CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type: Regular Meeting
Meeting Location: Council Conference Room – City Hall, Dover NH
Meeting Date: **Thursday, April 28, 2022**
Meeting Time: **10:30 AM**

1. 10:30 AM – 11:15 AM: Site Review using Transfer of Development Rights for Heron Bay Partners, LLC., Assessor's Map H, Lot 4, zoned IT – Innovative Technology, located at Cielo Drive. (Proposal is to construct age restricted, (55+) multi-family attached units in place of the two previously approved congregate care buildings, and using TDR to purchase 51 of those units). (P06-25F)

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

City of Dover
Planning Office
Attn: Donna Benton, Director of Planning and Community Development
288 Central Ave
Dover, NH 03820

April 7, 2022

Re: TDR Site Plan
Heron Bay Partners, LLC
Cielo Dr
Tax Map H, Lot 4

Mrs. Benton,

Enclosed please find the following required material in support of the Age Restricted TDR Site Plan at Cielo Drive:

- 9 Copies of the Full size plans
- 9 Copies of the TDR and Site Plan Application and checklist
- 9 Copies of the project narrative
- 3 Copies of the traffic analysis
- Drainage submitted electronically

Thank you for your time and attention to this matter.

BERRY SURVEYING & ENGINEERING

Christopher R. Berry
Principal, President

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Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com
crberry@metrocast.net

April 7, 2022

City of Dover Planning Department
Attn: Director of Department of Planning and Community Development Ms. Donna Benton
288 Central Ave.
Dover, NH 03820

RE: TDR Site Plan
Hero Bay Partners, LLC
Tax Map H, Lot 4
Cielo Drive & Windsor Way
Dover, NH 03820

Dear Mrs. Benton,

On behalf of our client Heron Bay Partners, LLC, Berry Surveying & Engineering (BS&E) is submitting a proposed Age restricted TDR Site plan for Cielo Drive.

Background and General Narrative:

Heron Bay Partners LLC, owns the parcel known as Cielo Drive in Dover, NH (Tax Map H, Lot 4). Berry Surveying & Engineering has conducted an on-site survey of the parcel which includes a topographic analysis as well as a wetlands analysis. No wetlands were found within the limit of construction, or within 50' of the limit of construction as determined by Deidra Benjamin CWS (Limit of Construction shown on Detail Existing Conditions Plan, Sheet #7). The site has been constructed under Site Plan Approval dated December 20, 2011 by the City of Dover and under NHDES Alteration of Terrain Permit #AoT-0189. The site currently contains sixty-nine (69) residential units, consisting of single family homes, duplexes, and a triplex. This number of units includes an existing four unit foundation that has been built as part of the prior approval on the south side of Cielo Drive (Units #52-55). The site is located in the innovative Technology District and is included in the Secondary Groundwater Protection District.

The original approval allowed for a total of seventy-two (72) residential units (single family homes, duplexes, and triplexes) and seventy-two (72) congregate care units between two buildings. The applicant is seeking to provide mutli-family housing, as this has a higher demand in Dover than the Congregate Care Buildings. For reference, the prior approved buildings and pavement footprint are shown on Detail Existing Conditions Plan, Sheet #7.

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: Heron Bay Partners, LLC Telephone # 603-742-2121

Address of Applicant: 242 Central Ave Dover NH

E-Mail Address: Dave@centralfallsrealty.com

Name of Property Owner (*if different from applicant*): _____ Telephone #_____

Address of Property Owner: _____

PROPERTY INFORMATION

Address of Property: Cielo Drive

Assessor's Map # H Lot(s) # 4

Zoning District(s) Innovative Technology Overlay District(s) Secondary Groundwater Protection

Size of Parcel: 1,500,405 sq. ft. 34.44 +/- ac. Property Deed: Book 3561 Page: 656

Existing Use of Property: Existing age restristed housing on other part of parcel

SITE PLAN INFORMATION

Describe Proposed Use: See attached narrative

Area of Parcel to be Developed: 145,000 SF sq. ft.

If Multi-family Residential: Number of Units 55 & Buildings Proposed 9

If lodging: Number of Units N/A & number of Buildings N/A

Number of Parking Spaces: Existing N/A Proposed 10

Highway Access (check where applicable): X City Street ____ State Highway

Number of Employees Total: 0 In Maximum Shift: 0

Disposition of Parcel:

Building Footprint 45,192 (9 Buildings) sq. ft.

Total Building Area _____ sq. ft.

Paved Area 4,965 Bit concrete sq. ft.
45,796 Porous

Building Setbacks:

Front Yard 50' IT/20' TDR ft.

Rear Yard 50' IT/30' TDR BUFFER ft.

Side Yard: Right____ ft. Left____ ft.
50' IT/30' TDR BUFFER

City Water? X Yes ___ No How far is city water from the property? _____

City Sewer? X Yes ___ No How far is city sewer from the property? _____

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

☒ Residential ☐ Residential (reduced size) ☐ Industrial | ☐ Purchase ☐ Land Preservation

Relief sought (Check All That Apply):

☐ Lot Size ☐ Frontage ☐ Setback ☐ 30' Buffer ☒ Increase by 51 units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

Applicant is proposing 55 age restricted townhouse units in place of two congrete care buildings (72 units) and 3 triplex units that was approved 12/20/11 and built under NHDES AoT Permit-0189.

BUILDING INFORMATION

Type of Building to be Built: Multi Family attached, age restricted

Height of Building: 30' +/- Finished Floor Elevation: See plans

Number of Seats (where applicable) N/A

Estimated value of construction: 16,500,000 Refuse removal: Public/Private (circle one)

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: N/A

Justification for waiver request(s) (*attach additional sheets as needed*):

N/A

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 805 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Christopher R. Berry
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@BerrySurveying.com
crberry@metrocast.net

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Terrain Planting & Design LLC
Eric Buck

Address 311 Kast Hill Road, Hopkinton NH 03229 Telephone #: 603-491-2322

Professional License #: 78 E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) John P. Hayes III

Address 7 Limestone Way, North Hampton NH 03862 Telephone #: 603-205-4396

Professional License #: 87 E-mail address: johnphayes@comcast.net

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 4-7-22

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: 4-7-22

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 4-7-22

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 4-7-22

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: 4-7-22

Signature of Applicant (*if different from owner*): _____ Date: _____

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 1, 2021)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan Review Fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # 55 per dwelling unit = $ 5,700.00
- ☐ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____

2. TOTAL IMPERVIOUS PAVED AREA (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # 4,965 sq. ft. = $ 547.55

Area updated after check **SUBTOTAL PLAN REVIEW FEE (A) = $ 6,247.55**

AND

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # _____ of x $8.00= $_____
- ☐ Certified letters fee: # of abutters _____ X $8.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

C. Foster's newspaper public notice fee $100.00 x # _____ applications = $_____

SUBTOTAL NOTICE FEE (B & C) = $_____

TOTAL INVOICE AMOUNT (A, B & C) = $_____

PLAN REVIEW FEE COLLECTED/PAID = $_____

BALANCE DUE = $_____

The balance due must be paid 28 hours prior to the Planning Board Meeting, to be heard.

CITY OF DOVER SITE REVIEW
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.

APPLICANT: Heron Bay Partners LLC File Number: _____

PROJECT TITLE: Windsor Way

PROPERTY LOCATION: Cielo Drive Tax Map: H Lot: 4

	Where/How Provided	Reviewed
1. Completed and signed Application form	x	
2. Plan Review Fees are provided	x	
3. Electronic copy of the engineered/surveyed plan layout	x	
4. Electronic copy of supplementary materials and application	x	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	x	
6. Waiver requests to the Site Plan Review Regulations, with written justification	x	
7. Conditional Use Permit applications	N/A	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	x	
9. A colored architectural plan showing all sides of buildings	x	
10. Folded copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:	x	
Location map at appropriate scale	x	
Proposed Project name and title and Planning File #	x	
Date, north arrow and scale	x	
Names of all abutting property owners	x	
Name and address of owners and/or applicants	x	
Signature & stamp of NH licensed land surveyor and/or engineer	x	
Zoning District boundaries, including any special or overlay districts	x	
Location of Conservation District areas	x	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	x	
Location and widths of existing & proposed easements & right of ways	x	
Location and width of existing and proposed access/egress ways	x	

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access	x	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	x	
Existing and proposed topographic information at two foot intervals	x	
Existing and proposed buildings and structure locations	x	
Minimum building setbacks or build to lines on all lots	x	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	x	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	x	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	x	
Existing and proposed stormwater lines and facilities	x	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	x	
Location of Flood Hazard Zone	N/A	
Location of all bodies of water and watercourses	N/A	
Location of wetlands and buffers	N/A	
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set	x	
Existing natural features and/or significant vegetation on property	x	
Depict existing contours up to 100 ft. beyond project limits	x	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	x	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	x	
Location, material and size of existing and proposed pavement area	x	
Location of proposed fire lanes	x	
Specify finished floor elevations of buildings	x	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	x	
Depict all service, storage, loading bays and utility areas	x	
All applicable Dover Common Site Plan notes	x	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	x	
Stormwater Management System Operation and Maintenance Plan	x	
Letter to Serve from Public and Private Utilities	Will provide	
Erosion and Sedimentation Control Plan	x	
Landscape Operation and Maintenance Plan	x	
Proposed restrictive covenants or homeowners association documents	Will provide	
Dates and permit numbers of all required state and federal permits	N/A	
If wetland buffer, indicate placards locations, as applicable	N/A	
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs	x	
Location of proposed drive-in facilities	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	Will provide as needed	

REVIEWED BY: _____ DATE_____ TRC DATE_____

The Proposal:

The proposal is to construct fifty-five (55), age restricted, multi-family attached units in nine buildings in the location of the prior approved congregate care units and an age restricted triplex. The front of Units #1-26 will be located along Cielo Drive with drive-under garages at the rear, accessed from the proposed roadway known as Windsor Way. The fronts of Units #27-55 are along Windsor Way, with a drive under garages as well. The applicant is proposing to purchase fifty-one (51) units via the Transfer of Development Rights Program (TDR). Units 52-55 fall under the prior Cielo Drive approval. The applicant intends to subdivide Units #1-51 from the remainder of the Cielo Drive project. The applicant is not requesting other relief under the TDR ordinance.

Access to the site is via a proposed roadway, known as Windsor Way. Windsor Way is a 24' wide travel way through the neck of the cul-de-sac, then a 20' travel lane, one-way cul-de-sac. Parking spaces and driveway lengths are a minimum of 18', some driveways are longer as shown. Windsor Way is proposed to be porous pavement, with all driveway and parking areas to be porous pavement as well. The applicant is also proposing to modify existing detention basin #900 (at the rear of Units #33-51). The proposal includes filling a portion of the detention basin, and excavating a portion to retain the original storage volume of the detention basin. All stormwater treatment takes place via infiltration through the Porous Pavement, or roof runoff into the existing detention basin.

Street scape is enhanced through the use of landscaping, hardscaping and typical urban amenities. Bushes and flowers are used at the front of the site and at proposed walk areas to create an inviting entrance, while flower beds are used to fill in smaller areas so as to not over power the site with shrubbery. Several street trees are proposed along Cielo Drive. The rear of the site, due to the intensity of use, has less opportunity for larger landscaping features. It does, however, provide space for flower beds and lower bushes to soften the feel of the entrance areas, creating an inviting residential nature to the rear of the project. The intent of this proposal is to create a streetscape that is well landscaped and is harmonious with the surrounding architecture. This includes a proposed sidewalk along the area of development, and two proposed crosswalks to the sidewalk on the north side of Cielo Drive. Roof styles and porches are similar in style to the remainder of Cielo Drive. Additionally, parking is provided within the driveway and the garages, similar to the remainder of Cielo Drive. Units along Cielo Drive have access at street level, or at the garage level on Windsor Way. The units along Windsor Way have access from the garage level.

Water utilities, sewer utilities, gas utilities, and power utility is proposed to be taken from Cielo Drive. Water utility is proposed to be a 8" CLDI line which is then run to a fire hydrant. Two 1" lines are then run from the primary line to each structure. The structures will be sprinkled and will contain utility closets or riser rooms accessible to the outside. Sewer utility is provided via gravity into an existing pump chamber. An emergency generator is proposed to be installed as part of the project. Dover T1 Fire Truck turning template into the site is provided within the plan

set. There are two existing hydrants on Cielo Drive within 500' of the project and one proposed within Windsor Way.

The project requires the following approvals:

- TDR Approval for the purchase of 51 units.
- Site Plan Approval.

Respectfully Submitted,
BERRY SURVEYING & ENGINEERING

Christopher R. Berry
Principal, President

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April 7, 2022

City of Dover Planning Department
Attn: Director of Department of Planning and Community Development Ms. Donna Benton
288 Central Ave.
Dover, NH 03820

RE: Traffic Impact Memo
Hero Bay Partners, LLC
Tax Map H, Lot 4
Cielo Drive & Windsor Way
Dover, NH 03820

Ms. Benton,

Pursuant to the City of Dover Site Review Regulations, Berry Surveying & Engineering (BS&E), on behalf of the applicant, has prepared a Trip Generation memo for the construction of fifty-five (55) age restricted multi-family units (9 buildings) at the southern side of the subject parcel. These multi-family units are proposed to replace the prior approval for two congregate care buildings (seventy-two units) and three multi-family units. The original City of Dover approval for Cielo Drive, dated December 20, 2011, showed seventy-two (72) residential units (single, duplex, triplex), and seventy-two (72) congregate care units between two buildings. Of the seventy-two residential units, sixty-nine (69) have been constructed, including the four unit foundation on the southeast side of the subject parcel. This results in three residential units that were not constructed from the original approval. As a result, fifty-two (52) multi-family units as shown as proposed trip generation. The intent of this memo is to show the difference in trip generation between the prior approval of congregate care units and residential units to the newly proposed townhouse units.

The following trip generations are calculated from the 10th Edition Trip Generation Manual using Code 252, Senior Adult Housing (Attached) and Code 253, Congregate Care Facility for the prior approval:

Senior Adult Housing (Attached) Prior Approved Generation

Time Method	Weekday Total Dwelling Units			Time Method	AM Peak Adj. Street Dwelling Units			Time Method	PM Peak Adj. Street Dwelling Units		
# Units	3			# Units	3			# Units	3		
Avg. Rate	3.70			Avg. Rate	0.20			Avg. Rate	0.26		
Total Trips	11.1			Total Trips	0.6			Total Trips	0.8		
% Enter	50.0	Total Enter	5.6	% Enter	35.0	Total Enter	0.2	% Enter	55.0	Total Enter	0.4
% Exit	50.0	Total Exit	5.6	% Exit	65.0	Total Exit	0.4	% Exit	45.0	Total Exit	0.4

Congregate Care Facility Prior Approved Generation

Time Method	Weekday Total Dwelling Units			Time Method	AM Peak Adj. Street Dwelling Units			Time Method	PM Peak Adj. Street Dwelling Units		
# Units	72			# Units	72			# Units	72		
Avg. Rate	2.02			Avg. Rate	0.07			Avg. Rate	0.18		
Total Trips	145.4			Total Trips	5.0			Total Trips	13.0		
% Enter	50.0	Total Enter	72.7	% Enter	60.0	Total Enter	3.0	% Enter	53.0	Total Enter	6.9
% Exit	50.0	Total Exit	72.7	% Exit	40.0	Total Exit	2.0	% Exit	47.0	Total Exit	6.1

Total Prior Approved Generation

Time Method	Weekday Total Dwelling Units			Time Method	AM Peak Adj. Street Dwelling Units			Time Method	PM Peak Adj. Street Dwelling Units		
Total Trips	156.5			Total Trips	5.6			Total Trips	13.7		
% Enter	50.0	Total Enter	78.3	% Enter	57.3	Total Enter	3.2	% Enter	53.1	Total Enter	7.3
% Exit	50.0	Total Exit	78.3	% Exit	42.7	Total Exit	2.4	% Exit	46.9	Total Exit	6.4

The following trip generations are calculated from the 10th Edition Trip Generation Manual using Code 252, Senior Adult Housing (Attached) for the proposed generation:

Senior Adult Housing (Attached) Proposed Generation

Time Method	Weekday Total Dwelling Units			Time Method	AM Peak Adj. Street Dwelling Units			Time Method	PM Peak Adj. Street Dwelling Units		
# Units	52			# Units	52			# Units	52		
Avg. Rate	3.70			Avg. Rate	0.20			Avg. Rate	0.26		
Total Trips	192.4			Total Trips	10.4			Total Trips	13.5		
% Enter	50.0	Total Enter	96.2	% Enter	35.0	Total Enter	3.6	% Enter	55.0	Total Enter	7.4
% Exit	50.0	Total Exit	96.2	% Exit	65.0	Total Exit	6.8	% Exit	45.0	Total Exit	6.1

Total Proposed Generation

Time Method	Weekday Total Dwelling Units			Time Method	AM Peak Adj. Street Dwelling Units			Time Method	PM Peak Adj. Street Dwelling Units		
Total Trips	192.4			Total Trips	10.4			Total Trips	13.5		
% Enter	50.0	Total Enter	96.2	% Enter	35.0	Total Enter	3.6	% Enter	55.0	Total Enter	7.4
% Exit	50.0	Total Exit	96.2	% Exit	65.0	Total Exit	6.8	% Exit	45.0	Total Exit	6.1

Proposed Change in Trip Generation

Time Period	Prior Approval	Proposed	Difference
Weekday Total	156.5	192.4	35.9
Am Peak Hour	5.6	10.4	4.8
PM Peak Hour	13.7	13.5	-0.2

It can be seen from the proposed change in trip generation that a minor increase of fine (5) trips during the AM peak hour occurs, and the PM peak hour trip generation difference is negligible from the original approval.

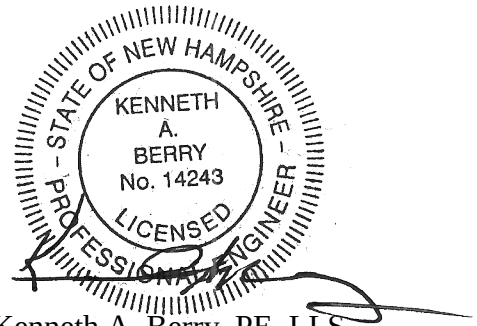
BERRY SURVEYING & ENGINEERING
335 Second Crown Pt. Rd., Barrington, NH 03825
(603) 332-2863 / (603) 335-4623 FAX
www.BerrySurveying.Com

- It is recommended that the existing and surrounding infrastructure will be sufficient to handle the minor projected increase in vehicle trips during the AM peak hour and all other hours for Cielo Drive.

Respectfully Submitted,

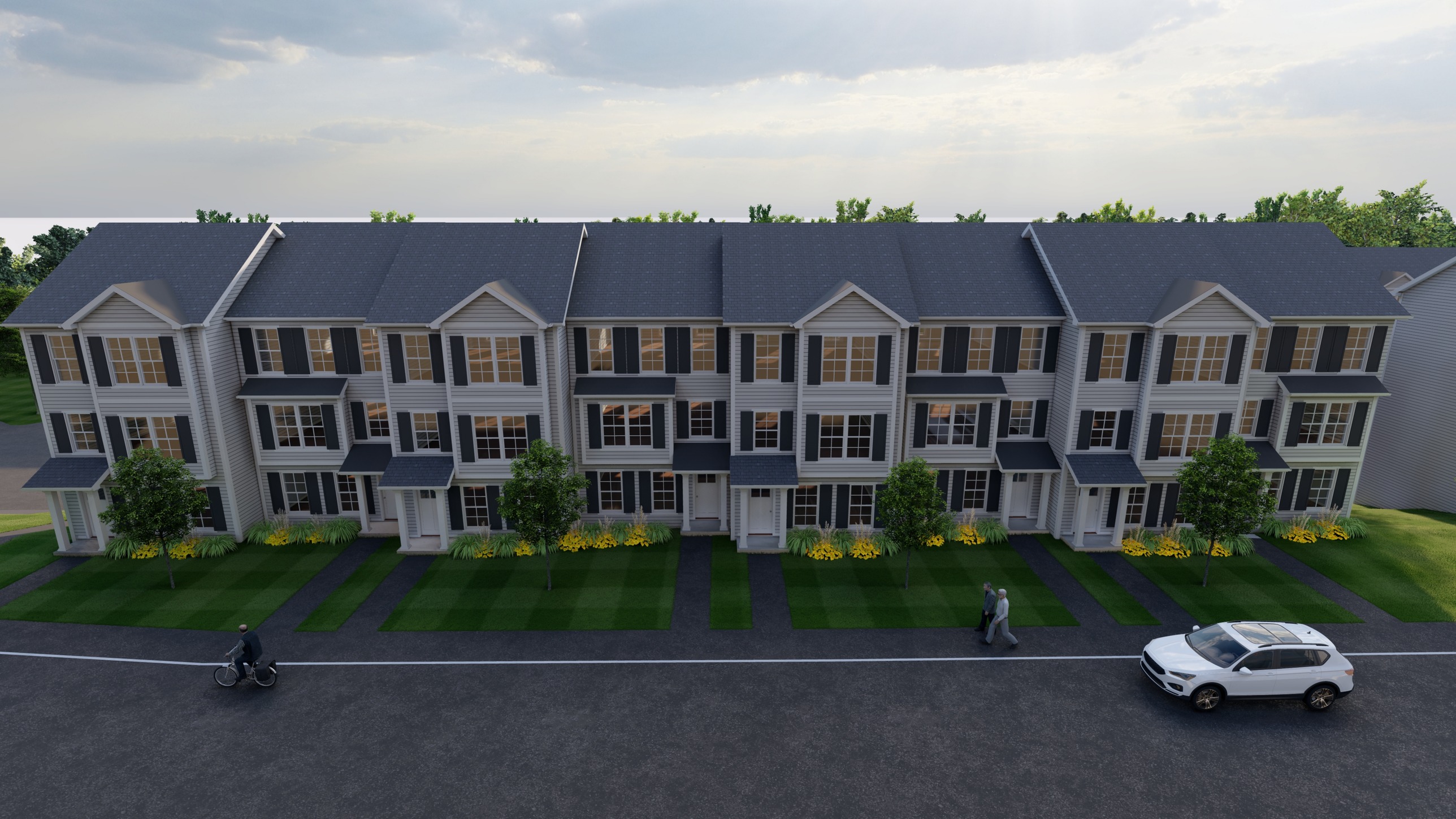
BERRY SURVEYING & ENGINEERING

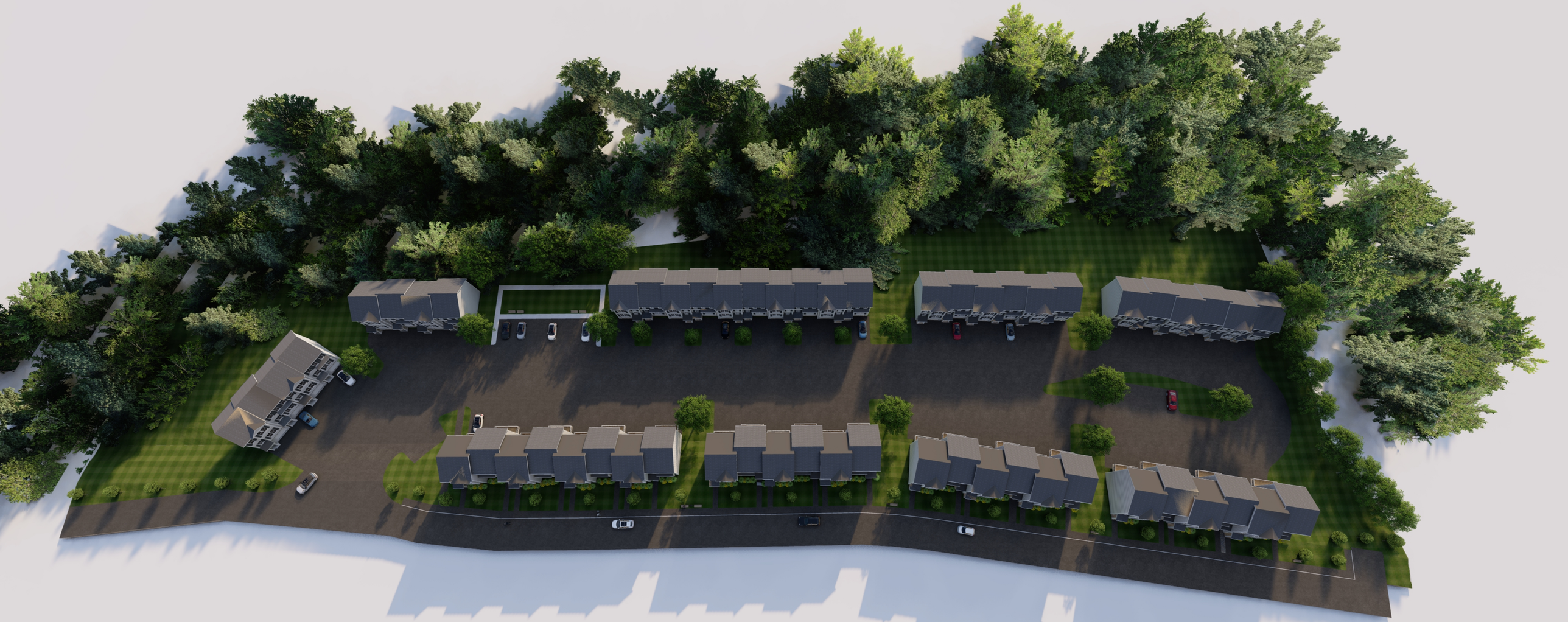
Christopher R. Berry, SIT
Principal, President

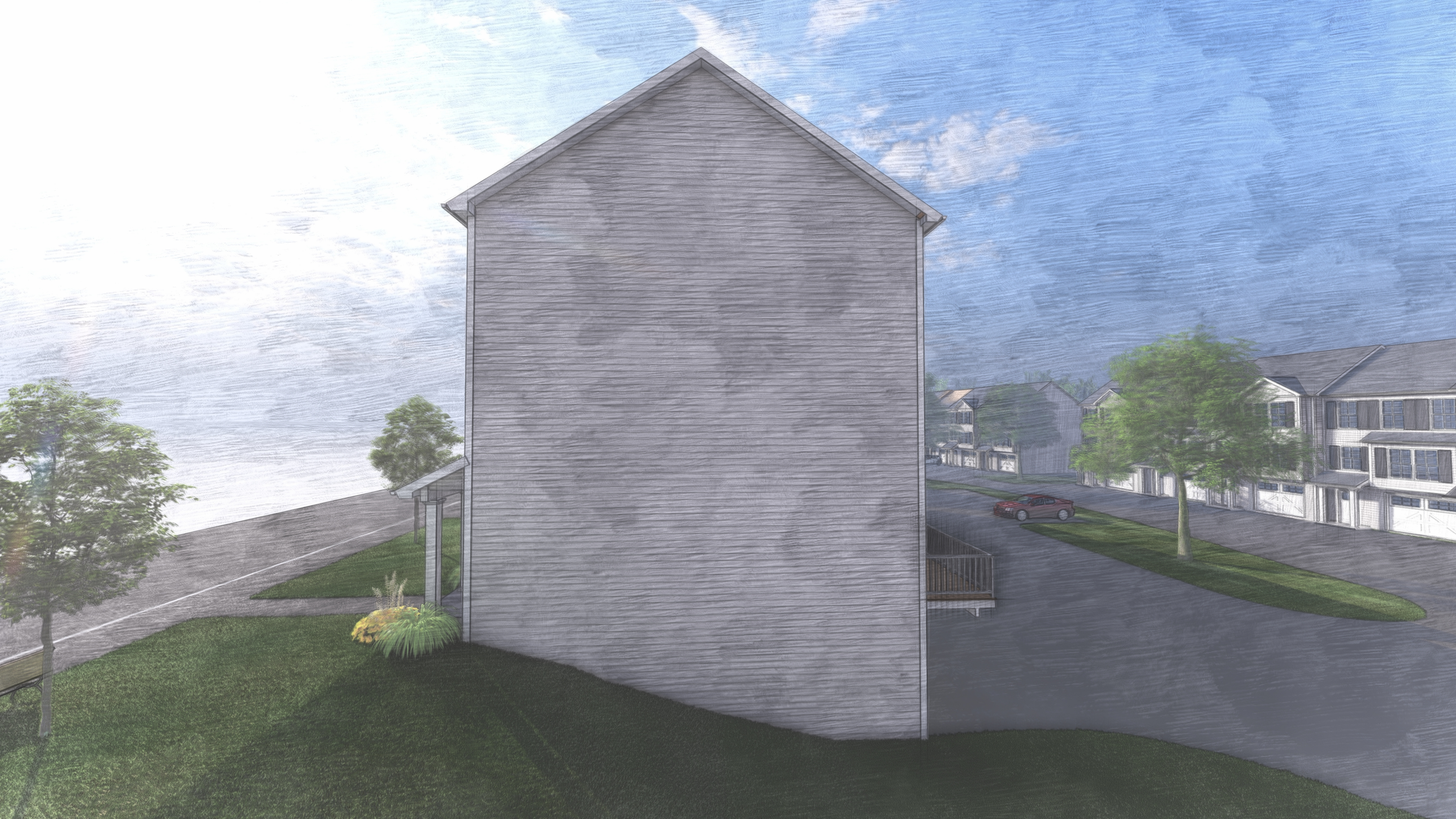


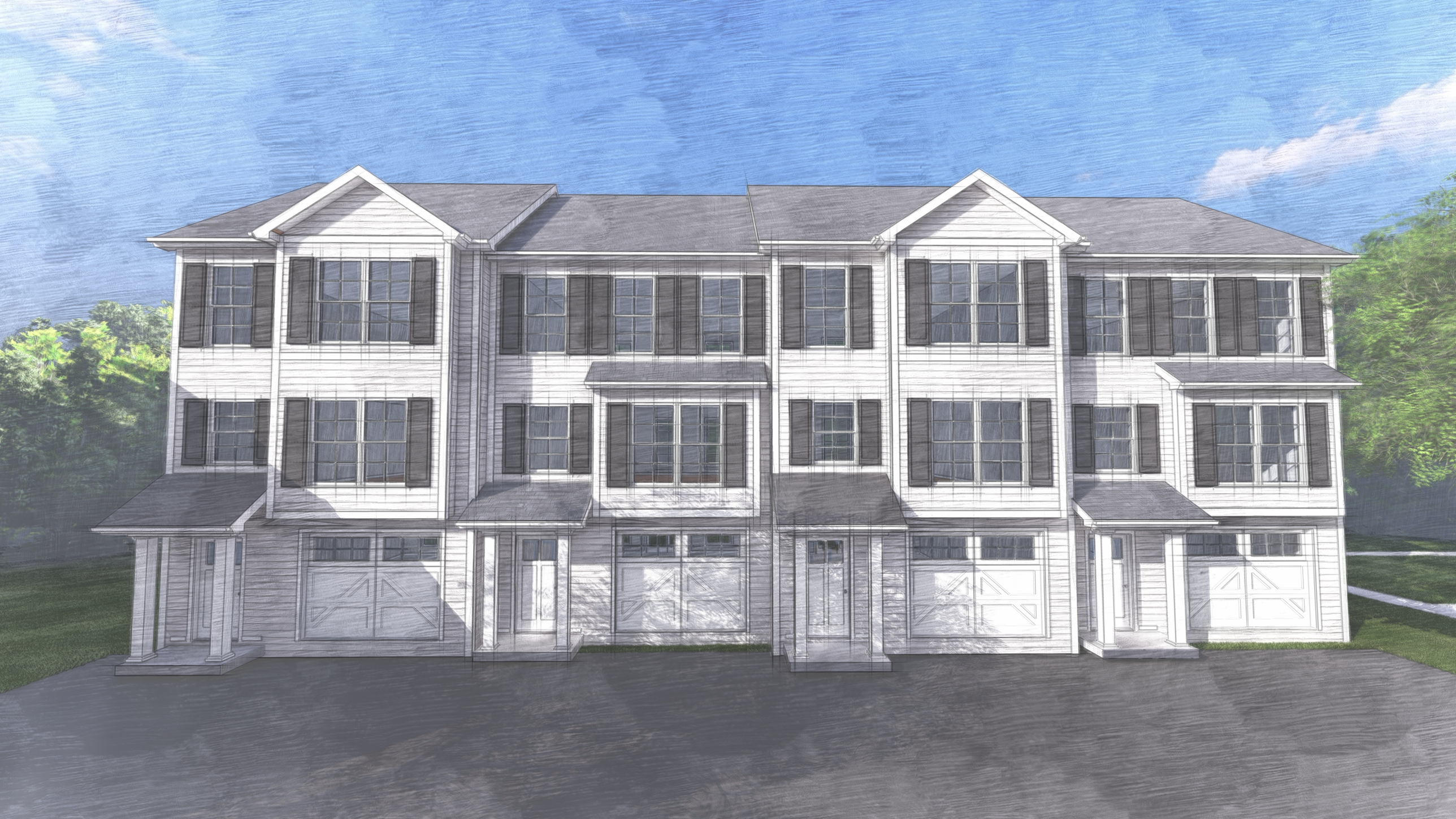
Kenneth A. Berry, PE, LLS,
CPSWQ, CPESC, CESSWI
Principal, VP-Technical Operations

KRP/krp









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SHEET 36 ~ TURNING TEMPLATE

SURVEYOR OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

ENGINEER OF RECORD: KENNETH A. BERRY, PE, LLS
CPSWQ, CPESC, CESSWI
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

WETLAND SCIENTIST: DEIDRA BENJAMIN, CWS
100 LEAVITT ROAD
PITTSFIELD, NH 03263
(603)-496-3307

SOIL SCIENTIST: JOHN P. HAYES, III CWS, CSS
7 LIMESTONE WAY
NORTH HAMPTON, NH 03862
(603)-205-4396

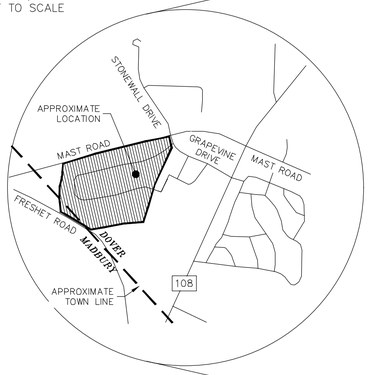
OWNER & APPLICANT: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

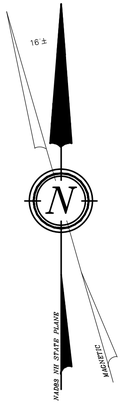
AGE RESTRICTED TRANSFER OF DEVELOPMENT RIGHTS RESIDENTIAL SITE PLAN FOR HERON BAY PARTNERS, LLC CIELO DRIVE & WINDSOR WAY DOVER, N.H. TAX MAP H, LOT 4

NOTE:

BERRY SURVEYING & ENGINEERING HAS PREPARED AN INSPECTION & MAINTENANCE MANUAL AS PART OF THIS PROJECTS DOCUMENTATION. ALL USERS ARE BOUND TO THIS DOCUMENT AS PART OF THE APPROVAL OF THE PLANNING BOARD. COPIES OF THE YEARLY INSPECTIONS ARE TO BE DELIVERED TO THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT.

LOCATION PLAN
DOVER, NH
NOT TO SCALE





VICINITY SKETCH
DOVER, NH
SCALE: 1" = 400' ±

REQUIRED PERMITS:

1.) NHDES ALTERATION OF TERRAIN PERMIT: PENDING
2.) NHDES SEWER DISCHARGE PERMIT: PENDING
3.) NHDES DWGB PERMIT: PENDING
4.) NATURAL HERITAGE BUREAU (NHB): PENDING
5.) DEPARTMENT OF HISTORICAL RESOURCES (DHR): PENDING
6.) US EPA NOI & SWPPP

GENERAL PLAN SET NOTES:

1.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.

2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SITE PLAN, THE SITE PLAN APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS AND SPECIFICATIONS OF THE CITY OF DOVER LAND SITE PLAN REGULATIONS AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL, UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED, IN ANY PARTICULAR, BELOW. NON - ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FOR SITE PLAN APPROVAL.

APPROVED DOVER

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 805 KENNETH A. BERRY SIGNATURE

STATE OF NEW HAMPSHIRE KENNETH A. BERRY No. 14047 LICENSED PROFESSIONAL ENGINEER

REVISION	DATE	DESCRIPTION

TRANSFER OF DEVELOPMENT RIGHTS RESIDENTIAL SITE PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

ABBREVIATION LEGEND:

E.O.P.	EDGE OF PAVEMENT
S.G.C.	SLOPED GRANITE CURB
V.G.C.	VERTICAL GRANITE CURB
BITUM.	BITUMINOUS
E.S.H.W.T	ESTIMATE SEASONAL HIGH WATER TABLE
TYP.	TYPICAL
U.G.E	UNDER GROUND ELECTRIC / UTILITY
CLDI	CONCRETE LINED DUCTILE IRON
DI	DUCTILE IRON
U.D.	UNDER DRAIN
C.O.	CLEAN OUT
CMP	CORRUGATED METAL PIPE
INV.	INVERT
ELEV.	ELEVATION
F.E.S.	FLARED END SECTION
HDPE	HIGH DENSITY POLYETHYLENE
RCP	REINFORCED CONCRETE PIPE
RECB	ROLLED EROSION CONTROL BLANKET
F.G.	FINISHED GRADE
E.G.	EXISTING GRADE
E.T.W.	EDGE OF TRAVELED WAY
T.B.R.	TO BE REMOVED
PL	PROPERTY LINE
EL	EASEMENT LINE
CL	CENTER LINE
CF	CUBIC FEET
P.C.	POINT OF CURVATURE
P.T.	POINT OF TANGENCY
P.V.P.	POINT OF VERTICAL CURVE
P.V.I.	POINT OF VERTICAL INTERSECTION
P.V.T.	POINT OF VERTICAL TANGENCY
EX.	EXISTING
PROP.	PROPOSED
STA.	STATION
BMP	BEST MANAGEMENT PRACTICE
'/,	FEET / FEET
TP	TEST PIT

PROPOSED LEGEND:

	UTILITY POLE
	LIGHT TYPE "A" MOUNTED LIGHT POLE
	LIGHT TYPE "B" MOUNTED ON BUILDING
	SEWER MANHOLE W/ STRUCTURE
	DRAIN MANHOLE W/STRUCTURE
	CATCH BASIN
	SIGNAGE
	CHECK DAM–MATERIAL AS SPECIFIED
	FLOW ARROW
	TEMPORARY BENCHMARK (T.B.M.)
E101 / E6	DETAIL SHEET / DETAIL
	MATCH POINT
	MATCH LINE
F241	CONTOUR MINOR, PROPOSED
F240	CONTOUR MAJOR, PROPOSED
	DRAIN CULVERT W/ FLARED END SECTION (F.E.S.)
	SHOULDER
	CENTER LINE
	BUILDING SETBACK LINE
	NHDES PROTECTIVE WELL RADIUS
	TRANSFORMER / J.BOX
UGE	UNDERGROUND UTILITY
U.D	UNDER DRAIN
SF	SILT FENCE / EROSION MIX BERM
SS C	FILTREXX 8" – 12" SILT SOXX AS SPECIFIED
	ORANGE CONSTRUCTION PERIMETER FENCE
P/C	PERIMETER CONTROL
CsB	NRCS SOIL DELINEATION SOIL TYPE
	RIP RAP
	STORMWATER BEST MANAGEMENT PRACTICE (BMP)
	BERM
	SNOW STORAGE AREA
W	GATE VALVE CURB STOP FIRE HYDRANT THRUST BLOCKS
F230.31	PROPOSED SPOT ELEVATION
W	PROPOSED WATER LINE
S	PROPOSED SEWER LINE
G	PROPOSED GAS LINE
	PROPOSED TREE LINE
	PROPOSED GRAVEL SHOULDER
	SAW CUT AND MILL

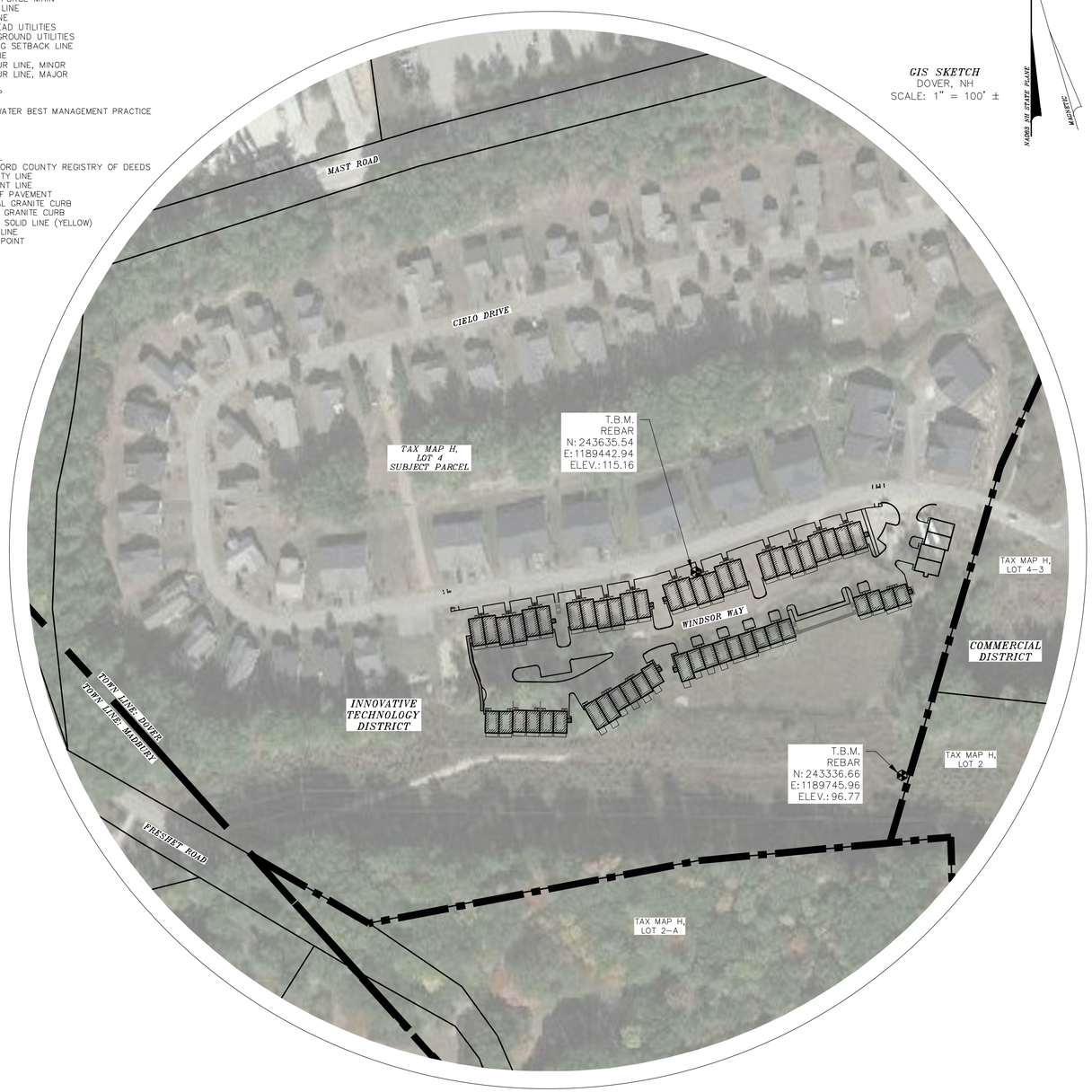
{ SSL ( ) ~ {SIZE} SINGLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ DSL ( ) ~ {SIZE} DOUBLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ SSB ( ) ~ {SIZE} SINGLE SOLID W/ BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ SBL ( ) ~ {SIZE} SINGLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ DBL ( ) ~ {SIZE} DOUBLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)

EXISTING LEGEND:

	IRON PIPE ~FND~
	IRON BOUND ~FND~
	STONE BOUND ~FND~
	GRANITE BOUND ~FND~
	UTILITY POLE
	SIGNAGE
D D	CULVERT W/ FLARED END SECTION (F.E.S.)
	DRAIN MANHOLE W/ STRUCTURE
	SEWER MANHOLE W/ STRUCTURE
	CATCH BASIN W/ STRUCTURE
	WATER GATE VALVE
	WATER SHUT OFF
	FIRE HYDRANT
	GAS VALVE
S S	SEWER LINE
FM FM	SEWER FORCE MAIN
W W	WATER LINE
GAS GAS	GAS LINE
OHU OHU	OVERHEAD UTILITIES
UGE UGE	UNDERGROUND UTILITIES
	BUILDING SETBACK LINE
158	TREELINE
160	CONTOUR LINE, MINOR
	CONTOUR LINE, MAJOR
	RIP RAP
	STORMWATER BEST MANAGEMENT PRACTICE
	BERM

FND FOUND
TYP TYPICAL
S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
PL PROPERTY LINE
EL EASEMENT LINE
E.O.P. EDGE OF PAVEMENT
V.G.C. VERTICAL GRANITE CURB
S.G.C. SLOPED GRANITE CURB
DSL (Y) DOUBLE SOLID LINE (YELLOW)
MATCH LINE
MATCH POINT

SIGN ID NUMBER	SIGN SIZE (WIDTH x HEIGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	BACKGROUND	LEGEND	BORDER	POST SIZE & QUANTITY
R1–1	30"x30"	STOP	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	RED	WHITE	WHITE	SQUARE (2)
R2–1	24"x30"	SPEED LIMIT 15	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	WHITE	GREEN	GREEN	SQUARE (1)
R6–1R	36"x12"	ONE WAY	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	BLACK W/ WHITE ARROW	BLACK	WHITE	SQUARE (1)
W14–2	30"x30"	NO OUTLET	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	YELLOW	BLACK	BLACK	SQUARE (0)
R8–31	12"x18"	NO PARKING FIRE LANE	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	2	WHITE	RED	RED	SQUARE (2)
W11–2	30"x30"		SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	4	YELLOW	BLACK	BLACK	SQUARE (4)



GIS SKETCH
DOVER, NH
SCALE: 1" = 100' ±

16 ±

N

SIGHT DISTANCE 336' ±

MAST RD

REVISION	DATE	DESCRIPTION

NEIGHBORHOOD PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : AS SHOWN
DATE : APRIL 7, 2022
FILE NO. : DB 2021–002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
NO. 14040
LICENSED PROFESSIONAL ENGINEER

ABUTTERS:

ANNE KOTLUS
2 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-2
BOOK 4592, PAGE 684

ESTHER M COMEAU TST
ESTHER M COMEAU TSTEE
4 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-4
BOOK 4346, PAGE 545

MICHELLE A LANGA
5 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-5
BOOK 4162, PAGE 248

JUDITH A EDWARDS REV TST
JUDITH A EDWARDS TSTEE
6 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-6
BOOK 4083, PAGE 001

WILLIAM JEFFREY & JANET CADDLE
7 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-7
BOOK 4600, PAGE 241

JOANNE E LANGDON
8 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-8
BOOK 4568, PAGE 615

KEVIN R & DIANE S PLANTE FAM REV TST
KEVIN R & DIANE S PLANTE TSTEES
9 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-9
BOOK 4183, PAGE 454

ALBERT J & HELEN M GAUVIN
10 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-10
BOOK 3973, PAGE 737

DAVID J & JOYCE C RIVOIRE 2018 TST
DAVID J & JOYCE C RIVOIRE TSTEES
11 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-11
BOOK 4577, PAGE 249

PETER J & SALLY J DIXON REV TST
PETER J & SALLY J DIXON TSTEES
12 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-12
BOOK 4323, PAGE 217

DEBORAH A BARR, TSTEE
DEBORAH A BARR TST
13 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-13
BOOK 4927, PAGE 1038

LINDA NARDELLA REV LIV TST
LINDA NARDELLA TSTEE
14 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-14
BOOK 4672, PAGE 509

NOYES FAMILY TST OF 2019
DEBRA NOYES TSTEE
15 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-15
BOOK 4710, PAGE 798

RICHARD A & CAROLYN SCOTT
16 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-16
BOOK 4926, PAGE 815

LINDA M CROTEAU
17 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-17
BOOK 4333, PAGE 511

JENNIFER B GEORGE
18 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-18
BOOK 3939, PAGE 613

ABUTTERS:

MARGARET K SILVIA
19 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-19
BOOK 3685, PAGE 206

JOHN & BARBARA BROTHWELL
20 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-20
BOOK 4646, PAGE 462

LUCILLE MORRIS
21 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-21
BOOK 4272, PAGE 040

SANDRA J POYANT REV TST
MARK F & SANDRA J POYANT TSTEES
22 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-22
BOOK 4782, PAGE 999

DAVID C & CATHERINE A DAIGLE
23 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-23
BOOK 4076, PAGE 333

DEBORAH E BONSTEEL
BARBARA ATHANS-HOOGEVEEN
89 BOXWOOD LN
DOVER, NH 03820
TAX MAP H, LOT 4-24
BOOK 4435, PAGE 605

JOSEPH & SUSAN E KLINE REV FAM TST
JOSEPH K & SUSAN KLINE TSTEES
25 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-25
BOOK 4213, PAGE 844

A & P JOHNSTON FAM REV TST
PRISCILLA ROUFF TSTEE
26 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-26
BOOK 4138, PAGE 206

ULRICH & SYBILLE BAUR
28 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-28
BOOK 4842, PAGE 419

CHARLENE STEARNS
29 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-29
BOOK 4423, PAGE 720

SUSAN L HERICH INVESTMENT TST
SUSAN L HERPICH TSTEE
30 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-30
BOOK 4773, PAGE 993

BARRY & MONA R SANDBERG
31 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-31
BOOK 4646, PAGE 656

JEANETTE NETZEL REV TST
JEANETTE NETZEL TSTEE
32 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-32
BOOK 4402, PAGE 453

STEPHEN BREWER SCHULTEN REV TST
CAROLYN H & STEPHEN B SCHULTEN
TSTEES
18 COTE DR
DOVER, NH 03820
TAX MAP H, LOT 4-33
BOOK 4166, PAGE 261

RONALD B NEWELL IRREV TST
PAMEAL S BEANE SUCCESSOR TSTEE
34 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-34
BOOK 4221, PAGE 501

THEORET FAMILY REC TST
ROGER A & PAULINE C THEORET TSTEES
35 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-35
BOOK 4043, PAGE 093

J PATRICK & KAREN B DUFFY
536 MIDDLE RD
DOVER, NH 03820
TAX MAP H, LOT 4-36
BOOK 4195, PAGE 824

NANCY J ECHOLS
37 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-37
BOOK 4253, PAGE 947

ABUTTERS:

LISA R VALHOS
ANGELA BYRNES
38 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-38
BOOK 4338, PAGE 536

L JAMES GOSCINSKI IRREV TST
LOUIS J & DONNA GOSCINSKI TSTEES
39 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-39
BOOK 4476, PAGE 377

KEVIN D KELLEY
36 THREE RIVERS FARM RD
DOVER, NH 03820
TAX MAP H, LOT 4-40
BOOK 4416, PAGE 696

DAVID S BLEW, III
41 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-41
BOOK 4297, PAGE 592

BEATRICE E RICHARDS REV LIV TST
BEATRICE E RICHARDS TSTEE
42 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-42
BOOK 4787, PAGE 864

AARON R & ANNE M NICHOLS REV LIV
TST
AARON R & ANNE M NICHOLS TSTEES
80 COTTONWOOD DR
DOVER, NH 03820
TAX MAP H, LOT 4-43
BOOK 4681, PAGE 389

JAMES A & RITA MORPHEW, JR
44 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-44
BOOK 4460, PAGE 148

CONRAD TURMELLE LIVING
THOMAS C & QUINN KEVIN TURMELLE
TSTEES
45 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-45
BOOK 4633, PAGE 997

NORDEN REV TST
VALLE G & DAILY B NORDEN TSTESS
46 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-46
BOOK 4468, PAGE 691

RICHARD & ELAINE DOLBEC REV TST
RICHARD E & ELAINE M DOLBEC TSTEES
47 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-47
BOOK 4203, PAGE 958

ARSENAULT FAMILY IRREC TST
NICOLE M MORJARIA TSTEE
48 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-48
BOOK 4701, PAGE 881

SUSAN L MARTIN BRADBURY REV TST
SUSAN L MARTIN BRADBURY TSTEE
49 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-49
BOOK 4688, PAGE 090

SUSAN L HASKELL
MARY KAY LANDRY
50 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-50
BOOK 4509, PAGE 254

JOHN R BLACKBURN
55 HEMLOCK CT
NEWFIELDS, NH 03856
TAX MAP H, LOT 4-51
BOOK 4338, PAGE 531

ROBERT L & LYNDA MCPHEE REV LIV
ROBERT L & LYNDA R MCPHEE TSTEES
52 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-52
BOOK 4561, PAGE 745

ALEXANDRINO J MONTEIRO REV TST
ALEXANDRINO J MONTEIRO TSTEE
53 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-53
BOOK 4347, PAGE 482

ABUTTERS:

LEE ANN BURNS REV TRST 1994
LEE ANN BURNS TSTEE
54 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-54
BOOK 4802, PAGE 905

MICHAEL A & BRENDA K CANINO
55 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-55
BOOK 4438, PAGE 176

JACQUELINE L BRAYTON REV TST
JACQUELINE L BRAYTON TSTEE
56 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-56
BOOK 4546, PAGE 158

NANCY L SCHULTE
58 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-58
BOOK 4532, PAGE 689

DONNA M RICKER LIV REV TST
DONNA M RICKER TSTEE
60 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-60
BOOK 4588, PAGE 516

MICHAEL B GRECO
62 CIELO DR
DOVER NH 03820
TAX MAP H, LOT 4-62
BOOK 4588, PAGE 487

DOUGLAS FREIR & HEATHER JONES REV
HEATHER JONES TSTEE
64 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-64
BOOK 4601, PAGE 648

WAYNE & JANICE ATHERTON REV TST
WAYNE M & JANICE M ATHERTON
TSTEES
66 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-66
BOOK 4593, PAGE 700

DIANE VASALLO
70 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-70
BOOK 4808, PAGE 626

GERALD & LOUISE BOOTHBY
72 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-72
BOOK 4801, PAGE 854

TIMOTHY & CHERYL LINDSAY REV TST
TIMOTHY & CHERYL LINDSAY TSTEES
4 BAYVIEW RD
DOVER, NH 03820
TAX MAP H, LOT 4-74
BOOK 4740, PAGE 117

ROLAND E LARSON
76 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-76
BOOK 4872, PAGE 1033

JOAN E MENEZ IRREV TST
JOAN E MENEZ TSTEE
78 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-78
BOOK 4841, PAGE 314

LISA A MERRILL
82 CIELO DR
DOVER, NH 03820
TAX MAP H, LOT 4-82
BOOK 4888, PAGE 560

DOVER FIELDS CONDOMINIUM
C/O DOVER INVESTMENTS LLC
48 CONSTITUTION DR
BEDFORD, NH 03110
TAX MAP H, LOT 4-3
BOOK 3496, PAGE 733

MAST ROAD DOVER LLC
C/O RAND-WHITNEY CONTAINER LLC
207 GREENWOOD ST
WORCESTER, MA 01607
TAX MAP H, LOT 53-1
BOOK 4333, PAGE 441

CITY OF DOVER
288 CENTRAL AVE
DOVER, NH 03820
TAX MAP H, LOT 58
BOOK 648, PAGE 271

BRANCH BROOK HOLDINGS LLC
PO BOX 410
CANDIA, NH 03034
TAX MAP H, LOTS 59 & 61
BOOK 3923, PAGE 904

ABUTTERS:

AGNES M TARANTO
330 MAST RD
DOVER, NH 03820
TAX MAP H, LOT 5-B
BOOK 4166, PAGE 250

DAVID D & PAMELA R BROWNE, JR
324 MAST RD
DOVER, NH 03820
TAX MAP H, LOT 5-B1
BOOK 2384, PAGE 618

JOANNE JOHNSON
18 FRESHET RD
DOVER, NH 03820
TAX MAP H, LOT 2-A
BOOK 2504, PAGE 771

CITY OF DOVER
288 CENTRAL AVE
DOVER, NH 03820
TAX MAP H, LOT 2
BOOK 1986, PAGE 647

CANDIA SO BRANCH BROOK HOLDINGS
PO BOX 410
CANDIA, NH 03034
TAX MAP 9, LOT 63
BOOK 3923, PAGE 904

SCOTT D & DIANE D NICOL
6 FRESHET RD
MADBURY, NH 03823
TAX MAP 9, LOT 66
BOOK 2230, PAGE 788

DANIEL & MIHAIELA C SABIN
8 FRESHET RD
MADBURY, NH 03823
TAX MAP 9, LOT 66A
BOOK 2124, PAGE 777

HODGSON REV LIV TST
ROBERT & DIANE HODGSON TSTEES
11 FRESHET RD
MADBURY, NH 03823
TAX MAP 9, LOTS 20 & 20A
BOOK 3635, PAGE 395

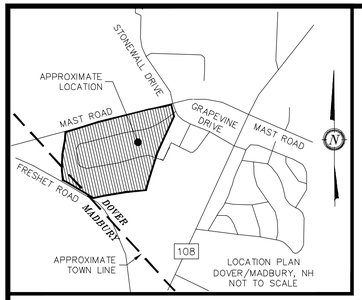
REVISION	DATE	DESCRIPTION

ABUTTERS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
NO. 10443
LICENSED PROFESSIONAL ENGINEER



NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) ZONING: (IT) INNOVATIVE TECHNOLOGY
SECONDARY GROUNDWATER PROTECTION OVERLA'
MINIMUM FRONTAGE ~ 200'
MINIMUM LOT SIZE ~ 87,120 Sq. Ft.
FRONT SETBACK ~ 50'
REAR SETBACK ~ 50'
SIDE SETBACK ~ 50'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 55'
MAX. LOT COVERAGE: 33%
PARKING SETBACK ~ 25.0'
MAX IMPERVIOUS ~ 20%

ZONING: (TDR) TRANSFER OF DEVELOPMENT RIGHTS (TDR)
MIN. LOT SIZE: N/A
MAX. LOT COVERAGE: N/A
MIN. FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER'

NOTES:

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF TAX MAP H, LOT 4, LOCATED IN DOVER, N.H., AS OF THE FIELD SURVEY IN 2021.

7.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN 2021.

10.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: SEPTEMBER 30, 2015.

11.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

12.) THIS SITE IS SERVICED BY MUNICIPAL SEWER AND WATER.

13.) NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

LEGEND:

- IRON PIPE ~FND~
- IRON BOUND ~FND~
- STONE BOUND ~FND~
- GRANITE BOUND ~FND~
- UTILITY POLE
- SIGNAGE
- CULVERT W/ FLARED END SECTION (F.E.S.)
- DRAIN MANHOLE W/ STRUCTURE
- SEWER MANHOLE W/ STRUCTURE
- CATCH BASIN W/ STRUCTURE
- WATER GATE VALVE
- WATER SHUT OFF
- FIRE HYDRANT
- GAS VALVE
- SEWER LINE
- SEWER FORCE MAIN
- WATER LINE
- GAS LINE
- OVERHEAD UTILITIES
- UNDERGROUND UTILITIES
- BUILDING SETBACK LINE
- TREELINE
- CONTOUR LINE, MINOR
- CONTOUR LINE, MAJOR
- RIP RAP
- STORMWATER BEST MANAGEMENT PRACTICE
- BERM

FND	FOUND
TYP	TYPICAL
S.C.R.D.	STRAFFORD COUNTY REGISTRY OF DEEDS
PL	PROPERTY LINE
EL	EASEMENT LINE
E.O.P.	EDGE OF PAVEMENT
V.G.C.	VERTICAL GRANITE CURB
S.G.C.	SLOPED GRANITE CURB
DSL (Y)	DOUBLE SOLID LINE (YELLOW)
	MATCH LINE
	MATCH POINT

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

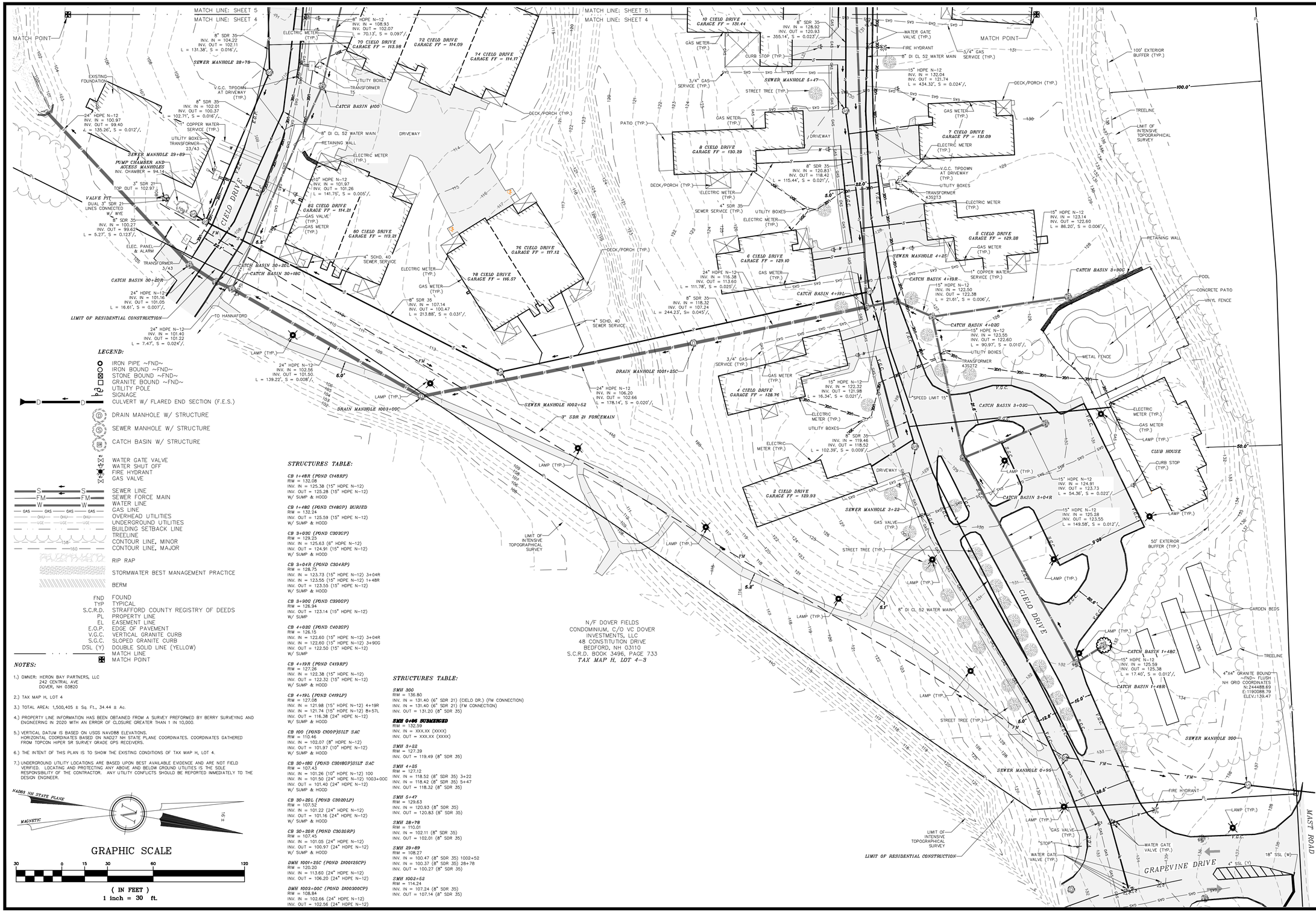
REVISION	DATE	DESCRIPTION

EXISTING CONDITIONS OVERVIEW
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 60 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
NO. 805
KENNETH A. BERRY
LICENSED LAND SURVEYOR
SIGNATURE



STRUCTURES TABLE:

CB 1+48R (POND C148RP)
RIM = 132.08
INV. IN = 125.38 (15" HDPE N-12)
INV. OUT = 125.28 (15" HDPE N-12)
W/ SUMP & HOOD

CB 1+48C (POND C148CP) BURIED
RIM = 132.24
INV. OUT = 125.59 (15" HDPE N-12)
W/ SUMP & HOOD

CB 3+03C (POND C303CP)
RIM = 129.25
INV. IN = 125.63 (6" HDPE N-12)
INV. OUT = 124.91 (15" HDPE N-12)
W/ SUMP & HOOD

CB 3+04R (POND C304RP)
RIM = 128.75
INV. IN = 123.73 (15" HDPE N-12) 3+04R
INV. IN = 123.55 (15" HDPE N-12) 1+48R
INV. OUT = 123.55 (15" HDPE N-12)
W/ SUMP & HOOD

CB 3+90C (POND C390CP)
RIM = 126.94
INV. OUT = 123.14 (15" HDPE N-12)
W/ SUMP

CB 4+02C (POND C402CP)
RIM = 126.15
INV. IN = 122.60 (15" HDPE N-12) 3+04R
INV. IN = 122.60 (15" HDPE N-12) 3+90G
INV. OUT = 122.50 (15" HDPE N-12)
W/ SUMP

CB 4+19R (POND C419RP)
RIM = 127.26
INV. IN = 122.38 (15" HDPE N-12)
INV. OUT = 122.32 (15" HDPE N-12)
W/ SUMP & HOOD

CB 4+19L (POND C419LP)
RIM = 127.08
INV. IN = 121.98 (15" HDPE N-12) 4+19R
INV. IN = 121.74 (15" HDPE N-12) 8+57L
INV. OUT = 116.38 (24" HDPE N-12)
W/ SUMP & HOOD

CB 100 (POND C100P)SILT SAC
RIM = 110.46
INV. IN = 102.07 (8" HDPE N-12)
INV. OUT = 101.97 (10" HDPE N-12)
W/ SUMP & HOOD

CB 30+18G (POND C3018GP)SILT SAC
RIM = 107.43
INV. IN = 101.26 (10" HDPE N-12) 100
INV. IN = 101.50 (24" HDPE N-12) 1003+00C
INV. OUT = 101.40 (24" HDPE N-12)
W/ SUMP & HOOD

CB 30+20L (POND C3020LP)
RIM = 107.52
INV. IN = 101.22 (24" HDPE N-12)
INV. OUT = 101.16 (24" HDPE N-12)
W/ SUMP & HOOD

CB 30+20R (POND C3020RP)
RIM = 107.45
INV. IN = 101.05 (24" HDPE N-12)
INV. OUT = 100.97 (24" HDPE N-12)
W/ SUMP & HOOD

DMH 1001+25C (POND D10012SCP)
RIM = 120.20
INV. IN = 113.60 (24" HDPE N-12)
INV. OUT = 106.20 (24" HDPE N-12)

DMH 1003+00C (POND D10030CP)
RIM = 108.84
INV. IN = 102.66 (24" HDPE N-12)
INV. OUT = 102.56 (24" HDPE N-12)

STRUCTURES TABLE:

SMH 300
RIM = 136.80
INV. IN = 131.40 (6" SDR 21) (CIELO DR.) (FM CONNECTION)
INV. IN = 131.40 (6" SDR 21) (FM CONNECTION)
INV. OUT = 131.20 (8" SDR 35)

SMH 0+96 SUBMERGED
RIM = 132.59
INV. IN = XXX.XX (XXXX)
INV. OUT = XXX.XX (XXXX)

SMH 3+22
RIM = 127.39
INV. OUT = 119.49 (8" SDR 35)

SMH 4+25
RIM = 127.12
INV. IN = 118.52 (8" SDR 35) 3+22
INV. IN = 118.42 (8" SDR 35) 5+47
INV. OUT = 118.32 (8" SDR 35)

SMH 5+47
RIM = 129.63
INV. IN = 120.93 (8" SDR 35)
INV. OUT = 120.83 (8" SDR 35)

SMH 28+78
RIM = 110.01
INV. IN = 102.11 (8" SDR 35)
INV. OUT = 102.01 (8" SDR 35)

SMH 29+89
RIM = 108.27
INV. IN = 100.47 (8" SDR 35) 1002+52
INV. IN = 100.37 (8" SDR 35) 28+78
INV. OUT = 100.27 (8" SDR 35)

SMH 1002+52
RIM = 114.24
INV. IN = 107.24 (8" SDR 35)
INV. OUT = 107.14 (8" SDR 35)

REVISION	DATE	DESCRIPTION

EXISTING CONDITIONS - EAST
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE No. 805 KENNETH A. BERRY LICENSED LAND SURVEYOR
SIGNATURE

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE.
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PREFORMED BY BERRY SURVEYING AND ENGINEERING IN 2020 WITH AN ERROR OF CLOSURE GREATER THAN 1 IN 10,000.

5.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS.
HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF TAX MAP H, LOT 4.

7.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

STRUCTURES TABLE:

CB 8+57R (POND CB57RP)
RIM = 136.50
INV. OUT = 132.36 (15" HDPE N-12)
W/ SUMP & HOOD

CB 8+57L (POND CB57LP)
RIM = 136.52
INV. IN = 132.14 (15" HDPE N-12) 8+57R
INV. IN = 132.04 (15" HDPE N-12) 12+95L
INV. OUT = 132.04 (15" HDPE N-12)
W/ SUMP & HOOD

CB 24+60L (POND C2460LP)
RIM = 116.88
INV. OUT = 112.52 (12" HDPE N-12)
W/ SUMP & HOOD

CB 24+60R (POND C2460RP)
RIM = 116.53
INV. IN = 112.13 (12" HDPE N-12)
INV. OUT = 112.13 (12" HDPE N-12)
W/ SUMP & HOOD

CB 26+10L (POND C2610LP)
RIM = 112.77
INV. OUT = 108.43 (12" HDPE N-12)
W/ SUMP & HOOD

CB 26+10R (POND C2610RP)
RIM = 112.87
INV. IN = 108.23 (12" HDPE N-12)
INV. OUT = 108.23 (12" HDPE N-12)
W/ SUMP & HOOD

YD #1 (POND YD1P) SILT SAC
RIM = 111.43
INV. OUT = 108.93 (8" HDPE N-12)
W/ SUMP & HOOD

OUTLET STRUCTURE #900 (POND 900P)
RIM = 102.00
INV. IN = 98.75 (1" RECTANGLE ORIFICE)
INV. OUT = 97.50 (30" HDPE N-12)

STRUCTURES TABLE:

SMH 7+75
RIM = 137.68
INV. IN = 129.02 (8" SDR 35)
INV. OUT = 128.92 (8" SDR 35)

SMH 25+01
RIM = 115.89
INV. IN = 107.81 (8" SDR 35)
INV. OUT = 107.71 (8" SDR 35)

SMH 27+40
RIM = 112.82
INV. IN = 104.32 (8" SDR 35)
INV. OUT = 104.22 (8" SDR 35)

STRUCTURES TABLE:

DMH 24+28R (POND D2428RP)
RIM = 104.16
INV. IN = 100.56 (12" HDPE N-12)
INV. OUT = 100.46 (12" HDPE N-12)

DMH 24+78R (POND D2478RP)
RIM = 102.96
INV. IN = 99.86 (12" HDPE N-12) 24+28R
INV. IN = 99.86 (12" HDPE N-12) 24+89R
INV. OUT = 99.76 (12" HDPE N-12)

DMH 24+86R (POND D2486RP) BURIED
RIM = 113.04
INV. IN = 108.64 (12" HDPE N-12)
INV. OUT = 103.24 (12" HDPE N-12)

DMH 24+89R (POND D2489RP)
RIM = 106.73
INV. IN = 102.73 (12" HDPE N-12)
INV. OUT = 102.73 (12" HDPE N-12)

DMH 26+25R (POND D2625RP)
RIM = 103.47
INV. IN = 100.12 (12" HDPE N-12)
INV. OUT = 100.12 (12" HDPE N-12)

DMH 27+23R (POND D2723RP)
RIM = 105.14
INV. IN = 101.60 (12" HDPE N-12)
INV. OUT = 101.50 (12" HDPE N-12)

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

NAD83 NH STATE PLANE
MAGNETIC
16.1°

MATCH LINE: SHEET 6
MATCH LINE: SHEET 5
MATCH POINT
100' EXTERIOR BUFFER (TYP.)
RETAINING WALL
CURB STOP (TYP.)
ELECTRIC METER (TYP.)
GAS METER (TYP.)
3/4" GAS SERVICE (TYP.)
UTILITY BOXES
TRANSFORMER 43S277
FIRE HYDRANT
1" COPPER WATER SERVICE (TYP.)
WATER GATE VALVE (TYP.)
STREET TREE (TYP.)
DRIVEWAY
PATIO (TYP.)
DECK/PORCH (TYP.)
TREELINE
VINYL FENCE
V.G.C. TIPDOWN AT DRIVEWAY (TYP.)
6" SDR 35 SEWER SERVICE (TYP.)
4" SDR 35 SEWER SERVICE (TYP.)
4" SDR 35 SEWER STUB (TYP.)
CONVEYANCE SWALE
RIP-RAP PROTECTION
YARD DRAIN #1
GAB WALL
LIMIT OF INTENSIVE TOPOGRAPHICAL SURVEY
BERM/MAINTENANCE PATH
EL

CIELO DRIVE

24 CIELO DRIVE GARAGE FF = 142.46
23 CIELO DRIVE GARAGE FF = 142.88
22 CIELO DRIVE GARAGE FF = 141.38
21 CIELO DRIVE GARAGE FF = 142.16
19 CIELO DRIVE GARAGE FF = 140.02
20 CIELO DRIVE GARAGE FF = 140.79
17 CIELO DRIVE GARAGE FF = 139.31
18 CIELO DRIVE GARAGE FF = 138.44
15 CIELO DRIVE GARAGE FF = 136.80
16 CIELO DRIVE GARAGE FF = 136.16
13 CIELO DRIVE GARAGE FF = 135.75
14 CIELO DRIVE GARAGE FF = 134.48
11 CIELO DRIVE GARAGE FF = 133.94
12 CIELO DRIVE GARAGE FF = 133.18
9 CIELO DRIVE GARAGE FF = 132.95
10 CIELO DRIVE GARAGE FF = 131.44
48 CIELO DRIVE GARAGE FF = 120.95
50 CIELO DRIVE GARAGE FF = 121.06
52 CIELO DRIVE GARAGE FF = 119.92
54 CIELO DRIVE GARAGE FF = 119.97
56 CIELO DRIVE GARAGE FF = 118.47
58 CIELO DRIVE GARAGE FF = 116.65
60 CIELO DRIVE GARAGE FF = 116.73
62 CIELO DRIVE GARAGE FF = 116.40
64 CIELO DRIVE GARAGE FF = 115.41
66 CIELO DRIVE GARAGE FF = 115.45

DRAIN MANHOLE 24+28R
DRAIN MANHOLE 24+78R
DRAIN MANHOLE 24+89R
DRAIN MANHOLE 26+25R
DRAIN MANHOLE 27+23R
CATCH BASIN 24+60L
CATCH BASIN 24+60R
CATCH BASIN 26+10L
CATCH BASIN 26+10R
CATCH BASIN 8+57R
CATCH BASIN 8+57L
SEWER MANHOLE 25+01
SEWER MANHOLE 27+40
SEWER MANHOLE 7+76
STORM WATER DETENTION BASIN #900
OUTLET STRUCTURE #900

12" HDPE N-12 INV. IN = 100.46 INV. OUT = 99.86 L = 53.82', S = 0.011'/.
12" HDPE N-12 INV. IN = 102.73 INV. OUT = 99.86 L = 40.72', S = 0.070'/.
12" HDPE N-12 INV. IN = 99.76 INV. OUT = 99.59 L = 16.31', S = 0.010'/.
12" HDPE N-12 INV. IN = 100.12 INV. OUT = 99.49 L = 18.58', S = 0.034'/, HEADWALL ON OUTLET
12" HDPE N-12 INV. IN = 100.12 INV. OUT = 100.12 L = 99.04', S = 0.014'/.
12" HDPE N-12 INV. IN = 101.50 INV. OUT = 100.12 L = 187.49', S = 0.016'/.
12" HDPE N-12 INV. IN = 112.13 INV. OUT = 108.64 L = 55.29', S = 0.063'/.
12" HDPE N-12 INV. IN = 105.24 INV. OUT = 102.73 L = 92.81', S = 0.027'/.
12" HDPE N-12 INV. IN = 112.52 INV. OUT = 112.13 L = 16.28', S = 0.024'/.
12" HDPE N-12 INV. IN = 108.23 INV. OUT = 101.60 L = 124.25', S = 0.053'/.
30" HDPE N-12 INV. IN = 97.50 INV. OUT = 97.17 L = 21.25', S = 0.016'/.
8" SDR 35 INV. IN = 112.51 INV. OUT = 107.81 L = 271.65', S = 0.017'/.
8" SDR 35 INV. IN = 107.71 INV. OUT = 104.32 L = 235.76', S = 0.014'/.
8" SDR 35 INV. IN = 104.22 INV. OUT = 103.92 L = 131.38', S = 0.016'/.
8" SDR 35 INV. IN = 133.38 INV. OUT = 129.02 L = 296.77', S = 0.015'/.
8" SDR 35 INV. IN = 128.92 INV. OUT = 120.93 L = 355.14', S = 0.023'/.
15" HDPE N-12 INV. IN = 135.27 INV. OUT = 132.04 L = 433.87', S = 0.007'/.
15" HDPE N-12 INV. IN = 132.36 INV. OUT = 132.14 L = 16.35', S = 0.013'/.
15" HDPE N-12 INV. IN = 132.04 INV. OUT = 121.74 L = 434.32', S = 0.024'/.
8" DI CL 52 WATER MAIN

MATCH LINE: SHEET 5
MATCH LINE: SHEET 4

REVISION	DATE	DESCRIPTION

EXISTING CONDITIONS - CENTRAL
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE NO. 805 LICENSED LAND SURVEYOR
KENNETH A. BERRY
SIGNATURE

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PREFORMED BY BERRY SURVEYING AND ENGINEERING IN 2020 WITH AN ERROR OF CLOSURE GREATER THAN 1 IN 10,000.

5.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS.
HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF TAX MAP H, LOT 4.

7.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

STRUCTURES TABLE:

CB 12+95C (POND C1295CP)BURIED
RIM = 141.62
INV. OUT = 135.84 (15" HDPE N-12)
W/ SUMP & HOOD

CB 12+95R (POND C1295RP)
RIM = 141.62
INV. IN = 135.76 (15" HDPE N-12)
INV. OUT = 135.76 (15" HDPE N-12)
W/ SUMP & HOOD

CB 12+95L (POND C1295LP)
RIM = 141.63
INV. IN = 135.29 (15" HDPE N-12)
INV. OUT = 135.27 (15" HDPE N-12)
W/ SUMP & HOOD

CB 16+43L (POND C1643LP)
RIM = 141.21
INV. OUT = 136.84 (12" HDPE N-12)
W/ SUMP & HOOD

CB 16+43R (POND C1643RP)
RIM = 141.18
INV. IN = 136.14 (12" HDPE N-12)
INV. OUT = 135.36 (12" HDPE N-12)
W/ SUMP & HOOD

CB 17+85L (POND C1785LP)
RIM = 135.25
INV. OUT = 130.41 (12" HDPE N-12)
W/ SUMP & HOOD

CB 17+85R (POND C1785RP)
RIM = 135.13
INV. IN = 129.73 (12" HDPE N-12) 17+85L
INV. IN = 129.75 (12" HDPE N-12) 16+43R
INV. OUT = 128.83 (12" HDPE N-12)
W/ SUMP & HOOD

CB 19+28R (POND C1928RP)
RIM = 128.92
INV. OUT = 124.26 (12" HDPE N-12)
W/ SUMP & HOOD

CB 19+28L (POND C1928LP)
RIM = 129.05
INV. IN = 124.01 (12" HDPE N-12) 19+28R
INV. IN = 123.91 (12" HDPE N-12) 18+69
INV. OUT = 122.19 (12" HDPE N-12)
W/ SUMP & HOOD

CB 19+79R (POND C1979RP)
RIM = 126.96
INV. IN = 120.32 (12" HDPE N-12)
INV. OUT = 120.32 (12" HDPE N-12)
W/ SUMP & HOOD

LEACHING CB 21+09R (POND 1000P)
RIM = 110.42
INV. OUT = 106.42 (12" HDPE N-12)
W/ SUMP

LEACHING CB 21+28R (POND 1000P)
RIM = 110.41
INV. IN = 106.01 (12" HDPE N-12)
INV. OUT = 105.91 (12" HDPE N-12)
W/ SUMP

LEACHING CB 21+48R (POND 1000P)
RIM = 110.34
INV. IN = 105.84 (12" HDPE N-12)
INV. OUT = 105.74 (12" HDPE N-12)
W/ SUMP

CB 21+73L (POND C2173LP)
RIM = 122.11
INV. OUT = 117.46 (12" HDPE N-12)
W/ SUMP & HOOD **(BROKEN HOOD)**

CB 21+73R (POND C2173RP)
RIM = 122.04
INV. IN = 116.94 (12" HDPE N-12) 21+73L
INV. IN = 116.94 (12" HDPE N-12) 19+79R
INV. OUT = 116.90 (12" HDPE N-12)
W/ SUMP & HOOD

CB 21+82R (POND C2182RP)
RIM = 119.56
INV. OUT = 116.12 (12" HDPE N-12)
W/ SUMP & HOOD

DMH 18+69 (POND DI869RP)
RIM = 131.77
INV. IN = 126.15 (12" HDPE N-12)
INV. OUT = 126.15 (12" HDPE N-12)

DMH 21+68R (POND DI268RP)
RIM = 108.51
INV. IN = 104.95 (12" HDPE N-12)
INV. OUT = 104.91 (12" HDPE N-12)

DMH 21+95R (POND DI195RP)
RIM = 121.80
INV. IN = 115.76 (12" HDPE N-12)
INV. OUT = 115.92 (24" HDPE N-12)

DMH 21+97R (POND DI297RP)
RIM = 119.93
INV. IN = 115.63 (12" HDPE N-12)
INV. OUT = 115.73 (24" HDPE N-12)

DMH 22+06R (POND DI206RP)(USINGSTK)
RIM = 120.14
INV. IN = 115.39 (24" HDPE N-12)
INV. OUT = 115.44 (12" HDPE N-12)

DMH 22+15R (POND DI215RP)
RIM = 120.28
INV. IN = 115.38 (12" HDPE N-12)
INV. OUT = 107.86 (12" HDPE N-12)

DMH 22+41R (POND DI224IRP)
RIM = 109.62
INV. IN = 103.68 (12" HDPE N-12)
INV. IN = 103.68 (12" HDPE N-12)
INV. OUT = 103.62 (12" HDPE N-12)

STRUCTURES TABLE:

SMH 12+07
RIM = 142.38
INV. IN = 133.48 (8" SDR 35)
INV. OUT = 133.38 (8" SDR 35)

SMH 15+00
RIM = 144.40
INV. OUT = 135.40 (8" SDR 35)

SMH 16+11
RIM = 142.47
INV. OUT = 132.72 (8" SDR 35)

SMH 17+79
RIM = 135.49
INV. IN = 126.39 (8" SDR 35)
INV. OUT = 126.29 (8" SDR 35)

SMH 18+36
RIM = 133.05
INV. IN = 124.23 (8" SDR 35)
INV. OUT = 124.13 (8" SDR 35)

SMH 19+00
RIM = 130.28
INV. IN = 121.56 (8" SDR 35)
INV. OUT = 121.50 (8" SDR 35)

SMH 19+57
RIM = 128.13
INV. IN = 119.03 (8" SDR 35)
INV. OUT = 118.93 (8" SDR 35)

SMH 22+26
RIM = 121.21
INV. IN = 112.61 (8" SDR 35)
INV. OUT = 112.51 (8" SDR 35)

MADBURY
DOVER

50' EXTERIOR BUFFER (TYP.)

TREELINE

RETAINING WALL

43 CIELO DRIVE GARAGE FF = 137.49

41 CIELO DRIVE GARAGE FF = 141.72

39 CIELO DRIVE GARAGE FF = 145.00

37 CIELO DRIVE GARAGE FF = 145.34

35 CIELO DRIVE GARAGE FF = 145.06

33 CIELO DRIVE GARAGE FF = 145.53

45 CIELO DRIVE GARAGE FF = 134.35

47 CIELO DRIVE GARAGE FF = 132.55

49 CIELO DRIVE GARAGE FF = 130.52

51 CIELO DRIVE GARAGE FF = 128.63

53 CIELO DRIVE GARAGE FF = 127.16

55 CIELO DRIVE GARAGE FF = 124.90

36 CIELO DRIVE GARAGE FF = 136.05

34 CIELO DRIVE GARAGE FF = 139.98

32 CIELO DRIVE GARAGE FF = 145.28

30 CIELO DRIVE GARAGE FF = 144.87

28 CIELO DRIVE GARAGE FF = 143.02

31 CIELO DRIVE GARAGE FF = 144.76

29 CIELO DRIVE GARAGE FF = 143.31

38 CIELO DRIVE GARAGE FF = 142.85

25 CIELO DRIVE GARAGE FF = 143.60

39 CIELO DRIVE GARAGE FF = 130.72

40 CIELO DRIVE GARAGE FF = 126.09

42 CIELO DRIVE GARAGE FF = 126.22

44 CIELO DRIVE GARAGE FF = 123.04

46 CIELO DRIVE GARAGE FF = 122.74

CIELO DRIVE

CONVEYANCE SWALE

LIMIT OF INTENSIVE TOPOGRAPHICAL SURVEY

DECK/PORCH (TYP.)

DRIVEWAY

PATIO (TYP.)

GAS METER (TYP.)

ELECTRIC METER (TYP.)

UTILITY BOXES

3/4" GAS SERVICE (TYP.)

1" COPPER WATER SERVICE (TYP.)

4" SDR 35 SEWER SERVICE (TYP.)

CURB STOP (TYP.)

V.G.C. TIPDOWN AT DRIVEWAY (TYP.)

WATER GATE VALVES (TYP.)

GAS VALVE

FIRE HYDRANT

STREET TREE (TYP.)

WOODEN FENCE

LAMP (TYP.)

TRANSFORMER 4352710

TRANSFORMER 4352711

TRANSFORMER 4352279

TRANSFORMER 4352717

TRANSFORMER SC3

TRANSFORMER T1

ES 399/1 W/ GUY WIRE

ES 399/10

PSNH 106 W/ GUY WIRES

"SPEED LIMIT 15"

8" SDR 35
INV. IN = 126.29
INV. OUT = 124.23
L = 56.05', S = 0.037'/-

12" HDPE N-12
INV. IN = 128.83
INV. OUT = 126.15
L = 81.73', S = 0.033'/-

CATCH BASIN 17+85R

SEWER MANIFOLD 18+36

DRAIN MANHOLE 18+69

8" SDR 35
INV. IN = 124.13
INV. OUT = 121.56
L = 62.74', S = 0.041'/-

SEWER MANIFOLD 19+00

12" HDPE N-12
INV. IN = 130.41
INV. OUT = 129.73
L = 15.44', S = 0.044'/-

CATCH BASIN 17+85L

12" HDPE N-12
INV. IN = 135.36
INV. OUT = 129.75
L = 141.52', S = 0.040'/-

12" HDPE N-12
INV. IN = 136.84
INV. OUT = 136.14
L = 15.66', S = 0.045'/-

CATCH BASIN 16+43L

SEWER MANIFOLD 16+11

12" HDPE N-12
INV. IN = 126.15
INV. OUT = 123.91
L = 51.79', S = 0.043'/-

CATCH BASIN 19+28L

4" SDR 35 SEWER SERVICE (TYP.)

12" HDPE N-12
INV. IN = 124.26
INV. OUT = 124.01
L = 16.29', S = 0.015'/-

CATCH BASIN 19+79R

8" SDR 35
INV. IN = 121.50
INV. OUT = 119.03
L = 54.64', S = 0.045'/-

SEWER MANIFOLD 19+57

12" HDPE N-12
INV. IN = 122.19
INV. OUT = 120.32
L = 52.09', S = 0.036'/-

8" SDR 35
INV. IN = 135.40
INV. OUT = 133.48
L = 288.84', S= 0.007'/-

SEWER MANIFOLD 15+00

12" HDPE N-12
INV. IN = 132.70
INV. OUT = 126.39
L = 165.30', S = 0.038'/-

CATCH BASIN 16+43R

15" HDPE N-12
INV. IN = 135.76
INV. OUT = 135.29
L = 16.20', S = 0.029'/-

15" HDPE N-12
INV. IN = 135.84
INV. OUT = 135.76
L = 9.14', S = 0.009'/-

CATCH BASIN 12+95C

CATCH BASIN 12+95R

15" HDPE N-12
INV. IN = 135.27
INV. OUT = 132.04
L = 433.87', S = 0.007'/-

8" DI CL 52 WATER MAIN

SEWER MANIFOLD 12+07

8" SDR 35
INV. IN = 118.93
INV. OUT = 112.61
L = 265.76', S= 0.024'/-

8" DI CL 52 WATER MAIN

12" HDPE N-12
INV. IN = 120.32
INV. OUT = 116.94
L = 189.63', S = 0.018'/-

LEACHING CATCH BASIN #21+09R

LEACHING CATCH BASIN #21+28R

LEACHING CATCH BASIN #21+48R

LAMP (TYP.)

CATCH BASIN 21+73R

CATCH BASIN 21+73L

12" HDPE N-12
INV. IN = 116.90
INV. OUT = 115.76
L = 27.58', S = 0.041'/-

12" HDPE N-12
INV. IN = 117.46
INV. OUT = 116.94
L = 15.64', S = 0.033'/-

12" HDPE N-12
INV. IN = 106.42
INV. OUT = 106.01
L = 11.56', S = 0.035'/-

12" HDPE N-12
INV. IN = 105.91
INV. OUT = 105.84
L = 12.49', S = 0.006'/-

STORMTECH CHAMBER SYSTEM #1

RETAINING WALL

RIP-RAP

RIP-RAP SPILLWAY

12" HDPE N-12
INV. IN = 105.84
INV. OUT = 104.91
L = 57.08', S = 0.016'/-

DRAIN MANHOLE 21+68R

CATCH BASIN #21+82R

24" HDPE N-12
INV. = 115.73

12" HDPE N-12
INV. IN = 116.12
INV. OUT = 115.63
L = 12.31', S = 0.040'/-

DRAIN MANHOLE 21+95R

DRAIN MANHOLE 21+97R

DRAIN MANHOLE 22+06R
OUTLET STRUCTURE #1

DRAIN MANHOLE 22+15R

24" HDPE N-12
INV. = 115.39

24" HDPE N-12
INV. = 115.92

SEWER MANIFOLD 22+26

12" HDPE N-12
INV. IN = 115.44
INV. OUT = 115.38
L = 5.30', S = 0.011'/-

12" HDPE N-12
INV. IN = 104.91
INV. OUT = 103.68
L = 72.49', S = 0.017'/-

12" HDPE N-12
INV. IN = 107.86
INV. OUT = 103.68
L = 57.15', S = 0.073'/-

DRAIN MANHOLE 22+41R

8" SDR 35
INV. IN = 112.51
INV. OUT = 107.81
L = 271.65', S = 0.017'/-

MATCH POINT

MATCH LINE: SHEET 6
MATCH LINE: SHEET 5

1" IRON PIPE
~FND~ +2.8'

NAD83 NH STATE PLANE

MAGNETIC

16.4°

N/F BROWNE, DAVID JR & PAMELA
324 MAST ROAD
DOVER, NH 03820
S.C.R.D. BOOK 2384, PAGE 618
TAX MAP H, LOT 5-B-1

STONE BOUND W/ DH
~FND~ FLUSH
NH GRID COORDINATES
N:244075.96
E:1185546.16
ELEV.:155.93

100' EXTERIOR BUFFER (TYP.)

