TOWN OF McCANDLESS
STANDARD DESIGN CRITERIA
for
STORMWATER MANAGEMENT
and
SOIL EROSION & SEDIMENTATION CONTROL

As Authorized by Town of McCandless Ordinance No. 1318

PREPARED FOR

July, 2006

10385

PARTRIDGE VENTURE ENGINEERING, P.C.

Providing Civil Engineering Consulting Services

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STANDARD DESIGN PROCEDURES
SINGLE STAGE ROCK SUMP DETENTION FACILITIES

Classifications

Stormwater Management Design Criteria for individual residential lot development has been divided into the following classifications:

Class I	Small Development Areas creating an impervious surface area of less than 400 square feet.
Class II	Small Development Areas creating an impervious surface area of greater than 400 square feet but less than 5,000 square feet.
Class III	Large Development Areas creating an impervious surface area in excess of 5,000 square feet.

General Design Criteria

The use of a single stage rock sump is one of several alternatives that may be appropriate for small project area developments. Site parameters which must be considered when determining the suitability of a sump for stormwater control include the following:

Soil Type
Site Topography - Slope, Basement Elevation, etc.
Discharge Location
Offsite stormwater conveyance systems
Offsite detention systems

Where it is determined that a single stage rock sump is appropriate, the following procedure is designed to provide a fast, simple method to determine the rock sump volume and orifice size required to provide adequate stormwater control for small projects. In order to develop a practical solution for this type of design problem, several qualifying assumptions are necessary to set limits for which the procedure is applicable. These limits are intended to incorporate the type of situation most often encountered. In general, all of the following conditions must be satisfied in order for the use of single stage rock sumps to be appropriate:

- Runoff from only impervious areas will enter the rock sump, i.e., RCN = 98. This runoff should be collected and conveyed to the sump in a separate drainage system. If runoff from impervious surfaces is not isolated, this method is not valid and the sump must be individually designed for the entire area that will be tributary to the facility;
- The pre-development area to be altered must have an existing time of concentration (Tc) of 0.1 hour of less; and
- The single stage rock sump must be designed in accordance with the parameters shown on the attached construction details.

Prior to using the following procedure, the designer must verify that all of the above criteria apply to the subject property. Should any of the conditions not apply, the use of the procedure outlined herein is inappropriate and may result in either the over-design or under-design of the rock sump facility.

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STANDARD DESIGN PROCEDURES
SINGLE STAGE ROCK SUMP DETENTION FACILITIES

Class I Facility Design Sizing

If the Development will result in an increase in impervious surface of less than 400 square feet, the infiltration sump design can be used (Detail Sheet SW-3). The sump volume required should be based upon 40 cubic feet of stone for each 100 square feet of impervious surface. The construction and installation of the sump shall be in accordance with the standard detail.

Class II Facility Design Sizing

If the Development will result in an increase in impervious surface of greater than 400 square feet but less than 5,000 square feet, the Class II design can be used. The rock sump shall be designed in accordance with the standard detail and design parameters shown on Standard Detail SW-4 & SW-5. The following procedure should be followed for the sump design:

1. Determine the area of the impervious surfaces that will be collected and conveyed to the sump. No runoff from pervious surface is permitted.
2. By using the Design Parameters for on-lot sumps, Detail sheet SW-5, determine the required volume of the sump.
3. Determine the sump dimensions to meet the required volume based upon the site topography and surface features.
4. By using the Design Parameters for on-lot sumps, Detail sheet SW-5, determine the size of the release orifice. This is based upon the required volume and depth of sump.
5. Complete the design of the sump in accordance with the parameters shown on the construction detail sheet SW-4.

Class III Facility Design Sizing

If the Development will result in an increase in impervious surface in excess of 5,000 square feet or if the area tributary to the facility includes pervious surfaces, the sump must be individually designed for the entire area tributary to the facility. This design must be submitted to the Town along with a report documenting the pre- and post-development site runoff for review and approval.

TOWN OF McCANDLESS
STANDARD DESIGN PROCEDURES
SINGLE STAGE ROCK SUMP DETENTION FACILITIES

DATE 7/6/2006

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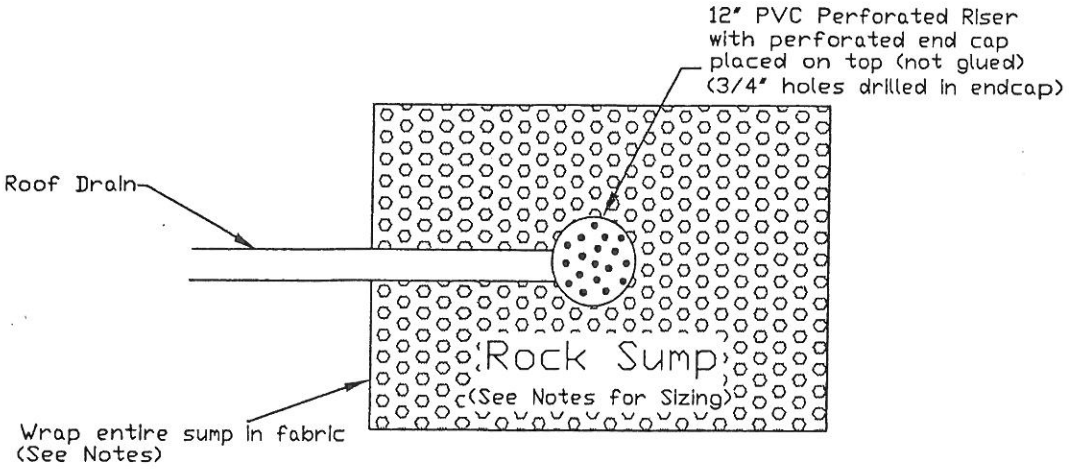
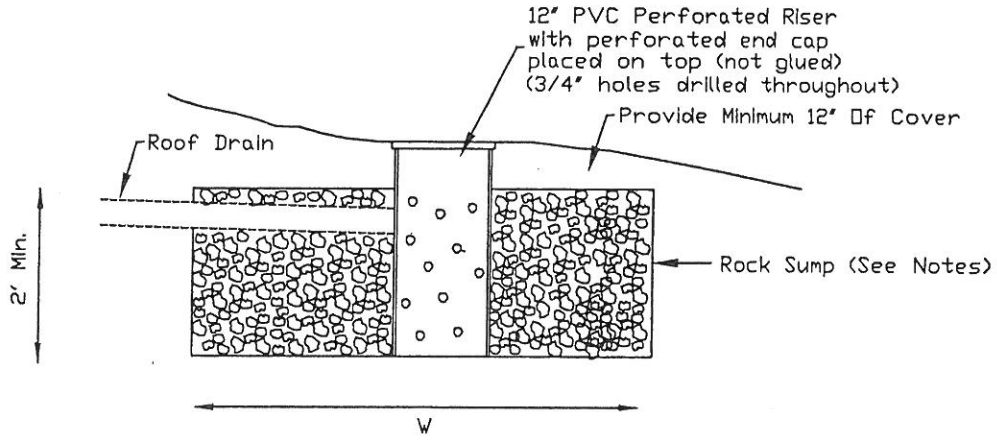
SCALE N.T.S.
PROJECT NUMBER 10303
SW-2



PLAN VIEW



SECTION

Notes:

1. The Rock Sump shall be designed as follows:
   40 c.f. of Rock per 100 s.f. of impervious area
2. Rock Sump shall be constructed of AASHTO #57 Limestone or 2B Gravel.
3. Wrap sump on all sides with PennDOT Class 2, Type B Non-woven Geotextile Material.
4. Dimensions and ratios shall vary as per design volume required.
5. Dry sumps in fill areas not permitted.
6. Cleanouts shall be located just before any horizontal bends.
7. When feasible, the Rock Sump should be located such that the top elevation of the riser pipe is below the basement floor elevation.

THIS DETAIL MAY BE UTILIZED FOR TOTAL IMPERVIOUS AREAS < 400 S.F.

