TRANSMITTAL LETTER

PUBLICATION:
Publication 72M
April 2004 Edition
Change No. 3

DATE:
August 29, 2008

SUBJECT:
Revisions to
Standards for Roadway Construction
April 2004 Edition

INFORMATION AND SPECIAL INSTRUCTIONS:
Incorporate the attached revisions into the April 2004 Edition of the Standards for Roadway Construction. These revisions should be adopted as soon as practical on all new and existing designs without affecting any letting schedules.

Revisions to RC-28M and RC-30M incorporate changes previously issued in SOL 432-08-04 and revisions to RC-64M and RC-67M incorporate changes previously issued in SOL 433-08-07.


The major revisions for each Standard Drawing are presented below. It is strongly advised that all recipients thoroughly examine the changes and revisions incorporated in this Change.

The new Standard Drawings that have been added are presented below.

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CANCEL AND DESTROY THE FOLLOWING:
RC-28M
RC-30M
RC-64M
RC-67M
SOL 432-08-04
SOL 433-08-07

ADDITIONAL COPIES ARE AVAILABLE FROM:

- PennDOT SALES STORE
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  (717) 767-8779 fax
  ra-penndotsalesstore.state.pa.us
- PennDOT website - www.dot.state.pa.us
  Click on Forms, Publications & Maps
- DGS warehouse (PennDOT employees ONLY)

APPROVED FOR ISSUANCE BY:

ALLEN D. BIEHLER
Brian G. Thompson, P.E.
Director of Bureau of Design, Highway Administration
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*APRIL, 2004 EDITION

**SEE CHANGE #1 FOR MAR. 30, 2006 STANDARD REVISIONS**

**SEE CHANGE #2 FOR JUL. 20, 2007 STANDARD REVISIONS**

**SEE CHANGE #3 FOR AUG. 29, 2008 STANDARD REVISIONS**
APPLY TACK COAT, AS INDICATED.

ON CONCRETE AND BITUMINOUS PAVEMENTS

OVERLAY TRANSITION WITH PAVING NOTCH

OVERLAY TRANSITIONS

PLAN VIEW

SUPERELEVATION SECTION

TABLE A

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<th>PAVING NOTCH (MINIMUM)</th>
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<tr>
<td>INTERSTATE AND OTHER</td>
<td>0.1% (1' IN 50')</td>
<td>15 m (50')</td>
</tr>
<tr>
<td>LIMITED ACCESS FREEWAYS</td>
<td>0.2% (1' IN 30')</td>
<td>8 m (30')</td>
</tr>
<tr>
<td>ARTERIALS &gt; 900 ft / 145 m</td>
<td>0.4% (1' IN 10')</td>
<td>3 m (10')</td>
</tr>
<tr>
<td>SEE NOTE 2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARTERIALS &lt; 900 ft / 145 m</td>
<td>0.6% (1' IN 10')</td>
<td>5 m (10')</td>
</tr>
<tr>
<td>COLLECTORS AND LOCAL ROADS</td>
<td>0.3% (1' IN 12')</td>
<td>5.5 m (12')</td>
</tr>
<tr>
<td>SEE NOTE 1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CROSS STREETS</td>
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<tr>
<td>SEE NOTE 1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRIVERWAYS</td>
<td>0.3% (1' IN 12')</td>
<td>NO NOTCH</td>
</tr>
</tbody>
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SEE TABLE A FOR DIMENSIONAL REQUIREMENTS

* SHOULD BE EQUALED THE THICKNESS OF THE WEARING COURSE.

TABLE B

<table>
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<th>NOMINAL MAXIMUM AGGREGATE SIZE</th>
<th>MIX</th>
<th>METRIC</th>
<th>ENGLISH</th>
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<tr>
<td>SP9.5 (ID-2W, ID-2W H.D.)</td>
<td>9.5</td>
<td>¹/₄&quot;</td>
<td></td>
</tr>
<tr>
<td>SP12.5</td>
<td>12.5</td>
<td>¹/₂&quot;</td>
<td></td>
</tr>
<tr>
<td>SP19 (ID-38, ID-28, ID-2B H.D.)</td>
<td>19</td>
<td>³/₄&quot;</td>
<td></td>
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</tbody>
</table>

NOTES:

1. USE HIGHER APPROPRIATE CRITERIA IF A CROSS STREET HAS A FUNCTIONAL CLASSIFICATION OF COLLECTORS AND LOCAL ROADS OR HIGHER.

2. USE 85TH PERCENTILE SPEED, IF AVAILABLE. OTHERWISE, USE THE POSTED SPEED.

3. PLACE Edge Flush WITH EXISTING PAVEMENT AND SEAL AS SPECIFIED IN PUBLICATION 408, SECTION 401.3(Y).

4. CONSTRUCT FLEXIBLE BASE REPLACEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 316.

5. PREPARE EXPOSED VERTICAL AND HORIZONTAL SURFACES AS PER PUBLICATION 408, SECTION 409.3(I).

6. FOR NON-OVERLAY APPLICATIONS, THE TOP 40 (1½") OF BASE REPLACEMENT WILL BE SUPERPAVE WEARING COURSE.

7. FOR RESTORATION OF RIGID PAVEMENT, REFER TO PUBLICATION 408, SECTION 516 AND RC-26M.

8. FOR SUPERPAVE BASE REPLACEMENT, SAW CUTTING, EXCAVATION, BANDING AND DISPOSAL, BITUMINOUS TACK COAT, STABILIZER MATERIAL, AND SEALING OF THE JOINTS ARE CONSIDERED AS INCIDENTAL.

9. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS IN PARENTHESES.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

OVERLAY TRANSITIONS AND PAVING NOTCHES

OVERLAY TRANSITIONS

LONGITUDINAL NOTCHED WEDGE JOINT
1. Provide materials and construction meeting the requirements of Publication No. 408, Section 610 for pavement base drain, Section 612 for subsurface drain, and Section 604 for combination storm sewer and underdrain.

2. Provide bituminous paper when geotextile material is not indicated.

3. Prefabricated pavement base drain is not recommended under curved sections and adjacent to widened pavement.

4. Place 2A aggregate material, in a lift to 3" thick, compact to 95% SPD.

**Notes**

- Provide materials and construction meeting the requirements of Publication No. 408, Section 610 for pavement base drain, Section 612 for subsurface drain, and Section 604 for combination storm sewer and underdrain.

- Provide bituminous paper when geotextile material is not indicated.

- Prefabricated pavement base drain is not recommended under curved sections and adjacent to widened pavement.

- Place 2A aggregate material, in a lift to 3" thick, compact to 95% SPD.

**Legend**

- Depth below subbase equal to the outside diameter of specified pipe plus 50 (2")

- When storm sewer is required and it interferes with placement of pavement base drain, eliminate the pavement base drain and use combination storm sewer and underdrain.

- Subbase depth.

- Sloping of the subbase material under the pavement is observed during trench excavation, compact backfill hydraulically, as directed by the engineer.

- Width is equal to 15-125 (3-5") of backfill aggregate plus 25 (1") for the prefabricated base drain.

- Vary to maintain the necessary subgrade slope. Consider additional aggregate incidental to the subgrade drain pay item.

**Subsurface Drains**

**Commonwealth of Pennsylvania**

Department of Transportation

**Notes:** Either all metric or all English values must be used on plans. Metric and English values shown may not be mixed.
COMPACTED 2A MATERIAL, SEE SHEET 4, BACKFILL DETAIL AT ENDWALL (FOR CONCRETE PIPE)

EXCAVATION FOR ENDWALLS

EXTRA DEPTH FOR PIPE UNDERDRAIN AND PAVEMENT BASE DRAIN

PAY LIMITS FOR PIPE EXCAVATION

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
PIPE INSTALLATION PROCEDURES

CONSTRUCTION DETAILS BELOW COVER THE FOLLOWING CONDITIONS:

A) PIPE LAYING ON TOP OF THE NATURAL GROUND,
   ROCK OR COMPACTED WITH FILL.

B) THE EXISTING GROUND IS BETWEEN THE TOP AND THE BOTTOM OF THE PROPOSED PIPE AND THE
   EXCAVATION BEDDING IS 1200 (4'-0") ABOVE THE TOP OF PIPE OR TO THE SUBGRADE ELEVATION.
   (UNLESS OTHERWISE SPECIFIED)

C) THE TOP OF PIPE IS BELOW THE LEVEL OF THE
   EXISTING GROUND IS BETWEEN THE TOP
   AND THE BOTTOM OF THE PROPOSED PIPE AND THE
   EXCAVATION BEDDING IS 1200 (4'-0") ABOVE THE TOP OF PIPE OR TO THE SUBGRADE ELEVATION.
   (UNLESS OTHERWISE SPECIFIED)

STEP 1 : REMOVE TOPSOIL (COMPRESSIBLE LAYER OF ORGANIC

STEP 2 : CONSTRUCT THE EMBANKMENT TO 1200 (4'-0") ABOVE

NOTE: IF UNSUITABLE MATERIAL IS FOUND, UNDERCUT AS DIRECTED AND BACKFILL WITH SUITABLE MATERIAL TO BOTTOM OF BEDDING ELEVATION. (UNLESS OTHERWISE SPECIFIED)

STEP 3 : EXCAVATE THE TRENCH TO THE WIDTH OF THE

STEP 4 : ENGRAVE THE TRENCH TO THE WIDTH OF THE

STEP 5 : LAY PIPE ON APPROPRIATE BEDDING. SEE STEP 6 FOR METAL PIPE ARCH AND METAL PLATE PIPE ARCH.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

SUBSURFACE DRAINS
PIPE PLACEMENT
EXCAVATION - BEDDING - BACKFILL

RECOMMENDED: 05/19/2008
RECOMMENDED: 05/19/2008
SHW. R. OF A.

RC-30M
1. PROVIDE MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 601 AND 220.

2. FLOWABLE BACKFILL WILL ENVELOP THE LAST SECTION OF PIPE OR ENVELOP THE LAST SECTION, CONSTRUCT MODEL STRUCTURE OF FLOWABLE BACKFILL MATERIAL AS SPECIFIED AND MAINTAIN POSITIVE FLOW OF WATER AWAY FROM THE TRENCH. IT MUST BE PROVIDED BY USE OF PROPERLY DESIGNED GRANULAR OR SYNTHETIC DRAINAGE.

3. PAYMENT FOR THE BACKFILL ENVELOP (AGGREGATE, BEDDING AND BACKFILL OR FLOWABLE BACKFILL MATERIAL) AND SUITABLE MATERIAL UP TO 300 (12") ABOVE THE PIPE IS INCIDENTAL TO THE PIPE.

4. THE FLOWABLE BACKFILL DETAIL REPLACES STEPS 6A, 6B, 6C AND 6D ON SHEET 4 WHEN FLOWABLE BACKFILL IS SPECIFIED.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

SUBSURFACE DRAINS
FLOWABLE BACKFILL

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
PLAIN CEMENT CONCRETE CURB

DETAIL A
CONTRACTION JOINT

TYPICAL CROSS SECTION

DETAIL B
CONTRACTION JOINT

TYPICAL CROSS SECTION

DETAIL C
CONTRACTION JOINT

TYPICAL CROSS SECTION

PLAIN CEMENT CONCRETE GUTTER

200 (8") DEEP
5 (1/2") WIDE

NOTE: REFER TO RC-67M FOR MAXIMUM SLOPE OF GUTTER WHEN PLACED AT A CURB RAMP

CONTRACTION JOINT, SEE DETAIL C,
(CONTINUOUS THRU CURB AND GUTTER)

--- REPRESENTS WIDTH OF GUTTER FOR COMPUTING PAY AREA.

