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Notes for Construction Entrance:
1. Avoid locating on steep slopes, over changes in public roads, or adjacent to existing structures.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 3H:1V side slope across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain positive drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
7. If conditions warrant, place geotextile fabric on a graded foundation to improve stability.

Maintenance for Construction Entrance:
1. Restamps entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

Notes for Concrete Washout:
1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout areas shall include a flat subsurface pit that extends to the amount of concrete to be placed on site. The subsurface pit shall be the same width as the entrance trenching and shall extend the full length of the entrance trenching.
3. Vehicle-tracking control is required at the entrance point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area, and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete trucks.
5. A drainage line with sediment control device shall be placed along the bottom and sides of the subsurface pit to drain or gravity sink.

Maintenance for Concrete Washout:
1. Concrete washout areas shall be expanded or extended into the materials to receive the washout at approximately 15% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout areas shall be designed in the subsurface pit and after the concrete is placed, it shall be removed from the job site.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the washout area installation, and/or removal of the concrete washout areas shall be finished.

CONCRETE WASHOUT

CONSTRUCTION ENTRANCE
Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope, in order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.

2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep, buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and tucked in similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.

3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.

4. CHECK SLOTS: Establish check slots transverse to slope every 20 feet. The slots should be 6 inches wide x 6 inches deep.

5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.

6. TERMINUS: The bottom edge of the mat shall be anchored.

Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course of the blanket centered over the project's line. All subsequent laps and seams shall be in contact with the soil, lay blanket loosely, avoiding stretching.

2. ANCHOR FOLD: The top of the mat should be tucked under, buried and secured with wood or other approved anchors.

3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 6 inches, with anchors outlining the edges of both blankets.

Maintenance:

1. Damaged or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.

2. Edges or seams that are loose or frayed shall be secured.
**Notes:**

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).

2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into smaller segments to minimize water concentrations (Figure A).

3. Long slope should be broken up with intermediate rows of silt fence to slow runoff velocities.


5. Install posts a minimum of 2' into the ground.

6. Trenching will only be allowed for small or difficult installation, where using machine cannot be reasonably used.

**Maintenance:**

1. Remove and dispose of sediment deposits when the deposit approaches 1/3 the height of silt fence.

2. Repair as necessary to maintain function and structure.

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**SILT FENCE LAYOUT**

![Diagram of silt fence layout](image)

**JOINING FENCE SECTIONS**

![Diagram of joining fence sections](image)

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**SILT FENCE DETAILS**

Not to Scale

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**STANDARD DRAWING**

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY
METRO CHAPTER

ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.
Notes for Wattles and Biodegradable Log Slope Protection:
1. The slope barriers shall be placed along contour lines, with a short section turned upside at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer’s instructions.
3. Spacing of stakes per manufacturer’s instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with maximum of 24’.

Maintenance for Mulch and Compost Filter Beam:
1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

Notes for Mulch and Compost Filter Beam:
1. The sediment control berm shall be placed uncompacted in a window of locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or when specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berm in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grading and shall be ground by the mechanical means such as a chipper, hammermill, or shred mill. Other approved method.

Mulch or Compost Filter Bem:

1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.
Notes for Diversion Berm:
1. Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
2. Diversion berms must be installed as a first step in the land-disturbing activity and must be functional prior to upslope land disturbance.
3. The berm should be adequately compacted to prevent failure.
4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
5. Place the berm as to minimize damages by construction operations and traffic.
6. The berm must discharge to a temporary sediment trap or stabilized area.
7. All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of as not to interfere with the proper functioning of diversion.
8. The diversion shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
9. The diversion shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
10. The diversion shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
11. The diversion shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.

Maintenance:
1. Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
2. Breaches in the berm shall be repaired immediately.

Notes for Slope Drain:
1. Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
2. The slope drain shall be sloped at 2:1 or shall be shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
3. The slope drain shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
4. The slope drain shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
5. The slope drain shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.

Maintenance:
1. Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
2. Outlet conditions shall be repaired if scour is observed.
3. Leakage or damaged section of pipe shall be repaired immediately.
4. Barriers directing water to the inlet shall be monitored for continuity and effectiveness.
5. Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
6. Breaches in the berm shall be repaired immediately.
Notes:
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:
1. Remove deposits from excavated storage area when available storage has been reduced by 20%.
2. Remove deposits from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

Notes:
Filter sock is to have a tight fit with no gaps and extend approximately 6" beyond inlet opening.

Notes:
Filter sock is to have a tight fit with no gaps and extend approximately 6" beyond inlet opening.

On Grade Curb Inlet Protection

Sump Inlet Sediment Filter

Notes:
1. Contractor shall field verify that ponded water depth will not cause unintended flooding.
2. Ponded Water Depth will not cause unintended flooding.

