

**BOROUGH OF OAKLAND
BERGEN COUNTY, NEW JERSEY**

LAND DEVELOPMENT APPLICATION

Date _____

**NOTE: APPLICATION SETS MUST BE COLLATED AND
SUBMITTED IN PACKET FORM FOR PROCESSING.**

Application No. _____

Date Received _____

Fee Submitted _____

Jurisdiction Date _____

Complete Date _____

Decision Date by _____

Board Action _____

FOR OFFICIAL USE ONLY

The undersigned, as Applicant/Owner of the subject property identified herein hereby makes application to the Borough of Oakland for (check all that apply)

- | | | |
|--|--|---|
| ☒ New Application | ☐ Major Subdivision Preliminary | ☒ Major Site Plan Preliminary |
| ☐ Amendment to prior approval | ☐ Major Subdivision Final | ☒ Major Site Plan Final |
| ☐ Concept Plan (PB only) | ☐ General Development Plan | ☐ Conditional Use |
| ☐ Minor Subdivision | ☐ Minor Site Plan | |

Indicate Relief to be Requested in Conjunction with this Application

- | | |
|--|---|
| ☐ Use Variance (N.J.S.A. 40:55D-70.d) | ☐ Bulk Variance(s) (N.J.S.A.40:55D-70.c) |
| ☐ RSIS Exception (N.J.A.C. 5: 21-3.2) | ☐ Design Standard Waiver(s) ☐ Environmental Protection Waiver |

1. APPLICANT INFORMATION

a. Name: DFLP Van Vooren, LLC

b. Address: PO Box 709, Franklin Lakes, NJ 07417

c. Telephone (include fax number if desired): _____

d. Applicant is a: (check applicable status)

☐ Corporation ☐ Partnership ☐ Individual (s) ☒ LLC

e. If applicant is a corporation or a partnership, please list the names and addresses of persons having a 10 % interest or more in the corporation or partnership on a separate sheet and attach to this application.

f. Relationship of applicant to property (check applicable status):

☒ Owner ☐ Purchaser under contract ☐ Lessee
☐ Other (please specify): _____

g. If applicant is represented by an attorney:

Name: Ben R. Cascio, Esq. Email - Bencascio@aol.com

Address: 684 Route 208, Franklin Lakes NJ 07417

Telephone: 201-848-7811 Fax: 201-848-9174

h. Preparation of Plans by:

Name: Weissman Engineering Email - weissmanengineering@yahoo.com

Address: 686 Godwin Avenue, Midland Park, NJ 07432

Tel: 201-445-2799 Fax: 201-445-0483

2. PROPERTY INFORMATION

a. Street address 17 Van Vooren Drive, Oakland NJ 07436

b. Tax Map Block(s) 3203 Lot (s) 2

c. Zone District I-P

d. Existing Use of Property Vacant

e. Please list prior applications or municipal actions regarding this property:

Unknown

f. Property is located (check applicable status):

☐ Within 200 feet of another municipality. ☐ Adjacent to a State Highway.

☐ Adjacent to an existing or proposed County road. ☐ Adjacent to other County land.

Note: If any category is checked, notification concerning this application to the appropriate agency is required.

g. Property has public sanitary sewer access available? ☒ No. If not what solution is proposed to handle sanitary waste. NO SEWER, SEPTICS TO BE INSTALLED

3. NATURE OF APPLICATION: (check where appropriate)

a. ☐ Minor Subdivision/ Major Subdivision:

(1) Indicate total tract size: _____ acres

(2) Proposed number of lots: _____

b. ☐ Residential Development (clearly detail proposed use of property): _____

c. ☒ Non-Residential Development (clearly detail proposed use of property): _____

Site Plan to construct a 21,780 s.f. Warehouse/Office Building

d. Contemplated form of ownership (check all that apply):

☒ Fee simple ☐ Condominium ☐ Cooperative ☐ Rental

e. Are there any existing Deed Restrictions? ☒ No ☐ Yes (attach copy of restriction)

f. Are there any proposed Deed Restrictions? ☒ No ☐ Yes (attach copy of restriction)

g. List exhibits accompanying this application: (attach separate sheet if necessary)

Site Plan prepared by Weissman Engineering dated 8/25/21

Architectural Plans prepared by John Saracco AIA, dated 8/27/21

h. Indicate if this is a bifurcated use variance application: ☐ yes ☒ no

If yes, note that any approval, if granted by the Board of Adjustment, shall be conditioned upon submittal of a completed site plan application being submitted to the Board of Adjustment for approval (N.J.S.A. 40:55D-76).

4. VARIANCE(S) REQUESTED: If this application requires a variance from the strict application of the Borough of Oakland Zoning Ordinance for a use permitted in the Zone in which the property is located complete the section below requesting said relief. You may attach additional sheets if needed.

<u>Section</u>	<u>Required</u>	<u>Proposed</u>
<u>None</u>		

5. SPECIFIC DESIGN WAIVER (S) RELIEF REQUESTED

<u>Section</u>	<u>Required</u>	<u>Proposed</u>
<u>None</u>		

7. SPECIFIC RELIEF REQUESTED

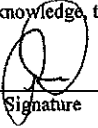
If relief is requested in connection with this development proposal for any category as indicated on the front page of this application and outlined above, attach hereto a separate exhibit(s) for each category of relief sought, stating the factual basis, legal theory, and whether they have been previously granted. Failure to supply this information if applicable will result in your application being deemed incomplete. N/A

8. OTHER INFORMATION REQUIRED

- Attach completed checklist.
- Attach certification of payment of taxes from Township Tax Collector.
- Attach any other government approvals if received in connection with this application such as NJDEP permits, NJDOT permits, Passaic County Approvals etc.

9. VERIFICATION AND AUTHORIZATION

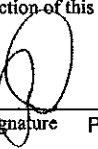
- Applicant's Statement: I hereby certify that the above statements made by me and the statements and information contained in the papers submitted in connection with this application are, to the best of my knowledge, true and accurate.


Applicant's Signature Peter Dobric, Managing Member, DFLP Van Vooren, LLC

10/8/21

Date

- Owner's Statement: I, the undersigned, being the owner of the property described in this application, hereby consent to the making of this application and the approval of the plans submitted. I further consent to the inspection of this property in connection with this application as deemed necessary by the municipal agency.


Owner's Signature Peter Dobric, Managing Member, DFLP Van Vooren, LLC

10/8/21

Date

Sworn and Subscribed to before me

8th day of October, 2021 (Year)


Ben R. Cascio, Esq.
Attorney at Law of NJ

(Notary)

APPLICATION FOR SOIL PERMIT

NOTE: This application must be filed in duplicate with the Planning Board Secretary.

Filed: _____ Fee Paid: _____

TO THE BOROUGH OF OAKLAND:

Application is hereby made pursuant to the provisions of Ordinance entitled "AN ORDINANCE TO REGULATE AND CONTROL THE MOVING OF SOIL IN AND UPON THE LANDS IN THE BOROUGH OF OAKLAND, N.J. IN THE COUNTY OF BERGEN" for a soil permit as follows:

Date: _____

1. APPLICANT'S NAME DLP VAN VOOREN, LLC SITE PLAN
2. APPLICANT'S ADDRESS 17 VAN VOOREN DRIVE, OAKLAND, NJ 07436
Phone No. 973-933-4832
3. WHO IS RESPONSIBLE FOR NOTICES AND CORRESPONDENCE?
Name Ben Casio
Address 664 Route 206, Franklin Lakes, NJ 07417
Phone No. 201-946-7811
4. BLOCK 203 LOT 2
Description of Lands on which soil permit is to cover _____
5. OWNER OF PROPERTY ON DATE OF APPLICATION
Name DLP VAN VOOREN, LLC
Address 17 VAN VOOREN DRIVE, OAKLAND, NJ 07436
6. WHAT IS THE INTEREST THAT THE APPLICANT HAS IN THE LAND IN QUESTION? To construct a warehouse on the site.
7. PURPOSE OF OPERATION:
☒ To grade land by moving soil WITHIN property line
☐ To grade land by removing soil to place OUTSIDE property line
a) Place to which soil will be removed 785
b) Kind of soil to be removed SUBSOIL, SERRIS FILL
☒ To grade land by filling in _____
Other (specify) _____
What disposition will be made of top soil WASHED/REUSE
For what purpose will land be used _____
8. KIND OF SOIL TO BE REMOVED:
Top Soil _____ cu. yds. _____
Subsoil _____ cu. yds. _____
Sand _____ cu. yds. _____
Gravel _____ cu. yds. _____
Other (specify kind and quantity) _____
9. TOTAL QUANTITY TO BE MOVED: 23700
10. DOES TOPOGRAPHICAL MAP ACCOMPANY THIS APPLICATION? YES
11. ON WHAT DATE WILL PROPOSED WORK BE COMPLETED? 6/22
12. PROPOSED HOURS AND DAYS OF OPERATION PER REQUIREMENT
13. NAME AND ADDRESS OF CONTRACTOR SUPERVISING PROPOSED EXCAVATION WORK 785
14. PERSON IN CHARGE OF HAULING OPERATION 785

15. NUMBER, CAPACITY, TYPE & DESCRIPTION OF EQUIPMENT USED AND NUMBER OF TRUCK LOADS: 182

16. ROUTES OVER WHICH MATERIAL WILL BE TRANSPORTED AND METHOD OF TRAFFIC CONTROL 182

17. METHOD OF NOISE AND DUST ABATEMENT PER ORDINANCE

18. NUMBER OF TREES TO BE REMOVED 4

19. METHOD LATERAL SUPPORT AND EROSION, FLOOD AND SILT CONTROL SEE PLAN

20. METHOD OF PROTECTION FOR DOWN STREAM PROPERTIES SEE PLAN

I FURTHER AGREE THAT I WILL FURNISH ANY OTHER PERTINENT DATA AS THE PLANNING BOARD AND THE MAYOR AND COUNCIL MAY REQUIRE.

SIGNED X

NOTARY PUBLIC

APPLICATION FOR SOIL PERMIT

NOTE: This application must be filed in duplicate with the Planning Board Secretary.

Filed: _____ Fee Paid: _____

TO THE BOROUGH OF OAKLAND:

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Date: _____

1. APPLICANT'S NAME DRP VAN VOOREN, LLC SITE PLAN
2. APPLICANT'S ADDRESS 17 VANVOOREN DRIVE, OAKLAND, NJ 07435

Phone No. 973-333-4552
3. WHO IS RESPONSIBLE FOR NOTICES AND CORRESPONDENCE?
Name Bert Cade
Address 584 Route 208, Franklin Lakes, NJ 07417
Phone No. 201-848-7811
4. BLOCK 3223 LOT 2
Description of Lands on which soil permit is to cover _____
5. OWNER OF PROPERTY ON DATE OF APPLICATION
Name DRP VAN VOOREN, LLC
Address 17 VANVOOREN DRIVE, OAKLAND, NJ 07435
6. WHAT IS THE INTEREST THAT THE APPLICANT HAS IN THE LAND IN QUESTION? To construct a warehouse on the site.
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To grade land by moving soil WITHIN property line
To grade land by removing soil to place OUTSIDE property line
a) Place to which soil will be removed _____
b) Kind of soil to be removed _____
To grade land by filling in _____
Other (specify) _____
What disposition will be made of top soil _____
For what purpose will land be used _____
8. KIND OF SOIL TO BE REMOVED:
Top Soil _____ cu. yds. Subsoil _____ cu. yds.
Sand _____ cu. yds. Gravel _____ cu. yds.
Other (specify kind and quantity) _____
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10. DOES TOPOGRAPHICAL MAP ACCOMPANY THIS APPLICATION? _____
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12. PROPOSED HOURS AND DAYS OF OPERATION _____
13. NAME AND ADDRESS OF CONTRACTOR SUPERVISING PROPOSED EXCAVATION WORK _____
14. PERSON IN CHARGE OF HAULING OPERATION _____

15. NUMBER, CAPACITY, TYPE & DESCRIPTION OF EQUIPMENT USED AND NUMBER OF TRUCK LOADS: _____

16. ROUTES OVER WHICH MATERIAL WILL BE TRANSPORTED AND METHOD OF TRAFFIC CONTROL _____

17. METHOD OF NOISE AND DUST ABATEMENT _____

18. NUMBER OF TREES TO BE REMOVED _____

19. METHOD LATERAL SUPPORT AND EROSION, FLOOD AND SILT CONTROL _____

20. METHOD OF PROTECTION FOR DOWN STREAM PROPERTIES _____

I FURTHER AGREE THAT I WILL FURNISH ANY OTHER PERTINENT DATA AS THE PLANNING BOARD AND THE MAYOR AND COUNCIL MAY REQUIRE.

SIGNED _____

NOTARY PUBLIC _____

OAK - _____

PLANNING BOARD
BOROUGH OF OAKLAND
DETERMINATION OF COMPLETENESS CHECKLIST
SITE PLAN

Project Title DFLP VAN VOOREN, LLC SITE PLAN
Lot, Block Lot 2, Block 3203
Docket No. _____

ITEM	YES	NO	N/A	COMMENTS
(1) Site plan drawn to a scale of not more than 1"=50', unless permitted by Board.	<u>X</u>	_____	_____	_____
(2) Signed and sealed statement of certifications by both N. J. registered professional Engineer and Land Surveyor, as to the accuracy of the site plan and topographical map.	<u>X</u>	_____	_____	_____
(3) Name and title of applicant, owner and plan preparer.	<u>X</u>	_____	_____	_____
(4) Approval block bearing titles of Chairman and Secretary of Planning Board and the Borough Engineer.	<u>X</u>	_____	_____	_____
(5) Lot, Block, and Tax Map Sheet Numbers.	<u>X</u>	_____	_____	_____
(6) Date, scale and north arrow.	<u>X</u>	_____	_____	_____
(7) Zone Boundaries of adjoining properties.	<u>X</u>	_____	_____	_____
(8) Existing/proposed contours referred to U.S.C.&G.S. datum.	<u>X</u>	_____	_____	_____
(9) Location of zoning setback lines and existing man-made or natural features.	<u>X</u>	_____	_____	_____
(10) Existing/proposed signage and	_____	_____	_____	_____

ITEM	YES	NO	N/A	COMMENTS
(11) Location of existing/ proposed buildings and structures.	<u>X</u>	—	—	—
(12) Location of all structures within one hundred (100') feet of the property.	<u>X</u>	—	—	—
(13) Proposed sanitary sewers and water systems.	<u>X</u>	—	—	—
(14) Building floor plans and elevations drawings of proposed principal building and accessory structures.	<u>X</u>	—	—	—
(15) Complete storm drainage system.	<u>X</u>	—	—	—
(16) Drainage Design Data/ Calculations.	<u>X</u>	—	—	—
(17) Location and detail of existing/ proposed site improvements (i.e. curbs, sidewalks, etc.)	<u>X</u>	—	—	—
(18) Dimensions of all adjacent streets and roadway improvements, and all existing driveways within 100' of site.	<u>X</u>	—	—	—
(19) Location and detail of sidewalk and street shade trees.	<u>X</u>	—	—	—
(20) Profiles and construction cross section for parking, aisles and driveways, curbing, walkways, exterior stairways and railings.	<u>X</u>	—	—	—
(21) Proposed off-street parking Schedule.	<u>X</u>	—	—	—
(22) Number and type of proposed uses of land, buildings and units, together with the floor area for same and the estimated number of employees or occupants of each unit	<u>X</u>	—	—	—

ITEM	YES	NO	N/A	COMMENTS
(23) Detail and location of fire protection systems.	X			
(24) Reference to covenants, deed restrictions, easements and subsequent waivers and variances.	X			
(25) Soil Erosion and Sediment Control Plan and Details.	X			
(26) Adherence to the Flood Damage Prevention Ordinance No. 85 Code 56.	X			
(27) Survey data together with Description of all areas Dedicated to the Borough of Oakland.	X			
(28) Required survey data.	X			
(29) Property owners within 200 feet.	X			
(30) Retaining wall design detail and calculations bearing seal and signature of a N. J. registered professional Engineer.	X			
(31) Soil Movement Application, Plan and Cross Sections prepared in accordance with Paragraph 59-67 of the Code.	X			
(32) Landscaping Plan and Planting Schedule.	X			
(33) Any additional information deemed necessary by the Planning Board.	X			
(34) The Board reserves the right to reject any and all drawings which are not clear, concise and legible.	X			

ITEM	YES	NO	N/A	COMMENTS
------	-----	----	-----	----------

(35) Locate area on National Wetlands Inventory Map.			X	
--	--	--	---	--

(36) Submittal of variance application.			X	
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(37) Residential Cluster (i.e. Townhouses):

a) The amount and location of common open space to be provided.			X	
b) The location and description of any common facilities to be provided.			X	

Name and responsibilities of the homeowner association if applicable.			X	
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(38) Final Site Plan: in addition to the aforesaid requirements, show or include the following:

- Final contours of site (100) feet of same at two (2) foot intervals.			X	
- Final Elevations at the corners of all proposed buildings and paved areas and at property corners.			X	
- Floor Plan and elevation drawings of the proposed building bearing the seal and signature of preparing architect.			X	
- Landscaping Plan and Planting Schedule.			X	

Note: Corporation making application MUST be represented by Counsel at any Planning Board Meetings.

NOTICE TO UTILITIES

Chapter 245 of the M.L.U.L. was amended to require that notice of hearings on application for site plans or major subdivisions be given to all public utilities and cable television companies owning land or possessing rights-of-way or easements within 200 feet of the property which is the subject of the hearing.

ADDITIONAL COMMENTS _____

17 Van Vooren Drive
Oakland NJ

Lot: 2 Block: 3203

Block: 3203

ARCHITECT:

JOHN SARACCO ARCHITECT LLC
PO BOX 245

POCONTO, N.J. 07005
P. 773 779 4000

6. **ANTHROPOMETRIC DATA**

Abstract

[illegible]

TABLE

First Floor Plan

① First Floor Plan
3/32" = 1'-0"

SEAL & SIGNATURE

—

1001

PB-101

New
Construction
17 Van Voorst Drive
Oakland NJ

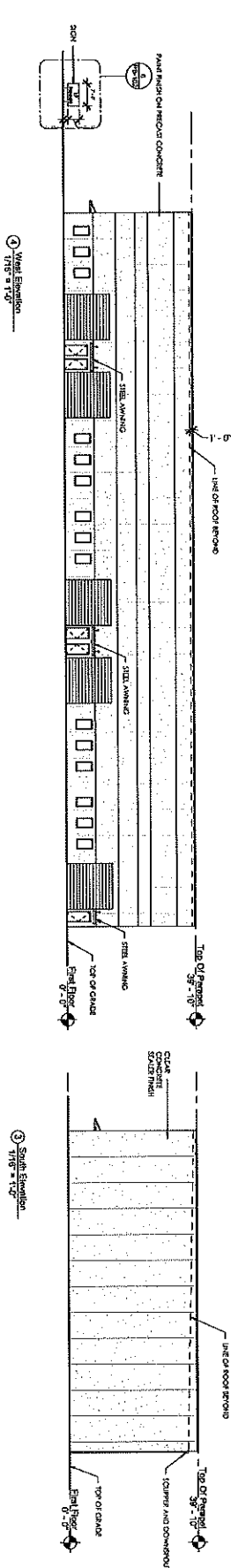
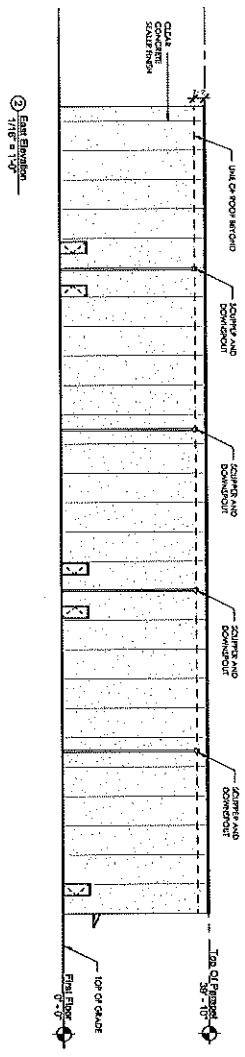
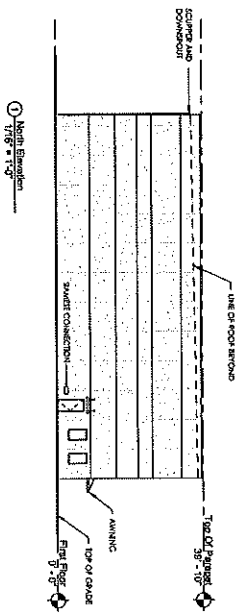
Lot: 2 Block: 3003

ARCHITECT:
JOHN SABACCO ARCHITECT LLC
1000 NEW YORK AVENUE
SUITE 200
NEW YORK, NY 10022
TEL: 212-691-1111
WWW.JSABACCO.COM

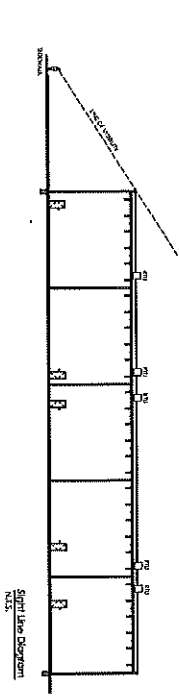
NO.	DATE	DESCRIPTION
1	12/21/11	ISSUED FOR PERMITS
2	01/27/12	ISSUED FOR PERMITS
3	02/23/12	ISSUED FOR PERMITS
4	03/23/12	ISSUED FOR PERMITS
5	04/23/12	ISSUED FOR PERMITS
6	05/23/12	ISSUED FOR PERMITS
7	06/23/12	ISSUED FOR PERMITS
8	07/23/12	ISSUED FOR PERMITS
9	08/23/12	ISSUED FOR PERMITS
10	09/23/12	ISSUED FOR PERMITS
11	10/23/12	ISSUED FOR PERMITS
12	11/23/12	ISSUED FOR PERMITS
13	12/23/12	ISSUED FOR PERMITS
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92	07/23/19	ISSUED FOR PERMITS
93	08/23/19	ISSUED FOR PERMITS
94	09/23/19	ISSUED FOR PERMITS
95	10/23/19	ISSUED FOR PERMITS
96	11/23/19	ISSUED FOR PERMITS
97	12/23/19	ISSUED FOR PERMITS
98	01/23/20	ISSUED FOR PERMITS
99	02/23/20	ISSUED FOR PERMITS
100	03/23/20	ISSUED FOR PERMITS

Elevations

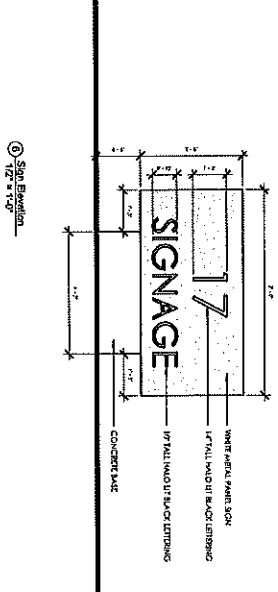
SCALE: AS SHOWN
DATE: 12/21/11
DRAWN BY: J.S.
CHECKED BY: J.S.
DESIGNED BY: J.S.
PROJECT NO.: 11-001
SHEET NO.: 11-001
DRAWING NO.: PB-102



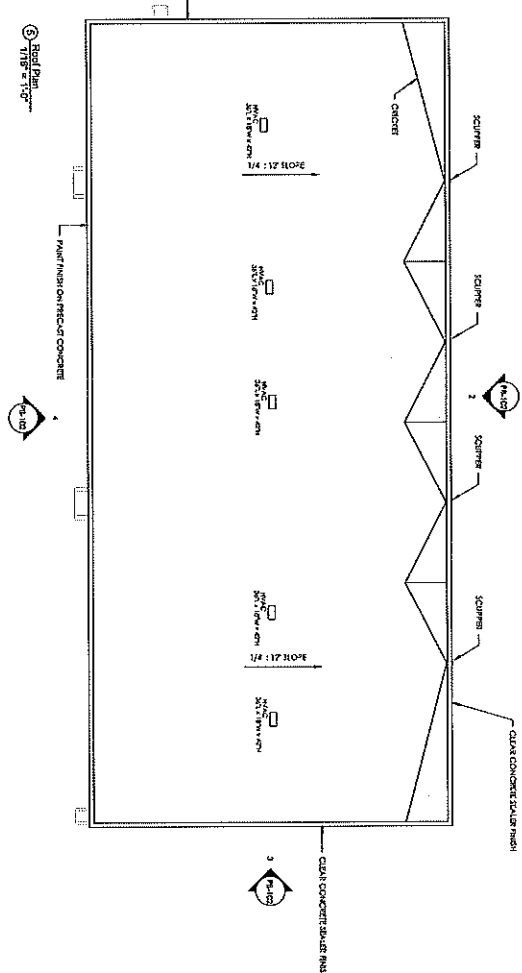
West Elevation
1/8" = 1'-0"



South Elevation
1/8" = 1'-0"



Sign Elevation
1/2" = 1'-0"



Roof Plan
1/8" = 1'-0"

PRELIMINARY & FINAL SITE PLAN FOR DFLP VAN VOOREN, LLC. BOROUGH OF OAKLAND BERGEN COUNTY, NEW JERSEY

- NOTES:**
1. ELEVATIONS BASED ON ASSUMED DATUM.
 2. REFERENCE MAPS/RECORDS:
FIELD MAP / ERIE/RECORDS
DATE: 1984 (P&S)
 3. TOTAL LOT AREA: 87,124.2 SF, 2.0 AC.
 4. PROPERTY IS IN THE I-P INDUSTRIAL PARK ZONE.
 5. FIELD SURVEY PERFORMED BY THIS OFFICE ON 5/19/21.
 6. TOTAL PARKING PROVIDED: 35 SPACES.

**Building Permit
TOWN OF FRANKLIN**

Office of Building Inspection
100 Main Street, 2nd Floor
Franklin, MA 01701-2211
Telephone: 508-326-7100
Fax: 508-326-7101

Building Permit No. _____

200 3

RECEIVED

200 3

200 3

200 3

200 3

200 3

200 3

Use of Building Permit No. _____ for Building Permit No. _____

200 3

RECEIVED

200 3

200 3

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RECEIVED

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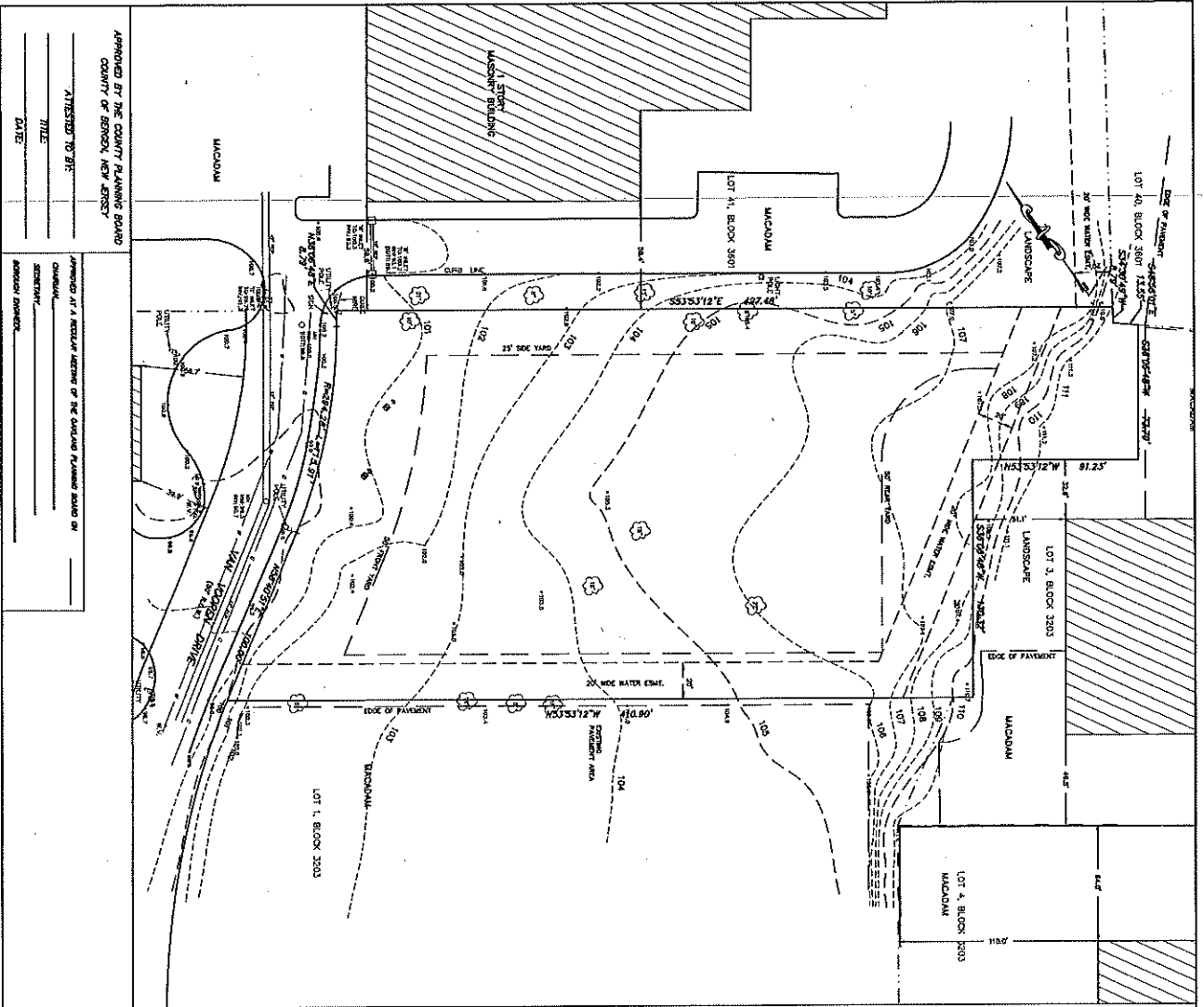
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APPROVED BY THE COUNTY PLANNING BOARD
COUNTY OF BERGEN, NEW JERSEY

ATTESTED TO BY:
TITLE:
DATE:

APPROVED AT A REGULAR MEETING OF THE COUNTY PLANNING BOARD ON:
DATE:
BY:

NO.	DATE	DESCRIPTION	BY
1	12/23/21	AS PER SIG. 12/23/21 LTR.	SM

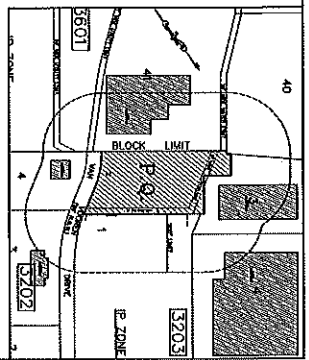
OWNER/APPPLICANT
DPL VAN VOOREN, LLC
17 VAN VOOREN DRIVE
OAKLAND, N.J. 07438

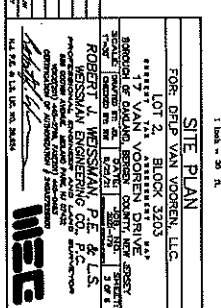
EXISTING CONDITIONS PLAN
FOR: DPL VAN VOOREN, LLC
LOT 2, BLOCK 3203
SUBDIVISION OF OAKLAND BERGEN COUNTY NEW JERSEY
DESIGNED BY: ROBERT A. WEISSMAN, P.E. & L.S.
DESIGNED BY: ROBERT A. WEISSMAN, P.E. & L.S.
DESIGNED BY: ROBERT A. WEISSMAN, P.E. & L.S.

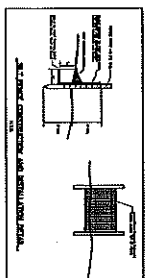
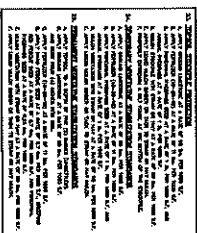
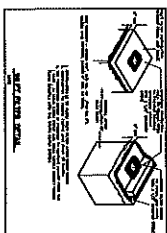
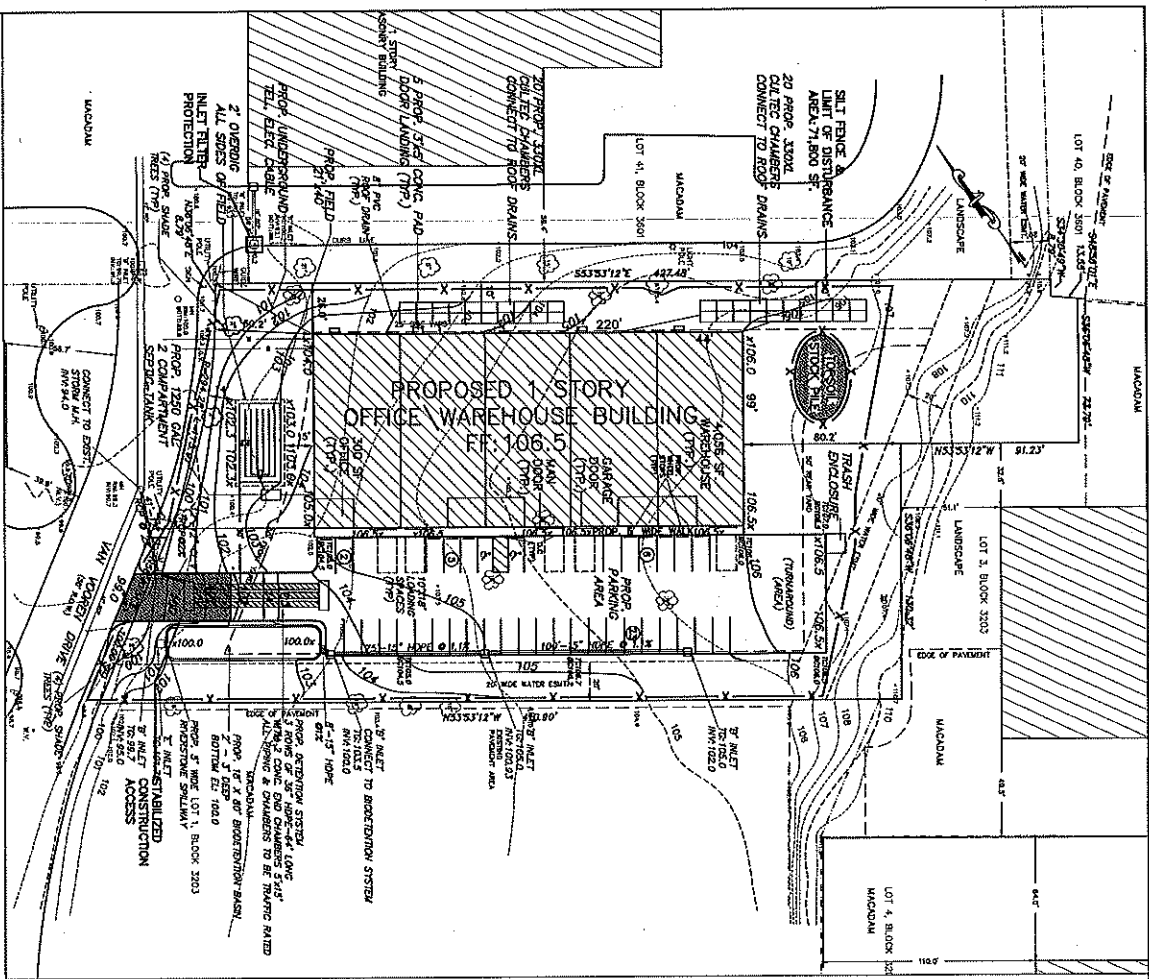


ZONING DATA (0-P, INDUSTRIAL PARK ZONE)	
REQUIRED	NOTED
1. LOT AREA	2. AC.
2. SIDE YARD	20' W.
3. FRONT YARD	20' W.
4. REAR YARD	20' W.
5. NUMBER OF STORIES	2.2 STORIES
6. NUMBER OF UNITS	205
7. BLOCK COVERAGE	50%
8. LOT COVERAGE	50%

- NOTES:**
1. ELEVATIONS BASED ON ASSUMED DATUM
 2. REFERENCE MAPS/DEEDS
 3. TOTAL LOT AREA: 87,721.2 SQ. FT. 2.0 AC.
 4. PROPERTY IS IN THE 0-P INDUSTRIAL PARK ZONE
 5. FIELD SURVEY PERFORMED BY THIS OFFICE ON 5/19/21.





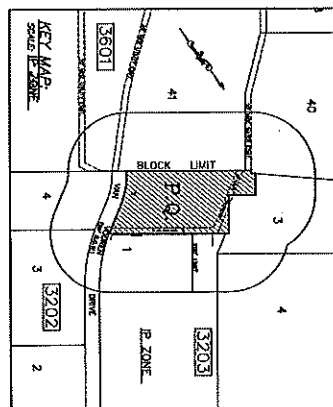


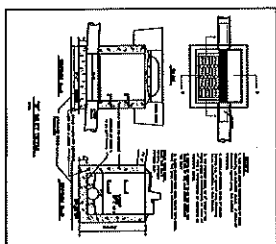
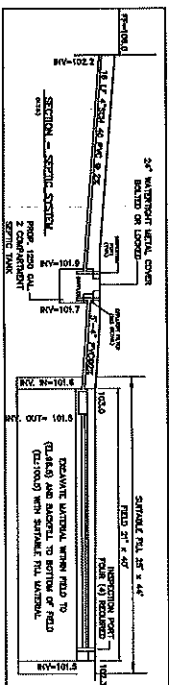
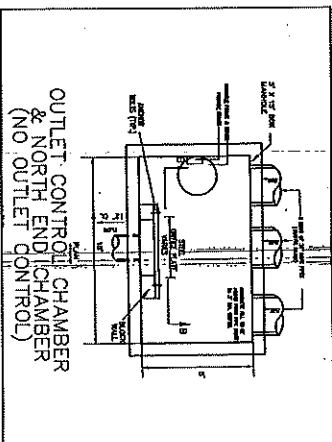
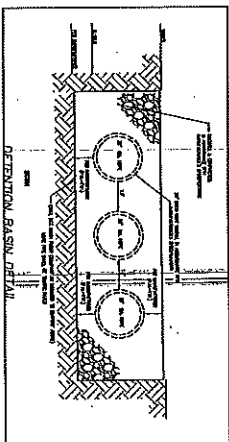
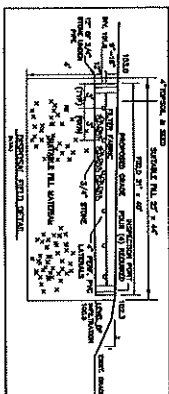
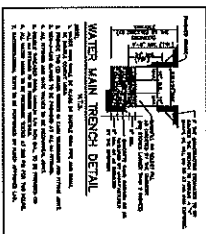
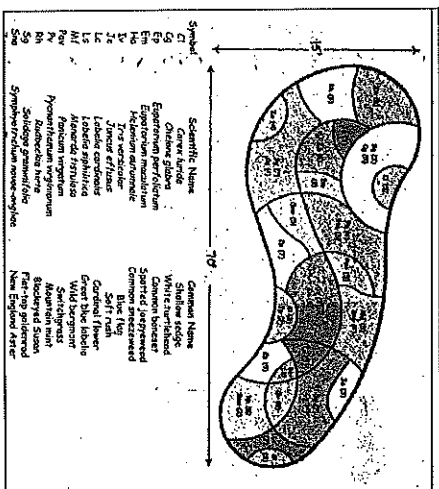
ROBERT L. WEISSMAN, P.E. & L.S.
WEISSMAN ENGINEERING CO., P.C.
PROFESSIONAL ENGINEER AND LAND SURVEYOR
18000 WILSON AVENUE, SUITE 100
DALLAS, TEXAS 75244
OFFICE OF / ASSISTANT / SECRETARY

NO.	DATE	DESCRIPTION	BY
1	12/26/75	25 PWT DWS 02/21/75 1 LN.	RLW

RLW
MAY 19 1976
MAY 19 1976

WEC



[illegible][illegible]

SOIL MOVEMENT QUANTITIES

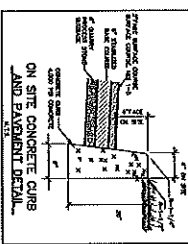
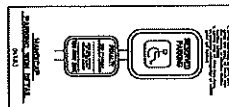
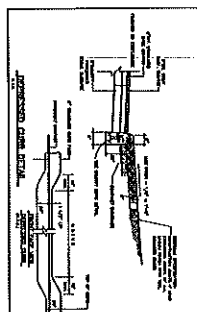
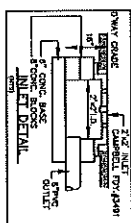
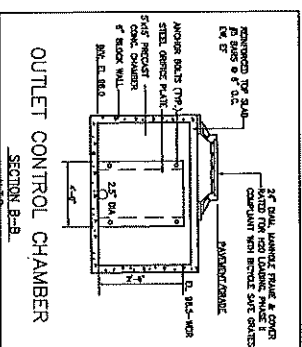
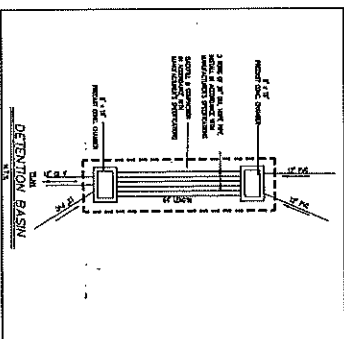
DECONTAMINATION

FORMER: 15' x 24' x 200' / 27 = 142 CY

CONTAMINATED: 15' x 24' x 400' / 27 = 144 CY

OUTLIER: 15' x 10' x 200' / 27 = 204 CY

TOTAL DECONTAMINATION: 384 CY

[illegible]

COUNTY OF BERGEN, NEW JERSEY

ATTESTED TO BY:

FILE:

DATE:

CHAIRMAN _____
SECRETARY _____
PORTFOLIO ENGINEER _____

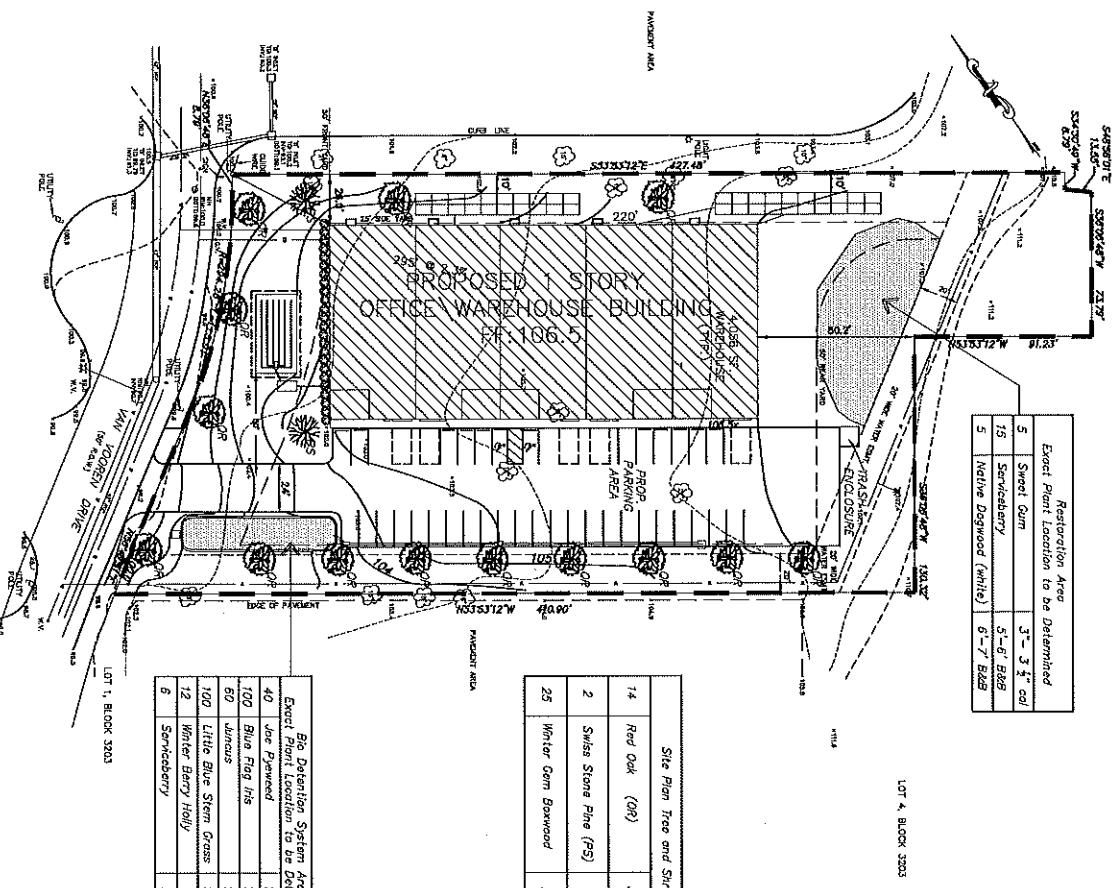
1	12/29/21	POST 8041 12/29/21 LTR
2	01/11/22	EXCISE/INVO

[illegible]

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Proposed Landscape Plan

SCALE: 1" = 30'-0"



Reforestation Area
Exact Plant Location to be Determined

5	Sweet Gum	3"-3 1/2" cal
15	Serviceberry	5'-6' B&B
5	Native Dogwood (white)	6'-7' B&B

Site Plan Tree and Shrub Location Plan

14	Red Oak (OR)	3"-3 1/2" cal	
2	Swiss Stone Pine (PS)	5'-6' B&B	
25	Winter Gum Boxwood	24"-30" B&B	

Bio Detention System Area
Exact Plant Location to be Determined

40	Joe Pyeweed	1 Cal
100	Blue Flag Iris	1 Cal
60	Ulmus	1 Cal
100	Little Blue Stem Grass	1 Cal
12	Winter Berry Holly	6'-7' B&B
6	Serviceberry	5'-6' B&B

NOTES

1. ALL PLANTINGS REQUIRE AN IRRIGATION SYSTEM.
2. ALL PLANTING BEDS WILL BE MULCHED.
3. TWO YEAR WARRANTY ON ALL PLANTS.
4. DEER GUARDS WILL BE INSTALLED ON ALL TREES.
5. ALL DISTURBED AREAS WILL BE STABILIZED.

