



## Earl Township Road Occupancy Permit

Permit Number

\_\_\_\_\_  
Date Submitted

\_\_\_\_\_  
Applicant Name

\_\_\_\_\_  
Telephone No.

\_\_\_\_\_  
Street address

\_\_\_\_\_  
Town, Zip

\_\_\_\_\_  
Work Location (If different than above)

Description of work (attach sketch if necessary)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **Important**

The terms and conditions embodied in this permit require the permittee to complete this work by the date specified in the permit. If the work started cannot be completed by the specified date, permittee shall request a time extension prior to the expiration of the original permit, at that time the Township may grant or deny the extension. The Board of Supervisors reserves the right to void and nullify this permit at any time. All work shall comply with township regulation or as specifically directed by the Township. It is the responsibility of the permittee to contact the Township for grade inspection and final inspection. It is the responsibility of the permittee to contact PA 1 Call at (1-800-242-1776) prior to any excavation. It is the responsibility of the permittee to provide any traffic control measures necessary to maintain safety to the public. Road cuts and or attachment need to be marked for review.

\_\_\_\_\_  
Township approval - Signature

\_\_\_\_\_  
Issue Date

\_\_\_\_\_  
Permit Expires Date

\_\_\_\_\_  
Total Fees

# Earl Township

517 North Railroad Avenue  
New Holland, PA 17557  
(717) 354-0773 - Fax (717) 355-0599

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## NOTICE TO ALL PERMIT APPLICANTS...

**ANY PERMIT APPROVAL ISSUED BY THE ZONING OFFICER IS BASED UPON INFORMATION PROVIDED BY THE APPLICANT. THE TOWNSHIP HAS NOT PERFORMED A TITLE SEARCH AND HAS NOT DETERMINED WHETHER THE PROPOSED CONSTRUCTION ENCROACHES INTO ANY EASEMENTS OF RECORD.**

**THE APPLICANT IS ASSUMING ALL RISKS THAT THE HOLDER OF AN EASEMENT, IN EXERCISING RIGHTS UNDER ITS EASEMENT, MAY DAMAGE OR REMOVE THE IMPROVEMENTS AUTHORIZED BY THIS PERMIT. IF THE HOLDER OF ANY EASEMENT, INCLUDING, BUT NOT LIMITED TO THE TOWNSHIP, EXERCISES RIGHTS UNDER SUCH EASEMENT AND DAMAGES OR DESTROYS IMPROVEMENTS AUTHORIZED BY THIS PERMIT, THE TOWNSHIP SHALL HAVE NO LIABILITY.**

**ANY CHANGES TO ANY EXISTING STORM WATER MANAGEMENT FACILITIES MUST COMPLY WITH ALL APPLICABLE TOWNSHIP ORDINANCES REGULATING EARTH DISTURBANCE AND STORM WATER MANAGEMENT, AND IT IS THE APPLICANT'S RESPONSIBILITY TO IDENTIFY ALL STORM WATER MANAGEMENT FACILITIES AND TO PRESERVE AND MAINTAIN SUCH FACILITIES UNLESS THE APPLICANT OBTAINS THE NECESSARY APPROVALS TO ALTER STORM WATER MANAGEMENT FACILITIES.**

**EARL TOWNSHIP ADOPTED NEW STORM WATER ORDINANCE**

**ON MAY 5, 2014**

(STATE MANDATED REGULATION)

THIS NEW MANDATE REQUIRES THAT ALL NEW IMPERVIOUS AREAS CREATED MUST BE DOCUMENTED AND THE RESULTING STORM WATER RUNOFF MANAGED PER REGULATIONS. THE FOLLOWING LEVELS OF STORM WATER MANAGEMENT HAVE BEEN CREATED TO ASSIST OUR RESIDENTS WITH THE REGULATIONS:

NEW IMPERVIOUS OF UP TO 1, 000 SQUARE FEET MAY UTILIZE AN EXEMPTION (ONE TIME EXEMPTION ACCUMULATIVE TO THE 1,000 SQUARE FEET) AND THE EXEMPTION APPLICATION SHALL BE EXECUTED AND SUBMITTED FOR APPROVAL BY THE TOWNSHIP.

NEW IMPERVIOUS OF 1, 001 TO 4,999 SQUARE FEET MAY UTILIZE THE SMALL PROJECT APPLICATION FOR SMALL PROJECT STORM WATER MANAGEMENT TO BE SUBMITTED AND APPROVED BY THE TOWNSHIP.

NEW IMPERVIOUS OF 5, 000 SQUARE FEET AND OVER SHALL PLAN FULL STORM WATER MANAGEMENT PER THE CURRENT EARL TOWNSHIP STORM WATER ORDINANCE AND SUBMIT FOR REVIEW AND APPROVAL BY THE TOWNSHIP.

**APPENDIX A-1**

**EXEMPTION APPLICATION**

Date Received \_\_\_\_\_ File Number \_\_\_\_\_ Property Act # \_\_\_\_\_  
Submitted Fees \$ \_\_\_\_\_ Approval of Application Date \_\_\_\_\_

Project Street Address: \_\_\_\_\_

Owner's Name: \_\_\_\_\_

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

Phone # / Fax # / E-mail: \_\_\_\_\_

Person/Firm to be completing work: \_\_\_\_\_

Phone # / Fax # / E-mail: \_\_\_\_\_

**Proposed Activity:**

Are you removing existing impervious as part of this project?

No

Yes, Total area of existing impervious to be removed \_\_\_\_\_ sq. ft.

Removal of ground cover, grading, filling, or excavation of an area (1,000 square feet or less)

• Total area of land disturbance: \_\_\_\_\_ sq. ft.

Type of Regulated Activity (check all that apply):  Removal of ground cover,

Grading,  Filling,  Excavation,  Other earth disturbance activity (please describe)

Addition of Impervious Surface (1,000 square feet or less)

• Total new impervious surface proposed \_\_\_\_\_ sq. ft.

Type of new impervious surface:  driveway,  shed,  garage,  deck,  walkway,

other (please describe) \_\_\_\_\_

**Check all items below that will be impacted by the project:**

Floodplain

Wetlands

Slopes greater than 15%

Known bedrock within 6 feet of the ground surface

Riparian forest buffer

Natural water flow paths (creeks, streams, ponds, swales, etc.)

Existing known stormwater problem areas

Downstream property owners

**Sketch**

Provide a sketch of the proposed additional impervious area or land disturbance.

**APPENDIX A-2**

**SMALL PROJECT APPLICATION**

File Number \_\_\_\_\_

Date Received \_\_\_\_\_

Submitted Fees \$ \_\_\_\_\_

Approval of Application Date \_\_\_\_\_

**Project Street Address:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

**Owner's Name and Address:** \_\_\_\_\_

**Phone # / Fax # / E-mail:** \_\_\_\_\_

**Please list the date of any previous Minor Land Disturbance or Small Project Applications for the subject property:**

\_\_\_\_\_

**Proposed Activity:**

Removal of ground cover, grading, filling or excavation of an area less than 5,000 square feet

Total area of land disturbance: \_\_\_\_\_ sq. ft.

