

RECREATION TRAIL AND WALKWAY

(Feet)
Code 568

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

A pathway prepared especially for pedestrian, equestrian, bicycle, and other off-road modes of travel through or to recreational areas.

II. Purpose

This practice may be applied as part of a resource management system to support one or more of the following purposes:

- Provide or improve recreation access.
- Provide travelways for recreational activities such as walking, horseback riding, bicycling, cross country skiing, and hiking.
- Direct travel away from ecologically sensitive and/or erosion prone areas.
- Minimize on-site and off-site damage to resources during periods of access.

III. Conditions Where Practice Applies

This practice applies on lands where prepared paths, trails, and walkways are needed for effective and safe access to or through recreation resources.

IV. Federal, State, and Local Laws

Users of this standard should be aware of potentially applicable federal, state, and local laws, rules, regulations, or permit requirements governing recreation trails and walkways. This standard does not contain the text of federal, state, or local laws.

V. Criteria

The following criteria apply to all purposes.

A. Location

General guidelines for location of trails are as follows.

1. Lay out trails to provide maximum visual variety.

2. Avoid needless destruction of trees and areas of natural beauty.
3. Follow natural contours of the land where possible.
4. For nature trails, a loop route about 1/2 mile long is desirable with the entrance and exit in the same general locality. Connector trails in the loop may be used to reduce the trail length.

Special attention shall be given to saving and maintaining key trees and other vegetation that have scenic value, provide shade, reduce erosion and runoff, provide den and food for wildlife, or add to the visual quality of the area.

B. Grade

Sustained grades shall be functional for the purpose intended, considering the topography. Table 1 shows desirable, maximum sustained, and short pitch grades for various types of trails. For grades steeper than shown in Table 1, steps or perrons may be used for pedestrian traffic and perrons may be used for horseback riding trails. Switchbacks should be used only when absolutely necessary. Switchbacks are acceptable for bicycle trails when the proper turning radius can be obtained.

C. Cross Section

The minimum tread width shall be 4 feet. The width in excavation sections for pedestrian trails on sidehill sections may be reduced to 3 feet if a greater width would adversely affect the visual resources. Table 1 may be used to determine the minimum tread width for various trail types.

Cut and fill slopes shall be stable for the soil material.

Adequate surface and subsurface drainage shall be provided as needed. A raised or elevated trail or walkway may be required for wet sites that cannot be drained.

D. Erosion Control

Plans shall include provisions for control of erosion. Disturbed areas shall be established to vegetation as soon as practicable after construction. If soil or climatic conditions preclude the use of vegetation, and protection is needed, nonvegetative means, such as mulches or gravel, may be used. Seedbed preparation, seeding, fertilizing, and mulching shall comply with NRCS Field Office Technical Guide (FOTG), Section IV, Standard 342, Critical Area Planting.

E. Culverts and Bridges

Culverts, bridges, or grade dips for water management shall be provided at drainage ways. The capacity and design shall be consistent with sound engineering principles and adequate for the intended use.

Bridges shall be designed for the maximum expected loading with an adequate factor of safety. Bridge designs may be obtained from consultants or bridge fabricators.

Culvert crossings shall be designed to allow overtopping without significant erosion damage to the crossing.

F. Surfacing

If surfacing is required for trail use, the surfacing material may be pit or creek-run gravel, concrete, asphalt, or other material that can withstand the required traffic and the elements at the site.

G. Safety

Safety of the users shall be incorporated into the trail design. Protection from slides and falling rocks shall be provided, as needed. Adequate directional and warning signs, handrails, bridges, and culverts shall be placed as dictated by the site and intended use. The minimum clearing width and height should be as shown in Table 1.

VI. Considerations

Additional recommendations relating to design that may enhance the use of, or avoid problems with, this practice but are not required to ensure its basic conservation functions are as follows.

- A. Assure safe ingress and egress to the trail or walkway.
- B. Consider requirements of Americans with Disabilities Act, where appropriate.
- C. Provide adequate parking for users and a maintenance staging area.
- D. Consider adjoining land uses and the proximity to residences, utilities, cultural resources, threatened and endangered species of plants and animals, wetlands, important farmlands, or other environmentally sensitive areas.
- E. Consider potential ecological and human impacts when planning a trail for use by motorized vehicles.

VII. Plans and Specifications

Plans and specifications for constructing recreation trails and walkways shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

VIII. Operation and Maintenance

An Operation and Maintenance Plan shall be developed that is consistent with the purpose of this practice, intended life of the components, and criteria for design.

The plan shall include but is not limited to:

- A. Maintenance of the required clearing height and width.
- B. Periodic inspection of trail surface materials and provisions for replacement.
- C. Inspection of drainage way crossings after runoff events.
- D. Maintenance of vegetated areas including moving and reseeded.

IX. References

USDA, NRCS, Wisconsin Field Office Technical Guide, Section IV, Conservation Practice Standards and Specifications.

Wisconsin Department of Natural Resources, Trail Specifications Handbook.

Table 1
Grade, Tread Width, and Clearing Limits for Various Trail Types¹

Trail Type	Grade (%)	Tread Width (feet)	Clearing	
			Width outside each tread (feet)	Height (feet)
Scenic hiking	≤ 10-desirable 15-maximum sustained 20-short pitch*	2-3	2	10
Nature	≤ 5-desirable 5-maximum sustained 10-short pitch*	5-6 (guided) 3-4 (self-guided)	2	10
Bicycle** <15 mph	≤ 5-desirable 5-maximum sustained 10-short pitch*	4 (one-way) add 4 feet for curves 7 (two-way) add 4 feet for curves	2	10
Horseback riding	<10-desirable 15-maximum sustained 20-short pitch*	5-6	2	12
Cross country skiing	8-desirable 12-maximum sustained	≤ 8% slope 4 (one-way) 7 (two-way)	2	10
		> 8% slope 11 (one-way) 21 (two-way)		
Snowmobile**	25-maximum sustained	6-8 (one-way) 10-12 (two-way)	2	10

* = short pitch = 100 feet or less

** = suggest 50 – 100 feet sight and stopping distance

¹ Reference: Trail Specifications Handbook, Wisconsin Department of Natural Resources