



# SIMPLIFIED APPROACH PERMIT PROCEDURES

**UPPER ALLEN TOWNSHIP**  
**Community Development Department**  
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Phone: 717-766-0756 Fax: 717-796-983  
Office Hours: M-F 8:00 AM – 4:30 PM  
[www.uatwp.org](http://www.uatwp.org)

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## SUBMISSION REQUIREMENTS

All applications must be completed in full with the Owner's signature.

The Simplified Approach application is a supplement application for projects that will create more than 1,000 square feet of impervious surface. This includes the total cumulative impervious surface area of existing and proposed projects.

The following documents must be included with the application:

- A completed application (Section II).
- A completed record of impervious surfaces (Section III).
- A completed Stormwater Management Plan (Section IV). Online mapping options are now available on the Township's website. The mapping option may be located by selecting the Community Development Department and then Permits. You may also type in the following link: [http://www.uatwp.org/?page\\_id=4667](http://www.uatwp.org/?page_id=4667).
- A completed and signed Stormwater Management/BMP Facilities Operation & Maintenance Agreement. (Section VII). A copy of the Agreement will be signed by the appropriate Township officials and returned to you upon approval of a Zoning Permit.
- Any supplemental materials defined in Step 3.

The application and supporting documentation must be submitted with the Zoning Permit application. Incomplete applications will result in delayed processing.

I/we have read the Simplified Approach Permit Procedures:

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**Applicant/Owner**

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**Date**

# **SIMPLIFIED APPROACH**

## **For Minor Regulated Activities in Upper Allen Township, Cumberland County, Pennsylvania**

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#### **Introduction:**

This Simplified Approach has been created as a tool to help property owners manage stormwater on their property and streamline the process of designing on-site stormwater management facilities for new, relatively minor residential and accessory structure projects. Through the use of this manual, residents have the ability to determine the appropriate facilities for their property, project, and budget. This design method is not intended to be used with large-scale subdivision / land development projects or activities that include construction of stormwater infrastructure.

## **I. Simplified Approach Directions and Review Process**

- Step 1:** Complete Worksheet 1 (Section II) and create a Record of Impervious Surfaces Stormwater Management Plan as required in Section IV. Proceed to Step 2.
- Step 2:** Fill out Columns 1-3 on the “Record of Impervious Surfaces Table” (Section III). Impervious area is defined under Section 214-10 of the Upper Allen Township Stormwater Management Ordinance. If the total cumulative impervious surface area added since January 18, 2017 is **less than or equal to 1,000 ft<sup>2</sup>**, proceed directly to Step 4. If the total cumulative impervious surface area added since January 18, 2017 is **greater than 1,000 ft<sup>2</sup> and less than or equal to 5,000 ft<sup>2</sup>** continue to Step 3.
- Step 3:** Complete the Minor Stormwater Management Plan (Section IV) and complete and sign the Stormwater Management/BMP Facilities Operation & Maintenance Agreement (Section VII). Submit Worksheet 1 along with supplemental materials identified under Step 3.
- 3a.** Determine if any of the proposed impervious areas are Disconnected Impervious Areas (hereinafter referred to as DIAs) by following the criteria listed in Section V. The DIA flow paths and contributory areas must be shown on the Plan. Fill out Column 4 of the Record of Impervious Surfaces for all areas that qualify as DIAs.
- 3b.** For all proposed impervious surfaces that cannot be completely disconnected, refer to the Record of Impervious Surfaces Table and calculate the volume of stormwater runoff required to be captured by Stormwater BMPs. Multiply the contributory square footage of impervious area draining to the BMP by 0.25 (Column 2 x 0.25 = Column 5). Using the “Chart for Determining BMP sizing” based on Volume Required (Section VI) and standard details (Section VIII), choose the BMP and size required for each contributory impervious area. It is the applicant’s responsibility to select a facility and determine the appropriate size. Proceed to Step 5.
- Step 4:** Submit the completed Worksheet 1, the Record of Impervious Surfaces, and the Record of Impervious Surfaces Stormwater Management Plan, along with any applicable fees to Upper Allen Township. The application shall not be considered to be complete unless it includes all of the information required. Proceed to Step 5.
- Step 5:** Upon receipt of a complete application, the official designated by Upper Allen Township to administer the Simplified Approach process shall review the application against the requirements applicable to Simplified Approach submissions. The designated official shall approve the application if the application conforms to applicable requirements. The designated official shall deny the application if the application does not conform to applicable requirements. Any denial shall be in writing and shall state the reasons for such denial. The designated official shall approve or deny the complete application within fifteen (15) working days of the date of filing. The property owner may, in response to a denied Simplified Approach submission, resubmit the application with revisions necessary to address the reasons for denial. Proceed to Step 6.
- Step 6:** Upon approval of a complete application packet, the designated official shall sign the permit and issue a copy to the Applicant. Once the permit is signed and its receipt is acknowledged, the applicant is authorized to initiate construction of the approved project pending all other approvals have been granted.

## II. Worksheet 1 (Application and Permit)

Property Address: \_\_\_\_\_ Parcel ID: \_\_\_\_\_

Property Owner's Name: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Address of Owner: \_\_\_\_\_

Applicant's Name (if different than the Owner): \_\_\_\_\_

Applicant's Phone Number (if different than the Owner): \_\_\_\_\_

Applicant's email: \_\_\_\_\_

Total Existing Impervious Surface Area on the Property: \_\_\_\_\_

Total Additional Impervious Surface Area Proposed by this Project: \_\_\_\_\_

Total Proposed Impervious Surface Area on the Lot upon completion of this Project: \_\_\_\_\_

Stormwater Management Submission Type (*check all that apply*):

\_\_\_\_\_ Record of Impervious Surfaces Stormwater Management Plan – List A (proposed impervious < 1,000 s.f.)

