Easton Staff Development Review
MEETING AGENDA

Wednesday, June 24, 2026 - 11:00 AM
Council Chambers, Easton Town Office
14 S Harrison Street

1. Discussion Items

a.

Application Number:	2026 - 1750 / ESDR 26 - 08
Applicant:	Lane Engineering LLC on behalf of Talbot County Humane Society, Inc.
Location:	7906 & 7894 Ocean Gateway Tax Map 0105, Grid 00EA, Parcels 1665 & 2987, Lots 1&2
Zoning District:	CG
Request:	Sketch site plan review for the redevelopment of the existing property, and the construction of a new building.

b.

Application Number:	2026 - 1732 / ESDR 26 - 06
Applicant:	Davis Bowen & Friedel, Inc. on behalf of the Talbot County Roads Department
Location:	605 Port Street Tax Map 0034, Grid 0009, Parcel 0034
Zoning District:	GI
Request:	Sketch site plan review for the construction of a new pole building as an addition to the existing Talbot County Roads Department equipment storage building.

c.

Application Number:	2026 - 1751 / ESDR 26 - 09
Applicant:	Davis Bowen & Friedel, Inc.
Location:	1 Medicial Center Drive Tax Map 0017, Grid 0023, Parcel 0129, Lot 3
Zoning District:	RH

Request:	Stormwater management review for the construction of a sewage pumping station.



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ARCHITECTURE ENGINEERING

TALBOT HUMANE SOCIETY - EAST ELEVATION

2025206.00
06.02.2026



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TALBOT HUMANE SOCIETY - NORTH ELEVATION

2025206.00

06.02.2026



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TALBOT HUMANE SOCIETY - WEST ELEVATION

2025206.00
06.02.2026



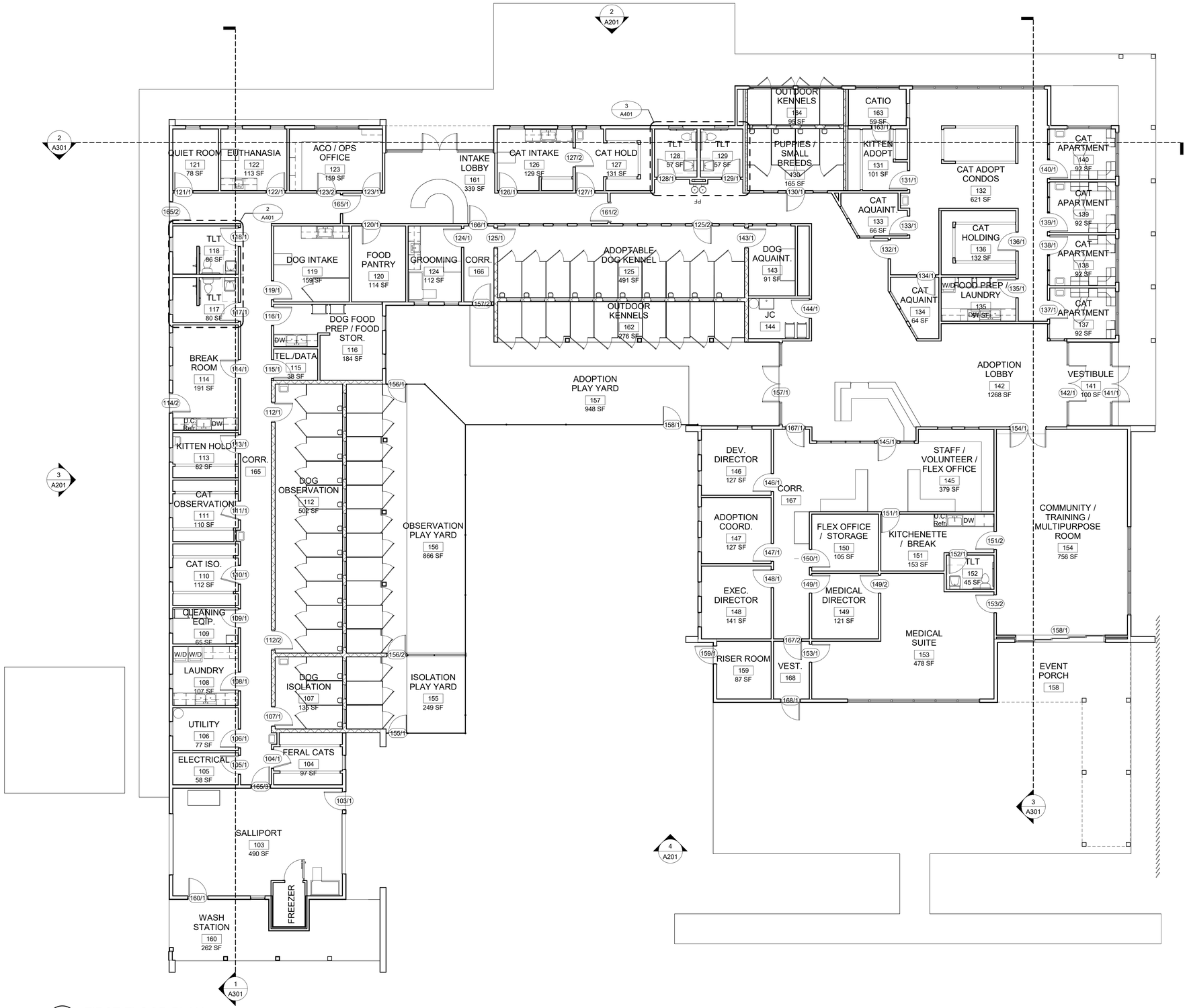
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TALBOT HUMANE SOCIETY - SOUTH ELEVATION

2025206.00
06.02.2026

GENERAL NOTES

1. DIMENSIONS ARE TO EXTERIOR FACE OF CONCRETE, MASONRY, OR METAL STUD UNLESS OTHERWISE NOTED.
2. REFER TO A000-SERIES DRAWINGS FOR SLAB AND OTHER CONSTRUCTION TYPES AND TYPICAL DETAILS.
3. SEE A1## FOR ROOF PLAN
4. SEE A400-SERIES FOR ENLARGED PLANS AND SECTIONS.
5. SEE A6## FOR FINISH SCHEDULE AND LEGEND.
6. SEE A6## FOR DOOR SCHEDULE, DOOR TYPES AND HOLLOW METAL, CURTAINWALL, AND STOREFRONT TYPES.
7. COORDINATE REQUIREMENTS OF WORK WITH ALL OTHER TRADES.



1 FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

BECKER MORGAN GROUP

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ENGINEERING

Delaware
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302.734.7950

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Salisbury, MD 21801
410.546.9100

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MORABITO CONSULTANTS, INC.
STRUCTURAL ENGINEER
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SPARKS, MARYLAND 21152
410-467-2377

LANE ENGINEERING, INC.
CIVIL ENGINEER
117 BAY STREET
EASTON, MARYLAND 21601
410-822-8003 fax: 410-822-2024

PROJECT TITLE

TALBOT HUMANE SOCIETY

7906 OCEAN GATEWAY
EASTON, MD 21601

PRELIMINARY
ISSUED FOR S.D. SUBMISSION
NOT FOR CONSTRUCTION
NOT FOR PERMITS
ISSUED:

SHEET TITLE

FIRST FLOOR PLAN

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

ISSUE BLOCK

Mark	Date	Description

PROJECT NO:	2025206.00
DATE:	02/13/26
SCALE:	1/8" = 1'-0"
DRAWN BY: AJO	PROJ MGR: WES

A101

COPYRIGHT © 2026

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TALBOT HUMANE SOCIETY - PERSPECTIVE 1

2025206.00

06.02.2026



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TALBOT HUMANE SOCIETY - PERSPECTIVE 2

2025206.00

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TALBOT HUMANE SOCIETY - PERSPECTIVE 3

2025206.00

06.02.2026

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TALBOT HUMANE SOCIETY - PERSPECTIVE 4

2025206.00

06.02.2026

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TALBOT HUMANE SOCIETY - PERSPECTIVE 5

2025206.00

06.02.2026

Lane Engineering, LLC

STORMWATER MANAGEMENT REPORT

TALBOT COUNTY HUMANE SOCIETY

TOWN OF EASTON, TALBOT COUNTY, MARYLAND

PREPARED FOR:

Becker Morgan Group c/o Brad A Hastings
312 W Main St, Suite 300, Salisbury, MD 21801
(410) 456-9100

PREPARED BY:

Alec F. Chosta, P.E.

DATE PREPARED:

June 3, 2026



06/03/2026

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: 4/04/2028.

LANE ENGINEERING, LLC
117 BAY STREET
EASTON, MARYLAND 21601
410-822-8003

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APPENDIX A : HydroCAD Quantity Management Analysis

APPENDIX B : ESD Calculations

APPENDIX C: Drainage Area Maps

APPENDIX D: 2001 SSPP Student Parking Lot Plans on file with TOE

Introduction

This report addresses the impacts of stormwater runoff as a result of the proposed re-development of the Talbot County Humane Society site located in Easton, MD. This stormwater management plan incorporates the requirements of the 2000 Maryland Stormwater Design Manual Volumes I and II (Manual) as currently updated. This report addresses stormwater requirements and meets the intent of the guidelines and methodologies presented in the MDE document Environmental Site Design (ESD) Process & Computations dated July 2010.

General Site Information

The project reference is Tax Map 106, Tax Parcel 1665, Lots 1 & 2 and Parcel 2987 at 7906 Ocean Gateway with GC (General Commercial) zoning. The Limit of Disturbance (LOD) associated with the Humane Society re-development is 2.094 acres±. The project site is located entirely outside of the Chesapeake Bay Critical Area. Refer to the Site Improvement Plans for more detailed site information.

Figure 1: Aerial View of Site



Existing Conditions

The project site is comprised of the current Humane Society Building, an adjacent former dwelling (used as overflow office space for the Humane Society), and the former student parking for the Saints Peter & Paul Sports Fields. It is the intent of the project to abandon the property lines bifurcating these existing structures/uses.

Of note, the student parking lot was created in the early 2000s and has an existing stormwater feature that appears to be a Chapter 3 "Pocket Pond" or similar Water Quality (WQv) structure. At the time of this report, Lane Engineering and the Town are working to track down records of sizing criteria and other technical aspects of this facility. Due to the current ambiguity, this practice is excluded from the proposed project and any technical analysis at the concept stage – it will remain intact in its current condition unless & until more information becomes available to potentially retrofit current ESD standards/elements. See Appendix "D" for drawings of record.

The subject parcels and unrelated, adjacent, third-party properties utilize a shared Right-of-Way and commercial access point to US-50 that is to remain without significant alterations.

The site is predominantly mapped as Hambrook-Sassafras Complex (Hydrologic Group B) with a small portion of Woodstown Loam (Hydrologic Group C) according to the USDA soil maps.

Finally, existing impervious coverage (45,831 SF±) within the proposed project limits of (91,239 SF±) is in excess of 40%, qualifying the proposed project for stormwater redevelopment criteria.

Proposed Project

A new 12,906 SF± building with modern offices, kennels, medical facilities, and utilities will replace the existing Humane building, which is beyond its salvageable use. 47 parking spaces for guest and staff use will be provided. Due to the continuous need for operations, the current building will remain in operation for the duration of construction, with demolition of the existing building to occur later in the project.

In general, the existing use, function, and operation of the property will remain, but in a newly expanded facility to better suit community needs.

Stormwater Management

There are four primary drainage areas within the development area – providing lines of interest (LOI) or points of interest (POI) at opposite ends of the site. All study points ultimately discharge to the existing MDOT SHA swale adjacent to US-50, combining with other offsite sources of runoff not analyzed herein.

The stormwater management quality and quantity computations and management compliance are based on the overall proposed limits of disturbance (LOD) area, land cover and curve numbers, soil types, runoff characteristics and other parameters as required.

Stormwater Quantity Management

The existing property with the current Humane Society building is dominated by impervious coverage with runoff leaving the site completely unmanaged. Only the former student parking lot for the Saints Peter & Paul ball fields incorporated some form of stormwater management, not assessed herein. Under the baseline quantity controls described by the Manual, any reduction in lot coverage or other form of onsite management would provide an implicit reduction in the total 2- and 10-year runoff from the overall project. As the project is reducing lot coverage in the new layout, largely by providing or converting parking lot spaces to permeable pavers to satisfy ESD requirements, quantity management is readily achieved.

For the purposes of this concept report, the minimum functional conditions of the proposed pavers, as described in MDE's Environmental Site Design Process & Computations guidance, is assumed. Using permeable pavers throughout the project site and assuming a minimum effective reduced curve number (RCN) of 55 for pavers with a 12" stone base in Group B soils, the quantity goals are met. Additional geotechnical evaluation may indicate these pavers will function with a better RCN if onsite soils are more conducive to infiltration – additional stormwater methodology for quality and quantity may also become viable.

The site was analyzed using HydroCAD software, with the following results:

Study Point	***Peak Runoff (cfs)***					
	2-year		***10-year***		***100-year***	
	Pre	***Post***	***Pre***	***Post***	***Pre***	***Post***
1	0.48	0.36	0.78	0.75	1.14	1.23
2	0.62	0.54	1.55	1.11	2.82	1.84
3	1.57	1.33	2.82	2.42	4.33	3.75
4	1.55	1.14	2.96	2.84	4.71	5.20
Total Runoff Leaving Site	**4.22**	**3.37**	**8.11**	**7.12**	**13.00**	**12.02**
Goal met?	**3.37 < 4.22 (OK)**		**7.12 < 8.11 (OK)**		**--**	

As seen above, the peak runoff leaving the project site at all study points will be reduced under proposed conditions for the 2 and 10 year storm events.

Please see Appendices A for quantity management calculations and see Appendix C for drainage area maps.

Stormwater Quality Treatment

Existing coverage is 45,831± sf (50.23%) of a 2.094-acre (91,239± sf) project limits of disturbance. As such, the project qualifies for stormwater re-development (existing impervious coverage is greater than 40%) whereby half of all existing impervious surface (45,831 ± sf x ½ = 22,916± sf) must either be treated to a P_E of 1.0 inch or removed.

The proposed project, will employ significant alternative surfaces (permeable pavers) which are not considered impervious surfaces by the Manual. The result is a post construction lot coverage of 37,507± sf. Therefore, the proposed development results in a reduction in onsite impervious coverage by 8,324± sf which is deducted from the 22,916± sf impervious surface treatment target. The remaining coverage, 14,592± sf, in conjunction to a P_E of 1.0 inch is used to develop a site target of 1,155 cf.

The pavers will utilize a 12" stone base that provides 0.196 cf of ESD_v per square foot of pavement. Employing 7,666 sf of pavers throughout the site results in a treatment volume of 1,503 cf. Please see Appendix B for additional information.

The objective of stormwater quality treatment is to provide the target ESDv using Environmental Site Design (ESD) features/practices to the Maximum Extent Practicable (MEP) before utilizing structural stormwater practices from Chapter 3 of the Manual.

ESD Practices Evaluation

Alternative Surfaces

- Green Rooftops – The project employs a specific architectural aesthetic as part of their design. A green roof is not readily incorporated into this architecture and would also require significant maintenance in the long term. Portions of the roof may potentially host screened mechanical equipment.
- **Permeable Pavements** – Permeable pavements are ideal for redevelopment projects as they both reduce stormwater runoff and do not count towards onsite impervious coverage. Given site constraints and the desire to maximize the building footprint and current use, permeable pavements are ideal for this project.
- Reinforced Turf - Reinforced turf areas are commonly used for emergency equipment access or for areas that receive minimal vehicular use. Not applicable for a site dominated by vehicular use.

Nonstructural practices

- Disconnection of Rooftop Runoff – Not enough onsite greenspace (existing or proposed) to employ this practice to substantial effect.
- Disconnection of Non-Rooftop Runoff – Not enough onsite greenspace (existing or proposed) to employ this practice to substantial effect.
- Sheetflow to Conservation Area – Not applicable; No conservation areas are within or adjacent to the project.

Micro-scale practices

- Rainwater Harvesting – Opportunities for on-site reuse of harvested rainwater are limited. Operations and maintenance, especially during cold-weather periods, are also a concern.
- Submerged Gravel Wetlands – Onsite space is limited for micro-scale practices without reducing the overall functionality & onsite circulation of the project. Mapped soils do not support the use of this practice.
- Landscape Infiltration – There is potential for a form of infiltration-based practices. Additional soil investigation may present an opportunity to implement this practice in the preliminary design phase of this project, if in-situ conditions support it.
- Infiltration Berms – The requirements of the proposed development do not leave enough room for the implementation of this practice.
- Dry Wells – This could be a viable practice for portions of the new building's roof, contingent upon additional geotechnical investigations.
- Micro-Bioretention – Onsite space is limited for micro-scale practices without reducing the overall functionality & onsite circulation of the project.
- Rain Gardens – This practice is better suited for residential environments.
- Swales – swales do not fit within the constraints of the site.

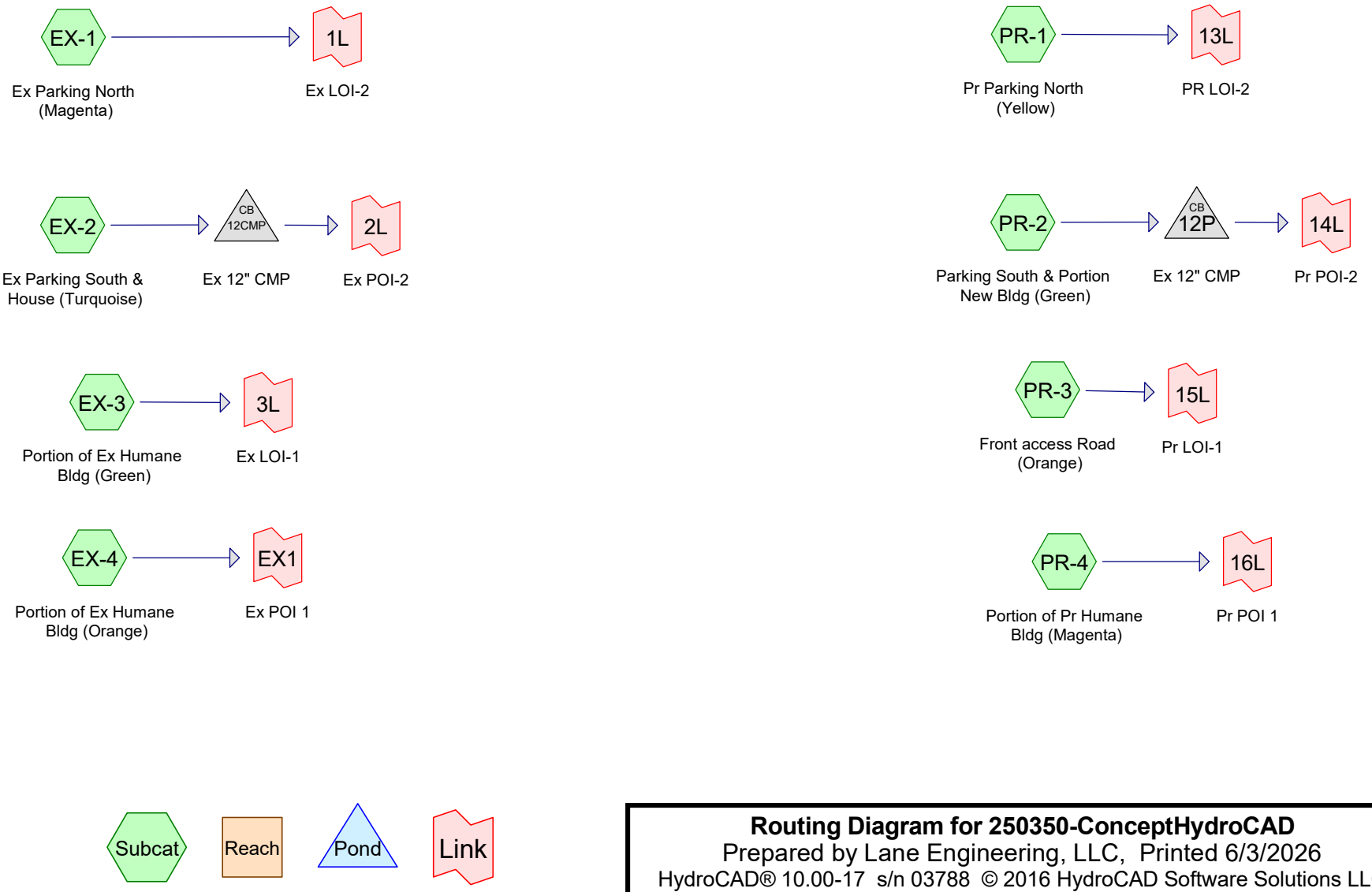
Permeable Pavers (A-2) are proposed to address the ESDv requirement. The total ESDv provided by these practices is 1,503 cf, which is greater than the 1,155 cf required. Therefore, ESD has been achieved to the MEP. Refer to Appendix B for calculations.

Conclusion

This stormwater management analysis indicates that the proposed design will successfully meet stormwater quality and quantity requirements. It is respectfully requested that the concept stormwater analysis and project design be approved as presented.

APPENDIX A

HYDROCAD QUANTITY MANAGEMENT ANALYSIS



Routing Diagram for 250350-ConceptHydroCAD
Prepared by Lane Engineering, LLC, Printed 6/3/2026
HydroCAD® 10.00-17 s/n 03788 © 2016 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.746	61	>75% Grass cover, Good, HSG B (EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3, PR-4)
0.350	74	>75% Grass cover, Good, HSG C (EX-2, EX-4, PR-4)
1.535	98	Bldg Roof & Parking Group B (EX-2, EX-3, EX-4, PR-2, PR-3, PR-4)
0.021	98	Bldg Roof & Parking Group C (EX-4, PR-4)
0.002	98	Bldg Roof Group C (EX-2)
0.138	98	Courtyard Roof via Rain Leader (PR-3)
0.216	98	Parking (EX-1, PR-1)
0.074	55	Perm. Pavers (PR-2)
0.106	55	Woods, Good, HSG B (PR-1, PR-4)
4.189	**79**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.852	HSG B	EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3, PR-4
0.350	HSG C	EX-2, EX-4, PR-4
0.000	HSG D	
1.987	Other	EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3, PR-4
4.189		**TOTAL AREA**

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	1.746	0.350	0.000	0.000	2.096	>75% Grass cover, Good	EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3, PR-4
0.000	0.000	0.000	0.000	1.535	1.535	Bldg Roof & Parking Group B	EX-2, EX-3, EX-4, PR-2, PR-3, PR-4
0.000	0.000	0.000	0.000	0.021	0.021	Bldg Roof & Parking Group C	EX-4, PR-4
0.000	0.000	0.000	0.000	0.002	0.002	Bldg Roof Group C	EX-2
0.000	0.000	0.000	0.000	0.138	0.138	Courtyard Roof via Rain Leader	PR-3
0.000	0.000	0.000	0.000	0.216	0.216	Parking	EX-1, PR-1
0.000	0.000	0.000	0.000	0.074	0.074	Perm. Pavers	PR-2
0.000	0.106	0.000	0.000	0.000	0.106	Woods, Good	PR-1, PR-4
0.000	**1.852**	**0.350**	**0.000**	**1.987**	**4.189**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	12CMP	34.12	33.74	45.6	0.0083	0.025	12.0	0.0	0.0
2	12P	34.12	33.74	45.6	0.0083	0.025	12.0	0.0	0.0

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: Ex Parking North (Magenta) Runoff Area=5,738 sf 93.05% Impervious Runoff Depth>2.84"
Tc=6.0 min CN=95 Runoff=0.48 cfs 0.031 af

Subcatchment EX-2: Ex Parking South & House (Turquoise) Runoff Area=34,549 sf 27.79% Impervious Runoff Depth>1.05"
Flow Length=409' Slope=0.0350 '/' Tc=16.6 min CN=72 Runoff=0.62 cfs 0.069 af

Subcatchment EX-3: Portion of Ex Humane Bldg (Green) Runoff Area=23,662 sf 70.32% Impervious Runoff Depth>2.09"
Tc=6.0 min CN=87 Runoff=1.57 cfs 0.095 af

Subcatchment EX-4: Portion of Ex Humane Bldg (Orange) Runoff Area=27,291 sf 52.17% Impervious Runoff Depth>1.77"
Tc=6.0 min CN=83 Runoff=1.55 cfs 0.092 af

Subcatchment PR-1: Pr Parking North (Yellow) Runoff Area=7,665 sf 53.32% Impervious Runoff Depth>1.48"
Tc=6.0 min CN=79 Runoff=0.36 cfs 0.022 af

Subcatchment PR-2: Parking South & Portion New Bldg (Green) Runoff Area=16,297 sf 55.51% Impervious Runoff Depth>1.55"
Flow Length=215' Tc=13.3 min CN=80 Runoff=0.54 cfs 0.048 af

Subcatchment PR-3: Front access Road (Orange) Runoff Area=20,757 sf 67.50% Impervious Runoff Depth>2.01"
Tc=6.0 min CN=86 Runoff=1.33 cfs 0.080 af

Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta) Runoff Area=46,520 sf 22.27% Impervious Runoff Depth>1.00"
Flow Length=367' Tc=9.2 min CN=71 Runoff=1.14 cfs 0.089 af

Pond 12CMP: Ex 12" CMP Peak Elev=34.67' Inflow=0.62 cfs 0.069 af
12.0" Round Culvert n=0.025 L=45.6' S=0.0083 '/' Outflow=0.62 cfs 0.069 af

Pond 12P: Ex 12" CMP Peak Elev=34.63' Inflow=0.54 cfs 0.048 af
12.0" Round Culvert n=0.025 L=45.6' S=0.0083 '/' Outflow=0.54 cfs 0.048 af

Link 1L: Ex LOI-2 Inflow=0.48 cfs 0.031 af
Primary=0.48 cfs 0.031 af

Link 2L: Ex POI-2
Inflow=0.62 cfs 0.069 af
Primary=0.62 cfs 0.069 af

Link 3L: Ex LOI-1
Inflow=1.57 cfs 0.095 af
Primary=1.57 cfs 0.095 af

Link 13L: PR LOI-2
Inflow=0.36 cfs 0.022 af
Primary=0.36 cfs 0.022 af

Link 14L: Pr POI-2
Inflow=0.54 cfs 0.048 af
Primary=0.54 cfs 0.048 af

Link 15L: Pr LOI-1
Inflow=1.33 cfs 0.080 af
Primary=1.33 cfs 0.080 af

Link 16L: Pr POI 1
Inflow=1.14 cfs 0.089 af
Primary=1.14 cfs 0.089 af

Link EX1: Ex POI 1
Inflow=1.55 cfs 0.092 af
Primary=1.55 cfs 0.092 af

Total Runoff Area = 4.189 ac Runoff Volume = 0.526 af Average Runoff Depth = 1.51"
54.34% Pervious = 2.276 ac 45.66% Impervious = 1.913 ac

Summary for Subcatchment EX-1: Ex Parking North (Magenta)

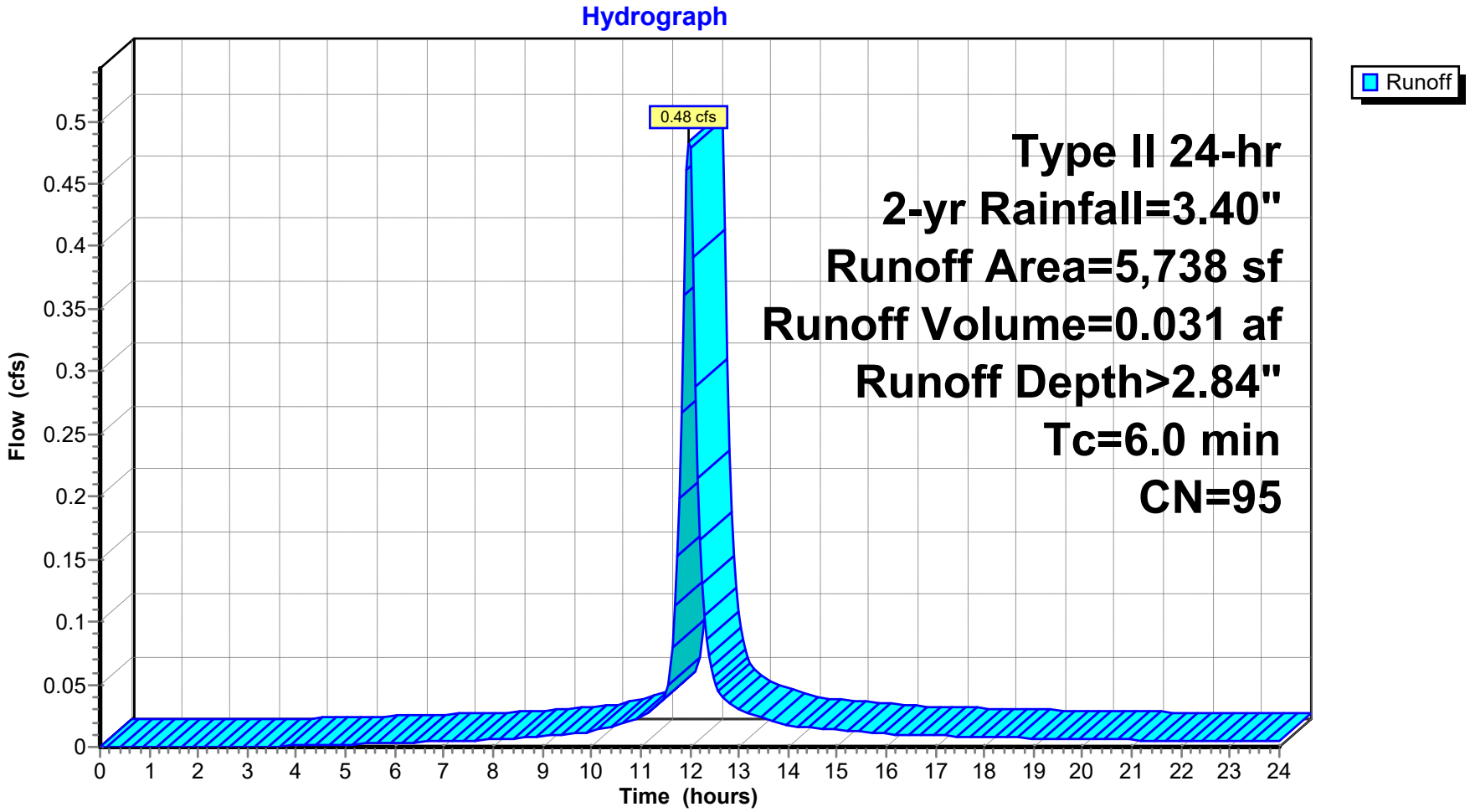
Runoff = 0.48 cfs @ 11.98 hrs, Volume= 0.031 af, Depth> 2.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	5,339	98	Parking
	399	61	>75% Grass cover, Good, HSG B
	5,738	95	Weighted Average
	399		6.95% Pervious Area
	5,339		93.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-1: Ex Parking North (Magenta)



Summary for Subcatchment EX-2: Ex Parking South & House (Turquoise)

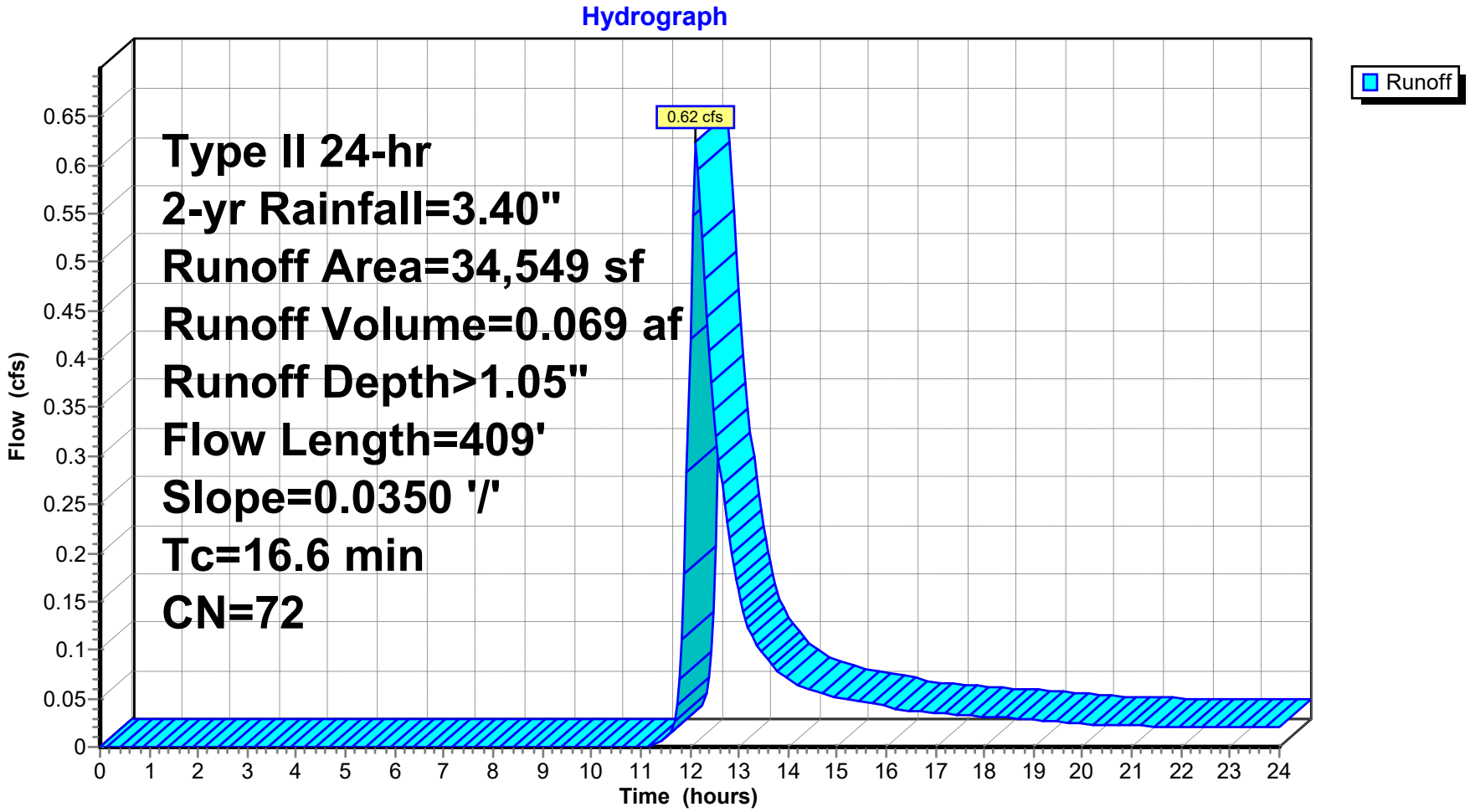
Runoff = 0.62 cfs @ 12.12 hrs, Volume= 0.069 af, Depth> 1.05"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	22,564	61	>75% Grass cover, Good, HSG B
*	93	98	Bldg Roof Group C
	2,383	74	>75% Grass cover, Good, HSG C
*	9,509	98	Bldg Roof & Parking Group B
	34,549	72	Weighted Average
	24,947		72.21% Pervious Area
	9,602		27.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	150	0.0350	0.24		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 3.40"
0.2	43	0.0350	3.01		**Shallow Concentrated Flow, Lawn** Unpaved Kv= 16.1 fps
5.9	216	0.0350	0.61	1.16	**Channel Flow, Parking lot swale** Area= 1.9 sf Perim= 10.1' r= 0.19' n= 0.150 Sheet flow over Short Grass
16.6	409	Total			

Subcatchment EX-2: Ex Parking South & House (Turquoise)



Summary for Subcatchment EX-3: Portion of Ex Humane Bldg (Green)

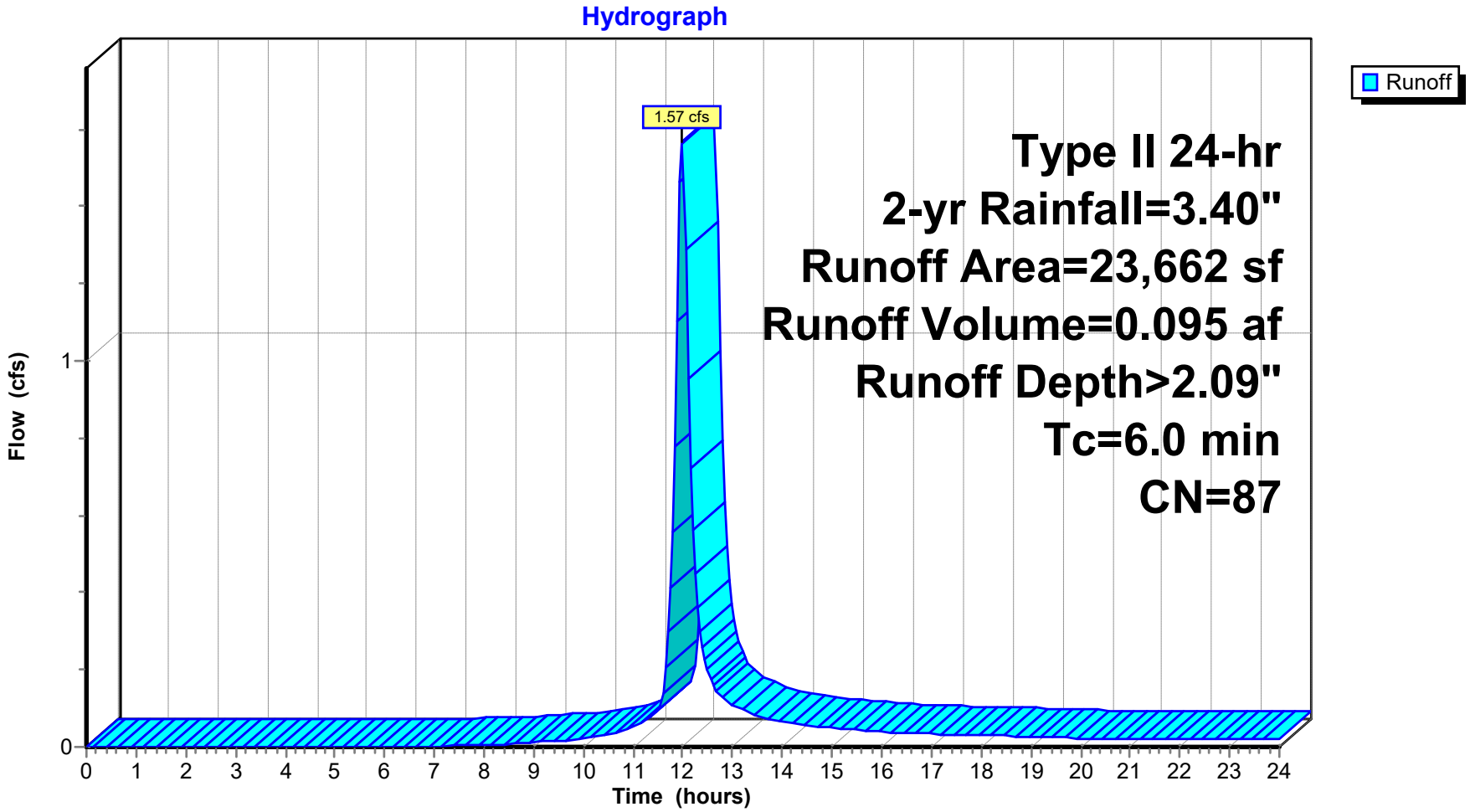
Runoff = 1.57 cfs @ 11.99 hrs, Volume= 0.095 af, Depth> 2.09"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	7,022	61	>75% Grass cover, Good, HSG B
*	16,640	98	Bldg Roof & Parking Group B
	23,662	87	Weighted Average
	7,022		29.68% Pervious Area
	16,640		70.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-3: Portion of Ex Humane Bldg (Green)



Summary for Subcatchment EX-4: Portion of Ex Humane Bldg (Orange)

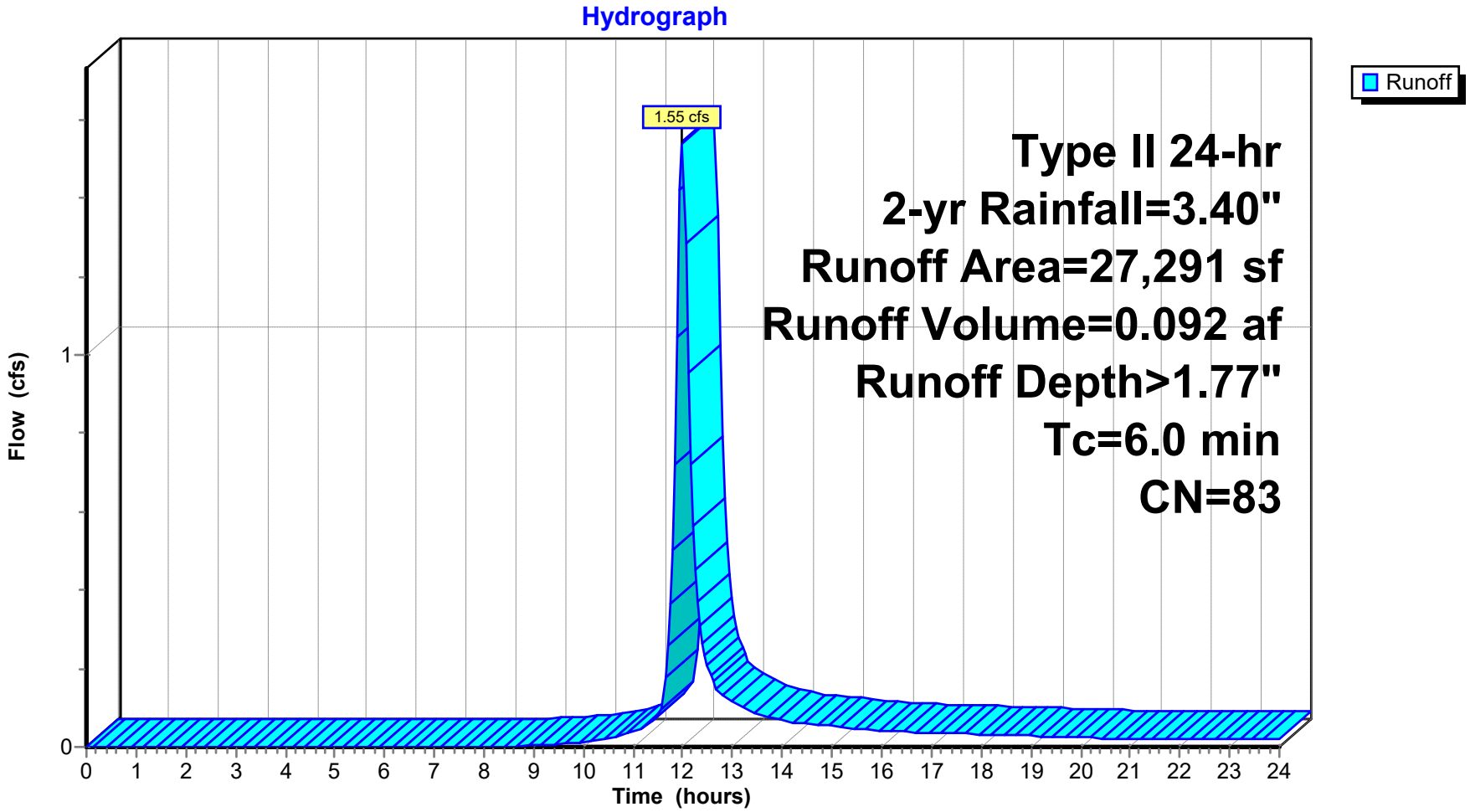
Runoff = 1.55 cfs @ 11.99 hrs, Volume= 0.092 af, Depth> 1.77"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	4,936	74	>75% Grass cover, Good, HSG C
*	732	98	Bldg Roof & Parking Group C
*	13,506	98	Bldg Roof & Parking Group B
	8,117	61	>75% Grass cover, Good, HSG B
	27,291	83	Weighted Average
	13,053		47.83% Pervious Area
	14,238		52.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-4: Portion of Ex Humane Bldg (Orange)



Summary for Subcatchment PR-1: Pr Parking North (Yellow)

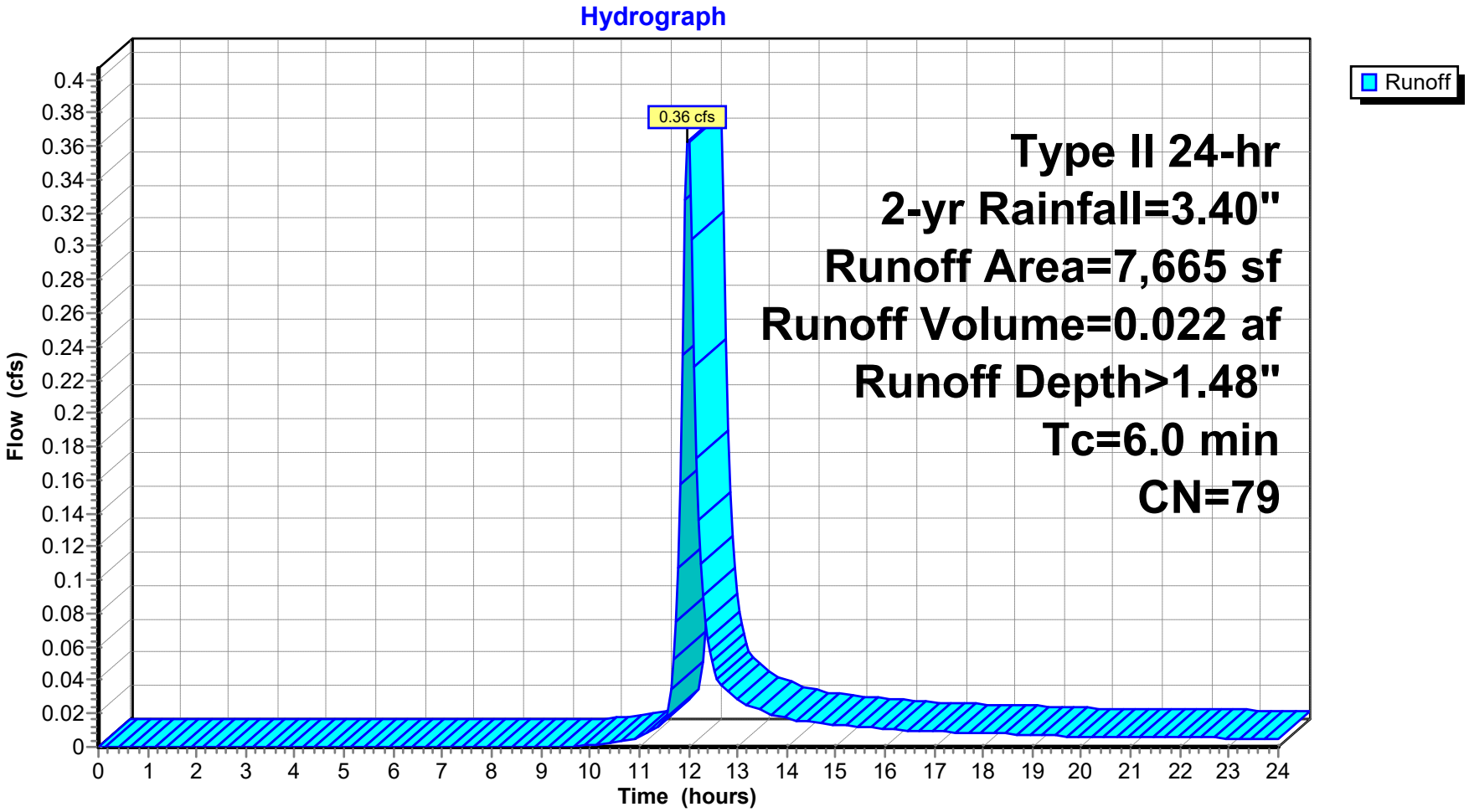
Runoff = 0.36 cfs @ 11.99 hrs, Volume= 0.022 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
*	4,087	98	Parking
	1,148	61	>75% Grass cover, Good, HSG B
	2,430	55	Woods, Good, HSG B
	7,665	79	Weighted Average
	3,578		46.68% Pervious Area
	4,087		53.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment PR-1: Pr Parking North (Yellow)



Summary for Subcatchment PR-2: Parking South & Portion New Bldg (Green)

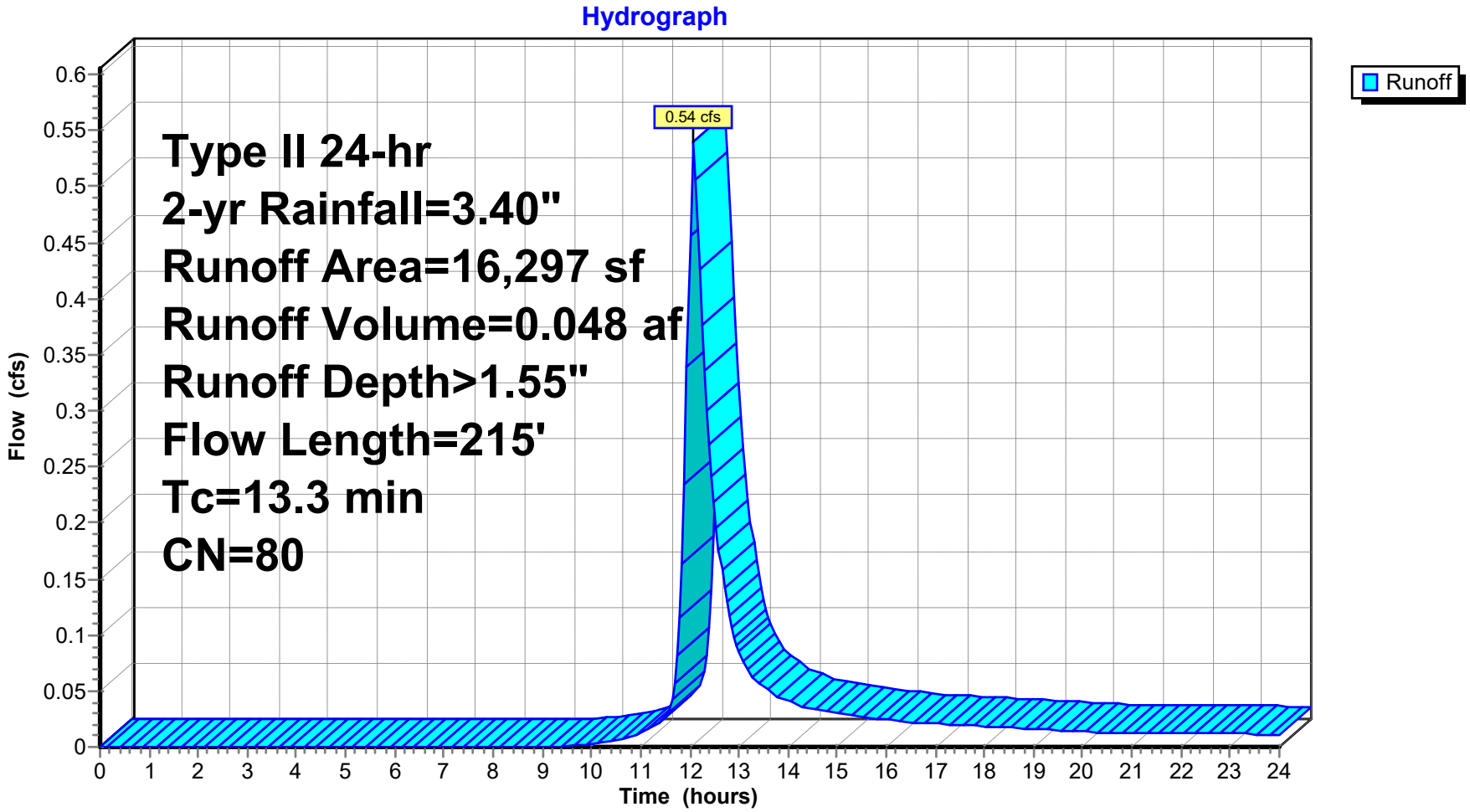
Runoff = 0.54 cfs @ 12.07 hrs, Volume= 0.048 af, Depth> 1.55"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	4,028	61	>75% Grass cover, Good, HSG B
*	9,047	98	Bldg Roof & Parking Group B
*	3,222	55	Perm. Pavers
	16,297	80	Weighted Average
	7,250		44.49% Pervious Area
	9,047		55.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	64	0.0200	1.30		**Sheet Flow, asphalt** Smooth surfaces n= 0.011 P2= 3.40"
11.4	47	0.0200	0.07		**Sheet Flow, pavers** Woods: Light underbrush n= 0.400 P2= 3.40"
1.1	104	0.0060	1.57		**Shallow Concentrated Flow, gutter** Paved Kv= 20.3 fps
13.3	215	Total			

Subcatchment PR-2: Parking South & Portion New Bldg (Green)



Summary for Subcatchment PR-3: Front access Road (Orange)

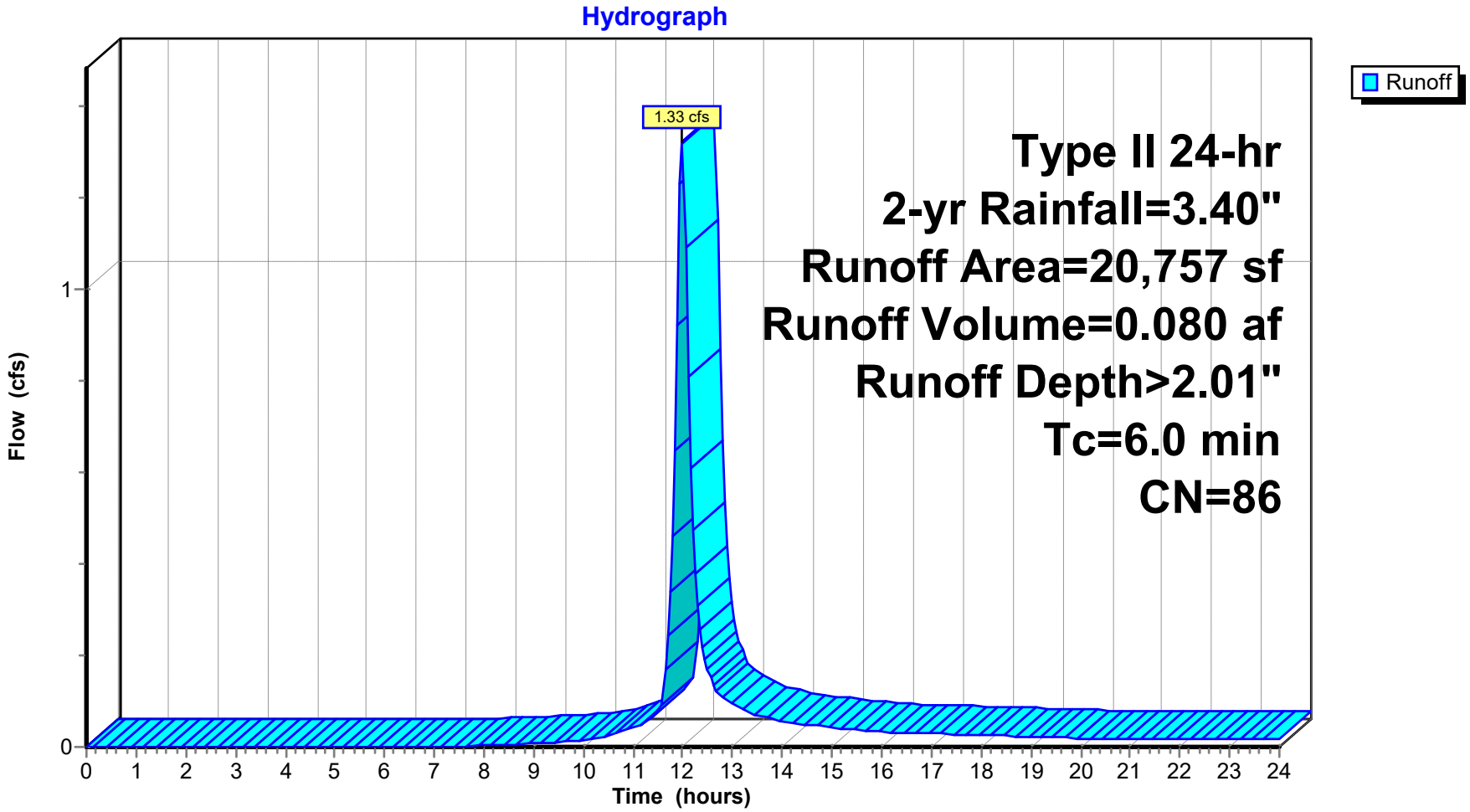
Runoff = 1.33 cfs @ 11.99 hrs, Volume= 0.080 af, Depth> 2.01"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	6,746	61	>75% Grass cover, Good, HSG B
*	8,015	98	Bldg Roof & Parking Group B
*	5,996	98	Courtyard Roof via Rain Leader
	20,757	86	Weighted Average
	6,746		32.50% Pervious Area
	14,011		67.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment PR-3: Front access Road (Orange)



Summary for Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta)

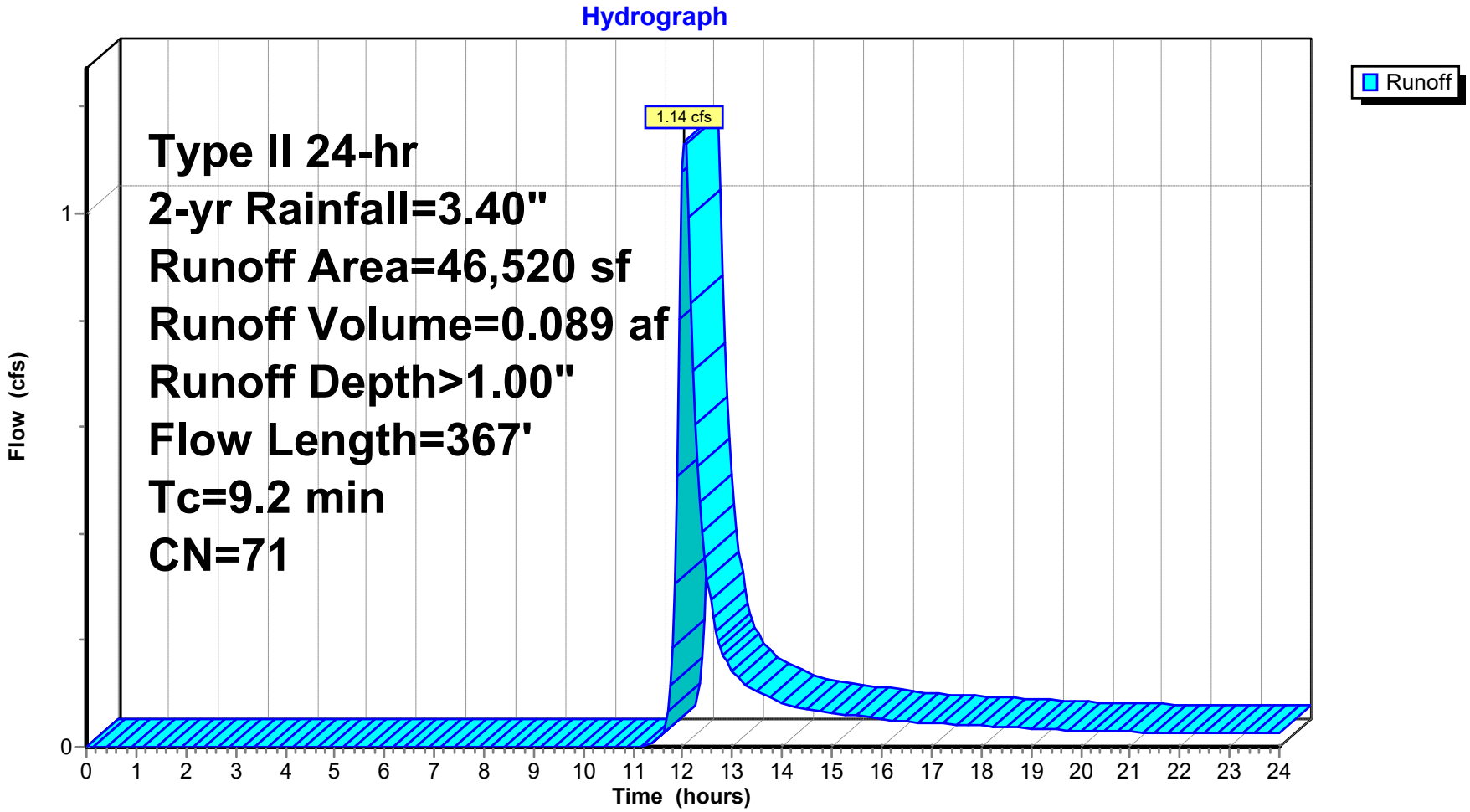
Runoff = 1.14 cfs @ 12.04 hrs, Volume= 0.089 af, Depth> 1.00"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=3.40"

	Area (sf)	CN	Description
	7,939	74	>75% Grass cover, Good, HSG C
*	204	98	Bldg Roof & Parking Group C
*	10,157	98	Bldg Roof & Parking Group B
	26,027	61	>75% Grass cover, Good, HSG B
	2,193	55	Woods, Good, HSG B
	46,520	71	Weighted Average
	36,159		77.73% Pervious Area
	10,361		22.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	150	0.1000	0.36		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 3.40"
2.3	217	0.0060	1.57		**Shallow Concentrated Flow, gutterpan** Paved Kv= 20.3 fps
9.2	367	Total			

Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta)



Summary for Pond 12CMP: Ex 12" CMP

[57] Hint: Peaked at 34.67' (Flood elevation advised)

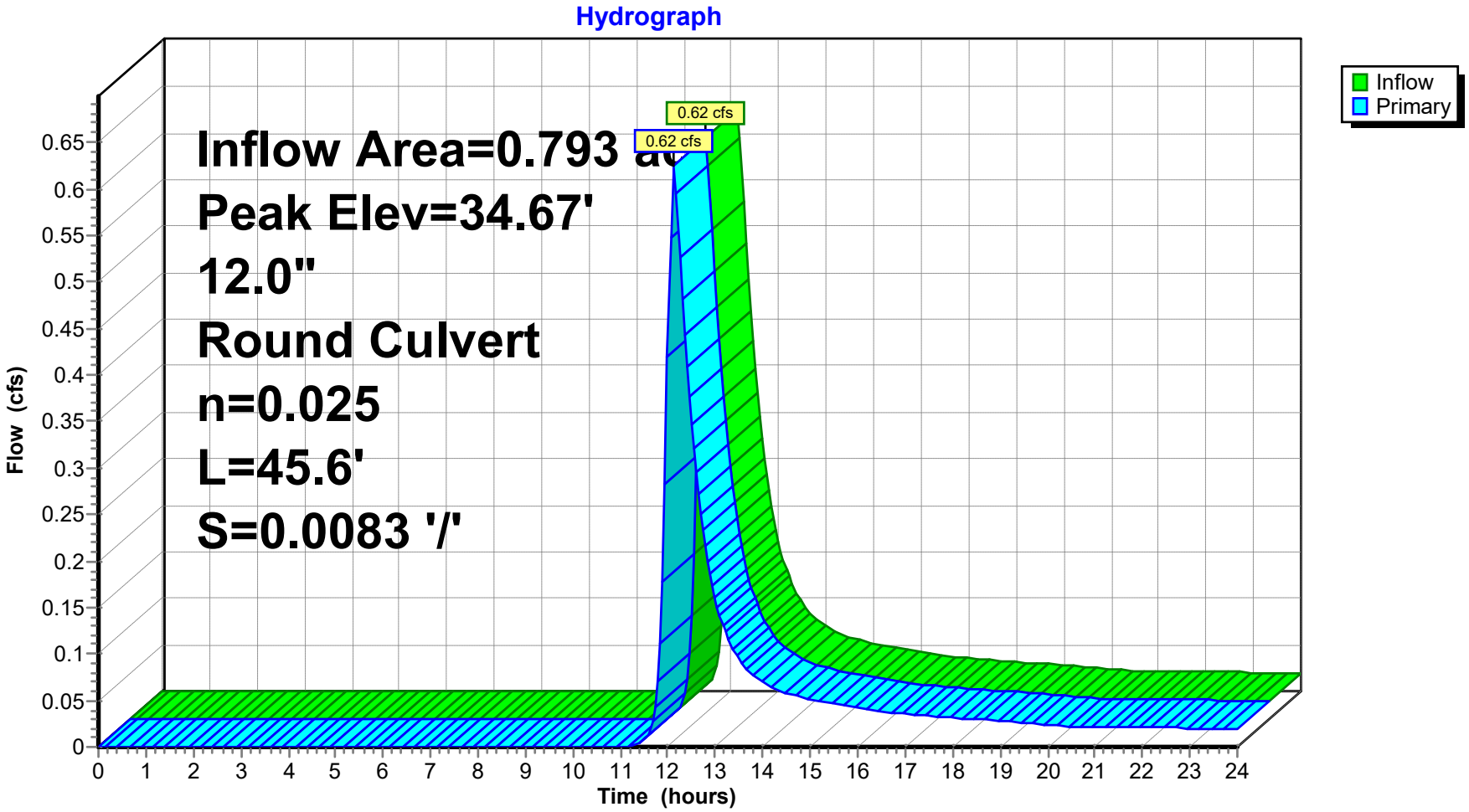
Inflow Area = 0.793 ac, 27.79% Impervious, Inflow Depth > 1.05" for 2-yr event
Inflow = 0.62 cfs @ 12.12 hrs, Volume= 0.069 af
Outflow = 0.62 cfs @ 12.12 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min
Primary = 0.62 cfs @ 12.12 hrs, Volume= 0.069 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 34.67' @ 12.12 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	34.12'	**12.0" Round Ex 12" CMP** L= 45.6' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.12' / 33.74' S= 0.0083 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.62 cfs @ 12.12 hrs HW=34.67' TW=0.00' (Dynamic Tailwater)
1=Ex 12" CMP (Barrel Controls 0.62 cfs @ 2.01 fps)

Pond 12CMP: Ex 12" CMP



Summary for Pond 12P: Ex 12" CMP

[57] Hint: Peaked at 34.63' (Flood elevation advised)

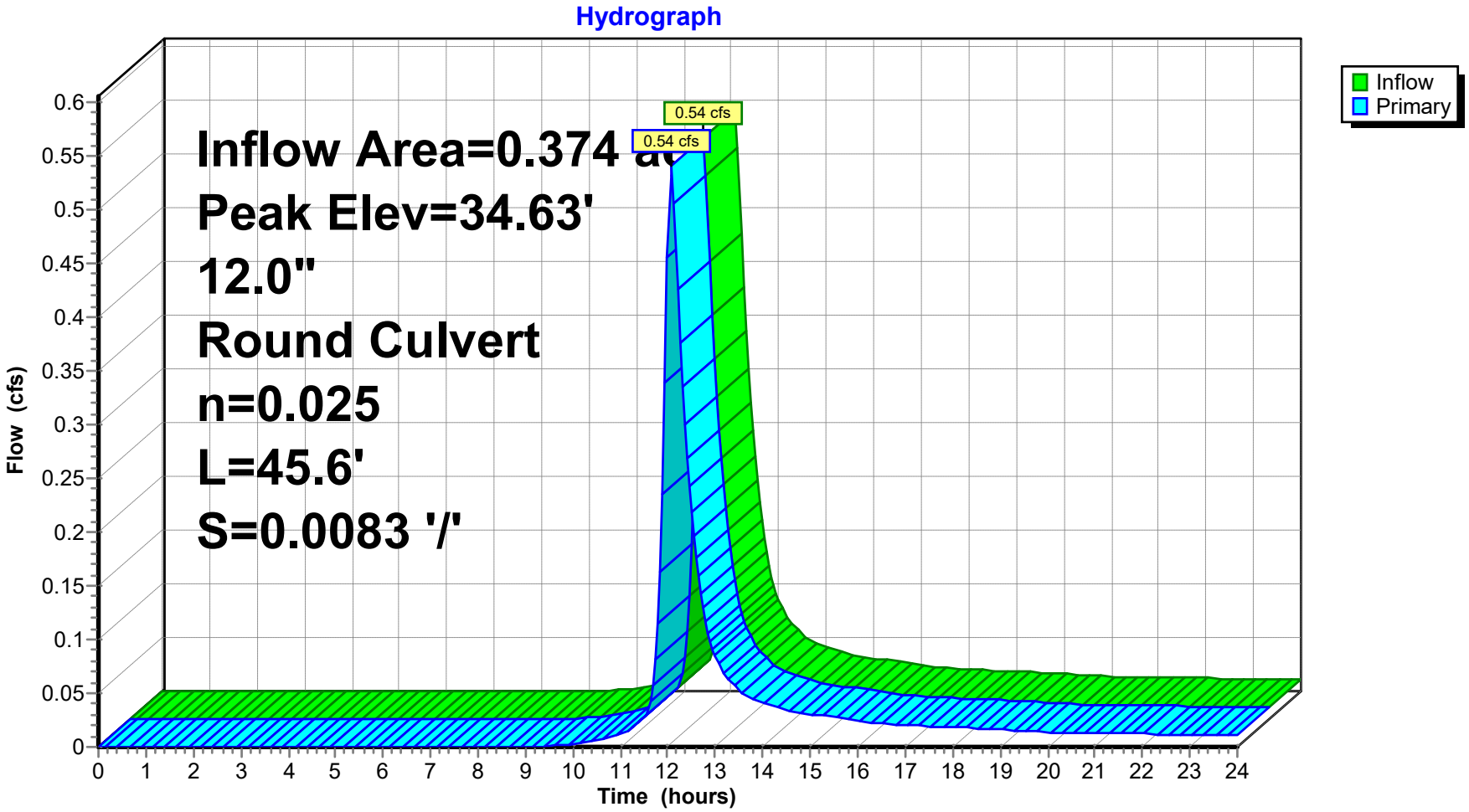
Inflow Area = 0.374 ac, 55.51% Impervious, Inflow Depth > 1.55" for 2-yr event
Inflow = 0.54 cfs @ 12.07 hrs, Volume= 0.048 af
Outflow = 0.54 cfs @ 12.07 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min
Primary = 0.54 cfs @ 12.07 hrs, Volume= 0.048 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 34.63' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	34.12'	**12.0" Round Ex 12" CMP** L= 45.6' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.12' / 33.74' S= 0.0083 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=0.53 cfs @ 12.07 hrs HW=34.63' TW=0.00' (Dynamic Tailwater)
↑**1=Ex 12" CMP** (Barrel Controls 0.53 cfs @ 1.93 fps)

Pond 12P: Ex 12" CMP

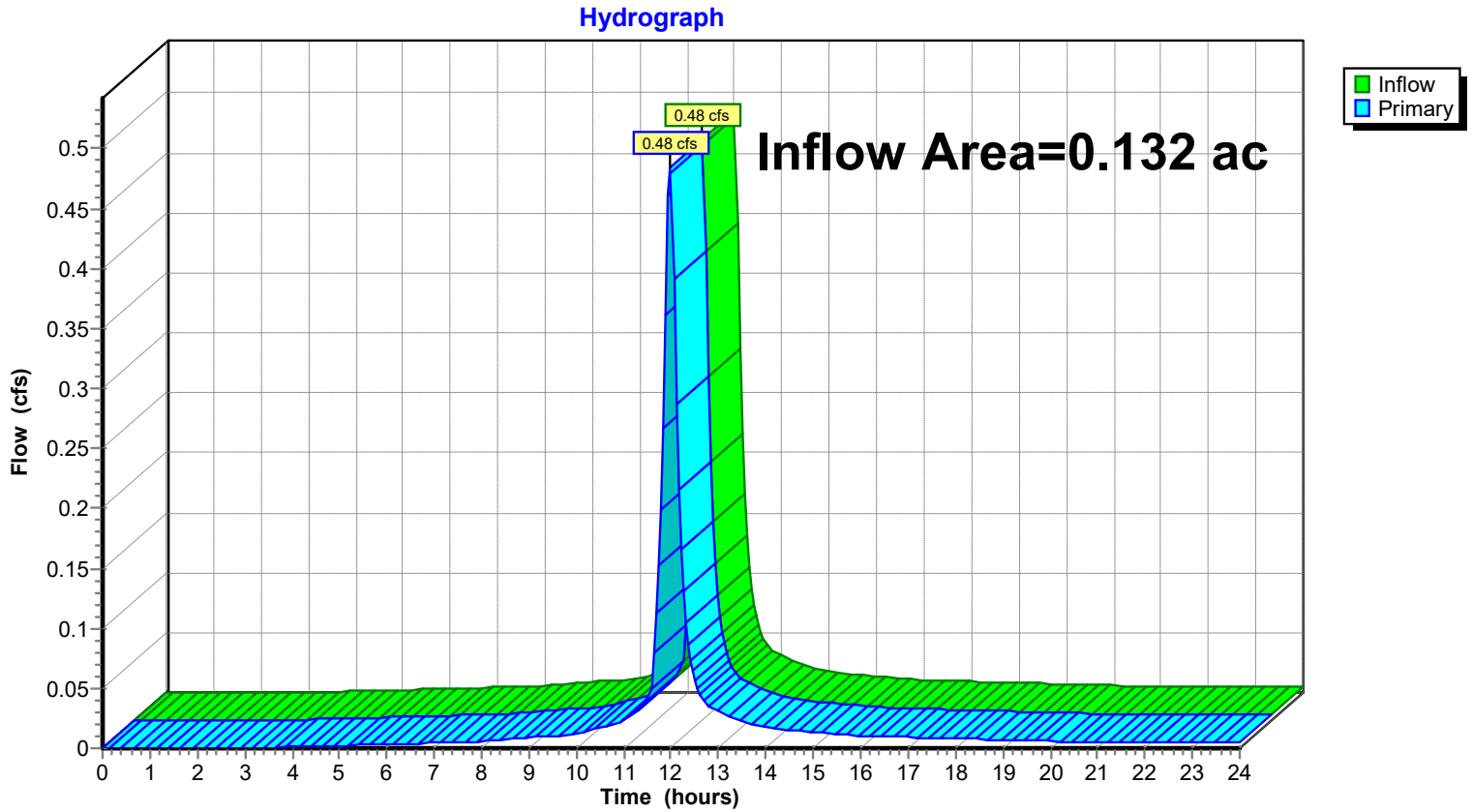


Summary for Link 1L: Ex LOI-2

Inflow Area = 0.132 ac, 93.05% Impervious, Inflow Depth > 2.84" for 2-yr event
Inflow = 0.48 cfs @ 11.98 hrs, Volume= 0.031 af
Primary = 0.48 cfs @ 11.98 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Ex LOI-2

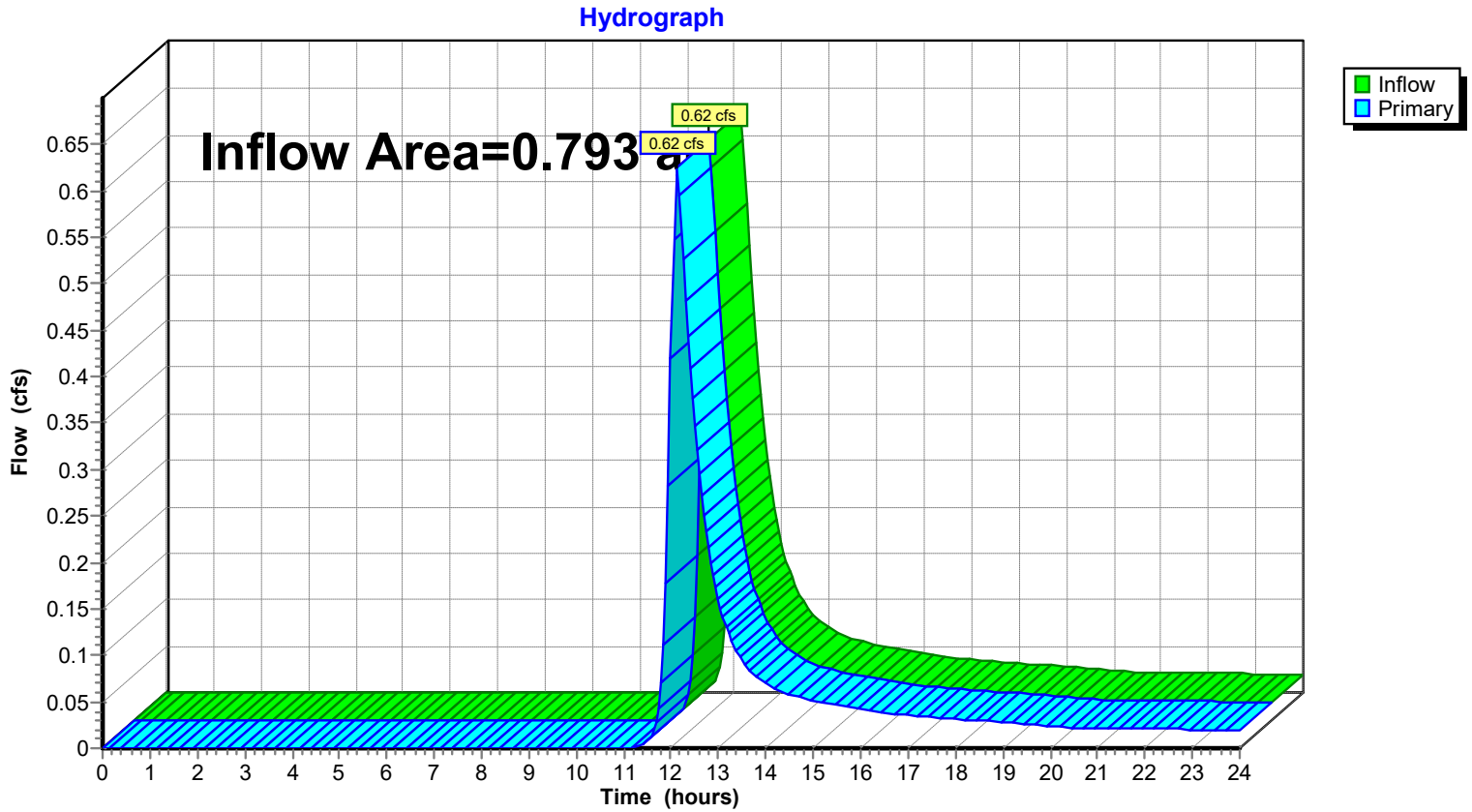


Summary for Link 2L: Ex POI-2

Inflow Area = 0.793 ac, 27.79% Impervious, Inflow Depth > 1.05" for 2-yr event
Inflow = 0.62 cfs @ 12.12 hrs, Volume= 0.069 af
Primary = 0.62 cfs @ 12.12 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Ex POI-2

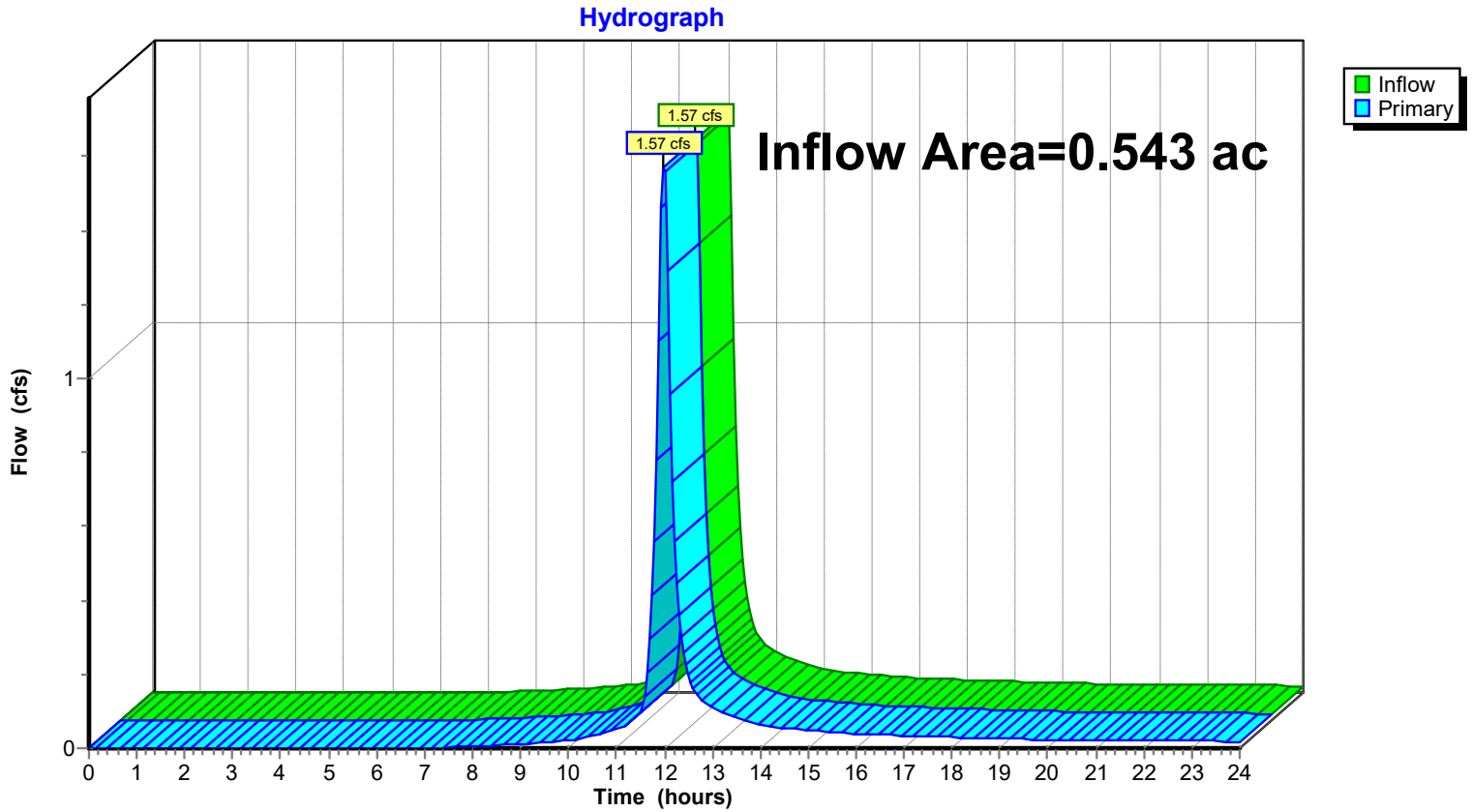


Summary for Link 3L: Ex LOI-1

Inflow Area = 0.543 ac, 70.32% Impervious, Inflow Depth > 2.09" for 2-yr event
Inflow = 1.57 cfs @ 11.99 hrs, Volume= 0.095 af
Primary = 1.57 cfs @ 11.99 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: Ex LOI-1

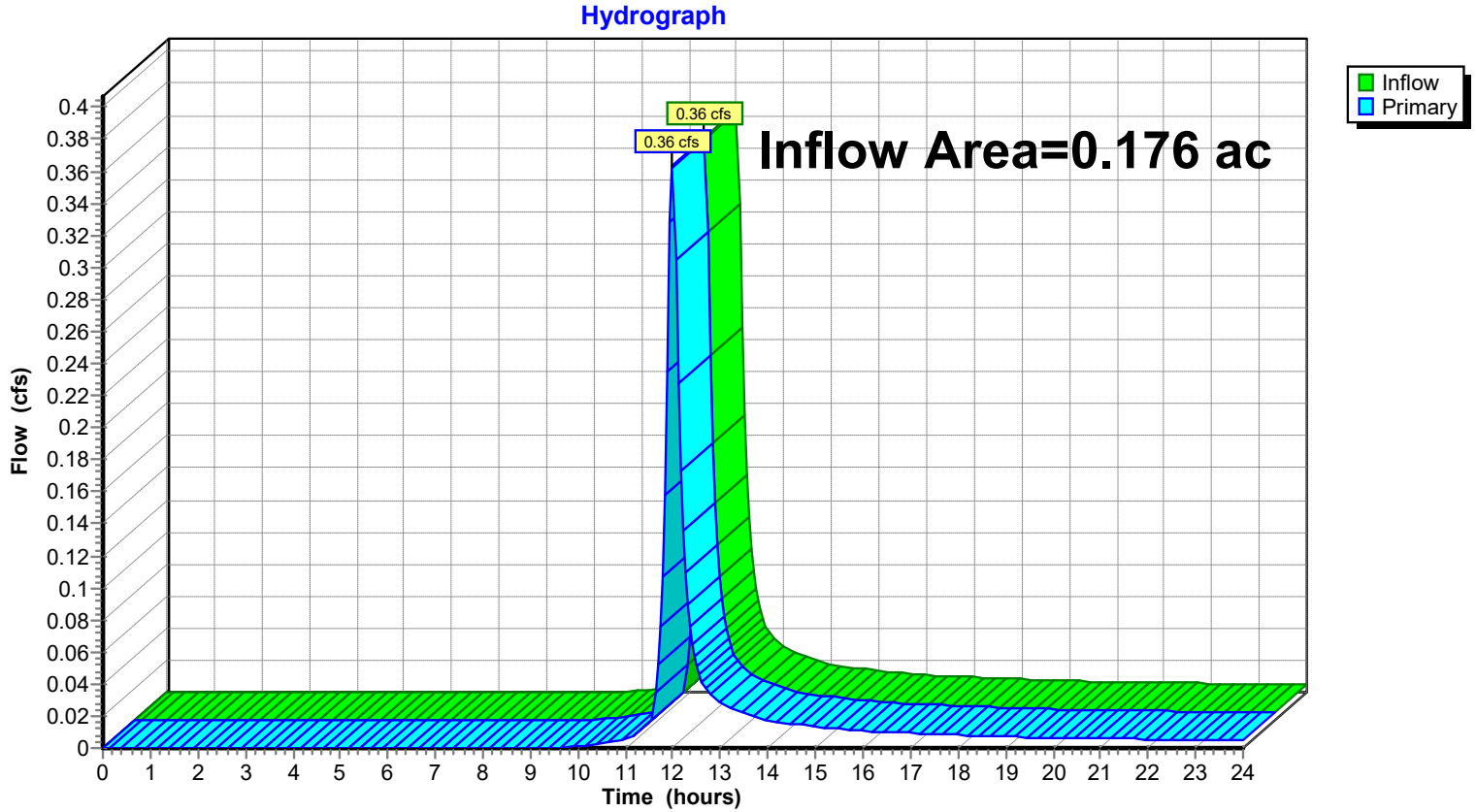


Summary for Link 13L: PR LOI-2

Inflow Area = 0.176 ac, 53.32% Impervious, Inflow Depth > 1.48" for 2-yr event
Inflow = 0.36 cfs @ 11.99 hrs, Volume= 0.022 af
Primary = 0.36 cfs @ 11.99 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 13L: PR LOI-2

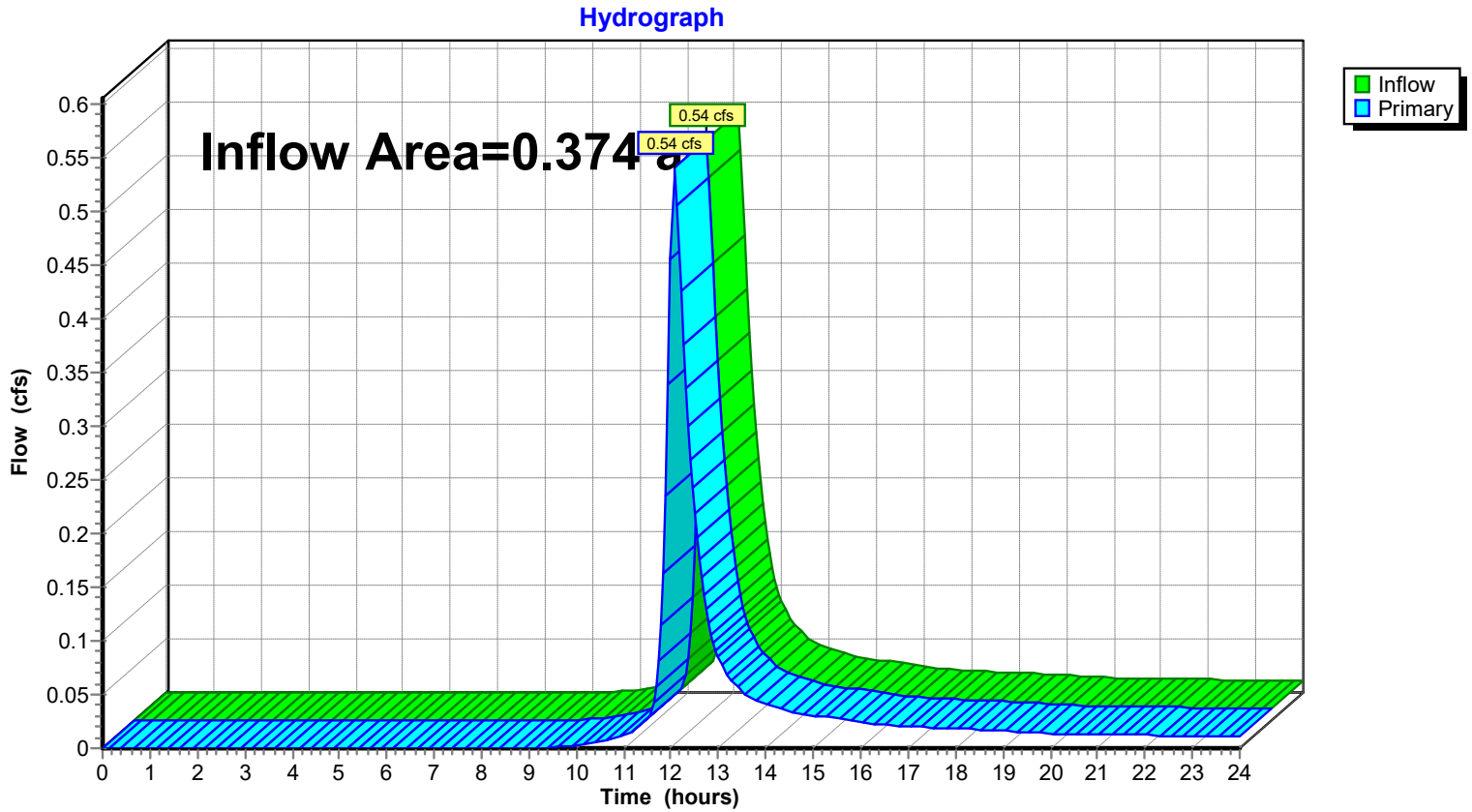


Summary for Link 14L: Pr POI-2

Inflow Area = 0.374 ac, 55.51% Impervious, Inflow Depth > 1.55" for 2-yr event
Inflow = 0.54 cfs @ 12.07 hrs, Volume= 0.048 af
Primary = 0.54 cfs @ 12.07 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 14L: Pr POI-2

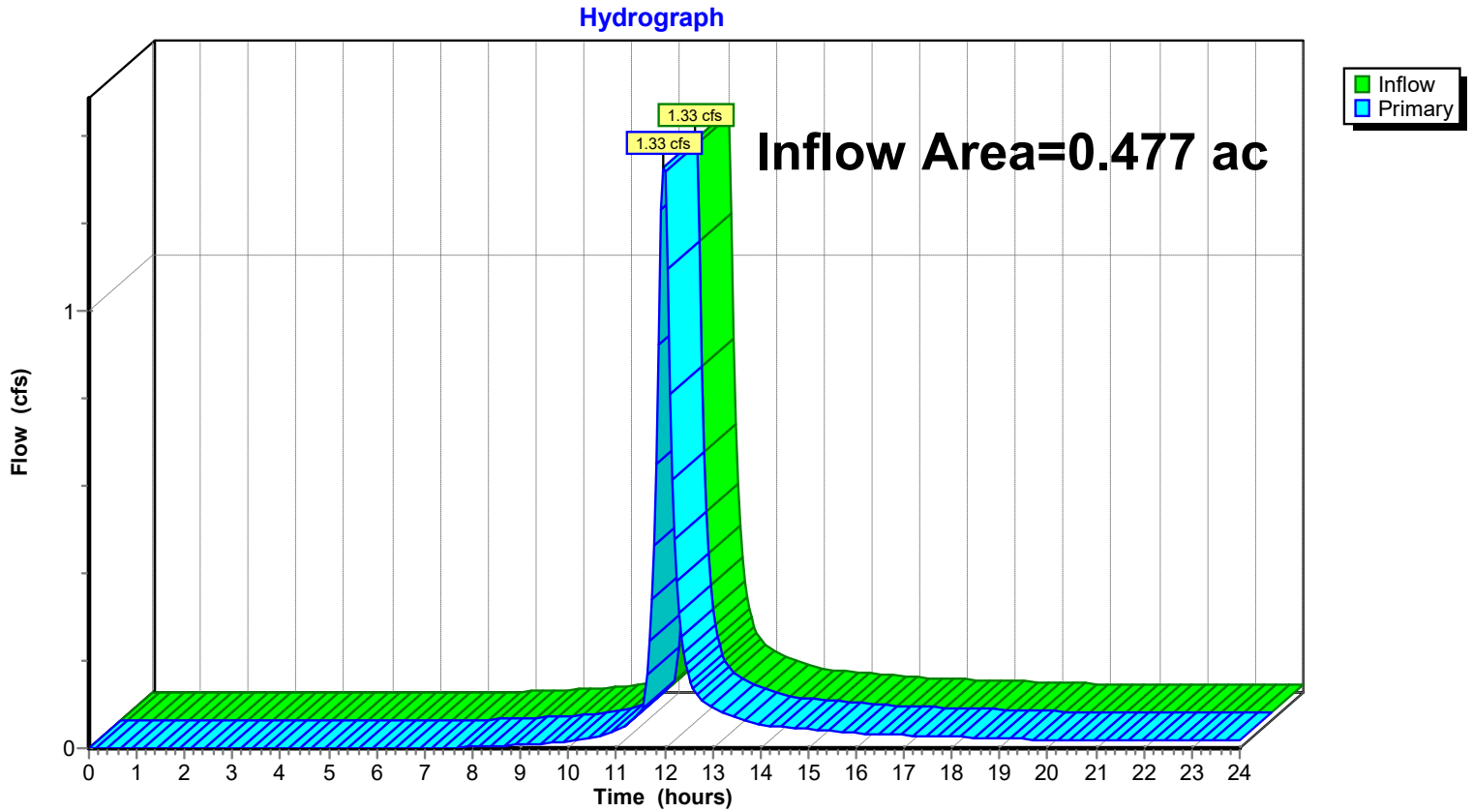


Summary for Link 15L: Pr LOI-1

Inflow Area = 0.477 ac, 67.50% Impervious, Inflow Depth > 2.01" for 2-yr event
Inflow = 1.33 cfs @ 11.99 hrs, Volume= 0.080 af
Primary = 1.33 cfs @ 11.99 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 15L: Pr LOI-1