APPROVED BY THE COUNTY PLANNING BOARD
COUNTY OF BERGEN, NEW JERSEY

ATTESTED TO BY:

TITLE:

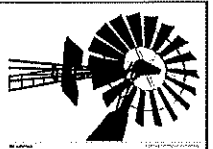
DATE:

APPROVED AT THE REGULAR MEETING OF THE
OAKLAND PLANNING BOARD

CHAIRMAN

SECRETARY

BOROUGH ENGINEER



Urban Farms
Landscape & Design
840 Franklin Lake Road
Franklin Lakes, NJ 07417
Tel: (201) 847-1800
Fax: (201) 847-1603
MaryMcIntire@UrbanFarms.com

12/27/2021
Landscape Architect
NJ Lic. # 21A50004200

No.	Date	Revisions

LANDSCAPING PLAN		
PROJECT: PROPOSED OFFICE & WAREHOUSE		
OWNER: DLPF VAN VOOREN, LLC 17 VAN VOOREN DRIVE OAKLAND, NEW JERSEY		
DATE: 12/31/2021	BLOCK: 3203	LOT: 2

DRAWING NO.
PROJECT NO.
2021-072

Stormwater Drainage Calculations

for

Lot No. 2- Block 3203

in

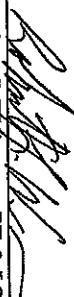
Borough of Oakland
Bergen County, NJ

Prepared for:

DELP VAN VOOREN, LLC

September 14, 2021

Prepared by:


Robert J. Weissman, PE & LS
NJ PE No. 29624

1. *Introduction*

The purpose of this report is to demonstrate the proposed stormwater drainage design and to provide the necessary calculations and reference information for the construction of the proposed development located at 17 Van Vooren Drive in the Borough of Oakland, Bergen County, NJ. The proposed project will be designed so that the Post-Development stormwater runoff flow rates will be reduced 50%, 75% and 80% respectively from the Pre-Development Conditions 2, 10 and 100-year storm events based on using a two and one-half inch diameter orifice. The proposed project's water quality requirement will be accommodated by three rain garden basins which will receive runoff flow from the proposed asphalt parking area and adjacent lawn areas. The recharge requirement will be accommodated by the use of underground stormwater infiltration system which will receive runoff from the proposed building roof area. Soil investigation revealed sandy soils with a permeability rate of 20 inches per hour and groundwater was estimated to be greater than 10 feet below the existing grade surface. The drainage analysis will only analyze the area within the developed area of the subject property.

2. *Pre-Development Condition*

The Pre-Development soil conditions consist of Type A Soils as indicated on the Bergen County Soil Survey. Surface conditions found at the project site mostly consists of lawn and small shrubs areas. The Pre-Development condition Lawn coefficient will be 0.39 and impervious coefficient 0.98. Time of Concentration calculation for the Drainage Area (DA) and is provided in the Pre-Development Section. The TR55 Method was used to determine the peak runoff rate for the Pre-Development storm events:

Storm Event	DA		Allowable		Pre-Dev. Flow Reductions
	Flow (CFS)	Flows (CFS)	Flows (CFS)		
2	0.00	0.00	0.00	50%	
10	0.08	0.06	0.06	75%	
100	1.71	1.36	1.36	80%	

3. *Post-Development Condition*

The proposed development will consist of the removal of the existing conditions and the construction of the proposed development. There are five drainage areas - Bypass (PB), Building Roof, DA#1, DA#2, and DA#3. A proposed detention basin will receive stormwater runoff from the proposed water quality basin overflows and then discharge to the existing municipal stormwater collection system. TR-55 analysis was used for the Post-Development Conditions. The proposed Bypass Area and the Detention Basin Flow were routed together to determine the total summation from the post-development project.

Storm Event	Bypass		Basin		Total-Post		Allowable
	Flow	Flow	Flow	Flow (CFS)	Flow (CFS)	Flow (CFS)	
2	0.00	0.00	0.00	0.00	0.00	0.00	
10	0.12	0.00	0.12	0.12	0.12	0.06	
100	1.26	0.39	1.32	1.32	1.32	1.36	

The proposed 10 year flow from the proposed bypass area is slightly higher than the allowable

4. *Water Quality*

Water Quality will be accommodated by the use of three rain garden basins which will receive stormwater runoff from the adjacent asphalt parking and lawn areas. The basins will be sized for the NIDEP water quality storm and have overflow devises for the larger storms. The basins will be planted with appropriate plants for rain gardens. The overflow devises will be sized to direct the large storm flows to an underground detention basin. An infiltration rate of five inches per hour will be used to accommodate infiltration at a slower rate than the below soils.

5. *Recharge*

Stormwater recharge will be accommodated by a proposed underground infiltration basin which will receive stormwater from the proposed building's roof area. The infiltration basin was designed using a 50% reduced soil permeability rate. The infiltration basin will accommodate flow from the 100 year storm and has sufficient volume to accommodate the Pre-Development two year storm runoff volume.

Pre-Development Conditions

Soil Map—Bergen County, New Jersey



MAP LEGEND

	Area of Interest (AOI)		Spoil Area
	Soils		Stony Spot
	Soil Map Unit Polygons		Very Stony Spot
	Soil Map Unit Lines		Wet Spot
	Soil Map Unit Points		Other
Special Point Features			Special Line Features
	Blowout	Water Features	
	Borrow Pit		Streams and Canals
	Clay Spot	Transportation	
	Closed Depression		Rails
	Gravel Pit		Interstate Highways
	Gravelly Spot		US Routes
	Landfill		Major Roads
	Lava Flow		Local Roads
	Marsh or swamp	Background	
	Mine or Quarry		Aerial Photography
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slp		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bergen County, New Jersey
Survey Area Data: Version 17, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 22, 2020—Sep 23, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PHG	Pls, sand and gravel	1.5	94.5%
UR	Urban land	0.1	5.5%
Totals for Area of Interest		1.6	100.0%

Bergen County, New Jersey

PHG--Pits, sand and gravel

Map Unit Setting

National map unit symbol: b0s6
Mean annual precipitation: 30 to 64 inches.
Mean annual air temperature: 46 to 79 degrees F
Frost-free period: 131 to 178 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits, sand and gravel: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits, Sand And Gravel

Setting

Parent material: Sandy material disturbed by human activity

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: No

Data Source Information

Soil Survey Area: Bergen County, New Jersey
Survey Area Data: Version 17, Jun 1, 2020



NOAA Atlas 14, Volume 2, Version 3
Location name: Oakland, New Jersey, USA*
Latitude: 41.0086°, Longitude: -74.2418°
Elevation: 428.92 ft**
* source: ESRI Maps
** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Benin, D. Martin, B. Liu, T. Parzybok, M. Vorka, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF tabular | PF graphical | Maps & Aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.345 (0.313-0.380)	0.411 (0.374-0.452)	0.489 (0.444-0.539)	0.566 (0.494-0.630)	0.617 (0.555-0.677)	0.668 (0.600-0.734)	0.717 (0.639-0.797)	0.764 (0.678-0.840)	0.822 (0.723-0.909)	0.866 (0.756-0.957)
10-min	0.542 (0.483-0.597)	0.649 (0.580-0.716)	0.771 (0.689-0.850)	0.855 (0.776-0.941)	0.962 (0.867-1.06)	1.04 (0.931-1.14)	1.11 (0.989-1.22)	1.17 (1.04-1.29)	1.25 (1.14-1.45)	1.31 (1.14-1.45)
15-min	0.672 (0.610-0.740)	0.805 (0.732-0.886)	0.960 (0.870-1.05)	1.07 (0.967-1.17)	1.20 (1.06-1.32)	1.30 (1.16-1.42)	1.39 (1.24-1.52)	1.47 (1.30-1.62)	1.57 (1.38-1.73)	1.64 (1.45-1.81)
30-min	0.904 (0.821-0.999)	1.10 (0.985-1.21)	1.34 (1.21-1.46)	1.52 (1.37-1.67)	1.74 (1.57-1.91)	1.80 (1.71-2.09)	2.05 (1.84-2.27)	2.21 (1.97-2.44)	2.41 (2.12-2.66)	2.55 (2.23-2.82)
60-min	1.12 (1.01-1.23)	1.36 (1.23-1.50)	1.70 (1.54-1.87)	1.95 (1.77-2.14)	2.28 (2.05-2.51)	2.54 (2.28-2.79)	2.80 (2.50-3.07)	3.05 (2.71-3.35)	3.40 (2.99-3.75)	3.65 (3.19-4.04)
2-hr	1.37 (1.25-1.50)	1.67 (1.52-1.83)	2.11 (1.91-2.31)	2.45 (2.22-2.69)	2.92 (2.63-3.19)	3.30 (2.90-3.61)	3.70 (3.29-4.04)	4.11 (3.64-4.49)	4.57 (4.08-5.11)	5.12 (4.42-5.82)
3-hr	1.54 (1.41-1.68)	1.87 (1.71-2.05)	2.36 (2.16-2.59)	2.75 (2.50-3.01)	3.29 (2.97-3.59)	3.72 (3.34-4.05)	4.17 (3.72-4.55)	4.63 (4.10-5.05)	5.28 (4.61-5.77)	5.79 (5.01-6.35)
6-hr	2.01 (1.84-2.20)	2.43 (2.23-2.65)	3.07 (2.81-3.35)	3.68 (3.27-3.91)	4.31 (3.90-4.70)	4.92 (4.42-5.35)	5.56 (4.96-6.04)	6.24 (5.51-6.79)	7.22 (6.28-7.87)	8.02 (6.90-8.77)
12-hr	2.51 (2.28-2.78)	3.05 (2.77-3.37)	3.86 (3.51-4.25)	4.54 (4.10-5.00)	5.53 (4.95-6.07)	6.37 (5.68-6.98)	7.28 (6.41-7.97)	8.28 (7.20-9.05)	9.75 (8.33-10.7)	11.0 (9.25-12.1)
24-hr	2.82 (2.59-3.09)	3.41 (3.13-3.74)	4.36 (4.00-4.73)	5.17 (4.72-5.65)	6.38 (5.79-6.97)	7.43 (6.69-8.12)	8.59 (7.67-9.35)	9.88 (8.72-10.5)	11.8 (10.3-13.0)	13.5 (11.5-14.8)
2-day	3.33 (3.07-3.52)	4.03 (3.71-4.39)	5.13 (4.72-5.59)	6.05 (5.56-6.59)	7.40 (6.78-8.03)	8.54 (7.74-9.27)	9.78 (8.78-10.6)	11.1 (9.91-12.1)	13.1 (11.5-14.6)	14.8 (12.8-16.3)
3-day	3.50 (3.23-3.79)	4.23 (3.91-4.59)	5.37 (4.96-5.82)	6.31 (5.81-6.83)	7.67 (7.09-8.30)	8.82 (8.02-9.54)	10.1 (9.08-10.9)	11.4 (10.2-12.4)	13.4 (11.8-14.6)	15.0 (13.1-16.5)
4-day	3.67 (3.40-3.95)	4.43 (4.11-4.79)	5.60 (5.19-6.05)	6.57 (6.07-7.09)	7.95 (7.30-8.57)	9.10 (8.31-9.81)	10.3 (9.38-11.2)	11.5 (10.5-12.5)	13.5 (12.0-14.5)	15.2 (13.3-16.7)
7-day	4.33 (4.04-4.65)	5.20 (4.85-5.65)	6.45 (6.01-6.94)	7.49 (6.98-8.04)	8.97 (8.29-9.63)	10.2 (9.37-11.0)	11.5 (10.5-12.4)	12.9 (11.7-13.9)	14.9 (13.3-16.1)	16.5 (14.6-18.0)
10-day	4.98 (4.68-5.32)	5.95 (5.59-6.35)	7.28 (6.82-7.77)	8.36 (7.82-8.91)	9.89 (9.21-10.6)	11.1 (10.3-11.9)	12.5 (11.5-13.5)	13.8 (12.5-14.9)	15.8 (14.2-17.0)	17.3 (15.5-18.9)
20-day	6.72 (6.33-7.14)	7.98 (7.52-8.48)	9.52 (8.96-10.1)	10.7 (10.1-11.4)	12.4 (11.5-13.1)	13.7 (12.7-14.5)	14.8 (13.5-15.9)	16.2 (15.0-17.3)	18.0 (16.5-19.3)	19.3 (17.5-20.8)
30-day	8.39 (7.83-8.95)	9.39 (8.76-10.0)	11.5 (10.9-12.2)	12.8 (12.1-13.5)	14.5 (13.7-15.3)	15.8 (14.8-16.7)	17.0 (15.9-18.0)	18.2 (17.0-19.3)	19.7 (18.3-21.0)	20.9 (19.3-22.3)
45-day	10.7 (10.1-11.2)	12.5 (11.8-13.2)	14.4 (13.7-15.2)	15.9 (15.0-16.7)	17.7 (16.8-18.7)	19.1 (18.0-20.1)	20.4 (19.2-21.5)	21.7 (20.4-22.9)	23.3 (21.9-24.7)	24.4 (22.7-26.0)
60-day	12.8 (12.1-13.5)	15.0 (14.2-15.8)	17.1 (16.3-18.0)	18.7 (17.8-19.7)	20.7 (19.6-21.8)	22.2 (21.0-23.3)	23.5 (22.2-24.8)	24.8 (23.3-26.2)	26.3 (24.7-27.8)	27.3 (25.6-29.0)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

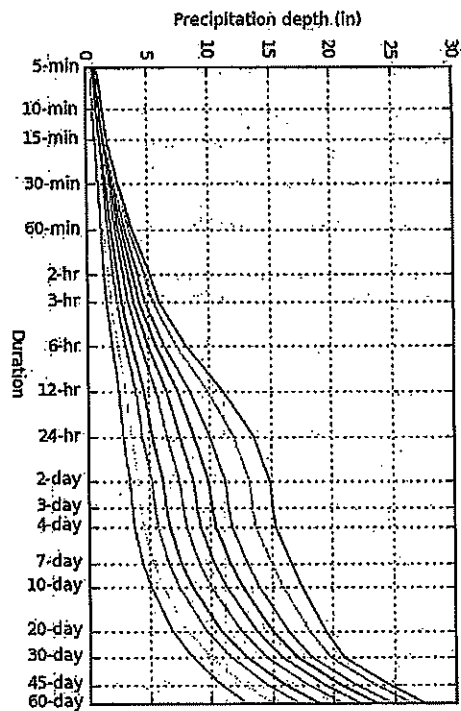
Numbers in parentheses are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates for a given duration and average recurrence interval will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

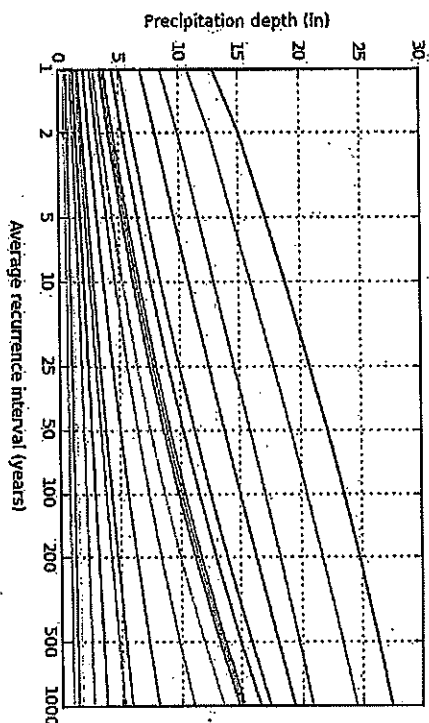
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PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 41.0086°, Longitude: -74.2418°

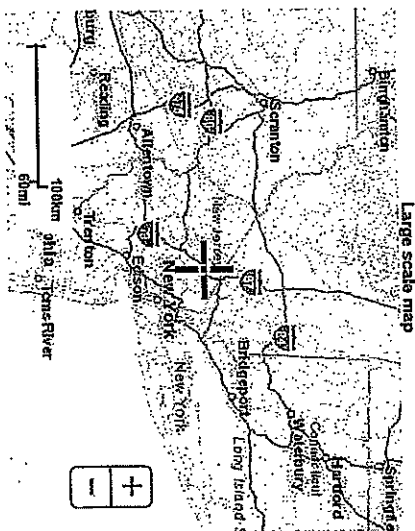
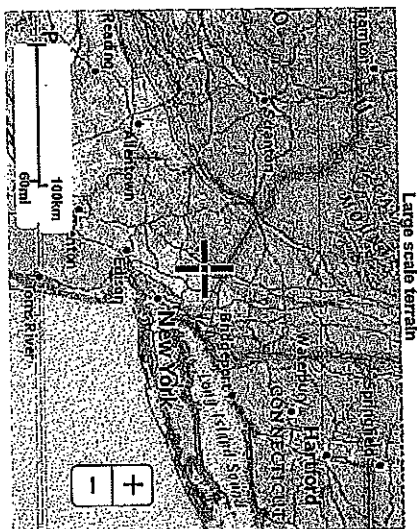
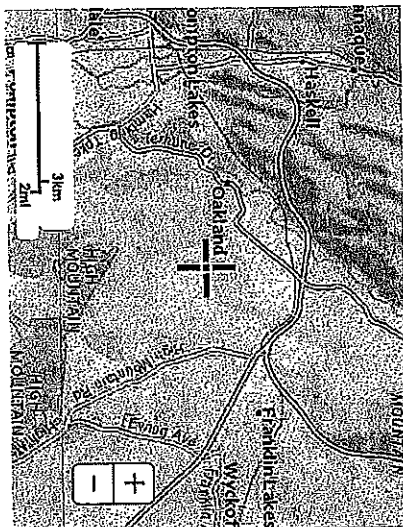


Average recurrence interval (years)	
1	—
2	---
5	---
10	---
25	---
50	---
100	---
200	---
500	---
1000	---



Duration	
5-min	— 2-day
10-min	--- 3-day
15-min	--- 4-day
30-min	--- 7-day
60-min	--- 10-day
2-hr	--- 20-day
3-hr	--- 30-day
6-hr	--- 45-day
12-hr	--- 60-day
24-hr	

Precipitation Frequency Data Server



Large scale aerial



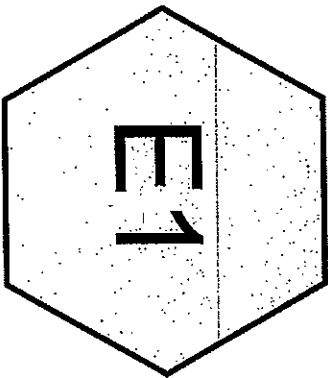
U.S. Department of Commerce
National Oceanic and Atmospheric Administration

National Weather Service
National Water Center

1325 East West Highway
Silver Spring, MD 20910

Questions?: HDSC.Questions@mda.gov

Disclaimer



PRE-DEV



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

17 VAN VOOREN DRIVE-PRE-DEV

NOAA 24-hr D NOAA-2 Rainfall=3.41"

Prepared by Weissman Engineering, PC

Printed 9/14/2021

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Summary for Subcatchment E1: PRE-DEV

Runoff = 0.00 cfs @ 23.99 hrs, Volume= 0.001 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)	CN	Description		
87,121	39	>75% Grass cover, Good, HSG A		
87,121		100.00% Pervious Area		
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0420	0.11	Sheet Flow, A-B Woods: Light underbrush . n= 0.400 P2= 3.30"
0.6	295	0.2300	7.72	Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
16.3	395	Total		

Hydrograph for Subcatchment E1: PRE-DEV

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	0.00	0.00
0.50	0.02	0.00	0.00	26.50	3.41	0.00	0.00
1.00	0.04	0.00	0.00	27.00	3.41	0.00	0.00
1.50	0.06	0.00	0.00	27.50	3.41	0.00	0.00
2.00	0.08	0.00	0.00	28.00	3.41	0.00	0.00
2.50	0.10	0.00	0.00	28.50	3.41	0.00	0.00
3.00	0.13	0.00	0.00	29.00	3.41	0.00	0.00
3.50	0.15	0.00	0.00	29.50	3.41	0.00	0.00
4.00	0.18	0.00	0.00	30.00	3.41	0.00	0.00
4.50	0.21	0.00	0.00	30.50	3.41	0.00	0.00
5.00	0.23	0.00	0.00	31.00	3.41	0.00	0.00
5.50	0.26	0.00	0.00	31.50	3.41	0.00	0.00
6.00	0.29	0.00	0.00	32.00	3.41	0.00	0.00
6.50	0.32	0.00	0.00	32.50	3.41	0.00	0.00
7.00	0.36	0.00	0.00	33.00	3.41	0.00	0.00
7.50	0.40	0.00	0.00	33.50	3.41	0.00	0.00
8.00	0.44	0.00	0.00	34.00	3.41	0.00	0.00
8.50	0.49	0.00	0.00	34.50	3.41	0.00	0.00
9.00	0.54	0.00	0.00	35.00	3.41	0.00	0.00
9.50	0.60	0.00	0.00	35.50	3.41	0.00	0.00
10.00	0.68	0.00	0.00	36.00	3.41	0.00	0.00
10.50	0.76	0.00	0.00	36.50	3.41	0.00	0.00
11.00	0.89	0.00	0.00	37.00	3.41	0.00	0.00
11.50	1.08	0.00	0.00	37.50	3.41	0.00	0.00
12.00	1.63	0.00	0.00	38.00	3.41	0.00	0.00
12.50	2.33	0.00	0.00	38.50	3.41	0.00	0.00
13.00	2.52	0.00	0.00	39.00	3.41	0.00	0.00
13.50	2.65	0.00	0.00	39.50	3.41	0.00	0.00
14.00	2.73	0.00	0.00	40.00	3.41	0.00	0.00
14.50	2.81	0.00	0.00	40.50	3.41	0.00	0.00
15.00	2.87	0.00	0.00	41.00	3.41	0.00	0.00
15.50	2.92	0.00	0.00	41.50	3.41	0.00	0.00
16.00	2.97	0.00	0.00	42.00	3.41	0.00	0.00
16.50	3.01	0.00	0.00	42.50	3.41	0.00	0.00
17.00	3.05	0.00	0.00	43.00	3.41	0.00	0.00
17.50	3.09	0.00	0.00	43.50	3.41	0.00	0.00
18.00	3.12	0.00	0.00	44.00	3.41	0.00	0.00
18.50	3.15	0.00	0.00	44.50	3.41	0.00	0.00
19.00	3.18	0.00	0.00	45.00	3.41	0.00	0.00
19.50	3.20	0.00	0.00	45.50	3.41	0.00	0.00
20.00	3.23	0.00	0.00	46.00	3.41	0.00	0.00
20.50	3.26	0.00	0.00	46.50	3.41	0.00	0.00
21.00	3.28	0.00	0.00	47.00	3.41	0.00	0.00
21.50	3.31	0.00	0.00	47.50	3.41	0.00	0.00
22.00	3.33	0.00	0.00	48.00	3.41	0.00	0.00
22.50	3.35	0.00	0.00				
23.00	3.37	0.00	0.00				
23.50	3.39	0.00	0.00				
24.00	3.41	0.00	0.00				
24.50	3.41	0.00	0.00				

17 VAN VOOREN DRIVE-PRE-DEV

NOAA 24-hr D NOAA-10 Rainfall=5.17"

Prepared by Weissman Engineering, PC

Printed 9/14/2021

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Summary for Subcatchment E1: PRE-DEV

Runoff = 0.08 cfs @ 13.03 hrs, Volume= 0.039 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description			
87,121	39	>75% Grass cover, Good, HSG A			
87,121		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0420	0.11		Sheet Flow, A-B
0.6	295	0.2300	7.72		Woods: Light underbrush n= 0.400 P2= 3.30"
					Shallow Concentrated Flow, B-C
					Unpaved Kp= 16.1 fps
16.3	395	Total			

Hydrograph for Subcatchment E1: PRE-DEV

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	0.24	0.00
0.50	0.03	0.00	0.00	26.50	5.17	0.24	0.00
1.00	0.06	0.00	0.00	27.00	5.17	0.24	0.00
1.50	0.09	0.00	0.00	27.50	5.17	0.24	0.00
2.00	0.12	0.00	0.00	28.00	5.17	0.24	0.00
2.50	0.16	0.00	0.00	28.50	5.17	0.24	0.00
3.00	0.19	0.00	0.00	29.00	5.17	0.24	0.00
3.50	0.23	0.00	0.00	29.50	5.17	0.24	0.00
4.00	0.27	0.00	0.00	30.00	5.17	0.24	0.00
4.50	0.31	0.00	0.00	30.50	5.17	0.24	0.00
5.00	0.35	0.00	0.00	31.00	5.17	0.24	0.00
5.50	0.40	0.00	0.00	31.50	5.17	0.24	0.00
6.00	0.44	0.00	0.00	32.00	5.17	0.24	0.00
6.50	0.49	0.00	0.00	32.50	5.17	0.24	0.00
7.00	0.54	0.00	0.00	33.00	5.17	0.24	0.00
7.50	0.60	0.00	0.00	33.50	5.17	0.24	0.00
8.00	0.67	0.00	0.00	34.00	5.17	0.24	0.00
8.50	0.74	0.00	0.00	34.50	5.17	0.24	0.00
9.00	0.82	0.00	0.00	35.00	5.17	0.24	0.00
9.50	0.91	0.00	0.00	35.50	5.17	0.24	0.00
10.00	1.02	0.00	0.00	36.00	5.17	0.24	0.00
10.50	1.16	0.00	0.00	36.50	5.17	0.24	0.00
11.00	1.34	0.00	0.00	37.00	5.17	0.24	0.00
11.50	1.64	0.00	0.00	37.50	5.17	0.24	0.00
12.00	2.48	0.00	0.00	38.00	5.17	0.24	0.00
12.50	3.53	0.01	0.04	38.50	5.17	0.24	0.00
13.00	3.83	0.03	0.08	39.00	5.17	0.24	0.00
13.50	4.01	0.05	0.07	39.50	5.17	0.24	0.00
14.00	4.15	0.06	0.06	40.00	5.17	0.24	0.00
14.50	4.26	0.08	0.06	40.50	5.17	0.24	0.00
15.00	4.35	0.09	0.05	41.00	5.17	0.24	0.00
15.50	4.43	0.10	0.05	41.50	5.17	0.24	0.00
16.00	4.50	0.11	0.04	42.00	5.17	0.24	0.00
16.50	4.57	0.12	0.04	42.50	5.17	0.24	0.00
17.00	4.63	0.13	0.04	43.00	5.17	0.24	0.00
17.50	4.68	0.14	0.04	43.50	5.17	0.24	0.00
18.00	4.73	0.15	0.03	44.00	5.17	0.24	0.00
18.50	4.77	0.16	0.03	44.50	5.17	0.24	0.00
19.00	4.82	0.16	0.03	45.00	5.17	0.24	0.00
19.50	4.86	0.17	0.03	45.50	5.17	0.24	0.00
20.00	4.90	0.18	0.03	46.00	5.17	0.24	0.00
20.50	4.94	0.19	0.03	46.50	5.17	0.24	0.00
21.00	4.98	0.20	0.03	47.00	5.17	0.24	0.00
21.50	5.01	0.20	0.03	47.50	5.17	0.24	0.00
22.00	5.05	0.21	0.03	48.00	5.17	0.24	0.00
22.50	5.08	0.22	0.03				
23.00	5.11	0.22	0.03				
23.50	5.14	0.23	0.03				
24.00	5.17	0.24	0.03				
24.50	5.17	0.24	0.00				

17 VAN VOOREN DRIVE-PRE-DEV

NOAA 24-hr D NOAA-100 Rainfall=8.59"

Prepared by Weissman Engineering, PC

Printed 9/14/2021

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Summary for Subcatchment E1: PRE-DEV

Runoff = 1.71 cfs @ 12.29 hrs, Volume= 0.236 af, Depth= 1.41"

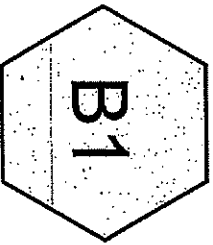
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)	CN	Description		
87,121	39	>75% Grass cover, Good, HSG A.		
87,121		100.00% Pervious Area		
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.7	100	0.0420	0.11	Sheet Flow, A-B
0.6	295	0.2300	7.72	Woods: Light underbrush n= 0.400 P2= 3.30" Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
16.3	395	Total		

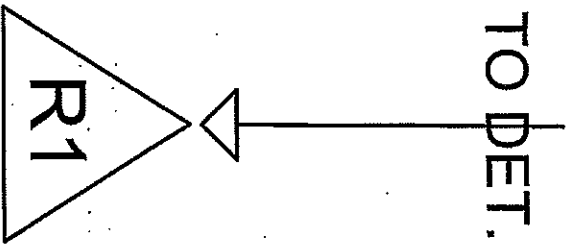
Hydrograph for Subcatchment E1: PRE-DEV

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	1.41	0.00
0.50	0.05	0.00	0.00	26.50	8.59	1.41	0.00
1.00	0.10	0.00	0.00	27.00	8.59	1.41	0.00
1.50	0.15	0.00	0.00	27.50	8.59	1.41	0.00
2.00	0.21	0.00	0.00	28.00	8.59	1.41	0.00
2.50	0.26	0.00	0.00	28.50	8.59	1.41	0.00
3.00	0.32	0.00	0.00	29.00	8.59	1.41	0.00
3.50	0.39	0.00	0.00	29.50	8.59	1.41	0.00
4.00	0.45	0.00	0.00	30.00	8.59	1.41	0.00
4.50	0.52	0.00	0.00	30.50	8.59	1.41	0.00
5.00	0.59	0.00	0.00	31.00	8.59	1.41	0.00
5.50	0.66	0.00	0.00	31.50	8.59	1.41	0.00
6.00	0.73	0.00	0.00	32.00	8.59	1.41	0.00
6.50	0.81	0.00	0.00	32.50	8.59	1.41	0.00
7.00	0.90	0.00	0.00	33.00	8.59	1.41	0.00
7.50	1.01	0.00	0.00	33.50	8.59	1.41	0.00
8.00	1.11	0.00	0.00	34.00	8.59	1.41	0.00
8.50	1.23	0.00	0.00	34.50	8.59	1.41	0.00
9.00	1.36	0.00	0.00	35.00	8.59	1.41	0.00
9.50	1.52	0.00	0.00	35.50	8.59	1.41	0.00
10.00	1.70	0.00	0.00	36.00	8.59	1.41	0.00
10.50	1.92	0.00	0.00	36.50	8.59	1.41	0.00
11.00	2.23	0.00	0.00	37.00	8.59	1.41	0.00
11.50	2.72	0.00	0.00	37.50	8.59	1.41	0.00
12.00	4.12	0.06	0.12	38.00	8.59	1.41	0.00
12.50	5.87	0.41	1.15	38.50	8.59	1.41	0.00
13.00	6.36	0.55	0.59	39.00	8.59	1.41	0.00
13.50	6.67	0.65	0.41	39.50	8.59	1.41	0.00
14.00	6.89	0.73	0.31	40.00	8.59	1.41	0.00
14.50	7.07	0.79	0.27	40.50	8.59	1.41	0.00
15.00	7.23	0.85	0.23	41.00	8.59	1.41	0.00
15.50	7.36	0.90	0.20	41.50	8.59	1.41	0.00
16.00	7.48	0.95	0.18	42.00	8.59	1.41	0.00
16.50	7.58	0.99	0.17	42.50	8.59	1.41	0.00
17.00	7.69	1.03	0.16	43.00	8.59	1.41	0.00
17.50	7.78	1.06	0.15	43.50	8.59	1.41	0.00
18.00	7.86	1.10	0.13	44.00	8.59	1.41	0.00
18.50	7.93	1.13	0.12	44.50	8.59	1.41	0.00
19.00	8.00	1.16	0.12	45.00	8.59	1.41	0.00
19.50	8.07	1.19	0.12	45.50	8.59	1.41	0.00
20.00	8.14	1.22	0.11	46.00	8.59	1.41	0.00
20.50	8.20	1.24	0.11	46.50	8.59	1.41	0.00
21.00	8.27	1.27	0.11	47.00	8.59	1.41	0.00
21.50	8.33	1.30	0.11	47.50	8.59	1.41	0.00
22.00	8.38	1.32	0.10	48.00	8.59	1.41	0.00
22.50	8.44	1.35	0.10				
23.00	8.49	1.37	0.09				
23.50	8.54	1.39	0.09				
24.00	8.59	1.41	0.08				
24.50	8.59	1.41	0.00				

Post-Development Conditions



BLDG. TO DET. BASIN



Recharge System



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

Summary for Subcatchment B1: BLDG. TO DET. BASIN

Runoff = 1.38 cfs @ 12.17 hrs, Volume= 0.132 af, Depth= 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)	CN	Description
21,780	98	Building Roof Area
21,780		100.00% Impervious Area
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)
		Capacity (cfs)
		Description
10.0		Direct Entry, Sheet Flow

Hydrograph for Subcatchment B1: BLDG. TO DET. BASIN

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	3.18	0.00
0.50	0.02	0.00	0.00	26.50	3.41	3.18	0.00
1.00	0.04	0.00	0.00	27.00	3.41	3.18	0.00
1.50	0.06	0.00	0.00	27.50	3.41	3.18	0.00
2.00	0.08	0.01	0.01	28.00	3.41	3.18	0.00
2.50	0.10	0.02	0.01	28.50	3.41	3.18	0.00
3.00	0.13	0.03	0.01	29.00	3.41	3.18	0.00
3.50	0.15	0.04	0.01	29.50	3.41	3.18	0.00
4.00	0.18	0.06	0.02	30.00	3.41	3.18	0.00
4.50	0.21	0.07	0.02	30.50	3.41	3.18	0.00
5.00	0.23	0.09	0.02	31.00	3.41	3.18	0.00
5.50	0.26	0.11	0.02	31.50	3.41	3.18	0.00
6.00	0.29	0.14	0.02	32.00	3.41	3.18	0.00
6.50	0.32	0.16	0.03	32.50	3.41	3.18	0.00
7.00	0.36	0.19	0.03	33.00	3.41	3.18	0.00
7.50	0.40	0.23	0.04	33.50	3.41	3.18	0.00
8.00	0.44	0.27	0.04	34.00	3.41	3.18	0.00
8.50	0.49	0.31	0.04	34.50	3.41	3.18	0.00
9.00	0.54	0.36	0.05	35.00	3.41	3.18	0.00
9.50	0.60	0.41	0.06	35.50	3.41	3.18	0.00
10.00	0.68	0.48	0.07	36.00	3.41	3.18	0.00
10.50	0.76	0.56	0.09	36.50	3.41	3.18	0.00
11.00	0.89	0.68	0.13	37.00	3.41	3.18	0.00
11.50	1.08	0.87	0.21	37.50	3.41	3.18	0.00
12.00	1.63	1.41	0.67	38.00	3.41	3.18	0.00
12.50	2.33	2.10	1.37	38.50	3.41	3.18	0.00
13.00	2.52	2.29	1.18	39.00	3.41	3.18	0.00
13.50	2.65	2.42	0.11	39.50	3.41	3.18	0.00
14.00	2.73	2.58	0.09	40.00	3.41	3.18	0.00
14.50	2.81	2.64	0.06	40.50	3.41	3.18	0.00
15.00	2.87	2.64	0.05	41.00	3.41	3.18	0.00
15.50	2.92	2.69	0.05	41.50	3.41	3.18	0.00
16.00	2.97	2.74	0.05	42.00	3.41	3.18	0.00
16.50	3.01	2.78	0.04	42.50	3.41	3.18	0.00
17.00	3.05	2.82	0.04	43.00	3.41	3.18	0.00
17.50	3.09	2.85	0.04	43.50	3.41	3.18	0.00
18.00	3.12	2.89	0.03	44.00	3.41	3.18	0.00
18.50	3.15	2.92	0.03	44.50	3.41	3.18	0.00
19.00	3.18	2.94	0.03	45.00	3.41	3.18	0.00
19.50	3.20	2.97	0.03	45.50	3.41	3.18	0.00
20.00	3.23	3.00	0.03	46.00	3.41	3.18	0.00
20.50	3.26	3.02	0.03	46.50	3.41	3.18	0.00
21.00	3.28	3.05	0.02	47.00	3.41	3.18	0.00
21.50	3.31	3.07	0.02	47.50	3.41	3.18	0.00
22.00	3.33	3.10	0.02	48.00	3.41	3.18	0.00
22.50	3.35	3.12	0.02				
23.00	3.37	3.14	0.02				
23.50	3.39	3.16	0.02				
24.00	3.41	3.18	0.02				
24.50	3.41	3.18	0.00				

Summary for Pond R1: Recharge System

Inflow Area = 0.500 ac, 100.00% Impervious, Inflow Depth = 3.18" for NOAA-2 event
 Inflow = 1.38 cfs @ 12.17 hrs, Volume = 0.132 af
 Outflow = 0.48 cfs @ 12.42 hrs, Volume = 0.132 af, Atten = 65%, Lag = 14.9 min
 Discarded = 0.48 cfs @ 12.42 hrs, Volume = 0.132 af

Routing by Stor-Ind method, Time Span = 0.00-48.00 hrs, dt = 0.05 hrs
 Peak Elev = 99.29' @ 12.42 hrs Surf Area = 0.038 ac Storage = 0.019 af

Plug-Flow detention time = 8.4 min calculated for 0.132 af (100% of Inflow)
 Center-of-Mass det. time = 8.4 min (769.1 - 760.6)

Volume	Invert	Avail. Storage	Storage Description
#1	98.00'	0.049 af	11.00'W x 150.00'L x 4.50'H Prismatoid 0.170 af Overall - 0.048 af Embedded = 0.122 af x 40.0% Voids
#2	100.00'	0.048 af	Cutec R-330XLHD x 40 Inside #1 Effective Size = 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size = 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment = +1.50' x 7.45 sf x 2 rows
			0.097 af Total Available Storage

Device Routing Invert Outlet Devices

#1	Discarded	Invert	Outlet Devices
		98.00'	10.000 in/hr Exfiltration over Wetted area

Discarded Outflow Max = 0.48 cfs @ 12.42 hrs HW = 99.28' (Free Discharge)
 1 = Exfiltration (Exfiltration Controls 0.48 cfs)

Hydrograph for Pond R1: Recharge System

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0.000	98.00	0.00
1.00	0.00	0.000	98.00	0.00
2.00	0.01	0.000	98.00	0.01
3.00	0.01	0.000	98.00	0.01
4.00	0.02	0.000	98.00	0.02
5.00	0.02	0.000	98.00	0.02
6.00	0.02	0.000	98.00	0.02
7.00	0.03	0.000	98.00	0.03
8.00	0.04	0.000	98.00	0.04
9.00	0.05	0.000	98.01	0.05
10.00	0.07	0.000	98.01	0.07
11.00	0.13	0.000	98.01	0.13
12.00	0.67	0.002	98.14	0.39
13.00	0.18	0.010	98.68	0.43
14.00	0.09	0.000	98.01	0.09
15.00	0.06	0.000	98.01	0.06
16.00	0.05	0.000	98.01	0.05
17.00	0.04	0.000	98.00	0.04
18.00	0.03	0.000	98.00	0.03
19.00	0.03	0.000	98.00	0.03
20.00	0.03	0.000	98.00	0.03
21.00	0.02	0.000	98.00	0.02
22.00	0.02	0.000	98.00	0.02
23.00	0.02	0.000	98.00	0.02
24.00	0.02	0.000	98.00	0.02
25.00	0.00	0.000	98.00	0.00
26.00	0.00	0.000	98.00	0.00
27.00	0.00	0.000	98.00	0.00
28.00	0.00	0.000	98.00	0.00
29.00	0.00	0.000	98.00	0.00
30.00	0.00	0.000	98.00	0.00
31.00	0.00	0.000	98.00	0.00
32.00	0.00	0.000	98.00	0.00
33.00	0.00	0.000	98.00	0.00
34.00	0.00	0.000	98.00	0.00
35.00	0.00	0.000	98.00	0.00
36.00	0.00	0.000	98.00	0.00
37.00	0.00	0.000	98.00	0.00
38.00	0.00	0.000	98.00	0.00
39.00	0.00	0.000	98.00	0.00
40.00	0.00	0.000	98.00	0.00
41.00	0.00	0.000	98.00	0.00
42.00	0.00	0.000	98.00	0.00
43.00	0.00	0.000	98.00	0.00
44.00	0.00	0.000	98.00	0.00
45.00	0.00	0.000	98.00	0.00
46.00	0.00	0.000	98.00	0.00
47.00	0.00	0.000	98.00	0.00
48.00	0.00	0.000	98.00	0.00