\_\_\_\_\_ Minor Stormwater Management Plan (1000 s.f. < proposed impervious < 5,000 s.f.)

Are there any known existing drainage problems or the potential for the proposed project to create drainage problems? (if yes please explain) \_\_\_\_\_

\_\_\_\_\_

### ***Declaration and Acknowledgement:***

- I (we) declare that I am the property owner, or representative of the owner, and that the information provided is accurate to the best of my knowledge. I (we) agree to assume full responsibility for the implementation. I (we) understand that stormwater may not adversely affect adjacent properties or be directed onto another property without written permission. I (we) declare that the proposed project will not adversely affect any, septic systems, or drinking water wells on this or any other property.
- I (we) understand that false information may result in a stop work order or revocation of permits. Municipal representatives are granted reasonable access to the property for review and/ or inspection of this project. I (we) acknowledge that the steps, assumptions, and guidelines provided in this submission, including but not limited to the Minor Stormwater Site Plan, the Upper Allen Township Stormwater Worksheet 1, Record of Proposed Impervious and the Stormwater Management / BMP Facilities and Maintenance Agreement (if applicable) will be adhered to.

### **Applicant Acknowledgement of Submission:**

Owner's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Development activities shall begin only after Upper Allen Township approves the Minor Stormwater Site Plan.**

### **Permit approved by Upper Allen Township**

#### ***Township Official:***

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

### III. Record of Impervious Surfaces

RECORD OF IMPERVIOUS SURFACES							
<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>	<i>Column 4</i>	<i>Column 5</i>	<i>Column 6</i>	<i>Column 7</i>	<i>Column 8</i>
Number/Letter (impervious area corresponding to Minor Stormwater Management Plan)	Area of Impervious (ft <sup>2</sup> )	Description (Roof, Patio, Pavement, Driveway, Gravel, Etc.)	Does the Impervious Area Meet the Requirements to be Disconnected? (yes/no)	Contributory Area Storage Requirements; Storage (ft <sup>3</sup> ) = Column 2 x .25	BMP used to Control Required Volume	BMP Size Requirement from Chart for Determining BMPs Sizing (Section VI)	Notes (Minimum Date)
<b><i>PROPOSED IMPERVIOUS AREA SINCE JANUARY 18, 2017</i></b>							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
<b><i>EXISTING IMPERVIOUS AREA BEFORE JANUARY 18, 2017</i></b>							
A							
B							
C							
D							
E							
F							
G							
H							
I							
J							

## **IV. Simplified Stormwater Management Plan Requirements**

The Cumberland County Planning Commission can provide assistance to applicants to obtain property maps with the below required items.

### **Record of Impervious Surfaces Stormwater Management Plan:**

1. Property Boundary
2. North Arrow and Scale (graphic) of 1"=50' or less.
3. Aerial Photo (if the land use has changed from the photo then draw in the approximate land uses (grass, woods, etc.).
4. Building Setbacks (Labeled)
5. 5' Contours or smaller where appropriate for the scale of the plan (Labeled)
6. Soils (Labeled)
7. Location of all existing and proposed impervious (home, accessory structures, driveways, etc.). The proposed impervious areas draining to a discharge point shall be numbered (1, 2, .... ) and the location of discharge from the existing and proposed impervious shall be shown, marked with an "x" or appropriate other symbol. The proposed impervious area reference number shown on the Minor Stormwater Management Plan shall correspond to the number on the Record sheet. The proposed impervious area on the plan shall be dimensioned.
8. Property Owners Signature

### **Minor Stormwater Management Plan:**

1. All plan requirements established above for the "Record of Impervious Surfaces Stormwater Management Plan."
2. Slope/flow direction arrows on and 50 feet beyond the property (If the property is of substantial size and the proposed impervious is within the lot interior the slope/flow direction arrows shall be shown for minimum of 100 feet beyond the site Regulated Activity area.)
3. Distance from proposed downspouts along flow path to property lines, drainage ways (natural or manmade), wooded areas, offsite structures on and 50 feet beyond the property line (If applying for the DIA credit, label the DIA flow path and length on the plan.)
4. Natural features such as drainage ways, streams, wetlands, on and 50 feet beyond the property line
5. Any other pertinent information that may be significant to the project site (steep slopes, etc.)
6. Wells and on-site septic systems
7. Size and location of stormwater BMP's with dimensions and details (as required)
8. Soil hydrologic soil group (listed under the soil)
9. Any existing and proposed structures first floor elevations
10. Grading spot elevations and or contours defining the proposed flow characteristics
11. Approximate distance from house and elevation of proposed stormwater BMPs and overflow paths for storms greater than 2 year events

## V. How to Determine a Disconnected Impervious Area (DIA)

When impervious surface areas like rooftops and paved areas are directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, the impervious surface areas may qualify to be treated as Disconnected Impervious Area (DIAs).

Impervious Area is defined in the definitions section of the ordinance.

**Rooftop Disconnection:** Impervious is considered to be disconnected if it meets the requirements listed below:

- The contributing impervious drainage area to each disconnected discharge (downspout) is less than 500 SF.
- The overland flow path from runoff discharge point has a slope of five percent (5%) or less.
- Soils along the overland flow path are not classified as hydrologic group “D” or soil rating “5”.
- The overland flow path is maintained as at least 90% uniformly vegetated condition.
- The receiving pervious area shall not include another person’s property unless written permission has been obtained from the affected property owner.
- The length of flow path must be 75 feet in length.
- The distance between discharge points and flow paths must be and remain a minimum of 8 feet apart for entire 75 feet.

