

**Natural Resources Conservation Service
Conservation Practice Standard**

**HEAVY USE AREA PROTECTION
(Ac.)
CODE 561**

DEFINITION

Protecting heavily used areas by establishing vegetative cover, surfacing with suitable materials, or installing needed structures.

PURPOSES

To stabilize urban, recreation, agricultural, or facility areas frequently and intensely used by people, animals, or vehicles.

CONDITIONS WHERE PRACTICE APPLIES

On urban, recreation, and agricultural areas or other frequently and intensely used areas that require special treatment to protect them from erosion or other deterioration.

CRITERIA

Urban and Recreation Areas

Drainage and erosion control. Provision shall be made for surface and subsurface drainage, as needed, and for disposal of runoff without causing erosion. All areas disturbed in construction shall be revegetated in accordance with Conservation Practice Standard - Critical Area Planting (342).

Base course - All areas to be paved shall have a 6 in. base course of gravel, crushed stone, or other suitable materials. The material in place may be used if it is adequate.

Areas that support automotive traffic shall be designed for a wheel load of at least 4,000 pounds.

Surface treatment - The thickness of the asphalt course, kind and size of aggregate, proportioning of bituminous materials, and mixing and placing of these materials shall be in accordance with good highway design practice for expected loading.

The quality and thickness of concrete and the spacing and size of reinforcing steel shall be appropriate for the expected load and in accordance with sound engineering practice.

The minimum thickness for a gravel surface shall be 2 inches.

If other surfacing materials are used, such as cinders, tree bark, or sawdust, the minimum thickness shall be 2 inches.

Structures. All structures shall be designed according to appropriate NRCS standards and specifications or Engineering Field Handbook recommendations.

Sprays and artificial mulches. Sprays of asphalt, oil, plastic, manufactured mulches, and similar materials shall be installed according to the manufacturer's recommendations.

Vegetative measures. Liming, fertilizing, seeding, and sodding shall be according to the planned use and local technical guide. If vegetation is not appropriate, other measures shall be used to prevent erosion.

Agricultural Areas

Drainage and erosion control. Provision shall be made for surface and subsurface drainage, as needed, and for disposal of runoff without causing erosion. All treatment areas shall be shaped to prevent ponding of water. Ramp areas shall be shaped so as to prevent surface water from entering the ramp. All areas disturbed in construction shall be revegetated in accordance with Conservation Practice Standard - Critical Area Planting (342).

Foundation preparation. All loose, wet, organic, or other undesirable materials shall be removed to depths, widths, and lengths as required by the

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design. All waste materials shall be disposed of in designated areas.

Filter fabric. A non-woven geotextile fabric shall be installed under all treatment areas unless foundation is on rock.

The geotextile fabric will be placed in the toe trenches of watering ramps. A minimum 12-in. overlap shall be used at all joints.

Surface treatment. Surface materials for paddock areas shall be crusher run stone, or graded stone as conditions warrant, with a maximum size of 2 inches. All surface material shall be smoothed uniformly and compacted. Minimum depth of crusher run stone or gravel shall be 6 in. uncompacted. If graded stone is used, the depth shall be 5 in. of graded stone with a 1 in. topping of crusher run stone.

Treatment area. For areas such as watering troughs, portable hay rings, feeding troughs, or mineral boxes, the treatment area shall extend a minimum of 10 ft. outside the limits of the facility.

For walkways the minimum treatment width shall be 8 ft. (cattle only). A width of 15 ft. is generally used for cattle/vehicles type walkways. All walkways shall be fenced.

For loafing areas the following shall apply:

Animal area	Minimum treatment area per animal (ft. sq.)
Diary Cattle	200
Beef Cattle	150
Horse	150
Sheep & Goats	10

Treatment areas for watering ramps shall have a minimum bottom width of 10 ft. and a maximum bottom width of 20 feet. Ramps shall have a slope of 5 to 1 or flatter toward the stream with side slopes of 2.5 to 1 or flatter. Protection for watering ramps shall extend into the pond or stream to protect the pond or stream bottom.

Fencing. Fencing shall be installed as necessary to control all animal traffic. Watering

ramps shall be permanently fenced to prevent livestock access to the stream or pond except at the access ramps. Fencing shall be built in accordance with Conservation Practice Standard - Fence (382).

CONSIDERATIONS

Water quantity

- Effects on the water budget, especially on volumes and rates of runoff, infiltration, and transpiration.

Water quality

- Excavation may be limited to one side of the stream at a time in order to facilitate diversion of the stream. It may be advantageous to divert the stream flows around the site using a pipe or ditch or to temporarily impound the stream during construction.
- Effects on the erosion and the movement of sediment, animal waste, and soluble and sediment-attached substances carried by runoff.
- Effects of changes in surface and groundwater caused by introduction of fertilizer for vegetated areas, and oils and chemicals associated with concrete and asphalt placement and other construction activities.
- Effects of changes in surface water caused by the surfacing of confined animal feeding areas.
- Consideration can be given for the use of concrete around troughs or tanks in lieu of gravel for agricultural applications.

PLANS AND SPECIFICATIONS

Plans and specifications for heavy use area protection shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

The treatment areas and associated practices be inspected annually and after significant storm events to identify repair and maintenance needs.

**Natural Resources Conservation Service
Construction Specifications**

HEAVY USE AREA PROTECTION

1. SCOPE

This item shall include all plans, specifications, construction operations, and vegetation required for the installation of heavy use areas. Construction operations shall be done in such a manner that soil erosion and air, water, and noise pollution will be minimized and held within legal limits as specified by state regulations.

2. CLEARING AND GRUBBING

All trees, stumps, roots, brush, weeds, and other objectionable material will be removed from the work area as required for proper installation of the planned and designed measure. Disposal shall be by burning, burying at approved locations, or removing from the site and stacking. All burning shall conform to state laws and regulations.

3. CONSTRUCTION

Where surface treatment of the area is required, prescribed construction procedures shall be followed.

If subgrade is required, it shall be brought to the required elevations by the removal of unsuitable material and by necessary

grading, filling, and leveling. The subgrade surface shall be compacted according to design specifications. All soft spots discovered during compaction operations will be removed and replaced with suitable material.

After subgrade preparation in urban and recreational areas, the base course will be laid, mixed as necessary to provide a pulverized, homogeneous mixture, and thoroughly compacted, first with a sheepfoot roller and then with a rubber-tired or pneumatic-tired roller.

Geotextile will be non-woven type of the grade specified and installed according to manufacturer's or design specifications. Equipment will not be allowed to operate directly on top of the geotextile fabric without a cushion of gravel or stone.

4. PROTECTION

Vegetation or heavy use area treatment shall be applied as shown in the plans and specifications. Vegetation will include seedbed preparation, liming, fertilizing, seeding, and either mulching or netting when needed and specified.