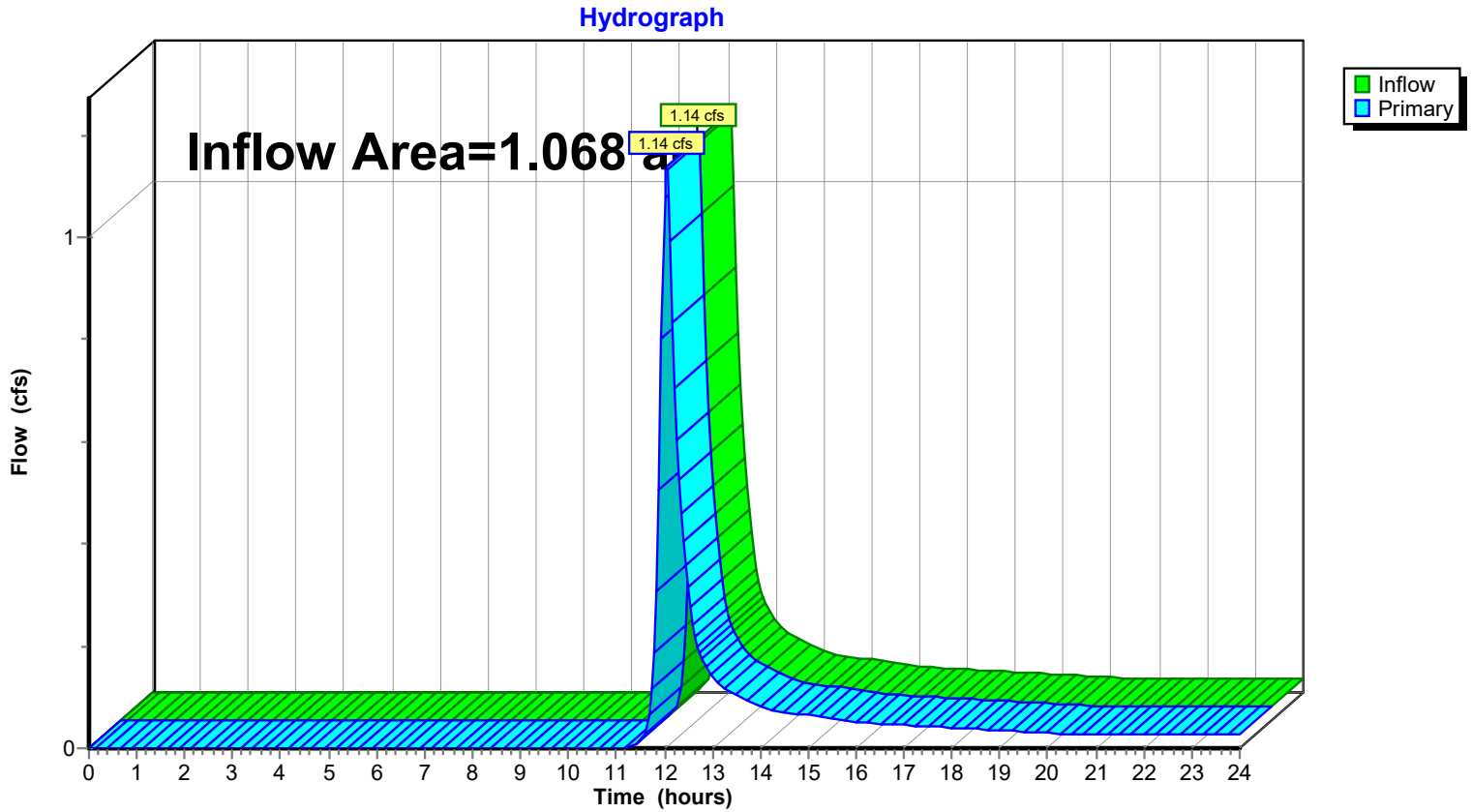


Summary for Link 16L: Pr POI 1

Inflow Area = 1.068 ac, 22.27% Impervious, Inflow Depth > 1.00" for 2-yr event
Inflow = 1.14 cfs @ 12.04 hrs, Volume= 0.089 af
Primary = 1.14 cfs @ 12.04 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 16L: Pr POI 1

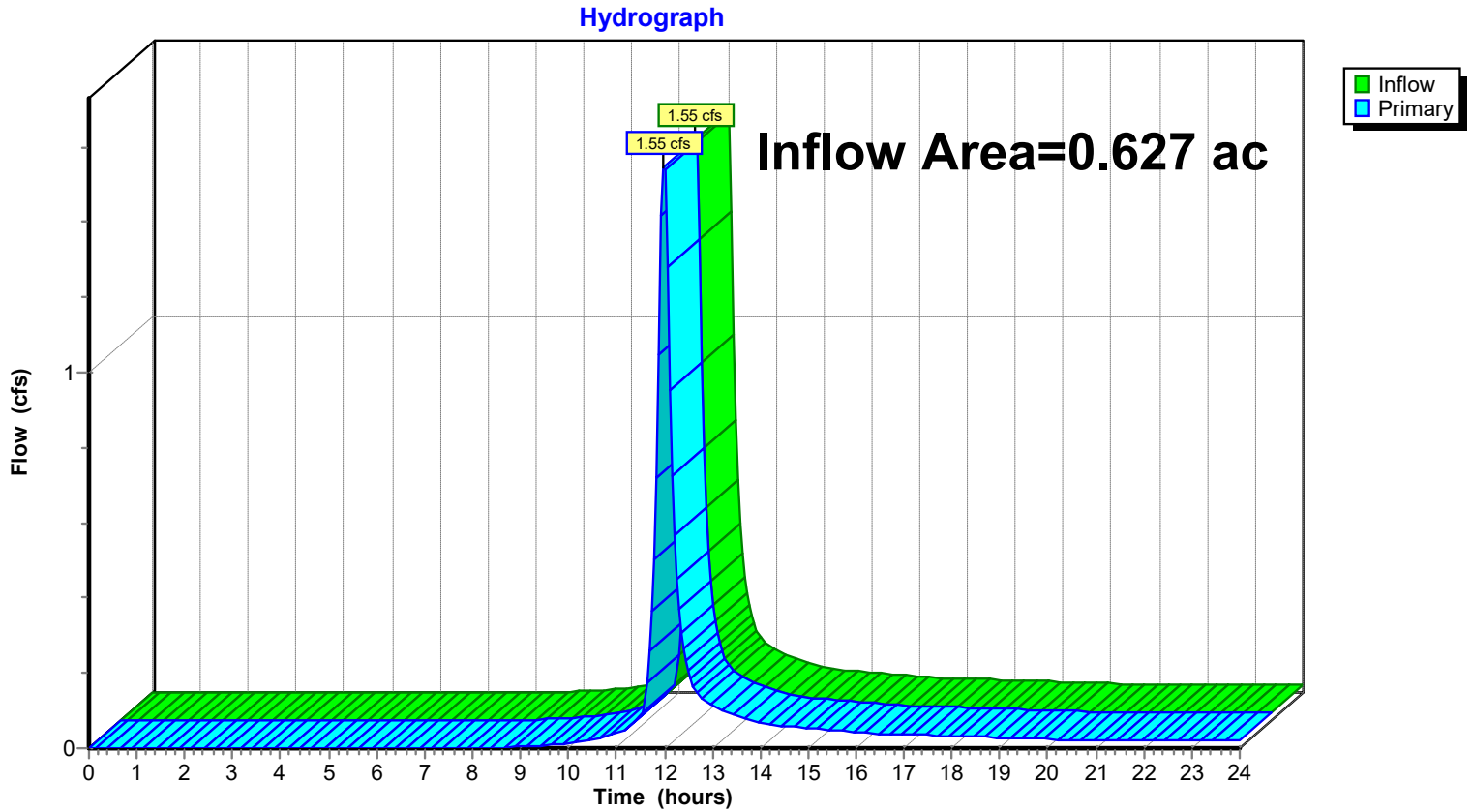


Summary for Link EX1: Ex POI 1

Inflow Area = 0.627 ac, 52.17% Impervious, Inflow Depth > 1.77" for 2-yr event
Inflow = 1.55 cfs @ 11.99 hrs, Volume= 0.092 af
Primary = 1.55 cfs @ 11.99 hrs, Volume= 0.092 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link EX1: Ex POI 1



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: Ex Parking North (Magenta) Runoff Area=5,738 sf 93.05% Impervious Runoff Depth>4.71"
Tc=6.0 min CN=95 Runoff=0.78 cfs 0.052 af

Subcatchment EX-2: Ex Parking South & House (Turquoise) Runoff Area=34,549 sf 27.79% Impervious Runoff Depth>2.41"
Flow Length=409' Slope=0.0350 '/' Tc=16.6 min CN=72 Runoff=1.55 cfs 0.159 af

Subcatchment EX-3: Portion of Ex Humane Bldg (Green) Runoff Area=23,662 sf 70.32% Impervious Runoff Depth>3.84"
Tc=6.0 min CN=87 Runoff=2.82 cfs 0.174 af

Subcatchment EX-4: Portion of Ex Humane Bldg (Orange) Runoff Area=27,291 sf 52.17% Impervious Runoff Depth>3.44"
Tc=6.0 min CN=83 Runoff=2.96 cfs 0.180 af

Subcatchment PR-1: Pr Parking North (Yellow) Runoff Area=7,665 sf 53.32% Impervious Runoff Depth>3.06"
Tc=6.0 min CN=79 Runoff=0.75 cfs 0.045 af

Subcatchment PR-2: Parking South & Portion New Bldg (Green) Runoff Area=16,297 sf 55.51% Impervious Runoff Depth>3.14"
Flow Length=215' Tc=13.3 min CN=80 Runoff=1.11 cfs 0.098 af

Subcatchment PR-3: Front access Road (Orange) Runoff Area=20,757 sf 67.50% Impervious Runoff Depth>3.74"
Tc=6.0 min CN=86 Runoff=2.42 cfs 0.149 af

Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta) Runoff Area=46,520 sf 22.27% Impervious Runoff Depth>2.34"
Flow Length=367' Tc=9.2 min CN=71 Runoff=2.84 cfs 0.208 af

Pond 12CMP: Ex 12" CMP Peak Elev=35.08' Inflow=1.55 cfs 0.159 af
12.0" Round Culvert n=0.025 L=45.6' S=0.0083 '/' Outflow=1.55 cfs 0.159 af

Pond 12P: Ex 12" CMP Peak Elev=34.89' Inflow=1.11 cfs 0.098 af
12.0" Round Culvert n=0.025 L=45.6' S=0.0083 '/' Outflow=1.11 cfs 0.098 af

Link 1L: Ex LOI-2 Inflow=0.78 cfs 0.052 af
Primary=0.78 cfs 0.052 af

Link 2L: Ex POI-2
Inflow=1.55 cfs 0.159 af
Primary=1.55 cfs 0.159 af

Link 3L: Ex LOI-1
Inflow=2.82 cfs 0.174 af
Primary=2.82 cfs 0.174 af

Link 13L: PR LOI-2
Inflow=0.75 cfs 0.045 af
Primary=0.75 cfs 0.045 af

Link 14L: Pr POI-2
Inflow=1.11 cfs 0.098 af
Primary=1.11 cfs 0.098 af

Link 15L: Pr LOI-1
Inflow=2.42 cfs 0.149 af
Primary=2.42 cfs 0.149 af

Link 16L: Pr POI 1
Inflow=2.84 cfs 0.208 af
Primary=2.84 cfs 0.208 af

Link EX1: Ex POI 1
Inflow=2.96 cfs 0.180 af
Primary=2.96 cfs 0.180 af

Total Runoff Area = 4.189 ac Runoff Volume = 1.064 af Average Runoff Depth = 3.05"
54.34% Pervious = 2.276 ac 45.66% Impervious = 1.913 ac

Summary for Subcatchment EX-1: Ex Parking North (Magenta)

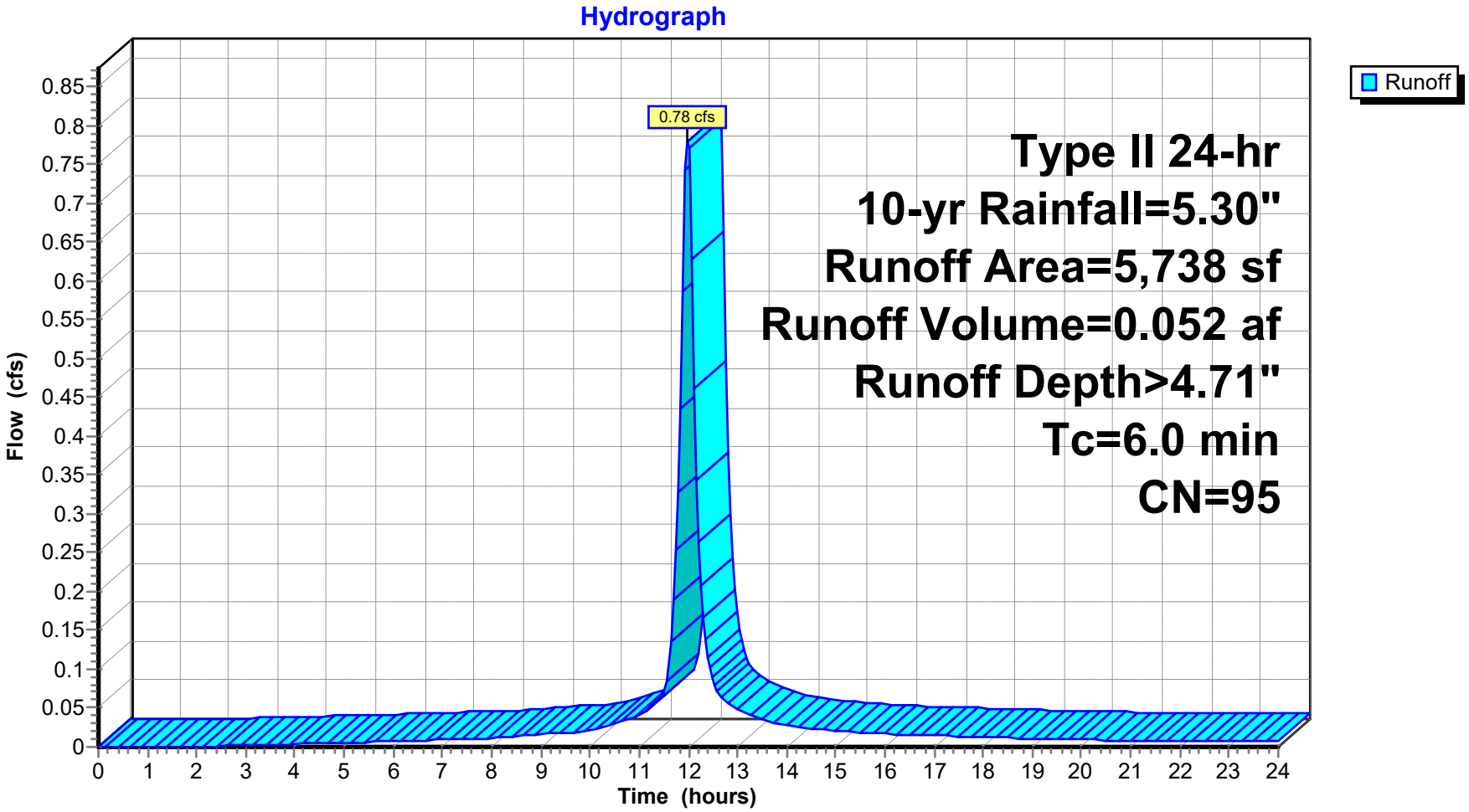
Runoff = 0.78 cfs @ 11.98 hrs, Volume= 0.052 af, Depth> 4.71"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	5,339	98	Parking
	399	61	>75% Grass cover, Good, HSG B
	5,738	95	Weighted Average
	399		6.95% Pervious Area
	5,339		93.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-1: Ex Parking North (Magenta)



Summary for Subcatchment EX-2: Ex Parking South & House (Turquoise)

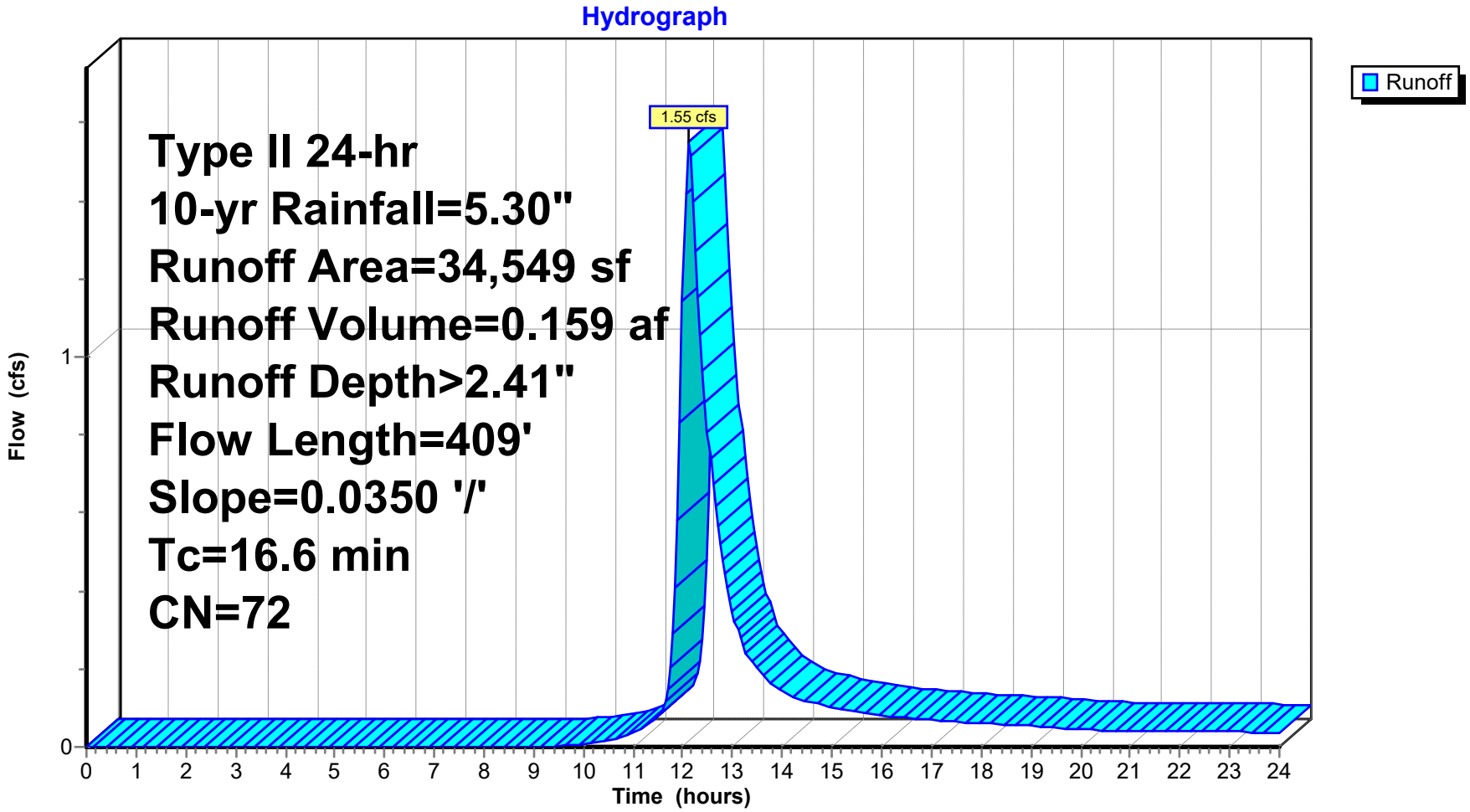
Runoff = 1.55 cfs @ 12.11 hrs, Volume= 0.159 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	22,564	61	>75% Grass cover, Good, HSG B
*	93	98	Bldg Roof Group C
	2,383	74	>75% Grass cover, Good, HSG C
*	9,509	98	Bldg Roof & Parking Group B
	34,549	72	Weighted Average
	24,947		72.21% Pervious Area
	9,602		27.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	150	0.0350	0.24		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 3.40"
0.2	43	0.0350	3.01		**Shallow Concentrated Flow, Lawn** Unpaved Kv= 16.1 fps
5.9	216	0.0350	0.61	1.16	**Channel Flow, Parking lot swale** Area= 1.9 sf Perim= 10.1' r= 0.19' n= 0.150 Sheet flow over Short Grass
16.6	409	Total			

Subcatchment EX-2: Ex Parking South & House (Turquoise)



Summary for Subcatchment EX-3: Portion of Ex Humane Bldg (Green)

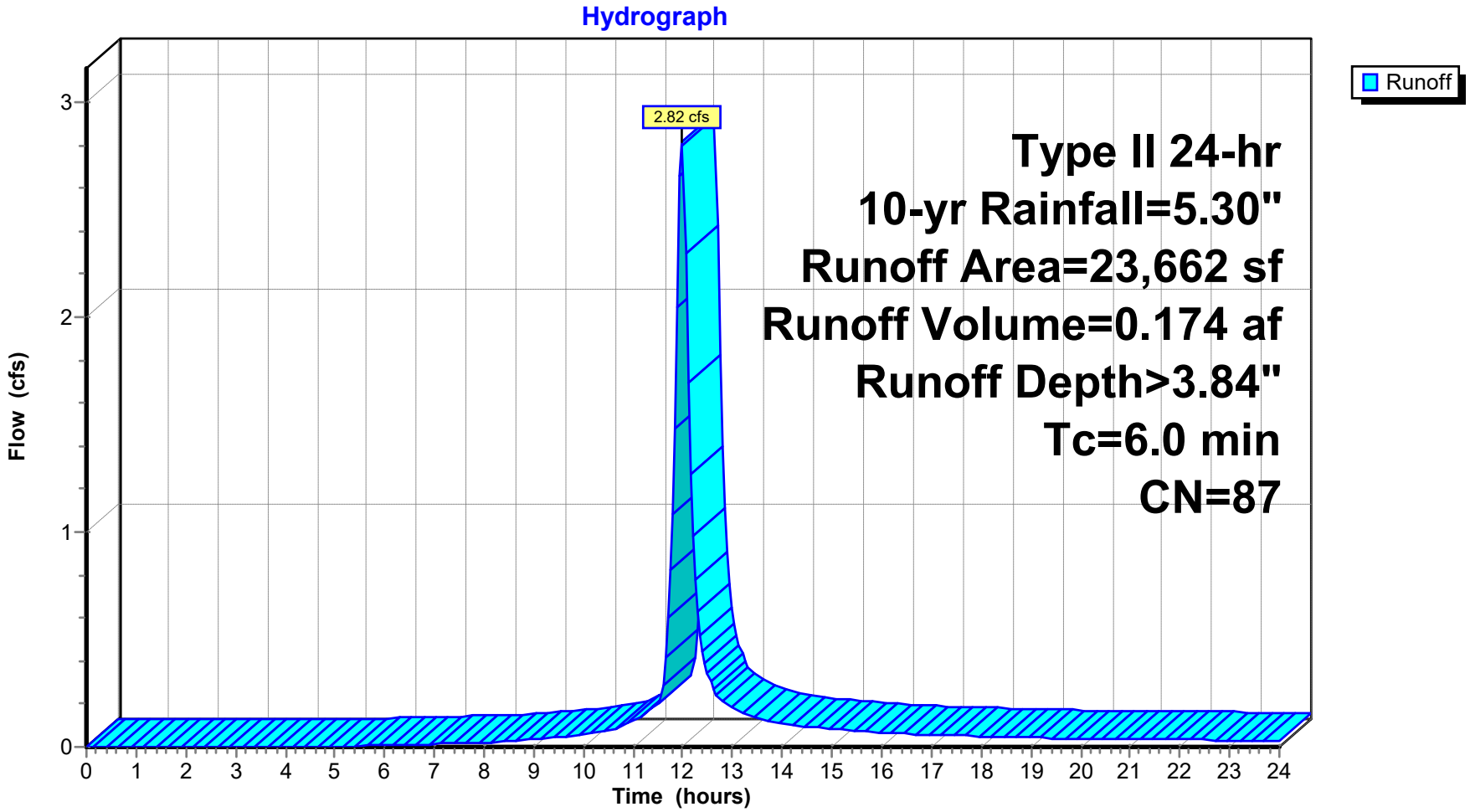
Runoff = 2.82 cfs @ 11.99 hrs, Volume= 0.174 af, Depth> 3.84"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	7,022	61	>75% Grass cover, Good, HSG B
*	16,640	98	Bldg Roof & Parking Group B
	23,662	87	Weighted Average
	7,022		29.68% Pervious Area
	16,640		70.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-3: Portion of Ex Humane Bldg (Green)



Summary for Subcatchment EX-4: Portion of Ex Humane Bldg (Orange)

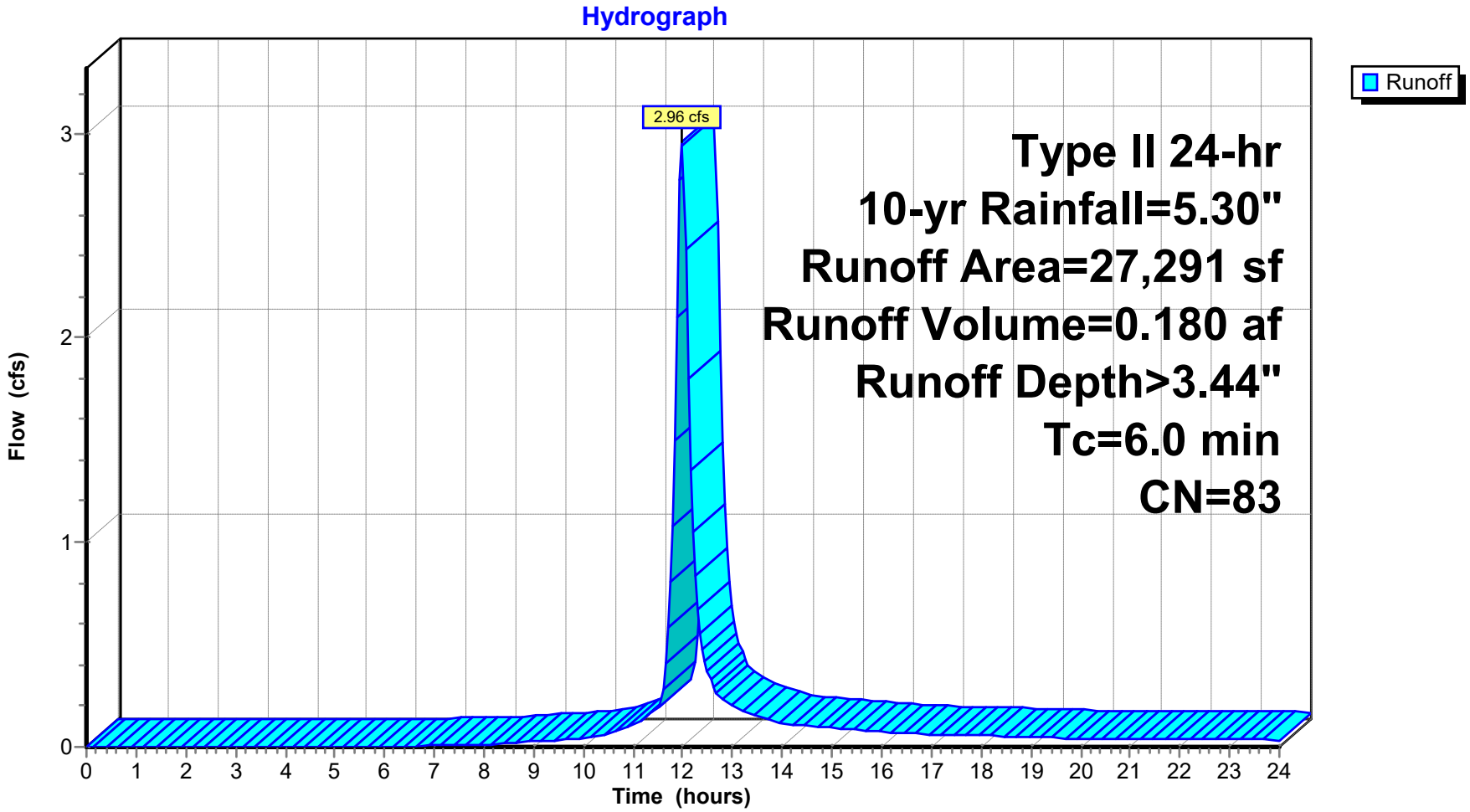
Runoff = 2.96 cfs @ 11.99 hrs, Volume= 0.180 af, Depth> 3.44"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	4,936	74	>75% Grass cover, Good, HSG C
*	732	98	Bldg Roof & Parking Group C
*	13,506	98	Bldg Roof & Parking Group B
	8,117	61	>75% Grass cover, Good, HSG B
	27,291	83	Weighted Average
	13,053		47.83% Pervious Area
	14,238		52.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-4: Portion of Ex Humane Bldg (Orange)



Summary for Subcatchment PR-1: Pr Parking North (Yellow)

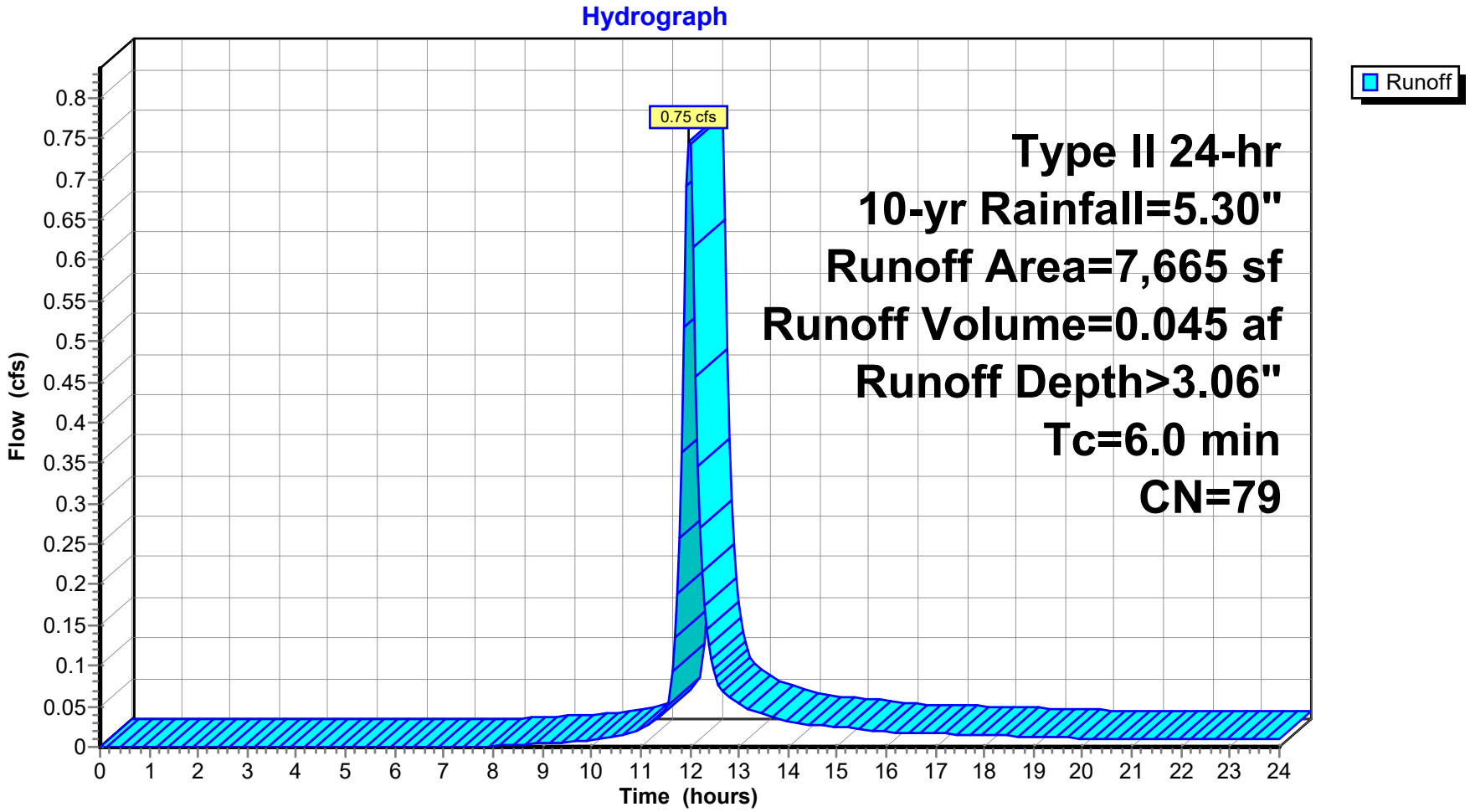
Runoff = 0.75 cfs @ 11.99 hrs, Volume= 0.045 af, Depth> 3.06"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
*	4,087	98	Parking
	1,148	61	>75% Grass cover, Good, HSG B
	2,430	55	Woods, Good, HSG B
	7,665	79	Weighted Average
	3,578		46.68% Pervious Area
	4,087		53.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment PR-1: Pr Parking North (Yellow)



Summary for Subcatchment PR-2: Parking South & Portion New Bldg (Green)

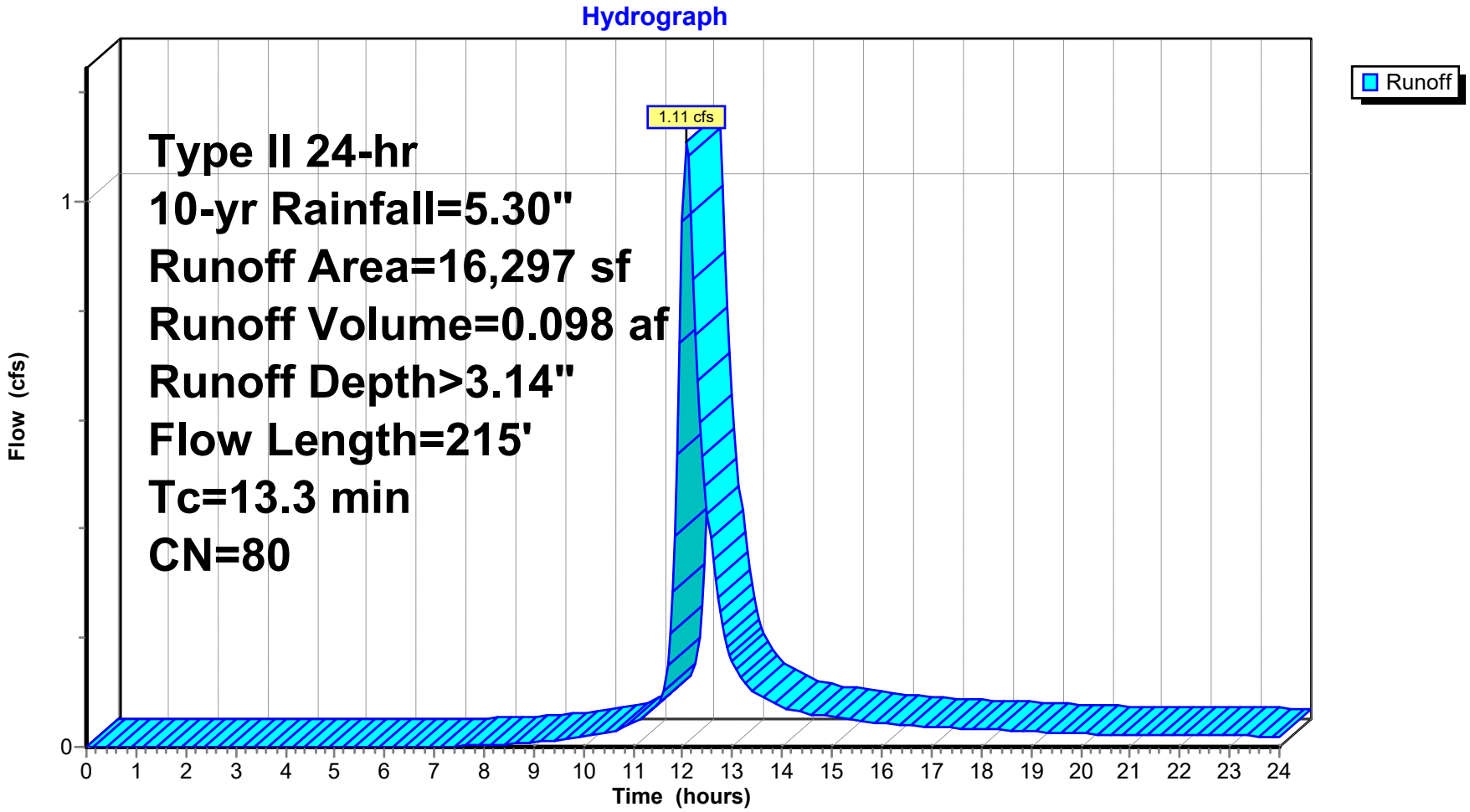
Runoff = 1.11 cfs @ 12.07 hrs, Volume= 0.098 af, Depth> 3.14"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	4,028	61	>75% Grass cover, Good, HSG B
*	9,047	98	Bldg Roof & Parking Group B
*	3,222	55	Perm. Pavers
	16,297	80	Weighted Average
	7,250		44.49% Pervious Area
	9,047		55.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	64	0.0200	1.30		**Sheet Flow, asphalt** Smooth surfaces n= 0.011 P2= 3.40"
11.4	47	0.0200	0.07		**Sheet Flow, pavers** Woods: Light underbrush n= 0.400 P2= 3.40"
1.1	104	0.0060	1.57		**Shallow Concentrated Flow, gutter** Paved Kv= 20.3 fps
13.3	215	Total			

Subcatchment PR-2: Parking South & Portion New Bldg (Green)



Summary for Subcatchment PR-3: Front access Road (Orange)

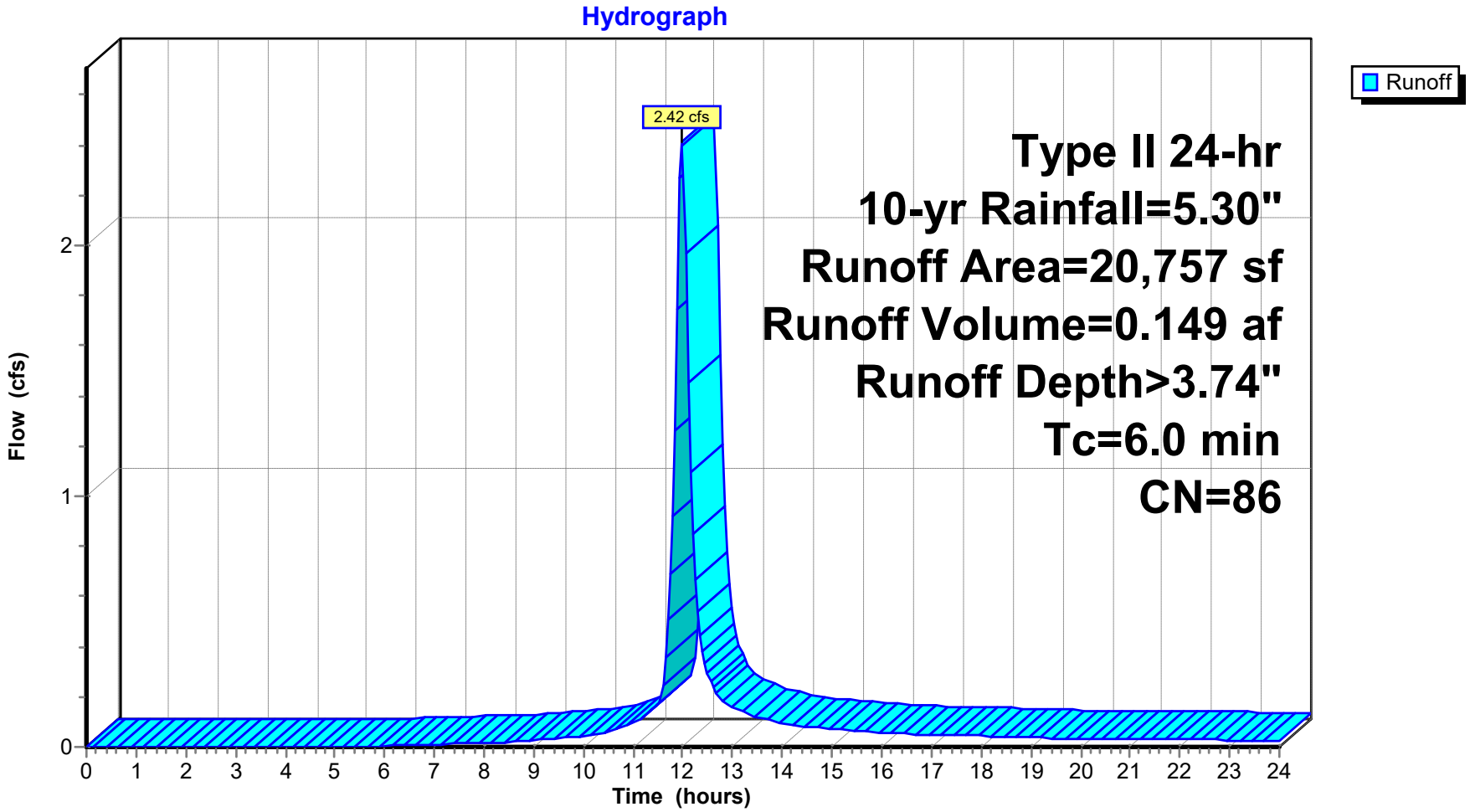
Runoff = 2.42 cfs @ 11.99 hrs, Volume= 0.149 af, Depth> 3.74"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	6,746	61	>75% Grass cover, Good, HSG B
*	8,015	98	Bldg Roof & Parking Group B
*	5,996	98	Courtyard Roof via Rain Leader
	20,757	86	Weighted Average
	6,746		32.50% Pervious Area
	14,011		67.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment PR-3: Front access Road (Orange)



Summary for Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta)

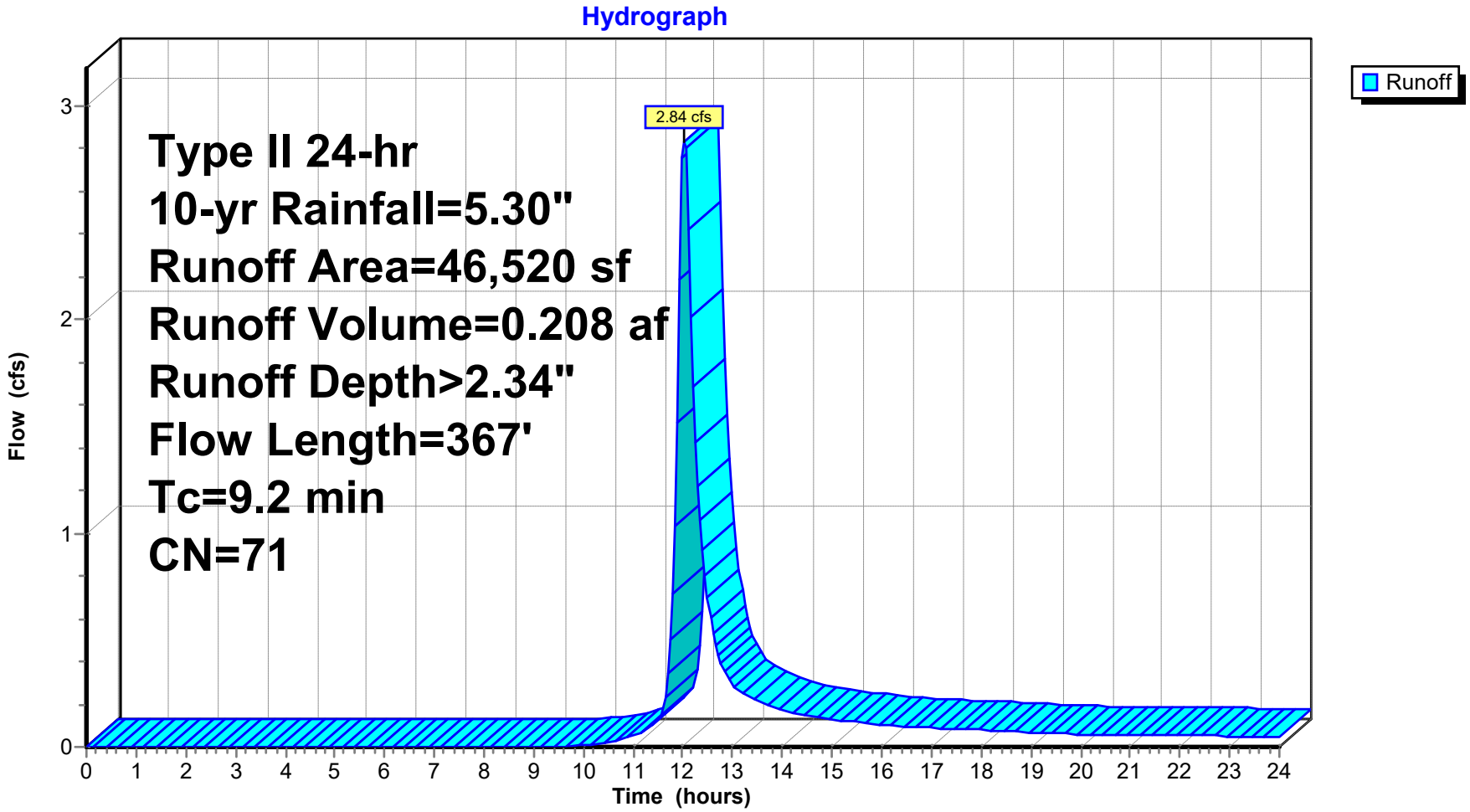
Runoff = 2.84 cfs @ 12.03 hrs, Volume= 0.208 af, Depth> 2.34"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=5.30"

	Area (sf)	CN	Description
	7,939	74	>75% Grass cover, Good, HSG C
*	204	98	Bldg Roof & Parking Group C
*	10,157	98	Bldg Roof & Parking Group B
	26,027	61	>75% Grass cover, Good, HSG B
	2,193	55	Woods, Good, HSG B
	46,520	71	Weighted Average
	36,159		77.73% Pervious Area
	10,361		22.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	150	0.1000	0.36		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 3.40"
2.3	217	0.0060	1.57		**Shallow Concentrated Flow, gutterpan** Paved Kv= 20.3 fps
9.2	367	Total			

Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta)



Summary for Pond 12CMP: Ex 12" CMP

[57] Hint: Peaked at 35.08' (Flood elevation advised)

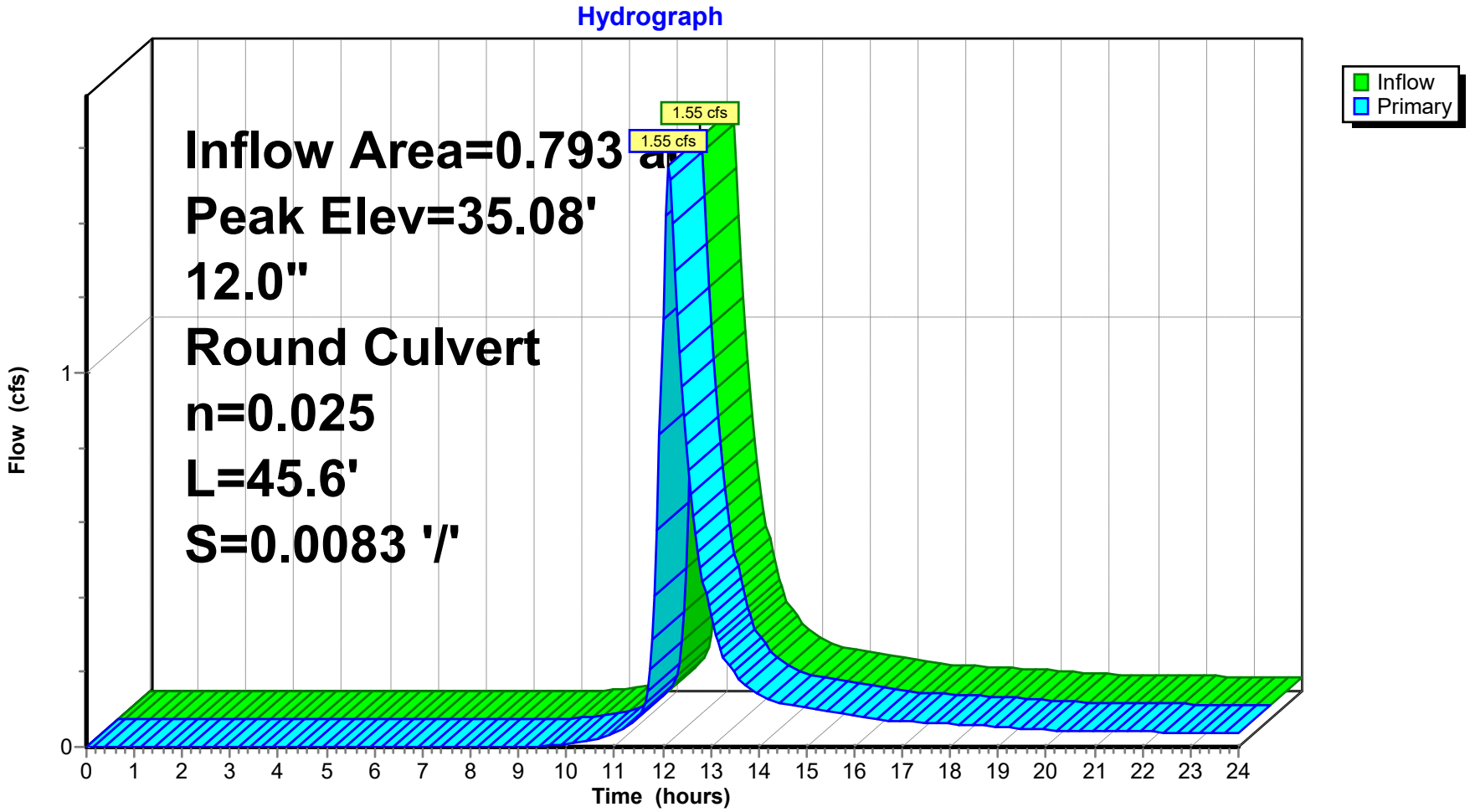
Inflow Area = 0.793 ac, 27.79% Impervious, Inflow Depth > 2.41" for 10-yr event
Inflow = 1.55 cfs @ 12.11 hrs, Volume= 0.159 af
Outflow = 1.55 cfs @ 12.11 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min
Primary = 1.55 cfs @ 12.11 hrs, Volume= 0.159 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 35.08' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	34.12'	**12.0" Round Ex 12" CMP** L= 45.6' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.12' / 33.74' S= 0.0083 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=1.54 cfs @ 12.11 hrs HW=35.07' TW=0.00' (Dynamic Tailwater)
1=Ex 12" CMP (Barrel Controls 1.54 cfs @ 2.56 fps)

Pond 12CMP: Ex 12" CMP



Summary for Pond 12P: Ex 12" CMP

[57] Hint: Peaked at 34.89' (Flood elevation advised)

Inflow Area = 0.374 ac, 55.51% Impervious, Inflow Depth > 3.14" for 10-yr event
Inflow = 1.11 cfs @ 12.07 hrs, Volume= 0.098 af
Outflow = 1.11 cfs @ 12.07 hrs, Volume= 0.098 af, Atten= 0%, Lag= 0.0 min
Primary = 1.11 cfs @ 12.07 hrs, Volume= 0.098 af

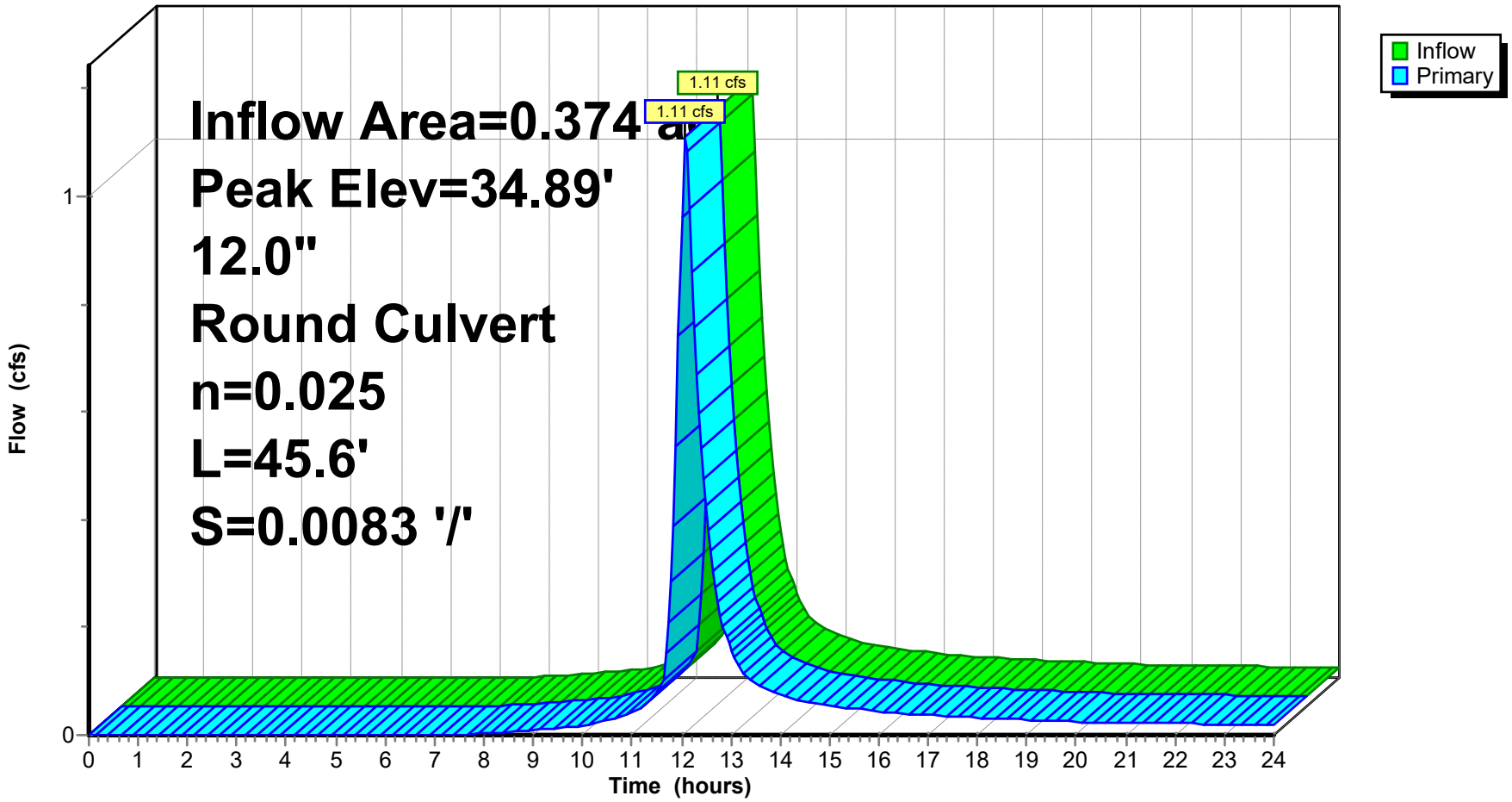
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 34.89' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	34.12'	**12.0" Round Ex 12" CMP** L= 45.6' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.12' / 33.74' S= 0.0083 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=1.09 cfs @ 12.07 hrs HW=34.88' TW=0.00' (Dynamic Tailwater)
1=Ex 12" CMP (Barrel Controls 1.09 cfs @ 2.35 fps)

Pond 12P: Ex 12" CMP

Hydrograph

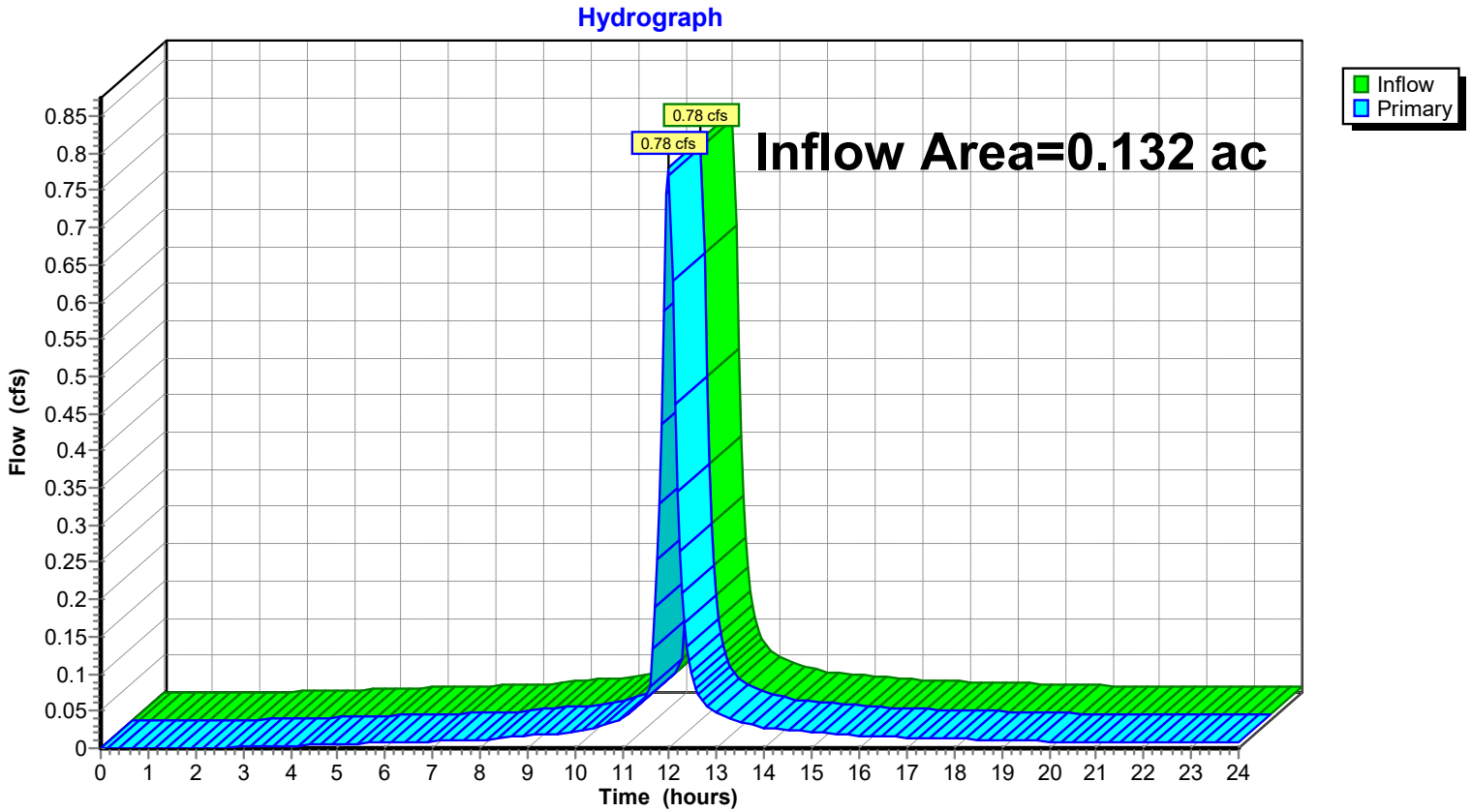


Summary for Link 1L: Ex LOI-2

Inflow Area = 0.132 ac, 93.05% Impervious, Inflow Depth > 4.71" for 10-yr event
Inflow = 0.78 cfs @ 11.98 hrs, Volume= 0.052 af
Primary = 0.78 cfs @ 11.98 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Ex LOI-2

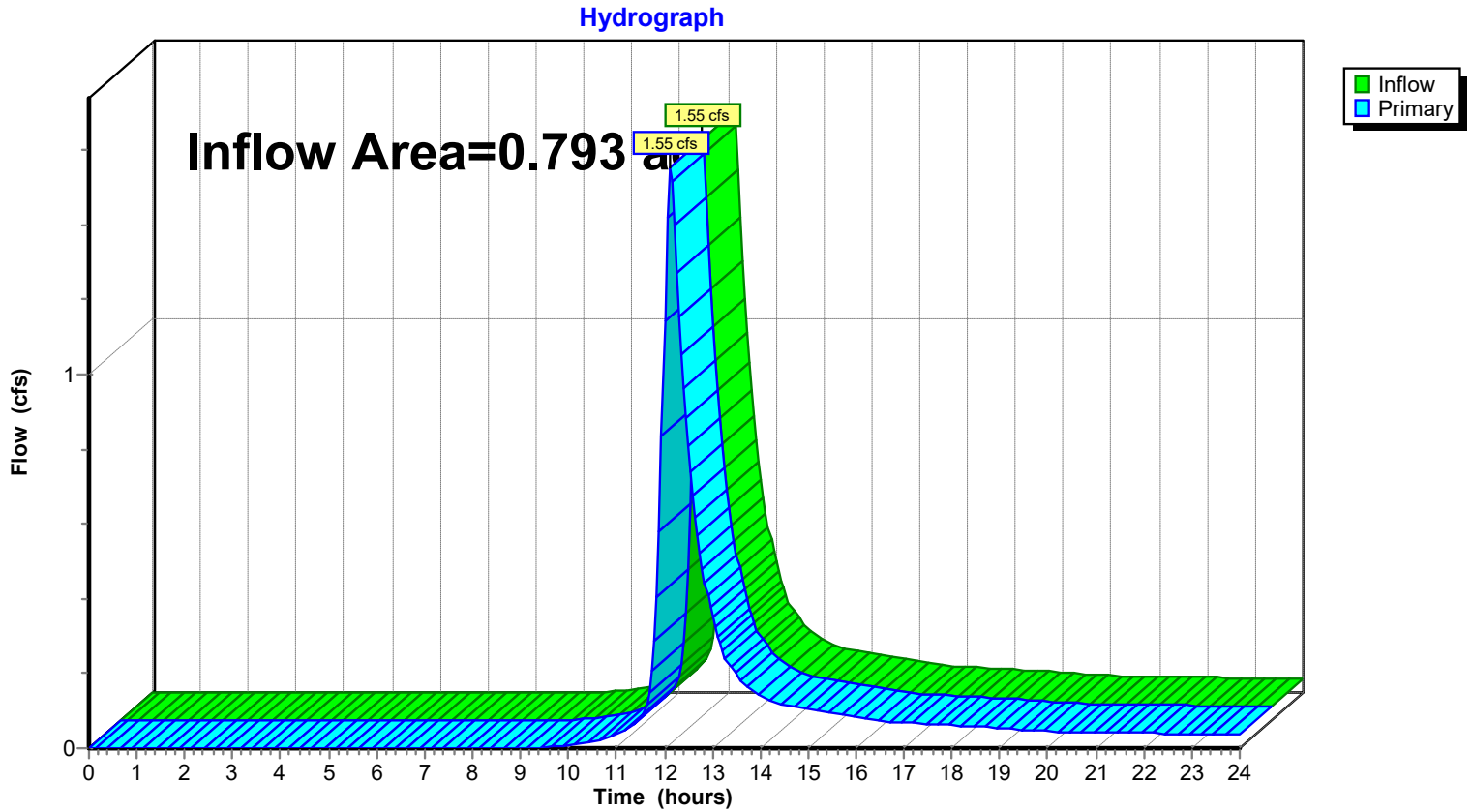


Summary for Link 2L: Ex POI-2

Inflow Area = 0.793 ac, 27.79% Impervious, Inflow Depth > 2.41" for 10-yr event
Inflow = 1.55 cfs @ 12.11 hrs, Volume= 0.159 af
Primary = 1.55 cfs @ 12.11 hrs, Volume= 0.159 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Ex POI-2

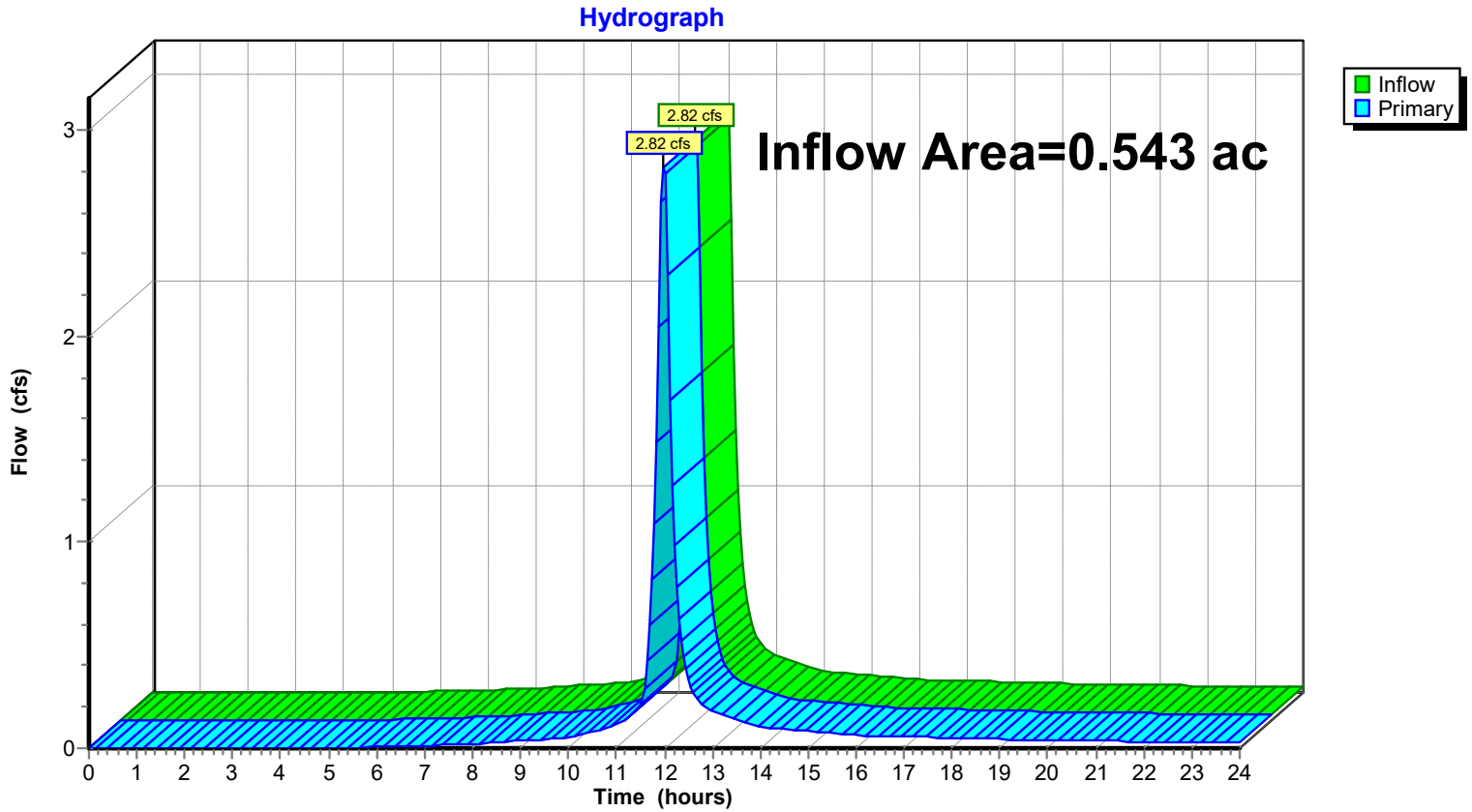


Summary for Link 3L: Ex LOI-1

Inflow Area = 0.543 ac, 70.32% Impervious, Inflow Depth > 3.84" for 10-yr event
Inflow = 2.82 cfs @ 11.99 hrs, Volume= 0.174 af
Primary = 2.82 cfs @ 11.99 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: Ex LOI-1

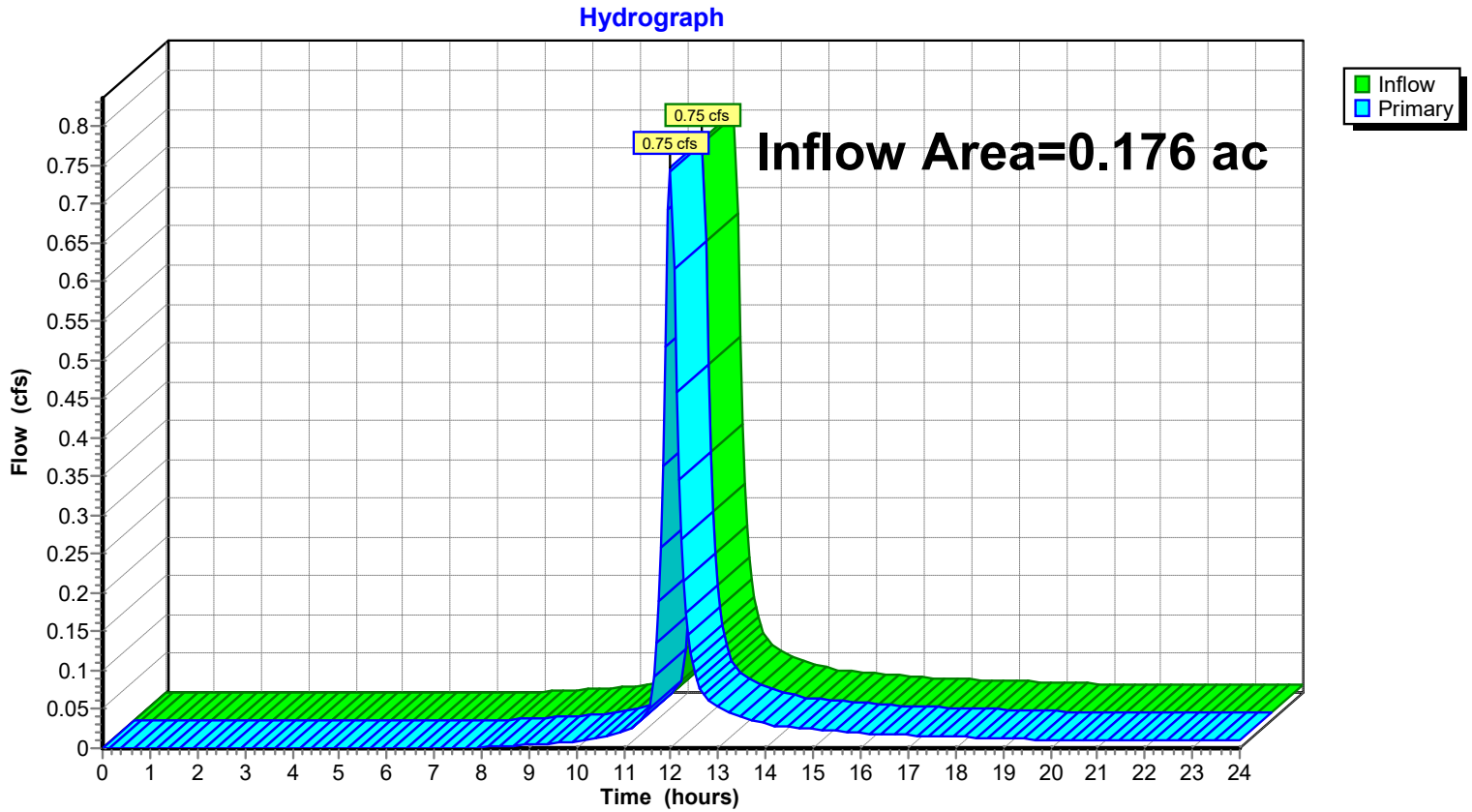


Summary for Link 13L: PR LOI-2

Inflow Area = 0.176 ac, 53.32% Impervious, Inflow Depth > 3.06" for 10-yr event
Inflow = 0.75 cfs @ 11.99 hrs, Volume= 0.045 af
Primary = 0.75 cfs @ 11.99 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 13L: PR LOI-2

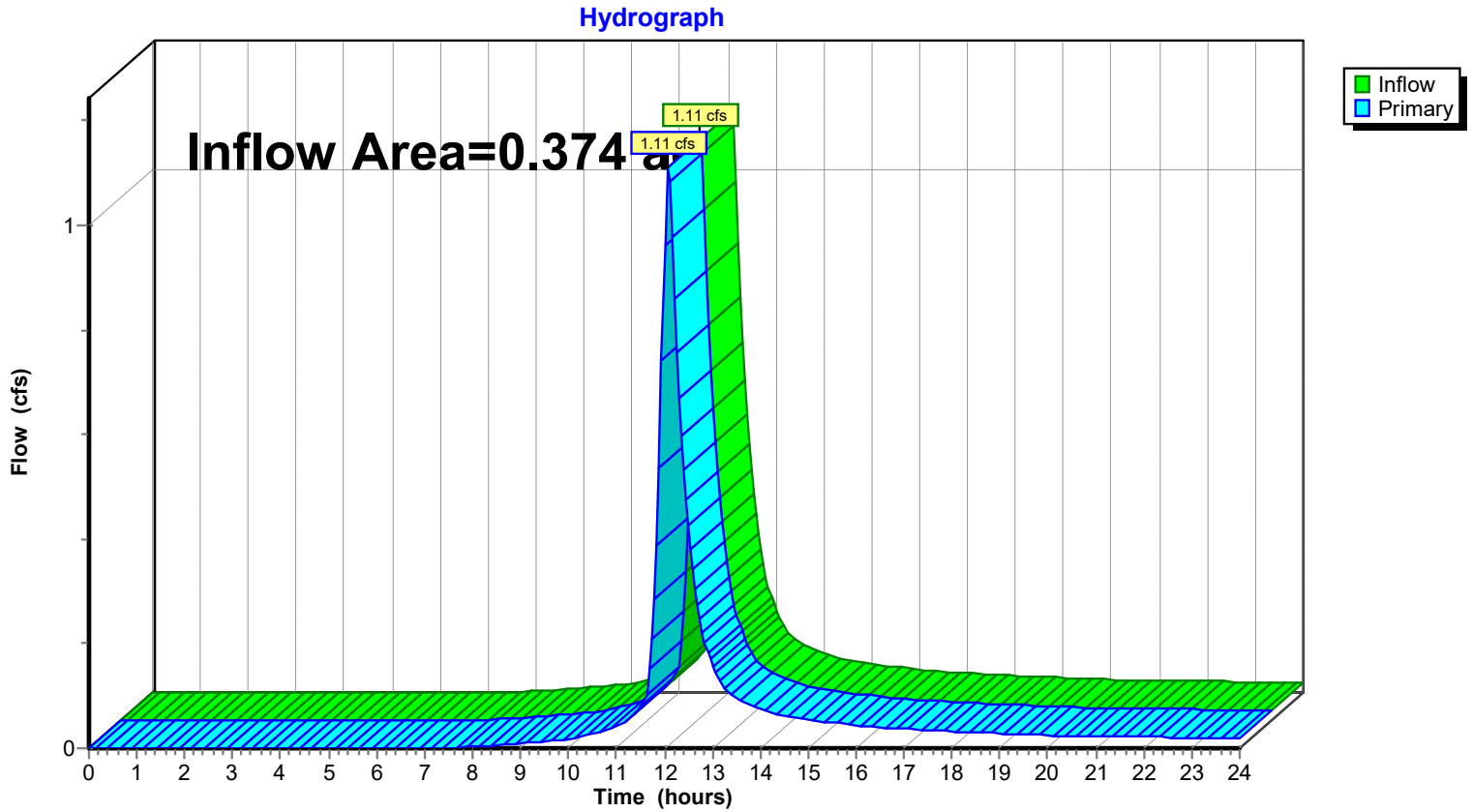


Summary for Link 14L: Pr POI-2

Inflow Area = 0.374 ac, 55.51% Impervious, Inflow Depth > 3.14" for 10-yr event
Inflow = 1.11 cfs @ 12.07 hrs, Volume= 0.098 af
Primary = 1.11 cfs @ 12.07 hrs, Volume= 0.098 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 14L: Pr POI-2

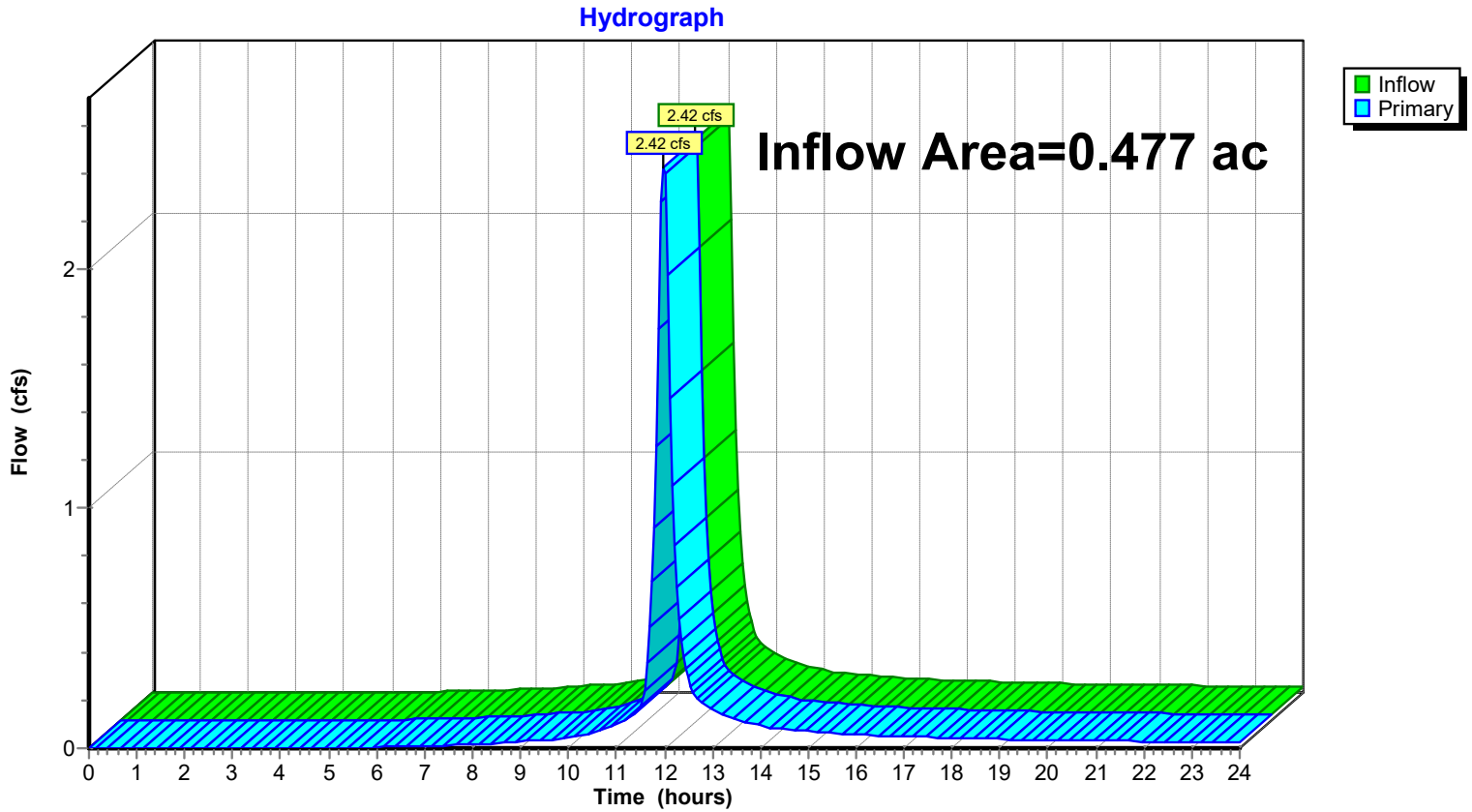


Summary for Link 15L: Pr LOI-1

Inflow Area = 0.477 ac, 67.50% Impervious, Inflow Depth > 3.74" for 10-yr event
Inflow = 2.42 cfs @ 11.99 hrs, Volume= 0.149 af
Primary = 2.42 cfs @ 11.99 hrs, Volume= 0.149 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 15L: Pr LOI-1

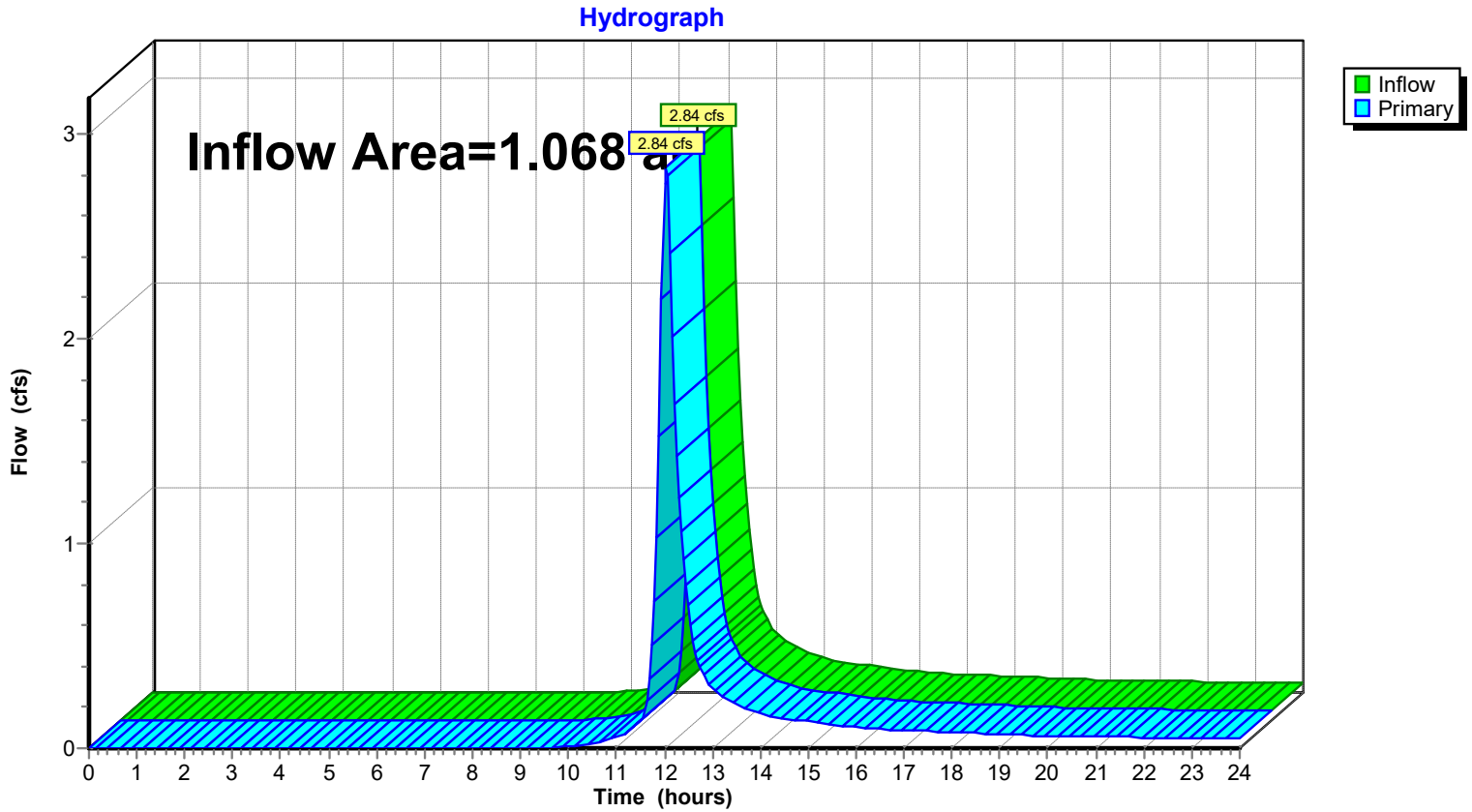


Summary for Link 16L: Pr POI 1

Inflow Area = 1.068 ac, 22.27% Impervious, Inflow Depth > 2.34" for 10-yr event
Inflow = 2.84 cfs @ 12.03 hrs, Volume= 0.208 af
Primary = 2.84 cfs @ 12.03 hrs, Volume= 0.208 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 16L: Pr POI 1

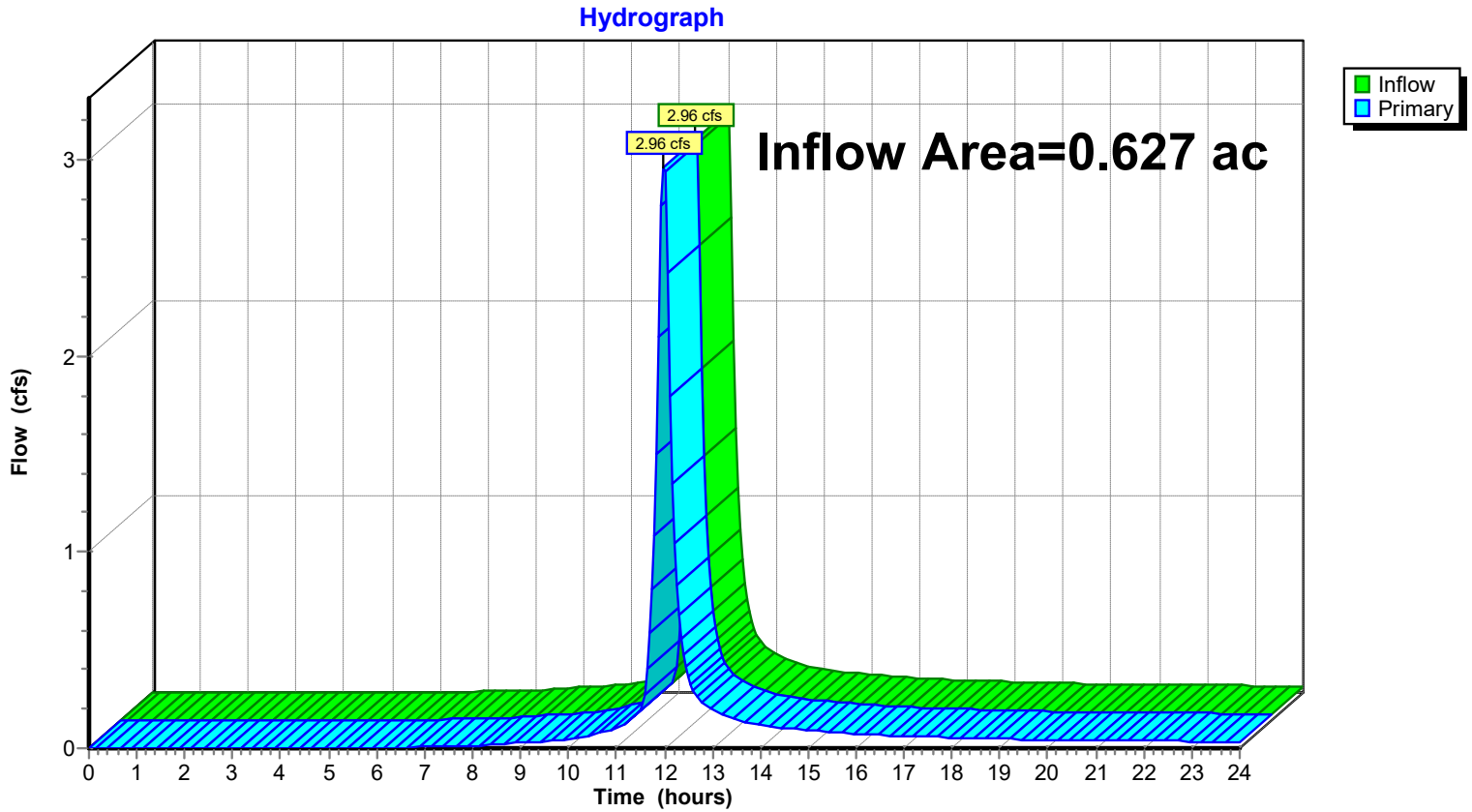


Summary for Link EX1: Ex POI 1

Inflow Area = 0.627 ac, 52.17% Impervious, Inflow Depth > 3.44" for 10-yr event
Inflow = 2.96 cfs @ 11.99 hrs, Volume= 0.180 af
Primary = 2.96 cfs @ 11.99 hrs, Volume= 0.180 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link EX1: Ex POI 1



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment EX-1: Ex Parking North (Magenta) Runoff Area=5,738 sf 93.05% Impervious Runoff Depth>6.99"
Tc=6.0 min CN=95 Runoff=1.14 cfs 0.077 af

Subcatchment EX-2: Ex Parking South & House (Turquoise) Runoff Area=34,549 sf 27.79% Impervious Runoff Depth>4.32"
Flow Length=409' Slope=0.0350 '/' Tc=16.6 min CN=72 Runoff=2.82 cfs 0.285 af

Subcatchment EX-3: Portion of Ex Humane Bldg (Green) Runoff Area=23,662 sf 70.32% Impervious Runoff Depth>6.05"
Tc=6.0 min CN=87 Runoff=4.33 cfs 0.274 af

Subcatchment EX-4: Portion of Ex Humane Bldg (Orange) Runoff Area=27,291 sf 52.17% Impervious Runoff Depth>5.59"
Tc=6.0 min CN=83 Runoff=4.71 cfs 0.292 af

Subcatchment PR-1: Pr Parking North (Yellow) Runoff Area=7,665 sf 53.32% Impervious Runoff Depth>5.13"
Tc=6.0 min CN=79 Runoff=1.23 cfs 0.075 af

Subcatchment PR-2: Parking South & Portion New Bldg (Green) Runoff Area=16,297 sf 55.51% Impervious Runoff Depth>5.23"
Flow Length=215' Tc=13.3 min CN=80 Runoff=1.84 cfs 0.163 af

Subcatchment PR-3: Front access Road (Orange) Runoff Area=20,757 sf 67.50% Impervious Runoff Depth>5.93"
Tc=6.0 min CN=86 Runoff=3.75 cfs 0.236 af

Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta) Runoff Area=46,520 sf 22.27% Impervious Runoff Depth>4.22"
Flow Length=367' Tc=9.2 min CN=71 Runoff=5.20 cfs 0.375 af

Pond 12CMP: Ex 12" CMP Peak Elev=36.18' Inflow=2.82 cfs 0.285 af
12.0" Round Culvert n=0.025 L=45.6' S=0.0083 '/' Outflow=2.82 cfs 0.285 af

Pond 12P: Ex 12" CMP Peak Elev=35.22' Inflow=1.84 cfs 0.163 af
12.0" Round Culvert n=0.025 L=45.6' S=0.0083 '/' Outflow=1.84 cfs 0.163 af

Link 1L: Ex LOI-2 Inflow=1.14 cfs 0.077 af
Primary=1.14 cfs 0.077 af

Link 2L: Ex POI-2
Inflow=2.82 cfs 0.285 af
Primary=2.82 cfs 0.285 af

Link 3L: Ex LOI-1
Inflow=4.33 cfs 0.274 af
Primary=4.33 cfs 0.274 af

Link 13L: PR LOI-2
Inflow=1.23 cfs 0.075 af
Primary=1.23 cfs 0.075 af

Link 14L: Pr POI-2
Inflow=1.84 cfs 0.163 af
Primary=1.84 cfs 0.163 af

Link 15L: Pr LOI-1
Inflow=3.75 cfs 0.236 af
Primary=3.75 cfs 0.236 af

Link 16L: Pr POI 1
Inflow=5.20 cfs 0.375 af
Primary=5.20 cfs 0.375 af

Link EX1: Ex POI 1
Inflow=4.71 cfs 0.292 af
Primary=4.71 cfs 0.292 af

Total Runoff Area = 4.189 ac Runoff Volume = 1.777 af Average Runoff Depth = 5.09"
54.34% Pervious = 2.276 ac 45.66% Impervious = 1.913 ac

Summary for Subcatchment EX-1: Ex Parking North (Magenta)

