Riprap Outlet Sediment Trap

**DATA**
- Drainage area (D.A.)
- Required storage \( (V_s) \)
- Design dimensions \((L \times W \times D)\)
- Embankment height \((H)\)
- Channel depth \((a)\)
- Weir length \((b)\)

**Perspective**

Flared apron
(end width = 1.5 x \(b\))

Compacted embankment

Excavated area

Flow

**Profile thru Outlet**

Top of compacted embankment
min. 1’ above top of stone lining

Temp. storage

Excavate below this elevation for additional wet pool storage

**Cross-section of Outlet**

EX. grnd

Rip-rap
\((R-4, \text{ Thickness } = 14”)\)

Geosynthetic fabric

\(1\)

\(2\)

\(a\)

\(b\)

\(4’ \text{ Min.}\)

\(10’ \text{ Min.}\)

\(H (4’ \text{ max.})\)

\(14”\)

\(D.\) A. 

\(V_s\)

\((L \times W \times D)\)

\(H\)

\(a\)

\(b\)

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**Source:** Adapted from MD Stds. & Specs. for ESC

**Symbol:** RST

**Detail No.:** DE-ESC-3.1.3.3

Sheet 1 of 2

Effective FEB 2019
## Construction Notes:

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be four (4) feet, measured at centerline of the embankment.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to the elevation of the crest of the outlet weir channel.
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
7. Stone used in the outlet shall be R-4 riprap with a thickness of 14”.
8. **An approved dewatering device shall be considered an integral part of the trap. Dewatering operations shall be conducted in accordance with any and all regulatory requirements.**
9. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
10. The structure shall be inspected after each rain and repaired as needed.
11. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized. Disturbed areas shall be stabilized in accordance with the Standards and Specifications for vegetative Stabilization contained in this Handbook.
12. The structure shall be removed and the area stabilized when the contributing drainage area has been properly stabilized.

**MAXIMUM DRAINAGE AREA: 15 ACRES**

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<th>Detail No.</th>
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<td>RST</td>
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<td>Sheet 2 of 2</td>
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