Type of Regulated Activity (check all that apply):

- Removal of ground cover
- Grading
- Filling
- Excavation
- Other earth disturbance activity (please describe)

\_\_\_\_\_

Addition of Impervious Surface (more than 1,000 SF but less than 5,000 SF)

Type of new impervious surface:  driveway,  shed,  garage,  deck,  walkway,  
 other (describe) \_\_\_\_\_

Total new impervious surface proposed for construction: \_\_\_\_\_ sq. ft.

Are you removing existing impervious as part of this project?

- No
- Yes – Total area of existing Impervious to be removed \_\_\_\_\_ sq. ft.

**Check all items below that will be impacted by the project:**

- Mature trees
- Sinkholes
- Water wells
- Septic drainfields
- Alternate septic drainfields
- Creeks, streams, wetlands, or ponds
- Existing stormwater management facility (basin, swale, etc.)
- Easements

**Total runoff volume to be permanently removed/managed on site from attached calculation worksheet:** \_\_\_\_\_ gallons or \_\_\_\_\_ cubic feet

**Proposed Stormwater Management Controls (Best Management Practice):**

- Rain Garden
- Infiltration Trench
- Cistern
- Rain Barrel
- Other (describe) \_\_\_\_\_

**Sketch**

Provide a sketch of the proposed additional impervious area or land disturbance. Include the following on the sketch:

- Property boundary
- Location and approximate footprint of existing structures (buildings, patios, driveways, etc.)
- Approximate location of any of the following features which will be impacted by the project:
  - Mature trees
  - Sinkholes
  - Water wells
  - Septic drainfields
  - Alternate septic drainfields
  - Creeks, streams, wetlands, ponds
  - Existing stormwater management facilities (basins, swales, etc.)
- Location and approximate footprint of proposed impervious area or land disturbance.
- Approximate footprint and location of all structures on adjacent properties if located within 50 feet of the proposed impervious area or land disturbance
- Location and description of proposed stormwater management facilities (e.g., rain gardens, swales, rain barrels, etc.)
- Direction of proposed stormwater discharge (e.g., with arrows)
- Scale and North arrow

**Person/Firm to be completing work:** \_\_\_\_\_  
**Phone # / Fax # / E-mail:** \_\_\_\_\_

6

Name of Person Submitting this Application: \_\_\_\_\_

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

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

• 1967/10  
1967/10

## Small Project Application Calculation Worksheet

The applicant may use the following to calculate the amount of runoff which must be managed in accordance with § 17-302B of this chapter.

Project Name: \_\_\_\_\_

Owner Name: \_\_\_\_\_

Proposed Additional Impervious Area: \_\_\_\_\_ square feet

### Impervious Area Calculations

Calculate the amount of runoff to be permanently removed (managed on site through reuse, evaporation, transpiration or infiltration):

Additional impervious area ÷ 12 = Permanently Removed Runoff Volume (PRV)

\_\_\_\_\_ square feet of additional impervious ÷ 12 = \_\_\_\_\_ cubic feet PRV

\_\_\_\_\_ cubic feet x 7.48 gallons per cubic feet = \_\_\_\_\_ gallons PRV



**EXAMPLE**  
**Small Project Application Calculation Worksheet**

Landowner Name: Jane Doe (20 x 45' garage)

Owner Name: Jane Doe

Proposed Additional Impervious Area: 900 square feet

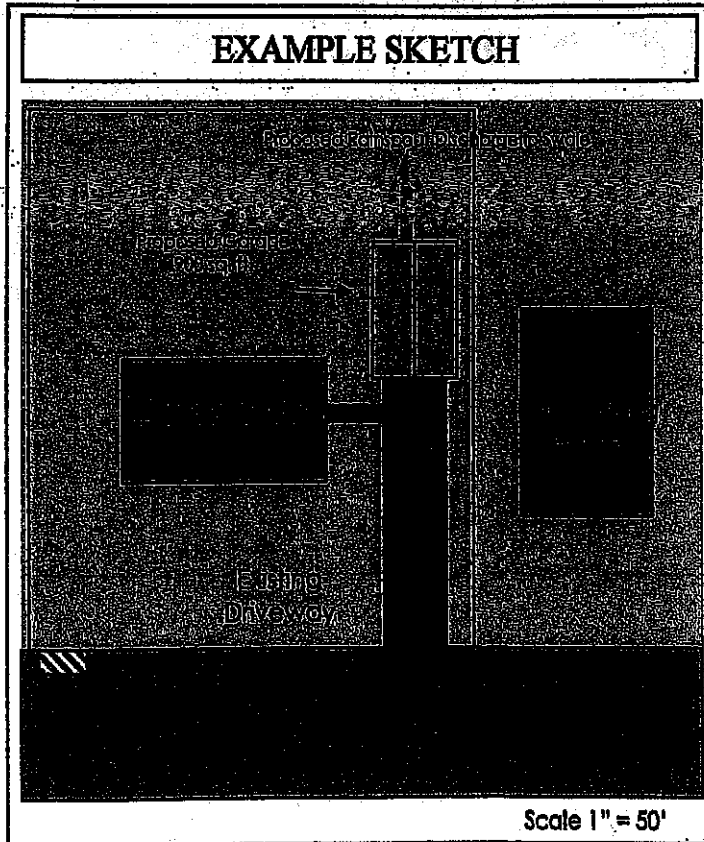
**Impervious Area Calculations**

Calculate the amount of runoff to be permanently removed (managed on site through reuse, evaporation, transpiration or infiltration) using the following formula:

*Additional Impervious Area ÷ 12 = Permanently Removed Runoff Volume (PRV)*

900 square feet of additional impervious ÷ 12 = 75 cubic feet PRV  
75 cubic feet x 7.48 gallons per cubic foot = 561 gallons PRV

SAMPLE



**Small Projects Guide-Sample Operation & Maintenance Plan**

**Construction:**

1. Install erosion and sedimentation control facilities
2. Stormwater Management Facility (ies) shall be installed before impervious areas are completed. If earthwork is involved during the construction of the impervious area, then extreme caution shall be taken so that sediment does not wash into the SWM Facility (ies).
3. Mark the locations of the SWM facility (ies).
4. Excavate the SWM Facility to the required depth. Contact municipality for inspection prior to filling. If standing water is encountered, a SWM Site Plan may need to be submitted; contact Municipal Engineer. All excavated materials shall be removed from the site or stabilized.