NOTES

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB AND DEPRESSED CURB, SECTION 640 FOR PLAIN CEMENT CONCRETE GUTTER AND SECTION 641 FOR PLAIN CEMENT CONCRETE CURB GUTTER.

2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS.

3. PLACE 20 (#3/4") THICK PREMOULDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO AREA ADJACENT TO CURB OR TO CONFORM TO CROSS SECTIONAL AREA OF CURB.

4. SEE RC-57M FOR PLAIN CEMENT CONCRETE CURB SLOPED TOP TREATMENT AT END OF STRUCTURES.

5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

6. MASON CURBS ARE INSTALLED AdjACENT TO PARKING LANES A 100 (4") HIGH CURB CAN BE UTILIZED WITH APPROVAL FROM THE LOCAL MUNICIPALITY.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

CURBS AND GUTTERS

ELEVATION VIEW
DEPRESSED CURB FOR DRIVEWAYS

SECTION A-A

NOTE: REFER TO RC-67M FOR MAXIMUM SLOPE OF GUTTER WHEN PLACED AT A CURB RAMP

CONTRACTION JOINT, SEE DETAIL C,
(CONTINUOUS THRU CURB AND GUTTER)

--- REPRESENTS WIDTH OF GUTTER FOR COMPUTING PAY AREA.
SURFACE OF CURB RAMP FLUSH WITH ROADWAY SURFACE

1220 C4'-0" MIN DEPRESSED CURB

CURB

~

CURB

RISING EDGE (TfP)

RAMP

AGGREGATE SUBBASE (SEE DWS EMBEDDING DETAIL SHEET 91-100)

SIDEWALK CURB RAMP SIDE FLARE

SEE NOTE 15

610 MM (24") MIN, SEE DETECTABLE WARNING SURFACE DETAILS, SHEET 9

RAMP LENGTH

8.33" MAX RAMP SLOPE

SIDEWALK

A-A

LANDING 1220 (4'-0")

PREMOLDED EXP. JET FILLER (TfP)

SIDEWALK AREA

ELEVATION

SIDE FLARE

RAMP CURB RAMP SIDE FLARE

SEE NOTE 3

LANDING SLOPE

7.14" MAX CROSS SLOPE ROADWAY

SIDE FLARE SLOPE

10.00" MAX SLOPE

2.00" MAX CROSS SLOPE ROADWAY

SIDE FLARE

PEDESTRIAN PUSH BUTTON (WHERE APPLICABLE)

DETECTABLE WARNING SURFACE FULL WIDTH OF RAMP

NOTES

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 100, 409, 630, 640, AND 694.

2. PROVIDE EXPANSION JOINT MATERIAL AT 1/3 1/3 1/3 FLUSH WHERE CURB RAMP ADJOINS THE ROADWAY. JOINT REQUIREMENTS ARE DEPENDING ON THE NEED TO FLUSH ADJACENT CONCRETE SURFACE.

3. CONSTRUCT CURB RAMPS WITH A 1220 (4'-0") CLEARSPACE OUTSIDE OF TRAVEL LANES AT THE BOTTOM OF THE RAMP. TO STANDARD CURB RAMPS IS FOR NEW CONSTRUCTION. THE CURB RAMP SIDE FLARES ARE TO BE INSTALLED WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS.

4. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.

5. PROVIDE A 1/4 IN. RESISTANT TEXTURE ON CURB RAMP TO DETERMINE DAMAGE STARTING POINT OF JOINTS. JOINTS IN RUBBER OR AGGREGATE SUBBASE

6. MODIFY CONSTRUCTION DETAILS TO ASPIRE TO DIMENSIONS TO EXISTING CURB DESIGN WHERE THE CURB HEIGHT IS LESS THAN THE STANDARD 200 (8") HEIGHT.

7. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.

8. IT IS NECESSARY TO LIMIT THE RUN OF A CURB RAMP TO A PERPENDICULAR CURB RAMP LENGTHS NOT TO EXCEED 6.00" (1.50), ADJUST RAMP LENGTH AS NEEDED TO PROVIDE ACCESS TO THE CURB.

9. MEASURE AND PAY FOR DEPRESSED CURBS IN ACCORDANCE WITH SECTION 20-4.

10. THE DETAILS PROVIDE PEDESTRIAN PUSH BUTTON POLES TO ILLUSTRATE THE PREFERRED PLACEMENT OF PEDESTRIAN PUSH BUTTONS TO BE INSTALLED WHERE APPLICABLE.

11. CONSTRUCT BUILT-UP CURB RAMP OF BITUMINOUS MATERIAL AS INDICATED, INCLUDING PREPARATION AND TACK COAT, AS REQUIRED.

12. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. USE CUSTOMARY UNITS IN (1) PARENTHESES.

13. ALIGN DETECTABLE WARNING DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF PEDESTRIAN TRAFFIC OR PERPENDICULAR TO CURB.

14. PROVIDE DETECTABLE WARNING SURFACES (DWS) 610 (24") MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAFFIC ALONG BOTH SIDES OF A RAMP AT THE ORIGIN AREAS, WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS.

15. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00" CROSS SLOPE ON THE CURB RAMP OR ACCESSIBLE ROUTE.

16. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARES WITH NOT TO BE EXCEED 6.00" CROSS SLOPE WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS.

