

- a.** Potential Revisions to the Zoning and Subdivision Text Amendments - Seafood Processing.
- b.** Potential Revisions to the Zoning and Subdivision Text Amendments - March 2024 Follow Up.
- c.** Continued discussion of the Comprehensive Plan Update.

6. Adjournment



**Town of Easton Planning Commission
Draft Decision Summary**

Thursday, June 20, 2024 at 1:00 p.m.

Town Hall Chamber 2

14 S. Harrison Street, Easton, Maryland

Archived video of the meeting is available at:

[Town of Easton Agendas and Minutes](https://www.eastonmd.gov/Agendas/Agendas%20and%20Minutes/2024/June%2020%20-%201%20PM%20-%20Town%20Hall%20Chamber%202%20-%20Draft%20Decision%20Summary)
[\(eastonmd.gov\)](https://www.eastonmd.gov/)

Attendance:

Commission Members:

Jennifer Dindinger, Chairperson
Philip Toussaint, Vice Chairperson
Tom Klein
Victoria McAndrews
William Ryall
Michael Ports, Alternate

Staff:

Miguel Salinas, Planning and Zoning Director
Joseph Mayer, Plan Reviewer
Nicholas Johnson, Planner
Sharon Van Emburgh, Esq. Town Attorney
Rick Van Emburgh, Town Engineer
Samantha Smith, Administrative Specialist

Absent:

Staff:

Lynn B. Thomas, Town Planner

1. Call to Order — Chairperson Dindinger called the meeting to order at 1:01 pm.

2. Decision Summary Review —

a. May 16, 2024 - The Commission noted the following correction to the draft decision summary:

i. Line 122: Add: “highway” or “roadway”.

Commissioner Ryall moved to approve the May 16, 2024 Decision Summary with amendments. Commissioner Klein seconded the motion.

<u>Vote</u>	<u>4 - 0 - 2</u>
FOR:	4 - Toussaint, Klein, Ports , Ryall,
AGAINST:	0
ABSTAIN:	2 - Dindinger, McAndrews
ABSENT:	0

54
55
56 **3. Old Business — None**
57
58

59 **4. New Business**
60

- 61 **a. Applicant:** Willow Construction, LLC
62 **File No.:** 2024 - 1189
63 **Location:** 7741 Ocean Gateway, Easton, MD 21601
64 Tax Map 0107, Grid 0000, Parcel 2783, Lot 7
65 **Zoning:** CG
66 **Request:** The applicant is seeking architectural approval for reconstruction
67 to the interior and exterior to the building façade of the existing 14,700 square
68 foot unoccupied car dealership on 7741 Ocean Gateway for a Hertrich Kia
69 Dealership.
70

71 Staff recommends the following condition:
72

- 73 1. The applicant is required to address all Easton Staff Development Review
74 (ESDR) review comments and obtain all applicable permits.
75

76 **Staff Presentation:**

77 Joseph Mayer, Plan Reviewer
78 Miguel Salinas, Director of Planning and Zoning
79 Sharon Van Emburgh, Esq. Town Attorney
80

81 **Applicant Presentation:**

82 Tim Metzner, Davis, Bowen & Friedel, Inc.
83 Emily Cylc, Davis, Bowen & Friedel, Inc.
84 Nicholas Chilcoate, Hertrich Kia
85 Al Guckes, Hertrich Kia
86 Shaquille Turner, Willow Construction
87 Justin Hiner, Willow Construction
88

89 **Public Comment — None**

90 **Public Comment Written — None**
91

92 **Vice Chairperson Toussaint moved to approve the architecture subject to the**
93 **following conditions:**
94

- 95 1. The applicant shall address all outstanding Easton Staff Development
96 Review (ESDR) comments, and obtain all applicable permits.
97
98 2. The applicant shall provide a more detailed description of the proposed glass
99 windows, and work with staff to mitigate bird strikes.

Commissioner Ryall seconded the motion.

Vote	5 - 0
FOR:	5 - Dindinger, Toussaint, Klein, McAndrews, Ryall
AGAINST:	0
ABSTAIN:	0
ABSENT:	0

5. Discussion Items

- a. 2023 Annual Report — Mr. Miguel Salinas presented the draft 2023 Easton Planning Commission Annual Report as required by the State Land Use Article. The Commission is required to formally approve the Report for submission to the Maryland Department of Planning, with a copy to be filed with the Town Council. This information is used by the State to assess the overall growth and development throughout the given year; particularly the amount of growth that is throughout the Priority Funding Areas of Maryland (the Town of Easton is presently within a Priority Funding Area). Mr. Salinas summarized that there were no outstanding findings in the reported data; noting that the information provided in the *Detailed Development Capacity Analysis* of Section III is supplemented with a table from the Draft 2024 Comprehensive Plan that provides data on capacity inside and outside the PFA. Mr. Salinas also noted findings in the *Measures and Indicators* section of the report (Section V) that approximated 58 new residential building permits issued in the reporting year, and reported one annexation (Easton Point Park).

The Commission reviewed Section II: *Amendments and Growth Related Changes in Development Patterns* of the draft report, and advocated for the additional selection of “Affordable/Workforce Housing” and “Bike/Pedestrian Planning” in *Table 2.E.*, as topics to be included in the applicable planning and/or development processes identified and/or implemented during the 2023 year. The four topics to be selected as applicable are: “Zoning Reform”, “Affordable/Workforce Housing”, “Revitalization and Infill”, and “Bike/Pedestrian Planning”.

The Commission considered the total number of residential units that qualify as Reconstructed/Replaced to be included in *Table 4A: Amount of Residential Growth* of Section V: *Measures and Indicators*. Staff clarified that the 55 residential units reported inside the PFA are predominantly single-family dwellings, and may also include a portion of units from the Doverbrook Apartment project. Projects such as the Jowite Street project are applicable to the 2024 calendar year report.

The Commission held further discussion in identifying additional recommendations to be reported in Section II of the draft report including the

146 preliminary development of new Town Design Guidelines, and Amendments to
147 Zoning Regulations and zoning map. The 2024 Annual Report is anticipated to
148 include data involving the most recent Zoning Ordinance updates. For reader
149 context and clarity, the Commission made a general suggestion for the renaming
150 or redescription of lesser known projects and properties referred to in the Total
151 Infill/Redevelopment/Build-out Potential table so that they may be more easily
152 identified.

153
154 **Staff Presentation:**

155 Joseph Mayer, Plan Reviewer

156 Miguel Salinas, Director of Planning and Zoning

157
158 **Commissioner Klein moved to approve the annual report with the proposed**
159 **amendments. Vice Chairperson Toussaint seconded the motion.**
160

161 Vote 5 - 0

162 FOR: 5 - Dindinger, Toussaint, Klein, McAndrews, Ryall

163 AGAINST: 0

164 ABSTAIN: 0

165 ABSENT: 0
166

- 167 **b.** Potential Revisions to the Zoning and Subdivision Text Amendments — The
168 ongoing discussion of potential revisions to the Zoning and Subdivision Text
169 Amendments was tabled to a future Planning Commission meeting.
170
- 171 **c.** Continued Discussion of the Inclusionary Zoning Ordinance — Mr. Salinas
172 provided an update to the progress of the Attainable Housing Task Force. The
173 Planning and Zoning Department is pursuing the hiring of a national fiscal and
174 housing policy consultant to provide best practices for Inclusionary Zoning
175 ordinances and recommendations for amendments to the Town’s draft ordinance.
176 The findings and recommendations of the consultant will be presented before the
177 Task Force at their July 11, 2024 meeting, and to the Planning Commission at a
178 later time. The Commissioners then discussed the most effective approach in
179 which to present their recommendation to the Council once they are prepared to
180 do so.
181
- 182 **d.** Window Design Related to the Mitigation of Bird Collision — Following the
183 review of application 2024 - 1189 on behalf of the Hertrich Kia dealership and the
184 architectural approval of the new Shore Health Hospital in November 2023, the
185 Commission reflected on appropriate design and lighting options to incorporate in
186 order to efficiently minimize bird-building collisions on future projects. As a
187 condition of their approval to investigate appropriate measures to minimize bird
188 collisions, representatives from the University of Maryland Medical System
189 application have since indicated that they are looking at higher reflective
190 percentages for their windows, and are exploring additional glass treatment

191 options.

- 192
- 193 e. Chairperson Dindinger announced her resignation effective August of 2024. Vice
- 194 Chairperson Toussaint will succeed as acting Chairperson, and Michael Ports has
- 195 volunteered to serve as a regular Commission Member. An election for Vice
- 196 Chairperson will be held at a subsequent meeting.
- 197
- 198

- 199 **6. Adjournment** — Chairperson Dindinger moved to adjourn. Commissioner Ryall
- 200 seconded the motion. The meeting was adjourned at 2:52 p.m.



TOWN OF EASTON
PLANNING & ZONING
14 S Harrison Street, Easton MD 21601

Date of Hearing: July 18, 2024

4a

**PLANNING COMMISSION
PUBLIC HEARING
STAFF REPORT**

SUBJECT: 404 & 406 Marvel Court - Redevelopment

ELECTION WARD: Ward 4

CRITICAL ACTION DATE: At the pleasure of the Commission

STAFF CONTACTS: Joseph Mayer, Plan Reviewer
Miguel Salinas, Director of Planning and Zoning

APPLICANT: NOVA SIXA, LLC

DOCUMENT CREATED ON: July 10, 2024

PURPOSE: The applicant is seeking site plan approval from the Planning Commission.

RECOMMENDATION: Staff supports Planning Commission approval of the proposed site plan subject to staff's recommended condition (see below).

APPLICATION INFORMATION:	
APPLICANT: Lane Engineering, LLC.: Brett Ewing	REPRESENTATIVE: Lane Engineering, LLC.: Brett Ewing NOVA SIXA, LLC.: Doug James.
PARCELS/ACREAGE:	
Parcel Information	Acreage
Map 105, Grid 0000, Parcel 2992D, Lots 4 & 5	1.42
ACCEPTANCE DATE: July 1, 2024	
LOCATION: 404 & 406 Marvel Court	
EXISTING ZONING CG	EXISTING LAND USE: Medical Facility.
HISTORIC DISTRICT: Not Applicable	FUTURE LAND USE MAP: Commercial

CONTEXT:

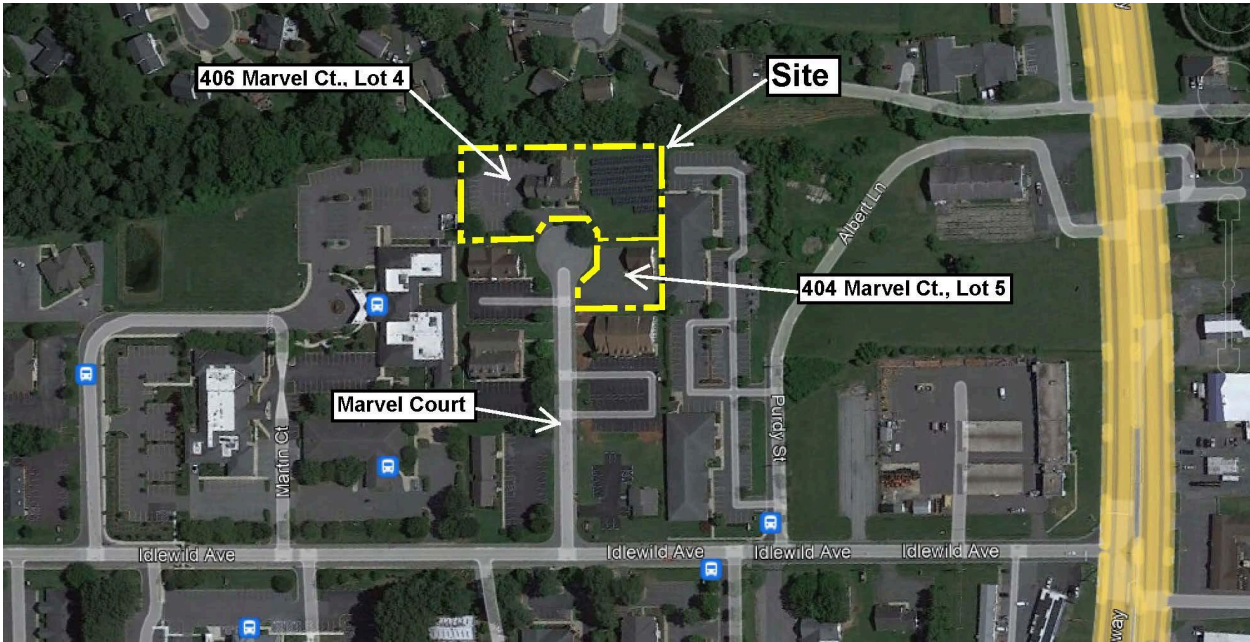
Location/Site Access – The subject property is located within the lands of “Idlewild East Joint Venture” along Marvel Court, fronting on the Northeast side of the cul-de-sac.

Existing Conditions – The subject property is currently a medical facility.

Surrounding Properties

- 401 & 403 Purdy Street - CG
- 402 & 405 Marvel Court - CG
- 10 Martin Court - CG

Figure 1: Vicinity Map



PROPOSAL: The applicant is proposing to construct a two-story 8,136 square foot addition to the medical clinic with improved amenities; adequate parking and landscaping.

The site is located on a previously developed area covered by impervious surface; existing walks, parking areas, drive aisles and a commercial structure. In addition, the site is within the priority funding area. Therefore, the applicant is seeking an exemption of forest conservation requirement from Article III of the Town’s *Forest Conservation Ordinance Section 31-3.2.O*; *an activity on a previous area covered by impervious surface and located in the priority funding area.*

BACKGROUND: The applicant submitted an application to the Easton Staff Development Review Committee on June 26, 2024.

ZONING ANALYSIS:

A. Permissible Land Uses

28-201 Table 2.1

CG

238	Medical Services	--	--	--	--	P	P	P	P	--	--	
-----	------------------	----	----	----	----	---	---	---	---	----	----	--

Analysis – The proposed project is presented and described by the Applicant as an addition to the medical clinic. The project is categorized as “*Medical Services*”. The proposed use is permitted by-right within Table 2.1 Table of Permissible Uses.

B. Off-Street Parking

For the purposes of off-street parking calculations, the use is considered “*Medical Clinic*” and has the following requirements:

28-1001.3 Parking Requirements

	Use/Activity	Minimum Vehicle Spaces	Maximum Vehicle Spaces	Minimum Bicycle Spaces	Notes
	Institutional or Community Facilities				
52	Medical Clinic	1 per 400 sf GFA	1 per 100 sf GFA	1 per 20 vehicle spaces	

Total Site Parking Required:

Existing 1 ½ Story

Medical Clinic: 1 per 400 sf GFA required-Minimum
 6,736 sf/400 = 17 spaces required-Minimum
 1 per 100 sf GFA required-Maximum
 6,736 sf/100 = 68 spaces required-Maximum

Proposed 2 Story

Medical Clinic: 1 per 400 sf GFA required-Minimum
 8,136 sf/400 = 21 spaces required-Minimum
 1 per 100 sf GFA required-Maximum
 8,136 sf/100 = 82 spaces required-Maximum

Total Spaces Required - Minimum: 38

Total Spaces Required - Maximum: 150

Total Spaces Provided: 73

Bike Racks Required: Medical - 1 Bike Space/20 Vehicle Spaces; 4 Bike Space Required

Analysis- The applicant has provided an additional forty-two (42) off-street parking spaces. There are ten (31) existing parking spaces on Lot 4. The owner does not foresee a demand for more parking spaces in the future, due to the nature of their business operations.

C. Commercial General District Development Standards

Table 1. Development Standards		
CG Zoning District	Standard	Proposed
Setbacks	Front = 25 feet Side = 10 feet Rear = 15 feet	Front = 25 feet Side = 10 feet Rear = 15 feet
Lot Size (min.)	20,000 square feet	61,997 square feet
Lot Frontage (min.)	60 feet	250 feet

Building Envelope (min.)	20 feet x 30 feet	112 feet X 230 feet
Lot Coverage (max.)	50% (Lot Area)	11.6% (Lot Area)
Height (max.)	50 feet	30 feet
Bufferyard	Per the provisions of Section 28-1014 of the Zoning Ordinance.	Existing perimeter landscaping provided.

§ 306.2 of the Zoning Ordinance states that development within the Commercial General District shall also meet these additional requirements:

- ***Off-Street Parking shall be provided for all uses in accordance with the standards of Section 28 – 1001.***
- ***All on-site lighting unless approved otherwise by the Planning and Zoning Commission shall be low cut-off shielded luminaries at 18’ height and light shall not shine off-site at levels greater than 1-foot candle.***
- ***All off-street loading and unloading areas shall be screened from view by permanent decorative screens or natural planting, either of which shall be a minimum of eight (8) feet in height.***
- ***All areas not devoted to buildings or parking areas shall be landscaped and maintained in a suitable manner, in accordance with the provisions of Section 28 – 1014 of this Ordinance.***

Analysis - The site falls under the CG - Commercial General District Area and meets the 28-306 Development Standards. Any comments or concerns from the ESDR review letters will be addressed during the Development Site Plan review. Staff notes that the applicant is proposing lot consolidation of the two properties which will be done under a separate application.

D. Forest Conservation

Easton Forest Conservation Ordinance #718, Article III, § 31-3.2 Exemptions

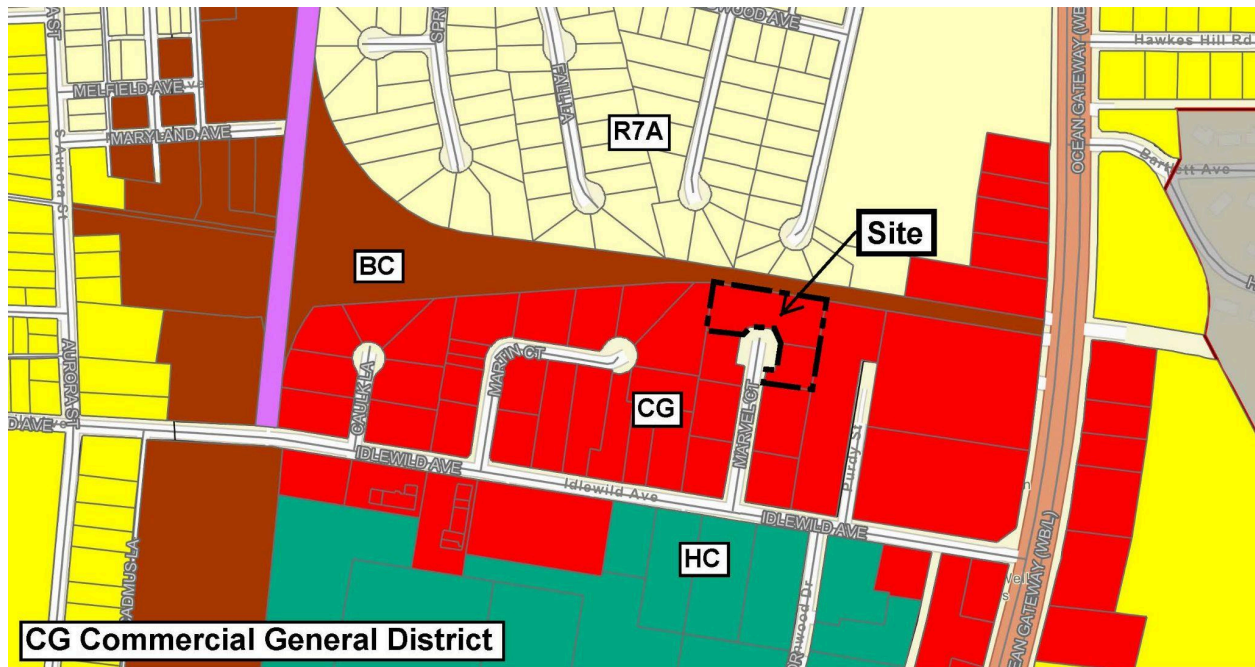
O. An activity on a previously developed area covered by impervious surface and located in the priority funding area.

Analysis - This site is within the priority funding area and is an existing developed area covered by impervious surface and existing utilities. The overall site area is 1.423 acres with an existing 1 ½ -Story Medical Clinic and a proposed 2 story-Medical Clinic Building with associated parking, stormwater management, and landscaping. Required Forest Conservation would be 0.21 acres or 9,297 square feet. The intent of the project is to maximize density within the infill area and provide adequate facilities to accommodate the site. The applicant has provided a landscape plan with twenty-two (22) deciduous-shade/canopy trees, two (2) understory trees and a hedge

for the parking spaces facing Marvel Court. Based on the existing conditions and priority funding area, the staff supports the exemption from Forest Conservation.

POLICY ANALYSIS:

Figure 2: Zoning Map



The submission of a site plan for a proposed use or development activity shall not be approved unless it meets the factors below:

1. The site plan meets the design principles and standards and required improvements set forth in this Ordinance, the Town Comprehensive Plan, the Town of Easton Subdivision Regulations, and other ordinances, regulations, and policies established by the Town of Easton.

Town of Easton 2010 Comprehensive Plan Design Principles (Principle #1) Integrated uses are desirable- Applicant's response: *This project proposes an addition of a medical office building and is compatible with the existing uses in the area.*

Staff notes that the proposed development fits within the general commercial nature of Marvel Court

(Principle #2) Natural features should determine design – Applicant's response: *To accommodate the proposed project, the existing and proposed stormwater management areas will be enhanced to improve water quality offsite. Majority of proposed improvements will occur over existing parking lots.*

Staff notes that there are no compelling natural features on site.

(Principle #3) Automobiles should not determine design – *Applicant's response: This site is currently utilized as a medical facility with associated parking and will continue to operate as it currently does.*

Staff notes that the applicant has provided 42 off-street parking spaces.

(Principle #4) Ample Open Space should be provided within & around neighborhoods – *Applicant's response: Not applicable; the intent of design principle is for residential use.*

Staff notes that open space is not applicable.

(Principle #5) Architecture should respect Easton's Historical Development – *Applicant's response: The application proposes architecture compatible with the existing building and other commercial uses that currently exist in the Town of Easton. The building meets the intent of the Town Design Guidelines utilizing different materials and details.*

(Principle #6) Signs should inform but not dominate – *Applicant's response: Monument sign exists and will be utilized.*

Staff notes that any change to the existing monument sign will require a Signage Application to be submitted prior to installation.

(Principle #7) Neighborhoods should contain a diversity of housing types – *Applicant's response: Not applicable; intended for residential use.*

(Principle #8) Residential neighborhoods should be interesting places – *Applicant's response: Not applicable.*

(Principle #9) Neighborhoods should connect – *Applicant's response: Not applicable.*

2. The site plan avoids or minimizes adverse impacts upon features (whether on-site or off-site) of historical, cultural or ecological significance.

Analysis - The proposed site is not within the Historic District or the Critical Area. This project would provide a two-story 8,136 square foot addition to the medical clinic with improved amenities; adequate parking and landscaping.

3. The proposed use or development activity will not substantially increase traffic hazards due to traffic generated by the proposed use, the location of curb cuts, or the layout of internal traffic circulation.

Analysis - The proposed use and activity will not increase traffic hazards in the surrounding area. Adequate off-street parking is provided.

4. The site plan and the proposed use or uses do not cause any adverse impact upon the health or safety of persons residing or working in the area surrounding the site or upon the character of the neighborhood surrounding the site; and

Analysis - There would be no adverse impacts. The existing property is located within a commercial general zoned business park. Proposed use provides a two-story 8,136 square foot addition to the medical clinic with adequate parking and landscaping features.

5. The site plan improves the water quality of the Chesapeake Bay or its tributaries.

Analysis - The proposed site would meet required design practices for stormwater management.

RECOMMENDED CONDITION:

Staff recommends the Planning Commission approve the sketch site plan with the following condition:

- The Applicant is required to address all ESDR review comments.

DRAFT MOTIONS:

1. I move that the Planning Commission approve the sketch site plan subject to staff's Condition of Approval.

OR

2. I move that the Planning Commission table the application to the August 15th Commission meeting for further discussion.

OR

3. I move an alternate motion.

ATTACHMENTS:

1. 2024-04-16 Tidewater PT Easton_SD, paper copy & PDF
2. 2024-06-26 ESDR Determination Letter & Application, paper copy & PDF
3. 2024-06-28 Site Plan Application, paper copy & PDF
4. 2024-07-01-Concept SWM report-230463, paper copy & PDF
5. 2024-07-01-IllustrativePlan-230464, paper copy & PDF
6. 2024-07-01-SketchSitePlan-230464, paper copy & PDF



TOWN OF EASTON PLANNING & ZONING DEPARTMENT

P.O. Box 520
Easton, Maryland 21601
410-822-1943
www.EastonMD.gov

DATE: June 17, 2024

TO: Brett Ewing & Alec Chosta – Lane Engineering, LLC (Agent)
Doug James - NOVA SIXA, LLC (Owner)

Cc: Miguel Salinas – Director, Planning & Zoning Department
Rick VanEmburch – Town Engineer, Department of Engineering

FROM: Joseph A. Mayer - Plan Reviewer, Planning & Zoning Department

SUBJECT: 404 & 406 Marvel Court - Redevelopment

We reviewed the **June 4, 2024** Sketch Plan Submittal for the Subject Project and have the following comments:

PLANNING & ZONING COMMENTS

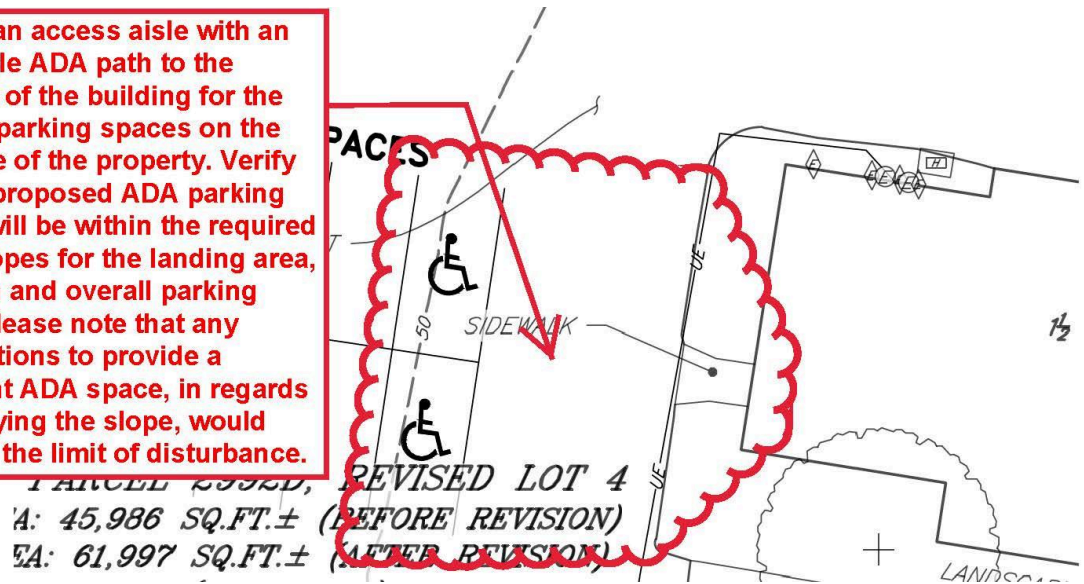
Sketch Site Plan Review #1

1. Replace the “*Crepe Myrtle*” plant selection with a native plant species.
2. Is there existing landscaping along the east side of the property? If so please indicate on the Sketch Site Plan, sheet 2 of 2.
3. Indicate the use of curb & gutter and/or curb stops within the parking lots.
4. Provide an access aisle with an accessible ADA path to the entrance of the building for the existing parking spaces on the west side of the property. Verify that the proposed ADA parking spaces will be within the required cross slopes for the landing area, ramp run and overall parking space. Please note that any modifications to provide a compliant ADA space, in regards to modifying the slope, would increase the limit of disturbance. **See attached markup.**
5. Show zoning district boundaries on the Vicinity Map and add the Ward District within the Title Block.
6. Round up the parking calculations to the highest number.
7. Per Chapter 28-1014.6 E.2 of the Zoning Ordinance, *Bufferyard plantings may be supplemented with these trees if it can be demonstrated to the satisfaction of the Planning and Zoning Commission that the overall appearance and screening needs of the project would be better served.* The Southeast corner of the property has no

screening adjacent to Parcels 2992A and 2992D (Lot 61). Elaborate within the *Landscape Requirements Summary Per Ordinance: Section 1014.6 E (Commercial/Office Uses)* on sheet 2 of 2 how the screening requirements have been satisfied. **See attached markup.**

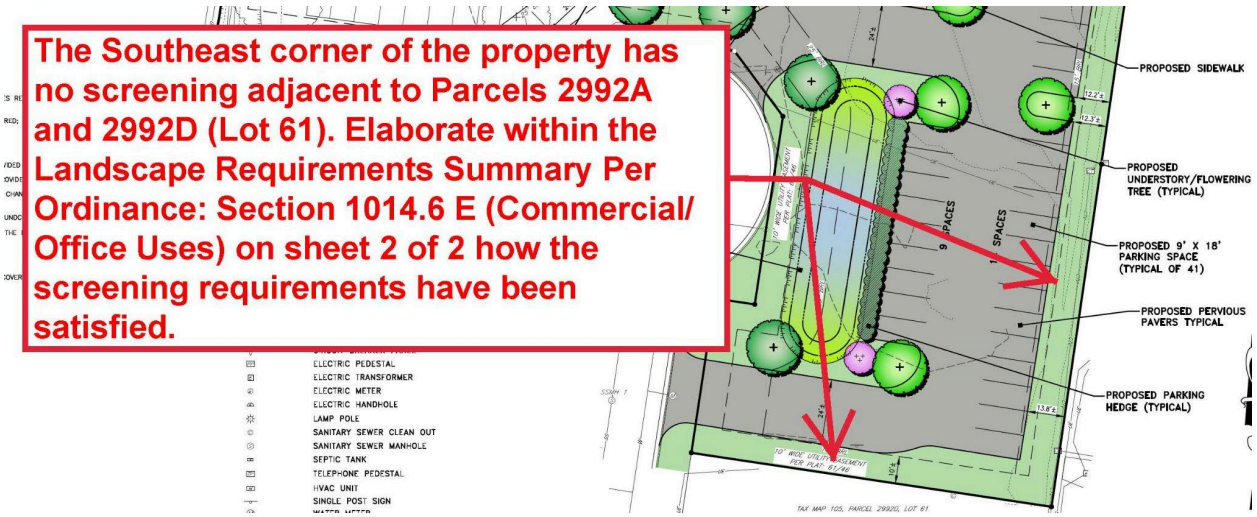
Review Comment #4

Provide an access aisle with an accessible ADA path to the entrance of the building for the existing parking spaces on the west side of the property. Verify that the proposed ADA parking spaces will be within the required cross slopes for the landing area, ramp run and overall parking space. Please note that any modifications to provide a compliant ADA space, in regards to modifying the slope, would increase the limit of disturbance.



Review Comment #8

The Southeast corner of the property has no screening adjacent to Parcels 2992A and 2992D (Lot 61). Elaborate within the *Landscape Requirements Summary Per Ordinance: Section 1014.6 E (Commercial/Office Uses)* on sheet 2 of 2 how the screening requirements have been satisfied.



Plan Review Status

Sketch Site Plan Review			Comments
Plans Approved	☐ Y	☒ N	Please review the comments above. Revise and resubmit.

Forest Stand Delineation & Forest Conservation Plan	
☐ Required ☐ Submitted ☐ Approved	Exempt from Forest Conservation per Article III, § 31-3.2 O. The proposed activity is on a previously developed area covered by impervious surface and is located within the priority funding area. As noted on the Sketch Site Plans, sheet 1 of 2. Analysis - The site is within the priority funding area and is an existing developed area covered by impervious surface; existing utilities. The overall site area is 1.423 acres with an existing 1 ½ -Story Medical Clinic and a proposed 2-Medical Clinic Building with associated parking, stormwater management and landscaping. Required Forest Conservation would be 0.21 acres or 9,297 square feet. The intent of the project is to maximize density within the infill area and provide adequate facilities to accommodate the site. The applicant has provided a landscape plan with twenty-two (22) deciduous-shade/canopy trees, two (2) understory trees and a hedge for the parking spaces facing Marvel Court. Based on the existing conditions and priority funding area, the staff supports the exemption.
Other	
☒ Required ☐ Submitted ☐ Approved	<u>IMPACT FEES</u> Please note, there will be a required Impact Fee for the proposed building. The Town's Impact Fees and Inspection Fees are to be paid upon the time you pick up your Building Permit. Please provide building square footage with appropriate use for calculation of Impact Fee. Talbot County Impact Fees are due prior to obtaining your Building Permit. Please provide receipt of payment to the Town's Building Inspection Division. Please add estimated Town Impact Fee calculations to cover sheet and add note below calculations; <i>"Note: The Impact Fee indicated in this notation shall not be construed as vested and until submission of the building application."</i> <u>Lot Line Revision Plat</u> To be submitted for review upon Sketch Plan approval.

Please contact me if you have any questions. Thank you.



TOWN OF
EASTON
ENGINEERING DEPARTMENT

DATE: June 25, 2024
TO: Brett Ewing - Lane Engineering
cc: Sierra Clem - Town of Easton
FROM: Rick Van Emburgh, P.E. – Town Engineer
SUBJECT: 406 Marvel Court
Sketch Plan & Sketch Stormwater Management Design Review

I reviewed the Application for the Subject project received on 6/4/2024.

The **Sketch Plan is Acceptable to the Engineering Department with the following Conditions:**

1. **SHEET 2 OF 2** - Provide Sidewalk along all ROW frontage per Town Zoning Code Section 28-1016.
2. **SHEET 2 OF 2** - Proposed entrances should be consistent with TOE-R-4.02. Radii are acceptable, but material should be concrete to ensure ADA compliance.

The **Sketch Stormwater Management Design is Approved with the following Conditions:**

3. **SHEET 2 OF 2** - Provide Target ESDv values in ESD Summary Chart.

Please contact me if you have any questions. Thank you.



EASTON UTILITIES

Life. Made better.™

Easton Utilities Commission

Plan Review Comments

Date: Friday, June 14, 2024

To: Joe Mayer; Nicholas Johnson; Sierra Clem

From: Kia Gibbs on behalf of Aaron Goller, PE

No. of Pages: 3

Regarding: 406 & 404 Marvel Court

Phase: Lot Line Revision

SUBM: 1

Status: Approved as Noted

Easton Utilities Commission has reviewed the above referenced plans and have provided the following comments. Please provide your corrections as listed below. Additional reviews will be required to ensure comments have been addressed. Items or documents not provided on initial submission will be subject to further review. Please contact Kia Gibbs, Admin Support at kgibbs@eucmail.com should you have any questions.

ITEM:	DRAWING /	
	PAGE	COMMENTS:
1	2	Relocate water meter outside of entrance, upgrade to traffic bearing
2	2	Abandon sewer lateral at the main
3	General	Capital charges of \$62,745 required for addition of medical structure
4	2	See electrical comment

PROPERTY OWNER: NOVA SIXA, LLC
PROPERTY ADDRESS: 406 MARVEL COURT
EASTON, MARYLAND 21601
DEED REFERENCE: 3043/500
PLAT REFERENCE: 61/46

PROPERTY OWNER: MARVEL COURT, LLC
PROPERTY ADDRESS: 404 MARVEL COURT
EASTON, MARYLAND 21601
DEED REFERENCE: 2611/95
PLAT REFERENCE: 61/46

THE IMPROVEMENTS SHOWN HEREON WERE FIELD LOCATED BY LANE ENGINEERING, LLC ON 10/16/2023.

THE DIMENSIONS OF BUILDINGS, STRUCTURES AND SETBACKS WERE MEASURED TO THE NEAREST 0.1 FOOT

THE CONTOURS SHOWN HEREON WERE TAKEN FROM FIELD RUN TOPOGRAPHY BY LANE ENGINEERING, LLC ON 10/26/2023.

THE ELEVATIONS SHOWN HEREON ARE NAVD 1988 DATUM AS ESTABLISHED BY GPS METHODOLOGY TO CORS STATIONS MDNM (NGS CERTIFICATE PENDING) AND LOYF (PID DK7414) COMBINED FACTOR: 0.99995360

THE COORDINATES SHOWN HEREON ARE BASED ON THE MARYLAND COORDINATE SYSTEM NAD83 (@011), AS ESTABLISHED BY GPS METHODOLOGY TO CORS STATIONS MDNM (NGS CERTIFICATE PENDING) AND LOYF (PID DK7313) COMBINED FACTOR: 0.99995360. THE DISTANCES SHOWN HEREON ARE GROUND BASED.

THE PROPERTY SHOWN HEREON IS NOT LOCATED IN THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP) SPECIAL FLOOD HAZARD AREA (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. THE PROPERTY IS MAPPED IN THE "X" FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAPS FOR COMMUNITY NO. 240607, MAP NO. 24041C01890 FOR TALBOT COUNTY, MARYLAND. THE 1% ANNUAL CHANCE FLOOD (100-YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IS THE FLOOD THAT HAS A 1% CHANCE OF BEING EQUALLED OR EXCEEDED IN ANY GIVEN YEAR. THE SFHA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. THE SFHA INCLUDES THE 1% ANNUAL CHANCE FLOOD, THE 1% ANNUAL CHANCE FLOOD ELEVATION (BFE) IS THE WATER SURFACE ELEVATION OF THE 1% ANNUAL CHANCE FLOOD. FLOOD INSURANCE MAY BE REQUIRED FOR STRUCTURES LOCATED IN THE SPECIAL FLOOD HAZARD AREA.

FLOOD ZONE LEGEND
ZONES A, AE, AH, AO, AR, A99, V, & VE - 1% ANNUAL CHANCE FLOOD
ZONE X (SHADED) - 0.2% ANNUAL CHANCE FLOOD
ZONE X - AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD

THE FLOOD DATA SHOWN HEREON IS BASED ON AVAILABLE MAPPED AND/OR DIGITAL INFORMATION AND IS DEPICTED AS DIRECTED AND REQUIRED BY FEDERAL, STATE AND LOCATION REGULATIONS. IT IS SUBJECT TO DATA INACCURACIES AND REGULATORY CHANGE AND SHOULD BE VERIFIED PRIOR TO FINALIZING DEVELOPMENT OR IMPROVEMENT PLANS FOR THE SUBJECT LANDS.

[illegible]

THE LOCATIONS OF EXISTING UTILITIES AS SHOWN
THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR
SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING
UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE
QUANTITIES SHOWN ON THIS PLAN ARE FOR
INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE
CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS
SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.



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354 Pennsylvania Ave. Centerville, MD 21617 (410) 758-2095

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 51461. Expiration Date: 04/04/2026.

SEAN



ON THE LANDS OF
NOVA SIXA, LLC

406 MARVEL COURT, LLC

IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND
TAX MAP 105, GRID 0, PARCEL 2992D, LOTS 4 AND 5

ISSUED FOR: AGENCY REVIEW

DATE: 05/31/24

05/31/24 0

SHEET No. 1 OF 2

SCALE: AS NOTED	JOB No. 230464
	FILE No. 1026

SEE SHEET 2 OF 2 FOR SKETCH SITE PLAN.

NOTE: THE LAYOUT AS SHOWN HEREON IS CONCEPTUAL ONLY AND NOT INTENDED TO BE UTILIZED FOR DESIGN OR CONSTRUCTION PURPOSES.

Page 22 of 513



TOWN OF EASTON
PO Box 520
Easton, Maryland 21601
(410)-822-2526 Fax (410)-822-8738
Office of Building Inspection.



ESDR- Building Inspection and Permit Department Comments

Date: June 11, 2024

**Project; NOVA SIXA, LLC New Two Story Medical Building
406 & 404 Marvel Court, Easton, MD 21601**

A Town of Easton Building Permit is required for all new construction.

- Contact this Department and verify current Building Codes including the Town of Easton's modifications prior to preparation of Building plans.

The following lists items required on the construction drawings in order to apply for a Building Permit.

- Indicate the type of construction, new (shell only or Tenant fit out),
- Construction Documents (3 sets) for any new construction will be required. Documents must be prepared by a registered Maryland Registered Architect, with original plans signed and sealed. A code analysis completed by a Registered Maryland Architect including, classification (use group), construction type, and occupant loads must be completed and included with the application materials.
- The Town of Easton, in accordance with the International Building Code Chapter 17, establishes a building inspections procedure that utilizes qualified, third-party professionals in addition to the Town's Building Inspectors. The purpose of this document is to establish the policy and guidelines for the construction process in accordance with the Building Code requirements. A copy can be found on the Town's Web Site
- Items that must be addressed by the construction documents will be structural strength, means of egress (include travel distance), facilities, stability, sanitation, light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment, **Accessibility**, and other safety requirements for public access.
- All mechanical, electrical, and plumbing permits as required must include construction documents signed and sealed by a professional engineer and by a responsible party for the contractor receiving the permit. Be sure the

Town of Easton modifications are included. Section 6-16 of the Town Code.

- Pursuant to Town of Easton Ordinance 477, Chapter 9 Fire Protection, Article VII Security Key Lock Boxes, a lockbox shall be provided on the exterior of the building and shall be located as required by the chief of the Easton Volunteer Fire Department, Inc. (410-822-4848).
 - An appointment may be set up with this department to review your permit application materials prior to permit application submission.
-
- **State Fire Marshal**, (410-822-7609) plan review and inspections are required. It is your responsibility to contact them and make application.

Bob Haase
Plan Review



Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
JUN 04 2024
TOWN OF EASTON

Easton Staff Development Review

Property Information

Address	406 & 404 Marvel Court, Easton, MD 21601						
Tax Map	105	Grid	0	Parcel	2992D	Lot	4 & 5
Deed Reference:	Liber	3043 / 2611	Folio	500 / 95			
Plat Reference:	Liber	61	Folio	64			
Base Zoning District	CG	Historic District	Y ☐ N ☒		Planning Redevelopment	Y ☐ N ☒	

Purpose of Application / Description of Work:

The proposed project is to remove the property line between Lots 4 & 5, thus creating revised Lot 4, then demolish the existing office building on Lot 5 and existing solar panels on Lot 4. The site will be redeveloped to include a two-story 4,000 SF (8,000 GFA) expansion of the existing medical facility, sidewalks, parking, and stormwater management area.

Owner

Name	NOVA SIXA, LLC		
Mailing Address	8845 Mistletoe Drive, Easton, MD 21601		
Telephone No.	410-310-1350	Email	dljcommercial@gmail.com

Applicant / Agent

Name	Lane Engineering, LLC c/o Brett Ewing, AICP		
Mailing Address	117 Bay Street, Easton, MD 21601		
Telephone No.	410-822-8003	Email	bewing@leinc.com

Surveyor / Engineer

Name	Alec Chosta, P.E.	License No.	51461	Expiration Date	4/4/2026
Mailing Address	Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601				
Telephone No.	410-822-8003	Email	achosta@leinc.com		

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date

6/4/2024

Printed Name of Applicant or Agent

Brett Ewing, AICP, Lane Engineering, LLC

For Office Use Only

Easton Staff Development Review Meeting Required Y ☒ N ☐

Easton Staff Development Review Meeting Date **06/26/2024**

Completeness Check Date **06/28/2024**

Revisions/Resubmissions Required Y ☐ N ☐

Resubmission Date

Documents Received Y ☐ N ☐

Staff Determination

Scheduled for July 18, 2024 Planning Commission meeting.

Planning Commission Required Y ☒ N ☐

BOZA Required Y ☐ N ☒

2024 - 1231 / ESDR 24 - 12

Historic District Commission Required Y ☐ N ☒

Resubmission for ESDR Required Y ☐ N ☐

Staff Signature *Samantha N. Smith*

Date **06/28/2024**

Revised 02-2019



Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
JUN 04 2024
TOWN OF EASTON

Site Plan, PUD, Planned Healthcare Application

Application Type

Planned Unit Development ☐ Amendment ☐ Health Care (HC) ☐ Site Plan ☒

Subdivision Information

Name 406 & 404 Marvel Court
Original Property Size Acres 1.42 AC Square Feet 61,997 SF
Telephone No. 410-822-8003 (Agent) Email bewing@leinc.com (Agent)

Site Plan Information

Property Size Acres 1.423 AC Square Feet 61,997 SF
Structure's Floor Area 4,000 SF +/- Structure's Square Feet 8,000 SF +/-
Area of Disturbance 61,997 SF +/- Number of Dwelling Units 0

Property Information

Address 406 & 404 Marvel Court, Easton, MD 21601
Tax Map 105 Grid 0 Parcel 2992D Lot 4 & 5
Deed Reference: Liber 3043 / 2611 Folio 500 / 95
Plat Reference: Liber 61 Folio 64
Base Zoning District CG Historic Y ☐ N ☒ Planned Redevelopment Y ☐ N ☒
Source of Electricity Easton Utilities

Owner

Name NOVA SIXA, LLC
Mailing Address 8845 Mistletoe Drive, Easton, MD 21601
Telephone No. 410-310-1350 Email dljcommercial@gmail.com

Applicant or Agent

Name Lane Engineering, LLC c/o Brett Ewing, AICP
Mailing Address 117 Bay Street, Easton, MD 21601
Telephone No. 410-822-8003 Email bewing@leinc.com

Surveyor / Engineer

Name Alec Chosta, P.E. License No. 51461 Expiration Date 4/4/2026
Mailing Address Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601
Telephone No. 410-822-8003 Email achosta@leinc.com

Any modifications during review shall warrant an updated application.

I hereby certify that I have reviewed and satisfied the Town of Easton Development Standards and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent



Date 6/4/2024

Printed Name of Applicant or Agent

Brett Ewing, AICP, Lane Engineering, LLC

For Office Use Only

Planning Commission Required	Y ☒ N ☐	
Planning Commission Meeting Date	07/18/2024	
Sketch Approval Date		Project No. ESDR 24-12
Prelim/Dev. Approval Date		Application No. 2024 - 1231
Final Approval Date		Sketch Fee Paid
Recordation Date		Develop. Fee Paid

Revised 02-2019

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Page 31 of 51

CONCEPT STORMWATER MANAGEMENT REPORT

For

406 Marvel Court
Easton, Maryland

Developer

NOVA SIXA, LLC
C/o Doug James
404 Marvel Court
Easton, MD 21601

Design Professional

Lane Engineering, LLC.
117 Bay Street
Easton, Maryland 21601
410-822-8003

Date Prepared

May 31, 2024

Prepared by

Matt Rajacich, E.I.T.

Reviewed by

Alec F. Chosta, P.E.
Civil Engineer



PROFESSIONAL CERTIFICATION: I hereby certify that this document was prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 51461, Expiration Date: 4/4/26.

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SECTIONS LIST

1. Introduction
2. General Site Information
3. Proposed Project
4. Stormwater Management and Environmental Site Design (ESD)
 - 4.1 Stormwater Quantity Management
5. Conclusion

APPENDIX LIST

- APPENDIX A – Maryland Environmental Site Design (ESD) Calculations
- APPENDIX B – Drainage Area Maps
- APPENDIX C – HydroCAD Quantity Management Report
- APPENDIX D – Field Boring at Proposed SGW Location

406 Marvel Court

STORMWATER MANAGEMENT REPORT

1. INTRODUCTION

This report addresses the concept stormwater management design for development of the property located at 406 Martin Court, Easton, Maryland. The stormwater management plan incorporates the requirements of the *2000 Maryland Stormwater Design Manual Volumes I and II* (Manual) as currently updated. Development projects are required to be reviewed during the concept, preliminary site development, and final design stages.

2. GENERAL SITE INFORMATION

Current site conditions consist of 2 separate lots which are improved with office buildings and parking. 404 Marvel Court is currently improved with a parking lot and an office building. The site drains to an existing swale that runs along the eastern side of the property. 406 Marvel Court is currently improved with a parking lot, an office building, and a solar farm. 406 Marvel Court has a high point in the middle of the lot and the site drains to existing swales on the eastern and western sides of the property (see Drainage Area Maps in Appendix B).



Per the USDA soil maps, most site soils are Hambrook-Sassafras complex and classified as a Hydrologic Soil Group (HSG) B soil. The remaining portion of the site is mapped as Woodstown Sandy Loam and Woodstown Loam which are considered group C soils.

Preliminary soil investigations conducted by Lane Engineering (see Appendix D), prior to the concept stormwater submittal, indicate onsite soils that are visually consistent with B soils. One soil boring was conducted in the vicinity of the proposed stormwater feature. The boring was terminated at 5' below grade. Soils were predominately clean sand, and no groundwater was encountered.

3. PROPOSED PROJECT

The developer proposes to demolish all existing improvements on 404 Marvel Court and remove the existing solar farm from 406 Marvel Court and combine the two lots and add an addition onto the existing 406 Marvel Court building and add additional parking on the 404 Marvel Court Area.

4. STORMWATER MANAGEMENT AND ENVIRONMENTAL SITE DESIGN (ESD)

The existing site, which includes the total area of both 406 and 404 Marvel Court, is over 40% impervious and therefore qualifies for redevelopment. Projects that qualify for redevelopment are required to treat 50% of the existing impervious area on-site to a Pe of 1" as well as treat 100% of the net increase in impervious area on-site to the full Pe based on soil group. The total site area for the project is 61,999 SF (1.423 acres) with an existing impervious area of 28,282 SF (0.649 acres, 46%). The proposed development will result in a total impervious area of 33,922 SF (0.779 acres) for a 5,640 SF net increase of impervious area on-site. Utilizing the requirements of redevelopment, this results in an ESD target volume of **2,245 cf**. Refer to Appendix A for detailed ESD calculations.

In accordance with the Manual, available ESD techniques i.e. Alternative Surfaces, Non-Structural and Micro-Scale Practices were evaluated for use at the site:

Alternative Surfaces

- Green Rooftops – Are not applicable to the current parking lot project.
- **Permeable Pavements** – Permeable pavements are effective for reducing imperviousness in pedestrian pavements and parking lots. The site is mapped with predominately B soils, and preliminary soil investigations show that there is predominately clean sands below grade making permeable pavements a viable practice for this project.
- Reinforced Turf - Reinforced turf areas are commonly used for emergency equipment access or for areas that receive minimal vehicular use. The proposed parking area will have significant vehicular use.

Nonstructural practices

- Disconnection of Rooftop Runoff – Not applicable to the current parking lot project.
- Disconnection of Non-Rooftop Runoff – This could be utilized to a minimal degree, however, the site lacks adequate green space to disconnect the entirety of the proposed parking lot.
- Sheetflow to Conservation Area – The adjacent properties and environmental features do not meet the requirements for implementation of this practice.

Micro-scale practices

- Rainwater Harvesting – Opportunities for on-site reuse of harvested rainwater is limited. Irrigation is not proposed for the site. Operations and maintenance, especially during cold-weather periods, is also a concern.
- **Submerged Gravel Wetlands** – This practice is best suited for sites with a high groundwater table and poor soils. Since no formal geotechnical work has been performed, a submerged gravel wetland ensures that the project is feasible if the required 2' separation between media and groundwater cannot be achieved.
- Landscape Infiltration – The drainage area limitation in Chapter 5 prohibits the use of this practice in the current configuration of the project.

- Infiltration Berms – The requirements of the proposed development do not leave enough room for the implementation of this practice.
- Dry Wells – The proposed drainage areas exceed the 1,000 square foot limit for dry wells.
- Micro-Bioretenention – This practice would provide significant treatment and quantity management. Maintenance for this practice is reasonable. Site soils may suit this infiltration practice, however additional geotechnical information is needed to confirm ground water elevation.
- Rain Gardens – The limited drainage area (10,000 sf) allowed for the practice, prevents its use for the current project.
- Bio-Swale – This practice could provide significant treatment and quantity management. Maintenance for this practice is reasonable. Site soils may suit this infiltration practice, however additional geotechnical information is needed to confirm ground water elevation.

Permeable Pavers and a Submerged Gravel Wetland are ideally suited for this site. Existing soils on site are mapped as B soils and preliminary soil investigations show the site is predominately clean sands making permeable pavers and ideal practice for this site. A submerged gravel wetland has been proposed as a concept stormwater management facility in lieu of conducting a formal geotechnical analysis. The drainage area to the proposed submerged gravel wetland is less than 20,000 SF, meaning the feature can be converted to a micro-bioretenention area during preliminary design if geotechnical analysis shows that there is proper separation between the media and groundwater as required in the Manual. This change would not impact the overall site design or required size of the stormwater management facility.

The total ESD volume provided by the gravel wetland's temporary ponding is **2,188 cf** and the permeable pavers is **1,365 cf** for total ESD volume of **3,553 cf**. Please refer to Appendix A for the detailed water quality computations.

4.1 STORMWATER QUANTITY MANAGEMENT

The existing office building at 406 Marvel Court is the high point between the two properties and water drains to existing swales on the eastern and western sides of the property.

The proposed project will utilize permeable pavers for the proposed parking areas as well as redirect rooftop runoff from the existing building at 406 Marvel Court and the proposed addition to the new management facility on-site which attenuate the added runoff from the proposed additions. This new feature will discharge to the existing swale that runs along on the eastern property line. The combination of this new management facility and the proposed permeable pavers will reduce runoff leaving the site. See the table below for details and refer to Appendix B to see pre and post development drainage area maps and refer to Appendix C for a detailed HydroCAD analysis for the site.

	2 Year Storm (cfs)		10 Year Storm (cfs)		100 Year Storm (cfs)	
	Pre	Post	Pre	Post	Pre	Post
Study Point 1	1.14	0.99	2.65	2.22	4.67	5.50
Study Point 2	1.73	1.61	3.12	2.95	4.80	4.57
TOTAL	2.87	2.60	5.77	5.17	9.47	10.07
NET REDUCTION	0.27		0.60		(0.60)	

5. CONCLUSION

This stormwater management analysis indicates that the proposed design will successfully meet stormwater quality and quantity requirements. Referring to the attached water quality calculations, the ESD volume provided is greater than the ESD volume required. Planning and design analysis indicate that stormwater quality and quantity management can be accomplished as described.

APPENDIX A

MARYLAND ENVIRONMENTAL SITE DESIGN (ESD) CALCULATIONS

Maryland Environmental Site Design (ESD) Computations

Project	Marvel Court	By	MR	Job #	230464
Location	406 Marvel Court	Date	5/31/2024	File #	1026

Determine if the Project is subject to Redevelopment Requirements:

Site Area = 1.4 ac excluding buffers, forest conservation = ac
 Net Site Area = 1.4
 Existing Imp. Area = 0.6 ac
 Percent Impervious (I) = 45.6 %
 I > 40%. Project subject to Redevelopment standards.

ESD Target for Redevelopment

Impervious Cover (50% of Ex. Imp): 0.32 ac 14,141 sf
 Percent Impervious (I) 100 %

Remove and/or treat 14,141 sf of existing impervious area
 Area of impervious removed = sf *(whereby I_{post} < I_{pre})*
 Impervious area remaining = 14,141 sf *to be treated using ESD practices, Pe = 1 in, Rv = 0.95*

$$\begin{aligned}
 R_v &= 0.05 + 0.009(I) \\
 &= 0.95
 \end{aligned}$$

Composite Target P_E (in.): **1.00**

$$\begin{aligned}
 ESD_v &= \frac{(P_E)(R_v)(A)}{12} \\
 &= \mathbf{1,119 \quad cf}
 \end{aligned}$$

Step 1 - Determine Stormwater Management Requirements

Initial Site Assessment (Site Data):

Total Increase in Impervious Area: 5,640 sf *(I_{post} > I_{pre} by this amount)*

Soil Types:

HSG	A	B	C	D
Area		4,512	1,128	
Percent		80.0	20.0	

Proposed Layout

Impervious Cover: 5,640 sf
 Percent Impervious (I) 100 %

Determine RCNs for Wooded Conditions:

HSG	A	B	C	D
Area		4,512	1,128	
Percent		80.0	20.0	
RCN	38	55	70	77

Weighted RCN: **58**

Determine ESD Targets:

$$R_v = 0.05 + 0.009(I) \\ = 0.95$$

From Table 5.3 and
%I = 100

HSG	A	B	C	D
Area		4,512	1,128	
Target P_E		2.6	2.2	

Composite Target P_E (in.): **2.52**

$$ESD_v = \frac{(P_E)(R_v)(A)}{12} \\ = 1,125 \quad \text{cf}$$

Total ESDv required = 2,245 cf

Step 2 - Preliminary ESD Options

Please refer to the Stormwater Management Report

Step 3 - ESD Design

Evaluation of specific ESD treatment practices for the project on the following sheets.

Permeable Pavement Areas

Parking Lot Area

Total Length	315	ft
Total Width	18	ft
Impervious Area	6,966	sf
Base thickness	12	in
ESD Value Per HSG	0.196	ESDv/sf (Ref. ESD Process & Comps)
ESDv provided	1,365	cf

Drainage Area SGW-1

Total Area	18,962 sf	Target ESDv = $\frac{(P_e)(R_v)(A)}{12}$
Impervious Area	11,694 sf	
Percent Impervious (I)	62 %	= 2,409 cf
Rv = 0.05 +0.009(I)	0.61	75% of target= 1,807 cf

Site Development Design - Submerged Gravel Wetland (M-2)

Based on the Cpv storm (2.8 in.): Max allowable ESDv that can be used:

$$V = \frac{(P)(R_v)(A)}{12} = 2,677 \text{ cf}$$

The computed ESDv provided is:

$$\text{ESDv} = (\text{Ponding storage}) + (\text{Storage in media})$$

$$= 2,188 \text{ cf}$$

Surface Area=	1,220 sf	Media Depth=	2 ft
Ponding Area=	2,280 sf		
Ponding depth=	1.25 ft	Porosity=	0

Therefore, when assessing compliance with the MEP standard, the volume of runoff treated by this Submerged Gravel wetland practice is **2,188 cf.**

Now check for compliance with design criteria:

Submerged Gravel Wetland Design Criteria:	Provided
Runoff shall enter, flowthrough, and exit in safe and non-erosive manner	✓
Drainage area to practice is large enough to maintain submerged flow	✓
Appropriate soils and/or high groundwater is present	✓
Section dimensions of soil media layers greater than minimum	✓
Distribution and collection piping/underdrains provided	✓
Flow paths through gravel greater than 15 ft	✓
Riser pipes provided and spaced at 15 ft or less apart	✓
Cleanouts Provided	✓

ESD SUMMARY CHART

DRAINAGE AREA	TYPE OF ESD PRACTICE	NAME OF ESD PRACTICE (STRUCTURE NAME)	ON-SITE OR OFF-SITE STRUCTURE	RUNOFF CURVE NUMBER (RCN) WEIGHTED	MARYLAND GRID COORDINATE NAD 83 METERS NORTHING	MARYLAND GRID COORDINATE NAD 83 METERS EASTING	ESD PRACTICE TOTAL DRAINAGE AREA (ACRES)	ESD PRACTICE IMPERVIOUS DRAINAGE AREA (ACRES)	SURFACE AREA OF ESD PRACTICE (ACRES)	TARGET PE (IN.)	ACTUAL PE (IN.)	TARGET ESDv (FT. ³)	ACTUAL ESDv (ft. ³)
1	A-2	PERMEABLE PAVERS	ON-SITE	-	401599.04	1579464.11	0.527	0.213	0.160	1	1	-	1,365
2	M-2	SUBMERGED GRAVEL WETLAND	ON-SITE	-	401501.34	1579376.64	0.435	0.268	0.028	1	1	-	2,188
3													
4	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-
6													
7													
8													
9													
10													
TOTAL/ AVERAGE				-			0.962	0.481	0.188	1	1	*2,245	3,553

* Total site target for development



APPROVAL

Rid Van Engle
TOWN ENGINEER

1/2020
DATE

**TOWN OF EASTON
STANDARD DETAILS**

ESD SUMMARY CHART

ISSUED: JANUARY 2020

STANDARD NO: TOE-SWM-7.01

SWM QUANTITY SUMMARY CHART

PRACTICE Study Point	DA (ACRES)	IMPERVIOUS (ACRES)	RCN	Tc (MINUTES)	PRE 2 YEAR	POST 2 YEAR	W.S.E.	PRE 10 YEAR	POST 10 YEAR	W.S.E.	PRE 100 YEAR	POST 100 YEAR	W.S.E.
1	0.987	0.499	-	5	1.14	0.99	48.81	2.65	2.22	49.05	4.67	5.50	49.34
2	0.435	0.280	-	1.70	1.73	1.61	-	3.12	2.95	-	4.80	4.57	-



APPROVAL

Rid Van Engle
TOWN ENGINEER

1/2020
DATE

**TOWN OF EASTON
STANDARD DETAILS**

SWM QUANTITY SUMMARY CHART

ISSUED: JANUARY 2020

STANDARD NO: TOE-SWM-7.02

APPENDIX B

DRAINAGE AREA MAPS

SWM PRE DEVELOPMENT DISCHARGES (CFS)			
STUDY POINT	Q ₂	Q ₁₀	Q ₁₀₀
1	1.14	2.65	4.67
2	1.73	3.12	4.80
TOTAL	2.87	5.77	9.47

AREA #	AREA (SF)	TOTAL Tc (MINUTES)	IMPERVIOUS (%)	DESCRIPTION
EX-1	42,340	11.10	35%	SOLAR FIELD, OFFICE BUILDING, AND PARKING
EX-2	19,659	1.70	69%	OFFICE BUILDING AND PARKING

[illegible]

WARNING!!
THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE QUANTITIES SHOWN ON THIS PLAN ARE FOR INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.

THE CONTRACTOR SHALL TEST PIT AND LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF ANY WORK ON-SITE. THE CONTRACTOR SHALL NOTIFY DEPT. OF PUBLIC WORKS OF ANY POSSIBLE CONFLICT AND REQUEST THE RELOCATION OF THE EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING ANY WORK ON-SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RELOCATION EXPENSE.



Lane Engineering, LLC

Established 1986
Civil Engineers • Land Planning • Land Surveyors



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PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 51461, Expiration Date: 04/04/2026.



5-31-24

PRE-DEVELOPMENT
DRAINAGE AREA
MAP

ON THE LANDS OF
NOVA SIXA, LLC
AND
406 MARVEL COURT, LLC

IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND
TAX MAP 105, GRID 0, PARCEL 2992D, LOTS 4 AND 5

ISSUED FOR:	DATE:	BY:
AGENCY REVIEW	05/31/24	BCE

SHEET No. 1 OF 2	DATE:
SCALE: AS NOTED	JOB No. 230464
	FILE No. 1026



TALBOT COUNTY SOILS				
MAP SYMBOL	SOILS NAME	HYDRIC SOILS	K FACTOR	SOIL GROUP
HfB	HAMBROOK-SASSAFRAS COMPLEX		0.37	B
WdA	WOODSTOWN SANDY LOAM	*	0.2	C
WoA	WOODSTOWN LOAM	*	0.32	C

* POSSIBLE SMALL AREAS OF HYDRIC SOIL INCLUSIONS SUBJECT TO FIELD VERIFICATION.

LEGEND

- | | |
|--|--------------------------|
| | IRON ROD FOUND |
| | CONCRETE MONUMENT FOUND |
| | CABLE TV PEDESTAL |
| | CIRCUIT BREAKER PANEL |
| | ELECTRIC PEDESTAL |
| | ELECTRIC TRANSFORMER |
| | ELECTRIC METER |
| | ELECTRIC HANDHOLE |
| | LAMP POLE |
| | SANITARY SEWER CLEAN OUT |
| | SANITARY SEWER MANHOLE |
| | SEPTIC TANK |
| | TELEPHONE PEDESTAL |
| | HVAC UNIT |
| | SINGLE POST SIGN |
| | WATER METER |
| | WATER FAUCET |
| | FLOOD ZONE LINE |
| | SURFACE ELEVATION |
| | MAJOR CONTOUR |
| | MINOR CONTOUR |
| | CHAINLINK FENCE |

SWM POST DEVELOPMENT DISCHARGES (CFS)			
STUDY POINT	Q ₂	Q ₁₀	Q ₁₀₀
1	0.99	2.22	5.50
2	1.61	2.95	4.57
TOTAL	2.60	5.17	10.07

STORMWATER MANAGEMENT DRAINAGE AREA TABLE				
AREA #	AREA (SF)	TOTAL Tc (MINUTES)	IMPERVIOUS (%)	DESCRIPTION
PR-1	22,964	5.00	40%	PARKING
PR-2	18,962	5.00	62%	OFFICE BUILDING AND ENTRANCE
PR-3	1,096	5.00	70%	RESIDUAL ENTRANCE
PR-4	18,977	1.70	64%	EXISTING PARKING AREA

[illegible]

WARNING!!

THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL SHOW THE LOCATION OF ALL EXISTING UTILITIES ON THE PLAN FOR INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.

THE CONTRACTOR SHALL TEST PIT AND LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF ANY WORK. BEFORE THE CONTRACTOR SHALL NOTIFY THE CITY OF PUBLIC WORKS OF ANY POSSIBLE CONFLICT AND REQUEST THE RELOCATION OF THE EXISTING UNDERGROUND UTILITIES BEFORE BEGINNING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RELOCATION EXPENSE.



Lane Engineering, LLC

Established 1986
Civil Engineers • Land Planning • Land Surveyors



E-mail: general@leinc.com
117 Bay St. Easton, MD 21601 (410) 822-8003
15 Washington St. Cambridge, MD 21613 (410) 221-0818
354 Pennsylvania Ave. Centreville, MD 21617 (410) 758-2095

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 51461, Expiration Date: 04/04/2026.



POST-DEVELOPMENT DRAINAGE AREA MAP

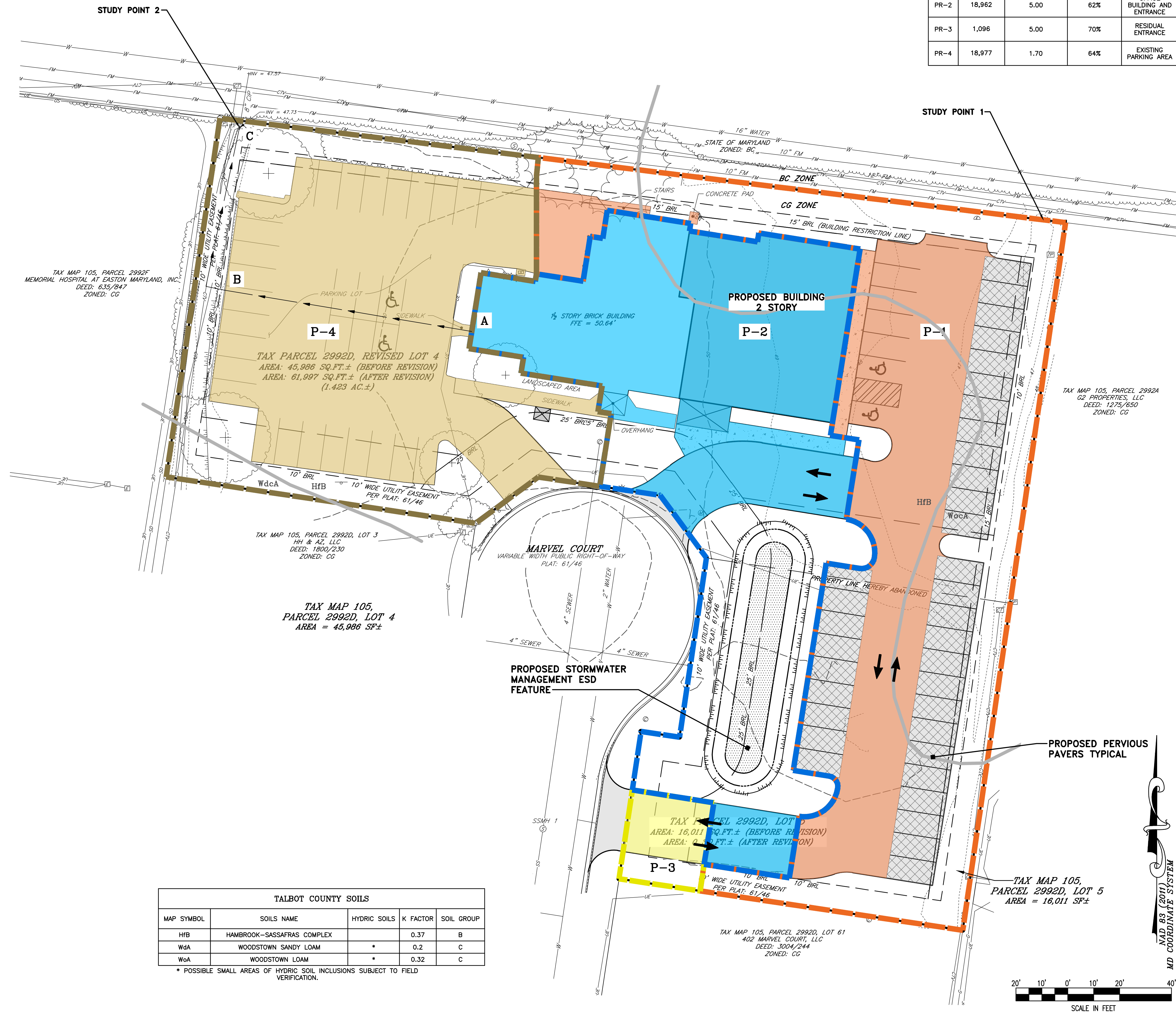
ON THE LANDS OF
NOVA SIXA, LLC
AND
406 MARVEL COURT, LLC

IN THE TOWN OF EASTON
TALBOT COUNTY, MARYLAND
TAX MAP 105, GRID 0, PARCEL 2992D, LOTS 4 AND 5

ISSUED FOR:	DATE:	BY:
AGENCY REVIEW	05/31/24	BCE

SHEET No. **2 OF 2** DATE: _____

SCALE:	JOB No. 230464
AS NOTED	FILE No. 1026



LEGEND

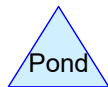
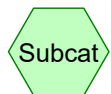
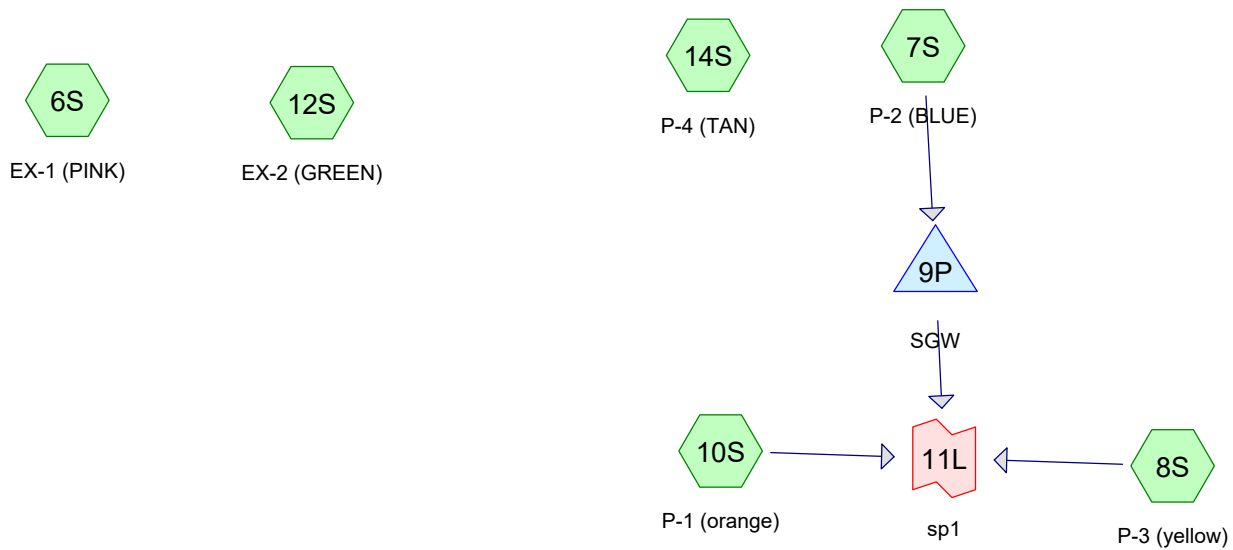
- | | |
|--|--------------------------|
| | IRON ROD FOUND |
| | CONCRETE MONUMENT FOUND |
| | CABLE TV PEDESTAL |
| | CIRCUIT BREAKER PANEL |
| | ELECTRIC PEDESTAL |
| | ELECTRIC TRANSFORMER |
| | ELECTRIC METER |
| | ELECTRIC HANDHOLE |
| | LAMP POLE |
| | SANITARY SEWER CLEAN OUT |
| | SANITARY SEWER MANHOLE |
| | SEPTIC TANK |
| | TELEPHONE PEDESTAL |
| | HVAC UNIT |
| | SINGLE POST SIGN |
| | WATER METER |
| | WATER FAUCET |
| | FLOOD ZONE LINE |
| | SURFACE ELEVATION |
| | MAJOR CONTOUR |
| | MINOR CONTOUR |
| | CHAINLINK FENCE |

TALBOT COUNTY SOILS				
MAP SYMBOL	SOILS NAME	HYDRIC SOILS	K FACTOR	SOIL GROUP
HfB	HAMBROOK-SASSAFRAS COMPLEX		0.37	B
WdA	WOODSTOWN SANDY LOAM	*	0.2	C
WoA	WOODSTOWN LOAM	*	0.32	C

* POSSIBLE SMALL AREAS OF HYDRIC SOIL INCLUSIONS SUBJECT TO FIELD VERIFICATION.

APPENDIX C

HydroCAD Report



Routing Diagram for 230463-CONCEPT
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Type II 24-hr 2 Rainfall=3.40"

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Page 2

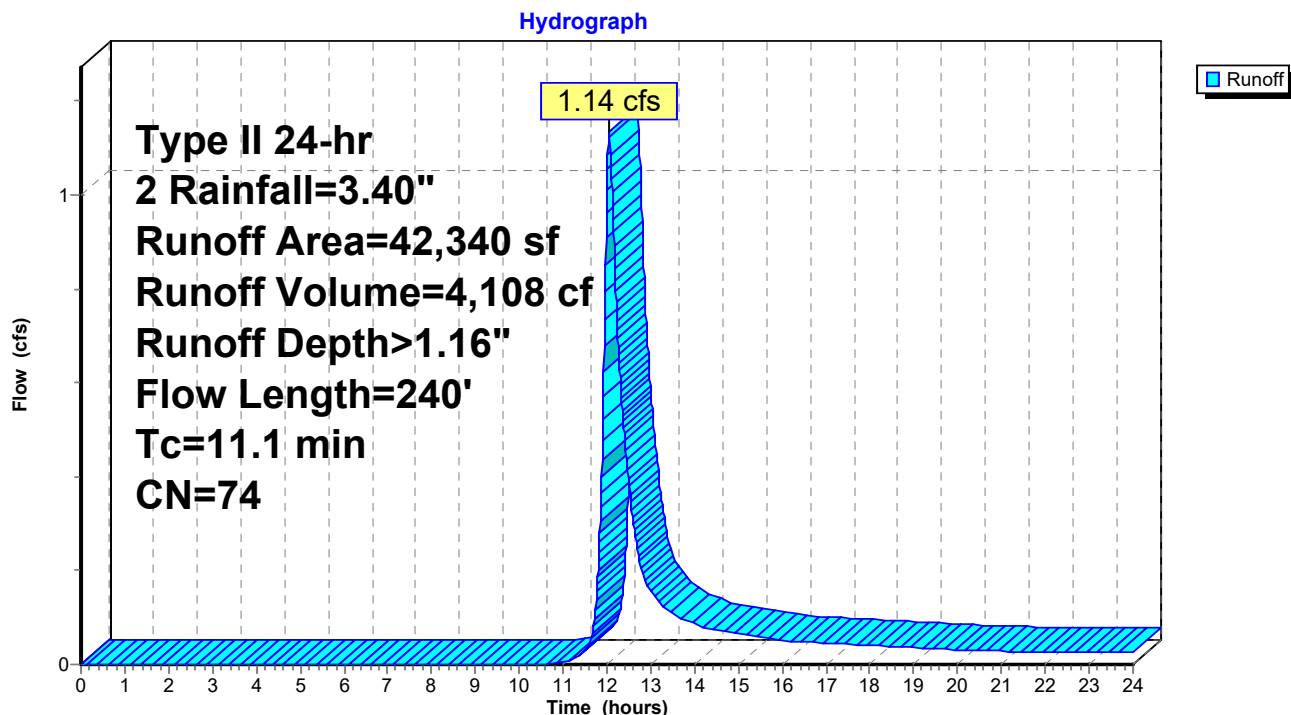
Summary for Subcatchment 6S: EX-1 (PINK)

Runoff = 1.14 cfs @ 12.06 hrs, Volume= 4,108 cf, Depth> 1.16"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2 Rainfall=3.40"

Area (sf)	CN	Description
27,537	61	>75% Grass cover, Good, HSG B
14,803	98	Paved parking, HSG C
42,340	74	Weighted Average
27,537		65.04% Pervious Area
14,803		34.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0200	1.11		Sheet Flow, a-b Smooth surfaces n= 0.011 P2= 3.40"
9.5	100	0.0200	0.18		Sheet Flow, b-c Grass: Short n= 0.150 P2= 3.40"
1.2	110	0.0100	1.50		Shallow Concentrated Flow, c-d Grassed Waterway Kv= 15.0 fps
11.1	240	Total			

Subcatchment 6S: EX-1 (PINK)

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Type II 24-hr 2 Rainfall=3.40"

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Page 3

Summary for Subcatchment 7S: P-2 (BLUE)

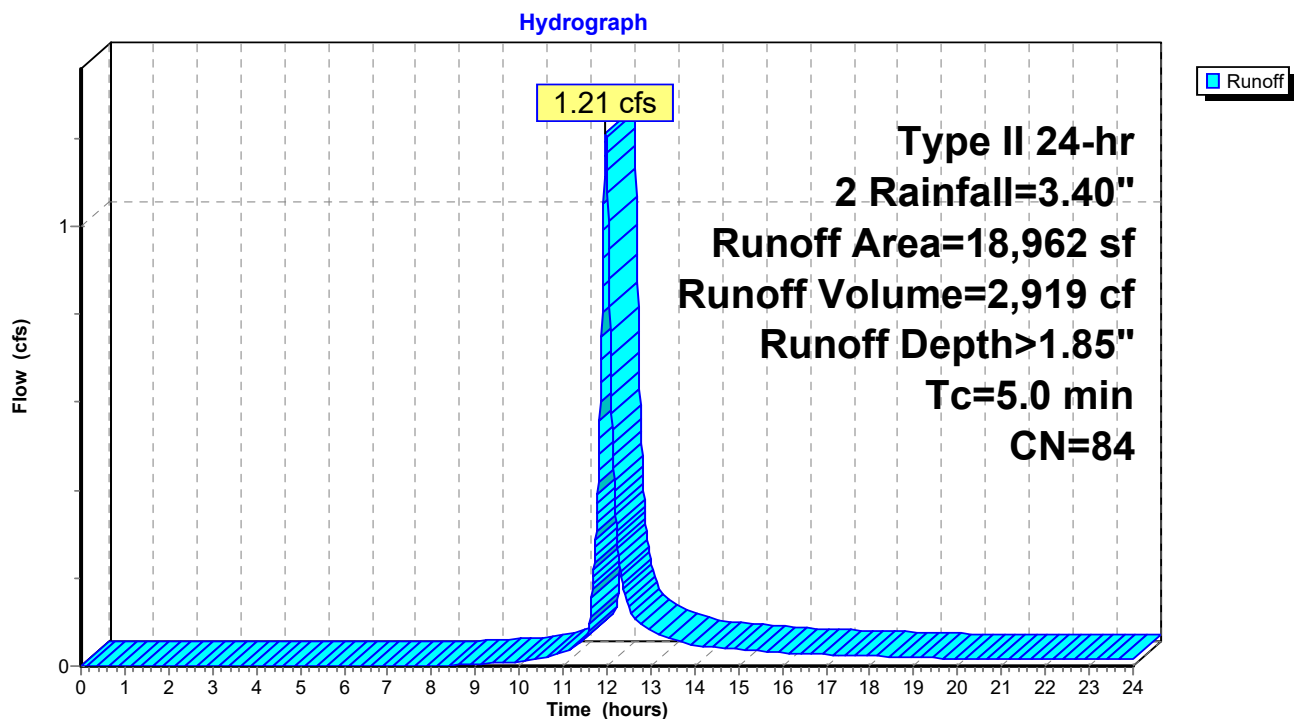
Runoff = 1.21 cfs @ 11.98 hrs, Volume= 2,919 cf, Depth> 1.85"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2 Rainfall=3.40"

Area (sf)	CN	Description
11,694	98	Paved parking, HSG C
7,268	61	>75% Grass cover, Good, HSG B
18,962	84	Weighted Average
7,268		38.33% Pervious Area
11,694		61.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 7S: P-2 (BLUE)



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Type II 24-hr 2 Rainfall=3.40"

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Summary for Subcatchment 8S: P-3 (yellow)

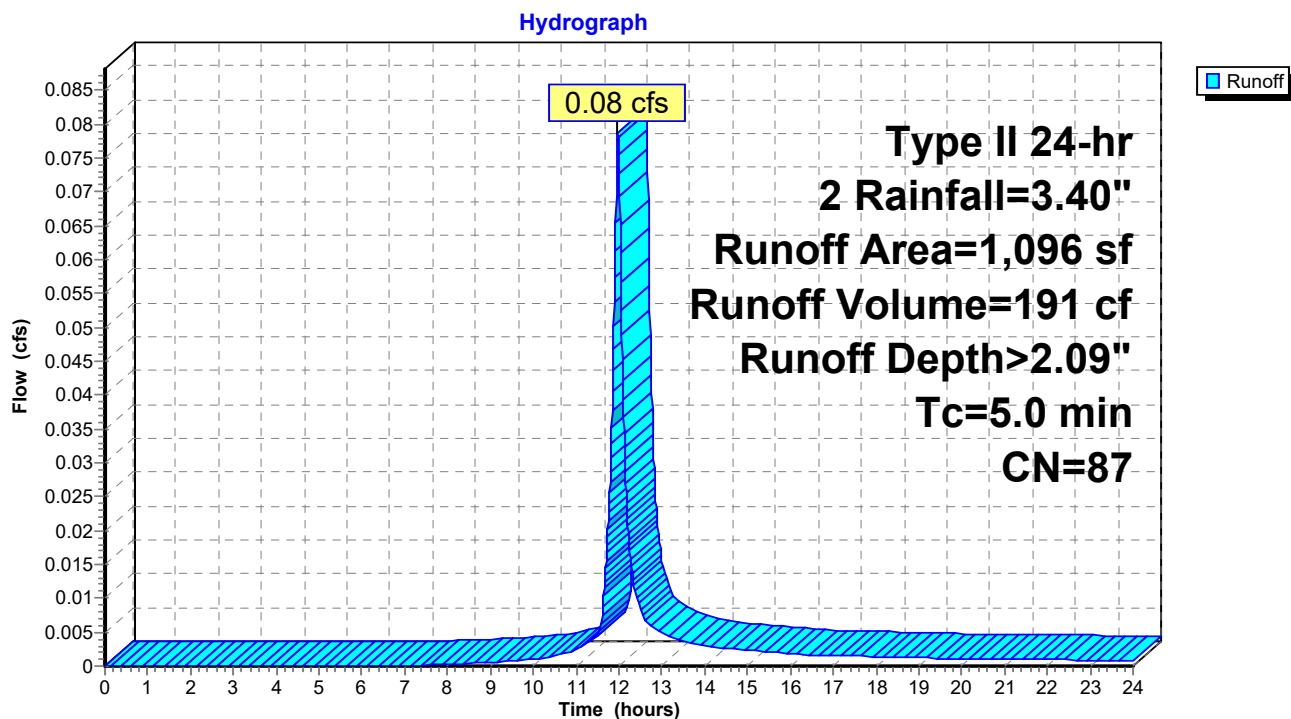
Runoff = 0.08 cfs @ 11.97 hrs, Volume= 191 cf, Depth> 2.09"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2 Rainfall=3.40"

Area (sf)	CN	Description
762	98	Paved parking, HSG C
334	61	>75% Grass cover, Good, HSG B
1,096	87	Weighted Average
334		30.47% Pervious Area
762		69.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 8S: P-3 (yellow)



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Type II 24-hr 2 Rainfall=3.40"

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Summary for Subcatchment 10S: P-1 (orange)

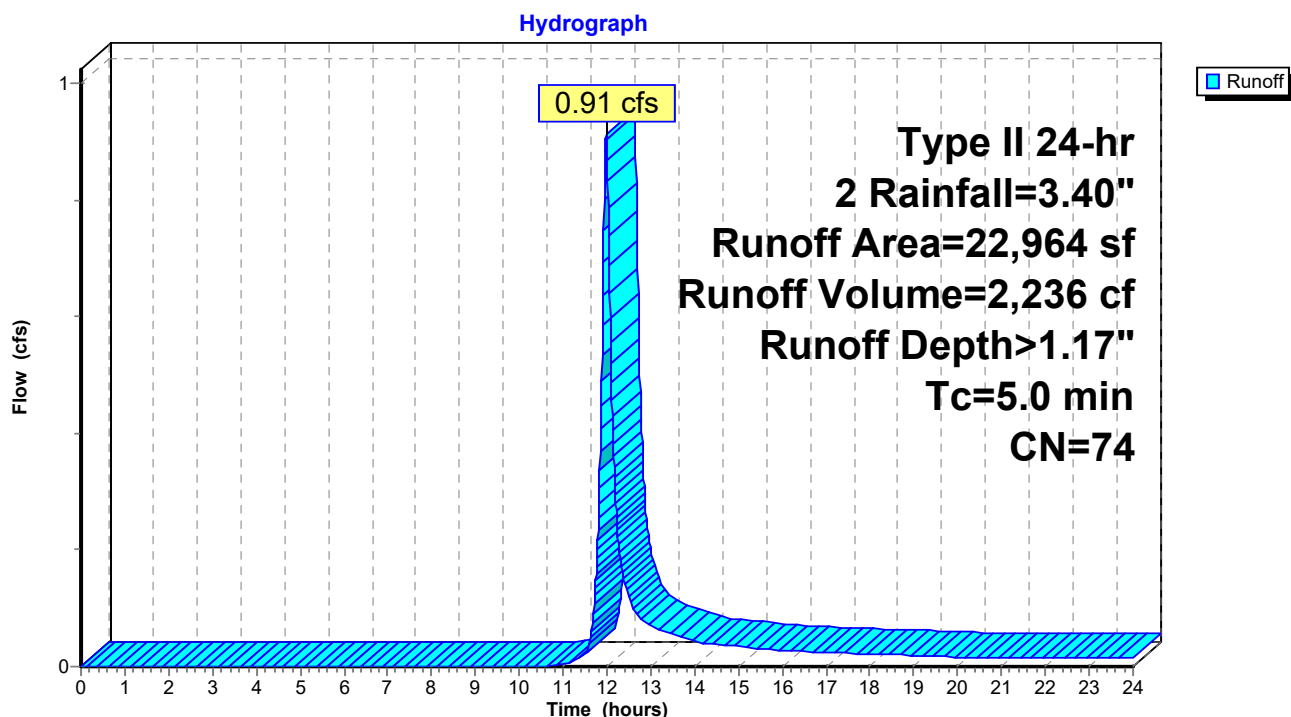
Runoff = 0.91 cfs @ 11.98 hrs, Volume= 2,236 cf, Depth> 1.17"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2 Rainfall=3.40"

Area (sf)	CN	Description
9,268	98	Paved parking, HSG C
5,670	55	Woods, Good, HSG B
8,026	61	>75% Grass cover, Good, HSG B
22,964	74	Weighted Average
13,696		59.64% Pervious Area
9,268		40.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 10S: P-1 (orange)



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Type II 24-hr 2 Rainfall=3.40"

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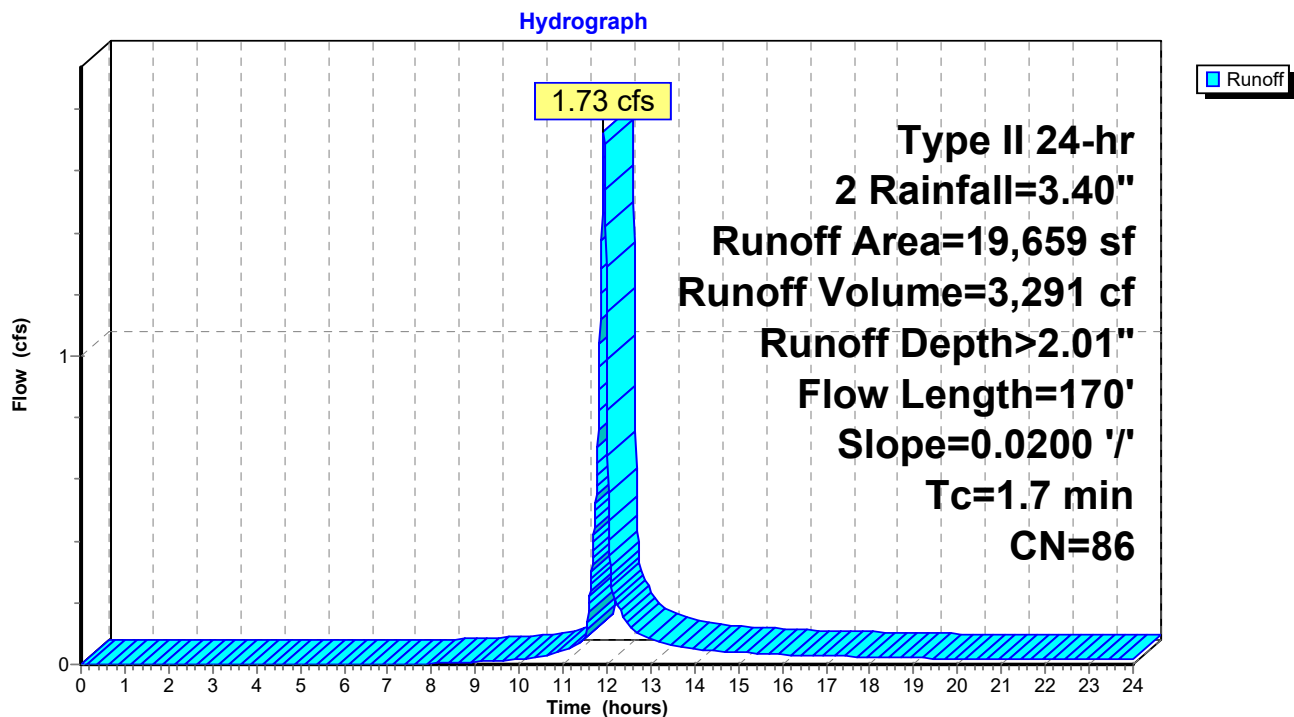
Summary for Subcatchment 12S: EX-2 (GREEN)

Runoff = 1.73 cfs @ 11.93 hrs, Volume= 3,291 cf, Depth> 2.01"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2 Rainfall=3.40"

Area (sf)	CN	Description
13,479	98	Paved parking, HSG C
6,180	61	>75% Grass cover, Good, HSG B
19,659	86	Weighted Average
6,180		31.44% Pervious Area
13,479		68.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.42		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 3.40"
0.5	70	0.0200	2.12		Shallow Concentrated Flow, B-C Grassed Waterway Kv= 15.0 fps
1.7	170	Total			

Subcatchment 12S: EX-2 (GREEN)

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Type II 24-hr 2 Rainfall=3.40"

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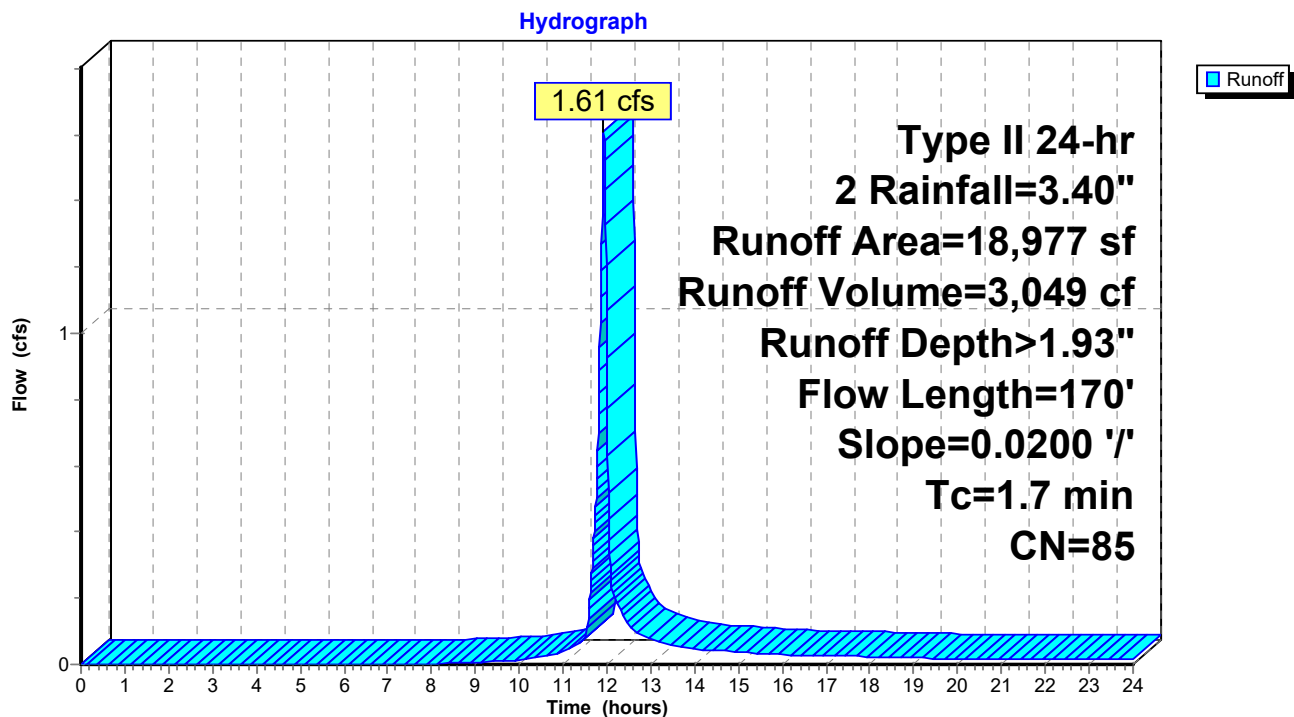
Summary for Subcatchment 14S: P-4 (TAN)

Runoff = 1.61 cfs @ 11.93 hrs, Volume= 3,049 cf, Depth> 1.93"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 2 Rainfall=3.40"

Area (sf)	CN	Description
12,198	98	Paved parking, HSG C
6,779	61	>75% Grass cover, Good, HSG B
18,977	85	Weighted Average
6,779		35.72% Pervious Area
12,198		64.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.42		Sheet Flow, a-b Smooth surfaces n= 0.011 P2= 3.40"
0.5	70	0.0200	2.12		Shallow Concentrated Flow, b-c Grassed Waterway Kv= 15.0 fps
1.7	170	Total			

Subcatchment 14S: P-4 (TAN)

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Type II 24-hr 2 Rainfall=3.40"

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Summary for Pond 9P: SGW

Inflow Area = 18,962 sf, 61.67% Impervious, Inflow Depth > 1.85" for 2 event
 Inflow = 1.21 cfs @ 11.98 hrs, Volume= 2,919 cf
 Outflow = 0.03 cfs @ 16.83 hrs, Volume= 679 cf, Atten= 98%, Lag= 291.3 min
 Primary = 0.03 cfs @ 16.83 hrs, Volume= 679 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Peak Elev= 48.81' @ 16.83 hrs Surf.Area= 2,296 sf Storage= 2,286 cf

Plug-Flow detention time= 450.1 min calculated for 679 cf (23% of inflow)

Center-of-Mass det. time= 315.1 min (1,139.6 - 824.5)

Volume	Invert	Avail.Storage	Storage Description			
#1	45.49'	4,094 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
45.49	1,220	196.0	0.0	0	0	1,220
45.50	1,220	196.0	0.0	0	0	1,222
47.49	1,220	196.0	0.0	0	0	1,612
47.50	1,220	196.0	100.0	12	12	1,614
49.50	2,992	247.0	100.0	4,082	4,094	3,466

Device	Routing	Invert	Outlet Devices
#1	Primary	47.25'	8.0" Round Culvert L= 162.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 47.25' / 45.25' S= 0.0123 ' S= 0.0123 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.35 sf
#2	Device 1	48.75'	6.0" W x 3.0" H Vert. Orifice/Grate C= 0.600
#3	Device 1	49.00'	10.7' long Sharp-Crested Rectangular Weir 0 End Contraction(s)
#4	Secondary	49.25'	6.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.03 cfs @ 16.83 hrs HW=48.81' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.03 cfs of 1.58 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.03 cfs @ 0.81 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.49' (Free Discharge)

4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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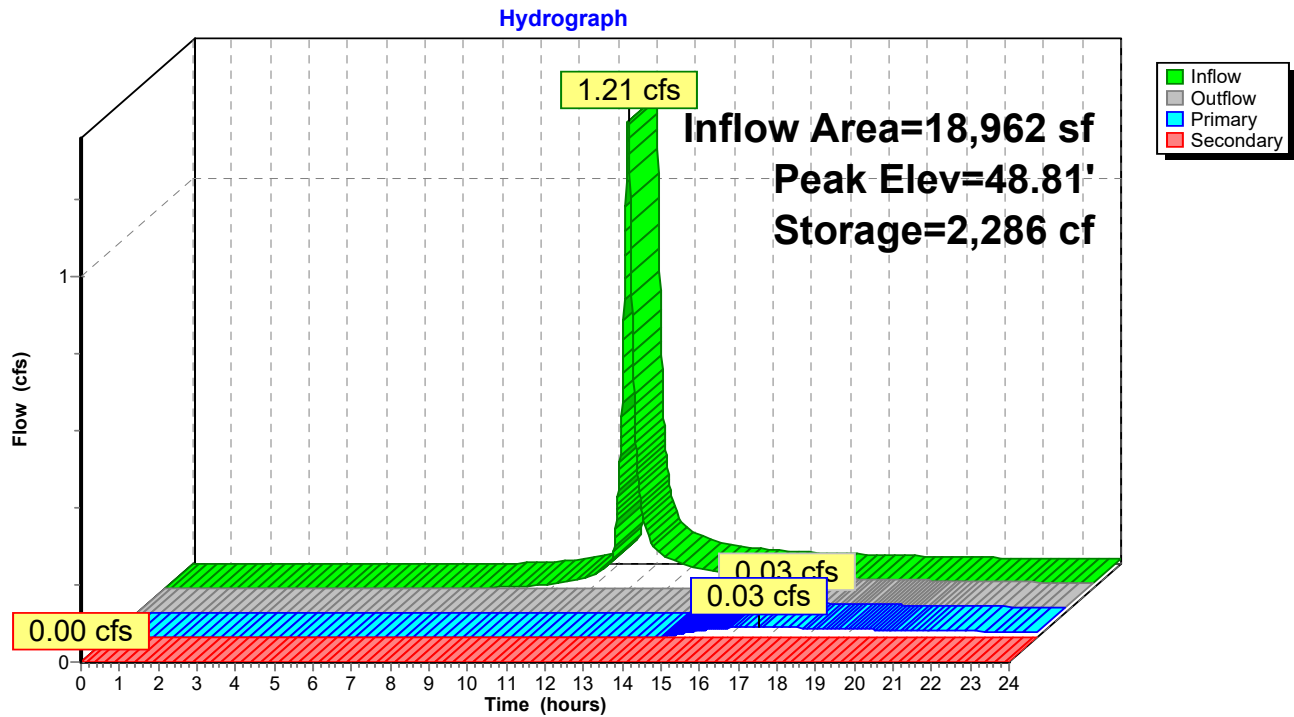
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Type II 24-hr 2 Rainfall=3.40"

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Pond 9P: SGW



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Type II 24-hr 2 Rainfall=3.40"

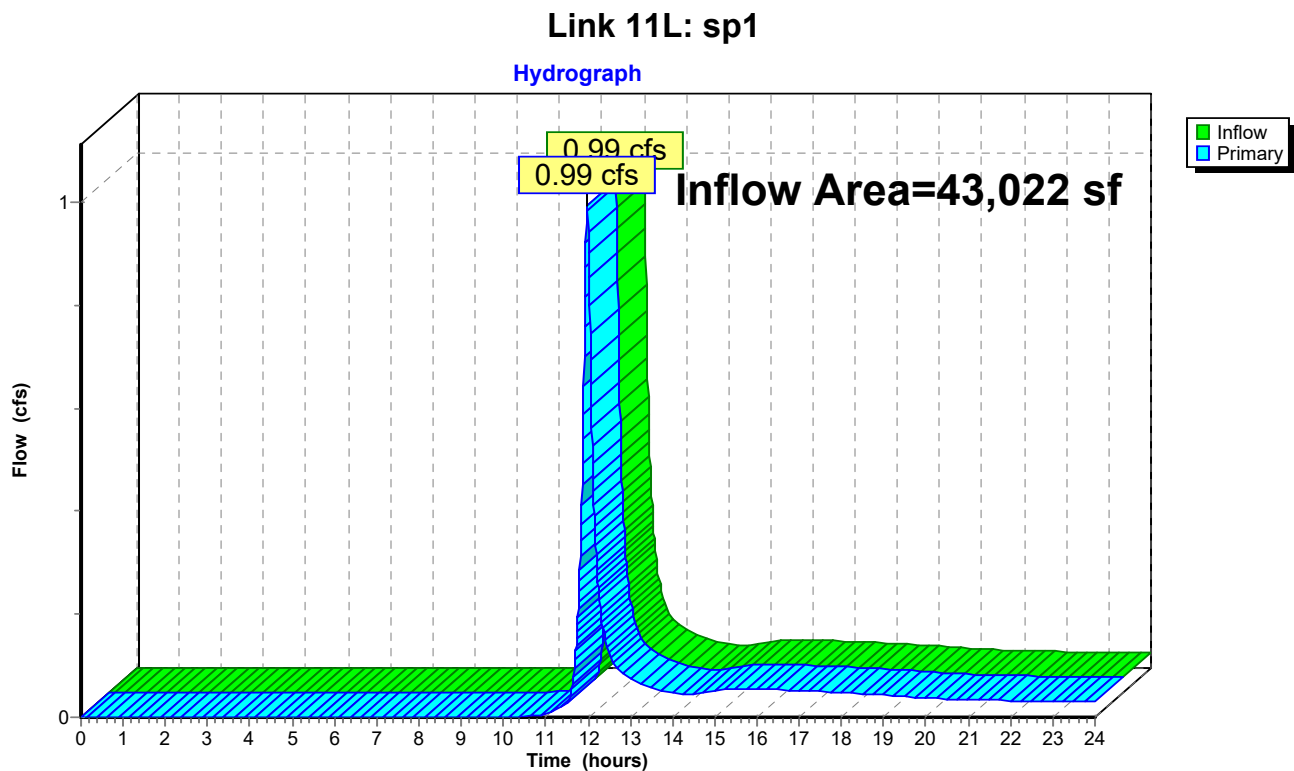
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Summary for Link 11L: sp1

Inflow Area = 43,022 sf, 50.50% Impervious, Inflow Depth > 0.87" for 2 event
Inflow = 0.99 cfs @ 11.98 hrs, Volume= 3,106 cf
Primary = 0.99 cfs @ 11.98 hrs, Volume= 3,106 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



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Type II 24-hr 10 Rainfall=5.30"

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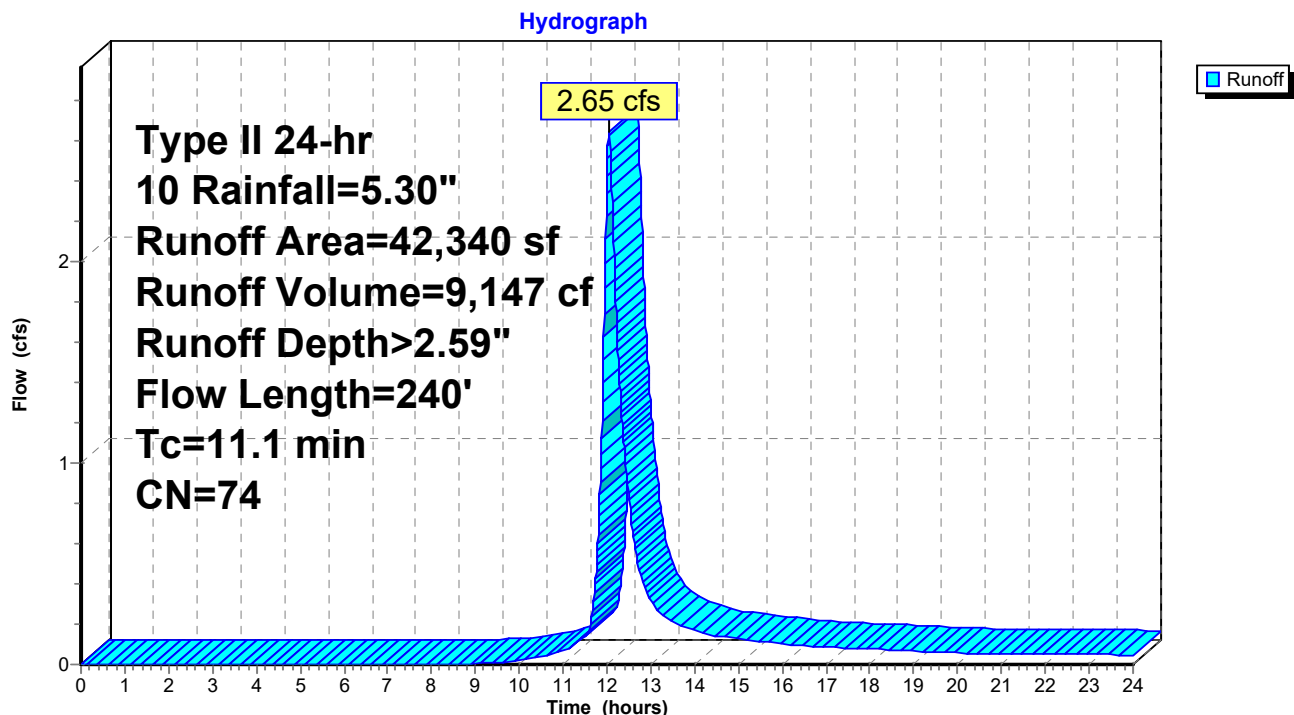
Summary for Subcatchment 6S: EX-1 (PINK)

Runoff = 2.65 cfs @ 12.04 hrs, Volume= 9,147 cf, Depth> 2.59"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 Rainfall=5.30"

Area (sf)	CN	Description
27,537	61	>75% Grass cover, Good, HSG B
14,803	98	Paved parking, HSG C
42,340	74	Weighted Average
27,537		65.04% Pervious Area
14,803		34.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0200	1.11		Sheet Flow, a-b Smooth surfaces n= 0.011 P2= 3.40"
9.5	100	0.0200	0.18		Sheet Flow, b-c Grass: Short n= 0.150 P2= 3.40"
1.2	110	0.0100	1.50		Shallow Concentrated Flow, c-d Grassed Waterway Kv= 15.0 fps
11.1	240	Total			

Subcatchment 6S: EX-1 (PINK)

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Type II 24-hr 10 Rainfall=5.30"

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Summary for Subcatchment 7S: P-2 (BLUE)

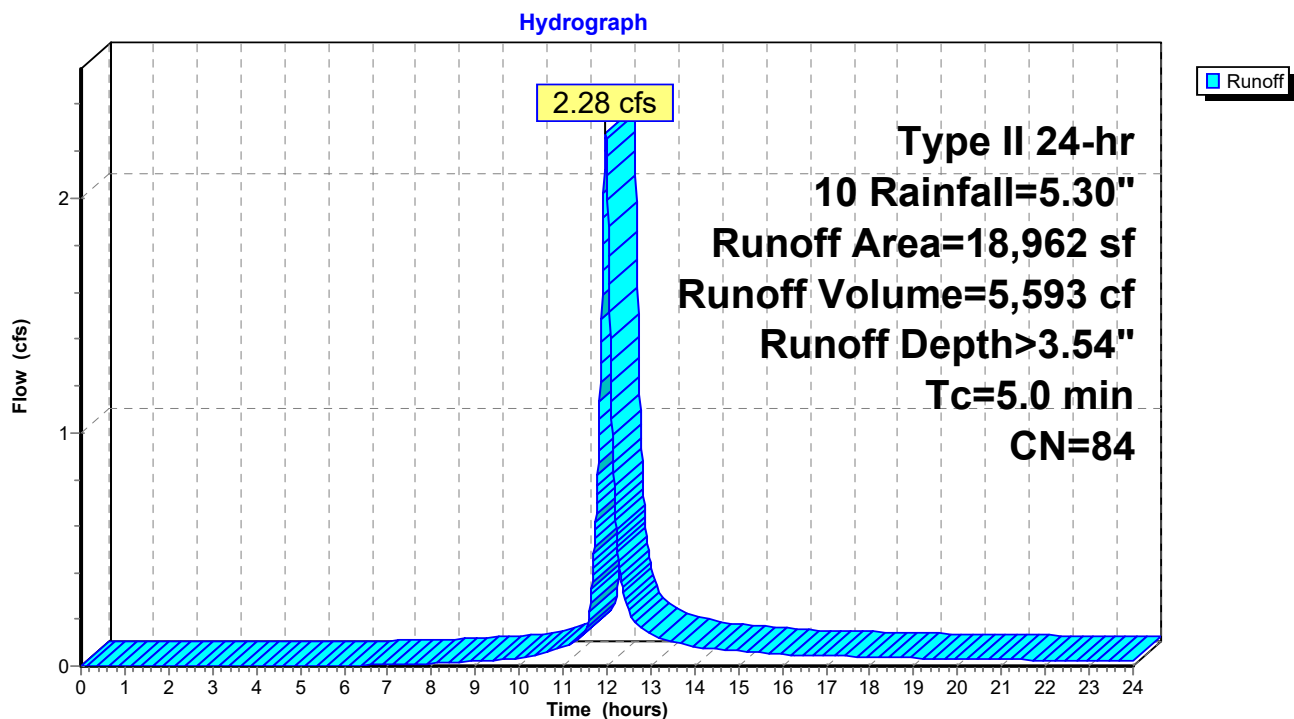
Runoff = 2.28 cfs @ 11.97 hrs, Volume= 5,593 cf, Depth> 3.54"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 Rainfall=5.30"

Area (sf)	CN	Description
11,694	98	Paved parking, HSG C
7,268	61	>75% Grass cover, Good, HSG B
18,962	84	Weighted Average
7,268		38.33% Pervious Area
11,694		61.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 7S: P-2 (BLUE)



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Type II 24-hr 10 Rainfall=5.30"

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Summary for Subcatchment 8S: P-3 (yellow)

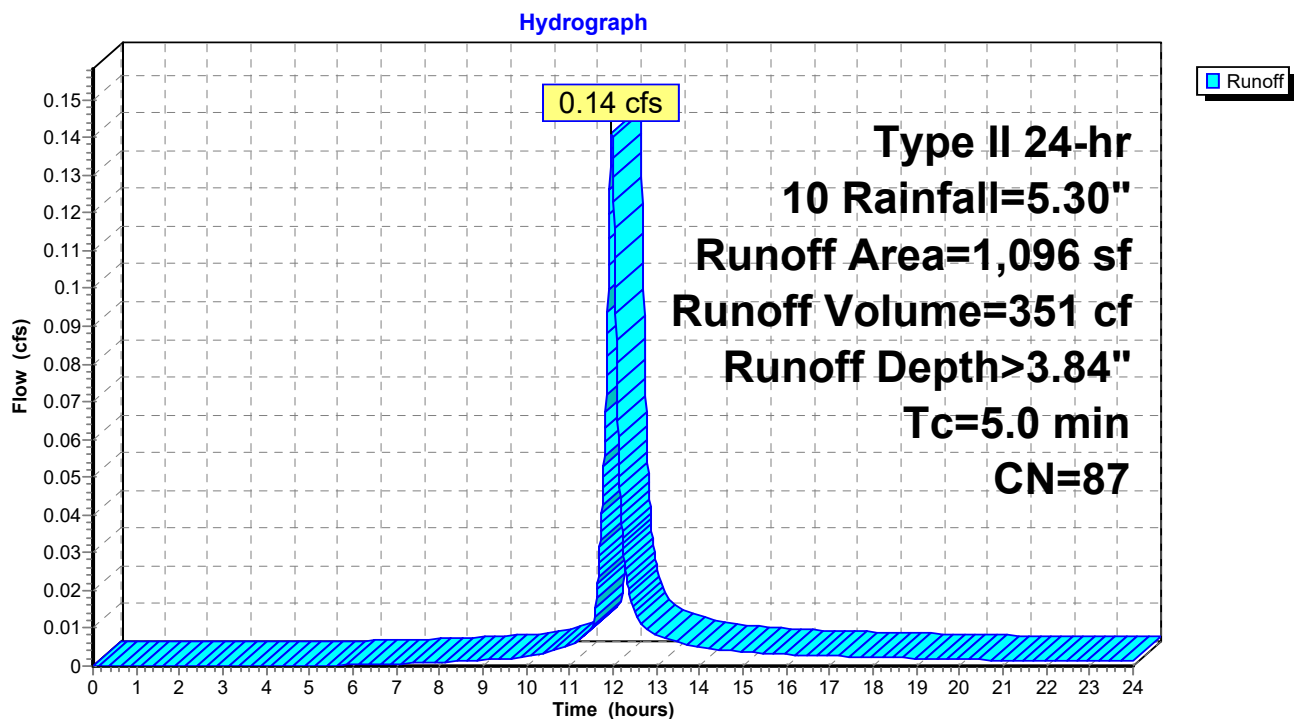
Runoff = 0.14 cfs @ 11.97 hrs, Volume= 351 cf, Depth> 3.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 Rainfall=5.30"

Area (sf)	CN	Description
762	98	Paved parking, HSG C
334	61	>75% Grass cover, Good, HSG B
1,096	87	Weighted Average
334		30.47% Pervious Area
762		69.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 8S: P-3 (yellow)



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Type II 24-hr 10 Rainfall=5.30"

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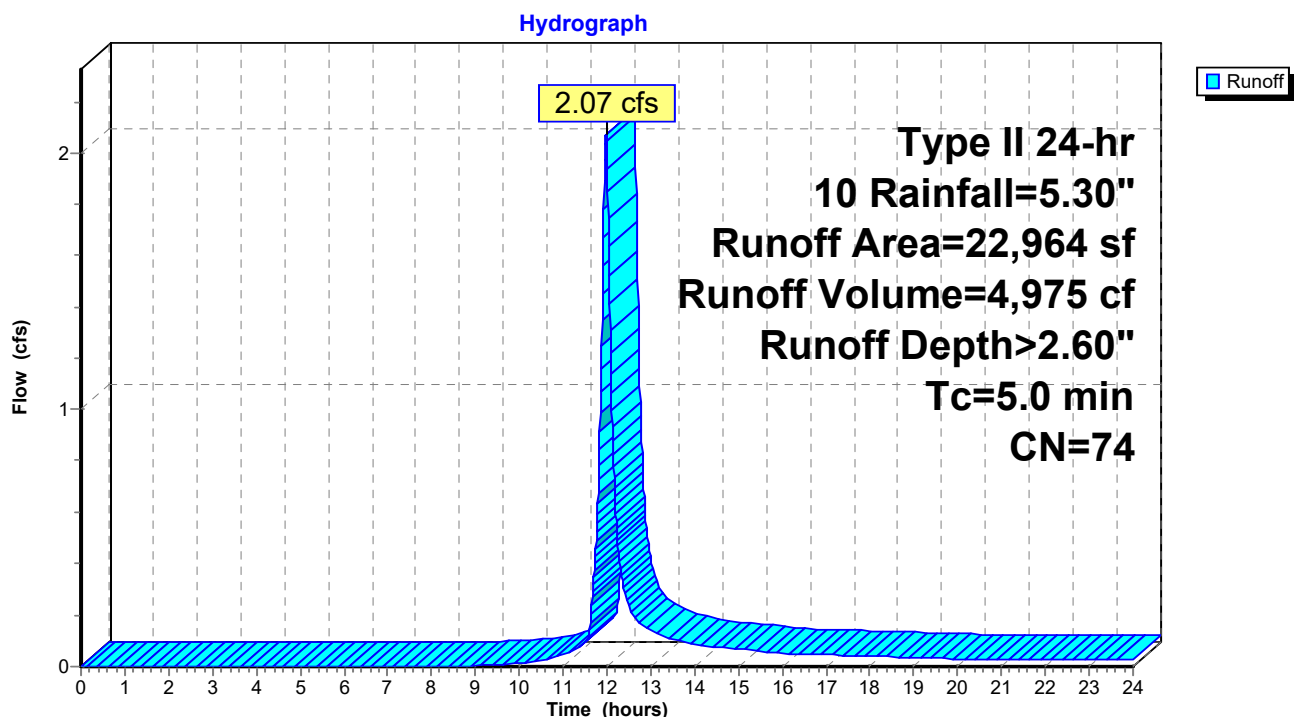
Summary for Subcatchment 10S: P-1 (orange)

Runoff = 2.07 cfs @ 11.98 hrs, Volume= 4,975 cf, Depth> 2.60"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 Rainfall=5.30"

Area (sf)	CN	Description
9,268	98	Paved parking, HSG C
5,670	55	Woods, Good, HSG B
8,026	61	>75% Grass cover, Good, HSG B
22,964	74	Weighted Average
13,696		59.64% Pervious Area
9,268		40.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 10S: P-1 (orange)

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Type II 24-hr 10 Rainfall=5.30"

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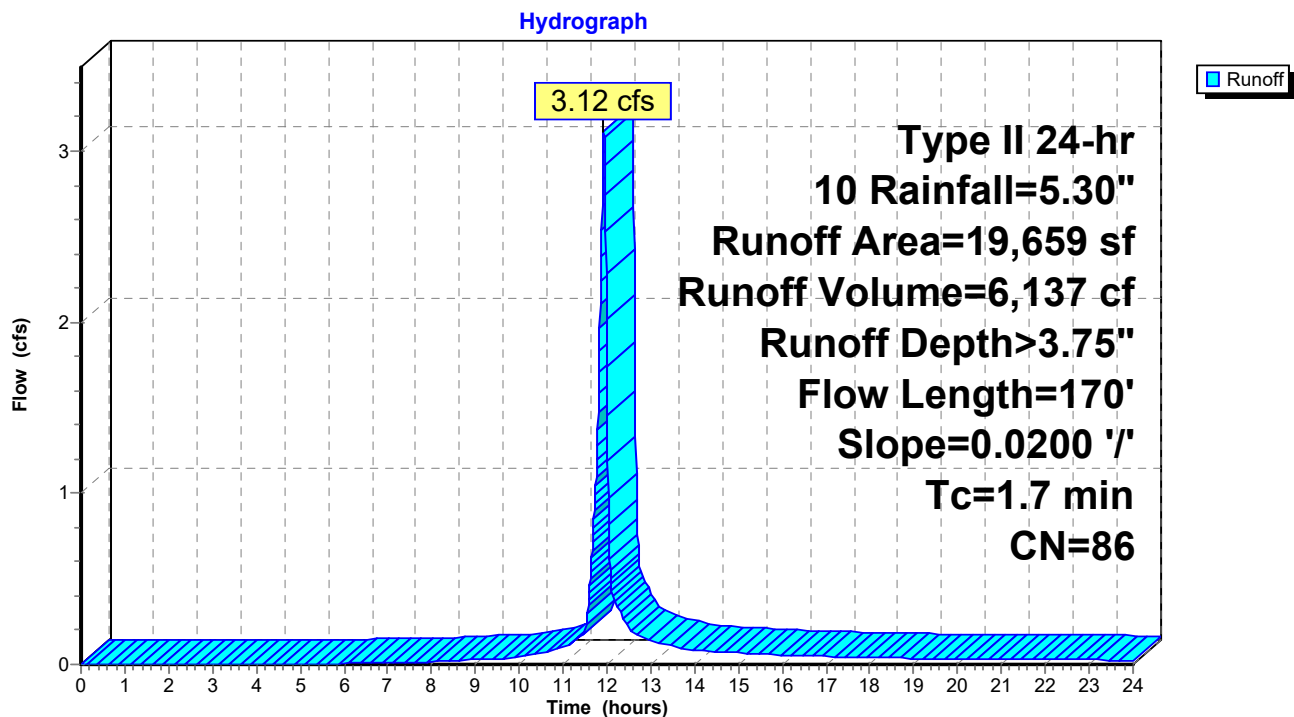
Summary for Subcatchment 12S: EX-2 (GREEN)

Runoff = 3.12 cfs @ 11.93 hrs, Volume= 6,137 cf, Depth> 3.75"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 Rainfall=5.30"

Area (sf)	CN	Description
13,479	98	Paved parking, HSG C
6,180	61	>75% Grass cover, Good, HSG B
19,659	86	Weighted Average
6,180		31.44% Pervious Area
13,479		68.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.42		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 3.40"
0.5	70	0.0200	2.12		Shallow Concentrated Flow, B-C Grassed Waterway Kv= 15.0 fps
1.7	170	Total			

Subcatchment 12S: EX-2 (GREEN)

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Type II 24-hr 10 Rainfall=5.30"

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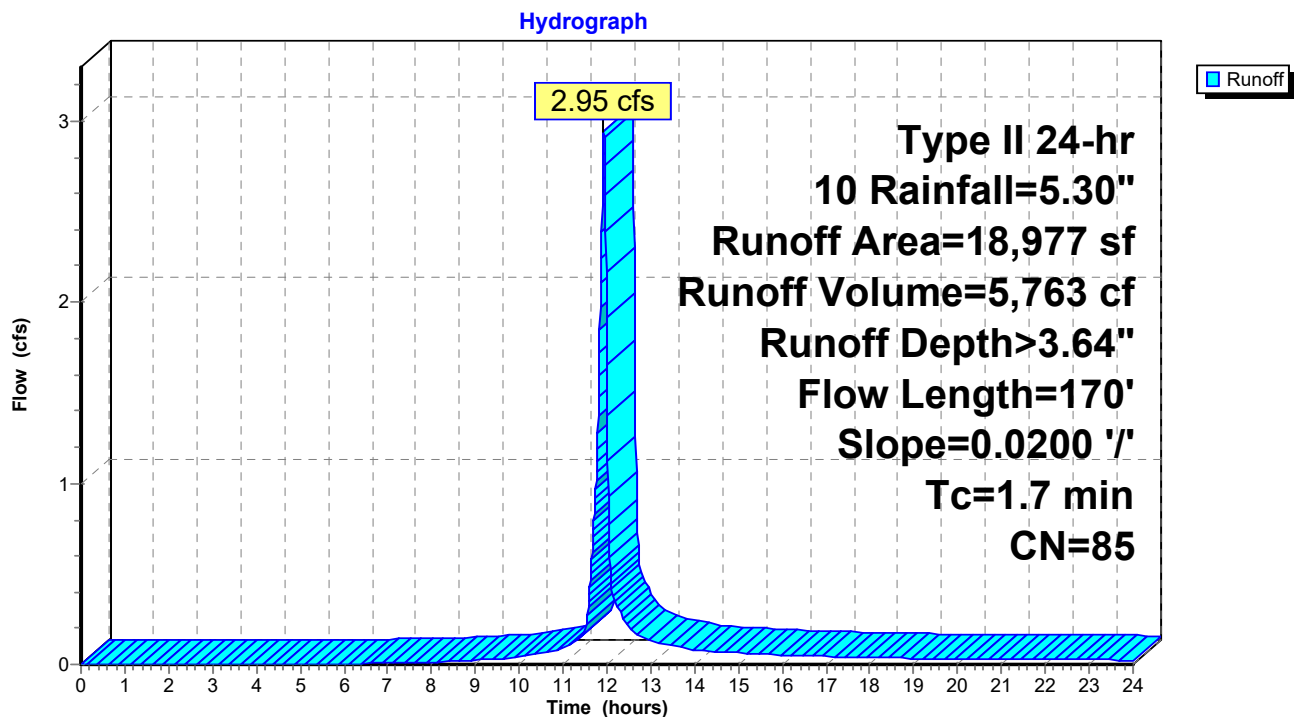
Summary for Subcatchment 14S: P-4 (TAN)

Runoff = 2.95 cfs @ 11.93 hrs, Volume= 5,763 cf, Depth> 3.64"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 Rainfall=5.30"

Area (sf)	CN	Description
12,198	98	Paved parking, HSG C
6,779	61	>75% Grass cover, Good, HSG B
18,977	85	Weighted Average
6,779		35.72% Pervious Area
12,198		64.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.42		Sheet Flow, a-b
					Smooth surfaces n= 0.011 P2= 3.40"
0.5	70	0.0200	2.12		Shallow Concentrated Flow, b-c
					Grassed Waterway Kv= 15.0 fps
1.7	170	Total			

Subcatchment 14S: P-4 (TAN)

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Type II 24-hr 10 Rainfall=5.30"

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Summary for Pond 9P: SGW

Inflow Area = 18,962 sf, 61.67% Impervious, Inflow Depth > 3.54" for 10 event
 Inflow = 2.28 cfs @ 11.97 hrs, Volume= 5,593 cf
 Outflow = 0.67 cfs @ 12.18 hrs, Volume= 3,312 cf, Atten= 71%, Lag= 12.7 min
 Primary = 0.67 cfs @ 12.18 hrs, Volume= 3,312 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 49.05' @ 12.18 hrs Surf.Area= 2,528 sf Storage= 2,861 cf

Plug-Flow detention time= 216.4 min calculated for 3,312 cf (59% of inflow)
 Center-of-Mass det. time= 109.4 min (915.5 - 806.1)

Volume	Invert	Avail.Storage	Storage Description			
#1	45.49'	4,094 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
45.49	1,220	196.0	0.0	0	0	1,220
45.50	1,220	196.0	0.0	0	0	1,222
47.49	1,220	196.0	0.0	0	0	1,612
47.50	1,220	196.0	100.0	12	12	1,614
49.50	2,992	247.0	100.0	4,082	4,094	3,466

Device	Routing	Invert	Outlet Devices
#1	Primary	47.25'	8.0" Round Culvert L= 162.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 47.25' / 45.25' S= 0.0123 ' S= 0.0123 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.35 sf
#2	Device 1	48.75'	6.0" W x 3.0" H Vert. Orifice/Grate C= 0.600
#3	Device 1	49.00'	10.7' long Sharp-Crested Rectangular Weir 0 End Contraction(s)
#4	Secondary	49.25'	6.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.67 cfs @ 12.18 hrs HW=49.05' TW=0.00' (Dynamic Tailwater)

↑ **1=Culvert** (Passes 0.67 cfs of 1.64 cfs potential flow)
 ↑ **2=Orifice/Grate** (Orifice Controls 0.25 cfs @ 1.98 fps)
 ↑ **3=Sharp-Crested Rectangular Weir** (Weir Controls 0.42 cfs @ 0.75 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.49' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

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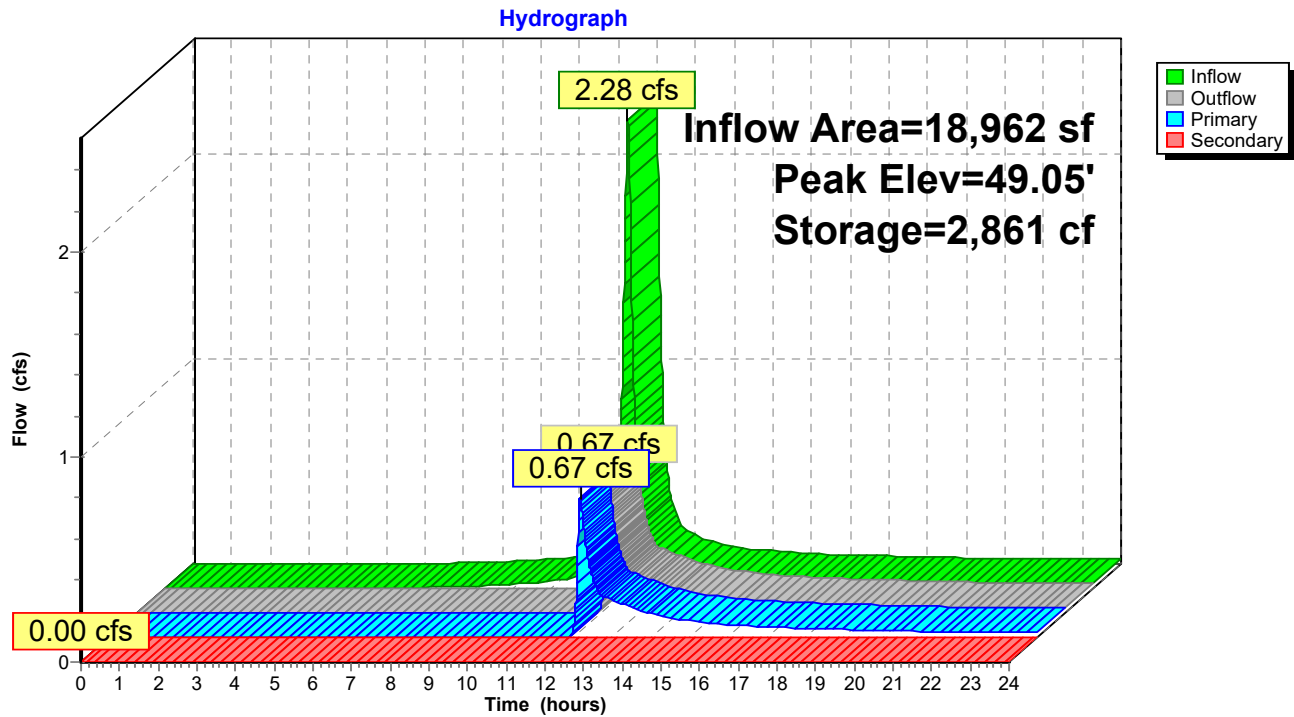
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Type II 24-hr 10 Rainfall=5.30"

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Pond 9P: SGW



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Type II 24-hr 10 Rainfall=5.30"

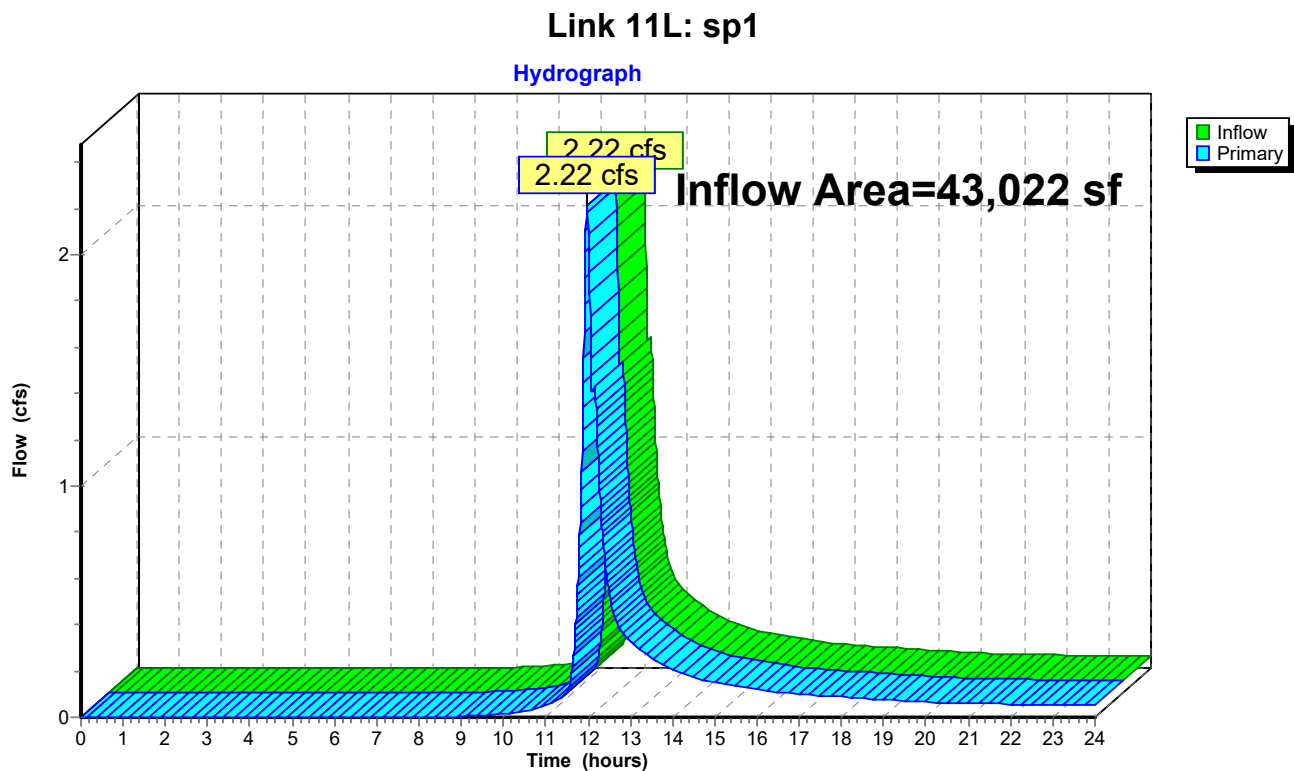
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Summary for Link 11L: sp1

Inflow Area = 43,022 sf, 50.50% Impervious, Inflow Depth > 2.41" for 10 event
Inflow = 2.22 cfs @ 11.98 hrs, Volume= 8,638 cf
Primary = 2.22 cfs @ 11.98 hrs, Volume= 8,638 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



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Type II 24-hr 100 Rainfall=7.60"

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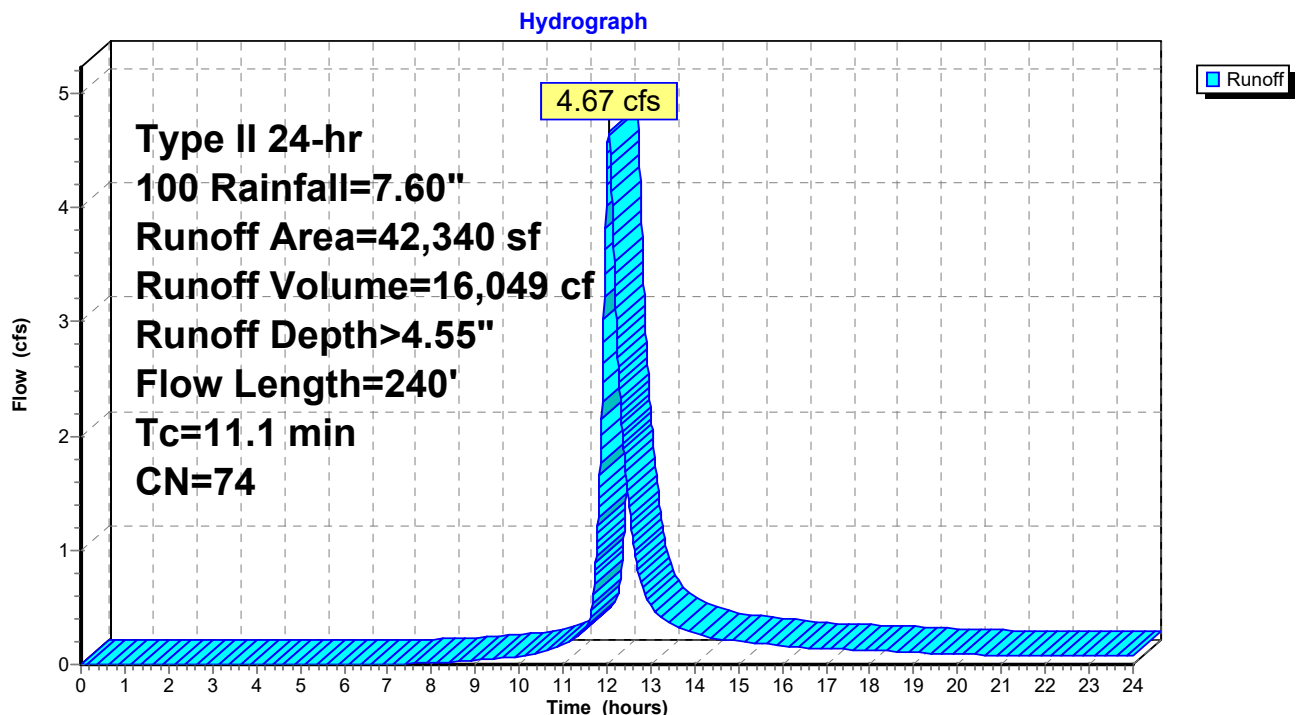
Summary for Subcatchment 6S: EX-1 (PINK)

Runoff = 4.67 cfs @ 12.04 hrs, Volume= 16,049 cf, Depth> 4.55"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100 Rainfall=7.60"

Area (sf)	CN	Description
27,537	61	>75% Grass cover, Good, HSG B
14,803	98	Paved parking, HSG C
42,340	74	Weighted Average
27,537		65.04% Pervious Area
14,803		34.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0200	1.11		Sheet Flow, a-b Smooth surfaces n= 0.011 P2= 3.40"
9.5	100	0.0200	0.18		Sheet Flow, b-c Grass: Short n= 0.150 P2= 3.40"
1.2	110	0.0100	1.50		Shallow Concentrated Flow, c-d Grassed Waterway Kv= 15.0 fps
11.1	240	Total			

Subcatchment 6S: EX-1 (PINK)

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Type II 24-hr 100 Rainfall=7.60"

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Summary for Subcatchment 7S: P-2 (BLUE)

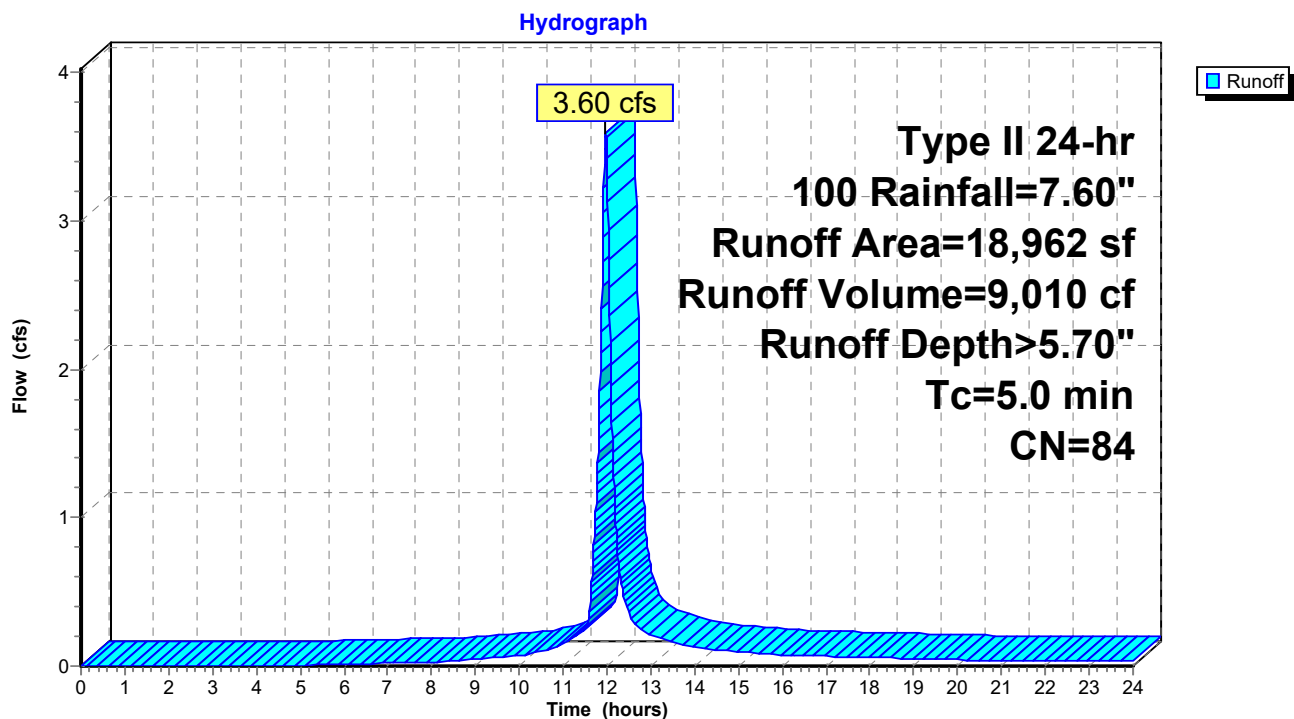
Runoff = 3.60 cfs @ 11.97 hrs, Volume= 9,010 cf, Depth> 5.70"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100 Rainfall=7.60"

Area (sf)	CN	Description
11,694	98	Paved parking, HSG C
7,268	61	>75% Grass cover, Good, HSG B
18,962	84	Weighted Average
7,268		38.33% Pervious Area
11,694		61.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 7S: P-2 (BLUE)



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Type II 24-hr 100 Rainfall=7.60"

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Summary for Subcatchment 8S: P-3 (yellow)

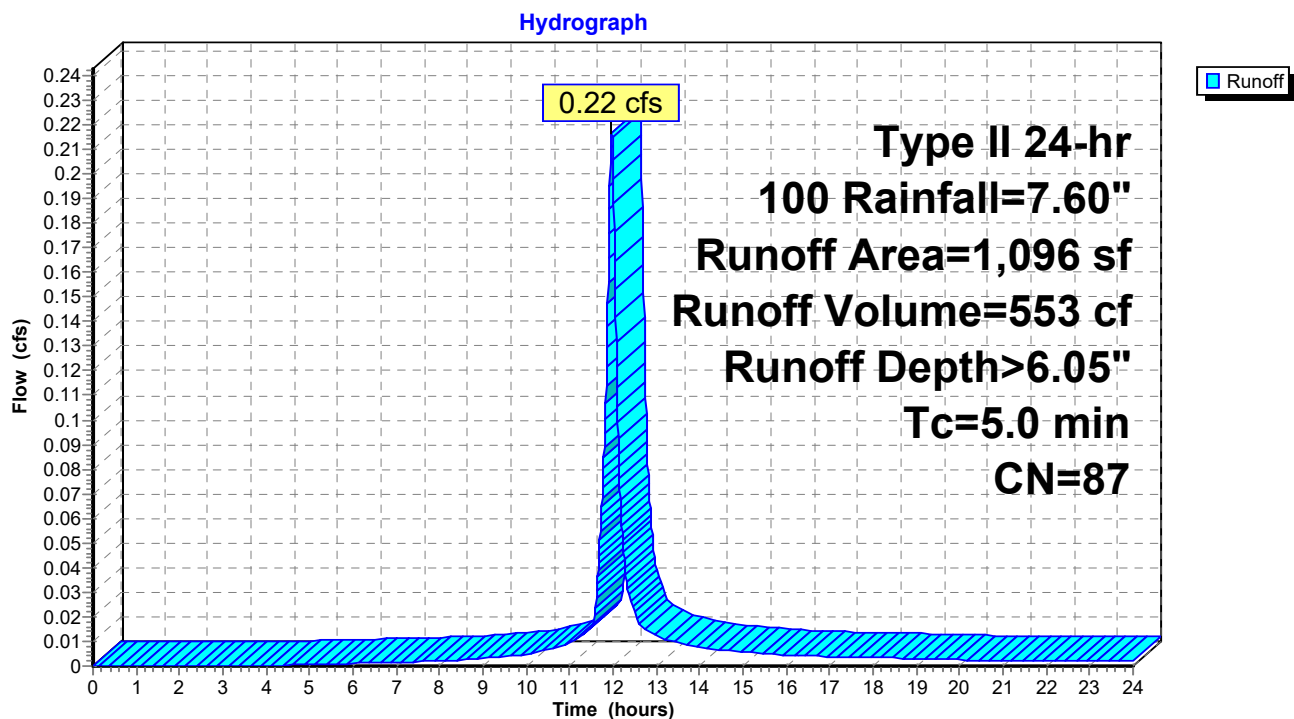
Runoff = 0.22 cfs @ 11.97 hrs, Volume= 553 cf, Depth> 6.05"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100 Rainfall=7.60"

Area (sf)	CN	Description
762	98	Paved parking, HSG C
334	61	>75% Grass cover, Good, HSG B
1,096	87	Weighted Average
334		30.47% Pervious Area
762		69.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 8S: P-3 (yellow)



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Type II 24-hr 100 Rainfall=7.60"

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Summary for Subcatchment 10S: P-1 (orange)

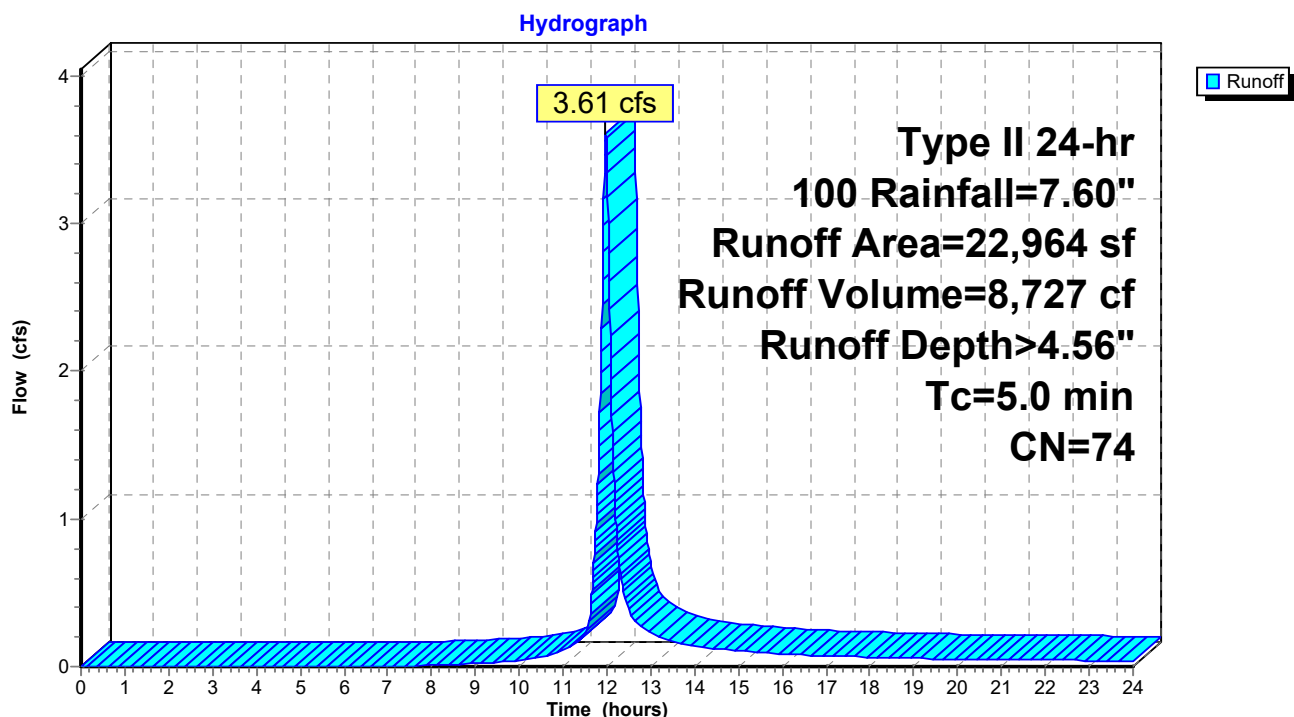
Runoff = 3.61 cfs @ 11.97 hrs, Volume= 8,727 cf, Depth> 4.56"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100 Rainfall=7.60"

Area (sf)	CN	Description
9,268	98	Paved parking, HSG C
5,670	55	Woods, Good, HSG B
8,026	61	>75% Grass cover, Good, HSG B
22,964	74	Weighted Average
13,696		59.64% Pervious Area
9,268		40.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment 10S: P-1 (orange)



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Type II 24-hr 100 Rainfall=7.60"

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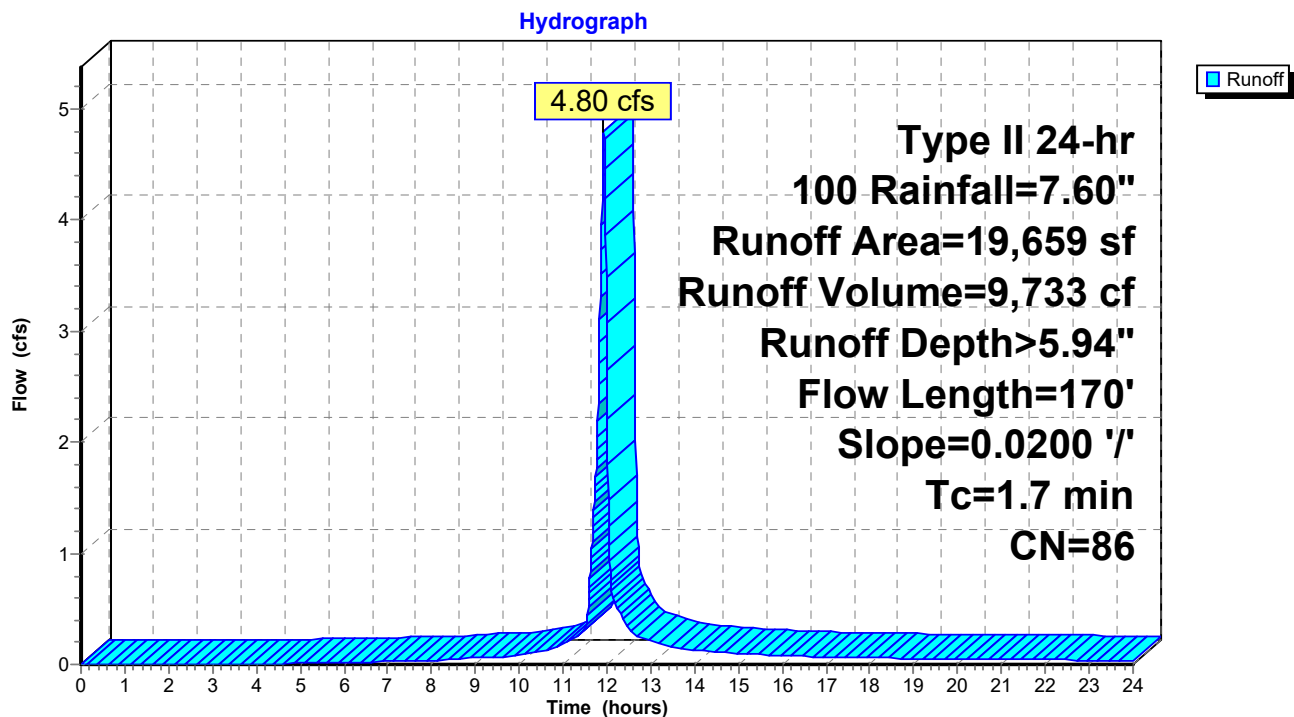
Summary for Subcatchment 12S: EX-2 (GREEN)

Runoff = 4.80 cfs @ 11.93 hrs, Volume= 9,733 cf, Depth> 5.94"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100 Rainfall=7.60"

Area (sf)	CN	Description
13,479	98	Paved parking, HSG C
6,180	61	>75% Grass cover, Good, HSG B
19,659	86	Weighted Average
6,180		31.44% Pervious Area
13,479		68.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.42		Sheet Flow, A-B Smooth surfaces n= 0.011 P2= 3.40"
0.5	70	0.0200	2.12		Shallow Concentrated Flow, B-C Grassed Waterway Kv= 15.0 fps
1.7	170	Total			

Subcatchment 12S: EX-2 (GREEN)

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Type II 24-hr 100 Rainfall=7.60"

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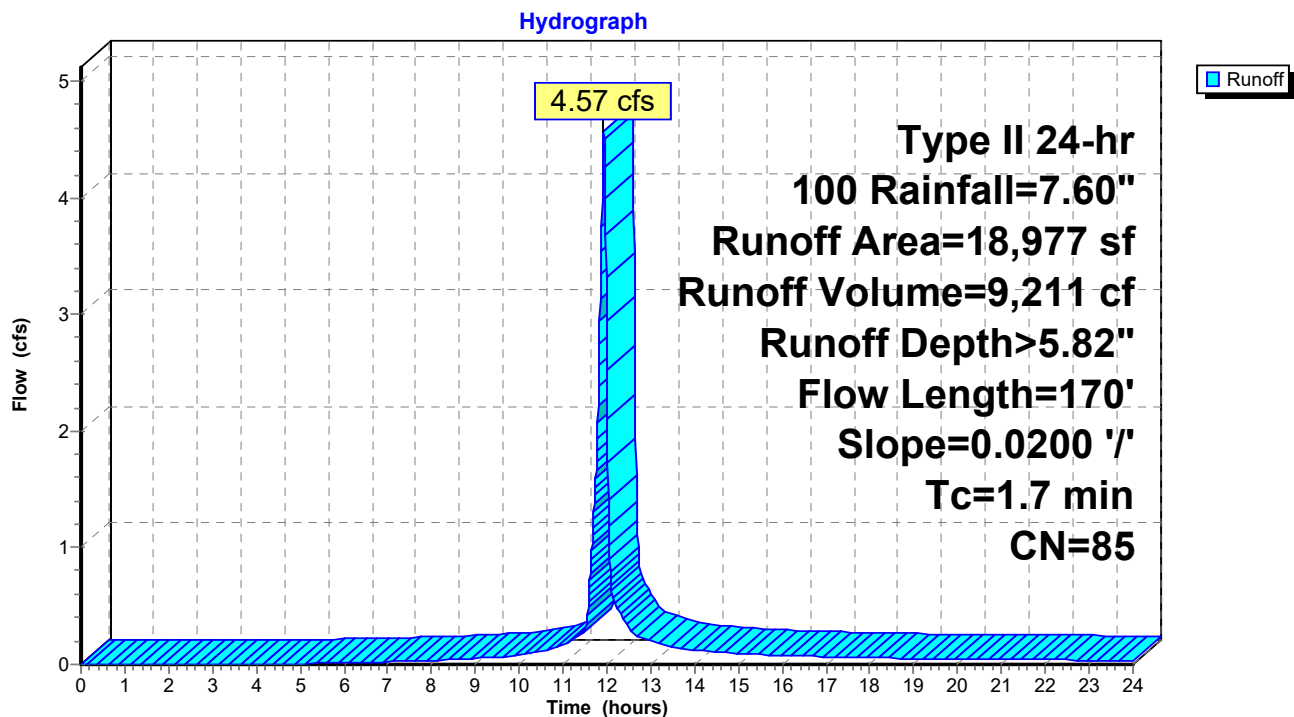
Summary for Subcatchment 14S: P-4 (TAN)

Runoff = 4.57 cfs @ 11.93 hrs, Volume= 9,211 cf, Depth> 5.82"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type II 24-hr 100 Rainfall=7.60"

Area (sf)	CN	Description
12,198	98	Paved parking, HSG C
6,779	61	>75% Grass cover, Good, HSG B
18,977	85	Weighted Average
6,779		35.72% Pervious Area
12,198		64.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.42		Sheet Flow, a-b
					Smooth surfaces n= 0.011 P2= 3.40"
0.5	70	0.0200	2.12		Shallow Concentrated Flow, b-c
					Grassed Waterway Kv= 15.0 fps
1.7	170	Total			

Subcatchment 14S: P-4 (TAN)

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Type II 24-hr 100 Rainfall=7.60"

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Summary for Pond 9P: SGW

Inflow Area = 18,962 sf, 61.67% Impervious, Inflow Depth > 5.70" for 100 event
 Inflow = 3.60 cfs @ 11.97 hrs, Volume= 9,010 cf
 Outflow = 2.11 cfs @ 12.08 hrs, Volume= 6,686 cf, Atten= 41%, Lag= 6.2 min
 Primary = 1.71 cfs @ 12.08 hrs, Volume= 6,519 cf
 Secondary = 0.40 cfs @ 12.08 hrs, Volume= 167 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 49.34' @ 12.08 hrs Surf.Area= 2,819 sf Storage= 3,622 cf

Plug-Flow detention time= 158.9 min calculated for 6,684 cf (74% of inflow)
 Center-of-Mass det. time= 69.3 min (862.0 - 792.7)

Volume	Invert	Avail.Storage	Storage Description			
#1	45.49'	4,094 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
45.49	1,220	196.0	0.0	0	0	1,220
45.50	1,220	196.0	0.0	0	0	1,222
47.49	1,220	196.0	0.0	0	0	1,612
47.50	1,220	196.0	100.0	12	12	1,614
49.50	2,992	247.0	100.0	4,082	4,094	3,466

Device	Routing	Invert	Outlet Devices
#1	Primary	47.25'	8.0" Round Culvert L= 162.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 47.25' / 45.25' S= 0.0123 ' S= 0.0123 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.35 sf
#2	Device 1	48.75'	6.0" W x 3.0" H Vert. Orifice/Grate C= 0.600
#3	Device 1	49.00'	10.7' long Sharp-Crested Rectangular Weir 0 End Contraction(s)
#4	Secondary	49.25'	6.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=1.71 cfs @ 12.08 hrs HW=49.34' TW=0.00' (Dynamic Tailwater)

↑ **1=Culvert** (Barrel Controls 1.71 cfs @ 4.91 fps)
 ↑ **2=Orifice/Grate** (Passes < 0.41 cfs potential flow)
 ↑ **3=Sharp-Crested Rectangular Weir** (Passes < 6.86 cfs potential flow)

Secondary OutFlow Max=0.39 cfs @ 12.08 hrs HW=49.34' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 0.39 cfs @ 0.75 fps)

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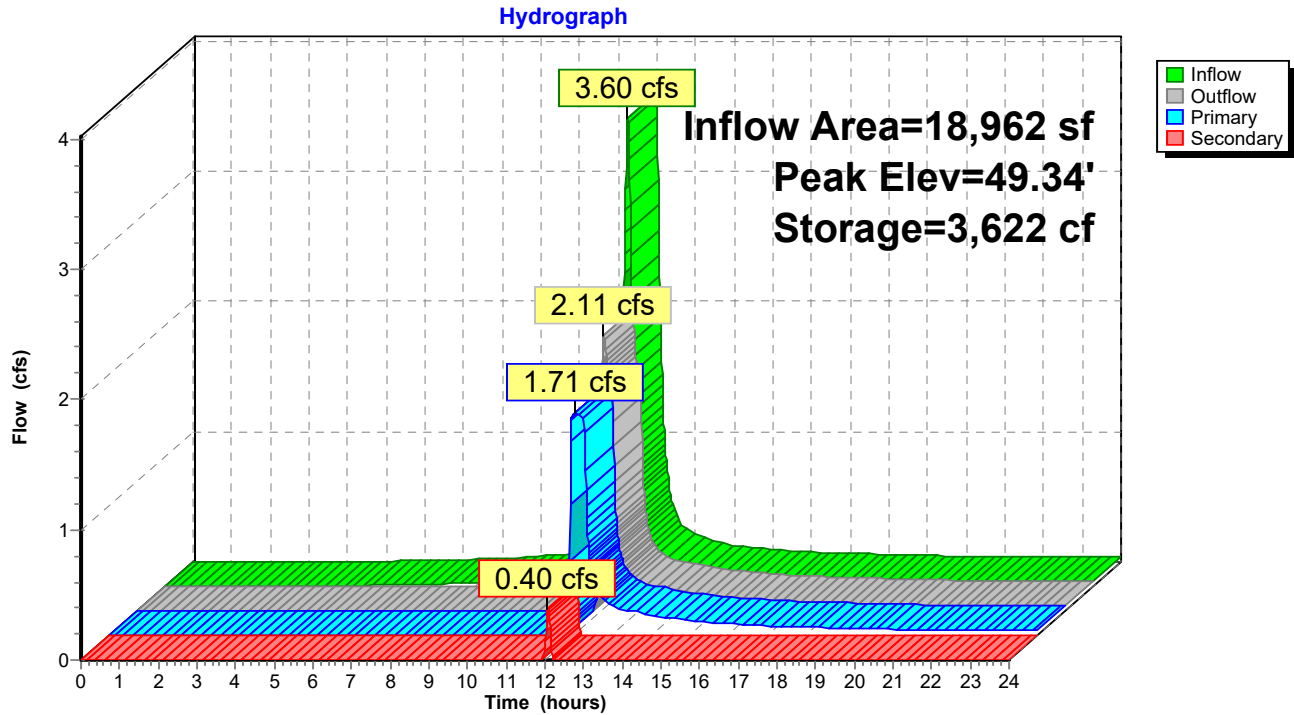
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Type II 24-hr 100 Rainfall=7.60"

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Pond 9P: SGW



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Type II 24-hr 100 Rainfall=7.60"

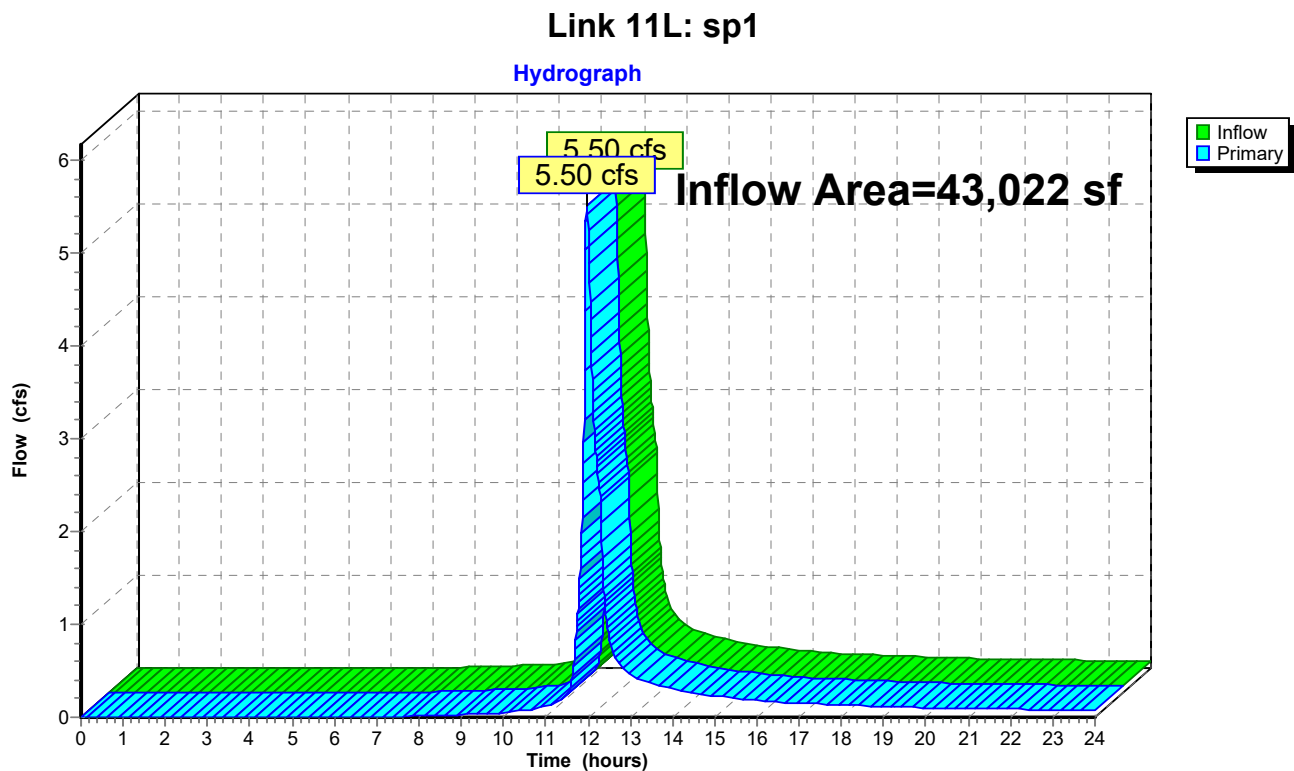
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Summary for Link 11L: sp1

Inflow Area = 43,022 sf, 50.50% Impervious, Inflow Depth > 4.41" for 100 event
Inflow = 5.50 cfs @ 11.98 hrs, Volume= 15,799 cf
Primary = 5.50 cfs @ 11.98 hrs, Volume= 15,799 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs



APPENDIX E

Field Boring at Proposed SGW Locations

Conducted by Matt Rajacich

Lane Engineering, LLC

May 29, 2024

Soil Image



Borehole Depth (ft)

0 to 1

Topsoil

2 to 5

Clean Sands



TOWN OF EASTON

14 South Harrison Street
Easton, Maryland 21601

July 3, 2024

Dear Resident,

The Easton Planning Commission (Commission) will hold a public meeting on **Thursday, July 18, 2024 at 1:00 p.m.** in the Easton Town Council Chambers located on the second floor of 14 South Harrison Street. The Town of Easton Zoning Ordinance requires that owners of property located within 400 feet of a parcel on which certain types of applications are pending be given notice of upcoming meetings or hearings. If you are a tenant in or an owner of a multi-unit building, please distribute or post this notice in a visible location for all other tenants or owners to view. If you are a tenant of a rental property, please notify the property owner that this notice letter has been distributed to their property. Notice has also been sent to the Star Democrat, a sign has been posted at the subject property and the hearing agenda has been posted on the Town of Easton website: <http://eastonmd.gov/>.

