

SECTION 5.13

OTHER RELATED PRACTICES

Overview

Practice 1301

Debris Disposal

Practice 1302

Permanent Limited Livestock Access

Practice 1303

Permanent Maintenance Access

SECTION 5.13

OTHER RELATED PRACTICES

This section addresses debris disposal, permanent limited livestock access, and permanent maintenance access to streams and ditches.

Debris disposal involves the proper disposal and/or removal of debris and spoil from channels and overbank areas. All garbage and miscellaneous rubbish should be removed from the site and landfilled. Other debris may be dealt with on site as appropriate. Brush and small woody debris may be burned; logs and stumps should be removed from the floodplain, or cabled in a secure location; non-toxic debris such as broken concrete may be buried on site a minimum depth of 2'.

Free and unconfined access to streams/ditches by livestock cause erosion/siltation and degrade water quality and stream habitat. Permanent limited livestock access allows livestock to obtain water at streams or ditches, but only in very localized areas. Generally, the entire channel is fenced off except for a 12'-16' wide ramp which extends 2'-3' into the channel. The ramp is protected with riprap and gravel, and is fenced to keep livestock out of the main channel.

Permanent maintenance access deals with the construction and maintenance of grassed access roads along streams and ditches. Although it is regarded as an added expense, permanent maintenance access should be considered for sites and activities where regular maintenance is anticipated.

Last Print/Revision Date: October 13, 1996

PRACTICE 1301 DEBRIS DISPOSAL

- DESCRIPTION**
- Proper disposal of debris and spoil removed from channels and overbank areas.



Exhibit 1301a: Debris/Spoil Disposal (Source: Ohio Stream Management Guide)

PURPOSE	<ul style="list-style-type: none"> ● To safely dispose of debris. ● To safely dispose of spoil material. ● To improve site aesthetics.
WHERE APPLICABLE	<ul style="list-style-type: none"> ● Any drainage improvement project where debris is removed. ● Channel Excavation spoil disposal.
ADVANTAGES	<ul style="list-style-type: none"> ● Prevents removed debris from becoming a problem in the future. ● Improves site aesthetics. ● After planting, the piled spoil provides a greater variety of wildlife habitat while also serving as a place of safety for animals during floods.
CONSTRAINTS	<ul style="list-style-type: none"> ● May be expensive. ● May be difficult to find an appropriate disposal site.
DESIGN AND CONSTRUCTION GUIDELINES	<p>Materials</p> <ul style="list-style-type: none"> ● May need equipment to haul debris. ● May need cables to securely anchor woody debris. ● For spoil piles: Vegetative Stabilization (Practice 1102). <p>Installation</p> <ul style="list-style-type: none"> ● Garbage and miscellaneous rubbish should be removed from the site and landfilled. ● Brush and small woody debris may be burned on site. ● Logs and stumps should be removed from the floodplain, or cabled in a secure location.

- Non-toxic debris such as broken concrete may be buried a minimum of 2' deep.
- Spoil material from channel excavation (Activity 5.6) may be piled in the floodplain but out of the floodway. When spread in wooded areas, care must be taken so that the spoil does not suffocate tree roots. Spoil piles should be planted to combinations of woody cover and wildlife meadow mixture vegetation (Practice 1102).

Special Considerations

- Logs and woody debris that have been removed from channel may be cabled in a secure location outside the floodway so that they do not impede flow even under flooded conditions.

MAINTENANCE

- Logs and woody debris cabled on site should be checked periodically.

REFERENCES

Related Practices

- Practice 107 Clearing and Grubbing.
- Activity 5.3 Debrushing.
- Activity 5.4 Obstruction Removal/River Restoration.
- Activity 5.6 Channel Excavation/Dredging.

Other Sources of Information

- Illinois DOT Specifications.
- MRBC Obstruction Removal Program.
- Ohio Stream Management Guide.

