Sandbag Barrier



Description

Device used to intercept sediment-laden sheet flow, and allow sediment to settle prior to discharging off-site.

Applications

- Along the site perimeter.
- Along streams and channels.
- Utility trench barriers in channels.
- Across swales and small catchments.
- Diversion dike or berm.
- Below toe of exposed slopes.
- Temporary sediment trap.
- Around stockpiles.
- Weigh down inlet protection devices.



Sandbag barriers intercept sediment-laden sheet flow and allow sediment to settle prior to discharging off-site.

Installation and Implementation Requirements

- Install bags end-to-end along a level contour.
- Turn ends of sandbag barrier up slope to prevent flow around ends.
- May be used in combination with soil stabilization controls up slope.

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Installation and Implementation Requirements *(continued)*

- Stack sandbags cross-sectionally in a pyramid formation if bags are to be stacked higher than 2 bags. If additional reinforcement is used, then stack sandbags in a brick wall formation.
- Materials for sandbag barrier shall comply with the following:
  - Sandbag shall be woven polypropylene or polyamide fabric with ultraviolet protection to avoid rapid deterioration of fabric.
  - Bag dimensions can vary but must be able to withstand anticipated flows.
  - Fill material shall consist of non-cohesive, permeable material free of fines from clay and deleterious material.
- Sandbag barriers are allowed to be used in-stream provided that they will not become flood hazards, sandbag contents do not leak into the stream bottom, and they are removed once the project is completed.



Sandbags may be stacked in a brick wall-like formation if additional reinforcement is used.

Considerations

- Drainage area shall not exceed 5 acres.
- Avoid installing at locations which may compromise traffic safety.
- Burlap material shall not be used for sandbags.
- Does not filter sediment.
- Bags degrade when exposed to sunlight.
- Not adequate for long-term projects.
- Depending on application, installation may require an adequate amount of manpower.
- Not ideal for concentrated flows.

What to Inspect

- Has sediment accumulated?
- Does the sandbag have tears or rips?
- Are sandbags evenly spaced to weigh down inlet protection?
- Does the sandbag need to be replaced or reoriented?

Sandbag Barrier

What to Inspect *(continued)*

- Is there evidence of erosion undermining the sandbag barrier?
- Is water bypassing the sandbag barrier?

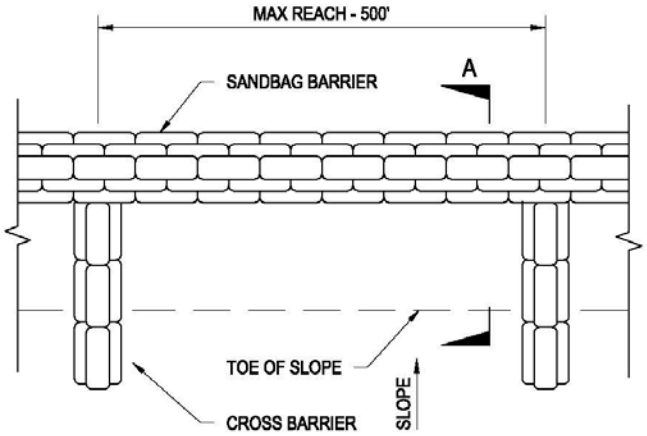
Maintenance

- Reshape or replace sandbags as necessary.
- Remove and properly dispose of sediment, which has accumulated to a depth of 6 inches.
- Remove sandbags if they are no longer in use. If the area needs to be stabilized, do so immediately after removal.



Ensure that disturbed sandbags are reshaped or replaced as necessary.

Sandbag Barrier



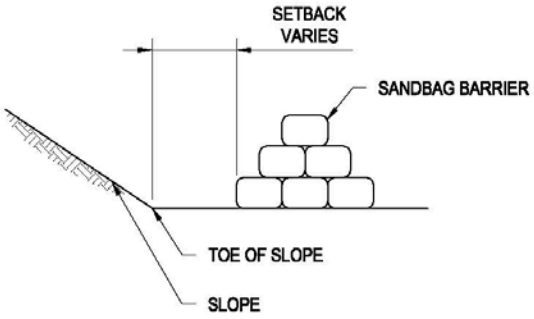
PLAN
NOT TO SCALE

NOTES:

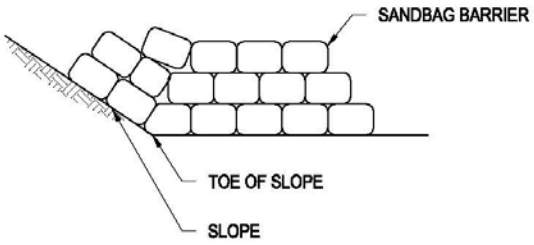
1. CONSTRUCT THE LENGTH OF EACH REACH SO THAT THE CHANGE IN BASE ELEVATION ALONG THE REACH DOES NOT EXCEED 1/2 THE HEIGHT OF THE LINEAR BARRIER.
2. IN NO CASE SHALL THE REACH LENGTH EXCEED 500 FEET.
3. PLACE SANDBAGS TIGHTLY.
4. DIMENSIONS MAY VARY TO FIT FIELD CONDITIONS.
5. SANDBAG BARRIER SHALL BE A MINIMUM OF 3 BAGS HIGH.
6. THE END OF THE BARRIER SHALL BE TURNED UP SLOPE.
7. CROSS BARRIERS SHALL BE A MIN OF 1/2 AND A MAX OF 2/3 OF THE HEIGHT OF THE LINEAR BARRIER.
8. SANDBAG MATERIAL MUST CONFORM TO ASTM D3786 AND ASTM D4355.
9. SANDBAG BARRIERS ARE ALLOWED IN -STREAM PROVIDED THAT THEY WILL NOT BECOME FLOOD HAZARDS, SANDBAG CONTENTS DO NOT LEAK, AND THEY ARE REMOVED ONCE THE PROJECT IS COMPLETED.

SANDBAG BARRIER

Sandbag Barrier



SECTION A
NOT TO SCALE



END DETAIL
NOT TO SCALE

SANDBAG BARRIER