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
ROCK SUMP DETAIL - CLASS I

DATE	7/6/2006
SCALE	N.T.S.
PROJECT NUMBER	10303
	SW-3

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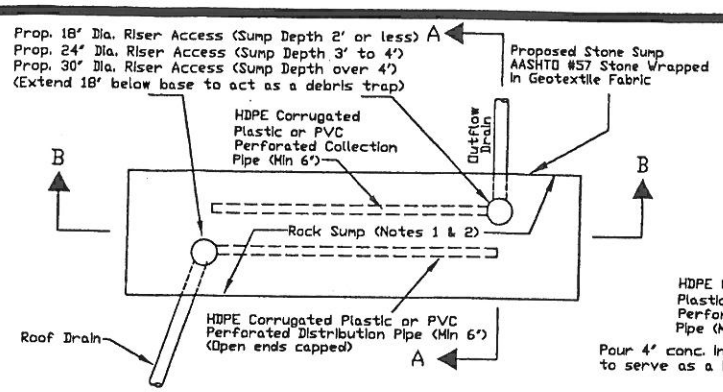
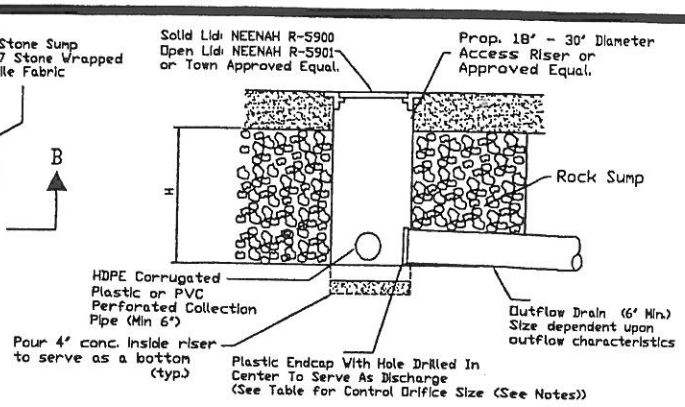
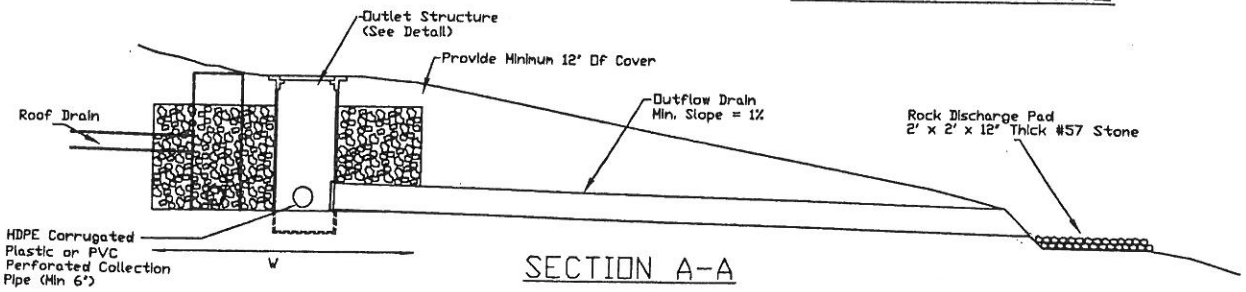


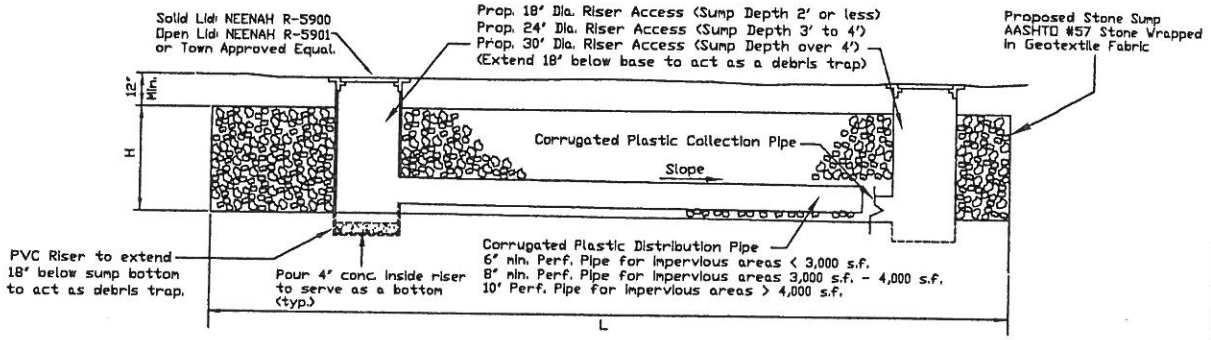
PLAN VIEW



OUTLET STRUCTURE



SECTION A-A



SECTION B-B

Notes:

1. Design Parameters (volume and outlet control works) shall be based upon the Table of values as shown on Detail SW-5, (400 S.F. < Impervious Area < 5000 s.f.)
2. Rock Sump shall be constructed of AASHTO #57 Limestone or 2B Gravel.
3. Wrap sump on all sides with PennDOT Type B Non-woven Geotextile Material.
4. Dimensions and ratios of L (Length), W (Width) and H (Height) shall vary as per design volume required.
5. Minimum ratio L to W is 3:1; (ie. L = 3W).
6. Dry sumps in fill areas not permitted.
7. Dimensions L (Length) shall be oriented to be parallel to the grade contour alignment.
8. No 90° elbows permitted on cleanout installations.
9. Cleanouts shall be located just before any horizontal bends.
10. All pipe and fittings shall be ASTM D2729.
11. When feasible, the Rock Sump should be located such that the outflow elevation is below the basement floor elevation.

THIS DETAIL MAY BE UTILIZED FOR TOTAL IMPERVIOUS AREAS > 400 S.F. & < 5,000 S.F.

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
ROCK SUMP DETAIL - CLASS II

DATE	7/6/2006
SCALE	N.T.S.
PROJECT NUMBER	10303
	SW-4

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DESIGN PARAMETERS
RESIDENTIAL ON-LOT SUMP

(TOTAL IMPERVIOUS AREA < 5,000 S.F.)

IMPERVIOUS AREA (SQ. FT.)	DEPTH OF SUMP (FT.)					SUMP VOLUME REQUIRED (CU. FT.)	
	1	2	3	4	5		
	DIAMETER OF OUTLET ORIFICE (IN)					NET	ROCK
400	11/16	9/16	1/2	1/2	1/2	68	170
600	13/16	11/16	5/8	9/16	9/16	102	255
800	15/16	13/16	11/16	5/8	5/8	136	340
1000	1-1/16	7/8	13/16	3/4	11/16	170	425
1200	1-3/16	1-0	7/8	13/16	3/4	204	510
1400	1-1/4	1-1/16	15/16	7/8	13/16	238	595
1600	1-3/8	1-1/8	1-0	15/16	7/8	272	680
1800	1-7/16	1-3/16	1-1/16	1-0	15/16	306	765
2000	1-1/2	1-1/4	1-1/8	1-1/16	1-0	340	850
2200	1-9/16	1-5/16	1-3/16	1-1/8	1-1/16	374	935
2400	1-5/8	1-3/8	1-1/4	1-3/16	1-1/8	408	1020
2600	1-11/16	1-7/16	1-5/16	1-1/4	1-1/8	442	1105
2800	1-3/4	1-1/2	1-3/8	1-1/4	1-3/16	476	1190
3000	1-13/16	1-9/16	1-3/8	1-5/16	1-1/4	510	1275
3200	1-7/8	1-5/8	1-7/16	1-3/8	1-1/4	544	1360
3400	1-15/16	1-5/8	1-1/2	1-3/8	1-5/16	578	1445
3600	2-0	1-11/16	1-9/16	1-7/16	1-3/8	612	1530
3800	2-1/16	1-3/4	1-9/16	1-7/16	1-3/8	646	1615
4000	2-1/8	1-13/16	1-5/8	1-1/2	1-7/16	680	1700
4200	2-3/16	1-13/16	1-11/16	1-9/16	1-7/16	714	1785
4400	2-1/4	1-7/8	1-11/16	1-9/16	1-1/2	748	1870
4600	2-5/16	1-15/16	1-3/4	1-5/8	1-9/16	782	1955
4800	2-5/16	1-15/16	1-3/4	1-5/8	1-9/16	816	2040
5000	2-3/8	2-0	1-13/16	1-11/16	1-5/8	850	2125

THIS DETAIL MAY BE UTILIZED FOR TOTAL IMPERVIOUS AREAS > 400 S.F. & < 5,000 S.F.