Last Print/Revision Date: October 13, 1996

PRACTICE 1302

PERMANENT LIMITED LIVESTOCK ACCESS

- DESCRIPTION**
- Creation of limited permanent access areas to streams and ditches for purposes of livestock watering.

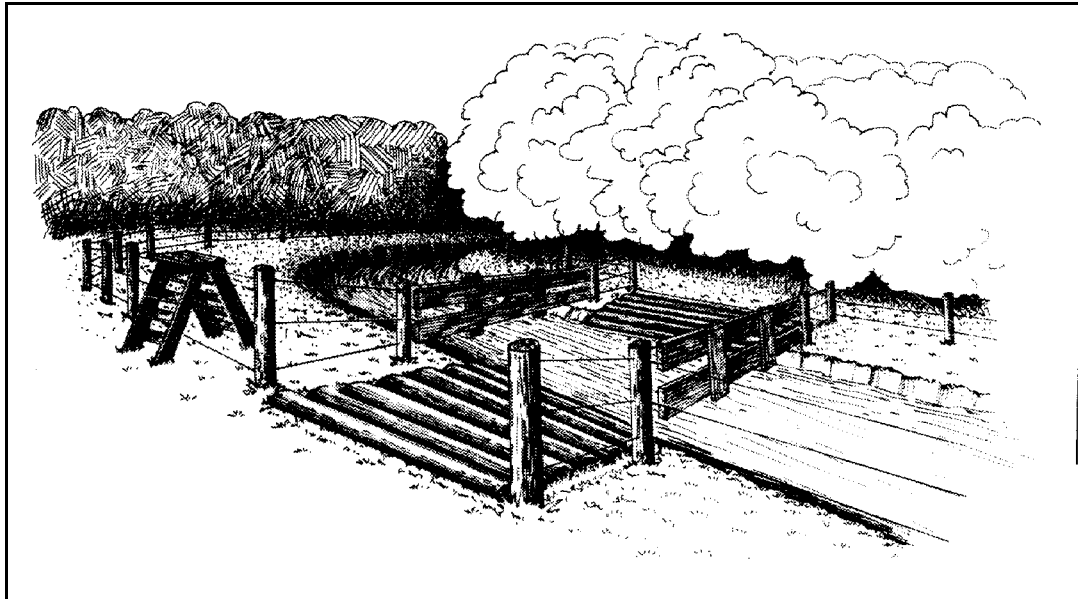


Exhibit 1302a: Permanent Limited Livestock Access (Source: Virginia Landowner's Guide)

-
- PURPOSE**
- To provide livestock with a watering area.
 - To limit livestock access to streams and ditches to a confined area in order to minimize bank erosion.

-
- WHERE APPLICABLE**
- Any stream or ditch which is used for livestock watering or livestock crossing.

-
- ADVANTAGES**
- Reduces erosion along channel caused by livestock.
 - Provides watering area for livestock while minimizing erosion.
 - Improves water quality and habitat by allowing vegetation to become established along the shore, thus creating a buffer to filter runoff.

-
- CONSTRAINTS**
- Added expense.

-
- DESIGN AND CONSTRUCTION GUIDELINES**
- Materials**
- Barbed wire and fence posts.
 - Geotextile fabric.
 - Riprap.
 - Road gravel.
 - Screenings.
 - Seed mix.

Installation

Recessed Limited Access (Exhibit 1302b, Exhibit 1302d)

- Excavate 12'-16' of the stream or ditch bank back \pm 6'.

- Grade the watering ramp so that the ramp slope does not exceed 4:1(1V:4H). Ramp and channel sideslopes should not exceed 2:1(1V:2H).
- Install geotextile fabric from the top of the ramp to 2'-3' (or as far as necessary for livestock to get to the water) into the recessed area. Install a 6"-8" layer of riprap over the fabric. Place 6" of road gravel over the riprap. Cap the road gravel with 2" of screenings.
- Re-seed (Practice 1102) all areas disturbed during construction that are not protected with riprap and gravel. Use erosion control blankets when slopes are steeper than 3:1 (1V:3H).
- Install barbed wire fence along both sides of the watering ramp, and across the bottom of the ramp. The fence should only go as far down into the recessed area as necessary for livestock to obtain water.

