| **Sediment Control Practices** | **SMP-07 Temporary Inlet Protection** |

Symbol

TIP

Description

This practice allows sediment to settle prior to entering into a stormwater catch basin or inlet. The detainment of sediment-laden runoff through filtering devices allows a cleaner runoff to be discharged into the environment.

Application

➢ Protection of storm drain inlets or catch basins from sedimentation upstream of the inlet.
➢ Areas where ponds are not encroached into access road or highway traffic.
➢ Disturbed tributary areas have not yet been permanently stabilized.
➢ Areas where drainage is 1 acre or less.
➢ Areas with drainage more than 1 acre must be accompanied by a downstream sediment trap or basin.

Design

Sediment control can be maintained using one of the following practices:

➢ Filter Fabric Fences
➢ Block and Gravel Filter
➢ Gravel and Wire Mesh Filter
   Excavated Inlet Sediment Traps

The ponding area must be relatively flat (less than 1 percent slope) with a sediment storage of 35 cubic yards per disturbed acre. All incoming storm flows must be intercepted and ponded or filtered by the structure, and pass over the structure and into the storm drain without bypasses. Temporary diking around the structure might be necessary to prevent bypass flow. Material can be excavated from inside the sediment storage area for this purpose. Drop inlet bag and frame filters are available from commercial vendors. These devices work very well if installed and maintained properly. Specify frames or filters that fit tightly around inlets and eliminate bypass opportunities. Filters can be reused if they are not damaged and washed out after prior use.

Design (cont'd)	**Construction Specifications**

Silt Fence Sediment Barrier
➢ Support posts for a silt fence must be steel fence posts or 2 by 4 inch wood, length 3-foot minimum, spacing 3-foot maximum, with a top frame X-brace or other support recommended.

➢ Excavate a trench 4 inches wide and at least 8 inches deep and bury the bottom of the silt fence in the trench.

➢ Backfill the trench with gravel or soil. Compact the backfill well.

➢ The height of the silt fence must be a 1.5-foot maximum, measured from the top of the inlet.

Gravel Doughnut
➢ Keep the stone slope toward the inlet at 3:1 or flatter or use concrete blocks to help prevent the stone from being washed into the drop inlet. A minimum 1-foot-wide level area set 4 inches below the drop inlet crest will add further protection against the entrance of material.
➢ Stone on the slope toward the inlet should be 3 inches or larger for stability, and 1 inch or smaller on the slope away from the inlet to control flow rate. Mix various size stone for best results.
➢ Wire mesh with 2-inch openings can be placed over the drain grating, but it must be inspected frequently to avoid blockage by trash. If concrete blocks are used, the openings should be covered with wire screen or filter fabric.

Maintenance
➢ Replace or clean clogged fabric or gravel immediately.
➢ Remove sediment when depth exceeds half the height of the filter or half the depth of the sediment trap or after each significant rainfall (one-half inch in 24 hours) to provide adequate storage volume for the next rain.
➢ Inspect all inlets and catch basins weekly before and after each rain event greater than one-half inch, and promptly make repairs as needed.
➢ Inspect once every 24 hours during heavy rainfall events.
➢ After site is stabilized remove all inlet devices within 30 days.
➢ Bring disturbed area to final grade and smooth and compact it.
➢ Clean around and inside the storm drain inlet.
➢ Deposit the removed sediment in an area that will not contribute sediment off-site and can be permanently stabilized.