**Paved Disconnection:** Paved surfaces can be considered disconnected if they, or the adjacent areas, meet the following requirements:

- The contributing flow path over the impervious area is not more than 75 feet.
- The length of the overland flow is greater than or equal to the maximum length of flow over the impervious area.
- The slope of both the contributing impervious area and the overland flow path is five percent (5%) or less.
- If discharge is concentrated at one or more discrete points, no more than 500 ft<sup>2</sup> may discharge to any one point. In addition, a gravel strip or other spreading device is required for concentrated discharges. For non-concentrated discharges along the entire edge of paved surface, a level spreader is not required; however, there must be provisions for the establishment of vegetation along the paved edge.

## Section VI. Chart for Determining BMP Sizing

Volume Required (ft <sup>3</sup> )	BMP						
	Rain Garden/ BioRetention	Infiltration Trench	Infiltration Bed	Infiltration Berm	PA Native Deciduous Tree*	PA Native Evergreen Tree*	Rain Barrel (55 Gal Typ)
	Variable Determining Size						
Area (ft <sup>2</sup> )	Length (ft)	Area (ft <sup>2</sup> )	Length (ft)	Quantity (ea)	Quantity (ea)	Quantity (ea)	
12.5	4	8	21	3	2	1	2
25	14	16	42	6	4	3	3
50	36	31	83	11	8	5	7
75	59	47	125	17	13	8	10
100	82	63	167	22	17	10	14
125	106	78	208	28	21	13	17
150	130	94	250	33	25	15	20
175	154	109	292	39	29	18	
200	178	125	333	44	33	20	
225	203	141	375	50	38	23	
250	227	156	417	56	42	25	
275	252	172	458	61	46	28	
300	277	188	500	67	50	30	
325	302	203	542	72			
350	326	219	583	78			
375	351	234	625	83			
400	376	250	667	89			
425	401	266	708	94			
450	426	281	750	100			
475	451	297	792	106			
500	476	313	833	111			
525	502	328	875	117			
550	527	344	917	122			
575	552	359	958	128			
600	577	375	1000	133			
625	602	391	1042	139			
650	628	406	1083	144			
675	653	422	1125	150			
700	678	438	1167	156			
725	704	453	1208	161			
750	729	469	1250	167			
775	754	484	1292	172			
800	780	500	1333	178			
825	805	516	1375	183			
850	830	531	1417	189			
875	856	547	1458	194			
900	881	563	1500	200			
925	907	578	1542	206			
950	932	594	1583	211			
975	958	609	1625	217			
1000	983	625	1667	222			
1025	1008	641	1750	239			
1050	1034	656	1750	233			
1075	1059	672	1792	239			
1100	1085	688	1833	244			
1125	1110	703	1875	250			
1150	1136	719	1917	256			
1175	1162	734	1958	261			
1200	1187	750	2000	267			
1225	1213	766	2042	272			
1250	1238	781	2083	278			

\*No more than 25% of total volume can be mitigated by use of trees

**Note:** Round volume required based on calculations to next highest number provided on this table.



## **VII. Stormwater Management/ BMP Facilities Operation and Maintenance Agreement**

**THIS AGREEMENT**, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_ hereinafter called the “Landowner” and Upper Allen Township, Cumberland County, Pennsylvania, hereinafter called the “Township.”

**WHEREAS**, the Landowner is the owner of certain real property described as the Cumberland County Tax Map / Parcel Identification Number \_\_\_\_\_, as recorded by Deed in the Land Records of Cumberland County, Pennsylvania, Book \_\_\_\_\_ Page \_\_\_\_\_, hereinafter called the “Property”;

**WHEREAS**, the Landowner is proceeding to build on and develop the property; and

**WHEREAS**, the Minor Stormwater Management Plan hereinafter called the “Plan”, which is expressly made a part hereof, as approved or to be approved by the Township, provides for management of stormwater within the confines of the property through the use of Stormwater Best Management Practices (Stormwater BMPs); and

**WHEREAS**, the Township and the Landowner, its successors and assigns, agree that the health, safety, and welfare of the residents of the Township, require that on-site Stormwater BMPs be constructed and maintained on the Property; and

**WHEREAS**, the Township requires that on-site Stormwater BMPs as shown on the Plan be constructed and adequately maintained by the Landowner, its successors and assigns. Any additional requirements imposed by the Township are considered part of the Plan.

**NOW, THEREFORE**, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner in accordance with the specifications identified within the Plan shall construct the onsite Stormwater BMPs.
2. The Landowner assumes full responsibility for the construction, operation, and maintenance of the proposed stormwater management facilities.
3. The Landowner, its successors and assigns, shall adequately maintain the Stormwater BMPs. This includes all pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions.
4. The Landowner, its successors and assigns, shall inspect the Stormwater BMPs after all rainfall events exceeding one inch of precipitation in a 24-hour period.
5. The Landowner, its successors and assigns, hereby grant permission to the Township, its authorized agents and employees, to enter upon the Property without prior notification at reasonable times and upon presentation of proper identification to inspect the Stormwater BMPs whenever the Township deems necessary.