17. THE IMMEDIATE ADJOINING SURFACE AT THE BOTTOM AND TOP OF CURB RAMPS IS NOT TO BE LESS THAN ROADWAY PROFILE SLOPE WHERE LOCATED ALONG美國, THE ROADWAY PROFILE IS DEPENDENT ON THE MEANS OF ACCESS TO THE CURB RAMP. THE ROADWAY PROFILE SLOPE IS DEPENDENT ON THE MEANS OF ACCESS TO THE CURB RAMP WHICH IS VARYING. THE ROADWAY PROFILE SLOPE IS DEPENDENT ON THE MEANS OF ACCESS TO THE CURB RAMP WHICH IS VARYING.

18. THE CONSTRUCTION SPECIFICATIONS ARE THE MANDATORY REQUIREMENTS OF THE CONTRACT DOCUMENTS AS APPLIED. THEY WILL BE EFFECTED AND WILL BE RECORDED.

19. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF THE RAMP IS NOT SOLELY DEPENDENT ON THE HEIGHT OF THE CURB. FOR EXAMPLE, A 150 (6") DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 1800 (6-0") FOR A 12:1 (1:12) SLOPE.

20. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 350, 409, 630, 676, AND 694.

21. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF THE RAMP IS NOT SOLELY DEPENDENT ON THE HEIGHT OF THE CURB. FOR EXAMPLE, A 150 (6") DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 1800 (6-0") FOR A 12:1 (1:12) SLOPE.

22. PROVIDE EXPANSION JOINT MATERIAL 13 (1/2") THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION BUREAU OF DESIGN

CURB RAMPS AND SIDEWALKS

NEW CONSTRUCTION OR ALTERATION DETAILS

RECOMMENDED 4/5-25-2008

NOTES

1. EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS, METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
NOTE: IF SPACE IS LIMITED, IT MAY BE NECESSARY TO CURB THE SIDE FLARES OF THE TYPE
CURB RAMPS (SEE ALTERNATE INSTALLATION DETAIL BELOW). PEDESTRIAN TRAFFIC SHOULD NOT BE DIRECTED TO CROSS THE VERTICAL DROP.

TYPE 1
DOUBLE CURB RAMPS
(PREFERRED INSTALLATION)

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND
ENGLISH VALUES SHOWN MAY NOT BE MIXED.
Plain Cement Concrete Curb (Typ)

Plain Cement Concrete - Depressed Curb

©Ramp Width

Plain Cement Concrete Curb

Pedestrian Push Button (Where Applicable)

Detectable Warning Surface (Typ)

Ramp Width

Sidewalk Width

1220 (4'-0") Min (See Note 20, Sheet 1)

610 (24")

Slope Zero 2.00% (4"")

Note: Either all metric or all English values must be used on plans. Metric and English values shown may not be mixed.

Commonwealth of Pennsylvania Department of Transportation Bureau of Design Curb Ramps and Sidewalks

New Construction or Alteration Details

Type 4 Curb Ramps

Recommended: Nov. 12, 1998

Sh 4 of 15

RC-67M
DETECTABLE WARNING SURFACE (DWS)
INSTALLATION INSTRUCTIONS

1. SAW CUT EXISTING CURB RAMP SURFACE WHERE THE DWS WILL BE PLACED.
2. REMOVE EXISTING CONCRETE FROM THIS AREA.
3. REMOVE AND COMPACT ANY DISTURBED AGGREGATE SUBBASE.
4. PLACE NEW CEMENT CONCRETE AND LEVEL TO A 100 (4 INCH) DEPTH SO THAT THE TOP OF THE CONCRETE IS LOWER THAN THE ADJOINING SIDEWALK, EQUIVALENT TO THE EMBEDDING DEPTH OF THE DWS MATERIAL.
5. LAY-OUT AND PROPERLY FIT EACH UNIT PRIOR TO SETTING IN WET CONCRETE.
6. CUT UNITS AS NECESSARY. TOTALLY REMOVE ALL DOMES.
7. PLACE UNITS ACROSS THE ENTIRE WIDTH OF THE CURB RAMP SURFACE AND/OR WHERE THE CURB IS FLUSH.
8. ALLOW FOR SMALL EXPANSION GAP BETWEEN EACH UNIT NOT TO EXCEED 1/8 IN.
9. PRESS UNITS INTO FULL CONTACT WITH THE FRESH CONCRETE.
10. ADJUST HEIGHT OF EACH UNIT EDGE TO BE LEVEL WITH ADJACENT RAMP SURFACES.
11. ONLY TRUNCATED DOMES SHOULD BE ABOVE THE ADJACENT FINISHED CONCRETE.
12. FILL ANY SAW CUT GAPS WITH APPROVED JOINT SEALANT MATERIAL.
13. DO NOT ALLOW FOOT TRAFFIC ON DWS FOR 72 HOURS OR UNTIL CONCRETE HAS CURED.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
CURB RAMPS AND SIDEWALKS
ALTERATION DETAILS
ELEVATION DIFFERENCE GREATER THAN 6 (1/4") MAX

RAMP LENGTH
LANDING 2,000 MAX SLOPE

EXISTING RAMP SECTION
(VERTICAL DROP AT RAMP)

RECOMMENDED CORRECTION:
RECONSTRUCT THE ENTIRE RAMP, WITH LANDINGS AND FLARES WHERE APPLICABLE. (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 101)

ELEVATION DIFFERENCE GREATER THAN 6 (1/4") MAX

RAMP LENGTH
LANDING 2,000 MAX SLOPE

EXISTING RAMP SECTION
(VERTICAL DROP AT ROAD SURFACE)

RECOMMENDED CORRECTION:
ELEVATION DIFFERENCE GREATER THAN 6 (1/4") AND LESS THAN OR EQUAL TO 12 (1/2") - PLACE BITUMINOUS MATERIAL AT FACE OF CURB TO BEVEL TRANSITION AT A SLOPE EQUAL TO THE RAMP SLOPE OR LANDING SLOPE.