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
ROCK SUMP DETAIL - CLASS II

DATE 7/6/2006

SCALE N.T.S.

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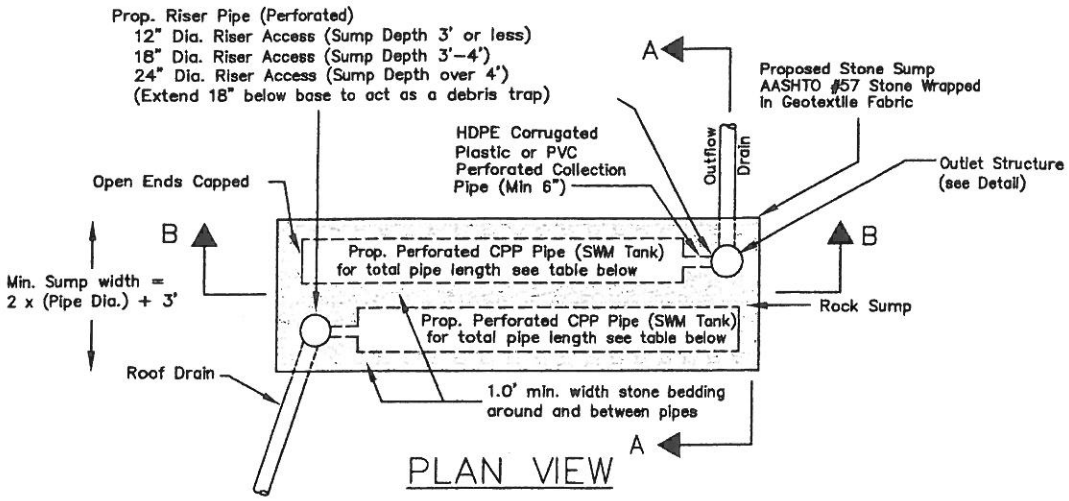
PROJECT NUMBER 10303

SW-5



TOWN OF McCANDLESS
STANDARDS SIZE SPREADSHEET
IF PIPE IS TO BE USED FOR RESIDENTIAL STORMWATER MANAGEMENT

IMPERVIOUS AREA	REQUIRED NET VOLUME	APPROXIMATE PIPE SIZE AND LENGTH REQUIRED							
		2' Depth Sump		3' Depth Sump		4' Depth Sump		5' Depth Sump	
		Pipe Size (inches)	Pipe Length (feet)	Pipe Size (inches)	Pipe Length (feet)	Pipe Size (inches)	Pipe Length (feet)	Pipe Size (inches)	Pipe Length (feet)
400	68	18	38	24	22	30	14	36	10
600	102	18	56	24	32	30	20	36	14
800	136	18	76	24	42	30	28	36	18
1000	170	18	96	24	54	30	34	36	24
1200	204	18	110	24	64	30	42	36	28
1400	238	18	130	24	76	30	48	36	34
1600	272	18	150	24	86	30	54	36	38
1800	306	18	170	24	96	30	62	36	42
2000	340	18	190	24	108	30	66	36	48
2200	374	18	210	24	118	30	70	36	52
2400	408	18	230	24	130	30	80	36	58
2600	442	18	250	24	140	30	90	36	62
2800	472	18	267	24	150	30	96	36	66
3000	510	18	289	24	160	30	104	36	72

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS

ALT ROCK SUMP DETAIL - CLASS II

DATE 7/6/2006

SCALE N.T.S.

PROJECT NUMBER 10303

SW-6

PARTRIDGE VENTURE ENGINEERING
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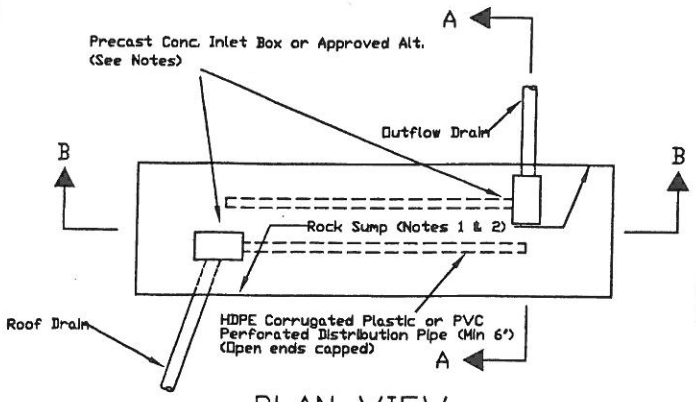
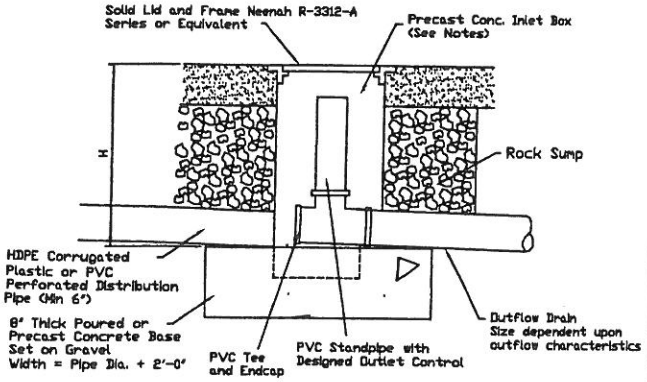
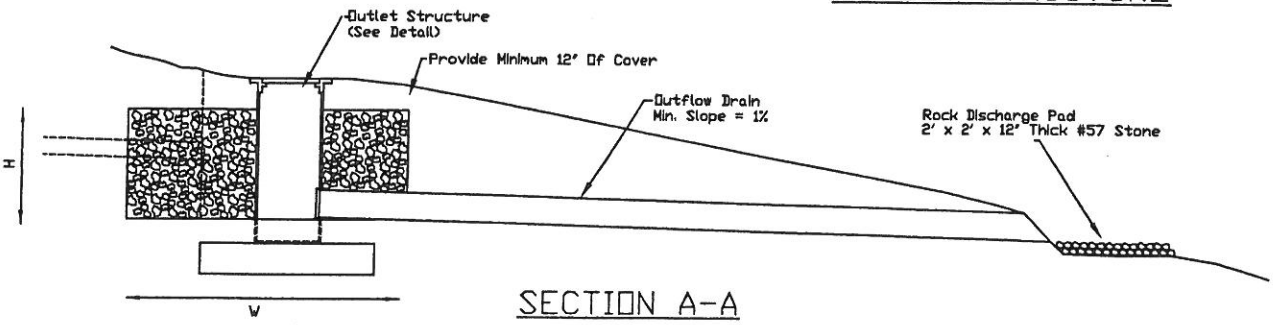


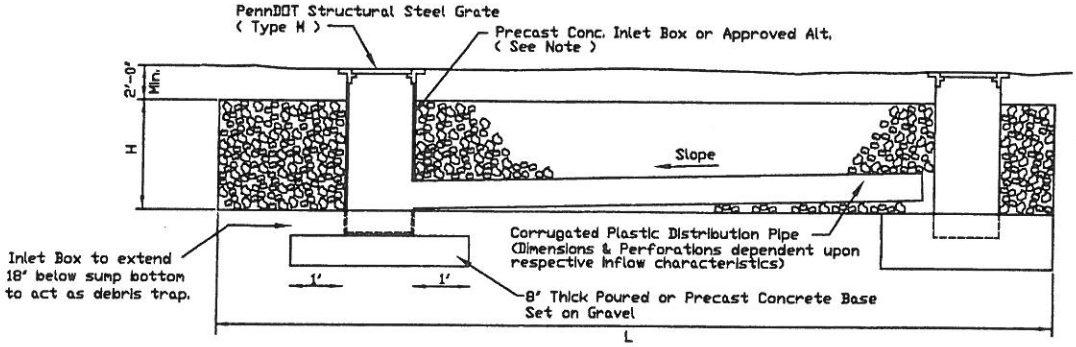
PLAN VIEW



OUTLET STRUCTURE



SECTION A-A



SECTION B-B

Notes:

1. Rock Sump must be individually designed for the tributary area. The Design and Report must be submitted for review and approval by the Town.
2. Rock Sump shall be constructed of AASHTO #57 Limestone or 2B Gravel.
3. Wrap sump on all sides with PennDOT Type B Non-woven Geotextile Material.
4. Dimensions and ratios of L (Length), W (Width) and H (Height) shall vary as per design volume required.
5. Minimum ratio L to W is 3:1; (ie. L = 3W).
6. Dry sumps in fill areas not permitted.
7. Dimensions L (Length) shall be oriented to be parallel to the grade contour alignment.
8. No 90° elbows permitted on cleanout installations.
9. Cleanouts shall be located just before any horizontal bends.
10. All pipe and fittings shall be ASTM D2729.
11. Typical void ratio for sizing the sump is 40% unless otherwise approved.
12. When feasible, the Rock Sump should be located such that the outflow elevation is below the basement floor elevation.