REVISION	DATE	DESCRIPTION

EXISTING CONDITIONS – WEST
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE — No. 805 — KENNETH J. BERRY — LICENSED LAND SURVEYOR
SIGNATURE

WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) ZONING: (IT) INNOVATIVE TECHNOLOGY
SECONDARY GROUNDWATER PROTECTION OVERLAY
MINIMUM FRONTAGE ~ 200'
MINIMUM LOT SIZE ~ 87,120 Sq. Ft.
FRONT SETBACK ~ 50'
REAR SETBACK ~ 50'
SIDE SETBACK ~ 50'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 55'
MAX. LOT COVERAGE: 33%
PARKING SETBACK ~ 25.0'
MAX IMPERVIOUS ~ 20%

ZONING: (TDR) TRANSFER OF DEVELOPMENT RIGHTS (TDR)
MIN. LOT SIZE: N/A
MAX. LOT COVERAGE: N/A
MIN. FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER'

NOTES:

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF TAX MAP H, LOT 4, LOCATED IN DOVER, N.H., AS OF THE FIELD SURVEY IN 2021.

7.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 PART IN 10,000.

9.) TOPOGRAPHY PROVIDED IS DEMARCATED AT 1' INTERVALS, AND IS THE RESULT OF A FIELD SURVEY PERFORMED IN 2021.

10.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PROPERTY DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF: FEMA COMMUNITY #330145, MAP 33017C0320E, DATED: SEPTEMBER 30, 2015.

11.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

12.) THIS SITE IS SERVICED BY MUNICIPAL SEWER AND WATER.

13.) NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET.

14.) SEE SHEETS #4–6 FOR INVERT AND POND INFORMATION.

15.) THE SHADED AREA SHOWN REPRESENTS THE IMPERVIOUS FOOTPRINT (BUILDING AND PAVEMENT) FROM THE ORIGINAL APPROVED SITE PLAN BY THE CITY OF DOVER DATED 12/20/2011. THIS IMPERVIOUS FOOTPRINT WAS APPROVED UNDER NHDES ALTERATION OF TERRAIN PERMIT #0189. THE PRIOR APPROVED USE WAS TWO CONGREGATE CARE FACILITIES FOR A TOTAL OF SEVENTY–TWO (72) UNITS AND THREE (3) ADDITIONAL SINGLE FAMILY ATTACHED UNITS IN THE LOCATION SHOWN.

16.) PRIOR APPROVAL IMPERVIOUS SHOWN NOT CONSTRUCTED:
BUILDING IMPERVIOUS: 35,556 Sq. Ft. (0.82 Ac.) +/–
PAVEMENT IMPERVIOUS: 21,652 Sq. Ft. (0.49 Ac.) +/–
TOTAL IMPERVIOUS AREA: 57,208 Sq. Ft. (1.31 Ac.) +/–

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

REVISION	DATE	DESCRIPTION

CONSTRUCTION AREA EXISTING CONDITIONS PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE — No. 805 — KENNETH J. BERRY — LICENSED LAND SURVEYOR
SIGNATURE

WETLAND NOTES:
WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295

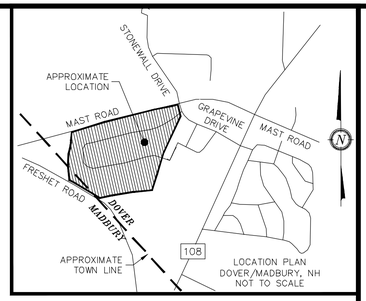
JOHN P. HAYES, III CSS #87

SITE SPECIFIC SOILS LEGEND

SYMBOL	SOIL TAXONOMIC NAME	HYDROLOGIC SOIL GROUP
Wd	WINDSOR	A
299	UDORTHENTS	A
300	UDIPSAMMENTS	A
350	UDIPSAMMENTS	A
900	ENDOQUENTS (SANDY OR GRAVELLY)	C

SLOPE: A = 0–3% B = 3–8% C = 8–15% D = 15–25% E = 25–50% F = 50%+

DENOMINATOR: /VPD = VERY POORLY DRAINED /PD = POORLY DRAINED /SWPD = SOMEWHAT POORLY DRAINED /MWD = MODERATELY WELL DRAINED



NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

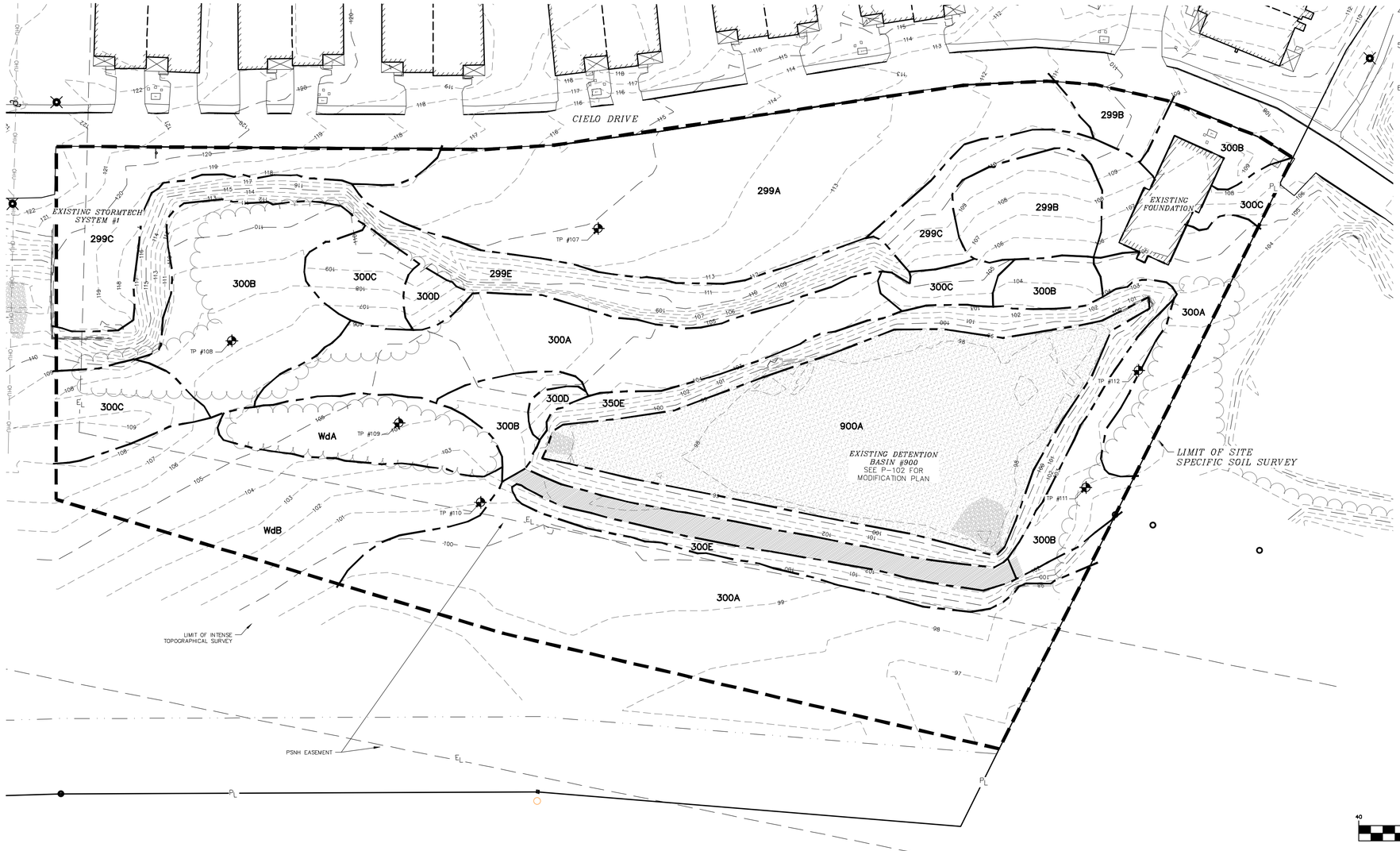
2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PREFORMED BY BERRY SURVEYING AND ENGINEERING IN 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 IN 10,000.

5.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING ANALYZED SITE SPECIFIC SOIL CONDITIONS OF THE SITE.



LEGEND:

- IRON PIPE ~FND~
- IRON BOUND ~FND~
- STONE BOUND ~FND~
- GRANITE BOUND ~FND~
- UTILITY POLE/GUY WIRE
- TEST HOLE
- BENCHMARK
- OVERHEAD UTILITIES LINE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- SOIL LINE
- LIMIT OF SOIL SURVEY
- 300A SOIL SERIES
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- TYP. TYPICAL
- FND FOUND

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

REVISION	DATE	DESCRIPTION

SITE SPECIFIC SOILS MAP
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 40 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS SHOW THE OVERVIEW GRADING AND DRAINAGE DESIGN FOR 55 PROPOSED AGE RESTRICTED HOUSING UNITS

6.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2016, CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

7.) CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION

8.) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION

9.) GRADE STAKES ARE TO BE PLACED AROUND ALL BOUNDARIES & CONTROL POINTS TO BE PROTECTED DURING CONSTRUCTION.

10.) ALL DISTURBED MONUMENTS TO BE RE-SET BY BS&E UPON COMPLETION OF PROJECT.

11.) THE APPLICANT MAY CHOOSE A CURB TO CURB INLAY INSTEAD OF PAYING THE MUNICIPAL PAVEMENT FEE.

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR NOR THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

CONSTRUCTION SEQUENCE:

THE CATCH BASINS ON CIELO DRIVE ARE TO REMAIN ACTIVE THROUGHOUT THE CONSTRUCTION PROCESS. THE EXISTING DRAINAGE INFRASTRUCTURE TO BE REMOVED MUST REMAIN ACTIVE UNTIL TH REPLACEMENT INFRASTRUCTURE IS READY TO BE ACTIVATED.

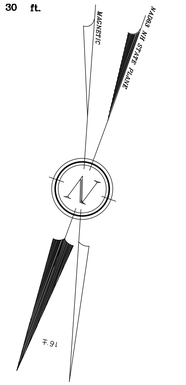
SEE THE DETENTION BASIN DEWATERING PLAN FOR BOTH EXISTING AND PROPOSED DRAINAGE INFRASTRUCTURE.

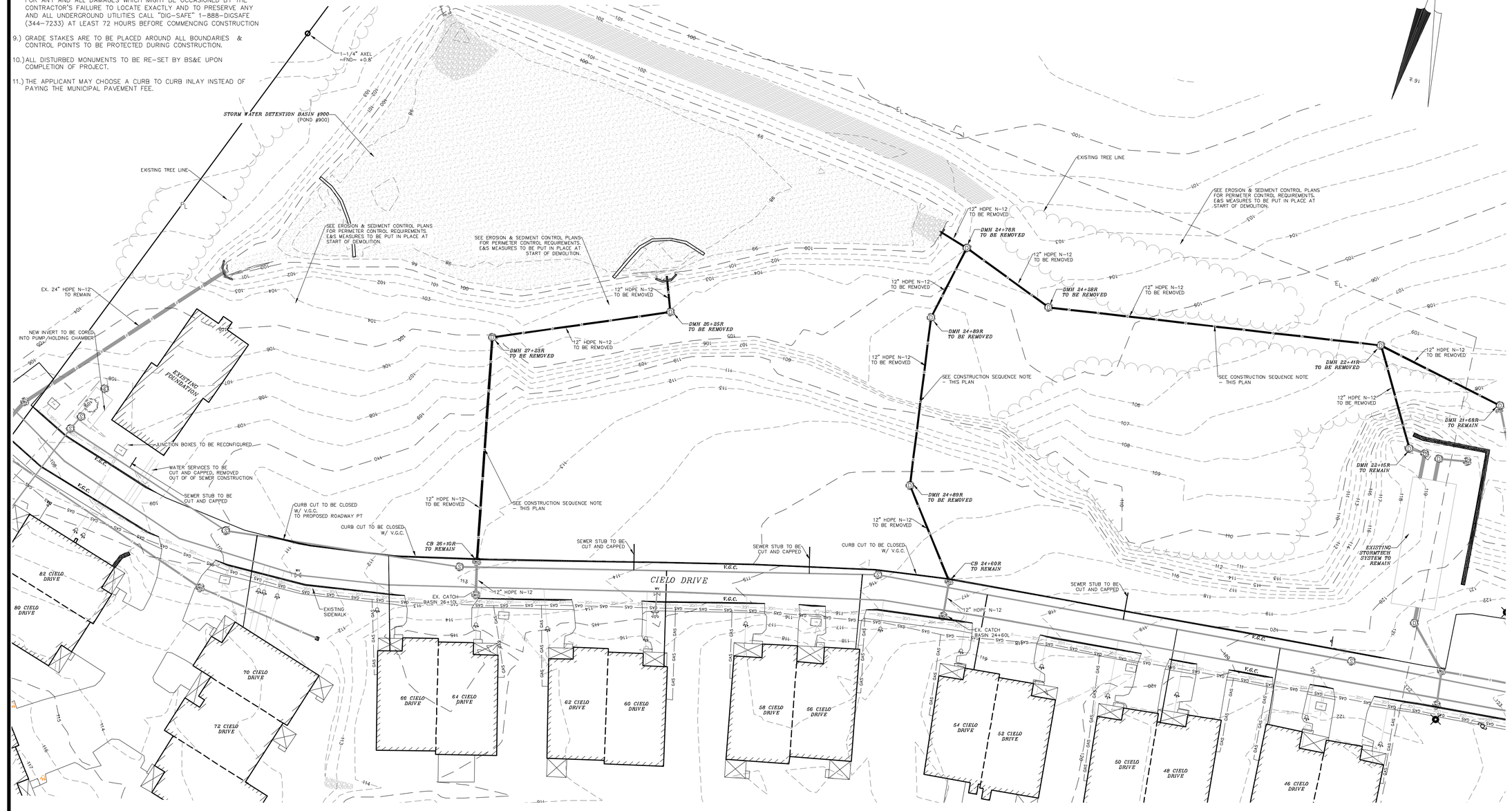
EXISTING MATERIALS REMOVED IN GOOD CONDITION MAY BE REUSED PROVIDING THAT IT WORKS WITH THE ABOVE SEQUENCE.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.





REVISION	DATE	DESCRIPTION

DEMOLITION PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) ZONING: (IT) INNOVATIVE TECHNOLOGY
SECONDARY GROUNDWATER PROTECTION OVERLAY
MINIMUM FRONTAGE ~ 200'
MINIMUM LOT SIZE ~ 87,120 Sq. Ft.
FRONT SETBACK ~ 50'
REAR SETBACK ~ 50'
SIDE SETBACK ~ 50'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 55'
MAX. LOT COVERAGE: 33%
PARKING SETBACK ~ 25.0'
MAX IMPERVIOUS ~ 20%

ZONING: (TDR) TRANSFER OF DEVELOPMENT RIGHTS (TDR)
MIN. LOT SIZE: N/A
MAX. LOT COVERAGE: N/A
MIN. FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED SITE PLAN DEVELOPMENT FOR THE SUBJECT PARCEL.

7.) LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD FOR THE PROPOSED USE OR STRUCTURE, INCLUDING THE CASE NUMBER AND DATE OF DECISION AND ANY CONDITIONS. **NONE**

8.) AS-BUILT PLANS OF THE SITE PLAN SHALL BE SUBMITTED ON PAPER AND IN DIGITAL FORMAT AUTOCAD DWG, AUTOCAD DXF OR ESRI FORMAT TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT IF A STREET IS PROPOSED FOR CITY ACCEPTANCE. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S OR P.E. DIGITAL FILES SHALL BE GEO-REFERENCED TO NEW HAMPSHIRE STATE PLANE COORDINATES NAD83 AND SHALL BE EXPRESSED IN FEET.

9.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.

10.) THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.

11.) ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF NHDOT TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.

NOTES CONTINUED:

12.) ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.

13.) THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR ANY EARTH DISTURBING ACTIVITY OCCURS. NO DISTURBANCE WITHIN THE 50' BUFFER IS PROPOSED.

14.) ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.

15.) A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS.

16.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

17.) SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7AM-6PM, SATURDAY 8AM-4PM, NO SUNDAY HOURS. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR ASSISTANT CITY MANAGER.

18.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

NOTES CONTINUED:

19.) THE PROPOSED USE FOR THE SITE IS FOR A AN EXPANSION ON THE EXISTING BUILDING, TO PROVIDE ADDITIONAL WAREHOUSE SPACE & LIGHT MANUFACTURING.

20.) THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:
- US EPA NOI & SWPPP: PENDING
- NATURAL HERITAGE BUREAU: PENDING
- NH DIVISION OF HISTORICAL RESOURCES: PENDING
- NHDES ALTERATION OF TERRAIN PERMIT: PENDING
- NHDES SEWER DISCHARGE PERMIT: PENDING
- NHDES DWGB PERMIT: PENDING

21.) COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

22.) ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

23.) ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.

24.) APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.

25.) THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES THAT MAY ACQUIRE ANY PROPERTY SUBJECT TO THE REQUIREMENTS AND RESPONSIBILITIES DESCRIBED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE NOTICE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR RECORDING CONTAINED IN RSA 477 AND 478. THE NOTICE NEED NOT SET FORTH THE REQUIREMENTS AT LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.

NOTES CONTINUED:

26.) PROPOSED EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

27.) APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.

28.) THE EXISTING STRUCTURE IS SERVICED BY SPIRNKLERS. THE PROPOSED EXPANSION WILL HAVE A SPRINKLER SYSTEM AS REQUIRED BY CHAPTER 81- 30 OF THE CODE OF THE CITY OF DOVER AND THE ADOPTED STATE OF NH BUILDING AND FIRE CODES. THE EXISTING STRUCTURE SUPPRESSION/SPRINKLER SYSTEM SHALL ALSO HAVE THE REQUISITE IMPROVEMENTS FOR THE BUILDING CLASSIFICATION AND USE GROUP AS WELL AS THE COMMODITIES STORED

29.) SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLOW DEVICE.

30.) FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.

31.) THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL BE ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. (I.E. IBC, ANSI-117.1) AND NH RSA 155-A: 5.

32.) SNOW SHALL BE REMOVED TO AN APPROVED LOCATION.
PAVEMENT COVERAGE: 45,796 Sq. Ft.

NOTES CONTINUED:

33.) WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, CERTIFIED WETLANDS SCIENTIST, CERTIFICATION NUMBER 295, IN ACCORDANCE WITH CHAPTER 170-27.1 OF THE ZONING ORDINANCE, IN SPRING OF 2022. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET.

34.) FIRE DEPARTMENT ACCESS ROADS SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES. NOT APPLICABLE FOR THIS PROJECT.

35.) TRASH REMOVAL WILL BE THROUGH PRIVATE TOTTERS PLACED ALONG THE ROADWAY FOR PICKUP. TOTTERS WILL BE STORED INSIDE GARAGES DURING ALL OTHER TIMES.

36.) PROJECT DISTURBANCE: 145,000 Sq. Ft. (3.33 Ac.) NOTE THAT THE PROJECT IS SUBJECT TO THE EPA NPDES PHASE II. THE NOTICE OF INTENT (NOI) MUST BE FILED ALONG WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). WEEKLY INSPECTIONS WILL BE CONDUCTED BY THE DESIGN ENGINEER OR AFTER A STORM EVENT OF GREAT THAN 0.25".

37.) PROPOSED IMPERVIOUS AREA:
POROUS PAVEMENT DOES NOT COUNT TOWARDS IMPERVIOUS AREA
PROPOSED BUILDING IMPERVIOUS AREA: 45,192 Sq. Ft. (1.04 Ac.)
PROPOSED PAVED/CURB IMPERVIOUS AREA: 4,965 Sq. Ft. (0.11 Ac.)
TOTAL PROPOSED IMPERVIOUS COVER IS 50,157 Sq. Ft. (1.15 Ac.)

PRIOR APPROVAL IMPERVIOUS SHOWN ON E PLAN NOT CONSTRUCTED:
BUILDING IMPERVIOUS: 35,556 Sq. Ft. (0.82 Ac.) +/-
PAVEMENT IMPERVIOUS: 21,652 Sq. Ft. (0.49 Ac.) +/-
TOTAL IMPERVIOUS AREA: 57,208 Sq. Ft. (1.31 Ac.) +/-

TRANSFER OF DEVELOPMENT RIGHTS REQUEST:
(UNITS 52-55 FROM PRIOR APPROVAL: 51 UNITS TO BE PURCHASED VIA TDR: 55 TOTAL

RECREATION SPACE REQUIREMENTS:

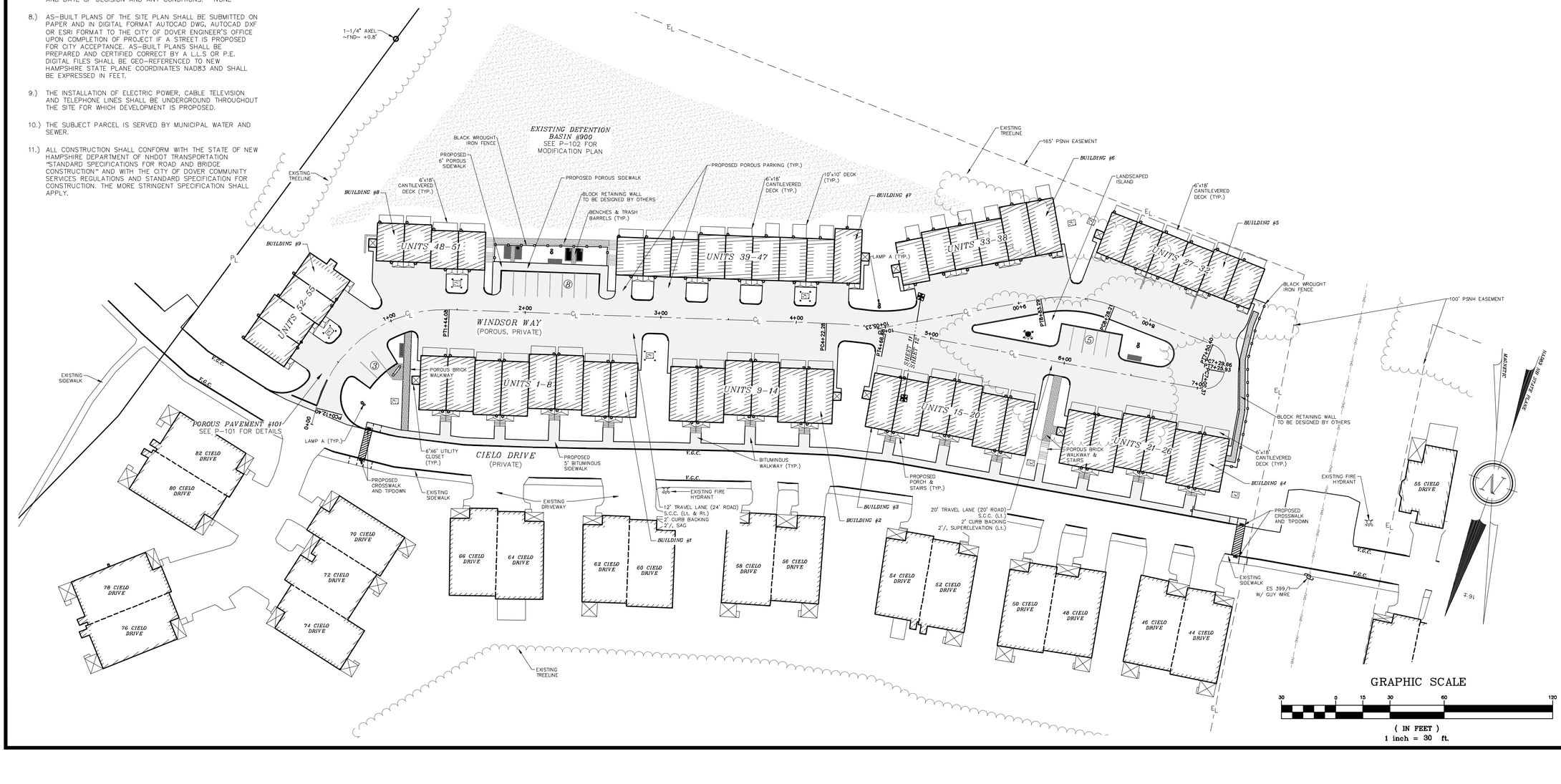
PROPOSED NUMBER OF BEDROOMS: 110
OPEN SPACE REQUIREMENT (100 SF PER BEDROOM): 11,000 SF
½ RECREATION SPACE FOR PASSIVE USE: 5,500 SF (PARTIALLY SATISFIED ON SITE)
100 SF/ BENCH (400 SF SATISFIED) 5,100 SF REMAINING (SATISFIED OFF SITE)
½ RECREATION SPACE FOR ACTIVE USE: 5,500 SF (SATISFIED OFF SITE)
RECREATION FEE REQUIRED

PARKING REQUIREMENTS:

CHAPTER 153-14D PARKING TABLE
- RESIDENTIAL
  - RESIDENTIAL (GATEWAY) 1.4 SPACES PER UNIT + 0.5 GUEST SPACE / UNIT :
    - 55 UNITS x 1.9 SPACES = 105 SPACES

TOTAL PROPOSED = 126 SPACES
TOWNHOUSES HAVE A SINGLE CAR GARAGE AND MIN ONE SPACE IN THE DRIVEWAY FOR 110 SPACES

16 STANDALONE PARKING SPACES ARE PROVIDED



REVISION	DATE	DESCRIPTION

OVERVIEW SITE PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 10464
LICENSED PROFESSIONAL ENGINEER

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

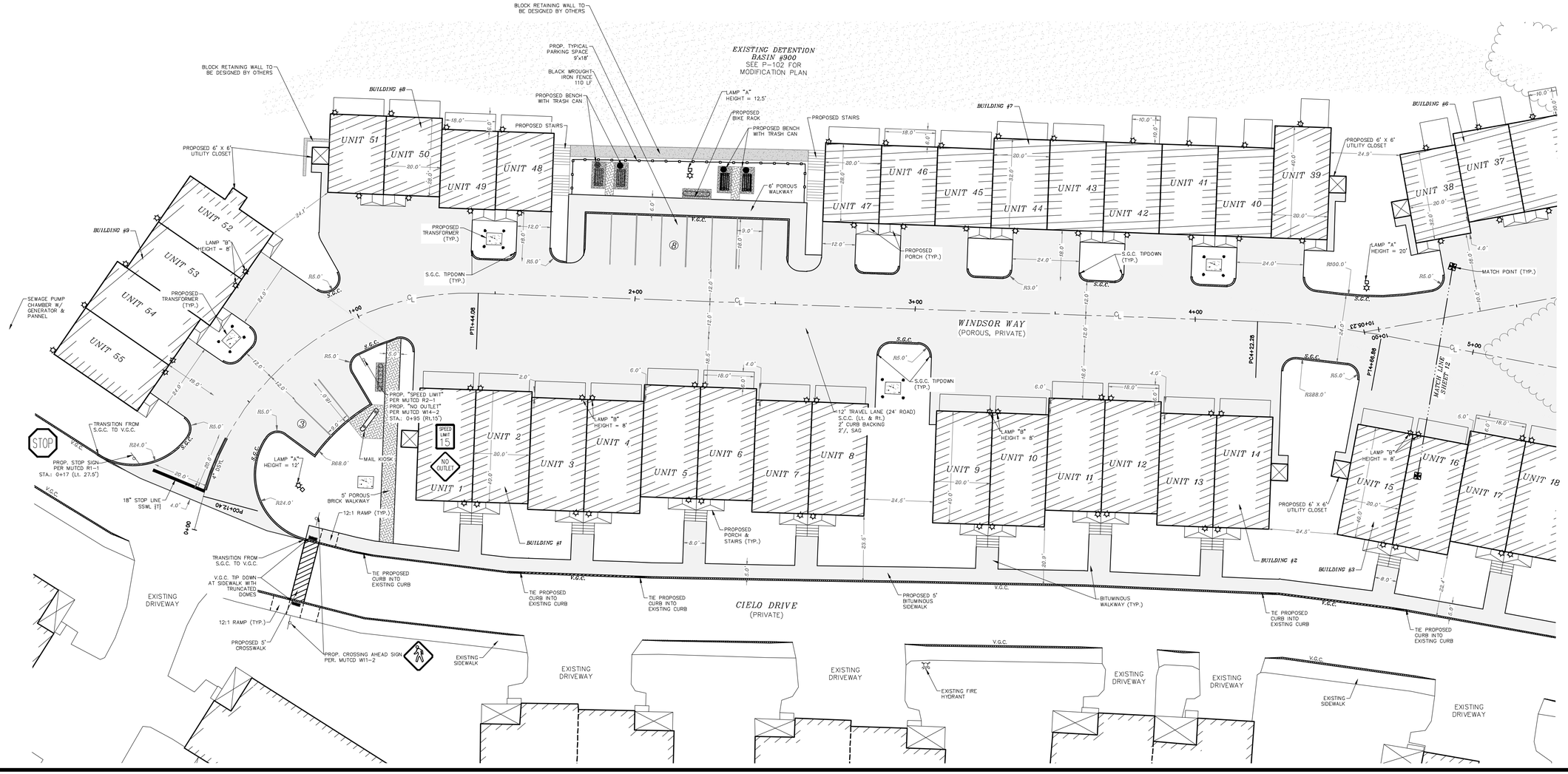
3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) ZONING: (IT) INNOVATIVE TECHNOLOGY
MINIMUM FRONTAGE ~ 200'
MINIMUM LOT SIZE ~ 87,120 Sq. Ft.
FRONT SETBACK ~ 50'
REAR SETBACK ~ 50'
SIDE SETBACK ~ 50'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 55'
MAX. LOT COVERAGE: 33%
PARKING SETBACK ~ 25.0'

ZONING: (TDR) TRANSFER OF DEVELOPMENT RIGHTS (TDR)
MIN. LOT SIZE: N/A
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER'

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED SITE PLAN DEVELOPMENT FOR WINDSOR WAY AND THE SUBJECT PARCEL.



REVISION	DATE	DESCRIPTION

SITE PLAN WINDSOR WAY 0+00 – 5+00
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) ZONING: (IT) INNOVATIVE TECHNOLOGY
MINIMUM FRONTAGE ~ 200'
MINIMUM LOT SIZE ~ 87,120 Sq. Ft.
FRONT SETBACK ~ 50'
REAR SETBACK ~ 50'
SIDE SETBACK ~ 50'
WETLANDS BUFFER ~ 50.0'
MAX. BUILDING HEIGHT: 55'
MAX. LOT COVERAGE: 33%
PARKING SETBACK ~ 25.0'

ZONING: (TDR) TRANSFER OF DEVELOPMENT RIGHTS (TDR)
MIN. LOT SIZE: N/A
MAX. LOT COVERAGE: N/A
MINIMUM FRONTAGE: 40'
ABUT A STREET SETBACK: 20'
ABUT A SIDE LOT LINE: 10'
ABUT A REAR LOT LINE: 30'
30' EXTERIOR BUFFER

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED SITE PLAN DEVELOPMENT FOR WINDSOR WAY AND THE SUBJECT PARCEL.

EXISTING DETENTION BASIN #900
SEE P-102 FOR MODIFICATION PLAN

BUILDING #6 — UNIT 38, UNIT 37, UNIT 36, UNIT 35, UNIT 34, UNIT 33

BUILDING #5 — UNIT 32, UNIT 31, UNIT 30, UNIT 29, UNIT 28, UNIT 27

BUILDING #3 — UNIT 15, UNIT 16, UNIT 17, UNIT 18, UNIT 19, UNIT 20

BUILDING #4 — UNIT 21, UNIT 22, UNIT 23, UNIT 24, UNIT 25, UNIT 26

10'x10' DECK (TYP.)
6'x18' CANTILEVERED DECK (TYP.)
4'x18' CANTILEVERED DECK (TYP.)
PROPOSED TRANSFORMER (TYP.)
165' PSNH EASEMENT
S.G.C. TIPDOWN (TYP.)
PROP. NO PARKING FIRE LANE SIGN PER MUTCD R8-3! STA.: 9+00 (Lt. 14.5')
PROP. ONE WAY SIGN PER MUTCD R6-1R STA: 5+45 (Lt.14.5')
PROPOSED LANDSCAPED ISLAND
PROP. NO PARKING FIRE LANE SIGN PER MUTCD R8-3! STA.: 8+00 (Lt. 14.5')
LAMP "A" HEIGHT = 20'
LAMP "B" HEIGHT = 8'
PROPOSED PORCH (TYP.)
PROP. TYPICAL PARKING SPACE 9'x18'
EXISTING TREELINE
PROPOSED FIRE HYDRANT W/ BOLLARDS STA: 5+70 (Lt. 16')
MATCH LINE SHEET 11
MATCH POINT (TYP.)
BLACK WROUGHT IRON FENCE 145 LF
100' PSNH EASEMENT
WINDSOR WAY (POROUS, PRIVATE)
20' TRAVEL LANE (20' ROAD) S.G.C. (Lt.)
2' CURB BACKING 2', SUPERELEVATION (Lt.)
6' POROUS BRICK WALKWAY
PROPOSED 6' X 6' UTILITY CLOSET
BLOCK RETAINING WALL TO BE DESIGNED BY OTHERS
PROPOSED PORCH & STAIRS (TYP.)
PROPOSED TRANSFORMER (TYP.)
CIELO DRIVE (PRIVATE)
PROPOSED 5' BITUMINOUS SIDEWALK
EXISTING SPEED LIMIT SIGN TO BE RELOCATED
12:1 RAMP (TYP.)
BITUMINOUS WALKWAY (TYP.)
V.G.C. TIP DOWN AT SIDEWALK WITH TRUNCATED DOMES
5' WIDE CROSSWALK
PROP. CROSSING AHEAD SIGN PER. MUTCD W11-2
EVERSOURCE 399/1
EXISTING PARKING
EXISTING FIRE HYDRANT
EXISTING DRIVEWAY
EXISTING SIDEWALK

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

REVISION	DATE	DESCRIPTION

SITE PLAN WINDSOR WAY 5+00 – END
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS SHOW THE OVERVIEW GRADING AND DRAINAGE DESIGN FOR 55 PROPOSED AGE RESTRICTED HOUSING UNITS.

6.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2016, CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

7.) CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION

8.) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION

9.) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

10.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

NOTES CONTINUED:

11.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. LIMIT OF GRADING SHOULD NOT BE EXPANDED WITHOUT CONSULTING THE DESIGN ENGINEER. SEE ALSO E&SC PLAN.

12.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R).

13.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH [T] SHALL BE THERMOPLASTIC.

14.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

15.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

NOTES CONTINUED:

16.) NOTE THAT THE PROJECT IS SUBJECT TO THE EPA NPDES PHASE II. THE NOTICE OF INTENT (NOI) MUST BE FILED ALONG WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). BIWEEKLY INSPECTIONS WILL BE CONDUCTED BY THE DESIGN ENGINEER AND AFTER STORM EVENTS OF OVER 0.25".

17.) UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASIN SUMPS. SEE SHEET E102, DETAIL E18 FOR DEFINITION OF STABLE.

18.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED. RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE. MANY PIPES AND STRUCTURES WILL HAVE MODIFIED LOCATIONS. RE-USE OF PIPES AND STRUCTURES ON THE PROJECT SITE IS PERMITTED, USING THE MANUFACTURES SPECIFICATIONS. QUALITY AND CARE IS TO BE USED WITH RE-USING CONCRETE PRODUCTS, FRAMES, GRATES AND RIMS.

19.) ALL BASINS AND DRAINS ARE TO HAVE BOOTS INSTALLED ON ALL INLETS AND OUTLETS.

20.) ALL TREATMENT SWALE TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS UNLESS OTHERWISE INSTRUCTED BY THE DESIGN ENGINEER DURING CONSTRUCTION.

21.) A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS, AS MAY BE APPLICABLE.

22.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND DOVER CITY STAFF SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

NOTES CONTINUED:

23.) BUILDING ADDRESSES SHALL BE DETERMINED BY THE BUILDING OFFICIAL.

24.) THE PROPOSED PROJECT WILL CONSIST OF ONE PHASE WHICH IS 145,000 Sq.Ft., 3.33 Ac.

25.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

26.) COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH CITY OF DOVER CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

27.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

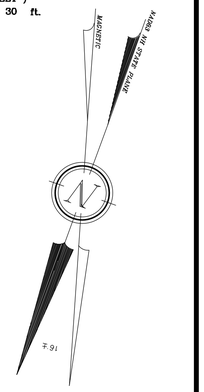
28.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY, AND SEDIMENT AND EROSION CONTROLS.

29.) GUTTERS ARE TO BE DESIGNED BY OTHERS. THE INTENT OF THE GUTTERS WILL BE TO DIRECT ROOF RUNOFF DIRECTLY INTO THE PROPOSED POROUS PAVEMENT AREA, WITH THE CROWN OF THE DOWNSPOUT TO BE AT THE INVERT OF THE CHOKER COURSE LAYER.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



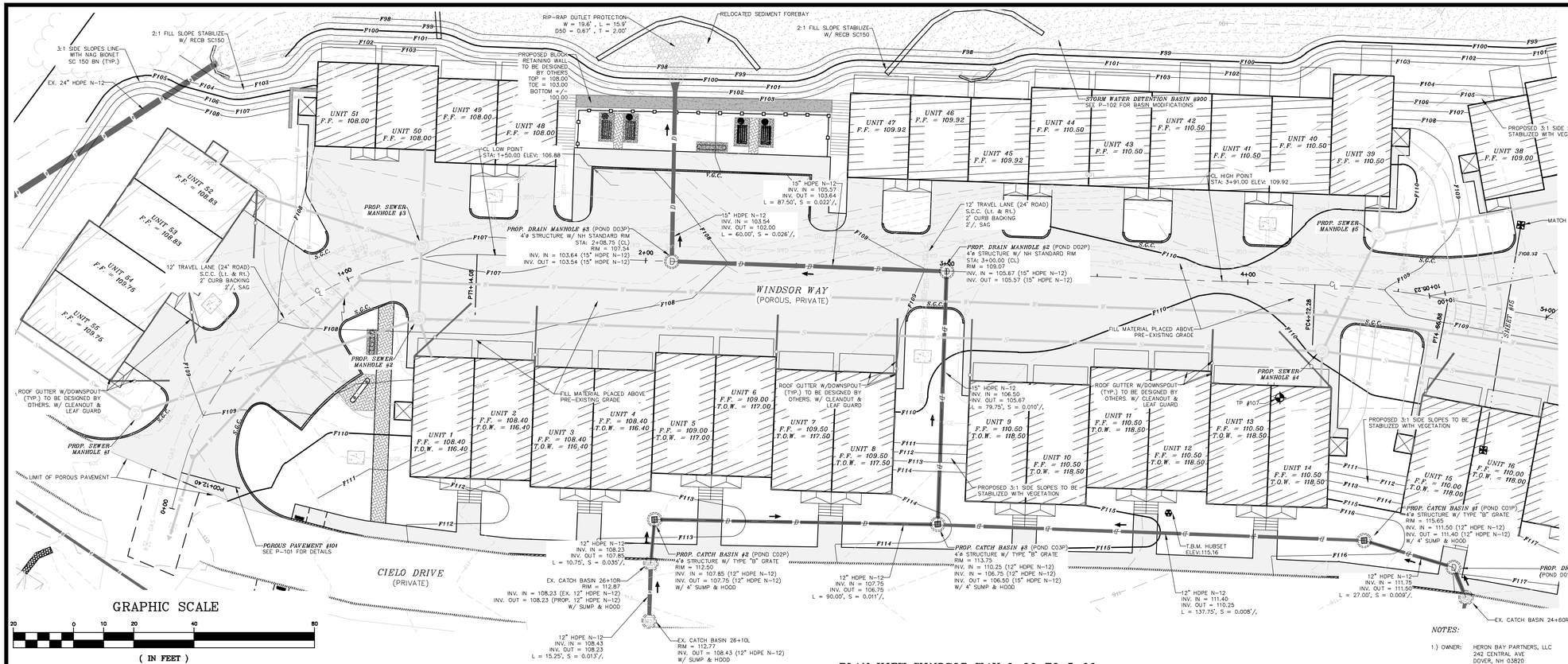
REVISION	DATE	DESCRIPTION

OVERVIEW GRADING & DRAINAGE PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PLAN VIEW WINDSOR WAY 0+00 TO 5+00

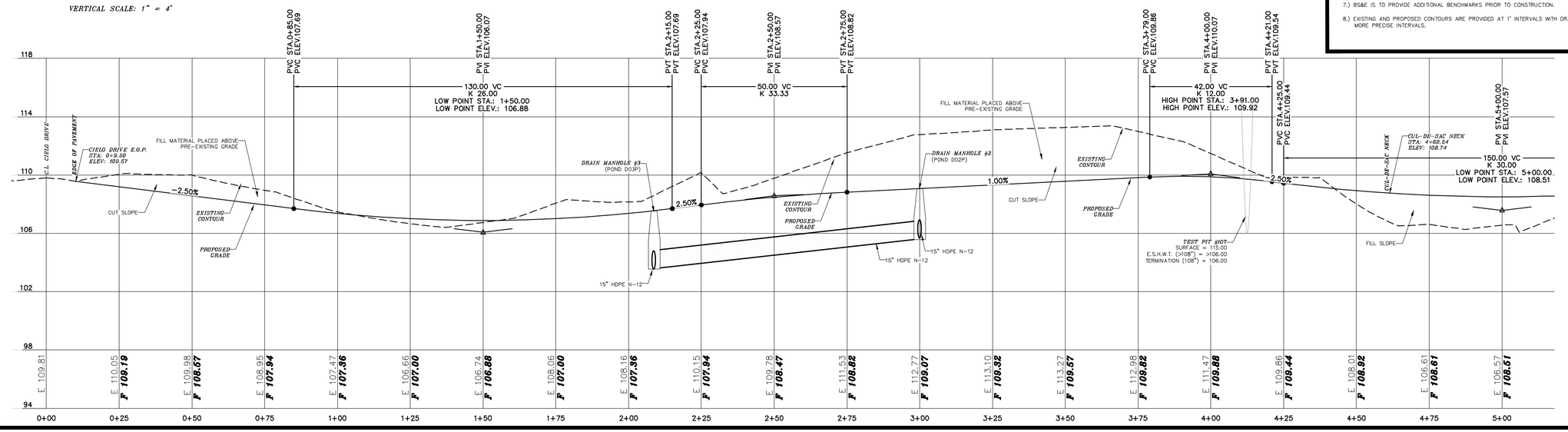
GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'

PROFILE VIEW WINDSOR WAY 0+00 TO 5+00



NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS TO PROVIDE GRADING & ENGINEERING DETAILS OF WINDSOR WAY AND TAX MAP H, LOT 4.

6.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).

7.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

8.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

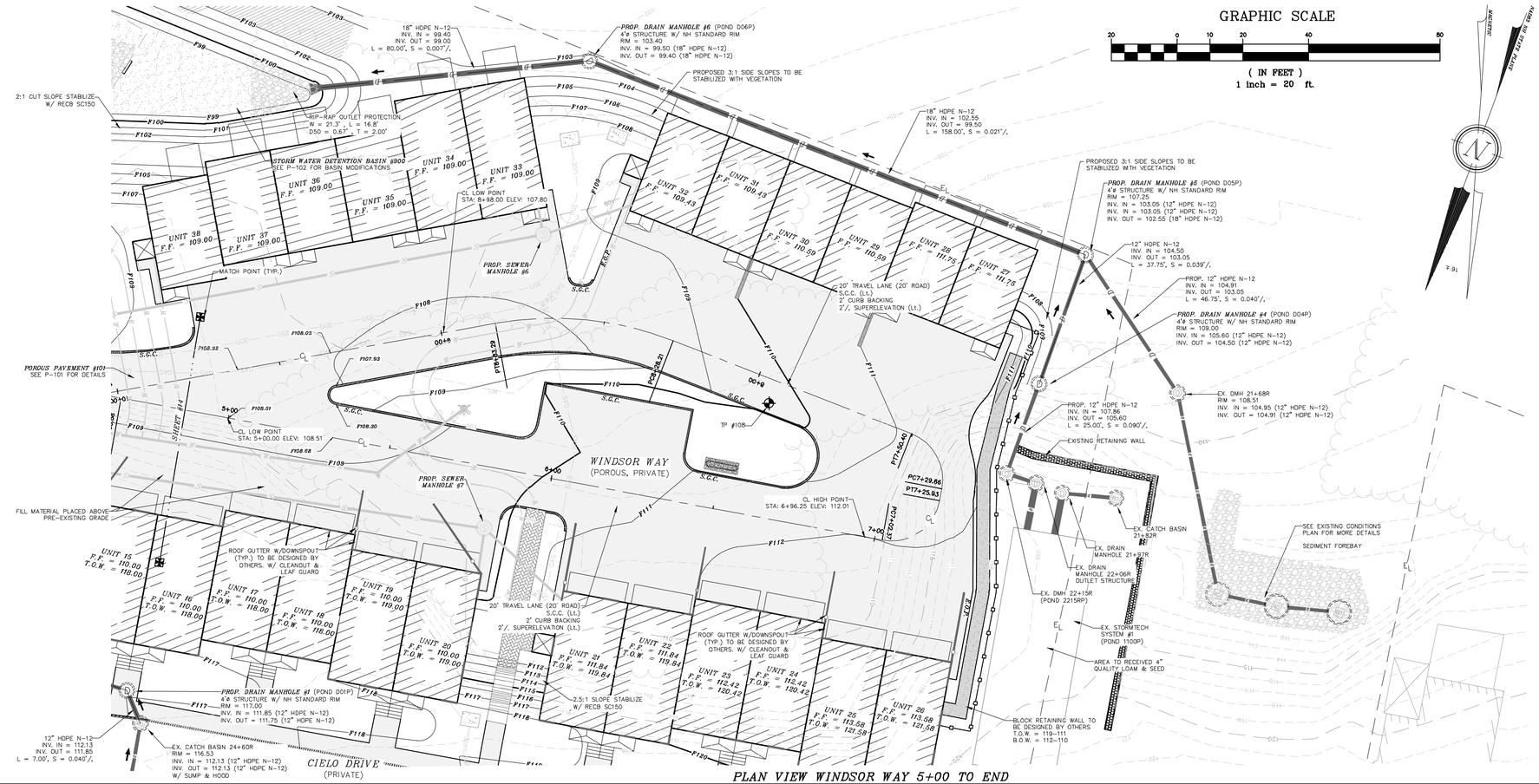
REVISION	DATE	DESCRIPTION

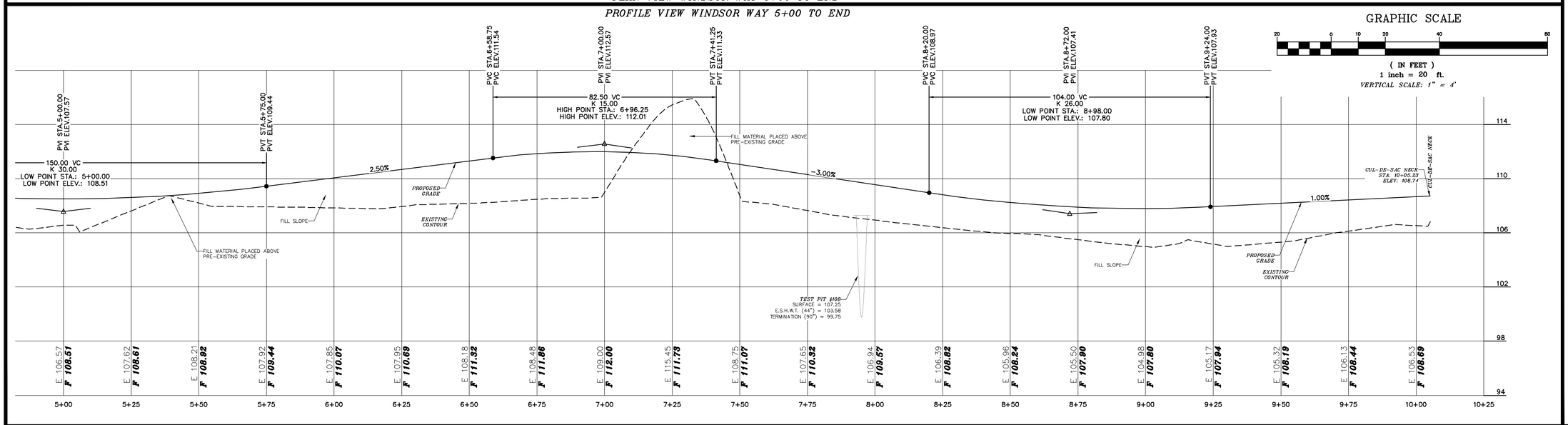
PLAN AND PROFILE WINDSOR WAY 0+00 TO 5+00
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER





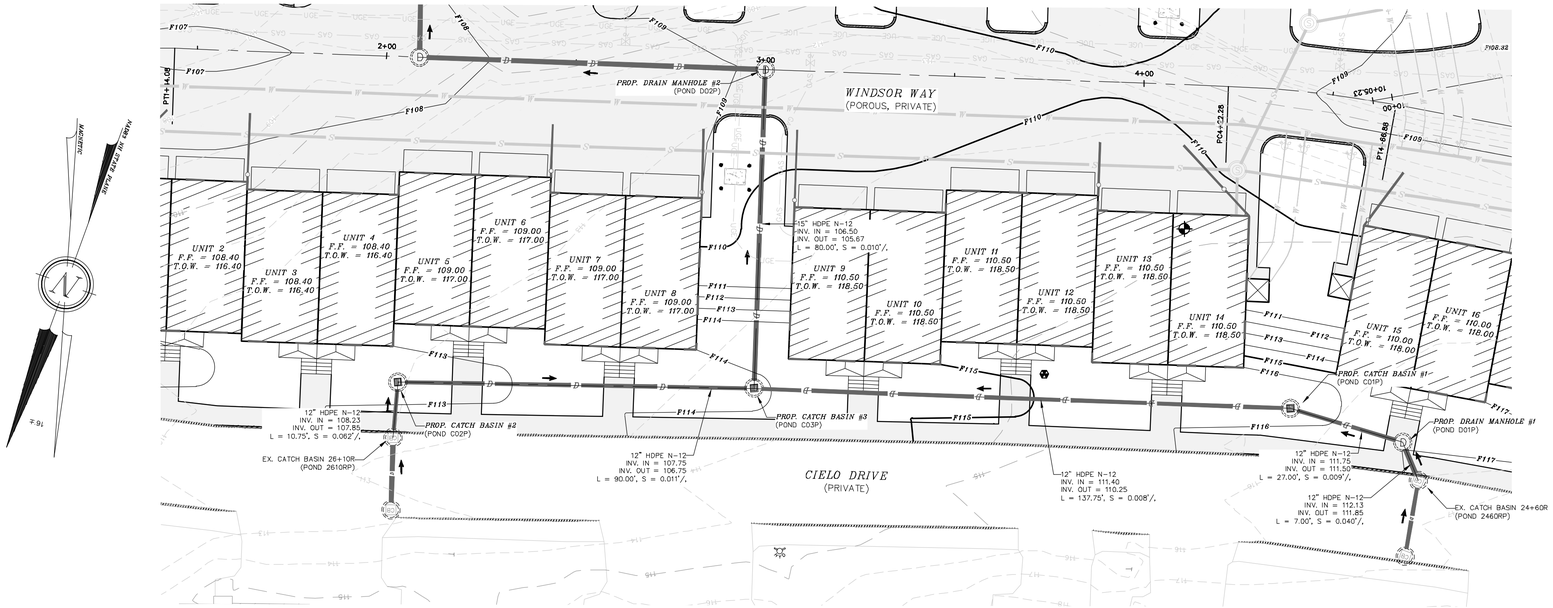
REVISION	DATE	DESCRIPTION

PLAN AND PROFILE WINDSOR WAY 5+00 TO END
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14241
LICENSED PROFESSIONAL ENGINEER



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

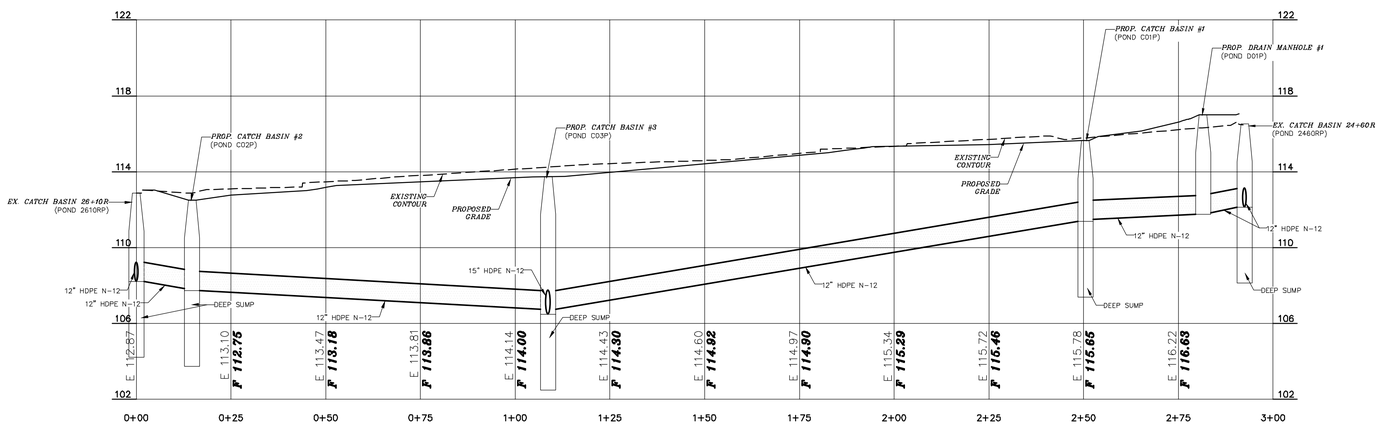
PLAN VIEW PROPOSED DRAIN LINE

GRAPHIC SCALE

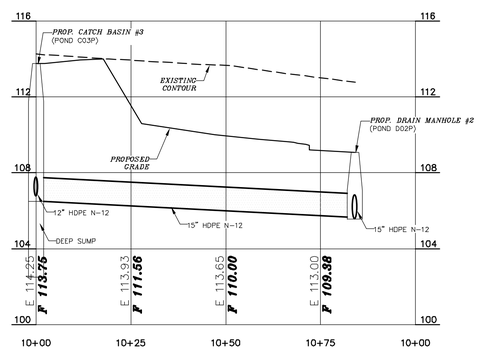
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

PROFILE VIEW PROPOSED DRAIN LINE



PROFILE VIEW CB #3 – DMH #2



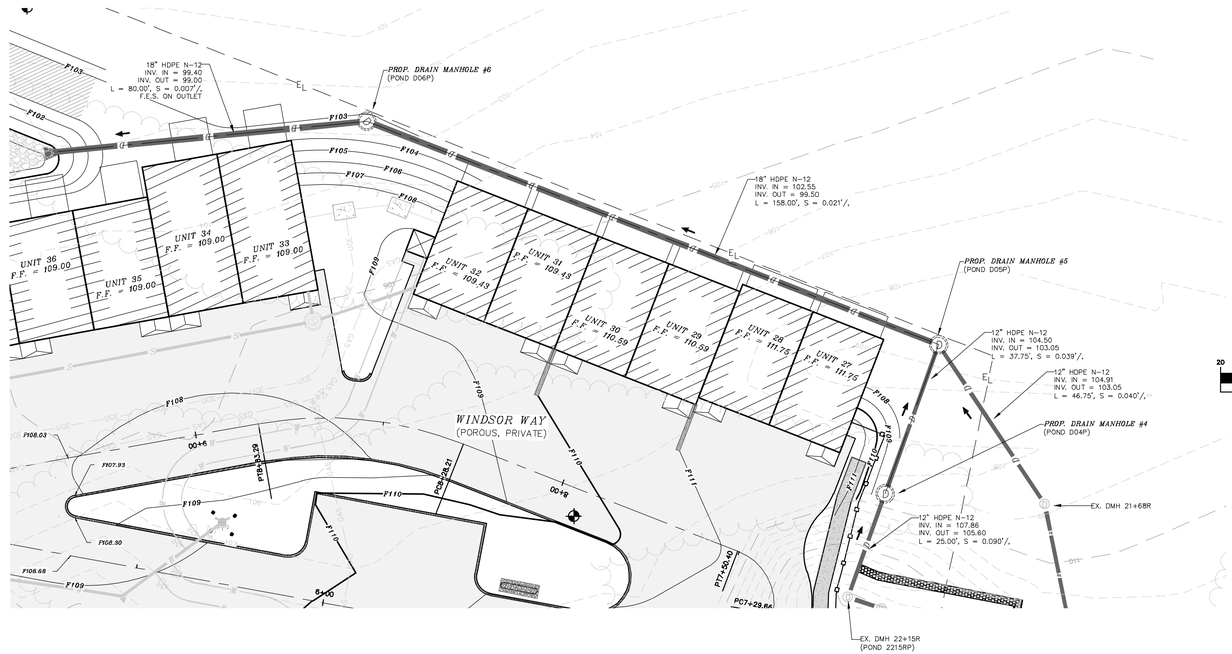
REVISION	DATE	DESCRIPTION

DRAINAGE PIPE PROFILE (1)
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



PLAN VIEW DMH #4 TO DETENTION BASIN #900

GRAPHIC SCALE

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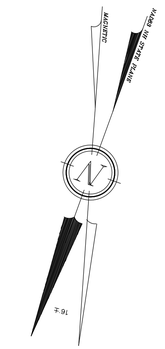
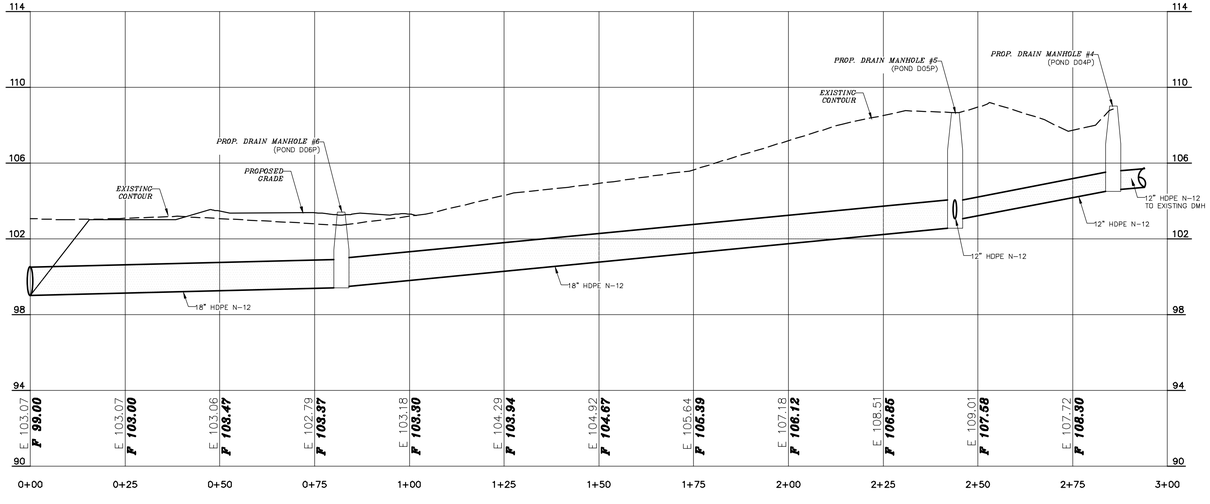
(IN FEET)
1 inch = 20 ft.



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



PROFILE VIEW DMH #4 TO DETENTION BASIN #900

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

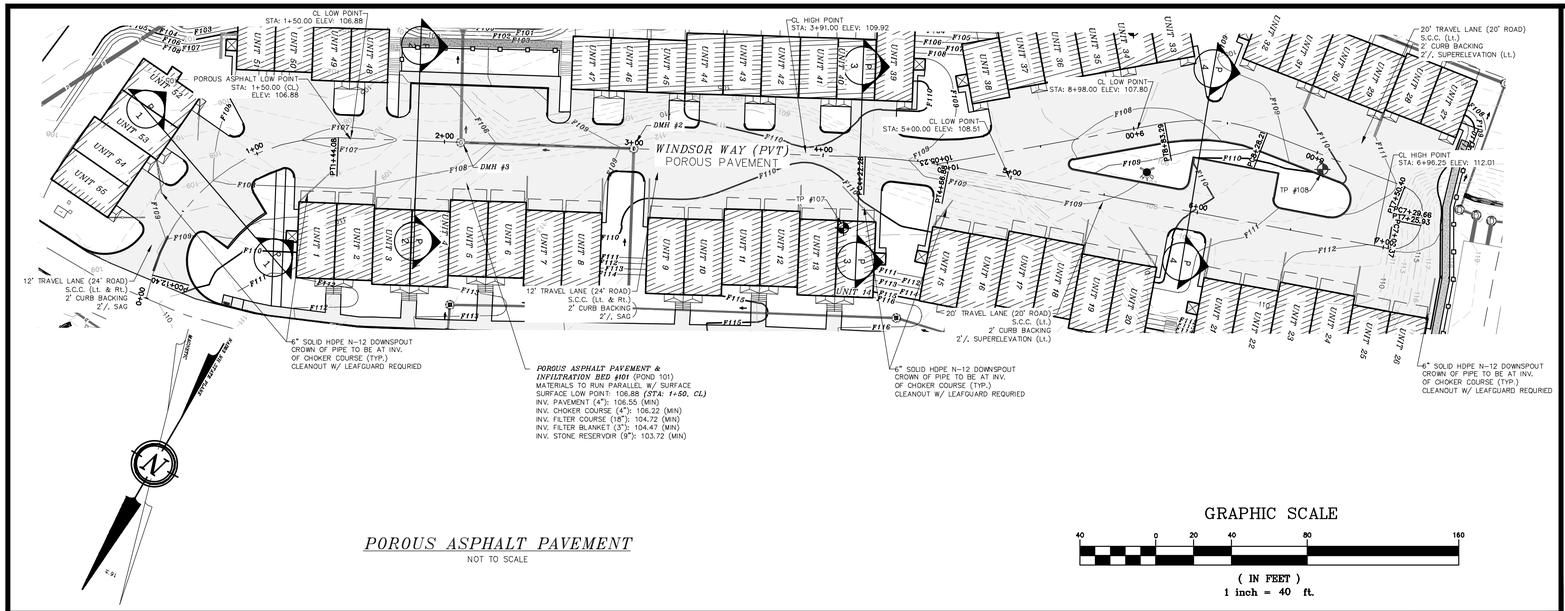
REVISION	DATE	DESCRIPTION

DRAINAGE PIPE PROFILE (2)
OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14242
LICENSED PROFESSIONAL ENGINEER



POROUS ASPHALT PAVEMENT
NOT TO SCALE

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

CHOKER COURSE *	
SIEVE SIZE	% PASSING BY WEIGHT
1 1/2"	100
1"	95 – 100
1/2"	25 – 60
# 4	0 – 10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #57 – AASHTO

FILTER COURSE *	
SIEVE SIZE	% PASSING BY WEIGHT
6"	100
# 4	70 – 100
# 200	0 – 6**

* EQUIVALENT TO MODIFIED NHDOT 304.1 – SECTION 304 OF NHDOT NHDOT STANDARD SPECIFICATIONS

** LESS THAN 4% FINES

POROUS ASPHALT MIX DESIGN CRITERIA	
SIEVE SIZE	% PASSING BY WEIGHT
3/4"	100
1/2"	85 – 100
3/8"	55 – 75
# 4	10 – 25
# 8	5 – 12
# 200	2 – 4
BINDER CONTENT (AASHTO T164)	5.8 – 6.5%
AIR VOID CONTENT (AASHTO D6752)	16 – 22%
DRAINDOWN (AASHTO D6390)	≤ 0.3%
RETAINED TENSILE STRENGTH (AASHTO D6390)	≥ 80%
CANTABRO ABRASION TEST (UNAGED)	≤ 20%
CANTABRO ABRASION TEST (7 DAYS)	≤ 30%

FILTER BLANKET COURSE *	
SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	95 – 100
# 4	22 – 55
# 8	0 – 10

* EQUIVALENT TO STANDARD WASHED STONE – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

RESERVOIR COURSE *	
SIEVE SIZE	% PASSING BY WEIGHT
2 1/2"	100
2"	90 – 100
1 1/2"	35 – 70
1"	0 – 15
1/2"	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #3 – AASHTO

DESIGN NOTES:

1.) POROUS ASPHALT PAVEMENT WILL CONFORM TO UNHSC (2007b) SPECIFICATIONS AS UPDATED BY UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS (DATED: SEPTEMBER 2016).

2.) THE FILTER COURSE WILL BE INSTALLED AT A MINIMUM DEPTH OF 12 INCHES AND CONSIST OF NHDOT (2016) SAND, ITEM 304.1 PER THE NH STORMWATER MANUAL.

3.) SEE CROSS SECTIONS FOR DETAILS.

4.) SEE STORMWATER SYSTEM OPERATIONS AND MAINTENANCE PLAN, DATED MARCH 17, 2022 FOR MAINTENANCE REQUIREMENTS.

REFERENCE:

1.) NH STORMWATER MANUAL: VOLUME 2, SECTION 4E PERMEABLE PAVEMENT.

2.) UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS, FEBRUARY 2014, REVISED SEPTEMBER 2016, UNIVERSITY OF NEW HAMPSHIRE STORWATER CENTER, DURHAM, NH 03824–3534.

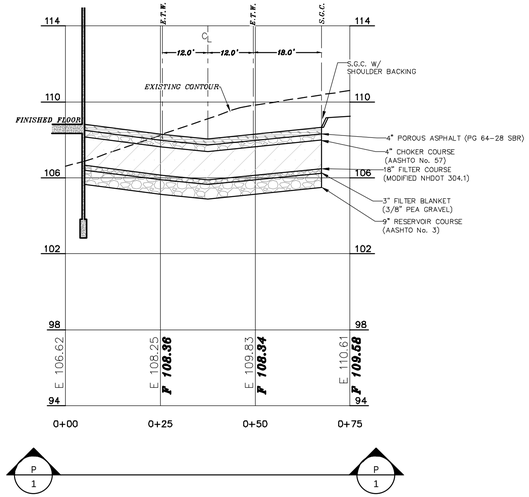
3.) POROUS ASPHALT PAVEMENT FOR STORMWATER MANAGEMENT, THE UNH STORMWATER CENTER.

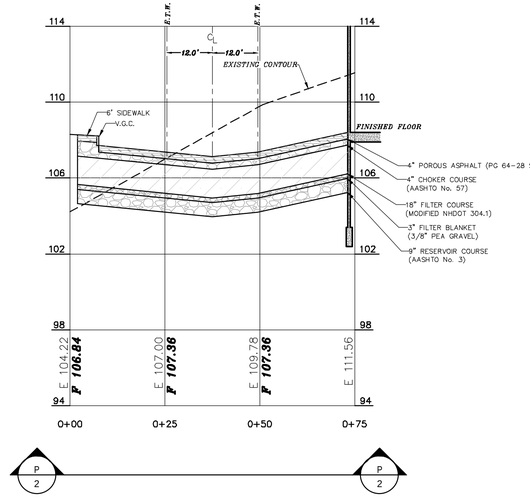
GENERAL NOTES:

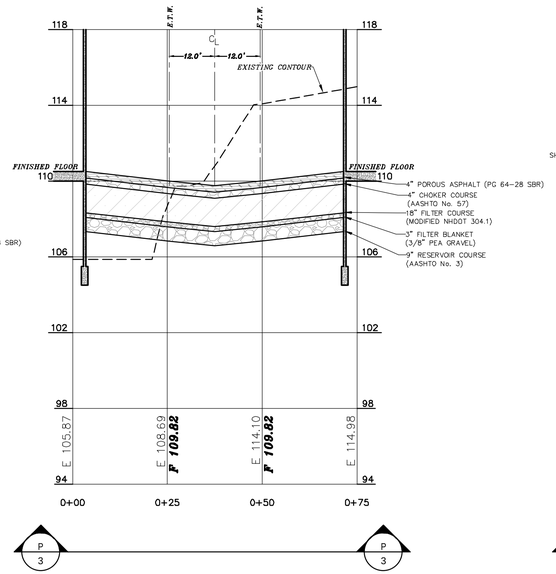
1.) ALL DRIVEWAYS ARE TO BE POROUS PAVEMENT IN ADDITION TO THE ROADWAY.

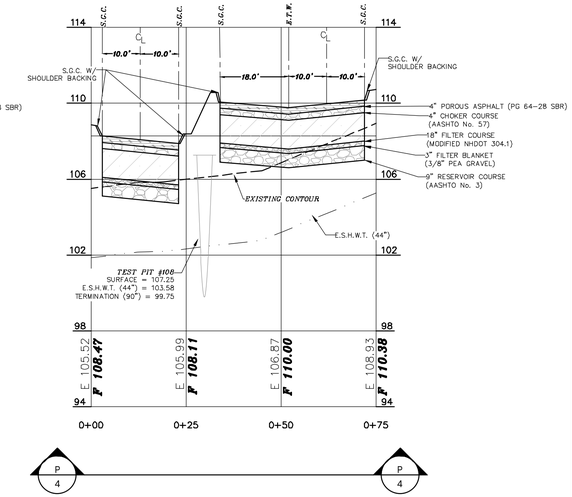
2.) SEE GRADING & DRAINAGE PLAN FOR PROFILE AND MORE DETAILS.

TOTAL SECTION DEPTH = 38"
TOTAL SECTION REQUIRED = 31.2"
(65% OF FROST DEPTH)
FROST DEPTH = 48" (UNHSC)









REVISION	DATE	DESCRIPTION

POROUS PAVEMENT W/ INFILTRATION #101
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : AS SHOWN
DATE : APRIL 7, 2022
FILE NO. : DB 2021–002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 18 OF 36

P–101

P–101

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

PLAN VIEW
DETENTION BASIN #900

STABILIZATION NOTE:
SEE NOTE #6, SHEET E-102, DETAIL E-18
SIDE SLOPES ARE TO BE STABILIZED WITHIN THREE WORKING DAY UPON COMPLETION OF FINAL GRADE.

P1

LOW PERMEABILITY MATERIAL GRADATION

SIEVE SIZE	% PASSING BY WEIGHT
#4	95 – 100
#40	60 – 95
#100	40 – 60
#200	25 – 45

1.) 6' CORE IS TO BE CONSTRUCTED OF COMPACTED LOAM MATERIAL MEETING THE REQUIREMENT OF THE LOW PERM SPECIFICATION

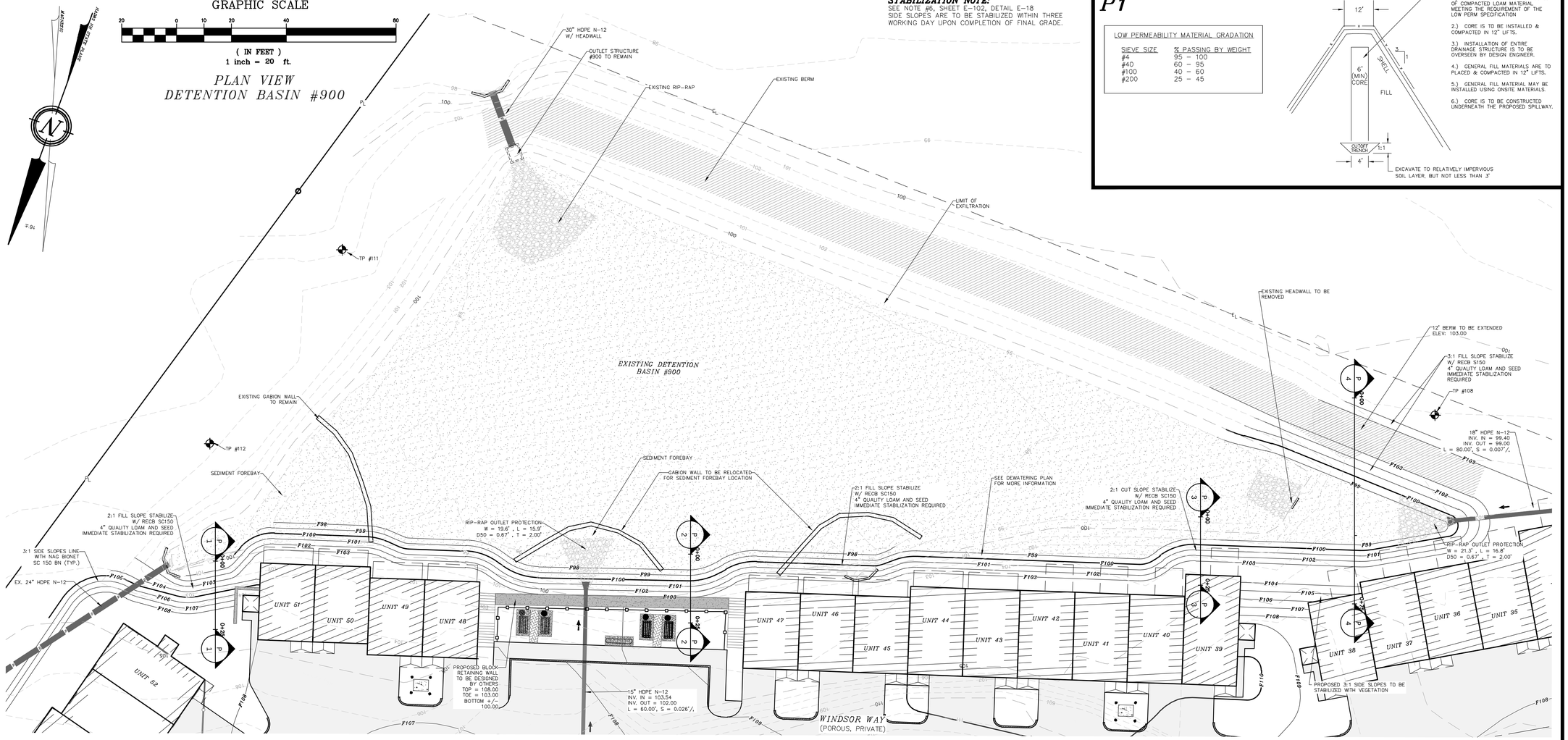
2.) CORE IS TO BE INSTALLED & COMPACTED IN 12" LIFTS.

3.) INSTALLATION OF ENTIRE DRAINAGE STRUCTURE IS TO BE OVERSEEN BY DESIGN ENGINEER.

4.) GENERAL FILL MATERIALS ARE TO PLACED & COMPACTED IN 12" LIFTS.

5.) GENERAL FILL MATERIAL MAY BE INSTALLED USING ONSITE MATERIALS.

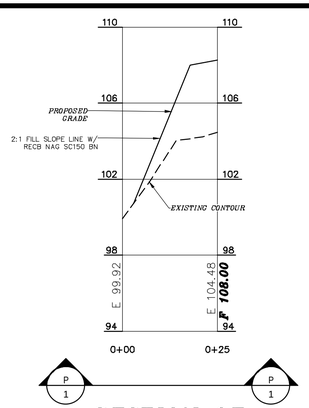
6.) CORE IS TO BE CONSTRUCTED UNDERNEATH THE PROPOSED SPILLWAY.



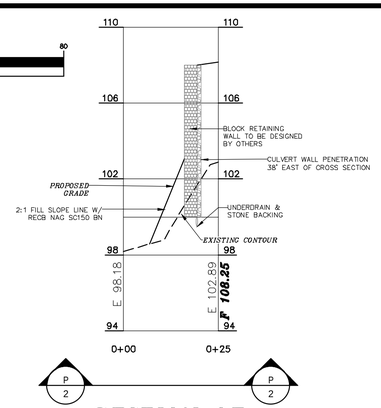
GRAPHIC SCALE

20 0 10 20 40 80

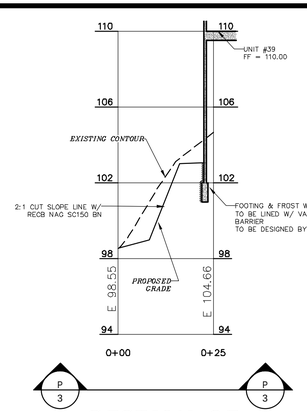
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



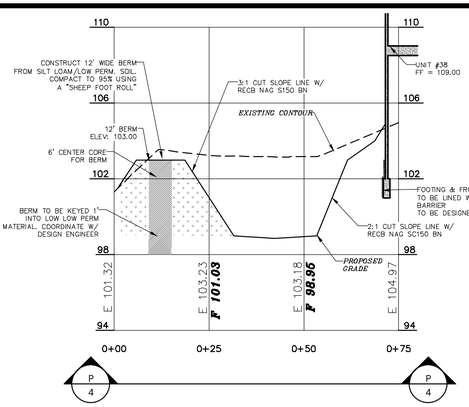
SECTION OF DETENTION BASIN #900



SECTION OF DETENTION BASIN #900



SECTION OF DETENTION BASIN #900



SECTION OF DETENTION BASIN #900

P-102

REVISION	DATE	DESCRIPTION

EXISTING DETENTION BASIN #900 MODIFICATION PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SOILS & DEWATERING:

WfB	*WINDSOR*	*LOAMY SAND*	*K= 0.17*
WaB	*WINDSOR*	*LOAMY SAND*	*K= 0.17*

SEE SITE SPECIFIC SOILS MAP (SSSM)
SEE WEBSOIL USDA-NRCS
ERODIBILITY FACTOR – K, CPESC MANUAL, ENVIROCERT INTERNATIONAL INC. &
ROCKINGHAM COUNTTY SOIL SURVEY, ROCKWEB SOIL ATTRIBUTES.

CONTRACTOR TO BE AWARE OF THE SOIL PROFILES AND ENSURE THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TAKEN AT ALL TIMES. ANY DEWATERING REQUIREMENTS IN NEW HAMPSHIRE REQUIRE SPECIAL PROVISIONS IN ACCORDANCE WITH THE "CLARIFICATION OF SECTION 9.1.2 (STATE OF NEW HAMPSHIRE CONDITIONS) AND OTHER NH SPECIFIC INFORMATION FOR THE U.S. EPA 2012 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED MAY 3, 2012 INCLUDED IN THE SWPPP.

COVER MANAGEMENT DURING CONSTRUCTION FOR EXPOSED SOIL WILL INCLUDE HAY / STRAW APPLIED AT A RATE OF 2.0 TONS PER ACRE, TEMPORARY SEEDING OF ANNUAL RYE GRASS, AND PERMANENT SEEDING AT THE EARLIES OPPORTUNITY. SEE ADDITIONAL REQUIREMENT FOR STABILIZATION ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS, E-101 AND E-102.

THE CONSTRUCTION SCHEDULE WILL BE MANAGED SO THAT ALL STORMWATER STRUCTURES WILL BE BUILT AND STABILIZED PRIOR TO RECEIVING SURFACE WATER RUNOFF. CONTRACTOR TO BE RESPONSIBLE FOR ALL DIVERSIONS DURING CONSTRUCTION AND FOR INTERIM SEDIMENT AND EROSION CONTROL MEASURES.

LEGEND:

- (R) POND PROTECTION
- (P) PERIMETER CONTROL
- (C) RESIDENTIAL/ROADWAY CONSTRUCTION
- IRON PIPE (FND)
- IRON BOUND (FND)
- REBAR (FND)
- UTILITY POLE
- BENCHMARK
- SILT FENCE
- FILTREXX SILTSOXX / MULCH BERM CONSTRUCTION FENCE
- PERIMETER CONTROL
- TREE LINE

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS TO SHOW THE EASTERN EROSION AND SEDIMENT CONTROL DETAIL.

6.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

7.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

8.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED ON GRADING AND DETAIL PLAN SHEETS, GREEN PIPE.

9.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

NOTES CONTINUED:

10.) UPON FINAL COMPLETION AND 85% STABILIZATION, THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS. SEDIMENT CONTROL PRACTICES REMOVED AND DISPOSED OF PROPERLY, AND ANNUAL MAINTENANCE PREFORMED ON ALL DRAINAGE PRACTICES.

11.) EROSION AND SEDIMENT CONTROL INSPECTIONS TO BE CONDUCTED ONCE PER EVERY SEVEN DAYS AND AT AN INCREASED FREQUENCY INCLUDING WITHIN 24-HOURS OF A 0.25 INCH RAIN EVENT. INSPECTIONS TO BE CONDUCTED BY A "QUALIFIED PERSON" AS DEFINED BY EPA CGP SECTION 6.3. PLEASE NOTE THAT SPECIFIC STORMWATER, EROSION PREVENTION AND SEDIMENT CONTROL TRAINING AND CERTIFICATION IS REQUIRED. INSPECTION REPORTS TO BE SUBMITTED TO THE CITY OF DOVER, NH, ENGINEERING DEPARTMENT WITHIN 24 HOURS IN ACCORDANCE WITH CGP 4.1.7 AND MAINTAINED BY THE OWNER FOR A PERIOD OF THREE YEARS AFTER THE PROJECT IS COMPLETED. SEE ALSO CITY OF DOVER ADDITIONAL INSPECTION REQUIREMENTS BELOW.

12.) CONTRACTOR MAY USE SILT FENCE, SILT SOXX OR MULCH BERM FOR PERIMETER CONTROL.

13.) PER EPA CGP 2.1.2.2 (INSTALL PERIMETER CONTROL), "YOU MUST INSTALL SEDIMENT CONTROLS ALONG THOSE PERIMETER AREAS OF YOUR SITE THAT WILL RECEIVE STORMWATER FROM EARTH DISTURBING ACTIVITIES." AS A RESULT OF SWPPP INSPECTIONS, THE CONTRACTOR MAY HAVE TO EXPAND PERIMETER CONTROLS TO MEET THIS REQUIREMENT. THE E&SC PLAN IS INITIATING GUIDANCE AS TO THE ANTICIPATED REQUIREMENTS AND IT THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT STORMWATER VIOLATION DO NOT OCCUR.

14.) CONTRACTOR IS REQUIRED TO INSTALL A CONSTRUCTION ENTRANCE PRIOR TO ANY EARTH DISTURBING ACTIVITIES.

15.) CONTRACTOR IS RESPONSIBLE FOR SWEEPING THE PARKING LOT, SIDEWALKS AND ANYTHING DISTURBED, TO ENSURE THAT NO SEDIMENT IS BEING TRACKED ONTO KNOX MARSH ROAD.

16.) CONTRACTOR IS RESPONSIBLE FOR CLEANING AND MAINTAINING THE INLET PROTECTION ONCE INSTALLED.

17.) FUGITIVE DUST IS TO BE CONTROLLED THROUGHOUT THE CONSTRUCTION PROCESS IN ACCORDANCE WITH ENV-A 1000.

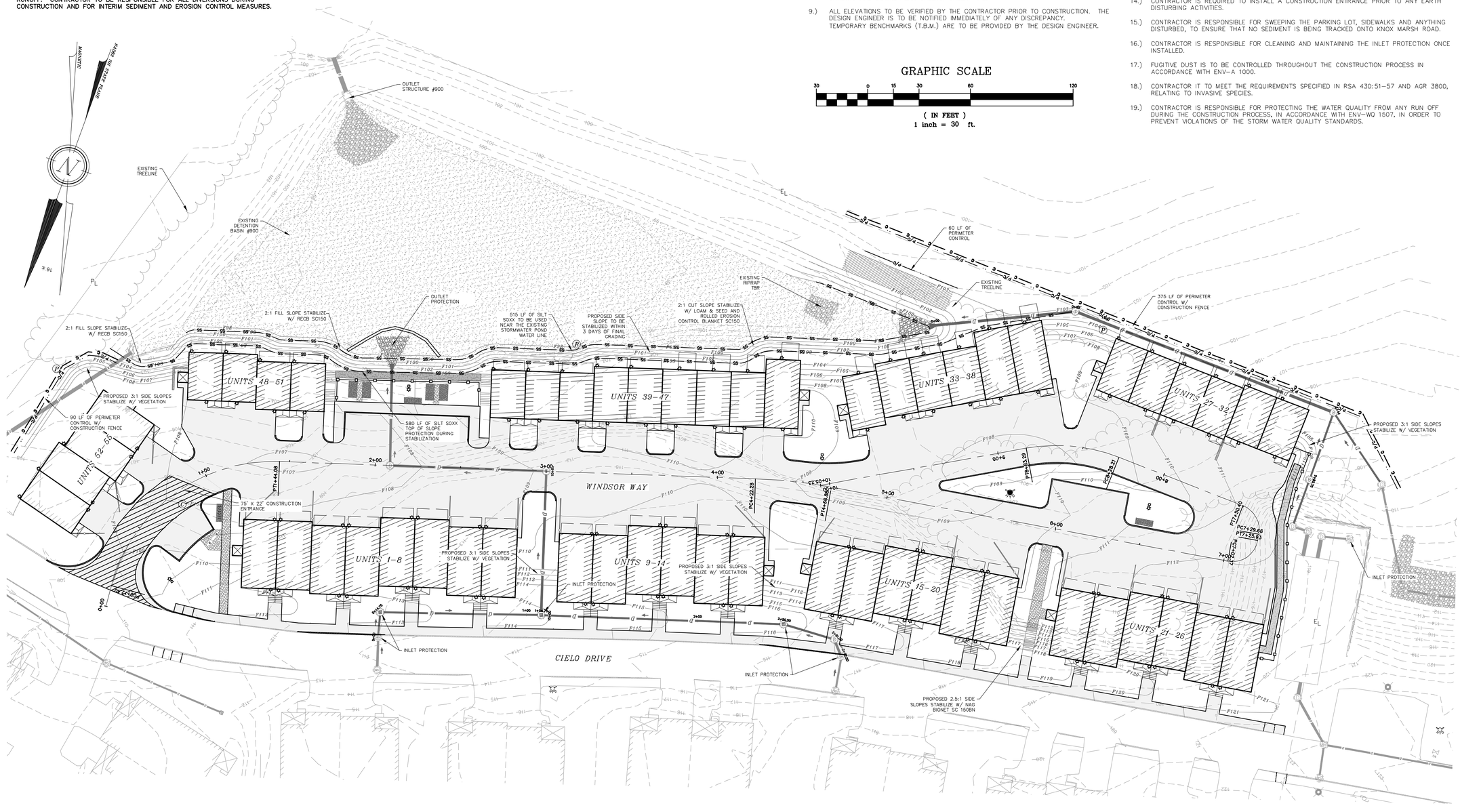
18.) CONTRACTOR IT TO MEET THE REQUIREMENTS SPECIFIED IN RSA 430:51-57 AND AGR 3800, RELATING TO INVASIVE SPECIES.

19.) CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE WATER QUALITY FROM ANY RUN OFF DURING THE CONSTRUCTION PROCESS, IN ACCORDANCE WITH ENV-WQ 1507, IN ORDER TO PREVENT VIOLATIONS OF THE STORM WATER QUALITY STANDARDS.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



REVISION	DATE	DESCRIPTION

EROSION AND SEDIMENT CONTROL PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14043
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER & APPLICANT: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) S.C.R.D. BOOK 3561, PAGE 656

4.) LOT AREA: 1,500,405 Sq. Ft., 34.44 Ac ±

5.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED OVERVIEW UTILITY DESIGN.

6.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

7.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

8.) PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOGF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAGFIC IN SENSITIVE AREAS, AND MAINTAINING AN EGFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.

9.) IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATION. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.

10.) PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIGFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION. VOIDS BETWEEN STONES AND CLUMPS OF MATERIAL SHALL BE FILLED WITH FINE MATERIALS.

11.) FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE DOVER DPW.

12.) CONTRACTOR TO CONTACT DOVER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.

NOTES CON'T:

13.) ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF DOVER STANDARDS. ALL HIGHWAY CONSTRUCTION WILL MEET THE CITY OF DOVER STANDARDS.

14.) CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (800) 662-7764. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.

15.) CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH FAIRPOINT COMMUNICATIONS AT (603) 427-5525.

16.) CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST.

17.) CONTRACTOR SHALL COORDINATE ALL GAS INSTALLATIONS WITH UNITIL.

18.) ALL SEWER MAN HOLE RIMS & COVERS ARE TO BE NH STANDARD.

19.) ALL WATER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED BLUE. ALL SEWER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED YELLOW, IS STUBBED PRIOR TO BUILDING CONSTRUCTION.

20.) CURB BOXES SHOULD BE PLACED IN THE LAWN AREA, OR IF PLACED IN PAVEMENT, A ROAD BOX IS REQUIRED.

21.) SEE EXISTING CONDTIONS PLAN FOR DATUM. VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL DATUS BASED ON NAD83 STATE PLANE COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS.

22.) MINIMUM SLOPE FOR ALL SEWER SERVICE CONNECTIONS IS TO BE NO LESS THAN 0.02 FT/FT.

23.) ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & DOVER DPW SEWER DIVISION STANDARDS. ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.05 (c)-(e) FOR SDR 35 GRAVITY SEWER PIPE, CONFORM WITH ENV-WQ 704.08 FOR SDR 21 / 11 / 9 FORCE MAIN PRESSURE PIPE, AND CONFORM WITH ASTM D3034. PVC JOINT SEALS SHALL CONFORM WITH ASTM D3121. THE FORCE MAIN SHALL BE TESTED IN ACCORDANCE WITH ENV-WQ 704.09.

24.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

25.) CONTRACTOR TO TRANSFER TEMPORARY BENCHMARK TO A SUITABLE BENCHMARK TO CONTROL CONSTRUCTION. ANY ELEVATION DISCREPANCIES ARE TO BE REPORTED TO THE THE DESIGN ENGINEER IMMEDIATELY.

26.) ALL SEWER AND WATER CROSSINGS ARE TO MAINTAIN A 1.5' OF SEPARATION.