ELEVATION DIFFERENCE GREATER THAN 6 (1/4") MAX

RAMP LENGTH
LANDING 2,000 MAX SLOPE

EXISTING RAMP SECTION
(RAMP SETTLEMENT)

RECOMMENDED CORRECTION:
RECONSTRUCT THE ENTIRE RAMP, WITH LANDINGS AND FLARES WHERE APPLICABLE. (SEE RAMP RECONSTRUCTION DETAIL ON SHEET 101)

ALTERATION DETAILS

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
CURB RAMPS AND SIDEWALKS
ALTERATION DETAILS
AND DRIVEWAY APRONS

RECOMMENDED AUG, 29, 2008
DIRECTOR, BUREAU OF DESIGN
NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
CURB RAMPS AND SIDEWALKS
DRIVEWAY APRONS

NOTE 20, SHEET 1

1. 3.3% MAX SLOPE
2. MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY APRON
3. MINIMUM SIDEWALK WIDTH 1525 (5'-0"
4. SEE NOTE 20, SHEET 1

NOTE 1: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
ANCHORING POST (EITHER MIN. 50 l 2") X 50 (2") WOODEN POST OR 31.8 (1.25") X 25 (1") STEEL T-SECTION POST)

EXISTING GROUND LINE

SILT BARRIER FENCE, 450 (18") HEIGHT

SILT BARRIER FENCE, 750 (30") HEIGHT

SILT BARRIER FENCE JOINING DETAIL

TABLE A
SILT BARRIER FENCE GEOTEXTILE SELECTION

<table>
<thead>
<tr>
<th>TYPE OF CLASS 3 GEOTEXTILE MATERIAL</th>
<th>NOMINAL POST SPACING WITHOUT MESH SUPPORT</th>
<th>MAX. POST SPACING WITH MESH SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A</td>
<td>750 (30&quot;)</td>
<td>3.4 m (12&quot;)</td>
</tr>
<tr>
<td>3A</td>
<td>1000 (40&quot;)</td>
<td>NA</td>
</tr>
<tr>
<td>3B</td>
<td>750 (30&quot;)</td>
<td>2.4 m (9&quot;)</td>
</tr>
<tr>
<td>3B</td>
<td>1050 (42&quot;)</td>
<td>1.2 m (4&quot;)</td>
</tr>
</tbody>
</table>

NA = NOT APPLICABLE

NOTES
1. REMOVE DEPOSITS WHEN SEDIMENT ACCUMULATION IS THE SAME AS THE ABOVE GROUND HEIGHT OF THE SILT FENCE.
2. ADHERE TO THE MANUFACTURER'S RECOMMENDATIONS RELATIVE TO REQUIRED GEOTEXTILE REPLACEMENT DUE TO WEATHERING.
3. PLACE SILT FENCE ON LEVEL GRADE, EXTEND BOTH ENDS OF THE FENCE AT LEAST 2400 (8'-0") UP SLOPE AT 45 DEGREES TO THE MAIN FORCE ALIGNMENT.
4. REPLACE UNDERCUT AND OVERTOPPED SECTIONS OF THE FENCE WITH A ROCK FILTER OUTLET (SEE SHEET 21, ROCK FILTER OUTLETS). SILT BARRIER FENCES AT POINTS OF FREQUENT FAILURES AND WHERE REQUIRED BY THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN ( ) PARENTHESES.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

PERIMETER CONTROL DEVICES

RECOMMENDED 8/12/08
RECOMMENDED 8/13/08
R.C. 70M
1. Space posts at 3000 (10'-0") maximum. Use 64 (2.5") diameter galvanized steel or aluminum posts.
2. Extend geotextile and wire fabric 300 (10'-0") min into excavated trench.
3. Place heavy duty silt barrier fence on level ground. Extend fence up slope at 45 degrees to the main fence alignment.
4. Remove deposits when sediment accumulation is one half the above ground height of the silt fence.
5. Adhere to the manufacturer's recommendations relative to required geotextile replacement due to weathering.
6. Replace undercut and overtopped sections of the fence with a rock filter outlet. Rock filter outlets should be installed along the silt barrier fence at points of frequent failures and where required by the erosion and sediment pollution control plan.

Cross Section

Filter at intersection of silt barrier fence
UP-SLOPE FACE

Filter at toe of slope
ROCK FILTER OUTLET

Notes:

- Either all metric or all English values must be used on plans. Metric and English values shown may not be mixed.
- All dimensions are in millimeters unless otherwise noted. U.S. customary units are in "-7 parenthesis.

Commonwealth of Pennsylvania
Department of Transportation
Bureau of Design

Perimeter Control Devices
NOTES

1. REMOVE DEPOSITS WHEN SEDIMENT ACCUMULATION IS ONE THIRD THE HEIGHT OF THE EXPOSED COMPOST FILTER BERM OR ONE HALF OF THE EXPOSED COMPOST FILTER SOCK.

2. PLACE COMPOST FILTER SOCK/BERM ON LEVEL GRADE. EXTEND BOTH ENDS OF THE COMPOST FILTER SOCK/BERM AT LEAST 3600 (12'-0") UPTOPE AT 45 DEGREES TO THE MAIN ALIGNMENT.

3. REPLACE BIODEGRADABLE FILTER SOCK AFTER 6 MONTHS; PHOTODEGRADABLE AFTER 12 MONTHS.

4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN () PARENTHESIS.
NOTES

1. PLACE CLEAN OUT STAKES NEAR THE CENTER OF SEDIMENT TRAP, REMOVING SEDIMENT WHEN THE CLEAN OUT ELEVATIONS ON THE STAKES PASS THE INVERT ELEVATION AS INDICATED. SATISFACTORYLY DISPOSE OF SEDIMENT.

