

Sd2

- Excavate foundation of least 2" below the crest of the storm drain.
- On each side of the structure, place one block in the bottom row on its side to allow pool drainage.
- Place the bottom row of blocks against the edge of the storm drain.
- Add support by placing 2"x4" wood slabs through block openings.
- Fit hardware cloth or wire mesh with 1/2" openings over all block openings to hold gravel in place.
- Place clean gravel 2" below the top of the block on a 2:1 or flatter slope and smooth it to an even grade.
- GADOT #57 stone is recommended.

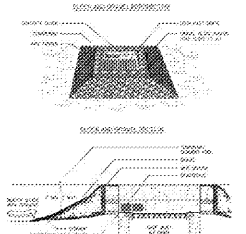


Figure 2. Block and Gravel Drop Inlet Protection Installation Requirements (Sd2-Bg)

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- Baffle Box (Sd2-B)**
- Applicable for inlets receiving a higher volume or velocity.
 - Construct 2"x4" boards spaced a maximum of 1" apart OR of plywood with weep holes 2" in diameter.
 - Place weep holes ~6" on center vertically or horizontally.
 - Place gravel outside of the box and around the inlet at a depth of 2-4".
 - Wrap entire box in Type C filter fabric and trench at a depth of 12".

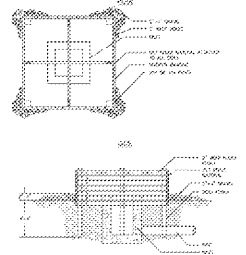


Figure 3. Baffle Box Installation Requirements (Sd2-B)

Sd2-Bg

- Gravel Drop Inlet Protection (Sd2-Bg)**
- Applicable where heavy concentrated flows are expected.
 - 3:1 or flatter slope toward the inlet.

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Sd2

- Leave a minimum 1 ft wide level stone area between the structure and the inlet to prevent gravel from entering the inlet.
- Place stone 3" in diameter or larger on the slope toward the inlet.
- Place 1/2" to 3/4" gravel on the slope away from the inlet at a minimum thickness of 1 foot.

Sd2-P

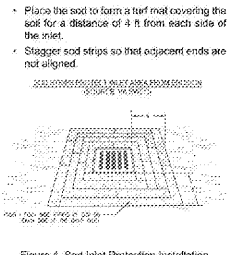


Figure 4. Sd2 Inlet Protection Installation Requirements (Sd2-P)

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Sd2

- For the "pigs-in-a-blanket" method, wrap 8" concrete blocks in filter fabric and span across curb basin inlet.
- Face openings in blocks outward.
- Leave a gap of ~4" between the inlet filter and the inlet to allow for overflow and prevent hazardous ponding in the roadway.
- Another method uses gravel bags consulted by wrapping GADOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

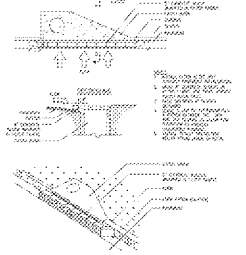


Figure 5. Curb Inlet Protection Installation Requirements (Sd2-P)

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- Inspect, clear, and/or repair trap at the end of each working day.
- Do not remove inlet protection and wash sediment into the inlet.
- Remove sediment when accumulation has reached ~~the top~~ the height of the trap.
- Remove sediment from curb inlet protection immediately.
- Remove all materials and any sediment once the contributing drainage area has been permanently stabilized.
- Appropriately stabilize all disturbed areas around the inlet.

MAINTENANCE

- Ds4 Disturbed Area Stabilization (With Sodding)
- Sd1 Sediment Barrier

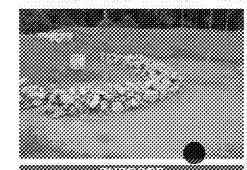
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Sd2

Sd3 TEMPORARY SEDIMENT BASIN

DEFINITION
A basin created by the construction of a barrier or dam across a concentrated flow area, or by excavating a basin, or by a combination of both.



PURPOSE

- Detain runoff waters and trap sediment from eroding areas.
- Protect embankles and drainage ways by the removal of sediment and debris.

INSTALLATION

- Construct all basins according to the approved plans unless modified by design professional.
- Remove all trees, vegetation, rocks, and other obstructions from the basin.
- Never install in a live stream.
- Storm water should discharge into the basin.
- Install on silts where (1) failure will not result in loss of life or interruption of use or service of public utilities and (2) the drainage area does not exceed 150 acres.

Sd3

Components of a Typical Temporary Sediment Basin

- Length to width ratio shall be greater than 2:1.
- The basin should be wedge shaped with the inlet at the narrow end.
- Install baffles and diversions when necessary.

Principal Spillway

- Join vertical pipe or box type riser to a pipe that extends through the embankment and exits beyond the downstream toe of the fill.
- The crest elevation of the riser should be 1 ft below the elevation of the control section of the emergency spillway.
- The riser and all pipe connections shall be completely watertight.
- Install pipes with a minimum diameter of 8".