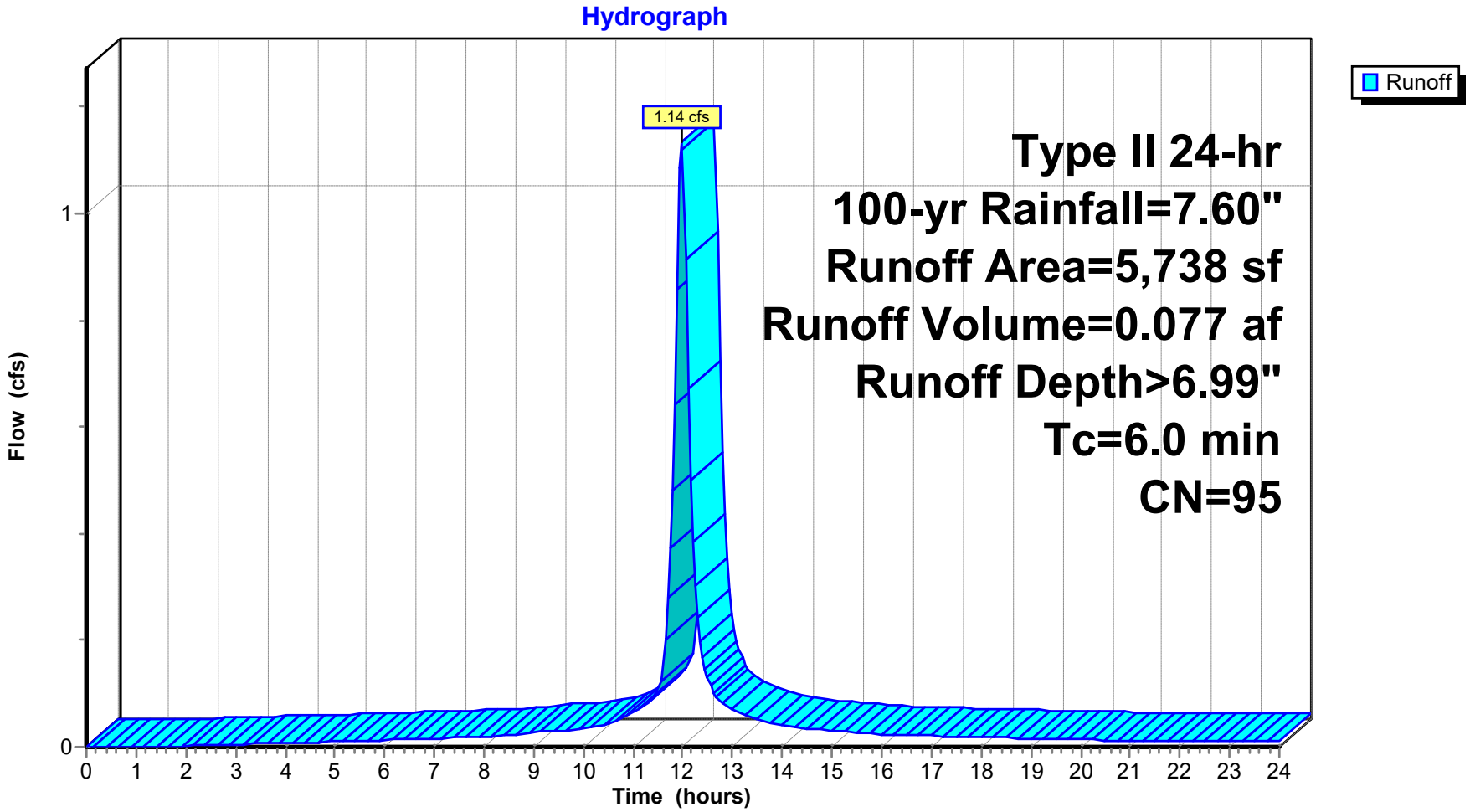
Runoff = 1.14 cfs @ 11.98 hrs, Volume= 0.077 af, Depth> 6.99"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	5,339	98	Parking
	399	61	>75% Grass cover, Good, HSG B
	5,738	95	Weighted Average
	399		6.95% Pervious Area
	5,339		93.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-1: Ex Parking North (Magenta)



Summary for Subcatchment EX-2: Ex Parking South & House (Turquoise)

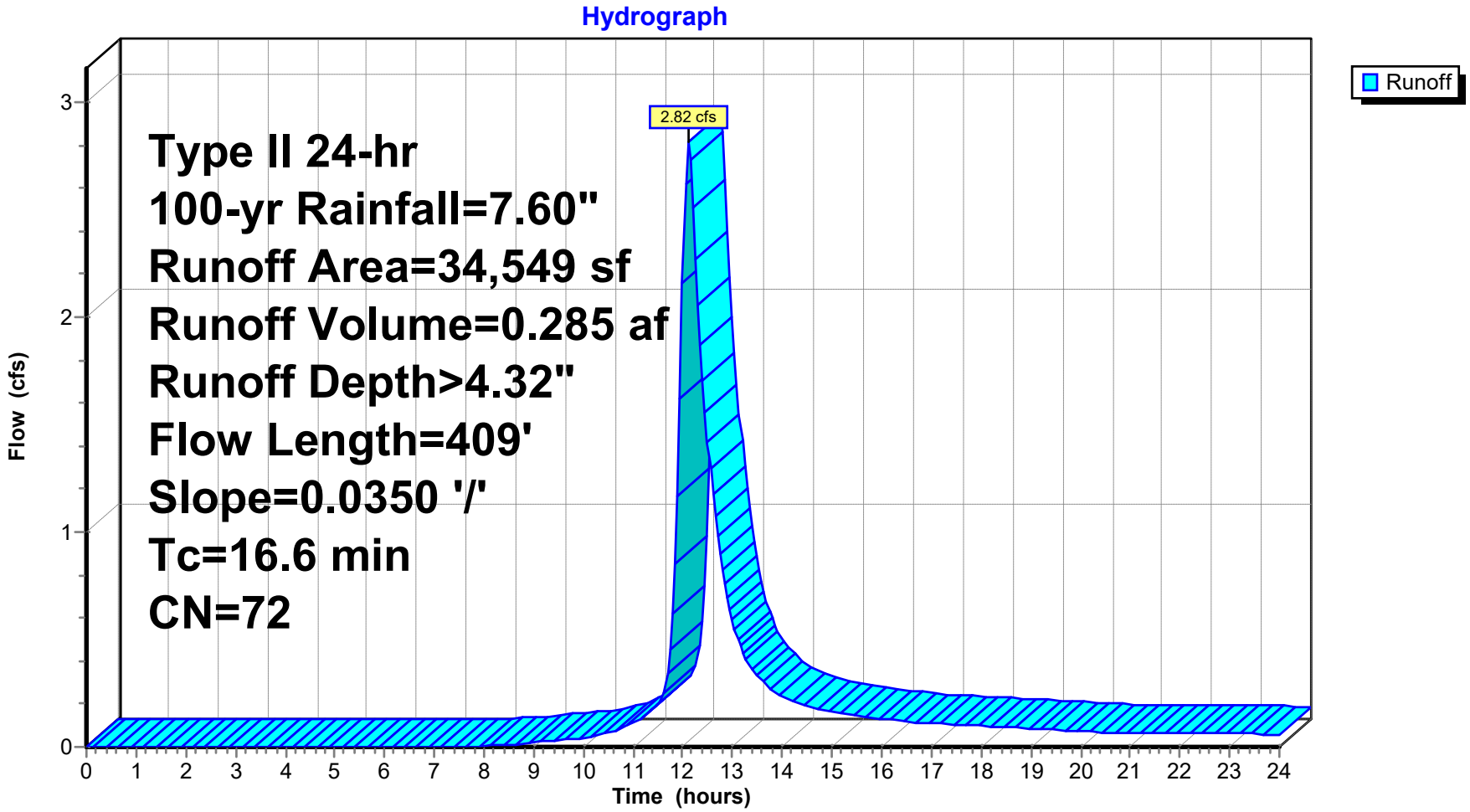
Runoff = 2.82 cfs @ 12.11 hrs, Volume= 0.285 af, Depth> 4.32"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	22,564	61	>75% Grass cover, Good, HSG B
*	93	98	Bldg Roof Group C
	2,383	74	>75% Grass cover, Good, HSG C
*	9,509	98	Bldg Roof & Parking Group B
	34,549	72	Weighted Average
	24,947		72.21% Pervious Area
	9,602		27.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	150	0.0350	0.24		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 3.40"
0.2	43	0.0350	3.01		**Shallow Concentrated Flow, Lawn** Unpaved Kv= 16.1 fps
5.9	216	0.0350	0.61	1.16	**Channel Flow, Parking lot swale** Area= 1.9 sf Perim= 10.1' r= 0.19' n= 0.150 Sheet flow over Short Grass
16.6	409	Total			

Subcatchment EX-2: Ex Parking South & House (Turquoise)



Summary for Subcatchment EX-3: Portion of Ex Humane Bldg (Green)

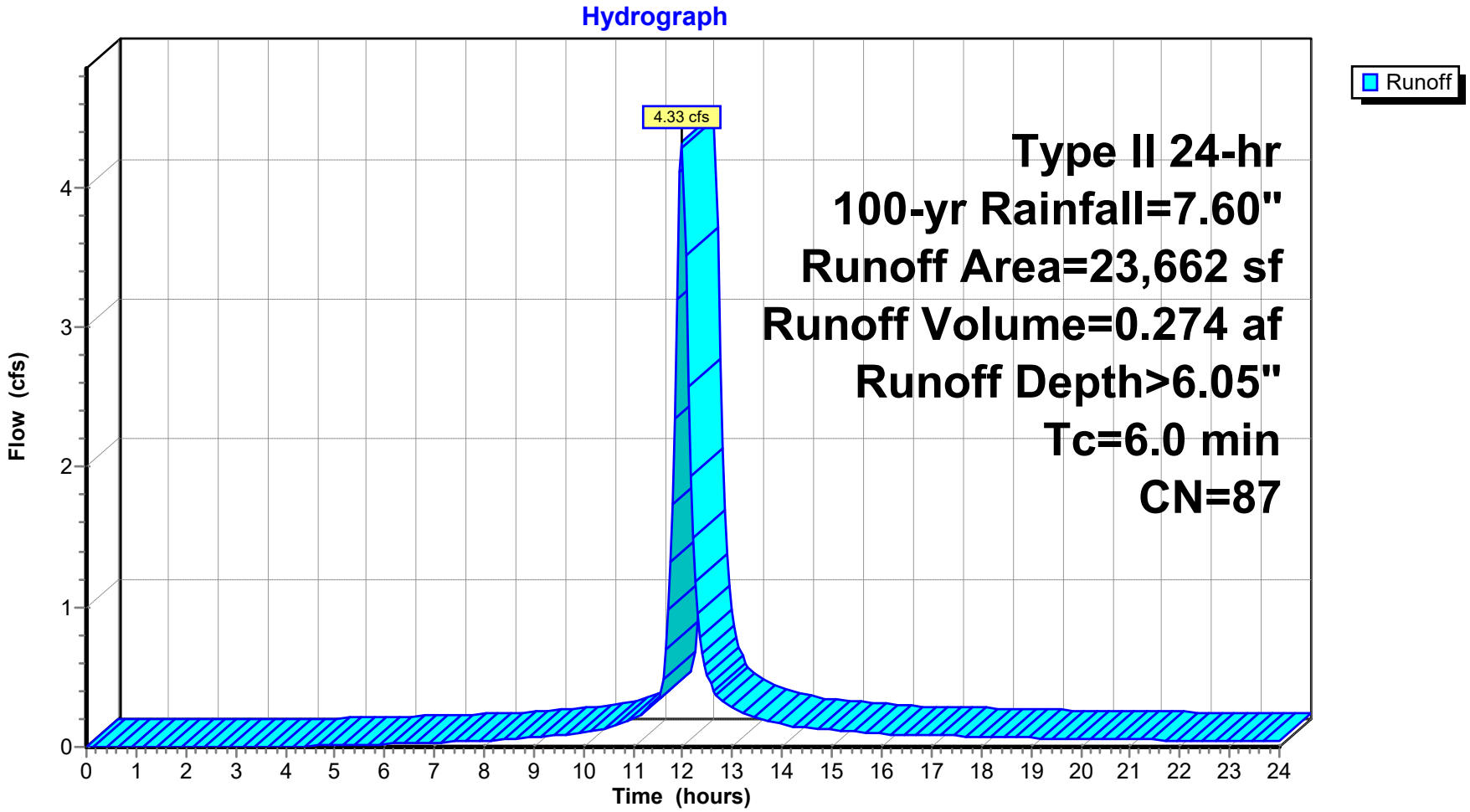
Runoff = 4.33 cfs @ 11.98 hrs, Volume= 0.274 af, Depth> 6.05"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	7,022	61	>75% Grass cover, Good, HSG B
*	16,640	98	Bldg Roof & Parking Group B
	23,662	87	Weighted Average
	7,022		29.68% Pervious Area
	16,640		70.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-3: Portion of Ex Humane Bldg (Green)



Summary for Subcatchment EX-4: Portion of Ex Humane Bldg (Orange)

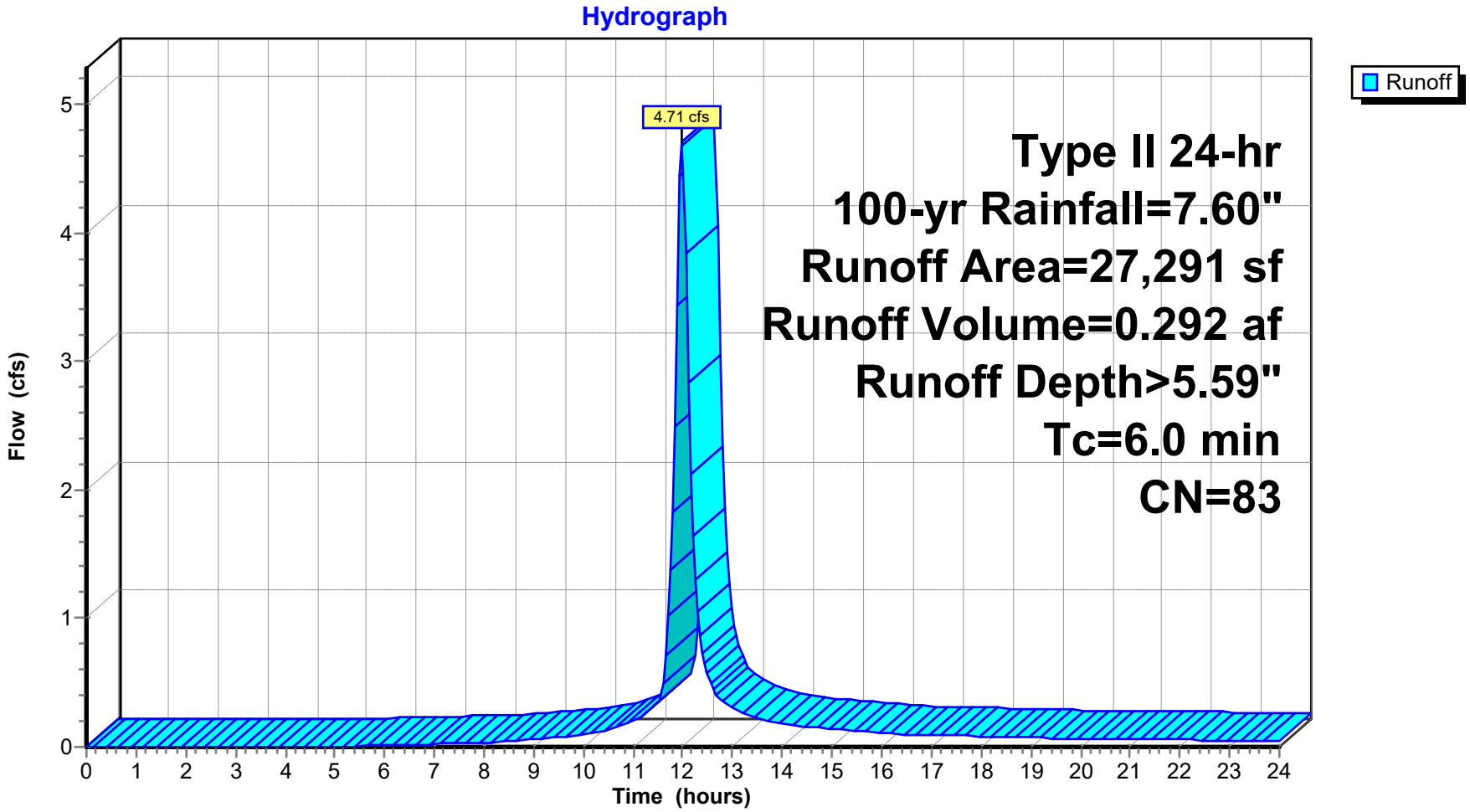
Runoff = 4.71 cfs @ 11.99 hrs, Volume= 0.292 af, Depth> 5.59"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	4,936	74	>75% Grass cover, Good, HSG C
*	732	98	Bldg Roof & Parking Group C
*	13,506	98	Bldg Roof & Parking Group B
	8,117	61	>75% Grass cover, Good, HSG B
	27,291	83	Weighted Average
	13,053		47.83% Pervious Area
	14,238		52.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment EX-4: Portion of Ex Humane Bldg (Orange)



Summary for Subcatchment PR-1: Pr Parking North (Yellow)

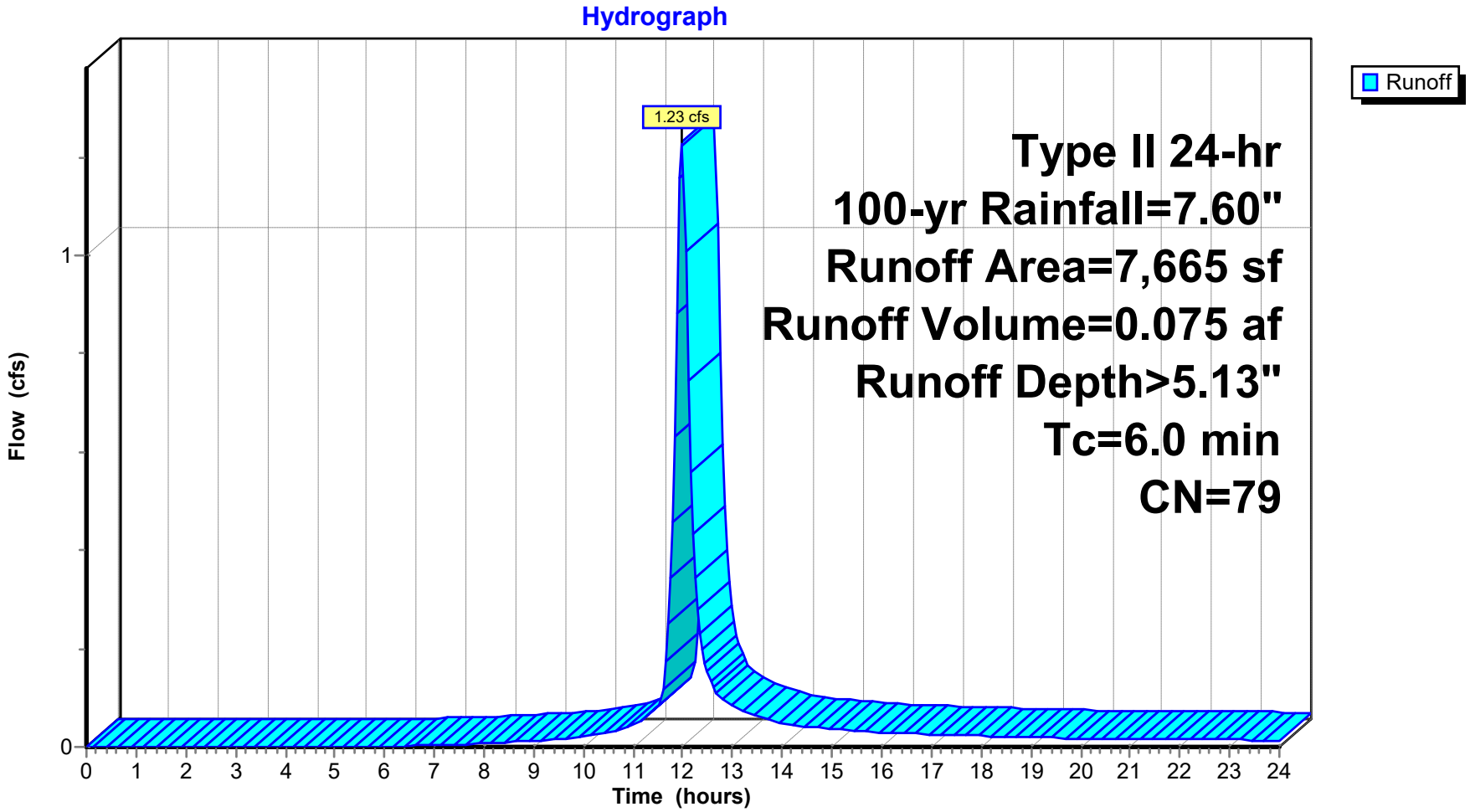
Runoff = 1.23 cfs @ 11.99 hrs, Volume= 0.075 af, Depth> 5.13"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
*	4,087	98	Parking
	1,148	61	>75% Grass cover, Good, HSG B
	2,430	55	Woods, Good, HSG B
	7,665	79	Weighted Average
	3,578		46.68% Pervious Area
	4,087		53.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment PR-1: Pr Parking North (Yellow)



Summary for Subcatchment PR-2: Parking South & Portion New Bldg (Green)

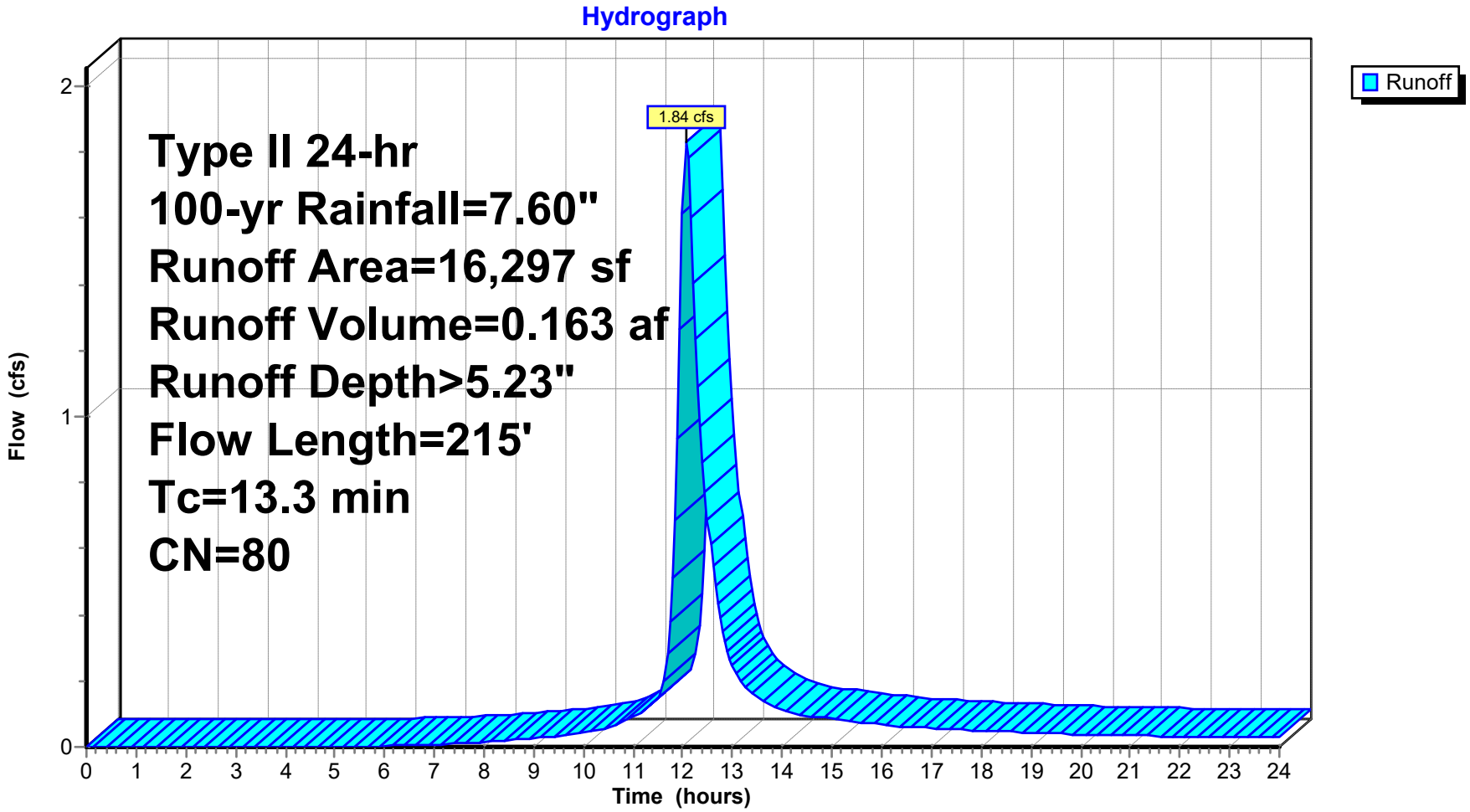
Runoff = 1.84 cfs @ 12.07 hrs, Volume= 0.163 af, Depth> 5.23"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	4,028	61	>75% Grass cover, Good, HSG B
*	9,047	98	Bldg Roof & Parking Group B
*	3,222	55	Perm. Pavers
	16,297	80	Weighted Average
	7,250		44.49% Pervious Area
	9,047		55.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	64	0.0200	1.30		**Sheet Flow, asphalt** Smooth surfaces n= 0.011 P2= 3.40"
11.4	47	0.0200	0.07		**Sheet Flow, pavers** Woods: Light underbrush n= 0.400 P2= 3.40"
1.1	104	0.0060	1.57		**Shallow Concentrated Flow, gutter** Paved Kv= 20.3 fps
13.3	215	Total			

Subcatchment PR-2: Parking South & Portion New Bldg (Green)



Summary for Subcatchment PR-3: Front access Road (Orange)

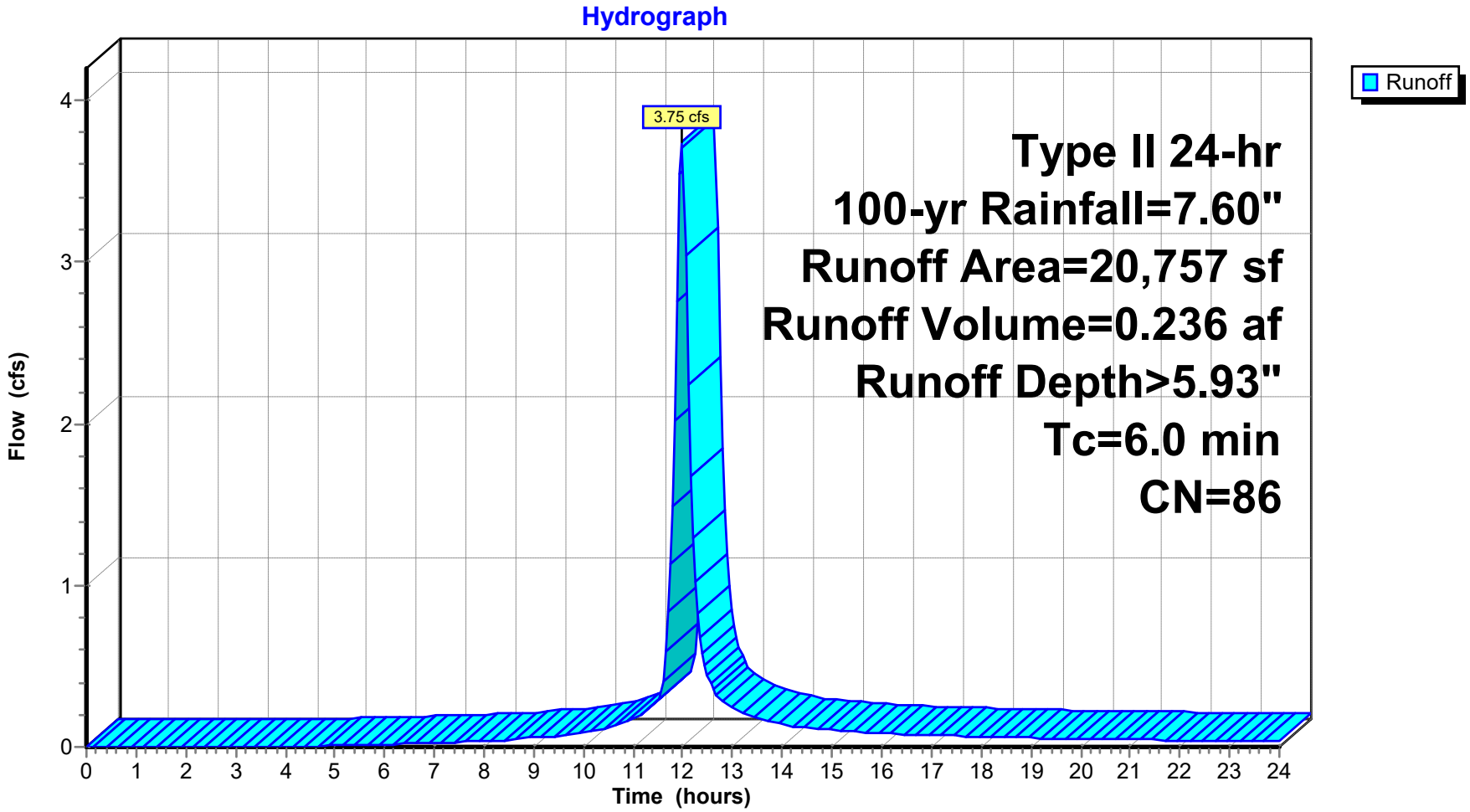
Runoff = 3.75 cfs @ 11.98 hrs, Volume= 0.236 af, Depth> 5.93"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	6,746	61	>75% Grass cover, Good, HSG B
*	8,015	98	Bldg Roof & Parking Group B
*	5,996	98	Courtyard Roof via Rain Leader
	20,757	86	Weighted Average
	6,746		32.50% Pervious Area
	14,011		67.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Min Tc per TR-55**

Subcatchment PR-3: Front access Road (Orange)



Summary for Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta)

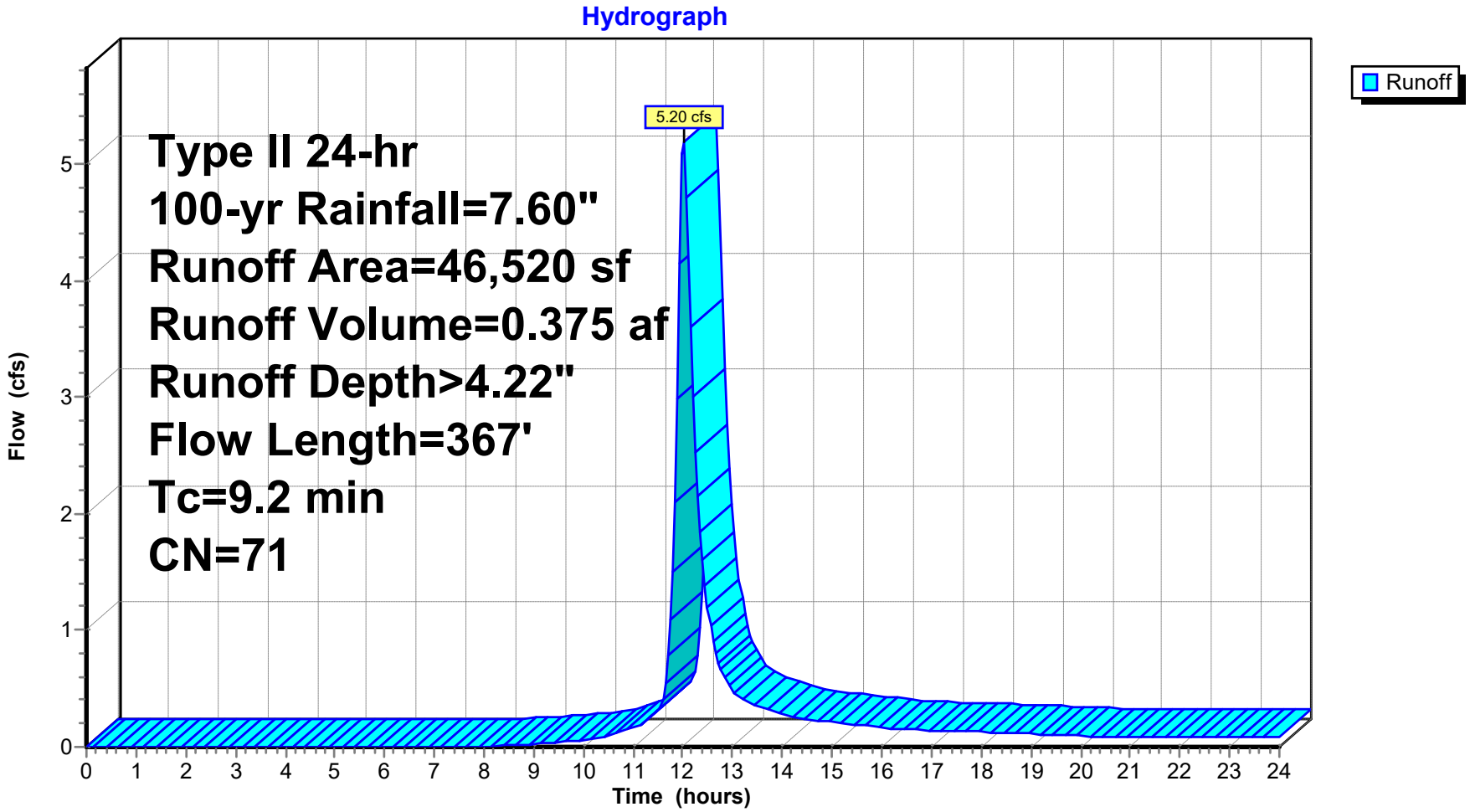
Runoff = 5.20 cfs @ 12.02 hrs, Volume= 0.375 af, Depth> 4.22"

Runoff by SCS TR-20 method, UH=Delmarva, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=7.60"

	Area (sf)	CN	Description
	7,939	74	>75% Grass cover, Good, HSG C
*	204	98	Bldg Roof & Parking Group C
*	10,157	98	Bldg Roof & Parking Group B
	26,027	61	>75% Grass cover, Good, HSG B
	2,193	55	Woods, Good, HSG B
	46,520	71	Weighted Average
	36,159		77.73% Pervious Area
	10,361		22.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	150	0.1000	0.36		**Sheet Flow, Lawn** Grass: Short n= 0.150 P2= 3.40"
2.3	217	0.0060	1.57		**Shallow Concentrated Flow, gutterpan** Paved Kv= 20.3 fps
9.2	367	Total			

Subcatchment PR-4: Portion of Pr Humane Bldg (Magenta)



Summary for Pond 12CMP: Ex 12" CMP

[57] Hint: Peaked at 36.18' (Flood elevation advised)

Inflow Area = 0.793 ac, 27.79% Impervious, Inflow Depth > 4.32" for 100-yr event
Inflow = 2.82 cfs @ 12.11 hrs, Volume= 0.285 af
Outflow = 2.82 cfs @ 12.11 hrs, Volume= 0.285 af, Atten= 0%, Lag= 0.0 min
Primary = 2.82 cfs @ 12.11 hrs, Volume= 0.285 af

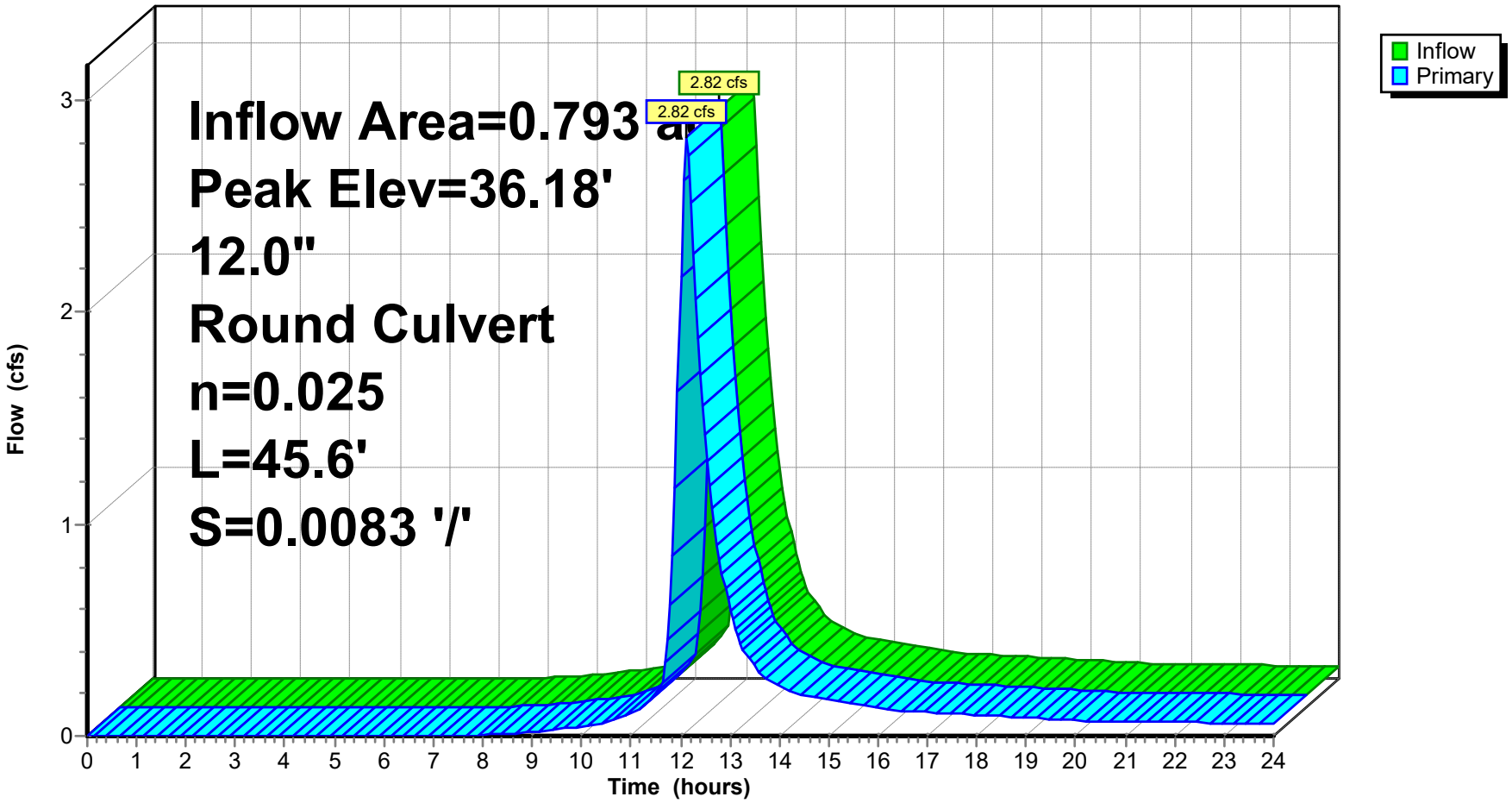
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 36.18' @ 12.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	34.12'	**12.0" Round Ex 12" CMP** L= 45.6' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.12' / 33.74' S= 0.0083 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=2.80 cfs @ 12.11 hrs HW=36.16' TW=0.00' (Dynamic Tailwater)
1=Ex 12" CMP (Barrel Controls 2.80 cfs @ 3.57 fps)

Pond 12CMP: Ex 12" CMP

Hydrograph



Summary for Pond 12P: Ex 12" CMP

[57] Hint: Peaked at 35.22' (Flood elevation advised)

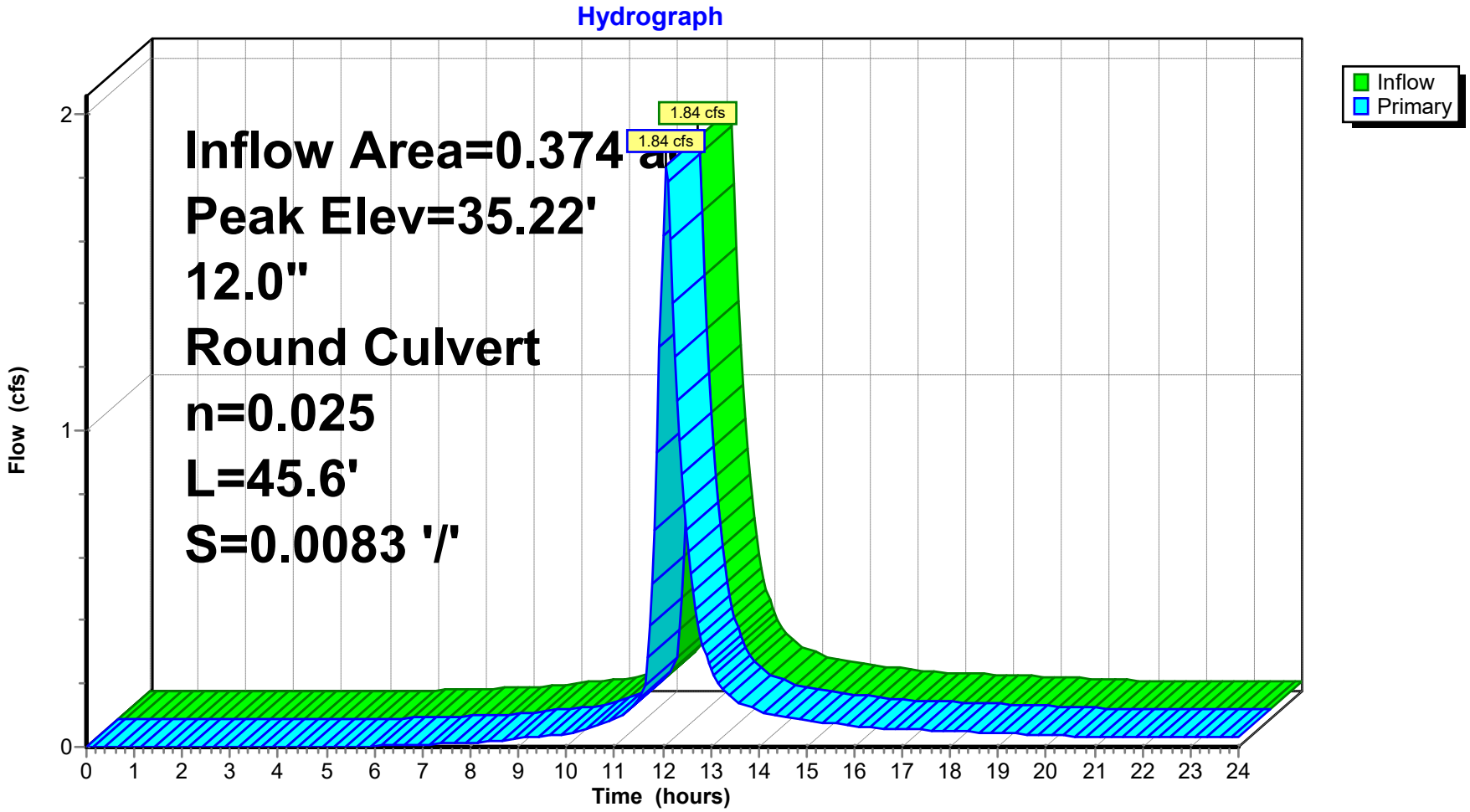
Inflow Area = 0.374 ac, 55.51% Impervious, Inflow Depth > 5.23" for 100-yr event
Inflow = 1.84 cfs @ 12.07 hrs, Volume= 0.163 af
Outflow = 1.84 cfs @ 12.07 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min
Primary = 1.84 cfs @ 12.07 hrs, Volume= 0.163 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 35.22' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	34.12'	**12.0" Round Ex 12" CMP** L= 45.6' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.12' / 33.74' S= 0.0083 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

Primary OutFlow Max=1.81 cfs @ 12.07 hrs HW=35.20' TW=0.00' (Dynamic Tailwater)
1=Ex 12" CMP (Barrel Controls 1.81 cfs @ 2.65 fps)

Pond 12P: Ex 12" CMP

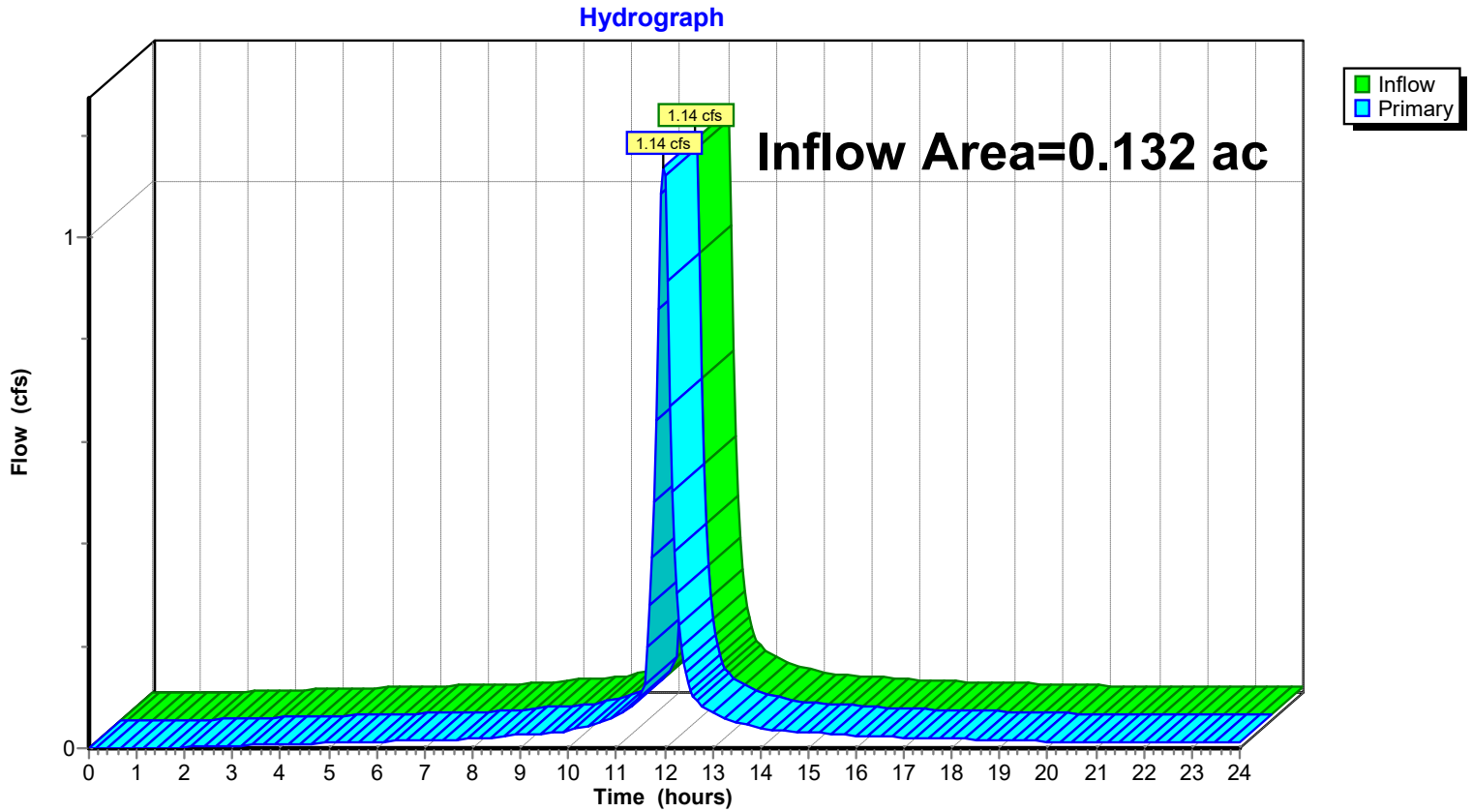


Summary for Link 1L: Ex LOI-2

Inflow Area = 0.132 ac, 93.05% Impervious, Inflow Depth > 6.99" for 100-yr event
Inflow = 1.14 cfs @ 11.98 hrs, Volume= 0.077 af
Primary = 1.14 cfs @ 11.98 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Ex LOI-2

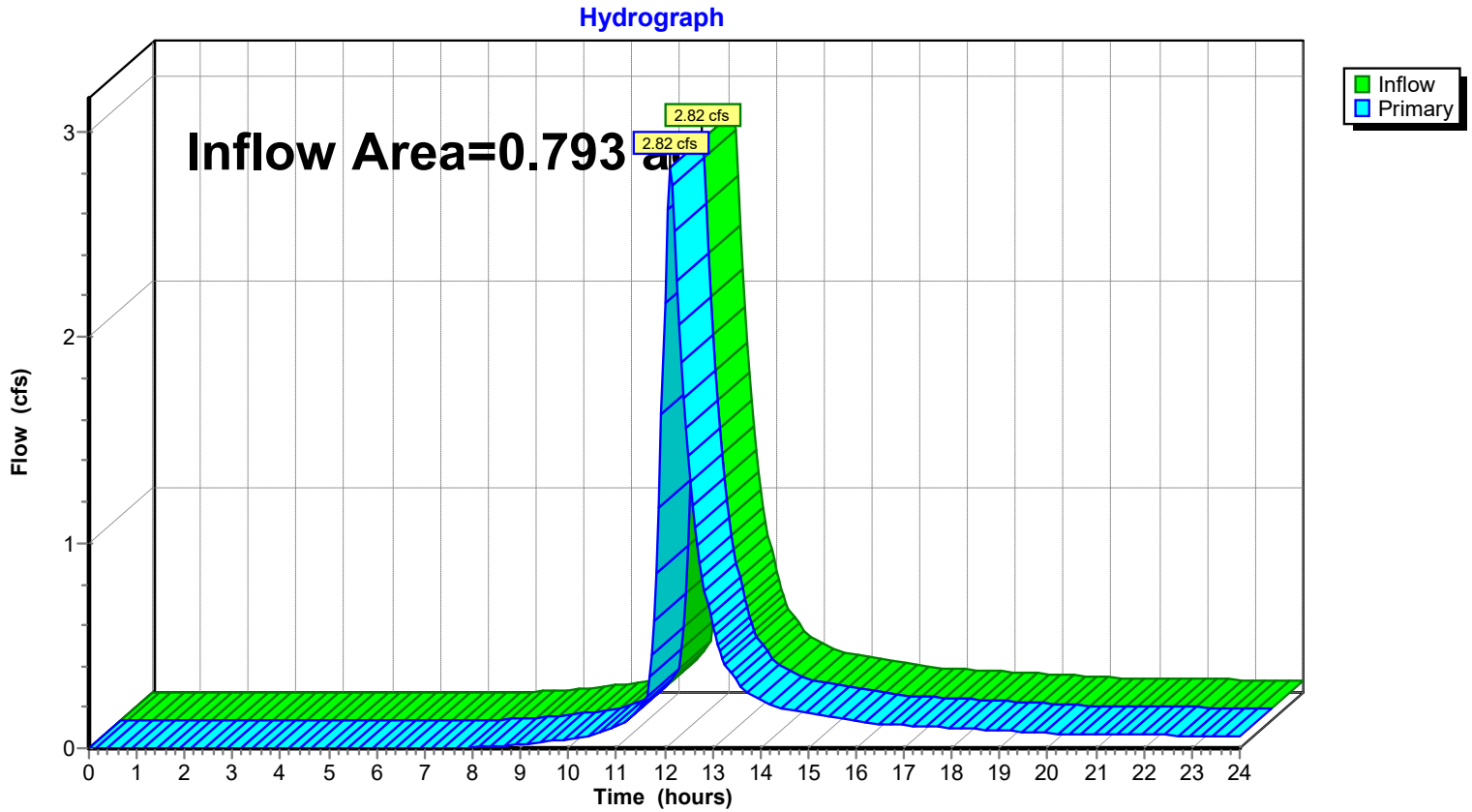


Summary for Link 2L: Ex POI-2

Inflow Area = 0.793 ac, 27.79% Impervious, Inflow Depth > 4.32" for 100-yr event
Inflow = 2.82 cfs @ 12.11 hrs, Volume= 0.285 af
Primary = 2.82 cfs @ 12.11 hrs, Volume= 0.285 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 2L: Ex POI-2

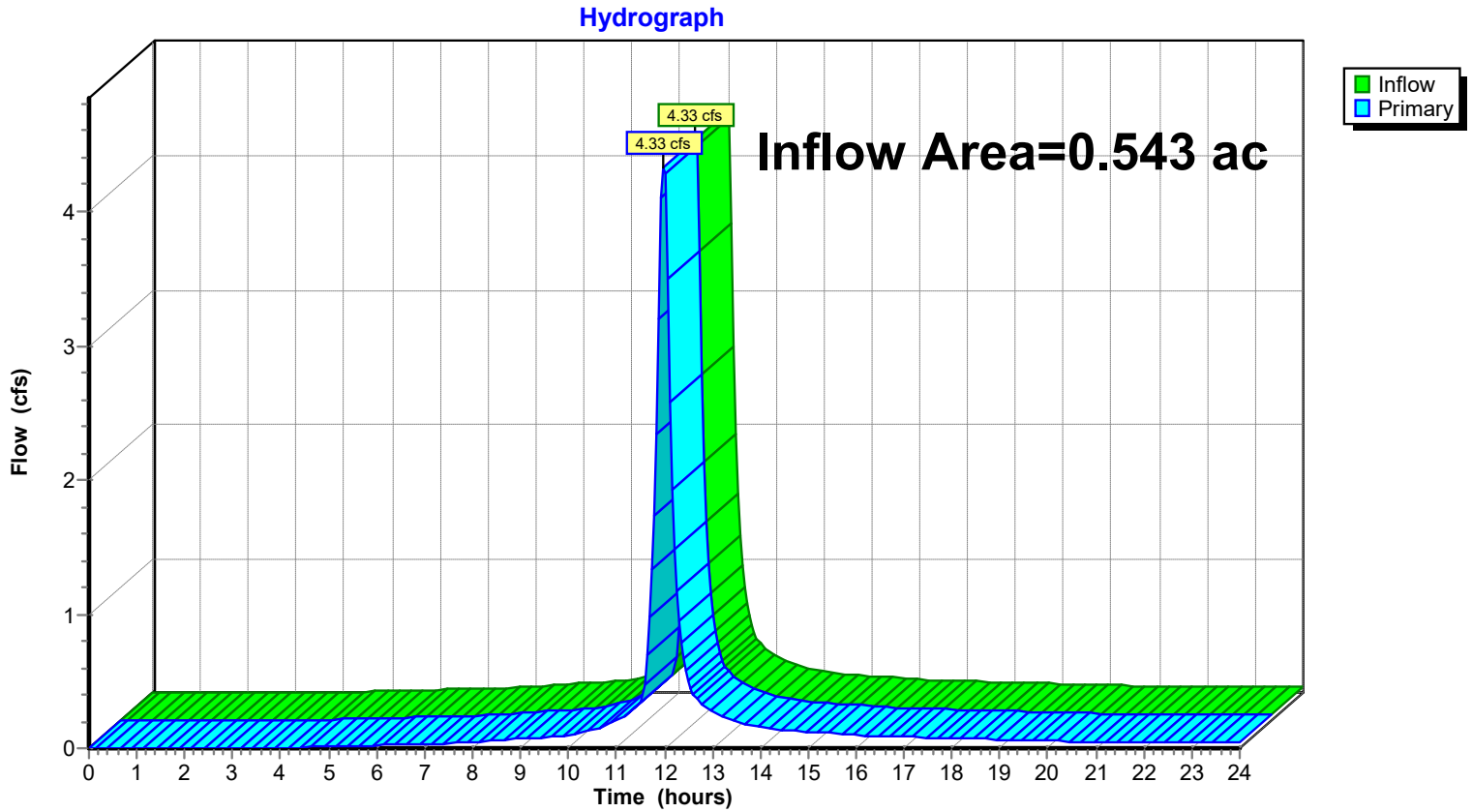


Summary for Link 3L: Ex LOI-1

Inflow Area = 0.543 ac, 70.32% Impervious, Inflow Depth > 6.05" for 100-yr event
Inflow = 4.33 cfs @ 11.98 hrs, Volume= 0.274 af
Primary = 4.33 cfs @ 11.98 hrs, Volume= 0.274 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: Ex LOI-1

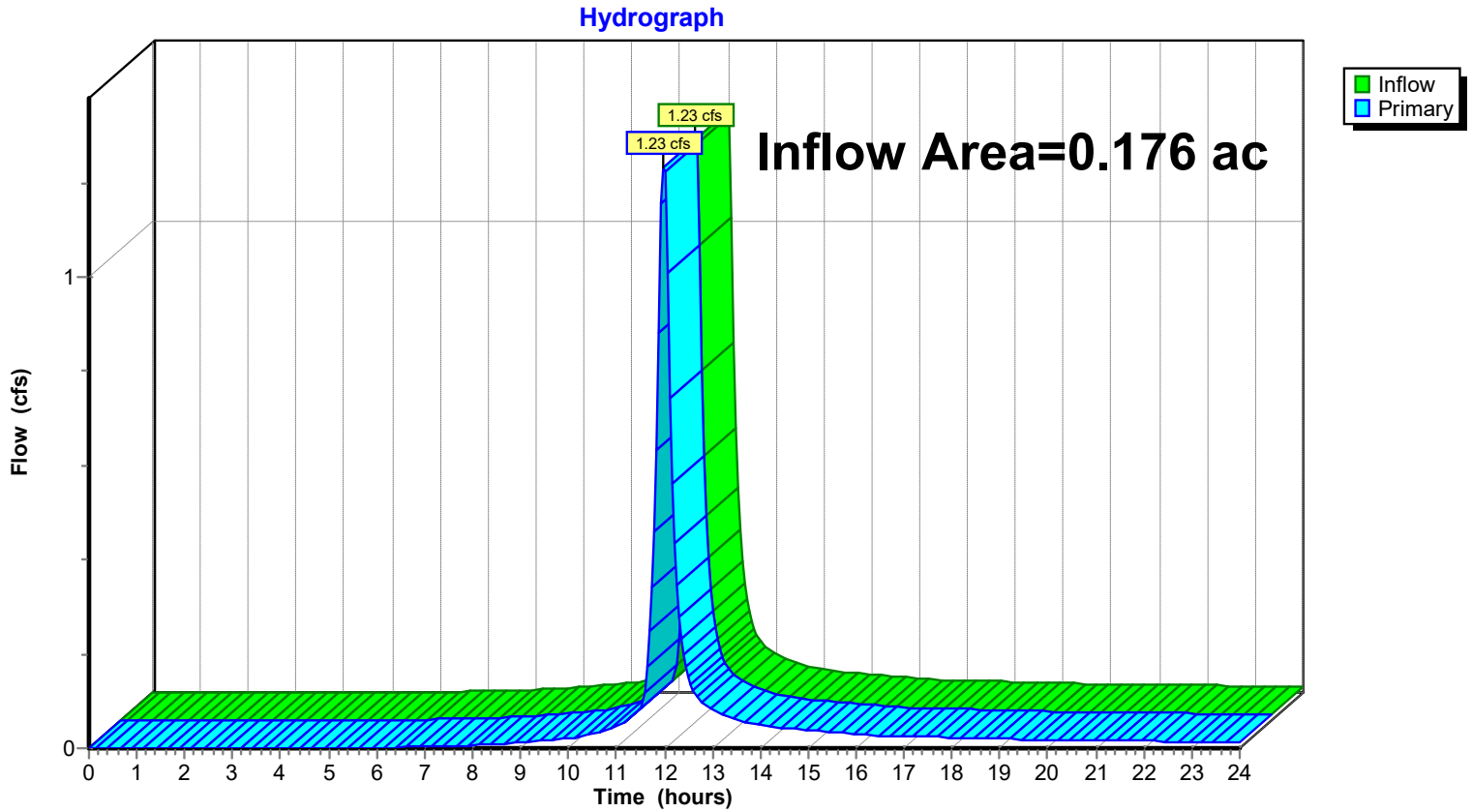


Summary for Link 13L: PR LOI-2

Inflow Area = 0.176 ac, 53.32% Impervious, Inflow Depth > 5.13" for 100-yr event
Inflow = 1.23 cfs @ 11.99 hrs, Volume= 0.075 af
Primary = 1.23 cfs @ 11.99 hrs, Volume= 0.075 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 13L: PR LOI-2

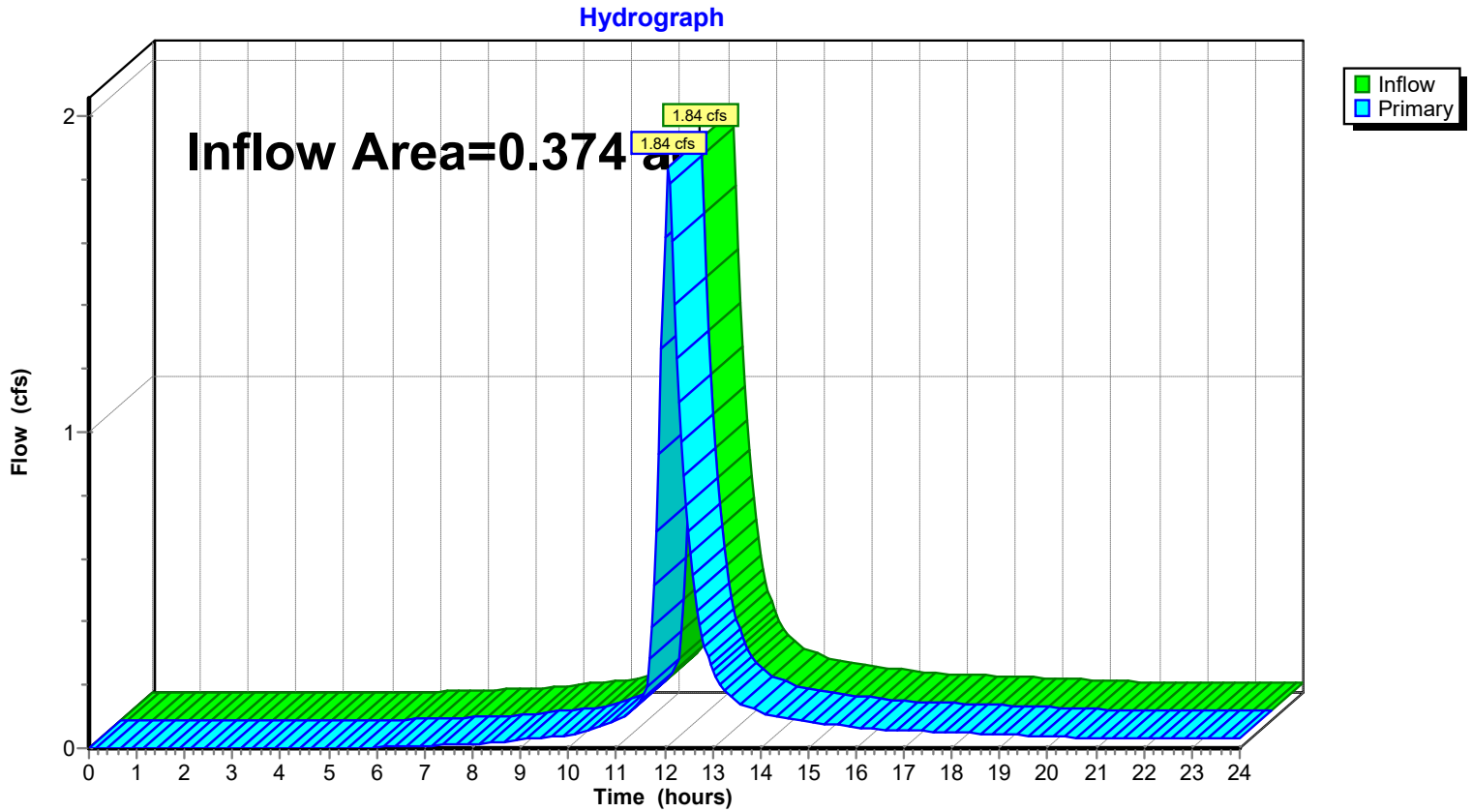


Summary for Link 14L: Pr POI-2

Inflow Area = 0.374 ac, 55.51% Impervious, Inflow Depth > 5.23" for 100-yr event
Inflow = 1.84 cfs @ 12.07 hrs, Volume= 0.163 af
Primary = 1.84 cfs @ 12.07 hrs, Volume= 0.163 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 14L: Pr POI-2

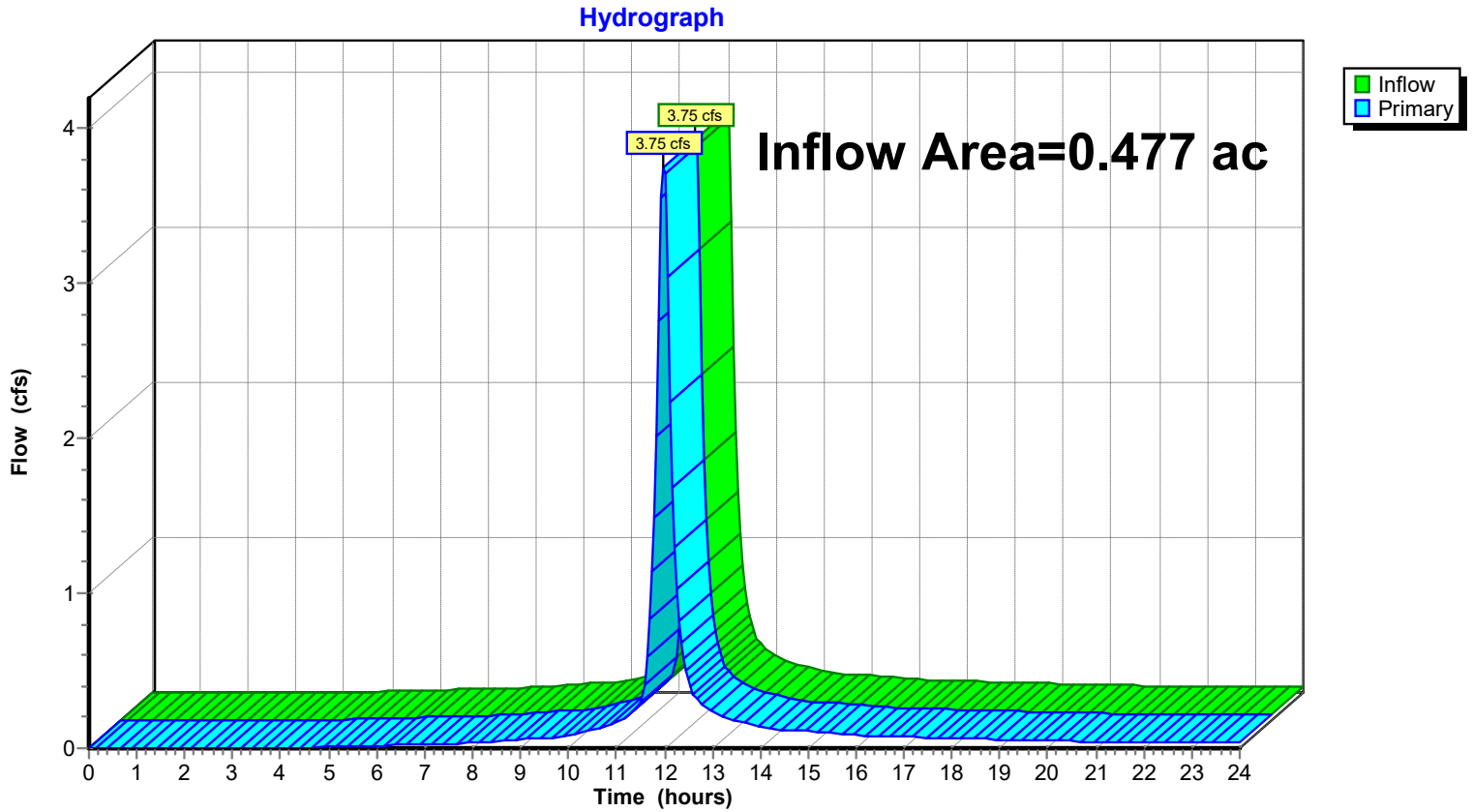


Summary for Link 15L: Pr LOI-1

Inflow Area = 0.477 ac, 67.50% Impervious, Inflow Depth > 5.93" for 100-yr event
Inflow = 3.75 cfs @ 11.98 hrs, Volume= 0.236 af
Primary = 3.75 cfs @ 11.98 hrs, Volume= 0.236 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 15L: Pr LOI-1

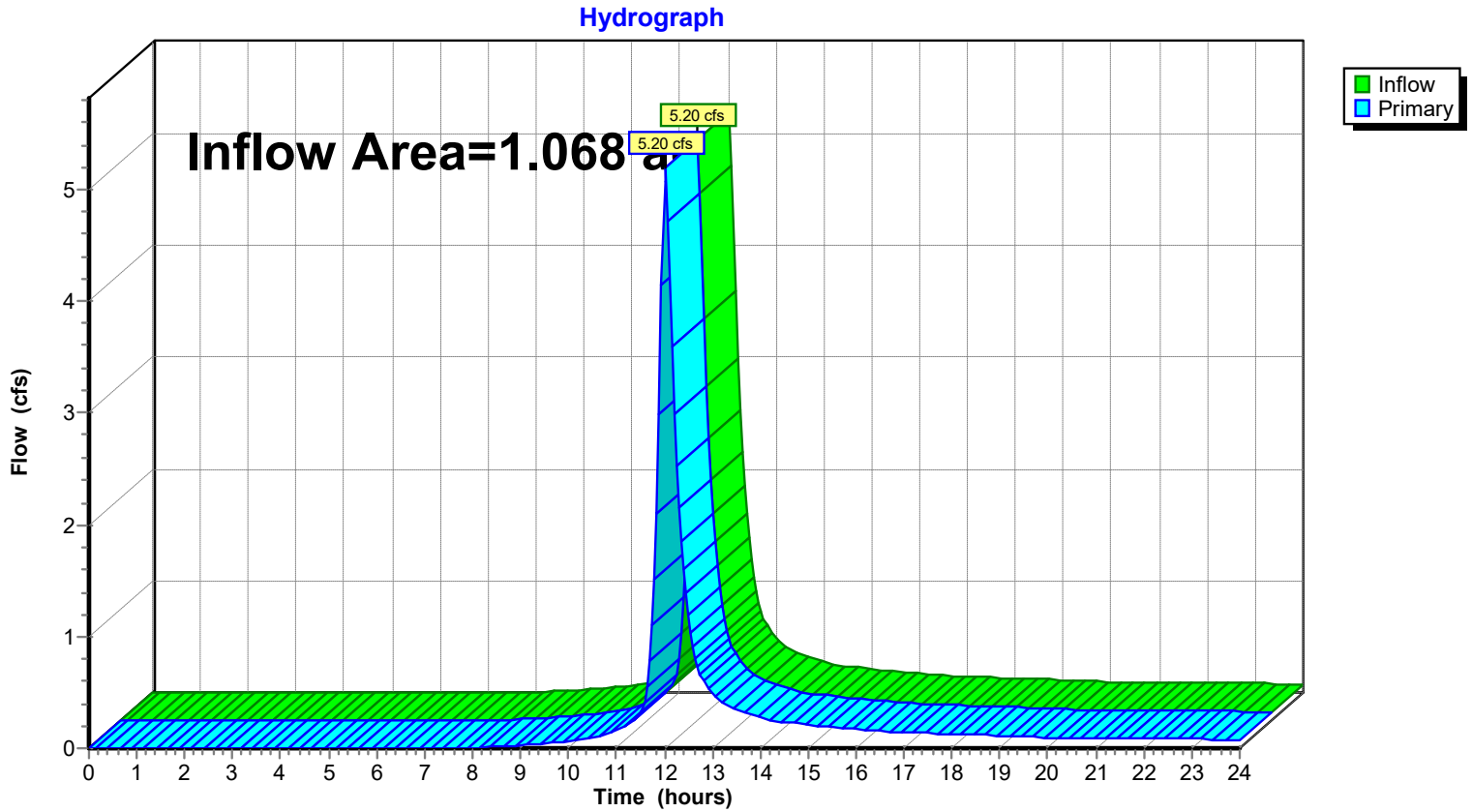


Summary for Link 16L: Pr POI 1

Inflow Area = 1.068 ac, 22.27% Impervious, Inflow Depth > 4.22" for 100-yr event
Inflow = 5.20 cfs @ 12.02 hrs, Volume= 0.375 af
Primary = 5.20 cfs @ 12.02 hrs, Volume= 0.375 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 16L: Pr POI 1

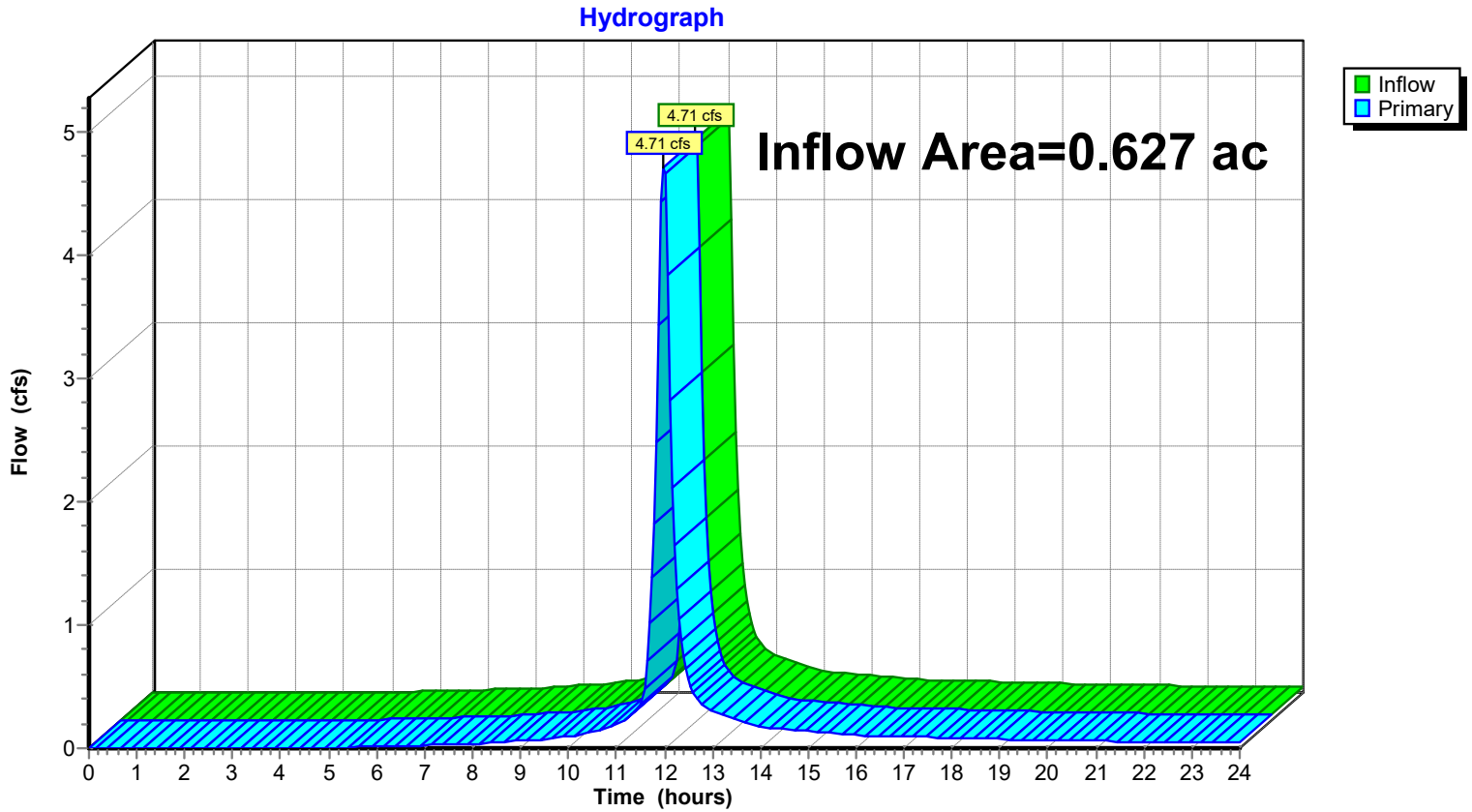


Summary for Link EX1: Ex POI 1

Inflow Area = 0.627 ac, 52.17% Impervious, Inflow Depth > 5.59" for 100-yr event
Inflow = 4.71 cfs @ 11.99 hrs, Volume= 0.292 af
Primary = 4.71 cfs @ 11.99 hrs, Volume= 0.292 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link EX1: Ex POI 1



APPENDIX B

ESD CALCULATIONS

ESD SITE TARGET

EARTHEN DISTURBANCE (LOD) = 91,239 SF;

EXISTING IMPERVIOUS 45,831 SF (50.23%); PROJECT QUALIFIES FOR REDEVELOPMENT ($I_{EXISTING}$ >40%)

TREAT, TO A P_E OF 1.0", OR REMOVE 50% OF EXISTING IMPERVIOUS SURFACE:

HALF EXISTING COVERAGE = 45,831 SF X ½ = 22,916 SF TO BE TREATED OR REMOVED

PROPOSED DEVELOPMENT = 37,507 SF; 8,324 SF REMOVED

REMAINING IMPERVIOUS TO BE TREATED = 14,592 SF

R_V = 0.95, P_E = 1.0"

$ESD_{V\ (HALF\ EXISTING)} = \frac{(Pe)(Rv)(A)}{12} = \frac{(1.0)(0.95)(14{,}592)}{12}$ = **1,155 CF**

PERMEABLE PAVERS (A-2)

PER MDE ENVIRONMENTAL SITE DESIGN (ESD) PROCESS & COMPUTATIONS TABLE 1

12" GRAVEL SUBBASE YIELDS 0.196 ESD_V PER FT^2 IN GROUP "B" SOILS

7,666 SF X 0.196 CF/SF = **1,503 CF**

APPENDIX C

DRAINAGE AREA MAPS

LEGEND

	MAIL BOX		LAMP POLE
HVAC	HVAC UNIT	OHU	OVER HEAD UTILITY LINES
GV	GAS SHUTOFF VALVE		GUARD RAIL
SSCO	SANITARY SEWER CLEAN OUT		FENCE
SSMH	SANITARY SEWER MANHOLE		APPROXIMATE TREE LINE
	FIRE HYDRANT		TOP OF BANK
WM	WATER METER		BOTTOM OF BANK
WV	WATER VALVE	10	MAJOR CONTOUR
WF	WATER FAUCET	7	MINOR CONTOUR
TP	TELEPHONE PEDESTAL		X-CUT FOUND
	FLOOD LIGHT		IRON ROD FOUND
	ELECTRIC TRANSFORMER		IRON ROD SET
	ELECTRIC HANDHOLE		COMPUTED POINT
GA	GUY WIRE ANCHOR		UTILITY POLE

TALBOT COUNTY SOILS

MAP SYMBOL	SOILS NAME	HYDRIC SOILS	K FACTOR	SOIL GROUP
HfB	HAMBROOK-SASSAFRAS COMPLEX		0.37	B
HfC	HAMBROOK-SASSAFRAS COMPLEX		0.32	B
WoA	WOODSTOWN LOAM	*	0.32	C

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

STORMWATER MANAGEMENT DRAINAGE AREA TABLE

AREA #	AREA (SF)	TOTAL Tc (MINUTES)	IMPERVIOUS (%)	DESCRIPTION
EX-1	5,738	6.00	93.05	HALF FMR SSPP STUDENT PARKING
EX-2	34,549	10.50	27.79	HALF FMR SSPP STUDENT PARKING & OVERFLOW OFFICE
EX-3	23,662	6.00	70.32	PORTION OF EX HUMANE BLDG & ACCESS ROAD
EX-4	27,291	6.00	52.17	QUARTER OF PROJECT SITE

SWM PRE-DEVELOPMENT DISCHARGES (CFS)

STUDY POINT	Q_2	Q_{10}	Q_{100}
1	0.48	0.78	1.14
2	0.62	1.55	2.82
3	1.57	2.82	4.33
4	1.55	2.96	4.71
TOTAL	4.22	8.11	13.00



PLANS ARE ISSUED FOR REVIEW ONLY

PLANS ARE NOT APPROVED FOR CONSTRUCTION

REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

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.

MISS UTILITY
DIG WITH CARE
BEFORE YOU DIG CALL
1-800-441-8355 OR 811
PROTECT YOURSELF, GIVE
TWO WORKING DAYS NOTICE

Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E-mail: general@lane-eng.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 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: 04/04/2028.

SEAL

STATE OF MARYLAND · PETER C. CROSBY · 51461 · PROFESSIONAL ENGINEER

DATE

EXISTING CONDITIONS DRAINAGE AREA MAP

FOR
TALBOT HUMANE SOCIETY

IN THE TOWN OF EASTON, WARD 4
TALBOT COUNTY, MARYLAND
TAX MAP 106 PARCEL 1665 LOTS 1 & 2 & PARCEL 2987

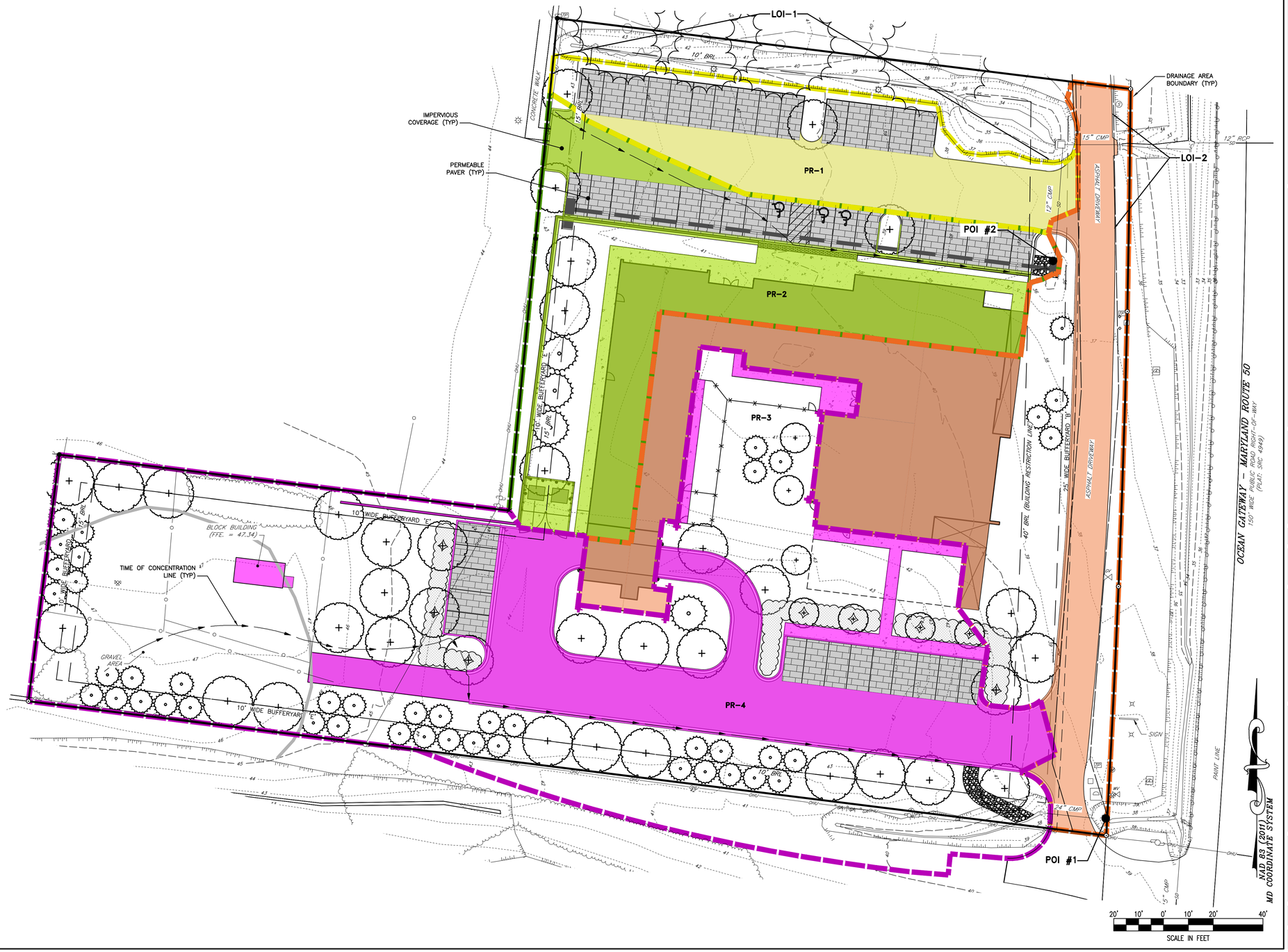
ISSUED FOR:	DATE: BY:
ESDR SUBMITTAL	06/03/26 BCE

SHEET No. 1 OF 2
SCALE: AS NOTED
JOB No. 250350
FILE No. B857

Date: 06/03/2026 - 9:30am User: achosta Project Manager: BCE
Drawing Path: J:\2025\0300\250350\Civil3D-250350\Dwg\Plots\CDA-PLTS-250350.dwg | 1 OF 2
XREF File(s): RAR-BASE-250350/XLD-BASE-250350/CSW-BASE-250350/VSF-BASE-250350/CBS-BASE-2438-250350/HSL-BASE-250350/LLP-BASE-250350/CUP-BASE-250350/RLD-EUC-BASE-250350/CDA-BASE-250350/VDA-BASE-250350

STORMWATER MANAGEMENT DRAINAGE AREA TABLE				
AREA #	AREA (SF)	TOTAL Tc (MINUTES)	IMPERVIOUS (%)	DESCRIPTION
PR-1	7,665	6.00	53.32	HALF PARKING
PR-2	16,297	13.30	55.51	PORTION OF NEW BUILDING & PARKING
PR-3	20,757	6.00	67.50	EX ACCESS & BLDG ROOF VIA COLLECTOR SYSTEM
PR-4	46,520	9.20	22.27	SOUTHERN PARKING

SWM POST-DEVELOPMENT DISCHARGES (CFS)			
STUDY POINT	Q_2	Q_{10}	Q_{100}
1	0.36	0.75	1.23
2	0.54	1.11	1.84
3	1.33	2.42	3.75
4	1.14	2.84	5.20
TOTAL	3.37	7.12	12.02



PLANS ARE ISSUED FOR REVIEW ONLY

PLANS ARE NOT APPROVED FOR CONSTRUCTION

REVISIONS TO APPROVED PLANS			
No.	DATE	DESCRIPTION	BY

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.

MISS UTILITY
DIG WITH CARE
BEFORE YOU DIG CALL
1-800-441-8355 OR 811
PROTECT YOURSELF, GIVE
TWO WORKING DAYS NOTICE

Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E-mail: general@lecinc.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 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: 04/04/2028.

SEAL

STATE OF MARYLAND · PETER C. CROSBY · 51461 · PROFESSIONAL ENGINEER

DATE

PROPOSED CONDITIONS DRAINAGE AREA MAP

FOR
TALBOT HUMANE SOCIETY

IN THE TOWN OF EASTON, WARD 4
TALBOT COUNTY, MARYLAND
TAX MAP 106 PARCEL 1665 LOTS 1 & 2 & PARCEL 2987

ISSUED FOR:	DATE: BY:
ESDR SUBMITTAL	06/03/26 BCE

SHEET No. 2 OF 2
SCALE: AS NOTED
JOB No. 250350
FILE No. B857

Date: 06/03/2026 - 9:30am User: achosta Project Manager: BCE
Drawing Path: J:\2025\0300\250350\Civil\3D-250350\Dwg\Plots\CDA-PLTS-250350.dwg | 2 OF 2
XREF File(s): RAR-BASE-250350/XLU-BASE-250350/CSH-BASE-250350/VSF-BASE-250350/CBS-BASE-2438-250350/HSL-BASE-250350/LLP-BASE-250350/CSW-BASE-250350/RLD-EUC-BASE-250350/CUP-BASE-250350/CDA-BASE-250350/VDA-BASE-250350

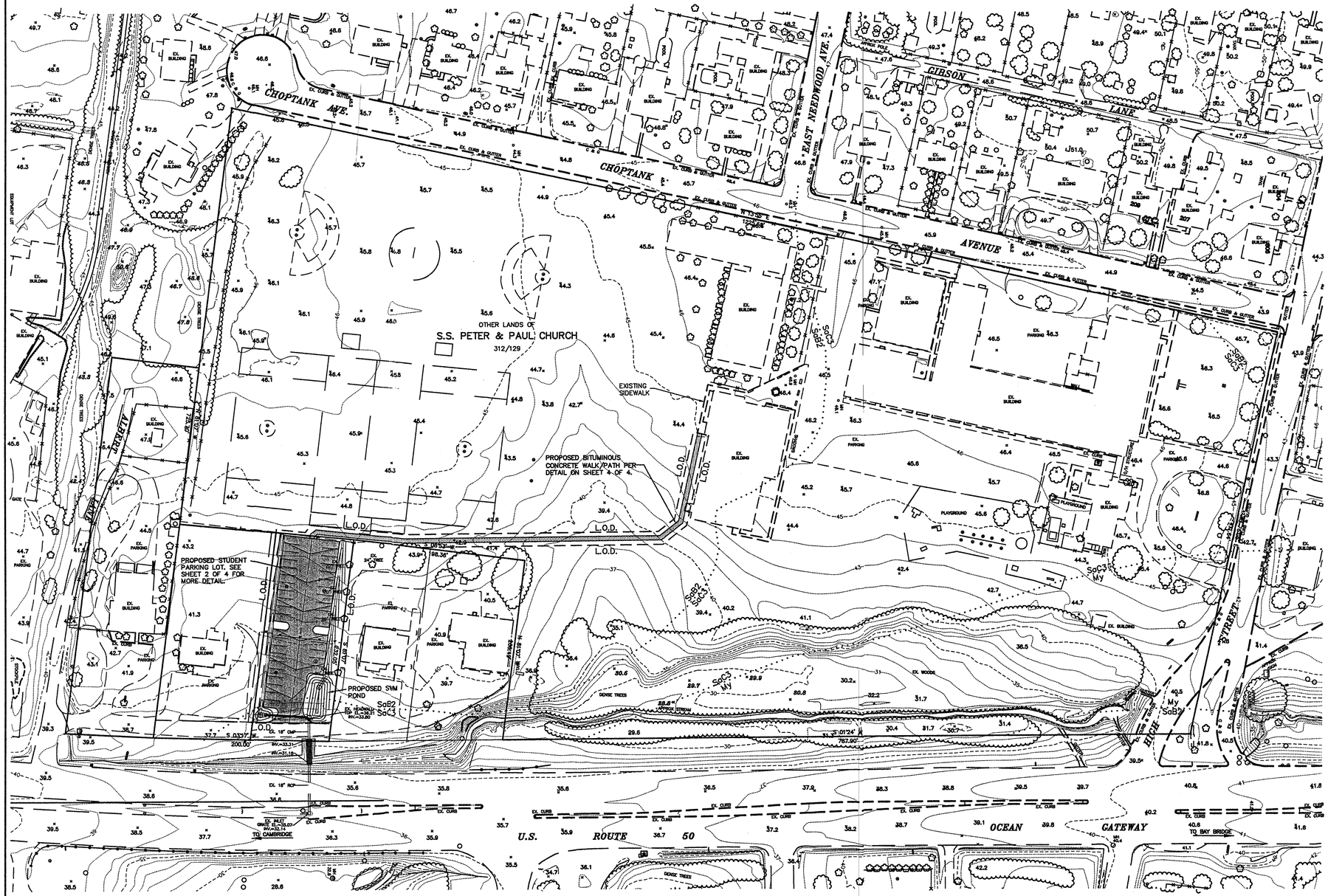
Land Development Desktop Civil 3D

APPENDIX D

2001 SSPP STUDENT PARKING LOT PLANS ON FILE WITH TOE

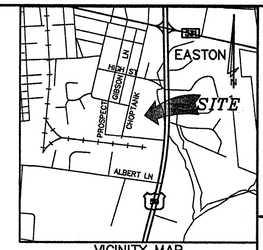
OWNER
STS. PETER & PAUL CHURCH
215 GOLDSBOROUGH STREET
EASTON, MARYLAND 21601
PHONE NO. 1-410-

ENGINEER
McCRONE, INC.
207 N. LIBERTY STREET
CENTREVILLE, MARYLAND 21617
PHONE NO. 1-410-758-2237



AREA SHOWN ▨ SHALL BE 3" BITUMINOUS CONCRETE ON 6" CR-6 ON COMPACTED SUBGRADE.