6. The Landowner acknowledges that the proposed Stormwater BMPs will be a permanent fixture of the property that cannot be altered or removed without approval by the Township.
7. In the event the Landowner, its successors and assigns, fails to maintain the Stormwater BMPs as shown on the Plan and in good working condition, the Township may enter upon the Property and take whatever action is deemed necessary to maintain said Stormwater BMPs and to charge the costs of such repairs to the Landowner, its successors and assigns. This provision shall not be construed to allow the Township to erect any structure of permanent nature on the land of the Landowner unless such structures were part of the approved Plan. It is expressly understood and agreed that the Township is under no obligation to routinely maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Township.
8. In the event that the Township, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the Township within thirty (30) days of receipt of invoice for all expenses incurred. The Township has the right to file a municipal lien for unpaid costs and expenses that have not been reimbursed thirty (30) days after receipt of invoice.
9. The intent and purpose of this Agreement is to ensure the proper maintenance of the Stormwater BMPs by the Landowner. This Agreement shall not be deemed to create any additional liability of any party for damage alleged to result from or be caused by nonpoint source pollution runoff. This Agreement imposes no liability of any kind whatsoever on the Township and the Landowner agrees to hold the Township harmless from any liability in the event the Stormwater BMPs fail to operate properly. In the event that a claim is asserted against the Township, its designated representatives or employees, the Township shall promptly notify the Landowner and the Landowner shall defend, at his own expense, any suit based on the claim. If any judgment or claims against the Township shall be allowed, the Landowner shall pay all costs and expenses regarding said judgment.
10. This Agreement shall be binding to the Landowner, its administrators, executors, assigns, heirs and any other successors in interests, in perpetuity.

**Landowner:**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

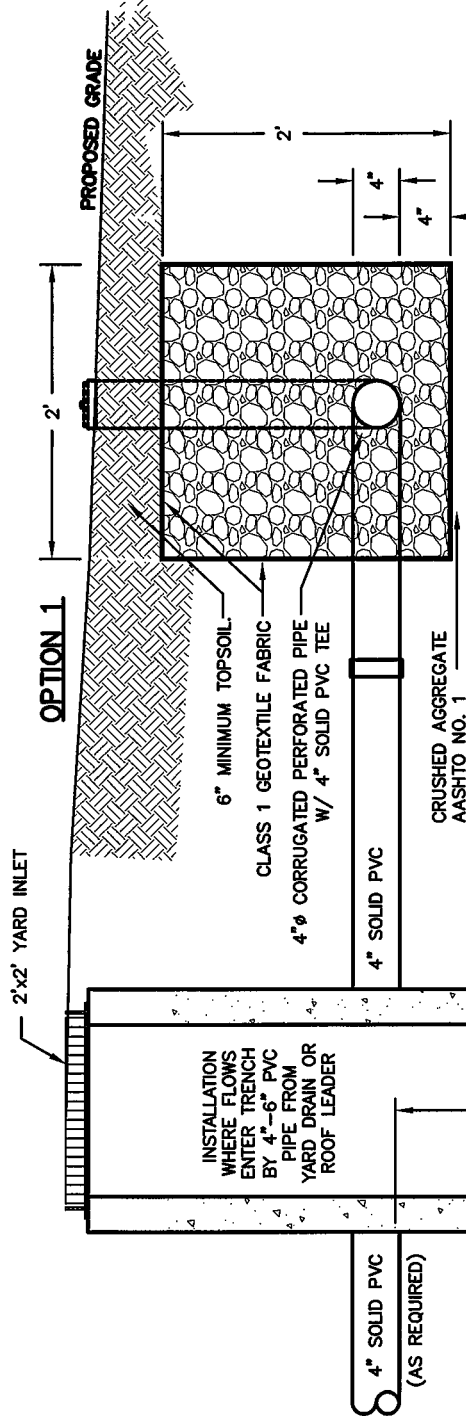
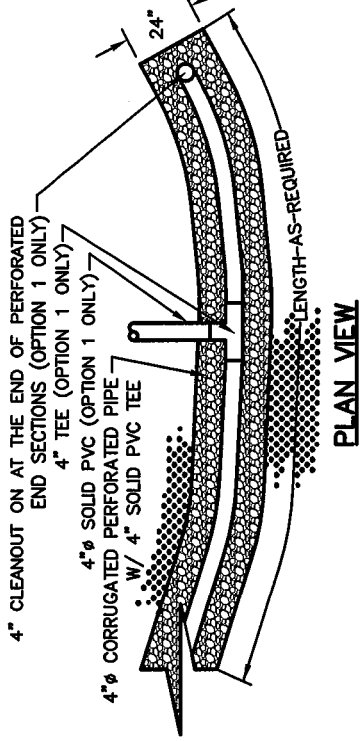
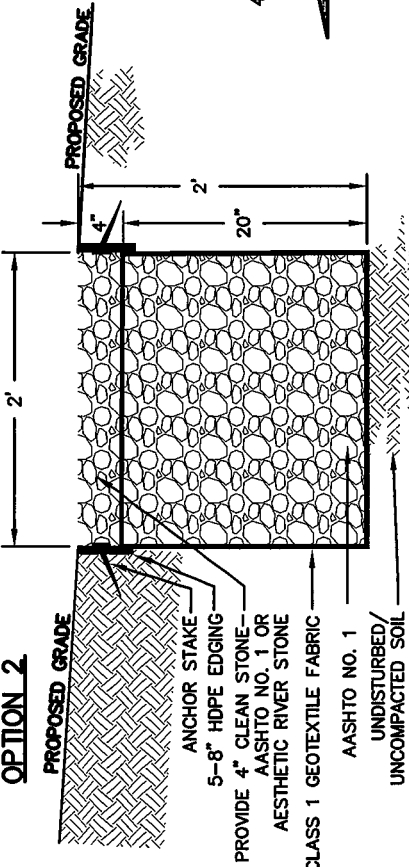
**Upper Allen Township:**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

**VIII. Standard Details**

DESIGN NOTE:  
 CHOOSE TRENCH LENGTH TO MEET REQUIREMENT PER THE BMP SIZING  
 CHART. TRENCHES SHALL BE INSTALLED PARALLEL TO THE EXISTING  
 CONTOUR SUCH THAT THE TOP OF TRENCH IS INSTALLED AT A  
 UNIFORM ELEVATION.



