

**NATURAL RESOURCES CONSERVATION SERVICE
VIRGINIA CONSERVATION PRACTICE STANDARD**

ANIMAL TRAILS AND WALKWAYS

(Ft.)

CODE 575

DEFINITION

Established lanes or travel ways that facilitate animal movement.

PURPOSE

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 PRACTICE APPLIES

On lands where control of animal movement is needed.

CRITERIA

General Criteria Applicable to All Purposes

All planned work shall comply with all federal, state, and local laws and permit conditions and requirements. 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 the equipment used for construction, movement of animals, and access by operator for management and maintenance.

Locate animal trails or walkways such that they will meet the intended purpose, are easily maintained, and will remain stable.

Trails or walkways shall be designed and constructed with consideration of site soil characteristics.

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 and placement of trail(s) or walkway(s).

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. Surface shall be crowned or out-sloped, as needed. Side slopes shall be no steeper than 2:1 (horizontal to vertical). All earthfill and cut slopes shall be re-vegetated in accordance with Virginia NRCS Conservation Practice Standard *Critical Area Planting (Code 342)*.

Use Virginia NRCS Conservation Practice Standard *Stream Crossing (Code 578)* when animal trails or walkways cross streams or other shallow water bodies.

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.

Consider the adequacy of natural surfacing. If trails or walkways are seeded or planted to vegetative cover, vegetation will be protected from grazing until fully established and capable of withstanding grazing and/or trampling. Vegetative cover shall be established in accordance with Virginia NRCS Conservation Practice Standard *Critical Area Planting (Code 342)*. Where maintaining vegetative cover is not possible, Virginia NRCS Conservation Practice Standard *Heavy Use Area Protection (Code 561)* will be used to provide adequate surface protection.

Virginia NRCS Conservation Practice Standard *Fence (Code 382)* will be used when needed to keep animals confined to the trail or walkway until the desired destination is reached.

Drainage and Erosion Control. Provisions shall be made for surface and subsurface drainage, as needed, and for disposal of runoff water without causing erosion or water quality impairment. The type of drainage structure used will depend on the intended use and runoff conditions. Refer to Virginia Engineering Design Note 1 - Road Drainage Practices.

For drainageway crossings, the capacity and design shall be consistent with sound engineering principles and shall be adequate for the intended use. When a culvert or bridge is installed in a drainageway, its minimum capacity shall convey the 2-year, 24-hour frequency storm runoff without causing erosion or overtopping.

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

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.

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.

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.

CONSIDERATIONS

Virginia NRCS Conservation Practice Standard *Prescribed Grazing (Code 528)* can be used to further improve grazing distribution and pressure.

Other conservation practices, such as Virginia NRCS Conservation Practice Standard *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 Virginia NRCS Conservation

Practice Standard *Heavy Use Area Protection (Code 561)*.

A vegetated buffer width of 35' should be maintained between the trail or walkway and bodies of water, sinkholes, or other sensitive areas.

Consider limiting width to prevent usage as a roadway. For travelways used by vehicles or equipment for purposes other than management and maintenance of animal trails or walkways, use Virginia NRCS Conservation Practice Standard *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, 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.

Record all required information in an engineer field book, on a plan sheet or design computation sheet, or in another appropriate location.

DESIGN DATA

1. Completed Environmental Evaluation and subsequent requirements.
2. Soils investigation.
3. Survey and plot data: profile, cross-sections, topography, as needed.
4. Design computations, including purpose of practice and references used. Include:
 - a. Grade or percent slope of trail or walkway; alignment of turns, surface materials.
 - b. Show computations for surface water controls, water bars, drainage structures and outlets, as needed.
 - c. Subsurface treatment, if applicable.
 - d. Location, extent, and specifications of fencing required.
5. Plan view of site with existing and planned features, including dimensions, distances, buildings, fences, erosion control measures, etc. Include connection to Heavy Use Area and/or transition to pasture or paddocks.
6. Standard Cover Sheet (VA-SO-100).

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7. Materials and quantities needed. Identify borrow material and/or spoil area, as needed.
8. Vegetation and/or ground cover requirements.
9. Identification of needed Erosion & Sediment Control measures.
10. Supplemental practices required.
11. Virginia Conservation Practice Specifications (700 Series).
12. Operation and Maintenance Plan.

CHECK DATA

1. As-built survey.
2. As-built plans including dimensions, types and quantities of materials installed, cross-slopes and grades of constructed trails and/or walkways, alignment of turns, and variations from design. Include justification for variations.
3. Locations of appurtenant practices.
4. Adequacy of vegetation and/or ground cover.
5. Complete as-built section of Cover Sheet.

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.

REFERENCES:

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United States Department of Agriculture, Forest Service, 2007. Trail Construction and Maintenance Notebook. Washington, DC.

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USDA-Natural Resources Conservation Service. Virginia Electronic Field Office Technical Guide (eFOTG), Section IV. Virginia Engineering Design Note 1 – Road Drainage Practices [On-line]. Available at

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Wood, Gene. 2007. Recreational horse trails in rural and wildland areas: design, construction and maintenance. Clemson University.