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VICINITY MAP
SCALE: 1" = 1,000'

NOTES:

1. THE PURPOSE OF THIS SITE PLAN IS TO RECEIVE APPROVAL FROM THE TOWN OF EASTON PLANNING COMMISSION FOR THE PROPOSED STUDENT PARKING LOT.
2. PROPERTY LINES SHOWN HEREON ARE BASED ON A PLAT BY KASTENHUBER AND ANDERSON ENTITLED "MAP SHOWING A PORTION OF 'CARROLLS ADDITION' PURCHASED BY SS. PETER & PAUL CHURCH." DATED: MARCH, 1954.
3. SOIL TYPES AND CONFIGURATIONS ARE TAKEN FROM THE U.S. DEPARTMENT OF AGRICULTURE, SCS 1966 SOIL SURVEY OF TALBOT COUNTY, MD SHEET NO. -
4. THIS SITE IS NOT LOCATED WITHIN THE 100 YEAR FLOOD PLAIN ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S F.I.R.M. MAP FOR THE TOWN OF EASTON, MARYLAND TALBOT COUNTY, PANEL NO. 240067 0002, DATED: SEPTEMBER 28, 1984. ZONE "C".
5. TOPOGRAPHY SHOWN HEREON IS A COMBINATION OF AERIAL TOPOGRAPHY AND FIELD RUN TOPOGRAPHY.
6. SETBACKS FOR CG ZONE: **GENERAL COMMERCIAL DISTRICT**
   FRONT = 25'
   REAR = 15'
   SIDE = 15'

SITE STATISTICS

CURRENT ZONING - CG - GENERAL COMMERCIAL DISTRICT
FOR DEED REFERENCE, SEE 312/129
SITE IS NOT LOCATED WITHIN THE CRITICAL AREA
SITE IS NOT LOCATED WITHIN THE 100 Yr. FLOOD PLAIN
PROPOSED USE - STUDENT PARKING LOT
TAX MAP - 105, BLOCK - 17, PARCEL - 1665, LOT 2

AREA OF SITE		= 0.482 AC.±
AREA IN CRITICAL AREA		= 0.000 AC.±
AREA IN 100 YEAR FLOOD PLAIN		= 0.000 AC.±
MAXIMUM LOT COVERAGE	(50% OF SITE)	= 0.241 AC.±
EXISTING LOT COVERAGE	(8% OF SITE)	= 0.040 AC.±
PROPOSED LOT COVERAGE	(61% OF SITE)	= 0.294 AC.±
EXISTING IMPERVIOUS AREA		= 0.040 AC.±
PROPOSED IMPERVIOUS AREA		= 0.254 AC.±

LEGEND

- DENOTES DEED POINT (UNLESS OTHERWISE NOTED)
- x 13.11 — EXISTING SPOT ELEVATION
- 46 — EXISTING CONTOUR
- 13x11 — PROPOSED SPOT ELEVATION
- 46 — PROPOSED CONTOUR
- -E-E- — EXISTING UNDERGROUND ELECTRIC LINE (APPROXIMATE LOCATION)
- -T-T- — EXISTING UNDERGROUND TELEPHONE LINE (APPROXIMATE LOCATION)
- EXISTING TELEPHONE PEDESTAL
- EXISTING OVERHEAD UTILITY LINE
- EXISTING UTILITY POLE
- EXISTING BUSH/SHRUB
- EXISTING TREE
- EXISTING WOODS/TREE LINE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING HYDRANT
- EXISTING TRAFFIC FLOW ARROW
- PROPOSED TRAFFIC FLOW ARROW
- PROPOSED HANDICAPPED PARKING SPACE
- -SF- — PERIMETER SILT FENCE
- L.O.D. — LIMIT OF DISTURBANCE

TOWN OF EASTON DEPARTMENT OF PUBLIC WORKS
TOWN OF EASTON DEPARTMENT OF PUBLIC WORKS FOR SEDIMENT AND EROSION CONTROL REVIEW ONLY
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
TALBOT SOIL CONSERVATION DISTRICT

DATE
SEAL

McCRONE
ENGINEERING □ ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING □ CONSTRUCTION SERVICES
207 NORTH LIBERTY STREET, SUITE 100
CENTREVILLE, MARYLAND
(410) 758-2237
ANNAPOLIS-<CENTREVILLE-EASTON-SALISBURY-SOUTHERN MARYLAND

DATE	REVISION
8-14-01	PER TOWN COMMENTS

SCALE: 1"=60'
DRAWN BY: T. VANA
DESIGNED BY: WTD, JR.
APPROVED BY: WTD, JR.
DATE: JUNE, 2001
JOB NO.: D10102259
FOLDER REF: 2351

OVERALL SITE PLAN.
FOR A STUDENT PARKING LOT FOR
S.S. PETER & PAUL CHURCH
IN THE TOWN OF EASTON
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR: STEPHEN F. GARLAND CUSTOM HOMES

SHEET NO. - 1 OF 4
CADD FILE - 01259S01

AREA SHOWN [▒] SHALL BE 3" BITUMINOUS CONCRETE ON 6" CR-6 ON COMPACTED SUBGRADE.

LEGEND

- DENOTES DEED POINT (UNLESS OTHERWISE NOTED)
- x 13.11 — EXISTING SPOT ELEVATION
- 46 — EXISTING CONTOUR
- 13x11 — PROPOSED SPOT ELEVATION
- 46 — PROPOSED CONTOUR
- E — EXISTING UNDERGROUND ELECTRIC LINE (APPROXIMATE LOCATION)
- T — EXISTING UNDERGROUND TELEPHONE LINE (APPROXIMATE LOCATION)
- EXISTING TELEPHONE PEDESTAL
- EXISTING OVERHEAD UTILITY LINE
- EXISTING UTILITY POLE
- EXISTING BUSH/SHRUB
- EXISTING TREE
- EXISTING WOODS/TREE LINE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING HYDRANT
- EXISTING TRAFFIC FLOW ARROW
- PROPOSED TRAFFIC FLOW ARROW
- PROPOSED HANDICAPPED PARKING SPACE
- SF — PERIMETER SILT FENCE
- L.O.D. — LIMIT OF DISTURBANCE

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EXISTING OVERHEAD UTILITY LINE

PROPOSED BITUMINOUS CONCRETE WALK/PATH PER DETAIL ON SHEET 4 OF 4.

OTHER LANDS OF S.S. PETER & PAUL CHURCH 312/129

PROPOSED TRAPEZOIDAL DITCH WITH 2' BOTTOM WIDTH @ 3:1 SIDE SLOPES @ 3.0% STABILIZE DITCH BOTTOM AND SIDE SLOPES WITH TOPSOIL, SEED, MULCH AND "CURLEX" EXCELSIOR MATTING PER DETAIL ON SHEET 4 OF 4.

EXISTING 10' UTILITY EASEMENT

PROPOSED PARKING BUMPER PER DETAIL ON SHEET 4 OF 4. TYPICAL

OTHER LANDS OF S.S. PETER & PAUL CHURCH 312/129

N/F LANDS OF TALBOT COUNTY HUMANE SOCIETY 281/290

N/F LANDS OF LITTLE RASCALS, LLC. 937/509

N/F LANDS OF DEWEY H. REED, III 867/728

PROPOSED TRAPEZOIDAL DITCH WITH 2' BOTTOM WIDTH @ 3:1 SIDE SLOPES @ 3.0% STABILIZE DITCH BOTTOM AND SIDE SLOPES WITH TOPSOIL, SEED, MULCH AND "CURLEX" EXCELSIOR MATTING PER DETAIL ON SHEET 4 OF 4.

PROPOSED RIP RAP INFLOW PROTECTION DEVICE PER DETAIL ON SHEET 4 OF 4.

PROPOSED STORMWATER MANAGEMENT POND WITH 3:1 SIDE SLOPES. STABILIZE SLOPES WITH TOPSOIL, SEED, MULCH AND "CURLEX" EXCELSIOR MATTING PER DETAIL ON SHEET 4 OF 4.

EXISTING CONCRETE HEADWALL TO BE REMOVED.

PROPOSED SINGLE "MR" INLET TO BE CONSTRUCTED OVER EXISTING 18" CMP. TOP OF GRATE EL. = 36.00 INV. = 2' TRAPEZOIDAL NOTCH = 35.00 PER DETAIL ON SHEET 4 OF 4.

PROPOSED INV.= 34.38

PROPOSED INV.= 33.80

EXISTING GRAVEL DRIVEWAY TO ACT AS A STABILIZED CONSTRUCTION ENTRANCE.

EXISTING 20' UTILITY EASEMENT

MATCH EXISTING GRADE

EX. 18" CMP

REGRADE EXISTING DITCH TO NEW CULVERT INVERT AND INFLOW PROTECTION DEVICE PER DETAIL ON SHEET 4 OF 4.

BENCH MARK NAIL ELEV. = 36.14

PROVIDE 48 LF OF 12" RCP (CL-III) WITH END SECTION (SOUTH) @ 1.20%

INV.=33.31

INV.=31.18

EXCAVATE 19" OF EXISTING SOIL TO ACCOMMODATE THE PROPOSED 19" THICK CLASS 1 RIP RAP LINING PER M.D.E. DETAIL 26 (MODIFIED) FOR ROCK OUTLET PROTECTION II. PER DETAIL ON SHEET 4 OF 4.

EX. 18" RCP

EX. CURB

EX. INLET GRATE EL.=35.07 INV.=32.14

TO ALBERT LANE

L.O.D.

SaB2

SaC3

U.S. ROUTE 50 OCEAN GATEWAY

MH 32.8

PIPE

TANK

TALBOT SOIL CONSERVATION DISTRICT

TOWN OF EASTON DEPARTMENT OF PUBLIC WORKS

FOR PERMIT AND EROSION CONTROL REVIEW ONLY

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

DATE — SEAL

McCRONE

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207 NORTH LIBERTY STREET
SUITE 100
CENTREVILLE, MARYLAND
(410) 758-2237

ANNAPOLIS-CENTREVILLE-ELKTON-SALISBURY-SOUTHERN MARYLAND

DATE	REVISION
8-14-01	PER TOWN COMMENTS

SCALE 1"=20'
DRAWN BY: T. VANA
DESIGNED BY: WTD, JR.
APPROVED BY: WTD, JR.
DATE AUGUST, 2001
JOB NO. D1010259
FOLDER REF 2351

SITE, GRADING, SEDIMENT & EROSION CONTROL PLAN

FOR A STUDENT PARKING LOT FOR

S.S. PETER & PAUL CHURCH

IN THE TOWN OF EASTON
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND

PREPARED FOR: STEPHEN F. GARLAND CUSTOM HOMES

SHEET NO. — 2 OF 4

CADD FILE — 01259S02

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	SPACING
A	PINUS STROBUS	EASTERN WHITE PINE	3	7'-7.5' TALL, B&B	AS SHOWN
B	QUERCUS PALUSTRIS	PIN OAK	2	2"-2.5" CAL., B&B	AS SHOWN
C	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2	2"-2.5" CAL., B&B	AS SHOWN
AA	BERBERIS THUNBERGII 'ROSE GLOW'	ROSE GLOW BARBERRY	27	18"-24" TALL, B&B	5' ON CENTER
BB	EUONYMUS KAIUTSCHOVICUS 'SIEBOLDIANA'	SEIBOLD SPREADING EUONYMUS	29	2'-3' TALL, B&B	5' ON CENTER
CC	TAXUS X MEDIA DENSIFORMIS	DENSE YEW	9	18"-24"TAL, B&B	5' ON CENTER
DD	WEIGELA FLORIDA 'VARIEGATA NANA'	VARIEGATED WEIGELA	7	18"-24" TALL, B&B	5' ON CENTER

PLANTING SPECIFICATIONS

A. MATERIALS

(1) PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. THEY SHALL HAVE BEEN ROOT PRUNED WITHIN THE LAST TWO YEARS.

THEY SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED AND DENSELEY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE, PEST, EGGS OR LARVAE, AND SHALL HAVE A HEALTHY, DEVELOPED ROOT SYSTEM.

PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH A DAMAGED OR CROOKED LEADER OR MULTIPLE LEADERS, ABRASIONS ON THE BARK, SUNSCALD, DISFIGURING KNOTS OR FREST CUTS OVER 1 1/2" WILL BE REJECTED.

NO CHANGE IN QUANTITY, SIZE, KIND OR QUALITY OF PLANT SPECIFIED WILL BE PERMITTED WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT/DESIGNER.

(2) TOPSOIL SHALL BE FERTILE, FRIABLE AND TYPICAL OF THE LOCALITY; IT SHALL BE FREE OF STONES, LUMPS, PLANTS, ROOTS, STICKS AND SHALL NOT BE DELIVERED IN A FROZEN OR MUDDY CONDITION.

(3) PLANTING SOIL (BACKFILL MIX) SHALL BE FIVE PARTS TOPSOIL AND ONE PART WET LOOSE PEATMOSS.

(4) STAKING MATERIALS: GUY WIRE SHALL BE PLIABLE 12 GAUGE GALVANIZED TWISTED TWO STRAND WIRE. HOSE SHALL BE A SUITABLE LENGTH OF TWO-PLY, REINFORCED BLACK RUBBER HOSE 3/4" INCH IN DIAMETER; STAKES SHALL CONFORM TO THE DETAIL ON THIS SHEET.

(5) WRAPPING MATERIAL SHALL BE A STANDARD MANUFACTURED TREE WRAPPING PAPER, BROWN IN COLOR WITH CRINKLED SURFACE AND FASTENED BY AN APPROVED METHOD.

B. APPLICABLE SPECIFICATIONS AND STANDARDS:

(1) "STANDARDIZED PLANT NAMES," LATEST EDITION AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.

(2) "AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, AMERICAN ASSOCIATION OF NURSERYMEN.

C. DIGGING AND HANDLING OF PLANT MATERIALS:

(1) IMMEDIATELY BEFORE DIGGING, SPRAY ALL EVERGREEN OR DECIDUOUS PLANT MATERIAL IN FULL LEAF WITH ANTI-DESICCANT, APPLYING AN ADEQUATE FILM OVER TRUNKS, BRANCHES, TWIGS, AND/OR FOLIAGE.

(2) DIG BALL AND BURLAP (B&B) PLANTS WITH FIRM NATURAL BALLS OF EARTH, OF DIAMETER NOT LESS THAN THAT RECOMMENDED BY AMERICAN STANDARD FOR NURSERY STOCK, AND IF SUFFICIENT DEPTH TO INCLUDE THE FIBROUS AND FEEDING ROOTS. PLANTS MOVED WITH A BALL WILL NOT BE ACCEPTED IF THE BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATIONS.

D. EXCAVATION OF PLANTING AREAS:

STAKE OUT ON THE GROUND LOCATIONS FOR PLANTS AND OUTLINES OF AREA TO BE PLANTED AND OBTAIN APPROVAL OF THE LANDSCAPE ARCHITECT/DESIGNER BEFORE EXCAVATION IS BEGUN

E. PLANTING OPERATIONS:

SET PLANTS AT SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO THE GROUND FROM WHICH THEY WERE DUG. USE PLANTING SOIL TO BACKFILL APPROXIMATELY 2/3 FULL, WATER THOROUGHLY BEFORE INSTALLING REMAINDER OF THE PLANTING SOIL TO TOP OF PIT, ELIMINATING ALL AIR POCKETS.

SET PLANTING PLUMB AND BRACE RIGIDLY IN POSITION UNTIL THE PLANTING SOIL HAS BEEN STAMPED SOLIDLY AROUND THE BALL AND ROOTS. CUT ROPES OR STRINGS FROM TOP OF BALL AFTER PLANT HAS BEEN SET. LEAVE BURLAP OR CLOTH WRAPPING INTACT AROUND BALLS. TURN UNDER AND BURY PORTIONS OF BURLAP AT TOP OF BALL.

PROTECT PLANTS AT ALL TIMES FROM SUN OR DRYING WINDS. PLANTS THAT CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH SOIL, WET MOSS OR OTHER ACCEPTABLE MATERIAL AND SHALL BE KEPT WELL WATERED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN THREE DAYS AFTER DELIVERY.

PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE LIFTED AND HANGLED FROM THE BOTTOM OF THE BALL ONLY.

MULCH ALL PITS AND BEDS WITH A TWO INCH LAYER OF BARKMULCH IMMEDIATELY AFTER PLANTING AND WORK INTO THE TOP THREE INCHES OF THE PLANTING SOIL. FORM A 3" EARTH SAUCER AROUND EACH PLANT. WATER ALL PLANTS IMMEDIATELY AFTER PLANTING.

F. STAKING, WRAPPING AND PRUNING:

STAKING SHALL BE COMPLETED IMMEDIATELY AFTER PLANTING. PLANTS SHALL STAND PLUMB AFTER STAKING. STAKES AND GUY WIRES SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD AND DISPOSTED OF OFF SITE BY THE CONTRACTOR.

WRAP DECIDUOUS TREE TRUNKS STARTING AT THE BASE OF THE TREE UP TO THE FIRST BRANCH. REMOVE WRAPPING AT THE END OF THE GUARENTEE PERIOD.

PRUNE PLANTS AT THE TIME OF PLANTING AS DIRECTED BY THE LANDSCAPE ARCHITECT/DESIGNER TO REMOVE 1/5 TO 1/3 OF THE FOLIAGE. REMOVE ALL DEAD WOOD, SUCKERS, OR BROKEN BRANCHES AND PRESERVE THE NATURAL CHARACTER OF THE PLANT.

G. GUARANTEE:

ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE (1) FULL YEAR FROM THE DATE THAT THE LANDSCAPE INSTALLATION IS ACCEPTED AS COMPLETE. PLANT MATERIAL NOT FOUND TO BE IN A HEALTHY, VIGOROUS CONDITION AT THE BEGINNING OF THE SECOND GROWING SEASON IS TO BE REPLACED.

H. SEEDING:

ALL AREAS REMAINING DISTURBED AFTER CONSTRUCTION, PAVING AND INSTALLATION OF THE LANDSCAPING ARE TO SEEDED.

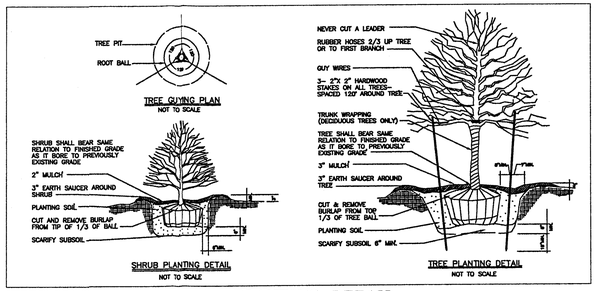
A) SEED BED PREPARATION: APPLY 25LBS. OF 10-10-10 FERTILIZER PER 1000 SQ.FT. HARROW OR DISC INTO SOIL TO A DEPTH OF 3-4 INCHES. APPLY PULVERIZED GROUND LIMESTONE, 50LBS. PER 1000 SQ. FT.

B) SEEDINGS: APPLY 4.5LBS PER 1000 SQ. FT. OF KENTUCKY 31 TALL FESCUE OR A SUITABLE COMPARABLE MIX ON A MOIST SEED BED WITH SUITABLE EQUIPMENT.

C) MULCHING: IMMEDIATELY AFTER SEEDING, UNIFORMLY MULCH ENTIRE AREA WITH UNDERWEATHERED SMALL GRAIN STRAW AT A RATE OF 1 1/2"-2" TONS PER ACRE.

FOR BEST RESULTS, SEEDING SHOULD BE PERFORMED BETWEEN FEB. 1ST AND APRIL 30TH OR AUG. 15TH TO OCT. 31ST.

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PLANTING DETAIL

NOTES TO CONTRACTOR

1. LANDSCAPE INSTALLER SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. INSTALLER SHALL INSURE THAT FINAL GRADES HAVE BEEN ESTABLISHED AND THE SITE IS READY FOR LANDSCAPE INSTALLATION.

2. LANDSCAPE INSTALLER SHALL MAINTAIN THE LANDSCAPE IMPROVEMENT AREAS IN A CLEAN CONDITION, REMOVING DEBRIS DAILY AND AT THE COMPLETION OF THE INSTALLATION.

3. 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.

4. 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 UP HILL 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.

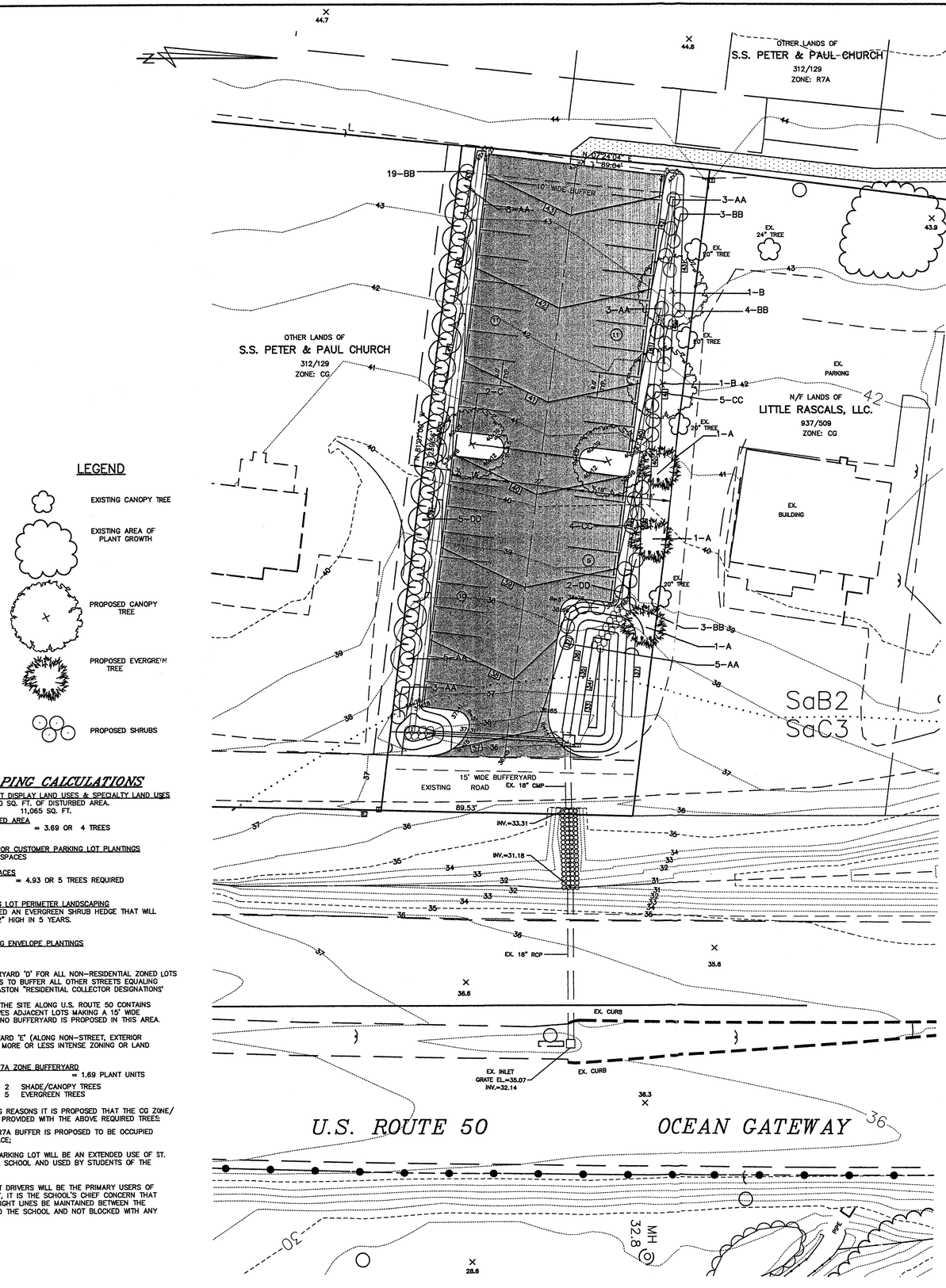
5. ALL SHRUB PLANTING PITS, LANDSCAPE BEDS AND PLANTING MASS AREAS SHALL BE WORKED TO A DEPTH OF 12" (OR RAISED SLIGHTLY TO ACHIEVE A 12" FRIABLE SOIL DEPTH). SHRUB PLANTING AREAS SHALL BE WORKED TO 12" MINIMUM OUTSIDE THE ROOT BALL.

6. 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.

7. ALL TREES TO BE STAKED AND GUYED WITH HARDWOOD STAKES, MINIMUM OF TWO (2)-FIVE FEET LONG, OR OTHER APPROVED GUYING SYSTEM. STAKES SHALL BE DRIVEN INTO STABLE SOILS. PROVIDE WIRE GUYS WITH RUBBER PROTECTANT OR OTHER APPROVED INDUSTRY PRACTICE.

8. LANDSCAPE INSTALLER SHALL MAINTAIN ALL PLANT MATERIALS THROUGH THE COMPLETION OF THE LANDSCAPE INSTALLATION, AND THEN AS REQUIRED BY THE OWNER.

9. ALL 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.



LEGEND

- EXISTING CANOPY TREE
- EXISTING AREA OF PLANT GROWTH
- PROPOSED CANOPY TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUBS

LANDSCAPING CALCULATIONS

SECTION 615.6.G – LARGE LOT DISPLAY LAND USES & SPECIALTY LAND USES
REQUIRES 1 TREE PER 3000 SQ. FT. OF DISTURBED AREA.
DISTURBED SITE AREA: 11,065 SQ. FT.

11,065 SQ. FT. OF DISTURBED AREA / 3000 = 3.69 OR 4 TREES

SECTION 615.6.G.1.a. – INTERIOR CUSTOMER PARKING LOT PLANTINGS
REQUIRES 1 TREE PER 7.5 SPACES

37 PROPOSED PARKING SPACES / 7.5 = 4.93 OR 5 TREES REQUIRED

SECTION 615.6.G.b – PARKING LOT PERIMETER LANDSCAPING
PARKING LOTS ARE REQUIRED AN EVERGREEN SHRUB HEDGE THAT WILL GROW TO A MINIMUM OF 42" HIGH IN 5 YEARS.

SECTION 615.6.G.c. – BUILDING ENVELOPE PLANTINGS
NOT APPLICABLE

SECTION 615.7.E.4 – BUFFERYARD 'D' FOR ALL NON-RESIDENTIAL ZONED LOTS OR LAND USE APPLICATIONS TO BUFFER ALL OTHER STREETS EQUALING OR EXCEEDING TOWN OF EASTON "RESIDENTIAL COLLECTOR DESIGNATIONS"

NOTE: THE EAST END OF THE SITE ALONG U.S. ROUTE 50 CONTAINS A PUBLIC ROAD THAT SERVES ADJACENT LOTS MAKING A 15' WIDE BUFFERYARD IMPOSSIBLE. NO BUFFERYARD IS PROPOSED IN THIS AREA.

SECTION 615.7.E.5 – BUFFERYARD 'E' (ALONG NON-STREET, EXTERIOR PROPERTY LINES ADJOINING MORE OR LESS INTENSE ZONING OR LAND USE).

84.5 L.F. OF CG ZONE/R7A ZONE BUFFERYARD / 50 = 1.69 PLANT UNITS

1.69 X 1 = 1.69 OR 2 SHADE/CANOPY TREES
3 = 5.07 OR 5 EVERGREEN TREES

NOTE: FOR THE FOLLOWING REASONS IT IS PROPOSED THAT THE CG ZONE/R7A ZONE BUFFER NOT BE PROVIDED WITH THE ABOVE REQUIRED TREES:

1. 23% OF THE CG/R7A BUFFER IS PROPOSED TO BE OCCUPIED BY PAVED SURFACE;
2. THE PROPOSED PARKING LOT WILL BE AN EXTENDED USE OF ST. PETER AND PAUL SCHOOL AND USED BY STUDENTS OF THE SCHOOL;
3. BECAUSE STUDENT DRIVERS WILL BE THE PRIMARY USERS OF THE PARKING LOT, IT IS THE SCHOOL'S CHIEF CONCERN THAT UNOBSTRUCTED SIGHT LINES BE MAINTAINED BETWEEN THE PARKING LOT AND THE SCHOOL AND NOT BLOCKED WITH ANY SCREENING.

TOWN OF EASTON DEPARTMENT OF PUBLIC WORKS

TOWN OF EASTON DEPARTMENT OF PUBLIC WORKS
FOR SEDIMENT AND EROSION CONTROL REVIEW ONLY

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

TALBOT SOIL CONSERVATION DISTRICT

SEAL

DATE

McCRONE
ENGINEERING ◻ ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING ◻ CONSTRUCTION SERVICES
207 NORTH LIBERTY STREET
SUITE 100
CENTREVILLE, MARYLAND
(410) 758-2237
ANNAPOLIS-CENTREVILLE-EASTON-SALISBURY-SOUTHERN MARYLAND

SCALE: 1"=20'
DRAWN BY: JONES
DESIGNED BY:
APPROVED BY:

DATE	REVISION
8-14-01	PER TOWN COMMENTS

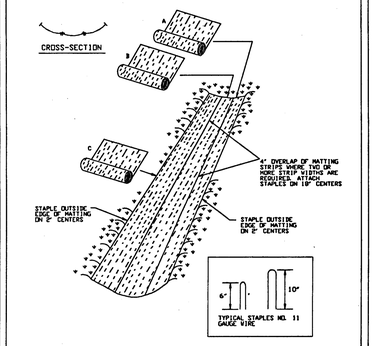
DATE: JUNE, 2001
JOB NO.: D1010259
FOLDER REF: 2351

LANDSCAPE PLAN
FOR A PARKING LOT FOR
S.S. PETER & PAUL CHURCH
FIRST ELECTION DISTRICT, TALBOT COUNTY, MARYLAND
PREPARED FOR: STEPHEN F. GARLAND CUSTOM HOMES

SHEET NO. — 3 OF 4

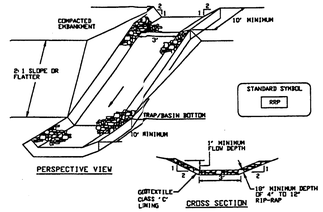
CADD FILE — 01259S03

DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 6 - 29 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 5 - RIP-RAP INFLOW PROTECTION



Construction Specifications

1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 2' (min.) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 18".

2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.

3. Entrance and exit sections shall be installed as shown on the detail section.

4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.

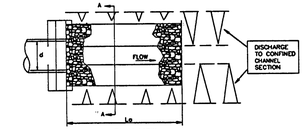
5. Gabion inflow Protection may be used in lieu of Rip-rap Inflow Protection.

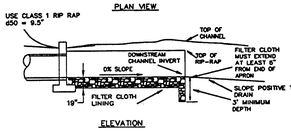
6. Rip-rap should blend into existing ground.

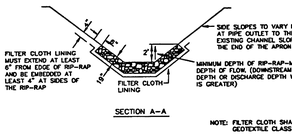
7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE 3 - 5 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 26 - ROCK OUTLET PROTECTION II

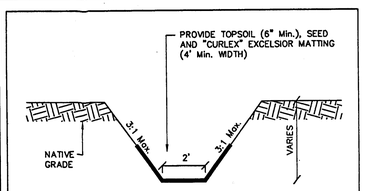






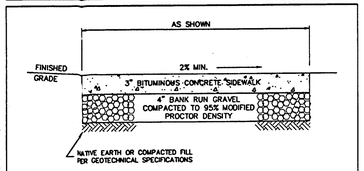
NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS 'C'

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 9	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



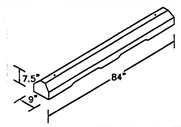
TYPICAL "TRAPEZOIDAL" SECTION

NOT TO SCALE



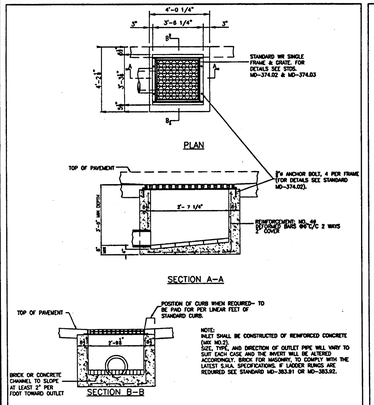
BITUMINOUS CONCRETE WALK DETAIL

NOT TO SCALE



7'-0" LONG - 370 LBS. TWO 5/8" X 18" ANCHOR PINS.
SPECIFICATIONS FOR QUALITY: SMOOTH STEEL FORM FINISH, HIGH STRENGTH-4500 P.S.I.

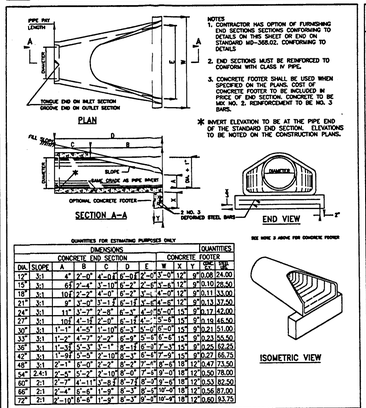
STANDARD PARKING BUMPER



MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

SINGLE WR INLET

STANDARD NO. MD-374.06



NOTES
1. CONTRACTOR HAS OPTION OF FURNISHING END SECTIONS CONFORMING TO DETAILS ON THIS SHEET OR END ON STANDARD NO-368.02, CONFORMING TO DETAILS
2. END SECTIONS MUST BE REINFORCED TO CONFORM WITH CLASS IV PIPE.
3. CONCRETE FOOTER SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF CONCRETE FOOTER TO BE INCLUDED IN PRICE OF END SECTION. CONCRETE TO BE MIX NO. 2. REINFORCEMENT TO BE NO. 3 BARS.
* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON THE CONSTRUCTION PLANS.

QUANTITIES FOR ESTIMATING PURPOSES ONLY

DIMENSIONS										QUANTITIES	
		CONCRETE END SECTION				CONCRETE FOOTER					
DIA.	SLOPE	A	B	C	D	E	W	X	Y	CY	LBS
12"	3:1	4"	2'-0"	4'-0"	6'-0"	2'-6"	3'-0"	12"	8"	0.08	24.00
15"	3:1	6"	2'-4"	5'-10"	6'-2"	2'-6"	3'-6"	12"	8"	0.10	29.50
18"	3:1	10"	2'-8"	6'-10"	6'-2"	2'-6"	4'-0"	12"	8"	0.11	33.00
21"	3:1	8"	3'-0"	7'-11"	6'-11"	2'-6"	4'-6"	12"	8"	0.13	37.50
24"	3:1	11"	3'-7"	9'-6"	6'-5"	3'-0"	5'-0"	15"	8"	0.17	42.00
27"	3:1	10"	4'-1"	10'-4"	6'-11"	3'-0"	5'-6"	15"	8"	0.19	46.00
30"	3:1	11'-1"	4'-5"	11'-10"	6'-3"	3'-0"	6'-0"	15"	8"	0.21	51.00
36"	3:1	1'-2"	5'-3"	14'-2"	6'-8"	3'-6"	7'-0"	15"	8"	0.25	59.50
42"	3:1	1'-3"	5'-9"	15'-1"	8'-1"	4'-0"	8'-0"	15"	8"	0.29	69.25
48"	3:1	1'-1"	6'-4"	17'-0"	8'-3"	4'-6"	9'-0"	15"	8"	0.27	66.75
54"	2.4:1	2'-5"	5'-2"	7'-10"	8'-0"	7'-9"	9'-0"	18"	12"	0.50	78.00
60"	2:1	2'-7"	4'-11"	6'-8"	8'-7"	8'-0"	9'-6"	18"	12"	0.53	82.50
66"	2:1	2'-4"	5'-6"	7'-3"	8'-3"	8'-6"	10'-0"	18"	12"	0.56	87.00
72"	2:1	2'-10"	6'-6"	9'-5"	8'-3"	9'-0"	10'-6"	18"	12"	0.60	93.75

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD CONCRETE END SECTION
ROUND CONCRETE PIPE

STANDARD NO. MD-368.01

ROCK OUTLET PROTECTION II

Construction Specifications

1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 96	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DEVELOPERS CERTIFICATE

I HEREBY CERTIFY THAT: 1. ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, OR ALL OF THESE, WILL BE DONE PURSUANT TO THIS PLAN AND; 2. THAT RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION WILL HAVE A CERTIFICATE OF TRAINING AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT; AND 3. THE DEVELOPER WILL PROVIDE THE DISTRICT ONE COPY OF A RED LINE AS-BUILT DRAWING OF EACH FACILITY REQUIRING A STATE POND PERMIT.

SIGNATURE _____ DATE _____

STS. PETER & PAUL CHURCH
215 GOLDSBOROUGH STREET
EASTON, MARYLAND, 21601

EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

1.) Contractor shall install soil erosion and sediment control devices prior to any grading. Following initial disturbance or re-disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes greater than three (3) horizontal to one (1) vertical (3:1) and fourteen days (14) as to all other disturbed or graded areas on the project site.

2.) All temporary erosion and sediment control devices are to be provided as indicated on this plan, with location adjustments to be made in the field as necessary, and to be maintained at the end of each working day until project completion. The minimum area practical shall be disturbed for the minimal amount of time possible.

3.) Clearing and grubbing shall include all trees, brush, debris, root mat and organic materials to be removed.

4.) Temporary seeding shall be accomplished between February 1st through April 30th, or August 15th through November 1st. During other times, temporary mulching shall be provided.

5.) Temporary seeding shall conform to the following applications: 600 lbs. per acre of 10-10-10; 4,000 lbs. per acre of ground limestone, to be incorporated into the soil by disking or other suitable means. Annual ryegrass shall be applied at a rate of 50 lbs. per acre using suitable equipment. Mulching shall be accomplished immediately after seeding

Seed Mixtures (For Hazard Zone 7A) (From Table 25)					Fertilizer Rate (10-10-10)	Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths		
	ANNUAL RYEGRASS	50 lbs.	2/1-4/30 8/15-11/1	1/4" to 1/2"	600 lb/ac (5 lb/ 1000 sf	2 tons/ac (100 lb/ 1000 sf

6.) Mulching shall be unchopped, unrotted, small grain straw applied at a rate of 2-2 1/2 tons per acre. Anchor mulch with a mulch anchoring tool on the contour, or with wood cellulose fiber at 750 lbs. per acre net dry weight or 50 lbs. of wood cellulose fiber per 100 gals. of water, or with a synthetic liquid binder according to manufacturer recommendations.

7.) Permanent seeding shall be accomplished between March 1st through May 15th, or August 15th through November 15th. Permanent seeding at other than specified times will be allowed only upon written approval. Permanent seeding shall conform to the following applications: Permanent seeding for sites having disturbed over five (5) acres shall use fertilizer rates recommended by a soil testing agency and the recommendations provided in the Permanent Seeding Summary Table. Permanent seeding for conditions other than listed above shall be performed at the rates and dates as provided in the Permanent Seeding Summary Table below. Fertilizer and lime amendments shall be incorporated into the top 3" - 5" of the soil be disking or other suitable means. Mulching shall be accomplished as discussed in item #6 of these specifications.

Seed Mixtures (For Hazard Zone 7A) (From Table 25)					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Appl. Rate (lbs./ac.)	Seeding Dates	Seeding Depths	N	P205	K20	
10	BOK TALL FESCUE, 20% HARD FESCUE	120 lbs 30 lbs.	3/1-5/15 8/15-11/15	1/4" to 1/2"	90 lb/ac (2 lb/ 1000 sf	175 lb/ac (4 lb/ 1000 sf	175 lb/ac (4 lb/ 1000 sf	2 tons/ac (100 lb/ 1000 sf

8.) Any spoil or borrow will be placed at a site approved by the Soil Conservation District.

9.) All areas remaining or intended to remain disturbed for longer than fourteen (14) days shall be stabilized in accordance with the USDA, Natural Resources Conservation Service Standards and Specifications for Soil Erosion and Sediment Control in developing areas for critical area stabilization.

10.) It will be the responsibility of the Contractor or Subcontractor to notify the Engineer of any deviation from this plan. Any change made in this plan without written authorization from the Engineer will place responsibility of said change on the Contractor or Subcontractor.

PHASE OF CONSTRUCTION

1. CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT INSPECTOR AT 410-901-4020 A MINIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRECONSTRUCTION MEETING PRIOR TO INITIATION OF ANY GRADING ACTIVITIES.

2. STRIP THE TOPSOIL FROM THE LIMITS OF THE PARKING LOT AND DISPOSE OF OFF-SITE AT AN APROVED SITE.

3. INSTALL THE 12" RCP WITH END SECTION. MODIFY THE EXISTING CONCRETE HEADWALL TO ACCOMODATE THE 12" RCP.

4. INSTALL RIP RAP INLFOW PROTECTION DEVICES AT THE LOCATIONS SHOWN.

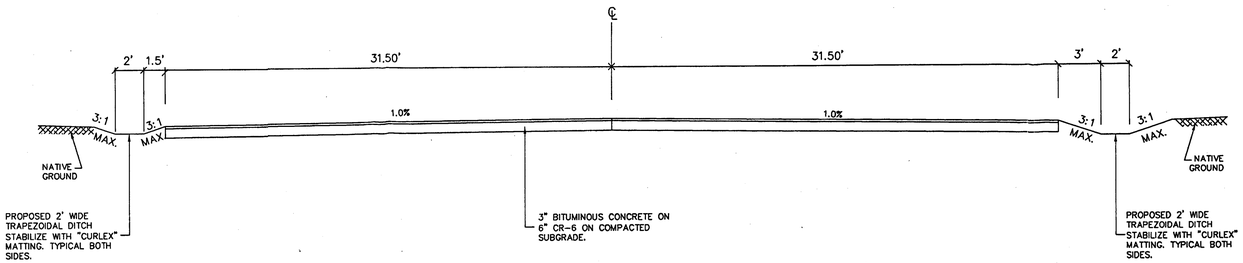
5. GRADE PARKING LOT TO SUBGRADE AND PLACE CR-6 BASE.

6. PLACE BITUMOUS CONCRETE BASE AND SURFACE COURSE.

7. STABILIZE ALL DISTURBED AREAS WITH TOPSOIL, SEED, AND MUCLH PER SPECS ON THIS SHEET.

S.C.S. NOTES

1. SOIL TYPES ARE: SASSAFRAS SANDY LOAM (SaB2), SASSAFRAS SANDY LOAM (SoC3)
2. TOTAL SITE AREA = 0.48 AC.±
3. TOTAL AREA TO BE DISTURBED = APPROX. 0.58 AC.±
4. TOTAL AREA TO BE SEEDED = APPROX. 0.24 AC.±



TYPICAL STREET SECTION

SCALE 1" = 5'

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TOWN OF EASTON DEPARTMENT OF PUBLIC WORKS

TALBOT SOIL CONSERVATION DISTRICT

TOWN OF EASTON DEPARTMENT OF PUBLIC WORKS
FOR SEDIMENT AND EROSION CONTROL REVIEW ONLY

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

DATE _____ SEAL

McCRONE
ENGINEERING ◻ ENVIRONMENTAL SCIENCES
PLANNING & SURVEYING ◻ CONSTRUCTION SERVICES
LAND PLANNING
207 NORTH LIBERTY STREET
SUITE 100
CENTREVILLE, MARYLAND
(410) 758-2237
ANNAPOLIS-CENTREVILLE-ELKTON-SALISBURY-SOUTHERN MARYLAND

SCALE	AS SHOWN
DRAWN BY:	M. O'CONNELL
DESIGNED BY:	WTD, Jr
APPROVED BY:	WTD, Jr
DATE	AUGUST, 2001
JOB NO.	01D01259
FOLDER REF	2351

REVISION	DATE
PER TOWN COMMENTS	8-14-01

MISCELLANEOUS NOTES AND DETAILS

FOR A STUDENT PARKING LOT FOR

STS. PETER & PAUL CHURCH

IN THE TOWN OF EASTON

IN THE TOWN OF EASTON, TALBOT COUNTY, MARYLAND

PREPARED FOR: STS. PETER & PAUL CHURCH

SHEET NO. — 4 OF 4

CADD FILE — 01259S04

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

Easton Staff Development Review

Property Information

Address	7906 & 7894 Ocean Gateway, Easton, MD 21601 (Parcel 1665 Lots 1 & 2 and Parcel 2987)						
Tax Map	105	Grid	0	Parcel	1665 & 2987	Lot	1 & 2
Deed Refernce:	Liber	2920	Folio	107			
Plat Reference:	Liber	76	Folio	44			
Base Zoning District	CG	Historic District Y ☐ N ☒		Planning Redevelopment Y ☐ N ☒			

Purpose of Application / Description of Work:

Proposed project is to revitalize, redevelop, and combine Parcels 1665 Lots 1 & 2 and Parcel 2987 to accommodate a new building to house the Talbot County Humane Society.

Owner

Name	Talbot Humane Co. / Talbot County Humane Society, Inc.		
Mailing Address	7894 Ocean Gateway, Easton, MD 21601		
Telephone No.		Email	

Applicant / Agent

Name	Brett Ewing, AICP, Lane Engineering, LLC		
Mailing Address	117 Bay Street, Easton, MD 21601		
Telephone No.		Email	

Surveyor / Engineer

Name	Alec Chosta, P.E.	License No.	51461	Expiration Date	4/4/2028
Mailing Address	Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601				
Telephone No.		Email			

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 6/3/2026

Printed Name of Applicant or Agent Brett Ewing, AICP, Lane Engineering, LLC

For Office Use Only

Easton Staff Development Review Meeting Required Y [X] N [ ]

Easton Staff Development Review Meeting Date

2026 - 1750 / ESDR 26 - 08 / SD-502

Completeness Check Date **06/04/2026**

Revisions/Resubmissions Required Y [ ] N [ ]

Resubmission Date

Documents Received Y [ ] N [ ]

Staff Determination

Scheduled for June ESDR/Prelim Review

Planning Commission Requir(Y [X] N [ ]

BOZA Required Y [ ] N [ ] **TBD**

Historic District Commission Required Y [ ] N [X]

Resubmission for ESDR Required Y [ ] N [ ] **TBD**

Staff Signature *Samantha N. Smith* Date **06/04/2026**

Revised 02-2019

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

Subdivision & Property Line Adjustment Application

Application Type

Subdivision ☐ Minor Subdivision ☐ Lot Line Revision ☒

Subdivision Information

Name	7906 & 7894 Ocean Gateway, Easton, MD 21601 (Parcel 1665 Lots 1 & 2 and Parcel 2987)			
Property Size	Acres	2.09 AC±	Square Feet	91,123 SF±
Number of Lots Proposed	1 total, no new			

Property Information

Address	7906 & 7894 Ocean Gateway, Easton, MD 21601 (Parcel 1665 Lots 1 & 2 and Parcel 2987)						
Tax Map	105	Grid	0	Parcel	1665 & 2987	Lot	1 & 2
Deed Refernce:	Liber	2920	Folio	107			
Plat Reference:	Liber	76	Folio	44			
Zoning District	CG	Planned Redevelopment Y ☐ N ☒		Historic District Y ☐ N ☒			
Source of Electricity	Easton						

Owner

Name	Talbot Humane Co. / Talbot County Humane Society, Inc.
Mailing Address	7894 Ocean Gateway, Easton, MD 21601
Telephone No.	Email

Surveyor / Engineer

Name	Alec Chosta, P.E.	License No.	51461	Expiration Date	4/4/2028
Mailing Address	Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601				
Telephone No.		Email			

Applicant or Agent

Name	Brett Ewing, AICP, Lane Engineering, LLC
Mailing Address	117 Bay Street, Easton, MD 21601
Telephone No.	Email

Additional Comments:

Proposed lot line abandonment between Parcels 1665 Lots 1 & 2 and Parcel 2978 for the purpose of redeveloping the Talbot County Humane Society.

Minimum Lot Size	20,000 SF	Minimum Lot Frontage	60 FT
Minimum Lot Envelope	20 FT X 30 FT	Existing Lot Coverage	11,093 SF±
		Proposed Lot Coverage	13,860 SF±

☐ ESDR Letter
☐ $200 Per Subdivided Lot Fee
☐ $500 Lot Line Revision Fee

Any modifications during review shall warrant an updated application.

I hereby certify that I have reviewed and satisfied the Town of Easton Subdivision Regulations Article 4, Procedures and Requirements and that submission of an incomplete application will be returned for correction prior to processing.

Signature of Applicant or Agent 

Date 6/3/2026

Printed Name of Applicant or Agent Brett Ewing, AICP, Lane Engineering, LLC

For Office Use Only

Planning Commission Y ☒ N ☐			
Planning Commission Meeting Date			
PC Approval Date		Subdivision No.	**SD-502**
Conditions? Y / N		Application No.	**2026 - 1750**
Recordation Date		Fee Amount	**$500.00**
ESDR Y / N Date		Review Fee Paid	**06/03/2026**
			Revised 02-2019

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

Site Plan, PUD, Planned Healthcare Application

Application Type

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

Subdivision Information

Name	Talbot Humane Society				
Original Property Size	Acres	2.09 AC±	Square Feet	91,123 SF±	
Telephone No.		Email			

Site Plan Information

Property Size	Acres	2.09 AC±	Square Feet	91,123 SF±
Structure's Floor Area	13,659 SF±	Structure's Square Feet	13,659 SF±	
Area of Disturbance	2.09 AC±	Number of Dwelling Units	0	

Property Information

Address	7906 & 7894 Ocean Gateway, Easton, MD 21601 (Parcel 1665 Lots 1 & 2 and Parcel 2987)						
Tax Map	105	Grid	0	Parcel	1665 & 2987	Lot	1 & 2
Deed Refernce:	Liber	2920	Folio	107			
Plat Reference:	Liber	76	Folio	44			
Base Zoning District	CG	Historic Y ☐ N ☒		Planned Redevelopment Y ☐ N ☒			
Source of Electricity	Easton						

Owner

Name	Talbot Humane Co. / Talbot County Humane Society, Inc.
Mailing Address	7894 Ocean Gateway, Easton, MD 21601
Telephone No.	Email

Applicant or Agent

Name	Brett Ewing, AICP, Lane Engineering, LLC
Mailing Address	117 Bay Street, Easton, MD 21601
Telephone No.	Email

Surveyor / Engineer

Name	Alec Chosta, P.E.	License No.	51461	Expiration Date	4/4/2028
Mailing Address	Lane Engineering, LLC, 117 Bay Street, Easton, MD 21601				
Telephone No.		Email			

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 6/3/2026

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			
Sketch Approval Date		Project No.	**ESDR 26 - 08**
Prelim/Dev. Approval Date		Application No.	**2026 - 1750**
Final Approval Date		Sketch Fee Paid	**06/03/2026**
Recordation Date		Develop. Fee Paid	

Revised 02-2019

TAX MAP 105, PARCEL 1665, LOT 1

PROPERTY OWNER: TALBOT HUMANE CO.

PROPERTY ADDRESS: 7906 OCEAN GATEWAY
EASTON, MARYLAND 21601

DEED REFERENCE: 2920/107

PLAT REFERENCE: 76/44

TAX MAP 105, PARCEL 1665, LOT 2

PROPERTY OWNER: TALBOT HUMANE CO.

PROPERTY ADDRESS: OCEAN GATEWAY
EASTON, MARYLAND 21601

DEED REFERENCE: 2920/107

PLAT REFERENCE: 76/44

TAX MAP 105, PARCEL 2987

PROPERTY OWNER: TALBOT COUNTY HUMANE SOCIETY, INC.

PROPERTY ADDRESS: 7894 OCEAN GATEWAY
EASTON, MARYLAND 21601

DEED REFERENCE: 281/290

PLAT REFERENCE: 76/43

SITE NOTES

THE PROPERTY SHOWN HEREON LIES ENTIRELY OUTSIDE OF THE CHESAPEAKE BAY CRITICAL AREA AS SHOWN ON THE TALBOT COUNTY CRITICAL AREA MAPS IN ACCORDANCE WITH TALBOT COUNTY BILL NO. 1295, ENACTED AUGUST 12, 2024.

THE IMPROVEMENTS SHOWN HEREON WERE FIELD LOCATED BY LANE ENGINEERING, LLC ON SEPTEMBER 24, 2025.

THE CONTOURS SHOWN HEREON WERE TAKEN FROM FIELD RUN TOPOGRAPHY BY LANE ENGINEERING, LLC ON SEPTEMBER 21, 2025.

THE TREE LINE SHOWN HEREON WAS TAKEN FROM 2022 TALBOT COUNTY AERIALS AND IS APPROXIMATE ONLY.

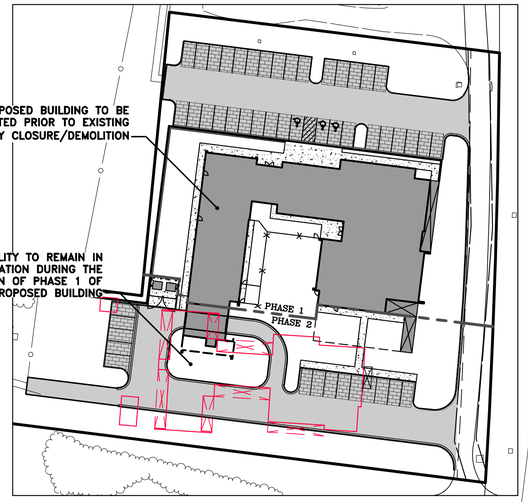
UNDERGROUND UTILITIES SHOWN HEREON WERE TAKE FROM FILES PROVIDED FROM EASTON UTILITIES COMMISSION AND ARE APPROXIMATE ONLY.

FLOOD DATA

THE PROPERTIES 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 FEDERAL INSURANCE RATE MAPS FOR COMMUNITY NO. 240067, MAP NO. 24041C0193C FOR TOWN OF EASTON, 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 EQUALED OR EXCEEDED IN ANY GIVEN YEAR. THE SFHA IS THE AREA SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD. THE SFHA INCLUDE ZONES A, AE, AH, AO, AR, A99, V & VE. THE BASE 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

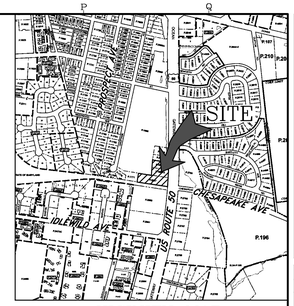
THE FLOOD DATA SHOWN HEREON IS BASED ON AVAILABLE MAPPED AND/OR DIGITAL INFORMATION AND IS DEPICTED AS DIRECTED AND REQUIRED BY FEDERAL, STATE AND LOCAL REGULATIONS. IT IS SUBJECT TO DATA INACCURACIES AND REGULATORY CHANGE AND SHOULD BE VERIFIED PRIOR TO FINALIZING DEVELOPMENT OR IMPROVEMENT PLANS FOR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



PHASE INSET
SCALE: 1" = 50'
25' 0' 25' 50'
SCALE IN FEET

LEGEND

MAIL BOX	LAMP POLE
HVAC UNIT	OVER HEAD UTILITY LINES
GAS SHUTOFF VALVE	GUARD RAIL
SANITARY SEWER CLEAN OUT	FENCE
SANITARY SEWER MANHOLE	APPROXIMATE TREE LINE
FIRE HYDRANT	TOP OF BANK
WATER METER	BOTTOM OF BANK
WATER VALVE	MAJOR CONTOUR
WATER FAUCET	MINOR CONTOUR
TELEPHONE PEDESTAL	X-CUT FOUND
FLOOD LIGHT	IRON ROD FOUND
ELECTRIC TRANSFORMER	IRON ROD SET
ELECTRIC HANDHOLE	COMPUTED POINT
GUY WIRE ANCHOR	UTILITY POLE



VICINITY MAP
SCALE: 1" = 1,000'



PLANS ARE ISSUED FOR REVIEW ONLY

PLANS ARE NOT APPROVED FOR CONSTRUCTION

REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

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.

MISS UTILITY
DIG WITH CARE
BEFORE YOU DIG CALL 1-800-441-8355 OR 811
PROTECT YOURSELF, GIVE TWO WORKING DAYS NOTICE

Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E-mail: general@lanei nc.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 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: 04/04/2028.

SEAL

STATE OF MARYLAND BRIAN C. ENGLE 51461 PROFESSIONAL ENGINEER

06-03-26
DATE

EXISTING CONDITIONS & DEMOLITION PLAM

FOR
TALBOT HUMANE SOCIETY

IN THE TOWN OF EASTON, WARD 4
TALBOT COUNTY, MARYLAND
TAX MAP 106 PARCEL 1665 LOTS 1 & 2 & PARCEL 2987

ISSUED FOR:	DATE:	BY:
ESDR SUBMITTAL	06/03/26	BCE

SHEET No. 1 OF 2
JOB No. 250350
SCALE: AS NOTED
FILE No. B857

© Lane Engineering, LLC

Date: 06/03/2026 - 10:30am User: barnes Project Manager: BCE
Drawing Path: C:\Users\barnes\AppData\Local\Temp\AcPublish_32464\CSK-PLTS-250350.dwg | 1 OF 2
XREF File(s): XAR-BASE-250350/XLD-BASE-250350/CSK-BASE-250350/YSF-BASE-250350/CBS-BASE-24X6-250350/HSL-BASE-250350/LLP-BASE-250350/CSW-BASE-250350/RLD-EUC-BASE-250350

PROJECT NOTES

ZONING: CG (COMMERCIAL GENERAL DISTRICT)

SITE AREA: 2.09 AC± (91,123 SF±)

BUILDING SETBACKS:

		HUMANE SOCIETY
FRONT –	25' (40' FROM U.S. ROUTE 50)	41'±
REAR –	10'	32'±
SIDE –	10'	88'± & 71'±

MAXIMUM LOT COVERAGE: 50% (BY BUILDINGS)

MAXIMUM BUILDING HEIGHT: 50'

EXISTING CONDITIONS: A COMMERCIAL PROPERTY CURRENTLY UTILIZED AS THE SITE OF THE TALBOT COUNTY HUMANE SOCIETY.

PROPOSED DEVELOPMENT: THE PROPOSED PROJECT IS TO REVITALIZE, REDEVELOP, & COMBINE THE EXISTING PARCELS AS SHOWN HEREON TO ACCOMMODATE A NEW BUILDING TO HOUSE THE TALBOT COUNTY HUMANE SOCIETY.

STORMWATER MANAGEMENT: STORMWATER QUANTITY/QUALITY CONTROL WILL BE ADDRESSED THROUGH ESD FEATURES (PERMEABLE PAVERS) AS REQUIRED AND DETAILED IN THE CONCEPT SWM REPORT INCLUDED WITH THIS SKETCH SITE PLAN. THE PROPERTY IS WITHIN THE WINDMILL BRANCH WATERSHED.

LOT COVERAGE: 13,860 SF± (15.2%)

REFUSE/TRASH: DUMPSTER AREA AND SCREENING AS SHOWN HEREON.

SITE LIGHTING: EXISTING ONSITE. ALL PROPOSED LIGHTING, UNLESS OTHERWISE APPROVED BY THE PLANNING COMMISSION, SHALL BE SHARP CUT-OFF SHIELDED LUMINARIES ON 18' HEIGHT POLES MAX. LIGHT SHALL NOT SHINE OFF-SITE AT LEVELS GREATER THAN A 1 FOOT CANDLE.

BUILDING HEIGHT: NOT TO EXCEED 50'

PROJECT NOTES

EXISTING PARKING: ANIMAL HOSPITAL @ 1/EMPLOYEE: 20 EMPLOYEES = 20 SPACES MINIMUM
ANIMAL HOSPITAL @ 1/200 SF GFA: 11,106 SF/200 = 56 SPACES MAXIMUM

48 REGULAR PARKING SPACES + 1 ADA ACCESSIBLE SPACES EXISTING

PROPOSED PARKING: ANIMAL HOSPITAL @ 1/EMPLOYEE: 20 EMPLOYEES = 20 SPACES MINIMUM
ANIMAL HOSPITAL @ 1/200 SF GFA: 12,906 SF/200 = 65 SPACES MAXIMUM

TOTAL SPACES PROVIDED: 48 SPACES PROVIDED
3 ADA ACCESSIBLE SPACES INCLUDED

BIKE RACKS REQUIRED: BIKE RACKS NOT REQUIRED FOR ANIMAL HOSPITAL USE.

COMPREHENSIVE PLAN DESIGN PRINCIPLES RESPONSE NARRATIVE

PRINCIPLE #1– INTEGRATED USES ARE DESIRABLE– THIS DEVELOPMENT PROPOSES THE SAME USE THAT EXISTS ON SITE TODAY, THE TALBOT HUMANE SOCIETY ON A COMMERCIALLY ZONED PROPERTY IN THE ROUTE 50 CORRIDOR.

PRINCIPLE #2– NATURAL FEATURES SHOULD DETERMINE DESIGN– NO COMPELLING NATURAL FEATURES; SITE LAYOUT ORIENTED TO TAKE ADVANTAGE OF NATURAL DRAINAGE PATTERNS.

PRINCIPLE #3– AUTOMOBILES SHOULD NOT DETERMINE DESIGN– PARKING FOR THE HUMANE SOCIETY PROVIDED, BUILDING ORIENTATION TO COMPLIMENT EXISTING SITE IS PRIMARY DESIGN FOR THIS LAYOUT. PARKING PROVIDED IN PERMEABLE PAVERS TO MITIGATE IMPACTS.

PRINCIPLE #4– AMPLE OPEN SPACES SHOULD BE PROVIDED WITHIN & AROUND NEIGHBORHOODS– USABLE OPEN SPACE NOT APPLICABLE.

PRINCIPLE #5– ARCHITECTURE SHOULD RESPECT EASTON'S HISTORICAL DEVELOPMENT– THIS APPLICATION PROPOSES ARCHITECTURE COMPATIBLE WITH TOWN OF EASTON'S ARCHITECTURAL PALETTE AND CONSISTENT WITH COMMERCIAL BUILDINGS IN THE ROUTE 50 CORRIDOR.

PRINCIPLE #6– SIGNS SHOULD INFORM BUT NOT DOMINATE– SIGNAGE TO BE SIMPLE PER CODE.

PRINCIPLE #7– NEIGHBORHOODS SHOULD CONTAIN A DIVERSITY OF HOUSING TYPES– NOT APPLICABLE TO THIS PROJECT.

PRINCIPLE #8 RESIDENTIAL NEIGHBORHOODS SHOULD BE INTERESTING PLACES– NOT APPLICABLE TO THIS PROJECT.

PRINCIPLE #9– NEIGHBORHOODS SHOULD CONNECT– NOT APPLICABLE TO THIS PROJECT. THE TOWN OF EASTON IS CURRENTLY PURSUING PEDESTRIAN IMPROVEMENTS IN THE ADJACENT (FORMER) RAILROAD RIGHT-OF-WAY AS PART OF A POTENTIAL FUTURE RAILS TO TRAILS EXTENSION.

FOREST CONSERVATION REQUIREMENTS:

EXEMPT PER §31-3.2.O: AN ACTIVITY ON A PREVIOUSLY DEVELOPED AREA COVERED BY IMPERVIOUS SURFACE AND LOCATED IN THE PRIORITY FUNDING AREA.

LANDSCAPE REQUIREMENTS SUMMARY PER ZONING ORDINANCE:

SECTION 1014.6.C.:

STREET TREES @ 1 TREE/70' OF STREET FRONTAGES = NOT APPLICABLE; NONE PROVIDED

SECTION 1014.6.F.:

1. OVERALL TREES: 1 TREE/3000 SQ FT DISTURBED AREA; 74,784 SF SQ FT/300 = 25 TREES REQUIRED; 25 PROVIDED

2.B. INTERIOR PARKING LOT PLANTINGS: 48 SPACES / 10 = 5 TREES REQUIRED; 5 TREES PROVIDED

2.C. PARKING LOT HEDGE: AS SHOWN

2.D.i. BUILDING FAÇADE PLANTINGS: ONE SHADE/ CANOPY TREE/20' OF APPLICABLE ENTRANCE FAÇADE ALONG US ROUTE NO. 50; FRONTAGE 133'/20 = 7 TREES REQUIRED; 7 TREES PROVIDED

2.D. SERVICE LOADING AREA SCREENING: PROVIDED AS SHOWN

SECTION 1014.7.E.:

25' WIDE LANDSCAPE BUFFERYARD 'B' (ALONG US ROUTE 50)
290 LF LESS ACCESS DRIVES AND PORTIONS OF EXISTING STORMWATER AREAS (146 LF)=
144 LF / 50' = 2.9 PLANT UNITS (PU)
2 SHADE/ CANOPY TREES X 2.9 PU = 6 SHADE/ CANOPY TREES REQUIRED
1 EVERGREEN TREES X 2.9 PU = 3 EVERGREEN TREES REQUIRED

10' WIDE LANDSCAPE BUFFERYARD 'E' (ALONG SOUTH& WEST PROPERTY LINES)
872 LF LESS PARKING AREA, UTILITY EASEMENT, EXISTING VEGETATION
& DUMPSTER AREA (200 LF)= 672 LF / 50' = 13.4 PLANT UNITS (PU)
1 SHADE/ CANOPY TREES X 13.4 PU = 14 SHADE/ CANOPY TREES REQUIRED
3 EVERGREEN TREES X 13.4 PU = 40 EVERGREEN TREES REQUIRED

SWM QUANTITY SUMMARY CHART

POI	EX DA (ACRES)	PR DA (ACRES)	EX IMPERVIOUS (ACRES)	PR IMPERVIOUS (ACRES)	EX RCN	PR RCN	EX Tc (MINUTES)	PR Tc (MINUTES)	PRE 2 YEAR	POST 2 YEAR	WSE	PRE 10 YEAR	POST 10 YEAR	WSE	PRE 100 YEAR	POST 100 YEAR	WSE
1	0.13	0.18	0.12	0.10	95	79	6.00	6.00	0.48	0.36	--	0.78	0.75	--	1.14	1.23	--
2	0.79	0.37	0.22	0.21	72	80	10.50	13.30	0.62	0.54	--	1.55	1.11	--	2.82	1.84	--
3	0.54	0.48	0.38	0.32	87	86	6.00	6.00	1.57	1.33	--	2.82	2.42	--	4.33	3.75	--
4	0.63	1.07	0.33	0.23	83	71	6.00	9.20	1.55	1.14	--	2.96	2.84	--	4.71	5.20	--
							TOTAL		4.22	3.37	--	8.11	7.12	--	13.00	12.02	--

ESD SUMMARY CHART

DRAINAGE AREA	TYPE OF ESD PRACTICE	TYPE 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 (FT³)	ACTUAL ESDv (FT³)
TOTAL SITE	A-2	PERMEABLE PAVERS	ON-SITE	--	401875.42	1580118.09	0.176	--	0.176	1.0	1.0	1,155	1,503



LANDSCAPE LEGEND

2" CALIPER MINIMUM CANOPY OR STREET TREES (OAK, ELM, MAPLE, ZELKOVA)

1.25" CALIPER OR 7' HEIGHT MINIMUM FLOWERING TREES (CHERRY, MAGNOLIA, RED BUD)

7' HEIGHT MINIMUM EVERGREEN TREES (WHITE PINE, SPRUCE, HOLLY, AMERICAN ARBORVITAE)

LANDSCAPING MASS – PERENNIAL MIX WITH SHRUBS, GRASSES

PLANS ARE ISSUED FOR REVIEW ONLY

PLANS ARE NOT APPROVED FOR CONSTRUCTION

REVISIONS TO APPROVED PLANS

No.	DATE	DESCRIPTION	BY

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.

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Lane Engineering, LLC
Established 1986
Civil Engineers • Land Planning • Land Surveyors
E-mail: general@lanei.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 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: 04/04/2028.

SEAL

STATE OF MARYLAND — BRIAN C. ENGLAND — 51461 — PROFESSIONAL ENGINEER

06-03-26

DATE

SKETCH SITE PLAN

FOR
TALBOT HUMANE SOCIETY

IN THE TOWN OF EASTON, WARD 4
TALBOT COUNTY, MARYLAND
TAX MAP 106 PARCEL 1665 LOTS 1 & 2 & PARCEL 2987

ISSUED FOR: ESDR SUBMITTAL — DATE: 06/03/26 — BY: BCE

SHEET No. 2 OF 2
SCALE: AS NOTED
JOB No. 250350
FILE No. B857

Date: 06/03/2026 – 10:30am User: barnes Project Manager: BCE
Drawing Path: C:\Users\barnes\AppData\Local\Temp\AcPublish_32464\CSK-PLTS-250350.dwg | 2 OF 2
XREF File(s): RAR-BASE-250350/VLD-BASE-250350/CSK-BASE-250350/VSF-BASE-250350/CBS-BASE-2436-250350/HSL-BASE-250350/LLP-BASE-250350/CSW-BASE-250

Ring W. Lardner, P.E.
W. Zachary Crouch, P.E.
Michael E. Wheedleton, AIA, LEED GA
Jason P. Loar, P.E.
Jamie L. Sechler, P.E.

PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPARTMENT
TOWN OF EASTON, TALBOT COUNTY, MARYLAND
DBF# 1503A039

JUNE 3, 2026

STATEMENT DESCRIBING THE EXTENT TO WHICH THE APPLICATION COMPLIES WITH THE RECOMMENDED DESIGN PRINCIPLES FOR EASTON

Principle #1 – Integrated Uses are Desirable
Principle #2 – Natural Features Should Determine Design
Principle #3 – Automobiles should not Determine Design
Principle #4 – Ample Open Spaces should be provided within and Around Neighborhoods
Principle #5 – Architecture Should Respect Easton's Historic Development
Principle #6 – Signs should Inform but not Dominate
Principle #7 – Neighborhoods Should Contain a Diversity of Housing Types
Principle #8 – Residential Developments Should be Interesting Places
Principle #9 – Neighborhoods Should Connect

This plan set conforms to the Recommended Design Principles for Easton as noted in the Comprehensive Plan. This plan includes: integrated uses, natural resources, automobiles not determining design, ample open spaces, architecture respecting Easton's history, signs inform, diverse housing interesting residential places, and connected neighborhoods. The proposed project integrates the principles where feasible. However, many of the principles are not applicable to this project due to the nature of the project. The project is a government storage building located in an industrial area in Town and well screened from view. The proposed building follows the existing architectural style of the buildings already on the site. The building will house equipment for servicing the County Roads. No signage is proposed with the proposed project. All references to residential developments are not applicable.

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

Easton Staff Development Review

Property Information

Address	605 Port Street, Easton, MD 21601-0000							
Tax Map	0034	Grid	0009	Parcel	0034	Lot	N/A	
Deed Refernce:	Liber	635	Folio	555				
Plat Reference:	Liber	N/A	Folio	N/A				
Base Zoning District	G/I	Historic District Y ☐ N ☑			Planning Redevelopment Y ☐ N ☑			

Purpose of Application / Description of Work:

Construct a pole building for the Talbot County Roads Department equipment storage.

Owner

Name	Brian Moore, Superintendent, Talbot County Roads Department
Mailing Address	605 Port Street, Easton, Maryland 21601
Telephone No.	Email

Applicant / Agent

Name	Robert J. Duma, P.E., Associate
Mailing Address	106 N. Washington Street, Suite 103, Easton, Maryland 21601
Telephone No.	Email

Surveyor / Engineer

Name	Robert J. Duma, P.E.	License No.	38830	Expiration Date	12-29-2026
Mailing Address	106 N. Washington Street, Suite 103, Easton, Maryland 21601				
Telephone No.		Email			

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 06/03/2026

Printed Name of Applicant or Agent Robert J. Duma, P.E.

For Office Use Only

Easton Staff Development Review Meeting Required Y [X] N [ ]

Easton Staff Development Review Meeting Date

Completeness Check Date **06/04/2026**

Revisions/Resubmissions Required Y [X] N [ ]

Resubmission Date **06/03/2026** Documents Received Y [X] N [ ]

Staff Determination

Scheduled for May 27, 2026 ESDR - RESUBMISSION REQUIRED

SCHEDULED FOR JUNE 2026 ESDR / PRELIM REVIEW

Planning Commission Requir(Y [ ] N [ ] **TBD**

BOZA Required Y [ ] N [ ] **TBD**

2026 - 1732 / ESDR 26 - 06

Historic District Commission Required Y [ ] N [X]

Resubmission for ESDR Required Y [ ] N [ ]

Staff Signature *Samantha N. Smith* Date **06/04/2026**

Revised 02-2019

PORT STREET STORAGE BUILDING

TALBOT COUNTY ROADS DEPT.

TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DBF#1503A039

JUNE 2026

ESDR PLAN SUBMISSION

DATA COLUMN

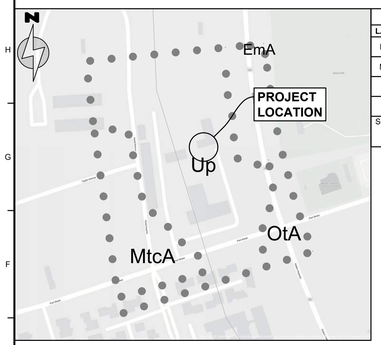
1	TAX MAP ID	NO.: 0034, GRID: 0009, PARCEL: 0034
2	DEED REFERENCE	BOOK: 00635, PAGE: 00555
3	APPROXIMATE PROJECT CENTER	LATITUDE 38.771264° / LONGITUDE 76.0882767°
4	ENGINEER	DAVIS, BOWEN & FRIEDEL, INC. 106 N. WASHINGTON STREET SUITE 103 EASTON, MARYLAND 21601 ROBERT J. DUMA, P.E. PHONE: 410-770-4744
	OWNER	TALBOT COUNTY MARYLAND 11 N WASHINGTON ST. EASTON, MARYLAND 21601 PHONE: 410-440-8010 FAX: 410-770-8007
5	DATUM	HORIZONTAL: NAD 83 (MD STATE PLANE) / VERTICAL: NAVD 88
7	LAND USE	EXISTING: PUBLIC WORKS MAINTENANCE / PROPOSED: PUBLIC WORKS MAINTENANCE
8	UTILITY PROVIDERS *(WATER & SEWER IS EXISTING AT THE SITE, NOT PROPOSED FOR THE BUILDING)*	SEWER: EASTON UTILITIES / WATER: EASTON UTILITIES / GAS: N/A / ELECTRIC: EASTON UTILITIES
9	POSTED SPEED LIMIT	PORT STREET (EASTON) 30 MPH
10	FLOODPLAIN	THE PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOODPLAIN AS DETERMINED BY FEMA PANEL 24041C0189C, REVISED JULY 20, 2016.
11	GROUNDWATER RECHARGE	THE PROPERTY IS LOCATED WITHIN AN AREA OF GOOD GROUNDWATER RECHARGE
12	WELLHEAD PROTECTION AREA	THE PROPERTY IS NOT LOCATED WITHIN A WELLHEAD PROTECTION AREA.
13	WETLANDS	THE PROPERTY IS IMPACTED BY STATE AND/OR FEDERALLY REGULATED WETLANDS.
14	CRITICAL AREA	THE PROPERTY IS LOCATED WITHIN THE INTENSELY DEVELOPED AREAS (IDA) DESIGNATION
15	COMPREHENSIVE PLAN DESIGNATION	THE PROPERTY IS LOCATED WITHIN THE TOWN PRIORITY FUNDING AREA.
16	ZONING	GI - GOVERNMENTAL/INSTITUTIONAL DISTRICT

17 CODE COMPLIANCE (GI)	REQUIRED	PROPOSED
FRONT SETBACK	40 FT	40 FT
REAR SETBACK	30 FT	30 FT
SIDE SETBACK	15 FT	15 FT
MINIMUM LOT SIZE	40,000 SF (0.9183 AC)	40,000 SF (0.9183 AC)
LOT FRONTAGE	100 FT	100 FT
MAXIMUM DENSITY	3 DWELLING UNITS	3 DWELLING UNITS
MAXIMUM BUILDING HEIGHT	50 FT (3 STORIES)	25'-10" +/-
LOT COVERAGE	≤20,000 SF (0.4591 AC)	TBD
PARKING	APPROXIMATELY 66 EXISTING SPACES, NO ADDITIONAL PARKING PROPOSED - NO STAFF WILL OCCUPY, STORAGE BUILDING ONLY.	
BICYCLE STORAGE	NO BICYCLE STORAGE PROPOSED - NO STAFF WILL OCCUPY, STORAGE BUILDING ONLY.	

18 AREAS	EXISTING	PROPOSED
SITE AREA	264,844.8 SF (6.08 AC) (100.00%)	264,844.8 SF (6.08 AC) (100.00%)
WOODS	AS SHOWN	NO CHANGE
IMPERVIOUS COVER	264,844.8 SF (6.08 AC) (100.00%)	263,291.8 SF (6.04 AC) (99.4%)
BUILDING	N/A	8,000 SF

19 LIGHTING

ANY OUTDOOR LIGHTING SHALL BE SHIELDED TO DIRECT LIGHT AND GLARE ONLY ONTO THE MINI-WAREHOUSE FACILITY AND MAY BE OF SUFFICIENT INTENSITY TO DISCLOSURE VANDALISM AND THEFT. SAID LIGHTING AND GLARE SHALL BE DEFLECTED, SHADED, AND FOCUSED AWAY FROM ALL ADJOINING PROPERTY.

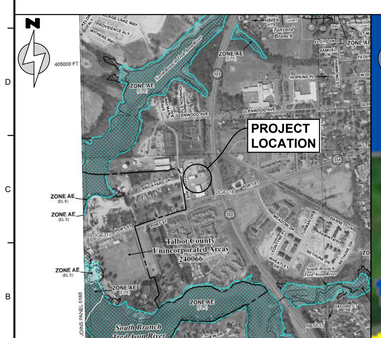


SOILS DATA

LABEL	SOIL	TYPE
EmA	ELKTON SILT LOAM, 0-2% SLOPES	C/D
MtcA	MATTAPEX SILT LOAM, 0-2% SLOPES, MID-ATLANTIC COASTAL PLAIN	C
OtA	OTHELLO SILT LOAMS, 0-2% SLOPES, MID-ATLANTIC COASTAL PLAIN	C/D
Up	URBAN LAND	--

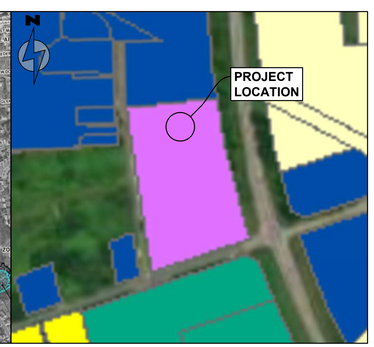
SOIL CLASSIFICATION OBTAINED FROM WEB SOIL SURVEY PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, VERSION 22 ISSUED SEPTEMBER 9, 2025.

SOILS MAP 0' 300' 600'
SCALE: 1" = 300'

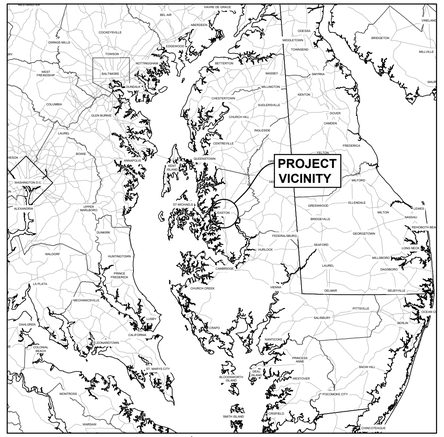


PANEL# 24041C0189D REVISED: 07/20/2016

FEMA MAP 0' 1000' 2000'
SCALE: 1" = 1000'



ZONING MAP 0' 300' 600'
SCALE: 1" = 300'



VICINITY MAP 0' 100,000' 200,000' 300,000'
SCALE: 1" = 100,000'



LOCATION MAP 0' 6,000' 12,000' 18,000'
SCALE: 1" = 6,000'

INDEX OF DRAWINGS

Sheet Number	Sheet Title
C-001	TITLE SHEET
C-002	LEGEND & NOTES
C-003	OVERALL SITE PLAN
V-101	EXISTING CONDITIONS PLAN
C-101	SITE PLAN
C-401	EROSION & SEDIMENT CONTROL PLAN
C-402	EROSION & SEDIMENT CONTROL DETAILS & NOTES
C-501	SITE DETAILS
A-201	PROPOSED ELEVATIONS
A-901	3D RENDERING

IMPACT STATEMENT

THE BUILDING ARCHITECTURE IS A STANDARD POLE BUILDING TO BE USED FOR THE ROADS DEPARTMENT STORAGE. THE BUILDING WILL BE USED AND OPERATED BY THE TALBOT COUNTY ROADS DEPARTMENT. THE BUILDING OPERATIONS WILL NOT RESULT IN NOXIOUS OR OFFENSIVE ODORS. THE PROPOSED BUILDING WILL NOT CONTAIN ANY WATER OR SEWER FACILITIES, ONLY MINIMAL ELECTRICAL FACILITIES AS NECESSARY. AS A RESULT, AIR AND NOISE POLLUTION WILL NOT BE FORESEEN AS AN ISSUE. TRAFFIC GENERATION BY THE BUILDING WILL BE MINIMAL AND ONLY AS NECESSARY BY THE EMPLOYEES OF THE TALBOT COUNTY ROADS DEPARTMENT USING THE FACILITY. VISITORS ARE NOT TO BE ANTICIPATED. ENTRANCES AND EXITS ARE ADEQUATE.

RECOMMENDED DESIGN PRINCIPLES

THIS PLAN SET CONFORMS TO THE RECOMMENDED DESIGN PRINCIPLES FOR EASTON AS NOTED IN THE COMPREHENSIVE PLAN. THE PLAN INCLUDES: INTEGRATED USES, NATURAL RESOURCES, AUTOMOBILES NOT DETERMINING DESIGN, AMPLE OPEN SPACES, ARCHITECTURE RESPECTING EASTON'S HISTORY, SIGNS INFORM, DIVERSE HOUSING, INTERESTING RESIDENTIAL PLACES, AND CONNECTED NEIGHBORHOODS.

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
EASTON, MARYLAND 410.770.4744 | MILFORD, DELAWARE 302.424.1441 | SALISBURY, MARYLAND 410.543.9091

REVIEWED FOR THE TALBOT SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS

APPROVED:

SHAWN D. SMITH, DISTRICT MANAGER — DATE
TALBOT SOIL CONSERVATION DISTRICT

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 ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPERS CERTIFICATION

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

SIGNATURE — DATE

1: IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR

2: ANY RESPONSIBLE PERSONENEL INVOLVED IN THE 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.

ENGINEER'S STATEMENT

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. 38830, EXPIRATION DATE: 12/29/26.

6/3/2026
ROBERT J. DUMA, P.E. — DATE
DAVIS, BOWEN & FRIEDEL, INC.
106 N. WASHINGTON STREET, SUITE 103
EASTON, MARYLAND 21601

OWNER'S STATEMENT

I, UNDERSIGNED, HEREBY STATE THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN. THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

OWNER'S REPRESENTATIVE — DATE

OWNER:
LANDS OF TALBOT COUNTY
11 N. WASHINGTON STREET
EASTON, MARYLAND 21601

APPROVED TOWN OF EASTON ENGINEER

NAME — DATE

APPROVED TOWN OF EASTON PLANNING & ZONING

NAME — DATE

STATE OF MARYLAND — ROBERT J. DUMA — LIC. No. 38830 — PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of MD. License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
EASTON, MARYLAND 410.770.4744 | MILFORD, DELAWARE 302.424.1441 | SALISBURY, MARYLAND 410.543.9091

PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS
6/3/2026	ESDR PLAN SUBMISSION

Date: JUNE 2026
Scale: AS SHOWN
Dwn.By: RJD
Proj.No.: 1503A039

TITLE SHEET

Dwg.No.: C-001

\\eas1\eas\Civil\1503A Talbot County\1503A039 Port Street Storage Bldg\CAD\SHEET\C-001.dwg Jun 02, 2026 - 4:10pm dumr

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GENERAL NOTES

1. BEFORE ANY EXCAVATION IS PERFORMED, THE CONTRACTOR SHALL CONTACT "MISS UTILITY" OF DELMARVA AT 1-800-441-8355, AT LEAST THREE (3) WORKING DAYS PRIOR TO EXCAVATION TO HAVE EXISTING UNDERGROUND UTILITIES LOCATED.
2. THE TOWN OF EASTON MUST BE NOTIFIED IN WRITING FIVE (5) BUSINESS DAYS PRIOR TO COMMENCING WITH CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED PLANS.
3. A WRITTEN "NOTICE TO PROCEED" MUST BE OBTAINED FROM A PRE-CONSTRUCTION MEETING SCHEDULED WITH THE TOWN OF EASTON BEFORE BEGINNING CONSTRUCTION. 48 HOURS NOTICE IS REQUIRED TO SCHEDULE A PRE-CONSTRUCTION MEETING AND OBTAIN A WRITTEN "NOTICE TO PROCEED".
4. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL APPRISE AND COORDINATE DURING ALL PHASES OF CONSTRUCTION.

TALBOT COUNTY DEPARTMENT OF PUBLIC WORKS	410-770-8170
TALBOT SOIL CONSERVATION DISTRICT	410-822-1344
DAVIS, BOWEN & FRIEDEL, INC.	410-770-4744
TOWN OF EASTON	410-820-8822

5. THE TOWN OF EASTON RESERVES THE RIGHT TO REQUIRE STRUCTURAL MODIFICATIONS TO THE SITE WORK FOLLOWING PERMIT ISSUANCE IF, IN THE OPINION OF THE TOWN, SUCH MODIFICATIONS ARE NECESSARY TO CORRECT DEFICIENCIES IN THE PLAN.
6. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND PROJECT SPECIFICATIONS.
7. NO OCCUPANCY PERMIT SHALL BE ISSUED UNTIL ALL IMPROVEMENTS (ROADS, DRAINAGE, STORMWATER MANAGEMENT, ETC.) HAVE BEEN COMPLETED AND THE AS-BUILT PLANS HAVE BEEN ACCEPTED BY THE TOWN OF EASTON.
8. APPROVAL OF THESE PLANS BY THE TOWN OF EASTON IS NOT A REPRESENTATION, GUARANTEE OR WARRANTY OF ANY KIND AND SHALL CREATE NO LIABILITY UPON THE TOWN, ITS OFFICIALS OR EMPLOYEES.
9. THE CONTRACTOR SHALL OBTAIN COPIES OF THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING PLANS AND VERIFY ALL BUILDING DIMENSIONS BEFORE BEGINNING CONSTRUCTION. COORDINATE ALL SITE WORK WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING PLANS.
10. THESE DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
11. AN "AS-BUILT/RECORD" PLAN SHALL BE PROVIDED TO THE TOWN OF EASTON WITHIN THIRTY (30) DAYS AFTER COMPLETION OF CONSTRUCTION.
12. WHENEVER EXCAVATION DISRUPTS GUY WIRES OR ENDANGERS ANY EXISTING TELEPHONE, POWER OR LIGHT POLE, THE POLE SHALL BE BRACED IN ACCORDANCE WITH REQUIREMENTS OF THE OWNER OF THE POLE.
13. CONSTRUCTION FOR ALL PUBLIC UTILITIES, MUST BE IN ACCORDANCE WITH THE LATEST TALBOT COUNTY DEPT. OF PUBLIC WORKS STANDARD DETAILS AND THE "CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR UTILITY AND ROADWAY CONSTRUCTION".
14. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE STAKEOUT NECESSARY FOR THE INSTALLATION OF THE BUILDING. ALL STAKEOUT TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF MARYLAND.
15. CONSTRUCTION OF ROADS, LOT AND SITE GRADING SHALL CONFORM TO EROSION AND SEDIMENT CONTROL REQUIREMENTS DEFINED ON THE SEDIMENT CONTROL PLAN DRAWINGS.
16. EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE BASED UPON THE BEST AVAILABLE INFORMATION AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. NO GUARANTEE IS MADE OR IMPLIED REGARDING THE ACCURACY OR COMPLETENESS THEREOF. CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF DEPTH, SIZE AND MATERIAL OF ALL UNDERGROUND UTILITIES TO HIS OWN SATISFACTION BEFORE BEGINNING ANY EXCAVATION OR PIPE LAYING. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THE INFORMATION ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO SUPPORT AND PROTECT ALL SHOWN OR NOT SHOWN EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITIES BE DAMAGED BY THE CONTRACTOR, THEN THE CONTRACTOR SHALL REPAIR THE DAMAGE CAUSED TO THE OWNER'S SATISFACTION, AT THE CONTRACTORS EXPENSE.
17. THE TALBOT SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, MODIFY OR DELETE ANY EROSION OR SEDIMENTS CONTROL MEASURES AS IT DEEMS NECESSARY.
18. CONTRACTOR SHALL ADJUST TO FINISH GRADE AS NECESSARY ANY VALVE BOXES, MANHOLES, CATCH BASINS, ETC. PRIOR TO PLACING PAVING.
19. DISCREPANCIES
    A. THE CONTRACTOR SHALL IMMEDIATELY STOP WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES DISCOVERED BETWEEN THE DRAWINGS AND EXISTING CONDITIONS.
    B. ERRORS OR OMISSIONS IN DRAWINGS OR LAYOUT SHALL BE TREATED AS A DISCREPANCY.
    C. THE ENGINEER WILL REVIEW THE CONTRACTOR'S FINDING TO CONFIRM THE DISCREPANCY.
    D. THE ENGINEER, WILL ISSUE NEW INSTRUCTIONS AS SOON AS POSSIBLE TO RELIEVE THE DISCREPANCY.
    E. THE CONTRACTOR SHALL RESOLVE ANY DISCREPANCY BEFORE START OF WORK OR CONTINUATION AFTER THE DISCREPANCY ARISES.''
35. ON-SITE TOPOGRAPHIC SURVEY BY DAVIS, BOWEN, & FRIEDEL, INC., APRIL, 2026. HORIZONTAL DATUM IS MARYLAND STATE PLANE, NAD 83/91. VERTICAL DATUM IS NAVD 88.
36. THE SITE IS NOT LOCATED WITHIN AN AREA OF 100 YEAR FLOOD BASED UPON INFORMATION OBTAINED FROM THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD BOUNDARY AND FLOODWAY MAP, FEMA PANEL NUMBER 24041C0189D, DATED JULY 20, 2016.
37. THERE ARE NO WETLANDS LOCATED WITHIN THE PROJECT LIMITS.
38. THIS SITE IS LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA AS DEFINED BY THE MARYLAND DEPARTMENT OF NATURAL RESOURCES CRITICAL AREA BOUNDARY MAP VIEWER.
39. DURING THE PROCESS OF THE JOB, THE CONTRACTOR SHALL KEEP A CAREFUL RECORD AT THE JOB SITE OF ALL CHANGES AND CORRECTIONS TO THE INFORMATION SHOWN ON THE CONTRACT DRAWING(S) AND THE STORMWATER MANAGEMENT PLAN DRAWING(S). PRIOR TO BACKFILL, THE CONTRACTOR SHALL ENTER SUCH CHANGES AND CORRECTIONS ON ONE SET OF RED LINE AS-BUILT DRAWINGS. THE RED LINE AS-BUILT DRAWINGS SHALL INDICATE, IN ADDITION TO ALL CHANGES AND CORRECTIONS, ALL SUBSURFACE STRUCTURES/UTILITIES INSTALLED OR UNCOVERED, REFERENCED TO PERMANENTLY FIXED SURFACE STRUCTURES. PRIOR TO TESTING OF THE UTILITY/UTILITIES AND ACCEPTANCE OF THE SWM FACILITIES INVOLVED UNDER THE CONTRACT, THE CONTRACTOR SHALL SUBMIT, CONCURRENTLY, TO THE OWNER ONE SET OF RED LINE AS-BUILT DRAWINGS SHOWING THE AFOREMENTIONED DATA AND ONE COPY OF THE RED LINE AS-BUILT DRAWINGS TO THE TOWN OF EASTON. SHOULD THE CONTRACTOR FAIL TO MAINTAIN RED LINE AS-BUILT DRAWING(S), THE OWNER MY BE REQUIRED TO HIRE A PRIVATE LOCATOR AND MAY BE REQUIRED TO TEST PIT THE MAINS AT THE DISCRETION OF THE TALBOT COUNTY ENGINEER. PARTIAL ACCEPTANCE OF THE PUBLIC UTILITIES AND ACCEPTANCE OF THE STORMWATER MANAGEMENT FACILITY MAY MAY BE DELAYED PENDING RECEIPT OF THIS INFORMATION.
40. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS UNLESS WRITTEN APPROVAL HAS BEEN PROVIDED BY THE ENGINEER.

DEMOLITION NOTES

1. MISS UTILITY OF DELMARVA SHALL BE NOTIFIED THREE CONSECUTIVE WORKING DAYS PRIOR TO EXCAVATION, AT 1-800-441-8355.
2. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. COMPLETENESS OR CORRECTNESS THEREOF IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY COMPANIES INVOLVED IN ORDER TO SECURE THE MOST ACCURATE INFORMATION AVAILABLE AS TO UTILITY LOCATION AND ELEVATION. NO CONSTRUCTION AROUND OR ADJACENT TO UTILITIES SHALL BEGIN WITHOUT NOTIFYING THEIR OWNERS AT LEAST 48 HOURS IN ADVANCE. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE AND ANY DAMAGE DONE TO THEM DUE TO HIS/HER NEGLIGENCE SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE. TO LOCATE EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL ABOVE GROUND STRUCTURES, UNDERGROUND STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
4. THE CONTRACTOR SHALL REMOVE AND IMMEDIATELY REPLACE, RELOCATE, RESET OR RECONSTRUCT ALL OBSTRUCTIONS IN THE ROAD WAY, INCLUDING, BUT NOT LIMITED TO, MAILBOXES, SIGNS, LANDSCAPING, LIGHTING, PLANTERS, CULVERTS, DRIVEWAYS, PARKING AREAS, CURBS, GUTTERS, FENCES, OR OTHER NATURAL OR MAN-MADE OBSTRUCTIONS. TRAFFIC CONTROL, REGULATORY, WARNING AND INFORMATIONAL SIGNS SHALL REMAIN FUNCTIONAL AND VISIBLE TO THE APPROPRIATE LANES OF TRAFFIC AT ALL TIMES, WITH THEIR RELOCATION KEPT TO A MINIMUM DISTANCE. THE COST SHALL BE INCLUDED IN THE COST OF ITEMS BID.
5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION.
6. MARYLAND REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING THE EXCAVATION FOR STRUCTURES AND UTILITY LINES ON AND OFF SITE MUST BE REMOVED AND PROPERLY DISCARDED. ANY REMEDIAL ACTION REQUIRED IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM. ADDITIONAL COSTS WILL BE NEGOTIATED WITH THE OWNER.
7. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES, PERMITS AND CHARGES.
8. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL WORK MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
9. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES.
10. PRIOR TO DEMOLITION OCCURRING, EROSION CONTROL DEVICES ARE TO BE INSTALLED AS DETAILED ON THE SEQUENCE OF CONSTRUCTION.