Notes:
On Grade Curb Inlet Protection

Sump Inlet Sediment Filter

Notes:
On Grade Curb Inlet Protection

Sump Inlet Sediment Filter
**Notes:**

1. Early Stage Area inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

**Maintenance:**

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

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**Area Inlet and Junction Box Protection**

**AERIAL STAGE AREA INLET**

*All open boxes and inlets not at final grade*

1. **Excavated Area for Sediment Storage**
2. **Silt fence**
3. **Wire Reinforced Silt Fence**

**Plan**

- **4' Max**
- **2' Min**

**Section A-A**

- **Top of silt fence below top of wall of sheeting to prevent bypass**
- **To 1' Dia**
- **2' Min.**

---

**LATE STAGE AREA INLET**

*(Area inlets at final grade and existing inlets)*

- **Wire Reinforced Silt Fence**
- **10" min 24" max**
- **Proposed Finished Grade**
- **Erosion Control Product**

**Erosion Control Product**

- **Sediment Storage**
- **Excavated Area for**

**Plan**

- **Top of inlet**
- **Final stabilized grade**

**Notes:**

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.
Notes for Sediment Trap:
1. The area under the embankment shall be cleared, graded, and stripped of any vegetation and root mat.
2. Fill material for the embankment shall be free of stones or other materials unsuitable for an embankment, large stones, and other objectionable material. The embankment should be compacted in 6-inch layers by traversing with construction equipment.
3. The outer embankment should be stabilized immediately after embankment construction.
4. Construction operations shall be carried out in such a manner that any resultant grading and compaction will not cause excessive inconvenience or damage to adjacent areas or structures.
5. Geometry of the design will be such that any resultant grading and compaction will not cause excessive inconvenience or damage to adjacent areas or structures.
6. All cut and fill slopes shall be 2H:1V or flatter, except for embankment sides which may be up to a maximum 1H:1V grade.
7. 67 C.Y./Acre dry storage from base of stone to top of stone berm.
8. 67 C.Y./Acre wet storage below base of stone.
9. Storage requirements equivalent to that of temporary sediment trap.
10. Geometry of the design will be such that any resultant grading and compaction will not cause excessive inconvenience or damage to adjacent areas or structures.
11. Cross-section of outlet shall be constructed in such a manner that any resultant grading and compaction will not cause excessive inconvenience or damage to adjacent areas or structures.
12. Maintenance for Sediment Trap:
   1. Check sediment traps after periods of significant runoff.
   2. Remove sediment and restore the trap to its original dimensions when sediment accumulation is 20% of the storage capacity.
   3. Immediately repair any erosion damage to the embankment and outlet.
   4. Keep outlet and pool area free of all trash and other debris.

Notes for Sediment Trap at Culvert Opening:
1. The inlet protection device shall be constructed in such a manner that any resultant grading and compaction will not cause excessive inconvenience or damage to adjacent areas or structures.
2. All cut and fill slopes shall be 2H:1V or flatter, except for embankment sides which may be up to a maximum 1H:1V grade.
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1. The area under the embankment shall be cleared, graded, and stripped of any vegetation and root mat.
2. Fill material for the embankment shall be free of stones or other materials unsuitable for an embankment, large stones, and other objectionable material. The embankment should be compacted in 6-inch layers by traversing with construction equipment.
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   2. Remove sediment and restore the trap to its original dimensions when sediment accumulation is 20% of the storage capacity.
   3. Immediately repair any erosion damage to the embankment and outlet.
   4. Keep outlet and pool area free of all trash and other debris.
Notes for Silt Fence Ditch Check:
1. Stakes shall be 4' (min.) long and one of the following materials:
   a. Hardwood - 1 3/8" x 1 3/8".
   b. Southern Pine (No. 2) - 2 3/8" x 2 3/8".
   c. Steel U, T, L, or C Section - 25 lbs per ft (max).
   d. Synthetic - same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.
6. Use support fencing when tributary area is greater than 2.4 acres or when ditch gradient is greater than 2 percent.
7. Silt fence shall be 4' high or more.
8. Attach to top frame with one of the following materials:
   a. Hardwood - 1 3/8" x 1 3/8".
   b. Southern Pine (No. 2) - 2 3/8" x 2 3/8".
   c. Steel U, T, L, or C Section - .95 lbs per ft (max).
   d. Synthetic - same strength as wood stakes.

Notes for Wattles and Biodegradable Log Ditch Check:
1. Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.
2. Overlap sections a minimum of 16".
3. Stakes shall be per manufacturer's instructions.
4. Use Erosion Control (Class 1) (Any Type).
5. Use Erosion Control (Class 2) (Any Type) channel lining as directed by the Engineer.
6. Use Erosion Control (Class 2) (Any Type) as the downstream apron when directed by the Engineer.
7. Silt fence sliced in to a 6" minimum depth.
8. Elevation at tie in points shall be a minimum of 4" higher than the center.
**Spacing Between Check Dams (all types)**

**Type I**
(2 Acres or less of Drainage Area)

- 3" to 6" aggregate upstream

**Type II**
(2-10 Acres of Drainage Area)

- 12" riprap downstream

**Notes:**

1. Rock check dams shall be used only for drainage areas less than 10 acres unless approved by the City Engineer.
2. Use rock checks only in situations where the ditch slope exceeds 6%.