Stage-Discharge for Pond R1: Recharge System

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
98.00	0.00	100.60	0.58
98.05	0.39	100.65	0.58
98.10	0.39	100.70	0.58
98.15	0.39	100.75	0.59
98.20	0.40	100.80	0.59
98.25	0.40	100.85	0.59
98.30	0.40	100.90	0.60
98.35	0.41	100.95	0.60
98.40	0.41	101.00	0.61
98.45	0.42	101.05	0.61
98.50	0.42	101.10	0.61
98.55	0.42	101.15	0.62
98.60	0.43	101.20	0.62
98.65	0.43	101.25	0.62
98.70	0.43	101.30	0.63
98.75	0.44	101.35	0.63
98.80	0.44	101.40	0.64
98.85	0.45	101.45	0.64
98.90	0.45	101.50	0.64
98.95	0.45	101.55	0.65
99.00	0.46	101.60	0.65
99.05	0.46	101.65	0.65
99.10	0.46	101.70	0.66
99.15	0.47	101.75	0.66
99.20	0.47	101.80	0.67
99.25	0.48	101.85	0.67
99.30	0.48	101.90	0.67
99.35	0.48	101.95	0.68
99.40	0.49	102.00	0.68
99.45	0.49	102.05	0.68
99.50	0.49	102.10	0.69
99.55	0.50	102.15	0.69
99.60	0.50	102.20	0.69
99.65	0.50	102.25	0.70
99.70	0.51	102.30	0.70
99.75	0.51	102.35	0.71
99.80	0.52	102.40	0.71
99.85	0.52	102.45	0.71
99.90	0.52	102.50	0.72
99.95	0.53		
100.00	0.53		
100.05	0.53		
100.10	0.54		
100.15	0.54		
100.20	0.55		
100.25	0.55		
100.30	0.55		
100.35	0.56		
100.40	0.56		
100.45	0.56		

Stage-Area-Storage for Pond R1: Recharge System

Elevation (feet)	Wetted (acres)	Storage (acre-feet)	Elevation (feet)	Wetted (acres)	Storage (acre-feet)
98.00	0.038	0.000	100.60	0.057	0.048
98.05	0.038	0.001	100.65	0.057	0.050
98.10	0.039	0.002	100.70	0.058	0.051
98.15	0.039	0.002	100.75	0.058	0.053
98.20	0.039	0.003	100.80	0.059	0.054
98.25	0.040	0.004	100.85	0.059	0.056
98.30	0.040	0.005	100.90	0.059	0.057
98.35	0.041	0.006	100.95	0.060	0.059
98.40	0.041	0.007	101.00	0.060	0.060
98.45	0.042	0.008	101.05	0.061	0.062
98.50	0.042	0.008	101.10	0.061	0.063
98.55	0.042	0.008	101.15	0.061	0.065
98.60	0.043	0.009	101.20	0.062	0.066
98.65	0.043	0.010	101.25	0.062	0.068
98.70	0.043	0.011	101.30	0.062	0.069
98.75	0.043	0.011	101.35	0.063	0.070
98.80	0.044	0.012	101.40	0.063	0.072
98.85	0.044	0.013	101.45	0.063	0.073
98.90	0.045	0.014	101.50	0.064	0.074
98.95	0.045	0.015	101.55	0.064	0.076
99.00	0.045	0.016	101.60	0.064	0.077
99.05	0.046	0.016	101.65	0.065	0.079
99.10	0.046	0.017	101.70	0.065	0.080
99.15	0.046	0.017	101.75	0.066	0.081
99.20	0.047	0.018	101.80	0.066	0.082
99.25	0.047	0.019	101.85	0.066	0.084
99.30	0.047	0.020	101.90	0.067	0.085
99.35	0.048	0.020	101.95	0.067	0.086
99.40	0.048	0.021	102.00	0.067	0.087
99.45	0.049	0.022	102.05	0.068	0.088
99.50	0.049	0.023	102.10	0.068	0.090
99.55	0.050	0.023	102.15	0.069	0.091
99.60	0.050	0.024	102.20	0.069	0.092
99.65	0.050	0.025	102.25	0.069	0.093
99.70	0.050	0.025	102.30	0.070	0.094
99.75	0.051	0.027	102.35	0.070	0.095
99.80	0.051	0.027	102.40	0.070	0.096
99.85	0.052	0.028	102.45	0.071	0.096
99.90	0.052	0.029	102.50	0.071	0.097
99.95	0.052	0.030			
100.00	0.053	0.030			
100.05	0.053	0.032			
100.10	0.053	0.033			
100.15	0.054	0.035			
100.20	0.054	0.036			
100.25	0.055	0.038			
100.30	0.055	0.039			
100.35	0.055	0.041			
100.40	0.056	0.042			
100.45	0.056	0.044			

Summary for Subcatchment B1: BLDG. TO DET. BASIN

Runoff = 2.11 cfs @ 12.17 hrs, Volume= 0.206 af, Depth= 4.93"

Runoff by SCS TR-20 method, LH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)		CN	Description	
*	21,780	98	Building Roof Area	
	21,780		100.00% Impervious Area	
Tc	Length	Slope	Velocity	Capacity
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)
10.0				
Direct Entry, Sheet Flow				

Hydrograph for Subcatchment B1: BLDG. TO DET. BASIN

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	4.93	0.00
0.50	0.03	0.00	0.00	26.50	5.17	4.93	0.00
1.00	0.06	0.00	0.00	27.00	5.17	4.93	0.00
1.50	0.09	0.01	0.01	27.50	5.17	4.93	0.00
2.00	0.12	0.02	0.02	28.00	5.17	4.93	0.00
2.50	0.16	0.04	0.02	28.50	5.17	4.93	0.00
3.00	0.19	0.07	0.02	29.00	5.17	4.93	0.00
3.50	0.23	0.09	0.03	29.50	5.17	4.93	0.00
4.00	0.27	0.12	0.03	30.00	5.17	4.93	0.00
4.50	0.31	0.15	0.03	30.50	5.17	4.93	0.00
5.00	0.35	0.19	0.04	31.00	5.17	4.93	0.00
5.50	0.40	0.23	0.04	31.50	5.17	4.93	0.00
6.00	0.44	0.27	0.04	32.00	5.17	4.93	0.00
6.50	0.49	0.31	0.05	32.50	5.17	4.93	0.00
7.00	0.54	0.36	0.05	33.00	5.17	4.93	0.00
7.50	0.60	0.41	0.06	33.50	5.17	4.93	0.00
8.00	0.67	0.48	0.06	34.00	5.17	4.93	0.00
8.50	0.74	0.54	0.07	34.50	5.17	4.93	0.00
9.00	0.82	0.62	0.08	35.00	5.17	4.93	0.00
9.50	0.91	0.71	0.09	35.50	5.17	4.93	0.00
10.00	1.02	0.82	0.11	36.00	5.17	4.93	0.00
10.50	1.16	0.94	0.13	36.50	5.17	4.93	0.00
11.00	1.34	1.13	0.20	37.00	5.17	4.93	0.00
11.50	1.64	1.42	0.32	37.50	5.17	4.93	0.00
12.00	2.48	2.25	1.03	38.00	5.17	4.93	0.00
12.50	3.53	3.30	0.56	38.50	5.17	4.93	0.00
13.00	3.83	3.59	0.27	39.00	5.17	4.93	0.00
13.50	4.01	3.78	0.17	39.50	5.17	4.93	0.00
14.00	4.15	3.91	0.13	40.00	5.17	4.93	0.00
14.50	4.26	4.02	0.11	40.50	5.17	4.93	0.00
15.00	4.35	4.11	0.09	41.00	5.17	4.93	0.00
15.50	4.43	4.19	0.08	41.50	5.17	4.93	0.00
16.00	4.50	4.26	0.07	42.00	5.17	4.93	0.00
16.50	4.57	4.33	0.07	42.50	5.17	4.93	0.00
17.00	4.63	4.39	0.06	43.00	5.17	4.93	0.00
17.50	4.68	4.44	0.05	43.50	5.17	4.93	0.00
18.00	4.73	4.49	0.05	44.00	5.17	4.93	0.00
18.50	4.77	4.54	0.04	44.50	5.17	4.93	0.00
19.00	4.82	4.58	0.04	45.00	5.17	4.93	0.00
19.50	4.86	4.62	0.04	45.50	5.17	4.93	0.00
20.00	4.90	4.66	0.04	46.00	5.17	4.93	0.00
20.50	4.94	4.70	0.04	46.50	5.17	4.93	0.00
21.00	4.98	4.74	0.04	47.00	5.17	4.93	0.00
21.50	5.01	4.77	0.04	47.50	5.17	4.93	0.00
22.00	5.05	4.81	0.03	48.00	5.17	4.93	0.00
22.50	5.08	4.84	0.03				
23.00	5.11	4.87	0.03				
23.50	5.14	4.90	0.03				
24.00	5.17	4.93	0.03				
24.50	5.17	4.93	0.00				

Summary for Pond R1: Recharge System

Inflow Area = 0.500 ac, 100.00% Impervious, Inflow Depth = 4.93" for NOAA-10 event
 Inflow = 2.11 cfs @ 12.17 hrs, Volume = 0.206 af
 Outflow = 0.55 cfs @ 12.51 hrs, Volume = 0.206 af Atten = 74%, Lag = 20.5 min
 Discarded = 0.55 cfs @ 12.51 hrs, Volume = 0.206 af

Routing by Stor-Ind method, Time Span = 0.00-48.00 hrs, dt = 0.05 hrs
 Peak Elev = 100.32' @ 12.51 hrs Surf Area = 0.038 ac Storage = 0.040 af

Plug-Flow detention time = 16.7 min calculated for 0.205 af (100% of Inflow)
 Center-of-Mass det. time = 16.7 min (769.1 - 752.4)

Volume	Invert	Avail. Storage	Storage Description
#1	98.00'	0.049 af	11.00'W x 150.00'L x 4.50'H Prismatic 0.170 af Overall - 0.048 af Embedded = 0.122 af x 40.0% Voids
#2	100.00'	0.048 af	Cuttec R-330XLHD x 40 Inside #1 Effective Size = 47.8" W x 30.0" H => 7.45 sf x 7.00'L = 52.2 cf Overall Size = 52.0" W x 30.5" H x 8.50'L with 1.50' Overlap Row Length Adjustment = +1.50' x 7.45 sf x 2 rows
			0.097 af Total Available Storage

Device Routing Invert Outlet Devices

#1	Discarded	98.00'	10.000 in/hr Exfiltration over Wetted area
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Discarded Outflow Max = 0.55 cfs @ 12.51 hrs HW = 100.31' (Free Discharge)
 1 = Exfiltration (Exfiltration Controls 0.55 cfs)

Hydrograph for Pond R1: Recharge System

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0.000	98.00	0.00
1.00	0.00	0.000	98.00	0.00
2.00	0.02	0.000	98.00	0.02
3.00	0.02	0.000	98.00	0.02
4.00	0.03	0.000	98.00	0.03
5.00	0.04	0.000	98.00	0.04
6.00	0.04	0.000	98.00	0.04
7.00	0.05	0.000	98.01	0.05
8.00	0.06	0.000	98.01	0.06
9.00	0.08	0.000	98.01	0.08
10.00	0.11	0.000	98.01	0.11
11.00	0.20	0.000	98.02	0.19
12.00	1.03	0.007	98.46	0.42
13.00	0.27	0.033	100.08	0.54
14.00	0.13	0.008	98.52	0.42
15.00	0.09	0.000	98.01	0.09
16.00	0.07	0.000	98.01	0.07
17.00	0.06	0.000	98.01	0.06
18.00	0.05	0.000	98.01	0.05
19.00	0.04	0.000	98.01	0.04
20.00	0.04	0.000	98.00	0.04
21.00	0.04	0.000	98.00	0.04
22.00	0.03	0.000	98.00	0.03
23.00	0.03	0.000	98.00	0.03
24.00	0.03	0.000	98.00	0.03
25.00	0.00	0.000	98.00	0.00
26.00	0.00	0.000	98.00	0.00
27.00	0.00	0.000	98.00	0.00
28.00	0.00	0.000	98.00	0.00
29.00	0.00	0.000	98.00	0.00
30.00	0.00	0.000	98.00	0.00
31.00	0.00	0.000	98.00	0.00
32.00	0.00	0.000	98.00	0.00
33.00	0.00	0.000	98.00	0.00
34.00	0.00	0.000	98.00	0.00
35.00	0.00	0.000	98.00	0.00
36.00	0.00	0.000	98.00	0.00
37.00	0.00	0.000	98.00	0.00
38.00	0.00	0.000	98.00	0.00
39.00	0.00	0.000	98.00	0.00
40.00	0.00	0.000	98.00	0.00
41.00	0.00	0.000	98.00	0.00
42.00	0.00	0.000	98.00	0.00
43.00	0.00	0.000	98.00	0.00
44.00	0.00	0.000	98.00	0.00
45.00	0.00	0.000	98.00	0.00
46.00	0.00	0.000	98.00	0.00
47.00	0.00	0.000	98.00	0.00
48.00	0.00	0.000	98.00	0.00

Stage Discharge for Pond R1: Recharge System

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
98.00	0.00	100.60	0.58
98.05	0.39	100.65	0.58
98.10	0.39	100.70	0.58
98.15	0.39	100.75	0.59
98.20	0.40	100.80	0.59
98.25	0.40	100.85	0.59
98.30	0.40	100.90	0.60
98.35	0.41	100.95	0.60
98.40	0.41	101.00	0.61
98.45	0.42	101.05	0.61
98.50	0.42	101.10	0.62
98.55	0.42	101.15	0.62
98.60	0.43	101.20	0.62
98.65	0.43	101.25	0.62
98.70	0.43	101.30	0.63
98.75	0.44	101.35	0.63
98.80	0.44	101.40	0.64
98.85	0.45	101.45	0.64
98.90	0.45	101.50	0.64
98.95	0.45	101.55	0.65
99.00	0.46	101.60	0.65
99.05	0.46	101.65	0.65
99.10	0.46	101.70	0.66
99.15	0.47	101.75	0.66
99.20	0.47	101.80	0.67
99.25	0.48	101.85	0.67
99.30	0.48	101.90	0.67
99.35	0.48	101.95	0.68
99.40	0.49	102.00	0.68
99.45	0.49	102.05	0.68
99.50	0.49	102.10	0.69
99.55	0.50	102.15	0.69
99.60	0.50	102.20	0.69
99.65	0.50	102.25	0.70
99.70	0.51	102.30	0.70
99.75	0.51	102.35	0.71
99.80	0.52	102.40	0.71
99.85	0.52	102.45	0.71
99.90	0.52	102.50	0.72
99.95	0.53		
100.00	0.53		
100.05	0.53		
100.10	0.54		
100.15	0.54		
100.20	0.55		
100.25	0.55		
100.30	0.55		
100.35	0.56		
100.40	0.56		
100.45	0.56		

Stage-Area-Storage for Pond R1: Recharge System

Elevation (feet)	Wetted (acres)	Storage (acre-feet)	Elevation (feet)	Wetted (acres)	Storage (acre-feet)
98.00	0.038	0.000	100.60	0.057	0.048
98.05	0.038	0.001	100.65	0.057	0.050
98.10	0.039	0.002	100.70	0.058	0.051
98.15	0.039	0.002	100.75	0.058	0.053
98.20	0.039	0.003	100.80	0.059	0.054
98.25	0.040	0.004	100.85	0.059	0.056
98.30	0.040	0.005	100.90	0.059	0.057
98.35	0.040	0.005	100.95	0.060	0.059
98.40	0.041	0.006	101.00	0.060	0.060
98.45	0.041	0.007	101.05	0.060	0.062
98.50	0.042	0.008	101.10	0.061	0.063
98.55	0.042	0.008	101.15	0.061	0.065
98.60	0.042	0.009	101.20	0.062	0.066
98.65	0.043	0.010	101.25	0.062	0.068
98.70	0.043	0.011	101.30	0.063	0.069
98.75	0.043	0.011	101.35	0.063	0.070
98.80	0.044	0.012	101.40	0.063	0.072
98.85	0.044	0.013	101.45	0.063	0.073
98.90	0.044	0.014	101.50	0.064	0.074
98.95	0.045	0.014	101.55	0.064	0.076
99.00	0.045	0.015	101.60	0.064	0.077
99.05	0.046	0.016	101.65	0.065	0.079
99.10	0.046	0.017	101.70	0.065	0.080
99.15	0.046	0.017	101.75	0.066	0.081
99.20	0.047	0.018	101.80	0.066	0.082
99.25	0.047	0.019	101.85	0.066	0.084
99.30	0.047	0.020	101.90	0.067	0.085
99.35	0.048	0.020	101.95	0.067	0.086
99.40	0.048	0.021	102.00	0.067	0.087
99.45	0.049	0.022	102.05	0.068	0.088
99.50	0.049	0.023	102.10	0.068	0.090
99.55	0.049	0.023	102.15	0.069	0.091
99.60	0.050	0.024	102.20	0.069	0.092
99.65	0.050	0.025	102.25	0.069	0.093
99.70	0.050	0.026	102.30	0.070	0.094
99.75	0.051	0.027	102.35	0.070	0.095
99.80	0.051	0.027	102.40	0.070	0.096
99.85	0.052	0.028	102.45	0.071	0.096
99.90	0.052	0.029	102.50	0.071	0.097
99.95	0.052	0.030			
100.00	0.053	0.030			
100.05	0.053	0.032			
100.10	0.053	0.033			
100.15	0.054	0.035			
100.20	0.054	0.036			
100.25	0.055	0.038			
100.30	0.055	0.039			
100.35	0.055	0.041			
100.40	0.056	0.042			
100.45	0.056	0.044			

Summary for Subcatchment B1: BLDG. TO DET. BASIN

Runoff = 3.51 cfs @ 12.17 hrs, Volume= 0.348 af, Depth= 8.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)	CN	Description
* 21,780	98	Building Roof Area
21,780		100.00% Impervious Area
Tc Length (min) (feet)	Slope (ft/ft)	Velocity (ft/sec)
10.0		Capacity (cfs)
		Description
		Direct Entry, Sheet Flow

Hydrograph for Subcatchment B1: BLDG. TO DET. BASIN

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	8.35	0.00
0.50	0.05	0.00	0.00	26.50	8.59	8.35	0.00
1.00	0.10	0.01	0.02	27.00	8.59	8.35	0.00
1.50	0.15	0.04	0.03	27.50	8.59	8.35	0.00
2.00	0.21	0.07	0.04	28.00	8.59	8.35	0.00
2.50	0.26	0.12	0.04	28.50	8.59	8.35	0.00
3.00	0.32	0.16	0.05	29.00	8.59	8.35	0.00
3.50	0.39	0.22	0.05	29.50	8.59	8.35	0.00
4.00	0.45	0.27	0.06	30.00	8.59	8.35	0.00
4.50	0.52	0.33	0.06	30.50	8.59	8.35	0.00
5.00	0.59	0.40	0.07	31.00	8.59	8.35	0.00
5.50	0.66	0.46	0.07	31.50	8.59	8.35	0.00
6.00	0.73	0.53	0.07	32.00	8.59	8.35	0.00
6.50	0.81	0.61	0.08	32.50	8.59	8.35	0.00
7.00	0.90	0.70	0.09	33.00	8.59	8.35	0.00
7.50	1.01	0.80	0.10	33.50	8.59	8.35	0.00
8.00	1.11	0.90	0.11	34.00	8.59	8.35	0.00
8.50	1.23	1.02	0.12	34.50	8.59	8.35	0.00
9.00	1.36	1.15	0.13	35.00	8.59	8.35	0.00
9.50	1.52	1.30	0.16	35.50	8.59	8.35	0.00
10.00	1.70	1.48	0.19	36.00	8.59	8.35	0.00
10.50	1.92	1.70	0.23	36.50	8.59	8.35	0.00
11.00	2.23	2.01	0.33	37.00	8.59	8.35	0.00
11.50	2.72	2.49	0.53	37.50	8.59	8.35	0.00
12.00	4.12	3.88	1.72	38.00	8.59	8.35	0.00
12.50	5.87	5.63	0.93	38.50	8.59	8.35	0.00
13.00	6.36	6.12	0.45	39.00	8.59	8.35	0.00
13.50	6.67	6.43	0.29	39.50	8.59	8.35	0.00
14.00	6.89	6.65	0.22	40.00	8.59	8.35	0.00
14.50	7.07	6.83	0.18	40.50	8.59	8.35	0.00
15.00	7.23	6.99	0.15	41.00	8.59	8.35	0.00
15.50	7.36	7.12	0.13	41.50	8.59	8.35	0.00
16.00	7.48	7.24	0.12	42.00	8.59	8.35	0.00
16.50	7.58	7.35	0.11	42.50	8.59	8.35	0.00
17.00	7.69	7.45	0.10	43.00	8.59	8.35	0.00
17.50	7.78	7.54	0.09	43.50	8.59	8.35	0.00
18.00	7.86	7.62	0.08	44.00	8.59	8.35	0.00
18.50	7.93	7.69	0.07	44.50	8.59	8.35	0.00
19.00	8.00	7.76	0.07	45.00	8.59	8.35	0.00
19.50	8.07	7.83	0.07	45.50	8.59	8.35	0.00
20.00	8.14	7.90	0.07	46.00	8.59	8.35	0.00
20.50	8.20	7.96	0.06	46.50	8.59	8.35	0.00
21.00	8.27	8.03	0.06	47.00	8.59	8.35	0.00
21.50	8.33	8.09	0.06	47.50	8.59	8.35	0.00
22.00	8.38	8.14	0.06	48.00	8.59	8.35	0.00
22.50	8.44	8.20	0.06				
23.00	8.49	8.25	0.05				
23.50	8.54	8.30	0.05				
24.00	8.59	8.35	0.05				
24.50	8.59	8.35	0.00				

Summary for Pond R1: Recharge System

Inflow Area = 0.500 ac, 100.00% Impervious, Inflow Depth = 8.35" for NOAA-100 event
 Inflow = 3.51 cfs @ 12.17 hrs, Volume = 0.348 af
 Outflow = 0.68 cfs @ 12.65 hrs, Volume = 0.348 af, Atten = 81%, Lag = 29.2 min
 Discarded = 0.68 cfs @ 12.65 hrs, Volume = 0.348 af

Routing by Stor-Ind method, Time Spent = 0.00-48.00 hrs, dt = 0.05 hrs
 Peak Elev = 102.04' @ 12.65 hrs Surf Area = 0.038 ac Storage = 0.088 af

Plug-Flow detention time = 35.8 min calculated for 0.348 af (100% of inflow)
 Center-of-Mass det. time = 35.7 min (780.6 - 744.8)

Volume	Invert	Avail. Storage	Storage Description
#1	98.00'	0.049 af	11.00'W x 150.00'L x 4.50'H Prismatoid 0.170 af Overall - 0.048 af Embedded = 0.122 af x 40.0% Voids
#2	100.00'	0.048 af	Cutec R-330XLHD x 40 Inside #1 Effective Size = 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size = 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment = +1.50' x 7.45 sf x 2 rows
		0.097 af	Total Available Storage

Device Routing Invert Outlet Devices

#1	Discarded	98.00'	10.000 Infr Exfiltration over Wetted area
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Discarded Outflow Max = 0.68 cfs @ 12.65 hrs HW = 102.04' (Free Discharge)
 1 = Exfiltration (Exfiltration Controls 0.68 cfs)

Hydrograph for Pond R1: Recharge System

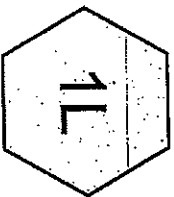
Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0.000	98.00	0.00
1.00	0.02	0.000	98.00	0.02
2.00	0.04	0.000	98.00	0.04
3.00	0.05	0.000	98.01	0.05
4.00	0.06	0.000	98.01	0.06
5.00	0.07	0.000	98.01	0.06
6.00	0.07	0.000	98.01	0.07
7.00	0.09	0.000	98.01	0.09
8.00	0.11	0.000	98.01	0.11
9.00	0.13	0.000	98.02	0.13
10.00	0.19	0.000	98.02	0.19
11.00	0.33	0.001	98.04	0.33
12.00	1.72	0.022	99.45	0.49
13.00	0.45	0.084	101.88	0.67
14.00	0.22	0.057	100.88	0.50
15.00	0.15	0.026	99.70	0.51
16.00	0.12	0.000	98.02	0.19
17.00	0.10	0.000	98.01	0.10
18.00	0.08	0.000	98.01	0.08
19.00	0.07	0.000	98.01	0.07
20.00	0.07	0.000	98.01	0.07
21.00	0.06	0.000	98.01	0.06
22.00	0.05	0.000	98.01	0.06
23.00	0.05	0.000	98.01	0.05
24.00	0.05	0.000	98.01	0.05
25.00	0.00	0.000	98.00	0.00
26.00	0.00	0.000	98.00	0.00
27.00	0.00	0.000	98.00	0.00
28.00	0.00	0.000	98.00	0.00
29.00	0.00	0.000	98.00	0.00
30.00	0.00	0.000	98.00	0.00
31.00	0.00	0.000	98.00	0.00
32.00	0.00	0.000	98.00	0.00
33.00	0.00	0.000	98.00	0.00
34.00	0.00	0.000	98.00	0.00
35.00	0.00	0.000	98.00	0.00
36.00	0.00	0.000	98.00	0.00
37.00	0.00	0.000	98.00	0.00
38.00	0.00	0.000	98.00	0.00
39.00	0.00	0.000	98.00	0.00
40.00	0.00	0.000	98.00	0.00
41.00	0.00	0.000	98.00	0.00
42.00	0.00	0.000	98.00	0.00
43.00	0.00	0.000	98.00	0.00
44.00	0.00	0.000	98.00	0.00
45.00	0.00	0.000	98.00	0.00
46.00	0.00	0.000	98.00	0.00
47.00	0.00	0.000	98.00	0.00
48.00	0.00	0.000	98.00	0.00

Stage-Discharge for Pond R1: Recharge System

Elevation (feet)	Discarded (cfs)	Elevation (feet)	Discarded (cfs)
98.00	0.00	100.60	0.58
98.05	0.39	100.65	0.58
98.10	0.39	100.70	0.58
98.15	0.39	100.75	0.59
98.20	0.40	100.80	0.59
98.25	0.40	100.85	0.59
98.30	0.40	100.90	0.60
98.35	0.41	100.95	0.60
98.40	0.41	101.00	0.61
98.45	0.42	101.05	0.61
98.50	0.42	101.10	0.61
98.55	0.42	101.15	0.62
98.60	0.43	101.20	0.62
98.65	0.43	101.25	0.62
98.70	0.43	101.30	0.63
98.75	0.44	101.35	0.63
98.80	0.44	101.40	0.64
98.85	0.45	101.45	0.64
98.90	0.45	101.50	0.64
98.95	0.45	101.55	0.65
99.00	0.46	101.60	0.65
99.05	0.46	101.65	0.65
99.10	0.46	101.70	0.66
99.15	0.47	101.75	0.66
99.20	0.47	101.80	0.67
99.25	0.48	101.85	0.67
99.30	0.48	101.90	0.67
99.35	0.48	101.95	0.68
99.40	0.49	102.00	0.68
99.45	0.49	102.05	0.68
99.50	0.49	102.10	0.69
99.55	0.50	102.15	0.69
99.60	0.50	102.20	0.69
99.65	0.50	102.25	0.70
99.70	0.51	102.30	0.70
99.75	0.51	102.35	0.71
99.80	0.52	102.40	0.71
99.85	0.52	102.45	0.71
99.90	0.52	102.50	0.72
99.95	0.53		
100.00	0.53		
100.05	0.53		
100.10	0.54		
100.15	0.54		
100.20	0.55		
100.25	0.55		
100.30	0.55		
100.35	0.56		
100.40	0.56		
100.45	0.56		

Stage-Area-Storage for Pond R1: Recharge System

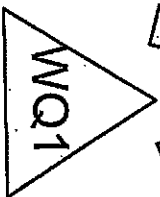
Elevation (feet)	Wetted (acres)	Storage (acre-feet)	Elevation (feet)	Wetted (acres)	Storage (acre-feet)
98.00	0.038	0.000	100.60	0.057	0.048
98.05	0.038	0.001	100.65	0.057	0.050
98.10	0.039	0.002	100.70	0.058	0.051
98.15	0.039	0.002	100.75	0.058	0.053
98.20	0.039	0.003	100.80	0.059	0.054
98.25	0.040	0.004	100.85	0.059	0.056
98.30	0.040	0.005	100.90	0.059	0.057
98.35	0.040	0.005	100.95	0.060	0.059
98.40	0.041	0.006	101.00	0.060	0.060
98.45	0.041	0.007	101.05	0.061	0.062
98.50	0.042	0.008	101.10	0.061	0.063
98.55	0.042	0.008	101.15	0.062	0.065
98.60	0.042	0.009	101.20	0.062	0.066
98.65	0.043	0.010	101.25	0.062	0.068
98.70	0.043	0.011	101.30	0.062	0.069
98.75	0.043	0.011	101.35	0.063	0.070
98.80	0.044	0.012	101.40	0.063	0.072
98.85	0.044	0.013	101.45	0.063	0.073
98.90	0.045	0.014	101.50	0.064	0.074
98.95	0.045	0.014	101.55	0.064	0.076
99.00	0.045	0.015	101.60	0.064	0.077
99.05	0.046	0.016	101.65	0.065	0.079
99.10	0.046	0.017	101.70	0.066	0.080
99.15	0.047	0.018	101.75	0.066	0.081
99.20	0.047	0.018	101.80	0.066	0.082
99.25	0.047	0.019	101.85	0.067	0.084
99.30	0.047	0.020	101.90	0.067	0.085
99.35	0.048	0.020	101.95	0.067	0.086
99.40	0.048	0.021	102.00	0.067	0.087
99.45	0.049	0.022	102.05	0.068	0.088
99.50	0.049	0.023	102.10	0.068	0.090
99.55	0.049	0.023	102.15	0.069	0.091
99.60	0.050	0.024	102.20	0.069	0.092
99.65	0.050	0.025	102.25	0.069	0.093
99.70	0.051	0.026	102.30	0.070	0.094
99.75	0.051	0.027	102.35	0.070	0.095
99.80	0.052	0.028	102.40	0.071	0.096
99.85	0.052	0.028	102.45	0.071	0.096
99.90	0.052	0.029	102.50	0.071	0.097
99.95	0.053	0.030			
100.00	0.053	0.030			
100.05	0.053	0.032			
100.10	0.054	0.033			
100.15	0.054	0.035			
100.20	0.054	0.036			
100.25	0.055	0.038			
100.30	0.055	0.039			
100.35	0.055	0.041			
100.40	0.056	0.042			
100.45	0.056	0.044			



DA#1 (LAWN) TO WQ BASIN#1



DA#1 (IMP) TO WQ BASIN#1



WQ BASIN #1



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	E/B	Depth (inches)	AMC
1	WQ	NJ DEP 2-hr		Default	2.00	1	1.25	2

Summary for Subcatchment 1IMP: DA#1 (IMP) TO WQ BASIN#1

Runoff = 0.38 cfs @ 1.15 hrs, Volume= 0.013 af, Depth= 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description		
6,403	98	Paved parking, HSG A		
6,403		100.00% Impervious Area		
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0				Direct Entry, Sheet Flow

Hydrograph for Subcatchment (IMP: DA#1 (IMP) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	1.25	1.03	0.00
0.50	0.10	0.01	0.01	26.50	1.25	1.03	0.00
1.00	0.63	0.43	0.16	27.00	1.25	1.03	0.00
1.50	1.15	0.94	0.07	27.50	1.25	1.03	0.00
2.00	1.25	1.03	0.02	28.00	1.25	1.03	0.00
2.50	1.25	1.03	0.00	28.50	1.25	1.03	0.00
3.00	1.25	1.03	0.00	29.00	1.25	1.03	0.00
3.50	1.25	1.03	0.00	29.50	1.25	1.03	0.00
4.00	1.25	1.03	0.00	30.00	1.25	1.03	0.00
4.50	1.25	1.03	0.00	30.50	1.25	1.03	0.00
5.00	1.25	1.03	0.00	31.00	1.25	1.03	0.00
5.50	1.25	1.03	0.00	31.50	1.25	1.03	0.00
6.00	1.25	1.03	0.00	32.00	1.25	1.03	0.00
6.50	1.25	1.03	0.00	32.50	1.25	1.03	0.00
7.00	1.25	1.03	0.00	33.00	1.25	1.03	0.00
7.50	1.25	1.03	0.00	33.50	1.25	1.03	0.00
8.00	1.25	1.03	0.00	34.00	1.25	1.03	0.00
8.50	1.25	1.03	0.00	34.50	1.25	1.03	0.00
9.00	1.25	1.03	0.00	35.00	1.25	1.03	0.00
9.50	1.25	1.03	0.00	35.50	1.25	1.03	0.00
10.00	1.25	1.03	0.00	36.00	1.25	1.03	0.00
10.50	1.25	1.03	0.00	36.50	1.25	1.03	0.00
11.00	1.25	1.03	0.00	37.00	1.25	1.03	0.00
11.50	1.25	1.03	0.00	37.50	1.25	1.03	0.00
12.00	1.25	1.03	0.00	38.00	1.25	1.03	0.00
12.50	1.25	1.03	0.00	38.50	1.25	1.03	0.00
13.00	1.25	1.03	0.00	39.00	1.25	1.03	0.00
13.50	1.25	1.03	0.00	39.50	1.25	1.03	0.00
14.00	1.25	1.03	0.00	40.00	1.25	1.03	0.00
14.50	1.25	1.03	0.00	40.50	1.25	1.03	0.00
15.00	1.25	1.03	0.00	41.00	1.25	1.03	0.00
15.50	1.25	1.03	0.00	41.50	1.25	1.03	0.00
16.00	1.25	1.03	0.00	42.00	1.25	1.03	0.00
16.50	1.25	1.03	0.00	42.50	1.25	1.03	0.00
17.00	1.25	1.03	0.00	43.00	1.25	1.03	0.00
17.50	1.25	1.03	0.00	43.50	1.25	1.03	0.00
18.00	1.25	1.03	0.00	44.00	1.25	1.03	0.00
18.50	1.25	1.03	0.00	44.50	1.25	1.03	0.00
19.00	1.25	1.03	0.00	45.00	1.25	1.03	0.00
19.50	1.25	1.03	0.00	45.50	1.25	1.03	0.00
20.00	1.25	1.03	0.00	46.00	1.25	1.03	0.00
20.50	1.25	1.03	0.00	46.50	1.25	1.03	0.00
21.00	1.25	1.03	0.00	47.00	1.25	1.03	0.00
21.50	1.25	1.03	0.00	47.50	1.25	1.03	0.00
22.00	1.25	1.03	0.00	48.00	1.25	1.03	0.00
22.50	1.25	1.03	0.00				
23.00	1.25	1.03	0.00				
23.50	1.25	1.03	0.00				
24.00	1.25	1.03	0.00				
24.50	1.25	1.03	0.00				

17 VAN VOOREN DRIVE-POST-DEV

NJ DEP 2-hr WQ Rainfall=1.25"

Prepared by Weissman Engineering, PC

Printed 9/14/2021

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Summary for Subcatchment 1L: DA#1 (LAWN) TO WQ BASIN#1

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)		CN	Description		
9,687		39	>75% Grass cover, Good, HSG A		
9,687			100.00% Pervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 11: DA#1 (LAWN) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	1.25	0.00	0.00
0.50	0.10	0.00	0.00	26.50	1.25	0.00	0.00
1.00	0.63	0.00	0.00	27.00	1.25	0.00	0.00
1.50	1.15	0.00	0.00	27.50	1.25	0.00	0.00
2.00	1.25	0.00	0.00	28.00	1.25	0.00	0.00
2.50	1.25	0.00	0.00	28.50	1.25	0.00	0.00
3.00	1.25	0.00	0.00	29.00	1.25	0.00	0.00
3.50	1.25	0.00	0.00	29.50	1.25	0.00	0.00
4.00	1.25	0.00	0.00	30.00	1.25	0.00	0.00
4.50	1.25	0.00	0.00	30.50	1.25	0.00	0.00
5.00	1.25	0.00	0.00	31.00	1.25	0.00	0.00
5.50	1.25	0.00	0.00	31.50	1.25	0.00	0.00
6.00	1.25	0.00	0.00	32.00	1.25	0.00	0.00
6.50	1.25	0.00	0.00	32.50	1.25	0.00	0.00
7.00	1.25	0.00	0.00	33.00	1.25	0.00	0.00
7.50	1.25	0.00	0.00	33.50	1.25	0.00	0.00
8.00	1.25	0.00	0.00	34.00	1.25	0.00	0.00
8.50	1.25	0.00	0.00	34.50	1.25	0.00	0.00
9.00	1.25	0.00	0.00	35.00	1.25	0.00	0.00
9.50	1.25	0.00	0.00	35.50	1.25	0.00	0.00
10.00	1.25	0.00	0.00	36.00	1.25	0.00	0.00
10.50	1.25	0.00	0.00	36.50	1.25	0.00	0.00
11.00	1.25	0.00	0.00	37.00	1.25	0.00	0.00
11.50	1.25	0.00	0.00	37.50	1.25	0.00	0.00
12.00	1.25	0.00	0.00	38.00	1.25	0.00	0.00
12.50	1.25	0.00	0.00	38.50	1.25	0.00	0.00
13.00	1.25	0.00	0.00	39.00	1.25	0.00	0.00
13.50	1.25	0.00	0.00	39.50	1.25	0.00	0.00
14.00	1.25	0.00	0.00	40.00	1.25	0.00	0.00
14.50	1.25	0.00	0.00	40.50	1.25	0.00	0.00
15.00	1.25	0.00	0.00	41.00	1.25	0.00	0.00
15.50	1.25	0.00	0.00	41.50	1.25	0.00	0.00
16.00	1.25	0.00	0.00	42.00	1.25	0.00	0.00
16.50	1.25	0.00	0.00	42.50	1.25	0.00	0.00
17.00	1.25	0.00	0.00	43.00	1.25	0.00	0.00
17.50	1.25	0.00	0.00	43.50	1.25	0.00	0.00
18.00	1.25	0.00	0.00	44.00	1.25	0.00	0.00
18.50	1.25	0.00	0.00	44.50	1.25	0.00	0.00
19.00	1.25	0.00	0.00	45.00	1.25	0.00	0.00
19.50	1.25	0.00	0.00	45.50	1.25	0.00	0.00
20.00	1.25	0.00	0.00	46.00	1.25	0.00	0.00
20.50	1.25	0.00	0.00	46.50	1.25	0.00	0.00
21.00	1.25	0.00	0.00	47.00	1.25	0.00	0.00
21.50	1.25	0.00	0.00	47.50	1.25	0.00	0.00
22.00	1.25	0.00	0.00	48.00	1.25	0.00	0.00
22.50	1.25	0.00	0.00				
23.00	1.25	0.00	0.00				
23.50	1.25	0.00	0.00				
24.00	1.25	0.00	0.00				
24.50	1.25	0.00	0.00				

Summary for Pond WQ1: WQ BASIN #1

Inflow Area = 0.369 ac, 39.79% Impervious, Inflow Depth = 0.41" for WQ event
 Inflow = 0.38 cfs @ 1.15 hrs, Volume = 0.013 af
 Outflow = 0.11 cfs @ 1.39 hrs, Volume = 0.013 af, Atten = 72%, Lag = 14.7 min
 Discarded = 0.11 cfs @ 1.39 hrs, Volume = 0.013 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume = 0.000 af

Routing by Stor-Ind method, Time Span = 0.00-48.00 hrs, dt = 0.05 hrs
 Peak Elev = 103.75' @ 1.39 hrs Surf.Area = 909 sf Storage = 223 cf

Plug-Flow detention time = 19.4 min calculated for 0.013 af (100% of Inflow)
 Center-of-Mass det. time = 19.4 min (93.3 - 74.0)

Volume	Invert	Avail.Storage	Storage Description	
#1	103.50'	948 cf	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
103.50	870	0	0	870
104.50	1,029	948	948	1,063

Device Routing Invert Outlet Devices

#1	Discarded	103.50'	5.000 in/hr Exfiltration over Wetted area
#2	Primary	104.25'	2.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Discarded Outflow Max = 0.11 cfs @ 1.39 hrs HW = 103.75' (Free Discharge)
 1 = Exfiltration (Exfiltration Controls 0.11 cfs)

Primary Outflow Max = 0.00 cfs @ 0.00 hrs HW = 103.50' (Free Discharge)
 2 = Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond WQ1: WQ BASIN #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	103.50	0.00	0.00	0.00
1.00	0.16	13	103.51	0.10	0.10	0.00
2.00	0.02	102	103.62	0.10	0.10	0.00
3.00	0.00	0	103.50	0.00	0.00	0.00
4.00	0.00	0	103.50	0.00	0.00	0.00
5.00	0.00	0	103.50	0.00	0.00	0.00
6.00	0.00	0	103.50	0.00	0.00	0.00
7.00	0.00	0	103.50	0.00	0.00	0.00
8.00	0.00	0	103.50	0.00	0.00	0.00
9.00	0.00	0	103.50	0.00	0.00	0.00
10.00	0.00	0	103.50	0.00	0.00	0.00
11.00	0.00	0	103.50	0.00	0.00	0.00
12.00	0.00	0	103.50	0.00	0.00	0.00
13.00	0.00	0	103.50	0.00	0.00	0.00
14.00	0.00	0	103.50	0.00	0.00	0.00
15.00	0.00	0	103.50	0.00	0.00	0.00
16.00	0.00	0	103.50	0.00	0.00	0.00
17.00	0.00	0	103.50	0.00	0.00	0.00
18.00	0.00	0	103.50	0.00	0.00	0.00
19.00	0.00	0	103.50	0.00	0.00	0.00
20.00	0.00	0	103.50	0.00	0.00	0.00
21.00	0.00	0	103.50	0.00	0.00	0.00
22.00	0.00	0	103.50	0.00	0.00	0.00
23.00	0.00	0	103.50	0.00	0.00	0.00
24.00	0.00	0	103.50	0.00	0.00	0.00
25.00	0.00	0	103.50	0.00	0.00	0.00
26.00	0.00	0	103.50	0.00	0.00	0.00
27.00	0.00	0	103.50	0.00	0.00	0.00
28.00	0.00	0	103.50	0.00	0.00	0.00
29.00	0.00	0	103.50	0.00	0.00	0.00
30.00	0.00	0	103.50	0.00	0.00	0.00
31.00	0.00	0	103.50	0.00	0.00	0.00
32.00	0.00	0	103.50	0.00	0.00	0.00
33.00	0.00	0	103.50	0.00	0.00	0.00
34.00	0.00	0	103.50	0.00	0.00	0.00
35.00	0.00	0	103.50	0.00	0.00	0.00
36.00	0.00	0	103.50	0.00	0.00	0.00
37.00	0.00	0	103.50	0.00	0.00	0.00
38.00	0.00	0	103.50	0.00	0.00	0.00
39.00	0.00	0	103.50	0.00	0.00	0.00
40.00	0.00	0	103.50	0.00	0.00	0.00
41.00	0.00	0	103.50	0.00	0.00	0.00
42.00	0.00	0	103.50	0.00	0.00	0.00
43.00	0.00	0	103.50	0.00	0.00	0.00
44.00	0.00	0	103.50	0.00	0.00	0.00
45.00	0.00	0	103.50	0.00	0.00	0.00
46.00	0.00	0	103.50	0.00	0.00	0.00
47.00	0.00	0	103.50	0.00	0.00	0.00
48.00	0.00	0	103.50	0.00	0.00	0.00