**For stone Infiltration Structures**

5. Line excavation with Geotextile.
6. Backfill SWM facility with required stone. If required: Install piping, cleanouts and associated facilities as detailed.
7. If required: Close geotextile material over stone bedding.
8. If required: Place topsoil over trench.
9. Stabilize and seed all disturbed areas.

**For Rain Gardens**

10. Place topsoil over excavated area.
11. Install plantings as shown on the plan.
12. Stabilize and seed all disturbed areas.

**Maintenance:**

1. The SWM facility shall be checked regularly to ensure that no standing water exists in the facility 3 days after a rain event. If water is encountered, the facility may need to be modified. Notification of the municipality is required of facility is not functioning before any modifications are made.
2. Monitor the SWM facility to ensure that no sediment, grass clippings, leaves, and other similar accumulations occur on top of, and/or within, the SWM Facility.
3. Homeowner to submit an inspection report to the Township one year after construction and every 3<sup>rd</sup> year there afterwards.

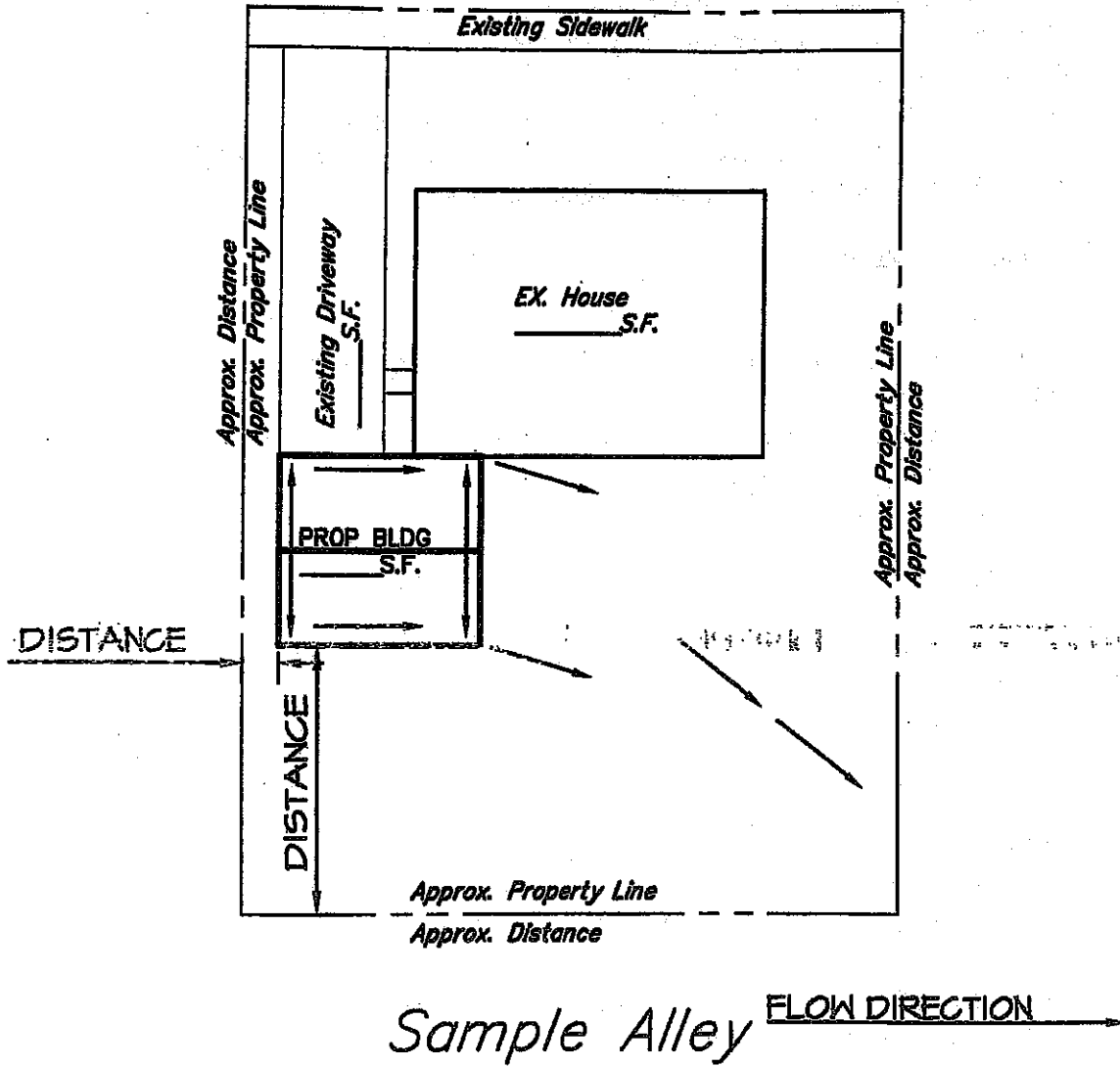
I have read and agree to the above Operation and Maintenance Plan. I, as the property owner, am responsible for the proper construction and operation and maintenance for the SWM Facilities. If I fail to adhere to any of these tasks, the Township may perform the services required and charge the appropriate fees. Nonpayment of the fees may result in a lien against my property.

\_\_\_\_\_  
Applicant Name (Printed)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# Main Street



## EARL TOWNSHIP ATTACHMENT I SAMPLE SKETCH/SITE PLAN

JOB NUMBER:

**ELAG**  
143 SOUTH BROAD STREET  
LITITZ, PA 17543  
(717) 626-7271 FAX (717) 626-7040  
www.elagroup.com  
**ELAG GROUP, INC.**  
ENGINEERS & LANDSCAPE ARCHITECTS

SCALE: N.T.S.

DRAWING:

DRAWN BY:

NA

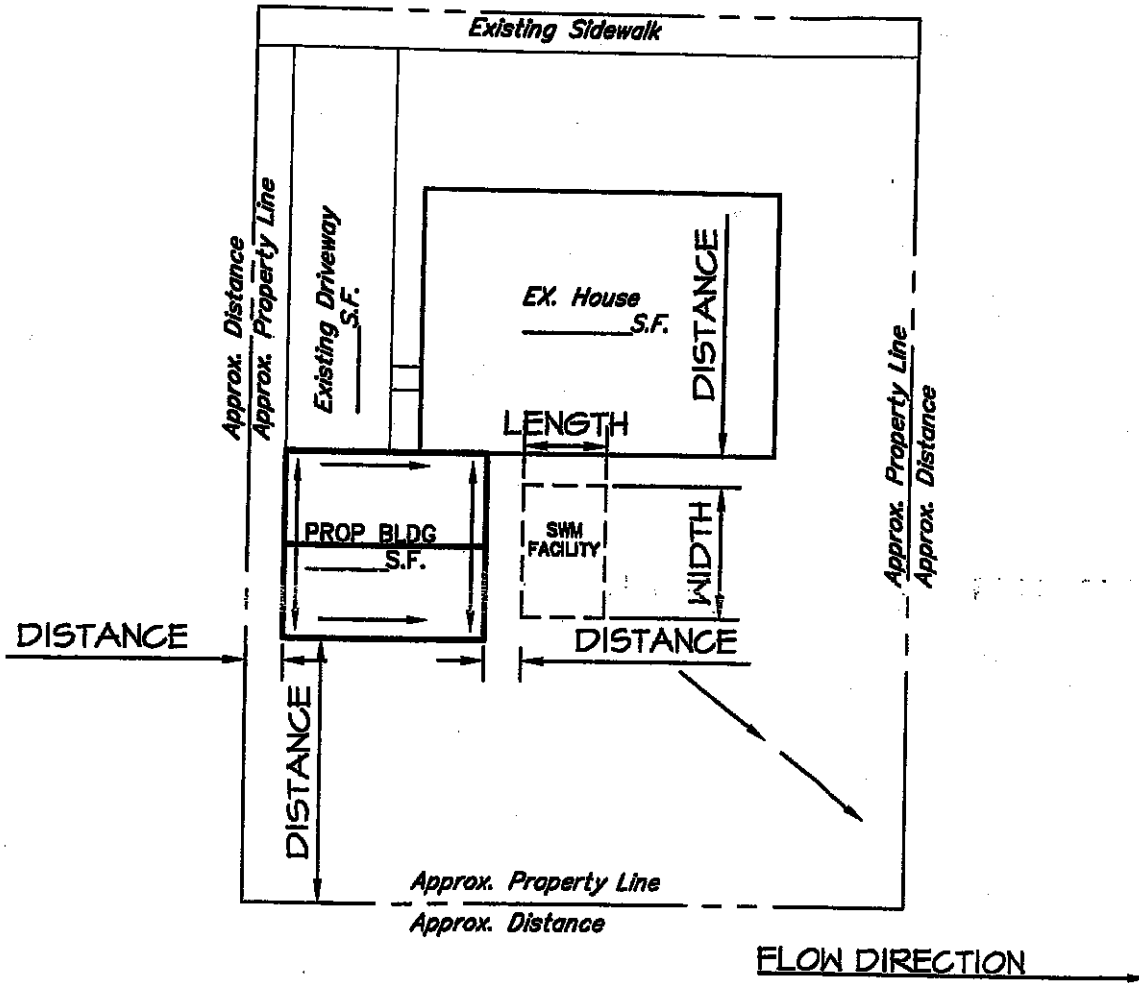
DATE:

2014

SKETCH:

1 OF 1

Main Street



Sample Alley

**EARL TOWNSHIP**  
**ATTACHMENT 2 SAMPLE SWM SITE PLAN**

JOB NUMBER:

**DLA**  
**inc.**  
**ENGINEERS & LANDSCAPE ARCHITECTS**

143 SOUTH BROAD STREET  
 LITITZ, PA 17543  
 (717) 626-7121 FAX (717) 626-7040  
 www.dlagroup.com

SCALE: N.T.S.

DRAWING:

DRAWN BY:

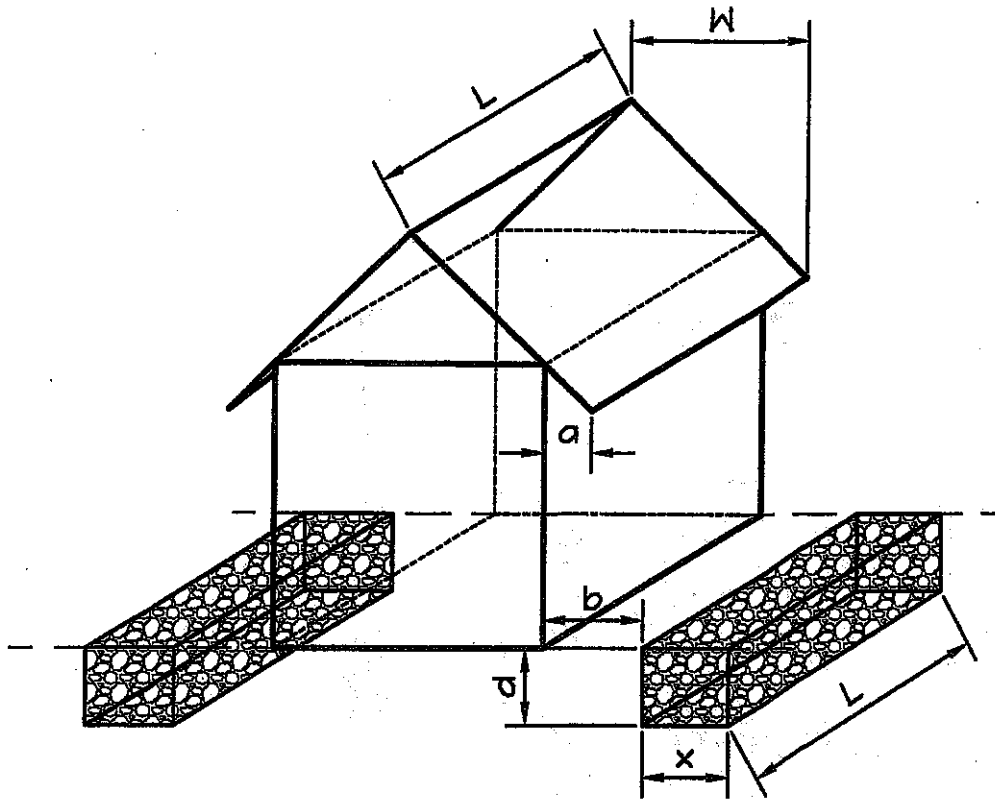
N/A

DATE:

2014

SKETCH:

1 OF 1



**KEY**

- L = LENGTH OF STRUCTURE ROOF = LENGTH OF SEEPAGE TRENCH (FT)
- W = WIDTH OF ONE SIDE OF THE ROOF (FT)
- a = EAVE/OVERHANG (FT)
- b = DISTANCE FROM STRUCTURE WALL TO SEEPAGE TRENCH (FT)  
= a + 1 FT => PLACE FROM EDGE OF TRENCH ONE FOOT PAST EAVES
- x = WIDTH OF SEEPAGE TRENCH (FT)
- d = DEPTH OF SEEPAGE TRENCH (FT)

REQUIRED VOLUME OF TRENCH =>  $L*W*1/12 = L*X*d*0.4$  =>  $X=0.14W$  for  $d=1.5'$

Ratio: 3.6 to 1  
(IMPERVIOUS TO INFILTRATION)

**NOTES**

- 1.) TRENCH MUST BE PROVIDED ON EACH SIDE OF STRUCTURE.
- 2.) SIDE AND BOTTOM OF TRENCH TO BE WRAPPED IN CLASS 1 GEOTEXTILE.
- 3.) TRENCH TO BE FILLED WITH CLEAN STONE (3/4" MIN. SIZE).
- 4.) TRENCH TO BE CONSTRUCTED AT 0% SLOPE ON UNDISTURBED SOIL.
- 5.) TRENCH TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION

**EARL TOWNSHIP**  
ATTACHMENT 3 STORMWATER MANAGEMENT STRUCTURES WITHOUT GUTTERS

JOB NUMBER:

-

 743 SOUTH BROAD STREET  
LITITZ, PA 17543  
(717) 626-1271 FAX (717) 626-7040  
www.lagrange.com

SCALE: N.T.S.