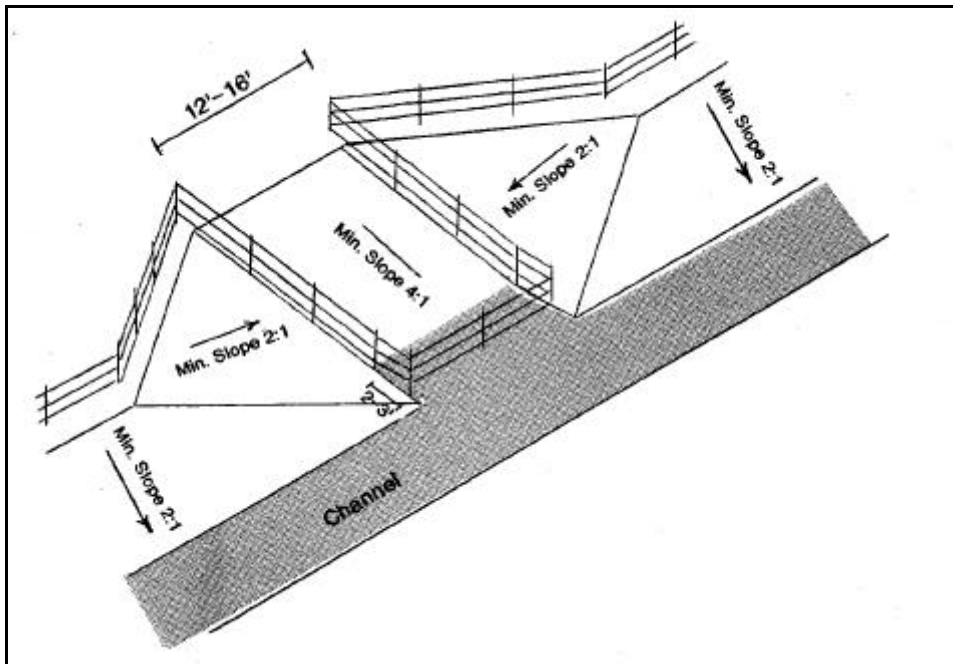


Exhibit 1302b: Recessed, permanent limited livestock access (Source: CBBEL Files)

Non-recessed Limited Access (1302c, Exhibit 1302d)

- Grade and armor the watering ramp as described above.
- Re-seed (Practice 1102) all areas disturbed during construction that are not protected with riprap and gravel. Use erosion control blankets when slopes are steeper than 3:1 (1V:3H).
- Install barbed wire fence along both sides of the watering ramp, and across the bottom of the ramp. The fence should only go as far into the channel as necessary for livestock to obtain water.