This letter is sent to inform you that Lane Engineering, LLC has filed application 2024 - 1231 on behalf of NOVA SIXA, LLC to request Sketch Site Plan approval for the redevelopment of the existing lots 4 & 5 to include a two-story 4,000 square foot (8,000 GFA) expansion of the existing medical facility with associated parking, stormwater management, and other site improvements. The property is located at 404 & 406 Marvel Court, also known as Tax Map 0105, Grid 0000, Parcel 2992D, Lots 4 & 5.

Copies of the proposed application are on file and available for public review in the Town's Planning Office at 14 South Harrison Street between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday. **In addition, digital copies will be available for review one week prior to the scheduled meeting via the Town's website at <https://www.eastonmd.gov/129/Agendas-Minutes>.** If you have any questions regarding this application, please contact the Planning Office at (410) 822-1943 or via email at ssmith@eastonMD.gov.

Samantha N. Smith

Samantha N. Smith, Administrative Specialist
Planning & Zoning Department
410-822-1943 ssmith@eastonMD.gov



***Subject property posting pursuant to Section 28-901.2.H.2
of the Town of Easton Zoning Code - July 2, 2024.***



AL:

FOR REVIEW
ONLY NOT FOR
CONSTRUCTION

PROFESSIONAL CERTIFICATION:
I CERTIFY THAT THESE DOCUMENTS WERE
PREPARED OR APPROVED BY ME, AND THAT I AM
A FULLY LICENSED ARCHITECT UNDER THE LAWS
OF THE STATE OF MARYLAND.

LICENSE NO.: 001395
EXPIRATION NO.: 09.23.2021

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CONSULTANTS

TIDEWATER PT - EASTON

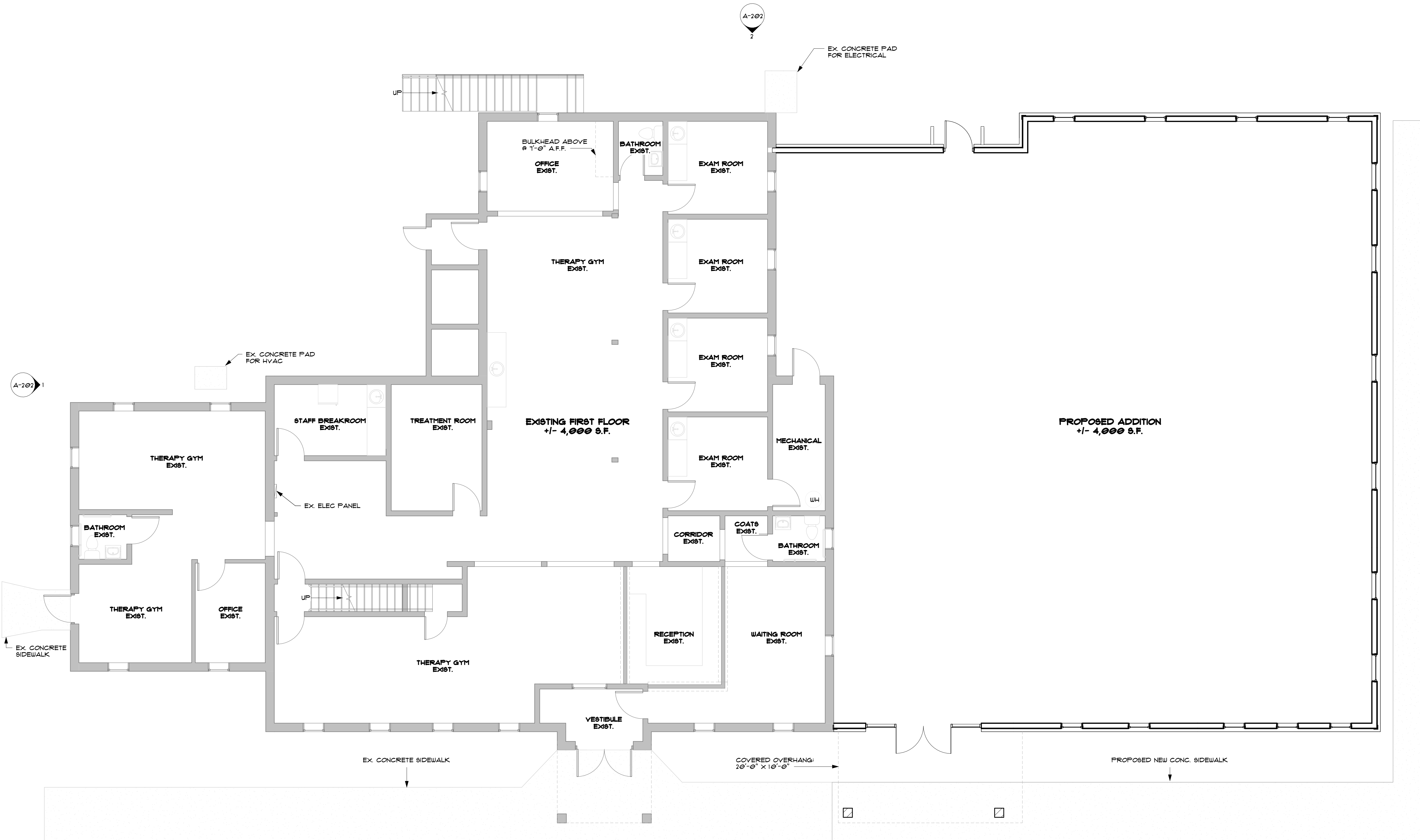
406 MARVEL COURT
EASTON MD

SHEET INFO:

FIRST FLOOR PLAN

[illegible]

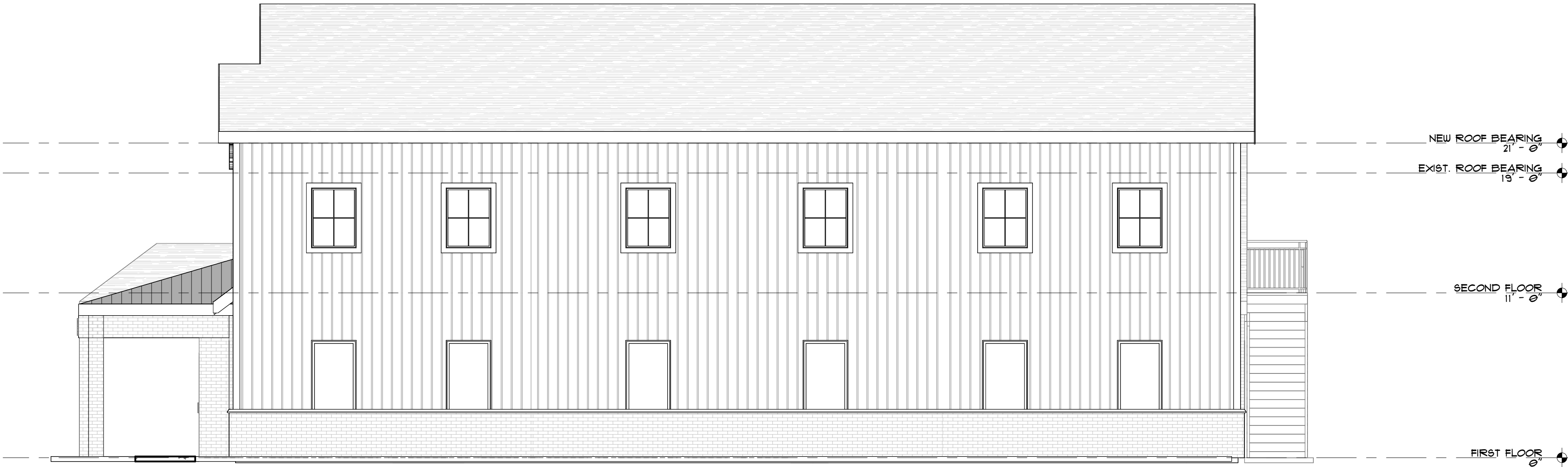
2024.04.16	Updated SD Exteriors
REV DATE	DESCRIPTION
E:	2023.03.08
JECT NO.	2024012
E:	3/16" = 1'-0"
J MGR:	C. Park
WN BY:	Author
ET NUMBER:	

$$A^{-1} \ominus I$$


① FIRST FLOOR
3/16" = 1'-0"



1 ELEVATION SOUTH
3/16" = 1'-0"



2 ELEVATION EAST
3/16" = 1'-0"

SEAL:



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TIDEWATER PT - EASTON
406 MARVEL COURT
EASTON MD

SHEET INFO:

PROPOSED
ELEVATIONS

REV	REV DATE	DESCRIPTION
1	2024 04 16	Updated SD Exteriors
DATE:	2024.04.08	
PROJECT NO.	2024012	
SCALE:	3/16" = 1'-0"	
PROJ MGR:	C. Park	
DRAWN BY:	L. Welch	
SHEET NUMBER:		

A-201



CENSE NO.: 001395
PIRATION NO.: 09.23.202

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CONSULTANTS:

TIDEWATER PT - EASTON

406 MARVEL COURT
EASTON MD

SHEET INFO:

PROPOSED ELEVATIONS

[illegible]

2024.04.16	Updated SD Exteriors
REV DATE	DESCRIPTION
E:	2023.03.08
JECT NO.	2024012
E:	3/16" = 1'-0"
BY MGR:	C. Park
OWN BY:	Author
SHEET NUMBER:	

A-202



② ELEVATION NORTH
 $3/16" = 1'-0"$



① ELEVATION WEST
3/16" = 1'-0"

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PREPARED OR APPROVED BY ME, AND THAT I AM
A FULLY LICENSED ARCHITECT UNDER THE LAWS
OF THE STATE OF MARYLAND.

SENSE NO.: 0013955
EXPIRATION NO.: 09.23.2024

DOCUMENTS PREPARED BY FISHER
HITECTURE, LLC, ARE SOLELY FOR
PURPOSES OF THE SPECIFIED
JECT. THEY ARE NOT INTENDED OR
HORIZED FOR USE ON ANY OTHER
JECT. FISHER ARCHITECTURE, LLC
ES NO REPRESENTATION AS TO
IR SUITABILITY FOR ANY OTHER USE.
DOCUMENTS PREPARED BY FISHER
HITECTURE, LLC ARE INSTRUMENTS
PROFESSIONAL SERVICE IN RESPECT
THE PROJECT. THESE DOCUMENTS
, AND SHALL REMAIN, THE PROPERTY
FISHER ARCHITECTURE, LLC.

CONSULTANTS:

TIDEWATER PT - EASTON

406 MARVEL COURT
EASTON, MD

SHEET INFO:

RENDERINGS

[illegible]

2024.04.16	Updated SD Exteriors
REV DATE	DESCRIPTION
:	2023.03.08
ECT NO.	2024012
E:	1" = 1'-0"
MGR:	C. Park
DN BY:	Author
ET NUMBER:	

A-801



TOWN OF EASTON
PLANNING & ZONING
14 S Harrison Street, Easton MD 21601

Date of Hearing: July 18, 2024

4b

**PLANNING COMMISSION
PUBLIC HEARING
STAFF REPORT**

SUBJECT: 9719 Ocean Gateway - Preston Powersports

ELECTION WARD: Ward 1

CRITICAL ACTION DATE: At the pleasure of the Commission

STAFF CONTACTS: Joseph Mayer, Plan Reviewer
Miguel Salinas, Director of Planning and Zoning

APPLICANT: ADBMD Route 50, LLC

DOCUMENT CREATED ON: July 10, 2024

PURPOSE: The applicant is seeking a site plan approval from the Planning Commission to construct a two-story building that includes a 10,000 square foot (SF) auto sales/showroom, 4,756 square foot (SF) warehouse, and a 4,920 square foot square (SF) repair garage with associated improvements. In addition, the applicant is seeking a waiver of overall landscaping canopy, parking lot trees and vegetative buffer requirements, to permit no trees on/around the display parking areas in order to prevent birds and tree leaves damaging the finish on vehicles displayed on the lot.

RECOMMENDATION: Should the Planning Commission approve the proposed site plan, as well as the waiver request, staff recommends proposed conditions (see below).

APPLICATION INFORMATION:	
APPLICANT: Rauch Inc.: Casey Rauch, Brian Fitzgerald & Chris Schoenster	REPRESENTATIVE: Rauch Inc.: Casey Rauch, Brian Fitzgerald & Chris Schoenster ADBMD Route 50, LLC: Chris Schaffner.
PARCELS/ACREAGE:	
Parcel Information	Acreage
Map 025, Grid 0006, Parcel 0113	3.23
ACCEPTANCE DATE: July 1, 2024	
LOCATION: 9719 Ocean Gateway	
EXISTING ZONING CG	EXISTING LAND USE: A vacant commercial property that was recently annexed into the Town.
HISTORIC DISTRICT: Not Applicable	FUTURE LAND USE MAP: Commercial

CONTEXT:

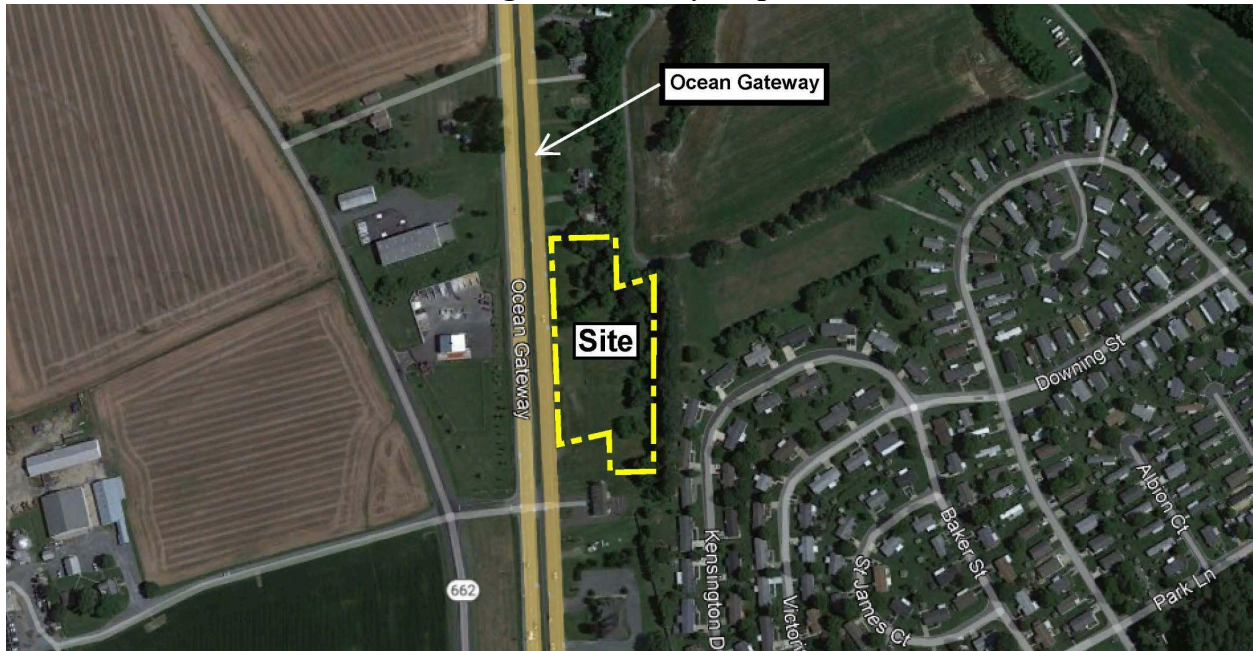
Location/Site Access – The subject property is located along Ocean Gateway, fronting on the west side of the road.

Existing Conditions – The subject property is currently a vacant commercial property that was recently annexed into the Town.

Surrounding Properties

- 9632 Hyde Park Circle - R10M
- 9839 Ocean Gateway - R10M
- 9773 Ocean Gateway - Talbot County
- 9707 Ocean Gateway - Talbot County
- 9740 Ocean Gateway - Talbot County
- 9775 Longwoods Drive - Talbot County

Figure 1: Vicinity Map



PROPOSAL: The applicant is proposing to construct a two-story building that includes a 10,000 square foot (SF) auto sales/showroom, 4,756 square foot (SF) warehouse, and a 4,920 square foot square (SF) repair garage, along with improved amenities, adequate parking, and landscaping. The applicant is seeking a waiver of overall landscaping canopy, parking lot trees and vegetative buffer requirements, to permit no trees on/around the display parking areas in order to prevent birds and tree leaves damaging the finish on vehicles displayed on the lot.

The site is located on a previously developed area covered by impervious surface; gravel drive aisles, and a brick wall at the front of the property facing Ocean Gateway. In addition, the site is within the priority funding area. Therefore, the applicant is seeking an exemption of forest conservation requirement from Article III of the Town's *Forest Conservation Ordinance Section 31-3.2.O; an activity on a previous area covered by impervious surface and located in the priority funding area.*

BACKGROUND: This property was annexed into the Town under Resolution No. 6161 and was effective March 1, 2024. The applicant submitted an application to the Easton Staff Development Review Committee (ESDR) on May 22, 2024. It was determined by the Committee that the application would return to the next available ESDR meeting on June 26, 2024.

ZONING ANALYSIS:

A. Permissible Land Uses

28-201 Table 2.1

CG

244	Auto Sales or Showroom*	--	--	--	--	--	P	SE	--	--	--	
-----	-------------------------	----	----	----	----	----	---	----	----	----	----	--

*- Denotes a use subject to supplemental standards (See Section 28-1007)

Analysis – The proposed project is presented and described by the Applicant as an Auto Sales or Showroom. The project is categorized as “*Auto Sales or Showroom*”. The proposed use is permitted by-right within Table 2.1 Table of Permissible Uses.

B. Off-Street Parking

For the purposes of off-street parking calculations, the use is considered “*Auto Sales or Showroom*”, “*Automotive Repair Garage*”, and “*Warehouse*” and has the following requirements:

28-1001.3 Parking Requirements

	Use/Activity	Minimum Vehicle Spaces	Maximum Vehicle Spaces	Minimum Bicycle Spaces	Notes
--	--------------	------------------------	------------------------	------------------------	-------

	Commercial Buildings				
9	Auto Sales or Showroom	1 per 375 sq. ft. GFA of sales and service building	1 per 200 sq. ft. GFA of sales and service building	--	

12	Automotive Repair Garage	1 per 500 sf GFA, including service bays, wash tunnels, and retail areas	1 per 375 sf GFA, including service bays, wash tunnels, and retail areas	--	
----	--------------------------	--	--	----	--

	Industrial Buildings				
40	Warehouse	1 per 2000 sf GFA	1 per 350 sf GFA	--	

Total Site Parking Required:

Auto Sales or Showroom: 1 per 375 sf GFA required-Minimum
 $10,000 \text{ sf} / 375 = 26.67$ spaces required-Minimum
 1 per 200 sf GFA required-Maximum
 $10,000 \text{ sf} / 200 = 50$ spaces required-Maximum

Auto Repair Garage: 1 per 500 sf GFA required-Minimum
 $4,920 \text{ sf} / 500 = 9.84$ spaces required-Minimum
 1 per 375 sf GFA required-Maximum
 $4,920 \text{ sf} / 375 = 13.12$ spaces required-Maximum

Warehouse : 1 per 2000 sf GFA required-Minimum
 4,756 sf/2000 = 2.38 spaces required-Minimum
 1 per 350 sf GFA required-Maximum
 4,756 sf/350 = 13.59 spaces required-Maximum

Total Spaces Required - Minimum: 39
 Total Spaces Required - Maximum: 77
Total Spaces Provided: 39

Analysis- The applicant has provided thirty-nine (39) off-street parking spaces. The owner does not foresee a demand for more parking spaces in the future, due to the nature of their business operations.

C. Commercial General District Development Standards

Table 1. Development Standards		
CG Zoning District	Standard	Proposed
Setbacks	Front = 25 feet Side = 10 feet Rear = 15 feet	Front = 25 feet Side = 10 feet Rear = 15 feet
Lot Size (min.)	20,000 square feet	140,698.8 square feet
Lot Frontage (min.)	60 feet	601.98 feet
Building Envelope (min.)	20 feet x 30 feet	90 feet X 555 feet
Lot Coverage (max.)	50% (Lot Area)	14% (Lot Area)
Height (max.)	50 feet	45 feet
Bufferyard	Per the provisions of Section 28-1014 of the Zoning Ordinance.	Applicant requests a landscaping & buffering waiver from Section 28-1014.6.G.1 and 28-1014.6.G.2a,d of the Zoning Ordinance.

§ 306.2 of the Zoning Ordinance states that development within the Commercial General District shall also meet these additional requirements:

- **Off-Street Parking shall be provided for all uses in accordance with the standards of Section 28 – 1001.**
- **All on-site lighting unless approved otherwise by the Planning and Zoning Commission shall be low cut-off shielded luminaries at 18' height and light shall not shine off-site at levels greater than 1-foot candle.**
- **All off-street loading and unloading areas shall be screened from view by permanent decorative screens or natural planting, either of which shall be a minimum of eight (8) feet in height.**

- *All areas not devoted to buildings or parking areas shall be landscaped and maintained in a suitable manner, in accordance with the provisions of Section 28 – 1014 of this Ordinance.*

Analysis - The site falls under the CG - Commercial General District Area and meets Section 28-306.2.A through H Development Standards. However, the applicant is requesting a landscape and buffer waiver from Section 28-306.2.I. Any comments or concerns from the ESDR review letters will be addressed during the Development Site Plan review.

D. Forest Conservation

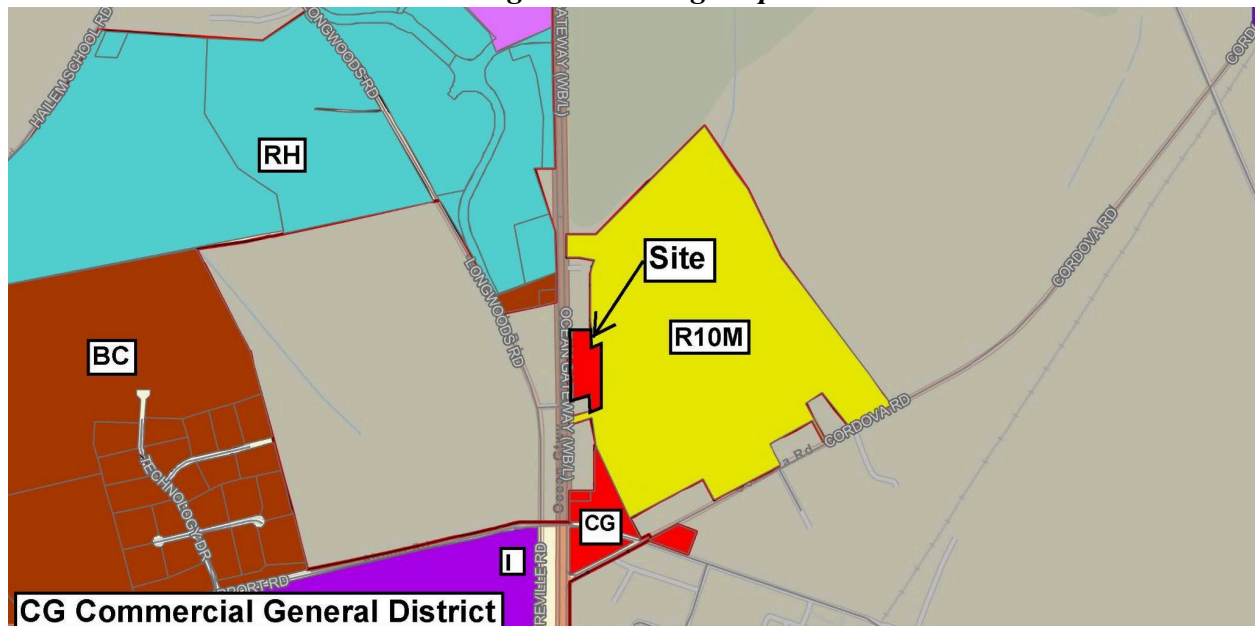
Easton Forest Conservation Ordinance #718, Article III, § 31-3.2 Exemptions

O. An activity on a previously developed area covered by impervious surface and located in the priority funding area.

Analysis - The site is within the priority funding area and is an existing developed area covered by impervious surface; gravel path, brick wall, and utilities. The overall site area is 3.250 acres with associated parking, stormwater management and landscaping. Required Forest Conservation would be 0.487 acres or 21,214 square feet. The intent of the project is to maximize density within the area and provide adequate facilities to accommodate the site. The staff recognizes the peculiar nature of these land use types and the need for large, open expanses of paved area and adequate traffic flow opportunities. Based on the existing conditions and priority funding area, the staff supports the exemption.

POLICY ANALYSIS:

Figure 2: Zoning Map



The submission of a site plan for a proposed use or development activity shall not be approved unless it meets the factors below:

1. The site plan meets the design principles and standards and required improvements set forth in this Ordinance, the Town Comprehensive Plan, the Town of Easton Subdivision Regulations, and other ordinances, regulations, and policies established by the Town of Easton.

Town of Easton 2010 Comprehensive Plan Design Principles (Principle #1) Integrated uses are desirable- Applicant's response: *This project proposes a powersports dealership which is a mix from the adjacent development which contains single family homes.*

Staff notes that the proposed development fits within the general commercial nature along Ocean Gateway.

(Principle #2) Natural features should determine design – Applicant's response: *To accommodate the proposed project, the proposed stormwater management areas will be constructed to improve water quality prior to offsite disposal. The project was designed to minimally disturb existing non-tidal wetlands on site. Less than 5,000 sf of non-tidal wetlands shall be disturbed.*

Staff notes that aside from the small area of non-tidal wetlands located at the north end of the property, there are no other compelling natural features on the remainder of the site.

(Principle #3) Automobiles should not determine design – Applicant's response: *Automobiles have not determined the design.*

Staff notes that the applicant has provided 39 off-street parking spaces.

(Principle #4) Ample Open Space should be provided within & around neighborhoods – Applicant's response: *The project strives to achieve maximum functionality while still providing open space around the perimeter of the property.*

Staff notes that open space is not applicable.

(Principle #5) Architecture should respect Easton's Historical Development – Applicant's response: *This application proposes architecture compatible with zoning classification 'CG' and design and materials of neighboring buildings.*

(Principle #6) Signs should inform but not dominate – Applicant's response: *Signs will be compatible with neighboring dealerships and follow the trend of the development.*

Staff notes that any proposed monument sign will require a Signage Application to be submitted prior to installation.

(Principle #7) Neighborhoods should contain a diversity of housing types – Applicant's response: *This building is not a part of a neighborhood.*

(Principle #8) Residential neighborhoods should be interesting places – Applicant's response: *This is not a residential neighborhood.*

(Principle #9) Neighborhoods should connect – Applicant's response: *This project is not a neighborhood.*

2. The site plan avoids or minimizes adverse impacts upon features (whether on-site or off-site) of historical, cultural or ecological significance.

Analysis - The proposed site is not within the Historic District or the Critical Area. This project would provide a two-story building that includes a 10,000 square foot auto sales/showroom, 4,756 square foot warehouse, and a 4,920 square foot automotive repair garage with improved amenities, adequate parking, and landscaping.

3. The proposed use or development activity will not substantially increase traffic hazards due to traffic generated by the proposed use, the location of curb cuts or the layout of internal traffic circulation.

Analysis - The proposed use and activity will not increase traffic hazards in the surrounding area. Adequate off-street parking is provided.

4. The site plan and the proposed use or uses do not cause any adverse impact upon the health or safety of persons residing or working in the area surrounding the site or upon the character of the neighborhood surrounding the site; and

Analysis - There would be no adverse impacts. The existing property is located within a commercial general zoned area. Proposed use provides a two-story 19,676 square foot auto sales and showroom with adequate parking and landscaping features.

5. The site plan improves the water quality of the Chesapeake Bay or its tributaries.

Analysis - The proposed site would meet required design practices for stormwater management.

E. Supplemental Waiver Request: landscaping & Buffering

28-1014.6 LANDSCAPE IMPROVEMENTS

A. Large Lot Display Land Uses and Specialty Land Uses: *Gas Stations, Car or Equipment Dealerships, and other uses that require large paved areas for display or storage of vehicles, equipment, and other uses as determined by Town Planner. The Town recognizes the peculiar nature of these land use types and the need for large, open expanses of paved area and adequate traffic flow opportunities. Nevertheless, the appearance of this land use type can be greatly enhanced with landscape improvements without detrimentally affecting these site and user needs.*

1. *Overall minimum tree plantings required (excluding required bufferyards) shall be based on site area to be disturbed. (Disturbed area includes all site areas except for existing forest retention and preservation, existing wetland preservation, significant non bufferyard areas of larger sites to be preserved in a natural state, and required bufferyard areas. The minimum tree requirement shall be one (1) tree per 3000 sq. ft. of disturbed area.*
2. *The following planting location requirements shall be met, with the balance of required tree plantings to be located on-site where appropriate. Bufferyard plantings may be supplemented with these trees if it can be demonstrated to the satisfaction of the Planning and Zoning Commission that the overall appearance and screening needs of the project would be better served. Existing specimen trees to be preserved within the disturbed area may be credited toward any applicable planting location requirement total.*
 - a. *Interior Customer Parking Lot Plantings- 1 tree per 7.5 spaces to be planted within the interior of the visitor or customer parking lot, **see Figure 10-7**. Trees shall be located within the parking bays so that no more than 15 parking spaces form an uninterrupted row. Trees shall be planted within an area of pervious space of at least 64 sq. ft. allocated per tree, with no dimension of any parking lot planting island less than 6'.*
 - b. *All visitor/customer parking lots shall be landscaped with an evergreen shrub hedge which will grow to a minimum 42" height within 5 years along all sides excluding the building or facility access side(s). Shrubs shall be spaced to form a continuous hedge within 5 years. **See figure 10-8.***
 - c. *Building Envelope Plantings- the landscape improvement plan shall incorporate tree, shrub, groundcover and accent plantings around entrance points, and along all building faces visible from streets or public ways. Service bay or equipment access areas are excluded. These landscape planting areas (excluding turf) shall be located along a minimum of 25% of the building face(s), **see Figure 10-8**. Minimum planting bed dimension shall be five feet (5'). Plant type and form shall reflect the adjacent building form and mass. Large or tall buildings shall incorporate larger plantings and more trees.*
 - d. *Bufferyards required per **Section 28 – 1014.7.E**.*

28 – 1014.7.E.2 BUFFERYARD STANDARDS

Bufferyard 'B' (for non-residentially zoned lots or land use applications to buffer Major Roads as described in Zoning Ord., Sec. 28 – 1010).

- a. *25' width*
- b. *Plant unit:*
 - 2 shade/canopy trees and 1 evergreen tree
- c. *Options:*
 1. *Average 3' berm, reduce evergreen tree height to 5'*

2. *Substitute 1.5 understory trees for 1 evergreen tree for maximum 50% of required evergreen trees.*

Analysis - Initially, there are fifty-six trees (56) trees required onsite. The overall intention of the applicant's waiver request is to have no trees on or around the display parking areas in order to prevent birds and tree leaves from damaging the finish on vehicles displayed on the lot. Their application referenced surrounding dealerships having no interior planting material for the same reasons. They're proposing a three (3') foot berm with low lying shrubs within the Bufferyard "B" area. The proposed site is along the Ocean Gateway corridor. However, there are adjacent residential properties to the North and East of the property. The applicant proposes 3 canopy trees, 90 large shrubs, 33 small shrubs and a perimeter 8' white vinyl fence for screening. Staff recommends the proposed canopy trees to be a larger caliper greater than 2" and the larger shrubs to be greater than 7' to enhance the screening along the adjacent residential properties.

RECOMMENDED CONDITION:

Staff recommends the Planning Commission approve the sketch site plan with the following condition:

- The Applicant is required to address any remaining ESDR review comments, in conjunction with submission of the Development Site Plan.
- The proposed canopy trees to be a larger caliper greater than 2" and the larger shrubs to be greater than 7' to enhance the screening along the adjacent residential properties.

DRAFT MOTIONS:

1. I move that the Planning Commission approve the sketch site plan subject to staff's Conditions of Approval.

OR

2. I move that the Planning Commission table the application to the August 15th Commission meeting for further discussion.

OR

3. I move an alternate motion.

ATTACHMENTS:

1. 2024.06.20 Landscaping Waiver Request, paper copy & PDF
2. 2024.06.20 Overall Landscaping Waiver Request, paper copy & PDF
3. 2024.06.28 ESDR Determination Letter & Application, paper copy & PDF
4. 2024-06-19 - PRESTON POWERSPORTS_ESDR ARCH (2), paper copy & PDF
5. 2024-07-01 Preston Powersports Site Plan, paper copy & PDF
6. 2024-07-01 SWM Report, PDF



TOWN OF EASTON PLANNING & ZONING DEPARTMENT

P.O. Box 520
Easton, Maryland 21601
410-822-1943
www.EastonMD.gov

DATE: June 18, 2024

TO: Casey Rauch & Chris Schoenster – Rauch, Inc. (Agent)
Chris Schaffner - % ADBMD Route 50, LLC(Owner)

Cc: Miguel Salinas – Director, Planning & Zoning Department
Rick VanEmburch – Town Engineer, Department of Engineering

FROM: Joseph A. Mayer - Plan Reviewer, Planning & Zoning Department

SUBJECT: 9717 Ocean Gateway - Preston Powersports

We reviewed the **June 6, 2024** Sketch Plan Submittal for the Subject Project and have the following comments:

PLANNING & ZONING COMMENTS

Sketch Site Plan Review #1

1. Provide a statement addressing § Section 28-1007.2.A.3.a through l and § Section 28-1007.2.A.4.a through h from the Town's Zoning Ordinance. Add response to the site plan.
2. Per Appendix B, Sketch Plan Submittal Checklist, *a statement describing the extent to which the application complies with the Recommended Design Principles for Easton set forth on pages 29-31 of the Comprehensive Plan.* Add the response onto sheet G-100.
3. Provide a typical section for the *"low shrub and groundcover"* area on sheet 12 of 15. List all native plant species proposed.
4. The Supplemental Waiver Request Application for the relief of area and height of the monument sign is not applicable. A Variance is required from § Section 28-1101.7 B.1 for exceeding fifty (50) square feet (per side) in area and the height of the sign being more than ten (10'). Please apply for a Board of Zoning Appeals Application.
5. Per § Section 28-1101.7 A.1.e from the Town's Zoning Ordinance, *for each business on a separate property, wall-mounted signage for each street frontage is permitted with a maximum area of one square foot of signage per one lineal foot of street frontage of the building.* The proposed wall signs include Preston Powersport signage, logo signage and vendor signage. If the total square footage exceeds the maximum area, the applicant will need to apply for a Board of Zoning Appeals Application.

6. Per § Section 28-306.2 G from the Town's Zoning Ordinance, any proposed lights shall not shine off-sight at levels greater than 1-foot candle unless approved otherwise by the Planning Commission. Please add information to the Site Data on sheet G-100.

Please address all review comments prior to your Planning Commission submission.

Plan Review Status

Sketch Site Plan Review		Comments
Plans Approved	☐ Y ☒ N	Please review the comments above. Revise and resubmit.
Forest Stand Delineation & Forest Conservation Plan		
☐ Required ☐ Submitted ☐ Approved		Exempt from Forest Conservation per Article III, § 31-3.2 O. The proposed activity is on a previously developed area covered by impervious surface and is located within the priority funding area. To be noted on the Sketch Site Plans, sheet G-100. Analysis - The site is within the priority funding area and is an existing developed area covered by impervious surface; gravel path, brick wall, and utilities. The overall site area is 3.250 acres with associated parking, stormwater management and landscaping. Required Forest Conservation would be 0.487 acres or 21,214 square feet. The intent of the project is to maximize density within the area and provide adequate facilities to accommodate the site. The staff recognizes the peculiar nature of these land use types and the need for large, open expanses of paved area and adequate traffic flow opportunities. Based on the existing conditions and priority funding area, the staff supports the exemption.
Other		
☒ Required ☐ Submitted ☐ Approved		<u>IMPACT FEES</u> Please note, there will be a required Impact Fee for the proposed building. The Town's Impact Fees and Inspection Fees are to be paid upon the time you pick up your Building Permit. Please provide building square footage with appropriate use for calculation of Impact Fee. Talbot County Impact Fees are due prior to obtaining your Building Permit. Please provide receipt of payment to the Town's Building Inspection Division. Please add estimated Town Impact Fee calculations to cover sheet and add note below calculations; "Note: The Impact Fee indicated in this notation shall not be construed as vested and until submission of the building application." Coordinate with Easton Airport: FAA Form 7460-1 Notice of Proposed Construction or Alteration must be filed according to the Title 14 of the Code of federal Regulations (14 CFR) Part 77. MDE approval is required. SHA Access approval is required. The installation of the flag poles would need details and notation on all applicable plan views. Please verify with the Building Inspection Division for the permitting process.

Please contact me if you have any questions. Thank you.



TOWN OF
EASTON
ENGINEERING DEPARTMENT

DATE: June 25, 2024
TO: Brian Fitzgerald - Rauch
cc: Sierra Clem - Town of Easton
FROM: Rick Van Emburgh, P.E. – Town Engineer
SUBJECT: Preston Powersports
Sketch Plan & Sketch Stormwater Management Design Review

I reviewed the Application for the Subject project received on 6/6/2024.

The **Sketch Plan is Acceptable to the Engineering Department.**

The **Sketch Stormwater Management Design is Approved.**

SHA Access and Hydraulics approval are required prior to receiving a Town Grading Permit.

Please contact me if you have any questions. Thank you.



EASTON UTILITIES

Life. Made better.™

Easton Utilities Commission

Plan Review Comments

Date: Thursday, June 20, 2024

To: Joe Mayer; Nicholas Johnson; Sierra Clem

From: Kia Gibbs on behalf of Aaron Goller, PE

No. of Pages: 4

Regarding: 9719 Ocean Gateway - Preston Powersports

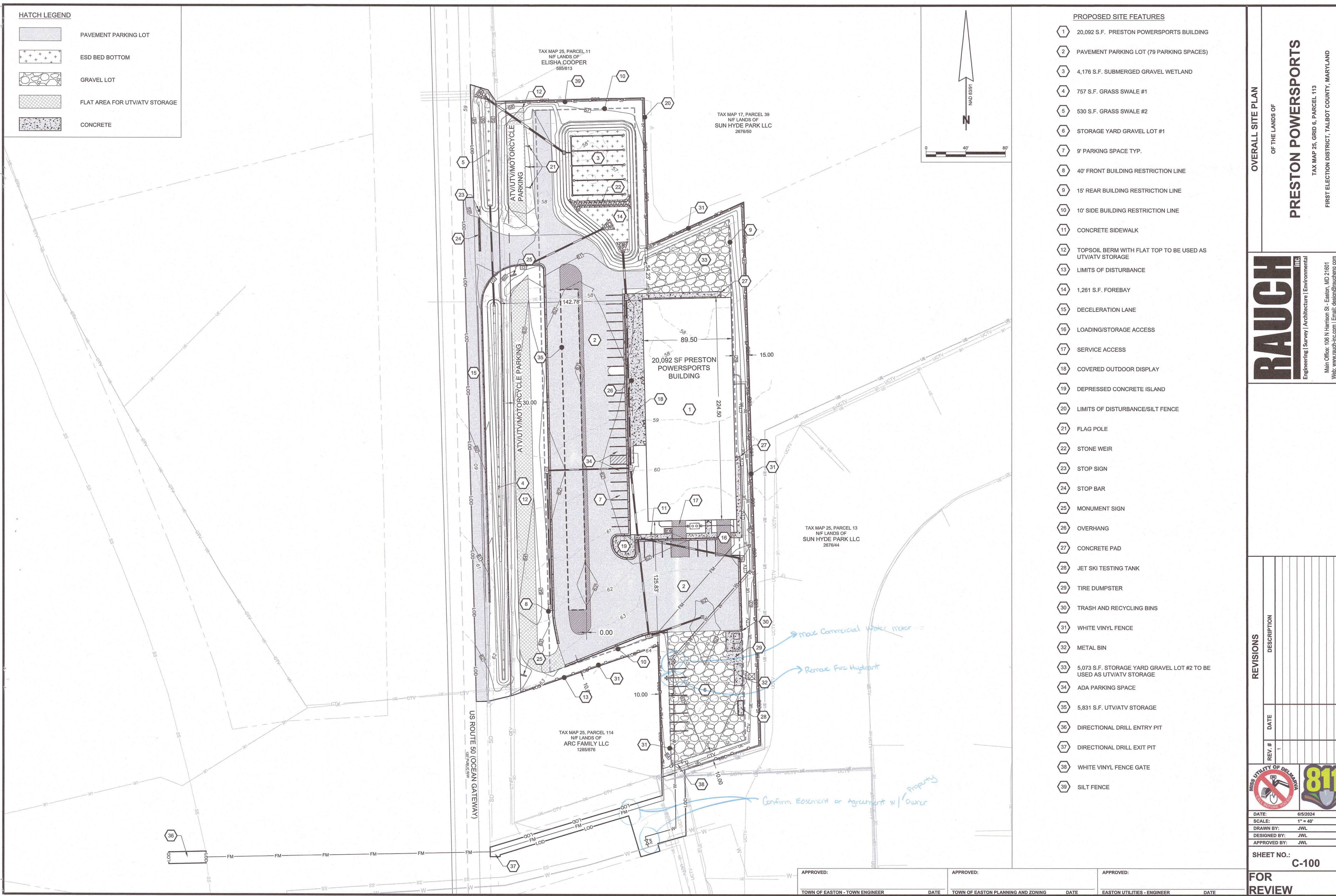
Phase: Sketch Site Plan

SUBM: 2

Status: Revise and Resubmit

Easton Utilities Commission has reviewed the above referenced plans and have provided the following comments. Please provide your corrections as listed below. Additional reviews will be required to ensure comments have been addressed. Items or documents not provided on initial submission will be subject to further review. Please contact Kia Gibbs, Admin Support at kgibbs@eucmail.com should you have any questions.

ITEM:	DRAWING /	
	PAGE	COMMENTS:
1	C-501	See electric comments. Previous comments were not addressed
2	General	Gas is available in the area
3	C-100	Fire hydrant shall not be located off of the fire line. Extend watermain along route 50.
4	General	Meter pit shall not be on private property
5	General	Confirm easement for Hyde Park entrance
6	C-203	Crossings not shown on profiles
7	C-501	Submittals required for oil/water separator



HATCH LEGEND	
	PAVEMENT PARKING LOT
	ESD BED BOTTOM
	GRAVEL LOT
	FLAT AREA FOR UTV/ATV STORAGE
	CONCRETE

- PROPOSED SITE FEATURES
- 1 20,092 S.F. PRESTON POWERSPORTS BUILDING
 - 2 PAVEMENT PARKING LOT (79 PARKING SPACES)
 - 3 4,176 S.F. SUBMERGED GRAVEL WETLAND
 - 4 757 S.F. GRASS SWALE #1
 - 5 530 S.F. GRASS SWALE #2
 - 6 STORAGE YARD GRAVEL LOT #1
 - 7 9' PARKING SPACE TYP.
 - 8 40' FRONT BUILDING RESTRICTION LINE
 - 9 15' REAR BUILDING RESTRICTION LINE
 - 10 10' SIDE BUILDING RESTRICTION LINE
 - 11 CONCRETE SIDEWALK
 - 12 TOPSOIL BERM WITH FLAT TOP TO BE USED AS UTV/ATV STORAGE
 - 13 LIMITS OF DISTURBANCE
 - 14 1,261 S.F. FOREBAY
 - 15 DECELERATION LANE
 - 16 LOADING/STORAGE ACCESS
 - 17 SERVICE ACCESS
 - 18 COVERED OUTDOOR DISPLAY
 - 19 DEPRESSED CONCRETE ISLAND
 - 20 LIMITS OF DISTURBANCE/SILT FENCE
 - 21 FLAG POLE
 - 22 STONE WEIR
 - 23 STOP SIGN
 - 24 STOP BAR
 - 25 MONUMENT SIGN
 - 26 OVERHANG
 - 27 CONCRETE PAD
 - 28 JET SKI TESTING TANK
 - 29 TIRE DUMPSTER
 - 30 TRASH AND RECYCLING BINS
 - 31 WHITE VINYL FENCE
 - 32 METAL BIN
 - 33 5,073 S.F. STORAGE YARD GRAVEL LOT #2 TO BE USED AS UTV/ATV STORAGE
 - 34 ADA PARKING SPACE
 - 35 5,831 S.F. UTV/ATV STORAGE
 - 36 DIRECTIONAL DRILL ENTRY PIT
 - 37 DIRECTIONAL DRILL EXIT PIT
 - 38 WHITE VINYL FENCE GATE
 - 39 SILT FENCE

OVERALL SITE PLAN
OF THE LANDS OF
PRESTON POWERSPORTS
TAX MAP 25, GRID 6, PARCEL 113
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR ABBMD ROUTE 50, LLC

RAUCH
INC.
Engineering | Survey | Architecture | Environmental
Main Office: 106 N. Harrison St., Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410.770.9081 | Fax: 410.770.3667

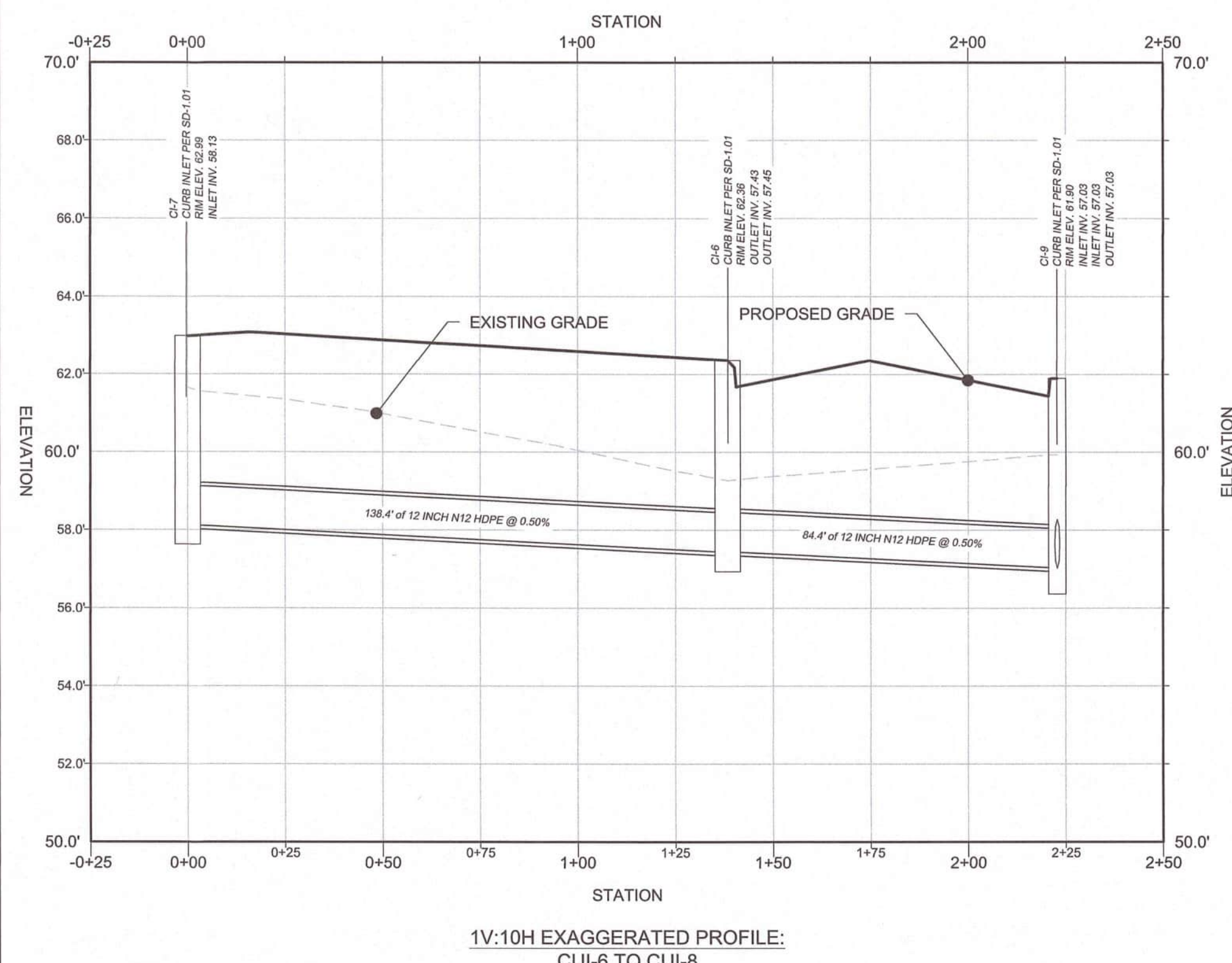
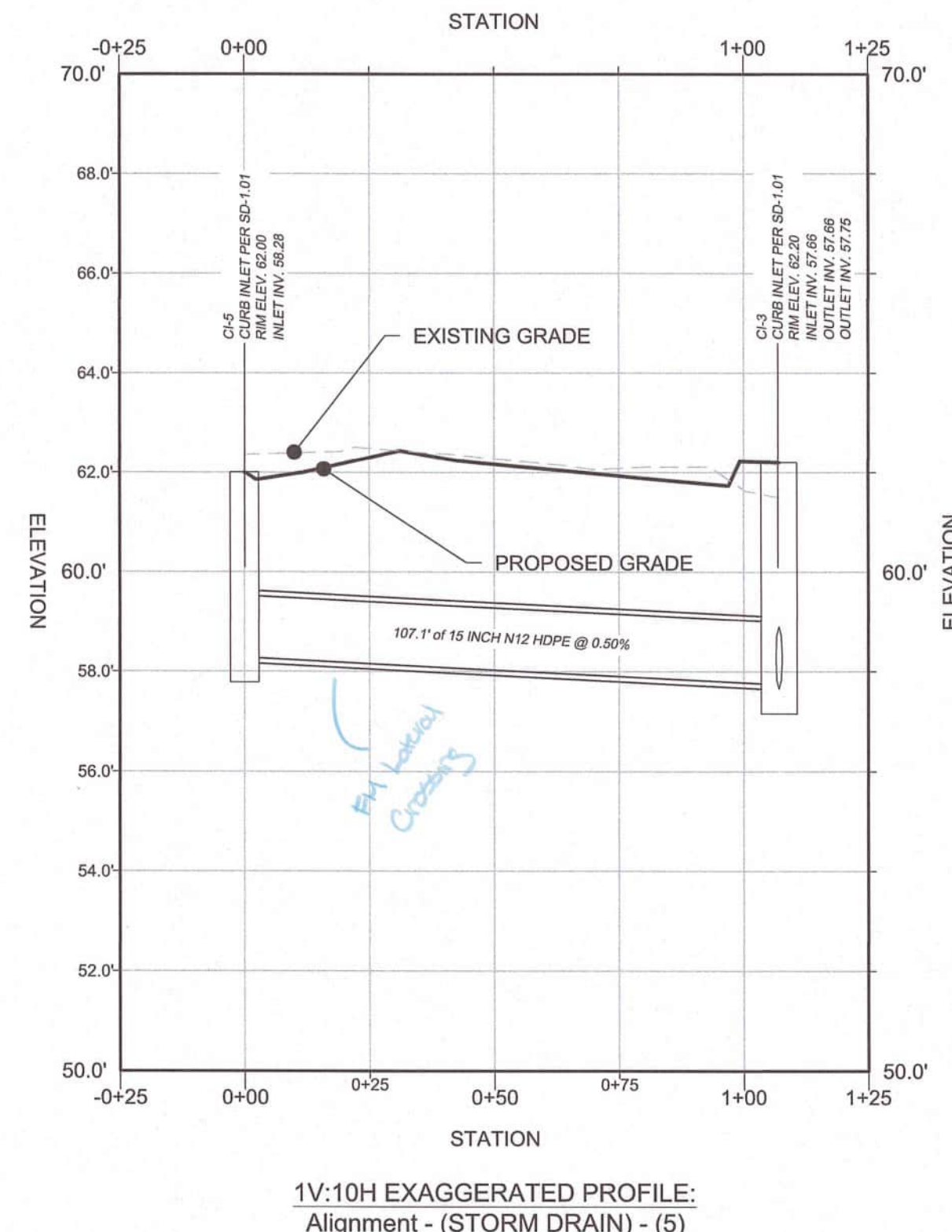
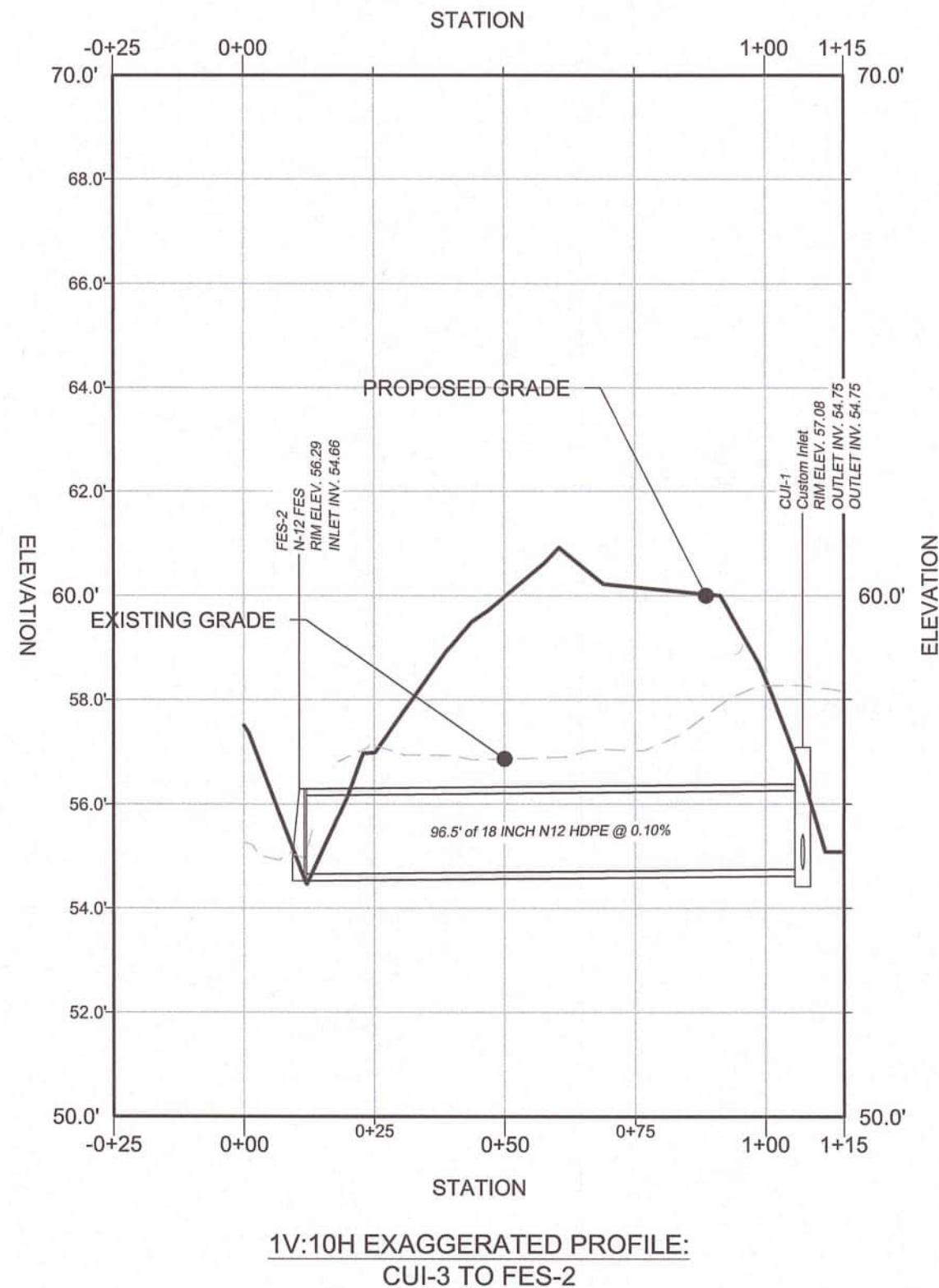
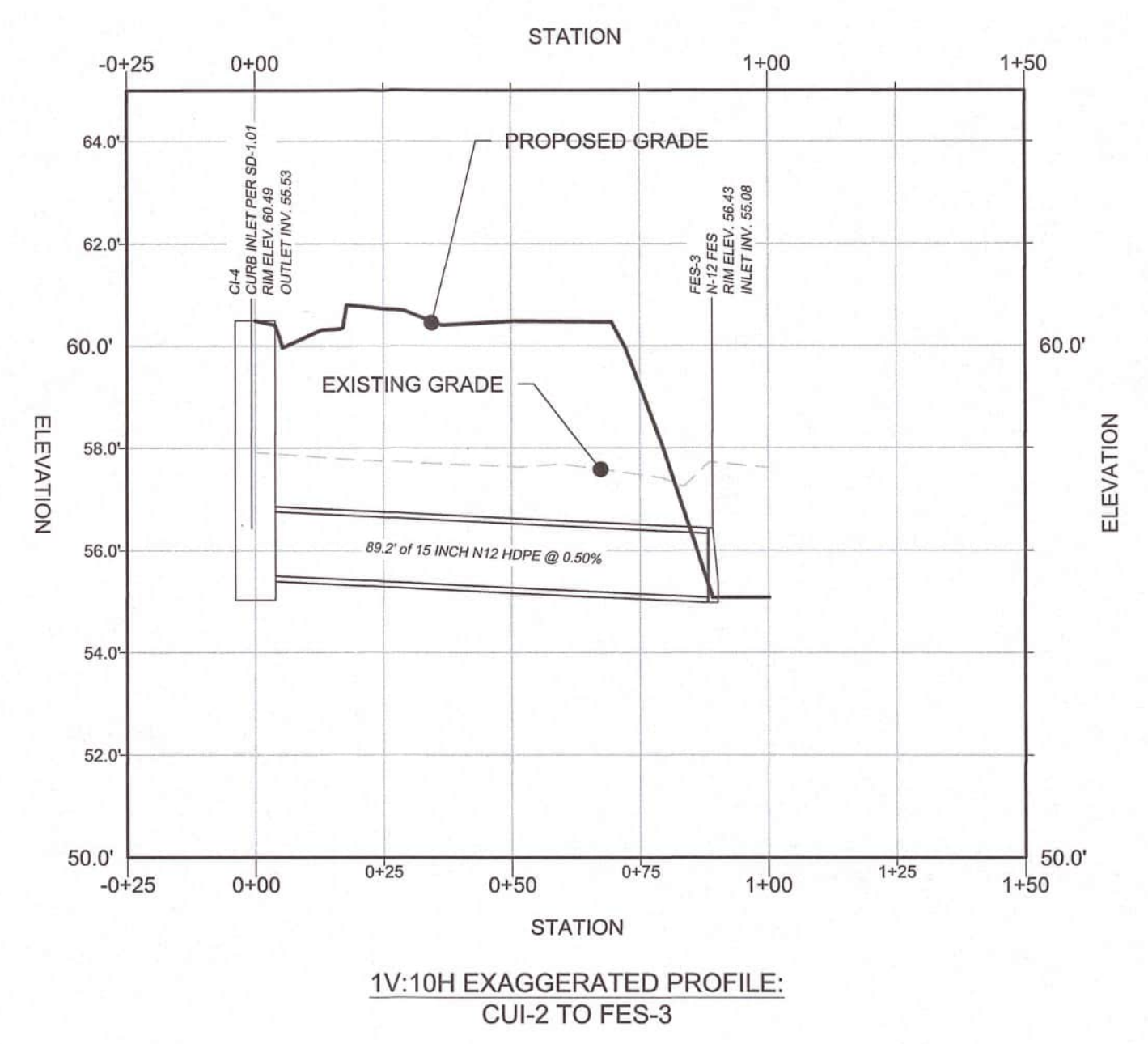
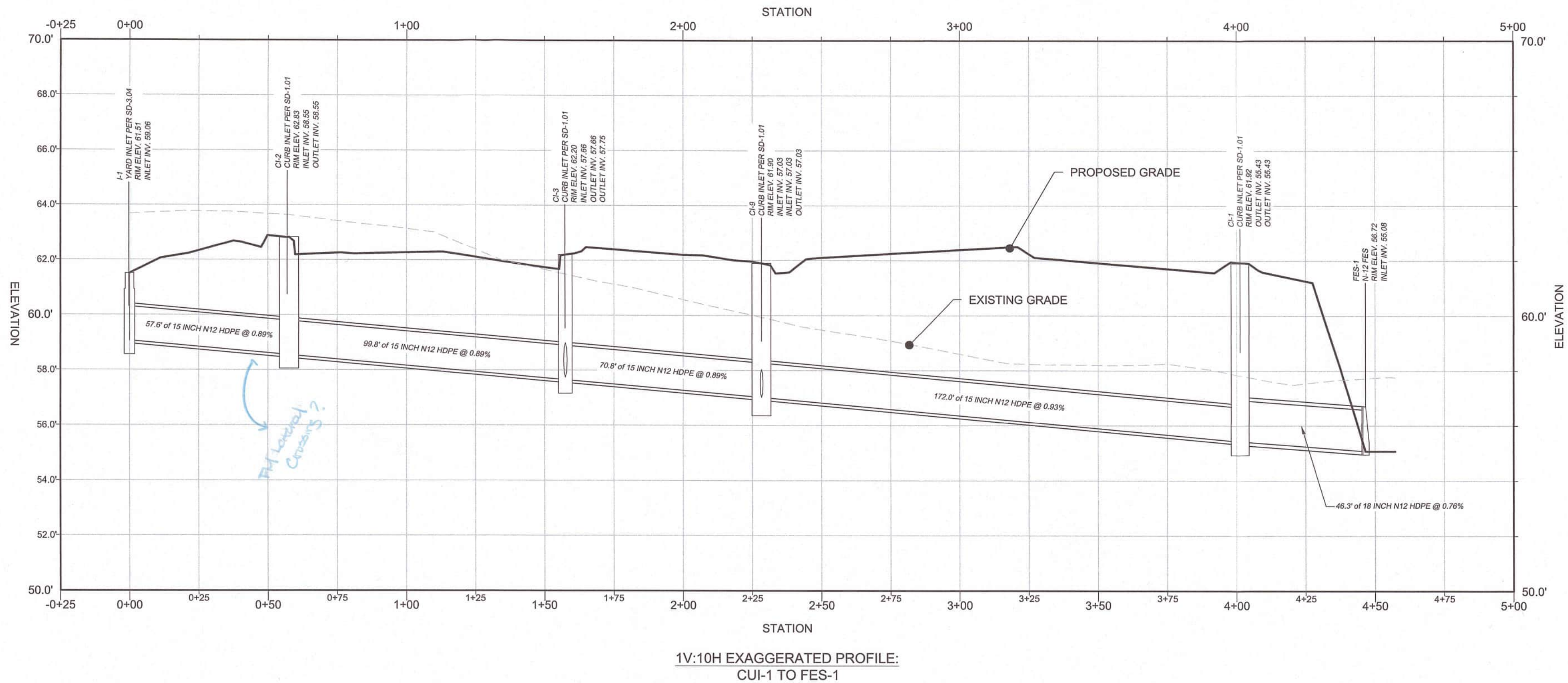
REVISIONS	
REV. #	DESCRIPTION
1	

DATE: 6/5/2024
SCALE: 1" = 40'
DRAWN BY: JWL
DESIGNED BY: JWL
APPROVED BY: JWL

SHEET NO.: **C-100**

FOR REVIEW

APPROVED:	APPROVED:	APPROVED:
TOWN OF EASTON - TOWN ENGINEER	TOWN OF EASTON PLANNING AND ZONING	EASTON UTILITIES - ENGINEER
DATE	DATE	DATE



LINETYPE LEGEND

— PROPOSED GRADE

- - - EXISTING GRADE

SCALE:
H: 1" = 30'

STORMWATER MANAGEMENT PROFILES
OF THE LANDS OF
PRESTON POWERSPORTS
TAX MAP 25, GRID 6, PARCEL 113
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR ADBMD ROUTE 50, LLC

RAUCH
INC.
Engineering | Survey | Architecture | Environmental
Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9381 | Fax: 410 770 3857

REVISIONS

REV. #	DATE	DESCRIPTION
1		

MISS UTILITY OF DELMARVA
811

DATE: 6/5/2024
SCALE: AS SHOWN
DRAWN BY: JWL
DESIGNED BY: JWL
APPROVED BY: JWL

SHEET NO.: **C-203**

FOR REVIEW

APPROVED:	APPROVED:	APPROVED:
TOWN OF EASTON - TOWN ENGINEER	TOWN OF EASTON PLANNING AND ZONING	EASTON UTILITIES - ENGINEER
DATE	DATE	DATE



Samantha Smith <ssmith@eastonmd.gov>

Re: Quick Update: 9719 Ocean Gateway (Preston Automotive) - June ESDR

1 message

Micah Risher <MRisher@talbotcountymd.gov>

Fri, Jun 7, 2024 at 10:32 AM

To: "smcfaden.consultant@mdot.maryland.gov" <smcfaden.consultant@mdot.maryland.gov>, Nick Johnson <njohnson@eastonmd.gov>, Colin Jones <cjones@eastonmd.gov>, Sierra Clem <sclem@eastonmd.gov>, Nancy Pinkney <npinkney@eastonmd.gov>, Kia Gibbs <kgibbs@eucmail.com>, "rbaker@mdot.maryland.gov" <rbaker@mdot.maryland.gov>, Brennan Greene -TCHD- <brennan.greene1@maryland.gov>, Aaron Goller <agoller@eucmail.com>, Lynn Thomas <lthomas@eastonmd.gov>, Sharon VanEmburch <svanemburch@ewingdietz.com>, Shawn Smith <shawn.smith@maryland.gov>, "hdierker@mdot.maryland.gov" <hdierker@mdot.maryland.gov>, Ryan Heckler <rheckler@eastonmd.gov>, Bob Haase <rhaase@eastonmd.gov>, "david.russ@maryland.gov" <david.russ@maryland.gov>, "1st.lieutenant@eastonvfd.org" <1st.lieutenant@eastonvfd.org>, Rick Van Emburch <rvanemburch@eastonmd.gov>, "renee.levy@maryland.gov" <renee.levy@maryland.gov>, "chief@eastonvdf.org" <chief@eastonvdf.org>, Miguel Salinas <msalinas@eastonmd.gov>, Joseph Mayer <jmayer@eastonmd.gov>, Samantha Smith <ssmith@eastonmd.gov>

Thank you,

Easton Airport will need to know the maximum height of the proposed building and flag pole once the site is brought up to the new grade.

An FAA aeronautical study may be required.

Micah Risher

Airport Manager

Easton Airport (ESN)

Office: 410-770-8055

Cell: 410-924-6894

www.eastonairport.com



From: Samantha Smith via Smartsheet <user@app.smartsheet.com>

Sent: Thursday, June 6, 2024 9:37 AM

To: smcfaden.consultant@mdot.maryland.gov <smcfaden.consultant@mdot.maryland.gov>; Nick Johnson <njohnson@eastonmd.gov>; Micah Risher <MRisher@talbotcountymd.gov>; Colin Jones <cjones@eastonmd.gov>; Sierra Clem <sclem@eastonmd.gov>; Nancy Pinkney <npinkney@eastonmd.gov>; Kia Gibbs <kgibbs@eucmail.com>; rbaker@mdot.maryland.gov <rbaker@mdot.maryland.gov>; Brennan Greene -TCHD- <brennan.greene1@maryland.gov>; Aaron Goller <agoller@eucmail.com>; Lynn Thomas



Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
MAY 01 2024
TOWN OF EASTON

Easton Staff Development Review

Property Information

Address 9719 Ocean Gateway, Easton, MD 21601
Tax Map 0025 Grid 0006 Parcel 0113 Lot
Deed Reference: Liber 03002 Folio 00214
Plat Reference: Liber Folio
Base Zoning District R10A Historic District Y ☐ N ☒ Planning Redevelopment Y ☐ N ☒
Purpose of Application / Description of Work:

The project consists of some minimal tree clearing and existing gravel demolition to construct a new powersports sales and service facility for Preston Automotive. There will water, sewer, electric, and communication services provided to the structure. There will be parking for both the powersports products for sale and for customers. Management for stormwater will be provided via a submerged gravel wetlands with forebay to the North side of the site. A deceleration lane will be required for the entrance off Rt 50.

Owner

Name ADBMD Route 50, LLC
Mailing Address 101 Bay St, Suite 12A
Telephone No. 302-745-6788 Email chris@dhwholdings.com

Applicant / Agent

Name Same as above
Mailing Address
Telephone No. Email

Surveyor / Engineer

Name Robert Rauch License No. 11024 Expiration Date 7/24/2024
Mailing Address 106 N. Harrison St, Easton, MD, 21601
Telephone No. 410-770-9081 Email robert@raucheng.com; brian@raucheng.com

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date 05/01/2024

Printed Name of Applicant or Agent

Robert Rauch

For Office Use Only

Easton Staff Development Review Meeting Required Y ☒ N ☐

Easton Staff Development Review Meeting Date 0c/hc/2024

Completeness Check Date 0c/02/2024

Revisions/Resubmissions Required Y ☐ N ☒

Resubmission Date

Documents Received Y ☐ N ☐

Staff Determination

Scheduled for July 18, 2024 Planning Commission meeting.

Planning Commission Required Y ☒ N ☐

2024 - 1210 / ESDR 24-11

BOZA Required Y ☐ N ☐ **TBD**

Historic District Commission Required Y ☐ N ☒

Resubmission for ESDR Required Y ☐ N ☒

Staff Signature *Samantha N. Smith*

Date 06/28/2024

Revised 02-2019



Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
JUN 20 2024
TOWN OF EASTON

Supplemental Waiver Request Application

Waiver Request Type

Sidewalk ☐ Parking Spaces ☐ Parking/Aisle Dimension ☐
Landscaping & Buffering ☒ Signage ☐ Other ☐

Project Information

Address	9719 Ocean Gateway, Easton, MD 21601				
Tax Map	25	Grid	6	Parcel	113
Zoning District	CG	PC Meeting Date		Historic District	Yes ☐ No ☒
Owner or Agent	ADBMD Route 50, LLC				
Mailing Address	101 Bay Street, Suite 12A				
Telephone No.	410-690-7358	Email			

Request Details

Please attach a detailed description of the waiver request(s) being made and the justification(s) for requesting said waiver(s).

Relief from the overall landscaping canopy, and tree requirements. 56 trees, 13 of which are evergreen, are required. Applicant is providing a perimeter 8' white vinyl fence, 3 canopy trees, 90 large shrubs, and 33 small shrubs within the site for screening. Larger trees and shrubs will bring leaves and birds. Both leaves and bird droppings will damage the finish on vehicles displayed on the lot. Surrounding dealerships within the Town of Easton show no trees on/around the display parking area for this reason. Curb appeal will still be obtained without tree landscaping.

☐ Ordinance Section Supporting Waiver Request. 28-1014.6.G.1

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date 6/5/2024

Printed Name of Applicant or Agent

Brian Fitzgerald

2024 - 1210 / ESDR 24 - 11



Town of Easton
Engineering, Planning and Zoning
14 South Harrison Street, Easton, MD 21601

RECEIVED
JUN 20 2024
TOWN OF EASTON

Supplemental Waiver Request Application

Waiver Request Type

Sidewalk ☐ Parking Spaces ☐ Parking/Aisle Dimension ☐
Landscaping & Buffering ☒ Signage ☐ Other ☐

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Zoning District	CG	PC Meeting Date		Historic District	Yes ☐ No ☒
Owner or Agent	ADBMD Route 50, LLC				
Mailing Address	101 Bay Street, Suite 12A				
Telephone No.	410-690-7358	Email			

Request Details

Please attach a detailed description of the waiver request(s) being made and the justification(s) for requesting said waiver(s).

Relief from interior customer parking lot plantings, and bufferyard "B" tree requirements. Applicant is constructing a 3' tall berm with low lying shrubs/ flowers no more than 3' tall within the bufferyard "B" area. The berm will be used to showcase utility vehicles. Interior parking lot plantings will induce leaf and bird droppings on the display vehicles. Leaves and bird droppings will damage the finish on the vehicles. Surrounding dealerships have no interior plantingsfor this reason.

☐ Ordinance Section Supporting Waiver Request.

28-1014.6.G.2.a,d

Any modifications during review shall warrant an updated application.

I do hereby solemnly declare and affirm that the information provided by this application and the documents attached hereto accurately represent the conditions of the request and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent

Date 6/5/2024

Printed Name of Applicant or Agent

Brian Fitzgerald

2024 - 1210 / ESDR 24 - 11

CONTACT INFORMATION

OWNER: ADBMD ROUTE 50, LLC
101 BAY STREET, SUITE 12 A
EASTON, MD 21601

DEVELOPER: ADBMD ROUTE 50, LLC
101 BAY STREET, SUITE 12 A
EASTON, MD 21601

ENGINEER: CASEY RAUCH
RAUCH INC.
106 N. HARRISON ST.
EASTON, MD 21601
(410) 770-9081

SITE DATA:

PROPERTY ADDRESS: 9719 OCEAN GATEWAY
EASTON, MD 21601

PRESENT ZONING CLASSIFICATION: CG - COMMERCIAL GENERAL DISTRICT

PROPOSED ZONING CLASSIFICATION: CG - COMMERCIAL GENERAL DISTRICT

MINIMUM LOT SIZE: 20,000 SQUARE FEET
MINIMUM FRONT SETBACK: 25 FEET
MINIMUM REAR SETBACK: 15 FEET
MINIMUM SIDE SETBACKS : 10 FEET

TAX MAP: 0025
GRID: 0006
PARCEL: 0113
DEED REFERENCE: /03002/ 00214

MAX. BUILDING HEIGHT: 50 FEET

EXISTING USE: VACANT

PROPOSED USE: COMMERCIAL POWER SPORT DEALERSHIP

SITE AREA: 3.23 ACRES
PROPOSED IMPERVIOUS: 1.981 ACRES (61.3% SITE AREA)
PROPOSED TOTAL LIMIT OF DISTURBANCE: 3.82 ACRES
STORMWATER MANAGEMENT AREAS: 0.08 ACRES +/-

FLOODPLAIN: PER FEMA FIRM MAP 10005C0511K
REVISED 3/16/2015, THE PROJECT AREA IS NOT LOCATED WITHIN THE FLOODPLAIN

NON-TIDAL WETLANDS: WETLANDS ARE PRESENT ON SITE

POSTED SPEED LIMIT: 55 MPH

FOREST CONSERVATION: NOT REQUIRED; EXISTING DEVELOPED PROPERTY WITHIN THE PRIORITY FUNDING AREA AS PER ARTICLE 8.31-3.2.0

LANDSCAPE/BUFFER YARD REQUIREMENT:

- TOTAL TREES REQUIRED = 56 (13 EVERGREEN)
- TOTAL TREES PROVIDED = 3 (0 EVERGREEN)

- TOTAL LARGE EVERGREEN SHRUBS REQUIRED = 81
- TOTAL LARGE EVERGREEN SHRUBS PROVIDED = 90

- TOTAL LANDSCAPE PLANTING AREA TO BE LOCATED ALONG AT LEAST 25% OF BUILDING FACE (225 X .25 = 57') REQUIRED
- TOTAL PERCENTAGE OF PROPOSED BUILDING FACE WITH LANDSCAPE PLANTING AREA = 34.3% (77') PROVIDED

WAIVER TO BE REQUESTED FOR (53) TREES; BUFFERYARD "B" 5' MIN EVERGREEN; PARKING LOT HEDGE TO BE PROVIDED WHERE POSSIBLE AND NOT PREVENTING VISIBILITY TO OWNER PRODUCT; 57 FEET OF BUILDING FACADE TO BE PROVIDED WITH PLANTINGS

WATERSHED: 02130502 - MILES RIVER

DATUM: HORIZONTAL - NAD83
VERTICAL - NAVD88

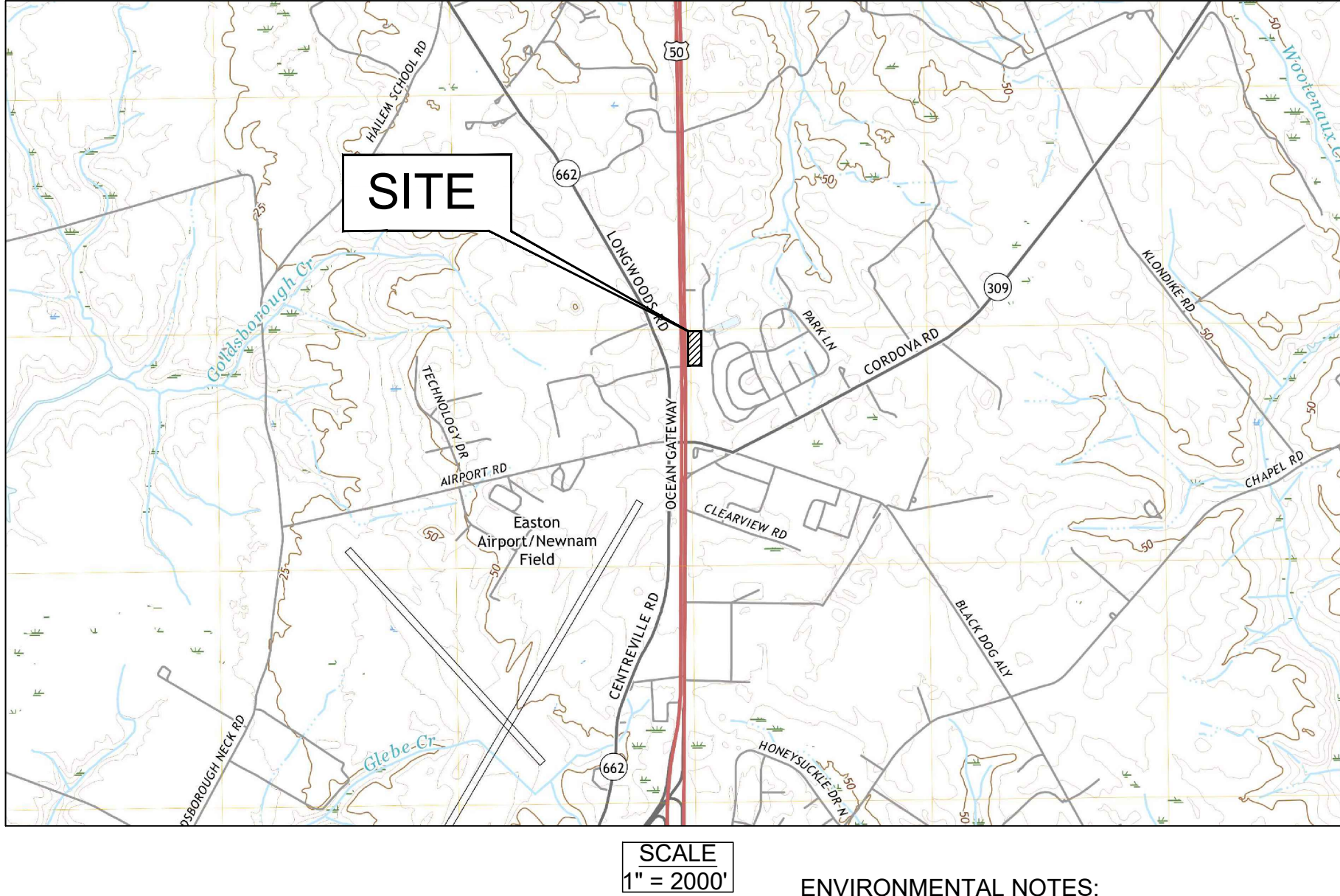
SURVEY PERFORMED BY RAUCH INC. ON 2/6/2023 & 2/15/2023

SECTION 28-1007.2.A.3.a-i, 28-1007.2.A.4.a-h STATEMENT RESPONSES

- 3.a- ALL SALES ARE DONE WITHIN AN FULLY ENCLOSED BUILDING. OUTDOOR DISPLAY IS SHOWN AND WE FEEL IT TIES IN WELL WITH THE OVERALL SITE. ALL AREAS ARE SCREENED TO A PRACTICAL EXTENT.
- b- A 6' TALL, WHITE VINYL FENCE WITH SHRUBS WILL BE PROVIDED ALONG ALL RESIDENTIAL PROPERTIES.
- c- ALL DUMPSTERS/ TRASH AREAS WILL BE COMPLETELY SCREENED WITH A 6' TALL WHITE VINYL FENCE. THE LOADING AREA WILL BE SCREENED BY A PROPERTY LINE PERIMETER 6' WHITE VINYL FENCE AND LARGE SHRUBS. ANY FENCING/SCREENAGE SURROUNDING THE PERIMETER OF THE LOADING AREA WILL OBSTRUCT IT'S INTENDED PURPOSE.
- d- THE BUILDING WILL MATCH IN COLOR TO THE EXISTING PRESTON POWERSPORTS ALONG ROUTE 50 AND WILL BE INLINE WITH OTHER DEALERSHIPS ALONG THIS ROAD.
- f- A 6' TALL WHITE VINYL FENCE WILL BE PROVIDED ALONG THE PROPERTY LINE TO PROVIDE SCREENING/PRIVACY. ALL SITE LIGHTING WILL BE DESIGNED IN A WAY AS TO NOT ENCROACH ONTO NEIGHBORING PROPERTIES.
- g- ALL ENTRANCES/ EXITS ARE GREATER THAN 50' FROM THE NEIGHBORING RESIDENTIAL PROPERTIES.
- h- ALL INTERIOR SIDEWALK/PEDESTRIAN ACCESS ARE PROTECTED BY CURBS.
- i- THE DRIVING LANE WILL BE IDENTICAL TO WHAT IS SHOWN ON THE FIRE MARSHAL PLAN. SIGNAGE WILL BE SHOWN CLEARLY INDICATING THE DRIVING LANE.
- 4.a- ALL PROPANE TANKS, IF SO CHOSE BY THE CLIENT, WILL BE UNDERGROUND AND IS NOTED THEY WILL BE SUBJECT TO SETBACK REQUIREMENTS.
- b- ALL ENTRANCES/EXITS ARE GREATER THAN 50' FROM THE NEIGHBORING RESIDENTIAL PROPERTIES
- c- ALL ACCUMULATION OF SCRAP WILL BE CONTAINED WITHIN THE SCREENED SOUTHERN GRAVEL LOT AND WILL BE HAULED/DISPOSED OF IN A TIMELY MANNER.
- d- THE BUILDING IS GREATER THAN 30' OF ANY NEIGHBORING STRUCTURE.
- e- ALL UNSIGHTLY SITE ELEMENTS ARE SCREENED BY SHRUBS AND A 6' TALL, WHITE VINYL FENCE.
- f- ALL SITE EXITS AND ENTRANCES ARE GREATER THAN 100' FROM ANY INTERSECTION.
- g- THERE ARE 12 INTERIOR SERVICE BAYS THEREFORE 9,600 S.F. OF EQUIVALENT STORAGE SHALL BE PROVIDED OUTSIDE THE BUILDING. THE NORTHERN GRAVEL LOT (5,073 S.F.) AND ASPHALT AREA (5,831 S.F.) WILL BE USED. TOTAL PROVIDED AREA IS 10,904 S.F.
- h- A 6' HIGH, WHITE VINYL FENCE WILL BE PROVIDED.

SITE INFRASTRUCTURE
FOR
PRESTON POWERSPORTS

ADBMD ROUTE 50, LLC
101 BAY STREET, SUITE 12A
EASTON, MD 21601



COMPREHENSIVE PLAN DESIGN PRINCIPLES RESPONSE NARRATIVE

- PRINCIPLE #1 - MIXED USES ARE DESIRABLE - THIS PROJECT PROPOSES A POWERSPORTS DEALERSHIP WHICH IS A MIX FROM THE ADJACENT DEVELOPMENT WHICH CONTAIN SINGLE FAMILY HOMES.
- PRINCIPLE #2 - NATURAL FEATURES SHOULD DETERMINE DESIGN - TO ACCOMMODATE THE PROPOSED PROJECT, THE PROPOSED STORMWATER MANAGEMENT AREAS WILL BE CONSTRUCTED TO IMPROVE WATER QUALITY PRIOR TO OFFSITE DISPOSAL. THE PROJECT WAS DESIGNED TO MINIMALLY DISTURB EXISTING NON-TIDAL WETLANDS ON SITE. LESS THAN 5,000 SF OF NON-TIDAL WETLANDS SHALL BE DISTURBED.
- PRINCIPLE #3 - AUTOMOBILES SHOULD NOT DETERMINE DESIGN - AUTOMOBILES HAVE NOT DETERMINED THE DESIGN.
- PRINCIPLE #4 - AMPLE COMMUNITY OPEN SPACE - THE PROJECT STRIVES TO ACHIEVE MAXIMUM FUNCTIONALITY WHILE STILL PROVIDING OPEN GREEN SPACE AROUND THE PERIMETER OF THE PROPERTY.
- PRINCIPLE #5 - ARCHITECTURE SHOULD RESPECT EASTON'S HISTORICAL DEVELOPMENT - THIS APPLICATION PROPOSES ARCHITECTURE COMPATIBLE WITH ZONING CLASSIFICATION 'CG' AND DESIGN AND MATERIALS OF NEIGHBORING BUILDINGS.
- PRINCIPLE #6 - SIGNS SHOULD INFORM BUT NOT DOMINATE - SIGNS WILL BE COMPATIBLE WITH NEIGHBORING DEALERSHIPS AND FOLLOW THE TREND OF THE DEVELOPMENT.
- PRINCIPLE #7 - NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES - THIS BUILDING IS NOT A PART OF A NEIGHBORHOOD.
- PRINCIPLE #8 - RESIDENTIAL NEIGHBORHOODS SHOULD BE INTERESTING PLACES - THIS IS NOT A RESIDENTIAL NEIGHBORHOOD.
- PRINCIPLE #9 - NEIGHBORHOODS SHOULD CONNECT - THIS PROJECT IS NOT A NEIGHBORHOOD.

ENVIRONMENTAL NOTES:

- THE PROJECT SITE IS NOT LOCATED WITHIN THE CRITICAL AREA BUFFER
- THE SITE IS NOT LOCATED WITHIN A 100 YEAR FLOODPLAIN
- NON-TIDAL WETLANDS ARE PRESENT ON-SITE

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETE WITHIN:

- A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND
- B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

HYDROLOGY NOTES:

- THE PROJECT WILL NOT ALTER HYDROLOGY TO OR FROM THE SITE
- NO OUTLETS WILL BE ALTERED BY THIS PROJECT

GENERAL NOTES

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, LOCAL BUILDING CODES, BEST PRACTICES OF THE RESPECTIVE TRADES AND THE STANDARD SPECIFICATIONS AND DETAILS REFERRED TO HEREON.

THIS DRAWING SHOWS INFORMATION OBTAINED FROM AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE LINES AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST WITHIN LIMITS OF THE WORK AT AND BELOW THE SURFACE OF THE GROUND. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORTING AND PROTECTING ALL PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES.

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO (2) WEEKS PRIOR TO START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM:

MDE (Main Number) 410-537-3000
MDE (Eastern Shore Field Office) 410-901-4020
TOWN OF EASTON DPW 410-882-0513
EASTON UTILITIES 410-822-6110
TALBOT COUNTY SCD 410-882-1577 x 3
MISS UTILITY 800-257-7777 or 811

SHOULD ANY DAMAGE OCCUR TO ANY MARKED UTILITIES, THEY SHALL BE REPAIRED SOLELY AT THE CONTRACTORS EXPENSE.

ALL LANDSCAPING SHALL BE PERFORMED BY QUALIFIED PROFESSIONALS. ALL PLANT MATERIALS SHALL BE FROM CERTIFIED NURSERYMAN AND BE GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PLANTING.

ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTORS EXPENSE.

FIRE LANE AND ACCESS WILL MEET REQUIREMENTS FOR THE PROPOSED BUILDING PRIOR TO THE FINAL SITE PLAN.

DRAWING LIST					
SHEET NUMBER	DRAWING TITLE				
G-100	COVER SHEET				
V-101	EXISTING CONDITIONS AND DEMOLITION PLAN				
C-100	OVERALL SITE PLAN				
C-201	EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLAN				
C-203	STORMWATER MANAGEMENT PROFILES				
C-205.01	EROSION & SEDIMENT CONTROL AND STORMWATER MANAGEMENT DETAILS				
C-205.02	STORMWATER MANAGEMENT DETAILS				
C-301	SITE GRADING PLAN				
C-305	GRADING DETAILS				
C-401	LANDSCAPING PLAN				
C-405	LANDSCAPING NOTES AND DETAILS				
C-501	UTILITY PLAN				
C-601	FIRE MARSHALL PLAN				

Type	Area (s.f)	Min Req.	Min Spaces	Max. Req.	Max Spaces
Auto Sales or Showroom	10,000.00	1 Space per 375 S.F.	26.67	1 Space per 2,000 S.F.	50.00
Warehouse	4,756.00	1 Space per 2,000 S.F.	2.38	1 Space per 350 S.F.	13.59
Automotive Repair Garage	4,920.00	1 Space per 500 S.F.	9.84	1 Space per 375 S.F.	13.12

Provided Parking = 39

ADA Parking Required = 2 ADA Spaces (1 Van, 1 Car)

ADA Parking Provided = 2 ADA Spaces (1 Van, 1 Car)

REVIEWED FOR THE TALBOT SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

APPROVED:

TALBOT SOIL CONSERVATION DISTRICT DATE

NOTE: THE TALBOT SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT THAT ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL OF THE DEVELOPMENT AND/OR CONSTRUCTION SHALL BE DONE IN ACCORDANCE TO THIS PLAN OF EROSION AND SEDIMENT CONTROL.

SIGNATURE DATE

- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION MADE IN THIS PLAN. ANY CHANGE MADE TO THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.
- ANY RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

LINETYPES

TOPOGRAPHY
MAJOR CONTOURS
MINOR CONTOURS
TOP OF SLOPE BREAKLINE
BOTTOM OF SLOPE BREAKLINE
TOPOGRAPHY BREAKLINE

CATCHMENT AREA

Tc FLOW PATH

PARCEL BOUNDARY
PARCEL SETBACK/EASEMENT
FENCELINE WOOD
FENCELINE STEEL
TREELINE/VEGETATION
ROADWAY CENTERLINE
HIGHWAY BARRIER

UTILITIES
OVERHEAD ELECTRIC
UNDERGROUND ELECTRIC
TELEPHONE LINE
GAS PIPE LINE
COMMUNICATIONS (FIBER, ETC)
WATER PIPE
STORMWATER PIPE

UNDERDRAIN
SANITARY SEWER
FORCE MAIN SEWER

ENVIRONMENTAL
WETLAND
FLOOD PLANE 100/500 YR
MEAN HIGH WATER
MEAN LOW WATER
CRITICAL AREA BOUNDARY
BUFFER 25'/100'
SOILS BOUNDARY

EROSION AND SEDIMENT CONTROL
SILT FENCE
SUPER SILT FENCE
SILT FENCE ON PAVEMENT
LIMITS OF DISTURBANCE
LOD & SILT FENCE
LOD & SUPER SILT FENCE
LOD & SILT FENCE ON PAVEMENT
STANDARD INLET PROTECTION
AT-GRADE INLET PROTECTION
CURB INLET PROTECTION
SWIM EASEMENT 5'/10'

SYMBOLS

FLARED END SECTION

YARD INLET

CURB INLET

CUSTOM INLET

NYLOPLAST INLET

STORM DRAIN MANHOLE

SANITARY SEWER MANHOLE

CLEANOUT

GATE VALVE

STUB

SIGN

WATER METER

FIRE HYDRANT

WELL

BOLLARD

ELECTRIC TRANSFORMER

TELEPHONE PEDESTAL

UTILITY POLE

GUY WIRE

CONIFEROUS TREE

DECIDUOUS TREE

SPOT ELEVATION

LAND SLOPE

BENCHMARK

BOREHOLE/MONITORING WELL

APPROVED:

TOWN OF EASTON - TOWN ENGINEER

DATE

PROPOSED

EXISTING

EXISTING

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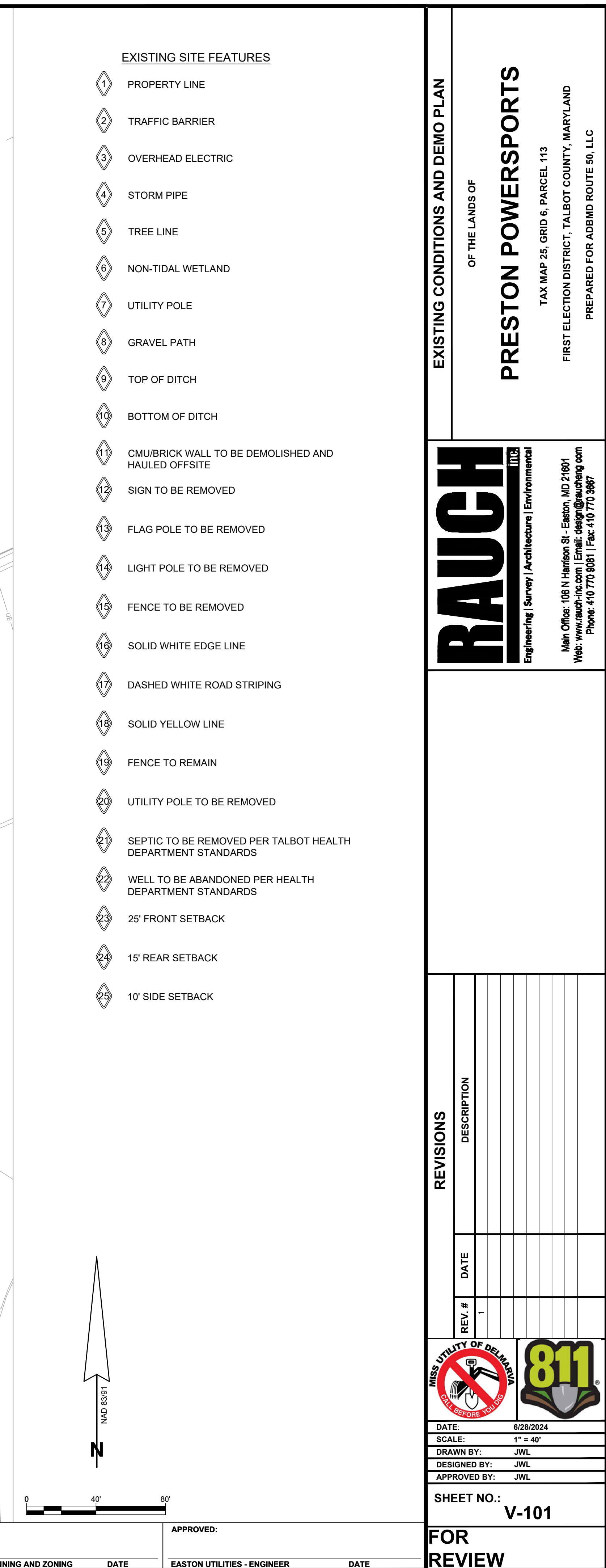
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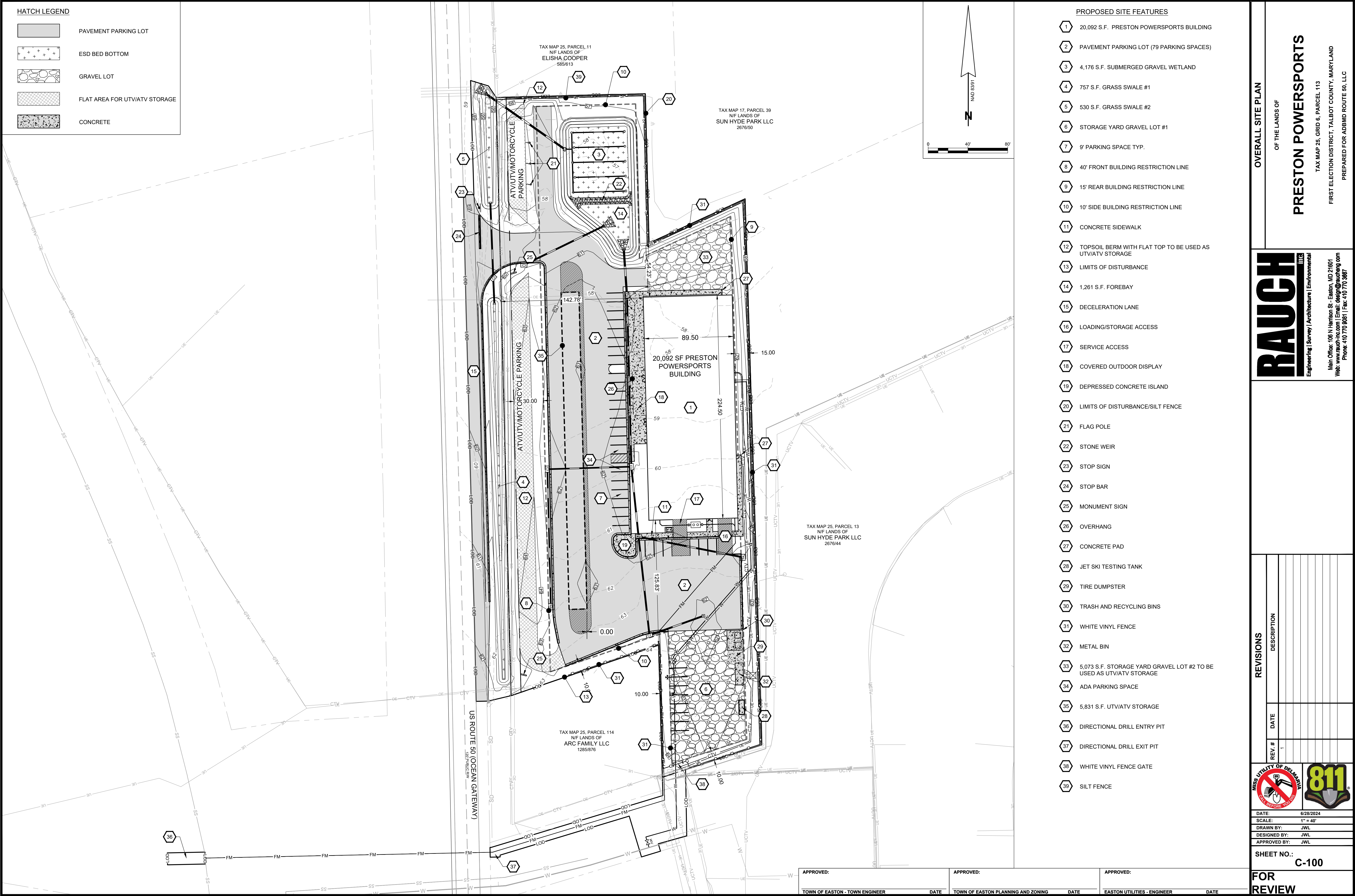
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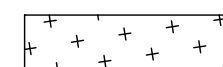
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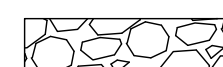




PAVEMENT PARKING LOT



ESD BED BOTTOM



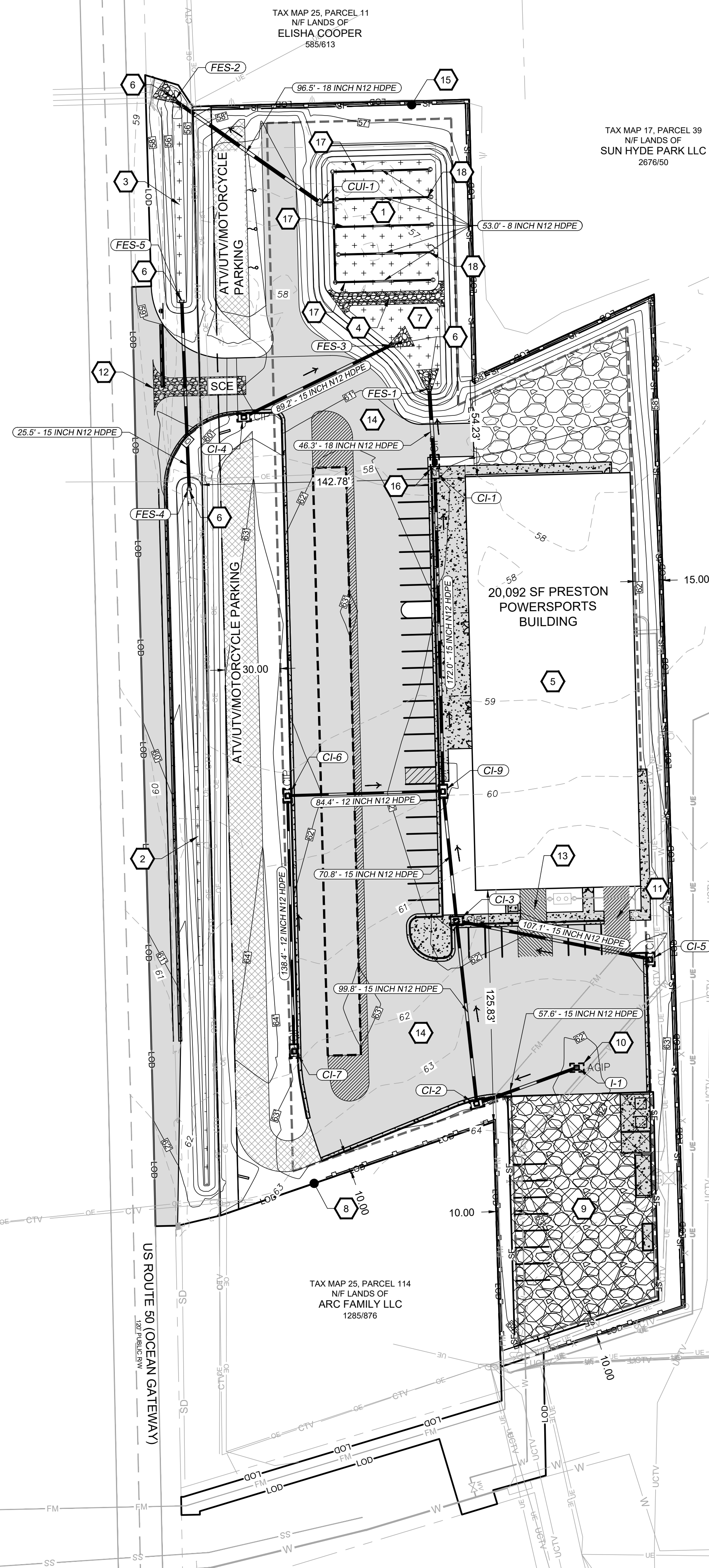
GRAVEL LOT



FLAT AREA FOR UTV/ATV STORAGE

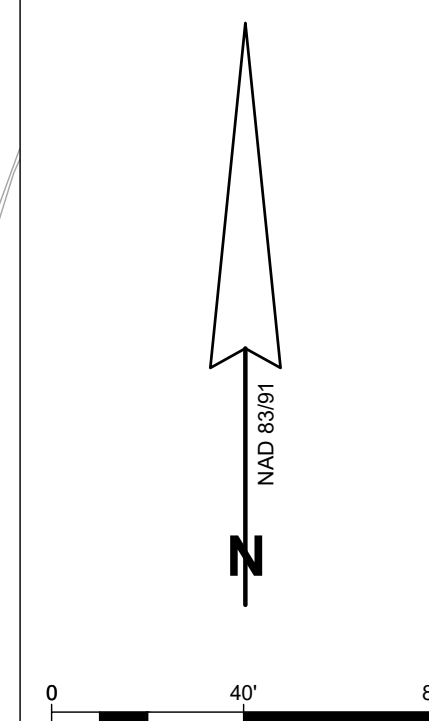


CONCRETE



PROPOSED SITE FEATURES

- 1 4,944 S.F. SUBMERGED GRAVEL WETLAND #1
- 2 757 S.F. GRASS SWALE #1
- 3 530 S.F. GRASS SWALE #2
- 4 STONE WEIR
- 5 20,092 SF PRESTON POWERSPORTS BUILDING
- 6 FLARED END SECTION WITH 19" THICK CLASS 1 RIP RAP OUTFALL PROTECTION
- 7 1,260 S.F. FOREBAY
- 8 LIMITS OF DISTURBANCE
- 9 STAGING & STOCKPILE AREA
- 10 AGIP TYP.
- 11 LOADING/STORAGE ACCESS
- 12 STABILIZED CONSTRUCTION ENTRANCE
- 13 SERVICE ACCESS
- 14 PAVEMENT PARKING LOT (79 PARKING SPACES)
- 15 SILT FENCE
- 16 CIP TYP.
- 17 COLLECTOR PIPES
- 18 DISTRIBUTION PIPE WITH DOME GRATE INLET



ESC & STORMWATER MANAGEMENT PLAN

OF THE LANDS OF

PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR ADBMD ROUTE 50, LLC



Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3667

REVISIONS

[illegible]

DATE:	6/28/2024
SCALE:	1" = 40'
DRAWN BY:	JWL
DESIGNED BY:	JWL
APPROVED BY:	JWL

SHEET NO.:
C-201

FOR
REVIEW

APPROVED:

TOWN OF EASTON - TOWN ENGINEER

DATE _____

APPROVED:

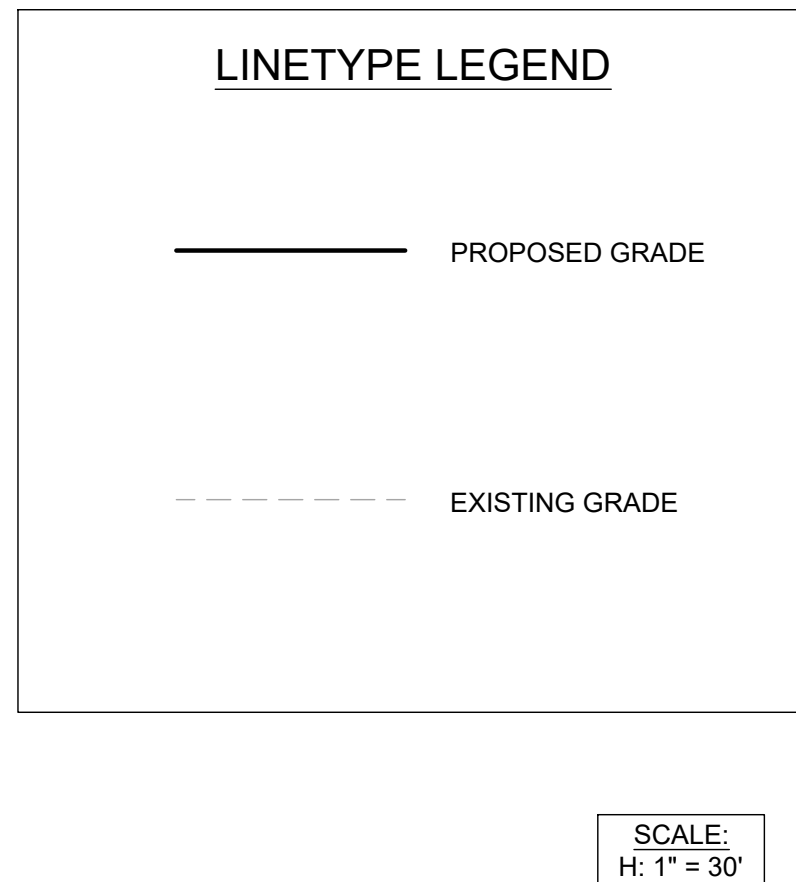
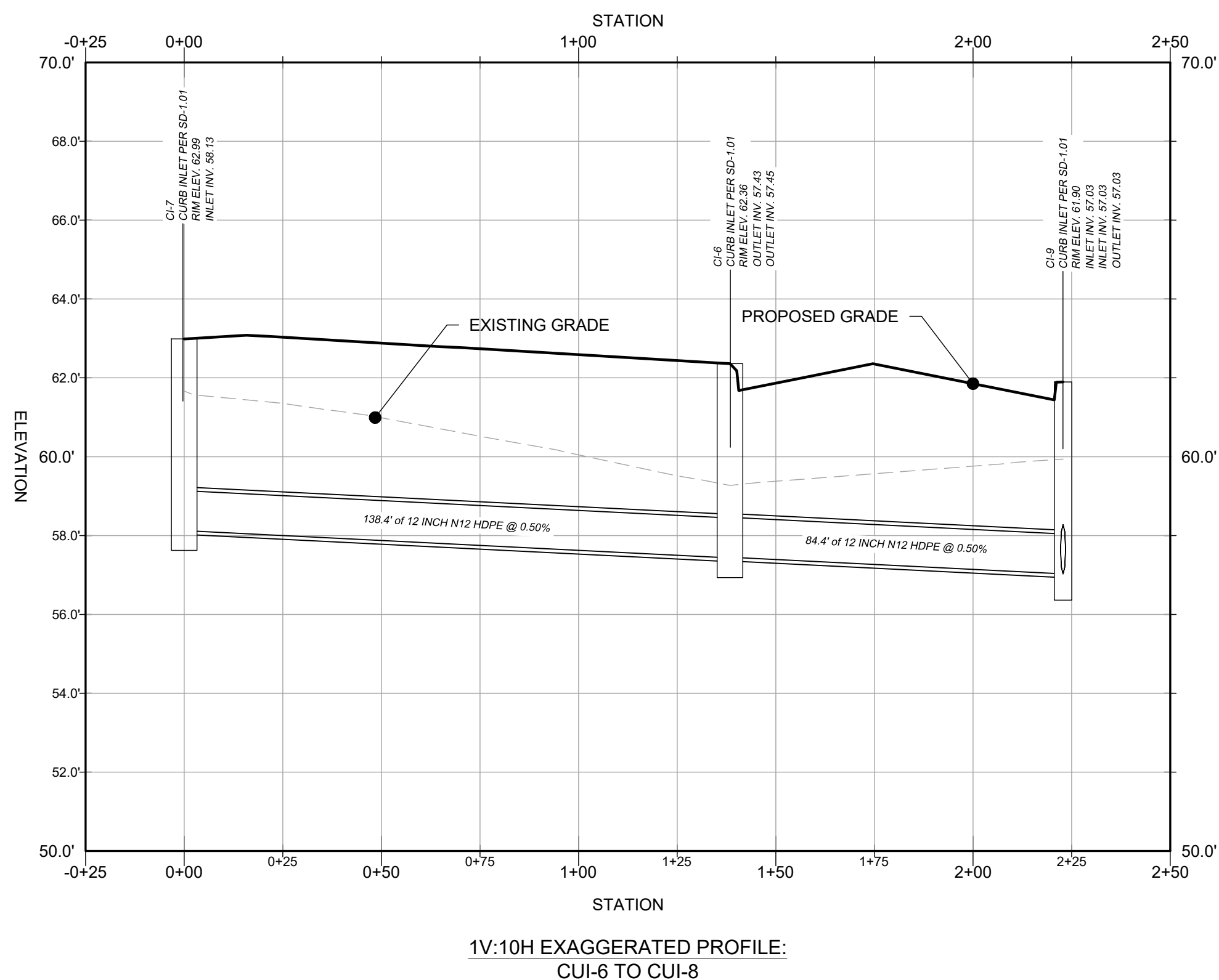
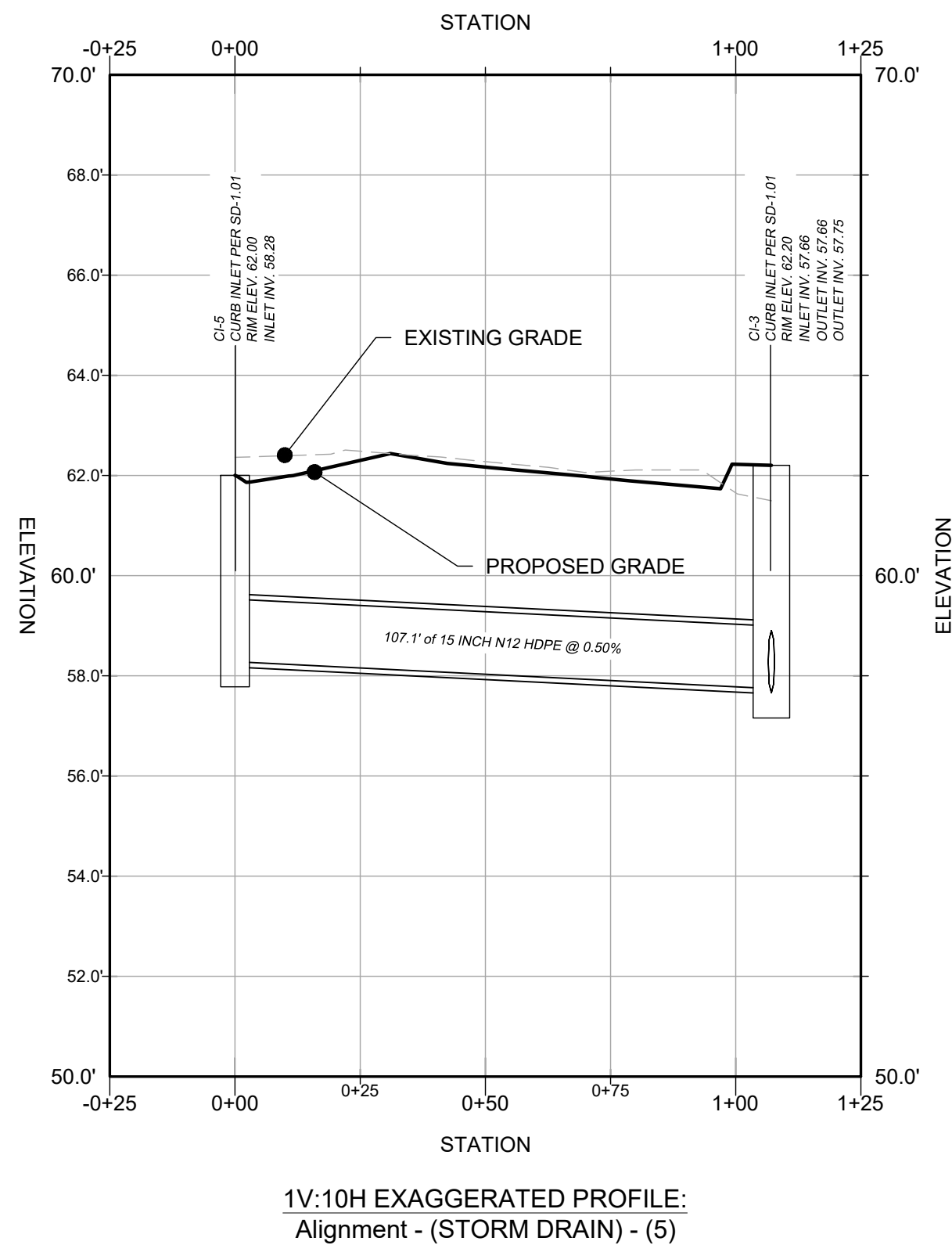
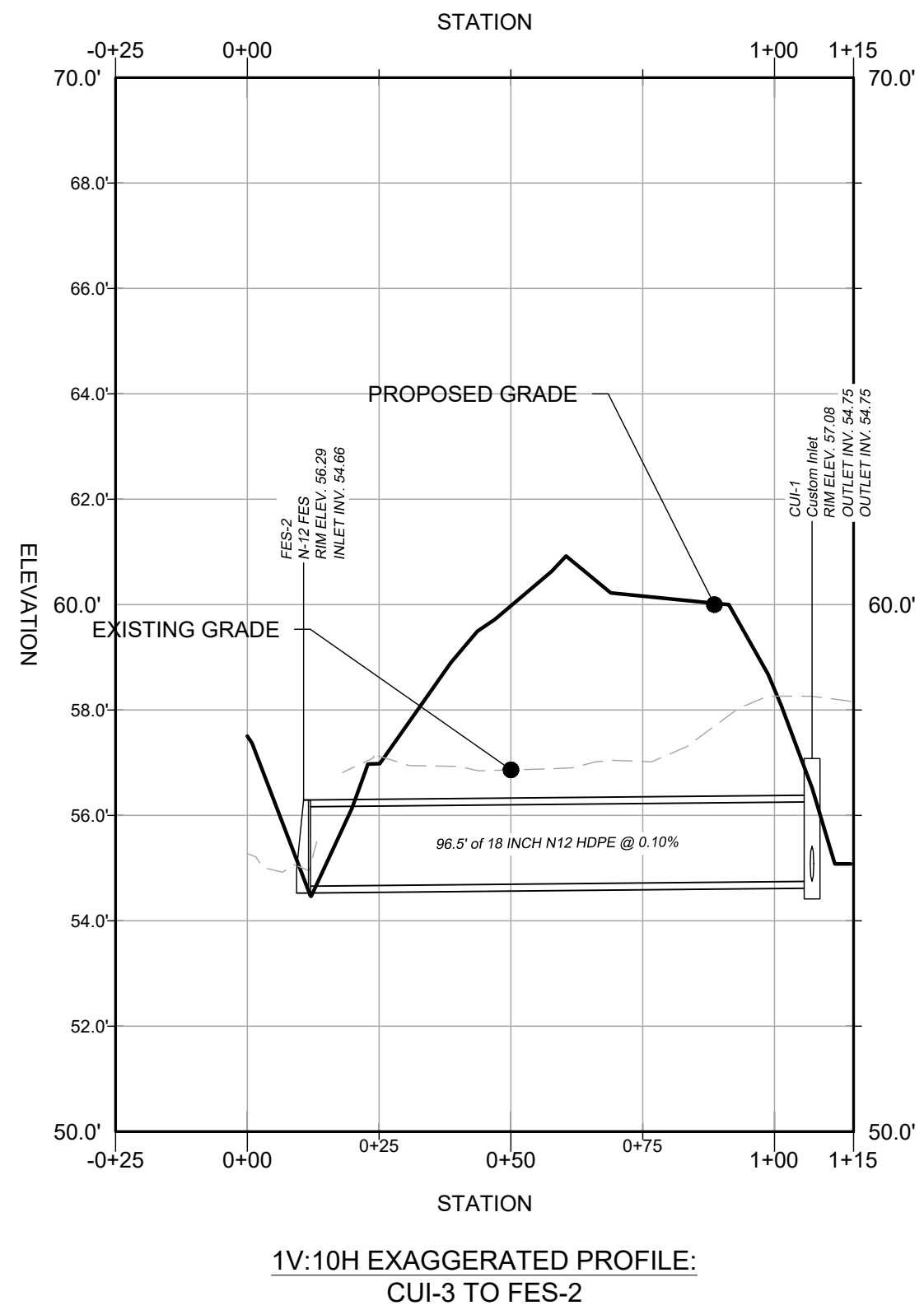
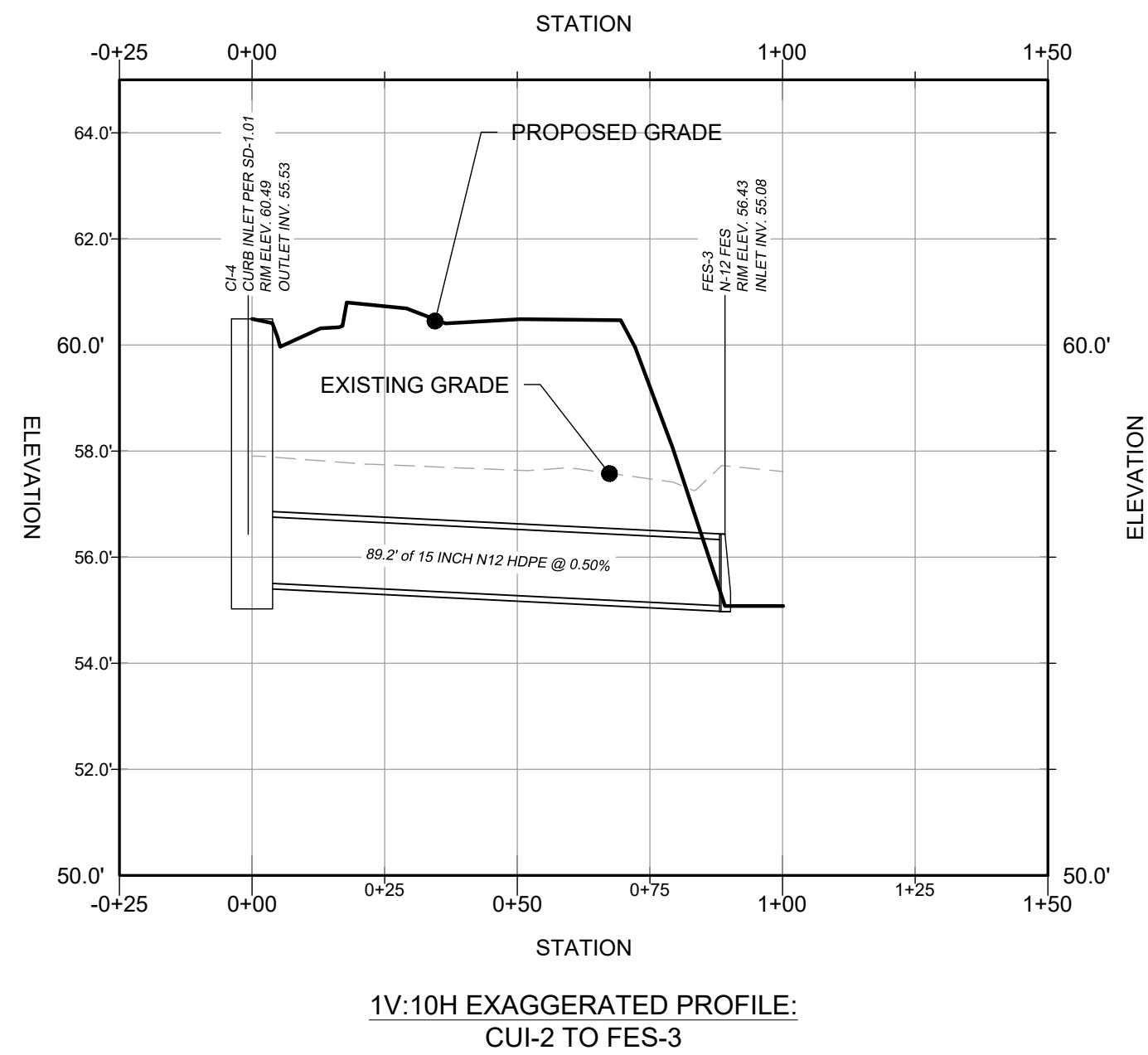
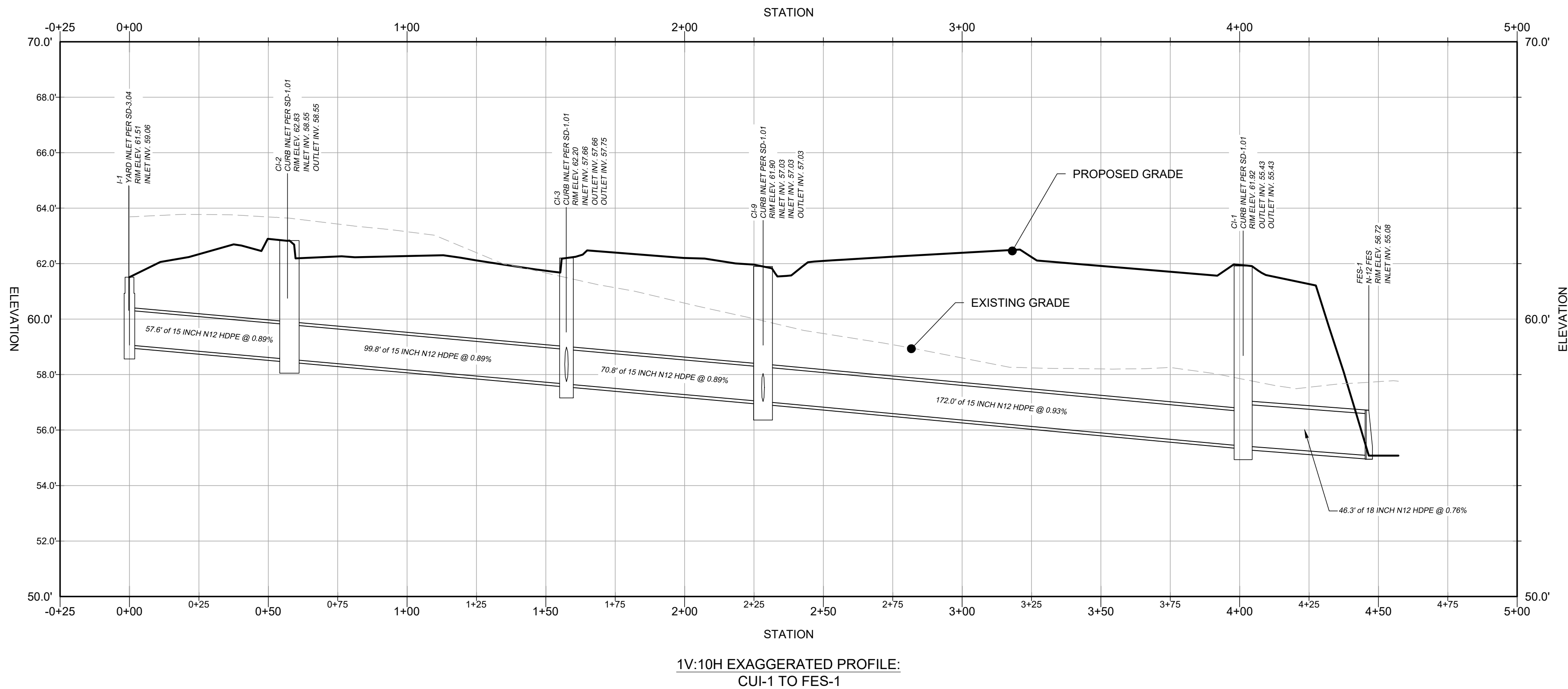
TOWN OF EASTON PLANNING AND ZONING

DAT

	APPROVED
--	-----------------

EASTON UTILITIES - ENGINEER

DATE _____



STORMWATER MANAGEMENT PROFILES

OF THE LANDS OF

PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR ADBMD ROUTE 50, LLC

RAUCH
Engineering | Survey | Architecture | Environmental

Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9881 | Fax: 410 770 3887

REVISIONS

DESCRIPTION

REV. #

DATE



DATE: 6/28/2024
SCALE: AS SHOWN
DRAWN BY: JWJ
DESIGNED BY: JWJ
APPROVED BY: JWJ

SHEET NO.:
C-203

FOR
REVIEW

APPROVED:

TOWN OF EASTON - TOWN ENGINEER

DATE

APPROVED:

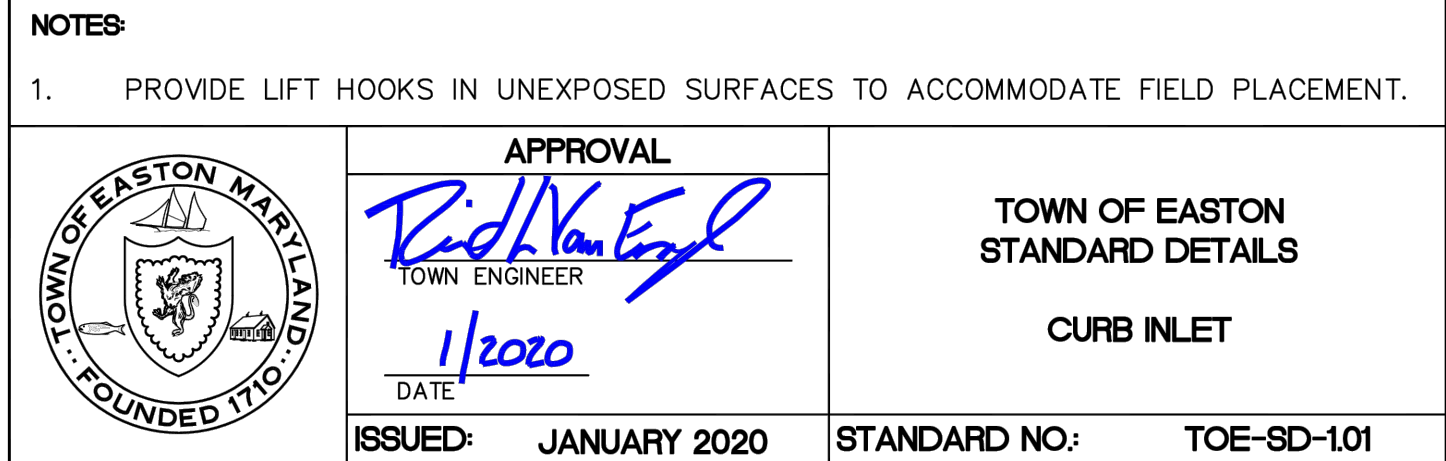
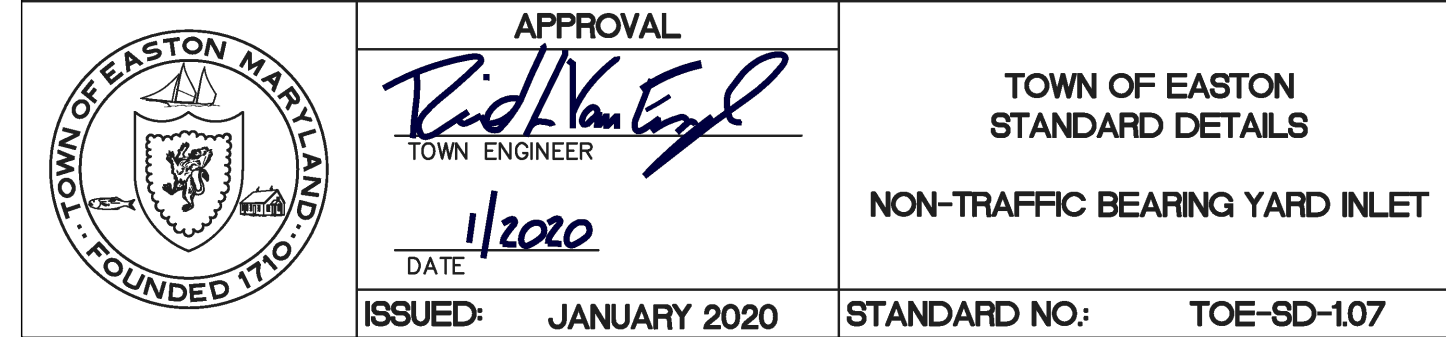
TOWN OF EASTON PLANNING AND ZONING

DATE

APPROVED:

EASTON UTILITIES - ENGINEER

DATE

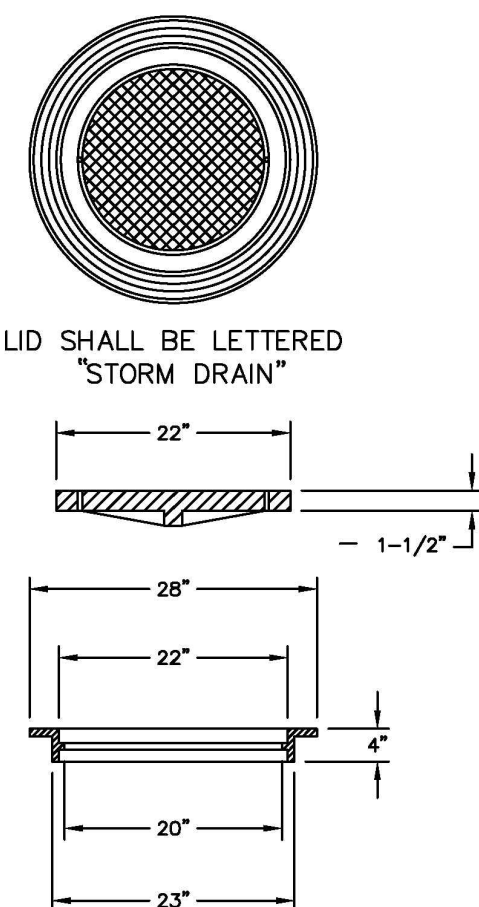


CURB INLET
DETAIL SD-1.01

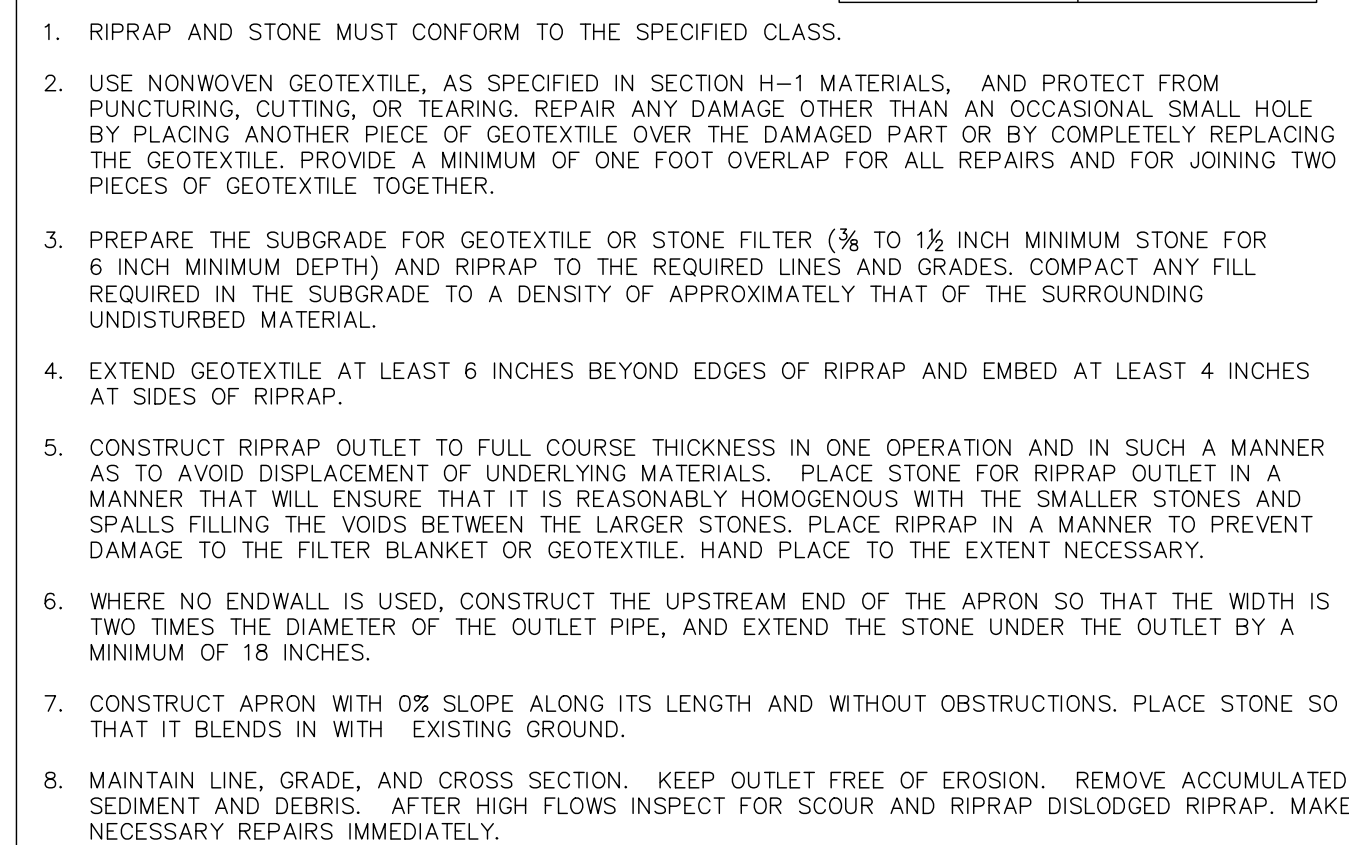


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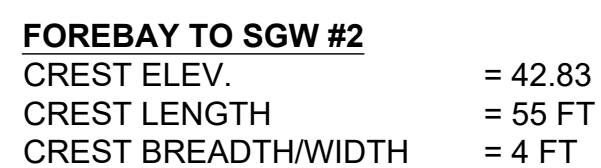
1. CASTING SHALL CONFORM TO ASTM A-48-64 CLASS 35B IRON MINIMUM.
2. CASTING SHALL HAVE GROUND OR MACHINED BEARING SURFACES.
3. CASTING SHALL BE OF UNIFORM QUALITY, FREE FROM BLOW HOLES, POROSITY, HARD SPOTS, SHRINKAGE DEFECTS, OR OTHER INJURIOUS DEFECTS.
4. CASTING SHALL BE LIGHT DUTY SIDEWALK TYPE.
5. "PICK HOLES" ARE REQUIRED IN LID.
6. FRAME AND COVER SHALL BE 154521 & 15444C AS MANUFACTURED BY EAST JORDON IRON WORKS, P.O. BOX 439 SPRING ST. EAST JORDON, MICH. 49727, OR AN APPROVED EQUAL.



CURB INLET-FRAME AND COVER
DETAIL SD-1.04



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



FOREBAY TO SGW #3

CREST ELEV.	= 47.83
CREST LENGTH	= 56 FT
CREST BREADTH/WIDTH	= 4 FT

APPROVED:	APPROVED:	APPROVED:
TOWN OF EASTON - TOWN ENGINEER	TOWN OF EASTON PLANNING AND ZONING	EASTON UTILITIES - ENGINEER
DATE	DATE	DATE

STORMWATER MANAGEMENT DETAILS

OF THE LANDS OF
PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR ADBMD ROUTE 50, LLC

RAUCH
inc.

Engineering | Survey | Architecture | Environmental

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Phone: 410 770 9081 | Fax: 410 770 3887

[illegible]

ESD SUMMARY CHART													
DRAINAGE AREA	TYPE OF ESD PRACTICE	NAME OF ESD PRACTICE (STRUCTURE NAME)	ON-SITE OR OFF-SITE STRUCTURE	RUNOFF CURVE NUMBER (NCN) WEIGHTED	MARYLAND GRID COORDINATE NAD 83 METERS NORTHING	MARYLAND GRID COORDINATE NAD 83 METERS EASTING	ESD PRACTICE TOTAL DRAINAGE AREA (ACRES)	ESD PRACTICE INTERMEDIUM DRAINAGE AREA (ACRES)	SURFACE AREA OF ESD PRACTICE (ACRES)	TARGET PE (IN.)	ACTUAL PE (IN.)	TARGET ESDv (FT. ³)	ACTUAL ESDv (ft. ³)
1	SOW-1	SUBMERGED GRAVEL WETLANDS #1	ON	93	420348.1338	1580312.5221	2.672	1.924	0.125	1.80	2.13	14,137	16,737
2													
3													
4													
5													
6													
7													
8													
9													
10													
TOTAL/AVERAGE				93			2.672	1.924	0.125	1.80	2.13	14,137	16,737

	APPROVAL <i>Rick Van Engle</i> TOWN ENGINEER <u>1/2020</u> DATE	TOWN OF EASTON STANDARD DETAILS ESD SUMMARY CHART
	ISSUED: JANUARY 2020	STANDARD NO: TOE-SWM-7.01

SWM QUANTITY SUMMARY CHART													
PRACTICE	DA (ACRES)	IMPERVIOUS (ACRES)	RCN	Tc (MINUTES)	PRE 2 YEAR	POST 2 YEAR	W.S.E.	PRE 10 YEAR	POST 10 YEAR	W.S.E.	PRE 100 YEAR	POST 100 YEAR	W.S.E.
SGW-1	2.672	1.924	93	12.1	4.40	3.79	56.71	8.59	8.47	57.33	17.28	28.22	57.97

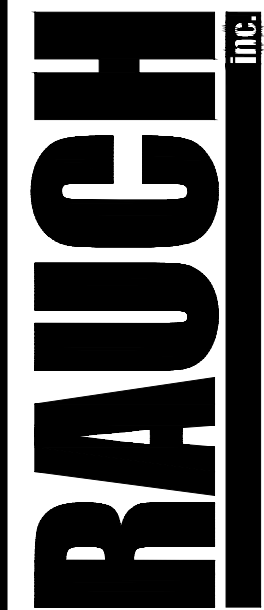
	APPROVAL TOWN ENGINEER DATE <u>1/2020</u>	TOWN OF EASTON STANDARD DETAILS SWM QUANTITY SUMMARY CHART
ISSUED: JANUARY 2020		STANDARD NO: TOE-SWM-7.02

PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR ADBMD ROUTE 50, LLC



Engineering | Survey | Architecture | Environmental

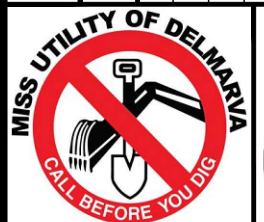
Main Office: 106 N Harrison St. - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3667

DESCRIPTION	DATE	REV #
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STATE OF DELAWARE
NO REUSE

DATE:	6/28/2024
AS SHOWN BY:	JWL
DESIGNED BY:	JWL
APPROVED BY:	JWL

NET NO.:
C-205.04



DATE:	6/28/2024
SCALE:	AS SHOWN
DRAWN BY:	JWL
DESIGNED BY:	JWL
APPROVED BY:	JWL

SHEET NO.: **C-205.04**

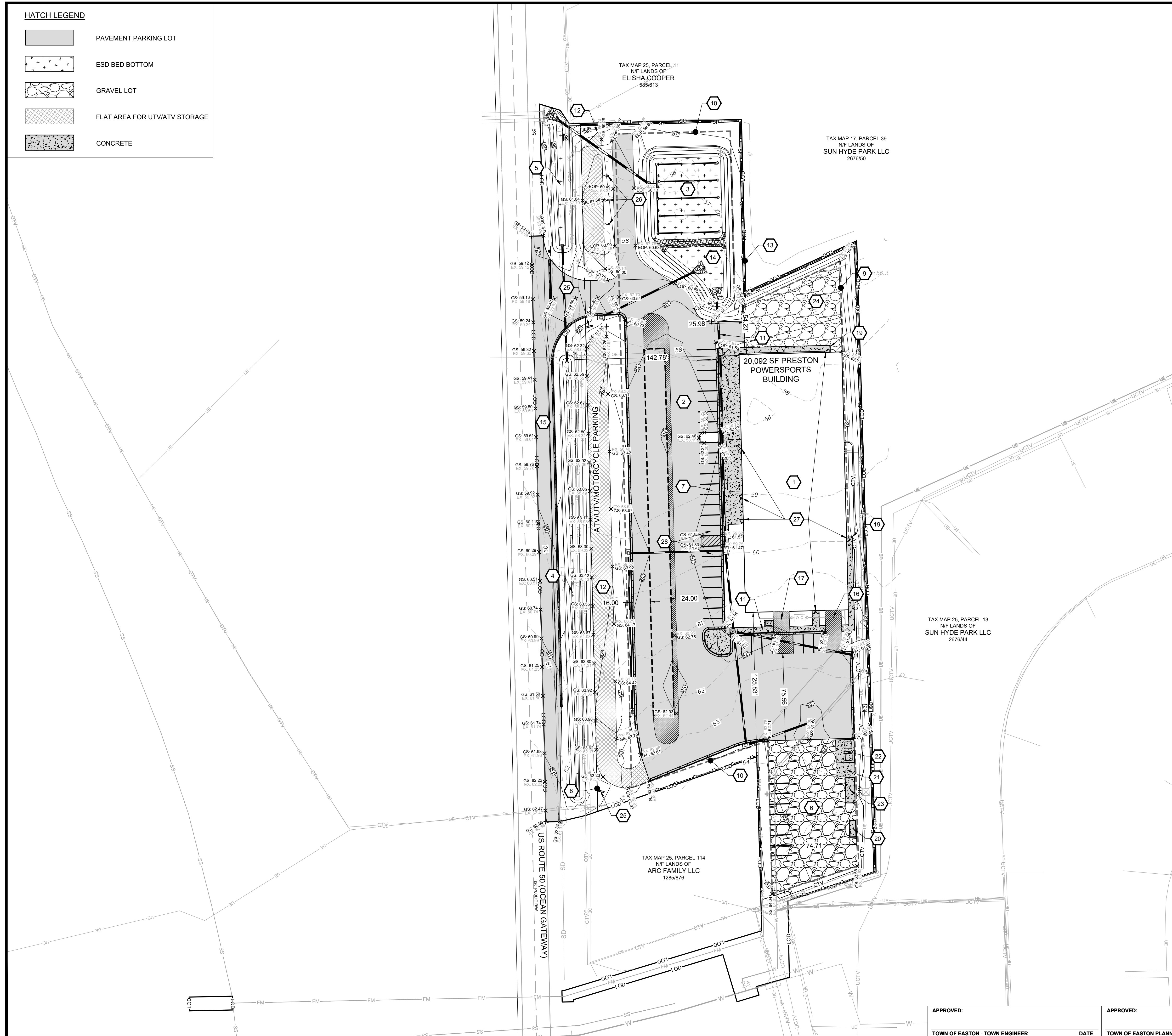
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APPROVED:	
TOWN OF EASTON - TOWN ENGINEER	DATE

APPROVED:	
TOWN OF EASTON PLANNING AND ZONING	DATE

APPROVED:	
EASTON UTILITIES - ENGINEER	DATE

	PAVEMENT PARKING LOT
	ESD BED BOTTOM
	GRAVEL LOT
	FLAT AREA FOR UTV/ATV STORAGE
	CONCRETE



1	20,092 S.F. PRESTON POWERSPORTS BUILDING
2	PAVEMENT PARKING LOT (79 PARKING SPACES) SEE DETAIL ON SHEET 305.01
3	4,944 S.F. SUBMERGED GRAVEL WETLAND
4	757 S.F. GRASS SWALE #1
5	350 S.F. GRASS SWALE #2
6	STORAGE YARD GRAVEL LOT #2
7	9' PARKING SPACE TYP.
8	40' FRONT BUILDING RESTRICTION LINE
9	10' REAR BUILDING RESTRICTION LINE
10	15' SIDE BUILDING RESTRICTION LINE
11	CONCRETE SIDEWALK
12	TOPSOIL BERM WITH FLAT TOP TO BE USED AS UTV/ATV STORAGE
13	LIMITS OF DISTURBANCE
14	FOREBAY
15	DECELERATION LANE
16	LOADING/STORAGE ACCESS
17	SERVICE ACCESS
18	DEPRESSED CONCRETE ISLAND
19	CONCRETE PAD
20	JET SKI TESTING TANK
21	TIRE DUMPSTER
22	TRASH AND RECYCLING BINS
23	METAL BIN
24	STORAGE YARD GRAVEL LOT #2
25	SITE MONUMENT SIGN
26	FLAG POLE
27	OVERHEAD DOOR
28	ADA PARKING SPACE

OF THE LANDS OF

PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR ADBMD ROUTE 50, LLC

RAUCH
INC.

Engineering | Survey | Architecture | Environmental

Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3667

REVISIONS

[illegible]

DATE:	6/28/2024
SCALE:	1" = 40'
DRAWN BY:	JWL
DESIGNED BY:	JWL
APPROVED BY:	JWL

SHEET NO.:
C-301

**FOR
REVIEW**

C-301

APPROVED:

TOWN OF EASTON - TOWN ENGINEER DATE

APPROVED:	
TOWN OF EASTON PLANNING AND ZONING	DATE

APPROVED:	
EASTON UTILITIES - ENGINEER	DATE

COMMERCIAL ASPHALT PAVEMENT FOR ROADS	SURFACE COURSE: 2" HOT MIX ASPHALT SUPERPAVE 9.5 MM BASE COURSE: 4" HOT MIX ASPHALT SUPERPAVE, 19.0 MM PLACED IN 2-2" LIFTS SUB BASE: 2" CR-6 GRADED AGGREGATE COMPACTED TO 95% OF ASTM D1557, MOIST PROCTOR METHOD
--	---

PAVING NOTES	
PAVING REQUIREMENTS	
A. BASE COURSE	
1. SUB-BASE COURSE SHALL BE PLACED ON PREPARED AND COMPACTED REEFLED EXCAVATIONS TO THE COMPACTED DEPTH AS SHOWN ON DETAIL, 99%-100% MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATION.	
2. GRADED AGGREGATE BASE COURSE:	
a) GRADED AGGREGATE BASE COURSE SHALL BE SPREAD ON PREPARED AND COMPACTED REEFLED EXCAVATIONS TO THE COMPACTED DEPTH AS SHOWN ON DETAIL, 99%-100% MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATION.	
b) GRADED AGGREGATE SHALL BE PER NO. 57 MIX, SECTION 801.	
c) RECYCLED COURSE CONCRETE IS AN ACCEPTABLE ALTERNATIVE PROVIDED THICKNESS ADJUSTMENTS ARE MADE BASED ON SUPPLEMENTAL TESTING TO BE SUBMITTED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE TOWN ENGINEER.	
B. TACK COAT	
1. COATING SHALL BE RESIDUAL ASPHALT EMULSION SURFACE BETWEEN .01 AND .05 GALLONS/SQ. YARD.	
2. CONTRACTOR SHALL TAKE CARE NOT TO TRACK COAT ON OVERLAY.	
C. HOT MIX ASPHALT PAVEMENT	
1. HOT MIX ASPHALT PAVEMENT SHALL CONSIST OF A NUMBER OF COURSES WITH A MAX. SUPERPAVE MATERIAL AND AGGREGATE ON A PREPARED SUB-BASE AS SHOWN WITHIN THE TOWN STANDARDS.	
2. MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET THE PROVISIONS OF SECTION 504 AND SECTION 505 OF THE STANDARD SPECIFICATION.	
3. PAVING COURSES OF BITUMINOUS CONCRETE MIXES SHALL HAVE LESS THAN 15% OF RECYCLED ASPHALT (SECTION 804.07).	
4. BASE COURSE SHALL HAVE NO MORE THAN 20% RAP.	
5. WEATHER RESISTANT	
a) PLANT MIXED SEAL - MINIMUM SURFACE TEMPERATURE 40T AND RING.	
b) SURFACE - MINIMUM SURFACE TEMPERATURE 40T AND RING.	
c) BASE COURSE - MINIMUM SURFACE TEMPERATURE 37T AND RING.	
D. CONCRETE PAVEMENT	
1. CONCRETE USED IN THE RESTORATION OF STREET AND ROADS SHALL BE PLACED TO THE MINIMUM THICKNESS THAT SHALL APPROVED BY THE TOWN. CONCRETE MAY BE A BASE COURSE WITH A BITUMINOUS CONCRETE OVERLAY OR A FINISHED SURFACE COURSE.	
2. CONCRETE PAVEMENT SHALL MEET THE PROVISIONS OF THE TOWN STANDARDS, SECTION 822.	
3. CONCRETE SIDEWALKS AND CURBS AND OTHER RESTORATION SHALL, AS INDICATED WITHIN THE TOWN STANDARDS.	
E. SOIL CEMENT	
1. WHERE THE COR VALUES ARE FOUND TO BE LOW WITHIN THE PAVED AREA, THE TOWN WILL ALLOW THE SOIL CEMENT TO BE REINFORCED BY A CONCRETE MATURE, BEING AVOIDED IN THE SUBGRADE APPLICATION SHALL BE SUBJECT TO THE GEOLOGICAL INVESTIGATION.	
2. A MINIMUM 12" OF 2" OF C-100 SHALL BE INSTALLED BETWEEN THE AMENDED SOIL AND CEMENT.	
3. MINIMUM MAX DEPTH OF THE SOIL CEMENT MIXTURE SHALL BE 18" WITH A 5-5-55 CEMENT CONTENT.	
 APPROVAL <i>[Signature]</i> TOWN ENGINEER TOWN OF EASTON STANDARD DETAILS PAVING NOTES DATE <u>1/10/20</u> ISSUED JANUARY 2020 STANDARD NO. TCE-R-102	

CONCRETE QUICK REFERENCE LIST

CAST-IN-PLACE CONCRETE SIDEWALKS AND CURBING

A. MATERIALS

1. SUBMIT MAXIMUM TEST FOR APPROVAL PRIOR TO PLACING CONCRETE (MPPM MAX #5 FOR ALL CONCRETE SIDEWALKS AND ENTRANCES, MINIMUM JOBS PER M3) FOR CURB AND SIDEWALK, ULTRAFORM MAX #7, EXCEPT MAXIMUM WATER CEMENTitious RATIO OF 0.45 AND 81% MINIMUM CEMENTitious CONTENT, AND EXCEEDED MINIMUM LABORATORY TESTING.

2. SUBMIT CONCRETE TESTING ACTIVITY FOR APPROVAL, WHICH CONTRACTOR OR PROJECT OWNER SHALL DELIVER FOR INFO AND LABORATORY TESTING.

B. CONCRETE PLACEMENT

1. NOTIFY TOWN OF INTENTION TO POUR CONCRETE 24 HOURS PRIOR TO PERFORMING WORK. (PHONE: 100-862-4421)

2. PROVIDER SHALL PRESENT CONTRACTOR GENERATED MAX DELIVERY TICKET UPON ARRIVAL TO TOWN.

3. DO NOT ADD WATER TO MIX AT JOB SITE UNLESS APPROVED BY ENGINEER. DO NOT POUR CONCRETE DURING RAIN EVENTS.

4. PROVIDER SHALL TRACK LOAD FOR SLUMP, TEMPERATURE, AND AIR ENTRAINMENT AT THE JOB SITE, PRIOR TO POURING EACH TRUCK LOAD DELIVERED TO SITE. THE MAXIMUM TIME FROM AGGREGATE WATER BATCH AT PLANT TO POURING AT SITE SHALL BE WITHIN 150 MINUTES. TESTING ACTIVITY SHALL VERIFY EACH TRUCK LOAD MEETS ALL REQUIRED REQUIREMENTS. TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER WITHIN 48 HOURS OF 7 AND 28 DAY BREAKS. REPORT SHALL INCLUDE LOCATION OF POUR PER PLAN STATION(S).

5. TESTING ACTIVITY SHALL COLLECT CORES FOR COMPRESSION TESTING ON EACH TRUCK LOAD OF CONCRETE. CORES SHALL BE TAKEN AT 150 MM AND 450 MM SPACINGS. TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER WITHIN 48 HOURS OF 7 AND 28 DAY BREAKS. REPORT SHALL INCLUDE LOCATION OF POUR PER PLAN STATION(S).

6. PROVIDER SHALL PROVIDE SUFFICIENT VENTILATION AT AREA OF CONCRETE CURB OR SIDEWALK. PREPARED, FREE OF WATER, FREE OF UNDESIRABLE MATERIALS AND THAT ALL REINFORCEMENT REQUIRED AT DRIVEWAYS, RAMP, VALLEY SLOTTING, ETC IS IN PLACE AND PROPERLY SUPPORTED.

7. COLD WEATHER CONCRETE PLACEMENT SHALL BE PROTECTED FROM DAMAGE AND PROOF FREEZING.

8. CONCRETE CURB AND SIDEWALKS SHALL HAVE PROPER CURING, INSTALLED AT 10 FOOT INTERVALS AND JOINTS AT 20 FOOT INTERVALS. MAXIMUM EXPANSION JOINTS SHALL BE 20 FEET.

9. CONCRETE CURB AND SIDEWALKS SHALL HAVE PROPER CURING, INSTALLED AT 10 FOOT INTERVALS AND JOINTS AT 20 FOOT INTERVALS. MAXIMUM EXPANSION JOINTS SHALL BE 20 FEET.

10. AT EACH 100 FOOT INTERVAL, PLUS AT EACH POINT OF "TANGENT OR CORNER, SIDEWALKS SHALL HAVE EXPANSION JOINTS AT 20 FOOT INTERVALS OR AT CHANGE OF DIRECTION.

APPROVAL


JOHN DONKER
DATE: 1/30/20

TOWN OF EASTON
STANDARD DETAILS

CONCRETE QUICK REFERENCE LIST

DATE: JANUARY 2020

STANDARD NO: TCE-R-103

CAST-IN-PLACE CONCRETE SIDEWALKS AND CURBING

A. Summary

- 1) Submit mix design for approval prior to placing concrete (MSHA MC #3) for all concrete sidewalks, air entrained, minimum 3500 psi (m). For curb and gutter, utilize MSHA MC #7, exceed maximum water cementitious ratio of 0.45 and 611 pounds minimum cementitious materials, air entrained, minimum 4200 psi (m).
- 2) Submit Concrete Testing Agency for approval, which contractor or project owner will arrange for testing and laboratory testing.

B. Concrete Placement

- 1) Notify the Town of Lansing to pour concrete 24 hours prior to performing work. (Phone: 410-825-8822).
- 2) Diver shall present computer generated mix delivery ticket upon arrival to site. Do not add water to mix at job site unless approved by Engineer. Do not pour concrete during rain events.
- 3) Testing Agency shall test for slump, temperature and air entrainment at the job site, prior to pouring each truck load delivered to site. The maximum time from adding water to batch of concrete to discharge of site shall be 1 1/2 hours. Testing Agency shall verify that subgrade is properly compacted.
- 4) Testing Agency shall collect cylinders for compression testing on each truck load of concrete delivered to site per ACI requirements. Test results shall be reported to the Engineer within 48 hours of test and 28 day results. Report shall include location of pour per plan stationing.
- 5) Engineer or his representative shall verify that area of concrete work is properly prepared, free of water, free of unsuitable materials and that all reinforcement required at driveway, ramp, curb and gutter is in place and properly supported.
- 6) Cold weather concrete placement shall be protected from damage and frost, freezing action or low temperatures. No unapproved admixtures are permitted.
- 7) Concrete curb and sidewalks shall have proper control joints installed at 10' intervals for curb and 5' foot intervals for sidewalks, curb & gutter shall have contraction joints every 10'-0" and expansion joints every 45'-0". Extended concrete curb & gutter shall have contraction joints every 10'-0", and expansion joints every 100'-0" and at point of tangent or curve. Sidewalk shall have expansion joints at 20' intervals or at change of direction.