Stage-Discharge for Pond WQ1: WQ BASIN #1

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
103.50	0.00	0.00	0.00	104.02	0.11	0.11	0.00
103.51	0.10	0.10	0.00	104.03	0.11	0.11	0.00
103.52	0.10	0.10	0.00	104.04	0.11	0.11	0.00
103.53	0.10	0.10	0.00	104.05	0.11	0.11	0.00
103.54	0.10	0.10	0.00	104.06	0.11	0.11	0.00
103.55	0.10	0.10	0.00	104.07	0.11	0.11	0.00
103.56	0.10	0.10	0.00	104.08	0.11	0.11	0.00
103.57	0.10	0.10	0.00	104.09	0.11	0.11	0.00
103.58	0.10	0.10	0.00	104.10	0.11	0.11	0.00
103.59	0.10	0.10	0.00	104.11	0.11	0.11	0.00
103.60	0.10	0.10	0.00	104.12	0.11	0.11	0.00
103.61	0.10	0.10	0.00	104.13	0.11	0.11	0.00
103.62	0.10	0.10	0.00	104.14	0.11	0.11	0.00
103.63	0.10	0.10	0.00	104.15	0.11	0.11	0.00
103.64	0.10	0.10	0.00	104.16	0.12	0.12	0.00
103.65	0.10	0.10	0.00	104.17	0.12	0.12	0.00
103.66	0.10	0.10	0.00	104.18	0.12	0.12	0.00
103.67	0.10	0.10	0.00	104.19	0.12	0.12	0.00
103.68	0.10	0.10	0.00	104.20	0.12	0.12	0.00
103.69	0.10	0.10	0.00	104.21	0.12	0.12	0.00
103.70	0.11	0.11	0.00	104.22	0.12	0.12	0.00
103.71	0.11	0.11	0.00	104.23	0.12	0.12	0.00
103.72	0.11	0.11	0.00	104.24	0.12	0.12	0.00
103.73	0.11	0.11	0.00	104.25	0.12	0.12	0.00
103.74	0.11	0.11	0.00	104.26	0.12	0.12	0.01
103.75	0.11	0.11	0.00	104.27	0.14	0.12	0.02
103.76	0.11	0.11	0.00	104.28	0.15	0.12	0.03
103.77	0.11	0.11	0.00	104.29	0.17	0.12	0.05
103.78	0.11	0.11	0.00	104.30	0.19	0.12	0.07
103.79	0.11	0.11	0.00	104.31	0.21	0.12	0.10
103.80	0.11	0.11	0.00	104.32	0.24	0.12	0.12
103.81	0.11	0.11	0.00	104.33	0.27	0.12	0.15
103.82	0.11	0.11	0.00	104.34	0.29	0.12	0.17
103.83	0.11	0.11	0.00	104.35	0.32	0.12	0.20
103.84	0.11	0.11	0.00	104.36	0.36	0.12	0.24
103.85	0.11	0.11	0.00	104.37	0.39	0.12	0.27
103.86	0.11	0.11	0.00	104.38	0.42	0.12	0.30
103.87	0.11	0.11	0.00	104.39	0.46	0.12	0.34
103.88	0.11	0.11	0.00	104.40	0.49	0.12	0.37
103.89	0.11	0.11	0.00	104.41	0.53	0.12	0.41
103.90	0.11	0.11	0.00	104.42	0.57	0.12	0.45
103.91	0.11	0.11	0.00	104.43	0.61	0.12	0.49
103.92	0.11	0.11	0.00	104.44	0.65	0.12	0.53
103.93	0.11	0.11	0.00	104.45	0.70	0.12	0.57
103.94	0.11	0.11	0.00	104.46	0.74	0.12	0.62
103.95	0.11	0.11	0.00	104.47	0.78	0.12	0.66
103.96	0.11	0.11	0.00	104.48	0.83	0.12	0.70
103.97	0.11	0.11	0.00	104.49	0.87	0.12	0.75
103.98	0.11	0.11	0.00	104.50	0.92	0.12	0.80
103.99	0.11	0.11	0.00				

Stage-Area-Storage for Pond WC1: WQ BASIN #1

Elevation (feet)	Surface (sq-ft)	Wetted (sq-ft)	Storage (cubic-feet)
103.50	870	870	0
103.52	873	874	17
103.54	876	877	35
103.56	879	881	52
103.58	882	885	70
103.60	885	889	88
103.62	888	892	106
103.64	891	896	123
103.66	895	900	141
103.68	898	904	159
103.70	901	907	177
103.72	904	911	195
103.74	907	915	213
103.76	910	919	231
103.78	913	922	250
103.80	916	926	268
103.82	919	930	286
103.84	923	934	305
103.86	926	938	323
103.88	929	941	342
103.90	932	945	360
103.92	935	949	379
103.94	938	953	398
103.96	941	957	417
103.98	945	961	435
104.00	948	964	454
104.02	951	968	473
104.04	954	972	492
104.06	957	976	511
104.08	961	980	531
104.10	964	984	550
104.12	967	988	569
104.14	970	992	589
104.16	973	995	608
104.18	977	998	628
104.20	980	1,003	647
104.22	983	1,007	667
104.24	986	1,011	686
104.26	990	1,015	706
104.28	993	1,019	726
104.30	996	1,023	746
104.32	999	1,027	766
104.34	1,003	1,031	786
104.36	1,006	1,035	806
104.38	1,009	1,039	826
104.40	1,012	1,043	846
104.42	1,016	1,047	867
104.44	1,019	1,051	887
104.46	1,022	1,055	907
104.48	1,026	1,059	928

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

Hydrograph for Subcatchment 1IMP: DA#1 (IMP) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	3.18	0.00
0.50	0.02	0.00	0.00	26.50	3.41	3.18	0.00
1.00	0.04	0.00	0.00	27.00	3.41	3.18	0.00
1.50	0.06	0.00	0.00	27.50	3.41	3.18	0.00
2.00	0.08	0.01	0.00	28.00	3.41	3.18	0.00
2.50	0.10	0.02	0.00	28.50	3.41	3.18	0.00
3.00	0.13	0.03	0.00	29.00	3.41	3.18	0.00
3.50	0.15	0.04	0.00	29.50	3.41	3.18	0.00
4.00	0.18	0.06	0.00	30.00	3.41	3.18	0.00
4.50	0.21	0.07	0.01	30.50	3.41	3.18	0.00
5.00	0.23	0.09	0.01	31.00	3.41	3.18	0.00
5.50	0.26	0.11	0.01	31.50	3.41	3.18	0.00
6.00	0.29	0.14	0.01	32.00	3.41	3.18	0.00
6.50	0.32	0.16	0.01	32.50	3.41	3.18	0.00
7.00	0.36	0.19	0.01	33.00	3.41	3.18	0.00
7.50	0.40	0.23	0.01	33.50	3.41	3.18	0.00
8.00	0.44	0.27	0.01	34.00	3.41	3.18	0.00
8.50	0.49	0.31	0.01	34.50	3.41	3.18	0.00
9.00	0.54	0.36	0.01	35.00	3.41	3.18	0.00
9.50	0.60	0.41	0.02	35.50	3.41	3.18	0.00
10.00	0.68	0.48	0.02	36.00	3.41	3.18	0.00
10.50	0.76	0.56	0.03	36.50	3.41	3.18	0.00
11.00	0.89	0.68	0.04	37.00	3.41	3.18	0.00
11.50	1.08	0.87	0.06	37.50	3.41	3.18	0.00
12.00	1.63	1.41	0.20	38.00	3.41	3.18	0.00
12.50	2.33	2.10	0.11	38.50	3.41	3.18	0.00
13.00	2.52	2.29	0.05	39.00	3.41	3.18	0.00
13.50	2.65	2.42	0.03	39.50	3.41	3.18	0.00
14.00	2.73	2.50	0.03	40.00	3.41	3.18	0.00
14.50	2.81	2.58	0.02	40.50	3.41	3.18	0.00
15.00	2.87	2.64	0.02	41.00	3.41	3.18	0.00
15.50	2.92	2.69	0.01	41.50	3.41	3.18	0.00
16.00	2.97	2.74	0.01	42.00	3.41	3.18	0.00
16.50	3.01	2.78	0.01	42.50	3.41	3.18	0.00
17.00	3.05	2.82	0.01	43.00	3.41	3.18	0.00
17.50	3.09	2.85	0.01	43.50	3.41	3.18	0.00
18.00	3.12	2.89	0.01	44.00	3.41	3.18	0.00
18.50	3.15	2.92	0.01	44.50	3.41	3.18	0.00
19.00	3.18	2.94	0.01	45.00	3.41	3.18	0.00
19.50	3.20	2.97	0.01	45.50	3.41	3.18	0.00
20.00	3.23	3.00	0.01	46.00	3.41	3.18	0.00
20.50	3.26	3.02	0.01	46.50	3.41	3.18	0.00
21.00	3.28	3.05	0.01	47.00	3.41	3.18	0.00
21.50	3.31	3.07	0.01	47.50	3.41	3.18	0.00
22.00	3.33	3.10	0.01	48.00	3.41	3.18	0.00
22.50	3.35	3.12	0.01				
23.00	3.37	3.14	0.01				
23.50	3.39	3.16	0.01				
24.00	3.41	3.18	0.01				
24.50	3.41	3.18	0.00				

Summary for Subcatchment 1L: DA#1 (LAWN) TO WQ BASIN#1

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)	CN	Description			
9,687	39	>75% Grass cover, Good, HSG A			
9,687		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 1L: DA#1 (LAWN) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	0.00	0.00
0.50	0.02	0.00	0.00	26.50	3.41	0.00	0.00
1.00	0.04	0.00	0.00	27.00	3.41	0.00	0.00
1.50	0.06	0.00	0.00	27.50	3.41	0.00	0.00
2.00	0.08	0.00	0.00	28.00	3.41	0.00	0.00
2.50	0.10	0.00	0.00	28.50	3.41	0.00	0.00
3.00	0.13	0.00	0.00	29.00	3.41	0.00	0.00
3.50	0.15	0.00	0.00	29.50	3.41	0.00	0.00
4.00	0.18	0.00	0.00	30.00	3.41	0.00	0.00
4.50	0.21	0.00	0.00	30.50	3.41	0.00	0.00
5.00	0.23	0.00	0.00	31.00	3.41	0.00	0.00
5.50	0.26	0.00	0.00	31.50	3.41	0.00	0.00
6.00	0.29	0.00	0.00	32.00	3.41	0.00	0.00
6.50	0.32	0.00	0.00	32.50	3.41	0.00	0.00
7.00	0.36	0.00	0.00	33.00	3.41	0.00	0.00
7.50	0.40	0.00	0.00	33.50	3.41	0.00	0.00
8.00	0.44	0.00	0.00	34.00	3.41	0.00	0.00
8.50	0.49	0.00	0.00	34.50	3.41	0.00	0.00
9.00	0.54	0.00	0.00	35.00	3.41	0.00	0.00
9.50	0.60	0.00	0.00	35.50	3.41	0.00	0.00
10.00	0.68	0.00	0.00	36.00	3.41	0.00	0.00
10.50	0.76	0.00	0.00	36.50	3.41	0.00	0.00
11.00	0.89	0.00	0.00	37.00	3.41	0.00	0.00
11.50	1.08	0.00	0.00	37.50	3.41	0.00	0.00
12.00	1.63	0.00	0.00	38.00	3.41	0.00	0.00
12.50	2.33	0.00	0.00	38.50	3.41	0.00	0.00
13.00	2.52	0.00	0.00	39.00	3.41	0.00	0.00
13.50	2.65	0.00	0.00	39.50	3.41	0.00	0.00
14.00	2.73	0.00	0.00	40.00	3.41	0.00	0.00
14.50	2.81	0.00	0.00	40.50	3.41	0.00	0.00
15.00	2.87	0.00	0.00	41.00	3.41	0.00	0.00
15.50	2.92	0.00	0.00	41.50	3.41	0.00	0.00
16.00	2.97	0.00	0.00	42.00	3.41	0.00	0.00
16.50	3.01	0.00	0.00	42.50	3.41	0.00	0.00
17.00	3.05	0.00	0.00	43.00	3.41	0.00	0.00
17.50	3.09	0.00	0.00	43.50	3.41	0.00	0.00
18.00	3.12	0.00	0.00	44.00	3.41	0.00	0.00
18.50	3.15	0.00	0.00	44.50	3.41	0.00	0.00
19.00	3.18	0.00	0.00	45.00	3.41	0.00	0.00
19.50	3.20	0.00	0.00	45.50	3.41	0.00	0.00
20.00	3.23	0.00	0.00	46.00	3.41	0.00	0.00
20.50	3.26	0.00	0.00	46.50	3.41	0.00	0.00
21.00	3.28	0.00	0.00	47.00	3.41	0.00	0.00
21.50	3.31	0.00	0.00	47.50	3.41	0.00	0.00
22.00	3.33	0.00	0.00	48.00	3.41	0.00	0.00
22.50	3.35	0.00	0.00				
23.00	3.37	0.00	0.00				
23.50	3.39	0.00	0.00				
24.00	3.41	0.00	0.00				
24.50	3.41	0.00	0.00				

Summary for Pond WQ1: WQ BASIN #1

Inflow Area = 0.369 ac, 39.79% Impervious, Inflow Depth = 1.27" for NOAA-2 event
 Inflow = 0.41 cfs @ 12.17 hrs, Volume= 0.039 af
 Outflow = 0.11 cfs @ 12.51 hrs, Volume= 0.039 af, Atten= 73%, Lag= 20.3 min
 Discarded = 0.11 cfs @ 12.51 hrs, Volume= 0.039 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 103.83' @ 12.51 hrs Surf Area= 922 sf Storage= 299 cf

Plug-Flow detention time= 13.5 min calculated for 0.039 af (100% of inflow)
 Center-of-Mass det time= 13.5 min (775.5 - 762.0)

Volume #1	Invert	Avail. Storage	Storage Description	Custom Stage Data (Cont'd)	Listed below (Recalc)
	103.50'	948 cf			
Elevation (feet)	Surf Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)	Wet Area (sq-ft)	
103.50	870	0	0	870	
104.50	1,029	948	948	1,063	

Device Routing Invert Outlet Devices

#1 Discarded 103.50' 5,000 in/hr Exfiltration over Wetted area
 #2 Primary 104.25' 2.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Discarded Outflow Max=0.11 cfs @ 12.51 hrs HW=103.83' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.11 cfs)

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=103.50' (Free Discharge)

2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond WC1: WQ BASIN #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	103.50	0.00	0.00	0.00
1.00	0.00	0	103.50	0.00	0.00	0.00
2.00	0.00	0	103.50	0.00	0.00	0.00
3.00	0.00	0	103.50	0.00	0.00	0.00
4.00	0.00	0	103.50	0.00	0.00	0.00
5.00	0.01	1	103.50	0.01	0.01	0.00
6.00	0.01	1	103.50	0.01	0.01	0.00
7.00	0.01	1	103.50	0.01	0.01	0.00
8.00	0.01	1	103.50	0.01	0.01	0.00
9.00	0.01	1	103.50	0.01	0.01	0.00
10.00	0.02	2	103.50	0.02	0.02	0.00
11.00	0.04	3	103.50	0.04	0.04	0.00
12.00	0.20	36	103.54	0.10	0.10	0.00
13.00	0.05	236	103.77	0.11	0.11	0.00
14.00	0.03	2	103.50	0.02	0.02	0.00
15.00	0.02	1	103.50	0.01	0.01	0.00
16.00	0.01	1	103.50	0.01	0.01	0.00
17.00	0.01	1	103.50	0.01	0.01	0.00
18.00	0.01	1	103.50	0.01	0.01	0.00
19.00	0.01	1	103.50	0.01	0.01	0.00
20.00	0.01	1	103.50	0.01	0.01	0.00
21.00	0.01	1	103.50	0.01	0.01	0.00
22.00	0.01	1	103.50	0.01	0.01	0.00
23.00	0.01	1	103.50	0.01	0.01	0.00
24.00	0.01	1	103.50	0.01	0.01	0.00
25.00	0.00	0	103.50	0.00	0.00	0.00
26.00	0.00	0	103.50	0.00	0.00	0.00
27.00	0.00	0	103.50	0.00	0.00	0.00
28.00	0.00	0	103.50	0.00	0.00	0.00
29.00	0.00	0	103.50	0.00	0.00	0.00
30.00	0.00	0	103.50	0.00	0.00	0.00
31.00	0.00	0	103.50	0.00	0.00	0.00
32.00	0.00	0	103.50	0.00	0.00	0.00
33.00	0.00	0	103.50	0.00	0.00	0.00
34.00	0.00	0	103.50	0.00	0.00	0.00
35.00	0.00	0	103.50	0.00	0.00	0.00
36.00	0.00	0	103.50	0.00	0.00	0.00
37.00	0.00	0	103.50	0.00	0.00	0.00
38.00	0.00	0	103.50	0.00	0.00	0.00
39.00	0.00	0	103.50	0.00	0.00	0.00
40.00	0.00	0	103.50	0.00	0.00	0.00
41.00	0.00	0	103.50	0.00	0.00	0.00
42.00	0.00	0	103.50	0.00	0.00	0.00
43.00	0.00	0	103.50	0.00	0.00	0.00
44.00	0.00	0	103.50	0.00	0.00	0.00
45.00	0.00	0	103.50	0.00	0.00	0.00
46.00	0.00	0	103.50	0.00	0.00	0.00
47.00	0.00	0	103.50	0.00	0.00	0.00
48.00	0.00	0	103.50	0.00	0.00	0.00

Summary for Subcatchment 1IMP: DA#1 (IMP) TO WQ BASIN#1

Runoff = 0.62 cfs @ 12.17 hrs, Volume= 0.060 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description			
6,403	98	Paved parking, HSG A			
6,403		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 11IMP: DA#1 (IMP) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	4.93	0.00
0.50	0.03	0.00	0.00	26.50	5.17	4.93	0.00
1.00	0.06	0.00	0.00	27.00	5.17	4.93	0.00
1.50	0.09	0.01	0.00	27.50	5.17	4.93	0.00
2.00	0.12	0.02	0.00	28.00	5.17	4.93	0.00
2.50	0.16	0.04	0.01	28.50	5.17	4.93	0.00
3.00	0.19	0.07	0.01	29.00	5.17	4.93	0.00
3.50	0.23	0.09	0.01	29.50	5.17	4.93	0.00
4.00	0.27	0.12	0.01	30.00	5.17	4.93	0.00
4.50	0.31	0.15	0.01	30.50	5.17	4.93	0.00
5.00	0.35	0.19	0.01	31.00	5.17	4.93	0.00
5.50	0.40	0.23	0.01	31.50	5.17	4.93	0.00
6.00	0.44	0.27	0.01	32.00	5.17	4.93	0.00
6.50	0.49	0.31	0.02	32.50	5.17	4.93	0.00
7.00	0.54	0.36	0.02	33.00	5.17	4.93	0.00
7.50	0.60	0.41	0.02	33.50	5.17	4.93	0.00
8.00	0.67	0.48	0.02	34.00	5.17	4.93	0.00
8.50	0.74	0.54	0.02	34.50	5.17	4.93	0.00
9.00	0.82	0.62	0.02	35.00	5.17	4.93	0.00
9.50	0.91	0.71	0.03	35.50	5.17	4.93	0.00
10.00	1.02	0.82	0.03	36.00	5.17	4.93	0.00
10.50	1.16	0.94	0.04	36.50	5.17	4.93	0.00
11.00	1.34	1.13	0.06	37.00	5.17	4.93	0.00
11.50	1.64	1.42	0.09	37.50	5.17	4.93	0.00
12.00	2.48	2.25	0.30	38.00	5.17	4.93	0.00
12.50	3.53	3.30	0.16	38.50	5.17	4.93	0.00
13.00	3.83	3.59	0.08	39.00	5.17	4.93	0.00
13.50	4.01	3.78	0.05	39.50	5.17	4.93	0.00
14.00	4.15	3.91	0.04	40.00	5.17	4.93	0.00
14.50	4.26	4.02	0.03	40.50	5.17	4.93	0.00
15.00	4.35	4.11	0.03	41.00	5.17	4.93	0.00
15.50	4.43	4.19	0.02	41.50	5.17	4.93	0.00
16.00	4.50	4.26	0.02	42.00	5.17	4.93	0.00
16.50	4.57	4.33	0.02	42.50	5.17	4.93	0.00
17.00	4.63	4.39	0.02	43.00	5.17	4.93	0.00
17.50	4.68	4.44	0.02	43.50	5.17	4.93	0.00
18.00	4.73	4.49	0.01	44.00	5.17	4.93	0.00
18.50	4.77	4.54	0.01	44.50	5.17	4.93	0.00
19.00	4.82	4.58	0.01	45.00	5.17	4.93	0.00
19.50	4.86	4.62	0.01	45.50	5.17	4.93	0.00
20.00	4.90	4.66	0.01	46.00	5.17	4.93	0.00
20.50	4.94	4.70	0.01	46.50	5.17	4.93	0.00
21.00	4.98	4.74	0.01	47.00	5.17	4.93	0.00
21.50	5.01	4.77	0.01	47.50	5.17	4.93	0.00
22.00	5.05	4.81	0.01	48.00	5.17	4.93	0.00
22.50	5.08	4.84	0.01				
23.00	5.11	4.87	0.01				
23.50	5.14	4.90	0.01				
24.00	5.17	4.93	0.01				
24.50	5.17	4.93	0.00				

Summary for Subcatchment 1L: DA#1 (LAWN) TO WQ BASIN#1

Runoff = 0.01 cfs @ 12.93 hrs, Volume= 0.004 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description			
9,687	39	>75% Grass cover, Good, HSG A			
9,687		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 1L: DA#1 (LAWN) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	0.24	0.00
0.50	0.03	0.00	0.00	26.50	5.17	0.24	0.00
1.00	0.06	0.00	0.00	27.00	5.17	0.24	0.00
1.50	0.09	0.00	0.00	27.50	5.17	0.24	0.00
2.00	0.12	0.00	0.00	28.00	5.17	0.24	0.00
2.50	0.16	0.00	0.00	28.50	5.17	0.24	0.00
3.00	0.19	0.00	0.00	29.00	5.17	0.24	0.00
3.50	0.23	0.00	0.00	29.50	5.17	0.24	0.00
4.00	0.27	0.00	0.00	30.00	5.17	0.24	0.00
4.50	0.31	0.00	0.00	30.50	5.17	0.24	0.00
5.00	0.35	0.00	0.00	31.00	5.17	0.24	0.00
5.50	0.40	0.00	0.00	31.50	5.17	0.24	0.00
6.00	0.44	0.00	0.00	32.00	5.17	0.24	0.00
6.50	0.49	0.00	0.00	32.50	5.17	0.24	0.00
7.00	0.54	0.00	0.00	33.00	5.17	0.24	0.00
7.50	0.60	0.00	0.00	33.50	5.17	0.24	0.00
8.00	0.67	0.00	0.00	34.00	5.17	0.24	0.00
8.50	0.74	0.00	0.00	34.50	5.17	0.24	0.00
9.00	0.82	0.00	0.00	35.00	5.17	0.24	0.00
9.50	0.91	0.00	0.00	35.50	5.17	0.24	0.00
10.00	1.02	0.00	0.00	36.00	5.17	0.24	0.00
10.50	1.16	0.00	0.00	36.50	5.17	0.24	0.00
11.00	1.34	0.00	0.00	37.00	5.17	0.24	0.00
11.50	1.64	0.00	0.00	37.50	5.17	0.24	0.00
12.00	2.48	0.00	0.00	38.00	5.17	0.24	0.00
12.50	3.53	0.01	0.01	38.50	5.17	0.24	0.00
13.00	3.83	0.03	0.01	39.00	5.17	0.24	0.00
13.50	4.01	0.05	0.01	39.50	5.17	0.24	0.00
14.00	4.15	0.06	0.01	40.00	5.17	0.24	0.00
14.50	4.26	0.08	0.01	40.50	5.17	0.24	0.00
15.00	4.35	0.09	0.01	41.00	5.17	0.24	0.00
15.50	4.43	0.10	0.00	41.50	5.17	0.24	0.00
16.00	4.50	0.11	0.00	42.00	5.17	0.24	0.00
16.50	4.57	0.12	0.00	42.50	5.17	0.24	0.00
17.00	4.63	0.13	0.00	43.00	5.17	0.24	0.00
17.50	4.68	0.14	0.00	43.50	5.17	0.24	0.00
18.00	4.73	0.15	0.00	44.00	5.17	0.24	0.00
18.50	4.77	0.16	0.00	44.50	5.17	0.24	0.00
19.00	4.82	0.16	0.00	45.00	5.17	0.24	0.00
19.50	4.86	0.17	0.00	45.50	5.17	0.24	0.00
20.00	4.90	0.18	0.00	46.00	5.17	0.24	0.00
20.50	4.94	0.19	0.00	46.50	5.17	0.24	0.00
21.00	5.01	0.20	0.00	47.00	5.17	0.24	0.00
21.50	5.05	0.21	0.00	47.50	5.17	0.24	0.00
22.00	5.08	0.22	0.00	48.00	5.17	0.24	0.00
22.50	5.11	0.22	0.00				
23.00	5.14	0.23	0.00				
23.50	5.17	0.24	0.00				
24.00	5.17	0.24	0.00				
24.50	5.17	0.24	0.00				

Summary for Pond WQ1: WQ BASIN #1

Inflow Area = 0.369 ac, 39.79% impervious, Inflow Depth = 2.10" for NOAA-10 event
 Inflow = 0.62 cfs @ 12.17 hrs, Volume = 0.065 af
 Outflow = 0.12 cfs @ 12.72 hrs, Volume = 0.065 af, Atten = 81%, Lag = 33.1 min
 Discarded = 0.12 cfs @ 12.72 hrs, Volume = 0.065 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume = 0.000 af

Routing by Stor-Ind method, Time Span = 0.00-48.00 hrs, dt = 0.05 hrs
 Peak Elev = 104.18' @ 12.72 hrs Surf Area = 976 sf Storage = 626 cf

Plug-Flow detention time = 30.7 min calculated for 0.065 af (100% of inflow)
 Center-of-Mass det. time = 30.7 min (801.6 - 770.9)

Volume	Invert	Avail. Storage	Storage Description	
#1	103.50'	948 cf	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)	Wet Area (sq-ft)
103.50	870	0	0	870
104.50	1,029	948	948	1,063

Device	Routing	Invert	Outlet Devices
#1	Discarded	103.50'	5,000 in/hr Exfiltration over Wetted area
#2	Primary	104.25'	2.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Discarded Outflow Max = 0.12 cfs @ 12.72 hrs HW = 104.18' (Free Discharge)
 1 = Exfiltration (Exfiltration Controls 0.12 cfs)

Primary Outflow Max = 0.00 cfs @ 0.00 hrs HW = 103.50' (Free Discharge)
 2 = Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond WQ1: WQ BASIN #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	103.50	0.00	0.00	0.00
1.00	0.00	0	103.50	0.00	0.00	0.00
2.00	0.00	0	103.50	0.00	0.00	0.00
3.00	0.01	1	103.50	0.01	0.01	0.00
4.00	0.01	1	103.50	0.01	0.01	0.00
5.00	0.01	1	103.50	0.01	0.01	0.00
6.00	0.01	1	103.50	0.01	0.01	0.00
7.00	0.02	1	103.50	0.01	0.01	0.00
8.00	0.02	2	103.50	0.02	0.02	0.00
9.00	0.02	2	103.50	0.02	0.02	0.00
10.00	0.03	3	103.50	0.03	0.03	0.00
11.00	0.06	5	103.51	0.06	0.06	0.00
12.00	0.30	109	103.62	0.10	0.10	0.00
13.00	0.09	612	104.16	0.12	0.12	0.00
14.00	0.04	422	103.97	0.11	0.11	0.00
15.00	0.03	171	103.89	0.10	0.10	0.00
16.00	0.03	2	103.50	0.03	0.03	0.00
17.00	0.02	2	103.50	0.02	0.02	0.00
18.00	0.02	2	103.50	0.02	0.02	0.00
19.00	0.02	1	103.50	0.02	0.02	0.00
20.00	0.02	1	103.50	0.02	0.02	0.00
21.00	0.01	1	103.50	0.01	0.01	0.00
22.00	0.01	1	103.50	0.01	0.01	0.00
23.00	0.01	1	103.50	0.01	0.01	0.00
24.00	0.01	1	103.50	0.01	0.01	0.00
25.00	0.00	0	103.50	0.00	0.00	0.00
26.00	0.00	0	103.50	0.00	0.00	0.00
27.00	0.00	0	103.50	0.00	0.00	0.00
28.00	0.00	0	103.50	0.00	0.00	0.00
29.00	0.00	0	103.50	0.00	0.00	0.00
30.00	0.00	0	103.50	0.00	0.00	0.00
31.00	0.00	0	103.50	0.00	0.00	0.00
32.00	0.00	0	103.50	0.00	0.00	0.00
33.00	0.00	0	103.50	0.00	0.00	0.00
34.00	0.00	0	103.50	0.00	0.00	0.00
35.00	0.00	0	103.50	0.00	0.00	0.00
36.00	0.00	0	103.50	0.00	0.00	0.00
37.00	0.00	0	103.50	0.00	0.00	0.00
38.00	0.00	0	103.50	0.00	0.00	0.00
39.00	0.00	0	103.50	0.00	0.00	0.00
40.00	0.00	0	103.50	0.00	0.00	0.00
41.00	0.00	0	103.50	0.00	0.00	0.00
42.00	0.00	0	103.50	0.00	0.00	0.00
43.00	0.00	0	103.50	0.00	0.00	0.00
44.00	0.00	0	103.50	0.00	0.00	0.00
45.00	0.00	0	103.50	0.00	0.00	0.00
46.00	0.00	0	103.50	0.00	0.00	0.00
47.00	0.00	0	103.50	0.00	0.00	0.00
48.00	0.00	0	103.50	0.00	0.00	0.00

Summary for Subcatchment 1IMP: DA#1 (IMP) TO WQ BASIN#1

Runoff = 1.03 cfs @ 12.17 hrs, Volume= 0.102 af, Depth= 8.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)	CN	Description			
6,403	98	Paved parking, HSG A			
6,403		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 1IMP: DA#1 (IMP) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	8.35	0.00
0.50	0.05	0.00	0.00	26.50	8.59	8.35	0.00
1.00	0.10	0.01	0.00	27.00	8.59	8.35	0.00
1.50	0.15	0.04	0.01	27.50	8.59	8.35	0.00
2.00	0.21	0.07	0.01	28.00	8.59	8.35	0.00
2.50	0.26	0.12	0.01	28.50	8.59	8.35	0.00
3.00	0.32	0.16	0.01	29.00	8.59	8.35	0.00
3.50	0.39	0.22	0.02	29.50	8.59	8.35	0.00
4.00	0.45	0.27	0.02	30.00	8.59	8.35	0.00
4.50	0.52	0.33	0.02	30.50	8.59	8.35	0.00
5.00	0.59	0.40	0.02	31.00	8.59	8.35	0.00
5.50	0.66	0.46	0.02	31.50	8.59	8.35	0.00
6.00	0.73	0.53	0.02	32.00	8.59	8.35	0.00
6.50	0.81	0.61	0.02	32.50	8.59	8.35	0.00
7.00	0.90	0.70	0.03	33.00	8.59	8.35	0.00
7.50	1.01	0.80	0.03	33.50	8.59	8.35	0.00
8.00	1.11	0.90	0.03	34.00	8.59	8.35	0.00
8.50	1.23	1.02	0.04	34.50	8.59	8.35	0.00
9.00	1.36	1.15	0.04	35.00	8.59	8.35	0.00
9.50	1.52	1.30	0.05	35.50	8.59	8.35	0.00
10.00	1.70	1.48	0.06	36.00	8.59	8.35	0.00
10.50	1.92	1.70	0.07	36.50	8.59	8.35	0.00
11.00	2.23	2.01	0.10	37.00	8.59	8.35	0.00
11.50	2.72	2.49	0.16	37.50	8.59	8.35	0.00
12.00	4.12	3.88	0.51	38.00	8.59	8.35	0.00
12.50	5.87	5.63	0.27	38.50	8.59	8.35	0.00
13.00	6.36	6.12	0.13	39.00	8.59	8.35	0.00
13.50	6.67	6.43	0.08	39.50	8.59	8.35	0.00
14.00	6.89	6.65	0.06	40.00	8.59	8.35	0.00
14.50	7.07	6.83	0.05	40.50	8.59	8.35	0.00
15.00	7.23	6.99	0.04	41.00	8.59	8.35	0.00
15.50	7.36	7.12	0.04	41.50	8.59	8.35	0.00
16.00	7.48	7.24	0.03	42.00	8.59	8.35	0.00
16.50	7.58	7.35	0.03	42.50	8.59	8.35	0.00
17.00	7.69	7.45	0.03	43.00	8.59	8.35	0.00
17.50	7.78	7.54	0.03	43.50	8.59	8.35	0.00
18.00	7.86	7.62	0.02	44.00	8.59	8.35	0.00
18.50	7.93	7.69	0.02	44.50	8.59	8.35	0.00
19.00	8.00	7.76	0.02	45.00	8.59	8.35	0.00
19.50	8.07	7.83	0.02	45.50	8.59	8.35	0.00
20.00	8.14	7.90	0.02	46.00	8.59	8.35	0.00
20.50	8.20	7.96	0.02	46.50	8.59	8.35	0.00
21.00	8.27	8.03	0.02	47.00	8.59	8.35	0.00
21.50	8.33	8.09	0.02	47.50	8.59	8.35	0.00
22.00	8.38	8.14	0.02	48.00	8.59	8.35	0.00
22.50	8.44	8.20	0.02				
23.00	8.49	8.25	0.02				
23.50	8.54	8.30	0.01				
24.00	8.59	8.35	0.01				
24.50	8.59	8.35	0.00				

Summary for Subcatchment 1L: DA#1 (LAWN) TO WQ BASIN#1

Runoff = 0.24 cfs @ 12.20 hrs, Volume= 0.026 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

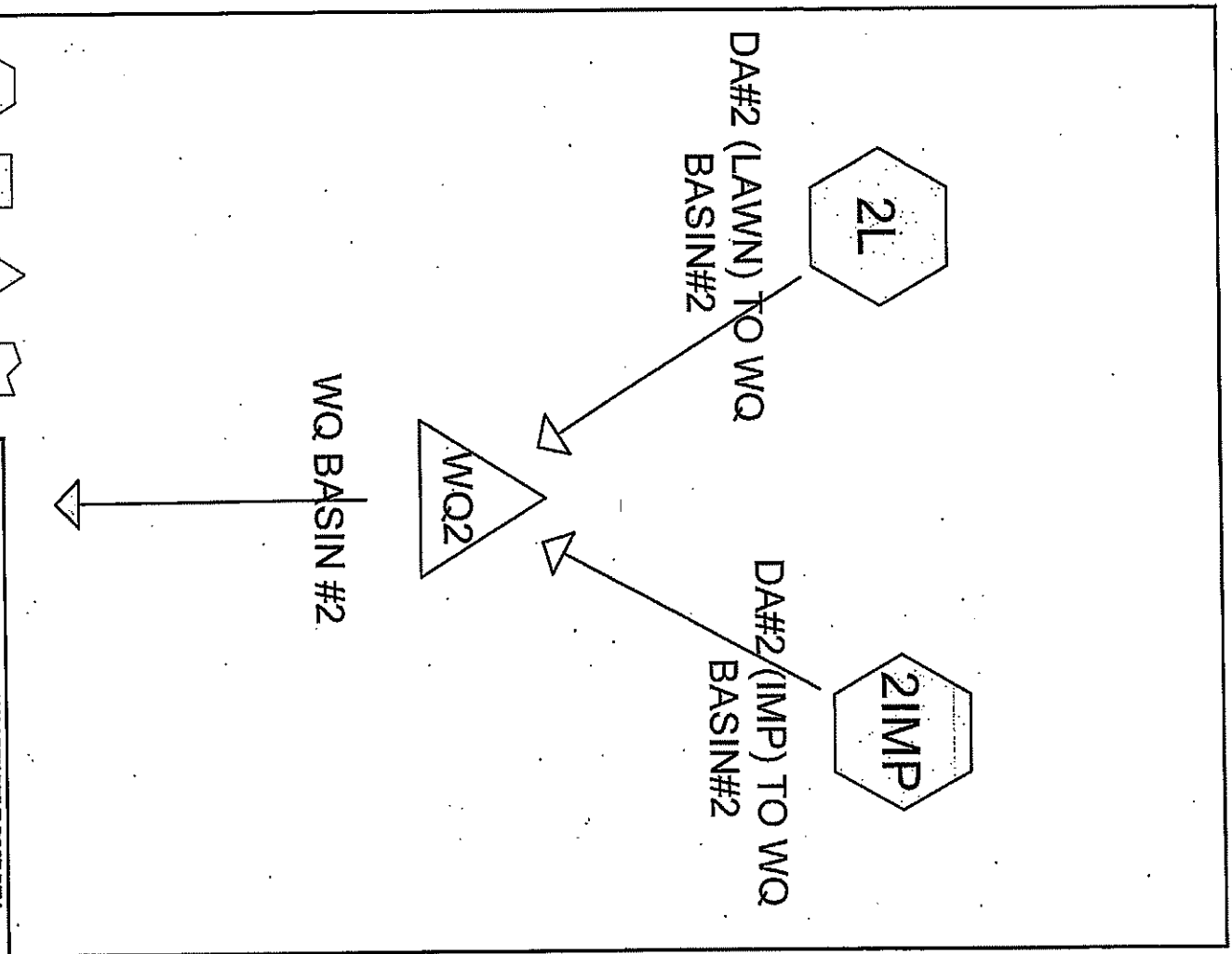
Area (sf)		CN	Description		
9,687		39	>75% Grass cover, Good, HSG A		
9,687		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 1L: DA#1 (LAWN) TO WQ BASIN#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	1.41	0.00
0.50	0.05	0.00	0.00	26.50	8.59	1.41	0.00
1.00	0.10	0.00	0.00	27.00	8.59	1.41	0.00
1.50	0.15	0.00	0.00	27.50	8.59	1.41	0.00
2.00	0.21	0.00	0.00	28.00	8.59	1.41	0.00
2.50	0.26	0.00	0.00	28.50	8.59	1.41	0.00
3.00	0.32	0.00	0.00	29.00	8.59	1.41	0.00
3.50	0.39	0.00	0.00	29.50	8.59	1.41	0.00
4.00	0.45	0.00	0.00	30.00	8.59	1.41	0.00
4.50	0.52	0.00	0.00	30.50	8.59	1.41	0.00
5.00	0.59	0.00	0.00	31.00	8.59	1.41	0.00
5.50	0.66	0.00	0.00	31.50	8.59	1.41	0.00
6.00	0.73	0.00	0.00	32.00	8.59	1.41	0.00
6.50	0.81	0.00	0.00	32.50	8.59	1.41	0.00
7.00	0.90	0.00	0.00	33.00	8.59	1.41	0.00
7.50	1.01	0.00	0.00	33.50	8.59	1.41	0.00
8.00	1.11	0.00	0.00	34.00	8.59	1.41	0.00
8.50	1.23	0.00	0.00	34.50	8.59	1.41	0.00
9.00	1.36	0.00	0.00	35.00	8.59	1.41	0.00
9.50	1.52	0.00	0.00	35.50	8.59	1.41	0.00
10.00	1.70	0.00	0.00	36.00	8.59	1.41	0.00
10.50	1.92	0.00	0.00	36.50	8.59	1.41	0.00
11.00	2.23	0.00	0.00	37.00	8.59	1.41	0.00
11.50	2.72	0.00	0.00	37.50	8.59	1.41	0.00
12.00	4.12	0.06	0.04	38.00	8.59	1.41	0.00
12.50	5.87	0.41	0.10	38.50	8.59	1.41	0.00
13.00	6.36	0.55	0.06	39.00	8.59	1.41	0.00
13.50	6.67	0.65	0.04	39.50	8.59	1.41	0.00
14.00	6.89	0.73	0.03	40.00	8.59	1.41	0.00
14.50	7.07	0.79	0.03	40.50	8.59	1.41	0.00
15.00	7.23	0.85	0.02	41.00	8.59	1.41	0.00
15.50	7.36	0.90	0.02	41.50	8.59	1.41	0.00
16.00	7.48	0.95	0.02	42.00	8.59	1.41	0.00
16.50	7.58	0.99	0.02	42.50	8.59	1.41	0.00
17.00	7.69	1.03	0.02	43.00	8.59	1.41	0.00
17.50	7.78	1.06	0.02	43.50	8.59	1.41	0.00
18.00	7.86	1.10	0.01	44.00	8.59	1.41	0.00
18.50	7.93	1.13	0.01	44.50	8.59	1.41	0.00
19.00	8.00	1.16	0.01	45.00	8.59	1.41	0.00
19.50	8.07	1.19	0.01	45.50	8.59	1.41	0.00
20.00	8.14	1.22	0.01	46.00	8.59	1.41	0.00
20.50	8.20	1.24	0.01	46.50	8.59	1.41	0.00
21.00	8.27	1.27	0.01	47.00	8.59	1.41	0.00
21.50	8.33	1.30	0.01	47.50	8.59	1.41	0.00
22.00	8.38	1.32	0.01	48.00	8.59	1.41	0.00
22.50	8.44	1.35	0.01				
23.00	8.49	1.37	0.01				
23.50	8.54	1.39	0.01				
24.00	8.59	1.41	0.01				
			0.00				

Hydrograph for Pond WQ1: WQ BASIN #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	103.50	0.00	0.00	0.00
1.00	0.00	0	103.50	0.00	0.00	0.00
2.00	0.01	1	103.50	0.01	0.01	0.00
3.00	0.01	1	103.50	0.01	0.01	0.00
4.00	0.02	1	103.50	0.02	0.02	0.00
5.00	0.02	2	103.50	0.02	0.02	0.00
6.00	0.02	2	103.50	0.02	0.02	0.00
7.00	0.03	2	103.50	0.03	0.03	0.00
8.00	0.03	3	103.50	0.03	0.03	0.00
9.00	0.04	3	103.50	0.04	0.04	0.00
10.00	0.06	5	103.51	0.06	0.06	0.00
11.00	0.10	8	103.51	0.10	0.10	0.00
12.00	0.54	344	103.88	0.11	0.11	0.00
13.00	0.19	757	104.31	0.22	0.12	0.10
14.00	0.10	688	104.24	0.12	0.12	0.00
15.00	0.07	568	104.12	0.11	0.11	0.00
16.00	0.06	379	103.92	0.11	0.11	0.00
17.00	0.05	175	103.70	0.10	0.10	0.00
18.00	0.04	3	103.50	0.04	0.04	0.00
19.00	0.03	3	103.50	0.03	0.03	0.00
20.00	0.03	3	103.50	0.03	0.03	0.00
21.00	0.03	3	103.50	0.03	0.03	0.00
22.00	0.03	2	103.50	0.03	0.03	0.00
23.00	0.03	2	103.50	0.03	0.03	0.00
24.00	0.02	2	103.50	0.02	0.02	0.00
25.00	0.00	0	103.50	0.00	0.00	0.00
26.00	0.00	0	103.50	0.00	0.00	0.00
27.00	0.00	0	103.50	0.00	0.00	0.00
28.00	0.00	0	103.50	0.00	0.00	0.00
29.00	0.00	0	103.50	0.00	0.00	0.00
30.00	0.00	0	103.50	0.00	0.00	0.00
31.00	0.00	0	103.50	0.00	0.00	0.00
32.00	0.00	0	103.50	0.00	0.00	0.00
33.00	0.00	0	103.50	0.00	0.00	0.00
34.00	0.00	0	103.50	0.00	0.00	0.00
35.00	0.00	0	103.50	0.00	0.00	0.00
36.00	0.00	0	103.50	0.00	0.00	0.00
37.00	0.00	0	103.50	0.00	0.00	0.00
38.00	0.00	0	103.50	0.00	0.00	0.00
39.00	0.00	0	103.50	0.00	0.00	0.00
40.00	0.00	0	103.50	0.00	0.00	0.00
41.00	0.00	0	103.50	0.00	0.00	0.00
42.00	0.00	0	103.50	0.00	0.00	0.00
43.00	0.00	0	103.50	0.00	0.00	0.00
44.00	0.00	0	103.50	0.00	0.00	0.00
45.00	0.00	0	103.50	0.00	0.00	0.00
46.00	0.00	0	103.50	0.00	0.00	0.00
47.00	0.00	0	103.50	0.00	0.00	0.00
48.00	0.00	0	103.50	0.00	0.00	0.00



Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	WQ	NJ DEP 2-hr		Default	2.00	1	1.25	2

Summary for Subcatchment 2IMP: DA#2 (IMP) TO WQ BASIN#2

Runoff = 0.42 cfs @ 1.15 hrs, Volume= 0.014 af, Depth= 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, df= 0.05 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description			
7,156	98	Paved parking, HSG A			
7,156		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 2IMP: DA#2 (IMP) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	1.25	1.03	0.00
0.50	0.10	0.01	0.01	26.50	1.25	1.03	0.00
1.00	0.63	0.43	0.17	27.00	1.25	1.03	0.00
1.50	1.15	0.94	0.07	27.50	1.25	1.03	0.00
2.00	1.25	1.03	0.02	28.00	1.25	1.03	0.00
2.50	1.25	1.03	0.00	28.50	1.25	1.03	0.00
3.00	1.25	1.03	0.00	29.00	1.25	1.03	0.00
3.50	1.25	1.03	0.00	29.50	1.25	1.03	0.00
4.00	1.25	1.03	0.00	30.00	1.25	1.03	0.00
4.50	1.25	1.03	0.00	30.50	1.25	1.03	0.00
5.00	1.25	1.03	0.00	31.00	1.25	1.03	0.00
5.50	1.25	1.03	0.00	31.50	1.25	1.03	0.00
6.00	1.25	1.03	0.00	32.00	1.25	1.03	0.00
6.50	1.25	1.03	0.00	32.50	1.25	1.03	0.00
7.00	1.25	1.03	0.00	33.00	1.25	1.03	0.00
7.50	1.25	1.03	0.00	33.50	1.25	1.03	0.00
8.00	1.25	1.03	0.00	34.00	1.25	1.03	0.00
8.50	1.25	1.03	0.00	34.50	1.25	1.03	0.00
9.00	1.25	1.03	0.00	35.00	1.25	1.03	0.00
9.50	1.25	1.03	0.00	35.50	1.25	1.03	0.00
10.00	1.25	1.03	0.00	36.00	1.25	1.03	0.00
10.50	1.25	1.03	0.00	36.50	1.25	1.03	0.00
11.00	1.25	1.03	0.00	37.00	1.25	1.03	0.00
11.50	1.25	1.03	0.00	37.50	1.25	1.03	0.00
12.00	1.25	1.03	0.00	38.00	1.25	1.03	0.00
12.50	1.25	1.03	0.00	38.50	1.25	1.03	0.00
13.00	1.25	1.03	0.00	39.00	1.25	1.03	0.00
13.50	1.25	1.03	0.00	39.50	1.25	1.03	0.00
14.00	1.25	1.03	0.00	40.00	1.25	1.03	0.00
14.50	1.25	1.03	0.00	40.50	1.25	1.03	0.00
15.00	1.25	1.03	0.00	41.00	1.25	1.03	0.00
15.50	1.25	1.03	0.00	41.50	1.25	1.03	0.00
16.00	1.25	1.03	0.00	42.00	1.25	1.03	0.00
16.50	1.25	1.03	0.00	42.50	1.25	1.03	0.00
17.00	1.25	1.03	0.00	43.00	1.25	1.03	0.00
17.50	1.25	1.03	0.00	43.50	1.25	1.03	0.00
18.00	1.25	1.03	0.00	44.00	1.25	1.03	0.00
18.50	1.25	1.03	0.00	44.50	1.25	1.03	0.00
19.00	1.25	1.03	0.00	45.00	1.25	1.03	0.00
19.50	1.25	1.03	0.00	45.50	1.25	1.03	0.00
20.00	1.25	1.03	0.00	46.00	1.25	1.03	0.00
20.50	1.25	1.03	0.00	46.50	1.25	1.03	0.00
21.00	1.25	1.03	0.00	47.00	1.25	1.03	0.00
21.50	1.25	1.03	0.00	47.50	1.25	1.03	0.00
22.00	1.25	1.03	0.00	48.00	1.25	1.03	0.00
22.50	1.25	1.03	0.00				
23.00	1.25	1.03	0.00				
23.50	1.25	1.03	0.00				
24.00	1.25	1.03	0.00				
24.50	1.25	1.03	0.00				

Summary for Subcatchment 2L: DA#2 (LAWN) TO WQ BASIN#2

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description			
2,209	39	>75% Grass cover, Good, HSG A			
2,209		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Stage-Area-Storage for Pond WQ2: WQ BASIN #2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
103.50	935	0	104.02	1,023	509
103.51	937	19	104.03	1,025	519
103.52	938	19	104.04	1,026	530
103.53	940	28	104.05	1,028	540
103.54	942	38	104.06	1,030	550
103.55	943	47	104.07	1,031	560
103.56	945	56	104.08	1,033	571
103.57	947	66	104.09	1,035	581
103.58	949	75	104.10	1,036	591
103.59	950	85	104.11	1,038	602
103.60	952	94	104.12	1,040	612
103.61	954	104	104.13	1,041	623
103.62	955	113	104.14	1,043	633
103.63	957	123	104.15	1,045	643
103.64	959	133	104.16	1,047	654
103.65	960	142	104.17	1,048	664
103.66	962	152	104.18	1,050	675
103.67	964	161	104.19	1,052	685
103.68	965	171	104.20	1,053	695
103.69	967	181	104.21	1,055	706
103.70	969	190	104.22	1,057	717
103.71	970	200	104.23	1,058	728
103.72	972	210	104.24	1,060	738
103.73	974	220	104.25	1,062	749
103.74	976	229	104.26	1,063	759
103.75	977	239	104.27	1,065	770
103.76	979	249	104.28	1,067	781
103.77	981	259	104.29	1,069	791
103.78	982	268	104.30	1,070	802
103.79	984	278	104.31	1,072	813
103.80	986	288	104.32	1,074	824
103.81	987	288	104.33	1,075	834
103.82	989	308	104.34	1,077	845
103.83	991	318	104.35	1,079	856
103.84	992	328	104.36	1,080	867
103.85	994	338	104.37	1,082	877
103.86	996	348	104.38	1,084	888
103.87	998	358	104.39	1,085	899
103.88	999	368	104.40	1,087	910
103.89	1,001	378	104.41	1,089	921
103.90	1,003	388	104.42	1,090	932
103.91	1,004	398	104.43	1,092	943
103.92	1,006	408	104.44	1,094	954
103.93	1,008	418	104.45	1,096	965
103.94	1,009	428	104.46	1,097	975
103.95	1,011	438	104.47	1,099	986
103.96	1,013	448	104.48	1,101	997
103.97	1,014	458	104.49	1,102	1,008
103.98	1,016	468	104.50	1,104	1,020
103.99	1,018	478			

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

Summary for Subcatchment 2IMP: DA#2 (IMP) TO WQ BASIN#2

Runoff = 0.45 cfs @ 12.17 hrs, Volume= 0.043 af, Depth= 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)	CN	Description			
7,156	98	Paved parking, HSG A			
7,156		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment ZIMP: DA#2 (IMP) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	3.18	0.00
0.50	0.02	0.00	0.00	26.50	3.41	3.18	0.00
1.00	0.04	0.00	0.00	27.00	3.41	3.18	0.00
1.50	0.06	0.00	0.00	27.50	3.41	3.18	0.00
2.00	0.08	0.01	0.00	28.00	3.41	3.18	0.00
2.50	0.10	0.02	0.00	28.50	3.41	3.18	0.00
3.00	0.13	0.03	0.00	29.00	3.41	3.18	0.00
3.50	0.15	0.04	0.00	29.50	3.41	3.18	0.00
4.00	0.18	0.06	0.01	30.00	3.41	3.18	0.00
4.50	0.21	0.07	0.01	30.50	3.41	3.18	0.00
5.00	0.23	0.09	0.01	31.00	3.41	3.18	0.00
5.50	0.26	0.11	0.01	31.50	3.41	3.18	0.00
6.00	0.29	0.14	0.01	32.00	3.41	3.18	0.00
6.50	0.32	0.16	0.01	32.50	3.41	3.18	0.00
7.00	0.36	0.19	0.01	33.00	3.41	3.18	0.00
7.50	0.40	0.23	0.01	33.50	3.41	3.18	0.00
8.00	0.44	0.27	0.01	34.00	3.41	3.18	0.00
8.50	0.49	0.31	0.01	34.50	3.41	3.18	0.00
9.00	0.54	0.36	0.02	35.00	3.41	3.18	0.00
9.50	0.60	0.41	0.02	35.50	3.41	3.18	0.00
10.00	0.68	0.48	0.02	36.00	3.41	3.18	0.00
10.50	0.76	0.56	0.03	36.50	3.41	3.18	0.00
11.00	0.89	0.68	0.04	37.00	3.41	3.18	0.00
11.50	1.08	0.87	0.07	37.50	3.41	3.18	0.00
12.00	1.63	1.41	0.22	38.00	3.41	3.18	0.00
12.50	2.33	2.10	0.12	38.50	3.41	3.18	0.00
13.00	2.52	2.29	0.06	39.00	3.41	3.18	0.00
13.50	2.65	2.42	0.04	39.50	3.41	3.18	0.00
14.00	2.73	2.50	0.03	40.00	3.41	3.18	0.00
14.50	2.81	2.58	0.02	40.50	3.41	3.18	0.00
15.00	2.87	2.64	0.02	41.00	3.41	3.18	0.00
15.50	2.92	2.69	0.02	41.50	3.41	3.18	0.00
16.00	2.97	2.74	0.02	42.00	3.41	3.18	0.00
16.50	3.01	2.78	0.01	42.50	3.41	3.18	0.00
17.00	3.05	2.82	0.01	43.00	3.41	3.18	0.00
17.50	3.09	2.85	0.01	43.50	3.41	3.18	0.00
18.00	3.12	2.89	0.01	44.00	3.41	3.18	0.00
18.50	3.15	2.92	0.01	44.50	3.41	3.18	0.00
19.00	3.18	2.94	0.01	45.00	3.41	3.18	0.00
19.50	3.20	2.97	0.01	45.50	3.41	3.18	0.00
20.00	3.23	3.00	0.01	46.00	3.41	3.18	0.00
20.50	3.26	3.02	0.01	46.50	3.41	3.18	0.00
21.00	3.28	3.05	0.01	47.00	3.41	3.18	0.00
21.50	3.31	3.07	0.01	47.50	3.41	3.18	0.00
22.00	3.33	3.10	0.01	48.00	3.41	3.18	0.00
22.50	3.35	3.12	0.01				
23.00	3.37	3.14	0.01				
23.50	3.39	3.16	0.01				
24.00	3.41	3.18	0.01				

Hydrograph for Subcatchment 21IMP: DA#2 (IMP) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	3.18	0.00
0.50	0.02	0.00	0.00	26.50	3.41	3.18	0.00
1.00	0.04	0.00	0.00	27.00	3.41	3.18	0.00
1.50	0.06	0.00	0.00	27.50	3.41	3.18	0.00
2.00	0.08	0.01	0.00	28.00	3.41	3.18	0.00
2.50	0.10	0.02	0.00	28.50	3.41	3.18	0.00
3.00	0.13	0.03	0.00	29.00	3.41	3.18	0.00
3.50	0.15	0.04	0.00	29.50	3.41	3.18	0.00
4.00	0.18	0.06	0.01	30.00	3.41	3.18	0.00
4.50	0.21	0.07	0.01	30.50	3.41	3.18	0.00
5.00	0.23	0.09	0.01	31.00	3.41	3.18	0.00
5.50	0.26	0.11	0.01	31.50	3.41	3.18	0.00
6.00	0.29	0.14	0.01	32.00	3.41	3.18	0.00
6.50	0.32	0.16	0.01	32.50	3.41	3.18	0.00
7.00	0.36	0.19	0.01	33.00	3.41	3.18	0.00
7.50	0.40	0.23	0.01	33.50	3.41	3.18	0.00
8.00	0.44	0.27	0.01	34.00	3.41	3.18	0.00
8.50	0.49	0.31	0.01	34.50	3.41	3.18	0.00
9.00	0.54	0.36	0.02	35.00	3.41	3.18	0.00
9.50	0.60	0.41	0.02	35.50	3.41	3.18	0.00
10.00	0.68	0.48	0.02	36.00	3.41	3.18	0.00
10.50	0.76	0.56	0.03	36.50	3.41	3.18	0.00
11.00	0.89	0.68	0.04	37.00	3.41	3.18	0.00
11.50	1.08	0.87	0.07	37.50	3.41	3.18	0.00
12.00	1.63	1.41	0.22	38.00	3.41	3.18	0.00
12.50	2.33	2.10	0.12	38.50	3.41	3.18	0.00
13.00	2.52	2.29	0.06	39.00	3.41	3.18	0.00
13.50	2.65	2.42	0.04	39.50	3.41	3.18	0.00
14.00	2.73	2.50	0.03	40.00	3.41	3.18	0.00
14.50	2.81	2.58	0.02	40.50	3.41	3.18	0.00
15.00	2.87	2.64	0.02	41.00	3.41	3.18	0.00
15.50	2.92	2.69	0.02	41.50	3.41	3.18	0.00
16.00	2.97	2.74	0.02	42.00	3.41	3.18	0.00
16.50	3.01	2.78	0.01	42.50	3.41	3.18	0.00
17.00	3.05	2.82	0.01	43.00	3.41	3.18	0.00
17.50	3.09	2.85	0.01	43.50	3.41	3.18	0.00
18.00	3.12	2.89	0.01	44.00	3.41	3.18	0.00
18.50	3.15	2.92	0.01	44.50	3.41	3.18	0.00
19.00	3.18	2.94	0.01	45.00	3.41	3.18	0.00
19.50	3.20	2.97	0.01	45.50	3.41	3.18	0.00
20.00	3.23	3.00	0.01	46.00	3.41	3.18	0.00
20.50	3.26	3.02	0.01	46.50	3.41	3.18	0.00
21.00	3.28	3.05	0.01	47.00	3.41	3.18	0.00
21.50	3.31	3.07	0.01	47.50	3.41	3.18	0.00
22.00	3.33	3.10	0.01	48.00	3.41	3.18	0.00
22.50	3.35	3.12	0.01				
23.00	3.37	3.14	0.01				
23.50	3.39	3.16	0.01				
24.00	3.41	3.18	0.01				
24.50	3.41	3.18	0.01				

Summary for Subcatchment 2L: DA#2 (LAWN) TO WQ BASIN#2

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)	CN	Description			
2,209	39	>75% Grass cover, Good, HSG A			
2,209		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 2L: DA#2 (LAWN) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	0.00	0.00
0.50	0.02	0.00	0.00	26.50	3.41	0.00	0.00
1.00	0.04	0.00	0.00	27.00	3.41	0.00	0.00
1.50	0.06	0.00	0.00	27.50	3.41	0.00	0.00
2.00	0.08	0.00	0.00	28.00	3.41	0.00	0.00
2.50	0.10	0.00	0.00	28.50	3.41	0.00	0.00
3.00	0.13	0.00	0.00	29.00	3.41	0.00	0.00
3.50	0.15	0.00	0.00	29.50	3.41	0.00	0.00
4.00	0.18	0.00	0.00	30.00	3.41	0.00	0.00
4.50	0.21	0.00	0.00	30.50	3.41	0.00	0.00
5.00	0.23	0.00	0.00	31.00	3.41	0.00	0.00
5.50	0.26	0.00	0.00	31.50	3.41	0.00	0.00
6.00	0.29	0.00	0.00	32.00	3.41	0.00	0.00
6.50	0.32	0.00	0.00	32.50	3.41	0.00	0.00
7.00	0.36	0.00	0.00	33.00	3.41	0.00	0.00
7.50	0.40	0.00	0.00	33.50	3.41	0.00	0.00
8.00	0.44	0.00	0.00	34.00	3.41	0.00	0.00
8.50	0.49	0.00	0.00	34.50	3.41	0.00	0.00
9.00	0.54	0.00	0.00	35.00	3.41	0.00	0.00
9.50	0.60	0.00	0.00	35.50	3.41	0.00	0.00
10.00	0.68	0.00	0.00	36.00	3.41	0.00	0.00
10.50	0.76	0.00	0.00	36.50	3.41	0.00	0.00
11.00	0.89	0.00	0.00	37.00	3.41	0.00	0.00
11.50	1.08	0.00	0.00	37.50	3.41	0.00	0.00
12.00	1.63	0.00	0.00	38.00	3.41	0.00	0.00
12.50	2.33	0.00	0.00	38.50	3.41	0.00	0.00
13.00	2.52	0.00	0.00	39.00	3.41	0.00	0.00
13.50	2.65	0.00	0.00	39.50	3.41	0.00	0.00
14.00	2.73	0.00	0.00	40.00	3.41	0.00	0.00
14.50	2.81	0.00	0.00	40.50	3.41	0.00	0.00
15.00	2.87	0.00	0.00	41.00	3.41	0.00	0.00
15.50	2.92	0.00	0.00	41.50	3.41	0.00	0.00
16.00	2.97	0.00	0.00	42.00	3.41	0.00	0.00
16.50	3.01	0.00	0.00	42.50	3.41	0.00	0.00
17.00	3.05	0.00	0.00	43.00	3.41	0.00	0.00
17.50	3.09	0.00	0.00	43.50	3.41	0.00	0.00
18.00	3.12	0.00	0.00	44.00	3.41	0.00	0.00
18.50	3.15	0.00	0.00	44.50	3.41	0.00	0.00
19.00	3.18	0.00	0.00	45.00	3.41	0.00	0.00
19.50	3.20	0.00	0.00	45.50	3.41	0.00	0.00
20.00	3.23	0.00	0.00	46.00	3.41	0.00	0.00
20.50	3.26	0.00	0.00	46.50	3.41	0.00	0.00
21.00	3.28	0.00	0.00	47.00	3.41	0.00	0.00
21.50	3.31	0.00	0.00	47.50	3.41	0.00	0.00
22.00	3.33	0.00	0.00	48.00	3.41	0.00	0.00
22.50	3.35	0.00	0.00				
23.00	3.37	0.00	0.00				
23.50	3.39	0.00	0.00				
24.00	3.41	0.00	0.00				
24.50	3.41	0.00	0.00				

Summary for Pond WQ2: WQ BASIN #2

Inflow Area = 0.215 ac, 76.41% Impervious, Inflow Depth = 2.43" for NOAA-2 event
 Inflow = 0.45 cfs @ 12.17 hrs, Volume= 0.044 af
 Outflow = 0.12 cfs @ 12.53 hrs, Volume= 0.044 af, Atten= 75%, Lag= 21.4 min
 Discarded = 0.12 cfs @ 12.53 hrs, Volume= 0.044 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 103.86' @ 12.53 hrs Surf.Area= 996 sf Storage= 346 cf

Plug-Flow detention time= 14.9 min calculated for 0.043 af (100% of inflow)
 Center-of-Mass det. time= 14.8 min (775.7 - 760.9)

Volume	Invert	Avail.Storage	Storage Description
#1	103.50'	1,020 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Curn.Store (cubic-feet)
103.50	935	0	0
104.50	1,104	1,020	1,020

Device Routing Invert Outlet Devices

#1	Discarded	103.50'	5,000 in/hr Exfiltration over Surface area
#2	Primary	104.25'	2.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Discarded OutFlow Max=0.12 cfs @ 12.53 hrs HW=103.86' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=103.50' (Free Discharge)
 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond WQ2: WQ BASIN #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	103.50	0.00	0.00	0.00
1.00	0.00	0	103.50	0.00	0.00	0.00
2.00	0.00	0	103.50	0.00	0.00	0.00
3.00	0.00	0	103.50	0.00	0.00	0.00
4.00	0.01	0	103.50	0.01	0.01	0.00
5.00	0.01	1	103.50	0.01	0.01	0.00
6.00	0.01	1	103.50	0.01	0.01	0.00
7.00	0.01	1	103.50	0.01	0.01	0.00
8.00	0.01	1	103.50	0.01	0.01	0.00
9.00	0.02	2	103.50	0.02	0.02	0.00
10.00	0.02	2	103.50	0.02	0.02	0.00
11.00	0.04	4	103.50	0.04	0.04	0.00
12.00	0.22	43	103.56	0.11	0.11	0.00
13.00	0.06	285	103.80	0.11	0.11	0.00
14.00	0.03	24	103.53	0.11	0.11	0.00
15.00	0.02	2	103.50	0.02	0.02	0.00
16.00	0.02	1	103.50	0.02	0.02	0.00
17.00	0.01	1	103.50	0.01	0.01	0.00
18.00	0.01	1	103.50	0.01	0.01	0.00
19.00	0.01	1	103.50	0.01	0.01	0.00
20.00	0.01	1	103.50	0.01	0.01	0.00
21.00	0.01	1	103.50	0.01	0.01	0.00
22.00	0.01	1	103.50	0.01	0.01	0.00
23.00	0.01	1	103.50	0.01	0.01	0.00
24.00	0.01	1	103.50	0.01	0.01	0.00
25.00	0.00	0	103.50	0.00	0.00	0.00
26.00	0.00	0	103.50	0.00	0.00	0.00
27.00	0.00	0	103.50	0.00	0.00	0.00
28.00	0.00	0	103.50	0.00	0.00	0.00
29.00	0.00	0	103.50	0.00	0.00	0.00
30.00	0.00	0	103.50	0.00	0.00	0.00
31.00	0.00	0	103.50	0.00	0.00	0.00
32.00	0.00	0	103.50	0.00	0.00	0.00
33.00	0.00	0	103.50	0.00	0.00	0.00
34.00	0.00	0	103.50	0.00	0.00	0.00
35.00	0.00	0	103.50	0.00	0.00	0.00
36.00	0.00	0	103.50	0.00	0.00	0.00
37.00	0.00	0	103.50	0.00	0.00	0.00
38.00	0.00	0	103.50	0.00	0.00	0.00
39.00	0.00	0	103.50	0.00	0.00	0.00
40.00	0.00	0	103.50	0.00	0.00	0.00
41.00	0.00	0	103.50	0.00	0.00	0.00
42.00	0.00	0	103.50	0.00	0.00	0.00
43.00	0.00	0	103.50	0.00	0.00	0.00
44.00	0.00	0	103.50	0.00	0.00	0.00
45.00	0.00	0	103.50	0.00	0.00	0.00
46.00	0.00	0	103.50	0.00	0.00	0.00
47.00	0.00	0	103.50	0.00	0.00	0.00
48.00	0.00	0	103.50	0.00	0.00	0.00

Summary for Subcatchment 2IMP: DA#2 (IMP) TO WQ BASIN#2

Runoff = 0.69 cfs @ 12.17 hrs, Volume= 0.068 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description		
7.156	98	Paved parking, HSG A		
7.156		100.00% Impervious Area		
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0				Direct Entry, Sheet Flow

Hydrograph for Subcatchment ZIMP: DA#2 (IMP) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	4.93	0.00
0.50	0.03	0.00	0.00	26.50	5.17	4.93	0.00
1.00	0.06	0.00	0.00	27.00	5.17	4.93	0.00
1.50	0.09	0.01	0.00	27.50	5.17	4.93	0.00
2.00	0.12	0.02	0.01	28.00	5.17	4.93	0.00
2.50	0.16	0.04	0.01	28.50	5.17	4.93	0.00
3.00	0.19	0.07	0.01	29.00	5.17	4.93	0.00
3.50	0.23	0.09	0.01	29.50	5.17	4.93	0.00
4.00	0.27	0.12	0.01	30.00	5.17	4.93	0.00
4.50	0.31	0.15	0.01	30.50	5.17	4.93	0.00
5.00	0.35	0.19	0.01	31.00	5.17	4.93	0.00
5.50	0.40	0.23	0.01	31.50	5.17	4.93	0.00
6.00	0.44	0.27	0.01	32.00	5.17	4.93	0.00
6.50	0.49	0.31	0.01	32.50	5.17	4.93	0.00
7.00	0.54	0.36	0.02	33.00	5.17	4.93	0.00
7.50	0.60	0.41	0.02	33.50	5.17	4.93	0.00
8.00	0.67	0.48	0.02	34.00	5.17	4.93	0.00
8.50	0.74	0.54	0.02	34.50	5.17	4.93	0.00
9.00	0.82	0.62	0.02	35.00	5.17	4.93	0.00
9.50	0.91	0.71	0.03	35.50	5.17	4.93	0.00
10.00	1.02	0.82	0.04	36.00	5.17	4.93	0.00
10.50	1.16	0.94	0.04	36.50	5.17	4.93	0.00
11.00	1.34	1.13	0.07	37.00	5.17	4.93	0.00
11.50	1.64	1.42	0.10	37.50	5.17	4.93	0.00
12.00	2.48	2.25	0.34	38.00	5.17	4.93	0.00
12.50	3.53	3.30	0.18	38.50	5.17	4.93	0.00
13.00	3.83	3.59	0.09	39.00	5.17	4.93	0.00
13.50	4.01	3.78	0.06	39.50	5.17	4.93	0.00
14.00	4.15	3.91	0.04	40.00	5.17	4.93	0.00
14.50	4.26	4.02	0.04	40.50	5.17	4.93	0.00
15.00	4.35	4.11	0.03	41.00	5.17	4.93	0.00
15.50	4.43	4.19	0.03	41.50	5.17	4.93	0.00
16.00	4.50	4.26	0.02	42.00	5.17	4.93	0.00
16.50	4.57	4.33	0.02	42.50	5.17	4.93	0.00
17.00	4.63	4.39	0.02	43.00	5.17	4.93	0.00
17.50	4.68	4.44	0.02	43.50	5.17	4.93	0.00
18.00	4.73	4.49	0.02	44.00	5.17	4.93	0.00
18.50	4.77	4.54	0.01	44.50	5.17	4.93	0.00
19.00	4.82	4.58	0.01	45.00	5.17	4.93	0.00
19.50	4.86	4.62	0.01	45.50	5.17	4.93	0.00
20.00	4.90	4.66	0.01	46.00	5.17	4.93	0.00
20.50	4.94	4.70	0.01	46.50	5.17	4.93	0.00
21.00	4.98	4.74	0.01	47.00	5.17	4.93	0.00
21.50	5.01	4.77	0.01	47.50	5.17	4.93	0.00
22.00	5.05	4.81	0.01	48.00	5.17	4.93	0.00
22.50	5.08	4.84	0.01				
23.00	5.11	4.87	0.01				
23.50	5.14	4.90	0.01				
24.00	5.17	4.93	0.01				
24.50	5.17	4.93	0.00				

Summary for Subcatchment 2L: DA#2 (LAWN) TO WQ BASIN#2

Runoff = 0.00 cfs @ 12.93 hrs, Volume= 0.001 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description			
2,209	39	>75% Grass cover, Good, HSG A			
2,209		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 2L: DA#2 (LAWN) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	0.24	0.00
0.50	0.03	0.00	0.00	26.50	5.17	0.24	0.00
1.00	0.06	0.00	0.00	27.00	5.17	0.24	0.00
1.50	0.09	0.00	0.00	27.50	5.17	0.24	0.00
2.00	0.12	0.00	0.00	28.00	5.17	0.24	0.00
2.50	0.16	0.00	0.00	28.50	5.17	0.24	0.00
3.00	0.19	0.00	0.00	29.00	5.17	0.24	0.00
3.50	0.23	0.00	0.00	29.50	5.17	0.24	0.00
4.00	0.27	0.00	0.00	30.00	5.17	0.24	0.00
4.50	0.31	0.00	0.00	30.50	5.17	0.24	0.00
5.00	0.35	0.00	0.00	31.00	5.17	0.24	0.00
5.50	0.40	0.00	0.00	31.50	5.17	0.24	0.00
6.00	0.44	0.00	0.00	32.00	5.17	0.24	0.00
6.50	0.49	0.00	0.00	32.50	5.17	0.24	0.00
7.00	0.54	0.00	0.00	33.00	5.17	0.24	0.00
7.50	0.60	0.00	0.00	33.50	5.17	0.24	0.00
8.00	0.67	0.00	0.00	34.00	5.17	0.24	0.00
8.50	0.74	0.00	0.00	34.50	5.17	0.24	0.00
9.00	0.82	0.00	0.00	35.00	5.17	0.24	0.00
9.50	0.91	0.00	0.00	35.50	5.17	0.24	0.00
10.00	1.02	0.00	0.00	36.00	5.17	0.24	0.00
10.50	1.16	0.00	0.00	36.50	5.17	0.24	0.00
11.00	1.34	0.00	0.00	37.00	5.17	0.24	0.00
11.50	1.64	0.00	0.00	37.50	5.17	0.24	0.00
12.00	2.48	0.00	0.00	38.00	5.17	0.24	0.00
12.50	3.53	0.01	0.00	38.50	5.17	0.24	0.00
13.00	3.83	0.03	0.00	39.00	5.17	0.24	0.00
13.50	4.01	0.05	0.00	39.50	5.17	0.24	0.00
14.00	4.15	0.06	0.00	40.00	5.17	0.24	0.00
14.50	4.26	0.08	0.00	40.50	5.17	0.24	0.00
15.00	4.35	0.09	0.00	41.00	5.17	0.24	0.00
15.50	4.43	0.10	0.00	41.50	5.17	0.24	0.00
16.00	4.57	0.11	0.00	42.00	5.17	0.24	0.00
16.50	4.63	0.12	0.00	42.50	5.17	0.24	0.00
17.00	4.68	0.13	0.00	43.00	5.17	0.24	0.00
17.50	4.73	0.14	0.00	43.50	5.17	0.24	0.00
18.00	4.77	0.15	0.00	44.00	5.17	0.24	0.00
18.50	4.82	0.16	0.00	44.50	5.17	0.24	0.00
19.00	4.86	0.17	0.00	45.00	5.17	0.24	0.00
19.50	4.90	0.18	0.00	45.50	5.17	0.24	0.00
20.00	4.94	0.19	0.00	46.00	5.17	0.24	0.00
20.50	4.98	0.20	0.00	46.50	5.17	0.24	0.00
21.00	5.01	0.20	0.00	47.00	5.17	0.24	0.00
21.50	5.05	0.21	0.00	47.50	5.17	0.24	0.00
22.00	5.08	0.22	0.00	48.00	5.17	0.24	0.00
22.50	5.11	0.22	0.00				
23.00	5.14	0.23	0.00				
23.50	5.17	0.24	0.00				
24.00	5.17	0.24	0.00				

Summary for Pond WQ2: WQ BASIN #2

Inflow Area = 0.215 ac, 76.41% Impervious, Inflow Depth = 3.82" for NOAA-10 event
 Inflow = 0.69 cfs @ 12.17 hrs, Volume= 0.069 af
 Outflow = 0.12 cfs @ 12.72 hrs, Volume= 0.069 af, Atten= 82%, Lag= 32.9 min
 Discarded = 0.12 cfs @ 12.72 hrs, Volume= 0.069 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 104.22' @ 12.72 hrs Surf.Area= 1,056 sf Storage= 714 cf

Plug-Flow detention time= 33.3 min calculated for 0.068 af (100% of inflow)
 Center-of-Mass det. time= 33.3 min (789.7 - 756.4)

Volume	Invert	Avail.Storage	Storage Description
#1	103.50'	1,020 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
103.50	935	0	0
104.50	1,104	1,020	1,020

Device Routing Invert Outlet Devices

#1 Discarded 103.50' 5,000 In/hr Exfiltration over Surface area
 #2 Primary 104.25' 2.0' long Sharp-Crested Rectangular Weir 2 End Contractions)

Discarded Outflow Max=0.12 cfs @ 12.72 hrs HW=104.22' (Free Discharge)
 1-Exfiltration (Exfiltration Controls 0.12 cfs)

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=103.50' (Free Discharge)
 2-Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond WQ2: WQ BASIN #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	103.50	0.00	0.00	0.00
1.00	0.00	0	103.50	0.00	0.00	0.00
2.00	0.01	0	103.50	0.00	0.00	0.00
3.00	0.01	1	103.50	0.01	0.01	0.00
4.00	0.01	1	103.50	0.01	0.01	0.00
5.00	0.01	1	103.50	0.01	0.01	0.00
6.00	0.01	1	103.50	0.01	0.01	0.00
7.00	0.02	1	103.50	0.02	0.02	0.00
8.00	0.02	2	103.50	0.02	0.02	0.00
9.00	0.02	2	103.50	0.02	0.02	0.00
10.00	0.04	3	103.50	0.04	0.04	0.00
11.00	0.07	6	103.51	0.06	0.06	0.00
12.00	0.34	129	103.64	0.11	0.11	0.00
13.00	0.09	697	104.20	0.12	0.12	0.00
14.00	0.04	484	104.00	0.12	0.12	0.00
15.00	0.03	203	103.71	0.11	0.11	0.00
16.00	0.02	2	103.50	0.02	0.02	0.00
17.00	0.02	2	103.50	0.02	0.02	0.00
18.00	0.02	1	103.50	0.02	0.02	0.00
19.00	0.02	1	103.50	0.02	0.02	0.00
20.00	0.01	1	103.50	0.01	0.01	0.00
21.00	0.01	1	103.50	0.01	0.01	0.00
22.00	0.01	1	103.50	0.01	0.01	0.00
23.00	0.01	1	103.50	0.01	0.01	0.00
24.00	0.01	1	103.50	0.01	0.01	0.00
25.00	0.00	0	103.50	0.00	0.00	0.00
26.00	0.00	0	103.50	0.00	0.00	0.00
27.00	0.00	0	103.50	0.00	0.00	0.00
28.00	0.00	0	103.50	0.00	0.00	0.00
29.00	0.00	0	103.50	0.00	0.00	0.00
30.00	0.00	0	103.50	0.00	0.00	0.00
31.00	0.00	0	103.50	0.00	0.00	0.00
32.00	0.00	0	103.50	0.00	0.00	0.00
33.00	0.00	0	103.50	0.00	0.00	0.00
34.00	0.00	0	103.50	0.00	0.00	0.00
35.00	0.00	0	103.50	0.00	0.00	0.00
36.00	0.00	0	103.50	0.00	0.00	0.00
37.00	0.00	0	103.50	0.00	0.00	0.00
38.00	0.00	0	103.50	0.00	0.00	0.00
39.00	0.00	0	103.50	0.00	0.00	0.00
40.00	0.00	0	103.50	0.00	0.00	0.00
41.00	0.00	0	103.50	0.00	0.00	0.00
42.00	0.00	0	103.50	0.00	0.00	0.00
43.00	0.00	0	103.50	0.00	0.00	0.00
44.00	0.00	0	103.50	0.00	0.00	0.00
45.00	0.00	0	103.50	0.00	0.00	0.00
46.00	0.00	0	103.50	0.00	0.00	0.00
47.00	0.00	0	103.50	0.00	0.00	0.00
48.00	0.00	0	103.50	0.00	0.00	0.00

Summary for Subcatchment 2IMP: DA#2 (IMP) TO WQ BASIN#2

Runoff = 1.15 cfs @ 12.17 hrs, Volume= 0.114 af, Depth= 8.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)		CN	Description		
7,156	98		Paved parking, HSG A		
7,156			100.00% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 2IMP: DA#2 (IMP) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	8.35	0.00
0.50	0.05	0.00	0.00	26.50	8.59	8.35	0.00
1.00	0.10	0.01	0.01	27.00	8.59	8.35	0.00
1.50	0.15	0.04	0.01	27.50	8.59	8.35	0.00
2.00	0.21	0.07	0.01	28.00	8.59	8.35	0.00
2.50	0.26	0.12	0.01	28.50	8.59	8.35	0.00
3.00	0.32	0.16	0.02	29.00	8.59	8.35	0.00
3.50	0.39	0.22	0.02	29.50	8.59	8.35	0.00
4.00	0.45	0.27	0.02	30.00	8.59	8.35	0.00
4.50	0.52	0.33	0.02	30.50	8.59	8.35	0.00
5.00	0.59	0.40	0.02	31.00	8.59	8.35	0.00
5.50	0.66	0.46	0.02	31.50	8.59	8.35	0.00
6.00	0.73	0.53	0.02	32.00	8.59	8.35	0.00
6.50	0.81	0.61	0.03	32.50	8.59	8.35	0.00
7.00	0.90	0.70	0.03	33.00	8.59	8.35	0.00
7.50	1.01	0.80	0.04	33.50	8.59	8.35	0.00
8.00	1.11	0.90	0.04	34.00	8.59	8.35	0.00
8.50	1.23	1.02	0.04	34.50	8.59	8.35	0.00
9.00	1.36	1.15	0.04	35.00	8.59	8.35	0.00
9.50	1.52	1.30	0.05	35.50	8.59	8.35	0.00
10.00	1.70	1.48	0.06	36.00	8.59	8.35	0.00
10.50	1.92	1.70	0.07	36.50	8.59	8.35	0.00
11.00	2.23	2.01	0.11	37.00	8.59	8.35	0.00
11.50	2.72	2.49	0.18	37.50	8.59	8.35	0.00
12.00	4.12	3.88	0.57	38.00	8.59	8.35	0.00
12.50	5.87	5.63	1.31	38.50	8.59	8.35	0.00
13.00	6.36	6.12	0.15	39.00	8.59	8.35	0.00
13.50	6.67	6.43	0.09	39.50	8.59	8.35	0.00
14.00	6.89	6.65	0.07	40.00	8.59	8.35	0.00
14.50	7.07	6.83	0.06	40.50	8.59	8.35	0.00
15.00	7.23	6.99	0.05	41.00	8.59	8.35	0.00
15.50	7.36	7.12	0.04	41.50	8.59	8.35	0.00
16.00	7.48	7.24	0.04	42.00	8.59	8.35	0.00
16.50	7.58	7.35	0.03	42.50	8.59	8.35	0.00
17.00	7.69	7.45	0.03	43.00	8.59	8.35	0.00
17.50	7.78	7.54	0.03	43.50	8.59	8.35	0.00
18.00	7.86	7.62	0.03	44.00	8.59	8.35	0.00
18.50	7.93	7.69	0.02	44.50	8.59	8.35	0.00
19.00	8.00	7.76	0.02	45.00	8.59	8.35	0.00
19.50	8.07	7.83	0.02	45.50	8.59	8.35	0.00
20.00	8.14	7.90	0.02	46.00	8.59	8.35	0.00
20.50	8.20	7.96	0.02	46.50	8.59	8.35	0.00
21.00	8.27	8.03	0.02	47.00	8.59	8.35	0.00
21.50	8.33	8.09	0.02	47.50	8.59	8.35	0.00
22.00	8.38	8.14	0.02	48.00	8.59	8.35	0.00
22.50	8.44	8.20	0.02				
23.00	8.49	8.25	0.02				
23.50	8.54	8.30	0.02				
24.00	8.59	8.35	0.02				
24.50	8.59	8.35	0.00				

Summary for Subcatchment 2L: DA#2 (LAWN) TO WQ BASIN#2

Runoff = 0.05 cfs @ 12.20 hrs, Volume= 0.006 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)		CN	Description		
2,209		39	>75% Grass cover, Good, HSG A		
2,209			100.00% Pervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 21: DA#2 (LAWN) TO WQ BASIN#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	1.41	0.00
0.50	0.05	0.00	0.00	26.50	8.59	1.41	0.00
1.00	0.10	0.00	0.00	27.00	8.59	1.41	0.00
1.50	0.15	0.00	0.00	27.50	8.59	1.41	0.00
2.00	0.21	0.00	0.00	28.00	8.59	1.41	0.00
2.50	0.26	0.00	0.00	28.50	8.59	1.41	0.00
3.00	0.32	0.00	0.00	29.00	8.59	1.41	0.00
3.50	0.39	0.00	0.00	29.50	8.59	1.41	0.00
4.00	0.45	0.00	0.00	30.00	8.59	1.41	0.00
4.50	0.52	0.00	0.00	30.50	8.59	1.41	0.00
5.00	0.59	0.00	0.00	31.00	8.59	1.41	0.00
5.50	0.66	0.00	0.00	31.50	8.59	1.41	0.00
6.00	0.73	0.00	0.00	32.00	8.59	1.41	0.00
6.50	0.81	0.00	0.00	32.50	8.59	1.41	0.00
7.00	0.90	0.00	0.00	33.00	8.59	1.41	0.00
7.50	1.01	0.00	0.00	33.50	8.59	1.41	0.00
8.00	1.11	0.00	0.00	34.00	8.59	1.41	0.00
8.50	1.23	0.00	0.00	34.50	8.59	1.41	0.00
9.00	1.36	0.00	0.00	35.00	8.59	1.41	0.00
9.50	1.52	0.00	0.00	35.50	8.59	1.41	0.00
10.00	1.70	0.00	0.00	36.00	8.59	1.41	0.00
10.50	1.92	0.00	0.00	36.50	8.59	1.41	0.00
11.00	2.23	0.00	0.00	37.00	8.59	1.41	0.00
11.50	2.72	0.00	0.00	37.50	8.59	1.41	0.00
12.00	4.12	0.06	0.02	38.00	8.59	1.41	0.00
12.50	5.87	0.41	0.01	38.50	8.59	1.41	0.00
13.00	6.36	0.55	0.01	39.00	8.59	1.41	0.00
13.50	6.67	0.65	0.01	39.50	8.59	1.41	0.00
14.00	6.89	0.73	0.01	40.00	8.59	1.41	0.00
14.50	7.07	0.79	0.01	40.50	8.59	1.41	0.00
15.00	7.23	0.85	0.01	41.00	8.59	1.41	0.00
15.50	7.36	0.90	0.00	41.50	8.59	1.41	0.00
16.00	7.48	0.95	0.00	42.00	8.59	1.41	0.00
16.50	7.58	0.99	0.00	42.50	8.59	1.41	0.00
17.00	7.69	1.03	0.00	43.00	8.59	1.41	0.00
17.50	7.78	1.06	0.00	43.50	8.59	1.41	0.00
18.00	7.86	1.10	0.00	44.00	8.59	1.41	0.00
18.50	7.93	1.13	0.00	44.50	8.59	1.41	0.00
19.00	8.00	1.16	0.00	45.00	8.59	1.41	0.00
19.50	8.07	1.19	0.00	45.50	8.59	1.41	0.00
20.00	8.14	1.22	0.00	46.00	8.59	1.41	0.00
20.50	8.20	1.24	0.00	46.50	8.59	1.41	0.00
21.00	8.27	1.27	0.00	47.00	8.59	1.41	0.00
21.50	8.33	1.30	0.00	47.50	8.59	1.41	0.00
22.00	8.36	1.32	0.00	48.00	8.59	1.41	0.00
22.50	8.44	1.35	0.00				
23.00	8.49	1.37	0.00				
23.50	8.54	1.39	0.00				
24.00	8.59	1.41	0.00				
24.50	8.59	1.41	0.00				
25.00	8.59	1.41	0.00				