DRAWING:

N/A

DRAWN BY:

SKETCH:

DATE:

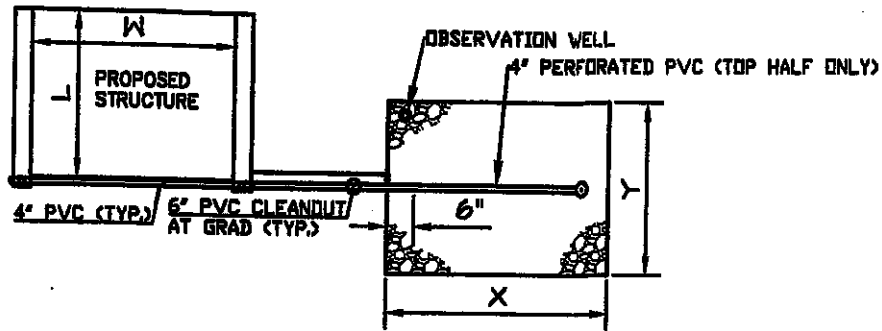
2014

1 OF 1

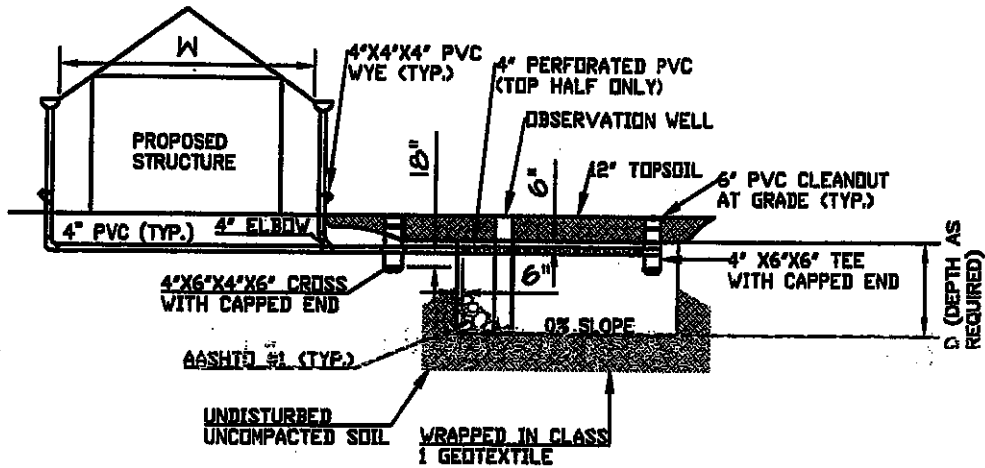
ENGINEERS & LANDSCAPE ARCHITECTS

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2



PLAN VIEW



SECTION VIEW

**KEY**

- L = LENGTH OF STRUCTURE ROOF (FT)
- W = WIDTH OF ENTIRE ROOF (FT)
- X = WIDTH OF INFILTRATION BED (FT)
- Y = LENGTH OF INFILTRATION BED (FT)

REQUIRED VOLUME OF BED =  $L*W*1/12 = X*Y*D*0.4$  [ASSUME X=W D=2']  
 $Y=0.11L$

RATIO 4.76 TO 1  
 (IMPERVIOUS TO INFILTRATION)

**NOTES**

- 1.) BOTTOM OF BED TO BE D+1' BELOW GRADE TO ACCOUNT FOR 1' OF TOPSOIL.
- 2.) PIPING AND CLEANOUTS TO BE CENTERED WITHIN INFILTRATION BED.
- 3.) BED TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION.
- 4.) SEE SHEET 2 OF 2 FOR ADDITIONAL DETAILS

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**EARL TOWNSHIP**  
 ATTACHMENT 4 STORMWATER MANAGEMENT SAMPLE STRUCTURE WITH GUTTERS

JOB NUMBER:

-

**LAGRANGE INC.**  
 143 SOUTH BROAD STREET  
 LITITZ, PA 17543  
 (717) 626-1211 FAX (717) 626-1040  
 1001lag@aol.com  
 ENGINEERS & LANDSCAPE ARCHITECTS

SCALE: N.T.S.

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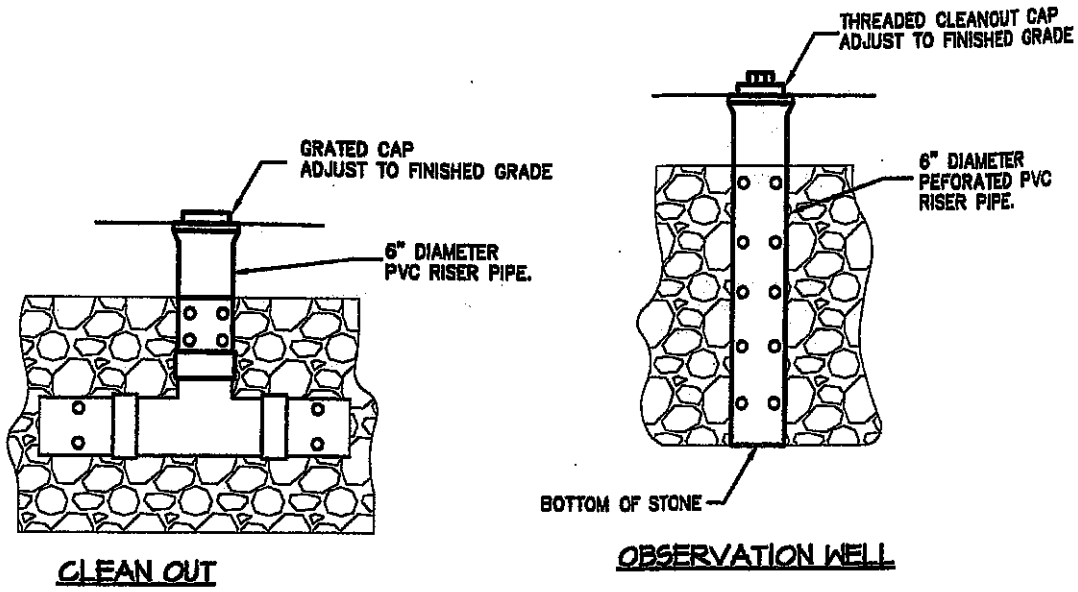
N/A