MANMADE ROADSIDE FEATURES

FEATURE DESCRIPTION	ID	EXISTING	PROPOSED
BOLLARD		○	○
CURB, TYPE 1-4	C		
CURB OPENING	CO		
CURB OPENING W/ SIDEWALK	COSW		
FENCE - CHAINLINK OR STRANDED	F	X X	X X
LAMP AND POST - RESIDENTIAL			
MAILBOX		MB	MB
TRAFFIC SIGN AND POST			

DRAINAGE FEATURES

FEATURE DESCRIPTION	ID	EXISTING	PROPOSED
FLARED END SECTION	FES		
DRAINAGE MANHOLE	MH	Ⓓ	◎
DRAINAGE INLET	DI		
DIRECTIONAL FLOW ARROW			
RIPRAP	RR	RIPRAP	RIPRAP
DRAINAGE PIPE	P		
UNDERDRAIN	UD		
UNDERDRAIN OUTLET	UDO		
SAFETY END SECTION	SES		
BIOFILTRATION SWALE			BFS BFS BFS
DITCH CENTERLINE			
DRAINAGE JUNCTION BOX	JB	J.B.	
DRAINAGE PIPE HEADWALL			

IDENTIFIERS

FEATURE DESCRIPTION	ID
ABANDON BY CONTRACTOR	ABC
ABANDON BY OTHERS	ABO
ADJUST BY CONTRACTOR	AC
ADJUST BY OTHERS	AO
CONVERT TO JUNCTION BOX	CVJB
CONVERT TO DRAINAGE MANHOLE	CVMH
DO NOT DISTURB	DNB
PEDESTRIAN CONNECTION / TYPE	PC
PEDESTRIAN CONNECTION / TYPE WITHOUT DETECTABLE WARNING SYSTEM	PC-W
RELOCATE BY CONTRACTOR	RLC
RELOCATE BY OTHERS	RLO
REMOVE BY CONTRACTOR	RMC
REMOVE BY OTHERS	RMO

NATURAL FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
HEDGEROW OR THICKET		
SHRUBBERY		
TREE - CONIFEROUS		
TREE - DECIDUOUS		
TREE LINE		
CONTOUR ELEVATION LABEL	24	24
ELEVATION	24.24	

SURVEY CONTROL AND MONUMENTATION

FEATURE DESCRIPTION	EXISTING	PROPOSED
SURVEY BENCHMARK LOCATION		
IRON ROD WITH CAP SET		◉ IRCS
CONCRETE MONUMENT (STONE FOUND)	☐ CMF ☐ SF	○ IPF
IRON PIPE FOUND	⊗ IRF	
IRON ROD FOUND	○ IPF	

RIGHT-OF-WAY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
BUILDING SETBACK LINE		
PERMANENT EASEMENT	+ +	PE PE
PROPERTY LINE		
RIGHT-OF-WAY BASELINE	1+00	1+00
RIGHT-OF-WAY LINE	EX-R/W	R/W
TAX DITCH RIGHT-OF-WAY		-TAX R/W-
TEMPORARY CONSTRUCTION EASEMENT		TCE TCE

MISCELLANEOUS FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
LIMIT OF DISTURBANCE		LOD LOD
SILT FENCE		SF SF
WETLANDS BOUNDARY LINE	WET WET	
WETLANDS		
WETLANDS BUFFER LINE	EX-10WLB	10WLB 10WLB
VEGETATION BUFFER LINE	EX-10VB	10VB 10VB
GENERAL BUFFER LINE	EX-10BZ	10BZ 10BZ
FORESTED BUFFER LINE	EX-10FB	10FB 10FB
LANDSCAPE BUFFER LINE	EX-10LB	10LB 10LB
SIDEWALK / SHARED USE PATH		

UTILITY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
ELECTRIC - ABOVE GROUND	EX-OHE	OHE OHE
ELECTRIC - UNDERGROUND	EX-UGE	UGE UGE
ELECTRIC MANHOLE	E	
ELECTRIC METER	EM	
ELECTRIC TRANSFORMER		
GAS - UNDERGROUND	EX-G EX-G	2G 2G 2G
GAS MANHOLE	G	
GAS METER	GM	
GAS VALVE	GV	
LIGHT POLE		
RAILROAD TRACKS		
SANITARY MAIN	EX-SS EX-SS	SSS SSS
SANITARY SEWER MANHOLE	Ⓢ	◎
SOIL BORING LOCATION		
TELEPHONE TEST POINT	T	
UTILITY POLE GUY WIRE ANCHOR		
UTILITY POLE		
WATER MAIN	EX-W EX-W	W W
WATER - FIRE HYDRANT		
WATER VALVE		
WATER METER / LATERAL		W.M.
SANITARY SEWER CLEANOUT / LATERAL		

STATE OF MARYLAND — ROBERT J. DUNN — LIC. No. 39830 — PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of MD. License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
SALISBURY, MARYLAND 410.543.9091
MILFORD, DELAWARE 302.424.1441
EASTON, MARYLAND 410.770.4744

PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: NOT TO SCALE
Dwn.By: RJD
Proj.No.: 1503A039

LEGEND & NOTES

Dwg.No.: **C-002**

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N/F
MUNICIPAL PUBLIC WORKS
TOWN OF EASTON
M:0034, GRID:0009, PARCEL:0170
DEED:569/639

N/F
DELMARVA POWER AND LIGHT
COMPANY OF MARYLAND
M:0034, GRID:0009, PARCEL:0099
DEED:438/537

15' BUILDING RESTRICTION LINE (BRL)

PR. 200'X40' STORAGE BUILDING, SEE SHEETS C-101 & A-201 FOR ADDITIONAL INFORMATION

EX. RADIO BASE BUILDING

15' BUILDING RESTRICTION LINE (BRL)

40' BUILDING RESTRICTION LINE (BRL)

EX. EQUIPMENT SHED

EX. MATERIAL STORAGE BUILDING

CRITICAL AREA BOUNDARY

EX. ON-SITE PARKING, TYP.

N/F
BLUE WATER ILLUMINATION LLC
M:0034, GRID:0009, PARCEL:0192
DEED:2686/447

TALBOT COUNTY MARYLAND
M:0034, GRID:0009, PARCEL:0034
DEED: 635/555

N/F
SCHULTZ GLADYS GAY KNOPP TERYE R
M:0034, GRID:0009, PARCEL:0219
DEED:2171/130

40' BUILDING RESTRICTION LINE (BRL)

TOWN OF EASTON MUNICIPAL BOUNDARY

N/F
RETIREMENT COMMUNITY OF EASTON INC
M:0034, GRID:0015, PARCEL:0093
DEED:2745/219

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OVERALL SITE PLAN

SCALE: 1" = 50'

0' 50' 100' 150'

STATE OF MARYLAND
ROBERT J. DUMAS
Lic. No. 38830
PROFESSIONAL ENGINEER

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PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: 1" = 50'
Dwn.By: RJD
Proj.No.: 1503A039

OVERALL SITE PLAN

Dwg.No.: **C-003**

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EX. PROPERTY LINE

15' BUILDING RESTRICTION LINE (BRL)

EX. STORMWATER MANAGEMENT POND

40' BUILDING RESTRICTION LINE (BRL)

EX. RADIO BASE BUILDING

LOCATION OF EXISTING GRAVEL STOCKPILE

FLOOD AVENUE

15' BUILDING RESTRICTION LINE (BRL)

EX. MATERIAL STORAGE BUILDING

EX. EQUIPMENT SHED

CRITICAL AREA BOUNDARY

EASTON PARKWAY

15.0'

40.0'

EXISTING CONDITIONS PLAN

SCALE: 1" = 20'

0' 20' 40' 60'

STATE OF MARYLAND
ROBERT J. DUNN
Lic. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of MD. License No. 38830 Expiration Date: 12-29-26

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PORT STREET STORAGE BUILDING

TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: 1" = 20'
Dwn.By: RJD
Proj.No.: 1503A039

EXISTING CONDITIONS PLAN

Dwg.No.: **V-101**

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SITE NOTES

- (A) PR. 200'X40' STORAGE BUILDING
- (B) PR. CONCRETE BOLLARD, TYP.
- (C) PR. 5' CONCRETE SIDEWALK

SITE PLAN

SCALE: 1" = 20'

0' 20' 40' 60'

SITE NOTES:
1. NO ADDITIONAL REFUSE COLLECTION AREAS ARE PROPOSED WITH THIS PROJECT.

NOTES: THE LIMIT OF DISTURBANCE FOR STORMWATER MANAGEMENT HAS BEEN CALCULATED USING THE EARTH DISTURBANCE REQUIRED TO INSTALL THE CONCRETE SLAB FOR THE BUILDING. THE PROPOSED GRASSED AREA IS 50% OF THIS LIMIT OF DISTURBANCE FOR THE REDUCTION OF IMPERVIOUS AREA REQUIRED FOR STORMWATER MANAGEMENT REDEVELOPMENT REGULATIONS. PERMANENT SEEDING SUMMARY SHALL BE FOLLOWED ON SHEET C-402

STEP 3: CALCULATE PHOSPHOROUS REMOVAL REQUIREMENT, RR FOR CRITICAL AREA SITES

DEVELOPMENT CATEGORY (FOR 10%)	REDEVELOMPENT
REDEVELOPMENT	
PREDEVELOPMENT RUNOFF COEFFICIENT, Rv_{pre}	0.95
PHOSPHORUS MEAN CONCENTRATION, C (mg/L)	0.30
AVERAGE ANNUAL PREDEVELOPMENT LOAD, L_{pre}(lbs P / yr)	0.36
POST-DEVELOPMENT RUNOFF COEFFICIENT, Rv_{post}	0.46
AVERAGE ANNUAL POST-DEVELOPMENT LOAD, L_{post}(lbs P /yr)	0.17
REMOVAL REQUIREMENT, RR (lbs P / yr)	-0.15

SITE IMPERVIOUSNESS & WATER QUALITY VOLUME, WQv (REDEVELOPMENT)

SITE AREA, A (ACRES)	0.15
EXISTING IMPERVIOUS SURFACE AREA (ACRES)	0.15
PROPOSED IMPERVIOUS SURFACE AREA (ACRES)	0.070
RAINFALL DEPTH, P (IN)	1.00
EXISTING IMPERVIOUSNESS, Ipre	100.00%
PROPOSED IMPERVIOUSNESS, Ipost	46.00%
REQUIRED TREATMENT AREA (ACRES)	0.00
RUNOFF COEFFICIENT (Rv)	0.95
WATER QUALITY VOLUME, WQv (CF)	0

STATE OF MARYLAND
ROBERT J. GUIDA
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional ENGINEER in the laws of the State of MD. License No. 38830 Expiration Date: 12-29-26

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SALISBURY, MARYLAND 410.543.9091

PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

COMMENTS

DATE

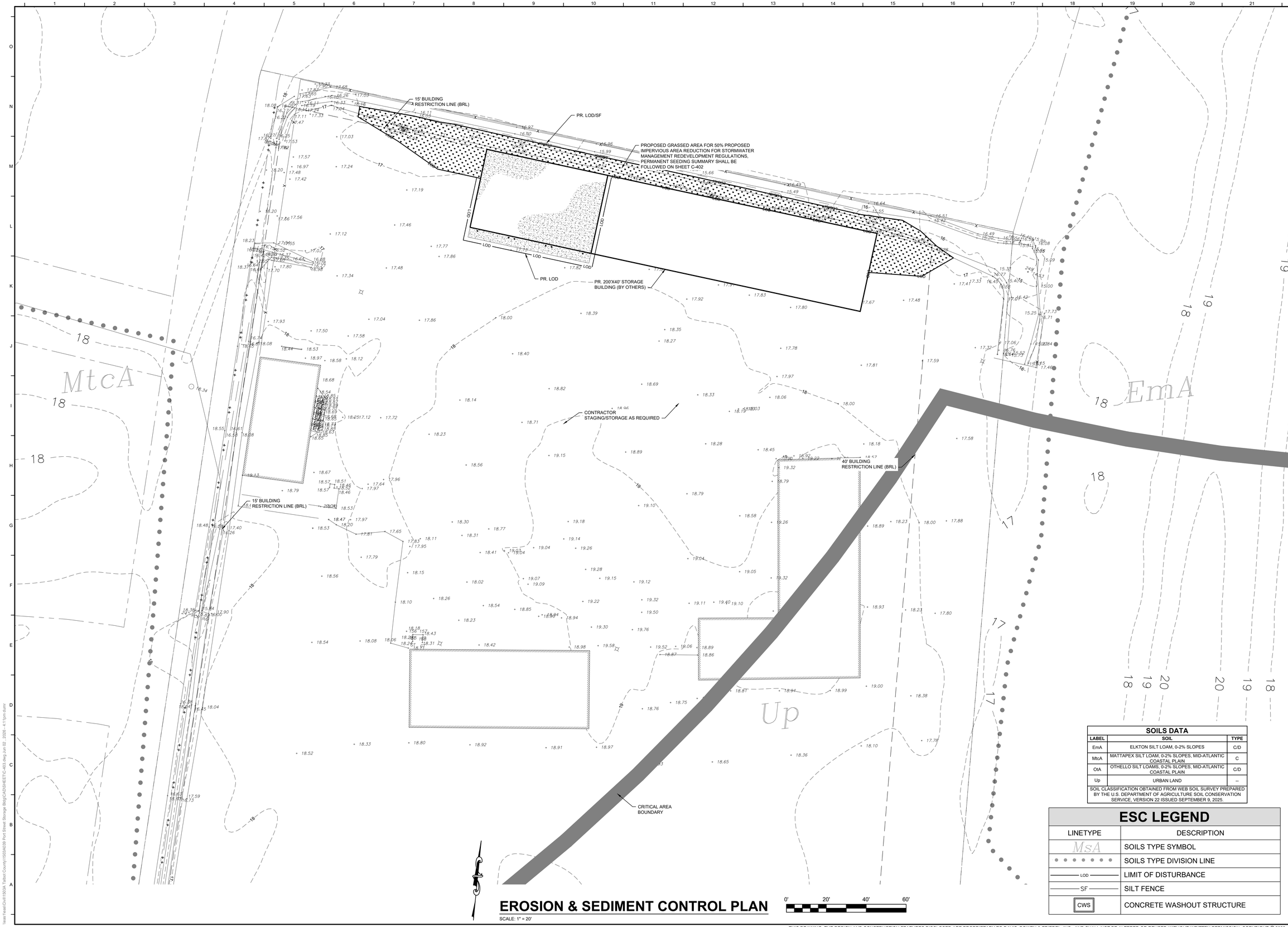
Date: JUNE 2026
Scale: 1" = 20'
Dwn.By: RJD
Proj.No.: 1503A039

SITE PLAN

Dwg.No.: **C-101**

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EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

0' 20' 40' 60'

SOILS DATA		
LABEL	SOIL	TYPE
EmA	ELKTON SILT LOAM, 0-2% SLOPES	C/D
MtcA	MATTAPEX SILT LOAM, 0-2% SLOPES, MID-ATLANTIC COASTAL PLAIN	C
OtA	OTHELLO SILT LOAMS, 0-2% SLOPES, MID-ATLANTIC COASTAL PLAIN	C/D
Up	URBAN LAND	--

SOIL CLASSIFICATION OBTAINED FROM WEB SOIL SURVEY PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, VERSION 22 ISSUED SEPTEMBER 9, 2025.

ESC LEGEND

LINETYPE	DESCRIPTION
MsA	SOILS TYPE SYMBOL
	SOILS TYPE DIVISION LINE
LOD	LIMIT OF DISTURBANCE
SF	SILT FENCE
CWS	CONCRETE WASHOUT STRUCTURE

STATE OF MARYLAND
ROBERT J. DUDA
LIC. No. 38830
PROFESSIONAL ENGINEER

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SALISBURY, MARYLAND 410.543.9091

PORT STREET STORAGE BUILDING

TALBOT COUNTY ROADS DEPT.

TOWN OF EASTON, TALBOT COUNTY, MARYLAND

Date:	JUNE 2026
Scale:	1" = 20'
Dwn.By:	RJD
Proj.No.:	1503A039

EROSION & SEDIMENT CONTROL PLAN

Dwg.No.: C-401

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EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL".
2. A PERIODIC MAINTENANCE OF ALL SEDIMENT CONTROL MEASURES SHALL BE REQUIRED TO INSURE EFFECTIVE SEDIMENT CONTROL. INSPECTION OF ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL.
3. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ESTABLISHED.
4. ALL AREAS NOT COVERED BY BUILDINGS, PAVEMENT, OR OTHER SUITABLE LANDSCAPING WILL BE SEEDED USING PERMANENT SEED MIXTURE SHOWN ON THIS PLAN.
5. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. THE REQUIREMENTS OF THIS SUBPARAGRAPH DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USED FOR MATERIAL STORAGE OF FOR THESE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED.
6. THE SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO REQUIRE ADDITIONAL SEDIMENT AND EROSION MEASURES DURING THE CONSTRUCTION OF THIS PROJECT.
7. SEEDING (PERMANENT)
   A. SHALL BE CONDUCTED BETWEEN MARCH 1 TO MAY 15 OR AUGUST 15 TO OCTOBER 15.
   B. SEED BED PREPARATION: APPLY 10-20-20 FERTILIZER AS SHOWN ON THE PERMANENT SEEDING SUMMARY AND HARROW OR DISC INTO SOIL TO A DEPTH OF 2 TO 4 INCHES; APPLY GRANULATED LIMESTONE AT 2 TONS PER ACRE. LEVEL AND RAKE THE AREA TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 ½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
   C. SEEDING: APPLY SEED AS SHOWN IN THE PERMANENT SEEDING SUMMARY ON A MOIST SEED BED WITH SUITABLE EQUIPMENT - MINIMUM COVERAGE 1/4 TO 1/2 INCH, IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATERS FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.
   D. MULCHING: IMMEDIATELY AFTER SEEDING, UNIFORMLY MULCH ENTIRE AREA WITH UNWEATHERED SMALL GRAIN STRAW AT A RATE OF 2.5 TONS PER ACRE. MULCH TO BE ANCHORED WITH MULCH ANCHORING TOOL ON THE CONTOUR.
8. TEMPORARY STABILIZATION:
   A. SEED BED PREP: APPLY 10 LB PER 1,000 SQ FT OF 10-20-20.
   B. PROVIDE TEMPORARY SEEDING AS SHOWN ON THE TEMPORARY SEEDING SUMMARY, BETWEEN FALL AND SPRING SEEDING DATES USE MULCH ONLY IF GROUND IS FROZEN AND RESEED WHEN THAWED.
   C. MULCH PER 7.D. ABOVE.
9. IF TEMPORARY STABILIZATION IS REQUIRED, PERMANENT SEEDING SHALL BE PERFORMED DURING THE NEXT APPLICABLE PERIOD PER PARAGRAPH (7) ABOVE.
10. ALL FILL SLOPE AREAS SHOWN HEREON ARE TO BE STABILIZED PER PARAGRAPHS (7) OR (8) ABOVE IMMEDIATELY AFTER COMPLETION OF GRADING OPERATIONS FOR THESE SLOPES.
11. INSTALL EROSION CONTROL MATTING ON ALL SLOPES 3:1 OR GREATER.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NECESSARY CLEANING OF ACCUMULATED SEDIMENT, DEBRIS, ETC. FROM THE EXISTING STORMWATER MANAGEMENT INFRASTRUCTURE.
13. SITE INFORMATION:

TOTAL AREA OF PROJECT SITE:	6.08	ACRES
AREA DISTURBED (SWM):	0.1532	ACRES
AREA DISTURBED (ESC):	0.0705	ACRES
AREA TO BE ROOFED OR PAVED	0.1234	ACRES
TOTAL CUT:	52	CUBIC YARDS
TOTAL FILL:	0	CUBIC YARDS
OFFSITE WASTE/BORROW AREA LOCATION:	TO BE DETERMINED	

*CUT AND FILL NUMBERS ARE NOT TO BE USED BY CONTRACTOR, FOR ESTIMATING PURPOSES ONLY

TEMPORARY SEEDING SUMMARY

SEE MIXTURE (HARDINESS ZONE 7b) FROM TABLE 26

SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
ANNUAL RATE	40	2/15 - 4/30 8/15 - 11/30	1/2"	436 lb/ac (10 lb / 1000sf)	2 tons/ac (90 lb / 1000sf)
FOX TAIL MILLET	30	5/1 - 8/14	1/2"		

NOTE: FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.

PERMANENT SEEDING SUMMARY

SEE MIXTURE (HARDINESS ZONE 7b) FROM TABLE 25

SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE N	P2O5	K20	LIME RATE
TALL FESCUE BLUEGRASS RED TOP	130 15 1	3/1 - 5/15 8/15 - 10/15	1/4" -1/2"	45 lb/ac (0.9 lb / 1000sf)	90 lb/ac (2 lb / 1000sf)	90 lb/ac (2 lb / 1000sf)	2 tons/ac (90 lb / 1000sf)

STANDARD STABILIZATION NOTE

1. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
   A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
   B. SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

SEQUENCE OF CONSTRUCTION

1. CONTACT THE TOWN OF EASTON (410-820-8822) AND M.D.E. (410-537-3000) TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 2 WEEKS PRIOR TO COMMENCING CONSTRUCTION.
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES WHERE SHOWN ON THE PLANS.
3. CONSTRUCT PROPOSED BUILDING.
4. IMMEDIATELY STABILIZE DISTURBED AREAS PER EROSION CONTROL NOTES.
5. BACKFILL, COMPACT, AND PROVIDE SURFACE RESTORATION AS REQUIRED.
6. CLEAN UP PROJECT SITE, SEED AND MULCH REMAINING DISTURBED AREAS.
7. UPON COMPLETION OF PROJECT AND FINAL STABILIZATION AND WITH M.D.E. CONCURRENCE, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
8. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

OWNER'S CERTIFICATION

I / WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I/WE HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ONSITE EVALUATION BY APPROPRIATE INSPECTION AND ENFORCEMENT AUTHORITY OR THE STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT.

OWNERS SIGNATURE _____ DATE _____

PRINTED NAME _____ TITLE _____

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II AND THE MARYLAND ENVIRONMENT EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT REGULATIONS.

Robert J. Duma _____ 6/3/2026

ROBERT J. DUMA, P.E.
MD P.E. REGISTRATION NO. 38830,
EXP. 12/29/2026

DATE

ESD TO THE MEP

ESD TO THE MEP HAS BEEN IMPLEMENTED IN ORDER TO MEET THE FOLLOWING ELEMENTS:

1. PREVENT SOIL EROSION FROM DEVELOPMENT PROJECTS.
2. PREVENT INCREASES IN NONPOINT POLLUTION.
3. MINIMIZE POLLUTANTS IN STORMWATER RUNOFF FROM BOTH NEW DEVELOPMENT AND REDEVELOPMENT.
4. RESTORE, ENHANCE, AND MAINTAIN CHEMICAL, PHYSICAL, AND BIOLOGICAL INTEGRITY OF RECEIVING WATERS TO PROTECT PUBLIC HEALTH AND ENHANCE DOMESTIC, MUNICIPAL, RECREATIONAL, INDUSTRIAL AND OTHER USES OF WATER AS SPECIFIED BY MDE.
5. MAINTAIN 100% OF THE AVERAGE ANNUAL PREDEVELOPMENT GROUNDWATER RECHARGE VOLUME.
6. CAPTURE AND TREAT RUNOFF TO REMOVE POLLUTANTS.
7. IMPLEMENT A CHANNEL PROTECTION STRATEGY TO PROTECT RECEIVING STREAMS.
8. PREVENT INCREASES IN THE FREQUENCY AND MAGNITUDE OF OUT-OF-BANK FLOODING FROM LARGE, LESS FREQUENT STORMS.
9. PROTECT PUBLIC SAFETY THROUGH THE PROPER DESIGN AND OPERATION OF STORMWATER MANAGEMENT FACILITIES.

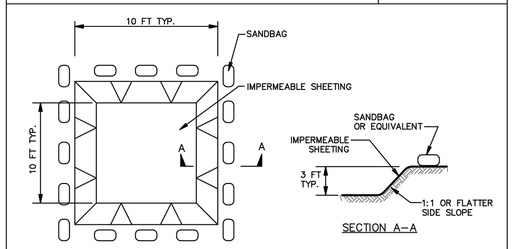
GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY

THE FOLLOWING ITEMS HAVE BEEN ADDRESSED TO MEET THE REQUIREMENTS OF THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY (NPDES NUMBER MDR10, STATE DISCHARGE PERMIT NUMBER 09GP).

1. UTILIZATION OF ENVIRONMENTAL SITE DESIGN.
2. MAINTENANCE OF LIMITS OF DISTURBANCE TO PROTECT NATURAL AREAS.
3. CONTROL OF CONSTRUCTION EQUIPMENT AND VEHICLES.
4. EVALUATION AND APPROPRIATE LIMITATION OF SITE CLEARING.
5. EVALUATION AND DESIGNATION OF SITE AREA FOR PHASING OR SEQUENCING.
6. IDENTIFICATION OF SOILS AT HIGH RISK FOR EROSION AND ADVANCED STABILIZATION TECHNIQUES TO BE USED.
7. IDENTIFICATION OF STEEP SLOPES AND DESIGNATION OF LIMITATIONS ON CLEARING THEM.
8. EVALUATION AND DESIGNATION OF STABILIZATION REQUIREMENTS AND TIME LIMITS AND PROTECTION MEASURES FOR DISCHARGES TO THE CHESAPEAKE BAY, IMPAIRED WATERS OR WATERS WITH AN ESTABLISHED TOTAL MAXIMUM DAILY LOAD (TMDL).

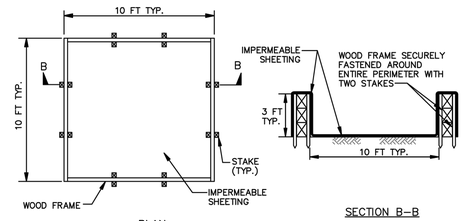
DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



PLAN — SECTION A–A

EXCAVATED WASHOUT STRUCTURE



PLAN — SECTION B–B

WASHOUT STRUCTURE WITH WOOD PLANKS

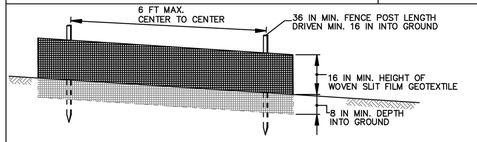
1 OF 2

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

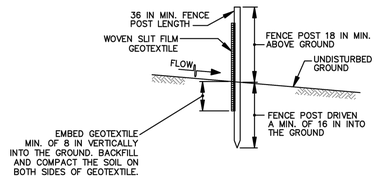
H.24

DETAIL E-1 SILT FENCE

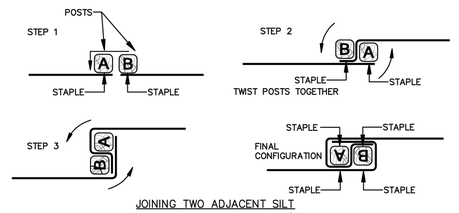
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

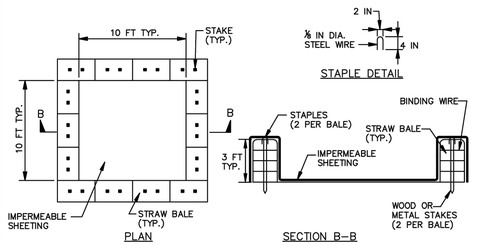
1 OF 2

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

E.2

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



PLAN — SECTION B–B

NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED), EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

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

H.25

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅜ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

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

E.3

STATE OF MARYLAND — ROBERT J. DUMA — No. 38830 — PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of MD. License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
EASTON, MARYLAND 410.770.4744
MILFORD, DELAWARE 302.424.1441
SALISBURY, MARYLAND 410.543.9091

PORT STREET STORAGE BUILDING

TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

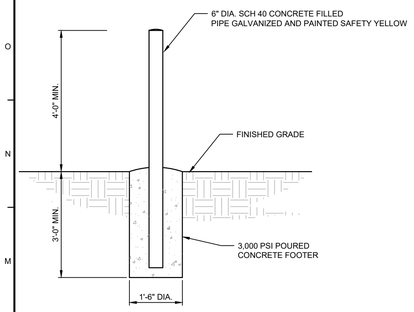
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Dwn.By: RJD
Proj.No.: 1503A039

EROSION & SEDIMENT CONTROL DETAILS & NOTES

Dwg.No.: C-402

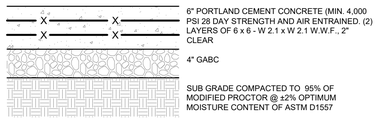
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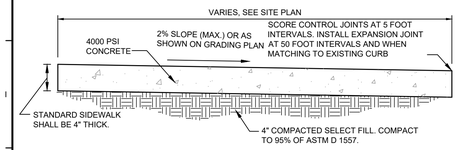
BOLLARD DETAIL

SCALE: NOT TO SCALE



CONCRETE SLAB SECTION

SCALE: NOT TO SCALE



SIDEWALK DETAIL

SCALE: NOT TO SCALE

STATE OF MARYLAND
ROBERT J. DUNN
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of MD. License No. 38830 Expiration Date: 12-29-26

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PORT STREET STORAGE BUILDING

TALBOT COUNTY ROADS DEPT.

TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

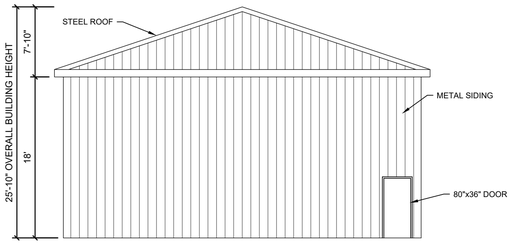
Date: JUNE 2026
Scale: AS SHOWN
Dwn.By: RJD
Proj.No.: 1503A039

SITE DETAILS

Dwg.No.: **C-501**

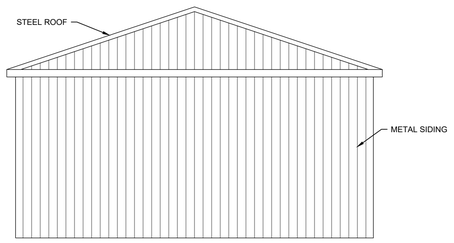
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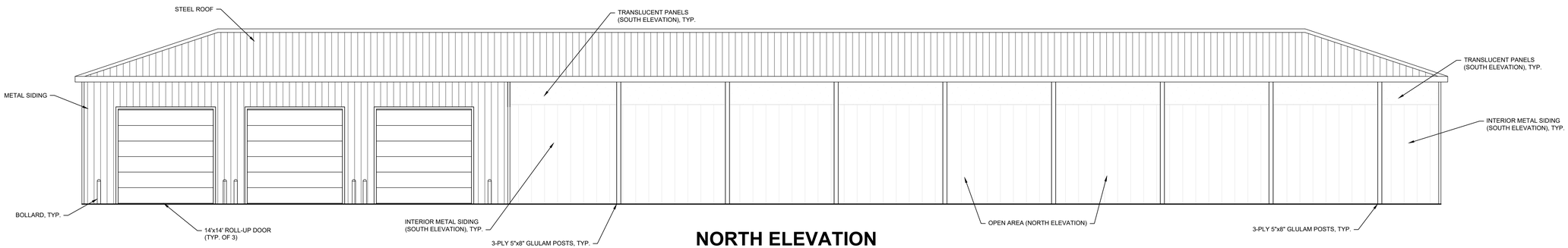
WEST ELEVATION

SCALE: 1/8" = 1'-0"



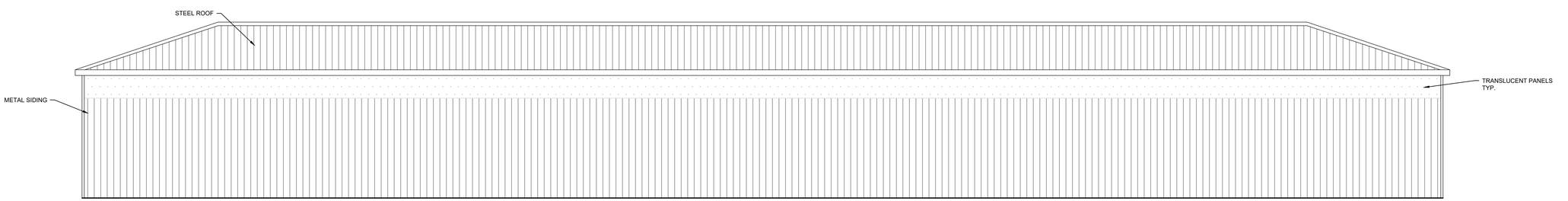
EAST ELEVATION

SCALE: 1/8" = 1'-0"



NORTH ELEVATION

SCALE: 1/8" = 1'-0"



SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

GENERAL NOTES:
ARCHITECTURAL ELEVATIONS PROVIDED AS AN APPROXIMATION OF THE GENERAL BUILDING HEIGHT AND SHAPE. FINAL ARCHITECTURAL PLANS AND ELEVATIONS TO BE PROVIDED BY BUILDING MANUFACTURER.

0' 8'
SCALE: 1/8" = 1'-0"

STATE OF MARYLAND
ROBERT J. DUNN
LIC. No. 38830
PROFESSIONAL ENGINEER

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PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
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Dwn.By: RJD
Proj.No.: 1503A039

PROPOSED ELEVATIONS

Dwg.No.: **A-201**

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3D RENDERING

SCALE: NOT TO SCALE

GENERAL NOTES:
ARCHITECTURAL RENDERINGS PROVIDED AS AN APPROXIMATION OF THE GENERAL BUILDING CHARACTER. FINAL ARCHITECTURAL PLANS AND ELEVATIONS TO BE PROVIDED BY BUILDING MANUFACTURER.

STATE OF MARYLAND
ROBERT J. DUNN
No. 38830
PROFESSIONAL ENGINEER

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PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPT.
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: NOT TO SCALE
Dwn.By: RJD
Proj.No.: 1503A039

3D RENDERING

Dwg.No.:
A-901

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DAVIS BOWEN & FRIEDEL, INC.

STORMWATER MANAGEMENT REPORT

Port Street Storage Building

Talbot County, Maryland

PREPARED BY

Davis, Bowen & Friedel, Inc.
106 N. Washington Street, Suite 103
Easton, MD 21601

June 3, 2026



DBF#1503A039

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APPENDICES

A. Calculations

List of Figures:

Figure 1: Existing Site Aerial

List of Tables:

Table 1: Existing Soil Descriptions

I. INTRODUCTION

The new Port Street Storage Building will be an addition to the Talbot County Roads Department storage yard located at 605 Port Street in Easton, Maryland. The stormwater management for this proposed project will be of focus in this narrative. The proposed structure is set to be a 200' by 40' pole building that will be used to store various pieces of equipment owned by the Talbot County Roads Department.

The stormwater for the proposed storage building is planned to be managed on-site with the proposed impervious area being replaced with pervious area that is 50% of the proposed based on the redevelopment requirements.



Figure 1: Existing Site Aerial

II. EXISTING CONDITIONS

The site is currently a largely developed 6.05 acre parcel of land owned by Talbot County. The proposed limit of disturbance (LOD) is approximately 0.15 acres. This comprises of the proposed building and the grassed area addition for ESD. Much of the site is currently being taken up by existing storage buildings for various pieces of equipment owned by the Talbot County Roads Department, administration buildings, and large areas of gravel parking and stockpiles, thus making the project subject to Redevelopment requirements due to the impervious area being above the 40% threshold.

Site Resource Statements:

- The Federal Emergency Management Administration (FEMA) flood plain maps were consulted to determine the project site is located in an area of minimal flood hazard (Zone X).
- The property is located within the Maryland Critical Area.
- There are no wetlands on the site.
- There are no steep slopes on the site.
- The site is located in an area of fair groundwater recharge.
- The Property is not located within a wellhead protection area.
- There are no known streams, springs, seeps, and intermittent streams within the site.

The soils located on site are classified as predominantly HSG D with much of the tract being classified as Urban Land. There are no known areas on site of highly erodible soils, K factors are typically negligible per NRCS Web Soil Survey as most of the existing site is considered Urban Land.

Per the NRCS Web Soil Survey, the soil types located on site are:

Existing Soils Descriptions		
Symbol	**Soil Name**	**HSG**
Up	Urban Land	D

Table 1: Existing Soil Descriptions

III. PROPOSED CONDITIONS

The proposed project consists of a new 200' by 40' storage building for the Talbot County Roads Department. The proposed building will be used to store various pieces of equipment owned by the Talbot County Roads Department. The rest of the existing site will remain as is. Although the 200' by 40' storage building would be a 0.18-acre disturbance, only 40' by 62' for the building with a concrete slab and a 3' wide concrete apron will be disturbed. The remainder of the building will not create ground disturbance, as it is a simple pole building with augured wood timber poles. The proposed impervious area totals approximately 0.07 acres.

ESD Practice Selection

Based on the proposed site and the existing impervious area, the stormwater management on site will be handled via redevelopment standards by reducing the proposed impervious area by 50%. The impervious area will be reduced by planting grass behind the proposed building, creating pervious area to offset the stormwater regulations.

IV. METHODOLOGY

The overall pre-developed site impervious area has been calculated at 100% impervious. Because the existing site imperviousness is more than 40%, the project is subject to the redevelopment requirements. The post-developed site will ultimately increase the overall pervious area of the site by 0.07 acres, bringing the proposed site imperviousness to 100%. Stormwater management shall be addressed for redevelopment by following the 2000 Maryland Stormwater Design Manual, Chapter 5, latest revised.

This application was prepared with consideration of using ESD to the Maximum Extent Practicable (MEP). Standard practices of redevelopment are to be employed and designed to ensure that the overall Recharge Volume (Rev), Water Quality Volume (WQv), and ESDv requirements have been met.

Critical Area

With the site being in the Critical Area Intensely Developed Area (IDA), the phosphorus reduction calculations must be met. Using the Maryland ESD Spreadsheet with 10% Phosphorus Removal, the criteria was able to be met and provided greater than 10% reduction.

V. EROSION AND SEDIMENT CONTROL

Perimeter controls such as silt fencing will be used to divert and/or treat stormwater runoff that may flow to SWM areas. Excavated materials will be placed in a contained area. A concrete washout structure will be used to isolate and contain any potential runoff that may flow to SWM areas.

VI. CONCLUSION

Based on the information provided, the proposed design will reduce the impervious area by 50%, following the redevelopment regulations in the 2000 Maryland Stormwater Design Manual, Chapter 5, latest revised. This narrative shows that the proposed stormwater management design implements the best management practices for this site.

APPENDIX A

ESD CALCULATONS

	VERSION	**4.2**			
Maryland ESD Calculations and 10% Phosphorus Removal					
Project Name:	**Port Street Storage Building**				
Date:	**3-Jun-26**				
	data input cells				
	calculation cells				
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)					
Site Area, A (acres)	0.15321				
Existing Impervious Surface Area (acres)	0.15				
Proposed Impervious Surface Area (acres)	0.07050				
Rainfall Depth, P (in)	1.0				
Existing Imperviousness, I_{pre}	100.0%				
Proposed Imperviousness, I_{post}	46.0%				
Water Quality Calculation for Redevelopment Only					
Required Treatment Area (acres)	0.00				
Runoff Coefficient, Rv	0.95				
Water Quality Volume, WQv (cf)	**0**				
Step 4: Calculate Environmental Site Design (ESD) Rainfall Target, P_E					
Development Category (for ESD)	**Redevelopment**				
% Soil Type A	0%				
% Soil Type B	0%				
% Soil Type C	0%				
% Soil Type D	100%				
Pre-Developed Condition, RCN_{woods}	77				
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)	0.00				
Maximum P_E (in)	2.7				
Site ESD Rainfall Target, P_E (in)		0.00			
ESD Runoff Depth, Q_E (in)		0.00			
ESD Runoff Volume, ESDv (cf)		**0**			
Total Treatment Volume (cf)		**0**			

Step 3: Calculate Phosphorous Removal Requirement, RR for Critical Area Sites	
Development Category (for 10%)	**Redevelopment**
New Development	
Average Annual Predevelopment Load, Lpre (lbs P / yr)	0.08
Redevelopment:	
Predevelopment Runoff Coefficient, Rv_{pre}	0.95
Phosphorous Mean Concentration, C (mg/L)	0.3
Average Annual Predevelopment Load, L_{pre} (lbs P / yr)	0.36
Post-Development Runoff Coefficient, Rv_{post}	0.46
Average Annual Post-Development Load, L_{post} (lbs P / yr)	0.17
Removal Requirement, RR (lbs P / yr)	**-0.15**

Calculation Summary

Critical Area 10% Calculations

Removal Requirement, RR (lbs P / yr)	**-0.15**
after non-structural and micro-scale BMPs (Steps 5 and 6)	
Total Load Reduction (lbs P / year)	0.00
Total Load Reduction Remaining (lbs P / yr)	**0.00**
after structural practices (Step 9)	
Total Load Reduction (lbs P / year)	0.00
Total Load Reduction Remaining (lbs P / yr)	**0.00**

MDE's ESD to the MEP Calculations

ESD Runoff Volume, ESDv (cf)	0.00
Total Treatment Volume (cf)	0.00

WQv or ESDv Treated (cf)	0.00
PE achieved (inches)	N/A

Entire ESDv Treated Through Environmental Site Design?	YES
ESDv Remaining? (cf)	0.00
If ESDV is not fully treated, is ESD to MEP achieved?	0.00

Redevelopment WQv Requirements Met Through Environmental Site Design?	YES
WQv Remaining? (cf)	0.00

New Development WQv Requirements Met Through Environmental Site Design?	N/A
WQv Remaining? (cf)	0.00

Ring W. Lardner, P.E.
W. Zachary Crouch, P.E.
Michael E. Wheedleton, AIA, LEED GA
Jason P. Loar, P.E.
Jamie L. Sechler, P.E.

PORT STREET STORAGE BUILDING
TALBOT COUNTY ROADS DEPARTMENT
TOWN OF EASTON, TALBOT COUNTY, MARYLAND
DBF# 1503A039

JUNE 3, 2026

"Waivers" or "Relief" from the referenced Easton Zoning Ordinance requirements for Sketch Site Plan submittal

Development Proposal: 8,000 SF storage shed over existing impervious, open air equipment storage area. County is simply constructing a 3-sided building over an existing storage/equipment parking area.

1. **28-901.3.A.9- Proposed Landscaping. Waiver requested.** The proposed structure is well hidden at the back of the site with surrounding buildings and existing perimeter landscape providing sufficient buffering. On site Landscaping not practical due to the nature of the roads dept yard activities, equipment movement and similar.

2. **28-901.3.A.10- Proposed Parking Layouts. Waiver requested.** No new vehicle parking is proposed; no new employees or vehicles will be added to the site's land use intensity- the building simply covers existing machinery storage with a roof.

3. **28-1001.3.A. #41- Off Street Parking. Waiver Requested.** 4 spaces required; 0 new spaces provided; no additional staff, no additional vehicles, more than ample parking on-site.

4. **28-1002.1.A Off Street Loading. Waiver Requested.** No loading function associated with this equipment storage shed.

5. **28-1014.A Landscape and Buffering. Waiver Requested.** No landscaping is proposed for the several reasons cited herein, so no Sketch Landscape Plan provided.

6. **28.1014.6.F.1 Overall Trees Required. Waiver Requested.** 3 trees required, but the inherent busy activity of the roads yard prevents reasonable locations for tree plantings on-site.

7. **28.1014.6.F.2.a. Interior Parking Lot Trees. Waiver Requested.** No new parking lot is proposed.

8. **28.1014.6.F.2.b. Parking Lot Hedge. Waiver Requested.** No new parking lot is proposed.

9. **28.1014.6.F.2.c. Building Envelope Plantings. Waiver Requested.** Except for 3 garage door bay accesses, this building is 3-side open front shed for equipment parking and ingress/egress. Due to its operational function and hidden location, no building envelope plantings are warranted.

10. **28.1014.7.E.2 Bufferyard B to Buffer Major Roads. Waiver requested.** This Bufferyard along MD RT 322 is substantially vegetated along most of the property frontage, and it obscures public views to the proposed storage building.

11. **28.1014.7.E.5 Bufferyard E to buffer "more or less" intense surrounding land uses. Waiver Requested.** First, this "land use" is not intense- it is a storage shed providing a roof over existing equipment storage. The abutting land uses are all industrial in nature.

12. **28-1016.E. Sidewalks required. Waiver Requested.** Someday, when the land use on Port St evolves a pedestrian connection is warranted and can be integrated into Port St redevelopment plans. The County might even be required to participate then. Until that time, we respectfully request a Waiver from this requirement.

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

Easton Staff Development Review

Property Information

Address	1 Medical Center Drive, Easton, Maryland 21601							
Tax Map	0017	Grid	0023	Parcel	0129	Lot	3	
Deed Refernce:	Liber	03177	Folio	00279				
Plat Reference:	Liber	83	Folio	458				
Base Zoning District	RH	Historic District	Y ☐	N ☑	Planning Redevelopment	Y ☐	N ☑	

Purpose of Application / Description of Work:

Work includes the construction of a sewage pumping station, stormwater management features, natural gas powered generator, electrical transformer, water/sewer/electric utilties, asphalt driveway, and site gravel.

Owner

Name	Aaron K. Goller, P.E., Senior Engineer, Easton Utilities
Mailing Address	201 N Washington Street, Easton, Maryland 21601
Telephone No.	Email

Applicant / Agent

Name	Robert J. Duma, P.E., Associate
Mailing Address	106 N. Washington Street, Suite 103, Easton, Maryland 21601
Telephone No.	Email

Surveyor / Engineer

Name	Robert J. Duma, P.E.	License No.	38830	Expiration Date	12-29-2026
Mailing Address	106 N Washington Street, Suite 103, Easton, Maryland 21601				
Telephone No.		Email			

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 06-3-2026

Printed Name of Applicant or Agent Robert J. Duma, P.E.

For Office Use Only

Easton Staff Development Review Meeting Required Y ☒ N ☐

Easton Staff Development Review Meeting Date

Completeness Check Date 06/04/2026

Revisions/Resubmissions Required Y ☐ N ☐

Resubmission Date

Documents Received Y ☐ N ☐

Staff Determination

Scheduled for June ESDR/ Prelim meeting.

Planning Commission Requir Y ☒ N ☐

BOZA Required Y ☐ N ☒

Historic District Commission Required Y ☐ N ☒

Resubmission for ESDR Required Y ☐ N ☐

2026 - 1751/ ESDR 26-09 / W 26 -

Staff Signature

Date

Revised 02-2019

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER

EASTON UTILITIES

TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DBF#3306A011

JUNE 2026

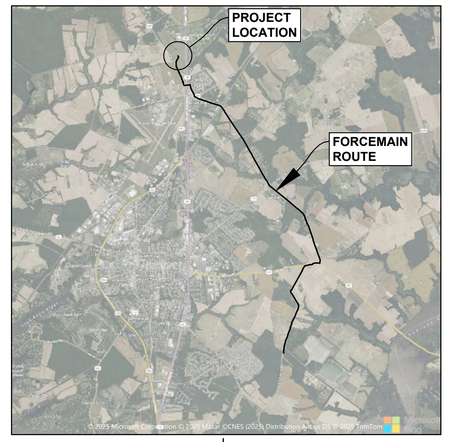
ESDR PLAN SUBMISSION



VICINITY MAP

SCALE: 1" = 100,000'

0' 100,000' 200,000' 300,000'



LOCATION MAP

SCALE: 1" = 6,000'

0' 6,000' 12,000' 18,000'

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C-503	SITE & UTILITY DETAILS
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C-505	SITE & UTILITY DETAILS

ENGINEER'S STATEMENT

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. 38830, EXPIRATION DATE: 12/29/26.

6/3/2026
DATE

ROBERT J. DURA, P.E.
DAVIS, BOWEN & FRIEDEL, INC.
106 N. WASHINGTON STREET, SUITE 103
EASTON, MARYLAND 21601

OWNER'S STATEMENT

I, UNDERSIGNED, HEREBY STATE THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AND SHOWN ON THIS PLAN. THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT AND DESIRE THE PLAN TO BE DEVELOPED AS SHOWN IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

OWNER'S REPRESENTATIVE — DATE

OWNER:
EASTON UTILITIES COMMISSION
201 N. WASHINGTON ST.
EASTON, MARYLAND 21601

APPROVED TALBOT COUNTY ENGINEER:

NAME — DATE

APPROVED TOWN OF EASTON ENGINEER:

NAME — DATE

APPROVED TOWN OF EASTON PLANNING AND ZONING:

NAME — DATE

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS • ENGINEERS • SURVEYORS
EASTON, MARYLAND 410.770.4744 | MILFORD, DELAWARE 302.424.1441 | SALISBURY, MARYLAND 410.543.9091

EASTON UTILITIES COMMISSION
Life. Made better.
EASTON UTILITIES COMMISSION
201 N. WASHINGTON ST.
EASTON, MARYLAND 21601
410-822-6110

Gipe Associates, Inc.
CONSULTING ENGINEERS
Mechanical | Electrical | Plumbing

STATEMENT OF PURPOSE & INTENT

THE PURPOSE OF THESE PLANS IS TO OBTAIN PROJECT APPROVALS AND PROVIDE NECESSARY INFORMATION TO CONSTRUCT A NEW WASTEWATER PUMP STATION, PRESSURIZED SEWER TRANSMISSION SYSTEM, & WATER DISTRIBUTION SYSTEM. THE PROJECT INTENDS TO SERVE THE NEW UMMS REGIONAL SHORE MEDICAL CENTER AND AREAS OF FUTURE DEVELOPMENTS.

RECOMMENDED DESIGN PRINCIPLES

THE PROPOSED PROJECT UTILIZES THE EXISTING SITE DESIGN AND TOPOGRAPHY WHERE POSSIBLE. THE EXISTING TOPOGRAPHY AND PERVIOUS AREAS ARE KEPT WHERE POSSIBLE. THE PROPOSED FEATURES ARE NECESSARY IMPROVEMENTS FOR THE CRITICAL INFRASTRUCTURE FOR THE PROPOSED PROJECT. THE PROPOSED PROJECT WILL SERVE THE NEW UMMS REGIONAL SHORE MEDICAL CENTER. THE PROCESS AND SITE DESIGN WILL PROVIDE A NICE RELIEF TO THE TOWN OF EASTON SEWER AND WATER TRANSMISSION SYSTEMS.

REVIEWED FOR THE TALBOT SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS

APPROVED:

SHAWN D. SMITH, DISTRICT MANAGER — DATE
TALBOT SOIL CONSERVATION DISTRICT

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 ADDITIONAL PROTECTION BECOMES NECESSARY.

DEVELOPER'S CERTIFICATION

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

SIGNATURE — DATE

1. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.
2. ANY RESPONSIBLE PERSONNEL INVOLVED IN THE 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.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

STATE OF MARYLAND — ROBERT J. DURA — LIC. No. 38830 — PROFESSIONAL ENGINEER

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS • ENGINEERS • SURVEYORS
EASTON, MARYLAND 410.770.4744 | MILFORD, DELAWARE 302.424.1441 | SALISBURY, MARYLAND 410.543.9091

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS
06/03/2026	ESDR PLAN SUBMISSION

Date: JUNE 2026
Scale: AS SHOWN
Dwn.By: NLC
Proj.No.: 3306A011

TITLE SHEET

Dwg.No.: **G-001**

P:\3306A Easton Utilities\3306A011 UMMS\CAD\SHEETS\G-001.dwg Jun 03, 2026 - 9:33am dumr

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GENERAL NOTES

1. TOPOGRAPHIC SURVEY PERFORMED BY DAVIS, BOWEN & FRIEDEL, INC., SEPTEMBER 2025 ON MARYLAND STATE PLANE, SOUTH ZONE COORDINATE/NAD83. BENCHMARKS ARE AS SHOWN ON PLANS. VERTICAL DATUM IS ON NAVD88.
2. ACCORDING TO FEMA/FIRM FLOOD MAP 24041C0180D, 24041C0185C, 24041C0191C, 24041C0192D, 24041C0193C, 24041C0194D, 24041C0310D, AND 24041C0306C, DATED 8/5/2013 AND 7/20/2016, PROJECT DISTURBANCES ARE IN ZONE AE AND ZONE X, ELEVATION 4 FEET.
3. BEFORE ANY EXCAVATION IS PERFORMED, CONTRACTOR SHALL CALL MISS. UTILITY AT 1-800-441-8355 AT LEAST 48 HOURS PRIOR TO EXCAVATION, TO HAVE EXISTING UNDERGROUND UTILITIES LOCATED AND MARKED.
4. EXISTING UTILITY LOCATIONS ARE SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION, AND ARE SHOWN ONLY FOR THE CONTRACTOR'S CONVENIENCE. THE CONTRACTOR SHALL TEST PIT TO VERIFY LOCATION, SIZE, MATERIALS AND INVERT OF ALL EXISTING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION, WHETHER OR NOT SHOWN ON THE DRAWINGS, SHALL BE REPAIRED BY THE CONTRACTOR, TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS UNLESS WRITTEN APPROVAL HAS BEEN PROVIDED BY THE OWNER OR ENGINEER.
6. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE CONTRACT DOCUMENTS, INCLUDING PLANS, SPECIFICATIONS, AND EASTON UTILITIES CONSTRUCTION DETAILS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR CLARIFICATION PRIOR TO SUBMITTING A BID.
7. THE CONTRACT DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS OF CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED, AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.
8. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL RIGHT-OF-WAY LINES AND EASEMENTS PRIOR TO BEGINNING CONSTRUCTION AS NECESSARY FOR CONSTRUCTION. ALL PROPOSED UTILITIES ARE TO BE CONSTRUCTED WITHIN TOWN RIGHT-OF-WAYS OR PERMISSION OBTAINED BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL TEMPORARY CONSTRUCTION EASEMENTS NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR SHALL PROVIDE ALL STAKEOUTS NECESSARY FOR THE INSTALLATION OF THE WORK.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC IN ALL WORK AREAS IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
10. WHENEVER EXCAVATION DISRUPTS GUY WIRES OR ENDANGERS EXISTING UTILITY POLES, THE POLE SHALL BE BRACED AND/OR GUY WIRES RELOCATED IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS AT THE CONTRACTOR'S EXPENSE.
11. CONTRACTOR SHALL EXERCISE EXTREME CARE AND CAUTION TO PROTECT ALL TREES, SHRUBS, AND LANDSCAPING FROM DAMAGE DURING CONSTRUCTION OPERATIONS UNLESS SPECIFICALLY DESIGNATED TO BE REMOVED. DAMAGED LANDSCAPING SHALL BE REPLACED IN-KIND, TO THE SATISFACTION OF THE PROPERTY OWNER.
12. CONTRACTOR SHALL REMOVE AND IMMEDIATELY REPLACE, RELOCATE, RESET, OR RECONSTRUCT ALL OBSTRUCTIONS IN THE WORK AREA, INCLUDING, BUT NOT LIMITED TO: SIGNS, LANDSCAPING, CULVERTS, FENCES, PROPERTY MARKERS, OR OTHER NATURAL OR MAN-MADE OBSTRUCTIONS ENCOUNTERED. ALL ASSOCIATED COST SHALL BE INCLUDED IN THE APPROPRIATE PRICES BID.
13. ALL PAVING, DRIVEWAYS, STORMDRAINS, STRUCTURES, CASTINGS, ETC., NOT DESIGNATED FOR REPLACEMENT, DAMAGED BY THE CONTRACTOR, SHALL BE REMOVED AND REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL TOPSOIL, SEED AND MULCH ALL UNPAVED AREAS DISTURBED DURING CONSTRUCTION, ACCORDING TO THE EROSION AND SEDIMENT CONTROL PLAN AND/OR THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
15. FITTINGS SHOWN ON THE PLANS ILLUSTRATE ANTICIPATED SIZE AND ANGLE OF DEFLECTION. THIS INFORMATION IS SHOWN FOR GENERAL INFORMATION AND IS NOT GUARANTEED. ACTUAL SIZES AND ANGLES MAY VARY DUE TO FIELD CONDITIONS.
16. CONTRACTOR SHALL MAINTAIN UTILITY SERVICE TO USERS AT ALL TIMES. WHEN TEMPORARY INTERRUPTIONS ARE NECESSARY, THEY SHALL BE KEPT TO A MINIMUM. 48 HOURS NOTICE SHALL BE GIVEN TO THE TOWN AND PROPERTY OWNERS PRIOR TO SERVICE TRANSFERS OR ANY SERVICE DISRUPTIONS. WHERE CONNECTIONS TO THE EXISTING SYSTEM ARE REQUIRED, THE CONTRACTOR SHALL PROVIDE ALL COUPLINGS, SLEEVES, AND ADAPTERS NECESSARY TO MAKE THE CONNECTION WITHIN THE PRICES BID. THE TOWN PERSONNEL SHALL OPERATE ALL VALVES AND EQUIPMENT RELATING TO THE WATER SYSTEM. HRSD SHALL OPERATE EXISTING WASTEWATER VALVES AND EQUIPMENT.
17. CONTRACTOR SHALL MAINTAIN VEHICULAR SERVICE TO USERS AT ALL TIMES. WHEN TEMPORARY INTERRUPTIONS ARE NECESSARY, THEY SHALL BE KEPT TO A MINIMUM. 48 HOURS NOTICE SHALL BE GIVEN TO THE TOWN AND PROPERTY OWNERS.
18. CONTRACTOR TO MAINTAIN A MINIMUM 18" VERTICAL CLEARANCE BETWEEN SEWER AND WATER PIPING, WITH WATER ABOVE SEWER WHERE FEASIBLE UNLESS OTHERWISE SHOWN ON THE DRAWINGS. MAINTAIN 10' HORIZONTAL SEPARATION, OUTSIDE OF PIPE TO OUTSIDE OF PIPE, BETWEEN PARALLEL WATER AND SEWER PIPING, WHERE MINIMUM CLEARANCES CANNOT BE MAINTAINED, WATER MAIN SHALL BE DEFLECTED TO GAIN CLEARANCE FROM SEWER, AS DETERMINED BY THE ENGINEER, FOR A MINIMUM OF 10' CENTERED ON THE CROSSING. SEWER MAIN JOINTS SHALL BE PLACED AS FAR AS IS PRACTICABLE FROM THE WATER CROSSING. SEWER MAIN SHALL BE INSTALLED WITH 12" VERTICAL CLEARANCE FROM ALL OTHER UTILITIES, INCLUDING STORMWATER. SEWER MAINS SHALL HAVE A MINIMUM OF 3' OF COVER. WATER MAINS SHALL HAVE A MINIMUM OF 3.5' OF COVER. FORCE MAINS SHALL HAVE A MINIMUM OF 4' OF COVER, WHERE MINIMUM VERTICAL CLEARANCE CANNOT BE MAINTAINED, PIPE MATERIAL TRANSITION TO DI AND CONCRETE ENCASEMENT OF ONE UTILITY MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER.
19. CONTRACTOR SHALL MAKE ACCOMMODATIONS WITH TRAFFIC CONTROL FOR EMERGENCY VEHICLES AT ALL TIMES DURING THIS PROJECT.

UTILITY NOTES

1. A MINIMUM OF 10 FEET HORIZONTAL CLEARANCE SHALL BE PROVIDED BETWEEN WATER LINES AND SEWER LINES. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES SHALL BE PROVIDED AT WATER AND SEWER CROSSINGS. ALL OTHER CROSSINGS SHALL BE A MINIMUM OF 12 INCHES UNLESS OTHERWISE NOTED. IF MINIMUM CLEARANCE CANNOT BE OBTAINED, A CONCRETE ENCASEMENT SHALL BE INSTALLED ON THE LOWER UTILITY, FOR A MINIMUM OF 10 FEET ON EITHER SIDE OF THE CROSSING.
2. FITTINGS SHOWN ON THE PLANS ILLUSTRATE ANTICIPATED ANGLE OF DEFLECTION. THIS INFORMATION IS SHOWN FOR GENERAL INFORMATION AND IS NOT GUARANTEED. ACTUAL ANGLE MAY VARY DUE TO FIELD CONDITIONS. USE OF ADDITIONAL FITTINGS SHALL BE AUTHORIZED BY THE ENGINEER.
3. CONTRACTOR TO MAINTAIN A MINIMUM OF 3 FEET OF COVER OVER ALL NEW GRAVITY SEWER LINES.
4. CONTRACTOR TO MAINTAIN A MINIMUM OF 42 INCHES OF COVER OVER WATER MAINS.
5. CONTRACTOR TO MAINTAIN A MINIMUM OF 48 INCHES OF COVER OVER FORCEMAINS.
6. CONTRACTOR TO MAINTAIN 10 FEET OF HORIZONTAL SEPERATION FROM EXISTING WATER WELLS PER MARYLAND COMAR 26.04.04 WITH A PASSING LEAKAGE TEST AND USING FUSIBLE PIPE WITH NO DISCERNIBLE JOINTS.

TRAFFIC NOTES

1. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY TO INCLUDE VEHICULAR AND PEDESTRIAN SAFETY AT ALL TIMES.
2. PROVISIONS SHALL BE MADE WITH APPROPRIATE SIGNAGE PROVIDED AS NEEDED, TO ALLOW ACCESS TO PROPERTIES BY RESIDENTS.
3. CONTRACTOR SHALL NOTIFY THE TOWN OF EASTON AND EMERGENCY MANAGEMENT SERVICES PRIOR TO ANY ROAD CLOSURES AND SHALL COORDINATE TRAFFIC PATTERNS TO MINIMIZE TRANSPORTATION DISRUPTION.
4. EASTON UTILITIES, OR THE ENGINEER, SHALL RETAIN THE RIGHT TO REQUIRE REVISIONS TO TEMPORARY TRAFFIC CONTROL MEASURES BEING PRACTICES IN THE EVENT THERE EXISTS A POTENTIAL SAFETY OR ACCESS ISSUE RESULTING FROM CONSTRUCTION ACTIVITIES.

PUMP STATION DESIGN NOTES

1. WET WELL AND SYSTEM PIPE SIZING IS FOR CURRENT AND PROJECTED FLOWS TOTALING 760 EDUs.
2. PUMP SIZING IS FOR CURRENT FLOWS TOTALING 684 EDUs.
3. THE NEW GANNON RANGE PUMP STATION, EXISTING CHAPEL ROAD PUMP STATION, AND EXISTING HYDE PARK PUMP STATION ARE INCLUDED IN THE PROJECTED FUTURE FLOWS.

PUMP STATION SITE DATA

1. TAX MAP ID: M: 0017 G: 0023 P: 0129 LOT: 3
2. DEED REFERENCE: 3177/279
3. APPROXIMATE PROJECT CENTER: LAT: 38°49'19.05"N LONG: 76° 3'45.48"W
4. OWNER / DEVELOPER:
   EASTON UTILITIES COMMISSION
   201 NORTH WASHINGTON STREET
   EASTON, MD 21601
   CONTACT: AARON GOLLER, P.E., SENIOR ENGINEER
   PHONE: (410)-822-6110
   EMAIL: agoller@eucmail.com
5. CONTRACTOR:
   TO BE DETERMINED
6. ENGINEER:
   DAVIS, BOWEN & FRIEDEL, INC.
   106 NORTH WASHINGTON STREET
   EASTON, MD 21601
   CONTACT: ROBERT J. DUMA, P.E., ASSOCIATE / SENIOR CIVIL ENGINEER
   PHONE: (410) 770-4744
   FAX: (410) 770-4515
   EMAIL: rjd@dbfinc.com
7. PROJECT SITE LOCATION:
   NEAR PROPOSED UMMS REGIONAL SHORE MEDICAL, EASTON, MD 21601
8. DATUM: NAVD 83 (MD STATE PLAN) HORIZONTAL, NAVD 88 VERTICAL
9. TYPE OF DEVELOPMENT:
   SEWAGE PUMP STATION SERVING THE PROPOSED UMMS REGIONAL SHORE MEDICAL CENTER
10. PLAT REFERENCE:
    83/458
11. ZONING CLASSIFICATION:

EXISTING	PROPOSED
RH (REGIONAL HEALTHCARE DISTRICT)	RH

12. LAND USE:

EXISTING	PROPOSED
VACANT	PUBLIC UTILITY (PERMITTED UNDER MISC. USES)

13. UTILITY PROVIDERS:

SEWER	WATER	TRASH	ELECTRIC	GAS
EUC	EUC	PRIVATE/N/A	EUC	EUC

14. PUMP STATION SITE ACREAGE:
    ±0.41 ACRES
15. EXISTING CONDITIONS:
    THE SITE IS CURRENTLY UNDEVELOPED
16. PROPOSED DEVELOPMENT:
    PUMP STATION TO SERVE THE PROPOSED UMMS REGIONAL SHORE MEDICAL CENTER IN ADDITION TO SERVING ANY FUTURE DEVELOPMENT. EXISTING AND PROPOSED FUTURE FLOW PROJECTIONS PROVIDED BY EASTON UTILITIES
17. PROPOSED STORMWATER MANAGEMENT:
    BIO-SWALE (ON-SITE)
18. PROPOSED IMPERVIOUS AREA:
    6,720.8909 SF (0.1543 AC) ~32.60%
19. POSTED SPEED LIMIT: 35 MPH (LONGWOODS ROAD)
20. FLOODPLAIN: THE PROPERTY IS NOT IMPACTED BY THE 100 YEAR FLOODPLAIN AS DETERMINED BY FEMA PANEL 24041C0180D EFFECTIVE 07/20/2016.
21. GROUNDWATER RECHARGE: NO KNOWN GROUNDWATER RECHARGE AREAS ARE LOCATED ON THE PROPERTY.
22. WELLHEAD PROTECTION AREA: THE PROPERTY IS NOT LOCATED WITHIN A WELLHEAD PROTECTION AREA.
23. WETLANDS: WETLANDS ARE NOT FOUND ONSITE
24. CODE COMPLIANCE

CODE COMPLIANCE	REQUIRED	PROPOSED
FRONT SETBACK	30 FT.	30 FT.
SIDE SETBACK	15 FT.	15 FT.
REAR SETBACK	15 FT.	15 FT.
LOT COVERAGE	40%	40%
MAXIMUM BUILDING HEIGHT	35 FT.	N/A
OPEN SPACE	15%	15%
LOT SIZE	10,000 SF MIN.	+/-17,859 SF

25. PARKING: WAIVER REQUESTED

MANMADE ROADSIDE FEATURES

FEATURE DESCRIPTION	ID	EXISTING	PROPOSED
BOLLARD		○	○
CURB, TYPE 1-4	C		
CURB OPENING	CO		
CURB OPENING W/ SIDEWALK	COW		
FENCE - CHAINLINK OR STRANDED	F	X X	X X
LAMP AND POST - RESIDENTIAL			
MAILBOX		MB	MB
TRAFFIC SIGN AND POST			

DRAINAGE FEATURES

FEATURE DESCRIPTION	ID	EXISTING	PROPOSED
FLARED END SECTION	FES		
DRAINAGE MANHOLE	MH	Ⓓ	◎
DRAINAGE INLET	DI		
DIRECTIONAL FLOW ARROW			
RIPRAP	RW		
DRAINAGE PIPE	P		
UNDERDRAIN	UW		
UNDERDRAIN OUTLET	UDO		
SAFETY END SECTION	RC-A		
BIOFILTRATION SWALE			BFS BFS BFS
DITCH CENTERLINE			
DRAINAGE JUNCTION BOX	JBF	J.B.	
DRAINAGE PIPE HEADWALL			

IDENTIFIERS

FEATURE DESCRIPTION	ID
ABANDON BY CONTRACTOR	ABC
ABANDON BY OTHERS	ABO
ADJUST BY CONTRACTOR	ADJC
ADJUST BY OTHERS	ADJO
CONVERT TO JUNCTION BOX	CVJB
CONVERT TO DRAINAGE MANHOLE	CMH
DO NOT DISTURB	DND
PEDESTRIAN CONNECTION / TYPE	PC
PEDESTRIAN CONNECTION / TYPE WITHOUT DETECTABLE WARNING SYSTEM	PC-A
RELOCATE BY CONTRACTOR	RLC
RELOCATE BY OTHERS	RLO
REMOVE BY CONTRACTOR	RMC
REMOVE BY OTHERS	RMO

NATURAL FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
HEDGEROW OR THICKET		
SHRUBBERY		
TREE - CONIFEROUS		
TREE - DECIDUOUS		
TREE LINE		
CONTOUR ELEVATION LABEL	24	24
ELEVATION	x 24.24	

SURVEY CONTROL AND MONUMENTATION

FEATURE DESCRIPTION	EXISTING	PROPOSED
SURVEY BENCHMARK LOCATION		
IRON ROD WITH CAP SET		◉ IRCS
CONCRETE MONUMENT (STONE FOUND)	☐ CMF ☐ SF	○ IPF
IRON PIPE FOUND	⊗ IRF	
IRON ROD FOUND	○ IPF	

RIGHT-OF-WAY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
BUILDING SETBACK LINE		
PERMANENT EASEMENT	++ ++ ++	PE PE
PROPERTY LINE		P
RIGHT-OF-WAY BASELINE	1+00	1+00
RIGHT-OF-WAY LINE	EX-R/W	R/W
TAX DITCH RIGHT-OF-WAY		TAX R/W
TEMPORARY CONSTRUCTION EASEMENT		TCE TCE

MISCELLANEOUS FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
LIMIT OF DISTURBANCE		LOD LOD
SILT FENCE		SF SF
WETLANDS BOUNDARY LINE	WET WET	
WETLANDS		
WETLANDS BUFFER LINE	EX-10WLB	10WLB 10WLB
VEGETATION BUFFER LINE	EX-10VB	10VB 10VB
GENERAL BUFFER LINE	EX-10BZ	10BZ 10BZ
FORESTED BUFFER LINE	EX-10FB	10FB 10FB
LANDSCAPE BUFFER LINE	EX-10LB	10LB 10LB
SIDEWALK / SHARED USE PATH		

UTILITY FEATURES

FEATURE DESCRIPTION	EXISTING	PROPOSED
ELECTRIC - ABOVE GROUND	EX-OHE	OHE OHE
ELECTRIC - UNDERGROUND	EX-UGE	UGE UGE
ELECTRIC MANHOLE	E	
ELECTRIC METER	EM	
ELECTRIC TRANSFORMER		
GAS - UNDERGROUND	EX-G EX-G	2G 2G 2G
GAS MANHOLE	G	
GAS METER	GM	
GAS VALVE	GV	
LIGHT POLE		
RAILROAD TRACKS		
SANITARY MAIN	EX-SS EX-SS	SSS SSS
SANITARY SEWER MANHOLE	Ⓢ	◎
SOIL BORING LOCATION		
TELEPHONE TEST POINT	T	
UTILITY POLE GUY WIRE ANCHOR		
UTILITY POLE		
WATER MAIN	EX-W EX-W	8W 8W
WATER - FIRE HYDRANT		
WATER VALVE		
WATER METER / LATERAL		W.M.
SANITARY SEWER CLEANOUT / LATERAL		

STATE OF MARYLAND — ROBERT J. DUMA — No. 38830 — PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS • ENGINEERS • SURVEYORS
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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER

EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: NOT TO SCALE
Dwn.By: NLC
Proj.No.: 3306A011

LEGEND & NOTES

Dwg.No.: **G-002**

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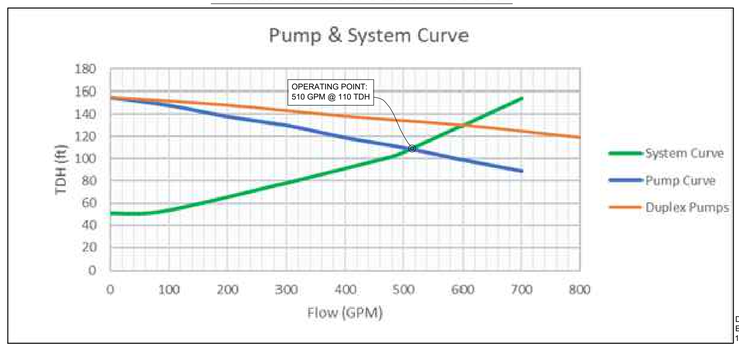
DESIGN CRITERIA

DESIGN FLOW		
EQUIVALENT DWELLING UNITS (PUMPS)	684	EDUs
USAGE PER EDU	250	GPD
PEAKING FACTOR	4	
AVERAGE DAILY FLOW	171,000	GPD
DESIGN FLOW RATE (PUMPS)	475	GPM
FORCEMAIN SIZING		
VELOCITY TARGET	2-8	FPS
SELECTED SIZE (NOMINAL)	8	IN
SELECTED SIZE (NOMINAL)	10	IN
SELECTED SIZE (NOMINAL)	12	IN
WET WELL SIZING		
EQUIVALENT DWELLING UNITS (WET WELL)	760	EDUs
DESIGN FLOW RATE (WET WELL)	528	GPM
DIAMETER	8	FT
VOLUME CALCULATION		
(WHERE t=7 MIN, Q=DESIGN FLOW (GPM)		
VOLUME	990	GAL
ACTIVE DEPTH	2.63	FT
NPSH	ADEQUATE	
WET WELL BUOYANCY		
VOLUME OF WATER DISPLACED BY WET WELL	1,653	CF
BUOYANT FORCE	103,157	LBS
SAFETY FACTOR	1.5	
COUNTERACTIVE WEIGHT REQUIRED	154,735	LBS
WEIGHT OF CONCRETE, WEIGHT OF SOIL, ETC.	63,745	LBS
REQUIRED WEIGHT BALLAST	0	LBS
CONCRETE VOLUME	0	CY

FLOW SCENARIOS							SCENARIO VELOCITIES		
	UMMS	GANNON	CHAPEL	HYDE	Total		VELOCITY (FPS)		
	GPM	GPM	GPM	GPM	GPM		8	10	12
UMMS	504.6				504.6		3.221	2.061	1.431
GANNON		635.35			635.35		4.055	2.595	1.802
CHAPEL			337.55		337.55		2.155	1.379	0.958
HYDE				204.67	204.67		1.306	0.836	0.581
UMMS + GANNON	418.97	550.53			969.5		6.188	3.960	2.750
UMMS + CHAPEL	474.66		146.5		621.16		3.965	2.537	1.762
UMMS + HYDE	465.09			77.82	542.91		3.465	2.218	1.540
GANNON + CHAPEL		605.19	166.15		771.34		4.923	3.151	2.188
GANNON + HYDE		607.36		155	762.36		4.866	3.114	2.163
CHAPEL + HYDE			274	177.86	451.86		2.884	1.846	1.282
UMMS + GANNON + CHAPEL	418.96	550.53	0		969.49		6.188	3.960	2.750
UMMS + GANNON + HYDE	396.78	545.49		43.32	985.59		6.291	4.026	2.796
UMMS + CHAPEL + HYDE	443.51		129.79	66.88	640.18		4.086	2.615	1.816
GANNON + CHAPEL + HYDE		587.95	110.45	140.81	839.21		5.356	3.428	2.381
UMMS + GANNON + CHAPEL + HYDE	396.78	545.49	0	43.32	985.59		6.291	4.026	2.796

Notes: Calculations are based on sewer model prepared in Bentley SewerCAD 2024. Blank cells indicate that the pump station is turned off. Zero (0) flow indicates pump station is unable to overcome head condition.

PUMP & SYSTEM CURVE



DUPLEX SUBMERSIBLE PUMP STATION
EBARA 100DKEBU4618
1770 RPM, 11.46 IN IMPELLER, 25 HP

STATE OF MARYLAND
ROBERT J. DUNN
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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

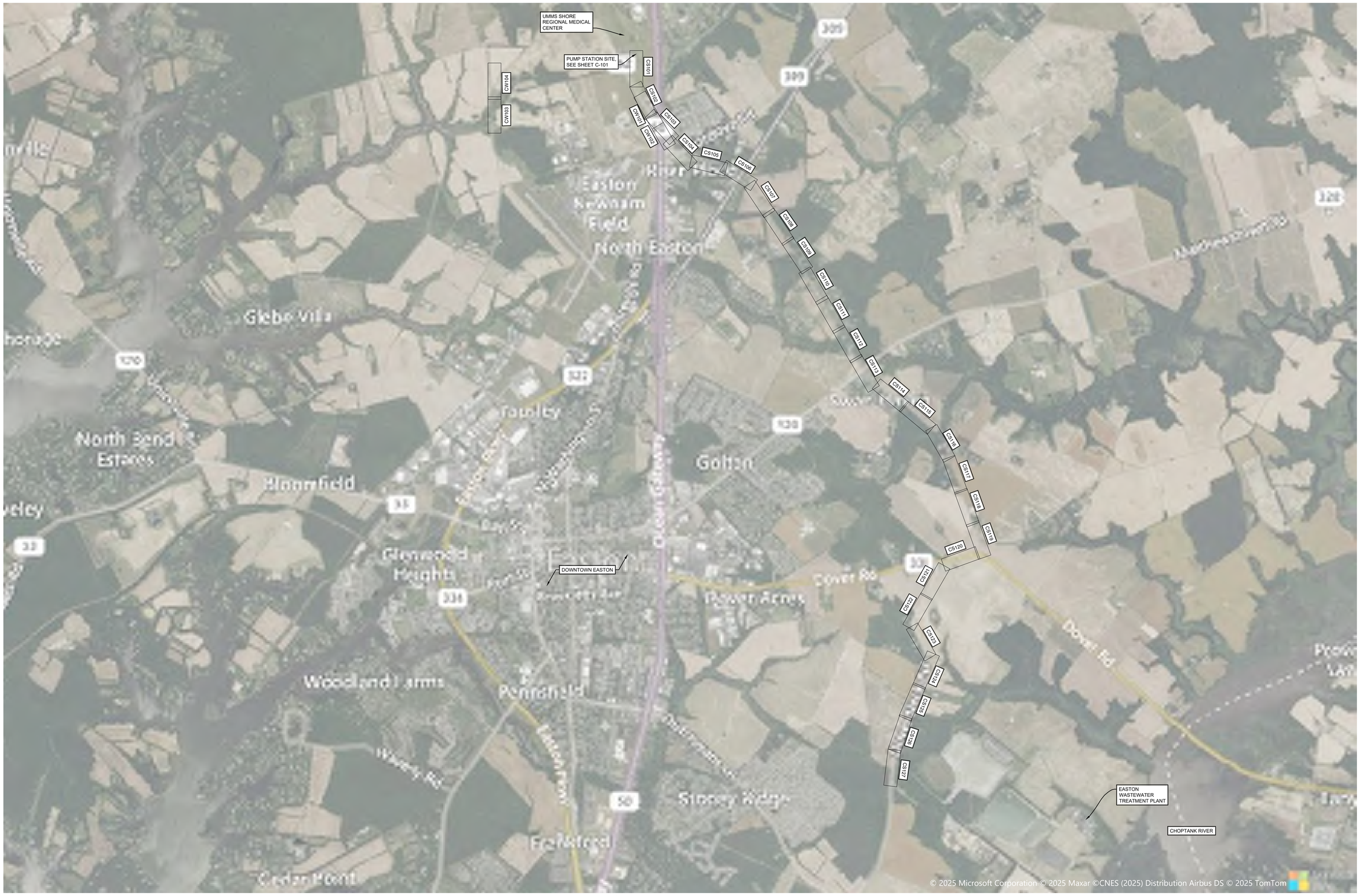
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Dwn.By: NLC
Proj.No.: 3306A011

DESIGN CRITERIA

Dwg.No.: **G-003**

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KEY MAP

SCALE: 1" = 1,500'

0' 1,500' 3,000' 4,500'

PLAN SET NOTE

SHEETS CS101-CS127 AND CW101-CW104 ARE PART OF A LARGER REGIONAL PROJECT AND HAVE NOT BEEN INCLUDED IN THIS PLAN SET. THESE TEMPORARY LINEAR DISTURBANCES FOR PIPELINE INSTALLATION FOLLOW MD-SHA RIGHT-OF-WAYS, TALBOT COUNTY RIGHT-OF-WAYS, AND PRIVATE UTILITY EASEMENTS.

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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
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Proj.No.: 3306A011

KEY MAP

Dwg.No.: G-004

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SITE & UTILITY NOTES:

(A) 3' X 3' CONCRETE PAD FOR MUFFIN MONSTER HYDRAULIC POWER RACK PER EQUIPMENT PAD DETAIL

(B) COORDINATE INSTALLATION OF NEMA 4X PUMP CONTROL & ELECTRICAL CABINET PER ELECTRICAL PLANS

(C) BOLLARD PER DETAIL, TYP.

(D) ASPHALT PER SECTION DETAIL

(E) 6' PERIMETER CHAIN LINK FENCE

(F) 6' CANTILEVER SLIDING GATE

(G) THRUST BLOCK PER DETAIL, 17' WIDE

(H) GATE VALVES W/ VALVE BOXES

(I) CONCRETE SLAB PER DETAILS. PROVIDE FULL DEPTH EXPANSION MATERIAL AT SLAB INTERFACE

(J) FROST PROOF YARD HYDRANT PER DETAIL W/ ISOLATION VALVE

(K) PRECAST VALVE VAULT PER DETAIL

(L) PRECAST METER VAULT PER DETAIL

(M) 6" EMERGENCY BYPASS PER DETAIL

(N) 31 LF OF 14"x23" HERCP III, SEE ENTRANCE PLANS

(O) 4" BARRELL HYDRANT W/ ISOLATION VALVE

(P) GRAVEL AREA, SEE DETAIL

(Q) TRANSFORMER PAD, SEE ELECTRICAL DETAILS AND COORDINATE SIZE WITH EQUIPMENT MANUFACTURER. CONTRACTOR TO LOCATE CONDUIT AND REROUTE AS NECESSARY TO ENTER TRANSFORMER PAD PER DETAIL. CONDUIT SHALL HAVE NO MORE THAN 4 90° BENDS IN ENTIRE RUN

(R) 2" WATER METER (WM)

(S) 4"X12" TAPPING TEE & VALVE

(T) 2"X4" REDUCER

(U) 3' SWINGING MANGATE

(V) 4" ADS N-12

(W) OUTFALL STRUCTURE W/ GRATE & TRASH RACK PER DETAIL

(X) 12" ADS N-12

SITE & PUMPSTATION NOTES

1. REFER TO SUBSEQUENT SHEETS FOR PUMP STATION AND SITE CONSTRICTION DETAILS.
2. ALL DIMENSIONS AND RADII REFER TO EDGE OF PAVEMENT.
3. PROPOSED DRIVEWAY BASE SHALL BE PROOF ROLLED AND APPROVED BY EASTON UTILITIES AND ENGINEER PRIOR TO SURFACE COURSE.
4. COORDINATE WITH UTILITY SERVICE PROVIDERS FOR THE INSTALLATION OR RELOCATION OF UTILITIES.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS/SPECIFICATIONS FOR PRECAST CONCRETE ITEMS, CR-6, FENCING/GATES, IMPORTED STRUCTURAL FILL, AND ALL PUMPS, PIPING MATERIALS, VALVES, FITTINGS, ELECTRICAL ITEMS, AND OTHER SYSTEM COMPONENTS TO ENGINEER AND EASTON UTILITIES FOR REVIEW AND APPROVAL.
6. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF BURIED CONDUITS.
7. ADJUST ALL VALVE BOXES AND STRUCTURE RIMS TO PROPOSED GRADE AS REQUIRED.
8. CONTRACTOR SHALL COORDINATE ALL FORCE MAIN CONNECTIONS SUBSEQUENT TO FULFILLING TESTING REQUIREMENTS WITH EUC.
9. CONTRACTOR SHALL INSTALL ALL ELECTRIC CONDUITS WITH 36" MINIMUM COVER. COORDINATE WITH ELECTRIC PLAN SHEETS FOR SIZE AND QUANTITY.
10. REFER TO SHEET C-110 FOR SEWER PROFILE.

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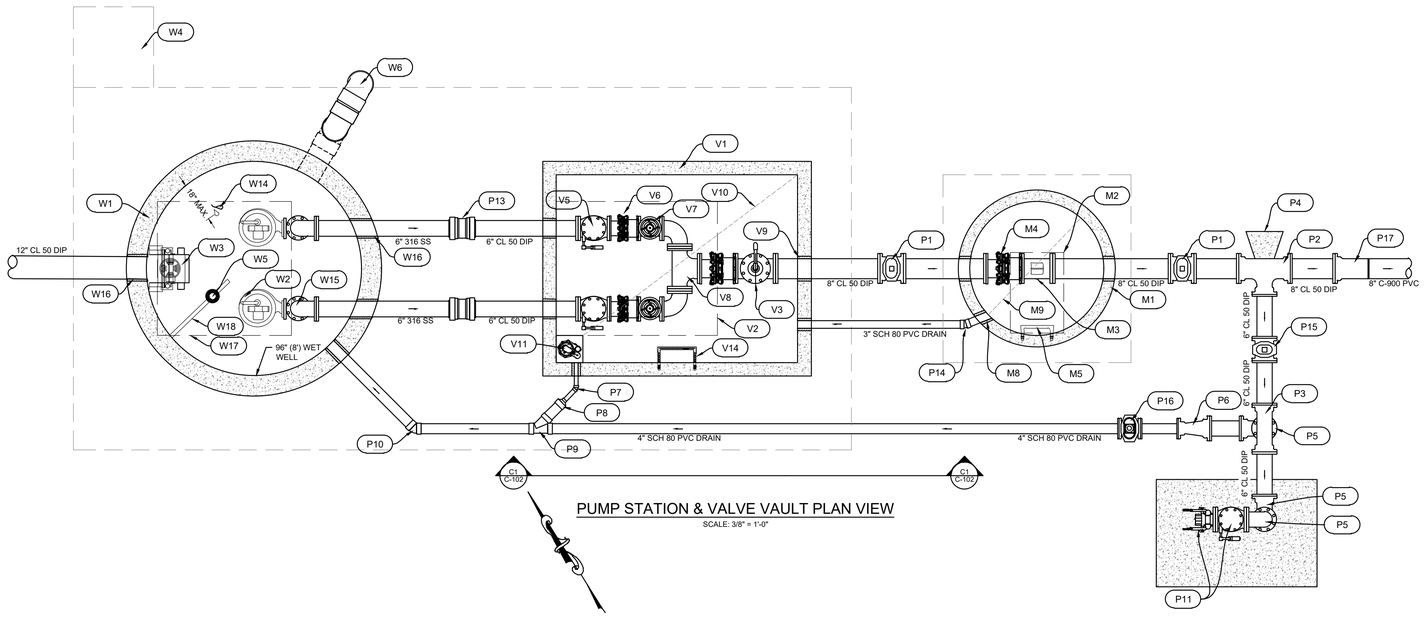
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PUMP STATION SITE PLAN

Dwg.No.: C-101

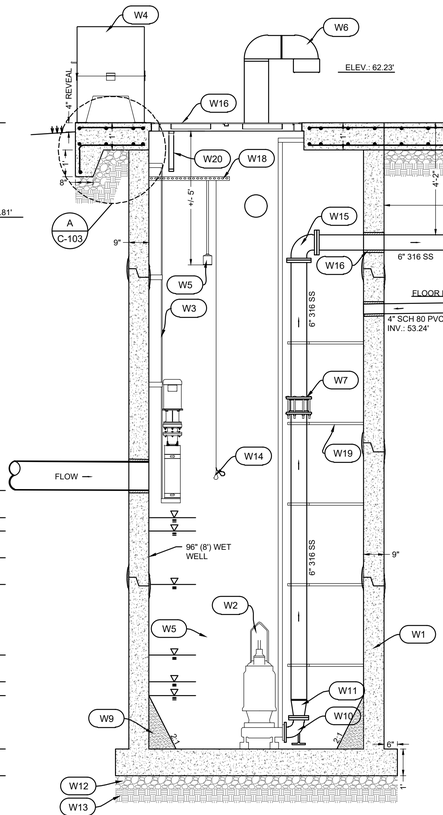
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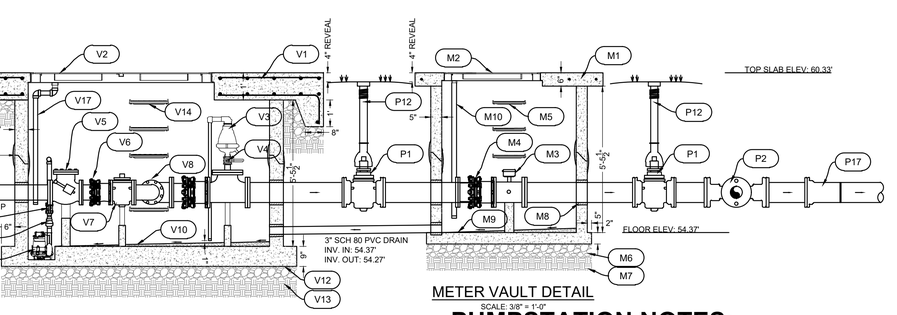
PUMP STATION & VALVE VAULT PLAN VIEW

SCALE: 3/8" = 1'-0"



SECTION

SCALE: 3/8" = 1'-0"



VALVE VAULT DETAIL

SCALE: 3/8" = 1'-0"

METER VAULT DETAIL

SCALE: 3/8" = 1'-0"

METER VAULT NOTES:

1. INTERNAL PIPING SHALL BE 8" FLANGED CL 50 DUCTILE IRON.
2. TOP SLAB IS NON-TRAFFIC BEARING.
3. METER SHALL BE 8" SIEMENS MAG 5100W SENSOR WITH MAG5000 TRANSMITTER. REMOTE MOUNT TRANSMITTER AT PANEL. SEE ELECTRICAL SITE PLAN FOR PVC CONDUIT SIZE AND LOCATION, TO BE CAST INTO STRUCTURE.
4. METER VAULT FLOOR SHALL BE 6" HIGHER THAN VALVE VAULT FLOOR AND BE SLOPED TO 3" SCH 80 PVC DRAIN PIPE AS NOTED

PUMPSTATION NOTES:

1. ALL MATERIALS FOR BACKFILL SHALL BE SELECT BORROW OR BANK RUN GRAVEL. ON-SITE EXCAVATED MATERIAL MAY BE USED FOR BACKFILL IF IT MEETS SPECIFICATIONS, AS VALIDATED BY A GEOTECHNICAL TESTING LABORATORY.
2. SUBMITTALS TO ENGINEER AND EASTON UTILITIES REQUIRED FOR ALL SYSTEM COMPONENTS.
3. 10-GAUGE TRACER WIRE TO BE INSTALLED BELOW ALL BURIED PIPES AND SHALL EXTEND TO GROUND SURFACE AT STRUCTURES AND VALVE BOXES.
4. VAULT SLEEVES SIZED TO SUIT PIPE, MECHANICAL SEAL BOTH ENDS FOR A WATER TIGHT PENETRATION, USING LINK-SEAL, OR EQUAL.
5. ALL DIMJ FITTINGS SHOWN SHALL BE RESTRAINED USING "MEGA LUG" WEDGE ACTION RETAINER GLANDS, OR APPROVED EQUAL. 304 SS HARDWARE REQUIRED.
6. CONCRETE: 5,000 PSI AT 28 DAYS, OR AS OTHERWISE SPECIFIED BY PRECASTER.
7. ALL JOINTS TO BE SEALED WITH CONSEAL CS-102, OR EQUAL.
8. PROVIDE EXTERIOR ASPHALTIC COATING EQUAL TO SEABOARD LN-12 ASPHALT PAINT, TWO 8-MIL COATS ON WET WELL, FLOW METER AND VALVE VAULTS. PROVIDE INTERIOR COATING EQUAL TO KAUFMAN SUREPOXY HIBILD, TWO 8-MIL COATS TO THE INTERIOR OF WET WELL AND VALVE VAULT.
9. ALL PIPING & NON-STAINLESS STEEL METAL APPURTENANCES WITHIN WET WELL AND VALVE VAULT SHALL BE COATED WITH 2 COATS OF A TNEMEC EPOXY COATING, OR ABOVE GRADE EQUAL, AND APPLIED PER MANUFACTURER INSTRUCTION.
10. LADDERS, SS STRAPS, VALVE BOXES, HANDRAIL MOUNTS OR ANY OTHER MISC. HARDWARE TO BE SUPPLIED AND INSTALLED BY CONTRACTOR IN FIELD.
11. VAULTS/CHAMBERS TO BE MANUFACTURED PER ASTM C-478.
12. CONTRACTOR TO COORDINATE THE INSTALLATION OF BURIED CONDUITS FOR PUMP STATION ELECTRICAL CONTROL AND COMMUNICATION, REFER TO ELECTRICAL DRAWINGS.
13. MECHANICAL JOINT FITTINGS ON BURIED PIPE SHALL BE DUCTILE IRON PER ASTM A536, CLASS 350, PER ANSI/AWWA C153/A21.53 WITH DOUBLE CEMENT LINING AND 304 SS HARDWARE.
14. DUCTILE IRON FLANGED FITTINGS PER ANSI/AWWA C110/A21.10 STANDARD, CLASS 125 WITH 316 SS HARDWARE.
15. DUCTILE IRON FLANGED JOINT PIPE PER ANSI/AWWA-C115/A21.15 STANDARD THICKNESS CLASS 53, WITH CLASS 125 FITTINGS. PIPE AND FITTINGS WITH VAULTS AND WET WELL SHALL BE FLANGED.
16. ALL PIPING TO BE PRESSURE AND LEAK TESTED PRIOR TO SYSTEM OPERATION.
17. ALL REBAR USED FOR REINFORCEMENT SHALL BE DEFORMED, HAVE A YIELD STRENGTH OF 60 KSI.
18. ALL VERTICAL PIPE TO BE SECURED WITH STAND-ON MODEL C-92 SUPPORTS.
19. INTEGRAL FALL PROTECTION GRATING IS REQUIRED FOR ALL PERSONNEL ACCESS DOOR ASSEMBLIES.
20. VALVE AND METER VAULT PIPE SUPPORTS AND CONCRETE BASES TO BE FIELD FIT AND INSTALLED AS SHOWN.
21. 1/2 HP SUBMERSIBLE SUMP PUMP. ZOELLER PUMP MODEL 95-0001, OR EQUAL. PIPE TO BYPASS ASSEMBLY DRAIN USING 1-1/2" SCH 80 PVC, PROVIDE PVC UNION IN VAULT FOR PUMP REMOVAL.
22. ALL HARDWARE IN THE PUMP STATION SHALL BE STAINLESS STEEL.