27.) DOMESTIC AND FIRE WATER SERVICES TO BE DETERMINED BY THE ARCHITECT AND FIRE PROTECTION SYSTEM DESIGNERS.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

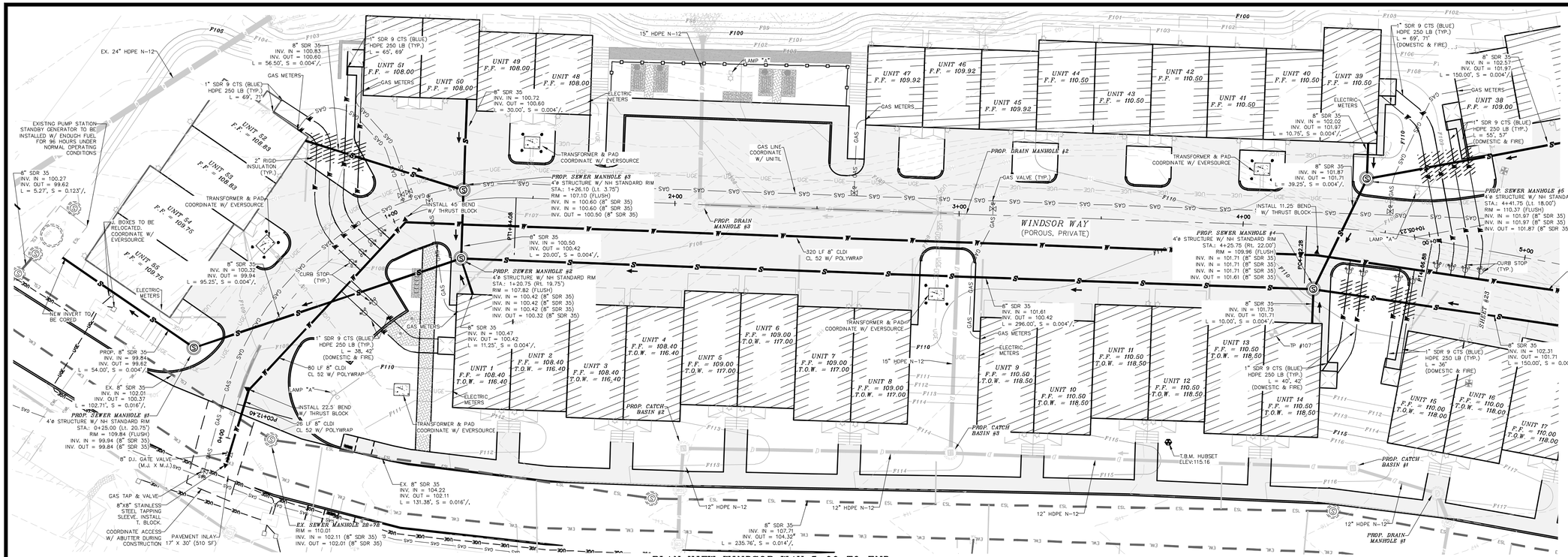
REVISION	DATE	DESCRIPTION

OVERVIEW UTILITY PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14043
LICENSED PROFESSIONAL ENGINEER



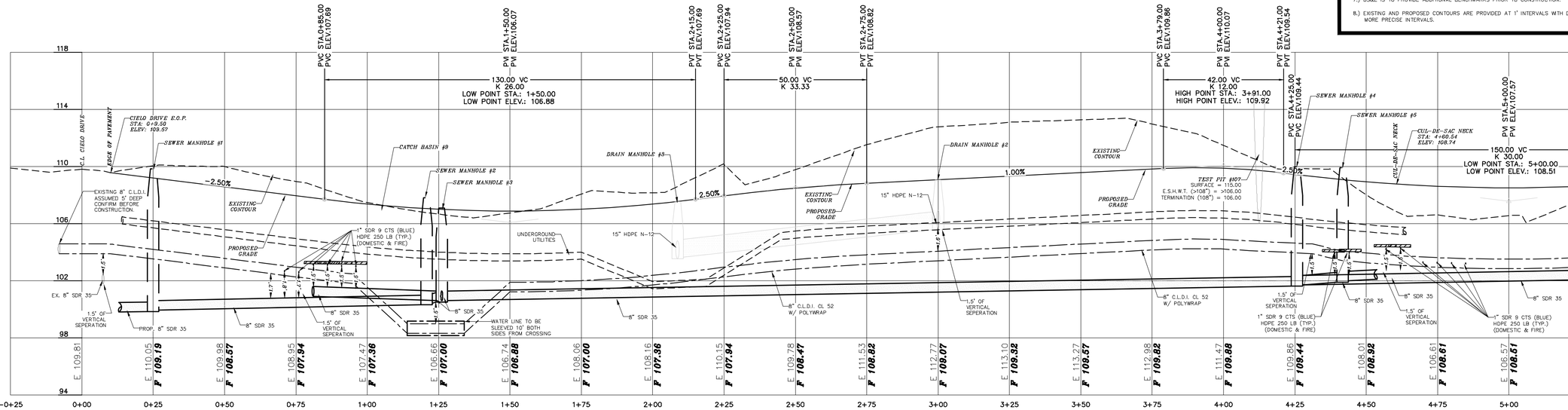
PLAN VIEW WINDSOR WAY 5+00 TO END

PROFILE VIEW WINDSOR WAY 5+00 TO END

GRAPHIC SCALE

20 0 10 20 40 60

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
243 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS TO PROVIDE UTILITY & ENGINEERING DETAILS OF WINDSOR WAY AND TAX MAP H, LOT 4.

6.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).

7.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

8.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

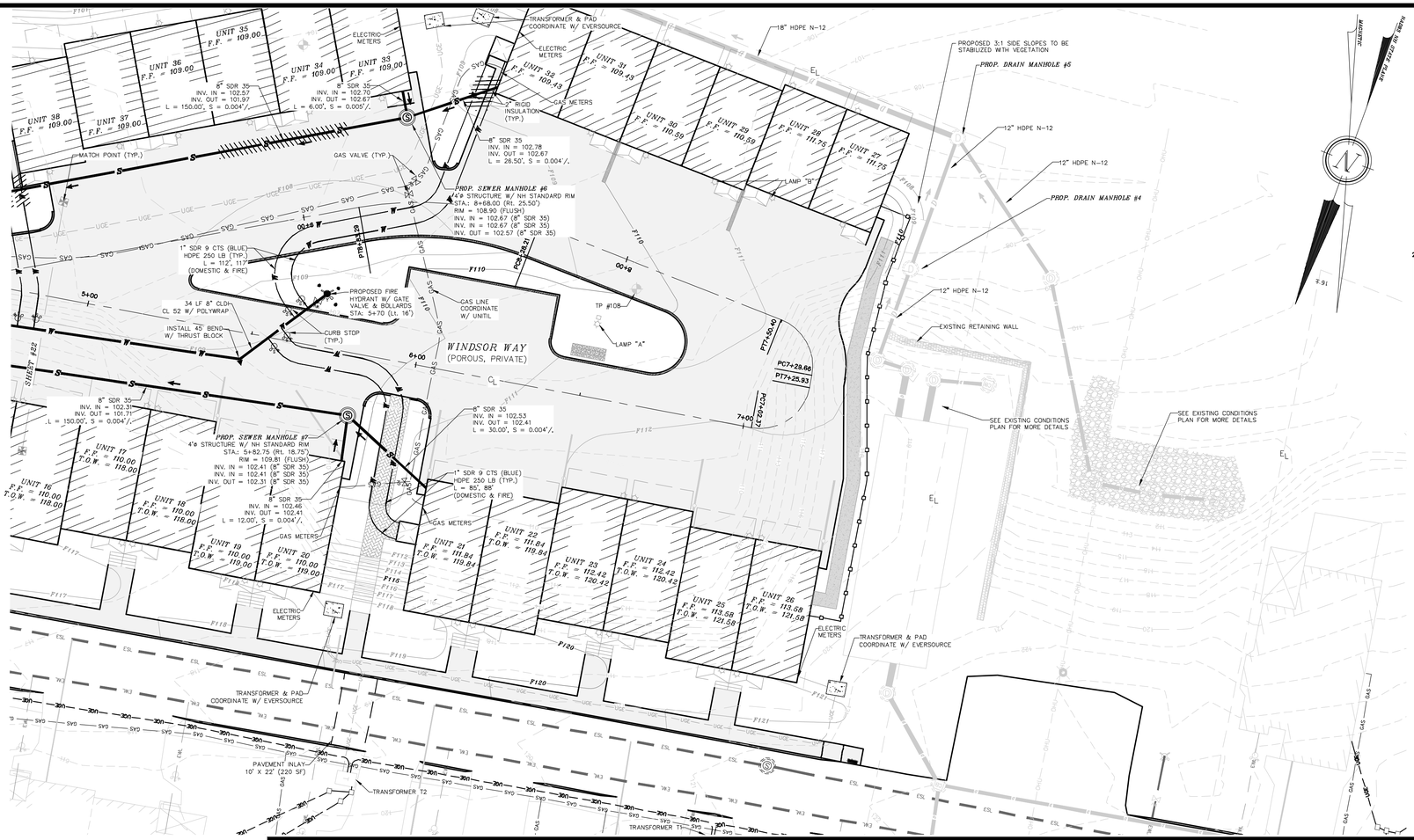
REVISION	DATE	DESCRIPTION

UTILITY PLAN AND PROFILE WINDSOR WAY 0+00 TO 5+00
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14241
LICENSED PROFESSIONAL ENGINEER



NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS TO PROVIDE UTILITY & ENGINEERING DETAILS OF WINDSOR WAY AND TAX MAP H, LOT 4.

6.) SEE EROSION & SEDIMENT CONTROL PLANS FOR DETAILS ON PERIMETER CONTROL (MULCH BERM / FENCE / SILT SOXX).

7.) BS&E IS TO PROVIDE ADDITIONAL BENCHMARKS PRIOR TO CONSTRUCTION.

8.) EXISTING AND PROPOSED CONTOURS ARE PROVIDED AT 1' INTERVALS WITH DRAINAGE FEATURES AT MORE PRECISE INTERVALS.

9.) SEE SHEET 2 FOR ALL OTHER STANDARD CONSTRUCTION NOTES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

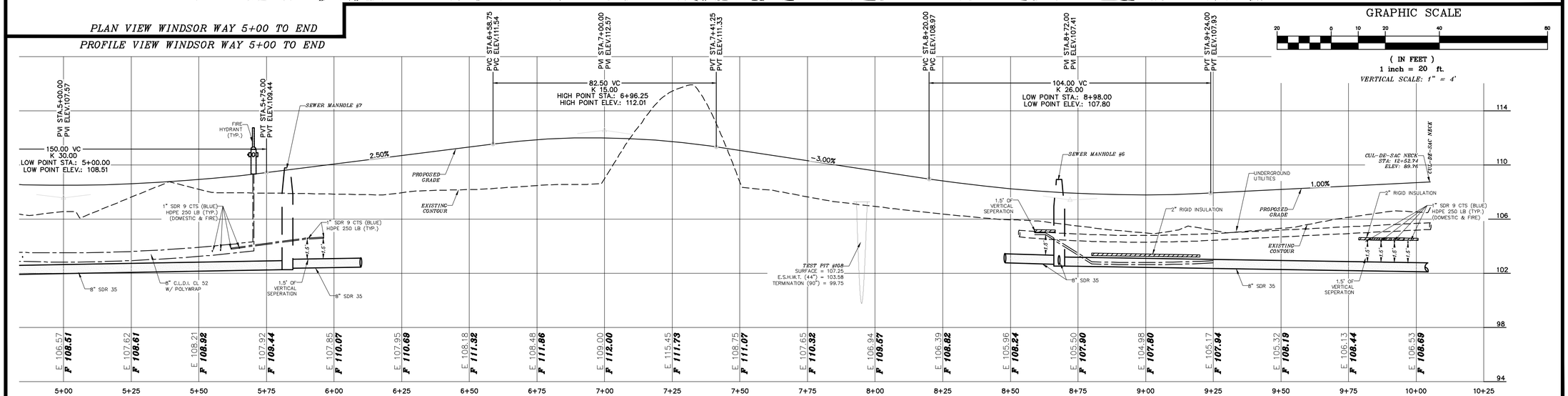
PLAN VIEW WINDSOR WAY 5+00 TO END

PROFILE VIEW WINDSOR WAY 5+00 TO END

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'



REVISION	DATE	DESCRIPTION

UTILITY PLAN AND PROFILE WINDSOR WAY 5+00 TO END
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 10414
LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

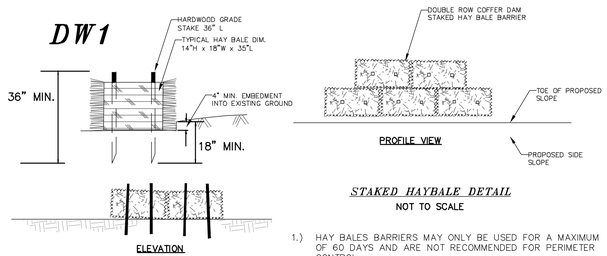
4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS SHOW THE EXISTING DRAINAGE INFRASTRUCTURE FROM THE DEMOLITION PLAN AND PROPOSED DRAINAGE INFRASTRUCTURE FROM THE GRADING AND DRAINAGE PLANS, IN RELATIONSHIP TO THE PROPOSED EXCAVATION AND DEWATERING THAT WILL BE REQUIRED TO ALTER THE LOCATION OF THE DETENTION BASIN.

6.) THE DETENTION BASIN WILL BE DEWATERED TO AN ELEVATION OF OR BELOW 98-FEET TO ALLOW THE REMOVAL OF UNSUITABLE MATERIAL AND PLACEMENT OF SUITABLE FILL MATERIAL IN A DRY CONDITION. HOWEVER THE DETENTION BASIN MUST REMAIN ACTIVE DURING THE EXCAVATION AND THE FILLING. THE USE OF THE COFFER DAMS WILL BE USED IN SECTIONS BASED ON THE AREA ANTICIPATED TO BE ACTIVELY WORKED. HAY BALE BARRIER COFFER DAMS MAY BE MOVED BUT THE ENTIRE LIFE OF THE HAY BALE IS NOT TO EXCEED 60 DAYS.

UTILITY NOTE:

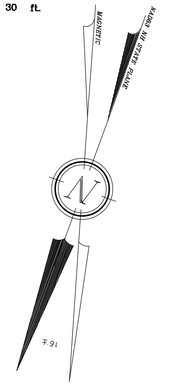
THE UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR NOR THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

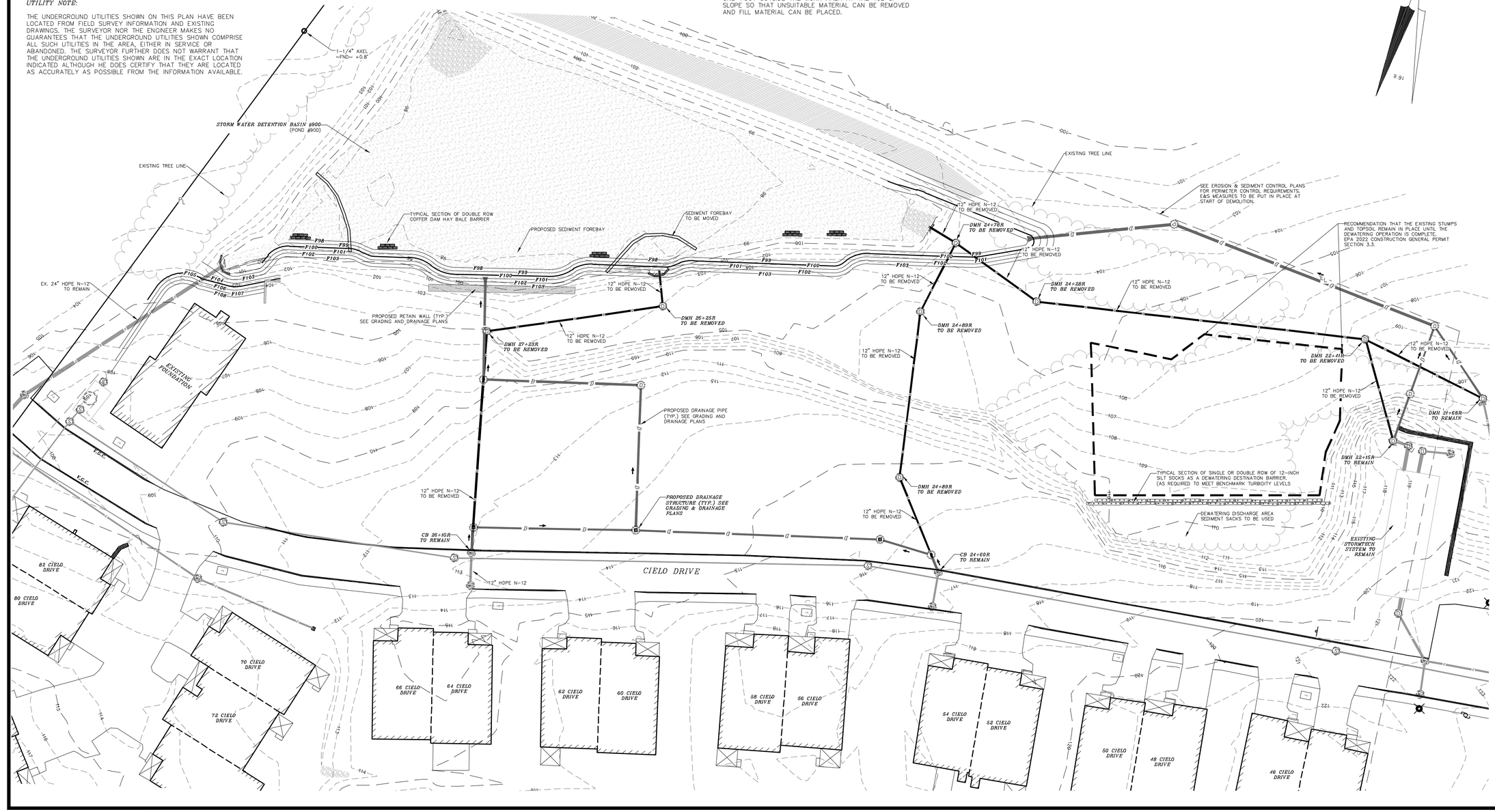


STAKED HAYBALE DETAIL
NOT TO SCALE

1.) HAY BALES BARRIERS MAY ONLY BE USED FOR A MAXIMUM OF 60 DAYS AND ARE NOT RECOMMENDED FOR PERIMETER CONTROL.
2.) TO BE INSTALLED IAW NH SWM #3, 4-2 SEDIMENT CONTROL, STRAW OR HAY BALE BARRIER.
3.) A DOUBLE ROW OF HAY BALE BARRIER WILL BE INSTALLED ONE-FOOT OUTSIDE THE WORK AREA AT THE TOE OF SLOPE SO THAT UNSUITABLE MATERIAL CAN BE REMOVED AND FILL MATERIAL CAN BE PLACED.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.





REVISION	DATE	DESCRIPTION

DEWATERING PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

5.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED LIGHTING PLAN FOR THE PROPOSED DEVELOPMENT.

6.) LAMP "A" WILL BE MOUNTED ABOVE GRADE AS NOTED ON THIS PLAN AND THE SITE PLAN. THERE ARE VARIATIONS THROUGHOUT THE SITE.
LAMP "B" WILL BE MOUNTED 8' ON THE UNITS AND ARE BASIC RESIDENTIAL LAMPS.

7.) SEE CONSTRUCTION DETAILS FOR LIGHT CUT SHEETS.

8.) EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

GRAPHIC SCALE

30 0 15 30 60 120

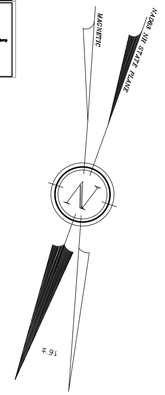
(IN FEET)
1 inch = 30 ft.

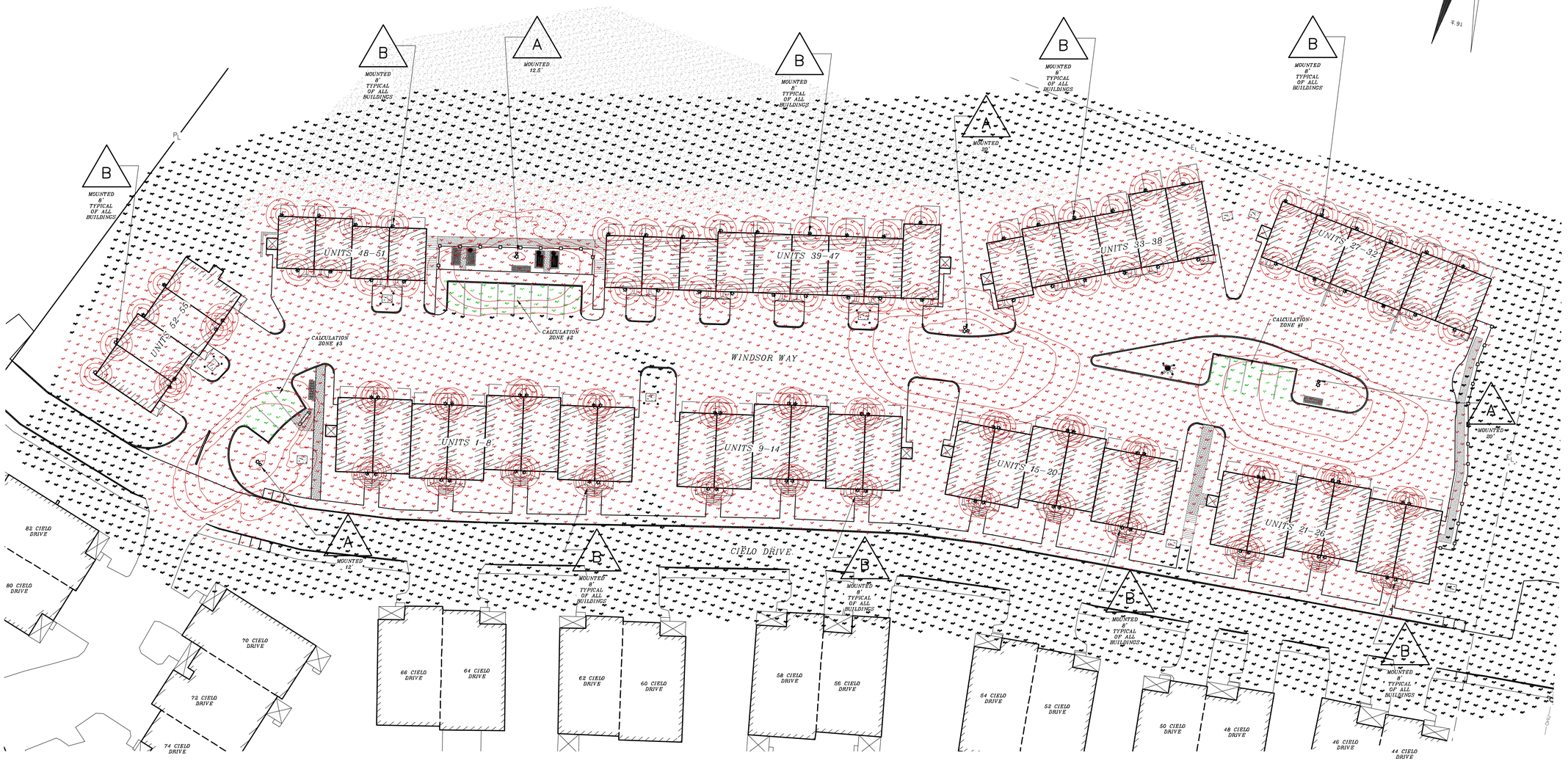
Schedule

Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Plot
□	A		4	Lithonia Lighting	DSX1 LED P1 30K T3M MVOLT	DSX1 LED P1 30K T3M MVOLT	1	6279	1	54	
○	B		110	Lithonia Lighting	ODSL10 SRC	CRAFTSTON WALL MOUNTED SMALL DECORATIVE LANTERN, ONE LAMP 13W SPIRAL COMPACT FLUORESCENT, WHITE GLASS DIFFUSER 4.25" DIA. X 6.65" HIGH, ELECTRONIC BALLAST	1	900	1	12.6	

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	0.2 fc	6.1 fc	0.0 fc	N/A	N/A
Stat Zone # 1	X	0.8 fc	1.7 fc	0.2 fc	8.5:1	4.0:1
Stat Zone # 2	X	0.9 fc	2.7 fc	0.2 fc	13.5:1	4.5:1
Stat Zone # 3	X	1.6 fc	3.2 fc	0.4 fc	8.0:1	4.0:1





REVISION	DATE	DESCRIPTION

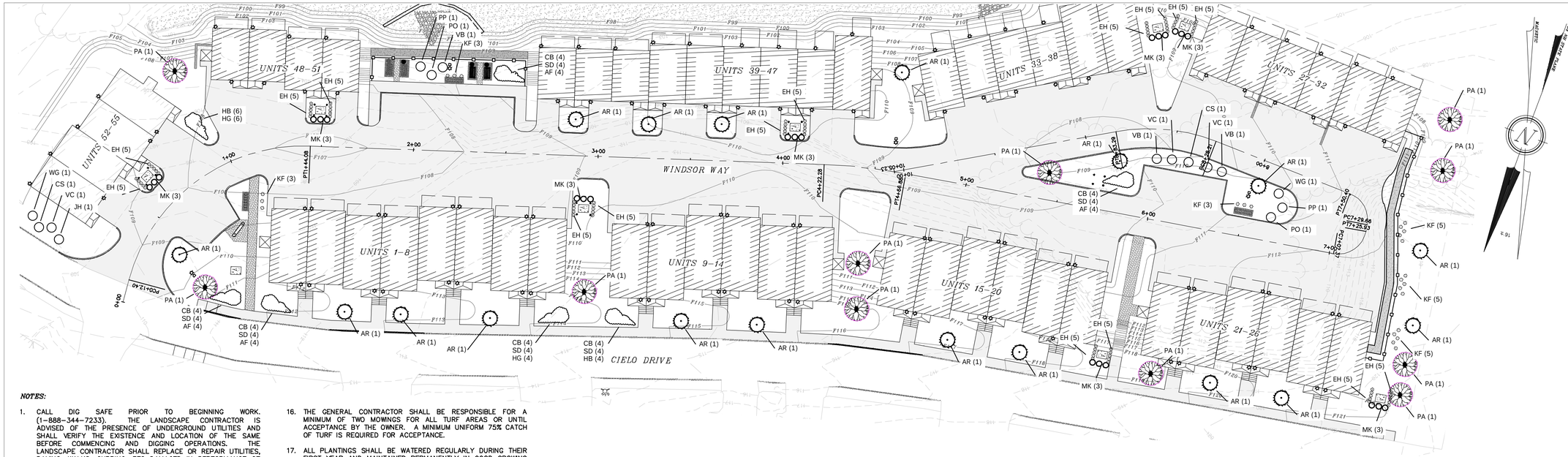
LIGHTING PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 25 OF 36



NOTES:

1. CALL DIG SAFE PRIOR TO BEGINNING WORK. (1–888–344–7233). THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF THE SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER OR GENERAL CONTRACTOR.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS. VARIATIONS IN QUANTITIES ARE TO BE APPROVED BY THE DESIGN ENGINEER.
4. PROVIDED SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN
6. ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS AND DISEASE.
7. ALL PLANTINGS SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM OWNER.
8. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND NEWLY PLANTED TREES AND SHRUBS DURING THE CONSTRUCTION PROCESS. WHERE REQUIRED, THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING (SNOW OR EQUAL) AROUND EXISTING TREES AND SHRUBS THAT COULD BE IMPACTED BY THE CONSTRUCTION PROCESS. STORAGE OF CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS, SNOW STORAGE AND OR VEHICLE PARKING SHALL NOT BE PERMITTED WITHIN THE DRIP LINE OF TREES OR TWENTY FEET WHICH EVER IS GREATER.
10. NEW PLANTINGS SHALL BE INSTALLED PER PROJECT DRAWINGS AND SPECIFICATION THAT INCLUDE FERTILIZATION AND MULCHING AS REQUIRED.
11. ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL–ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. MAINTENANCE OF NEW PLANTINGS AND LAWNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND OR LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE OWNER. RESPONSIBILITIES SHALL INCLUDE WATERING WEEDING AND MOWING AS NECESSARY. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, REPLACEMENT MATERIAL SHALL BE GUARANTEED FOR AND ADDITIONAL YEAR FROM TIME OF INSTALLATION.
14. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL MEASURES DURING THE CONSTRUCTION PHASE AND UNTIL ALL AREAS HAVE BEEN STABILIZED AND ACCEPTED BY THE OWNER. THE GENERAL CONTRACTOR SHALL PROVIDE WEEKLY INSPECTIONS OF EROSION MEASURE AND IMMEDIATELY AFTER STORM EVENTS AND REPAIR AS NECESSARY.
15. THE GENERAL CONTRACTOR AND OR THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL THREE GUYING MATERIAL ONCE PLANT MATERIAL HAS BEEN ESTABLISHED. (MINIMUM OF ONE GROWING SEASON). ALL TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE STABILIZATION OF DISTURBANCE HAS BEEN ACCEPTED BY OWNER.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF TWO MOWINGS FOR ALL TURF AREAS OR UNTIL ACCEPTANCE BY THE OWNER. A MINIMUM UNIFORM 75% CATCH OF TURF IS REQUIRED FOR ACCEPTANCE.
17. ALL PLANTINGS SHALL BE WATERED REGULARLY DURING THEIR FIRST YEAR AND MAINTAINED PERMANENTLY IN GOOD GROWING CONDITION AS AN EFFECTIVE VISUAL SCREEN.
18. SHRUBS OR TREES WHICH DIE SHALL BE REPLACED WITHIN ONE GROWING SEASON WITH NEW SHRUBS OR TREES TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE LANDSCAPING REQUIREMENTS.
19. ALL REQUIRED LANDSCAPING SHALL BE INSTALLED BEFORE OCCUPANCY, OR WITHIN SIX MONTHS IF OCCUPANCY OCCURS DURING WINTER CONDITIONS.
20. TREES ARE TO BE 6' TALL AT PLANTING.
21. ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITIONS (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)
22. 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY–PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUND COVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.
23. PLANT–PIT BACK–FILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PARTS OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON–SITE TOPSOIL AS PART OF BACK FILL WHEN AVAILABLE.
24. ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.
25. TOPSOIL WILL BE TESTED FOR FERTILIZATION REQUIREMENTS, AND SLOW RELEASE ENVIRONMENTALLY FRIENDLY FERTILIZER WILL BE APPLIED AT THE RECOMMENDED RATES.
26. ALL DISTURBED WETLAND BUFFER AREAS, EXCEPT FOR AREAS THAT ARE PART OF THE DRAINAGE SYSTEM, ARE TO BE RESEEDED WITH A CONSERVATION SEED MIX AND ONLY MOWED TWICE PER YEAR.
27. ALL PLANT SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.
28. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY OR AT THE JOB SITE WHILE WORK IS ONGOING TO CONFORMITY TO SPECIFIED QUALITY, SIZE AND VARIETY.
29. PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT–BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT MAY BE DEEMED UNACCEPTABLE.
30. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NO LESS THAN ONE FULL YEAR FROM THE TIME OF INSTALLATION. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE. IF THE CONTRACTOR IS DISSATISFIED WITH THE CARE GIVEN, HE SHALL IMMEDIATELY, AND IN SUFFICIENT TIME TO PERMIT THE CONDITION TO BE RECTIFIED, NOTIFY THE OWNER IN WRITING OR OTHERWISE FORFEIT HIS CLAIM.
31. BY THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAS DIED, THAT HAS LOST NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESS PRUNING OR INADEQUATE OR IMPROPER CARE, OR IS, IN THE OPINION OF THE OWNER, IN UNHEALTHY OR UNSIGHTLY CONDITION.
32. THE CONTRACTOR IS TO USE TEMPORARY MEASURES FOR WATERING PLANTS DURING THE ESTABLISHMENT PERIOD. INCLUDING CONNECTING TEMPORARY HOSES TO THE STRUCTURE WATER SUPPLY LINE AND UTILIZING SPRINKLERS UNTIL 85% GROWTH OCCURS.

PLANTING SCHEDULE
Cielo Drive
Botanical Name/ Common Name

	Size	Qty	Label
Trees			
Plantanus acerifolia/London Planetree	3" Cal.	10	PA
Acer Rubrum / Red maple	3" Cal.	16	AR
Shrubs			
Weigela / Weigela	3 Gal.	2	WG
Prunus pumila / Sand Cherry	3 Gal.	2	PP
Physocarpus opulifolius / Ninebark	3 Gal.	2	PO
Viburnum / Viburnum	3 Gal.	4	VB
Cornus sanguina 'Winter Flame' / Winter Flame Dogwood Red Twig or Yellow Twig	2 Gal.	2	CS
Vaccinium corymbosum / High Bush Bluberry	2 Gal.	3	VC
Juniperus hirzontalis / Blue Rug Juniper	2 Gal.	1	JH
Syringa patula 'Miss Kim' / Miss Kim Lilac	2-3' B&B	24	MK
Perennials			
Geranium sanguineum 'New Hampshire Purple' / Cransebill	#1	24	CB
Hemerocallis 'Happy Returns' / Happy Returns Daylily	#1	24	SD
Astilbe x arendsii 'Bridal Veil' / Bridal Veil Astilbe	#1	16	AF
Hosta 'Big Daddy' / Big Daddy Plantain Lily	#1	10	HB
Hosta 'Guacamole' / Guacamole Plantain Lily	#1	10	HG
Grasses			
Calamagrostis acutifolia 'Karl Foerster' / Feather Reed Grass	#2	24	KF
Hemerocallis 'Happy Returns' / Big Time Happy Daylily	#1	80	EH

PLANTING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM L.A. PRIOR TO PURCHASING &/OR INSTALLING SUBSTITUTE PLANT MATERIAL PRIOR TO PURCHASE OF ANY SUBSTITUTE MATERIALS.
2. CONSTRUCTION ACCESS WILL BE AS DIRECTED BY L.A. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ACCESS ROUTE AND ALL AREAS DISTURBED BY PLANTING OPERATIONS UPON COMPLETION OF CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.
3. LAYOUT OF ALL PLANTING BEDS AND LOCATION OF PLANTS TO BE APPROVED BY L.A. ON SITE PRIOR TO CONSTRUCTION AND INSTALLATION.
4. CONTRACTOR TO REMOVE ALL DEBRIS GENERATED BY PLANT INSTALLATION. DEBRIS TO BE DISPOSED OF IN A LEGAL MANNER.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN GOOD, HEALTHY & FLOURISHING CONDITION FOR ONE YEAR FROM THE DATE OF FINAL INSTALLATION APPROVAL BY L.A. CONTRACTOR SHALL REPLACE, WITHOUT COST TO OWNER, AND AS SOON AS WEATHER CONDITIONS PERMIT, ALL DEAD AND NON–FLOURISHING PLANTS AS DETERMINED BY THE L.A. REPLACEMENT PLANTS SHALL BE BE GUARANTEED IDENTICALLY TO ORIGINAL PLANTS, TIME PERIOD COMMENCING FROM DATE OF REPLACEMENT PLANTING APPROVAL BY L.A.
6. ALL BEDS TO BE MULCHED WITH 3" DEPTH SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO PROVIDE NECESSARY TEMPORARY IRRIGATION IF NEEDED BASED ON TIME OF YEAR THE PROJECT IS IMPLEMENTED.
8. ALL PLANT MATERIAL TO COMPLY WITH THE CITY OF DOVER'S SITE REVIEW REGULATIONS, 149–14(G), SUCH THAT THERE SHALL BE DECIDUOUS SHADE TREES PLANTED 40 FEET O.C. ALONG THE PERIMTERE OF THE PARKING LOTS AND SHRUBS PLANTED 5 FEET O.C. WITHIN THE PERIMETER BUFFER. SEE PLANT LIST FOR SPECIES AND SIZE OF PLANTS.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

terrain
planning & design llc

General Plant Maintenance Guide

General Plant Bed Maintenance:

- All plant maintenance should be performed by a qualified horticulturalist or licensed arborist. Cleaning the dead material out of the planting bed in the fall helps keep litter from building up around the plants and in some cases killing the plants. Watering the first year during dry periods will help get the plants established. Mulching every year is not necessary. Raking the old mulch and turning it over is all that is needed. When necessary only install one inch of mulch and do not place the mulch closer than 3" to the trunks or stems of woody plants.

Trees

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the trunk.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after trees have dropped their leaves for the year.
- Prune dead wood once a year.
- Depending on the amount of compaction the bed area receives, deep root aeration may be needed over time

Woody Shrubs

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the stems.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after shrubs have dropped their leaves or gone dormant for the year.
- Prune dead wood once a year.

Grasses

- Grasses only need to be clipped back at the end of the growing season and all the clippings removed from the area.
- Do not over mulch. Too much mulch will prohibit the grass from developing into a strong clump.

Perennials

- All perennials need to be pruned back after the first or second hard frost. A two step method; first dead head all the flower heads and let drop to the ground for re-seeding. Second cut the stems back to 3" above the ground and remove the stem and leaf litter and place in compost. Do not over mulch. Too much mulch will prohibit the growth and development
- Fertilizing perennials once in the spring with a low phosphate fertilizer will help the plants to get started in the spring.

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terrain
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311 kast hill road
hopkinton, nh 03229
603. 491. 2322
terrainplanning.com

CIELO DRIVE

Site Location:
Cielo Drive
Dover, NH
Tax Map H, Lot 4

Prepared For:
Berry Surveying & Engineering
335 Second Crown Point Rd
Barrington, NH 03825

LANDSCAPE PLAN

DATE:

SCALE: 1" = 30'

PROJECT #: 21002

Drawn By: ID

Checked By: ERB

REVISIONS: DATE:
Issued for Client Review

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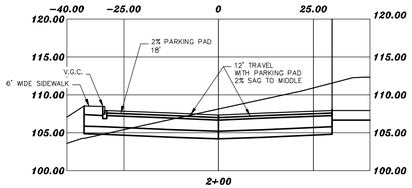
SHEET 26 OF 36

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
Vertical Scale 10



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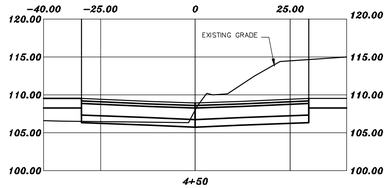

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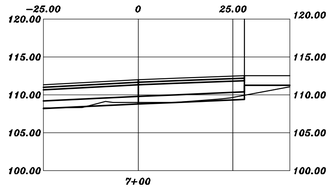
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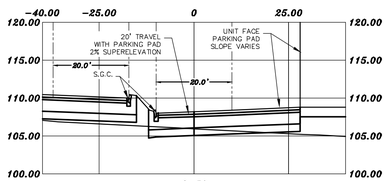

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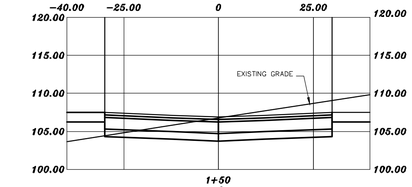

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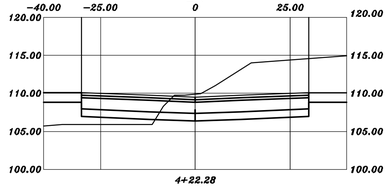
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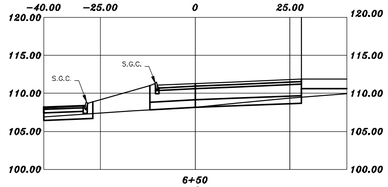

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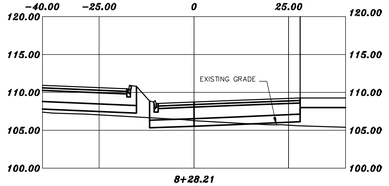

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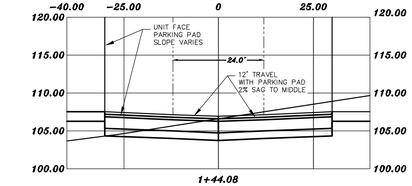

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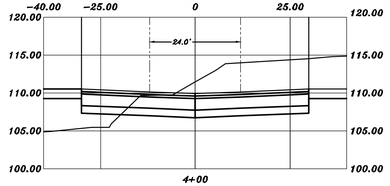

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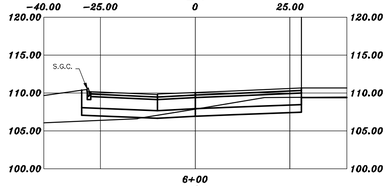

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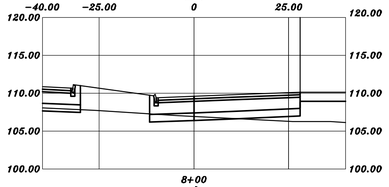

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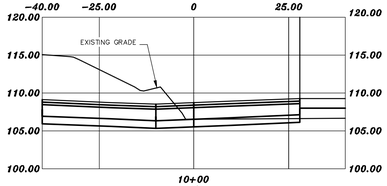

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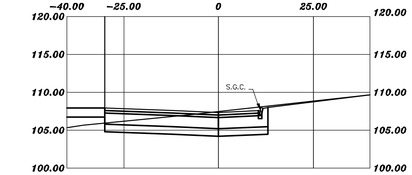

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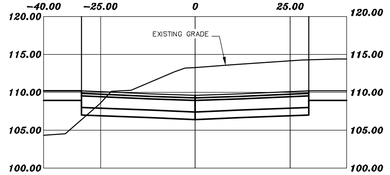

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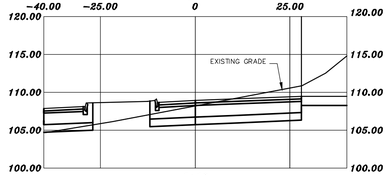

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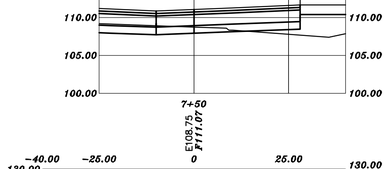

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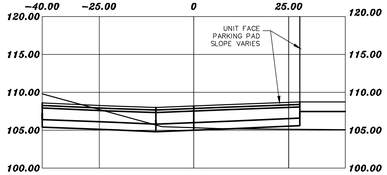

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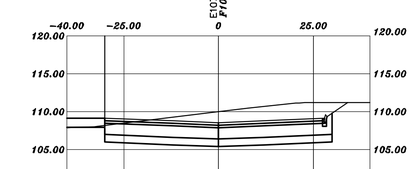
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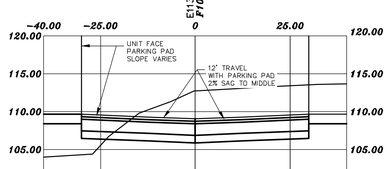

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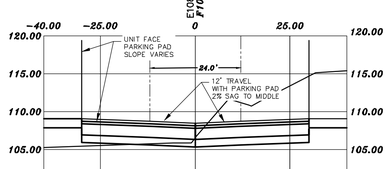

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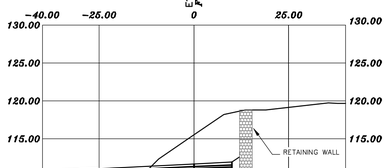

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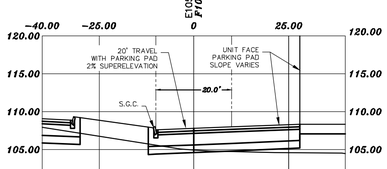

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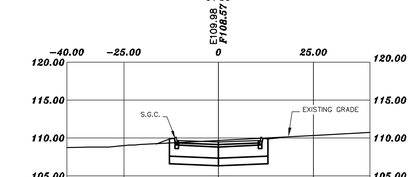

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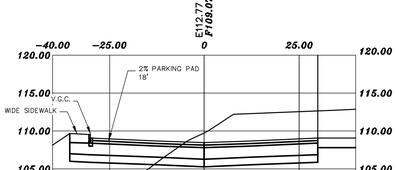

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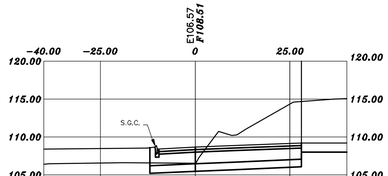

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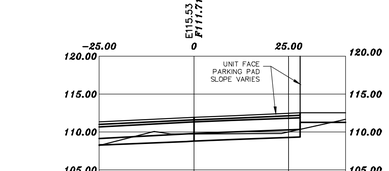

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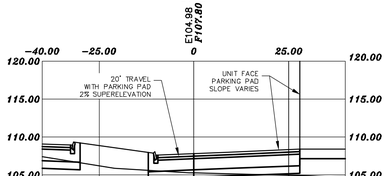

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P107.84

REVISION	DATE	DESCRIPTION

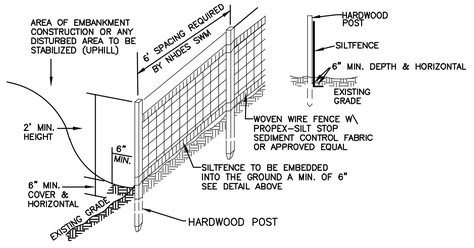
CROSS SECTIONS WINDSOR WAY 0+00 – END
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14345
LICENSED PROFESSIONAL ENGINEER

E1



SILT FENCE CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 6' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF. SEE MAINTENANCE NOTE BELOW.
4. REMOVAL OF SEDIMENT REQUIRED AT A DEPTH OF 6-INCHES.
4. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
5. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER.
6. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED.
7. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, SILT FENCE, PAGE 90.

SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH SIX-INCHES IN DEPTH.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

SILT FENCE DETAIL
NOT TO SCALE

E2

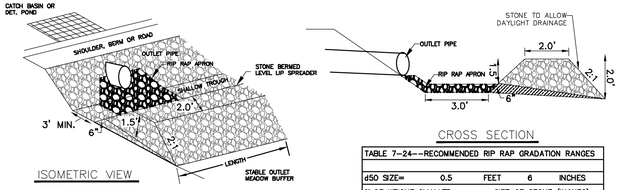
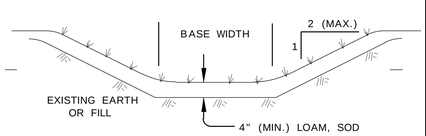


TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	FEET	6 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3

1. CONSTRUCT THE LEVEL SPREADER LIP ON A 0% GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
3. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING EXCELSIOR ENFORCER MATTING BENEATH THE STONE. EACH STRIP SHALL OVERLAP BY AT LEAST SIX INCHES.
4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
5. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF STONE REMOVAL HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED.
6 REFERENCE IS MADE TO NHDES SWM VOL. 2, 4-6, STONE BERM LEVEL SPREADERS, PAGE 162

STONE BERM LEVEL SPREADER
NOT TO SCALE

E3



GRASS TREATMENT SWALE
NOT TO SCALE

INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATIONS, VEGETATION LOSS, & INVASIVE SPECIES. REPAIR AS NECESSARY.

MOW GRASS ANNUALLY TO A DEPTH OF 4".

INSTALL STABILIZATION MATTING DURING CONSTRUCATION

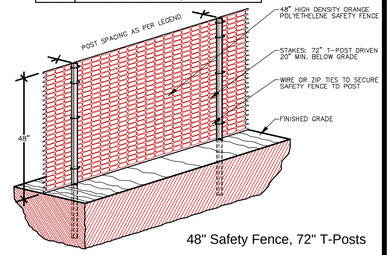
TO BE CONSTRUCTED IAW NH SWM #2 CHAPTER 4, #5 TREATMENT SWALES, PAGE 123.

E4 *CONSTRUCTION SAFETY FENCE*

NOT TO SCALE

LEGEND

SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C..
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C..
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.

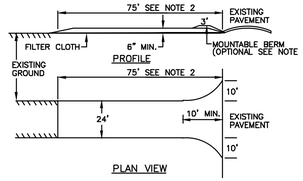


48" Safety Fence, 72" T-Posts

1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE AS PER PLAN.
3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET OUTSIDE OF THE DRIP LINE OF THE TREE.
4. SAFETY FENCE SHOULD BE FASTENED SECURELY TO THE T-POSTS.
5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

E5 *STABILIZED CONSTRUCTION ENTRANCE*

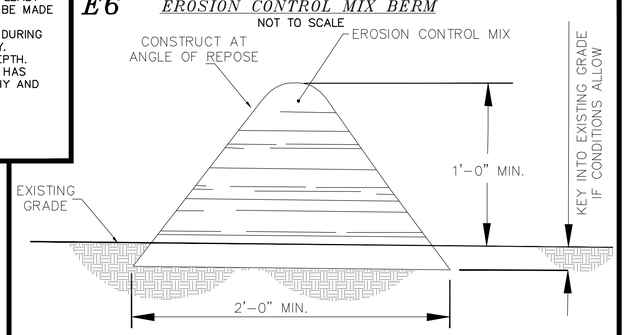
NOT TO SCALE



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CONSTRUCTION EXIT, PAGE 124.

E6 *EROSION CONTROL MIX BERM*

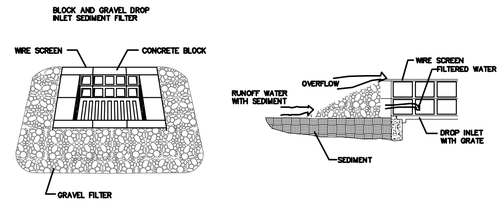
NOT TO SCALE



EROSION CONTROL MIX BERMS SHALL BE USED ONLY AS FOLLOWS:

1. BERMS SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE BERM.
2. THE BERMS SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSLY AS POSSIBLE.
3. THE BERMS SHALL BE INSTALLED ON SLOPES LESS THAN 5%.
4. SUBJECT TO (E), BELOW, THE MIX SHALL HAVE AN ORGANIC PORTION BETWEEN 80 AND 100% DRY WEIGHT BASIS, AND BE FIBROUS AND ELONGATED SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS.
5. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS SHALL NOT BE USED AS ORGANIC MATERIAL.
6. THE MIX SHALL NOT CONTAIN SILTS, CLAY, OR FINE SANDS.
7. THE MIX SHALL HAVE A PARTICLE SIZE BY WEIGHT OF 70 TO 85% PASSING A 6-INCH SCREEN AND A MAXIMUM OF 85% PASSING THE 0.75-INCH SCREEN.
8. THE MIX PH SHALL BE BETWEEN 5.0 AND 8.0.
9. THE BERM SHALL BE AT LEAST 12 INCHES HIGH AND AT LEAST 2 FEET WIDE.
10. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

E7



MAINTENANCE

ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

BLOCK & GRAVEL DROP INLET SEDIMENT FILTER
NOT TO SCALE

TO BE USED IN ALL AREAS WHERE THERE WILL BE NO TRAFFIC.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

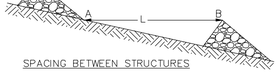
E8 *TEMPORARY EROSION CONTROL MEASURES*

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. (SEE SEED SPECIFICATIONS THIS SHEET)
4. ALL DISTURBED AREAS WILL BE RESTABILIZED WITHIN 45 DAYS. AT ANY ONE TIME, NO MORE THAN 5 ACRES, (217,800 Sq. Ft.) WILL BE DISTURBED.
5. SILT FENCES AND PERIMETER BARRIERS SHALL BE INSPECTED PERIODICALLY AND AFTER EVERY RAIN DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
6. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
7. PER THE EPA CGP REQUIREMENTS THERE WILL BE REPORTS OF THE EROSION CONTROL INSPECTIONS IAW SWPPP PREPARED BY BS&E. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OR GREATER RAIN EVENT.
8. DITCHES, SWALES, AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
10. DRIVEWAYS AND CUT AND FILL SPLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINAL GRADE.
11. STABILIZATION MEANS:
    - 11.1. A MINIMUM OF 85% OF VEGETATIVE COVER HAS BEEN ESTABLISHED.
    - 11.2. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED, OR
    - 11.3. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
12. THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
13. THE NHDES STORMWATER MANUAL, IN THREE VOLUMES, DATED DECEMBER 2008, IS A PART OF THIS PLAN SET AND THE MORE RESTRICTIVE WILL GOVERN. (NH SWM)

E9 *STONE CHECK DAM*

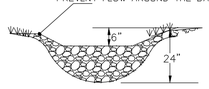
NOT TO SCALE

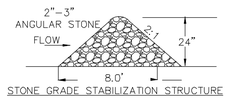
THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.



SPACING BETWEEN STRUCTURES

NOTE: KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIUM OF 18" TO PREVENT FLOW AROUND THE DAM.

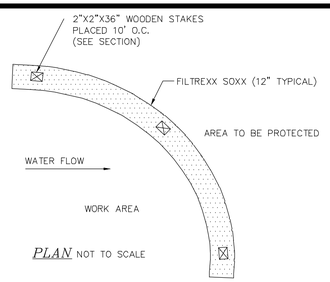




STONE GRADE STABILIZATION STRUCTURE

1.) CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.
2.) THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHOULD BE LESS THEN ONE ACRE.
3.) THE MAXIMUM HEIGHT OF THE DAM SHOULD BE TWO FEET.
4.) THE CENTER OF THE DAM SHOULD BE AT LEAST SIX INCHES LOWER THAN THE OUTER EDGES.
5.) THE MAXIMUM SPACING IS AS SHOWN ON THE PROJECT SITE PLANS.
6.) CHECK DAMS WILL NOT BE USED IN A FLOWING STREAM.
7.) TEMPORARY CHECK DAMS WILL BE REMOVED ONCE THE SWALE OR DITCH IS DETERMINED STABLE.
8.) TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CHECK DAMS, PAGE 114.

E10

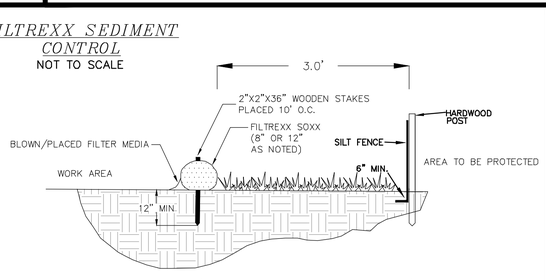


PLAN NOT TO SCALE

NOTES

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIRMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
5. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIRMENTS OF THE SPECIFIC APPLICATION.
6. FILTREXX SOXX IS A REGISTERED TRADEMARK OF FILTREXXIN TERNATIONAL, LLC.
7. SILT FENCE IS NOT A SUBSTITUTION FOR SILT SOXX AND ANY EQUAL SUBSTITUTION TO BE APPROVED.
8. TO BE CONSTRUCTED IAW FILTREXX, SECTION 1:EROSION & SEDIMENT CONTROL (PAGE 323) - CONSTRUCTION ACTIVITIES, SWPPP CUT SHEET: FILTREXX SEDIMENT CONTROL

FILTREXX SEDIMENT CONTROL
NOT TO SCALE

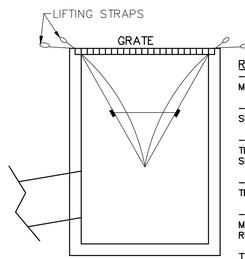


Filtrexx International, LLC
35481 Grafton Eastern Rd | Grafton, Oh 44044
440-926-2607 | fax: 440-926-4021
WWW.FILTREXX.COM
OR APPROVED EQUAL

NOTE: FOR AREAS REQUIRING DOUBLE PERIMETER CONTROL WITHIN 50' OF JURISDICTIONAL WETLANDS AND NOT FOR ALL SILT SOXX APPLICATIONS. THIS DUPLICATION MAY BE SPECIFIED AS 12" SILT SOXX OR ORANGE CONSTRUCTION FENCE AS NOTED.

SECTION NOT TO SCALE

E11



RECOMMENDED MAINTENANCE SCHEDULE

-EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT, AND MUST BE MAINTAINED.

-IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACK SHOULD BE INSPECTED EVERY 2-3 WEEKS.

-THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

-TO BE USED IN ALL AREAS WHERE THERE WILL BE TRAFFIC.

- ARE SUBJECT TO DAMAGE BY SNOW PLOWS, AND MUST BE INSPECTED AFTER ANY SNOW EVENT AND REPLACED AS REQUIRED.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

SILTSACK DETAIL
NOT TO SCALE

E-101

REVISION	DATE	DESCRIPTION

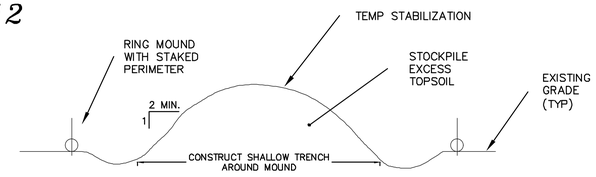
EROSION & SEDIMENT CONTROL DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14240
LICENSED PROFESSIONAL ENGINEER

E12



TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, SOIL STOCKPILE PRACTICES, PAGE 46.

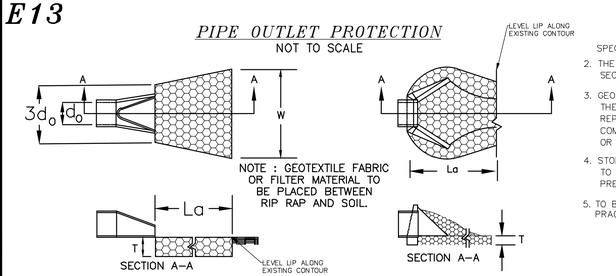
TOPSOIL STOCKPILE MOUND

NOT TO SCALE

E13

PIPE OUTLET PROTECTION

NOT TO SCALE



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

PIPE OUTLET TO WELL-DEFINED CHANNEL

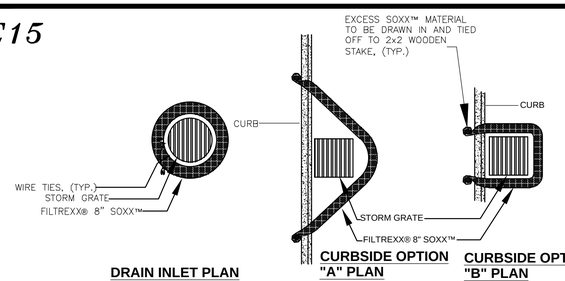
PIPE OUTLET PROTECTION CONSTRUCTION SPECIFICATIONS

1. SPECIFIED GRADATION.
2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO NHDOT SECTION 583.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. TO BE CONSTRUCTED IAW NH SWM #2 4-6 CONVEYANCE PRACTICES, 6. OUTLET PROTECTION, PAGE 172.

E14

TABLE 7-24--RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	FEET	6 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE OF STONE (INCHES) FROM		TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3

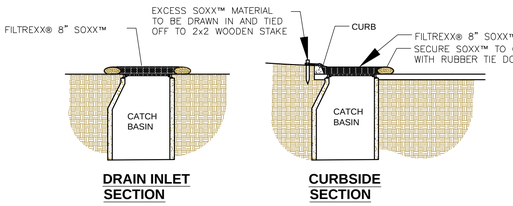
E15



DRAIN INLET PLAN

CURBSIDE OPTION "A" PLAN

CURBSIDE OPTION "B" PLAN



DRAIN INLET SECTION

CURBSIDE SECTION

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX INLET PROTECTION

NOT TO SCALE

E16

NOTE: THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

NOTE: Temporary seed mix for stabilization of turf shall be winter rye or oats at a rate of 2.5 lbs. per 1000 s.f. and shall be placed prior to OCT. 15, if permanent seeding not yet complete.

SEEDING GUIDE

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	FAIR	GOOD	EXCELLENT
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	GOOD	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	FAIR	GOOD	GOOD	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	F	FAIR	EXCELLENT	EXCELLENT	2/
	G	FAIR	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE 7-36.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

RECOMMENDED *

SEEDING RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	24	0.55
CREEPING RED FESCUE	24	0.55
BIRDS FOOT TREFOIL	REMOVED	REMOVED
TOTAL	48	1.10
D. TALL FESCUE	30	0.45
FLAT PEA	20	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

CONSERVATION MIX	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
TALL FESCUE (35%)	15	0.35
CREEPING RED FESCUE (25%)	15	0.35
ANNUAL RYEGRASS (12%)	5	0.12
PERENNIAL RYEGRASS (10%)	5	0.12
KENTUCKY BLUEGRASS (10%)	15	0.35
WHITE CLOVER (3%)	7	0.16

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED.
   WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEED BED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING
   AND INCORPORATED INTO THE SOIL KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE,
   THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
   AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100LBS. PER 1,000 SQ.FT.
   NITROGEN(N), 50LBS. PER ACRE OR 1.1LBS. PER 1,000 SQ.FT.
   PHOSPHATE(P2O5), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   POTASH(K2O), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   (NOTE: THIS IS THE EQUIVALENT OF 500LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000LBS. PER ACRE OF 5-10-10.)
   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT TREFOIL, AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.
6. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, PERMANENT VEGETATION, PAGE 60.
7. SEE RAIN GARDEN AND INFILTRATION DETAIL SHEETS FOR SPECIFIC PLANTING INSTRUCTIONS AND SEEDING.

E17

CONSTRUCTION SEQUENCE:

1.) CUT AND REMOVE TREES IN CONSTRUCTION AREA ONLY AS REQUIRED, RELOCATE ANY PROJECT T.B.M.

2.) CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS SPECIFIED. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY THE COMMUNITY SERVICES DEPARTMENT.

3.) EROSION, SEDIMENT AND DETENTION CONTROL FACILITY SHALL BE INSTALLED & STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.TEMPORARY DIVERSIONS MAY BE REQUIRED. POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES MUST BE INITIATED AND STABILIZED EARLY IN THE PROCESS. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.

4.) CLEAR, CUT AND DISPOSE OF DEBRIS IN APPROVED FACILITY

5.) CONSTRUCT TEMPORARY CULVERTS AS REQUIRED, OR DIRECTED

6.) CONSTRUCT ROADWAYS FOR ACCESS TO DESIRED CONSTRUCTION AREAS. ALL ROADS SHALL BE STABILIZED IMMEDIATELY. SEE BEST MANAGEMENT PRACTICES FOR BLASTING ON SHEET C-102.

7.) START BUILDING CONSTRUCTION.

8.) INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. INSTALL RAIN GARDENS. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING.

9.) BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED. NO AREA IS ALLOWED TO BE DISTURBED FOR A LENGTH OF TIME THAT EXCEEDS 45 DAYS BEFORE BEING STABILIZED, DAILY, OR AS REQUIRED. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES. LIMIT THE LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.

10.) CONSTRUCT TEMPORARY BERMS, DRAINS DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.

11.) INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. ALL SWPPP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORM WATER INSPECTOR (CESSW), OR A CERTIFIED PROFESSIONAL IN STORM WATER QUALITY (CPSWQ). INSPECTION REPORTS SHALL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT. EROSION AND SEDITMENT CONTROL PRACTICES ARE TO BE INSPECTED WEEKLY AND AFTER 0.5" OF RAINFALL.

12.) COMPLETE PERMANENT SEEDING AND LANDSCAPING.

13.) REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE COMPLETE.

14.) SMOOTH AND REVEGETATE ALL DISTURBED AREAS.

15.) FINISH PAVING ALL ROADWAYS.

16.) LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.

E18

DEFINITION OF STABLE:

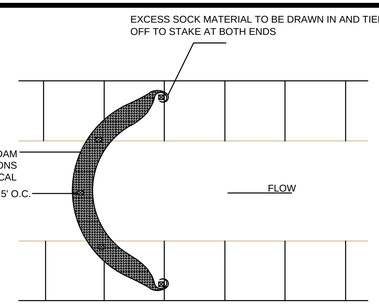
PER ENV-WQ 1500 ALTERATION OF TERRAIN

1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
2. A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED..
3. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
4. OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

ADDITION STABILIZATION NOTES:

5. HAY MULCH OR OTHER APPROVED METHODS SHALL BE USED TO CONTROL EROSION OF NEWLY GRADED AREAS. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS AFTER THEIR CONSTRUCTION.
6. DISTURBED SOIL AREAS SHALL BE EITHER TEMPORARILY OR PERMANENTLY STABILIZED. IN AREAS WHERE FINAL GRADING HAS NOT OCCURRED, TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN (7) CALENDAR DAYS FOR EXPOSED SOIL AREAS THAT ARE WITHIN ONE HUNDRED (100) FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE (3) CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.

E19

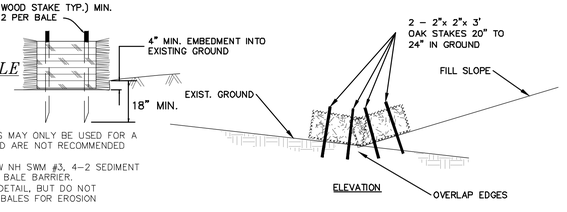


FILTREXX CHECK DAM

NOT TO SCALE

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. CHECK DAM SHOULD BE USED IN AREAS THAT DRAIN 1 ACRE OR LESS.
3. SEDIMENT SHOULD BE REMOVED FROM BEHIND CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED ½ THE HEIGHT OF THE CHECK DAM.
4. CHECK DAM CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
5. CONTRACTOR IS REQUIRED TO BE A FILTREXX CERTIFIED™ INSTALLER.

E20

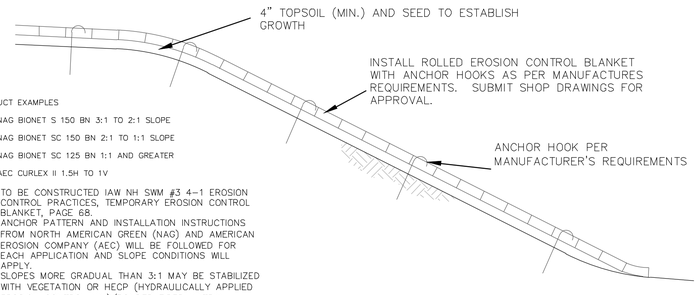


STAKED HAYBALE DETAIL

NOT TO SCALE

1.) HAY BALES BARRIERS MAY ONLY BE USED FOR A MAXIMUM OF 60 DAYS AND ARE NOT RECOMMENDED FOR PERIMETER CONTROL.
2.) TO BE INSTALLED IAW NH SWM #3, 4-2 SEDIMENT CONTROL, STRAW OR HAY BALE BARRIER.
3.) REQUIRED TO SHOW DETAIL, BUT DO NOT RECOMEND USE OF HAY BALES FOR EROSION CONTROL.

E21



PRODUCT EXAMPLES

1.) NAG BIONET S 150 BN 3:1 TO 2:1 SLOPE
2.) NAG BIONET SC 150 BN 2:1 TO 1:1 SLOPE
3.) NAG BIONET SC 125 BN 1:1 AND GREATER
4.) AEC CURLEX II 1.5H TO 1V

1. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, TEMPORARY EROSION CONTROL BLANKET, PAGE 68.
2. ANCHOR PATTERN AND INSTALLATION INSTRUCTIONS FROM NORTH AMERICAN GREEN (NAG) AND AMERICAN EROSION COMPANY (AEC) WILL BE FOLLOWED FOR EACH APPLICATION AND SLOPE CONDITIONS WILL APPLY.
3. SLOPES MORE GRADUAL THAN 3:1 MAY BE STABILIZED WITH VEGETATION OR HECP (HYDRAULICALLY APPLIED EROSION CONTROL MIX)/BONDED FIBER MATRIX. HOWEVER THE ENGINEER RESERVES THE RIGHT TO REQUEST INCREASED RECB TO BE INSTALLED ON ANY SLOPE.
4. ALL RECB IS TO CONSIST OF ALL NATURAL MATERIAL WITH NO SYNTHETIC COMPONENTS (NO PHOTO BIODEGRADABLE NETTING)

ROLLED EROSION CONTROL BLANKET (RECB) SLOPE STABILIZATION DETAIL

E22

WINTER STABILIZATION NOTES

1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER OCTOBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED ABOVE.

2. ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH TEMPORARY JUTE MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY GRADED AND SHAPED.

3. PRIOR TO OCT. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER OCTOBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.

4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEEDED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

5. ENV-WQ 1505.06 COLD WEATHER SITE STABILIZATION (B)(1) LIMITS AREA OF EXPOSURE TO ONE ACRE OF UNSTABILIZED SOIL WITHOUT OBTAINING A WAIVER AND WINTER CONSTRUCTION PLAN.

E-102

REVISION	DATE	DESCRIPTION

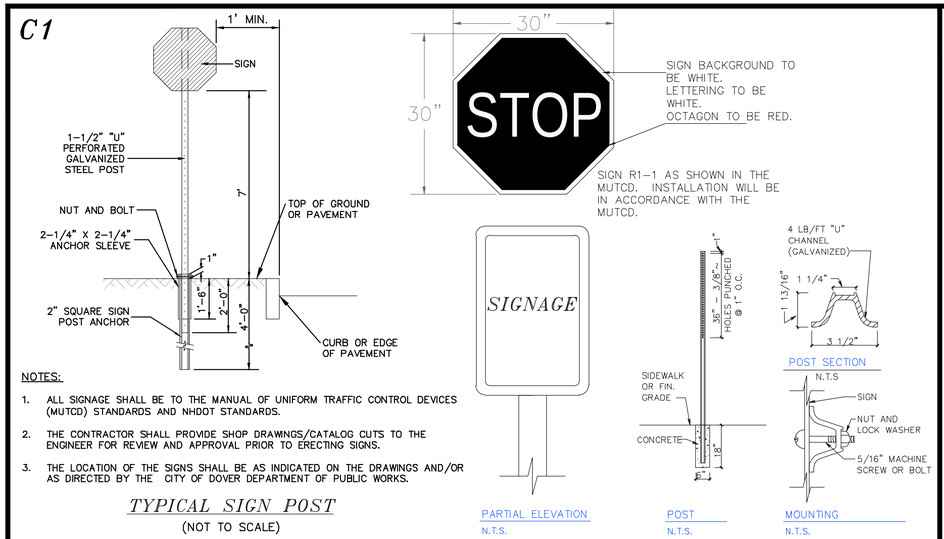
EROSION & SEDIMENT CONTROL DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

C1



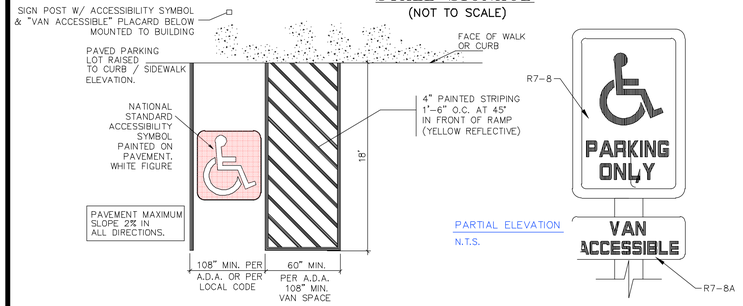
NOTES:

1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.
3. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE CITY OF DOVER DEPARTMENT OF PUBLIC WORKS.

TYPICAL SIGN POST
(NOT TO SCALE)

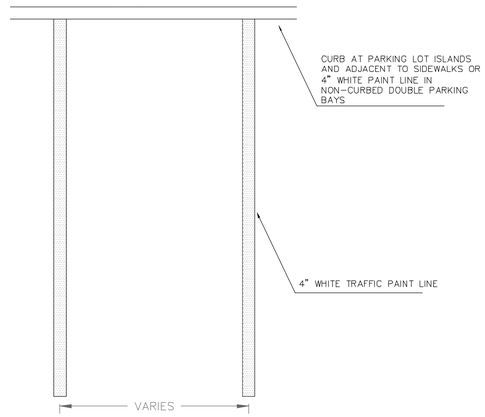
C2

ACCESSIBLE PARKING STALL SIGNAGE
(NOT TO SCALE)



C3

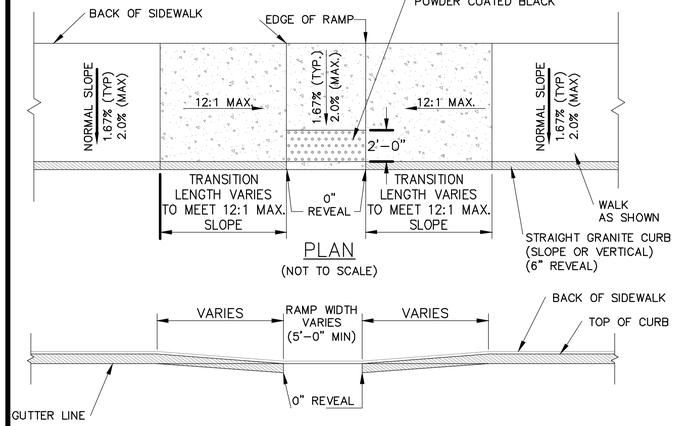
PARKING SPACE DETAIL
NOT TO SCALE



NOTES:

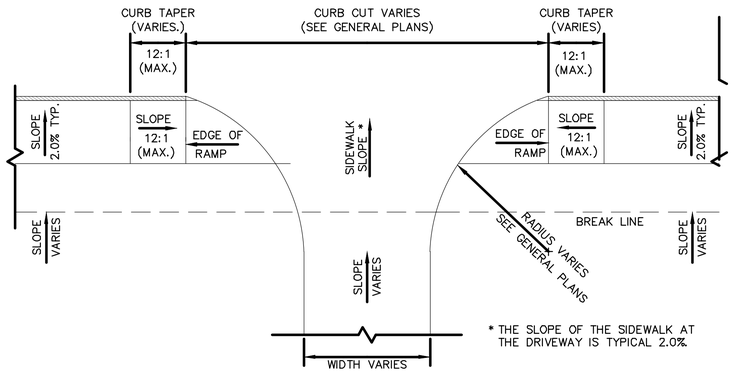
1.) PROVIDE TWO COATS OF PAINT ON ALL PARKING LINES.
2.) SEE PROPOSED SITE PLANS FOR LOCATION OF PARKING SPACES.
3.) PAINTED SPACES ONLY WHERE MARKED ON SITE PLAN

C4



TYPICAL DETAIL FOR WHEELCHAIR RAMP

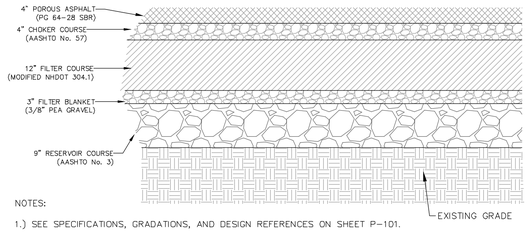
C5



* THE SLOPE OF THE SIDEWALK AT THE DRIVEWAY IS TYPICAL 2.0%

PLAN VIEW (DRIVEWAY & SIDEWALK)
NOT TO SCALE

C6

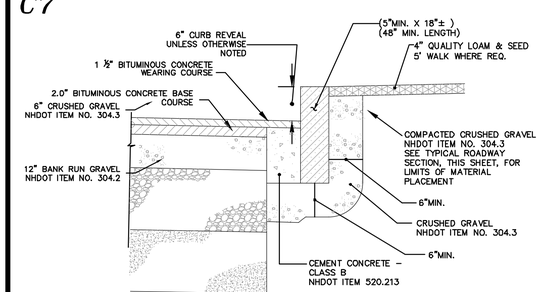


NOTES:

1.) SEE SPECIFICATIONS, GRADATIONS, AND DESIGN REFERENCES ON SHEET P-101.

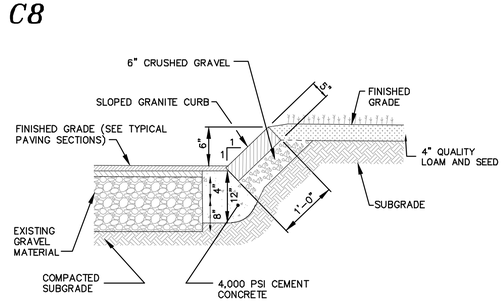
POROUS ASPHALT PAVEMENT SECTION
NOT TO SCALE

C7



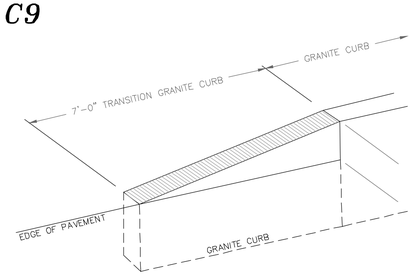
VERTICAL GRANITE CURB DETAIL
NOT TO SCALE

C8



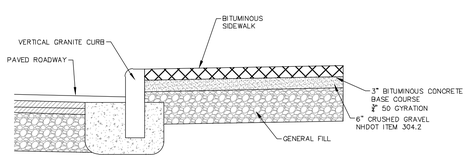
SLOPE GRANITE CURB DETAIL
NOT TO SCALE

C9



CURB TRANSITION DETAIL
NOT TO SCALE
TO BE USED FOR TRANSITION FROM GRANITE CURB TO EDGE OF PAVEMENT

C10



BITUMINOUS SIDEWALK RAISED
NOT TO SCALE (ALONG CIELO DR NON-POROUS)

C-101

REVISION	DATE	DESCRIPTION

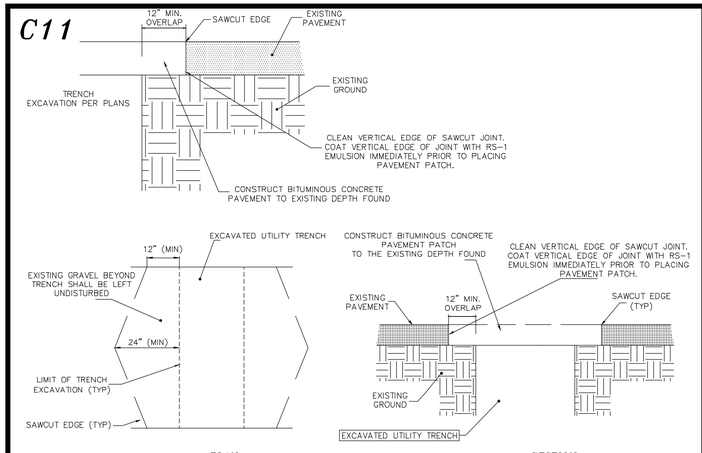
CONSTRUCTION DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY No. 12417
LICENSED PROFESSIONAL ENGINEER

C11



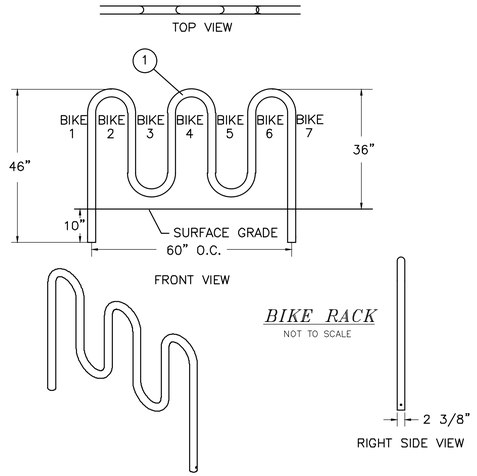
PLAN *SECTION*

NOTES
1. MACHINE CUT EXISTING PAVEMENT.
2. ALL TEMPORARY, DAMAGED, OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET NHDOT REQUIREMENTS.

TYPICAL TRENCH PATCH
NOT TO SCALE

C12

MATERIALS LIST
(1) TUBING – ø 2 3/8" x .154" Wall Steel Tubing



BIKE RACK
NOT TO SCALE

C13

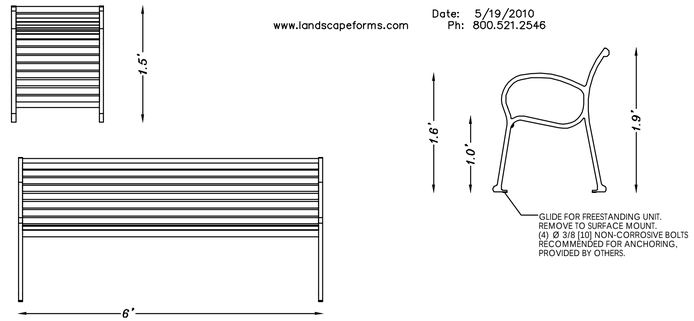
Scarborough™ Bench, 24" Backed, with Horizontal Strap Seat

BENCH DETAIL
(NOT TO SCALE)

Scarborough™ Bench, 24" Backed, with Horizontal Strap Seat
Product Drawing

Scarborough™ Bench, 24" Backed, with Horizontal Strap Seat

www.landscapeforms.com Date: 5/19/2010 Ph: 800.521.2546

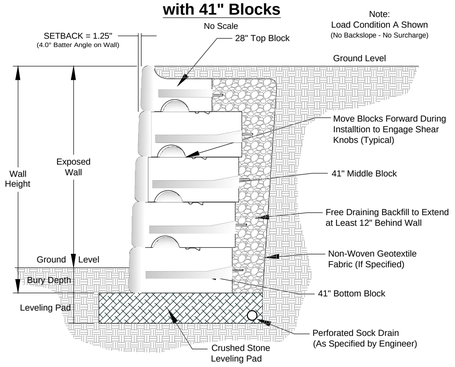


C14

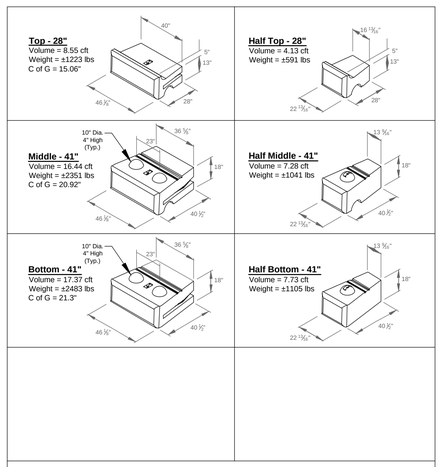
See Redi-Rock.com for Detailed Section Drawings of Each Condition Shown in the Design Charts

NOTES:
1.) USE THE 41" BOTTOM BLOCK TO INSTALL THE FIRST COURSE. NOTE EMBEDMENT REQUIREMENT. COURSE DEPTH IS 1.5'
3.) USE 41" MIDDLE BLOCK FOR MIDDLE ROWS, APPROXIMATELY 7 COURSES DEPENDING ON WALL HEIGHT.
4.) USE 41" TOP BLOCK ALONG TOP OF WALL. NOTE WALL DROPS ARE TO BE FULL BLOCK DEPTHS.
5.) USE 41" HALF BLOCKS FOR RADIAL TURNS AND END SECTIONS.
6.) THE WALL MANUFACTURER TYPICALLY PROVIDES WALL PROFILE AND BLOCK COUNT TO THE CONTRACTOR AS REQUIRED FOR CONSTRUCTION. THIS IS TO BE REVIEWED BY BOTH DPW AND DESIGN ENGINEER FOR CORRELATION WITH PROJECT SITE PLANS AND IS TO BE DESIGNED AND STAMPED BY A STRUCTURAL ENGINEER (OTHERS).

Typical Gravity Wall with 41" Blocks



41" SERIES BLOCKS



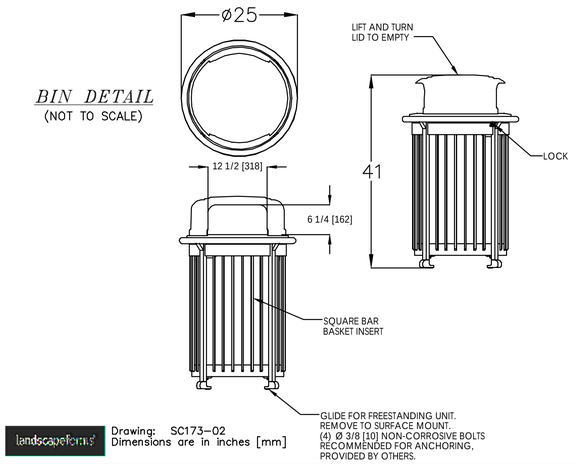
NOTES:
Volume and Center of Gravity (C of G) calculations are based on the blocks as shown.
Center of Gravity is measured from the back of the block.
Half blocks may include a fork lift slot on one side.
Actual weights and volumes may vary.
Weight shown is based on 143 pcf concrete.

Redi-Rock® International, LLC
RETAINING WALL DETAIL
NOT TO SCALE

NOTE: RETAINING WALL TO BE DESIGNED BY A LICENSED PROFESSIONAL GEOTECHNICAL/STRUCTURAL ENGINEER.

C15

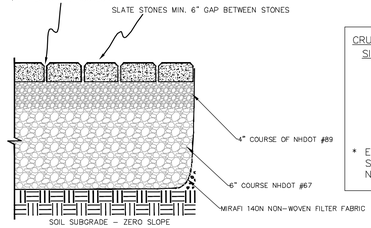
BIN DETAIL
(NOT TO SCALE)



landscapeforms
Drawing: SC173-02
Dimensions are in inches [mm]

C16

PERVIOUS PATIO DETAIL
NOT TO SCALE



CRUSHED STONE BEDDING	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 –10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

1.) INSTALL AT THE WALKWAYS IN ALONG UNITS 5-8 & 9

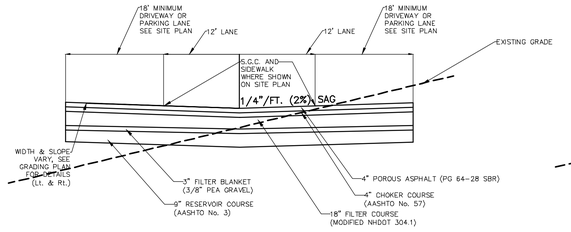
2.) STONE TO MEET THE SPECIFICATIONS PROVIDED.

COMPACTED SUBGRADE – CONTRACTOR SHALL SCARIFY SUBGRADE TO A DEPTH OF 24 INCHES. ALL STONES GREATER THAN 6" IN DIAMETER SHALL BE REMOVED FROM THE SCARIFIED LAYER. ANY IMPORTED FILL SHALL BE FREE OF ORGANICS AND FROST AND SHALL HAVE NO ROCKS LARGER THAN 6" IN DIAMETER. FILL MATERIAL SHALL BE APPROVED BY THE CITY'S AGENT AND/OR THE CITY'S ENGINEER.

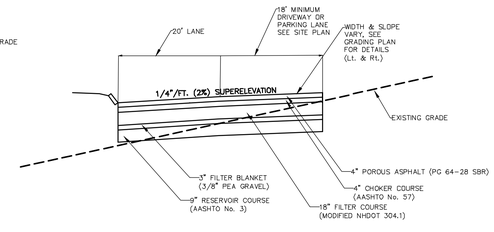
CRUSHED STONE BEDDING *	
SIEVE SIZE	% PASSING BY WEIGHT
1/2"	100
3/8"	90 – 100
#4"	20 – 55
# 8	5 –30
# 16	0 – 10
# 50	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #89 – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

C17



TYPICAL ROADWAY SECTION WINDSOR WAY
0+00–4+60.54 (POROUS PAVEMENT)
NOT TO SCALE



TYPICAL ROADWAY SECTION WINDSOR WAY
4+60.54–END (POROUS PAVEMENT)
NOT TO SCALE

C-102

REVISION	DATE	DESCRIPTION

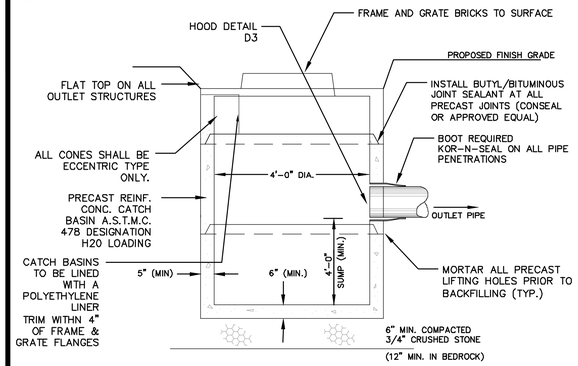
CONSTRUCTION DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 17243 – LICENSED PROFESSIONAL ENGINEER

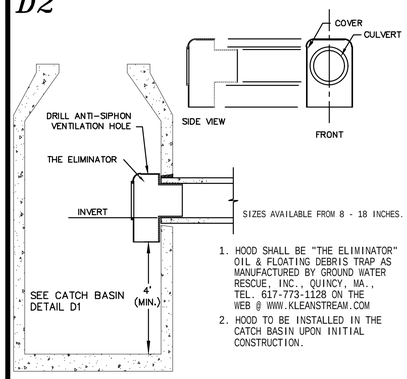
D1



CATCH BASIN DETAIL

NOT TO SCALE

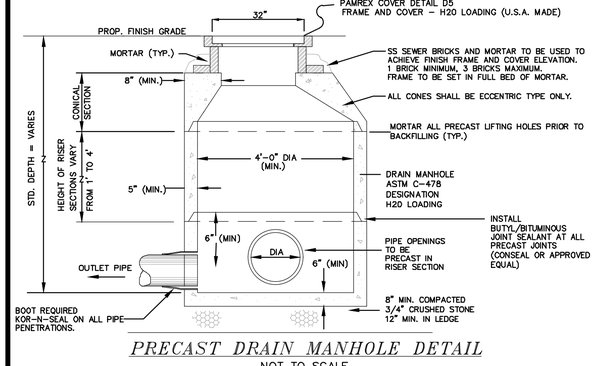
D2



CATCH BASIN HOOD DETAIL

NOT TO SCALE

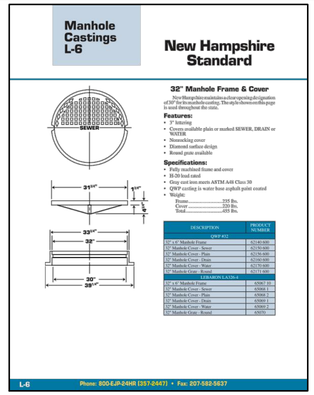
D3



PRECAST DRAIN MANHOLE DETAIL

NOT TO SCALE

D4

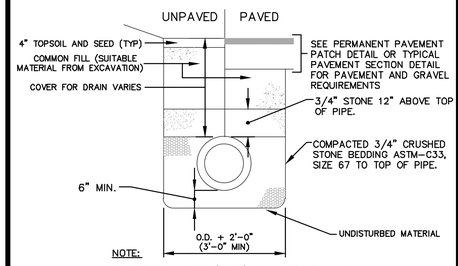


DRAIN MANHOLE FRAME AND GRATE WILL BE NEW HAMPSHIRE STANDARD, OR APPROVED EQUAL, 32 INCH OPENING, CAST IRON, H20 LOADING.

DRAIN MANHOLE COVER DETAIL

NOT TO SCALE

D5



NOTE:

PLASTIC DRAIN PIPE (HDPE) SHALL BE ADS N-12 (CORRUGATED EXTERIOR/SMOOTH INTERIOR) OR EQUAL MEETING AASHTO M-252 AND H-20 LOADING.

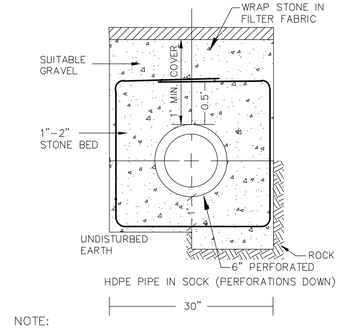
DI DRAIN PIPE SHALL BE CL. 50.

RC DRAIN PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.

TYPICAL DRAIN PIPE TRENCH

NOT TO SCALE

D6



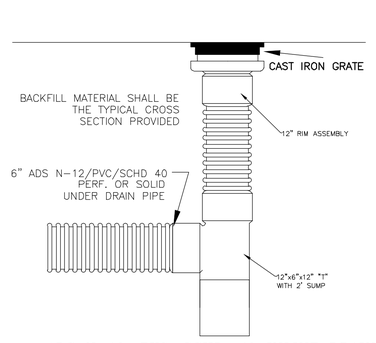
NOTE:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.