DATE:

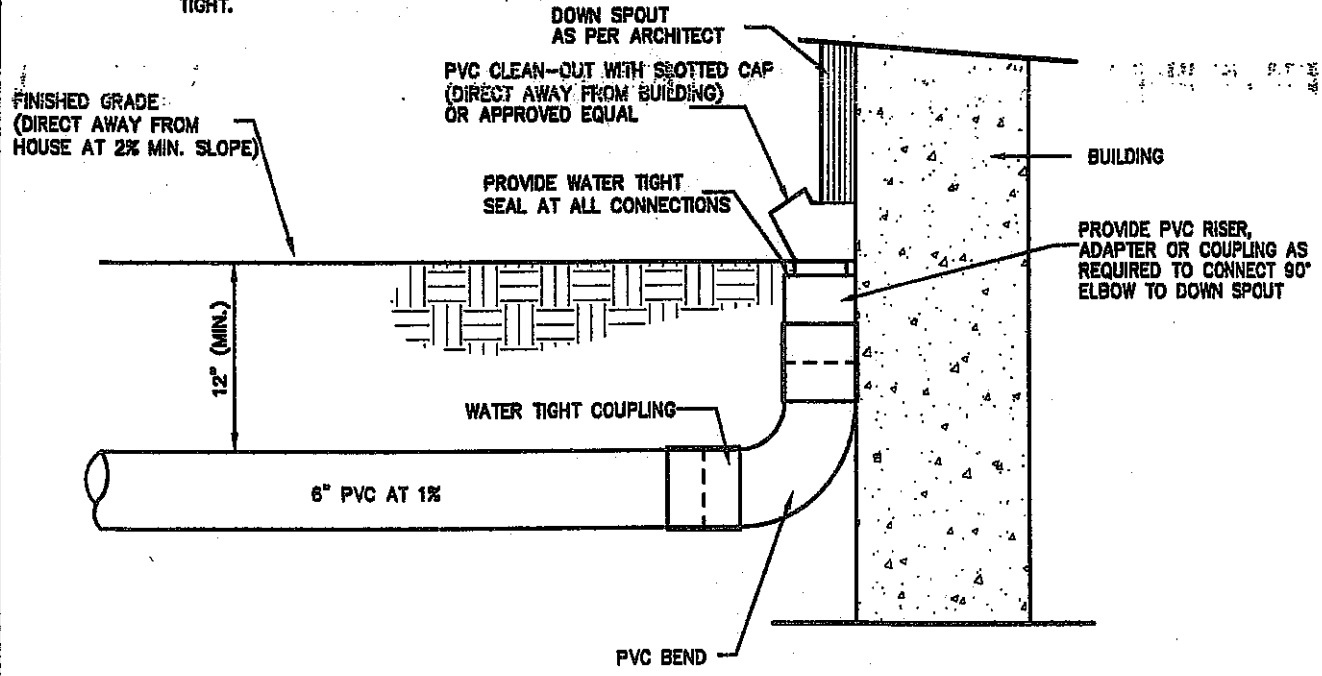
2014

SKETCH:


1 OF 2



**NOTE:**  
 CONTRACTOR SHALL PROVIDE ALL FITTINGS, ADAPTERS, COUPLINGS AND OTHER APPURTENANCES AS REQUIRED TO CONNECT STORM CONVEYANCE SYSTEM. ALL CONNECTIONS SHALL BE WATER TIGHT.

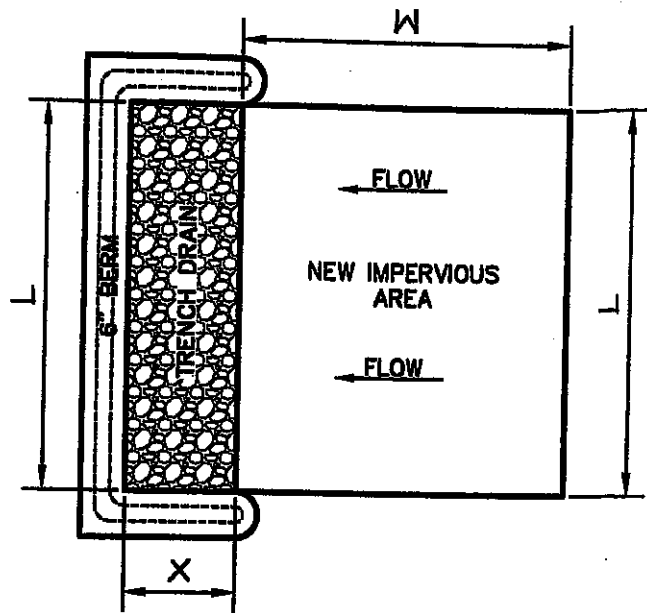


**CONNECTION TO DOWNSPOUT**

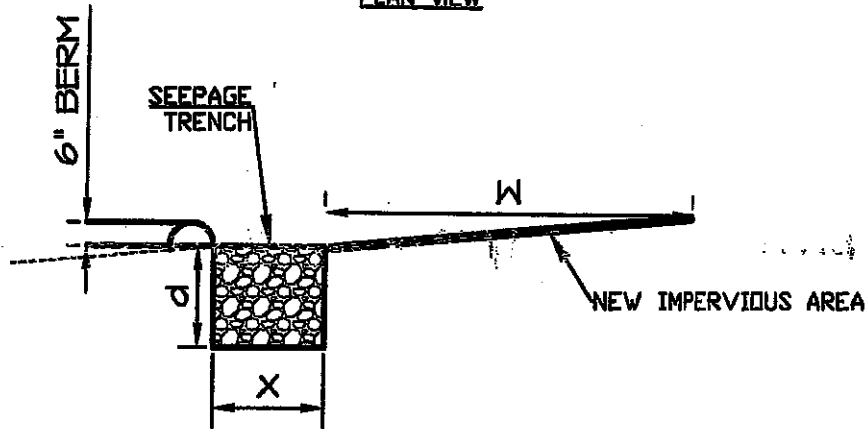
<b>EARL TOWNSHIP</b>		JOB NUMBER:
ATTACHMENT 4-IDOWNSPOUT/CLEAN OUT/OBSERVATION WELL DETAILS		-
 743 SOUTH BROAD STREET LITITZ, PA 17543 (717) 626-7121 FAX (717) 626-1040 www.idgroup.com	SCALE: N.T.S.	
	DRAWN BY:	DRAWING: N/A
	DATE: 2014	SKETCH: 2 OF 2

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PLAN VIEW



SECTION VIEW

**KEY**

- L = LENGTH OF NEW IMPERVIOUS SURFACE (FT) =LENGTH OF SEEPAGE TRENCH
- W = WIDTH OF NEW IMPERVIOUS SURFACE -MAY NOT EXCEED 75'
- X = WIDTH OF SEEPAGE TRENCH (FT)
- d = DEPTH OF SEEPAGE TRENCH (FT)

REQUIRED VOLUME OF TRENCH =>  $L*W*d/12=X*L*d*0.4$  =>  $X=0.14W$  FOR  $d=1.5'$

**NOTES**

- 1.) SIDE AND BOTTOM OF TRENCH TO BE WRAPPED IN CLASS 1 GEOTEXTILE
- 2.) TRENCH TO BE FILLED WITH CLEAN STONE (3/4"MIN. SIZE).
- 3.) TRENCH TO BE CONSTRUCTED AT 0% SLOPE ON UNDISTURBED SOIL.
- 4.) TRENCH TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION.