**Maintenance:**

1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of the ditch check.
2. Replace and reshape as necessary to maintain function and integrity of installation.

**Spacing Interval**

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**Notes:** Use this spacing only for Rock Ditch Checks.
### Sediment Basin Design Summary (**)

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<th>Basin #1</th>
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<td>Minimum Sediment Storage Volume</td>
<td>cu yd</td>
<td>154 cu yd/acre required minimum</td>
</tr>
<tr>
<td>Provided Sediment Storage Volume</td>
<td>cu yd</td>
<td></td>
</tr>
<tr>
<td>Bottom Elevation</td>
<td>ft</td>
<td></td>
</tr>
<tr>
<td>Sediment Channel Elevation</td>
<td>ft</td>
<td>Elevation equal to 25% of original design volume</td>
</tr>
<tr>
<td>Top of Riser Elevation</td>
<td>ft</td>
<td></td>
</tr>
<tr>
<td>Top of Dry Storage Volume</td>
<td>ft</td>
<td></td>
</tr>
<tr>
<td>Emergency Spillway Elevation</td>
<td>ft</td>
<td>all or above 2YR elevation, 1.0 ft min above principal spillway</td>
</tr>
<tr>
<td>Top of Dam Elevation</td>
<td>ft</td>
<td>1.0 ft min above D-25 elevation</td>
</tr>
<tr>
<td>Check Shape Data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A = Area of Normal Pool</td>
<td>ft²</td>
<td></td>
</tr>
<tr>
<td>L = Length of Flow Path</td>
<td>ft</td>
<td></td>
</tr>
<tr>
<td>W0 = Effective Width = A/L</td>
<td>ft</td>
<td></td>
</tr>
<tr>
<td>Length to Wall Ratio = L/W0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal Spillway Data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riser Pipe dia</td>
<td>in</td>
<td>15&quot; min. Size for 2 year flow minimum</td>
</tr>
<tr>
<td>Barrel Pipe dia</td>
<td>in</td>
<td>15&quot; min. Size for 2 year flow minimum</td>
</tr>
<tr>
<td>Concrete Base size for Riser Pipe</td>
<td>ft²</td>
<td></td>
</tr>
<tr>
<td>Concrete Base size for Barrel Pipe</td>
<td>ft²</td>
<td></td>
</tr>
<tr>
<td>Skimmer Size</td>
<td>ft²</td>
<td></td>
</tr>
<tr>
<td>Trash Rack (see skimmer detail Sht. ESC-12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Permeability Backfill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skimmer Size</td>
<td>ft²</td>
<td></td>
</tr>
<tr>
<td>Lining Material</td>
<td>ft/sec</td>
<td></td>
</tr>
<tr>
<td>Design Velocity in Spillway</td>
<td>ft/sec</td>
<td></td>
</tr>
<tr>
<td>Lining Material</td>
<td>ft/sec</td>
<td></td>
</tr>
<tr>
<td>Sediment Basin Notes:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Interior baffles shall be provided to reduce short-circuiting of the basin. See Sht. ESC-12 for approved baffle options.
2. Anti-seep collars shall be located in a non-fill location when feasible and shall be lined with a non-permeable material such as Riprap or Turf Reinforcement Mat.
3. When directed, sediment basins shall be fenced using construction fence or other material for safety reasons and include warning signs, reading: "Danger - KEEP OUT".
4. Provide baffles. For baffle options see details on Sht. ESC-12.
5. Emergency spillways to be located in a non-fill location when feasible and shall be lined with a non-erodible material such as Riprap or Turf Reinforcement Mat.

**Maintenance:**

1. Check temporary sediment basins after periods of significant runoff.
2. Remove sediment and restore the basin to its original dimensions when sediment accumulates to 25% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Repair and/or replace baffles as necessary to maintain function and integrity of installation.
5. Keep outlet, skimmer and pool area free of all trash and other debris.