WET WELL SCHEDULE

W1	96" (8') DIAMETER PRE-CAST CONCRETE WET WELL
W2	EBARA GRINDER PUMPS (TYP. OF 2)
W3	MUFFIN MONSTER HYDRAULIC COMMINUTOR MODEL 30005-0012 W/ BYPASS SCREEN CHAMBER W/ FIELD CUT 316 SS SLIDING RAIL SYSTEM
W4	MUFFIN MONSTER HYDRAULIC POWER PACK PARKER 5HP TEFC 10 GAL W/SS FABRICATED CLAMSHELL ENCLOSURE, PROVIDE ACTIVE VENTILATION
W5	SIEMENS ECHOMAX XPS-10 TRANSDUCER #7ML1115-0EA30
W6	10" Ø SCH. 10 WELDED 304 SS GOOSENECK VENT W/ BIRD SCREEN & LINK SEAL GASKET
W7	DRESSER COUPLING, STYLE 38 STAINLESS STEEL (TYP. OF 2)
W8	STAND-ON CLAMPS, TYP.
W9	FIELD PLACED CHAMFER USING TYPE S NON-SHRINK GROUT
W10	4" FL 316 SS BASE ELBOW
W11	4" X 6" WELDED 316 SS REDUCER
W12	6" GRAVEL BEDDING
W13	UNDISTURBED EARTH
W14	EMERGENCY HIGH HIGH WATER FLOAT
W15	6" FL 316 SS 90° BEND, TYP.
W16	A-LOK GASKET, TYP. ALL PIPE OPENINGS
W17	60"x60" DOUBLE LEAF HALLIDAY W2S6060 ACCESS W/ PROTECTIVE GRATING
W18	UNISTRUT P1000T-1-5/8"X1-5/8"X36", 12 GAUGE, METAL FRAMING STRUT, SLOTTED, FIELD CUT
W19	STAND-ON CLAMPS, TYP.
W20	2" SCH. 40 PVC ACCESS HATCH DRAIN

VALVE VAULT SCHEDULE

V1	5,000 PSI PRECAST CONCRETE VALVE VAULT
V2	72"X60" DOUBLE LEAF HALLIDAY W2S7260 ACCESS W/ PROTECTIVE GRATING
V3	A.R.I. D-025 (HDPE), 2" NPT INLET, 1" NPT OUTLET; SECURE TO SIDE OF VALVE VAULT USING SS STAND-ON CLAMP; VENT TO 12" ABOVE FLOOR
V4	2" BRASS QUARTER TURN VALVE W/ 2" BRASS UNION
V5	WEIGHTED ARM, AIR CUSHIONED SWING CHECK VALVE; 6" APCO CVS6000A(AC) (TYP. OF 2)
V6	ROMAC DJ405 DISMANTLING JOINT (TYP. OF 3)
V7	6" DEZURIK PLUG VALVE W/ WRENCH HANDLE (TYP. OF 2)
V8	6"X6"X8" FL DI TEE
V9	A-LOK GASKET, TYP. ALL PIPE OPENINGS
V10	FIELD PLACED TYPE S NON-SHRINK GROUT SLOPED TO SUMP PIT
V11	1/2 HP SUBMERSIBLE SUMP PUMP, ZOELLER PUMP MODEL 95-0001
V12	6" GRAVEL BEDDING
V13	UNDISTURBED EARTH
V14	M.A. INDUSTRIES PS-3-PFC MANHOLE STEPS, TYP.
V15	1-1/2" ISOLATION VALVE
V16	1-1/2" CHECK VALVE
V17	2" SCH. 40 PVC ACCESS HATCH DRAIN

METER VAULT SCHEDULE

M1	5,000 PSI PRECAST CONCRETE METER VAULT
M2	24"X36" SINGLE LEAF HALLIDAY W1S2436 ACCESS W/ PROTECTIVE GRATING
M3	8" SIEMENS SITRANS FM MAG 5100 FLOW METER
M4	ROMAC DJ405 DISMANTLING JOINT
M5	PRECAST MAHOLE STEPS, TYP.
M6	6" GRAVEL BEDDING
M7	UNDISTURBED EARTH
M8	A-LOK GASKET, TYP. ALL PIPE OPENINGS
M9	FIELD PLACED TYPE S NON-SHRINK GROUT SLOPED TO DRAIN PIPE
M10	2" SCH. 40 PVC ACCESS HATCH DRAIN

YARD PIPING SCHEDULE

P1	8" MUELLER A-2361 RWGV 350WMJXMJ
P2	8"X8"X6" MJ DI TEE
P3	6"X6"X6" MJ DI TEE
P4	THRUST BLOCK PER DETAIL
P5	6" MJ DI 90° BEND
P6	4"X6" MJ DI REDUCER
P7	1-1/2" SCH 80 PVC 45° BEND
P8	1-1/2"X4" SCH 80 PVC REDUCER
P9	4" SCH 80 PVC WYE
P10	4" SCH 80 PVC 45° BEND
P11	6" GODWIN FEMALE CONNECTION & WEIGHTED ARM SWING CHECK VALVE; 6" DEZURIK APCO CVS6000A(AC), PER DETAIL
P12	THREE PIECE SCREW TYPE VALVE BOX
P13	6" XTRA FLEX RESTRAINED JOINT HIGH DEFLECTION FITTING (TYP. OF 2)
P14	3" SCH 80 PVC 22° BEND
P15	6" MUELLER A-2361 RWGV 350MJXMJ
P16	4" MUELLER A-2361 RWGV 350MJXMJ
P17	8" MJDIXPVC ADAPTER

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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: 3/8" = 1'-0"
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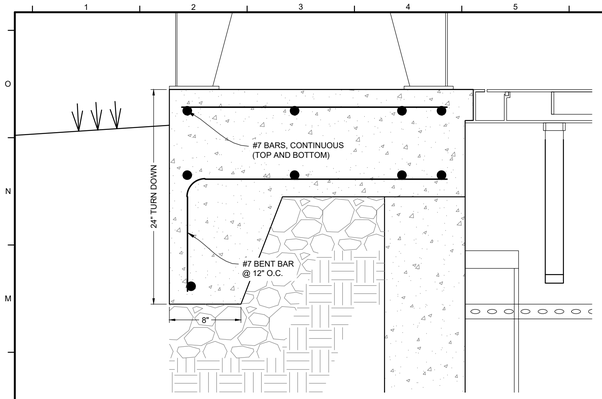
PUMP STATION PLAN & SECTION

Dwg.No.: **C-102**

0' 1' 2' 3' 4'
3/8"

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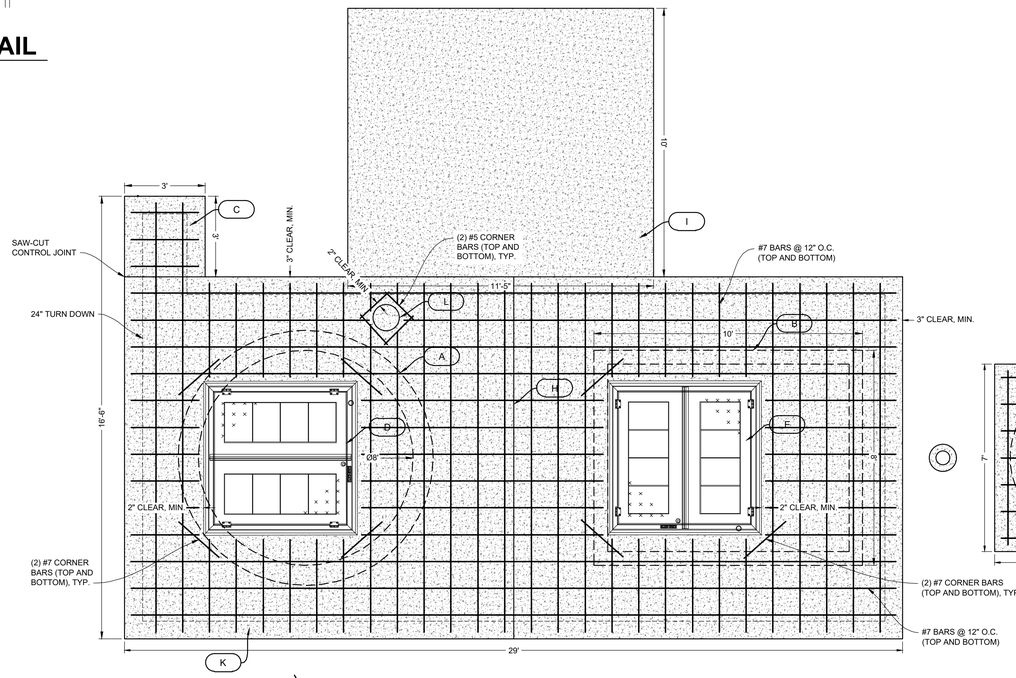
A SECTION REINFORCEMENT DETAIL

SCALE: 1-1/2" = 1'-0"

TOP SLAB SCHEDULE

A	96" (8') DIAMETER PRE-CAST CONCRETE WET WELL
B	5,000 PSI CONCRETE VALVE VAULT
C	MUFFIN MONSTER HYDRAULIC POWER PACK PARKER 5HP TEFC 10 GAL W/ FABRICATED SOUNDPROOF CLAMSHELL ENCLOSURE & VENTILATION (NOT SHOWN)
D	60"X60" DOUBLE LEAF W2S6060 HALLIDAY ACCESS W/ PROTECTIVE GRATING
E	72"X60" DOUBLE LEAF W2S7260 HALLIDAY ACCESS W/ PROTECTIVE GRATING
F	24"X36" SINGLE LEAF W1S HALLIDAY2436 ACCESS W/ PROTECTIVE GRATING
G	THREE PIECE SCREW TYPE VALVE BOX W/ POURED IN PLACE CONCRETE COLLAR, TYP.
H	EXPANSION JOINT W/ BACKING MATERIAL
I	COORDINATE INSTALLATION OF NEMA 4X PUMP CONTROL & ELECTRICAL CABINET PER ELECTRICAL PLANS, SEE SITE PLAN, PAD PER ELECTRICAL PLANS
J	5,000 PSI PRE-CAST CONCRETE METER VAULT W/ CAST-IN-PLACE TOP SLAB
K	5,000 PSI CAST-IN-PLACE REINFORCED CONCRETE PAD
L	10" Ø SCH. 10 WELDED 304 SS GOOSENECK VENT OPENING

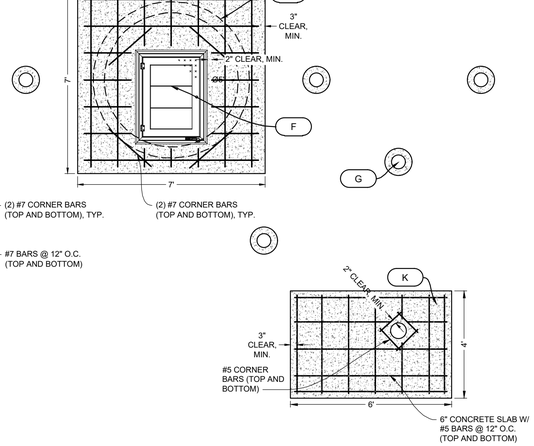
NOTES:
1. PUMP STATION TOP SLAB REINFORCEMENT DESIGN TO FOLLOW AS SHOWN ON THIS PLAN.
2. ALL CONCRETE ASSOCIATED WITH PROPOSED WET WELL, VALVE VAULT, METER VAULT SHALL BE 5,000 PSI CONCRETE UNLESS OTHERWISE NOTED.
3. GENERATOR & TRANSFORMER PAD SHOWN FOR PLAN PURPOSES, SEE ELECTRICAL DRAWINGS FOR DETAILS.
4. ALL VALVE BOX LIDS ON SITE SHALL BE MARKED "SEWER" EXCEPT FOR WATER LINES.

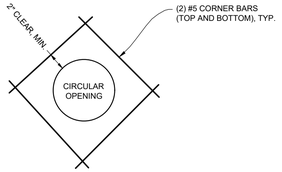


PUMP STATION & VALVE VAULT TOP SLAB PLAN

SCALE: 3/8" = 1'-0"

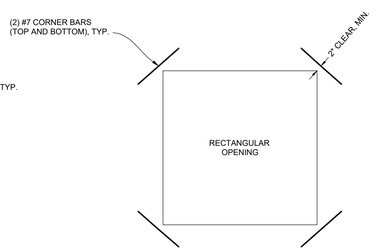
0' 1' 2' 3' 4'
3/8"





CIRCULAR OPENING DETAIL

SCALE: 1-1/2" = 1'-0"



RECTANGULAR OPENING DETAIL

SCALE: 3/8" = 1'-0"

STATE OF MARYLAND
ROBERT J. DUNN
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
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SALISBURY, MARYLAND 410.543.9091
MILFORD, DELAWARE 302.424.1441

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

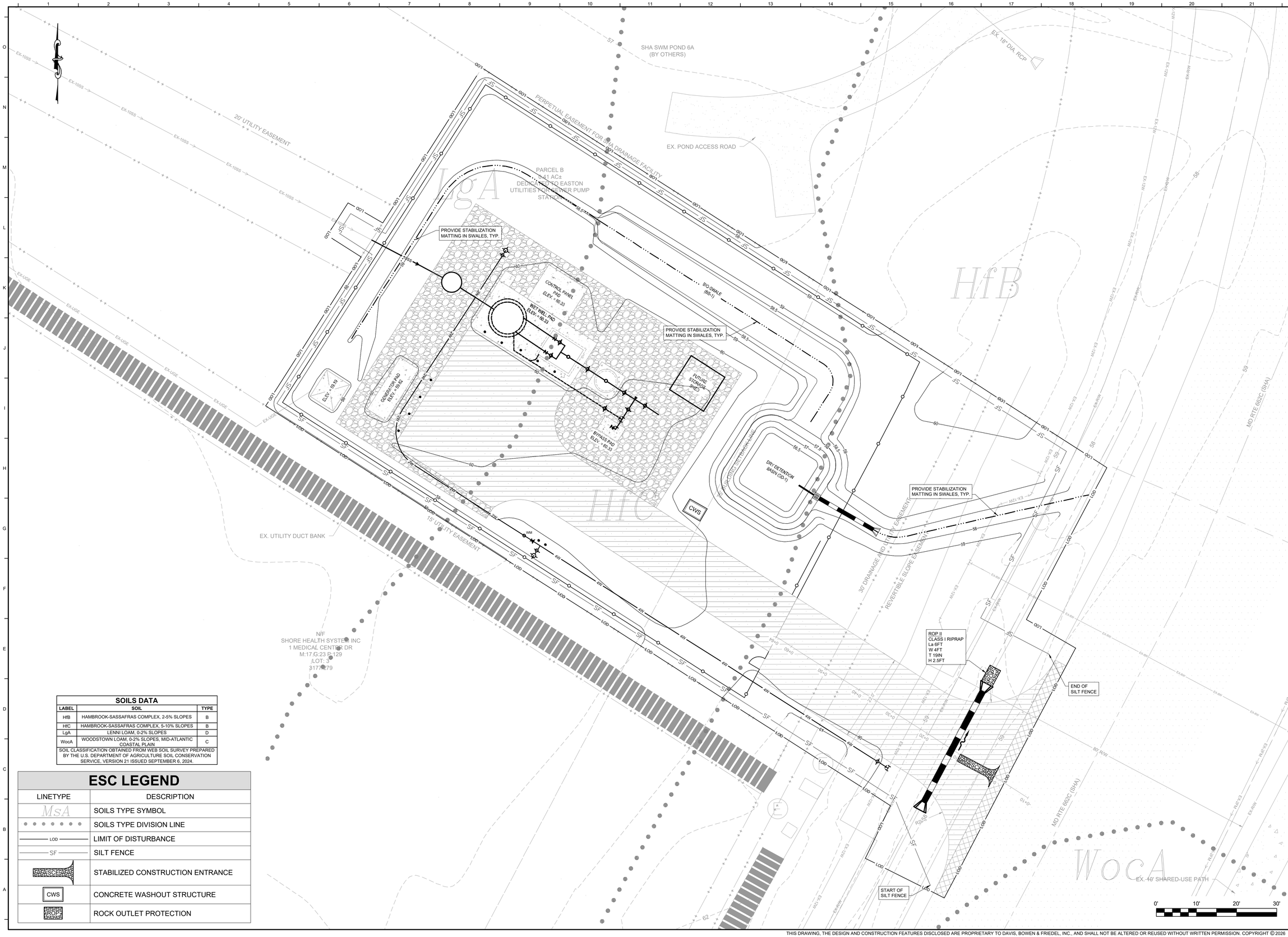
Date: JUNE 2026
Scale: AS SHOWN
Dwn.By: NLC
Proj.No.: 3306A011

PUMP STATION TOP SLAB PLAN

Dwg.No.: **C-103**

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P:\3306A Easton Utilities\3306A011 UMMS\CAD\SHEETS\C-102.dwg Jun 03, 2026 - 9:34am dunr



SOILS DATA		
LABEL	SOIL	TYPE
HfB	HAMBROOK-SASSAFRAS COMPLEX, 2-5% SLOPES	B
HfC	HAMBROOK-SASSAFRAS COMPLEX, 5-10% SLOPES	B
LgA	LENNI LOAM, 0-2% SLOPES	D
WocA	WOODSTOWN LOAM, 0-2% SLOPES, MID-ATLANTIC COASTAL PLAIN	C
SOIL CLASSIFICATION OBTAINED FROM WEB SOIL SURVEY PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE, VERSION 21 ISSUED SEPTEMBER 6, 2024.		

ESC LEGEND

LINETYPE	DESCRIPTION
MsA	SOILS TYPE SYMBOL
	SOILS TYPE DIVISION LINE
LOD	LIMIT OF DISTURBANCE
SF	SILT FENCE
SCE	STABILIZED CONSTRUCTION ENTRANCE
CWS	CONCRETE WASHOUT STRUCTURE
ROP	ROCK OUTLET PROTECTION

0' 10' 20' 30'

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland. License No. 38830 Expiration Date: 12-29-26

STATE OF MARYLAND · ROBERT J. DUMAS · LIC. No. 38830 · PROFESSIONAL ENGINEER

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
EASTON, MARYLAND 410.770.4744
SALISBURY, MARYLAND 410.543.9091
GILFORD, DELAWARE 302.424.1441

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER EASTON UTILITIES TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: 1" = 10'
Dwn.By: NLC
Proj.No.: 3306A011

PUMP STATION ESC PLAN

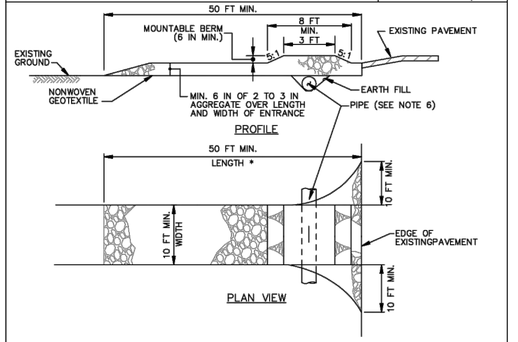
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DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

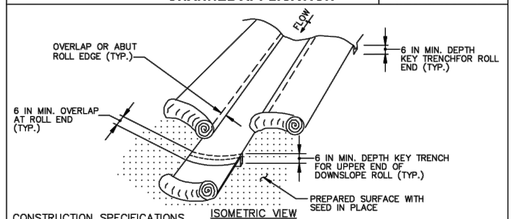
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.2

DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL: TSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN–MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON–LEACHING AND NON–TOXIC TO VEGETATION AND SEED GERMINATION AND NON–INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. KEY–IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
7. OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

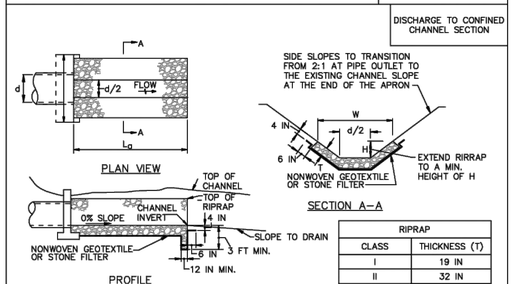
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.38

DETAIL D-4-1-B ROCK OUTLET PROTECTION II

STANDARD SYMBOL: ROPII

DISCHARGE TO CONFINED CHANNEL SECTION



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (⅜ TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

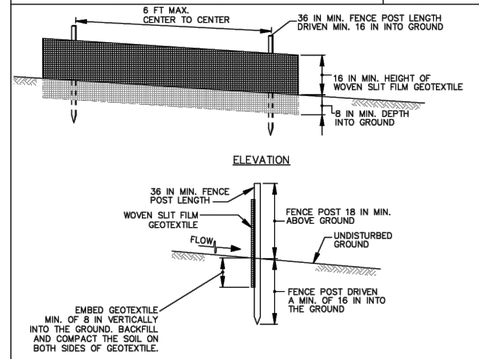
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

D.21

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



1 OF 2

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

E.2

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅛ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

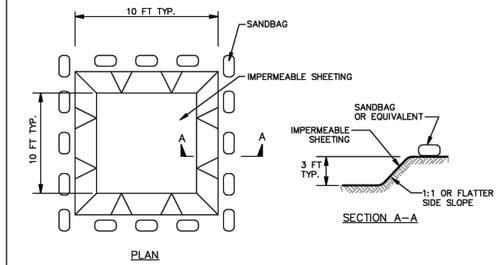
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.3

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



1 OF 2

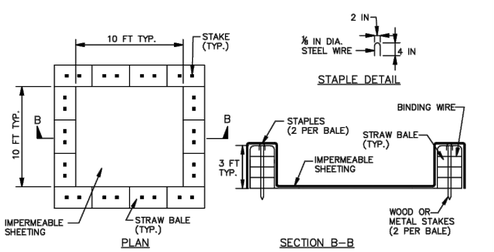
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

H.24

DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS



CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET–VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

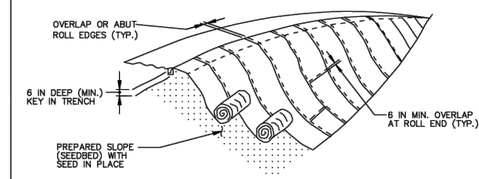
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

H.25

DETAIL B-4-6-B TEMPORARY SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL: TSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN–MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON–LEACHING AND NON–TOXIC TO VEGETATION AND SEED GERMINATION AND NON–INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

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

B.39

STATE OF MARYLAND
ROBERT J. DUNN
LIC. NO. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland. License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
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MILFORD, DELAWARE 302.424.1441
EASTON, MARYLAND 410.770.4744

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER EASTON UTILITIES TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: NOT TO SCALE
Dwn.By: NLC
Proj.No.: 3306A011

ESC DETAILS & NOTES

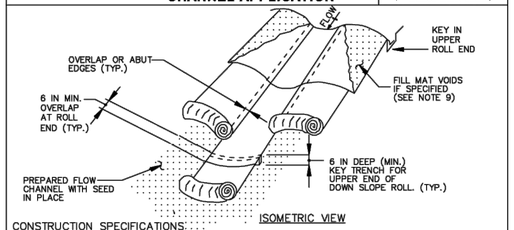
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DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL
PSSMC – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS:

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON–DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON–LEACHING AND NON–TOXIC TO VEGETATION AND SEED GERMINATION AND NON–INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "I" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "I" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

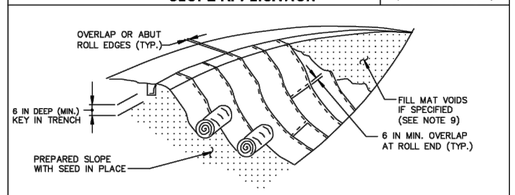
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B.40

DETAIL B-4-6-D PERMANENT SOIL STABILIZATION MATTING SLOPE APPLICATION

STANDARD SYMBOL
PSSMS – * lb/ft² (* INCLUDE SHEAR STRESS)



ISOMETRIC VIEW

CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON–DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON–LEACHING AND NON–TOXIC TO VEGETATION AND SEED GERMINATION AND NON–INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "I" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "I" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH–SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.

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

B.41

EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL".
2. A PERIODIC MAINTENANCE OF ALL SEDIMENT CONTROL MEASURES SHALL BE REQUIRED TO INSURE EFFECTIVE SEDIMENT CONTROL. INSPECTION OF ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL.
3. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ESTABLISHED.
4. ALL AREAS NOT COVERED BY BUILDINGS, PAVEMENT, OR OTHER SUITABLE LANDSCAPING WILL BE SEEDED USING PERMANENT SEED MIXTURE SHOWN ON THIS PLAN.
5. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. THE REQUIREMENTS OF THIS SUBPARAGRAPH DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USED FOR MATERIAL STORAGE OF FOR THESE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED.
6. THE SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO REQUIRE ADDITIONAL SEDIMENT AND EROSION MEASURES DURING THE CONSTRUCTION OF THIS PROJECT.
7. SEEDING (PERMANENT)
   A. SHALL BE CONDUCTED BETWEEN MARCH 1 TO MAY 15 OR AUGUST 15 TO OCTOBER 15.
   B. SEED BED PREPARATION: APPLY 10-20-20 FERTILIZER AS SHOWN ON THE PERMANENT SEEDING SUMMARY AND HARROW OR DISC INTO SOIL TO A DEPTH OF 2 TO 4 INCHES; APPLY GRANULATED LIMESTONE AT 2 TONS PER ACRE. LEVEL AND RAKE THE AREA TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 ½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
   C. SEEDING: APPLY SEED AS SHOWN IN THE PERMANENT SEEDING SUMMARY ON A MOIST SEED BED WITH SUITABLE EQUIPMENT - MINIMUM COVERAGE 1/4 TO 1/2 INCH. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATERS FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.
   D. MULCHING: IMMEDIATELY AFTER SEEDING, UNIFORMLY MULCH ENTIRE AREA WITH UNWEATHERED SMALL GRAIN STRAW AT A RATE OF 2.5 TONS PER ACRE. MULCH TO BE ANCHORED WITH MULCH ANCHORING TOOL ON THE CONTOUR.
8. TEMPORARY STABILIZATION:
   A. SEED BED PREP: APPLY 10 LB PER 1,000 SQ FT OF 10-20-20.
   B. PROVIDE TEMPORARY SEEDING AS SHOWN ON THE TEMPORARY SEEDING SUMMARY, BETWEEN FALL AND SPRING SEEDING DATES USE MULCH ONLY IF GROUND IS FROZEN AND RESEED WHEN THAWED.
   C. MULCH PER 7.D. ABOVE.
9. IF TEMPORARY STABILIZATION IS REQUIRED, PERMANENT SEEDING SHALL BE PERFORMED DURING THE NEXT APPLICABLE PERIOD PER PARAGRAPH (7) ABOVE.
10. ALL FILL SLOPE AREAS SHOWN HEREON ARE TO BE STABILIZED PER PARAGRAPHS (7) OR (8) ABOVE IMMEDIATELY AFTER COMPLETION OF GRADING OPERATIONS FOR THESE SLOPES.
11. INSTALL EROSION CONTROL MATTING ON ALL SLOPES 3:1 0R GREATER.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NECESSARY CLEANING OF ACCUMULATED SEDIMENT, DEBRIS, ETC. FROM THE EXISTING STORMWATER MANAGEMENT INFRASTRUCTURE.
13. SITE INFORMATION:

TOTAL AREA OF PROJECT SITE:	VARIES (PUMP STATION & LINEAR PIPE)	
AREA DISTURBED:	5.6663	ACRES (TOTAL PROJECT: PUMP STATION & LINEAR PIPE)
	5.2046	ACRES (TEMPORARY, LINEAR PIPE DISTURBANCE)
	0.4618	ACRES (PUMP STATION)
PROPOSED IMPERVIOUS AREA:	0.1543	ACRES (PUMP STATION)
TOTAL CUT:	296	CUBIC YARDS
TOTAL FILL:	743	CUBIC YARDS
OFFSITE WASTE/BORROW AREA LOCATION:	TO BE DETERMINED	

*CUT AND FILL NUMBERS ARE NOT TO BE USED BY CONTRACTOR, FOR ESTIMATING PURPOSES ONLY

TEMPORARY SEEDING SUMMARY

SPECIES	SEE MIXTURE (HARDINESS ZONE 7b) FROM TABLE 26 APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
ANNUAL RATE	40	2/15 - 4/30 8/15 - 11/30	1/2"	436 lb/ac (10 lb / 1000sf)	2 tons/ac (90 lb / 1000sf)
FOX TAIL MILLET	30	5/1 - 8/14	1/2"		

NOTE: FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.

PERMANENT SEEDING SUMMARY

SPECIES	SEE MIXTURE (HARDINESS ZONE 7b) FROM TABLE 25 APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20) N	P205	K20	LIME RATE
TALL FESCUE BLUEGRASS RED TOP	130 15 1	3/1 - 5/15 8/15 - 10/15	1/4" -1/2"	45 lb/ac (0.9 lb / 1000sf)	90 lb/ac (2 lb / 1000sf)	90 lb/ac (2 lb / 1000sf)	2 tons/ac (90 lb / 1000sf)

STANDARD STABILIZATION NOTE

1. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
   A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
   B. SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

SEQUENCE OF CONSTRUCTION

1. CONTACT EASTON UTILITIES (410-822-6110) AND M.D.E. (410-537-3000) TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 2 WEEKS PRIOR TO COMMENCING CONSTRUCTION.
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES WHERE SHOWN ON THE PLANS.
3. CONNECT TO EXISTING GRAVITY SEWER AND INSTALL 10" SDR-35 AND 12" DIP GRAVITY SEWER TO ONSITE MANHOLE AND WET WELL.
4. INSTALL ONSITE MANHOLE, WET WELL, VALVE VAULT, AND METER VAULT AS SHOWN ON THE PLANS.
5. INSTALL ALL OTHER PUMP STATION APPURTENANCES AS NOTED ON THE PLANS.
6. PERFORM ALL OTHER PUMP STATION SITE WORK AS SHOWN ON THE PLANS.
7. INSTALL 8", 10", 12" C-900 PVC FORCEMAIN PIPE AND AIR RELEASE VALVES AS SHOWN ON THE PLANS AND CONNECT TO EXISTING 30" FORCEMAIN.
8. INSTALL 12" C-900 PVC WATERMAIN PIPE AND FIRE HYDRANTS AND CONNECT TO EXISTING WATERMAIN AS SHOWN ON THE PLANS.
9. IMMEDIATELY STABILIZE DISTURBED AREAS PER EROSION CONTROL NOTES.
10. BACKFILL, COMPACT, AND PROVIDE SURFACE RESTORATION AS REQUIRED.
11. PERFORM FULL DEPTH PAVEMENT RESTORATION AS SHOWN ON THE PLANS.
12. CLEAN UP PROJECT SITE, SEED AND MULCH REMAINING DISTURBED AREAS.
13. UPON COMPLETION OF PROJECT AND FINAL STABILIZATION AND WITH M.D.E. CONCURRENCE, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
14. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THE STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

OWNER'S CERTIFICATION

I / WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I/WE HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ONSITE EVALUATION BY APPROPRIATE INSPECTION AND ENFORCEMENT AUTHORITY OR THE STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT.

OWNERS SIGNATURE _____ DATE _____

PRINTED NAME _____ TITLE _____

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II AND THE MARYLAND ENVIRONMENT EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT REGULATIONS.

ROBERT J. DUMA, P.E. _____ 6/3/2026 DATE
MD P.E. REGISTRATION NO. 38830,
EXP. 12/29/2026

ESD TO THE MEP

ESD TO THE MEP HAS BEEN IMPLEMENTED IN ORDER TO MEET THE FOLLOWING ELEMENTS:

1. PREVENT SOIL EROSION FROM DEVELOPMENT PROJECTS.
2. PREVENT INCREASES IN NONPOINT POLLUTION.
3. MINIMIZE POLLUTANTS IN STORMWATER RUNOFF FROM BOTH NEW DEVELOPMENT AND REDEVELOPMENT.
4. RESTORE, ENHANCE, AND MAINTAIN CHEMICAL, PHYSICAL, AND BIOLOGICAL INTEGRITY OF RECEIVING WATERS TO PROTECT PUBLIC HEALTH AND ENHANCE DOMESTIC, MUNICIPAL, RECREATIONAL, INDUSTRIAL AND OTHER USES OF WATER AS SPECIFIED BY MDE.
5. MAINTAIN 100% OF THE AVERAGE ANNUAL PREDEVELOPMENT GROUNDWATER RECHARGE VOLUME.
6. CAPTURE AND TREAT RUNOFF TO REMOVE POLLUTANTS.
7. IMPLEMENT A CHANNEL PROTECTION STRATEGY TO PROTECT RECEIVING STREAMS.
8. PREVENT INCREASES IN THE FREQUENCY AND MAGNITUDE OF OUT-OF-BANK FLOODING FROM LARGE, LESS FREQUENT STORMS.
9. PROTECT PUBLIC SAFETY THROUGH THE PROPER DESIGN AND OPERATION OF STORMWATER MANAGEMENT FACILITIES.

GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY

THE FOLLOWING ITEMS HAVE BEEN ADDRESSED TO MEET THE REQUIREMENTS OF THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY (NPDES NUMBER MDR10, STATE DISCHARGE PERMIT NUMBER 09GP).

1. UTILIZATION OF ENVIRONMENTAL SITE DESIGN.
2. MAINTENANCE OF LIMITS OF DISTURBANCE TO PROTECT NATURAL AREAS.
3. CONTROL OF CONSTRUCTION EQUIPMENT AND VEHICLES.
4. EVALUATION AND APPROPRIATE LIMITATION OF SITE CLEARING.
5. EVALUATION AND DESIGNATION OF SITE AREA FOR PHASING OR SEQUENCING.
6. IDENTIFICATION OF SOILS AT HIGH RISK FOR EROSION AND ADVANCED STABILIZATION TECHNIQUES TO BE USED.
7. IDENTIFICATION OF STEEP SLOPES AND DESIGNATION OF LIMITATIONS ON CLEARING THEM.
8. EVALUATION AND DESIGNATION OF STABILIZATION REQUIREMENTS AND TIME LIMITS AND PROTECTION MEASURES FOR DISCHARGES TO THE CHESAPEAKE BAY, IMPAIRED WATERS OR WATERS WITH AN ESTABLISHED TOTAL MAXIMUM DAILY LOAD (TMDL).

STATE OF MARYLAND
ROBERT J. DUMA
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS • ENGINEERS • SURVEYORS
EASTON, MARYLAND 410.770.4744
SALISBURY, MARYLAND 410.543.9091
MILFORD, DELAWARE 302.424.1441

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

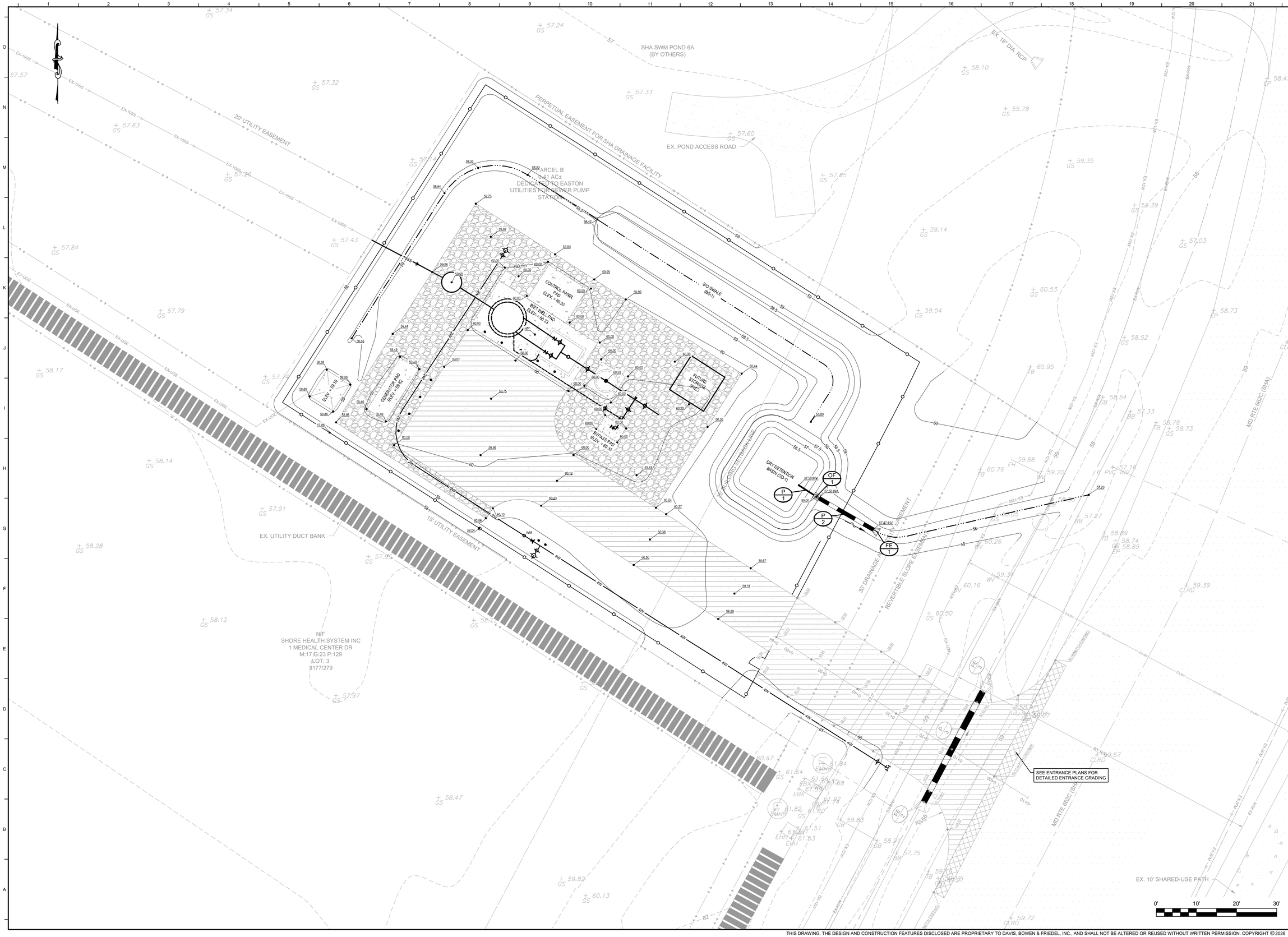
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Proj.No.: 3306A011

ESC DETAILS & NOTES

Dwg.No.: **C-106**

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STATE OF MARYLAND
ROBERT J. DUMAS
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland. License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
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SALISBURY, MARYLAND 410.543.9091

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER EASTON UTILITIES TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

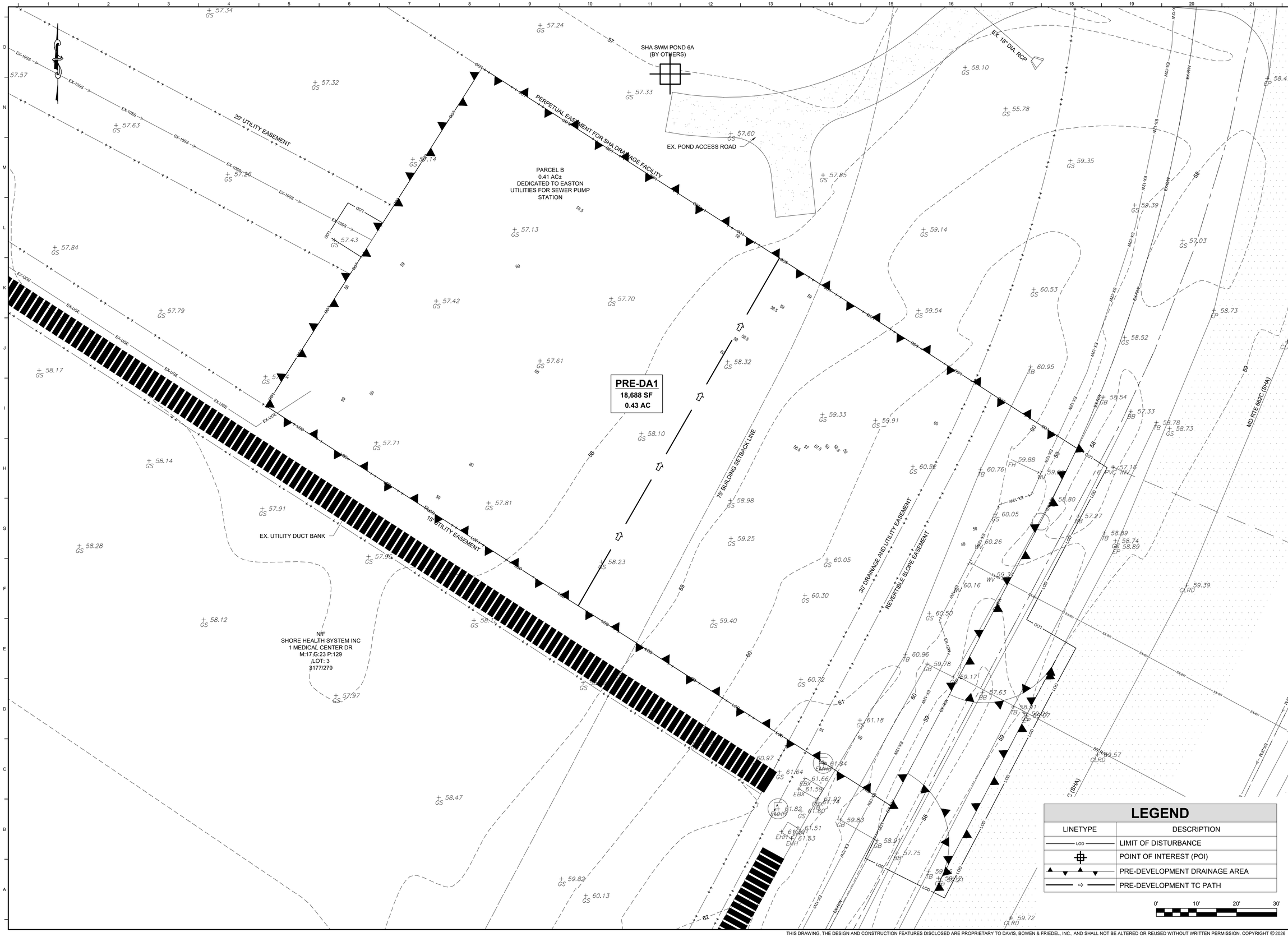
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Proj.No.: 3306A011

PUMP STATION GRADING PLAN

Dwg.No.: C-107

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STATE OF MARYLAND
ROBERT J. DUNN
LIC. No. 38830
PROFESSIONAL ENGINEER

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. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date:	JUNE 2026
Scale:	1" = 10'
Dwn.By:	NLC
Proj.No.:	3306A011

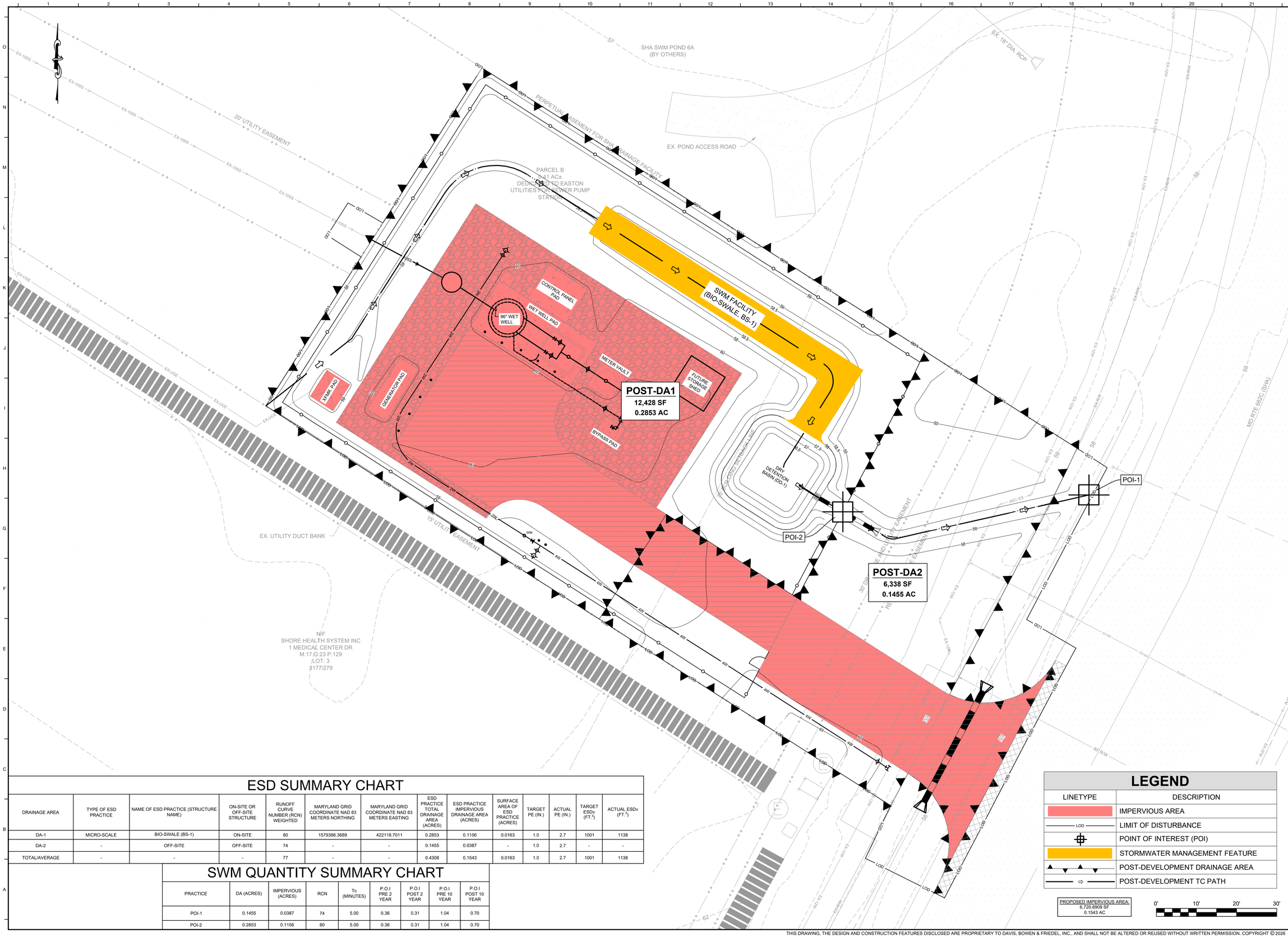
PRE STORMWATER MANAGEMENT PLAN

Dwg.No.:

C-108

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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 ($FT.^3$)
DA-1	MICRO-SCALE	BIO-SWALE (BS-1)	ON-SITE	80	1579386.3689	422118.7011	0.2853	0.1156	0.0163	1.0	2.7	1001	1138
DA-2	-	OFF-SITE	OFF-SITE	74	-	-	0.1455	0.0387	-	1.0	2.7	-	-
TOTAL/AVERAGE	-	-	-	77	-	-	0.4308	0.1543	0.0163	1.0	2.7	1001	1138

SWM QUANTITY SUMMARY CHART

PRACTICE	DA (ACRES)	IMPERVIOUS (ACRES)	RCN	Tc (MINUTES)	P.O.I PRE 2 YEAR	P.O.I POST 2 YEAR	P.O.I PRE 10 YEAR	P.O.I POST 10 YEAR
POI-1	0.1455	0.0387	74	5.00	0.36	0.31	1.04	0.70
POI-2	0.2853	0.1156	80	5.00	0.36	0.31	1.04	0.70

LEGEND

LINETYPE	DESCRIPTION
	IMPERVIOUS AREA
LOD	LIMIT OF DISTURBANCE
	POINT OF INTEREST (POI)
	STORMWATER MANAGEMENT FEATURE
	POST-DEVELOPMENT DRAINAGE AREA
	POST-DEVELOPMENT TC PATH

PROPOSED IMPERVIOUS AREA:
6,720.8909 SF
0.1543 AC

0' 10' 20' 30'

STATE OF MARYLAND
ROBERT J. DUNN
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional ENGINEER the laws of the State of Maryland. License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
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SALISBURY, MARYLAND 410.543.9091
MILFORD, DELAWARE 302.424.1441

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

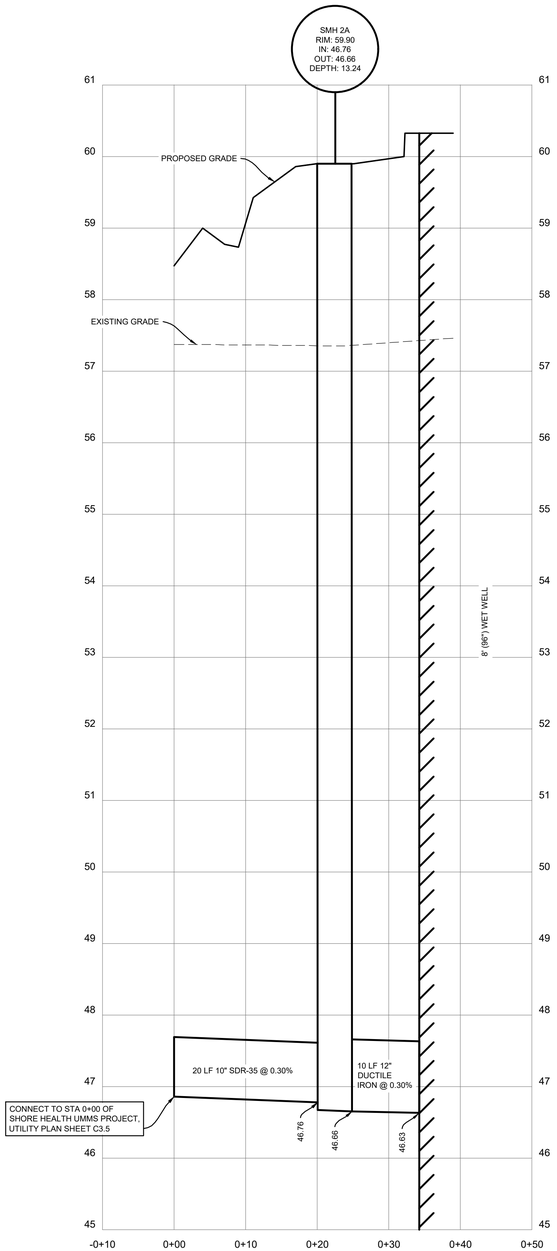
Date: JUNE 2026
Scale: 1" = 10'
Dwn.By: NLC
Proj.No.: 3306A011

POST STORMWATER MANAGEMENT PLAN

Dwg.No.: **C-109**

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GRAVITY SEWER PROFILE

SCALE: 1" = 10' HORIZ.; 1" = 1' VERT.

STORM PIPE SCHEDULE

LABEL	FROM	TO	SIZE/TYPE		CLASS	LENGTH (FT)	INV. IN (FT)	INV. OUT (FT)	Slope (%)
P1	--	OF1	4"	HDPE	N-12	5	57.50	57.50	0.00
P2	OF1	FE1	12"	HDPE	N-12	16	57.50	57.47	0.19

STORM STRUCTURE SCHEDULE

LABEL	DESCRIPTION	RIM ELEV. (FT)	INVERT ELEV.	
			IN (FT)	OUT (FT)
FE1	ADS N-12 FES	57.47	N/A	57.47
OF1	MDOT SHA STANDARD 374.23-SINGLE WR INLET	59.00	57.50	57.50

1" / 0'

0' 10' 20' 30'

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

STATE OF MARYLAND · ROBERT J. DUMAS · LIC. No. 38830 · PROFESSIONAL ENGINEER

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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

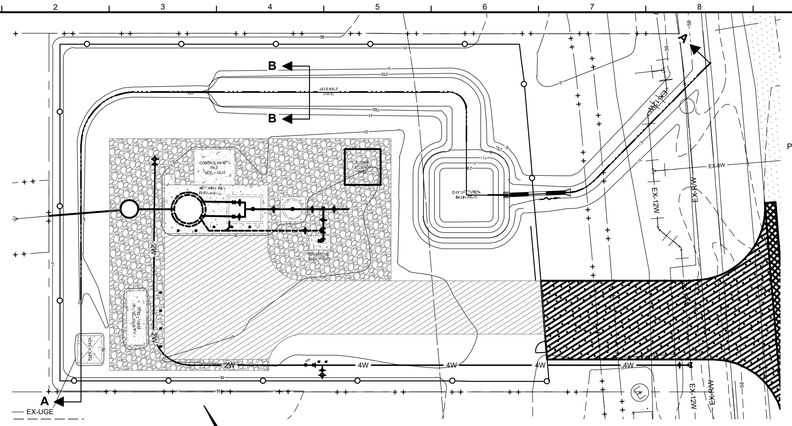
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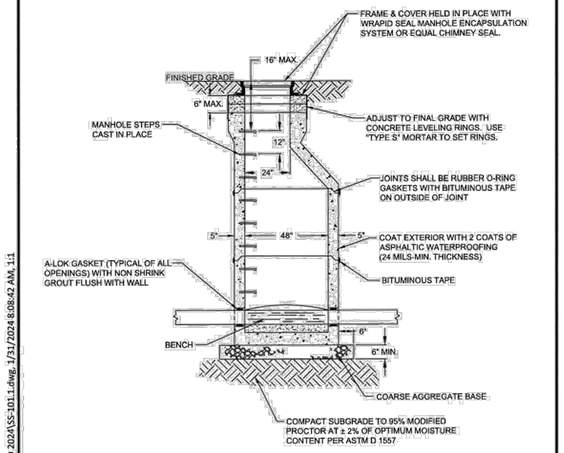
PIPE PROFILES & SCHEDULES

Dwg.No.: C-110

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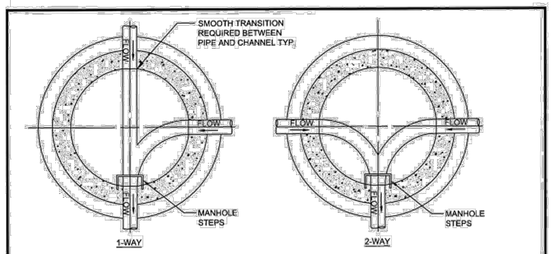

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EX-4W
EX-4W
EX-12W
EX-4W
EX-4W
EX-4



NOTES:
1. PRECAST MANHOLE SHALL BE 4000 PSI REINFORCED CONCRETE THAT CONFORMS TO ASTM C-478 (LATEST) AS MANUFACTURED BY: GILLESPIE PRECAST OR AN APPROVED EQUAL.
2. BENCH AND CHANNEL SHALL BE BRICK, PRECAST OR HAND FORMED CONCRETE. ELEVATION DROP ACROSS MANHOLE SHALL BE A MINIMUM OF 0.1' FROM INVERT IN TO INVERT OUT.
3. MANHOLE STEPS, FRAME AND COVER REQUIRED OVER EFFLUENT SIDE AS SHOWN.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS PRECAST CONCRETE MANHOLE
ISSUED: JANUARY 2024		STANDARD NO.: SS-101.1

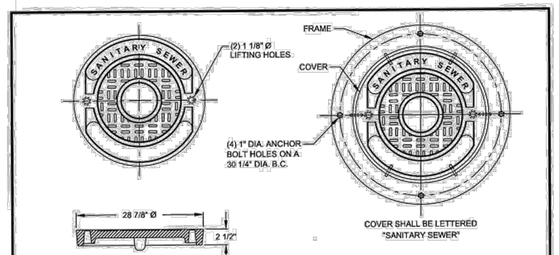
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FLOW CHANNEL NOTES:
1. FLOW CHANNELS SHALL BE EITHER BRICK OR CONCRETE, 4" MIN. THICKNESS. USE "TYPE S" MORTAR FOR BRICK CHANNELS. CONCRETE SHALL BE SHA MIX NO. 1.
2. CHANNEL WIDTH SHALL MATCH INSIDE DIAMETER OF INCOMING AND OUTGOING PIPES. BLEND CHANNEL FOR SMOOTH TRANSITION.
3. BENCH SHALL BE INSTALLED TO TOP OF PIPE, SEE DETAIL.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS MANHOLE FLOW CHANNELS
ISSUED: JANUARY 2024		STANDARD NO.: SS-101.6

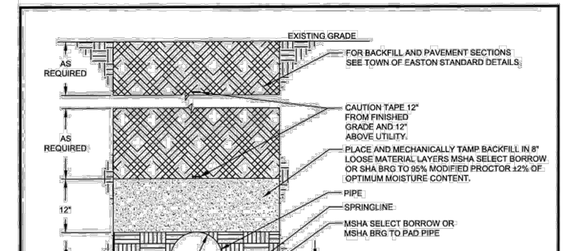
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NOTES:
1. CASTING SHALL CONFORM TO ASTM A-48-64 CLASS 35B IRON MINIMUM.
2. CASTING SHALL HAVE GROUND OR MACHINED BEARING SURFACES.
3. CASTING SHALL BE OF UNIFORM QUALITY, FREE FROM BLOW HOLES, POROSITY, HARD SPOTS, SHRINKAGE DEFECTS, OR OTHER INJURIOUS DEFECTS.
4. CASTING SHALL BE HEAVY DUTY ROADWAY TYPE.
5. FRAME & COVER SHALL BE R-1565 AS MANUFACTURED BY NEENAH FOUNDRY COMPANY OR AN APPROVED EQUAL.
6. CONTRACTOR TO FURNISH AND INSTALL PARSON MANHOLE INSERT, MODEL V2P AT ALL LOCATIONS EXCEPT ARV MANHOLES.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS MANHOLE FRAME & COVER
ISSUED: JANUARY 2024		STANDARD NO.: SS-101.7

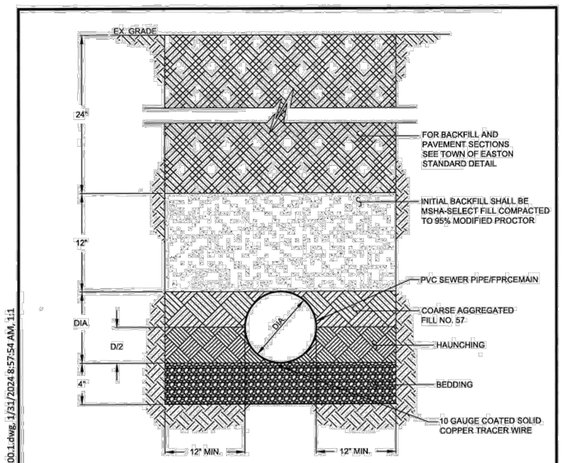
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NOTES:
1. WARNING TAPE SHALL BE PLACED 12" ABOVE PIPE AND 12" BELOW GRADE SURFACE.
2. THE TRACING WIRE SHALL BE A CONTINUOUS CONDUCTOR CONNECTED TO ALL FITTINGS, FIRE HYDRANTS AND SERVICES.
3. ALL FITTINGS SHALL BE AS SPECIFIED IN AWWA C110, MECHANICAL JOINT, DUCTILE IRON, PRESSURE RATED AT 350 PSI.
4. ALL FITTINGS SHALL BE RESTRAINED BY THRUST BLOCKS ACCORDING TO EUC STANDARD DETAILS.
5. FIRM BEARING SHALL BE PROVIDED FOR FULL LENGTH OF BARREL. EXCAVATE FOR BELL HOLES.
6. AFTER PIPE IS INSTALLED ON BEDDING, PLACE BACKFILL IN LIFTS TO SPRINGLINE, CROWN AND COVER, TAMPING AFTER EACH LIFT. LIFTS NOT TO EXCEED 6".
7. THOROUGHLY TAPE MECHANICAL CONNECTIONS OF TRACER WIRE WITH ELECTRICAL TAPE.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS WATER MAIN INSTALLATION
ISSUED: JANUARY 2024		STANDARD NO.: W-100.1

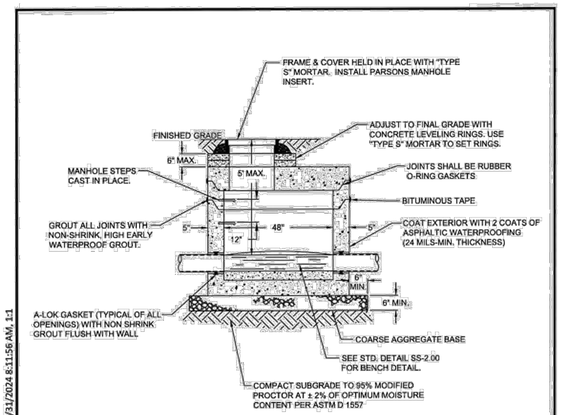
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NOTES:
1. BEDDING, HAUNCHING AND FILL MATERIAL TO THE TOP OF PIPE SHALL BE COARSE AGGREGATE MEETING THE REQUIREMENTS OF AASHTO M43, SIZE NUMBER 57.
2. DURING HAUNCHING, CONTRACTOR SHALL CAREFULLY WORK GRAVEL DOWN AROUND THE BOTTOM OF THE PIPE.
3. WARNING TAPE SHALL BE PLACED 12" ABOVE PIPE AND 12" BELOW GRADE SURFACE.
4. CONTRACTOR TO PLACE FILL IN LIFTS, TAMPING AFTER EACH LIFT. LIFTS NOT TO EXCEED 6".
5. THOROUGHLY TAPE MECHANICAL CONNECTIONS OF TRACER WIRE WITH ELECTRICAL TAPE.
6. THE TRACING WIRE SHALL BE A CONTINUOUS CONDUCTOR CONNECTED TO ALL FITTINGS AND SERVICES.
7. ALL FITTINGS SHALL BE AS SPECIFIED IN AWWA C110-93, RESTRAINED MECHANICAL JOINT, DUCTILE IRON, PRESSURE RATED AT 350 PSI.
8. ALL FITTINGS SHALL BE RESTRAINED BY THRUST BLOCKS ACCORDING TO W-101.1.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS GRAVITY SEWER FORCEMAIN TRENCH
ISSUED: JANUARY 2024		STANDARD NO.: SS-100.1

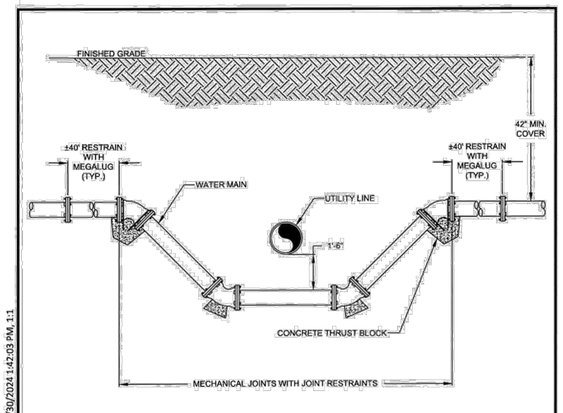
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NOTES:
1. PRECAST MANHOLE SHALL BE 4000 PSI REINFORCED CONCRETE THAT CONFORMS TO ASTM C-478 (LATEST) AS MANUFACTURED BY: GILLESPIE PRECAST OR AN APPROVED EQUAL.
2. BENCH AND CHANNEL SHALL BE BRICK, PRECAST OR HAND FORMED CONCRETE. ELEVATION DROP ACROSS MANHOLE SHALL BE A MINIMUM OF 0.1' FROM INVERT IN TO INVERT OUT.
3. MANHOLE STEPS, FRAME AND COVER REQUIRED OVER EFFLUENT SIDE AS SHOWN.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS SHALLOW PRECAST MANHOLE
ISSUED: JANUARY 2024		STANDARD NO.: SS-101.2

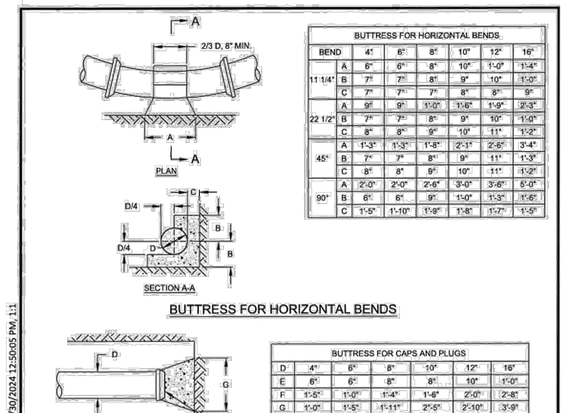
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NOTES:
1. BELL RESTRAINTS SHALL BE INSTALLED PER THE DESIGN ENGINEER'S RECOMMENDATION.
2. JOINT RESTRAINTS SHALL BE EPOXY COATED WITH STAINLESS STEEL HARDWARE.
3. JOINT RESTRAINTS SHALL BE MANUFACTURED BY EBAA OR APPROVED EQUAL.

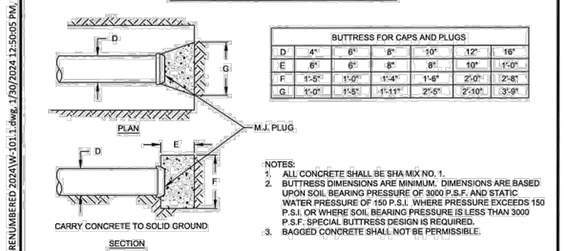
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EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS WATER MAIN DEFLECTION
ISSUED: JANUARY 2024		STANDARD NO.: W-100.3

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BUTTRESS FOR HORIZONTAL BENDS

BUTTRESS FOR HORIZONTAL BENDS							
BEND		4"	6"	8"	10"	12"	16"
11 1/4°	A	6"	6"	8"	10"	1'-0"	1'-4"
	B	7"	7"	8"	9"	10"	1'-0"
	C	7"	7"	7"	8"	8"	9"
22 1/2°	A	9"	9"	1'-0"	1'-8"	1'-9"	2'-3"
	B	7"	7"	8"	9"	10"	1'-0"
	C	8"	8"	9"	10"	11"	1'-2"
45°	A	1'-3"	1'-3"	1'-8"	2'-1"	2'-6"	3'-4"
	B	7"	7"	8"	9"	11"	1'-3"
	C	8"	8"	9"	10"	11"	1'-2"
90°	A	2'-0"	2'-0"	2'-6"	3'-0"	3'-6"	5'-0"
	B	6"	6"	9"	1'-0"	1'-3"	1'-6"
	C	1'-5"	1'-10"	1'-9"	1'-8"	1'-7"	1'-5"



BUTTRESS FOR CAPS AND PLUGS

BUTTRESS FOR CAPS AND PLUGS						
D	4"	6"	8"	10"	12"	16"
E	6"	6"	8"	8"	10"	1'-0"
F	1'-5"	1'-0"	1'-4"	1'-8"	2'-0"	2'-8"
G	1'-0"	1'-5"	1'-11"	2'-5"	2'-10"	3'-9"

NOTES:
1. ALL CONCRETE SHALL BE SHA MIX NO. 1.
2. BUTTRESS DIMENSIONS ARE MINIMUM. DIMENSIONS ARE BASED UPON SOIL BEARING PRESSURE OF 3000 P.S.F. AND STATIC WATER PRESSURE OF 150 P.S.I. WHERE PRESSURE EXCEEDS 150 P.S.I. OR WHERE SOIL BEARING PRESSURE IS LESS THAN 3000 P.S.F. SPECIAL BUTTRESS DESIGN IS REQUIRED.
3. BAGGED CONCRETE SHALL NOT BE PERMISSIBLE.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS BUTTRESSES FOR CAPS AND HORIZONTAL BENDS
ISSUED: JANUARY 2024		STANDARD NO.: W-101.1

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STATE OF MARYLAND · ROBERT J. DUMAL · LIC. No. 38830 · PROFESSIONAL ENGINEER

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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: NOT TO SCALE
Dwn.By: NLC
Proj.No.: 3306A011

SITE & UTILITY DETAILS

Dwg.No.: C-501

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DIMENSION TABLE							
PIPE DIA. IN.	TABLE PRESSURE PSI	BEND ANGLE (DEG.)	CONCRETE VOLUME (CY)	CUBE SIZE (FT.)	STIRRUP DIA. (IN.)	STIRRUP EMBEDMENT (IN.)	STIRRUP BAR #
4"	250	11.25	0.21	1.8	5/8	17	5
		22.5	0.43	2.3			
		45	0.77	2.8			
6"	250	11.25	0.48	2.4	5/8	17	5
		22.5	0.95	3.0			
		45	1.79	3.6			
8"	250	11.25	0.86	2.9	5/8	17	5
		22.5	1.65	3.5			
		45	3.22	4.4			
10"	250	11.25	1.39	3.3	5/8	17	5
		22.5	2.62	4.1			
		45	4.97	4.1			
12"	250	11.25	1.94	3.7	5/8	17	5
		22.5	3.91	4.7			
		45	6.89	5.7	7/8	24	7
14"	250	11.25	2.62	4.1	5/8	17	5
		22.5	5.26	5.2	3/4	20	6
		45	9.70	6.4	1	27	8
16"	250	11.25	3.44	4.5	5/8	17	5
		22.5	6.89	5.7	7/8	24	7
		45	12.63	7.0	1 1/8	30	9

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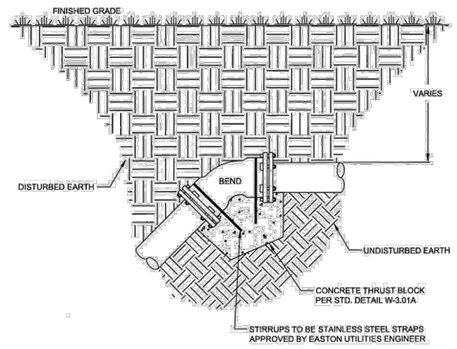
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EU ENGINEERING DEPARTMENT	
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ISSUED: JANUARY 2024	

EASTON UTILITIES STANDARD DETAILS

THRUST BLOCK VERTICAL BEND DIMENSION TABLE

STANDARD NO.: W-101.2.1

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1. CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
2. POUR CONCRETE BLOCKING AGAINST UNDISTURBED EARTH.
3. ALL CONCRETE SHALL BE SHA MIX #1.
4. WRAP PIPE AND/OR FITTINGS WITH 2 LAYERS OF POLYETHYLENE FILM WHERE IN CONTACT WITH CONCRETE.
5. KEEP CONCRETE CLEAR OF ALL JOINTS AND ACCESSORIES.
6. STIRRUPS SHALL BE STAINLESS STEEL STRAPS APPROVED BY EASTON UTILITIES ENGINEER.
7. CONTRACTOR MAY UTILIZE JOINT RESTRAINTS AND STAINLESS STEEL ALL THREADS IN PLACE OF VERTICAL BEND THRUST BLOCK WHEN APPROVED BY EASTON UTILITIES ENGINEER.
8. SAKRETE SHALL NOT BE PERMISSBLE.

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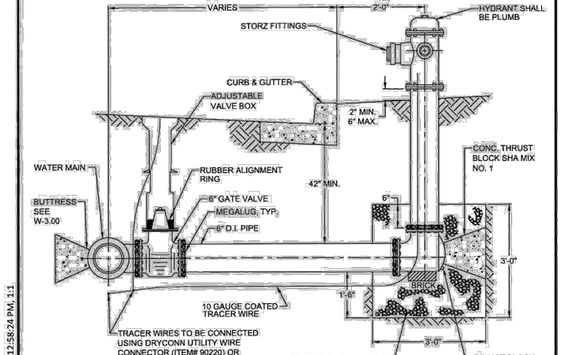
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EU ENGINEERING DEPARTMENT	
1/31/2024 DATE	
ISSUED: JANUARY 2024	

EASTON UTILITIES STANDARD DETAILS

THRUST BLOCK VERTICAL BEND

STANDARD NO.: W-101.2

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NOTES:
1. FIRE HYDRANTS SHALL BE MUELLER A423 OR APPROVED EQUAL MEETING AWWA C502.
2. FIRE HYDRANT SPECIFICATIONS:
   - A. TRAFFIC TYPE, PAINTED FOREST GREEN.
   - B. OPERATING NUT-HEXAGON 1 1/2" FLAT TO FLAT-OPEN LEFT
   - C. 6" MECHANICAL JOINT BASE.
   - D. STEAMER NOZZLE-5" INTEGRAL STORZ FITTING AND CAP-FITTING SHALL HAVE BRASS METAL FACE AND HARD ANODIZED ALUMINUM RAMPS AND LUGS MADE OF FORGED OR EXTRUDED 6061-T6 ALUMINUM. CAP SHALL BE FITTED WITH A SUCTION SEAL AND CONNECTED TO THE HYDRANT WITH A 0.125" VINYL COATED AIRCRAFT CABLE.
   - E. 2-2.1/2"-HOSE NOZZLES-HOSE THREAD 3 1/2" DIA., 8 THREADS/INCH
3. GATE VALVES SHALL MEET AWWA C509 CONFORMING TO EASTON UTILITIES REGULATIONS REGARDING GATE VALVES. VALVES SHALL BE OPEN RIGHT. SEE GATE VALVE DETAIL.
4. FIRE HYDRANTS SHALL BE INSTALLED ON PROPERTY LINES WHERE POSSIBLE.
5. MINIMUM HYDRANT SPACING SHALL BE 500' MAX FOR SINGLE FAMILY RESIDENTIAL, 375' MAX FOR MULTI-FAMILY, COMMERCIAL, ETC. AS MEASURED ALONG THE IMPROVED RIGHT OF WAY.
6. BONNETS SHALL BE PAINTED AS DIRECTED BY EASTON UTILITIES.

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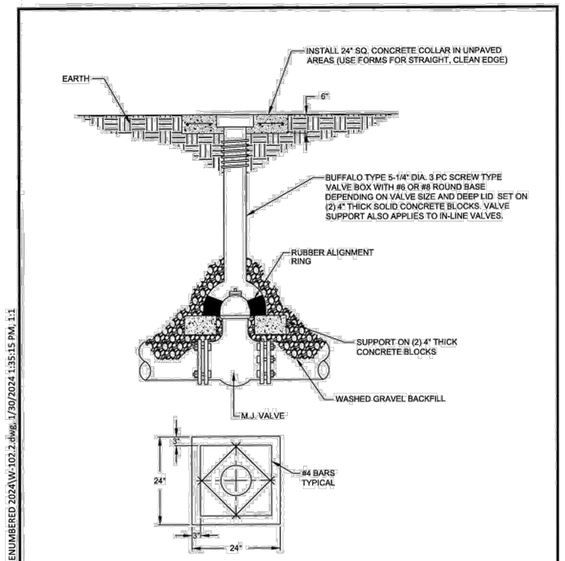
APPROVAL	REVISED
EU ENGINEERING DEPARTMENT	
1/31/2024 DATE	
ISSUED: JANUARY 2024	

EASTON UTILITIES STANDARD DETAILS

FIRE HYDRANT

STANDARD NO.: W-102.1

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NOTES :
1. ALL REINFORCEMENT SHALL BE #4 REBAR UNLESS OTHERWISE NOTED.

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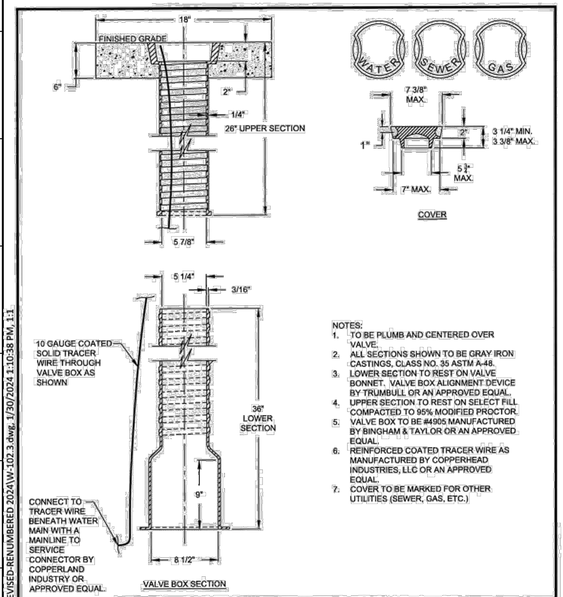
APPROVAL	REVISED
EU ENGINEERING DEPARTMENT	
1/31/2024 DATE	
ISSUED: JANUARY 2024	

EASTON UTILITIES STANDARD DETAILS

GATE VALVE BOX ASSEMBLY

STANDARD NO.: W-102.2

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NOTES:
1. TO BE PLUMB AND CENTERED OVER VALVE.
2. ALL SECTIONS SHOWN TO BE GRAY IRON CASTINGS, CLASS NO. 35 ASTM A-48.
3. LOWER SECTION TO REST ON VALVE BONNET. VALVE BOX ALIGNMENT DEVICE BY TRUMBULL OR AN APPROVED EQUAL.
4. UPPER SECTION TO REST ON SELECT FILL COMPACTED TO 95% MODIFIED PROCTOR.
5. VALVE BOX TO BE #4905 MANUFACTURED BY BINGHAM & TAYLOR OR AN APPROVED EQUAL.
6. REINFORCED COATED TRACER WIRE AS MANUFACTURED BY COPPERHEAD INDUSTRIES, LLC OR AN APPROVED EQUAL.
7. COVER TO BE MARKED FOR OTHER UTILITIES (SEWER, GAS, ETC.)

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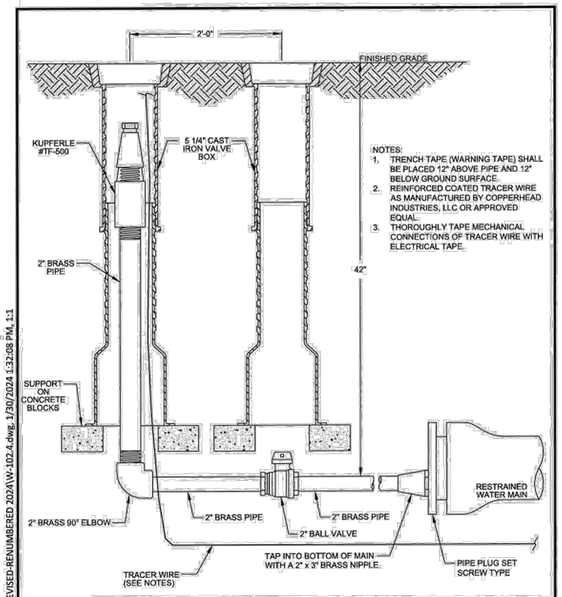
APPROVAL	REVISED
EU ENGINEERING DEPARTMENT	
1/31/2024 DATE	
ISSUED: JANUARY 2024	

EASTON UTILITIES STANDARD DETAILS

SCREW TYPE VALVE BOX

STANDARD NO.: W-102.3

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NOTES:
1. TRENCH TAPE (WARNING TAPE) SHALL BE PLACED 12" ABOVE PIPE AND 12" BELOW GROUND SURFACE.
2. REINFORCED COATED TRACER WIRE AS MANUFACTURED BY COPPERHEAD INDUSTRIES, LLC OR APPROVED EQUAL.
3. THOROUGHLY TAPE MECHANICAL CONNECTIONS OF TRACER WIRE WITH ELECTRICAL TAPE.

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APPROVAL	REVISED
EU ENGINEERING DEPARTMENT	
1/31/2024 DATE	
ISSUED: JANUARY 2024	

EASTON UTILITIES STANDARD DETAILS

BLOW OFF SAMPLING STATION

STANDARD NO.: W-102.4

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SHA PORTLAND CEMENT CONCRETE MIXTURE

MIX NO.	28 DAY SPECIFIED DESIGN COMPRES-SIVE STRENGTH (PSI)	MIN. CEMENT FACTOR (LB/YD.)3	COARSE AGGREGATE AASHTO M43 SIZE	MAX. WATER CEMENT RATIO	SLUMP (IN)	TOTAL AIR CONTENT (%)	CONCRETE TEMPERATURE (F)
1	2500	455	57 or 67	0.55	2 - 5	5 - 8	50 - 95
2	3000	530	57 or 67	0.50	2 - 5	5 - 8	50 - 95
3	3500	580	57 or 67	0.50	2 - 5	5 - 8	50 - 95
4	3500	615	57 or 67	0.55	4 - 8	N/A	50 - 95
5	3500	580	7	0.50	2 - 5	5 - 8	50 - 95
6	4500	615	57 or 67	0.45	2 - 5	5 - 8	50 - 95
7	4200	580	57	0.50	1 1/2 - 3	5 - 8	50 - 95
8	4000	750	7	0.42	2 - 5	5 - 8	50 - 95
9	3000	800	57 or 67	0.45	4 - 8	5 - 8	60 - 100
10	4500	700	3/4" - NO. 4	0.45	2 - 5	6 - 9	50 - 80
11	4200	[illegible]	57 or 67	0.45	2 - 5	5 - 8	50 - 80
12	4200	[illegible]	3/4" - NO. 4	0.45	2 - 5	6 - 9	50 - 80
13	4000	615	57 or 67	0.45	2 - 5	5 - 8	50 - 95
HE	3000	N/A	N/A	N/A	3 - 9	5 - 8	60 - 100
PC	N/A	450	7 OR 8	0.45	N/A	15 - 25	N/A
WT	2500	650	57	0.45	5 MAX.	5 - 8	60 - 95

NOTE:
1. STATE CERTIFIED CONCRETE MANUFACTURER.

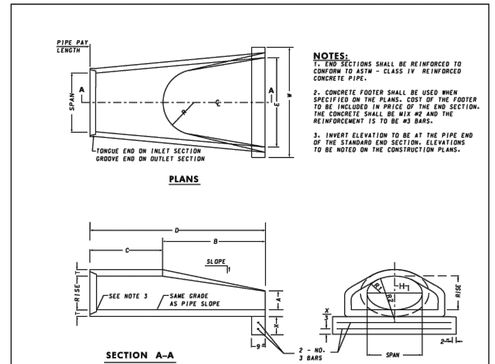
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APPROVAL	REVISED
EU ENGINEERING DEPARTMENT	
1/31/2024 DATE	
ISSUED: JANUARY 2024	

EASTON UTILITIES STANDARD DETAILS

SHA PORTLAND CEMENT CONCRETE MIXTURE

STANDARD NO.: G-100.1



QUANTITIES FOR ESTIMATING PURPOSES ONLY

HERCP			CONCRETE END SECTION									CONCRETE FOOTER			
RISE	SPAN	EQUIV. DIA.	APPR. SLOPE	WALL T	A	B	C	D	E	H	R	R1	R2	W	X	CONC. (CY)	REINF. (LBS.)
14"	23"	18"	3.1:1	2 3/4"	8"	2'-3"	3'-9"	6'-0"	3'-5"	1 3/8"	6"	6"	1'-8"	4'-5"	12"	0.12	3.07
19"	30"	24"	2.8:1	3 1/4"	8 1/2"	3'-3"	5'-3"	6'-0"	4'-6"	1 7/8"	7"	8 1/4"	2'-2 1/4"	5'-6"	15"	0.19	3.86
23"	34"	27"	2.9:1	3 1/2"	9"	4'-0"	6'-0"	6'-0"	5'-1"	1 3/4"	8"	9 1/4"	2'-5 1/4"	6'-1"	15"	0.23	4.32
24"	38"	30"	2.9:1	3 3/4"	9 1/2"	4'-6"	6'-0"	6'-0"	5'-8"	2 1/8"	9"	10 1/4"	2'-8 3/4"	6'-8"	15"	0.23	4.76
29"	45"	36"	2.7:1	4 1/2"	11 1/4"	5'-0"	7'-0"	8'-0"	6'-9"	2 5/8"	11"	12 1/4"	3'-3 1/4"	8'-0"	15"	0.28	5.76

SPECIFICATION 305	CATEGORY CODE ITEMS
APPROVED	Kirk G. McCall, DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

REVISIONS:	APPROVAL + SHA	APPROVAL + FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	7-14-09	APPROVAL 8-05-09
REVISED	7-1-09	REVISED 7-27-09
REVISED		REVISED
REVISED		REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD CONCRETE END SECTION HORIZONTAL ELLIPTICAL PIPE

STANDARD NO. *MD 369.00*

STATE OF MARYLAND — ROBERT J. DUNN — Lic. No. 38830 — PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
ARCHITECTS · ENGINEERS · SURVEYORS
EASTON, MARYLAND 410.770.4744 | SALISBURY, MARYLAND 410.543.9091
MILFORD, DELAWARE 302.424.1441

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

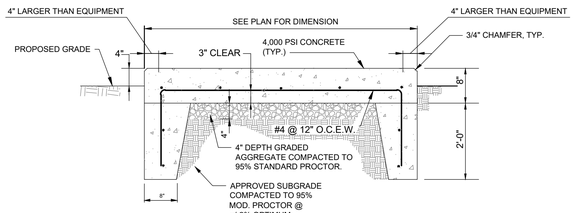
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Date: JUNE 2026
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Dwn.By: NLC
Proj.No.: 3306A011

SITE & UTILITY DETAILS

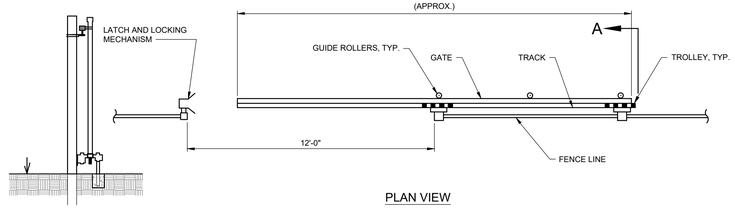
Dwg.No.: **C-502**

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EQUIPMENT PAD DETAIL

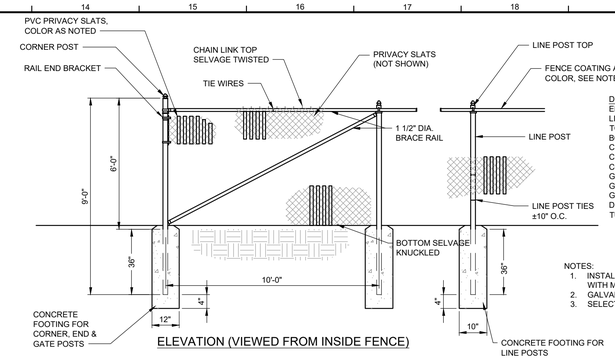
SCALE: NOT TO SCALE



SECTION A

PLAN VIEW

NOTE:
PROVIDE DETAILED SHOP DRAWINGS FOR REVIEW.



ELEVATION (VIEWED FROM INSIDE FENCE)

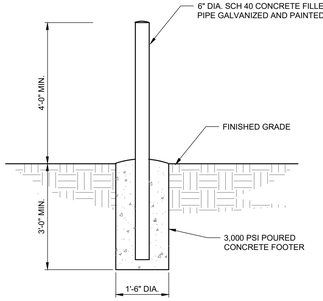
FENCE SCHEDULE

DESCRIPTION	DIAMETER & GAUGE	STANDARD
END/CORNER POST	3"	SS 40
LINE POST	2"	SS 40
TOP RAIL	1-5/8"	SS 40
BOTTOM (RAIL/WIRE)	6 GAUGE	N/A
CHAIN LINK FABRIC	9 GAUGE	N/A
CHAIN LINK MESH SIZE	2"	N/A
CORNER/GATE SUPPORT RAIL	2"	SS 40
GATE POST	4"	SS 40
GATE FRAME	2"	SS 40
GATE FABRIC	9 GAUGE	N/A
DIAGONAL TRUSS (WITH TURNBUCKLE)	3/8" ROD	N/A

NOTES:
1. INSTALLATION WILL BE COMPLETED IN ACCORDANCE WITH MANUFACTURE'S SPECIFICATIONS.
2. GALVANIZED CHAIN LINK FENCE FABRIC AND POSTS.
3. SELECT GREEN PRIVACY SLATS.

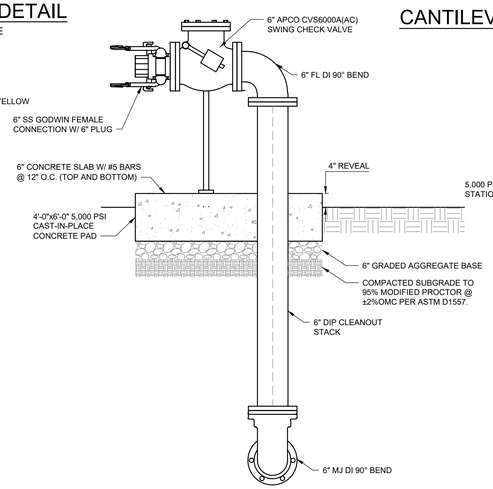
CHAIN LINK FENCE DETAIL

SCALE: NOT TO SCALE



BOLLARD DETAIL

SCALE: NOT TO SCALE

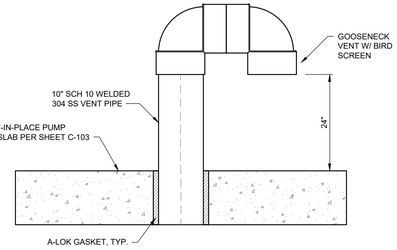


PUMP STATION BYPASS DETAIL

SCALE: NOT TO SCALE

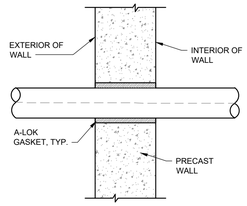
CANTILEVER SLIDING GATE DETAIL

SCALE: NOT TO SCALE



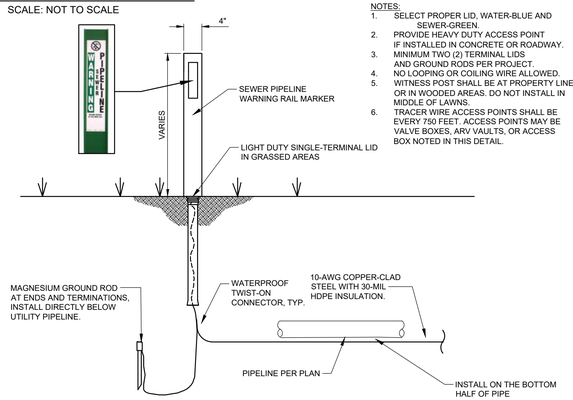
10" GOOSENECK VENT DETAIL

SCALE: NOT TO SCALE



PRECAST WALL PIPE PENETRATION DETAIL

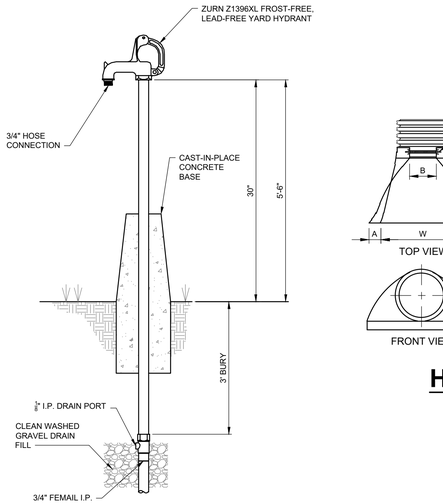
SCALE: NOT TO SCALE



NOTES:
1. SELECT PROPER LID, WATER-BLUE AND SEWER-GREEN.
2. PROVIDE HEAVY DUTY ACCESS POINT IF INSTALLED IN CONCRETE OR ROADWAY.
3. MINIMUM TWO (2) TERMINAL LIDS AND GROUND RODS PER PROJECT.
4. NO LOOPING OR COILING WIRE ALLOWED.
5. WITNESS POST SHALL BE AT PROPERTY LINES OR IN WOODED AREAS. DO NOT INSTALL IN MIDDLE OF LAWNS.
6. TRACER WIRE ACCESS POINTS SHALL BE EVERY 750 FEET. ACCESS POINTS MAY BE VALVE BOXES, ARV VAULTS, OR ACCESS BOX NOTED IN THIS DETAIL.