- NOTES:**
1. INFILTRATION TRENCHES TO BE INSTALLED IN UNDISTURBED SOIL. CONTINUOUS TRENCHES SHALL BE INSTALLED PARALLEL TO THE CONTOUR SUCH THAT THE TRENCH IS AT A UNIFORM ELEVATION THROUGHOUT.
  2. SUBGRADE BELOW THE INFILTRATION TRENCH SHOULD NOT BE COMPACTED. IF THE SUBGRADE BECOMES COMPACTED FOR ANY REASON, THE SOIL SHALL BE SCARIFIED PRIOR TO CONSTRUCTING THE BED.
  3. SEDIMENT ACCUMULATION SHALL BE MONITORED SEASONALLY.
  4. PENDING THE INSTALLATION TYPE WHEN SEDIMENT ACCUMULATES TO A DEPTH OF 18" IN THE YARD BASIN, OR AS THE TOP 4" OF RIVER STONE OR AASHTO STONE ARE CHOKED WITH DEBRIS AND SEDIMENT, IT SHALL BE REMOVED.

**INFILTRATION TRENCH**  
 N.T.S.

DRAWING PREPARED BY C. S. DAVIDSON, INC.

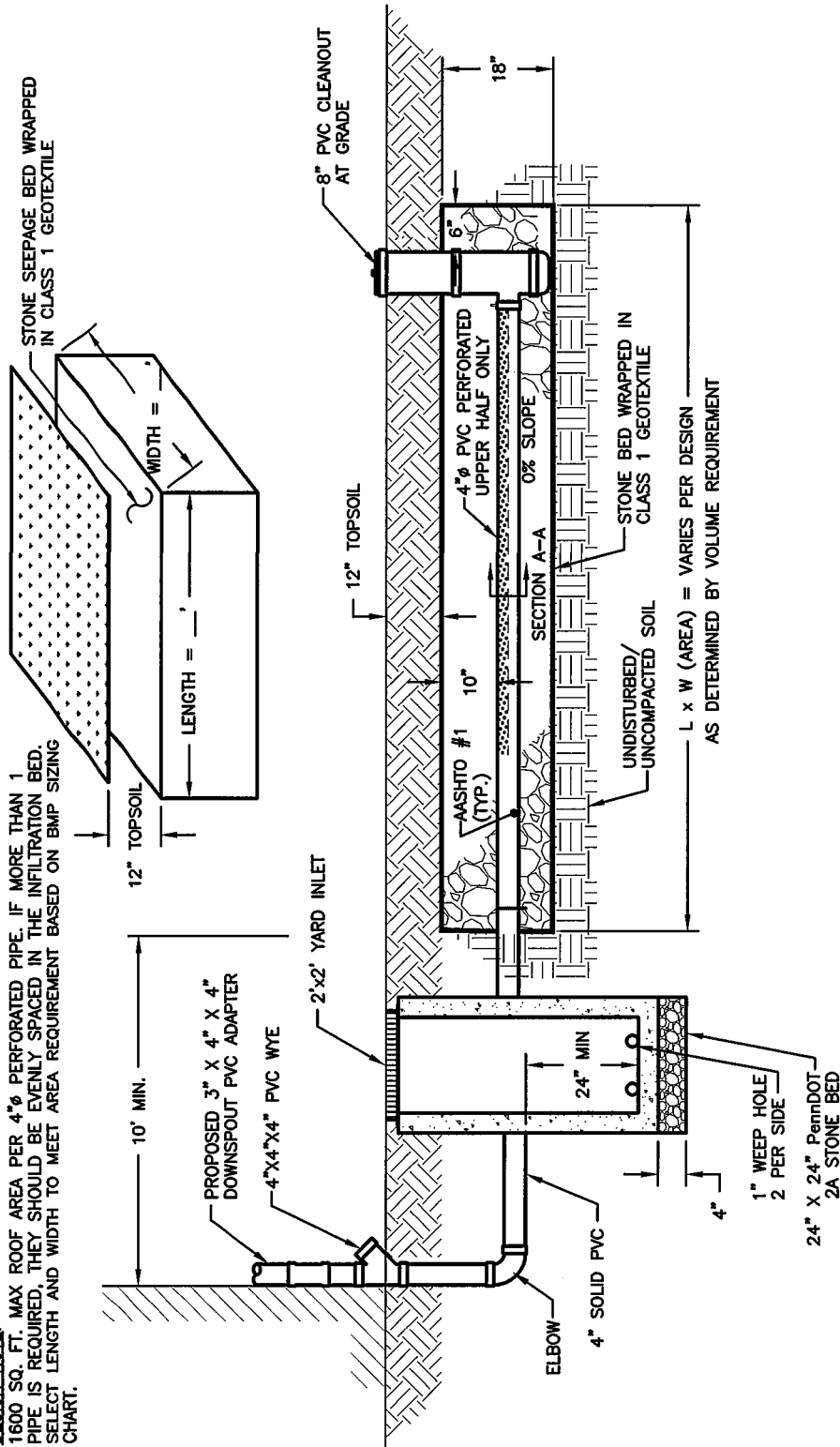
SIMPLIFIED APPROACH DETAILS.dwg

DATE: AUG. 2016

**SIMPLIFIED APPROACH STANDARD DETAIL**  
**INFILTRATION TRENCH**

CUMBERLAND COUNTY, PENNSYLVANIA

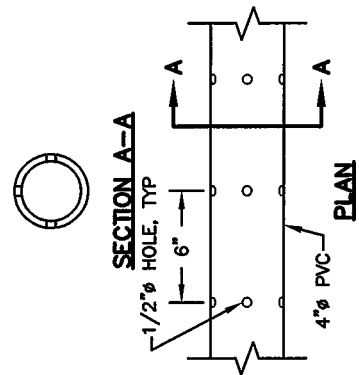
**DESIGN NOTE:**  
 1600 SQ. FT. MAX ROOF AREA PER 4" PERFORATED PIPE. IF MORE THAN 1 PIPE IS REQUIRED, THEY SHOULD BE EVENLY SPACED IN THE INFILTRATION BED. SELECT LENGTH AND WIDTH TO MEET AREA REQUIREMENT BASED ON BMP SIZING CHART.