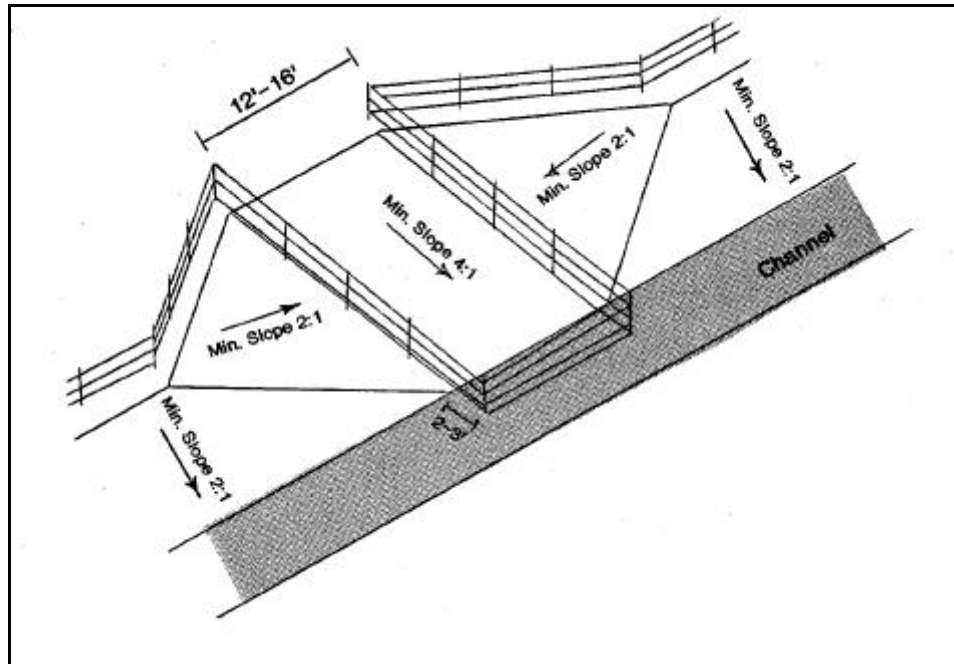


Exhibit 1302c: Non-recessed, permanent limited livestock access (Source: CBBEL Files)

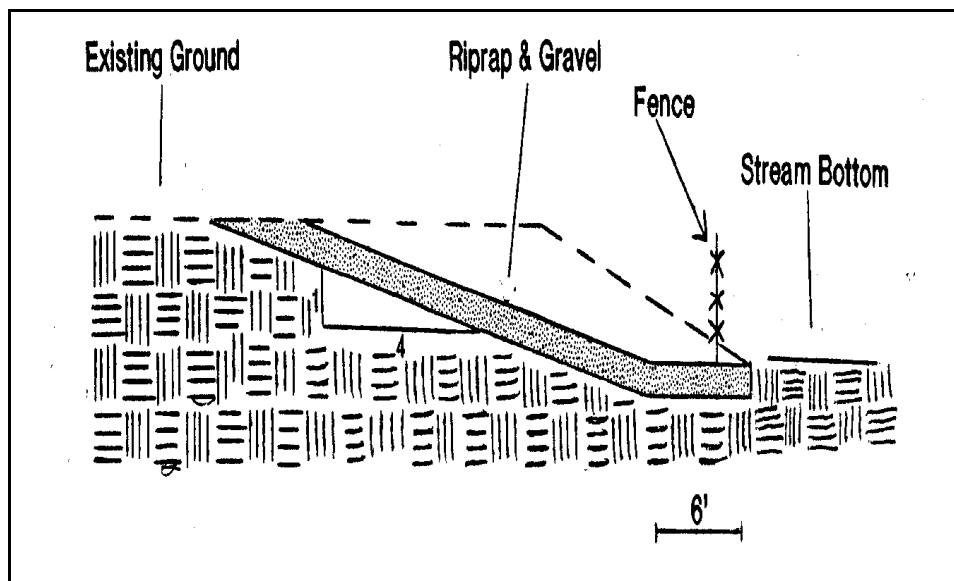


Exhibit 1302d: Typical cross section of permanent, limited livestock access (Source: CBBEL Files)

Special Considerations

- Recessed access is recommended over direct stream or ditch access in most cases.

MAINTENANCE

- Monitor water ramp and sideslopes for erosion, especially after flood events, and repair as necessary.
- Apply additional riprap and gravel as necessary.

REFERENCES

Related Practices

- Practice 1102 Vegetative Stabilization.

Other Sources of Information

- NRCS Files
 - Virginia Landowner's Guide
-

Last Print/Revision Date: October 13, 1996

PRACTICE 1303 PERMANENT MAINTENANCE ACCESS

DESCRIPTION

- Creation of a permanent, passable maintenance access road adjacent to a channel which is designed to minimize erosion, and has positive drainage.