UNDERDRAIN TRENCH DETAIL

NOT TO SCALE

D7



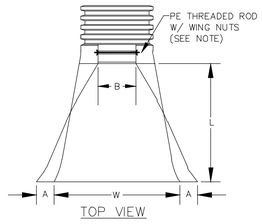
ADS N-12, PVC, SCHD. 40 INLINE DRAIN

NOT TO SCALE USED FOR CLEANOUTS

D8

PART No.	PIPE SIZE	A	B(MAX)	H	L	W
1510-NP	15" 375 mm	6.5" 165 mm	10" 254 mm	6.5" 165 mm	25" 635 mm	29" 735 mm
1810-NP	18" 450 mm	7.5" 190 mm	15" 380 mm	6.5" 165 mm	32" 812 mm	35" 890 mm
2410-NP	24" 600 mm	7.5" 190 mm	18" 450 mm	6.5" 165 mm	36" 900 mm	45" 1140 mm
3010-NP	30" 750 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm
3610-NP	36" 900 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm

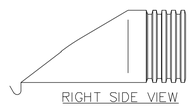
NOTE: PE THREADED ROD W/ WING NUTS PROVIDED FOR END SECTIONS 15"-24". 30" & 36" END SECTIONS TO BE WELDED PER MANUFACTURER'S RECOMMENDATIONS.



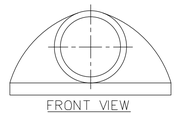
TOP VIEW

ADS N-12 FLARED END SECTIONS

NOT TO SCALE (ALL DIMENSIONS ARE NOMINAL)



RIGHT SIDE VIEW



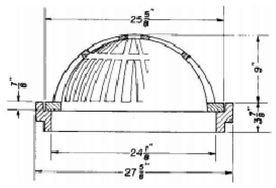
FRONT VIEW

D9

R-4353
Beehive Grate, Frame

Light Duty

CATALOG NUMBER	GRATE TYPE	SQ. FT. OPEN	WEIR PERIMETER LINEAL FEET
R-4353	Beehive	1.8	6.7



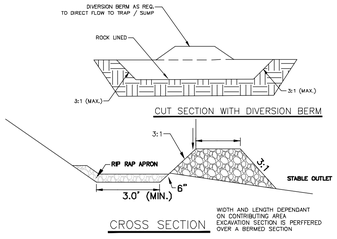
Also available with 2 - 7/8" tall frame, if requested.

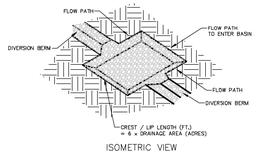
CATCH BASIN IN GRASSED AREA FRAME & GRATE DETAIL

NOT TO SCALE

D10

1. TRAP TO BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
5. THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
6. THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.





ISOMETRIC VIEW

SIEVE DESIGNATION	SIZE OF STONE (INCHES)
100%	12
84-100%	6
68-83%	3
42-55%	1
8-12%	NO. 4

STONE LINED SEDIMENT TRAP

NOT TO SCALE

REFERENCE IS MADE TO A LONG TERM MAINTENANCE MANUAL PREPARED BY BERRY SURVEYING & ENGINEERING, WHICH IS ON FILE AT THE CITY OF ROCHESTER PLANNING DEPARTMENT, AND CAN BE FOUND AT THE OFFICE OF BERRY SURVEYING & ENGINEERING. (603) 332-2863

D-101

REVISION	DATE	DESCRIPTION

DRAINAGE DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 12243 LICENSED PROFESSIONAL ENGINEER

U1

NOTES ON MANHOLE AND SEWER CONSTRUCTION:

1) IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT AND ADEQUATE JOINTING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND HS-20-44 LOADING, INCLUDING THE COVER. ALL SMH CONSTRUCTION AND MATERIALS WILL BE IAW ENV.-WQ 704.13 ADOPTED OCTOBER 15, 2014

2) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE. (IAW ENV.-WQ 704.12 (d))

3) SEWER MANHOLE DIAMETER SHALL BE AS INDICATED ON THE PLANS.

4) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.

5) GRAVITY SEWER PIPE TESTING WILL BE IN ACCORDANCE WITH ENV.-WQ 704.06 AND MAN HOLE TESTING IAW ENV.-WQ 704.17 DATED OCTOBER 15, 2014.

6) INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. INVERT BRICKS SHALL BE LAID ON EDGE AND THE BASE SECTION SHALL BE FULL. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. CARE SHALL BE TAKEN TO ENSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. (IAW ENV.-WQ 704.13 (a) (9)), MORTAR SHALL CONFORM WITH REQUIREMENTS OF IAW ENV.-WQ 704.13 (c).

7) FRAMES AND COVERS: MANHOLES FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. 3-INCH (MINIMUM HEIGHT) LETTERS WITH THE WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH MANHOLE COVER. (IAW ENV.-WQ 704.13 (a) (4-6)) SEWER MAN HOLE COVERS ARE TO PAMREX.

8) SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.

9) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE DOVER DPW, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON A DOUBLE ROW OF AN OVERLAPPING TYPE ELASTOMERIC OR MASTIC-LIKE GASKET. APPROVED ELASTOMERIC SEALANTS ARE: RAM-NEK, KENT SEAL NO. 2, EZ, OR EQUAL.

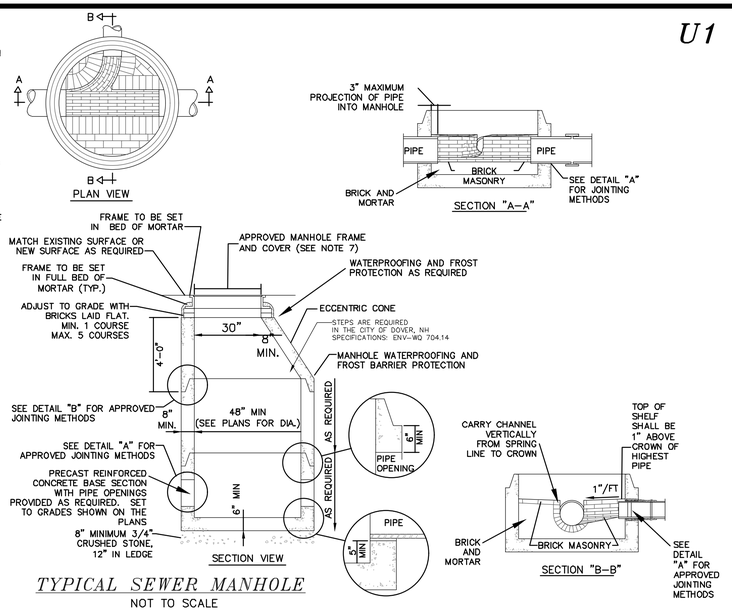
10) IN CROSS COUNTRY AREAS OUTSIDE OF THE PAVED ROADWAY SURFACE, THE MANHOLE FRAME ELEVATION SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE. GRADE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE MANHOLE. SEE TYPICAL TRENCH DETAIL ON SHEET D-102.

11.) ALL FRAMES AND GRATES ARE TO BE U.S.A. MADE. MANHOLE STEPS ARE REQUIRED IN THIS MUNICIPALITY AND MUST CONFORM TO THE REQUIREMENTS OF ENV-WQ 704.14.

12.) THE CONTRACTOR TO WORK WITH CITY OF DOVER REVIEW ENGINEER AND SEWER DEPARTMENT ON THE MEANS AND METHODS USED TO INSTALL ALL SEWER STRUCTURES.

13.) ANY WORK INVOLVING THE CUTTING INTO THE EXISTING A.C. PIPE SHALL MEET THE REQUIREMENTS OF ENV-A 1800.

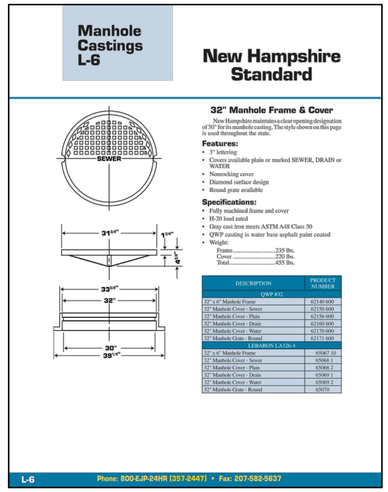
14.) THE "CITY OF DOVER, NEW HAMPSHIRE, DEPARTMENT OF COMMUNITY SERVICES, CONSTRUCTION GUIDELINES, PERMITS, RULES, AND REGULATIONS" (DATED MARCH 13, 2018) ARE A PART OF THE CONSTRUCTION DETAILS AND TO BE FOLLOWED.



TYPICAL SEWER MANHOLE

NOT TO SCALE

U2

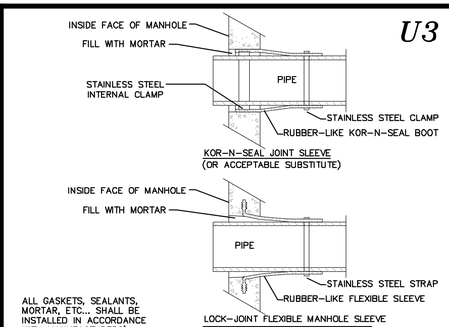


SEWER MANHOLE FRAME AND GRATE WILL BE NEW HAMPSHIRE STANDARD, OR APPROVED EQUAL, 32 INCH OPENING, CAST IRON, H20 LOADING.

SEWER MANHOLE COVER DETAIL

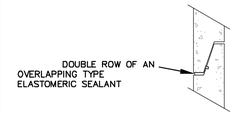
NOT TO SCALE

U3



DETAIL "A" – PIPE TO MANHOLE JOINTS

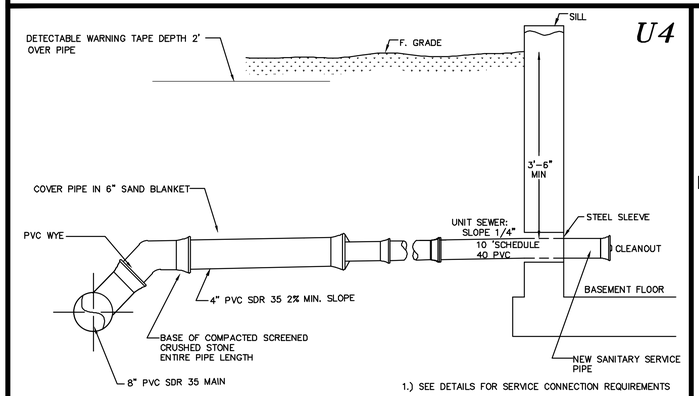
NOT TO SCALE



DETAIL "B" HORIZONTAL JOINTS

NOT TO SCALE

U4



DETAIL OF UNIT SEWER SERVICE

NOT TO SCALE

1.) SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS

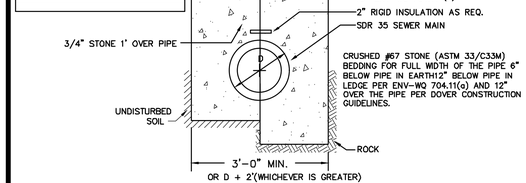
2.) SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.

3.) CLEANOUTS SHALL BE INSTALLED INSIDE EACH BUILDING EXIT POINT

U5

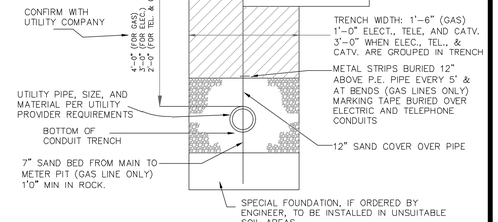
TYPICAL SEWER PIPE TRENCH

NOT TO SCALE



NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.
3. ANTI-SEEP COLLARS OR CLAY CHECK DAMS ON STEEP RUNS IN WET CONDITIONS.
4. ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & MUNICIPAL DPW SEWER DIVISION STANDARDS. ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.05 (c)-(e) AND CONFORM WITH ASTM D3034. PVC JOINT SEALS SHALL CONFORM WITH ASTM D3121. SDR-21 PVC FORCE MAIN PIPE MATERIAL IS REQUIRED IN LOCATIONS AS SHOWN. SDR-21 PVC FORCEMAIN PIPE WILL CONFORM TO ENV-WQ 704.08.

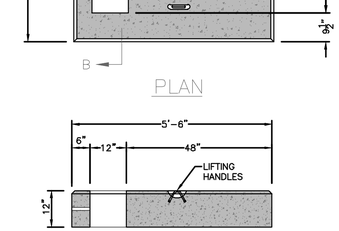
U6



ELECTRICAL, TELEPHONE, AND GAS TRENCH

NOT TO SCALE

U7



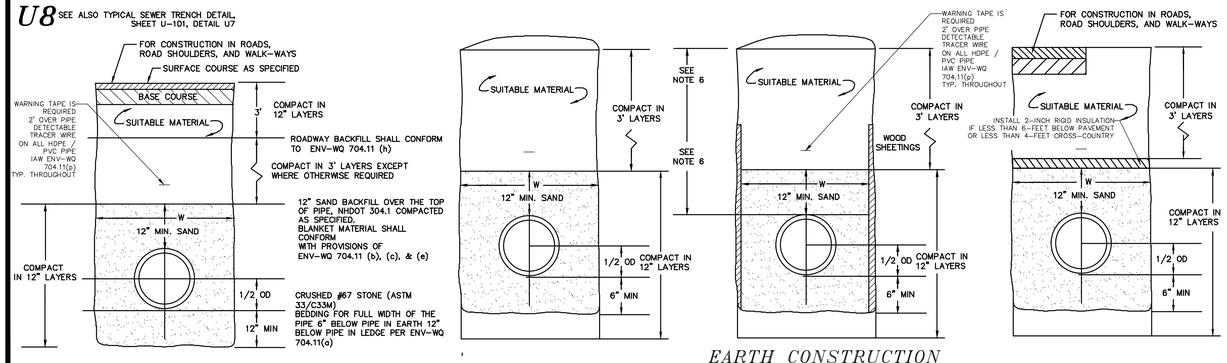
NOTES:
1. CONCRETE MINIMUM STRENGTH 4,000 PSI AFTER 28 DAYS
2. REINFORCEMENT STEEL CONFORMS TO ASTM A615 GRADE 60 #6 REBAR.
3. MEETS OR EXCEEDS EVERSOURCE SPECIFICATIONS.
4. MUST BE A SHEA CONCRETE PRODUCT OR EQUAL.

TRANSFORMER AND PAD DETAIL

NOT TO SCALE

U8

SEE ALSO TYPICAL SEWER TRENCH DETAIL, SHEET U-101, DETAIL U7



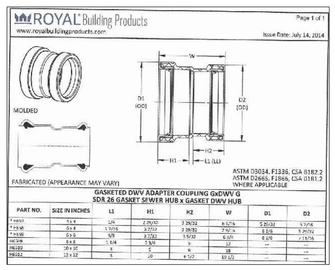
LEDGE CONSTRUCTION — NOT TO SCALE

EARTH CONSTRUCTION — NOT TO SCALE

EARTH CONSTRUCTION WITH SHEETING — NOT TO SCALE

TRENCH INSULATION — NOT TO SCALE

U9



COUPLING DETAIL

NOT TO SCALE

U-101

UTILITY DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

REVISION	DATE	DESCRIPTION

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

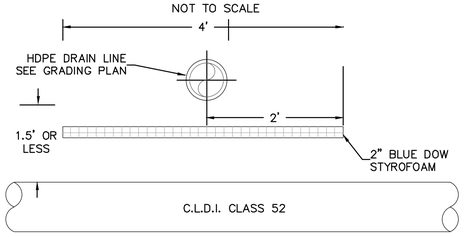
AS NOTED
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE — KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

SHEET 33 OF 36

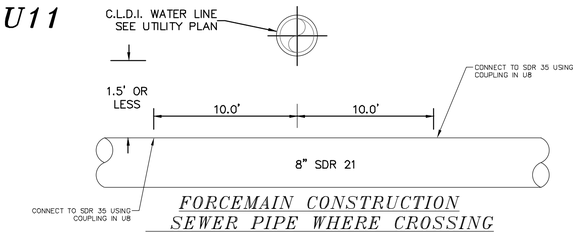
U10 INSULATE WATER PIPE WHERE CROSSING UNDER DRAIN LINE

NOT TO SCALE



NOTE: THIS ONLY APPLIES IF 1.5' OF VERTICAL SEPARATION CAN NOT BE OBTAINED THIS ALSO APPLIES FOR THE REVERSE SITUATION

U11



FORCEMAIN CONSTRUCTION SEWER PIPE WHERE CROSSING UNDER WATER LINE

NOT TO SCALE

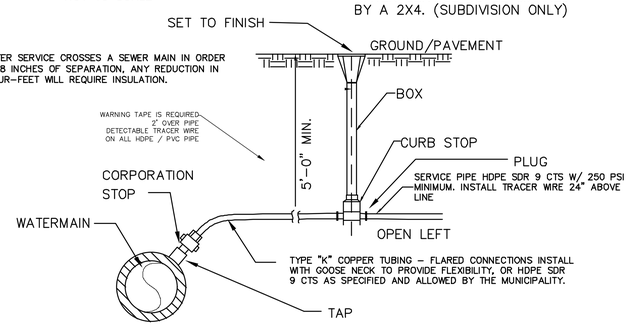
U12

TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

THE END OF THE INSTALLED WATER SERVICE TO BE MARKED BY A 2X4. (SUBDIVISION ONLY)

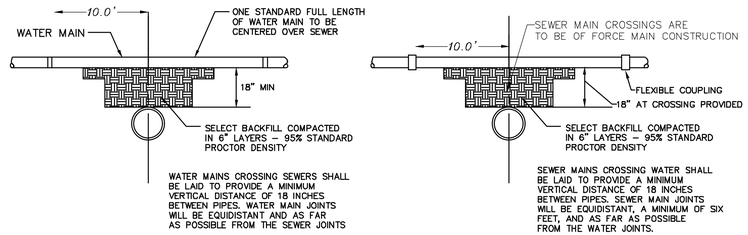
WHERE A WATER SERVICE CROSSES A SEWER MAIN IN ORDER TO PROVIDE 18 INCHES OF SEPARATION, ANY REDUCTION IN DEPTH TO FOUR-FEET WILL REQUIRE INSULATION.



U13

SEPERATION NOTES:

1. WATER MAIN SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR WATER WORKS" SO-CALLED TEN STATE STANDARDS AND NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL DESIGN STANDARDS, ENV-WQ 700 ADOPTED OCTOBER 14, 2014.
2. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THEN THE PIPES SHALL BE INSTALLED IN A SEPARATE TRENCH AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
3. VERTICAL SEPARATION REQUIREMENTS APPLY TO WATER AND SEWER MAINS AND SERVICE LINES. WHERE SEWER CROSSES WATER MAIN AND WATER SERVICE CROSSES SEWER MAIN, 18 INCH VERTICAL CLEARANCE SHALL BE PROVIDED WITH WATER OVER SEWER.



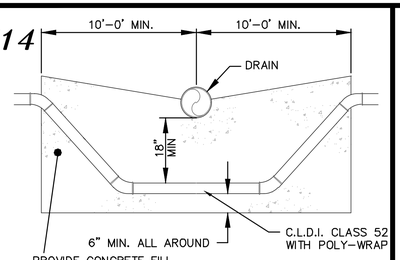
WATER MAIN ABOVE SEWER

WATER MAIN BELOW SEWER

TYPICAL WATER/SEWER SEPERATION DETAILS

NOT TO SCALE

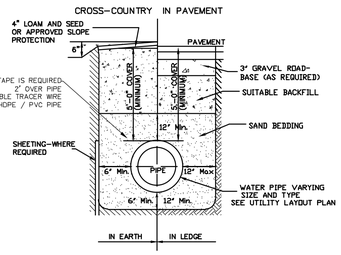
U14



WATER MAIN INSTALLATION - BELOW DRAIN & SEWER

NOT TO SCALE

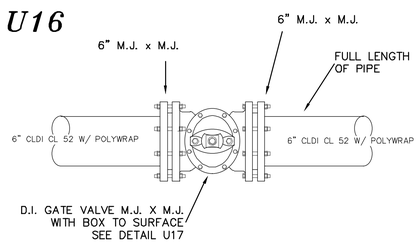
U15



TYPICAL TRENCH DETAIL FOR WATER SYSTEM

NOT TO SCALE

U16



SHUTOFF VALVE DETAIL

NOT TO SCALE

1.) ALL VALVES ARE TO OPEN RIGHT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

U17

TYPICAL THRUST BLOCKS

NOT TO SCALE

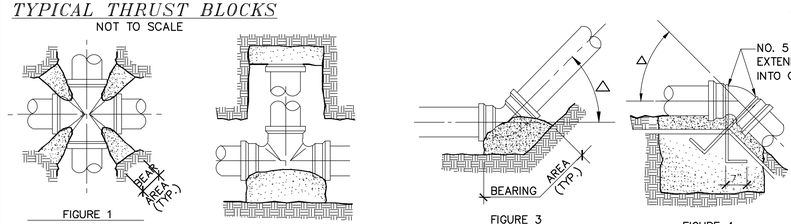


FIGURE 1 CROSS (ONLY REQ'D IF ANY LEG IS LESS THAN 60 FT. LONG)

FIGURE 2 TEE, PLUG OR CAP

FIGURE 3 HORIZONTAL OR UPWARD VERTICAL BEND

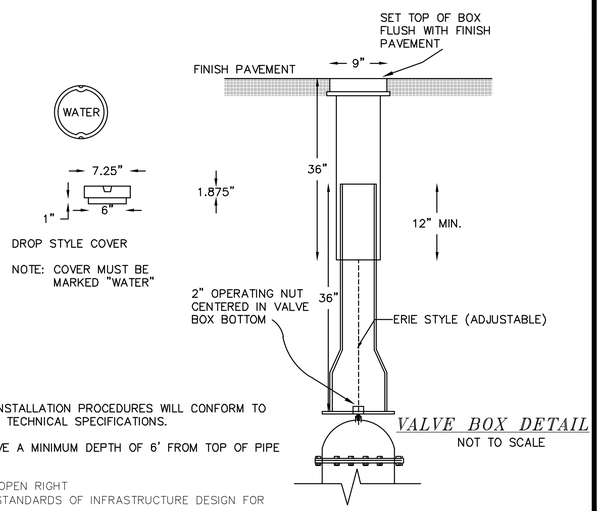
FIGURE 4 DOWNWARD VERTICAL BEND

PIPE I.D.	BEARING AREA, SQUARE FEET						VOLUME OF CONC. CU.YD		
	FIGURE 1	FIGURE 2	FIGURE 3, △				FIGURE 4, △		
			90°	45°	22-1/2°	11-1/4°	45°	22-1/2°	11-1/4°
4"	2	2	2	1	1	1	1.0	.5	.5
6"	2	3	3	2	1	1	1.5	1.0	.5
8"	2	5	6	3	2	1	2.0	1.0	.5
10"	3	7	10	5	3	1	4.0	2.0	1.0
12"	3	10	14	8	4	2			
14"	4	14	20	10	5	3			
16"	4	20	24	12	7	4			
18"	5	24	30	16	10	5			
20"	5	28	40	20	12	6			

GENERAL NOTES:

1. ALL FITTINGS & EXPOSED REBAR TO BE RAPPED W/ TWO LAYERS OF 6 MIL. POLYETHYLENE WHERE COVERED WITH CONCRETE.
2. ALL CONCRETE SHALL BE CLASS C 3000 P.S.I. MINIMUM 28 DAYS COMPRESSIVE STRENGTH.
3. PLACE CONCRETE AGAINST UNDISTURBED EARTH.
4. TABLE DENOTES MINIMUM BEARING AREA OR VOLUME OF THRUST BLOCK. SPECIAL DESIGN FOR EACH INSTALLATION IS REQUIRED IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 P.S.F.
5. VERTICAL SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.
6. KEEP CONCRETE AWAY FROM FLANGE BOLTS AND FITTINGS.
7. MECHANICAL JOINTS AT ALL FITTINGS IE: BENDS, TEES, CROSSES, AND VALVES SHALL BE THRUST RESTRAINT. (MEGA-LUG OR APPROVED EQUAL.

U18



VALVE BOX DETAIL

NOT TO SCALE

NOTES:

1.) ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO LOCAL WATER WORKS TECHNICAL SPECIFICATIONS.

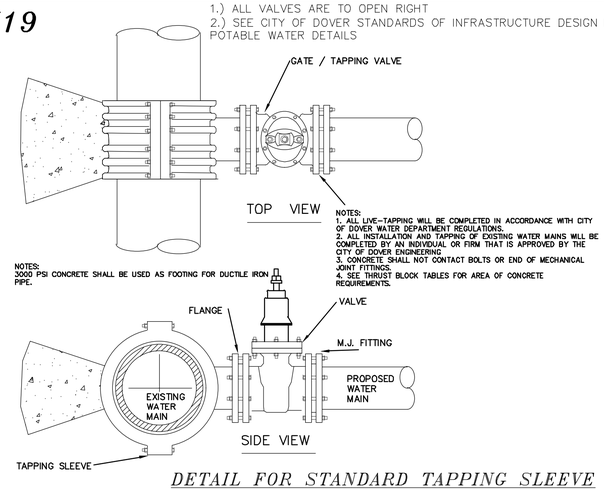
2.) ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 6' FROM TOP OF PIPE TO FINISH GRADE.

3.) ALL VALVES ARE TO OPEN RIGHT

4.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

U19

1.) ALL VALVES ARE TO OPEN RIGHT
2.) SEE CITY OF DOVER STANDARDS OF INFRASTRUCTURE DESIGN FOR POTABLE WATER DETAILS

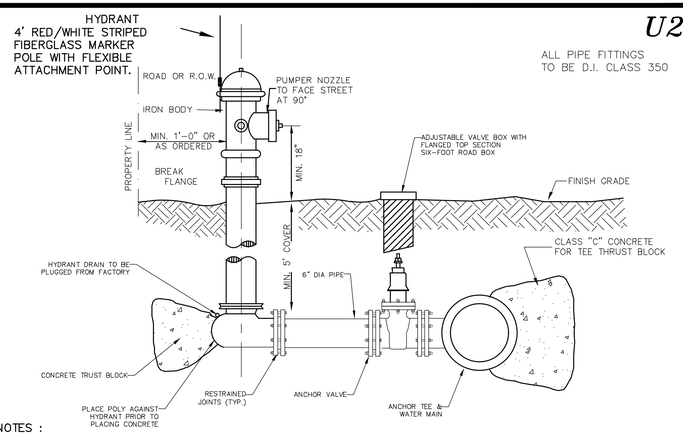


DETAIL FOR STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

NOT TO SCALE

U20

ALL PIPE FITTINGS TO BE D.I. CLASS 350



NOTES :

1.) THE FIRE HYDRANT IS TO BE PAINTED CITY OF DOVER STANDARD COLORS AND BE EQUIPPED WITH A HYDRANT LOCATOR.

2.) THE FIRE HYDRANT SHALL BE THE "EDDY" TYPE.

3.) GATE VALVES OPEN LEFT.

HYDRANT INSTALLATION DETAIL

NOT TO SCALE

U-102

REVISION	DATE	DESCRIPTION

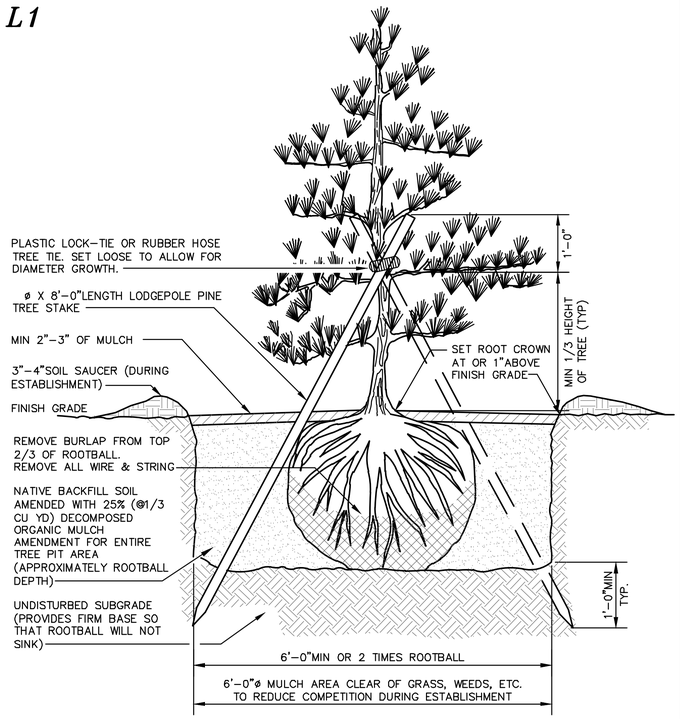
UTILITY DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS NOTED
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

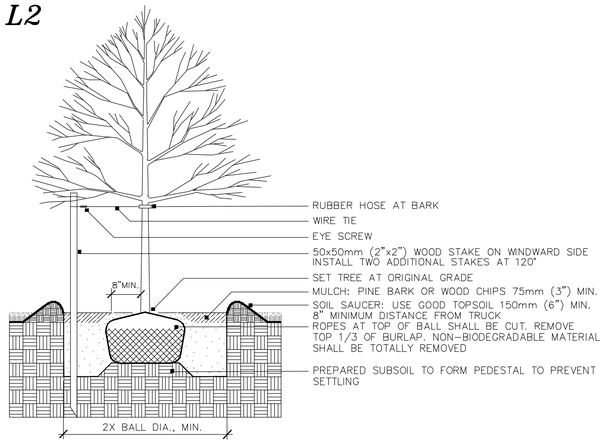
STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

L1



CONIFEROUS TREE PLANTING

L2



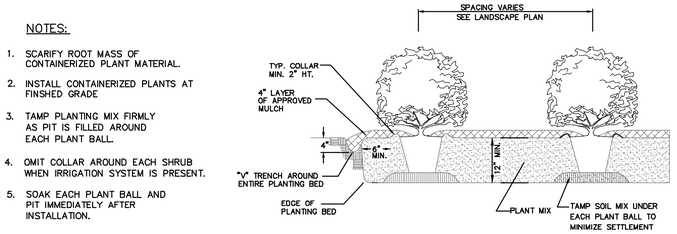
DECIDUOUS TREE PLANTING

NOTE: STAKING TO BE USED IN PARKING ISLANDS AND OTHER CONFINED AREAS AS NECESSARY TO AVOID CONFLICTS WITH PEDESTRIANS

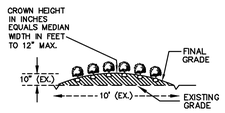
L3

NOTES:

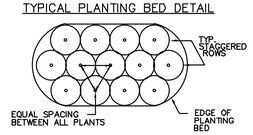
1. SCARIFY ROOT MASS OF CONTAINERIZED PLANT MATERIAL.
2. INSTALL CONTAINERIZED PLANTS AT FINSHED GRADE
3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
4. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
5. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



TYPICAL PLANTING BED DETAIL



TYPICAL BED CROWNING

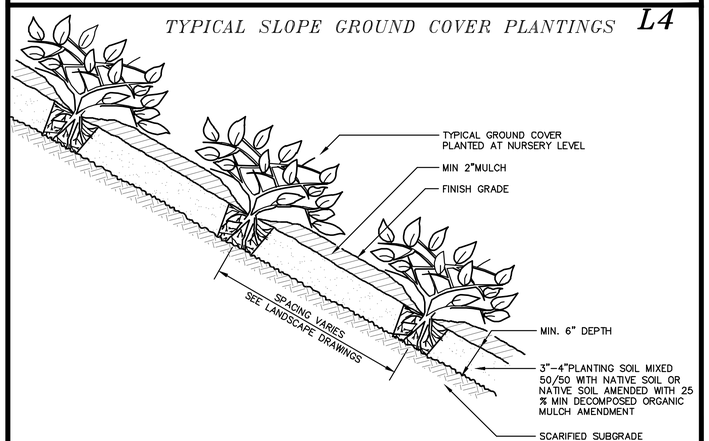


TYPICAL PLANTING BED PLAN

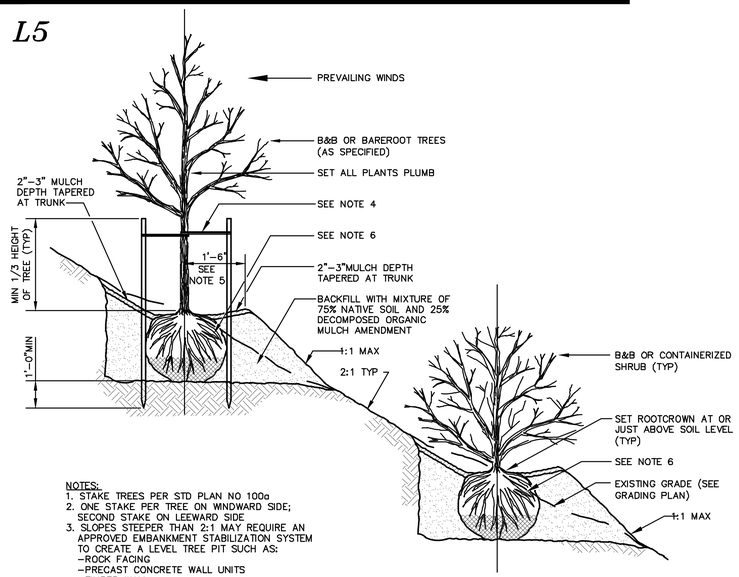
SHRUB & HEDGE PLANTING

L4

TYPICAL SLOPE GROUND COVER PLANTINGS



L5



NOTES:
1. STAKE TREES PER STD PLAN NO 100a
2. ONE STAKE PER TREE ON WINDWARD SIDE; SECOND STAKE ON LEEWARD SIDE
3. SLOPES STEEPER THAN 2:1 MAY REQUIRE AN APPROVED EMBANKMENT STABILIZATION SYSTEM TO CREATE A LEVEL TREE PIT SUCH AS:
   - -ROCK FACING
   - -PRECAST CONCRETE WALL UNITS
   - -TIMBER WALL
   - -MANUFACTURED SLOPE RETENTION UNITS
4. CHAINLOCK TREE TIE. LOOP EACH TIE AROUND TREE LOOSELY TO PROVIDE 1" SLACK FOR DIAMETER GROWTH.
5. SHAPE SOIL TO PROVIDE 3' DIAMETER OR ROOTBALL DIAMETER, WHICHEVER IS GREATER, WATERING RING.
6. REMOVE ALL WIRE AND STRING. REMOVE TOP 2/3 OF BURLAP.

TREE PLANTING ON SLOPES

L6

NOTES:

1.) CALL DIG SAFE PRIOR TO BEGINNING WORK. (1-888-344-7233). THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF THE SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER OR GENERAL CONTRACTOR.

2.) CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.

3.) PROVIDED SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.

4.) ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

5.) ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS AND DISEASE.

6.) ALL PLANTINGS SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM OWNER.

7.) ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.

8.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND NEWLY PLANTED TREES AND SHRUBS DURING THE CONSTRUCTION PROCESS. WHERE REQUIRED, THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING (SNOW OR EQUAL) AROUND EXISTING TREES AND SHRUBS THAT COULD BE IMPACTED BY THE CONSTRUCTION PROCESS. STORAGE OF CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS, SNOW STORAGE AND OR VEHICLE PARKING SHALL NOT BE PERMITTED WITHIN THE DRIP LINE OF TREES OR TWENTY FEET WHICH EVER IS GREATER.

9.) NEW PLANTINGS SHALL BE INSTALLED PER PROJECT DRAWINGS AND SPECIFICATION THAT INCLUDE FERTILIZATION AND MULCHING AS REQUIRED.

10.) ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH.

11.) WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.

12.) MAINTENANCE OF NEW PLANTINGS AND LAWNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND OR LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE OWNER. RESPONSIBILITIES SHALL INCLUDE WATERING WEEDING AND MOWING AS NECESSARY. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, REPLACEMENT MATERIAL SHALL BE GUARANTEED FOR AND ADDITIONAL YEAR FROM TIME OF INSTALLATION.

13.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL MEASURES DURING THE CONSTRUCTION PHASE AND UNTIL ALL AREAS HAVE BEEN STABILIZED AND ACCEPTED BY THE OWNER. THE GENERAL CONTRACTOR SHALL PROVIDE WEEKLY INSPECTIONS OF EROSION MEASURE AND IMMEDIATELY AFTER STORM EVENTS AND REPAIR AS NECESSARY.

14.) THE GENERAL CONTRACTOR AND OR THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL THREE GUYING MATERIAL ONCE PLANT MATERIAL HAS BEEN ESTABLISHED. (MINIMUM OF ONE GROWING SEASON). ALL TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE STABILIZATION OF DISTURBANCE HAS BEEN ACCEPTED BY OWNER.

15.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF TWO MOWINGS FOR ALL TURF AREAS OR UNTIL ACCEPTANCE BY THE OWNER. A MINIMUM UNIFORM 75% CATCH OF TURF IS REQUIRED FOR ACCEPTANCE.

16.) ALL PLANTINGS SHALL BE WATERED REGULARLY DURING THEIR FIRST YEAR AND MAINTAINED PERMANENTLY IN GOOD GROWING CONDITION AS AN EFFECTIVE VISUAL SCREEN.

17.) SHRUBS OR TREES WHICH DIE SHALL BE REPLACED WITHIN ONE GROWING SEASON WITH NEW SHRUBS OR TREES TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE LANDSCAPING REQUIREMENTS.

18.) ALL REQUIRED LANDSCAPING SHALL BE INSTALLED BEFORE OCCUPANCY, OR WITHIN SIX MONTHS IF OCCUPANCY OCCURS DURING WINTER CONDITIONS.

19.) TREES ARE TO BE 3.5" CALIPER 6" OFF THE ROOT BALL.

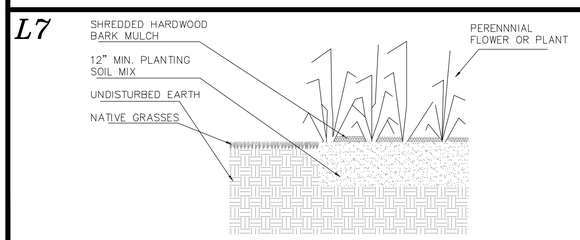
20.) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITIONS (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)

21.) 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUND COVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.

22.) PLANT-PIT BACK-FILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PARTS OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON-SITE TOPSOIL AS PART OF BACK FILL WHEN AVAILABLE.

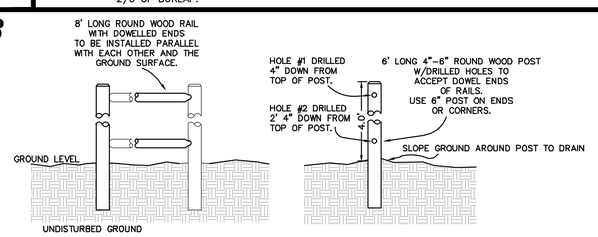
23.) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.

L7



PERENNIAL PLANTING DETAIL

L8



TYPICAL POST & RAIL FENCE DETAIL

NOT TO SCALE

REVISION	DATE	DESCRIPTION

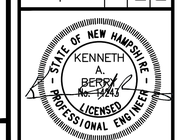
LANDSCAPING DETAILS
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

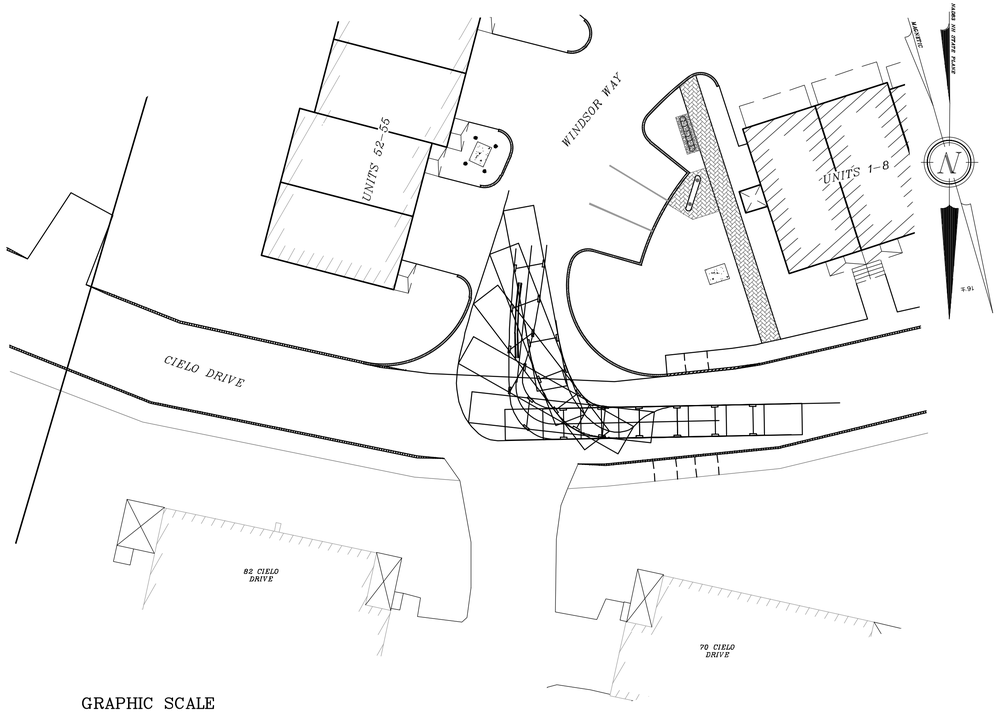
AS NOTED

DATE : APRIL 7, 2022

FILE NO. : DB 2021-002



L-101

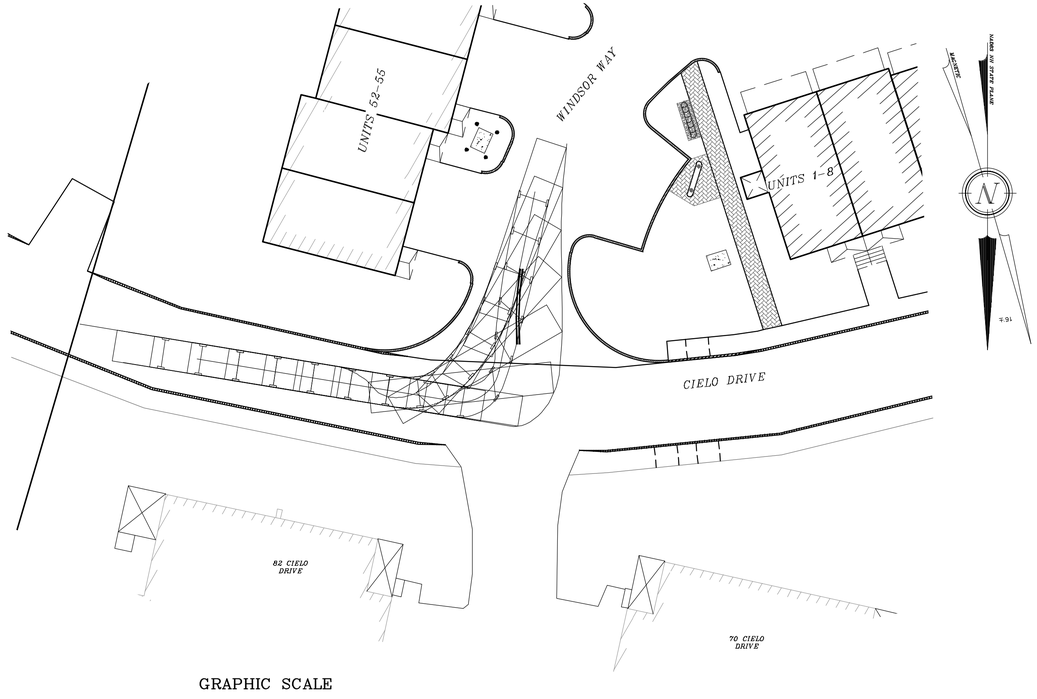


GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

TRUCK TURNING ENTRANCE RIGHT

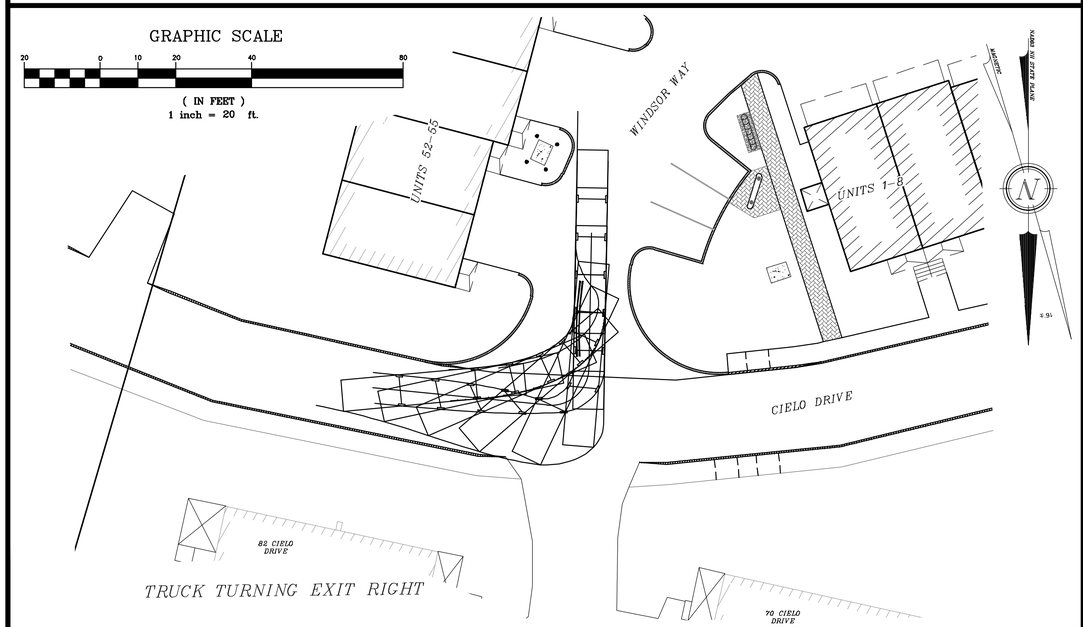


GRAPHIC SCALE

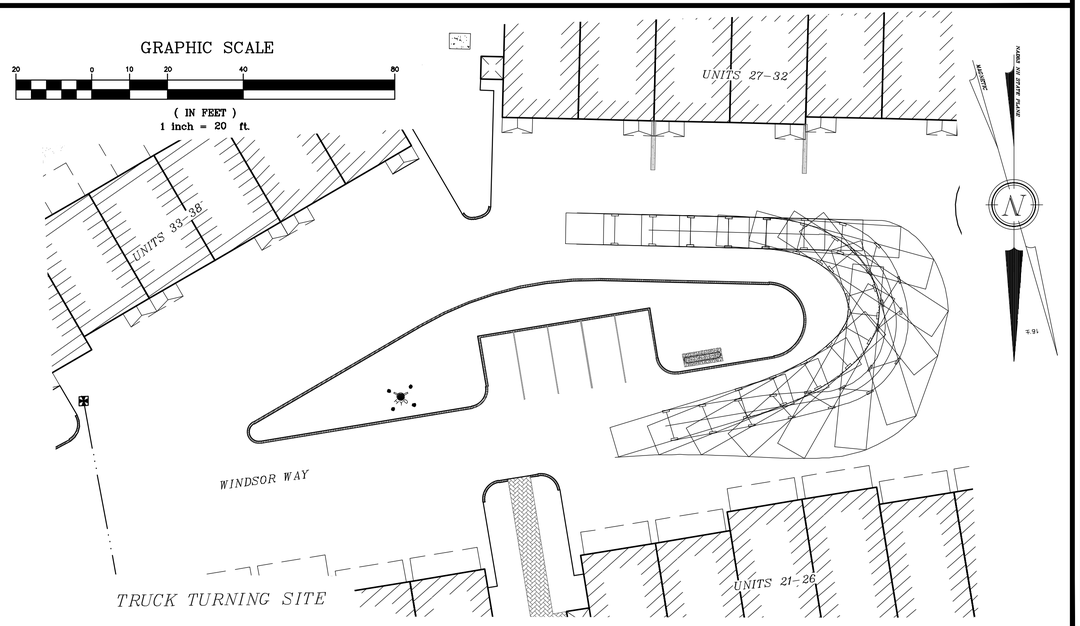
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

TRUCK TURNING ENTRANCE LEFT



TRUCK TURNING EXIT RIGHT



TRUCK TURNING SITE

REVISION	DATE	DESCRIPTION

DOVER T-1 FIRE TRUCK TRUCK TURNING WINDSOR WAY
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14240
LICENSED PROFESSIONAL ENGINEER

DRAINAGE ANALYSIS
&
EROSION & SEDIMENT CONTROL PLAN

Prepared for:

Heron Bay Partners, LLC.
42 Central Ave.
Dover, NH 03820

Land of:

Heron Bay Partners, LLC.

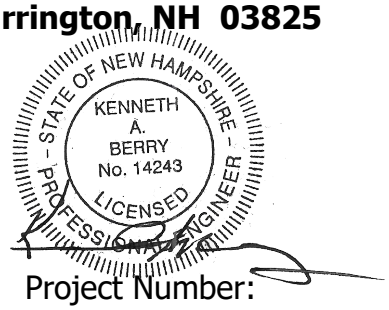
Cielo Drive
Dover, NH 03820

LOCATION

Tax Map H, Lot 4

Prepared by:

Berry Surveying & Engineering
335 Second Crown Point Road
Barrington, NH 03825



Project Number:
DB 2021-002

April 7, 2022

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Appendix I – Pre-Existing Conditions Analysis

25 Yr-24 Hr. Full Summary

Appendix II - Existing Conditions Analysis

25 Yr-24 Hr. Full Summary
2 Yr- 24 Hr Node Listing
10 Yr -24 Hr. Node Listing
25 Yr-24 Hr. Node Listing
50 Yr-24 Hr. Node Listing

Appendix III - Proposed Conditions Analysis

25 Yr-24 Hr. Full Summary
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Extreme Precipitation Tables
Rip Rap Calculations
NCRS USDA Web-soil Map
Inspection and Maintenance Manual Stormwater System Management
Watershed Report Card, 303(d) List, & ORW List

Enclosed: W-1 Sheet Pre-Existing Conditions Watershed Plan
W-2 Sheets Existing Conditions Watershed Plans Sheets 1-5
W-3 Sheets Post Construction Watershed Plans Sheets 6-10
Erosion & Sediment Control Plan

DESIGN METHOD OBJECTIVES

The owner / developer of Tax Map H, Lot 4, Heron Bay Partners, LLC, is proposing to expand the development of the property on Cielo Drive from the current state of development (which was constructed under Alteration of Terrain Permit #AoT-0189.).

A Pre-Existing Conditions Analysis (W-1) was completed for the property based on the data on public record at NHDES Alteration of Terrain (AoT). The purpose for the Pre-Existing Conditions Analysis was to maintain the subcatchment dividing lines which resulted in the analysis of peak rates of runoff and volume at the five-analysis points along the southern property line, which have been maintained.

The record analysis was completed based on Administrative Rules and Regulations in effect prior to 2008, although the approval is dated in 2010. The rainfall data use for storm events, likewise, pre-date the current Extreme Precipitation standards. The Pre-Existing Conditions Drainage Analysis provided in Appendix I is provided to compare the record analysis to the current standards. This analysis also represents more current analysis methodologies.

Both an Existing (W-2) and Proposed (W-3) Conditions analysis were conducted for the purpose of estimating the peak rate of stormwater run-off and to subsequently design adequate mitigation of drainage. There are five existing drainage discharge points which were identified in the pre-existing analysis and duplicated in the proposed analysis. Designing two watershed models we have compared the differences in these rates of peak run-off and surface water volume. Sheet W1, Existing Conditions Watershed Plan, outlines the characteristics of the site in its existing or pre-construction conditions. The second analysis displays the proposed (post-construction) conditions (See Sheet W2). The analysis was conducted using data for; 2 Yr-24 Hr (3.62”), 10 Yr-24 Hr (5.46”), 25 Yr-24 Hr (6.91”), 50 Yr-24 Hr (8.26”), and 100 YR-24 Hr (9.87”) storm events. Storm event analysis was accomplished using the USDA SCS TR-20 method within the HydroCAD Stormwater Modeling System environment. Rainfall quantities are based on the Extreme Precipitation Table for this location from the Northeast Regional Climate Center / Cornell University (http://precip.eas.cornell.edu). Dover is considered a part of the Coastal Region, and therefore a 15% escalation of rain fall depths has been applied to this application, reflected in the totals above.

1.0 Pre-Existing Conditions Analysis:

Reference: Sheet W1 – Pre-Existing Conditions Watershed Plan (Enclosed)
TFM Existing Conditions Plan (AoT #0189)

The pre-existing parcel was vacant land at the time of analysis. The soils within the development area are made up of multiple soil types, containing Hydrologic Soil Group (HSG) A & C. The soils were analyzed utilizing the USDA / NRCS Soils Study. The land cover types involved are grassed land, woods, roofs, and road pavement.

The land area analyzed consists of 74.54 acres, of which 34.44 acres of land make up the locus parcel. The watershed was been divided into six subcatchments which drain to five separate analysis points to the south and southeast of the parcel.

The Johnson Creek – Gerrish Brook (NHRIV600030902-13) watershed will receive all of the runoff from the site either directly or indirectly. The impairment of the watershed are as follows:

Mercury, NE Regional Mercury TMDL, December 20, 2008, TMDL #33883
Escherichia coli, Bacteria, NH Statewide Bacteria, 9-21-2010, TMDL #39273
pH, Low Priority, Non-ORW.

The following five analysis points were utilized in the Pre-Existing Conditions Analysis and will be maintained through the current analysis.

Final Reach #100

Subcatchment #1 consists largely of offsite land area to the east of the parcel as well as one of the proposed entrance areas. Runoff in this subcatchment flows south to an offsite point being analyzed as **Final Reach #100**.

Final Reach #200

Subcatchment #2 consists of a portion of land including the second proposed entrance area and extending in toward the middle of the locus parcel. Runoff flows south to a nonpoint discharge being analyzed as **Final Reach #200**.

Final Reach #300

Subcatchment #3 consists of land toward the middle of the parcel, including offsite land to the north and south. Runoff flows south to a nonpoint discharge which is being analyzed as **Final Reach #300**.

Final Reach #400

Subcatchment #4 consists of a large portion of land through the western side of the parcel and the surrounding offsite land. Runoff flows south to a nonpoint discharge being analyzed as **Final Reach #400**.

Final Reach #500

Subcatchment #5 consists of largely offsite land including a small portion of onsite land along the western edge of the parcel. Runoff flows to the river and is being analyzed at **Reach #500**. Runoff is also received from **Subcatchment #15** through an overland reach (**Reach #15**) flowing through the wetlands to **Final Reach #500**.

Subcatchment #15 is made up of exclusively offsite land to the west of the parcel. Runoff flows south through **Subcatchment #5** to **Final Reach #500** through an overland reach (**Reach #15**). This subcatchment is analyzed in this way so that we may better analyze and show the effects the development would have on the surrounding runoff.

Note: The methodology utilized in the 2006 / 2010 analysis, by others, included the division of Subcatchments #1 through #5 into additional subcatchments based on the proposed conditions that were being contemplated. It is current methodology to utilize the terrain at face value and not generate artificial subcatchments, as a result this further subdivision was not carried through this Pre-Existing Conditions Analysis. The five evaluation points along the southern boundary line appear to have been derived from conditions and ownership along that boundary line and the five analysis divisions were preserved.

2.0 Existing Conditions Analysis:

Reference: Sheet W2 - Existing Conditions Watershed Plan (Enclosed)
BS & E Existing Conditions Plan

The current state of development of the parcel includes a variety of single family, duplex, and triplex structures for a total of 64 dwelling units as well as a total of 2,980 linear feet of roadway (constructed under Alteration of Terrain permit #AoT-0189}. Drainage is mitigated by a detention pond and a system of catch basins and drain manholes. The runoff culminates at a detention basin with infiltration above a specific elevation.

A Site Specific Soil Survey was conducted by John P. Hayes III, (CSS #87) to analyze the soils in the area of proposed construction. The Soils were found to consist of soil types within hydrologic soil groups (HSG) A&C (See included Site Specific Soil Report for more information).

Subcatchment #1 is included in this analysis due to the minor change in subcatchment size and shape as a result of the construction of Cielo Drive. With the construction of Hannaford and other structures drainage is mitigated by other practices unrelated to Cielo Drive, therefore those changes and practices were not considered in this analysis and the state of subcatchment #1 in the pre-existing analysis has been preserved throughout.

Final Reach #100

Subcatchment #1 is somewhat decreased in size by the proposed construction of Cielo Drive and a portion of the related buildings. Runoff still drains to **Final Reach #100**.

Final Reach #200

Subcatchment #2 is moderately decreased in size due to the construction of Cielo Drive and multiple residential buildings. Runoff still flows to **Final Reach #200**.

Final Reach #300

Subcatchment #3 is considerably reduced in size by the proposed construction of Cielo drive, residential buildings, and the main drainage practice (**Detention Pond #900**). Runoff continues to flow to **Final Reach #300**.

Subcatchments #148G & 148R are made up of an area of land to the west of the entrance to Cielo Drive. Runoff flows to a pair of catch basins (**Ponds #148G & 148R** respectively). Runoff flows through the upper east trunk line through catch basins and drain manholes, eventually to **Pond #900**.

Subcatchments #303G & 304R are made up of an area of land further down Cielo Drive and the land surrounding the proposed commercial building near the entrance of Cielo Drive. Runoff flows to a pair of catch basins (**Ponds #303G & 304R** respectively). Runoff flows through a portion of the upper east trunk line through catch basins and drain manholes, eventually to **Pond #900**.

Subcatchment #390G is made up of a large portion of land behind a number of the residential buildings along the north side of Cielo Drive. Runoff flows to a catch basin (**Pond #390G**). Runoff flows through a portion of the upper east trunk line through catch basins and drain manholes, eventually to **Pond #900**.

Subcatchment #402G is made up of an area of land further down Cielo Drive, just before the residential area. Runoff flows to a catch basin (**Pond #402G**). Runoff flows through a portion of the upper east trunk line through catch basins and drain manholes, eventually to **Pond #900**.

Subcatchments #419L & 419R are made up of an area of land further down Cielo Drive including portions of the residential buildings on either side of the road (**Subcatchment #419L** includes a majority of the left side of the road extending down from the entrance of Cielo Drive). Runoff flows to a pair of catch basins (**Ponds #419L & 419R** respectively). Runoff flows through a portion of the upper east trunk line through catch basins and drain manholes, eventually to **Pond #900**.

Subcatchments #1295G, 1295L & 1295R are made up of an area of land further down Cielo Drive extending to the high point in the roadway west of **Subcatchments #857L & 857R**. This includes the land surrounding the roadside portions of the proposed residential buildings along Cielo Drive and a small area of grassed land between two residential buildings. Runoff flows to a trio of catch basins (**Ponds #1295G, 1295L & 1295R** respectively). Runoff flows through the upper west trunk line through catch basins and drain manholes, eventually to **Pond #900**.

Subcatchments #857L & 857R are made up of an area of land west of **Subcatchments #419L & 419R**. This includes the land surrounding the roadside portions of the proposed residential buildings along Cielo Drive. Runoff flows to a pair of catch basins (**Ponds #857L & 857R** respectively). Runoff flows through a portion of the upper west trunk line through catch basins and drain manholes, eventually to **Pond #900**.

Subcatchment #Y01 consists of the majority of the central land area within Cielo Drive as well as portions of the residential roofs. Runoff flows to a small yard drain (**Pond #Y01**) and is directed to **Pond #900** through part of the upper trunk line.

Subcatchment #100 is made up of a very small area of land and a portion of the roof of a single residential building. Runoff is collected in a catch basin (**Pond #C100**) and directed to **Pond #900** through part of the upper trunk line.

Subcatchments #3018G, 3020L & 3020R are made up of an area of land encompassing the lower entrance of Cielo Drive and a portion of the existing residential buildings adjacent to the eastern end of the proposed development expansion. Runoff flows to a trio of catch basins (**Ponds #3018G, 3020L & 3020R** respectively) which contribute runoff directly to **Pond #900**.

Subcatchments #1643L & 1643R are made up of an area of land along Cielo Drive including portions of the residential buildings on either side of the road. Runoff flows to a pair of catch basins (**Ponds #1643L & 1643R** respectively). Runoff flows through the lower trunk line through a series of drain manholes and catch basins eventually to **Pond #900**.

Subcatchments #1785L & 1785R consist of an area of land along Cielo Drive including portions of the residential buildings on either side of the road. Runoff flows to a pair of catch basins (**Ponds #1785L & 1785R** respectively). Runoff flows through a portion of the lower trunk line through a series of drain manholes and catch basins eventually to **Pond #900**.

Subcatchments #1928L & 1928R consist of an area of land along Cielo Drive including portions of the residential buildings on either side of the road. Runoff flows to a pair of catch basins (**Ponds #1928L & 1928R** respectively). Runoff flows through a portion of the lower trunk line through a series of drain manholes and catch basins eventually to **Pond #900**.

Subcatchment #1979R consists of a small portion of land at the end of the corner of Cielo Drive. Runoff flows to catch basin (**Pond #1979R**) and is directed to **Pond #900** through part of the lower trunk line.

Subcatchments #2173L & 2173R consist of an area of land along Cielo Drive including portions of the residential buildings on either side of the road. Runoff flows to a pair of catch basins (**Ponds #2173L & 2173R** respectively). Runoff flows through a portion of the lower trunk line through a series of drain manholes as well as a small StromTech chamber system (**Pond #1100**) eventually to **Pond #900**.

Subcatchments #2460L & 2460R consist of a portion of land along Cielo Drive (**Subcatchment #2460L** includes a portion of the roofs on the left side of the road extending to Cielo Drive). Runoff flows to a pair of catch basins (**Ponds #2460L & 2460R** respectively) before flowing through a pair of drain manholes, eventually to **Pond #900**.

Subcatchment #1000 consists of a large portion of the land area behind the existing houses on the lower part of Cielo Drive. Runoff flows through a natural swale around the outside of the parcel and to a riprap forebay (**Pond #1000**) to treat runoff flowing into part of the lower trunk line to **Pond #900**.

Subcatchments #2610L & 2610R are made up of an area of land along Cielo Drive (**Subcatchment #2610L** includes a portion of the roofs on the left side of the road extending to Cielo Drive). Runoff flows to a pair of catch basins (**Ponds #2610L & 2610R** respectively). Runoff flows through a pair of drain manholes, eventually to **Pond #900**.

Subcatchment #900 consists of the land area directly surrounding and draining to **Infiltration Pond #900**. Runoff that is not infiltrated outlets to **Final Reach #300**.

Final Reach #400

Subcatchment #4 is greatly reduced in size as a result of the proposed construction of multiple residential buildings along and behind Cielo Drive. Runoff continues to flow to **Final Reach #400**.

Final Reach #500

Subcatchment #5 is moderately reduced in size as a result of the proposed construction of multiple residential buildings and Cielo Drive. Runoff still flows to **Final Reach #500**.

Subcatchment #15 & **Reach #15** remain unchanged.

3.0 Proposed Conditions Analysis:

Reference: Sheet W3 - Proposed Conditions Watershed Plan (Enclosed)
Proposed Grading & Drainage Plan

The proposal for development includes 9 buildings for a total of 55 two-bedroom townhouses a total of 1,005 feet of roadway (Windsor Way). The proposal is supported by a porous pavement system to include the clean roof runoff. The existing detention basin (Pond 900) is to be modified the size and volume of the detention basin will be greater than the existing detention basin.

Final Reach #100

Subcatchment #1 is unchanged from the existing state.

Final Reach #200

Subcatchment #2 is marginally decreased in size due to the construction of Windsor Way and multiple residential buildings. Runoff still flows to **Final Reach #200**.

Final Reach #300

All subcatchments within the confines of the construction of Cielo Drive remain unchanged. This includes all stationed catch basin subcatchments (**Subcatchments #148-#3020**) as well as **Subcatchments #100, #1000, & #Y01**.

Subcatchment #21-23 make up the area of land between Cielo Drive and the rear portions of the proposed residential units along the northern side of Windsor Way. Runoff is collected in a series of catch basins (**Ponds #C01-#C03** respectively) and directed to the primary detention pond (**Pond #900**) through a series of drain manholes.

Subcatchment #31 consists of the proposed roadway (Windsor Way), the front portions of a majority of the proposed residential units, and a portion of the surrounding land. Runoff flows to the roadway and into the porous pavement system (**Pond #101**) where it is infiltrated.

Subcatchment #900 and **Pond #900** are marginally decreased in size. The current design proposes a small portion of the practice to be filled in to make room for a number of proposed residential units. The outlet of the pond remains unchanged and runoff still flows to **Final Reach #300**.

Final Reach #400

Subcatchment #4 is reduced in size as a result of the proposed construction of Windsor Way and a number of related residential buildings. Runoff continues to flow to **Final Reach #400**.

Final Reach #500

Subcatchment #5 is unchanged from the existing state.

Subcatchment #15 & **Reach #15** remain unchanged.

Stormwater Treatment:

Treatment takes place within the porous pavement practice designed to support the development on site. The stormwater quality volume capability is treated within provided treatment area of the practice and discharge through infiltration.

See the Infiltration Feasibility Study for details regarding the infiltration practices.

4.0 FULL COMPARATIVE ANALYSIS

ANALYSIS COMPONENT: PEAK RATE DISCHARGE (Cubic Feet / Second)

		2 Yr	10 Yr	25 Yr	50 Yr
Final Reach #100	Existing	4.09	17.48	31.66	46.53
	Proposed	4.09	17.48	31.66	46.53
Final Reach #200	Existing	0.97	3.03	4.98	6.95
	Proposed	1.03	3.06	4.96	6.87
Final Reach #300	Existing	0.00	0.36	0.98	2.65
	Proposed	0.00	0.35	0.91	2.25
Final Reach #400	Existing	0.00	0.04	0.21	0.94
	Proposed	0.00	0.03	0.15	0.67
Final Reach #500	Existing	0.00	0.07	0.44	1.66
	Proposed	0.00	0.07	0.44	1.66

ANALYSIS COMPONENT: VOLUME (Acre Feet)

		2 Yr	10 Yr	25 Yr	50 Yr
Final Reach #100	Existing	0.961	2.935	4.931	7.028
	Proposed	0.961	2.935	4.931	7.028
Final Reach #200	Existing	0.126	0.324	0.512	0.704
	Proposed	0.129	0.324	0.508	0.695
Final Reach #300	Existing	0.000	0.283	0.816	1.552
	Proposed	0.000	0.280	0.800	1.485
Final Reach #400	Existing	0.000	0.023	0.107	0.232
	Proposed	0.000	0.017	0.077	0.165
Final Reach #500	Existing	0.000	0.048	0.248	0.554
	Proposed	0.000	0.048	0.248	0.554

Note: Final Reach #200 has one contributing subcatchment, #2. This subcatchment is reduced in size by 4,257 sq. ft. with the same Time of Concentration. The area being diverted into the proposed development is primarily HSG A and is all within the cover type of grass. The Weighted Curve Number for the subcatchment is changed from 63 in the Existing Condition to 64 in the Proposed Conditions Analysis. It is our opinion that this increase of 0.06 and 0.03 CFS, respectively for the 2 YR and 10 YR – 24 Hr Storm Event, is negligible, especially considering that the area is actually the current site of a detention pond for the property to the east.

5.0 EROSION and SEDIMENT CONTROL PLAN & BEST MANAGEMENT PRACTICES (BMP's)

Reference: Proposed Site Plan and Grading Plan
Erosion & Sediment Control Plan
Erosion & Sediment Control Details

The proposed site development is protected from erosion and the abutting properties are protected from sediment by the use of Best Management Practices as outlined in the New Hampshire Stormwater Manual, Volume 2, Post-Construction Best Management Practices Selection & Design (December 2008, NHDES & US EPA). Any area disturbed by construction will be re-stabilized within 14 days and abutting properties will not be adversely affected by this development. All swales and drainage structures will be constructed and stabilized prior to having run-off directed to them. Reference is also made to the Stormwater System Management: Inspection & Maintenance Manual which has been written specifically for this project and available to the owner.

Perimeter Control (Silt Fence / SiltSoxx / Erosion Control Mix Berm)

The plan set demonstrates the location of perimeter sediment control. The Erosion and Sediment Control Details, Sheet E-101, has the specifications for installation and maintenance of the silt fence, Filtrexx mulch filled SiltSoxx (or approved equal), and Erosion Control Mix Berm. There are locations on the site, for example bio-media rain garden protection, where Silt Soxx protection is specified

Detention Ponds

Description: Detention Ponds are also constructed ponds with the purpose of detaining runoff but not necessarily for infiltration purposes. During construction it is important that the ground surface not be exposed to traffic or construction equipment to preserve the infiltration capabilities of the existing soil. Construction specifications are included in the plan set and New Hampshire Stormwater Manual, Volume 2, 4-3 Treatment Practices, 3B, In-ground Infiltration Basin and Section 4-6, Conveyance Practices, 2. Detention Basins.

Maintenance Considerations:
Infiltration Basins and Detention Ponds should be inspected at least twice annually and following any rainfall event exceeding 0.25 inches in a twenty-four hour period. Maintenance rehabilitation will be conducted as warranted by each inspection. Trash and debris will be removed at each inspection.

On an annual basis the infiltration capabilities need to be confirmed by evaluation the drawdown time. If the infiltration system does not drain within 72-hours following a rainfall event, a qualified professional will assess the condition of the basin to determine

measures required to restore the infiltration function. This is normally the direct result of sediment accumulation which will be removed to restore the filter media ratio.

Also on an annual basis the vegetation should be inspected to ensure healthy condition. Invasive species need to be removed along with dead or diseased vegetation.

Vegetated Stabilization

All areas that are disturbed during construction will be stabilized with vegetated material within 30 days of breaking ground. Construction will be managed in such a manner that erosion is prevented and that no abutter's property will be subjected to any siltation, unless otherwise permitted. All areas to be planted with grass for long-term cover will follow the specification and on Sheet E-102 using seeding mixture C, as follows:

Mixture	Pounds per Acre	Pounds per 1,000 Sq. Ft.
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Conservation Mix

Tall Fescue	15	0.35
Creeping Red Fescue	15	0.35
Annual Ryegrass	5	0.12
Perennial Ryegrass	5	0.12
Kentucky Bluegrass	15	0.35
White Clover	7	0.16
Total	**62**	**1.45**

Conservation Mix will used to stabilize all 2:1 slopes and all land area disturbed within the wetland buffer. (If applicable).

Rain Garden Mix: The grass that is planted within a rain garden bio-filtration system within the bio-media must consist of a combination of warm season grass seed and cold season grass seed in order for the grass to start growing for stabilization and continue growing in the sandy well-drained environment. Planting specification will meet the requirements as outlined in 'Vegetation New Hampshire Sand and Gravel Pits' mix 1 (warm season grasses) (15 lbs/ac) and include annual and perennial rye grass seed (15 lbs/ac); the New England native warm season grass mix (23 lbs/ac) by New England Wetland Plants, Inc.; rain garden mix 180 (15 lbs/ac & 15 lbs/ac of rye) / rain garden grass mix 180-1 (20 lbs/ac & 10 lbs/ac of rye) by Ernst Conservation Seeds; or approved equal.

Detention Pond Mix: The grass that is planted within a Detention Pond will be a mix designed for both inundation and dry conditions such as Ernst Seeds, Retention Basin Floor Mix ERNMX-126.

Stabilized Construction Entrance

A temporary gravel construction entrance provides an area where mud can be dislodged from tires before the vehicle leaves the construction site to reduce the amount of mud and sediment transported onto paved municipal and state roads. The stone size for the pad should be 3" coarse aggregate, and the pad itself constructed to a minimum length of 75' for the full width of the access road. The aggregate should be placed at least six inches thick. A plan view and profile are shown on Sheet E-101- Erosion & Sediment Control Detail Plan. (If applicable).

Environmental Dust Control

Dust will be controlled on the site by the use of multiple Best Management Practices. Mulching and temporary seeding will be the first line of protection to be utilized where problems occur. If dust problems are not solved by these applications, the use of water and calcium chloride can be applied. Calcium chloride will be applied at a rate that will keep the surface moist but not cause pollution.

Vegetated Filter Strips / Buffers

Filter strips are areas of land with natural or planted vegetation designed to receive sheet run-off from up gradient development. These natural areas, preferably wooded, are effective in removing sediment and sediment-laden pollutants from such run-off, although their effectiveness is severely diminished when forced to deal with concentrated flow and must therefore be equipped with a level-spreading device. Filter strips should not have a slope exceeding fifteen percent and have a minimum length of seventy-five feet. Each buffer is individually specified and limits are located on the Sediment & Erosion Control Plan

Drainage Swales / Stormwater Conveyance Channels

Drainage swales will be stabilized with vegetation for long term cover as outlined below, and on Sheet E-102 using seed mixture C. As a general rule, velocities in the swale should not exceed 3.0 feet per second for a vegetated swale although velocities as high as 4.5 FPS are allowed under certain soil conditions (If applicable).

Construction Sequence

1. Cut and remove trees in construction area only as required.

2. Construct and/or install temporary and permanent sediment erosion and detention control facilities as required.

3. Erosion, sediment and detention control facility shall be installed & stabilized prior to any earth moving operation & or directing runoff to them.

4. Clear, cut and dispose of debris in approved facility.

5. Construct temporary culverts as required, or directed.

6. Construct roadways for access to desired construction areas. All roads shall be stabilized immediately.

7. Start building construction

8. Detention basin modifications and drainage pipes being rerouted will required to be a priority in the construction order. The existing drainage to Cielo Drive must be maintained at all times. See the Demolition Plan and Detention basin Dewatering Plan for details. Install pipe and construction associated appurtenances as required or directed. Install rain gardens. All disturbed areas shall be stabilized immediately after grading (3 days).

9. Begin permanent and temporary seeding and mulching. All cut and fill slopes and disturbed areas shall be seeded or mulched as required, or directed. No area is allowed to be disturbed for a length of time that exceeds 45 days before being stabilized. Daily, or as required. All roadways and parking areas shall be stabilized within 72 hours of achieving finished grades. All cut and fill slopes shall be stabilized within 72 hours of achieving finished grades.

10. Construct temporary berms, drains ditches, silt fences, sediment traps, etc. mulch and seed as required. Install footings and pour concrete foundations.

11. Inspect and maintain all erosion and sediment control measures during construction.

12. Complete permanent seeding and landscaping. Vertical construction may begin after the

13. Remove temporary erosion control measures after seeding areas have established themselves and site improvements are complete.

14. Smooth and revegetate all disturbed areas.

15. Finish paving all roadways.

Temporary Erosion Control Measures

1. The smallest practical area of land shall be exposed at any one time.

2. Erosion, sediment control measures shall be installed as shown on the plans and at locations as required, or directed by the engineer.

3. All disturbed areas shall be returned to original grades and elevations. Disturbed areas shall be loamed with a minimum of 4" of loam and seeded with not less than 1.10 pound of seed per 1,000 square feet (48 pounds per acre) of area.

4. Silt fences and other barriers shall be inspected periodically and after every rainstorm during the life of the project. All damaged areas shall be repaired, sediment deposits shall periodically be removed and properly disposed of.

5. After all disturbed areas have been stabilized, the temporary erosion control measures are to be removed and the area disturbed by the removal smoothed and re-vegetated.

6. Areas must be seeded and mulched within 5 days of final grading, permanently stabilized within 15 days of final grading, or temporarily stabilized within 30 days of initial disturbance of soil.

Inspection and Maintenance Schedule

Fencing (if used) will be inspected during and after storm events to ensure that the fence still has integrity and is not allowing sediment to pass. Depending on SWPPP criteria, all controls will be inspected either once every 7 days and after storm events. Inspection reports must be submitted to City of Dover Community Services, Engineering Department. See also Stormwater System Management: Inspection & Maintenance Manual published separately also by Berry Surveying & Engineering. See also Storm Water Pollution Prevention Plan (SWPPP) developed in accordance with EPA NPDES requirements & the City of Dover Stormwater regulations. In accordance with the City of Dover Site Plan Review Ordinance and US EPA 2022 Construction General Permit, Inspections will be conducted by a qualified person as defined by both the City of Dover and EPA. This requirement includes Erosion and Sediment Control Education and Professional Certification.

Corrective Action measures will be made in accordance with SWPPP requirements and records maintained on site by the Contractor.

6.0 CONCLUSION

Peak rates of runoff are modeled to be equal or reduced in the post-construction analysis / condition, as compared to the pre-construction peak rates of runoff during all major storm events due to the installation of the low impact development stormwater devices. There is an insignificant increase to one of the five final reaches in the minor storm events. The comparative volume is compliant with AoT Standards with only a 0.003 Acre-feet increase in the 2 Year – 24 Hour storm event.

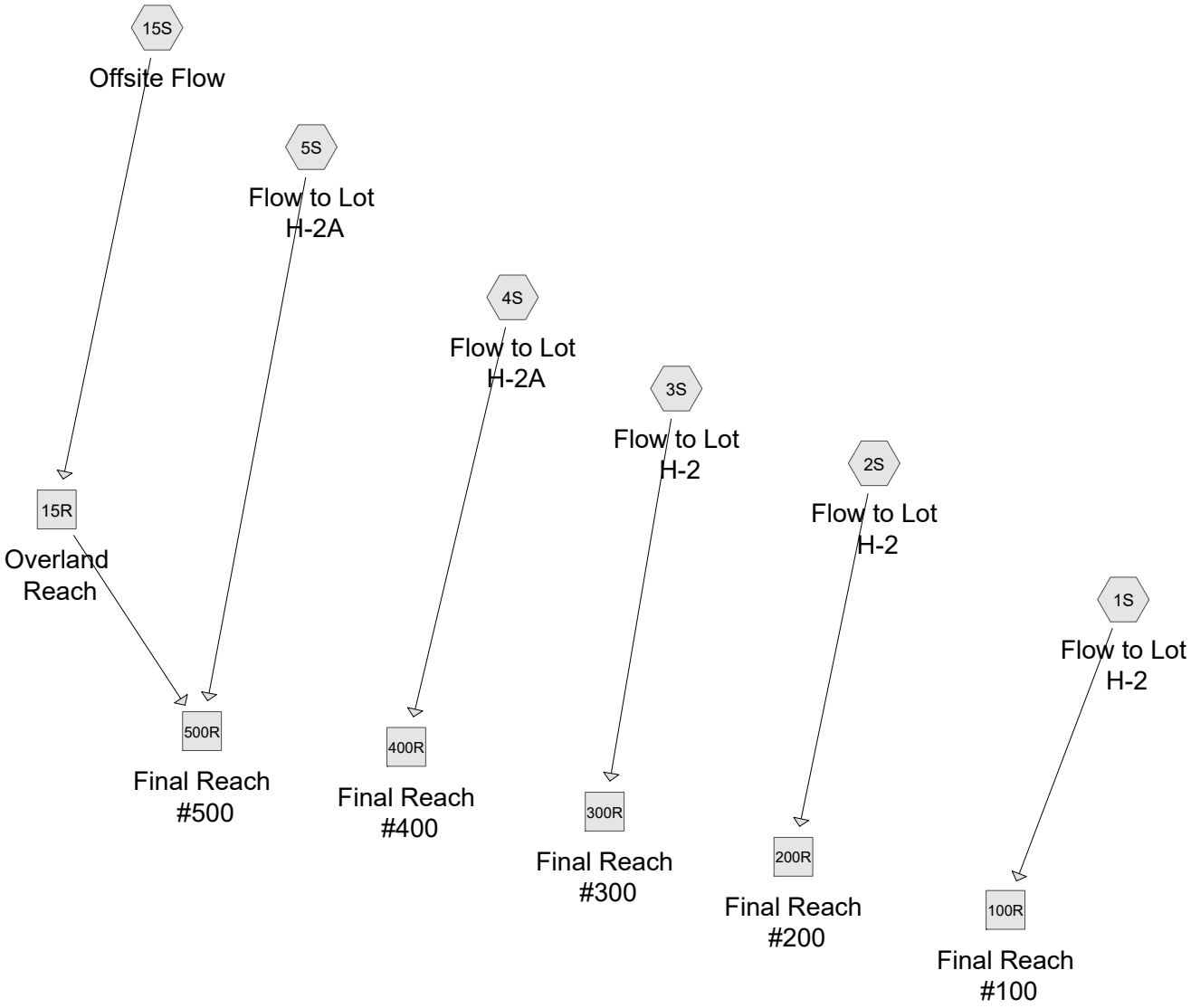
A Site Specific, Terrain Alteration Permit (RSA 485: A-17) is required for this site plan due to the area of disturbance being greater than 100,000 SF. The impact is approximately 145,000 square feet (3.33 ac.), so that an EPA Notice of Intent will be required to be filed prior to construction and a Stormwater Pollution Prevention Plan prepared.