**NOTES:**

1. INFILTRATION PITS TO BE INSTALLED IN UNDISTURBED SOIL.
2. SUBGRADE BELOW THE INFILTRATION PIT SHOULD NOT BE COMPACTED. IF THE SUBGRADE BECOMES COMPACTED FOR ANY REASON, THE SOIL SHALL BE SCARIFIED PRIOR TO CONSTRUCTING THE BED.
3. SEDIMENT ACCUMULATION SHALL BE MONITORED SEASONALLY.
4. WHEN SEDIMENT ACCUMULATES TO A DEPTH OF 18" IN THE YARD BASIN, IT SHALL BE REMOVED.

**TYPICAL INFILTRATION BED DETAIL**  
 N.T.S.



DRAWING PREPARED BY C. S. DAVIDSON, INC.

SIMPLIFIED APPROACH DETAILS.dwg

DATE: AUG. 2016

**SIMPLIFIED APPROACH STANDARD DETAIL**  
**INFILTRATION BED**

CUMBERLAND COUNTY , PENNSYLVANIA

**DESIGN NOTE:**  
HOME OWNER TO CHOOSE LENGTH OF THE BERM REQUIRED BASED ON THE VOLUME REQUIRED PER THE BMP SIZING CHART. BERMS SHALL BE INSTALLED PARALLEL TO THE EXISTING CONTOUR SUCH THAT THE TOP OF BERM IS INSTALLED AT A UNIFORM ELEVATION.

CONTRACTOR'S OPTION: THE CONTRACTOR MAY CHOOSE TO STRIP THE SOD OFF OF THE FOOTPRINT AREA OF THE INFILTRATION BERM FOR REUSE AS STABILIZATION OF 3:1 EMBANKMENTS. IF EXISTING SOD IS NOT USED, THE DEVELOPER SHALL STABILIZE THE EMBANKMENTS WITH TEMPORARY MATTING, SEEDING AND MULCHING PER ADAMS COUNTY CONSERVATION DISTRICT REQUIREMENTS.

SOD OR PROVIDE TOPSOIL AND SEEDING STABILIZED WITH TEMPORARY NA GREEN S75 MATTING THROUGHOUT ENTIRE BERM.

AREA OF BERM FILL SHALL BE PLACED IN 6" LIFTS AND COMPACTED

EXISTING GROUND (SLOPE VARIES)

FLows TO ENTER BERM BY OVERLAND FLOW, SWALE OR 4"-6" PVC PIPE FROM YARD DRAIN OR ROOF LEADER

THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS SO AS NOT TO COMPACT INNER BASIN SUBGRADE AREAS. HEAVY EQUIPMENT SHOULD BE KEPT OUT OF THESE AREAS.

### INFILTRATION BERM DETAIL

(N.T.S.)