Approved Alternate Structures

Precast Concrete Inlet Box Specifications:

If the total depth of the sump < 4 feet:
2' x 2' Precast Conc. Inlet Box
24" Diameter Conc. Pipe

If the total depth of the sump > 4 feet:
2' x 4' Precast Conc. Inlet Box
36" Diameter Conc. Pipe

Lid and Grate Specifications: (for conc. pipe)
Open Grate - Neenah R-2510 Series or equal
Solid Lid - Neenah R-1691 Series or equal

THIS DETAIL MAY BE UTILIZED FOR TOTAL IMPERVIOUS AREAS > 5,000 S.F.

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
ROCK SUMP DETAIL - CLASS III

DATE	7/6/2006
SCALE	N.T.S.
PROJECT NUMBER	10303
	SW-7

PARTRIDGE VENTURE ENGINEERING
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STANDARD CRITERIA FOR DISPOSAL OF STORMWATER FROM RESIDENTIAL ROOF AND DRIVEWAY DRAINS

The following protocol shall be used for the discharge of a roof or driveway drains, either for new construction or in situations where the drain has been removed from the sanitary or combined sewer system:

A. Unless otherwise approved by the Town, no stormwater from roofs or driveway drains shall be discharged to the street surface, curb underdrain, storm or sanitary sewer.

B. Roof drains shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable. Acceptable methods of disposal include:

- Properly designed dry sumps.
- Grassed Swales or other ground surface impoundment areas with adequate consideration being given to erosion protection and impact to downstream properties.
- Water gardens.
- Rain Barrels.

C. Direct connections of roof drains to storm sewers, streets or roadside ditches may be permitted by the Town. The Person engaged in such action shall contact the Town for a determination and obtain a permit for the proposed connection. Some specific instances where a direct connection may be permitted are as follows:

1. The development plan is equipped with a regional stormwater management facility where BMPs are presently in place.
2. If the only area available for a sump of stormwater BMP is situated on a fill site where the groundwater migration could cause damage to downstream property.
3. Where a determination is made by the Town Staff that it is more advantageous to connect directly to streets or storm sewers
4. If a direct connection of roof drains or stormwater runoff is permitted by the Town, the following provisions must be followed:
   a. A cleanout shall be constructed approximately ten (10') feet from the edge of pavement for Municipal Inspection Purposes. The Town reserves the right to access and inspect the stormwater inspection port as deemed necessary for MS4 compliance documentation.
   b. The storm lateral must be equipped with a check valve or other alternate measures as approved by the Town to prevent stormwater from backing up from the public main line into the private lateral.
   c. The private storm sewer must be equipped with BMP's to address runoff quality if the development plan is not equip with a regional stormwater management facility containing BMP's. BMP measures shall be privately owned and maintained and must be implemented on the system on private property prior to the inspection port.

D. No Person shall construct private facilities for stormwater management purposes within the Public Right-of-Way.

E. If a storm lateral connection is proposed to traverse a property other than that which it serves, a private easement agreement must be recorded with Allegheny County. A copy of this agreement must be provided to the Town prior to the issuance of a Permit.

TOWN OF McCANDLESS

STANDARD CRITERIA FOR DISPOSAL OF STORMWATER FROM RESIDENTIAL ROOF & DRIVEWAY DRAINS

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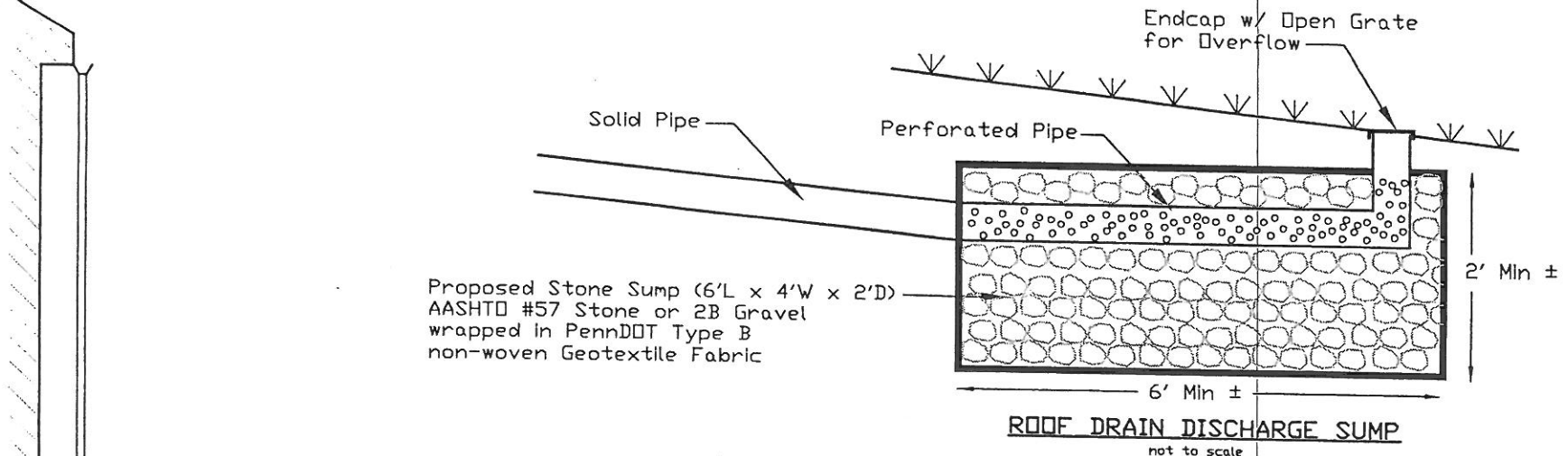
DATE	7/6/2006
SCALE	N.T.S.
PROJECT NUMBER	10303
	SW-8



ROOF DRAIN DISCHARGE SUMP

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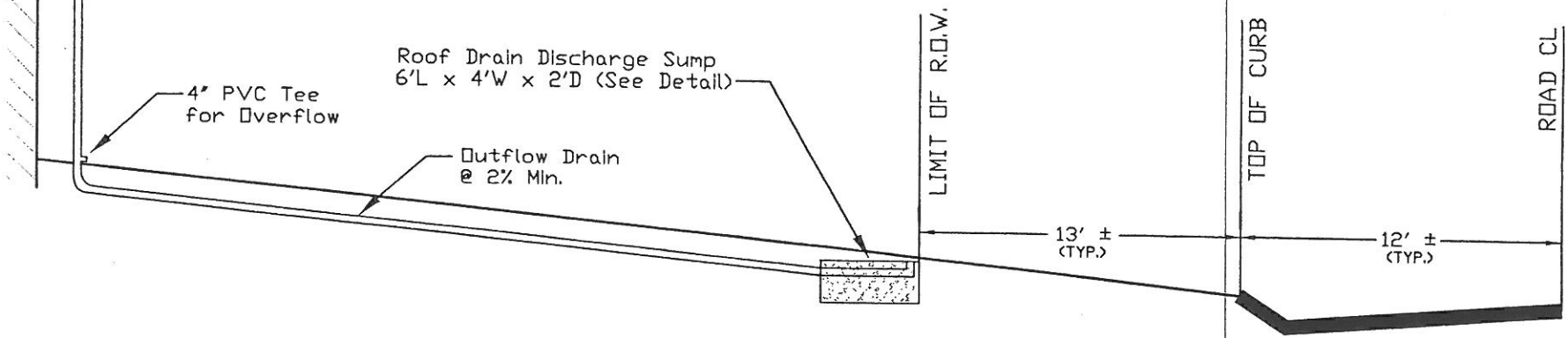