PLAN

ELEVATION

SECTION A-A

NOTES

- TO BE USED ON SOME SIDEWALKS OR SIDEWALKS WITH SLOPED TRANSITION FROM THE ROADWAY WHERE THE CROWN DIFFERENCE IN THE DETAILS ABOVE CAN BE SATISFIED, MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
- WHERE 6" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WALKER MUST BE REQUESTED.
- NO TRANSVERSE CURB OR RAMP FOR SIDEWALK SHALL EXCEED 12.1 IN THE DIRECTION OF PEDESTRIAN TRAVEL OR 6.1 IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD 7.0.3.
- SIDEWALK RAMP SHALL BE SHOWN ON PLANS TRANSLATELY AND PERPENDICULAR WITH THE CENTER OF THE RAMP ALIGNED TO A LINE ON THE CONSTRUCTION CEMENT. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD SLOPES.
- TRANSITION POINTS TO THE INTO EXISTING SIDEWALK SHALL BE A MINIMUM OF 5' IN LENGTH.

APPROVAL

[Signature]

JOHN CHONDER

DATE: 1/10/20

TOWN OF EASTON STANDARD DETAILS

SIDEWALK RAMPS PERPENDICULAR

ISSUED: JANUARY 2020

STANDARD NO: TOE-R-7.03

NOTES

1. PAVEMENT SHALL BE CUT FULL DEPTH OF THE EXISTING PAVEMENT SECTION. ALL CUTS SHALL BE MADE IN STRAIGHT LINES.
2. IF PATCH FALLS WITHIN 2' OF EXISTING CURB OR EDGE OF PAWING, CONTINUE RESTORATION TO EDGE OF PAVE.
3. SURFACE COURSE: 2" OF 9.5mm SUPERPAVE.
BASE COURSE: 4" OF 9.5mm, 12mm OR 19.0 mm SUPERPAVE IN 2"-2" SLITS; NOTE: IF SC & BC ARE BOTH 9.5mm, THEY MAY BE DONE IN 2"-3" SLITS
4. ADDITIONAL MILL AND OVERLAY MAY BE REQUIRED WHEN MULTIPLE PAVEMENT REPAIRS ARE LOCATED BY THE SAME RELATIVE VERTICAL LIMITS OF MILL AND OVERLAY; WHEN REQUIRED, WILL BE DETERMINED BY THE TOWN ENGINEER.
5. WHEN SURFACE AREAS OF REPAIR EXCEEDS 100 SF, THE 2" SURFACE COURSE SHALL EXTEND ENTIRE WIDTH OF TRAVEL LANES AND/OR SHOULDER. LIMITS OF MILL AND OVERLAY, WHEN REQUIRED, WILL BE DETERMINED BY THE TOWN ENGINEER.
6. CONTRACTOR MUST CONFIRM LIMITS OF PAVEMENT REQUIRED WITH TOWN ENGINEER PRIOR TO START OF PAVEMENT WORK.

APPROVAL

[Signature]

TWN ENGINEER

DATE: 1/13/20

**TOWN OF EASTON
STANDARD DETAILS**

**PERMANENT ASPHALT PAVEMENT
REPAIR FOR UTILITY TRENCHES**

STANDARD NO.: TOE-R-501-3

[illegible]

PRESTON POWERSPORTS

OF THE LANDS OF

GRADING DETAILS

RAUCH

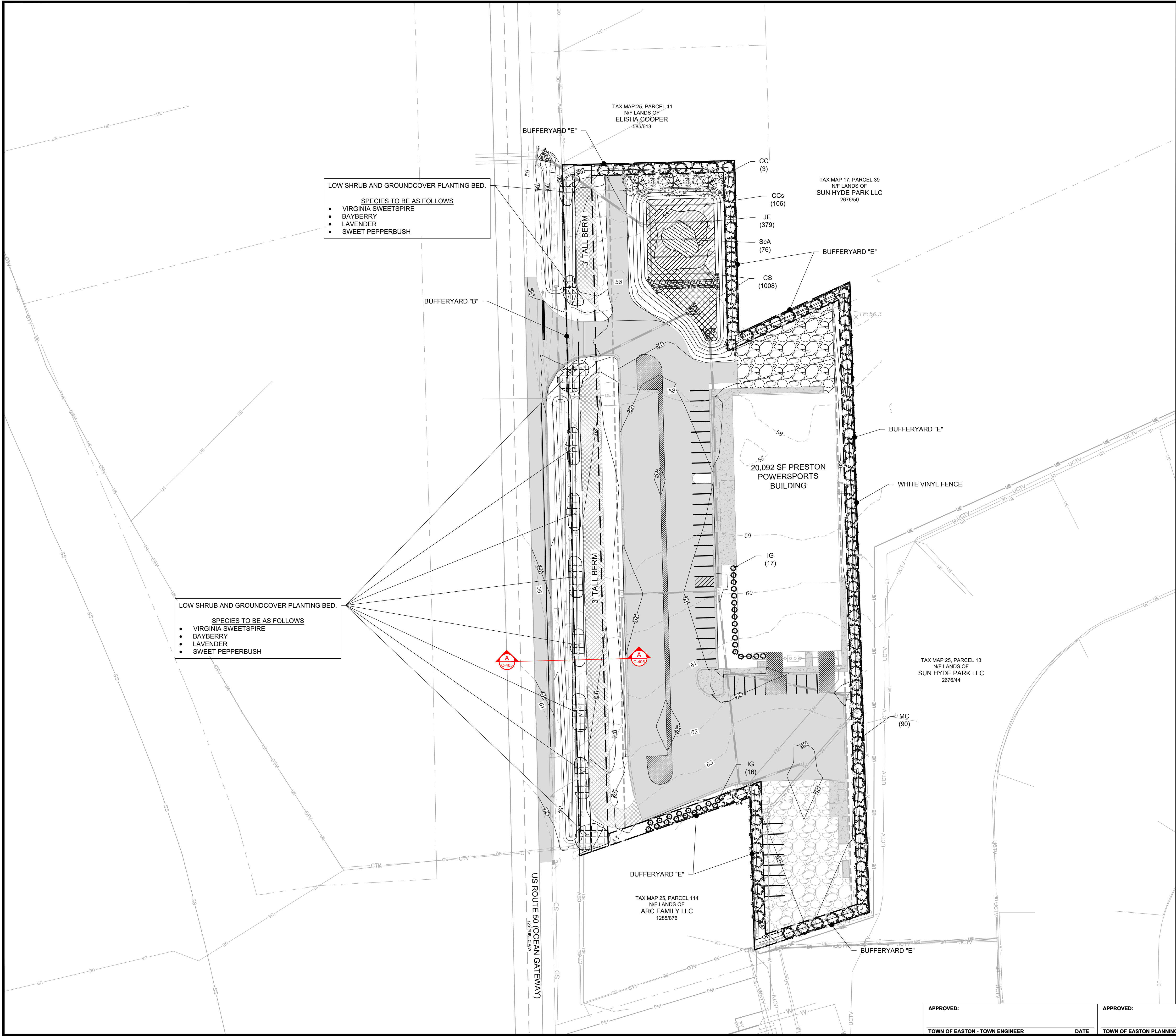
Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3687

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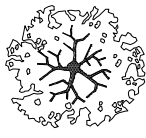
SHEET NO.: **C-305**

FOR REVIEW

APPROVED:		APPROVED:		APPROVED:		FOR REVIEW
TOWN OF EASTON - TOWN ENGINEER	DATE	TOWN OF EASTON PLANNING AND ZONING	DATE	EASTON UTILITIES - ENGINEER	DATE	



LANDSCAPE LEGEND

 EASTERN REDBUDD

 WAX MYRTLE

 INK BERRY

LANDSCAPING PLAN

OF THE LANDS OF

PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR ADBMD ROUTE 50, LLC

RAUCH

Engineering | Survey | Architecture | Environmental

Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 8081 | Fax: 410 770 3887

REVISIONS

REV. #	DATE	DESCRIPTION
1		

DATE: 6/28/2024
SCALE: 1" = 40'
DRAWN BY: JWJ
DESIGNED BY: JWJ
APPROVED BY: JWJ

SHEET NO.: C-401

FOR REVIEW

APPROVED:	APPROVED:	APPROVED:
TOWN OF EASTON - TOWN ENGINEER	TOWN OF EASTON PLANNING AND ZONING	EASTON UTILITIES - ENGINEER
DATE	DATE	DATE

LANDSCAPE PLANTING REQUIREMENTS

GENERAL REQUIREMENTS:

- COMPLIANCE WITH THE TERMS OF THIS LANDSCAPE PLAN, INCLUDING ALL MAINTENANCE AND WARRANTY REQUIREMENTS PRESCRIBED HEREON IS THE RESPONSIBILITY OF THE OWNER. MAINTENANCE AND WARRANTY TERMS AND RESPONSIBILITIES OF THE CONTRACTOR SHALL BE NEGOTIATED BETWEEN OWNER AND CONTRACTOR.
- THE CONTRACTOR (CONTRACTOR) IS RESPONSIBLE FOR THE COMPLETE INSTALLATION OF ALL LANDSCAPING SHOWN OR IMPLIED ON THIS PLAN. PLANT QUANTITIES ARE SHOWN FOR CONVENIENCE ONLY AND SHALL BE VERIFIED PRIOR TO INSTALLATION. THE CONTRACTOR SHALL NOTIFY THE OWNER, OR DESIGNATED REPRESENTATIVE IF PROPOSED SPECIES AND/OR SITE PLANTING CONDITIONS WARRANT RE-DESIGN CONSIDERATIONS.
- THE CONTRACTOR SHALL DILIGENTLY ATTEMPT TO LOCATE THE SPECIFIED NATIVE PLANT MATERIAL. IF SPECIFIED PLANT MATERIALS CANNOT BE LOCATED, ALTERNATIVES MAY BE CONSIDERED AND APPROVED, IN ADVANCE, BY THE OWNER, OR DESIGNATED REPRESENTATIVE.
- PRIOR TO LANDSCAPE INSTALLATION, THE CONTRACTOR SHALL COORDINATE A SITE MEETING WITH THE OWNER, OR DESIGNATED REPRESENTATIVE TO REVIEW THE PLAN, SITE DRAINAGE CONDITIONS AND TO DETERMINE ANY FIELD ADJUSTMENTS NECESSARY.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK, AND SHALL COORDINATE WITH OTHER CONTRACTORS ON SITE AND MISS UTILITY TO VERIFY UTILITY LOCATIONS, ANY REPAIRS TO EXISTING UNDERGROUND UTILITIES REQUIRED AS A RESULT OF ACTIONS OF THE CONTRACTOR AND/OR HIS ASSIGNS SHALL BE BORNE BY CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY THAT FINAL ROUGH GRADES HAVE BEEN ESTABLISHED AND THAT THE SITE IS READY FOR LANDSCAPE INSTALLATION. THE CONTRACTOR SHALL ENSURE THAT PLANTINGS WILL HAVE ADEQUATE DRAINAGE. THE CONTRACTOR SHALL INSTALL PLANT MATERIAL FACTORING IN ANY "FINAL" GRADING WORK TO BE COMPLETED AFTER LANDSCAPE INSTALLATION.
- THE CONTRACTOR SHALL LAY OUT BEDS AND POSITION PLANTS FOR APPROVAL BY OWNER, OR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW ANY SIGNIFICANT FIELD ADJUSTMENTS PRIOR TO INSTALLATION.
- NOTE: PLANTING WITHIN THE ROOT ZONE OF EXISTING TREES REQUIRES ADDITIONAL CARE. HAND DIGGING OF PLANTING HOLES AND ADJUSTMENT OF PLANTING LAYOUT MAY BE NECESSARY.
- THE CONTRACTOR SHALL MAINTAIN A CLEAN JOB SITE AND REMOVE ALL PLANTING AND RELATED DEBRIS DAILY DURING THE COURSE OF IMPLEMENTATION.
- THE OWNER, OR DESIGNATED REPRESENTATIVE SHALL REJECT ANY AND ALL PLANT MATERIAL THAT DOES NOT MEET SPECIFICATIONS, IS DISEASED OR OTHERWISE UNHEALTHY.
- ALL LANDSCAPE INSTALLATION SHALL BE ACCOMPLISHED WITH QUALIFIED PERSONNEL, UTILIZING INDUSTRY STANDARD PRACTICES AND TECHNIQUES.

PLANT MATERIAL:

- ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK AS APPROVED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE INC. LATEST EDITIONS.
- ALL PLANT MATERIAL SHALL BE NURSERY GROWN WITH SOUND HORTICULTURAL PRACTICES AND UNLESS OTHERWISE APPROVED BY THE OWNER, OR DESIGNATED REPRESENTATIVE, GROWN IN SOIL AND CLIMATE CONDITIONS SIMILAR TO THIS PROJECT SITE.
- ALL MATERIAL SHALL EXHIBIT HEALTHY GROWTH WITH GOOD BRANCHING STRUCTURE, DENSE FOLIAGE AND A FIBROUS, DEVELOPED ROOT SYSTEM.
- ALL MATERIAL SHALL BE FREE OF INSECT INFESTATION AND DISEASE. THE OWNER RESERVES THE RIGHT TO HAVE THE PLANT MATERIAL INSPECTED AND TAGGED AT THE GROWING SITE, AND TO REJECT ANY DEFICIENT MATERIAL AT THE JOB SITE.

PLANT MATERIAL HANDLING:

- ALL PLANT MATERIAL SHALL ARRIVE AT THE JOB SITE IN A HEALTHY CONDITION.
- THE CONTRACTOR SHALL STAGE DELIVERY AND PLANT INSTALLATION TO MINIMIZE STRESS ON PLANT MATERIAL.
- PLANT MATERIAL TO BE STAGED ON OR OFF THE JOB SITE SHALL BE LOCATED TO MAXIMIZE PROTECTION FROM HOT SUN AND DRYING WINDS, AND SHALL BE WATERED TO MAINTAIN A STRESS FREE CONDITION. ON-SITE WATER MAY NOT BE AVAILABLE FOR THE CONTRACTOR TO USE. THE LACK OF AVAILABLE WATER SHALL NOT RELIEVE THE CONTRACTOR OF ADEQUATE MAINTENANCE.

PLANTING SCHEDULE:

- PLANTING SCHEDULES SHALL COINCIDE WITH THE OVERALL PROGRESS OF SITE CONSTRUCTIONS.
- CERTAIN PLANT SPECIES REQUIRE SPECIFIC SEASON INSTALLATION AND SHALL BE COORDINATED APPROPRIATELY.
- PLANTING IS DISCOURAGED IN THE HOT, DRY PERIODS OF SUMMER AND DURING FROZEN GROUND CONDITIONS IN WINTER, BUT MAY BE CONSIDERED YEAR-ROUND WITH MAINTENANCE REQUIREMENTS ADDRESSED ACCORDINGLY.
- THE CONTRACTOR IS RESPONSIBLE FOR PLANT MATERIAL HEALTH AND VIGOR REGARDLESS OF WHEN THE MATERIAL IS INSTALLED.

TREE & SHRUB PLANTINGS:

- ALL TREE/SHRUB PLANTING PITS SHALL BE EXCAVATED TO A DEPTH SO THAT THE PLANT ROOT FLARE SHALL LIE AT THE FINISHED GRADE SURROUNDING THE PLANT. SOIL THAT MAY HAVE BEEN PLACED ON TOP OF ROOT BALL OR SETTLED AROUND TRUNK OR ROOT FLARE DURING TRANSPORT SHALL BE REMOVED TO ADEQUATELY EXPOSE ROOT FLARE SO PROPER PLANTING DEPTH CAN BE ESTABLISHED.
- THE ROOT BALL SHALL REST ON UNDISTURBED OR STABILIZED SOIL. THE CONTRACTOR SHALL NOTIFY THE OWNER, OR DESIGNATED REPRESENTATIVE IF THIS PLANTING DEPTH SPECIFICATION CANNOT BE IMPLEMENTED.
- TREE PLANTING PITS SHALL BE EXCAVATED DEPTH EQUAL TO THE HEIGHT OF THE ROOT BALL AND TO A WIDTH EQUALING TWICE THE ROOT BALL DIAMETER.
- EXCAVATED SOILS NOT PREVIOUSLY COMPACTED OR OTHERWISE DEGRADED SHALL BE RE-USED FOR PLANTING PIT BACKFILL. EXCAVATED SOILS UNSUITED FOR BACKFILL SHALL BE AMENDED WITH FRIABLE TOPSOIL TO CREATE A SUITABLE PLANTING SOIL AS APPROVED BY THE OWNER, OR DESIGNATED REPRESENTATIVE. EXCAVATED SOILS THAT CANNOT BE RESTORED TO A REASONABLE PLANTING SOIL SHALL BE REMOVED AND REPLACED WITH A SUITABLE PLANTING SOIL. NOTE: FOR BEDDING PURPOSES OR UNLESS OTHERWISE SPECIFIED HERON, THE CONTRACTOR SHALL ASSUME EXCAVATED SOILS ARE SUITABLE FOR PLANTING BACKFILL.
- SLOW RELEASE FERTILIZER TAB(S) (20-10-5, 21 GRAM, 2-YEAR) SHALL BE ADDED TO PLANTING HOLES AS PER MANUFACTURER'S SPECIFICATIONS.
- THE SIDES OF CONTAINER GROWN STOCK SHALL BE CUT OR SCARIFIED TO ELIMINATE BOUND ROOTS AND PROMOTE HEALTHY ROOT GROWTH.
- ALL SYNTHETIC MATERIALS FROM AROUND THE TREE TRUNK AND ROOT BALL SHALL BE REMOVED AND NOT EVIDENT WITHIN THE BACKFILL SOIL MIX. STRING, ROPE, SYNTHETIC BURLAP, PLASTIC, STRAPPING, AND OTHER MATERIALS THAT WILL NOT DECOMPOSE IN THE SOIL SHALL BE REMOVED AT THE TIME OF PLANTING
- SOIL GRADES SHALL BE FEATHERED AROUND PLANTINGS TO BLEND WITH SURROUNDING LANDSCAPE OR TURF AREAS. EXCESS EXCAVATED SOIL SHALL BE REMOVED FROM JOB SITE.
- ALL TREES AND SHRUBS SHALL BE WATERED DURING PLANTING TO MINIMIZE AIR POCKETS AND TO ENSURE SOIL CONTACT WITH ROOTS.

TREE STAKING/ GUYING:

- TREES SHALL BE STAKED TO PREVENT TOPPLING BY STRONG WIND.
- STAKES SHALL BE INSTALLED ACCORDING TO DETAIL PROVIDED ON PLAN. ANOTHER STAKING/GUYING METHOD MAY BE USED WITH APPROVAL OF OWNER'S REPRESENTATIVE.

HERBACEOUS PLANT INSTALLATION:

- ROOT MASSES SHALL BE MOIST, BUT NOT SATURATED, AT THE TIME OF PLANTING.
- PLANT PITS SHALL BE PREPARED USING A DIBBLE, SPADE OR MECHANICAL AUGER BY OPENING A HOLE AT THE PLANTING SITE. FOR PLANTINGS UNDER EXISTING TREES, PLANTING HOLES SHALL BE HAND-DUG AND LOCATIONS ADJUSTED TO ACCOMMODATE EXISTING TREE ROOTS.
- PLANTS SHALL BE PLACED IN PLANTING PITS IN A VERTICAL POSITION.
- SOIL SHALL BE BACKFILLED INTO PLANT PITS, LIGHTLY COMPRESSED TO ELIMINATE AIR POCKETS, AND FIRMED AROUND THE PLANTS.
- ALL PLANTS SHALL BE WATERED DURING PLANTING TO MINIMIZE AIR POCKETS AND TO ENSURE SOIL CONTACT WITH ROOTS.

MULCHING:

- TWO TO THREE INCHES OF SHREDDED HARDWOOD MULCH SHALL BE APPLIED TO ALL NEWLY PLANTED TREES AND SHRUBS.
- TWO TO THREE INCHES OF HARDWOOD MULCH SHALL BE APPLIED TO UPLAND HERBACEOUS PLANTING AREAS AS SHOWN ON THE PLANTING PLAN.
- MULCH SHALL NOT BE APPLIED TO SWALE, FOREBAY, OR WETLAND PLANTING SHELF AREAS.

MAINTENANCE

DURING CONSTRUCTION PERIOD:

- THE CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL THROUGHOUT JOB COMPLETION AND FINAL ACCEPTANCE. ALL PLANT MATERIAL SHALL BE WATERED, WEEDED, MULCHED, PRUNED AND TREATED FOR INSECT DAMAGE, FUNGUS OR DISEASE TO INSURE HEALTHY GROWING CONDITIONS. WATERING SHALL PROVIDE ADEQUATE MOISTURE TO SUPPORT VIGOROUS GROWTH. DURING TIMES OF NORMAL PRECIPITATION, ALL TREES SHALL RECEIVE 1", OR APPROX. 5-10 GALLONS OF WATER PER WEEK. PLANTS IN HEAVIER SOILS SHALL BE MONITORED TO AVOID OVER-WATERING. GATOR BAGS, WATERING TRAYS, IRRIGATION, HAND WATERING, OR OTHER INDUSTRY STANDARD TECHNIQUES SHALL BE EMPLOYED TO MAINTAIN ADEQUATE MOISTURE SUPPLY TO THE PLANT MATERIAL. THE CONTRACTOR SHALL INSTRUCT THE OWNER REGARDING THE REQUIRED AND PROPER ON-GOING MAINTENANCE OF LANDSCAPE MATERIAL.

DURING WARRANTY PERIOD:

APPROVED:	APPROVED:	APPROVED:
TOWN OF EASTON - TOWN ENGINEER	TOWN OF EASTON PLANNING AND ZONING	EASTON UTILITIES - ENGINEER
DATE	DATE	DATE

- THE CONTRACTOR SHALL VISIT THE SITE PERIODICALLY TO ADVISE OWNER OF ANY DEFICIENT CONDITIONS AFFECTING PLANT SURVIVABILITY. DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED (SEE WARRANTY BELOW).

LANDSCAPE WARRANTIES

FROM THE 2018 TOWN OF EASTON ZONING ORDINANCE:

- PRIOR TO ISSUANCE OF AN OCCUPANCY PERMIT, THE APPROVED PRELIMINARY LANDSCAPE PLAN SHALL BE IMPLEMENTED BY THE APPLICANT. AT COMPLETION, THE APPLICANT SHALL REQUEST THAT THE TOWN INSPECT THE COMPLETE LANDSCAPING AND ISSUE THE APPROPRIATE APPROVAL. THE TOWN RECOGNIZES THAT PLANTING SCHEDULES AND FAVORABLE WEATHER/CLIMATIC CONDITIONS DO NOT ALWAYS COINCIDE. THE APPLICANT SHALL MAKE EVERY REASONABLE EFFORT TO COORDINATE BUILDING AND SITE CONSTRUCTION WITH LANDSCAPE IMPROVEMENT INSTALLATION SO THAT ALL PROJECT CONSTRUCTION CAN BE COMPLETE PRIOR TO REQUEST FOR OCCUPANCY PERMITS. UPON DEMONSTRATING THAT SOME OR ALL OF THE REQUIRED LANDSCAPE IMPROVEMENTS SHOULD BE POSTPONED, AND SUBJECT TO THE APPROVAL OF THE TOWN, THE APPLICANT SHALL POST AN IRREVOCABLE FINANCIAL SURETY EQUAL TO THE ESTIMATED INSTALLATION COSTS AS APPROVED BY THE TOWN, GUARANTEEING THE COMPLETE IMPLEMENTATION OF THE LANDSCAPE PLAN WITHIN 6 MONTHS OF OCCUPANCY OR USE OF THE SITE OR SUBDIVISION. AFTER INSTALLATION IS COMPLETE AND INSPECTED AND APPROVED BY THE TOWN, THE APPLICANT SHALL REQUEST IN WRITING TO THE TOWN TO RELEASE ANY UNUSED PORTION OF THE SURETY.
- THE OWNER/DEVELOPER SHALL MAINTAIN ALL LANDSCAPE IMPROVEMENTS PROVIDING ADEQUATE GROWING CONDITIONS TO INSURE HEALTHY, VIGOROUS PLANT SURVIVAL AND GROWTH. THE TOWN RESERVES THE RIGHT TO PERIODICALLY REVIEW INSTALLED LANDSCAPES AND REPORT ANY SIGNIFICANT DEFICIENCIES TO THE OWNER/DEVELOPER. AT THE END OF TWO GROWING SEASONS, AND/OR AT ANY TIME PRIOR TO, THE TOWN SHALL ASSESS THE LANDSCAPE IMPROVEMENTS AND DIRECT REPLACEMENT OR REVITALIZATION OF ANY DEFICIENT AREAS. THE OWNER SHALL REPAIR OR REPLACE DEFICIENT ITEMS WITHIN 30 CALENDAR DAYS.
- FAILURE TO MAINTAIN, REPAIR OR REPLACE THE REQUIRED AND APPROVED LANDSCAPE IMPROVEMENTS SHALL BE CONSIDERED A VIOLATION OF THIS ORDINANCE AND SHALL BE ENFORCED IN ACCORDANCE WITH SECTION 28 – 1308 OF THE TOWN OF EASTON ZONING ORDINANCE.

MAINTENANCE:

DURING CONSTRUCTION PERIOD:

THE CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL THROUGH JOB COMPLETION AND FINAL ACCEPTANCE, ALL PLANT MATERIAL SHALL BE WATERED, WEEDED, MULCHED, PRUNED AND TREATED FOR INSECT DAMAGE, FUNGUS OR DISEASE TO ENSURE HEALTHY GROWING CONDITIONS. WATERING SHALL PROVIDE ADEQUATE MOISTURE TO SUPPORT VIGOROUS GROWTH. TYPICALLY, ALL TREES SHOULD RECEIVE APPROXIMATELY 1", OR 5-10 GALLONS OF WATER PER WEEK. PLANTS IN HEAVIER SOILS SHALL BE MONITORED TO AVOID OVER-WATERING. GATOR BAGS, WATERING TRAYS, IRRIGATION, HAND WATERING, OR OTHER INDUSTRY STANDARD TECHNIQUES SHALL BE EMPLOYED TO MAINTAIN ADEQUATE MOISTURE SUPPLY TO THE PLANT MATERIAL. INSTRUCT OWNER REGARDING REQUIRED AND PROPER ON-GOING MAINTENANCE OF LANDSCAPE INSTALLATION.

PLANT SCHEDULE:

SYMBOL	QUAN	SCIENTIFIC NAME	COMMON NAME	SPECIFICATION	MAX HEIGHT
GRASSES & GRASS-LIKE PLANTS					
CCs	106	CALAMAGROSTIS CANADENSIS	BLUEJOINT REEDGRASS	1 G, 36" SPACING	5'
CS	1008	CAREX STRICTA	TUSSOCK SEDGE	1 G, 18" SPACING	3'
JE	379	JUNCUS EFFUSUS	SOFT RUSH	1 G, 24" SPACING	4'
ScA	76	SCIRPUS ATROVIRENS	GREENBULRUS	1 G, 36" SPACING	6'
TREE					
CC	3	CERCIS CANADENSIS	EASTERN REDBUD	B&B, 6' - 7' HEIGHT	30'
SHRUB					
MC	90	MORELLA CERIFERA	WAX MYRTLE	5 G, 12" SPACING MIN	20'
IG	33	ILEX GLABRA	INK BERRY	3 G, 6' SPACING MIN	10'

LANDSCAPE REQUIREMENTS SUMMARY PER ZONING ORDINANCE:

SECTION 1014.7.:

- BUFFERYARD "B" (ROUTE 50):
REQUIRED: 25' WIDE; 2 SHADE/CANOPY TREES & 1 EVERGREEN TREE PER 50' OF PROPERTY LINE
OPTIONS: AVERAGE 3' BERM, REDUCE EVERGREEN TREE HEIGHT TO 5'
SELECTED: AVERAGE 3' BERM, REDUCE EVERGREEN TREE HEIGHT TO 5 (600 LF / 50 LF = 12 X 1 = 12 EVERGREEN TREES)
PROVIDED: 3' BERM, WITH PLANTINGS NO MORE THAN 3' BETWEEN TOP OF SHA SWALE AND BERM
- BUFFERYARD "E" (OTHER):
REQUIRED: 10' WIDE; 1 SHADE/CANOPY TREE & 3 EVERGREEN TREES PER 50' OF PROPERTY LINE
OPTIONS:
a. 2 SHADE/CANOPY TREES & 8 LARGE EVERGREEN SHRUBS
b. 4 EVERGREEN TREES
c. WALL/FENCE WITH 3 LARGE EVERGREEN SHRUBS
SELECTED: WALL/FENCE WITH 81 EVERGREEN SHRUBS (1350 LF / 50 LF = 27 X 3 = 81)
PROVIDED: 8' WHITE VINYL FENCE WITH 90 LARGE EVERGREEN SHRUBS

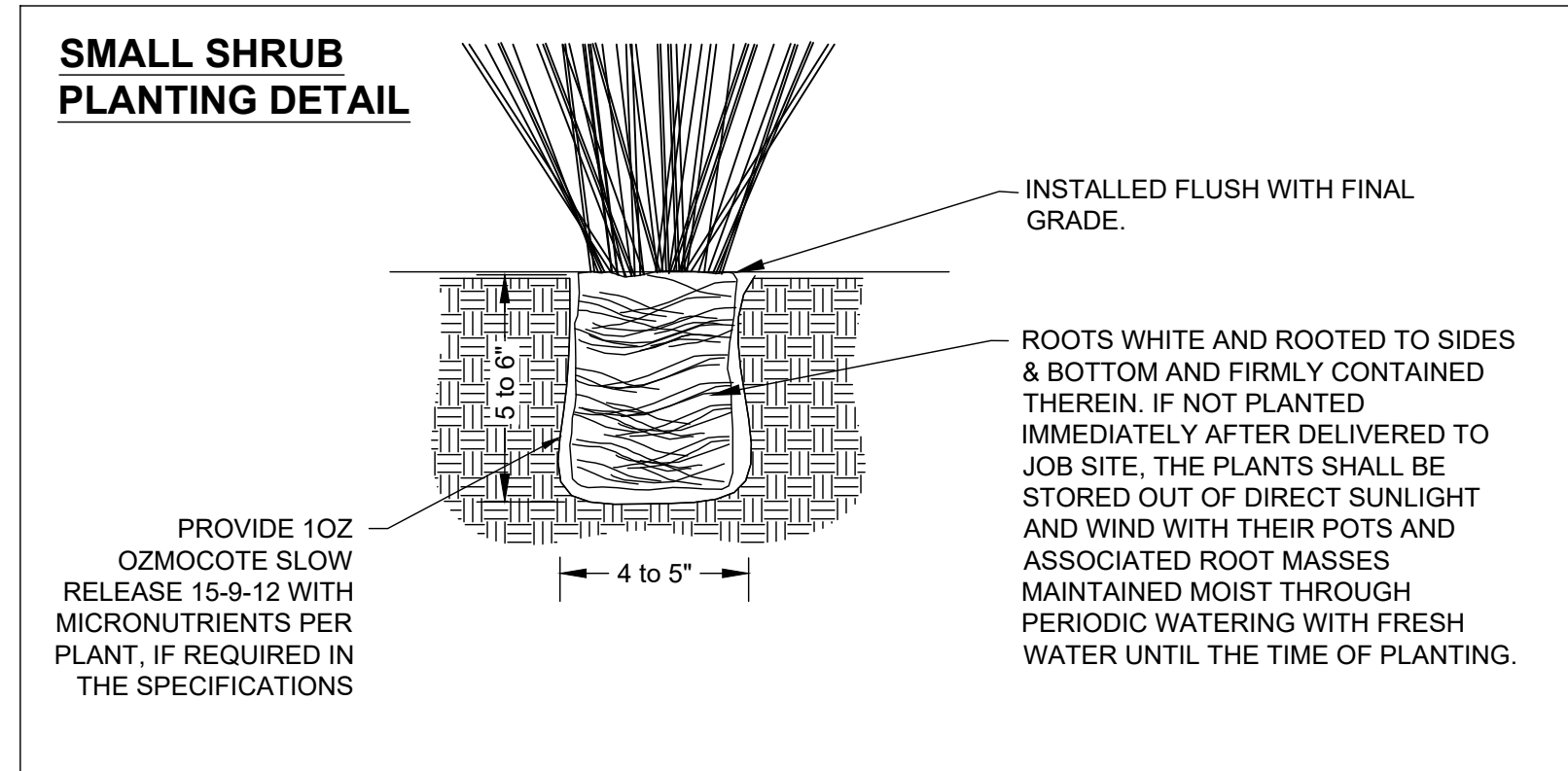
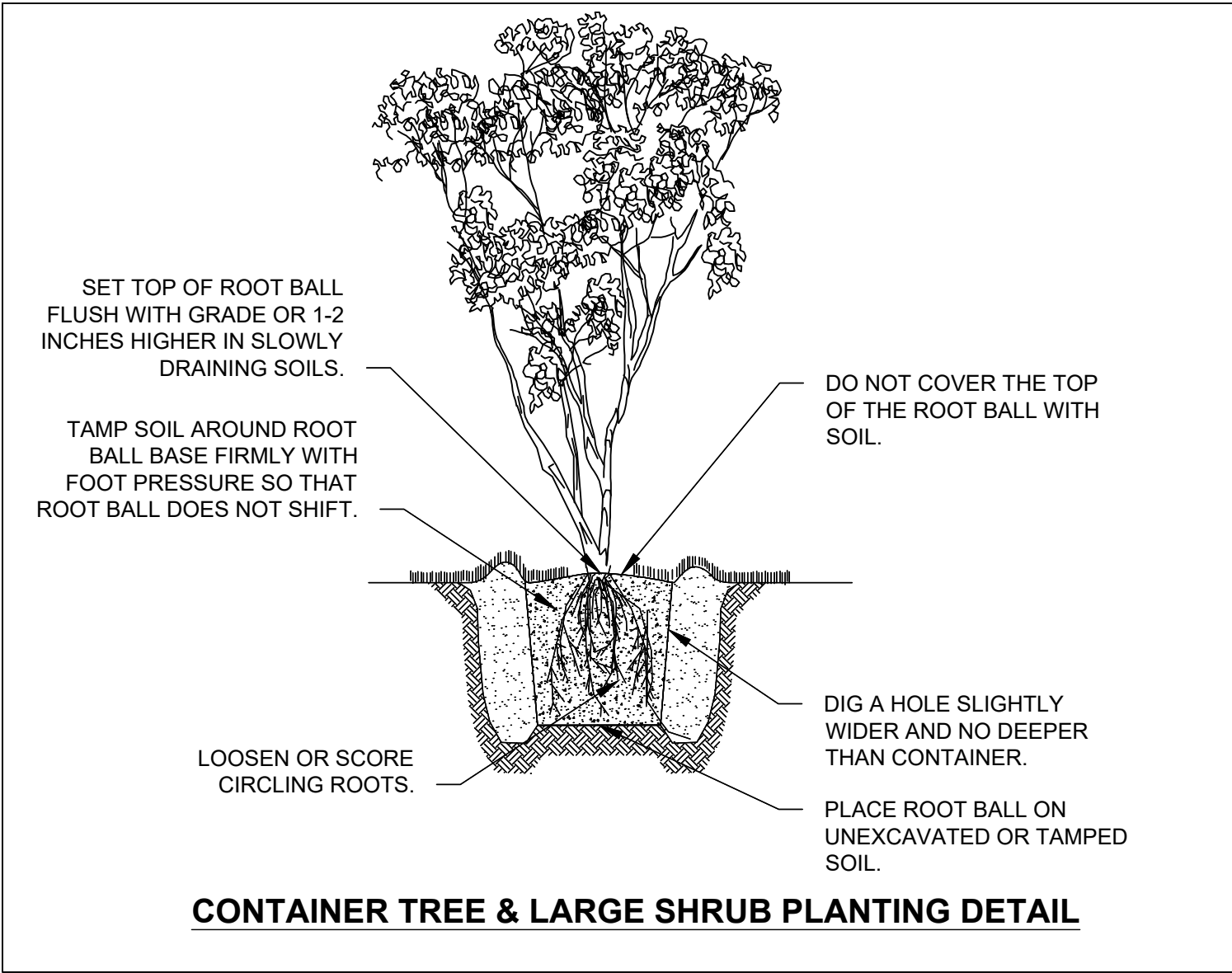
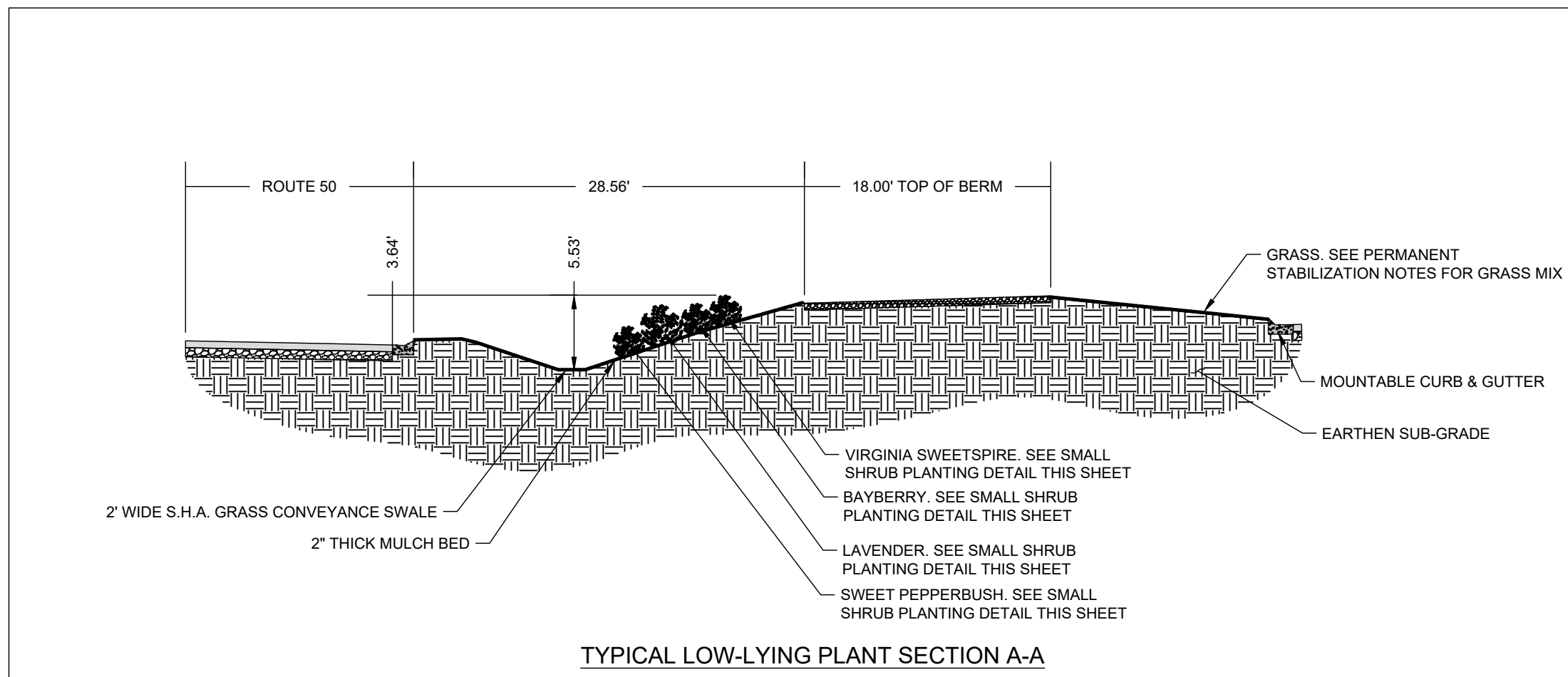
SECTION 1014.6.G.:

- OVERALL TREES: 1 TREE PER 3,000 SF DISTURBANCE
= 166,520 SF * 1 TREE/3,000 SF = 56 TREES REQUIRED
- 2a. INTERIOR CUSTOMER PARKING: 1 TREE/7.5 SPACES (39/7.5) = 6 TREES
- 2b. PARKING LOT HEDGE: MIN. 42" TALL EVERGREEN SHRUB HEDGE AROUND VISITOR/CUSTOMER PARKING
- 2c. BUILDING ENVELOPE PLANTINGS: MIN. 25% OF BUILDING FACE (225*.25) = 57 FEET WITH MIN. PLANTING BED DIM. OF 5'

- 56 TREES REQUIRED; 13 EVERGREEN TREES REQUIRED; 16 LARGE EVERGREEN SHRUBS REQUIRED; WALL/FENCE REQUIRED ALONG HYDE PARK PROPERTY
- WAIVER TO BE REQUESTED FOR TREES; PARKING LOT HEDGE TO BE PROVIDED WHERE POSSIBLE AND NOT PREVENTING VISIBILITY TO OWNER PRODUCT; 57 FEET OF BUILDING FACADE TO BE PROVIDED WITH PLANTINGS

LANDSCAPING NOTES:

- LANDSCAPE INSTALLER SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. INSTALLER SHALL ENSURE THAT FINAL GRADES HAVE BEEN ESTABLISHED AND THE SITE IS READY FOR LANDSCAPE INSTALLATION.
- LANDSCAPE INSTALLER SHALL MAINTAIN THE LANDSCAPE IMPROVEMENT AREAS IN A CLEAN CONDITION, REMOVING DEBRIS DAILY AND AT THE COMPLETION OF THE INSTALLATION.
- INSTALLER SHALL LAYOUT ALL BEDS AND POSITION PLANTS PER THE PLANS. ADJUST AS REQUIRED FOR FIELD CONDITIONS. REPORT SIGNIFICANT ADJUSTMENTS TO THE OWNER FOR APPROVAL PRIOR TO PLANT INSTALLATION. ALL BED AREAS SHALL BE SPRAYED WITH HERBICIDE AS NEEDED TO KILL AND/OR REMOVE ALL WEED OR GRASS VEGETATION.
- EXCEPT FOR TREE SPADE INSTALLATIONS, ALL TREE PITS SHALL BE EXCAVATED TO A DEPTH SO THAT THE ROOT BALL WILL REST ON SOLID SOIL AT THE PROPER HEIGHT. STREET TREES PLANTING PITS SHALL BE EXCAVATED AND WORKED IN A RECTANGULAR FORM WITH THE SMALL DIMENSION TWICE THE DIAMETER OF THE ROOT BALL AND THE LARGE DIMENSION AT LEAST THREE TIMES THE DIAMETER OF THE ROOT BALL. OPEN AREA TREE PITS SHALL BE EXCAVATED TO A MINIMUM DIMENSION OF TWICE THE ROOTBALL WIDTH. TREES PLANTED ON SLOPES OR SIDE SWALES SHALL BE INSTALLED AT A HEIGHT RELATING TO THE UPHILL SIDE OF THE PIT, AND MOUNDED WITH SOIL AROUND THE LOWER SIDE. ALL SIDES AND BOTTOM OF TREE PLANTING PITS SHALL BE SCARIFIED OR LOOSENED TO PERMIT ROOT GROWTH. EXCAVATED SOILS THAT HAVE BEEN PREVIOUSLY UNDISTURBED SHALL BE LOOSENED AND UTILIZED FOR BACKFILL. COMPACTED SOILS THAT CANNOT BE RESTORED TO A REASONABLE PLANTING SOIL SHALL BE REMOVED AND REPLACED WITH FRIABLE NATIVE SOILS FROM THE REGION.
- ALL SHRUB PLANTING PITS, LANDSCAPE BEDS AND PLANTING MASS AREAS SHALL BE WORKED TOWN OF EASTON 2018 EDITION ZONING ORDINANCE ARTICLE X 10-62 TO A DEPTH OF 12" (OR RAISED SLIGHTLY TO ACHIEVE A 12" FRIABLE SOIL DEPTH). SHRUB PLANTING AREAS SHALL BE WORKED TO 12" MINIMUM OUTSIDE THE ROOT BALL.
- ALL LANDSCAPE BEDS SHALL BE "V" EDGED AND MULCHED WITH MINIMUM 3" DOUBLE SHREDDED HARDWOOD BARK MULCH, OR APPROVED EQUAL. MULCH TO FENCE LINES OR BACK OF CURBS WHERE APPROPRIATE TO ELIMINATE NARROW GRASS AREAS. AVOID MULCH PILED AGAINST TREE TRUNKS, ETC.
- ALL TREES TO BE STAKED AND GUYED WITH HARDWOOD STAKES, MINIMUM OF TWO (2) - 5' LONG, OR OTHER APPROVED GUYING SYSTEM. STAKES SHALL BE DRIVEN INTO STABLE SOILS. PROVIDE WIRE GUYS WITH RUBBER PROTECTANT OR OTHER APPROVED INDUSTRY PRACTICE.
- LANDSCAPE INSTALLER SHALL MAINTAIN ALL PLANT MATERIALS THROUGH THE COMPLETION OF THE LANDSCAPE INSTALLATION, AND THEN AS REQUIRED BY THE OWNER.
- AT THE COMPLETION OF THE LANDSCAPE INSTALLATION (OR BY PHASED COMPLETION IF PROVIDED FOR ON THE PLAN), THE OWNER, OR HIS DESIGNATED REPRESENTATIVE SHALL REQUEST AN INSPECTION BY TOWN OF EASTON.



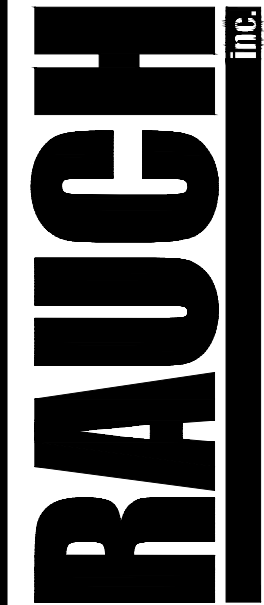
LANDSCAPING DETAILS

OF THE LANDS OF

PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR ADBMD ROUTE 50, LLC



Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 8081 | Fax: 410 770 3987

REVISIONS

REV. #	DATE	DESCRIPTION
1		



DATE:	6/28/2024
SCALE:	1" = 40'
DRAWN BY:	JWL
DESIGNED BY:	JWL
APPROVED BY:	JWL

SHEET NO.:
C-405

FOR REVIEW

HATCH LEGEND

PAVEMENT PARKING LOT

ESD BED BOTTOM

GRAVEL LOT

FLAT AREA FOR UTV/ATV STORAGE

CONCRETE

PROPOSED SITE FEATURES

1

20,092 SF PRESTON POWERSPORTS BUILDING

2

6" SDR-35 SEWER

3

SEWER CLEANOUT

4

OIL/WATER SEPARATOR

5

1.5" HDPE SDR-11 FORCE MAIN

6

E-ONE GRINDER PUMP AND ALARM PANEL

7

6" FIRE SUPPRESSION LINE

8

4" UNDERGROUND ELECTRIC CONDUIT

9

3 PHASE TRANSFORMER WITH 6" BOLLARDS

10

2" POTABLE WATER LINE

11

2" COMMERCIAL WATER METER

12

1-2" COMMUNICATION CONDUIT

13

6" WATER MAIN TO CONNECT INTO EXISTING 10" WATER MAIN

14

500 GAL. FUEL TANK ON A CONCRETE PAD

15

6" WATER SERVICE WITH TAPPING SLEEVE AND 6" C509 AWWA GATE VALE

16

500 GAL. FUEL TANK ON A CONCRETE PAD

17

3 - 4" DUCTS FOR SECONDARY SERVICE

18

2 - 4" DUCTS FOR PRIMARY SERVICE

19

6" WATER GATE VALVE

20

FIRE HYDRANT

21

DIRECTIONAL DRILL OF A 1.5" FORCEMAIN

APPROVED:

TOWN OF EASTON - TOWN ENGINEER

DATE

APPROVED:

TOWN OF EASTON PLANNING AND ZONING

DATE

APPROVED:

EASTON UTILITIES - ENGINEER

DATE

UTILITY PLAN

OF THE LANDS OF

PRESTON POWERSPORTS

TAX MAP 25, GRID 6, PARCEL 113

FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR ADBMD ROUTE 50, LLC

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Engineering | Survey | Architecture | Environmental

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REVISIONS

REV. #	DATE	DESCRIPTION
1		

MISS. UTILITY OF DELAWARE

CALL BEFORE YOU DIG

811

MISS. UTILITY OF DELAWARE

DATE: 6/28/2024

SCALE: 1" = 40'

DRAWN BY: JWJ

DESIGNED BY: JWJ

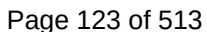
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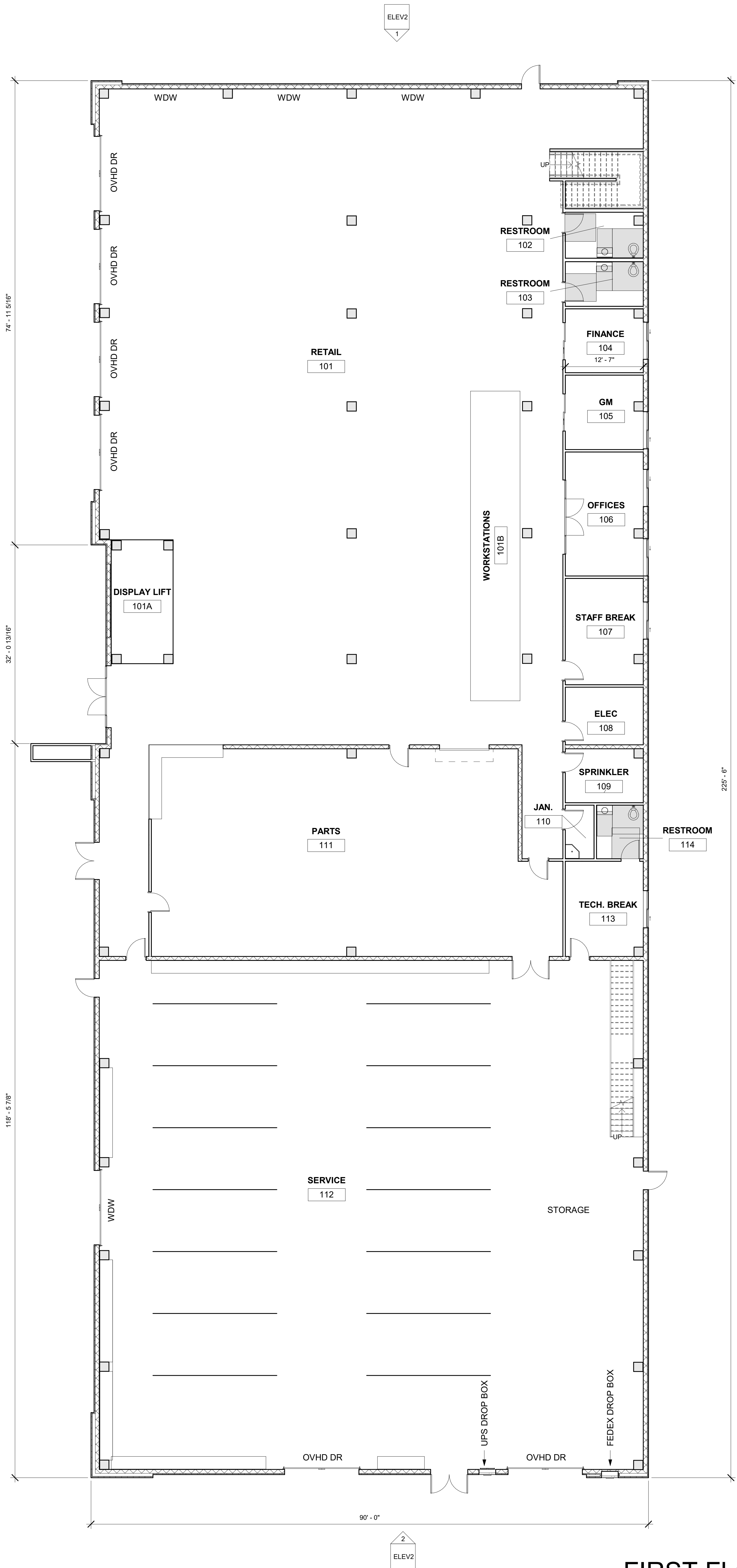
SHEET NO.:

C-501

FOR REVIEW

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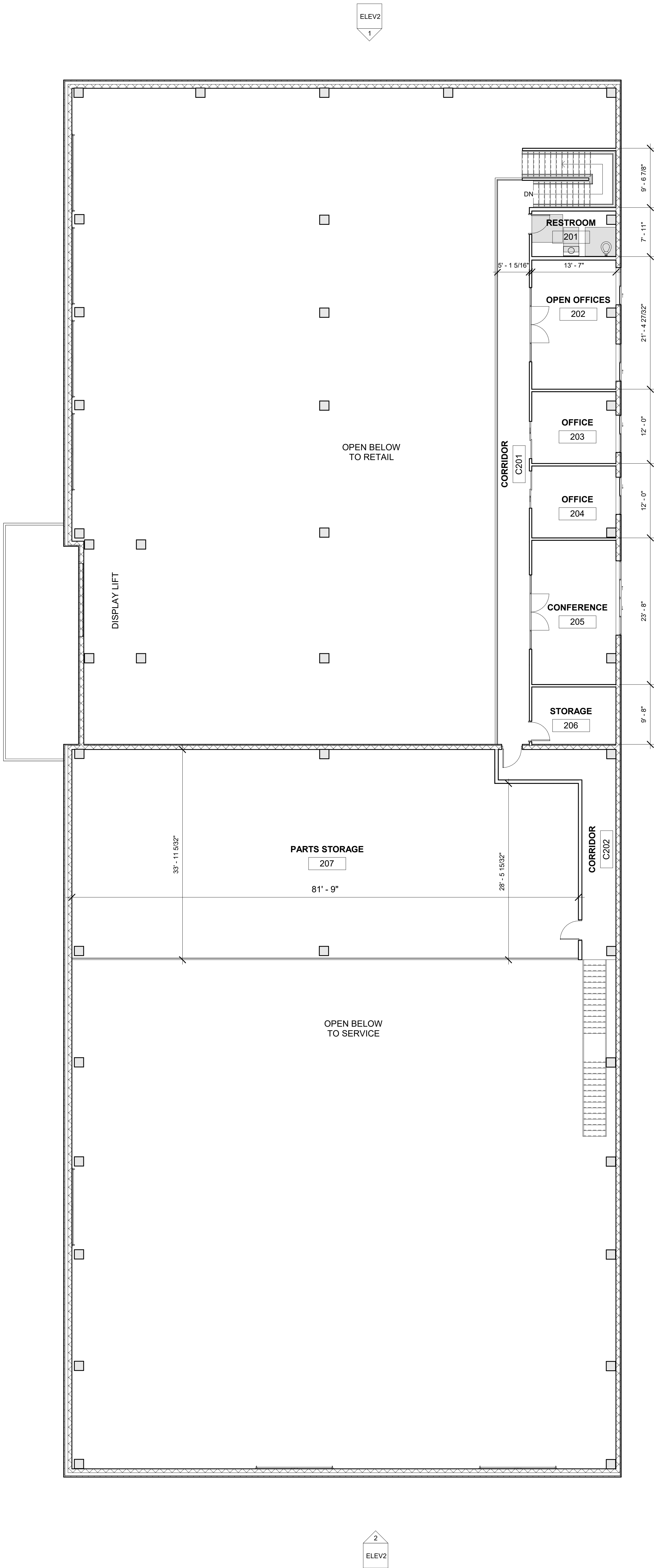


FIRST FLOOR PLAN



office: 410.770.9081 | fax: 410.770.3667
email: design@raucheng.com | web: www.raucheng.com
106 N. Harrison St - Easton, MD 21601

PRESTON POWERSPORTS
SCHEMATIC DESIGN
DATE: 6/19/2024

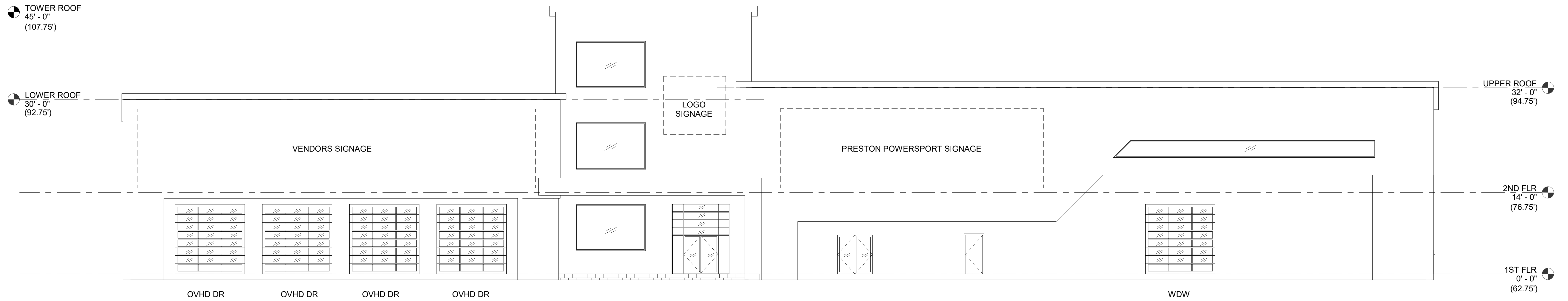


SECOND FLOOR PLAN

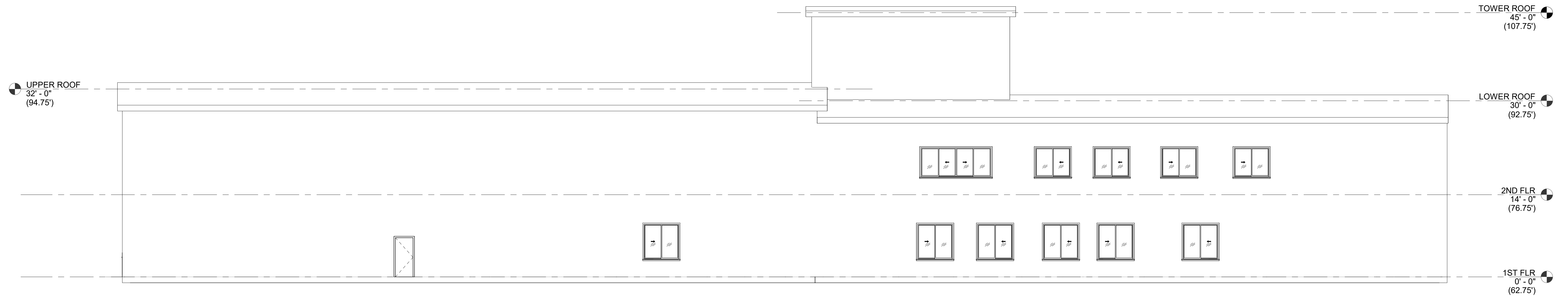


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1 - WEST ELEVATION

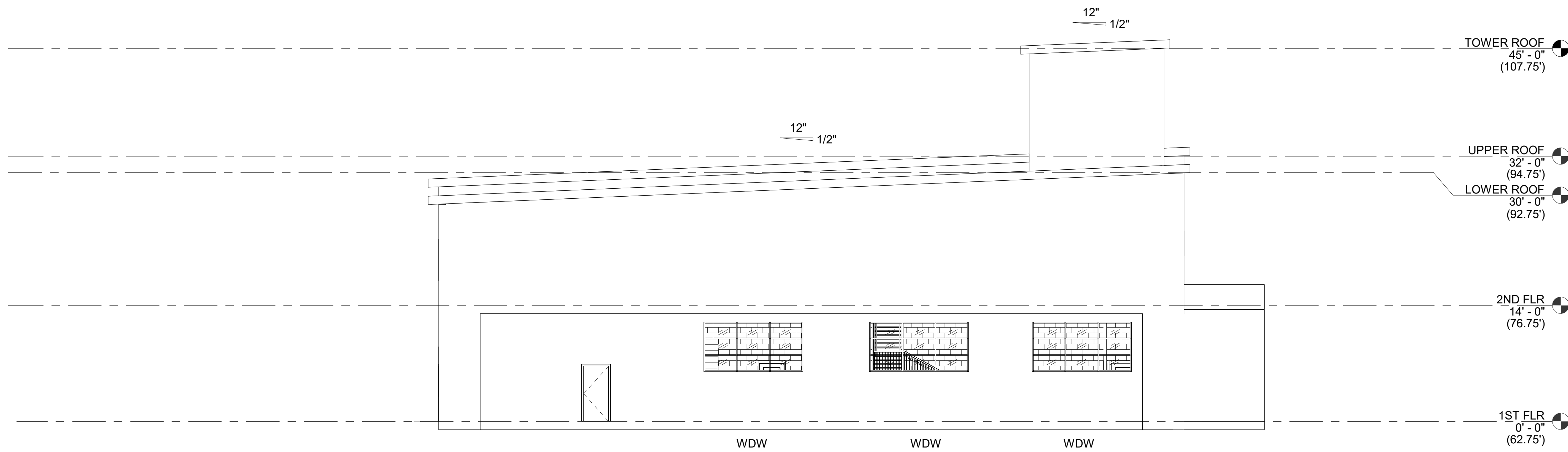


2 - EAST ELEVATION

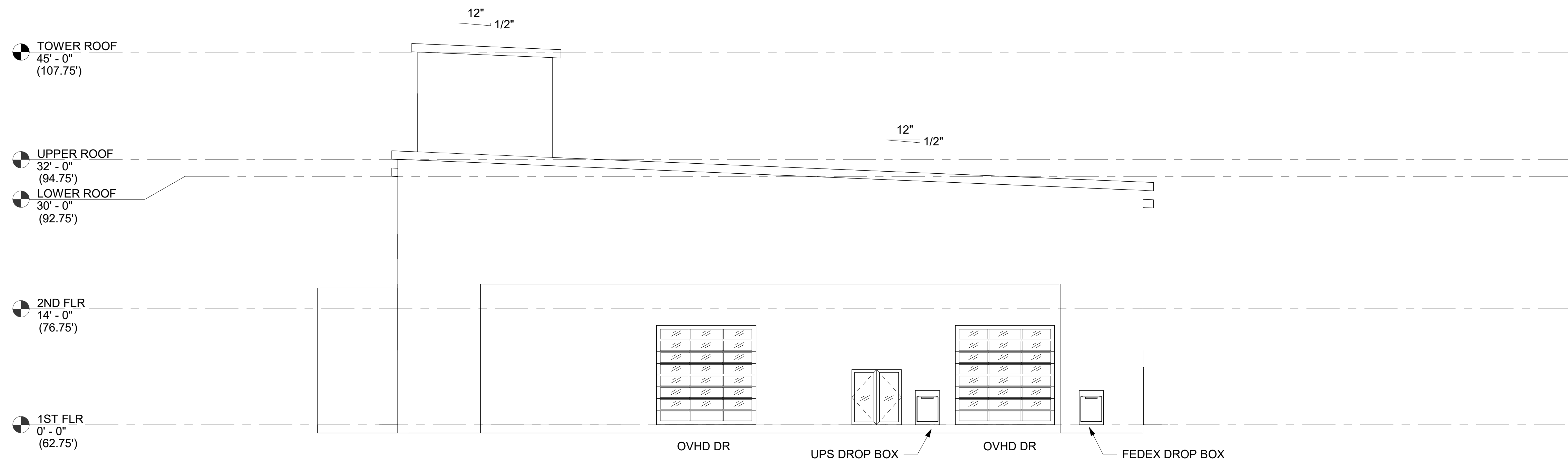


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 DATE: 6/19/2024



1 - NORTH ELEVATION



2 - SOUTH ELEVATION



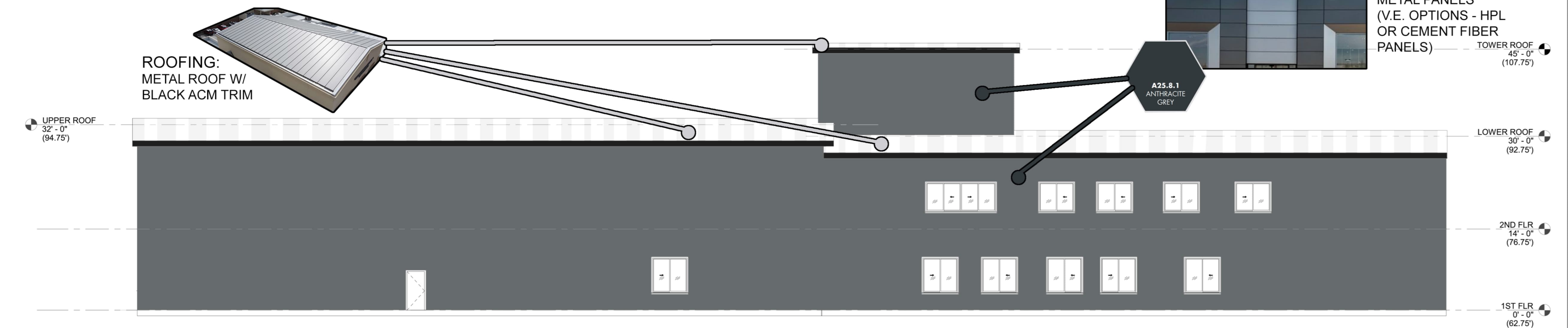
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PRESTON POWERSPORTS
SCHEMATIC DESIGN
DATE: 6/19/2024



1 - WEST ELEVATION

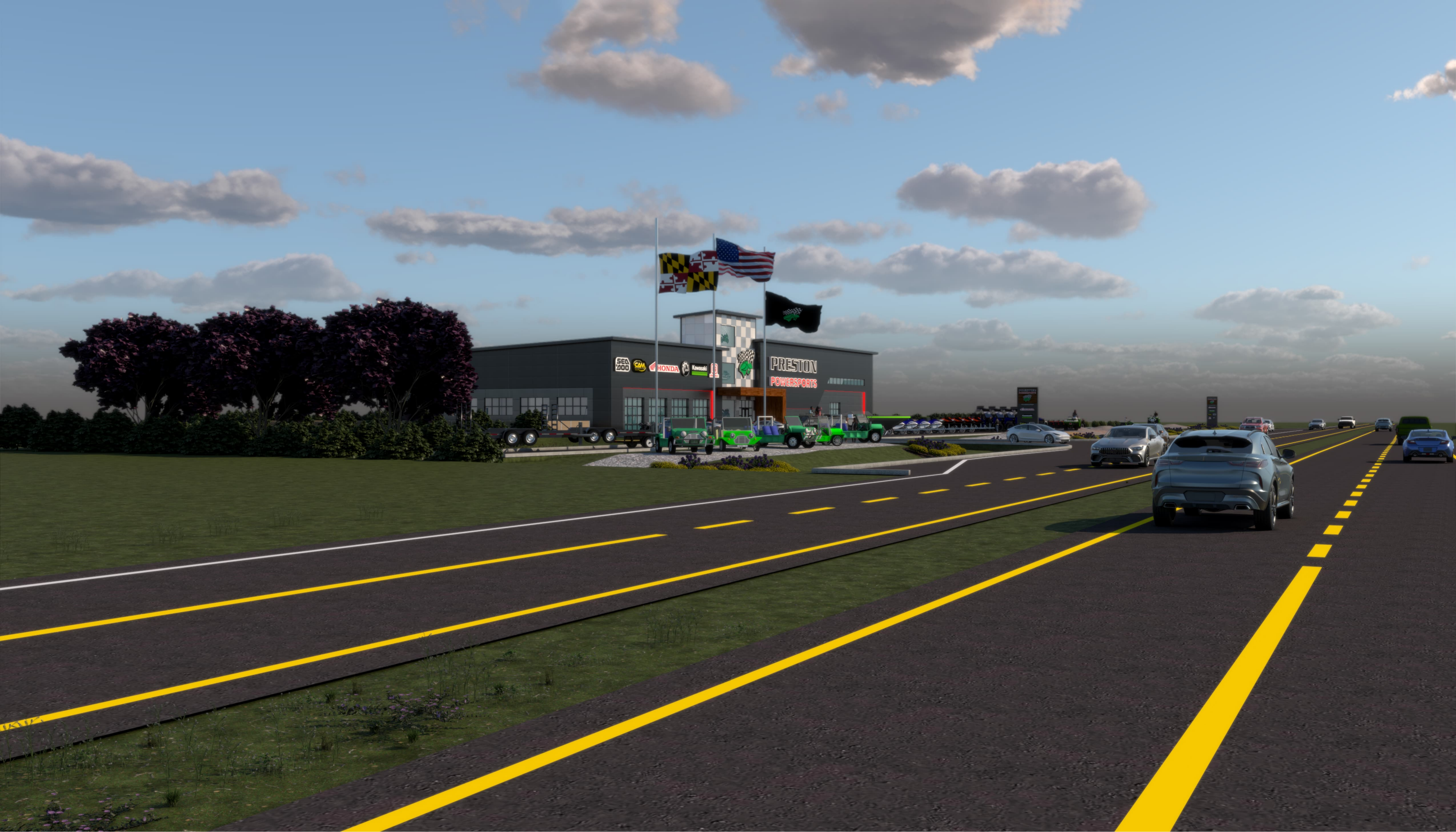
OVHD DOOR:
BLACK ALUMN.
FRAME, CLEAR,
NON-MIRRORED
GLAZING



2 - EAST ELEVATION



















**SITE DEVELOPMENT
STORMWATER MANAGEMENT ANALYSIS
FOR
PRESTON POWERSPORTS
9719 OCEAN GATEWAY
EASTON, MD 21601**

**PREPARED FOR:
ADBMD ROUTE 50, LLC**

**PREPARED BY:
RAUCH, INC
106 N. HARRISON STREET
EASTON, MD 21601**

JUNE 4TH, 2024

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

TABLE OF CONTENTS

SECTION 1.....	Stormwater Management Narrative
SECTION 2.....	ESD Calculation Spreadsheets
SECTION 3.....	Pre-Development Quantity Calculations
SECTION 4.....	Post-Development Quantity Calculations
SECTION 5.....	Pre & Post Drainage Map
SECTION 6.....	Soil Report

SECTION 1 – STORMWATER MANAGEMENT NARRATIVE

SITE DEVELOPMENT STORMWATER MANAGEMENT NARRATIVE

The proposed Preston Powersports facility is located on a 3.25-acre parcel of land with an existing driveway and trees. 100% of the existing soils within the proposed limits of disturbance are Hydrologic Soil Type D. This project is located within the Miles River watershed (02130502).

The proposed development plan will add 1.34 acres of impervious surfaces, comprising of a building, gravel lots, sidewalk/concrete pads, and asphalt parking. Based on the conditions of the existing parcel, the proposed development will be categorized as “New Development”. The spreadsheets found in Section 2 of this report calculates the required ESD volume to be 14,137 CF of ESD storage.

Water quality will be met through a submerged gravel wetland facility. Prior to entering the submerged gravel wetlands facility water will go through a forebay as a form of pretreatment. The submerged gravel wetlands will have a series of distribution pipes that have risers to the surface to collect surface water. This water will flow through the stone reservoir and be collected by the collection pipes. The rim of the outfall structure will be set 2’ above the bed elevation. The water will discharge into existing ditch along Route 50 and within SHA’s Right-of-Way. The 2, 10, and 100-yr storm will be contained within the submerged gravel wetlands. All Stormwater practices are designed in accordance with MDE Chap. 5 Guidelines.

The volume provided within the submerged gravel wetlands and forebay is as follows:
Total Storage: 16,737 CF

Water quantity control is required for both the 2-year, 10, and 100-year storm events. The table for all study points are shown below for existing and proposed.

Study Point #1			
	2-YR (CFS)	10-YR (CFS)	100-YR (CFS)
Existing	4.40	8.59	17.28
Proposed	3.79	8.47	28.22

ESD SUMMARY CHART

DRAINAGE AREA	TYPE OF ESD PRACTICE	NAME OF ESD PRACTICE (STRUCTURE NAME)	ON-SITE OR OFF-SITE STRUCTURE	RUNOFF CURVE NUMBER (RON) WEIGHTED	MARYLAND GRID COORDINATE NAD 83 METERS NORTHING	MARYLAND GRID COORDINATE NAD 83 METERS EASTING	ESD PRACTICE TOTAL DRAINAGE AREA (ACRES)	ESD PRACTICE IMPERVIOUS DRAINAGE AREA (ACRES)	SURFACE AREA OF ESD PRACTICE (ACRES)	TARGET PE (IN.)	ACTUAL PE (IN.)	TARGET ESDv (FT. ³)	ACTUAL ESDv (ft. ³)
1	SGW-1	SUBMERGED GRAVEL WETLANDS #1	ON	93	420348.1336	1580312.5221	2.672	1.924	0.125	1.80	2.13	14,137	16,737
2													
3													
4													
5													
6													
7													
8													
9													
10													
TOTAL/ AVERAGE				93			2.672	1.924	0.125	1.80	2.13	14,137	16,737

APPROVAL


 TOWN ENGINEER

1/2020
 DATE

TOWN OF EASTON
STANDARD DETAILS

ESD SUMMARY CHART



ISSUED: JANUARY 2020

STANDARD NO.: TOE-SWM-7.01

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SECTION 2 – ESD CALCULATION SPREADSHEETS

5/1/2024

EXISTING LOD COVERAGE

COVERAGE DESCRIPTION	COVERAGE CATEGORY	COVERAGE AREA SQ-FT	SOIL TYPE
TREES/VEGETATION	PERVIOUS	146623 D	
TREES/VEGETATION	IMPERVIOUS	19521 D	

TOTAL SITE AREA

EXISTING IMPERVIOUS AREA

PERCENT IMPERVIOUS

166144 SQ-FT

19521 SQ-FT

12%

PROPOSED LOD COVERAGE

COVERAGE DESCRIPTION	COVERAGE CATEGORY	COVERAGE AREA SQ-FT
IMPERVIOUS PAVING	IMPERVIOUS	75396
ROOFS	IMPERVIOUS	20093

TOTAL SITE AREA

PROPOSED IMPERVIOUS AREA

PERCENT IMPERVIOUS

166144 SQ-FT

95489 SQ-FT

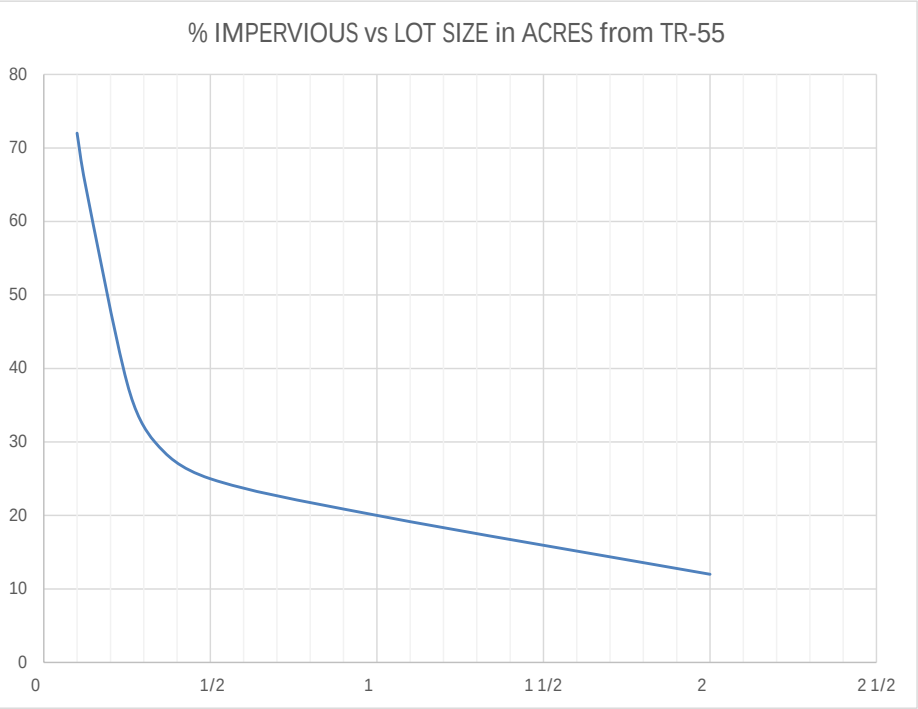
57%

PERCENT HSG A	0%
PERCENT HSG B	0%
PERCENT HSG C	0%
PERCENT HSG D	100%

0

FROM TR-55		
LOT SIZE , % IMPERVIOUS		
	2.00	12
	1.00	20
1/2	0.50	25
1/3	0.33	30
1/4	0.25	38
1/8	0.13	65
	0.10	72

0.166667



Maryland ESD Calculations and 10% Phosphorus Removal

Last Update: 1/6/2019 Rauch Inc.

Project Name:	Preston Powersports
Date:	1-May-24
	data input cells
	calculation cells146623

Step 1: Complete ESD Implementation Checklist

Check all of the Following ESD Practices That Were Implemented at Site	Yes - No - N/A
Environmental Mapping Was Conducted at Site Prior to Layout	YES
Natural Areas Were Conserved (e.g., forests, wetlands, steep slopes, floodplains)	YES
Stream, Wetland and Shoreline Buffers Were Reserved	YES
Disturbance of Permeable Soils Was Minimized	YES
Natural Flow Paths Were Maintained Across the Site	YES
Building Layout Was Fingerprinted to Reduce Clearing and Grading at Site	YES
Site Grading Promoted Sheetflow From Impervious Areas to Pervious Ones	YES
Site Design Was Evaluated to Reduce Creation of Needless Impervious Cover	YES
Site Design Was Evaluated to Maximize Disconnection of Impervious Cover	YES
Site Design Was Evaluated to Identify Potential Hotspot Generating Area for Stormwater Treatment	YES
Erosion and Sediment Control Practices and Post Construction Stormwater Management Practices Were Integrated into a Comprehensive Plan	YES
Tree PlantingWas Used at the Site to Convert Turf Areas into Forest	YES

Step 2: Calculate Site Imperviousness and Water Quality Volume, WQv (for redevelopment)

defined as A single tract, lot, parcel of land or combination of tracts, lots parcels of land that are in one ownership or are contiguous and in diverse ownership where development is to be performed as part of a unit, subdivision or project. See page 5.117 in the design handbook. This means that a project may be classed as redevelopment even if the LOD is less than 40% impervious

Total SITE Area, A (acres or sq-ft)	140758
Existing SITE Impervious Area (acres or sq-ft)	11887
SITE percent impervious	8%
Development Category (for ESD)	New Development

LOD Area, A (acres)	3.81
Existing LOD Impervious Surface Area (acres)	0.45
Proposed LOD Impervious Surface Area (acres)	2.19
Rainfall Depth, P (in)	1.0

Existing LOD Imperviousness, I _{pre}	12%
Proposed LOD Imperviousness, I _{post}	57%

Water Quality Calculation for Redevelopment Only	
Required Treatment Area (acres)	0.000
Runoff Coefficient, Rv	0.95

Water Quality Volume, WQv (cf)	0
--------------------------------	---

Step 4: Calculate Environmental Site Design (ESD) Rainfall Target, P_E

% Soil Type A	0%	RCN Soil Type A	72.99
% Soil Type B	0%	RCN Soil Type B	81.99
% Soil Type C	0%	RCN Soil Type C	86.99
% Soil Type D	100%	RCN Soil Type D	90.49

Target Pre-Developed Condition, RCN _{woods}	77.00000	Post-Developed Condition, RCN	90.49
--	----------	-------------------------------	-------

Soil Type A ESD Rainfall Target, P _E (in)	0.00
Soil Type B ESD Rainfall Target, P _E (in)	0.00
Soil Type C ESD Rainfall Target, P _E (in)	0.00
Soil Type D ESD Rainfall Target, P _E (in)	1.80
	1yr
Maximum P _E (in)	2.7

Runoff depths for H and H analysis		
2yr	10yr	100yr
3.4	5.3	7.6

Site ESD Rainfall Target, P _E (in)	1.80
---	------

ESD Runoff Depth, Q _E (in)	1.02
---------------------------------------	------

ESD Runoff Volume, ESDv (cf)	14,137
------------------------------	--------

Total Treatment Volume (cf)	14,137
-----------------------------	--------

4176567975396

Step 3: Calculate Phosphorous Removal Requirement, RR for Critical Area Sites

Development Category (for 10%)	New Development
--------------------------------	-----------------

New Development	
Average Annual Predevelopment Load, L _{pre} (lbs P / yr)	1.91

Redevelopment:	
Predevelopment Runoff Coefficient, Rv _{pre}	0.16
Phosphorous Mean Concentration, C (mg/L)	0.3
Average Annual Predevelopment Load, L _{pre} (lbs P / yr)	1.45

Post-Development Runoff Coefficient, Rv _{post}	0.57
Average Annual Post-Development Load, L _{post} (lbs P / yr)	5.30

Removal Requirement, RR (lbs P / yr)	3.58
--------------------------------------	------

Step 5: Select Nonstructural Practices to Treat the ESD Rainfall Target

	P _E Credit Description	Contributing Drainage Area (sf)	Direct WQv or ESDv Received by Practice (cf)	WQv or ESDv from Up-Gradient Practices (cf)	Average P _E Credit (in)	WQV or ESDv credit (cf)	Runoff Volume Remaining (cf)
<i>Nonstructural Practices</i>							
Disconnection of Rooftop Runoff 1	Up to 1 inch credit provided based upon disconnection flow length.	0	0	N/A	#DIV/0!	0	0
Disconnection of Rooftop Runoff 2	Up to 1 inch credit provided based upon disconnection flow length.	0	0	N/A	#DIV/0!	0	0
Disconnection of Non-Rooftop Runoff 1	Up to 1 inch credit provided based upon disconnection and contributing flow lengths.	0	0	N/A	#DIV/0!	0	0
Disconnection of Non-Rooftop Runoff 2	Up to 1 inch credit provided based upon disconnection and contributing flow lengths.	0	0	N/A	#DIV/0!	0	0
Sheetflow to Conservation Areas 1	Up to 1 inch credit provided based upon conservation area width.	0	0	0	#DIV/0!	0	0
Sheetflow to Conservation Areas 2	Up to 1 inch credit provided based upon conservation area width.	0	0	0	#DIV/0!	0	0

Step 6: Select Micro-Scale Practices to Treat the ESD Rainfall Target

	P _E Credit Description	Contributing Drainage Area (sf)	Direct ESDv Received by Practice (cf)	WQv or ESDv from Up-Gradient Practices (cf)	WQv or ESDv credit (cf)	Runoff Volume Remaining (cf)
<i>Micro-Scale Practices</i>						
Green Roof (Level 1)	ESDv credit is based on roof thickness	0	0	N/A	0	0
Green Roof (Level 2)	ESDv credit is based on roof thickness	0	0	N/A	0	0
Pemeable Pavement (A Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Pemeable Pavement (B Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Pemeable Pavement (C Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0
Rainwater Harvesting	ESDv credit is based on design storage volume and annual use	0	0	0	0	0
Submerged Gravel Wetlands	ESDv credit is based on design storage volume	146,830	18,140	14088	16,737	15,492
Infiltration berms	ESDv credit is based on design storage volume	0	0	0	0	0
Rain Gardens 1	ESDv credit is based on design storage volume	0	0	0	0	0
Rain Gardens 2	ESDv credit is based on design storage volume	0	0	0	0	0
Micro-Bioretention 1	ESDv credit is based on design storage volume	0	0	0	0	0
Micro-Bioretention 2	ESDv credit is based on design storage volume	0	0	0	0	0
Landscape Infiltration	ESDv credit is based on design storage volume	0	0	0	0	0
Grass Swales 1	ESDv credit is based on design storage volume	0	0	0	0	0
Grass Swales 2	ESDv credit is based on design storage volume	0	0	0	0	0
Bio-swales 1	ESDv credit is based on design storage volume	0	0	0	0	0
Bio-swales 2	ESDv credit is based on design storage volume	0	0	0	0	0
Wet Swales	ESDv credit is based on design storage volume	0	0	0	0	0

Critical Area Credits

Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00

Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
80%	#DIV/0!	0.00	0.00	0.00
80%	#DIV/0!	0.00	0.00	0.00
40%	#DIV/0!	0.00	0.00	0.00
45%	#DIV/0!	0.00	0.00	0.00
55%	61%	8.05	4.93	3.12
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
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#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00
#DIV/0!	#DIV/0!	0.00	0.00	0.00

Step 7: Check for ESDv to MEP compliance and Revise Site If Necessary

Drainage Area Treated (sf)		146,830	WQv or ESDv Treated (cf) using ESD practices		16,737	Total Load Reduction (lbs P / year)		4.93
			Pe achieved (inches)		2.13	Total Load Reduction Remaining (lbs P / yr)		0.00
			Entire ESDv Treated Through ESD Practices?		YES			
			ESDv Remaining? (cf)		0			
			If ESDV is not fully treated, is ESD to MEP achieved?		NO			
			Redevelopment WQv Requirements Met Through ESD Practices?		N/A			
			WQv Remaining? (cf)		0			
			New Development WQv Requirements Met Through ESD Practices?		YES			
			WQv Remaining? (cf)		0			

New Development Water Quality Volume Requirements

Required Treatment Area (acres)	3.81
Runoff Coefficient, Rv	0.57
Water Quality Volume, WQv (cf)	7,854

Step 8: Determine Reduced RCN and Volume Management Requirements Based Upon PE Achieved

Reduced RCN for Type A Soils	N/A						
Reduced RCN for Type B Soils	N/A						
Reduced RCN for Type C Soils	N/A						
Reduced RCN for Type D Soils	N/A						
Composite Reduced RCN CN* 1 yr	N/A	Target Reduced RCN woods 1 yr	77.00				
QE (in) for Reduced RCN	N/A	QE (in) for pre developed RCN	0.87				
V (ft³) for Reduced RCN	N/A	V (ft³) for pre developed RCN	12026				
Volume Management Required (cf)	0						
Volume Required for structural practices (cf)	0						

Composite reduced runoff curve number for H and H analysis (TR-55)

S	Ia	Pe achived x Rv
1.05	0.21	1.21
2 yr	10 yr	100 yr
2.40	4.22	6.47
1.19	3.01	5.26
74.33	78.45	80.09

Return period
Qr
Qr-(Pe achieved x Rv)
CN*

Step 9: Select Structural Practices to Meet Volume Management Requirements

	Contributing Drainage Area (sf)	% Impervious Cover	Direct ESDv Received by Practice (cf)	ESDv from Upstream Practices (cf)	Treatment Volume (cf)			
Structural Practices								
Stormwater Ponds (Level 1)	0	0%	0	0	0			
Stormwater Ponds (Level 2)	0	0%	0	0	0			
Stormwater Wetlands (Level 1)	0	0%	0	0	0			
Stormwater Wetlands (Level 2)	0	0%	0	0	0			
Stormwater Filtering Systems (Level 1)	0	0%	0	0	0			
Stormwater Filtering Systems (Level 2)	0	0%	0	0	0			
Stormwater Infiltration (Level 1)	0	0%	0	0	0			
Stormwater Infiltration (Level 2)	0	0%	0	0	0			
Total structural CPv or WQv provided					0			
WQv Requirement Met through structural practices?					YES			
WQv Remaining (cf)					0			
CPv Requirement Met through structural practices?					YES			
CPv Remaining (cf)					0			

Critical Area Credits

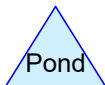
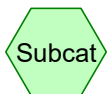
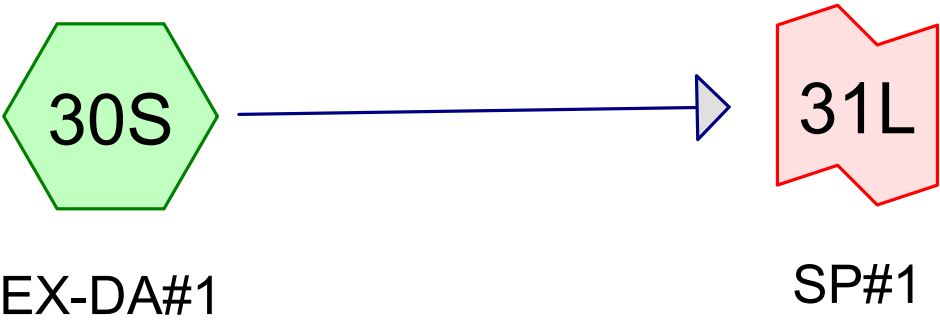
Phosphorous Removal Efficiency	Adjusted Phosphorus Removal Efficiency	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
50%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
50%	0%	0.00	0.00	0.00
75%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
65%	0%	0.00	0.00	0.00
60%	0%	0.00	0.00	0.00
90%	0%	0.00	0.00	0.00
Total Load Reduction (lbs P / year)				4.93
Total Load Reduction Remaining (lbs P / yr)				0.00

	Contributing Drainage Area (sf)	% Impervious Cover ----- RV	To fully treat sub area ----- PE required ----- WQV required	Max available WQv or ESDv from CDA (cf)	Area of upstream catchment (sf)	WQv or ESDv from Up- Gradient Practices (cf)	Total catchment area ----- Total ESDv to practice	Practice Specific Parameter(s)				WQV or ESDv provided (cf)	Runoff Volume Remainin g (cf)	Down-Gradient Practice and Row	SOIL TYPE	Baseline Phosphor ous Removal Efficiency	Adjusted Removal Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remainin g Load (lbs/yr)	Watershe d-inches treated (PE Provided)	Annual Rainfall Treated (%)
Micro-Scale Practices																						
Submerged Gravel Wetlands #1	45,413	0%	1.00	511	101417	14088	146,830	Bed Surface Area (sf)	Top of Ponding Surface Area (sf)	Ponding Depth (ft)	Media Depth (ft)	13,196	1,403			60%	76.73%	3.65	2.80	0.85	2.44	105.59%
		4,176	5,679					2	2													
Forebay #1	101,417	80%	1.80	17,629	0	0	101,417	Bed Surface Area (sf)	75396	Ponding Depth (ft)	Media Depth (ft)	3,541	14,088	Submerged Gravel Wetlands 1		60%	48.53%	4.40	2.14	2.27	0.54	66.78%
		0.7725771	11753					1,261	2,280	2	0											
Total	146,830			18,140		14,088						16,737	15,492			55%	61.30%	8.05	4.93	3.12	1.40	91.29%

	Contributing Drainage Area (sf)	% Impervious Cover ----- RV	To fully treat sub area ----- PE required ----- WQV required	Max available WQv or ESDv from CDA (cf)	Area of upstream catchment (sf)	WQv or ESDv from Up- Gradient Practices (cf)	Total catchment area ----- Total ESDv to practice	Practice Specific Parameter(s)				WQV or ESDv provided (cf)	Runoff Volume Remainin g (cf)	Down-Gradient Practice and Row	SOIL TYPE	Baseline Phosphor ous Removal Efficiency	Adjusted Removal Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remainin g Load (lbs/yr)	Watershe d-inches treated (PE Provided)	Annual Rainfall Treated (%)
Micro-Scale Practices																						
Submerged Gravel Wetlands #1	45,413	0%	1.00	511	101417	14088	146,830	Bed Surface Area (sf)	Top of Ponding Surface Area (sf)	Ponding Depth (ft)	Media Depth (ft)	13,196	1,403			60%	76.73%	3.65	2.80	0.85	2.44	105.59%
		14599	4,176				5,679	2	2	C/D												
Forebay #1	101,417	80%	1.80	17,629	0	0	101,417	Bed Surface Area (sf)	Top of Ponding Surface Area (sf)	Ponding Depth (ft)	Media Depth (ft)	3,541	14,088	Submerged Gravel Wetlands 1		60%	48.53%	4.40	2.14	2.27	0.54	66.78%
		17629	1,261				2,280	2	0	C/D												
Total	146,830			18,140		14,088						16,737	15,492			55%	61.30%	8.05	4.93	3.12	1.40	91.29%

SECTION 3 – PRE-DEVELOPMENT QUANTITY CALCULATIONS

EXISTING



EX and PR

Prepared by Rauch Inc

Printed 5/1/2024

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Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 5020 MD Talbot

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	NOAA 24-hr	C	Default	24.00	1	3.33	2
2	10-Year	NOAA 24-hr	C	Default	24.00	1	5.20	2
3	100-Year	NOAA 24-hr	C	Default	24.00	1	8.98	2

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.257	80	>75% Grass cover, Good, HSG D (30S)
0.641	98	Paved parking, HSG D (30S)
3.898	83	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
3.898	HSG D	30S
0.000	Other	
3.898		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	3.257	0.000	3.257	>75% Grass cover, Good	30S
0.000	0.000	0.000	0.641	0.000	0.641	Paved parking	30S
0.000	0.000	0.000	3.898	0.000	3.898	TOTAL AREA	

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 30S: EX-DA#1Runoff Area=169,795 sf 16.44% Impervious Runoff Depth>1.56"
Flow Length=756' Tc=32.9 min CN=83 Runoff=4.40 cfs 0.508 af**Link 31L: SP#1**Inflow=4.40 cfs 0.508 af
Primary=4.40 cfs 0.508 af**Total Runoff Area = 3.898 ac Runoff Volume = 0.508 af Average Runoff Depth = 1.56"**
83.56% Pervious = 3.257 ac 16.44% Impervious = 0.641 ac

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"
Printed 5/1/2024

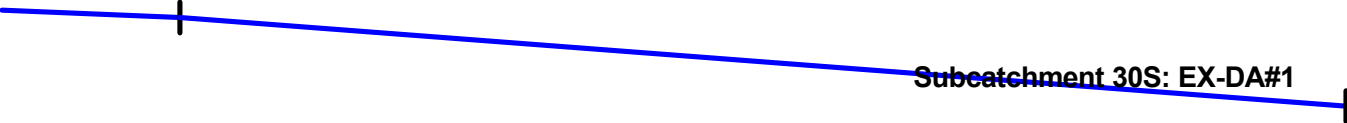
Summary for Subcatchment 30S: EX-DA#1

Runoff = 4.40 cfs @ 12.47 hrs, Volume= 0.508 af, Depth> 1.56"
Routed to Link 31L : SP#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
141,874	80	>75% Grass cover, Good, HSG D
13,874	98	Paved parking, HSG D
14,047	98	Paved parking, HSG D
169,795	83	Weighted Average
141,874		83.56% Pervious Area
27,921		16.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	100	0.0080	0.08		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"
13.0	656	0.0144	0.84		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
32.9	756	Total			



EX and PR

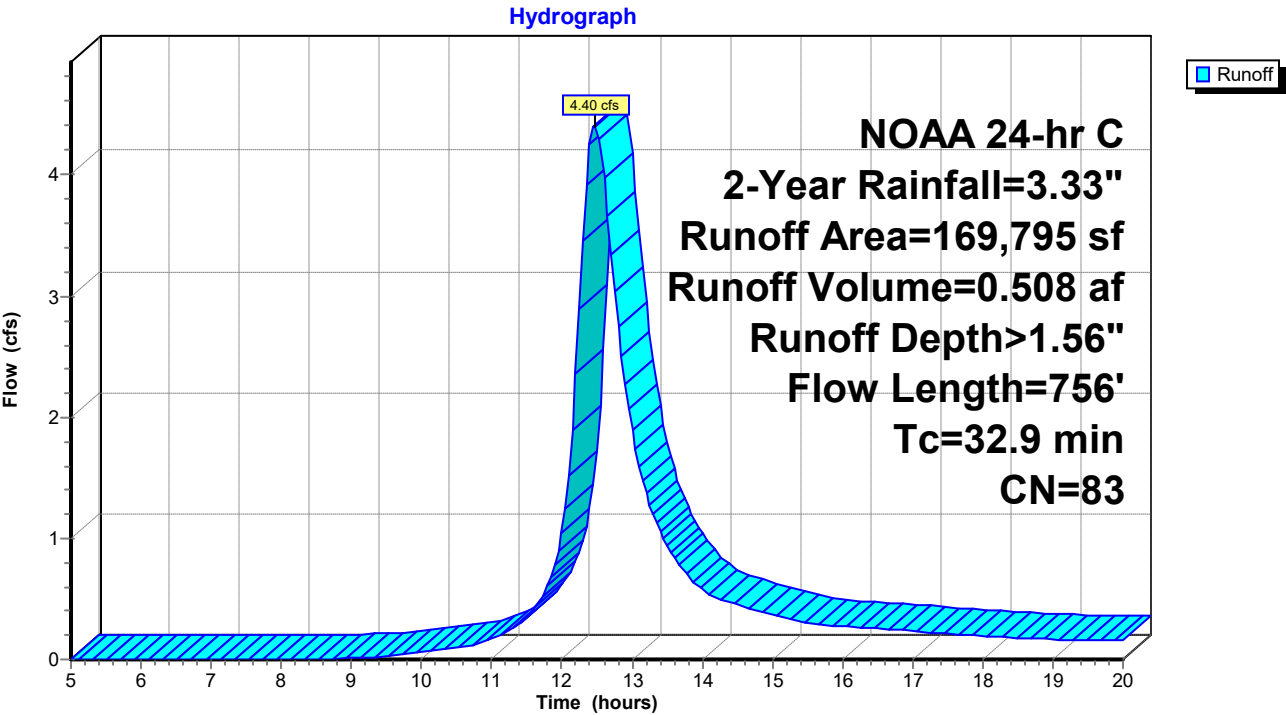
Prepared by Rauch Inc

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Subcatchment 30S: EX-DA#1



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 30S: EX-DA#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	1.50	0.19
5.25	0.22	0.00	0.00	18.25	3.08	1.51	0.18
5.50	0.24	0.00	0.00	18.50	3.09	1.52	0.18
5.75	0.25	0.00	0.00	18.75	3.11	1.53	0.17
6.00	0.26	0.00	0.00	19.00	3.12	1.54	0.17
6.25	0.28	0.00	0.00	19.25	3.13	1.55	0.16
6.50	0.29	0.00	0.00	19.50	3.14	1.56	0.16
6.75	0.31	0.00	0.00	19.75	3.16	1.57	0.16
7.00	0.32	0.00	0.00	20.00	3.17	1.58	0.16
7.25	0.34	0.00	0.00				
7.50	0.36	0.00	0.00				
7.75	0.38	0.00	0.00				
8.00	0.40	0.00	0.00				
8.25	0.42	0.00	0.00				
8.50	0.44	0.00	0.00				
8.75	0.46	0.00	0.00				
9.00	0.49	0.00	0.01				
9.25	0.51	0.00	0.02				
9.50	0.54	0.01	0.03				
9.75	0.57	0.01	0.04				
10.00	0.61	0.02	0.06				
10.25	0.65	0.02	0.08				
10.50	0.69	0.03	0.10				
10.75	0.74	0.05	0.12				
11.00	0.80	0.06	0.17				
11.25	0.88	0.09	0.24				
11.50	0.98	0.13	0.35				
11.75	1.17	0.21	0.54				
12.00	1.59	0.43	1.05				
12.25	2.16	0.81	2.90				
12.50	2.35	0.94	4.37				
12.75	2.45	1.02	3.03				
13.00	2.53	1.08	1.89				
13.25	2.59	1.13	1.28				
13.50	2.64	1.17	0.94				
13.75	2.68	1.20	0.72				
14.00	2.72	1.23	0.58				
14.25	2.76	1.25	0.50				
14.50	2.79	1.28	0.45				
14.75	2.82	1.30	0.41				
15.00	2.84	1.32	0.37				
15.25	2.87	1.34	0.34				
15.50	2.89	1.36	0.31				
15.75	2.91	1.37	0.29				
16.00	2.93	1.39	0.27				
16.25	2.95	1.41	0.26				
16.50	2.97	1.42	0.25				
16.75	2.99	1.44	0.24				
17.00	3.01	1.45	0.23				
17.25	3.02	1.46	0.22				
17.50	3.04	1.48	0.21				
17.75	3.05	1.49	0.20				

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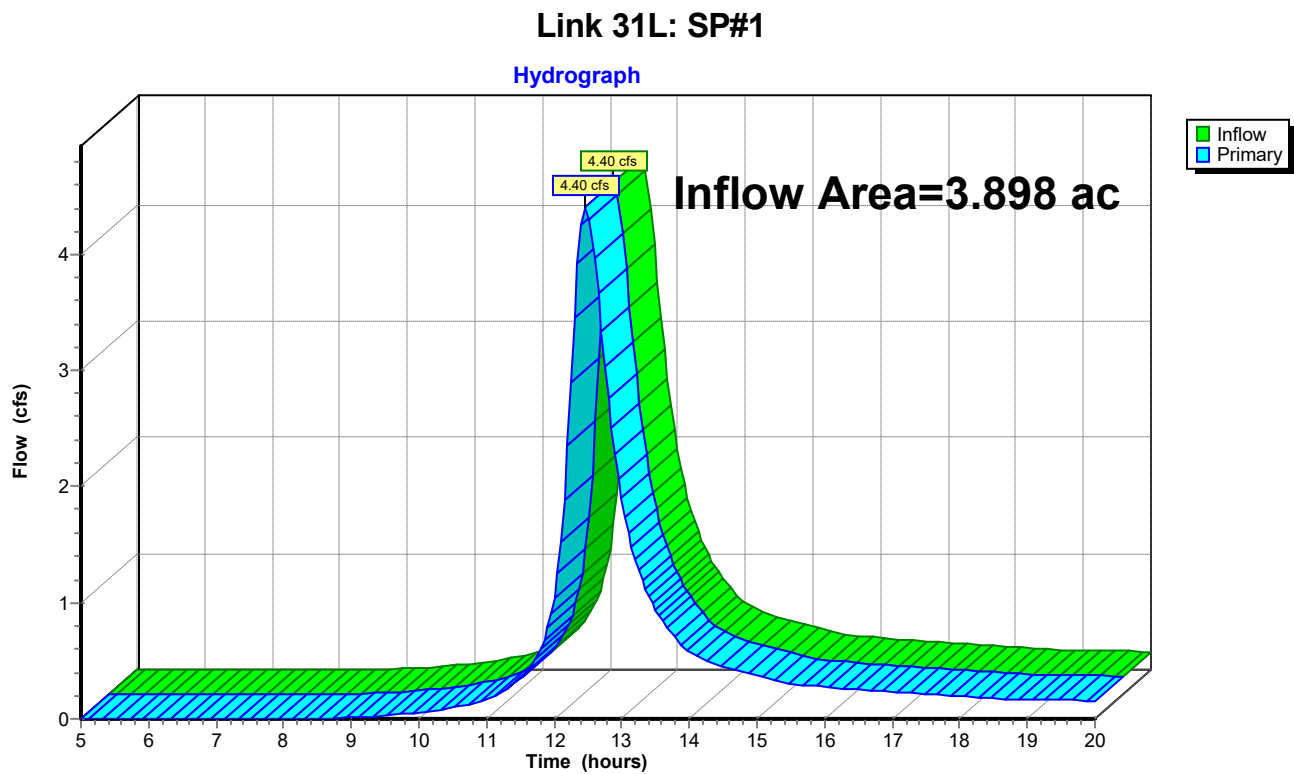
NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Summary for Link 31L: SP#1

Inflow Area = 3.898 ac, 16.44% Impervious, Inflow Depth > 1.56" for 2-Year event
Inflow = 4.40 cfs @ 12.47 hrs, Volume= 0.508 af
Primary = 4.40 cfs @ 12.47 hrs, Volume= 0.508 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Link 31L: SP#1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.00	0.19	0.00	0.19
5.25	0.00	0.00	0.00	18.25	0.18	0.00	0.18
5.50	0.00	0.00	0.00	18.50	0.18	0.00	0.18
5.75	0.00	0.00	0.00	18.75	0.17	0.00	0.17
6.00	0.00	0.00	0.00	19.00	0.17	0.00	0.17
6.25	0.00	0.00	0.00	19.25	0.16	0.00	0.16
6.50	0.00	0.00	0.00	19.50	0.16	0.00	0.16
6.75	0.00	0.00	0.00	19.75	0.16	0.00	0.16
7.00	0.00	0.00	0.00	20.00	0.16	0.00	0.16
7.25	0.00	0.00	0.00				
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.01	0.00	0.01				
9.25	0.02	0.00	0.02				
9.50	0.03	0.00	0.03				
9.75	0.04	0.00	0.04				
10.00	0.06	0.00	0.06				
10.25	0.08	0.00	0.08				
10.50	0.10	0.00	0.10				
10.75	0.12	0.00	0.12				
11.00	0.17	0.00	0.17				
11.25	0.24	0.00	0.24				
11.50	0.35	0.00	0.35				
11.75	0.54	0.00	0.54				
12.00	1.05	0.00	1.05				
12.25	2.90	0.00	2.90				
12.50	4.37	0.00	4.37				
12.75	3.03	0.00	3.03				
13.00	1.89	0.00	1.89				
13.25	1.28	0.00	1.28				
13.50	0.94	0.00	0.94				
13.75	0.72	0.00	0.72				
14.00	0.58	0.00	0.58				
14.25	0.50	0.00	0.50				
14.50	0.45	0.00	0.45				
14.75	0.41	0.00	0.41				
15.00	0.37	0.00	0.37				
15.25	0.34	0.00	0.34				
15.50	0.31	0.00	0.31				
15.75	0.29	0.00	0.29				
16.00	0.27	0.00	0.27				
16.25	0.26	0.00	0.26				
16.50	0.25	0.00	0.25				
16.75	0.24	0.00	0.24				
17.00	0.23	0.00	0.23				
17.25	0.22	0.00	0.22				
17.50	0.21	0.00	0.21				
17.75	0.20	0.00	0.20				

EX and PR

NOAA 24-hr C 10-Year Rainfall=5.20"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 30S: EX-DA#1Runoff Area=169,795 sf 16.44% Impervious Runoff Depth>3.09"
Flow Length=756' Tc=32.9 min CN=83 Runoff=8.59 cfs 1.004 af**Link 31L: SP#1**Inflow=8.59 cfs 1.004 af
Primary=8.59 cfs 1.004 af**Total Runoff Area = 3.898 ac Runoff Volume = 1.004 af Average Runoff Depth = 3.09"**
83.56% Pervious = 3.257 ac 16.44% Impervious = 0.641 ac

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 30S: EX-DA#1

Runoff = 8.59 cfs @ 12.46 hrs, Volume= 1.004 af, Depth> 3.09"
 Routed to Link 31L : SP#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
141,874	80	>75% Grass cover, Good, HSG D
13,874	98	Paved parking, HSG D
14,047	98	Paved parking, HSG D
169,795	83	Weighted Average
141,874		83.56% Pervious Area
27,921		16.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	100	0.0080	0.08		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"
13.0	656	0.0144	0.84		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
32.9	756	Total			



EX and PR

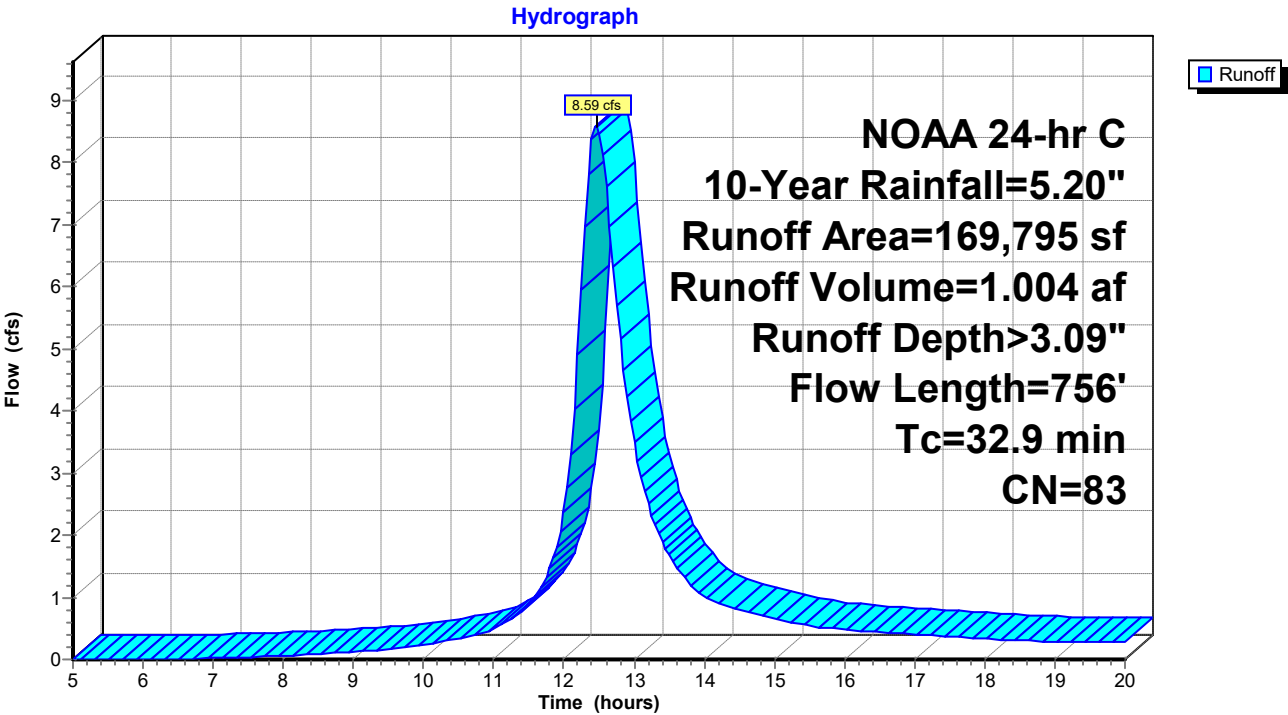
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NOAA 24-hr C 10-Year Rainfall=5.20"

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Subcatchment 30S: EX-DA#1



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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 30S: EX-DA#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.00	0.00	18.00	4.79	2.98	0.34
5.25	0.35	0.00	0.00	18.25	4.81	3.00	0.32
5.50	0.37	0.00	0.00	18.50	4.83	3.02	0.30
5.75	0.39	0.00	0.00	18.75	4.85	3.04	0.29
6.00	0.41	0.00	0.00	19.00	4.87	3.06	0.29
6.25	0.43	0.00	0.00	19.25	4.89	3.07	0.28
6.50	0.46	0.00	0.00	19.50	4.91	3.09	0.28
6.75	0.48	0.00	0.01	19.75	4.93	3.11	0.27
7.00	0.51	0.00	0.02	20.00	4.95	3.12	0.27
7.25	0.53	0.01	0.03				
7.50	0.56	0.01	0.04				
7.75	0.59	0.01	0.05				
8.00	0.62	0.02	0.06				
8.25	0.66	0.03	0.07				
8.50	0.69	0.03	0.09				
8.75	0.72	0.04	0.10				
9.00	0.76	0.05	0.12				
9.25	0.80	0.06	0.14				
9.50	0.84	0.08	0.16				
9.75	0.89	0.09	0.20				
10.00	0.95	0.11	0.24				
10.25	1.01	0.14	0.28				
10.50	1.07	0.16	0.33				
10.75	1.15	0.20	0.39				
11.00	1.25	0.24	0.50				
11.25	1.38	0.31	0.66				
11.50	1.54	0.40	0.91				
11.75	1.83	0.58	1.32				
12.00	2.48	1.04	2.37				
12.25	3.37	1.75	5.94				
12.50	3.66	2.00	8.47				
12.75	3.82	2.13	5.71				
13.00	3.95	2.24	3.49				
13.25	4.05	2.33	2.32				
13.50	4.13	2.40	1.68				
13.75	4.19	2.45	1.28				
14.00	4.25	2.51	1.02				
14.25	4.31	2.55	0.88				
14.50	4.36	2.60	0.80				
14.75	4.40	2.64	0.73				
15.00	4.44	2.67	0.66				
15.25	4.48	2.70	0.59				
15.50	4.51	2.74	0.54				
15.75	4.54	2.77	0.50				
16.00	4.58	2.79	0.48				
16.25	4.61	2.82	0.46				
16.50	4.64	2.85	0.44				
16.75	4.67	2.87	0.42				
17.00	4.69	2.90	0.41				
17.25	4.72	2.92	0.39				
17.50	4.74	2.94	0.37				
17.75	4.77	2.96	0.35				

EX and PR

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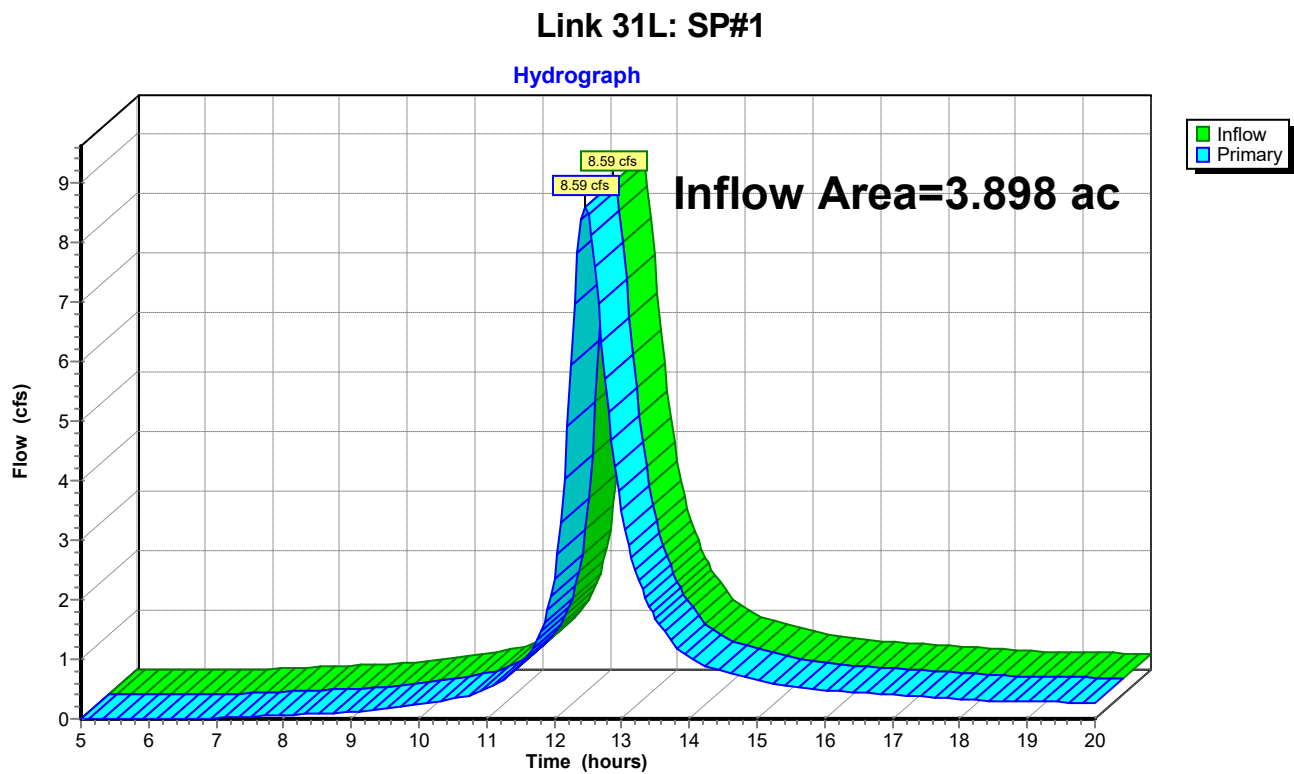
NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Link 31L: SP#1

Inflow Area = 3.898 ac, 16.44% Impervious, Inflow Depth > 3.09" for 10-Year event
Inflow = 8.59 cfs @ 12.46 hrs, Volume= 1.004 af
Primary = 8.59 cfs @ 12.46 hrs, Volume= 1.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



EX and PR

Prepared by Rauch Inc

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Link 31L: SP#1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.00	0.34	0.00	0.34
5.25	0.00	0.00	0.00	18.25	0.32	0.00	0.32
5.50	0.00	0.00	0.00	18.50	0.30	0.00	0.30
5.75	0.00	0.00	0.00	18.75	0.29	0.00	0.29
6.00	0.00	0.00	0.00	19.00	0.29	0.00	0.29
6.25	0.00	0.00	0.00	19.25	0.28	0.00	0.28
6.50	0.00	0.00	0.00	19.50	0.28	0.00	0.28
6.75	0.01	0.00	0.01	19.75	0.27	0.00	0.27
7.00	0.02	0.00	0.02	20.00	0.27	0.00	0.27
7.25	0.03	0.00	0.03				
7.50	0.04	0.00	0.04				
7.75	0.05	0.00	0.05				
8.00	0.06	0.00	0.06				
8.25	0.07	0.00	0.07				
8.50	0.09	0.00	0.09				
8.75	0.10	0.00	0.10				
9.00	0.12	0.00	0.12				
9.25	0.14	0.00	0.14				
9.50	0.16	0.00	0.16				
9.75	0.20	0.00	0.20				
10.00	0.24	0.00	0.24				
10.25	0.28	0.00	0.28				
10.50	0.33	0.00	0.33				
10.75	0.39	0.00	0.39				
11.00	0.50	0.00	0.50				
11.25	0.66	0.00	0.66				
11.50	0.91	0.00	0.91				
11.75	1.32	0.00	1.32				
12.00	2.37	0.00	2.37				
12.25	5.94	0.00	5.94				
12.50	8.47	0.00	8.47				
12.75	5.71	0.00	5.71				
13.00	3.49	0.00	3.49				
13.25	2.32	0.00	2.32				
13.50	1.68	0.00	1.68				
13.75	1.28	0.00	1.28				
14.00	1.02	0.00	1.02				
14.25	0.88	0.00	0.88				
14.50	0.80	0.00	0.80				
14.75	0.73	0.00	0.73				
15.00	0.66	0.00	0.66				
15.25	0.59	0.00	0.59				
15.50	0.54	0.00	0.54				
15.75	0.50	0.00	0.50				
16.00	0.48	0.00	0.48				
16.25	0.46	0.00	0.46				
16.50	0.44	0.00	0.44				
16.75	0.42	0.00	0.42				
17.00	0.41	0.00	0.41				
17.25	0.39	0.00	0.39				
17.50	0.37	0.00	0.37				
17.75	0.35	0.00	0.35				

EX and PR

NOAA 24-hr C 100-Year Rainfall=8.98"

Prepared by Rauch Inc

Printed 5/1/2024

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 30S: EX-DA#1Runoff Area=169,795 sf 16.44% Impervious Runoff Depth>6.43"
Flow Length=756' Tc=32.9 min CN=83 Runoff=17.28 cfs 2.089 af**Link 31L: SP#1**Inflow=17.28 cfs 2.089 af
Primary=17.28 cfs 2.089 af**Total Runoff Area = 3.898 ac Runoff Volume = 2.089 af Average Runoff Depth = 6.43"**
83.56% Pervious = 3.257 ac 16.44% Impervious = 0.641 ac

EX and PR

Prepared by Rauch Inc

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NOAA 24-hr C 100-Year Rainfall=8.98"

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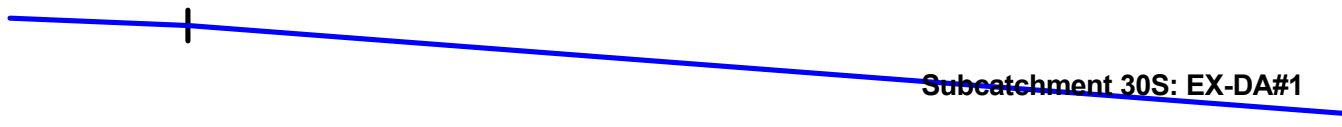
Summary for Subcatchment 30S: EX-DA#1

Runoff = 17.28 cfs @ 12.45 hrs, Volume= 2.089 af, Depth> 6.43"
 Routed to Link 31L : SP#1

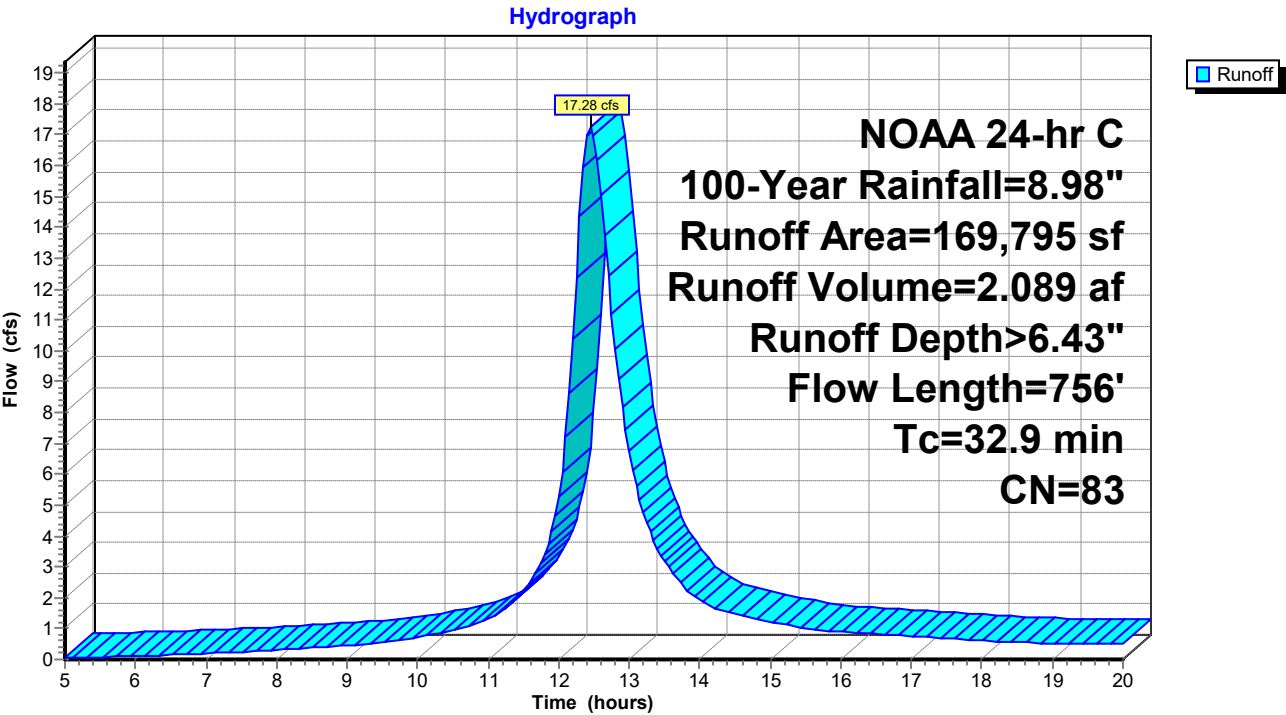
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
141,874	80	>75% Grass cover, Good, HSG D
13,874	98	Paved parking, HSG D
14,047	98	Paved parking, HSG D
169,795	83	Weighted Average
141,874		83.56% Pervious Area
27,921		16.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	100	0.0080	0.08		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"
13.0	656	0.0144	0.84		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
32.9	756	Total			



Subcatchment 30S: EX-DA#1



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 30S: EX-DA#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.01	0.04	18.00	8.27	6.23	0.62
5.25	0.61	0.02	0.06	18.25	8.30	6.27	0.59
5.50	0.64	0.02	0.07	18.50	8.34	6.30	0.56
5.75	0.68	0.03	0.09	18.75	8.37	6.34	0.54
6.00	0.71	0.04	0.11	19.00	8.41	6.37	0.53
6.25	0.75	0.05	0.12	19.25	8.44	6.40	0.52
6.50	0.79	0.06	0.14	19.50	8.48	6.43	0.51
6.75	0.83	0.07	0.16	19.75	8.51	6.46	0.50
7.00	0.88	0.09	0.19	20.00	8.54	6.49	0.50
7.25	0.92	0.10	0.21				
7.50	0.97	0.12	0.24				
7.75	1.02	0.14	0.27				
8.00	1.08	0.16	0.30				
8.25	1.13	0.19	0.33				
8.50	1.19	0.21	0.37				
8.75	1.25	0.24	0.40				
9.00	1.31	0.28	0.44				
9.25	1.38	0.31	0.48				
9.50	1.46	0.35	0.54				
9.75	1.54	0.40	0.62				
10.00	1.64	0.46	0.72				
10.25	1.74	0.52	0.83				
10.50	1.85	0.60	0.94				
10.75	1.99	0.69	1.07				
11.00	2.16	0.80	1.31				
11.25	2.38	0.96	1.67				
11.50	2.65	1.17	2.22				
11.75	3.16	1.57	3.10				
12.00	4.28	2.53	5.28				
12.25	5.82	3.93	12.39				
12.50	6.33	4.40	16.96				
12.75	6.60	4.65	11.18				
13.00	6.82	4.86	6.73				
13.25	6.99	5.02	4.42				
13.50	7.13	5.15	3.17				
13.75	7.24	5.25	2.41				
14.00	7.34	5.35	1.91				
14.25	7.44	5.44	1.65				
14.50	7.52	5.52	1.49				
14.75	7.60	5.60	1.35				
15.00	7.67	5.66	1.22				
15.25	7.73	5.72	1.10				
15.50	7.79	5.78	0.99				
15.75	7.85	5.83	0.93				
16.00	7.90	5.89	0.89				
16.25	7.96	5.94	0.85				
16.50	8.01	5.99	0.82				
16.75	8.06	6.03	0.78				
17.00	8.10	6.08	0.75				
17.25	8.15	6.12	0.72				
17.50	8.19	6.16	0.69				
17.75	8.23	6.20	0.65				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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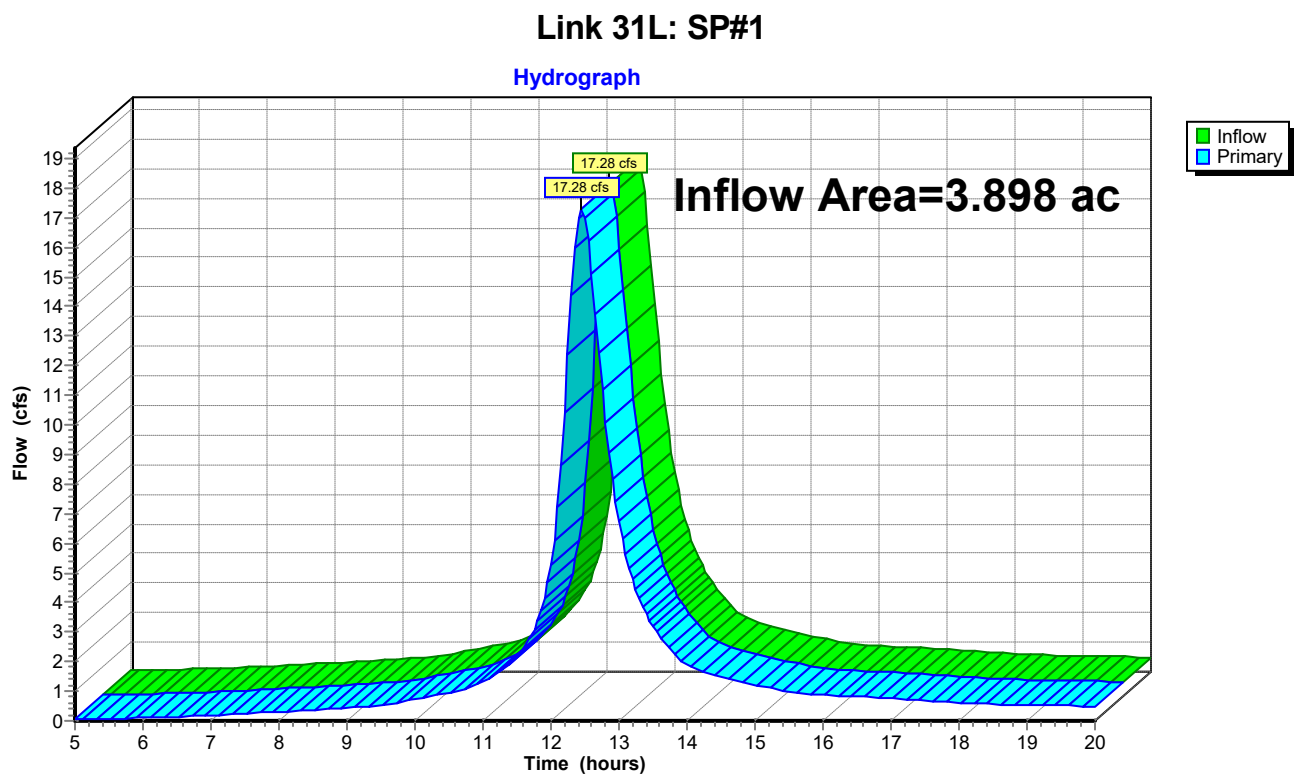
Summary for Link 31L: SP#1

Inflow Area = 3.898 ac, 16.44% Impervious, Inflow Depth > 6.43" for 100-Year event

Inflow = 17.28 cfs @ 12.45 hrs, Volume= 2.089 af

Primary = 17.28 cfs @ 12.45 hrs, Volume= 2.089 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

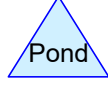
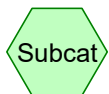
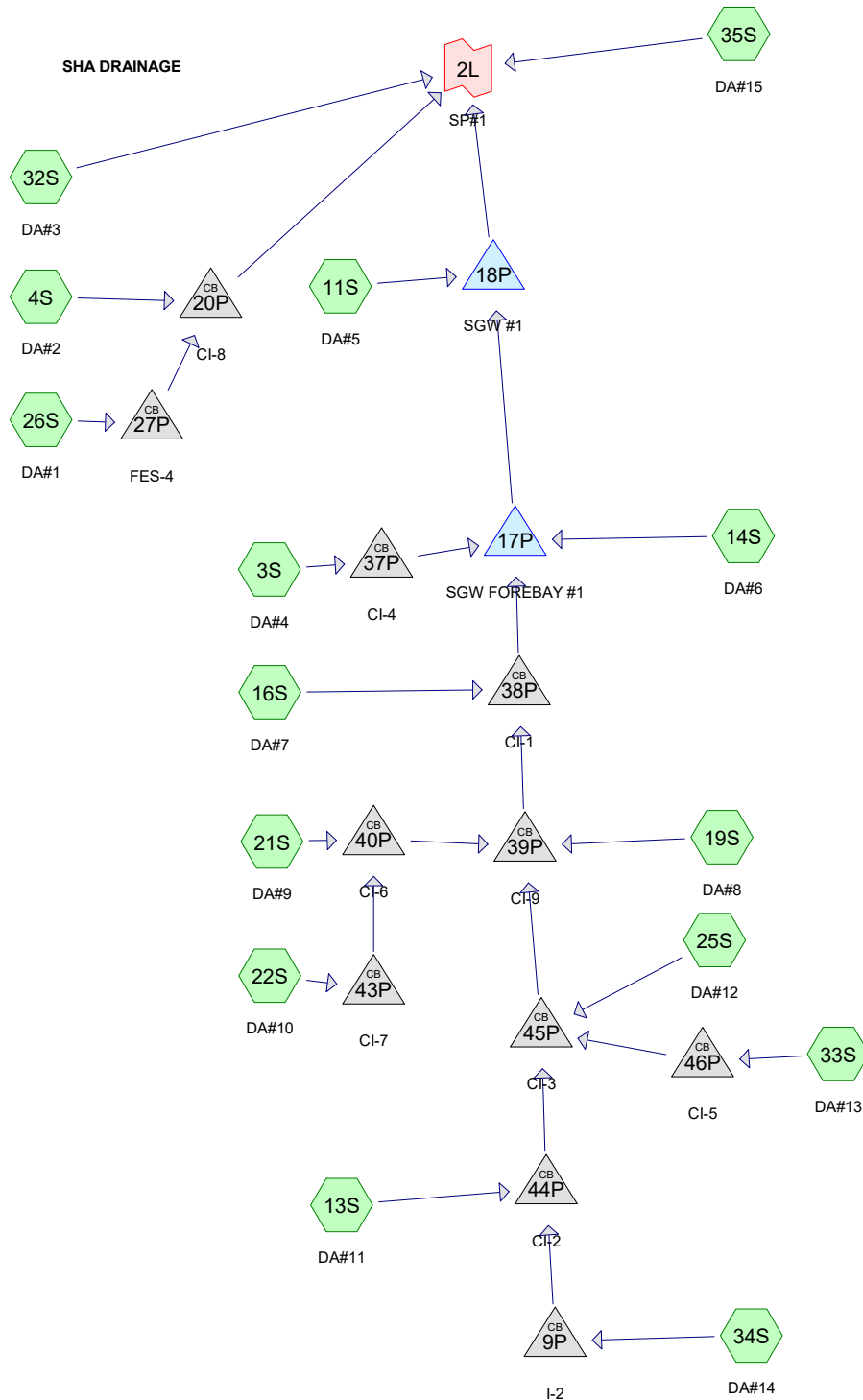
Printed 5/1/2024

Hydrograph for Link 31L: SP#1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.04	0.00	0.04	18.00	0.62	0.00	0.62
5.25	0.06	0.00	0.06	18.25	0.59	0.00	0.59
5.50	0.07	0.00	0.07	18.50	0.56	0.00	0.56
5.75	0.09	0.00	0.09	18.75	0.54	0.00	0.54
6.00	0.11	0.00	0.11	19.00	0.53	0.00	0.53
6.25	0.12	0.00	0.12	19.25	0.52	0.00	0.52
6.50	0.14	0.00	0.14	19.50	0.51	0.00	0.51
6.75	0.16	0.00	0.16	19.75	0.50	0.00	0.50
7.00	0.19	0.00	0.19	20.00	0.50	0.00	0.50
7.25	0.21	0.00	0.21				
7.50	0.24	0.00	0.24				
7.75	0.27	0.00	0.27				
8.00	0.30	0.00	0.30				
8.25	0.33	0.00	0.33				
8.50	0.37	0.00	0.37				
8.75	0.40	0.00	0.40				
9.00	0.44	0.00	0.44				
9.25	0.48	0.00	0.48				
9.50	0.54	0.00	0.54				
9.75	0.62	0.00	0.62				
10.00	0.72	0.00	0.72				
10.25	0.83	0.00	0.83				
10.50	0.94	0.00	0.94				
10.75	1.07	0.00	1.07				
11.00	1.31	0.00	1.31				
11.25	1.67	0.00	1.67				
11.50	2.22	0.00	2.22				
11.75	3.10	0.00	3.10				
12.00	5.28	0.00	5.28				
12.25	12.39	0.00	12.39				
12.50	16.96	0.00	16.96				
12.75	11.18	0.00	11.18				
13.00	6.73	0.00	6.73				
13.25	4.42	0.00	4.42				
13.50	3.17	0.00	3.17				
13.75	2.41	0.00	2.41				
14.00	1.91	0.00	1.91				
14.25	1.65	0.00	1.65				
14.50	1.49	0.00	1.49				
14.75	1.35	0.00	1.35				
15.00	1.22	0.00	1.22				
15.25	1.10	0.00	1.10				
15.50	0.99	0.00	0.99				
15.75	0.93	0.00	0.93				
16.00	0.89	0.00	0.89				
16.25	0.85	0.00	0.85				
16.50	0.82	0.00	0.82				
16.75	0.78	0.00	0.78				
17.00	0.75	0.00	0.75				
17.25	0.72	0.00	0.72				
17.50	0.69	0.00	0.69				
17.75	0.65	0.00	0.65				

SECTION 4 – POST-DEVELOPMENT QUANTITY CALCULATIONS

PROPOSED



Routing Diagram for EX and PR
 Prepared by Rauch Inc, Printed 5/1/2024
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EX and PR

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Project Notes

Rainfall events imported from "NRCS-Rain.txt" for 5020 MD Talbot

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	NOAA 24-hr	C	Default	24.00	1	3.33	2
2	10-Year	NOAA 24-hr	C	Default	24.00	1	5.20	2
3	100-Year	NOAA 24-hr	C	Default	24.00	1	8.98	2

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.567	80	>75% Grass cover, Good, HSG D (3S, 4S, 11S, 13S, 14S, 16S, 19S, 21S, 22S, 25S, 26S, 32S, 33S, 34S, 35S)
0.092	98	Paved parking, HSG D (4S, 11S)
2.239	98	Roofs, HSG D (3S, 13S, 14S, 16S, 19S, 21S, 22S, 25S, 26S, 32S, 33S, 34S)
3.898	91	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
3.898	HSG D	3S, 4S, 11S, 13S, 14S, 16S, 19S, 21S, 22S, 25S, 26S, 32S, 33S, 34S, 35S
0.000	Other	
3.898		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.567	0.000	1.567	>75% Grass cover, Good	3S, 4S, 11S, 13S, 14S, 16S, 19S, 21S, 22S, 25S, 26S, 32S, 33S, 34S, 35S
0.000	0.000	0.000	0.092	0.000	0.092	Paved parking	4S, 11S
0.000	0.000	0.000	2.239	0.000	2.239	Roofs	3S, 13S, 14S, 16S, 19S, 21S, 22S, 25S, 26S, 32S, 33S, 34S
0.000	0.000	0.000	3.898	0.000	3.898	TOTAL AREA	

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Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	9P	59.06	58.55	57.6	0.0089	0.012	0.0	15.0	0.0	
2	18P	54.75	54.66	96.5	0.0009	0.012	0.0	18.0	0.0	
3	20P	56.78	56.00	75.5	0.0103	0.012	0.0	15.0	0.0	
4	27P	57.05	56.78	25.5	0.0106	0.012	0.0	15.0	0.0	
5	37P	55.53	55.08	89.2	0.0050	0.012	0.0	15.0	0.0	
6	38P	55.43	55.08	46.3	0.0076	0.012	0.0	18.0	0.0	
7	39P	57.03	55.43	172.0	0.0093	0.012	0.0	15.0	0.0	
8	40P	57.45	57.03	84.4	0.0050	0.012	0.0	12.0	0.0	
9	43P	58.13	57.43	138.4	0.0051	0.012	0.0	12.0	0.0	
10	44P	58.55	57.66	99.8	0.0089	0.012	0.0	15.0	0.0	
11	45P	57.66	57.03	99.8	0.0063	0.012	0.0	15.0	0.0	
12	46P	58.28	57.75	107.0	0.0050	0.012	0.0	15.0	0.0	

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 3S: DA#4	Runoff Area=9,330 sf 70.69% Impervious Runoff Depth>2.41" Flow Length=143' Tc=1.4 min CN=93 Runoff=0.76 cfs 0.043 af
Subcatchment 4S: DA#2	Runoff Area=3,733 sf 67.48% Impervious Runoff Depth>2.32" Flow Length=44' Slope=0.0948 '/' Tc=3.8 min CN=92 Runoff=0.28 cfs 0.017 af
Subcatchment 11S: DA#5	Runoff Area=9,317 sf 15.83% Impervious Runoff Depth>1.58" Flow Length=44' Slope=0.0889 '/' Tc=1.1 min CN=83 Runoff=0.54 cfs 0.028 af
Subcatchment 13S: DA#11	Runoff Area=6,211 sf 83.67% Impervious Runoff Depth>2.60" Flow Length=81' Slope=0.0126 '/' Tc=1.2 min CN=95 Runoff=0.53 cfs 0.031 af
Subcatchment 14S: DA#6	Runoff Area=21,528 sf 73.17% Impervious Runoff Depth>2.41" Flow Length=119' Tc=3.4 min CN=93 Runoff=1.69 cfs 0.099 af
Subcatchment 16S: DA#7	Runoff Area=8,499 sf 87.34% Impervious Runoff Depth>2.69" Flow Length=120' Tc=1.5 min CN=96 Runoff=0.73 cfs 0.044 af
Subcatchment 19S: DA#8	Runoff Area=17,721 sf 97.79% Impervious Runoff Depth>2.86" Flow Length=73' Slope=0.0174 '/' Tc=1.0 min CN=98 Runoff=1.58 cfs 0.097 af
Subcatchment 21S: DA#9	Runoff Area=10,950 sf 68.20% Impervious Runoff Depth>2.32" Flow Length=128' Tc=1.4 min CN=92 Runoff=0.86 cfs 0.049 af
Subcatchment 22S: DA#10	Runoff Area=5,696 sf 41.20% Impervious Runoff Depth>1.88" Flow Length=99' Tc=12.1 min CN=87 Runoff=0.28 cfs 0.020 af
Subcatchment 25S: DA#12	Runoff Area=6,725 sf 87.20% Impervious Runoff Depth>2.69" Flow Length=98' Slope=0.0100 '/' Tc=1.5 min CN=96 Runoff=0.58 cfs 0.035 af
Subcatchment 26S: DA#1	Runoff Area=29,068 sf 39.09% Impervious Runoff Depth>1.88" Flow Length=405' Tc=5.5 min CN=87 Runoff=1.72 cfs 0.105 af
Subcatchment 32S: DA#3	Runoff Area=9,470 sf 40.45% Impervious Runoff Depth>1.89" Flow Length=161' Tc=1.0 min CN=87 Runoff=0.64 cfs 0.034 af
Subcatchment 33S: DA#13	Runoff Area=3,211 sf 51.14% Impervious Runoff Depth>2.05" Flow Length=52' Slope=0.0292 '/' Tc=0.6 min CN=89 Runoff=0.23 cfs 0.013 af
Subcatchment 34S: DA#14	Runoff Area=17,184 sf 73.97% Impervious Runoff Depth>2.41" Flow Length=100' Slope=0.0187 '/' Tc=1.2 min CN=93 Runoff=1.39 cfs 0.079 af
Subcatchment 35S: DA#15	Runoff Area=11,147 sf 0.00% Impervious Runoff Depth>1.37" Flow Length=558' Tc=21.2 min CN=80 Runoff=0.31 cfs 0.029 af
Pond 9P: I-2	Peak Elev=59.70' Inflow=1.39 cfs 0.079 af Outflow=1.39 cfs 0.079 af

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Pond 17P: SGW FOREBAY #1	Peak Elev=56.71' Storage=2,712 cf Inflow=8.32 cfs 0.509 af Outflow=8.79 cfs 0.474 af
Pond 18P: SGW #1	Peak Elev=56.71' Storage=7,790 cf Inflow=9.33 cfs 0.502 af Outflow=1.24 cfs 0.502 af
Pond 20P: CI-8	Peak Elev=57.48' Inflow=1.99 cfs 0.121 af Outflow=1.99 cfs 0.121 af
Pond 27P: FES-4	Peak Elev=57.79' Inflow=1.72 cfs 0.105 af 15.0" Round Culvert n=0.012 L=25.5' S=0.0106 '/' Outflow=1.72 cfs 0.105 af
Pond 37P: CI-4	Peak Elev=56.71' Inflow=0.76 cfs 0.043 af Outflow=0.76 cfs 0.043 af
Pond 38P: CI-1	Peak Elev=56.85' Inflow=6.06 cfs 0.367 af Outflow=6.06 cfs 0.367 af
Pond 39P: CI-9	Peak Elev=58.46' Inflow=5.33 cfs 0.323 af Outflow=5.33 cfs 0.323 af
Pond 40P: CI-6	Peak Elev=58.55' Inflow=1.04 cfs 0.069 af Outflow=1.04 cfs 0.069 af
Pond 43P: CI-7	Peak Elev=58.63' Inflow=0.28 cfs 0.020 af Outflow=0.28 cfs 0.020 af
Pond 44P: CI-2	Peak Elev=59.30' Inflow=1.92 cfs 0.110 af Outflow=1.92 cfs 0.110 af
Pond 45P: CI-3	Peak Elev=58.81' Inflow=2.73 cfs 0.157 af Outflow=2.73 cfs 0.157 af
Pond 46P: CI-5	Peak Elev=58.82' Inflow=0.23 cfs 0.013 af Outflow=0.23 cfs 0.013 af
Link 2L: SP#1	Inflow=3.79 cfs 0.687 af Primary=3.79 cfs 0.687 af

Total Runoff Area = 3.898 ac Runoff Volume = 0.722 af Average Runoff Depth = 2.22"
40.21% Pervious = 1.567 ac 59.79% Impervious = 2.330 ac

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"
Printed 5/1/2024

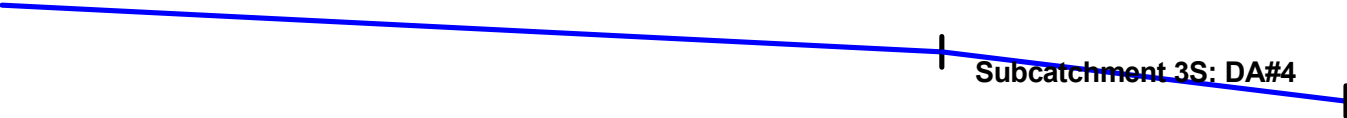
Summary for Subcatchment 3S: DA#4

Runoff = 0.76 cfs @ 12.07 hrs, Volume= 0.043 af, Depth> 2.41"
Routed to Pond 37P : CI-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
6,595	98	Roofs, HSG D
2,735	80	>75% Grass cover, Good, HSG D
9,330	93	Weighted Average
2,735		29.31% Pervious Area
6,595		70.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0180	1.36		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.2	43	0.0441	4.26		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.4	143	Total			



EX and PR

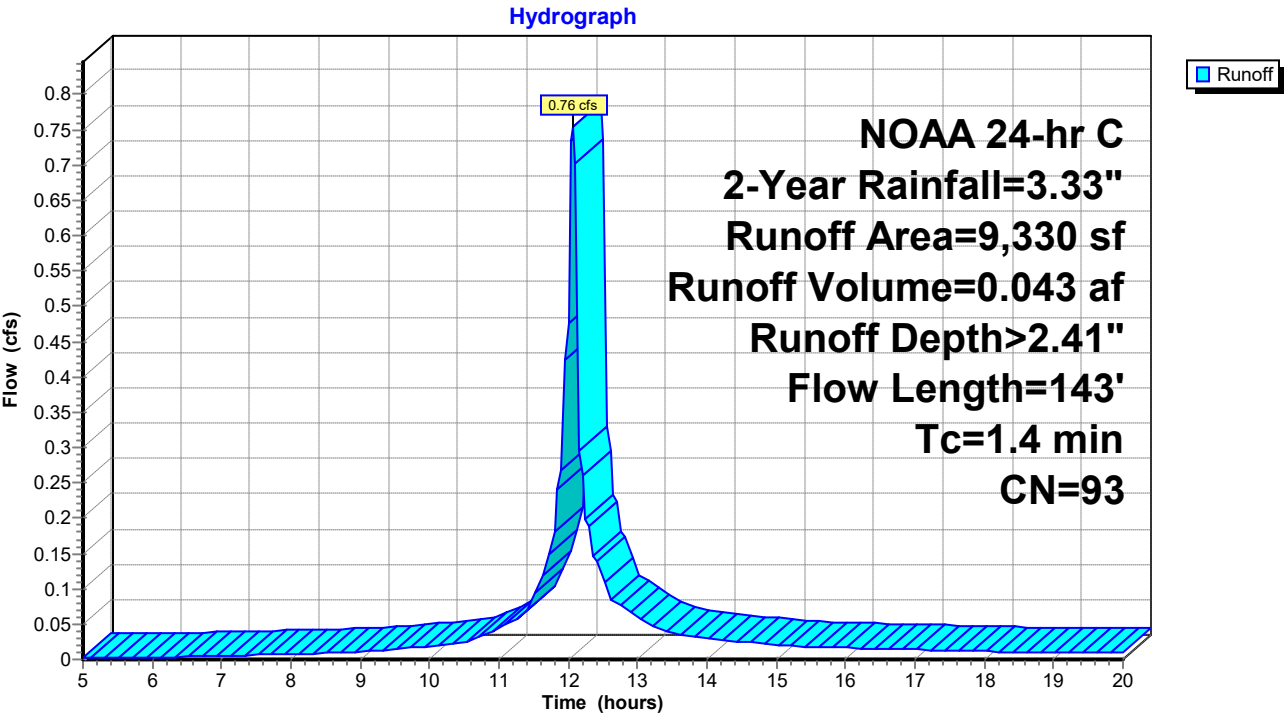
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NOAA 24-hr C 2-Year Rainfall=3.33"

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Subcatchment 3S: DA#4



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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Subcatchment 3S: DA#4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	2.32	0.01
5.25	0.22	0.01	0.00	18.25	3.08	2.33	0.01
5.50	0.24	0.01	0.00	18.50	3.09	2.34	0.01
5.75	0.25	0.01	0.00	18.75	3.11	2.36	0.01
6.00	0.26	0.01	0.00	19.00	3.12	2.37	0.01
6.25	0.28	0.02	0.00	19.25	3.13	2.38	0.01
6.50	0.29	0.02	0.00	19.50	3.14	2.39	0.01
6.75	0.31	0.03	0.00	19.75	3.16	2.40	0.01
7.00	0.32	0.03	0.00	20.00	3.17	2.41	0.01
7.25	0.34	0.04	0.01				
7.50	0.36	0.05	0.01				
7.75	0.38	0.05	0.01				
8.00	0.40	0.06	0.01				
8.25	0.42	0.07	0.01				
8.50	0.44	0.08	0.01				
8.75	0.46	0.09	0.01				
9.00	0.49	0.10	0.01				
9.25	0.51	0.12	0.01				
9.50	0.54	0.13	0.01				
9.75	0.57	0.15	0.02				
10.00	0.61	0.17	0.02				
10.25	0.65	0.20	0.02				
10.50	0.69	0.22	0.02				
10.75	0.74	0.26	0.03				
11.00	0.80	0.30	0.04				
11.25	0.88	0.36	0.06				
11.50	0.98	0.44	0.08				
11.75	1.17	0.59	0.17				
12.00	1.59	0.94	0.48				
12.25	2.16	1.46	0.20				
12.50	2.35	1.63	0.13				
12.75	2.45	1.73	0.08				
13.00	2.53	1.81	0.06				
13.25	2.59	1.87	0.05				
13.50	2.64	1.92	0.04				
13.75	2.68	1.95	0.03				
14.00	2.72	1.99	0.03				
14.25	2.76	2.02	0.03				
14.50	2.79	2.05	0.03				
14.75	2.82	2.08	0.02				
15.00	2.84	2.10	0.02				
15.25	2.87	2.13	0.02				
15.50	2.89	2.15	0.02				
15.75	2.91	2.17	0.02				
16.00	2.93	2.19	0.02				
16.25	2.95	2.21	0.02				
16.50	2.97	2.23	0.02				
16.75	2.99	2.24	0.01				
17.00	3.01	2.26	0.01				
17.25	3.02	2.27	0.01				
17.50	3.04	2.29	0.01				
17.75	3.05	2.30	0.01				

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Summary for Subcatchment 4S: DA#2

Runoff = 0.28 cfs @ 12.10 hrs, Volume= 0.017 af, Depth> 2.32"
Routed to Pond 20P : CI-8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

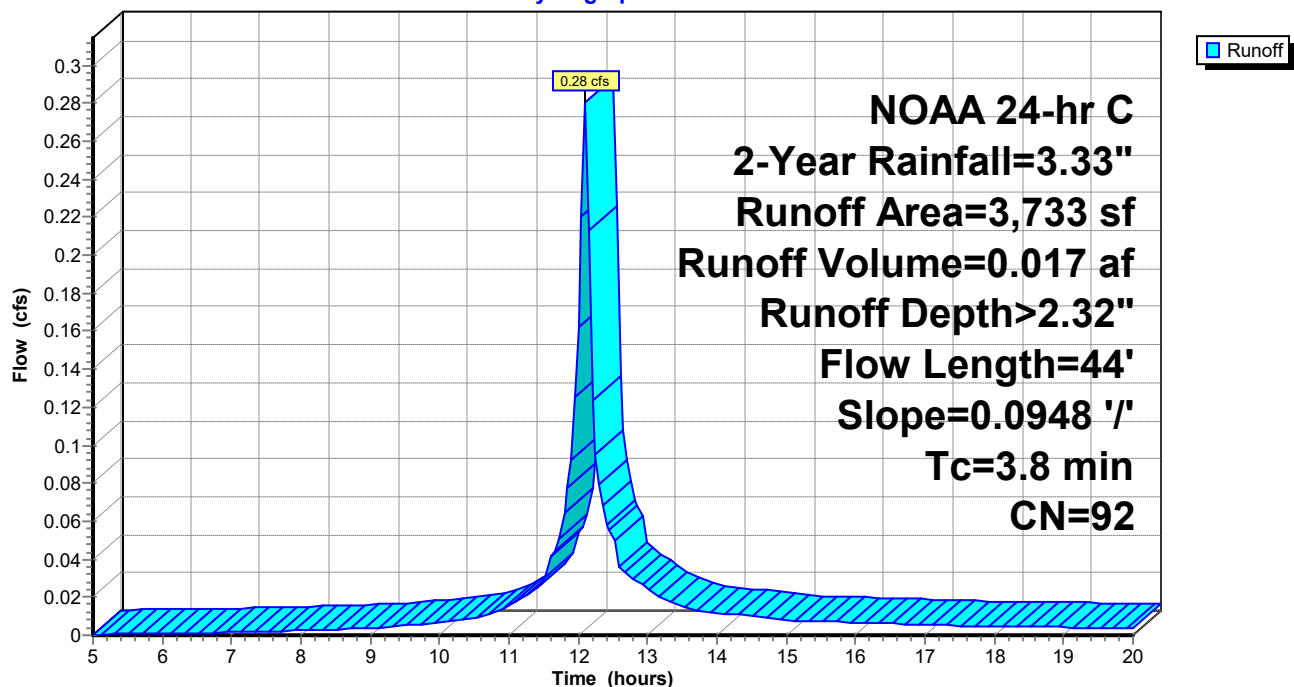
Area (sf)	CN	Description
2,519	98	Paved parking, HSG D
1,214	80	>75% Grass cover, Good, HSG D
3,733	92	Weighted Average
1,214		32.52% Pervious Area
2,519		67.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	44	0.0948	0.19		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"

Subcatchment 4S: DA#2

Subcatchment 4S: DA#2

Hydrograph



EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Subcatchment 4S: DA#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	2.22	0.00
5.25	0.22	0.00	0.00	18.25	3.08	2.24	0.00
5.50	0.24	0.00	0.00	18.50	3.09	2.25	0.00
5.75	0.25	0.01	0.00	18.75	3.11	2.26	0.00
6.00	0.26	0.01	0.00	19.00	3.12	2.27	0.00
6.25	0.28	0.01	0.00	19.25	3.13	2.28	0.00
6.50	0.29	0.01	0.00	19.50	3.14	2.30	0.00
6.75	0.31	0.02	0.00	19.75	3.16	2.31	0.00
7.00	0.32	0.02	0.00	20.00	3.17	2.32	0.00
7.25	0.34	0.03	0.00				
7.50	0.36	0.03	0.00				
7.75	0.38	0.04	0.00				
8.00	0.40	0.05	0.00				
8.25	0.42	0.05	0.00				
8.50	0.44	0.06	0.00				
8.75	0.46	0.07	0.00				
9.00	0.49	0.08	0.00				
9.25	0.51	0.09	0.00				
9.50	0.54	0.11	0.01				
9.75	0.57	0.13	0.01				
10.00	0.61	0.14	0.01				
10.25	0.65	0.17	0.01				
10.50	0.69	0.19	0.01				
10.75	0.74	0.22	0.01				
11.00	0.80	0.26	0.01				
11.25	0.88	0.32	0.02				
11.50	0.98	0.39	0.03				
11.75	1.17	0.53	0.05				
12.00	1.59	0.87	0.16				
12.25	2.16	1.38	0.10				
12.50	2.35	1.55	0.05				
12.75	2.45	1.65	0.03				
13.00	2.53	1.72	0.02				
13.25	2.59	1.78	0.02				
13.50	2.64	1.83	0.02				
13.75	2.68	1.86	0.01				
14.00	2.72	1.90	0.01				
14.25	2.76	1.93	0.01				
14.50	2.79	1.96	0.01				
14.75	2.82	1.99	0.01				
15.00	2.84	2.01	0.01				
15.25	2.87	2.04	0.01				
15.50	2.89	2.06	0.01				
15.75	2.91	2.08	0.01				
16.00	2.93	2.10	0.01				
16.25	2.95	2.11	0.01				
16.50	2.97	2.13	0.01				
16.75	2.99	2.15	0.01				
17.00	3.01	2.17	0.01				
17.25	3.02	2.18	0.01				
17.50	3.04	2.20	0.01				
17.75	3.05	2.21	0.00				

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Summary for Subcatchment 11S: DA#5

Runoff = 0.54 cfs @ 12.07 hrs, Volume= 0.028 af, Depth> 1.58"
Routed to Pond 18P : SGW #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

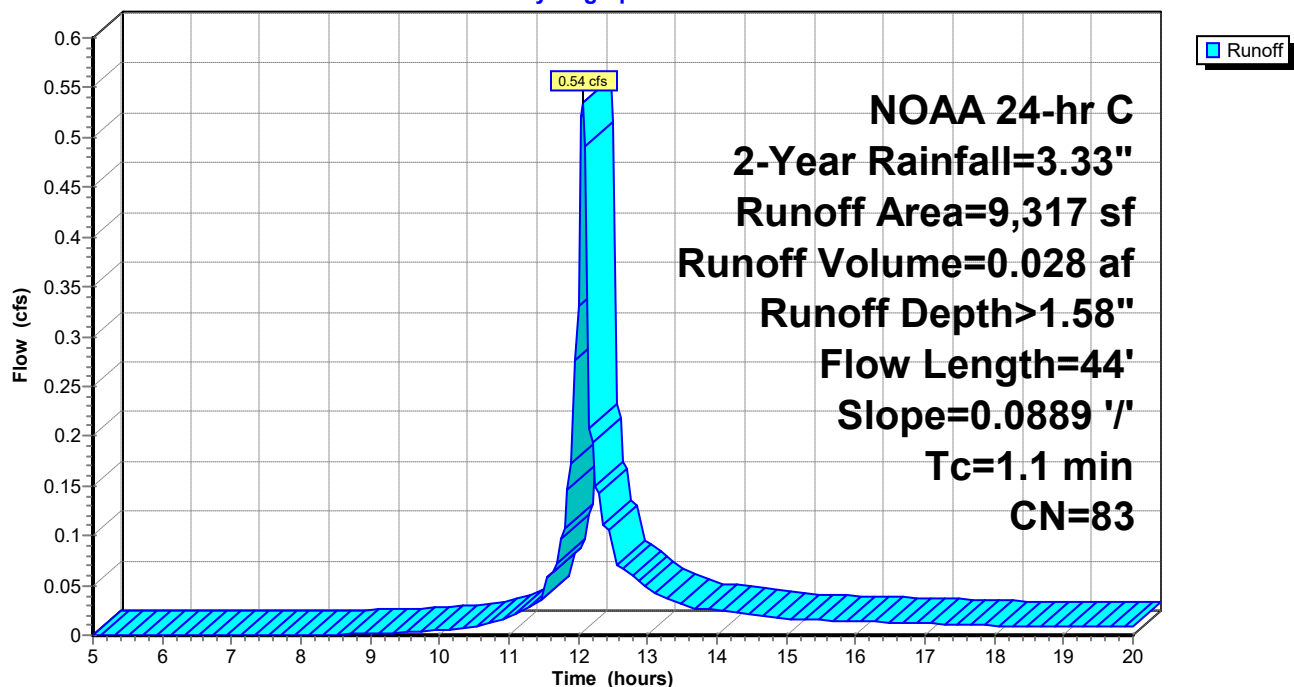
Area (sf)	CN	Description
1,475	98	Paved parking, HSG D
7,842	80	>75% Grass cover, Good, HSG D
9,317	83	Weighted Average
7,842		84.17% Pervious Area
1,475		15.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	44	0.0889	0.65		Sheet Flow, Fallow n= 0.050 P2= 3.42"