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**Note:** The plans and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.
**PRINCIPAL SPILLWAY DETAIL**

- **Cleanout level**: Red painted, 2' max.
- **Outlet pipe**
- **Trash Rack**
- **Riser**
- **Dia. CMP**: 15" min. (Dia. varies)
- **Schedule 40 PVC Pipe**
- **Floating Skimmer**
- **Dia. varies**: min. length, Orifice 12"
- **Dewatering**
- **Coupling**
- **Style**: "Fernco"
- **Tubing dia.**
- **Flexible**
- **Ballast**: Concrete

**Cleanout Level**

- **To increase flow with consistent 1" deep weirs at alternating ends of each baffle, riser width should be adjusted for expected flow (min. 4")**

**Flexible Pipe**

- **Barrel pipe longer than shown**
- **Float**
- **Screen accessible**
- **Vent**

**SKIMMER DETAIL (Typ.)**

*Designer to provide specific details per application for skimmer maintenance*

- Pull cord secured to bank
- **Watertight Joints**

**BAFFLE DETAILS**

- **Not to Scale**
- **Weir width should be adjusted for expected flow**
- **Alternating ends of each baffle**
- **To increase flow path construct 1' deep weirs at alternating ends of each baffle.**

**Option A - Rock with Weir**

- **Stable impervious rock dam**
- **3"-6" clean aggregate**

**Option B - Coir Fiber Material**

- **2'-0" ties at posts and on wire every 12"**
- **Support wire or rope and secure with plastic**
- **Drape baffle material over support**
- **Coir fiber or similar material**
- **Maximum 4' between posts**
- **Support wire or rope**

**ANTI-SEEPAGE COLLAR DETAIL**

- **Corrugated Metal**

**ANTI-SEEPAGE COLLAR LOCATIONS**

1. Connections between the anti-seepage collar and the barrel must be watertight.
2. P = projection distance. Sized as required to achieve at least a 10% increase in seepage length.
3. 14xP = Max. spacing between collars.
4. Collars shall generally be placed in the middle third of the embankment, and within the saturated zone.
5. All materials to be in accordance with construction material specifications.
6. When specified on the plans, coating of collars shall be in accordance with construction material specifications.
7. Each collar shall be furnished with two (2) 1 1/8" diameter rods with standard tank lugs for connecting the collars to the pipe.
8. For bands and collars, modification of the details shown may be used providing equal water tightness is maintained and detailed drawings are submitted and approved by the Engineer prior to delivery.
**Notes for Temporary Stream Crossing**

1. Stream bank erosion by installing with erosion control BMPs such as erosion control blankets.

2. For all stream channels, ensure the culvert outlet(s) with riprap to dissipate energy.

3. If sediment or debris is accumulating upstream of the crossing, remove as needed to maintain the function of the crossing.

4. If a temporary crossing is required, the culvert or alternate design may be necessary.

**Maintenance:**

1. Repair stream bank erosion by installing with erosion control BMPs such as erosion control blankets.

2. For all stream channels, ensure the culvert outlet(s) with riprap to dissipate energy.

3. If sediment or debris is accumulating upstream of the crossing, remove as needed to maintain the function of the crossing.

4. If a temporary crossing is required, the culvert or alternate design may be necessary.

**Temporary Stream Crossing**

**Notes for Temporary Diversion Channel**

1. The diversion channel crossing must be operational before work is done in the stream. Construction will be performed in the dry.

2. Minimum width of bottom shall be 6 feet or equal to bottom width of existing streambed, whichever is less.

3. Maximum steepness of side slopes shall be 2H:1V. Depth and grade may be variable, dependent on site conditions, but shall be sufficient to ensure continuous flow of water in the channel.

4. Channel must be lined with riprap or turf reinforcement mat depending on the expected velocity and shear stress in the channel.

5. Stream diversion levees shall be secured at the upstream and downstream sides with non-erodible weights such as riprap. These weights shall allow normal flow of the stream. Soil shall not be mixed with stream diversion weights. Weights may also be needed along the diversion's length to secure them.

6. Stream diversion levees shall be removed at the top of slope along with a sediment control blanket.

7. Non-erodible materials such as mastic, earth barriers, and non-erodible weights shall be used as flow barriers to divert the water away from the original channel and prevent or reduce water backup into the construction area.

8. Streams should be re-watered, only after backfilling and re-establishment of original streambanks and banks is completed.

**Stream Diversion Channel**

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

**Notes for Diversion Channels**

1. The diversion channel crossing must be operational before work is done in the stream. Construction will be performed in the dry.

2. Minimum width of bottom shall be 6 feet or equal to bottom width of existing streambed, whichever is less.

3. Maximum steepness of side slopes shall be 2H:1V. Depth and grade may be variable, dependent on site conditions, but shall be sufficient to ensure continuous flow of water in the channel.

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8. Streams should be re-watered, only after backfilling and re-establishment of original streambanks and banks is completed.
1. Rock all sides steeper than 3:1.
2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
4. Install riprap apron so that it is no higher than flowline of pipe.
5. Reference APWA Specification 2650 for rock type, size, and placement.

Notes:

OUTLET PROTECTION W/O END SECTION

OUTLET PROTECTION WITH END SECTION

OUTLET PROTECTION

Modified from 2015 Shawnee Park Standard Details for Erosion and Sediment Control.