** NO WORK IS PERMITTED WITHIN THE PUBLIC RIGHT-OF-WAY **

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
TYPICAL RESIDENTIAL ROOF DRAIN DISCHARGE

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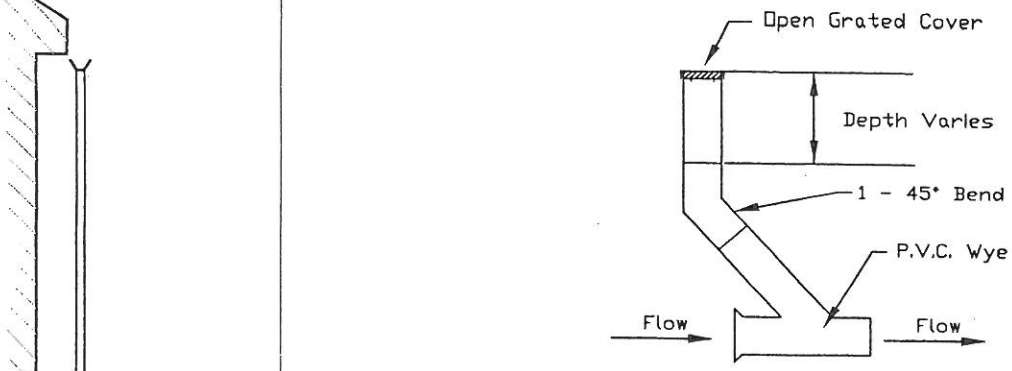
DATE	7/6/2006
SCALE	NTS
PROJECT NUMBER	10303
	SW-9



CLEANOUT DETAIL

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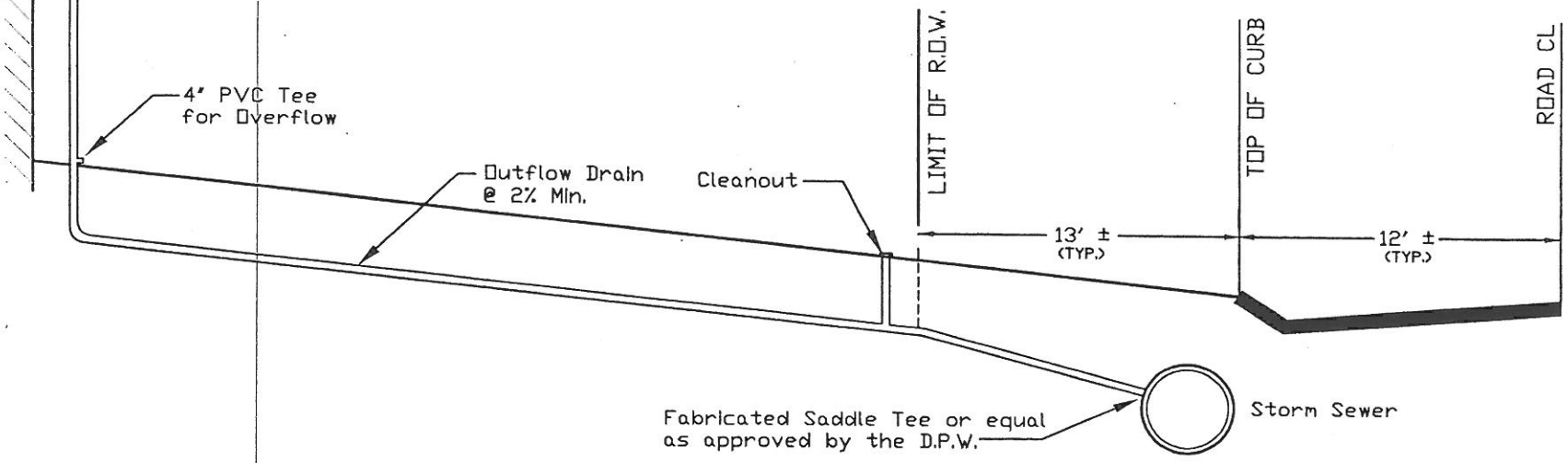

** NO WORK IS PERMITTED WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS **

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
TYPICAL RESIDENTIAL ROOF DRAIN DISCHARGE

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DATE	7/6/2006
SCALE	NTS
PROJECT NUMBER	10303
	SW-10

In calculating the volume of runoff that can be infiltrated at a site, the following methodology shall be used:

a. Methodology:

$Re_v = [(S)(Rv)(A)]/12$, where:

Re_v = Recharge Volume (acre-feet)
S = Soil specific recharge factor (inches)
A = Site area contributing to the recharge facility (acres)
R_v = Volumetric runoff coefficient, $R_v = 0.05 + 0.009$ (I), where:
I = percent impervious area, and
S shall be obtained based upon hydrologic soil group based upon the table below:

Hydrologic Soil Group	Soil Specific Recharge Factor (S)
A	0.38
B	0.25
C	0.13
D	0.06

If more than one hydrologic soil group (HSG) is present at a site, a composite recharge volume shall be computed based upon the proportion of total site area within each HSG.

b. In selecting the appropriate infiltration BMP's, the Applicant shall consider the following:

(i) Permeability and infiltration rate of the site soils.

(ii) Slope and depth to bedrock.

(iii) Seasonal high water table.

(iv) Proximity to building foundations and well heads

(v) Erodibility of soils

(vi) Land availability and topography

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
INFILTRATION RECHARGE VOLUME CALCULATIONS

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DATE	7/6/2006
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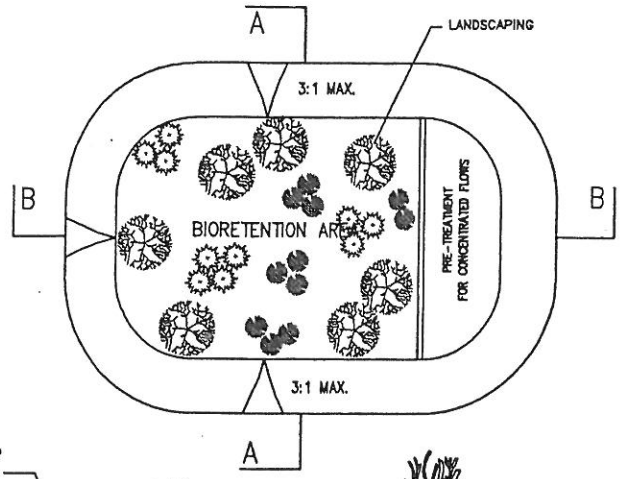
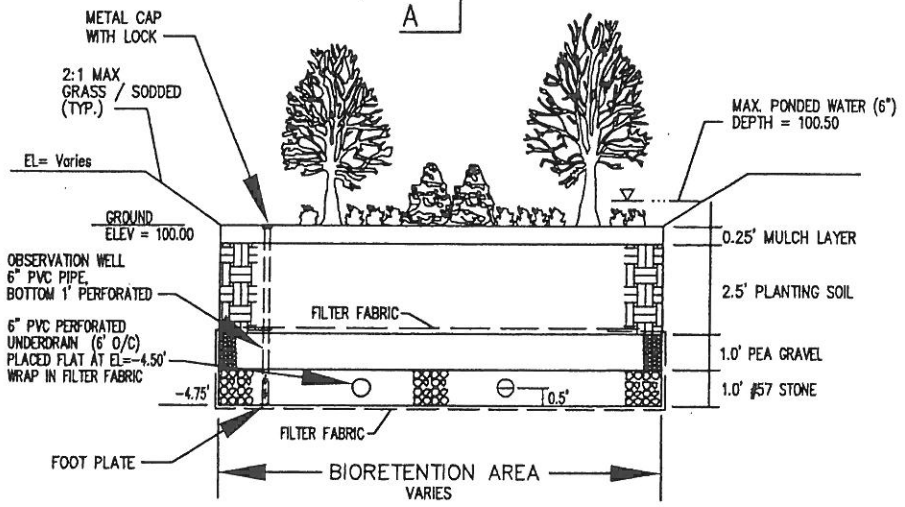
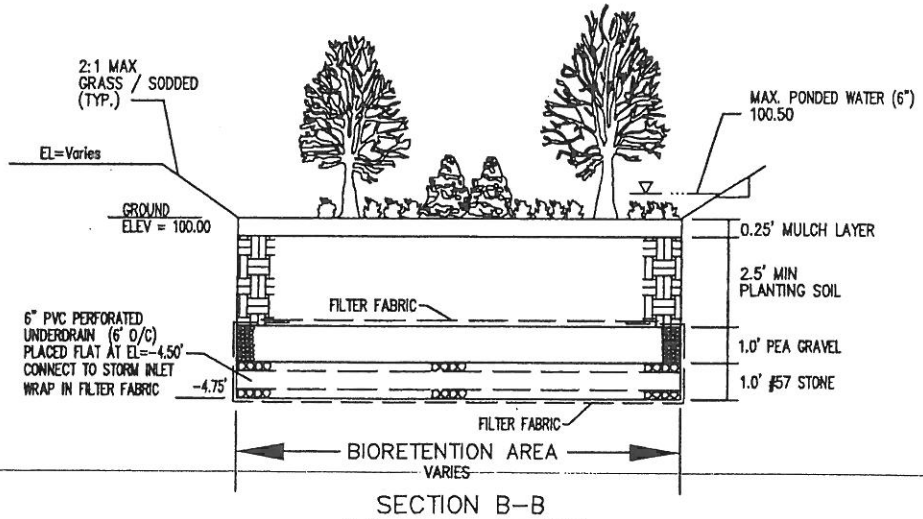
PROJECT NUMBER	10303
	SW-11