Subcatchment 11S: DA#5

Subcatchment 11S: DA#5

Hydrograph



EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 11S: DA#5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	1.50	0.01
5.25	0.22	0.00	0.00	18.25	3.08	1.51	0.01
5.50	0.24	0.00	0.00	18.50	3.09	1.52	0.01
5.75	0.25	0.00	0.00	18.75	3.11	1.53	0.01
6.00	0.26	0.00	0.00	19.00	3.12	1.54	0.01
6.25	0.28	0.00	0.00	19.25	3.13	1.55	0.01
6.50	0.29	0.00	0.00	19.50	3.14	1.56	0.01
6.75	0.31	0.00	0.00	19.75	3.16	1.57	0.01
7.00	0.32	0.00	0.00	20.00	3.17	1.58	0.01
7.25	0.34	0.00	0.00				
7.50	0.36	0.00	0.00				
7.75	0.38	0.00	0.00				
8.00	0.40	0.00	0.00				
8.25	0.42	0.00	0.00				
8.50	0.44	0.00	0.00				
8.75	0.46	0.00	0.00				
9.00	0.49	0.00	0.00				
9.25	0.51	0.00	0.00				
9.50	0.54	0.01	0.00				
9.75	0.57	0.01	0.00				
10.00	0.61	0.02	0.01				
10.25	0.65	0.02	0.01				
10.50	0.69	0.03	0.01				
10.75	0.74	0.05	0.01				
11.00	0.80	0.06	0.02				
11.25	0.88	0.09	0.03				
11.50	0.98	0.13	0.04				
11.75	1.17	0.21	0.10				
12.00	1.59	0.43	0.33				
12.25	2.16	0.81	0.15				
12.50	2.35	0.94	0.10				
12.75	2.45	1.02	0.06				
13.00	2.53	1.08	0.05				
13.25	2.59	1.13	0.04				
13.50	2.64	1.17	0.03				
13.75	2.68	1.20	0.03				
14.00	2.72	1.23	0.02				
14.25	2.76	1.25	0.02				
14.50	2.79	1.28	0.02				
14.75	2.82	1.30	0.02				
15.00	2.84	1.32	0.02				
15.25	2.87	1.34	0.02				
15.50	2.89	1.36	0.02				
15.75	2.91	1.37	0.01				
16.00	2.93	1.39	0.01				
16.25	2.95	1.41	0.01				
16.50	2.97	1.42	0.01				
16.75	2.99	1.44	0.01				
17.00	3.01	1.45	0.01				
17.25	3.02	1.46	0.01				
17.50	3.04	1.48	0.01				
17.75	3.05	1.49	0.01				

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Summary for Subcatchment 13S: DA#11

Runoff = 0.53 cfs @ 12.07 hrs, Volume= 0.031 af, Depth> 2.60"
Routed to Pond 44P : CI-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

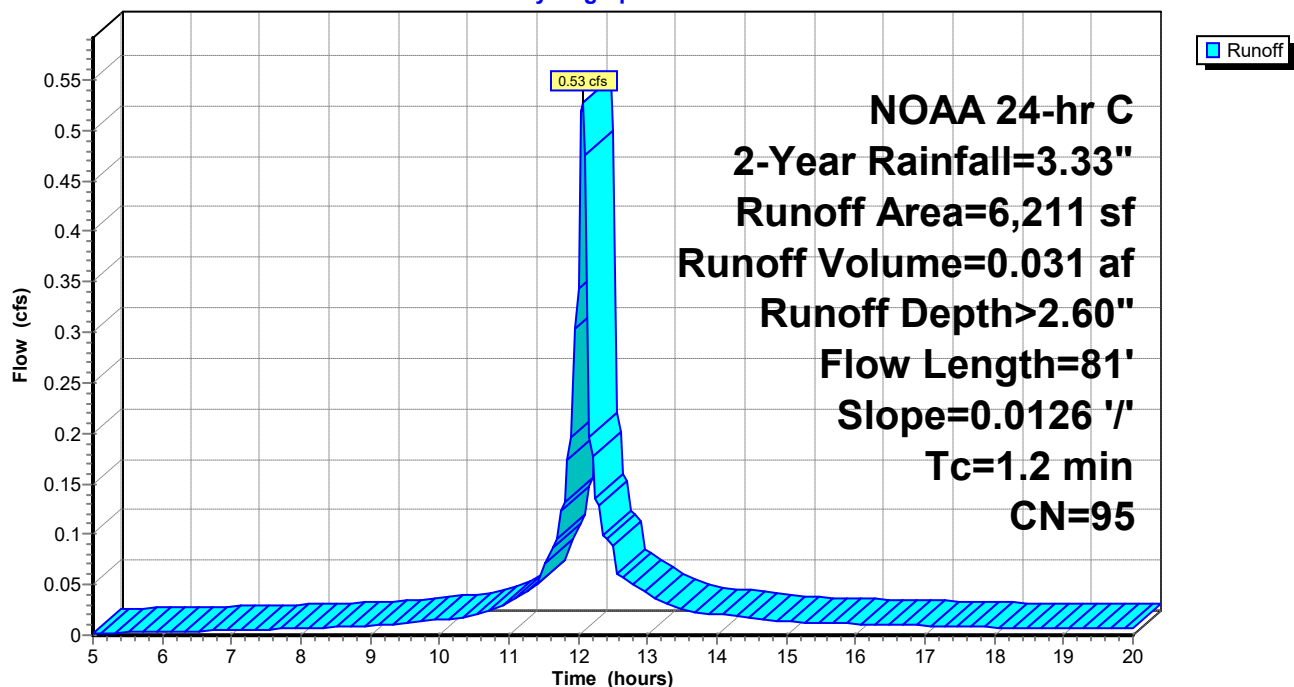
Area (sf)	CN	Description
5,197	98	Roofs, HSG D
1,014	80	>75% Grass cover, Good, HSG D
6,211	95	Weighted Average
1,014		16.33% Pervious Area
5,197		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	81	0.0126	1.13		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 13S: DA#11

Subcatchment 13S: DA#11

Hydrograph



EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 13S: DA#11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.02	0.00	18.00	3.07	2.51	0.01
5.25	0.22	0.02	0.00	18.25	3.08	2.53	0.01
5.50	0.24	0.03	0.00	18.50	3.09	2.54	0.01
5.75	0.25	0.03	0.00	18.75	3.11	2.55	0.01
6.00	0.26	0.04	0.00	19.00	3.12	2.56	0.01
6.25	0.28	0.04	0.00	19.25	3.13	2.58	0.01
6.50	0.29	0.05	0.00	19.50	3.14	2.59	0.01
6.75	0.31	0.06	0.00	19.75	3.16	2.60	0.01
7.00	0.32	0.06	0.00	20.00	3.17	2.61	0.01
7.25	0.34	0.07	0.01				
7.50	0.36	0.08	0.01				
7.75	0.38	0.09	0.01				
8.00	0.40	0.11	0.01				
8.25	0.42	0.12	0.01				
8.50	0.44	0.13	0.01				
8.75	0.46	0.14	0.01				
9.00	0.49	0.16	0.01				
9.25	0.51	0.18	0.01				
9.50	0.54	0.20	0.01				
9.75	0.57	0.22	0.01				
10.00	0.61	0.24	0.02				
10.25	0.65	0.27	0.02				
10.50	0.69	0.30	0.02				
10.75	0.74	0.34	0.03				
11.00	0.80	0.39	0.03				
11.25	0.88	0.46	0.04				
11.50	0.98	0.55	0.06				
11.75	1.17	0.71	0.12				
12.00	1.59	1.09	0.34				
12.25	2.16	1.63	0.14				
12.50	2.35	1.81	0.09				
12.75	2.45	1.91	0.05				
13.00	2.53	1.99	0.04				
13.25	2.59	2.05	0.03				
13.50	2.64	2.10	0.03				
13.75	2.68	2.14	0.02				
14.00	2.72	2.18	0.02				
14.25	2.76	2.21	0.02				
14.50	2.79	2.24	0.02				
14.75	2.82	2.27	0.02				
15.00	2.84	2.30	0.01				
15.25	2.87	2.32	0.01				
15.50	2.89	2.34	0.01				
15.75	2.91	2.36	0.01				
16.00	2.93	2.38	0.01				
16.25	2.95	2.40	0.01				
16.50	2.97	2.42	0.01				
16.75	2.99	2.44	0.01				
17.00	3.01	2.45	0.01				
17.25	3.02	2.47	0.01				
17.50	3.04	2.49	0.01				
17.75	3.05	2.50	0.01				

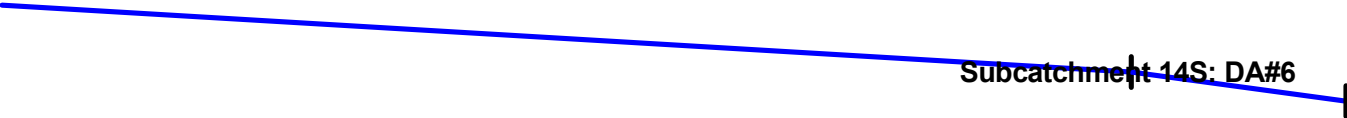
Summary for Subcatchment 14S: DA#6

Runoff = 1.69 cfs @ 12.09 hrs, Volume= 0.099 af, Depth> 2.41"
Routed to Pond 17P : SGW FOREBAY #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
15,753	98	Roofs, HSG D
5,775	80	>75% Grass cover, Good, HSG D
21,528	93	Weighted Average
5,775		26.83% Pervious Area
15,753		73.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	100	0.0319	0.51		Sheet Flow, Fallow n= 0.050 P2= 3.42"
0.1	19	0.0726	4.34		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
3.4	119	Total			



EX and PR

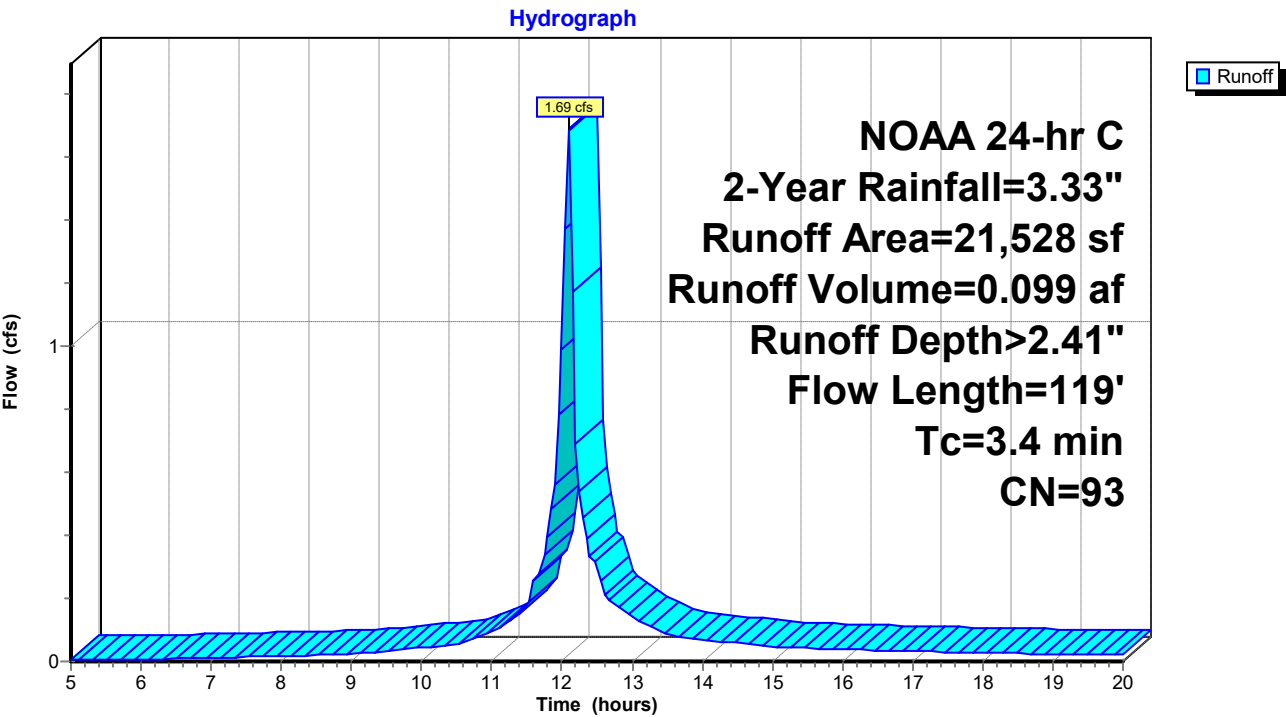
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Subcatchment 14S: DA#6



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 14S: DA#6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	2.32	0.03
5.25	0.22	0.01	0.00	18.25	3.08	2.33	0.03
5.50	0.24	0.01	0.00	18.50	3.09	2.34	0.02
5.75	0.25	0.01	0.01	18.75	3.11	2.36	0.02
6.00	0.26	0.01	0.01	19.00	3.12	2.37	0.02
6.25	0.28	0.02	0.01	19.25	3.13	2.38	0.02
6.50	0.29	0.02	0.01	19.50	3.14	2.39	0.02
6.75	0.31	0.03	0.01	19.75	3.16	2.40	0.02
7.00	0.32	0.03	0.01	20.00	3.17	2.41	0.02
7.25	0.34	0.04	0.01				
7.50	0.36	0.05	0.01				
7.75	0.38	0.05	0.02				
8.00	0.40	0.06	0.02				
8.25	0.42	0.07	0.02				
8.50	0.44	0.08	0.02				
8.75	0.46	0.09	0.02				
9.00	0.49	0.10	0.02				
9.25	0.51	0.12	0.03				
9.50	0.54	0.13	0.03				
9.75	0.57	0.15	0.04				
10.00	0.61	0.17	0.04				
10.25	0.65	0.20	0.05				
10.50	0.69	0.22	0.05				
10.75	0.74	0.26	0.07				
11.00	0.80	0.30	0.09				
11.25	0.88	0.36	0.13				
11.50	0.98	0.44	0.17				
11.75	1.17	0.59	0.34				
12.00	1.59	0.94	0.99				
12.25	2.16	1.46	0.54				
12.50	2.35	1.63	0.31				
12.75	2.45	1.73	0.18				
13.00	2.53	1.81	0.14				
13.25	2.59	1.87	0.11				
13.50	2.64	1.92	0.09				
13.75	2.68	1.95	0.08				
14.00	2.72	1.99	0.07				
14.25	2.76	2.02	0.06				
14.50	2.79	2.05	0.06				
14.75	2.82	2.08	0.05				
15.00	2.84	2.10	0.05				
15.25	2.87	2.13	0.04				
15.50	2.89	2.15	0.04				
15.75	2.91	2.17	0.04				
16.00	2.93	2.19	0.04				
16.25	2.95	2.21	0.04				
16.50	2.97	2.23	0.04				
16.75	2.99	2.24	0.03				
17.00	3.01	2.26	0.03				
17.25	3.02	2.27	0.03				
17.50	3.04	2.29	0.03				
17.75	3.05	2.30	0.03				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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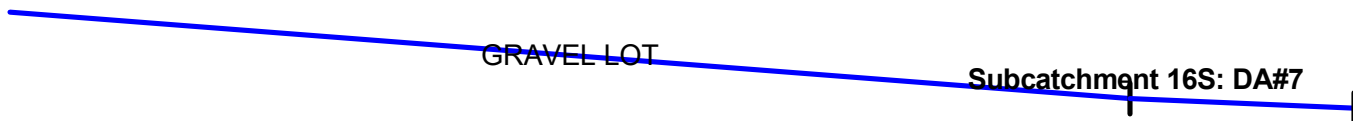
Summary for Subcatchment 16S: DA#7

Runoff = 0.73 cfs @ 12.07 hrs, Volume= 0.044 af, Depth> 2.69"
 Routed to Pond 38P : CI-1

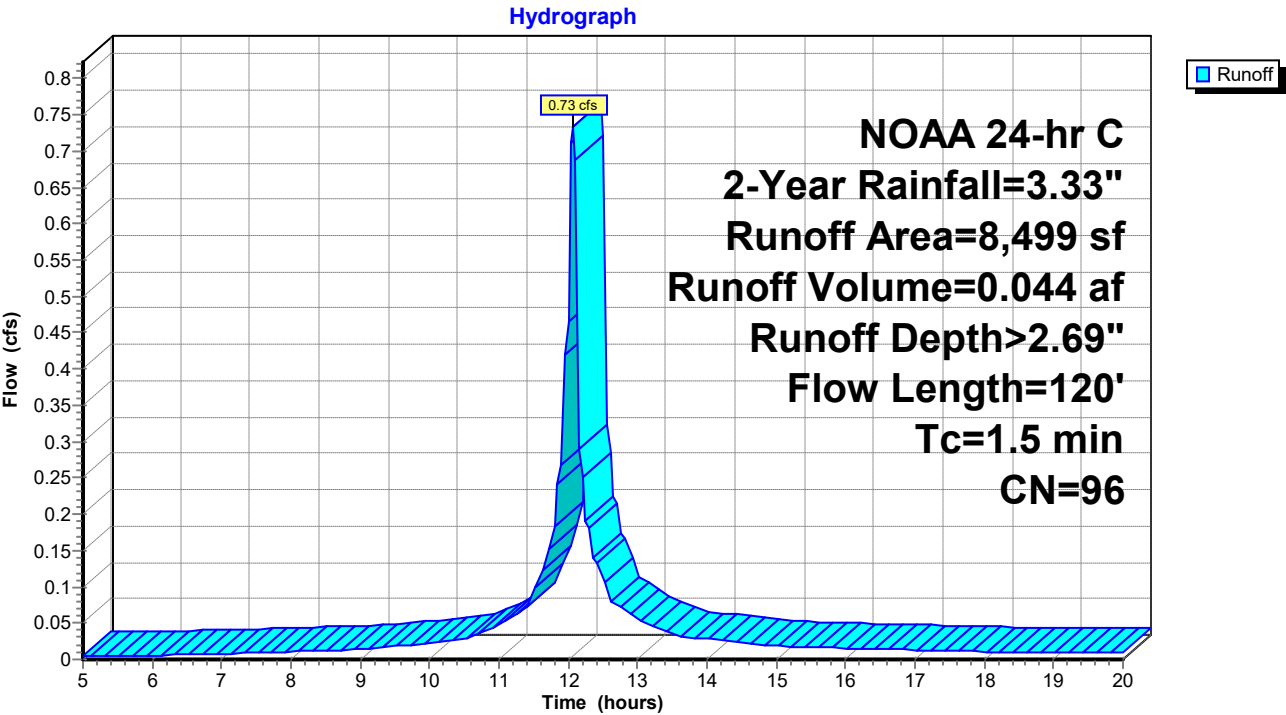
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
7,423	98	Roofs, HSG D
1,076	80	>75% Grass cover, Good, HSG D
8,499	96	Weighted Average
1,076		12.66% Pervious Area
7,423		87.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0151	1.27		Sheet Flow, GRAVEL LOT Smooth surfaces n= 0.011 P2= 3.42"
0.2	20	0.0085	1.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.5	120	Total			



Subcatchment 16S: DA#7



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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Subcatchment 16S: DA#7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.03	0.00	18.00	3.07	2.62	0.01
5.25	0.22	0.04	0.00	18.25	3.08	2.63	0.01
5.50	0.24	0.04	0.00	18.50	3.09	2.64	0.01
5.75	0.25	0.05	0.01	18.75	3.11	2.66	0.01
6.00	0.26	0.05	0.01	19.00	3.12	2.67	0.01
6.25	0.28	0.06	0.01	19.25	3.13	2.68	0.01
6.50	0.29	0.07	0.01	19.50	3.14	2.69	0.01
6.75	0.31	0.08	0.01	19.75	3.16	2.70	0.01
7.00	0.32	0.09	0.01	20.00	3.17	2.72	0.01
7.25	0.34	0.10	0.01				
7.50	0.36	0.11	0.01				
7.75	0.38	0.12	0.01				
8.00	0.40	0.14	0.01				
8.25	0.42	0.15	0.01				
8.50	0.44	0.17	0.01				
8.75	0.46	0.18	0.01				
9.00	0.49	0.20	0.01				
9.25	0.51	0.22	0.02				
9.50	0.54	0.24	0.02				
9.75	0.57	0.26	0.02				
10.00	0.61	0.29	0.02				
10.25	0.65	0.32	0.03				
10.50	0.69	0.36	0.03				
10.75	0.74	0.40	0.04				
11.00	0.80	0.45	0.05				
11.25	0.88	0.52	0.06				
11.50	0.98	0.62	0.08				
11.75	1.17	0.79	0.17				
12.00	1.59	1.18	0.47				
12.25	2.16	1.73	0.19				
12.50	2.35	1.91	0.12				
12.75	2.45	2.01	0.07				
13.00	2.53	2.09	0.06				
13.25	2.59	2.15	0.04				
13.50	2.64	2.20	0.04				
13.75	2.68	2.24	0.03				
14.00	2.72	2.28	0.03				
14.25	2.76	2.31	0.03				
14.50	2.79	2.35	0.02				
14.75	2.82	2.37	0.02				
15.00	2.84	2.40	0.02				
15.25	2.87	2.42	0.02				
15.50	2.89	2.44	0.02				
15.75	2.91	2.46	0.02				
16.00	2.93	2.48	0.02				
16.25	2.95	2.50	0.01				
16.50	2.97	2.52	0.01				
16.75	2.99	2.54	0.01				
17.00	3.01	2.56	0.01				
17.25	3.02	2.57	0.01				
17.50	3.04	2.59	0.01				
17.75	3.05	2.60	0.01				

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

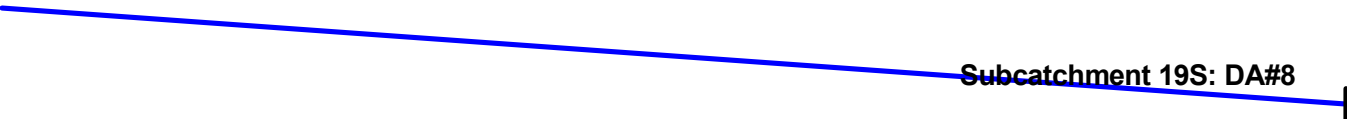
Summary for Subcatchment 19S: DA#8

Runoff = 1.58 cfs @ 12.06 hrs, Volume= 0.097 af, Depth> 2.86"
Routed to Pond 39P : CI-9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

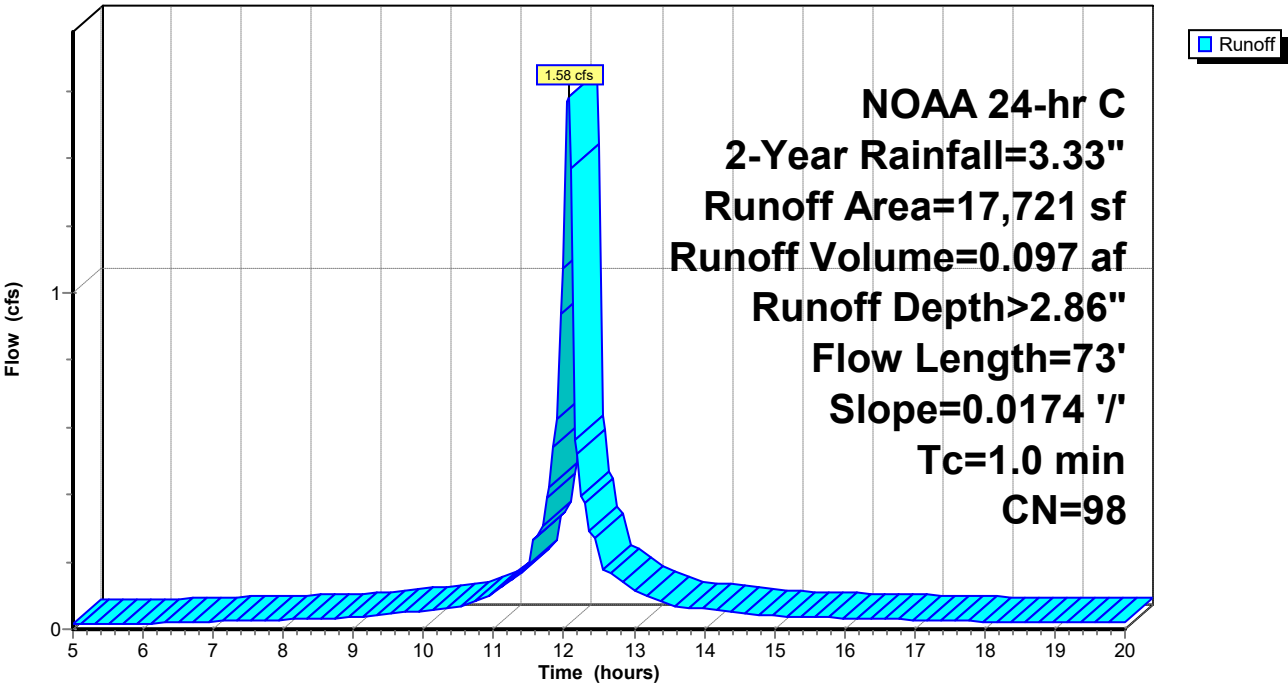
Area (sf)	CN	Description
17,329	98	Roofs, HSG D
392	80	>75% Grass cover, Good, HSG D
17,721	98	Weighted Average
392		2.21% Pervious Area
17,329		97.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	73	0.0174	1.26		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"



Subcatchment 19S: DA#8

Hydrograph



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 19S: DA#8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.08	0.01	18.00	3.07	2.83	0.02
5.25	0.22	0.09	0.02	18.25	3.08	2.85	0.02
5.50	0.24	0.10	0.02	18.50	3.09	2.86	0.02
5.75	0.25	0.11	0.02	18.75	3.11	2.87	0.02
6.00	0.26	0.12	0.02	19.00	3.12	2.89	0.02
6.25	0.28	0.13	0.02	19.25	3.13	2.90	0.02
6.50	0.29	0.14	0.02	19.50	3.14	2.91	0.02
6.75	0.31	0.15	0.02	19.75	3.16	2.92	0.02
7.00	0.32	0.17	0.02	20.00	3.17	2.93	0.02
7.25	0.34	0.18	0.02				
7.50	0.36	0.19	0.03				
7.75	0.38	0.21	0.03				
8.00	0.40	0.23	0.03				
8.25	0.42	0.25	0.03				
8.50	0.44	0.27	0.03				
8.75	0.46	0.28	0.03				
9.00	0.49	0.31	0.03				
9.25	0.51	0.33	0.04				
9.50	0.54	0.35	0.04				
9.75	0.57	0.38	0.05				
10.00	0.61	0.42	0.05				
10.25	0.65	0.45	0.06				
10.50	0.69	0.49	0.07				
10.75	0.74	0.54	0.09				
11.00	0.80	0.60	0.11				
11.25	0.88	0.68	0.15				
11.50	0.98	0.78	0.19				
11.75	1.17	0.96	0.39				
12.00	1.59	1.37	1.07				
12.25	2.16	1.93	0.40				
12.50	2.35	2.12	0.25				
12.75	2.45	2.22	0.15				
13.00	2.53	2.30	0.12				
13.25	2.59	2.36	0.09				
13.50	2.64	2.41	0.07				
13.75	2.68	2.45	0.06				
14.00	2.72	2.49	0.06				
14.25	2.76	2.53	0.05				
14.50	2.79	2.56	0.05				
14.75	2.82	2.59	0.04				
15.00	2.84	2.61	0.04				
15.25	2.87	2.64	0.04				
15.50	2.89	2.66	0.04				
15.75	2.91	2.68	0.03				
16.00	2.93	2.70	0.03				
16.25	2.95	2.72	0.03				
16.50	2.97	2.74	0.03				
16.75	2.99	2.76	0.03				
17.00	3.01	2.77	0.03				
17.25	3.02	2.79	0.03				
17.50	3.04	2.81	0.03				
17.75	3.05	2.82	0.02				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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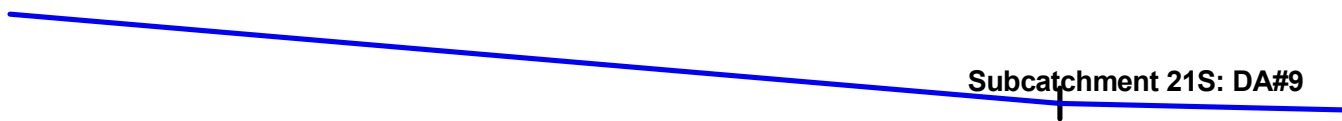
Summary for Subcatchment 21S: DA#9

Runoff = 0.86 cfs @ 12.07 hrs, Volume= 0.049 af, Depth> 2.32"
 Routed to Pond 40P : CI-6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
7,468	98	Roofs, HSG D
3,482	80	>75% Grass cover, Good, HSG D
10,950	92	Weighted Average
3,482		31.80% Pervious Area
7,468		68.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0254	1.56		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.3	28	0.0068	1.67		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.4	128	Total			



EX and PR

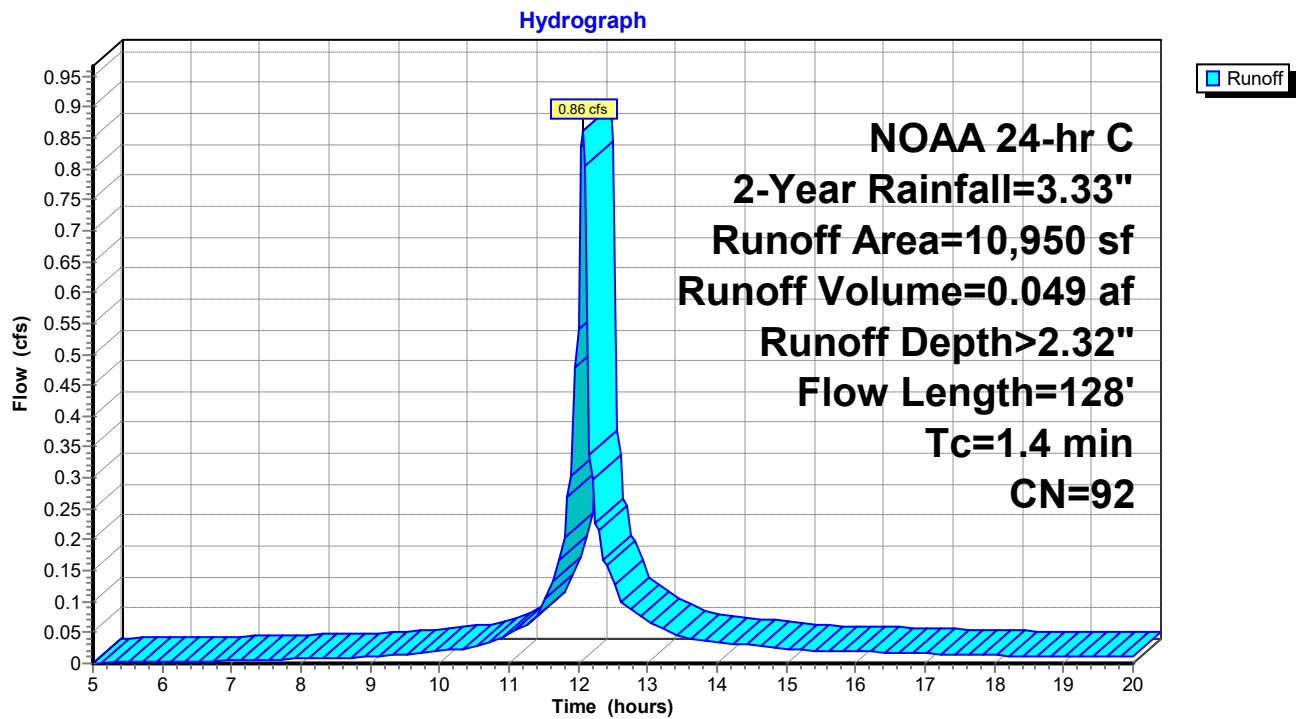
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Subcatchment 21S: DA#9



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 21S: DA#9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	2.22	0.01
5.25	0.22	0.00	0.00	18.25	3.08	2.24	0.01
5.50	0.24	0.00	0.00	18.50	3.09	2.25	0.01
5.75	0.25	0.01	0.00	18.75	3.11	2.26	0.01
6.00	0.26	0.01	0.00	19.00	3.12	2.27	0.01
6.25	0.28	0.01	0.00	19.25	3.13	2.28	0.01
6.50	0.29	0.01	0.00	19.50	3.14	2.30	0.01
6.75	0.31	0.02	0.00	19.75	3.16	2.31	0.01
7.00	0.32	0.02	0.00	20.00	3.17	2.32	0.01
7.25	0.34	0.03	0.01				
7.50	0.36	0.03	0.01				
7.75	0.38	0.04	0.01				
8.00	0.40	0.05	0.01				
8.25	0.42	0.05	0.01				
8.50	0.44	0.06	0.01				
8.75	0.46	0.07	0.01				
9.00	0.49	0.08	0.01				
9.25	0.51	0.09	0.01				
9.50	0.54	0.11	0.02				
9.75	0.57	0.13	0.02				
10.00	0.61	0.14	0.02				
10.25	0.65	0.17	0.02				
10.50	0.69	0.19	0.03				
10.75	0.74	0.22	0.04				
11.00	0.80	0.26	0.04				
11.25	0.88	0.32	0.06				
11.50	0.98	0.39	0.09				
11.75	1.17	0.53	0.19				
12.00	1.59	0.87	0.54				
12.25	2.16	1.38	0.23				
12.50	2.35	1.55	0.15				
12.75	2.45	1.65	0.09				
13.00	2.53	1.72	0.07				
13.25	2.59	1.78	0.05				
13.50	2.64	1.83	0.04				
13.75	2.68	1.86	0.04				
14.00	2.72	1.90	0.03				
14.25	2.76	1.93	0.03				
14.50	2.79	1.96	0.03				
14.75	2.82	1.99	0.03				
15.00	2.84	2.01	0.02				
15.25	2.87	2.04	0.02				
15.50	2.89	2.06	0.02				
15.75	2.91	2.08	0.02				
16.00	2.93	2.10	0.02				
16.25	2.95	2.11	0.02				
16.50	2.97	2.13	0.02				
16.75	2.99	2.15	0.02				
17.00	3.01	2.17	0.02				
17.25	3.02	2.18	0.02				
17.50	3.04	2.20	0.01				
17.75	3.05	2.21	0.01				

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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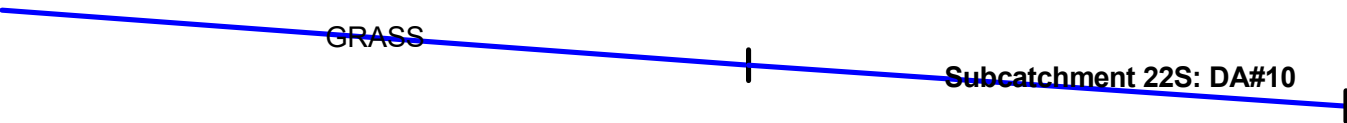
Summary for Subcatchment 22S: DA#10

Runoff = 0.28 cfs @ 12.20 hrs, Volume= 0.020 af, Depth> 1.88"
Routed to Pond 43P : CI-7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
2,347	98	Roofs, HSG D
3,349	80	>75% Grass cover, Good, HSG D
5,696	87	Weighted Average
3,349		58.80% Pervious Area
2,347		41.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	55	0.0100	0.08		Sheet Flow, GRASS Grass: Dense n= 0.240 P2= 3.42"
0.8	44	0.0093	0.89		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
12.1	99	Total			



EX and PR

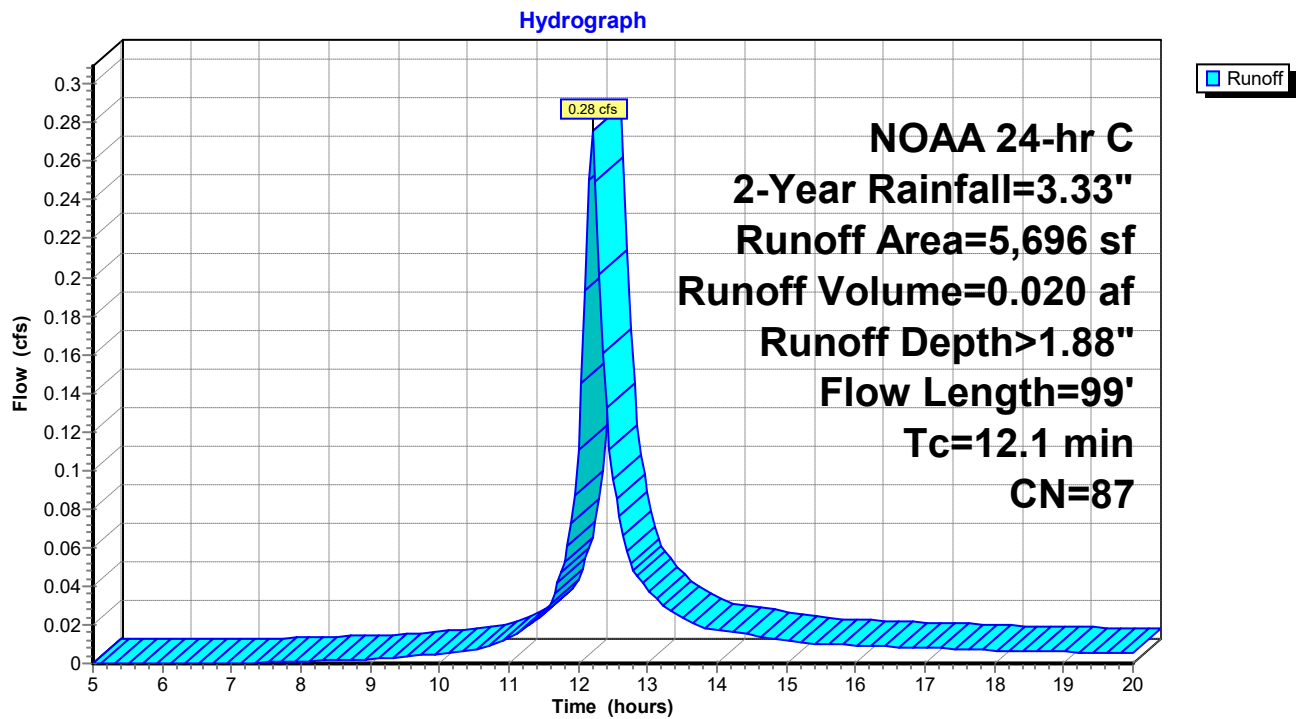
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Subcatchment 22S: DA#10



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Hydrograph for Subcatchment 22S: DA#10

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	1.80	0.01
5.25	0.22	0.00	0.00	18.25	3.08	1.81	0.01
5.50	0.24	0.00	0.00	18.50	3.09	1.82	0.01
5.75	0.25	0.00	0.00	18.75	3.11	1.83	0.01
6.00	0.26	0.00	0.00	19.00	3.12	1.84	0.01
6.25	0.28	0.00	0.00	19.25	3.13	1.85	0.01
6.50	0.29	0.00	0.00	19.50	3.14	1.86	0.01
6.75	0.31	0.00	0.00	19.75	3.16	1.88	0.01
7.00	0.32	0.00	0.00	20.00	3.17	1.89	0.01
7.25	0.34	0.00	0.00				
7.50	0.36	0.00	0.00				
7.75	0.38	0.00	0.00				
8.00	0.40	0.01	0.00				
8.25	0.42	0.01	0.00				
8.50	0.44	0.01	0.00				
8.75	0.46	0.02	0.00				
9.00	0.49	0.02	0.00				
9.25	0.51	0.03	0.00				
9.50	0.54	0.03	0.00				
9.75	0.57	0.04	0.00				
10.00	0.61	0.05	0.01				
10.25	0.65	0.07	0.01				
10.50	0.69	0.08	0.01				
10.75	0.74	0.10	0.01				
11.00	0.80	0.13	0.01				
11.25	0.88	0.16	0.02				
11.50	0.98	0.22	0.03				
11.75	1.17	0.32	0.05				
12.00	1.59	0.60	0.11				
12.25	2.16	1.03	0.25				
12.50	2.35	1.18	0.10				
12.75	2.45	1.27	0.05				
13.00	2.53	1.34	0.04				
13.25	2.59	1.39	0.03				
13.50	2.64	1.43	0.02				
13.75	2.68	1.47	0.02				
14.00	2.72	1.50	0.02				
14.25	2.76	1.53	0.02				
14.50	2.79	1.56	0.01				
14.75	2.82	1.58	0.01				
15.00	2.84	1.60	0.01				
15.25	2.87	1.62	0.01				
15.50	2.89	1.64	0.01				
15.75	2.91	1.66	0.01				
16.00	2.93	1.68	0.01				
16.25	2.95	1.70	0.01				
16.50	2.97	1.71	0.01				
16.75	2.99	1.73	0.01				
17.00	3.01	1.74	0.01				
17.25	3.02	1.76	0.01				
17.50	3.04	1.77	0.01				
17.75	3.05	1.78	0.01				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Summary for Subcatchment 25S: DA#12

Runoff = 0.58 cfs @ 12.07 hrs, Volume= 0.035 af, Depth> 2.69"
Routed to Pond 45P : CI-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

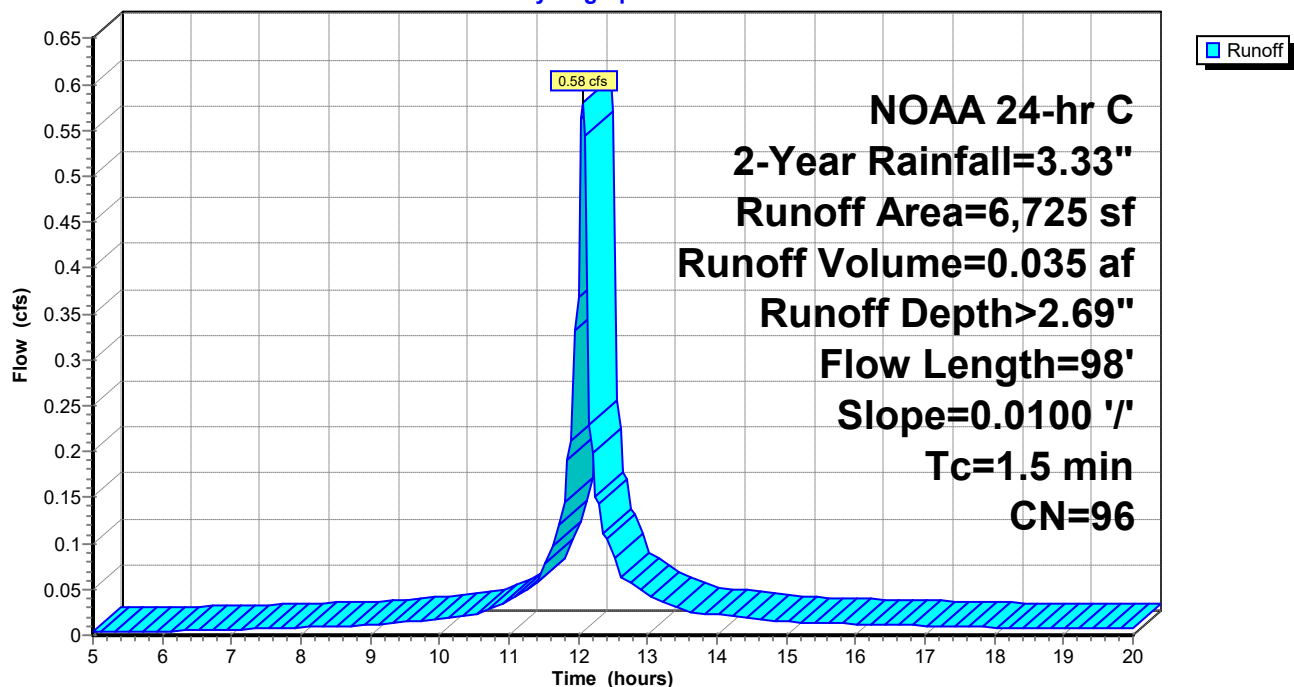
Area (sf)	CN	Description
5,864	98	Roofs, HSG D
861	80	>75% Grass cover, Good, HSG D
6,725	96	Weighted Average
861		12.80% Pervious Area
5,864		87.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	98	0.0100	1.07		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 25S: DA#12

Subcatchment 25S: DA#12

Hydrograph



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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Subcatchment 25S: DA#12

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.03	0.00	18.00	3.07	2.62	0.01
5.25	0.22	0.04	0.00	18.25	3.08	2.63	0.01
5.50	0.24	0.04	0.00	18.50	3.09	2.64	0.01
5.75	0.25	0.05	0.00	18.75	3.11	2.66	0.01
6.00	0.26	0.05	0.00	19.00	3.12	2.67	0.01
6.25	0.28	0.06	0.00	19.25	3.13	2.68	0.01
6.50	0.29	0.07	0.01	19.50	3.14	2.69	0.01
6.75	0.31	0.08	0.01	19.75	3.16	2.70	0.01
7.00	0.32	0.09	0.01	20.00	3.17	2.72	0.01
7.25	0.34	0.10	0.01				
7.50	0.36	0.11	0.01				
7.75	0.38	0.12	0.01				
8.00	0.40	0.14	0.01				
8.25	0.42	0.15	0.01				
8.50	0.44	0.17	0.01				
8.75	0.46	0.18	0.01				
9.00	0.49	0.20	0.01				
9.25	0.51	0.22	0.01				
9.50	0.54	0.24	0.01				
9.75	0.57	0.26	0.02				
10.00	0.61	0.29	0.02				
10.25	0.65	0.32	0.02				
10.50	0.69	0.36	0.02				
10.75	0.74	0.40	0.03				
11.00	0.80	0.45	0.04				
11.25	0.88	0.52	0.05				
11.50	0.98	0.62	0.06				
11.75	1.17	0.79	0.14				
12.00	1.59	1.18	0.37				
12.25	2.16	1.73	0.15				
12.50	2.35	1.91	0.10				
12.75	2.45	2.01	0.06				
13.00	2.53	2.09	0.05				
13.25	2.59	2.15	0.03				
13.50	2.64	2.20	0.03				
13.75	2.68	2.24	0.02				
14.00	2.72	2.28	0.02				
14.25	2.76	2.31	0.02				
14.50	2.79	2.35	0.02				
14.75	2.82	2.37	0.02				
15.00	2.84	2.40	0.01				
15.25	2.87	2.42	0.01				
15.50	2.89	2.44	0.01				
15.75	2.91	2.46	0.01				
16.00	2.93	2.48	0.01				
16.25	2.95	2.50	0.01				
16.50	2.97	2.52	0.01				
16.75	2.99	2.54	0.01				
17.00	3.01	2.56	0.01				
17.25	3.02	2.57	0.01				
17.50	3.04	2.59	0.01				
17.75	3.05	2.60	0.01				

EX and PR

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HydroCAD® 10.20-3g s/n 02413 © 2023 HydroCAD Software Solutions LLC

NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Summary for Subcatchment 26S: DA#1

Runoff = 1.72 cfs @ 12.12 hrs, Volume= 0.105 af, Depth> 1.88"
 Routed to Pond 27P : FES-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
11,362	98	Roofs, HSG D
17,706	80	>75% Grass cover, Good, HSG D
29,068	87	Weighted Average
17,706		60.91% Pervious Area
11,362		39.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	27	0.0306	0.11		Sheet Flow, GRASS Grass: Dense n= 0.240 P2= 3.42"
1.4	378	0.0073	4.50	71.98	Channel Flow, Area= 16.0 sf Perim= 14.6' r= 1.10' n= 0.030
5.5	405	Total			

GRASS

Subcatchment 26S: DA#1

EX and PR

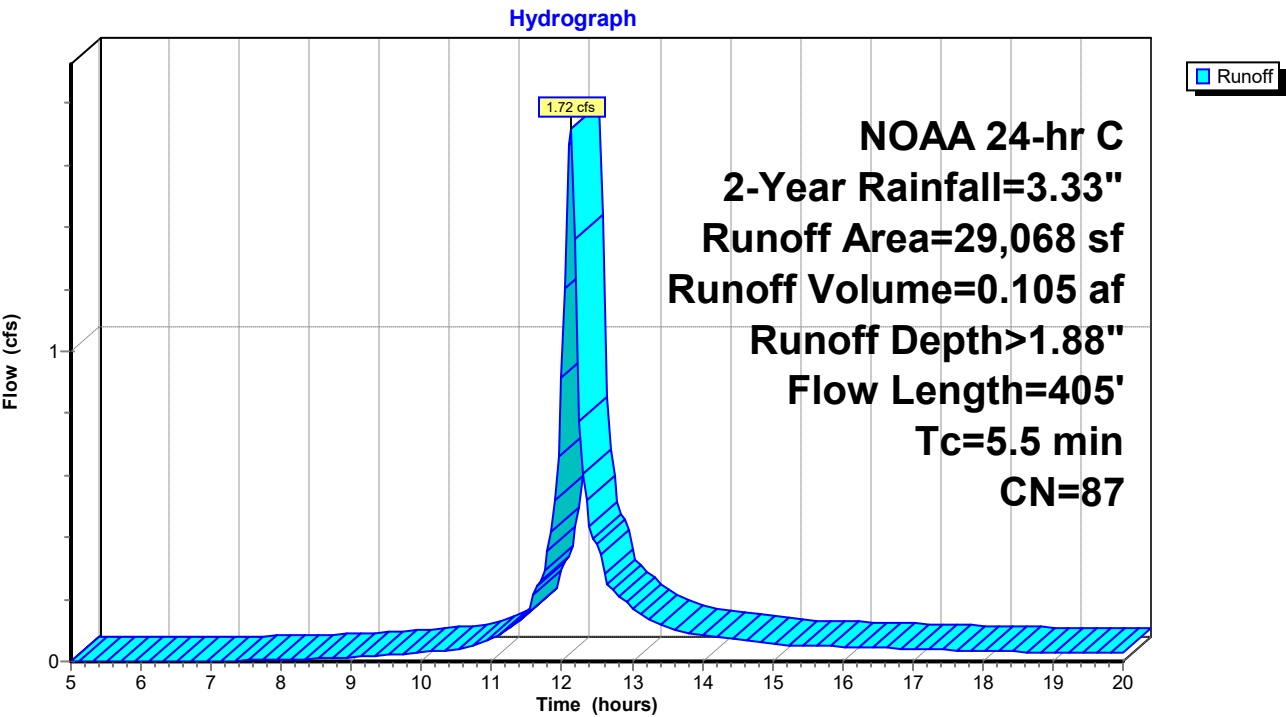
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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Subcatchment 26S: DA#1



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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Subcatchment 26S: DA#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	1.80	0.03
5.25	0.22	0.00	0.00	18.25	3.08	1.81	0.03
5.50	0.24	0.00	0.00	18.50	3.09	1.82	0.03
5.75	0.25	0.00	0.00	18.75	3.11	1.83	0.03
6.00	0.26	0.00	0.00	19.00	3.12	1.84	0.03
6.25	0.28	0.00	0.00	19.25	3.13	1.85	0.03
6.50	0.29	0.00	0.00	19.50	3.14	1.86	0.03
6.75	0.31	0.00	0.00	19.75	3.16	1.88	0.03
7.00	0.32	0.00	0.00	20.00	3.17	1.89	0.03
7.25	0.34	0.00	0.00				
7.50	0.36	0.00	0.00				
7.75	0.38	0.00	0.00				
8.00	0.40	0.01	0.01				
8.25	0.42	0.01	0.01				
8.50	0.44	0.01	0.01				
8.75	0.46	0.02	0.01				
9.00	0.49	0.02	0.01				
9.25	0.51	0.03	0.02				
9.50	0.54	0.03	0.02				
9.75	0.57	0.04	0.02				
10.00	0.61	0.05	0.03				
10.25	0.65	0.07	0.03				
10.50	0.69	0.08	0.04				
10.75	0.74	0.10	0.05				
11.00	0.80	0.13	0.07				
11.25	0.88	0.16	0.11				
11.50	0.98	0.22	0.15				
11.75	1.17	0.32	0.29				
12.00	1.59	0.60	0.92				
12.25	2.16	1.03	0.77				
12.50	2.35	1.18	0.38				
12.75	2.45	1.27	0.22				
13.00	2.53	1.34	0.18				
13.25	2.59	1.39	0.14				
13.50	2.64	1.43	0.11				
13.75	2.68	1.47	0.09				
14.00	2.72	1.50	0.09				
14.25	2.76	1.53	0.08				
14.50	2.79	1.56	0.07				
14.75	2.82	1.58	0.07				
15.00	2.84	1.60	0.06				
15.25	2.87	1.62	0.05				
15.50	2.89	1.64	0.05				
15.75	2.91	1.66	0.05				
16.00	2.93	1.68	0.05				
16.25	2.95	1.70	0.05				
16.50	2.97	1.71	0.04				
16.75	2.99	1.73	0.04				
17.00	3.01	1.74	0.04				
17.25	3.02	1.76	0.04				
17.50	3.04	1.77	0.04				
17.75	3.05	1.78	0.03				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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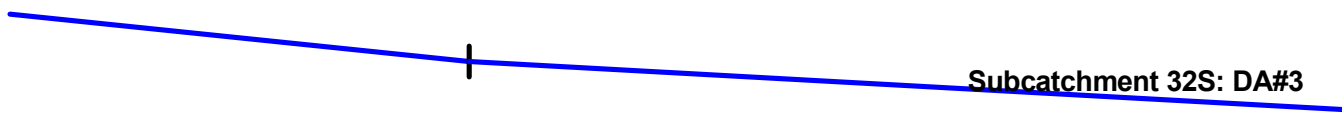
Summary for Subcatchment 32S: DA#3

Runoff = 0.64 cfs @ 12.06 hrs, Volume= 0.034 af, Depth> 1.89"
 Routed to Link 2L : SP#1

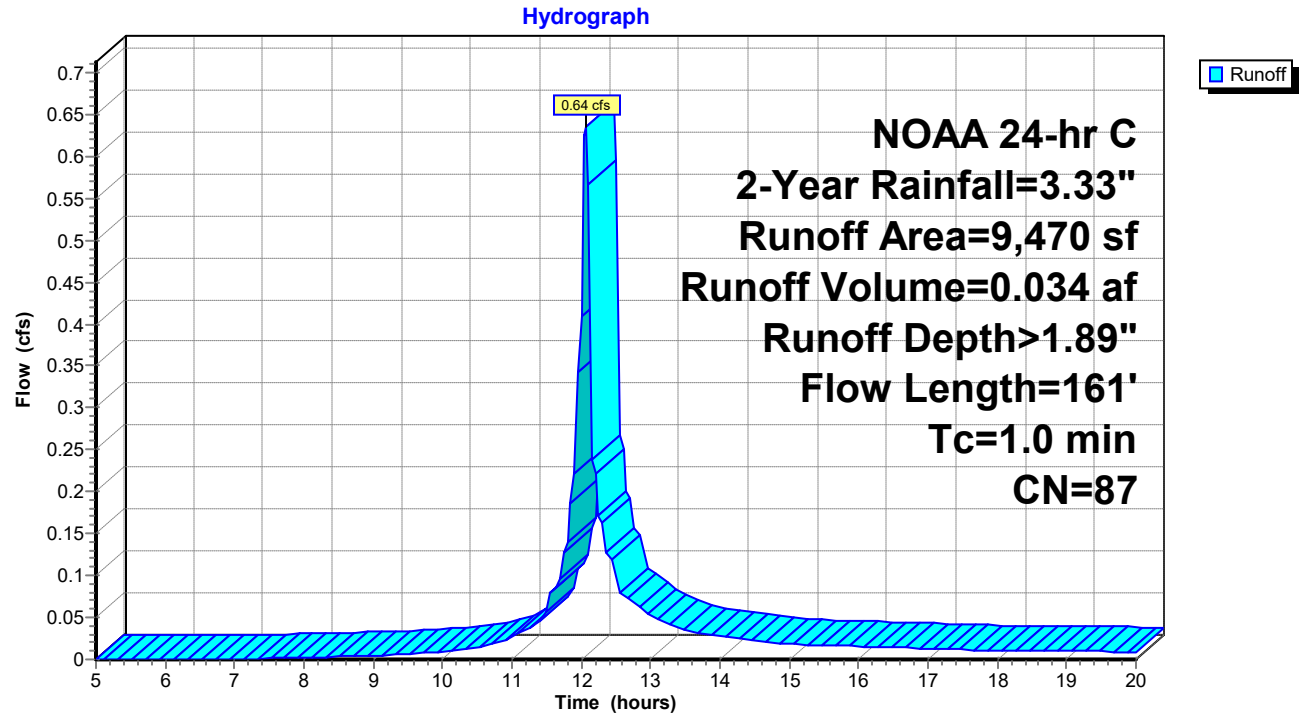
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
3,831	98	Roofs, HSG D
5,639	80	>75% Grass cover, Good, HSG D
9,470	87	Weighted Average
5,639		59.55% Pervious Area
3,831		40.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	55	0.0240	1.36		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.3	106	0.0128	5.96	95.31	Channel Flow, Area= 16.0 sf Perim= 14.6' r= 1.10' n= 0.030
1.0	161	Total			



Subcatchment 32S: DA#3



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 32S: DA#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	1.80	0.01
5.25	0.22	0.00	0.00	18.25	3.08	1.81	0.01
5.50	0.24	0.00	0.00	18.50	3.09	1.82	0.01
5.75	0.25	0.00	0.00	18.75	3.11	1.83	0.01
6.00	0.26	0.00	0.00	19.00	3.12	1.84	0.01
6.25	0.28	0.00	0.00	19.25	3.13	1.85	0.01
6.50	0.29	0.00	0.00	19.50	3.14	1.86	0.01
6.75	0.31	0.00	0.00	19.75	3.16	1.88	0.01
7.00	0.32	0.00	0.00	20.00	3.17	1.89	0.01
7.25	0.34	0.00	0.00				
7.50	0.36	0.00	0.00				
7.75	0.38	0.00	0.00				
8.00	0.40	0.01	0.00				
8.25	0.42	0.01	0.00				
8.50	0.44	0.01	0.00				
8.75	0.46	0.02	0.00				
9.00	0.49	0.02	0.00				
9.25	0.51	0.03	0.01				
9.50	0.54	0.03	0.01				
9.75	0.57	0.04	0.01				
10.00	0.61	0.05	0.01				
10.25	0.65	0.07	0.01				
10.50	0.69	0.08	0.01				
10.75	0.74	0.10	0.02				
11.00	0.80	0.13	0.03				
11.25	0.88	0.16	0.04				
11.50	0.98	0.22	0.06				
11.75	1.17	0.32	0.13				
12.00	1.59	0.60	0.41				
12.25	2.16	1.03	0.17				
12.50	2.35	1.18	0.11				
12.75	2.45	1.27	0.07				
13.00	2.53	1.34	0.05				
13.25	2.59	1.39	0.04				
13.50	2.64	1.43	0.03				
13.75	2.68	1.47	0.03				
14.00	2.72	1.50	0.03				
14.25	2.76	1.53	0.03				
14.50	2.79	1.56	0.02				
14.75	2.82	1.58	0.02				
15.00	2.84	1.60	0.02				
15.25	2.87	1.62	0.02				
15.50	2.89	1.64	0.02				
15.75	2.91	1.66	0.02				
16.00	2.93	1.68	0.02				
16.25	2.95	1.70	0.01				
16.50	2.97	1.71	0.01				
16.75	2.99	1.73	0.01				
17.00	3.01	1.74	0.01				
17.25	3.02	1.76	0.01				
17.50	3.04	1.77	0.01				
17.75	3.05	1.78	0.01				

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Summary for Subcatchment 33S: DA#13

Runoff = 0.23 cfs @ 12.06 hrs, Volume= 0.013 af, Depth> 2.05"
Routed to Pond 46P : CI-5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

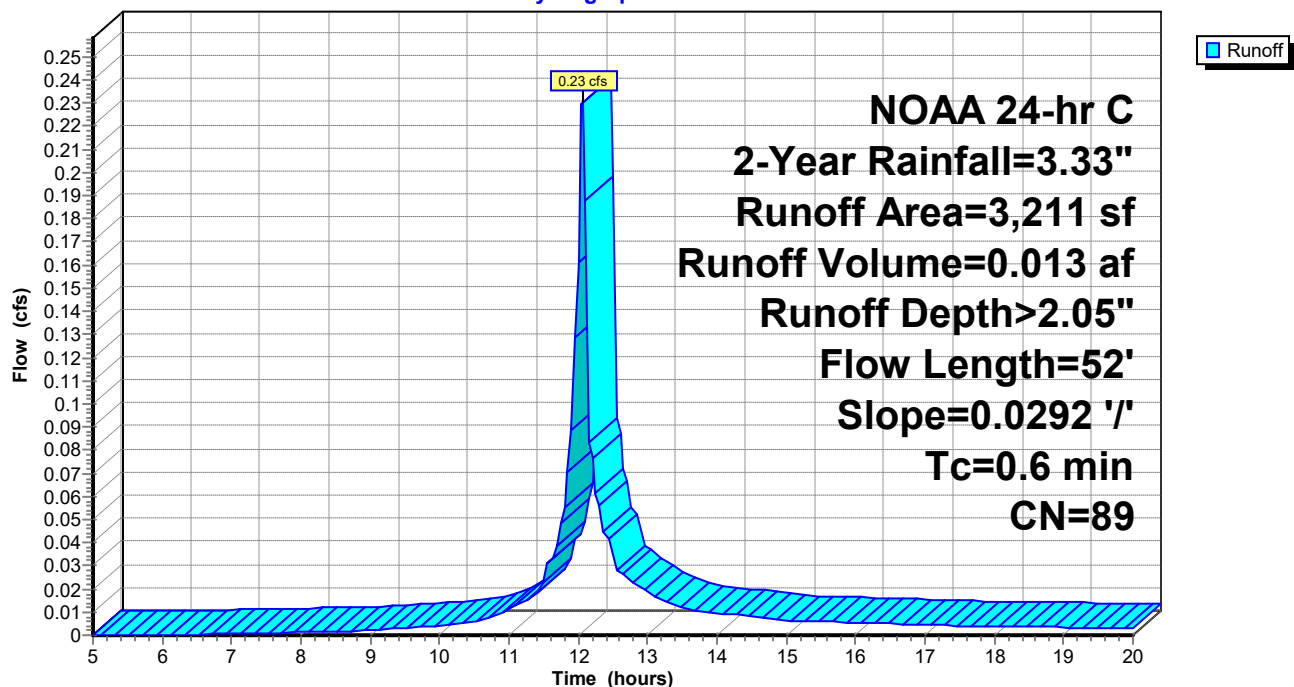
Area (sf)	CN	Description
1,642	98	Roofs, HSG D
1,569	80	>75% Grass cover, Good, HSG D
3,211	89	Weighted Average
1,569		48.86% Pervious Area
1,642		51.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	52	0.0292	1.45		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 33S: DA#13

Subcatchment 33S: DA#13

Hydrograph



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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Subcatchment 33S: DA#13

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	1.96	0.00
5.25	0.22	0.00	0.00	18.25	3.08	1.97	0.00
5.50	0.24	0.00	0.00	18.50	3.09	1.98	0.00
5.75	0.25	0.00	0.00	18.75	3.11	2.00	0.00
6.00	0.26	0.00	0.00	19.00	3.12	2.01	0.00
6.25	0.28	0.00	0.00	19.25	3.13	2.02	0.00
6.50	0.29	0.00	0.00	19.50	3.14	2.03	0.00
6.75	0.31	0.00	0.00	19.75	3.16	2.04	0.00
7.00	0.32	0.00	0.00	20.00	3.17	2.05	0.00
7.25	0.34	0.01	0.00				
7.50	0.36	0.01	0.00				
7.75	0.38	0.01	0.00				
8.00	0.40	0.02	0.00				
8.25	0.42	0.02	0.00				
8.50	0.44	0.03	0.00				
8.75	0.46	0.03	0.00				
9.00	0.49	0.04	0.00				
9.25	0.51	0.05	0.00				
9.50	0.54	0.06	0.00				
9.75	0.57	0.07	0.00				
10.00	0.61	0.08	0.00				
10.25	0.65	0.10	0.01				
10.50	0.69	0.12	0.01				
10.75	0.74	0.14	0.01				
11.00	0.80	0.17	0.01				
11.25	0.88	0.21	0.02				
11.50	0.98	0.28	0.02				
11.75	1.17	0.40	0.05				
12.00	1.59	0.70	0.16				
12.25	2.16	1.16	0.06				
12.50	2.35	1.32	0.04				
12.75	2.45	1.41	0.02				
13.00	2.53	1.48	0.02				
13.25	2.59	1.54	0.01				
13.50	2.64	1.58	0.01				
13.75	2.68	1.62	0.01				
14.00	2.72	1.65	0.01				
14.25	2.76	1.68	0.01				
14.50	2.79	1.71	0.01				
14.75	2.82	1.74	0.01				
15.00	2.84	1.76	0.01				
15.25	2.87	1.78	0.01				
15.50	2.89	1.80	0.01				
15.75	2.91	1.82	0.01				
16.00	2.93	1.84	0.01				
16.25	2.95	1.86	0.01				
16.50	2.97	1.87	0.00				
16.75	2.99	1.89	0.00				
17.00	3.01	1.90	0.00				
17.25	3.02	1.92	0.00				
17.50	3.04	1.93	0.00				
17.75	3.05	1.95	0.00				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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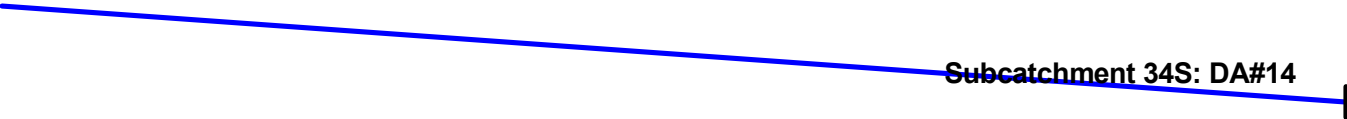
Summary for Subcatchment 34S: DA#14

Runoff = 1.39 cfs @ 12.07 hrs, Volume= 0.079 af, Depth> 2.41"
Routed to Pond 9P : I-2

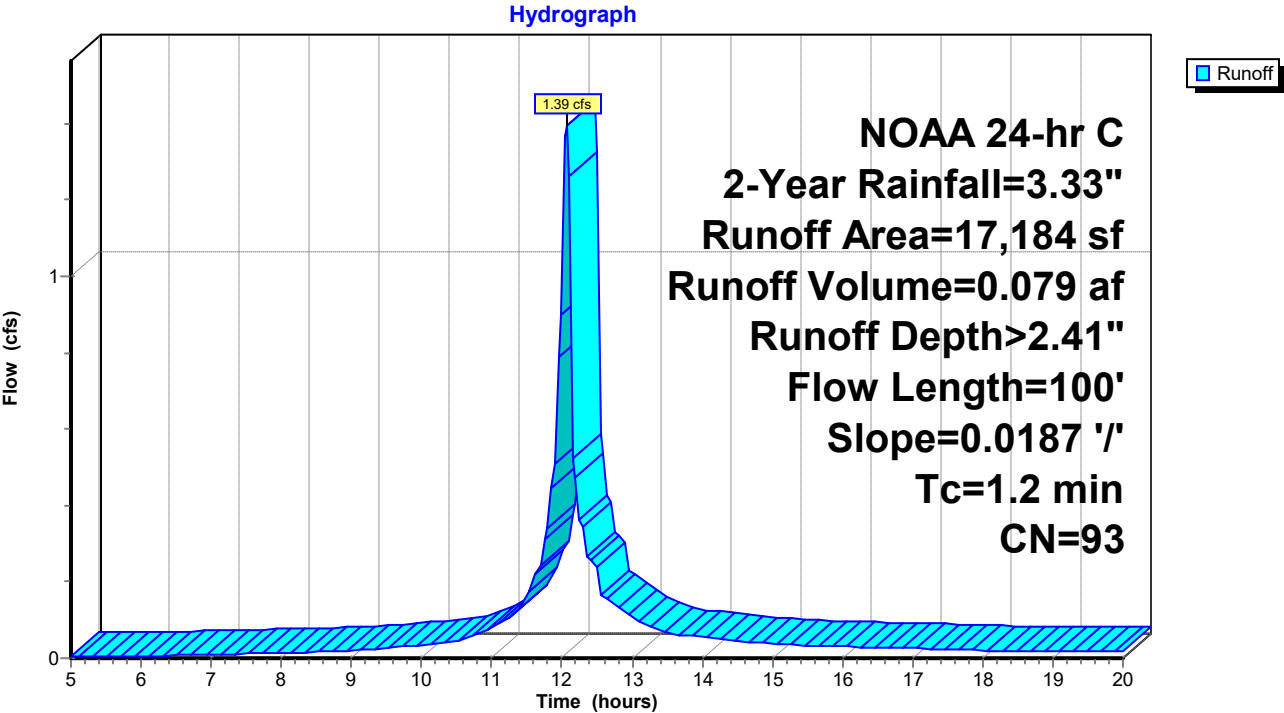
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
12,711	98	Roofs, HSG D
4,473	80	>75% Grass cover, Good, HSG D
17,184	93	Weighted Average
4,473		26.03% Pervious Area
12,711		73.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0187	1.38		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"



Subcatchment 34S: DA#14



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Subcatchment 34S: DA#14

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	2.32	0.02
5.25	0.22	0.01	0.00	18.25	3.08	2.33	0.02
5.50	0.24	0.01	0.00	18.50	3.09	2.34	0.02
5.75	0.25	0.01	0.00	18.75	3.11	2.36	0.02
6.00	0.26	0.01	0.01	19.00	3.12	2.37	0.02
6.25	0.28	0.02	0.01	19.25	3.13	2.38	0.02
6.50	0.29	0.02	0.01	19.50	3.14	2.39	0.02
6.75	0.31	0.03	0.01	19.75	3.16	2.40	0.02
7.00	0.32	0.03	0.01	20.00	3.17	2.41	0.02
7.25	0.34	0.04	0.01				
7.50	0.36	0.05	0.01				
7.75	0.38	0.05	0.01				
8.00	0.40	0.06	0.01				
8.25	0.42	0.07	0.02				
8.50	0.44	0.08	0.02				
8.75	0.46	0.09	0.02				
9.00	0.49	0.10	0.02				
9.25	0.51	0.12	0.02				
9.50	0.54	0.13	0.03				
9.75	0.57	0.15	0.03				
10.00	0.61	0.17	0.03				
10.25	0.65	0.20	0.04				
10.50	0.69	0.22	0.04				
10.75	0.74	0.26	0.06				
11.00	0.80	0.30	0.08				
11.25	0.88	0.36	0.11				
11.50	0.98	0.44	0.15				
11.75	1.17	0.59	0.31				
12.00	1.59	0.94	0.90				
12.25	2.16	1.46	0.36				
12.50	2.35	1.63	0.24				
12.75	2.45	1.73	0.14				
13.00	2.53	1.81	0.11				
13.25	2.59	1.87	0.09				
13.50	2.64	1.92	0.07				
13.75	2.68	1.95	0.06				
14.00	2.72	1.99	0.06				
14.25	2.76	2.02	0.05				
14.50	2.79	2.05	0.05				
14.75	2.82	2.08	0.04				
15.00	2.84	2.10	0.04				
15.25	2.87	2.13	0.03				
15.50	2.89	2.15	0.03				
15.75	2.91	2.17	0.03				
16.00	2.93	2.19	0.03				
16.25	2.95	2.21	0.03				
16.50	2.97	2.23	0.03				
16.75	2.99	2.24	0.03				
17.00	3.01	2.26	0.03				
17.25	3.02	2.27	0.02				
17.50	3.04	2.29	0.02				
17.75	3.05	2.30	0.02				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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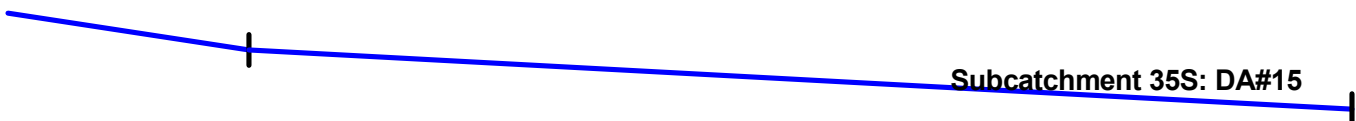
Summary for Subcatchment 35S: DA#15

Runoff = 0.31 cfs @ 12.32 hrs, Volume= 0.029 af, Depth> 1.37"
Routed to Link 2L : SP#1

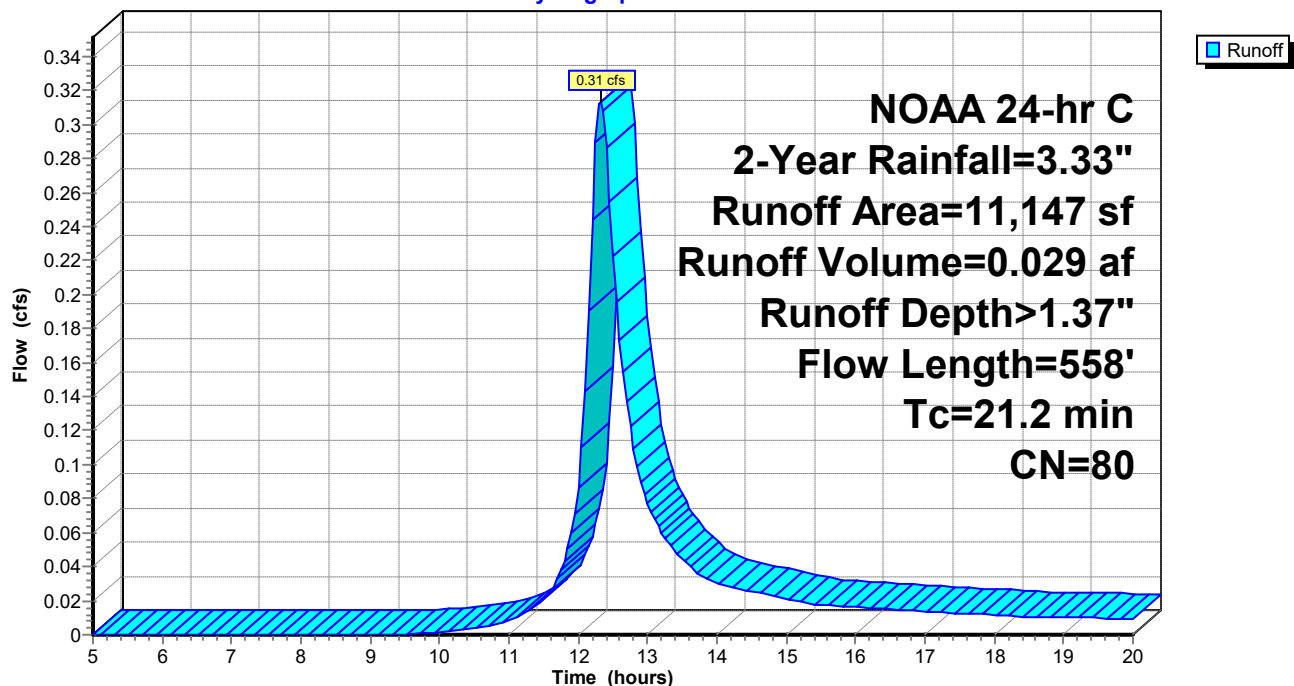
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 2-Year Rainfall=3.33"

Area (sf)	CN	Description
11,147	80	>75% Grass cover, Good, HSG D
11,147		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2	100	0.0336	0.15		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"
10.0	458	0.0118	0.76		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	558	Total			

**Subcatchment 35S: DA#15**

Hydrograph



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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Subcatchment 35S: DA#15

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.21	0.00	0.00	18.00	3.07	1.30	0.01
5.25	0.22	0.00	0.00	18.25	3.08	1.31	0.01
5.50	0.24	0.00	0.00	18.50	3.09	1.32	0.01
5.75	0.25	0.00	0.00	18.75	3.11	1.33	0.01
6.00	0.26	0.00	0.00	19.00	3.12	1.34	0.01
6.25	0.28	0.00	0.00	19.25	3.13	1.35	0.01
6.50	0.29	0.00	0.00	19.50	3.14	1.36	0.01
6.75	0.31	0.00	0.00	19.75	3.16	1.37	0.01
7.00	0.32	0.00	0.00	20.00	3.17	1.38	0.01
7.25	0.34	0.00	0.00				
7.50	0.36	0.00	0.00				
7.75	0.38	0.00	0.00				
8.00	0.40	0.00	0.00				
8.25	0.42	0.00	0.00				
8.50	0.44	0.00	0.00				
8.75	0.46	0.00	0.00				
9.00	0.49	0.00	0.00				
9.25	0.51	0.00	0.00				
9.50	0.54	0.00	0.00				
9.75	0.57	0.00	0.00				
10.00	0.61	0.00	0.00				
10.25	0.65	0.01	0.00				
10.50	0.69	0.01	0.00				
10.75	0.74	0.02	0.01				
11.00	0.80	0.03	0.01				
11.25	0.88	0.05	0.01				
11.50	0.98	0.08	0.02				
11.75	1.17	0.14	0.04				
12.00	1.59	0.33	0.09				
12.25	2.16	0.66	0.29				
12.50	2.35	0.78	0.22				
12.75	2.45	0.85	0.12				
13.00	2.53	0.91	0.08				
13.25	2.59	0.95	0.06				
13.50	2.64	0.99	0.04				
13.75	2.68	1.02	0.04				
14.00	2.72	1.05	0.03				
14.25	2.76	1.07	0.03				
14.50	2.79	1.09	0.03				
14.75	2.82	1.12	0.02				
15.00	2.84	1.13	0.02				
15.25	2.87	1.15	0.02				
15.50	2.89	1.17	0.02				
15.75	2.91	1.18	0.02				
16.00	2.93	1.20	0.02				
16.25	2.95	1.21	0.02				
16.50	2.97	1.23	0.02				
16.75	2.99	1.24	0.01				
17.00	3.01	1.25	0.01				
17.25	3.02	1.27	0.01				
17.50	3.04	1.28	0.01				
17.75	3.05	1.29	0.01				

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"
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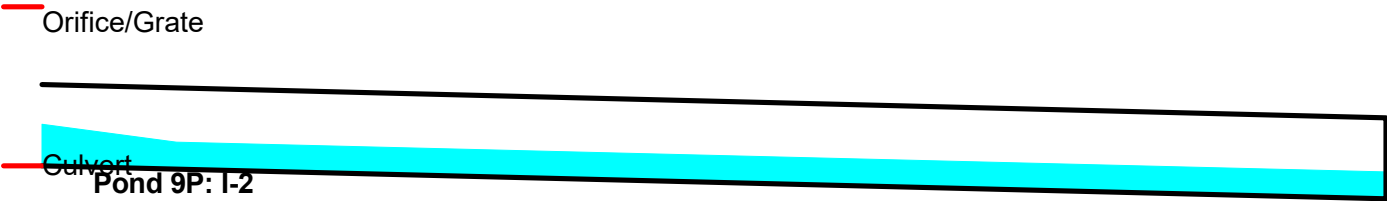
Summary for Pond 9P: I-2

Inflow Area = 0.394 ac, 73.97% Impervious, Inflow Depth > 2.41" for 2-Year event
Inflow = 1.39 cfs @ 12.07 hrs, Volume= 0.079 af
Outflow = 1.39 cfs @ 12.07 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min
Primary = 1.39 cfs @ 12.07 hrs, Volume= 0.079 af
Routed to Pond 44P : CI-2

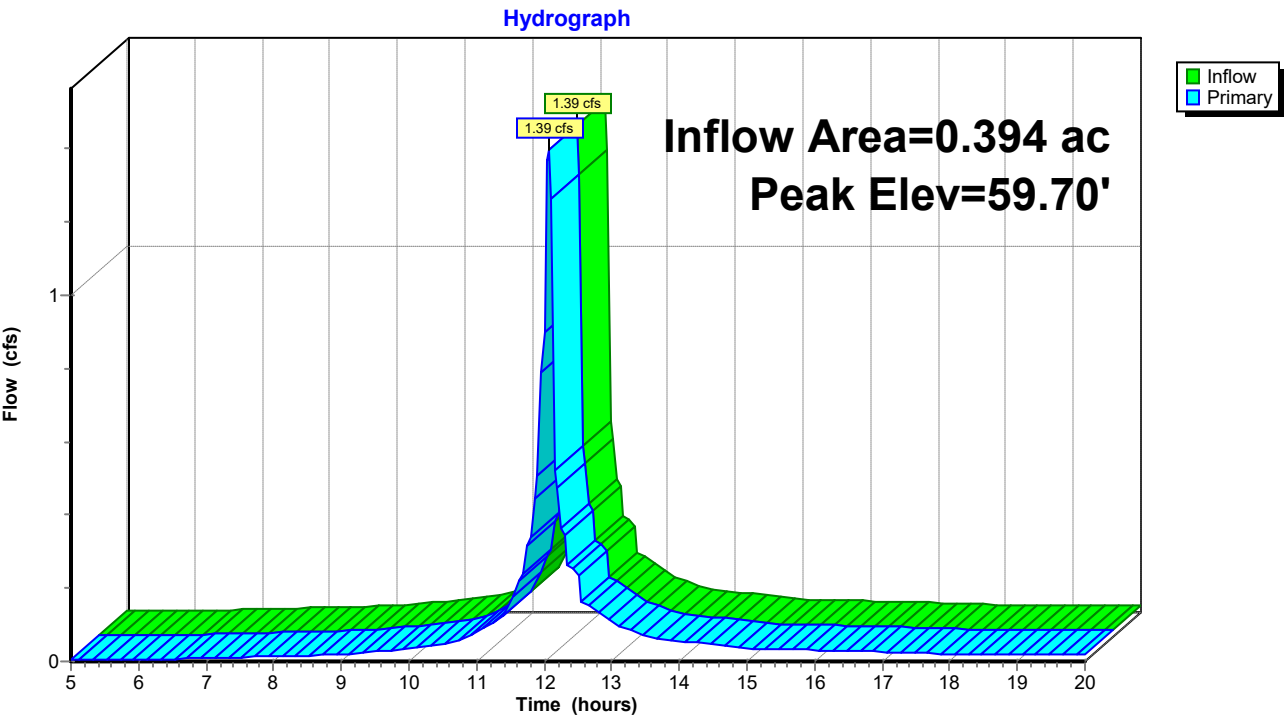
Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 59.70' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.51'	1.0" x 2.0" Horiz. Orifice/Grate X 20.00 columns X 10 rows C= 0.600 in 24.0" x 24.0" Grate (69% open area)
#2	Primary	59.06'	15.0" Round Culvert L= 57.6' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 59.06' / 58.55' S= 0.0089 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

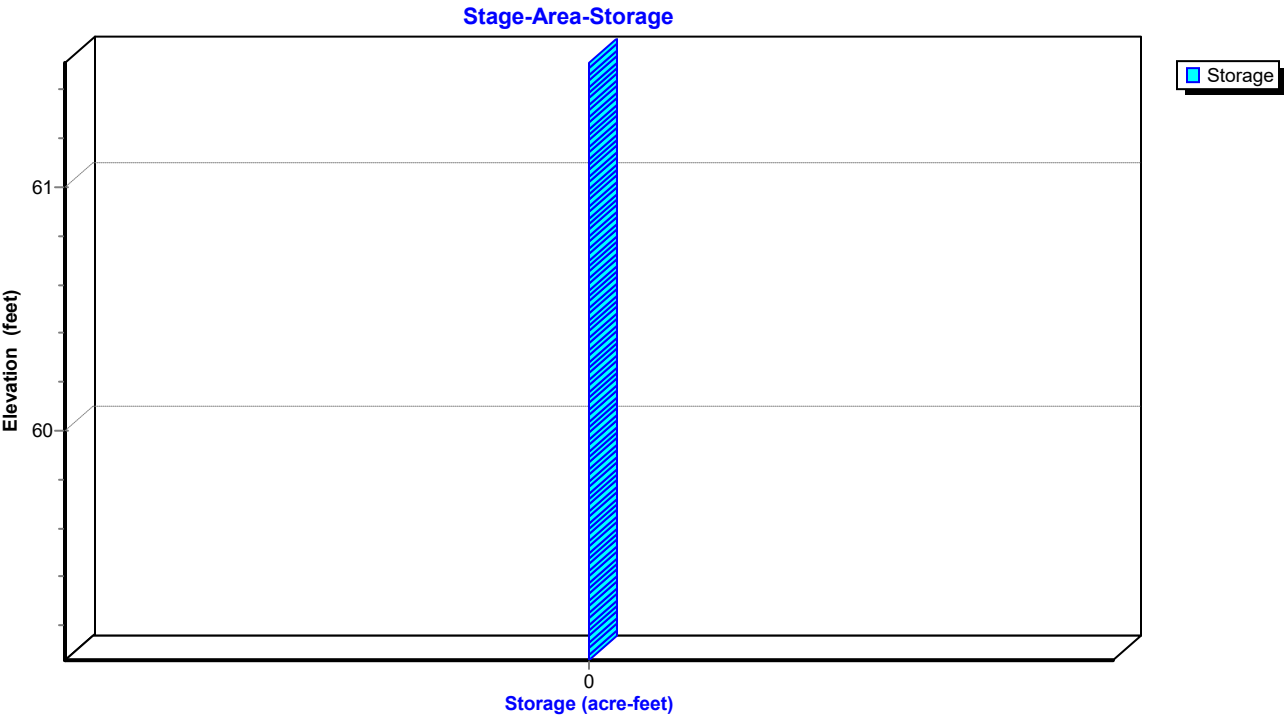
Primary OutFlow Max=1.19 cfs @ 12.07 hrs HW=59.67' TW=59.27' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 1.19 cfs @ 2.91 fps)



Pond 9P: I-2



Pond 9P: I-2



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Hydrograph for Pond 9P: I-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	59.09	0.00	18.00	0.02	59.13	0.02
5.25	0.00	59.09	0.00	18.25	0.02	59.13	0.02
5.50	0.00	59.09	0.00	18.50	0.02	59.13	0.02
5.75	0.00	59.09	0.00	18.75	0.02	59.13	0.02
6.00	0.01	59.10	0.01	19.00	0.02	59.13	0.02
6.25	0.01	59.10	0.01	19.25	0.02	59.13	0.02
6.50	0.01	59.10	0.01	19.50	0.02	59.13	0.02
6.75	0.01	59.10	0.01	19.75	0.02	59.13	0.02
7.00	0.01	59.11	0.01	20.00	0.02	59.13	0.02
7.25	0.01	59.11	0.01				
7.50	0.01	59.11	0.01				
7.75	0.01	59.12	0.01				
8.00	0.01	59.12	0.01				
8.25	0.02	59.12	0.02				
8.50	0.02	59.12	0.02				
8.75	0.02	59.13	0.02				
9.00	0.02	59.13	0.02				
9.25	0.02	59.13	0.02				
9.50	0.03	59.14	0.03				
9.75	0.03	59.14	0.03				
10.00	0.03	59.15	0.03				
10.25	0.04	59.16	0.04				
10.50	0.04	59.16	0.04				
10.75	0.06	59.18	0.06				
11.00	0.08	59.19	0.08				
11.25	0.11	59.22	0.11				
11.50	0.15	59.24	0.15				
11.75	0.31	59.33	0.31				
12.00	0.90	59.55	0.90				
12.25	0.36	59.37	0.36				
12.50	0.24	59.30	0.24				
12.75	0.14	59.24	0.14				
13.00	0.11	59.22	0.11				
13.25	0.09	59.20	0.09				
13.50	0.07	59.19	0.07				
13.75	0.06	59.18	0.06				
14.00	0.06	59.17	0.06				
14.25	0.05	59.17	0.05				
14.50	0.05	59.16	0.05				
14.75	0.04	59.16	0.04				
15.00	0.04	59.15	0.04				
15.25	0.03	59.15	0.03				
15.50	0.03	59.15	0.03				
15.75	0.03	59.15	0.03				
16.00	0.03	59.14	0.03				
16.25	0.03	59.14	0.03				
16.50	0.03	59.14	0.03				
16.75	0.03	59.14	0.03				
17.00	0.03	59.14	0.03				
17.25	0.02	59.14	0.02				
17.50	0.02	59.13	0.02				
17.75	0.02	59.13	0.02				

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Stage-Area-Storage for Pond 9P: I-2

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
59.06	0.000	60.10	0.000	61.14	0.000
59.08	0.000	60.12	0.000	61.16	0.000
59.10	0.000	60.14	0.000	61.18	0.000
59.12	0.000	60.16	0.000	61.20	0.000
59.14	0.000	60.18	0.000	61.22	0.000
59.16	0.000	60.20	0.000	61.24	0.000
59.18	0.000	60.22	0.000	61.26	0.000
59.20	0.000	60.24	0.000	61.28	0.000
59.22	0.000	60.26	0.000	61.30	0.000
59.24	0.000	60.28	0.000	61.32	0.000
59.26	0.000	60.30	0.000	61.34	0.000
59.28	0.000	60.32	0.000	61.36	0.000
59.30	0.000	60.34	0.000	61.38	0.000
59.32	0.000	60.36	0.000	61.40	0.000
59.34	0.000	60.38	0.000	61.42	0.000
59.36	0.000	60.40	0.000	61.44	0.000
59.38	0.000	60.42	0.000	61.46	0.000
59.40	0.000	60.44	0.000	61.48	0.000
59.42	0.000	60.46	0.000	61.50	0.000
59.44	0.000	60.48	0.000		
59.46	0.000	60.50	0.000		
59.48	0.000	60.52	0.000		
59.50	0.000	60.54	0.000		
59.52	0.000	60.56	0.000		
59.54	0.000	60.58	0.000		
59.56	0.000	60.60	0.000		
59.58	0.000	60.62	0.000		
59.60	0.000	60.64	0.000		
59.62	0.000	60.66	0.000		
59.64	0.000	60.68	0.000		
59.66	0.000	60.70	0.000		
59.68	0.000	60.72	0.000		
59.70	0.000	60.74	0.000		
59.72	0.000	60.76	0.000		
59.74	0.000	60.78	0.000		
59.76	0.000	60.80	0.000		
59.78	0.000	60.82	0.000		
59.80	0.000	60.84	0.000		
59.82	0.000	60.86	0.000		
59.84	0.000	60.88	0.000		
59.86	0.000	60.90	0.000		
59.88	0.000	60.92	0.000		
59.90	0.000	60.94	0.000		
59.92	0.000	60.96	0.000		
59.94	0.000	60.98	0.000		
59.96	0.000	61.00	0.000		
59.98	0.000	61.02	0.000		
60.00	0.000	61.04	0.000		
60.02	0.000	61.06	0.000		
60.04	0.000	61.08	0.000		
60.06	0.000	61.10	0.000		
60.08	0.000	61.12	0.000		

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Summary for Pond 17P: SGW FOREBAY #1

Inflow Area = 2.458 ac, 76.90% Impervious, Inflow Depth > 2.49" for 2-Year event
 Inflow = 8.32 cfs @ 12.07 hrs, Volume= 0.509 af
 Outflow = 8.79 cfs @ 12.08 hrs, Volume= 0.474 af, Atten= 0%, Lag= 0.3 min
 Primary = 8.79 cfs @ 12.08 hrs, Volume= 0.474 af
 Routed to Pond 18P : SGW #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 56.71' @ 12.60 hrs Surf.Area= 2,062 sf Storage= 2,712 cf

Plug-Flow detention time= 51.2 min calculated for 0.472 af (93% of inflow)
 Center-of-Mass det. time= 25.8 min (777.7 - 751.9)

Volume	Invert	Avail.Storage	Storage Description
#1	55.08'	5,991 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.08	1,261	0	0
58.08	2,733	5,991	5,991

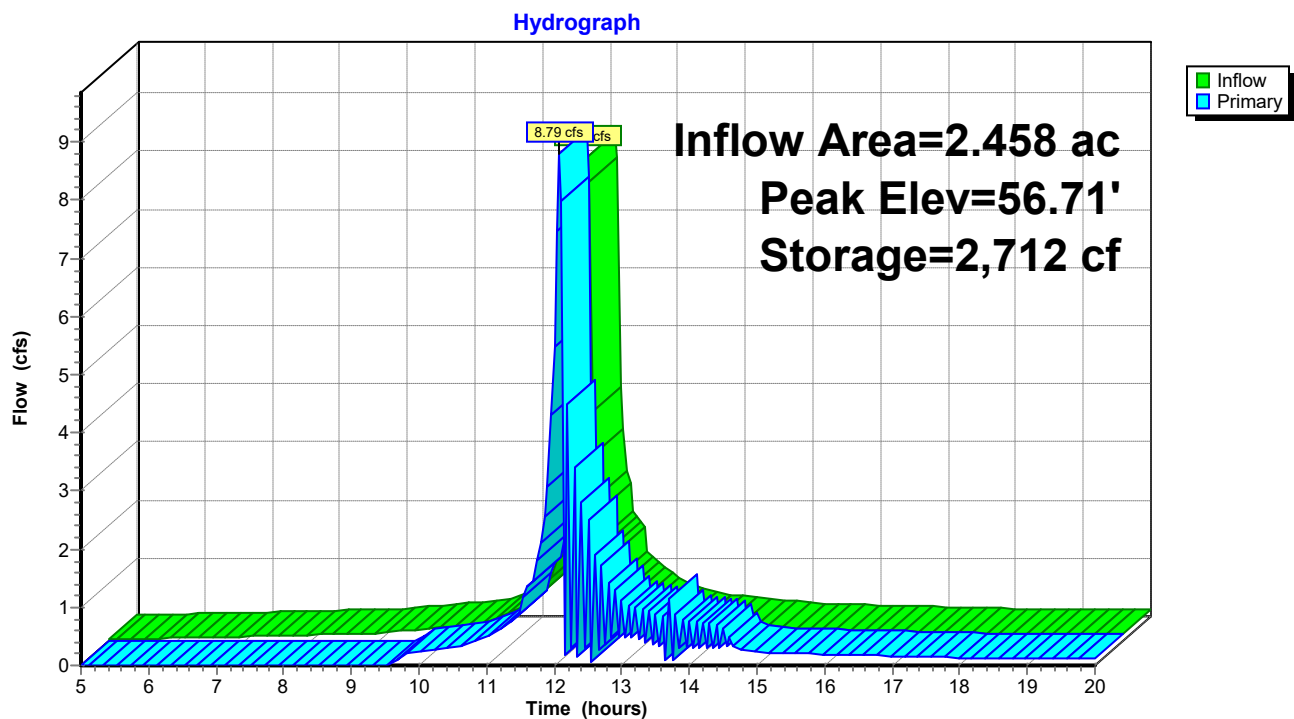
Device	Routing	Invert	Outlet Devices
#1	Primary	56.08'	60.0' long + 3.0 ' SideZ x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 12.08 hrs HW=56.23' TW=56.30' (Dynamic Tailwater)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

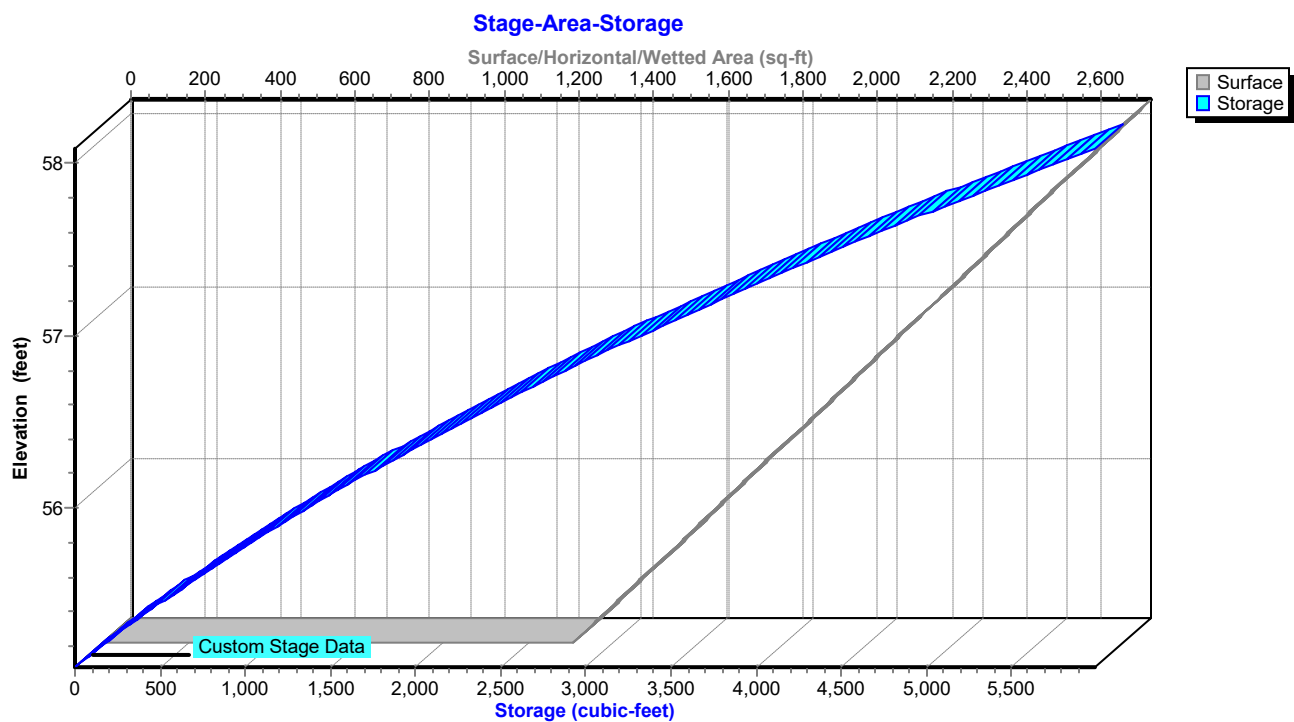
Pond 17P: SGW FOREBAY #1

Broad-Crested Rectangular Weir

Pond 17P: SGW FOREBAY #1



Pond 17P: SGW FOREBAY #1



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Hydrograph for Pond 17P: SGW FOREBAY #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.03	3	55.08	0.00
5.50	0.04	69	55.13	0.00
6.00	0.05	146	55.19	0.00
6.50	0.06	242	55.26	0.00
7.00	0.07	359	55.35	0.00
7.50	0.09	503	55.45	0.00
8.00	0.10	674	55.57	0.00
8.50	0.12	874	55.70	0.00
9.00	0.14	1,105	55.84	0.00
9.50	0.19	1,396	56.02	0.00
10.00	0.24	1,531	56.09	0.24
10.50	0.30	1,534	56.10	0.30
11.00	0.50	1,546	56.10	0.49
11.50	0.92	1,565	56.11	0.90
12.00	5.42	1,704	56.19	5.47
12.50	1.53	2,685	56.70	2.49
13.00	0.70	2,599	56.66	1.12
13.50	0.44	2,309	56.51	0.89
14.00	0.35	1,957	56.33	0.77
14.50	0.29	1,622	56.15	0.63
15.00	0.23	1,530	56.09	0.23
15.50	0.21	1,529	56.09	0.21
16.00	0.19	1,527	56.09	0.19
16.50	0.18	1,526	56.09	0.18
17.00	0.16	1,525	56.09	0.16
17.50	0.15	1,524	56.09	0.15
18.00	0.13	1,523	56.09	0.13
18.50	0.12	1,522	56.09	0.12
19.00	0.12	1,522	56.09	0.12
19.50	0.12	1,521	56.09	0.12
20.00	0.11	1,521	56.09	0.11

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Stage-Area-Storage for Pond 17P: SGW FOREBAY #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
55.08	1,261	0	57.68	2,537	4,937
55.13	1,286	64	57.73	2,561	5,065
55.18	1,310	129	57.78	2,586	5,193
55.23	1,335	195	57.83	2,610	5,323
55.28	1,359	262	57.88	2,635	5,454
55.33	1,384	331	57.93	2,659	5,587
55.38	1,408	400	57.98	2,684	5,720
55.43	1,433	471	58.03	2,708	5,855
55.48	1,457	544	58.08	2,733	5,991
55.53	1,482	617			
55.58	1,506	692			
55.63	1,531	768			
55.68	1,555	845			
55.73	1,580	923			
55.78	1,604	1,003			
55.83	1,629	1,084			
55.88	1,654	1,166			
55.93	1,678	1,249			
55.98	1,703	1,334			
56.03	1,727	1,419			
56.08	1,752	1,506			
56.13	1,776	1,595			
56.18	1,801	1,684			
56.23	1,825	1,775			
56.28	1,850	1,866			
56.33	1,874	1,960			
56.38	1,899	2,054			
56.43	1,923	2,149			
56.48	1,948	2,246			
56.53	1,972	2,344			
56.58	1,997	2,444			
56.63	2,022	2,544			
56.68	2,046	2,646			
56.73	2,071	2,749			
56.78	2,095	2,853			
56.83	2,120	2,958			
56.88	2,144	3,065			
56.93	2,169	3,173			
56.98	2,193	3,282			
57.03	2,218	3,392			
57.08	2,242	3,503			
57.13	2,267	3,616			
57.18	2,291	3,730			
57.23	2,316	3,845			
57.28	2,340	3,962			
57.33	2,365	4,079			
57.38	2,390	4,198			
57.43	2,414	4,318			
57.48	2,439	4,440			
57.53	2,463	4,562			
57.58	2,488	4,686			
57.63	2,512	4,811			

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Summary for Pond 18P: SGW #1

Inflow Area = 2.672 ac, 72.01% Impervious, Inflow Depth > 2.25" for 2-Year event
Inflow = 9.33 cfs @ 12.08 hrs, Volume= 0.502 af
Outflow = 1.24 cfs @ 12.55 hrs, Volume= 0.502 af, Atten= 87%, Lag= 28.1 min
Primary = 1.24 cfs @ 12.55 hrs, Volume= 0.502 af
Routed to Link 2L : SP#1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 56.71' @ 12.55 hrs Surf.Area= 5,368 sf Storage= 7,790 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 64.7 min (843.0 - 778.3)

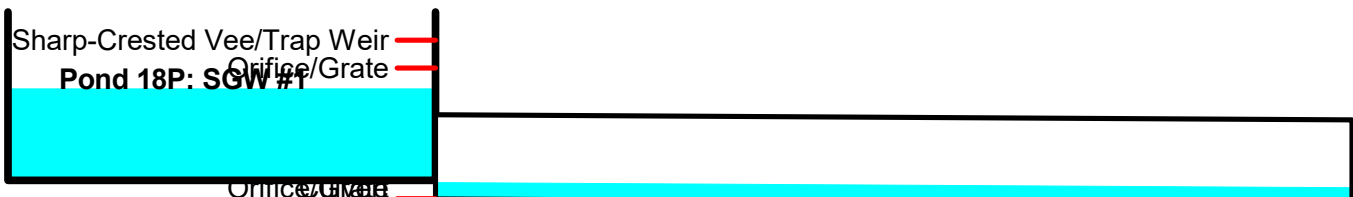
Volume	Invert	Avail.Storage	Storage Description
#1	55.08'	15,815 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.08	4,176	0	0
58.08	6,367	15,815	15,815

Device	Routing	Invert	Outlet Devices
#1	Primary	54.75'	18.0" Round Culvert L= 96.5' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 54.75' / 54.66' S= 0.0009 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	57.08'	2.0" x 1.0" Horiz. Orifice/Grate X 10.00 columns X 20 rows C= 0.600 in 24.0" x 24.0" Grate (69% open area) Limited to weir flow at low heads
#3	Device 1	54.75'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	57.58'	20.0 deg x 10.0' long x 0.50' rise Sharp-Crested Vee/Trap Weir Cv= 2.69 (C= 3.36)

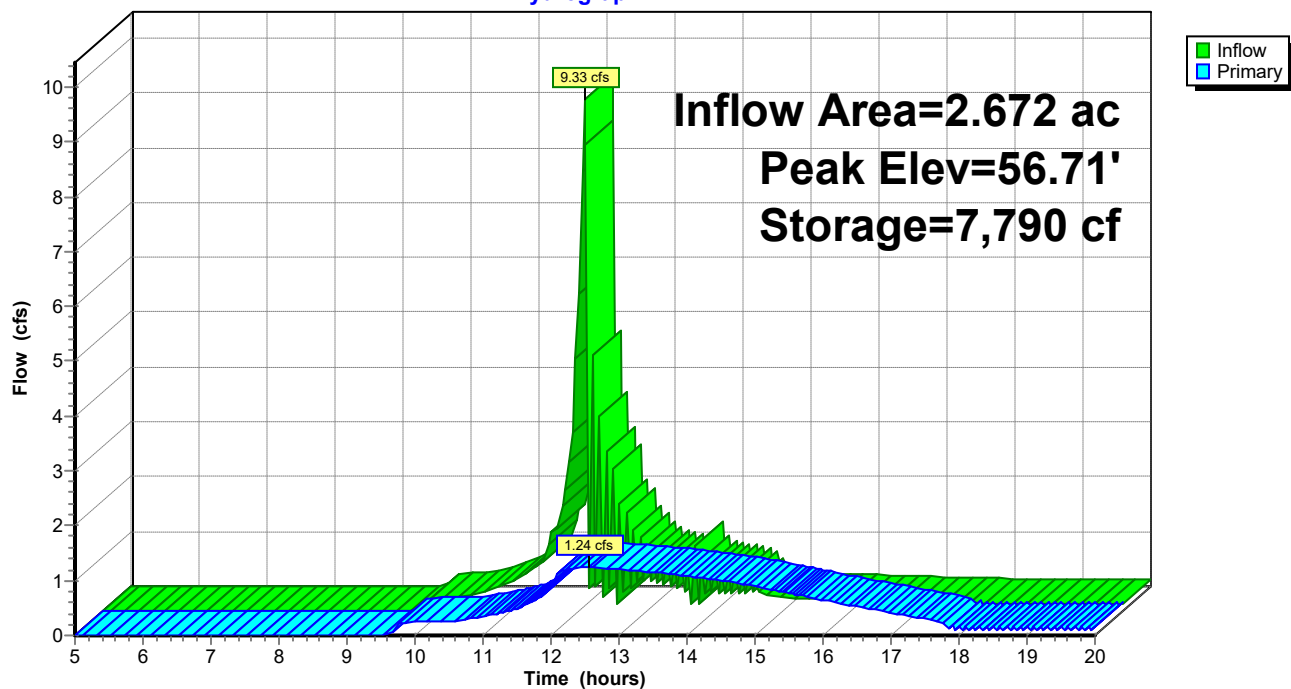
Primary OutFlow Max=1.24 cfs @ 12.55 hrs HW=56.71' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 1.24 cfs of 6.39 cfs potential flow)
2=Orifice/Grate (Controls 0.00 cfs)
3=Orifice/Grate (Orifice Controls 1.24 cfs @ 6.30 fps)
4=Sharp-Crested Vee/Trap Weir (Controls 0.00 cfs)



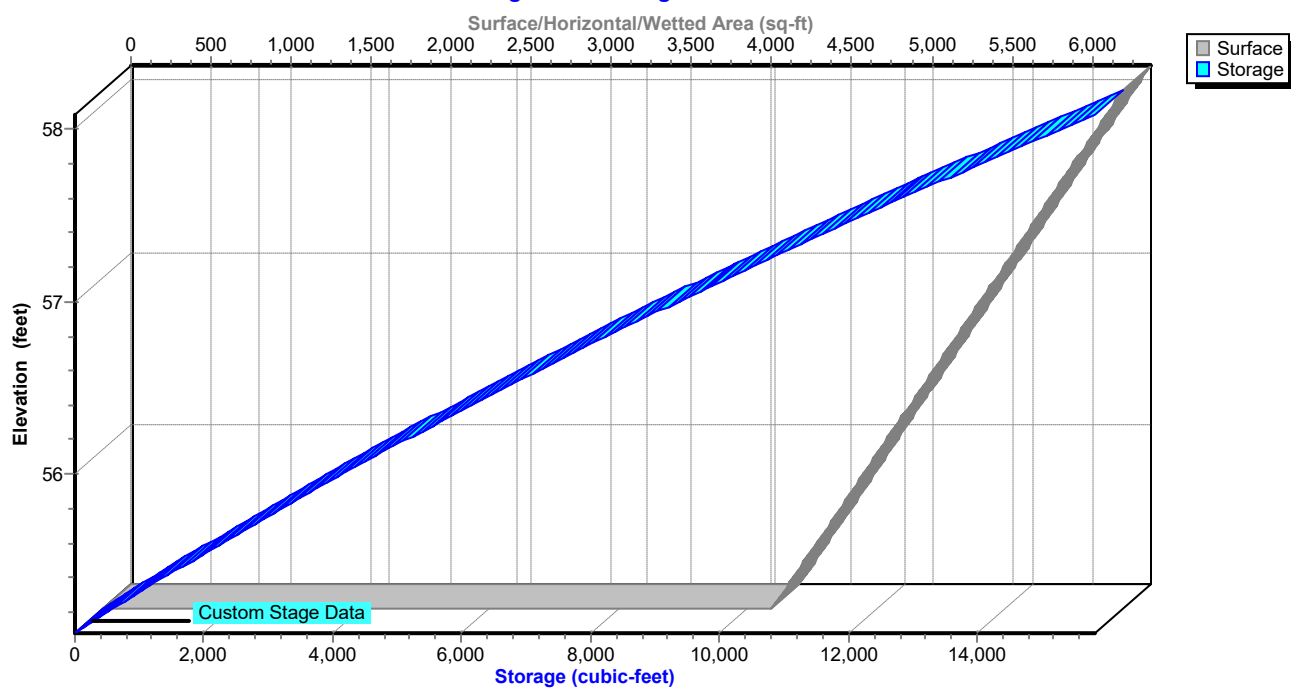
Pond 18P: SGW #1

Hydrograph



Pond 18P: SGW #1

Stage-Area-Storage



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Hydrograph for Pond 18P: SGW #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	55.08	0.00
5.50	0.00	0	55.08	0.00
6.00	0.00	0	55.08	0.00
6.50	0.00	0	55.08	0.00
7.00	0.00	0	55.08	0.00
7.50	0.00	0	55.08	0.00
8.00	0.00	0	55.08	0.00
8.50	0.00	0	55.08	0.00
9.00	0.00	0	55.08	0.00
9.50	0.00	0	55.08	0.00
10.00	0.24	1	55.08	0.24
10.50	0.30	35	55.09	0.26
11.00	0.51	230	55.13	0.34
11.50	0.94	774	55.26	0.48
12.00	5.80	3,873	55.94	0.92
12.50	2.59	7,766	56.71	1.24
13.00	1.17	7,428	56.64	1.21
13.50	0.92	6,641	56.50	1.16
14.00	0.79	5,691	56.31	1.08
14.50	0.65	4,764	56.13	1.00
15.00	0.25	3,645	55.89	0.89
15.50	0.22	2,567	55.66	0.77
16.00	0.21	1,679	55.47	0.65
16.50	0.19	982	55.31	0.53
17.00	0.17	464	55.19	0.41
17.50	0.16	122	55.11	0.30
18.00	0.14	0	55.08	0.17
18.50	0.13	0	55.08	0.17
19.00	0.13	0	55.08	0.16
19.50	0.13	0	55.08	0.16
20.00	0.12	0	55.08	0.15

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Stage-Area-Storage for Pond 18P: SGW #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
55.08	4,176	0	57.68	6,075	13,326
55.13	4,213	210	57.73	6,111	13,631
55.18	4,249	421	57.78	6,148	13,937
55.23	4,286	635	57.83	6,184	14,246
55.28	4,322	850	57.88	6,221	14,556
55.33	4,359	1,067	57.93	6,257	14,868
55.38	4,395	1,286	57.98	6,294	15,181
55.43	4,432	1,506	58.03	6,330	15,497
55.48	4,468	1,729	58.08	6,367	15,815
55.53	4,505	1,953			
55.58	4,541	2,179			
55.63	4,578	2,407			
55.68	4,614	2,637			
55.73	4,651	2,869			
55.78	4,687	3,102			
55.83	4,724	3,337			
55.88	4,760	3,575			
55.93	4,797	3,813			
55.98	4,833	4,054			
56.03	4,870	4,297			
56.08	4,906	4,541			
56.13	4,943	4,787			
56.18	4,979	5,035			
56.23	5,016	5,285			
56.28	5,052	5,537			
56.33	5,089	5,791			
56.38	5,125	6,046			
56.43	5,162	6,303			
56.48	5,198	6,562			
56.53	5,235	6,823			
56.58	5,272	7,086			
56.63	5,308	7,350			
56.68	5,345	7,616			
56.73	5,381	7,885			
56.78	5,418	8,155			
56.83	5,454	8,426			
56.88	5,491	8,700			
56.93	5,527	8,975			
56.98	5,564	9,253			
57.03	5,600	9,532			
57.08	5,637	9,813			
57.13	5,673	10,095			
57.18	5,710	10,380			
57.23	5,746	10,666			
57.28	5,783	10,955			
57.33	5,819	11,245			
57.38	5,856	11,537			
57.43	5,892	11,830			
57.48	5,929	12,126			
57.53	5,965	12,423			
57.58	6,002	12,722			
57.63	6,038	13,023			

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"
Printed 5/1/2024

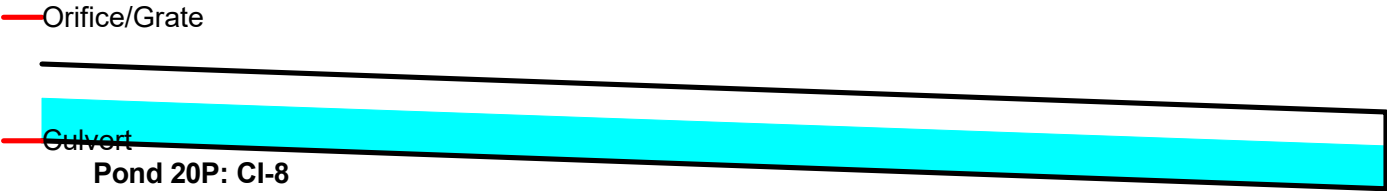
Summary for Pond 20P: CI-8

Inflow Area = 0.753 ac, 42.32% Impervious, Inflow Depth > 1.93" for 2-Year event
Inflow = 1.99 cfs @ 12.12 hrs, Volume= 0.121 af
Outflow = 1.99 cfs @ 12.12 hrs, Volume= 0.121 af, Atten= 0%, Lag= 0.0 min
Primary = 1.99 cfs @ 12.12 hrs, Volume= 0.121 af
Routed to Link 2L : SP#1

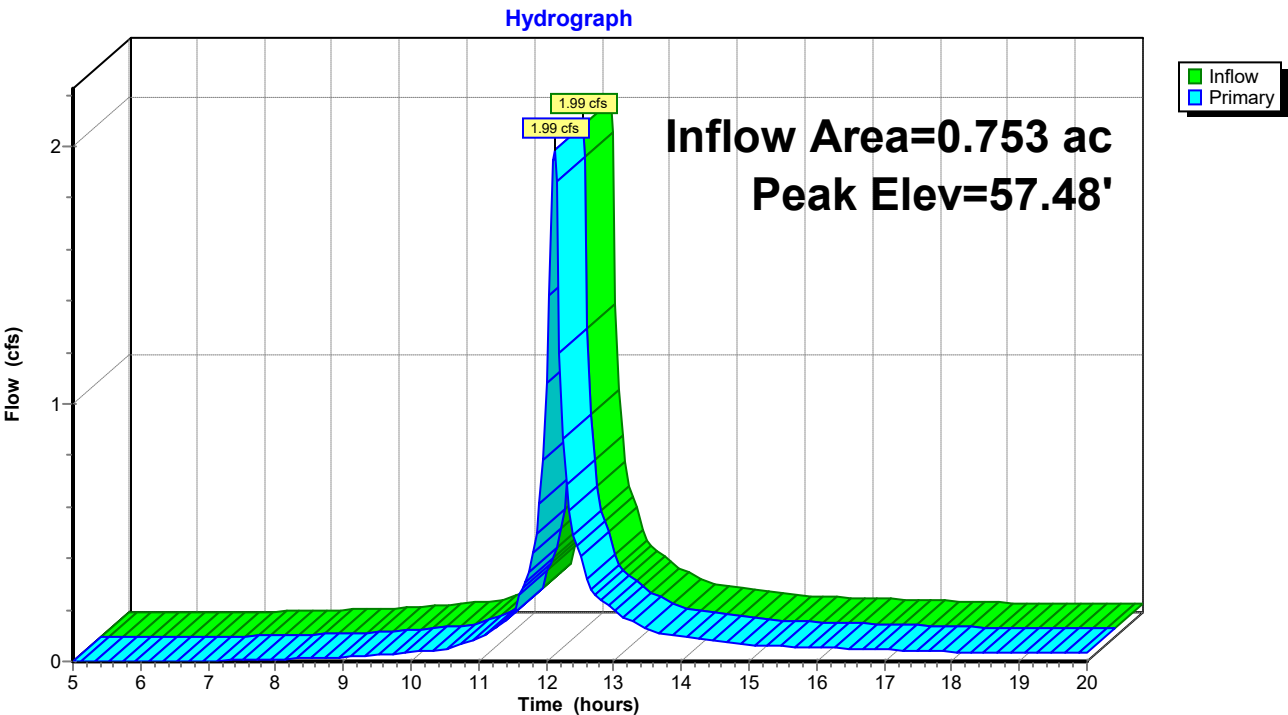
Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 57.48' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	58.79'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	56.78'	15.0" Round Culvert L= 75.5' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 56.78' / 56.00' S= 0.0103 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

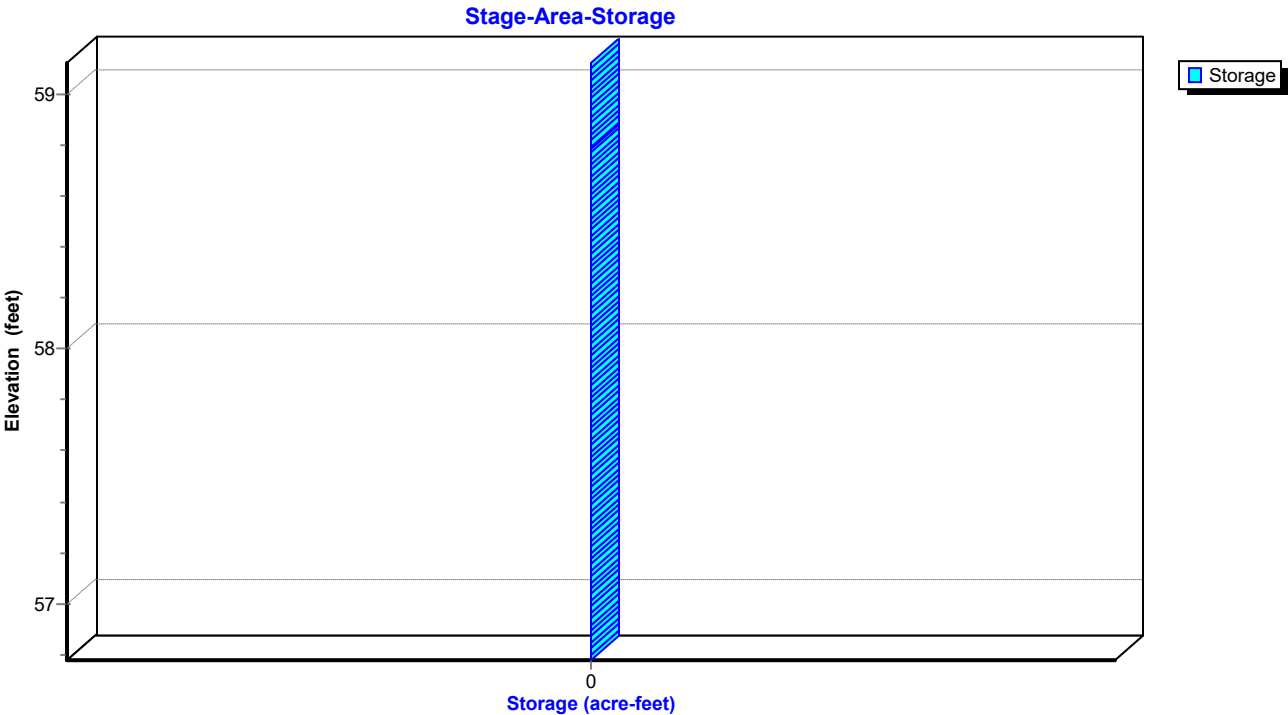
Primary OutFlow Max=1.92 cfs @ 12.12 hrs HW=57.46' TW=0.00' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Inlet Controls 1.92 cfs @ 2.81 fps)



Pond 20P: CI-8



Pond 20P: CI-8



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Pond 20P: CI-8

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	56.79	0.00	18.00	0.04	56.87	0.04
5.25	0.00	56.79	0.00	18.25	0.04	56.87	0.04
5.50	0.00	56.79	0.00	18.50	0.04	56.87	0.04
5.75	0.00	56.79	0.00	18.75	0.03	56.86	0.03
6.00	0.00	56.79	0.00	19.00	0.03	56.86	0.03
6.25	0.00	56.80	0.00	19.25	0.03	56.86	0.03
6.50	0.00	56.80	0.00	19.50	0.03	56.86	0.03
6.75	0.00	56.80	0.00	19.75	0.03	56.86	0.03
7.00	0.00	56.81	0.00	20.00	0.03	56.86	0.03
7.25	0.00	56.81	0.00				
7.50	0.01	56.82	0.01				
7.75	0.01	56.82	0.01				
8.00	0.01	56.82	0.01				
8.25	0.01	56.83	0.01				
8.50	0.01	56.83	0.01				
8.75	0.01	56.84	0.01				
9.00	0.02	56.84	0.02				
9.25	0.02	56.85	0.02				
9.50	0.02	56.85	0.02				
9.75	0.03	56.86	0.03				
10.00	0.04	56.87	0.04				
10.25	0.04	56.87	0.04				
10.50	0.05	56.88	0.05				
10.75	0.07	56.90	0.07				
11.00	0.09	56.91	0.09				
11.25	0.13	56.94	0.13				
11.50	0.17	56.97	0.17				
11.75	0.35	57.05	0.35				
12.00	1.08	57.27	1.08				
12.25	0.87	57.22	0.87				
12.50	0.43	57.08	0.43				
12.75	0.26	57.01	0.26				
13.00	0.20	56.98	0.20				
13.25	0.16	56.96	0.16				
13.50	0.13	56.94	0.13				
13.75	0.11	56.93	0.11				
14.00	0.10	56.92	0.10				
14.25	0.09	56.92	0.09				
14.50	0.08	56.91	0.08				
14.75	0.07	56.90	0.07				
15.00	0.07	56.90	0.07				
15.25	0.06	56.89	0.06				
15.50	0.06	56.89	0.06				
15.75	0.06	56.89	0.06				
16.00	0.05	56.89	0.05				
16.25	0.05	56.88	0.05				
16.50	0.05	56.88	0.05				
16.75	0.05	56.88	0.05				
17.00	0.05	56.88	0.05				
17.25	0.04	56.87	0.04				
17.50	0.04	56.87	0.04				
17.75	0.04	56.87	0.04				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Stage-Area-Storage for Pond 20P: CI-8

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
56.78	0.000	57.82	0.000	58.86	0.000
56.80	0.000	57.84	0.000	58.88	0.000
56.82	0.000	57.86	0.000	58.90	0.000
56.84	0.000	57.88	0.000	58.92	0.000
56.86	0.000	57.90	0.000	58.94	0.000
56.88	0.000	57.92	0.000	58.96	0.000
56.90	0.000	57.94	0.000	58.98	0.000
56.92	0.000	57.96	0.000	59.00	0.000
56.94	0.000	57.98	0.000	59.02	0.000
56.96	0.000	58.00	0.000	59.04	0.000
56.98	0.000	58.02	0.000	59.06	0.000
57.00	0.000	58.04	0.000	59.08	0.000
57.02	0.000	58.06	0.000	59.10	0.000
57.04	0.000	58.08	0.000	59.12	0.000
57.06	0.000	58.10	0.000		
57.08	0.000	58.12	0.000		
57.10	0.000	58.14	0.000		
57.12	0.000	58.16	0.000		
57.14	0.000	58.18	0.000		
57.16	0.000	58.20	0.000		
57.18	0.000	58.22	0.000		
57.20	0.000	58.24	0.000		
57.22	0.000	58.26	0.000		
57.24	0.000	58.28	0.000		
57.26	0.000	58.30	0.000		
57.28	0.000	58.32	0.000		
57.30	0.000	58.34	0.000		
57.32	0.000	58.36	0.000		
57.34	0.000	58.38	0.000		
57.36	0.000	58.40	0.000		
57.38	0.000	58.42	0.000		
57.40	0.000	58.44	0.000		
57.42	0.000	58.46	0.000		
57.44	0.000	58.48	0.000		
57.46	0.000	58.50	0.000		
57.48	0.000	58.52	0.000		
57.50	0.000	58.54	0.000		
57.52	0.000	58.56	0.000		
57.54	0.000	58.58	0.000		
57.56	0.000	58.60	0.000		
57.58	0.000	58.62	0.000		
57.60	0.000	58.64	0.000		
57.62	0.000	58.66	0.000		
57.64	0.000	58.68	0.000		
57.66	0.000	58.70	0.000		
57.68	0.000	58.72	0.000		
57.70	0.000	58.74	0.000		
57.72	0.000	58.76	0.000		
57.74	0.000	58.78	0.000		
57.76	0.000	58.80	0.000		
57.78	0.000	58.82	0.000		
57.80	0.000	58.84	0.000		

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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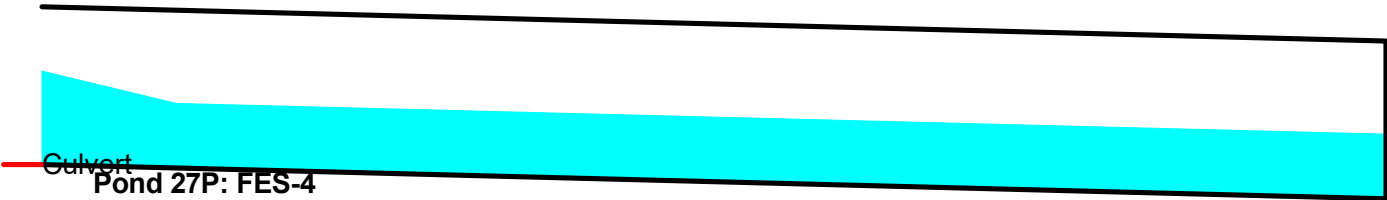
Summary for Pond 27P: FES-4

Inflow Area = 0.667 ac, 39.09% Impervious, Inflow Depth > 1.88" for 2-Year event
Inflow = 1.72 cfs @ 12.12 hrs, Volume= 0.105 af
Outflow = 1.72 cfs @ 12.12 hrs, Volume= 0.105 af, Atten= 0%, Lag= 0.0 min
Primary = 1.72 cfs @ 12.12 hrs, Volume= 0.105 af
Routed to Pond 20P : CI-8

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 57.79' @ 12.14 hrs

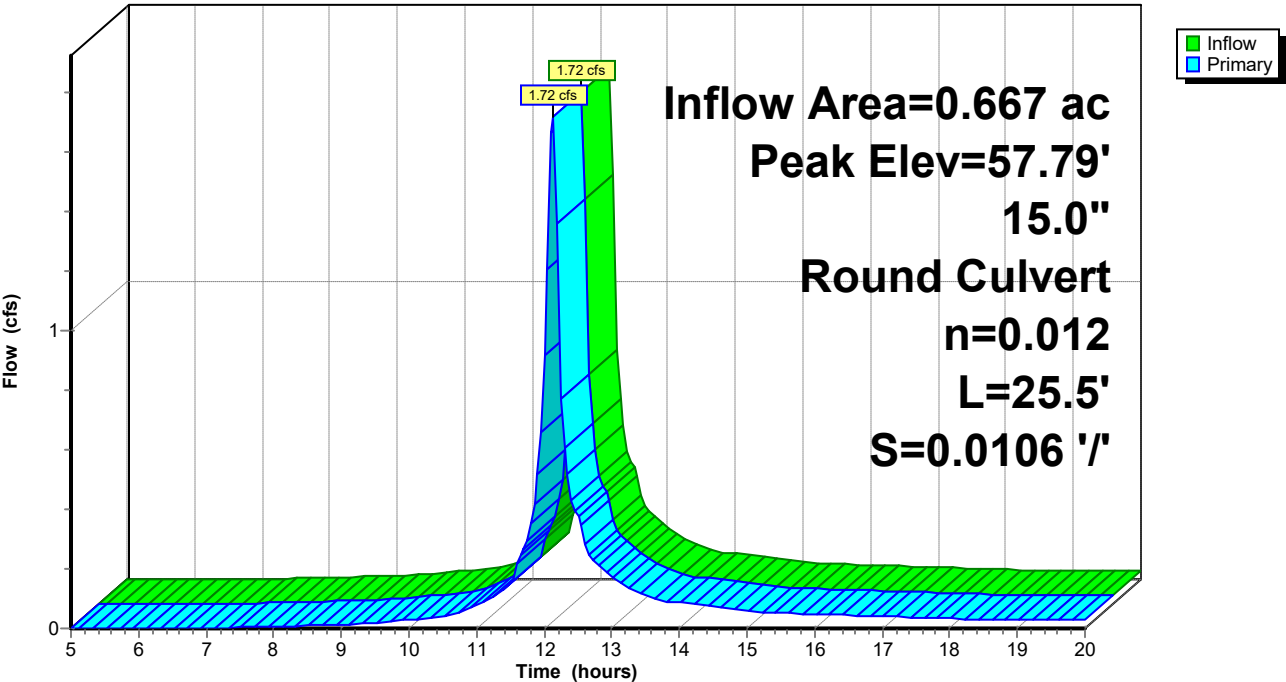
Device	Routing	Invert	Outlet Devices
#1	Primary	57.05'	15.0" Round Culvert L= 25.5' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 57.05' / 56.78' S= 0.0106 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.54 cfs @ 12.12 hrs HW=57.76' TW=57.46' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.54 cfs @ 3.07 fps)



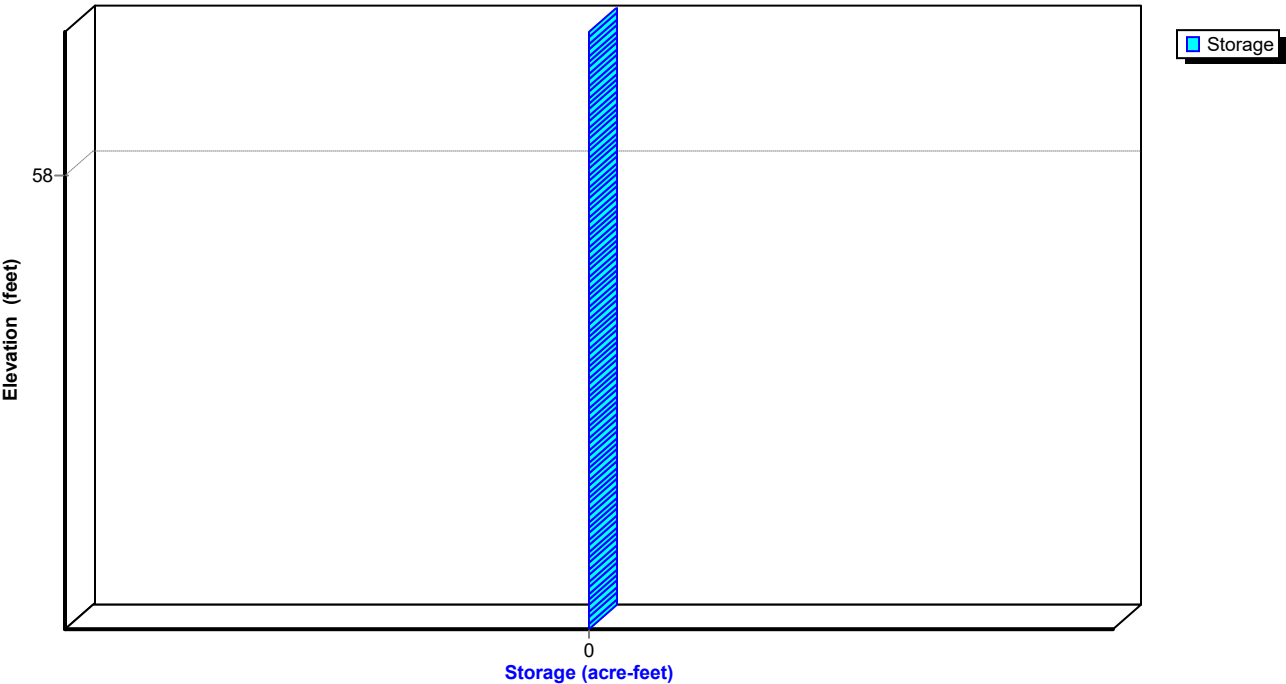
Pond 27P: FES-4

Hydrograph



Pond 27P: FES-4

Stage-Area-Storage



EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Pond 27P: FES-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	57.05	0.00	18.00	0.03	57.13	0.03
5.25	0.00	57.05	0.00	18.25	0.03	57.13	0.03
5.50	0.00	57.05	0.00	18.50	0.03	57.13	0.03
5.75	0.00	57.05	0.00	18.75	0.03	57.13	0.03
6.00	0.00	57.05	0.00	19.00	0.03	57.13	0.03
6.25	0.00	57.05	0.00	19.25	0.03	57.13	0.03
6.50	0.00	57.05	0.00	19.50	0.03	57.13	0.03
6.75	0.00	57.06	0.00	19.75	0.03	57.13	0.03
7.00	0.00	57.07	0.00	20.00	0.03	57.13	0.03
7.25	0.00	57.07	0.00				
7.50	0.00	57.08	0.00				
7.75	0.00	57.08	0.00				
8.00	0.01	57.09	0.01				
8.25	0.01	57.09	0.01				
8.50	0.01	57.10	0.01				
8.75	0.01	57.10	0.01				
9.00	0.01	57.10	0.01				
9.25	0.02	57.11	0.02				
9.50	0.02	57.12	0.02				
9.75	0.02	57.12	0.02				
10.00	0.03	57.13	0.03				
10.25	0.03	57.14	0.03				
10.50	0.04	57.14	0.04				
10.75	0.05	57.16	0.05				
11.00	0.07	57.18	0.07				
11.25	0.11	57.20	0.11				
11.50	0.15	57.23	0.15				
11.75	0.29	57.31	0.29				
12.00	0.92	57.54	0.92				
12.25	0.77	57.54	0.77				
12.50	0.38	57.36	0.38				
12.75	0.22	57.28	0.22				
13.00	0.18	57.25	0.18				
13.25	0.14	57.23	0.14				
13.50	0.11	57.21	0.11				
13.75	0.09	57.19	0.09				
14.00	0.09	57.19	0.09				
14.25	0.08	57.18	0.08				
14.50	0.07	57.18	0.07				
14.75	0.07	57.17	0.07				
15.00	0.06	57.16	0.06				
15.25	0.05	57.16	0.05				
15.50	0.05	57.16	0.05				
15.75	0.05	57.15	0.05				
16.00	0.05	57.15	0.05				
16.25	0.05	57.15	0.05				
16.50	0.04	57.15	0.04				
16.75	0.04	57.15	0.04				
17.00	0.04	57.14	0.04				
17.25	0.04	57.14	0.04				
17.50	0.04	57.14	0.04				
17.75	0.03	57.14	0.03				

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Stage-Area-Storage for Pond 27P: FES-4

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.05	0.000	57.57	0.000	58.09	0.000
57.06	0.000	57.58	0.000	58.10	0.000
57.07	0.000	57.59	0.000	58.11	0.000
57.08	0.000	57.60	0.000	58.12	0.000
57.09	0.000	57.61	0.000	58.13	0.000
57.10	0.000	57.62	0.000	58.14	0.000
57.11	0.000	57.63	0.000	58.15	0.000
57.12	0.000	57.64	0.000	58.16	0.000
57.13	0.000	57.65	0.000	58.17	0.000
57.14	0.000	57.66	0.000	58.18	0.000
57.15	0.000	57.67	0.000	58.19	0.000
57.16	0.000	57.68	0.000	58.20	0.000
57.17	0.000	57.69	0.000	58.21	0.000
57.18	0.000	57.70	0.000	58.22	0.000
57.19	0.000	57.71	0.000	58.23	0.000
57.20	0.000	57.72	0.000	58.24	0.000
57.21	0.000	57.73	0.000	58.25	0.000
57.22	0.000	57.74	0.000	58.26	0.000
57.23	0.000	57.75	0.000	58.27	0.000
57.24	0.000	57.76	0.000	58.28	0.000
57.25	0.000	57.77	0.000	58.29	0.000
57.26	0.000	57.78	0.000	58.30	0.000
57.27	0.000	57.79	0.000		
57.28	0.000	57.80	0.000		
57.29	0.000	57.81	0.000		
57.30	0.000	57.82	0.000		
57.31	0.000	57.83	0.000		
57.32	0.000	57.84	0.000		
57.33	0.000	57.85	0.000		
57.34	0.000	57.86	0.000		
57.35	0.000	57.87	0.000		
57.36	0.000	57.88	0.000		
57.37	0.000	57.89	0.000		
57.38	0.000	57.90	0.000		
57.39	0.000	57.91	0.000		
57.40	0.000	57.92	0.000		
57.41	0.000	57.93	0.000		
57.42	0.000	57.94	0.000		
57.43	0.000	57.95	0.000		
57.44	0.000	57.96	0.000		
57.45	0.000	57.97	0.000		
57.46	0.000	57.98	0.000		
57.47	0.000	57.99	0.000		
57.48	0.000	58.00	0.000		
57.49	0.000	58.01	0.000		
57.50	0.000	58.02	0.000		
57.51	0.000	58.03	0.000		
57.52	0.000	58.04	0.000		
57.53	0.000	58.05	0.000		
57.54	0.000	58.06	0.000		
57.55	0.000	58.07	0.000		
57.56	0.000	58.08	0.000		

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"
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Summary for Pond 37P: CI-4

Inflow Area = 0.214 ac, 70.69% Impervious, Inflow Depth > 2.41" for 2-Year event
Inflow = 0.76 cfs @ 12.07 hrs, Volume= 0.043 af
Outflow = 0.76 cfs @ 12.07 hrs, Volume= 0.043 af, Atten= 0%, Lag= 0.0 min
Primary = 0.76 cfs @ 12.07 hrs, Volume= 0.043 af
Routed to Pond 17P : SGW FOREBAY #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 56.71' @ 12.65 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	59.64'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	55.53'	15.0" Round Culvert L= 89.2' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 55.53' / 55.08' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

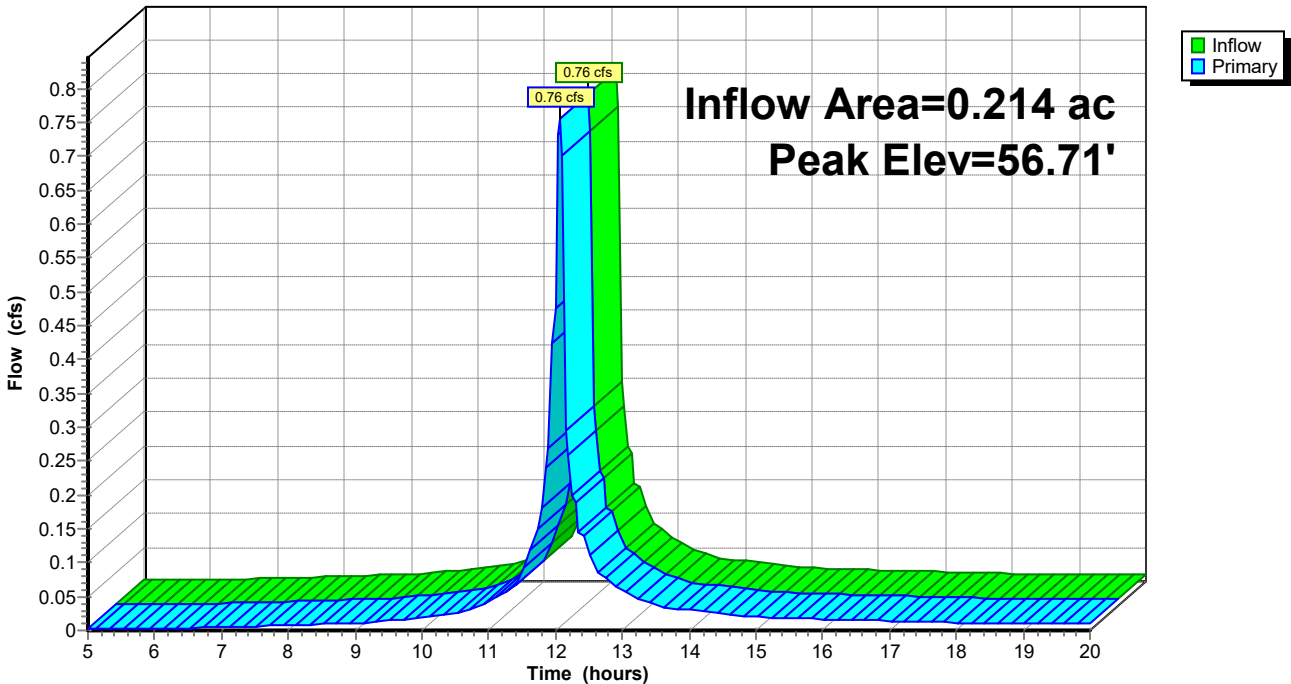
Primary OutFlow Max=0.62 cfs @ 12.07 hrs HW=56.29' TW=56.23' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 0.62 cfs @ 1.12 fps)

Orifice/Grate



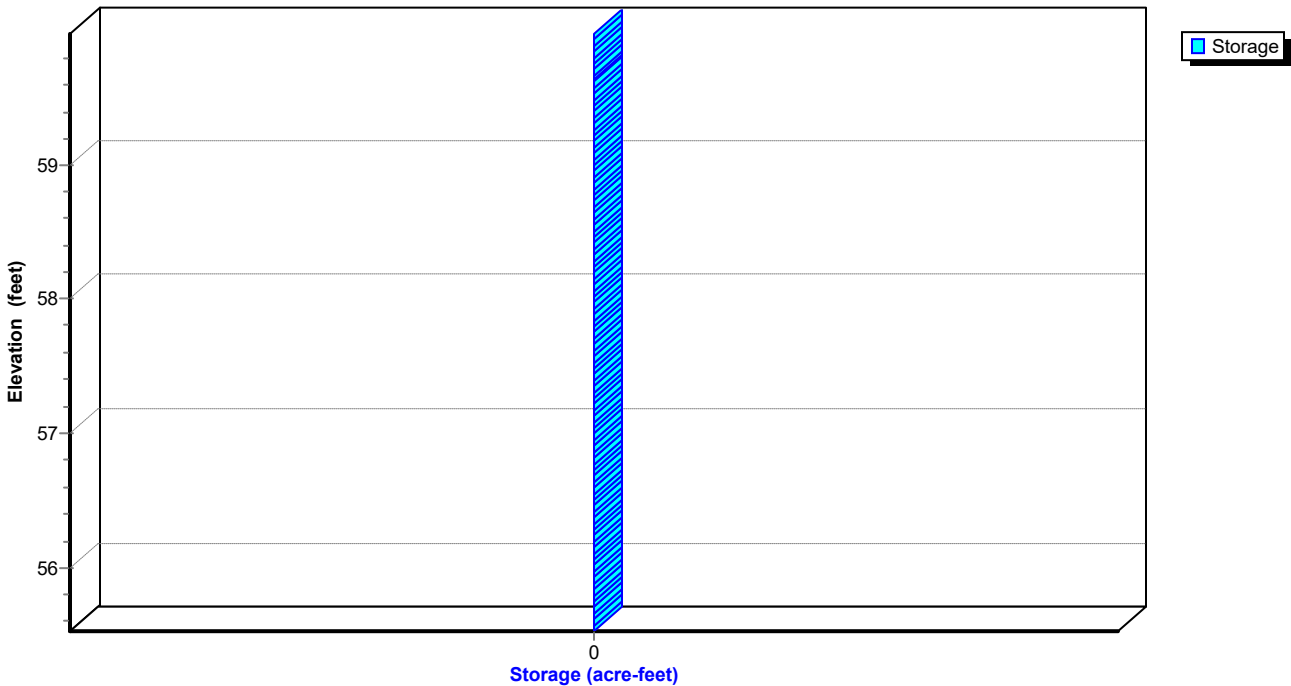
Pond 37P: CI-4

Hydrograph



Pond 37P: CI-4

Stage-Area-Storage



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Pond 37P: CI-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	55.55	0.00	18.00	0.01	56.09	0.01
5.25	0.00	55.56	0.00	18.25	0.01	56.09	0.01
5.50	0.00	55.56	0.00	18.50	0.01	56.09	0.01
5.75	0.00	55.56	0.00	18.75	0.01	56.09	0.01
6.00	0.00	55.56	0.00	19.00	0.01	56.09	0.01
6.25	0.00	55.57	0.00	19.25	0.01	56.09	0.01
6.50	0.00	55.57	0.00	19.50	0.01	56.09	0.01
6.75	0.00	55.57	0.00	19.75	0.01	56.09	0.01
7.00	0.00	55.58	0.00	20.00	0.01	56.09	0.01
7.25	0.01	55.58	0.01				
7.50	0.01	55.59	0.01				
7.75	0.01	55.60	0.01				
8.00	0.01	55.61	0.01				
8.25	0.01	55.64	0.01				
8.50	0.01	55.69	0.01				
8.75	0.01	55.76	0.01				
9.00	0.01	55.83	0.01				
9.25	0.01	55.91	0.01				
9.50	0.01	56.00	0.01				
9.75	0.02	56.09	0.02				
10.00	0.02	56.09	0.02				
10.25	0.02	56.09	0.02				
10.50	0.02	56.10	0.02				
10.75	0.03	56.10	0.03				
11.00	0.04	56.10	0.04				
11.25	0.06	56.11	0.06				
11.50	0.08	56.11	0.08				
11.75	0.17	56.14	0.17				
12.00	0.48	56.23	0.48				
12.25	0.20	56.53	0.20				
12.50	0.13	56.68	0.13				
12.75	0.08	56.70	0.08				
13.00	0.06	56.67	0.06				
13.25	0.05	56.61	0.05				
13.50	0.04	56.53	0.04				
13.75	0.03	56.44	0.03				
14.00	0.03	56.35	0.03				
14.25	0.03	56.26	0.03				
14.50	0.03	56.16	0.03				
14.75	0.02	56.10	0.02				
15.00	0.02	56.09	0.02				
15.25	0.02	56.09	0.02				
15.50	0.02	56.09	0.02				
15.75	0.02	56.09	0.02				
16.00	0.02	56.09	0.02				
16.25	0.02	56.09	0.02				
16.50	0.02	56.09	0.02				
16.75	0.01	56.09	0.01				
17.00	0.01	56.09	0.01				
17.25	0.01	56.09	0.01				
17.50	0.01	56.09	0.01				
17.75	0.01	56.09	0.01				

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Stage-Area-Storage for Pond 37P: CI-4

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
55.53	0.000	58.13	0.000
55.58	0.000	58.18	0.000
55.63	0.000	58.23	0.000
55.68	0.000	58.28	0.000
55.73	0.000	58.33	0.000
55.78	0.000	58.38	0.000
55.83	0.000	58.43	0.000
55.88	0.000	58.48	0.000
55.93	0.000	58.53	0.000
55.98	0.000	58.58	0.000
56.03	0.000	58.63	0.000
56.08	0.000	58.68	0.000
56.13	0.000	58.73	0.000
56.18	0.000	58.78	0.000
56.23	0.000	58.83	0.000
56.28	0.000	58.88	0.000
56.33	0.000	58.93	0.000
56.38	0.000	58.98	0.000
56.43	0.000	59.03	0.000
56.48	0.000	59.08	0.000
56.53	0.000	59.13	0.000
56.58	0.000	59.18	0.000
56.63	0.000	59.23	0.000
56.68	0.000	59.28	0.000
56.73	0.000	59.33	0.000
56.78	0.000	59.38	0.000
56.83	0.000	59.43	0.000
56.88	0.000	59.48	0.000
56.93	0.000	59.53	0.000
56.98	0.000	59.58	0.000
57.03	0.000	59.63	0.000
57.08	0.000	59.68	0.000
57.13	0.000	59.73	0.000
57.18	0.000	59.78	0.000
57.23	0.000	59.83	0.000
57.28	0.000	59.88	0.000
57.33	0.000	59.93	0.000
57.38	0.000		
57.43	0.000		
57.48	0.000		
57.53	0.000		
57.58	0.000		
57.63	0.000		
57.68	0.000		
57.73	0.000		
57.78	0.000		
57.83	0.000		
57.88	0.000		
57.93	0.000		
57.98	0.000		
58.03	0.000		
58.08	0.000		

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Summary for Pond 38P: CI-1

Inflow Area = 1.749 ac, 78.72% Impervious, Inflow Depth > 2.52" for 2-Year event
Inflow = 6.06 cfs @ 12.07 hrs, Volume= 0.367 af
Outflow = 6.06 cfs @ 12.07 hrs, Volume= 0.367 af, Atten= 0%, Lag= 0.0 min
Primary = 6.06 cfs @ 12.07 hrs, Volume= 0.367 af
Routed to Pond 17P : SGW FOREBAY #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 56.85' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.41'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	55.43'	18.0" Round Culvert L= 46.3' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 55.43' / 55.08' S= 0.0076 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=5.68 cfs @ 12.07 hrs HW=56.83' TW=56.22' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 5.68 cfs @ 4.32 fps)

Orifice/Grate

Culvert Pond 38P: CI-1

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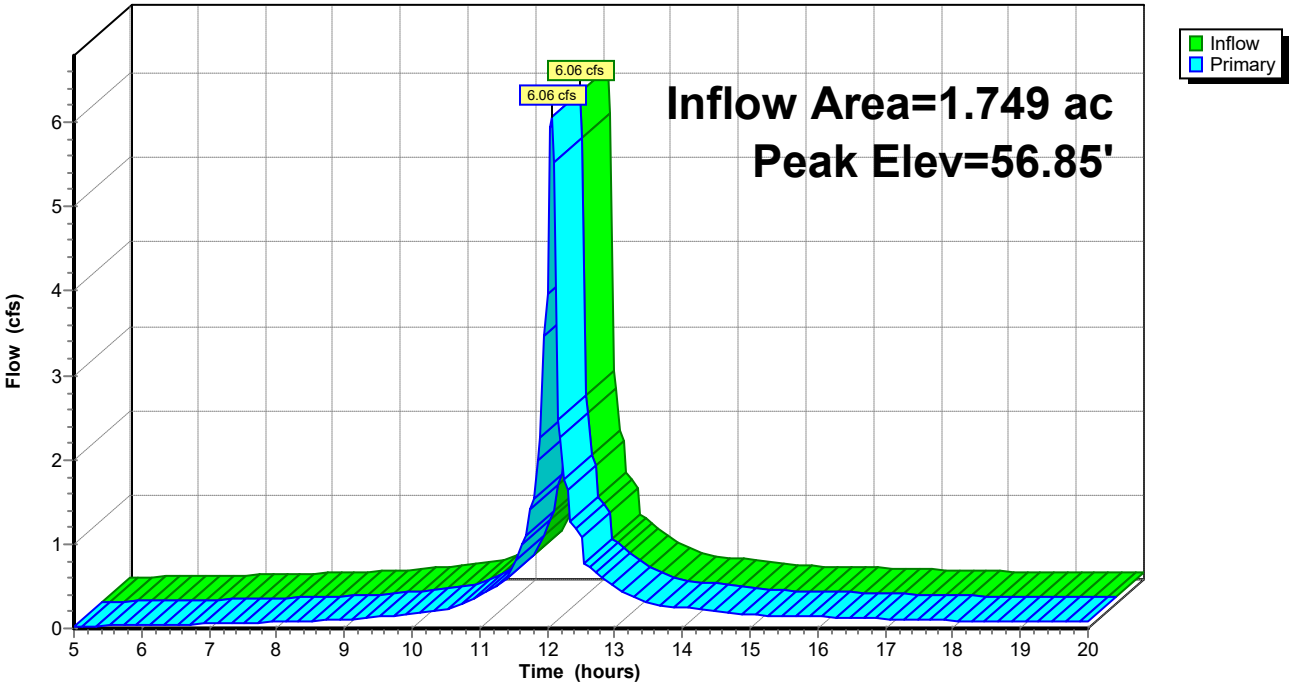
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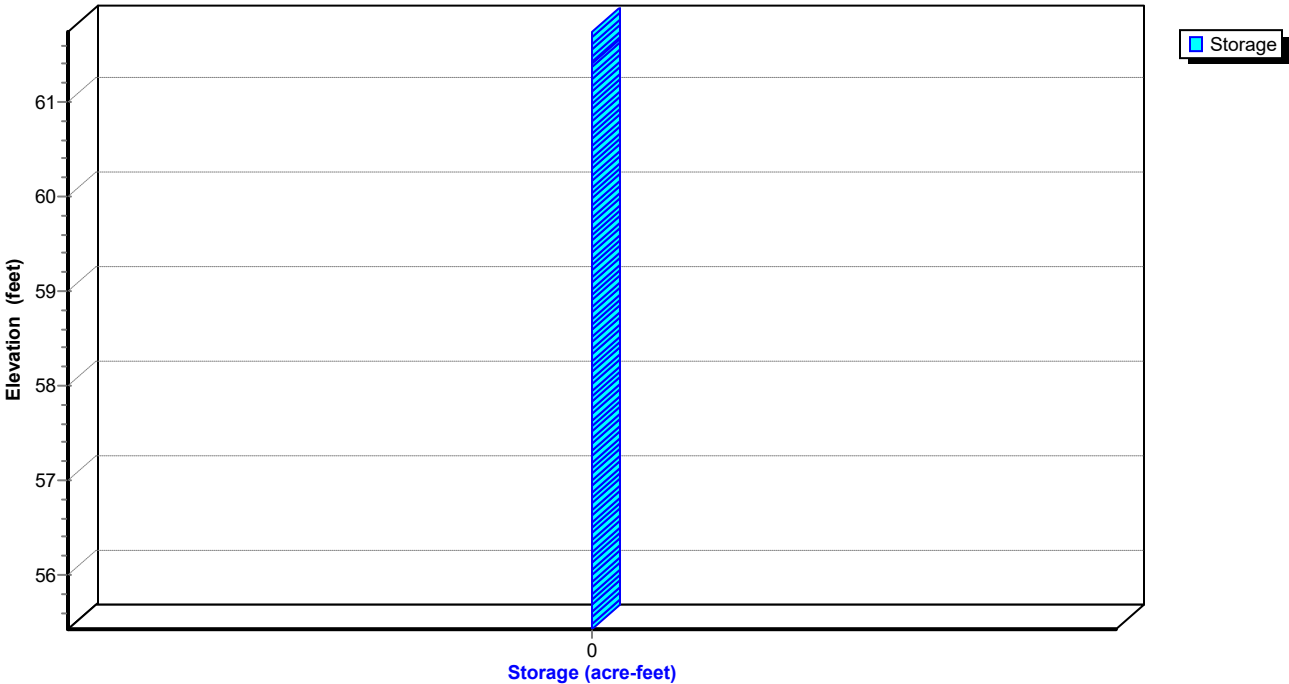
Pond 38P: CI-1

Hydrograph



Pond 38P: CI-1

Stage-Area-Storage



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Hydrograph for Pond 38P: CI-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.03	55.51	0.03	18.00	0.09	56.09	0.09
5.25	0.03	55.51	0.03	18.25	0.09	56.09	0.09
5.50	0.03	55.51	0.03	18.50	0.09	56.09	0.09
5.75	0.04	55.52	0.04	18.75	0.09	56.09	0.09
6.00	0.04	55.52	0.04	19.00	0.09	56.09	0.09
6.25	0.04	55.53	0.04	19.25	0.08	56.09	0.08
6.50	0.05	55.54	0.05	19.50	0.08	56.09	0.08
6.75	0.05	55.55	0.05	19.75	0.08	56.09	0.08
7.00	0.06	55.56	0.06	20.00	0.08	56.09	0.08
7.25	0.06	55.57	0.06				
7.50	0.07	55.58	0.07				
7.75	0.07	55.60	0.07				
8.00	0.08	55.63	0.08				
8.25	0.08	55.66	0.08				
8.50	0.09	55.71	0.09				
8.75	0.10	55.77	0.10				
9.00	0.10	55.84	0.10				
9.25	0.12	55.91	0.12				
9.50	0.14	56.00	0.14				
9.75	0.16	56.09	0.16				
10.00	0.18	56.10	0.18				
10.25	0.20	56.10	0.20				
10.50	0.22	56.10	0.22				
10.75	0.29	56.11	0.29				
11.00	0.36	56.12	0.36				
11.25	0.51	56.14	0.51				
11.50	0.68	56.16	0.68				
11.75	1.42	56.27	1.42				
12.00	3.96	56.61	3.96				
12.25	1.77	56.62	1.77				
12.50	1.08	56.71	1.08				
12.75	0.63	56.71	0.63				
13.00	0.50	56.67	0.50				
13.25	0.38	56.61	0.38				
13.50	0.31	56.53	0.31				
13.75	0.27	56.44	0.27				
14.00	0.25	56.35	0.25				
14.25	0.23	56.26	0.23				
14.50	0.21	56.17	0.21				
14.75	0.18	56.10	0.18				
15.00	0.17	56.10	0.17				
15.25	0.15	56.10	0.15				
15.50	0.15	56.10	0.15				
15.75	0.14	56.10	0.14				
16.00	0.14	56.09	0.14				
16.25	0.13	56.09	0.13				
16.50	0.13	56.09	0.13				
16.75	0.12	56.09	0.12				
17.00	0.12	56.09	0.12				
17.25	0.11	56.09	0.11				
17.50	0.10	56.09	0.10				
17.75	0.10	56.09	0.10				

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Stage-Area-Storage for Pond 38P: CI-1

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
55.43	0.000	58.03	0.000	60.63	0.000
55.48	0.000	58.08	0.000	60.68	0.000
55.53	0.000	58.13	0.000	60.73	0.000
55.58	0.000	58.18	0.000	60.78	0.000
55.63	0.000	58.23	0.000	60.83	0.000
55.68	0.000	58.28	0.000	60.88	0.000
55.73	0.000	58.33	0.000	60.93	0.000
55.78	0.000	58.38	0.000	60.98	0.000
55.83	0.000	58.43	0.000	61.03	0.000
55.88	0.000	58.48	0.000	61.08	0.000
55.93	0.000	58.53	0.000	61.13	0.000
55.98	0.000	58.58	0.000	61.18	0.000
56.03	0.000	58.63	0.000	61.23	0.000
56.08	0.000	58.68	0.000	61.28	0.000
56.13	0.000	58.73	0.000	61.33	0.000
56.18	0.000	58.78	0.000	61.38	0.000
56.23	0.000	58.83	0.000	61.43	0.000
56.28	0.000	58.88	0.000	61.48	0.000
56.33	0.000	58.93	0.000	61.53	0.000
56.38	0.000	58.98	0.000	61.58	0.000
56.43	0.000	59.03	0.000	61.63	0.000
56.48	0.000	59.08	0.000	61.68	0.000
56.53	0.000	59.13	0.000	61.73	0.000
56.58	0.000	59.18	0.000		
56.63	0.000	59.23	0.000		
56.68	0.000	59.28	0.000		
56.73	0.000	59.33	0.000		
56.78	0.000	59.38	0.000		
56.83	0.000	59.43	0.000		
56.88	0.000	59.48	0.000		
56.93	0.000	59.53	0.000		
56.98	0.000	59.58	0.000		
57.03	0.000	59.63	0.000		
57.08	0.000	59.68	0.000		
57.13	0.000	59.73	0.000		
57.18	0.000	59.78	0.000		
57.23	0.000	59.83	0.000		
57.28	0.000	59.88	0.000		
57.33	0.000	59.93	0.000		
57.38	0.000	59.98	0.000		
57.43	0.000	60.03	0.000		
57.48	0.000	60.08	0.000		
57.53	0.000	60.13	0.000		
57.58	0.000	60.18	0.000		
57.63	0.000	60.23	0.000		
57.68	0.000	60.28	0.000		
57.73	0.000	60.33	0.000		
57.78	0.000	60.38	0.000		
57.83	0.000	60.43	0.000		
57.88	0.000	60.48	0.000		
57.93	0.000	60.53	0.000		
57.98	0.000	60.58	0.000		

EX and PR

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Summary for Pond 39P: CI-9

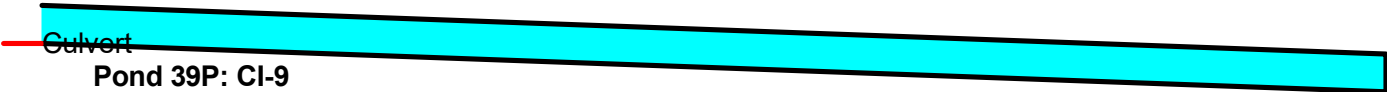
Inflow Area = 1.554 ac, 77.64% Impervious, Inflow Depth > 2.50" for 2-Year event
Inflow = 5.33 cfs @ 12.07 hrs, Volume= 0.323 af
Outflow = 5.33 cfs @ 12.07 hrs, Volume= 0.323 af, Atten= 0%, Lag= 0.0 min
Primary = 5.33 cfs @ 12.07 hrs, Volume= 0.323 af
Routed to Pond 38P : CI-1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 58.46' @ 12.06 hrs