Summary for Pond WQ2: WQ BASIN #2

Inflow Area = 0.215 ac, 76.41% Impervious, Inflow Depth = 6.71" for NOAA-100 event
Inflow = 1.20 cfs @ 12.17 hrs, Volume = 0.120 af
Outflow = 0.85 cfs @ 12.27 hrs, Volume = 0.120 af, Atten = 30%, Lag = 6.3 min
Discarded = 0.13 cfs @ 12.27 hrs, Volume = 0.098 af
Primary = 0.72 cfs @ 12.27 hrs, Volume = 0.022 af

Routing by Stor-Ind method, Time Span = 0.00-48.00 hrs, dt = 0.05 hrs
Peak Elev = 104.48' @ 12.27 hrs Surf Area = 1,101 sf Storage = 1,002 cf
Plug-Flow detention time = 32.5 min calculated for 0.120 af (100% of inflow)
Center-of-Mass det. time = 32.5 min (786.2 - 753.7)

Volume	Invert	Avail. Storage	Storage Description
#1	103.50'	1,020 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
103.50	935	0	0
104.50	1,104	1,020	1,020

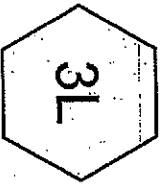
Device	Routing	Invert	Outlet Devices
#1	Discarded	103.50'	5,000 in/hr Exfiltration over Surface area
#2	Primary	104.25'	2.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Discarded Outflow Max = 0.13 cfs @ 12.27 hrs HW = 104.48' (Free Discharge)
1-1 = Exfiltration (Exfiltration Controls 0.13 cfs)

Primary Outflow Max = 0.69 cfs @ 12.27 hrs HW = 104.48' (Free Discharge)
2-2 = Sharp-Crested Rectangular Weir (Weir Controls 0.69 cfs @ 1.56 fps)

Hydrograph for Pond WQ2: WQ BASIN #2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	103.50	0.00	0.00	0.00
1.00	0.01	0	103.50	0.00	0.00	0.00
2.00	0.01	1	103.50	0.01	0.01	0.00
3.00	0.02	1	103.50	0.02	0.02	0.00
4.00	0.02	2	103.50	0.02	0.02	0.00
5.00	0.02	2	103.50	0.02	0.02	0.00
6.00	0.02	2	103.50	0.02	0.02	0.00
7.00	0.03	3	103.50	0.03	0.03	0.00
8.00	0.04	3	103.50	0.04	0.04	0.00
9.00	0.04	4	103.50	0.04	0.04	0.00
10.00	0.06	5	103.51	0.06	0.06	0.00
11.00	0.11	9	103.51	0.11	0.11	0.00
12.00	0.57	394	103.91	0.12	0.12	0.00
13.00	0.16	798	104.30	0.19	0.12	0.06
14.00	0.08	693	104.20	0.12	0.12	0.00
15.00	0.05	499	104.01	0.12	0.12	0.00
16.00	0.04	253	103.76	0.11	0.11	0.00
17.00	0.04	4	103.50	0.04	0.04	0.00
18.00	0.03	3	103.50	0.03	0.03	0.00
19.00	0.03	2	103.50	0.03	0.03	0.00
20.00	0.02	2	103.50	0.02	0.02	0.00
21.00	0.02	2	103.50	0.02	0.02	0.00
22.00	0.02	2	103.50	0.02	0.02	0.00
23.00	0.02	2	103.50	0.02	0.02	0.00
24.00	0.02	2	103.50	0.02	0.02	0.00
25.00	0.00	0	103.50	0.00	0.00	0.00
26.00	0.00	0	103.50	0.00	0.00	0.00
27.00	0.00	0	103.50	0.00	0.00	0.00
28.00	0.00	0	103.50	0.00	0.00	0.00
29.00	0.00	0	103.50	0.00	0.00	0.00
30.00	0.00	0	103.50	0.00	0.00	0.00
31.00	0.00	0	103.50	0.00	0.00	0.00
32.00	0.00	0	103.50	0.00	0.00	0.00
33.00	0.00	0	103.50	0.00	0.00	0.00
34.00	0.00	0	103.50	0.00	0.00	0.00
35.00	0.00	0	103.50	0.00	0.00	0.00
36.00	0.00	0	103.50	0.00	0.00	0.00
37.00	0.00	0	103.50	0.00	0.00	0.00
38.00	0.00	0	103.50	0.00	0.00	0.00
39.00	0.00	0	103.50	0.00	0.00	0.00
40.00	0.00	0	103.50	0.00	0.00	0.00
41.00	0.00	0	103.50	0.00	0.00	0.00
42.00	0.00	0	103.50	0.00	0.00	0.00
43.00	0.00	0	103.50	0.00	0.00	0.00
44.00	0.00	0	103.50	0.00	0.00	0.00
45.00	0.00	0	103.50	0.00	0.00	0.00
46.00	0.00	0	103.50	0.00	0.00	0.00
47.00	0.00	0	103.50	0.00	0.00	0.00
48.00	0.00	0	103.50	0.00	0.00	0.00



DA#3 (LAWN) TO WQ
BASIN#3



DA#3 (IMP) TO WQ
BASIN#3



WQ BASIN #3



17 VAN VOOREN DRIVE-POST-DEV

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Printed 9/14/2021
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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	WQ	NJ DEP 2-hr		Default	2.00	1	1.25	2

Summary for Subcatchment 3IMP: DA#3 (IMP) TO WQ BASIN#3

Runoff = 0.30 cfs @ 1.15 hrs, Volume= 0.010 af, Depth= 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)	CN	Description			
5,054	98	Paved parking, HSG A			
5,054		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 3IMP: DA#3 (IMP) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	1.25	1.03	0.00
0.50	0.10	0.01	0.00	26.50	1.25	1.03	0.00
1.00	0.63	0.43	0.12	27.00	1.25	1.03	0.00
1.50	1.15	0.94	0.05	27.50	1.25	1.03	0.00
2.00	1.25	1.03	0.01	28.00	1.25	1.03	0.00
2.50	1.25	1.03	0.00	28.50	1.25	1.03	0.00
3.00	1.25	1.03	0.00	29.00	1.25	1.03	0.00
3.50	1.25	1.03	0.00	29.50	1.25	1.03	0.00
4.00	1.25	1.03	0.00	30.00	1.25	1.03	0.00
4.50	1.25	1.03	0.00	30.50	1.25	1.03	0.00
5.00	1.25	1.03	0.00	31.00	1.25	1.03	0.00
5.50	1.25	1.03	0.00	31.50	1.25	1.03	0.00
6.00	1.25	1.03	0.00	32.00	1.25	1.03	0.00
6.50	1.25	1.03	0.00	32.50	1.25	1.03	0.00
7.00	1.25	1.03	0.00	33.00	1.25	1.03	0.00
7.50	1.25	1.03	0.00	33.50	1.25	1.03	0.00
8.00	1.25	1.03	0.00	34.00	1.25	1.03	0.00
8.50	1.25	1.03	0.00	34.50	1.25	1.03	0.00
9.00	1.25	1.03	0.00	35.00	1.25	1.03	0.00
9.50	1.25	1.03	0.00	35.50	1.25	1.03	0.00
10.00	1.25	1.03	0.00	36.00	1.25	1.03	0.00
10.50	1.25	1.03	0.00	36.50	1.25	1.03	0.00
11.00	1.25	1.03	0.00	37.00	1.25	1.03	0.00
11.50	1.25	1.03	0.00	37.50	1.25	1.03	0.00
12.00	1.25	1.03	0.00	38.00	1.25	1.03	0.00
12.50	1.25	1.03	0.00	38.50	1.25	1.03	0.00
13.00	1.25	1.03	0.00	39.00	1.25	1.03	0.00
13.50	1.25	1.03	0.00	39.50	1.25	1.03	0.00
14.00	1.25	1.03	0.00	40.00	1.25	1.03	0.00
14.50	1.25	1.03	0.00	40.50	1.25	1.03	0.00
15.00	1.25	1.03	0.00	41.00	1.25	1.03	0.00
15.50	1.25	1.03	0.00	41.50	1.25	1.03	0.00
16.00	1.25	1.03	0.00	42.00	1.25	1.03	0.00
16.50	1.25	1.03	0.00	42.50	1.25	1.03	0.00
17.00	1.25	1.03	0.00	43.00	1.25	1.03	0.00
17.50	1.25	1.03	0.00	43.50	1.25	1.03	0.00
18.00	1.25	1.03	0.00	44.00	1.25	1.03	0.00
18.50	1.25	1.03	0.00	44.50	1.25	1.03	0.00
19.00	1.25	1.03	0.00	45.00	1.25	1.03	0.00
19.50	1.25	1.03	0.00	45.50	1.25	1.03	0.00
20.00	1.25	1.03	0.00	46.00	1.25	1.03	0.00
20.50	1.25	1.03	0.00	46.50	1.25	1.03	0.00
21.00	1.25	1.03	0.00	47.00	1.25	1.03	0.00
21.50	1.25	1.03	0.00	47.50	1.25	1.03	0.00
22.00	1.25	1.03	0.00	48.00	1.25	1.03	0.00
22.50	1.25	1.03	0.00				
23.00	1.25	1.03	0.00				
23.50	1.25	1.03	0.00				
24.00	1.25	1.03	0.00				
24.50	1.25	1.03	0.00				

Summary for Subcatchment 3L: DA#3 (LAWN) TO WQ BASIN#3

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NJ DEP 2-hr WQ Rainfall=1.25"

Area (sf)		CN	Description		
2,539		39	>75% Grass cover, Good, HSG A		
2,539			100.00% Pervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 31: DA#3 (LAWN) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	1.25	0.00	0.00
0.50	0.10	0.00	0.00	26.50	1.25	0.00	0.00
1.00	0.63	0.00	0.00	27.00	1.25	0.00	0.00
1.50	1.15	0.00	0.00	27.50	1.25	0.00	0.00
2.00	1.25	0.00	0.00	28.00	1.25	0.00	0.00
2.50	1.25	0.00	0.00	28.50	1.25	0.00	0.00
3.00	1.25	0.00	0.00	29.00	1.25	0.00	0.00
3.50	1.25	0.00	0.00	29.50	1.25	0.00	0.00
4.00	1.25	0.00	0.00	30.00	1.25	0.00	0.00
4.50	1.25	0.00	0.00	30.50	1.25	0.00	0.00
5.00	1.25	0.00	0.00	31.00	1.25	0.00	0.00
5.50	1.25	0.00	0.00	31.50	1.25	0.00	0.00
6.00	1.25	0.00	0.00	32.00	1.25	0.00	0.00
6.50	1.25	0.00	0.00	32.50	1.25	0.00	0.00
7.00	1.25	0.00	0.00	33.00	1.25	0.00	0.00
7.50	1.25	0.00	0.00	33.50	1.25	0.00	0.00
8.00	1.25	0.00	0.00	34.00	1.25	0.00	0.00
8.50	1.25	0.00	0.00	34.50	1.25	0.00	0.00
9.00	1.25	0.00	0.00	35.00	1.25	0.00	0.00
9.50	1.25	0.00	0.00	35.50	1.25	0.00	0.00
10.00	1.25	0.00	0.00	36.00	1.25	0.00	0.00
10.50	1.25	0.00	0.00	36.50	1.25	0.00	0.00
11.00	1.25	0.00	0.00	37.00	1.25	0.00	0.00
11.50	1.25	0.00	0.00	37.50	1.25	0.00	0.00
12.00	1.25	0.00	0.00	38.00	1.25	0.00	0.00
12.50	1.25	0.00	0.00	38.50	1.25	0.00	0.00
13.00	1.25	0.00	0.00	39.00	1.25	0.00	0.00
13.50	1.25	0.00	0.00	39.50	1.25	0.00	0.00
14.00	1.25	0.00	0.00	40.00	1.25	0.00	0.00
14.50	1.25	0.00	0.00	40.50	1.25	0.00	0.00
15.00	1.25	0.00	0.00	41.00	1.25	0.00	0.00
15.50	1.25	0.00	0.00	41.50	1.25	0.00	0.00
16.00	1.25	0.00	0.00	42.00	1.25	0.00	0.00
16.50	1.25	0.00	0.00	42.50	1.25	0.00	0.00
17.00	1.25	0.00	0.00	43.00	1.25	0.00	0.00
17.50	1.25	0.00	0.00	43.50	1.25	0.00	0.00
18.00	1.25	0.00	0.00	44.00	1.25	0.00	0.00
18.50	1.25	0.00	0.00	44.50	1.25	0.00	0.00
19.00	1.25	0.00	0.00	45.00	1.25	0.00	0.00
19.50	1.25	0.00	0.00	45.50	1.25	0.00	0.00
20.00	1.25	0.00	0.00	46.00	1.25	0.00	0.00
20.50	1.25	0.00	0.00	46.50	1.25	0.00	0.00
21.00	1.25	0.00	0.00	47.00	1.25	0.00	0.00
21.50	1.25	0.00	0.00	47.50	1.25	0.00	0.00
22.00	1.25	0.00	0.00	48.00	1.25	0.00	0.00
22.50	1.25	0.00	0.00				
23.00	1.25	0.00	0.00				
23.50	1.25	0.00	0.00				
24.00	1.25	0.00	0.00				
24.50	1.25	0.00	0.00				

17 VAN VOOREN DRIVE-POST-DEV

NJ DEP 2-hr WQ Rainfall=1.25"

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Summary for Pond WQ3: WQ BASIN #3

Inflow Area = 0.174 ac, 66.56% Impervious, Inflow Depth = 0.69" for WQ event
 Inflow = 0.30 cfs @ 1.15 hrs, Volume= 0.010 af
 Outflow = 0.10 cfs @ 1.35 hrs, Volume= 0.010 af, Atten= 65%, Lag= 12.5 min
 Discarded = 0.10 cfs @ 1.35 hrs, Volume= 0.010 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 102.17' @ 1.35 hrs Surf.Area= 897 sf Storage= 148 cf

Plug-Flow detention time= 12.4 min calculated for 0.010 af (100% of inflow)
 Center-of-Mass det time= 12.4 min (86.4 - 74.0)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	950 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.00	870	0	0
103.00	1,029	950	950

Device Routing Invert Outlet Devices
 #1 Discarded 102.00' 5.000 in/hr Exfiltration over Surface area
 #2 Primary 102.75' 2.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
 Discarded Outflow Max=0.10 cfs @ 1.35 hrs HW=102.17' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.10 cfs)

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=102.00' (Free Discharge)
 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

17 VAN VOOREN DRIVE-POST-DEV

NJ DEP 2-hr WQ Rainfall=1.25"

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Hydrograph for Pond WQ3: WQ BASIN #3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	102.00	0.00	0.00	0.00
1.00	0.12	9	102.01	0.10	0.10	0.00
2.00	0.01	8	102.01	0.09	0.09	0.00
3.00	0.00	0	102.00	0.00	0.00	0.00
4.00	0.00	0	102.00	0.00	0.00	0.00
5.00	0.00	0	102.00	0.00	0.00	0.00
6.00	0.00	0	102.00	0.00	0.00	0.00
7.00	0.00	0	102.00	0.00	0.00	0.00
8.00	0.00	0	102.00	0.00	0.00	0.00
9.00	0.00	0	102.00	0.00	0.00	0.00
10.00	0.00	0	102.00	0.00	0.00	0.00
11.00	0.00	0	102.00	0.00	0.00	0.00
12.00	0.00	0	102.00	0.00	0.00	0.00
13.00	0.00	0	102.00	0.00	0.00	0.00
14.00	0.00	0	102.00	0.00	0.00	0.00
15.00	0.00	0	102.00	0.00	0.00	0.00
16.00	0.00	0	102.00	0.00	0.00	0.00
17.00	0.00	0	102.00	0.00	0.00	0.00
18.00	0.00	0	102.00	0.00	0.00	0.00
19.00	0.00	0	102.00	0.00	0.00	0.00
20.00	0.00	0	102.00	0.00	0.00	0.00
21.00	0.00	0	102.00	0.00	0.00	0.00
22.00	0.00	0	102.00	0.00	0.00	0.00
23.00	0.00	0	102.00	0.00	0.00	0.00
24.00	0.00	0	102.00	0.00	0.00	0.00
25.00	0.00	0	102.00	0.00	0.00	0.00
26.00	0.00	0	102.00	0.00	0.00	0.00
27.00	0.00	0	102.00	0.00	0.00	0.00
28.00	0.00	0	102.00	0.00	0.00	0.00
29.00	0.00	0	102.00	0.00	0.00	0.00
30.00	0.00	0	102.00	0.00	0.00	0.00
31.00	0.00	0	102.00	0.00	0.00	0.00
32.00	0.00	0	102.00	0.00	0.00	0.00
33.00	0.00	0	102.00	0.00	0.00	0.00
34.00	0.00	0	102.00	0.00	0.00	0.00
35.00	0.00	0	102.00	0.00	0.00	0.00
36.00	0.00	0	102.00	0.00	0.00	0.00
37.00	0.00	0	102.00	0.00	0.00	0.00
38.00	0.00	0	102.00	0.00	0.00	0.00
39.00	0.00	0	102.00	0.00	0.00	0.00
40.00	0.00	0	102.00	0.00	0.00	0.00
41.00	0.00	0	102.00	0.00	0.00	0.00
42.00	0.00	0	102.00	0.00	0.00	0.00
43.00	0.00	0	102.00	0.00	0.00	0.00
44.00	0.00	0	102.00	0.00	0.00	0.00
45.00	0.00	0	102.00	0.00	0.00	0.00
46.00	0.00	0	102.00	0.00	0.00	0.00
47.00	0.00	0	102.00	0.00	0.00	0.00
48.00	0.00	0	102.00	0.00	0.00	0.00

Stage-Discharge for Pond WQ3: WQ BASIN #3

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
102.00	0.00	0.00	0.00	102.52	0.11	0.11	0.00
102.01	0.10	0.10	0.00	102.53	0.11	0.11	0.00
102.02	0.10	0.10	0.00	102.54	0.11	0.11	0.00
102.03	0.10	0.10	0.00	102.55	0.11	0.11	0.00
102.04	0.10	0.10	0.00	102.56	0.11	0.11	0.00
102.05	0.10	0.10	0.00	102.57	0.11	0.11	0.00
102.06	0.10	0.10	0.00	102.58	0.11	0.11	0.00
102.07	0.10	0.10	0.00	102.59	0.11	0.11	0.00
102.08	0.10	0.10	0.00	102.60	0.11	0.11	0.00
102.09	0.10	0.10	0.00	102.61	0.11	0.11	0.00
102.10	0.10	0.10	0.00	102.62	0.11	0.11	0.00
102.11	0.10	0.10	0.00	102.63	0.11	0.11	0.00
102.12	0.10	0.10	0.00	102.64	0.11	0.11	0.00
102.13	0.10	0.10	0.00	102.65	0.11	0.11	0.00
102.14	0.10	0.10	0.00	102.66	0.11	0.11	0.00
102.15	0.10	0.10	0.00	102.67	0.11	0.11	0.00
102.16	0.10	0.10	0.00	102.68	0.11	0.11	0.00
102.17	0.10	0.10	0.00	102.69	0.11	0.11	0.00
102.18	0.10	0.10	0.00	102.70	0.11	0.11	0.00
102.19	0.10	0.10	0.00	102.71	0.11	0.11	0.00
102.20	0.10	0.10	0.00	102.72	0.11	0.11	0.00
102.21	0.10	0.10	0.00	102.73	0.11	0.11	0.00
102.22	0.10	0.10	0.00	102.74	0.11	0.11	0.00
102.23	0.10	0.10	0.00	102.75	0.11	0.11	0.00
102.24	0.11	0.11	0.00	102.76	0.12	0.11	0.01
102.25	0.11	0.11	0.00	102.77	0.13	0.11	0.02
102.26	0.11	0.11	0.00	102.78	0.15	0.12	0.03
102.27	0.11	0.11	0.00	102.79	0.17	0.12	0.05
102.28	0.11	0.11	0.00	102.80	0.19	0.12	0.07
102.29	0.11	0.11	0.00	102.81	0.21	0.12	0.10
102.30	0.11	0.11	0.00	102.82	0.24	0.12	0.12
102.31	0.11	0.11	0.00	102.83	0.26	0.12	0.15
102.32	0.11	0.11	0.00	102.84	0.29	0.12	0.17
102.33	0.11	0.11	0.00	102.85	0.32	0.12	0.20
102.34	0.11	0.11	0.00	102.86	0.35	0.12	0.24
102.35	0.11	0.11	0.00	102.87	0.39	0.12	0.27
102.36	0.11	0.11	0.00	102.88	0.42	0.12	0.30
102.37	0.11	0.11	0.00	102.89	0.45	0.12	0.34
102.38	0.11	0.11	0.00	102.90	0.49	0.12	0.37
102.39	0.11	0.11	0.00	102.91	0.53	0.12	0.41
102.40	0.11	0.11	0.00	102.92	0.57	0.12	0.45
102.41	0.11	0.11	0.00	102.93	0.61	0.12	0.49
102.42	0.11	0.11	0.00	102.94	0.65	0.12	0.53
102.43	0.11	0.11	0.00	102.95	0.69	0.12	0.57
102.44	0.11	0.11	0.00	102.96	0.73	0.12	0.62
102.45	0.11	0.11	0.00	102.97	0.78	0.12	0.66
102.46	0.11	0.11	0.00	102.98	0.82	0.12	0.70
102.47	0.11	0.11	0.00	102.99	0.87	0.12	0.75
102.48	0.11	0.11	0.00	103.00	0.92	0.12	0.80

17 VAN VOOREN DRIVE-POST-DEV

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NJ DEP 2-hr WQ Rainfall=1.25"
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Stage-Area-Storage for Pond WQ3: WQ BASIN #3

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
102.00	870	0	102.52	953	474
102.01	872	9	102.53	954	483
102.02	873	17	102.54	956	493
102.03	875	26	102.55	957	503
102.04	876	35	102.56	959	512
102.05	878	44	102.57	961	522
102.06	880	52	102.58	962	531
102.07	881	61	102.59	964	541
102.08	883	70	102.60	965	551
102.09	884	79	102.61	967	560
102.10	886	88	102.62	969	570
102.11	887	97	102.63	970	580
102.12	889	106	102.64	972	589
102.13	891	114	102.65	973	599
102.14	892	123	102.66	975	609
102.15	894	132	102.67	977	619
102.16	895	141	102.68	978	628
102.17	897	150	102.69	980	638
102.18	899	159	102.70	981	648
102.19	900	168	102.71	983	658
102.20	902	177	102.72	984	668
102.21	903	186	102.73	986	677
102.22	905	195	102.74	988	687
102.23	907	204	102.75	989	697
102.24	908	213	102.76	991	707
102.25	910	222	102.77	992	717
102.26	911	232	102.78	994	727
102.27	913	241	102.79	996	737
102.28	915	250	102.80	997	747
102.29	916	259	102.81	999	757
102.30	918	268	102.82	1,000	767
102.31	919	277	102.83	1,002	777
102.32	921	287	102.84	1,004	787
102.33	922	296	102.85	1,005	797
102.34	924	305	102.86	1,007	807
102.35	926	314	102.87	1,008	817
102.36	927	324	102.88	1,010	827
102.37	928	333	102.89	1,012	837
102.38	930	342	102.90	1,013	847
102.39	932	351	102.91	1,015	856
102.40	934	361	102.92	1,016	866
102.41	935	370	102.93	1,018	878
102.42	937	379	102.94	1,019	888
102.43	938	389	102.95	1,021	898
102.44	940	398	102.96	1,023	908
102.45	942	408	102.97	1,024	919
102.46	943	417	102.98	1,026	929
102.47	945	426	102.99	1,027	939
102.48	946	436	103.00	1,029	950
102.49	948	445			
102.50	950	455			

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

17 VAN VOOREN DRIVE-POST-DEV

NOAA 24-hr D NOAA-2 Rainfall=3.41"

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Summary for Subcatchment 3IMP: DA#3 (IMP) TO WQ BASIN#3

Runoff = 0.32 cfs @ 12.17 hrs, Volume= 0.031 af, Depth= 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)		CN	Description	
5,054		98	Paved parking, HSG A	
5,054			100.00% Impervious Area	
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0				Direct Entry, Sheet Flow

Hydrograph for Subcatchment 3IMP: DAF3 (IMP) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	3.18	0.00
0.50	0.02	0.00	0.00	26.50	3.41	3.18	0.00
1.00	0.04	0.00	0.00	27.00	3.41	3.18	0.00
1.50	0.06	0.00	0.00	27.50	3.41	3.18	0.00
2.00	0.08	0.01	0.00	28.00	3.41	3.18	0.00
2.50	0.10	0.02	0.00	28.50	3.41	3.18	0.00
3.00	0.13	0.03	0.00	29.00	3.41	3.18	0.00
3.50	0.15	0.04	0.00	29.50	3.41	3.18	0.00
4.00	0.18	0.06	0.00	30.00	3.41	3.18	0.00
4.50	0.21	0.07	0.00	30.50	3.41	3.18	0.00
5.00	0.23	0.09	0.00	31.00	3.41	3.18	0.00
5.50	0.26	0.11	0.01	31.50	3.41	3.18	0.00
6.00	0.29	0.14	0.01	32.00	3.41	3.18	0.00
6.50	0.32	0.16	0.01	32.50	3.41	3.18	0.00
7.00	0.36	0.19	0.01	33.00	3.41	3.18	0.00
7.50	0.40	0.23	0.01	33.50	3.41	3.18	0.00
8.00	0.44	0.27	0.01	34.00	3.41	3.18	0.00
8.50	0.49	0.31	0.01	34.50	3.41	3.18	0.00
9.00	0.54	0.36	0.01	35.00	3.41	3.18	0.00
9.50	0.60	0.41	0.01	35.50	3.41	3.18	0.00
10.00	0.68	0.48	0.02	36.00	3.41	3.18	0.00
10.50	0.76	0.56	0.02	36.50	3.41	3.18	0.00
11.00	0.89	0.68	0.03	37.00	3.41	3.18	0.00
11.50	1.08	0.87	0.05	37.50	3.41	3.18	0.00
12.00	1.63	1.41	0.16	38.00	3.41	3.18	0.00
12.50	2.33	2.10	0.09	38.50	3.41	3.18	0.00
13.00	2.52	2.29	0.03	39.00	3.41	3.18	0.00
13.50	2.65	2.42	0.02	39.50	3.41	3.18	0.00
14.00	2.73	2.50	0.02	40.00	3.41	3.18	0.00
14.50	2.81	2.58	0.01	40.50	3.41	3.18	0.00
15.00	2.87	2.64	0.01	41.00	3.41	3.18	0.00
15.50	2.92	2.69	0.01	41.50	3.41	3.18	0.00
16.00	2.97	2.74	0.01	42.00	3.41	3.18	0.00
16.50	3.01	2.78	0.01	42.50	3.41	3.18	0.00
17.00	3.05	2.82	0.01	43.00	3.41	3.18	0.00
17.50	3.09	2.85	0.01	43.50	3.41	3.18	0.00
18.00	3.12	2.89	0.01	44.00	3.41	3.18	0.00
18.50	3.15	2.92	0.01	44.50	3.41	3.18	0.00
19.00	3.18	2.94	0.01	45.00	3.41	3.18	0.00
19.50	3.20	2.97	0.01	45.50	3.41	3.18	0.00
20.00	3.23	3.00	0.01	46.00	3.41	3.18	0.00
20.50	3.26	3.02	0.01	46.50	3.41	3.18	0.00
21.00	3.28	3.05	0.01	47.00	3.41	3.18	0.00
21.50	3.31	3.07	0.01	47.50	3.41	3.18	0.00
22.00	3.33	3.10	0.01	48.00	3.41	3.18	0.00
22.50	3.35	3.12	0.01				
23.00	3.37	3.14	0.00				
23.50	3.39	3.16	0.00				
24.00	3.41	3.18	0.00				
24.50	3.41	3.18	0.00				

Summary for Subcatchment 3L: DA#3 (LAWN) TO WQ BASIN#3

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)		CN	Description		
2,539		39	>75% Grass cover, Good, HSG A		
2,539			100.00% Pervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 3L: DA#3 (LAWN) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	0.00	0.00
0.50	0.02	0.00	0.00	26.50	3.41	0.00	0.00
1.00	0.04	0.00	0.00	27.00	3.41	0.00	0.00
1.50	0.06	0.00	0.00	27.50	3.41	0.00	0.00
2.00	0.08	0.00	0.00	28.00	3.41	0.00	0.00
2.50	0.10	0.00	0.00	28.50	3.41	0.00	0.00
3.00	0.13	0.00	0.00	29.00	3.41	0.00	0.00
3.50	0.15	0.00	0.00	29.50	3.41	0.00	0.00
4.00	0.18	0.00	0.00	30.00	3.41	0.00	0.00
4.50	0.21	0.00	0.00	30.50	3.41	0.00	0.00
5.00	0.23	0.00	0.00	31.00	3.41	0.00	0.00
5.50	0.26	0.00	0.00	31.50	3.41	0.00	0.00
6.00	0.29	0.00	0.00	32.00	3.41	0.00	0.00
6.50	0.32	0.00	0.00	32.50	3.41	0.00	0.00
7.00	0.36	0.00	0.00	33.00	3.41	0.00	0.00
7.50	0.40	0.00	0.00	33.50	3.41	0.00	0.00
8.00	0.44	0.00	0.00	34.00	3.41	0.00	0.00
8.50	0.49	0.00	0.00	34.50	3.41	0.00	0.00
9.00	0.54	0.00	0.00	35.00	3.41	0.00	0.00
9.50	0.60	0.00	0.00	35.50	3.41	0.00	0.00
10.00	0.68	0.00	0.00	36.00	3.41	0.00	0.00
10.50	0.76	0.00	0.00	36.50	3.41	0.00	0.00
11.00	0.89	0.00	0.00	37.00	3.41	0.00	0.00
11.50	1.08	0.00	0.00	37.50	3.41	0.00	0.00
12.00	1.63	0.00	0.00	38.00	3.41	0.00	0.00
12.50	2.33	0.00	0.00	38.50	3.41	0.00	0.00
13.00	2.52	0.00	0.00	39.00	3.41	0.00	0.00
13.50	2.65	0.00	0.00	39.50	3.41	0.00	0.00
14.00	2.73	0.00	0.00	40.00	3.41	0.00	0.00
14.50	2.81	0.00	0.00	40.50	3.41	0.00	0.00
15.00	2.87	0.00	0.00	41.00	3.41	0.00	0.00
15.50	2.92	0.00	0.00	41.50	3.41	0.00	0.00
16.00	2.97	0.00	0.00	42.00	3.41	0.00	0.00
16.50	3.01	0.00	0.00	42.50	3.41	0.00	0.00
17.00	3.05	0.00	0.00	43.00	3.41	0.00	0.00
17.50	3.09	0.00	0.00	43.50	3.41	0.00	0.00
18.00	3.12	0.00	0.00	44.00	3.41	0.00	0.00
18.50	3.15	0.00	0.00	44.50	3.41	0.00	0.00
19.00	3.18	0.00	0.00	45.00	3.41	0.00	0.00
19.50	3.20	0.00	0.00	45.50	3.41	0.00	0.00
20.00	3.23	0.00	0.00	46.00	3.41	0.00	0.00
20.50	3.26	0.00	0.00	46.50	3.41	0.00	0.00
21.00	3.28	0.00	0.00	47.00	3.41	0.00	0.00
21.50	3.31	0.00	0.00	47.50	3.41	0.00	0.00
22.00	3.33	0.00	0.00	48.00	3.41	0.00	0.00
22.50	3.35	0.00	0.00				
23.00	3.37	0.00	0.00				
23.50	3.39	0.00	0.00				
24.00	3.41	0.00	0.00				
24.50	3.41	0.00	0.00				
25.00	3.41	0.00	0.00				

Summary for Pond WQ3: WQ BASIN #3

Inflow Area = 0.174 ac, 66.56% Impervious, Inflow Depth = 2.12" for NOAA-2 event
Inflow = 0.32 cfs @ 12.17 hrs, Volume= 0.031 af
Outflow = 0.10 cfs @ 12.43 hrs, Volume= 0.031 af, Atten= 67%, Lag= 15.9 min
Discarded = 0.10 cfs @ 12.43 hrs, Volume= 0.031 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 102.22' @ 12.43 hrs Surf.Area= 905 sf Storage= 193 cf
Plug-Flow detention time= 8.3 min calculated for 0.031 af (100% of inflow)
Center-of-Mass det. time= 8.3 min (769.4 - 761.1')

Volume #1	Invert	Avail.Storage	Storage Description
	102.00'	950 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.00	870	0	0
103.00	1,029	950	950

Device #	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	5,000 in/hr Exfiltration over Surface area
#2	Primary	102.75'	2.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Discarded Outflow Max=0.10 cfs @ 12.43 hrs HW=102.22' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.10 cfs)
 Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=102.00' (Free Discharge)
 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond WQ3: WQ BASIN #3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	102.00	0.00	0.00	0.00
1.00	0.00	0	102.00	0.00	0.00	0.00
2.00	0.00	0	102.00	0.00	0.00	0.00
3.00	0.00	0	102.00	0.00	0.00	0.00
4.00	0.00	0	102.00	0.00	0.00	0.00
5.00	0.00	0	102.00	0.00	0.00	0.00
6.00	0.01	0	102.00	0.01	0.01	0.00
7.00	0.01	1	102.00	0.01	0.01	0.00
8.00	0.01	1	102.00	0.01	0.01	0.00
9.00	0.01	1	102.00	0.01	0.01	0.00
10.00	0.02	3	102.00	0.02	0.02	0.00
11.00	0.03	18	102.02	0.03	0.03	0.00
12.00	0.16	106	102.12	0.10	0.10	0.00
13.00	0.04	2	102.00	0.02	0.02	0.00
14.00	0.02	1	102.00	0.01	0.01	0.00
15.00	0.01	1	102.00	0.01	0.01	0.00
16.00	0.01	1	102.00	0.01	0.01	0.00
17.00	0.01	1	102.00	0.01	0.01	0.00
18.00	0.01	1	102.00	0.01	0.01	0.00
19.00	0.01	1	102.00	0.01	0.01	0.00
20.00	0.01	1	102.00	0.01	0.01	0.00
21.00	0.01	0	102.00	0.01	0.01	0.00
22.00	0.01	0	102.00	0.01	0.01	0.00
23.00	0.00	0	102.00	0.00	0.00	0.00
24.00	0.00	0	102.00	0.00	0.00	0.00
25.00	0.00	0	102.00	0.00	0.00	0.00
26.00	0.00	0	102.00	0.00	0.00	0.00
27.00	0.00	0	102.00	0.00	0.00	0.00
28.00	0.00	0	102.00	0.00	0.00	0.00
29.00	0.00	0	102.00	0.00	0.00	0.00
30.00	0.00	0	102.00	0.00	0.00	0.00
31.00	0.00	0	102.00	0.00	0.00	0.00
32.00	0.00	0	102.00	0.00	0.00	0.00
33.00	0.00	0	102.00	0.00	0.00	0.00
34.00	0.00	0	102.00	0.00	0.00	0.00
35.00	0.00	0	102.00	0.00	0.00	0.00
36.00	0.00	0	102.00	0.00	0.00	0.00
37.00	0.00	0	102.00	0.00	0.00	0.00
38.00	0.00	0	102.00	0.00	0.00	0.00
39.00	0.00	0	102.00	0.00	0.00	0.00
40.00	0.00	0	102.00	0.00	0.00	0.00
41.00	0.00	0	102.00	0.00	0.00	0.00
42.00	0.00	0	102.00	0.00	0.00	0.00
43.00	0.00	0	102.00	0.00	0.00	0.00
44.00	0.00	0	102.00	0.00	0.00	0.00
45.00	0.00	0	102.00	0.00	0.00	0.00
46.00	0.00	0	102.00	0.00	0.00	0.00
47.00	0.00	0	102.00	0.00	0.00	0.00
48.00	0.00	0	102.00	0.00	0.00	0.00

Summary for Subcatchment 3IMP: DA#3 (IMP) TO WQ BASIN#3

Runoff = 0.49 cfs @ 12.17 hrs, Volume= 0.048 af, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description			
5,054	98	Paved parking, HSG A			
5,054		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 3IMP: DA#3 (IMP) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	4.93	0.00
0.50	0.03	0.00	0.00	26.50	5.17	4.93	0.00
1.00	0.06	0.00	0.00	27.00	5.17	4.93	0.00
1.50	0.09	0.01	0.00	27.50	5.17	4.93	0.00
2.00	0.12	0.02	0.00	28.00	5.17	4.93	0.00
2.50	0.16	0.04	0.00	28.50	5.17	4.93	0.00
3.00	0.19	0.07	0.01	29.00	5.17	4.93	0.00
3.50	0.23	0.09	0.01	29.50	5.17	4.93	0.00
4.00	0.27	0.12	0.01	30.00	5.17	4.93	0.00
4.50	0.31	0.15	0.01	30.50	5.17	4.93	0.00
5.00	0.35	0.19	0.01	31.00	5.17	4.93	0.00
5.50	0.40	0.23	0.01	31.50	5.17	4.93	0.00
6.00	0.44	0.27	0.01	32.00	5.17	4.93	0.00
6.50	0.49	0.31	0.01	32.50	5.17	4.93	0.00
7.00	0.54	0.36	0.01	33.00	5.17	4.93	0.00
7.50	0.60	0.41	0.01	33.50	5.17	4.93	0.00
8.00	0.67	0.48	0.01	34.00	5.17	4.93	0.00
8.50	0.74	0.54	0.02	34.50	5.17	4.93	0.00
9.00	0.82	0.62	0.02	35.00	5.17	4.93	0.00
9.50	0.91	0.71	0.02	35.50	5.17	4.93	0.00
10.00	1.02	0.82	0.03	36.00	5.17	4.93	0.00
10.50	1.16	0.94	0.03	36.50	5.17	4.93	0.00
11.00	1.34	1.13	0.05	37.00	5.17	4.93	0.00
11.50	1.64	1.42	0.07	37.50	5.17	4.93	0.00
12.00	2.48	2.25	0.24	38.00	5.17	4.93	0.00
12.50	3.53	3.30	0.13	38.50	5.17	4.93	0.00
13.00	3.83	3.59	0.06	39.00	5.17	4.93	0.00
13.50	4.01	3.78	0.04	39.50	5.17	4.93	0.00
14.00	4.15	3.91	0.03	40.00	5.17	4.93	0.00
14.50	4.26	4.02	0.03	40.50	5.17	4.93	0.00
15.00	4.35	4.11	0.02	41.00	5.17	4.93	0.00
15.50	4.43	4.19	0.02	41.50	5.17	4.93	0.00
16.00	4.50	4.26	0.02	42.00	5.17	4.93	0.00
16.50	4.57	4.33	0.02	42.50	5.17	4.93	0.00
17.00	4.63	4.39	0.01	43.00	5.17	4.93	0.00
17.50	4.68	4.44	0.01	43.50	5.17	4.93	0.00
18.00	4.73	4.49	0.01	44.00	5.17	4.93	0.00
18.50	4.77	4.54	0.01	44.50	5.17	4.93	0.00
19.00	4.82	4.58	0.01	45.00	5.17	4.93	0.00
19.50	4.86	4.62	0.01	45.50	5.17	4.93	0.00
20.00	4.90	4.66	0.01	46.00	5.17	4.93	0.00
20.50	4.94	4.70	0.01	46.50	5.17	4.93	0.00
21.00	4.98	4.74	0.01	47.00	5.17	4.93	0.00
21.50	5.01	4.77	0.01	47.50	5.17	4.93	0.00
22.00	5.05	4.81	0.01	48.00	5.17	4.93	0.00
22.50	5.08	4.84	0.01				
23.00	5.11	4.87	0.01				
23.50	5.14	4.90	0.01				
24.00	5.17	4.93	0.00				
24.50	5.17	4.93	0.00				

Summary for Subcatchment 3L: DA#3 (LAWN) TO WQ BASIN#3

Runoff = 0.00 cfs @ 12.93 hrs, Volume= 0.001 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description			
2,539	39	>75% Grass cover, Good, HSG A			
2,539		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow.