Exhibit 1303a: Permanent Maintenance Access (Source: Allen County Surveyor's Office Files)

PURPOSE	<ul style="list-style-type: none"> ● Reduce erosion along streams and ditches caused by vehicles. ● Provide permanent vehicular access for routine maintenance activities.
WHERE APPLICABLE	<ul style="list-style-type: none"> ● Applicable for projects where long term maintenance access is required along a channel.
ADVANTAGES	<ul style="list-style-type: none"> ● Allows permanent vehicular access without causing erosion. ● Provides for drainage under access road while minimizing erosion.
CONSTRAINTS	<ul style="list-style-type: none"> ● Wooded easements must be cleared and grubbed (Practice 107). ● Added expense. ● Erosion must be kept in check during plant establishment.
DESIGN AND CONSTRUCTION GUIDELINES	<p>Materials</p> <ul style="list-style-type: none"> ● Fill material may be necessary. ● Corrugated, 24' long, 12" diameter PVC or PE pipe with watertight joints. ● Riprap. ● Granular fill (gravel \leq 1" in diameter). ● Seed mix.

Installation

Wooded Easements

- Verify that no wetlands will be impacted.
- Clear and grub (practice 107) access area at least 15' wide, plus area needed for piling spoil.
- Grade a 15' easement along the channel. The finished grade elevation should be no more than 0.5' above pre-construction ground elevation. The easement should slope toward the channel at a 6% grade (Exhibit 1303b, 1303c).
- Spoil should be graded into a berm between the easement and the woods.
- A berm drain should be installed between any breaks in the berm (Exhibit 1303d).
- Seed disturbed area (Practice 1102).