SECTION A–A



SECTION B–B

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS

BIORETENTION BASIN

DATE 7/6/2006

SCALE N.T.S.

PROJECT NUMBER 10303

SW-12

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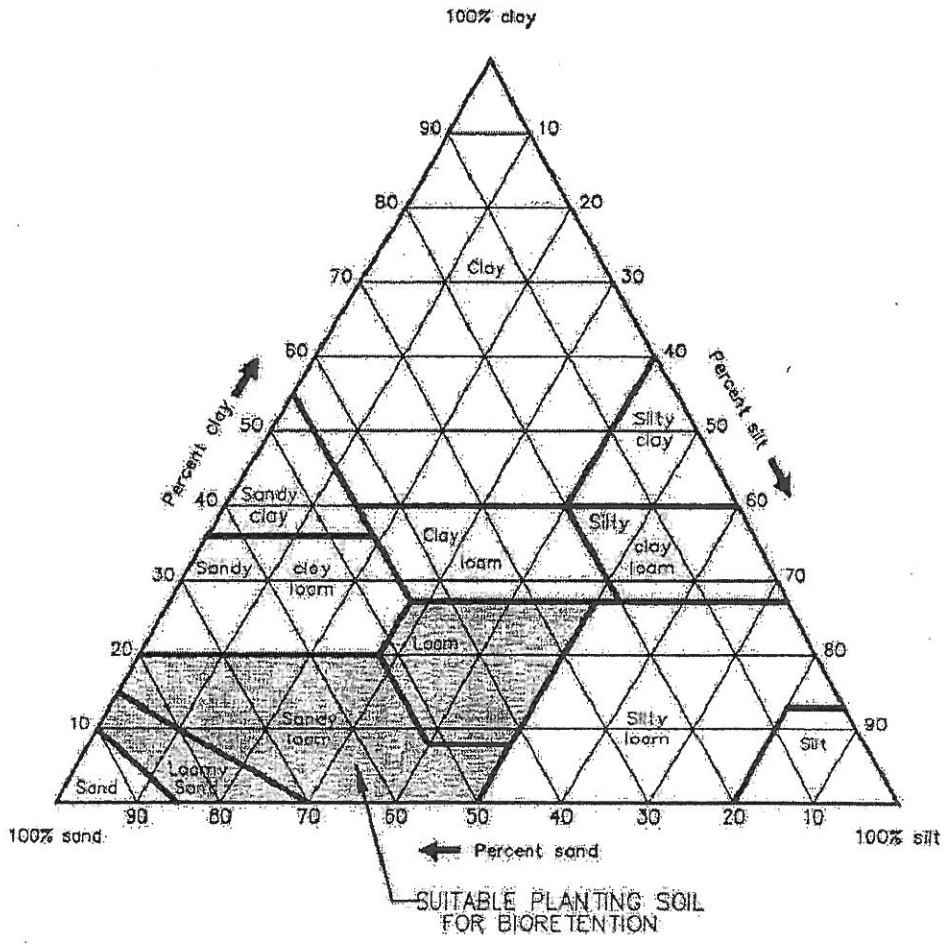
USDA Textural Triangle



SOURCE: U.S. SOIL CONSERVATION SERVICE, 1967.

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
USDA TEXTURAL TRIANGLE

DATE	7/6/2006
SCALE	N.T.S.
PROJECT NUMBER	10303
	SW-13

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STANDARD PROCEDURES
EROSION AND SEDIMENTATION CONTROLS

General

Erosion and Sedimentation from individual residential lots can most often be controlled by silt fence along the lower perimeter of all disturbed areas and the installation of a rock construction entrance where construction traffic will enter and exit the site. Standard Construction Detail, Sheet ES-1, shows the typical erosion controls that should be placed on high and low side lots. If the scope of the work requires additional measures on the site, an individual plan must be submitted and approved by the Town of McCandless and Allegheny County Conservation District. In all cases, the Contractor is responsible for complying with the provisions of 25 PA Code, Chapter 102.

Temporary Erosion Controls

Silt fence must be installed along the lower perimeter of all disturbed areas and will function as the primary control for the site. A stone construction entrance must be installed at the driveway entrance to the site to help prevent mud from being tracked out onto the roadway. When at all possible, construction vehicles should be restricted to paved surfaces.

All uncompleted disturbed areas on which activity will cease for more than twenty (20) days should be seeded and stabilized. After construction is complete and all areas are stabilized, all temporary control measures may be removed and all monitoring will cease. Stabilization is defined as the establishment of a uniform 70% perennial vegetal cover.

Staging Schedule

In general, the following staging schedule should be followed for small projects:

1. Remove all trees that interfere with the proposed land development activities.
2. Install the silt fence in accordance with the standard detail shown on Detail Sheet ES-2 along the lower perimeter of all disturbed areas.
3. Install the rock construction entrance in accordance with the standard detail shown on Detail Sheet ES-2 at the entrance to the site. The stone base for the driveway should also be installed as soon as it is graded in order to prevent erosion.
4. Grub the construction area and remove the topsoil, stockpiling it at the area designated on the plans.
5. Construct the site improvements.
6. Seed and mulch all disturbed areas.
7. Remove all E & S Controls once the site is stabilized. An area will not be considered stabilized until a uniform 70% perennial vegetal cover is established over the disturbed area.

TOWN OF McCANDLESS

STANDARD PROCEDURES
EROSION & SEDIMENTATION CONTROL

DATE 7/6/2006

SCALE N.T.S.

PROJECT NUMBER 10303

ES-1

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STANDARD PROCEDURES
EROSION AND SEDIMENTATION CONTROLS

Maintenance Schedule

It shall be the sole responsibility of the contractor to execute the control of inspection, maintenance, and repair of various sediment control facilities according to the guidelines prescribed below.

All control measures must be inspected on a weekly basis, and in all cases immediately following each runoff event. All necessary repairs should be carried out immediately after their identification. Materials cleaned from the BMP's shall be disposed of by spreading them in the topsoil stockpile area.

Silt Fence — Maintenance checks shall include inspecting silt fence for undercutting, tears, collapse of fence, and depths of sediment accumulation. All repairs of damaged fence must be performed immediately to ensure that the fence meets design specifications. Sediment should be removed periodically, and in all cases should accumulation attain depths equal to half the height of fence. Sediment deposits removed from the silt fence must be disposed of by spreading the material within the topsoil stockpile area. Undercutting of the toe shall be immediately repaired by installing a rock filter outlet.