**EARL TOWNSHIP**  
ATTACHMENT 5 STORMWATER MANAGEMENT AT GRADE IMPERVIOUS

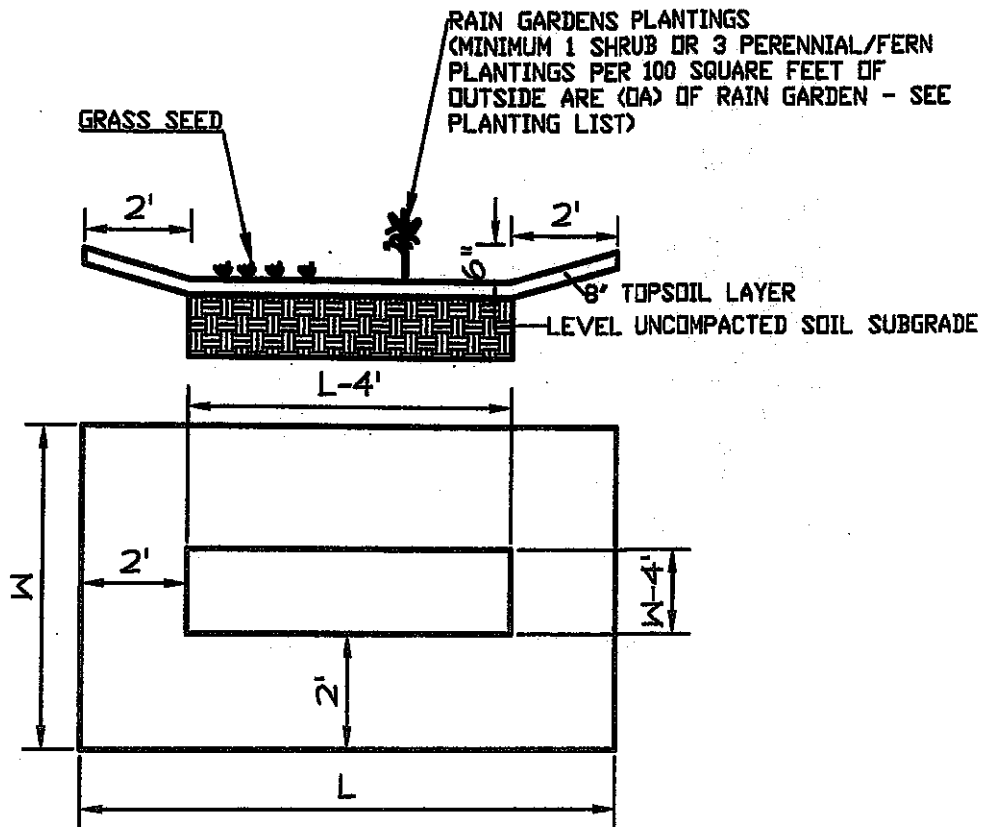
JOB NUMBER:

 143 SOUTH BROAD STREET  
LITITZ, PA 17543  
(717) 625-1211 FAX (717) 625-1040  
www.elogroup.com

SCALE: N.T.S.  
DRAWN BY:  
DATE: 2014

DRAWING:  
N/A  
SKETCH:  
1 OF 1





- 1.) CALCULATE REQUIRED RAIN GARDEN VOLUME (V)  
 $(RV) = \text{SQUARE FEET OF NEW IMPERVIOUS AREA} \times (0.085')$        $RV = \underline{\hspace{2cm}} \text{ FT}^3$
- 2.) CALCULATE OUTSIDE AREA OF RAIN GARDEN (OA)  
 $(OA) = \text{LENGTH (L)} \times \text{WIDTH (W)}$        $OA = \underline{\hspace{2cm}} \text{ FT}^2$
- 3.) CALCULATE INSIDE AREA OF RAIN GARDEN (IA)  
 $(IA) = [(L) - 4'] \times [(W) - 4']$        $IA = \underline{\hspace{2cm}} \text{ FT}^2$
- 4.) CALCULATE AVERAGE AREA OF RAIN GARDEN (AA)  
 $(AA) = (OA) / 2 + (IA) / 2$        $AA = \underline{\hspace{2cm}} \text{ FT}^2$
- 5.) CALCULATE STORAGE VOLUME (SV)  
 $(SV) = (AA) \times 0.5'$        $SV = \underline{\hspace{2cm}} \text{ FT}^3$
- 6.) CHECK FOR ADEQUATE STORAGE  
 STORAGE VOLUME (SV) MUST BE GREATER THAN REQUIRED VOLUME (RV)  
 $RV = \underline{\hspace{2cm}} \text{ FT}^3 > SV = \underline{\hspace{2cm}} \text{ FT}^3$
- 7.) ADJUST RAIN GARDEN SIZE  
 IF STORAGE VOLUME (SV) IS NOT GREATER THAN REQUIRED VOLUME (RV), INCREASE THE SIZE  
 OF THE RAIN GARDEN AND REPEAT STEPS 2-6.