2. STABILIZE INTERIOR AND EXTERIOR SLOPES WITH SEEDING AND SOIL SUPPLEMENTS AND MULCH AS INDICATED.

3. INSPECT SEDIMENT TRAP ONCE A WEEK AND AFTER EACH STORM EVENT THAT PRODUCES RUNOFF.

4. REPAIR DAMAGED OR CLOGGED SPILLWAYS IMMEDIATELY.

5. REMOVE ALL TRASH AND OTHER DEBRIS FROM SEDIMENT TRAP AND SPILLWAY WHEN DIRECTED.

6. WHEN DIRECTED, REMOVE TEMORARY SEDIMENT TRAP.

7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN PARENTHESES.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

SEDIMENT BASIN AND SEDIMENT TRAP

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
NOTES
1. PROVIDE SUITABLE MATERIAL TO ENSURE THAT EMBANKMENTS, RISERS, PIPES AND CONNECTIONS DO NOT LEAK.
2. PLACE CLEAN OUT STAKES NEAR THE CENTER OF SEDIMENT TRAP. REMOVE SEDIMENT WHEN THE CLEAN OUT ELEVATIONS ON THE STAKES HAVE BEEN MET. DURING REMOVAL, IF REQUIRED, REMARK CLEAN OUT ELEVATIONS ON THE STAKES. SATISFACTORILY DISPOSE OF SEDIMENT.
3. STABILIZE INTERIOR AND EXTERIOR SLOPES WITH SEEDING AND SOIL STABILIZATION AND MULCH AS INDICATED.
4. INSPECT SEDIMENT TRAP/BASIN ONCE A WEEK, AFTER EACH RAINFALL STORM EVENT, OR AS DIRECTED.
5. REPAIR DAMAGED OR CLOGGED SPILLWAYS IMMEDIATELY.
6. REMOVE ALL TRASH AND OTHER DEBRIS FROM SEDIMENT TRAP/BASIN AND SPILLWAY AS DIRECTED.
7. WHEN DIRECTED REMOVE TEMPORARY SEDIMENT TRAP/BASIN OR CONVERT TEMPORARY SEDIMENT TRAP/BASIN TO PERMANENT STORMWATER MANAGEMENT FACILITY AS INDICATED.
8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN ( ) PARENTHESES.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

R.S. AUG. 29, 2008

NOTES

* ELAVATION AS INDICATED

PROVIDE ONE 25.4 mm DIAMETER PERFORATION EVERY VERTICAL 300 mm (12") ABOVE CLEAN OUT ELEVATION.

RISER CREST ELEVATION

BASIN CLEAN OUT ELEVATION 25.4 mm DIAMETER PERFORATION ABOVE INVERT ELEVATION.

BASIN INVERT ELEVATION

TEMPORARY RISER PIPE ASSEMBLY DIAMETER AS INDICATED

BASIN INVERT ELEVATION

TRASH RACK AND ANTI-VORTEX DEVICE, SEE DETAIL

225 mm (9") MAX DIAMETER

EMERGENCY SPILLWAY ROCK OUTLET DISSIPATOR

WEIR SECTION Z-Z

PLAN VIEW ROCK OUTLET DISSIPATOR

END VIEW

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

RC-71M
INLET PROTECTION, AS INDICATED
SEE DETAILS ON SHEETS 2, 3 AND 4

EXISTING TYPE M INLET

FLOW

EXISTING TYPE C OR TYPE S INLET

SECTION A-A

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
1. Inspect inlet filter bag after each runoff event. Maintain as needed to ensure proper functioning of the bag.

2. Monitor accumulated sediment/scrubbing when the inlet filter reaches one half maximum capacity.

3. Replace filter bag if ripped or torn.

4. Provide down gradient berm as indicated on sheet 1. Do not use in sag/sump conditions.

5. Use sandbag at type C inlet curb openings to prevent bypass flow.

6. Remove properly dispose of inlet filter bag when no longer needed.

7. All dimensions are in millimeters unless otherwise noted. U.S. customary units are in () parenthesis.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
INLET AND OUTLET PROTECTION
INLET BOX, TYPE AS INDICATED

CONCRETE BLOCKS, PLACED 1 ROW HIGH

SECTION D-D

GALVANIZED DOWN GRADIENT BERM, AS REQUIRED, SEE RC-72M SHEET 1

EXISTING GROUND LINE

3.07 (11 GA.) GALVANIZED WIRE MESH (SEE NOTES 5 AND 7)

CONCRETE BLOCKS, AS REQUIRED, SEE RC-72M SHEET 1

5.07 (11 GA.) GALVANIZED WIRE MESH (SEE NOTES 5 AND 7)

SECTION C-C

CONCRETE BLOCK/GRAVEL INLET PROTECTION (TYPE M OR TYPE S INLETS)

CONCRETE BLOCK/GRAVEL INLET PROTECTION (TYPE C INLET)

CONCRETE BLOCKS, PLACED 1 ROW HIGH

NOTES

1. INSPECT AND REPAIR CONCRETE BLOCK/GRAVEL INLET FILTER AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE GUTTERS AND FILTERING MATERIAL IN ACCORDANCE WITH SUBMISSION NO. 46.

2. REMOVE SEDIMENT AS REQUIRED OR WHEN DIRECTED FROM TRAVELED ROADWAYS.

3. REPLACE AND SATISfactorILY DISPOSE OF Clogged FILTER STONE (AASHTO NO. 57 COARSE AGGREGATE) PRIOR TO REPLACEMENT OF CONCRETE BLOCKS TO PREVENT MOVEMENT OF GRAVEL.

