

Surface Roughening

What it is

Surface roughening is a temporary erosion control practice where the soil surface is roughened by the creation of grooves, depressions, or steps that run parallel to the contour of the land.

When and Where to use it

- Surface roughening is appropriate for all slopes and should be performed immediately after rough grades have been established in an area.
- Surface roughening can also be used to help establish vegetative cover by reducing runoff velocity and giving seed an opportunity to take hold and grow.
- Surface roughening can be used in combination with other erosion control measures such as mulching and seeding.

When and Where NOT to use it

- Slopes that are not smooth-graded and are left sufficiently rough after final grading do not need further roughening to control erosion.
- Surface roughening alone is not sufficient to stabilize a slope for long periods of times, further stabilization measures should be implemented within two weeks of grading.
- Extremely sandy or rocky soils are not well suited for surface roughening.

Application Techniques and Maintenance Requirements

Figure SR-1 provides application techniques and maintenance requirements for surface roughening.

SURFACE ROUGHENING NOTES

APPLICATION TECHNIQUES

1. STAIR STEP GRADING – USED ON SLOPES WITH GRADIENTS BETWEEN 3:1 AND 2:1 AND FOR SOIL CONTAINING A LARGE AMOUNT OF SMALL ROCKS. STAIRS ARE TO BE WIDE ENOUGH TO WORK WITH STANDARD EARTH MOVING EQUIPMENT.
2. GROOVE CUTTING – USED ON SLOPES WITH GRADIENTS BETWEEN 3:1 AND 2:1. GROOVES ARE TO BE AT LEAST 3 INCHES DEEP AND NO MORE THAN 15 INCHES APART.
3. TRACKING – USED ON SOILS WITH HIGHER SAND CONTENT DUE TO COMPACTION BY HEAVY MACHINERY.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SURFACE ROUGHENED AREAS.
2. SURFACE ROUGHENING IS TO BE REPEATED AS OFTEN AS NECESSARY.
3. VEHICLES OR EQUIPMENT IS NOT TO BE DRIVEN OVER AREAS THAT HAVE BEEN ROUGHENED.
4. AS SURFACE ROUGHENING IS ONLY A TEMPORARY CONTROL, ADDITIONAL TREATMENTS MAY BE NECESSARY TO MAINTAIN THE SOIL SURFACE IN A ROUGHENED CONDITION.