Inspection
❑ Filter fabric stakes are secure.
❑ Filter fabric is cleaned or replaced to prevent clogging.
❑ Sediment from behind the fabric less than ½ the height of the silt fence.
❑ Gravel filter is in working order. No evidence of gravel washing through.
❑ Do not clean any gravel adjacent to any inlet or waterway.
❑ Bags are properly maintained.
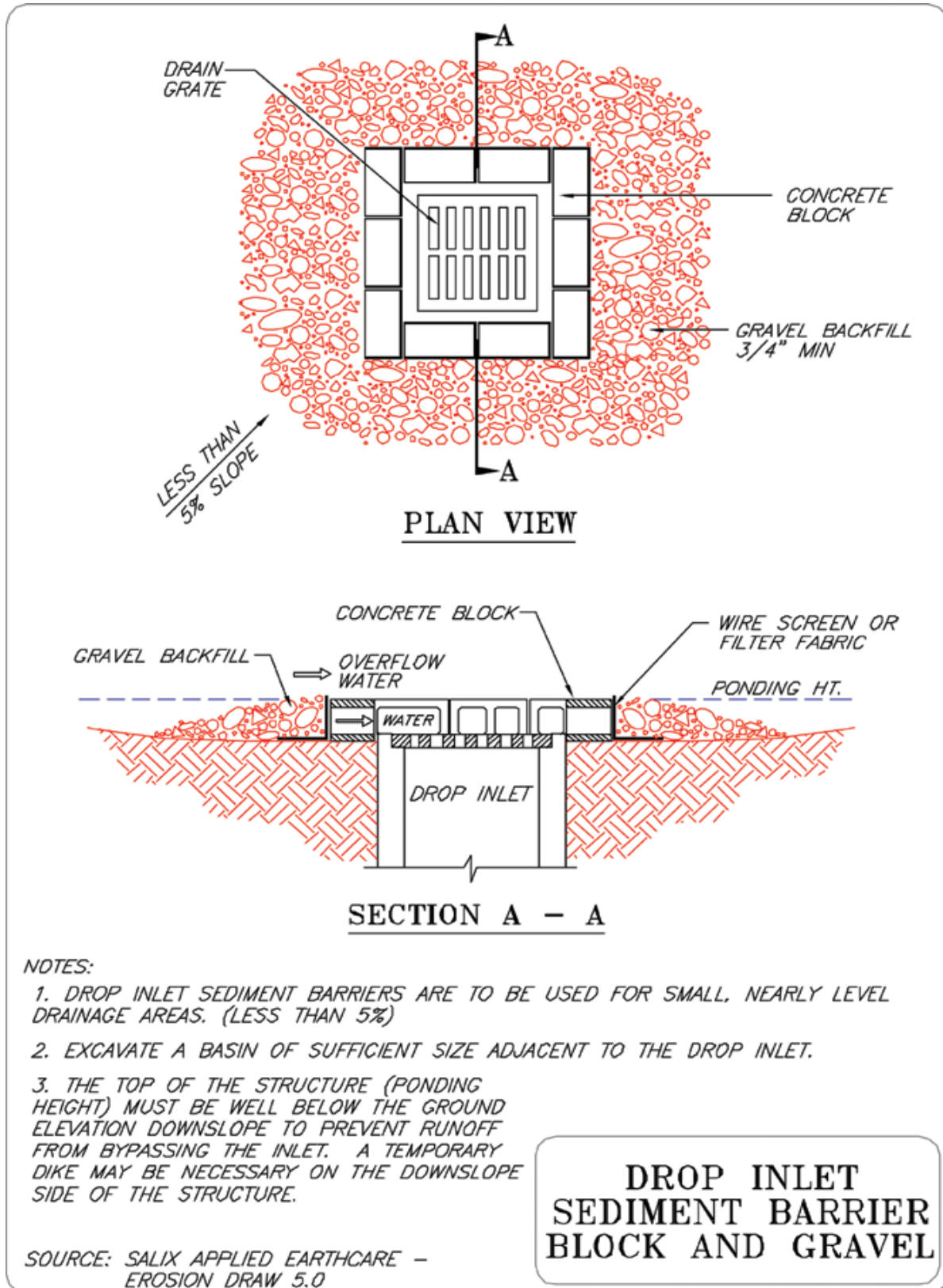❑ No evidence of displacement of the practice.

PLAN VIEW

SECTION A – A

NOTES:

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)

2. EXCAVATE A BASIN OF SUFFICIENT SIZE ADJACENT TO THE DROP INLET.

3. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

SOURCE: SALIX APPLIED EARTHCARE – EROSION DRAW 5.0

DROP INLET SEDIMENT BARRIER BLOCK AND GRAVEL

Figure SMP07-1. Block and Gravel Drop Inlet Protection
Kentucky Construction Site BMP Planning and Technical Specifications Manual