Construction Entrance — The stabilized construction entrance should be maintained so as to ensure a constant rock thickness. This will be achieved by the placement of additional rock to the specified dimension as required. A stockpile of rock must be maintained on-site for this purpose. At the completion of each work day, all sediment deposited on the public roadways must be removed and returned to the construction site unless otherwise approved by the Town of McCandless. Washing the roadway with water will be unacceptable

Vegetation — All areas to be stabilized by vegetation should be inspected for rills and gullies, bare soil patches or accumulation of sediment at the toe of slopes. Eroded areas shall be regraded, and substandard vegetated areas shall be re-seeded and mulched as specified in the plans.

TOWN OF McCANDLESS

STANDARD PROCEDURES
EROSION & SEDIMENTATION CONTROL

DATE 7/6/2006

SCALE N.T.S.

PROJECT NUMBER 10303

ES-2

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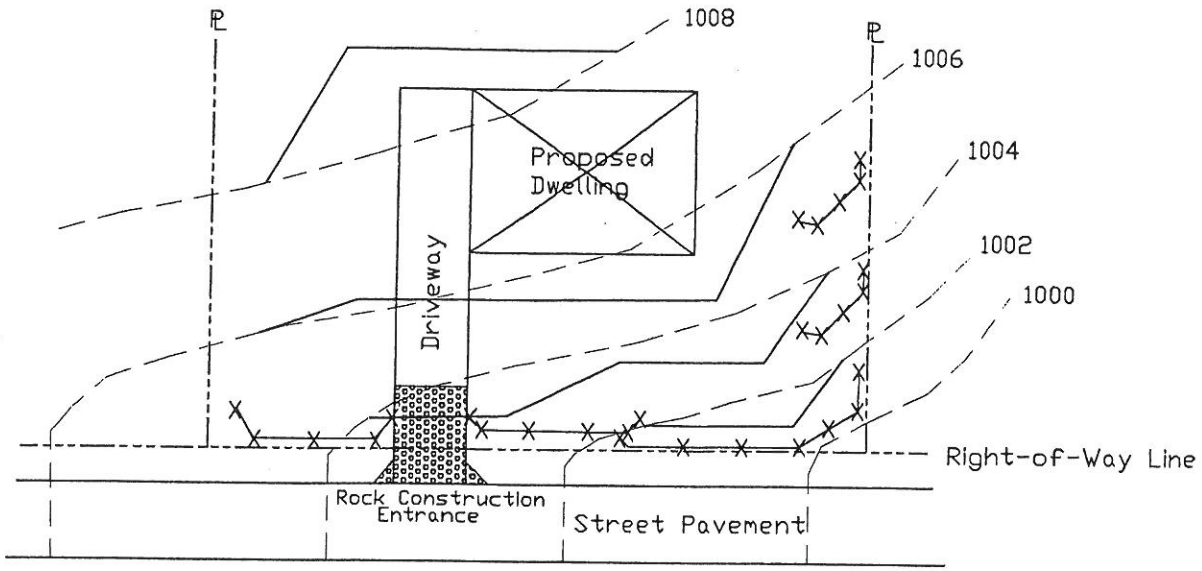
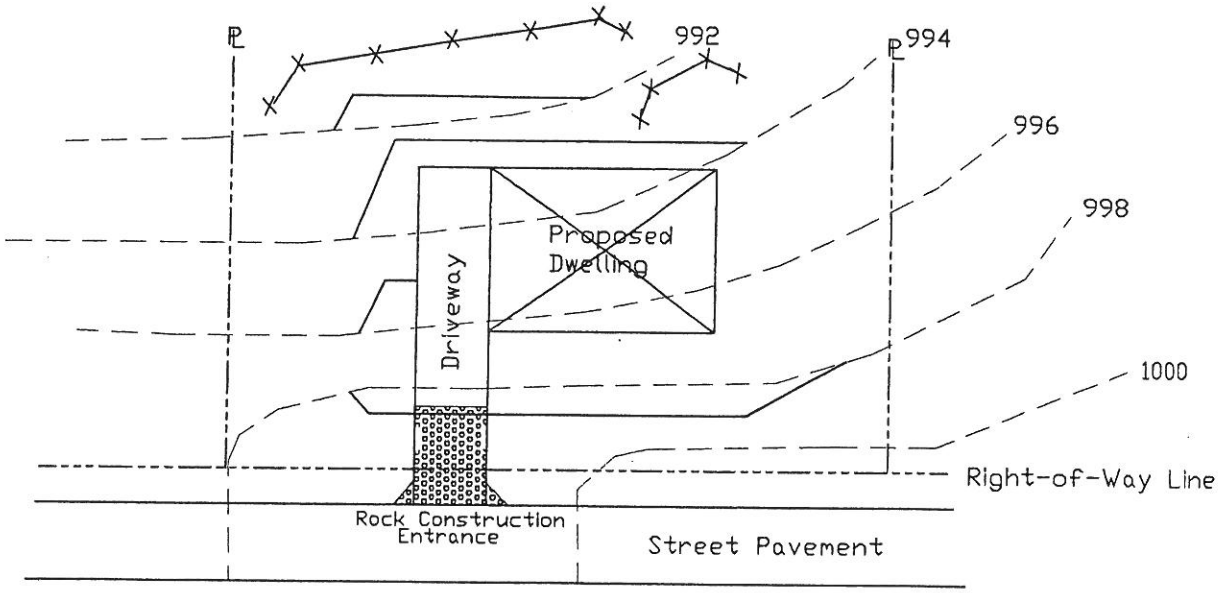


TYPICAL HIGH-SIDE ON-LOT CONTROL



TYPICAL LOW-SIDE ON-LOT CONTROL

LEGEND

Finished Grade

Existing Grade

Silt Fence

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
TYPICAL ON-LOT EROSION CONTROL DETAIL

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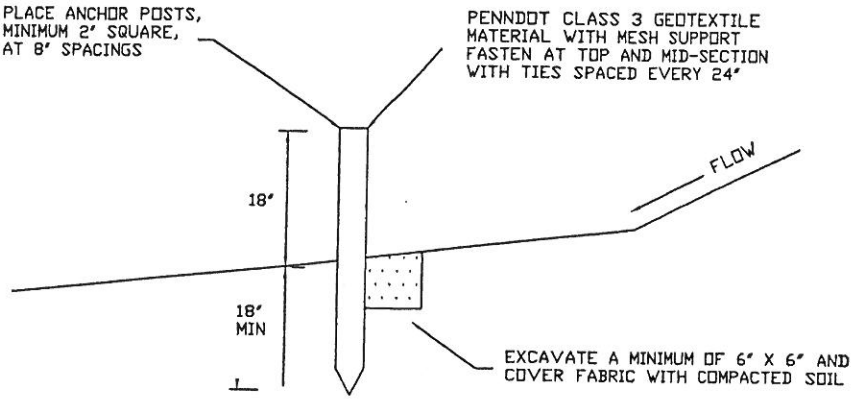
DATE	7/6/2006
SCALE	N.T.S.
PROJECT NUMBER	10303
	ES-3



INSTALLATION:

A TRENCH WILL BE PLOWED OR OTHERWISE EXCAVATED TO THE REQUIRED DEPTH WITH LITTLE, IF ANY, DISTURBANCE TO THE DOWNSLOPE SIDE OF THE TRENCH. THE BOTTOM OF THE TRENCH AND THE FENCE TOP WILL BE PLACED ON A LEVEL GRADE. WHEN IT IS NECESSARY TO CROSS SMALL DEPRESSIONS, THE TRENCH BOTTOM AND FENCE TOP EDGE MAY DEVIATE SLIGHTLY FROM LEVEL GRADE. GRADES IN SUCH SECTIONS WILL NOT EXCEED 1% NOR WILL THE DEVIATION EXTEND FOR MORE THAN 25 FEET.

SUPPORT STAKES WILL BE DRIVEN TO THE REQUIRED DEPTH BELOW THE EXISTING GROUND SURFACE AT SPECIFIED INTERVALS AS ILLUSTRATED.