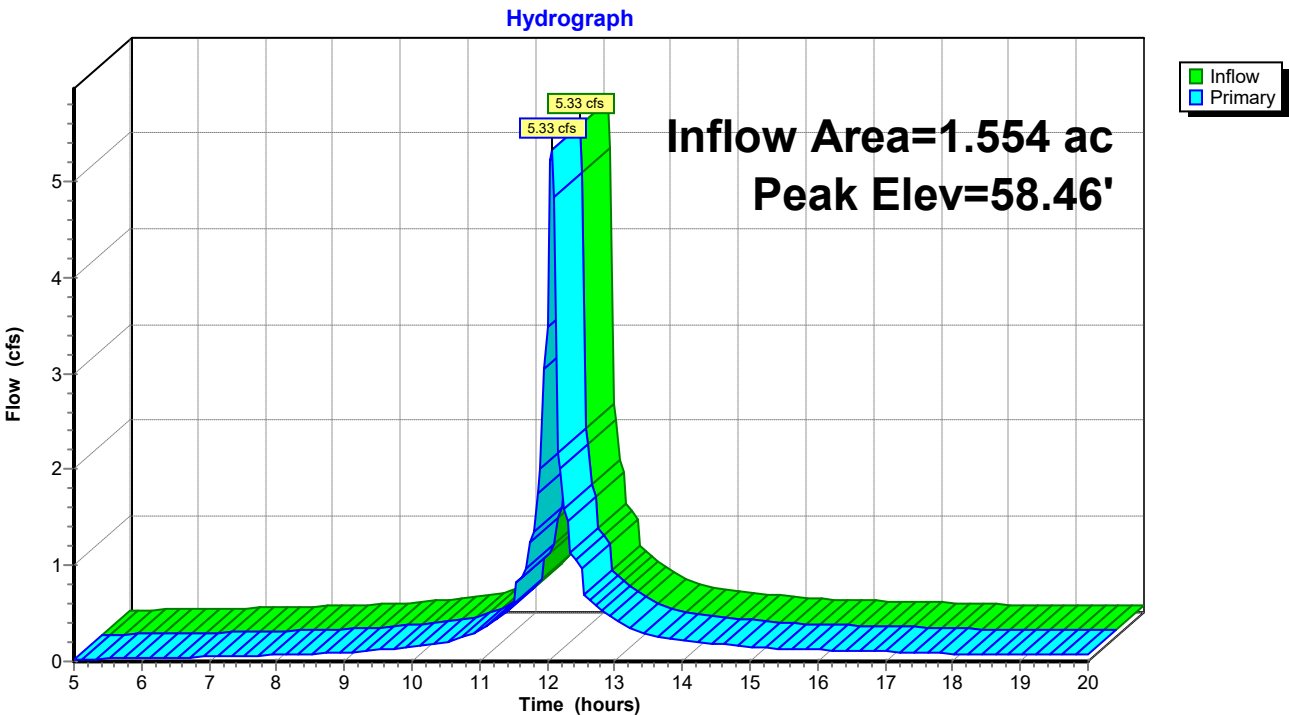
Device	Routing	Invert	Outlet Devices
#1	Primary	61.44'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.03'	15.0" Round Culvert L= 172.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.03' / 55.43' S= 0.0093 '/ Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=5.10 cfs @ 12.07 hrs HW=58.40' TW=56.83' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Inlet Controls 5.10 cfs @ 4.16 fps)

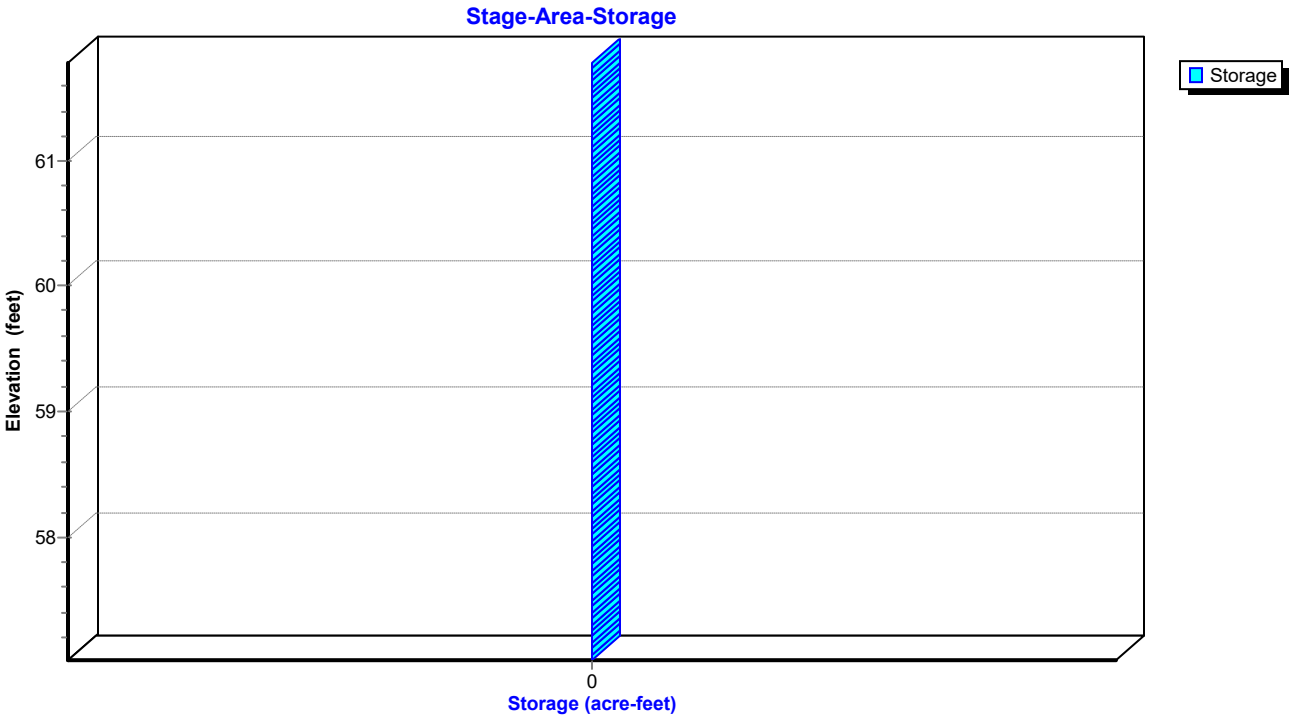
Orifice/Grate



Pond 39P: CI-9



Pond 39P: CI-9



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Hydrograph for Pond 39P: CI-9

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.02	57.10	0.02	18.00	0.08	57.17	0.08
5.25	0.03	57.11	0.03	18.25	0.08	57.17	0.08
5.50	0.03	57.11	0.03	18.50	0.08	57.17	0.08
5.75	0.03	57.11	0.03	18.75	0.08	57.17	0.08
6.00	0.03	57.11	0.03	19.00	0.08	57.17	0.08
6.25	0.04	57.12	0.04	19.25	0.07	57.17	0.07
6.50	0.04	57.12	0.04	19.50	0.07	57.17	0.07
6.75	0.04	57.13	0.04	19.75	0.07	57.17	0.07
7.00	0.05	57.13	0.05	20.00	0.07	57.16	0.07
7.25	0.05	57.14	0.05				
7.50	0.06	57.14	0.06				
7.75	0.06	57.15	0.06				
8.00	0.07	57.15	0.07				
8.25	0.07	57.16	0.07				
8.50	0.08	57.16	0.08				
8.75	0.08	57.17	0.08				
9.00	0.09	57.17	0.09				
9.25	0.11	57.19	0.11				
9.50	0.12	57.20	0.12				
9.75	0.14	57.21	0.14				
10.00	0.15	57.22	0.15				
10.25	0.17	57.23	0.17				
10.50	0.19	57.24	0.19				
10.75	0.26	57.28	0.26				
11.00	0.32	57.30	0.32				
11.25	0.45	57.35	0.45				
11.50	0.59	57.40	0.59				
11.75	1.24	57.57	1.24				
12.00	3.49	58.02	3.49				
12.25	1.58	57.69	1.58				
12.50	0.96	57.56	0.96				
12.75	0.56	57.45	0.56				
13.00	0.44	57.40	0.44				
13.25	0.34	57.35	0.34				
13.50	0.28	57.31	0.28				
13.75	0.24	57.29	0.24				
14.00	0.22	57.27	0.22				
14.25	0.20	57.26	0.20				
14.50	0.18	57.24	0.18				
14.75	0.16	57.23	0.16				
15.00	0.15	57.22	0.15				
15.25	0.14	57.21	0.14				
15.50	0.13	57.21	0.13				
15.75	0.13	57.21	0.13				
16.00	0.12	57.20	0.12				
16.25	0.12	57.20	0.12				
16.50	0.11	57.20	0.11				
16.75	0.11	57.19	0.11				
17.00	0.10	57.19	0.10				
17.25	0.10	57.18	0.10				
17.50	0.09	57.18	0.09				
17.75	0.09	57.18	0.09				

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Stage-Area-Storage for Pond 39P: CI-9

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.03	0.000	59.63	0.000
57.08	0.000	59.68	0.000
57.13	0.000	59.73	0.000
57.18	0.000	59.78	0.000
57.23	0.000	59.83	0.000
57.28	0.000	59.88	0.000
57.33	0.000	59.93	0.000
57.38	0.000	59.98	0.000
57.43	0.000	60.03	0.000
57.48	0.000	60.08	0.000
57.53	0.000	60.13	0.000
57.58	0.000	60.18	0.000
57.63	0.000	60.23	0.000
57.68	0.000	60.28	0.000
57.73	0.000	60.33	0.000
57.78	0.000	60.38	0.000
57.83	0.000	60.43	0.000
57.88	0.000	60.48	0.000
57.93	0.000	60.53	0.000
57.98	0.000	60.58	0.000
58.03	0.000	60.63	0.000
58.08	0.000	60.68	0.000
58.13	0.000	60.73	0.000
58.18	0.000	60.78	0.000
58.23	0.000	60.83	0.000
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000		
59.23	0.000		
59.28	0.000		
59.33	0.000		
59.38	0.000		
59.43	0.000		
59.48	0.000		
59.53	0.000		
59.58	0.000		

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Summary for Pond 40P: CI-6

Inflow Area = 0.382 ac, 58.96% Impervious, Inflow Depth > 2.17" for 2-Year event
Inflow = 1.04 cfs @ 12.08 hrs, Volume= 0.069 af
Outflow = 1.04 cfs @ 12.08 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min
Primary = 1.04 cfs @ 12.08 hrs, Volume= 0.069 af
Routed to Pond 39P : CI-9

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 58.55' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.68'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.45'	12.0" Round Culvert L= 84.4' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.45' / 57.03' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.44 cfs @ 12.08 hrs HW=58.40' TW=58.38' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 0.44 cfs @ 0.73 fps)

Orifice/Grate

Culvert Pond 40P: CI-6

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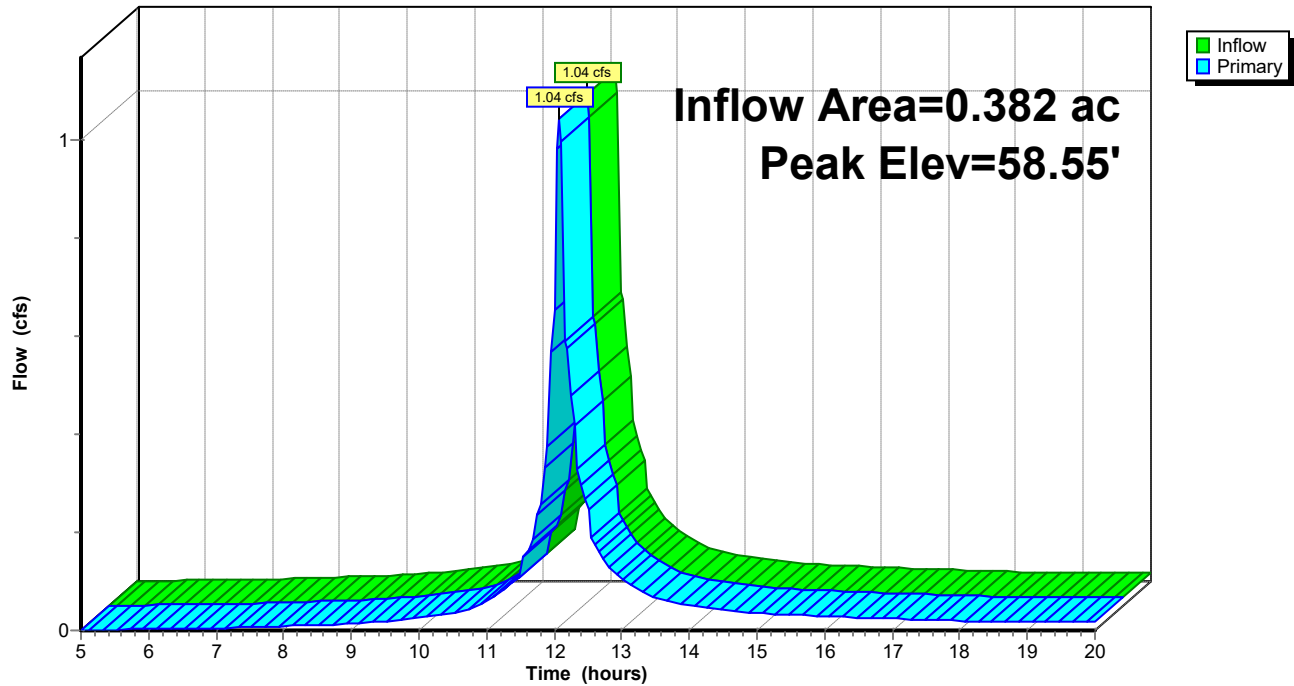
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NOAA 24-hr C 2-Year Rainfall=3.33"

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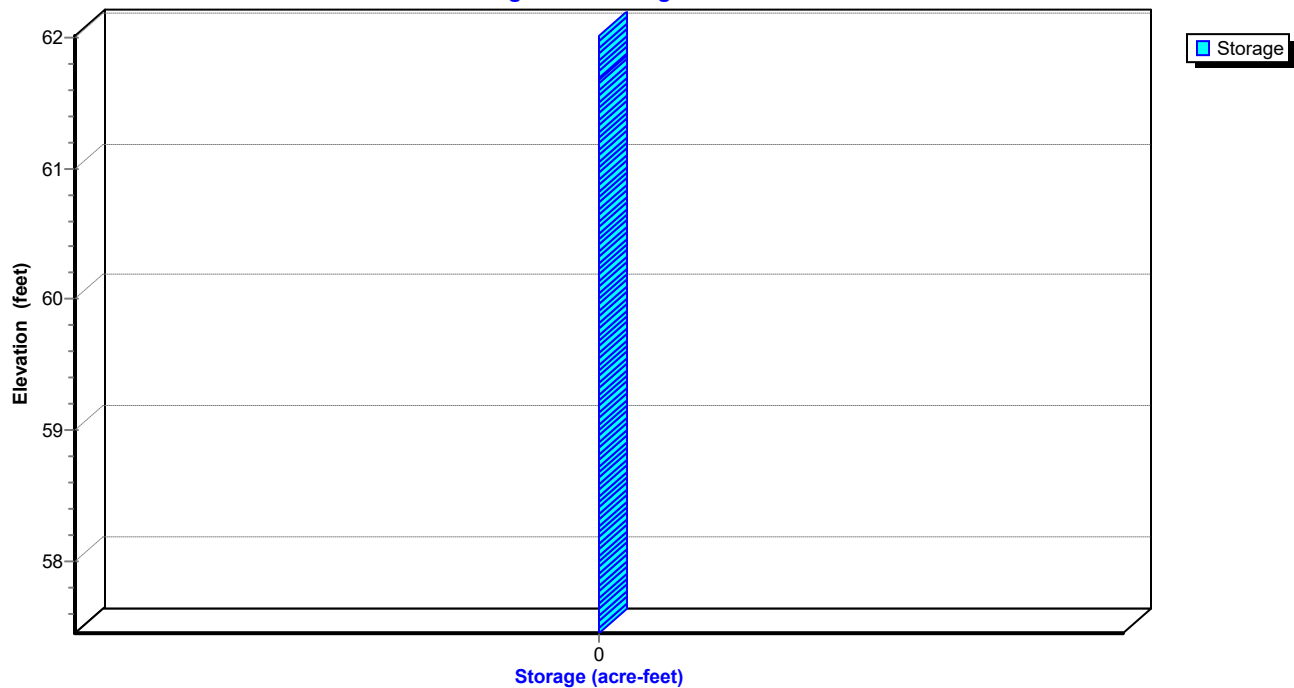
Pond 40P: CI-6

Hydrograph



Pond 40P: CI-6

Stage-Area-Storage



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Hydrograph for Pond 40P: CI-6

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	57.47	0.00	18.00	0.02	57.53	0.02
5.25	0.00	57.47	0.00	18.25	0.02	57.53	0.02
5.50	0.00	57.48	0.00	18.50	0.02	57.53	0.02
5.75	0.00	57.48	0.00	18.75	0.02	57.53	0.02
6.00	0.00	57.48	0.00	19.00	0.02	57.53	0.02
6.25	0.00	57.48	0.00	19.25	0.02	57.53	0.02
6.50	0.00	57.49	0.00	19.50	0.02	57.53	0.02
6.75	0.00	57.49	0.00	19.75	0.02	57.53	0.02
7.00	0.00	57.49	0.00	20.00	0.02	57.53	0.02
7.25	0.01	57.50	0.01				
7.50	0.01	57.50	0.01				
7.75	0.01	57.50	0.01				
8.00	0.01	57.51	0.01				
8.25	0.01	57.51	0.01				
8.50	0.01	57.51	0.01				
8.75	0.01	57.52	0.01				
9.00	0.01	57.52	0.01				
9.25	0.02	57.53	0.02				
9.50	0.02	57.53	0.02				
9.75	0.02	57.54	0.02				
10.00	0.03	57.55	0.03				
10.25	0.03	57.56	0.03				
10.50	0.03	57.56	0.03				
10.75	0.05	57.58	0.05				
11.00	0.06	57.60	0.06				
11.25	0.08	57.63	0.08				
11.50	0.11	57.66	0.11				
11.75	0.24	57.77	0.24				
12.00	0.65	58.10	0.65				
12.25	0.48	57.96	0.48				
12.50	0.24	57.79	0.24				
12.75	0.14	57.70	0.14				
13.00	0.11	57.66	0.11				
13.25	0.08	57.63	0.08				
13.50	0.07	57.61	0.07				
13.75	0.06	57.60	0.06				
14.00	0.05	57.59	0.05				
14.25	0.05	57.58	0.05				
14.50	0.04	57.58	0.04				
14.75	0.04	57.57	0.04				
15.00	0.04	57.56	0.04				
15.25	0.03	57.56	0.03				
15.50	0.03	57.56	0.03				
15.75	0.03	57.55	0.03				
16.00	0.03	57.55	0.03				
16.25	0.03	57.55	0.03				
16.50	0.03	57.55	0.03				
16.75	0.03	57.55	0.03				
17.00	0.02	57.54	0.02				
17.25	0.02	57.54	0.02				
17.50	0.02	57.54	0.02				
17.75	0.02	57.54	0.02				

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Stage-Area-Storage for Pond 40P: CI-6

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.45	0.000	60.05	0.000
57.50	0.000	60.10	0.000
57.55	0.000	60.15	0.000
57.60	0.000	60.20	0.000
57.65	0.000	60.25	0.000
57.70	0.000	60.30	0.000
57.75	0.000	60.35	0.000
57.80	0.000	60.40	0.000
57.85	0.000	60.45	0.000
57.90	0.000	60.50	0.000
57.95	0.000	60.55	0.000
58.00	0.000	60.60	0.000
58.05	0.000	60.65	0.000
58.10	0.000	60.70	0.000
58.15	0.000	60.75	0.000
58.20	0.000	60.80	0.000
58.25	0.000	60.85	0.000
58.30	0.000	60.90	0.000
58.35	0.000	60.95	0.000
58.40	0.000	61.00	0.000
58.45	0.000	61.05	0.000
58.50	0.000	61.10	0.000
58.55	0.000	61.15	0.000
58.60	0.000	61.20	0.000
58.65	0.000	61.25	0.000
58.70	0.000	61.30	0.000
58.75	0.000	61.35	0.000
58.80	0.000	61.40	0.000
58.85	0.000	61.45	0.000
58.90	0.000	61.50	0.000
58.95	0.000	61.55	0.000
59.00	0.000	61.60	0.000
59.05	0.000	61.65	0.000
59.10	0.000	61.70	0.000
59.15	0.000	61.75	0.000
59.20	0.000	61.80	0.000
59.25	0.000	61.85	0.000
59.30	0.000	61.90	0.000
59.35	0.000	61.95	0.000
59.40	0.000	62.00	0.000
59.45	0.000		
59.50	0.000		
59.55	0.000		
59.60	0.000		
59.65	0.000		
59.70	0.000		
59.75	0.000		
59.80	0.000		
59.85	0.000		
59.90	0.000		
59.95	0.000		
60.00	0.000		

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NOAA 24-hr C 2-Year Rainfall=3.33"
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Summary for Pond 43P: CI-7

Inflow Area = 0.131 ac, 41.20% Impervious, Inflow Depth > 1.88" for 2-Year event
Inflow = 0.28 cfs @ 12.20 hrs, Volume= 0.020 af
Outflow = 0.28 cfs @ 12.20 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min
Primary = 0.28 cfs @ 12.20 hrs, Volume= 0.020 af
Routed to Pond 40P : CI-6

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 58.63' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.27'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.13'	12.0" Round Culvert L= 138.4' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.13' / 57.43' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

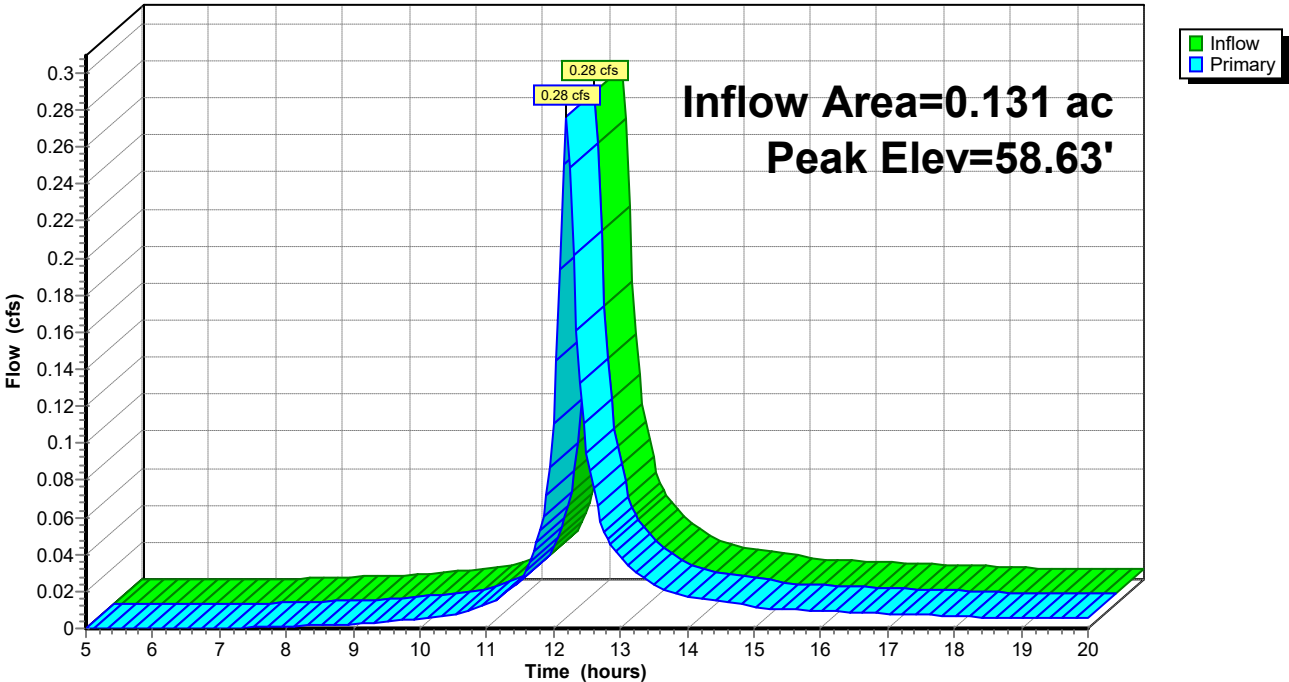
Primary OutFlow Max=0.47 cfs @ 12.20 hrs HW=58.56' TW=58.04' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 0.47 cfs @ 2.16 fps)

Orifice/Grate



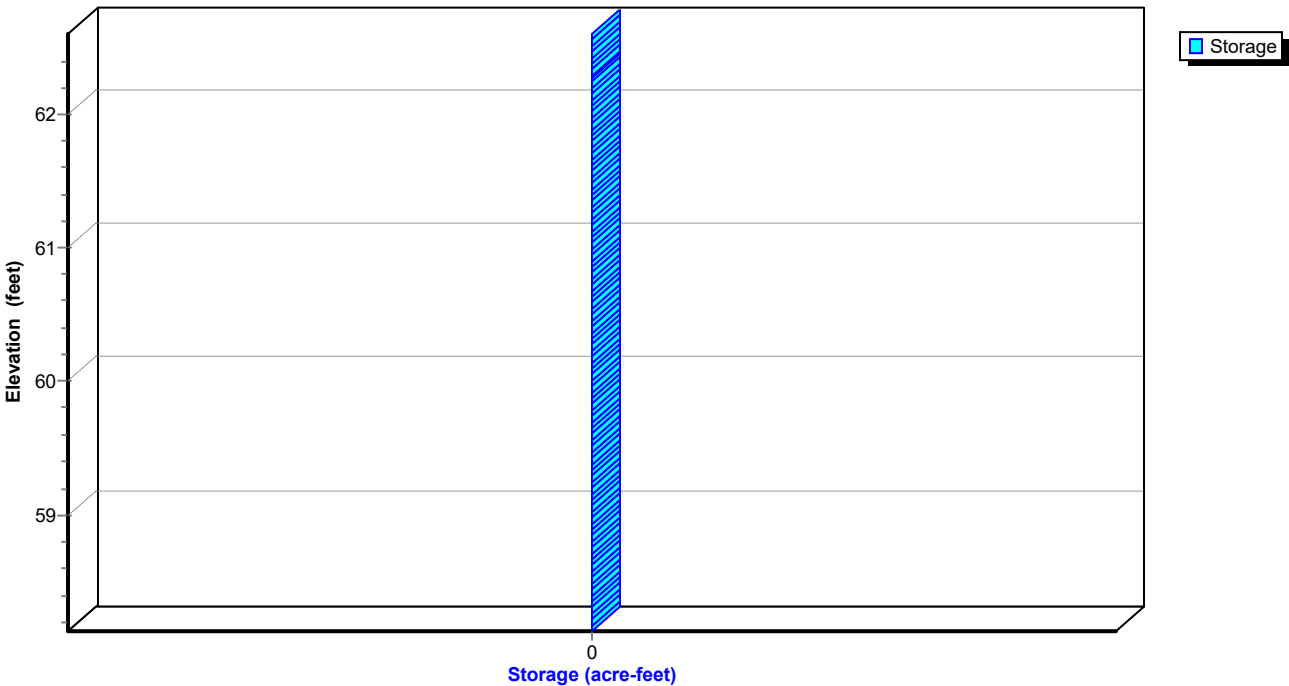
Pond 43P: CI-7

Hydrograph



Pond 43P: CI-7

Stage-Area-Storage



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NOAA 24-hr C 2-Year Rainfall=3.33"

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Hydrograph for Pond 43P: CI-7

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	58.13	0.00	18.00	0.01	58.18	0.01
5.25	0.00	58.13	0.00	18.25	0.01	58.18	0.01
5.50	0.00	58.13	0.00	18.50	0.01	58.18	0.01
5.75	0.00	58.13	0.00	18.75	0.01	58.18	0.01
6.00	0.00	58.13	0.00	19.00	0.01	58.18	0.01
6.25	0.00	58.13	0.00	19.25	0.01	58.18	0.01
6.50	0.00	58.13	0.00	19.50	0.01	58.18	0.01
6.75	0.00	58.13	0.00	19.75	0.01	58.18	0.01
7.00	0.00	58.14	0.00	20.00	0.01	58.18	0.01
7.25	0.00	58.14	0.00				
7.50	0.00	58.15	0.00				
7.75	0.00	58.15	0.00				
8.00	0.00	58.15	0.00				
8.25	0.00	58.15	0.00				
8.50	0.00	58.16	0.00				
8.75	0.00	58.16	0.00				
9.00	0.00	58.16	0.00				
9.25	0.00	58.16	0.00				
9.50	0.00	58.17	0.00				
9.75	0.00	58.17	0.00				
10.00	0.01	58.17	0.01				
10.25	0.01	58.18	0.01				
10.50	0.01	58.18	0.01				
10.75	0.01	58.19	0.01				
11.00	0.01	58.20	0.01				
11.25	0.02	58.21	0.02				
11.50	0.03	58.23	0.03				
11.75	0.05	58.26	0.05				
12.00	0.11	58.35	0.11				
12.25	0.25	58.45	0.25				
12.50	0.10	58.32	0.10				
12.75	0.05	58.27	0.05				
13.00	0.04	58.25	0.04				
13.25	0.03	58.23	0.03				
13.50	0.02	58.22	0.02				
13.75	0.02	58.21	0.02				
14.00	0.02	58.21	0.02				
14.25	0.02	58.21	0.02				
14.50	0.01	58.20	0.01				
14.75	0.01	58.20	0.01				
15.00	0.01	58.20	0.01				
15.25	0.01	58.19	0.01				
15.50	0.01	58.19	0.01				
15.75	0.01	58.19	0.01				
16.00	0.01	58.19	0.01				
16.25	0.01	58.19	0.01				
16.50	0.01	58.19	0.01				
16.75	0.01	58.19	0.01				
17.00	0.01	58.18	0.01				
17.25	0.01	58.18	0.01				
17.50	0.01	58.18	0.01				
17.75	0.01	58.18	0.01				

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Stage-Area-Storage for Pond 43P: CI-7

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.13	0.000	60.73	0.000
58.18	0.000	60.78	0.000
58.23	0.000	60.83	0.000
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000	61.78	0.000
59.23	0.000	61.83	0.000
59.28	0.000	61.88	0.000
59.33	0.000	61.93	0.000
59.38	0.000	61.98	0.000
59.43	0.000	62.03	0.000
59.48	0.000	62.08	0.000
59.53	0.000	62.13	0.000
59.58	0.000	62.18	0.000
59.63	0.000	62.23	0.000
59.68	0.000	62.28	0.000
59.73	0.000	62.33	0.000
59.78	0.000	62.38	0.000
59.83	0.000	62.43	0.000
59.88	0.000	62.48	0.000
59.93	0.000	62.53	0.000
59.98	0.000	62.58	0.000
60.03	0.000		
60.08	0.000		
60.13	0.000		
60.18	0.000		
60.23	0.000		
60.28	0.000		
60.33	0.000		
60.38	0.000		
60.43	0.000		
60.48	0.000		
60.53	0.000		
60.58	0.000		
60.63	0.000		
60.68	0.000		

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Summary for Pond 44P: CI-2

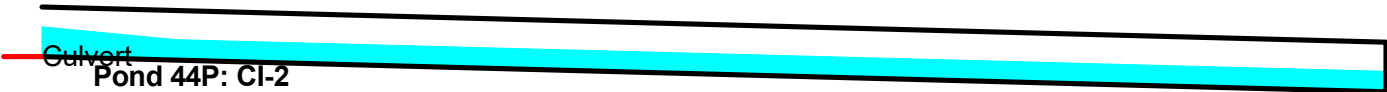
Inflow Area = 0.537 ac, 76.55% Impervious, Inflow Depth > 2.46" for 2-Year event
Inflow = 1.92 cfs @ 12.07 hrs, Volume= 0.110 af
Outflow = 1.92 cfs @ 12.07 hrs, Volume= 0.110 af, Atten= 0%, Lag= 0.0 min
Primary = 1.92 cfs @ 12.07 hrs, Volume= 0.110 af
Routed to Pond 45P : CI-3

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 59.30' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.18'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.55'	15.0" Round Culvert L= 99.8' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.55' / 57.66' S= 0.0089 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.61 cfs @ 12.07 hrs HW=59.27' TW=58.70' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 1.61 cfs @ 3.15 fps)

Orifice/Grate



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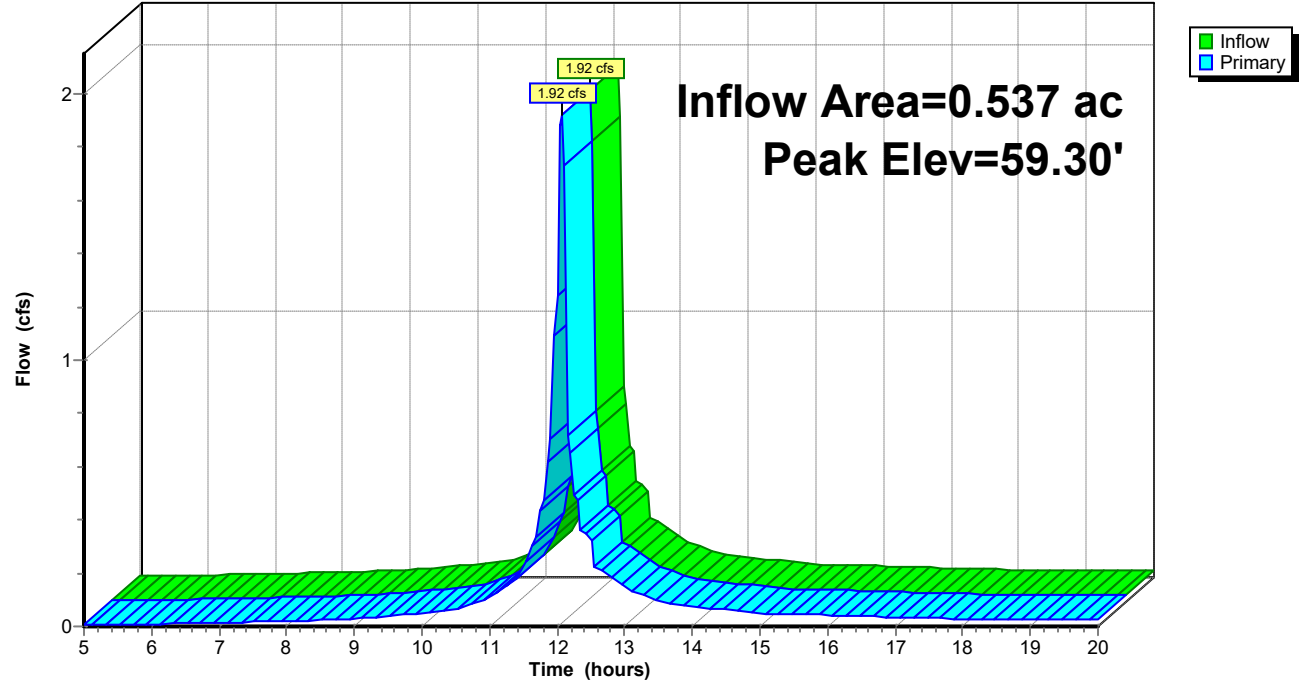
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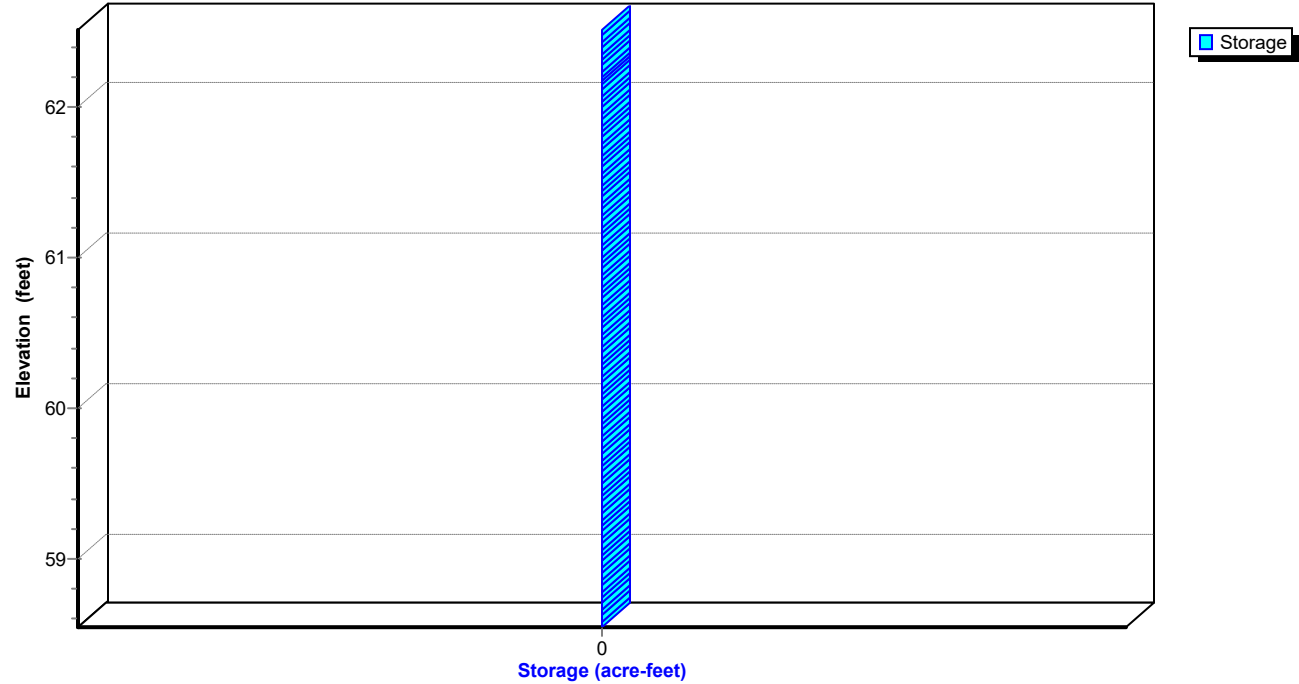
Pond 44P: CI-2

Hydrograph



Pond 44P: CI-2

Stage-Area-Storage



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Hydrograph for Pond 44P: CI-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	58.59	0.01	18.00	0.03	58.63	0.03
5.25	0.01	58.59	0.01	18.25	0.03	58.63	0.03
5.50	0.01	58.59	0.01	18.50	0.03	58.63	0.03
5.75	0.01	58.59	0.01	18.75	0.03	58.63	0.03
6.00	0.01	58.60	0.01	19.00	0.03	58.63	0.03
6.25	0.01	58.60	0.01	19.25	0.03	58.63	0.03
6.50	0.01	58.60	0.01	19.50	0.03	58.63	0.03
6.75	0.01	58.60	0.01	19.75	0.03	58.63	0.03
7.00	0.01	58.61	0.01	20.00	0.02	58.63	0.02
7.25	0.02	58.61	0.02				
7.50	0.02	58.61	0.02				
7.75	0.02	58.62	0.02				
8.00	0.02	58.62	0.02				
8.25	0.02	58.62	0.02				
8.50	0.02	58.62	0.02				
8.75	0.03	58.63	0.03				
9.00	0.03	58.63	0.03				
9.25	0.03	58.64	0.03				
9.50	0.04	58.64	0.04				
9.75	0.04	58.65	0.04				
10.00	0.05	58.66	0.05				
10.25	0.06	58.66	0.06				
10.50	0.06	58.67	0.06				
10.75	0.09	58.69	0.09				
11.00	0.11	58.70	0.11				
11.25	0.15	58.73	0.15				
11.50	0.20	58.76	0.20				
11.75	0.44	58.86	0.44				
12.00	1.24	59.12	1.24				
12.25	0.50	58.91	0.50				
12.50	0.32	58.82	0.32				
12.75	0.19	58.76	0.19				
13.00	0.15	58.73	0.15				
13.25	0.12	58.71	0.12				
13.50	0.10	58.70	0.10				
13.75	0.08	58.68	0.08				
14.00	0.08	58.68	0.08				
14.25	0.07	58.67	0.07				
14.50	0.06	58.67	0.06				
14.75	0.06	58.66	0.06				
15.00	0.05	58.66	0.05				
15.25	0.05	58.65	0.05				
15.50	0.05	58.65	0.05				
15.75	0.04	58.65	0.04				
16.00	0.04	58.65	0.04				
16.25	0.04	58.65	0.04				
16.50	0.04	58.64	0.04				
16.75	0.04	58.64	0.04				
17.00	0.04	58.64	0.04				
17.25	0.03	58.64	0.03				
17.50	0.03	58.64	0.03				
17.75	0.03	58.63	0.03				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Stage-Area-Storage for Pond 44P: CI-2

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.55	0.000	61.15	0.000
58.60	0.000	61.20	0.000
58.65	0.000	61.25	0.000
58.70	0.000	61.30	0.000
58.75	0.000	61.35	0.000
58.80	0.000	61.40	0.000
58.85	0.000	61.45	0.000
58.90	0.000	61.50	0.000
58.95	0.000	61.55	0.000
59.00	0.000	61.60	0.000
59.05	0.000	61.65	0.000
59.10	0.000	61.70	0.000
59.15	0.000	61.75	0.000
59.20	0.000	61.80	0.000
59.25	0.000	61.85	0.000
59.30	0.000	61.90	0.000
59.35	0.000	61.95	0.000
59.40	0.000	62.00	0.000
59.45	0.000	62.05	0.000
59.50	0.000	62.10	0.000
59.55	0.000	62.15	0.000
59.60	0.000	62.20	0.000
59.65	0.000	62.25	0.000
59.70	0.000	62.30	0.000
59.75	0.000	62.35	0.000
59.80	0.000	62.40	0.000
59.85	0.000	62.45	0.000
59.90	0.000	62.50	0.000
59.95	0.000		
60.00	0.000		
60.05	0.000		
60.10	0.000		
60.15	0.000		
60.20	0.000		
60.25	0.000		
60.30	0.000		
60.35	0.000		
60.40	0.000		
60.45	0.000		
60.50	0.000		
60.55	0.000		
60.60	0.000		
60.65	0.000		
60.70	0.000		
60.75	0.000		
60.80	0.000		
60.85	0.000		
60.90	0.000		
60.95	0.000		
61.00	0.000		
61.05	0.000		
61.10	0.000		

EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"
Printed 5/1/2024

Summary for Pond 45P: CI-3

Inflow Area = 0.765 ac, 76.25% Impervious, Inflow Depth > 2.47" for 2-Year event
Inflow = 2.73 cfs @ 12.07 hrs, Volume= 0.157 af
Outflow = 2.73 cfs @ 12.07 hrs, Volume= 0.157 af, Atten= 0%, Lag= 0.0 min
Primary = 2.73 cfs @ 12.07 hrs, Volume= 0.157 af
Routed to Pond 39P : CI-9

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 58.81' @ 12.09 hrs

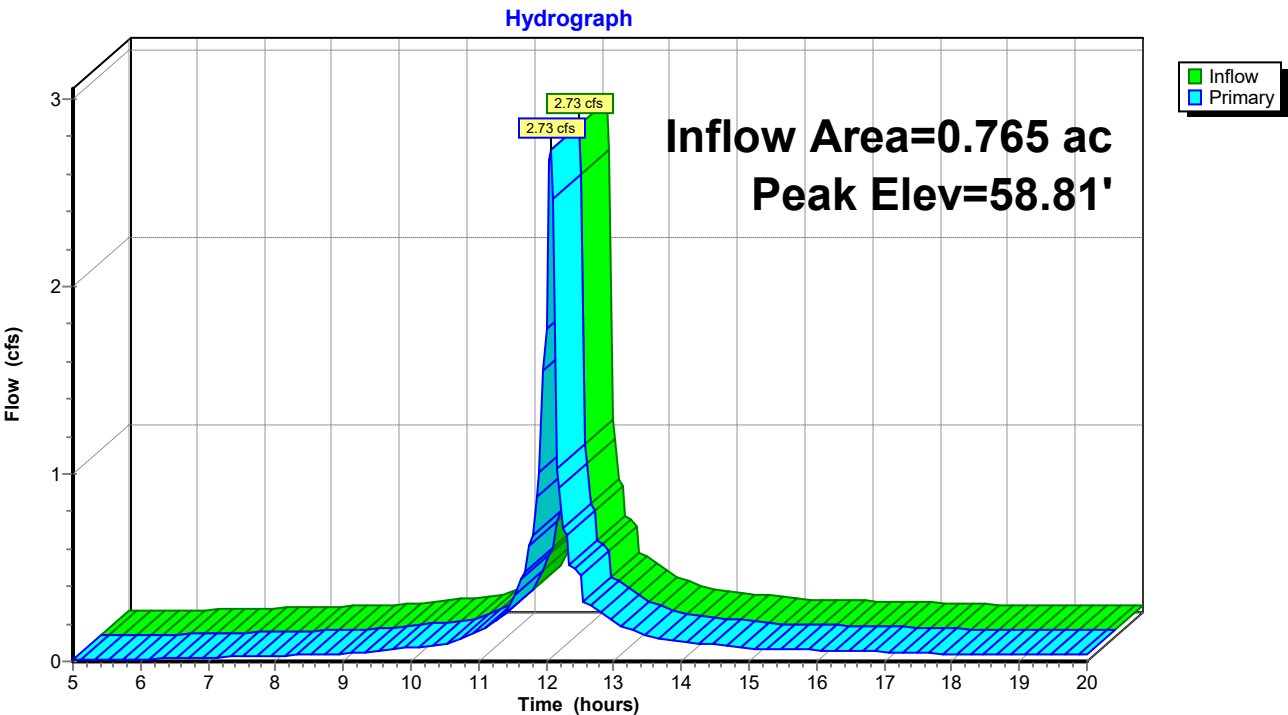
Device	Routing	Invert	Outlet Devices
#1	Primary	61.68'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.66'	15.0" Round Culvert L= 99.8' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.66' / 57.03' S= 0.0063 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.95 cfs @ 12.07 hrs HW=58.70' TW=58.40' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 1.95 cfs @ 2.44 fps)

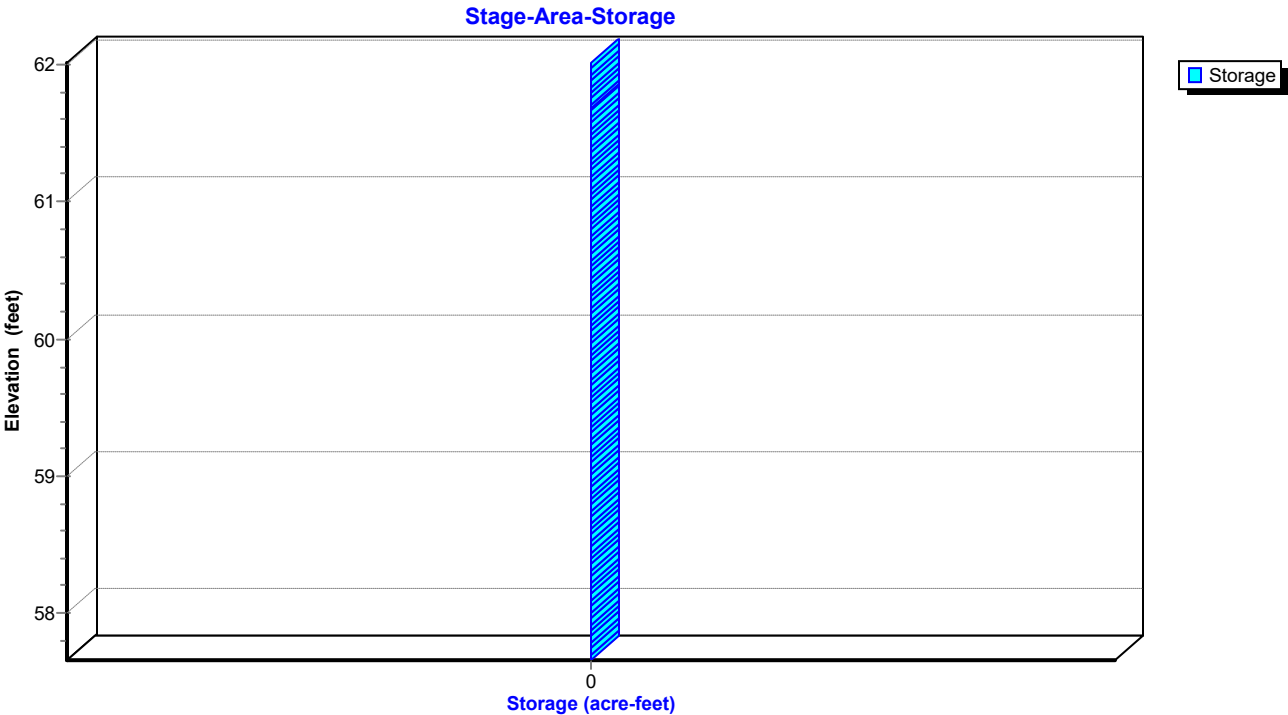
Orifice/Grate



Pond 45P: CI-3



Pond 45P: CI-3



EX and PR

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Pond 45P: CI-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	57.71	0.01	18.00	0.04	57.76	0.04
5.25	0.01	57.71	0.01	18.25	0.04	57.76	0.04
5.50	0.01	57.71	0.01	18.50	0.04	57.76	0.04
5.75	0.01	57.72	0.01	18.75	0.04	57.76	0.04
6.00	0.01	57.72	0.01	19.00	0.04	57.76	0.04
6.25	0.01	57.72	0.01	19.25	0.04	57.76	0.04
6.50	0.02	57.73	0.02	19.50	0.04	57.76	0.04
6.75	0.02	57.73	0.02	19.75	0.04	57.76	0.04
7.00	0.02	57.74	0.02	20.00	0.04	57.76	0.04
7.25	0.02	57.74	0.02				
7.50	0.03	57.74	0.03				
7.75	0.03	57.75	0.03				
8.00	0.03	57.75	0.03				
8.25	0.03	57.75	0.03				
8.50	0.04	57.76	0.04				
8.75	0.04	57.76	0.04				
9.00	0.04	57.77	0.04				
9.25	0.05	57.77	0.05				
9.50	0.06	57.78	0.06				
9.75	0.06	57.79	0.06				
10.00	0.07	57.80	0.07				
10.25	0.08	57.81	0.08				
10.50	0.09	57.82	0.09				
10.75	0.12	57.84	0.12				
11.00	0.15	57.86	0.15				
11.25	0.22	57.90	0.22				
11.50	0.29	57.94	0.29				
11.75	0.62	58.08	0.62				
12.00	1.77	58.45	1.77				
12.25	0.71	58.16	0.71				
12.50	0.46	58.04	0.46				
12.75	0.27	57.94	0.27				
13.00	0.22	57.91	0.22				
13.25	0.17	57.88	0.17				
13.50	0.14	57.85	0.14				
13.75	0.12	57.84	0.12				
14.00	0.11	57.83	0.11				
14.25	0.10	57.82	0.10				
14.50	0.09	57.82	0.09				
14.75	0.08	57.81	0.08				
15.00	0.07	57.80	0.07				
15.25	0.07	57.79	0.07				
15.50	0.06	57.79	0.06				
15.75	0.06	57.79	0.06				
16.00	0.06	57.79	0.06				
16.25	0.06	57.78	0.06				
16.50	0.06	57.78	0.06				
16.75	0.05	57.78	0.05				
17.00	0.05	57.78	0.05				
17.25	0.05	57.77	0.05				
17.50	0.05	57.77	0.05				
17.75	0.04	57.77	0.04				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Stage-Area-Storage for Pond 45P: CI-3

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.66	0.000	60.26	0.000
57.71	0.000	60.31	0.000
57.76	0.000	60.36	0.000
57.81	0.000	60.41	0.000
57.86	0.000	60.46	0.000
57.91	0.000	60.51	0.000
57.96	0.000	60.56	0.000
58.01	0.000	60.61	0.000
58.06	0.000	60.66	0.000
58.11	0.000	60.71	0.000
58.16	0.000	60.76	0.000
58.21	0.000	60.81	0.000
58.26	0.000	60.86	0.000
58.31	0.000	60.91	0.000
58.36	0.000	60.96	0.000
58.41	0.000	61.01	0.000
58.46	0.000	61.06	0.000
58.51	0.000	61.11	0.000
58.56	0.000	61.16	0.000
58.61	0.000	61.21	0.000
58.66	0.000	61.26	0.000
58.71	0.000	61.31	0.000
58.76	0.000	61.36	0.000
58.81	0.000	61.41	0.000
58.86	0.000	61.46	0.000
58.91	0.000	61.51	0.000
58.96	0.000	61.56	0.000
59.01	0.000	61.61	0.000
59.06	0.000	61.66	0.000
59.11	0.000	61.71	0.000
59.16	0.000	61.76	0.000
59.21	0.000	61.81	0.000
59.26	0.000	61.86	0.000
59.31	0.000	61.91	0.000
59.36	0.000	61.96	0.000
59.41	0.000	62.01	0.000
59.46	0.000		
59.51	0.000		
59.56	0.000		
59.61	0.000		
59.66	0.000		
59.71	0.000		
59.76	0.000		
59.81	0.000		
59.86	0.000		
59.91	0.000		
59.96	0.000		
60.01	0.000		
60.06	0.000		
60.11	0.000		
60.16	0.000		
60.21	0.000		

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NOAA 24-hr C 2-Year Rainfall=3.33"
Printed 5/1/2024

Summary for Pond 46P: CI-5

Inflow Area = 0.074 ac, 51.14% Impervious, Inflow Depth > 2.05" for 2-Year event
Inflow = 0.23 cfs @ 12.06 hrs, Volume= 0.013 af
Outflow = 0.23 cfs @ 12.06 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min
Primary = 0.23 cfs @ 12.06 hrs, Volume= 0.013 af
Routed to Pond 45P : CI-3

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 58.82' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.87'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.28'	15.0" Round Culvert L= 107.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.28' / 57.75' S= 0.0050 '/ Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=58.63' TW=58.67' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate



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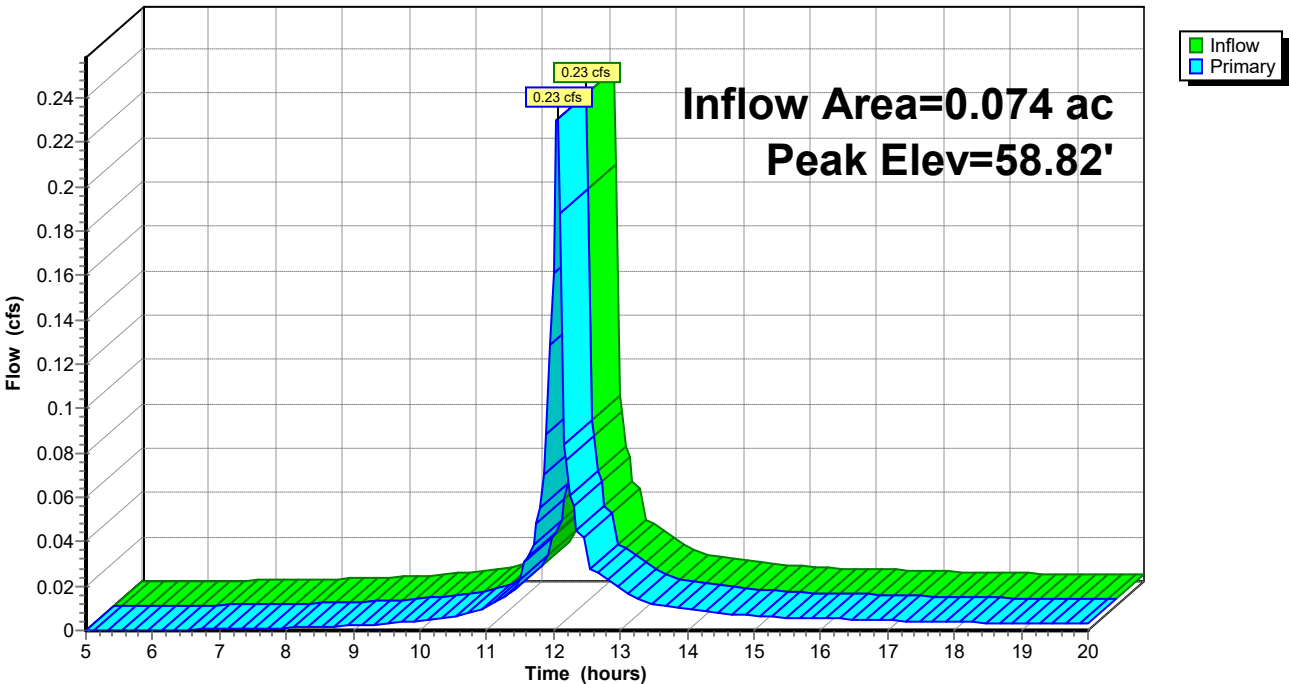
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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

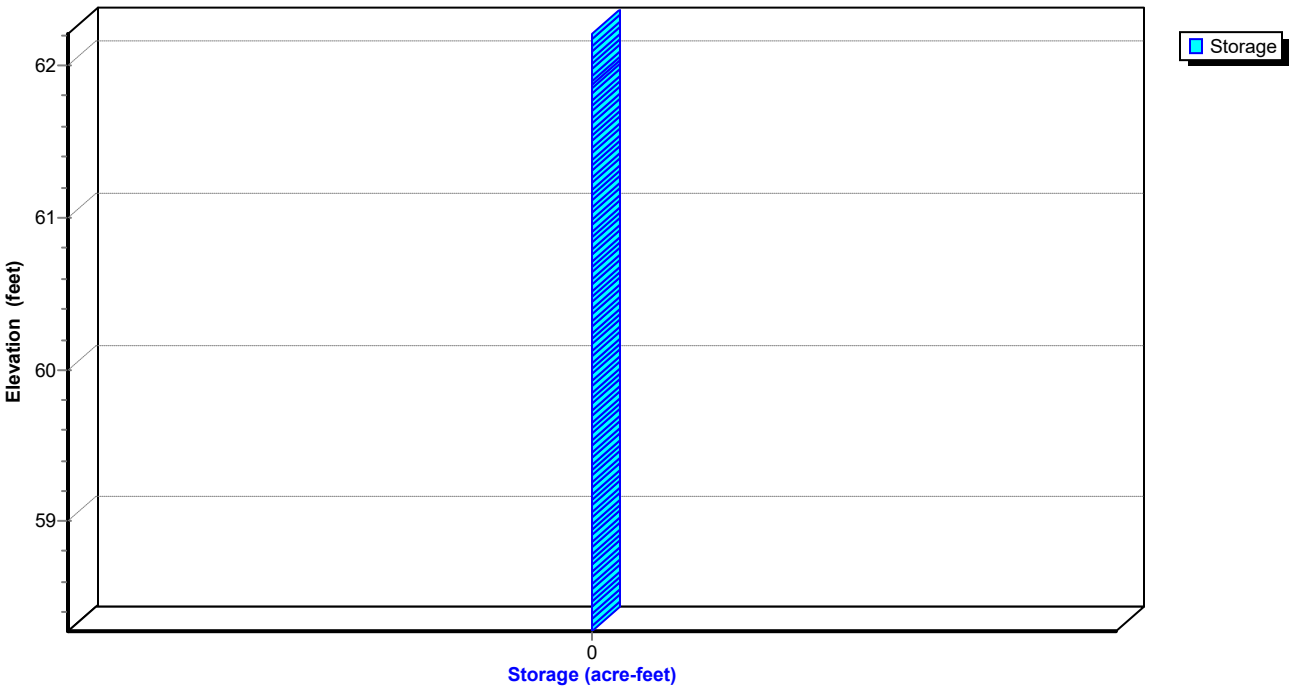
Pond 46P: CI-5

Hydrograph



Pond 46P: CI-5

Stage-Area-Storage



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Hydrograph for Pond 46P: CI-5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	58.28	0.00	18.00	0.00	58.32	0.00
5.25	0.00	58.28	0.00	18.25	0.00	58.31	0.00
5.50	0.00	58.28	0.00	18.50	0.00	58.31	0.00
5.75	0.00	58.28	0.00	18.75	0.00	58.31	0.00
6.00	0.00	58.29	0.00	19.00	0.00	58.31	0.00
6.25	0.00	58.29	0.00	19.25	0.00	58.31	0.00
6.50	0.00	58.29	0.00	19.50	0.00	58.31	0.00
6.75	0.00	58.29	0.00	19.75	0.00	58.31	0.00
7.00	0.00	58.29	0.00	20.00	0.00	58.31	0.00
7.25	0.00	58.30	0.00				
7.50	0.00	58.30	0.00				
7.75	0.00	58.30	0.00				
8.00	0.00	58.30	0.00				
8.25	0.00	58.30	0.00				
8.50	0.00	58.30	0.00				
8.75	0.00	58.31	0.00				
9.00	0.00	58.31	0.00				
9.25	0.00	58.31	0.00				
9.50	0.00	58.31	0.00				
9.75	0.00	58.32	0.00				
10.00	0.00	58.32	0.00				
10.25	0.01	58.32	0.01				
10.50	0.01	58.32	0.01				
10.75	0.01	58.33	0.01				
11.00	0.01	58.34	0.01				
11.25	0.02	58.35	0.02				
11.50	0.02	58.37	0.02				
11.75	0.05	58.41	0.05				
12.00	0.16	58.55	0.16				
12.25	0.06	58.45	0.06				
12.50	0.04	58.40	0.04				
12.75	0.02	58.37	0.02				
13.00	0.02	58.36	0.02				
13.25	0.01	58.35	0.01				
13.50	0.01	58.34	0.01				
13.75	0.01	58.34	0.01				
14.00	0.01	58.34	0.01				
14.25	0.01	58.33	0.01				
14.50	0.01	58.33	0.01				
14.75	0.01	58.33	0.01				
15.00	0.01	58.33	0.01				
15.25	0.01	58.32	0.01				
15.50	0.01	58.32	0.01				
15.75	0.01	58.32	0.01				
16.00	0.01	58.32	0.01				
16.25	0.01	58.32	0.01				
16.50	0.00	58.32	0.00				
16.75	0.00	58.32	0.00				
17.00	0.00	58.32	0.00				
17.25	0.00	58.32	0.00				
17.50	0.00	58.32	0.00				
17.75	0.00	58.32	0.00				

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NOAA 24-hr C 2-Year Rainfall=3.33"

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Stage-Area-Storage for Pond 46P: CI-5

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000	61.78	0.000
59.23	0.000	61.83	0.000
59.28	0.000	61.88	0.000
59.33	0.000	61.93	0.000
59.38	0.000	61.98	0.000
59.43	0.000	62.03	0.000
59.48	0.000	62.08	0.000
59.53	0.000	62.13	0.000
59.58	0.000	62.18	0.000
59.63	0.000		
59.68	0.000		
59.73	0.000		
59.78	0.000		
59.83	0.000		
59.88	0.000		
59.93	0.000		
59.98	0.000		
60.03	0.000		
60.08	0.000		
60.13	0.000		
60.18	0.000		
60.23	0.000		
60.28	0.000		
60.33	0.000		
60.38	0.000		
60.43	0.000		
60.48	0.000		
60.53	0.000		
60.58	0.000		
60.63	0.000		
60.68	0.000		
60.73	0.000		
60.78	0.000		
60.83	0.000		

EX and PR

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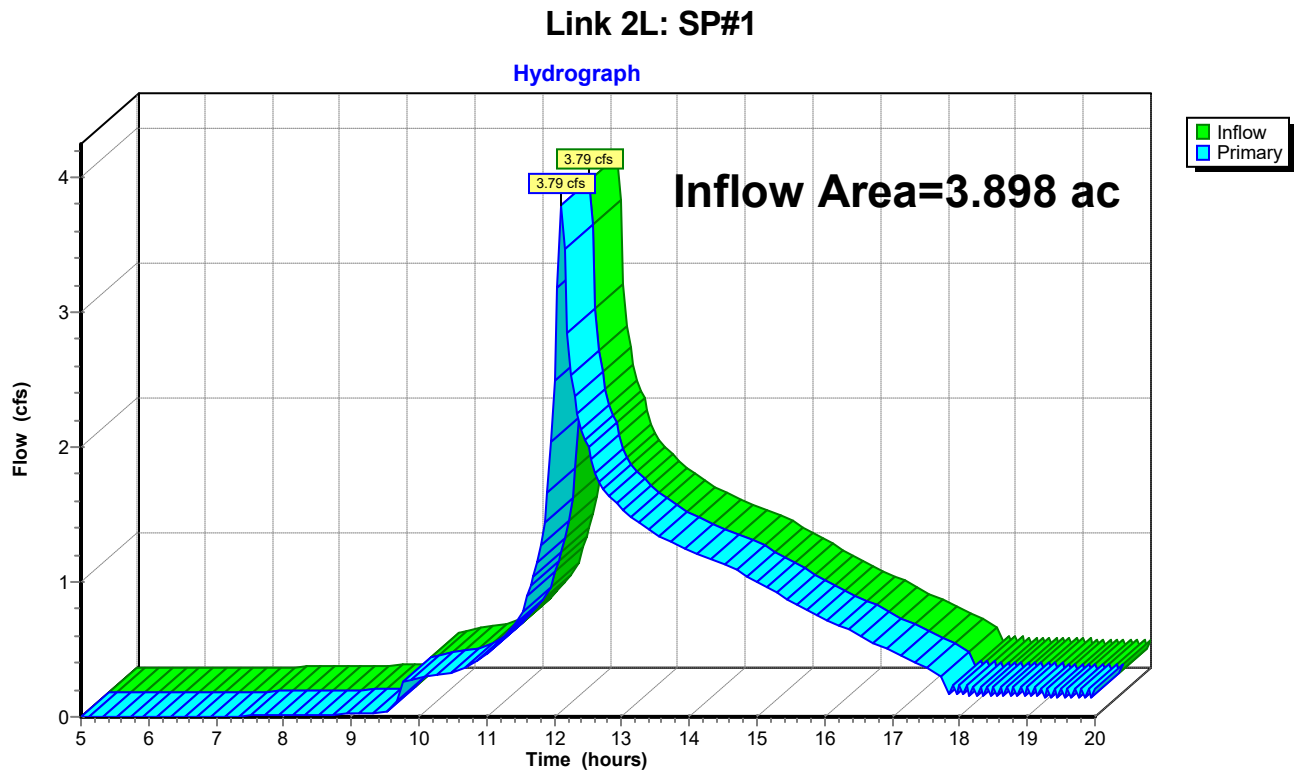
NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Summary for Link 2L: SP#1

Inflow Area = 3.898 ac, 59.79% Impervious, Inflow Depth > 2.11" for 2-Year event
Inflow = 3.79 cfs @ 12.11 hrs, Volume= 0.687 af
Primary = 3.79 cfs @ 12.11 hrs, Volume= 0.687 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



EX and PR

Prepared by Rauch Inc

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NOAA 24-hr C 2-Year Rainfall=3.33"

Printed 5/1/2024

Hydrograph for Link 2L: SP#1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.00	0.23	0.00	0.23
5.25	0.00	0.00	0.00	18.25	0.16	0.00	0.16
5.50	0.00	0.00	0.00	18.50	0.22	0.00	0.22
5.75	0.00	0.00	0.00	18.75	0.15	0.00	0.15
6.00	0.00	0.00	0.00	19.00	0.22	0.00	0.22
6.25	0.00	0.00	0.00	19.25	0.15	0.00	0.15
6.50	0.00	0.00	0.00	19.50	0.21	0.00	0.21
6.75	0.00	0.00	0.00	19.75	0.14	0.00	0.14
7.00	0.00	0.00	0.00	20.00	0.20	0.00	0.20
7.25	0.00	0.00	0.00				
7.50	0.01	0.00	0.01				
7.75	0.01	0.00	0.01				
8.00	0.01	0.00	0.01				
8.25	0.01	0.00	0.01				
8.50	0.02	0.00	0.02				
8.75	0.02	0.00	0.02				
9.00	0.02	0.00	0.02				
9.25	0.03	0.00	0.03				
9.50	0.03	0.00	0.03				
9.75	0.26	0.00	0.26				
10.00	0.29	0.00	0.29				
10.25	0.31	0.00	0.31				
10.50	0.33	0.00	0.33				
10.75	0.38	0.00	0.38				
11.00	0.47	0.00	0.47				
11.25	0.59	0.00	0.59				
11.50	0.74	0.00	0.74				
11.75	1.14	0.00	1.14				
12.00	2.49	0.00	2.49				
12.25	2.53	0.00	2.53				
12.50	2.00	0.00	2.00				
12.75	1.68	0.00	1.68				
13.00	1.54	0.00	1.54				
13.25	1.44	0.00	1.44				
13.50	1.36	0.00	1.36				
13.75	1.29	0.00	1.29				
14.00	1.24	0.00	1.24				
14.25	1.19	0.00	1.19				
14.50	1.13	0.00	1.13				
14.75	1.07	0.00	1.07				
15.00	1.00	0.00	1.00				
15.25	0.93	0.00	0.93				
15.50	0.86	0.00	0.86				
15.75	0.80	0.00	0.80				
16.00	0.73	0.00	0.73				
16.25	0.67	0.00	0.67				
16.50	0.61	0.00	0.61				
16.75	0.55	0.00	0.55				
17.00	0.49	0.00	0.49				
17.25	0.42	0.00	0.42				
17.50	0.36	0.00	0.36				
17.75	0.32	0.00	0.32				

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 3S: DA#4	Runoff Area=9,330 sf 70.69% Impervious Runoff Depth>4.11" Flow Length=143' Tc=1.4 min CN=93 Runoff=1.25 cfs 0.073 af
Subcatchment 4S: DA#2	Runoff Area=3,733 sf 67.48% Impervious Runoff Depth>4.01" Flow Length=44' Slope=0.0948 '/' Tc=3.8 min CN=92 Runoff=0.47 cfs 0.029 af
Subcatchment 11S: DA#5	Runoff Area=9,317 sf 15.83% Impervious Runoff Depth>3.13" Flow Length=44' Slope=0.0889 '/' Tc=1.1 min CN=83 Runoff=1.03 cfs 0.056 af
Subcatchment 13S: DA#11	Runoff Area=6,211 sf 83.67% Impervious Runoff Depth>4.30" Flow Length=81' Slope=0.0126 '/' Tc=1.2 min CN=95 Runoff=0.85 cfs 0.051 af
Subcatchment 14S: DA#6	Runoff Area=21,528 sf 73.17% Impervious Runoff Depth>4.11" Flow Length=119' Tc=3.4 min CN=93 Runoff=2.79 cfs 0.169 af
Subcatchment 16S: DA#7	Runoff Area=8,499 sf 87.34% Impervious Runoff Depth>4.39" Flow Length=120' Tc=1.5 min CN=96 Runoff=1.17 cfs 0.071 af
Subcatchment 19S: DA#8	Runoff Area=17,721 sf 97.79% Impervious Runoff Depth>4.54" Flow Length=73' Slope=0.0174 '/' Tc=1.0 min CN=98 Runoff=2.49 cfs 0.154 af
Subcatchment 21S: DA#9	Runoff Area=10,950 sf 68.20% Impervious Runoff Depth>4.01" Flow Length=128' Tc=1.4 min CN=92 Runoff=1.44 cfs 0.084 af
Subcatchment 22S: DA#10	Runoff Area=5,696 sf 41.20% Impervious Runoff Depth>3.50" Flow Length=99' Tc=12.1 min CN=87 Runoff=0.50 cfs 0.038 af
Subcatchment 25S: DA#12	Runoff Area=6,725 sf 87.20% Impervious Runoff Depth>4.39" Flow Length=98' Slope=0.0100 '/' Tc=1.5 min CN=96 Runoff=0.93 cfs 0.056 af
Subcatchment 26S: DA#1	Runoff Area=29,068 sf 39.09% Impervious Runoff Depth>3.51" Flow Length=405' Tc=5.5 min CN=87 Runoff=3.10 cfs 0.195 af
Subcatchment 32S: DA#3	Runoff Area=9,470 sf 40.45% Impervious Runoff Depth>3.52" Flow Length=161' Tc=1.0 min CN=87 Runoff=1.14 cfs 0.064 af
Subcatchment 33S: DA#13	Runoff Area=3,211 sf 51.14% Impervious Runoff Depth>3.72" Flow Length=52' Slope=0.0292 '/' Tc=0.6 min CN=89 Runoff=0.40 cfs 0.023 af
Subcatchment 34S: DA#14	Runoff Area=17,184 sf 73.97% Impervious Runoff Depth>4.11" Flow Length=100' Slope=0.0187 '/' Tc=1.2 min CN=93 Runoff=2.30 cfs 0.135 af
Subcatchment 35S: DA#15	Runoff Area=11,147 sf 0.00% Impervious Runoff Depth>2.83" Flow Length=558' Tc=21.2 min CN=80 Runoff=0.64 cfs 0.060 af
Pond 9P: I-2	Peak Elev=61.39' Inflow=2.30 cfs 0.135 af Outflow=2.30 cfs 0.135 af

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Pond 17P: SGW FOREBAY #1	Peak Elev=57.33' Storage=4,077 cf Inflow=13.60 cfs 0.856 af Outflow=10.43 cfs 0.820 af
Pond 18P: SGW #1	Peak Elev=57.33' Storage=11,240 cf Inflow=11.46 cfs 0.875 af Outflow=4.70 cfs 0.875 af
Pond 20P: CI-8	Peak Elev=57.77' Inflow=3.55 cfs 0.224 af Outflow=3.55 cfs 0.224 af
Pond 27P: FES-4	Peak Elev=58.13' Inflow=3.10 cfs 0.195 af 15.0" Round Culvert n=0.012 L=25.5' S=0.0106 '/' Outflow=3.10 cfs 0.195 af
Pond 37P: CI-4	Peak Elev=57.33' Inflow=1.25 cfs 0.073 af Outflow=1.25 cfs 0.073 af
Pond 38P: CI-1	Peak Elev=57.82' Inflow=9.87 cfs 0.613 af Outflow=9.87 cfs 0.613 af
Pond 39P: CI-9	Peak Elev=61.10' Inflow=8.70 cfs 0.542 af Outflow=8.70 cfs 0.542 af
Pond 40P: CI-6	Peak Elev=61.25' Inflow=1.77 cfs 0.122 af Outflow=1.77 cfs 0.122 af
Pond 43P: CI-7	Peak Elev=61.26' Inflow=0.50 cfs 0.038 af Outflow=0.50 cfs 0.038 af
Pond 44P: CI-2	Peak Elev=61.38' Inflow=3.15 cfs 0.186 af Outflow=3.15 cfs 0.186 af
Pond 45P: CI-3	Peak Elev=61.38' Inflow=4.48 cfs 0.266 af Outflow=4.48 cfs 0.266 af
Pond 46P: CI-5	Peak Elev=61.38' Inflow=0.40 cfs 0.023 af Outflow=0.40 cfs 0.023 af
Link 2L: SP#1	Inflow=8.47 cfs 1.223 af Primary=8.47 cfs 1.223 af

Total Runoff Area = 3.898 ac Runoff Volume = 1.259 af Average Runoff Depth = 3.88"
40.21% Pervious = 1.567 ac 59.79% Impervious = 2.330 ac

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"
Printed 5/1/2024

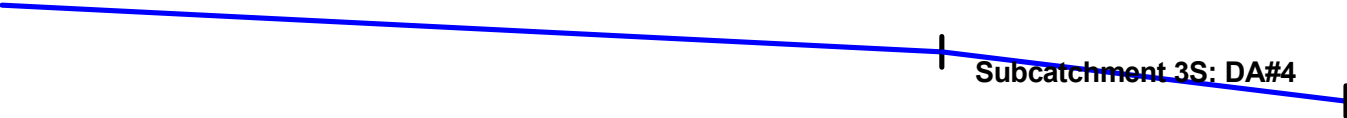
Summary for Subcatchment 3S: DA#4

Runoff = 1.25 cfs @ 12.07 hrs, Volume= 0.073 af, Depth> 4.11"
Routed to Pond 37P : CI-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
6,595	98	Roofs, HSG D
2,735	80	>75% Grass cover, Good, HSG D
9,330	93	Weighted Average
2,735		29.31% Pervious Area
6,595		70.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0180	1.36		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.2	43	0.0441	4.26		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.4	143	Total			



EX and PR

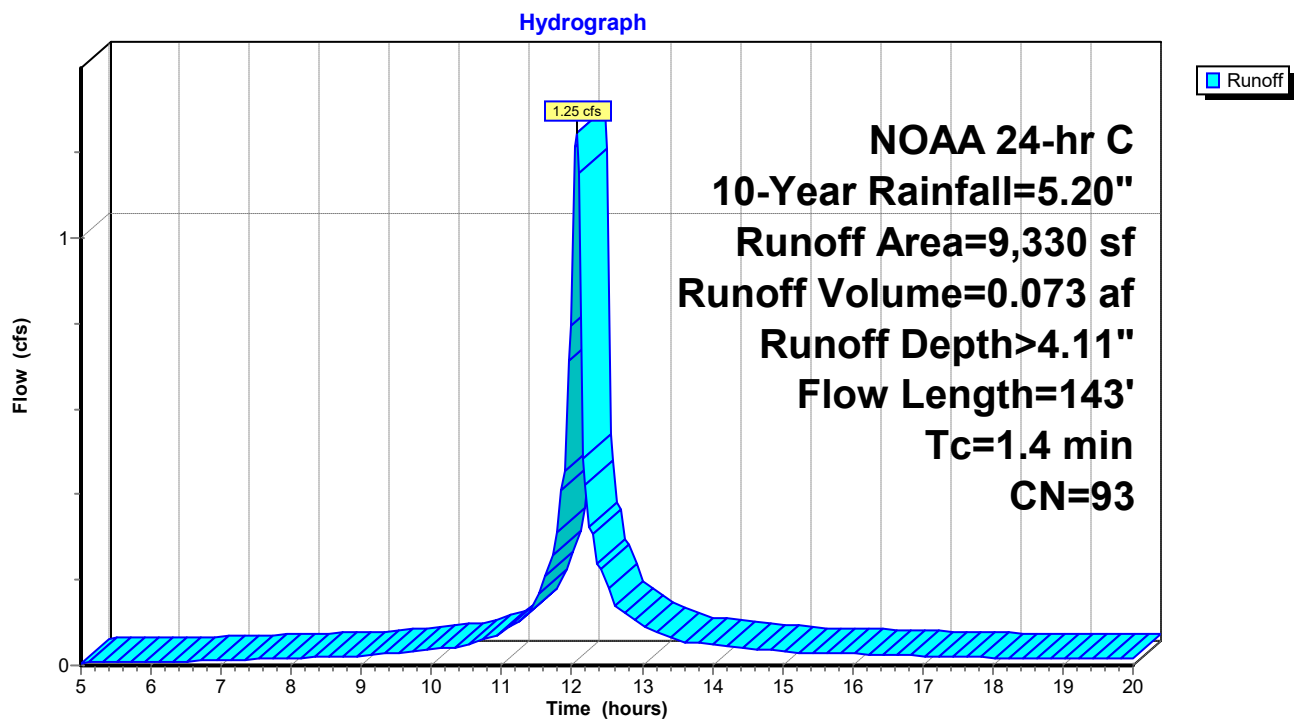
Prepared by Rauch Inc

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Subcatchment 3S: DA#4



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 3S: DA#4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.03	0.01	18.00	4.79	3.99	0.02
5.25	0.35	0.04	0.01	18.25	4.81	4.01	0.02
5.50	0.37	0.05	0.01	18.50	4.83	4.03	0.02
5.75	0.39	0.06	0.01	18.75	4.85	4.05	0.02
6.00	0.41	0.07	0.01	19.00	4.87	4.07	0.02
6.25	0.43	0.08	0.01	19.25	4.89	4.09	0.02
6.50	0.46	0.09	0.01	19.50	4.91	4.11	0.02
6.75	0.48	0.10	0.01	19.75	4.93	4.13	0.02
7.00	0.51	0.11	0.01	20.00	4.95	4.14	0.02
7.25	0.53	0.13	0.01				
7.50	0.56	0.15	0.01				
7.75	0.59	0.16	0.02				
8.00	0.62	0.18	0.02				
8.25	0.66	0.20	0.02				
8.50	0.69	0.22	0.02				
8.75	0.72	0.25	0.02				
9.00	0.76	0.27	0.02				
9.25	0.80	0.30	0.03				
9.50	0.84	0.33	0.03				
9.75	0.89	0.37	0.03				
10.00	0.95	0.41	0.04				
10.25	1.01	0.46	0.04				
10.50	1.07	0.51	0.05				
10.75	1.15	0.57	0.06				
11.00	1.25	0.65	0.08				
11.25	1.38	0.76	0.11				
11.50	1.54	0.90	0.14				
11.75	1.83	1.16	0.29				
12.00	2.48	1.76	0.80				
12.25	3.37	2.61	0.32				
12.50	3.66	2.89	0.21				
12.75	3.82	3.05	0.12				
13.00	3.95	3.17	0.10				
13.25	4.05	3.27	0.07				
13.50	4.13	3.34	0.06				
13.75	4.19	3.41	0.05				
14.00	4.25	3.47	0.05				
14.25	4.31	3.52	0.04				
14.50	4.36	3.57	0.04				
14.75	4.40	3.61	0.04				
15.00	4.44	3.65	0.03				
15.25	4.48	3.68	0.03				
15.50	4.51	3.72	0.03				
15.75	4.54	3.75	0.03				
16.00	4.58	3.78	0.03				
16.25	4.61	3.81	0.03				
16.50	4.64	3.84	0.02				
16.75	4.67	3.87	0.02				
17.00	4.69	3.90	0.02				
17.25	4.72	3.92	0.02				
17.50	4.74	3.95	0.02				
17.75	4.77	3.97	0.02				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 4S: DA#2

Runoff = 0.47 cfs @ 12.10 hrs, Volume= 0.029 af, Depth> 4.01"
Routed to Pond 20P : CI-8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

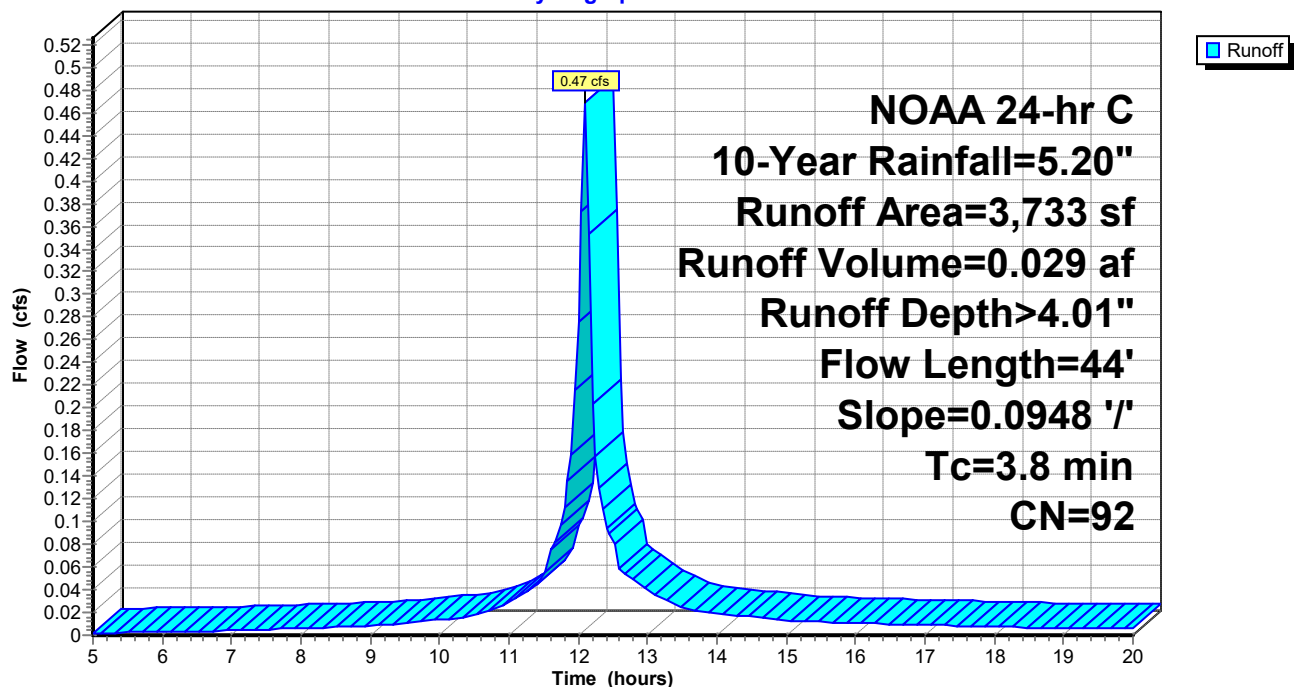
Area (sf)	CN	Description
2,519	98	Paved parking, HSG D
1,214	80	>75% Grass cover, Good, HSG D
3,733	92	Weighted Average
1,214		32.52% Pervious Area
2,519		67.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	44	0.0948	0.19		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"

Subcatchment 4S: DA#2

Subcatchment 4S: DA#2

Hydrograph



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 4S: DA#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.02	0.00	18.00	4.79	3.88	0.01
5.25	0.35	0.03	0.00	18.25	4.81	3.90	0.01
5.50	0.37	0.04	0.00	18.50	4.83	3.92	0.01
5.75	0.39	0.04	0.00	18.75	4.85	3.94	0.01
6.00	0.41	0.05	0.00	19.00	4.87	3.96	0.01
6.25	0.43	0.06	0.00	19.25	4.89	3.98	0.01
6.50	0.46	0.07	0.00	19.50	4.91	4.00	0.01
6.75	0.48	0.08	0.00	19.75	4.93	4.02	0.01
7.00	0.51	0.09	0.00	20.00	4.95	4.04	0.01
7.25	0.53	0.11	0.00				
7.50	0.56	0.12	0.01				
7.75	0.59	0.14	0.01				
8.00	0.62	0.15	0.01				
8.25	0.66	0.17	0.01				
8.50	0.69	0.19	0.01				
8.75	0.72	0.21	0.01				
9.00	0.76	0.24	0.01				
9.25	0.80	0.26	0.01				
9.50	0.84	0.29	0.01				
9.75	0.89	0.33	0.01				
10.00	0.95	0.36	0.01				
10.25	1.01	0.41	0.02				
10.50	1.07	0.46	0.02				
10.75	1.15	0.52	0.02				
11.00	1.25	0.59	0.03				
11.25	1.38	0.70	0.04				
11.50	1.54	0.83	0.05				
11.75	1.83	1.08	0.10				
12.00	2.48	1.67	0.28				
12.25	3.37	2.51	0.16				
12.50	3.66	2.79	0.09				
12.75	3.82	2.95	0.05				
13.00	3.95	3.07	0.04				
13.25	4.05	3.17	0.03				
13.50	4.13	3.24	0.02				
13.75	4.19	3.30	0.02				
14.00	4.25	3.36	0.02				
14.25	4.31	3.41	0.02				
14.50	4.36	3.46	0.02				
14.75	4.40	3.51	0.01				
15.00	4.44	3.54	0.01				
15.25	4.48	3.58	0.01				
15.50	4.51	3.61	0.01				
15.75	4.54	3.65	0.01				
16.00	4.58	3.68	0.01				
16.25	4.61	3.71	0.01				
16.50	4.64	3.74	0.01				
16.75	4.67	3.76	0.01				
17.00	4.69	3.79	0.01				
17.25	4.72	3.81	0.01				
17.50	4.74	3.84	0.01				
17.75	4.77	3.86	0.01				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 11S: DA#5

Runoff = 1.03 cfs @ 12.07 hrs, Volume= 0.056 af, Depth> 3.13"
Routed to Pond 18P : SGW #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

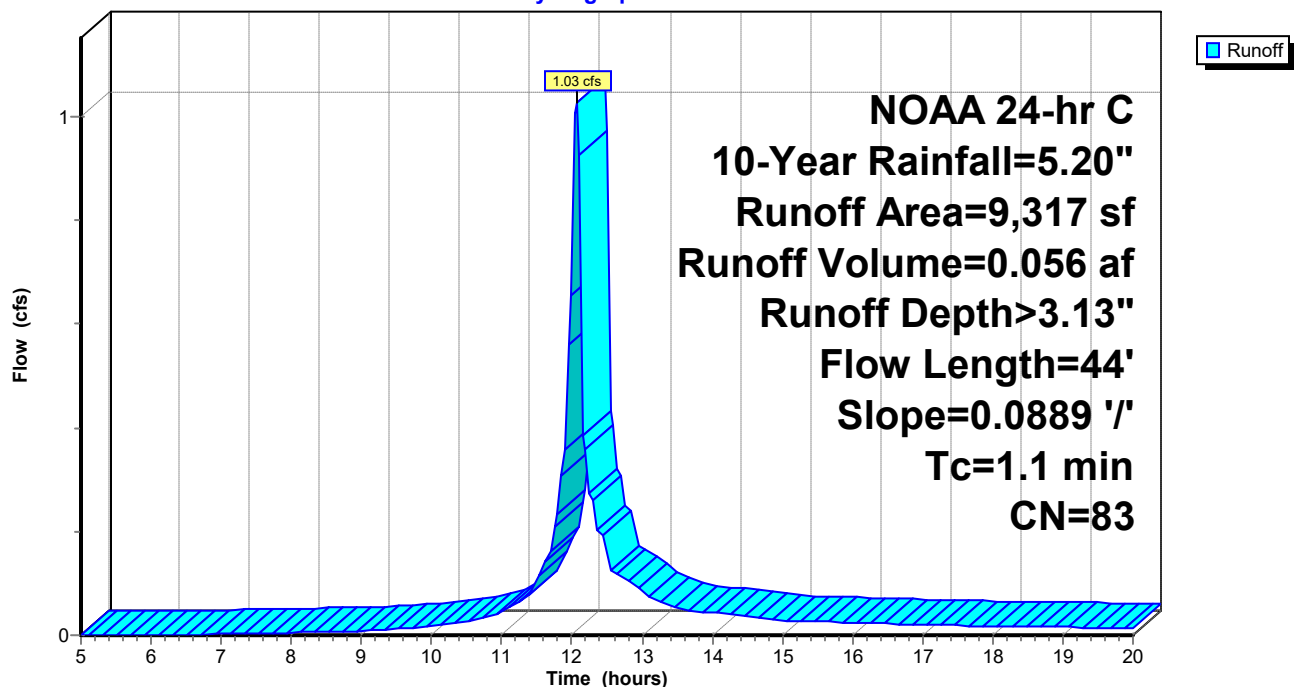
Area (sf)	CN	Description
1,475	98	Paved parking, HSG D
7,842	80	>75% Grass cover, Good, HSG D
9,317	83	Weighted Average
7,842		84.17% Pervious Area
1,475		15.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	44	0.0889	0.65		Sheet Flow, Fallow n= 0.050 P2= 3.42"

Subcatchment 11S: DA#5

Subcatchment 11S: DA#5

Hydrograph



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 11S: DA#5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.00	0.00	18.00	4.79	2.98	0.02
5.25	0.35	0.00	0.00	18.25	4.81	3.00	0.02
5.50	0.37	0.00	0.00	18.50	4.83	3.02	0.02
5.75	0.39	0.00	0.00	18.75	4.85	3.04	0.02
6.00	0.41	0.00	0.00	19.00	4.87	3.06	0.02
6.25	0.43	0.00	0.00	19.25	4.89	3.07	0.02
6.50	0.46	0.00	0.00	19.50	4.91	3.09	0.01
6.75	0.48	0.00	0.00	19.75	4.93	3.11	0.01
7.00	0.51	0.00	0.00	20.00	4.95	3.12	0.01
7.25	0.53	0.01	0.00				
7.50	0.56	0.01	0.00				
7.75	0.59	0.01	0.00				
8.00	0.62	0.02	0.00				
8.25	0.66	0.03	0.01				
8.50	0.69	0.03	0.01				
8.75	0.72	0.04	0.01				
9.00	0.76	0.05	0.01				
9.25	0.80	0.06	0.01				
9.50	0.84	0.08	0.01				
9.75	0.89	0.09	0.02				
10.00	0.95	0.11	0.02				
10.25	1.01	0.14	0.02				
10.50	1.07	0.16	0.02				
10.75	1.15	0.20	0.03				
11.00	1.25	0.24	0.05				
11.25	1.38	0.31	0.07				
11.50	1.54	0.40	0.09				
11.75	1.83	0.58	0.21				
12.00	2.48	1.04	0.66				
12.25	3.37	1.75	0.27				
12.50	3.66	2.00	0.18				
12.75	3.82	2.13	0.11				
13.00	3.95	2.24	0.09				
13.25	4.05	2.33	0.07				
13.50	4.13	2.40	0.05				
13.75	4.19	2.45	0.05				
14.00	4.25	2.51	0.04				
14.25	4.31	2.55	0.04				
14.50	4.36	2.60	0.04				
14.75	4.40	2.64	0.03				
15.00	4.44	2.67	0.03				
15.25	4.48	2.70	0.03				
15.50	4.51	2.74	0.03				
15.75	4.54	2.77	0.03				
16.00	4.58	2.79	0.02				
16.25	4.61	2.82	0.02				
16.50	4.64	2.85	0.02				
16.75	4.67	2.87	0.02				
17.00	4.69	2.90	0.02				
17.25	4.72	2.92	0.02				
17.50	4.74	2.94	0.02				
17.75	4.77	2.96	0.02				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 13S: DA#11

Runoff = 0.85 cfs @ 12.06 hrs, Volume= 0.051 af, Depth> 4.30"
Routed to Pond 44P : CI-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

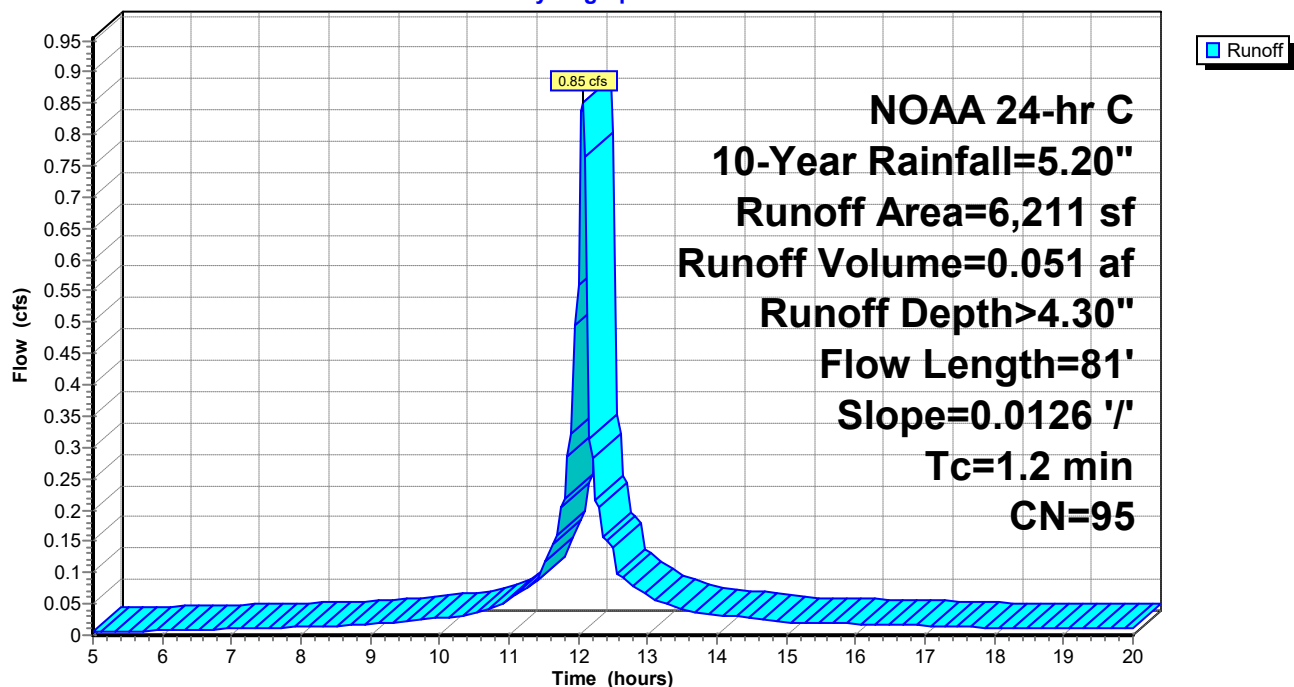
Area (sf)	CN	Description
5,197	98	Roofs, HSG D
1,014	80	>75% Grass cover, Good, HSG D
6,211	95	Weighted Average
1,014		16.33% Pervious Area
5,197		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	81	0.0126	1.13		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 13S: DA#11

Subcatchment 13S: DA#11

Hydrograph



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 13S: DA#11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.07	0.01	18.00	4.79	4.21	0.01
5.25	0.35	0.08	0.01	18.25	4.81	4.23	0.01
5.50	0.37	0.09	0.01	18.50	4.83	4.25	0.01
5.75	0.39	0.10	0.01	18.75	4.85	4.27	0.01
6.00	0.41	0.11	0.01	19.00	4.87	4.29	0.01
6.25	0.43	0.13	0.01	19.25	4.89	4.31	0.01
6.50	0.46	0.14	0.01	19.50	4.91	4.33	0.01
6.75	0.48	0.16	0.01	19.75	4.93	4.35	0.01
7.00	0.51	0.17	0.01	20.00	4.95	4.37	0.01
7.25	0.53	0.19	0.01				
7.50	0.56	0.21	0.01				
7.75	0.59	0.23	0.01				
8.00	0.62	0.26	0.01				
8.25	0.66	0.28	0.01				
8.50	0.69	0.31	0.02				
8.75	0.72	0.33	0.02				
9.00	0.76	0.36	0.02				
9.25	0.80	0.39	0.02				
9.50	0.84	0.43	0.02				
9.75	0.89	0.47	0.03				
10.00	0.95	0.52	0.03				
10.25	1.01	0.57	0.03				
10.50	1.07	0.63	0.03				
10.75	1.15	0.70	0.04				
11.00	1.25	0.78	0.05				
11.25	1.38	0.90	0.08				
11.50	1.54	1.05	0.10				
11.75	1.83	1.32	0.20				
12.00	2.48	1.94	0.56				
12.25	3.37	2.81	0.22				
12.50	3.66	3.10	0.14				
12.75	3.82	3.26	0.08				
13.00	3.95	3.38	0.07				
13.25	4.05	3.48	0.05				
13.50	4.13	3.56	0.04				
13.75	4.19	3.62	0.04				
14.00	4.25	3.68	0.03				
14.25	4.31	3.73	0.03				
14.50	4.36	3.78	0.03				
14.75	4.40	3.83	0.02				
15.00	4.44	3.87	0.02				
15.25	4.48	3.90	0.02				
15.50	4.51	3.94	0.02				
15.75	4.54	3.97	0.02				
16.00	4.58	4.00	0.02				
16.25	4.61	4.03	0.02				
16.50	4.64	4.06	0.02				
16.75	4.67	4.09	0.02				
17.00	4.69	4.12	0.02				
17.25	4.72	4.14	0.01				
17.50	4.74	4.16	0.01				
17.75	4.77	4.19	0.01				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

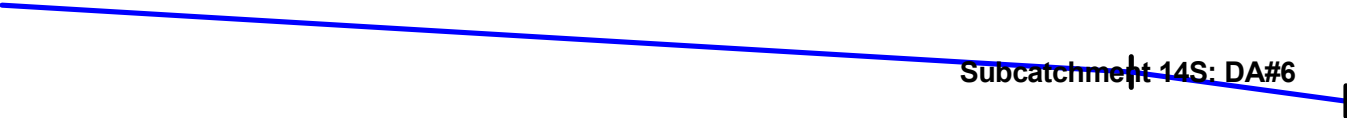
Summary for Subcatchment 14S: DA#6

Runoff = 2.79 cfs @ 12.09 hrs, Volume= 0.169 af, Depth> 4.11"
Routed to Pond 17P : SGW FOREBAY #1

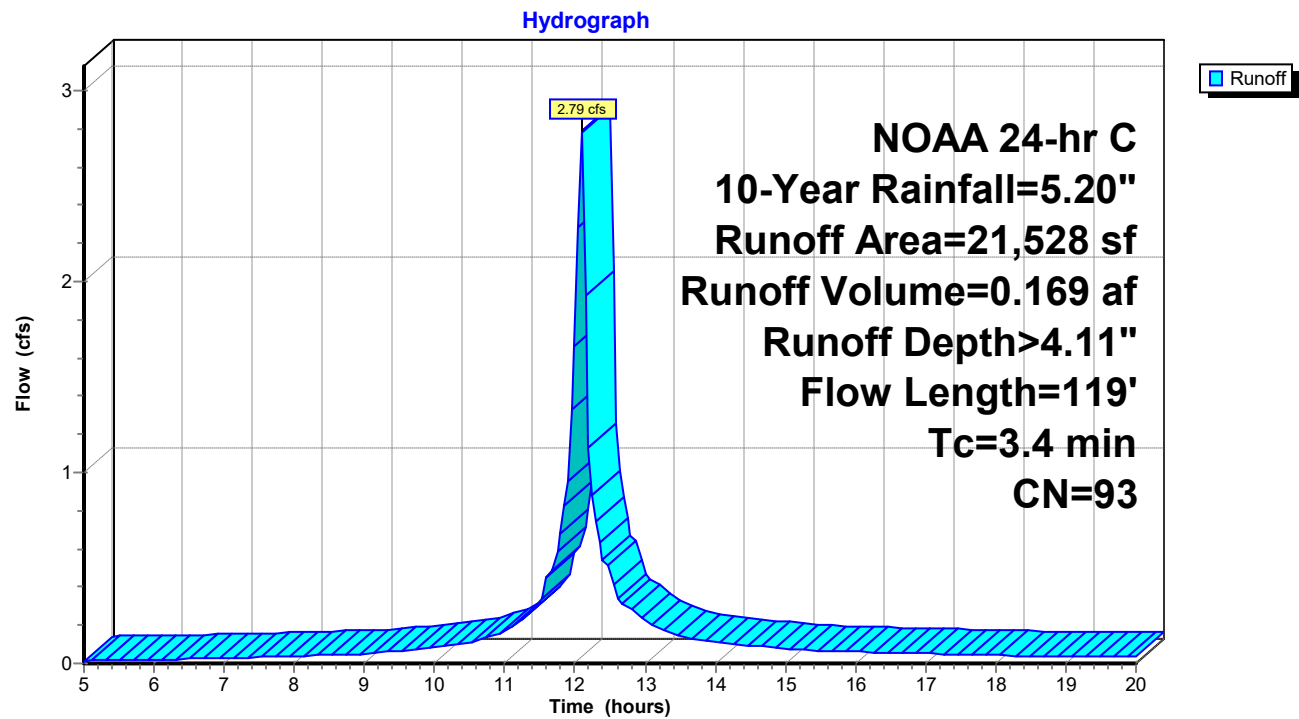
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
15,753	98	Roofs, HSG D
5,775	80	>75% Grass cover, Good, HSG D
21,528	93	Weighted Average
5,775		26.83% Pervious Area
15,753		73.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	100	0.0319	0.51		Sheet Flow, Fallow n= 0.050 P2= 3.42"
0.1	19	0.0726	4.34		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
3.4	119	Total			



Subcatchment 14S: DA#6



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 14S: DA#6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.03	0.01	18.00	4.79	3.99	0.04
5.25	0.35	0.04	0.01	18.25	4.81	4.01	0.04
5.50	0.37	0.05	0.02	18.50	4.83	4.03	0.04
5.75	0.39	0.06	0.02	18.75	4.85	4.05	0.04
6.00	0.41	0.07	0.02	19.00	4.87	4.07	0.04
6.25	0.43	0.08	0.02	19.25	4.89	4.09	0.04
6.50	0.46	0.09	0.02	19.50	4.91	4.11	0.04
6.75	0.48	0.10	0.03	19.75	4.93	4.13	0.04
7.00	0.51	0.11	0.03	20.00	4.95	4.14	0.04
7.25	0.53	0.13	0.03				
7.50	0.56	0.15	0.03				
7.75	0.59	0.16	0.04				
8.00	0.62	0.18	0.04				
8.25	0.66	0.20	0.04				
8.50	0.69	0.22	0.04				
8.75	0.72	0.25	0.05				
9.00	0.76	0.27	0.05				
9.25	0.80	0.30	0.06				
9.50	0.84	0.33	0.07				
9.75	0.89	0.37	0.08				
10.00	0.95	0.41	0.08				
10.25	1.01	0.46	0.09				
10.50	1.07	0.51	0.10				
10.75	1.15	0.57	0.14				
11.00	1.25	0.65	0.17				
11.25	1.38	0.76	0.23				
11.50	1.54	0.90	0.30				
11.75	1.83	1.16	0.59				
12.00	2.48	1.76	1.66				
12.25	3.37	2.61	0.88				
12.50	3.66	2.89	0.51				
12.75	3.82	3.05	0.29				
13.00	3.95	3.17	0.23				
13.25	4.05	3.27	0.18				
13.50	4.13	3.34	0.14				
13.75	4.19	3.41	0.12				
14.00	4.25	3.47	0.11				
14.25	4.31	3.52	0.10				
14.50	4.36	3.57	0.09				
14.75	4.40	3.61	0.08				
15.00	4.44	3.65	0.07				
15.25	4.48	3.68	0.07				
15.50	4.51	3.72	0.07				
15.75	4.54	3.75	0.06				
16.00	4.58	3.78	0.06				
16.25	4.61	3.81	0.06				
16.50	4.64	3.84	0.06				
16.75	4.67	3.87	0.05				
17.00	4.69	3.90	0.05				
17.25	4.72	3.92	0.05				
17.50	4.74	3.95	0.05				
17.75	4.77	3.97	0.04				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 16S: DA#7

Runoff = 1.17 cfs @ 12.07 hrs, Volume= 0.071 af, Depth> 4.39"
 Routed to Pond 38P : CI-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
7,423	98	Roofs, HSG D
1,076	80	>75% Grass cover, Good, HSG D
8,499	96	Weighted Average
1,076		12.66% Pervious Area
7,423		87.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0151	1.27		Sheet Flow, GRAVEL LOT Smooth surfaces n= 0.011 P2= 3.42"
0.2	20	0.0085	1.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.5	120	Total			



EX and PR

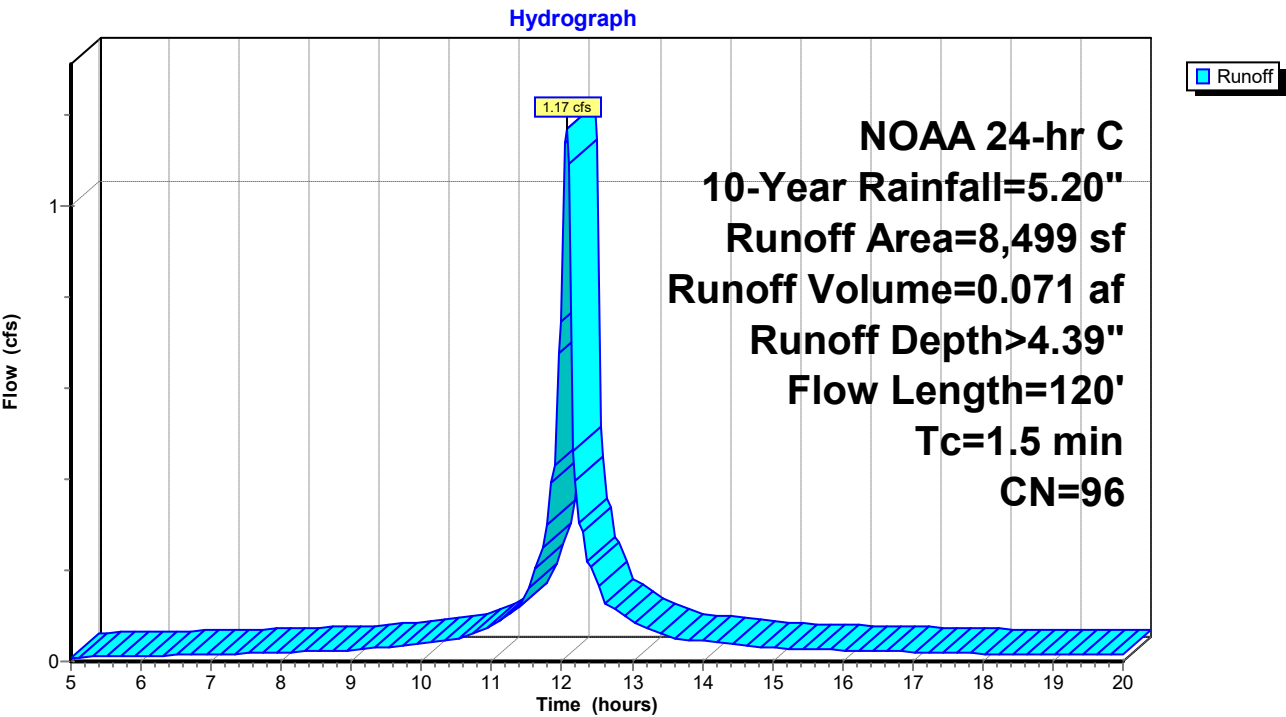
Prepared by Rauch Inc

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Subcatchment 16S: DA#7



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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 16S: DA#7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.09	0.01	18.00	4.79	4.32	0.02
5.25	0.35	0.10	0.01	18.25	4.81	4.34	0.02
5.50	0.37	0.12	0.01	18.50	4.83	4.36	0.02
5.75	0.39	0.13	0.01	18.75	4.85	4.38	0.02
6.00	0.41	0.14	0.01	19.00	4.87	4.40	0.02
6.25	0.43	0.16	0.01	19.25	4.89	4.42	0.02
6.50	0.46	0.18	0.01	19.50	4.91	4.44	0.01
6.75	0.48	0.19	0.01	19.75	4.93	4.46	0.01
7.00	0.51	0.21	0.02	20.00	4.95	4.48	0.01
7.25	0.53	0.23	0.02				
7.50	0.56	0.26	0.02				
7.75	0.59	0.28	0.02				
8.00	0.62	0.30	0.02				
8.25	0.66	0.33	0.02				
8.50	0.69	0.36	0.02				
8.75	0.72	0.39	0.02				
9.00	0.76	0.42	0.02				
9.25	0.80	0.45	0.03				
9.50	0.84	0.49	0.03				
9.75	0.89	0.54	0.04				
10.00	0.95	0.58	0.04				
10.25	1.01	0.64	0.04				
10.50	1.07	0.70	0.05				
10.75	1.15	0.77	0.06				
11.00	1.25	0.86	0.08				
11.25	1.38	0.98	0.11				
11.50	1.54	1.13	0.13				
11.75	1.83	1.41	0.28				
12.00	2.48	2.04	0.75				
12.25	3.37	2.92	0.30				
12.50	3.66	3.21	0.20				
12.75	3.82	3.37	0.11				
13.00	3.95	3.49	0.09				
13.25	4.05	3.59	0.07				
13.50	4.13	3.67	0.06				
13.75	4.19	3.73	0.05				
14.00	4.25	3.79	0.04				
14.25	4.31	3.84	0.04				
14.50	4.36	3.89	0.04				
14.75	4.40	3.94	0.03				
15.00	4.44	3.98	0.03				
15.25	4.48	4.01	0.03				
15.50	4.51	4.05	0.03				
15.75	4.54	4.08	0.03				
16.00	4.58	4.11	0.02				
16.25	4.61	4.14	0.02				
16.50	4.64	4.17	0.02				
16.75	4.67	4.20	0.02				
17.00	4.69	4.23	0.02				
17.25	4.72	4.25	0.02				
17.50	4.74	4.28	0.02				
17.75	4.77	4.30	0.02				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

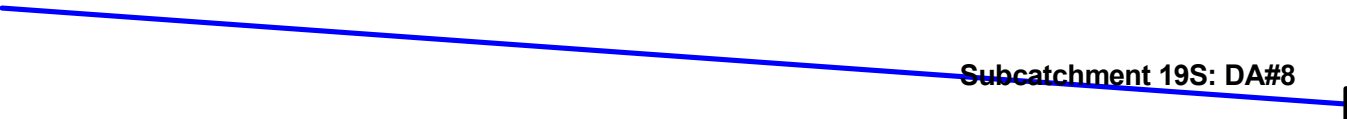
Summary for Subcatchment 19S: DA#8

Runoff = 2.49 cfs @ 12.06 hrs, Volume= 0.154 af, Depth> 4.54"
Routed to Pond 39P : CI-9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

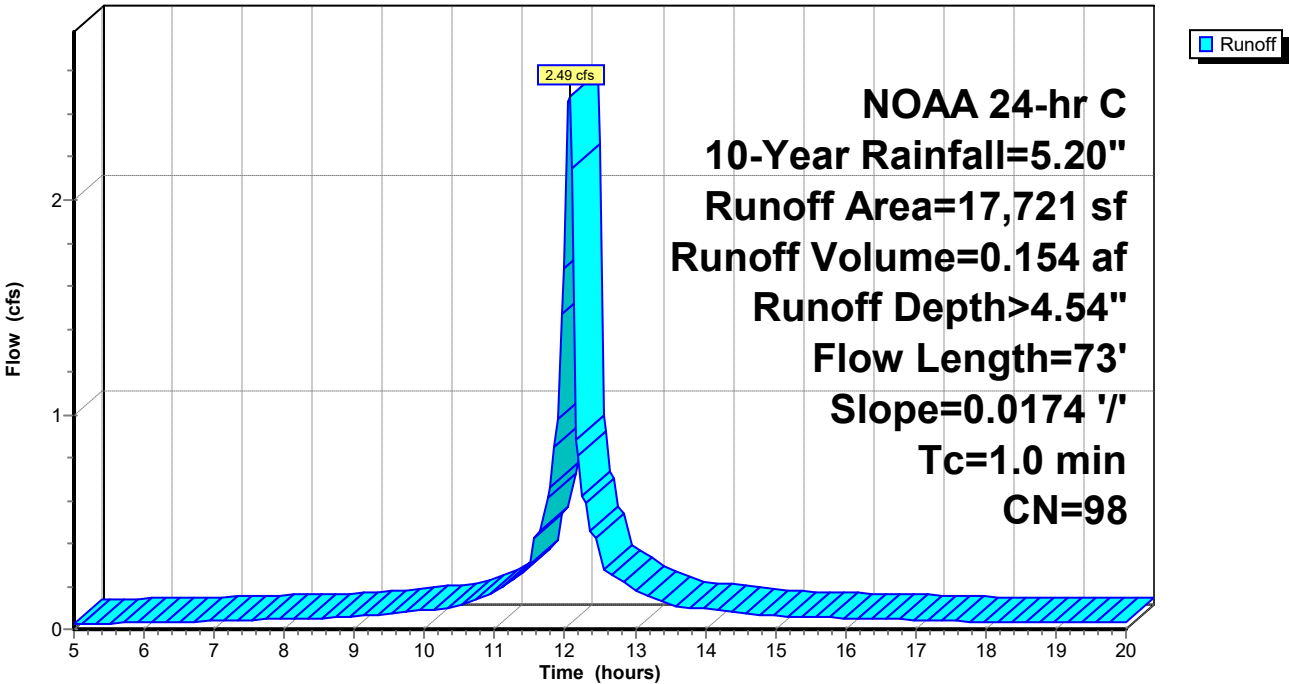
Area (sf)	CN	Description
17,329	98	Roofs, HSG D
392	80	>75% Grass cover, Good, HSG D
17,721	98	Weighted Average
392		2.21% Pervious Area
17,329		97.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	73	0.0174	1.26		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"



Subcatchment 19S: DA#8

Hydrograph



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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 19S: DA#8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.17	0.03	18.00	4.79	4.55	0.03
5.25	0.35	0.19	0.03	18.25	4.81	4.57	0.03
5.50	0.37	0.20	0.03	18.50	4.83	4.59	0.03
5.75	0.39	0.22	0.03	18.75	4.85	4.61	0.03
6.00	0.41	0.24	0.03	19.00	4.87	4.63	0.03
6.25	0.43	0.26	0.03	19.25	4.89	4.65	0.03
6.50	0.46	0.28	0.03	19.50	4.91	4.67	0.03
6.75	0.48	0.30	0.04	19.75	4.93	4.69	0.03
7.00	0.51	0.32	0.04	20.00	4.95	4.71	0.03
7.25	0.53	0.35	0.04				
7.50	0.56	0.38	0.04				
7.75	0.59	0.40	0.05				
8.00	0.62	0.43	0.05				
8.25	0.66	0.46	0.05				
8.50	0.69	0.49	0.05				
8.75	0.72	0.53	0.05				
9.00	0.76	0.56	0.06				
9.25	0.80	0.60	0.07				
9.50	0.84	0.64	0.07				
9.75	0.89	0.69	0.08				
10.00	0.95	0.74	0.09				
10.25	1.01	0.80	0.10				
10.50	1.07	0.86	0.11				
10.75	1.15	0.94	0.14				
11.00	1.25	1.03	0.17				
11.25	1.38	1.16	0.23				
11.50	1.54	1.32	0.31				
11.75	1.83	1.60	0.61				
12.00	2.48	2.25	1.68				
12.25	3.37	3.14	0.62				
12.50	3.66	3.43	0.40				
12.75	3.82	3.59	0.24				
13.00	3.95	3.72	0.19				
13.25	4.05	3.81	0.14				
13.50	4.13	3.89	0.12				
13.75	4.19	3.96	0.10				
14.00	4.25	4.02	0.09				
14.25	4.31	4.07	0.09				
14.50	4.36	4.12	0.08				
14.75	4.40	4.16	0.07				
15.00	4.44	4.20	0.06				
15.25	4.48	4.24	0.06				
15.50	4.51	4.28	0.06				
15.75	4.54	4.31	0.05				
16.00	4.58	4.34	0.05				
16.25	4.61	4.37	0.05				
16.50	4.64	4.40	0.05				
16.75	4.67	4.43	0.05				
17.00	4.69	4.46	0.04				
17.25	4.72	4.48	0.04				
17.50	4.74	4.51	0.04				
17.75	4.77	4.53	0.04				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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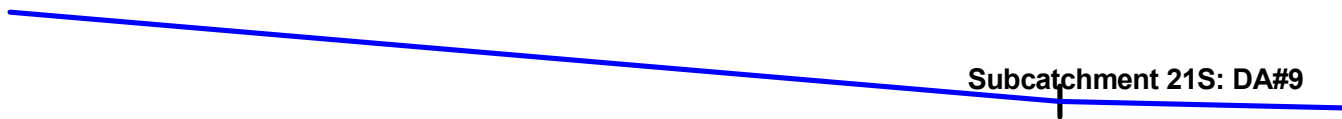
Summary for Subcatchment 21S: DA#9

Runoff = 1.44 cfs @ 12.07 hrs, Volume= 0.084 af, Depth> 4.01"
 Routed to Pond 40P : CI-6

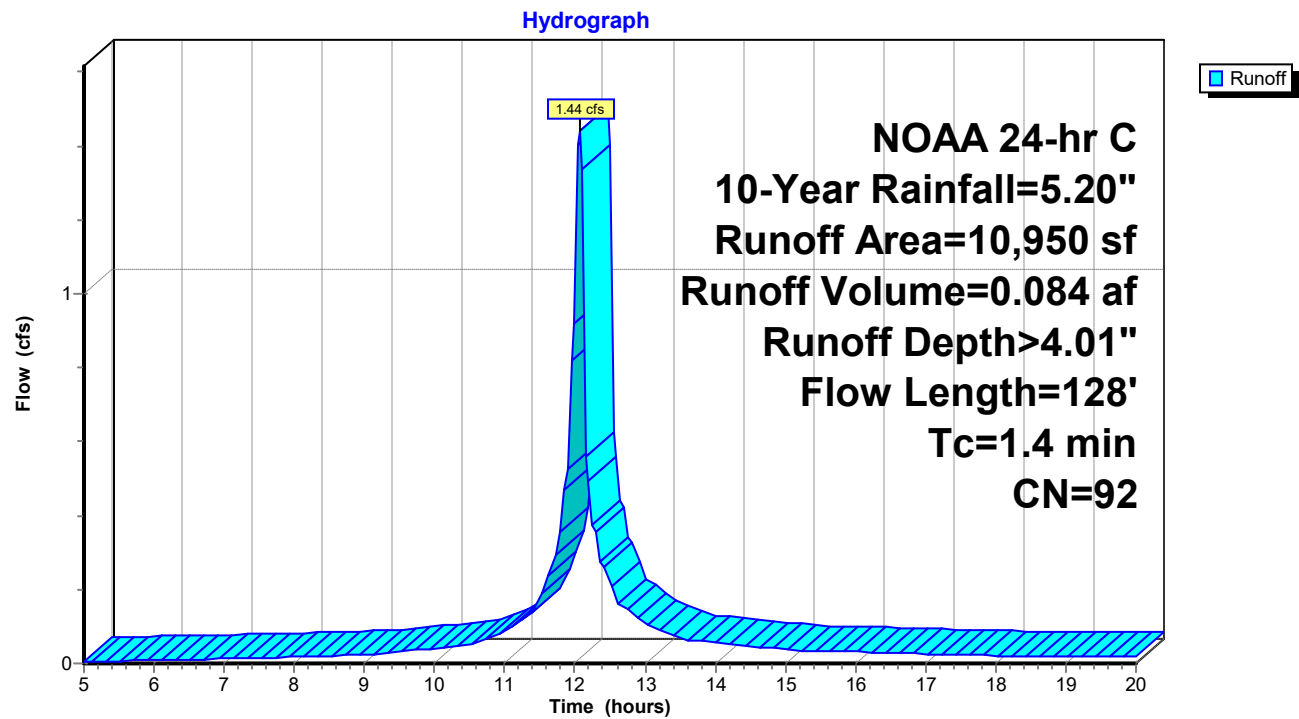
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
7,468	98	Roofs, HSG D
3,482	80	>75% Grass cover, Good, HSG D
10,950	92	Weighted Average
3,482		31.80% Pervious Area
7,468		68.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0254	1.56		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.3	28	0.0068	1.67		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.4	128	Total			



Subcatchment 21S: DA#9



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 21S: DA#9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.02	0.01	18.00	4.79	3.88	0.02
5.25	0.35	0.03	0.01	18.25	4.81	3.90	0.02
5.50	0.37	0.04	0.01	18.50	4.83	3.92	0.02
5.75	0.39	0.04	0.01	18.75	4.85	3.94	0.02
6.00	0.41	0.05	0.01	19.00	4.87	3.96	0.02
6.25	0.43	0.06	0.01	19.25	4.89	3.98	0.02
6.50	0.46	0.07	0.01	19.50	4.91	4.00	0.02
6.75	0.48	0.08	0.01	19.75	4.93	4.02	0.02
7.00	0.51	0.09	0.01	20.00	4.95	4.04	0.02
7.25	0.53	0.11	0.01				
7.50	0.56	0.12	0.02				
7.75	0.59	0.14	0.02				
8.00	0.62	0.15	0.02				
8.25	0.66	0.17	0.02				
8.50	0.69	0.19	0.02				
8.75	0.72	0.21	0.02				
9.00	0.76	0.24	0.02				
9.25	0.80	0.26	0.03				
9.50	0.84	0.29	0.03				
9.75	0.89	0.33	0.04				
10.00	0.95	0.36	0.04				
10.25	1.01	0.41	0.05				
10.50	1.07	0.46	0.05				
10.75	1.15	0.52	0.07				
11.00	1.25	0.59	0.08				
11.25	1.38	0.70	0.12				
11.50	1.54	0.83	0.16				
11.75	1.83	1.08	0.33				
12.00	2.48	1.67	0.92				
12.25	3.37	2.51	0.37				
12.50	3.66	2.79	0.24				
12.75	3.82	2.95	0.14				
13.00	3.95	3.07	0.11				
13.25	4.05	3.17	0.09				
13.50	4.13	3.24	0.07				
13.75	4.19	3.30	0.06				
14.00	4.25	3.36	0.06				
14.25	4.31	3.41	0.05				
14.50	4.36	3.46	0.05				
14.75	4.40	3.51	0.04				
15.00	4.44	3.54	0.04				
15.25	4.48	3.58	0.03				
15.50	4.51	3.61	0.03				
15.75	4.54	3.65	0.03				
16.00	4.58	3.68	0.03				
16.25	4.61	3.71	0.03				
16.50	4.64	3.74	0.03				
16.75	4.67	3.76	0.03				
17.00	4.69	3.79	0.03				
17.25	4.72	3.81	0.02				
17.50	4.74	3.84	0.02				
17.75	4.77	3.86	0.02				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

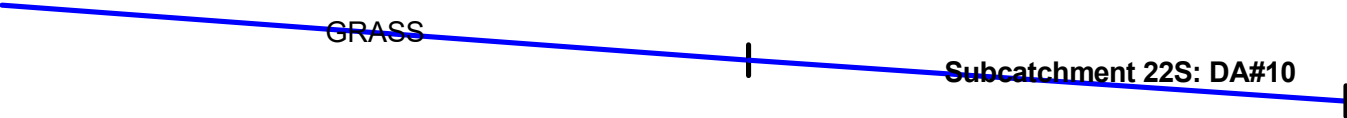
Summary for Subcatchment 22S: DA#10

Runoff = 0.50 cfs @ 12.20 hrs, Volume= 0.038 af, Depth> 3.50"
Routed to Pond 43P : CI-7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
2,347	98	Roofs, HSG D
3,349	80	>75% Grass cover, Good, HSG D
5,696	87	Weighted Average
3,349		58.80% Pervious Area
2,347		41.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	55	0.0100	0.08		Sheet Flow, GRASS Grass: Dense n= 0.240 P2= 3.42"
0.8	44	0.0093	0.89		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
12.1	99	Total			



EX and PR

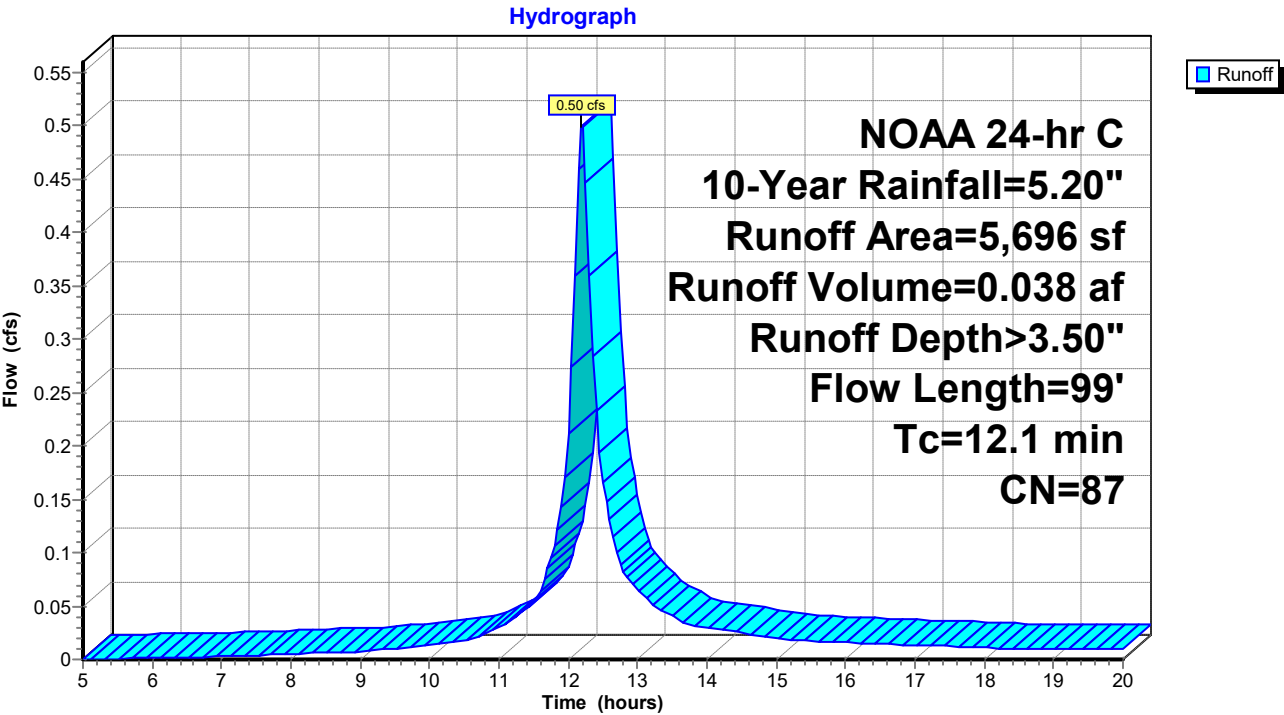
Prepared by Rauch Inc

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Subcatchment 22S: DA#10



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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 22S: DA#10

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.00	0.00	18.00	4.79	3.37	0.01
5.25	0.35	0.00	0.00	18.25	4.81	3.39	0.01
5.50	0.37	0.00	0.00	18.50	4.83	3.41	0.01
5.75	0.39	0.01	0.00	18.75	4.85	3.43	0.01
6.00	0.41	0.01	0.00	19.00	4.87	3.44	0.01
6.25	0.43	0.01	0.00	19.25	4.89	3.46	0.01
6.50	0.46	0.02	0.00	19.50	4.91	3.48	0.01
6.75	0.48	0.02	0.00	19.75	4.93	3.50	0.01
7.00	0.51	0.03	0.00	20.00	4.95	3.52	0.01
7.25	0.53	0.03	0.00				
7.50	0.56	0.04	0.00				
7.75	0.59	0.05	0.00				
8.00	0.62	0.06	0.00				
8.25	0.66	0.07	0.01				
8.50	0.69	0.08	0.01				
8.75	0.72	0.09	0.01				
9.00	0.76	0.11	0.01				
9.25	0.80	0.13	0.01				
9.50	0.84	0.15	0.01				
9.75	0.89	0.17	0.01				
10.00	0.95	0.20	0.01				
10.25	1.01	0.23	0.02				
10.50	1.07	0.26	0.02				
10.75	1.15	0.31	0.02				
11.00	1.25	0.37	0.03				
11.25	1.38	0.45	0.04				
11.50	1.54	0.56	0.05				
11.75	1.83	0.77	0.10				
12.00	2.48	1.29	0.21				
12.25	3.37	2.07	0.45				
12.50	3.66	2.33	0.17				
12.75	3.82	2.48	0.09				
13.00	3.95	2.59	0.07				
13.25	4.05	2.68	0.05				
13.50	4.13	2.75	0.04				
13.75	4.19	2.81	0.03				
14.00	4.25	2.87	0.03				
14.25	4.31	2.92	0.03				
14.50	4.36	2.97	0.02				
14.75	4.40	3.01	0.02				
15.00	4.44	3.04	0.02				
15.25	4.48	3.08	0.02				
15.50	4.51	3.11	0.02				
15.75	4.54	3.14	0.02				
16.00	4.58	3.17	0.02				
16.25	4.61	3.20	0.02				
16.50	4.64	3.23	0.01				
16.75	4.67	3.25	0.01				
17.00	4.69	3.28	0.01				
17.25	4.72	3.30	0.01				
17.50	4.74	3.33	0.01				
17.75	4.77	3.35	0.01				

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 25S: DA#12

Runoff = 0.93 cfs @ 12.07 hrs, Volume= 0.056 af, Depth> 4.39"
Routed to Pond 45P : CI-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

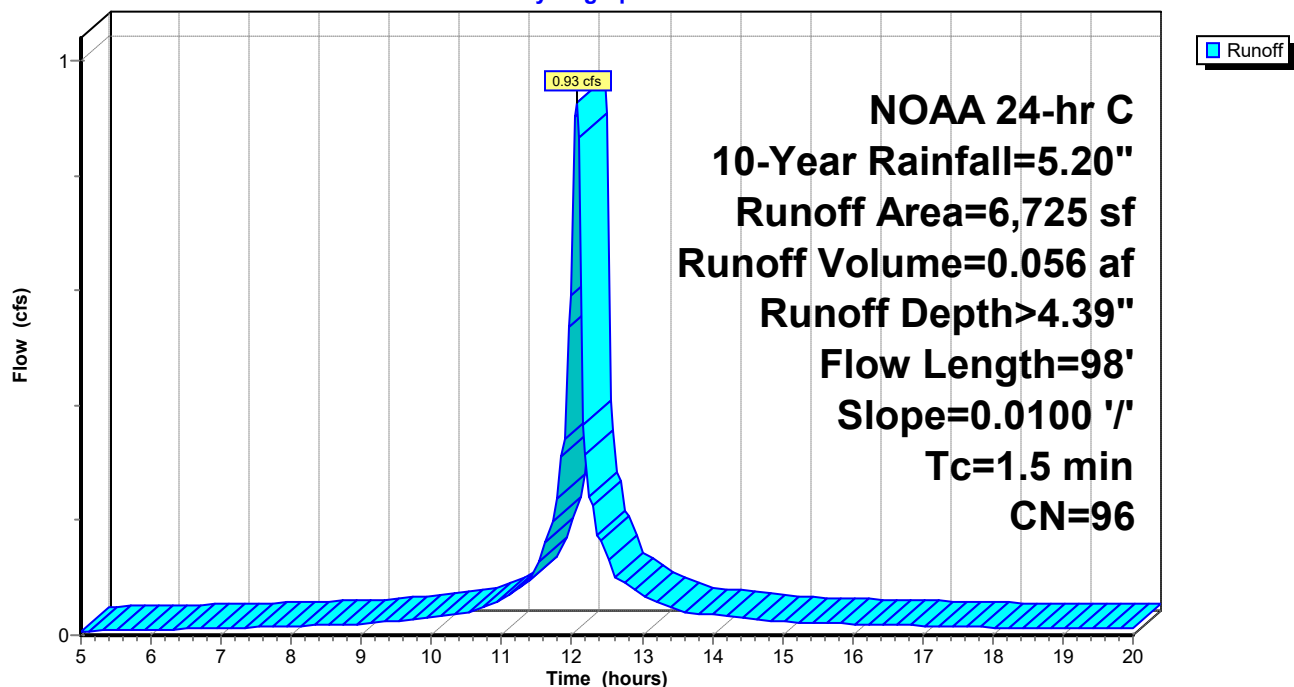
Area (sf)	CN	Description
5,864	98	Roofs, HSG D
861	80	>75% Grass cover, Good, HSG D
6,725	96	Weighted Average
861		12.80% Pervious Area
5,864		87.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	98	0.0100	1.07		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 25S: DA#12

Subcatchment 25S: DA#12

Hydrograph



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 25S: DA#12

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.09	0.01	18.00	4.79	4.32	0.01
5.25	0.35	0.10	0.01	18.25	4.81	4.34	0.01
5.50	0.37	0.12	0.01	18.50	4.83	4.36	0.01
5.75	0.39	0.13	0.01	18.75	4.85	4.38	0.01
6.00	0.41	0.14	0.01	19.00	4.87	4.40	0.01
6.25	0.43	0.16	0.01	19.25	4.89	4.42	0.01
6.50	0.46	0.18	0.01	19.50	4.91	4.44	0.01
6.75	0.48	0.19	0.01	19.75	4.93	4.46	0.01
7.00	0.51	0.21	0.01	20.00	4.95	4.48	0.01
7.25	0.53	0.23	0.01				
7.50	0.56	0.26	0.01				
7.75	0.59	0.28	0.01				
8.00	0.62	0.30	0.02				
8.25	0.66	0.33	0.02				
8.50	0.69	0.36	0.02				
8.75	0.72	0.39	0.02				
9.00	0.76	0.42	0.02				
9.25	0.80	0.45	0.02				
9.50	0.84	0.49	0.03				
9.75	0.89	0.54	0.03				
10.00	0.95	0.58	0.03				
10.25	1.01	0.64	0.03				
10.50	1.07	0.70	0.04				
10.75	1.15	0.77	0.05				
11.00	1.25	0.86	0.06				
11.25	1.38	0.98	0.08				
11.50	1.54	1.13	0.11				
11.75	1.83	1.41	0.22				
12.00	2.48	2.04	0.59				
12.25	3.37	2.92	0.24				
12.50	3.66	3.21	0.16				
12.75	3.82	3.37	0.09				
13.00	3.95	3.49	0.07				
13.25	4.05	3.59	0.05				
13.50	4.13	3.67	0.04				
13.75	4.19	3.73	0.04				
14.00	4.25	3.79	0.04				
14.25	4.31	3.84	0.03				
14.50	4.36	3.89	0.03				
14.75	4.40	3.94	0.03				
15.00	4.44	3.98	0.02				
15.25	4.48	4.01	0.02				
15.50	4.51	4.05	0.02				
15.75	4.54	4.08	0.02				
16.00	4.58	4.11	0.02				
16.25	4.61	4.14	0.02				
16.50	4.64	4.17	0.02				
16.75	4.67	4.20	0.02				
17.00	4.69	4.23	0.02				
17.25	4.72	4.25	0.02				
17.50	4.74	4.28	0.01				
17.75	4.77	4.30	0.01				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Summary for Subcatchment 26S: DA#1

Runoff = 3.10 cfs @ 12.12 hrs, Volume= 0.195 af, Depth> 3.51"
 Routed to Pond 27P : FES-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
11,362	98	Roofs, HSG D
17,706	80	>75% Grass cover, Good, HSG D
29,068	87	Weighted Average
17,706		60.91% Pervious Area
11,362		39.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	27	0.0306	0.11		Sheet Flow, GRASS Grass: Dense n= 0.240 P2= 3.42"
1.4	378	0.0073	4.50	71.98	Channel Flow, Area= 16.0 sf Perim= 14.6' r= 1.10' n= 0.030
5.5	405	Total			

GRASS

Subcatchment 26S: DA#1

EX and PR

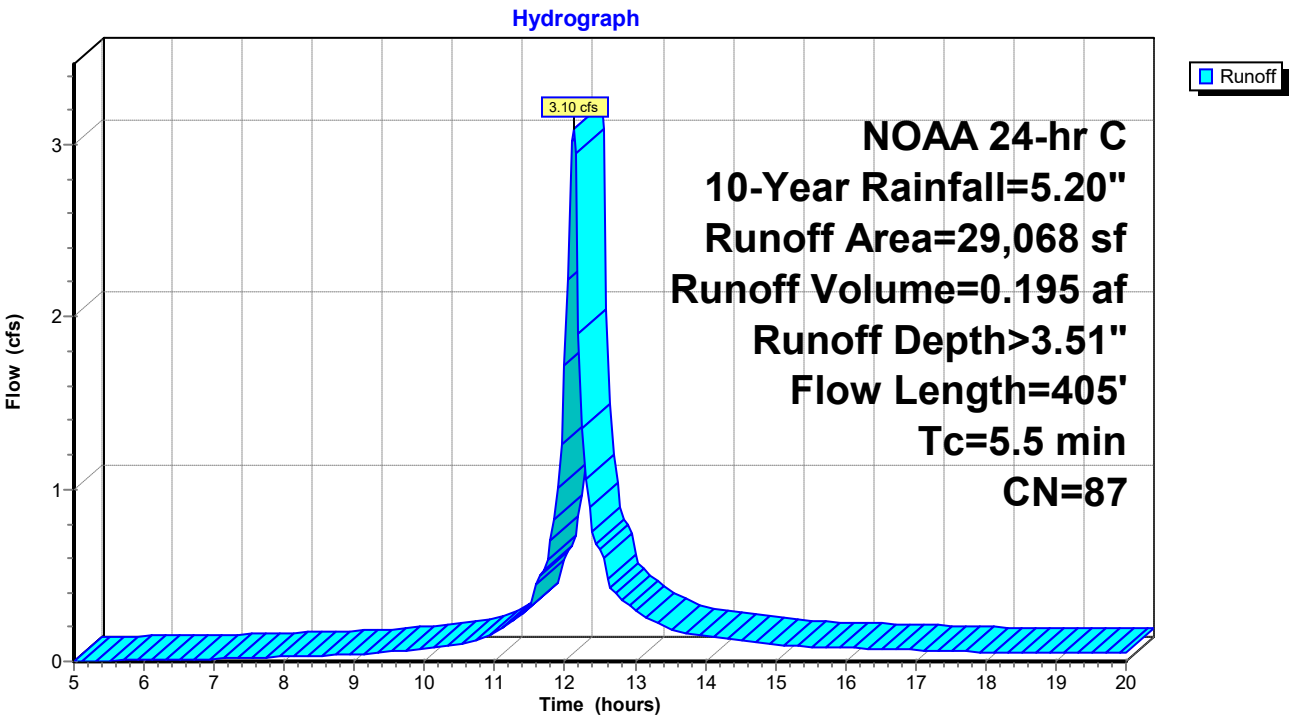
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NOAA 24-hr C 10-Year Rainfall=5.20"

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Subcatchment 26S: DA#1



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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 26S: DA#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.00	0.00	18.00	4.79	3.37	0.05
5.25	0.35	0.00	0.00	18.25	4.81	3.39	0.05
5.50	0.37	0.00	0.00	18.50	4.83	3.41	0.05
5.75	0.39	0.01	0.01	18.75	4.85	3.43	0.05
6.00	0.41	0.01	0.01	19.00	4.87	3.44	0.05
6.25	0.43	0.01	0.01	19.25	4.89	3.46	0.05
6.50	0.46	0.02	0.01	19.50	4.91	3.48	0.05
6.75	0.48	0.02	0.01	19.75	4.93	3.50	0.05
7.00	0.51	0.03	0.02	20.00	4.95	3.52	0.05
7.25	0.53	0.03	0.02				
7.50	0.56	0.04	0.02				
7.75	0.59	0.05	0.02				
8.00	0.62	0.06	0.03				
8.25	0.66	0.07	0.03				
8.50	0.69	0.08	0.03				
8.75	0.72	0.09	0.04				
9.00	0.76	0.11	0.04				
9.25	0.80	0.13	0.05				
9.50	0.84	0.15	0.06				
9.75	0.89	0.17	0.06				
10.00	0.95	0.20	0.08				
10.25	1.01	0.23	0.09				
10.50	1.07	0.26	0.10				
10.75	1.15	0.31	0.13				
11.00	1.25	0.37	0.17				
11.25	1.38	0.45	0.23				
11.50	1.54	0.56	0.31				
11.75	1.83	0.77	0.59				
12.00	2.48	1.29	1.72				
12.25	3.37	2.07	1.36				
12.50	3.66	2.33	0.65				
12.75	3.82	2.48	0.39				
13.00	3.95	2.59	0.30				
13.25	4.05	2.68	0.23				
13.50	4.13	2.75	0.19				
13.75	4.19	2.81	0.16				
14.00	4.25	2.87	0.15				
14.25	4.31	2.92	0.13				
14.50	4.36	2.97	0.12				
14.75	4.40	3.01	0.11				
15.00	4.44	3.04	0.10				
15.25	4.48	3.08	0.09				
15.50	4.51	3.11	0.09				
15.75	4.54	3.14	0.08				
16.00	4.58	3.17	0.08				
16.25	4.61	3.20	0.08				
16.50	4.64	3.23	0.07				
16.75	4.67	3.25	0.07				
17.00	4.69	3.28	0.07				
17.25	4.72	3.30	0.06				
17.50	4.74	3.33	0.06				
17.75	4.77	3.35	0.06				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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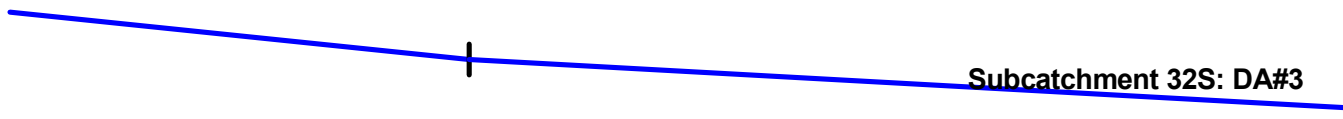
Summary for Subcatchment 32S: DA#3

Runoff = 1.14 cfs @ 12.06 hrs, Volume= 0.064 af, Depth> 3.52"
 Routed to Link 2L : SP#1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
3,831	98	Roofs, HSG D
5,639	80	>75% Grass cover, Good, HSG D
9,470	87	Weighted Average
5,639		59.55% Pervious Area
3,831		40.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	55	0.0240	1.36		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.3	106	0.0128	5.96	95.31	Channel Flow, Area= 16.0 sf Perim= 14.6' r= 1.10' n= 0.030
1.0	161	Total			



EX and PR

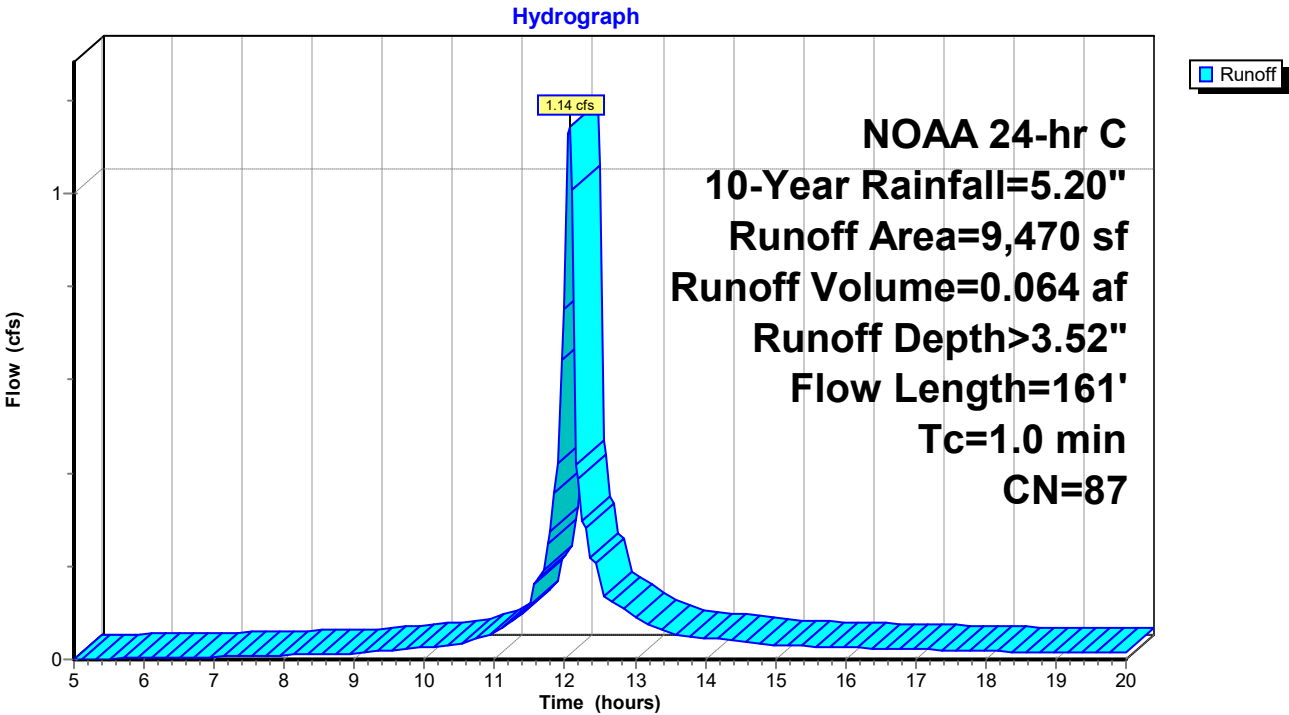
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NOAA 24-hr C 10-Year Rainfall=5.20"

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Subcatchment 32S: DA#3



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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Subcatchment 32S: DA#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.00	0.00	18.00	4.79	3.37	0.02
5.25	0.35	0.00	0.00	18.25	4.81	3.39	0.02
5.50	0.37	0.00	0.00	18.50	4.83	3.41	0.02
5.75	0.39	0.01	0.00	18.75	4.85	3.43	0.02
6.00	0.41	0.01	0.00	19.00	4.87	3.44	0.02
6.25	0.43	0.01	0.00	19.25	4.89	3.46	0.02
6.50	0.46	0.02	0.00	19.50	4.91	3.48	0.02
6.75	0.48	0.02	0.00	19.75	4.93	3.50	0.02
7.00	0.51	0.03	0.01	20.00	4.95	3.52	0.02
7.25	0.53	0.03	0.01				
7.50	0.56	0.04	0.01				
7.75	0.59	0.05	0.01				
8.00	0.62	0.06	0.01				
8.25	0.66	0.07	0.01				
8.50	0.69	0.08	0.01				
8.75	0.72	0.09	0.01				
9.00	0.76	0.11	0.01				
9.25	0.80	0.13	0.02				
9.50	0.84	0.15	0.02				
9.75	0.89	0.17	0.02				
10.00	0.95	0.20	0.03				
10.25	1.01	0.23	0.03				
10.50	1.07	0.26	0.03				
10.75	1.15	0.31	0.05				
11.00	1.25	0.37	0.06				
11.25	1.38	0.45	0.08				
11.50	1.54	0.56	0.12				
11.75	1.83	0.77	0.25				
12.00	2.48	1.29	0.75				
12.25	3.37	2.07	0.30				
12.50	3.66	2.33	0.19				
12.75	3.82	2.48	0.12				
13.00	3.95	2.59	0.09				
13.25	4.05	2.68	0.07				
13.50	4.13	2.75	0.06				
13.75	4.19	2.81	0.05				
14.00	4.25	2.87	0.05				
14.25	4.31	2.92	0.04				
14.50	4.36	2.97	0.04				
14.75	4.40	3.01	0.03				
15.00	4.44	3.04	0.03				
15.25	4.48	3.08	0.03				
15.50	4.51	3.11	0.03				
15.75	4.54	3.14	0.03				
16.00	4.58	3.17	0.03				
16.25	4.61	3.20	0.02				
16.50	4.64	3.23	0.02				
16.75	4.67	3.25	0.02				
17.00	4.69	3.28	0.02				
17.25	4.72	3.30	0.02				
17.50	4.74	3.33	0.02				
17.75	4.77	3.35	0.02				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 33S: DA#13

Runoff = 0.40 cfs @ 12.06 hrs, Volume= 0.023 af, Depth> 3.72"
Routed to Pond 46P : CI-5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

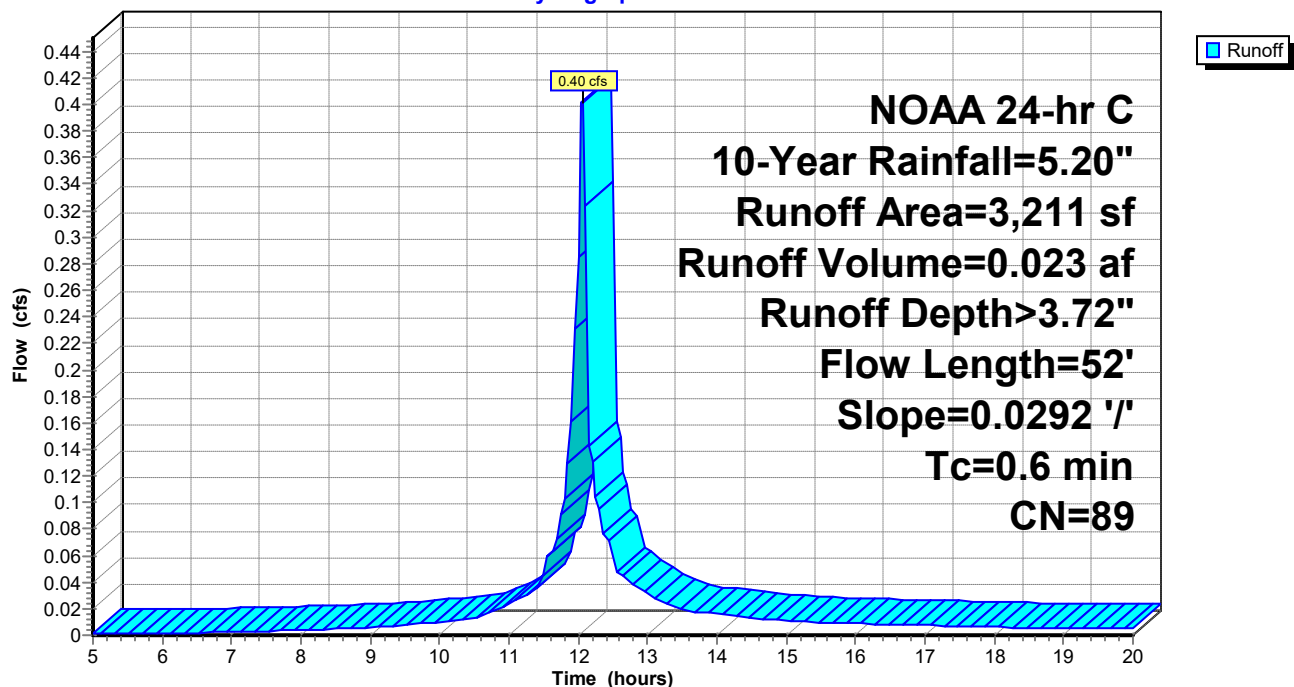
Area (sf)	CN	Description
1,642	98	Roofs, HSG D
1,569	80	>75% Grass cover, Good, HSG D
3,211	89	Weighted Average
1,569		48.86% Pervious Area
1,642		51.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	52	0.0292	1.45		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 33S: DA#13

Subcatchment 33S: DA#13

Hydrograph



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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 33S: DA#13

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.01	0.00	18.00	4.79	3.57	0.01
5.25	0.35	0.01	0.00	18.25	4.81	3.59	0.01
5.50	0.37	0.01	0.00	18.50	4.83	3.61	0.01
5.75	0.39	0.02	0.00	18.75	4.85	3.63	0.01
6.00	0.41	0.02	0.00	19.00	4.87	3.65	0.01
6.25	0.43	0.02	0.00	19.25	4.89	3.67	0.01
6.50	0.46	0.03	0.00	19.50	4.91	3.68	0.01
6.75	0.48	0.04	0.00	19.75	4.93	3.70	0.01
7.00	0.51	0.05	0.00	20.00	4.95	3.72	0.01
7.25	0.53	0.05	0.00				
7.50	0.56	0.06	0.00				
7.75	0.59	0.08	0.00				
8.00	0.62	0.09	0.00				
8.25	0.66	0.10	0.00				
8.50	0.69	0.12	0.00				
8.75	0.72	0.13	0.01				
9.00	0.76	0.15	0.01				
9.25	0.80	0.17	0.01				
9.50	0.84	0.19	0.01				
9.75	0.89	0.22	0.01				
10.00	0.95	0.25	0.01				
10.25	1.01	0.29	0.01				
10.50	1.07	0.33	0.01				
10.75	1.15	0.38	0.02				
11.00	1.25	0.45	0.02				
11.25	1.38	0.54	0.03				
11.50	1.54	0.66	0.04				
11.75	1.83	0.89	0.09				
12.00	2.48	1.44	0.29				
12.25	3.37	2.24	0.10				
12.50	3.66	2.51	0.06				
12.75	3.82	2.66	0.04				
13.00	3.95	2.78	0.03				
13.25	4.05	2.87	0.02				
13.50	4.13	2.94	0.02				
13.75	4.19	3.00	0.02				
14.00	4.25	3.06	0.02				
14.25	4.31	3.11	0.01				
14.50	4.36	3.16	0.01				
14.75	4.40	3.20	0.01				
15.00	4.44	3.24	0.01				
15.25	4.48	3.27	0.01				
15.50	4.51	3.31	0.01				
15.75	4.54	3.34	0.01				
16.00	4.58	3.37	0.01				
16.25	4.61	3.40	0.01				
16.50	4.64	3.43	0.01				
16.75	4.67	3.45	0.01				
17.00	4.69	3.48	0.01				
17.25	4.72	3.50	0.01				
17.50	4.74	3.53	0.01				
17.75	4.77	3.55	0.01				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Subcatchment 34S: DA#14

Runoff = 2.30 cfs @ 12.06 hrs, Volume= 0.135 af, Depth> 4.11"
Routed to Pond 9P : I-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

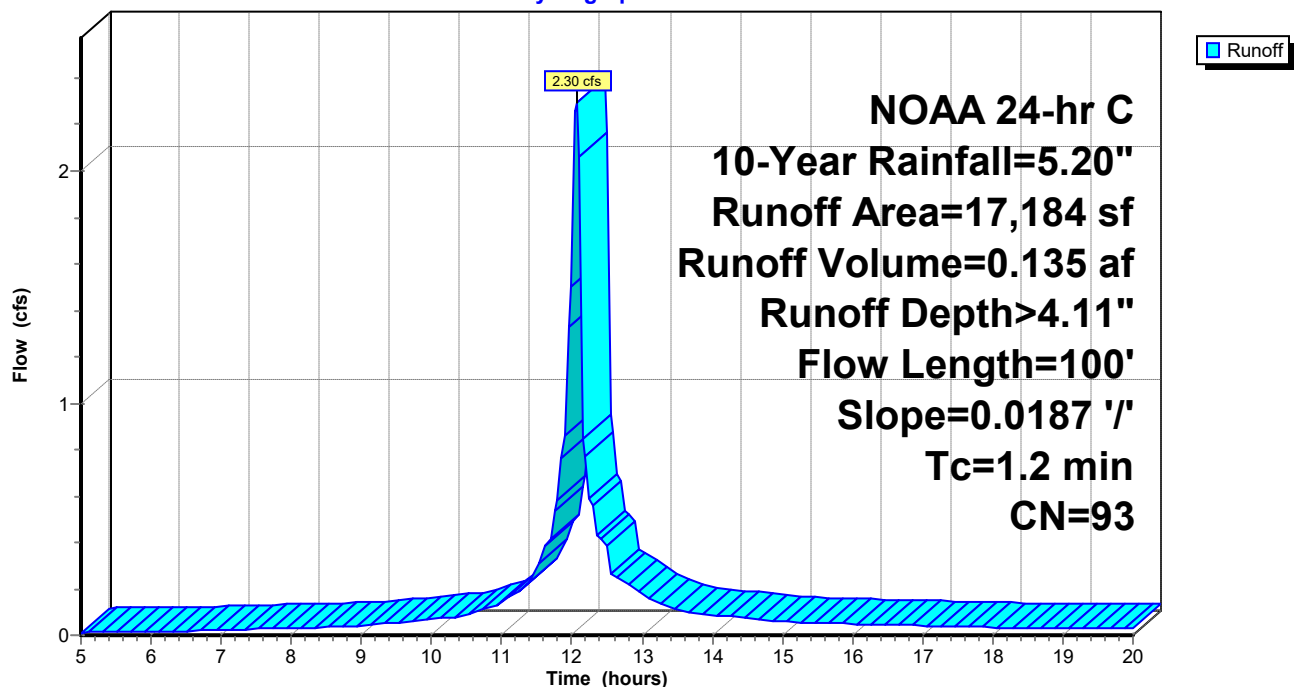
Area (sf)	CN	Description
12,711	98	Roofs, HSG D
4,473	80	>75% Grass cover, Good, HSG D
17,184	93	Weighted Average
4,473		26.03% Pervious Area
12,711		73.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0187	1.38		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 34S: DA#14

Subcatchment 34S: DA#14

Hydrograph



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Subcatchment 34S: DA#14

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.03	0.01	18.00	4.79	3.99	0.03
5.25	0.35	0.04	0.01	18.25	4.81	4.01	0.03
5.50	0.37	0.05	0.01	18.50	4.83	4.03	0.03
5.75	0.39	0.06	0.01	18.75	4.85	4.05	0.03
6.00	0.41	0.07	0.01	19.00	4.87	4.07	0.03
6.25	0.43	0.08	0.02	19.25	4.89	4.09	0.03
6.50	0.46	0.09	0.02	19.50	4.91	4.11	0.03
6.75	0.48	0.10	0.02	19.75	4.93	4.13	0.03
7.00	0.51	0.11	0.02	20.00	4.95	4.14	0.03
7.25	0.53	0.13	0.02				
7.50	0.56	0.15	0.03				
7.75	0.59	0.16	0.03				
8.00	0.62	0.18	0.03				
8.25	0.66	0.20	0.03				
8.50	0.69	0.22	0.04				
8.75	0.72	0.25	0.04				
9.00	0.76	0.27	0.04				
9.25	0.80	0.30	0.05				
9.50	0.84	0.33	0.05				
9.75	0.89	0.37	0.06				
10.00	0.95	0.41	0.07				
10.25	1.01	0.46	0.08				
10.50	1.07	0.51	0.08				
10.75	1.15	0.57	0.11				
11.00	1.25	0.65	0.14				
11.25	1.38	0.76	0.20				
11.50	1.54	0.90	0.26				
11.75	1.83	1.16	0.54				
12.00	2.48	1.76	1.50				
12.25	3.37	2.61	0.59				
12.50	3.66	2.89	0.38				
12.75	3.82	3.05	0.22				
13.00	3.95	3.17	0.18				
13.25	4.05	3.27	0.14				
13.50	4.13	3.34	0.11				
13.75	4.19	3.41	0.10				
14.00	4.25	3.47	0.09				
14.25	4.31	3.52	0.08				
14.50	4.36	3.57	0.07				
14.75	4.40	3.61	0.07				
15.00	4.44	3.65	0.06				
15.25	4.48	3.68	0.06				
15.50	4.51	3.72	0.05				
15.75	4.54	3.75	0.05				
16.00	4.58	3.78	0.05				
16.25	4.61	3.81	0.05				
16.50	4.64	3.84	0.05				
16.75	4.67	3.87	0.04				
17.00	4.69	3.90	0.04				
17.25	4.72	3.92	0.04				
17.50	4.74	3.95	0.04				
17.75	4.77	3.97	0.04				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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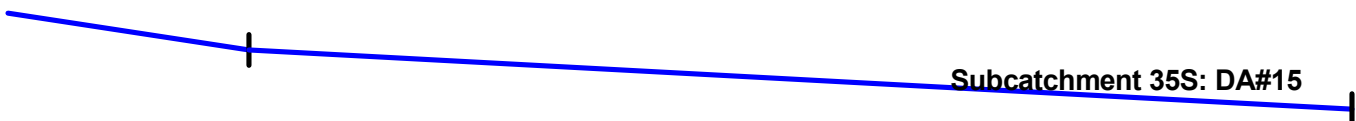
Summary for Subcatchment 35S: DA#15