4. PLACE 3.07 (11 GA.) GALVANIZED WIRE MESH AROUND PERIMETER OF CONCRETE BLOCKS TO PREVENT MOVEMENT OF GRAVEL.

5. UPON APPROVAL, 6.25 (1/4") MAX PLASTIC MESH MAY BE SUBSTITUTED FOR GALVANIZED WIRE MESH.

6. PLACE CONCRETE BLOCKS MEETING THE REQUIREMENTS OF PUBLICATION 408 AROUND INLET PERIMETER.

7. PLACE 3.07 (11 GA.) GALVANIZED WIRE MESH OVER EXPOSED GRATE AREA OF TYPE C INLETS ONLY. PLACE WIRE MESH ALONG PERIMETER OF CONCRETE BLOCKS PRIOR TO PLACING ASSIST NO. 57 COARSE AGGREGATE, ALL INLET TYPES.

8. PROVIDE DOWN GRADIENT BERM AS INDICATED ON RC-72M, SHEET 1. DO NOT USE IN SAG/SUMP CONDITIONS.

9. DO NOT USE INLET PROTECTION ON ROADWAYS WHERE PONDING WATER OR INLET PROTECTION MAY BE HAZARDOUS TO VEHICULAR TRAFFIC.

10. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN (PARENTHESIS.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
INLET AND OUTLET PROTECTION

RECOMMENDED AUG, 29, 2008

SHT 3 OF 1

RC-72M
PIPE/GRAVEL INLET PROTECTION

SECTION D-D

FLOW
EXISTING GROUND LINE

SECTION C-C

SANDBAGS OR TEMPORARY EARTHEN BERM, SEE SHEET 1

NOTES

1. INSPECT AND REPAIR CONCRETE BLOCK/GRAVEL INLET FILTER AFTER EACH RUNOFF EVENT. REMOVE ACCUMULATED SEDIMENT AS NECESSARY. RAKE PERIODICALLY TO INCREASE INFILTRATION.

2. REMOVE SEDIMENT AS REQUIRED OR WHEN DIRECTED FROM TRAVELED ROADWAYS.

3. REPLACE AND SATISFACTORILY DISPOSE OF CLOGGED INLET PROTECTION. RAKE PERIODICALLY TO INCREASE INFILTRATION.

4. PLACE 3.07 (11 GA.) GALVANIZED WIRE MESH ON TOP OF INLET.

5. PLACE 375 (15") DIAMETER PIPE ON WIRE MESH AS INDICATED.

6. DO NOT USE INLET PROTECTION ON ROADWAYS WHERE PONDING WATER OR INLET PROTECTION MAY BE HAZARDOUS TO VEHICULAR TRAFFIC.

7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN PARENTHESES.

NOTES: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

INLET AND OUTLET PROTECTION

REFERENCES

SHEET 4 OF 7

RECOMMENDED NOV. 29, 2006
RECOMMENDED NOV. 29, 2006

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
1. PROVIDE GEOTEXTILE MATERIAL ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.
2. SLOPE SHOULD BE LEVEL OR AS CLOSE TO LEVEL AS REASONABLY POSSIBLE BASED ON SITE CONDITIONS.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN PARENCHESES.
PIPE END TREATMENT, ROCK, AS INDICATED.

PIPE DIAMETER, AS INDICATED

WIDTH = PIPE DIAMETER

1/2 PIPE DIAMETER

APRON LENGTH, AS INDICATED

FINISHED SLOPE, AS INDICATED

EXISTING GROUND LINE

SECTION C-C

ROCK APRON (FLAT AREA)

NOTES
1. SLOPE SHOULD BE LEVEL OR AS CLOSE TO LEVEL AS REASONABLY POSSIBLE BASED ON SITE CONDITIONS.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN PARENTHESES.

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
1. Excavate Initial Anchor Trench 300 (1' -0") deep and 150 (6") wide across the width of the channel to prevent undermining of the rolled erosion control products.

2. Excavate Intermittent Check Slot 150 (6") deep and 150 (6") wide across the width of the channel at 7000 to 9000 (25' -0" to 30' -0") along the length of the rolled erosion control products. See Note 2.

3. Excavate Terminal Anchor Trench 300 (1' -0") deep and 150 (6") wide across the width of the channel to prevent water from flowing downward to the rolled erosion control products without separation from the soil.

4. Extend rolled erosion control products 600-900 (2'-0" - 3'-0") above the crest of channel side whenever possible.

5. Place 3 anchors/m2 (2 1/2 anchors/sqy).

6. Provide anchoring devices in accordance with Section 806.2 of Publication 408.

7. All dimensions are in millimeters unless otherwise noted. U.S. customary units are in parentheses.

Commonwealth of Pennsylvania
Department of Transportation
Bureau of Design

Channel and Slope Protection

Rolled Erosion Control Products (RECP)

Notes: Either all metric or all English values must be used on plans. Metric and English values shown may not be mixed.
1. Install Rolled Erosion Control Products in straight sections around channel bend to avoid curling of mat edges. Install Rolled Erosion Control Products starting with Panel #1.

2. Establish and maintain continuous contact between the Rolled Erosion Control Products and soil surface.

3. Install Rolled Erosion Control Products as indicated and as shown on Sheet 2.

4. Terminate panels at channel edge or as directed by the representative.

5. All dimensions are in millimeters unless otherwise noted. U.S. customary units are in ( ) parentheses.

NOTES

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
CHANNEL AND SLOPE PROTECTION

RC-73M
NOTES

1. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE HALF THE HEIGHT OF THE ROCK BARRIER. REPLACE CLOGGED FILTER STONE. REMOVE AND DISPOSE OF SEDIMENT IN AN APPROVED MANNER.

