Access Road

Definition

An access road is an aggregate armored and stabilized roadway which acts as a defined point of ingress and egress from a site with disturbed soils.

Description and Purpose

Access road is a sediment control BMP consisting of a stabilized aggregate driving surface which is used to prevent off-site migration of sediment from construction traffic. This practice allows ingress and egress of construction traffic from a project site, while protecting vegetative cover, preventing erosion and sediment tracking, reducing areas of soil compaction, and protecting water quality. Access roads define and limit the number of access points at a project site. They may be used throughout a site for similar purposes.

The practice may also be called an ingress road or egress road, aggregate access road, driveway, haul road, or stabilized construction entrance or roadway.

Pollutant controlled:

- Suspended solids

Treatment Mechanisms:

- Prevents vegetation loss, soil compaction, and erosion at site access points
- Removes sediment from tires prior to egress onto public right-of-ways
- Stores and stabilizes sediment in pore spaces between aggregate
- Limits construction traffic disturbance if properly designed and installed

Pollution Removal Efficiencies:

- May have poor performance on sites with clay soils, possibly requiring a tire washdown

Companion and Alternative BMPs

- Adjacent Construction Barriers can keep site traffic on Access Roads, and off of protected areas
- Street Sweeping, Watercourse Crossing, or tire washdown, where appropriate
- Diversions can direct runoff from Access Roads to stable, vegetated areas, or to treatment systems

Advantages and Disadvantages

Advantages:

- Applicable to nearly all sites with disturbed soils and construction/equipment traffic
- Simple design; easy to install and remove
- Ease of access for maintenance
- Materials may include recycled/reused concrete – good for road projects
- Effective for minimizing street sweeping and sediment loading to inlet protection devices

Disadvantages:

- Limited effectiveness on heavy clay soil
- May require frequent maintenance or several reinstallations on heavy traffic sites
- Needs to be removed or paved when the project is complete
- Aggregate may be expensive

Location

Locate access roads at every point where construction traffic enters or leaves a site with disturbed soils.

Avoid placing access roads in wetlands, flood plains, rivers, streams, or drains. If such placement is unavoidable, a permit from the DEQ may be required prior to construction.

General Characteristics

- Compacted roadway with an open graded (limited fines) aggregate surface.
- Flared entrance adjacent to roadways
- Optional improvements: Tire washing station; mountable berm adjacent to roadway; turn-arounds or widened areas for passing.

Materials

- 2-3 inch diameter open-graded or washed aggregate (stone or crushed concrete). Angular or crushed aggregate will increase effectiveness of sediment removal, increase road stability, and increase the service life of the Access Road by providing pore space for sediment storage. An increase in aggregate size and depth is necessary for heavier equipment. Avoid aggregate sizes that may wedge between dual tires if such traffic is expected.
- Non-woven geotextile fabric (8-12 oz/yd^3) underlay. Geotextile material increases the service life and increases road stability.

Design Specifications

- Determine the location and construction specifications during the project planning stage
- Locate, size, and design for use by all applicable construction traffic. Consider additional space to turn trucks/trailers
- Address and treat sediment laden runoff prior to discharging from the site
- Whenever possible, construct the entrance on a firm, compacted subgrade. This can substantially increase the effectiveness of the pad and reduce the need for maintenance
- State permits for crossing streams or wetlands will generally be necessary, and special precautions may be required to protect water quality
- Use the following specifications unless local or state requirements, or project engineer specifications, differ:
    a. Minimum length: 50 feet
    b. Minimum width: 10 feet. Design for at least 2 feet wider than the width of the largest vehicle or piece of equipment expected, with additional width for turning radius on corners
    c. Suggested minimum thickness: 6 inches of 2-3 inch diameter open graded or washed, angular aggregate. Larger diameter aggregate requires additional thickness
    d. Flare the entrance to the adjacent road to provide a turning radius
    e. Side slopes should be no steeper than 2H:1V
    f. Do not construct an earthen road shoulder except where turn-outs are needed
    g. Underlay Access Road with a nonwoven geotextile fabric
    h. Place and compact aggregate in uniform layers of not more than 6 inches, nor less 3 inches

Performance Enhancers

- Tire washing or corrugated or ribbed "drive-on" steel panels improve effectiveness
- Mountable Berm at transition to pavement to encourage sediment to dislodge from tires
- Install turn-arounds and passing lanes if appropriate
- Install/maintain Filter Strips, Sediment Basins, or other sediment controls to address runoff

Construction Guidelines

Guidelines are in consecutive order:

1. Construct prior to initiating earth disturbance at the site, during any time of year
2. Clear, grade, and compact the Access Road subgrade and surrounding area according to Grading Practices specifications
3. Apply non-woven geotextile fabric over the existing subgrade prior to placing aggregate
4. Apply the aggregate in layers, compacting prior to placement of the next layer

5. Install Construction Barriers to prevent ingress and egress on unprotected soils
6. At the project completion, remove access roads and reuse or dispose of aggregate
7. Re-grade as necessary, and install permanent stabilization measures as soon as possible
8. Once the access road has been removed, special attention is necessary to ensure that off-site sedimentation/tracking is not occurring, or is addressed by Street Sweeping

Monitoring

Access roads should be inspected daily during use. Performance is determined by the lack of tracking out of materials onto adjacent right-of-ways.

Maintenance

- Routinely inspect (daily during use) the access road and adjacent roadways for trackout, soil build-up, filled aggregate voids, and signs of road bed failure such as migration of the stone into the sub-base, rutting, etc. Repair failures and sweep/remove trackout immediately
- Inspect and maintain any companion BMPs that treat or control runoff or prevent erosion
- Clean, replenish (adding additional aggregate layers), or replace the aggregate surface before soil buildup causes track-out
- Keep drainage ways for the access road clear
- Increase the length of the Access Road or install a tire wash if the Access Road is not effectively removing sediment from tires during egress. Tire wash water should drain into a Sediment Basin or other suitable treatment practice for suspended solids.
- Where site constraints limit the effectiveness of the access road, daily street sweeping can keep the soil that is tracked out from reaching sewers
- Immediately remove all sediment dropped or eroded onto public right-of-ways by sweeping or shoveling. Do not wash sediment into waterways or storm sewers.
- Immediately remove any aggregate that has loosened from the pad and ended up on the roadway.

References

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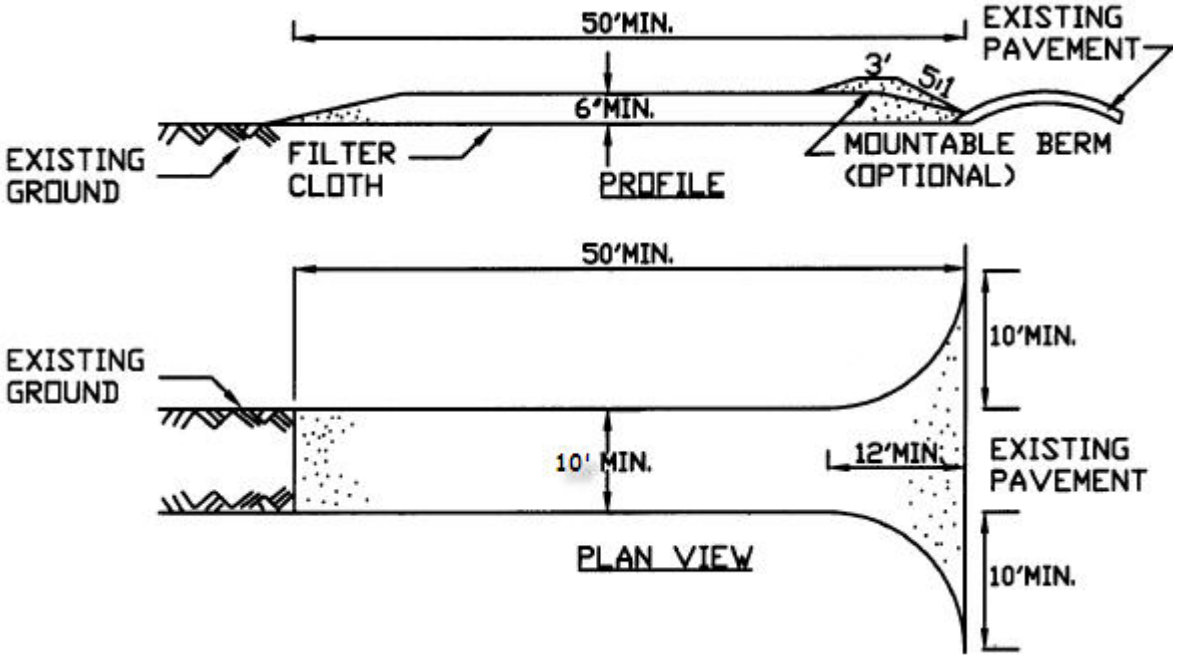
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New York Standards and Specifications for Erosion and Sediment Control, 2005. *Stabilized Construction Entrance.*

Figure 1. Access Road



Source: New York Standards and Specifications for Erosion and Sediment Control, 2005. *Stabilized Construction Entrance.*