Hydrograph for Subcatchment 3L; DA#3 (LAWN) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	0.24	0.00
0.50	0.03	0.00	0.00	26.50	5.17	0.24	0.00
1.00	0.06	0.00	0.00	27.00	5.17	0.24	0.00
1.50	0.09	0.00	0.00	27.50	5.17	0.24	0.00
2.00	0.12	0.00	0.00	28.00	5.17	0.24	0.00
2.50	0.16	0.00	0.00	28.50	5.17	0.24	0.00
3.00	0.19	0.00	0.00	29.00	5.17	0.24	0.00
3.50	0.23	0.00	0.00	29.50	5.17	0.24	0.00
4.00	0.27	0.00	0.00	30.00	5.17	0.24	0.00
4.50	0.31	0.00	0.00	30.50	5.17	0.24	0.00
5.00	0.35	0.00	0.00	31.00	5.17	0.24	0.00
5.50	0.40	0.00	0.00	31.50	5.17	0.24	0.00
6.00	0.44	0.00	0.00	32.00	5.17	0.24	0.00
6.50	0.49	0.00	0.00	32.50	5.17	0.24	0.00
7.00	0.54	0.00	0.00	33.00	5.17	0.24	0.00
7.50	0.60	0.00	0.00	33.50	5.17	0.24	0.00
8.00	0.67	0.00	0.00	34.00	5.17	0.24	0.00
8.50	0.74	0.00	0.00	34.50	5.17	0.24	0.00
9.00	0.82	0.00	0.00	35.00	5.17	0.24	0.00
9.50	0.91	0.00	0.00	35.50	5.17	0.24	0.00
10.00	1.02	0.00	0.00	36.00	5.17	0.24	0.00
10.50	1.16	0.00	0.00	36.50	5.17	0.24	0.00
11.00	1.34	0.00	0.00	37.00	5.17	0.24	0.00
11.50	1.64	0.00	0.00	37.50	5.17	0.24	0.00
12.00	2.48	0.00	0.00	38.00	5.17	0.24	0.00
12.50	3.53	0.01	0.00	38.50	5.17	0.24	0.00
13.00	3.83	0.03	0.00	39.00	5.17	0.24	0.00
13.50	4.01	0.05	0.00	39.50	5.17	0.24	0.00
14.00	4.15	0.06	0.00	40.00	5.17	0.24	0.00
14.50	4.26	0.08	0.00	40.50	5.17	0.24	0.00
15.00	4.35	0.09	0.00	41.00	5.17	0.24	0.00
15.50	4.43	0.10	0.00	41.50	5.17	0.24	0.00
16.00	4.50	0.11	0.00	42.00	5.17	0.24	0.00
16.50	4.57	0.12	0.00	42.50	5.17	0.24	0.00
17.00	4.63	0.13	0.00	43.00	5.17	0.24	0.00
17.50	4.68	0.14	0.00	43.50	5.17	0.24	0.00
18.00	4.73	0.15	0.00	44.00	5.17	0.24	0.00
18.50	4.77	0.16	0.00	44.50	5.17	0.24	0.00
19.00	4.82	0.16	0.00	45.00	5.17	0.24	0.00
19.50	4.86	0.17	0.00	45.50	5.17	0.24	0.00
20.00	4.90	0.18	0.00	46.00	5.17	0.24	0.00
20.50	4.94	0.19	0.00	46.50	5.17	0.24	0.00
21.00	4.98	0.20	0.00	47.00	5.17	0.24	0.00
21.50	5.01	0.20	0.00	47.50	5.17	0.24	0.00
22.00	5.05	0.21	0.00	48.00	5.17	0.24	0.00
22.50	5.08	0.22	0.00				
23.00	5.11	0.22	0.00				
23.50	5.14	0.23	0.00				
24.00	5.17	0.24	0.00				

Summary for Pond WQ3: WQ BASIN #3

Inflow Area = 0.174 ac, 66.56% Impervious, Inflow Depth = 3.36" for NOAA-10 event
 Inflow = 0.49 cfs @ 12.17 hrs, Volume= 0.049 af
 Outflow = 0.11 cfs @ 12.60 hrs, Volume= 0.049 af, Atten= 78%, Lag= 25.9 min
 Discarded = 0.11 cfs @ 12.60 hrs, Volume= 0.049 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 102.46' @ 12.60 hrs Surf.Area= 944 sf Storage= 420 cf

Plug-Flow detention time= 19.7 min calculated for 0.049 af (100% of inflow)
 Center-of-Mass det. time= 19.6 min (778.5 - 758.8)

Volume	Invert	Avail. Storage	Storage Description
#1	102.00'	950 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Curr. Store (cubic-feet)
102.00	870	0	0
103.00	1,029	950	950

Device	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	5,000 in/hr Exfiltration over Surface area
#2	Primary	102.75'	2.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Discarded Outflow Max=0.11 cfs @ 12.60 hrs HW=102.46' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.11 cfs)

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=102.00' (Free Discharge)
 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond WQ3: WQ BASIN #3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	102.00	0.00	0.00	0.00
1.00	0.00	0	102.00	0.00	0.00	0.00
2.00	0.00	0	102.00	0.00	0.00	0.00
3.00	0.01	0	102.00	0.01	0.01	0.00
4.00	0.01	1	102.00	0.01	0.01	0.00
5.00	0.01	1	102.00	0.01	0.01	0.00
6.00	0.01	1	102.00	0.01	0.01	0.00
7.00	0.01	1	102.00	0.01	0.01	0.00
8.00	0.01	2	102.00	0.01	0.01	0.00
9.00	0.02	2	102.00	0.02	0.02	0.00
10.00	0.03	4	102.00	0.03	0.03	0.00
11.00	0.05	60	102.07	0.05	0.05	0.00
12.00	0.24	380	102.42	0.10	0.11	0.00
13.00	0.07	155	102.18	0.10	0.10	0.00
14.00	0.03	2	102.00	0.02	0.02	0.00
15.00	0.02	2	102.00	0.02	0.02	0.00
16.00	0.02	2	102.00	0.02	0.02	0.00
17.00	0.01	1	102.00	0.01	0.01	0.00
18.00	0.01	1	102.00	0.01	0.01	0.00
19.00	0.01	1	102.00	0.01	0.01	0.00
20.00	0.01	1	102.00	0.01	0.01	0.00
21.00	0.01	1	102.00	0.01	0.01	0.00
22.00	0.01	1	102.00	0.01	0.01	0.00
23.00	0.01	1	102.00	0.01	0.01	0.00
24.00	0.01	1	102.00	0.01	0.01	0.00
25.00	0.00	0	102.00	0.00	0.00	0.00
26.00	0.00	0	102.00	0.00	0.00	0.00
27.00	0.00	0	102.00	0.00	0.00	0.00
28.00	0.00	0	102.00	0.00	0.00	0.00
29.00	0.00	0	102.00	0.00	0.00	0.00
30.00	0.00	0	102.00	0.00	0.00	0.00
31.00	0.00	0	102.00	0.00	0.00	0.00
32.00	0.00	0	102.00	0.00	0.00	0.00
33.00	0.00	0	102.00	0.00	0.00	0.00
34.00	0.00	0	102.00	0.00	0.00	0.00
35.00	0.00	0	102.00	0.00	0.00	0.00
36.00	0.00	0	102.00	0.00	0.00	0.00
37.00	0.00	0	102.00	0.00	0.00	0.00
38.00	0.00	0	102.00	0.00	0.00	0.00
39.00	0.00	0	102.00	0.00	0.00	0.00
40.00	0.00	0	102.00	0.00	0.00	0.00
41.00	0.00	0	102.00	0.00	0.00	0.00
42.00	0.00	0	102.00	0.00	0.00	0.00
43.00	0.00	0	102.00	0.00	0.00	0.00
44.00	0.00	0	102.00	0.00	0.00	0.00
45.00	0.00	0	102.00	0.00	0.00	0.00
46.00	0.00	0	102.00	0.00	0.00	0.00
47.00	0.00	0	102.00	0.00	0.00	0.00
48.00	0.00	0	102.00	0.00	0.00	0.00

Summary for Subcatchment 3IMP: DA#3 (IMP) TO WQ BASIN#3

Runoff = 0.81 cfs @ 12.17 hrs, Volume= 0.081 af, Depth= 8.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)	CN	Description			
5,054	98	Paved parking, HSG A			
5,054		100.00% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 3IMP: DA#3 (IMP) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	8.35	0.00
0.50	0.05	0.00	0.00	26.50	8.59	8.35	0.00
1.00	0.10	0.01	0.00	27.00	8.59	8.35	0.00
1.50	0.15	0.04	0.01	27.50	8.59	8.35	0.00
2.00	0.21	0.07	0.01	28.00	8.59	8.35	0.00
2.50	0.26	0.12	0.01	28.50	8.59	8.35	0.00
3.00	0.32	0.16	0.01	29.00	8.59	8.35	0.00
3.50	0.39	0.22	0.01	29.50	8.59	8.35	0.00
4.00	0.45	0.27	0.01	30.00	8.59	8.35	0.00
4.50	0.52	0.33	0.01	30.50	8.59	8.35	0.00
5.00	0.59	0.40	0.02	31.00	8.59	8.35	0.00
5.50	0.66	0.46	0.02	31.50	8.59	8.35	0.00
6.00	0.73	0.53	0.02	32.00	8.59	8.35	0.00
6.50	0.81	0.61	0.02	32.50	8.59	8.35	0.00
7.00	0.90	0.70	0.02	33.00	8.59	8.35	0.00
7.50	1.01	0.80	0.02	33.50	8.59	8.35	0.00
8.00	1.11	0.90	0.03	34.00	8.59	8.35	0.00
8.50	1.23	1.02	0.03	34.50	8.59	8.35	0.00
9.00	1.36	1.15	0.03	35.00	8.59	8.35	0.00
9.50	1.52	1.30	0.04	35.50	8.59	8.35	0.00
10.00	1.70	1.48	0.04	36.00	8.59	8.35	0.00
10.50	1.92	1.70	0.05	36.50	8.59	8.35	0.00
11.00	2.23	2.01	0.08	37.00	8.59	8.35	0.00
11.50	2.72	2.49	0.12	37.50	8.59	8.35	0.00
12.00	4.12	3.88	0.40	38.00	8.59	8.35	0.00
12.50	5.87	5.63	0.22	38.50	8.59	8.35	0.00
13.00	6.36	6.12	0.10	39.00	8.59	8.35	0.00
13.50	6.67	6.43	0.07	39.50	8.59	8.35	0.00
14.00	6.89	6.65	0.05	40.00	8.59	8.35	0.00
14.50	7.07	6.83	0.04	40.50	8.59	8.35	0.00
15.00	7.23	6.99	0.03	41.00	8.59	8.35	0.00
15.50	7.36	7.12	0.03	41.50	8.59	8.35	0.00
16.00	7.48	7.24	0.03	42.00	8.59	8.35	0.00
16.50	7.58	7.35	0.03	42.50	8.59	8.35	0.00
17.00	7.69	7.45	0.02	43.00	8.59	8.35	0.00
17.50	7.78	7.54	0.02	43.50	8.59	8.35	0.00
18.00	7.86	7.62	0.02	44.00	8.59	8.35	0.00
18.50	7.93	7.69	0.02	44.50	8.59	8.35	0.00
19.00	8.00	7.76	0.02	45.00	8.59	8.35	0.00
19.50	8.07	7.83	0.02	45.50	8.59	8.35	0.00
20.00	8.14	7.90	0.02	46.00	8.59	8.35	0.00
20.50	8.20	7.96	0.02	46.50	8.59	8.35	0.00
21.00	8.27	8.03	0.01	47.00	8.59	8.35	0.00
21.50	8.33	8.09	0.01	47.50	8.59	8.35	0.00
22.00	8.38	8.14	0.01	48.00	8.59	8.35	0.00
22.50	8.44	8.20	0.01				
23.00	8.49	8.25	0.01				
23.50	8.54	8.30	0.01				
24.00	8.59	8.35	0.00				
24.50	8.59	8.35	0.00				

Summary for Subcatchment 3L: DA#3 (LAWN) TO WQ BASIN#3

Runoff = 0.06 cfs @ 12.20 hrs, Volume= 0.007 af, Depth= 1.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)		CN	Description		
2,539		39	>75% Grass cover, Good, HSG A		
2,539			100.00% Pervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Sheet Flow

Hydrograph for Subcatchment 3L: DA#3 (LAWN) TO WQ BASIN#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	1.41	0.00
0.50	0.05	0.00	0.00	26.50	8.59	1.41	0.00
1.00	0.10	0.00	0.00	27.00	8.59	1.41	0.00
1.50	0.15	0.00	0.00	27.50	8.59	1.41	0.00
2.00	0.21	0.00	0.00	28.00	8.59	1.41	0.00
2.50	0.26	0.00	0.00	28.50	8.59	1.41	0.00
3.00	0.32	0.00	0.00	29.00	8.59	1.41	0.00
3.50	0.39	0.00	0.00	29.50	8.59	1.41	0.00
4.00	0.45	0.00	0.00	30.00	8.59	1.41	0.00
4.50	0.52	0.00	0.00	30.50	8.59	1.41	0.00
5.00	0.59	0.00	0.00	31.00	8.59	1.41	0.00
5.50	0.66	0.00	0.00	31.50	8.59	1.41	0.00
6.00	0.73	0.00	0.00	32.00	8.59	1.41	0.00
6.50	0.81	0.00	0.00	32.50	8.59	1.41	0.00
7.00	0.90	0.00	0.00	33.00	8.59	1.41	0.00
7.50	1.01	0.00	0.00	33.50	8.59	1.41	0.00
8.00	1.11	0.00	0.00	34.00	8.59	1.41	0.00
8.50	1.23	0.00	0.00	34.50	8.59	1.41	0.00
9.00	1.36	0.00	0.00	35.00	8.59	1.41	0.00
9.50	1.52	0.00	0.00	35.50	8.59	1.41	0.00
10.00	1.70	0.00	0.00	36.00	8.59	1.41	0.00
10.50	1.92	0.00	0.00	36.50	8.59	1.41	0.00
11.00	2.23	0.00	0.00	37.00	8.59	1.41	0.00
11.50	2.72	0.00	0.00	37.50	8.59	1.41	0.00
12.00	4.12	0.06	0.04	38.00	8.59	1.41	0.00
12.50	5.87	0.41	0.03	38.50	8.59	1.41	0.00
13.00	6.36	0.55	0.02	39.00	8.59	1.41	0.00
13.50	6.67	0.65	0.01	39.50	8.59	1.41	0.00
14.00	6.89	0.73	0.01	40.00	8.59	1.41	0.00
14.50	7.07	0.79	0.01	40.50	8.59	1.41	0.00
15.00	7.23	0.85	0.01	41.00	8.59	1.41	0.00
15.50	7.36	0.90	0.01	41.50	8.59	1.41	0.00
16.00	7.48	0.95	0.01	42.00	8.59	1.41	0.00
16.50	7.58	0.99	0.00	42.50	8.59	1.41	0.00
17.00	7.69	1.03	0.00	43.00	8.59	1.41	0.00
17.50	7.78	1.06	0.00	43.50	8.59	1.41	0.00
18.00	7.86	1.10	0.00	44.00	8.59	1.41	0.00
18.50	7.93	1.13	0.00	44.50	8.59	1.41	0.00
19.00	8.00	1.16	0.00	45.00	8.59	1.41	0.00
19.50	8.07	1.19	0.00	45.50	8.59	1.41	0.00
20.00	8.14	1.22	0.00	46.00	8.59	1.41	0.00
20.50	8.20	1.24	0.00	46.50	8.59	1.41	0.00
21.00	8.27	1.27	0.00	47.00	8.59	1.41	0.00
21.50	8.33	1.30	0.00	47.50	8.59	1.41	0.00
22.00	8.38	1.32	0.00	48.00	8.59	1.41	0.00
22.50	8.44	1.35	0.00				
23.00	8.49	1.37	0.00				
23.50	8.54	1.39	0.00				
24.00	8.59	1.41	0.00				
24.50	8.59	1.41	0.00				

Summary for Pond WQ3: WQ BASIN #3

Inflow Area = 0.174 ac, 66.56% Impervious, Inflow Depth = 6.03" for NOAA-100 event
 Inflow = 0.87 cfs @ 12.17 hrs, Volume= 0.088 af
 Outflow = 0.38 cfs @ 12.37 hrs, Volume= 0.088 af, Atten= 56%, Lag= 12.0 min
 Discarded = 0.12 cfs @ 12.37 hrs, Volume= 0.079 af
 Primary = 0.27 cfs @ 12.37 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 102.87' @ 12.37 hrs Surf.Area= 1,008 sf Storage= 817 cf

Plug-Flow detention time= 34.5 min calculated for 0.088 af (100% of Inflow)
 Center-of-Mass det. time= 34.5 min (793.4 - 758.9)

Volume	Invert	Avail. Storage	Storage Description
#1	102.00'	950 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.00	870	0	0
103.00	1,029	950	950

Device Routing Invert Outlet Devices

#1 Discarded 102.00' 5,000 in/hr Exfiltration over Surface area
 #2 Primary 102.75' 2.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Discarded Outflow Max=0.12 cfs @ 12.37 hrs HW=102.87' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.12 cfs)

Primary Outflow Max=0.26 cfs @ 12.37 hrs HW=102.87' (Free Discharge)
 2=Sharp-Crested Rectangular Weir (Weir Controls 0.26 cfs @ 1.12 fps)

Hydrograph for Pond WQ3: WQ BASIN #3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	102.00	0.00	0.00	0.00
1.00	0.00	0	102.00	0.00	0.00	0.00
2.00	0.01	1	102.00	0.01	0.01	0.00
3.00	0.01	1	102.00	0.01	0.01	0.00
4.00	0.01	1	102.00	0.01	0.01	0.00
5.00	0.02	1	102.00	0.02	0.02	0.00
6.00	0.02	1	102.00	0.02	0.02	0.00
7.00	0.02	2	102.00	0.02	0.02	0.00
8.00	0.03	2	102.00	0.03	0.03	0.00
9.00	0.03	3	102.00	0.03	0.03	0.00
10.00	0.04	4	102.00	0.04	0.04	0.00
11.00	0.08	7	102.01	0.08	0.08	0.00
12.00	0.41	208	102.23	0.11	0.11	0.00
13.00	0.12	723	102.78	0.14	0.11	0.03
14.00	0.06	591	102.64	0.11	0.11	0.00
15.00	0.04	373	102.41	0.11	0.11	0.00
16.00	0.03	120	102.14	0.10	0.10	0.00
17.00	0.03	2	102.00	0.03	0.03	0.00
18.00	0.02	2	102.00	0.02	0.02	0.00
19.00	0.02	2	102.00	0.02	0.02	0.00
20.00	0.02	2	102.00	0.02	0.02	0.00
21.00	0.02	2	102.00	0.02	0.02	0.00
22.00	0.02	1	102.00	0.02	0.02	0.00
23.00	0.01	1	102.00	0.02	0.02	0.00
24.00	0.01	1	102.00	0.01	0.01	0.00
25.00	0.00	0	102.00	0.00	0.00	0.00
26.00	0.00	0	102.00	0.00	0.00	0.00
27.00	0.00	0	102.00	0.00	0.00	0.00
28.00	0.00	0	102.00	0.00	0.00	0.00
29.00	0.00	0	102.00	0.00	0.00	0.00
30.00	0.00	0	102.00	0.00	0.00	0.00
31.00	0.00	0	102.00	0.00	0.00	0.00
32.00	0.00	0	102.00	0.00	0.00	0.00
33.00	0.00	0	102.00	0.00	0.00	0.00
34.00	0.00	0	102.00	0.00	0.00	0.00
35.00	0.00	0	102.00	0.00	0.00	0.00
36.00	0.00	0	102.00	0.00	0.00	0.00
37.00	0.00	0	102.00	0.00	0.00	0.00
38.00	0.00	0	102.00	0.00	0.00	0.00
39.00	0.00	0	102.00	0.00	0.00	0.00
40.00	0.00	0	102.00	0.00	0.00	0.00
41.00	0.00	0	102.00	0.00	0.00	0.00
42.00	0.00	0	102.00	0.00	0.00	0.00
43.00	0.00	0	102.00	0.00	0.00	0.00
44.00	0.00	0	102.00	0.00	0.00	0.00
45.00	0.00	0	102.00	0.00	0.00	0.00
46.00	0.00	0	102.00	0.00	0.00	0.00
47.00	0.00	0	102.00	0.00	0.00	0.00
48.00	0.00	0	102.00	0.00	0.00	0.00

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	WQ	NJ DEP 2-hr		Default	2.00	1	1.25	2

Summary for Pond D1: DETENTION BASIN

Inflow Area = 0.759 ac, 56.32% Impervious, Inflow Depth = 0.00" for WQ event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 96.00' @ 0.00 hrs Surf.Area= 150 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume Invert Avail. Storage Storage Description

#1	96.00'	1,357 cf	36.0" Round Pipe Storage x 3 L= 64.0'
#2	96.00'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc) x 2
		1,807 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
96.00	75	0	0
99.00	75	225	225

Device	Routing	Invert	Outlet Devices
#1	Primary	96.00'	2.5" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	98.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=96.00' (Free Discharge)

1=Orifice/Grate (Controls 0.00 cfs)

2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond D1: DETENTION BASIN

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	96.00	0.00	26.00	0.00	96.00	0.00
0.50	0.00	96.00	0.00	26.50	0.00	96.00	0.00
1.00	0.00	96.00	0.00	27.00	0.00	96.00	0.00
1.50	0.00	96.00	0.00	27.50	0.00	96.00	0.00
2.00	0.00	96.00	0.00	28.00	0.00	96.00	0.00
2.50	0.00	96.00	0.00	28.50	0.00	96.00	0.00
3.00	0.00	96.00	0.00	29.00	0.00	96.00	0.00
3.50	0.00	96.00	0.00	29.50	0.00	96.00	0.00
4.00	0.00	96.00	0.00	30.00	0.00	96.00	0.00
4.50	0.00	96.00	0.00	30.50	0.00	96.00	0.00
5.00	0.00	96.00	0.00	31.00	0.00	96.00	0.00
5.50	0.00	96.00	0.00	31.50	0.00	96.00	0.00
6.00	0.00	96.00	0.00	32.00	0.00	96.00	0.00
6.50	0.00	96.00	0.00	32.50	0.00	96.00	0.00
7.00	0.00	96.00	0.00	33.00	0.00	96.00	0.00
7.50	0.00	96.00	0.00	33.50	0.00	96.00	0.00
8.00	0.00	96.00	0.00	34.00	0.00	96.00	0.00
8.50	0.00	96.00	0.00	34.50	0.00	96.00	0.00
9.00	0.00	96.00	0.00	35.00	0.00	96.00	0.00
9.50	0.00	96.00	0.00	35.50	0.00	96.00	0.00
10.00	0.00	96.00	0.00	36.00	0.00	96.00	0.00
10.50	0.00	96.00	0.00	36.50	0.00	96.00	0.00
11.00	0.00	96.00	0.00	37.00	0.00	96.00	0.00
11.50	0.00	96.00	0.00	37.50	0.00	96.00	0.00
12.00	0.00	96.00	0.00	38.00	0.00	96.00	0.00
12.50	0.00	96.00	0.00	38.50	0.00	96.00	0.00
13.00	0.00	96.00	0.00	39.00	0.00	96.00	0.00
13.50	0.00	96.00	0.00	39.50	0.00	96.00	0.00
14.00	0.00	96.00	0.00	40.00	0.00	96.00	0.00
14.50	0.00	96.00	0.00	40.50	0.00	96.00	0.00
15.00	0.00	96.00	0.00	41.00	0.00	96.00	0.00
15.50	0.00	96.00	0.00	41.50	0.00	96.00	0.00
16.00	0.00	96.00	0.00	42.00	0.00	96.00	0.00
16.50	0.00	96.00	0.00	42.50	0.00	96.00	0.00
17.00	0.00	96.00	0.00	43.00	0.00	96.00	0.00
17.50	0.00	96.00	0.00	43.50	0.00	96.00	0.00
18.00	0.00	96.00	0.00	44.00	0.00	96.00	0.00
18.50	0.00	96.00	0.00	44.50	0.00	96.00	0.00
19.00	0.00	96.00	0.00	45.00	0.00	96.00	0.00
19.50	0.00	96.00	0.00	45.50	0.00	96.00	0.00
20.00	0.00	96.00	0.00	46.00	0.00	96.00	0.00
20.50	0.00	96.00	0.00	46.50	0.00	96.00	0.00
21.00	0.00	96.00	0.00	47.00	0.00	96.00	0.00
21.50	0.00	96.00	0.00	47.50	0.00	96.00	0.00
22.00	0.00	96.00	0.00	48.00	0.00	96.00	0.00
22.50	0.00	96.00	0.00				
23.00	0.00	96.00	0.00				
23.50	0.00	96.00	0.00				
24.00	0.00	96.00	0.00				

Stage-Discharge for Pond D1: DETENTION BASIN

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
96.00	0.00	97.04	0.16	98.08	0.23
96.02	0.00	97.06	0.16	98.10	0.23
96.04	0.00	97.08	0.16	98.12	0.23
96.06	0.01	97.10	0.16	98.14	0.23
96.08	0.01	97.12	0.17	98.16	0.24
96.10	0.02	97.14	0.17	98.18	0.24
96.12	0.03	97.16	0.17	98.20	0.24
96.14	0.04	97.18	0.17	98.22	0.24
96.16	0.04	97.20	0.17	98.24	0.24
96.18	0.05	97.22	0.17	98.26	0.24
96.20	0.05	97.24	0.17	98.28	0.24
96.22	0.06	97.26	0.18	98.30	0.24
96.24	0.06	97.28	0.18	98.32	0.24
96.26	0.06	97.30	0.18	98.34	0.25
96.28	0.07	97.32	0.18	98.36	0.25
96.30	0.07	97.34	0.18	98.38	0.25
96.32	0.08	97.36	0.19	98.40	0.25
96.34	0.08	97.38	0.19	98.42	0.25
96.36	0.08	97.40	0.19	98.44	0.25
96.38	0.09	97.42	0.19	98.46	0.25
96.40	0.09	97.44	0.19	98.48	0.25
96.42	0.10	97.46	0.19	98.50	0.25
96.44	0.10	97.50	0.19	98.52	0.29
96.46	0.10	97.52	0.20	98.54	0.36
96.48	0.10	97.54	0.20	98.56	0.45
96.50	0.10	97.56	0.20	98.58	0.55
96.52	0.11	97.58	0.20	98.60	0.67
96.54	0.11	97.60	0.20	98.62	0.80
96.56	0.11	97.62	0.20	98.64	0.94
96.58	0.11	97.64	0.20	98.66	1.09
96.60	0.12	97.66	0.21	98.68	1.25
96.62	0.12	97.68	0.21	98.70	1.42
96.64	0.12	97.70	0.21	98.72	1.60
96.66	0.12	97.72	0.21	98.74	1.79
96.68	0.13	97.74	0.21	98.76	1.98
96.70	0.13	97.76	0.21	98.78	2.18
96.72	0.13	97.78	0.21	98.80	2.39
96.74	0.13	97.80	0.21	98.82	2.60
96.76	0.13	97.82	0.22	98.84	2.82
96.78	0.13	97.84	0.22	98.86	3.05
96.80	0.14	97.86	0.22	98.88	3.28
96.82	0.14	97.88	0.22	98.90	3.52
96.84	0.14	97.90	0.22	98.92	3.76
96.86	0.14	97.92	0.22	98.94	4.01
96.88	0.14	97.94	0.22	98.96	4.26
96.90	0.15	97.96	0.22	98.98	4.52
96.92	0.15	97.98	0.22	99.00	4.79
96.94	0.15	98.00	0.23		
96.96	0.15	98.02	0.23		

Stage-Area-Storage for Pond D1: DETENTION BASIN

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
96.00	0	97.04	574	98.08	1,316
96.02	4	97.06	588	98.10	1,330
96.04	10	97.08	602	98.12	1,343
96.06	15	97.10	616	98.14	1,357
96.08	22	97.12	630	98.16	1,370
96.10	29	97.14	644	98.18	1,383
96.12	36	97.16	658	98.20	1,397
96.14	44	97.18	673	98.22	1,410
96.16	52	97.20	687	98.24	1,423
96.18	60	97.22	701	98.26	1,436
96.20	69	97.24	716	98.28	1,449
96.22	78	97.26	730	98.30	1,461
96.24	87	97.28	744	98.32	1,474
96.26	96	97.30	759	98.34	1,487
96.28	106	97.32	773	98.36	1,499
96.30	116	97.34	788	98.38	1,512
96.32	126	97.36	802	98.40	1,524
96.34	136	97.38	817	98.42	1,536
96.36	146	97.40	831	98.44	1,548
96.38	157	97.42	846	98.46	1,560
96.40	168	97.44	860	98.48	1,572
96.42	178	97.46	875	98.50	1,583
96.44	190	97.48	889	98.52	1,595
96.46	201	97.50	904	98.54	1,606
96.48	212	97.52	918	98.56	1,618
96.50	224	97.54	933	98.58	1,629
96.52	235	97.56	947	98.60	1,640
96.54	247	97.58	962	98.62	1,650
96.56	259	97.60	976	98.64	1,661
96.58	271	97.62	991	98.66	1,671
96.60	283	97.64	1,005	98.68	1,682
96.62	296	97.66	1,020	98.70	1,692
96.64	308	97.68	1,034	98.72	1,701
96.66	320	97.70	1,048	98.74	1,711
96.68	333	97.72	1,063	98.76	1,720
96.70	346	97.74	1,077	98.78	1,729
96.72	358	97.76	1,092	98.80	1,738
96.74	371	97.78	1,106	98.82	1,747
96.76	384	97.80	1,120	98.84	1,755
96.78	397	97.82	1,134	98.86	1,763
96.80	411	97.84	1,149	98.88	1,771
96.82	424	97.86	1,163	98.90	1,778
96.84	437	97.88	1,177	98.92	1,785
96.86	450	97.90	1,191	98.94	1,792
96.88	464	97.92	1,205	98.96	1,798
96.90	477	97.94	1,219	98.98	1,803
96.92	491	97.96	1,233	99.00	1,807
96.94	505	97.98	1,247		
96.96	518	98.00	1,261		
96.98	532	98.02	1,275		
97.00	546	98.04	1,289		

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/S	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

Summary for Pond D1: DETENTION BASIN

Inflow Area = 0.759 ac, 56.32% Impervious, Inflow Depth = 0.00" for NOAA-2 event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume = 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume = 0.000 af, Atten = 0%, Lag = 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume = 0.000 af

Routing by Stor-Ind method, Time Span = 0.00-48.00 hrs, dt = 0.05 hrs
 Peak Elev = 96.00' @ 0.00 hrs Surf Area = 150 sf Storage = 0 cf

Plug-Flow detention time = (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time = (not calculated: no inflow)

Volume	Invert	Avail. Storage	Storage Description
#1	96.00'	1,357 cf	36.0" Round Pipe Storage x 3 L = 64.0'
#2	96.00'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc) x 2
		1,807 cf	Total Available Storage

Elevation (feet)	Surf Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
96.00	75	0	0
99.00	75	225	225

Device	Routing	Invert	Outlet Devices
#1	Primary	96.00'	2.5" Vert. Orifice/Grate C = 0.600 Limited to weir flow at low heads
#2	Primary	98.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary Outflow Max = 0.00 cfs @ 0.00 hrs HW = 96.00' (Free Discharge)
 1 = Orifice/Grate (Controls 0.00 cfs)
 2 = Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond D1: DETENTION BASIN

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	96.00	0.00	26.00	0.00	96.00	0.00
0.50	0.00	96.00	0.00	26.50	0.00	96.00	0.00
1.00	0.00	96.00	0.00	27.00	0.00	96.00	0.00
1.50	0.00	96.00	0.00	27.50	0.00	96.00	0.00
2.00	0.00	96.00	0.00	28.00	0.00	96.00	0.00
2.50	0.00	96.00	0.00	28.50	0.00	96.00	0.00
3.00	0.00	96.00	0.00	29.00	0.00	96.00	0.00
3.50	0.00	96.00	0.00	29.50	0.00	96.00	0.00
4.00	0.00	96.00	0.00	30.00	0.00	96.00	0.00
4.50	0.00	96.00	0.00	30.50	0.00	96.00	0.00
5.00	0.00	96.00	0.00	31.00	0.00	96.00	0.00
5.50	0.00	96.00	0.00	31.50	0.00	96.00	0.00
6.00	0.00	96.00	0.00	32.00	0.00	96.00	0.00
6.50	0.00	96.00	0.00	32.50	0.00	96.00	0.00
7.00	0.00	96.00	0.00	33.00	0.00	96.00	0.00
7.50	0.00	96.00	0.00	33.50	0.00	96.00	0.00
8.00	0.00	96.00	0.00	34.00	0.00	96.00	0.00
8.50	0.00	96.00	0.00	34.50	0.00	96.00	0.00
9.00	0.00	96.00	0.00	35.00	0.00	96.00	0.00
9.50	0.00	96.00	0.00	35.50	0.00	96.00	0.00
10.00	0.00	96.00	0.00	36.00	0.00	96.00	0.00
10.50	0.00	96.00	0.00	36.50	0.00	96.00	0.00
11.00	0.00	96.00	0.00	37.00	0.00	96.00	0.00
11.50	0.00	96.00	0.00	37.50	0.00	96.00	0.00
12.00	0.00	96.00	0.00	38.00	0.00	96.00	0.00
12.50	0.00	96.00	0.00	38.50	0.00	96.00	0.00
13.00	0.00	96.00	0.00	39.00	0.00	96.00	0.00
13.50	0.00	96.00	0.00	39.50	0.00	96.00	0.00
14.00	0.00	96.00	0.00	40.00	0.00	96.00	0.00
14.50	0.00	96.00	0.00	40.50	0.00	96.00	0.00
15.00	0.00	96.00	0.00	41.00	0.00	96.00	0.00
15.50	0.00	96.00	0.00	41.50	0.00	96.00	0.00
16.00	0.00	96.00	0.00	42.00	0.00	96.00	0.00
16.50	0.00	96.00	0.00	42.50	0.00	96.00	0.00
17.00	0.00	96.00	0.00	43.00	0.00	96.00	0.00
17.50	0.00	96.00	0.00	43.50	0.00	96.00	0.00
18.00	0.00	96.00	0.00	44.00	0.00	96.00	0.00
18.50	0.00	96.00	0.00	44.50	0.00	96.00	0.00
19.00	0.00	96.00	0.00	45.00	0.00	96.00	0.00
19.50	0.00	96.00	0.00	45.50	0.00	96.00	0.00
20.00	0.00	96.00	0.00	46.00	0.00	96.00	0.00
20.50	0.00	96.00	0.00	46.50	0.00	96.00	0.00
21.00	0.00	96.00	0.00	47.00	0.00	96.00	0.00
21.50	0.00	96.00	0.00	47.50	0.00	96.00	0.00
22.00	0.00	96.00	0.00	48.00	0.00	96.00	0.00
22.50	0.00	96.00	0.00				
23.00	0.00	96.00	0.00				
23.50	0.00	96.00	0.00				
24.00	0.00	96.00	0.00				
24.50	0.00	96.00	0.00				

Summary for Pond D1: DETENTION BASIN

Inflow Area = 0.759 ac, 56.32% Impervious, Inflow Depth = 0.00" for NOAA-10 event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 96.00' @ 0.00 hrs Surf Area= 150 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail. Storage	Storage Description
#1	96.00'	1,357 cf	36.0" Round Pipe Storage x 3 L= 64.0'
#2	96.00'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc) x 2
		1,807 cf	Total Available Storage

Elevation (feet)	Surf Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
96.00	75	0	0
99.00	75	225	225

Device	Routing	Invert	Outlet Devices
#1	Primary	96.00'	2.5" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	98.50'	4.0" long Sharp-Crested Rectangular Weir 2 End Contractions

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=96.00' (Free Discharge)
 1-Orifice/Grate (Controls 0.00 cfs)
 2-Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond D1: DETENTION BASIN

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	96.00	0.00	26.00	0.00	96.00	0.00
0.50	0.00	96.00	0.00	26.50	0.00	96.00	0.00
1.00	0.00	96.00	0.00	27.00	0.00	96.00	0.00
1.50	0.00	96.00	0.00	27.50	0.00	96.00	0.00
2.00	0.00	96.00	0.00	28.00	0.00	96.00	0.00
2.50	0.00	96.00	0.00	28.50	0.00	96.00	0.00
3.00	0.00	96.00	0.00	29.00	0.00	96.00	0.00
3.50	0.00	96.00	0.00	29.50	0.00	96.00	0.00
4.00	0.00	96.00	0.00	30.00	0.00	96.00	0.00
4.50	0.00	96.00	0.00	30.50	0.00	96.00	0.00
5.00	0.00	96.00	0.00	31.00	0.00	96.00	0.00
5.50	0.00	96.00	0.00	31.50	0.00	96.00	0.00
6.00	0.00	96.00	0.00	32.00	0.00	96.00	0.00
6.50	0.00	96.00	0.00	32.50	0.00	96.00	0.00
7.00	0.00	96.00	0.00	33.00	0.00	96.00	0.00
7.50	0.00	96.00	0.00	33.50	0.00	96.00	0.00
8.00	0.00	96.00	0.00	34.00	0.00	96.00	0.00
8.50	0.00	96.00	0.00	34.50	0.00	96.00	0.00
9.00	0.00	96.00	0.00	35.00	0.00	96.00	0.00
9.50	0.00	96.00	0.00	35.50	0.00	96.00	0.00
10.00	0.00	96.00	0.00	36.00	0.00	96.00	0.00
10.50	0.00	96.00	0.00	36.50	0.00	96.00	0.00
11.00	0.00	96.00	0.00	37.00	0.00	96.00	0.00
11.50	0.00	96.00	0.00	37.50	0.00	96.00	0.00
12.00	0.00	96.00	0.00	38.00	0.00	96.00	0.00
12.50	0.00	96.00	0.00	38.50	0.00	96.00	0.00
13.00	0.00	96.00	0.00	39.00	0.00	96.00	0.00
13.50	0.00	96.00	0.00	39.50	0.00	96.00	0.00
14.00	0.00	96.00	0.00	40.00	0.00	96.00	0.00
14.50	0.00	96.00	0.00	40.50	0.00	96.00	0.00
15.00	0.00	96.00	0.00	41.00	0.00	96.00	0.00
15.50	0.00	96.00	0.00	41.50	0.00	96.00	0.00
16.00	0.00	96.00	0.00	42.00	0.00	96.00	0.00
16.50	0.00	96.00	0.00	42.50	0.00	96.00	0.00
17.00	0.00	96.00	0.00	43.00	0.00	96.00	0.00
17.50	0.00	96.00	0.00	43.50	0.00	96.00	0.00
18.00	0.00	96.00	0.00	44.00	0.00	96.00	0.00
18.50	0.00	96.00	0.00	44.50	0.00	96.00	0.00
19.00	0.00	96.00	0.00	45.00	0.00	96.00	0.00
19.50	0.00	96.00	0.00	45.50	0.00	96.00	0.00
20.00	0.00	96.00	0.00	46.00	0.00	96.00	0.00
20.50	0.00	96.00	0.00	46.50	0.00	96.00	0.00
21.00	0.00	96.00	0.00	47.00	0.00	96.00	0.00
21.50	0.00	96.00	0.00	47.50	0.00	96.00	0.00
22.00	0.00	96.00	0.00	48.00	0.00	96.00	0.00
22.50	0.00	96.00	0.00				
23.00	0.00	96.00	0.00				
23.50	0.00	96.00	0.00				
24.00	0.00	96.00	0.00				
24.50	0.00	96.00	0.00				

Summary for Pond D1: DETENTION BASIN

Inflow Area = 0.759 ac, 56.32% Impervious, Inflow Depth = 0.90" for NOAA-100 event
Inflow = 1.65 cfs @ 12.30 hrs, Volume= 0.057 af
Outflow = 0.39 cfs @ 12.76 hrs, Volume= 0.057 af, Atten= 76%, Lag= 27.4 min
Primary = 0.39 cfs @ 12.76 hrs, Volume= 0.057 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 98.55' @ 12.76 hrs Surf.Area= 563 sf Storage= 1,610 cf

Plug-Flow detention time= 76.4 min calculated for 0.057 af (100% of inflow)
Center-of-Mass det. time= 75.6 min (826.0 - 750.4)

Volume	Invert	Avail. Storage	Storage Description
#1	96.00'	1,357 cf	36.0" Round Pipe Storage x 3 L= 64.0'
#2	96.00'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc) x 2
		1,807 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
96.00	75	0	0
99.00	75	225	225

Device	Routing	Invert	Outlet Devices
#1	Primary	96.00'	2.5" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	98.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary OutFlow Max=0.38 cfs @ 12.76 hrs HW=98.55' (Free Discharge)
1=Orifice/Grate (Orifice Controls 0.26 cfs @ 7.52 fps)

2=Sharp-Crested Rectangular Weir (Weir Controls 0.13 cfs @ 0.70 fps)

Hydrograph for Pond D1: DETENTION BASIN

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	96.00	0.00
1.00	0.00	0	96.00	0.00
2.00	0.00	0	96.00	0.00
3.00	0.00	0	96.00	0.00
4.00	0.00	0	96.00	0.00
5.00	0.00	0	96.00	0.00
6.00	0.00	0	96.00	0.00
7.00	0.00	0	96.00	0.00
8.00	0.00	0	96.00	0.00
9.00	0.00	0	96.00	0.00
10.00	0.00	0	96.00	0.00
11.00	0.00	0	96.00	0.00
12.00	0.00	0	96.00	0.00
13.00	0.19	1,575	98.49	0.25
14.00	0.00	938	97.55	0.20
15.00	0.00	351	96.71	0.13
16.00	0.00	47	96.15	0.03
17.00	0.00	8	96.03	0.00
18.00	0.00	3	96.01	0.00
19.00	0.00	1	96.01	0.00
20.00	0.00	0	96.00	0.00
21.00	0.00	0	96.00	0.00
22.00	0.00	0	96.00	0.00
23.00	0.00	0	96.00	0.00
24.00	0.00	0	96.00	0.00
25.00	0.00	0	96.00	0.00
26.00	0.00	0	96.00	0.00
27.00	0.00	0	96.00	0.00
28.00	0.00	0	96.00	0.00
29.00	0.00	0	96.00	0.00
30.00	0.00	0	96.00	0.00
31.00	0.00	0	96.00	0.00
32.00	0.00	0	96.00	0.00
33.00	0.00	0	96.00	0.00
34.00	0.00	0	96.00	0.00
35.00	0.00	0	96.00	0.00
36.00	0.00	0	96.00	0.00
37.00	0.00	0	96.00	0.00
38.00	0.00	0	96.00	0.00
39.00	0.00	0	96.00	0.00
40.00	0.00	0	96.00	0.00
41.00	0.00	0	96.00	0.00
42.00	0.00	0	96.00	0.00
43.00	0.00	0	96.00	0.00
44.00	0.00	0	96.00	0.00
45.00	0.00	0	96.00	0.00
46.00	0.00	0	96.00	0.00
47.00	0.00	0	96.00	0.00
48.00	0.00	0	96.00	0.00

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

Summary for Subcatchment BY: BYPASS

Runoff = 0.00 cfs @ 16.45 hrs, Volume= 0.003 af, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)	CN	Description
7,491	39	>75% Grass cover, Good, HSG A
22,118	39	>75% Grass cover, Good, HSG A
2,684	98	Paved parking, HSG A
32,293	44	Weighted Average
29,609		91.69% Pervious Area
2,684		8.31% Impervious Area
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)
10.0		Capacity (cfs)
Description		
Direct Entry, SHEET FLOW		

Hydrograph for Subcatchment BY: BYPASS

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	0.05	0.00
0.50	0.02	0.00	0.00	26.50	3.41	0.05	0.00
1.00	0.04	0.00	0.00	27.00	3.41	0.05	0.00
1.50	0.06	0.00	0.00	27.50	3.41	0.05	0.00
2.00	0.08	0.00	0.00	28.00	3.41	0.05	0.00
2.50	0.10	0.00	0.00	28.50	3.41	0.05	0.00
3.00	0.13	0.00	0.00	29.00	3.41	0.05	0.00
3.50	0.15	0.00	0.00	29.50	3.41	0.05	0.00
4.00	0.18	0.00	0.00	30.00	3.41	0.05	0.00
4.50	0.21	0.00	0.00	30.50	3.41	0.05	0.00
5.00	0.23	0.00	0.00	31.00	3.41	0.05	0.00
5.50	0.26	0.00	0.00	31.50	3.41	0.05	0.00
6.00	0.29	0.00	0.00	32.00	3.41	0.05	0.00
6.50	0.32	0.00	0.00	32.50	3.41	0.05	0.00
7.00	0.36	0.00	0.00	33.00	3.41	0.05	0.00
7.50	0.40	0.00	0.00	33.50	3.41	0.05	0.00
8.00	0.44	0.00	0.00	34.00	3.41	0.05	0.00
8.50	0.49	0.00	0.00	34.50	3.41	0.05	0.00
9.00	0.54	0.00	0.00	35.00	3.41	0.05	0.00
9.50	0.60	0.00	0.00	35.50	3.41	0.05	0.00
10.00	0.68	0.00	0.00	36.00	3.41	0.05	0.00
10.50	0.76	0.00	0.00	36.50	3.41	0.05	0.00
11.00	0.89	0.00	0.00	37.00	3.41	0.05	0.00
11.50	1.08	0.00	0.00	37.50	3.41	0.05	0.00
12.00	1.63	0.00	0.00	38.00	3.41	0.05	0.00
12.50	2.33	0.00	0.00	38.50	3.41	0.05	0.00
13.00	2.52	0.00	0.00	39.00	3.41	0.05	0.00
13.50	2.65	0.00	0.00	39.50	3.41	0.05	0.00
14.00	2.73	0.00	0.00	40.00	3.41	0.05	0.00
14.50	2.81	0.01	0.00	40.50	3.41	0.05	0.00
15.00	2.87	0.01	0.00	41.00	3.41	0.05	0.00
15.50	2.92	0.01	0.00	41.50	3.41	0.05	0.00
16.00	2.97	-0.01	0.00	42.00	3.41	0.05	0.00
16.50	3.01	0.02	0.00	42.50	3.41	0.05	0.00
17.00	3.05	0.02	0.00	43.00	3.41	0.05	0.00
17.50	3.09	0.02	0.00	43.50	3.41	0.05	0.00
18.00	3.12	0.02	0.00	44.00	3.41	0.05	0.00
18.50	3.15	0.03	0.00	44.50	3.41	0.05	0.00
19.00	3.18	0.03	0.00	45.00	3.41	0.05	0.00
19.50	3.20	0.03	0.00	45.50	3.41	0.05	0.00
20.00	3.23	0.04	0.00	46.00	3.41	0.05	0.00
20.50	3.26	0.04	0.00	46.50	3.41	0.05	0.00
21.00	3.28	0.04	0.00	47.00	3.41	0.05	0.00
21.50	3.31	0.04	0.00	47.50	3.41	0.05	0.00
22.00	3.33	0.05	0.00	48.00	3.41	0.05	0.00
22.50	3.35	0.05	0.00				
23.00	3.37	0.05	0.00				
23.50	3.39	0.05	0.00				
24.00	3.41	0.05	0.00				
24.50	3.41	0.05	0.00				