2. PROVIDE GEOTEXTILE MATERIAL ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.

3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN PARENTHESES.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

CHANNEL AND SLOPE PROTECTION
TOE OF SLOPE

ANGLE, AS REQUIRED

PROVIDE LENGTH OF TRANSVERSE BERM (REQUIRED TO CONTAIN SURFACE DRAINAGE AND TO DIRECT INTO TEMPORARY SLOPE DRAIN. THE TRANSVERSE BERM WILL NOT BE REQUIRED WHERE THE DRAIN IS LOCATED AT A LOW POINT.

FOR FILL SLOPES PROVIDE METAL FLEXIBLE RUBBER OR PLASTIC PIPE ADEQUATELY ANCHORED TO FILL SLOPE. LENGTH IS VARIABLE.

PLAN

DETAIL A

SECTION

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
TEMPORARY DIVERSIONS

NOTE: MAINTAIN SLOPE PIPES AT ALL TIMES AS INDICATED IN PUBLICATION 408, SECTION 854. CLEAN OR REPAIR ALL CLOGGED OR LEAKING PIPE AS NECESSARY. REPLACE ACCUMULATED SEDIMENT FROM THE ENTRANCE OR EXIT OF EACH SLOPE PIPE AND TOP OF EMBANKMENT.

1. INSPECT TEMPORARY SLOPE PIPES ONCE A WEEK AND AFTER EACH STORM EVENT THAT PRODUCES RUNOFF.

2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN PARENTHESES.

3. FILL SLOPE PIPE FITTINGS AND CONNECTORS, SEE RC-33M

PLAN

SECTION A-A

TEMPORARY SLOPE PIPE

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
TEMPORARY DIVERSIONS

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
TEMPORARY DIVERSIONS

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN
TEMPORARY DIVERSIONS

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

COMMONWEALTH OF PENNSYLVANIA
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NOTES

1. LOCATE BAG IN LEVEL AREAS (LESS THAN 5% GRADE). WHEN LEVEL AREAS ARE NOT AVAILABLE, PLACE AASHTO NO. 57 COARSE AGGREGATE TO LEVEL THE BAG.

2. LOCATE BAG IN A WELL VEGETATED AREA. DISCHARGE ONTO A STABLE, EROSION RESISTANT AREA. WHEN VEGETATION IS NOT AVAILABLE, PLACE AASHTO NO. 57 COARSE AGGREGATE TO LEVEL THE BAG.

3. LOCATE BAG IN AN AREA ACCESSIBLE BY EQUIPMENT FOR MAINTENANCE AND REMOVAL PURPOSES.

4. DO NOT INSERT MORE THAN ONE HOSE INTO A BAG.

5. REPLACE THE BAG WHEN THE SEDIMENT CAPACITY HAS BEEN FILLED AND/OR WHEN THERE IS A FAILURE. THE ADDITIONAL BAGS WILL BE PAID AS EACH.

6. REPLACE AND PROPERLY DISPOSE OF THE PUMPED WATER FILTER BAGS. RESTORE THE AREA IN ACCORDANCE WITH THE SPECIFICATIONS IN SECTION 408. DO NOT CUT FILTER BAG OR DISTRIBUTE AND SEED SEDIMENT.

7. DO NOT PERMIT DISCHARGE FROM THE BAG TO DRAIN BACK INTO WORK OR ACCESS AREAS OF THE PROJECT.

8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN ( ) PARENTHESIS.

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Dewatering Devices

NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.
1. Place and compact embankment material from the trench excavation on the upslope side of the straw bale barrier.

2. Place straw bale barrier on level grade. Extend both ends upslope 2400 mm (8' - 0") from the compacted embankment material.

3. Remove sediment accumulation when depth of sediment equals 75 mm (3") above the compacted embankment material.

4. Place bales so binders are in the horizontal position.

5. Anchor each bale with two wood stakes. Drive first stake at an angle and into the previously laid bale to force the bales together.

6. Replace undercut and overlapped sections of the barrier with a rock filter outlet.

7. All dimensions are in millimeters unless otherwise noted. U.S. customary units are in parenthesis.

8. Pay limit of straw bale barrier

NOTE: Either all metric or all English values must be used on plans. Metric and English values shown may not be mixed.
NOTES

1. INSPECT THE ENTRANCE DAILY. REMOVE ALL SEDIMENT DEPOSITED ON THE PUBLIC ROADWAYS AND RETURN TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WILL NOT BE PERMITTED.

2. MAINTAIN THE SPECIFIED ROCK CONSTRUCTION ENTRANCE THICKNESS. PLACE ADDITIONAL ROCK WHENEVER ROCK BECOMES CLOGGED WITH SEDIMENT.

3. MAINTAIN STOCKPILE OF AASHTO NO. 1 COARSE AGGREGATE.

4. CONSTRUCT A MOUNTABLE EMBANKMENT MIN 150' - 0" MIN. COVER CANNOT BE PLACED OVER THE PIPE.

5. SATISFACTORY REMOVAL OF MATERIAL AS PER SPECIFICATION IS RECOMMENDED WHEN ROCK CONSTRUCTION ENTRANCE IS NO LONGER REQUIRED.

6. PROVIDE GEOTEXTILE MATERIAL MEETING THE REQUIREMENTS IN APPENDIX A1. PLACE AND INSTALL GEOTEXTILE ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.

7. CONSTRUCT ROCK CONSTRUCTION ENTRANCE WITHIN THE RIGHTS-OF-WAY OR EASEMENT AREAS. ENTRANCE MAY BE CONSTRUCTED ON A SKEW IF ADEQUATE PULL OUT SIGHT DISTANCE IS AVAILABLE.

8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS ARE IN () PARENTHESES.

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