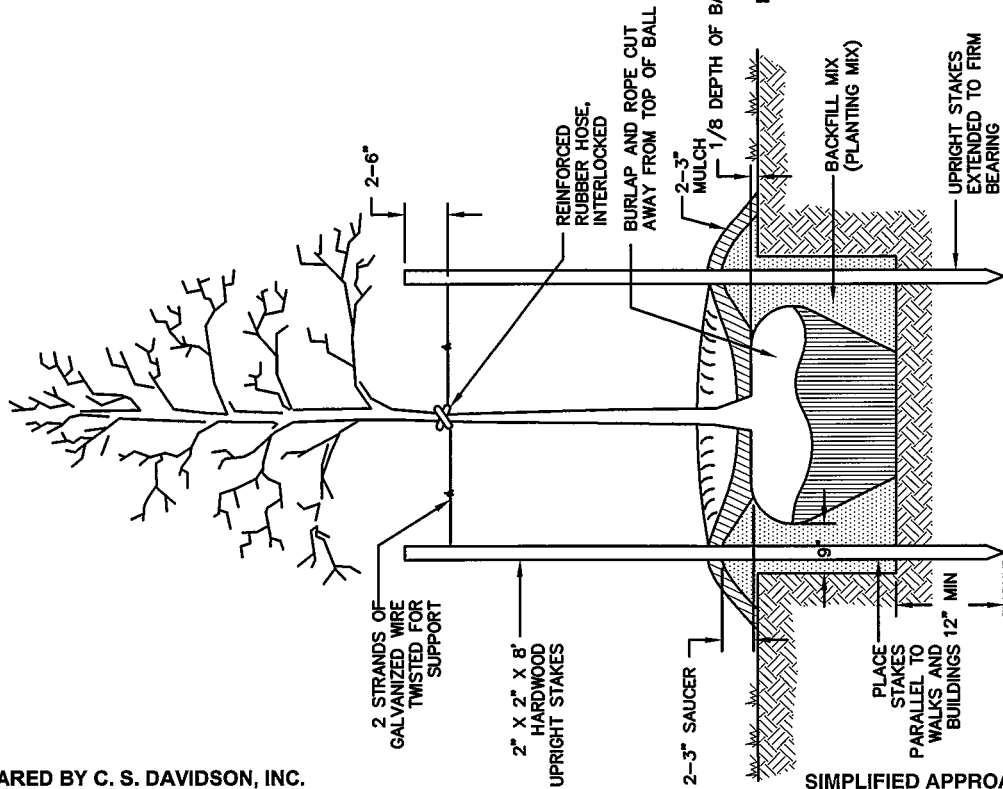
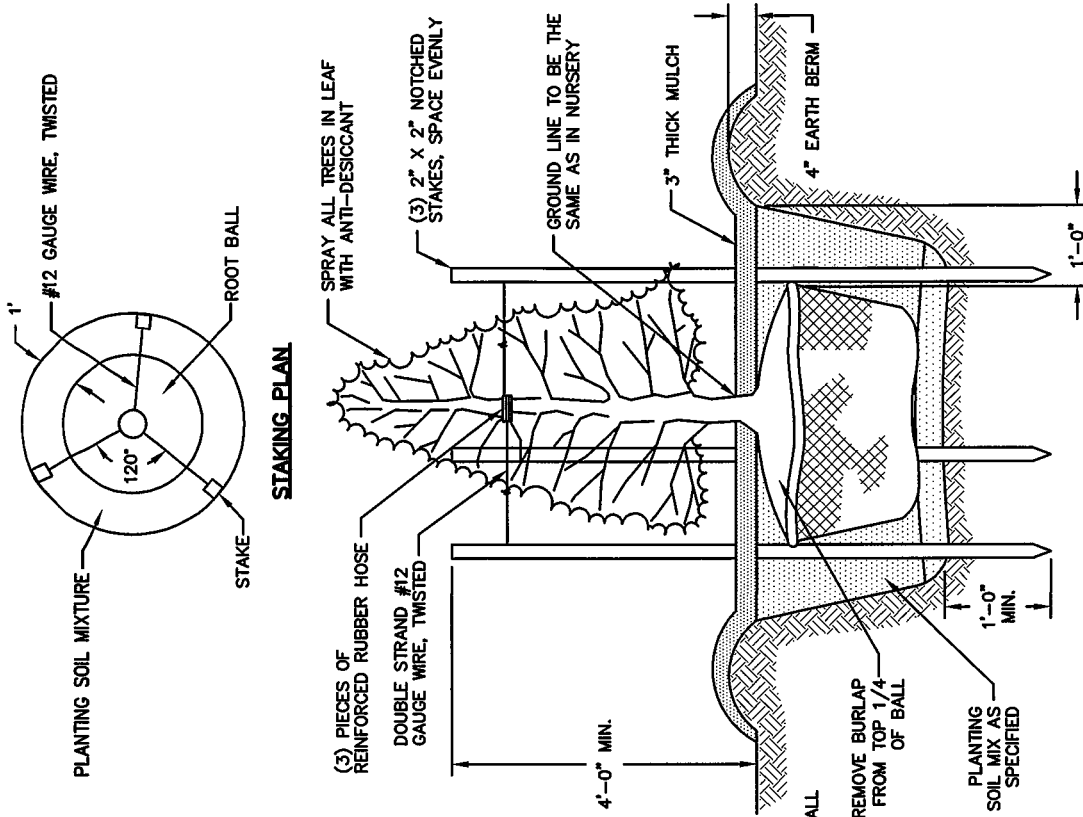
**NOTES:**

1. REMOVE TOPSOIL IN AREA OF INSTALLATION OF BERM AND STOCKPILE ABOVE. PERFORM EXCAVATION OF SUBGRADE. OVER EXCAVATING BERM BY 6" AND REPLACE WITH STOCKPILED SOIL.
2. SOIL IN THE INFILTRATION BERM BOTTOM SHOULD NOT BE COMPACTED. IF THE SUBGRADE BECOMES COMPACTED FOR ANY REASON, THE SOIL SHALL BE SCARIFIED PRIOR TO SEEDING.
3. SEDIMENT ACCUMULATION SHALL BE MONITORED SEASONALLY.
4. WHEN SEDIMENT ACCUMULATES TO A DEPTH OF 3" IN THE BERM, IT SHALL BE REMOVED.
5. BERM SOILS SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER.
6. BERMS SHALL BE KEPT FREE FROM NOXIOUS WEEDS AND INVASIVE SPECIES
7. BERMS SHOULD BE MOWED ANNUALLY OR BIANNUALLY

# SIMPLIFIED APPROACH STANDARD DETAIL INFILTRATION BERM

**DESIGN NOTE:**  
 TREES MUST BE PA NATIVE SPECIES, A MINIMUM OF 1" CALIPER. DEAD TREES SHALL BE REPLACED BY PROPERTY OWNER WITHIN A MINIMUM OF 12 MONTHS. NO MORE THAN 25% OF VOLUME REQUIREMENT CAN BE TAKEN FOR TREE PLANTING.

DRAWING PREPARED BY C. S. DAVIDSON, INC.



**NOTE:**  
 1. FLOOD SAUCER WITH WATER TWICE WITHIN 24 HOURS OF PLANTING.

**EVERGREEN TREE PLANTING DETAIL**  
 N.T.S.

**NOTES:**  
 1. SPRAY ALL TREES IN LEAF WITH ANTI-DESICCANT PRIOR TO PLANTING.  
 2. FLOOD SAUCER WITH WATER TWICE WITHIN 24 HOURS OF PLANTING.