Runoff = 0.64 cfs @ 12.31 hrs, Volume= 0.060 af, Depth> 2.83"
Routed to Link 2L : SP#1

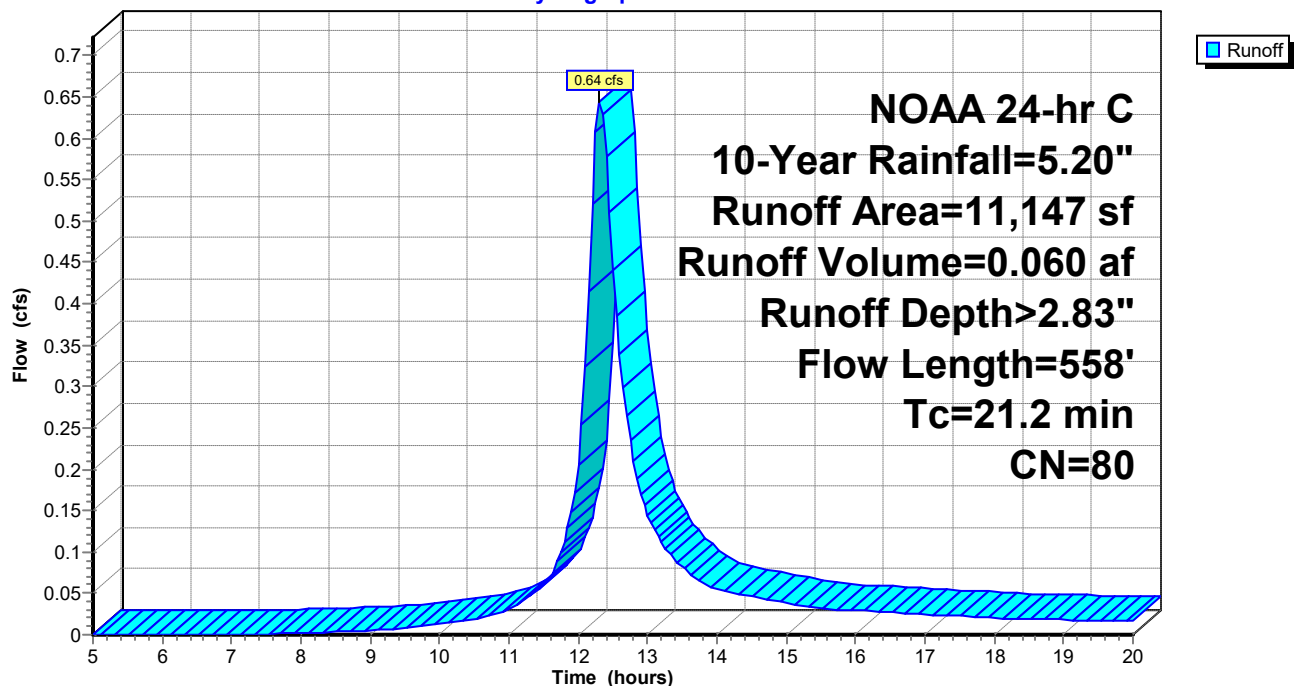
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 10-Year Rainfall=5.20"

Area (sf)	CN	Description
11,147	80	>75% Grass cover, Good, HSG D
11,147		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2	100	0.0336	0.15		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"
10.0	458	0.0118	0.76		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	558	Total			

**Subcatchment 35S: DA#15**

Hydrograph



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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Subcatchment 35S: DA#15

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.33	0.00	0.00	18.00	4.79	2.71	0.02
5.25	0.35	0.00	0.00	18.25	4.81	2.73	0.02
5.50	0.37	0.00	0.00	18.50	4.83	2.74	0.02
5.75	0.39	0.00	0.00	18.75	4.85	2.76	0.02
6.00	0.41	0.00	0.00	19.00	4.87	2.78	0.02
6.25	0.43	0.00	0.00	19.25	4.89	2.80	0.02
6.50	0.46	0.00	0.00	19.50	4.91	2.81	0.02
6.75	0.48	0.00	0.00	19.75	4.93	2.83	0.02
7.00	0.51	0.00	0.00	20.00	4.95	2.85	0.02
7.25	0.53	0.00	0.00				
7.50	0.56	0.00	0.00				
7.75	0.59	0.00	0.00				
8.00	0.62	0.01	0.00				
8.25	0.66	0.01	0.00				
8.50	0.69	0.01	0.00				
8.75	0.72	0.02	0.00				
9.00	0.76	0.02	0.01				
9.25	0.80	0.03	0.01				
9.50	0.84	0.04	0.01				
9.75	0.89	0.05	0.01				
10.00	0.95	0.07	0.01				
10.25	1.01	0.09	0.02				
10.50	1.07	0.11	0.02				
10.75	1.15	0.13	0.02				
11.00	1.25	0.17	0.03				
11.25	1.38	0.23	0.04				
11.50	1.54	0.30	0.06				
11.75	1.83	0.46	0.10				
12.00	2.48	0.87	0.21				
12.25	3.37	1.54	0.61				
12.50	3.66	1.77	0.44				
12.75	3.82	1.90	0.23				
13.00	3.95	2.00	0.14				
13.25	4.05	2.08	0.10				
13.50	4.13	2.15	0.08				
13.75	4.19	2.20	0.07				
14.00	4.25	2.25	0.06				
14.25	4.31	2.30	0.05				
14.50	4.36	2.34	0.05				
14.75	4.40	2.38	0.04				
15.00	4.44	2.41	0.04				
15.25	4.48	2.44	0.03				
15.50	4.51	2.47	0.03				
15.75	4.54	2.50	0.03				
16.00	4.58	2.53	0.03				
16.25	4.61	2.55	0.03				
16.50	4.64	2.58	0.03				
16.75	4.67	2.60	0.03				
17.00	4.69	2.63	0.02				
17.25	4.72	2.65	0.02				
17.50	4.74	2.67	0.02				
17.75	4.77	2.69	0.02				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"
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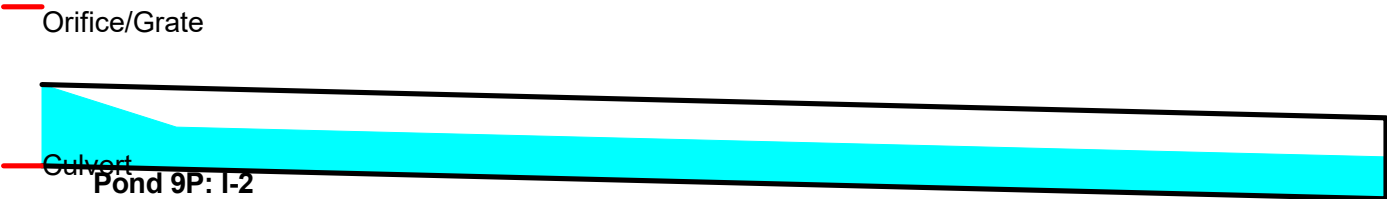
Summary for Pond 9P: I-2

Inflow Area = 0.394 ac, 73.97% Impervious, Inflow Depth > 4.11" for 10-Year event
Inflow = 2.30 cfs @ 12.06 hrs, Volume= 0.135 af
Outflow = 2.30 cfs @ 12.06 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min
Primary = 2.30 cfs @ 12.06 hrs, Volume= 0.135 af
Routed to Pond 44P : CI-2

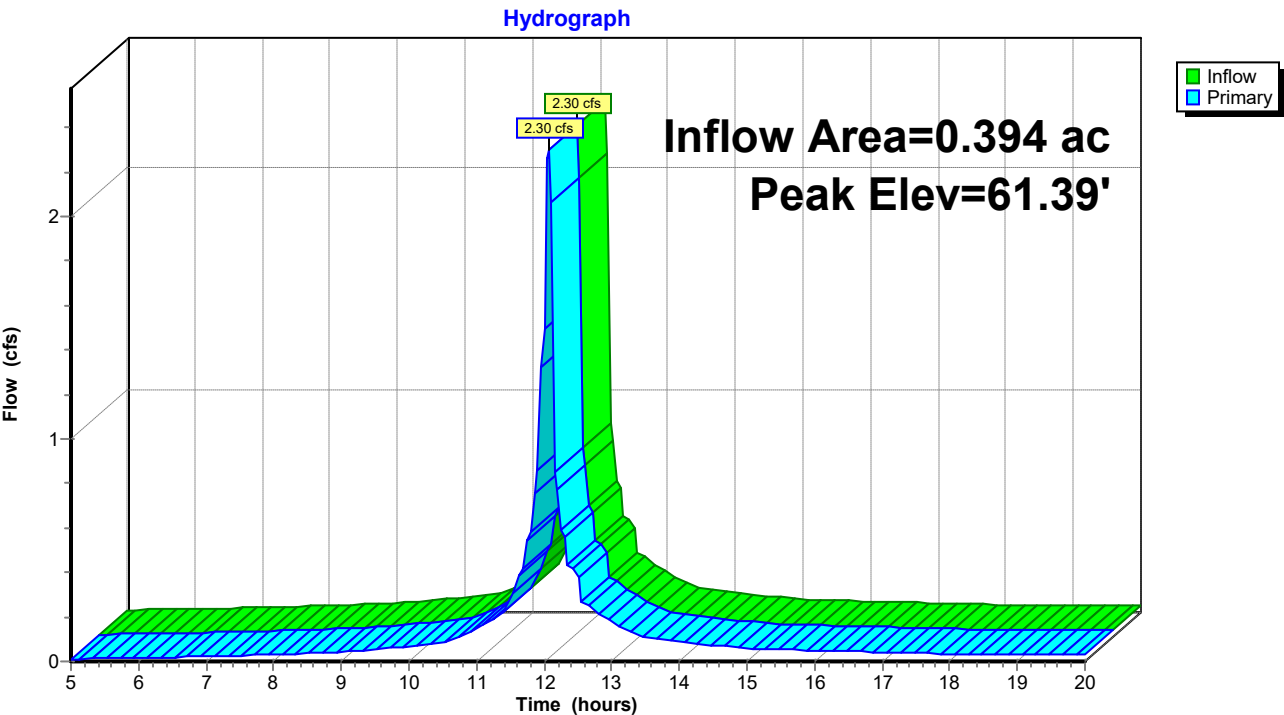
Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.39' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.51'	1.0" x 2.0" Horiz. Orifice/Grate X 20.00 columns X 10 rows C= 0.600 in 24.0" x 24.0" Grate (69% open area)
#2	Primary	59.06'	15.0" Round Culvert L= 57.6' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 59.06' / 58.55' S= 0.0089 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

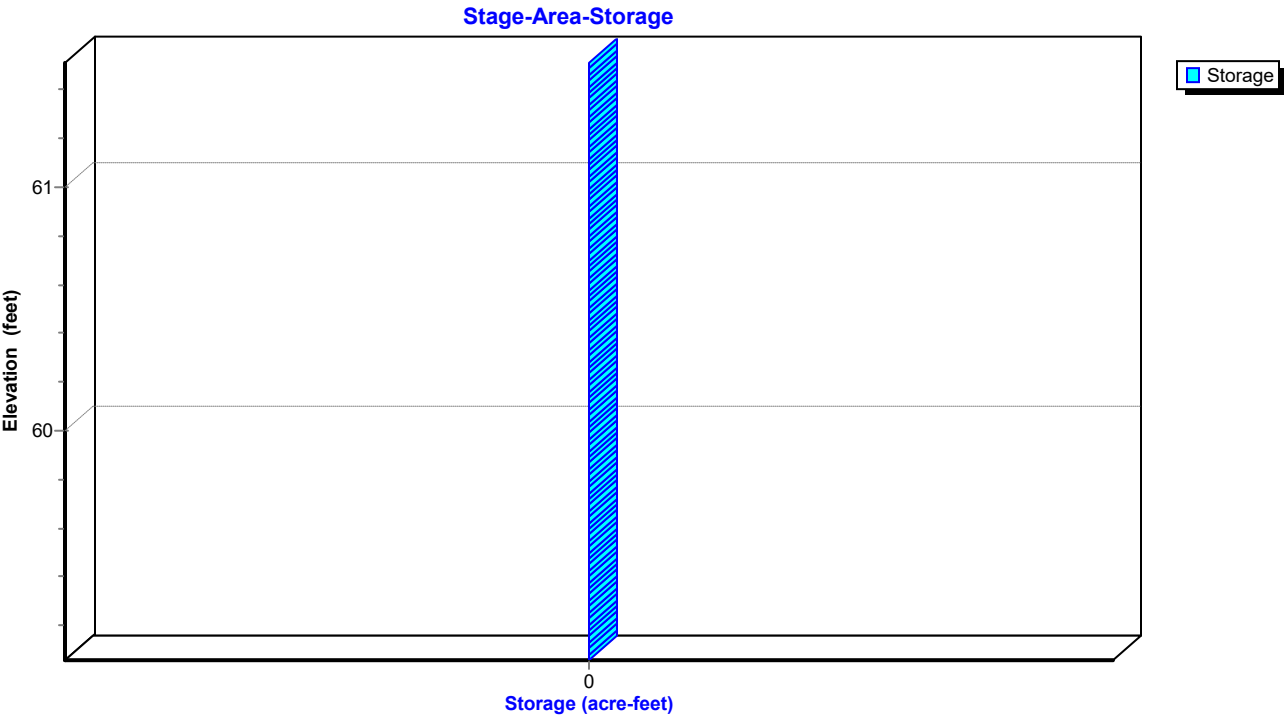
Primary OutFlow Max=1.69 cfs @ 12.06 hrs HW=59.91' TW=59.62' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 1.69 cfs @ 2.67 fps)



Pond 9P: I-2



Pond 9P: I-2



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 9P: I-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	59.11	0.01	18.00	0.03	59.15	0.03
5.25	0.01	59.11	0.01	18.25	0.03	59.15	0.03
5.50	0.01	59.12	0.01	18.50	0.03	59.15	0.03
5.75	0.01	59.12	0.01	18.75	0.03	59.15	0.03
6.00	0.01	59.12	0.01	19.00	0.03	59.14	0.03
6.25	0.02	59.12	0.02	19.25	0.03	59.14	0.03
6.50	0.02	59.13	0.02	19.50	0.03	59.14	0.03
6.75	0.02	59.13	0.02	19.75	0.03	59.14	0.03
7.00	0.02	59.13	0.02	20.00	0.03	59.14	0.03
7.25	0.02	59.14	0.02				
7.50	0.03	59.14	0.03				
7.75	0.03	59.14	0.03				
8.00	0.03	59.14	0.03				
8.25	0.03	59.15	0.03				
8.50	0.04	59.15	0.04				
8.75	0.04	59.15	0.04				
9.00	0.04	59.16	0.04				
9.25	0.05	59.16	0.05				
9.50	0.05	59.17	0.05				
9.75	0.06	59.18	0.06				
10.00	0.07	59.18	0.07				
10.25	0.08	59.19	0.08				
10.50	0.08	59.20	0.08				
10.75	0.11	59.22	0.11				
11.00	0.14	59.24	0.14				
11.25	0.20	59.27	0.20				
11.50	0.26	59.30	0.26				
11.75	0.54	59.42	0.54				
12.00	1.50	59.73	1.50				
12.25	0.59	61.02	0.59				
12.50	0.38	59.37	0.38				
12.75	0.22	59.29	0.22				
13.00	0.18	59.26	0.18				
13.25	0.14	59.24	0.14				
13.50	0.11	59.22	0.11				
13.75	0.10	59.21	0.10				
14.00	0.09	59.20	0.09				
14.25	0.08	59.20	0.08				
14.50	0.07	59.19	0.07				
14.75	0.07	59.18	0.07				
15.00	0.06	59.18	0.06				
15.25	0.06	59.17	0.06				
15.50	0.05	59.17	0.05				
15.75	0.05	59.17	0.05				
16.00	0.05	59.17	0.05				
16.25	0.05	59.16	0.05				
16.50	0.05	59.16	0.05				
16.75	0.04	59.16	0.04				
17.00	0.04	59.16	0.04				
17.25	0.04	59.15	0.04				
17.50	0.04	59.15	0.04				
17.75	0.04	59.15	0.04				

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Stage-Area-Storage for Pond 9P: I-2

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
59.06	0.000	60.10	0.000	61.14	0.000
59.08	0.000	60.12	0.000	61.16	0.000
59.10	0.000	60.14	0.000	61.18	0.000
59.12	0.000	60.16	0.000	61.20	0.000
59.14	0.000	60.18	0.000	61.22	0.000
59.16	0.000	60.20	0.000	61.24	0.000
59.18	0.000	60.22	0.000	61.26	0.000
59.20	0.000	60.24	0.000	61.28	0.000
59.22	0.000	60.26	0.000	61.30	0.000
59.24	0.000	60.28	0.000	61.32	0.000
59.26	0.000	60.30	0.000	61.34	0.000
59.28	0.000	60.32	0.000	61.36	0.000
59.30	0.000	60.34	0.000	61.38	0.000
59.32	0.000	60.36	0.000	61.40	0.000
59.34	0.000	60.38	0.000	61.42	0.000
59.36	0.000	60.40	0.000	61.44	0.000
59.38	0.000	60.42	0.000	61.46	0.000
59.40	0.000	60.44	0.000	61.48	0.000
59.42	0.000	60.46	0.000	61.50	0.000
59.44	0.000	60.48	0.000		
59.46	0.000	60.50	0.000		
59.48	0.000	60.52	0.000		
59.50	0.000	60.54	0.000		
59.52	0.000	60.56	0.000		
59.54	0.000	60.58	0.000		
59.56	0.000	60.60	0.000		
59.58	0.000	60.62	0.000		
59.60	0.000	60.64	0.000		
59.62	0.000	60.66	0.000		
59.64	0.000	60.68	0.000		
59.66	0.000	60.70	0.000		
59.68	0.000	60.72	0.000		
59.70	0.000	60.74	0.000		
59.72	0.000	60.76	0.000		
59.74	0.000	60.78	0.000		
59.76	0.000	60.80	0.000		
59.78	0.000	60.82	0.000		
59.80	0.000	60.84	0.000		
59.82	0.000	60.86	0.000		
59.84	0.000	60.88	0.000		
59.86	0.000	60.90	0.000		
59.88	0.000	60.92	0.000		
59.90	0.000	60.94	0.000		
59.92	0.000	60.96	0.000		
59.94	0.000	60.98	0.000		
59.96	0.000	61.00	0.000		
59.98	0.000	61.02	0.000		
60.00	0.000	61.04	0.000		
60.02	0.000	61.06	0.000		
60.04	0.000	61.08	0.000		
60.06	0.000	61.10	0.000		
60.08	0.000	61.12	0.000		

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Summary for Pond 17P: SGW FOREBAY #1

Inflow Area = 2.458 ac, 76.90% Impervious, Inflow Depth > 4.18" for 10-Year event
 Inflow = 13.60 cfs @ 12.07 hrs, Volume= 0.856 af
 Outflow = 10.43 cfs @ 12.06 hrs, Volume= 0.820 af, Atten= 23%, Lag= 0.0 min
 Primary = 10.43 cfs @ 12.06 hrs, Volume= 0.820 af
 Routed to Pond 18P : SGW #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 57.33' @ 12.29 hrs Surf.Area= 2,365 sf Storage= 4,077 cf

Plug-Flow detention time= 41.1 min calculated for 0.817 af (95% of inflow)
 Center-of-Mass det. time= 24.1 min (768.0 - 743.9)

Volume	Invert	Avail.Storage	Storage Description
#1	55.08'	5,991 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.08	1,261	0	0
58.08	2,733	5,991	5,991

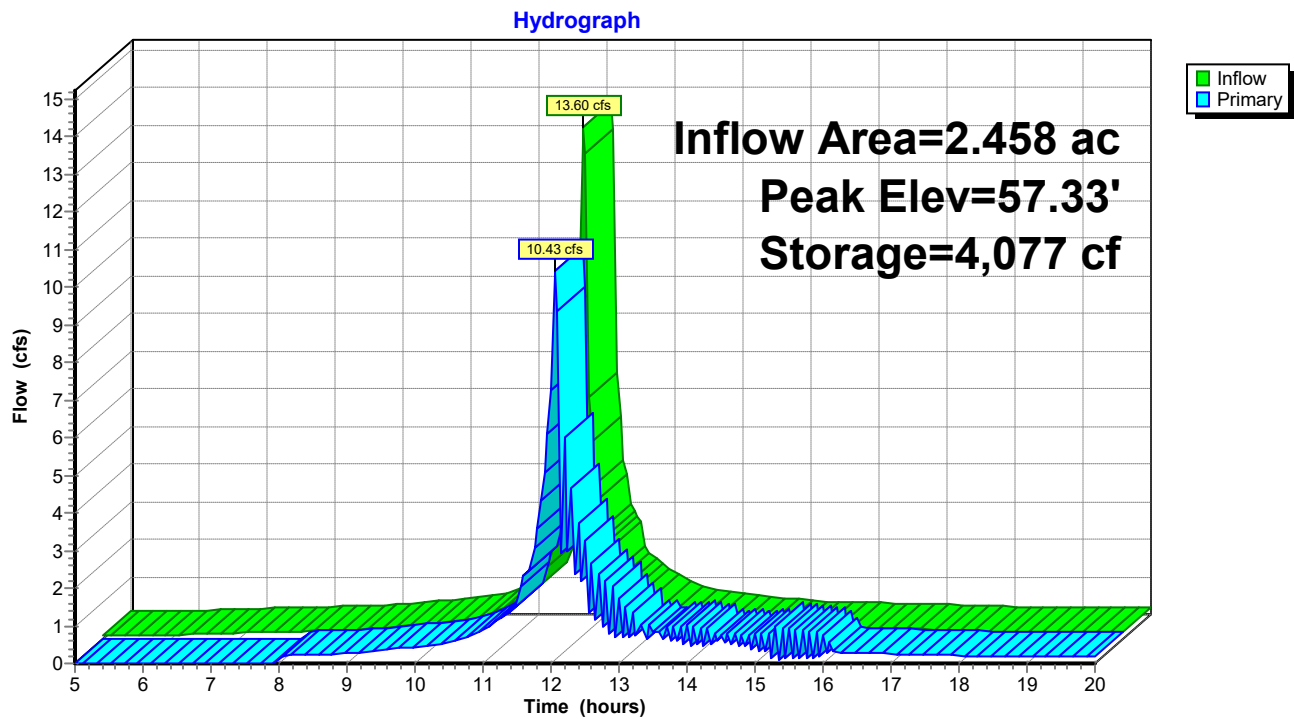
Device	Routing	Invert	Outlet Devices
#1	Primary	56.08'	60.0' long + 3.0 ' SideZ x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=56.72' TW=57.00' (Dynamic Tailwater)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

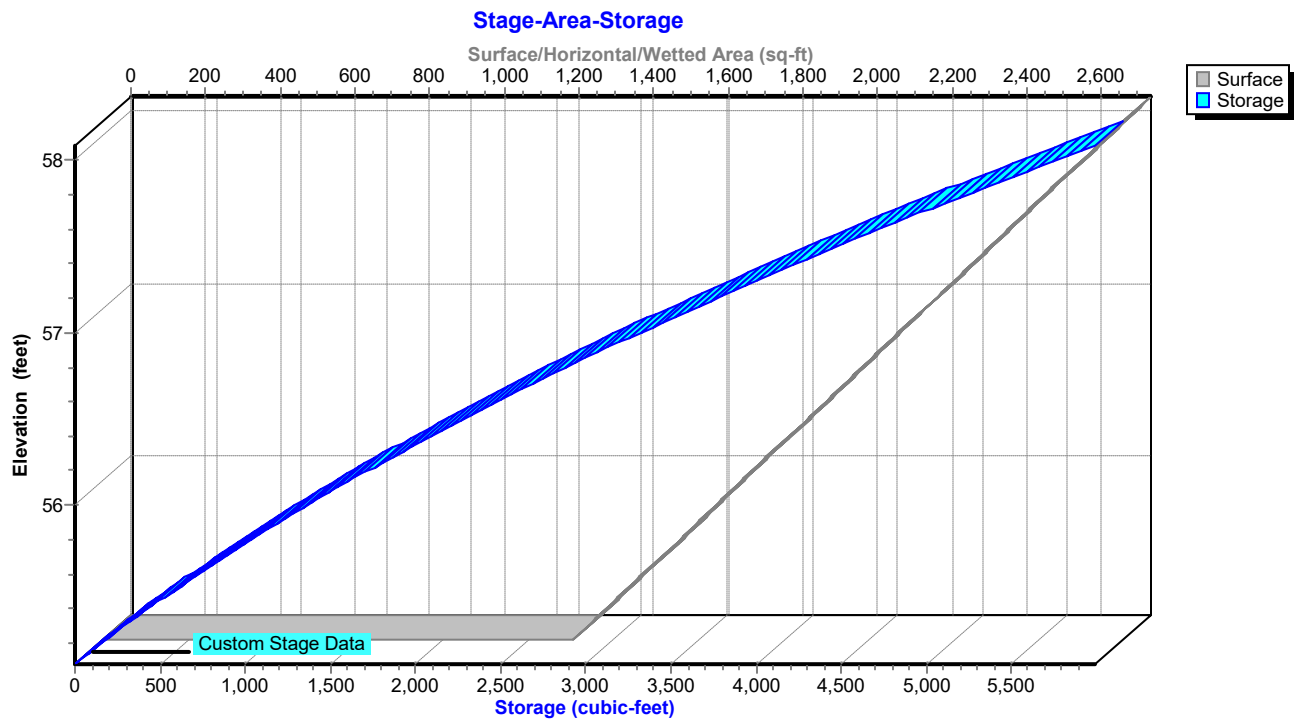
Pond 17P: SGW FOREBAY #1

Broad-Crested Rectangular Weir

Pond 17P: SGW FOREBAY #1



Pond 17P: SGW FOREBAY #1



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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 17P: SGW FOREBAY #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.09	8	55.09	0.00
5.50	0.10	173	55.21	0.00
6.00	0.11	361	55.35	0.00
6.50	0.13	580	55.50	0.00
7.00	0.16	841	55.68	0.00
7.50	0.18	1,148	55.87	0.00
8.00	0.21	1,503	56.08	0.00
8.50	0.24	1,531	56.09	0.24
9.00	0.27	1,533	56.09	0.27
9.50	0.35	1,538	56.10	0.35
10.00	0.44	1,543	56.10	0.44
10.50	0.54	1,548	56.10	0.54
11.00	0.88	1,564	56.11	0.88
11.50	1.59	1,592	56.13	1.56
12.00	8.95	2,168	56.44	7.26
12.50	2.47	3,924	57.26	3.28
13.00	1.13	3,616	57.13	1.73
13.50	0.71	3,379	57.02	0.83
14.00	0.56	3,053	56.87	1.00
14.50	0.47	2,700	56.71	0.72
15.00	0.37	2,327	56.52	0.80
15.50	0.33	1,959	56.33	0.91
16.00	0.31	1,625	56.15	0.75
16.50	0.28	1,534	56.10	0.28
17.00	0.26	1,532	56.09	0.26
17.50	0.23	1,530	56.09	0.23
18.00	0.21	1,529	56.09	0.21
18.50	0.20	1,528	56.09	0.20
19.00	0.19	1,527	56.09	0.19
19.50	0.19	1,527	56.09	0.19
20.00	0.18	1,526	56.09	0.18

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Stage-Area-Storage for Pond 17P: SGW FOREBAY #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
55.08	1,261	0	57.68	2,537	4,937
55.13	1,286	64	57.73	2,561	5,065
55.18	1,310	129	57.78	2,586	5,193
55.23	1,335	195	57.83	2,610	5,323
55.28	1,359	262	57.88	2,635	5,454
55.33	1,384	331	57.93	2,659	5,587
55.38	1,408	400	57.98	2,684	5,720
55.43	1,433	471	58.03	2,708	5,855
55.48	1,457	544	58.08	2,733	5,991
55.53	1,482	617			
55.58	1,506	692			
55.63	1,531	768			
55.68	1,555	845			
55.73	1,580	923			
55.78	1,604	1,003			
55.83	1,629	1,084			
55.88	1,654	1,166			
55.93	1,678	1,249			
55.98	1,703	1,334			
56.03	1,727	1,419			
56.08	1,752	1,506			
56.13	1,776	1,595			
56.18	1,801	1,684			
56.23	1,825	1,775			
56.28	1,850	1,866			
56.33	1,874	1,960			
56.38	1,899	2,054			
56.43	1,923	2,149			
56.48	1,948	2,246			
56.53	1,972	2,344			
56.58	1,997	2,444			
56.63	2,022	2,544			
56.68	2,046	2,646			
56.73	2,071	2,749			
56.78	2,095	2,853			
56.83	2,120	2,958			
56.88	2,144	3,065			
56.93	2,169	3,173			
56.98	2,193	3,282			
57.03	2,218	3,392			
57.08	2,242	3,503			
57.13	2,267	3,616			
57.18	2,291	3,730			
57.23	2,316	3,845			
57.28	2,340	3,962			
57.33	2,365	4,079			
57.38	2,390	4,198			
57.43	2,414	4,318			
57.48	2,439	4,440			
57.53	2,463	4,562			
57.58	2,488	4,686			
57.63	2,512	4,811			

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Pond 18P: SGW #1

Inflow Area = 2.672 ac, 72.01% Impervious, Inflow Depth > 3.93" for 10-Year event
 Inflow = 11.46 cfs @ 12.06 hrs, Volume= 0.875 af
 Outflow = 4.70 cfs @ 12.24 hrs, Volume= 0.875 af, Atten= 59%, Lag= 10.6 min
 Primary = 4.70 cfs @ 12.24 hrs, Volume= 0.875 af
 Routed to Link 2L : SP#1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 57.33' @ 12.24 hrs Surf.Area= 5,819 sf Storage= 11,240 cf

Plug-Flow detention time= 67.8 min calculated for 0.875 af (100% of inflow)
 Center-of-Mass det. time= 67.8 min (836.1 - 768.3)

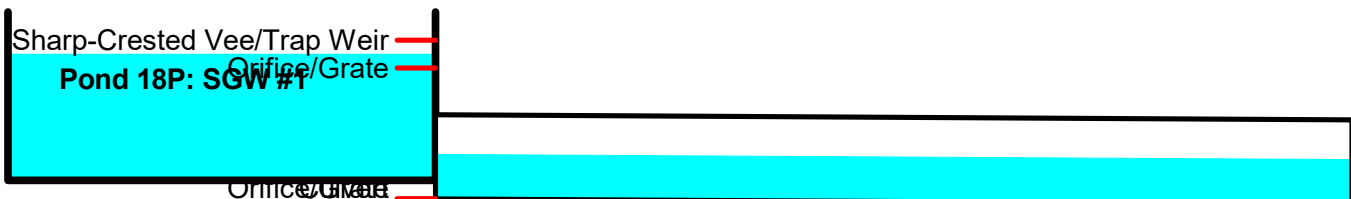
Volume	Invert	Avail.Storage	Storage Description
#1	55.08'	15,815 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.08	4,176	0	0
58.08	6,367	15,815	15,815

Device	Routing	Invert	Outlet Devices
#1	Primary	54.75'	18.0" Round Culvert L= 96.5' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 54.75' / 54.66' S= 0.0009 ' S= 0.0009 ' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	57.08'	2.0" x 1.0" Horiz. Orifice/Grate X 10.00 columns X 20 rows C= 0.600 in 24.0" x 24.0" Grate (69% open area) Limited to weir flow at low heads
#3	Device 1	54.75'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	57.58'	20.0 deg x 10.0' long x 0.50' rise Sharp-Crested Vee/Trap Weir Cv= 2.69 (C= 3.36)

Primary OutFlow Max=4.67 cfs @ 12.24 hrs HW=57.33' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 4.67 cfs of 8.84 cfs potential flow)
 2=Orifice/Grate (Weir Controls 3.22 cfs @ 1.63 fps)
 3=Orifice/Grate (Orifice Controls 1.44 cfs @ 7.35 fps)
 4=Sharp-Crested Vee/Trap Weir (Controls 0.00 cfs)



EX and PR

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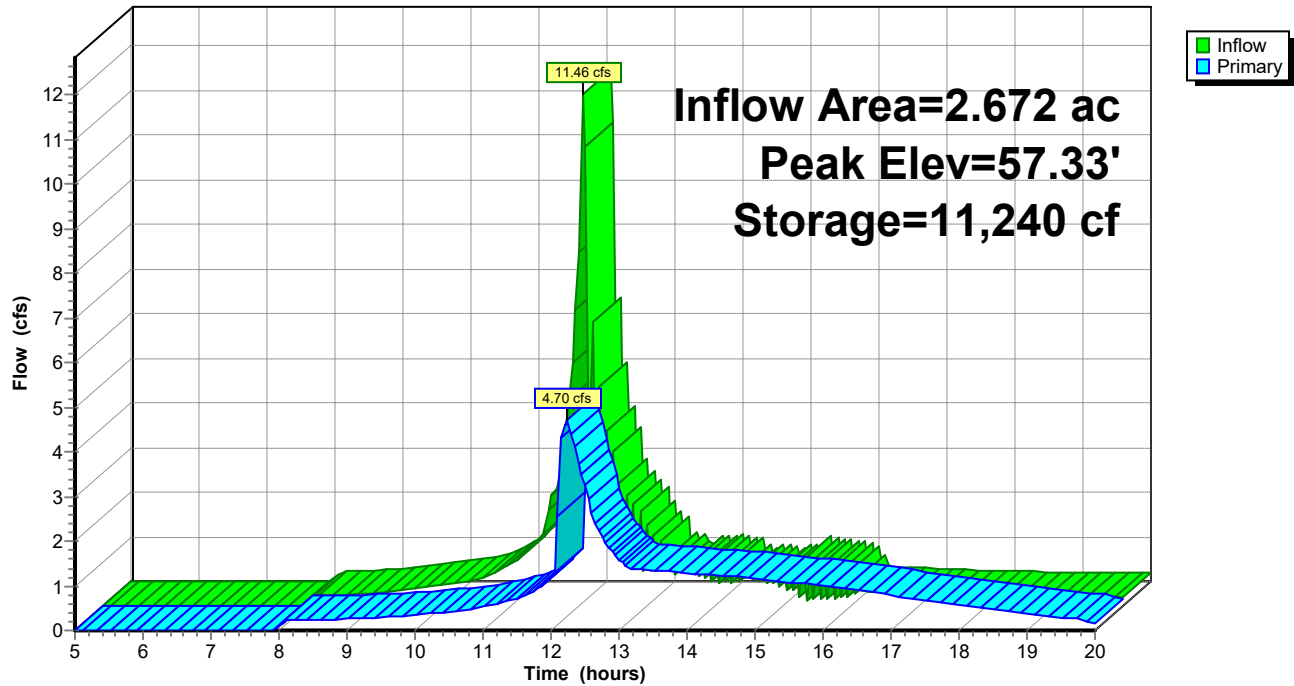
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NOAA 24-hr C 10-Year Rainfall=5.20"

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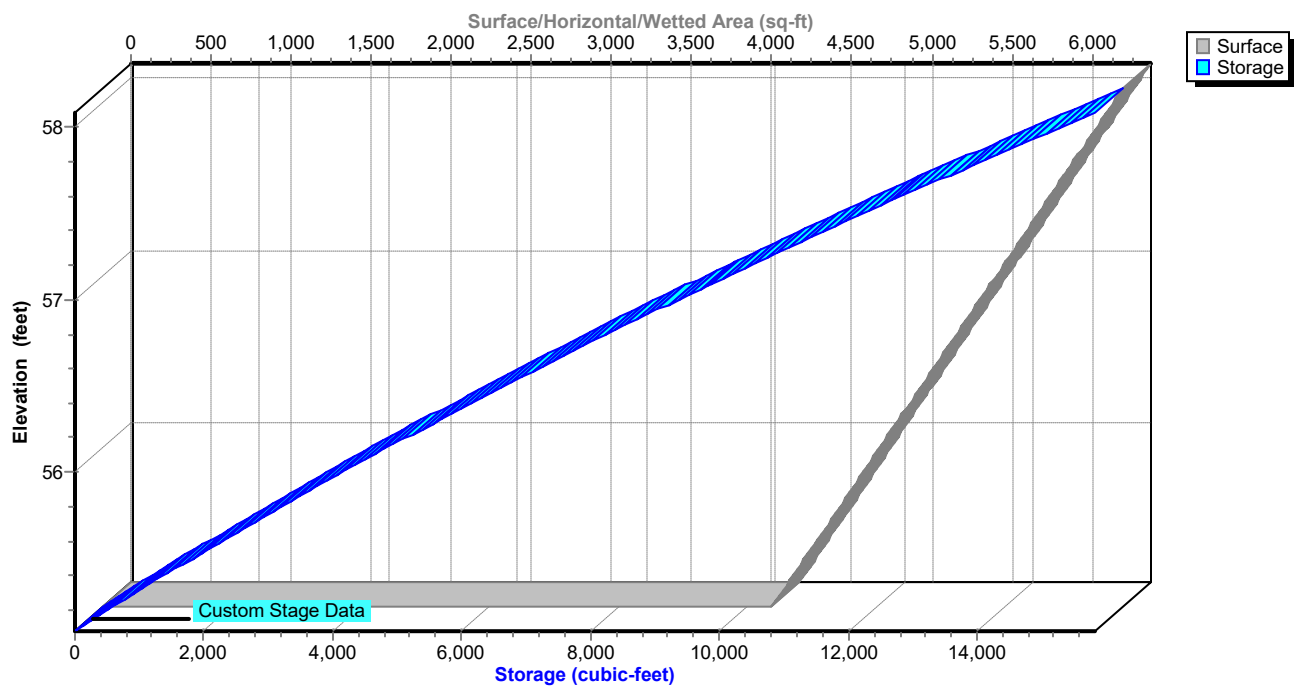
Pond 18P: SGW #1

Hydrograph



Pond 18P: SGW #1

Stage-Area-Storage



EX and PR

NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 18P: SGW #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	55.08	0.00
5.50	0.00	0	55.08	0.00
6.00	0.00	0	55.08	0.00
6.50	0.00	0	55.08	0.00
7.00	0.00	0	55.08	0.00
7.50	0.00	0	55.08	0.00
8.00	0.00	0	55.08	0.00
8.50	0.24	1	55.08	0.24
9.00	0.28	17	55.08	0.26
9.50	0.36	104	55.10	0.29
10.00	0.46	264	55.14	0.35
10.50	0.57	488	55.20	0.42
11.00	0.93	978	55.31	0.53
11.50	1.66	2,154	55.57	0.72
12.00	7.92	7,430	56.65	1.21
12.50	3.46	10,780	57.25	3.25
13.00	1.82	10,037	57.12	1.58
13.50	0.88	9,446	57.01	1.34
14.00	1.05	8,583	56.86	1.29
14.50	0.76	7,661	56.69	1.23
15.00	0.83	6,681	56.50	1.16
15.50	0.94	5,692	56.31	1.08
16.00	0.78	4,770	56.13	1.00
16.50	0.31	3,716	55.91	0.90
17.00	0.28	2,721	55.70	0.79
17.50	0.25	1,879	55.51	0.68
18.00	0.23	1,191	55.36	0.57
18.50	0.21	662	55.24	0.46
19.00	0.21	299	55.15	0.36
19.50	0.20	87	55.10	0.28
20.00	0.19	0	55.08	0.17

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Stage-Area-Storage for Pond 18P: SGW #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
55.08	4,176	0	57.68	6,075	13,326
55.13	4,213	210	57.73	6,111	13,631
55.18	4,249	421	57.78	6,148	13,937
55.23	4,286	635	57.83	6,184	14,246
55.28	4,322	850	57.88	6,221	14,556
55.33	4,359	1,067	57.93	6,257	14,868
55.38	4,395	1,286	57.98	6,294	15,181
55.43	4,432	1,506	58.03	6,330	15,497
55.48	4,468	1,729	58.08	6,367	15,815
55.53	4,505	1,953			
55.58	4,541	2,179			
55.63	4,578	2,407			
55.68	4,614	2,637			
55.73	4,651	2,869			
55.78	4,687	3,102			
55.83	4,724	3,337			
55.88	4,760	3,575			
55.93	4,797	3,813			
55.98	4,833	4,054			
56.03	4,870	4,297			
56.08	4,906	4,541			
56.13	4,943	4,787			
56.18	4,979	5,035			
56.23	5,016	5,285			
56.28	5,052	5,537			
56.33	5,089	5,791			
56.38	5,125	6,046			
56.43	5,162	6,303			
56.48	5,198	6,562			
56.53	5,235	6,823			
56.58	5,272	7,086			
56.63	5,308	7,350			
56.68	5,345	7,616			
56.73	5,381	7,885			
56.78	5,418	8,155			
56.83	5,454	8,426			
56.88	5,491	8,700			
56.93	5,527	8,975			
56.98	5,564	9,253			
57.03	5,600	9,532			
57.08	5,637	9,813			
57.13	5,673	10,095			
57.18	5,710	10,380			
57.23	5,746	10,666			
57.28	5,783	10,955			
57.33	5,819	11,245			
57.38	5,856	11,537			
57.43	5,892	11,830			
57.48	5,929	12,126			
57.53	5,965	12,423			
57.58	6,002	12,722			
57.63	6,038	13,023			

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NOAA 24-hr C 10-Year Rainfall=5.20"

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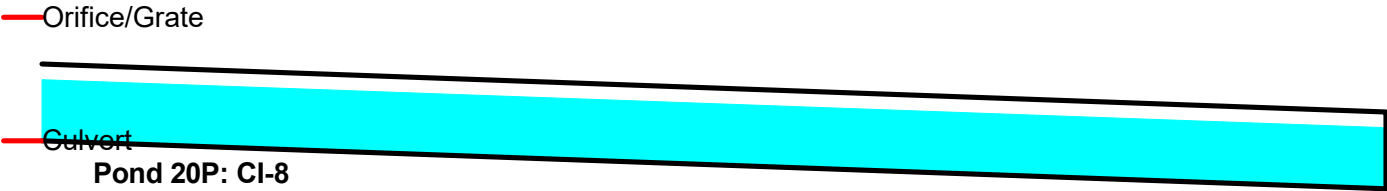
Summary for Pond 20P: CI-8

Inflow Area = 0.753 ac, 42.32% Impervious, Inflow Depth > 3.57" for 10-Year event
Inflow = 3.55 cfs @ 12.12 hrs, Volume= 0.224 af
Outflow = 3.55 cfs @ 12.12 hrs, Volume= 0.224 af, Atten= 0%, Lag= 0.0 min
Primary = 3.55 cfs @ 12.12 hrs, Volume= 0.224 af
Routed to Link 2L : SP#1

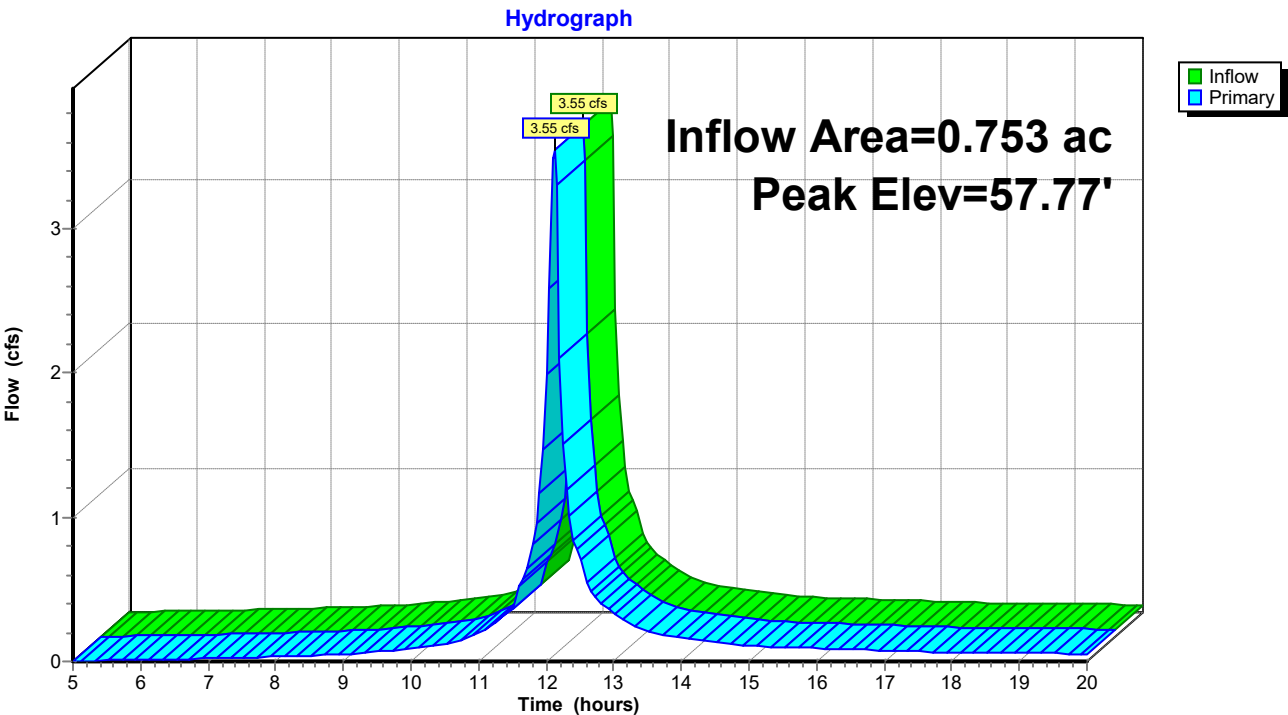
Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 57.77' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	58.79'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	56.78'	15.0" Round Culvert L= 75.5' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 56.78' / 56.00' S= 0.0103 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

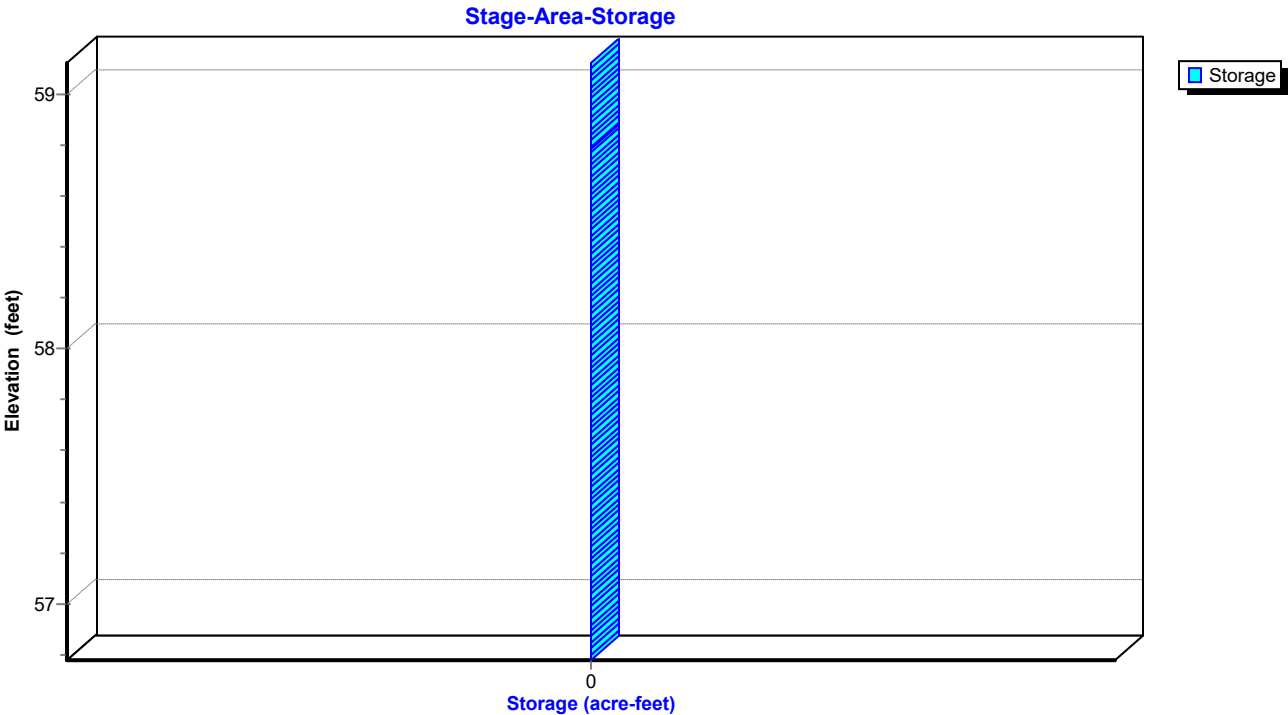
Primary OutFlow Max=3.43 cfs @ 12.12 hrs HW=57.75' TW=0.00' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Inlet Controls 3.43 cfs @ 3.35 fps)



Pond 20P: CI-8



Pond 20P: CI-8



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 20P: CI-8

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	56.81	0.00	18.00	0.06	56.89	0.06
5.25	0.01	56.81	0.01	18.25	0.06	56.89	0.06
5.50	0.01	56.82	0.01	18.50	0.06	56.89	0.06
5.75	0.01	56.82	0.01	18.75	0.06	56.89	0.06
6.00	0.01	56.83	0.01	19.00	0.06	56.89	0.06
6.25	0.01	56.83	0.01	19.25	0.06	56.89	0.06
6.50	0.01	56.84	0.01	19.50	0.05	56.89	0.05
6.75	0.02	56.84	0.02	19.75	0.05	56.88	0.05
7.00	0.02	56.84	0.02	20.00	0.05	56.88	0.05
7.25	0.02	56.85	0.02				
7.50	0.03	56.85	0.03				
7.75	0.03	56.86	0.03				
8.00	0.03	56.86	0.03				
8.25	0.04	56.87	0.04				
8.50	0.04	56.87	0.04				
8.75	0.04	56.87	0.04				
9.00	0.05	56.88	0.05				
9.25	0.06	56.89	0.06				
9.50	0.07	56.90	0.07				
9.75	0.08	56.91	0.08				
10.00	0.09	56.91	0.09				
10.25	0.10	56.92	0.10				
10.50	0.11	56.93	0.11				
10.75	0.15	56.96	0.15				
11.00	0.19	56.98	0.19				
11.25	0.27	57.02	0.27				
11.50	0.36	57.05	0.36				
11.75	0.68	57.17	0.68				
12.00	2.00	57.48	2.00				
12.25	1.51	57.37	1.51				
12.50	0.74	57.18	0.74				
12.75	0.44	57.09	0.44				
13.00	0.34	57.05	0.34				
13.25	0.26	57.02	0.26				
13.50	0.21	56.99	0.21				
13.75	0.18	56.97	0.18				
14.00	0.16	56.96	0.16				
14.25	0.15	56.96	0.15				
14.50	0.14	56.95	0.14				
14.75	0.12	56.94	0.12				
15.00	0.11	56.93	0.11				
15.25	0.10	56.92	0.10				
15.50	0.10	56.92	0.10				
15.75	0.09	56.92	0.09				
16.00	0.09	56.92	0.09				
16.25	0.09	56.91	0.09				
16.50	0.08	56.91	0.08				
16.75	0.08	56.91	0.08				
17.00	0.08	56.90	0.08				
17.25	0.07	56.90	0.07				
17.50	0.07	56.90	0.07				
17.75	0.07	56.90	0.07				

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Stage-Area-Storage for Pond 20P: CI-8

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
56.78	0.000	57.82	0.000	58.86	0.000
56.80	0.000	57.84	0.000	58.88	0.000
56.82	0.000	57.86	0.000	58.90	0.000
56.84	0.000	57.88	0.000	58.92	0.000
56.86	0.000	57.90	0.000	58.94	0.000
56.88	0.000	57.92	0.000	58.96	0.000
56.90	0.000	57.94	0.000	58.98	0.000
56.92	0.000	57.96	0.000	59.00	0.000
56.94	0.000	57.98	0.000	59.02	0.000
56.96	0.000	58.00	0.000	59.04	0.000
56.98	0.000	58.02	0.000	59.06	0.000
57.00	0.000	58.04	0.000	59.08	0.000
57.02	0.000	58.06	0.000	59.10	0.000
57.04	0.000	58.08	0.000	59.12	0.000
57.06	0.000	58.10	0.000		
57.08	0.000	58.12	0.000		
57.10	0.000	58.14	0.000		
57.12	0.000	58.16	0.000		
57.14	0.000	58.18	0.000		
57.16	0.000	58.20	0.000		
57.18	0.000	58.22	0.000		
57.20	0.000	58.24	0.000		
57.22	0.000	58.26	0.000		
57.24	0.000	58.28	0.000		
57.26	0.000	58.30	0.000		
57.28	0.000	58.32	0.000		
57.30	0.000	58.34	0.000		
57.32	0.000	58.36	0.000		
57.34	0.000	58.38	0.000		
57.36	0.000	58.40	0.000		
57.38	0.000	58.42	0.000		
57.40	0.000	58.44	0.000		
57.42	0.000	58.46	0.000		
57.44	0.000	58.48	0.000		
57.46	0.000	58.50	0.000		
57.48	0.000	58.52	0.000		
57.50	0.000	58.54	0.000		
57.52	0.000	58.56	0.000		
57.54	0.000	58.58	0.000		
57.56	0.000	58.60	0.000		
57.58	0.000	58.62	0.000		
57.60	0.000	58.64	0.000		
57.62	0.000	58.66	0.000		
57.64	0.000	58.68	0.000		
57.66	0.000	58.70	0.000		
57.68	0.000	58.72	0.000		
57.70	0.000	58.74	0.000		
57.72	0.000	58.76	0.000		
57.74	0.000	58.78	0.000		
57.76	0.000	58.80	0.000		
57.78	0.000	58.82	0.000		
57.80	0.000	58.84	0.000		

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NOAA 24-hr C 10-Year Rainfall=5.20"

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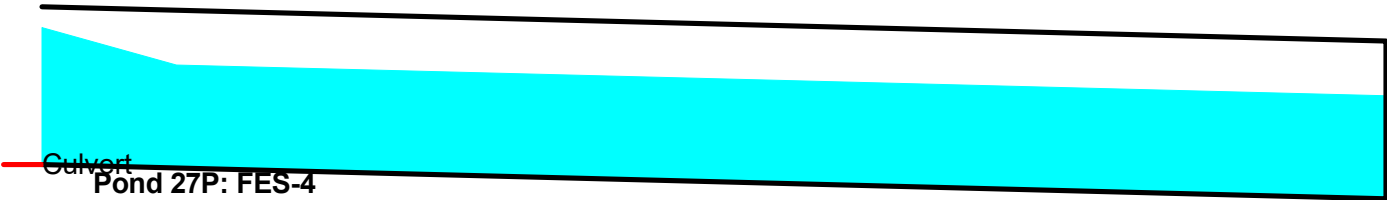
Summary for Pond 27P: FES-4

Inflow Area = 0.667 ac, 39.09% Impervious, Inflow Depth > 3.51" for 10-Year event
Inflow = 3.10 cfs @ 12.12 hrs, Volume= 0.195 af
Outflow = 3.10 cfs @ 12.12 hrs, Volume= 0.195 af, Atten= 0%, Lag= 0.0 min
Primary = 3.10 cfs @ 12.12 hrs, Volume= 0.195 af
Routed to Pond 20P : CI-8

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 58.13' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	57.05'	15.0" Round Culvert L= 25.5' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 57.05' / 56.78' S= 0.0106 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=2.69 cfs @ 12.12 hrs HW=58.09' TW=57.75' (Dynamic Tailwater)
↑1=Culvert (Outlet Controls 2.69 cfs @ 3.36 fps)



EX and PR

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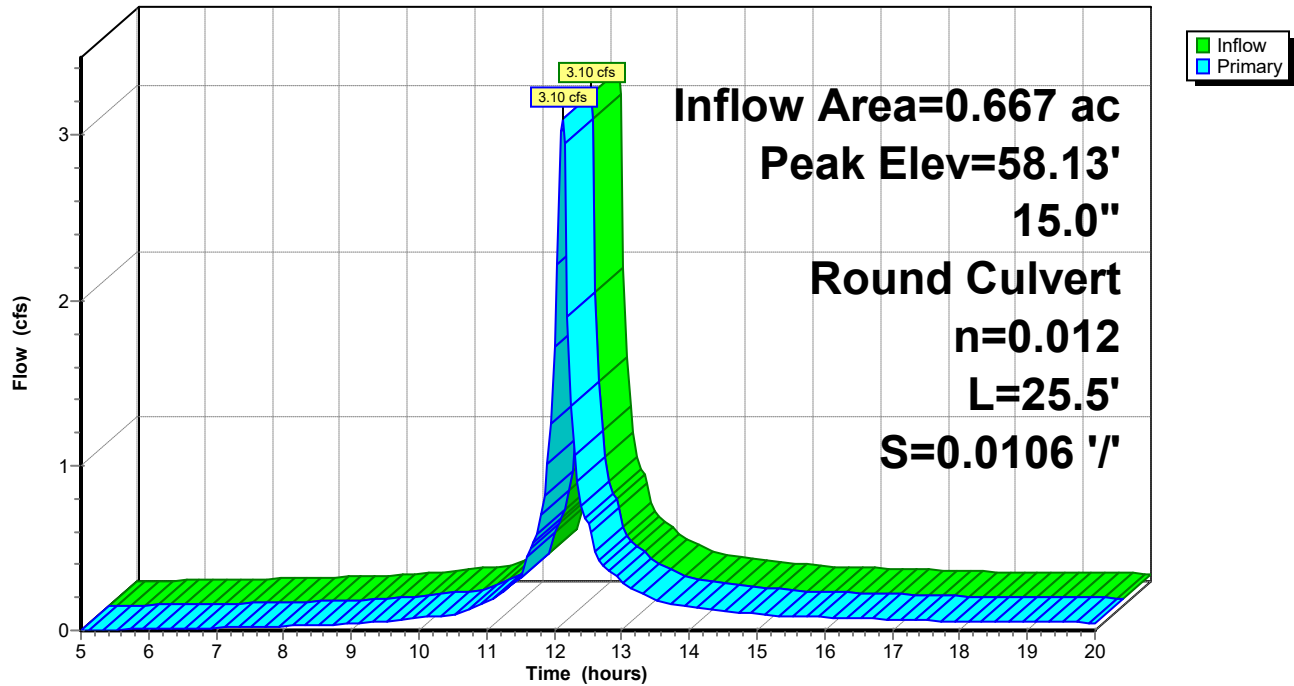
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NOAA 24-hr C 10-Year Rainfall=5.20"

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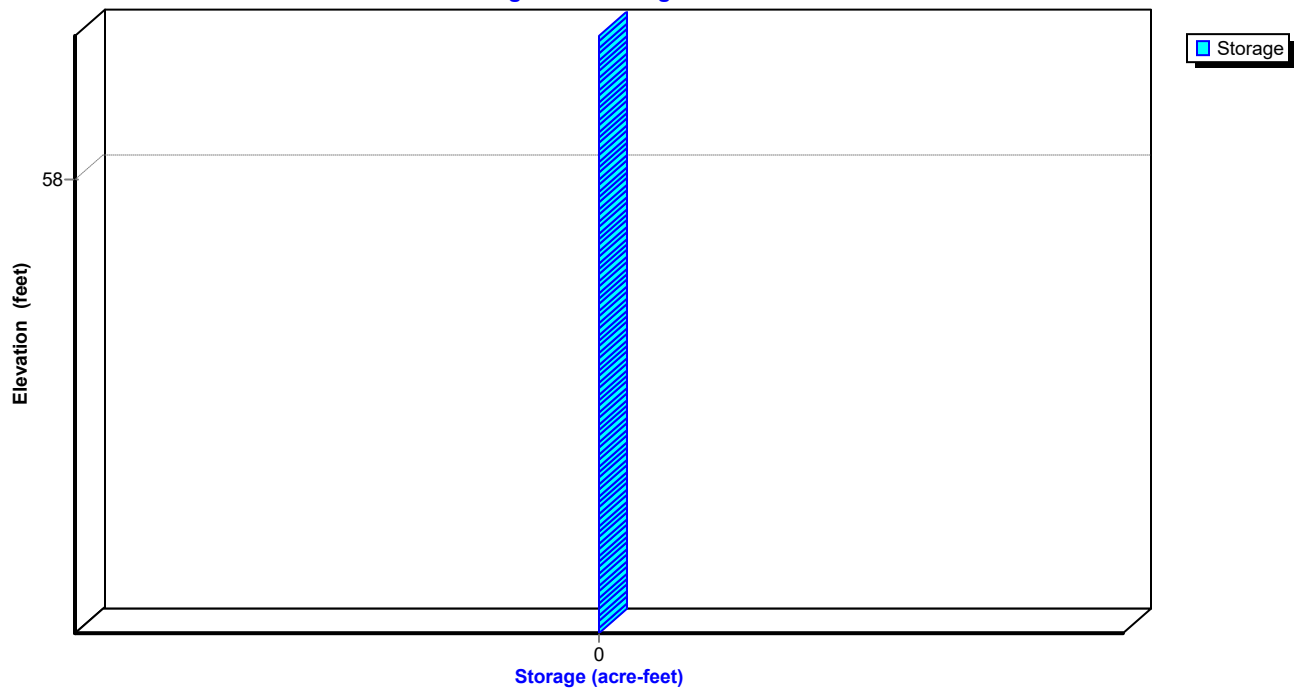
Pond 27P: FES-4

Hydrograph



Pond 27P: FES-4

Stage-Area-Storage



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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 27P: FES-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	57.07	0.00	18.00	0.05	57.16	0.05
5.25	0.00	57.08	0.00	18.25	0.05	57.16	0.05
5.50	0.00	57.08	0.00	18.50	0.05	57.16	0.05
5.75	0.01	57.09	0.01	18.75	0.05	57.16	0.05
6.00	0.01	57.09	0.01	19.00	0.05	57.16	0.05
6.25	0.01	57.10	0.01	19.25	0.05	57.15	0.05
6.50	0.01	57.10	0.01	19.50	0.05	57.15	0.05
6.75	0.01	57.10	0.01	19.75	0.05	57.15	0.05
7.00	0.02	57.11	0.02	20.00	0.05	57.15	0.05
7.25	0.02	57.11	0.02				
7.50	0.02	57.12	0.02				
7.75	0.02	57.12	0.02				
8.00	0.03	57.13	0.03				
8.25	0.03	57.13	0.03				
8.50	0.03	57.14	0.03				
8.75	0.04	57.14	0.04				
9.00	0.04	57.14	0.04				
9.25	0.05	57.15	0.05				
9.50	0.06	57.16	0.06				
9.75	0.06	57.17	0.06				
10.00	0.08	57.18	0.08				
10.25	0.09	57.19	0.09				
10.50	0.10	57.20	0.10				
10.75	0.13	57.22	0.13				
11.00	0.17	57.25	0.17				
11.25	0.23	57.28	0.23				
11.50	0.31	57.32	0.31				
11.75	0.59	57.44	0.59				
12.00	1.72	57.76	1.72				
12.25	1.36	57.75	1.36				
12.50	0.65	57.47	0.65				
12.75	0.39	57.36	0.39				
13.00	0.30	57.32	0.30				
13.25	0.23	57.29	0.23				
13.50	0.19	57.26	0.19				
13.75	0.16	57.24	0.16				
14.00	0.15	57.23	0.15				
14.25	0.13	57.22	0.13				
14.50	0.12	57.22	0.12				
14.75	0.11	57.21	0.11				
15.00	0.10	57.20	0.10				
15.25	0.09	57.19	0.09				
15.50	0.09	57.19	0.09				
15.75	0.08	57.19	0.08				
16.00	0.08	57.18	0.08				
16.25	0.08	57.18	0.08				
16.50	0.07	57.18	0.07				
16.75	0.07	57.18	0.07				
17.00	0.07	57.17	0.07				
17.25	0.06	57.17	0.06				
17.50	0.06	57.17	0.06				
17.75	0.06	57.16	0.06				

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Stage-Area-Storage for Pond 27P: FES-4

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.05	0.000	57.57	0.000	58.09	0.000
57.06	0.000	57.58	0.000	58.10	0.000
57.07	0.000	57.59	0.000	58.11	0.000
57.08	0.000	57.60	0.000	58.12	0.000
57.09	0.000	57.61	0.000	58.13	0.000
57.10	0.000	57.62	0.000	58.14	0.000
57.11	0.000	57.63	0.000	58.15	0.000
57.12	0.000	57.64	0.000	58.16	0.000
57.13	0.000	57.65	0.000	58.17	0.000
57.14	0.000	57.66	0.000	58.18	0.000
57.15	0.000	57.67	0.000	58.19	0.000
57.16	0.000	57.68	0.000	58.20	0.000
57.17	0.000	57.69	0.000	58.21	0.000
57.18	0.000	57.70	0.000	58.22	0.000
57.19	0.000	57.71	0.000	58.23	0.000
57.20	0.000	57.72	0.000	58.24	0.000
57.21	0.000	57.73	0.000	58.25	0.000
57.22	0.000	57.74	0.000	58.26	0.000
57.23	0.000	57.75	0.000	58.27	0.000
57.24	0.000	57.76	0.000	58.28	0.000
57.25	0.000	57.77	0.000	58.29	0.000
57.26	0.000	57.78	0.000	58.30	0.000
57.27	0.000	57.79	0.000		
57.28	0.000	57.80	0.000		
57.29	0.000	57.81	0.000		
57.30	0.000	57.82	0.000		
57.31	0.000	57.83	0.000		
57.32	0.000	57.84	0.000		
57.33	0.000	57.85	0.000		
57.34	0.000	57.86	0.000		
57.35	0.000	57.87	0.000		
57.36	0.000	57.88	0.000		
57.37	0.000	57.89	0.000		
57.38	0.000	57.90	0.000		
57.39	0.000	57.91	0.000		
57.40	0.000	57.92	0.000		
57.41	0.000	57.93	0.000		
57.42	0.000	57.94	0.000		
57.43	0.000	57.95	0.000		
57.44	0.000	57.96	0.000		
57.45	0.000	57.97	0.000		
57.46	0.000	57.98	0.000		
57.47	0.000	57.99	0.000		
57.48	0.000	58.00	0.000		
57.49	0.000	58.01	0.000		
57.50	0.000	58.02	0.000		
57.51	0.000	58.03	0.000		
57.52	0.000	58.04	0.000		
57.53	0.000	58.05	0.000		
57.54	0.000	58.06	0.000		
57.55	0.000	58.07	0.000		
57.56	0.000	58.08	0.000		

EX and PR

Prepared by Rauch Inc
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NOAA 24-hr C 10-Year Rainfall=5.20"
Printed 5/1/2024

Summary for Pond 37P: CI-4

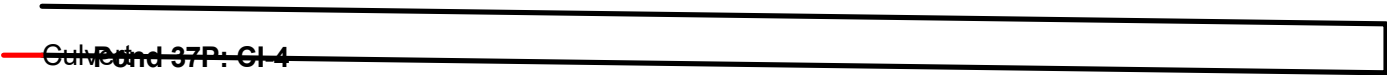
Inflow Area = 0.214 ac, 70.69% Impervious, Inflow Depth > 4.11" for 10-Year event
Inflow = 1.25 cfs @ 12.07 hrs, Volume= 0.073 af
Outflow = 1.25 cfs @ 12.07 hrs, Volume= 0.073 af, Atten= 0%, Lag= 0.0 min
Primary = 1.25 cfs @ 12.07 hrs, Volume= 0.073 af
Routed to Pond 17P : SGW FOREBAY #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 57.33' @ 12.34 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	59.64'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	55.53'	15.0" Round Culvert L= 89.2' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 55.53' / 55.08' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

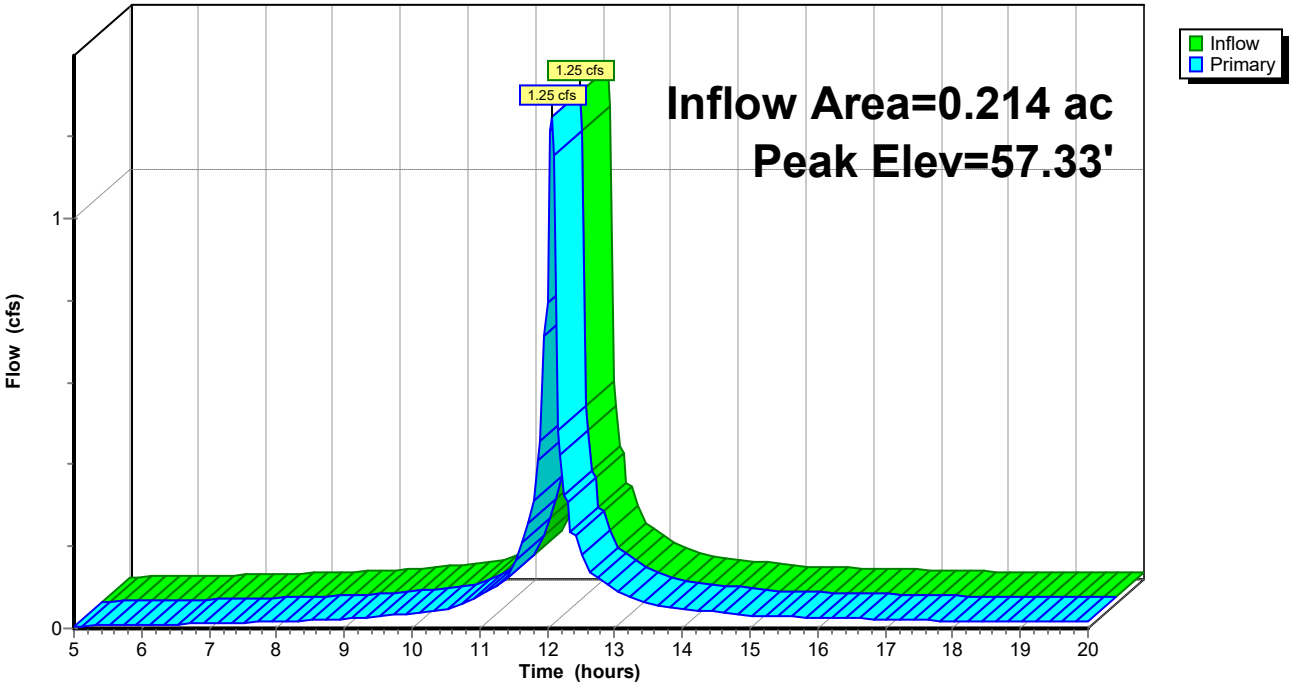
Primary OutFlow Max=0.00 cfs @ 12.07 hrs HW=56.61' TW=56.75' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate



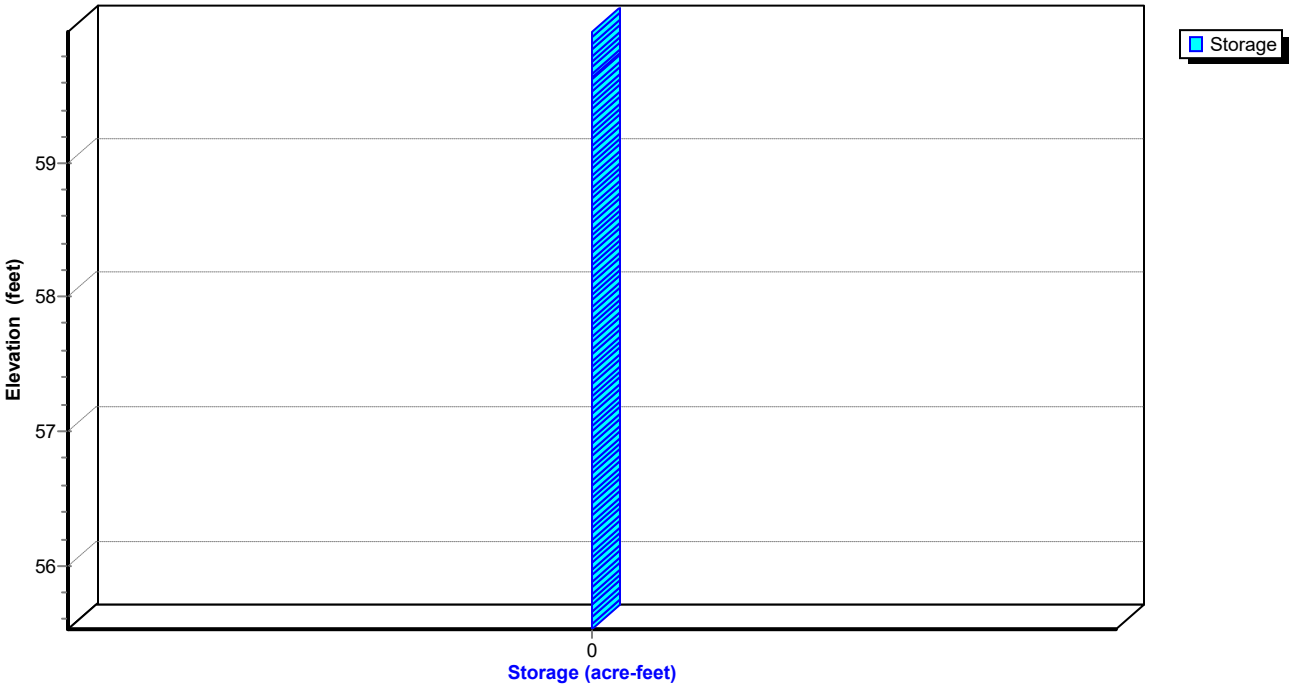
Pond 37P: CI-4

Hydrograph



Pond 37P: CI-4

Stage-Area-Storage



EX and PR

Prepared by Rauch Inc

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Pond 37P: CI-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	55.57	0.01	18.00	0.02	56.09	0.02
5.25	0.01	55.58	0.01	18.25	0.02	56.09	0.02
5.50	0.01	55.58	0.01	18.50	0.02	56.09	0.02
5.75	0.01	55.58	0.01	18.75	0.02	56.09	0.02
6.00	0.01	55.59	0.01	19.00	0.02	56.09	0.02
6.25	0.01	55.60	0.01	19.25	0.02	56.09	0.02
6.50	0.01	55.61	0.01	19.50	0.02	56.09	0.02
6.75	0.01	55.63	0.01	19.75	0.02	56.09	0.02
7.00	0.01	55.67	0.01	20.00	0.02	56.09	0.02
7.25	0.01	55.75	0.01				
7.50	0.01	55.85	0.01				
7.75	0.02	55.95	0.02				
8.00	0.02	56.06	0.02				
8.25	0.02	56.09	0.02				
8.50	0.02	56.09	0.02				
8.75	0.02	56.09	0.02				
9.00	0.02	56.10	0.02				
9.25	0.03	56.10	0.03				
9.50	0.03	56.10	0.03				
9.75	0.03	56.10	0.03				
10.00	0.04	56.10	0.04				
10.25	0.04	56.10	0.04				
10.50	0.05	56.10	0.05				
10.75	0.06	56.11	0.06				
11.00	0.08	56.11	0.08				
11.25	0.11	56.12	0.11				
11.50	0.14	56.13	0.14				
11.75	0.29	56.17	0.29				
12.00	0.80	56.36	0.80				
12.25	0.32	57.31	0.32				
12.50	0.21	57.28	0.21				
12.75	0.12	57.19	0.12				
13.00	0.10	57.14	0.10				
13.25	0.07	57.09	0.07				
13.50	0.06	57.04	0.06				
13.75	0.05	56.97	0.05				
14.00	0.05	56.89	0.05				
14.25	0.04	56.81	0.04				
14.50	0.04	56.72	0.04				
14.75	0.04	56.63	0.04				
15.00	0.03	56.54	0.03				
15.25	0.03	56.45	0.03				
15.50	0.03	56.35	0.03				
15.75	0.03	56.26	0.03				
16.00	0.03	56.16	0.03				
16.25	0.03	56.10	0.03				
16.50	0.02	56.10	0.02				
16.75	0.02	56.10	0.02				
17.00	0.02	56.09	0.02				
17.25	0.02	56.09	0.02				
17.50	0.02	56.09	0.02				
17.75	0.02	56.09	0.02				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Stage-Area-Storage for Pond 37P: CI-4

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
55.53	0.000	58.13	0.000
55.58	0.000	58.18	0.000
55.63	0.000	58.23	0.000
55.68	0.000	58.28	0.000
55.73	0.000	58.33	0.000
55.78	0.000	58.38	0.000
55.83	0.000	58.43	0.000
55.88	0.000	58.48	0.000
55.93	0.000	58.53	0.000
55.98	0.000	58.58	0.000
56.03	0.000	58.63	0.000
56.08	0.000	58.68	0.000
56.13	0.000	58.73	0.000
56.18	0.000	58.78	0.000
56.23	0.000	58.83	0.000
56.28	0.000	58.88	0.000
56.33	0.000	58.93	0.000
56.38	0.000	58.98	0.000
56.43	0.000	59.03	0.000
56.48	0.000	59.08	0.000
56.53	0.000	59.13	0.000
56.58	0.000	59.18	0.000
56.63	0.000	59.23	0.000
56.68	0.000	59.28	0.000
56.73	0.000	59.33	0.000
56.78	0.000	59.38	0.000
56.83	0.000	59.43	0.000
56.88	0.000	59.48	0.000
56.93	0.000	59.53	0.000
56.98	0.000	59.58	0.000
57.03	0.000	59.63	0.000
57.08	0.000	59.68	0.000
57.13	0.000	59.73	0.000
57.18	0.000	59.78	0.000
57.23	0.000	59.83	0.000
57.28	0.000	59.88	0.000
57.33	0.000	59.93	0.000
57.38	0.000		
57.43	0.000		
57.48	0.000		
57.53	0.000		
57.58	0.000		
57.63	0.000		
57.68	0.000		
57.73	0.000		
57.78	0.000		
57.83	0.000		
57.88	0.000		
57.93	0.000		
57.98	0.000		
58.03	0.000		
58.08	0.000		

EX and PR

Prepared by Rauch Inc
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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Pond 38P: CI-1

Inflow Area = 1.749 ac, 78.72% Impervious, Inflow Depth > 4.21" for 10-Year event
Inflow = 9.87 cfs @ 12.07 hrs, Volume= 0.613 af
Outflow = 9.87 cfs @ 12.07 hrs, Volume= 0.613 af, Atten= 0%, Lag= 0.0 min
Primary = 9.87 cfs @ 12.07 hrs, Volume= 0.613 af
Routed to Pond 17P : SGW FOREBAY #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 57.82' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.41'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	55.43'	18.0" Round Culvert L= 46.3' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 55.43' / 55.08' S= 0.0076 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=8.53 cfs @ 12.07 hrs HW=57.74' TW=56.73' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Inlet Controls 8.53 cfs @ 4.83 fps)

Orifice/Grate

Culvert Pond 38P: CI-1

EX and PR

Prepared by Rauch Inc

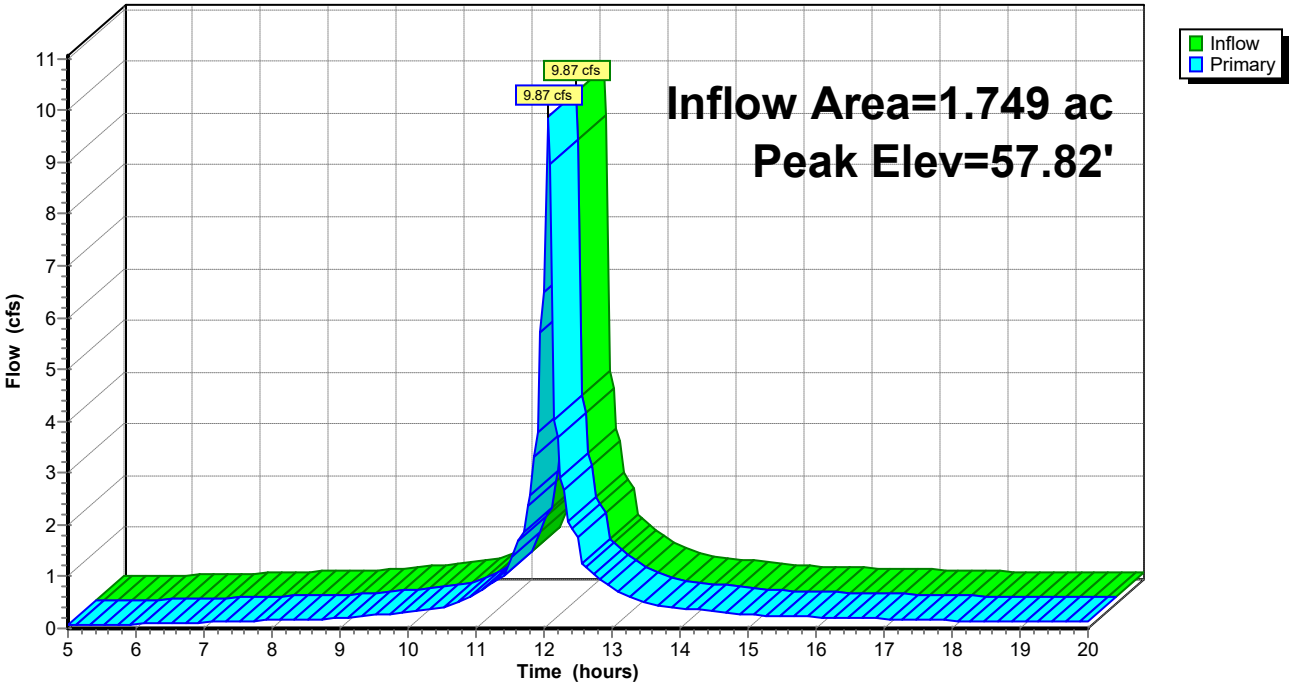
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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

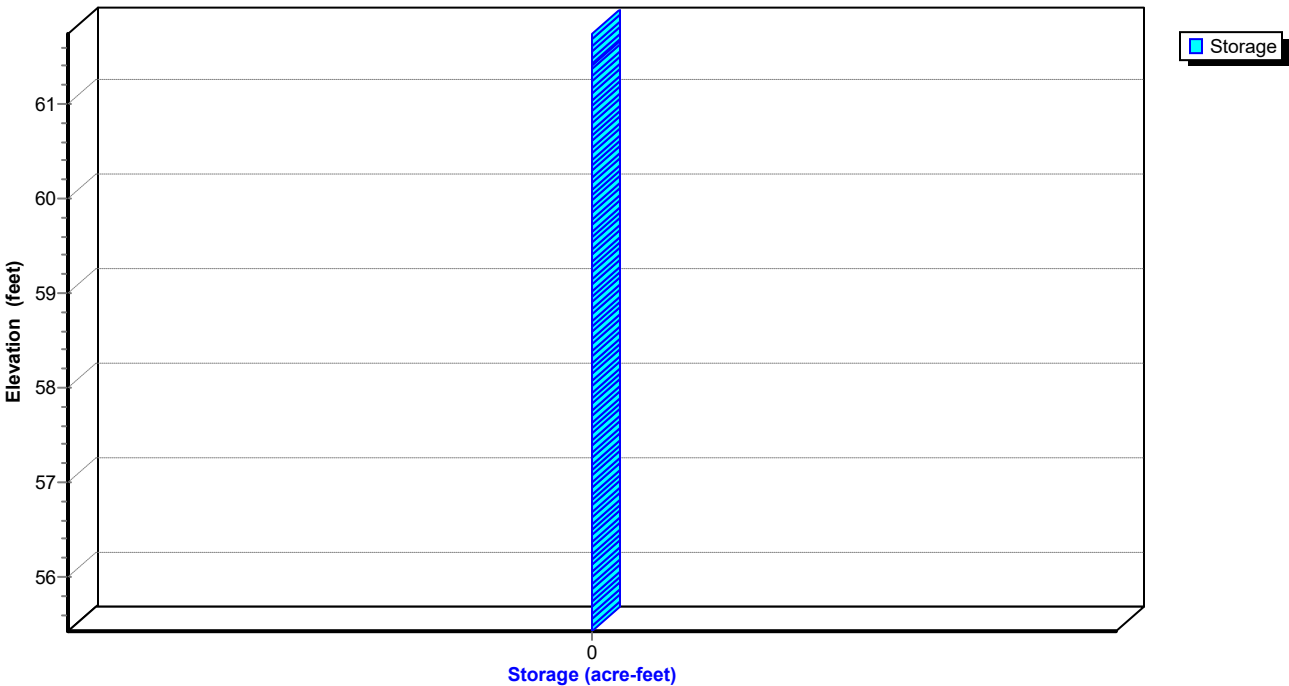
Pond 38P: CI-1

Hydrograph



Pond 38P: CI-1

Stage-Area-Storage



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 38P: CI-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.07	55.55	0.07	18.00	0.15	56.10	0.15
5.25	0.07	55.55	0.07	18.25	0.14	56.10	0.14
5.50	0.08	55.56	0.08	18.50	0.14	56.10	0.14
5.75	0.08	55.57	0.08	18.75	0.14	56.10	0.14
6.00	0.08	55.58	0.08	19.00	0.14	56.09	0.14
6.25	0.09	55.60	0.09	19.25	0.13	56.09	0.13
6.50	0.10	55.62	0.10	19.50	0.13	56.09	0.13
6.75	0.11	55.65	0.11	19.75	0.13	56.09	0.13
7.00	0.12	55.70	0.12	20.00	0.13	56.09	0.13
7.25	0.13	55.78	0.13				
7.50	0.14	55.86	0.14				
7.75	0.15	55.96	0.15				
8.00	0.16	56.06	0.16				
8.25	0.17	56.10	0.17				
8.50	0.17	56.10	0.17				
8.75	0.19	56.10	0.19				
9.00	0.20	56.10	0.20				
9.25	0.23	56.10	0.23				
9.50	0.26	56.11	0.26				
9.75	0.29	56.11	0.29				
10.00	0.32	56.11	0.32				
10.25	0.36	56.12	0.36				
10.50	0.39	56.12	0.39				
10.75	0.52	56.14	0.52				
11.00	0.64	56.16	0.64				
11.25	0.89	56.20	0.89				
11.50	1.16	56.24	1.16				
11.75	2.38	56.41	2.38				
12.00	6.50	56.94	6.50				
12.25	2.90	57.43	2.90				
12.50	1.75	57.32	1.75				
12.75	1.02	57.21	1.02				
13.00	0.80	57.14	0.80				
13.25	0.62	57.10	0.62				
13.50	0.50	57.04	0.50				
13.75	0.43	56.97	0.43				
14.00	0.40	56.89	0.40				
14.25	0.36	56.81	0.36				
14.50	0.33	56.73	0.33				
14.75	0.30	56.64	0.30				
15.00	0.26	56.54	0.26				
15.25	0.25	56.45	0.25				
15.50	0.24	56.35	0.24				
15.75	0.23	56.26	0.23				
16.00	0.22	56.17	0.22				
16.25	0.21	56.10	0.21				
16.50	0.20	56.10	0.20				
16.75	0.19	56.10	0.19				
17.00	0.18	56.10	0.18				
17.25	0.17	56.10	0.17				
17.50	0.17	56.10	0.17				
17.75	0.16	56.10	0.16				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Stage-Area-Storage for Pond 38P: CI-1

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
55.43	0.000	58.03	0.000	60.63	0.000
55.48	0.000	58.08	0.000	60.68	0.000
55.53	0.000	58.13	0.000	60.73	0.000
55.58	0.000	58.18	0.000	60.78	0.000
55.63	0.000	58.23	0.000	60.83	0.000
55.68	0.000	58.28	0.000	60.88	0.000
55.73	0.000	58.33	0.000	60.93	0.000
55.78	0.000	58.38	0.000	60.98	0.000
55.83	0.000	58.43	0.000	61.03	0.000
55.88	0.000	58.48	0.000	61.08	0.000
55.93	0.000	58.53	0.000	61.13	0.000
55.98	0.000	58.58	0.000	61.18	0.000
56.03	0.000	58.63	0.000	61.23	0.000
56.08	0.000	58.68	0.000	61.28	0.000
56.13	0.000	58.73	0.000	61.33	0.000
56.18	0.000	58.78	0.000	61.38	0.000
56.23	0.000	58.83	0.000	61.43	0.000
56.28	0.000	58.88	0.000	61.48	0.000
56.33	0.000	58.93	0.000	61.53	0.000
56.38	0.000	58.98	0.000	61.58	0.000
56.43	0.000	59.03	0.000	61.63	0.000
56.48	0.000	59.08	0.000	61.68	0.000
56.53	0.000	59.13	0.000	61.73	0.000
56.58	0.000	59.18	0.000		
56.63	0.000	59.23	0.000		
56.68	0.000	59.28	0.000		
56.73	0.000	59.33	0.000		
56.78	0.000	59.38	0.000		
56.83	0.000	59.43	0.000		
56.88	0.000	59.48	0.000		
56.93	0.000	59.53	0.000		
56.98	0.000	59.58	0.000		
57.03	0.000	59.63	0.000		
57.08	0.000	59.68	0.000		
57.13	0.000	59.73	0.000		
57.18	0.000	59.78	0.000		
57.23	0.000	59.83	0.000		
57.28	0.000	59.88	0.000		
57.33	0.000	59.93	0.000		
57.38	0.000	59.98	0.000		
57.43	0.000	60.03	0.000		
57.48	0.000	60.08	0.000		
57.53	0.000	60.13	0.000		
57.58	0.000	60.18	0.000		
57.63	0.000	60.23	0.000		
57.68	0.000	60.28	0.000		
57.73	0.000	60.33	0.000		
57.78	0.000	60.38	0.000		
57.83	0.000	60.43	0.000		
57.88	0.000	60.48	0.000		
57.93	0.000	60.53	0.000		
57.98	0.000	60.58	0.000		

EX and PR

Prepared by Rauch Inc
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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Pond 39P: CI-9

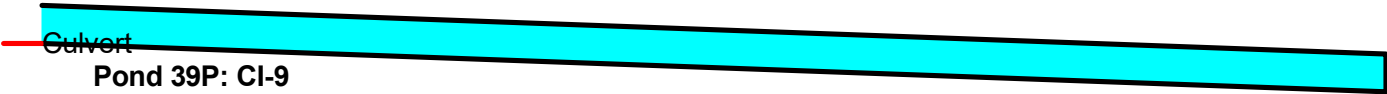
Inflow Area = 1.554 ac, 77.64% Impervious, Inflow Depth > 4.18" for 10-Year event
Inflow = 8.70 cfs @ 12.07 hrs, Volume= 0.542 af
Outflow = 8.70 cfs @ 12.07 hrs, Volume= 0.542 af, Atten= 0%, Lag= 0.0 min
Primary = 8.70 cfs @ 12.07 hrs, Volume= 0.542 af
Routed to Pond 38P : CI-1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.10' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.44'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.03'	15.0" Round Culvert L= 172.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.03' / 55.43' S= 0.0093 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=7.65 cfs @ 12.07 hrs HW=60.71' TW=57.74' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 7.65 cfs @ 6.23 fps)

Orifice/Grate



EX and PR

Prepared by Rauch Inc

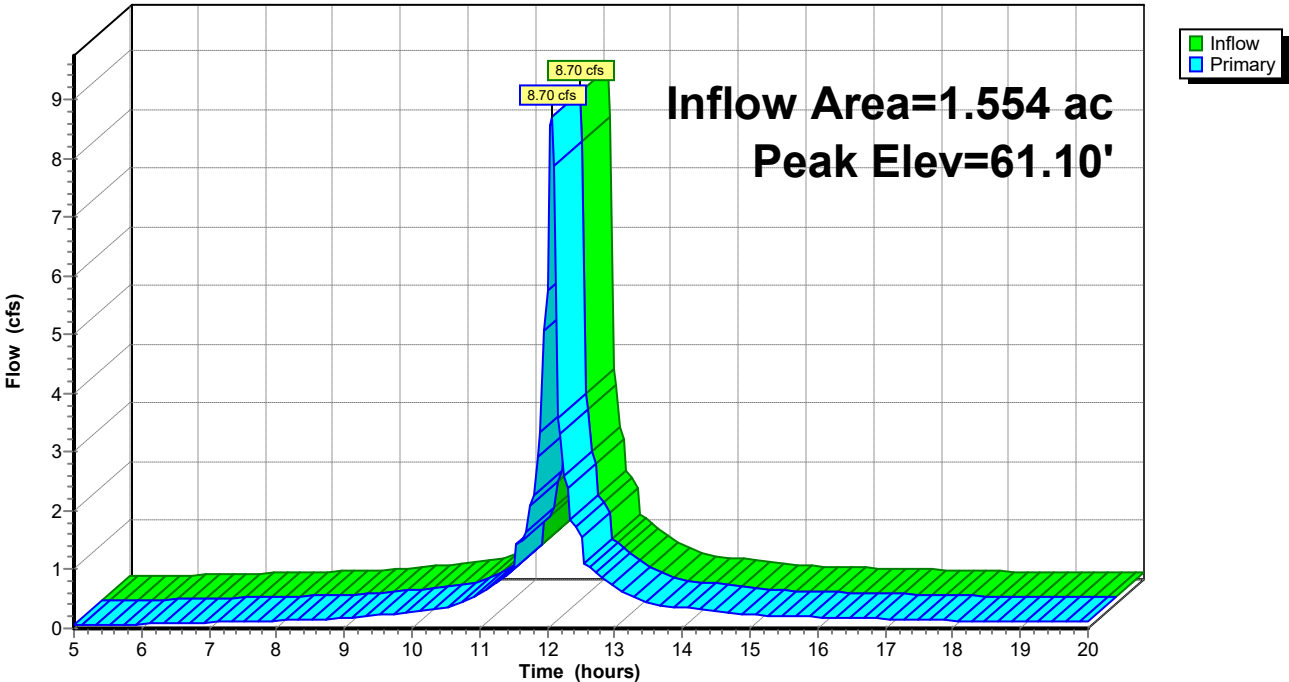
HydroCAD® 10.20-3g s/n 02413 © 2023 HydroCAD Software Solutions LLC

NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

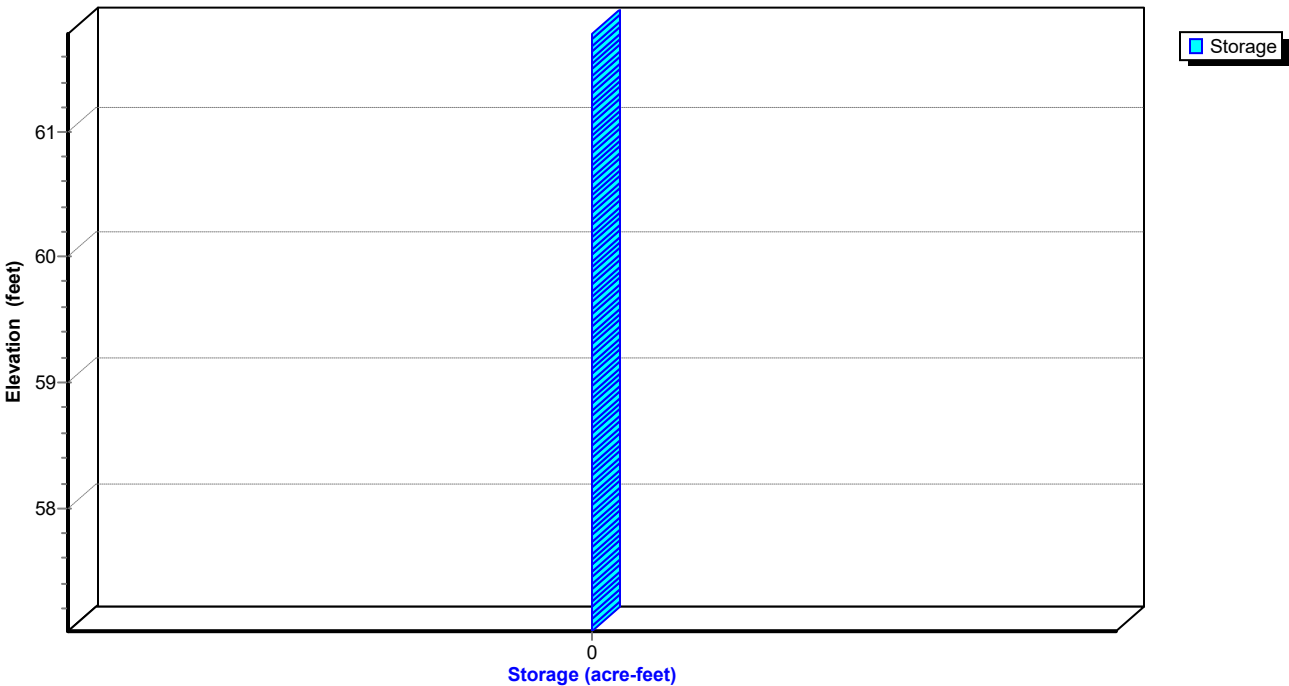
Pond 39P: CI-9

Hydrograph



Pond 39P: CI-9

Stage-Area-Storage



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Pond 39P: CI-9

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.06	57.14	0.06	18.00	0.13	57.21	0.13
5.25	0.06	57.14	0.06	18.25	0.13	57.21	0.13
5.50	0.06	57.15	0.06	18.50	0.13	57.21	0.13
5.75	0.07	57.15	0.07	18.75	0.12	57.20	0.12
6.00	0.07	57.15	0.07	19.00	0.12	57.20	0.12
6.25	0.08	57.16	0.08	19.25	0.12	57.20	0.12
6.50	0.09	57.17	0.09	19.50	0.12	57.20	0.12
6.75	0.09	57.17	0.09	19.75	0.12	57.20	0.12
7.00	0.10	57.18	0.10	20.00	0.11	57.20	0.11
7.25	0.11	57.18	0.11				
7.50	0.12	57.19	0.12				
7.75	0.13	57.20	0.13				
8.00	0.14	57.21	0.14				
8.25	0.14	57.22	0.14				
8.50	0.15	57.22	0.15				
8.75	0.16	57.23	0.16				
9.00	0.17	57.23	0.17				
9.25	0.20	57.25	0.20				
9.50	0.22	57.26	0.22				
9.75	0.25	57.28	0.25				
10.00	0.28	57.29	0.28				
10.25	0.31	57.30	0.31				
10.50	0.35	57.31	0.35				
10.75	0.46	57.36	0.46				
11.00	0.56	57.39	0.56				
11.25	0.78	57.46	0.78				
11.50	1.02	57.52	1.02				
11.75	2.10	57.75	2.10				
12.00	5.75	58.60	5.75				
12.25	2.59	58.08	2.59				
12.50	1.55	57.85	1.55				
12.75	0.91	57.66	0.91				
13.00	0.71	57.58	0.71				
13.25	0.55	57.51	0.55				
13.50	0.45	57.46	0.45				
13.75	0.38	57.42	0.38				
14.00	0.35	57.39	0.35				
14.25	0.32	57.37	0.32				
14.50	0.30	57.34	0.30				
14.75	0.26	57.32	0.26				
15.00	0.23	57.29	0.23				
15.25	0.22	57.28	0.22				
15.50	0.21	57.27	0.21				
15.75	0.20	57.26	0.20				
16.00	0.19	57.25	0.19				
16.25	0.19	57.24	0.19				
16.50	0.18	57.24	0.18				
16.75	0.17	57.23	0.17				
17.00	0.16	57.23	0.16				
17.25	0.15	57.22	0.15				
17.50	0.15	57.22	0.15				
17.75	0.14	57.21	0.14				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Stage-Area-Storage for Pond 39P: CI-9

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.03	0.000	59.63	0.000
57.08	0.000	59.68	0.000
57.13	0.000	59.73	0.000
57.18	0.000	59.78	0.000
57.23	0.000	59.83	0.000
57.28	0.000	59.88	0.000
57.33	0.000	59.93	0.000
57.38	0.000	59.98	0.000
57.43	0.000	60.03	0.000
57.48	0.000	60.08	0.000
57.53	0.000	60.13	0.000
57.58	0.000	60.18	0.000
57.63	0.000	60.23	0.000
57.68	0.000	60.28	0.000
57.73	0.000	60.33	0.000
57.78	0.000	60.38	0.000
57.83	0.000	60.43	0.000
57.88	0.000	60.48	0.000
57.93	0.000	60.53	0.000
57.98	0.000	60.58	0.000
58.03	0.000	60.63	0.000
58.08	0.000	60.68	0.000
58.13	0.000	60.73	0.000
58.18	0.000	60.78	0.000
58.23	0.000	60.83	0.000
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000		
59.23	0.000		
59.28	0.000		
59.33	0.000		
59.38	0.000		
59.43	0.000		
59.48	0.000		
59.53	0.000		
59.58	0.000		

EX and PR

Prepared by Rauch Inc

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Summary for Pond 40P: CI-6

Inflow Area = 0.382 ac, 58.96% Impervious, Inflow Depth > 3.84" for 10-Year event
Inflow = 1.77 cfs @ 12.08 hrs, Volume= 0.122 af
Outflow = 1.77 cfs @ 12.08 hrs, Volume= 0.122 af, Atten= 0%, Lag= 0.0 min
Primary = 1.77 cfs @ 12.08 hrs, Volume= 0.122 af
Routed to Pond 39P : CI-9

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.25' @ 12.13 hrs

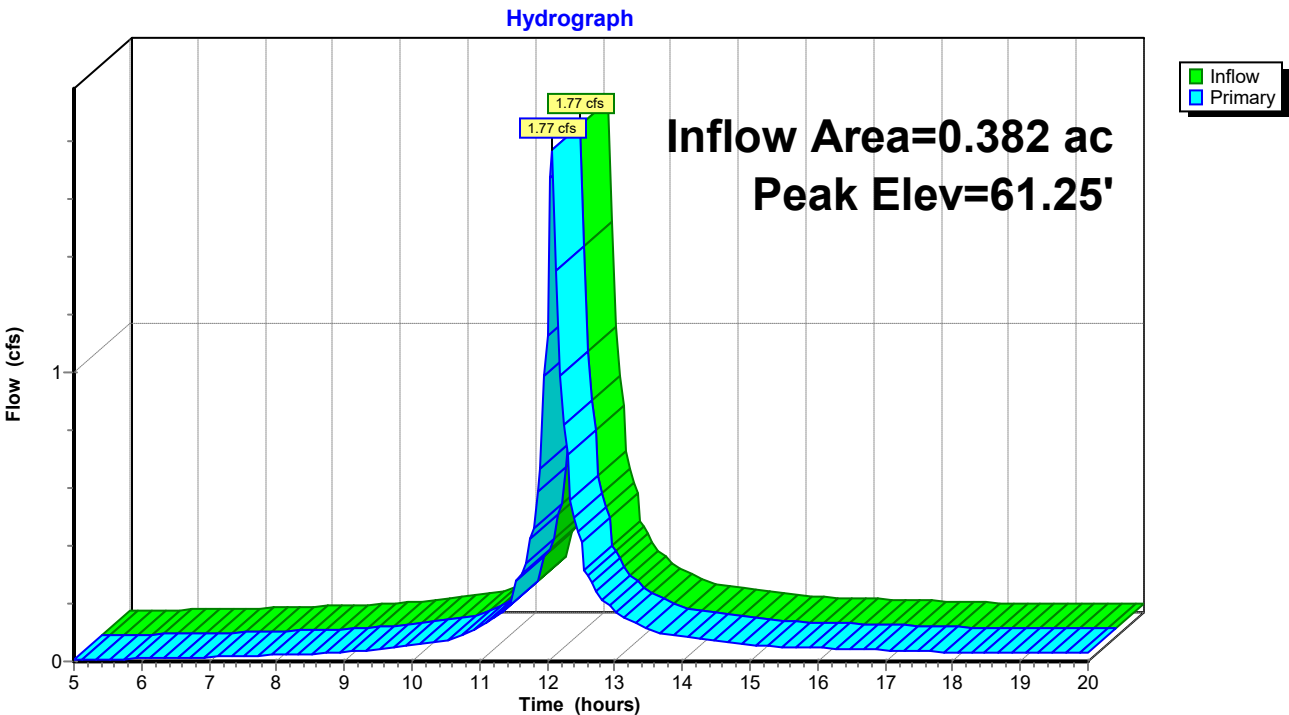
Device	Routing	Invert	Outlet Devices
#1	Primary	61.68'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.45'	12.0" Round Culvert L= 84.4' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.45' / 57.03' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 12.08 hrs HW=59.94' TW=60.76' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

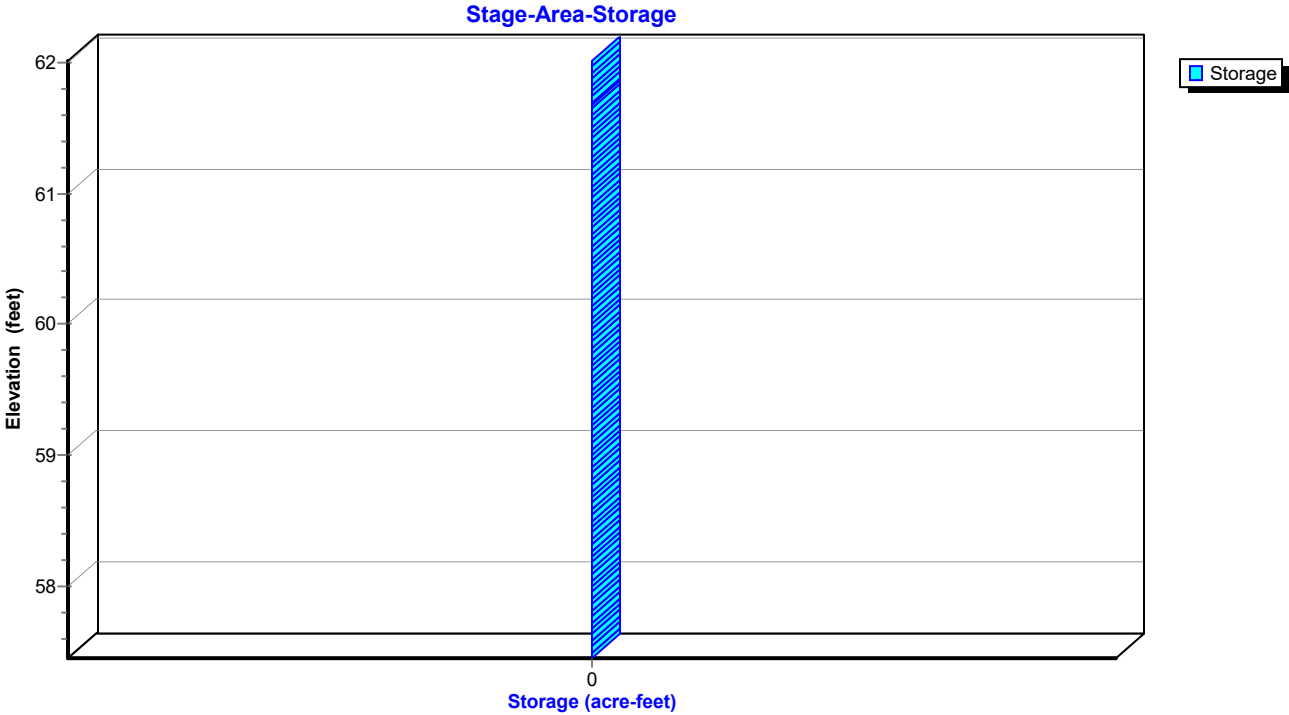
Orifice/Grate

Culvert Pond 40P: CI-6

Pond 40P: CI-6



Pond 40P: CI-6



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 40P: CI-6

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.01	57.50	0.01	18.00	0.03	57.56	0.03
5.25	0.01	57.50	0.01	18.25	0.03	57.56	0.03
5.50	0.01	57.50	0.01	18.50	0.03	57.56	0.03
5.75	0.01	57.51	0.01	18.75	0.03	57.55	0.03
6.00	0.01	57.51	0.01	19.00	0.03	57.55	0.03
6.25	0.01	57.51	0.01	19.25	0.03	57.55	0.03
6.50	0.01	57.52	0.01	19.50	0.03	57.55	0.03
6.75	0.01	57.52	0.01	19.75	0.03	57.55	0.03
7.00	0.02	57.53	0.02	20.00	0.03	57.55	0.03
7.25	0.02	57.53	0.02				
7.50	0.02	57.53	0.02				
7.75	0.02	57.54	0.02				
8.00	0.02	57.54	0.02				
8.25	0.02	57.55	0.02				
8.50	0.03	57.55	0.03				
8.75	0.03	57.55	0.03				
9.00	0.03	57.56	0.03				
9.25	0.04	57.57	0.04				
9.50	0.04	57.58	0.04				
9.75	0.05	57.59	0.05				
10.00	0.05	57.59	0.05				
10.25	0.06	57.60	0.06				
10.50	0.07	57.61	0.07				
10.75	0.09	57.64	0.09				
11.00	0.11	57.66	0.11				
11.25	0.16	57.71	0.16				
11.50	0.21	57.75	0.21				
11.75	0.43	57.91	0.43				
12.00	1.13	58.53	1.13				
12.25	0.82	58.27	0.82				
12.50	0.41	58.00	0.41				
12.75	0.23	57.82	0.23				
13.00	0.18	57.76	0.18				
13.25	0.14	57.71	0.14				
13.50	0.11	57.68	0.11				
13.75	0.09	57.65	0.09				
14.00	0.09	57.64	0.09				
14.25	0.08	57.63	0.08				
14.50	0.07	57.62	0.07				
14.75	0.06	57.61	0.06				
15.00	0.06	57.60	0.06				
15.25	0.05	57.59	0.05				
15.50	0.05	57.59	0.05				
15.75	0.05	57.59	0.05				
16.00	0.05	57.58	0.05				
16.25	0.05	57.58	0.05				
16.50	0.04	57.58	0.04				
16.75	0.04	57.57	0.04				
17.00	0.04	57.57	0.04				
17.25	0.04	57.57	0.04				
17.50	0.04	57.56	0.04				
17.75	0.03	57.56	0.03				

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Stage-Area-Storage for Pond 40P: CI-6

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.45	0.000	60.05	0.000
57.50	0.000	60.10	0.000
57.55	0.000	60.15	0.000
57.60	0.000	60.20	0.000
57.65	0.000	60.25	0.000
57.70	0.000	60.30	0.000
57.75	0.000	60.35	0.000
57.80	0.000	60.40	0.000
57.85	0.000	60.45	0.000
57.90	0.000	60.50	0.000
57.95	0.000	60.55	0.000
58.00	0.000	60.60	0.000
58.05	0.000	60.65	0.000
58.10	0.000	60.70	0.000
58.15	0.000	60.75	0.000
58.20	0.000	60.80	0.000
58.25	0.000	60.85	0.000
58.30	0.000	60.90	0.000
58.35	0.000	60.95	0.000
58.40	0.000	61.00	0.000
58.45	0.000	61.05	0.000
58.50	0.000	61.10	0.000
58.55	0.000	61.15	0.000
58.60	0.000	61.20	0.000
58.65	0.000	61.25	0.000
58.70	0.000	61.30	0.000
58.75	0.000	61.35	0.000
58.80	0.000	61.40	0.000
58.85	0.000	61.45	0.000
58.90	0.000	61.50	0.000
58.95	0.000	61.55	0.000
59.00	0.000	61.60	0.000
59.05	0.000	61.65	0.000
59.10	0.000	61.70	0.000
59.15	0.000	61.75	0.000
59.20	0.000	61.80	0.000
59.25	0.000	61.85	0.000
59.30	0.000	61.90	0.000
59.35	0.000	61.95	0.000
59.40	0.000	62.00	0.000
59.45	0.000		
59.50	0.000		
59.55	0.000		
59.60	0.000		
59.65	0.000		
59.70	0.000		
59.75	0.000		
59.80	0.000		
59.85	0.000		
59.90	0.000		
59.95	0.000		
60.00	0.000		

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Pond 43P: CI-7

Inflow Area = 0.131 ac, 41.20% Impervious, Inflow Depth > 3.50" for 10-Year event
Inflow = 0.50 cfs @ 12.20 hrs, Volume= 0.038 af
Outflow = 0.50 cfs @ 12.20 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.0 min
Primary = 0.50 cfs @ 12.20 hrs, Volume= 0.038 af
Routed to Pond 40P : CI-6

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.26' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.27'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.13'	12.0" Round Culvert L= 138.4' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.13' / 57.43' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=4.19 cfs @ 12.20 hrs HW=60.99' TW=58.69' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Outlet Controls 4.19 cfs @ 5.34 fps)

Orifice/Grate

Culvert
Pond 43P: CI-7

EX and PR

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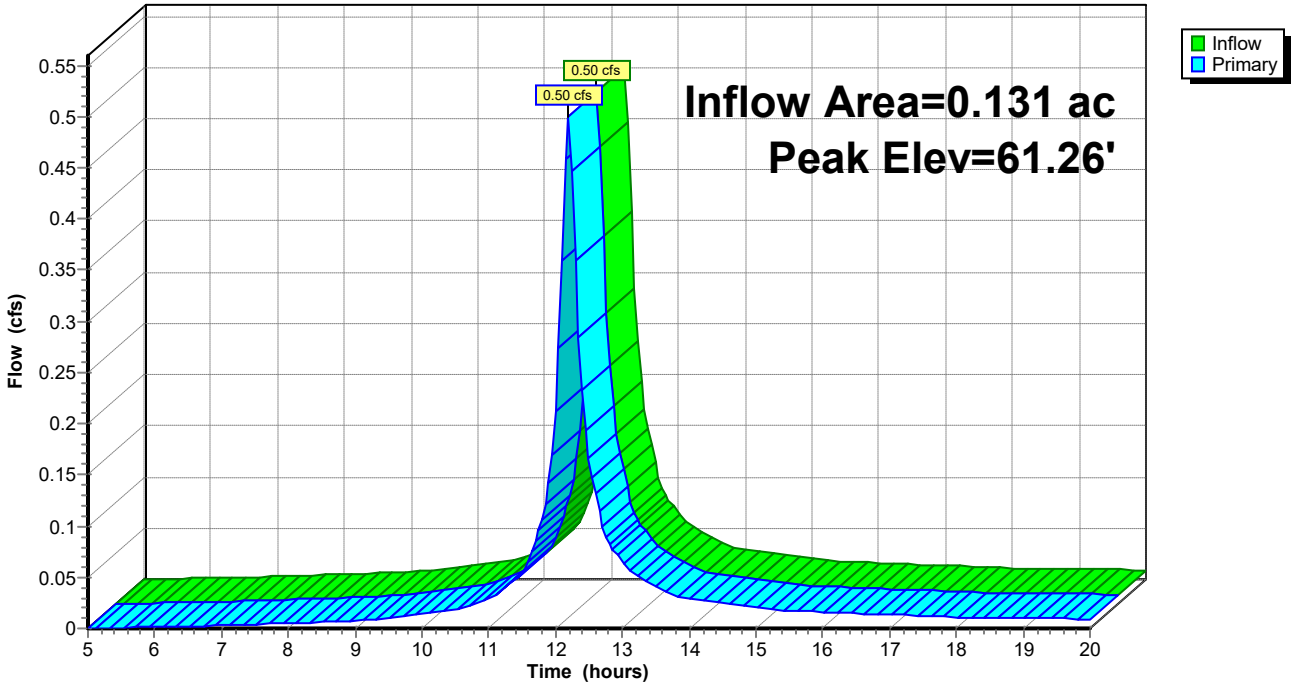
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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

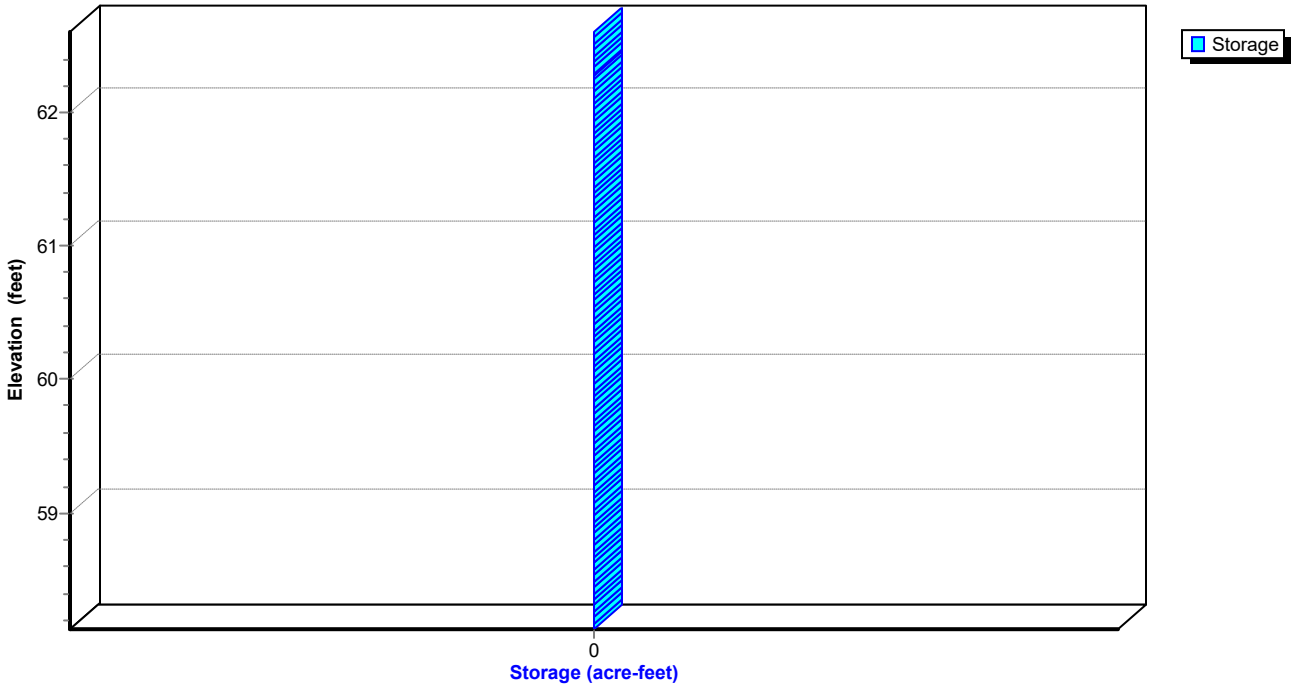
Pond 43P: CI-7

Hydrograph



Pond 43P: CI-7

Stage-Area-Storage



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 43P: CI-7

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	58.14	0.00	18.00	0.01	58.19	0.01
5.25	0.00	58.14	0.00	18.25	0.01	58.19	0.01
5.50	0.00	58.15	0.00	18.50	0.01	58.19	0.01
5.75	0.00	58.15	0.00	18.75	0.01	58.19	0.01
6.00	0.00	58.15	0.00	19.00	0.01	58.19	0.01
6.25	0.00	58.16	0.00	19.25	0.01	58.19	0.01
6.50	0.00	58.16	0.00	19.50	0.01	58.19	0.01
6.75	0.00	58.16	0.00	19.75	0.01	58.19	0.01
7.00	0.00	58.16	0.00	20.00	0.01	58.19	0.01
7.25	0.00	58.17	0.00				
7.50	0.00	58.17	0.00				
7.75	0.00	58.17	0.00				
8.00	0.00	58.17	0.00				
8.25	0.01	58.18	0.01				
8.50	0.01	58.18	0.01				
8.75	0.01	58.18	0.01				
9.00	0.01	58.18	0.01				
9.25	0.01	58.19	0.01				
9.50	0.01	58.19	0.01				
9.75	0.01	58.20	0.01				
10.00	0.01	58.20	0.01				
10.25	0.02	58.21	0.02				
10.50	0.02	58.21	0.02				
10.75	0.02	58.22	0.02				
11.00	0.03	58.23	0.03				
11.25	0.04	58.25	0.04				
11.50	0.05	58.27	0.05				
11.75	0.10	58.32	0.10				
12.00	0.21	58.47	0.21				
12.25	0.45	58.70	0.45				
12.50	0.17	58.40	0.17				
12.75	0.09	58.32	0.09				
13.00	0.07	58.29	0.07				
13.25	0.05	58.26	0.05				
13.50	0.04	58.25	0.04				
13.75	0.03	58.24	0.03				
14.00	0.03	58.23	0.03				
14.25	0.03	58.23	0.03				
14.50	0.02	58.22	0.02				
14.75	0.02	58.22	0.02				
15.00	0.02	58.21	0.02				
15.25	0.02	58.21	0.02				
15.50	0.02	58.21	0.02				
15.75	0.02	58.21	0.02				
16.00	0.02	58.21	0.02				
16.25	0.02	58.20	0.02				
16.50	0.01	58.20	0.01				
16.75	0.01	58.20	0.01				
17.00	0.01	58.20	0.01				
17.25	0.01	58.20	0.01				
17.50	0.01	58.20	0.01				
17.75	0.01	58.19	0.01				

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Stage-Area-Storage for Pond 43P: CI-7

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.13	0.000	60.73	0.000
58.18	0.000	60.78	0.000
58.23	0.000	60.83	0.000
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000	61.78	0.000
59.23	0.000	61.83	0.000
59.28	0.000	61.88	0.000
59.33	0.000	61.93	0.000
59.38	0.000	61.98	0.000
59.43	0.000	62.03	0.000
59.48	0.000	62.08	0.000
59.53	0.000	62.13	0.000
59.58	0.000	62.18	0.000
59.63	0.000	62.23	0.000
59.68	0.000	62.28	0.000
59.73	0.000	62.33	0.000
59.78	0.000	62.38	0.000
59.83	0.000	62.43	0.000
59.88	0.000	62.48	0.000
59.93	0.000	62.53	0.000
59.98	0.000	62.58	0.000
60.03	0.000		
60.08	0.000		
60.13	0.000		
60.18	0.000		
60.23	0.000		
60.28	0.000		
60.33	0.000		
60.38	0.000		
60.43	0.000		
60.48	0.000		
60.53	0.000		
60.58	0.000		
60.63	0.000		
60.68	0.000		

EX and PR

Prepared by Rauch Inc

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Pond 44P: CI-2

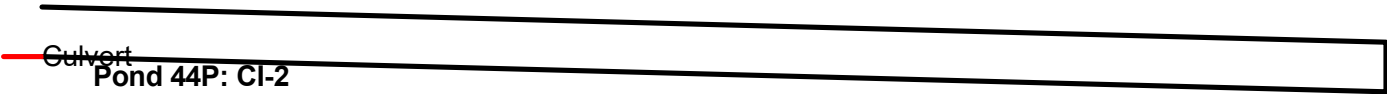
Inflow Area = 0.537 ac, 76.55% Impervious, Inflow Depth > 4.16" for 10-Year event
Inflow = 3.15 cfs @ 12.06 hrs, Volume= 0.186 af
Outflow = 3.15 cfs @ 12.06 hrs, Volume= 0.186 af, Atten= 0%, Lag= 0.0 min
Primary = 3.15 cfs @ 12.06 hrs, Volume= 0.186 af
Routed to Pond 45P : CI-3

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.38' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.18'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.55'	15.0" Round Culvert L= 99.8' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.55' / 57.66' S= 0.0089 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=59.62' TW=59.83' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate



EX and PR

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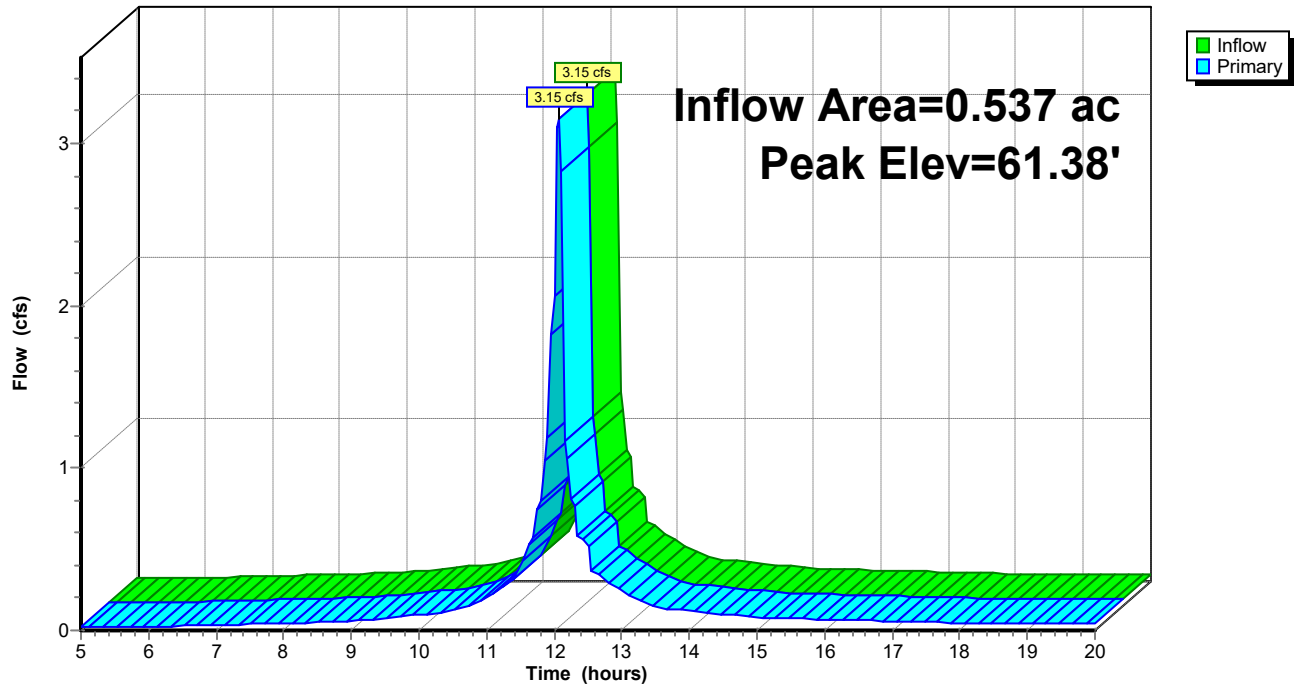
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NOAA 24-hr C 10-Year Rainfall=5.20"

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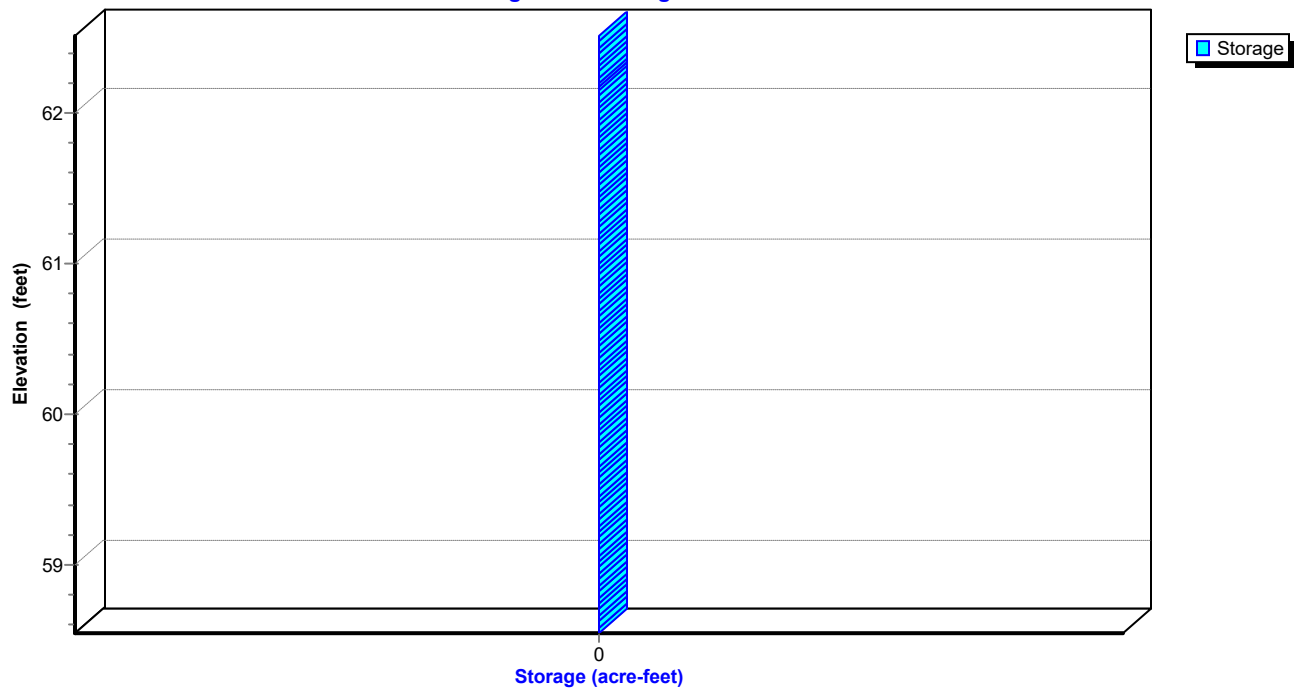
Pond 44P: CI-2

Hydrograph



Pond 44P: CI-2

Stage-Area-Storage



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Hydrograph for Pond 44P: CI-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.02	58.61	0.02	18.00	0.05	58.65	0.05
5.25	0.02	58.61	0.02	18.25	0.04	58.65	0.04
5.50	0.02	58.62	0.02	18.50	0.04	58.65	0.04
5.75	0.02	58.62	0.02	18.75	0.04	58.65	0.04
6.00	0.02	58.62	0.02	19.00	0.04	58.65	0.04
6.25	0.02	58.63	0.02	19.25	0.04	58.65	0.04
6.50	0.03	58.63	0.03	19.50	0.04	58.65	0.04
6.75	0.03	58.63	0.03	19.75	0.04	58.65	0.04
7.00	0.03	58.64	0.03	20.00	0.04	58.64	0.04
7.25	0.04	58.64	0.04				
7.50	0.04	58.64	0.04				
7.75	0.04	58.65	0.04				
8.00	0.04	58.65	0.04				
8.25	0.05	58.65	0.05				
8.50	0.05	58.66	0.05				
8.75	0.05	58.66	0.05				
9.00	0.06	58.66	0.06				
9.25	0.07	58.67	0.07				
9.50	0.08	58.68	0.08				
9.75	0.09	58.69	0.09				
10.00	0.10	58.70	0.10				
10.25	0.11	58.70	0.11				
10.50	0.12	58.71	0.12				
10.75	0.16	58.74	0.16				
11.00	0.19	58.76	0.19				
11.25	0.27	58.80	0.27				
11.50	0.36	58.83	0.36				
11.75	0.74	58.97	0.74				
12.00	2.06	59.34	2.06				
12.25	0.80	59.07	0.80				
12.50	0.52	58.91	0.52				
12.75	0.31	58.82	0.31				
13.00	0.24	58.78	0.24				
13.25	0.19	58.76	0.19				
13.50	0.15	58.73	0.15				
13.75	0.13	58.72	0.13				
14.00	0.12	58.71	0.12				
14.25	0.11	58.71	0.11				
14.50	0.10	58.70	0.10				
14.75	0.09	58.69	0.09				
15.00	0.08	58.68	0.08				
15.25	0.08	58.68	0.08				
15.50	0.07	58.68	0.07				
15.75	0.07	58.67	0.07				
16.00	0.07	58.67	0.07				
16.25	0.06	58.67	0.06				
16.50	0.06	58.67	0.06				
16.75	0.06	58.66	0.06				
17.00	0.06	58.66	0.06				
17.25	0.05	58.66	0.05				
17.50	0.05	58.66	0.05				
17.75	0.05	58.65	0.05				

EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Stage-Area-Storage for Pond 44P: CI-2

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.55	0.000	61.15	0.000
58.60	0.000	61.20	0.000
58.65	0.000	61.25	0.000
58.70	0.000	61.30	0.000
58.75	0.000	61.35	0.000
58.80	0.000	61.40	0.000
58.85	0.000	61.45	0.000
58.90	0.000	61.50	0.000
58.95	0.000	61.55	0.000
59.00	0.000	61.60	0.000
59.05	0.000	61.65	0.000
59.10	0.000	61.70	0.000
59.15	0.000	61.75	0.000
59.20	0.000	61.80	0.000
59.25	0.000	61.85	0.000
59.30	0.000	61.90	0.000
59.35	0.000	61.95	0.000
59.40	0.000	62.00	0.000
59.45	0.000	62.05	0.000
59.50	0.000	62.10	0.000
59.55	0.000	62.15	0.000
59.60	0.000	62.20	0.000
59.65	0.000	62.25	0.000
59.70	0.000	62.30	0.000
59.75	0.000	62.35	0.000
59.80	0.000	62.40	0.000
59.85	0.000	62.45	0.000
59.90	0.000	62.50	0.000
59.95	0.000		
60.00	0.000		
60.05	0.000		
60.10	0.000		
60.15	0.000		
60.20	0.000		
60.25	0.000		
60.30	0.000		
60.35	0.000		
60.40	0.000		
60.45	0.000		
60.50	0.000		
60.55	0.000		
60.60	0.000		
60.65	0.000		
60.70	0.000		
60.75	0.000		
60.80	0.000		
60.85	0.000		
60.90	0.000		
60.95	0.000		
61.00	0.000		
61.05	0.000		
61.10	0.000		

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Summary for Pond 45P: CI-3

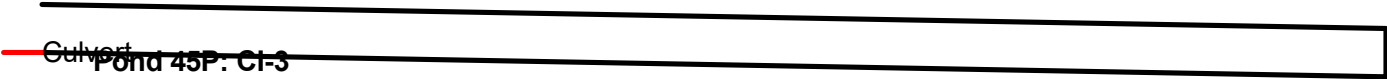
Inflow Area = 0.765 ac, 76.25% Impervious, Inflow Depth > 4.16" for 10-Year event
Inflow = 4.48 cfs @ 12.06 hrs, Volume= 0.266 af
Outflow = 4.48 cfs @ 12.06 hrs, Volume= 0.266 af, Atten= 0%, Lag= 0.0 min
Primary = 4.48 cfs @ 12.06 hrs, Volume= 0.266 af
Routed to Pond 39P : CI-9

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.38' @ 12.12 hrs

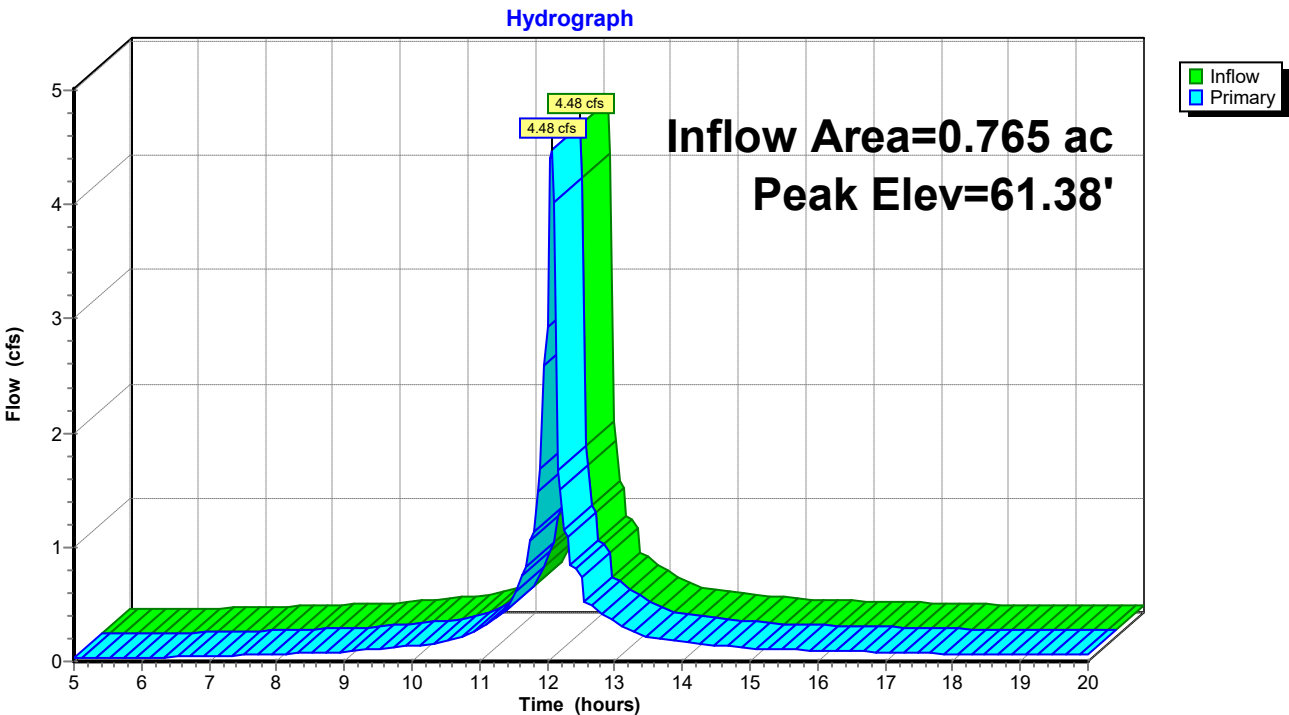
Device	Routing	Invert	Outlet Devices
#1	Primary	61.68'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.66'	15.0" Round Culvert L= 99.8' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.66' / 57.03' S= 0.0063 '/ Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=59.83' TW=60.70' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

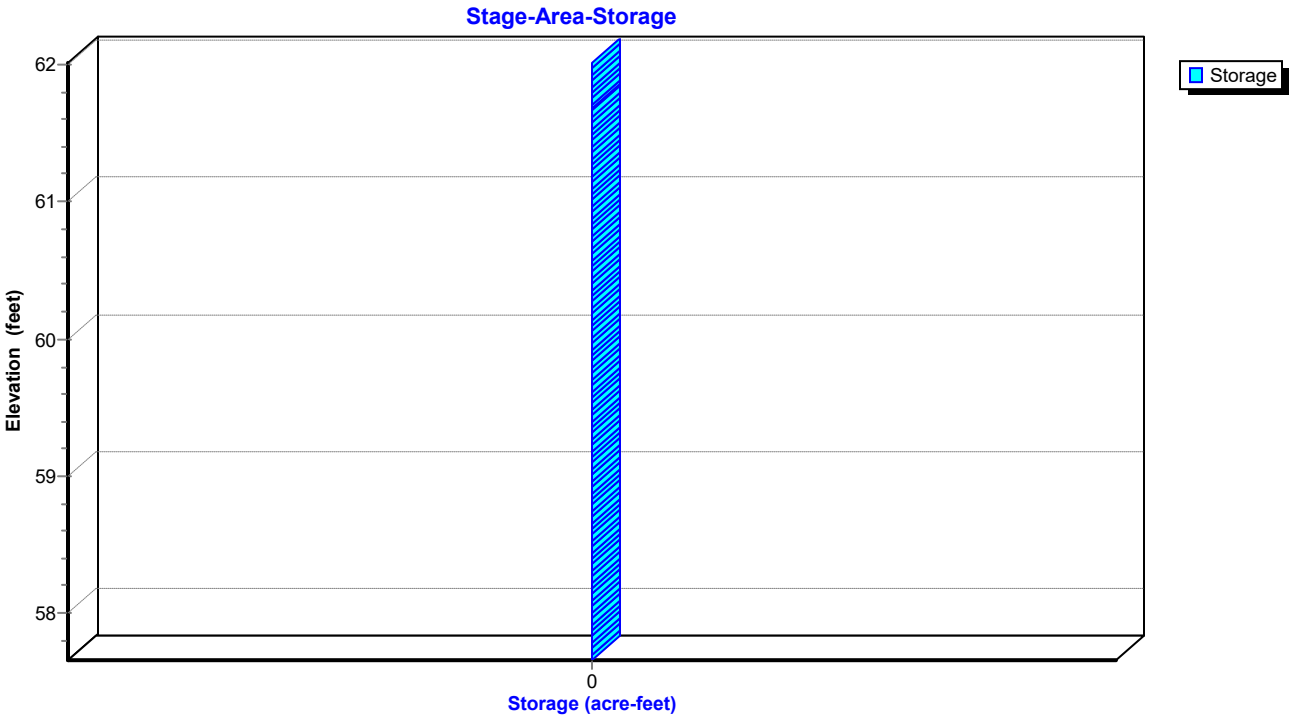
Orifice/Grate



Pond 45P: CI-3



Pond 45P: CI-3



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Pond 45P: CI-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.02	57.74	0.02	18.00	0.06	57.79	0.06
5.25	0.03	57.75	0.03	18.25	0.06	57.79	0.06
5.50	0.03	57.75	0.03	18.50	0.06	57.79	0.06
5.75	0.03	57.75	0.03	18.75	0.06	57.79	0.06
6.00	0.03	57.75	0.03	19.00	0.06	57.79	0.06
6.25	0.04	57.76	0.04	19.25	0.06	57.79	0.06
6.50	0.04	57.76	0.04	19.50	0.06	57.78	0.06
6.75	0.04	57.77	0.04	19.75	0.06	57.78	0.06
7.00	0.05	57.77	0.05	20.00	0.06	57.78	0.06
7.25	0.05	57.78	0.05				
7.50	0.06	57.78	0.06				
7.75	0.06	57.79	0.06				
8.00	0.06	57.79	0.06				
8.25	0.07	57.80	0.07				
8.50	0.07	57.80	0.07				
8.75	0.08	57.80	0.08				
9.00	0.08	57.81	0.08				
9.25	0.10	57.82	0.10				
9.50	0.11	57.83	0.11				
9.75	0.12	57.84	0.12				
10.00	0.14	57.85	0.14				
10.25	0.15	57.86	0.15				
10.50	0.17	57.87	0.17				
10.75	0.23	57.91	0.23				
11.00	0.28	57.94	0.28				
11.25	0.39	57.99	0.39				
11.50	0.51	58.04	0.51				
11.75	1.06	58.23	1.06				
12.00	2.94	58.85	2.94				
12.25	1.15	58.40	1.15				
12.50	0.74	58.20	0.74				
12.75	0.44	58.05	0.44				
13.00	0.35	57.99	0.35				
13.25	0.27	57.95	0.27				
13.50	0.22	57.92	0.22				
13.75	0.19	57.89	0.19				
14.00	0.17	57.88	0.17				
14.25	0.16	57.87	0.16				
14.50	0.14	57.86	0.14				
14.75	0.13	57.85	0.13				
15.00	0.12	57.84	0.12				
15.25	0.11	57.83	0.11				
15.50	0.10	57.83	0.10				
15.75	0.10	57.82	0.10				
16.00	0.10	57.82	0.10				
16.25	0.09	57.82	0.09				
16.50	0.09	57.81	0.09				
16.75	0.08	57.81	0.08				
17.00	0.08	57.81	0.08				
17.25	0.08	57.80	0.08				
17.50	0.07	57.80	0.07				
17.75	0.07	57.80	0.07				

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Stage-Area-Storage for Pond 45P: CI-3

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.66	0.000	60.26	0.000
57.71	0.000	60.31	0.000
57.76	0.000	60.36	0.000
57.81	0.000	60.41	0.000
57.86	0.000	60.46	0.000
57.91	0.000	60.51	0.000
57.96	0.000	60.56	0.000
58.01	0.000	60.61	0.000
58.06	0.000	60.66	0.000
58.11	0.000	60.71	0.000
58.16	0.000	60.76	0.000
58.21	0.000	60.81	0.000
58.26	0.000	60.86	0.000
58.31	0.000	60.91	0.000
58.36	0.000	60.96	0.000
58.41	0.000	61.01	0.000
58.46	0.000	61.06	0.000
58.51	0.000	61.11	0.000
58.56	0.000	61.16	0.000
58.61	0.000	61.21	0.000
58.66	0.000	61.26	0.000
58.71	0.000	61.31	0.000
58.76	0.000	61.36	0.000
58.81	0.000	61.41	0.000
58.86	0.000	61.46	0.000
58.91	0.000	61.51	0.000
58.96	0.000	61.56	0.000
59.01	0.000	61.61	0.000
59.06	0.000	61.66	0.000
59.11	0.000	61.71	0.000
59.16	0.000	61.76	0.000
59.21	0.000	61.81	0.000
59.26	0.000	61.86	0.000
59.31	0.000	61.91	0.000
59.36	0.000	61.96	0.000
59.41	0.000	62.01	0.000
59.46	0.000		
59.51	0.000		
59.56	0.000		
59.61	0.000		
59.66	0.000		
59.71	0.000		
59.76	0.000		
59.81	0.000		
59.86	0.000		
59.91	0.000		
59.96	0.000		
60.01	0.000		
60.06	0.000		
60.11	0.000		
60.16	0.000		
60.21	0.000		

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Summary for Pond 46P: CI-5

Inflow Area = 0.074 ac, 51.14% Impervious, Inflow Depth > 3.72" for 10-Year event
Inflow = 0.40 cfs @ 12.06 hrs, Volume= 0.023 af
Outflow = 0.40 cfs @ 12.06 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min
Primary = 0.40 cfs @ 12.06 hrs, Volume= 0.023 af
Routed to Pond 45P : CI-3

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.38' @ 12.17 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.87'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.28'	15.0" Round Culvert L= 107.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.28' / 57.75' S= 0.0050 '/ Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=58.95' TW=59.45' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate



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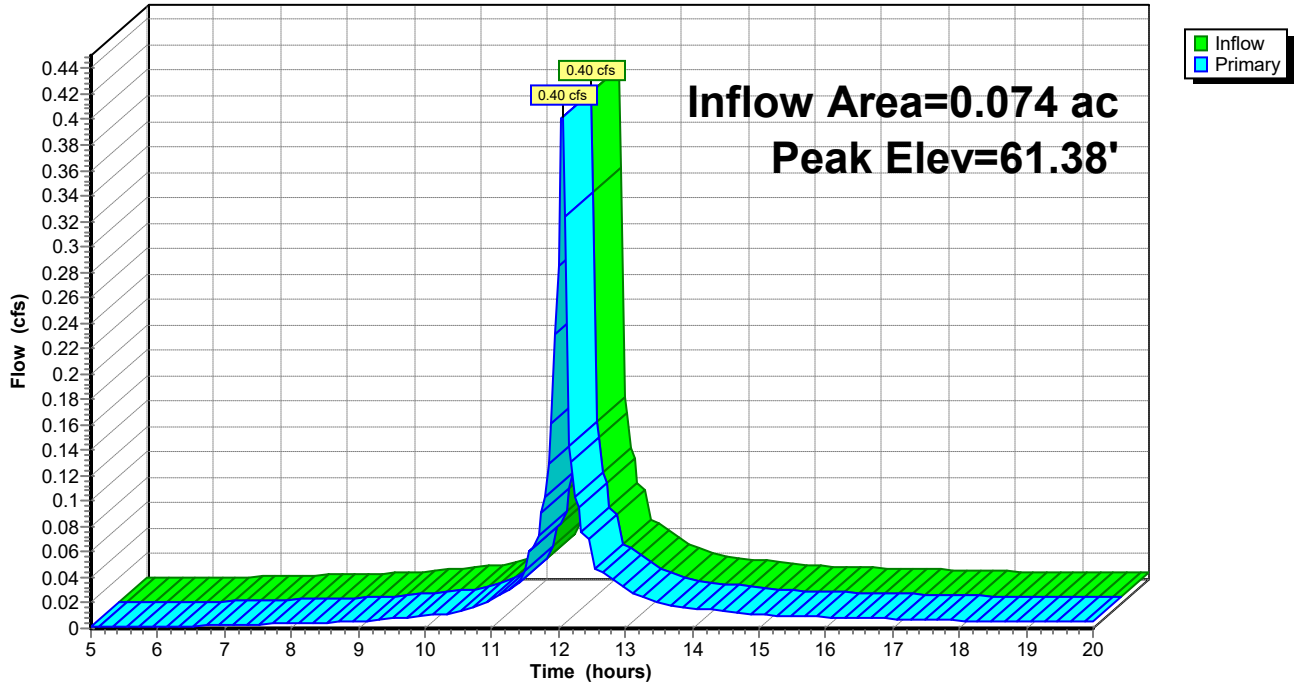
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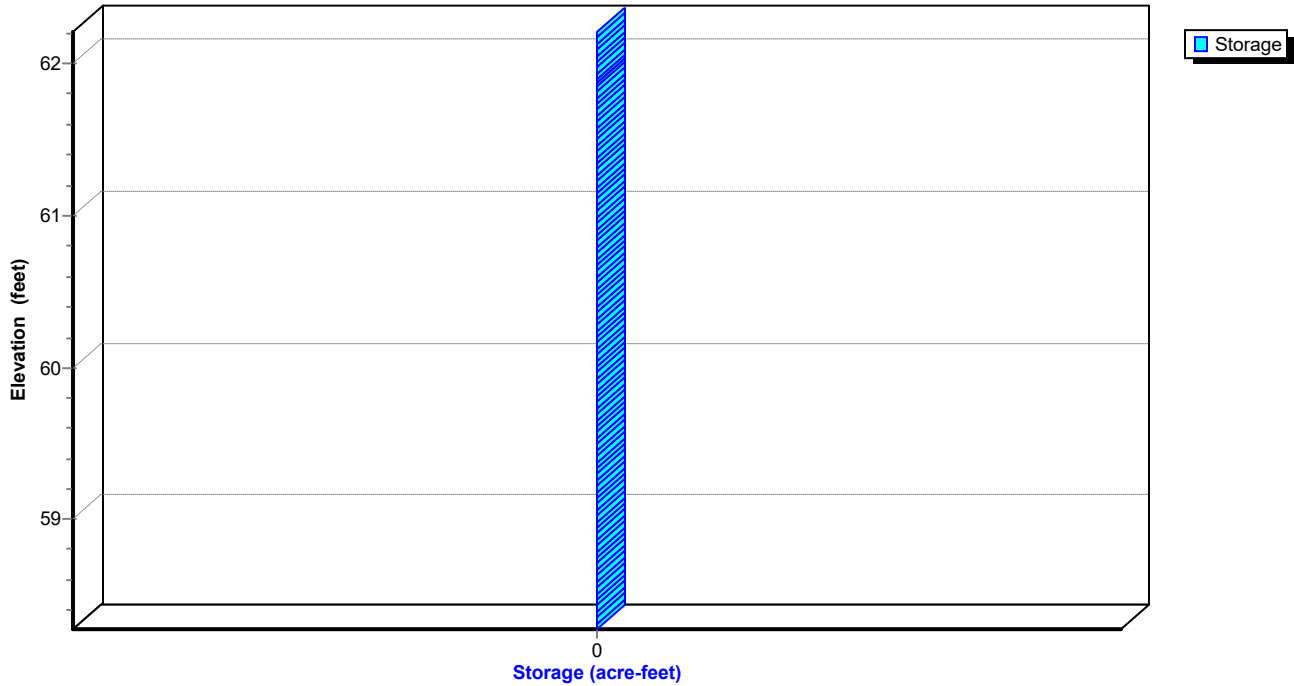
Pond 46P: CI-5

Hydrograph



Pond 46P: CI-5

Stage-Area-Storage



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Hydrograph for Pond 46P: CI-5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	58.30	0.00	18.00	0.01	58.32	0.01
5.25	0.00	58.30	0.00	18.25	0.01	58.32	0.01
5.50	0.00	58.30	0.00	18.50	0.01	58.32	0.01
5.75	0.00	58.30	0.00	18.75	0.01	58.32	0.01
6.00	0.00	58.30	0.00	19.00	0.01	58.32	0.01
6.25	0.00	58.30	0.00	19.25	0.01	58.32	0.01
6.50	0.00	58.31	0.00	19.50	0.01	58.32	0.01
6.75	0.00	58.31	0.00	19.75	0.01	58.32	0.01
7.00	0.00	58.31	0.00	20.00	0.01	58.32	0.01
7.25	0.00	58.31	0.00				
7.50	0.00	58.31	0.00				
7.75	0.00	58.31	0.00				
8.00	0.00	58.32	0.00				
8.25	0.00	58.32	0.00				
8.50	0.00	58.32	0.00				
8.75	0.01	58.32	0.01				
9.00	0.01	58.32	0.01				
9.25	0.01	58.33	0.01				
9.50	0.01	58.33	0.01				
9.75	0.01	58.33	0.01				
10.00	0.01	58.34	0.01				
10.25	0.01	58.34	0.01				
10.50	0.01	58.35	0.01				
10.75	0.02	58.36	0.02				
11.00	0.02	58.37	0.02				
11.25	0.03	58.38	0.03				
11.50	0.04	58.40	0.04				
11.75	0.09	58.46	0.09				
12.00	0.29	58.72	0.29				
12.25	0.10	58.66	0.10				
12.50	0.06	58.45	0.06				
12.75	0.04	58.40	0.04				
13.00	0.03	58.38	0.03				
13.25	0.02	58.37	0.02				
13.50	0.02	58.36	0.02				
13.75	0.02	58.36	0.02				
14.00	0.02	58.35	0.02				
14.25	0.01	58.35	0.01				
14.50	0.01	58.35	0.01				
14.75	0.01	58.34	0.01				
15.00	0.01	58.34	0.01				
15.25	0.01	58.34	0.01				
15.50	0.01	58.34	0.01				
15.75	0.01	58.33	0.01				
16.00	0.01	58.33	0.01				
16.25	0.01	58.33	0.01				
16.50	0.01	58.33	0.01				
16.75	0.01	58.33	0.01				
17.00	0.01	58.33	0.01				
17.25	0.01	58.33	0.01				
17.50	0.01	58.33	0.01				
17.75	0.01	58.33	0.01				

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Stage-Area-Storage for Pond 46P: CI-5

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000	61.78	0.000
59.23	0.000	61.83	0.000
59.28	0.000	61.88	0.000
59.33	0.000	61.93	0.000
59.38	0.000	61.98	0.000
59.43	0.000	62.03	0.000
59.48	0.000	62.08	0.000
59.53	0.000	62.13	0.000
59.58	0.000	62.18	0.000
59.63	0.000		
59.68	0.000		
59.73	0.000		
59.78	0.000		
59.83	0.000		
59.88	0.000		
59.93	0.000		
59.98	0.000		
60.03	0.000		
60.08	0.000		
60.13	0.000		
60.18	0.000		
60.23	0.000		
60.28	0.000		
60.33	0.000		
60.38	0.000		
60.43	0.000		
60.48	0.000		
60.53	0.000		
60.58	0.000		
60.63	0.000		
60.68	0.000		
60.73	0.000		
60.78	0.000		
60.83	0.000		

EX and PR

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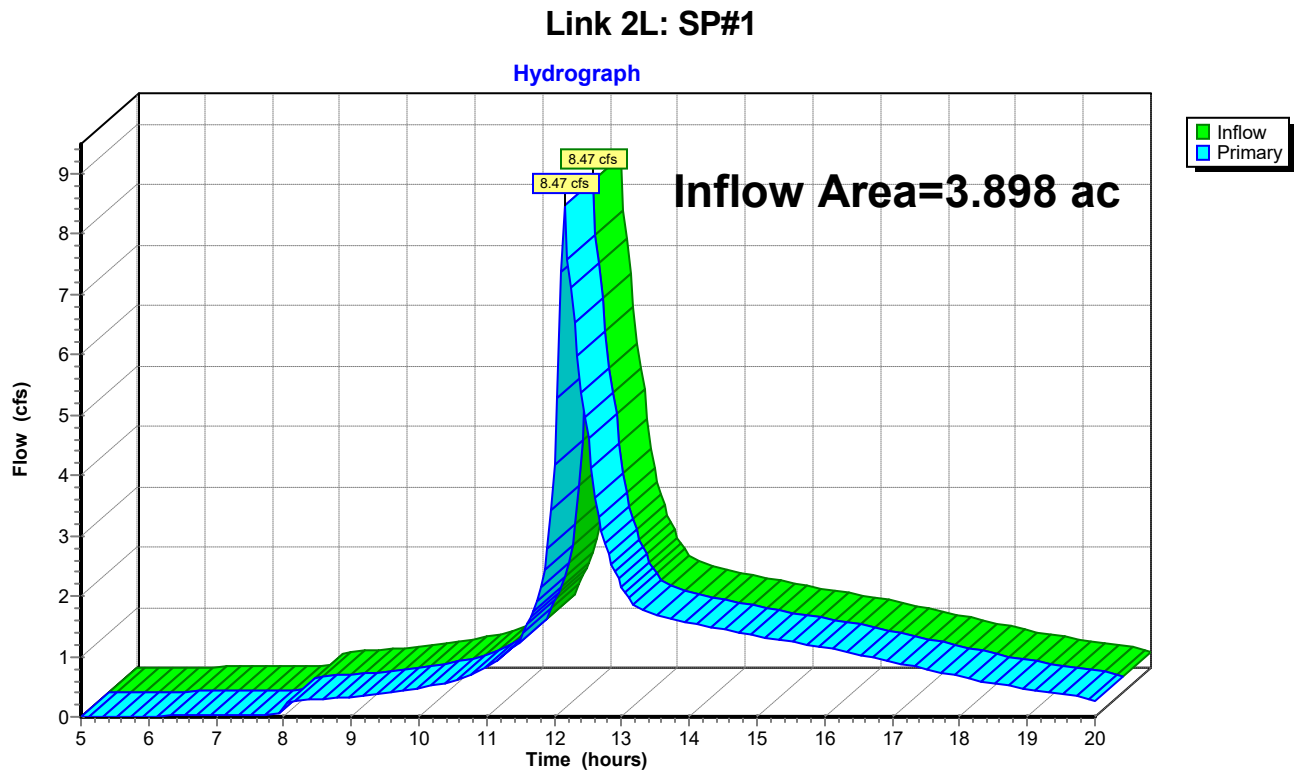
NOAA 24-hr C 10-Year Rainfall=5.20"

Printed 5/1/2024

Summary for Link 2L: SP#1

Inflow Area = 3.898 ac, 59.79% Impervious, Inflow Depth > 3.77" for 10-Year event
Inflow = 8.47 cfs @ 12.15 hrs, Volume= 1.223 af
Primary = 8.47 cfs @ 12.15 hrs, Volume= 1.223 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



EX and PR

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NOAA 24-hr C 10-Year Rainfall=5.20"