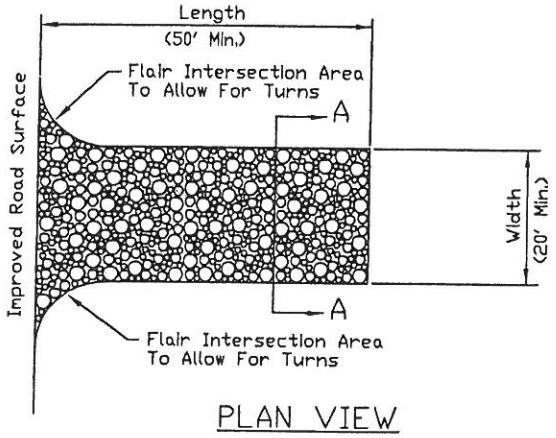
STRETCH AND FASTEN FABRIC TO THE UPSLOPE SIDE OF THE SUPPORT STAKES.

WHERE ENDS OF FABRIC COME TOGETHER, THEY WILL BE OVERLAPPED, FOLDED, AND STAPLED TO PREVENT SEDIMENT BYPASS. AT THE ENDS OF EACH LINE OF SILT FENCE, OR EVERY 100 FEET, WHICHEVER IS S SHORTER, EXTEND THE FENCE UPSLOPE AT A 90 DEGREE ANGLE FOR 4 FEET TO PREVENT ENDFLOW.

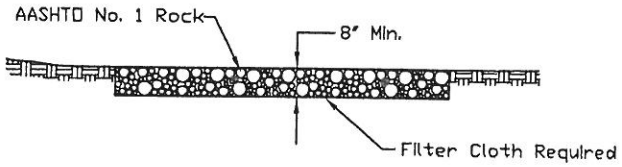
THE TOE ANCHOR WILL BE BACKFILLED AND COMPACTED TO A DENSITY EQUAL TO SURROUNDING SOILS.

SILT FENCE

NO SCALE



PLAN VIEW



SECTION A-A

MAINTENANCE: The structure's thickness will be constantly maintained to the specified dimensions by adding rock. A stockpile of rock material will be maintained on the site for this purpose. At the end of each construction day, all sediment deposited on public roadways will be removed and returned to the

ROCK CONSTRUCTION ENTRANCE DETAIL

NO SCALE

TOWN OF McCANDLESS
STANDARD CONSTRUCTION DETAILS
TYPICAL EROSION CONTROL DETAILS

DATE	7/6/2006
SCALE	N.T.S.
PROJECT NUMBER	10303
	ES-4

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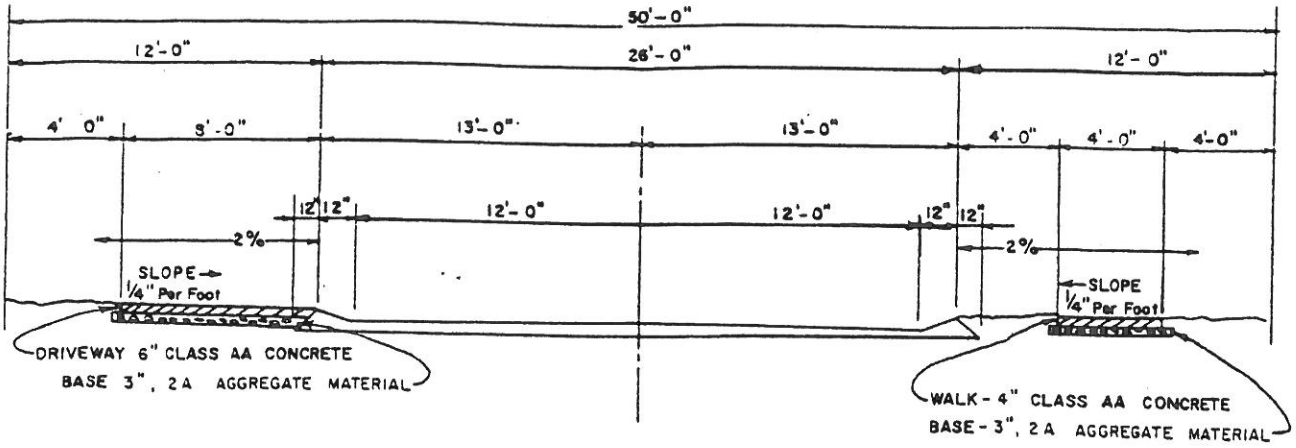
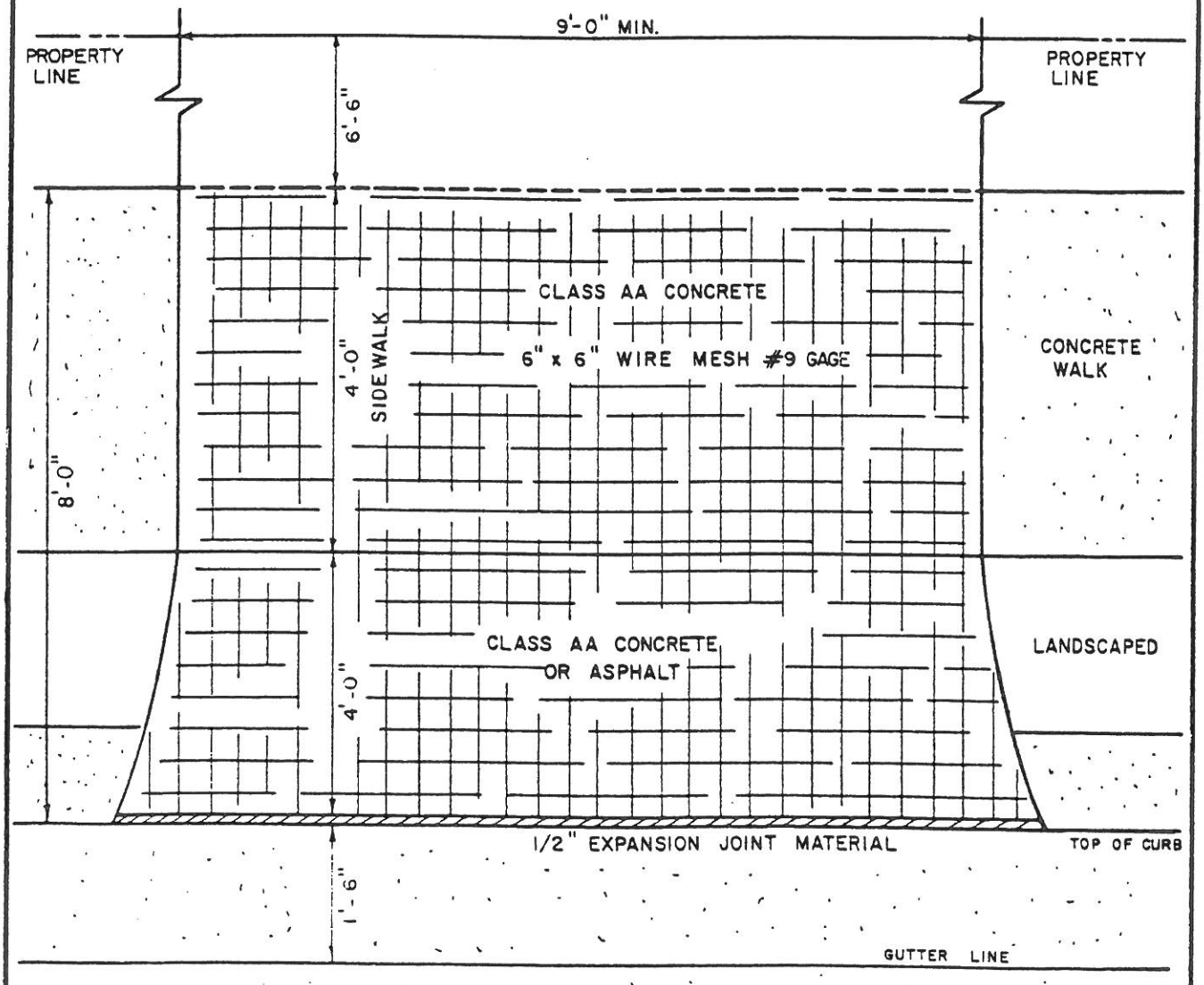


SIDEWALK DETAIL



DRIVEWAY APPROACH APRON

REVISIONS:

MARCH, 1991
JAN., 1992
SEPTEMBER, 1999

SIDEWALK DETAIL
DRIVEWAY APPROACH APRON

TOWN OF McCANDLESS STANDARDS FOR CONSTRUCTION
ALLEGHENY COUNTY, PA.

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