Summary for Subcatchment BY: BYPASS

Runoff = 0.12 cfs @ 12.27 hrs, Volume= 0.028 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)	CN	Description			
7,491	39	>75% Grass cover, Good, HSG A			
22,118	39	>75% Grass cover, Good, HSG A			
2,684	98	Paved parking, HSG A			
32,293	44	Weighted Average			
29,609		91.69% Pervious Area			
2,684		8.31% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, SHEET FLOW

Hydrograph for Subcatchment BY: BYPASS

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	0.45	0.00
0.50	0.03	0.00	0.00	26.50	5.17	0.45	0.00
1.00	0.06	0.00	0.00	27.00	5.17	0.45	0.00
1.50	0.09	0.00	0.00	27.50	5.17	0.45	0.00
2.00	0.12	0.00	0.00	28.00	5.17	0.45	0.00
2.50	0.16	0.00	0.00	28.50	5.17	0.45	0.00
3.00	0.19	0.00	0.00	29.00	5.17	0.45	0.00
3.50	0.23	0.00	0.00	29.50	5.17	0.45	0.00
4.00	0.27	0.00	0.00	30.00	5.17	0.45	0.00
4.50	0.31	0.00	0.00	30.50	5.17	0.45	0.00
5.00	0.35	0.00	0.00	31.00	5.17	0.45	0.00
5.50	0.40	0.00	0.00	31.50	5.17	0.45	0.00
6.00	0.44	0.00	0.00	32.00	5.17	0.45	0.00
6.50	0.49	0.00	0.00	32.50	5.17	0.45	0.00
7.00	0.54	0.00	0.00	33.00	5.17	0.45	0.00
7.50	0.60	0.00	0.00	33.50	5.17	0.45	0.00
8.00	0.67	0.00	0.00	34.00	5.17	0.45	0.00
8.50	0.74	0.00	0.00	34.50	5.17	0.45	0.00
9.00	0.82	0.00	0.00	35.00	5.17	0.45	0.00
9.50	0.91	0.00	0.00	35.50	5.17	0.45	0.00
10.00	1.02	0.00	0.00	36.00	5.17	0.45	0.00
10.50	1.16	0.00	0.00	36.50	5.17	0.45	0.00
11.00	1.34	0.00	0.00	37.00	5.17	0.45	0.00
11.50	1.64	0.00	0.00	37.50	5.17	0.45	0.00
12.00	2.48	0.00	0.00	38.00	5.17	0.45	0.00
12.50	3.53	0.07	0.09	38.50	5.17	0.45	0.00
13.00	3.83	0.12	0.07	39.00	5.17	0.45	0.00
13.50	4.01	0.15	0.05	39.50	5.17	0.45	0.00
14.00	4.15	0.18	0.04	40.00	5.17	0.45	0.00
14.50	4.26	0.20	0.04	40.50	5.17	0.45	0.00
15.00	4.35	0.22	0.03	41.00	5.17	0.45	0.00
15.50	4.43	0.24	0.03	41.50	5.17	0.45	0.00
16.00	4.50	0.26	0.03	42.00	5.17	0.45	0.00
16.50	4.57	0.28	0.02	42.50	5.17	0.45	0.00
17.00	4.63	0.29	0.02	43.00	5.17	0.45	0.00
17.50	4.68	0.31	0.02	43.50	5.17	0.45	0.00
18.00	4.73	0.32	0.02	44.00	5.17	0.45	0.00
18.50	4.77	0.33	0.02	44.50	5.17	0.45	0.00
19.00	4.82	0.34	0.02	45.00	5.17	0.45	0.00
19.50	4.86	0.36	0.02	45.50	5.17	0.45	0.00
20.00	4.90	0.37	0.02	46.00	5.17	0.45	0.00
20.50	4.94	0.38	0.02	46.50	5.17	0.45	0.00
21.00	4.98	0.39	0.02	47.00	5.17	0.45	0.00
21.50	5.01	0.40	0.02	47.50	5.17	0.45	0.00
22.00	5.05	0.41	0.02	48.00	5.17	0.45	0.00
22.50	5.08	0.42	0.01				
23.00	5.11	0.43	0.01				
23.50	5.14	0.44	0.01				
24.00	5.17	0.45	0.00				
24.50	5.17	0.45	0.00				

Summary for Subcatchment BY: BYPASS

Runoff = 1.26 cfs @ 12.19 hrs, Volume= 0.120 af, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)	CN	Description
7,491	39	>75% Grass cover, Good, HSG A
22,118	39	>75% Grass cover, Good, HSG A
2,684	98	Paved parking, HSG A
32,293	44	Weighted Average
29,609		91.69% Pervious Area
2,684		8.31% Impervious Area
Tc Length (min) (feet)	Slope (ft/ft)	Velocity (ft/sec)
10.0		Capacity (cfs)
Description		
Direct Entry, SHEET FLOW		

Hydrograph for Subcatchment BY: BYPASS

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	1.95	0.00
0.50	0.05	0.00	0.00	26.50	8.59	1.95	0.00
1.00	0.10	0.00	0.00	27.00	8.59	1.95	0.00
1.50	0.15	0.00	0.00	27.50	8.59	1.95	0.00
2.00	0.21	0.00	0.00	28.00	8.59	1.95	0.00
2.50	0.26	0.00	0.00	28.50	8.59	1.95	0.00
3.00	0.32	0.00	0.00	29.00	8.59	1.95	0.00
3.50	0.39	0.00	0.00	29.50	8.59	1.95	0.00
4.00	0.45	0.00	0.00	30.00	8.59	1.95	0.00
4.50	0.52	0.00	0.00	30.50	8.59	1.95	0.00
5.00	0.59	0.00	0.00	31.00	8.59	1.95	0.00
5.50	0.66	0.00	0.00	31.50	8.59	1.95	0.00
6.00	0.73	0.00	0.00	32.00	8.59	1.95	0.00
6.50	0.81	0.00	0.00	32.50	8.59	1.95	0.00
7.00	0.90	0.00	0.00	33.00	8.59	1.95	0.00
7.50	1.01	0.00	0.00	33.50	8.59	1.95	0.00
8.00	1.11	0.00	0.00	34.00	8.59	1.95	0.00
8.50	1.23	0.00	0.00	34.50	8.59	1.95	0.00
9.00	1.36	0.00	0.00	35.00	8.59	1.95	0.00
9.50	1.52	0.00	0.00	35.50	8.59	1.95	0.00
10.00	1.70	0.00	0.00	36.00	8.59	1.95	0.00
10.50	1.92	0.00	0.00	36.50	8.59	1.95	0.00
11.00	2.23	0.00	0.00	37.00	8.59	1.95	0.00
11.50	2.72	0.00	0.00	37.50	8.59	1.95	0.00
12.00	4.12	0.17	0.34	38.00	8.59	1.95	0.00
12.50	5.87	0.69	0.48	38.50	8.59	1.95	0.00
13.00	6.36	0.88	0.27	39.00	8.59	1.95	0.00
13.50	6.67	1.01	0.18	39.50	8.59	1.95	0.00
14.00	6.89	1.10	0.14	40.00	8.59	1.95	0.00
14.50	7.07	1.19	0.12	40.50	8.59	1.95	0.00
15.00	7.23	1.26	0.10	41.00	8.59	1.95	0.00
15.50	7.36	1.32	0.09	41.50	8.59	1.95	0.00
16.00	7.48	1.38	0.08	42.00	8.59	1.95	0.00
16.50	7.58	1.43	0.08	42.50	8.59	1.95	0.00
17.00	7.69	1.48	0.07	43.00	8.59	1.95	0.00
17.50	7.78	1.52	0.06	43.50	8.59	1.95	0.00
18.00	7.86	1.56	0.06	44.00	8.59	1.95	0.00
18.50	7.93	1.60	0.06	44.50	8.59	1.95	0.00
19.00	8.00	1.64	0.05	45.00	8.59	1.95	0.00
19.50	8.07	1.67	0.05	45.50	8.59	1.95	0.00
20.00	8.14	1.71	0.05	46.00	8.59	1.95	0.00
20.50	8.20	1.74	0.05	46.50	8.59	1.95	0.00
21.00	8.27	1.77	0.05	47.00	8.59	1.95	0.00
21.50	8.33	1.81	0.05	47.50	8.59	1.95	0.00
22.00	8.38	1.84	0.05	48.00	8.59	1.95	0.00
22.50	8.44	1.87	0.04				
23.00	8.49	1.89	0.04				
23.50	8.54	1.92	0.04				
24.00	8.59	1.95	0.04				
24.50	8.59	1.95	0.00				

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	NOAA-2	NOAA 24-hr	D	Default	24.00	1	3.41	2
2	NOAA-10	NOAA 24-hr	D	Default	24.00	1	5.17	2
3	NOAA-100	NOAA 24-hr	D	Default	24.00	1	8.59	2

17 VAN VOOREN DRIVE-POST-DEV

NOAA 24-hr D NOAA-2 Rainfall=3.41"

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Summary for Subcatchment BY: BYPASS

Runoff = 0.00 cfs @ 16.45 hrs, Volume= 0.003 af, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-2 Rainfall=3.41"

Area (sf)	CN	Description
7,491	39	>75% Grass cover, Good, HSG A
22,118	39	>75% Grass cover, Good, HSG A
2,684	98	Paved parking, HSG A
32,293	44	Weighted Average
29,609		91.69% Pervious Area
2,684		8.31% Impervious Area
Tc Length (min)	Slope (ft/ft)	Velocity (ft/sec)
10.0		Capacity (cfs)
		Description
		Direct Entry, SHEET FLOW

Hydrograph for Subcatchment BY: BYPASS

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	3.41	0.05	0.00
0.50	0.02	0.00	0.00	26.50	3.41	0.05	0.00
1.00	0.04	0.00	0.00	27.00	3.41	0.05	0.00
1.50	0.06	0.00	0.00	27.50	3.41	0.05	0.00
2.00	0.08	0.00	0.00	28.00	3.41	0.05	0.00
2.50	0.10	0.00	0.00	28.50	3.41	0.05	0.00
3.00	0.13	0.00	0.00	29.00	3.41	0.05	0.00
3.50	0.15	0.00	0.00	29.50	3.41	0.05	0.00
4.00	0.18	0.00	0.00	30.00	3.41	0.05	0.00
4.50	0.21	0.00	0.00	30.50	3.41	0.05	0.00
5.00	0.23	0.00	0.00	31.00	3.41	0.05	0.00
5.50	0.26	0.00	0.00	31.50	3.41	0.05	0.00
6.00	0.29	0.00	0.00	32.00	3.41	0.05	0.00
6.50	0.32	0.00	0.00	32.50	3.41	0.05	0.00
7.00	0.36	0.00	0.00	33.00	3.41	0.05	0.00
7.50	0.40	0.00	0.00	33.50	3.41	0.05	0.00
8.00	0.44	0.00	0.00	34.00	3.41	0.05	0.00
8.50	0.49	0.00	0.00	34.50	3.41	0.05	0.00
9.00	0.54	0.00	0.00	35.00	3.41	0.05	0.00
9.50	0.60	0.00	0.00	35.50	3.41	0.05	0.00
10.00	0.68	0.00	0.00	36.00	3.41	0.05	0.00
10.50	0.76	0.00	0.00	36.50	3.41	0.05	0.00
11.00	0.89	0.00	0.00	37.00	3.41	0.05	0.00
11.50	1.08	0.00	0.00	37.50	3.41	0.05	0.00
12.00	1.63	0.00	0.00	38.00	3.41	0.05	0.00
12.50	2.33	0.00	0.00	38.50	3.41	0.05	0.00
13.00	2.52	0.00	0.00	39.00	3.41	0.05	0.00
13.50	2.65	0.00	0.00	39.50	3.41	0.05	0.00
14.00	2.73	0.00	0.00	40.00	3.41	0.05	0.00
14.50	2.81	0.01	0.00	40.50	3.41	0.05	0.00
15.00	2.87	0.01	0.00	41.00	3.41	0.05	0.00
15.50	2.92	0.01	0.00	41.50	3.41	0.05	0.00
16.00	2.97	0.01	0.00	42.00	3.41	0.05	0.00
16.50	3.01	0.02	0.00	42.50	3.41	0.05	0.00
17.00	3.05	0.02	0.00	43.00	3.41	0.05	0.00
17.50	3.09	0.02	0.00	43.50	3.41	0.05	0.00
18.00	3.12	0.02	0.00	44.00	3.41	0.05	0.00
18.50	3.15	0.03	0.00	44.50	3.41	0.05	0.00
19.00	3.18	0.03	0.00	45.00	3.41	0.05	0.00
19.50	3.20	0.03	0.00	45.50	3.41	0.05	0.00
20.00	3.23	0.04	0.00	46.00	3.41	0.05	0.00
20.50	3.26	0.04	0.00	46.50	3.41	0.05	0.00
21.00	3.28	0.04	0.00	47.00	3.41	0.05	0.00
21.50	3.31	0.04	0.00	47.50	3.41	0.05	0.00
22.00	3.33	0.05	0.00	48.00	3.41	0.05	0.00
22.50	3.35	0.05	0.00				
23.00	3.37	0.05	0.00				
23.50	3.39	0.05	0.00				
24.00	3.41	0.06	0.00				
24.50	3.41	0.06	0.00				

Summary for Pond D1: DETENTION BASIN

Inflow Area = 0.759 ac, 56.32% Impervious, Inflow Depth = 0.00" for NOAA-2 event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 96.00' @ 0.00 hrs Surf.Area= 150 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail. Storage	Storage Description
#1	96.00'	1,357 cf	36.0" Round Pipe Storage x 3 L= 64.0'
#2	96.00'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc) x 2
		1,807 cf	Total Available Storage

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
96.00	75	0	0
99.00	75	225	225

Device	Routing	Invert	Outlet Devices
#1	Primary	96.00'	2.5" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	98.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=96.00' (Free Discharge)

1=Orifice/Grate (Controls 0.00 cfs)

2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond D1: DETENTION BASIN

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	96.00	0.00	26.00	0.00	96.00	0.00
0.50	0.00	96.00	0.00	26.50	0.00	96.00	0.00
1.00	0.00	96.00	0.00	27.00	0.00	96.00	0.00
1.50	0.00	96.00	0.00	27.50	0.00	96.00	0.00
2.00	0.00	96.00	0.00	28.00	0.00	96.00	0.00
2.50	0.00	96.00	0.00	28.50	0.00	96.00	0.00
3.00	0.00	96.00	0.00	29.00	0.00	96.00	0.00
3.50	0.00	96.00	0.00	29.50	0.00	96.00	0.00
4.00	0.00	96.00	0.00	30.00	0.00	96.00	0.00
4.50	0.00	96.00	0.00	30.50	0.00	96.00	0.00
5.00	0.00	96.00	0.00	31.00	0.00	96.00	0.00
5.50	0.00	96.00	0.00	31.50	0.00	96.00	0.00
6.00	0.00	96.00	0.00	32.00	0.00	96.00	0.00
6.50	0.00	96.00	0.00	32.50	0.00	96.00	0.00
7.00	0.00	96.00	0.00	33.00	0.00	96.00	0.00
7.50	0.00	96.00	0.00	33.50	0.00	96.00	0.00
8.00	0.00	96.00	0.00	34.00	0.00	96.00	0.00
8.50	0.00	96.00	0.00	34.50	0.00	96.00	0.00
9.00	0.00	96.00	0.00	35.00	0.00	96.00	0.00
9.50	0.00	96.00	0.00	35.50	0.00	96.00	0.00
10.00	0.00	96.00	0.00	36.00	0.00	96.00	0.00
10.50	0.00	96.00	0.00	36.50	0.00	96.00	0.00
11.00	0.00	96.00	0.00	37.00	0.00	96.00	0.00
11.50	0.00	96.00	0.00	37.50	0.00	96.00	0.00
12.00	0.00	96.00	0.00	38.00	0.00	96.00	0.00
12.50	0.00	96.00	0.00	38.50	0.00	96.00	0.00
13.00	0.00	96.00	0.00	39.00	0.00	96.00	0.00
13.50	0.00	96.00	0.00	39.50	0.00	96.00	0.00
14.00	0.00	96.00	0.00	40.00	0.00	96.00	0.00
14.50	0.00	96.00	0.00	40.50	0.00	96.00	0.00
15.00	0.00	96.00	0.00	41.00	0.00	96.00	0.00
15.50	0.00	96.00	0.00	41.50	0.00	96.00	0.00
16.00	0.00	96.00	0.00	42.00	0.00	96.00	0.00
16.50	0.00	96.00	0.00	42.50	0.00	96.00	0.00
17.00	0.00	96.00	0.00	43.00	0.00	96.00	0.00
17.50	0.00	96.00	0.00	43.50	0.00	96.00	0.00
18.00	0.00	96.00	0.00	44.00	0.00	96.00	0.00
18.50	0.00	96.00	0.00	44.50	0.00	96.00	0.00
19.00	0.00	96.00	0.00	45.00	0.00	96.00	0.00
19.50	0.00	96.00	0.00	45.50	0.00	96.00	0.00
20.00	0.00	96.00	0.00	46.00	0.00	96.00	0.00
20.50	0.00	96.00	0.00	46.50	0.00	96.00	0.00
21.00	0.00	96.00	0.00	47.00	0.00	96.00	0.00
21.50	0.00	96.00	0.00	47.50	0.00	96.00	0.00
22.00	0.00	96.00	0.00	48.00	0.00	96.00	0.00
22.50	0.00	96.00	0.00				
23.00	0.00	96.00	0.00				
23.50	0.00	96.00	0.00				
24.00	0.00	96.00	0.00				
24.50	0.00	96.00	0.00				

Summary for Link T: Total Flow to Van Vooren Drive

Inflow Area = 1.500 ac, 32.59% Impervious, Inflow Depth = 0.03" for NOAA-2 event
Inflow = 0.00 cfs @ 16.45 hrs, Volume= 0.003 af
Primary = 0.00 cfs @ 16.45 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Hydrograph for Link T: Total Flow to Van Vooren Drive

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	27.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	27.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	28.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	28.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
12.50	0.00	0.00	0.00	38.50	0.00	0.00	0.00
13.00	0.00	0.00	0.00	39.00	0.00	0.00	0.00
13.50	0.00	0.00	0.00	39.50	0.00	0.00	0.00
14.00	0.00	0.00	0.00	40.00	0.00	0.00	0.00
14.50	0.00	0.00	0.00	40.50	0.00	0.00	0.00
15.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
15.50	0.00	0.00	0.00	41.50	0.00	0.00	0.00
16.00	0.00	0.00	0.00	42.00	0.00	0.00	0.00
16.50	0.00	0.00	0.00	42.50	0.00	0.00	0.00
17.00	0.00	0.00	0.00	43.00	0.00	0.00	0.00
17.50	0.00	0.00	0.00	43.50	0.00	0.00	0.00
18.00	0.00	0.00	0.00	44.00	0.00	0.00	0.00
18.50	0.00	0.00	0.00	44.50	0.00	0.00	0.00
19.00	0.00	0.00	0.00	45.00	0.00	0.00	0.00
19.50	0.00	0.00	0.00	45.50	0.00	0.00	0.00
20.00	0.00	0.00	0.00	46.00	0.00	0.00	0.00
20.50	0.00	0.00	0.00	46.50	0.00	0.00	0.00
21.00	0.00	0.00	0.00	47.00	0.00	0.00	0.00
21.50	0.00	0.00	0.00	47.50	0.00	0.00	0.00
22.00	0.00	0.00	0.00	48.00	0.00	0.00	0.00
22.50	0.00	0.00	0.00				
23.00	0.00	0.00	0.00				
23.50	0.00	0.00	0.00				
24.00	0.00	0.00	0.00				
24.50	0.00	0.00	0.00				

Summary for Subcatchment BY: BYPASS

Runoff = 0.12 cfs @ 12.27 hrs, Volume= 0.028 af, Depth= 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-10 Rainfall=5.17"

Area (sf)		CN	Description		
7,491	39		>75% Grass cover, Good, HSG A		
22,118	39		>75% Grass cover, Good, HSG A		
2,684	98		Paved parking, HSG A		
32,293	44		Weighted Average		
29,609			91.69% Pervious Area		
2,684			8.31% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, SHEET FLOW

Hydrograph for Subcatchment BY: BYPASS

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	5.17	0.45	0.00
0.50	0.03	0.00	0.00	26.50	5.17	0.45	0.00
1.00	0.06	0.00	0.00	27.00	5.17	0.45	0.00
1.50	0.09	0.00	0.00	27.50	5.17	0.45	0.00
2.00	0.12	0.00	0.00	28.00	5.17	0.45	0.00
2.50	0.16	0.00	0.00	28.50	5.17	0.45	0.00
3.00	0.19	0.00	0.00	29.00	5.17	0.45	0.00
3.50	0.23	0.00	0.00	29.50	5.17	0.45	0.00
4.00	0.27	0.00	0.00	30.00	5.17	0.45	0.00
4.50	0.31	0.00	0.00	30.50	5.17	0.45	0.00
5.00	0.35	0.00	0.00	31.00	5.17	0.45	0.00
5.50	0.40	0.00	0.00	31.50	5.17	0.45	0.00
6.00	0.44	0.00	0.00	32.00	5.17	0.45	0.00
6.50	0.49	0.00	0.00	32.50	5.17	0.45	0.00
7.00	0.54	0.00	0.00	33.00	5.17	0.45	0.00
7.50	0.60	0.00	0.00	33.50	5.17	0.45	0.00
8.00	0.67	0.00	0.00	34.00	5.17	0.45	0.00
8.50	0.74	0.00	0.00	34.50	5.17	0.45	0.00
9.00	0.82	0.00	0.00	35.00	5.17	0.45	0.00
9.50	0.91	0.00	0.00	35.50	5.17	0.45	0.00
10.00	1.02	0.00	0.00	36.00	5.17	0.45	0.00
10.50	1.16	0.00	0.00	36.50	5.17	0.45	0.00
11.00	1.34	0.00	0.00	37.00	5.17	0.45	0.00
11.50	1.64	0.00	0.00	37.50	5.17	0.45	0.00
12.00	2.48	0.00	0.00	38.00	5.17	0.45	0.00
12.50	3.53	0.07	0.09	38.50	5.17	0.45	0.00
13.00	3.83	0.12	0.07	39.00	5.17	0.45	0.00
13.50	4.01	0.15	0.06	39.50	5.17	0.45	0.00
14.00	4.15	0.18	0.04	40.00	5.17	0.45	0.00
14.50	4.26	0.20	0.04	40.50	5.17	0.45	0.00
15.00	4.35	0.22	0.03	41.00	5.17	0.45	0.00
15.50	4.43	0.24	0.03	41.50	5.17	0.45	0.00
16.00	4.50	0.26	0.03	42.00	5.17	0.45	0.00
16.50	4.57	0.28	0.02	42.50	5.17	0.45	0.00
17.00	4.63	0.29	0.02	43.00	5.17	0.45	0.00
17.50	4.68	0.31	0.02	43.50	5.17	0.45	0.00
18.00	4.73	0.32	0.02	44.00	5.17	0.45	0.00
18.50	4.77	0.33	0.02	44.50	5.17	0.45	0.00
19.00	4.82	0.34	0.02	45.00	5.17	0.45	0.00
19.50	4.86	0.36	0.02	45.50	5.17	0.45	0.00
20.00	4.90	0.37	0.02	46.00	5.17	0.45	0.00
20.50	4.94	0.38	0.02	46.50	5.17	0.45	0.00
21.00	4.98	0.39	0.02	47.00	5.17	0.45	0.00
21.50	5.01	0.40	0.02	47.50	5.17	0.45	0.00
22.00	5.05	0.41	0.01	48.00	5.17	0.45	0.00
22.50	5.08	0.42	0.01				
23.00	5.11	0.43	0.01				
23.50	5.14	0.44	0.01				
24.00	5.17	0.45	0.00				
24.50	5.17	0.45	0.00				

Summary for Pond D1: DETENTION BASIN

Inflow Area = 0.759 ac, 56.32% Impervious, Inflow Depth = 0.00" for NOAA-10 event
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 96.00' @ 0.00 hrs Surf Area= 150 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail. Storage	Storage Description
#1	96.00'	1,357 cf	36.0" Round Pipe Storage x 3 L= 64.0'
#2	96.00'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc) x 2
		1,807 cf	Total Available Storage

Elevation (feet)	Surf Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
96.00	75	0	0
99.00	75	225	225

Device	Routing	Invert	Outlet Devices
#1	Primary	96.00'	2.5" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	98.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary Outflow Max=0.00 cfs @ 0.00 hrs HW=96.00' (Free Discharge)
 1=Orifice/Grate (Controls 0.00 cfs)
 2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Hydrograph for Pond D1: DETENTION BASIN

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	96.00	0.00	26.00	0.00	96.00	0.00
0.50	0.00	96.00	0.00	26.50	0.00	96.00	0.00
1.00	0.00	96.00	0.00	27.00	0.00	96.00	0.00
1.50	0.00	96.00	0.00	27.50	0.00	96.00	0.00
2.00	0.00	96.00	0.00	28.00	0.00	96.00	0.00
2.50	0.00	96.00	0.00	28.50	0.00	96.00	0.00
3.00	0.00	96.00	0.00	29.00	0.00	96.00	0.00
3.50	0.00	96.00	0.00	29.50	0.00	96.00	0.00
4.00	0.00	96.00	0.00	30.00	0.00	96.00	0.00
4.50	0.00	96.00	0.00	30.50	0.00	96.00	0.00
5.00	0.00	96.00	0.00	31.00	0.00	96.00	0.00
5.50	0.00	96.00	0.00	31.50	0.00	96.00	0.00
6.00	0.00	96.00	0.00	32.00	0.00	96.00	0.00
6.50	0.00	96.00	0.00	32.50	0.00	96.00	0.00
7.00	0.00	96.00	0.00	33.00	0.00	96.00	0.00
7.50	0.00	96.00	0.00	33.50	0.00	96.00	0.00
8.00	0.00	96.00	0.00	34.00	0.00	96.00	0.00
8.50	0.00	96.00	0.00	34.50	0.00	96.00	0.00
9.00	0.00	96.00	0.00	35.00	0.00	96.00	0.00
9.50	0.00	96.00	0.00	35.50	0.00	96.00	0.00
10.00	0.00	96.00	0.00	36.00	0.00	96.00	0.00
10.50	0.00	96.00	0.00	36.50	0.00	96.00	0.00
11.00	0.00	96.00	0.00	37.00	0.00	96.00	0.00
11.50	0.00	96.00	0.00	37.50	0.00	96.00	0.00
12.00	0.00	96.00	0.00	38.00	0.00	96.00	0.00
12.50	0.00	96.00	0.00	38.50	0.00	96.00	0.00
13.00	0.00	96.00	0.00	39.00	0.00	96.00	0.00
13.50	0.00	96.00	0.00	39.50	0.00	96.00	0.00
14.00	0.00	96.00	0.00	40.00	0.00	96.00	0.00
14.50	0.00	96.00	0.00	40.50	0.00	96.00	0.00
15.00	0.00	96.00	0.00	41.00	0.00	96.00	0.00
15.50	0.00	96.00	0.00	41.50	0.00	96.00	0.00
16.00	0.00	96.00	0.00	42.00	0.00	96.00	0.00
16.50	0.00	96.00	0.00	42.50	0.00	96.00	0.00
17.00	0.00	96.00	0.00	43.00	0.00	96.00	0.00
17.50	0.00	96.00	0.00	43.50	0.00	96.00	0.00
18.00	0.00	96.00	0.00	44.00	0.00	96.00	0.00
18.50	0.00	96.00	0.00	44.50	0.00	96.00	0.00
19.00	0.00	96.00	0.00	45.00	0.00	96.00	0.00
19.50	0.00	96.00	0.00	45.50	0.00	96.00	0.00
20.00	0.00	96.00	0.00	46.00	0.00	96.00	0.00
20.50	0.00	96.00	0.00	46.50	0.00	96.00	0.00
21.00	0.00	96.00	0.00	47.00	0.00	96.00	0.00
21.50	0.00	96.00	0.00	47.50	0.00	96.00	0.00
22.00	0.00	96.00	0.00	48.00	0.00	96.00	0.00
22.50	0.00	96.00	0.00				
23.00	0.00	96.00	0.00				
23.50	0.00	96.00	0.00				
24.00	0.00	96.00	0.00				
24.50	0.00	96.00	0.00				

Summary for Link T: Total Flow to Van Vooren Drive

Inflow Area = 1.500 ac, 32.59% Impervious, Inflow Depth = 0.22" for NOAA-10 event
Inflow = 0.12 cfs @ 12.27 hrs, Volume= 0.028 af
Primary = 0.12 cfs @ 12.27 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Hydrograph for Link 1: Total Flow to Van Vooren Drive

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	27.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	27.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	28.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	28.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
12.00	0.00	0.00	0.00	38.00	0.00	0.00	0.00
12.50	0.09	0.00	0.09	38.50	0.00	0.00	0.00
13.00	0.07	0.00	0.07	39.00	0.00	0.00	0.00
13.50	0.05	0.00	0.05	39.50	0.00	0.00	0.00
14.00	0.04	0.00	0.04	40.00	0.00	0.00	0.00
14.50	0.04	0.00	0.04	40.50	0.00	0.00	0.00
15.00	0.03	0.00	0.03	41.00	0.00	0.00	0.00
15.50	0.03	0.00	0.03	41.50	0.00	0.00	0.00
16.00	0.03	0.00	0.03	42.00	0.00	0.00	0.00
16.50	0.02	0.00	0.02	42.50	0.00	0.00	0.00
17.00	0.02	0.00	0.02	43.00	0.00	0.00	0.00
17.50	0.02	0.00	0.02	43.50	0.00	0.00	0.00
18.00	0.02	0.00	0.02	44.00	0.00	0.00	0.00
18.50	0.02	0.00	0.02	44.50	0.00	0.00	0.00
19.00	0.02	0.00	0.02	45.00	0.00	0.00	0.00
19.50	0.02	0.00	0.02	45.50	0.00	0.00	0.00
20.00	0.02	0.00	0.02	46.00	0.00	0.00	0.00
20.50	0.02	0.00	0.02	46.50	0.00	0.00	0.00
21.00	0.02	0.00	0.02	47.00	0.00	0.00	0.00
21.50	0.02	0.00	0.02	47.50	0.00	0.00	0.00
22.00	0.02	0.00	0.02	48.00	0.00	0.00	0.00
22.50	0.01	0.00	0.01				
23.00	0.01	0.00	0.01				
23.50	0.01	0.00	0.01				
24.00	0.00	0.00	0.00				
24.50	0.00	0.00	0.00				
25.00	0.00	0.00	0.00				

Summary for Subcatchment BY: BYPASS

Runoff = 1.26 cfs @ 12.19 hrs, Volume= 0.120 af, Depth= 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
NOAA 24-hr D NOAA-100 Rainfall=8.59"

Area (sf)		CN	Description		
7,491	39		>75% Grass cover, Good, HSG A		
22,118	39		>75% Grass cover, Good, HSG A		
2,684	98		Paved parking, HSG A		
32,293	44		Weighted Average		
29,609			91.69% Pervious Area		
2,684			8.31% Impervious Area		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, SHEET FLOW

Hydrograph for Subcatchment BY: BYPASS

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	26.00	8.59	1.95	0.00
0.50	0.05	0.00	0.00	26.50	8.59	1.95	0.00
1.00	0.10	0.00	0.00	27.00	8.59	1.95	0.00
1.50	0.15	0.00	0.00	27.50	8.59	1.95	0.00
2.00	0.21	0.00	0.00	28.00	8.59	1.95	0.00
2.50	0.26	0.00	0.00	28.50	8.59	1.95	0.00
3.00	0.32	0.00	0.00	29.00	8.59	1.95	0.00
3.50	0.39	0.00	0.00	29.50	8.59	1.95	0.00
4.00	0.45	0.00	0.00	30.00	8.59	1.95	0.00
4.50	0.52	0.00	0.00	30.50	8.59	1.95	0.00
5.00	0.59	0.00	0.00	31.00	8.59	1.95	0.00
5.50	0.66	0.00	0.00	31.50	8.59	1.95	0.00
6.00	0.73	0.00	0.00	32.00	8.59	1.95	0.00
6.50	0.81	0.00	0.00	32.50	8.59	1.95	0.00
7.00	0.90	0.00	0.00	33.00	8.59	1.95	0.00
7.50	1.01	0.00	0.00	33.50	8.59	1.95	0.00
8.00	1.11	0.00	0.00	34.00	8.59	1.95	0.00
8.50	1.23	0.00	0.00	34.50	8.59	1.95	0.00
9.00	1.36	0.00	0.00	35.00	8.59	1.95	0.00
9.50	1.52	0.00	0.00	35.50	8.59	1.95	0.00
10.00	1.70	0.00	0.00	36.00	8.59	1.95	0.00
10.50	1.92	0.00	0.00	36.50	8.59	1.95	0.00
11.00	2.23	0.00	0.00	37.00	8.59	1.95	0.00
11.50	2.72	0.00	0.00	37.50	8.59	1.95	0.00
12.00	4.12	0.17	0.34	38.00	8.59	1.95	0.00
12.50	5.87	0.69	0.48	38.50	8.59	1.95	0.00
13.00	6.36	0.88	0.27	39.00	8.59	1.95	0.00
13.50	6.67	1.01	0.18	39.50	8.59	1.95	0.00
14.00	6.89	1.10	0.14	40.00	8.59	1.95	0.00
14.50	7.07	1.19	0.12	40.50	8.59	1.95	0.00
15.00	7.23	1.26	0.10	41.00	8.59	1.95	0.00
15.50	7.36	1.32	0.09	41.50	8.59	1.95	0.00
16.00	7.48	1.38	0.08	42.00	8.59	1.95	0.00
16.50	7.58	1.43	0.08	42.50	8.59	1.95	0.00
17.00	7.69	1.48	0.07	43.00	8.59	1.95	0.00
17.50	7.78	1.52	0.07	43.50	8.59	1.95	0.00
18.00	7.86	1.56	0.06	44.00	8.59	1.95	0.00
18.50	7.93	1.60	0.06	44.50	8.59	1.95	0.00
19.00	8.00	1.64	0.05	45.00	8.59	1.95	0.00
19.50	8.07	1.67	0.05	45.50	8.59	1.95	0.00
20.00	8.14	1.71	0.05	46.00	8.59	1.95	0.00
20.50	8.20	1.74	0.05	46.50	8.59	1.95	0.00
21.00	8.27	1.77	0.05	47.00	8.59	1.95	0.00
21.50	8.33	1.81	0.05	47.50	8.59	1.95	0.00
22.00	8.38	1.84	0.04	48.00	8.59	1.95	0.00
22.50	8.44	1.87	0.04				
23.00	8.49	1.89	0.04				
23.50	8.54	1.92	0.04				
24.00	8.59	1.95	0.00				
24.50	8.59	1.95	0.00				

Summary for Pond D1: DETENTION BASIN

Inflow Area = 0.759 ac, 56.32% Impervious, Inflow Depth = 0.90" for NOAA-100 event
 Inflow = 1.65 cfs @ 12.30 hrs, Volume= 0.057 af
 Outflow = 0.39 cfs @ 12.76 hrs, Volume= 0.057 af, Atten= 76%, Lag= 27.4 min
 Primary = 0.39 cfs @ 12.76 hrs, Volume= 0.057 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 98.55' @ 12.76 hrs Surf.Area= 563 sf Storage= 1,610 cf

Plug-Flow detention time= 76.4 min calculated for 0.057 af (100% of Inflow)
 Center-of-Mass det. time= 75.6 min (826.0 - 750.4)

Volume	Invert	Avail Storage	Storage Description
#1	96.00'	1,357 cf	36.0" Round Pipe Storage x 3 L= 64.0'
#2	96.00'	450 cf	Custom Stage Data (Prismatic) Listed below (Recalc) x 2
1,807 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
96.00	75	0	0
99.00	75	225	225

Device	Routing	Invert	Outlet Devices
#1	Primary	96.00'	2.5" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	98.50'	4.0" long Sharp-Crested Rectangular Weir 2 End Contractions

Primary Outflow Max=0.38 cfs @ 12.76 hrs HW=98.55' (Free Discharge)
 1=Orifice/Grate (Orifice Controls 0.26 cfs @ 7.52 fps)
 2=Sharp-Crested Rectangular Weir (Weir Controls 0.13 cfs @ 0.70 fps)

Hydrograph for Pond D1: DETENTION BASIN

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	96.00	0.00
1.00	0.00	0	96.00	0.00
2.00	0.00	0	96.00	0.00
3.00	0.00	0	96.00	0.00
4.00	0.00	0	96.00	0.00
5.00	0.00	0	96.00	0.00
6.00	0.00	0	96.00	0.00
7.00	0.00	0	96.00	0.00
8.00	0.00	0	96.00	0.00
9.00	0.00	0	96.00	0.00
10.00	0.00	0	96.00	0.00
11.00	0.00	0	96.00	0.00
12.00	0.00	0	96.00	0.00
13.00	0.19	1,575	98.49	0.25
14.00	0.00	938	97.55	0.20
15.00	0.00	351	96.71	0.13
16.00	0.00	47	96.15	0.03
17.00	0.00	8	96.03	0.00
18.00	0.00	3	96.01	0.00
19.00	0.00	1	96.01	0.00
20.00	0.00	0	96.00	0.00
21.00	0.00	0	96.00	0.00
22.00	0.00	0	96.00	0.00
23.00	0.00	0	96.00	0.00
24.00	0.00	0	96.00	0.00
25.00	0.00	0	96.00	0.00
26.00	0.00	0	96.00	0.00
27.00	0.00	0	96.00	0.00
28.00	0.00	0	96.00	0.00
29.00	0.00	0	96.00	0.00
30.00	0.00	0	96.00	0.00
31.00	0.00	0	96.00	0.00
32.00	0.00	0	96.00	0.00
33.00	0.00	0	96.00	0.00
34.00	0.00	0	96.00	0.00
35.00	0.00	0	96.00	0.00
36.00	0.00	0	96.00	0.00
37.00	0.00	0	96.00	0.00
38.00	0.00	0	96.00	0.00
39.00	0.00	0	96.00	0.00
40.00	0.00	0	96.00	0.00
41.00	0.00	0	96.00	0.00
42.00	0.00	0	96.00	0.00
43.00	0.00	0	96.00	0.00
44.00	0.00	0	96.00	0.00
45.00	0.00	0	96.00	0.00
46.00	0.00	0	96.00	0.00
47.00	0.00	0	96.00	0.00
48.00	0.00	0	96.00	0.00

17 VAN VOOREN DRIVE-POST-DEV

NOAA 24-hr D NOAA-100 Rainfall=8.59"

Prepared by Weissman Engineering, PC

Printed 9/14/2021

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Summary for Link T: Total Flow to Van Vooren Drive

Inflow Area = 1.500 ac, 32.59% Impervious, Inflow Depth = 1.42" for NOAA-100 event
Inflow = 1.32 cfs @ 12.20 hrs, Volume= 0.177 af
Primary = 1.32 cfs @ 12.20 hrs, Volume= 0.177 af, Atten= 0%, Lag= 0.0 min
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Hydrograph for Link T: Total Flow to Van Vooren Drive

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	26.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	26.50	0.00	0.00	0.00
1.00	0.00	0.00	0.00	27.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	27.50	0.00	0.00	0.00
2.00	0.00	0.00	0.00	28.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	28.50	0.00	0.00	0.00
3.00	0.00	0.00	0.00	29.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	29.50	0.00	0.00	0.00
4.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	30.50	0.00	0.00	0.00
5.00	0.00	0.00	0.00	31.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	31.50	0.00	0.00	0.00
6.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	32.50	0.00	0.00	0.00
7.00	0.00	0.00	0.00	33.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	33.50	0.00	0.00	0.00
8.00	0.00	0.00	0.00	34.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	34.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00	35.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	35.50	0.00	0.00	0.00
10.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	36.50	0.00	0.00	0.00
11.00	0.00	0.00	0.00	37.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	37.50	0.00	0.00	0.00
12.00	0.34	0.00	0.34	38.00	0.00	0.00	0.00
12.50	0.71	0.00	0.71	38.50	0.00	0.00	0.00
13.00	0.52	0.00	0.52	39.00	0.00	0.00	0.00
13.50	0.41	0.00	0.41	39.50	0.00	0.00	0.00
14.00	0.34	0.00	0.34	40.00	0.00	0.00	0.00
14.50	0.29	0.00	0.29	40.50	0.00	0.00	0.00
15.00	0.23	0.00	0.23	41.00	0.00	0.00	0.00
15.50	0.18	0.00	0.18	41.50	0.00	0.00	0.00
16.00	0.12	0.00	0.12	42.00	0.00	0.00	0.00
16.50	0.09	0.00	0.09	42.50	0.00	0.00	0.00
17.00	0.07	0.00	0.07	43.00	0.00	0.00	0.00
17.50	0.06	0.00	0.06	43.50	0.00	0.00	0.00
18.00	0.06	0.00	0.06	44.00	0.00	0.00	0.00
18.50	0.06	0.00	0.06	44.50	0.00	0.00	0.00
19.00	0.05	0.00	0.05	45.00	0.00	0.00	0.00
19.50	0.05	0.00	0.05	45.50	0.00	0.00	0.00
20.00	0.05	0.00	0.05	46.00	0.00	0.00	0.00
20.50	0.05	0.00	0.05	46.50	0.00	0.00	0.00
21.00	0.05	0.00	0.05	47.00	0.00	0.00	0.00
21.50	0.05	0.00	0.05	47.50	0.00	0.00	0.00
22.00	0.05	0.00	0.05	48.00	0.00	0.00	0.00
22.50	0.04	0.00	0.04				
23.00	0.04	0.00	0.04				
23.50	0.04	0.00	0.04				
24.00	0.04	0.00	0.04				
24.50	0.00	0.00	0.00				