

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

ACCESS ROAD

(ft.)
CODE 560

DEFINITION

A travel-way for equipment and vehicles constructed as part of a conservation plan.

PURPOSE

To provide a fixed route for vehicular travel for resource activities involving the management of timber, livestock, agriculture, wildlife habitat, and other conservation enterprises while protecting the soil, water, fish, wildlife, and other adjacent natural resources.

CONDITIONS WHERE PRACTICE APPLIES

Where access is needed from a private or public road or highway to a land use enterprise or conservation measure, or where travel ways are needed in a planned land use area.

Access roads range from seasonal use roads, designed for low speed and rough driving conditions, to all-weather roads heavily used by the public and designed with safety as a high priority. Some roads are only constructed for a single purpose; i.e. control of forest fires, logging and forest management activities, access to remote recreation areas, or access for maintenance of facilities.

CRITERIA

Access roads shall be designed to serve the enterprise or planned use with the expected traffic. Types of vehicles or equipment, speed, loads, soils, climate, and other operating conditions need to be considered.

Laws and Regulations. This practice must comply with all federal, state, and local laws and regulations. Laws and regulations of particular concern include those involving water and drainage rights, wetlands, Waters of the U.S., pollution control, property easements, preservation of cultural resources, and endangered species.

Where general public use is anticipated, roads shall be designed to meet applicable federal, state and local criteria.

Location. Roads shall be located to serve the purpose intended, to facilitate the control and disposal of surface and subsurface water, to control or reduce erosion, to make the best use of topographic features, and to include scenic vistas where possible. The roads should generally follow natural contours and slopes to minimize disturbance of drainage patterns.

Roads shall be located where they can be maintained and where water management problems are not created. To reduce potential pollution, roads shall be located away from watercourses and utilize buffers where possible.

Alignment. Road gradient and horizontal alignment shall be adapted to the intensity of use, mode of travel, type of equipment, load weights, and level of development.

Grades normally should not exceed 10 percent except for short lengths. Maximum grades of 18 percent should be exceeded only for special uses such as logging, field access, fire protection, or other uses not accessible by the general public.

Roads should cross streams as near a perpendicular angle as appropriate.

Width. Minimum width for single-lane private or special-purpose roads is 10 feet with greater widths at curves and turnouts.

Minimum width of other roads is 14 feet (10 foot tread-width plus 2 foot shoulders) for one-way traffic and 20 feet (16 foot tread-width plus 2 foot shoulders) for two-way traffic. The two-way traffic minimum width shall be 24 feet (20 foot tread width plus 2 foot shoulders) for trailer or large truck traffic.

Shoulder width may be paved, gravel or grass.

Conservation practice standards are reviewed periodically and updated if needed. The current version of this standard is on our eFOTG web site available at www.sd.nrcs.usda.gov or may be obtained at your local Natural Resources Conservation Service.

Turnouts shall be included at appropriate locations on single lane roads where vehicles travel in both directions on a limited basis. Minimum road width at turnouts shall be 20 feet for a distance of at least 30 feet.

Side slopes. All cuts and fills shall be designed to have stable slopes two horizontal to one vertical or flatter. For short lengths, rock areas, or very steep hillsides, stable steeper slopes are permitted.

Areas with geological conditions and soils subject to slides shall be avoided or treated to prevent slides.

Drainage. Culverts, bridges, fords, or grade dips shall be provided at all natural drainageways. The capacity and design shall be consistent with sound engineering principles and shall be adequate for the class of vehicle, type of road, development, and use. Minimum drainage capacity shall convey the design storm runoff without causing erosion or (except at fords) road overtopping. Except as specified by applicable laws, codes, or regulations, minimum design storm frequency shall be as shown in Table 1.

Table 1

Road Type	Storm Frequency
Forest Access Roads, Farm Field Access	2 year - 24 Hour
Farm Driveways, Recreation Access	10 year - 24 Hour
Public Access Roads, Camp grounds, Etc.	25 year - 24 Hour

Drainageway crossings should not impact fish migration.

Roadside ditches shall be adequate to provide surface drainage for the roadway. Roadside ditch bottoms shall be at least 1.0 foot below top of road surface. Ditch channels shall be designed to not aggrade or degrade.

Water-breaks or water-bars may be used to control surface runoff on low-intensity use roads. Water bars on roads must be compatible with the use and maintenance of the road surface.

Provide parking and turnaround areas where needed such as at the end of dead end roads.

Surfacing. Access roads shall be graveled or paved if required by traffic needs, soil, climate, erosion control, or dust control.

Unsurfaced roads may require controlled access to prevent damage or hazardous conditions during adverse climatic conditions.

Construction Operations. During construction, soil erosion and air and water pollution must be minimized and held within legal limits. Trees, stumps, roots and other objectionable material shall be removed from the work area.

Traffic safety. Passing lanes, turnouts, guardrails, signs, and other facilities shall be provided as needed for safe traffic flow.

Traffic safety shall be a prime factor in selecting the angle and grade of intersections with public highways. The intersection angle should not be less than 85 degrees. Public highways shall be entered at hill tops or other locations offering good visibility and a clear site distance in both directions of at least 300 feet.

Erosion control. After completion of construction, road side slopes and other disturbed areas shall be vegetated as soon as soil and climatic conditions permit, following the standard for Critical Area Planting (342).

Roadside channels, cross drains, and drainage structure inlets and outlets shall be designed to be stable, following applicable practice standards.

Watercourses and water quality shall be protected during and after construction by erosion-control facilities and maintenance. Filter strips, water and sediment control basins, and other conservation practices shall be used and maintained as needed.

CONSIDERATIONS

Consider visual resources and environmental values during planning and design.

Access roads should be located to reduce adverse impacts to wetlands, waterbodies and wildlife habitat. Consider the following:

Effects on downstream flows or aquifers that would affect other water uses or users.

Effects on wetlands and wildlife habitats.

Short-term and construction-related effects of this practice on downstream water quality.

PLANS AND SPECIFICATIONS

Plans and specifications for constructing access roads shall meet this standard and describe requirements to achieve its purpose.

OPERATION AND MAINTENANCE

An operation and maintenance plan must be developed for use by the owner/operator in meeting the purposes of the practice. The plan should include:

Inspection of culverts, roadside ditches, water bars, and outlets after each major runoff event and restoration of flow capacity as needed.

Maintenance of adequate cover on vegetated areas. Re-seed and mow as needed.

Filling low areas in travel treads and re-grade, as needed, to maintain road cross section.

Inspection of roads with water-bars periodically to insure proper cross section is maintained and outlets are stable.

Inspect and maintain paving, barriers, signs and other functional and safety structures.