Respectfully Submitted,
BERRY SURVEYING & ENGINEERING

Christopher R. Berry, SIT 567
Principal, President

Kenneth A. Berry, PE, LLS,
CPSWQ, CPESC, CESSWI
Principal, VP - Technical Operations

Kevin R. Poulin, EIT
Design Engineer / Project Manager



Subcat Reach Pond Link

Routing Diagram for 21-002 Pre-Existing Analysis
Prepared by Berry Surveying & Engineering, Printed 4/11/2022
HydroCAD® 10.00-25 s/n 10221 © 2019 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.000	39	>75% Grass cover, Good, HSG A (15S)
4.607	30	Brush, Good, HSG A (3S, 4S, 5S)
0.003	73	Brush, Good, HSG D (1S)
0.435	76	Gravel roads, HSG A (3S, 4S, 5S)
12.227	39	Pasture/grassland/range, Good, HSG A (1S, 2S, 3S)
7.555	74	Pasture/grassland/range, Good, HSG C (1S, 2S)
5.855	80	Pasture/grassland/range, Good, HSG D (1S)
0.140	98	Paved parking (15S)
1.461	98	Unconnected pavement, HSG A (1S, 3S, 4S, 5S)
0.246	98	Unconnected pavement, HSG C (1S)
37.445	30	Woods, Good, HSG A (1S, 2S, 3S, 4S, 5S, 15S)
0.954	70	Woods, Good, HSG C (1S, 2S)
0.276	77	Woods, Good, HSG D (1S)
72.203	**43**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
57.175	HSG A	1S, 2S, 3S, 4S, 5S, 15S
0.000	HSG B	
8.755	HSG C	1S, 2S
6.133	HSG D	1S
0.140	Other	15S
72.203		**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
1.000	0.000	0.000	0.000	0.000	1.000	>75% Grass cover, Good	15S
4.607	0.000	0.000	0.003	0.000	4.609	Brush, Good	1S, 3S, 4S, 5S
0.435	0.000	0.000	0.000	0.000	0.435	Gravel roads	3S, 4S, 5S
12.227	0.000	7.555	5.855	0.000	25.636	Pasture/grassland/range, Good	1S, 2S, 3S
0.000	0.000	0.000	0.000	0.140	0.140	Paved parking	15S
1.461	0.000	0.246	0.000	0.000	1.707	Unconnected pavement	1S, 3S, 4S, 5S
37.445	0.000	0.954	0.276	0.000	38.675	Woods, Good	1S, 2S, 3S, 4S, 5S, 15S
57.175	**0.000**	**8.755**	**6.133**	**0.140**	**72.203**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,369,294 sf 4.29% Impervious Runoff Depth>1.95"
Flow Length=1,479' Tc=43.2 min UI Adjusted CN=54 Runoff=31.60 cfs 5.110 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=168,325 sf 0.00% Impervious Runoff Depth>1.87"
Flow Length=978' Tc=30.9 min CN=53 Runoff=4.31 cfs 0.601 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=409,027 sf 1.20% Impervious Runoff Depth>0.29"
Flow Length=1,233' Tc=43.9 min CN=32 Runoff=0.41 cfs 0.225 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=596,920 sf 0.77% Impervious Runoff Depth>0.24"
Flow Length=1,320' Tc=36.4 min UI Adjusted CN=31 Runoff=0.47 cfs 0.272 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=243,547 sf 2.52% Impervious Runoff Depth>0.24"
Flow Length=1,175' Tc=31.2 min UI Adjusted CN=31 Runoff=0.19 cfs 0.111 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.29"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.36 cfs 0.197 af

Reach 15R: Overland Reach Avg. Flow Depth=0.08' Max Vel=0.79 fps Inflow=0.36 cfs 0.197 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.36 cfs 0.195 af

Reach 100R: Final Reach #100 Inflow=31.60 cfs 5.110 af
Outflow=31.60 cfs 5.110 af

Reach 200R: Final Reach #200 Inflow=4.31 cfs 0.601 af
Outflow=4.31 cfs 0.601 af

Reach 300R: Final Reach #300 Inflow=0.41 cfs 0.225 af
Outflow=0.41 cfs 0.225 af

Reach 400R: Final Reach #400 Inflow=0.47 cfs 0.272 af
Outflow=0.47 cfs 0.272 af

Reach 500R: Final Reach #500 Inflow=0.55 cfs 0.307 af
Outflow=0.55 cfs 0.307 af

Total Runoff Area = 72.203 ac Runoff Volume = 6.517 af Average Runoff Depth = 1.08"
97.44% Pervious = 70.356 ac 2.56% Impervious = 1.847 ac

Summary for Subcatchment 1S: Flow to Lot H-2

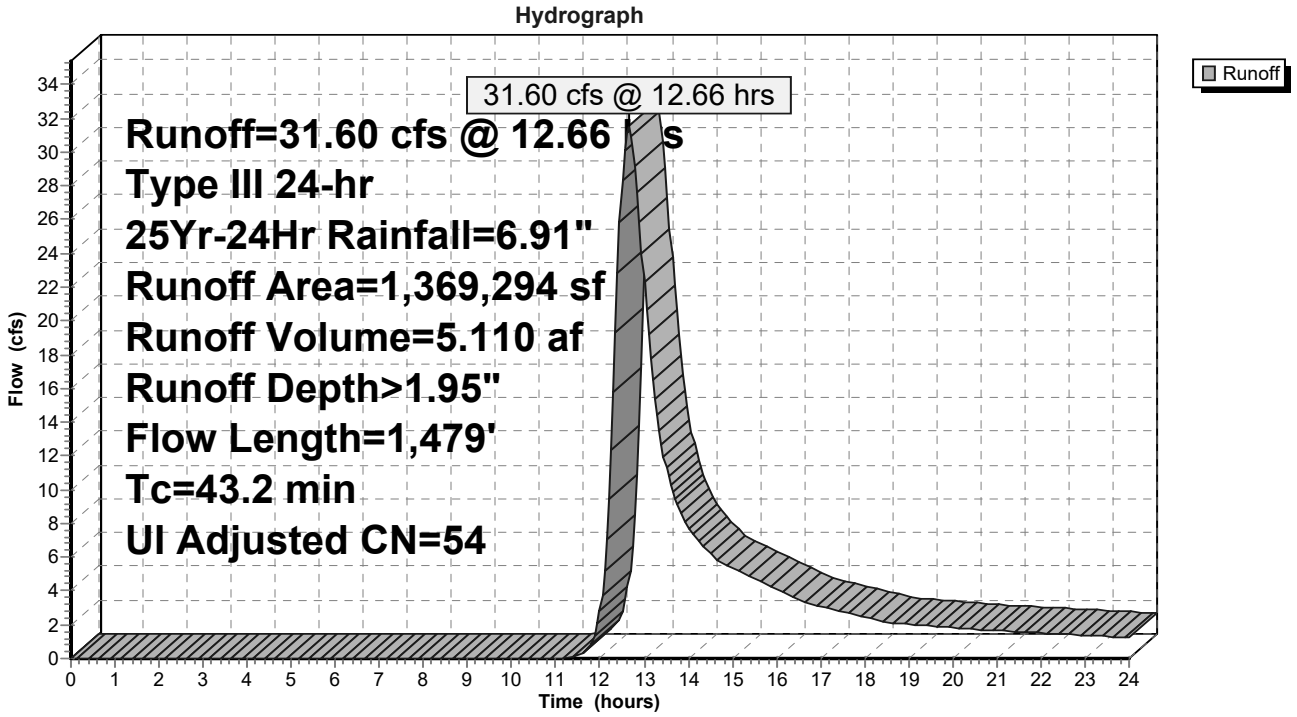
Runoff = 31.60 cfs @ 12.66 hrs, Volume= 5.110 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25Yr-24Hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
47,994	98		Unconnected pavement, HSG A
413,703	39		Pasture/grassland/range, Good, HSG A
334,653	30		Woods, Good, HSG A
10,706	98		Unconnected pavement, HSG C
275,112	74		Pasture/grassland/range, Good, HSG C
19,958	70		Woods, Good, HSG C
255,023	80		Pasture/grassland/range, Good, HSG D
120	73		Brush, Good, HSG D
12,025	77		Woods, Good, HSG D
1,369,294	55	54	Weighted Average, UI Adjusted
1,310,594			95.71% Pervious Area
58,700			4.29% Impervious Area
58,700			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	100	0.0300	0.10		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.61"
3.5	207	0.0386	0.98		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
22.5	1,172	0.0154	0.87		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
43.2	1,479	Total			

Subcatchment 1S: Flow to Lot H-2



Summary for Subcatchment 2S: Flow to Lot H-2

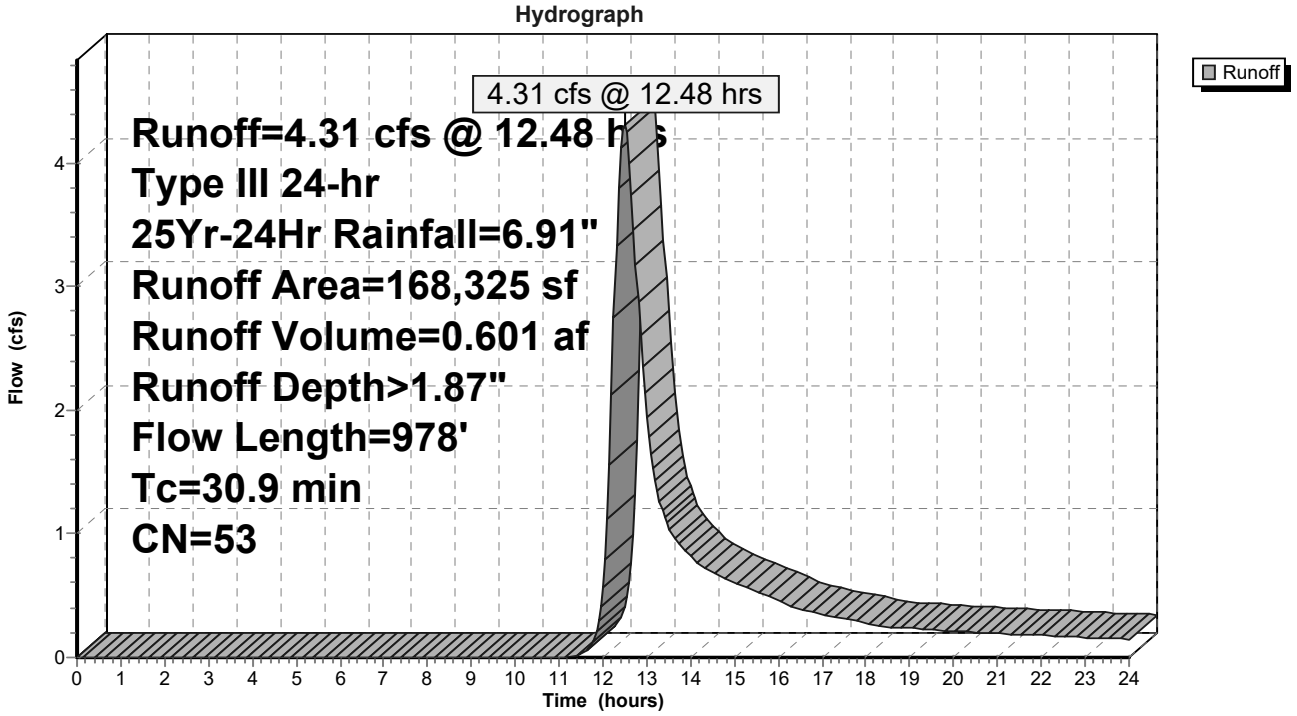
Runoff = 4.31 cfs @ 12.48 hrs, Volume= 0.601 af, Depth> 1.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25Yr-24Hr Rainfall=6.91"

Area (sf)	CN	Description
77,737	39	Pasture/grassland/range, Good, HSG A
15,008	30	Woods, Good, HSG A
53,984	74	Pasture/grassland/range, Good, HSG C
21,596	70	Woods, Good, HSG C
168,325	53	Weighted Average
168,325		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.2	100	0.0350	0.10		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.61"
12.4	765	0.0216	1.03		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
2.3	113	0.0265	0.81		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
30.9	978	Total			

Subcatchment 2S: Flow to Lot H-2



Summary for Subcatchment 3S: Flow to Lot H-2

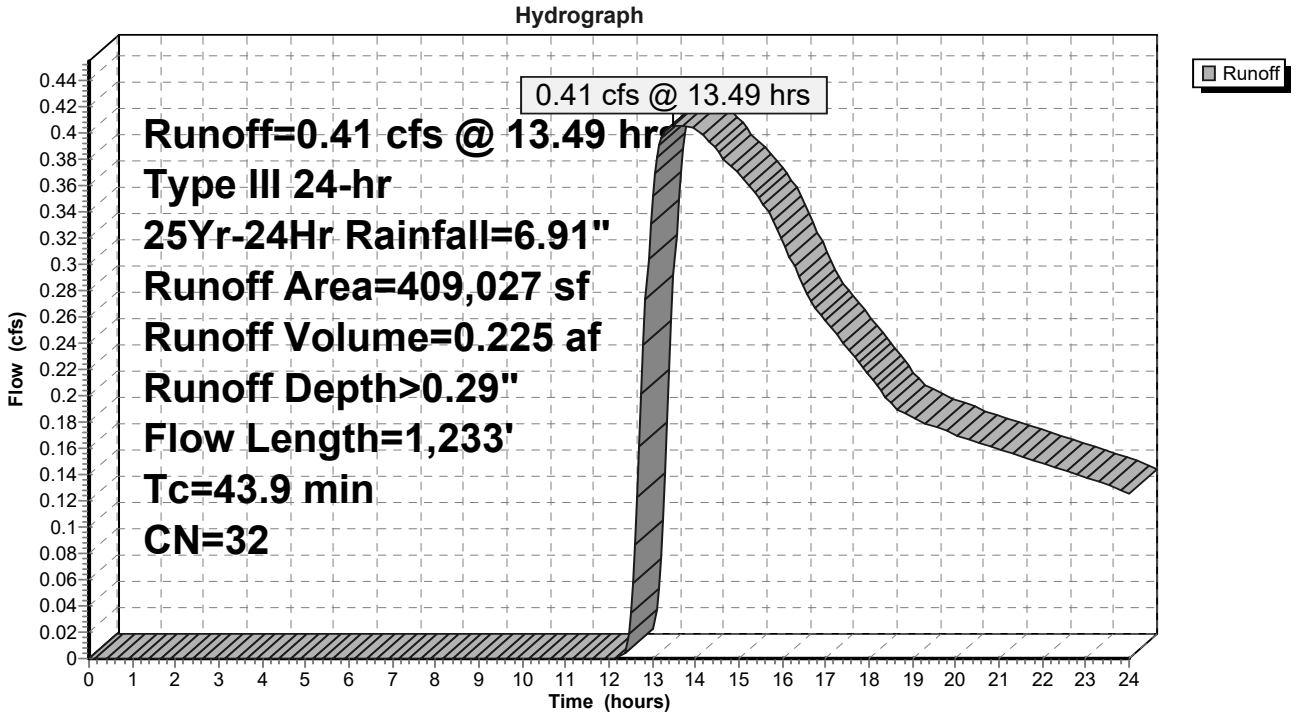
Runoff = 0.41 cfs @ 13.49 hrs, Volume= 0.225 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25Yr-24Hr Rainfall=6.91"

Area (sf)	CN	Description
4,922	98	Unconnected pavement, HSG A
2,710	76	Gravel roads, HSG A
41,153	39	Pasture/grassland/range, Good, HSG A
33,775	30	Brush, Good, HSG A
326,467	30	Woods, Good, HSG A
409,027	32	Weighted Average
404,105		98.80% Pervious Area
4,922		1.20% Impervious Area
4,922		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.2	100	0.0200	0.08		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.61"
20.5	980	0.0255	0.80		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
3.2	153	0.0261	0.81		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
43.9	1,233	Total			

Subcatchment 3S: Flow to Lot H-2



Summary for Subcatchment 4S: Flow to Lot H-2A

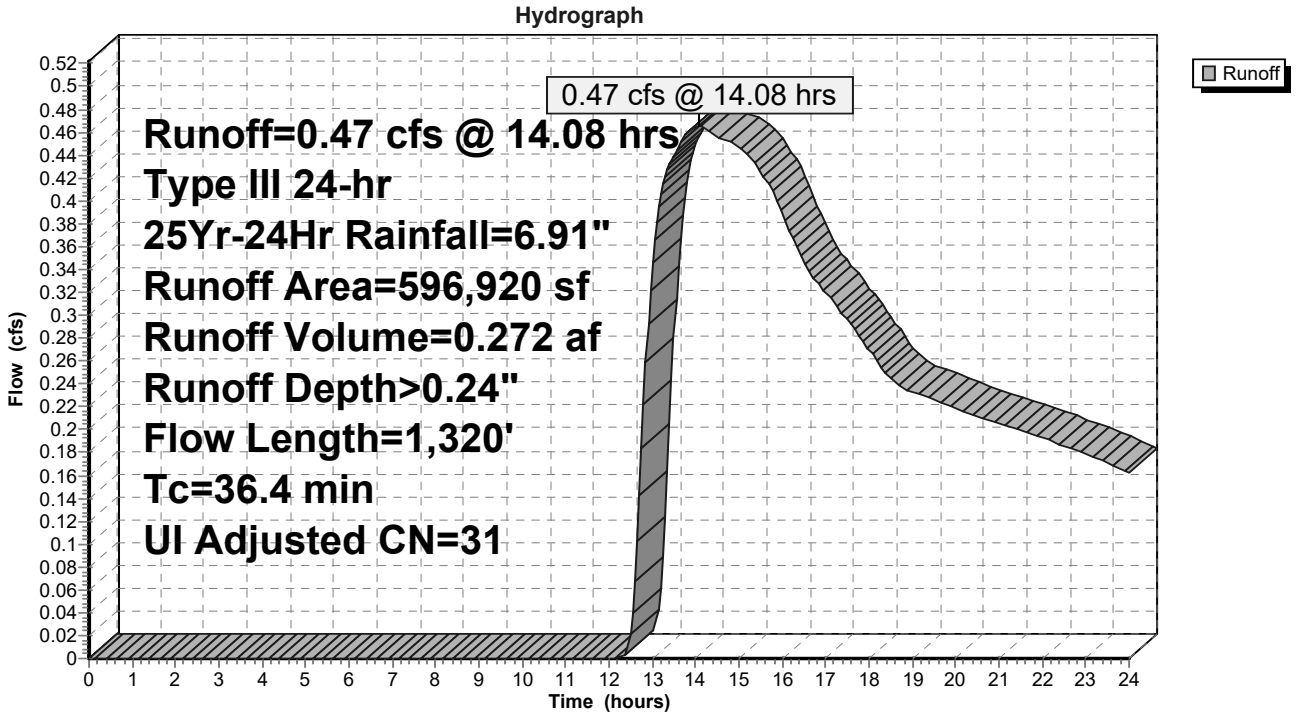
Runoff = 0.47 cfs @ 14.08 hrs, Volume= 0.272 af, Depth> 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25Yr-24Hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
4,607	98		Unconnected pavement, HSG A
14,330	76		Gravel roads, HSG A
138,831	30		Brush, Good, HSG A
439,152	30		Woods, Good, HSG A
596,920	32	31	Weighted Average, UI Adjusted
592,313			99.23% Pervious Area
4,607			0.77% Impervious Area
4,607			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	60	0.0837	0.13		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.61"
6.7	40	0.0497	0.10		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.61"
8.8	429	0.0266	0.82		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
5.8	397	0.0266	1.14		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
7.5	394	0.0305	0.87		**Shallow Concentrated Flow, Segment #5** Woodland Kv= 5.0 fps
36.4	1,320	Total			

Subcatchment 4S: Flow to Lot H-2A



Summary for Subcatchment 5S: Flow to Lot H-2A

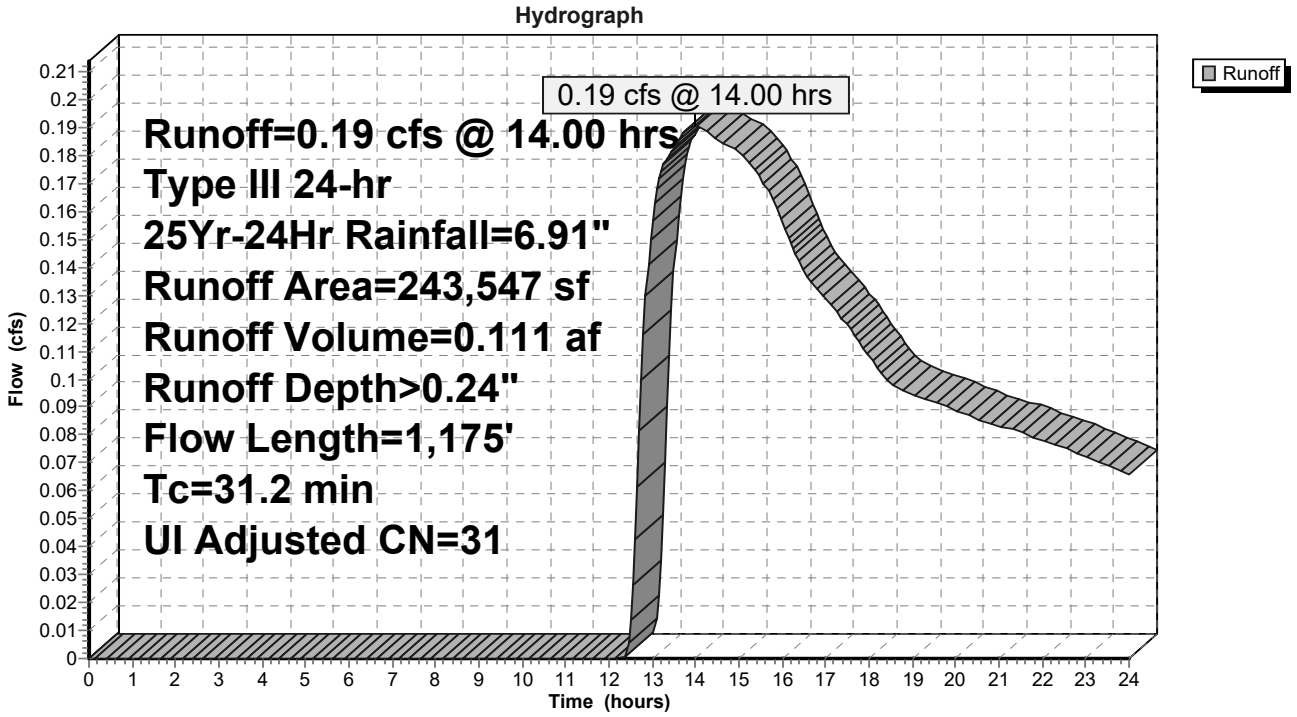
Runoff = 0.19 cfs @ 14.00 hrs, Volume= 0.111 af, Depth> 0.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25Yr-24Hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
6,126	98		Unconnected pavement, HSG A
1,920	76		Gravel roads, HSG A
28,063	30		Brush, Good, HSG A
207,438	30		Woods, Good, HSG A
243,547	32	31	Weighted Average, UI Adjusted
237,421			97.48% Pervious Area
6,126			2.52% Impervious Area
6,126			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	30	0.1674	0.15		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.61"
11.6	70	0.0392	0.10		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.61"
9.7	645	0.0496	1.11		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
6.6	430	0.0465	1.08		**Shallow Concentrated Flow, Segment #4** Woodland Kv= 5.0 fps
31.2	1,175	Total			

Subcatchment 5S: Flow to Lot H-2A



Summary for Subcatchment 15S: Offsite Flow

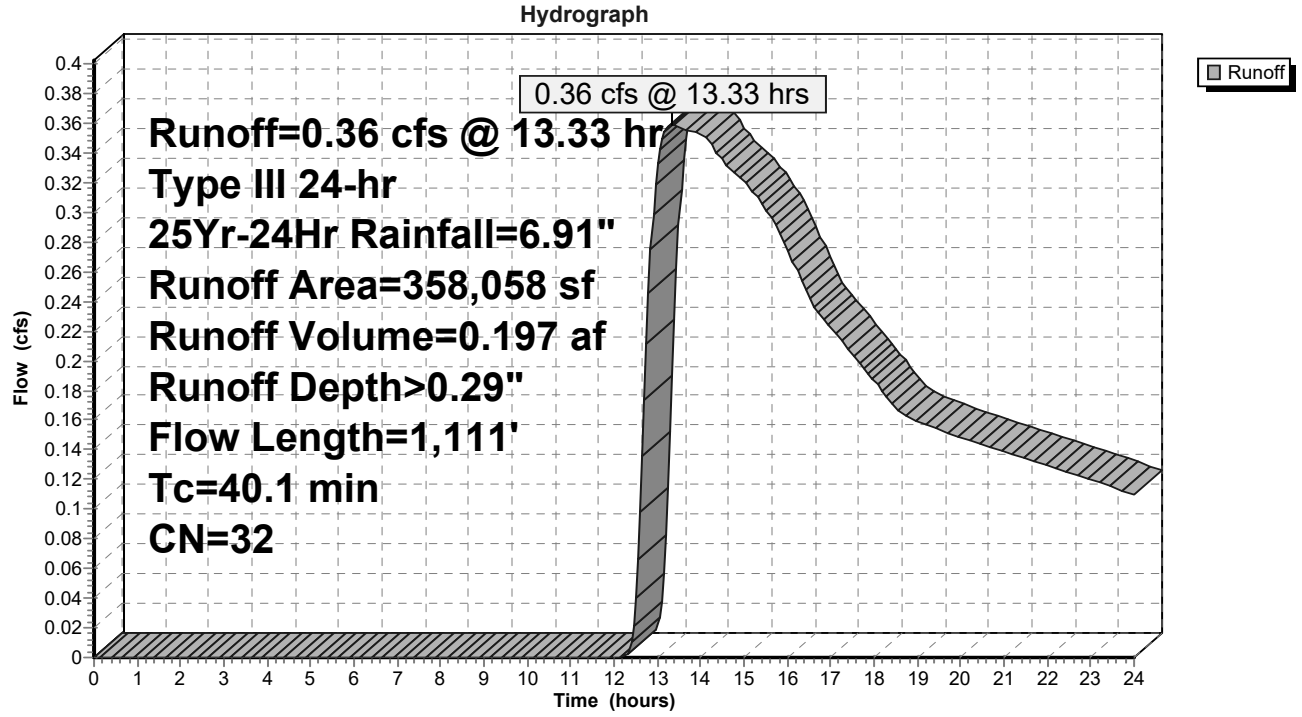
Runoff = 0.36 cfs @ 13.33 hrs, Volume= 0.197 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25Yr-24Hr Rainfall=6.91"

	Area (sf)	CN	Description
*	6,100	98	Paved parking
	43,560	39	>75% Grass cover, Good, HSG A
	308,398	30	Woods, Good, HSG A
	358,058	32	Weighted Average
	351,958		98.30% Pervious Area
	6,100		1.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.2	100	0.0200	0.08		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.61"
9.5	385	0.0182	0.67		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
8.4	485	0.0371	0.96		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
2.0	141	0.0533	1.15		**Shallow Concentrated Flow, Segment #4** Woodland Kv= 5.0 fps
40.1	1,111	Total			

Subcatchment 15S: Offsite Flow



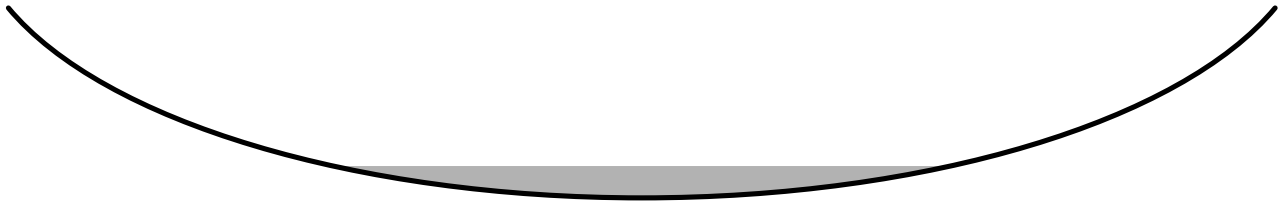
Summary for Reach 15R: Overland Reach

Inflow Area = 8.220 ac, 1.70% Impervious, Inflow Depth > 0.29" for 25Yr-24Hr event
Inflow = 0.36 cfs @ 13.33 hrs, Volume= 0.197 af
Outflow = 0.36 cfs @ 13.56 hrs, Volume= 0.195 af, Atten= 1%, Lag= 13.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.79 fps, Min. Travel Time= 10.3 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 12.7 min

Peak Storage= 221 cf @ 13.56 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 0.50' Flow Area= 6.7 sf, Capacity= 17.39 cfs

20.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 488.8' Slope= 0.0164 '/'
Inlet Invert= 140.00', Outlet Invert= 132.00'



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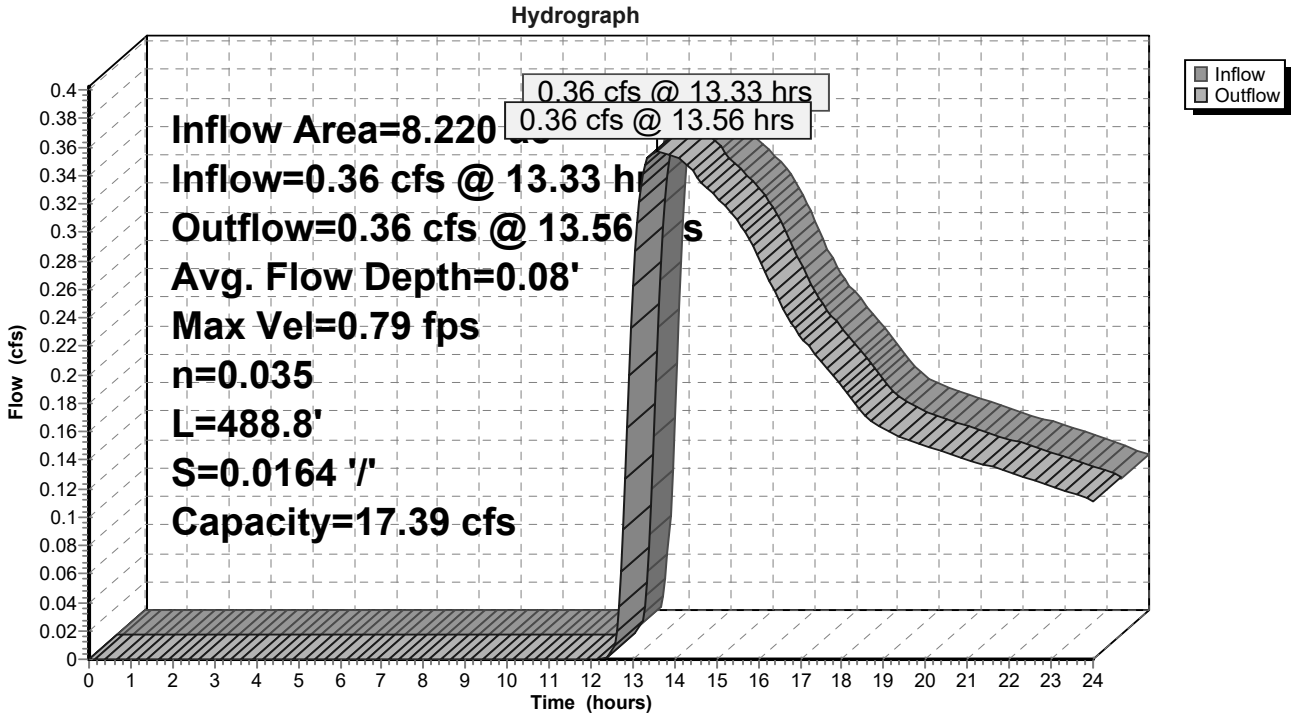
Reach 15R: Overland Reach



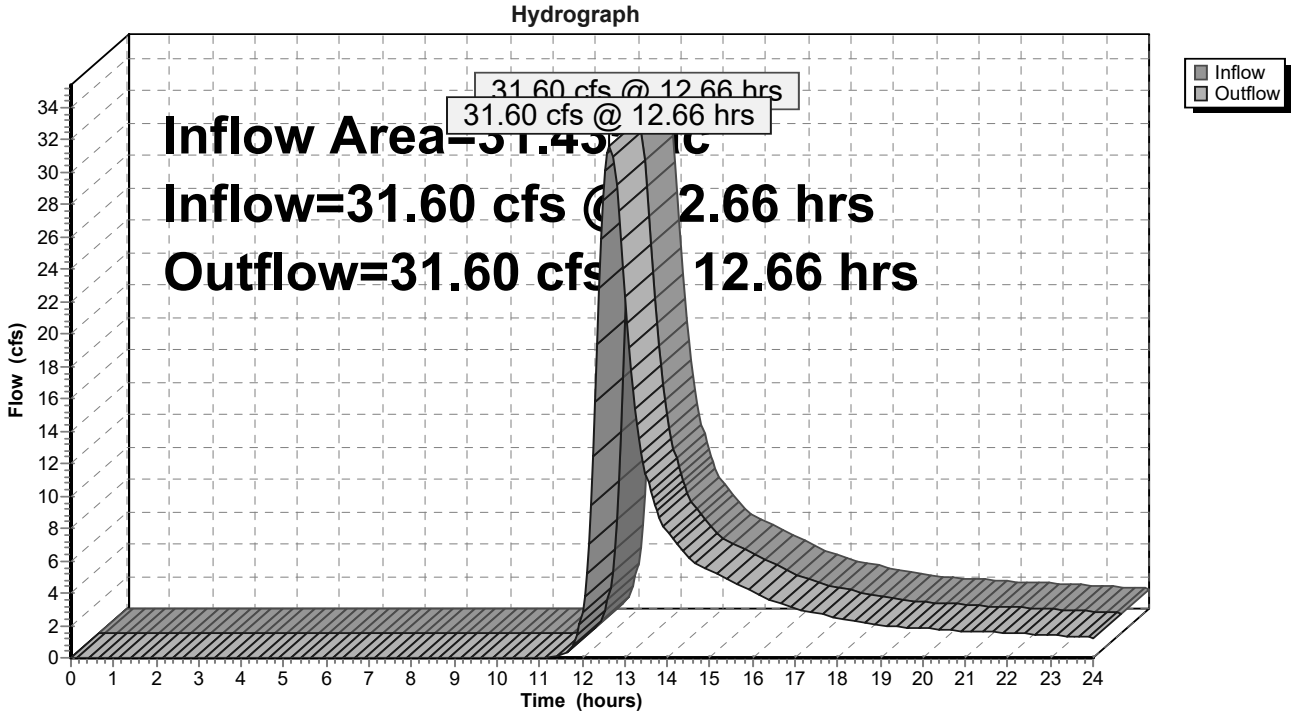
Summary for Reach 100R: Final Reach #100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 31.435 ac, 4.29% Impervious, Inflow Depth > 1.95" for 25Yr-24Hr event
Inflow = 31.60 cfs @ 12.66 hrs, Volume= 5.110 af
Outflow = 31.60 cfs @ 12.66 hrs, Volume= 5.110 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 100R: Final Reach #100



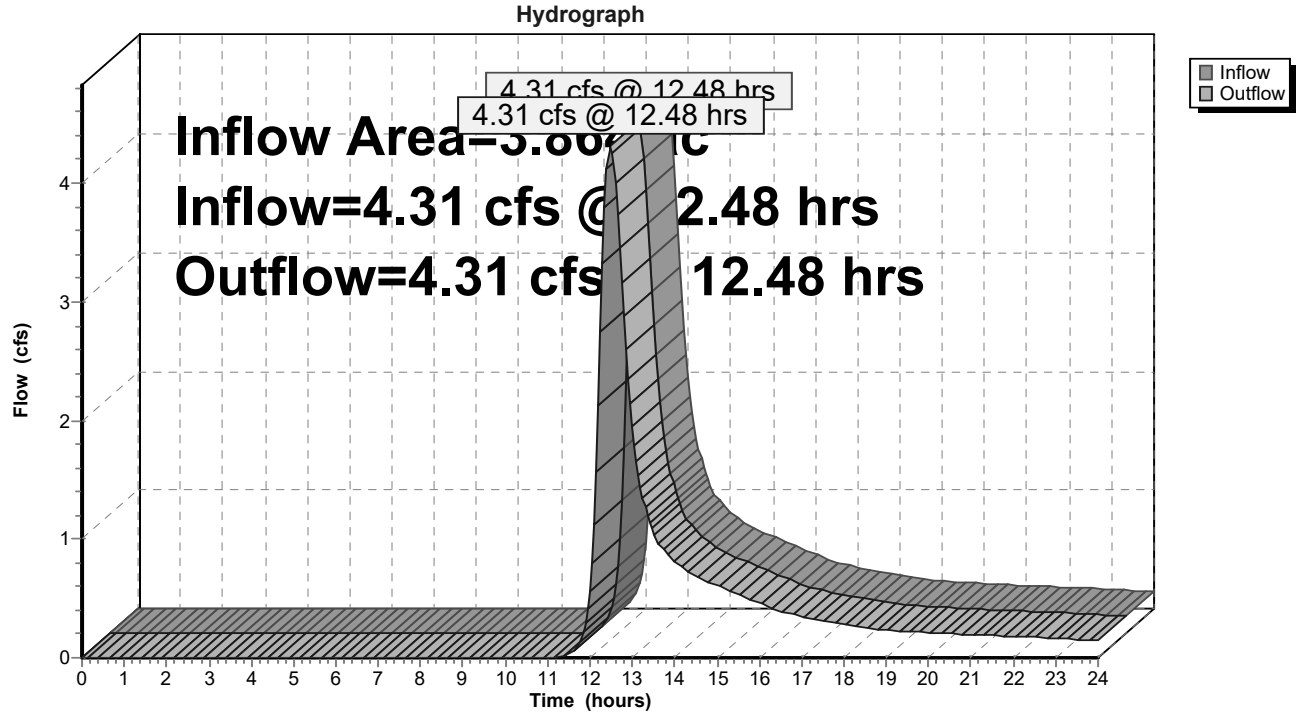
Summary for Reach 200R: Final Reach #200

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.864 ac, 0.00% Impervious, Inflow Depth > 1.87" for 25Yr-24Hr event
Inflow = 4.31 cfs @ 12.48 hrs, Volume= 0.601 af
Outflow = 4.31 cfs @ 12.48 hrs, Volume= 0.601 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 200R: Final Reach #200



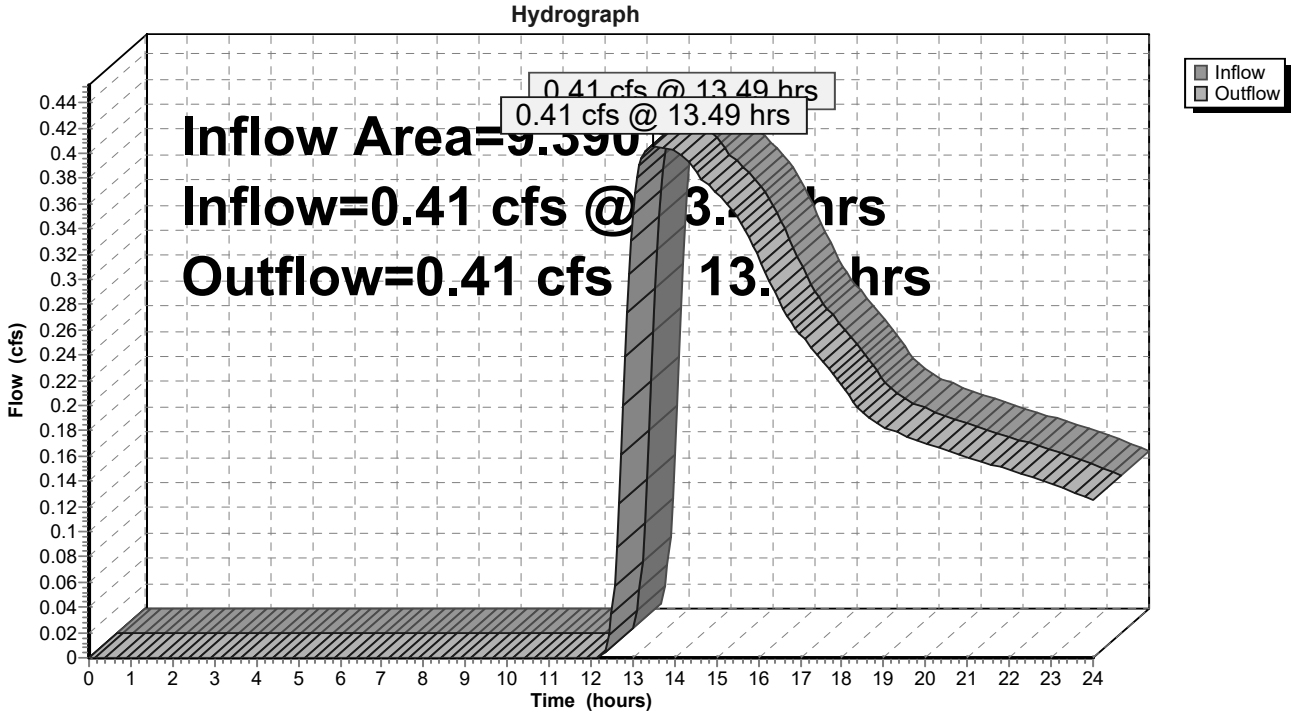
Summary for Reach 300R: Final Reach #300

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.390 ac, 1.20% Impervious, Inflow Depth > 0.29" for 25Yr-24Hr event
Inflow = 0.41 cfs @ 13.49 hrs, Volume= 0.225 af
Outflow = 0.41 cfs @ 13.49 hrs, Volume= 0.225 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 300R: Final Reach #300



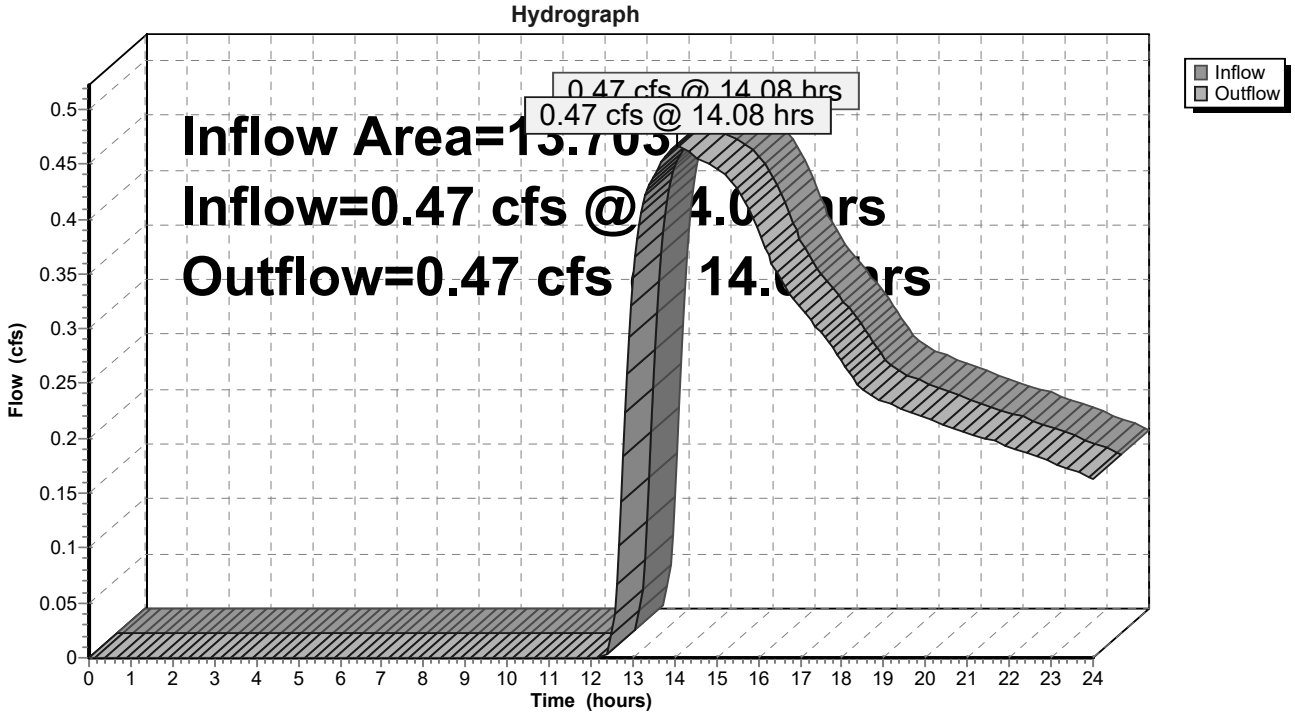
Summary for Reach 400R: Final Reach #400

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.703 ac, 0.77% Impervious, Inflow Depth > 0.24" for 25Yr-24Hr event
Inflow = 0.47 cfs @ 14.08 hrs, Volume= 0.272 af
Outflow = 0.47 cfs @ 14.08 hrs, Volume= 0.272 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 400R: Final Reach #400



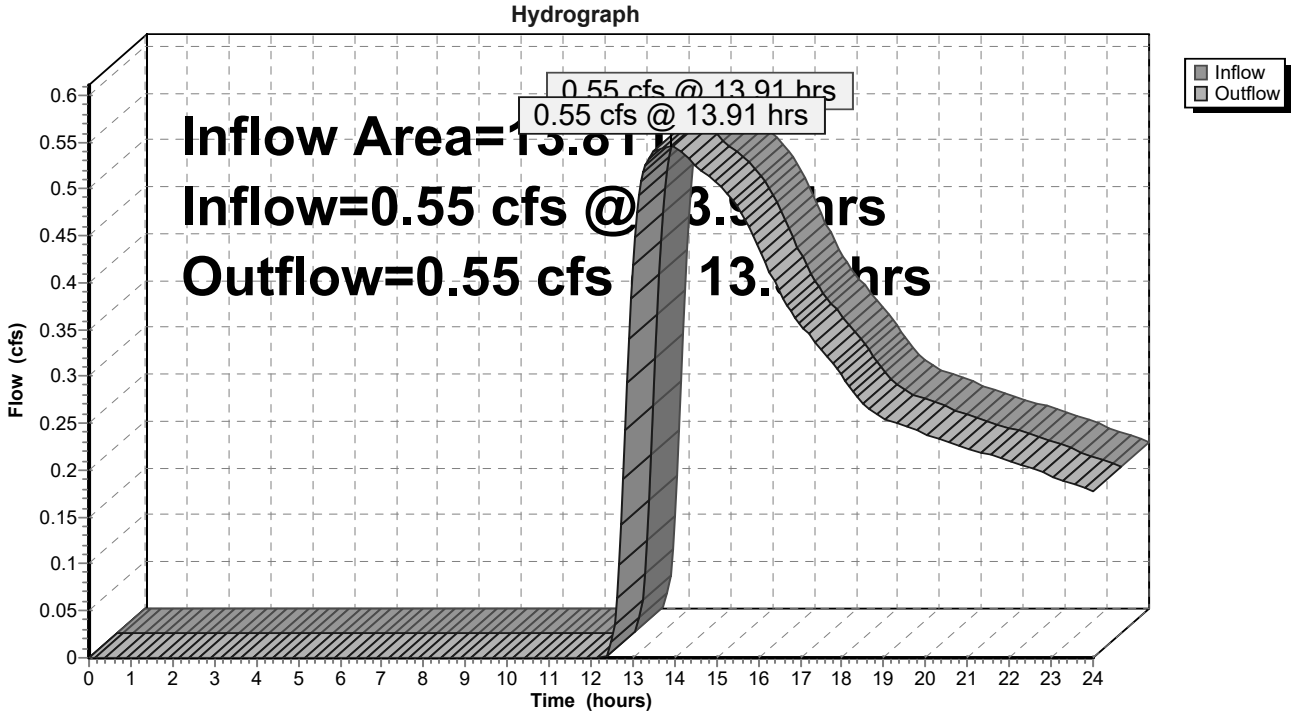
Summary for Reach 500R: Final Reach #500

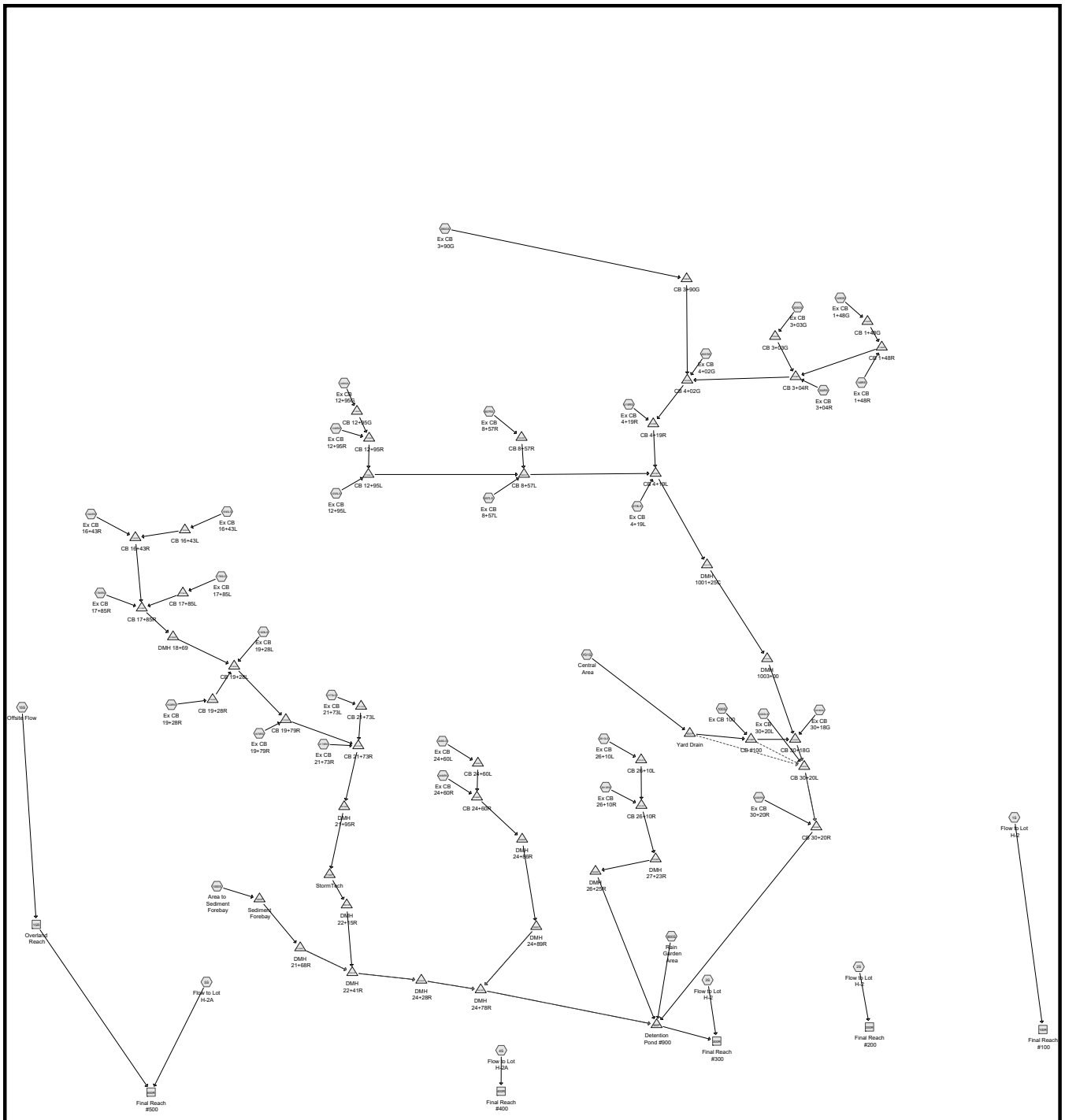
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.811 ac, 2.03% Impervious, Inflow Depth > 0.27" for 25Yr-24Hr event
Inflow = 0.55 cfs @ 13.91 hrs, Volume= 0.307 af
Outflow = 0.55 cfs @ 13.91 hrs, Volume= 0.307 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 500R: Final Reach #500





Subcat Reach Pond Link

Routing Diagram for 21-002 Existing Analysis

Prepared by Berry Surveying & Engineering, Printed 4/11/2022

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
15.928	39	>75% Grass cover, Good, HSG A (2S, 3S, 4S, 5S, 15S, 100S, 148GS, 148RS, 303GS, 304RS, 390GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1000S, 1295GS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 1979RS, 2173LS, 2173RS, 2460LS, 2610LS, 3018GS, 3020LS, Y01S)
0.823	74	>75% Grass cover, Good, HSG C (900S, 3018GS, 3020LS)
3.915	30	Brush, Good, HSG A (3S, 4S, 5S)
0.003	73	Brush, Good, HSG D (1S)
7.496	39	Pasture/grassland/range, Good, HSG A (1S)
6.316	74	Pasture/grassland/range, Good, HSG C (1S)
5.855	80	Pasture/grassland/range, Good, HSG D (1S)
0.140	98	Paved parking (15S)
3.193	98	Paved parking, HSG A (100S, 148RS, 303GS, 304RS, 402GS, 419LS, 419RS, 857LS, 857RS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 1979RS, 2173LS, 2173RS, 2460LS, 2460RS, 2610LS, 2610RS, 3020LS, 3020RS)
0.008	98	Paved parking, HSG C (3018GS, 3020LS, 3020RS)
1.325	98	Roofs, HSG A (100S, 303GS, 402GS, 419LS, 419RS, 857LS, 857RS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 2173LS, 2173RS, 2460LS, 2610LS, 3018GS, 3020LS)
1.293	98	Unconnected pavement, HSG A (1S, 2S, 148GS, 390GS, Y01S)
0.249	98	Unconnected pavement, HSG C (1S, 2S)
1.902	98	Unconnected roofs, HSG A (2S, 390GS, 1000S, Y01S)
0.016	98	Water Surface, HSG A (303GS)
21.367	30	Woods, Good, HSG A (1S, 2S, 3S, 4S, 5S, 15S, 148GS, 148RS, 303GS, 390GS, 402GS, Y01S)
2.100	70	Woods, Good, HSG C (1S, 2S)
0.276	77	Woods, Good, HSG D (1S)
72.204	**50**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
56.436	HSG A	1S, 2S, 3S, 4S, 5S, 15S, 100S, 148GS, 148RS, 303GS, 304RS, 390GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1000S, 1295GS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 1979RS, 2173LS, 2173RS, 2460LS, 2460RS, 2610LS, 2610RS, 3018GS, 3020LS, 3020RS, Y01S
0.000	HSG B	
9.495	HSG C	1S, 2S, 900S, 3018GS, 3020LS, 3020RS
6.133	HSG D	1S
0.140	Other	15S
72.204		**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
15.928	0.000	0.823	0.000	0.000	16.751	>75% Grass cover, Good	2S, 3S, 4S, 5S, 15S, 100S, 148GS, 148RS, 303GS, 304RS, 390GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1000S, 1295GS, 1295LS, 1295RS, 164

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.915	0.000	0.000	0.003	0.000	3.918	Brush, Good	1S, 3S, 4S, 5S
7.496	0.000	6.316	5.855	0.000	19.667	Pasture/grassland/range, Good	1S
3.193	0.000	0.008	0.000	0.140	3.341	Paved parking	15S, 100S, 148RS, 303GS, 304RS, 402GS, 419LS, 419RS, 857LS, 857RS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 192

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
1.325	0.000	0.000	0.000	0.000	1.325	Roofs	100S, 303GS, 402GS, 419LS, 419RS, 857LS, 857RS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 2173LS, 2173RS,

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
1.293	0.000	0.249	0.000	0.000	1.542	Unconnected pavement	1S, 2S, 148 GS, 390 GS, Y01 S
1.902	0.000	0.000	0.000	0.000	1.902	Unconnected roofs	2S, 390 GS, 100 0S, Y01 S
0.016	0.000	0.000	0.000	0.000	0.016	Water Surface	303 GS
21.367	0.000	2.100	0.276	0.000	23.743	Woods, Good	1S, 2S, 3S, 4S, 5S, 15S , 148 GS, 148 RS, 303 GS, 390 GS, 402 GS, Y01 S

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
56.436	**0.000**	**9.495**	**6.133**	**0.140**	**72.204**	**TOTAL AREA**	

Pipe Listing (all 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	900P	97.50	97.17	21.2	0.0156	0.012	30.0	0.0	0.0
2	1000P	105.84	104.91	57.1	0.0163	0.012	12.0	0.0	0.0
3	1100P	115.39	115.39	5.0	0.0000	0.012	24.0	0.0	0.0
4	2486RP	105.24	102.73	92.8	0.0270	0.012	12.0	0.0	0.0
5	2489RP	102.73	99.86	40.7	0.0705	0.012	12.0	0.0	0.0
6	2625RP	100.12	99.49	18.6	0.0339	0.012	12.0	0.0	0.0
7	2723RP	101.50	100.12	99.0	0.0139	0.012	12.0	0.0	0.0
8	C100P	101.97	101.26	141.7	0.0050	0.012	10.0	0.0	0.0
9	C1295GP	135.84	135.76	9.1	0.0088	0.012	15.0	0.0	0.0
10	C1295LP	135.27	132.04	433.9	0.0074	0.012	15.0	0.0	0.0
11	C1295RP	135.76	135.29	16.2	0.0290	0.012	15.0	0.0	0.0
12	C148GP	125.59	125.38	17.4	0.0121	0.012	15.0	0.0	0.0
13	C148RP	125.28	123.55	149.6	0.0116	0.012	15.0	0.0	0.0
14	C1643LP	136.84	136.14	15.7	0.0446	0.012	12.0	0.0	0.0
15	C1643RP	135.36	129.75	141.5	0.0396	0.012	12.0	0.0	0.0
16	C1785LP	130.41	129.73	15.4	0.0442	0.012	12.0	0.0	0.0
17	C1785RP	128.83	126.15	81.7	0.0328	0.012	12.0	0.0	0.0
18	C1928LP	122.19	120.32	52.1	0.0359	0.012	12.0	0.0	0.0
19	C1928RP	124.26	124.01	16.3	0.0153	0.012	12.0	0.0	0.0
20	C1979RP	120.32	116.94	189.6	0.0178	0.012	12.0	0.0	0.0
21	C2173LP	117.46	116.94	15.6	0.0333	0.012	12.0	0.0	0.0
22	C2173RP	116.90	115.76	27.6	0.0413	0.012	12.0	0.0	0.0
23	C2460LP	112.52	112.13	16.3	0.0239	0.012	12.0	0.0	0.0
24	C2460RP	112.13	108.64	55.3	0.0631	0.012	12.0	0.0	0.0
25	C2610LP	108.43	108.23	15.2	0.0132	0.012	12.0	0.0	0.0
26	C2610RP	108.23	101.60	124.2	0.0534	0.012	12.0	0.0	0.0
27	C3018GP	101.40	101.22	7.5	0.0240	0.012	24.0	0.0	0.0
28	C3020LP	101.16	101.05	16.6	0.0066	0.012	24.0	0.0	0.0
29	C3020RP	100.97	99.40	135.3	0.0116	0.012	24.0	0.0	0.0
30	C303GP	124.91	123.73	54.4	0.0217	0.012	15.0	0.0	0.0
31	C304RP	123.55	122.60	91.0	0.0104	0.012	15.0	0.0	0.0
32	C390GP	123.14	122.60	86.2	0.0063	0.012	15.0	0.0	0.0
33	C402GP	122.50	122.38	21.6	0.0056	0.012	15.0	0.0	0.0
34	C419LP	116.38	113.60	111.8	0.0249	0.012	24.0	0.0	0.0
35	C419RP	122.32	121.98	16.3	0.0209	0.012	15.0	0.0	0.0
36	C857LP	132.04	121.74	434.3	0.0237	0.012	15.0	0.0	0.0
37	C857RP	132.36	132.14	16.4	0.0134	0.012	15.0	0.0	0.0
38	D100125CP	106.20	102.66	178.1	0.0199	0.012	24.0	0.0	0.0
39	D100300CP	102.56	101.50	139.2	0.0076	0.012	24.0	0.0	0.0
40	D1869P	126.15	123.91	51.8	0.0432	0.012	12.0	0.0	0.0
41	D2168RP	104.91	103.68	72.5	0.0170	0.012	12.0	0.0	0.0
42	D2195P	115.92	115.92	7.1	0.0000	0.012	24.0	0.0	0.0

Pipe Listing (all nodes) (continued)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
43	D2215P	107.86	103.68	57.1	0.0732	0.012	12.0	0.0	0.0
44	D2241RP	103.62	100.56	187.5	0.0163	0.012	12.0	0.0	0.0
45	D2428RP	100.46	99.86	53.8	0.0112	0.012	12.0	0.0	0.0
46	D2478RP	99.76	99.59	16.3	0.0104	0.012	12.0	0.0	0.0
47	Y01P	108.93	102.07	71.1	0.0965	0.012	8.0	0.0	0.0

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

Subcatchment 1S: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>2.14"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=31.66 cfs 4.931 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=98,319 sf 2.65% Impervious Runoff Depth>2.72"
Flow Length=507' Tc=17.7 min CN=62 Runoff=4.98 cfs 0.512 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.29"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.06 cfs 0.027 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=192,385 sf 0.00% Impervious Runoff Depth>0.29"
Flow Length=544' Tc=21.8 min CN=32 Runoff=0.21 cfs 0.107 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.19"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.09 cfs 0.053 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.29"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.36 cfs 0.197 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>4.50"
Tc=6.0 min CN=79 Runoff=0.09 cfs 0.007 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.88"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.14 cfs 0.023 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>2.16"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.34 cfs 0.029 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>2.06"
Flow Length=290' Tc=12.5 min CN=55 Runoff=2.08 cfs 0.199 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>2.83"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.39 cfs 0.033 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.66"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=1.44 cfs 0.299 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>1.36"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.21 cfs 0.019 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>4.28"
Flow Length=428' Tc=10.2 min CN=77 Runoff=3.19 cfs 0.265 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>3.64"
Flow Length=380' Tc=15.1 min CN=71 Runoff=2.44 cfs 0.230 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>5.05"
Flow Length=283' Tc=9.2 min CN=84 Runoff=1.30 cfs 0.107 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>3.54"
Flow Length=207' Tc=7.2 min CN=70 Runoff=1.70 cfs 0.128 af

Subcatchment 900S: Rain Garden Area Runoff Area=113,960 sf 0.00% Impervious Runoff Depth>1.53"
Flow Length=184' Tc=11.1 min CN=49 Runoff=3.26 cfs 0.333 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>1.27"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=1.30 cfs 0.174 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.73"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.03 cfs 0.005 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>4.39"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.49 cfs 0.122 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>3.03"
Flow Length=278' Tc=10.4 min CN=65 Runoff=1.84 cfs 0.155 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.035 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>3.43"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.61 cfs 0.054 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>3.54"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.70 cfs 0.051 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>3.33"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.93 cfs 0.071 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>3.54"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.85 cfs 0.064 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>3.54"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.83 cfs 0.060 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>4.28"
Tc=6.0 min CN=77 Runoff=0.19 cfs 0.014 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>3.85"
Flow Length=297' Tc=6.0 min CN=73 Runoff=1.39 cfs 0.101 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>3.96"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.78 cfs 0.057 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>3.96"
Flow Length=384' Tc=9.4 min CN=74 Runoff=2.32 cfs 0.187 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=3,371 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.51 cfs 0.043 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>3.96"
Flow Length=322' Tc=9.0 min CN=74 Runoff=1.83 cfs 0.147 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=3,173 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.48 cfs 0.040 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>2.63"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.55 cfs 0.047 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>2.44"
Flow Length=548' Tc=10.4 min CN=59 Runoff=3.11 cfs 0.268 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=2,995 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.46 cfs 0.038 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>1.03"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=3.08 cfs 0.504 af

Reach 15R: Overland Reach Avg. Flow Depth=0.08' Max Vel=0.79 fps Inflow=0.36 cfs 0.197 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.36 cfs 0.195 af

Reach 100R: Final Reach #100 Inflow=31.66 cfs 4.931 af
Outflow=31.66 cfs 4.931 af

Reach 200R: Final Reach #200 Inflow=4.98 cfs 0.512 af
Outflow=4.98 cfs 0.512 af

Reach 300R: Final Reach #300 Inflow=0.98 cfs 0.816 af
Outflow=0.98 cfs 0.816 af

Reach 400R: Final Reach #400 Inflow=0.21 cfs 0.107 af
Outflow=0.21 cfs 0.107 af

Reach 500R: Final Reach #500 Inflow=0.44 cfs 0.248 af
Outflow=0.44 cfs 0.248 af

Pond 900P: Detention Pond #900 Peak Elev=101.13' Storage=102,025 cf Inflow=33.30 cfs 3.746 af
Discarded=1.08 cfs 1.033 af Primary=0.95 cfs 0.789 af Outflow=2.03 cfs 1.822 af

Pond 1000P: Sediment Forebay Peak Elev=110.12' Storage=162 cf Inflow=1.30 cfs 0.174 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=2.25 cfs 0.174 af

Pond 1100P: StormTech Peak Elev=116.70' Storage=2,281 cf Inflow=6.38 cfs 0.506 af
Discarded=0.13 cfs 0.160 af Primary=5.64 cfs 0.344 af Outflow=5.77 cfs 0.504 af

Pond 2486RP: DMH 24+86R Peak Elev=106.27' Storage=13 cf Inflow=2.75 cfs 0.230 af
12.0" Round Culvert n=0.012 L=92.8' S=0.0270 '/' Outflow=2.75 cfs 0.230 af

Pond 2489RP: DMH 24+89R Peak Elev=103.79' Storage=13 cf Inflow=2.75 cfs 0.230 af
Primary=2.75 cfs 0.230 af Secondary=0.00 cfs 0.000 af Outflow=2.75 cfs 0.230 af

Pond 2625RP: DMH 26+25R Peak Elev=101.13' Storage=13 cf Inflow=2.27 cfs 0.187 af
12.0" Round Culvert n=0.012 L=18.6' S=0.0339 '/' Outflow=2.27 cfs 0.187 af

Pond 2723RP: DMH 27+23R Peak Elev=102.36' Storage=11 cf Inflow=2.27 cfs 0.187 af
12.0" Round Culvert n=0.012 L=99.0' S=0.0139 '/' Outflow=2.27 cfs 0.187 af

Pond C100P: CB #100 Peak Elev=107.89' Storage=74 cf Inflow=2.52 cfs 0.499 af
Primary=2.55 cfs 0.499 af Secondary=0.00 cfs 0.000 af Outflow=2.55 cfs 0.499 af

Pond C1295GP: CB 12+95G Peak Elev=136.56' Storage=9 cf Inflow=0.03 cfs 0.005 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.05 cfs 0.005 af

Pond C1295LP: CB 12+95L Peak Elev=136.27' Storage=13 cf Inflow=3.32 cfs 0.282 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=3.32 cfs 0.282 af

Pond C1295RP: CB 12+95R Peak Elev=136.56' Storage=10 cf Inflow=1.84 cfs 0.160 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=1.84 cfs 0.160 af

Pond C148GP: CB 1+48G Peak Elev=125.77' Storage=2 cf Inflow=0.14 cfs 0.023 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.14 cfs 0.023 af

Pond C148RP: CB 1+48R Peak Elev=125.58' Storage=4 cf Inflow=0.41 cfs 0.051 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.41 cfs 0.051 af

Pond C1643LP: CB 16+43L Peak Elev=137.16' Storage=4 cf Inflow=0.41 cfs 0.035 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.41 cfs 0.035 af

Pond C1643RP: CB 16+43R Peak Elev=135.86' Storage=6 cf Inflow=0.94 cfs 0.089 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.94 cfs 0.089 af

Pond C1785LP: CB 17+85L Peak Elev=130.83' Storage=5 cf Inflow=0.70 cfs 0.051 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.70 cfs 0.051 af

Pond C1785RP: CB 17+85R Peak Elev=129.78' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=2.56 cfs 0.211 af

Pond C1928LP: CB 19+28L Peak Elev=123.93' Storage=22 cf Inflow=4.22 cfs 0.335 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=4.21 cfs 0.335 af

Pond C1928RP: CB 19+28R Peak Elev=124.73' Storage=6 cf Inflow=0.83 cfs 0.060 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.83 cfs 0.060 af

Pond C1979RP: CB 19+79R Peak Elev=122.98' Storage=33 cf Inflow=4.40 cfs 0.349 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=4.35 cfs 0.349 af

Pond C2173LP: CB 21+73L Peak Elev=120.32' Storage=36 cf Inflow=1.39 cfs 0.101 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=1.28 cfs 0.101 af

Pond C2173RP: CB 21+73R Peak Elev=120.24' Storage=42 cf Inflow=6.38 cfs 0.506 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=6.38 cfs 0.506 af

Pond C2460LP: CB 24+60L Peak Elev=113.52' Storage=13 cf Inflow=2.32 cfs 0.187 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=2.31 cfs 0.187 af

Pond C2460RP: CB 24+60R Peak Elev=113.16' Storage=13 cf Inflow=2.77 cfs 0.230 af
12.0" Round Culvert n=0.012 L=55.3' S=0.0631 '/' Outflow=2.75 cfs 0.230 af

Pond C2610LP: CB 26+10L Peak Elev=109.35' Storage=12 cf Inflow=1.83 cfs 0.147 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=1.82 cfs 0.147 af

Pond C2610RP: CB 26+10R Peak Elev=109.09' Storage=11 cf Inflow=2.27 cfs 0.187 af
12.0" Round Culvert n=0.012 L=124.2' S=0.0534 '/' Outflow=2.27 cfs 0.187 af

Pond C3018GP: CB 30+18G Peak Elev=105.99' Storage=59 cf Inflow=15.94 cfs 2.160 af
Primary=15.88 cfs 2.160 af Secondary=0.00 cfs 0.000 af Outflow=15.88 cfs 2.160 af

Pond C3020LP: CB 30+20L Peak Elev=105.04' Storage=49 cf Inflow=18.98 cfs 2.440 af
Primary=18.93 cfs 2.440 af Secondary=0.00 cfs 0.000 af Outflow=18.93 cfs 2.440 af

Pond C3020RP: CB 30+20R Peak Elev=103.59' Storage=33 cf Inflow=19.26 cfs 2.478 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=19.26 cfs 2.478 af

Pond C303GP: CB 3+03G Peak Elev=125.62' Storage=9 cf Inflow=2.08 cfs 0.199 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=2.08 cfs 0.199 af

Pond C304RP: CB 3+04R Peak Elev=124.59' Storage=13 cf Inflow=2.85 cfs 0.283 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=2.84 cfs 0.283 af

Pond C390GP: CB 3+90G Peak Elev=124.26' Storage=14 cf Inflow=1.44 cfs 0.299 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=1.45 cfs 0.299 af

Pond C402GP: CB 4+02G Peak Elev=124.22' Storage=22 cf Inflow=3.34 cfs 0.601 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=3.33 cfs 0.601 af

Pond C419LP: CB 4+19L Peak Elev=118.30' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=14.64 cfs 1.614 af

Pond C419RP: CB 4+19R Peak Elev=123.90' Storage=20 cf Inflow=5.77 cfs 0.832 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=5.78 cfs 0.832 af

Pond C857LP: CB 8+57L Peak Elev=133.76' Storage=22 cf Inflow=6.17 cfs 0.517 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=6.18 cfs 0.517 af

Pond C857RP: CB 8+57R Peak Elev=133.81' Storage=18 cf Inflow=1.70 cfs 0.128 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=1.68 cfs 0.128 af

Pond D100125CP: DMH 1001+25C Peak Elev=108.12' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=14.64 cfs 1.614 af

Pond D100300CP: DMH 1003+00 Peak Elev=106.61' Storage=51 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=14.59 cfs 1.613 af

Pond D1869P: DMH 18+69 Peak Elev=127.10' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=2.55 cfs 0.211 af

Pond D2168RP: DMH 21+68R Peak Elev=109.73' Storage=65 cf Inflow=2.25 cfs 0.174 af
Primary=1.85 cfs 0.163 af Secondary=1.10 cfs 0.011 af Outflow=1.97 cfs 0.174 af

Pond D2195P: DMH 21+95R Peak Elev=117.33' Storage=18 cf Inflow=6.38 cfs 0.506 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=6.38 cfs 0.506 af

Pond D2215P: DMH 22+15R Peak Elev=111.78' Storage=49 cf Inflow=5.64 cfs 0.344 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0732 '/' Outflow=5.61 cfs 0.344 af

Pond D2241RP: DMH 22+41R Peak Elev=109.73' Storage=80 cf Inflow=6.17 cfs 0.518 af
Primary=5.87 cfs 0.516 af Secondary=0.33 cfs 0.002 af Outflow=6.06 cfs 0.518 af

Pond D2428RP: DMH 24+28R Peak Elev=104.50' Storage=60 cf Inflow=6.06 cfs 0.518 af
Primary=4.88 cfs 0.488 af Secondary=1.96 cfs 0.030 af Outflow=6.02 cfs 0.518 af

Pond D2478RP: DMH 24+78R Peak Elev=103.31' Storage=54 cf Inflow=8.62 cfs 0.749 af
Primary=6.60 cfs 0.723 af Secondary=2.05 cfs 0.026 af Outflow=8.65 cfs 0.748 af

Pond Y01P: Yard Drain Peak Elev=111.47' Storage=8 cf Inflow=3.08 cfs 0.504 af
Primary=2.50 cfs 0.492 af Secondary=0.58 cfs 0.012 af Outflow=3.08 cfs 0.504 af

Total Runoff Area = 72.204 ac Runoff Volume = 9.738 af Average Runoff Depth = 1.62"
88.75% Pervious = 64.078 ac 11.25% Impervious = 8.126 ac

Summary for Subcatchment 1S: Flow to Lot H-2

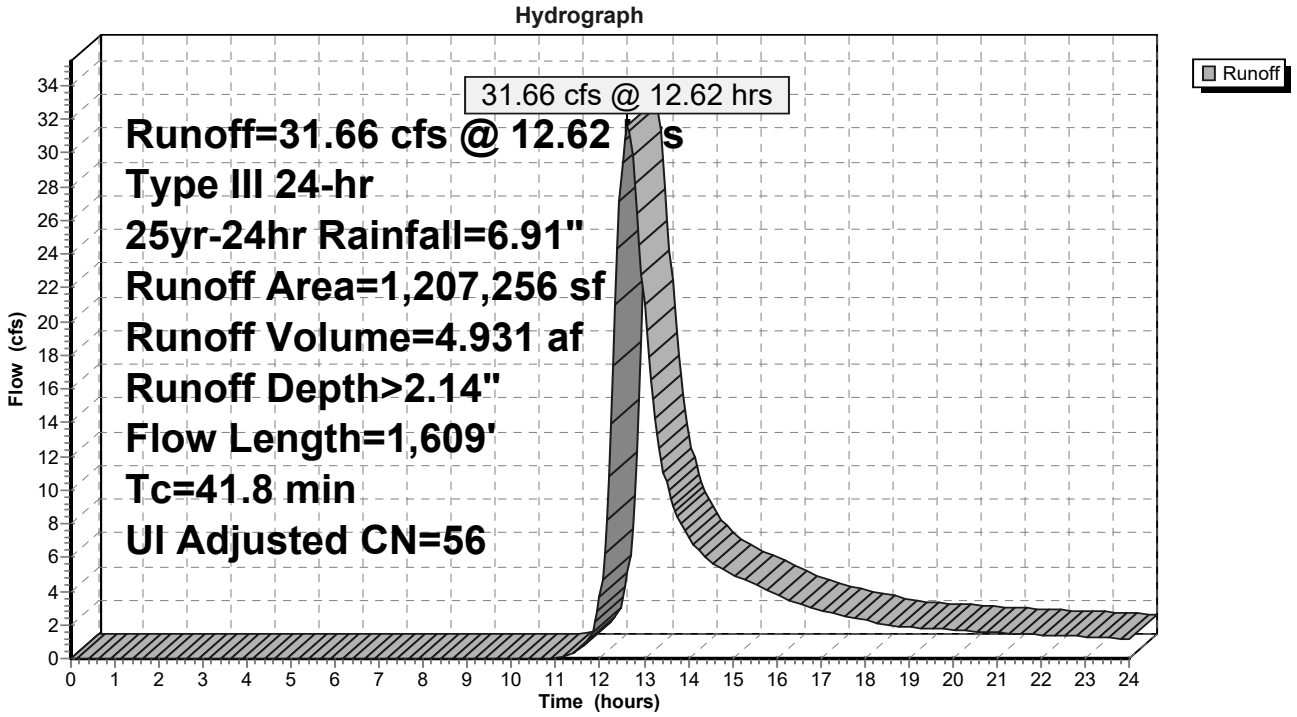
Runoff = 31.66 cfs @ 12.62 hrs, Volume= 4.931 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
42,880	98		Unconnected pavement, HSG A
326,542	39		Pasture/grassland/range, Good, HSG A
264,890	30		Woods, Good, HSG A
10,706	98		Unconnected pavement, HSG C
275,112	74		Pasture/grassland/range, Good, HSG C
19,958	70		Woods, Good, HSG C
255,023	80		Pasture/grassland/range, Good, HSG D
120	73		Brush, Good, HSG D
12,025	77		Woods, Good, HSG D
1,207,256	57	56	Weighted Average, UI Adjusted
1,153,670			95.56% Pervious Area
53,586			4.44% Impervious Area
53,586			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	29	0.0255	0.07		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
8.1	71	0.0992	0.15		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.62"
4.3	312	0.0577	1.20		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
5.4	294	0.0170	0.91		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
5.7	373	0.0242	1.09		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
3.5	247	0.0284	1.18		**Shallow Concentrated Flow, Segment #6** Short Grass Pasture Kv= 7.0 fps
8.0	283	0.0071	0.59		**Shallow Concentrated Flow, Segment #7** Short Grass Pasture Kv= 7.0 fps
41.8	1,609	Total			

Subcatchment 1S: Flow to Lot H-2



Summary for Subcatchment 2S: Flow to Lot H-2

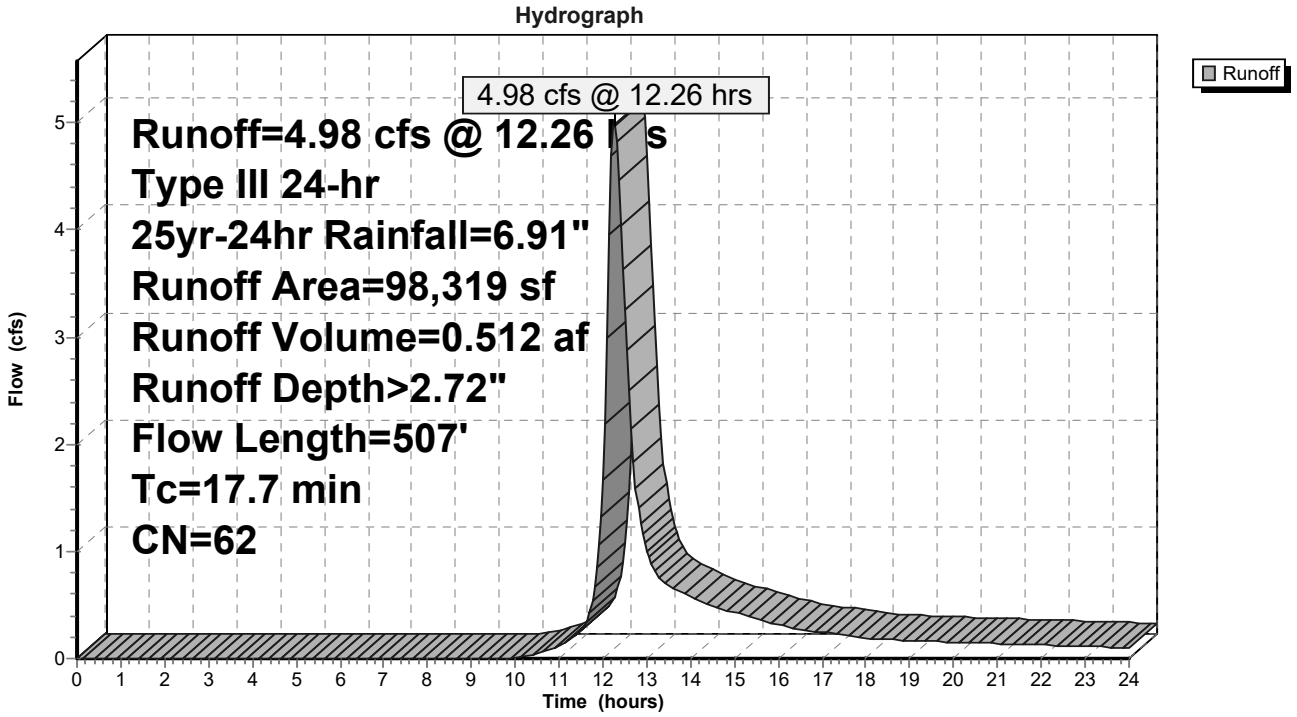
Runoff = 4.98 cfs @ 12.26 hrs, Volume= 0.512 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
2,409	98	Unconnected roofs, HSG A
12,548	39	>75% Grass cover, Good, HSG A
62	98	Unconnected pavement, HSG A
11,656	30	Woods, Good, HSG A
131	98	Unconnected pavement, HSG C
71,513	70	Woods, Good, HSG C
98,319	62	Weighted Average
95,717		97.35% Pervious Area
2,602		2.65% Impervious Area
2,602		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	38	0.0787	0.26		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
7.9	62	0.0808	0.13		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.62"
7.3	407	0.0344	0.93		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
17.7	507	Total			

Subcatchment 2S: Flow to Lot H-2



Summary for Subcatchment 3S: Flow to Lot H-2

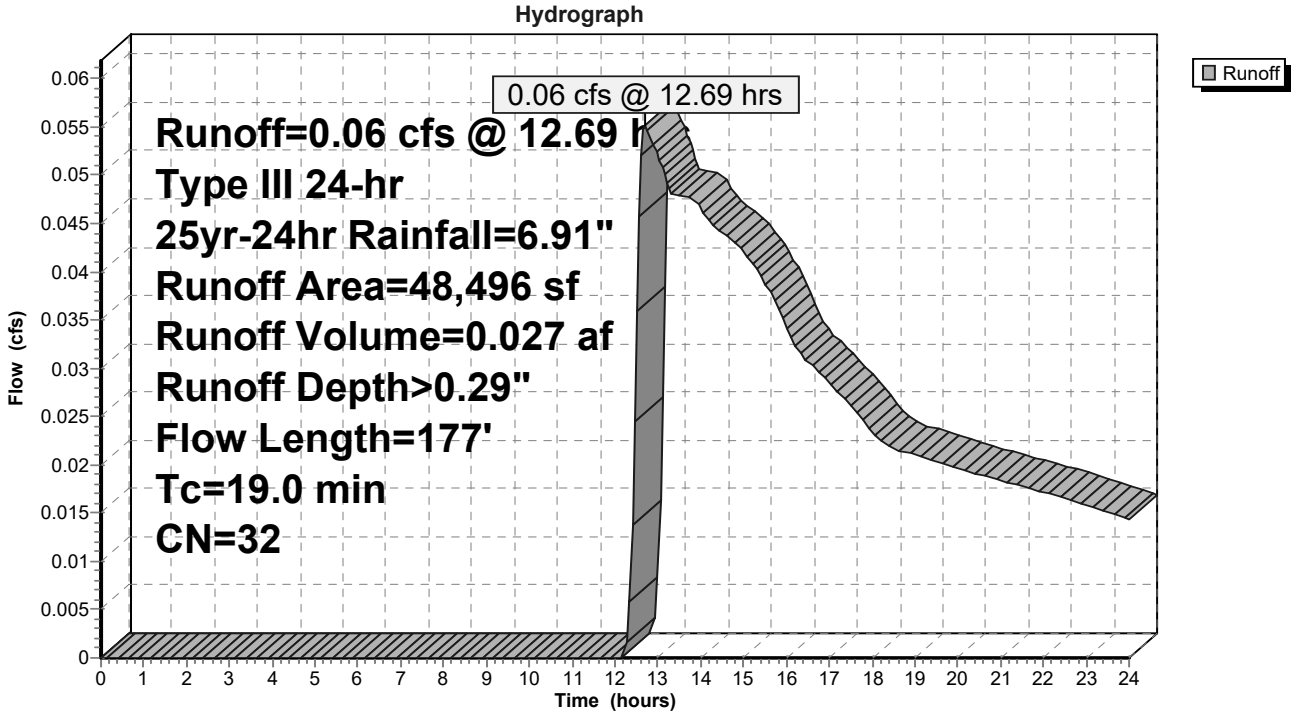
Runoff = 0.06 cfs @ 12.69 hrs, Volume= 0.027 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
8,920	39	>75% Grass cover, Good, HSG A
38,030	30	Brush, Good, HSG A
1,546	30	Woods, Good, HSG A
48,496	32	Weighted Average
48,496		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	100	0.0300	0.10		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
1.8	77	0.0196	0.70		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
19.0	177	Total			

Subcatchment 3S: Flow to Lot H-2



Summary for Subcatchment 4S: Flow to Lot H-2A

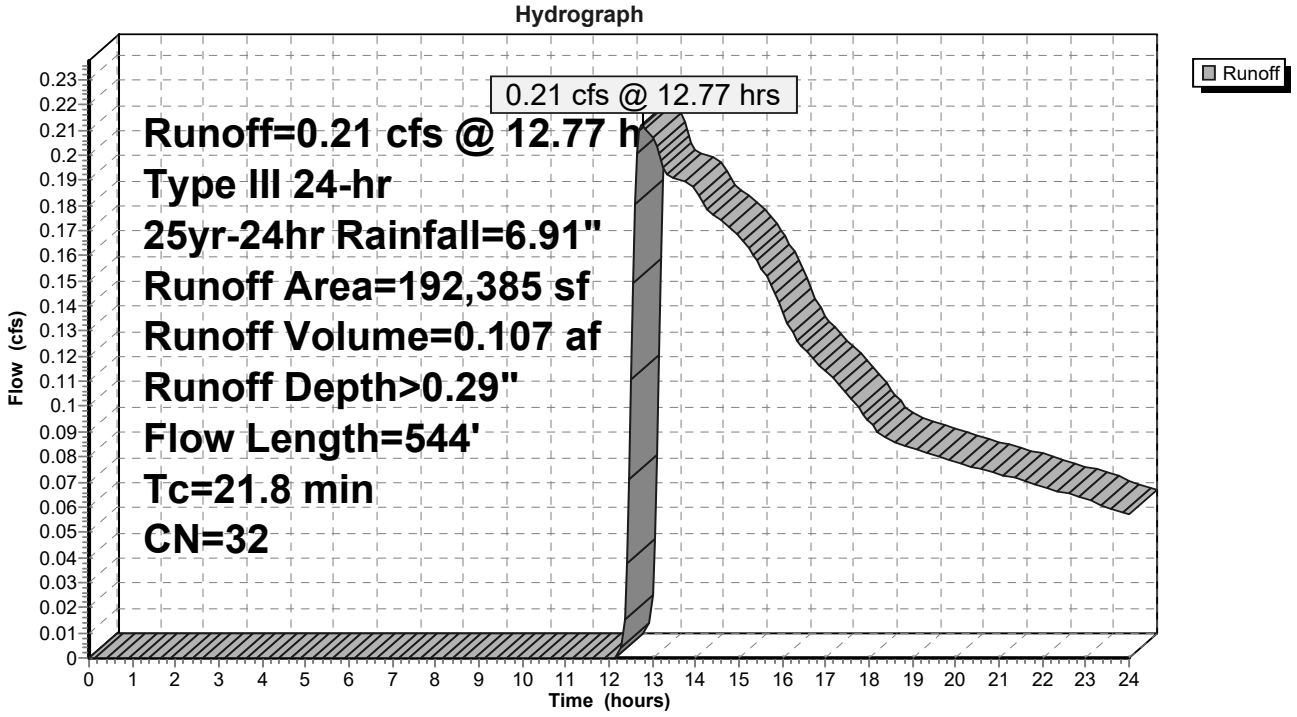
Runoff = 0.21 cfs @ 12.77 hrs, Volume= 0.107 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
45,342	39	>75% Grass cover, Good, HSG A
104,456	30	Brush, Good, HSG A
42,587	30	Woods, Good, HSG A
192,385	32	Weighted Average
192,385		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0500	0.12		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
2.0	121	0.0412	1.01		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
5.8	323	0.0341	0.92		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
21.8	544	Total			

Subcatchment 4S: Flow to Lot H-2A



Summary for Subcatchment 5S: Flow to Lot H-2A

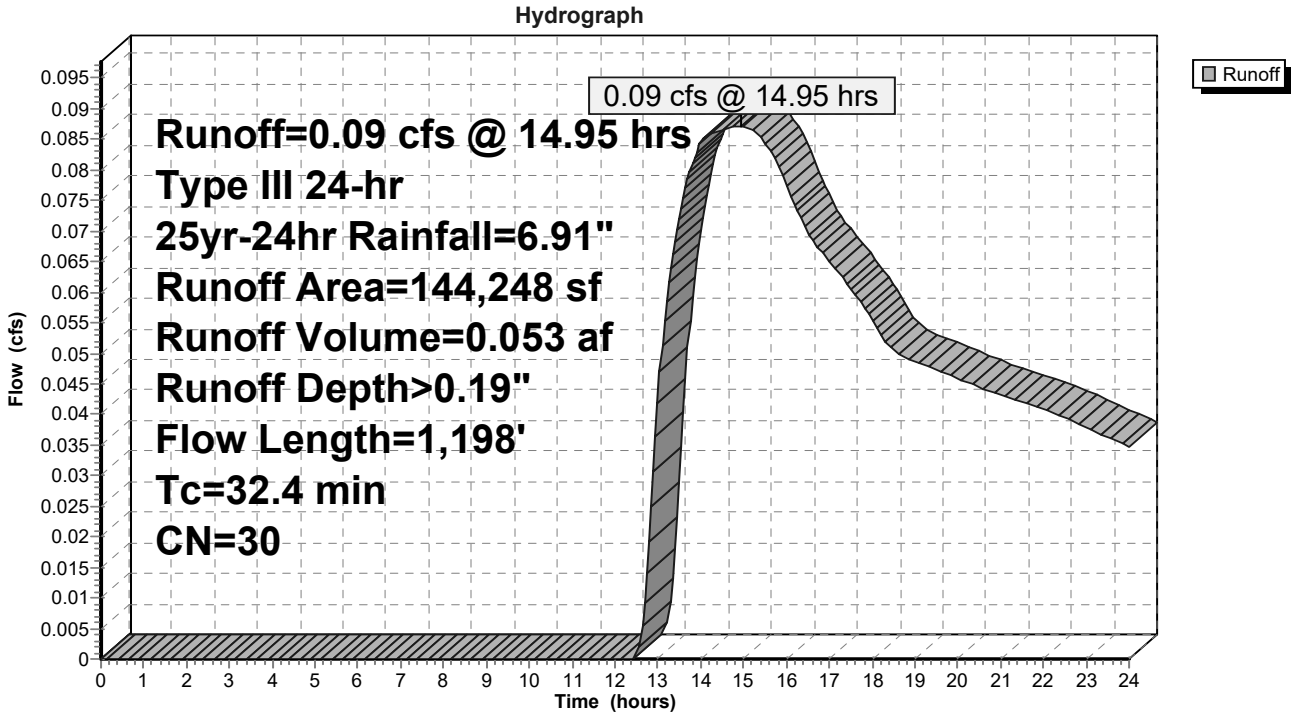
Runoff = 0.09 cfs @ 14.95 hrs, Volume= 0.053 af, Depth> 0.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
77	39	>75% Grass cover, Good, HSG A
28,063	30	Brush, Good, HSG A
116,108	30	Woods, Good, HSG A
144,248	30	Weighted Average
144,248		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.3	100	0.0400	0.11		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
3.2	188	0.0385	0.98		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
8.6	578	0.0502	1.12		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
5.3	332	0.0437	1.05		**Shallow Concentrated Flow, Segment #4** Woodland Kv= 5.0 fps
32.4	1,198	Total			

Subcatchment 5S: Flow to Lot H-2A



Summary for Subcatchment 15S: Offsite Flow

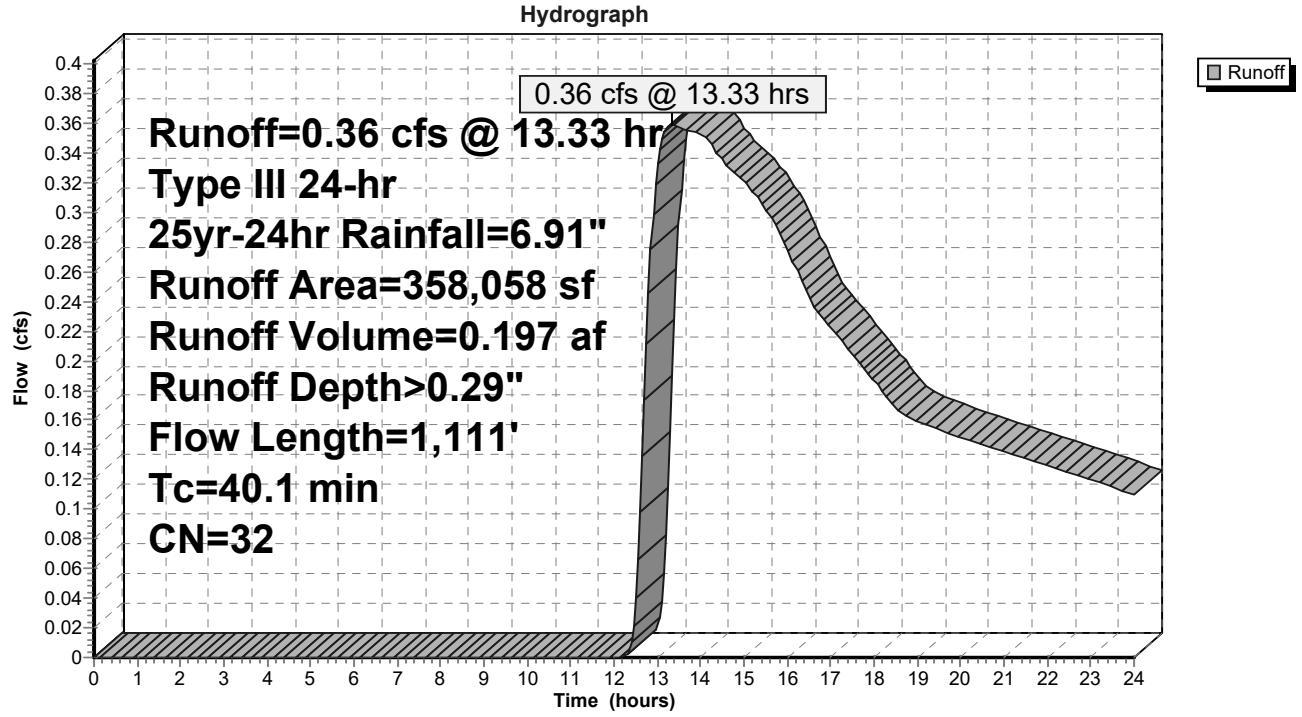
Runoff = 0.36 cfs @ 13.33 hrs, Volume= 0.197 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

	Area (sf)	CN	Description
*	6,100	98	Paved parking
	43,560	39	>75% Grass cover, Good, HSG A
	308,398	30	Woods, Good, HSG A
	358,058	32	Weighted Average
	351,958		98.30% Pervious Area
	6,100		1.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.2	100	0.0200	0.08		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
9.5	385	0.0182	0.67		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
8.4	485	0.0371	0.96		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
2.0	141	0.0533	1.15		**Shallow Concentrated Flow, Segment #4** Woodland Kv= 5.0 fps
40.1	1,111	Total			

Subcatchment 15S: Offsite Flow



Summary for Subcatchment 100S: Ex CB 100

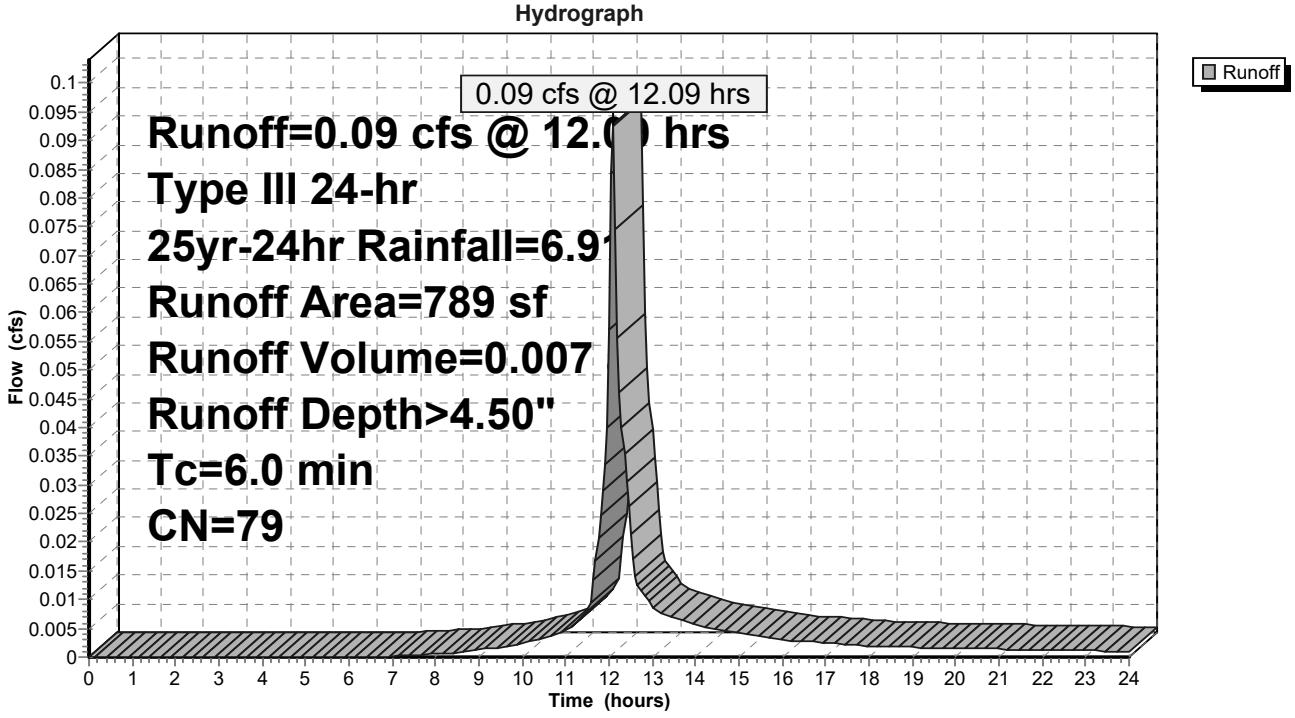
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 4.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
507	98	Roofs, HSG A
258	39	>75% Grass cover, Good, HSG A
24	98	Paved parking, HSG A
789	79	Weighted Average
258		32.70% Pervious Area
531		67.30% Impervious Area

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

Subcatchment 100S: Ex CB 100



Summary for Subcatchment 148GS: Ex CB 1+48G

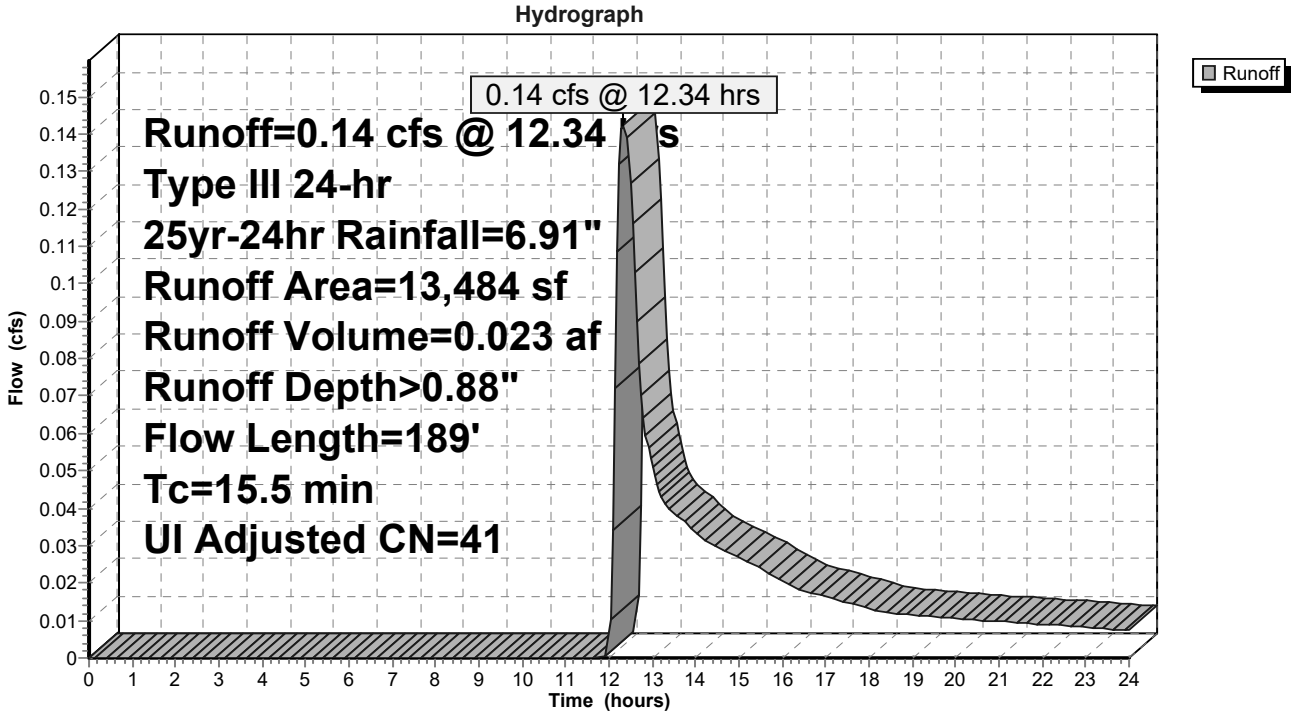
Runoff = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
6,867	39		>75% Grass cover, Good, HSG A
2,265	98		Unconnected pavement, HSG A
4,352	30		Woods, Good, HSG A
13,484	46	41	Weighted Average, UI Adjusted
11,219			83.20% Pervious Area
2,265			16.80% Impervious Area
2,265			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0500	0.12		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
1.5	89	0.0198	0.98		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
15.5	189	Total			