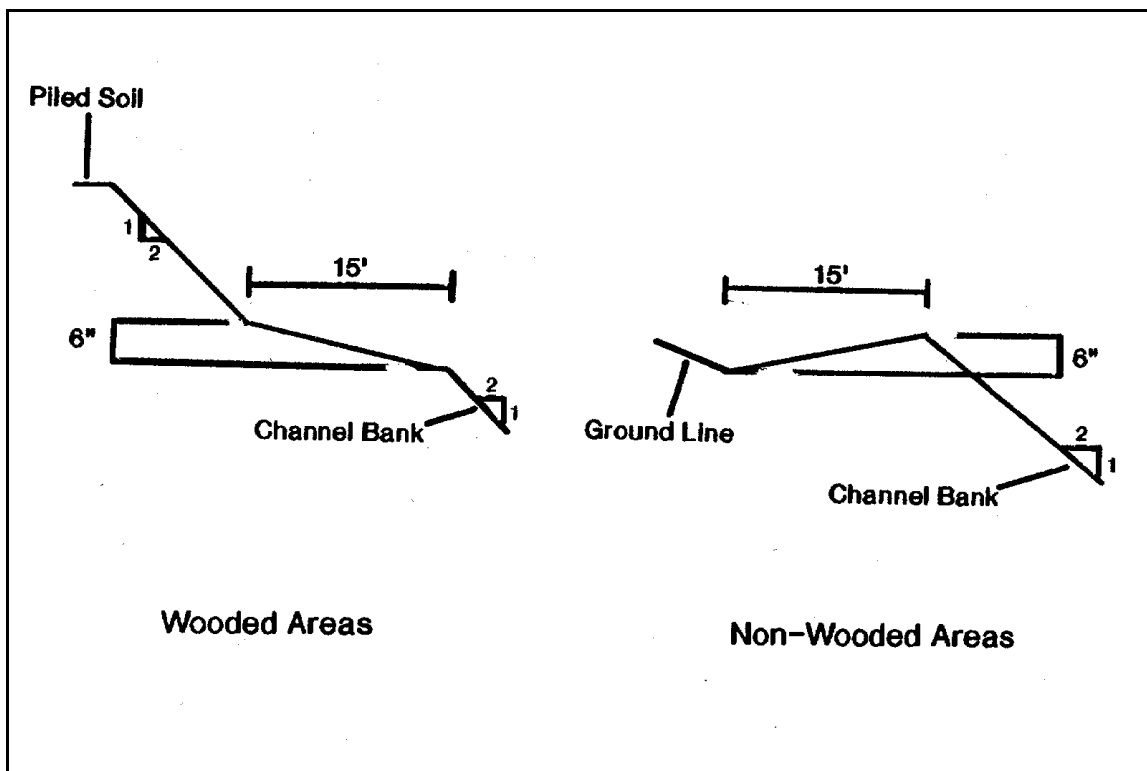


Exhibit 1303b: Berm grading details (Source: CBBEL Files)

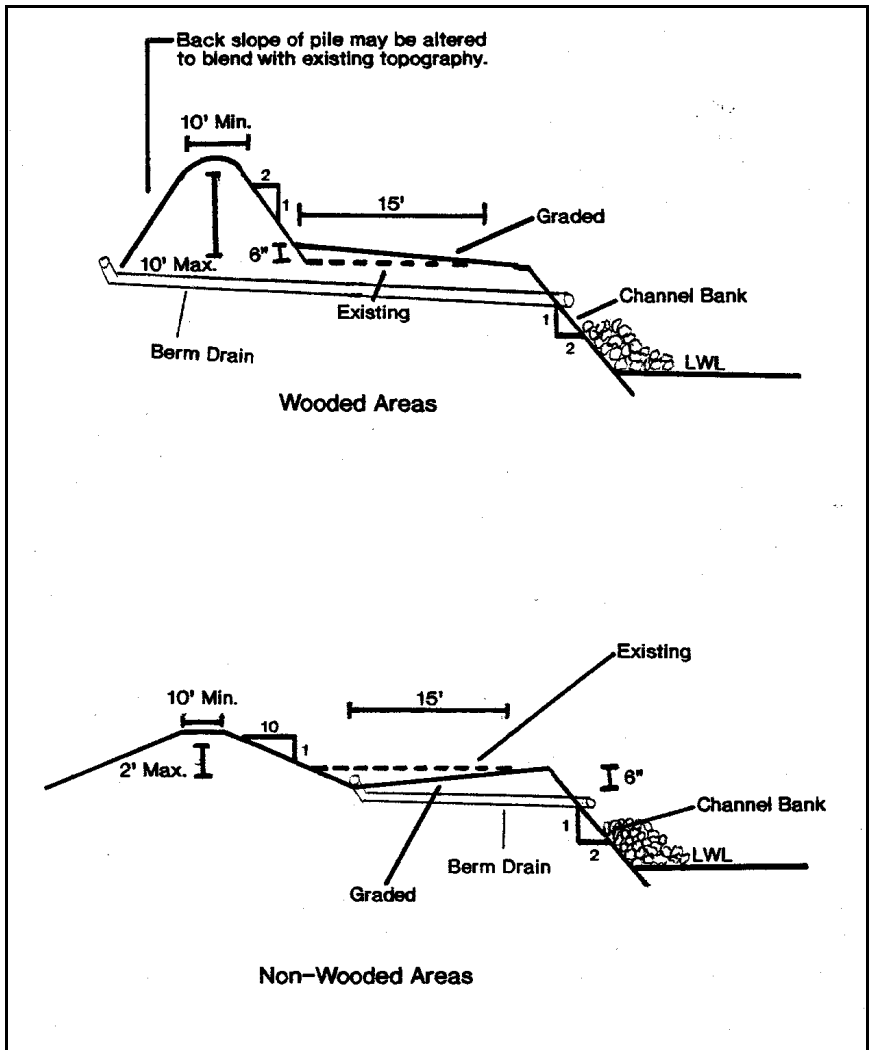


Exhibit 1303c: Grading and access road details (Source: CBEL Files)