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Hydrograph for Link 2L: SP#1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	0.00	0.00	18.00	0.67	0.00	0.67
5.25	0.01	0.00	0.01	18.25	0.61	0.00	0.61
5.50	0.01	0.00	0.01	18.50	0.56	0.00	0.56
5.75	0.01	0.00	0.01	18.75	0.50	0.00	0.50
6.00	0.01	0.00	0.01	19.00	0.46	0.00	0.46
6.25	0.02	0.00	0.02	19.25	0.41	0.00	0.41
6.50	0.02	0.00	0.02	19.50	0.37	0.00	0.37
6.75	0.02	0.00	0.02	19.75	0.34	0.00	0.34
7.00	0.03	0.00	0.03	20.00	0.26	0.00	0.26
7.25	0.03	0.00	0.03				
7.50	0.04	0.00	0.04				
7.75	0.04	0.00	0.04				
8.00	0.05	0.00	0.05				
8.25	0.28	0.00	0.28				
8.50	0.30	0.00	0.30				
8.75	0.31	0.00	0.31				
9.00	0.32	0.00	0.32				
9.25	0.35	0.00	0.35				
9.50	0.39	0.00	0.39				
9.75	0.43	0.00	0.43				
10.00	0.48	0.00	0.48				
10.25	0.53	0.00	0.53				
10.50	0.59	0.00	0.59				
10.75	0.68	0.00	0.68				
11.00	0.81	0.00	0.81				
11.25	1.01	0.00	1.01				
11.50	1.25	0.00	1.25				
11.75	1.93	0.00	1.93				
12.00	4.17	0.00	4.17				
12.25	7.11	0.00	7.11				
12.50	4.62	0.00	4.62				
12.75	2.87	0.00	2.87				
13.00	2.16	0.00	2.16				
13.25	1.80	0.00	1.80				
13.50	1.69	0.00	1.69				
13.75	1.61	0.00	1.61				
14.00	1.56	0.00	1.56				
14.25	1.50	0.00	1.50				
14.50	1.45	0.00	1.45				
14.75	1.40	0.00	1.40				
15.00	1.34	0.00	1.34				
15.25	1.29	0.00	1.29				
15.50	1.24	0.00	1.24				
15.75	1.20	0.00	1.20				
16.00	1.15	0.00	1.15				
16.25	1.10	0.00	1.10				
16.50	1.04	0.00	1.04				
16.75	0.97	0.00	0.97				
17.00	0.91	0.00	0.91				
17.25	0.85	0.00	0.85				
17.50	0.79	0.00	0.79				
17.75	0.73	0.00	0.73				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 3S: DA#4	Runoff Area=9,330 sf 70.69% Impervious Runoff Depth>7.55" Flow Length=143' Tc=1.4 min CN=93 Runoff=2.22 cfs 0.135 af
Subcatchment 4S: DA#2	Runoff Area=3,733 sf 67.48% Impervious Runoff Depth>7.46" Flow Length=44' Slope=0.0948 '/' Tc=3.8 min CN=92 Runoff=0.84 cfs 0.053 af
Subcatchment 11S: DA#5	Runoff Area=9,317 sf 15.83% Impervious Runoff Depth>6.48" Flow Length=44' Slope=0.0889 '/' Tc=1.1 min CN=83 Runoff=2.04 cfs 0.116 af
Subcatchment 13S: DA#11	Runoff Area=6,211 sf 83.67% Impervious Runoff Depth>7.73" Flow Length=81' Slope=0.0126 '/' Tc=1.2 min CN=95 Runoff=1.50 cfs 0.092 af
Subcatchment 14S: DA#6	Runoff Area=21,528 sf 73.17% Impervious Runoff Depth>7.55" Flow Length=119' Tc=3.4 min CN=93 Runoff=4.97 cfs 0.311 af
Subcatchment 16S: DA#7	Runoff Area=8,499 sf 87.34% Impervious Runoff Depth>7.80" Flow Length=120' Tc=1.5 min CN=96 Runoff=2.05 cfs 0.127 af
Subcatchment 19S: DA#8	Runoff Area=17,721 sf 97.79% Impervious Runoff Depth>7.92" Flow Length=73' Slope=0.0174 '/' Tc=1.0 min CN=98 Runoff=4.31 cfs 0.269 af
Subcatchment 21S: DA#9	Runoff Area=10,950 sf 68.20% Impervious Runoff Depth>7.46" Flow Length=128' Tc=1.4 min CN=92 Runoff=2.59 cfs 0.156 af
Subcatchment 22S: DA#10	Runoff Area=5,696 sf 41.20% Impervious Runoff Depth>6.92" Flow Length=99' Tc=12.1 min CN=87 Runoff=0.95 cfs 0.075 af
Subcatchment 25S: DA#12	Runoff Area=6,725 sf 87.20% Impervious Runoff Depth>7.80" Flow Length=98' Slope=0.0100 '/' Tc=1.5 min CN=96 Runoff=1.62 cfs 0.100 af
Subcatchment 26S: DA#1	Runoff Area=29,068 sf 39.09% Impervious Runoff Depth>6.93" Flow Length=405' Tc=5.5 min CN=87 Runoff=5.87 cfs 0.385 af
Subcatchment 32S: DA#3	Runoff Area=9,470 sf 40.45% Impervious Runoff Depth>6.94" Flow Length=161' Tc=1.0 min CN=87 Runoff=2.16 cfs 0.126 af
Subcatchment 33S: DA#13	Runoff Area=3,211 sf 51.14% Impervious Runoff Depth>7.15" Flow Length=52' Slope=0.0292 '/' Tc=0.6 min CN=89 Runoff=0.74 cfs 0.044 af
Subcatchment 34S: DA#14	Runoff Area=17,184 sf 73.97% Impervious Runoff Depth>7.55" Flow Length=100' Slope=0.0187 '/' Tc=1.2 min CN=93 Runoff=4.10 cfs 0.248 af
Subcatchment 35S: DA#15	Runoff Area=11,147 sf 0.00% Impervious Runoff Depth>6.10" Flow Length=558' Tc=21.2 min CN=80 Runoff=1.35 cfs 0.130 af
Pond 9P: I-2	Peak Elev=62.77' Inflow=4.10 cfs 0.248 af Outflow=4.10 cfs 0.248 af

EX and PR

NOAA 24-hr C 100-Year Rainfall=8.98"

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Pond 17P: SGW FOREBAY #1 Peak Elev=57.97' Storage=5,684 cf Inflow=24.13 cfs 1.557 af
Outflow=21.62 cfs 1.517 af

Pond 18P: SGW #1 Peak Elev=57.97' Storage=15,095 cf Inflow=23.65 cfs 1.633 af
Outflow=19.07 cfs 1.607 af

Pond 20P: CI-8 Peak Elev=58.68' Inflow=6.68 cfs 0.439 af
Outflow=6.68 cfs 0.439 af

Pond 27P: FES-4 Peak Elev=59.54' Inflow=5.87 cfs 0.385 af
15.0" Round Culvert n=0.012 L=25.5' S=0.0106 '/' Outflow=5.87 cfs 0.385 af

Pond 37P: CI-4 Peak Elev=57.98' Inflow=2.22 cfs 0.135 af
Outflow=2.22 cfs 0.135 af

Pond 38P: CI-1 Peak Elev=61.61' Inflow=17.48 cfs 1.112 af
Outflow=17.48 cfs 1.112 af

Pond 39P: CI-9 Peak Elev=62.68' Inflow=15.43 cfs 0.985 af
Outflow=15.43 cfs 0.985 af

Pond 40P: CI-6 Peak Elev=62.71' Inflow=3.23 cfs 0.232 af
Outflow=3.23 cfs 0.232 af

Pond 43P: CI-7 Peak Elev=62.71' Inflow=0.95 cfs 0.075 af
Outflow=0.95 cfs 0.075 af

Pond 44P: CI-2 Peak Elev=62.77' Inflow=5.60 cfs 0.340 af
Outflow=5.60 cfs 0.340 af

Pond 45P: CI-3 Peak Elev=62.76' Inflow=7.96 cfs 0.484 af
Outflow=7.96 cfs 0.484 af

Pond 46P: CI-5 Peak Elev=62.76' Inflow=0.74 cfs 0.044 af
Outflow=0.74 cfs 0.044 af

Link 2L: SP#1 Inflow=28.22 cfs 2.301 af
Primary=28.22 cfs 2.301 af

Total Runoff Area = 3.898 ac Runoff Volume = 2.367 af Average Runoff Depth = 7.29"
40.21% Pervious = 1.567 ac 59.79% Impervious = 2.330 ac

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"
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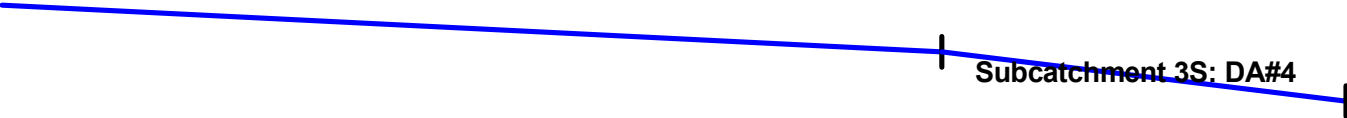
Summary for Subcatchment 3S: DA#4

Runoff = 2.22 cfs @ 12.07 hrs, Volume= 0.135 af, Depth> 7.55"
Routed to Pond 37P : CI-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
6,595	98	Roofs, HSG D
2,735	80	>75% Grass cover, Good, HSG D
9,330	93	Weighted Average
2,735		29.31% Pervious Area
6,595		70.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0180	1.36		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.2	43	0.0441	4.26		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.4	143	Total			



EX and PR

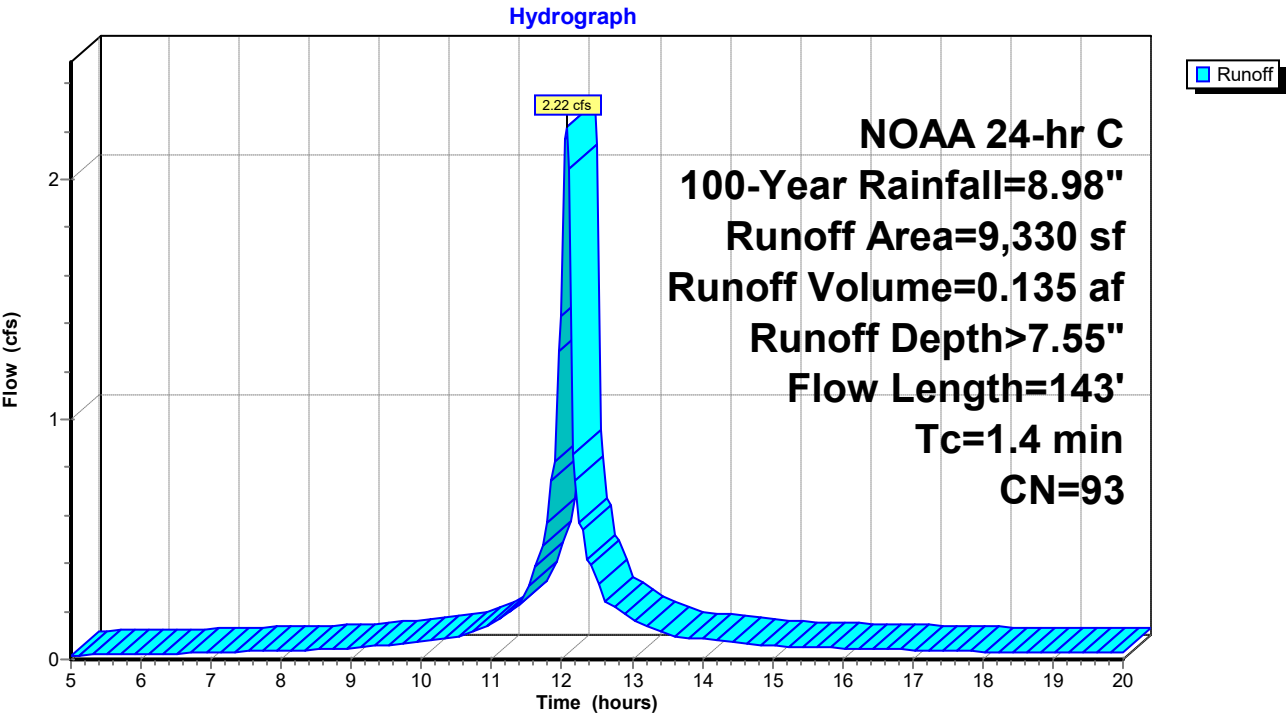
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Subcatchment 3S: DA#4



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 3S: DA#4

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.15	0.02	18.00	8.27	7.43	0.03
5.25	0.61	0.17	0.02	18.25	8.30	7.46	0.03
5.50	0.64	0.19	0.02	18.50	8.34	7.50	0.03
5.75	0.68	0.22	0.02	18.75	8.37	7.53	0.03
6.00	0.71	0.24	0.02	19.00	8.41	7.57	0.03
6.25	0.75	0.27	0.02	19.25	8.44	7.60	0.03
6.50	0.79	0.29	0.02	19.50	8.48	7.63	0.03
6.75	0.83	0.32	0.03	19.75	8.51	7.67	0.03
7.00	0.88	0.36	0.03	20.00	8.54	7.70	0.03
7.25	0.92	0.39	0.03				
7.50	0.97	0.43	0.03				
7.75	1.02	0.47	0.04				
8.00	1.08	0.51	0.04				
8.25	1.13	0.56	0.04				
8.50	1.19	0.60	0.04				
8.75	1.25	0.65	0.04				
9.00	1.31	0.70	0.05				
9.25	1.38	0.76	0.05				
9.50	1.46	0.83	0.06				
9.75	1.54	0.90	0.07				
10.00	1.64	0.99	0.07				
10.25	1.74	1.08	0.08				
10.50	1.85	1.18	0.09				
10.75	1.99	1.30	0.12				
11.00	2.16	1.46	0.14				
11.25	2.38	1.66	0.20				
11.50	2.65	1.92	0.26				
11.75	3.16	2.40	0.53				
12.00	4.28	3.49	1.43				
12.25	5.82	5.01	0.57				
12.50	6.33	5.50	0.37				
12.75	6.60	5.78	0.21				
13.00	6.82	6.00	0.17				
13.25	6.99	6.16	0.13				
13.50	7.13	6.30	0.11				
13.75	7.24	6.41	0.09				
14.00	7.34	6.51	0.09				
14.25	7.44	6.60	0.08				
14.50	7.52	6.69	0.07				
14.75	7.60	6.77	0.06				
15.00	7.67	6.83	0.06				
15.25	7.73	6.90	0.05				
15.50	7.79	6.96	0.05				
15.75	7.85	7.01	0.05				
16.00	7.90	7.07	0.05				
16.25	7.96	7.12	0.04				
16.50	8.01	7.17	0.04				
16.75	8.06	7.22	0.04				
17.00	8.10	7.27	0.04				
17.25	8.15	7.31	0.04				
17.50	8.19	7.35	0.04				
17.75	8.23	7.39	0.03				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Subcatchment 4S: DA#2

Runoff = 0.84 cfs @ 12.10 hrs, Volume= 0.053 af, Depth> 7.46"
Routed to Pond 20P : CI-8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

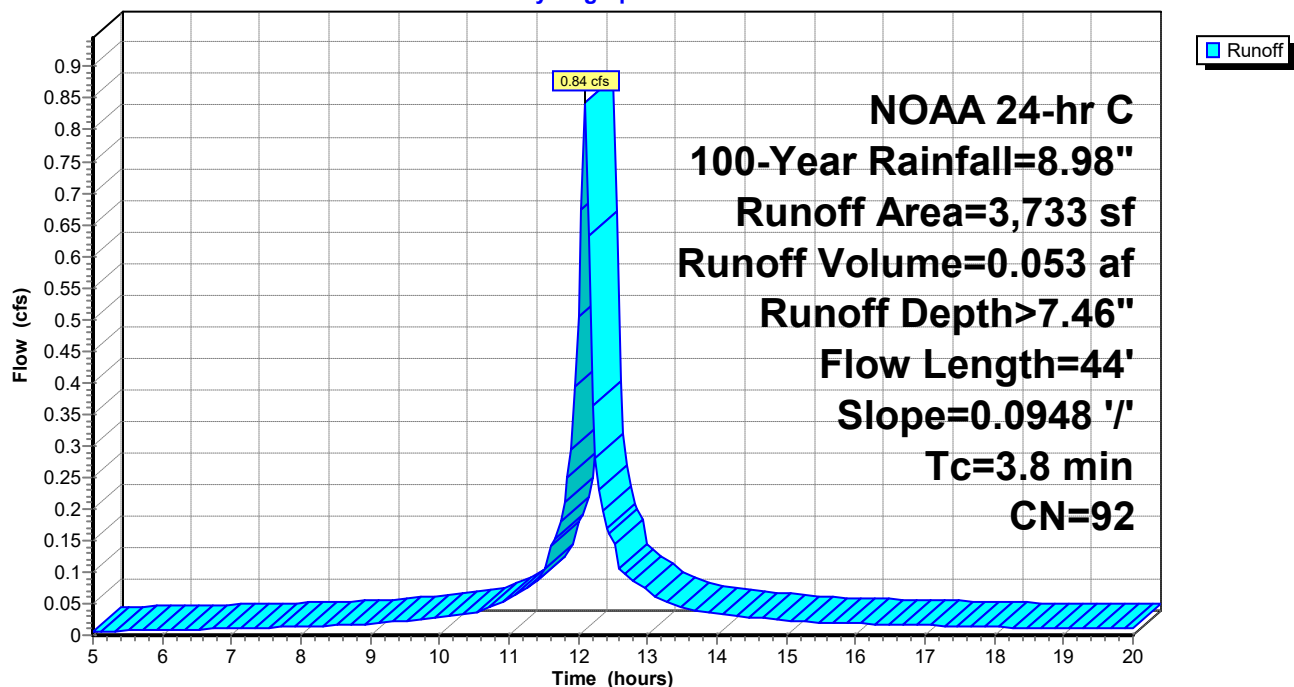
Area (sf)	CN	Description
2,519	98	Paved parking, HSG D
1,214	80	>75% Grass cover, Good, HSG D
3,733	92	Weighted Average
1,214		32.52% Pervious Area
2,519		67.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	44	0.0948	0.19		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"

Subcatchment 4S: DA#2

Subcatchment 4S: DA#2

Hydrograph



EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Subcatchment 4S: DA#2

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.12	0.01	18.00	8.27	7.31	0.01
5.25	0.61	0.14	0.01	18.25	8.30	7.34	0.01
5.50	0.64	0.16	0.01	18.50	8.34	7.38	0.01
5.75	0.68	0.18	0.01	18.75	8.37	7.41	0.01
6.00	0.71	0.21	0.01	19.00	8.41	7.45	0.01
6.25	0.75	0.23	0.01	19.25	8.44	7.48	0.01
6.50	0.79	0.26	0.01	19.50	8.48	7.51	0.01
6.75	0.83	0.28	0.01	19.75	8.51	7.55	0.01
7.00	0.88	0.31	0.01	20.00	8.54	7.58	0.01
7.25	0.92	0.35	0.01				
7.50	0.97	0.38	0.01				
7.75	1.02	0.42	0.01				
8.00	1.08	0.46	0.01				
8.25	1.13	0.50	0.01				
8.50	1.19	0.55	0.02				
8.75	1.25	0.59	0.02				
9.00	1.31	0.64	0.02				
9.25	1.38	0.70	0.02				
9.50	1.46	0.77	0.02				
9.75	1.54	0.84	0.03				
10.00	1.64	0.92	0.03				
10.25	1.74	1.01	0.03				
10.50	1.85	1.10	0.03				
10.75	1.99	1.23	0.04				
11.00	2.16	1.38	0.06				
11.25	2.38	1.58	0.07				
11.50	2.65	1.84	0.09				
11.75	3.16	2.31	0.18				
12.00	4.28	3.39	0.50				
12.25	5.82	4.90	0.28				
12.50	6.33	5.39	0.15				
12.75	6.60	5.66	0.09				
13.00	6.82	5.88	0.07				
13.25	6.99	6.05	0.05				
13.50	7.13	6.18	0.04				
13.75	7.24	6.29	0.04				
14.00	7.34	6.39	0.03				
14.25	7.44	6.49	0.03				
14.50	7.52	6.57	0.03				
14.75	7.60	6.65	0.03				
15.00	7.67	6.72	0.02				
15.25	7.73	6.78	0.02				
15.50	7.79	6.84	0.02				
15.75	7.85	6.89	0.02				
16.00	7.90	6.95	0.02				
16.25	7.96	7.00	0.02				
16.50	8.01	7.05	0.02				
16.75	8.06	7.10	0.02				
17.00	8.10	7.15	0.02				
17.25	8.15	7.19	0.01				
17.50	8.19	7.23	0.01				
17.75	8.23	7.27	0.01				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Subcatchment 11S: DA#5

Runoff = 2.04 cfs @ 12.06 hrs, Volume= 0.116 af, Depth> 6.48"
Routed to Pond 18P : SGW #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

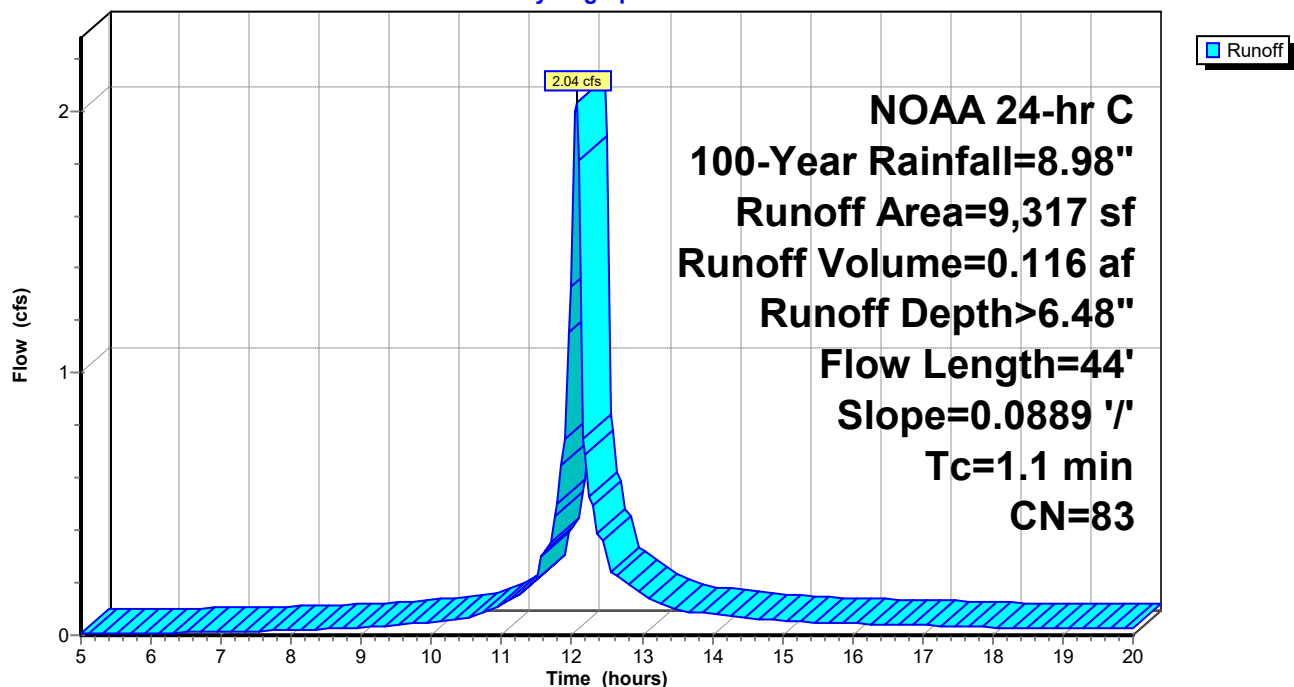
Area (sf)	CN	Description
1,475	98	Paved parking, HSG D
7,842	80	>75% Grass cover, Good, HSG D
9,317	83	Weighted Average
7,842		84.17% Pervious Area
1,475		15.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	44	0.0889	0.65		Sheet Flow, Fallow n= 0.050 P2= 3.42"

Subcatchment 11S: DA#5

Subcatchment 11S: DA#5

Hydrograph



EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Subcatchment 11S: DA#5

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.01	0.00	18.00	8.27	6.23	0.03
5.25	0.61	0.02	0.00	18.25	8.30	6.27	0.03
5.50	0.64	0.02	0.01	18.50	8.34	6.30	0.03
5.75	0.68	0.03	0.01	18.75	8.37	6.34	0.03
6.00	0.71	0.04	0.01	19.00	8.41	6.37	0.03
6.25	0.75	0.05	0.01	19.25	8.44	6.40	0.03
6.50	0.79	0.06	0.01	19.50	8.48	6.43	0.03
6.75	0.83	0.07	0.01	19.75	8.51	6.46	0.03
7.00	0.88	0.09	0.01	20.00	8.54	6.49	0.03
7.25	0.92	0.10	0.01				
7.50	0.97	0.12	0.02				
7.75	1.02	0.14	0.02				
8.00	1.08	0.16	0.02				
8.25	1.13	0.19	0.02				
8.50	1.19	0.21	0.02				
8.75	1.25	0.24	0.03				
9.00	1.31	0.28	0.03				
9.25	1.38	0.31	0.03				
9.50	1.46	0.35	0.04				
9.75	1.54	0.40	0.05				
10.00	1.64	0.46	0.05				
10.25	1.74	0.52	0.06				
10.50	1.85	0.60	0.07				
10.75	1.99	0.69	0.09				
11.00	2.16	0.80	0.11				
11.25	2.38	0.96	0.16				
11.50	2.65	1.17	0.21				
11.75	3.16	1.57	0.46				
12.00	4.28	2.53	1.33				
12.25	5.82	3.93	0.53				
12.50	6.33	4.40	0.34				
12.75	6.60	4.65	0.20				
13.00	6.82	4.86	0.16				
13.25	6.99	5.02	0.12				
13.50	7.13	5.15	0.10				
13.75	7.24	5.25	0.09				
14.00	7.34	5.35	0.08				
14.25	7.44	5.44	0.07				
14.50	7.52	5.52	0.07				
14.75	7.60	5.60	0.06				
15.00	7.67	5.66	0.05				
15.25	7.73	5.72	0.05				
15.50	7.79	5.78	0.05				
15.75	7.85	5.83	0.05				
16.00	7.90	5.89	0.04				
16.25	7.96	5.94	0.04				
16.50	8.01	5.99	0.04				
16.75	8.06	6.03	0.04				
17.00	8.10	6.08	0.04				
17.25	8.15	6.12	0.04				
17.50	8.19	6.16	0.03				
17.75	8.23	6.20	0.03				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Subcatchment 13S: DA#11

Runoff = 1.50 cfs @ 12.06 hrs, Volume= 0.092 af, Depth> 7.73"
Routed to Pond 44P : CI-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

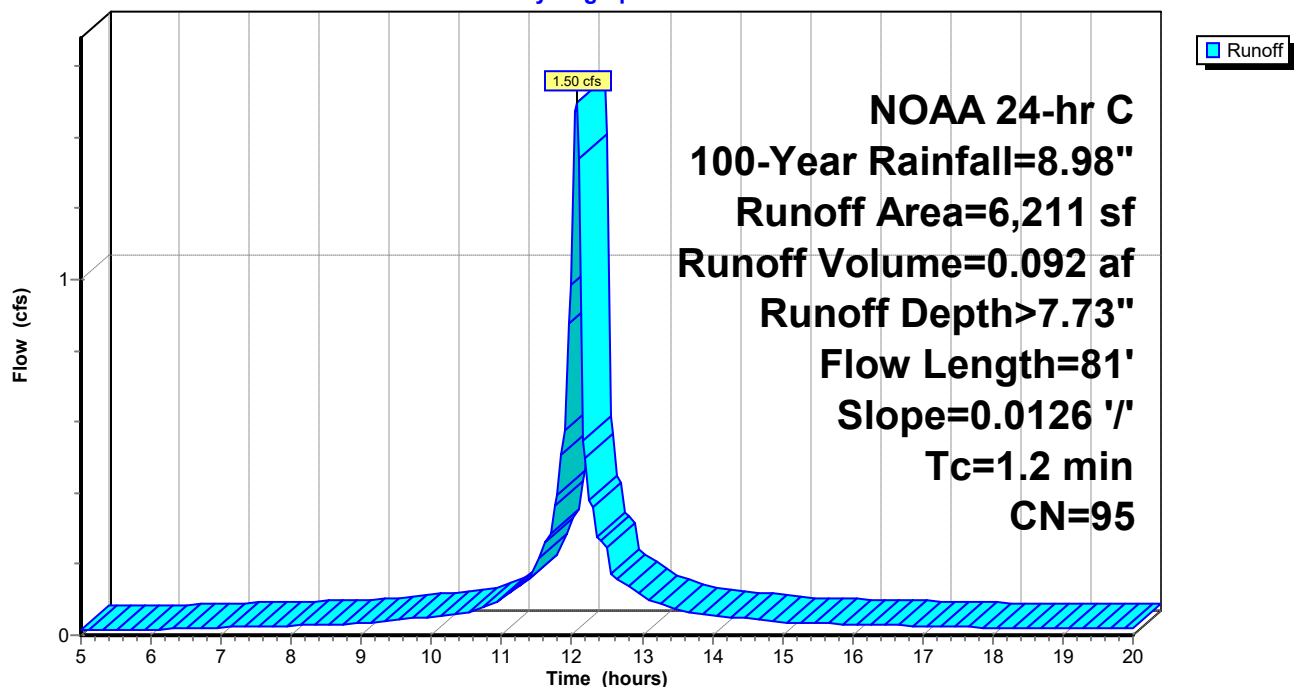
Area (sf)	CN	Description
5,197	98	Roofs, HSG D
1,014	80	>75% Grass cover, Good, HSG D
6,211	95	Weighted Average
1,014		16.33% Pervious Area
5,197		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	81	0.0126	1.13		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 13S: DA#11

Subcatchment 13S: DA#11

Hydrograph



EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 13S: DA#11

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.22	0.01	18.00	8.27	7.67	0.02
5.25	0.61	0.24	0.01	18.25	8.30	7.70	0.02
5.50	0.64	0.27	0.02	18.50	8.34	7.74	0.02
5.75	0.68	0.30	0.02	18.75	8.37	7.77	0.02
6.00	0.71	0.32	0.02	19.00	8.41	7.81	0.02
6.25	0.75	0.35	0.02	19.25	8.44	7.84	0.02
6.50	0.79	0.39	0.02	19.50	8.48	7.88	0.02
6.75	0.83	0.42	0.02	19.75	8.51	7.91	0.02
7.00	0.88	0.46	0.02	20.00	8.54	7.94	0.02
7.25	0.92	0.50	0.02				
7.50	0.97	0.54	0.02				
7.75	1.02	0.58	0.03				
8.00	1.08	0.63	0.03				
8.25	1.13	0.68	0.03				
8.50	1.19	0.73	0.03				
8.75	1.25	0.78	0.03				
9.00	1.31	0.84	0.03				
9.25	1.38	0.90	0.04				
9.50	1.46	0.97	0.04				
9.75	1.54	1.05	0.05				
10.00	1.64	1.14	0.05				
10.25	1.74	1.24	0.06				
10.50	1.85	1.34	0.06				
10.75	1.99	1.47	0.08				
11.00	2.16	1.63	0.10				
11.25	2.38	1.84	0.14				
11.50	2.65	2.11	0.18				
11.75	3.16	2.60	0.37				
12.00	4.28	3.71	0.99				
12.25	5.82	5.24	0.38				
12.50	6.33	5.74	0.24				
12.75	6.60	6.01	0.14				
13.00	6.82	6.23	0.11				
13.25	6.99	6.40	0.09				
13.50	7.13	6.53	0.07				
13.75	7.24	6.64	0.06				
14.00	7.34	6.75	0.06				
14.25	7.44	6.84	0.05				
14.50	7.52	6.93	0.05				
14.75	7.60	7.00	0.04				
15.00	7.67	7.07	0.04				
15.25	7.73	7.13	0.03				
15.50	7.79	7.19	0.03				
15.75	7.85	7.25	0.03				
16.00	7.90	7.31	0.03				
16.25	7.96	7.36	0.03				
16.50	8.01	7.41	0.03				
16.75	8.06	7.46	0.03				
17.00	8.10	7.51	0.03				
17.25	8.15	7.55	0.02				
17.50	8.19	7.59	0.02				
17.75	8.23	7.63	0.02				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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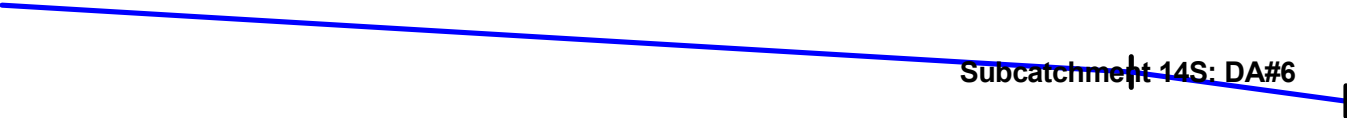
Summary for Subcatchment 14S: DA#6

Runoff = 4.97 cfs @ 12.09 hrs, Volume= 0.311 af, Depth> 7.55"
Routed to Pond 17P : SGW FOREBAY #1

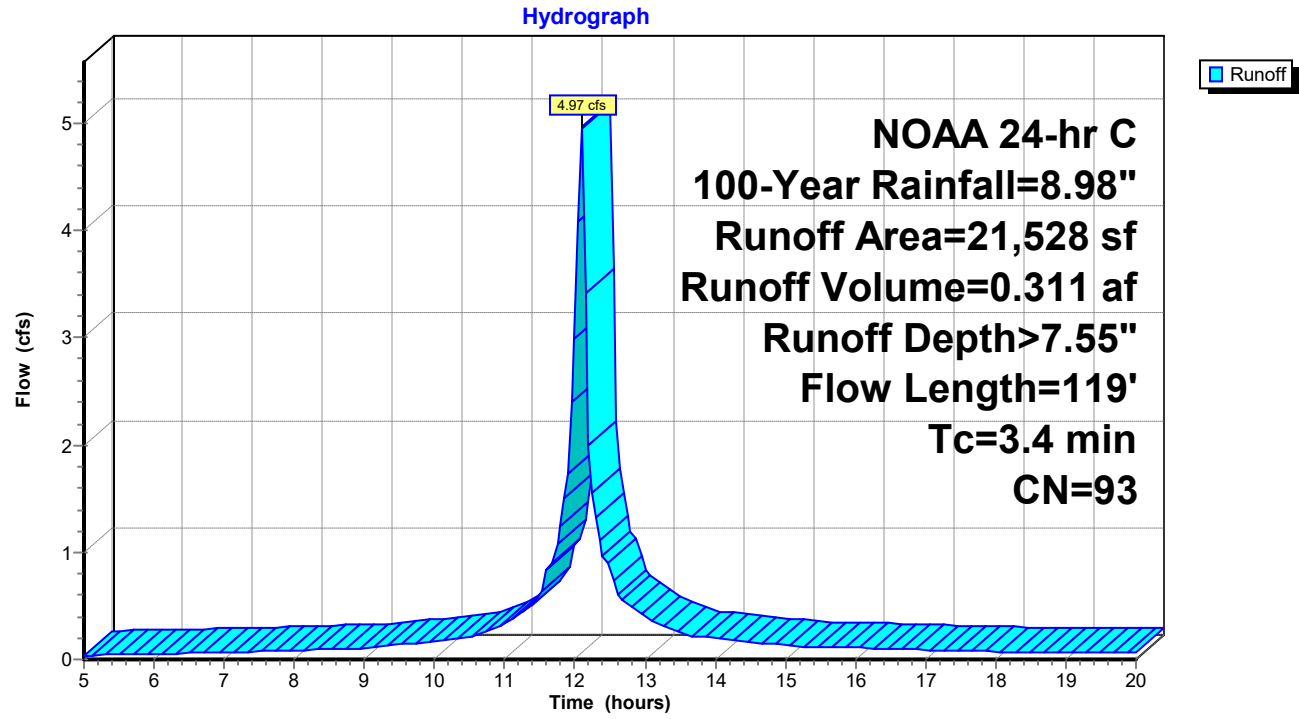
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
15,753	98	Roofs, HSG D
5,775	80	>75% Grass cover, Good, HSG D
21,528	93	Weighted Average
5,775		26.83% Pervious Area
15,753		73.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	100	0.0319	0.51		Sheet Flow, Fallow n= 0.050 P2= 3.42"
0.1	19	0.0726	4.34		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
3.4	119	Total			



Subcatchment 14S: DA#6



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 14S: DA#6

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.15	0.04	18.00	8.27	7.43	0.07
5.25	0.61	0.17	0.04	18.25	8.30	7.46	0.07
5.50	0.64	0.19	0.04	18.50	8.34	7.50	0.07
5.75	0.68	0.22	0.05	18.75	8.37	7.53	0.07
6.00	0.71	0.24	0.05	19.00	8.41	7.57	0.07
6.25	0.75	0.27	0.05	19.25	8.44	7.60	0.07
6.50	0.79	0.29	0.06	19.50	8.48	7.63	0.07
6.75	0.83	0.32	0.06	19.75	8.51	7.67	0.06
7.00	0.88	0.36	0.07	20.00	8.54	7.70	0.06
7.25	0.92	0.39	0.07				
7.50	0.97	0.43	0.08				
7.75	1.02	0.47	0.08				
8.00	1.08	0.51	0.09				
8.25	1.13	0.56	0.09				
8.50	1.19	0.60	0.10				
8.75	1.25	0.65	0.10				
9.00	1.31	0.70	0.11				
9.25	1.38	0.76	0.12				
9.50	1.46	0.83	0.14				
9.75	1.54	0.90	0.15				
10.00	1.64	0.99	0.17				
10.25	1.74	1.08	0.19				
10.50	1.85	1.18	0.20				
10.75	1.99	1.30	0.27				
11.00	2.16	1.46	0.33				
11.25	2.38	1.66	0.44				
11.50	2.65	1.92	0.55				
11.75	3.16	2.40	1.08				
12.00	4.28	3.49	2.98				
12.25	5.82	5.01	1.55				
12.50	6.33	5.50	0.89				
12.75	6.60	5.78	0.52				
13.00	6.82	6.00	0.40				
13.25	6.99	6.16	0.31				
13.50	7.13	6.30	0.25				
13.75	7.24	6.41	0.21				
14.00	7.34	6.51	0.20				
14.25	7.44	6.60	0.18				
14.50	7.52	6.69	0.16				
14.75	7.60	6.77	0.15				
15.00	7.67	6.83	0.13				
15.25	7.73	6.90	0.12				
15.50	7.79	6.96	0.12				
15.75	7.85	7.01	0.11				
16.00	7.90	7.07	0.11				
16.25	7.96	7.12	0.10				
16.50	8.01	7.17	0.10				
16.75	8.06	7.22	0.10				
17.00	8.10	7.27	0.09				
17.25	8.15	7.31	0.09				
17.50	8.19	7.35	0.08				
17.75	8.23	7.39	0.08				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Summary for Subcatchment 16S: DA#7

Runoff = 2.05 cfs @ 12.07 hrs, Volume= 0.127 af, Depth> 7.80"
 Routed to Pond 38P : CI-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
7,423	98	Roofs, HSG D
1,076	80	>75% Grass cover, Good, HSG D
8,499	96	Weighted Average
1,076		12.66% Pervious Area
7,423		87.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	100	0.0151	1.27		Sheet Flow, GRAVEL LOT Smooth surfaces n= 0.011 P2= 3.42"
0.2	20	0.0085	1.87		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.5	120	Total			



EX and PR

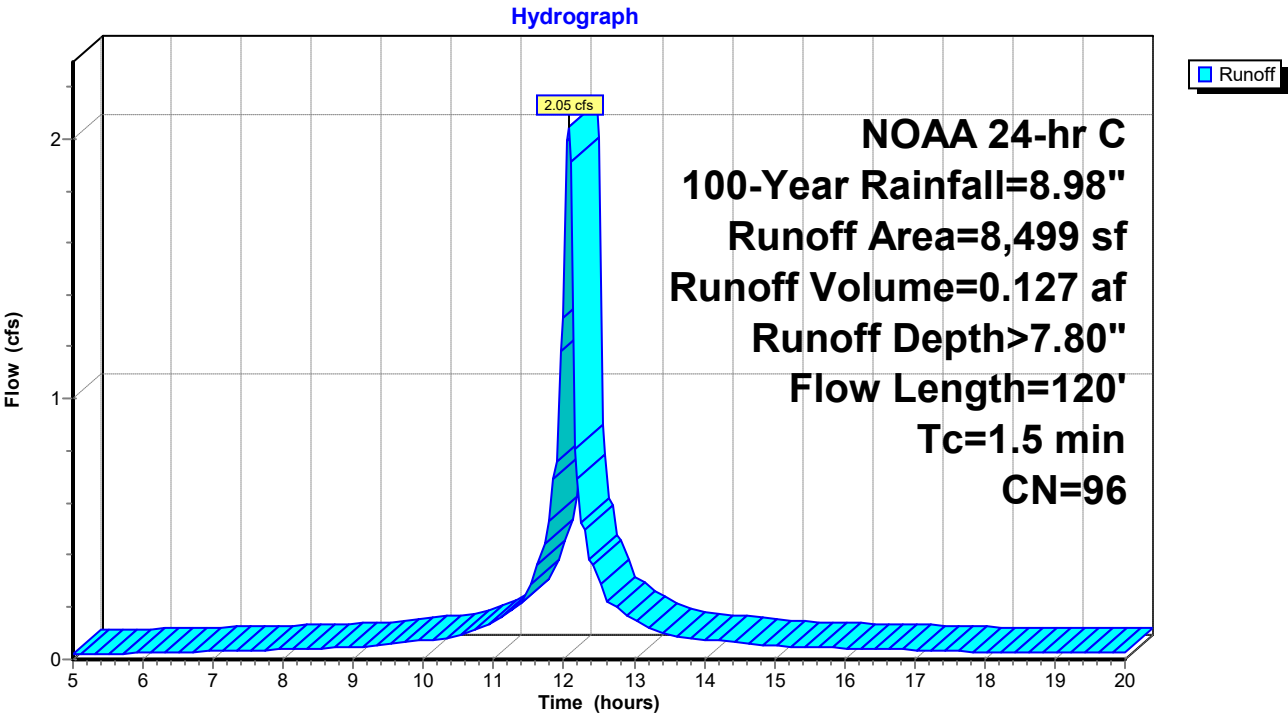
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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Subcatchment 16S: DA#7



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Subcatchment 16S: DA#7

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.26	0.02	18.00	8.27	7.79	0.03
5.25	0.61	0.29	0.02	18.25	8.30	7.82	0.03
5.50	0.64	0.32	0.02	18.50	8.34	7.86	0.03
5.75	0.68	0.35	0.02	18.75	8.37	7.89	0.03
6.00	0.71	0.38	0.02	19.00	8.41	7.93	0.03
6.25	0.75	0.41	0.03	19.25	8.44	7.96	0.03
6.50	0.79	0.44	0.03	19.50	8.48	8.00	0.03
6.75	0.83	0.48	0.03	19.75	8.51	8.03	0.03
7.00	0.88	0.52	0.03	20.00	8.54	8.06	0.03
7.25	0.92	0.56	0.03				
7.50	0.97	0.60	0.04				
7.75	1.02	0.65	0.04				
8.00	1.08	0.70	0.04				
8.25	1.13	0.75	0.04				
8.50	1.19	0.80	0.04				
8.75	1.25	0.86	0.04				
9.00	1.31	0.92	0.05				
9.25	1.38	0.98	0.05				
9.50	1.46	1.05	0.06				
9.75	1.54	1.14	0.07				
10.00	1.64	1.23	0.07				
10.25	1.74	1.32	0.08				
10.50	1.85	1.43	0.09				
10.75	1.99	1.56	0.12				
11.00	2.16	1.72	0.14				
11.25	2.38	1.94	0.19				
11.50	2.65	2.21	0.24				
11.75	3.16	2.71	0.50				
12.00	4.28	3.82	1.31				
12.25	5.82	5.35	0.53				
12.50	6.33	5.85	0.34				
12.75	6.60	6.13	0.20				
13.00	6.82	6.35	0.16				
13.25	6.99	6.52	0.12				
13.50	7.13	6.65	0.10				
13.75	7.24	6.76	0.08				
14.00	7.34	6.87	0.08				
14.25	7.44	6.96	0.07				
14.50	7.52	7.04	0.07				
14.75	7.60	7.12	0.06				
15.00	7.67	7.19	0.05				
15.25	7.73	7.25	0.05				
15.50	7.79	7.31	0.05				
15.75	7.85	7.37	0.04				
16.00	7.90	7.43	0.04				
16.25	7.96	7.48	0.04				
16.50	8.01	7.53	0.04				
16.75	8.06	7.58	0.04				
17.00	8.10	7.62	0.04				
17.25	8.15	7.67	0.03				
17.50	8.19	7.71	0.03				
17.75	8.23	7.75	0.03				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Summary for Subcatchment 19S: DA#8

Runoff = 4.31 cfs @ 12.06 hrs, Volume= 0.269 af, Depth> 7.92"
Routed to Pond 39P : CI-9

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

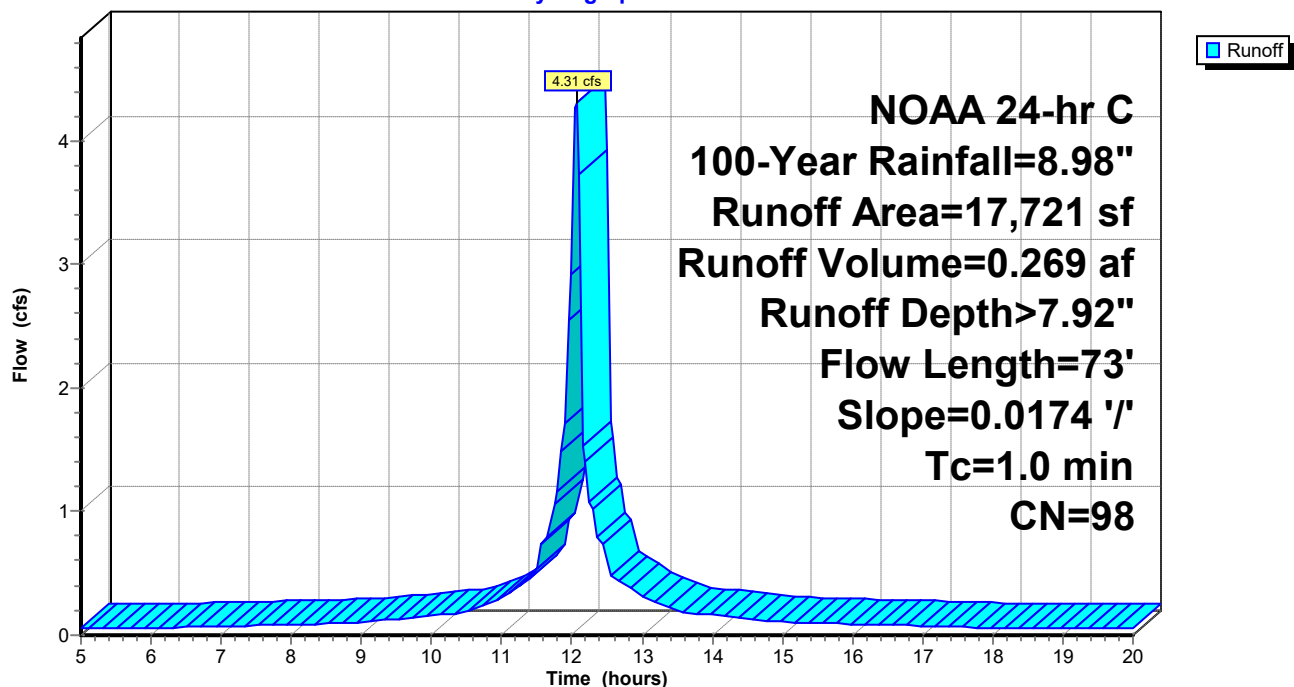
Area (sf)	CN	Description
17,329	98	Roofs, HSG D
392	80	>75% Grass cover, Good, HSG D
17,721	98	Weighted Average
392		2.21% Pervious Area
17,329		97.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	73	0.0174	1.26		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 19S: DA#8

Subcatchment 19S: DA#8

Hydrograph



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 19S: DA#8

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.38	0.05	18.00	8.27	8.03	0.06
5.25	0.61	0.41	0.05	18.25	8.30	8.06	0.06
5.50	0.64	0.45	0.05	18.50	8.34	8.10	0.06
5.75	0.68	0.48	0.06	18.75	8.37	8.13	0.06
6.00	0.71	0.51	0.06	19.00	8.41	8.17	0.06
6.25	0.75	0.55	0.06	19.25	8.44	8.20	0.05
6.50	0.79	0.59	0.06	19.50	8.48	8.24	0.05
6.75	0.83	0.63	0.07	19.75	8.51	8.27	0.05
7.00	0.88	0.67	0.07	20.00	8.54	8.30	0.05
7.25	0.92	0.72	0.08				
7.50	0.97	0.76	0.08				
7.75	1.02	0.81	0.08				
8.00	1.08	0.86	0.09				
8.25	1.13	0.92	0.09				
8.50	1.19	0.98	0.09				
8.75	1.25	1.03	0.10				
9.00	1.31	1.09	0.10				
9.25	1.38	1.16	0.12				
9.50	1.46	1.24	0.13				
9.75	1.54	1.32	0.15				
10.00	1.64	1.42	0.16				
10.25	1.74	1.52	0.17				
10.50	1.85	1.63	0.19				
10.75	1.99	1.76	0.25				
11.00	2.16	1.93	0.30				
11.25	2.38	2.15	0.41				
11.50	2.65	2.42	0.53				
11.75	3.16	2.92	1.07				
12.00	4.28	4.04	2.92				
12.25	5.82	5.58	1.08				
12.50	6.33	6.09	0.69				
12.75	6.60	6.36	0.41				
13.00	6.82	6.59	0.32				
13.25	6.99	6.75	0.25				
13.50	7.13	6.89	0.20				
13.75	7.24	7.00	0.17				
14.00	7.34	7.10	0.16				
14.25	7.44	7.20	0.15				
14.50	7.52	7.28	0.14				
14.75	7.60	7.36	0.12				
15.00	7.67	7.43	0.11				
15.25	7.73	7.49	0.10				
15.50	7.79	7.55	0.10				
15.75	7.85	7.61	0.09				
16.00	7.90	7.66	0.09				
16.25	7.96	7.72	0.09				
16.50	8.01	7.77	0.08				
16.75	8.06	7.82	0.08				
17.00	8.10	7.86	0.08				
17.25	8.15	7.91	0.07				
17.50	8.19	7.95	0.07				
17.75	8.23	7.99	0.06				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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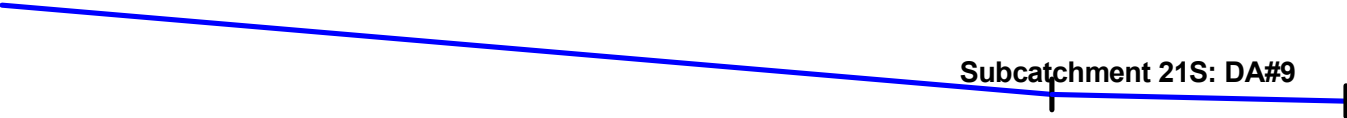
Summary for Subcatchment 21S: DA#9

Runoff = 2.59 cfs @ 12.07 hrs, Volume= 0.156 af, Depth> 7.46"
Routed to Pond 40P : CI-6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
7,468	98	Roofs, HSG D
3,482	80	>75% Grass cover, Good, HSG D
10,950	92	Weighted Average
3,482		31.80% Pervious Area
7,468		68.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	100	0.0254	1.56		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.3	28	0.0068	1.67		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.4	128	Total			



EX and PR

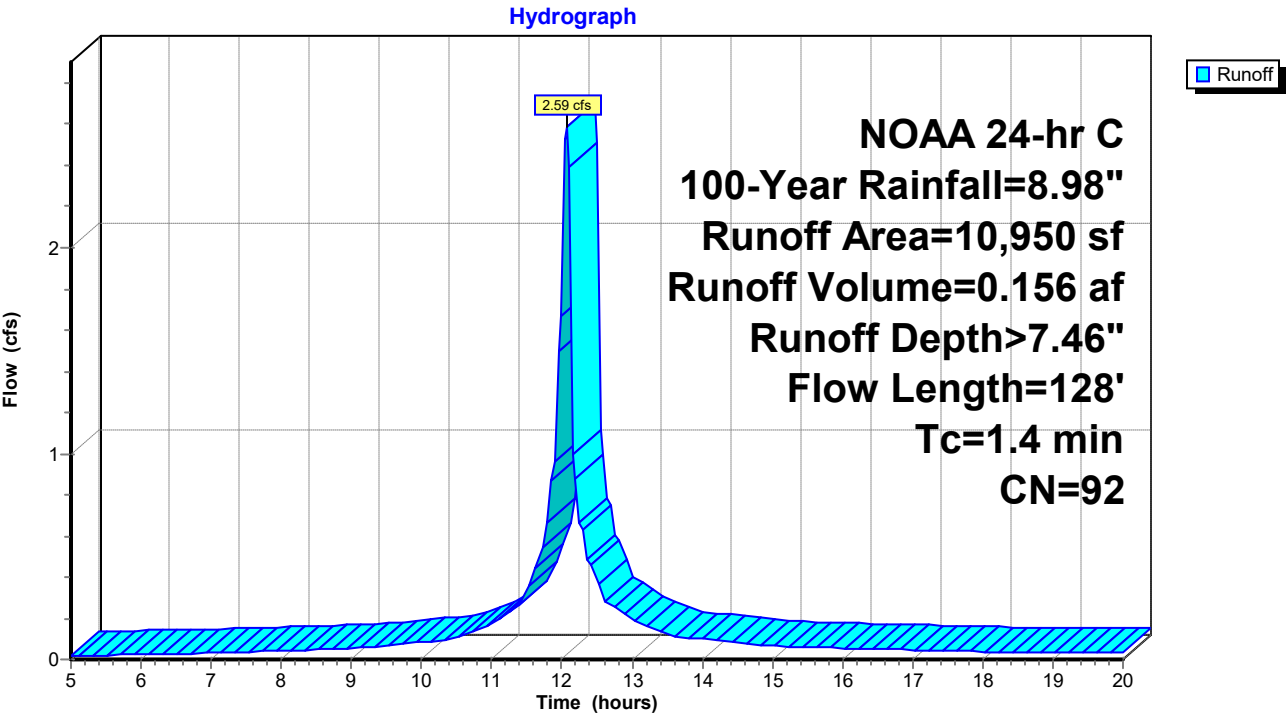
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NOAA 24-hr C 100-Year Rainfall=8.98"

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Subcatchment 21S: DA#9



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Subcatchment 21S: DA#9

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.12	0.02	18.00	8.27	7.31	0.04
5.25	0.61	0.14	0.02	18.25	8.30	7.34	0.04
5.50	0.64	0.16	0.02	18.50	8.34	7.38	0.04
5.75	0.68	0.18	0.02	18.75	8.37	7.41	0.03
6.00	0.71	0.21	0.02	19.00	8.41	7.45	0.03
6.25	0.75	0.23	0.03	19.25	8.44	7.48	0.03
6.50	0.79	0.26	0.03	19.50	8.48	7.51	0.03
6.75	0.83	0.28	0.03	19.75	8.51	7.55	0.03
7.00	0.88	0.31	0.03	20.00	8.54	7.58	0.03
7.25	0.92	0.35	0.03				
7.50	0.97	0.38	0.04				
7.75	1.02	0.42	0.04				
8.00	1.08	0.46	0.04				
8.25	1.13	0.50	0.04				
8.50	1.19	0.55	0.05				
8.75	1.25	0.59	0.05				
9.00	1.31	0.64	0.05				
9.25	1.38	0.70	0.06				
9.50	1.46	0.77	0.07				
9.75	1.54	0.84	0.08				
10.00	1.64	0.92	0.08				
10.25	1.74	1.01	0.09				
10.50	1.85	1.10	0.10				
10.75	1.99	1.23	0.14				
11.00	2.16	1.38	0.17				
11.25	2.38	1.58	0.23				
11.50	2.65	1.84	0.30				
11.75	3.16	2.31	0.62				
12.00	4.28	3.39	1.67				
12.25	5.82	4.90	0.67				
12.50	6.33	5.39	0.43				
12.75	6.60	5.66	0.25				
13.00	6.82	5.88	0.20				
13.25	6.99	6.05	0.15				
13.50	7.13	6.18	0.13				
13.75	7.24	6.29	0.11				
14.00	7.34	6.39	0.10				
14.25	7.44	6.49	0.09				
14.50	7.52	6.57	0.08				
14.75	7.60	6.65	0.07				
15.00	7.67	6.72	0.07				
15.25	7.73	6.78	0.06				
15.50	7.79	6.84	0.06				
15.75	7.85	6.89	0.06				
16.00	7.90	6.95	0.05				
16.25	7.96	7.00	0.05				
16.50	8.01	7.05	0.05				
16.75	8.06	7.10	0.05				
17.00	8.10	7.15	0.05				
17.25	8.15	7.19	0.04				
17.50	8.19	7.23	0.04				
17.75	8.23	7.27	0.04				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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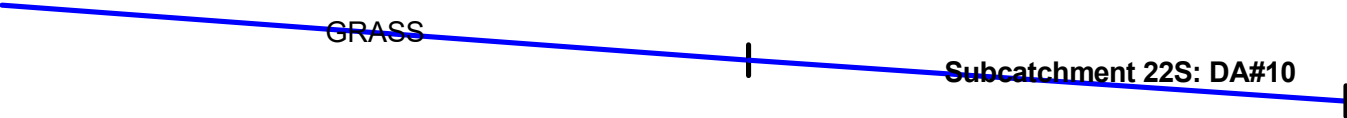
Summary for Subcatchment 22S: DA#10

Runoff = 0.95 cfs @ 12.19 hrs, Volume= 0.075 af, Depth> 6.92"
Routed to Pond 43P : CI-7

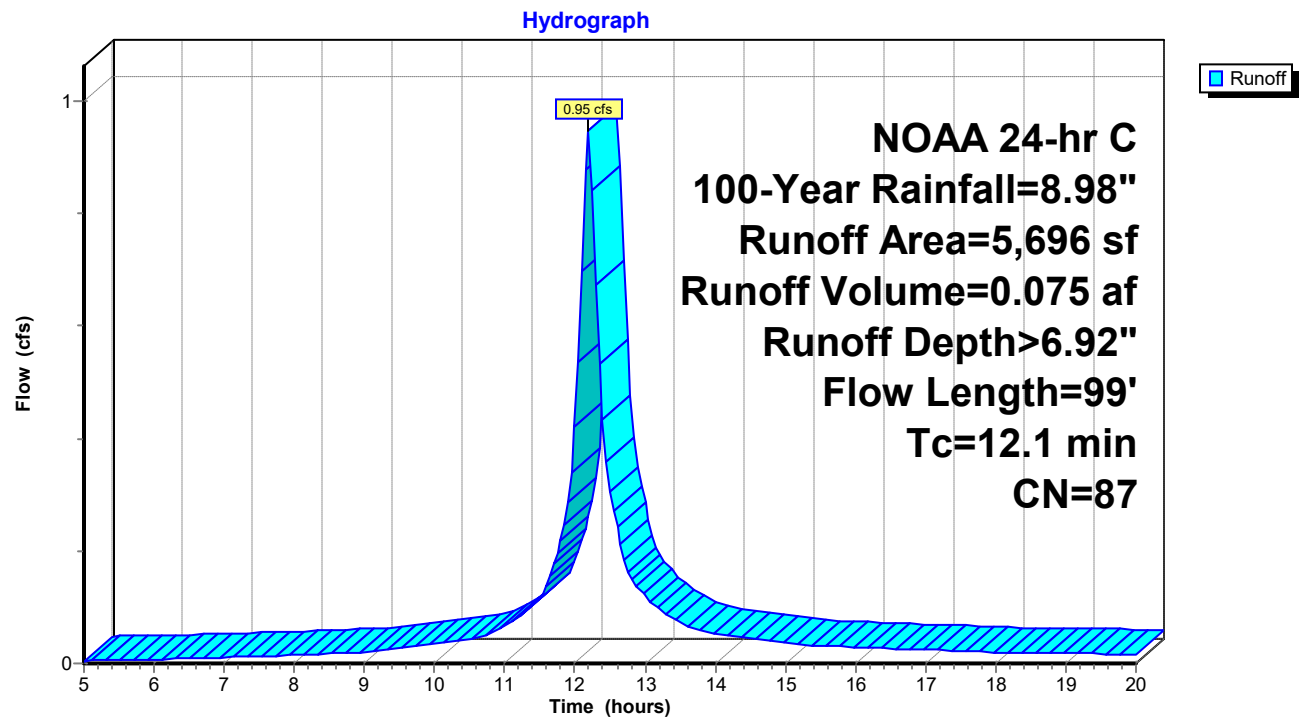
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
2,347	98	Roofs, HSG D
3,349	80	>75% Grass cover, Good, HSG D
5,696	87	Weighted Average
3,349		58.80% Pervious Area
2,347		41.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.3	55	0.0100	0.08		Sheet Flow, GRASS Grass: Dense n= 0.240 P2= 3.42"
0.8	44	0.0093	0.89		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
12.1	99	Total			



Subcatchment 22S: DA#10



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 22S: DA#10

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.04	0.00	18.00	8.27	6.71	0.02
5.25	0.61	0.05	0.01	18.25	8.30	6.75	0.02
5.50	0.64	0.06	0.01	18.50	8.34	6.78	0.02
5.75	0.68	0.08	0.01	18.75	8.37	6.81	0.02
6.00	0.71	0.09	0.01	19.00	8.41	6.85	0.02
6.25	0.75	0.10	0.01	19.25	8.44	6.88	0.02
6.50	0.79	0.12	0.01	19.50	8.48	6.91	0.02
6.75	0.83	0.14	0.01	19.75	8.51	6.95	0.02
7.00	0.88	0.16	0.01	20.00	8.54	6.98	0.02
7.25	0.92	0.18	0.01				
7.50	0.97	0.21	0.01				
7.75	1.02	0.24	0.01				
8.00	1.08	0.27	0.02				
8.25	1.13	0.30	0.02				
8.50	1.19	0.33	0.02				
8.75	1.25	0.37	0.02				
9.00	1.31	0.41	0.02				
9.25	1.38	0.45	0.02				
9.50	1.46	0.51	0.03				
9.75	1.54	0.57	0.03				
10.00	1.64	0.63	0.03				
10.25	1.74	0.71	0.04				
10.50	1.85	0.79	0.04				
10.75	1.99	0.90	0.05				
11.00	2.16	1.03	0.07				
11.25	2.38	1.21	0.09				
11.50	2.65	1.44	0.12				
11.75	3.16	1.88	0.20				
12.00	4.28	2.89	0.42				
12.25	5.82	4.35	0.84				
12.50	6.33	4.83	0.31				
12.75	6.60	5.10	0.16				
13.00	6.82	5.31	0.12				
13.25	6.99	5.47	0.09				
13.50	7.13	5.60	0.07				
13.75	7.24	5.71	0.06				
14.00	7.34	5.81	0.05				
14.25	7.44	5.90	0.05				
14.50	7.52	5.99	0.04				
14.75	7.60	6.06	0.04				
15.00	7.67	6.13	0.04				
15.25	7.73	6.19	0.03				
15.50	7.79	6.25	0.03				
15.75	7.85	6.30	0.03				
16.00	7.90	6.36	0.03				
16.25	7.96	6.41	0.03				
16.50	8.01	6.46	0.03				
16.75	8.06	6.51	0.03				
17.00	8.10	6.55	0.02				
17.25	8.15	6.59	0.02				
17.50	8.19	6.64	0.02				
17.75	8.23	6.67	0.02				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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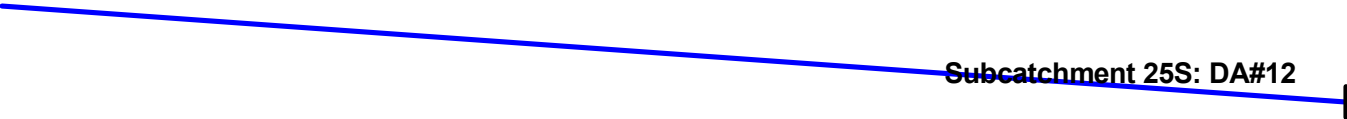
Summary for Subcatchment 25S: DA#12

Runoff = 1.62 cfs @ 12.07 hrs, Volume= 0.100 af, Depth> 7.80"
Routed to Pond 45P : CI-3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

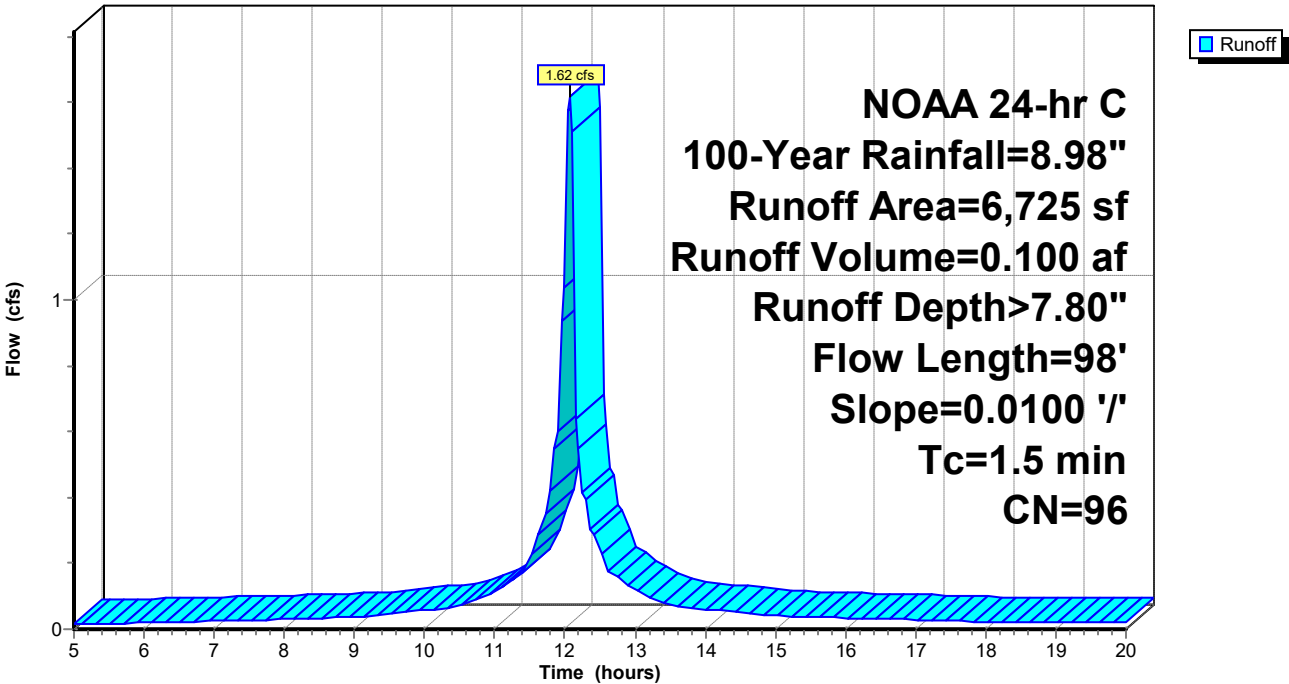
Area (sf)	CN	Description
5,864	98	Roofs, HSG D
861	80	>75% Grass cover, Good, HSG D
6,725	96	Weighted Average
861		12.80% Pervious Area
5,864		87.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	98	0.0100	1.07		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"



Subcatchment 25S: DA#12

Hydrograph



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 25S: DA#12

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.26	0.02	18.00	8.27	7.79	0.02
5.25	0.61	0.29	0.02	18.25	8.30	7.82	0.02
5.50	0.64	0.32	0.02	18.50	8.34	7.86	0.02
5.75	0.68	0.35	0.02	18.75	8.37	7.89	0.02
6.00	0.71	0.38	0.02	19.00	8.41	7.93	0.02
6.25	0.75	0.41	0.02	19.25	8.44	7.96	0.02
6.50	0.79	0.44	0.02	19.50	8.48	8.00	0.02
6.75	0.83	0.48	0.02	19.75	8.51	8.03	0.02
7.00	0.88	0.52	0.02	20.00	8.54	8.06	0.02
7.25	0.92	0.56	0.03				
7.50	0.97	0.60	0.03				
7.75	1.02	0.65	0.03				
8.00	1.08	0.70	0.03				
8.25	1.13	0.75	0.03				
8.50	1.19	0.80	0.03				
8.75	1.25	0.86	0.04				
9.00	1.31	0.92	0.04				
9.25	1.38	0.98	0.04				
9.50	1.46	1.05	0.05				
9.75	1.54	1.14	0.05				
10.00	1.64	1.23	0.06				
10.25	1.74	1.32	0.06				
10.50	1.85	1.43	0.07				
10.75	1.99	1.56	0.09				
11.00	2.16	1.72	0.11				
11.25	2.38	1.94	0.15				
11.50	2.65	2.21	0.19				
11.75	3.16	2.71	0.39				
12.00	4.28	3.82	1.04				
12.25	5.82	5.35	0.42				
12.50	6.33	5.85	0.27				
12.75	6.60	6.13	0.16				
13.00	6.82	6.35	0.12				
13.25	6.99	6.52	0.10				
13.50	7.13	6.65	0.08				
13.75	7.24	6.76	0.07				
14.00	7.34	6.87	0.06				
14.25	7.44	6.96	0.06				
14.50	7.52	7.04	0.05				
14.75	7.60	7.12	0.05				
15.00	7.67	7.19	0.04				
15.25	7.73	7.25	0.04				
15.50	7.79	7.31	0.04				
15.75	7.85	7.37	0.04				
16.00	7.90	7.43	0.03				
16.25	7.96	7.48	0.03				
16.50	8.01	7.53	0.03				
16.75	8.06	7.58	0.03				
17.00	8.10	7.62	0.03				
17.25	8.15	7.67	0.03				
17.50	8.19	7.71	0.03				
17.75	8.23	7.75	0.02				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Summary for Subcatchment 26S: DA#1

Runoff = 5.87 cfs @ 12.12 hrs, Volume= 0.385 af, Depth> 6.93"
 Routed to Pond 27P : FES-4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
11,362	98	Roofs, HSG D
17,706	80	>75% Grass cover, Good, HSG D
29,068	87	Weighted Average
17,706		60.91% Pervious Area
11,362		39.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	27	0.0306	0.11		Sheet Flow, GRASS Grass: Dense n= 0.240 P2= 3.42"
1.4	378	0.0073	4.50	71.98	Channel Flow, Area= 16.0 sf Perim= 14.6' r= 1.10' n= 0.030
5.5	405	Total			

GRASS

Subcatchment 26S: DA#1

EX and PR

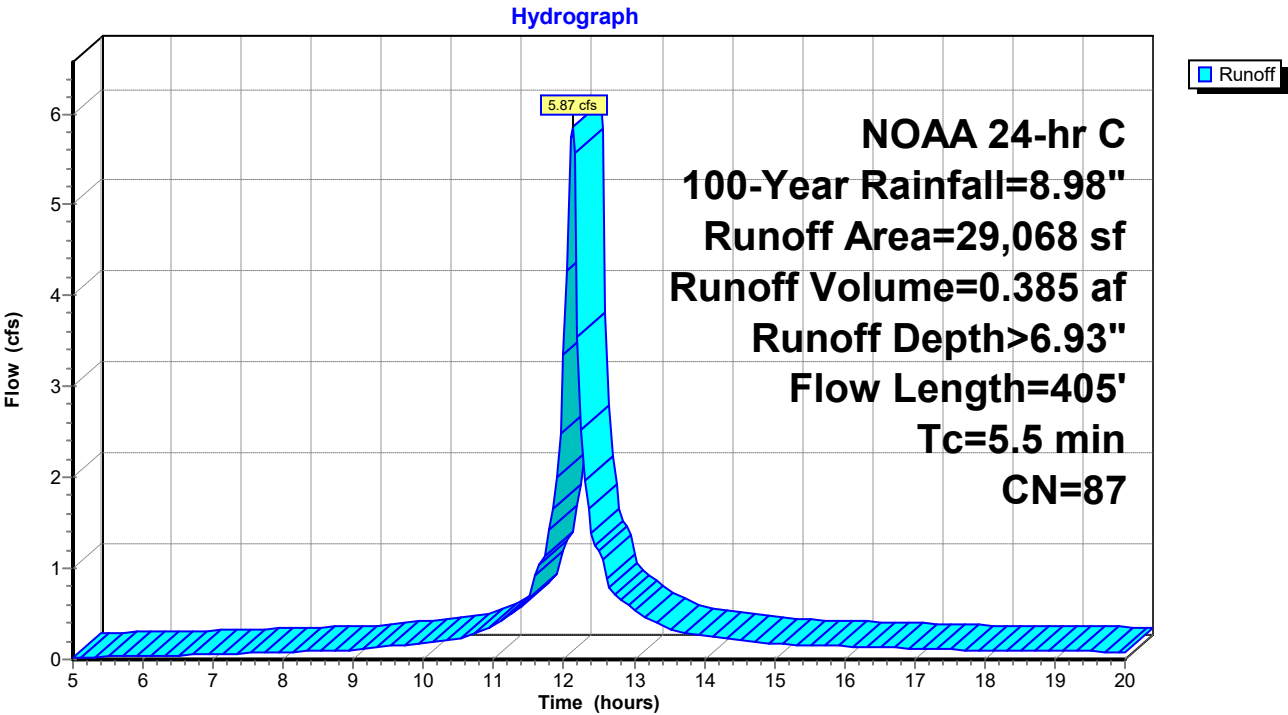
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NOAA 24-hr C 100-Year Rainfall=8.98"

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Subcatchment 26S: DA#1



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 26S: DA#1

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.04	0.03	18.00	8.27	6.71	0.10
5.25	0.61	0.05	0.03	18.25	8.30	6.75	0.09
5.50	0.64	0.06	0.03	18.50	8.34	6.78	0.09
5.75	0.68	0.08	0.03	18.75	8.37	6.81	0.09
6.00	0.71	0.09	0.04	19.00	8.41	6.85	0.09
6.25	0.75	0.10	0.04	19.25	8.44	6.88	0.09
6.50	0.79	0.12	0.05	19.50	8.48	6.91	0.09
6.75	0.83	0.14	0.05	19.75	8.51	6.95	0.09
7.00	0.88	0.16	0.06	20.00	8.54	6.98	0.08
7.25	0.92	0.18	0.06				
7.50	0.97	0.21	0.07				
7.75	1.02	0.24	0.07				
8.00	1.08	0.27	0.08				
8.25	1.13	0.30	0.09				
8.50	1.19	0.33	0.09				
8.75	1.25	0.37	0.10				
9.00	1.31	0.41	0.11				
9.25	1.38	0.45	0.12				
9.50	1.46	0.51	0.14				
9.75	1.54	0.57	0.16				
10.00	1.64	0.63	0.18				
10.25	1.74	0.71	0.21				
10.50	1.85	0.79	0.23				
10.75	1.99	0.90	0.29				
11.00	2.16	1.03	0.37				
11.25	2.38	1.21	0.50				
11.50	2.65	1.44	0.65				
11.75	3.16	1.88	1.20				
12.00	4.28	2.89	3.35				
12.25	5.82	4.35	2.52				
12.50	6.33	4.83	1.20				
12.75	6.60	5.10	0.70				
13.00	6.82	5.31	0.54				
13.25	6.99	5.47	0.43				
13.50	7.13	5.60	0.34				
13.75	7.24	5.71	0.29				
14.00	7.34	5.81	0.26				
14.25	7.44	5.90	0.24				
14.50	7.52	5.99	0.22				
14.75	7.60	6.06	0.20				
15.00	7.67	6.13	0.18				
15.25	7.73	6.19	0.16				
15.50	7.79	6.25	0.16				
15.75	7.85	6.30	0.15				
16.00	7.90	6.36	0.14				
16.25	7.96	6.41	0.14				
16.50	8.01	6.46	0.13				
16.75	8.06	6.51	0.13				
17.00	8.10	6.55	0.12				
17.25	8.15	6.59	0.12				
17.50	8.19	6.64	0.11				
17.75	8.23	6.67	0.10				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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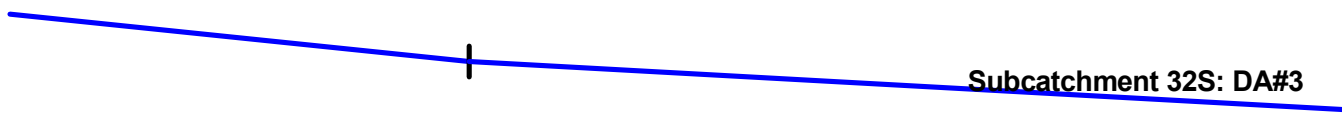
Summary for Subcatchment 32S: DA#3

Runoff = 2.16 cfs @ 12.06 hrs, Volume= 0.126 af, Depth> 6.94"
 Routed to Link 2L : SP#1

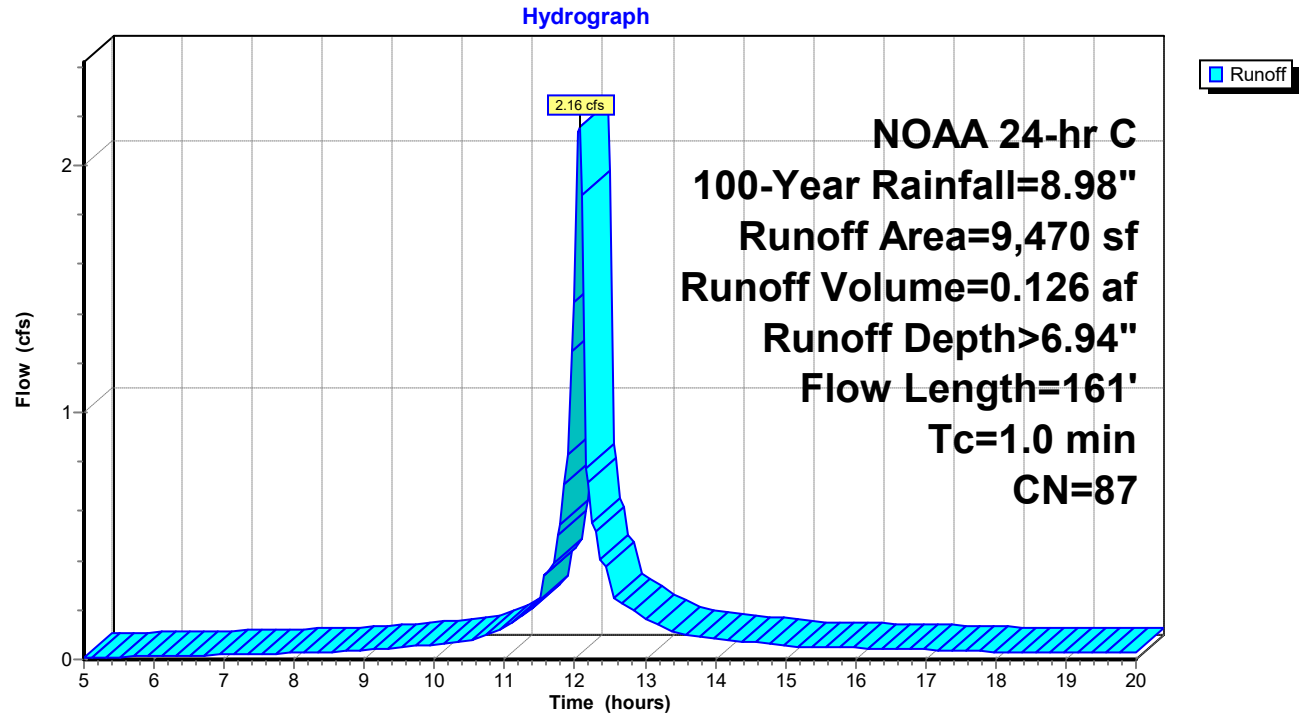
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
3,831	98	Roofs, HSG D
5,639	80	>75% Grass cover, Good, HSG D
9,470	87	Weighted Average
5,639		59.55% Pervious Area
3,831		40.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	55	0.0240	1.36		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"
0.3	106	0.0128	5.96	95.31	Channel Flow, Area= 16.0 sf Perim= 14.6' r= 1.10' n= 0.030
1.0	161	Total			



Subcatchment 32S: DA#3



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Hydrograph for Subcatchment 32S: DA#3

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.04	0.01	18.00	8.27	6.71	0.03
5.25	0.61	0.05	0.01	18.25	8.30	6.75	0.03
5.50	0.64	0.06	0.01	18.50	8.34	6.78	0.03
5.75	0.68	0.08	0.01	18.75	8.37	6.81	0.03
6.00	0.71	0.09	0.01	19.00	8.41	6.85	0.03
6.25	0.75	0.10	0.01	19.25	8.44	6.88	0.03
6.50	0.79	0.12	0.02	19.50	8.48	6.91	0.03
6.75	0.83	0.14	0.02	19.75	8.51	6.95	0.03
7.00	0.88	0.16	0.02	20.00	8.54	6.98	0.03
7.25	0.92	0.18	0.02				
7.50	0.97	0.21	0.02				
7.75	1.02	0.24	0.02				
8.00	1.08	0.27	0.03				
8.25	1.13	0.30	0.03				
8.50	1.19	0.33	0.03				
8.75	1.25	0.37	0.03				
9.00	1.31	0.41	0.04				
9.25	1.38	0.45	0.04				
9.50	1.46	0.51	0.05				
9.75	1.54	0.57	0.06				
10.00	1.64	0.63	0.06				
10.25	1.74	0.71	0.07				
10.50	1.85	0.79	0.08				
10.75	1.99	0.90	0.10				
11.00	2.16	1.03	0.13				
11.25	2.38	1.21	0.18				
11.50	2.65	1.44	0.24				
11.75	3.16	1.88	0.50				
12.00	4.28	2.89	1.44				
12.25	5.82	4.35	0.55				
12.50	6.33	4.83	0.35				
12.75	6.60	5.10	0.21				
13.00	6.82	5.31	0.17				
13.25	6.99	5.47	0.13				
13.50	7.13	5.60	0.11				
13.75	7.24	5.71	0.09				
14.00	7.34	5.81	0.08				
14.25	7.44	5.90	0.08				
14.50	7.52	5.99	0.07				
14.75	7.60	6.06	0.06				
15.00	7.67	6.13	0.06				
15.25	7.73	6.19	0.05				
15.50	7.79	6.25	0.05				
15.75	7.85	6.30	0.05				
16.00	7.90	6.36	0.05				
16.25	7.96	6.41	0.04				
16.50	8.01	6.46	0.04				
16.75	8.06	6.51	0.04				
17.00	8.10	6.55	0.04				
17.25	8.15	6.59	0.04				
17.50	8.19	6.64	0.04				
17.75	8.23	6.67	0.03				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Summary for Subcatchment 33S: DA#13

Runoff = 0.74 cfs @ 12.05 hrs, Volume= 0.044 af, Depth> 7.15"
Routed to Pond 46P : CI-5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

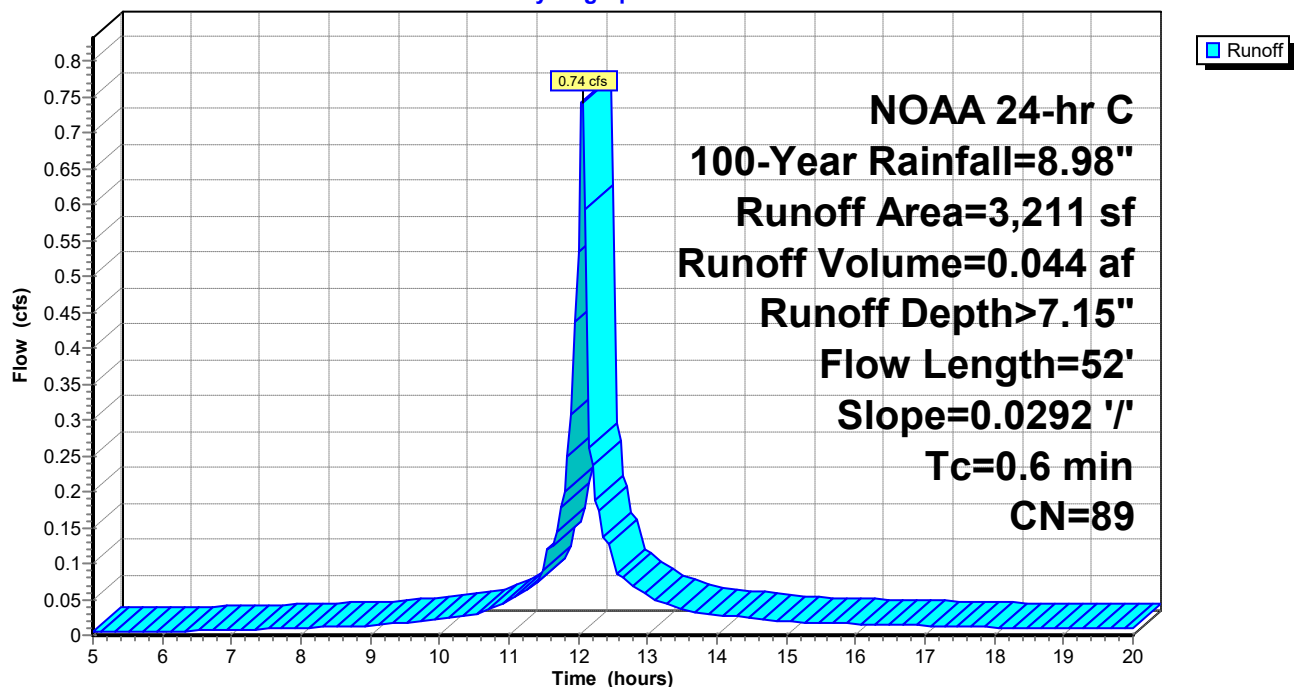
Area (sf)	CN	Description
1,642	98	Roofs, HSG D
1,569	80	>75% Grass cover, Good, HSG D
3,211	89	Weighted Average
1,569		48.86% Pervious Area
1,642		51.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	52	0.0292	1.45		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"

Subcatchment 33S: DA#13

Subcatchment 33S: DA#13

Hydrograph



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Subcatchment 33S: DA#13

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.07	0.00	18.00	8.27	6.95	0.01
5.25	0.61	0.08	0.00	18.25	8.30	6.99	0.01
5.50	0.64	0.09	0.00	18.50	8.34	7.02	0.01
5.75	0.68	0.11	0.00	18.75	8.37	7.05	0.01
6.00	0.71	0.13	0.01	19.00	8.41	7.09	0.01
6.25	0.75	0.15	0.01	19.25	8.44	7.12	0.01
6.50	0.79	0.17	0.01	19.50	8.48	7.15	0.01
6.75	0.83	0.19	0.01	19.75	8.51	7.19	0.01
7.00	0.88	0.21	0.01	20.00	8.54	7.22	0.01
7.25	0.92	0.24	0.01				
7.50	0.97	0.27	0.01				
7.75	1.02	0.30	0.01				
8.00	1.08	0.33	0.01				
8.25	1.13	0.37	0.01				
8.50	1.19	0.41	0.01				
8.75	1.25	0.45	0.01				
9.00	1.31	0.49	0.01				
9.25	1.38	0.54	0.02				
9.50	1.46	0.60	0.02				
9.75	1.54	0.66	0.02				
10.00	1.64	0.74	0.02				
10.25	1.74	0.82	0.03				
10.50	1.85	0.91	0.03				
10.75	1.99	1.02	0.04				
11.00	2.16	1.16	0.05				
11.25	2.38	1.35	0.06				
11.50	2.65	1.59	0.09				
11.75	3.16	2.04	0.18				
12.00	4.28	3.09	0.53				
12.25	5.82	4.56	0.19				
12.50	6.33	5.05	0.12				
12.75	6.60	5.32	0.07				
13.00	6.82	5.54	0.06				
13.25	6.99	5.70	0.04				
13.50	7.13	5.83	0.04				
13.75	7.24	5.94	0.03				
14.00	7.34	6.04	0.03				
14.25	7.44	6.13	0.03				
14.50	7.52	6.22	0.02				
14.75	7.60	6.29	0.02				
15.00	7.67	6.36	0.02				
15.25	7.73	6.42	0.02				
15.50	7.79	6.48	0.02				
15.75	7.85	6.54	0.02				
16.00	7.90	6.59	0.02				
16.25	7.96	6.65	0.02				
16.50	8.01	6.70	0.01				
16.75	8.06	6.74	0.01				
17.00	8.10	6.79	0.01				
17.25	8.15	6.83	0.01				
17.50	8.19	6.87	0.01				
17.75	8.23	6.91	0.01				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

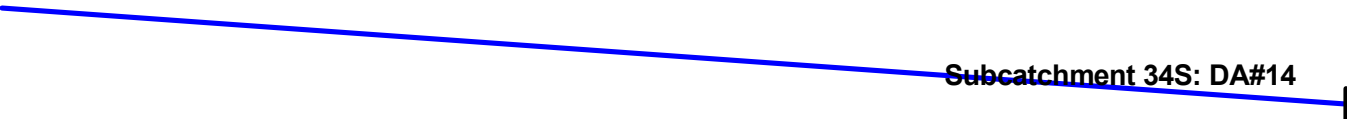
Summary for Subcatchment 34S: DA#14

Runoff = 4.10 cfs @ 12.06 hrs, Volume= 0.248 af, Depth> 7.55"
Routed to Pond 9P : I-2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

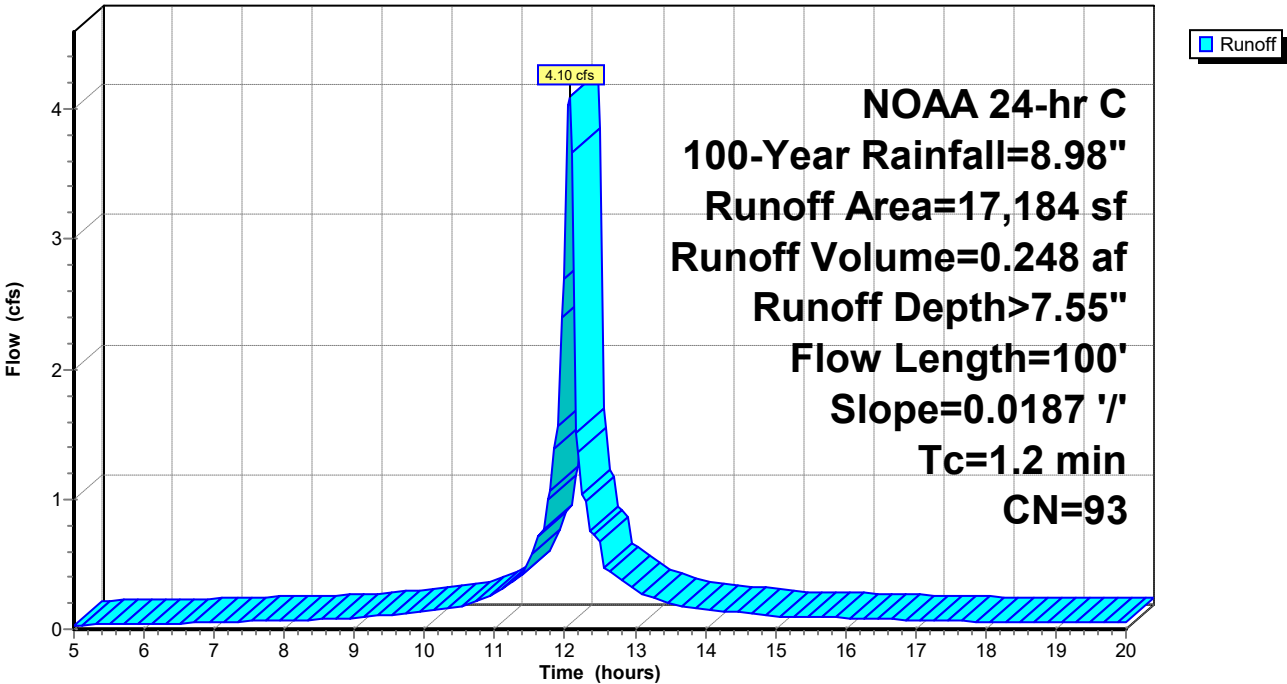
Area (sf)	CN	Description
12,711	98	Roofs, HSG D
4,473	80	>75% Grass cover, Good, HSG D
17,184	93	Weighted Average
4,473		26.03% Pervious Area
12,711		73.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0187	1.38		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.42"



Subcatchment 34S: DA#14

Hydrograph



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Subcatchment 34S: DA#14

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.15	0.03	18.00	8.27	7.43	0.06
5.25	0.61	0.17	0.03	18.25	8.30	7.46	0.06
5.50	0.64	0.19	0.04	18.50	8.34	7.50	0.06
5.75	0.68	0.22	0.04	18.75	8.37	7.53	0.05
6.00	0.71	0.24	0.04	19.00	8.41	7.57	0.05
6.25	0.75	0.27	0.04	19.25	8.44	7.60	0.05
6.50	0.79	0.29	0.05	19.50	8.48	7.63	0.05
6.75	0.83	0.32	0.05	19.75	8.51	7.67	0.05
7.00	0.88	0.36	0.05	20.00	8.54	7.70	0.05
7.25	0.92	0.39	0.06				
7.50	0.97	0.43	0.06				
7.75	1.02	0.47	0.06				
8.00	1.08	0.51	0.07				
8.25	1.13	0.56	0.07				
8.50	1.19	0.60	0.08				
8.75	1.25	0.65	0.08				
9.00	1.31	0.70	0.09				
9.25	1.38	0.76	0.10				
9.50	1.46	0.83	0.11				
9.75	1.54	0.90	0.13				
10.00	1.64	0.99	0.14				
10.25	1.74	1.08	0.15				
10.50	1.85	1.18	0.17				
10.75	1.99	1.30	0.22				
11.00	2.16	1.46	0.27				
11.25	2.38	1.66	0.37				
11.50	2.65	1.92	0.48				
11.75	3.16	2.40	0.99				
12.00	4.28	3.49	2.69				
12.25	5.82	5.01	1.04				
12.50	6.33	5.50	0.67				
12.75	6.60	5.78	0.40				
13.00	6.82	6.00	0.31				
13.25	6.99	6.16	0.24				
13.50	7.13	6.30	0.20				
13.75	7.24	6.41	0.17				
14.00	7.34	6.51	0.16				
14.25	7.44	6.60	0.14				
14.50	7.52	6.69	0.13				
14.75	7.60	6.77	0.12				
15.00	7.67	6.83	0.10				
15.25	7.73	6.90	0.10				
15.50	7.79	6.96	0.09				
15.75	7.85	7.01	0.09				
16.00	7.90	7.07	0.09				
16.25	7.96	7.12	0.08				
16.50	8.01	7.17	0.08				
16.75	8.06	7.22	0.08				
17.00	8.10	7.27	0.07				
17.25	8.15	7.31	0.07				
17.50	8.19	7.35	0.07				
17.75	8.23	7.39	0.06				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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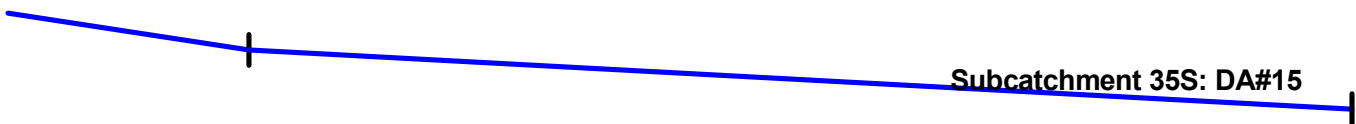
Summary for Subcatchment 35S: DA#15

Runoff = 1.35 cfs @ 12.30 hrs, Volume= 0.130 af, Depth> 6.10"
Routed to Link 2L : SP#1

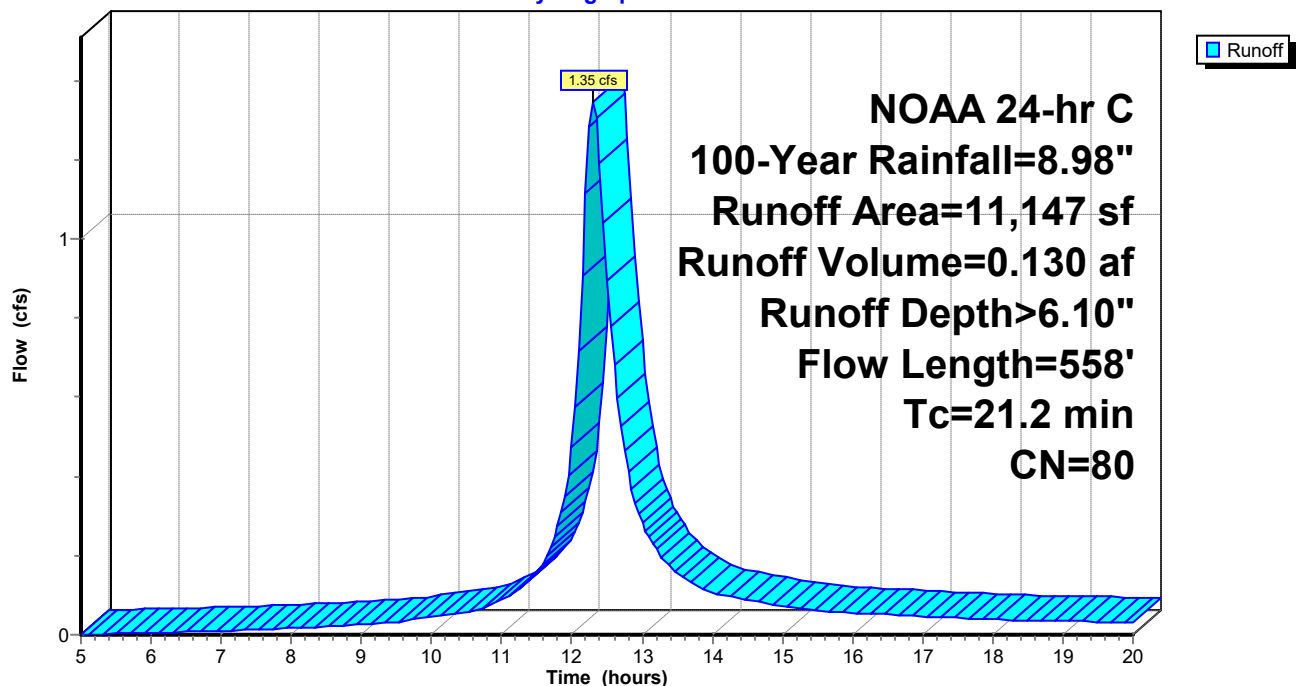
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr C 100-Year Rainfall=8.98"

Area (sf)	CN	Description
11,147	80	>75% Grass cover, Good, HSG D
11,147		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.2	100	0.0336	0.15		Sheet Flow, Grass: Dense n= 0.240 P2= 3.42"
10.0	458	0.0118	0.76		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	558	Total			

**Subcatchment 35S: DA#15**

Hydrograph



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Hydrograph for Subcatchment 35S: DA#15

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.57	0.00	0.00	18.00	8.27	5.88	0.04
5.25	0.61	0.00	0.00	18.25	8.30	5.91	0.04
5.50	0.64	0.01	0.00	18.50	8.34	5.94	0.03
5.75	0.68	0.01	0.00	18.75	8.37	5.98	0.03
6.00	0.71	0.02	0.00	19.00	8.41	6.01	0.03
6.25	0.75	0.02	0.01	19.25	8.44	6.04	0.03
6.50	0.79	0.03	0.01	19.50	8.48	6.07	0.03
6.75	0.83	0.04	0.01	19.75	8.51	6.10	0.03
7.00	0.88	0.05	0.01	20.00	8.54	6.13	0.03
7.25	0.92	0.06	0.01				
7.50	0.97	0.07	0.01				
7.75	1.02	0.09	0.01				
8.00	1.08	0.11	0.02				
8.25	1.13	0.13	0.02				
8.50	1.19	0.15	0.02				
8.75	1.25	0.17	0.02				
9.00	1.31	0.20	0.03				
9.25	1.38	0.23	0.03				
9.50	1.46	0.27	0.03				
9.75	1.54	0.31	0.04				
10.00	1.64	0.36	0.04				
10.25	1.74	0.41	0.05				
10.50	1.85	0.47	0.06				
10.75	1.99	0.55	0.07				
11.00	2.16	0.66	0.09				
11.25	2.38	0.80	0.12				
11.50	2.65	1.00	0.16				
11.75	3.16	1.37	0.25				
12.00	4.28	2.28	0.48				
12.25	5.82	3.62	1.28				
12.50	6.33	4.08	0.90				
12.75	6.60	4.33	0.47				
13.00	6.82	4.53	0.28				
13.25	6.99	4.69	0.20				
13.50	7.13	4.81	0.16				
13.75	7.24	4.92	0.13				
14.00	7.34	5.01	0.11				
14.25	7.44	5.10	0.10				
14.50	7.52	5.18	0.09				
14.75	7.60	5.25	0.08				
15.00	7.67	5.31	0.07				
15.25	7.73	5.37	0.06				
15.50	7.79	5.43	0.06				
15.75	7.85	5.48	0.06				
16.00	7.90	5.54	0.06				
16.25	7.96	5.59	0.05				
16.50	8.01	5.63	0.05				
16.75	8.06	5.68	0.05				
17.00	8.10	5.72	0.05				
17.25	8.15	5.76	0.04				
17.50	8.19	5.80	0.04				
17.75	8.23	5.84	0.04				

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Summary for Pond 9P: I-2

Inflow Area = 0.394 ac, 73.97% Impervious, Inflow Depth > 7.55" for 100-Year event
Inflow = 4.10 cfs @ 12.06 hrs, Volume= 0.248 af
Outflow = 4.10 cfs @ 12.06 hrs, Volume= 0.248 af, Atten= 0%, Lag= 0.0 min
Primary = 4.10 cfs @ 12.06 hrs, Volume= 0.248 af
Routed to Pond 44P : CI-2

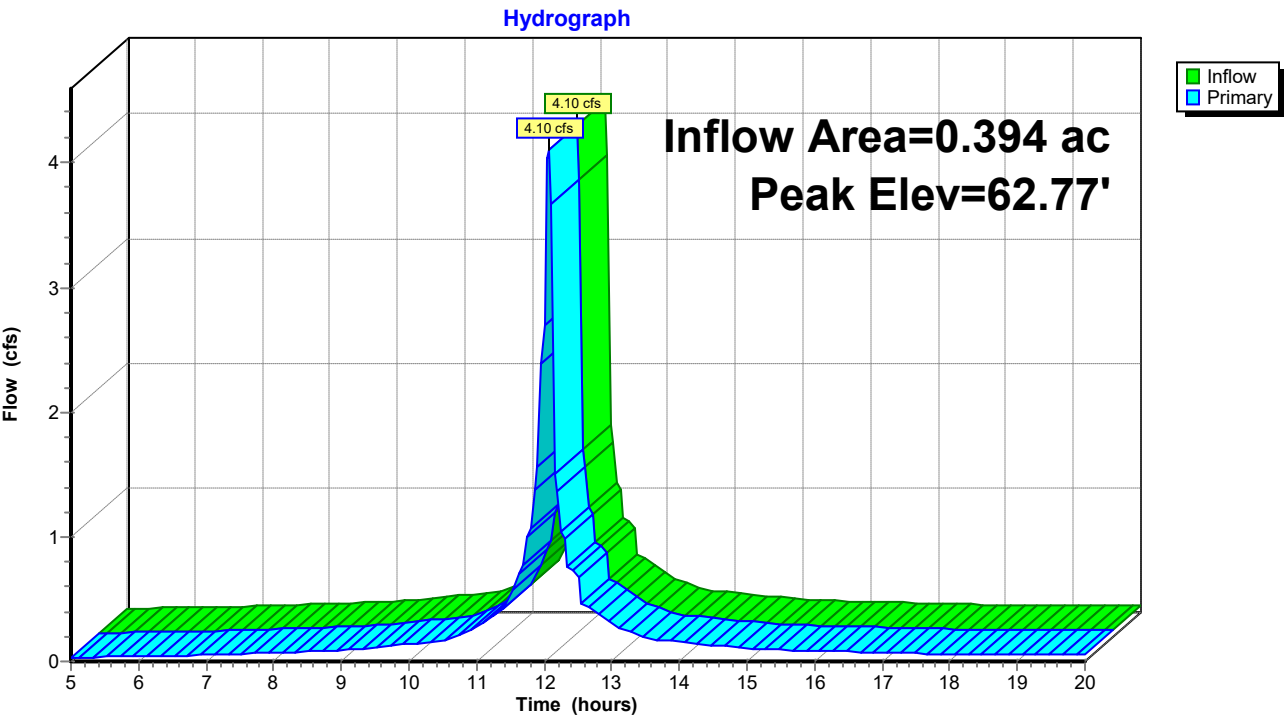
Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 62.77' @ 12.23 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.51'	1.0" x 2.0" Horiz. Orifice/Grate X 20.00 columns X 10 rows C= 0.600 in 24.0" x 24.0" Grate (69% open area)
#2	Primary	59.06'	15.0" Round Culvert L= 57.6' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 59.06' / 58.55' S= 0.0089 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

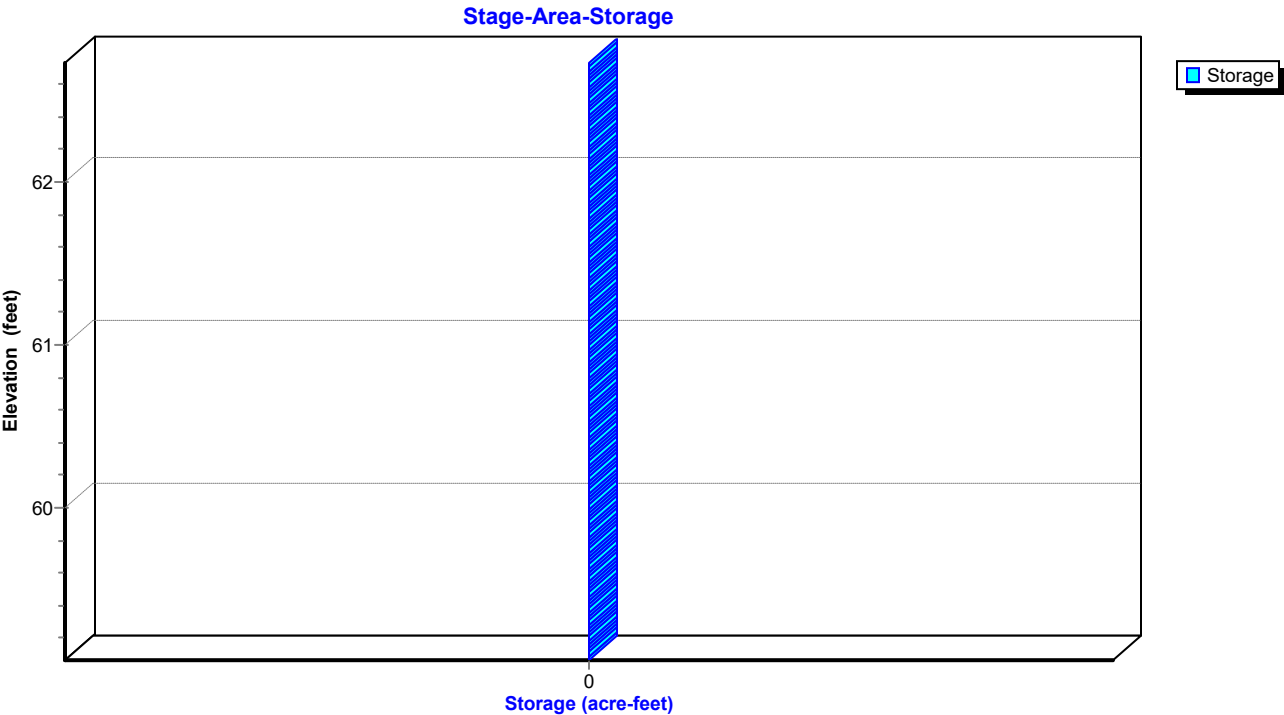
Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=61.28' TW=62.40' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)



Pond 9P: I-2



Pond 9P: I-2



EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Pond 9P: I-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.03	59.14	0.03	18.00	0.06	59.18	0.06
5.25	0.03	59.15	0.03	18.25	0.06	59.17	0.06
5.50	0.04	59.15	0.04	18.50	0.06	59.17	0.06
5.75	0.04	59.15	0.04	18.75	0.05	59.17	0.05
6.00	0.04	59.15	0.04	19.00	0.05	59.17	0.05
6.25	0.04	59.16	0.04	19.25	0.05	59.17	0.05
6.50	0.05	59.16	0.05	19.50	0.05	59.17	0.05
6.75	0.05	59.17	0.05	19.75	0.05	59.17	0.05
7.00	0.05	59.17	0.05	20.00	0.05	59.17	0.05
7.25	0.06	59.17	0.06				
7.50	0.06	59.18	0.06				
7.75	0.06	59.18	0.06				
8.00	0.07	59.19	0.07				
8.25	0.07	59.19	0.07				
8.50	0.08	59.19	0.08				
8.75	0.08	59.20	0.08				
9.00	0.09	59.20	0.09				
9.25	0.10	59.21	0.10				
9.50	0.11	59.22	0.11				
9.75	0.13	59.23	0.13				
10.00	0.14	59.24	0.14				
10.25	0.15	59.25	0.15				
10.50	0.17	59.26	0.17				
10.75	0.22	59.29	0.22				
11.00	0.27	59.31	0.27				
11.25	0.37	59.36	0.37				
11.50	0.48	59.40	0.48				
11.75	0.99	59.57	0.99				
12.00	2.69	60.08	2.69				
12.25	1.04	62.72	1.04				
12.50	0.67	59.51	0.67				
12.75	0.40	59.38	0.40				
13.00	0.31	59.33	0.31				
13.25	0.24	59.30	0.24				
13.50	0.20	59.27	0.20				
13.75	0.17	59.26	0.17				
14.00	0.16	59.25	0.16				
14.25	0.14	59.24	0.14				
14.50	0.13	59.23	0.13				
14.75	0.12	59.22	0.12				
15.00	0.10	59.21	0.10				
15.25	0.10	59.21	0.10				
15.50	0.09	59.21	0.09				
15.75	0.09	59.20	0.09				
16.00	0.09	59.20	0.09				
16.25	0.08	59.20	0.08				
16.50	0.08	59.19	0.08				
16.75	0.08	59.19	0.08				
17.00	0.07	59.19	0.07				
17.25	0.07	59.18	0.07				
17.50	0.07	59.18	0.07				
17.75	0.06	59.18	0.06				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Stage-Area-Storage for Pond 9P: I-2

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
59.06	0.000	61.66	0.000
59.11	0.000	61.71	0.000
59.16	0.000	61.76	0.000
59.21	0.000	61.81	0.000
59.26	0.000	61.86	0.000
59.31	0.000	61.91	0.000
59.36	0.000	61.96	0.000
59.41	0.000	62.01	0.000
59.46	0.000	62.06	0.000
59.51	0.000	62.11	0.000
59.56	0.000	62.16	0.000
59.61	0.000	62.21	0.000
59.66	0.000	62.26	0.000
59.71	0.000	62.31	0.000
59.76	0.000	62.36	0.000
59.81	0.000	62.41	0.000
59.86	0.000	62.46	0.000
59.91	0.000	62.51	0.000
59.96	0.000	62.56	0.000
60.01	0.000	62.61	0.000
60.06	0.000	62.66	0.000
60.11	0.000	62.71	0.000
60.16	0.000		
60.21	0.000		
60.26	0.000		
60.31	0.000		
60.36	0.000		
60.41	0.000		
60.46	0.000		
60.51	0.000		
60.56	0.000		
60.61	0.000		
60.66	0.000		
60.71	0.000		
60.76	0.000		
60.81	0.000		
60.86	0.000		
60.91	0.000		
60.96	0.000		
61.01	0.000		
61.06	0.000		
61.11	0.000		
61.16	0.000		
61.21	0.000		
61.26	0.000		
61.31	0.000		
61.36	0.000		
61.41	0.000		
61.46	0.000		
61.51	0.000		
61.56	0.000		
61.61	0.000		

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Summary for Pond 17P: SGW FOREBAY #1

Inflow Area = 2.458 ac, 76.90% Impervious, Inflow Depth > 7.60" for 100-Year event
 Inflow = 24.13 cfs @ 12.07 hrs, Volume= 1.557 af
 Outflow = 21.62 cfs @ 12.06 hrs, Volume= 1.517 af, Atten= 10%, Lag= 0.0 min
 Primary = 21.62 cfs @ 12.06 hrs, Volume= 1.517 af
 Routed to Pond 18P : SGW #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 57.97' @ 12.16 hrs Surf.Area= 2,677 sf Storage= 5,684 cf

Plug-Flow detention time= 28.2 min calculated for 1.512 af (97% of inflow)
 Center-of-Mass det. time= 17.0 min (754.1 - 737.1)

Volume	Invert	Avail.Storage	Storage Description
#1	55.08'	5,991 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.08	1,261	0	0
58.08	2,733	5,991	5,991

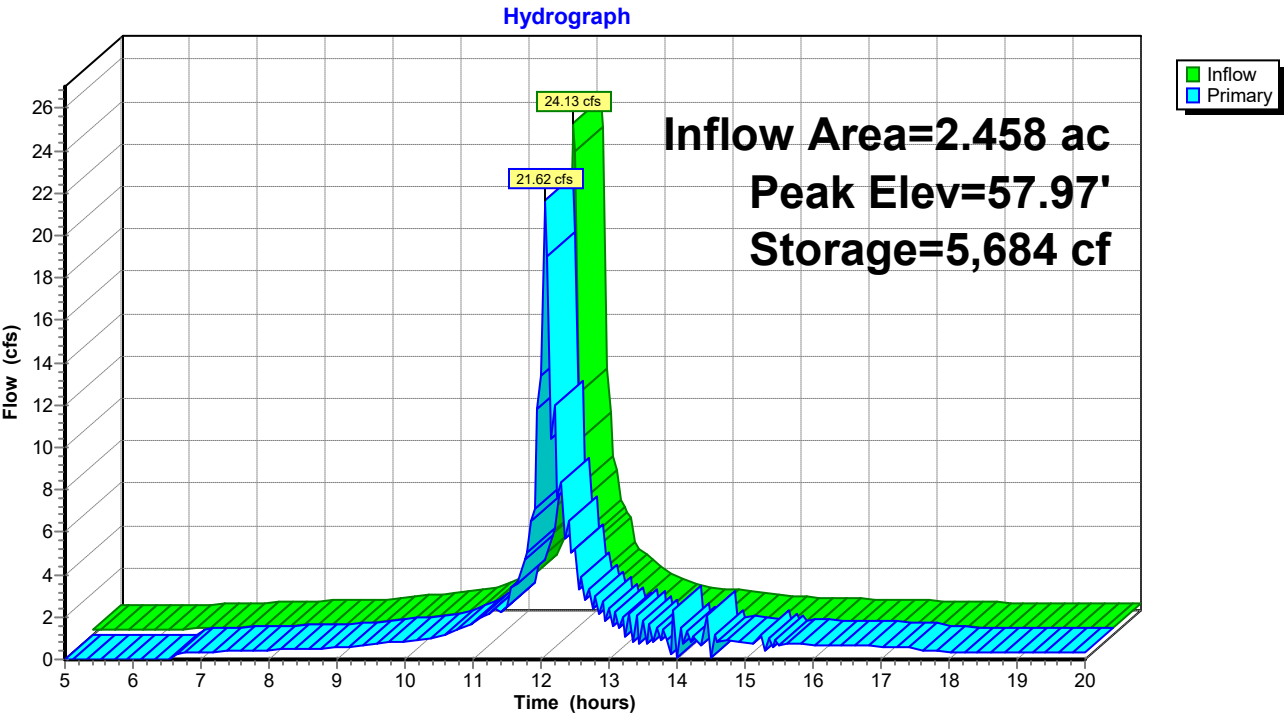
Device	Routing	Invert	Outlet Devices
#1	Primary	56.08'	60.0' long + 3.0 ' SideZ x 3.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=57.64' TW=57.84' (Dynamic Tailwater)
 ↑1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

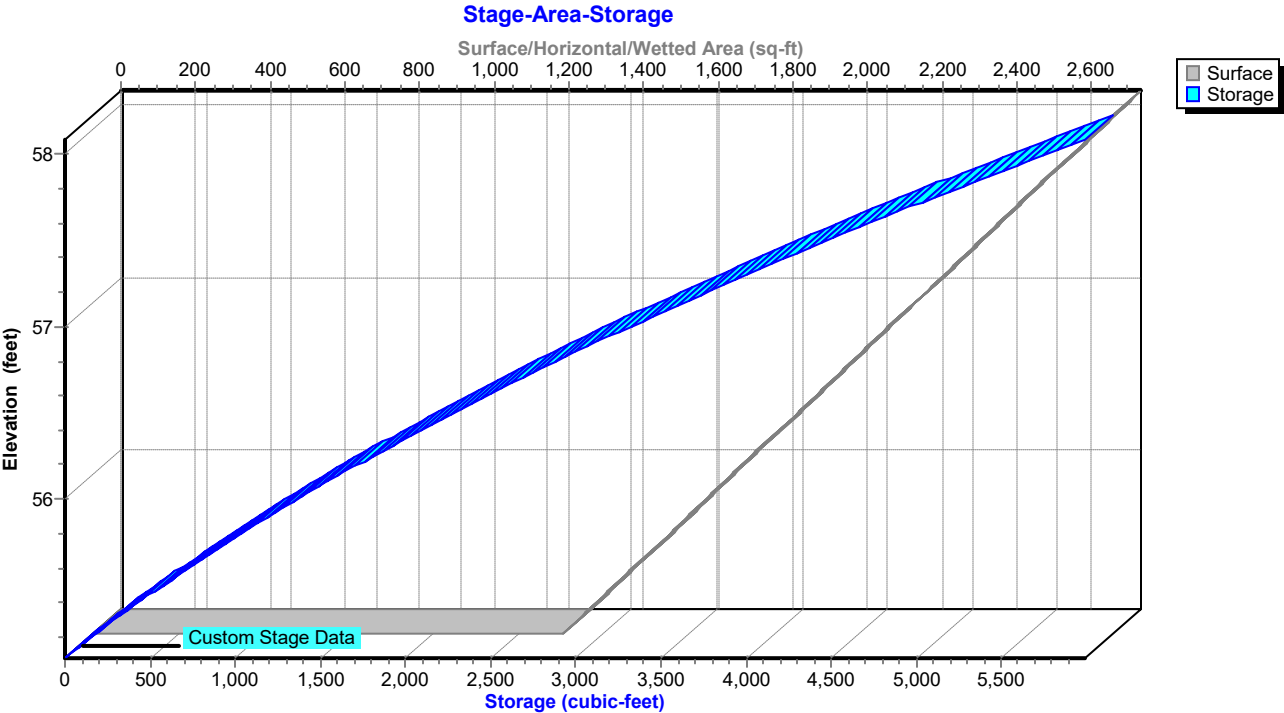
Pond 17P: SGW FOREBAY #1

Broad-Crested Rectangular Weir

Pond 17P: SGW FOREBAY #1



Pond 17P: SGW FOREBAY #1



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NOAA 24-hr C 100-Year Rainfall=8.98"

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Hydrograph for Pond 17P: SGW FOREBAY #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.22	20	55.10	0.00
5.50	0.24	430	55.40	0.00
6.00	0.26	877	55.70	0.00
6.50	0.30	1,382	56.01	0.00
7.00	0.35	1,538	56.10	0.35
7.50	0.39	1,540	56.10	0.39
8.00	0.44	1,543	56.10	0.44
8.50	0.49	1,546	56.10	0.49
9.00	0.54	1,548	56.10	0.54
9.50	0.70	1,556	56.11	0.70
10.00	0.86	1,564	56.11	0.86
10.50	1.04	1,571	56.12	1.04
11.00	1.66	1,595	56.13	1.66
11.50	2.93	1,818	56.25	2.51
12.00	15.98	4,268	57.41	13.39
12.50	4.34	4,343	57.44	5.24
13.00	1.98	3,811	57.22	2.43
13.50	1.24	3,623	57.13	1.84
14.00	0.98	3,422	57.04	0.07
14.50	0.82	3,210	56.95	0.12
15.00	0.65	2,991	56.85	0.85
15.50	0.58	2,685	56.70	0.65
16.00	0.54	2,391	56.55	0.62
16.50	0.49	2,104	56.41	0.57
17.00	0.45	1,826	56.26	0.53
17.50	0.41	1,566	56.11	0.50
18.00	0.36	1,539	56.10	0.36
18.50	0.35	1,538	56.10	0.35
19.00	0.34	1,537	56.10	0.34
19.50	0.32	1,536	56.10	0.33
20.00	0.31	1,536	56.10	0.31

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Stage-Area-Storage for Pond 17P: SGW FOREBAY #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
55.08	1,261	0	57.68	2,537	4,937
55.13	1,286	64	57.73	2,561	5,065
55.18	1,310	129	57.78	2,586	5,193
55.23	1,335	195	57.83	2,610	5,323
55.28	1,359	262	57.88	2,635	5,454
55.33	1,384	331	57.93	2,659	5,587
55.38	1,408	400	57.98	2,684	5,720
55.43	1,433	471	58.03	2,708	5,855
55.48	1,457	544	58.08	2,733	5,991
55.53	1,482	617			
55.58	1,506	692			
55.63	1,531	768			
55.68	1,555	845			
55.73	1,580	923			
55.78	1,604	1,003			
55.83	1,629	1,084			
55.88	1,654	1,166			
55.93	1,678	1,249			
55.98	1,703	1,334			
56.03	1,727	1,419			
56.08	1,752	1,506			
56.13	1,776	1,595			
56.18	1,801	1,684			
56.23	1,825	1,775			
56.28	1,850	1,866			
56.33	1,874	1,960			
56.38	1,899	2,054			
56.43	1,923	2,149			
56.48	1,948	2,246			
56.53	1,972	2,344			
56.58	1,997	2,444			
56.63	2,022	2,544			
56.68	2,046	2,646			
56.73	2,071	2,749			
56.78	2,095	2,853			
56.83	2,120	2,958			
56.88	2,144	3,065			
56.93	2,169	3,173			
56.98	2,193	3,282			
57.03	2,218	3,392			
57.08	2,242	3,503			
57.13	2,267	3,616			
57.18	2,291	3,730			
57.23	2,316	3,845			
57.28	2,340	3,962			
57.33	2,365	4,079			
57.38	2,390	4,198			
57.43	2,414	4,318			
57.48	2,439	4,440			
57.53	2,463	4,562			
57.58	2,488	4,686			
57.63	2,512	4,811			

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Summary for Pond 18P: SGW #1

Inflow Area = 2.672 ac, 72.01% Impervious, Inflow Depth > 7.33" for 100-Year event
Inflow = 23.65 cfs @ 12.06 hrs, Volume= 1.633 af
Outflow = 19.07 cfs @ 12.11 hrs, Volume= 1.607 af, Atten= 19%, Lag= 2.8 min
Primary = 19.07 cfs @ 12.11 hrs, Volume= 1.607 af
Routed to Link 2L : SP#1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 57.97' @ 12.11 hrs Surf.Area= 6,284 sf Storage= 15,095 cf

Plug-Flow detention time= 54.8 min calculated for 1.602 af (98% of inflow)
Center-of-Mass det. time= 48.1 min (802.4 - 754.3)

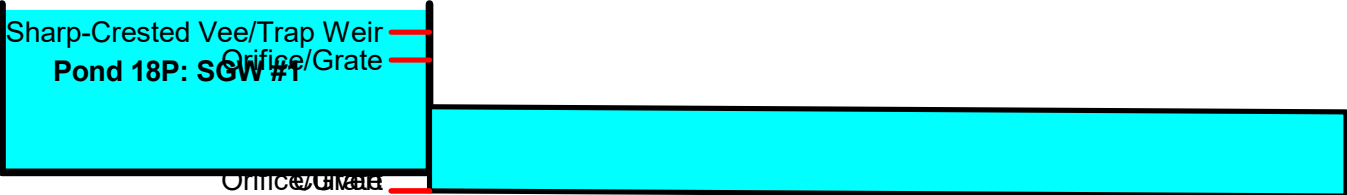
Volume	Invert	Avail.Storage	Storage Description
#1	55.08'	15,815 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.08	4,176	0	0
58.08	6,367	15,815	15,815

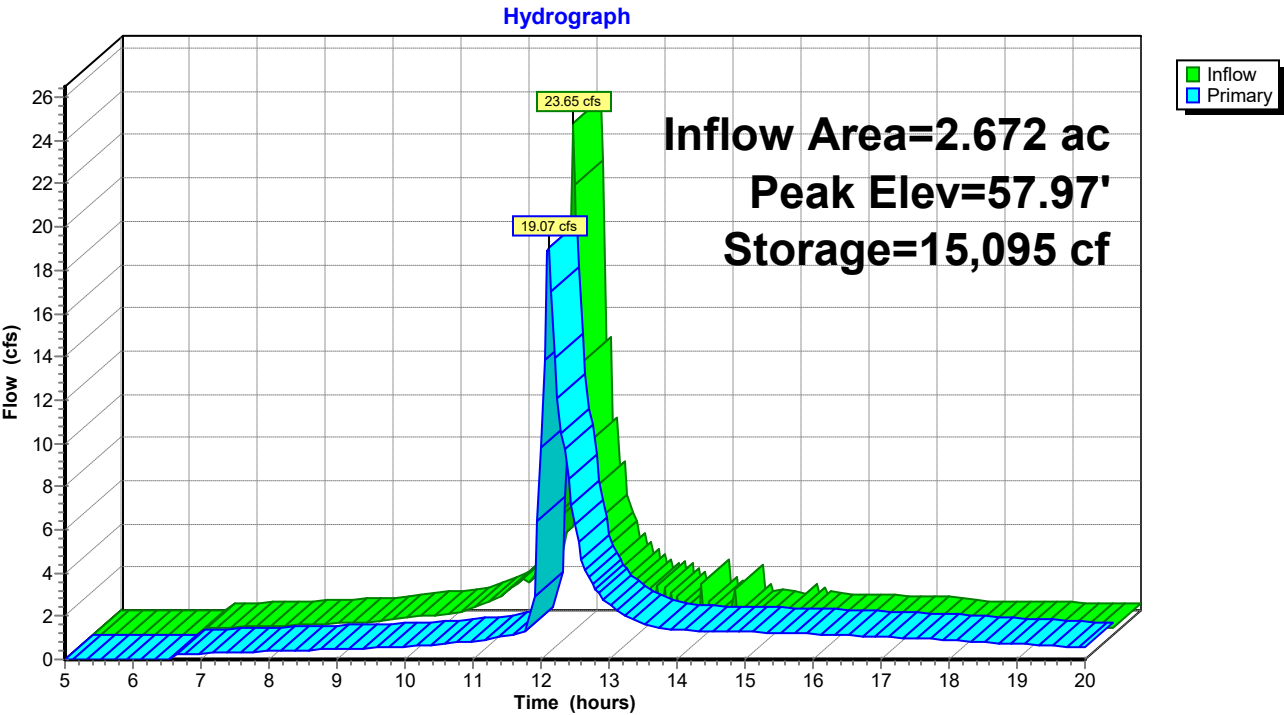
Device	Routing	Invert	Outlet Devices
#1	Primary	54.75'	18.0" Round Culvert L= 96.5' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 54.75' / 54.66' S= 0.0009 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf
#2	Device 1	57.08'	2.0" x 1.0" Horiz. Orifice/Grate X 10.00 columns X 20 rows C= 0.600 in 24.0" x 24.0" Grate (69% open area) Limited to weir flow at low heads
#3	Device 1	54.75'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Primary	57.58'	20.0 deg x 10.0' long x 0.50' rise Sharp-Crested Vee/Trap Weir Cv= 2.69 (C= 3.36)

Primary OutFlow Max=18.44 cfs @ 12.11 hrs HW=57.95' TW=0.00' (Dynamic Tailwater)

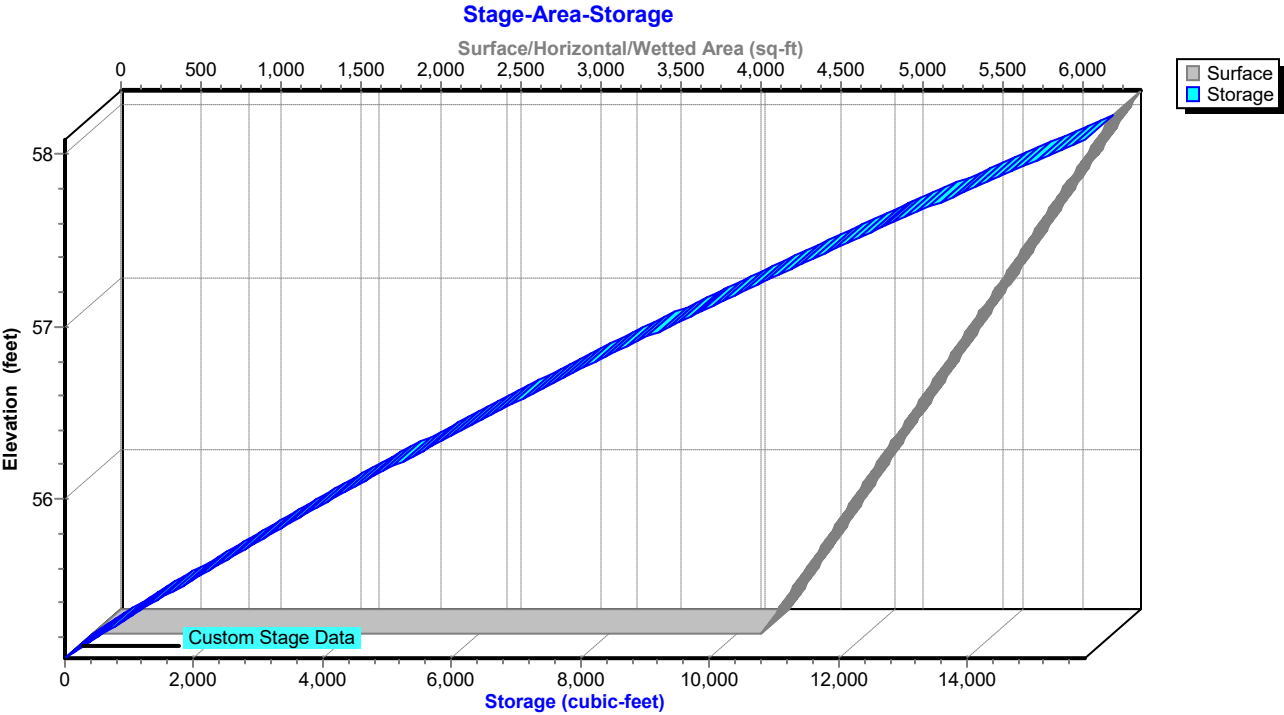
- 1=Culvert (Barrel Controls 10.94 cfs @ 6.19 fps)
- 2=Orifice/Grate (Passes < 12.45 cfs potential flow)
- 3=Orifice/Grate (Passes < 1.62 cfs potential flow)
- 4=Sharp-Crested Vee/Trap Weir (Weir Controls 7.51 cfs @ 2.03 fps)



Pond 18P: SGW #1



Pond 18P: SGW #1



EX and PR

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Hydrograph for Pond 18P: SGW #1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	55.08	0.00
5.50	0.01	0	55.08	0.01
6.00	0.01	0	55.08	0.01
6.50	0.01	0	55.08	0.01
7.00	0.36	91	55.10	0.29
7.50	0.41	220	55.13	0.34
8.00	0.46	356	55.16	0.38
8.50	0.52	508	55.20	0.43
9.00	0.57	678	55.24	0.47
9.50	0.74	968	55.31	0.52
10.00	0.91	1,437	55.41	0.61
10.50	1.10	2,065	55.55	0.70
11.00	1.77	3,255	55.81	0.85
11.50	2.72	5,657	56.30	1.08
12.00	14.72	12,743	57.58	9.77
12.50	5.58	11,671	57.40	6.27
13.00	2.59	10,522	57.20	2.56
13.50	1.94	10,066	57.12	1.63
14.00	0.15	9,682	57.06	1.36
14.50	0.19	9,139	56.96	1.32
15.00	0.90	8,437	56.83	1.28
15.50	0.70	7,643	56.68	1.23
16.00	0.66	6,869	56.54	1.17
16.50	0.61	6,105	56.39	1.12
17.00	0.56	5,352	56.24	1.05
17.50	0.54	4,609	56.09	0.99
18.00	0.40	3,688	55.90	0.90
18.50	0.38	2,844	55.72	0.80
19.00	0.36	2,143	55.57	0.72
19.50	0.35	1,577	55.45	0.63
20.00	0.34	1,135	55.35	0.56

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Stage-Area-Storage for Pond 18P: SGW #1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
55.08	4,176	0	57.68	6,075	13,326
55.13	4,213	210	57.73	6,111	13,631
55.18	4,249	421	57.78	6,148	13,937
55.23	4,286	635	57.83	6,184	14,246
55.28	4,322	850	57.88	6,221	14,556
55.33	4,359	1,067	57.93	6,257	14,868
55.38	4,395	1,286	57.98	6,294	15,181
55.43	4,432	1,506	58.03	6,330	15,497
55.48	4,468	1,729	58.08	6,367	15,815
55.53	4,505	1,953			
55.58	4,541	2,179			
55.63	4,578	2,407			
55.68	4,614	2,637			
55.73	4,651	2,869			
55.78	4,687	3,102			
55.83	4,724	3,337			
55.88	4,760	3,575			
55.93	4,797	3,813			
55.98	4,833	4,054			
56.03	4,870	4,297			
56.08	4,906	4,541			
56.13	4,943	4,787			
56.18	4,979	5,035			
56.23	5,016	5,285			
56.28	5,052	5,537			
56.33	5,089	5,791			
56.38	5,125	6,046			
56.43	5,162	6,303			
56.48	5,198	6,562			
56.53	5,235	6,823			
56.58	5,272	7,086			
56.63	5,308	7,350			
56.68	5,345	7,616			
56.73	5,381	7,885			
56.78	5,418	8,155			
56.83	5,454	8,426			
56.88	5,491	8,700			
56.93	5,527	8,975			
56.98	5,564	9,253			
57.03	5,600	9,532			
57.08	5,637	9,813			
57.13	5,673	10,095			
57.18	5,710	10,380			
57.23	5,746	10,666			
57.28	5,783	10,955			
57.33	5,819	11,245			
57.38	5,856	11,537			
57.43	5,892	11,830			
57.48	5,929	12,126			
57.53	5,965	12,423			
57.58	6,002	12,722			
57.63	6,038	13,023			

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NOAA 24-hr C 100-Year Rainfall=8.98"

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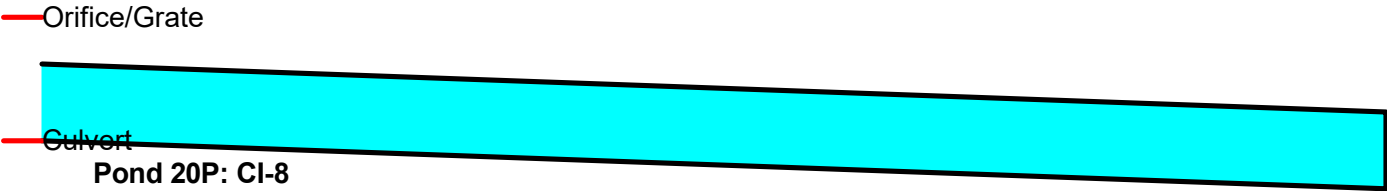
Summary for Pond 20P: CI-8

Inflow Area = 0.753 ac, 42.32% Impervious, Inflow Depth > 6.99" for 100-Year event
Inflow = 6.68 cfs @ 12.12 hrs, Volume= 0.439 af
Outflow = 6.68 cfs @ 12.12 hrs, Volume= 0.439 af, Atten= 0%, Lag= 0.0 min
Primary = 6.68 cfs @ 12.12 hrs, Volume= 0.439 af
Routed to Link 2L : SP#1

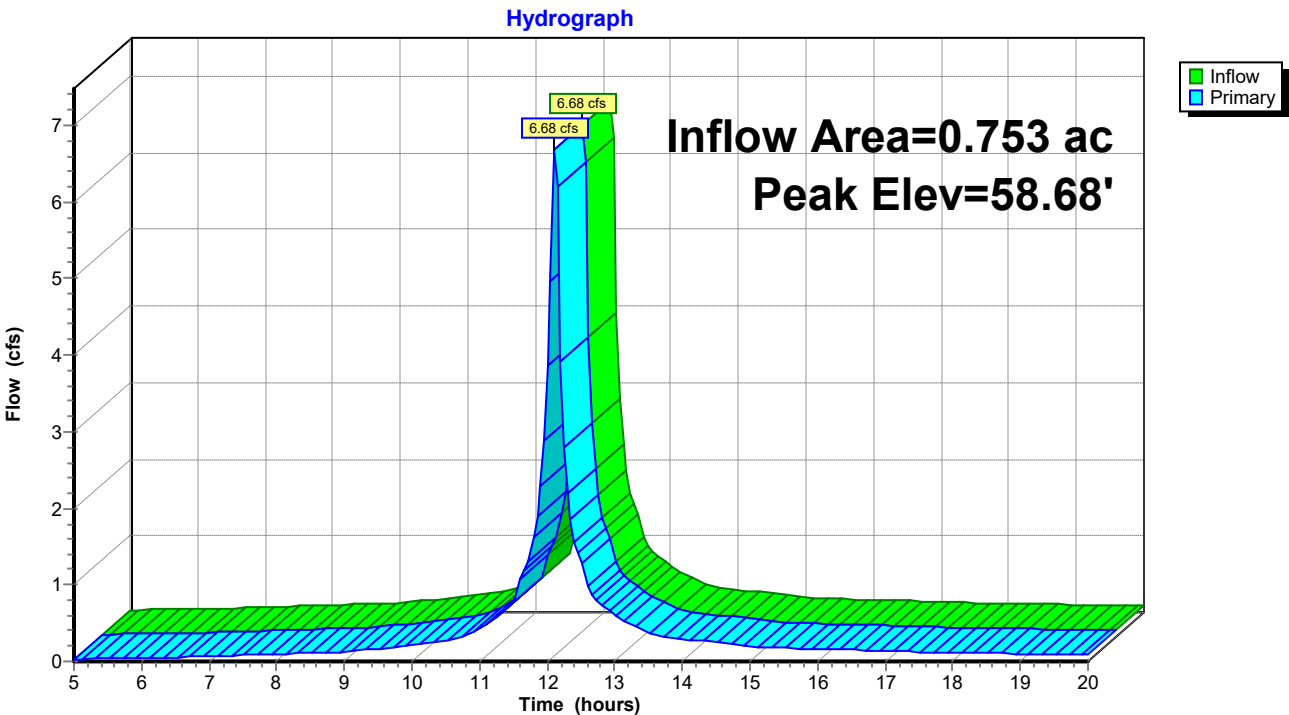
Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 58.68' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	58.79'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	56.78'	15.0" Round Culvert L= 75.5' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 56.78' / 56.00' S= 0.0103 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

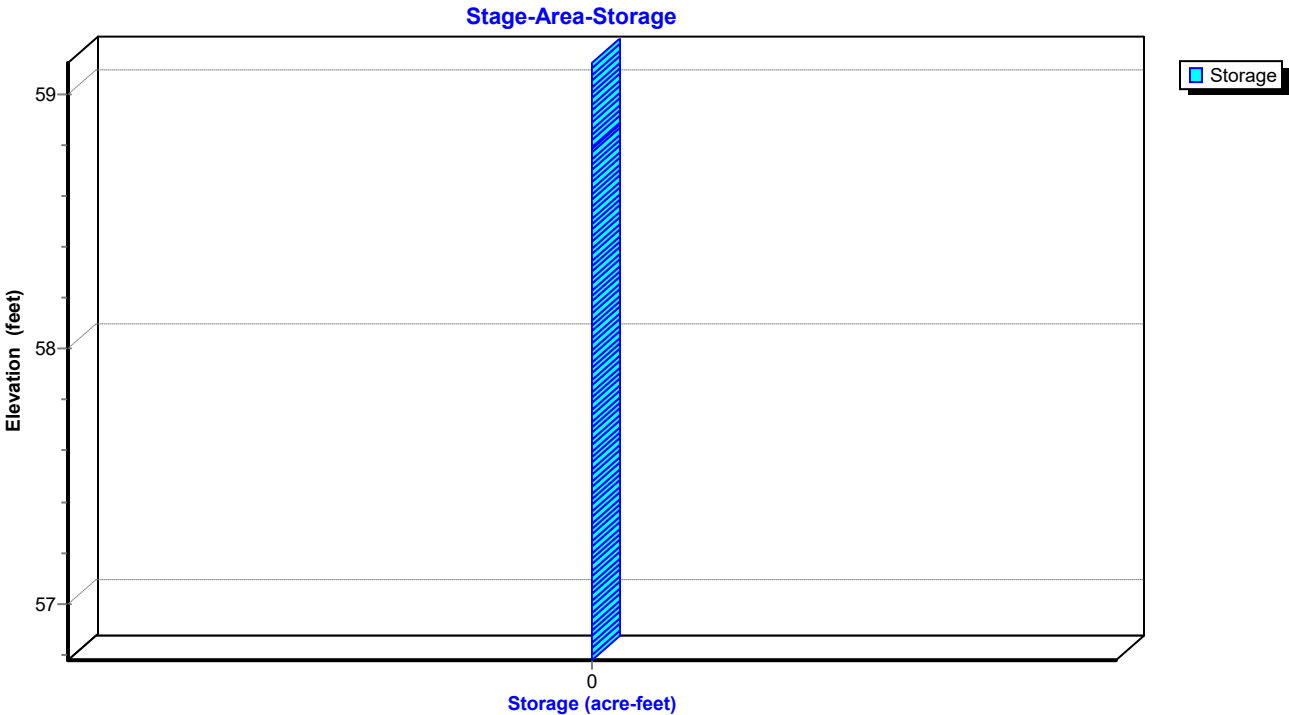
Primary OutFlow Max=6.47 cfs @ 12.12 hrs HW=58.60' TW=0.00' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Inlet Controls 6.47 cfs @ 5.27 fps)



Pond 20P: CI-8



Pond 20P: CI-8



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Hydrograph for Pond 20P: CI-8

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.03	56.86	0.03	18.00	0.11	56.93	0.11
5.25	0.03	56.86	0.03	18.25	0.11	56.93	0.11
5.50	0.04	56.87	0.04	18.50	0.10	56.93	0.10
5.75	0.04	56.87	0.04	18.75	0.10	56.93	0.10
6.00	0.04	56.88	0.04	19.00	0.10	56.92	0.10
6.25	0.05	56.88	0.05	19.25	0.10	56.92	0.10
6.50	0.06	56.89	0.06	19.50	0.10	56.92	0.10
6.75	0.06	56.89	0.06	19.75	0.10	56.92	0.10
7.00	0.07	56.90	0.07	20.00	0.09	56.92	0.09
7.25	0.07	56.90	0.07				
7.50	0.08	56.91	0.08				
7.75	0.09	56.91	0.09				
8.00	0.10	56.92	0.10				
8.25	0.10	56.92	0.10				
8.50	0.11	56.93	0.11				
8.75	0.12	56.94	0.12				
9.00	0.13	56.94	0.13				
9.25	0.14	56.95	0.14				
9.50	0.17	56.97	0.17				
9.75	0.19	56.98	0.19				
10.00	0.21	56.99	0.21				
10.25	0.24	57.00	0.24				
10.50	0.26	57.01	0.26				
10.75	0.34	57.05	0.34				
11.00	0.43	57.08	0.43				
11.25	0.58	57.13	0.58				
11.50	0.74	57.18	0.74				
11.75	1.38	57.34	1.38				
12.00	3.86	57.83	3.86				
12.25	2.80	57.63	2.80				
12.50	1.35	57.34	1.35				
12.75	0.79	57.20	0.79				
13.00	0.61	57.15	0.61				
13.25	0.48	57.10	0.48				
13.50	0.38	57.07	0.38				
13.75	0.32	57.04	0.32				
14.00	0.30	57.03	0.30				
14.25	0.27	57.02	0.27				
14.50	0.25	57.01	0.25				
14.75	0.22	57.00	0.22				
15.00	0.20	56.98	0.20				
15.25	0.18	56.97	0.18				
15.50	0.18	56.97	0.18				
15.75	0.17	56.97	0.17				
16.00	0.16	56.96	0.16				
16.25	0.16	56.96	0.16				
16.50	0.15	56.96	0.15				
16.75	0.14	56.95	0.14				
17.00	0.14	56.95	0.14				
17.25	0.13	56.94	0.13				
17.50	0.12	56.94	0.12				
17.75	0.12	56.94	0.12				

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Stage-Area-Storage for Pond 20P: CI-8

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
56.78	0.000	57.82	0.000	58.86	0.000
56.80	0.000	57.84	0.000	58.88	0.000
56.82	0.000	57.86	0.000	58.90	0.000
56.84	0.000	57.88	0.000	58.92	0.000
56.86	0.000	57.90	0.000	58.94	0.000
56.88	0.000	57.92	0.000	58.96	0.000
56.90	0.000	57.94	0.000	58.98	0.000
56.92	0.000	57.96	0.000	59.00	0.000
56.94	0.000	57.98	0.000	59.02	0.000
56.96	0.000	58.00	0.000	59.04	0.000
56.98	0.000	58.02	0.000	59.06	0.000
57.00	0.000	58.04	0.000	59.08	0.000
57.02	0.000	58.06	0.000	59.10	0.000
57.04	0.000	58.08	0.000	59.12	0.000
57.06	0.000	58.10	0.000		
57.08	0.000	58.12	0.000		
57.10	0.000	58.14	0.000		
57.12	0.000	58.16	0.000		
57.14	0.000	58.18	0.000		
57.16	0.000	58.20	0.000		
57.18	0.000	58.22	0.000		
57.20	0.000	58.24	0.000		
57.22	0.000	58.26	0.000		
57.24	0.000	58.28	0.000		
57.26	0.000	58.30	0.000		
57.28	0.000	58.32	0.000		
57.30	0.000	58.34	0.000		
57.32	0.000	58.36	0.000		
57.34	0.000	58.38	0.000		
57.36	0.000	58.40	0.000		
57.38	0.000	58.42	0.000		
57.40	0.000	58.44	0.000		
57.42	0.000	58.46	0.000		
57.44	0.000	58.48	0.000		
57.46	0.000	58.50	0.000		
57.48	0.000	58.52	0.000		
57.50	0.000	58.54	0.000		
57.52	0.000	58.56	0.000		
57.54	0.000	58.58	0.000		
57.56	0.000	58.60	0.000		
57.58	0.000	58.62	0.000		
57.60	0.000	58.64	0.000		
57.62	0.000	58.66	0.000		
57.64	0.000	58.68	0.000		
57.66	0.000	58.70	0.000		
57.68	0.000	58.72	0.000		
57.70	0.000	58.74	0.000		
57.72	0.000	58.76	0.000		
57.74	0.000	58.78	0.000		
57.76	0.000	58.80	0.000		
57.78	0.000	58.82	0.000		
57.80	0.000	58.84	0.000		

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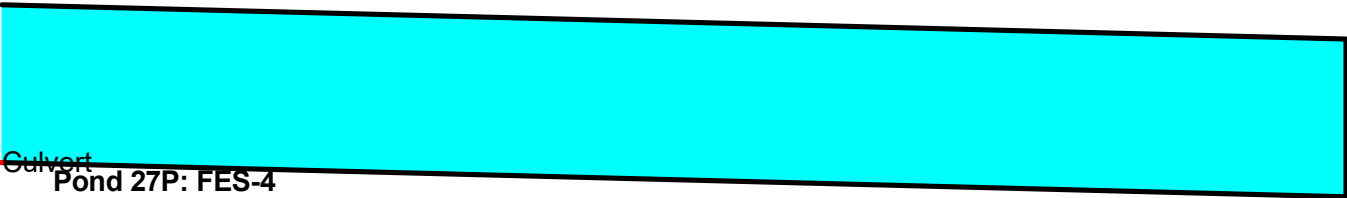
Summary for Pond 27P: FES-4

Inflow Area = 0.667 ac, 39.09% Impervious, Inflow Depth > 6.93" for 100-Year event
Inflow = 5.87 cfs @ 12.12 hrs, Volume= 0.385 af
Outflow = 5.87 cfs @ 12.12 hrs, Volume= 0.385 af, Atten= 0%, Lag= 0.0 min
Primary = 5.87 cfs @ 12.12 hrs, Volume= 0.385 af
Routed to Pond 20P : CI-8

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 59.54' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	57.05'	15.0" Round Culvert L= 25.5' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 57.05' / 56.78' S= 0.0106 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=4.75 cfs @ 12.12 hrs HW=59.24' TW=58.59' (Dynamic Tailwater)
↑1=Culvert (Inlet Controls 4.75 cfs @ 3.87 fps)



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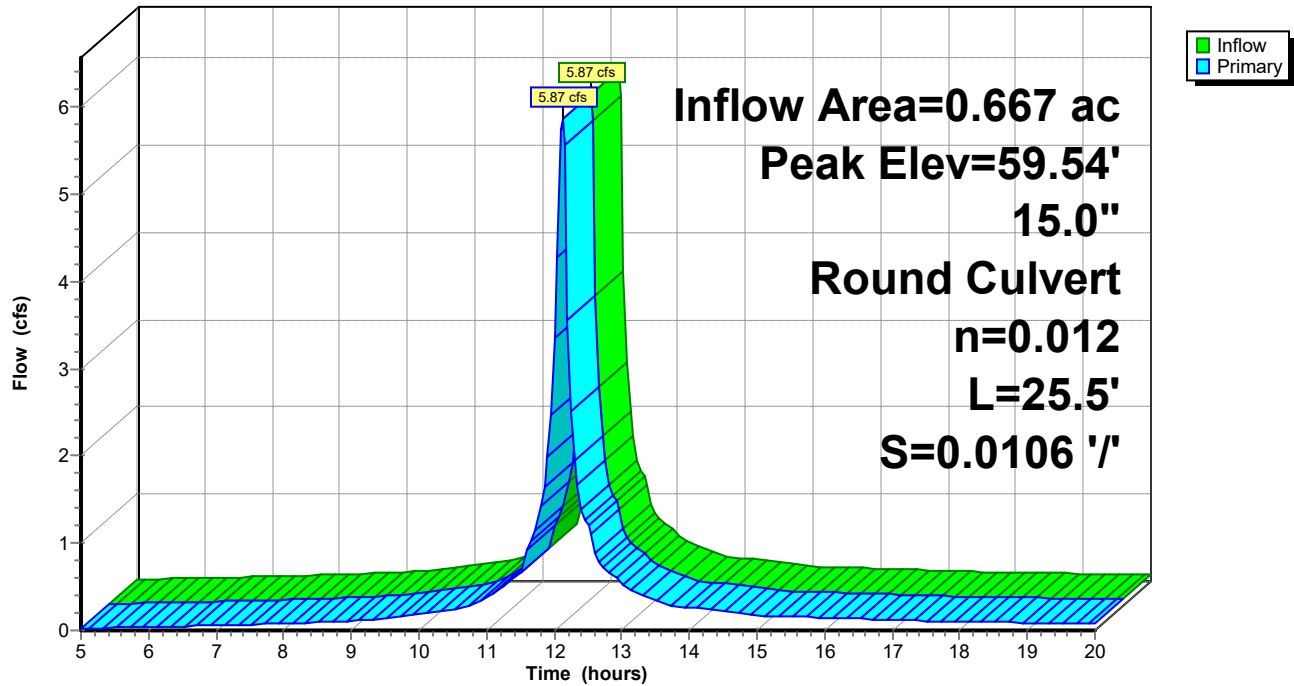
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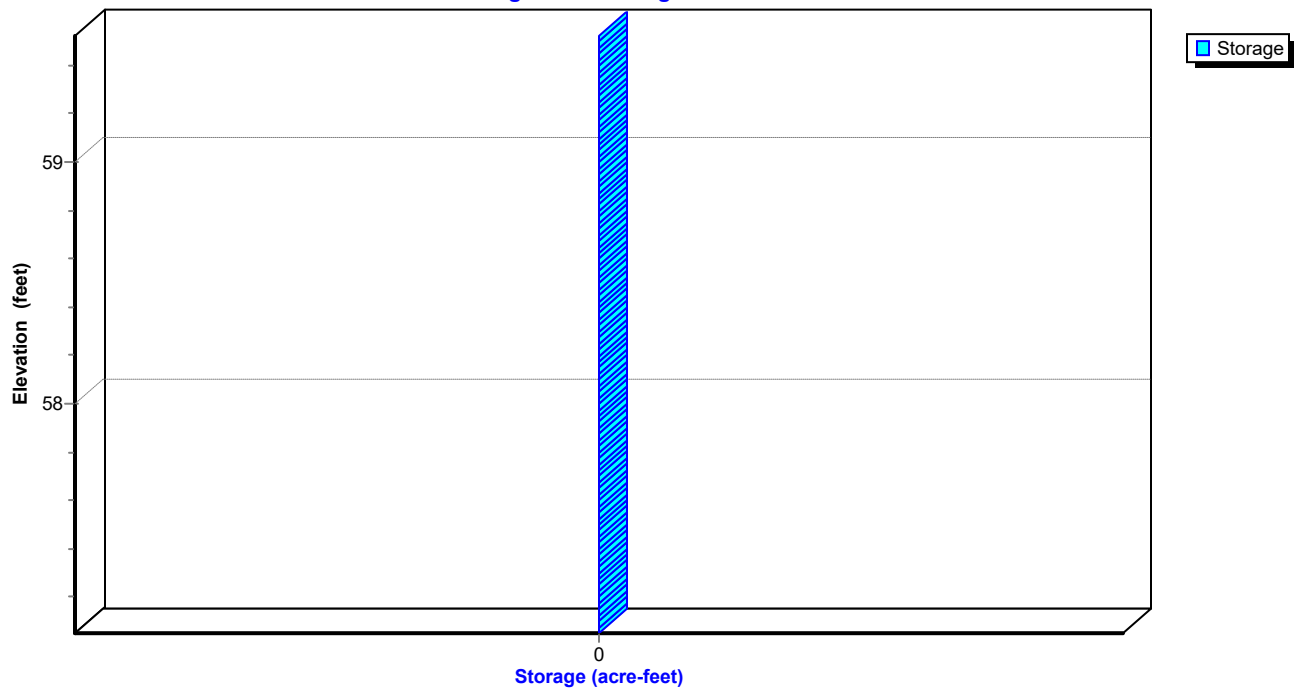
Pond 27P: FES-4

Hydrograph



Pond 27P: FES-4

Stage-Area-Storage



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Hydrograph for Pond 27P: FES-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.03	57.12	0.03	18.00	0.10	57.20	0.10
5.25	0.03	57.13	0.03	18.25	0.09	57.20	0.09
5.50	0.03	57.13	0.03	18.50	0.09	57.19	0.09
5.75	0.03	57.14	0.03	18.75	0.09	57.19	0.09
6.00	0.04	57.14	0.04	19.00	0.09	57.19	0.09
6.25	0.04	57.15	0.04	19.25	0.09	57.19	0.09
6.50	0.05	57.15	0.05	19.50	0.09	57.19	0.09
6.75	0.05	57.16	0.05	19.75	0.09	57.19	0.09
7.00	0.06	57.16	0.06	20.00	0.08	57.19	0.08
7.25	0.06	57.17	0.06				
7.50	0.07	57.17	0.07				
7.75	0.07	57.18	0.07				
8.00	0.08	57.18	0.08				
8.25	0.09	57.19	0.09				
8.50	0.09	57.20	0.09				
8.75	0.10	57.20	0.10				
9.00	0.11	57.21	0.11				
9.25	0.12	57.22	0.12				
9.50	0.14	57.23	0.14				
9.75	0.16	57.24	0.16				
10.00	0.18	57.26	0.18				
10.25	0.21	57.27	0.21				
10.50	0.23	57.28	0.23				
10.75	0.29	57.32	0.29				
11.00	0.37	57.35	0.37				
11.25	0.50	57.41	0.50				
11.50	0.65	57.47	0.65				
11.75	1.20	57.64	1.20				
12.00	3.35	58.12	3.35				
12.25	2.52	58.12	2.52				
12.50	1.20	57.65	1.20				
12.75	0.70	57.49	0.70				
13.00	0.54	57.43	0.54				
13.25	0.43	57.38	0.43				
13.50	0.34	57.34	0.34				
13.75	0.29	57.31	0.29				
14.00	0.26	57.30	0.26				
14.25	0.24	57.29	0.24				
14.50	0.22	57.28	0.22				
14.75	0.20	57.27	0.20				
15.00	0.18	57.25	0.18				
15.25	0.16	57.24	0.16				
15.50	0.16	57.24	0.16				
15.75	0.15	57.24	0.15				
16.00	0.14	57.23	0.14				
16.25	0.14	57.23	0.14				
16.50	0.13	57.22	0.13				
16.75	0.13	57.22	0.13				
17.00	0.12	57.22	0.12				
17.25	0.12	57.21	0.12				
17.50	0.11	57.21	0.11				
17.75	0.10	57.20	0.10				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Stage-Area-Storage for Pond 27P: FES-4

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.05	0.000	58.09	0.000	59.13	0.000
57.07	0.000	58.11	0.000	59.15	0.000
57.09	0.000	58.13	0.000	59.17	0.000
57.11	0.000	58.15	0.000	59.19	0.000
57.13	0.000	58.17	0.000	59.21	0.000
57.15	0.000	58.19	0.000	59.23	0.000
57.17	0.000	58.21	0.000	59.25	0.000
57.19	0.000	58.23	0.000	59.27	0.000
57.21	0.000	58.25	0.000	59.29	0.000
57.23	0.000	58.27	0.000	59.31	0.000
57.25	0.000	58.29	0.000	59.33	0.000
57.27	0.000	58.31	0.000	59.35	0.000
57.29	0.000	58.33	0.000	59.37	0.000
57.31	0.000	58.35	0.000	59.39	0.000
57.33	0.000	58.37	0.000	59.41	0.000
57.35	0.000	58.39	0.000	59.43	0.000
57.37	0.000	58.41	0.000	59.45	0.000
57.39	0.000	58.43	0.000	59.47	0.000
57.41	0.000	58.45	0.000	59.49	0.000
57.43	0.000	58.47	0.000	59.51	0.000
57.45	0.000	58.49	0.000	59.53	0.000
57.47	0.000	58.51	0.000		
57.49	0.000	58.53	0.000		
57.51	0.000	58.55	0.000		
57.53	0.000	58.57	0.000		
57.55	0.000	58.59	0.000		
57.57	0.000	58.61	0.000		
57.59	0.000	58.63	0.000		
57.61	0.000	58.65	0.000		
57.63	0.000	58.67	0.000		
57.65	0.000	58.69	0.000		
57.67	0.000	58.71	0.000		
57.69	0.000	58.73	0.000		
57.71	0.000	58.75	0.000		
57.73	0.000	58.77	0.000		
57.75	0.000	58.79	0.000		
57.77	0.000	58.81	0.000		
57.79	0.000	58.83	0.000		
57.81	0.000	58.85	0.000		
57.83	0.000	58.87	0.000		
57.85	0.000	58.89	0.000		
57.87	0.000	58.91	0.000		
57.89	0.000	58.93	0.000		
57.91	0.000	58.95	0.000		
57.93	0.000	58.97	0.000		
57.95	0.000	58.99	0.000		
57.97	0.000	59.01	0.000		
57.99	0.000	59.03	0.000		
58.01	0.000	59.05	0.000		
58.03	0.000	59.07	0.000		
58.05	0.000	59.09	0.000		
58.07	0.000	59.11	0.000		

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Pond 37P: CI-4

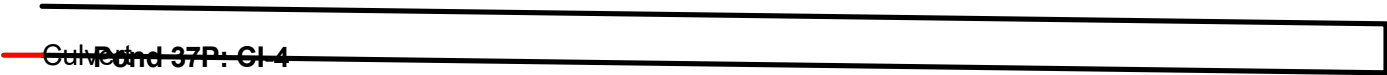
Inflow Area = 0.214 ac, 70.69% Impervious, Inflow Depth > 7.55" for 100-Year event
Inflow = 2.22 cfs @ 12.07 hrs, Volume= 0.135 af
Outflow = 2.22 cfs @ 12.07 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min
Primary = 2.22 cfs @ 12.07 hrs, Volume= 0.135 af
Routed to Pond 17P : SGW FOREBAY #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 57.98' @ 12.21 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	59.64'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	55.53'	15.0" Round Culvert L= 89.2' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 55.53' / 55.08' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.07 hrs HW=57.62' TW=57.66' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate



EX and PR

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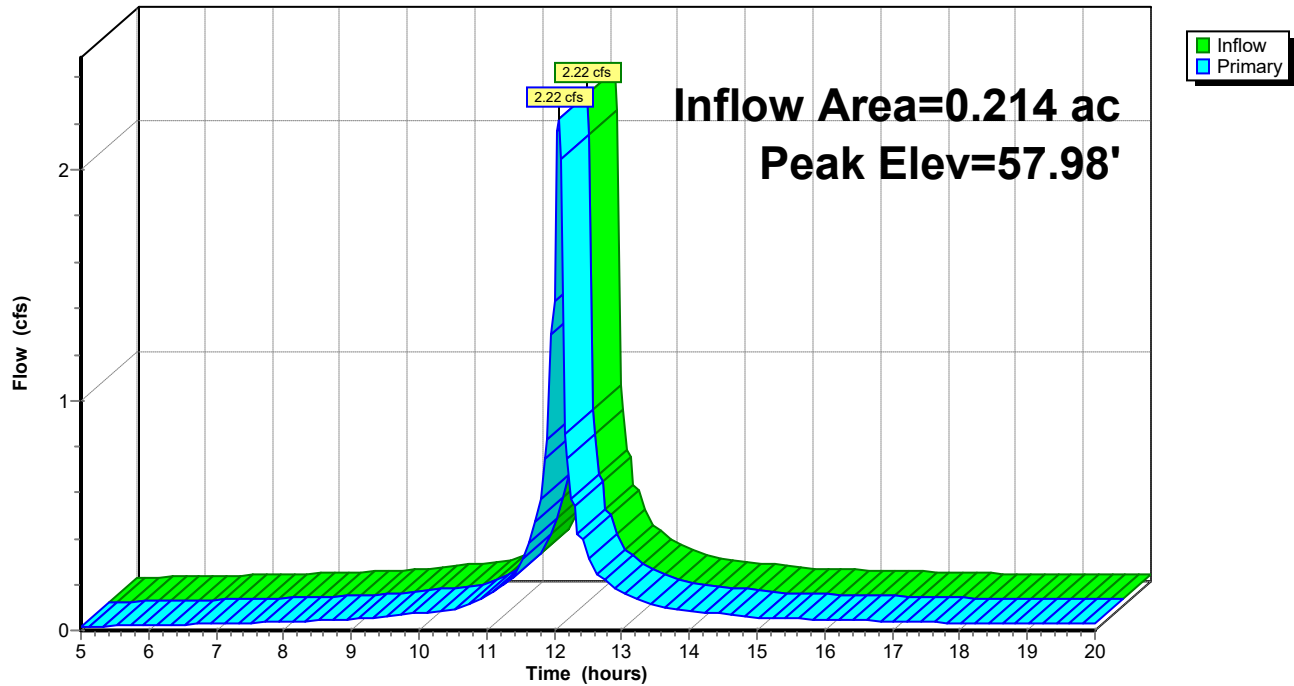
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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