Subcatchment 148GS: Ex CB 1+48G



Summary for Subcatchment 148RS: Ex CB 1+48R

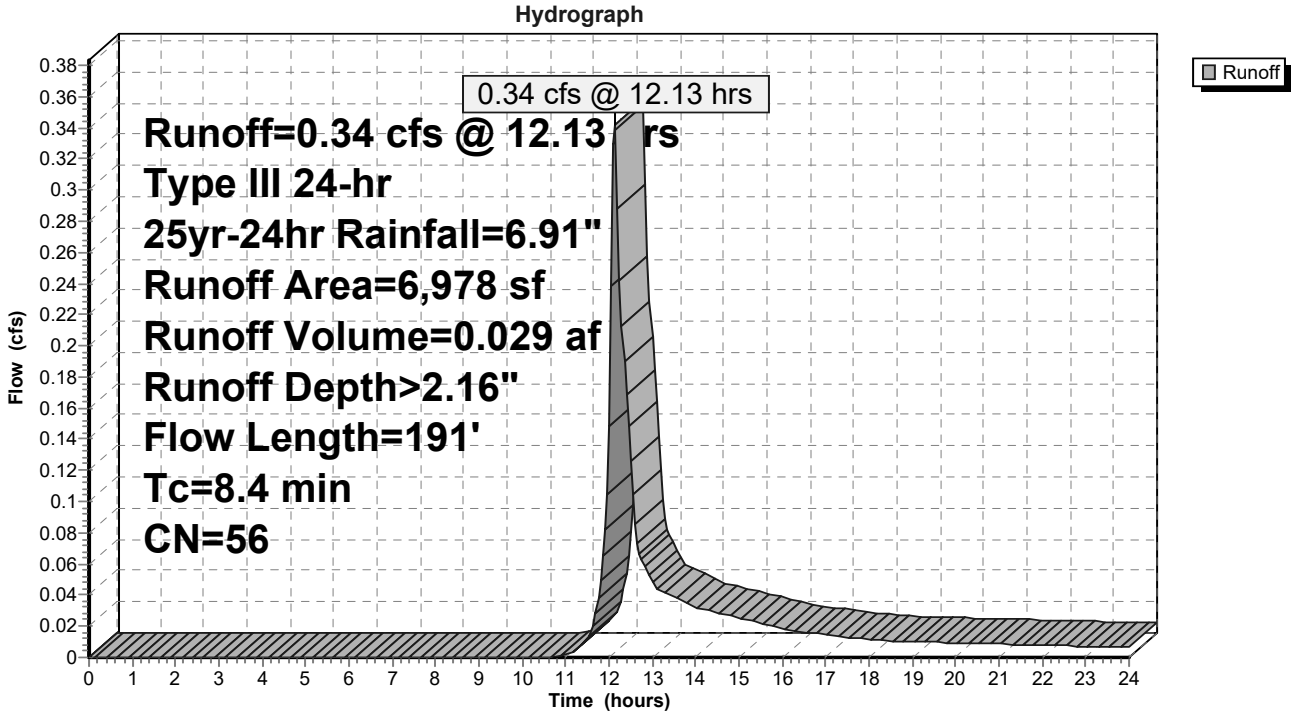
Runoff = 0.34 cfs @ 12.13 hrs, Volume= 0.029 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,422	39	>75% Grass cover, Good, HSG A
2,171	98	Paved parking, HSG A
1,385	30	Woods, Good, HSG A
6,978	56	Weighted Average
4,807		68.89% Pervious Area
2,171		31.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0400	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.4	91	0.0247	1.10		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
8.4	191	Total			

Subcatchment 148RS: Ex CB 1+48R



Summary for Subcatchment 303GS: Ex CB 3+03G

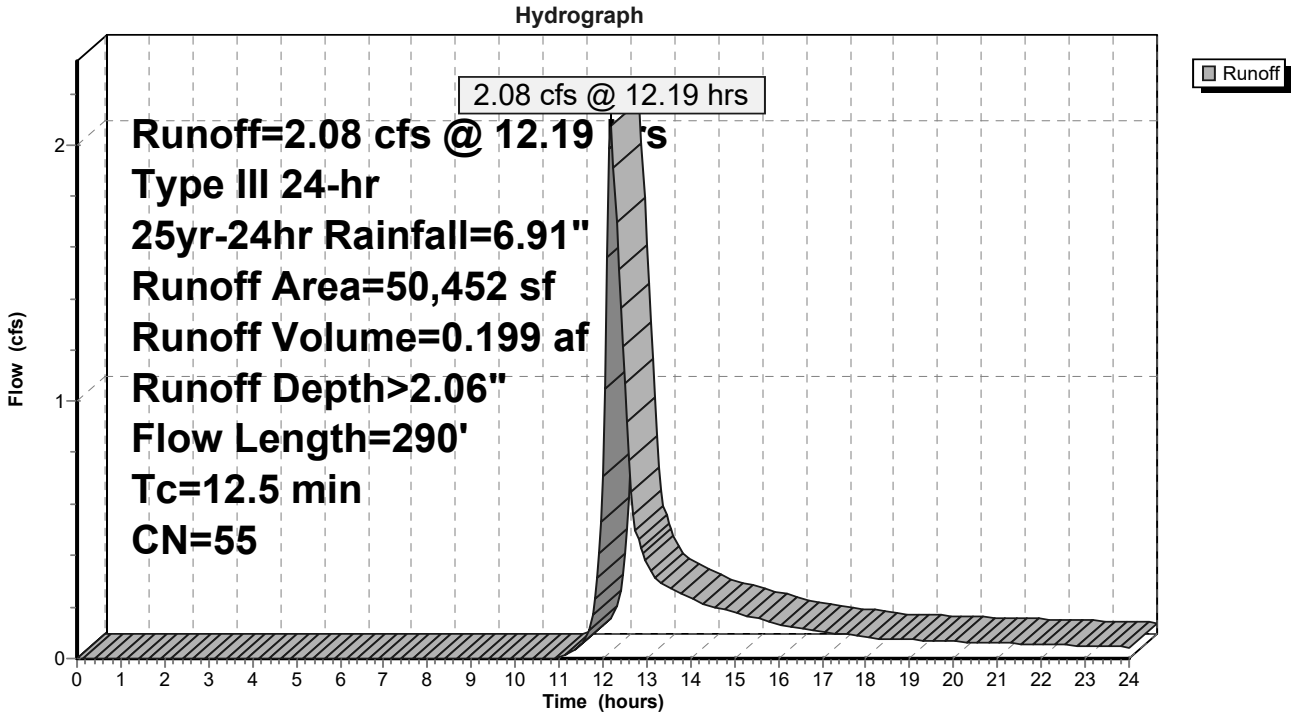
Runoff = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,226	98	Roofs, HSG A
16,471	39	>75% Grass cover, Good, HSG A
12,702	98	Paved parking, HSG A
17,377	30	Woods, Good, HSG A
676	98	Water Surface, HSG A
50,452	55	Weighted Average
33,848		67.09% Pervious Area
16,604		32.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	53	0.0236	0.17		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
5.2	47	0.1331	0.15		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.62"
0.4	35	0.0787	1.40		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
0.0	11	0.3537	4.16		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
1.6	127	0.0355	1.32		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
0.1	17	0.0584	4.91		**Shallow Concentrated Flow, Segment #6** Paved Kv= 20.3 fps
12.5	290	Total			

Subcatchment 303GS: Ex CB 3+03G



Summary for Subcatchment 304RS: Ex CB 3+04R

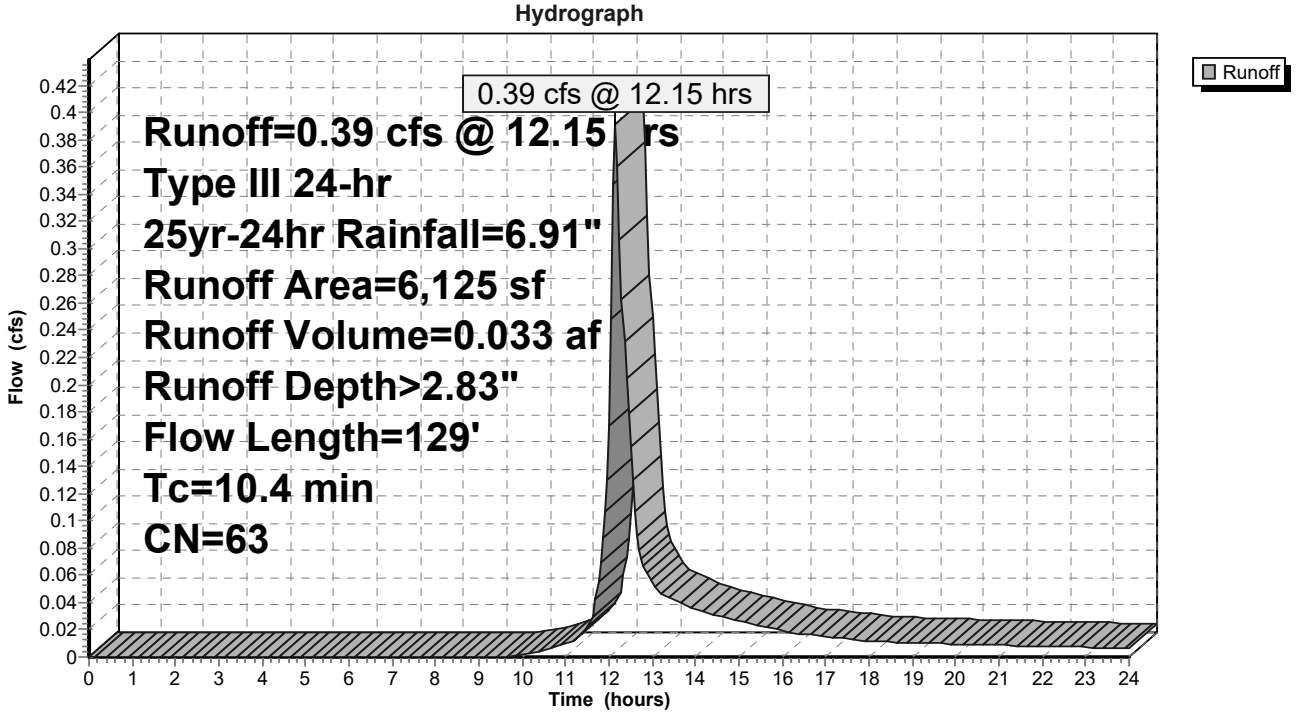
Runoff = 0.39 cfs @ 12.15 hrs, Volume= 0.033 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,618	39	>75% Grass cover, Good, HSG A
2,507	98	Paved parking, HSG A
6,125	63	Weighted Average
3,618		59.07% Pervious Area
2,507		40.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	81	0.0153	0.16		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.2	10	0.0250	1.01		**Sheet Flow, Segment #2** Smooth surfaces n= 0.011 P2= 3.62"
1.2	9	0.0278	0.13		**Sheet Flow, Segment #3** Grass: Short n= 0.150 P2= 3.62"
0.3	29	0.0509	1.58		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
10.4	129	Total			

Subcatchment 304RS: Ex CB 3+04R



Summary for Subcatchment 390GS: Ex CB 3+90G

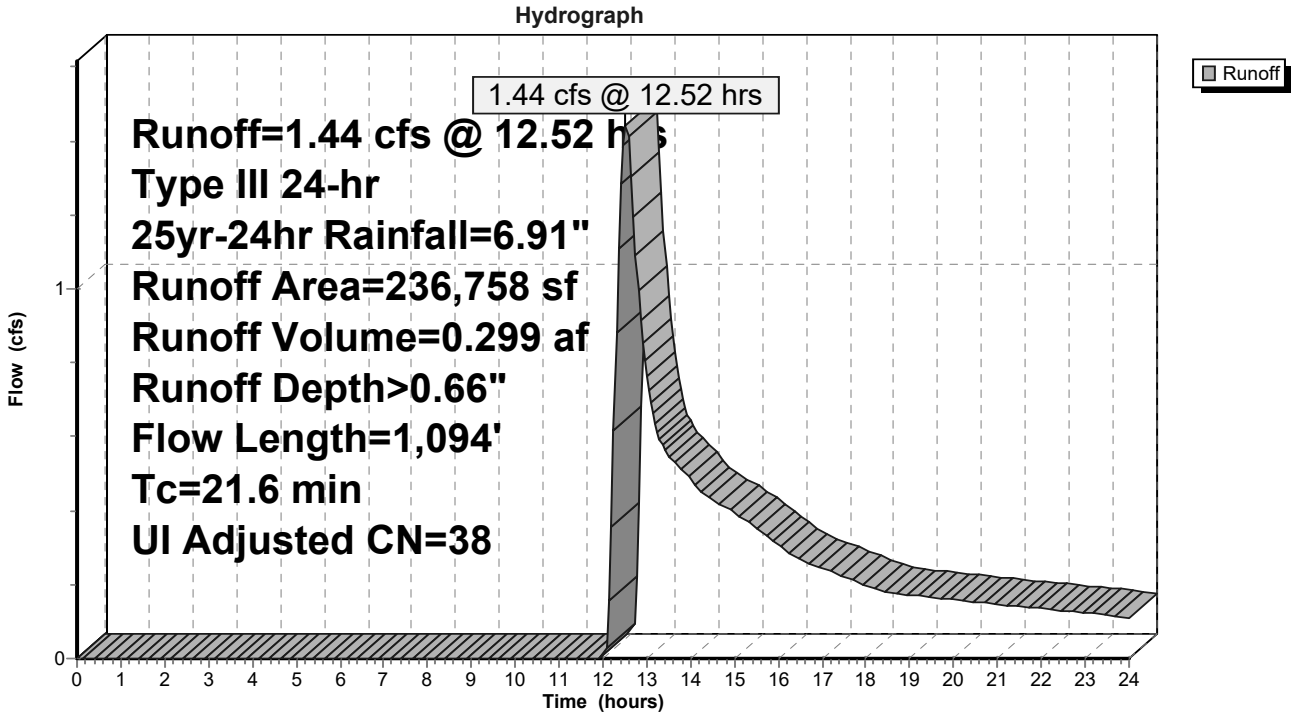
Runoff = 1.44 cfs @ 12.52 hrs, Volume= 0.299 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
14,979	98		Unconnected roofs, HSG A
108,159	39		>75% Grass cover, Good, HSG A
8,253	98		Unconnected pavement, HSG A
105,367	30		Woods, Good, HSG A
236,758	41	38	Weighted Average, UI Adjusted
213,526			90.19% Pervious Area
23,232			9.81% Impervious Area
23,232			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	100	0.0050	0.35		**Shallow Concentrated Flow, Segment #1** Woodland Kv= 5.0 fps
3.1	135	0.0111	0.74		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
2.8	161	0.0357	0.94		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
0.1	24	0.2514	3.51		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
10.9	674	0.0215	1.03		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
21.6	1,094	Total			

Subcatchment 390GS: Ex CB 3+90G



Summary for Subcatchment 402GS: Ex CB 4+02G

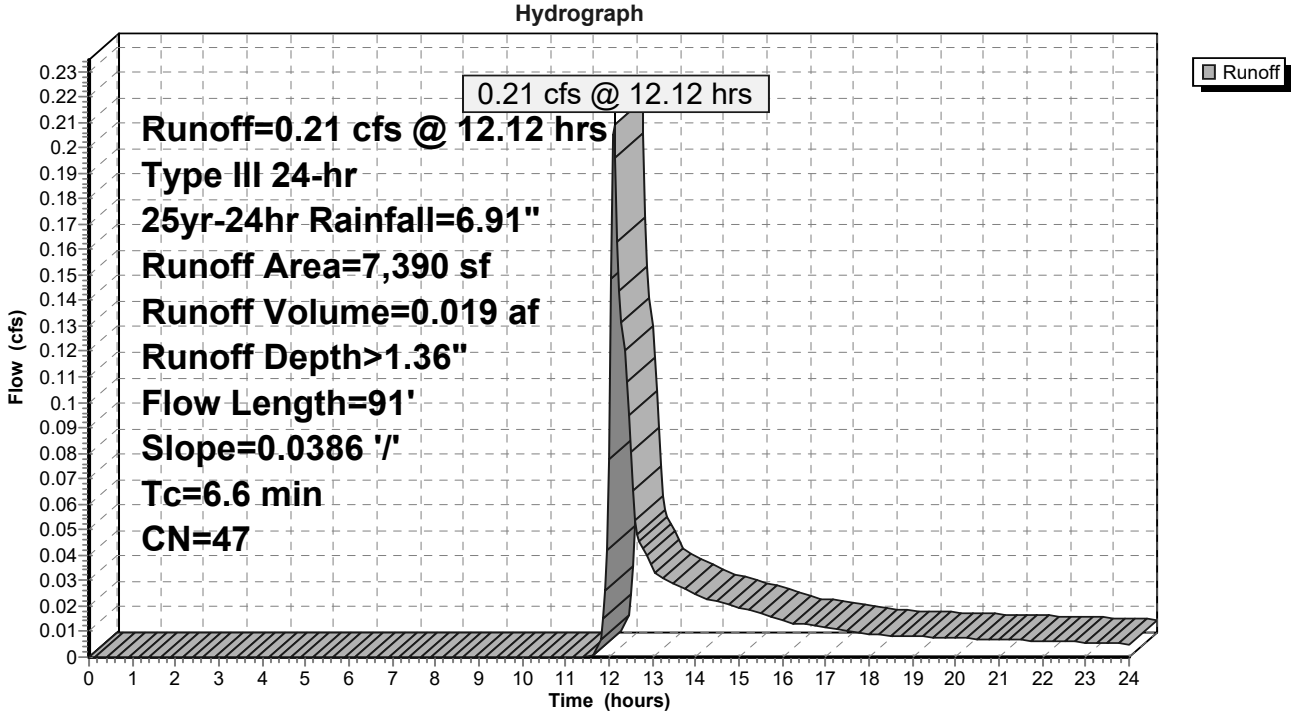
Runoff = 0.21 cfs @ 12.12 hrs, Volume= 0.019 af, Depth> 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
573	98	Roofs, HSG A
6,245	39	>75% Grass cover, Good, HSG A
435	98	Paved parking, HSG A
137	30	Woods, Good, HSG A
7,390	47	Weighted Average
6,382		86.36% Pervious Area
1,008		13.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	91	0.0386	0.23		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"

Subcatchment 402GS: Ex CB 4+02G



Summary for Subcatchment 419LS: Ex CB 4+19L

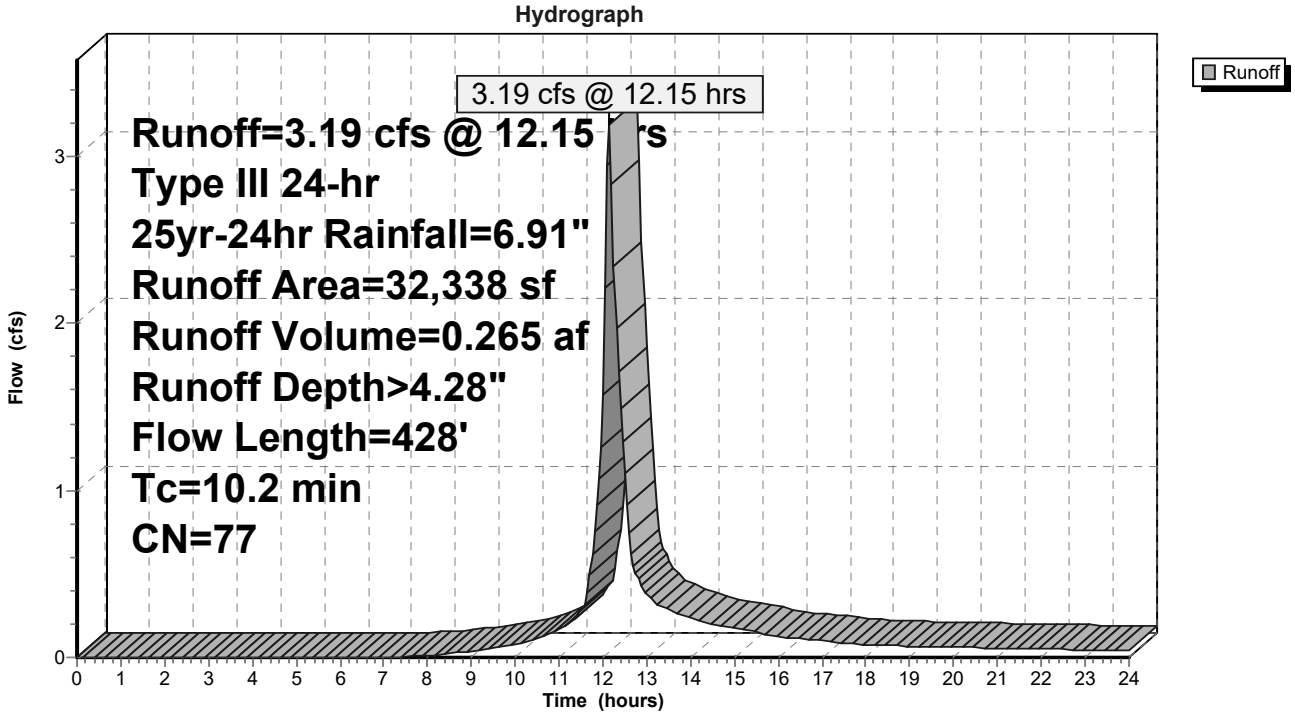
Runoff = 3.19 cfs @ 12.15 hrs, Volume= 0.265 af, Depth> 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,277	98	Roofs, HSG A
11,583	39	>75% Grass cover, Good, HSG A
19,478	98	Paved parking, HSG A
32,338	77	Weighted Average
11,583		35.82% Pervious Area
20,755		64.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	87	0.0201	0.18		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
2.0	341	0.0205	2.91		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
10.2	428	Total			

Subcatchment 419LS: Ex CB 4+19L



Summary for Subcatchment 419RS: Ex CB 4+19R

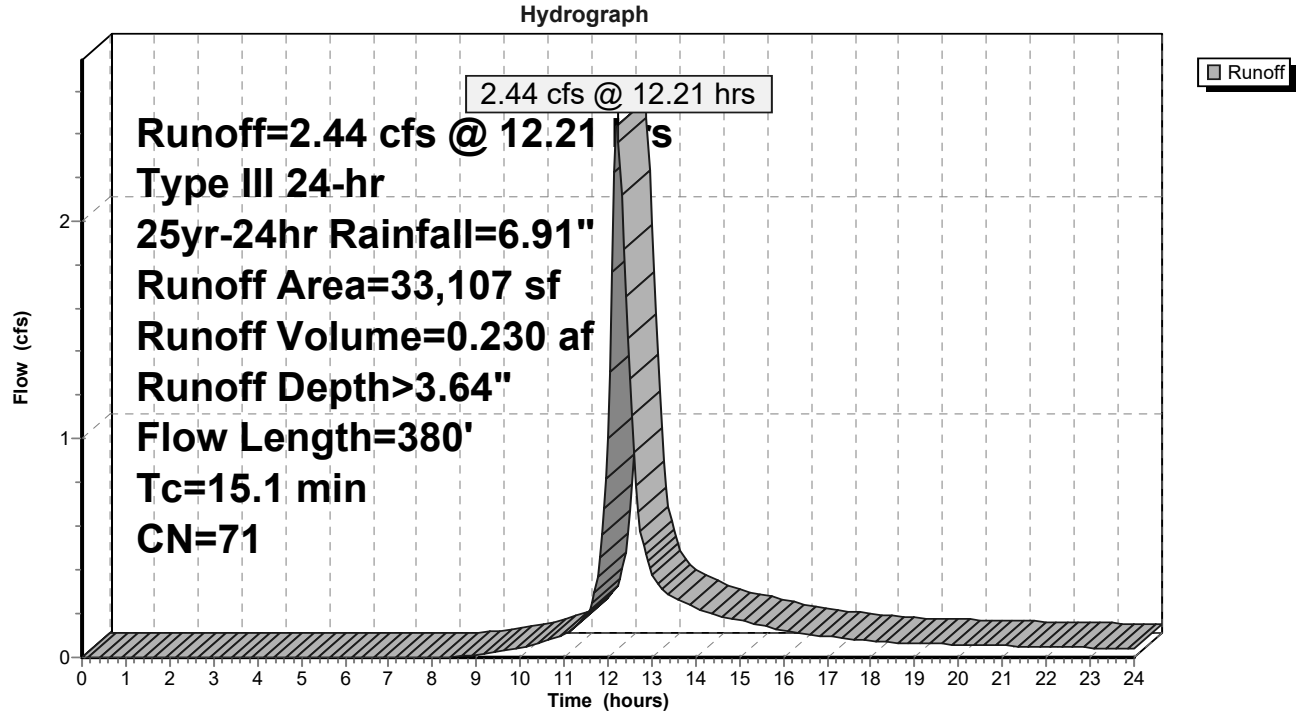
Runoff = 2.44 cfs @ 12.21 hrs, Volume= 0.230 af, Depth> 3.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
6,785	98	Roofs, HSG A
15,010	39	>75% Grass cover, Good, HSG A
11,312	98	Paved parking, HSG A
33,107	71	Weighted Average
15,010		45.34% Pervious Area
18,097		54.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0075	0.12		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.5	280	0.0241	3.15		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
15.1	380	Total			

Subcatchment 419RS: Ex CB 4+19R



Summary for Subcatchment 857LS: Ex CB 8+57L

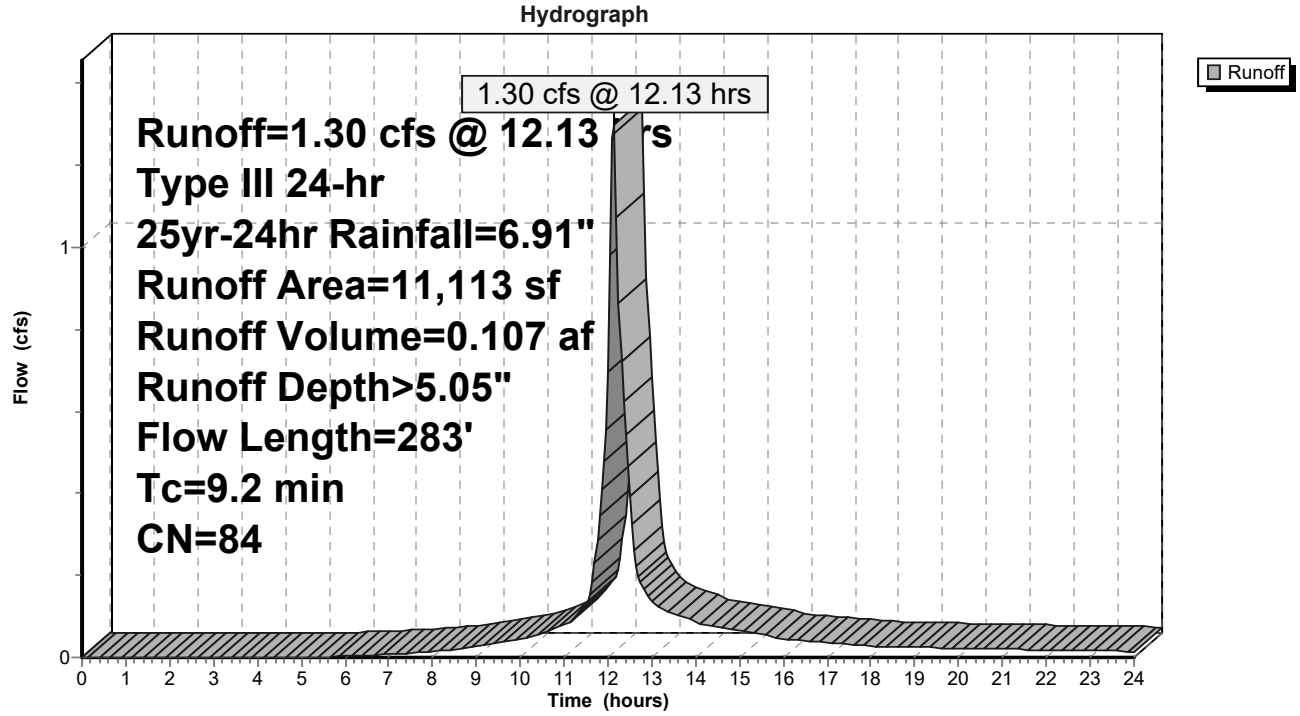
Runoff = 1.30 cfs @ 12.13 hrs, Volume= 0.107 af, Depth> 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
898	98	Roofs, HSG A
2,629	39	>75% Grass cover, Good, HSG A
7,586	98	Paved parking, HSG A
11,113	84	Weighted Average
2,629		23.66% Pervious Area
8,484		76.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	77	0.0163	0.16		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.1	206	0.0230	3.08		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
9.2	283	Total			

Subcatchment 857LS: Ex CB 8+57L



Summary for Subcatchment 857RS: Ex CB 8+57R

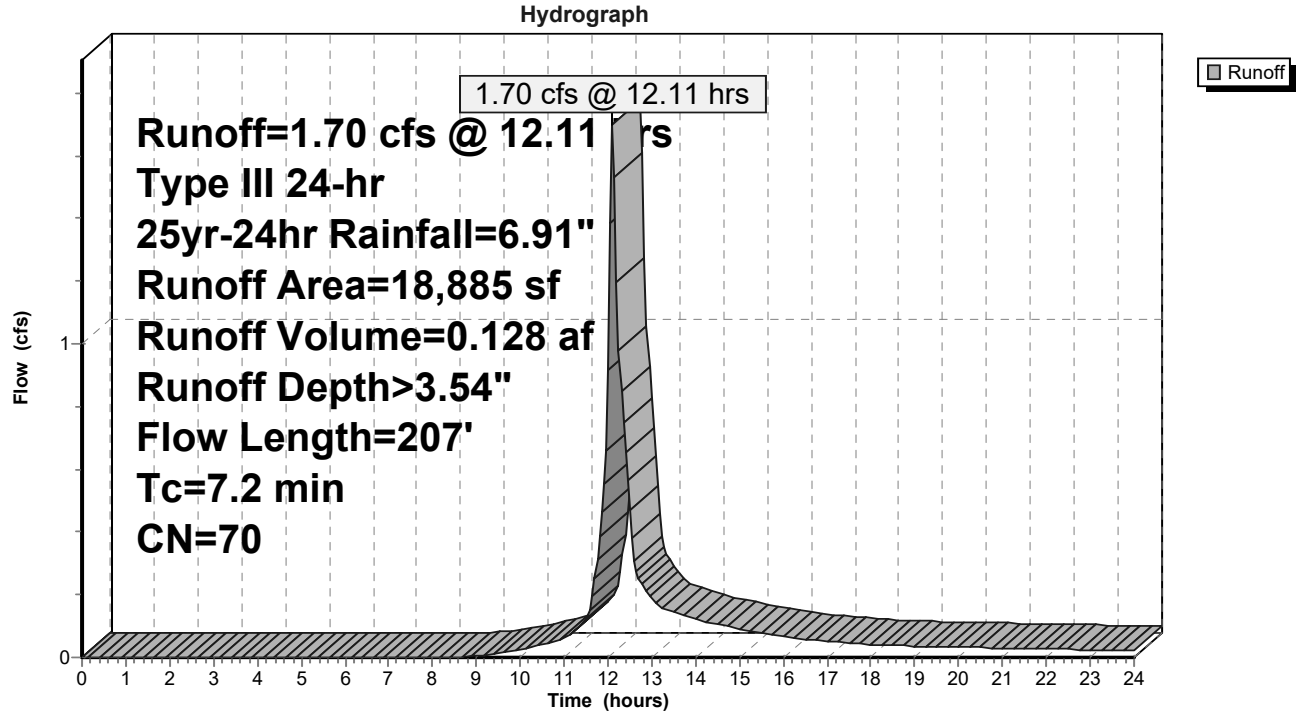
Runoff = 1.70 cfs @ 12.11 hrs, Volume= 0.128 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,834	98	Roofs, HSG A
8,863	39	>75% Grass cover, Good, HSG A
6,188	98	Paved parking, HSG A
18,885	70	Weighted Average
8,863		46.93% Pervious Area
10,022		53.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	78	0.0288	0.20		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.7	129	0.0214	2.97		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
7.2	207	Total			

Subcatchment 857RS: Ex CB 8+57R



Summary for Subcatchment 900S: Rain Garden Area

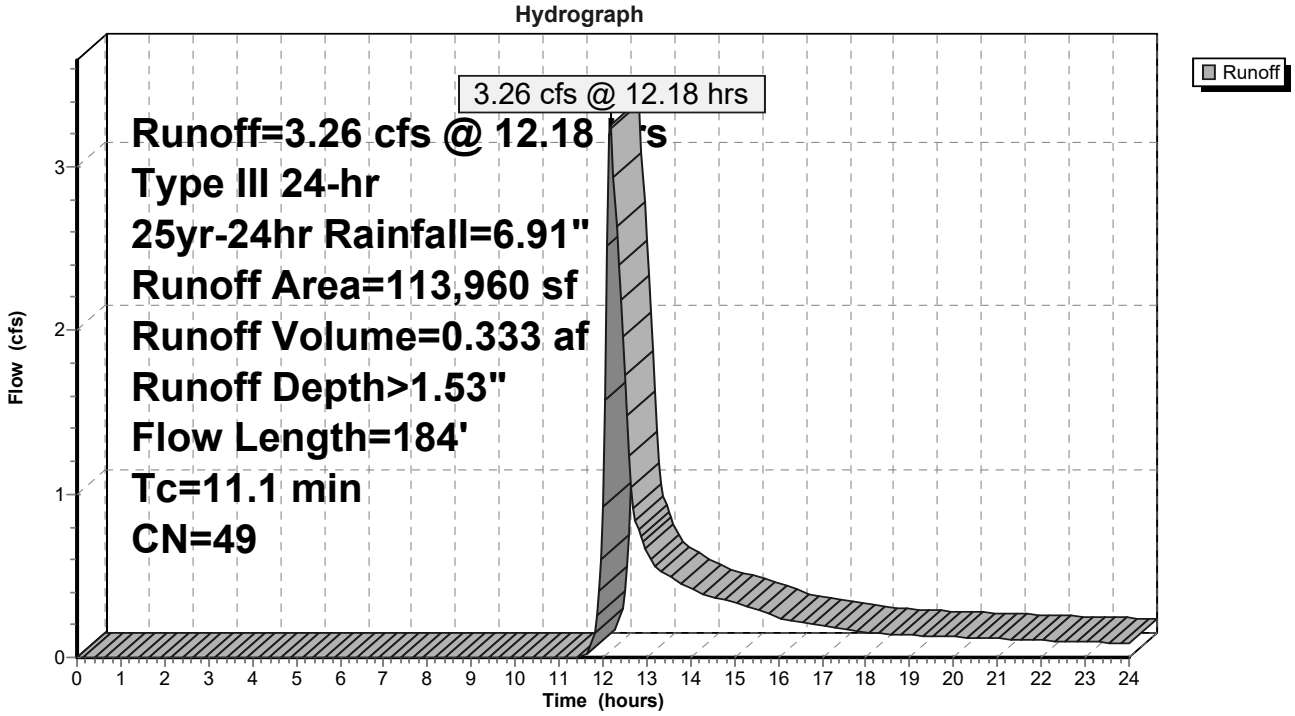
Runoff = 3.26 cfs @ 12.18 hrs, Volume= 0.333 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
81,707	39	>75% Grass cover, Good, HSG A
32,253	74	>75% Grass cover, Good, HSG C
113,960	49	Weighted Average
113,960		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0150	0.16		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.4	20	0.0150	0.86		**Shallow Concentrated Flow, Segment #1** Short Grass Pasture Kv= 7.0 fps
0.4	64	0.1400	2.62		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
11.1	184	Total			

Subcatchment 900S: Rain Garden Area



Summary for Subcatchment 1000S: Area to Sediment Forebay

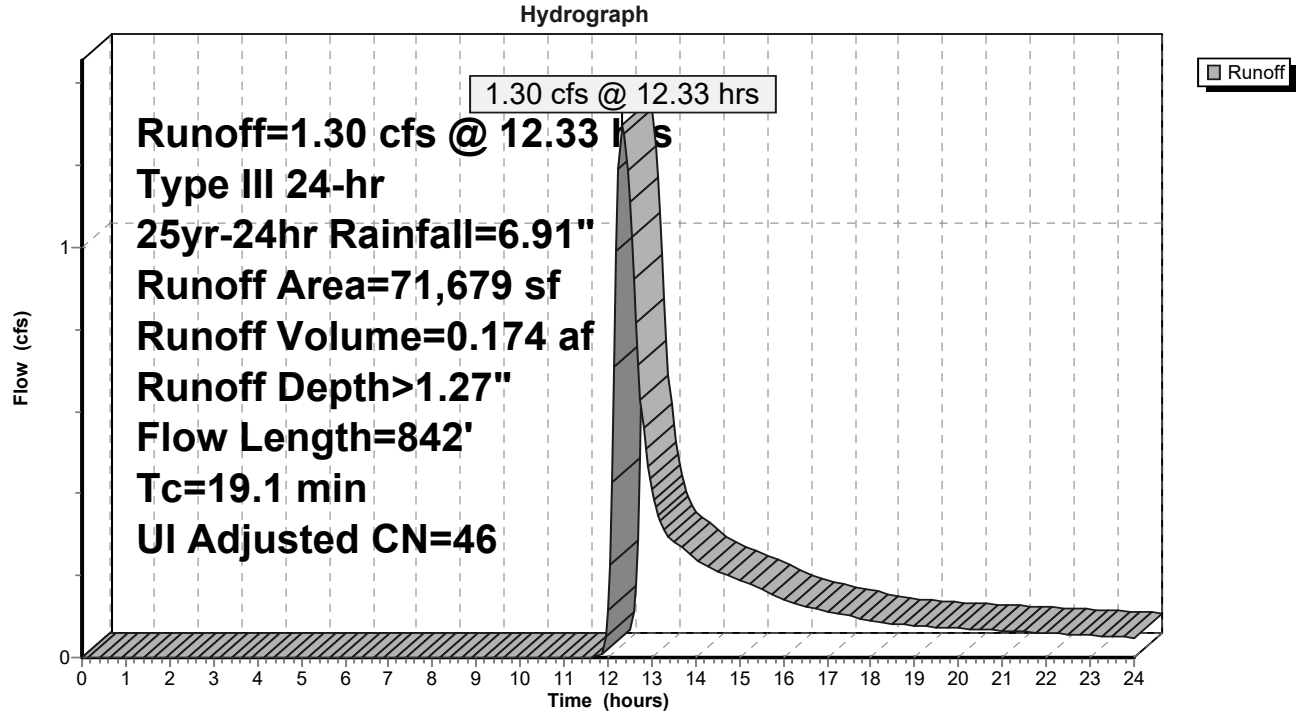
Runoff = 1.30 cfs @ 12.33 hrs, Volume= 0.174 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
18,191	98		Unconnected roofs, HSG A
53,488	39		>75% Grass cover, Good, HSG A
71,679	54	46	Weighted Average, UI Adjusted
53,488			74.62% Pervious Area
18,191			25.38% Impervious Area
18,191			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0150	0.16		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
2.5	171	0.0263	1.14		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
0.9	92	0.0546	1.64		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
5.4	479	0.0439	1.47		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
19.1	842	Total			

Subcatchment 1000S: Area to Sediment Forebay



Summary for Subcatchment 1295GS: Ex CB 12+95G

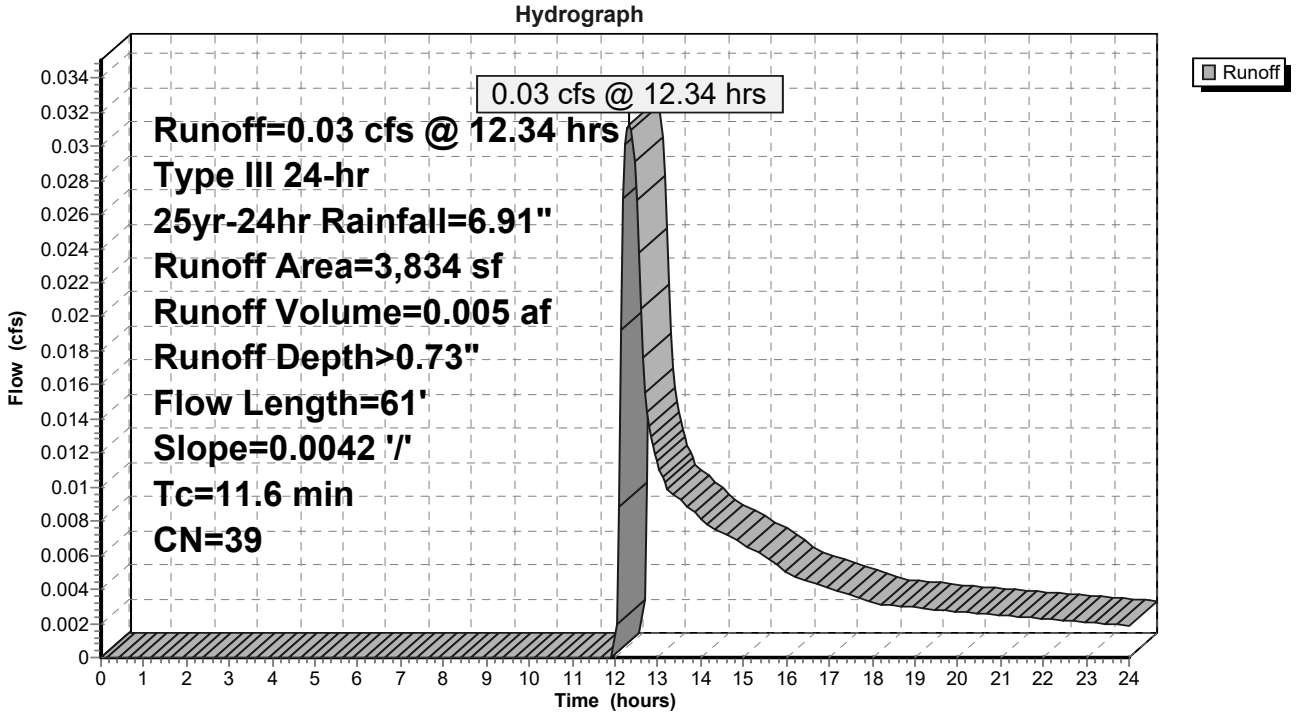
Runoff = 0.03 cfs @ 12.34 hrs, Volume= 0.005 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,834	39	>75% Grass cover, Good, HSG A
3,834		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	61	0.0042	0.09		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"

Subcatchment 1295GS: Ex CB 12+95G



Summary for Subcatchment 1295LS: Ex CB 12+95L

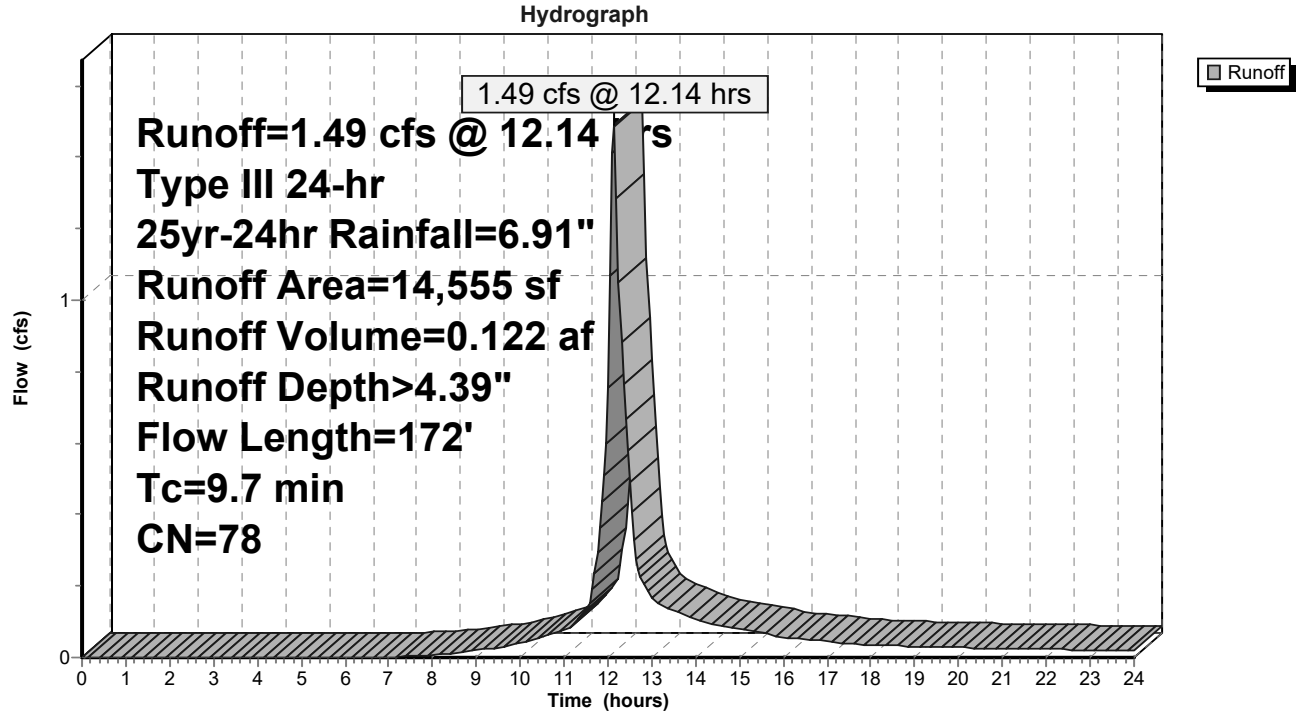
Runoff = 1.49 cfs @ 12.14 hrs, Volume= 0.122 af, Depth> 4.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,230	98	Roofs, HSG A
5,011	39	>75% Grass cover, Good, HSG A
8,314	98	Paved parking, HSG A
14,555	78	Weighted Average
5,011		34.43% Pervious Area
9,544		65.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0225	0.19		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.1	18	0.0141	2.41		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
0.6	31	0.0160	0.89		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
0.2	23	0.0107	2.10		**Shallow Concentrated Flow, Segment #4** Paved Kv= 20.3 fps
9.7	172	Total			

Subcatchment 1295LS: Ex CB 12+95L



Summary for Subcatchment 1295RS: Ex CB 12+95R

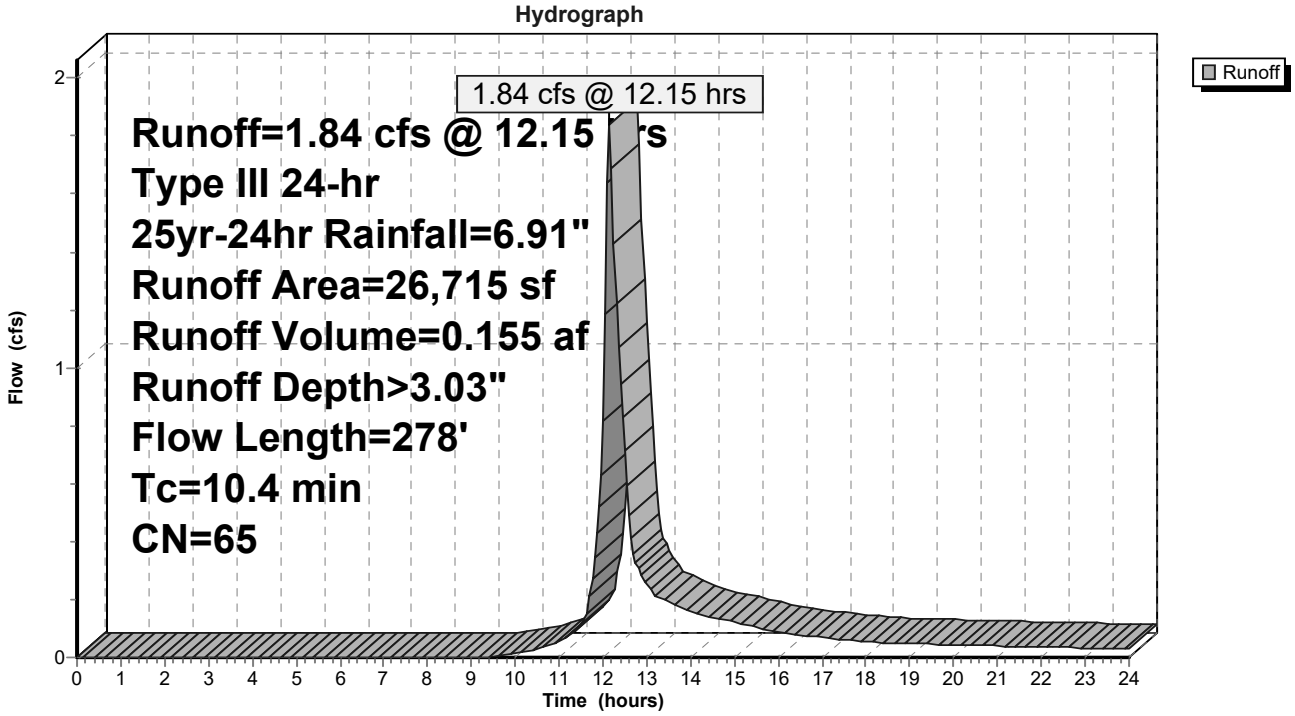
Runoff = 1.84 cfs @ 12.15 hrs, Volume= 0.155 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
4,673	98	Roofs, HSG A
14,723	39	>75% Grass cover, Good, HSG A
7,319	98	Paved parking, HSG A
26,715	65	Weighted Average
14,723		55.11% Pervious Area
11,992		44.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	79	0.0127	0.14		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.3	199	0.0151	2.49		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
10.4	278	Total			

Subcatchment 1295RS: Ex CB 12+95R



Summary for Subcatchment 1643LS: Ex CB 16+43L

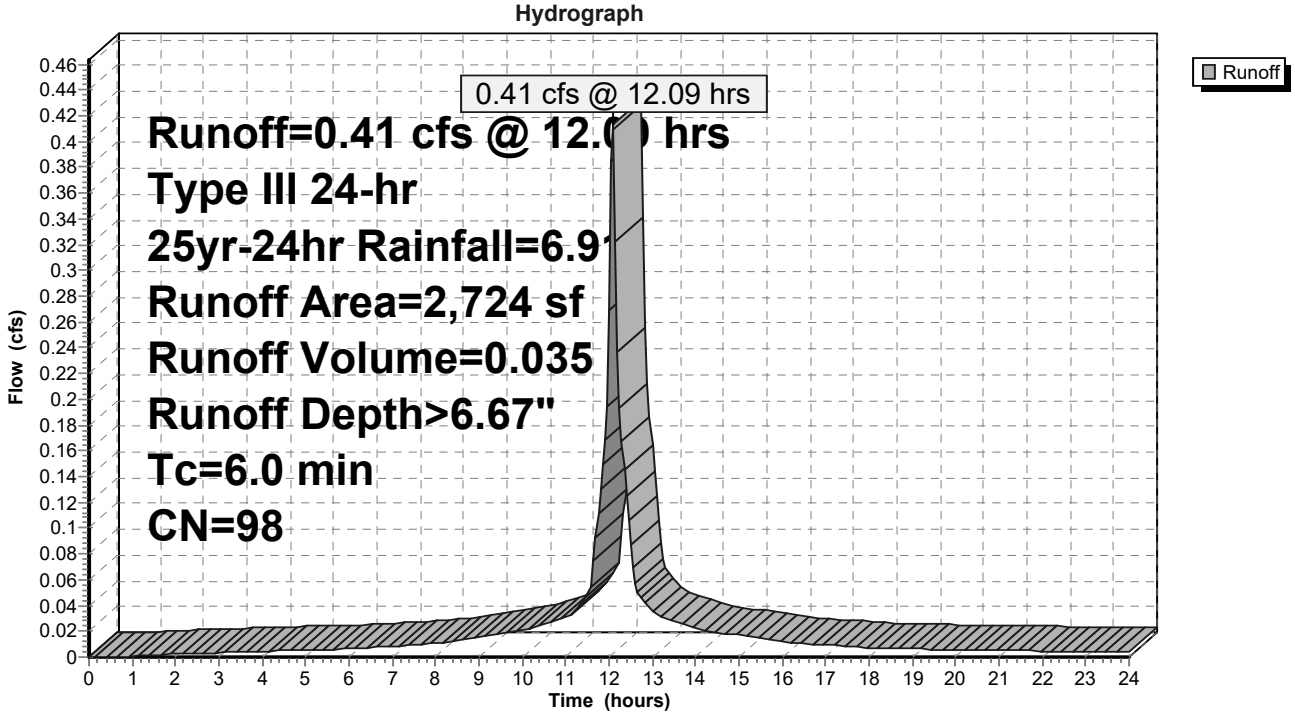
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
845	98	Roofs, HSG A
12	39	>75% Grass cover, Good, HSG A
1,867	98	Paved parking, HSG A
2,724	98	Weighted Average
12		0.44% Pervious Area
2,712		99.56% Impervious Area

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

Subcatchment 1643LS: Ex CB 16+43L



Summary for Subcatchment 1643RS: Ex CB 16+43R

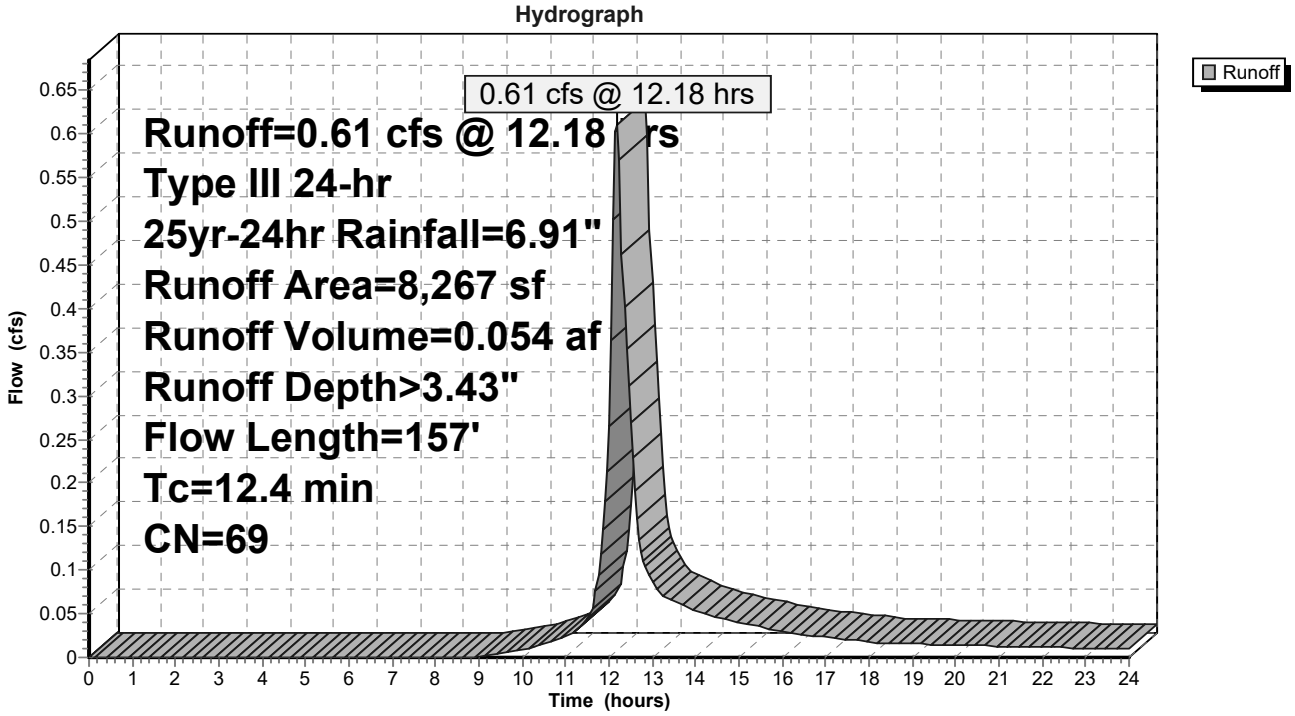
Runoff = 0.61 cfs @ 12.18 hrs, Volume= 0.054 af, Depth> 3.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,406	98	Roofs, HSG A
4,120	39	>75% Grass cover, Good, HSG A
2,741	98	Paved parking, HSG A
8,267	69	Weighted Average
4,120		49.84% Pervious Area
4,147		50.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0100	0.14		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.2	57	0.0397	4.04		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
12.4	157	Total			

Subcatchment 1643RS: Ex CB 16+43R



Summary for Subcatchment 1785LS: Ex CB 17+85L

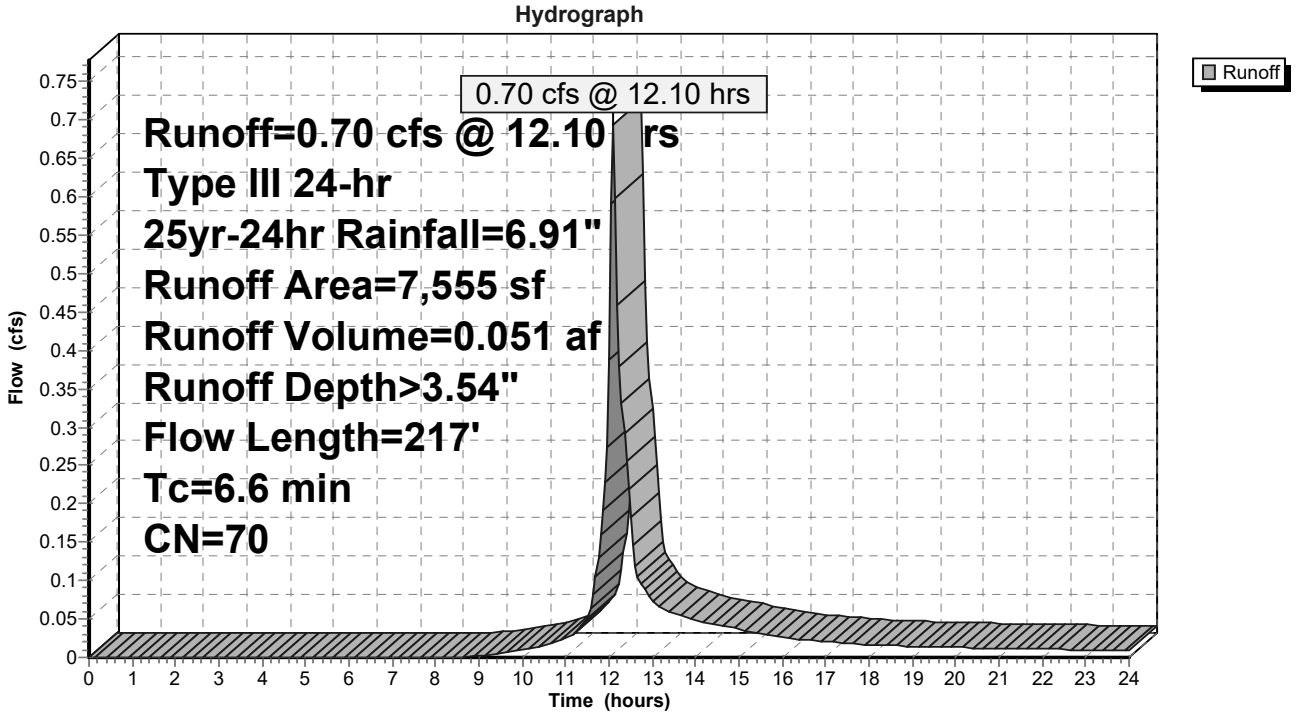
Runoff = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,105	98	Roofs, HSG A
3,580	39	>75% Grass cover, Good, HSG A
2,870	98	Paved parking, HSG A
7,555	70	Weighted Average
3,580		47.39% Pervious Area
3,975		52.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0550	0.27		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.5	117	0.0363	3.87		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
6.6	217	Total			

Subcatchment 1785LS: Ex CB 17+85L



Summary for Subcatchment 1785RS: Ex CB 17+85R

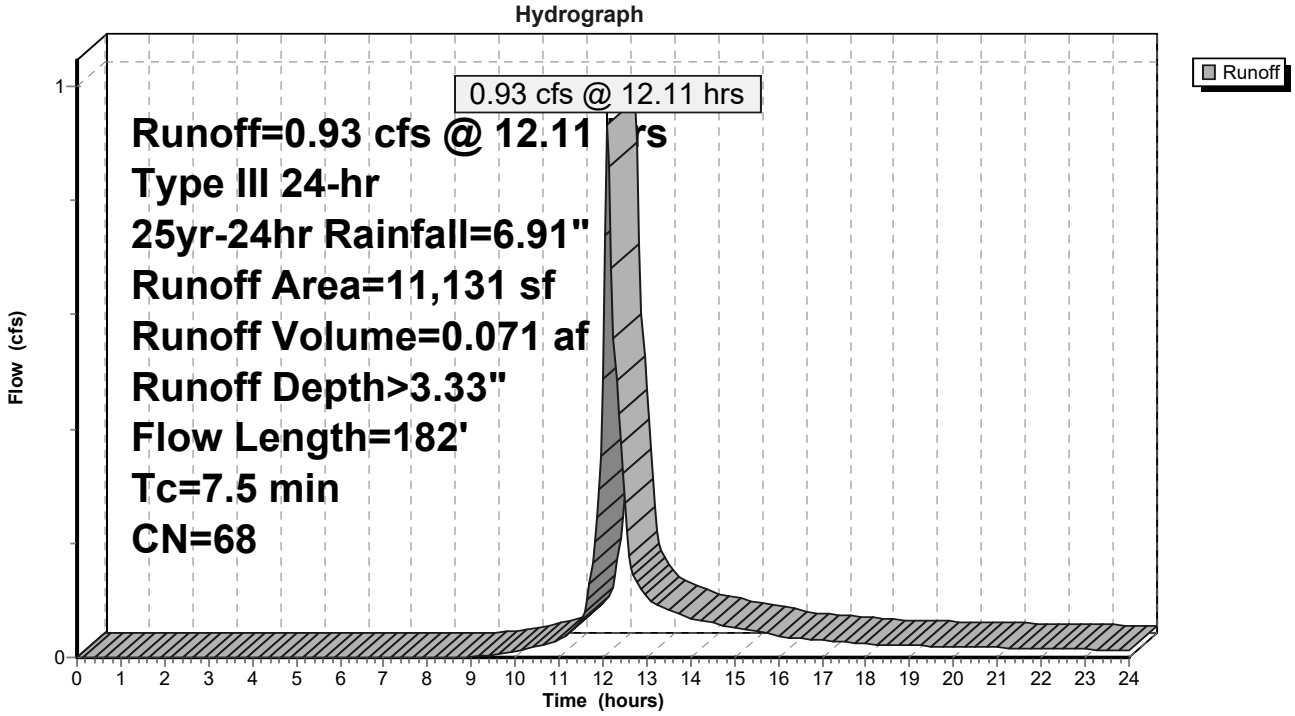
Runoff = 0.93 cfs @ 12.11 hrs, Volume= 0.071 af, Depth> 3.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,753	98	Roofs, HSG A
5,666	39	>75% Grass cover, Good, HSG A
3,712	98	Paved parking, HSG A
11,131	68	Weighted Average
5,666		50.90% Pervious Area
5,465		49.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0375	0.23		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.3	82	0.0428	4.20		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
7.5	182	Total			

Subcatchment 1785RS: Ex CB 17+85R



Summary for Subcatchment 1928LS: Ex CB 19+28L

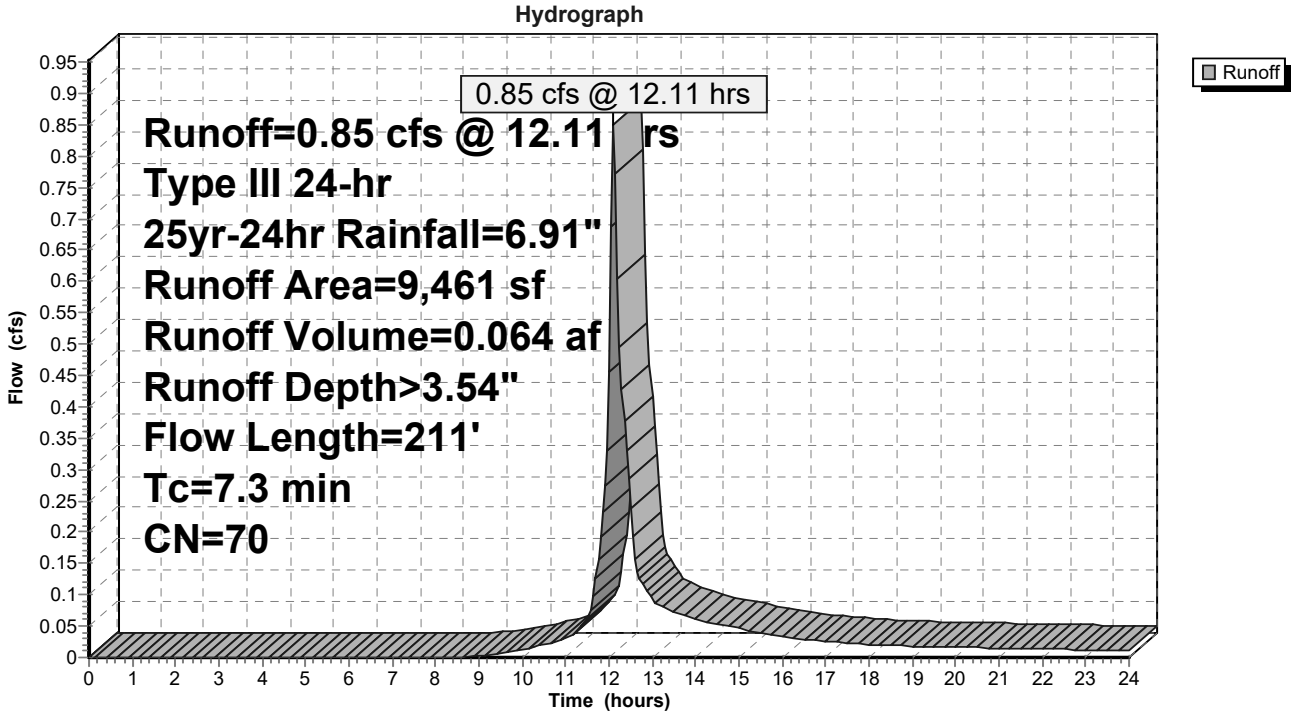
Runoff = 0.85 cfs @ 12.11 hrs, Volume= 0.064 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,895	98	Roofs, HSG A
4,519	39	>75% Grass cover, Good, HSG A
3,047	98	Paved parking, HSG A
9,461	70	Weighted Average
4,519		47.76% Pervious Area
4,942		52.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0425	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.1	17	0.0877	2.07		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
0.4	94	0.0481	4.45		**Shallow Concentrated Flow, Segment #1** Paved Kv= 20.3 fps
7.3	211	Total			

Subcatchment 1928LS: Ex CB 19+28L



Summary for Subcatchment 1928RS: Ex CB 19+28R

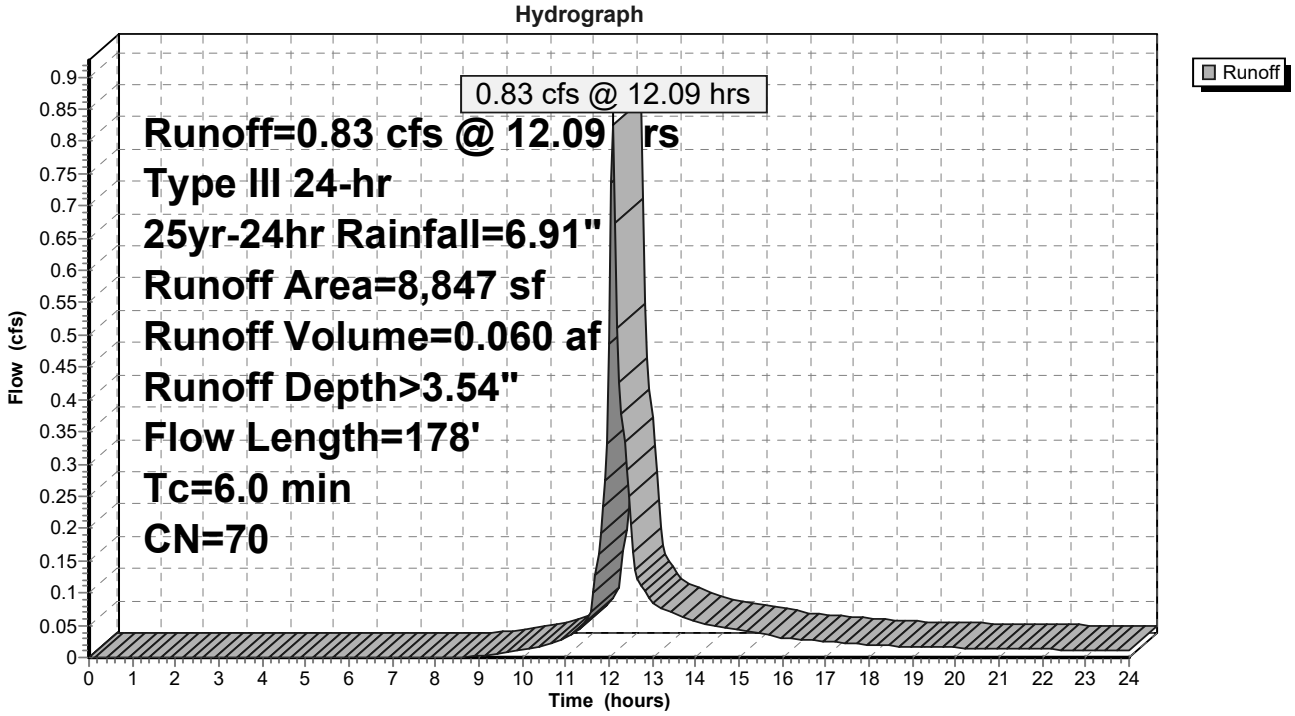
Runoff = 0.83 cfs @ 12.09 hrs, Volume= 0.060 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
912	98	Roofs, HSG A
4,138	39	>75% Grass cover, Good, HSG A
3,797	98	Paved parking, HSG A
8,847	70	Weighted Average
4,138		46.77% Pervious Area
4,709		53.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	40	0.0681	0.25		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.6	60	0.0377	1.70		**Sheet Flow, Segment #2** Smooth surfaces n= 0.011 P2= 3.62"
0.3	78	0.0386	3.99		**Shallow Concentrated Flow, Segment #3** Paved Kv= 20.3 fps
3.6	178	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1928RS: Ex CB 19+28R



Summary for Subcatchment 1979RS: Ex CB 19+79R

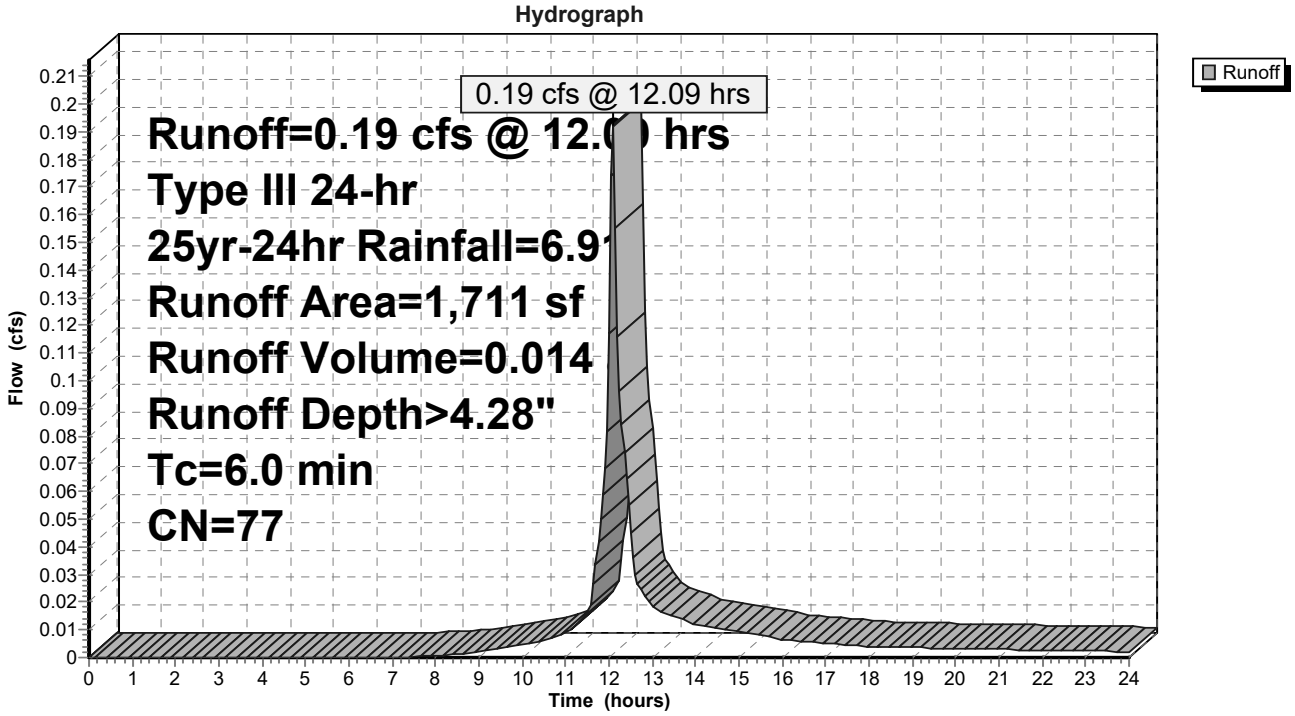
Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.014 af, Depth> 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
623	39	>75% Grass cover, Good, HSG A
1,088	98	Paved parking, HSG A
1,711	77	Weighted Average
623		36.41% Pervious Area
1,088		63.59% Impervious Area

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

Subcatchment 1979RS: Ex CB 19+79R



Summary for Subcatchment 2173LS: Ex CB 21+73L

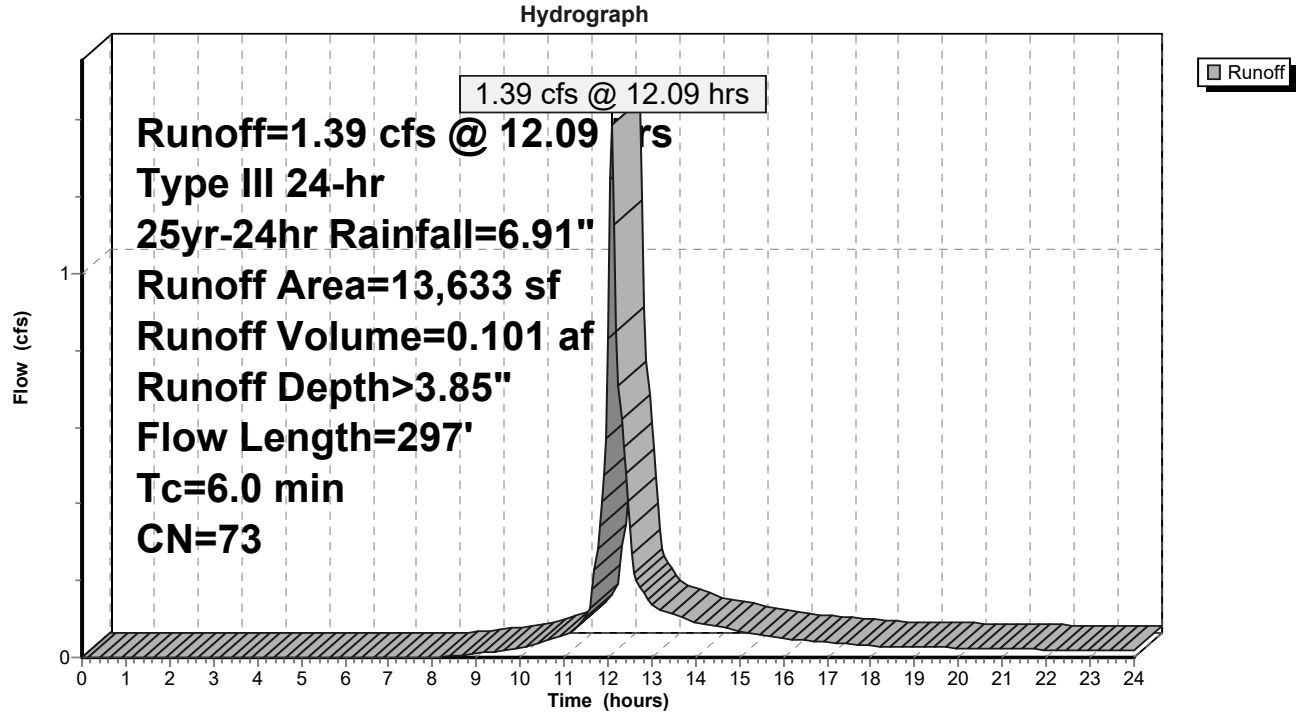
Runoff = 1.39 cfs @ 12.09 hrs, Volume= 0.101 af, Depth> 3.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
2,788	98	Roofs, HSG A
5,776	39	>75% Grass cover, Good, HSG A
5,069	98	Paved parking, HSG A
13,633	73	Weighted Average
5,776		42.37% Pervious Area
7,857		57.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	70	0.0891	0.31		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.1	227	0.0298	3.50		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
4.9	297	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 2173LS: Ex CB 21+73L



Summary for Subcatchment 2173RS: Ex CB 21+73R

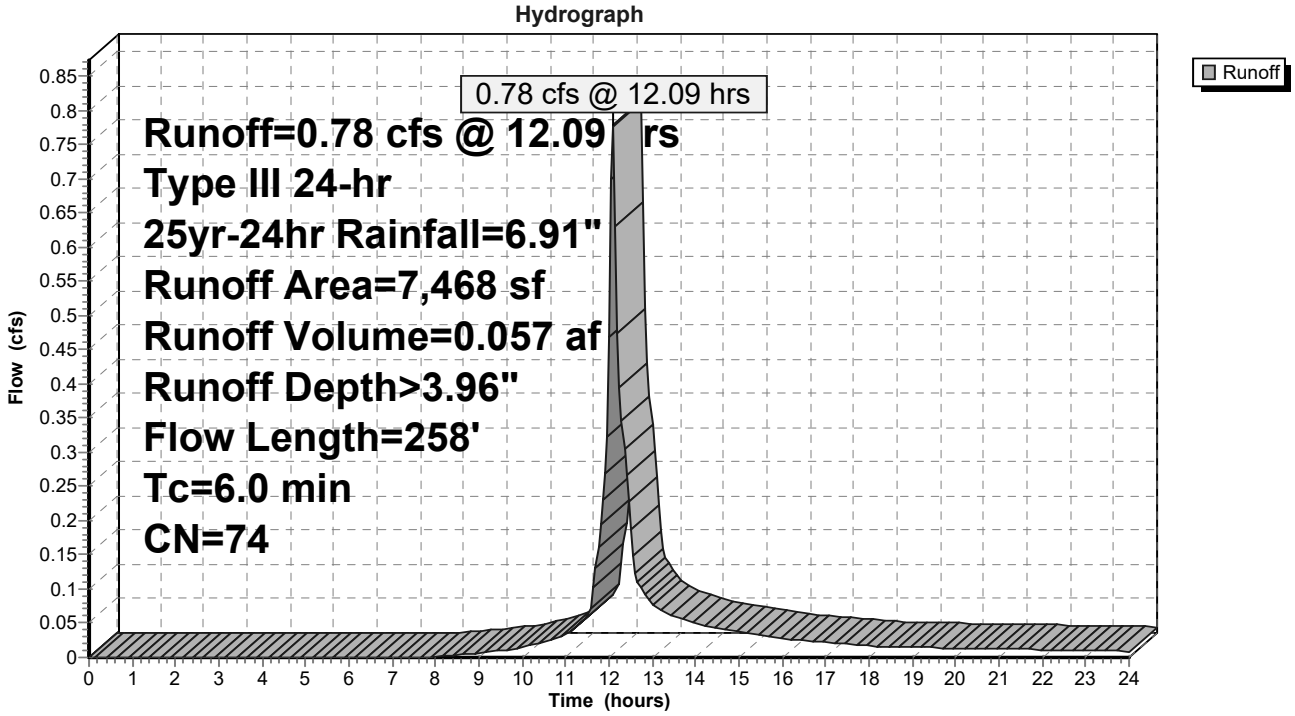
Runoff = 0.78 cfs @ 12.09 hrs, Volume= 0.057 af, Depth> 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
933	98	Roofs, HSG A
3,022	39	>75% Grass cover, Good, HSG A
3,513	98	Paved parking, HSG A
7,468	74	Weighted Average
3,022		40.47% Pervious Area
4,446		59.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.5	50	0.0300	0.19		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.7	50	0.0150	1.14		**Sheet Flow, Segment #2** Smooth surfaces n= 0.011 P2= 3.62"
0.8	158	0.0253	3.23		**Shallow Concentrated Flow, Segment #3** Paved Kv= 20.3 fps
6.0	258	Total			

Subcatchment 2173RS: Ex CB 21+73R



Summary for Subcatchment 2460LS: Ex CB 24+60L

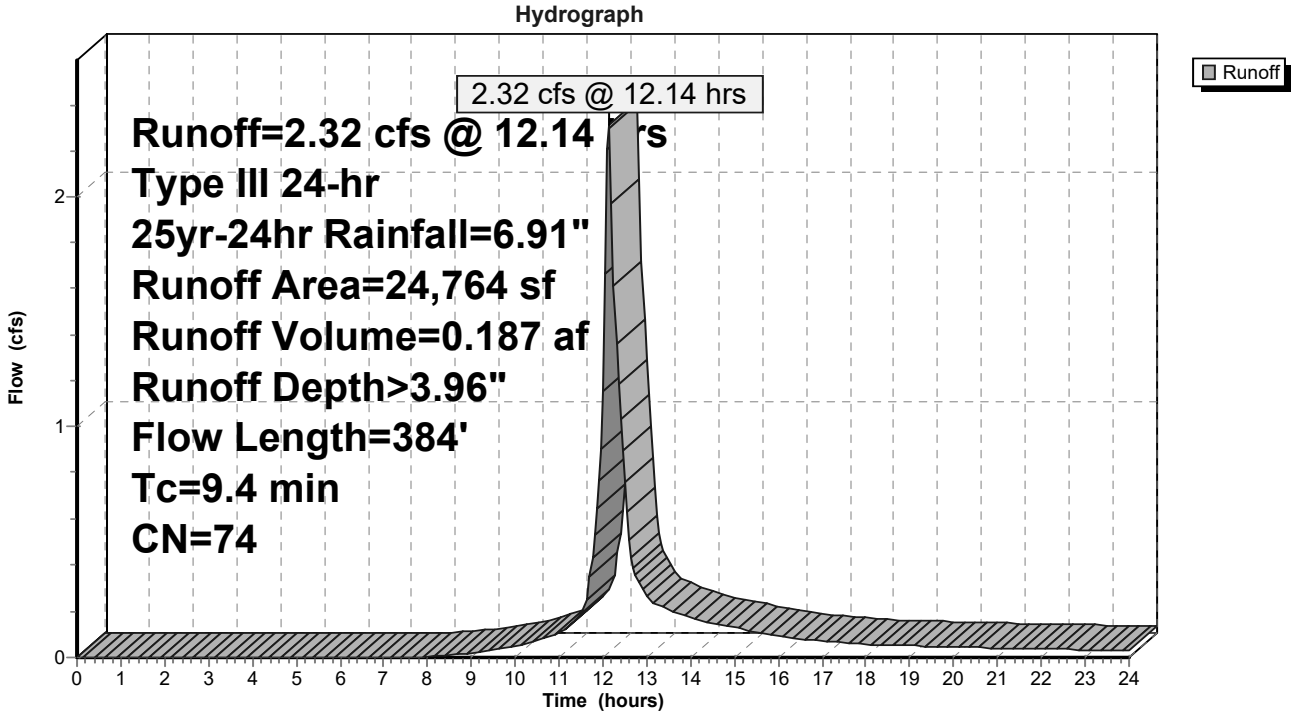
Runoff = 2.32 cfs @ 12.14 hrs, Volume= 0.187 af, Depth> 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
7,412	98	Roofs, HSG A
9,989	39	>75% Grass cover, Good, HSG A
7,363	98	Paved parking, HSG A
24,764	74	Weighted Average
9,989		40.34% Pervious Area
14,775		59.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0400	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.9	32	0.0079	0.62		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
1.5	252	0.0188	2.78		**Shallow Concentrated Flow, Segment #3** Paved Kv= 20.3 fps
9.4	384	Total			

Subcatchment 2460LS: Ex CB 24+60L



Summary for Subcatchment 2460RS: Ex CB 24+60R

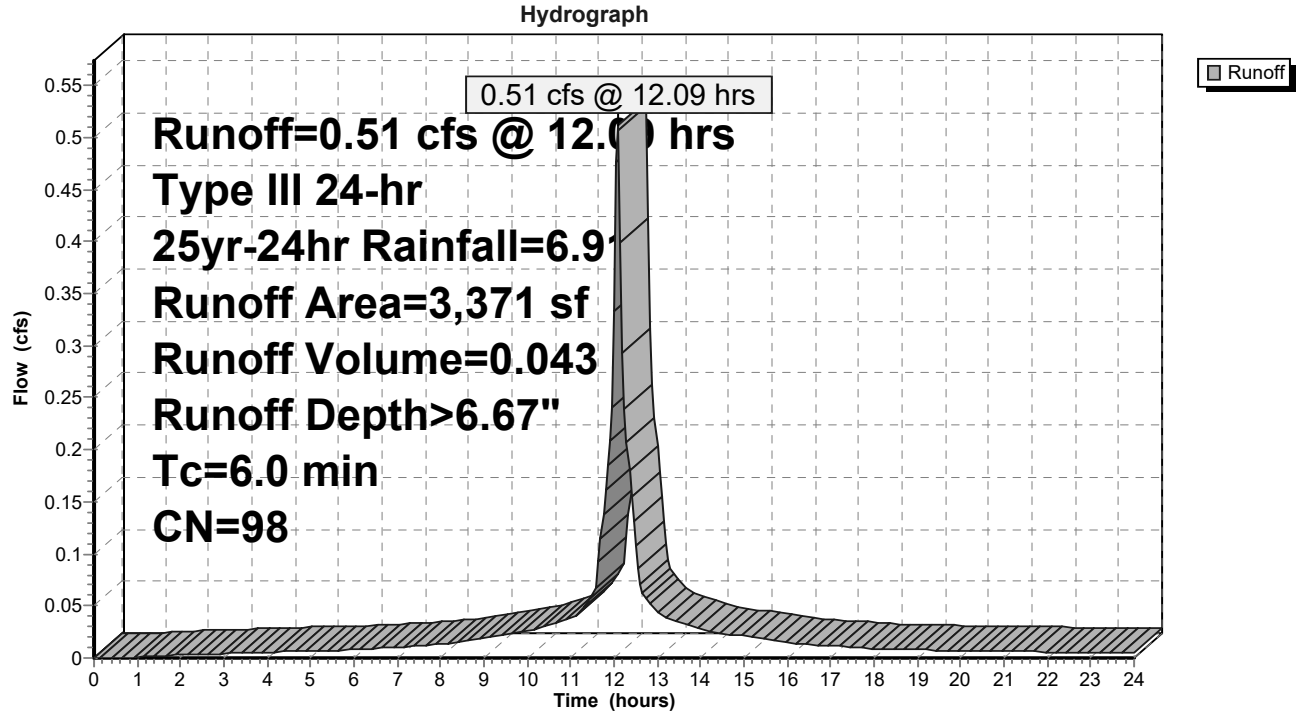
Runoff = 0.51 cfs @ 12.09 hrs, Volume= 0.043 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,371	98	Paved parking, HSG A
3,371		100.00% Impervious Area

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

Subcatchment 2460RS: Ex CB 24+60R



Summary for Subcatchment 2610LS: Ex CB 26+10L

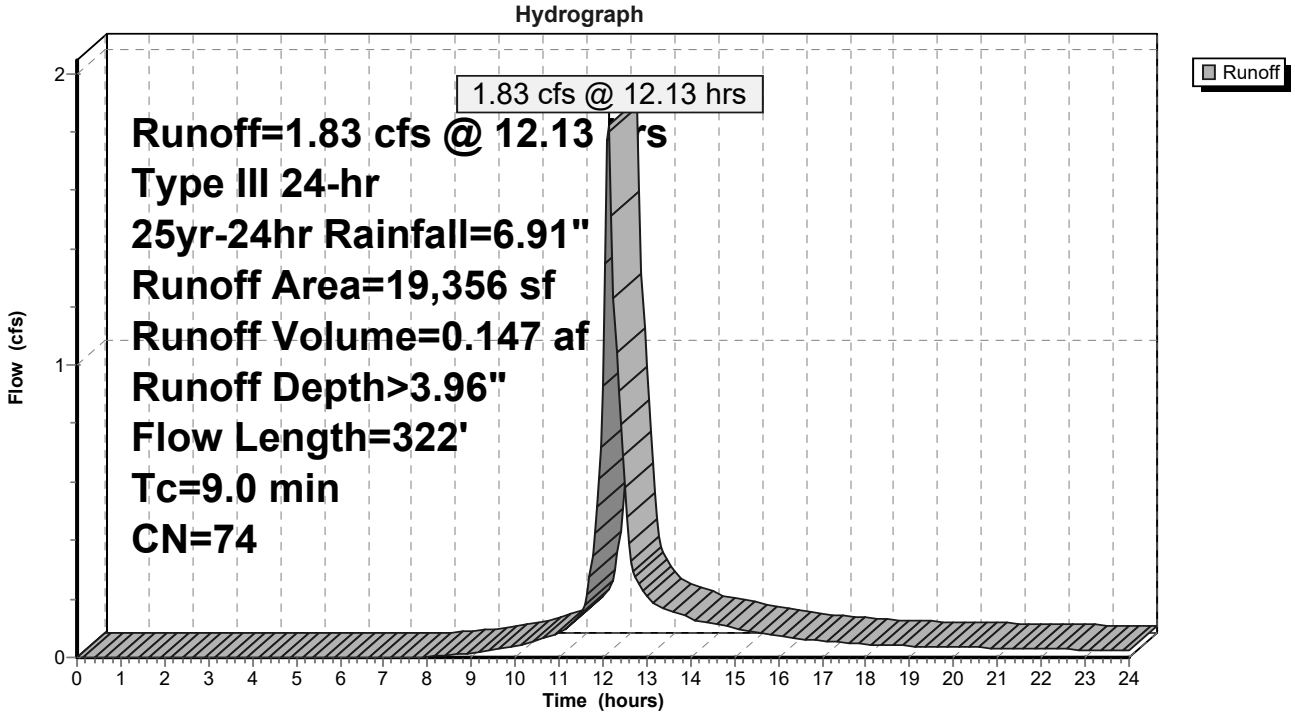
Runoff = 1.83 cfs @ 12.13 hrs, Volume= 0.147 af, Depth> 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
7,813	39	>75% Grass cover, Good, HSG A
6,142	98	Paved parking, HSG A
5,401	98	Roofs, HSG A
19,356	74	Weighted Average
7,813		40.36% Pervious Area
11,543		59.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	94	0.0291	0.21		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.5	228	0.0153	2.51		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
9.0	322	Total			