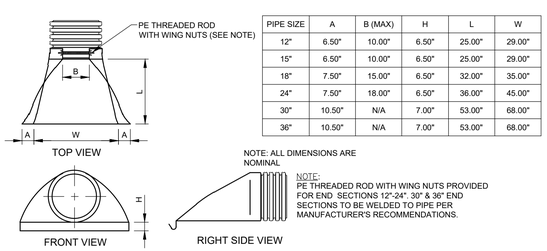
TRACER WIRE DETAIL

SCALE: NOT TO SCALE



YARD HYDRANT DETAIL

SCALE: NOT TO SCALE

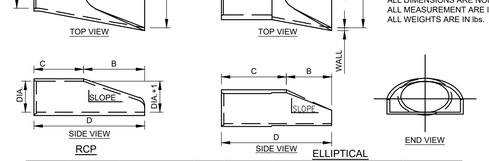


PIPE SIZE	A	B (MAX)	H	L	W
12"	6.50"	10.00"	6.50"	25.00"	29.00"
15"	6.50"	10.00"	6.50"	25.00"	29.00"
18"	7.50"	15.00"	6.50"	32.00"	35.00"
24"	7.50"	18.00"	6.50"	36.00"	45.00"
30"	10.50"	N/A	7.00"	53.00"	68.00"
36"	10.50"	N/A	7.00"	53.00"	68.00"

NOTE: ALL DIMENSIONS ARE NOMINAL

NOTE:
PE THREADED ROD WITH WING NUTS PROVIDED FOR END SECTIONS 12"-24", 30" & 36" END SECTIONS TO BE WELDED TO PIPE PER MANUFACTURER'S RECOMMENDATIONS.

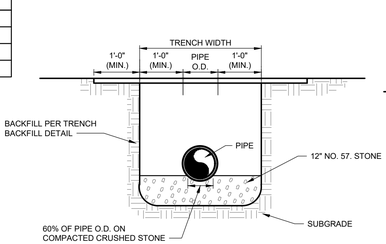
HDPE END SECTION DETAILS



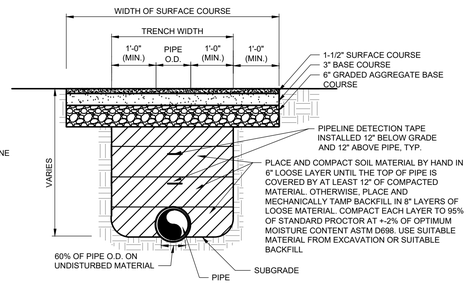
NOTE:
ALL DIMENSIONS ARE NOMINAL
ALL MEASUREMENT ARE IN INCHES
ALL WEIGHTS ARE IN lbs.

PIPE	SLOPE	WALL THICKNESS	B	C	D	E	R-1	UNIT WEIGHT
15	3:1	2 1/4	27	46	73	30	--	910
18	3:1	2 1/2	27	46	73	36	--	1190
24	3:1	3	42	31 1/2	73 1/2	48	--	1770
14X23	3:1	2 3/4	26	3 11	73	36	--	1090

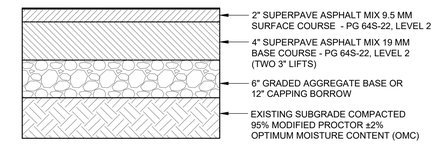
RCP END SECTION DETAILS



CRUSHED STONE BEDDING



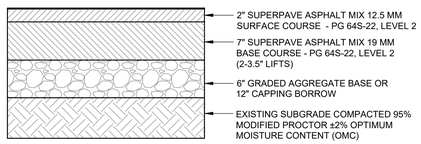
TRENCH BACKFILL



FULL DEPTH ASPHALT SECTION (PUMP STATION SITE)

SCALE: NOT TO SCALE

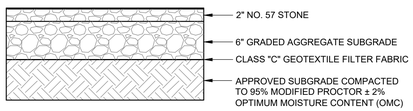
NOTE:
1. SEE ENTRANCE PLANS FOR ENTRANCE PAVEMENT SECTION DETAILS.



FULL DEPTH ASPHALT SECTION-MODERATE DUTY PAVEMENT (MDOT-SHA ROADS)

SCALE: NOT TO SCALE

NOTE:
1. MDOT-SHA ROADS MODERATE DUTY PAVEMENT SECTION FOR MINOR ARTERIAL ROADS, AS REQUIRED DURING CONSTRUCTION.
2. SEE EASTON UTILITIES STANDARD DETAIL NO. SS-100.1 ON SHEET C-501 FOR PIPE TRENCH DETAILS.



GRAVEL DRIVE DETAIL

SCALE: NOT TO SCALE

STATE OF MARYLAND
ROBERT J. DUNN
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
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MILFORD, DELAWARE 302.424.1441
EASTON, MARYLAND 410.770.4744

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

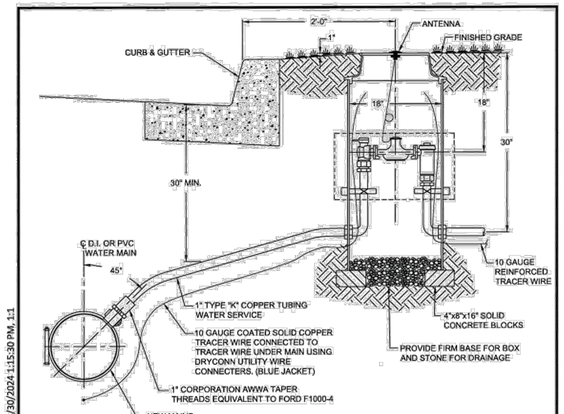
Date: JUNE 2026
Scale: AS SHOWN
Dwn.By: NLC
Proj.No.: 3306A011

SITE & UTILITY DETAILS

Dwg.No.: **C-503**

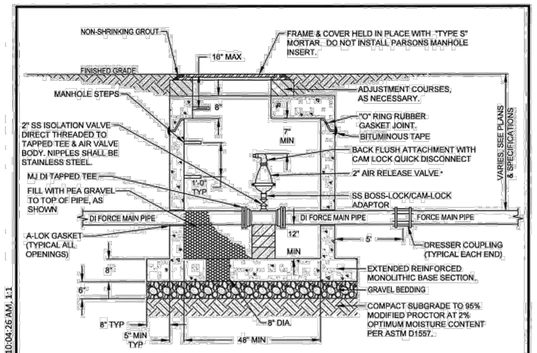
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NOTES:
1. TUBING TO BE LAID LEVEL WITH TOP OF MAIN UNLESS OTHERWISE DIRECTED BY ENGINEER.
2. CORPORATION COCK TO BE LEFT OPEN, METER ANGLE VALVE LEFT CLOSED.
3. METER BOX MUELLER NO. 330RS1826FBBNN OR AN APPROVED EQUAL FURNISHED AND INSTALLED BY CONTRACTOR. COVER SHALL BE TRUMBULL; POLYMER 367-5771 LID WITH WATER LOGO AND 367-5680 FOR TRAFFIC BEARING. FRAME SHALL BE AY MCDONALD TYPE C OR APPROVED EQUAL. A 3/4" DIA. HOLE SHALL BE DRILLED IN THE CENTER OF ALL LIDS FOR EXTERNAL ANTENNA INSTALLATION.
4. SURFACE RESTORATION SHALL BE PER TOWN OF EASTON STANDARDS.
5. PIPE SHALL BE TAPPED WITH A HOLE CUTTER THAT WILL RETAIN THE COUPON IN ACCORDANCE WITH UNI-BELL PLASTIC PIPE ASSOCIATION UNI-B-3.
6. THOROUGHLY TAPE MECHANICAL CONNECTIONS WITH ELECTRICAL TAPE.
7. METER SHALL BE FURNISHED BY EASTON UTILITIES.

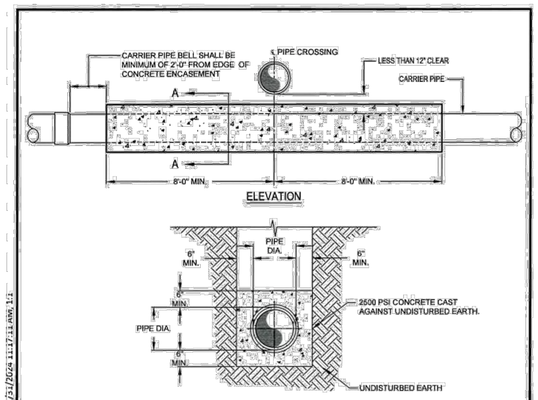
APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS 1" WATER SERVICE
ISSUED: JANUARY 2024		STANDARD NO.: W-103.1



*AIR RELEASE VALVE TO BE A.R.I. MODEL D-025 (HDPE), 2" NPT INLET, 1" NPT OUTLET

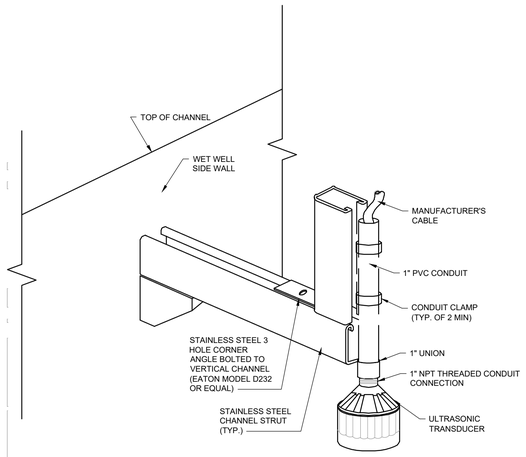
NOTES:
1. STRUCTURE TO BE 4000PSI REINFORCED CONCRETE THAT CONFORMS TO ASTM C-478 AND AASHTO M199. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL.
2. INSTALL FRAME AND COVER AT PROPOSED FINISHED GRADE, AS DIRECTED. UTILIZING BRICK OR PRECAST ADJUSTMENT COURSES, AS NECESSARY. MINIMUM ONE LAYER OF BRICK OR 3" OF CONCRETE WITH A MAXIMUM 6" STACKING HEIGHT.
3. PIPE OPENINGS SHALL BE AS NECESSARY FOR SIZE, LOCATION AND INVERTS PROVIDED ON THE SITE PLANS.
4. EXTERIOR TO BE COATED WITH TWO (2) COATS OF WATERPROOF BITUMASTIC COMPOUND (24 MILS MIN. THICKNESS).
5. FORCEMAIN PIPE SIZE AND MATERIAL AS INDICATED IN PLANS AND SPECIFICATIONS.
6. ALL MATERIALS TO BE STAINLESS STEEL UNLESS OTHERWISE NOTED. NO GALVANIZED FITTINGS TO BE IN MANHOLE.
7. PROVIDE 8" DIAMETER OPENING FOR FRENCH DRAIN, AS SHOWN. FRENCH DRAIN AND BOTTOM OF MANHOLE TO BE FILLED WITH PEA GRAVEL TO TOP OF FORCEMAIN.
8. FORCEMAIN TO BE SUPPORTED BY BLOCKING, AS SHOWN, UNDER AIR RELEASE VALVE.
9. ALL COMPONENTS IN AIR RELEASE VAULT SHALL BE STAINLESS STEEL.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS AIR RELEASE VALVE ASSEMBLY IN PRECAST MANHOLE
ISSUED: JANUARY 2024		STANDARD NO.: SS-104.1



NOTES:
1. FOR ALL UTILITY CROSSINGS SEPARATED BY LESS THAN 12", 18" SEPARATION BETWEEN FOR WATER, SEWER AND STORM WATER. LOWER UTILITY TO BE ENCASED.
2. FOR ENCASEMENT OF SEWER MAIN WHICH CROSSES UNDER UTILITIES OTHER THAN WATER, ENCASEMENT LENGTH SHALL BE REDUCED TO 5 FEET ON EITHER SIDE OF THE UTILITY CROSSING.
3. WHEN CONCRETE ENCASEMENT OF PVC MAIN IS REQUIRED, TRANSITION TO DUCTILE IRON PIPE FOR FULL LENGTH OF ENCASEMENT PLUS 2'-0" ON EACH SIDE. ENCASEMENT OF PVC MAIN WILL NOT BE ACCEPTED.
4. CONCRETE TO BE SHA MIX #1.
5. CONCRETE TO BE CAST AGAINST UNDISTURBED EARTH.

APPROVAL	REVISED	
EU ENGINEERING DEPARTMENT 1/31/2024 DATE		EASTON UTILITIES STANDARD DETAILS CONCRETE ENCASEMENT
ISSUED: JANUARY 2024		STANDARD NO.: G-101.1



ULS TRANSDUCER MOUNTING DETAIL

SCALE: NOT TO SCALE

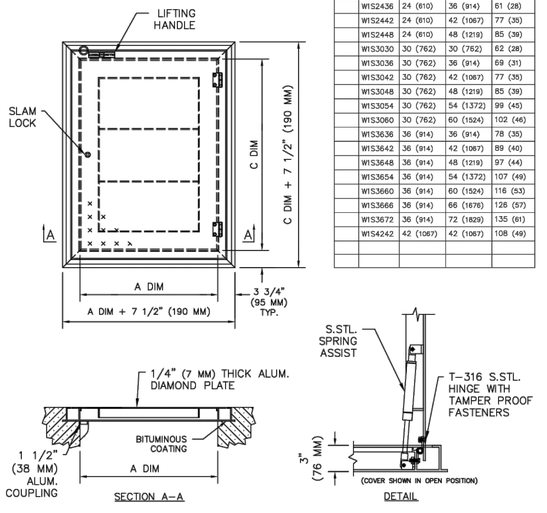
SERIES W1S ACCESS DOOR

STANDARD FEATURES:

- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG PER SQ. METER LOAD RATING)
- EXTRUDED ALUMINUM CHANNEL FRAME
- SINGLE LEAF CONSTRUCTION
- AUTO–LOCK T–316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T–316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T–316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT–IN EPDM CUSHION/GASKET
- NON–OZONE DEPLETING BITUMINOUS COATING
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE

HALLIDAY PRODUCTS
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Sales@HallidayProducts.com

STANDARD SIZES				
QTY.	MODEL NO.	A DIM INCHES (MM)	C DIM INCHES (MM)	UNIT WT. LBS. (KG)
	W1S2424	24 (610)	24 (610)	46 (20)
	W1S2430	24 (610)	30 (762)	51 (23)
	W1S2436	24 (610)	36 (914)	61 (28)
	W1S2442	24 (610)	42 (1067)	77 (35)
	W1S2448	24 (610)	48 (1219)	85 (39)
	W1S3030	30 (762)	30 (762)	62 (28)
	W1S3036	30 (762)	36 (914)	69 (31)
	W1S3042	30 (762)	42 (1067)	77 (35)
	W1S3048	30 (762)	48 (1219)	85 (39)
	W1S3054	30 (762)	54 (1372)	99 (45)
	W1S3060	30 (762)	60 (1524)	102 (46)
	W1S3636	36 (914)	36 (914)	78 (35)
	W1S3642	36 (914)	42 (1067)	89 (40)
	W1S3648	36 (914)	48 (1219)	97 (44)
	W1S3654	36 (914)	54 (1372)	107 (49)
	W1S3660	36 (914)	60 (1524)	116 (53)
	W1S3666	36 (914)	66 (1676)	126 (57)
	W1S3672	36 (914)	72 (1829)	135 (61)
	W1S4242	42 (1067)	42 (1067)	108 (49)



W1S SERIES RO

METER PIT ACCESS HATCH DETAIL

SCALE: NOT TO SCALE

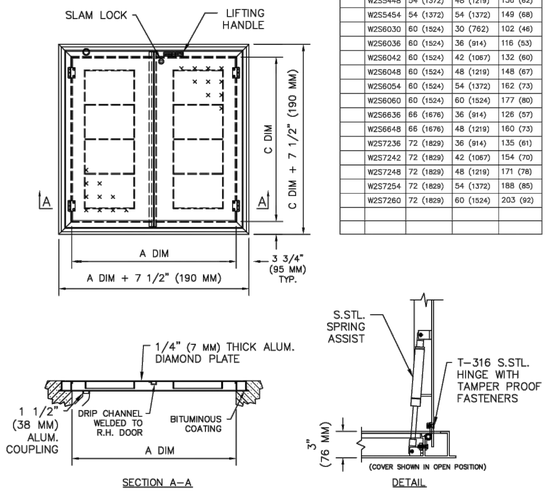
SERIES W2S ACCESS DOOR

STANDARD FEATURES:

- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG PER SQ. METER LOAD RATING)
- EXTRUDED ALUMINUM CHANNEL FRAME
- DOUBLE LEAF CONSTRUCTION
- AUTO–LOCK T–316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T–316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T–316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT–IN EPDM CUSHION/GASKET
- NON–OZONE DEPLETING BITUMINOUS COATING
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE

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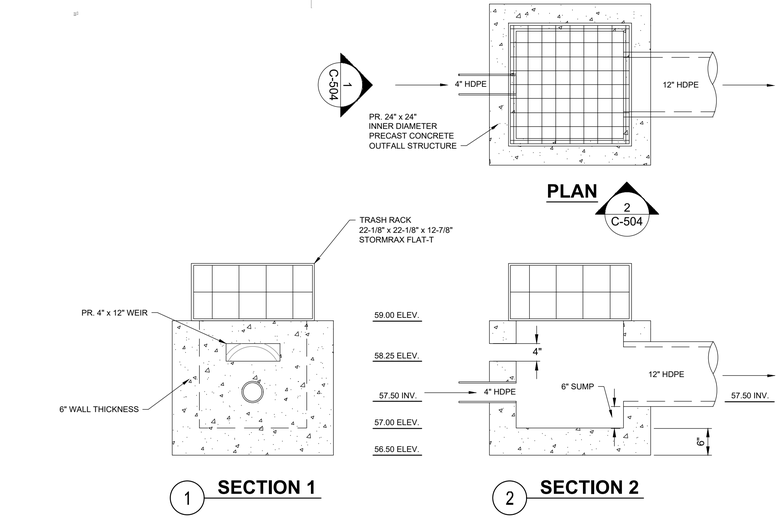
STANDARD SIZES				
QTY.	MODEL NO.	A DIM INCHES (MM)	C DIM INCHES (MM)	UNIT WT. LBS. (KG)
	W2S4242	42 (1067)	42 (1067)	108 (48)
	W2S4842	48 (1219)	42 (1067)	115 (52)
	W2S4848	48 (1219)	48 (1219)	126 (57)
	W2S5442	54 (1372)	42 (1067)	124 (56)
	W2S5448	54 (1372)	48 (1219)	136 (62)
	W2S5454	54 (1372)	54 (1372)	149 (68)
	W2S6030	60 (1524)	30 (762)	102 (46)
	W2S6036	60 (1524)	36 (914)	116 (53)
	W2S6042	60 (1524)	42 (1067)	132 (60)
	W2S6048	60 (1524)	48 (1219)	148 (67)
	W2S6054	60 (1524)	54 (1372)	162 (73)
	W2S6060	60 (1524)	60 (1524)	177 (80)
	W2S6636	66 (1676)	36 (914)	126 (57)
	W2S6648	66 (1676)	48 (1219)	160 (73)
	W2S7236	72 (1829)	36 (914)	135 (61)
	W2S7242	72 (1829)	42 (1067)	154 (70)
	W2S7248	72 (1829)	48 (1219)	171 (78)
	W2S7254	72 (1829)	54 (1372)	188 (85)
	W2S7260	72 (1829)	60 (1524)	203 (92)



W2S SERIES RO

WET WELL & VALVE VAULT ACCESS HATCH DETAIL

SCALE: NOT TO SCALE



OUTFALL STRUCTURE OF1 DETAIL

SCALE: 3/4" = 1'-0"

STATE OF MARYLAND
ROBERT J. DUMAT
LIC. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland. License No. 38830 Expiration Date: 12-29-26

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SALISBURY, MARYLAND 410.543.9091
MILFORD, DELAWARE 302.424.1441

WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

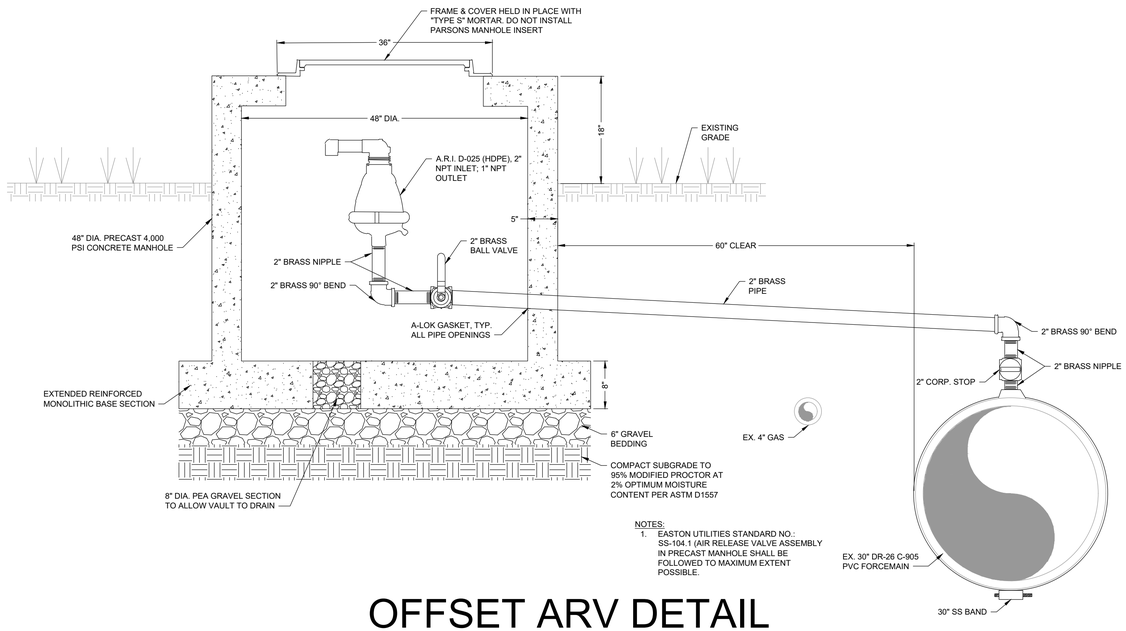
Date: JUNE 2026
Scale: AS SHOWN
Dwn.By: NLC
Proj.No.: 3306A011

SITE & UTILITY DETAILS

Dwg.No.: **C-504**

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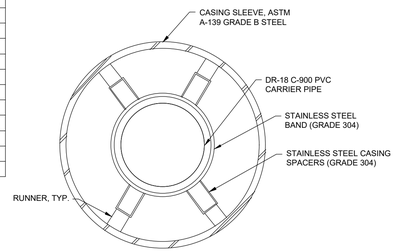


NOTES:
1. EASTON UTILITIES STANDARD NO.: SS-104.1 (AIR RELEASE VALVE ASSEMBLY IN PRECAST MANHOLE SHALL BE FOLLOWED TO MAXIMUM EXTENT POSSIBLE.

OFFSET ARV DETAIL

SCALE: 1" = 1'

CARRIER PIPE (IN.)	MINIMUM O.D. CASING PIPE (IN.)
4	10
6	12
8	16
10	18
12	20
14	24
15	26
16	30
18	32
20	34
21	36
24	36
30	42



NOTE:
1. DETAIL APPLIES TO JACK AND BORE INSTALLATIONS.
2. END SEAL TO BE INSTALLED ON EACH END OF CASING PIPE.
3. CASING SPACERS SHALL BE INSTALLED 1' (MAX.) FROM EACH SIDE OF ANY CARRIER PIPE JOINT, AND A MINIMUM OF 6' ON CENTER ALONG THE CARRIER PIPE IN BETWEEN JOINTS.
4. PREFERRED CONFIGURATION IS WITH CARRIER PIPE CENTERED WITHIN CASING PIPE. OFF-CENTERED CONFIGURATION MAY BE UTILIZED DEPENDING ON SITE CONDITIONS AS APPROVED BY OWNER OR ENGINEER.
5. SEE TABLE FOR MINIMUM CASING PIPE SIZE. IF RESTRAINED JOINTS ARE USED, CASING PIPE DIAMETER SHALL BE MODIFIED AS REQUIRED TO ACCOMMODATE THE PIPE RESTRAINTS.

CASING SLEEVE INSTALLATION

SCALE: NOT TO SCALE

STATE OF MARYLAND
ROBERT J. DUNN
Lic. No. 38830
PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer in the laws of the State of Maryland. License No. 38830 Expiration Date: 12-29-26

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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
Scale: AS SHOWN
Dwn.By: NLC
Proj.No.: 3306A011

SITE & UTILITY DETAILS

Dwg.No.: **C-505**

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Ring W. Lardner, P.E.
W. Zachary Crouch, P.E.
Michael E. Wheedleton, AIA, LEED GA
Jason P. Loar, P.E.
Jamie L. Sechler, P.E.

WATER & WASTEWATER INFRASTRUCTURE DESIGN
FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND
DBF# 3306A011

JUNE 3, 2026

STATEMENT DESCRIBING THE EXTENT TO WHICH THE APPLICATION COMPLIES WITH THE RECOMMENDED DESIGN PRINCIPLES FOR EASTON

Principle #1 – Integrated Uses are Desirable
Principle #2 – Natural Features Should Determine Design
Principle #3 – Automobiles should not Determine Design
Principle #4 – Ample Open Spaces should be provided within and Around Neighborhoods
Principle #5 – Architecture Should Respect Easton's Historic Development
Principle #6 – Signs should Inform but not Dominate
Principle #7 – Neighborhoods Should Contain a Diversity of Housing Types
Principle #8 – Residential Developments Should be Interesting Places
Principle #9 – Neighborhoods Should Connect

This plan set conforms to the Recommended Design Principles for Easton as noted in the Comprehensive Plan. The proposed project integrates the principles where feasible. However, many of the principles are not applicable to this project due to the nature of the project. The project is a public utility serving wastewater conveyance for the UMMS hospital. All references to neighborhoods and residential developments are not applicable. References to architecture and buildings are not applicable. The project does not have any proposed signs.

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FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND
DBF# 3306A011

JUNE 3, 2026

ZONING ORDINANCE WAIVERS

The proposed project is a sewage pumping station to transmit flows from the UMMS Regional Shore Medical Center to the Easton Wastewater Treatment Plant. The project requires waivers as the only structures are below grade sewage pumping station components. The project does not conform to typical site development or architecture.

1. **Waiver #1 - 28-901.3.A.9 Proposed Landscaping** The project is a public utility maximizing function on a small parcel of land. Landscaping, trees, and bufferyards have the potential to make the site difficult to access and disrupt sewer system operations.

2. **Waiver #2 - 28-901.3.A.10 Proposed Parking Layouts** The wastewater pumping station is an unmanned site. One employee is planned to visit the site for only approximately one hour per day. The site driveway has been designed to accommodate this one pick-up truck per day visit to the site. A turnaround for the truck has been provided. No additional parking is required for this type of public utility.

3. **Waiver #3 – 28-901.3.A.11 & 12 Conceptual Building Elevations and Digital 3D Renderings** The project does not have a conventional building. A cross section of the pumping station has been provided; however, the station will be buried underground. The only above ground visible site equipment will be the generator, pipe connections, and electrical enclosures.

4. **Waiver #4 - 28-1001.3 Parking Requirements** See waiver request #2 for the parking explanation.

5. **Waiver #5 - 28-1014.A Landscape, Buffering and Landscape Plans** See waiver #1 for explanation regarding landscaping.

6. **Waiver #6 - 28.1014.7 Bufferyard Standard** See waiver request #1 for explanation regarding landscaping, which also applies to bufferyard requirements.

STORMWATER MANAGEMENT REPORT

Water & Wastewater Infrastructure Design For The UMMS Regional Shore Medical Center

Town of Easton, Talbot County, Maryland

PREPARED BY

Davis, Bowen & Friedel, Inc.
106 N. Washington Street, Suite 103
Easton, MD 21601

June 3, 2026



DBF#3306A011

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APPENDICES

A. Calculations

- ESD Calculations

B. Pre-Development HydroCAD

C. Post-Development HydroCAD-Velocity

D. Post-Development HydroCAD-Storage

E. USDA Web Soil Survey

F. SWM Site Plans

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Table 1: Pre-Development Area Summary Table

Table 2: Existing Soil Descriptions

Table 3: Quantity Management Summary Table

I. INTRODUCTION

The new water and wastewater infrastructure for the UMMS Regional Shore Medical Center will consist of a sewage pumping station that will be the focus of the stormwater management on this project and this narrative. The sewage pumping station site is just a small portion of a much larger water and wastewater project consisting of linear pipeline with minimal temporary disturbances. The new sewage pump station will serve the new UMMS Regional Medical Center in Easton, Maryland and will sit near the new facility along MD RTE 662C with a linear forcemain pipeline running approximately 6.25 miles down to the Easton wastewater treatment plant. The water infrastructure will be connecting the new facility onto the existing drinking water distribution system with water main looping for water quality and redundancy.

The stormwater for the sewage pump station site is planned to be managed all on site by a bio-swale.



Figure 1: Existing Site Aerial

II. EXISTING CONDITIONS

The sewage pump station site is currently an undeveloped 0.41 acre parcel of land with ownership being conveyed to the Town of Easton for Easton Utilities use. The proposed limit of disturbance is approximately 0.46 acres with improvements to MD-SHA R.O.W. The existing drainage area discharges to a recently constructed nearby SWM Pond which is acting as the current Point of Interest (POI). The existing impervious area is 0.00 acres as the site is currently undeveloped.

The existing topography of the site gradually slopes toward the point of interest with no steep slopes.

Site Resource Statements:

- The Federal Emergency Management Administration (FEMA) flood plain maps were consulted to determine the project site is located in an area of minimal flood hazard (Zone X).
- The property is NOT located within the Maryland Critical Area.
- There are no wetlands on the site.
- There are no steep slopes on the site.
- The site is located in an area of fair groundwater recharge.
- The Property is not located within a wellhead protection area.
- There are no known streams, springs, seeps, and intermittent streams within the site.

Pre-Development Area Summary Table						
Area	**Impervious Area (AC.)**	**Pervious Area (AC.)**	**% Impervious**	**CN#**	**Total Area (AC.)**	**Point of Analysis**
DA-1	0.00	0.43	0%	66	0.43	POI
TOTAL	0.00	0.43	0%	66	0.43	---

Table 1: Pre-Development Area Summary Table

The soils located on site are classified as predominantly HSG B with some HSG D. There are no known areas on site of highly erodible soils, K factors range between 0.00 to 0.32 per NRCS Web Soil Survey.

Per the NRCS Web Soil Survey, the soil types located on site are:

Existing Soils Descriptions		
Symbol	**Soil Name**	**HSG**
HfB	Hambrook-Sassafras Complex, 2-5% Slopes	B
HfC	Hambrook-Sassafras Complex, 5-10% Slopes	B
LgA	Lenni Loam, 0-2% Slopes	D

Table 2: Existing Soil Descriptions

III. PROPOSED CONDITIONS

The proposed project consists of a sewage pumping station with a forcemain pipeline exiting the site. The site will have an asphalt drive as well as a large gravel area surrounding the station that will be used as a turnaround for larger trucks. An 8' wide bio-swale will be on site to handle the stormwater. The proposed impervious area totals approximately 0.1543 acres or 32.6% of the total site area. The proposed site has been modeled as two (2) drainage areas and one (1) point of interest.

ESD Practice Selection

Based on the proposed site and the existing grades, the proposed ESD practice will be a bio-swale to the MEP. The proposed drainage pattern will remain the same as now. For quantity management, a small dry detention basin has been provided to attenuate peak flows.

IV. METHODOLOGY

The overall pre-developed site impervious area has been calculated at 0% impervious. Because the existing site imperviousness is less than 40%, the project is subject to the new development requirements. The post-developed site will ultimately increase the overall impervious area of the site by 0.1543 acres, bringing the proposed site imperviousness to 32.6%. Stormwater management shall be addressed for new development by following the 2000 Maryland Stormwater Design Manual, Chapter 5, latest revised.

This application was prepared with consideration of using ESD to the Maximum Extent Practicable (MEP). ESD practices of a bio-swale are to be employed and designed to ensure that the overall Recharge Volume (Rev), Water Quality Volume (WQv), and ESDv requirements have been met.

V. EROSION AND SEDIMENT CONTROL

Rock outlet protection, and perimeter controls such as silt fencing will be used to divert and/or treat stormwater runoff that may flow to SWM areas. Stabilized construction entrances will also be utilized as well as temporary and permanent matting to ensure slope stabilization in the proposed swales. Excavated materials will be placed in a contained area, and any pumping operations necessary for dewatering during construction will discharge filtered water to a stable outlet.

VI. ANALYSIS

Per our calculations the ESDv requirement is 1,001 CF and the proposed impervious surface area 0.1543 acres. The site stormwater requirements will be met on-site through the proposed bio-swale. Please refer to the worksheets in Appendix A for the preliminary site requirements calculations.

Quantity management has been achieved according to the Town of Easton requirements (2-Year and 10-Year). The 100-Year storm has been safely passes through the stormwater infrastructure. See below for the Quantity Management summary table.

Quantity Management Summary Table		
Storm	**Pre-Development Inflow (CFS)**	**Post-Development Inflow (CFS)**
2-Year	0.36	0.31
10-Year	1.04	0.70

Table 3: Quantity Management Summary Table

VII. CONCLUSION

Based on the information provided, the proposed design shall manage stormwater runoff to treat for quality and quantity for the proposed project while minimizing offsite discharge. This report shows that the proposed stormwater management design implements the best management practices for this site.

APPENDIX A

ESD CALCULATONS

Maryland ESD Calculations and 10% Phosphorus Removal

Last Update: 6/3/2026

Project Name:	**UMMS W&WW Infrastructure - Sewage Pump Station**
Date:	**3-Jun-26**

data input cells

calculation cells

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)

Site Area, A (acres)	0.46
Existing Impervious Surface Area (acres)	0.00
Proposed Impervious Surface Area (acres)	0.15
Rainfall Depth, P (in)	1.0
Existing Imperviousness, I_{pre}	0.0%
Proposed Imperviousness, I_{post}	32.6%
Water Quality Calculation for Redevelopment Only	
Required Treatment Area (acres)	0.00
Runoff Coefficient, Rv	0.95
Water Quality Volume, WQv (cf)	**0**

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

Development Category (for 10%)	**New Development**
New Development	
Average Annual Predevelopment Load, Lpre (lbs P / yr)	0.23
Redevelopment:	
Predevelopment Runoff Coefficient, Rv_{pre}	0.05
Phosphorous Mean Concentration, C (mg/L)	0.3
Average Annual Predevelopment Load, L_{pre} (lbs P / yr)	0.06
Post-Development Runoff Coefficient, Rv_{post}	0.34
Average Annual Post-Development Load, L_{post} (lbs P / yr)	0.39
Removal Requirement, RR (lbs P / yr)	**0.18**

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

Development Category (for ESD)	**New Development**
% Soil Type A	0%
% Soil Type B	73%
% Soil Type C	0%
% Soil Type D	27%
Pre-Developed Condition, RCN_{woods}	60.94
Soil Type A ESD Rainfall Target, P_E (in)	0.00
Soil Type B ESD Rainfall Target, P_E (in)	1.31
Soil Type C ESD Rainfall Target, P_E (in)	0.00
Soil Type D ESD Rainfall Target, P_E (in)	0.43
Maximum P_E (in)	2.7
Site ESD Rainfall Target, P_E (in)	1.75
ESD Runoff Depth, Q_E (in)	0.60
ESD Runoff Volume, ESDv (cf)	**1,001**
Total Treatment Volume (cf)	**1,001**

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

Nonstructural Practices	P_E Credit Description	Contributing Drainage Area (sf)	Direct WQv or ESDv Received by Practice (cf)	WQv or ESDv from Up-Gradient Practices (cf)	P_E Credit (in)	WQV or ESDv credit (cf)	Runoff Volume Remaining (cf)	*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)
Disconnection of Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	#DIV/0!	0	0	50%	0%	0.00	0.00	0.00
Disconnection of Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection flow length.	0	0	0	#DIV/0!	0	0	25%	0%	0.00	0.00	0.00
Disconnection of Non-Rooftop Runoff (A/B Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow lengths.	0	0	0	#DIV/0!	0	0	50%	0%	0.00	0.00	0.00
Disconnection of Non-Rooftop Runoff (C/D Soils)	Up to 1 inch credit provided based upon disconnection and contributing flow	0	0	0	#DIV/0!	0	0	25%	0%	0.00	0.00	0.00
Sheetflow to Conservation Areas (A/B Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Sheetflow to Conservation Areas (C/D Soils)	Up to 1 inch credit provided based upon conservation area width.	0	0	0	0	0	0	25%	0%	0.00	0.00	0.00

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

Micro-Scale Practices	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)	Baseline Phosphorous Removal Efficiency	Average Adjusted Removal Efficiency Rate	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
Green Roof (Level 1)	ESDv credit is based on roof thickness	0	0	N/A	0	0	45%	0%	0.00	0.00	0.00
Green Roof (Level 2)	ESDv credit is based on roof thickness	0	0	N/A	0	0	60%	0%	0.00	0.00	0.00
Pemeable Pavement (A Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	80%	0%	0.00	0.00	0.00
Pemeable Pavement (B Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	80%	0%	0.00	0.00	0.00
Pemeable Pavement (C Soils)	ESDv credit is based on subbase thickness	0	0	N/A	0	0	40%	0%	0.00	0.00	0.00
Rainwater Harvesting	ESDv credit is based on design storage volume and annual use	0	0	0	0	0	45%	0%	0.00	0.00	0.00
Submerged Gravel Wetlands	ESDv credit is based on design storage volume	0	0	0	0	0	60%	0%	0.00	0.00	0.00
Micro-Infiltration/Dry Wells	ESDv credit is based on design storage volume	0	0	0	0	0	65%	0%	0.00	0.00	0.00
Rain Gardens (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	65%	0%	0.00	0.00	0.00
Rain Gardens (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	25%	0%	0.00	0.00	0.00
Micro-Bioretention (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	75%	0%	0.00	0.00	0.00
Micro-Bioretention (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Landscape Infiltration	ESDv credit is based on design storage volume	0	0	0	0	0	75%	0%	0.00	0.00	0.00
Grass Swales (A/B Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	40%	0%	0.00	0.00	0.00
Grass Swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	20%	0%	0.00	0.00	0.00
Bio-swales (A/B Soils)	ESDv credit is based on design storage volume	12,428	1,160	0	1,138	22	75%	98%	0.29	0.28	0.01
Bio-swales (C/D Soils)	ESDv credit is based on design storage volume	0	0	0	0	0	50%	0%	0.00	0.00	0.00
Wet Swales	ESDv credit is based on design storage volume	0	0	0	0	0	40%	0%	0.00	0.00	0.00

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

Drainage Area Treated (sf)	12,428	**WQv or ESDv Treated (cf)**	1,138	Total Load Reduction (lbs P / year) 0.28
		P_E achieved (inches)	1.98	**Total Load Reduction Remaining (lbs P / yr) 0.00**
		Entire ESDv Treated Through Environmental Site Design?	**YES**	
		ESDv Remaining? (cf)	**0**	
		If ESDV is not fully treated, is ESD to MEP achieved?		
		Redevelopment WQv Requirements Met Through Environmental Site Design?	**N/A**	
New Development Water Quality Volume Requirements		**WQv Remaining? (cf)**	**0**	
Required Treatment Area (acres)	0.46			
Runoff Coefficient, Rv	0.34			
Water Quality Volume, WQv (cf)	**574**	**New Development WQv Requirements Met Through Environmental Site Design?**	**YES**	
		WQv Remaining? (cf)	**0**	

Step 8: Determine Reduced RCN and Volume Management Requirements Based Upon P_E 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	**N/A**		
Q_E (in) for Reduced RCN	N/A	Q_E (in) for RCN of 55	0.12
V (ft^3) for Reduced RCN	N/A	V (ft^3) for RCN of 55	207
Volume Management Required (cf)	**0**		

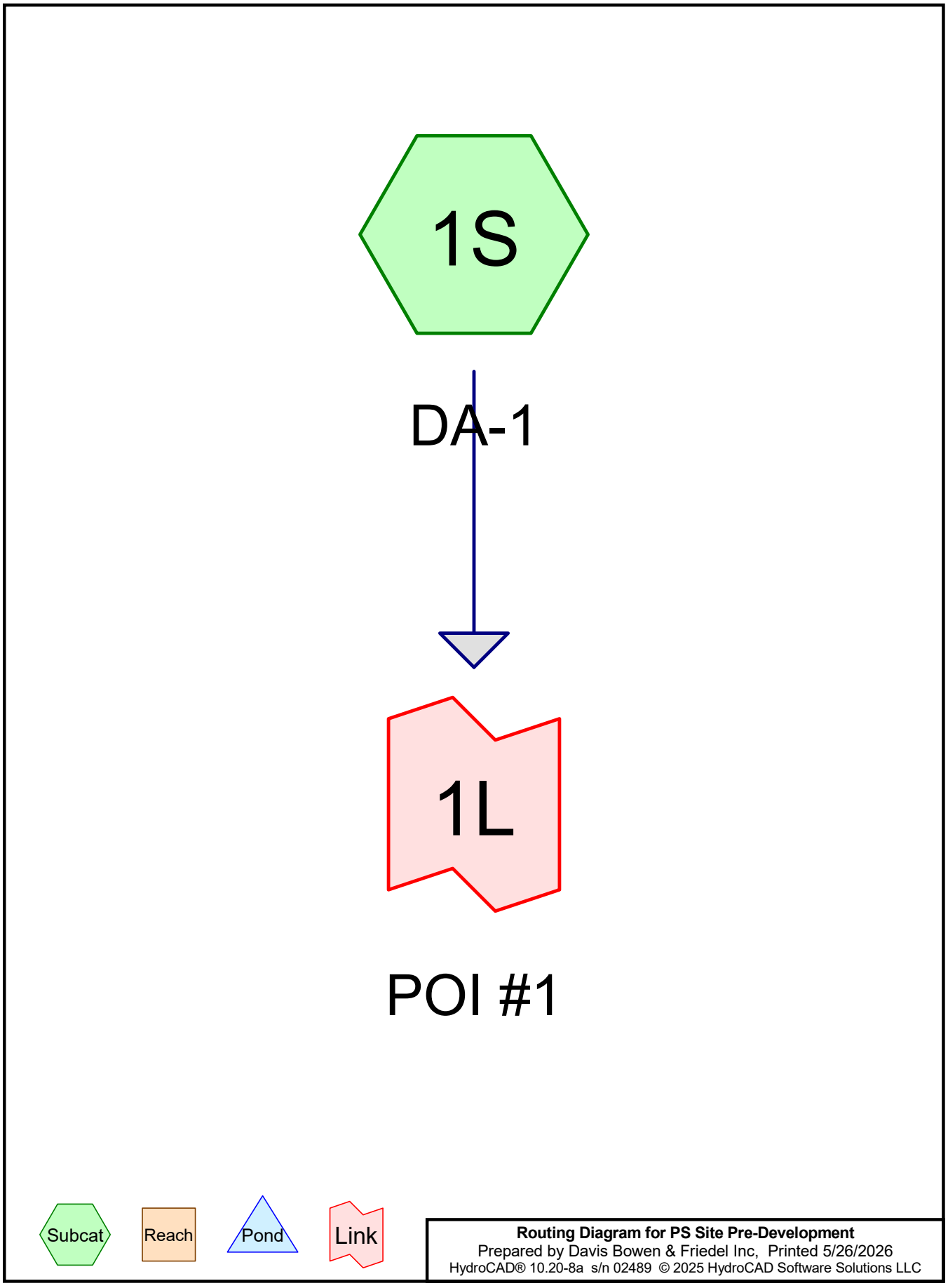
Step 9: Select Structural Practices to Meet Volume Management Requirements

Structural Practices	Contributing Drainage Area (sf)	% Impervious Cover	Direct ESDv Received by Practice (cf)	ESDv from Upstream Practices (cf)	Treatment Volume (cf)	Phosphorous Removal Efficiency	*Critical Area Credits* Adjusted Phosphorus Removal Efficiency	P Load to Practice (lbs/yr)	Load Reduction (lbs/yr)	Remaining Load (lbs/yr)
Stormwater Ponds (Level 1)	0	0%	0	0	0	50%	0%	0.00	0.00	0.00
Stormwater Ponds (Level 2)	0	0%	0	0	0	75%	0%	0.00	0.00	0.00
Stormwater Wetlands (Level 1)	0	0%	0	0	0	50%	0%	0.00	0.00	0.00
Stormwater Wetlands (Level 2)	0	0%	0	0	0	75%	0%	0.00	0.00	0.00
Stormwater Filtering Systems (Level 1)	0	0%	0	0	0	60%	0%	0.00	0.00	0.00
Stormwater Filtering Systems (Level 2)	0	0%	0	0	0	65%	0%	0.00	0.00	0.00
Stormwater Infiltration (Level 1)	0	0%	0	0	0	60%	0%	0.00	0.00	0.00
Stormwater Infiltration (Level 2)	0	0%	0	0	0	90%	0%	0.00	0.00	0.00

Total structural CPv provided	0	Total Load Reduction (lbs P / year)	0.28
Management Requirement Met?	**YES**	**Total Load Reduction Remaining (lbs P / yr)**	**0.00**
Volume Remaining (cf)	**0**		

APPENDIX B

PRE-DEVELOPMENT HYDROCAD REPORT


1S
DA-1
1L
POI #1
Subcat
Reach
Pond
Link
Routing Diagram for PS Site Pre-Development
Prepared by Davis Bowen & Friedel Inc, Printed 5/26/2026
HydroCAD® 10.20-8a s/n 02489 © 2025 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2YR TALBOT	Type II 24-hr		Default	24.00	1	3.40	2
2	10YR TALBOT	Type II 24-hr		Default	24.00	1	5.30	2
3	100YR TALBOT (Qf)	Type II 24-hr		Default	24.00	1	7.60	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.312	61	>75% Grass cover, Good, HSG B (1S)
0.116	80	>75% Grass cover, Good, HSG D (1S)
0.429	**66**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.312	HSG B	1S
0.000	HSG C	
0.116	HSG D	1S
0.000	Other	
0.429		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.312	0.000	0.116	0.000	0.429	>75% Grass cover, Good	1S
0.000	**0.312**	**0.000**	**0.116**	**0.000**	**0.429**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 1S: DA-1 Runoff Area=18,668 sf 0.00% Impervious Runoff Depth=0.75"
Flow Length=100' Slope=0.0020 '/' Tc=14.9 min CN=66 Runoff=0.36 cfs 0.027 af

Link 1L: POI #1 Inflow=0.36 cfs 0.027 af
Primary=0.36 cfs 0.027 af

Total Runoff Area = 0.429 ac Runoff Volume = 0.027 af Average Runoff Depth = 0.75"
100.00% Pervious = 0.429 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: DA-1

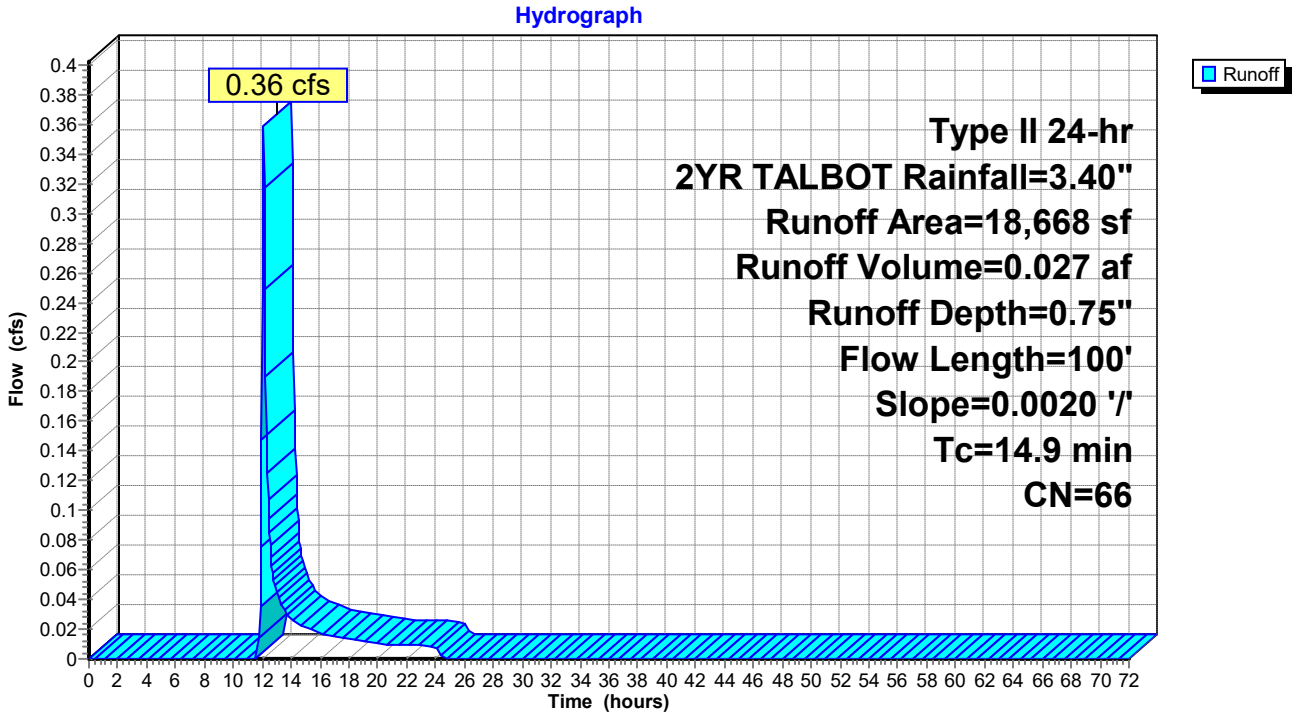
Runoff = 0.36 cfs @ 12.09 hrs, Volume= 0.027 af, Depth= 0.75"
Routed to Link 1L : POI #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type II 24-hr 2YR TALBOT Rainfall=3.40"

Area (sf)	CN	Description
13,611	61	>75% Grass cover, Good, HSG B
5,057	80	>75% Grass cover, Good, HSG D
18,668	66	Weighted Average
18,668		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	50	0.0020	0.06		**Sheet Flow, Across Site** Grass: Short n= 0.150 P2= 3.40"
1.2	50	0.0020	0.72		**Shallow Concentrated Flow, Across Site** Unpaved Kv= 16.1 fps
14.9	100	Total			

Subcatchment 1S: DA-1

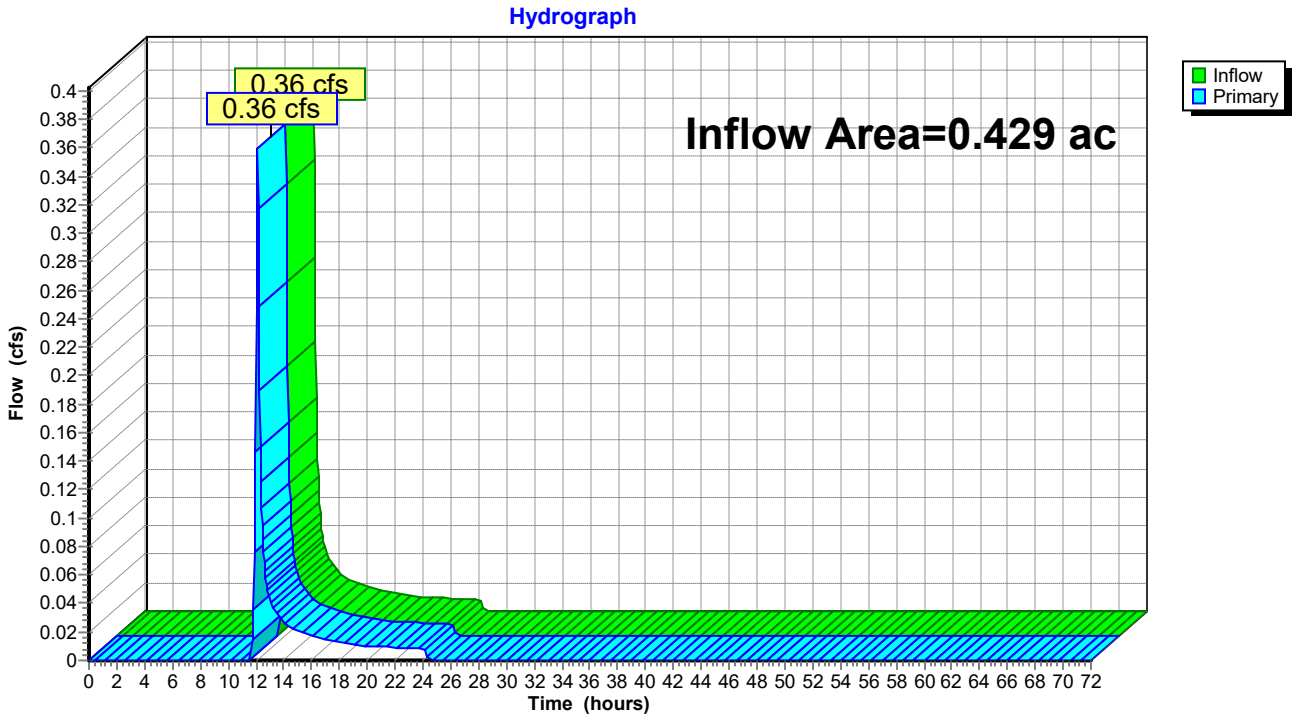


Summary for Link 1L: POI #1

Inflow Area = 0.429 ac, 0.00% Impervious, Inflow Depth = 0.75" for 2YR TALBOT event
Inflow = 0.36 cfs @ 12.09 hrs, Volume= 0.027 af
Primary = 0.36 cfs @ 12.09 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 1L: POI #1



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 1S: DA-1 Runoff Area=18,668 sf 0.00% Impervious Runoff Depth=1.94"
Flow Length=100' Slope=0.0020 '/' Tc=14.9 min CN=66 Runoff=1.04 cfs 0.069 af

Link 1L: POI #1 Inflow=1.04 cfs 0.069 af
Primary=1.04 cfs 0.069 af

Total Runoff Area = 0.429 ac Runoff Volume = 0.069 af Average Runoff Depth = 1.94"
100.00% Pervious = 0.429 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: DA-1

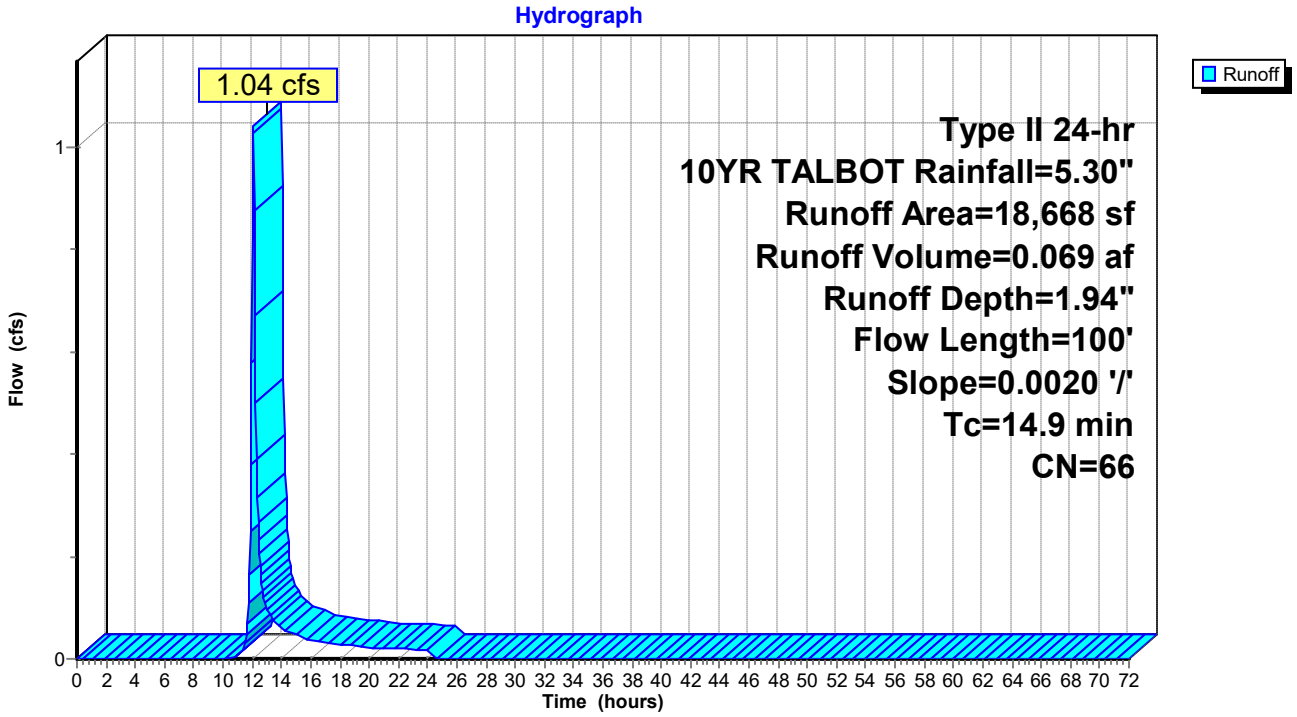
Runoff = 1.04 cfs @ 12.08 hrs, Volume= 0.069 af, Depth= 1.94"
Routed to Link 1L : POI #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type II 24-hr 10YR TALBOT Rainfall=5.30"

Area (sf)	CN	Description
13,611	61	>75% Grass cover, Good, HSG B
5,057	80	>75% Grass cover, Good, HSG D
18,668	66	Weighted Average
18,668		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	50	0.0020	0.06		**Sheet Flow, Across Site** Grass: Short n= 0.150 P2= 3.40"
1.2	50	0.0020	0.72		**Shallow Concentrated Flow, Across Site** Unpaved Kv= 16.1 fps
14.9	100	Total			

Subcatchment 1S: DA-1

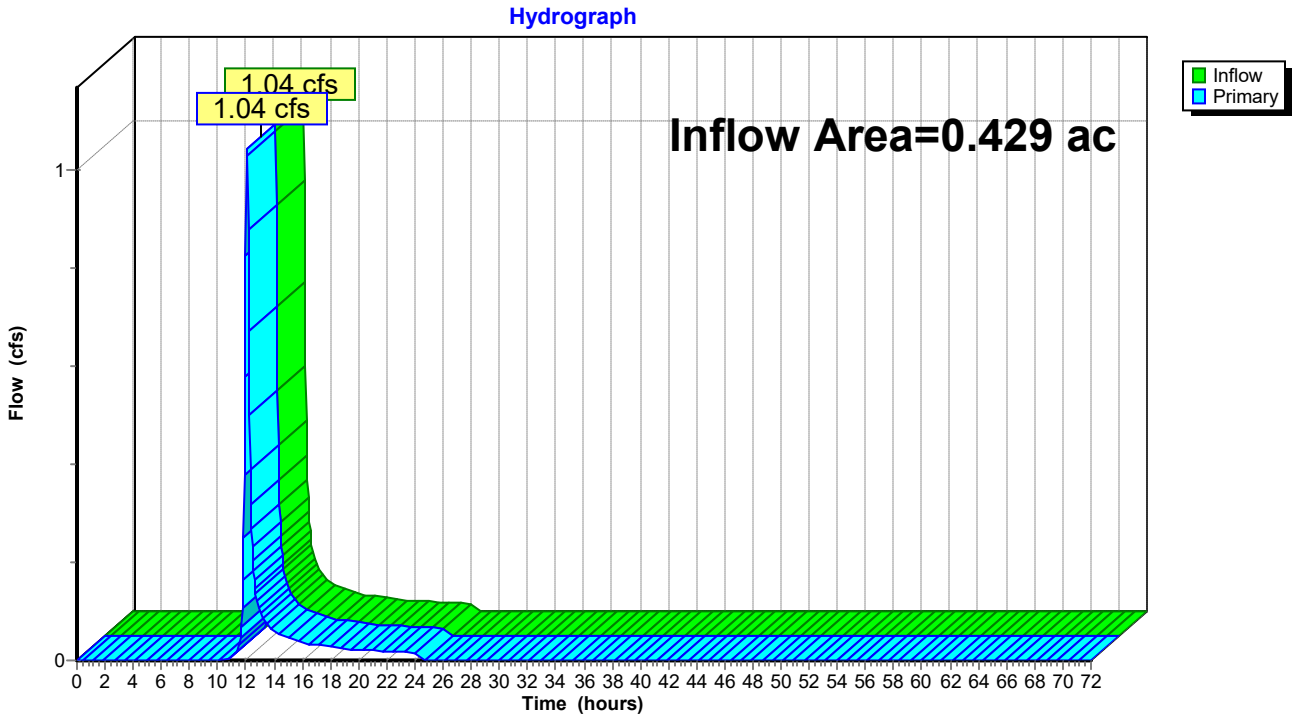


Summary for Link 1L: POI #1

Inflow Area = 0.429 ac, 0.00% Impervious, Inflow Depth = 1.94" for 10YR TALBOT event
Inflow = 1.04 cfs @ 12.08 hrs, Volume= 0.069 af
Primary = 1.04 cfs @ 12.08 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Link 1L: POI #1



Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 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 1S: DA-1 Runoff Area=18,668 sf 0.00% Impervious Runoff Depth=3.68"
Flow Length=100' Slope=0.0020 '/' Tc=14.9 min CN=66 Runoff=2.03 cfs 0.132 af

Link 1L: POI #1 Inflow=2.03 cfs 0.132 af
Primary=2.03 cfs 0.132 af

Total Runoff Area = 0.429 ac Runoff Volume = 0.132 af Average Runoff Depth = 3.68"
100.00% Pervious = 0.429 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: DA-1

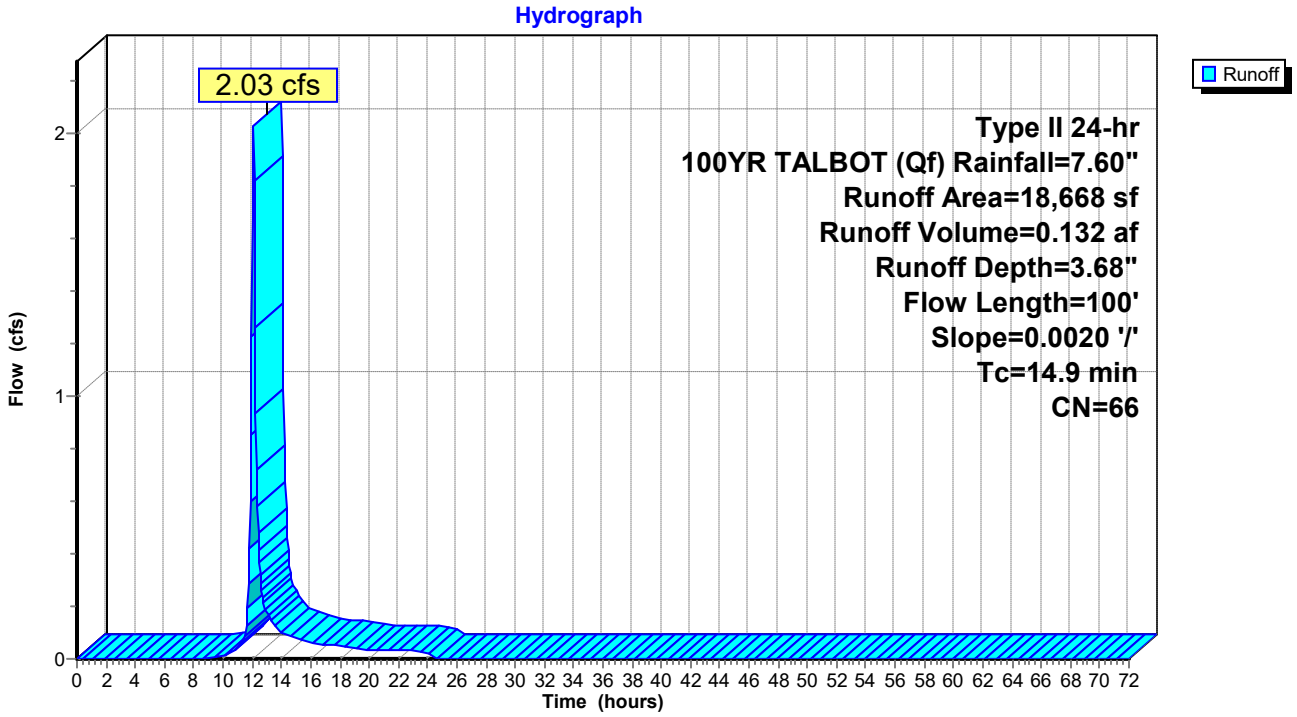
Runoff = 2.03 cfs @ 12.07 hrs, Volume= 0.132 af, Depth= 3.68"
Routed to Link 1L : POI #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type II 24-hr 100YR TALBOT (Qf) Rainfall=7.60"

Area (sf)	CN	Description
13,611	61	>75% Grass cover, Good, HSG B
5,057	80	>75% Grass cover, Good, HSG D
18,668	66	Weighted Average
18,668		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	50	0.0020	0.06		**Sheet Flow, Across Site** Grass: Short n= 0.150 P2= 3.40"
1.2	50	0.0020	0.72		**Shallow Concentrated Flow, Across Site** Unpaved Kv= 16.1 fps
14.9	100	Total			

Subcatchment 1S: DA-1

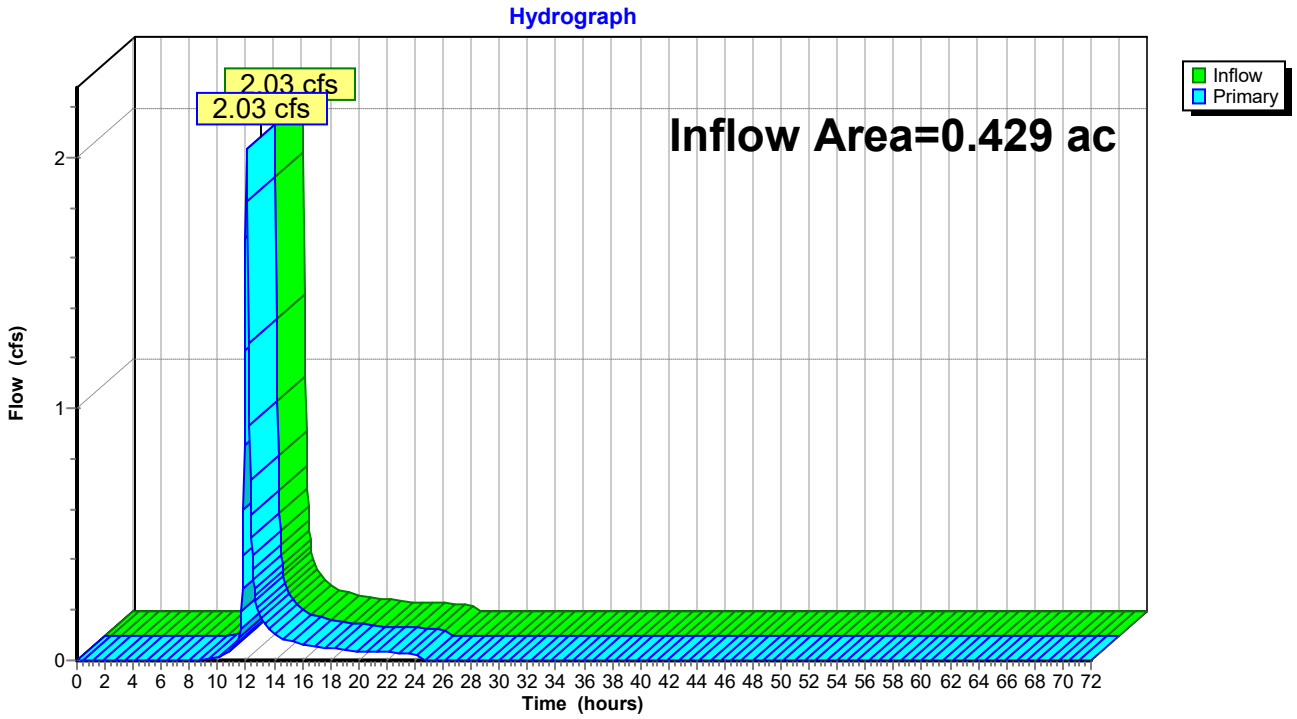


Summary for Link 1L: POI #1

Inflow Area = 0.429 ac, 0.00% Impervious, Inflow Depth = 3.68" for 100YR TALBOT (Qf) event
Inflow = 2.03 cfs @ 12.07 hrs, Volume= 0.132 af
Primary = 2.03 cfs @ 12.07 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

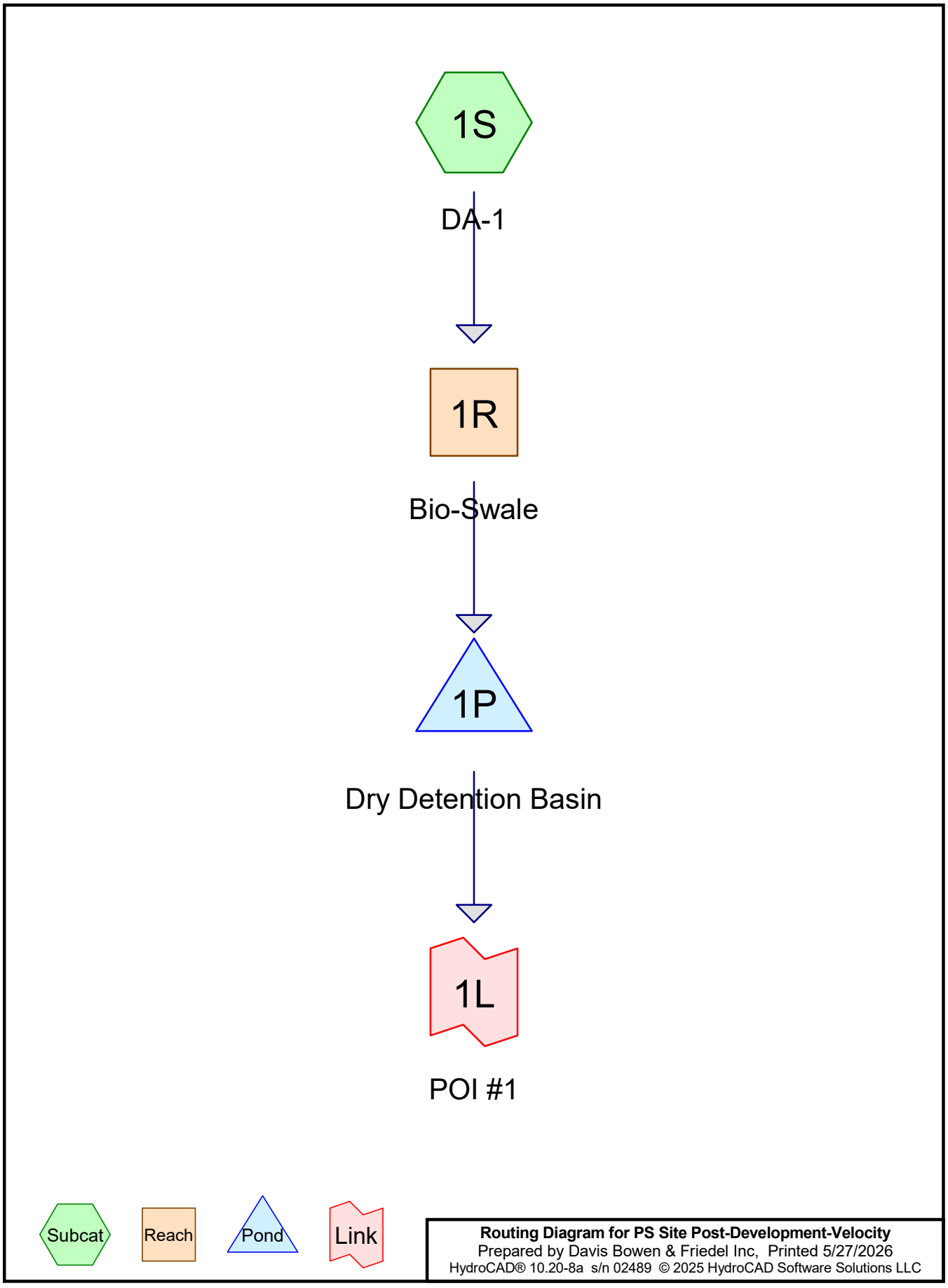
Link 1L: POI #1



APPENDIX C

POST-DEVELOPMENT HYDROCAD-VELOCITY

NOTE: THE FOLLOWING HYDROCAD MODEL IS PROVIDED TO CHECK VELOCITY REQUIREMENTS (LESS THEN 1.0 FEET PER SECOND) ON THE WATER QUALITY STORM. CONSERVATIVELY, THE 1-YEAR STORM HAS BEEN USED TO CHECK VELOCITY (EXCEEDING THE WQ STORM). THE BIO-SWALE HAS BEEN MODELED AS A REACH.


1S
DA-1
1R
Bio-Swale
1P
Dry Detention Basin
1L
POI #1
Subcat
Reach
Pond
Link
Routing Diagram for PS Site Post-Development-Velocity
Prepared by Davis Bowen & Friedel Inc, Printed 5/27/2026
HydroCAD® 10.20-8a s/n 02489 © 2025 HydroCAD Software Solutions LLC

Summary for Reach 1R: Bio-Swale

Inflow Area = 0.425 ac, 35.91% Impervious, Inflow Depth > 0.84" for 1YR TALBOT event
Inflow = 0.57 cfs @ 12.04 hrs, Volume= 0.030 af
Outflow = 0.56 cfs @ 12.06 hrs, Volume= 0.030 af, Atten= 1%, Lag= 1.0 min
Routed to Pond 1P : Dry Detention Basin

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.86 fps, Min. Travel Time= 1.6 min
Avg. Velocity = 0.28 fps, Avg. Travel Time= 5.0 min

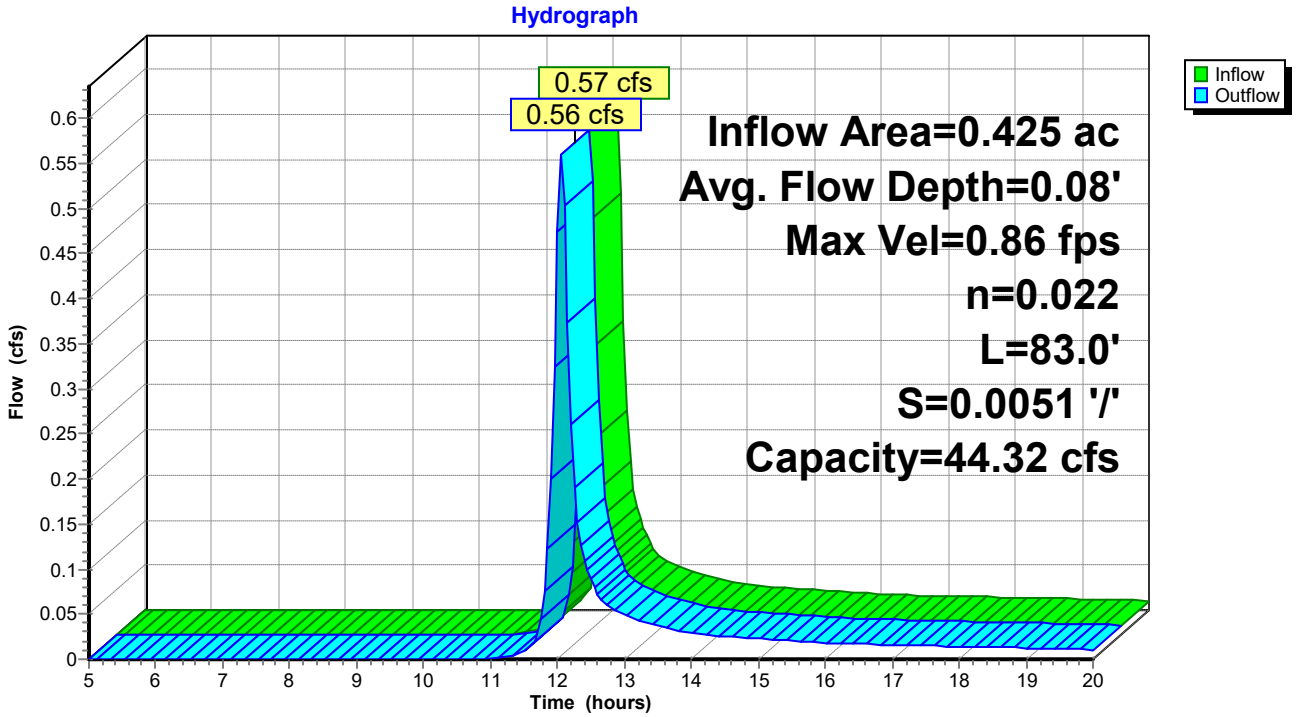
Peak Storage= 54 cf @ 12.06 hrs
Average Depth at Peak Storage= 0.08' , Surface Width= 8.47'
Bank-Full Depth= 1.00' Flow Area= 11.0 sf, Capacity= 44.32 cfs

8.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 83.0' Slope= 0.0051 '/'
Inlet Invert= 58.42', Outlet Invert= 58.00'



‡

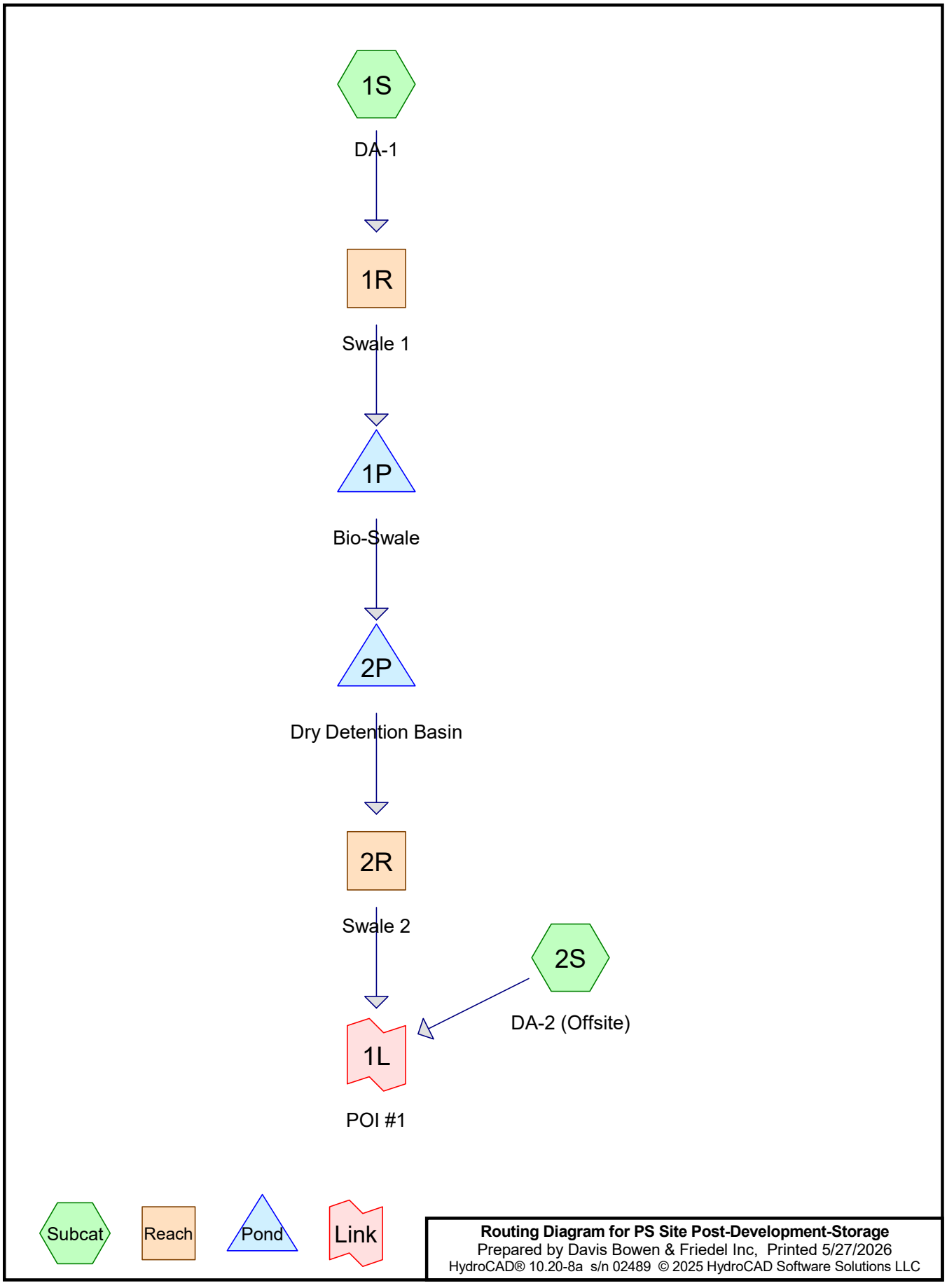
Reach 1R: Bio-Swale



APPENDIX D

POST-DEVELOPMENT HYDROCAD-STORAGE

NOTE: THE FOLLOWING HYDROCAD MODEL IS PROVIDED TO MODEL STORAGE AND QUANTITY MANAGEMENT REQUIREMENTS FOR THE 2-YEAR AND 10-YEAR STORM. THE BIO-SWALE HAS BEEN MODELED AS A POND IN THIS MODEL.