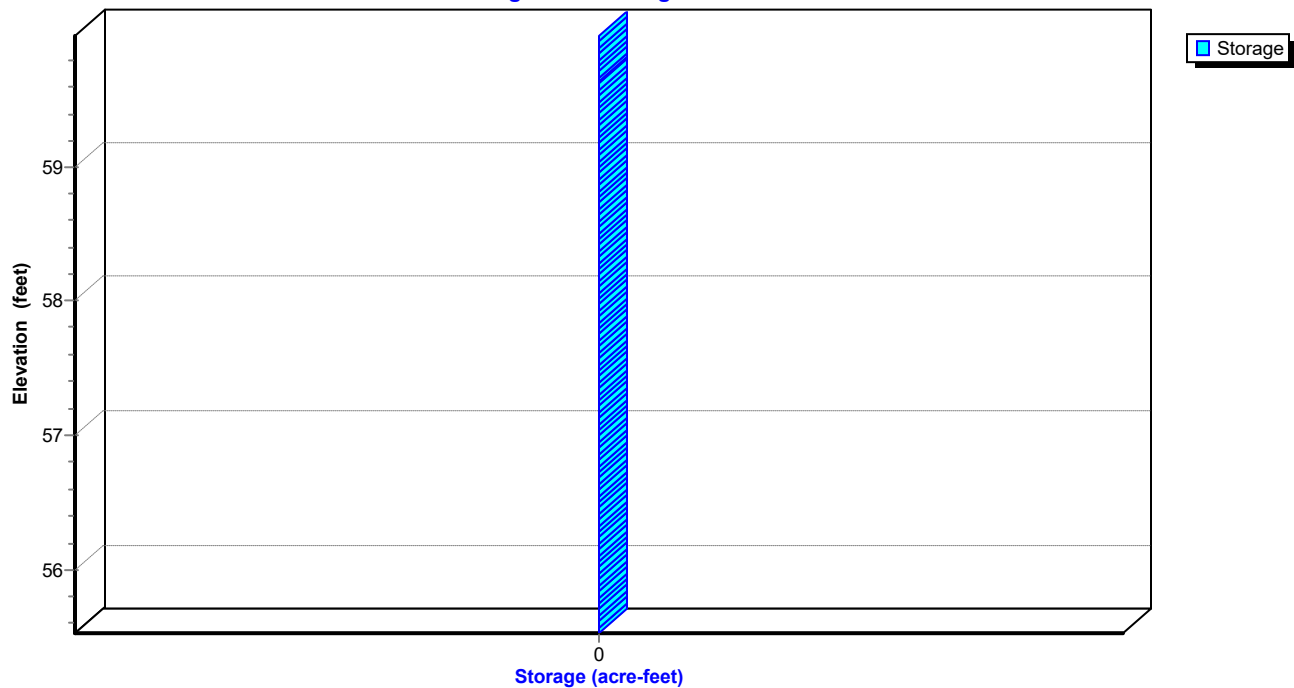
Pond 37P: CI-4

Hydrograph



Pond 37P: CI-4

Stage-Area-Storage



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Hydrograph for Pond 37P: CI-4

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.02	55.60	0.02	18.00	0.03	56.10	0.03
5.25	0.02	55.61	0.02	18.25	0.03	56.10	0.03
5.50	0.02	55.62	0.02	18.50	0.03	56.10	0.03
5.75	0.02	55.64	0.02	18.75	0.03	56.10	0.03
6.00	0.02	55.69	0.02	19.00	0.03	56.10	0.03
6.25	0.02	55.82	0.02	19.25	0.03	56.10	0.03
6.50	0.02	55.98	0.02	19.50	0.03	56.10	0.03
6.75	0.03	56.10	0.03	19.75	0.03	56.10	0.03
7.00	0.03	56.10	0.03	20.00	0.03	56.10	0.03
7.25	0.03	56.10	0.03				
7.50	0.03	56.10	0.03				
7.75	0.04	56.10	0.04				
8.00	0.04	56.10	0.04				
8.25	0.04	56.10	0.04				
8.50	0.04	56.10	0.04				
8.75	0.04	56.10	0.04				
9.00	0.05	56.10	0.05				
9.25	0.05	56.11	0.05				
9.50	0.06	56.11	0.06				
9.75	0.07	56.11	0.07				
10.00	0.07	56.11	0.07				
10.25	0.08	56.12	0.08				
10.50	0.09	56.12	0.09				
10.75	0.12	56.13	0.12				
11.00	0.14	56.14	0.14				
11.25	0.20	56.15	0.20				
11.50	0.26	56.22	0.26				
11.75	0.53	56.58	0.53				
12.00	1.43	57.30	1.43				
12.25	0.57	57.91	0.57				
12.50	0.37	57.49	0.37				
12.75	0.21	57.30	0.21				
13.00	0.17	57.23	0.17				
13.25	0.13	57.18	0.13				
13.50	0.11	57.14	0.11				
13.75	0.09	57.11	0.09				
14.00	0.09	57.06	0.09				
14.25	0.08	57.02	0.08				
14.50	0.07	56.97	0.07				
14.75	0.06	56.92	0.06				
15.00	0.06	56.86	0.06				
15.25	0.05	56.79	0.05				
15.50	0.05	56.71	0.05				
15.75	0.05	56.64	0.05				
16.00	0.05	56.57	0.05				
16.25	0.04	56.49	0.04				
16.50	0.04	56.42	0.04				
16.75	0.04	56.35	0.04				
17.00	0.04	56.27	0.04				
17.25	0.04	56.20	0.04				
17.50	0.04	56.13	0.04				
17.75	0.03	56.10	0.03				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Stage-Area-Storage for Pond 37P: CI-4

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
55.53	0.000	58.13	0.000
55.58	0.000	58.18	0.000
55.63	0.000	58.23	0.000
55.68	0.000	58.28	0.000
55.73	0.000	58.33	0.000
55.78	0.000	58.38	0.000
55.83	0.000	58.43	0.000
55.88	0.000	58.48	0.000
55.93	0.000	58.53	0.000
55.98	0.000	58.58	0.000
56.03	0.000	58.63	0.000
56.08	0.000	58.68	0.000
56.13	0.000	58.73	0.000
56.18	0.000	58.78	0.000
56.23	0.000	58.83	0.000
56.28	0.000	58.88	0.000
56.33	0.000	58.93	0.000
56.38	0.000	58.98	0.000
56.43	0.000	59.03	0.000
56.48	0.000	59.08	0.000
56.53	0.000	59.13	0.000
56.58	0.000	59.18	0.000
56.63	0.000	59.23	0.000
56.68	0.000	59.28	0.000
56.73	0.000	59.33	0.000
56.78	0.000	59.38	0.000
56.83	0.000	59.43	0.000
56.88	0.000	59.48	0.000
56.93	0.000	59.53	0.000
56.98	0.000	59.58	0.000
57.03	0.000	59.63	0.000
57.08	0.000	59.68	0.000
57.13	0.000	59.73	0.000
57.18	0.000	59.78	0.000
57.23	0.000	59.83	0.000
57.28	0.000	59.88	0.000
57.33	0.000	59.93	0.000
57.38	0.000		
57.43	0.000		
57.48	0.000		
57.53	0.000		
57.58	0.000		
57.63	0.000		
57.68	0.000		
57.73	0.000		
57.78	0.000		
57.83	0.000		
57.88	0.000		
57.93	0.000		
57.98	0.000		
58.03	0.000		
58.08	0.000		

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Pond 38P: CI-1

Inflow Area = 1.749 ac, 78.72% Impervious, Inflow Depth > 7.63" for 100-Year event
Inflow = 17.48 cfs @ 12.07 hrs, Volume= 1.112 af
Outflow = 17.48 cfs @ 12.07 hrs, Volume= 1.112 af, Atten= 0%, Lag= 0.0 min
Primary = 17.48 cfs @ 12.07 hrs, Volume= 1.112 af
Routed to Pond 17P : SGW FOREBAY #1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 61.61' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.41'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	55.43'	18.0" Round Culvert L= 46.3' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 55.43' / 55.08' S= 0.0076 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=16.29 cfs @ 12.07 hrs HW=61.32' TW=57.65' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Inlet Controls 16.29 cfs @ 9.22 fps)

Orifice/Grate

Culvert Pond 38P: CI-1

EX and PR

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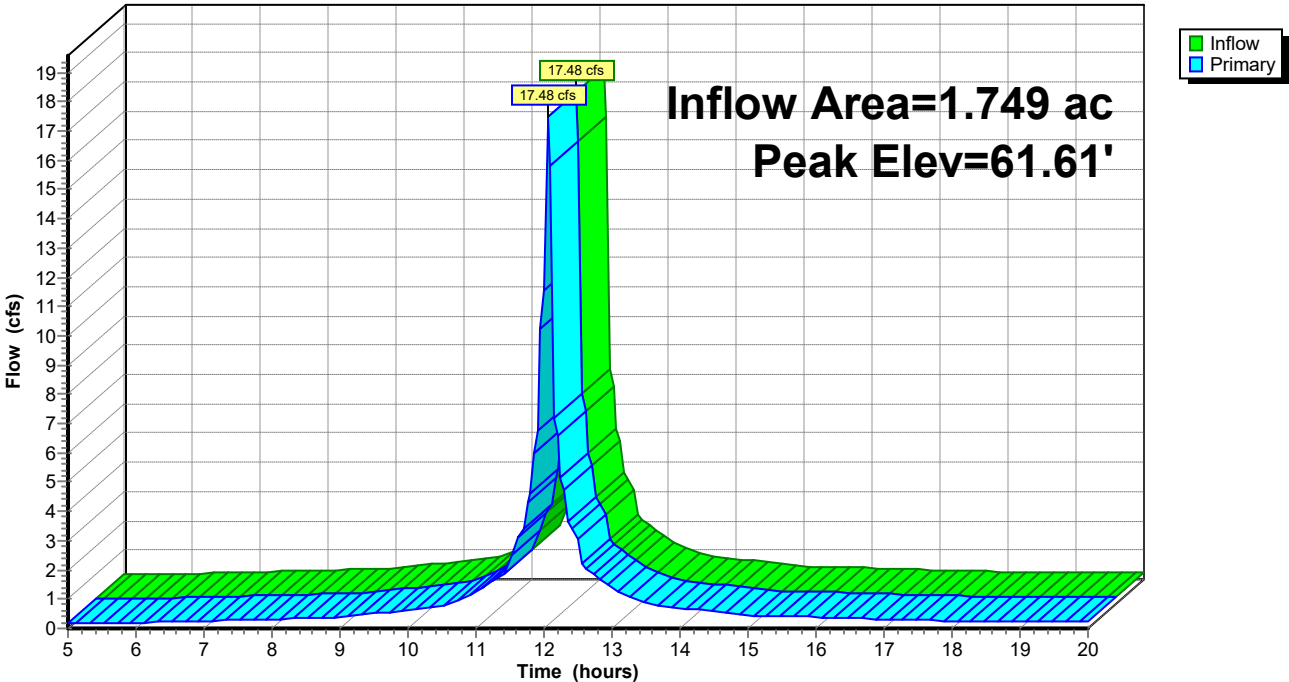
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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

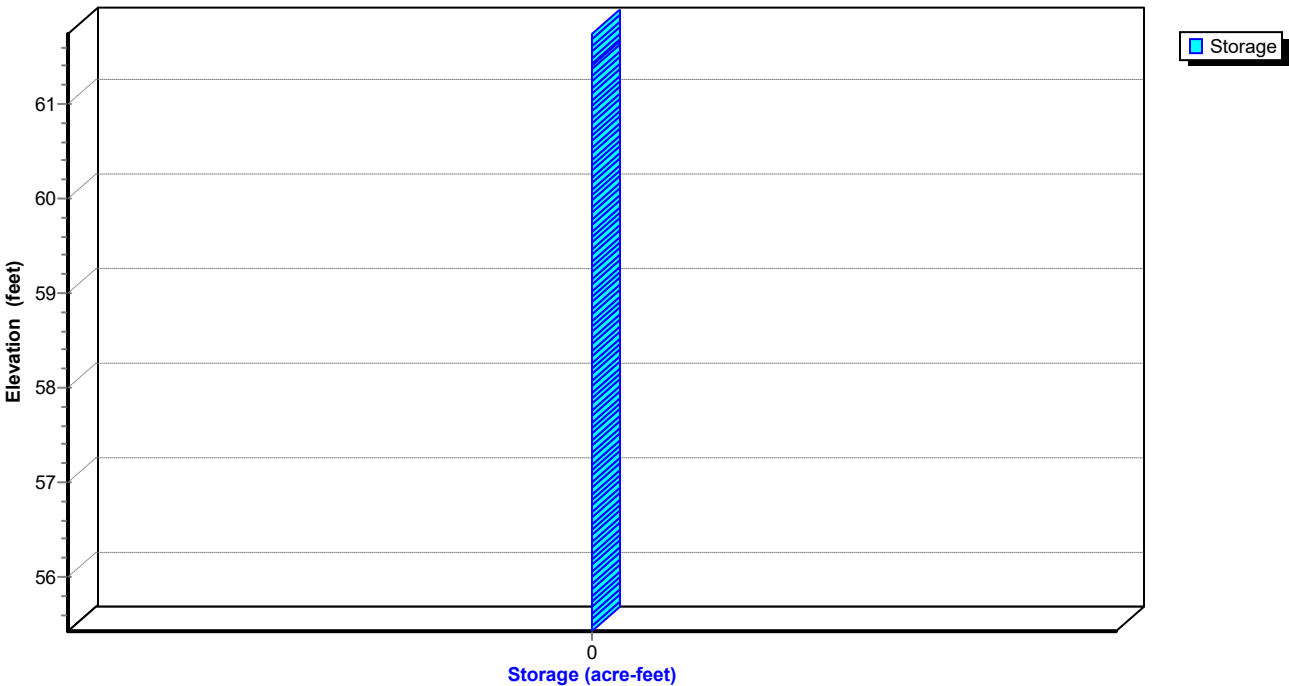
Pond 38P: CI-1

Hydrograph



Pond 38P: CI-1

Stage-Area-Storage



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Pond 38P: CI-1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.16	55.61	0.16	18.00	0.26	56.11	0.26
5.25	0.17	55.62	0.17	18.25	0.25	56.11	0.25
5.50	0.18	55.64	0.18	18.50	0.25	56.11	0.25
5.75	0.18	55.68	0.18	18.75	0.24	56.11	0.24
6.00	0.19	55.74	0.19	19.00	0.24	56.11	0.24
6.25	0.21	55.85	0.21	19.25	0.23	56.11	0.23
6.50	0.22	55.99	0.22	19.50	0.23	56.10	0.23
6.75	0.24	56.11	0.24	19.75	0.23	56.10	0.23
7.00	0.25	56.11	0.25	20.00	0.22	56.10	0.22
7.25	0.27	56.11	0.27				
7.50	0.29	56.11	0.29				
7.75	0.30	56.11	0.30				
8.00	0.32	56.11	0.32				
8.25	0.34	56.12	0.34				
8.50	0.35	56.12	0.35				
8.75	0.37	56.12	0.37				
9.00	0.39	56.12	0.39				
9.25	0.45	56.13	0.45				
9.50	0.50	56.14	0.50				
9.75	0.57	56.15	0.57				
10.00	0.62	56.16	0.62				
10.25	0.68	56.17	0.68				
10.50	0.75	56.18	0.75				
10.75	0.98	56.21	0.98				
11.00	1.19	56.24	1.19				
11.25	1.64	56.31	1.64				
11.50	2.12	56.41	2.12				
11.75	4.31	56.87	4.31				
12.00	11.57	59.08	11.57				
12.25	5.14	58.27	5.14				
12.50	3.08	57.62	3.08				
12.75	1.79	57.35	1.79				
13.00	1.40	57.25	1.40				
13.25	1.08	57.19	1.08				
13.50	0.88	57.15	0.88				
13.75	0.75	57.11	0.75				
14.00	0.70	57.07	0.70				
14.25	0.63	57.03	0.63				
14.50	0.58	56.97	0.58				
14.75	0.52	56.92	0.52				
15.00	0.46	56.86	0.46				
15.25	0.43	56.79	0.43				
15.50	0.42	56.72	0.42				
15.75	0.40	56.65	0.40				
16.00	0.38	56.57	0.38				
16.25	0.37	56.50	0.37				
16.50	0.35	56.43	0.35				
16.75	0.33	56.35	0.33				
17.00	0.32	56.28	0.32				
17.25	0.30	56.21	0.30				
17.50	0.29	56.14	0.29				
17.75	0.27	56.11	0.27				

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Stage-Area-Storage for Pond 38P: CI-1

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
55.43	0.000	58.03	0.000	60.63	0.000
55.48	0.000	58.08	0.000	60.68	0.000
55.53	0.000	58.13	0.000	60.73	0.000
55.58	0.000	58.18	0.000	60.78	0.000
55.63	0.000	58.23	0.000	60.83	0.000
55.68	0.000	58.28	0.000	60.88	0.000
55.73	0.000	58.33	0.000	60.93	0.000
55.78	0.000	58.38	0.000	60.98	0.000
55.83	0.000	58.43	0.000	61.03	0.000
55.88	0.000	58.48	0.000	61.08	0.000
55.93	0.000	58.53	0.000	61.13	0.000
55.98	0.000	58.58	0.000	61.18	0.000
56.03	0.000	58.63	0.000	61.23	0.000
56.08	0.000	58.68	0.000	61.28	0.000
56.13	0.000	58.73	0.000	61.33	0.000
56.18	0.000	58.78	0.000	61.38	0.000
56.23	0.000	58.83	0.000	61.43	0.000
56.28	0.000	58.88	0.000	61.48	0.000
56.33	0.000	58.93	0.000	61.53	0.000
56.38	0.000	58.98	0.000	61.58	0.000
56.43	0.000	59.03	0.000	61.63	0.000
56.48	0.000	59.08	0.000	61.68	0.000
56.53	0.000	59.13	0.000	61.73	0.000
56.58	0.000	59.18	0.000		
56.63	0.000	59.23	0.000		
56.68	0.000	59.28	0.000		
56.73	0.000	59.33	0.000		
56.78	0.000	59.38	0.000		
56.83	0.000	59.43	0.000		
56.88	0.000	59.48	0.000		
56.93	0.000	59.53	0.000		
56.98	0.000	59.58	0.000		
57.03	0.000	59.63	0.000		
57.08	0.000	59.68	0.000		
57.13	0.000	59.73	0.000		
57.18	0.000	59.78	0.000		
57.23	0.000	59.83	0.000		
57.28	0.000	59.88	0.000		
57.33	0.000	59.93	0.000		
57.38	0.000	59.98	0.000		
57.43	0.000	60.03	0.000		
57.48	0.000	60.08	0.000		
57.53	0.000	60.13	0.000		
57.58	0.000	60.18	0.000		
57.63	0.000	60.23	0.000		
57.68	0.000	60.28	0.000		
57.73	0.000	60.33	0.000		
57.78	0.000	60.38	0.000		
57.83	0.000	60.43	0.000		
57.88	0.000	60.48	0.000		
57.93	0.000	60.53	0.000		
57.98	0.000	60.58	0.000		

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Pond 39P: CI-9

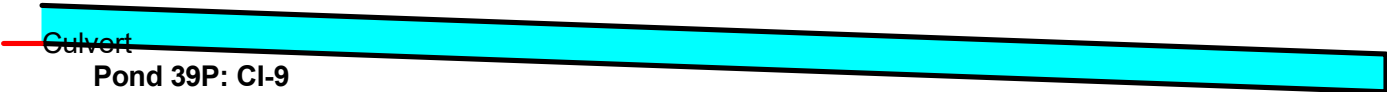
Inflow Area = 1.554 ac, 77.64% Impervious, Inflow Depth > 7.60" for 100-Year event
Inflow = 15.43 cfs @ 12.06 hrs, Volume= 0.985 af
Outflow = 15.43 cfs @ 12.06 hrs, Volume= 0.985 af, Atten= 0%, Lag= 0.0 min
Primary = 15.43 cfs @ 12.06 hrs, Volume= 0.985 af
Routed to Pond 38P : CI-1

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 62.68' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.44'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.03'	15.0" Round Culvert L= 172.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.03' / 55.43' S= 0.0093 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

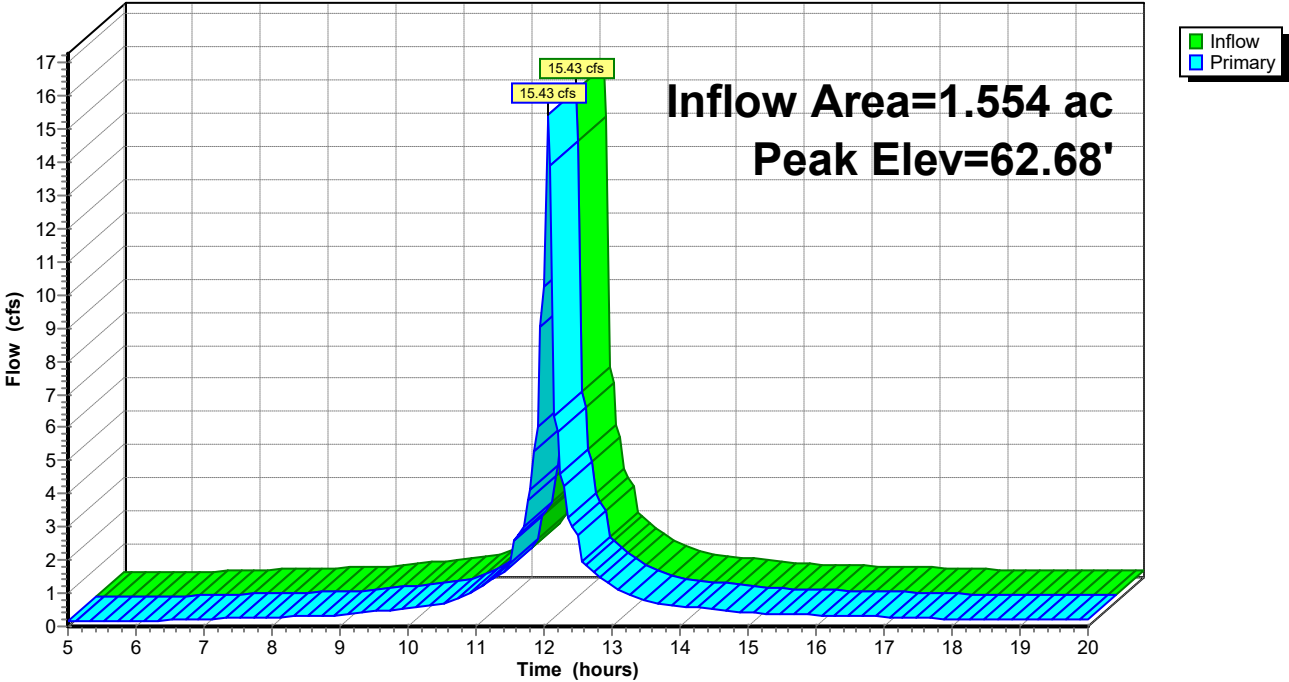
Primary OutFlow Max=12.39 cfs @ 12.06 hrs HW=62.39' TW=61.32' (Dynamic Tailwater)
1=Orifice/Grate (Orifice Controls 7.80 cfs @ 4.25 fps)
2=Culvert (Outlet Controls 4.60 cfs @ 3.74 fps)

Orifice/Grate



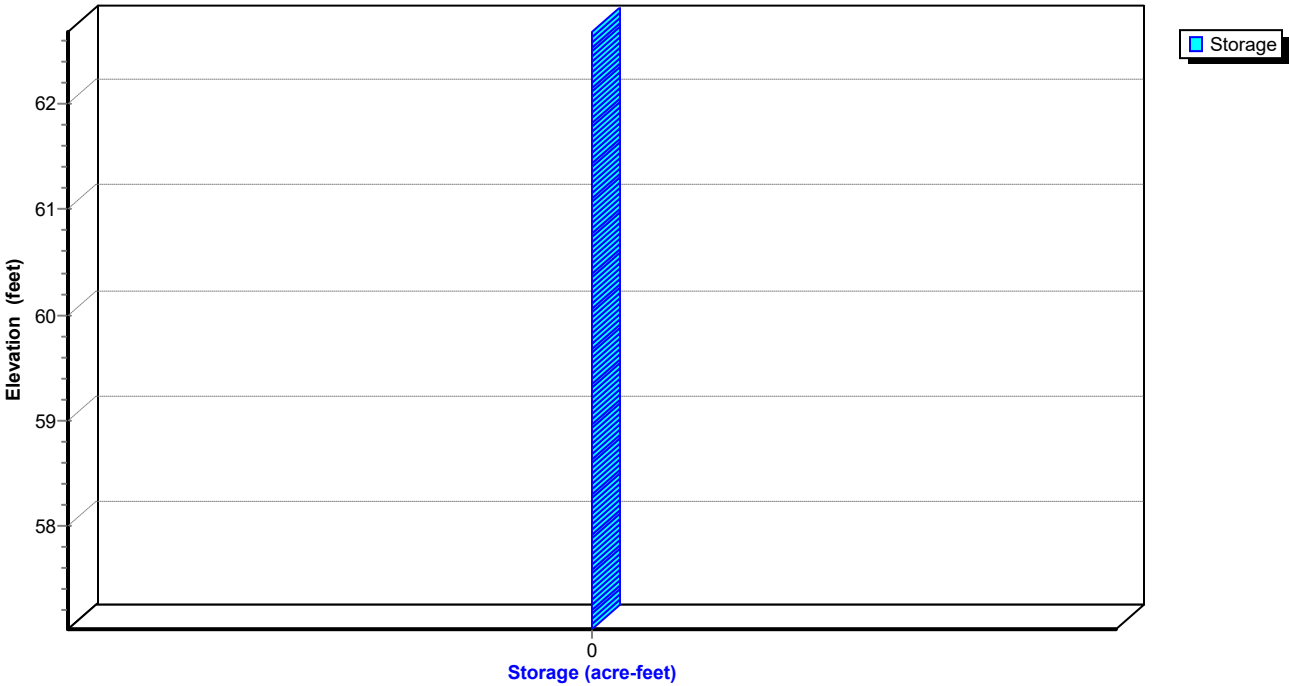
Pond 39P: CI-9

Hydrograph



Pond 39P: CI-9

Stage-Area-Storage



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Pond 39P: CI-9

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.14	57.20	0.14	18.00	0.23	57.26	0.23
5.25	0.15	57.20	0.15	18.25	0.22	57.26	0.22
5.50	0.15	57.21	0.15	18.50	0.22	57.26	0.22
5.75	0.16	57.21	0.16	18.75	0.22	57.26	0.22
6.00	0.17	57.22	0.17	19.00	0.21	57.25	0.21
6.25	0.18	57.23	0.18	19.25	0.21	57.25	0.21
6.50	0.19	57.24	0.19	19.50	0.21	57.25	0.21
6.75	0.21	57.25	0.21	19.75	0.20	57.25	0.20
7.00	0.22	57.26	0.22	20.00	0.20	57.25	0.20
7.25	0.24	57.27	0.24				
7.50	0.25	57.27	0.25				
7.75	0.27	57.28	0.27				
8.00	0.28	57.29	0.28				
8.25	0.30	57.29	0.30				
8.50	0.31	57.30	0.31				
8.75	0.33	57.31	0.33				
9.00	0.34	57.31	0.34				
9.25	0.40	57.33	0.40				
9.50	0.44	57.35	0.44				
9.75	0.50	57.37	0.50				
10.00	0.55	57.39	0.55				
10.25	0.60	57.40	0.60				
10.50	0.66	57.42	0.66				
10.75	0.87	57.48	0.87				
11.00	1.05	57.53	1.05				
11.25	1.45	57.62	1.45				
11.50	1.88	57.72	1.88				
11.75	3.81	58.11	3.81				
12.00	10.26	61.70	10.26				
12.25	4.61	59.63	4.61				
12.50	2.74	58.24	2.74				
12.75	1.59	57.87	1.59				
13.00	1.25	57.76	1.25				
13.25	0.96	57.66	0.96				
13.50	0.78	57.60	0.78				
13.75	0.67	57.55	0.67				
14.00	0.62	57.53	0.62				
14.25	0.56	57.50	0.56				
14.50	0.52	57.47	0.52				
14.75	0.46	57.44	0.46				
15.00	0.41	57.41	0.41				
15.25	0.38	57.39	0.38				
15.50	0.37	57.37	0.37				
15.75	0.35	57.36	0.35				
16.00	0.34	57.35	0.34				
16.25	0.33	57.33	0.33				
16.50	0.31	57.32	0.31				
16.75	0.30	57.31	0.30				
17.00	0.29	57.30	0.29				
17.25	0.27	57.29	0.27				
17.50	0.26	57.28	0.26				
17.75	0.24	57.27	0.24				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Stage-Area-Storage for Pond 39P: CI-9

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.03	0.000	59.63	0.000	62.23	0.000
57.08	0.000	59.68	0.000	62.28	0.000
57.13	0.000	59.73	0.000	62.33	0.000
57.18	0.000	59.78	0.000	62.38	0.000
57.23	0.000	59.83	0.000	62.43	0.000
57.28	0.000	59.88	0.000	62.48	0.000
57.33	0.000	59.93	0.000	62.53	0.000
57.38	0.000	59.98	0.000	62.58	0.000
57.43	0.000	60.03	0.000	62.63	0.000
57.48	0.000	60.08	0.000		
57.53	0.000	60.13	0.000		
57.58	0.000	60.18	0.000		
57.63	0.000	60.23	0.000		
57.68	0.000	60.28	0.000		
57.73	0.000	60.33	0.000		
57.78	0.000	60.38	0.000		
57.83	0.000	60.43	0.000		
57.88	0.000	60.48	0.000		
57.93	0.000	60.53	0.000		
57.98	0.000	60.58	0.000		
58.03	0.000	60.63	0.000		
58.08	0.000	60.68	0.000		
58.13	0.000	60.73	0.000		
58.18	0.000	60.78	0.000		
58.23	0.000	60.83	0.000		
58.28	0.000	60.88	0.000		
58.33	0.000	60.93	0.000		
58.38	0.000	60.98	0.000		
58.43	0.000	61.03	0.000		
58.48	0.000	61.08	0.000		
58.53	0.000	61.13	0.000		
58.58	0.000	61.18	0.000		
58.63	0.000	61.23	0.000		
58.68	0.000	61.28	0.000		
58.73	0.000	61.33	0.000		
58.78	0.000	61.38	0.000		
58.83	0.000	61.43	0.000		
58.88	0.000	61.48	0.000		
58.93	0.000	61.53	0.000		
58.98	0.000	61.58	0.000		
59.03	0.000	61.63	0.000		
59.08	0.000	61.68	0.000		
59.13	0.000	61.73	0.000		
59.18	0.000	61.78	0.000		
59.23	0.000	61.83	0.000		
59.28	0.000	61.88	0.000		
59.33	0.000	61.93	0.000		
59.38	0.000	61.98	0.000		
59.43	0.000	62.03	0.000		
59.48	0.000	62.08	0.000		
59.53	0.000	62.13	0.000		
59.58	0.000	62.18	0.000		

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Summary for Pond 40P: CI-6

Inflow Area = 0.382 ac, 58.96% Impervious, Inflow Depth > 7.27" for 100-Year event
Inflow = 3.23 cfs @ 12.08 hrs, Volume= 0.232 af
Outflow = 3.23 cfs @ 12.08 hrs, Volume= 0.232 af, Atten= 0%, Lag= 0.0 min
Primary = 3.23 cfs @ 12.08 hrs, Volume= 0.232 af
Routed to Pond 39P : CI-9

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 62.71' @ 12.14 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.68'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.45'	12.0" Round Culvert L= 84.4' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.45' / 57.03' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 12.08 hrs HW=62.12' TW=62.47' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate

Culvert Pond 40P: CI-6

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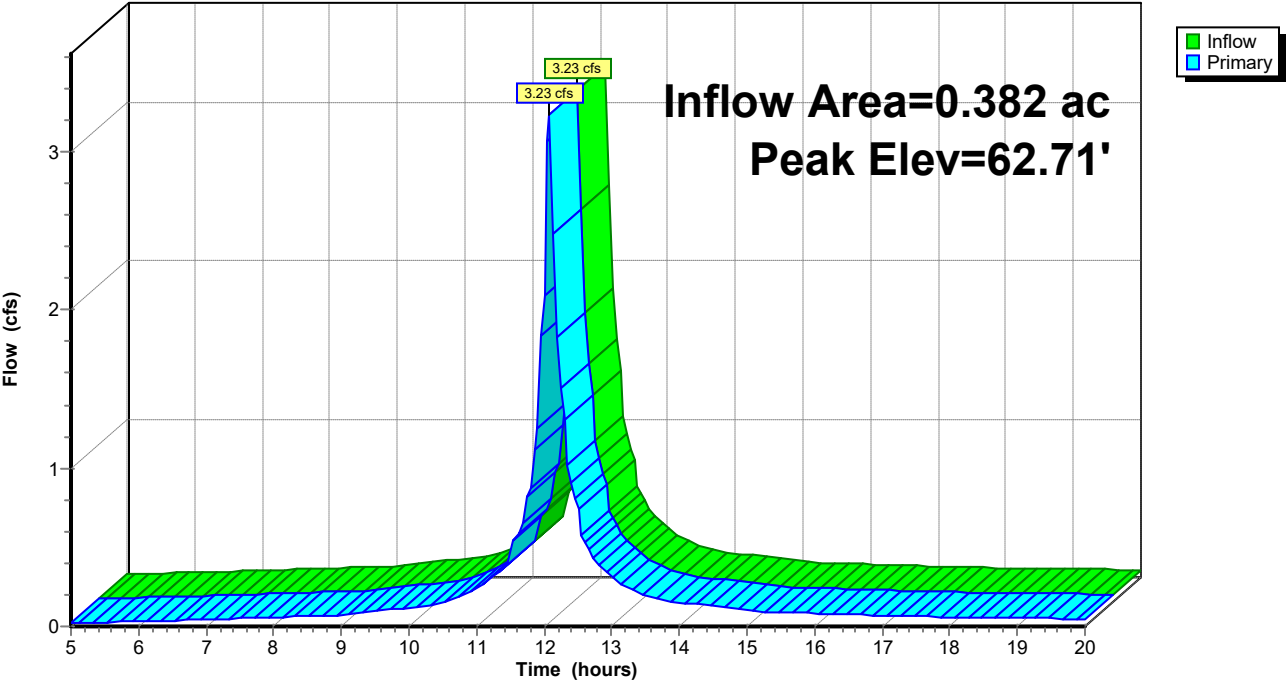
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NOAA 24-hr C 100-Year Rainfall=8.98"

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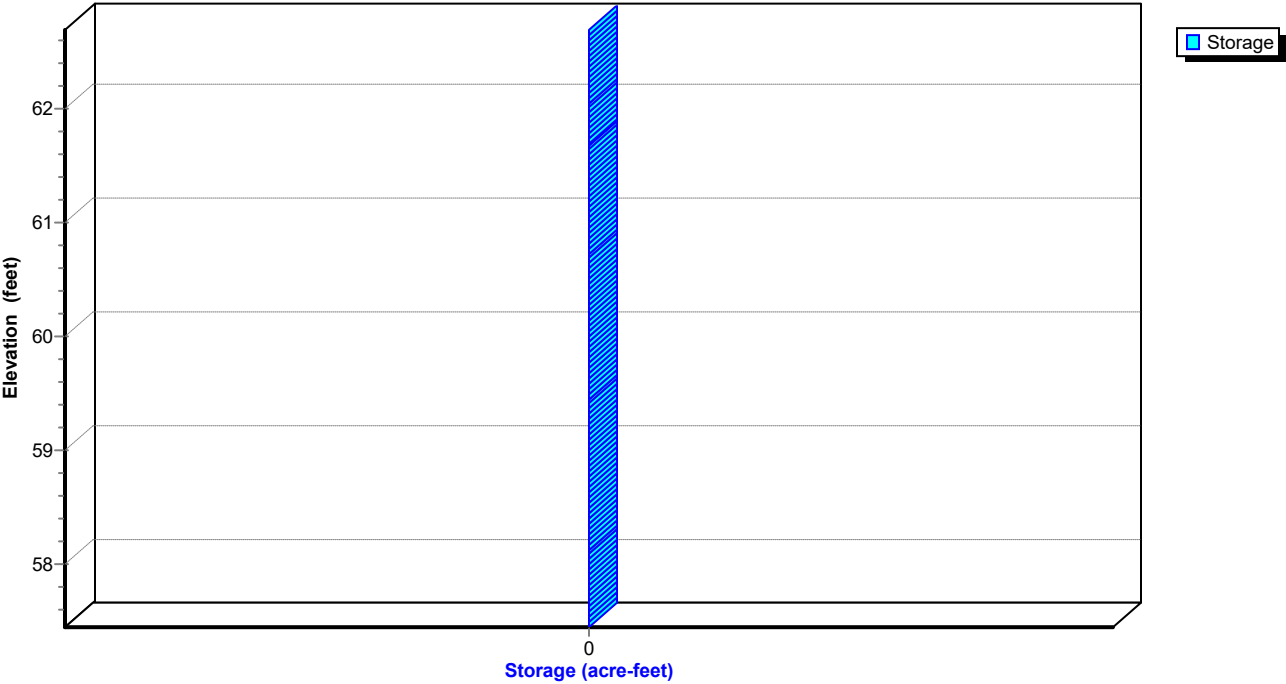
Pond 40P: CI-6

Hydrograph



Pond 40P: CI-6

Stage-Area-Storage



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Pond 40P: CI-6

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.02	57.54	0.02	18.00	0.06	57.60	0.06
5.25	0.02	57.55	0.02	18.25	0.05	57.59	0.05
5.50	0.03	57.55	0.03	18.50	0.05	57.59	0.05
5.75	0.03	57.55	0.03	18.75	0.05	57.59	0.05
6.00	0.03	57.55	0.03	19.00	0.05	57.59	0.05
6.25	0.03	57.56	0.03	19.25	0.05	57.59	0.05
6.50	0.04	57.57	0.04	19.50	0.05	57.59	0.05
6.75	0.04	57.57	0.04	19.75	0.05	57.59	0.05
7.00	0.04	57.58	0.04	20.00	0.05	57.58	0.05
7.25	0.05	57.58	0.05				
7.50	0.05	57.59	0.05				
7.75	0.05	57.59	0.05				
8.00	0.06	57.60	0.06				
8.25	0.06	57.60	0.06				
8.50	0.06	57.61	0.06				
8.75	0.07	57.61	0.07				
9.00	0.07	57.62	0.07				
9.25	0.08	57.63	0.08				
9.50	0.09	57.64	0.09				
9.75	0.11	57.66	0.11				
10.00	0.12	57.67	0.12				
10.25	0.13	57.68	0.13				
10.50	0.15	57.69	0.15				
10.75	0.19	57.73	0.19				
11.00	0.23	57.77	0.23				
11.25	0.32	57.84	0.32				
11.50	0.41	57.91	0.41				
11.75	0.82	58.16	0.82				
12.00	2.09	61.76	2.09				
12.25	1.51	60.47	1.51				
12.50	0.74	58.41	0.74				
12.75	0.41	58.02	0.41				
13.00	0.32	57.91	0.32				
13.25	0.24	57.83	0.24				
13.50	0.20	57.78	0.20				
13.75	0.17	57.74	0.17				
14.00	0.15	57.73	0.15				
14.25	0.14	57.71	0.14				
14.50	0.13	57.69	0.13				
14.75	0.11	57.68	0.11				
15.00	0.10	57.66	0.10				
15.25	0.09	57.65	0.09				
15.50	0.09	57.64	0.09				
15.75	0.09	57.64	0.09				
16.00	0.08	57.63	0.08				
16.25	0.08	57.63	0.08				
16.50	0.08	57.62	0.08				
16.75	0.07	57.62	0.07				
17.00	0.07	57.61	0.07				
17.25	0.07	57.61	0.07				
17.50	0.06	57.60	0.06				
17.75	0.06	57.60	0.06				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Stage-Area-Storage for Pond 40P: CI-6

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.45	0.000	60.05	0.000	62.65	0.000
57.50	0.000	60.10	0.000	62.70	0.000
57.55	0.000	60.15	0.000		
57.60	0.000	60.20	0.000		
57.65	0.000	60.25	0.000		
57.70	0.000	60.30	0.000		
57.75	0.000	60.35	0.000		
57.80	0.000	60.40	0.000		
57.85	0.000	60.45	0.000		
57.90	0.000	60.50	0.000		
57.95	0.000	60.55	0.000		
58.00	0.000	60.60	0.000		
58.05	0.000	60.65	0.000		
58.10	0.000	60.70	0.000		
58.15	0.000	60.75	0.000		
58.20	0.000	60.80	0.000		
58.25	0.000	60.85	0.000		
58.30	0.000	60.90	0.000		
58.35	0.000	60.95	0.000		
58.40	0.000	61.00	0.000		
58.45	0.000	61.05	0.000		
58.50	0.000	61.10	0.000		
58.55	0.000	61.15	0.000		
58.60	0.000	61.20	0.000		
58.65	0.000	61.25	0.000		
58.70	0.000	61.30	0.000		
58.75	0.000	61.35	0.000		
58.80	0.000	61.40	0.000		
58.85	0.000	61.45	0.000		
58.90	0.000	61.50	0.000		
58.95	0.000	61.55	0.000		
59.00	0.000	61.60	0.000		
59.05	0.000	61.65	0.000		
59.10	0.000	61.70	0.000		
59.15	0.000	61.75	0.000		
59.20	0.000	61.80	0.000		
59.25	0.000	61.85	0.000		
59.30	0.000	61.90	0.000		
59.35	0.000	61.95	0.000		
59.40	0.000	62.00	0.000		
59.45	0.000	62.05	0.000		
59.50	0.000	62.10	0.000		
59.55	0.000	62.15	0.000		
59.60	0.000	62.20	0.000		
59.65	0.000	62.25	0.000		
59.70	0.000	62.30	0.000		
59.75	0.000	62.35	0.000		
59.80	0.000	62.40	0.000		
59.85	0.000	62.45	0.000		
59.90	0.000	62.50	0.000		
59.95	0.000	62.55	0.000		
60.00	0.000	62.60	0.000		

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Pond 43P: CI-7

Inflow Area = 0.131 ac, 41.20% Impervious, Inflow Depth > 6.92" for 100-Year event
Inflow = 0.95 cfs @ 12.19 hrs, Volume= 0.075 af
Outflow = 0.95 cfs @ 12.19 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min
Primary = 0.95 cfs @ 12.19 hrs, Volume= 0.075 af
Routed to Pond 40P : CI-6

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 62.71' @ 12.19 hrs

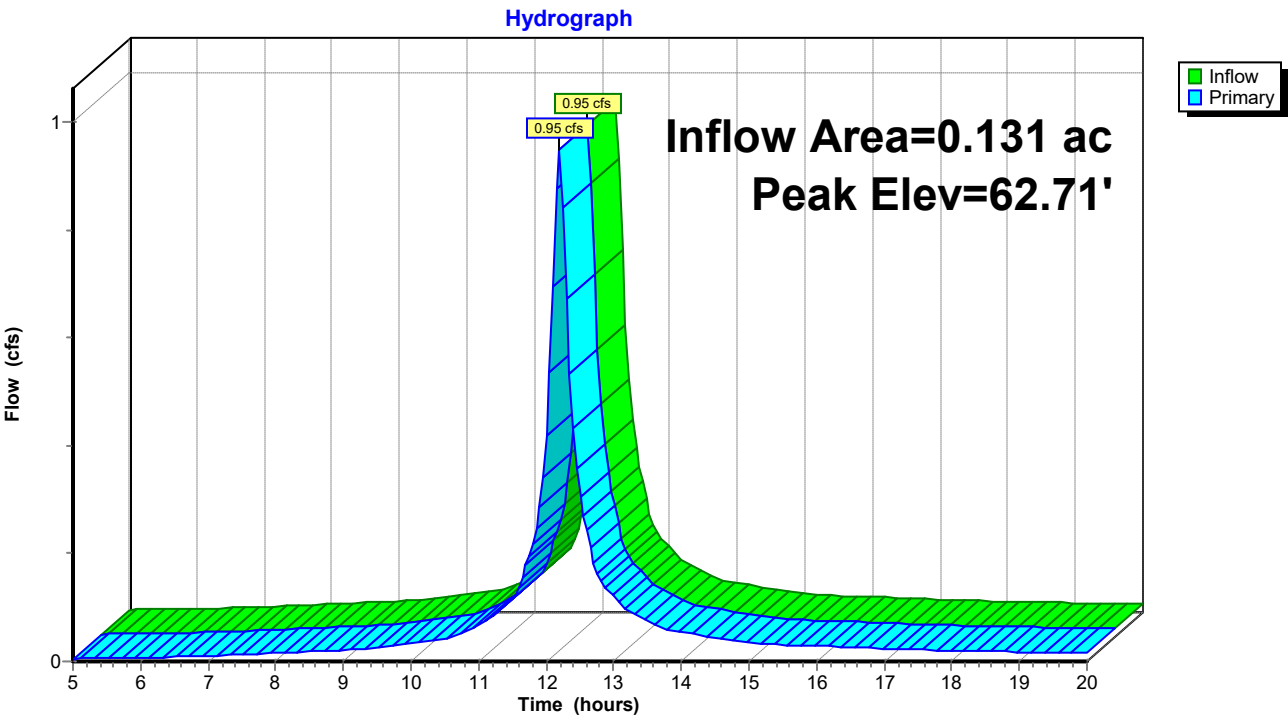
Device	Routing	Invert	Outlet Devices
#1	Primary	62.27'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.13'	12.0" Round Culvert L= 138.4' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.13' / 57.43' S= 0.0051 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=6.37 cfs @ 12.19 hrs HW=62.65' TW=61.90' (Dynamic Tailwater)
1=Orifice/Grate (Orifice Controls 3.98 cfs @ 2.17 fps)
2=Culvert (Outlet Controls 2.39 cfs @ 3.04 fps)

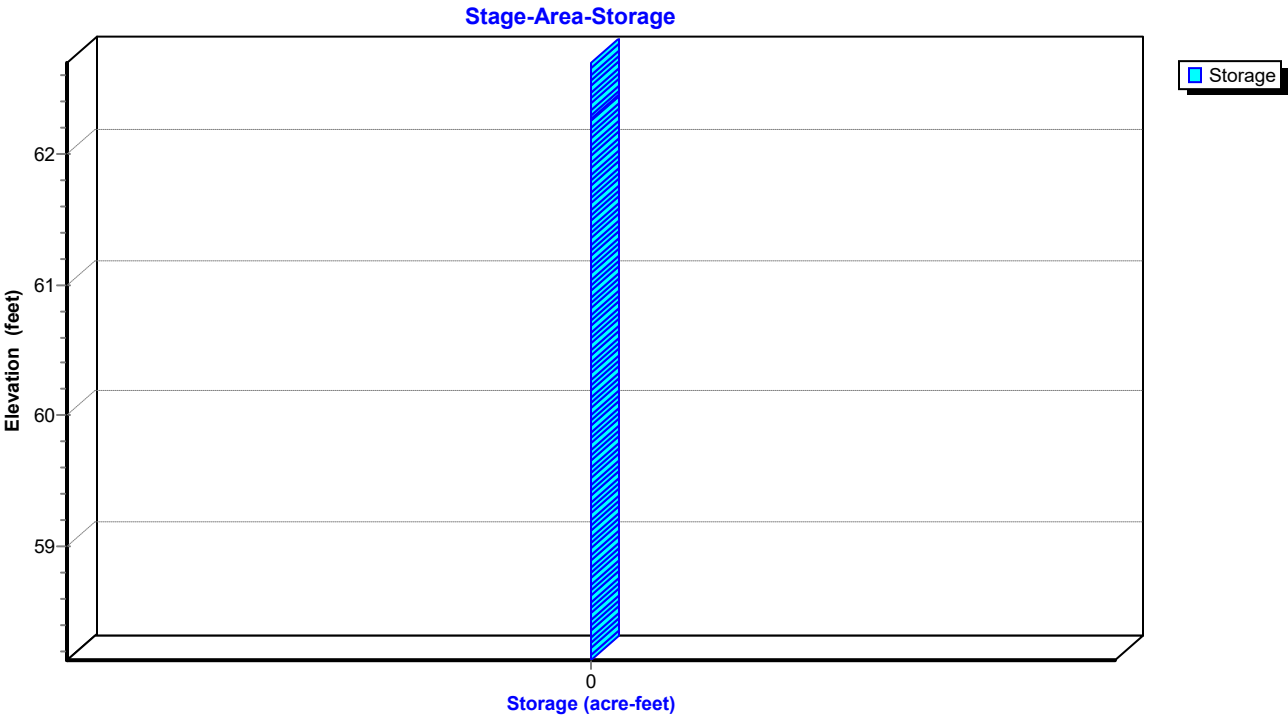
Orifice/Grate

Culvert
Pond 43P: CI-7

Pond 43P: CI-7



Pond 43P: CI-7



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Pond 43P: CI-7

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	58.17	0.00	18.00	0.02	58.21	0.02
5.25	0.01	58.17	0.01	18.25	0.02	58.21	0.02
5.50	0.01	58.18	0.01	18.50	0.02	58.21	0.02
5.75	0.01	58.18	0.01	18.75	0.02	58.21	0.02
6.00	0.01	58.18	0.01	19.00	0.02	58.21	0.02
6.25	0.01	58.18	0.01	19.25	0.02	58.21	0.02
6.50	0.01	58.19	0.01	19.50	0.02	58.21	0.02
6.75	0.01	58.19	0.01	19.75	0.02	58.21	0.02
7.00	0.01	58.19	0.01	20.00	0.02	58.21	0.02
7.25	0.01	58.20	0.01				
7.50	0.01	58.20	0.01				
7.75	0.01	58.20	0.01				
8.00	0.02	58.20	0.02				
8.25	0.02	58.21	0.02				
8.50	0.02	58.21	0.02				
8.75	0.02	58.21	0.02				
9.00	0.02	58.22	0.02				
9.25	0.02	58.22	0.02				
9.50	0.03	58.23	0.03				
9.75	0.03	58.23	0.03				
10.00	0.03	58.24	0.03				
10.25	0.04	58.25	0.04				
10.50	0.04	58.25	0.04				
10.75	0.05	58.27	0.05				
11.00	0.07	58.29	0.07				
11.25	0.09	58.31	0.09				
11.50	0.12	58.34	0.12				
11.75	0.20	58.43	0.20				
12.00	0.42	59.43	0.42				
12.25	0.84	61.91	0.84				
12.50	0.31	58.63	0.31				
12.75	0.16	58.40	0.16				
13.00	0.12	58.35	0.12				
13.25	0.09	58.32	0.09				
13.50	0.07	58.30	0.07				
13.75	0.06	58.28	0.06				
14.00	0.05	58.27	0.05				
14.25	0.05	58.26	0.05				
14.50	0.04	58.26	0.04				
14.75	0.04	58.25	0.04				
15.00	0.04	58.24	0.04				
15.25	0.03	58.24	0.03				
15.50	0.03	58.24	0.03				
15.75	0.03	58.23	0.03				
16.00	0.03	58.23	0.03				
16.25	0.03	58.23	0.03				
16.50	0.03	58.23	0.03				
16.75	0.03	58.22	0.03				
17.00	0.02	58.22	0.02				
17.25	0.02	58.22	0.02				
17.50	0.02	58.22	0.02				
17.75	0.02	58.22	0.02				

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Stage-Area-Storage for Pond 43P: CI-7

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.13	0.000	60.73	0.000
58.18	0.000	60.78	0.000
58.23	0.000	60.83	0.000
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000	61.78	0.000
59.23	0.000	61.83	0.000
59.28	0.000	61.88	0.000
59.33	0.000	61.93	0.000
59.38	0.000	61.98	0.000
59.43	0.000	62.03	0.000
59.48	0.000	62.08	0.000
59.53	0.000	62.13	0.000
59.58	0.000	62.18	0.000
59.63	0.000	62.23	0.000
59.68	0.000	62.28	0.000
59.73	0.000	62.33	0.000
59.78	0.000	62.38	0.000
59.83	0.000	62.43	0.000
59.88	0.000	62.48	0.000
59.93	0.000	62.53	0.000
59.98	0.000	62.58	0.000
60.03	0.000	62.63	0.000
60.08	0.000	62.68	0.000
60.13	0.000		
60.18	0.000		
60.23	0.000		
60.28	0.000		
60.33	0.000		
60.38	0.000		
60.43	0.000		
60.48	0.000		
60.53	0.000		
60.58	0.000		
60.63	0.000		
60.68	0.000		

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Pond 44P: CI-2

Inflow Area = 0.537 ac, 76.55% Impervious, Inflow Depth > 7.60" for 100-Year event
Inflow = 5.60 cfs @ 12.06 hrs, Volume= 0.340 af
Outflow = 5.60 cfs @ 12.06 hrs, Volume= 0.340 af, Atten= 0%, Lag= 0.0 min
Primary = 5.60 cfs @ 12.06 hrs, Volume= 0.340 af
Routed to Pond 45P : CI-3

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 62.77' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	62.18'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.55'	15.0" Round Culvert L= 99.8' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.55' / 57.66' S= 0.0089 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=4.03 cfs @ 12.06 hrs HW=62.40' TW=62.23' (Dynamic Tailwater)
1=Orifice/Grate (Orifice Controls 1.83 cfs @ 1.49 fps)
2=Culvert (Outlet Controls 2.20 cfs @ 1.79 fps)

Orifice/Grate



EX and PR

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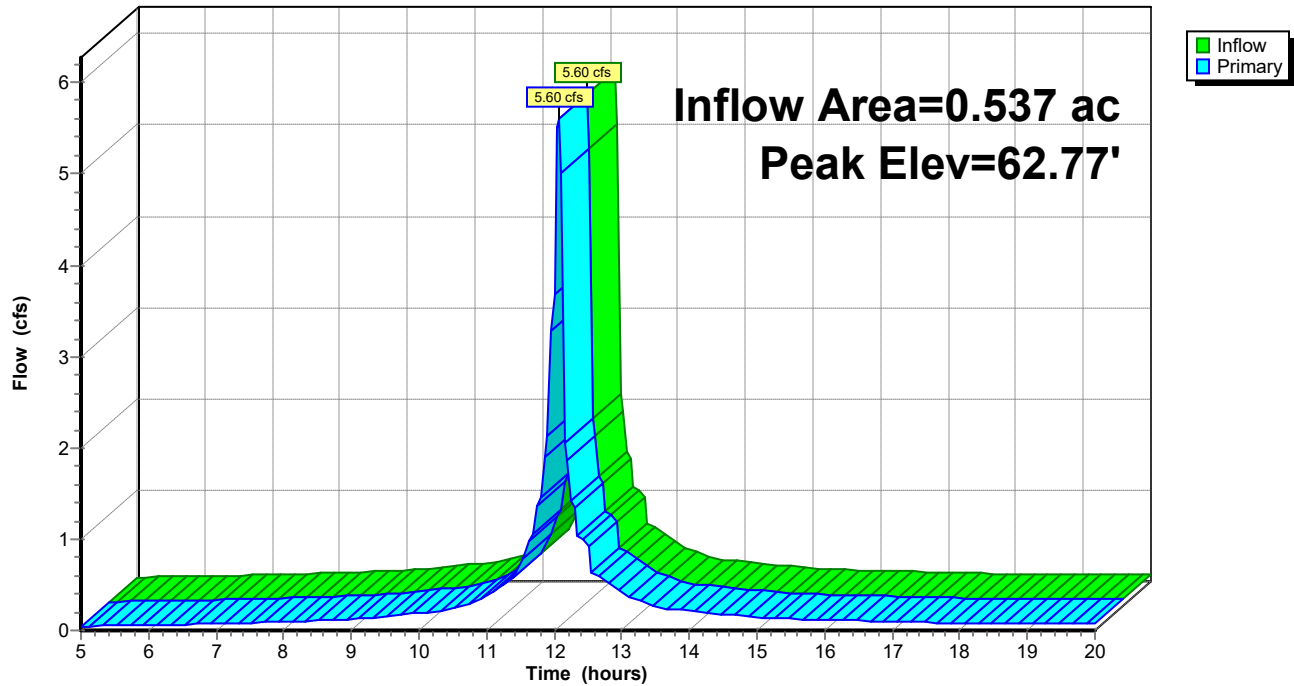
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NOAA 24-hr C 100-Year Rainfall=8.98"

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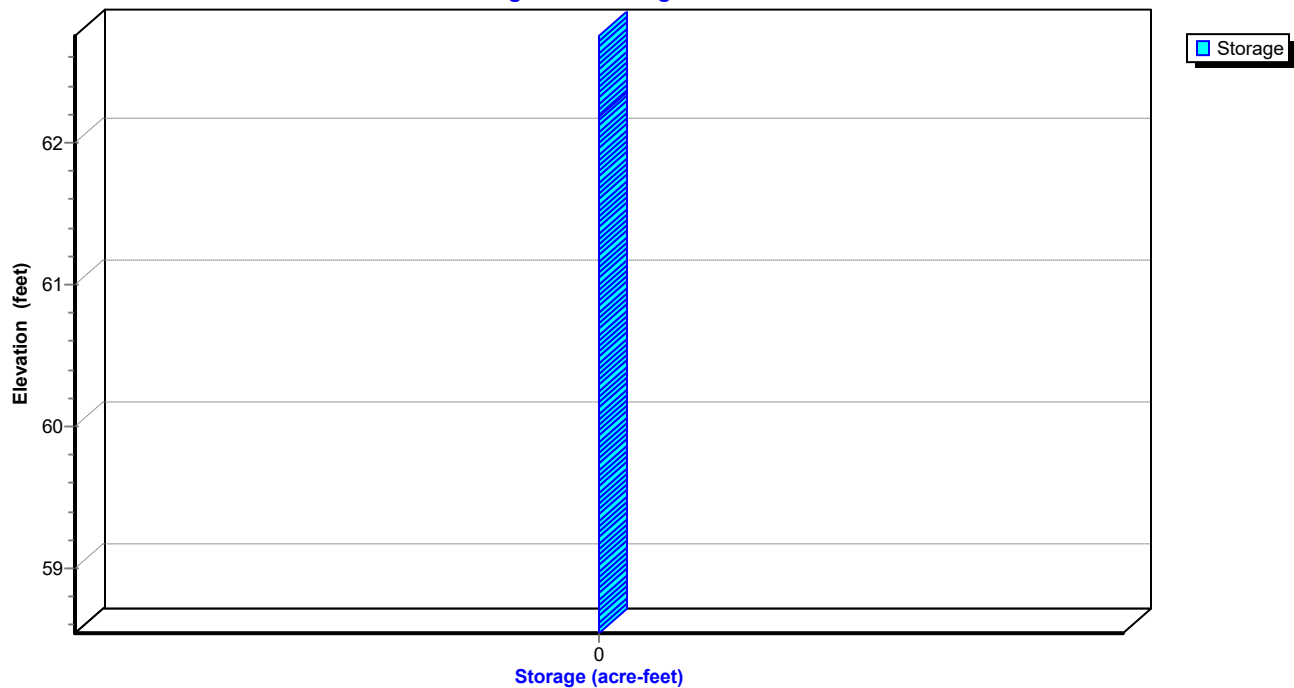
Pond 44P: CI-2

Hydrograph



Pond 44P: CI-2

Stage-Area-Storage



EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Pond 44P: CI-2

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.05	58.65	0.05	18.00	0.08	58.68	0.08
5.25	0.05	58.65	0.05	18.25	0.08	58.68	0.08
5.50	0.05	58.66	0.05	18.50	0.08	58.68	0.08
5.75	0.05	58.66	0.05	18.75	0.07	58.68	0.07
6.00	0.06	58.66	0.06	19.00	0.07	58.68	0.07
6.25	0.06	58.67	0.06	19.25	0.07	58.68	0.07
6.50	0.06	58.67	0.06	19.50	0.07	58.68	0.07
6.75	0.07	58.67	0.07	19.75	0.07	58.67	0.07
7.00	0.07	58.68	0.07	20.00	0.07	58.67	0.07
7.25	0.08	58.68	0.08				
7.50	0.09	58.69	0.09				
7.75	0.09	58.69	0.09				
8.00	0.10	58.70	0.10				
8.25	0.10	58.70	0.10				
8.50	0.11	58.70	0.11				
8.75	0.11	58.71	0.11				
9.00	0.12	58.71	0.12				
9.25	0.14	58.72	0.14				
9.50	0.15	58.73	0.15				
9.75	0.17	58.75	0.17				
10.00	0.19	58.75	0.19				
10.25	0.21	58.77	0.21				
10.50	0.23	58.78	0.23				
10.75	0.30	58.81	0.30				
11.00	0.37	58.84	0.37				
11.25	0.51	58.89	0.51				
11.50	0.66	58.95	0.66				
11.75	1.36	59.15	1.36				
12.00	3.68	60.35	3.68				
12.25	1.42	61.90	1.42				
12.50	0.92	59.10	0.92				
12.75	0.54	58.92	0.54				
13.00	0.43	58.87	0.43				
13.25	0.33	58.83	0.33				
13.50	0.27	58.80	0.27				
13.75	0.23	58.78	0.23				
14.00	0.21	58.77	0.21				
14.25	0.19	58.76	0.19				
14.50	0.18	58.75	0.18				
14.75	0.16	58.74	0.16				
15.00	0.14	58.73	0.14				
15.25	0.13	58.72	0.13				
15.50	0.13	58.72	0.13				
15.75	0.12	58.71	0.12				
16.00	0.12	58.71	0.12				
16.25	0.11	58.71	0.11				
16.50	0.11	58.70	0.11				
16.75	0.10	58.70	0.10				
17.00	0.10	58.70	0.10				
17.25	0.09	58.69	0.09				
17.50	0.09	58.69	0.09				
17.75	0.08	58.69	0.08				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Stage-Area-Storage for Pond 44P: CI-2

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.55	0.000	61.15	0.000
58.60	0.000	61.20	0.000
58.65	0.000	61.25	0.000
58.70	0.000	61.30	0.000
58.75	0.000	61.35	0.000
58.80	0.000	61.40	0.000
58.85	0.000	61.45	0.000
58.90	0.000	61.50	0.000
58.95	0.000	61.55	0.000
59.00	0.000	61.60	0.000
59.05	0.000	61.65	0.000
59.10	0.000	61.70	0.000
59.15	0.000	61.75	0.000
59.20	0.000	61.80	0.000
59.25	0.000	61.85	0.000
59.30	0.000	61.90	0.000
59.35	0.000	61.95	0.000
59.40	0.000	62.00	0.000
59.45	0.000	62.05	0.000
59.50	0.000	62.10	0.000
59.55	0.000	62.15	0.000
59.60	0.000	62.20	0.000
59.65	0.000	62.25	0.000
59.70	0.000	62.30	0.000
59.75	0.000	62.35	0.000
59.80	0.000	62.40	0.000
59.85	0.000	62.45	0.000
59.90	0.000	62.50	0.000
59.95	0.000	62.55	0.000
60.00	0.000	62.60	0.000
60.05	0.000	62.65	0.000
60.10	0.000	62.70	0.000
60.15	0.000	62.75	0.000
60.20	0.000		
60.25	0.000		
60.30	0.000		
60.35	0.000		
60.40	0.000		
60.45	0.000		
60.50	0.000		
60.55	0.000		
60.60	0.000		
60.65	0.000		
60.70	0.000		
60.75	0.000		
60.80	0.000		
60.85	0.000		
60.90	0.000		
60.95	0.000		
61.00	0.000		
61.05	0.000		
61.10	0.000		

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Summary for Pond 45P: CI-3

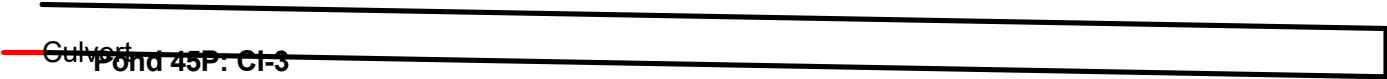
Inflow Area = 0.765 ac, 76.25% Impervious, Inflow Depth > 7.60" for 100-Year event
Inflow = 7.96 cfs @ 12.06 hrs, Volume= 0.484 af
Outflow = 7.96 cfs @ 12.06 hrs, Volume= 0.484 af, Atten= 0%, Lag= 0.0 min
Primary = 7.96 cfs @ 12.06 hrs, Volume= 0.484 af
Routed to Pond 39P : CI-9

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 62.76' @ 12.13 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.68'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	57.66'	15.0" Round Culvert L= 99.8' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 57.66' / 57.03' S= 0.0063 '/ Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

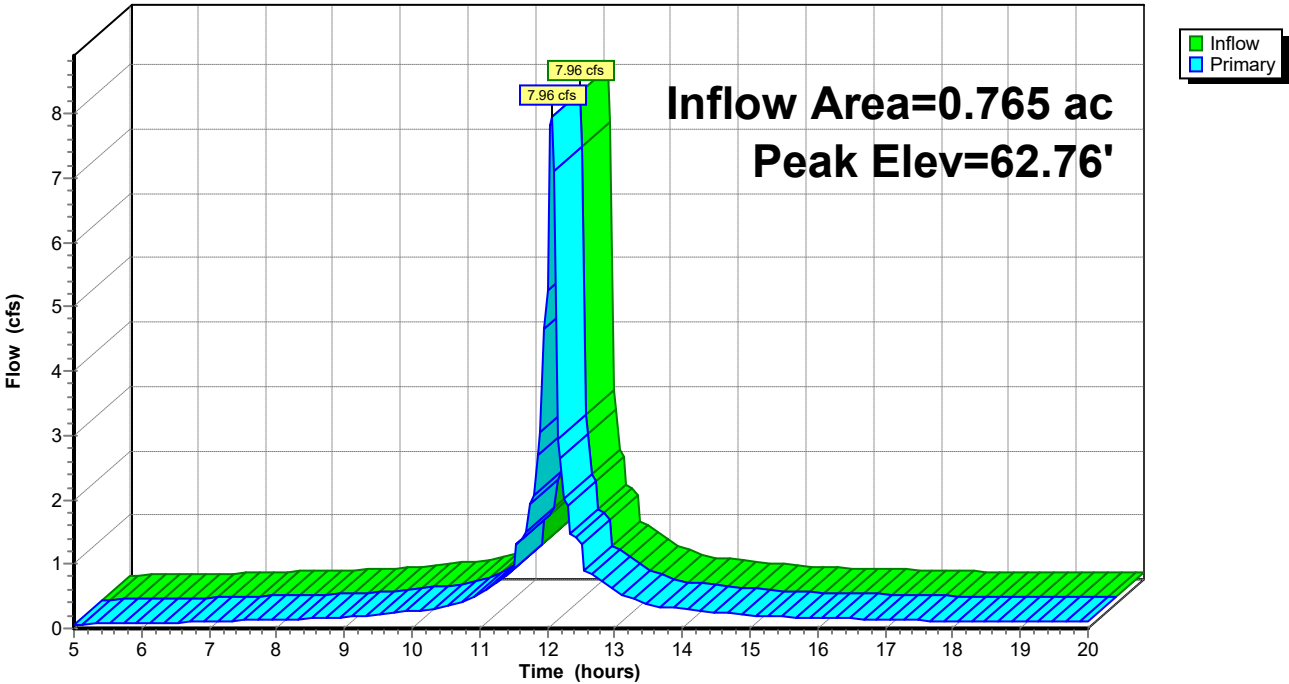
Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=62.23' TW=62.38' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate



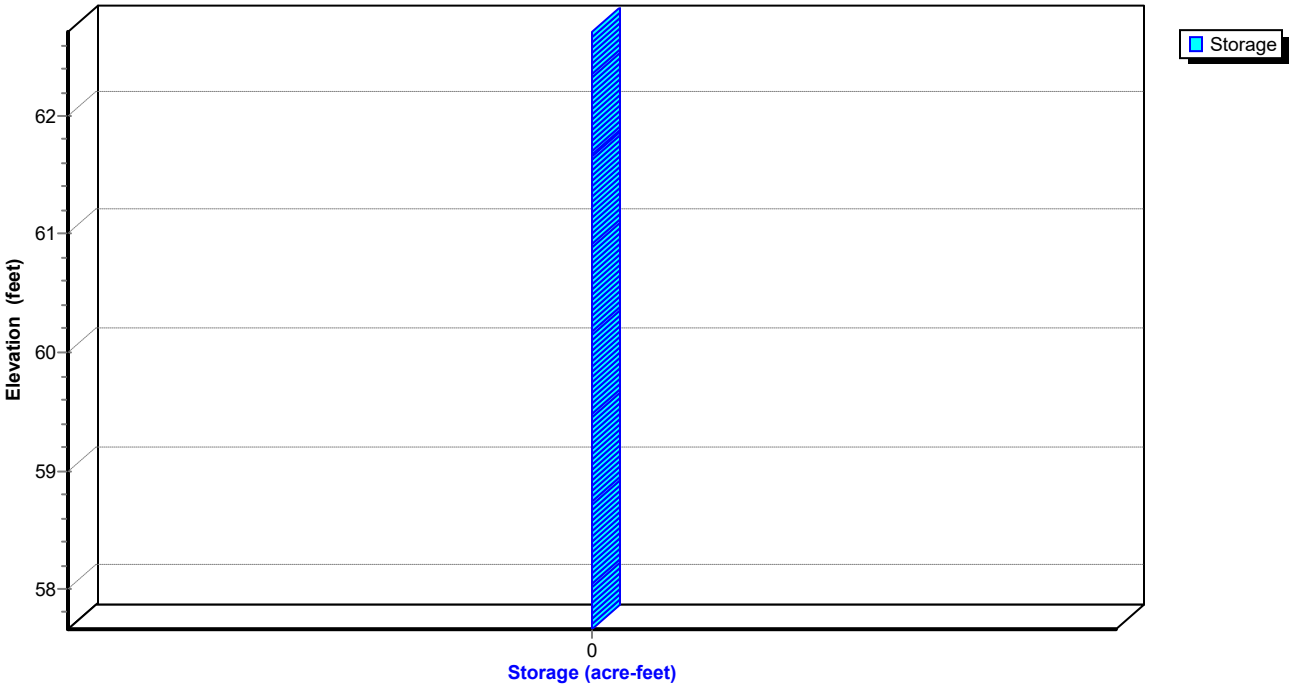
Pond 45P: CI-3

Hydrograph



Pond 45P: CI-3

Stage-Area-Storage



EX and PR

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Hydrograph for Pond 45P: CI-3

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.07	57.79	0.07	18.00	0.11	57.83	0.11
5.25	0.07	57.80	0.07	18.25	0.11	57.83	0.11
5.50	0.07	57.80	0.07	18.50	0.11	57.83	0.11
5.75	0.08	57.80	0.08	18.75	0.11	57.83	0.11
6.00	0.08	57.80	0.08	19.00	0.10	57.83	0.10
6.25	0.09	57.81	0.09	19.25	0.10	57.83	0.10
6.50	0.09	57.82	0.09	19.50	0.10	57.82	0.10
6.75	0.10	57.82	0.10	19.75	0.10	57.82	0.10
7.00	0.11	57.83	0.11	20.00	0.10	57.82	0.10
7.25	0.11	57.83	0.11				
7.50	0.12	57.84	0.12				
7.75	0.13	57.85	0.13				
8.00	0.14	57.85	0.14				
8.25	0.15	57.86	0.15				
8.50	0.15	57.86	0.15				
8.75	0.16	57.87	0.16				
9.00	0.17	57.87	0.17				
9.25	0.20	57.89	0.20				
9.50	0.22	57.90	0.22				
9.75	0.25	57.92	0.25				
10.00	0.27	57.93	0.27				
10.25	0.30	57.95	0.30				
10.50	0.33	57.96	0.33				
10.75	0.43	58.01	0.43				
11.00	0.52	58.05	0.52				
11.25	0.73	58.13	0.73				
11.50	0.94	58.20	0.94				
11.75	1.93	58.49	1.93				
12.00	5.25	61.90	5.25				
12.25	2.02	60.40	2.02				
12.50	1.31	58.54	1.31				
12.75	0.77	58.22	0.77				
13.00	0.61	58.13	0.61				
13.25	0.47	58.06	0.47				
13.50	0.38	58.01	0.38				
13.75	0.33	57.98	0.33				
14.00	0.30	57.97	0.30				
14.25	0.28	57.95	0.28				
14.50	0.25	57.94	0.25				
14.75	0.22	57.92	0.22				
15.00	0.20	57.90	0.20				
15.25	0.19	57.89	0.19				
15.50	0.18	57.89	0.18				
15.75	0.17	57.88	0.17				
16.00	0.17	57.88	0.17				
16.25	0.16	57.87	0.16				
16.50	0.15	57.86	0.15				
16.75	0.15	57.86	0.15				
17.00	0.14	57.85	0.14				
17.25	0.13	57.85	0.13				
17.50	0.13	57.84	0.13				
17.75	0.12	57.84	0.12				

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NOAA 24-hr C 100-Year Rainfall=8.98"

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Stage-Area-Storage for Pond 45P: CI-3

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
57.66	0.000	60.26	0.000
57.71	0.000	60.31	0.000
57.76	0.000	60.36	0.000
57.81	0.000	60.41	0.000
57.86	0.000	60.46	0.000
57.91	0.000	60.51	0.000
57.96	0.000	60.56	0.000
58.01	0.000	60.61	0.000
58.06	0.000	60.66	0.000
58.11	0.000	60.71	0.000
58.16	0.000	60.76	0.000
58.21	0.000	60.81	0.000
58.26	0.000	60.86	0.000
58.31	0.000	60.91	0.000
58.36	0.000	60.96	0.000
58.41	0.000	61.01	0.000
58.46	0.000	61.06	0.000
58.51	0.000	61.11	0.000
58.56	0.000	61.16	0.000
58.61	0.000	61.21	0.000
58.66	0.000	61.26	0.000
58.71	0.000	61.31	0.000
58.76	0.000	61.36	0.000
58.81	0.000	61.41	0.000
58.86	0.000	61.46	0.000
58.91	0.000	61.51	0.000
58.96	0.000	61.56	0.000
59.01	0.000	61.61	0.000
59.06	0.000	61.66	0.000
59.11	0.000	61.71	0.000
59.16	0.000	61.76	0.000
59.21	0.000	61.81	0.000
59.26	0.000	61.86	0.000
59.31	0.000	61.91	0.000
59.36	0.000	61.96	0.000
59.41	0.000	62.01	0.000
59.46	0.000	62.06	0.000
59.51	0.000	62.11	0.000
59.56	0.000	62.16	0.000
59.61	0.000	62.21	0.000
59.66	0.000	62.26	0.000
59.71	0.000	62.31	0.000
59.76	0.000	62.36	0.000
59.81	0.000	62.41	0.000
59.86	0.000	62.46	0.000
59.91	0.000	62.51	0.000
59.96	0.000	62.56	0.000
60.01	0.000	62.61	0.000
60.06	0.000	62.66	0.000
60.11	0.000	62.71	0.000
60.16	0.000		
60.21	0.000		

EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Pond 46P: CI-5

Inflow Area = 0.074 ac, 51.14% Impervious, Inflow Depth > 7.15" for 100-Year event
Inflow = 0.74 cfs @ 12.05 hrs, Volume= 0.044 af
Outflow = 0.74 cfs @ 12.05 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.0 min
Primary = 0.74 cfs @ 12.05 hrs, Volume= 0.044 af
Routed to Pond 45P : CI-3

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 62.76' @ 12.18 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	61.87'	66.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	58.28'	15.0" Round Culvert L= 107.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 58.28' / 57.75' S= 0.0050 '/ Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

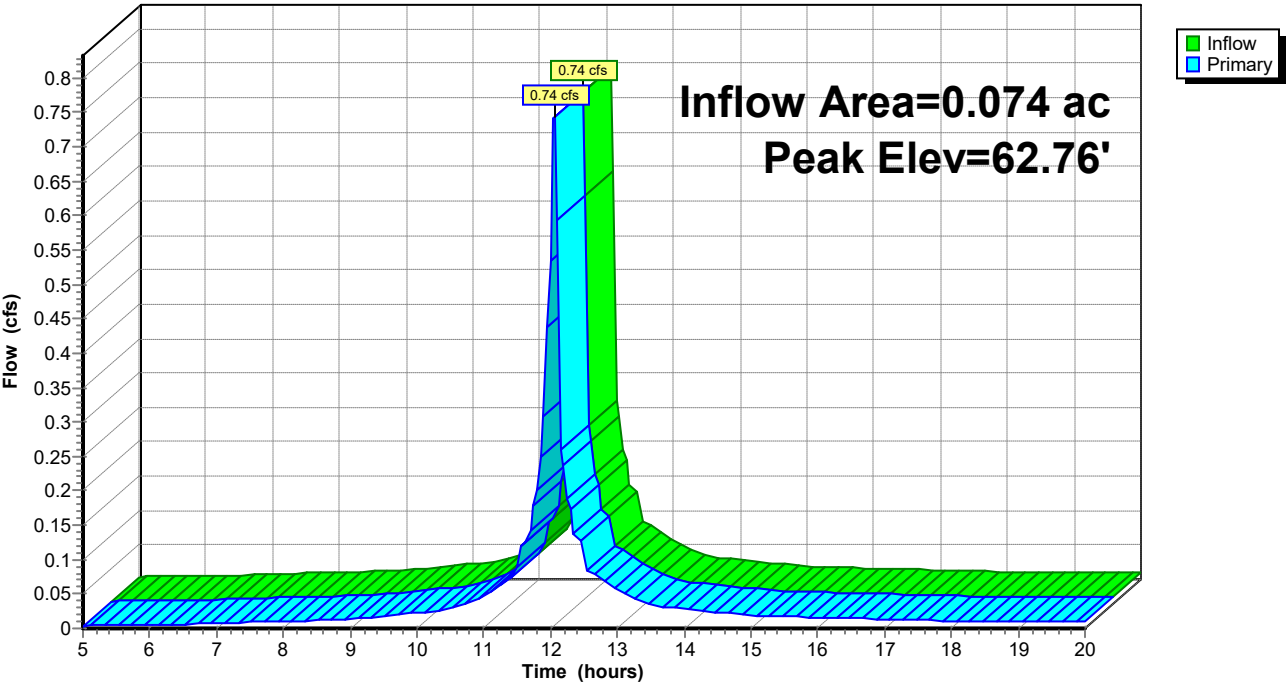
Primary OutFlow Max=0.00 cfs @ 12.05 hrs HW=61.93' TW=62.15' (Dynamic Tailwater)
1=Orifice/Grate (Controls 0.00 cfs)
2=Culvert (Controls 0.00 cfs)

Orifice/Grate



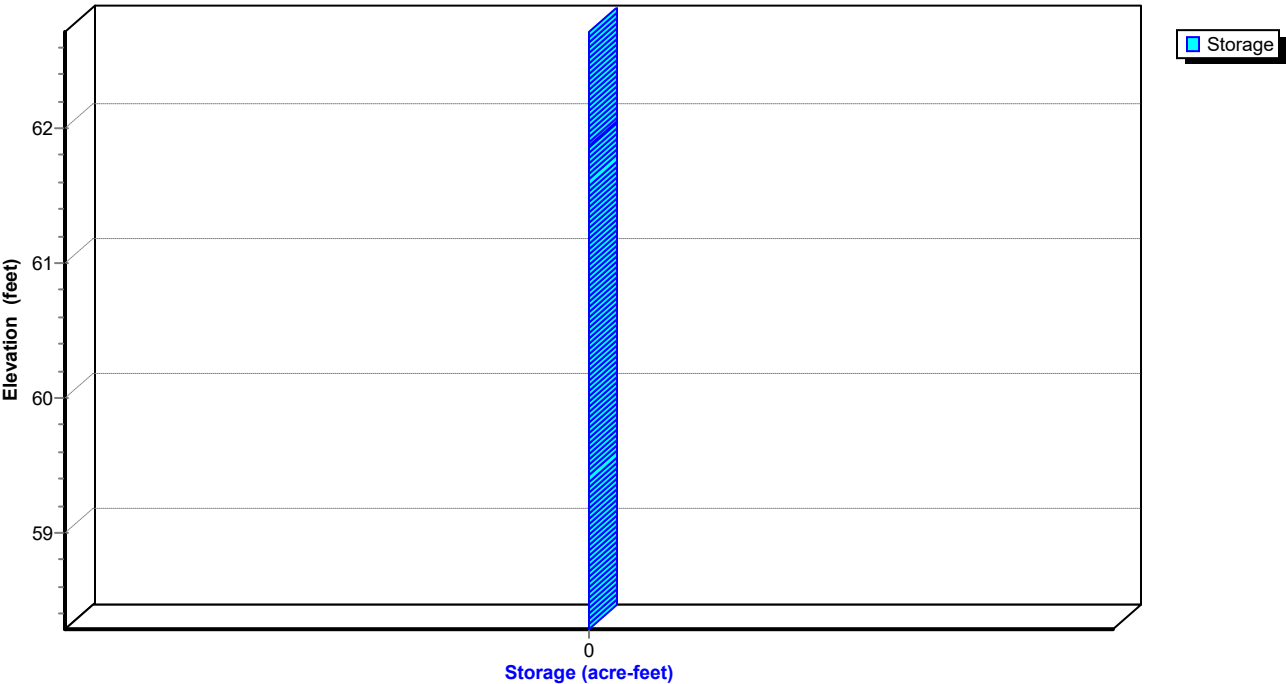
Pond 46P: CI-5

Hydrograph



Pond 46P: CI-5

Stage-Area-Storage



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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Pond 46P: CI-5

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	58.32	0.00	18.00	0.01	58.34	0.01
5.25	0.00	58.32	0.00	18.25	0.01	58.34	0.01
5.50	0.00	58.32	0.00	18.50	0.01	58.34	0.01
5.75	0.00	58.32	0.00	18.75	0.01	58.34	0.01
6.00	0.01	58.32	0.01	19.00	0.01	58.34	0.01
6.25	0.01	58.32	0.01	19.25	0.01	58.34	0.01
6.50	0.01	58.33	0.01	19.50	0.01	58.34	0.01
6.75	0.01	58.33	0.01	19.75	0.01	58.34	0.01
7.00	0.01	58.33	0.01	20.00	0.01	58.33	0.01
7.25	0.01	58.33	0.01				
7.50	0.01	58.33	0.01				
7.75	0.01	58.34	0.01				
8.00	0.01	58.34	0.01				
8.25	0.01	58.34	0.01				
8.50	0.01	58.34	0.01				
8.75	0.01	58.34	0.01				
9.00	0.01	58.35	0.01				
9.25	0.02	58.35	0.02				
9.50	0.02	58.36	0.02				
9.75	0.02	58.36	0.02				
10.00	0.02	58.37	0.02				
10.25	0.03	58.37	0.03				
10.50	0.03	58.38	0.03				
10.75	0.04	58.39	0.04				
11.00	0.05	58.41	0.05				
11.25	0.06	58.43	0.06				
11.50	0.09	58.47	0.09				
11.75	0.18	58.58	0.18				
12.00	0.53	59.87	0.53				
12.25	0.19	61.83	0.19				
12.50	0.12	58.65	0.12				
12.75	0.07	58.46	0.07				
13.00	0.06	58.43	0.06				
13.25	0.04	58.41	0.04				
13.50	0.04	58.39	0.04				
13.75	0.03	58.38	0.03				
14.00	0.03	58.38	0.03				
14.25	0.03	58.37	0.03				
14.50	0.02	58.37	0.02				
14.75	0.02	58.36	0.02				
15.00	0.02	58.36	0.02				
15.25	0.02	58.36	0.02				
15.50	0.02	58.35	0.02				
15.75	0.02	58.35	0.02				
16.00	0.02	58.35	0.02				
16.25	0.02	58.35	0.02				
16.50	0.01	58.35	0.01				
16.75	0.01	58.35	0.01				
17.00	0.01	58.35	0.01				
17.25	0.01	58.34	0.01				
17.50	0.01	58.34	0.01				
17.75	0.01	58.34	0.01				

EX and PR

Prepared by Rauch Inc

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Stage-Area-Storage for Pond 46P: CI-5

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
58.28	0.000	60.88	0.000
58.33	0.000	60.93	0.000
58.38	0.000	60.98	0.000
58.43	0.000	61.03	0.000
58.48	0.000	61.08	0.000
58.53	0.000	61.13	0.000
58.58	0.000	61.18	0.000
58.63	0.000	61.23	0.000
58.68	0.000	61.28	0.000
58.73	0.000	61.33	0.000
58.78	0.000	61.38	0.000
58.83	0.000	61.43	0.000
58.88	0.000	61.48	0.000
58.93	0.000	61.53	0.000
58.98	0.000	61.58	0.000
59.03	0.000	61.63	0.000
59.08	0.000	61.68	0.000
59.13	0.000	61.73	0.000
59.18	0.000	61.78	0.000
59.23	0.000	61.83	0.000
59.28	0.000	61.88	0.000
59.33	0.000	61.93	0.000
59.38	0.000	61.98	0.000
59.43	0.000	62.03	0.000
59.48	0.000	62.08	0.000
59.53	0.000	62.13	0.000
59.58	0.000	62.18	0.000
59.63	0.000	62.23	0.000
59.68	0.000	62.28	0.000
59.73	0.000	62.33	0.000
59.78	0.000	62.38	0.000
59.83	0.000	62.43	0.000
59.88	0.000	62.48	0.000
59.93	0.000	62.53	0.000
59.98	0.000	62.58	0.000
60.03	0.000	62.63	0.000
60.08	0.000	62.68	0.000
60.13	0.000		
60.18	0.000		
60.23	0.000		
60.28	0.000		
60.33	0.000		
60.38	0.000		
60.43	0.000		
60.48	0.000		
60.53	0.000		
60.58	0.000		
60.63	0.000		
60.68	0.000		
60.73	0.000		
60.78	0.000		
60.83	0.000		

EX and PR

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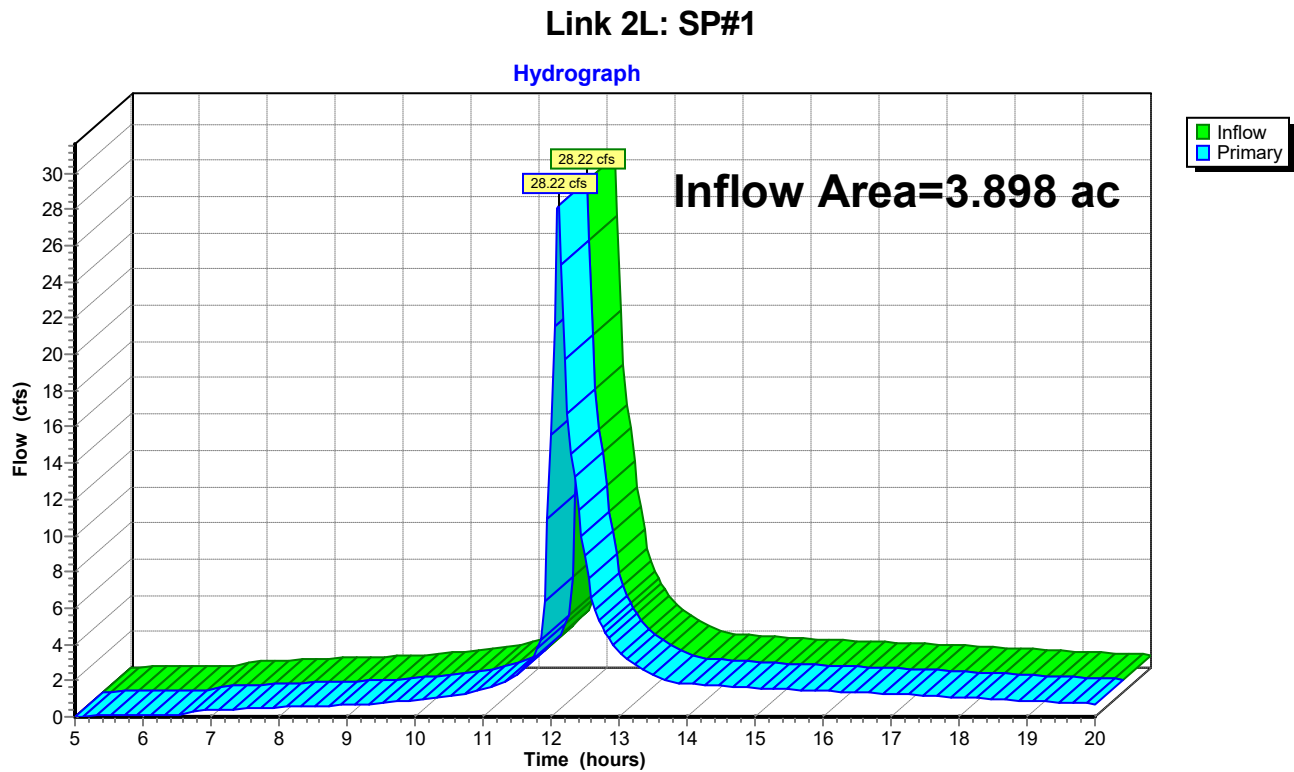
NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Summary for Link 2L: SP#1

Inflow Area = 3.898 ac, 59.79% Impervious, Inflow Depth > 7.09" for 100-Year event
Inflow = 28.22 cfs @ 12.11 hrs, Volume= 2.301 af
Primary = 28.22 cfs @ 12.11 hrs, Volume= 2.301 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



EX and PR

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NOAA 24-hr C 100-Year Rainfall=8.98"

Printed 5/1/2024

Hydrograph for Link 2L: SP#1

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.04	0.00	0.04	18.00	1.08	0.00	1.08
5.25	0.05	0.00	0.05	18.25	1.02	0.00	1.02
5.50	0.06	0.00	0.06	18.50	0.97	0.00	0.97
5.75	0.06	0.00	0.06	18.75	0.93	0.00	0.93
6.00	0.07	0.00	0.07	19.00	0.88	0.00	0.88
6.25	0.08	0.00	0.08	19.25	0.83	0.00	0.83
6.50	0.09	0.00	0.09	19.50	0.79	0.00	0.79
6.75	0.34	0.00	0.34	19.75	0.75	0.00	0.75
7.00	0.38	0.00	0.38	20.00	0.71	0.00	0.71
7.25	0.42	0.00	0.42				
7.50	0.46	0.00	0.46				
7.75	0.49	0.00	0.49				
8.00	0.52	0.00	0.52				
8.25	0.55	0.00	0.55				
8.50	0.59	0.00	0.59				
8.75	0.62	0.00	0.62				
9.00	0.65	0.00	0.65				
9.25	0.70	0.00	0.70				
9.50	0.77	0.00	0.77				
9.75	0.85	0.00	0.85				
10.00	0.93	0.00	0.93				
10.25	1.01	0.00	1.01				
10.50	1.10	0.00	1.10				
10.75	1.28	0.00	1.28				
11.00	1.50	0.00	1.50				
11.25	1.84	0.00	1.84				
11.50	2.23	0.00	2.23				
11.75	3.38	0.00	3.38				
12.00	15.55	0.00	15.55				
12.25	16.69	0.00	16.69				
12.50	8.87	0.00	8.87				
12.75	4.96	0.00	4.96				
13.00	3.62	0.00	3.62				
13.25	2.77	0.00	2.77				
13.50	2.27	0.00	2.27				
13.75	1.94	0.00	1.94				
14.00	1.84	0.00	1.84				
14.25	1.79	0.00	1.79				
14.50	1.73	0.00	1.73				
14.75	1.67	0.00	1.67				
15.00	1.61	0.00	1.61				
15.25	1.55	0.00	1.55				
15.50	1.51	0.00	1.51				
15.75	1.48	0.00	1.48				
16.00	1.44	0.00	1.44				
16.25	1.40	0.00	1.40				
16.50	1.36	0.00	1.36				
16.75	1.32	0.00	1.32				
17.00	1.28	0.00	1.28				
17.25	1.23	0.00	1.23				
17.50	1.19	0.00	1.19				
17.75	1.14	0.00	1.14				

SECTION 5 – PRE & POST DRAINAGE MAPS



TAX MAP 17, PARCEL 39
N/F LANDS OF
SUN HYDE PARK LLC
2676/50

TAX MAP 25, PARCEL 13
N/F LANDS OF
SUN HYDE PARK LLC
2676/44

US ROUTE 50 (OCEAN GATEWAY)
120' PUBLIC ROW

CsB
C/D SOILS

HfB
B SOILS

TAX MAP 25, PARCEL 114
N/F LANDS OF
ARC FAMILY LLC
1285/876

EX-DA #1

EmA
C/D SOILS

3

STORM DRAIN PIPE (X4)

→→→→→

[▶](#) [▶](#) [▶](#) [▶](#)

100

A

100

EXISTING DRAINAGE AREA

OF THE LANDS OF

PRESTON POWER SPORTS

TAX MAP , GRID , PARCEL

ELECTION DISTRICT, COUNTY, MARYLAND

PREPARED FOR

RAUCH

Engineering | Survey | Architecture | Environmental
inc.

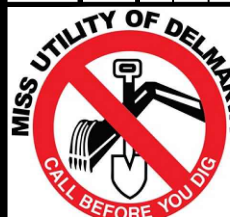
Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3667

REVISIONS

DESCRIPTION

EV. #	DATE
-------	------

#



DATE: 5/1/2024

SCALE: 1" = 40'

DRAWN BY:	JWL
DESIGNED BY:	JWL

APPROVED BY: JWJ

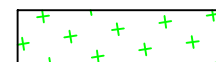
SHEET NO. :

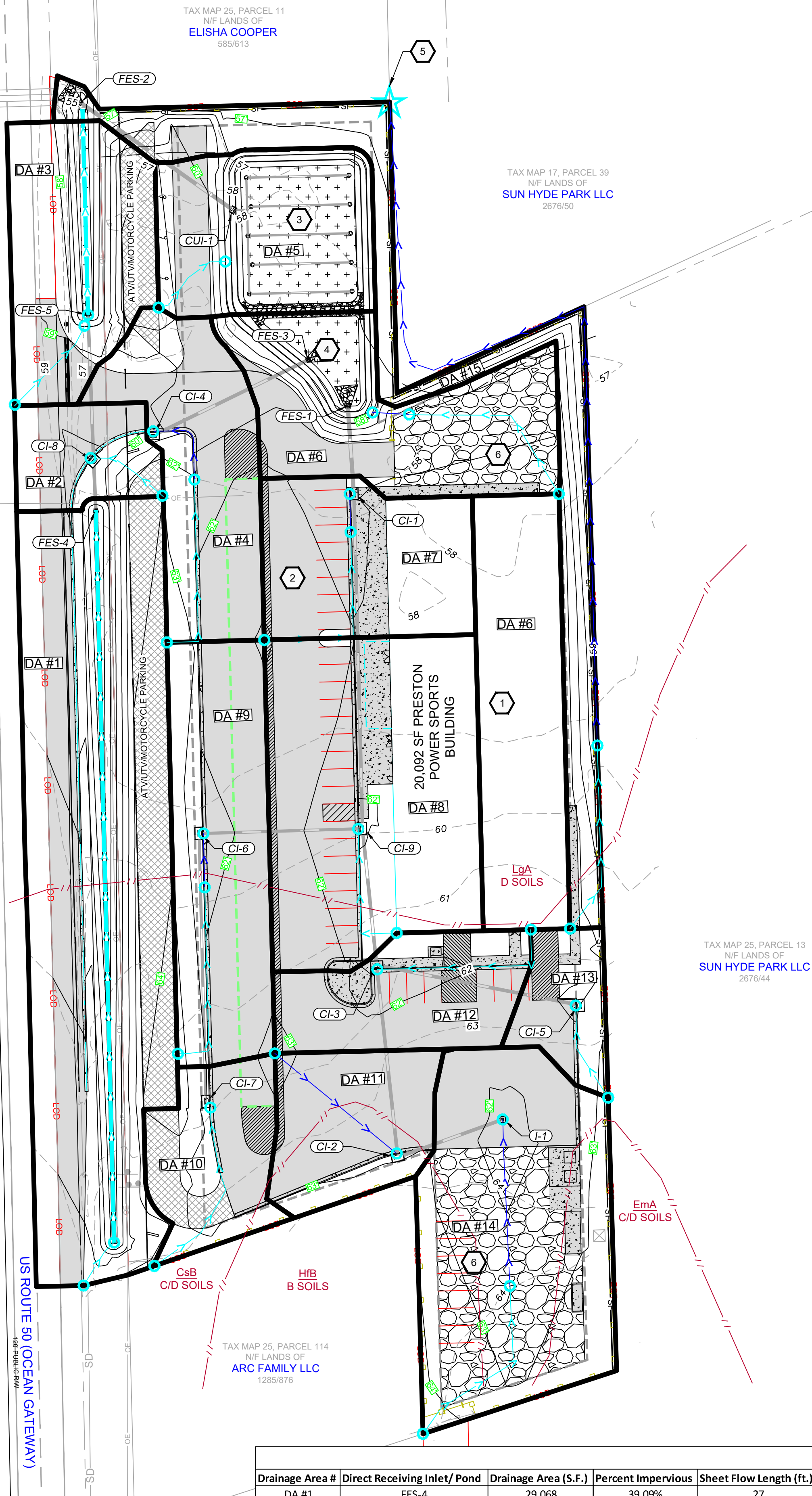
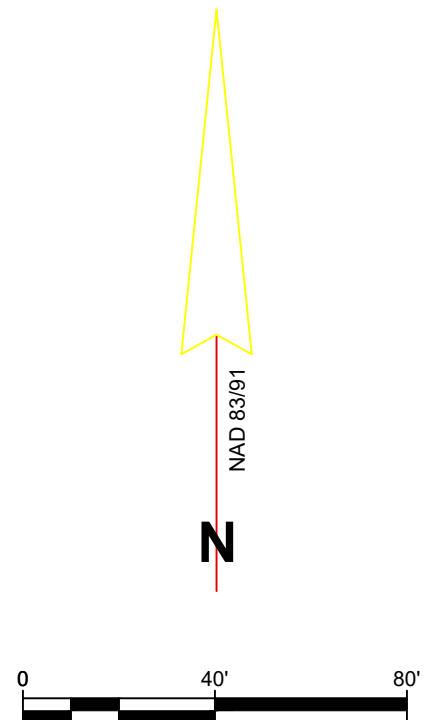
FX DA MAP

**FOR
REVIEW**

Study Point #1									
Drainage Area #	Direct Receiving Inlet/ Pond	Drainage Area (S.F.)	Percent Impervious	Sheet Flow Length (ft.)	Sheet Flow Slope	Shallow Concentrated Flow Length (ft.)	Shallow Concentrated Flow Slope	Pipe Flow Length (ft.)	Pipe Flow Slope
EX-DA #1	Study Point #1	169,795	17.75%	100	0.80%	656	1.44%	N/A	N/A

HATCH LEGEND

-  PAVEMENT PARKING LOT
-  ESD BED BOTTOM
-  GRAVEL LOT
-  FLAT AREA FOR UTV/ATV PARKING
-  CONCRETE



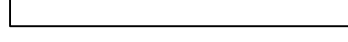
PROPOSED DRAINAGE FEATURES

- 1 20,092 S.F. PRESTON POWER SPORTS BUILDING
- 2 PAVEMENT PARKING LOT (79 PARKING SPACES)
- 3 SUBMERGED GRAVEL WETLAND #1
- 4 SUBMERGED GRAVEL WETLAND FOREBAY #1
- 5 STUDY POINT #1
- 6 GRAVEL STORAGE LOT

EXISTING SITE FEATURES

- 1 STORM DRAIN PIPE (X4)

LEGEND

-  DRAINAGE AREA BOUNDARY
-  SOILS BOUNDARY
-  SHEET FLOW
-  SHALLOW CONCENTRATED FLOW
-  PIPE FLOW
-  REACH/SWALE/CHANNEL
-  TIME OF CONCENTRATION METHOD DIVIDER
-  STUDY POINT

Study Point #1									
Drainage Area #	Direct Receiving Inlet/ Pond	Drainage Area (S.F.)	Percent Impervious	Sheet Flow Length (ft.)	Sheet Flow Slope	Shallow Concentrated Flow Length (ft.)	Shallow Concentrated Flow Slope	Channel Flow Length (ft.)	Channel Flow Slope
DA #1	FES-4	29,068	39.09%	27	3.06%	N/A	N/A	378	0.73%
DA #2	CI-8	3,738	67.39%	44	9.48%	N/A	N/A	N/A	N/A
DA #3	Study Point #1	9,470	40.45%	55	2.40%	N/A	N/A	106	1.28%
DA #4	CI-4	9,330	70.69%	100	1.80%	43	4.41%	N/A	N/A
DA #5	SGW #1	9,317	15.83%	44	8.89%	N/A	N/A	N/A	N/A
DA #6	SGW Forebay #1	21,528	73.17%	100	3.19%	19	7.26%	N/A	N/A
DA #7	CI-1	8,499	87.34%	100	1.51%	20	0.85%	N/A	N/A
DA #8	CI-9	17,721	92.68%	73	1.74%	N/A	N/A	N/A	N/A
DA #9	CI-6	10,950	68.20%	100	2.54%	28	0.61%	N/A	N/A
DA #10	CI-7	5,696	41.20%	55(GRASS)/44(CURB)	1% (GRASS)/0.93% (CURB)	N/A	N/A	N/A	N/A
DA #11	CI-2	6,211	83.67%	81	1.26%	N/A	N/A	N/A	N/A
DA #12	CI-3	6,725	87.20%	98	1.00%	N/A	N/A	N/A	N/A
DA #13	CI-5	3,211	51.14%	52	2.92%	N/A	N/A	N/A	N/A
DA #14	I-1	17,184	73.97%	100	1.87%	86	1.00%	N/A	N/A
DA #15	Study Point #1	13,096	0.00%	100	3.36%	458	1.18%	N/A	N/A

PROPOSED DRAINAGE MAP

OF THE LANDS OF

PRESTON POWER SPORTS

TAX MAP , GRID , PARCEL
ELECTION DISTRICT, COUNTY, MARYLAND
PREPARED FOR



Main Office: 106 N Harrison St - Easton, MD 21601
Web: www.rauch-inc.com | Email: design@raucheng.com
Phone: 410 770 9081 | Fax: 410 770 3987

REVISIONS

REV. #	DATE	DESCRIPTION
1		



DATE: 5/1/2024
SCALE: 1" = 40'
DESIGNED BY: JWJ
APPROVED BY: JWJ

SHEET NO.: PR DA MAP

FOR REVIEW

SECTION 6 – SOIL REPORTS



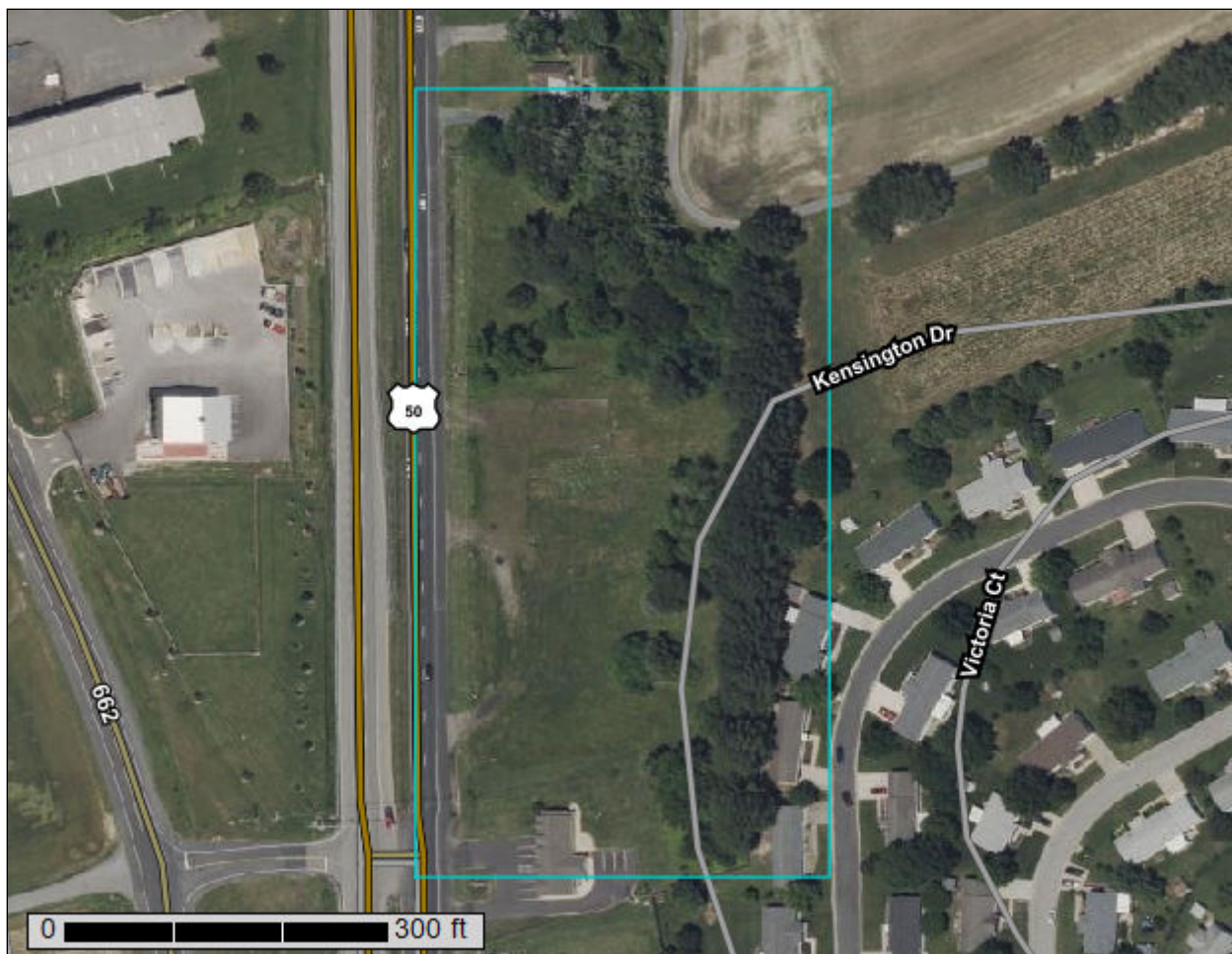
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Talbot County, Maryland**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

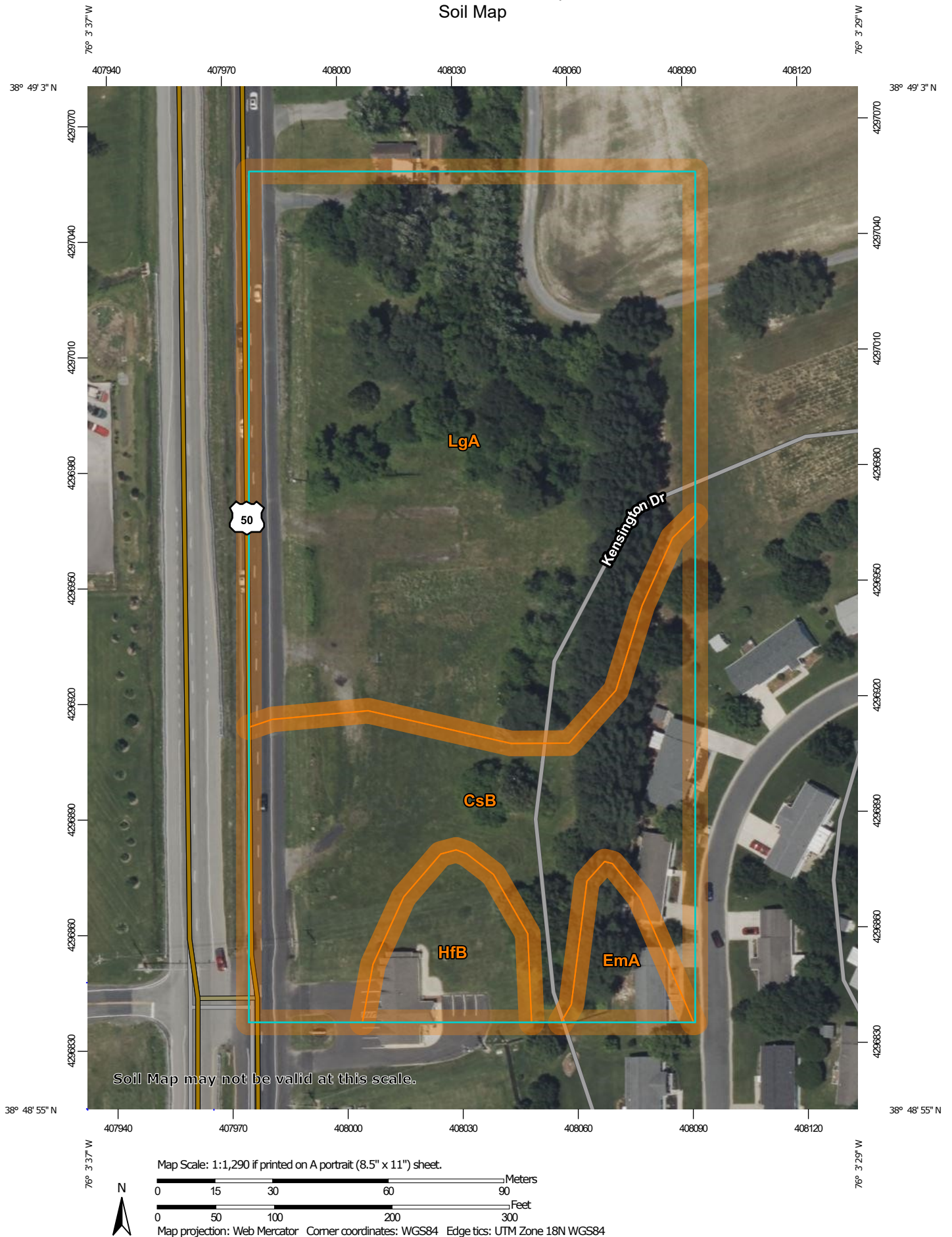
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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: Talbot County, Maryland
Survey Area Data: Version 19, Sep 14, 2022

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

Date(s) aerial images were photographed: May 30, 2022—Jul 4, 2022

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
CsB	Crosiadore silt loam, 2 to 5 percent slopes	1.8	29.0%
EmA	Elkton silt loam, 0 to 2 percent slopes	0.2	3.3%
HfB	Hambrook-Sassafras complex, 2 to 5 percent slopes	0.4	5.6%
LgA	Lenni loam, 0 to 2 percent slopes	4.0	62.1%
Totals for Area of Interest		6.4	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Talbot County, Maryland

CsB—Crosiadore silt loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1vh03

Elevation: 0 to 100 feet

Mean annual precipitation: 42 to 48 inches

Mean annual air temperature: 52 to 58 degrees F

Frost-free period: 180 to 220 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Crosiadore and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crosiadore

Setting

Landform: Depressions, flats

Landform position (three-dimensional): Talf

Down-slope shape: Concave, linear

Across-slope shape: Concave, linear

Parent material: Silty eolian deposits over fluviomarine sediments

Typical profile

Ap - 0 to 10 inches: silt loam

Bt - 10 to 28 inches: silt loam

2Btg - 28 to 33 inches: sandy loam

2Cg - 33 to 50 inches: sandy loam

2C1 - 50 to 57 inches: gravelly loamy sand

2C2 - 57 to 80 inches: fine sandy loam

Properties and qualities

Slope: 2 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: About 10 to 20 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Hydric soil rating: No

Minor Components

Mattapex

Percent of map unit: 10 percent

Landform: Flats
Landform position (three-dimensional): Rise
Hydric soil rating: No

Elkton

Percent of map unit: 5 percent
Landform: Swales, flats, depressions
Landform position (three-dimensional): Dip
Hydric soil rating: Yes

Othello

Percent of map unit: 5 percent
Landform: Flats, depressions, drainageways, swales
Landform position (three-dimensional): Dip
Hydric soil rating: Yes

EmA—Elkton silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: spvy
Elevation: 0 to 210 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Elkton, undrained, and similar soils: 40 percent
Elkton, drained, and similar soils: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elkton, Undrained

Setting

Landform: Depressions, flats, drainageways, swales
Landform position (three-dimensional): Dip, talf
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Silty eolian deposits and/or fluviomarine sediments

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material
A - 3 to 4 inches: silt loam
Eg - 4 to 13 inches: silt loam
Btg - 13 to 43 inches: silty clay loam
2BCg - 43 to 80 inches: very fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 0 to 10 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Description of Elkton, Drained

Setting

Landform: Swales, depressions, flats
Landform position (three-dimensional): Dip, tal
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Silty eolian deposits and/or fluviomarine sediments

Typical profile

Ap - 0 to 10 inches: silt loam
BEg - 10 to 13 inches: silt loam
Btg - 13 to 43 inches: silty clay loam
2BCg - 43 to 80 inches: very fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 10 to 20 inches
Frequency of flooding: None
Frequency of ponding: Rare
Available water supply, 0 to 60 inches: High (about 9.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Crosiadore

Percent of map unit: 10 percent
Landform: Depressions, flats
Landform position (three-dimensional): Rise
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Mattapex

Percent of map unit: 5 percent
Landform: Swales, depressions, flats
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

Keyport

Percent of map unit: 5 percent
Landform: Flats, depressions, fluviomarine terraces
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Kentuck, undrained

Percent of map unit: 5 percent
Landform: Depressions, swales
Down-slope shape: Concave
Across-slope shape: Concave, linear
Hydric soil rating: Yes

HfB—Hambrook-Sassafras complex, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1vh09
Elevation: 0 to 330 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hambrook and similar soils: 41 percent
Sassafras and similar soils: 39 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hambrook

Setting

Landform: Depressions, knolls, fluviomarine terraces, flats
Landform position (three-dimensional): Rise
Down-slope shape: Concave, convex, linear
Across-slope shape: Concave, convex, linear

Typical profile

Ap - 0 to 10 inches: sandy loam
BE - 10 to 14 inches: loam
Bt - 14 to 28 inches: sandy clay loam

Custom Soil Resource Report

BC - 28 to 65 inches: loamy sand

2Cg - 65 to 80 inches: silt loam

Properties and qualities

Slope: 2 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)*

Depth to water table: About 40 to 72 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Hydric soil rating: No

Description of Sassafras

Setting

Landform: Low hills, flats, fluviomarine terraces, knolls

Landform position (three-dimensional): Riser, dip

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Typical profile

Ap - 0 to 9 inches: sandy loam

E - 9 to 15 inches: sandy loam

Bt - 15 to 30 inches: loam

BC - 30 to 37 inches: sandy loam

C - 37 to 80 inches: loamy sand

Properties and qualities

Slope: 2 to 5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)*

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Woodstown

Percent of map unit: 10 percent

Landform: Flats, depressions
Landform position (three-dimensional): Dip
Hydric soil rating: No

Ingleside

Percent of map unit: 5 percent
Landform: Flats
Landform position (three-dimensional): Talf
Hydric soil rating: No

Mattapex

Percent of map unit: 5 percent
Landform: Flats, depressions
Landform position (three-dimensional): Dip
Hydric soil rating: No

LgA—Lenni loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: spw3
Elevation: 10 to 120 feet
Mean annual precipitation: 42 to 48 inches
Mean annual air temperature: 52 to 58 degrees F
Frost-free period: 180 to 220 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lenni, undrained, and similar soils: 50 percent
Lenni, drained, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lenni, Undrained

Setting

Landform: Flats, swales, depressions
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey fluviomarine sediments

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 7 inches: loam
Eg - 7 to 14 inches: loam
Btg - 14 to 51 inches: clay
2Cg - 51 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Drainage class: Poorly drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 0 to 10 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: D

Hydric soil rating: Yes

Description of Lenni, Drained

Setting

Landform: Flats, swales, depressions

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Clayey fluviomarine sediments

Typical profile

Ap - 0 to 7 inches: loam

Eg - 7 to 14 inches: loam

Btg - 14 to 51 inches: clay

2Cg - 51 to 80 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 10 to 20 inches

Frequency of flooding: None

Frequency of ponding: Rare

Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): 3w

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Hydric soil rating: Yes

Minor Components

Keyport

Percent of map unit: 5 percent

Landform: Flats

Landform position (three-dimensional): Rise

Hydric soil rating: No

Rosedale

Percent of map unit: 5 percent

Landform: Dunes, knolls, flats

Custom Soil Resource Report

Landform position (three-dimensional): Rise
Hydric soil rating: No

Pepperbox

Percent of map unit: 5 percent
Landform: Flats, knolls
Landform position (three-dimensional): Rise
Hydric soil rating: No

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Custom Soil Resource Report

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TOWN OF EASTON

14 South Harrison Street
Easton, Maryland 21601

July 3, 2024

Dear Resident,

The Easton Planning Commission (Commission) will hold a public meeting on **Thursday, July 18, 2024 at 1:00 p.m.** in the Easton Town Council Chambers located on the second floor of 14 South Harrison Street. The Town of Easton Zoning Ordinance requires that owners of property located within 400 feet of a parcel on which certain types of applications are pending be given notice of upcoming meetings or hearings. If you are a tenant in or an owner of a multi-unit building, please distribute or post this notice in a visible location for all other tenants or owners to view. If you are a tenant of a rental property, please notify the property owner that this notice letter has been distributed to their property. Notice has also been sent to the Star Democrat, a sign has been posted at the subject property and the hearing agenda has been posted on the Town of Easton website: <http://eastonmd.gov/>.

This letter is sent to inform you that Rauch Engineering, Inc. has filed application 2024 - 1210 on behalf of ADBMD Route 50, LLC to request Sketch Site Plan approval for the construction of a new automotive sales and services facility with associated stormwater management improvements, and a waiver for buffer yard requirements on the proposed Preston Powersports dealership on the property located at 9719 Ocean Gateway, also known as Tax Map 0025, Grid 0006, Parcel 0013.

Copies of the proposed application are on file and available for public review in the Town's Planning Office at 14 South Harrison Street between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday. **In addition, digital copies will be available for review one week prior to the scheduled meeting via the Town's website at <https://www.eastonmd.gov/129/Agendas-Minutes>.** If you have any questions regarding this application, please contact the Planning Office at (410) 822-1943 or via email at ssmith@eastonMD.gov.

Samantha N. Smith

Samantha N. Smith, Administrative Specialist
Planning & Zoning Department
410-822-1943 ssmith@eastonMD.gov



***Subject property posting pursuant to Section 28-901.2.H.2
of the Town of Easton Zoning Code - July 2, 2024.***



MEMORANDUM

TO: EASTON PLANNING & ZONING COMMISSION

FROM: LYNN B. THOMAS, JR., AICP, TOWN PLANNER

DATE: JULY 11, 2024

SUBJECT: SEAFOOD PROCESSING ZONING TEXT AMENDMENT

The Town Council has recently been pursuing options available to them to generally address odor issues, with particular emphasis on a Seafood Processing Business that has been the subject of numerous neighborhood complaints since it opened a few years ago. In preparation for a workshop on the issue, Sharon prepared a memorandum outlining the range of options available to the Town. Here is what she included in the section on Zoning options:

POSSIBLE LONG-TERM SOLUTIONS AND PREVENTION OF SIMILAR ISSUES

The zoning code could be amended to add provisions to address this type of business both with supplemental standards that could address things like odor control measures, operational requirements, or setbacks from residential uses, and also to look at which zoning districts are appropriate for this type of use. While the existing crab picking business is grandfathered as to the use, if they wanted to expand in the future, having provisions in the zoning ordinance could require compliance at that time. Zoning provisions could also address where appropriate locations are in Town for this type of use in the event this business decides to relocate or other businesses want to locate in Town. Zoning amendments take a few months to accomplish.

The Council indicated that they would like us to pursue the zoning options by proposing a text amendment for their consideration. They indicated that they had no preference as to whether it comes as a standalone amendment or as part of the packet we are in the process of developing. However, they did state a preference for whichever option is the most expeditious. Given that we are only at the beginning of the discussion stage of the packet of amendments, it seems to me that a standalone amendment would potentially have the quickest route to adoption. This also has the advantage of this particular amendment not being held up by controversy or extended discussion related to one or more of the other proposed changes.

Here are my initial thoughts on a seafood processing amendment:

- We should amend the definition of industry light to make it clear that seafood processing does not qualify as this use:

Industry, light - A use engaged in the manufacture, predominantly from previously prepared materials of finished products or parts, including processing, fabrication, assembly, treatment, packaging, incidental storage, sales, and distribution of such products, but excluding **seafood processing** or basic industrial processing.

- We should concurrently create a definition of seafood processing.

Seafood processing - A use engaged in the process by which harvested seafood, or by-product of harvested seafood, is cleaned, cut, eviscerated or otherwise prepared or cooked for sale in bulk, with a resulting by-product.

- We then need to decide where and how to permit. Maybe "P" in the I District and "SE" in the BC district?
- Finally, we need to consider possible supplemental standards. Some possibilities that come to mind are:
 - Enhanced separation from Residentially-zoned land (500'??).
 - Standards regarding the appropriate treatment and handling of any "by-products" (i.e., waste).
 - Require odor controlling technology??

These would be added to Article X, Section 28-1007.3 A 10 (the Supplemental Standards for Industrial Uses):

10. Seafood processing

- a. No portion of any structure used for, or in association with, a seafood processing use shall be located within five hundred feet (500') of any parcel with a residential zoning classification (R-7A, R-10A, or R-10M). The same enhanced setback shall apply from approved Planned Unit Development (PUD) or Planned Redevelopment Overlay projects that are primarily residential in nature.
- b. All by-products shall be treated, stored, and eliminated in accordance with all local and/or State regulations and may not be stored within a vehicle in excess of 24 hours.
- c. All seafood processing facilities shall install odor control technology, as necessary, in order to control ventilation at the establishment in such a manner that no odor from any product or by-product can be detected outside the building on the same property or on adjacent properties or public rights-of-way, or within any other unit located within the same building as the seafood processing facility, if the use occupies only a portion of the building. The operator shall properly maintain all odor mitigation equipment to ensure maximum efficiency. Applicants shall provide certification by a Professional Engineer, Certified Industrial Hygienist, or other equivalently qualified professional that proposed odor control measures will effectively eliminate outdoor odors for all odor sources.
- d. Any seafood processing use that was legally in existence as of September 1, 2024 shall comply with the supplemental standards of this subsection no later than January 1, 2029.



TOWN OF EASTON

Planning & Zoning Department

STAFF MEMORANDUM

TO: EASTON PLANNING AND ZONING COMMISSION

FROM: LYNN B. THOMAS, JR., AICP
TOWN PLANNER

DATE: MAY 6, 2024

SUBJECT: PROPOSED ZONING CODE AMENDMENTS - FOLLOW-UP

The Commission will recall that potential Zoning Code amendments were presented and discussed at your March meeting. At that time, you assigned each proposed change to one of several categories. One of which were for proposed changes identified as so-called “no-brainers” and the others which were categorized such that additional research and/or discussion was requested. For simplicity sake, I have lumped all of the latter together here. Here then are the various proposed amendments, beginning with the “No-Brainers”:

1. **Add definitions for sheds, swimming pools, and patios** - We have no definitions for these common structures and given that they have unique standards (e.g., setbacks) it is important to establish precisely what each term encompasses. In addition, the ordinance needs to specify whether, and to what extent, we may allow encroachment of patios into setbacks.

Shed - a small accessory structure used to store items related to or used in connection with a residence.

Swimming pool - any artificial structure, basin, chamber or tank, except a private spa, either above or below ground, which is used or intended to be used for the primary

purpose of swimming, diving, wading or recreational bathing. A swimming pool includes all associated equipment, structures and facilities located within a common enclosure. A unit used in conjunction with the private practice of a physician or physical therapist is not a swimming pool.

Patio - an uncovered horizontal structure with a surface height, at any point, no greater than two feet (2') above grade, intended for use as an outdoor amenity space.

2. Removal of "Tree of Heaven" as a suitable street tree -

This is a highly invasive species and not appropriate for planting generally ,or specifically as a Street Tree.

Currently Tree of Heaven is listed in Section 28-1014.3 under the exceptions to the acceptable plant species list, indicating it is “suitable as street tree only.” If we want to prohibit its use under any scenario, we simply need to change that note to read “Not suitable in any location.” This is consistent with several other species on this list (e.g., Bradford Pear, or Black Honey locust).

I also understand that there is a desire to address the osage orange in the same manner. Just like the tree of heaven, it is currently listed as “suitable as street trees only.” Banning it everywhere would be accomplished identical to what is proposed for the tree of heaven above.

3. Reducing the site triangle distance for some zones and clarifying whether an alley and street corner is considered an intersection

There is some thought amongst staff that rather than using a blanket standard, sight triangles should be determined by the design speed of the street, the type of traffic control at the intersection, and the location of the travel ways from the edge of buildings at the corners, at least on urban streets. In any event, the AASHTO Green Book addresses the determination of clear sight triangles and the Town Engineer's Standard Details may also provide additional requirements and guidance. Any changes to the site triangle distance or intersection design in general will require close coordination with the Town Engineer.

Attachment 3 is a more detailed and context-specific version of this standard from St. Petersburg, FL. I think this might be what we are looking for, although the distances used there may not necessarily be the same as we would adopt.

4. **Re-visit restaurant use types to allow more flexibility for hybrid take out/eat in restaurants -**

The current zoning code lists four types of restaurants: Fast Food, Carry Out/Deli, Night Club, and Sit Down. It does not particularly describe a sit-down restaurant with carry out service, which has become almost commonplace since the COVID Pandemic. This is occasionally an issue with regards to the question of the use and more commonly when trying to determine the appropriate parking requirement.

I am not sure this is as much of an issue for the use table as it is (or could be) for parking requirements, at least if we assume that carryout is an acceptable activity associated with any type of restaurant. Beyond parking, what is the impact difference for a restaurant that does a moderate carry-out business vs one that does little or none?

Our parking standards for the various restaurant uses are currently fairly consistent, with a minimum ratio of 1 space per 100 sf GFA and maximum of 1 per 50 for all types except carry-out (which is 1 per 300 and 1 per 200). Given this and the caveat in the paragraph above, I am not sure there is a need to change anything, unless you want to build in flexibility for relief from the minimum parking requirements for any restaurant type when a “significant” portion of the business is anticipated to come from carry-out service. This could obviously be a basis for a parking waiver, but building in administrative flexibility might be appropriate in this specific scenario.

5. **Removing "Parking Districts" from code -** This is an outdated reference to an old code and an old practice whereby businesses located within a defined geographic area could pay a fee in lieu of providing required off-street parking. It was eliminated probably 20 years ago so the reference should be removed from the Zoning Code.

This will be accomplished (hopefully!) with a simple Search and Delete command.

6. **Revisit minimum parking space requirements -** This is simply a suggestion to look at national standards to make sure we are not out of sync with contemporary recommendations.

One of the hottest trends in Planning circles currently involves drastic changes to parking standards, highlighted by a handful of communities who have eliminated parking minimums altogether. Such communities have decided to allow parking to be determined by market forces rather than (potentially) prescriptive formulas, many of

which are based on national averages and may be subject to changes in business operations or characteristics over time that are not reflected in the standards.

Our parking ratios were fairly comprehensively updated with the last comprehensive Zoning Code Update in 2021. As such, barring a significant across-the-board change such as that described above, I do not see the need for changes to our parking standards. If there are any specific uses you have concerns about, I will be happy to do some additional research to see what other communities impose.

7. Change language for parking space dimensions -

Are our dimensional requirements for parking spaces appropriate?

The dimensional requirements for parking spaces are found in Table 10.1, which is copied below:

Table 10.1

Angle	Minimum Stall Width (W)	Minimum Stall Length (L)	Minimum Aisle Width (Maneuvering Space) (A)
90°	9 feet	18 feet **	24 feet (25')
60°	9 feet	18 feet **	18 feet one-way (16') 22 feet two-way (20')
45°	9 feet	18 feet **	16 feet one-way (12') 22 feet two-way (19')
30°	9 feet	18 feet **	14 feet one-way (12') 22 feet two-way (19')
Parallel	8 feet	22 feet	16 feet one-way 22 feet two-way

**** - Vehicle Overhang:** Up to two (2) feet of vehicle overhang into any planter area is allowed provided the planter is a minimum of six feet wide, in this situation the minimum required depth of the parking stall may be reduced by up to two (2) feet. When utilizing this option, curbing shall be utilized at the edge of the paved area, rather than wheel stops.

The standards highlighted in yellow are the recommendations from the 21st Century Land Development Code, a source I frequently reference. The Commission should discuss whether or not they are in favor of changing these (or any other) of our standards. If so, the actual change is easy to make.

8. Conflicting statements in Article 12 - Check this section for internal conflicts regarding non-conformities. Also, consider changing from 6 months to 12 consecutive months for a

nonconforming use to be considered to be abandoned unless the use was disrupted due to repair or remodeling.

With regards to the time frame for abandonment, that would be a very straightforward change to Section 28-1201 E, as follows:

E. Any non-conforming use, including the non-conforming use of a lot, parcel or structure that is discontinued or abandoned for a period of ~~six (6) months~~, **one (1) year**, shall not be resumed thereafter and any future use of lot, parcel, or structure shall conform to the provisions of this Ordinance. Any structure that is moved for any reason for any distance by the owner, shall be required to conform to the regulations for the zoning district in which it is located after it is moved. In the case of any dispute as to whether a non-conforming use is abandoned or discontinued, the burden of proof shall be upon the property owner.

9. Map Corrections -

- a. Waterside Village is indicated as CG rather than PUD
- b. Parcel on Creamery and another on Wrightson behind the Seafood Market/Deli are both shown as CG but should have been changed to CB in 2021 Update.
- c. Elliott Road Apartment site is now PUD
- d. Gannon Range site is now PUD
- e. Should we consider changing the base zoning of any part of the properties in the general vicinity of the ill-fated Mansion Apartment on August Street? They are now CB. Was suggested at the meeting that they should be residential, even though until 2021 they were Industrial (I-1).

I think items a through d speak for themselves and simply need to be changed. Item e is potentially subject to further discussion, although so long as the properties in question are also within the PR Overlay, the base zoning is not terribly important except that if it is a residential classification, that does potentially limit the scope/scale of any proposed commercial use. Otherwise, essentially anything can be proposed, subject to site plan approval.

- #### **10. MXW window and door placement standards. -**
- There is a seemingly contradictory statement that Zach Smith identified that says "The uses on the ground floor shall be visible from and/or accessible to the street through the use of windows and doors on at least 50% of the length of the first floor street frontage. At least 60% or more than 90% of the total surface area of the front elevation shall be in public entrances and windows (including retail display windows)." 28-312.4.4

This is seemingly easy. We just need to decide which provision we would like to see be the standard and eliminate the other (or, figure out a way to clearly distinguish between the two).

11. MXW LEED standard is outdated -

Simply need to change LEED Bronze to LEED Certified.

This is definitely easy and, again, a simple Search and Replace will hopefully fix this issue.

12. Clean up usage of the terms single-family attached and townhomes - are these synonymous or is there a difference and if so, what is it and does that affect how each is treated on the use table?

Just a guess, but I am thinking that the term “single-family attached” was originally used in the Zoning Code to disassociate this type of housing from multi-family and the process and/or stigma that was at one time, rightly or wrongly, associated with such uses. I would like to think we have generally moved beyond that now and would favor simply referring to the use as Townhouses or Townhomes. They are, afterall, included amongst the Missing Middle Housing Options. If you agree, this would be another Search and Replace fix, although in this case it would be a fairly extensive one.

Next are the potential amendments that were identified as needing some level of additional discussion. A number of them deal with various issues associated with the Sign Regulations and you specifically grouped those together, so I will include those next:

13. Revised internal illumination standards for signage - The current illumination

standards for signs are somewhat limited for internal illumination. They are as follows:

- i. Individual backlit letters which are silhouetted against a softly illuminated wall;
- ii. Individual letters with translucent faces, containing soft lighting elements inside each letter; and
- iii. Metal-faced box signs with cut-out letters and soft-glow fluorescent tubes.

The most common form of internal illumination involves something like item iii, but rarely with metal-faced signs. Instead, they are generally a plastic-like material. They are very common and unless we want to create an even larger number of non-conforming signs, we should probably legitimize them by expressly allowing them in this list, and if we do want to prohibit them, the Code should more clearly make such a statement. There may also be a middle-ground and if so, we should specify what that is. One example of

this is from the City of Alexandria, VA who prohibits internally illuminated translucent *rectangular* panel signs (but allows them in other shapes). If the Commission is interested in adding this as a possibility, I suggest we add to this session, something like the following:

iv. Translucent panel signs that are non rectangular in shape.

14. **Revised language regarding signage not being located above the eave line** - The Ordinance currently addresses this issue by stating that:

B. Wall signs shall not be mounted higher than the eave line or top of the parapet wall of the building and no portions of the sign shall extend beyond the ends of the wall to which it is attached.

This poses an issue because there are certain roof types where a wall sign would seem appropriate, but are precluded based on this language. A front-facing gable (a la at the Amish Market) is one example. If that is the only configuration where we believe an exception is warranted, the solution may be as simple as revising the language above to something like:

B. Wall signs shall not be mounted higher than the eave line or top of the parapet wall of the building and no portions of the sign shall extend beyond the ends of the wall to which it is attached. Such signs may extend above the eave line on facades with a front-facing gable roof, in which case such signs shall not extend above the top of the gable.

15. **Removal of fuel price regulations for freestanding signs** - There is actually a State Law that also regulates fuel price signs and our local zoning regulations appear to be at conflict with them. We should either make them consistent, or perhaps eliminate our regulation and simply allow the State law (whatever it is at any given moment) to apply.

The State Law is found in **Maryland Code BUSINESS REGULATION § 10-315 -**

Advertising signs. The current Zoning Code allows such signs, but limits them in size to 3 square feet. As I read this State Law, it does not regulate size (and in fact, indicates that such signs are exempt from local zoning number or area limitations), but rather simply requires such signs to be “readable by passing motorists.” I think the simplest fix to this issue is something like the following:

H. Signs affixed to the top or sides of an operable fuel dispensing pump ~~shall not exceed three (3) square feet in area,~~ per the standards of MD Code Business Regulation Section 10-315, provided such sign and shall only display instructional or price information, and shall not include advertising copy pertaining to any product, sale or promotion.

- 16. Freestanding signs where a solid base isn't practical** - Our sign regulations currently require freestanding signs to be constructed on a solid base that is at least as wide as the sign face. We make exceptions in the CB (Central Business) District out of recognition that there likely is insufficient room to accommodate an otherwise permitted freestanding sign given the small lot sizes and the degree to which these lots are usually covered. These properties may have, for example, a post-mounted sign or a projecting sign. Some property-owners in the CG Zoning District have suggested that site constraints limit their ability to comply with this standard as well.

Before adopting changes that grant such relief, I think it is important to determine whether this is actually a widespread problem or relatively isolated to a few properties, possibly with unique circumstances. If the former, it may be legitimate to consider offering some form of relief, but if the latter, that is the textbook example of a Variance for such relief.

I frankly am skeptical that properties in the CG Zoning District are constrained to the point that they cannot locate a sign in conformance with our Regulations. I suspect that instead, they simply do not want to, either for reasons related to cost or a perceived competitive disadvantage. Unless you think our signs standards are too onerous I do not recommend relief in the CG similar to what we offer in the CB. If you want to consider any form of relief, perhaps it is to allow the replacement of a non-conforming sign with one that may not necessarily fully comply with today's regulations, but moves the sign closer (and the more you can detail what that entails, the better).

The remainder of the proposed changes were identified as appropriate for additional discussion, but not sign-related in nature. They are:

- 17. Donation Centers** - The proposal that initiated this round of amendments is attached, as prepared by the representative from Planet Aid. If you have been by Giant and seen the "Donation Center" at the far end of the parking lot (next to the main entrance drive between Wal*Mart and the Shopping Center), over the course of the last several months, you will know what they are seeking to legitimize.
- 18. Additional differentiation criteria for single family homes** - The current Supplemental Standards for Single Family Detached home differentiation, is as follows:

a. Calculations of Differences in Appearance

1. Differences in bulk and massing shall be reviewed for two (2) lots on either side of the proposed unit on the same side of the street.
2. Where lots are interrupted by an intervening street, parkland or similar feature of at least fifty (50) feet in width, no review shall be necessary.
3. The proposed unit shall be considered different from any vacant lot for which no building permit has been issued without requiring further documentation.

b. Differentiation

The proposed unit shall differ from each other house in at least two (2) of the five criteria listed below, unless the units differ with respect to the number of full stories (#2) then only #2 is required.

1. The unit is a different housing type.
 - a. Single-family detached;
 - b. Zero lot line (where allowed);
 - c. Single-family attached; or
 - d. Single-family detached rotated ninety (90) degrees (i.e. the narrower façade fronts the street as opposed to the wider façade).
2. The unit differs in the number of full stories.
3. The unit is served by a different type of garage.
 - a. Front-load garage;
 - b. Side-load garage;
 - c. Rear-load garage;
 - d. Detached garage;
 - e. Carport; or

- f. No Garage.
4. The unit has a different roof type
- a. Gable
 - b. Hip;
 - c. Gambrel
 - d. Mansard;
 - e. Roof types a through d rotated ninety (90) degrees; or
 - f. Flat.

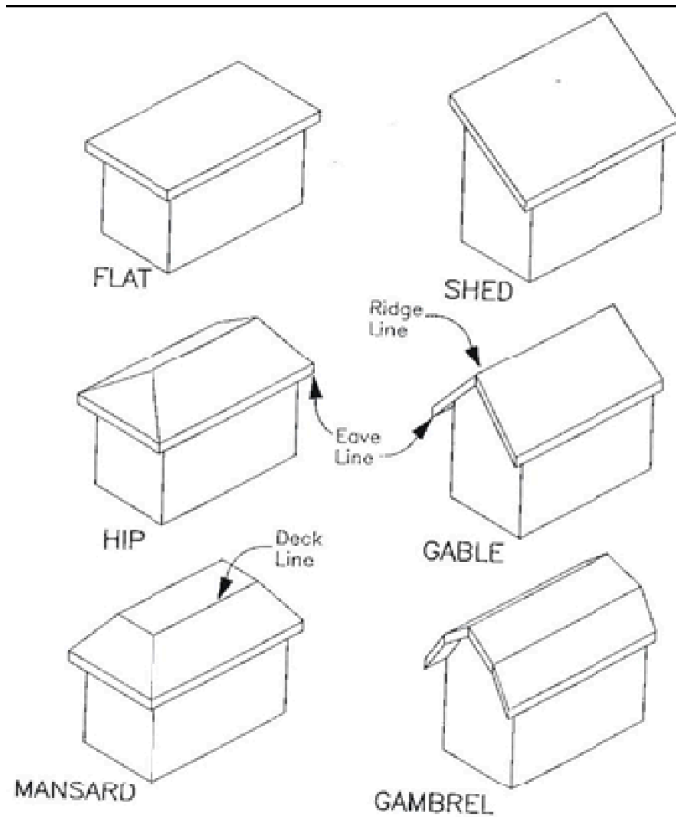


Figure 10.1 Sample Roof Types

5. The unit has variation in the articulation of the front façade.
- a. Garage setback from the front façade of at least four (4) feet;

- b. Covered, open walled porch of at least six (6) feet in depth extending at least thirty-three (33) percent of the width of the front façade; or
 - c. Other articulation of the front façade at least four (4) feet in depth, extending at least thirty-three (33) percent of the width of the front façade.
6. Although not required, differentiation in color between adjacent homes is strongly encouraged.

I would like to add more options for folks to choose from, and if we add enough, require compliance with more of them (e.g., 3 of 7 rather than 2 of 5). Some possibilities:

- 7. Different cladding materials.
- 8. Different window sizing and groupings.
- 9. Difference in number of dormers.
- 10. Addition of a bay window that projects a minimum of one foot from the front wall, as measured from the ground up.
- 11. Change of roof pitch of at least two units of change as measured by a roof's vertical rise over its horizontal span (e., 6/12 pitch to 8/12 pitch).

19. More specifics on what driveway materials are dust free and resistant to erosion -

We have received several requests for gravel driveways, presumably to reduce costs. The zoning ordinance states that "all off-street parking facilities shall be constructed of dust-free materials, have a surface resistant to erosion, drained so as to prevent damage to abutting properties or public streets, and maintained properly by the owner". Historically, gravel and stone were considered to satisfy this standard. More recently, we have interpreted this standard to exclude gravel and crushed aggregate. This prohibition is due to gravel spilling out into the rights-of-way. This is bad for seniors, wheelchairs, and people with physical disabilities or limited mobility. In addition, gravel is eventually compacted and considered an impervious surface (people have made the argument that gravel driveways are good for stormwater infiltration). More consideration and clarification for this standard needs to be made. For example, do we continue to prohibit, but allow exceptions for gravel parking areas for agriculturally-zoned properties, temporary and overflow parking areas, or for areas devoted to commercial vehicle storage? In addition, discussion should be held with the Town Engineer regarding any other equivalent and acceptable paving material(s).

Here is the language in question along with a suggested revision (to at least initiate the discussion):

All off-street parking facilities shall be constructed of dust-free materials, have a surface resistant to erosion, drained so as to prevent damage to abutting properties or public streets, and maintained properly by the owner. Dust free material shall include concrete or bituminous surface. Semi-pervious materials, such as permeable pavers, porous asphalt, porous concrete, grass-crete, or gravel-crete may be used for residential driveways, vehicle storage areas, designated employee parking areas, or parking spaces provided in excess of the maximum parking requirement (subject to an approved Parking waiver). Any other parking or maneuvering space may utilize semi-pervious materials subject to Planning Commission approval. All off-street parking areas shall be constructed in accordance with the construction specifications as may be developed and maintained by the Town Engineer. Surfaces in areas designated as accessible parking and/or accessible pedestrian paths shall meet all applicable federal and State of Maryland standards.

20. Food trucks - The Zoning Code regulates Food Trucks (mobile food uses) on private property. Although food trucks on public property (e.g., on streets or in government-owned parks or parking lots) are also common, those would be regulated in other parts of the Town Code. Currently food trucks on private property are only permitted in limited circumstances:

- a. At an active construction site (the idea being they could provide a lunch option to construction workers).
- b. In association with an approved Special Event (e.g., ABC Store is Having Customer Appreciation Day and as part of the celebration, Food Trucks will be present).
- c. In the Planned Redevelopment District on a site that bears some connection to the principal use (e.g., Four Sisters sells products from their store and Rise Up sells menu items to compliment the coffee shop).

Along with short-term rentals, Food Trucks are probably the issue I get asked about the most and people are surprised/disappointed by how limiting our rules are. Arguments for allowing them more generally are that they provide more variety in food selection, they provide some lower cost options, they bring a sense of vibrancy to an area, and they can be a way for prospective restaurateurs to get established before moving on to a traditional brick-and-mortar business. The arguments against, in the past, have been primarily two-fold. First, some say they promote a “carnival atmosphere” that Easton has long sought to avoid. Second, there is concern about the impact food trucks may have on traditional restaurants. If the Commission is of a mind that there is a role for more food

trucks in Easton, I believe the two primary objections can be addressed with appropriate supplemental standards.

I believe there are several different variations of food truck uses. One is when food trucks set-up in specified locations, usually on-street, in a public parking lot, or in a park. Here in Easton at least, this scenario would not be regulated by the Zoning Code as it does not specifically address uses in the public realm. Another scenario is when a private property owner wants to establish them permanently or semi-permanently either independently or in conjunction with existing use on the property. This scenario is currently limited to item c above. If you are open to expanding the options for this scenario, I think we would simply delete the phrase “In the Planned Redevelopment District” and say something like “Where indicated as permitted in the Table of Permissible Uses...” You can then maintain the requirement of a connection to the principal use, or delete it and essentially allow a food truck to operate the same as a brick and mortar establishment. A third scenario is one where multiple food trucks are set up on a site. This could be on a permanent basis or Temporarily (and perhaps in association with some special event). Some jurisdictions refer to this by terms such as “Food Truck Court.”

I would like the Commission to discuss this issue and indicate the direction they would like to go before proposing something (if anything) for this item.

21. Parking standards for single-family detached - Since at least 1976, the parking requirement for single-family detached houses has been two spaces, and the Code has indicated that a driveway with minimum dimensions of 10’ by 35’ shall be deemed adequate for meeting that requirement. There has been discussion at some of your more recent subdivision reviews concerning the overall appropriateness of this standard. Issues raised include:

- Garages should count as parking spaces (they never have on the basis that there is no guarantee that they won’t become filled up with the homeowners “stuff” and thus not be available for parking).
- If a driveway of 10’ x 35’ cannot be provided (or the homeowner does not want to provide it) are there other arrangements that are appropriate and if so, what are the dimensional requirements for them? This is increasingly an issue where we are encouraging houses to be built closer to the street (i.e., with 15’ setbacks) and still allowing front-loaded garages.
- On-street parking should count. The short answer to why it does not is that this is an off-street parking requirement. However, this is now being viewed by many (especially new urbanists and like-minded planners) as a particularly suburban

standard that is detrimental to supporting or reinstating a more urban design in communities. In fact, one of my New Urbanist resources recommends subtracting the amount of on-street parking fronting single family housing, from the required off-street parking. Presumably in most cases this will satisfy the requirement. See also attached discussion from the Form Based Codes book that Tal Bone bequeathed me when he left the Commission. There are a number of good points/observations.

We seem to have multiple options for addressing this issue, depending on how much additional flexibility you want to allow. Starting with the issue of allowing garage space to count as the required parking, while I have not found a jurisdiction which expressly says that garage parking does or does not count, it is in some cases implied. For example, one jurisdiction that I found stipulates that “enclosed space” (which I take to mean a garage and perhaps a carport) may be counted towards the required parking provided that an apron is constructed adjacent to the garage that is equal to the width of the garage and a minimum of 20’ deep. I presume this is a safeguard against the garage space being filled with “stuff” and thus unable to accommodate vehicles. Another jurisdiction goes even further by actually requiring “a minimum of two (2) enclosed parking spaces with a minimum driveway width of sixteen (16) feet.” This jurisdiction also couples this requirement with standards that preclude a front-loaded garage that extends closer to the street than the house does.

I think the solution to this issue may be to build on the existing language and add as many additional options for compliance as you deem appropriate, as follows, for example:

J. Single-family and duplex units may satisfy their off-street parking requirements utilizing any combination of the following options:

- (1) A driveway ten (10) feet wide and thirty-five (35) feet long shall be deemed sufficient parking space, for single family or each unit in a duplex.
- (2) Space within a structure (e.g., a garage or carport) may be used towards the satisfaction of the parking requirement provided that a parking apron that is at least as wide as the structure and extends a minimum of 20’ away from the structure, is constructed immediately adjacent to said structure.
- (3) A parking pad of at least 9’ x 18’ per space is provided on-site.
- (4) ??? (Other options? On-street parking allowance?)

22. **Backing into the Street from a Parking Space** - Another standard that has been part of our regulations since, at least, 1976, is one which states: “ All off-street parking spaces, other than for a single family or duplex dwelling, which requires vehicles to back into a public road, street or highway are prohibited.” We are finding that this can pose a challenge for infill projects, specifically for potential Missing Middle Housing projects. A thought for consideration - perhaps the limiting factor should not be the use, but rather the type of street onto which such backing would occur. I offer as Exhibit A, the parking lot behind Town Hall, which has a lot more cars backing onto this (admittedly busy) side street than would occur at a MMH type, and yet in 34 years at the Town (most of which has been in an office overlooking this parking lot) I have not witnessed a single accident on this street.

As a starting point for this discussion, I offer the following suggested revision:

D. All off-street parking spaces, ~~other than for a single family or duplex dwelling,~~ which requires vehicles to back into a public road, street or highway, other than a residential street (as classified by the Easton Subdivision Regulations) are prohibited.

I would largely defer to Rick on this, but we may also need to consider deleting (or revising) the following standard in conjunction with any changes to item D, above:

I. No parking spaces except those proposed for single family or duplex residences shall have direct access to a public way.

23. **Clarifying intrusions into easements vs setbacks** - The Code allows for exceptions for certain structures or features to extend into the Building Setback. This is generally not an issue, but it can be when the intrusion is also into//over an easement, which is not uncommon. The beginning of that section along with suggested clarifying language is:

SECTION 28 – 1006 OTHER EXCEPTIONS TO SETBACK REQUIREMENTS

Provided they do not encroach upon any recorded easements, the following features may project into required setbacks as hereinafter set forth.

24. **Subdivision Amendment** - In addition to the foregoing potential Zoning Code Amendments, there is one revision needed to the Subdivision Regulations. In Section

409 (e) Acknowledgements and Notations, we need to add the following required plat note:

A UTILITIES DISTRIBUTION RIGHT-OF-WAY AND EASEMENT IS HEREBY DEDICATED TO THE TOWN OF EASTON IN AND OVER STRIPS OF LAND TEN (10) FEET IN WIDTH ALONG THOSE BOUNDARY LINES CONTIGUOUS TO ANY STREET OR ALLEY AND FIVE (5) FEET IN WIDTH ON EACH SIDE OF SIDE LOT LINES.

Early in the discussion phase of the last Subdivision Regulations Update, this note was flagged for discussion as to whether it was necessary as the preliminary plat standards require that the Applicant shows the proposed location of all rights-of-way and easements. In further discussion with Easton Utilities it was determined that this language is needed and should have been left in the Regulations. Unfortunately, when I cleaned up the document, apparently instead of simply removing the highlighting of this statement, I instead deleted it. The correction is simply to just add the statement back in, where it was and just as stated in the previous version of the document.

Attachment 1 - Proposed Donation Center Text Amendment

I. Donation Bins

- a. No person or other legal entity shall place or maintain any Donation Bin on the premises open to the public except when issued a permit by the Building Inspection Division in accordance with this section.
- b. All Donation Bins shall be appropriately located so as not to interfere with sight triangles, on-site circulation, required setbacks, landscaping, parking and any other requirements that have been imposed as part of the site plan approval for the property, and shall be placed on a concrete or paved surface.
- c. The Donation Bin shall be of a type that is enclosed by use of a receiving door and locked so that the contents of the bin may not be accessed by anyone other than those responsible for the retrieval of the contents.
- d. The Donation Bin shall not cover a ground surface area in excess of thirty-one (31) square feet, nor be more than seven (7) feet in height.
- e. Donation Bins must be maintained and kept in good repair. The Donation Bins area shall be maintained in a safe, orderly condition. Donation bins shall have no rust, peeling paint or graffiti. The areas around the Donation Bin must be kept clean and free of garbage and debris on the premises where the Donation Bin is located. Each Donation Bin shall be regularly emptied of its contents so that it does not overflow.
- f. There shall be no more than two Donation Bins per property.
- g. A permit for a Donation Bin shall be required. The permit shall be issued by the Building Inspection Division, but can only be granted in compliance with the following:
 - i. The Donation Bin is owned by a duly registered organization in good standing in the State of Maryland. The applicant shall submit a statement of declaration of whether the organization is “for profit” or “not for profit”. A “not for profit” must submit proof of the organization’s 501 c (3) designation and a “for profit” must submit proof of the organization’s tax ID as well as name and address of the owner;
 - ii. Each duly registered non profit organization shall be permitted to have a maximum of eight (8) Donation Bins within the Town of Easton;
 - iii. The type, size and location of the Donation Bin comply with this subsection;

- iv. The applicant submits a letter of authority/permission from the property owners upon which the Donation Bin is proposed to be located;
- v. The name, address and telephone number of the organization is displayed on each Donation Bin;
- vi. The general use of any donations or funds raised from the sale of the donations are displayed on each Donation Bin. If the organization is “for profit” the Donation Bin shall be labeled “For Profit” and “Not tax Deductible”; and
- vii. All information required to be displayed on the Donation Bin shall be in lettering not smaller than one and a half (1.5) inches tall and must be in contrasting color with the background.

2. Donation Centers

Donation Center – A variation of a Donation Bin that is larger, equipped with lights and monitored via security camera 24 hours per day, seven days per week.

- a. Except as hereby modified, Donation Centers shall comply with all Supplemental Standards applicable to Donation Bins.
- b. Donation Centers shall not cover a ground surface area in excess of one hundred sixty (160) square feet, nor be more than eight (8) feet in height, exclusive of equipment installed on top of the Donation Center.
- c. The Donation Center shall be equipped with lights to provide a safe environment for any citizen who wishes to donate items after dark.
- d. The Donation Center shall be equipped and maintained in working condition with 24/7 video monitoring.
- e. The Donation Center shall be attended and/or serviced by the organization operating the Donation Center at least three times per week.
- f. The Donation Center may not occupy more than four off-street parking spaces.
- g. Donation Centers shall be placed on the property of vacant businesses or the parking area of businesses with a clearly demonstrable excess of parking. Such Centers may also be located outside of parking lots on such sites. In either case, such Centers shall be located so as to not interfere with traffic and circulation of the establishment.
- h. Donation Centers established at the site of vacant businesses shall cease to operate at said site within 30 days of the Application of a Use and Occupancy permit for the property, unless the new business owner agrees to the continuation

of the Donation Center and can demonstrate that the locational criteria specified in item g above will continue to be satisfied.

- i. There shall be no more than one (1) Donation Center within a one (1) mile radius.
- j. Any given property may have one (1) Donation Center or two (2) Donation Bins.

Attachment 2 - Form-Based Codes Parking Commentary

(See March Mmemo)



VISIBILITY TRIANGLE REQUIREMENTS

Pedestrians and motorists passing through traffic intersections must be able to see clearly around corners in order to avoid collisions. Clear visibility at intersections of streets, alleys, driveways and sidewalks is a matter of safety.

The ability to see around corners can be impaired by the growth of trees, plants, vehicle parking and even fence installations. Visibility triangle rules require that certain areas of the private property and the abutting City right-of-way be maintained and clear of visibility obstructions.

VISIBILITY TRIANGLE RULES

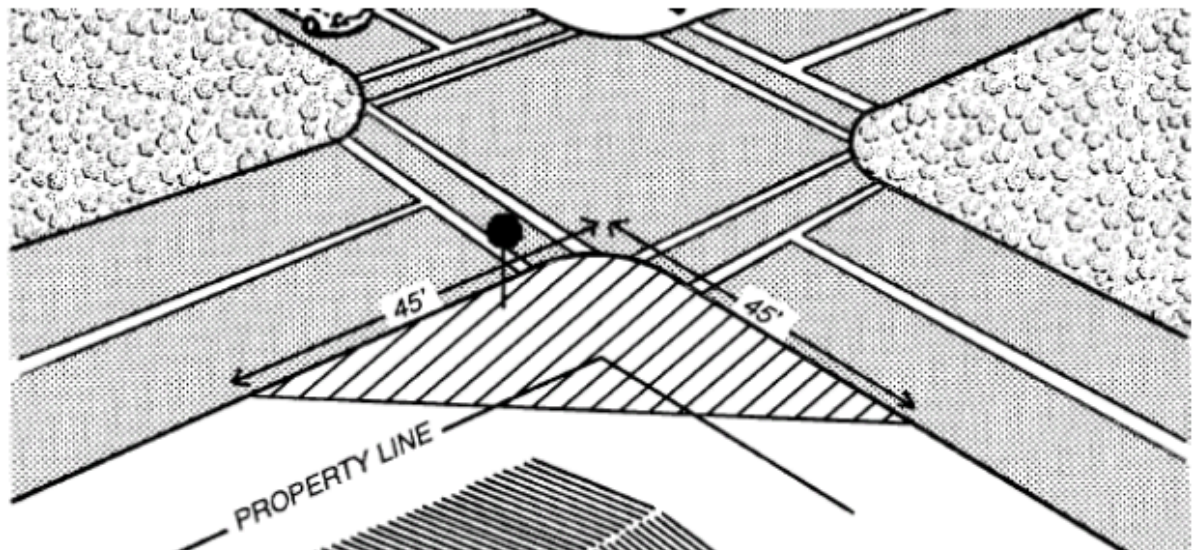
In the measured visibility triangle, the following restrictions apply:

- **No structures** can be placed except fences, walls or berms not higher than three feet
- **No motor vehicle**, trailer or other equipment is allowed to park, stand or stop
- **No vegetation** can be planted or allowed to grow **higher than three feet**, except for one tree on the private property and two trees in the City right-of-way with any tree having **branches no lower than eight feet**

VISIBILITY TRIANGLE DESCRIPTIONS & DIAGRAMS

STREET INTERSECTION

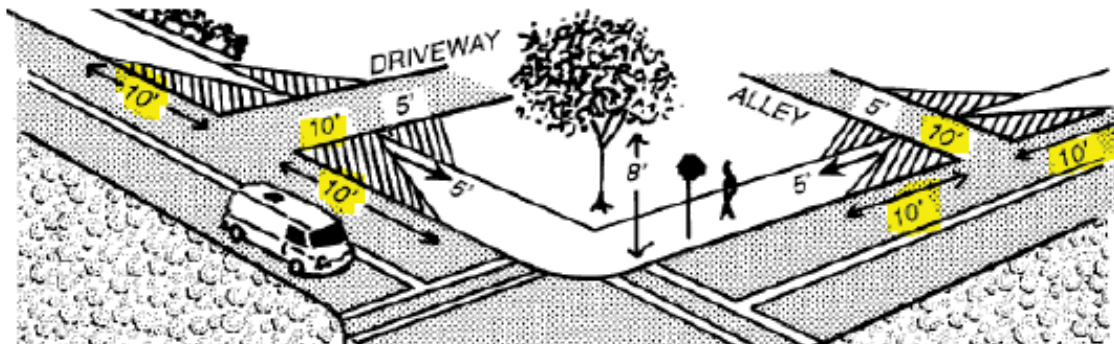
The visibility triangle for a street intersection is a triangle with 45-foot sides, starting at the corner where two curb lines intersect and extending out away from this corner intersection, but still following curb lines.



VISIBILITY TRIANGLE REQUIREMENTS

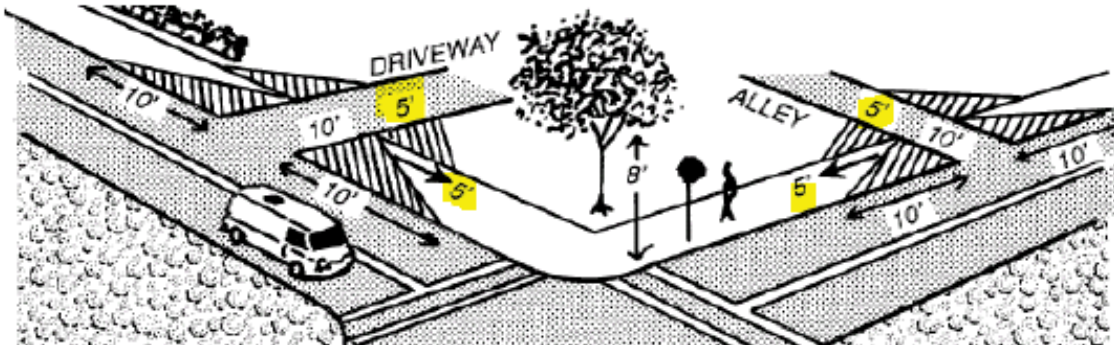
INTERSECTIONS OF ALLEYS OR DRIVEWAYS WITH STREETS

The visibility triangle for intersections of alleys or driveway with streets is a triangle with 10-foot sides extending from the intersection of the curb line but following the edge of the alley or driveway



INTERSECTIONS OF ALLEYS OR DRIVEWAYS WITH SIDEWALKS

The visibility triangle for intersections of alleys or driveways with sidewalks is a triangle with five foot sides extending from the intersection formed using the edge of the sidewalk furthest from the street and the edge of the alley or driveway



EXCEPTIONS

As of April 17, 1998, any lawfully constructed structure (any structure built with a City Building Permit and having received a final approved inspection) is grandfathered and does not have to comply with visibility triangle requirements.

Other visibility triangle exemptions include:

- Benches
- Fire hydrants
- Government signs
- Sign posts
- Traffic control devices
- Utility control devices
- Utility poles

Two types of Zoning Districts – DC (Downtown Center) and CCT-2 (Corridor Commercial Traditional-2) – are not subject to the visibility

triangle regulations. This is because many of the existing buildings were allowed to be built years ago, partially in the triangle area, in addition to there being large numbers of traffic signal-controlled intersections which do not require the same degree of visibility.

Regardless of visibility triangle regulations, property owners must take responsibility to trim trees, plants and grass on their property and in the City right-of-way that abuts their property in order to comply with City Codes. Also, in the City right-of-way, property owners must obtain a minor easement and permit from the City's Engineering and Capital Improvements Department to build any structure of any height (for example, a fence).