Subcatchment 2610LS: Ex CB 26+10L



Summary for Subcatchment 2610RS: Ex CB 26+10R

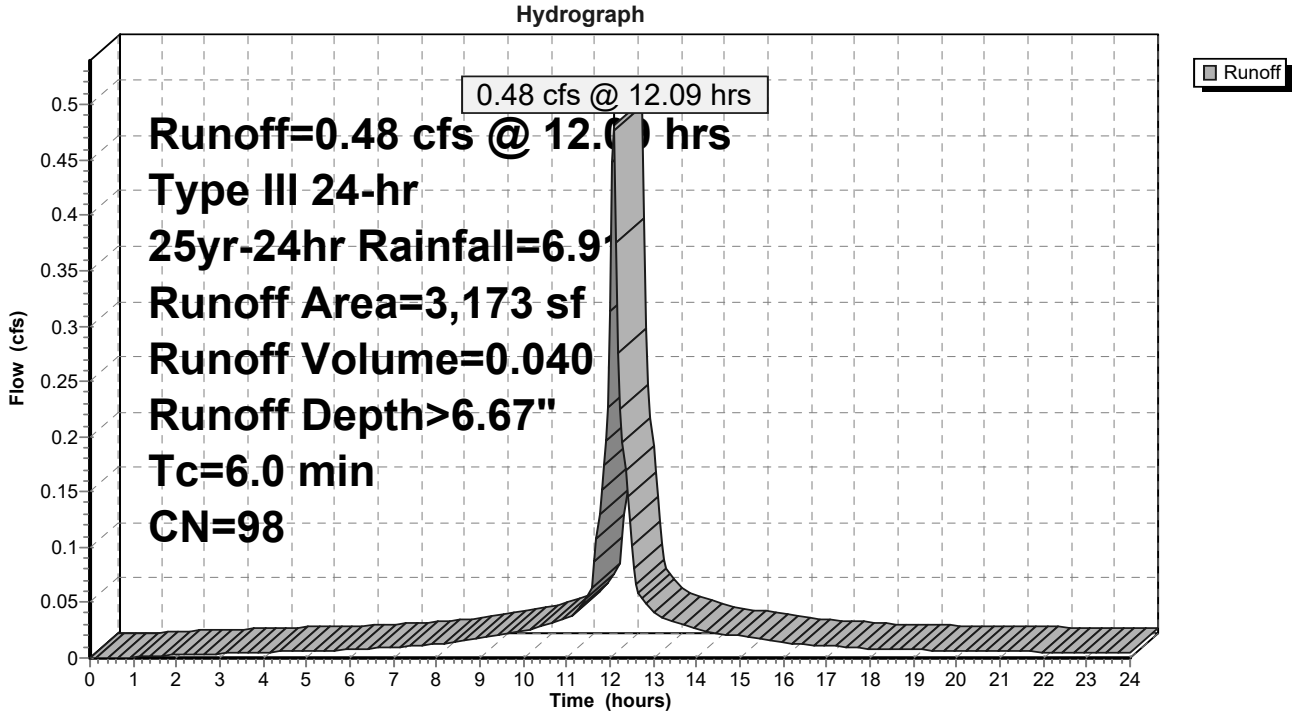
Runoff = 0.48 cfs @ 12.09 hrs, Volume= 0.040 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,173	98	Paved parking, HSG A
3,173		100.00% Impervious Area

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

Subcatchment 2610RS: Ex CB 26+10R



Summary for Subcatchment 3018GS: Ex CB 30+18G

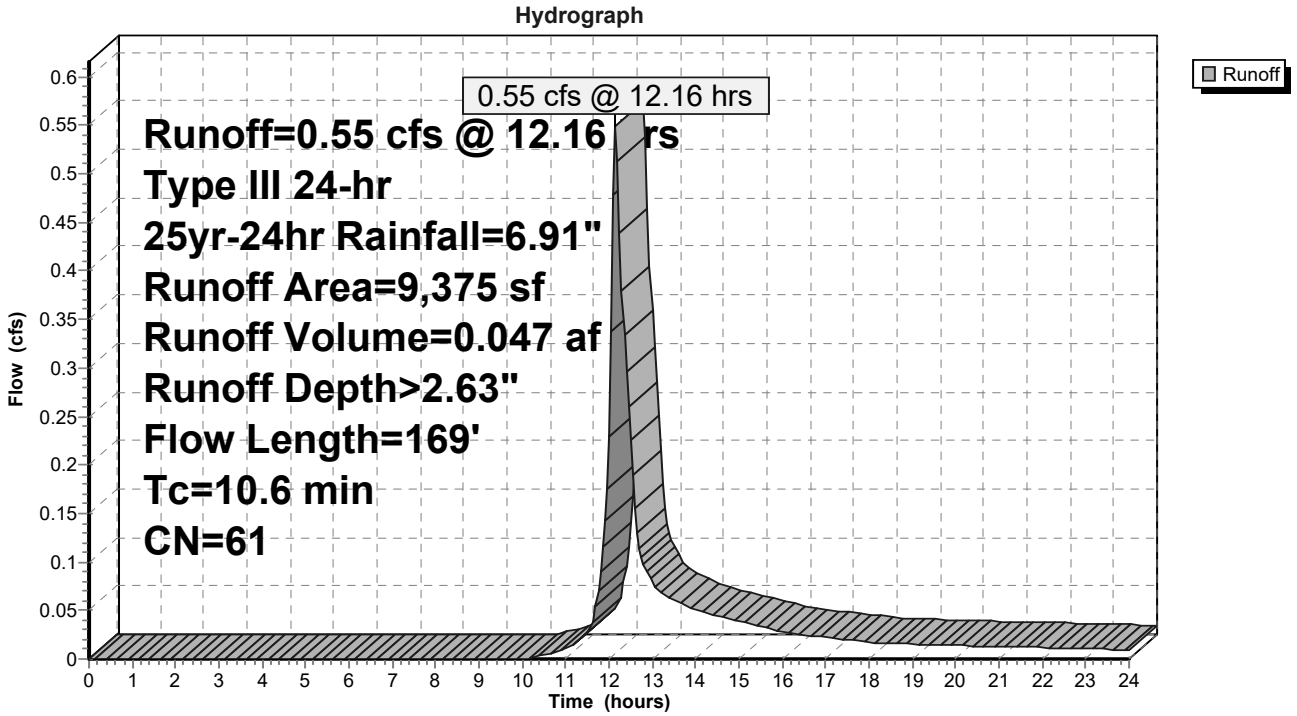
Runoff = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,132	98	Roofs, HSG A
4,436	39	>75% Grass cover, Good, HSG A
3,545	74	>75% Grass cover, Good, HSG C
262	98	Paved parking, HSG C
9,375	61	Weighted Average
7,981		85.13% Pervious Area
1,394		14.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	72	0.0139	0.15		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.0	20	0.1960	0.33		**Sheet Flow, Segment #2** Grass: Short n= 0.150 P2= 3.62"
1.4	77	0.0162	0.89		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
10.6	169	Total			

Subcatchment 3018GS: Ex CB 30+18G



Summary for Subcatchment 3020LS: Ex CB 30+20L

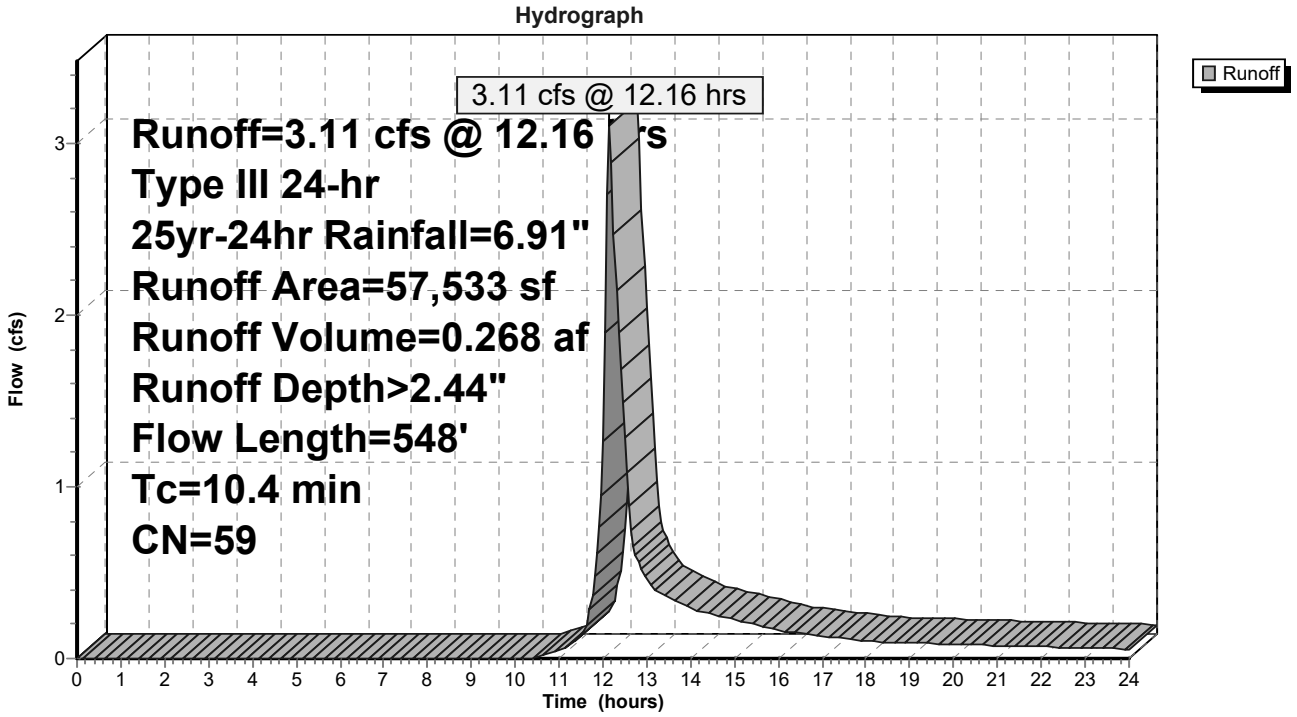
Runoff = 3.11 cfs @ 12.16 hrs, Volume= 0.268 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
9,134	98	Roofs, HSG A
37,949	39	>75% Grass cover, Good, HSG A
10,350	98	Paved parking, HSG A
42	74	>75% Grass cover, Good, HSG C
58	98	Paved parking, HSG C
57,533	59	Weighted Average
37,991		66.03% Pervious Area
19,542		33.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	77	0.0454	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.4	23	0.1204	0.28		**Sheet Flow, Segment #2** Grass: Short n= 0.150 P2= 3.62"
0.4	44	0.0739	1.90		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
0.0	5	0.7394	6.02		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
1.3	61	0.0124	0.78		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
0.1	26	0.2268	3.33		**Shallow Concentrated Flow, Segment #6** Short Grass Pasture Kv= 7.0 fps
0.5	46	0.0592	1.70		**Shallow Concentrated Flow, Segment #7** Short Grass Pasture Kv= 7.0 fps
1.3	266	0.0282	3.41		**Shallow Concentrated Flow, Segment #8** Paved Kv= 20.3 fps
10.4	548	Total			

Subcatchment 3020LS: Ex CB 30+20L



Summary for Subcatchment 3020RS: Ex CB 30+20R

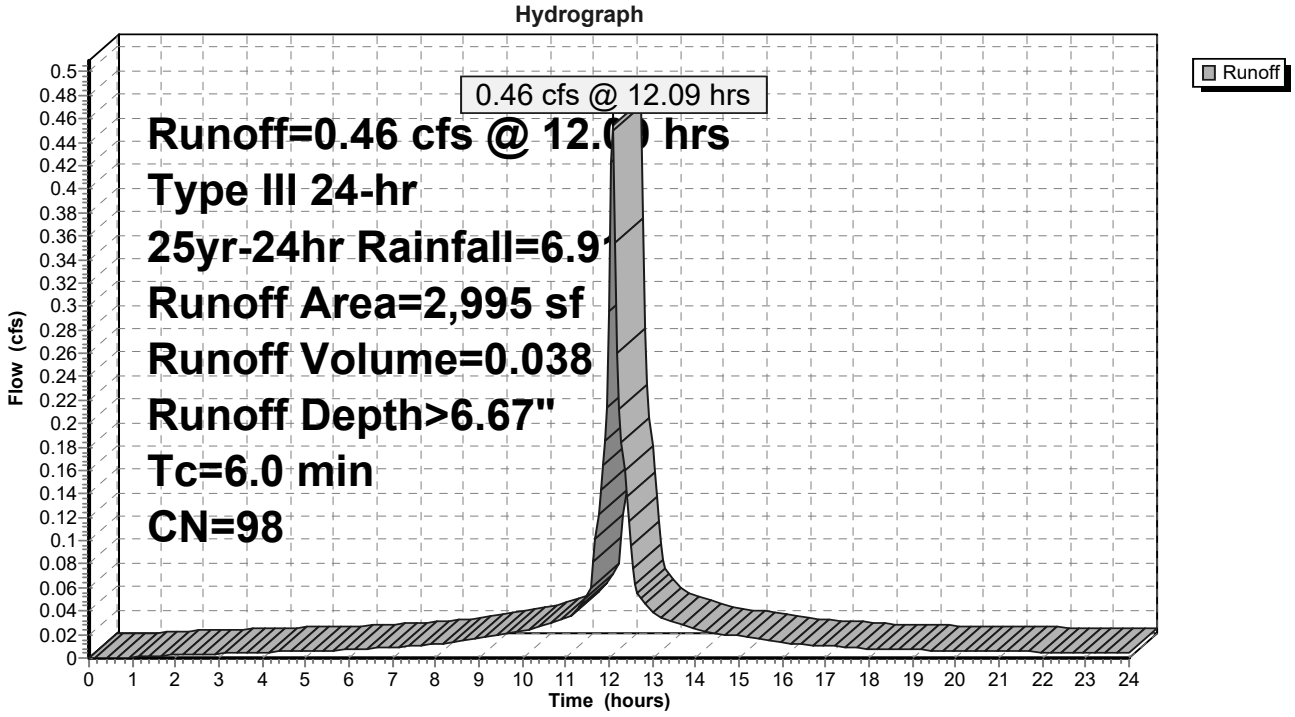
Runoff = 0.46 cfs @ 12.09 hrs, Volume= 0.038 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
2,966	98	Paved parking, HSG A
29	98	Paved parking, HSG C
2,995	98	Weighted Average
2,995		100.00% Impervious Area

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

Subcatchment 3020RS: Ex CB 30+20R



Summary for Subcatchment Y01S: Central Area

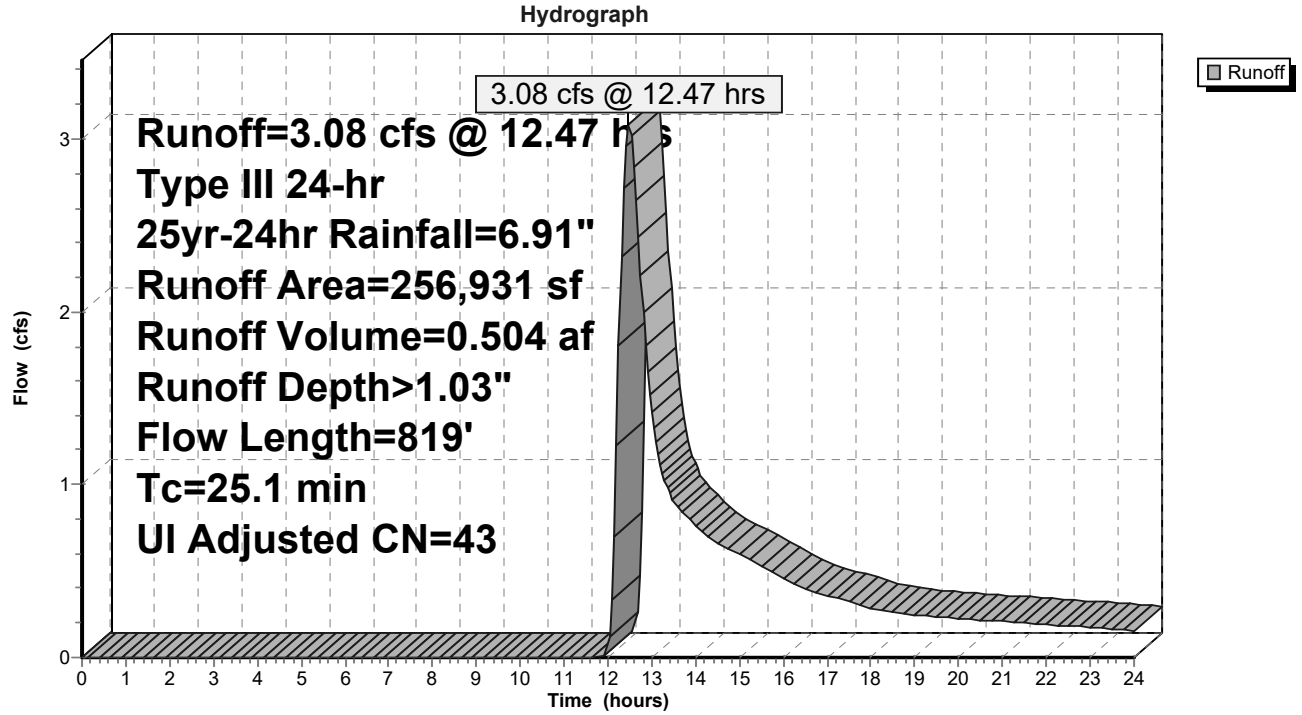
Runoff = 3.08 cfs @ 12.47 hrs, Volume= 0.504 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
47,289	98		Unconnected roofs, HSG A
149,841	39		>75% Grass cover, Good, HSG A
2,860	98		Unconnected pavement, HSG A
56,941	30		Woods, Good, HSG A
256,931	49	43	Weighted Average, UI Adjusted
206,782			80.48% Pervious Area
50,149			19.52% Impervious Area
50,149			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0650	0.13		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
0.1	22	0.3200	3.96		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
12.4	697	0.0178	0.93		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
25.1	819	Total			

Subcatchment Y01S: Central Area



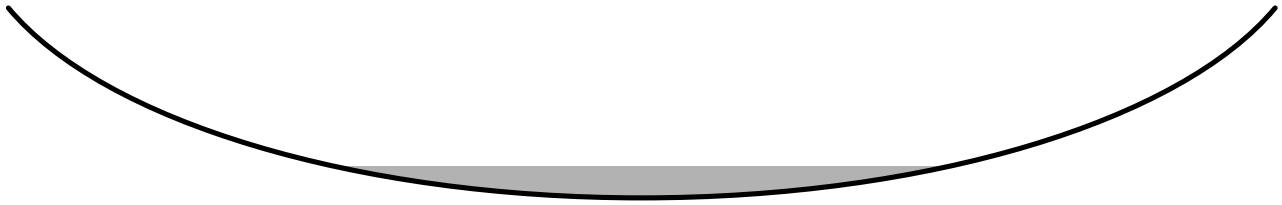
Summary for Reach 15R: Overland Reach

Inflow Area = 8.220 ac, 1.70% Impervious, Inflow Depth > 0.29" for 25yr-24hr event
Inflow = 0.36 cfs @ 13.33 hrs, Volume= 0.197 af
Outflow = 0.36 cfs @ 13.56 hrs, Volume= 0.195 af, Atten= 1%, Lag= 13.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.79 fps, Min. Travel Time= 10.3 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 12.7 min

Peak Storage= 221 cf @ 13.56 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 0.50' Flow Area= 6.7 sf, Capacity= 17.39 cfs

20.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 488.8' Slope= 0.0164 '/'
Inlet Invert= 140.00', Outlet Invert= 132.00'



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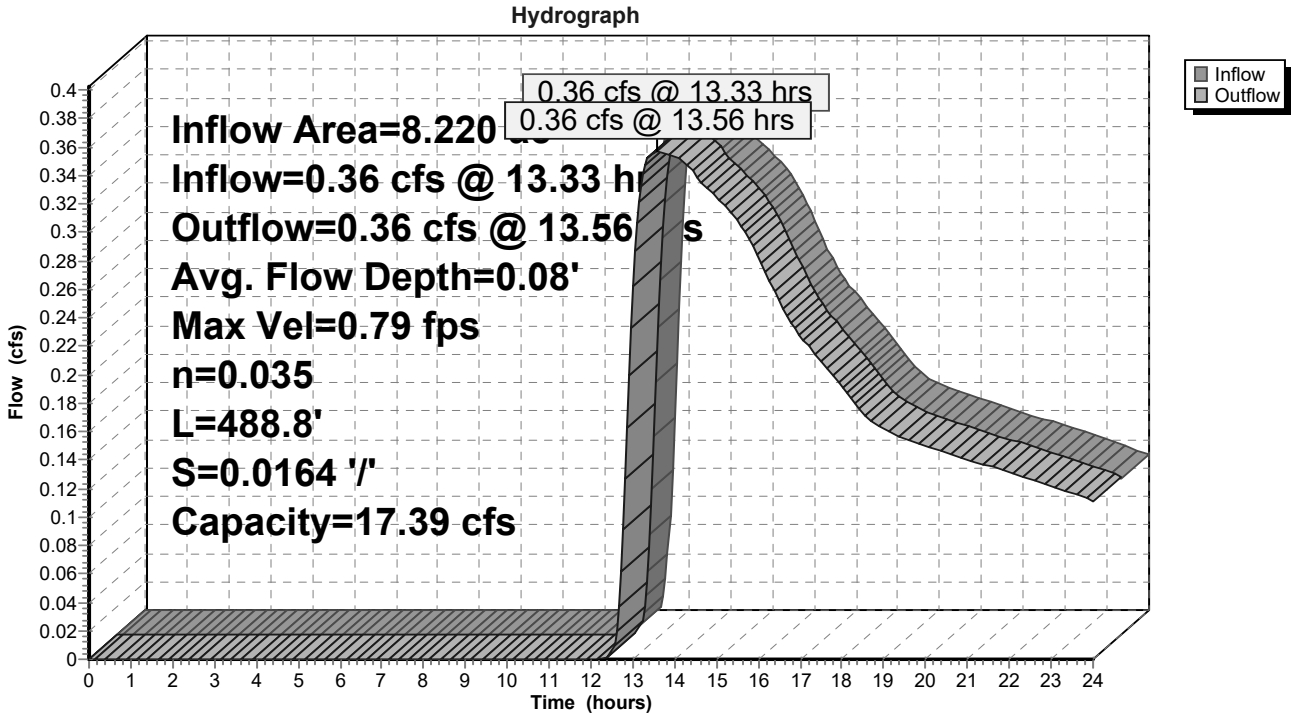
Reach 15R: Overland Reach



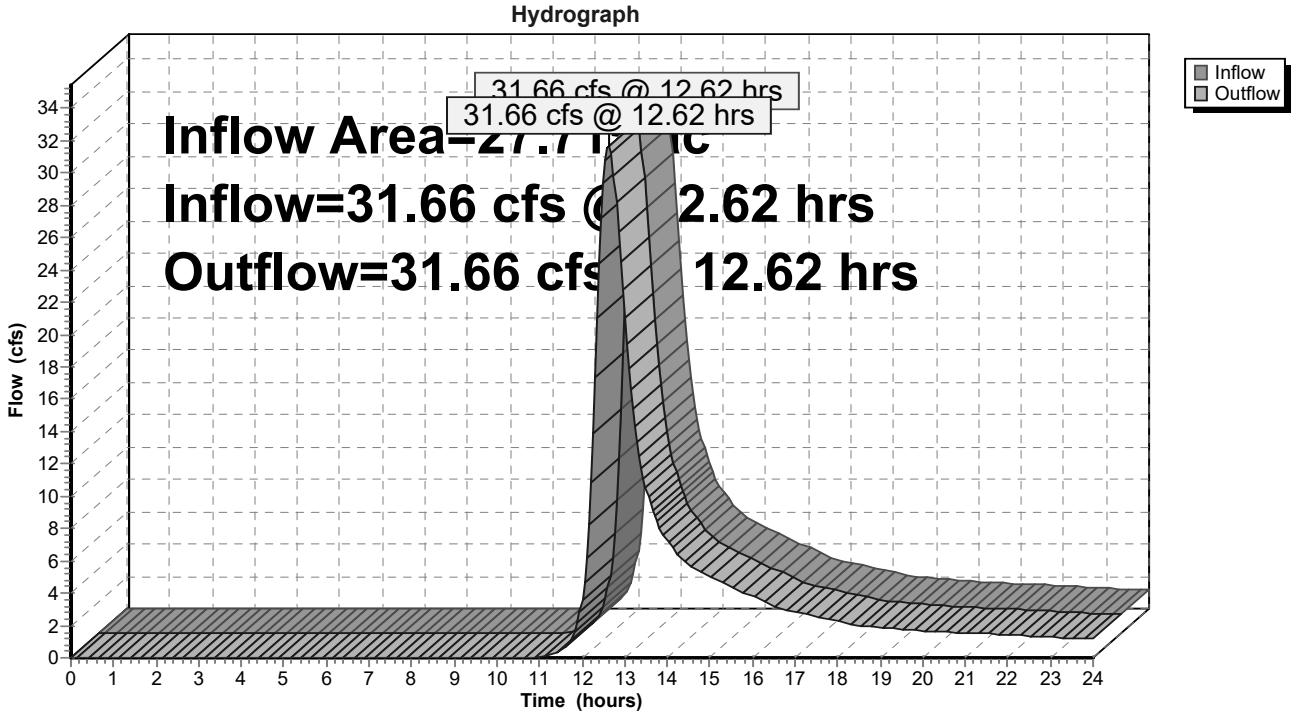
Summary for Reach 100R: Final Reach #100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 27.715 ac, 4.44% Impervious, Inflow Depth > 2.14" for 25yr-24hr event
Inflow = 31.66 cfs @ 12.62 hrs, Volume= 4.931 af
Outflow = 31.66 cfs @ 12.62 hrs, Volume= 4.931 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 100R: Final Reach #100



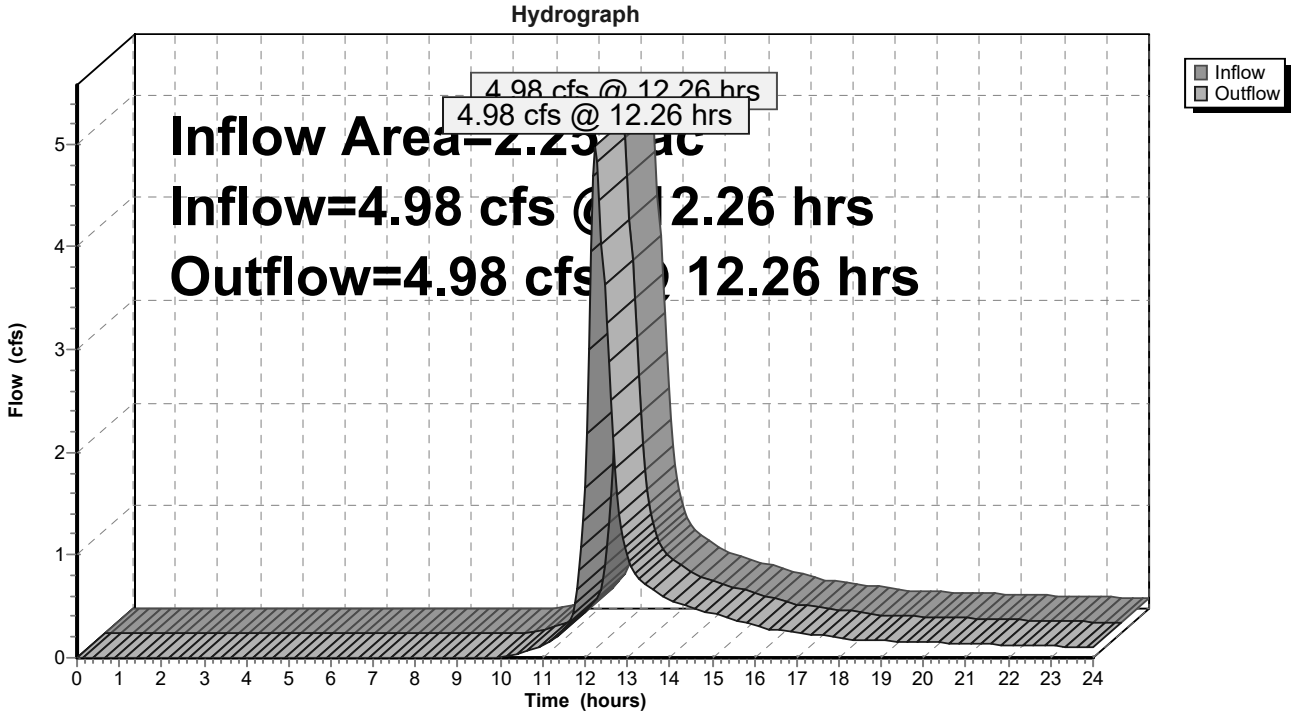
Summary for Reach 200R: Final Reach #200

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.257 ac, 2.65% Impervious, Inflow Depth > 2.72" for 25yr-24hr event
Inflow = 4.98 cfs @ 12.26 hrs, Volume= 0.512 af
Outflow = 4.98 cfs @ 12.26 hrs, Volume= 0.512 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 200R: Final Reach #200



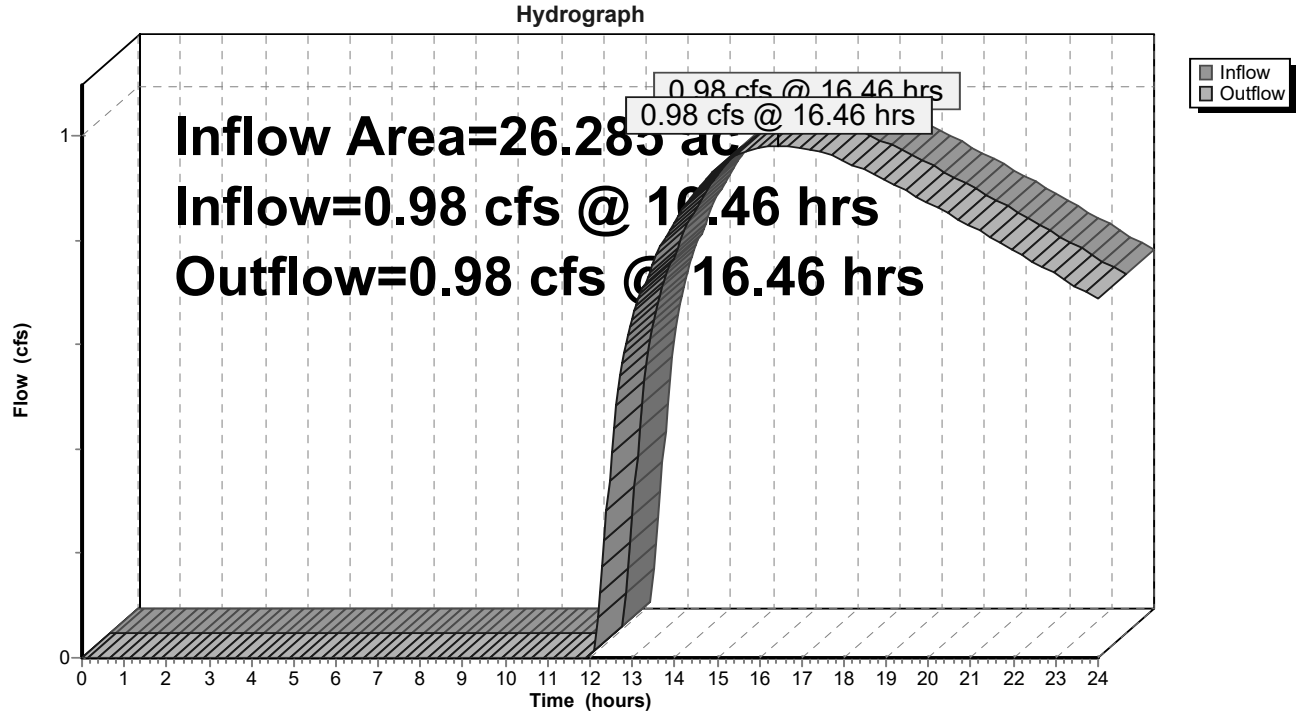
Summary for Reach 300R: Final Reach #300

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 26.285 ac, 25.48% Impervious, Inflow Depth > 0.37" for 25yr-24hr event
Inflow = 0.98 cfs @ 16.46 hrs, Volume= 0.816 af
Outflow = 0.98 cfs @ 16.46 hrs, Volume= 0.816 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 300R: Final Reach #300



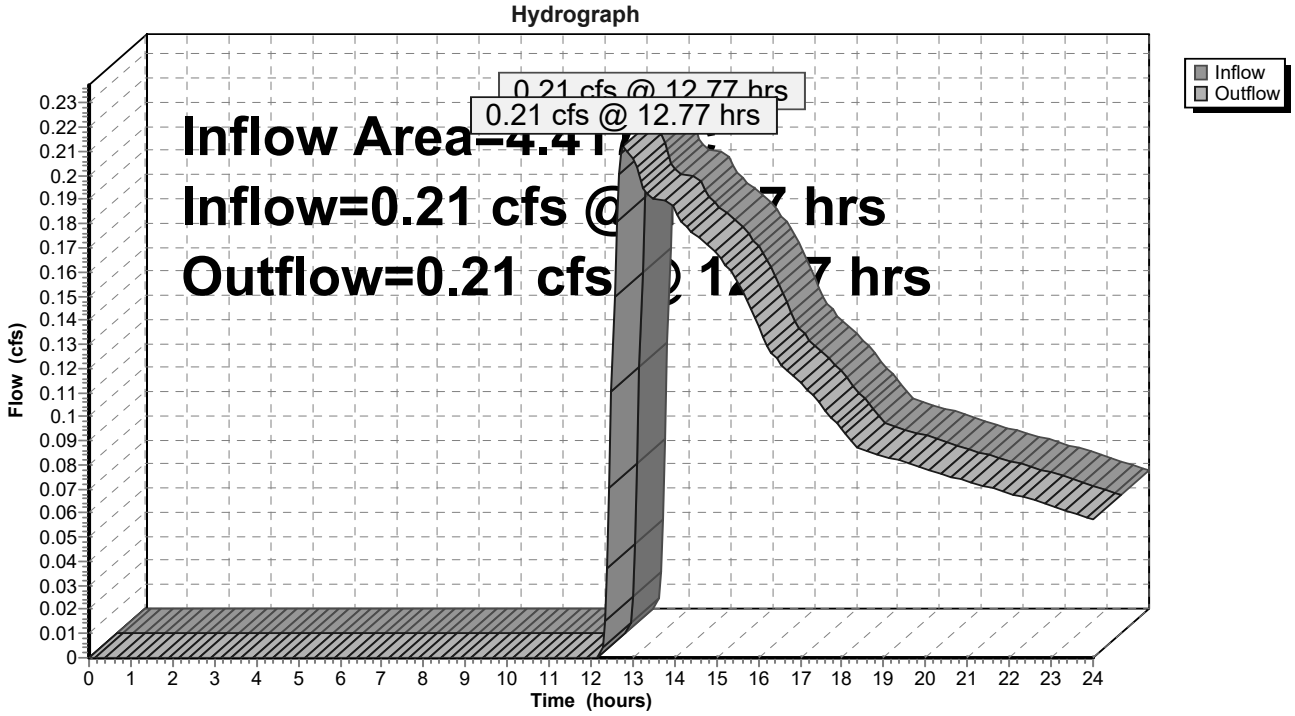
Summary for Reach 400R: Final Reach #400

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.417 ac, 0.00% Impervious, Inflow Depth > 0.29" for 25yr-24hr event
Inflow = 0.21 cfs @ 12.77 hrs, Volume= 0.107 af
Outflow = 0.21 cfs @ 12.77 hrs, Volume= 0.107 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 400R: Final Reach #400



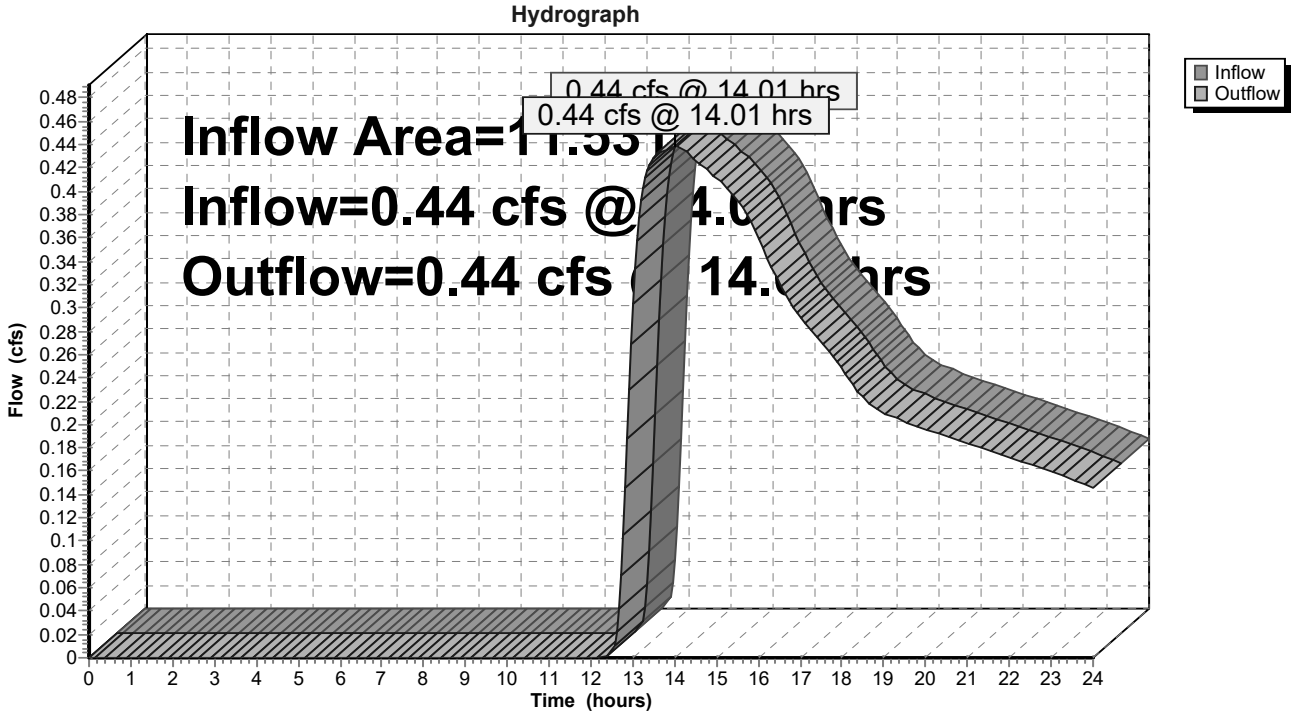
Summary for Reach 500R: Final Reach #500

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.531 ac, 1.21% Impervious, Inflow Depth > 0.26" for 25yr-24hr event
Inflow = 0.44 cfs @ 14.01 hrs, Volume= 0.248 af
Outflow = 0.44 cfs @ 14.01 hrs, Volume= 0.248 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 500R: Final Reach #500



Summary for Pond 900P: Detention Pond #900

[80] Warning: Exceeded Pond 2625RP by 0.01' @ 13.85 hrs (0.22 cfs 0.051 af)

Inflow Area =	25.171 ac,	26.60% Impervious,	Inflow Depth >	1.79" for 25yr-24hr event
Inflow =	33.30 cfs @	12.16 hrs,	Volume=	3.746 af
Outflow =	2.03 cfs @	16.64 hrs,	Volume=	1.822 af, Atten= 94%, Lag= 268.7 min
Discarded =	1.08 cfs @	16.64 hrs,	Volume=	1.033 af
Primary =	0.95 cfs @	16.64 hrs,	Volume=	0.789 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 101.13' @ 16.64 hrs Surf.Area= 38,721 sf Storage= 102,025 cf
Flood Elev= 103.00' Surf.Area= 44,672 sf Storage= 180,226 cf

Plug-Flow detention time= 356.4 min calculated for 1.822 af (49% of inflow)
Center-of-Mass det. time= 224.5 min (1,082.8 - 858.3)

Volume	Invert	Avail.Storage	Storage Description
#1	98.00'	180,136 cf	**Open Water Storage (Irregular)** Listed below (Recalc)
#2	97.50'	90 cf	**4.00'W x 5.00'L x 4.50'H Outlet Structure** -Impervious
		180,226 cf	Total Available Storage

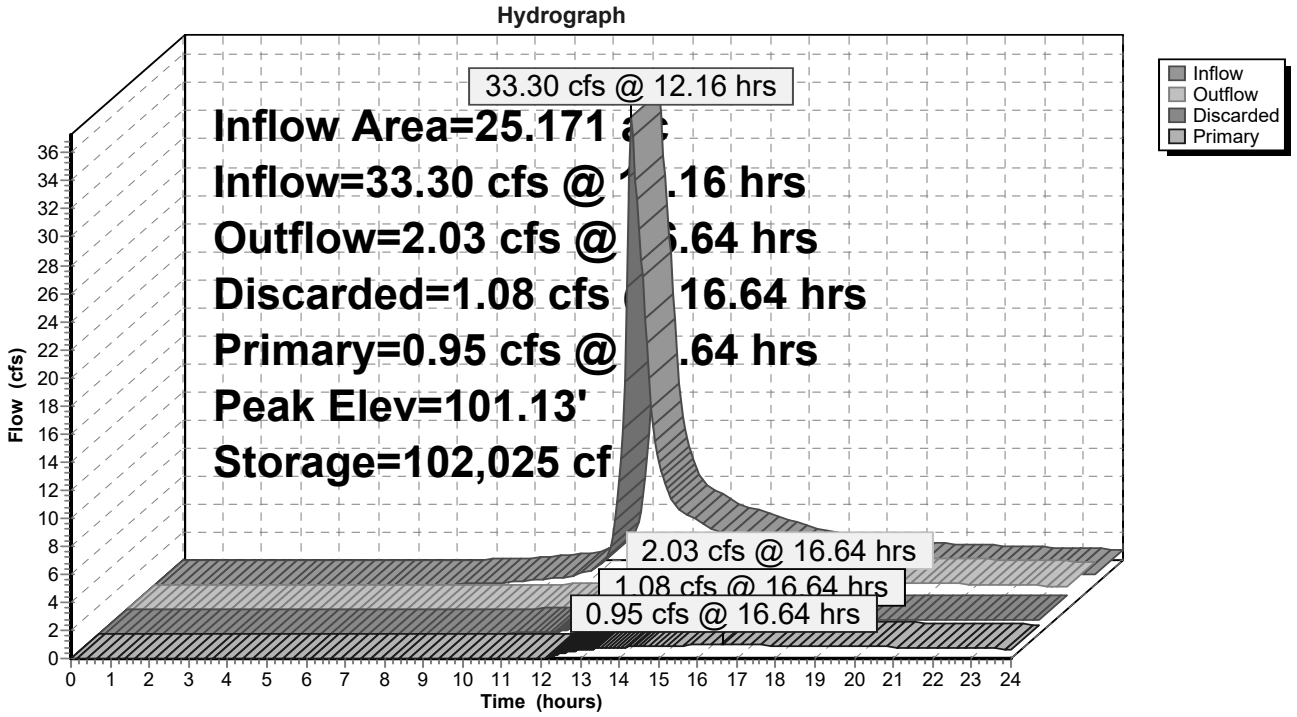
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
98.00	23,127	729.8	0	0	23,127
99.00	31,307	866.4	27,114	27,114	40,496
100.00	35,120	901.3	33,195	60,309	45,485
101.00	38,296	974.8	36,697	97,006	56,498
102.00	41,667	992.5	39,970	136,975	59,438
103.00	44,672	1,011.0	43,161	180,136	62,553

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.00'	**3.000 in/hr 3In/Hr over Surface area above 98.00'** Excluded Surface area = 23,127 sf
#2	Primary	97.50'	**30.0" Round 30" HDPE N-12** L= 21.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 97.50' / 97.17' S= 0.0156 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#3	Device 2	98.80'	**1.0" W x 39.0" H Vert. 1" X 39" Orifice** C= 0.600
#4	Device 2	102.10'	**48.0" x 60.0" Horiz. Outlet Structure** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=1.08 cfs @ 16.64 hrs HW=101.13' (Free Discharge)
└**1=3In/Hr** (Exfiltration Controls 1.08 cfs)

Primary OutFlow Max=0.95 cfs @ 16.64 hrs HW=101.13' TW=0.00' (Dynamic Tailwater)
└**2=30" HDPE N-12** (Passes 0.95 cfs of 36.45 cfs potential flow)
  └**3=1" X 39" Orifice** (Orifice Controls 0.95 cfs @ 4.90 fps)
  └**4=Outlet Structure** (Controls 0.00 cfs)

Pond 900P: Detention Pond #900



Summary for Pond 1000P: Sediment Forebay

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 1.646 ac, 25.38% Impervious, Inflow Depth > 1.27" for 25yr-24hr event
Inflow = 1.30 cfs @ 12.33 hrs, Volume= 0.174 af
Outflow = 2.25 cfs @ 12.31 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.0 min
Primary = 2.25 cfs @ 12.31 hrs, Volume= 0.174 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 110.12' @ 12.29 hrs Surf.Area= 41 sf Storage= 162 cf
Flood Elev= 113.00' Surf.Area= 2,618 sf Storage= 4,224 cf

Plug-Flow detention time= 0.6 min calculated for 0.174 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (905.6 - 905.1)

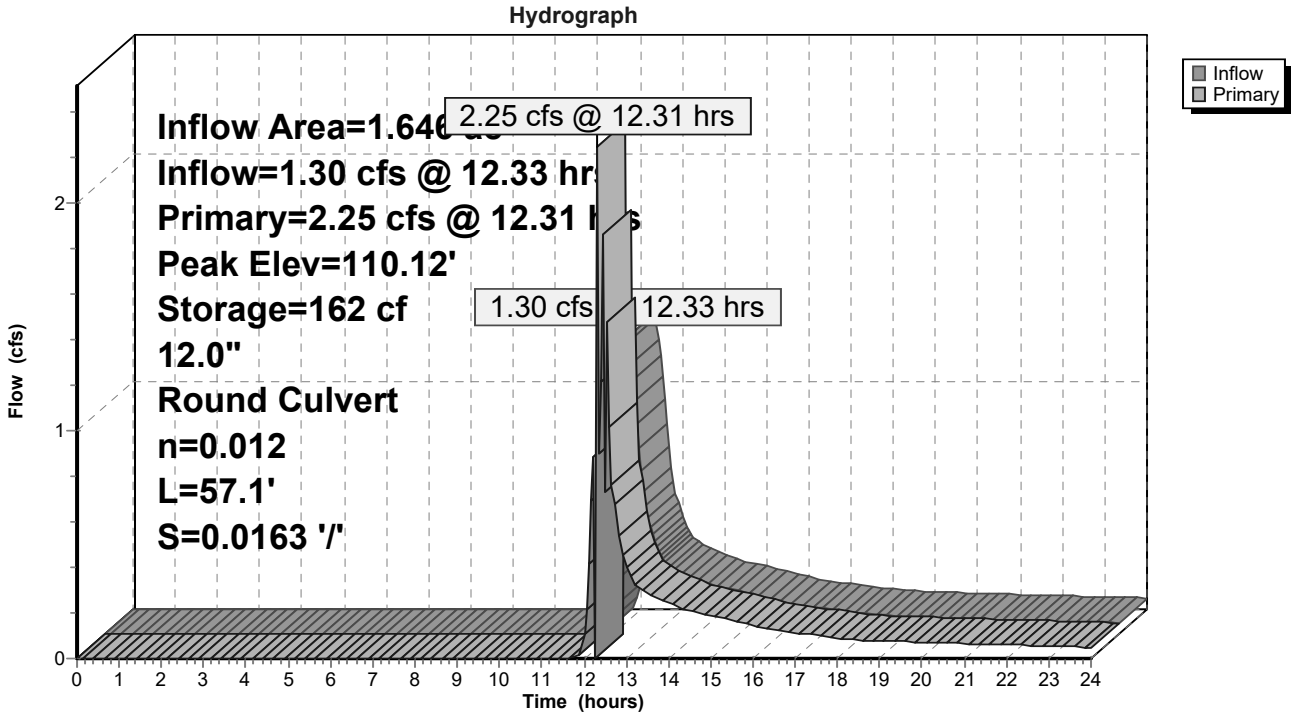
Volume	Invert	Avail.Storage	Storage Description
#1	110.34'	4,055 cf	**Open Water Storage (Irregular)**Listed below (Recalc)
#2	106.42'	50 cf	**4.00'D x 4.00'H CB 2109**
#3	106.01'	55 cf	**4.00'D x 4.40'H CB 2128**
#4	105.84'	64 cf	**4.50'D x 4.00'H CB 2148**
		4,224 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
110.34	4	8.0	0	0	4
110.42	675	128.3	19	19	1,309
111.00	926	159.8	462	482	2,036
112.00	1,858	209.2	1,365	1,847	3,498
113.00	2,577	253.8	2,208	4,055	5,158

Device	Routing	Invert	Outlet Devices
#1	Primary	105.84'	**12.0" Round 12" HDPE N-12** L= 57.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 105.84' / 104.91' S= 0.0163 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=3.71 cfs @ 12.31 hrs HW=109.94' TW=108.89' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Outlet Controls 3.71 cfs @ 4.72 fps)

Pond 1000P: Sediment Forebay



Summary for Pond 1100P: StormTech

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth > 3.74" for 25yr-24hr event
Inflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af
Outflow = 5.77 cfs @ 12.16 hrs, Volume= 0.504 af, Atten= 10%, Lag= 3.2 min
Discarded = 0.13 cfs @ 10.50 hrs, Volume= 0.160 af
Primary = 5.64 cfs @ 12.16 hrs, Volume= 0.344 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 116.70' @ 12.16 hrs Surf.Area= 1,848 sf Storage= 2,281 cf
Flood Elev= 118.39' Surf.Area= 1,848 sf Storage= 3,965 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 20.5 min (845.1 - 824.5)

Volume	Invert	Avail.Storage	Storage Description
#1	114.89'	1,668 cf	**Stone (Irregular)** Listed below (Recalc) 6,468 cf Overall - 2,297 cf Embedded = 4,171 cf x 40.0% Voids
#2	115.39'	2,297 cf	**ADS_StormTech SC-740 +Cap** x 50 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		3,965 cf	Total Available Storage

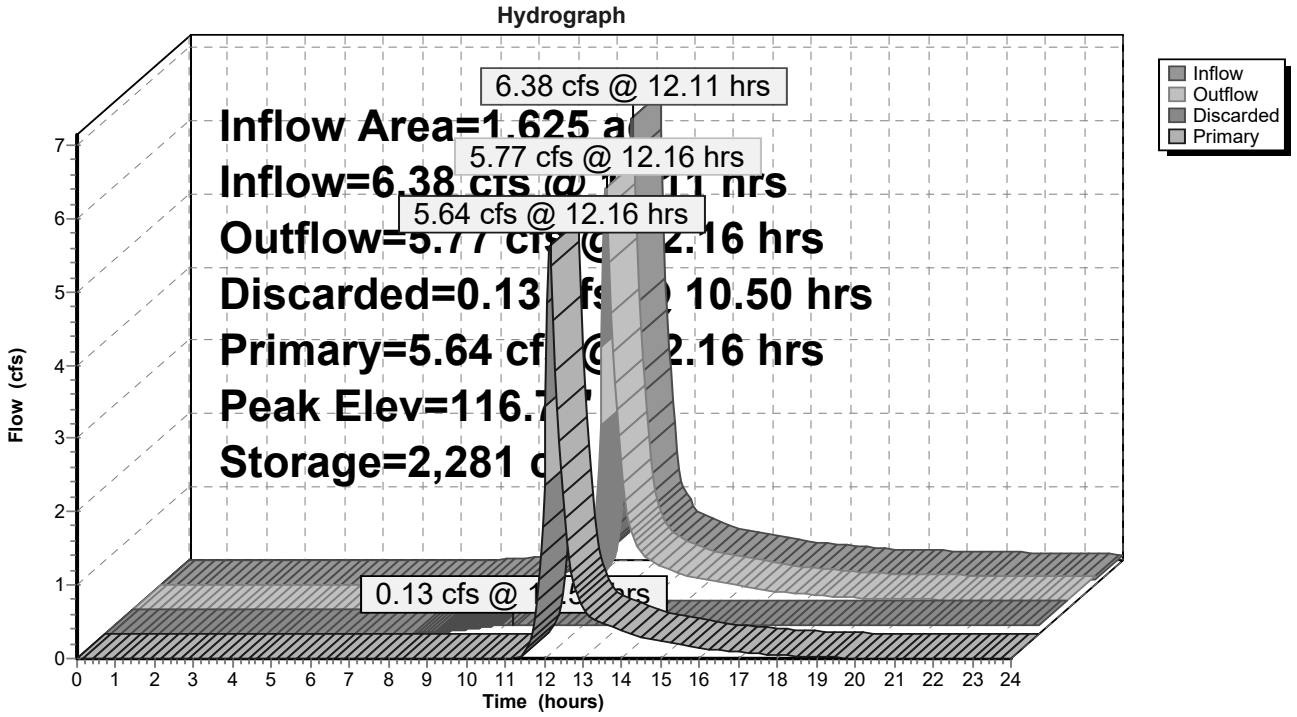
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
114.89	1,848	196.9	0	0	1,848
118.39	1,848	196.9	6,468	6,468	2,537

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.89'	**3.000 in/hr 3 In/Hr Exfiltration over Surface area**
#2	Primary	115.39'	**24.0" Round 24" HDPE N-12** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 115.39' / 115.39' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Discarded OutFlow Max=0.13 cfs @ 10.50 hrs HW=114.94' (Free Discharge)
↑—**1=3 In/Hr Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=5.54 cfs @ 12.16 hrs HW=116.69' TW=110.83' (Dynamic Tailwater)
↑—**2=24" HDPE N-12** (Barrel Controls 5.54 cfs @ 3.66 fps)

Pond 1100P: StormTech



Summary for Pond 2486RP: DMH 24+86R

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.646 ac, 64.50% Impervious, Inflow Depth > 4.28" for 25yr-24hr event
Inflow = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af
Outflow = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af, Atten= 0%, Lag= 0.1 min
Primary = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 106.27' @ 12.13 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 113.04' Surf.Area= 13 sf Storage= 98 cf

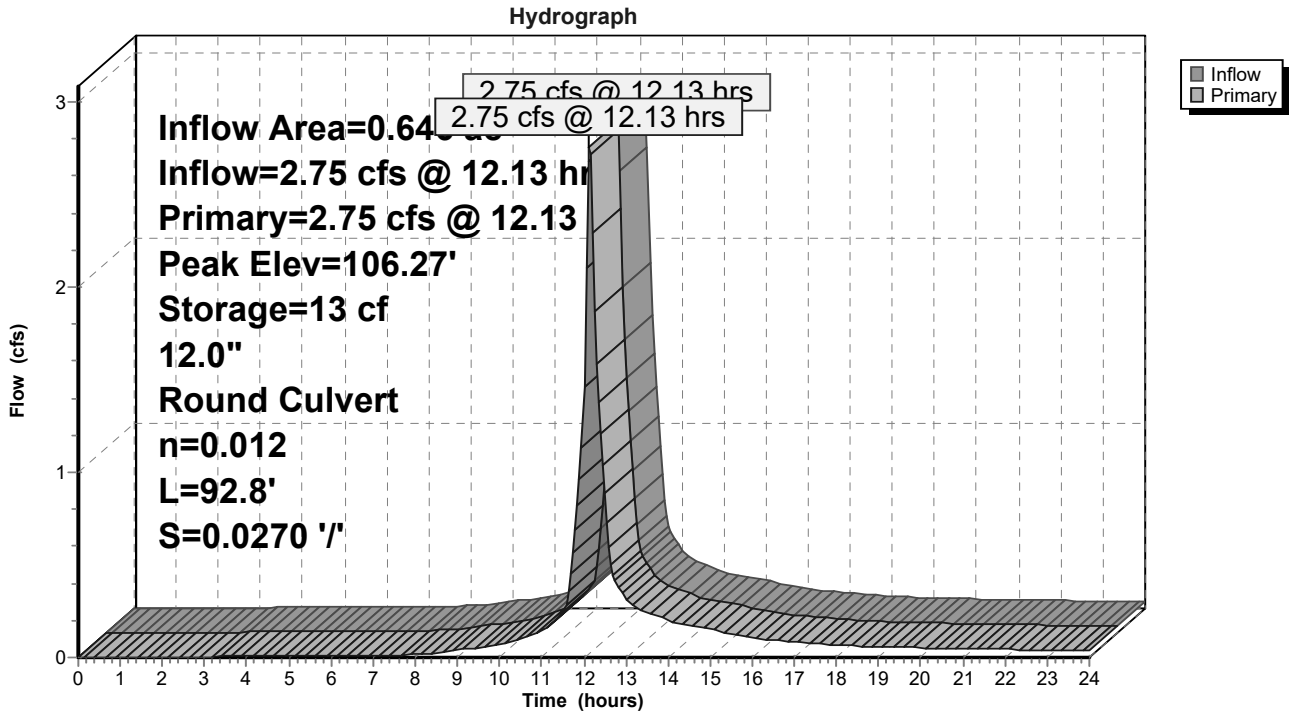
Plug-Flow detention time= 0.2 min calculated for 0.230 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (809.8 - 809.7)

Volume	Invert	Avail.Storage	Storage Description
#1	105.24'	98 cf	**4.00'D x 7.80'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	105.24'	**12.0" Round 12" HDPE N-12** L= 92.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 105.24' / 102.73' S= 0.0270 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.70 cfs @ 12.13 hrs HW=106.25' TW=103.76' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 2.70 cfs @ 3.44 fps)

Pond 2486RP: DMH 24+86R



Summary for Pond 2489RP: DMH 24+89R

Inflow Area = 0.646 ac, 64.50% Impervious, Inflow Depth > 4.28" for 25yr-24hr event
Inflow = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af
Outflow = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af, Atten= 0%, Lag= 0.1 min
Primary = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 103.79' @ 12.16 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 106.73' Surf.Area= 53 sf Storage= 50 cf

Plug-Flow detention time= 0.2 min calculated for 0.230 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (810.0 - 809.8)

Volume	Invert	Avail.Storage	Storage Description
#1	102.73'	50 cf	**4.00'D x 4.00'H 4' Structure**
#2	106.73'	11 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)
		61 cf	Total Available Storage

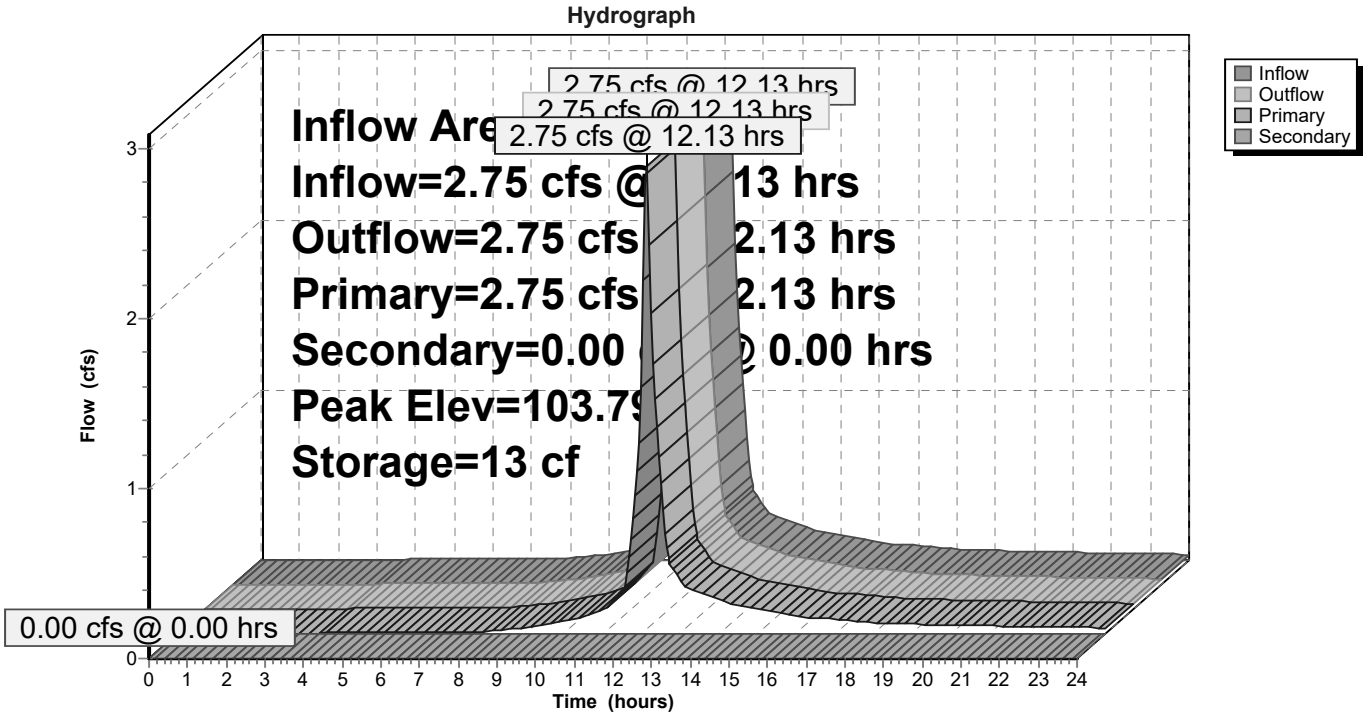
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
106.73	40	0	0
107.00	40	11	11

Device	Routing	Invert	Outlet Devices
#1	Primary	102.73'	**12.0" Round 12" HDPE N-12** L= 40.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 102.73' / 99.86' S= 0.0705 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Secondary	106.73'	**4.0' long x 4.0' breadth Overflow Storage** 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=2.43 cfs @ 12.13 hrs HW=103.76' TW=103.25' (Dynamic Tailwater)
1=12" HDPE N-12 (Outlet Controls 2.43 cfs @ 3.73 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=102.73' TW=99.76' (Dynamic Tailwater)
2=Overflow Storage (Controls 0.00 cfs)

Pond 2489RP: DMH 24+89R



Summary for Pond 2625RP: DMH 26+25R

Inflow Area = 0.517 ac, 65.32% Impervious, Inflow Depth > 4.34" for 25yr-24hr event
Inflow = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af
Outflow = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.1 min
Primary = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 101.13' @ 16.69 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 103.47' Surf.Area= 13 sf Storage= 42 cf

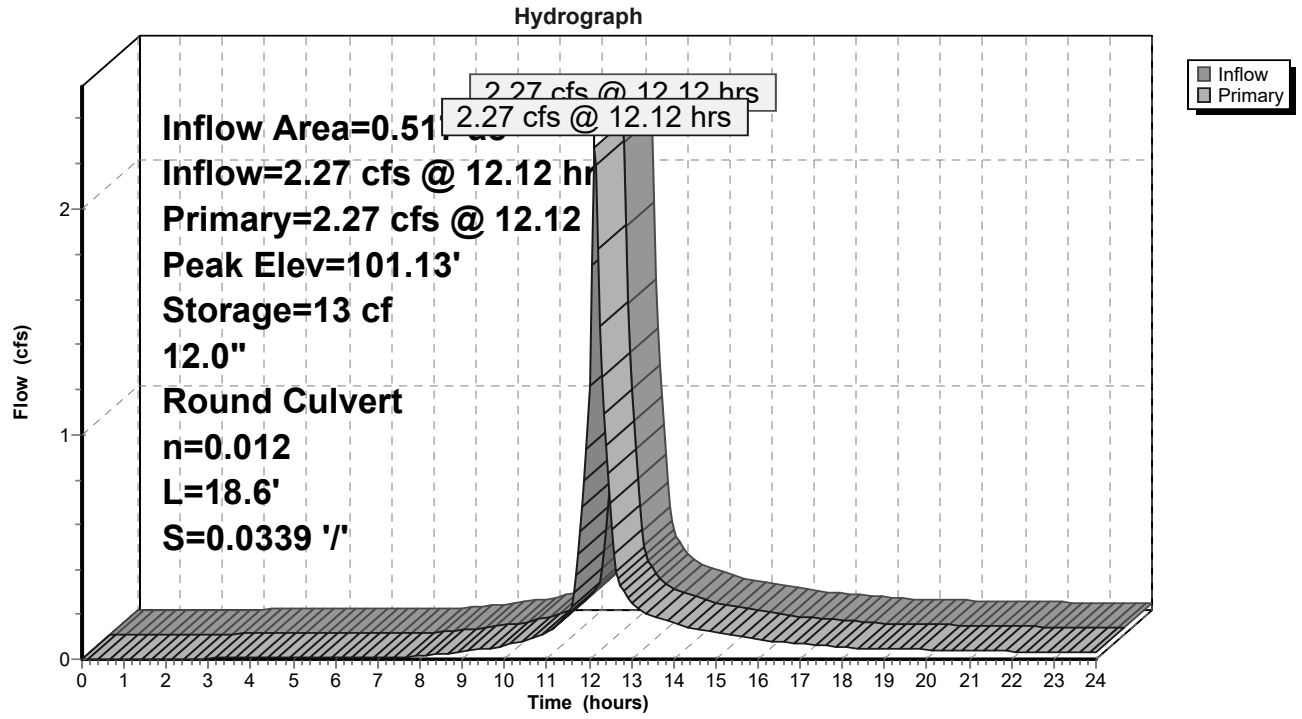
Plug-Flow detention time= 0.9 min calculated for 0.186 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (807.6 - 807.2)

Volume	Invert	Avail.Storage	Storage Description
#1	100.12'	42 cf	**4.00'D x 3.35'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	100.12'	**12.0" Round 12" HDPE N-12** L= 18.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.12' / 99.49' S= 0.0339 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.21 cfs @ 12.12 hrs HW=100.96' TW=98.95' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Inlet Controls 2.21 cfs @ 3.13 fps)

Pond 2625RP: DMH 26+25R



Summary for Pond 2723RP: DMH 27+23R

Inflow Area = 0.517 ac, 65.32% Impervious, Inflow Depth > 4.34" for 25yr-24hr event
Inflow = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af
Outflow = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.1 min
Primary = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 102.36' @ 12.12 hrs Surf.Area= 13 sf Storage= 11 cf
Flood Elev= 105.14' Surf.Area= 13 sf Storage= 46 cf

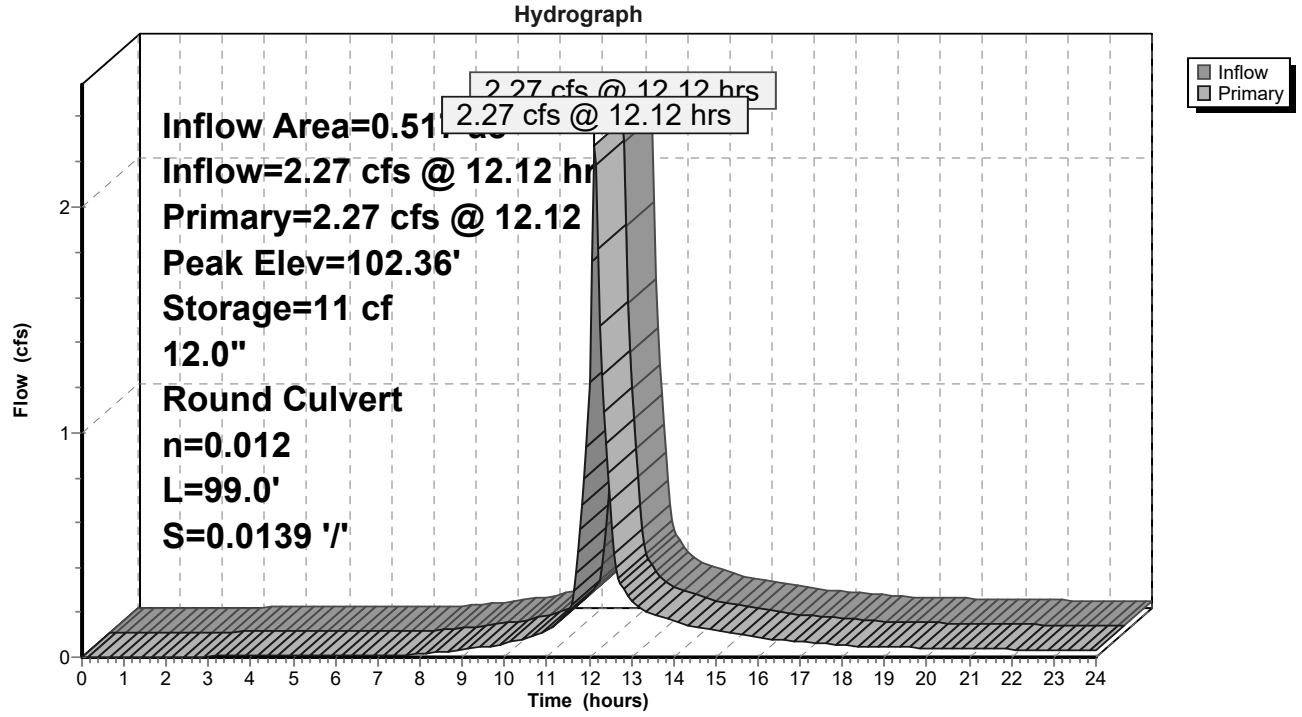
Plug-Flow detention time= 0.3 min calculated for 0.187 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (807.2 - 807.0)

Volume	Invert	Avail.Storage	Storage Description
#1	101.50'	46 cf	**4.00'D x 3.64'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	101.50'	**12.0" Round 12" HDPE N-12** L= 99.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 101.50' / 100.12' S= 0.0139 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.21 cfs @ 12.12 hrs HW=102.34' TW=100.96' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 2.21 cfs @ 3.13 fps)

Pond 2723RP: DMH 27+23R



Summary for Pond C100P: CB #100

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 5.916 ac, 19.66% Impervious, Inflow Depth > 1.01" for 25yr-24hr event
Inflow = 2.52 cfs @ 12.46 hrs, Volume= 0.499 af
Outflow = 2.55 cfs @ 12.46 hrs, Volume= 0.499 af, Atten= 0%, Lag= 0.0 min
Primary = 2.55 cfs @ 12.46 hrs, Volume= 0.499 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 107.89' @ 12.32 hrs Surf.Area= 13 sf Storage= 74 cf
Flood Elev= 110.46' Surf.Area= 17 sf Storage= 107 cf

Plug-Flow detention time= 0.3 min calculated for 0.498 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (925.4 - 925.2)

Volume	Invert	Avail.Storage	Storage Description
#1	101.97'	107 cf	**4.00'D x 8.49'H 4' Structure**
#2	110.46'	28 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		134 cf	Total Available Storage

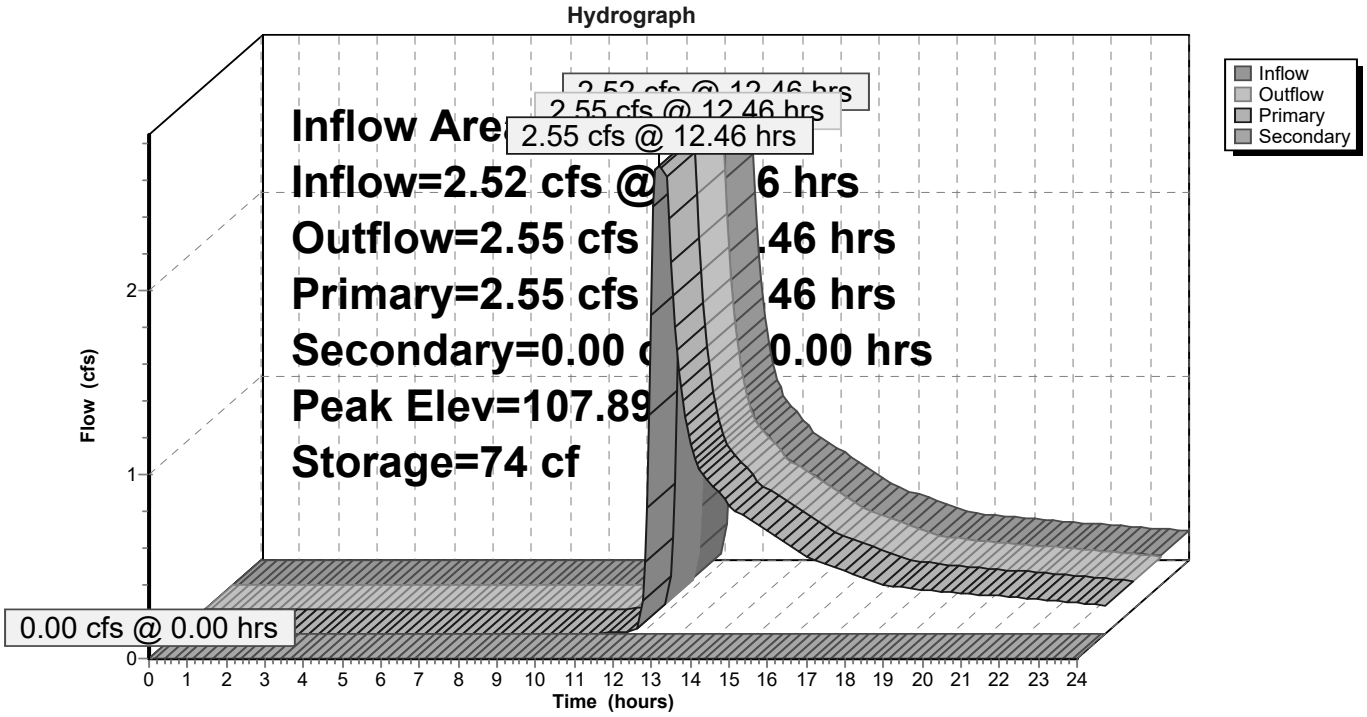
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
110.46	4	4.0	0	0	4
110.75	250	100.0	28	28	799

Device	Routing	Invert	Outlet Devices
#1	Primary	101.97'	**10.0" Round Culvert** L= 141.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 101.97' / 101.26' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Secondary	110.46'	**10.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.73 cfs @ 12.46 hrs HW=106.88' TW=104.41' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.73 cfs @ 5.01 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=101.97' TW=101.16' (Dynamic Tailwater)
2=Overflow (Controls 0.00 cfs)

Pond C100P: CB #100



Summary for Pond C1295GP: CB 12+95G

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=32)

Inflow Area = 0.088 ac, 0.00% Impervious, Inflow Depth > 0.73" for 25yr-24hr event
Inflow = 0.03 cfs @ 12.34 hrs, Volume= 0.005 af
Outflow = 0.05 cfs @ 12.35 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.6 min
Primary = 0.05 cfs @ 12.35 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 136.56' @ 12.25 hrs Surf.Area= 13 sf Storage= 9 cf

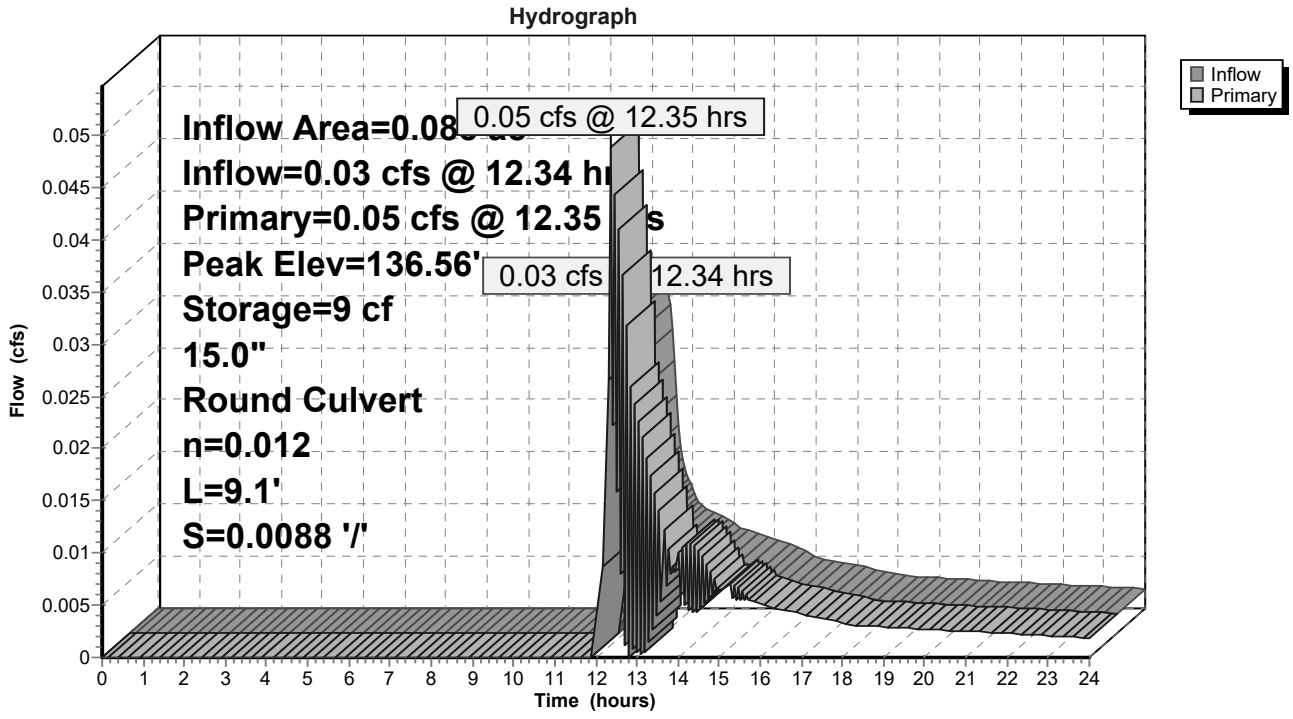
Plug-Flow detention time= 3.4 min calculated for 0.005 af (100% of inflow)
Center-of-Mass det. time= 2.6 min (938.4 - 935.8)

Volume	Invert	Avail.Storage	Storage Description
#1	135.84'	73 cf	**4.00'D x 5.78'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.84'	**15.0" Round 15 " HDPE N-12** L= 9.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 135.84' / 135.76' S= 0.0088 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.57 cfs @ 12.35 hrs HW=136.41' TW=136.34' (Dynamic Tailwater)
1=15 " HDPE N-12 (Outlet Controls 0.57 cfs @ 1.56 fps)

Pond C1295GP: CB 12+95G



Summary for Pond C1295LP: CB 12+95L

Inflow Area = 1.035 ac, 47.75% Impervious, Inflow Depth > 3.27" for 25yr-24hr event
Inflow = 3.32 cfs @ 12.15 hrs, Volume= 0.282 af
Outflow = 3.32 cfs @ 12.15 hrs, Volume= 0.282 af, Atten= 0%, Lag= 0.0 min
Primary = 3.32 cfs @ 12.15 hrs, Volume= 0.282 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 136.27' @ 12.16 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 141.63' Surf.Area= 13 sf Storage= 80 cf

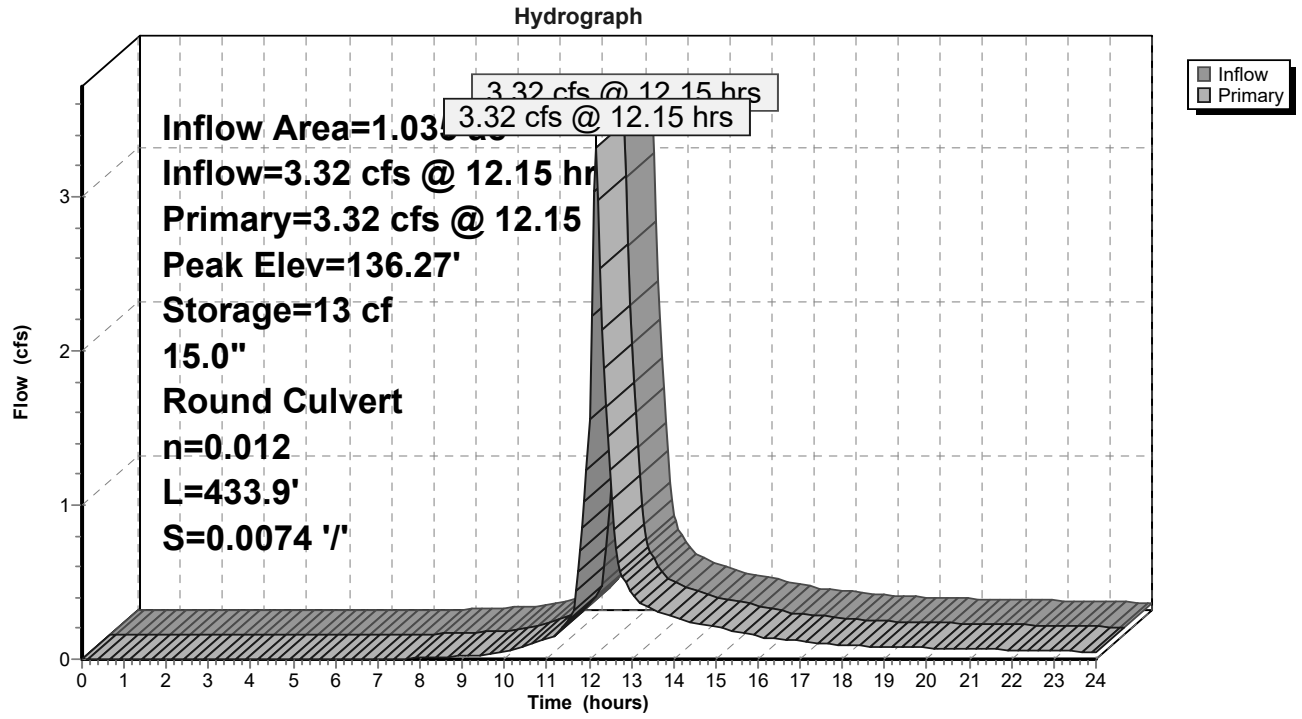
Plug-Flow detention time= 0.2 min calculated for 0.282 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (834.6 - 834.5)

Volume	Invert	Avail.Storage	Storage Description
#1	135.27'	80 cf	**4.00'D x 6.36'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.27'	**15.0" Round 15" HDPE N-12** L= 433.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 135.27' / 132.04' S= 0.0074 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=3.26 cfs @ 12.15 hrs HW=136.27' TW=133.74' (Dynamic Tailwater)
↑—**1=15" HDPE N-12** (Outlet Controls 3.26 cfs @ 4.25 fps)

Pond C1295LP: CB 12+95L



Summary for Pond C1295RP: CB 12+95R

[80] Warning: Exceeded Pond C1295GP by 0.54' @ 12.10 hrs (1.27 cfs 0.029 af)

Inflow Area = 0.701 ac, 39.25% Impervious, Inflow Depth > 2.74" for 25yr-24hr event
Inflow = 1.84 cfs @ 12.15 hrs, Volume= 0.160 af
Outflow = 1.84 cfs @ 12.15 hrs, Volume= 0.160 af, Atten= 0%, Lag= 0.0 min
Primary = 1.84 cfs @ 12.15 hrs, Volume= 0.160 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 136.56' @ 12.19 hrs Surf.Area= 13 sf Storage= 10 cf
Flood Elev= 141.62' Surf.Area= 13 sf Storage= 74 cf

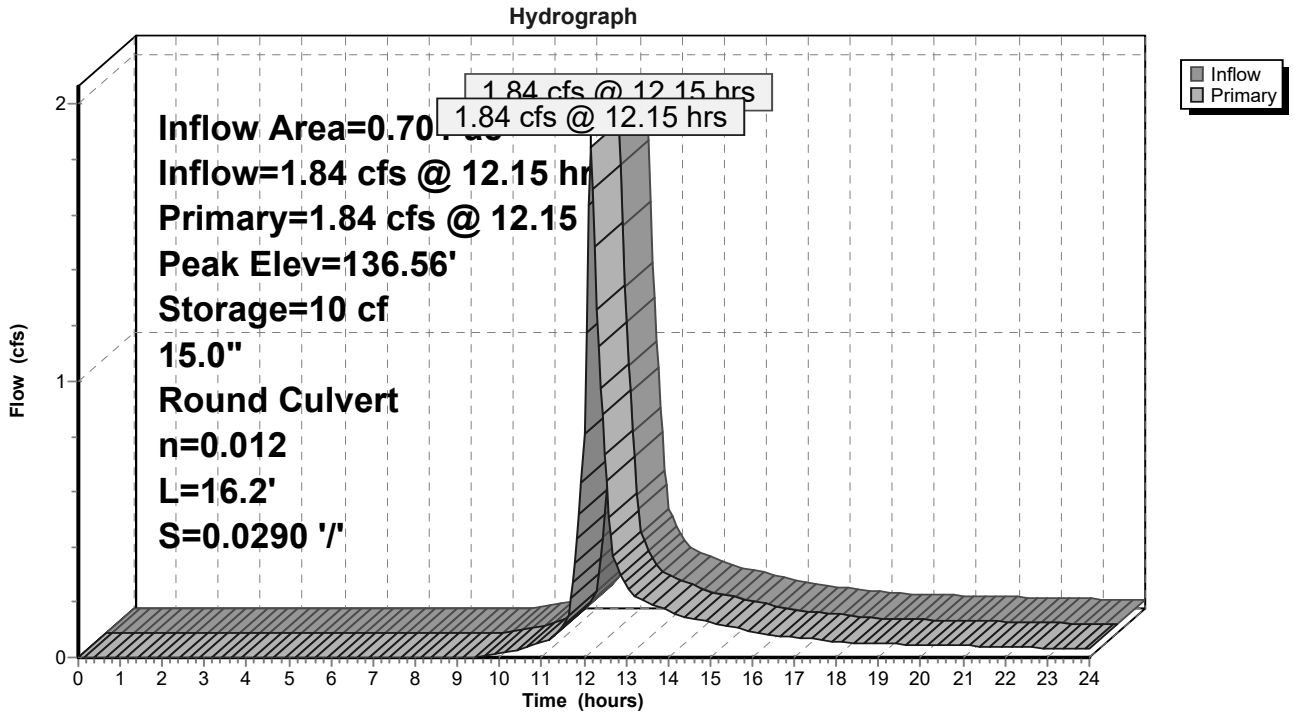
Plug-Flow detention time= 0.2 min calculated for 0.160 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (848.8 - 848.6)

Volume	Invert	Avail.Storage	Storage Description
#1	135.76'	74 cf	**4.00'D x 5.86'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.76'	**15.0" Round 15" HDPE N-12** L= 16.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 135.76' / 135.29' S= 0.0290 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.61 cfs @ 12.15 hrs HW=136.54' TW=136.27' (Dynamic Tailwater)
1=15" HDPE N-12 (Outlet Controls 1.61 cfs @ 2.83 fps)

Pond C1295RP: CB 12+95R



Summary for Pond C148GP: CB 1+48G

Inflow Area = 0.310 ac, 16.80% Impervious, Inflow Depth > 0.88" for 25yr-24hr event
Inflow = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af
Outflow = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min
Primary = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 125.77' @ 12.32 hrs Surf.Area= 13 sf Storage= 2 cf
Flood Elev= 132.24' Surf.Area= 13 sf Storage= 84 cf

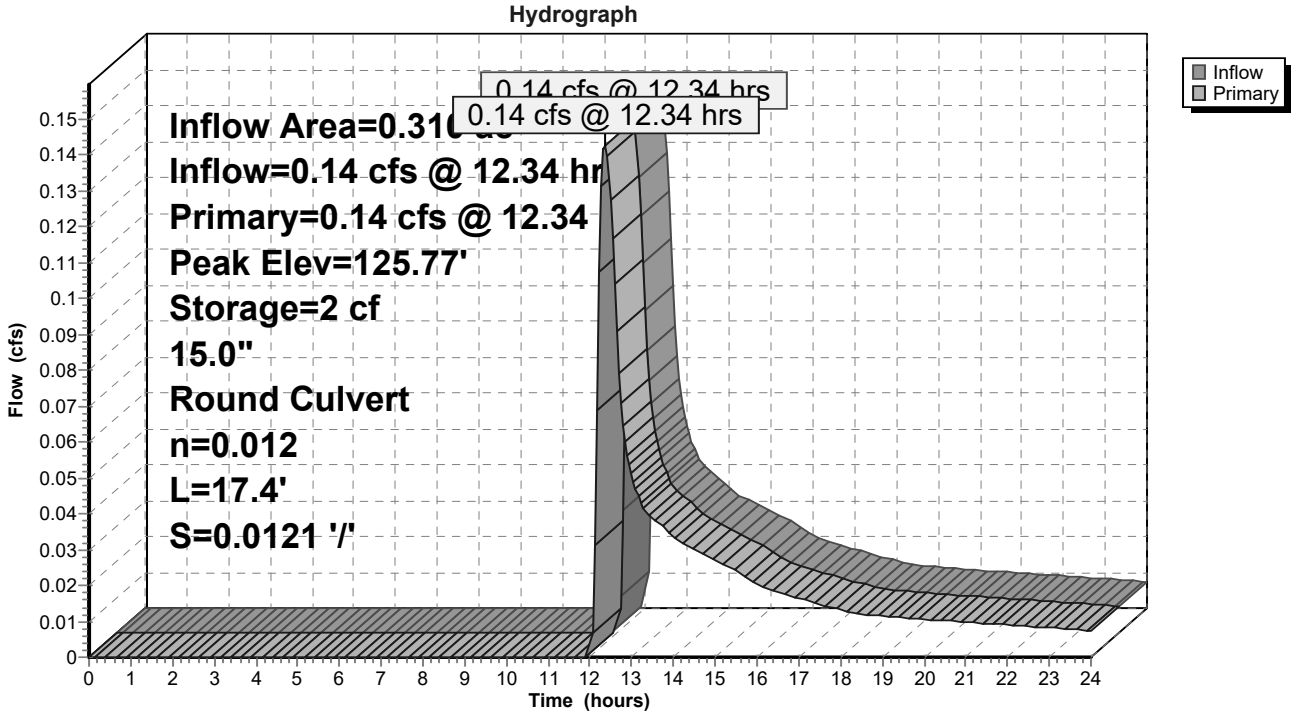
Plug-Flow detention time= 0.6 min calculated for 0.023 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (926.5 - 926.2)