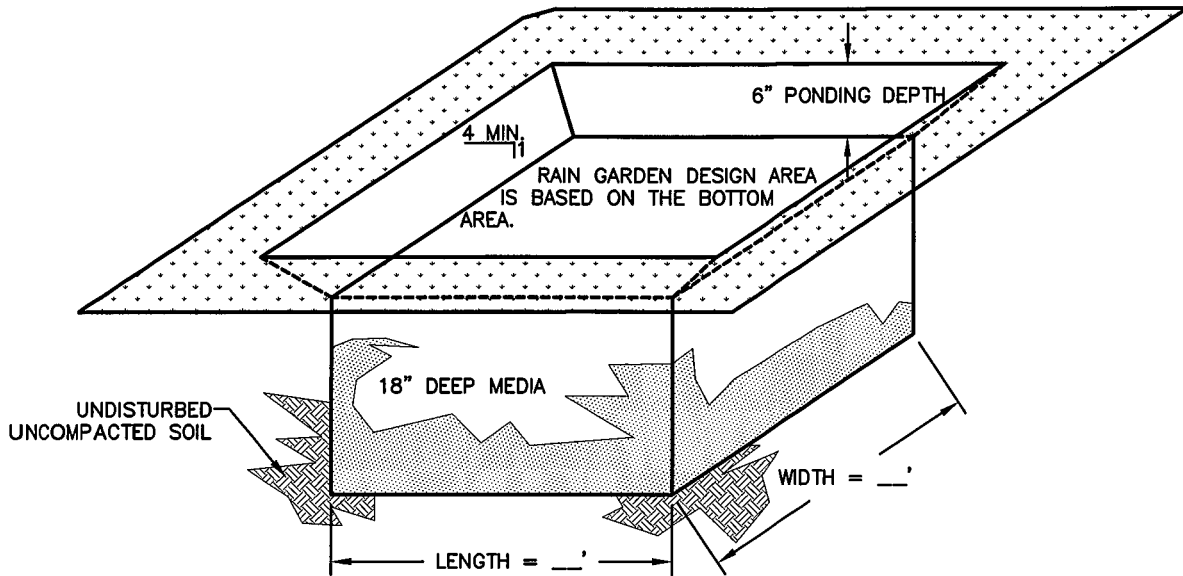
**DECIDUOUS TREE PLANTING DETAIL**  
 N.T.S.

SIMPLIFIED APPROACH DETAILS.dwg

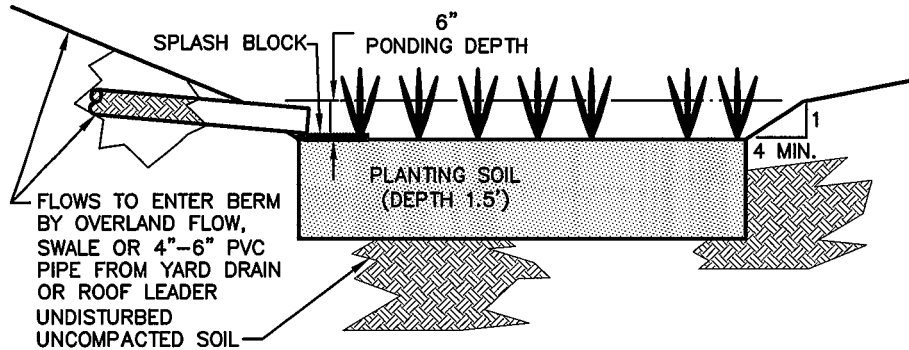
DATE: AUG. 2016

# SIMPLIFIED APPROACH STANDARD DETAIL TREE PLANTING

CUMBERLAND COUNTY, PENNSYLVANIA



**DESIGN NOTE:**  
 CHOOSE LENGTH AND WIDTH TO MEET AREA REQUIREMENT PER THE BMP SIZING CHART. BERMS SHALL BE INSTALLED PARALLEL TO THE EXISTING CONTOUR SUCH THAT THE TOP OF BERM IS INSTALLED AT A UNIFORM ELEVATION.



**NOTES:**

1. PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX. RATIO FOR RAIN GARDEN SOIL MIX SHOULD CONTAIN AN APPROXIMATE RATIO OF 50% SAND, 30% COMPOST AND 20% NATIVE SOILS
2. THE SOILS SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER.
3. BRUSH OR SEEDS FROM NOXIOUS WEEDS SHALL NOT BE PRESENT IN THE SOILS.
4. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN 9" LIFTS THAT ARE LOOSELY COMPACTED.
5. BIO-RETENTION AREA MUST BE PROTECTED FROM EROSION/SEDIMENTATION DURING CONSTRUCTION.
6. WET PLANTINGS IN RAIN GARDEN SHOULD BE NATIVE TO PA. DIRECTION FOR PLANTING SCHEDULE AND DENSITY BASED ON SITE CONDITIONS (SUN/SHADE/APPEAL) CAN BE OBTAINED FROM THE CUMBERLAND COUNTY CONSERVATION DISTRICT
7. SUBGRADE IN THE RAIN GARDEN BOTTOM SHOULD NOT BE COMPACTED. IF THE SUBGRADE BECOMES COMPACTED FOR ANY REASON, IT SHALL BE SCARIFIED PRIOR TO SOIL PLACEMENT
8. IN TOWNSHIPS WHERE INFILTRATION MAY BE IMPOSSIBLE DUE TO SOIL CONDITIONS OR BASEMENTS, IT IS RECOMMENDED THAT A 60 MIL HDPE POND LINER BE INSTALLED ALONG WITH 30" OF PLANTING SOIL MEDIA.

**RAIN GARDEN**  
 N.T.S.

**SIMPLIFIED APPROACH STANDARD DETAIL**

**RAIN GARDEN**