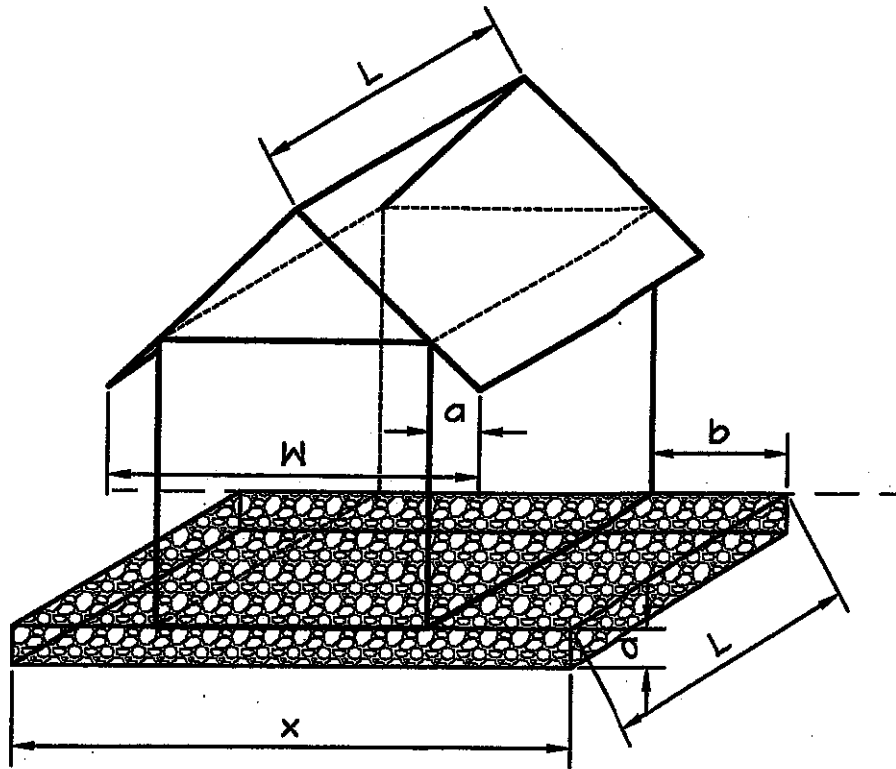
**EARL TOWNSHIP**  
**ATTACHMENT 6 RAIN GARDEN**

JOB NUMBER:

**DLG GROUP INC.**  
 743 SOUTH BROAD STREET  
 LITITZ, PA 17543  
 (717) 626-7211 FAX (717) 626-7040  
 www.dlggroup.com  
**ENGINEERS & LANDSCAPE ARCHITECTS**

SCALE: N.T.S.  
 DRAWN BY:  
 DATE: 2014

DRAWING:  
 N/A  
 SKETCH:  
 1 OF 1



**KEY**

- L = LENGTH OF STRUCTURE ROOF = LENGTH OF SEEPAGE TRENCH (FT.)
- W = WIDTH OF ONE SIDE OF THE ROOF (FT)
- a = EAVE/OVERHANG (FT)
- b = DISTANCE FROM STRUCTURE WALL TO SEEPAGE TRENCH (FT)  
= a + 1 FT => PLACE FROM EDGE OF TRENCH ONE FOOT PAST EAVES
- x = WIDTH OF SEEPAGE TRENCH (FT)  
x = W + 2FT
- d = DEPTH OF SEEPAGE TRENCH (FT)  
D = 6" TO 8" (AVERAGE)

**NOTES**

- 1.) TRENCH MUST BE PROVIDED ON EACH SIDE OF STRUCTURE.
- 2.) SIDE AND BOTTOM OF TRENCH TO BE WRAPPED IN CLASS 1 GEOTEXTILE.
- 3.) TRENCH TO BE FILLED WITH CLEAN STONE (3/4" MIN. SIZE).
- 4.) TRENCH TO BE CONSTRUCTED AT 0% SLOPE ON UNDISTURBED SOIL.
- 5.) TRENCH TO BE CHECKED REGULARLY TO MAINTAIN PROPER OPERATION

**EARL TOWNSHIP**

**ATTACHMENT 7 STORMWATER MANAGEMENT STRUCTURES WITHOUT GUTTERS**

JOB NUMBER:


 143 SOUTH BROAD STREET  
 LITITZ, PA 17543  
 (717) 626-7121 FAX (717) 626-7040  
 www.leitzgroup.com  
**Leitz Group Inc.**  
 ENGINEERS & LANDSCAPE ARCHITECTS

SCALE: N.T.S.

DRAWING:

DRAWN BY:

N/A

DATE:

2014

SKETCH:

1 OF 1

## Rain Garden Native Planting List

### Perennials and Ferns

Blue false indigo (*Baptista Australis*)  
Blue flag iris (*Iris Versicolor*)  
Blue star (*Amsonia tabernaemontana*)  
Blue vervain (*Verbena hastata*)  
Boltonia (*Boltonia asteroides*)  
Boneset (*Eupatorium perfoliatum*)  
Bottlebrush grass (*Hystrix patula*)  
Broomsedge (*Andropogon virginicus*)  
Cardinal flower (*Lobelia cardinalis*)  
Cinnamon fern (*Osmunda cinnamomea*)  
Culvers root (*Veronicastrum virginicum*)  
Golden ragwort (*Senecio aureus*)  
Goldenrod (*Solidago patula*, *S. rugosa*)  
Great blue lobelia (*Lobelia siphilitica*)  
Green bullrush (*Scirpus atrovirens*)  
Horsetail (*Equisetum species*)  
Marsh marigold (*Caltha palustris*)  
Mistflower (*Eupatorium colestinum*)  
Monkey flower (*Mimulus ringens*)  
New England aster (*Aster novae-anglia*)  
New York aster (*Aster novi-belgii*)  
Obedient plant (*Physotegia virginiana*)  
Royal fern (*Osmunda regalis*)  
Seedbox (*Ludwigia alternifolia*)  
Sensitive fern (*Onoclea sensibilis*)  
Sneezeweed (*Helenium autumnale*)  
Soft rush (*Juncus effusus*)  
Swamp milkweed (*Asclepias incarnata*)  
Swamp rose mallow (*Hibiscus moscheutos*)  
Swamp sunflower (*Helianthus angustifolius*)  
Switchgrass (*Panicum virgatum*)  
Threadleaf coreopsis (*Coreopsis Verticillata*)  
Tussock sedge (*Carex stricta*)  
White turtlehead (*Chelone glabra*)  
Woolgrass (*Scirpus cyperinus*)

### Shrubs

American beautyberry (*Callicarpa americana*)  
Arrowwood (*Viburnum dentatum*)  
Black chokeberry (*Aronia melanocarpa*)  
Broad-leaved meadowsweet (*Spirea latifolia*)  
Buttonbush (*Cephalanthus occidentalis*)  
Elderberry (*Sambucus canadensis*)  
Inkberry (*Ilex glabra*)  
Narrow-leaved meadowsweet (*Spirea alba*)  
Ninebark (*Physocarpus opulifolius*)  
Possumhaw (*Viburnum nudum*)  
Red-osier dogwood (*Cornus sericea*)  
St. Johnswort (*Hypericum densiflorum*)  
Silky dogwood (*Cornus amomum*)  
Smooth alder (*Alnus serrulata*)  
Spicebush (*Lindera benzoin*)  
Swamp azalea (*Rhododendron viscosum*)  
Swamp rose (*Rosa palustris*)  
Sweet pepperbush (*Clethra alnifolia*)  
Wild raisin (*Viburnum cassinoides*)  
Winterberry (*Ilex verticillata*)  
Virginia sweetspire (*Itea virginica*)