but are not limited to, the following:

- Periodic grading or re-shaping trails or walkways to maintain the designed grade and dimensions,
- Periodic addition of surfacing materials where used,
- Re-seeding of areas in which the vegetation has been damaged or destroyed, and/or
- Mending of fences and replacement of gates.

Periodic removal and management of manure accumulations will be addressed in the O&M plan.

For multiple adjacent vegetated walkways the O&M plan should provide guidance as to the rotation of walkways to allow for recovery of vegetation and for improvement of traffic - supporting conditions.