1S
DA-1
1R
Swale 1
1P
Bio-Swale
2P
Dry Detention Basin
2R
Swale 2
2S
DA-2 (Offsite)
1L
POI #1
Subcat
Reach
Pond
Link
Routing Diagram for PS Site Post-Development-Storage
Prepared by Davis Bowen & Friedel Inc, Printed 5/27/2026
HydroCAD® 10.20-8a s/n 02489 © 2025 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2YR TALBOT	Type II 24-hr		Default	24.00	1	3.40	2
2	10YR TALBOT	Type II 24-hr		Default	24.00	1	5.30	2
3	100YR TALBOT (Qf)	Type II 24-hr		Default	24.00	1	7.60	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.206	61	>75% Grass cover, Good, HSG B (1S, 2S)
0.059	80	>75% Grass cover, Good, HSG D (1S)
0.166	98	Paved parking, HSG B (1S, 2S)
0.431	**78**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.371	HSG B	1S, 2S
0.000	HSG C	
0.059	HSG D	1S
0.000	Other	
0.431		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.206	0.000	0.059	0.000	0.265	>75% Grass cover, Good	1S, 2S
0.000	0.166	0.000	0.000	0.000	0.166	Paved parking	1S, 2S
0.000	**0.371**	**0.000**	**0.059**	**0.000**	**0.431**	**TOTAL AREA**	

Pipe Listing (all 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	2P	57.50	57.50	5.0	0.0000	0.020	0.0	4.0	0.0	
2	2P	57.50	57.47	16.0	0.0019	0.013	0.0	12.0	0.0	

Time span=0.00-24.00 hrs, dt=0.02 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1S: DA-1 Runoff Area=12,428 sf 40.51% Impervious Runoff Depth>1.56"
Flow Length=6,364' Tc=5.0 min CN=80 Runoff=0.82 cfs 0.037 af

Subcatchment 2S: DA-2 (Offsite) Runoff Area=6,338 sf 34.38% Impervious Runoff Depth>1.17"
Flow Length=191' Tc=5.0 min CN=74 Runoff=0.31 cfs 0.014 af

Reach 1R: Swale 1 Avg. Flow Depth=0.41' Max Vel=1.60 fps Inflow=0.82 cfs 0.037 af
n=0.022 L=87.0' S=0.0049 '/' Capacity=8.66 cfs Outflow=0.81 cfs 0.037 af

Reach 2R: Swale 2 Avg. Flow Depth=0.07' Max Vel=0.51 fps Inflow=0.01 cfs 0.001 af
n=0.022 L=55.0' S=0.0049 '/' Capacity=8.64 cfs Outflow=0.01 cfs 0.001 af

Pond 1P: Bio-Swale Peak Elev=58.01' Storage=1,198 cf Inflow=0.81 cfs 0.037 af
Outflow=0.02 cfs 0.010 af

Pond 2P: Dry Detention Basin Peak Elev=57.60' Storage=364 cf Inflow=0.02 cfs 0.010 af
Outflow=0.01 cfs 0.001 af

Link 1L: POI #1 Inflow=0.31 cfs 0.015 af
Primary=0.31 cfs 0.015 af

Total Runoff Area = 0.431 ac Runoff Volume = 0.051 af Average Runoff Depth = 1.43"
61.56% Pervious = 0.265 ac 38.44% Impervious = 0.166 ac

Summary for Subcatchment 1S: DA-1

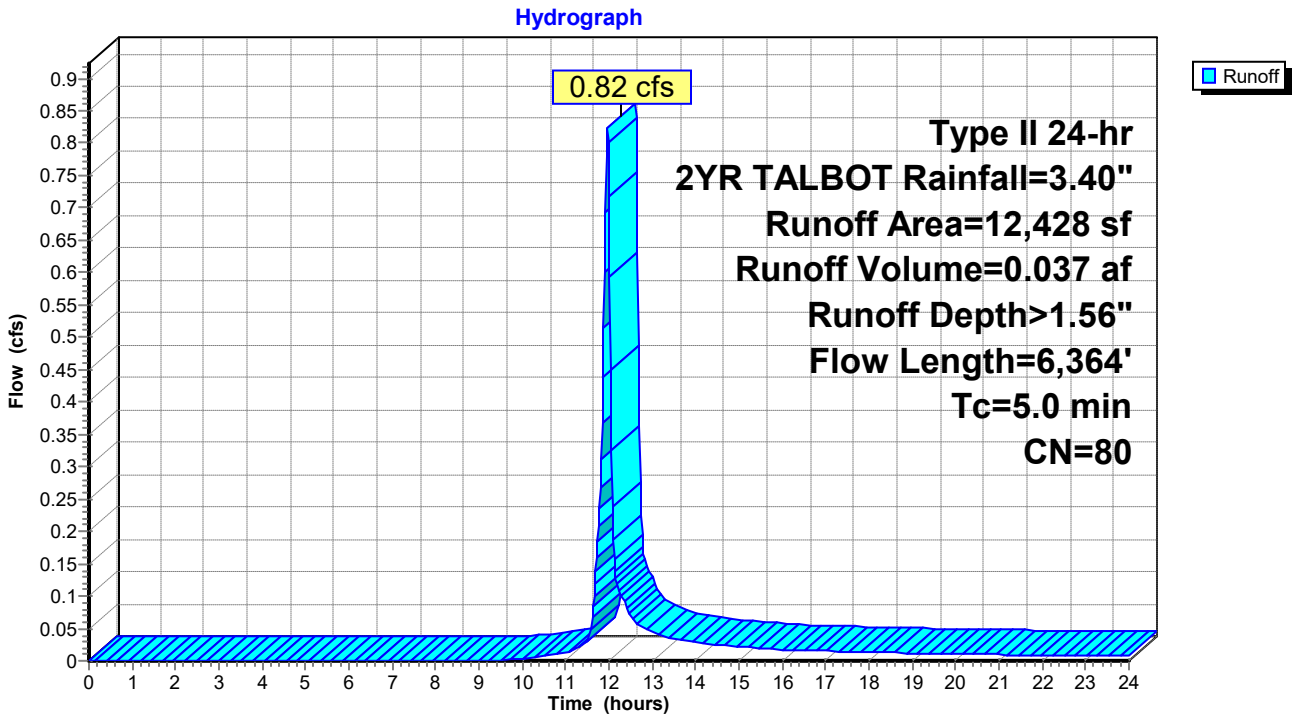
Runoff = 0.82 cfs @ 11.96 hrs, Volume= 0.037 af, Depth> 1.56"
Routed to Reach 1R : Swale 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Type II 24-hr 2YR TALBOT Rainfall=3.40"

Area (sf)	CN	Description
4,807	61	>75% Grass cover, Good, HSG B
2,586	80	>75% Grass cover, Good, HSG D
5,035	98	Paved parking, HSG B
12,428	80	Weighted Average
7,393		59.49% Pervious Area
5,035		40.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	6,364		21.21		**Direct Entry, Tc Min**

Subcatchment 1S: DA-1



Summary for Subcatchment 2S: DA-2 (Offsite)

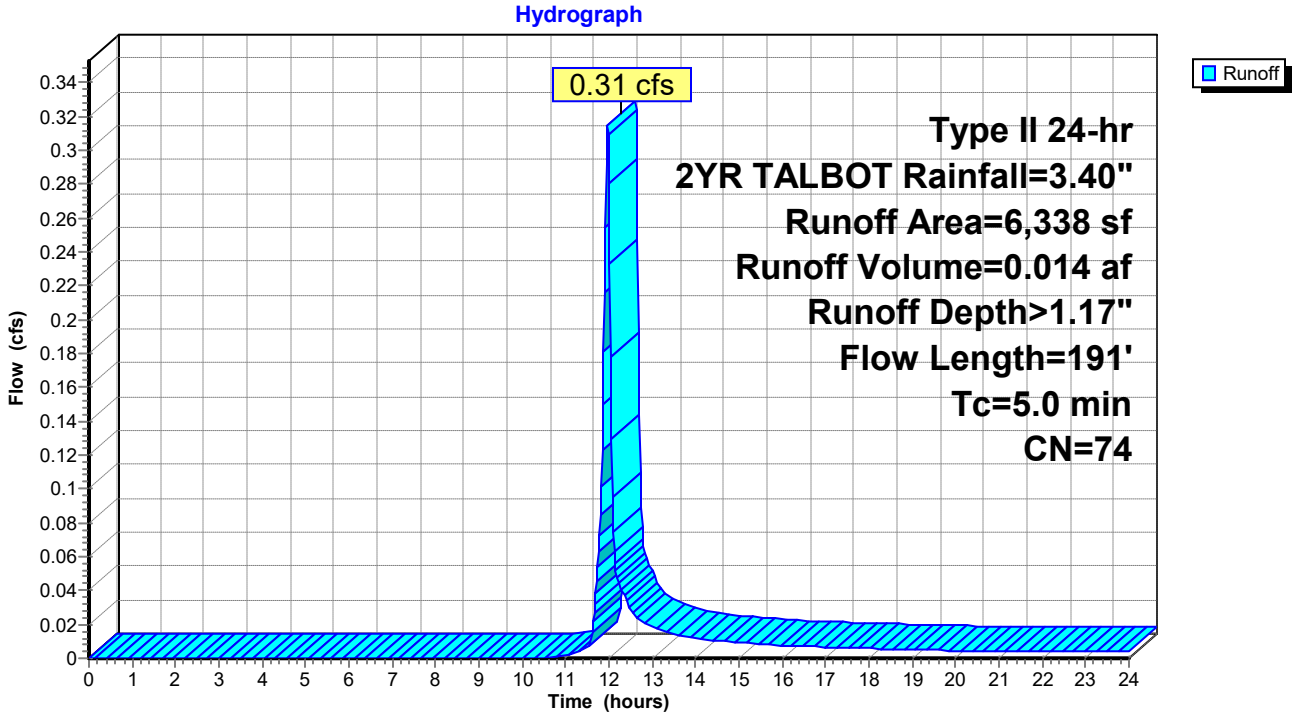
Runoff = 0.31 cfs @ 11.97 hrs, Volume= 0.014 af, Depth> 1.17"
Routed to Link 1L : POI #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Type II 24-hr 2YR TALBOT Rainfall=3.40"

Area (sf)	CN	Description
4,159	61	>75% Grass cover, Good, HSG B
2,179	98	Paved parking, HSG B
6,338	74	Weighted Average
4,159		65.62% Pervious Area
2,179		34.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	191		0.64		**Direct Entry, Tc Min**

Subcatchment 2S: DA-2 (Offsite)



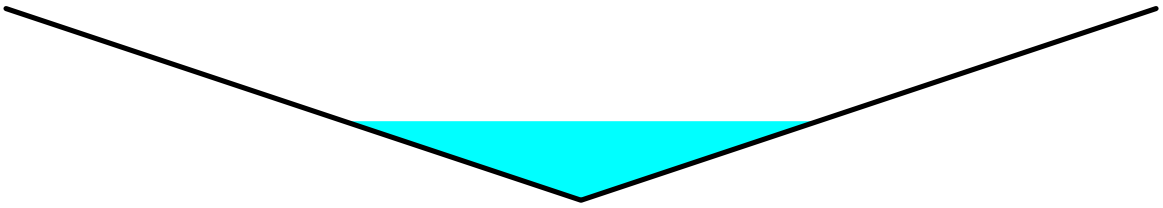
Summary for Reach 1R: Swale 1

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 1.56" for 2YR TALBOT event
Inflow = 0.82 cfs @ 11.96 hrs, Volume= 0.037 af
Outflow = 0.81 cfs @ 11.97 hrs, Volume= 0.037 af, Atten= 1%, Lag= 0.7 min
Routed to Pond 1P : Bio-Swale

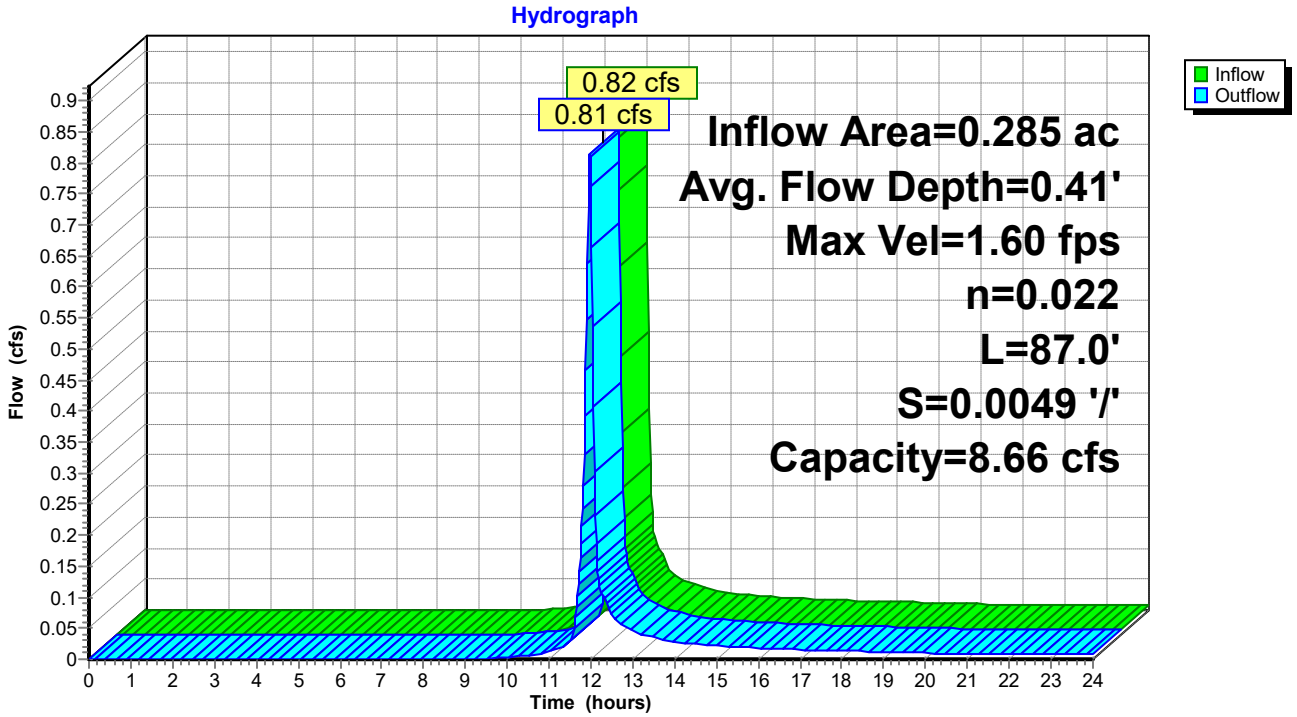
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.60 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 0.60 fps, Avg. Travel Time= 2.4 min

Peak Storage= 44 cf @ 11.97 hrs
Average Depth at Peak Storage= 0.41' , Surface Width= 2.47'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 8.66 cfs

0.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.00'
Length= 87.0' Slope= 0.0049 '/'
Inlet Invert= 58.85', Outlet Invert= 58.42'



Reach 1R: Swale 1



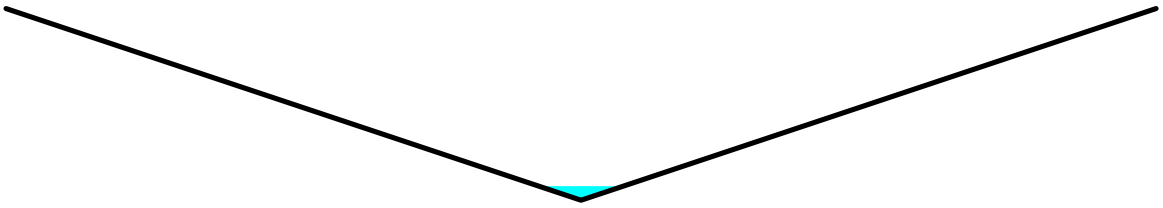
Summary for Reach 2R: Swale 2

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 0.05" for 2YR TALBOT event
Inflow = 0.01 cfs @ 24.00 hrs, Volume= 0.001 af
Outflow = 0.01 cfs @ 24.00 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min
Routed to Link 1L : POI #1

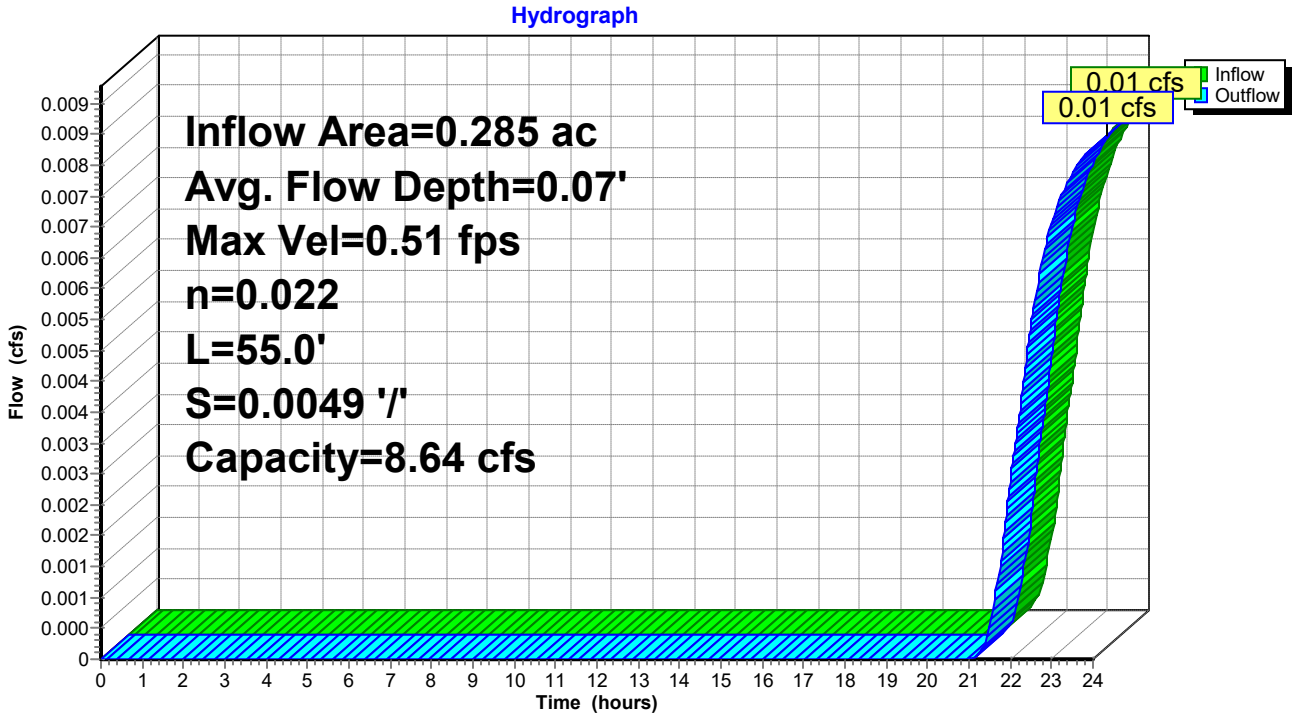
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Max. Velocity= 0.51 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 0.41 fps, Avg. Travel Time= 2.2 min

Peak Storage= 1 cf @ 24.00 hrs
Average Depth at Peak Storage= 0.07' , Surface Width= 0.44'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 8.64 cfs

0.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.00'
Length= 55.0' Slope= 0.0049 '/'
Inlet Invert= 57.47', Outlet Invert= 57.20'



Reach 2R: Swale 2



Summary for Pond 1P: Bio-Swale

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 1.55" for 2YR TALBOT event
Inflow = 0.81 cfs @ 11.97 hrs, Volume= 0.037 af
Outflow = 0.02 cfs @ 15.11 hrs, Volume= 0.010 af, Atten= 97%, Lag= 188.0 min
Primary = 0.02 cfs @ 15.11 hrs, Volume= 0.010 af
Routed to Pond 2P : Dry Detention Basin

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Peak Elev= 58.01' @ 15.11 hrs Surf.Area= 667 sf Storage= 1,198 cf

Plug-Flow detention time= 417.2 min calculated for 0.010 af (26% of inflow)
Center-of-Mass det. time= 283.5 min (1,119.4 - 835.9)

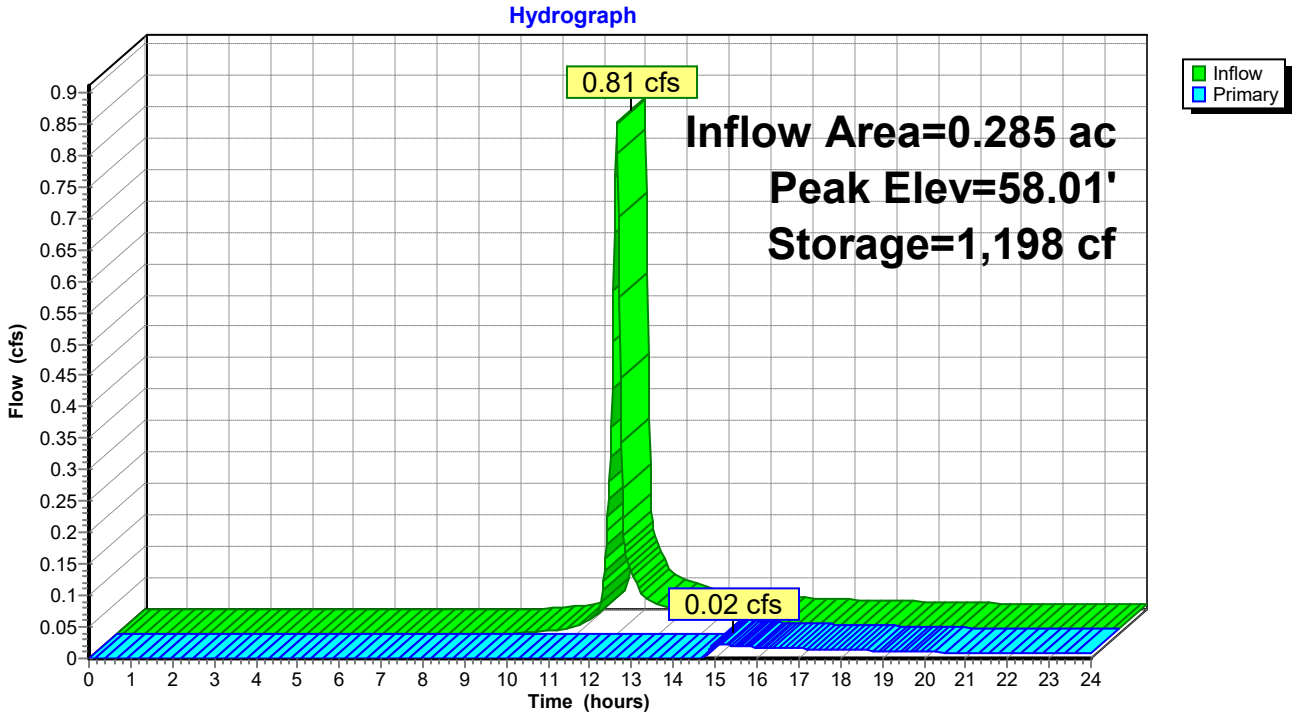
Volume	Invert	Avail.Storage	Storage Description
#1	55.00'	2,834 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.00	662	0.0	0	0
56.00	662	40.0	265	265
57.00	662	40.0	265	530
58.00	662	100.0	662	1,192
59.00	1,234	100.0	948	2,140
59.50	1,542	100.0	694	2,834

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0' long + 3.0 '/' SideZ x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.02 cfs @ 15.11 hrs HW=58.01' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.02 cfs @ 0.23 fps)

Pond 1P: Bio-Swale



Summary for Pond 2P: Dry Detention Basin

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 0.40" for 2YR TALBOT event
Inflow = 0.02 cfs @ 15.11 hrs, Volume= 0.010 af
Outflow = 0.01 cfs @ 24.00 hrs, Volume= 0.001 af, Atten= 62%, Lag= 533.5 min
Primary = 0.01 cfs @ 24.00 hrs, Volume= 0.001 af
Routed to Reach 2R : Swale 2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Peak Elev= 57.60' @ 24.00 hrs Surf.Area= 453 sf Storage= 364 cf

Plug-Flow detention time= 471.8 min calculated for 0.001 af (12% of inflow)
Center-of-Mass det. time= 263.1 min (1,382.4 - 1,119.4)

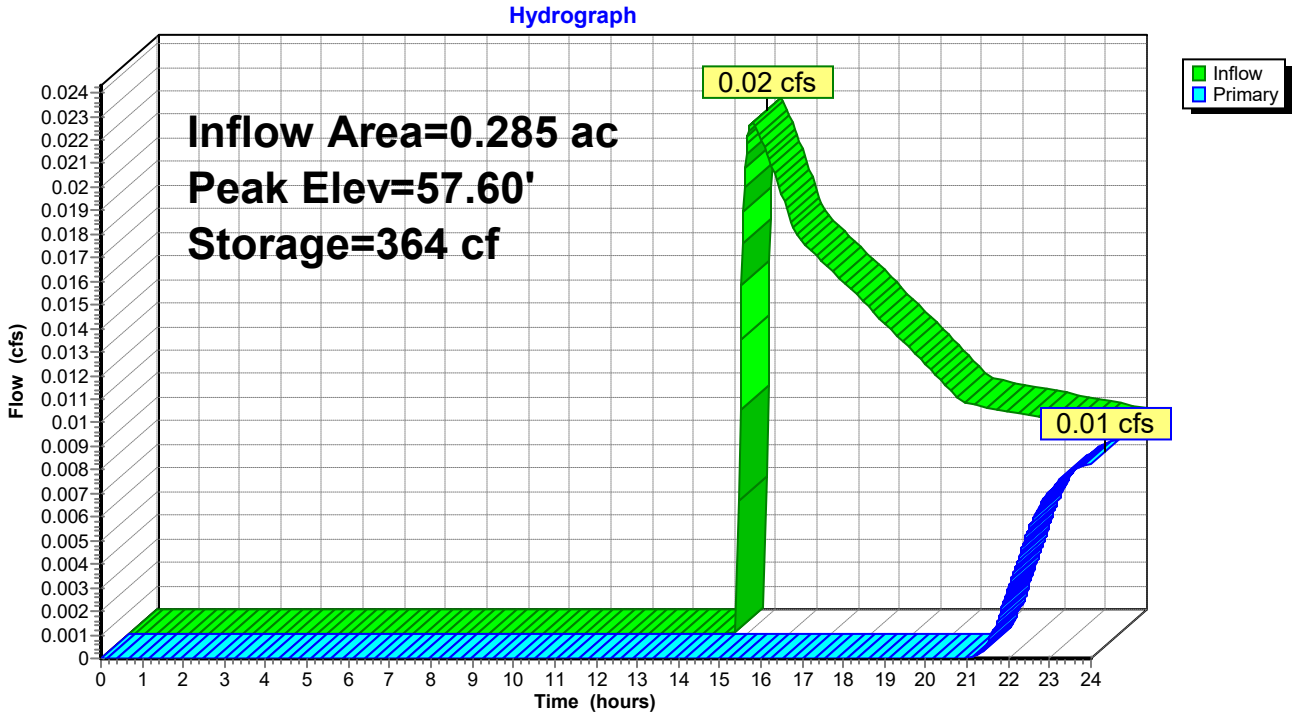
Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	1,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.50	223	0	0
57.00	316	135	135
57.50	423	185	320
58.00	570	248	568
59.00	830	700	1,268

Device	Routing	Invert	Outlet Devices
#1	Device 2	57.50'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.50' / 57.50' S= 0.0000 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.09 sf
#2	Primary	57.50'	**12.0" Round Culvert** L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.50' / 57.47' S= 0.0019 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	58.25'	**90.0 deg x 1.0' long x 0.33' rise Sharp-Crested Vee/Trap Weir** Cv= 2.50 (C= 3.13)
#4	Device 2	58.99'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.01 cfs @ 24.00 hrs HW=57.60' (Free Discharge)
└**2=Culvert** (Passes 0.01 cfs of 0.02 cfs potential flow)
  ├**1=Culvert** (Barrel Controls 0.01 cfs @ 0.55 fps)
  ├**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 2P: Dry Detention Basin

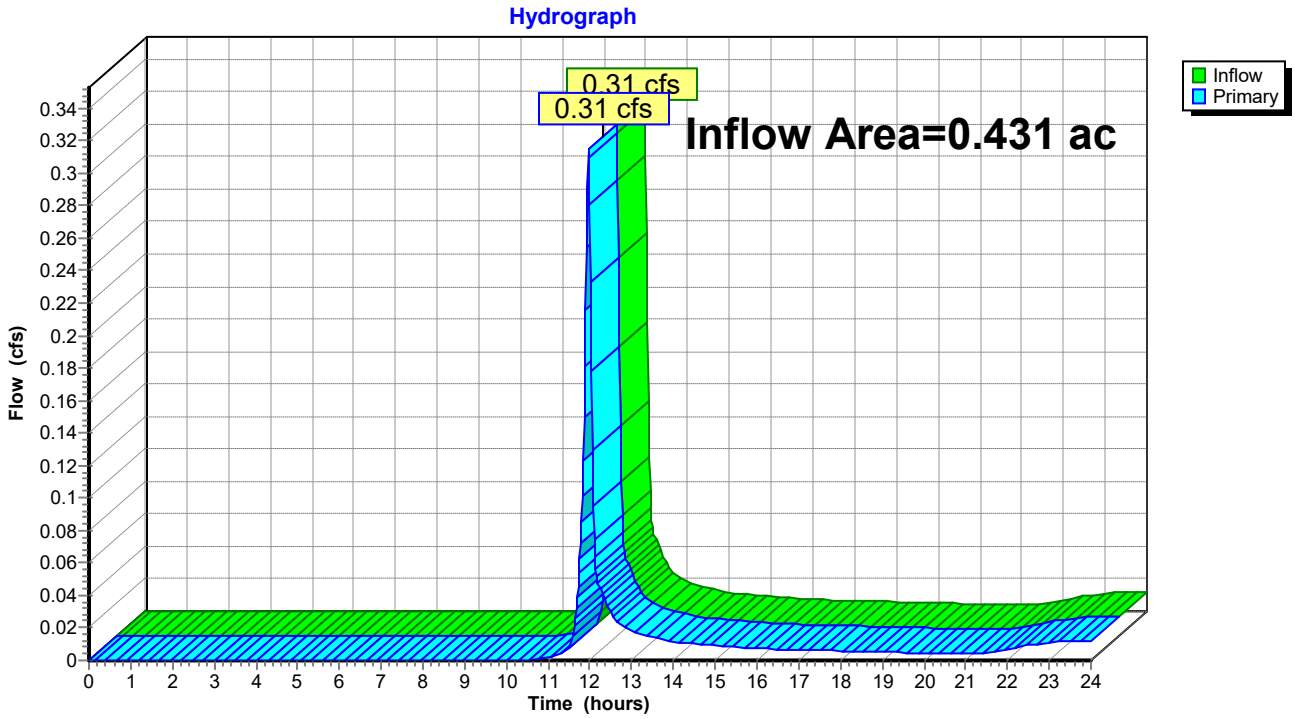


Summary for Link 1L: POI #1

Inflow Area = 0.431 ac, 38.44% Impervious, Inflow Depth > 0.43" for 2YR TALBOT event
Inflow = 0.31 cfs @ 11.97 hrs, Volume= 0.015 af
Primary = 0.31 cfs @ 11.97 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs

Link 1L: POI #1



Time span=0.00-24.00 hrs, dt=0.02 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1S: DA-1 Runoff Area=12,428 sf 40.51% Impervious Runoff Depth>3.15"
Flow Length=6,364' Tc=5.0 min CN=80 Runoff=1.64 cfs 0.075 af

Subcatchment 2S: DA-2 (Offsite) Runoff Area=6,338 sf 34.38% Impervious Runoff Depth>2.60"
Flow Length=191' Tc=5.0 min CN=74 Runoff=0.70 cfs 0.032 af

Reach 1R: Swale 1 Avg. Flow Depth=0.53' Max Vel=1.90 fps Inflow=1.64 cfs 0.075 af
n=0.022 L=87.0' S=0.0049 '/' Capacity=8.66 cfs Outflow=1.62 cfs 0.075 af

Reach 2R: Swale 2 Avg. Flow Depth=0.22' Max Vel=1.05 fps Inflow=0.16 cfs 0.039 af
n=0.022 L=55.0' S=0.0049 '/' Capacity=8.64 cfs Outflow=0.16 cfs 0.039 af

Pond 1P: Bio-Swale Peak Elev=58.16' Storage=1,307 cf Inflow=1.62 cfs 0.075 af
Outflow=1.31 cfs 0.047 af

Pond 2P: Dry Detention Basin Peak Elev=58.01' Storage=571 cf Inflow=1.31 cfs 0.047 af
Outflow=0.16 cfs 0.039 af

Link 1L: POI #1 Inflow=0.70 cfs 0.070 af
Primary=0.70 cfs 0.070 af

Total Runoff Area = 0.431 ac Runoff Volume = 0.107 af Average Runoff Depth = 2.97"
61.56% Pervious = 0.265 ac 38.44% Impervious = 0.166 ac

Summary for Subcatchment 1S: DA-1

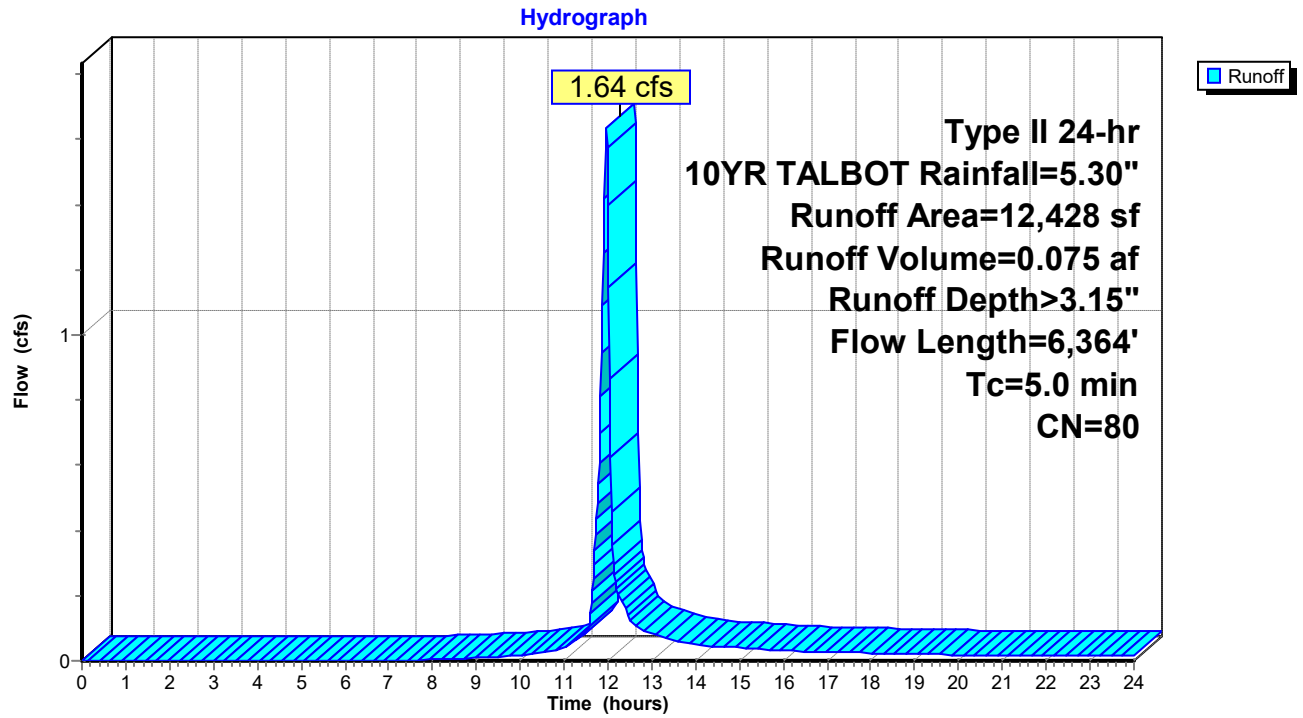
Runoff = 1.64 cfs @ 11.96 hrs, Volume= 0.075 af, Depth> 3.15"
Routed to Reach 1R : Swale 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Type II 24-hr 10YR TALBOT Rainfall=5.30"

Area (sf)	CN	Description
4,807	61	>75% Grass cover, Good, HSG B
2,586	80	>75% Grass cover, Good, HSG D
5,035	98	Paved parking, HSG B
12,428	80	Weighted Average
7,393		59.49% Pervious Area
5,035		40.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	6,364		21.21		**Direct Entry, Tc Min**

Subcatchment 1S: DA-1



Summary for Subcatchment 2S: DA-2 (Offsite)

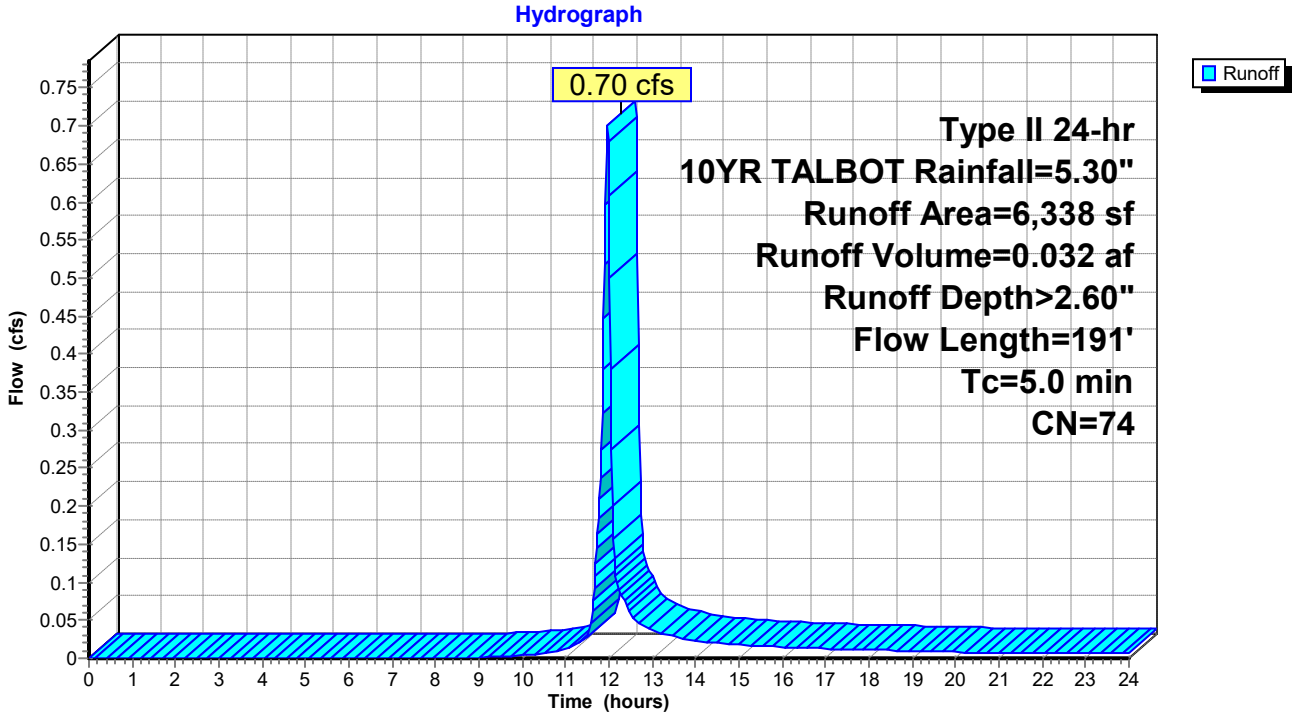
Runoff = 0.70 cfs @ 11.96 hrs, Volume= 0.032 af, Depth> 2.60"
Routed to Link 1L : POI #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Type II 24-hr 10YR TALBOT Rainfall=5.30"

Area (sf)	CN	Description
4,159	61	>75% Grass cover, Good, HSG B
2,179	98	Paved parking, HSG B
6,338	74	Weighted Average
4,159		65.62% Pervious Area
2,179		34.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	191		0.64		**Direct Entry, Tc Min**

Subcatchment 2S: DA-2 (Offsite)



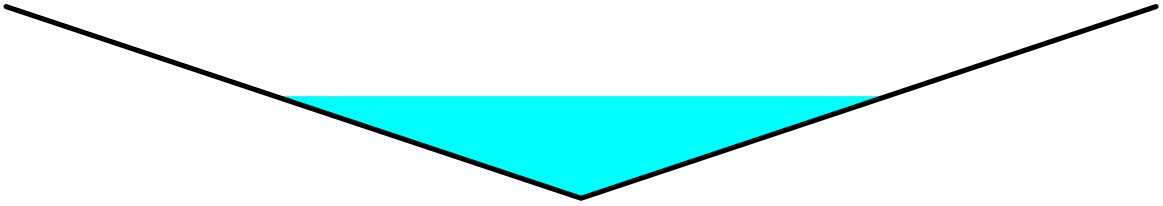
Summary for Reach 1R: Swale 1

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 3.15" for 10YR TALBOT event
Inflow = 1.64 cfs @ 11.96 hrs, Volume= 0.075 af
Outflow = 1.62 cfs @ 11.97 hrs, Volume= 0.075 af, Atten= 1%, Lag= 0.6 min
Routed to Pond 1P : Bio-Swale

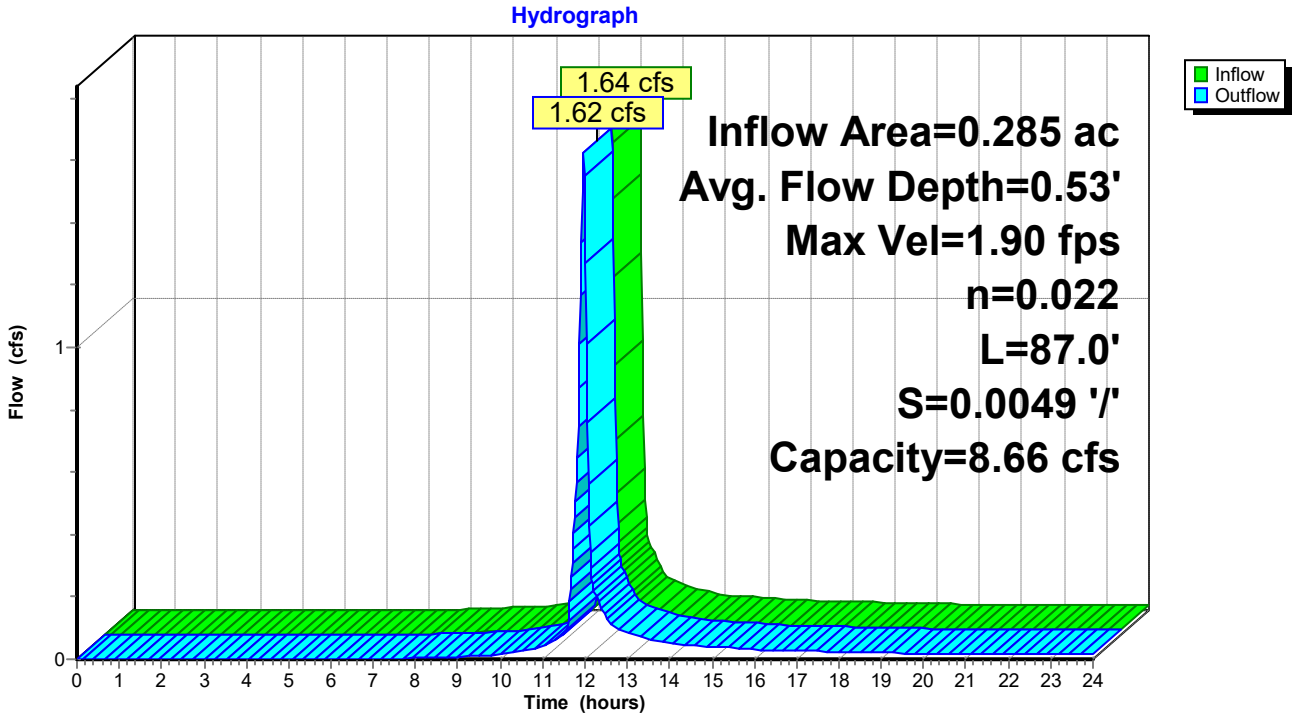
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.90 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 0.68 fps, Avg. Travel Time= 2.1 min

Peak Storage= 74 cf @ 11.97 hrs
Average Depth at Peak Storage= 0.53' , Surface Width= 3.20'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 8.66 cfs

0.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.00'
Length= 87.0' Slope= 0.0049 '/'
Inlet Invert= 58.85', Outlet Invert= 58.42'



Reach 1R: Swale 1



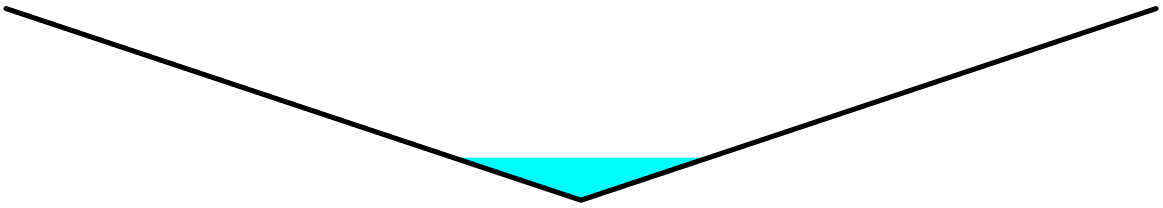
Summary for Reach 2R: Swale 2

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 1.63" for 10YR TALBOT event
Inflow = 0.16 cfs @ 12.46 hrs, Volume= 0.039 af
Outflow = 0.16 cfs @ 12.47 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.7 min
Routed to Link 1L : POI #1

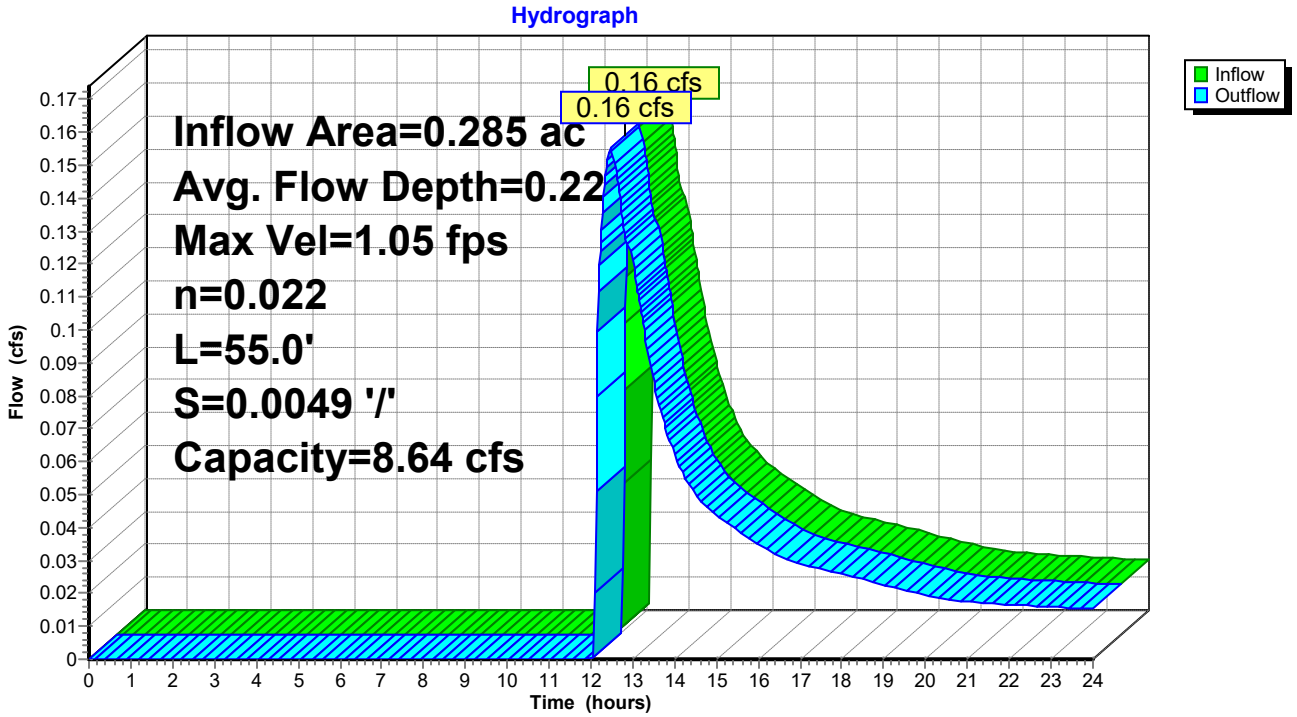
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.05 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 0.71 fps, Avg. Travel Time= 1.3 min

Peak Storage= 8 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 1.33'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 8.64 cfs

0.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.00'
Length= 55.0' Slope= 0.0049 '/'
Inlet Invert= 57.47', Outlet Invert= 57.20'



Reach 2R: Swale 2



Summary for Pond 1P: Bio-Swale

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 3.15" for 10YR TALBOT event
Inflow = 1.62 cfs @ 11.97 hrs, Volume= 0.075 af
Outflow = 1.31 cfs @ 12.02 hrs, Volume= 0.047 af, Atten= 19%, Lag= 3.1 min
Primary = 1.31 cfs @ 12.02 hrs, Volume= 0.047 af
Routed to Pond 2P : Dry Detention Basin

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Peak Elev= 58.16' @ 12.02 hrs Surf.Area= 756 sf Storage= 1,307 cf

Plug-Flow detention time= 180.3 min calculated for 0.047 af (63% of inflow)
Center-of-Mass det. time= 73.1 min (888.7 - 815.6)

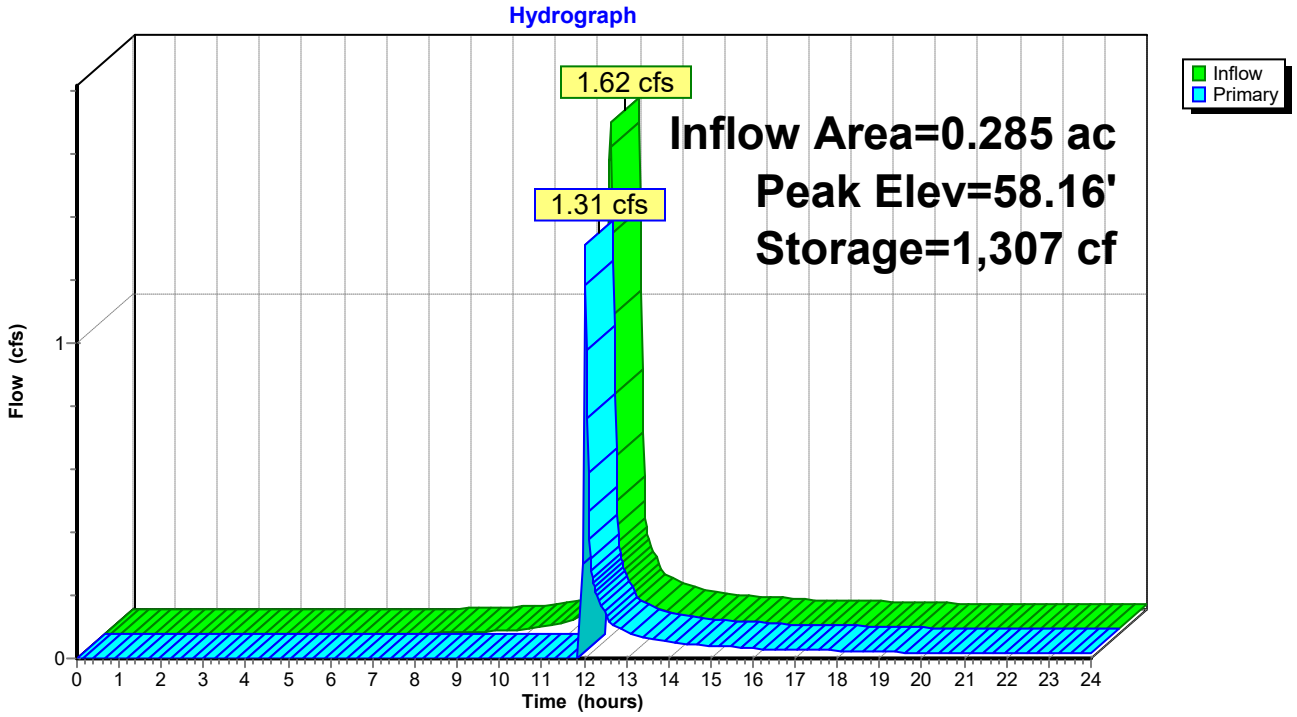
Volume	Invert	Avail.Storage	Storage Description
#1	55.00'	2,834 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.00	662	0.0	0	0
56.00	662	40.0	265	265
57.00	662	40.0	265	530
58.00	662	100.0	662	1,192
59.00	1,234	100.0	948	2,140
59.50	1,542	100.0	694	2,834

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0' long + 3.0 '/' SideZ x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.28 cfs @ 12.02 hrs HW=58.16' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 1.28 cfs @ 0.93 fps)

Pond 1P: Bio-Swale



Summary for Pond 2P: Dry Detention Basin

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 2.00" for 10YR TALBOT event
Inflow = 1.31 cfs @ 12.02 hrs, Volume= 0.047 af
Outflow = 0.16 cfs @ 12.46 hrs, Volume= 0.039 af, Atten= 88%, Lag= 26.4 min
Primary = 0.16 cfs @ 12.46 hrs, Volume= 0.039 af
Routed to Reach 2R : Swale 2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Peak Elev= 58.01' @ 12.46 hrs Surf.Area= 572 sf Storage= 571 cf

Plug-Flow detention time= 132.8 min calculated for 0.039 af (82% of inflow)
Center-of-Mass det. time= 51.9 min (940.6 - 888.7)

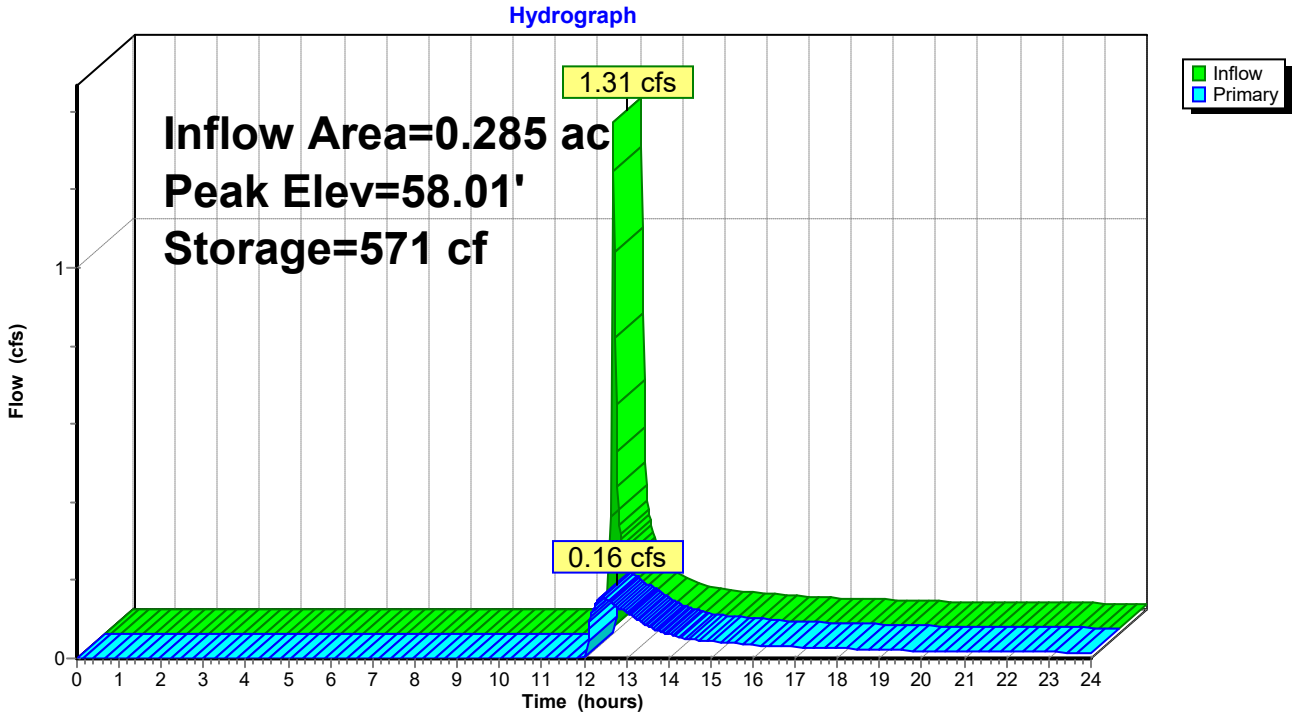
Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	1,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.50	223	0	0
57.00	316	135	135
57.50	423	185	320
58.00	570	248	568
59.00	830	700	1,268

Device	Routing	Invert	Outlet Devices
#1	Device 2	57.50'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.50' / 57.50' S= 0.0000 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.09 sf
#2	Primary	57.50'	**12.0" Round Culvert** L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.50' / 57.47' S= 0.0019 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	58.25'	**90.0 deg x 1.0' long x 0.33' rise Sharp-Crested Vee/Trap Weir** Cv= 2.50 (C= 3.13)
#4	Device 2	58.99'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.16 cfs @ 12.46 hrs HW=58.01' (Free Discharge)
└**2=Culvert** (Passes 0.16 cfs of 0.59 cfs potential flow)
  ├**1=Culvert** (Barrel Controls 0.16 cfs @ 1.78 fps)
  ├**3=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 2P: Dry Detention Basin

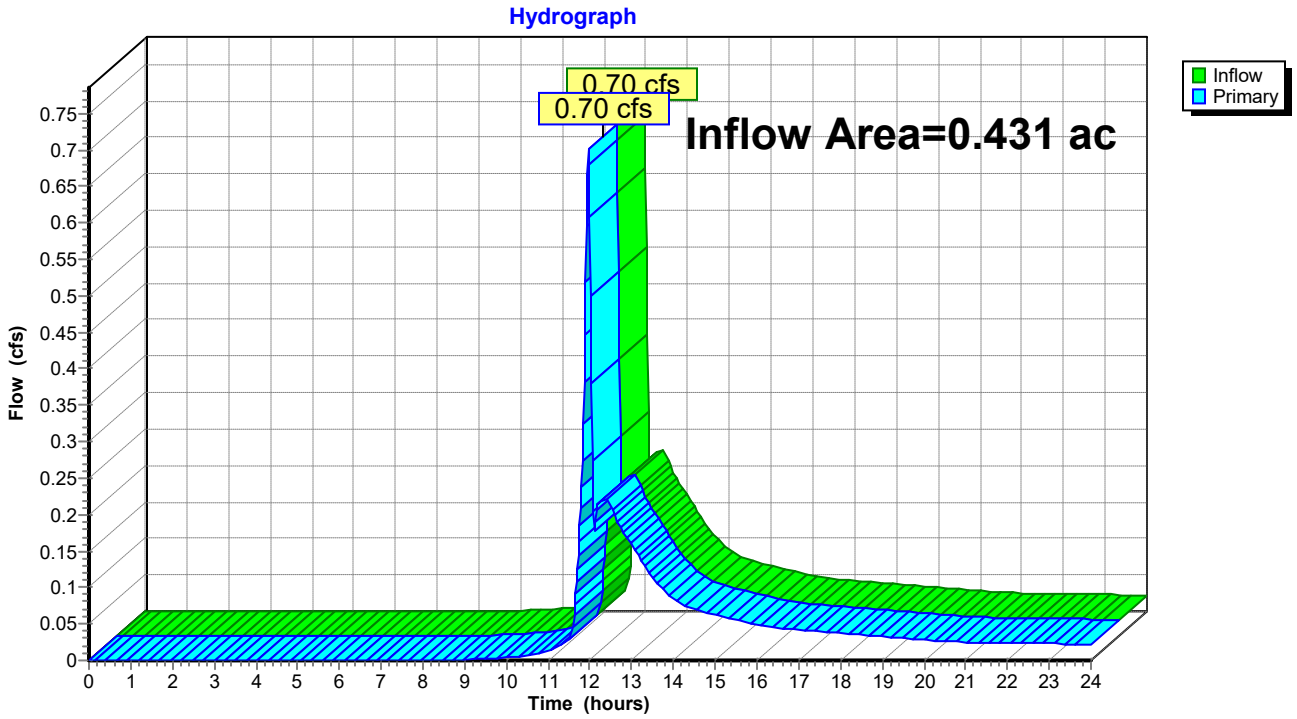


Summary for Link 1L: POI #1

Inflow Area = 0.431 ac, 38.44% Impervious, Inflow Depth > 1.96" for 10YR TALBOT event
Inflow = 0.70 cfs @ 11.96 hrs, Volume= 0.070 af
Primary = 0.70 cfs @ 11.96 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs

Link 1L: POI #1



Time span=0.00-24.00 hrs, dt=0.02 hrs, 1201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1S: DA-1 Runoff Area=12,428 sf 40.51% Impervious Runoff Depth>5.25"
Flow Length=6,364' Tc=5.0 min CN=80 Runoff=2.66 cfs 0.125 af

Subcatchment 2S: DA-2 (Offsite) Runoff Area=6,338 sf 34.38% Impervious Runoff Depth>4.56"
Flow Length=191' Tc=5.0 min CN=74 Runoff=1.21 cfs 0.055 af

Reach 1R: Swale 1 Avg. Flow Depth=0.64' Max Vel=2.14 fps Inflow=2.66 cfs 0.125 af
n=0.022 L=87.0' S=0.0049 '/' Capacity=8.66 cfs Outflow=2.63 cfs 0.125 af

Reach 2R: Swale 2 Avg. Flow Depth=0.53' Max Vel=1.89 fps Inflow=1.59 cfs 0.088 af
n=0.022 L=55.0' S=0.0049 '/' Capacity=8.64 cfs Outflow=1.59 cfs 0.088 af

Pond 1P: Bio-Swale Peak Elev=58.25' Storage=1,376 cf Inflow=2.63 cfs 0.125 af
Outflow=2.60 cfs 0.097 af

Pond 2P: Dry Detention Basin Peak Elev=58.80' Storage=1,105 cf Inflow=2.60 cfs 0.097 af
Outflow=1.59 cfs 0.088 af

Link 1L: POI #1 Inflow=2.27 cfs 0.143 af
Primary=2.27 cfs 0.143 af

Total Runoff Area = 0.431 ac Runoff Volume = 0.180 af Average Runoff Depth = 5.02"
61.56% Pervious = 0.265 ac 38.44% Impervious = 0.166 ac

Summary for Subcatchment 1S: DA-1

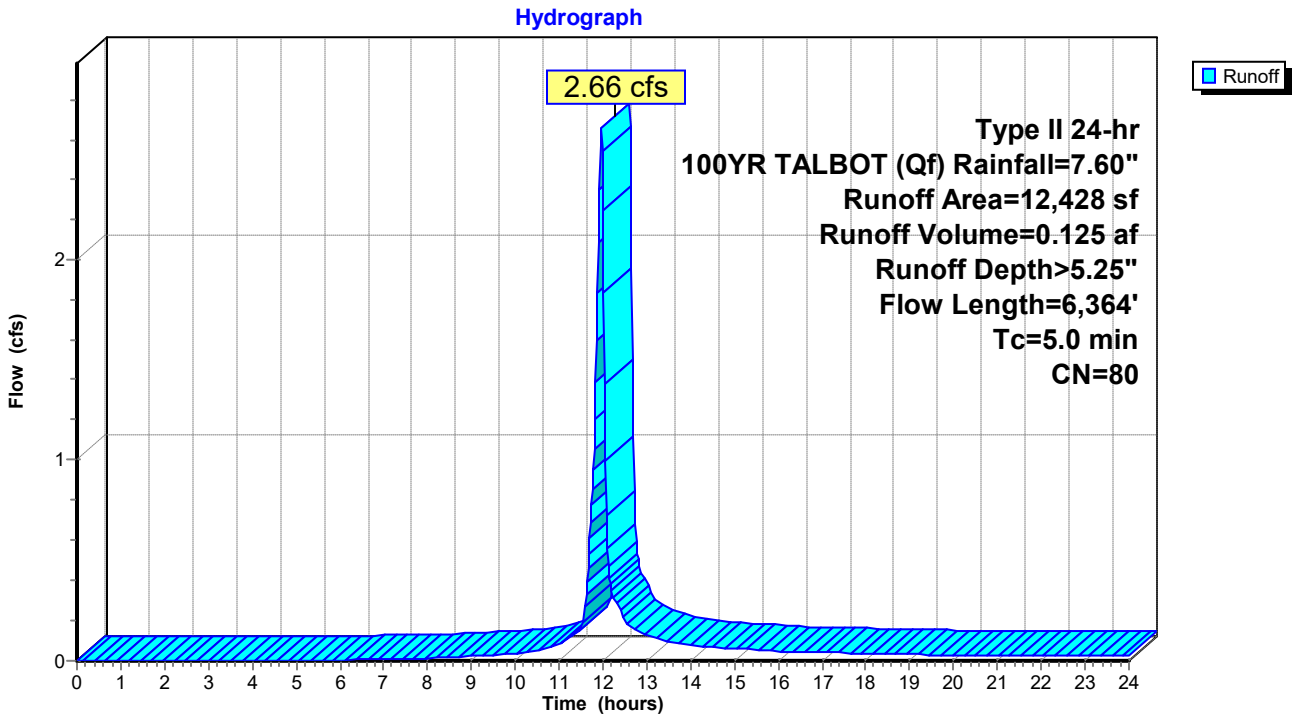
Runoff = 2.66 cfs @ 11.96 hrs, Volume= 0.125 af, Depth> 5.25"
Routed to Reach 1R : Swale 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Type II 24-hr 100YR TALBOT (Qf) Rainfall=7.60"

Area (sf)	CN	Description
4,807	61	>75% Grass cover, Good, HSG B
2,586	80	>75% Grass cover, Good, HSG D
5,035	98	Paved parking, HSG B
12,428	80	Weighted Average
7,393		59.49% Pervious Area
5,035		40.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	6,364		21.21		**Direct Entry, Tc Min**

Subcatchment 1S: DA-1



Summary for Subcatchment 2S: DA-2 (Offsite)

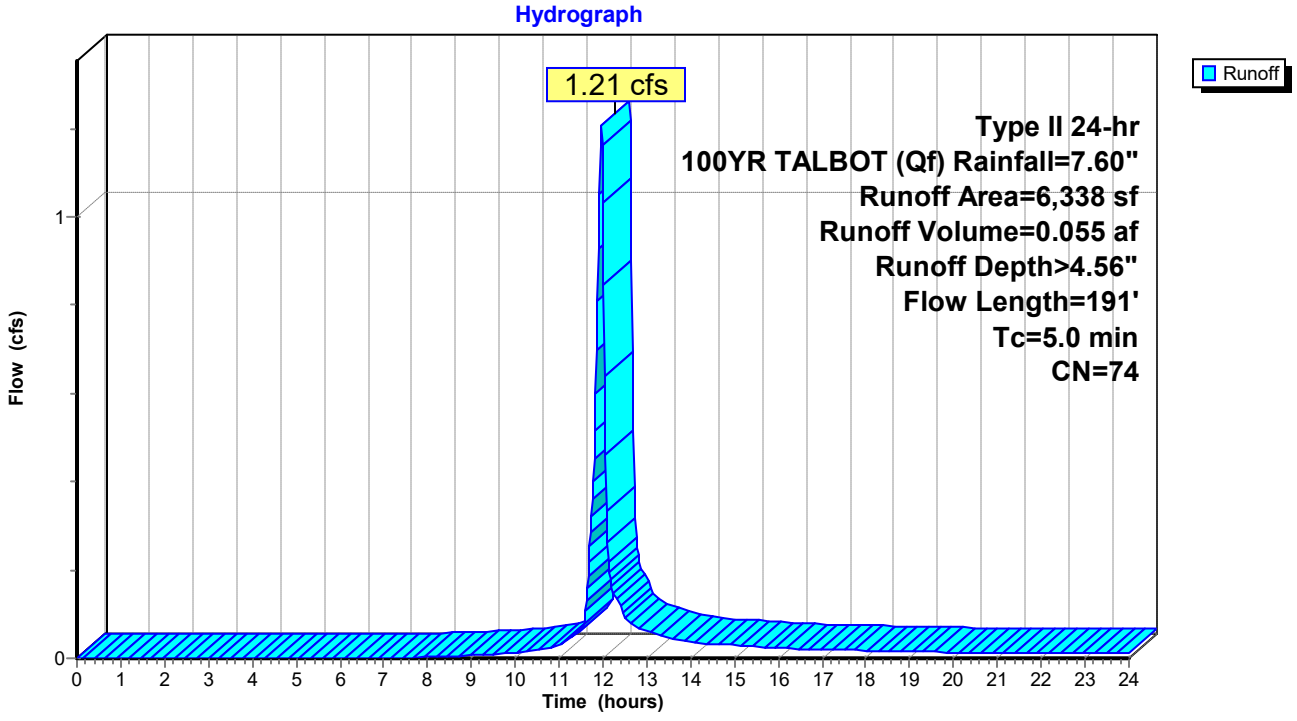
Runoff = 1.21 cfs @ 11.96 hrs, Volume= 0.055 af, Depth> 4.56"
Routed to Link 1L : POI #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Type II 24-hr 100YR TALBOT (Qf) Rainfall=7.60"

Area (sf)	CN	Description
4,159	61	>75% Grass cover, Good, HSG B
2,179	98	Paved parking, HSG B
6,338	74	Weighted Average
4,159		65.62% Pervious Area
2,179		34.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	191		0.64		**Direct Entry, Tc Min**

Subcatchment 2S: DA-2 (Offsite)



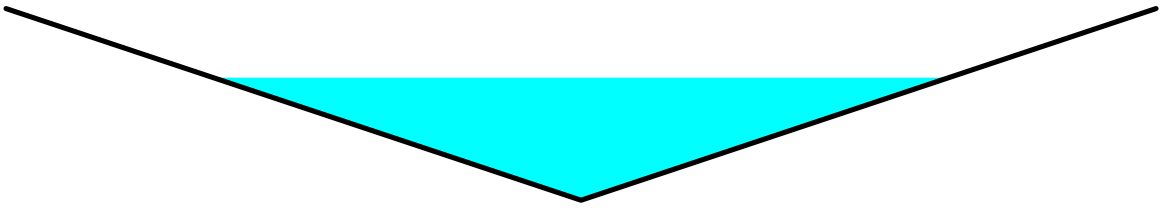
Summary for Reach 1R: Swale 1

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 5.25" for 100YR TALBOT (Qf) event
Inflow = 2.66 cfs @ 11.96 hrs, Volume= 0.125 af
Outflow = 2.63 cfs @ 11.97 hrs, Volume= 0.125 af, Atten= 1%, Lag= 0.5 min
Routed to Pond 1P : Bio-Swale

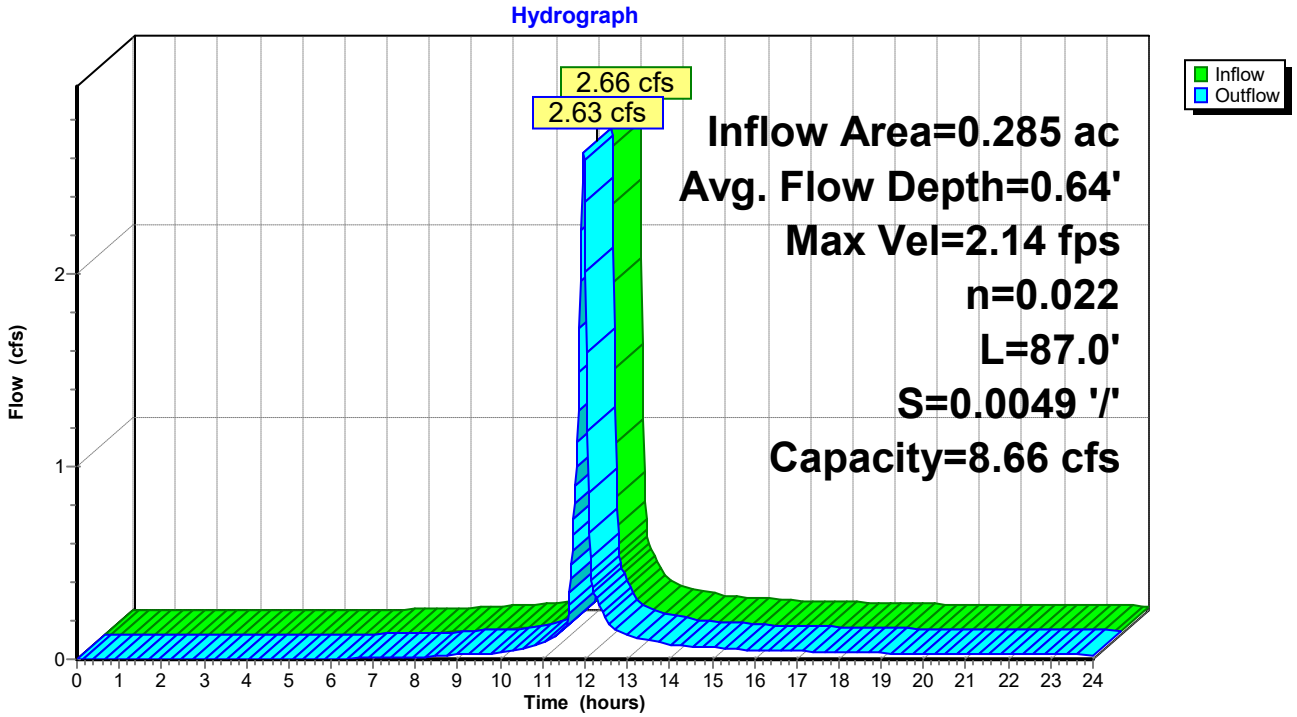
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Max. Velocity= 2.14 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 0.75 fps, Avg. Travel Time= 1.9 min

Peak Storage= 107 cf @ 11.97 hrs
Average Depth at Peak Storage= 0.64' , Surface Width= 3.84'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 8.66 cfs

0.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.00'
Length= 87.0' Slope= 0.0049 '/'
Inlet Invert= 58.85', Outlet Invert= 58.42'



Reach 1R: Swale 1



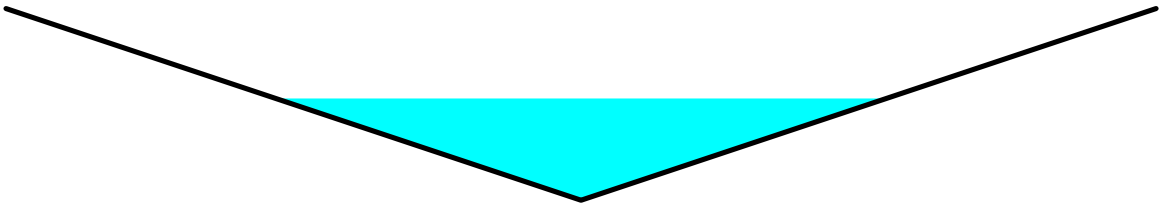
Summary for Reach 2R: Swale 2

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 3.71" for 100YR TALBOT (Qf) event
Inflow = 1.59 cfs @ 12.06 hrs, Volume= 0.088 af
Outflow = 1.59 cfs @ 12.06 hrs, Volume= 0.088 af, Atten= 0%, Lag= 0.4 min
Routed to Link 1L : POI #1

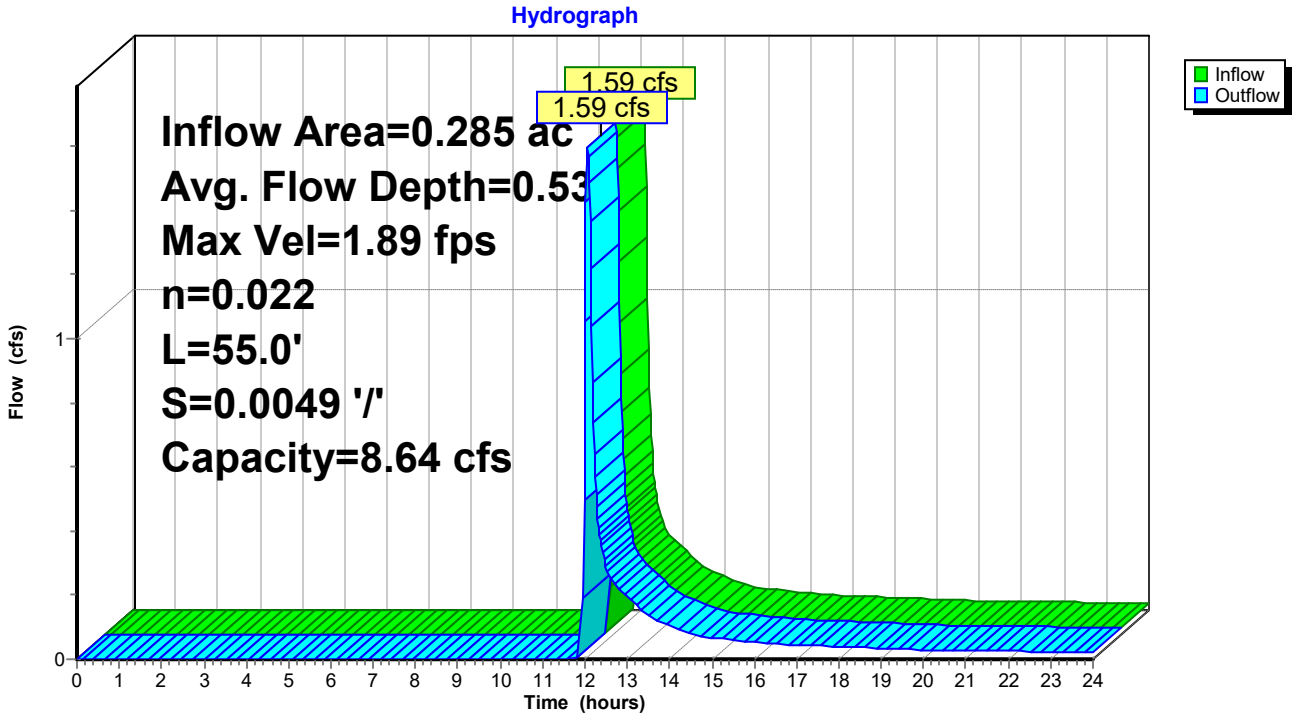
Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Max. Velocity= 1.89 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 0.81 fps, Avg. Travel Time= 1.1 min

Peak Storage= 46 cf @ 12.06 hrs
Average Depth at Peak Storage= 0.53' , Surface Width= 3.18'
Bank-Full Depth= 1.00' Flow Area= 3.0 sf, Capacity= 8.64 cfs

0.00' x 1.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 6.00'
Length= 55.0' Slope= 0.0049 '/'
Inlet Invert= 57.47', Outlet Invert= 57.20'



Reach 2R: Swale 2



Summary for Pond 1P: Bio-Swale

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 5.24" for 100YR TALBOT (Qf) event
Inflow = 2.63 cfs @ 11.97 hrs, Volume= 0.125 af
Outflow = 2.60 cfs @ 11.98 hrs, Volume= 0.097 af, Atten= 1%, Lag= 0.8 min
Primary = 2.60 cfs @ 11.98 hrs, Volume= 0.097 af
Routed to Pond 2P : Dry Detention Basin

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Peak Elev= 58.25' @ 11.98 hrs Surf.Area= 806 sf Storage= 1,376 cf

Plug-Flow detention time= 127.7 min calculated for 0.097 af (78% of inflow)
Center-of-Mass det. time= 43.3 min (844.4 - 801.1)

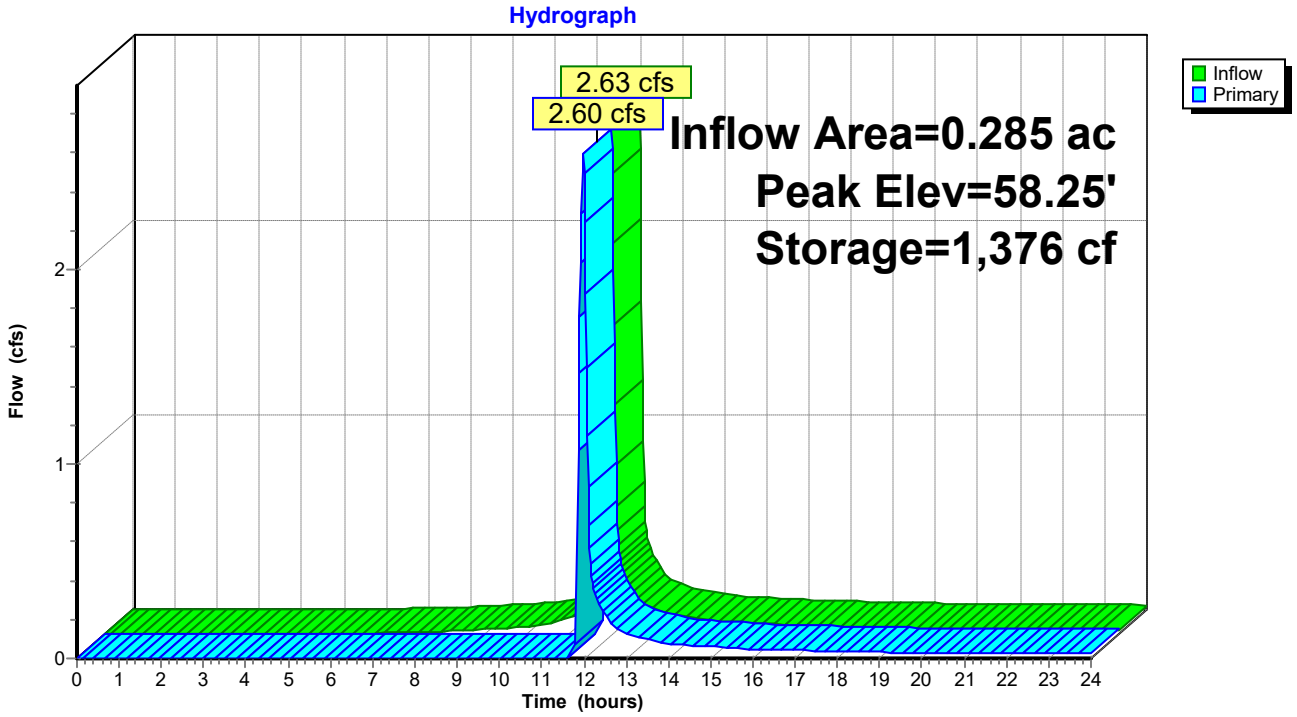
Volume	Invert	Avail.Storage	Storage Description
#1	55.00'	2,834 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.00	662	0.0	0	0
56.00	662	40.0	265	265
57.00	662	40.0	265	530
58.00	662	100.0	662	1,192
59.00	1,234	100.0	948	2,140
59.50	1,542	100.0	694	2,834

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	**8.0' long + 3.0 '/' SideZ x 5.0' 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 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=2.58 cfs @ 11.98 hrs HW=58.25' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 2.58 cfs @ 1.17 fps)

Pond 1P: Bio-Swale



Summary for Pond 2P: Dry Detention Basin

Inflow Area = 0.285 ac, 40.51% Impervious, Inflow Depth > 4.09" for 100YR TALBOT (Qf) event
Inflow = 2.60 cfs @ 11.98 hrs, Volume= 0.097 af
Outflow = 1.59 cfs @ 12.06 hrs, Volume= 0.088 af, Atten= 39%, Lag= 4.6 min
Primary = 1.59 cfs @ 12.06 hrs, Volume= 0.088 af
Routed to Reach 2R : Swale 2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs
Peak Elev= 58.80' @ 12.06 hrs Surf.Area= 777 sf Storage= 1,105 cf

Plug-Flow detention time= 72.7 min calculated for 0.088 af (91% of inflow)
Center-of-Mass det. time= 25.9 min (870.3 - 844.4)

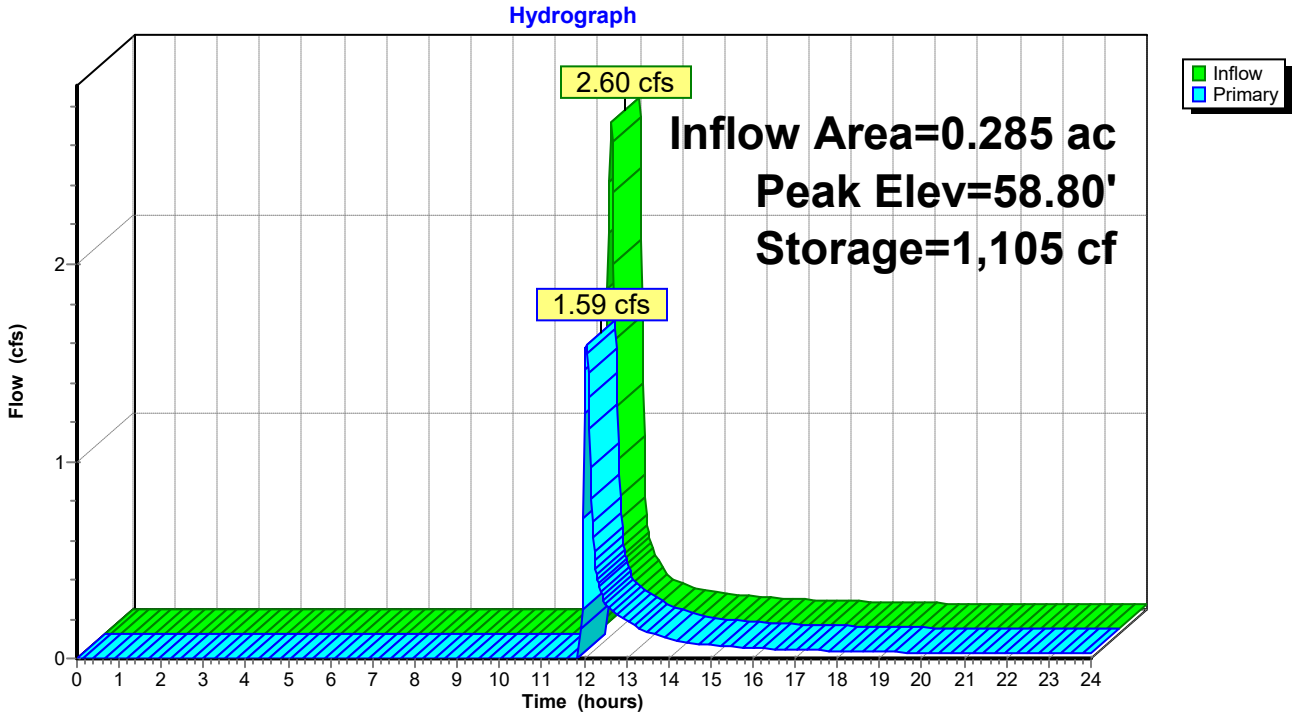
Volume	Invert	Avail.Storage	Storage Description
#1	56.50'	1,268 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.50	223	0	0
57.00	316	135	135
57.50	423	185	320
58.00	570	248	568
59.00	830	700	1,268

Device	Routing	Invert	Outlet Devices
#1	Device 2	57.50'	**4.0" Round Culvert** L= 5.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 57.50' / 57.50' S= 0.0000 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.09 sf
#2	Primary	57.50'	**12.0" Round Culvert** L= 16.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.50' / 57.47' S= 0.0019 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	58.25'	**90.0 deg x 1.0' long x 0.33' rise Sharp-Crested Vee/Trap Weir** Cv= 2.50 (C= 3.13)
#4	Device 2	58.99'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.59 cfs @ 12.06 hrs HW=58.79' (Free Discharge)
└**2=Culvert** (Passes 1.59 cfs of 2.67 cfs potential flow)
  ├**1=Culvert** (Inlet Controls 0.35 cfs @ 4.04 fps)
  ├**3=Sharp-Crested Vee/Trap Weir** (Orifice Controls 1.23 cfs @ 2.81 fps)
  └**4=Orifice/Grate** (Controls 0.00 cfs)

Pond 2P: Dry Detention Basin

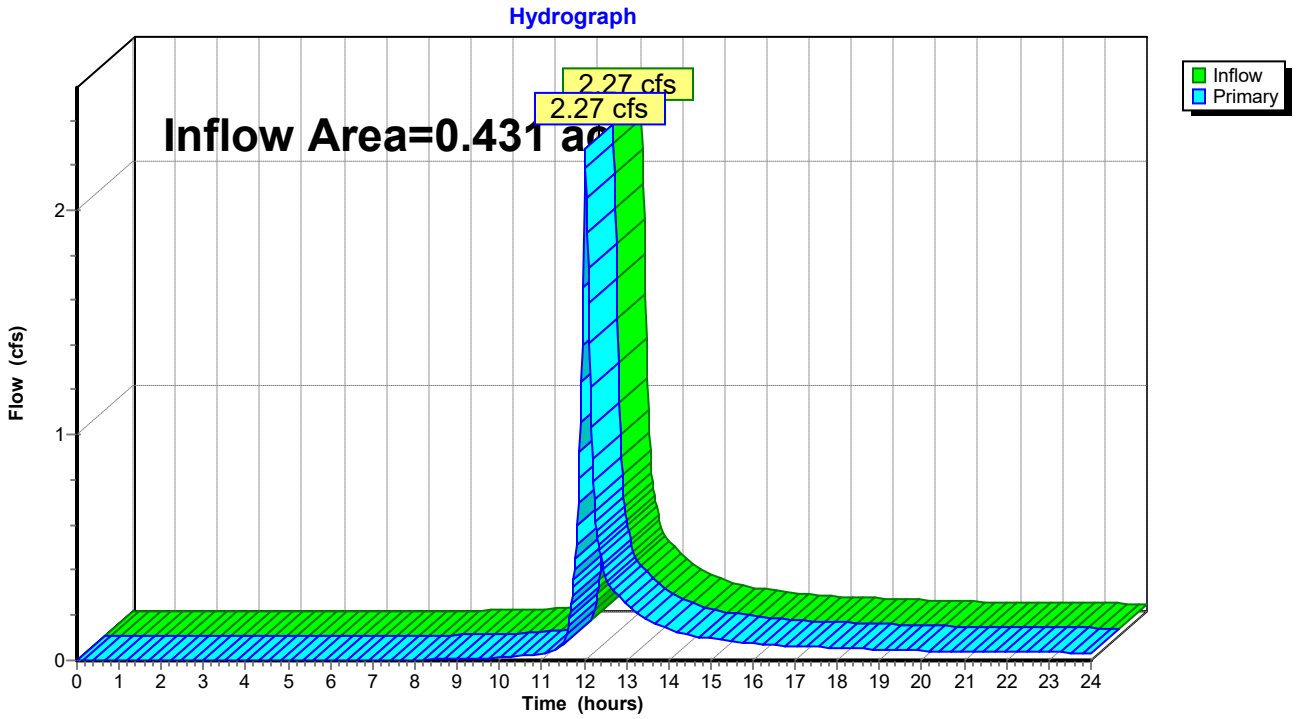


Summary for Link 1L: POI #1

Inflow Area = 0.431 ac, 38.44% Impervious, Inflow Depth > 4.00" for 100YR TALBOT (Qf) event
Inflow = 2.27 cfs @ 12.02 hrs, Volume= 0.143 af
Primary = 2.27 cfs @ 12.02 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min

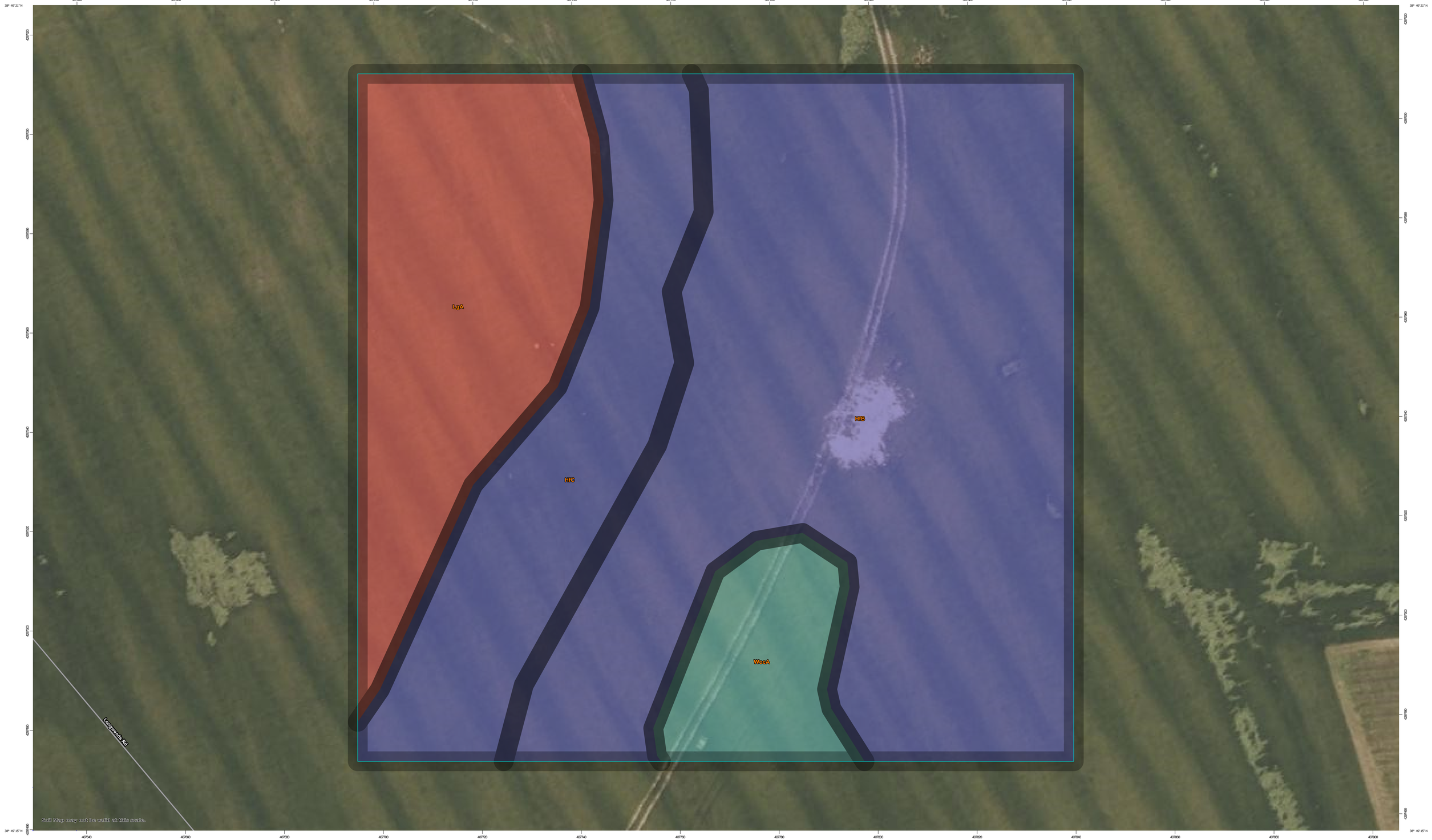
Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.02 hrs

Link 1L: POI #1



APPENDIX E

USDA WEB SOIL SURVEY



Map Scale: 1:344 if printed on D landscape (34" x 22") sheet.
Meters: 0 5 10 20 30
Feet: 0 15 30 60 90
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

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 21, Sep 6, 2024

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HfB	Hambrook-Sassafras complex, 2 to 5 percent slopes	B	2.7	54.5%
HfC	Hambrook-Sassafras complex, 5 to 10 percent slopes	B	0.9	17.7%
LgA	Lenni loam, 0 to 2 percent slopes	D	1.0	20.9%
WocA	Woodstown loam, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	C	0.3	6.9%
Totals for Area of Interest			**5.0**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

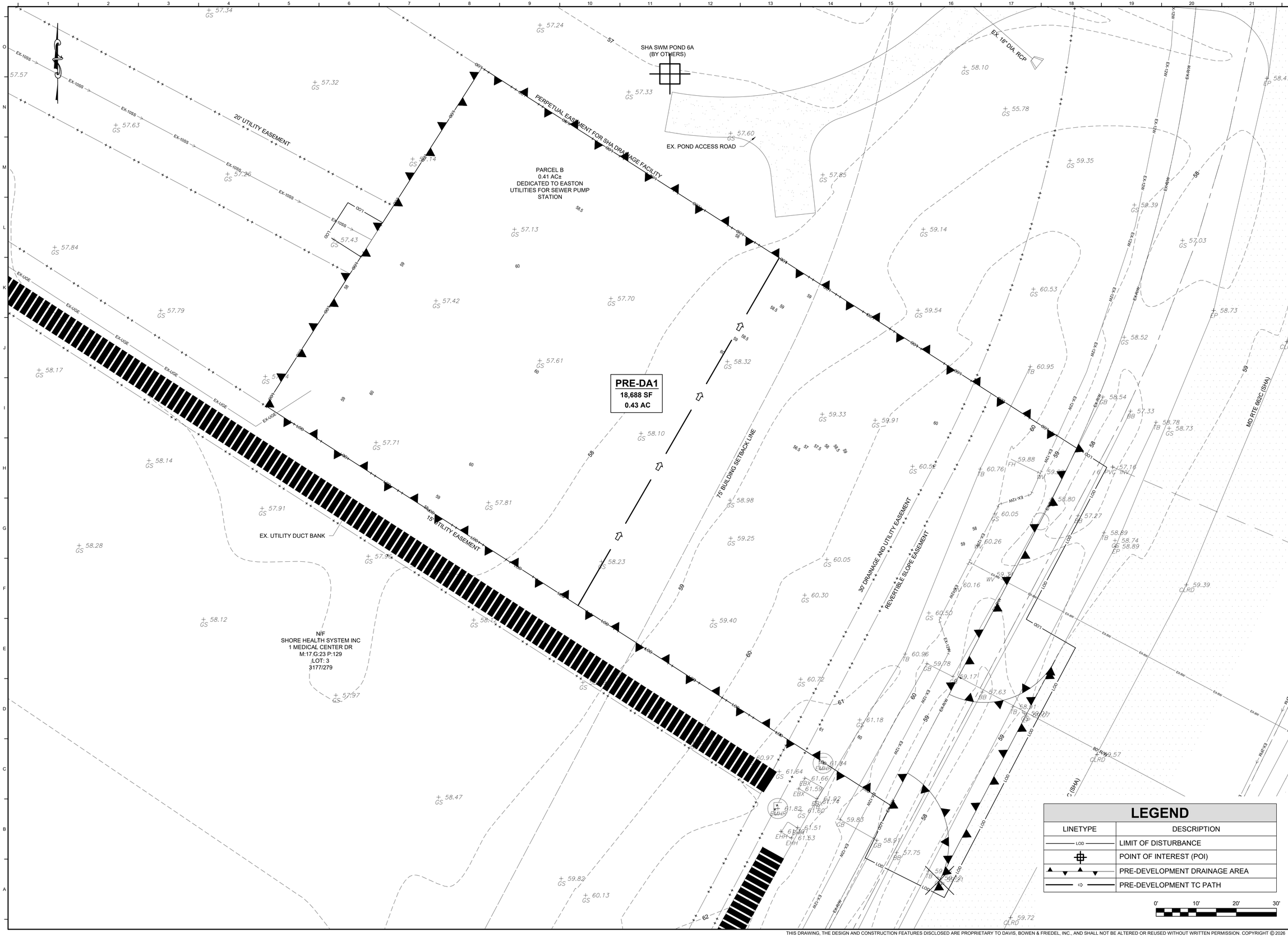
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX F

SWM SITE PLANS



LEGEND

LINETYPE	DESCRIPTION
LOD	LIMIT OF DISTURBANCE
	POINT OF INTEREST (POI)
	PRE-DEVELOPMENT DRAINAGE AREA
⇨	PRE-DEVELOPMENT TC PATH

0' 10' 20' 30'

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional ENGINEER the laws of the State of Maryland, License No. 38830 Expiration Date: 12-29-26

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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

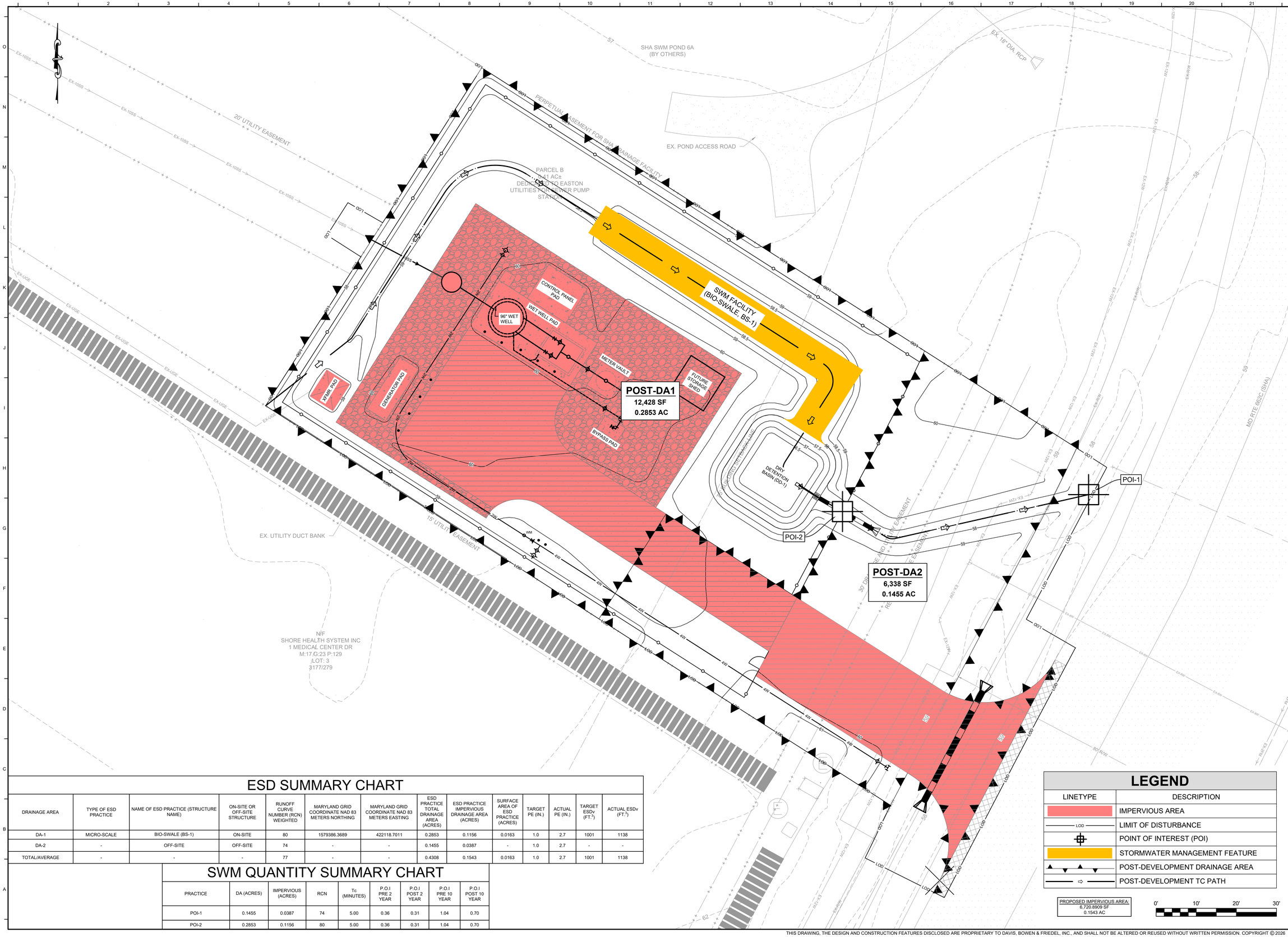
Date: JUNE 2026
Scale: 1" = 10'
Dwn.By: NLC
Proj.No.: 3306A011

PRE STORMWATER MANAGEMENT PLAN

Dwg.No.: **C-108**

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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 ($FT.^3$)
DA-1	MICRO-SCALE	BIO-SWALE (BS-1)	ON-SITE	80	1579386.3689	422118.7011	0.2853	0.1156	0.0163	1.0	2.7	1001	1138
DA-2	-	OFF-SITE	OFF-SITE	74	-	-	0.1455	0.0387	-	1.0	2.7	-	-
TOTAL/AVERAGE	-	-	-	77	-	-	0.4308	0.1543	0.0163	1.0	2.7	1001	1138

SWM QUANTITY SUMMARY CHART

PRACTICE	DA (ACRES)	IMPERVIOUS (ACRES)	RCN	Tc (MINUTES)	P.O.I PRE 2 YEAR	P.O.I POST 2 YEAR	P.O.I PRE 10 YEAR	P.O.I POST 10 YEAR
POI-1	0.1455	0.0387	74	5.00	0.36	0.31	1.04	0.70
POI-2	0.2853	0.1156	80	5.00	0.36	0.31	1.04	0.70

LEGEND

LINETYPE	DESCRIPTION
	IMPERVIOUS AREA
LOD	LIMIT OF DISTURBANCE
	POINT OF INTEREST (POI)
	STORMWATER MANAGEMENT FEATURE
	POST-DEVELOPMENT DRAINAGE AREA
	POST-DEVELOPMENT TC PATH

PROPOSED IMPERVIOUS AREA:
6,720.8909 SF
0.1543 AC

0' 10' 20' 30'

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. 38830 Expiration Date: 12-29-26

DAVIS BOWEN & FRIEDEL, INC.
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WATER & WASTEWATER INFRASTRUCTURE DESIGN FOR THE UMMS REGIONAL SHORE MEDICAL CENTER
EASTON UTILITIES
TOWN OF EASTON, TALBOT COUNTY, MARYLAND

DATE	COMMENTS

Date: JUNE 2026
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Dwn.By: NLC
Proj.No.: 3306A011

POST STORMWATER MANAGEMENT PLAN

Dwg.No.: C-109

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