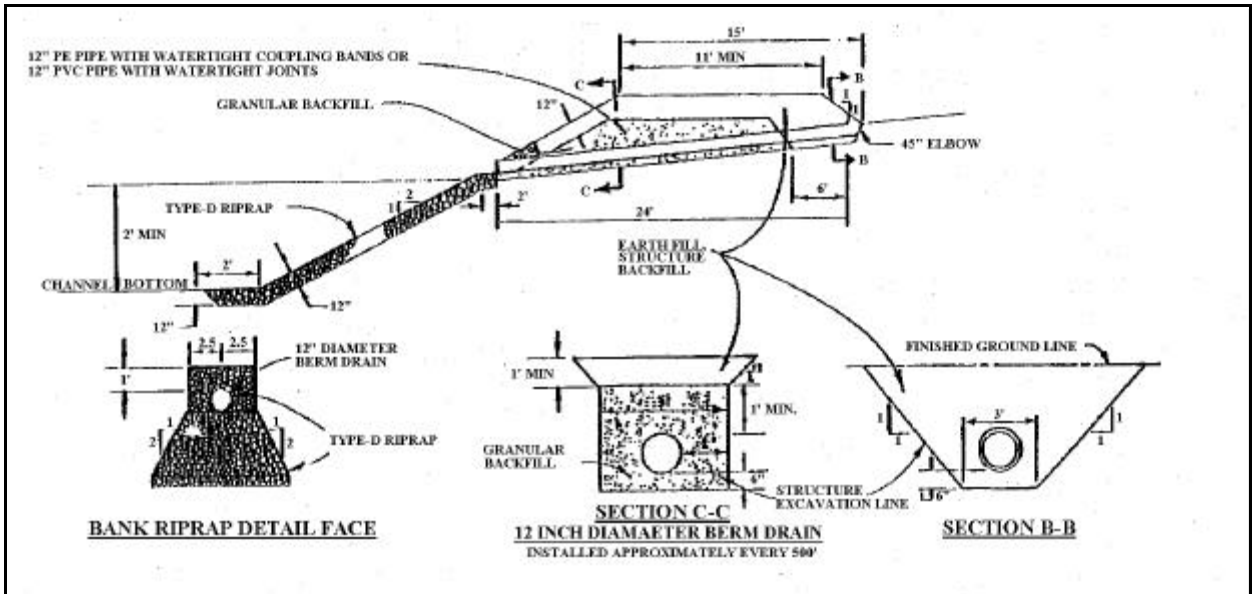


Exhibit 1303d: Berm drain details (Source: NRCS Files)

Non-Wooded Easements

- Verify that no wetlands will be impacted.
- Grade at least a 15' wide access area along the channel. The finished grade should be no more than 0.5' above pre-construction ground elevation. The easement should slope away from the channel at a 6% grade (Exhibit 1303b, Exhibit 1303c).
- Spoil may be graded into the adjacent field creating a low berm for positive drainage.
- Berm drains should be installed at least every 500' (Exhibit 1303d).
- Seed disturbed area (Practice 1102).

Installing Berm Drains

- 12" diameter berm drains should be installed at least every 500' (Exhibit 1303d).
- Drains should be trenched beneath the easement and filled with granular backfill.
- Inlet elevations should be established by providing 0.2% minimum grade from the low ground behind the spoil to the berm drain inlet.
- A 45 degree elbow should be attached to the inlet of the drain.
- Outfall area should be protected with riprap.

Special Considerations

- Where possible, access roads should be located on non-wooded sides of a channel.

MAINTENANCE

- Periodically check access road, and berm drain inlets and outlets for erosion, especially during plant establishment.

REFERENCES

Related Practices

- Practice 102 Tree Preservation and Protection.
- Practice 103 Temporary Wetland Crossing.
- Practice 107 Clearing and Grubbing.
- Practice 1102 Vegetative Stabilization.
- Activity 5.10 Outlet Protection.

Other Sources of Information

- NRCS Files.

Last Print/Revision Date: October 13, 1996