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Sd3

- If using the conventional method for dewatering a sediment basin, perforate lower half of riser with 1/2" holes spaced approximately 3", and cover with 2 ft of 3"x4" slats.
- If constructing the basin with a skimmer outlet, please refer to the specification Sk-Floating Surface Skimmer.
- Install a trash rack and anti-vortex device securely on top of the riser.
- Attach riser to the base with a watertight connection. Embed riser 9" into an 18" thick concrete base.
- Provide an adequate outlet that allows discharge in an erosion free manner.
- Place the fill material around the pipe spillway in 3" layers and compact to at least the same density as the adjacent embankment.
- A minimum depth of 2 ft of hard compacted trackfill shall be placed over the pipe spillway before crossing it with construction equipment.



Figure 2. Typical Sediment Basin Trash Rack

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Sd3



Figure 3. Concrete Riser Base Detail

- Construct a channel with a straight control section of at least 20 ft in length and a straight outlet section that is at least 25 ft in length.
- Stabilize with vegetation, asphalt, riprap or concrete.

Entrance of Runoff into Basin

- Install dikes, weales, or other water control devices to direct runoff into the basin.
- Locate points of entry as far away from the riser as possible.



Figure 4. Emergency Spillway

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Sd3

- Stabilize the embankment and all other disturbed areas in accordance with the appropriate permanent vegetative measure, Ds3, immediately following construction.



Figure 5. Clean-out marker

- Curb Inlet Protection (Sd2-B)**
- Excavate a 6" deep trench with a minimum depth of 12" along the centerline of the curb.
 - Extend the trench to the riser crest to a minimum bottom depth of 4 ft in order to permit operation of construction equipment.
 - Stabilize slopes 3:1 or steeper than 1:1.

- Embankment (Sd3)**
- Place fill material in 6"-8" thick continuous layers over entire length of fill.
 - Construct the embankment to an elevation 1% higher than the design height to allow for settlement.
 - Fill material shall be free of rocks, woody vegetation, oversized stones, rocks, etc.

Table 1. Dam Width Requirements

Fill Height (ft)	Minimum Top Width (ft)
<10	8
10-15	10

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Sd4

Sd4 TEMPORARY SEDIMENT TRAP

DEFINITION
A small temporary pond that drains a disturbed area so that sediment can settle out.



Figure 6. Sediment Trap

- Collect and store sediment from uphill sites cleared and/or graded during construction.
- For use on small tributary areas with no unusual drainage features.

INSTALLATION

- Install according to the approved plan.
- Sediment traps are effective against coarse sediment, but not against silt or clay particles.
- The maximum drainage area is 5 acres depending on the type of installation.
- The maximum depth of a trap is 4 ft as measured from the bottom of the trap to the invert of the emergency spillway.
- Ensure the length to width ratio is greater than 2:1.
- The height of the embankment shall not exceed 5.5 ft from the downstream toe to the top of the berm. The top width shall be at least 3 ft.
- Slopes shall not exceed 2:1.

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Sd4

- Construct side slopes 3:1 or flatter to allow people and equipment to enter the basin.

Methods (Sd4-A)

- Limited to small drainage areas less than 1 acre with gentle slopes (1-2%).
- The maximum life span is 6 months.
- Silt fence, straw bale barriers or grass filter strips are used to "pocket" the overflow water as it leaves the sediment trap.

Combination Outlet (Sd4-B)

- A combination of straw bales and silt fence are used to dewater the trap.
- Properly install and stake the straw bales and ensure the silt fence has a wide socking so that the materials can resist 1 ft or more of ponded water.
- The maximum drainage area is 1 acre.
- The life span is less than 1 year.
- Requires frequent maintenance and adjustments.

Rock Outlet (Sd4-C)

- This type relies on filtering through layers of aggregate, rock or riprap material to dewater the sediment trap.
- This is the sturdiest design of the three and requires less maintenance.
- The maximum drainage area is 5 acres.
- The life span is typically 1 year.

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Sd4

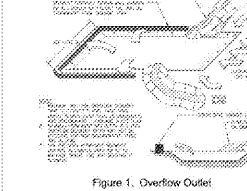


Figure 1. Overflow Outlet

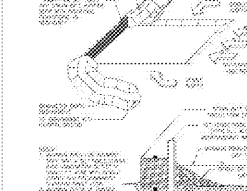


Figure 2. Combination Outlet

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Sd4

- Emergency Spillway**
- Stabilize with rock, geotextile, vegetation, or another suitable material that is resistant to erosion.
 - Must be able to convey the 10-year storm event.

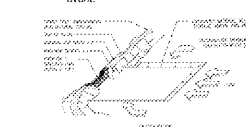


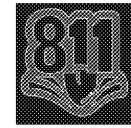
Figure 3. Rock Outlet

MAINTENANCE

- Repair all damages caused by soil erosion or construction equipment at or before the end of each working day.
- The cleanout volume for a temporary sediment trap is one-third of the total storage volume.

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