Volume	Invert	Avail.Storage	Storage Description
#1	125.59'	84 cf	**4.00'D x 6.65'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	125.59'	**15.0" Round 15 " HDPE N-12** L= 17.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 125.59' / 125.38' S= 0.0121 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.14 cfs @ 12.34 hrs HW=125.77' TW=125.57' (Dynamic Tailwater)
1=15 " HDPE N-12 (Outlet Controls 0.14 cfs @ 1.97 fps)

Pond C148GP: CB 1+48G



Summary for Pond C148RP: CB 1+48R

Inflow Area = 0.470 ac, 21.68% Impervious, Inflow Depth > 1.31" for 25yr-24hr event
Inflow = 0.41 cfs @ 12.16 hrs, Volume= 0.051 af
Outflow = 0.41 cfs @ 12.17 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min
Primary = 0.41 cfs @ 12.17 hrs, Volume= 0.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 125.58' @ 12.20 hrs Surf.Area= 13 sf Storage= 4 cf
Flood Elev= 132.08' Surf.Area= 13 sf Storage= 85 cf

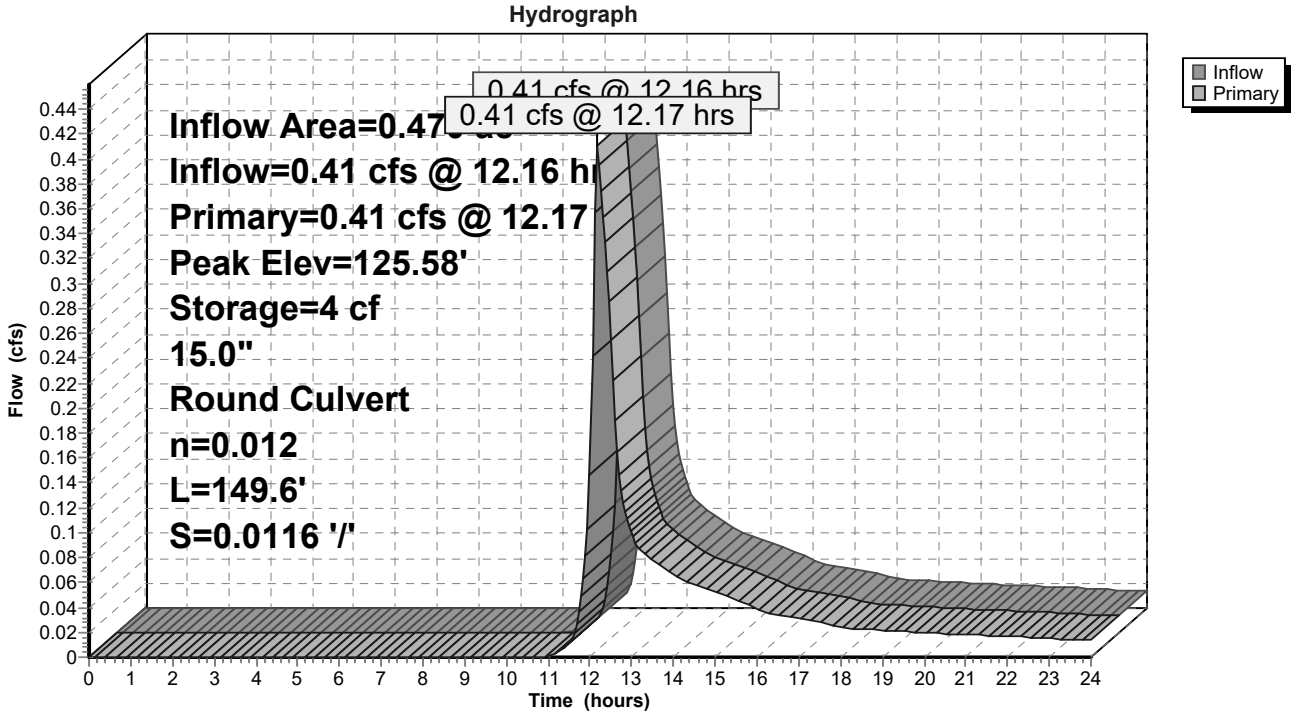
Plug-Flow detention time= 0.4 min calculated for 0.051 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (892.5 - 892.3)

Volume	Invert	Avail.Storage	Storage Description
#1	125.28'	85 cf	**4.00'D x 6.80'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	125.28'	**15.0" Round 15" HDPE N-12** L= 149.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 125.28' / 123.55' S= 0.0116 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.39 cfs @ 12.17 hrs HW=125.58' TW=124.44' (Dynamic Tailwater)
1=15" HDPE N-12 (Outlet Controls 0.39 cfs @ 2.63 fps)

Pond C148RP: CB 1+48R



Summary for Pond C1643LP: CB 16+43L

Inflow Area = 0.063 ac, 99.56% Impervious, Inflow Depth > 6.67" for 25yr-24hr event
Inflow = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.1 min
Primary = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 137.16' @ 12.09 hrs Surf.Area= 13 sf Storage= 4 cf
Flood Elev= 141.21' Surf.Area= 13 sf Storage= 55 cf

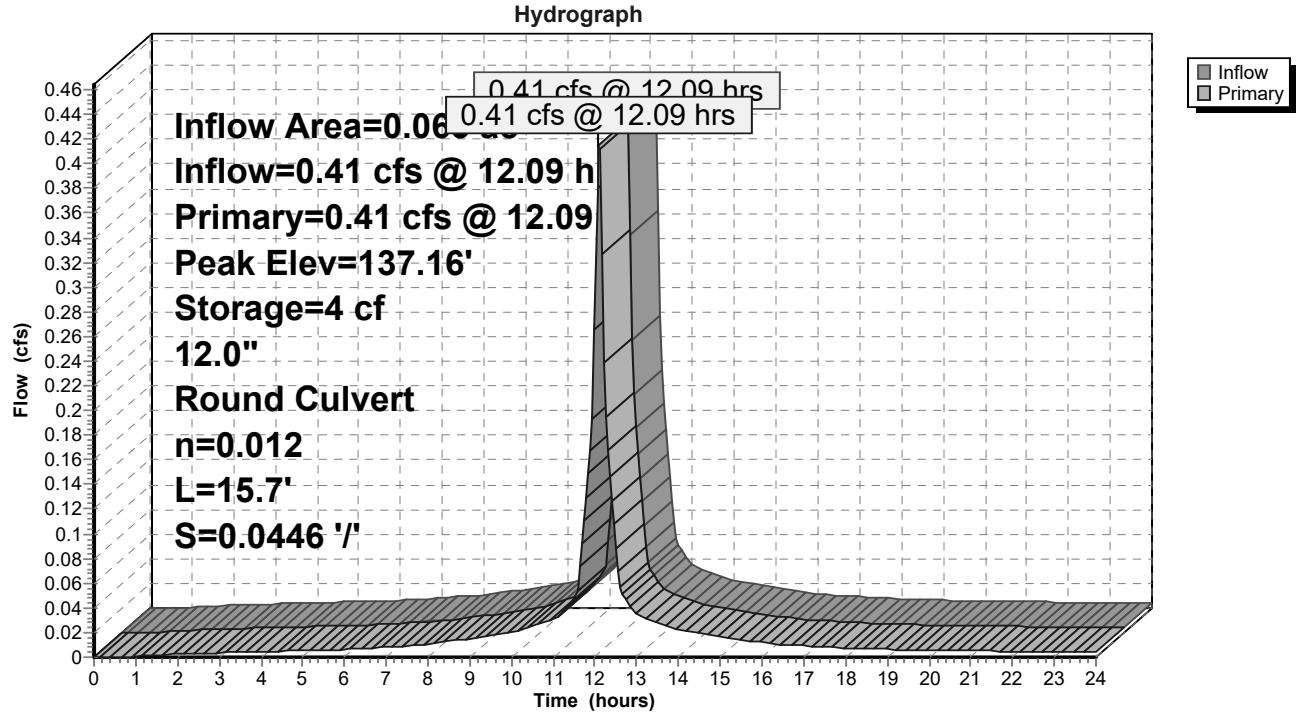
Plug-Flow detention time= 0.6 min calculated for 0.035 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (743.1 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	136.84'	55 cf	**4.00'D x 4.37'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	136.84'	**12.0" Round 12" HDPE N-12** L= 15.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 136.84' / 136.14' S= 0.0446 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.40 cfs @ 12.09 hrs HW=137.15' TW=135.84' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 0.40 cfs @ 1.91 fps)

Pond C1643LP: CB 16+43L



Summary for Pond C1643RP: CB 16+43R

Inflow Area = 0.252 ac, 62.41% Impervious, Inflow Depth > 4.23" for 25yr-24hr event
Inflow = 0.94 cfs @ 12.13 hrs, Volume= 0.089 af
Outflow = 0.94 cfs @ 12.13 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.1 min
Primary = 0.94 cfs @ 12.13 hrs, Volume= 0.089 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 135.86' @ 12.13 hrs Surf.Area= 13 sf Storage= 6 cf
Flood Elev= 141.18' Surf.Area= 13 sf Storage= 73 cf

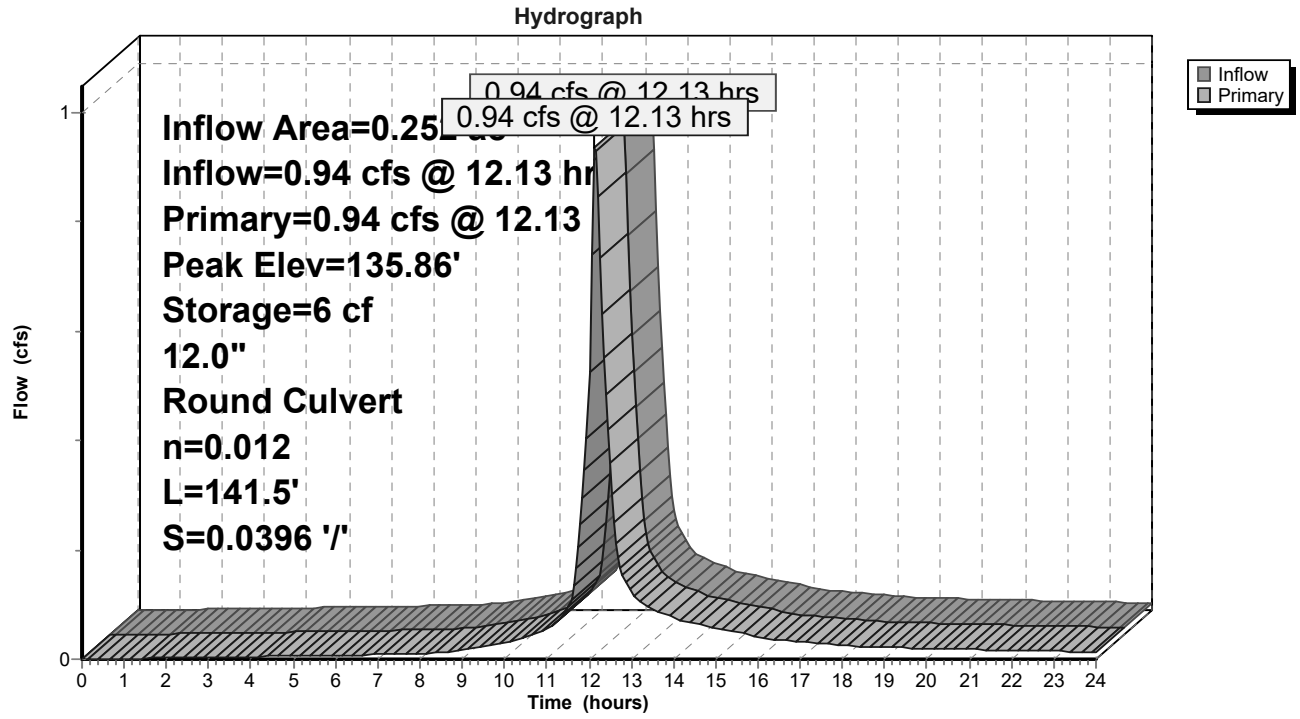
Plug-Flow detention time= 0.4 min calculated for 0.089 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (801.3 - 801.1)

Volume	Invert	Avail.Storage	Storage Description
#1	135.36'	73 cf	**4.00'D x 5.82'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.36'	**12.0" Round 12" HDPE N-12** L= 141.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 135.36' / 129.75' S= 0.0396 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.92 cfs @ 12.13 hrs HW=135.85' TW=129.74' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 0.92 cfs @ 2.39 fps)

Pond C1643RP: CB 16+43R



Summary for Pond C1785LP: CB 17+85L

Inflow Area = 0.173 ac, 52.61% Impervious, Inflow Depth > 3.54" for 25yr-24hr event
Inflow = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af
Outflow = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.1 min
Primary = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 130.83' @ 12.10 hrs Surf.Area= 13 sf Storage= 5 cf
Flood Elev= 135.25' Surf.Area= 13 sf Storage= 61 cf

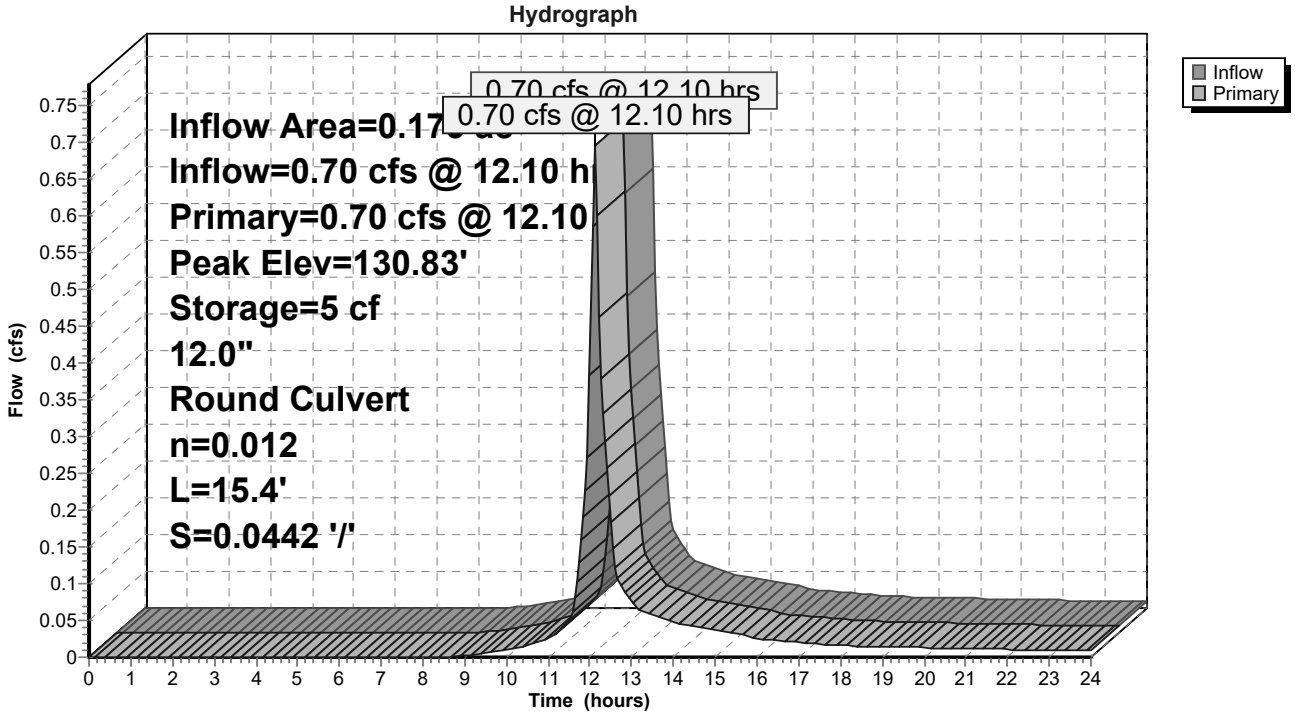
Plug-Flow detention time= 0.4 min calculated for 0.051 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (831.6 - 831.4)

Volume	Invert	Avail.Storage	Storage Description
#1	130.41'	61 cf	**4.00'D x 4.84'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	130.41'	**12.0" Round 12" HDPE N-12** L= 15.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 130.41' / 129.73' S= 0.0442 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.69 cfs @ 12.10 hrs HW=130.83' TW=129.77' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 0.69 cfs @ 2.21 fps)

Pond C1785LP: CB 17+85L



Summary for Pond C1785RP: CB 17+85R

Inflow Area = 0.681 ac, 54.92% Impervious, Inflow Depth > 3.72" for 25yr-24hr event
Inflow = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af
Outflow = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.1 min
Primary = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 129.78' @ 12.11 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 135.13' Surf.Area= 13 sf Storage= 79 cf

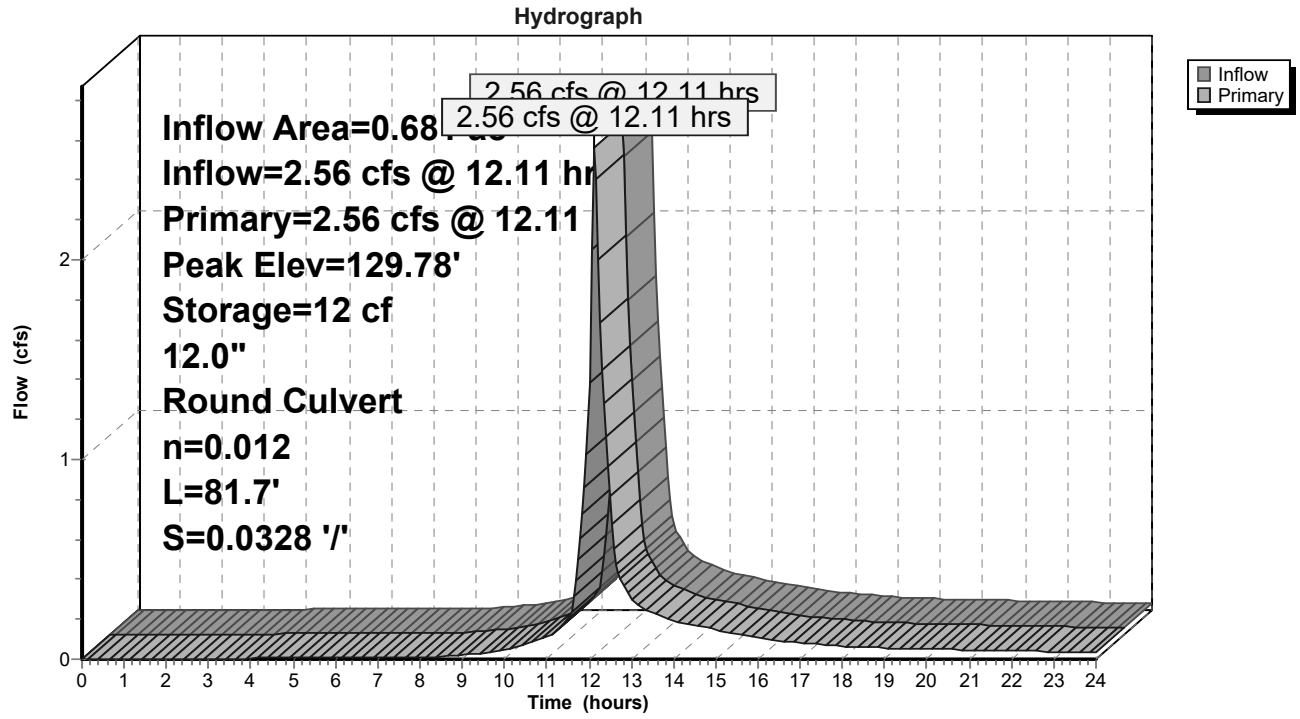
Plug-Flow detention time= 0.2 min calculated for 0.211 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (820.7 - 820.5)

Volume	Invert	Avail.Storage	Storage Description
#1	128.83'	79 cf	**4.00'D x 6.30'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	128.83'	**12.0" Round 12" HDPE N-12** L= 81.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 128.83' / 126.15' S= 0.0328 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.49 cfs @ 12.11 hrs HW=129.76' TW=127.08' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Inlet Controls 2.49 cfs @ 3.28 fps)

Pond C1785RP: CB 17+85R



Summary for Pond C1928LP: CB 19+28L

Inflow Area = 1.102 ac, 54.08% Impervious, Inflow Depth > 3.65" for 25yr-24hr event
Inflow = 4.22 cfs @ 12.11 hrs, Volume= 0.335 af
Outflow = 4.21 cfs @ 12.11 hrs, Volume= 0.335 af, Atten= 0%, Lag= 0.1 min
Primary = 4.21 cfs @ 12.11 hrs, Volume= 0.335 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 123.93' @ 12.11 hrs Surf.Area= 13 sf Storage= 22 cf
Flood Elev= 129.05' Surf.Area= 13 sf Storage= 86 cf

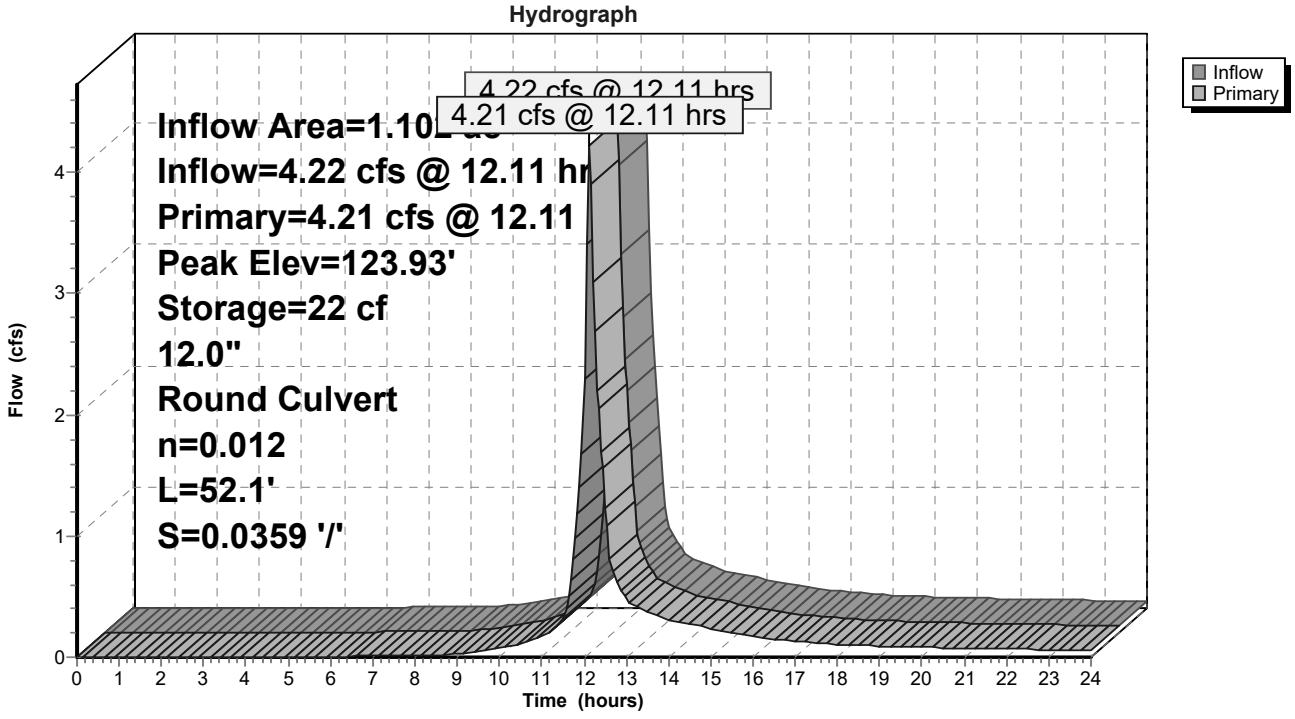
Plug-Flow detention time= 0.2 min calculated for 0.334 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (824.9 - 824.8)

Volume	Invert	Avail.Storage	Storage Description
#1	122.19'	86 cf	**4.00'D x 6.86'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	122.19'	**12.0" Round 12" HDPE N-12** L= 52.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 122.19' / 120.32' S= 0.0359 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=4.12 cfs @ 12.11 hrs HW=123.88' TW=122.58' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 4.12 cfs @ 5.25 fps)

Pond C1928LP: CB 19+28L



Summary for Pond C1928RP: CB 19+28R

Inflow Area = 0.203 ac, 53.23% Impervious, Inflow Depth > 3.54" for 25yr-24hr event
Inflow = 0.83 cfs @ 12.09 hrs, Volume= 0.060 af
Outflow = 0.83 cfs @ 12.10 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.1 min
Primary = 0.83 cfs @ 12.10 hrs, Volume= 0.060 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.73' @ 12.09 hrs Surf.Area= 13 sf Storage= 6 cf
Flood Elev= 128.92' Surf.Area= 13 sf Storage= 59 cf

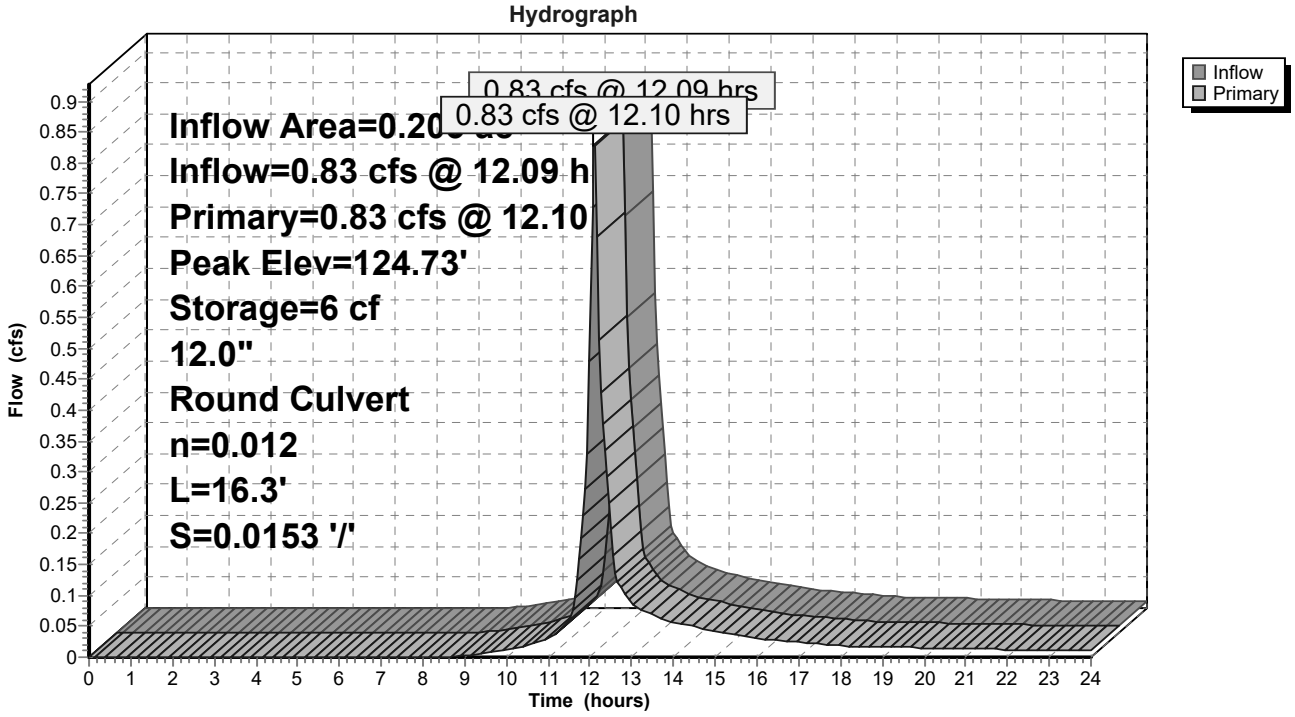
Plug-Flow detention time= 0.4 min calculated for 0.060 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (831.1 - 830.9)

Volume	Invert	Avail.Storage	Storage Description
#1	124.26'	59 cf	**4.00'D x 4.66'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	124.26'	**12.0" Round 12" HDPE N-12** L= 16.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 124.26' / 124.01' S= 0.0153 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.82 cfs @ 12.10 hrs HW=124.73' TW=123.87' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Barrel Controls 0.82 cfs @ 3.34 fps)

Pond C1928RP: CB 19+28R



Summary for Pond C1979RP: CB 19+79R

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)

Inflow Area = 1.141 ac, 54.41% Impervious, Inflow Depth > 3.67" for 25yr-24hr event
Inflow = 4.40 cfs @ 12.11 hrs, Volume= 0.349 af
Outflow = 4.35 cfs @ 12.11 hrs, Volume= 0.349 af, Atten= 1%, Lag= 0.1 min
Primary = 4.35 cfs @ 12.11 hrs, Volume= 0.349 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 122.98' @ 12.14 hrs Surf.Area= 13 sf Storage= 33 cf
Flood Elev= 126.96' Surf.Area= 13 sf Storage= 83 cf

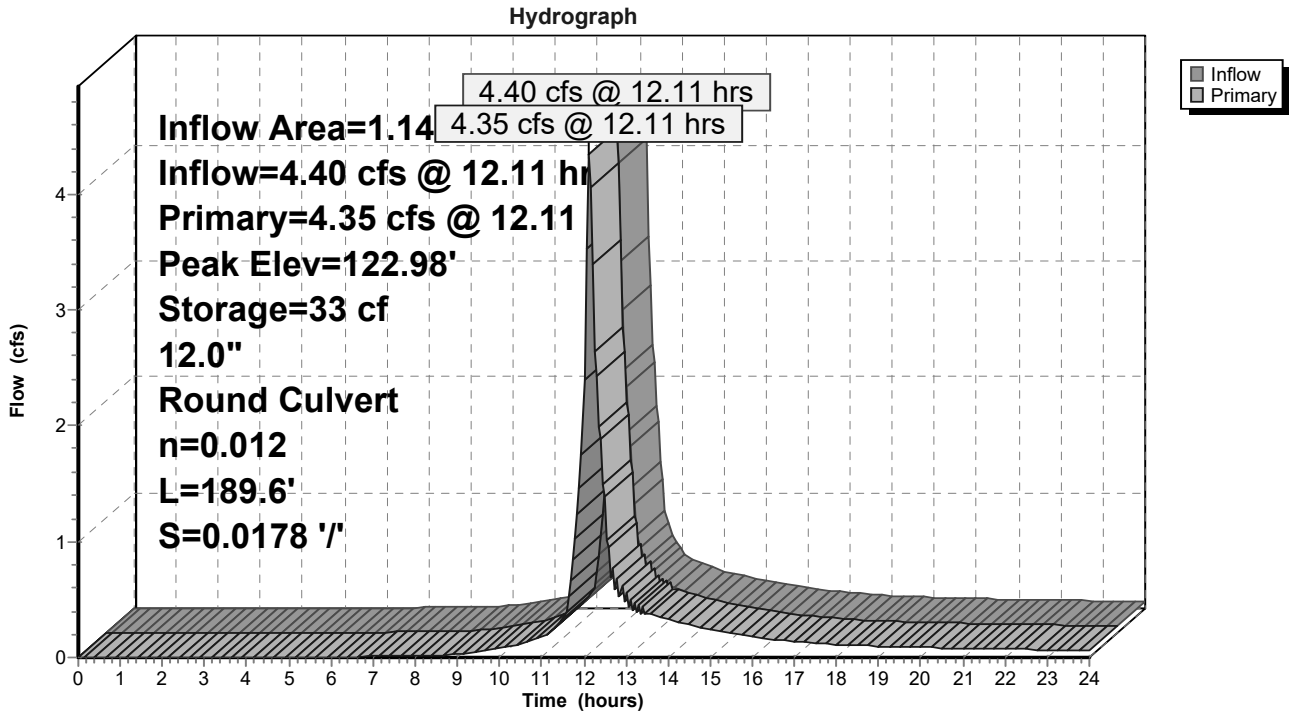
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.1 min (824.6 - 824.5)

Volume	Invert	Avail.Storage	Storage Description
#1	120.32'	83 cf	**4.00'D x 6.64'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	120.32'	**12.0" Round 12" HDPE N-12** L= 189.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 120.32' / 116.94' S= 0.0178 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=3.86 cfs @ 12.11 hrs HW=122.59' TW=120.12' (Dynamic Tailwater)
└**1=12" HDPE N-12** (Outlet Controls 3.86 cfs @ 4.92 fps)

Pond C1979RP: CB 19+79R



Summary for Pond C2173LP: CB 21+73L

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)

Inflow Area = 0.313 ac, 57.63% Impervious, Inflow Depth > 3.85" for 25yr-24hr event
Inflow = 1.39 cfs @ 12.09 hrs, Volume= 0.101 af
Outflow = 1.28 cfs @ 12.09 hrs, Volume= 0.101 af, Atten= 8%, Lag= 0.0 min
Primary = 1.28 cfs @ 12.09 hrs, Volume= 0.101 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 120.32' @ 12.16 hrs Surf.Area= 13 sf Storage= 36 cf
Flood Elev= 122.11' Surf.Area= 13 sf Storage= 58 cf

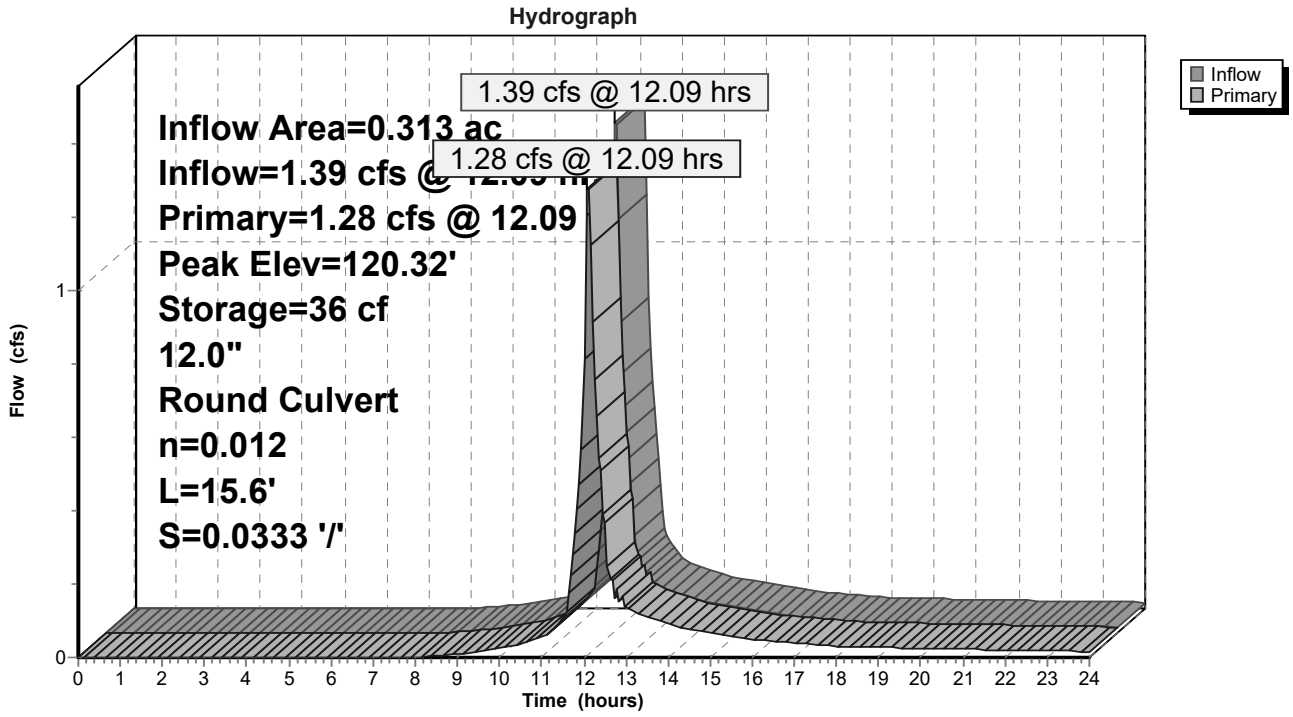
Plug-Flow detention time= 0.4 min calculated for 0.101 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (824.5 - 824.2)

Volume	Invert	Avail.Storage	Storage Description
#1	117.45'	58 cf	**4.00'D x 4.65'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	117.46'	**12.0" Round 12" HDPE N-12** L= 15.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.46' / 116.94' S= 0.0333 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 12.09 hrs HW=119.31' TW=120.07' (Dynamic Tailwater)
└**1=12" HDPE N-12** (Controls 0.00 cfs)

Pond C2173LP: CB 21+73L



Summary for Pond C2173RP: CB 21+73R

[80] Warning: Exceeded Pond C2173LP by 0.96' @ 12.05 hrs (3.71 cfs 0.035 af)

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth > 3.74" for 25yr-24hr event
Inflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af
Outflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af, Atten= 0%, Lag= 0.2 min
Primary = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 120.24' @ 12.11 hrs Surf.Area= 13 sf Storage= 42 cf
Flood Elev= 122.04' Surf.Area= 13 sf Storage= 65 cf

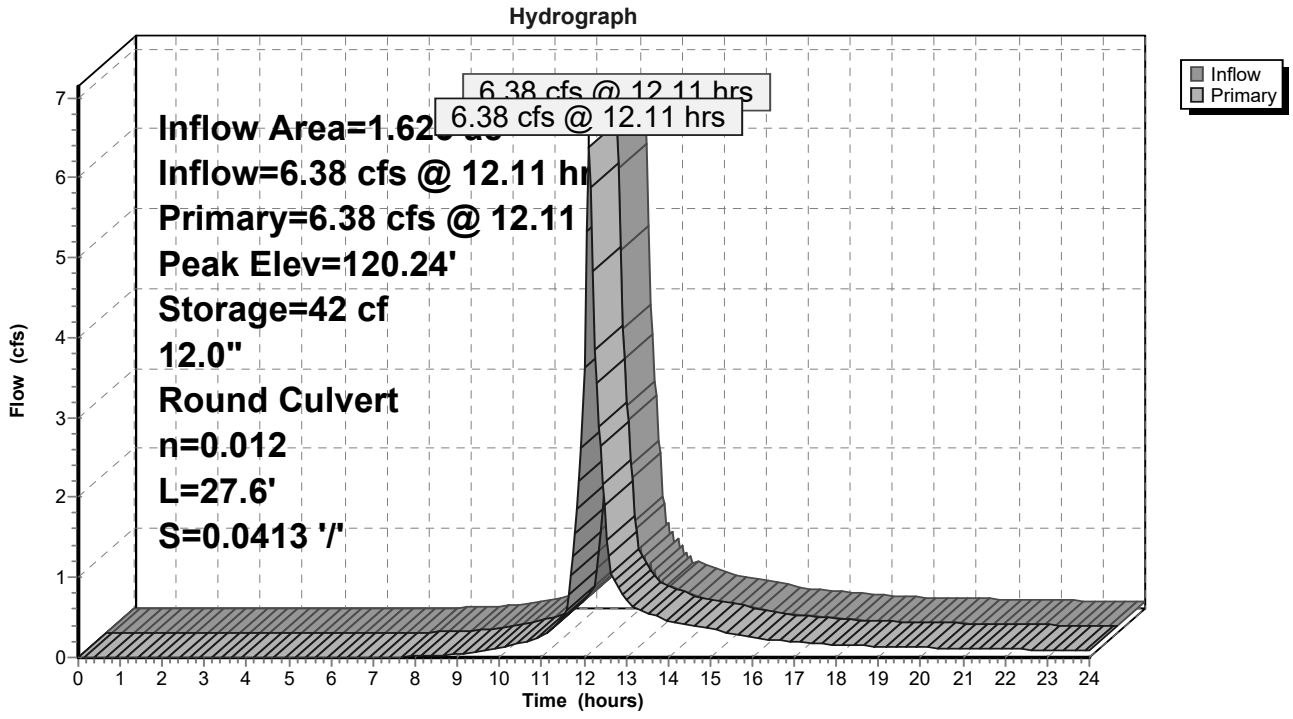
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.1 min (824.4 - 824.3)

Volume	Invert	Avail.Storage	Storage Description
#1	116.90'	65 cf	**4.00'D x 5.14'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	116.90'	**12.0" Round 12" HDPE N-12** L= 27.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 116.90' / 115.76' S= 0.0413 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=6.27 cfs @ 12.11 hrs HW=120.15' TW=117.31' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 6.27 cfs @ 7.98 fps)

Pond C2173RP: CB 21+73R



Summary for Pond C2460LP: CB 24+60L

Inflow Area = 0.569 ac, 59.66% Impervious, Inflow Depth > 3.96" for 25yr-24hr event
Inflow = 2.32 cfs @ 12.14 hrs, Volume= 0.187 af
Outflow = 2.31 cfs @ 12.14 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.1 min
Primary = 2.31 cfs @ 12.14 hrs, Volume= 0.187 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 113.52' @ 12.16 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 116.88' Surf.Area= 13 sf Storage= 55 cf

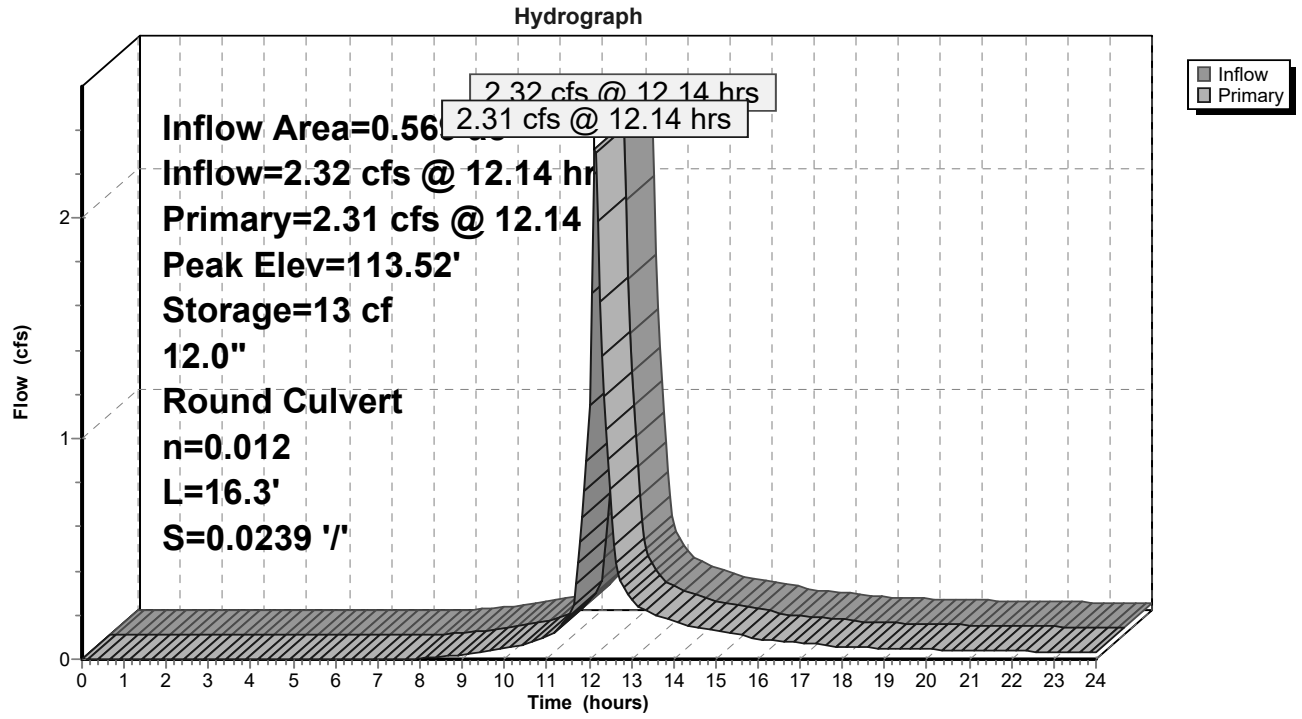
Plug-Flow detention time= 0.2 min calculated for 0.187 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (824.8 - 824.7)

Volume	Invert	Avail.Storage	Storage Description
#1	112.52'	55 cf	**4.00'D x 4.36'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	112.52'	**12.0" Round 12" HDPE N-12** L= 16.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 112.52' / 112.13' S= 0.0239 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.12 cfs @ 12.14 hrs HW=113.49' TW=113.14' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Outlet Controls 2.12 cfs @ 3.48 fps)

Pond C2460LP: CB 24+60L



Summary for Pond C2460RP: CB 24+60R

Inflow Area = 0.646 ac, 64.50% Impervious, Inflow Depth > 4.28" for 25yr-24hr event
Inflow = 2.77 cfs @ 12.12 hrs, Volume= 0.230 af
Outflow = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af, Atten= 1%, Lag= 0.1 min
Primary = 2.75 cfs @ 12.13 hrs, Volume= 0.230 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 113.16' @ 12.13 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 116.53' Surf.Area= 13 sf Storage= 55 cf

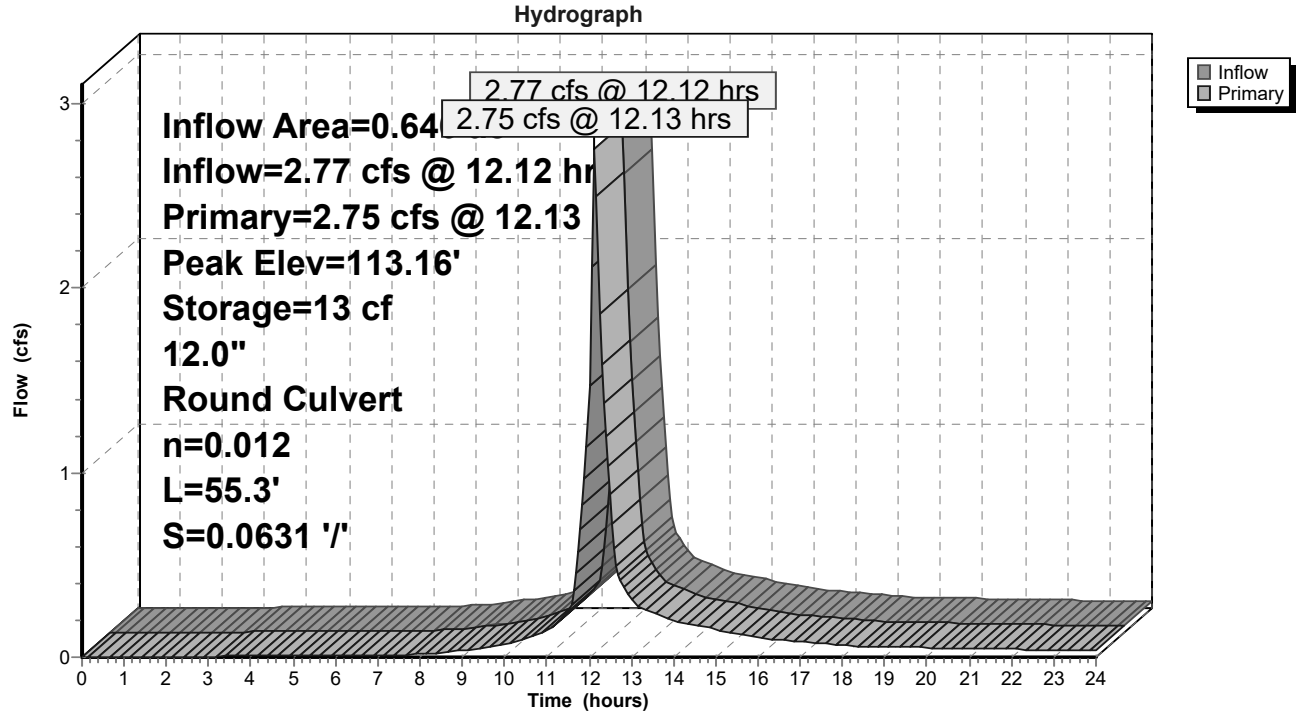
Plug-Flow detention time= 0.2 min calculated for 0.230 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (809.7 - 809.5)

Volume	Invert	Avail.Storage	Storage Description
#1	112.13'	55 cf	**4.00'D x 4.40'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	112.13'	**12.0" Round 12" HDPE N-12** L= 55.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 112.13' / 108.64' S= 0.0631 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.70 cfs @ 12.13 hrs HW=113.14' TW=106.25' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Inlet Controls 2.70 cfs @ 3.44 fps)

Pond C2460RP: CB 24+60R



Summary for Pond C2610LP: CB 26+10L

Inflow Area = 0.444 ac, 59.64% Impervious, Inflow Depth > 3.96" for 25yr-24hr event
Inflow = 1.83 cfs @ 12.13 hrs, Volume= 0.147 af
Outflow = 1.82 cfs @ 12.13 hrs, Volume= 0.147 af, Atten= 0%, Lag= 0.1 min
Primary = 1.82 cfs @ 12.13 hrs, Volume= 0.147 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 109.35' @ 12.15 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 112.77' Surf.Area= 13 sf Storage= 55 cf

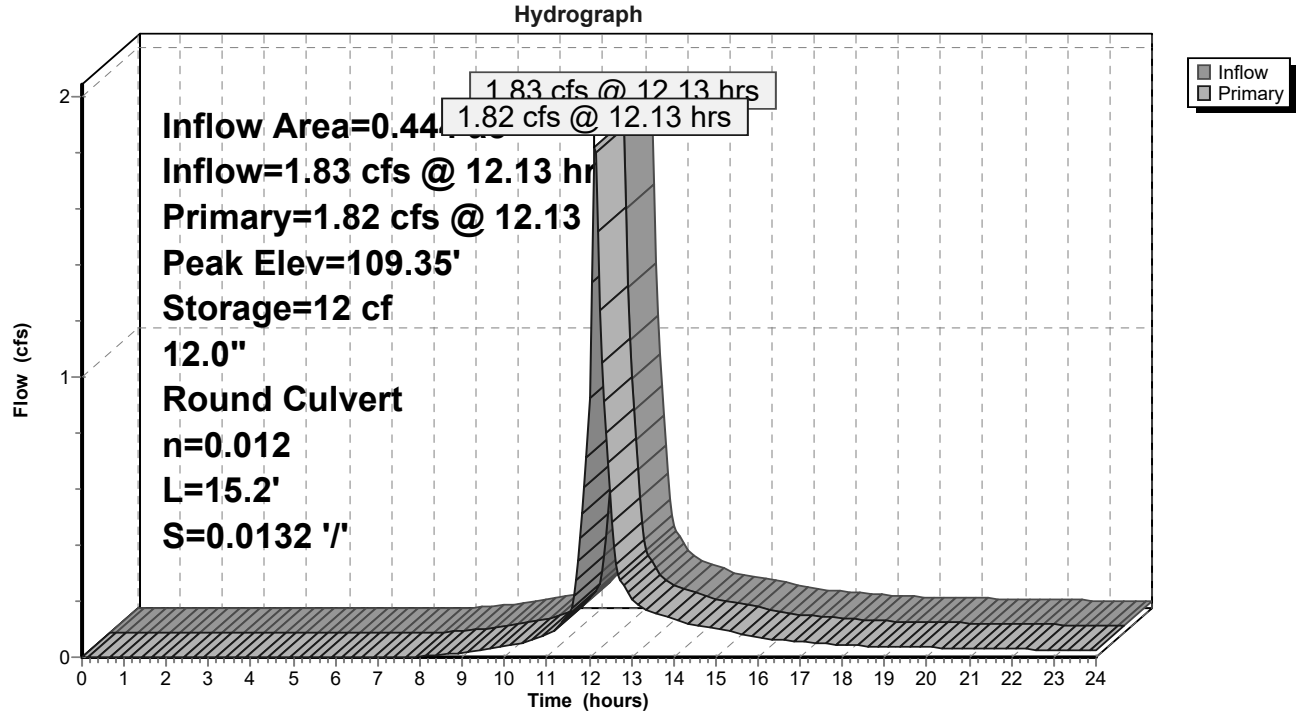
Plug-Flow detention time= 0.3 min calculated for 0.146 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (824.6 - 824.4)

Volume	Invert	Avail.Storage	Storage Description
#1	108.43'	55 cf	**4.00'D x 4.34'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	108.43'	**12.0" Round 12" HDPE N-12** L= 15.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 108.43' / 108.23' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.67 cfs @ 12.13 hrs HW=109.32' TW=109.07' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Outlet Controls 1.67 cfs @ 2.98 fps)

Pond C2610LP: CB 26+10L



Summary for Pond C2610RP: CB 26+10R

Inflow Area = 0.517 ac, 65.32% Impervious, Inflow Depth > 4.34" for 25yr-24hr event
Inflow = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af
Outflow = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af, Atten= 0%, Lag= 0.1 min
Primary = 2.27 cfs @ 12.12 hrs, Volume= 0.187 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 109.09' @ 12.12 hrs Surf.Area= 13 sf Storage= 11 cf
Flood Elev= 112.87' Surf.Area= 13 sf Storage= 58 cf

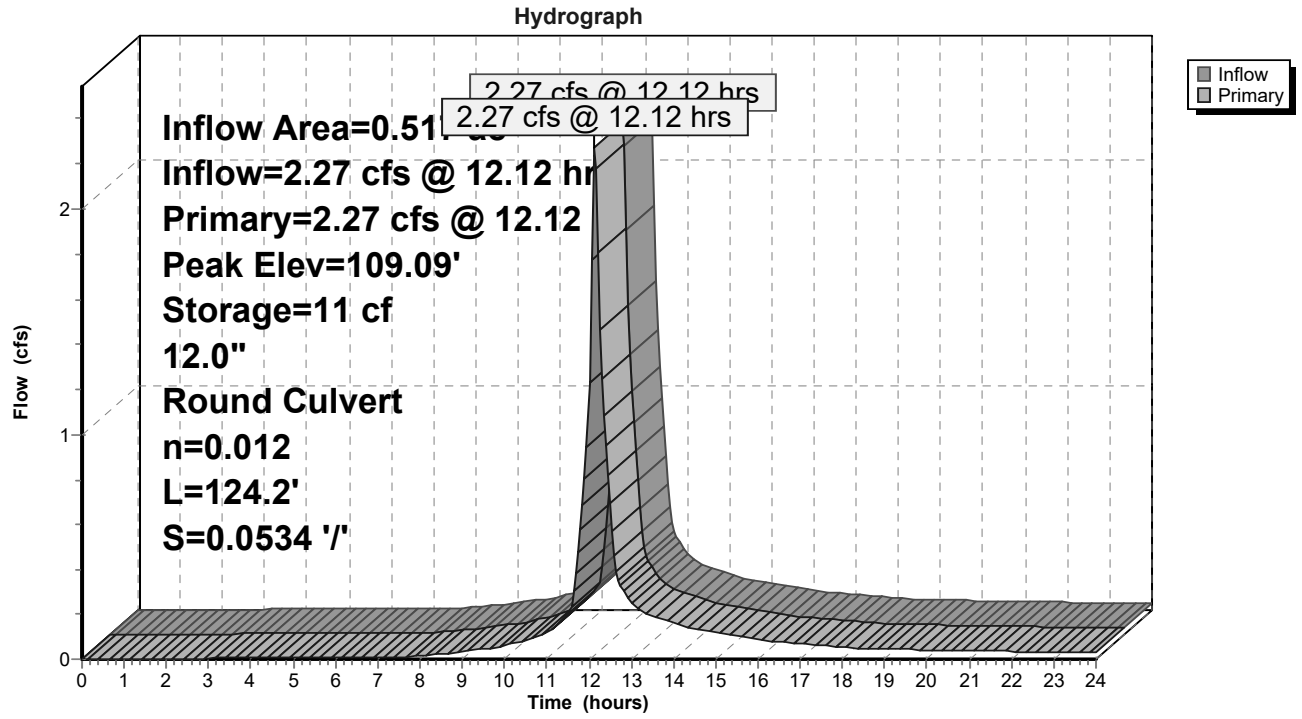
Plug-Flow detention time= 0.2 min calculated for 0.187 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (807.0 - 806.8)

Volume	Invert	Avail.Storage	Storage Description
#1	108.23'	58 cf	**4.00'D x 4.64'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**12.0" Round 12" HDPE N-12** L= 124.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 108.23' / 101.60' S= 0.0534 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.21 cfs @ 12.12 hrs HW=109.07' TW=102.34' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 2.21 cfs @ 3.13 fps)

Pond C2610RP: CB 26+10R



Summary for Pond C3018GP: CB 30+18G

[80] Warning: Exceeded Pond C100P by 0.80' @ 12.15 hrs (1.56 cfs 0.029 af)

Inflow Area = 16.732 ac, 24.53% Impervious, Inflow Depth > 1.55" for 25yr-24hr event
Inflow = 15.94 cfs @ 12.17 hrs, Volume= 2.160 af
Outflow = 15.88 cfs @ 12.17 hrs, Volume= 2.160 af, Atten= 0%, Lag= 0.0 min
Primary = 15.88 cfs @ 12.17 hrs, Volume= 2.160 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 105.99' @ 12.24 hrs Surf.Area= 13 sf Storage= 59 cf

Plug-Flow detention time= 0.1 min calculated for 2.160 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (874.1 - 874.0)

Volume	Invert	Avail.Storage	Storage Description
#1	101.26'	78 cf	**4.00'D x 6.17'H 4' Structure**
#2	107.43'	277 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		355 cf	Total Available Storage

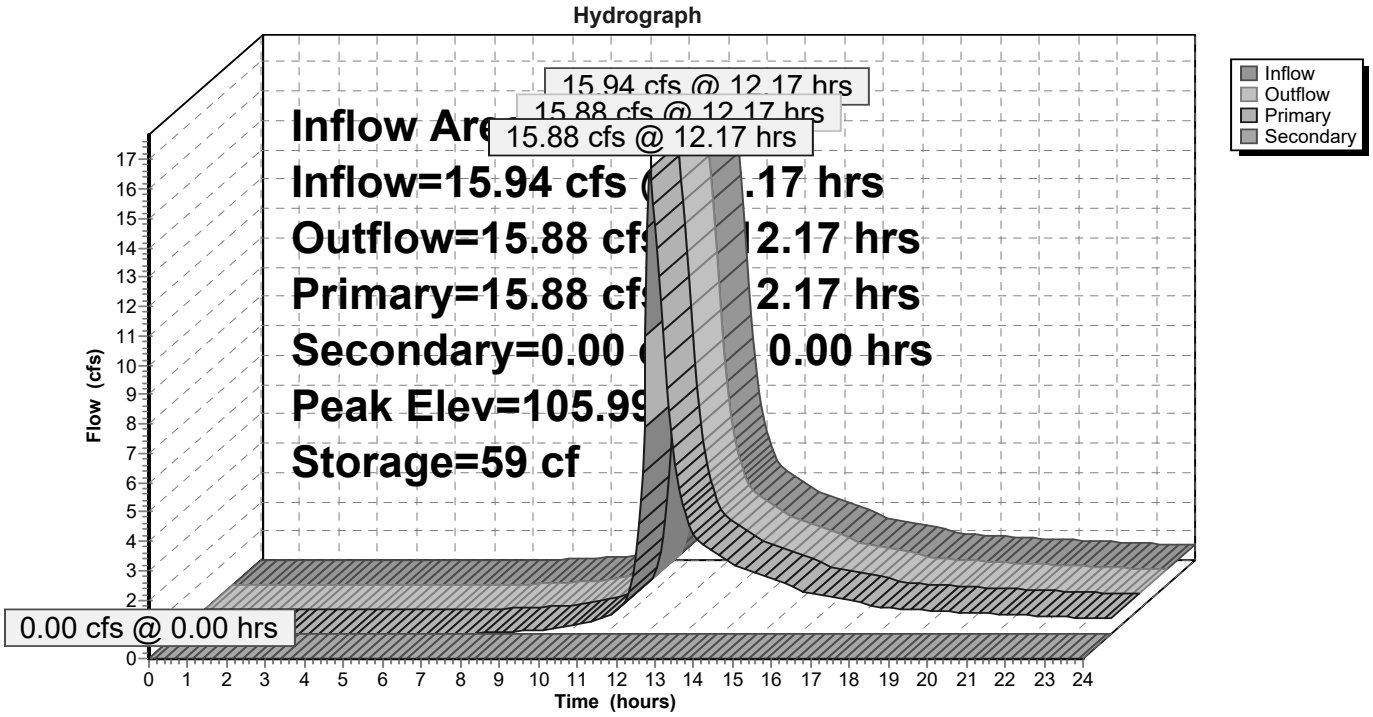
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
107.43	4	4.0	0	0	4
108.00	390	100.0	82	82	799
108.50	390	100.0	195	277	849

Device	Routing	Invert	Outlet Devices
#1	Primary	101.40'	**24.0" Round 24" HDPE N-12** L= 7.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 101.40' / 101.22' S= 0.0240 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	108.00'	**15.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=9.37 cfs @ 12.17 hrs HW=105.25' TW=104.86' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Inlet Controls 9.37 cfs @ 2.98 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=101.26' TW=101.16' (Dynamic Tailwater)
↑—**2=Overflow** (Controls 0.00 cfs)

Pond C3018GP: CB 30+18G



Summary for Pond C3020LP: CB 30+20L

Inflow Area = 18.052 ac, 25.22% Impervious, Inflow Depth > 1.62" for 25yr-24hr event
Inflow = 18.98 cfs @ 12.17 hrs, Volume= 2.440 af
Outflow = 18.93 cfs @ 12.17 hrs, Volume= 2.440 af, Atten= 0%, Lag= 0.1 min
Primary = 18.93 cfs @ 12.17 hrs, Volume= 2.440 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 105.04' @ 12.20 hrs Surf.Area= 13 sf Storage= 49 cf

Plug-Flow detention time= 0.1 min calculated for 2.440 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (871.9 - 871.9)

Volume	Invert	Avail.Storage	Storage Description
#1	101.16'	80 cf	**4.00'D x 6.36'H 4' Structure**
#2	107.52'	37 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		117 cf	Total Available Storage

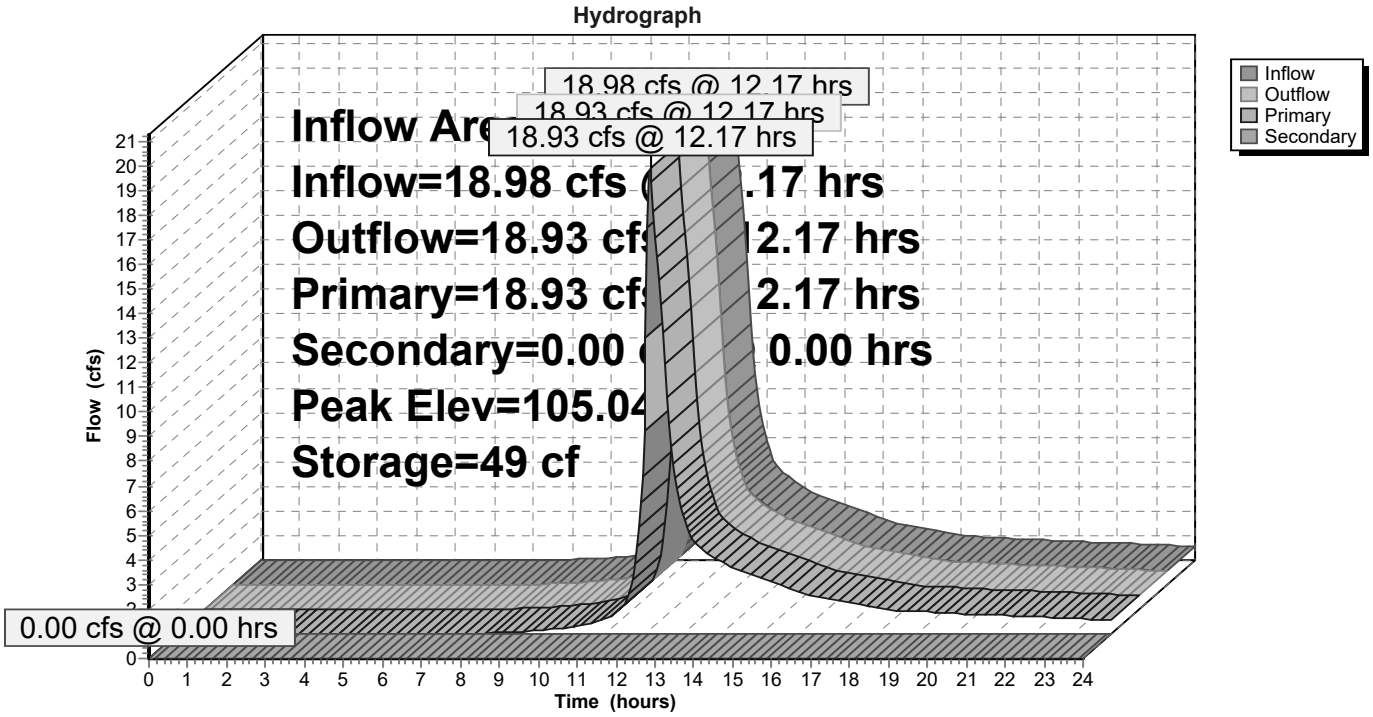
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
107.52	4	4.0	0	0	4
108.00	200	65.0	37	37	339

Device	Routing	Invert	Outlet Devices
#1	Primary	101.16'	**24.0" Round 24" HDPE N-12** L= 16.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 101.16' / 101.05' S= 0.0066 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	107.52'	**10.0' long x 10.0' breadth Oveflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=17.36 cfs @ 12.17 hrs HW=104.86' TW=103.54' (Dynamic Tailwater)
1=24" HDPE N-12 (Inlet Controls 17.36 cfs @ 5.53 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=101.16' TW=100.97' (Dynamic Tailwater)
2=Oveflow (Controls 0.00 cfs)

Pond C3020LP: CB 30+20L



Summary for Pond C3020RP: CB 30+20R

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 18.121 ac, 25.50% Impervious, Inflow Depth > 1.64" for 25yr-24hr event
Inflow = 19.26 cfs @ 12.17 hrs, Volume= 2.478 af
Outflow = 19.26 cfs @ 12.17 hrs, Volume= 2.478 af, Atten= 0%, Lag= 0.0 min
Primary = 19.26 cfs @ 12.17 hrs, Volume= 2.478 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 103.59' @ 12.17 hrs Surf.Area= 13 sf Storage= 33 cf

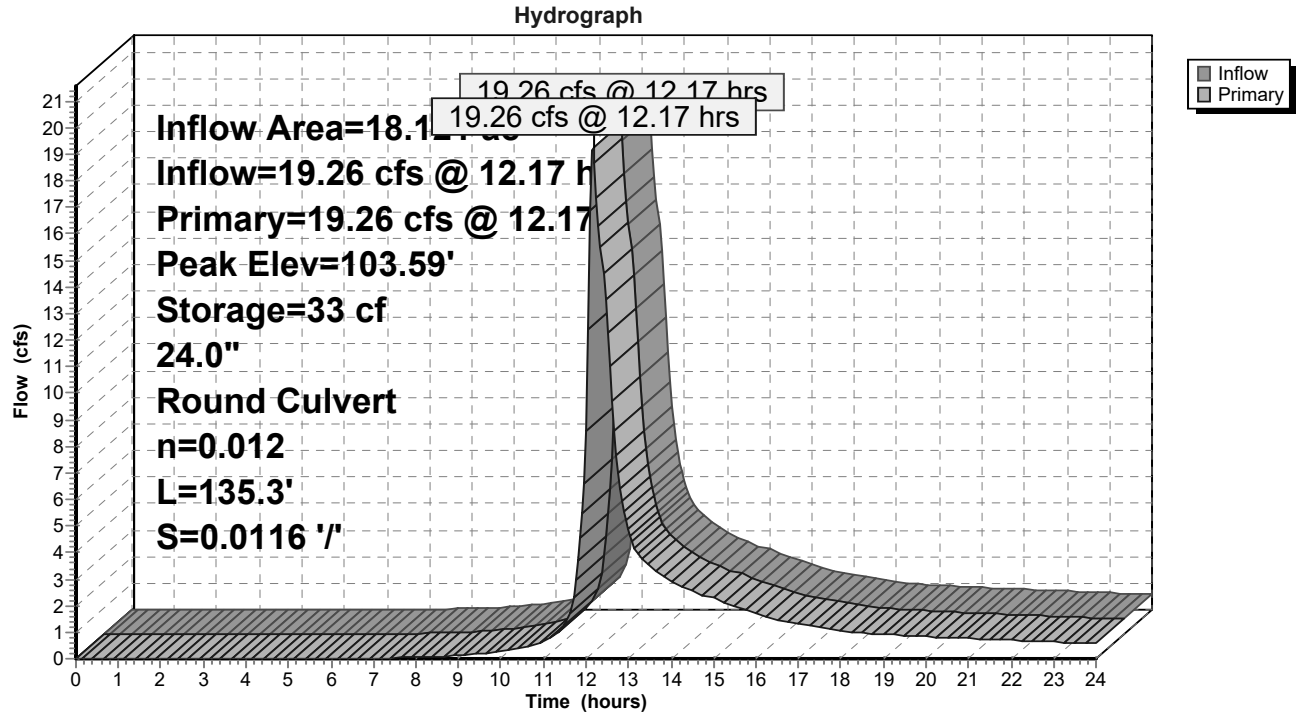
Plug-Flow detention time= 0.1 min calculated for 2.478 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (870.0 - 869.9)

Volume	Invert	Avail.Storage	Storage Description
#1	100.97'	81 cf	**4.00'D x 6.48'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	100.97'	**24.0" Round 24" HDPE N-12** L= 135.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.97' / 99.40' S= 0.0116 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=18.97 cfs @ 12.17 hrs HW=103.54' TW=99.11' (Dynamic Tailwater)
1=24" HDPE N-12 (Inlet Controls 18.97 cfs @ 6.04 fps)

Pond C3020RP: CB 30+20R



Summary for Pond C303GP: CB 3+03G

Inflow Area = 1.158 ac, 32.91% Impervious, Inflow Depth > 2.06" for 25yr-24hr event
Inflow = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af
Outflow = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af, Atten= 0%, Lag= 0.0 min
Primary = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 125.62' @ 12.19 hrs Surf.Area= 13 sf Storage= 9 cf
Flood Elev= 129.25' Surf.Area= 13 sf Storage= 55 cf

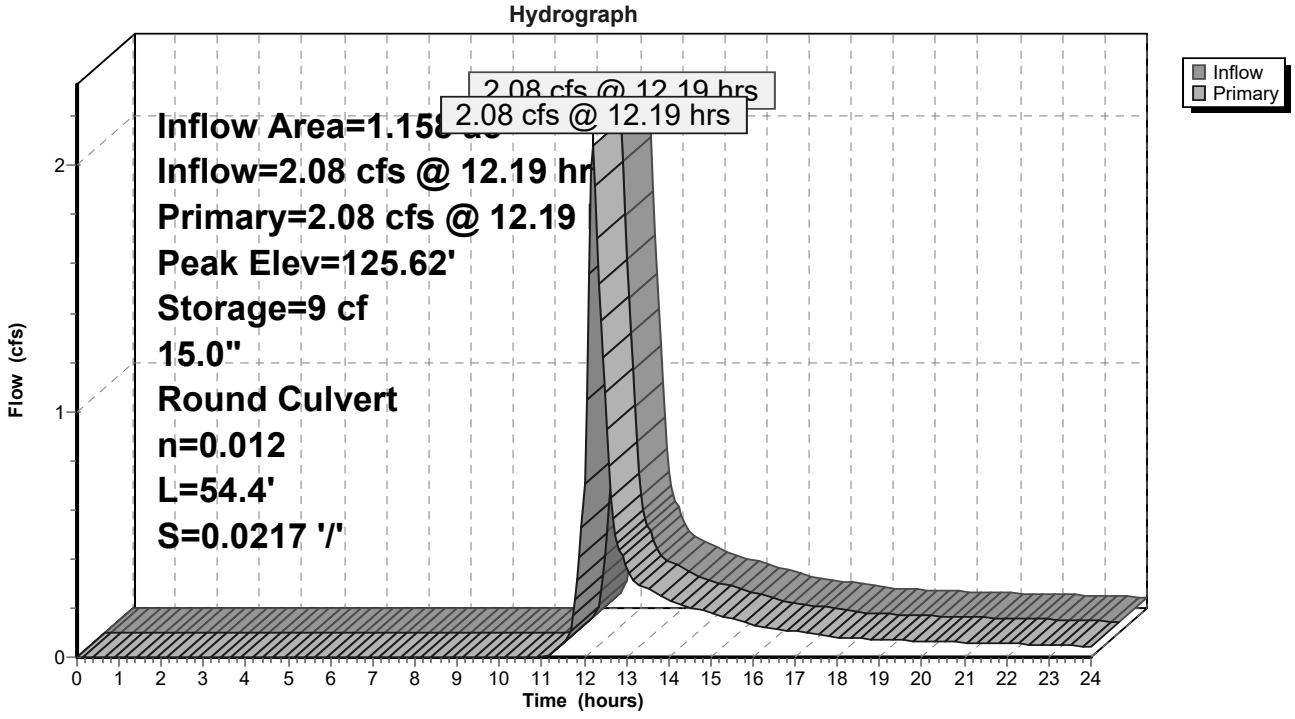
Plug-Flow detention time= 0.2 min calculated for 0.198 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (871.4 - 871.3)

Volume	Invert	Avail.Storage	Storage Description
#1	124.91'	55 cf	**4.00'D x 4.34'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	124.91'	**15.0" Round 15" HDPE N-12** L= 54.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 124.91' / 123.73' S= 0.0217 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=2.06 cfs @ 12.19 hrs HW=125.62' TW=124.48' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Inlet Controls 2.06 cfs @ 2.87 fps)

Pond C303GP: CB 3+03G



Summary for Pond C304RP: CB 3+04R

Inflow Area = 1.769 ac, 30.57% Impervious, Inflow Depth > 1.92" for 25yr-24hr event
Inflow = 2.85 cfs @ 12.18 hrs, Volume= 0.283 af
Outflow = 2.84 cfs @ 12.18 hrs, Volume= 0.283 af, Atten= 0%, Lag= 0.0 min
Primary = 2.84 cfs @ 12.18 hrs, Volume= 0.283 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.59' @ 12.29 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 128.75' Surf.Area= 13 sf Storage= 65 cf

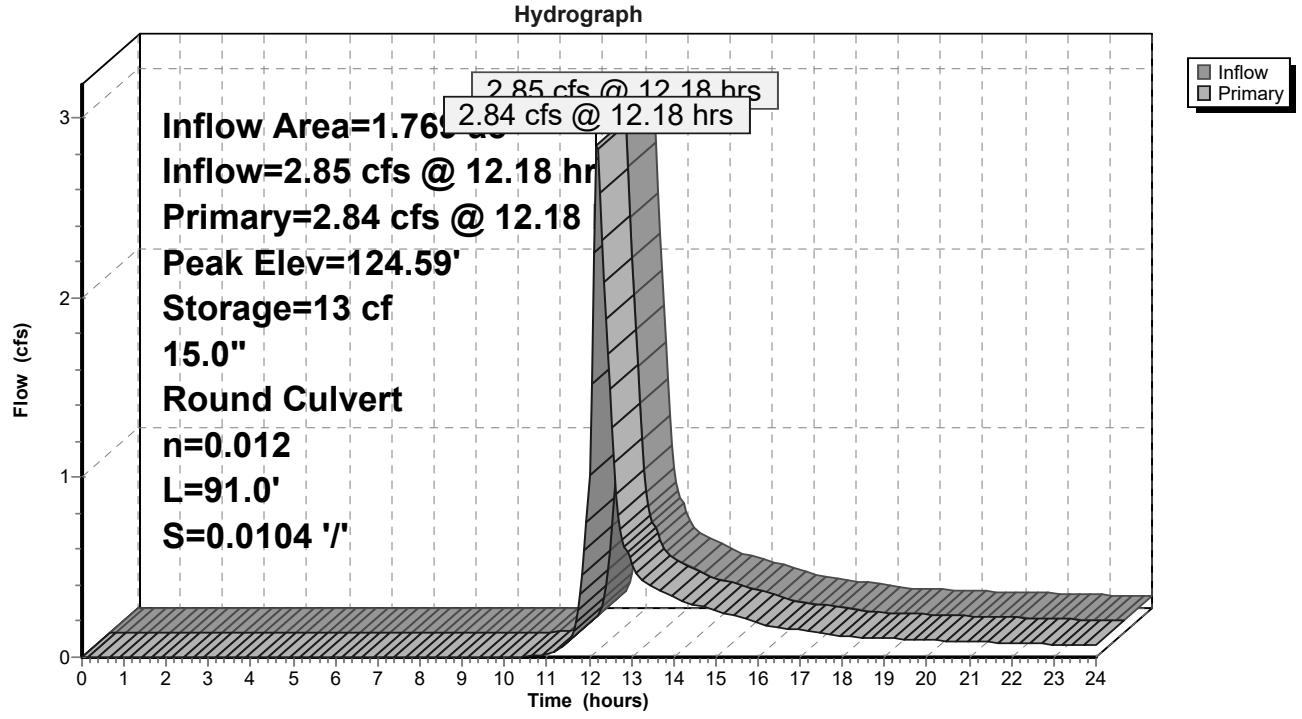
Plug-Flow detention time= 0.2 min calculated for 0.283 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (872.8 - 872.7)

Volume	Invert	Avail.Storage	Storage Description
#1	123.55'	65 cf	**4.00'D x 5.20'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	123.55'	**15.0" Round 15" HDPE N-12** L= 91.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 123.55' / 122.60' S= 0.0104 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=2.25 cfs @ 12.18 hrs HW=124.47' TW=123.96' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Outlet Controls 2.25 cfs @ 3.23 fps)

Pond C304RP: CB 3+04R



Summary for Pond C390GP: CB 3+90G

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 5.435 ac, 9.81% Impervious, Inflow Depth > 0.66" for 25yr-24hr event
Inflow = 1.44 cfs @ 12.52 hrs, Volume= 0.299 af
Outflow = 1.45 cfs @ 12.52 hrs, Volume= 0.299 af, Atten= 0%, Lag= 0.0 min
Primary = 1.45 cfs @ 12.52 hrs, Volume= 0.299 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.26' @ 12.33 hrs Surf.Area= 13 sf Storage= 14 cf
Flood Elev= 126.94' Surf.Area= 13 sf Storage= 48 cf

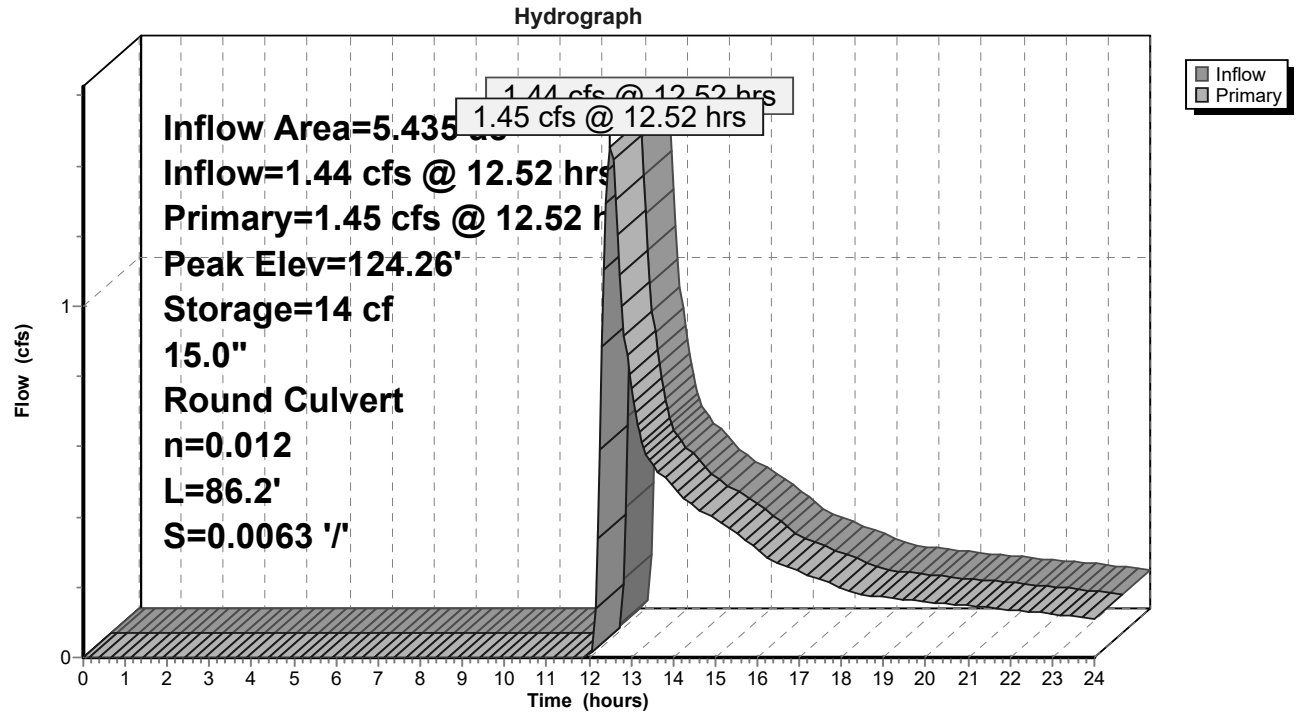
Plug-Flow detention time= 0.2 min calculated for 0.298 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (949.9 - 949.8)

Volume	Invert	Avail.Storage	Storage Description
#1	123.14'	48 cf	**4.00'D x 3.80'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	123.14'	**15.0" Round 15" HDPE N-12** L= 86.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 123.14' / 122.60' S= 0.0063 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.83 cfs @ 12.52 hrs HW=124.09' TW=123.78' (Dynamic Tailwater)
1=15" HDPE N-12 (Outlet Controls 1.83 cfs @ 2.54 fps)

Pond C390GP: CB 3+90G



Summary for Pond C402GP: CB 4+02G

[80] Warning: Exceeded Pond C390GP by 0.29' @ 12.20 hrs (1.70 cfs 0.017 af)

Inflow Area = 7.373 ac, 14.88% Impervious, Inflow Depth > 0.98" for 25yr-24hr event
Inflow = 3.34 cfs @ 12.29 hrs, Volume= 0.601 af
Outflow = 3.33 cfs @ 12.25 hrs, Volume= 0.601 af, Atten= 0%, Lag= 0.0 min
Primary = 3.33 cfs @ 12.25 hrs, Volume= 0.601 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.22' @ 12.27 hrs Surf.Area= 13 sf Storage= 22 cf
Flood Elev= 126.15' Surf.Area= 26 sf Storage= 46 cf

Plug-Flow detention time= 0.1 min calculated for 0.601 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (911.9 - 911.8)

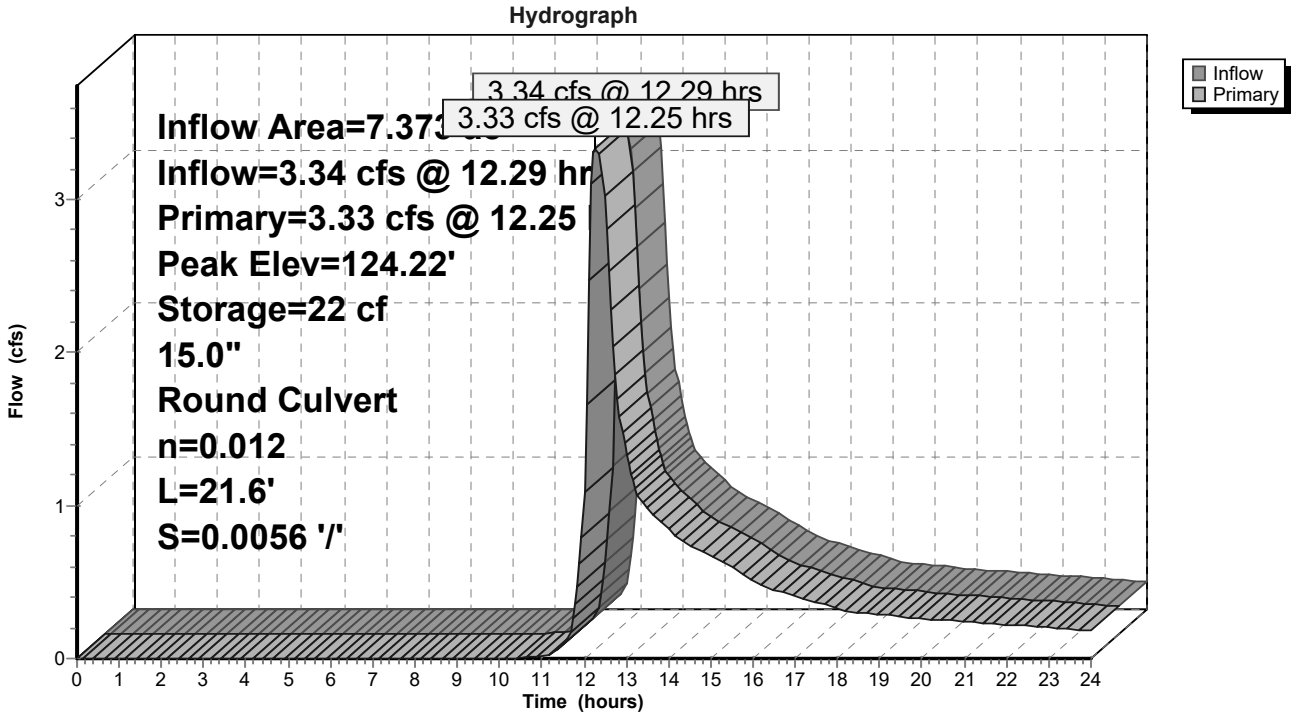
Volume	Invert	Avail.Storage	Storage Description
#1	122.50'	46 cf	**4.00'D x 3.65'H 4' Structure**
#2	126.15'	53 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		99 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
126.15	13	12.6	0	0	13
127.00	134	70.0	53	53	392

Device	Routing	Invert	Outlet Devices
#1	Primary	122.50'	**15.0" Round 15" HDPE N-12** L= 21.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 122.50' / 122.38' S= 0.0056 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=3.42 cfs @ 12.25 hrs HW=124.21' TW=123.87' (Dynamic Tailwater)
↑—**1=15" HDPE N-12** (Inlet Controls 3.42 cfs @ 2.78 fps)

Pond C402GP: CB 4+02G



Summary for Pond C419LP: CB 4+19L

Inflow Area = 10.600 ac, 27.44% Impervious, Inflow Depth > 1.83" for 25yr-24hr event
Inflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af
Outflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af, Atten= 0%, Lag= 0.0 min
Primary = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 118.30' @ 12.16 hrs Surf.Area= 13 sf Storage= 24 cf
Flood Elev= 127.08' Surf.Area= 13 sf Storage= 134 cf

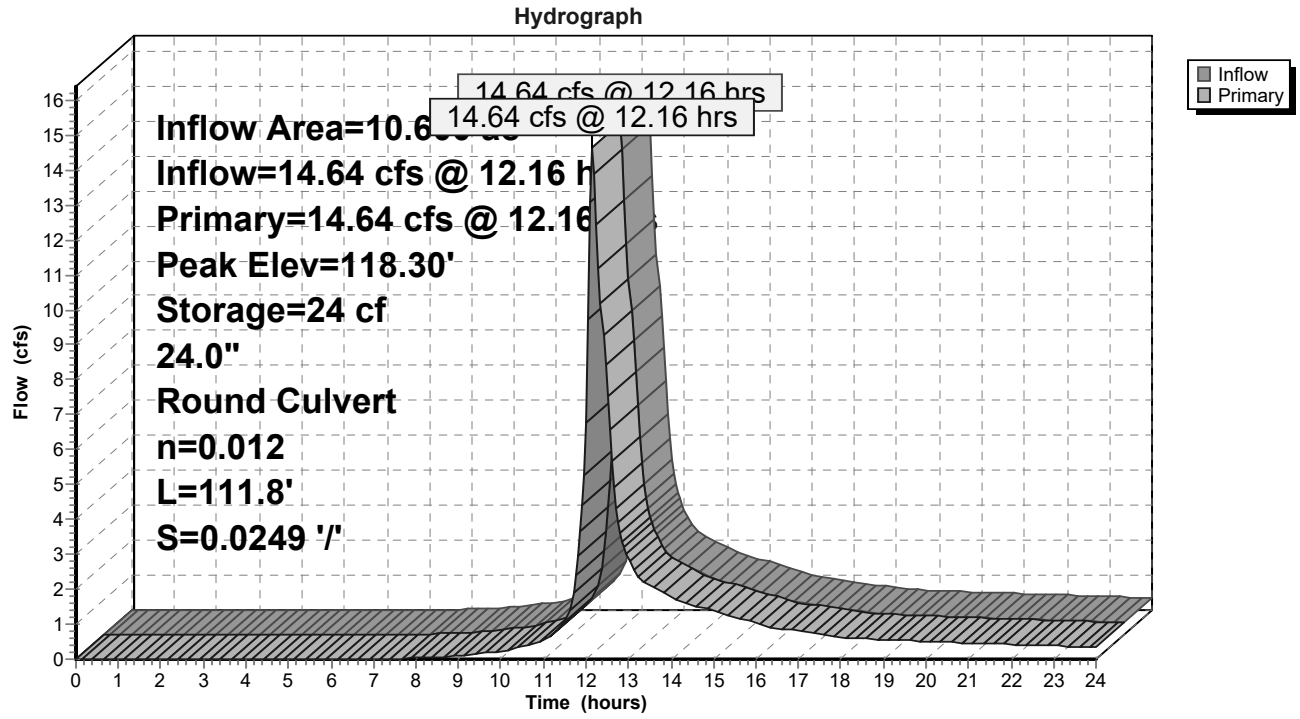
Plug-Flow detention time= 0.1 min calculated for 1.610 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (858.6 - 858.5)

Volume	Invert	Avail.Storage	Storage Description
#1	116.38'	134 cf	**4.00'D x 10.70'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	116.38'	**24.0" Round 24" HDPE N-12** L= 111.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 116.38' / 113.60' S= 0.0249 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=14.49 cfs @ 12.16 hrs HW=118.28' TW=108.10' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Inlet Controls 14.49 cfs @ 4.70 fps)

Pond C419LP: CB 4+19L



Summary for Pond C419RP: CB 4+19R

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[80] Warning: Exceeded Pond C402GP by 0.01' @ 12.15 hrs (0.62 cfs 0.003 af)

Inflow Area = 8.133 ac, 18.60% Impervious, Inflow Depth > 1.23" for 25yr-24hr event
Inflow = 5.77 cfs @ 12.22 hrs, Volume= 0.832 af
Outflow = 5.78 cfs @ 12.22 hrs, Volume= 0.832 af, Atten= 0%, Lag= 0.0 min
Primary = 5.78 cfs @ 12.22 hrs, Volume= 0.832 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 123.90' @ 12.22 hrs Surf.Area= 13 sf Storage= 20 cf
Flood Elev= 127.26' Surf.Area= 13 sf Storage= 62 cf

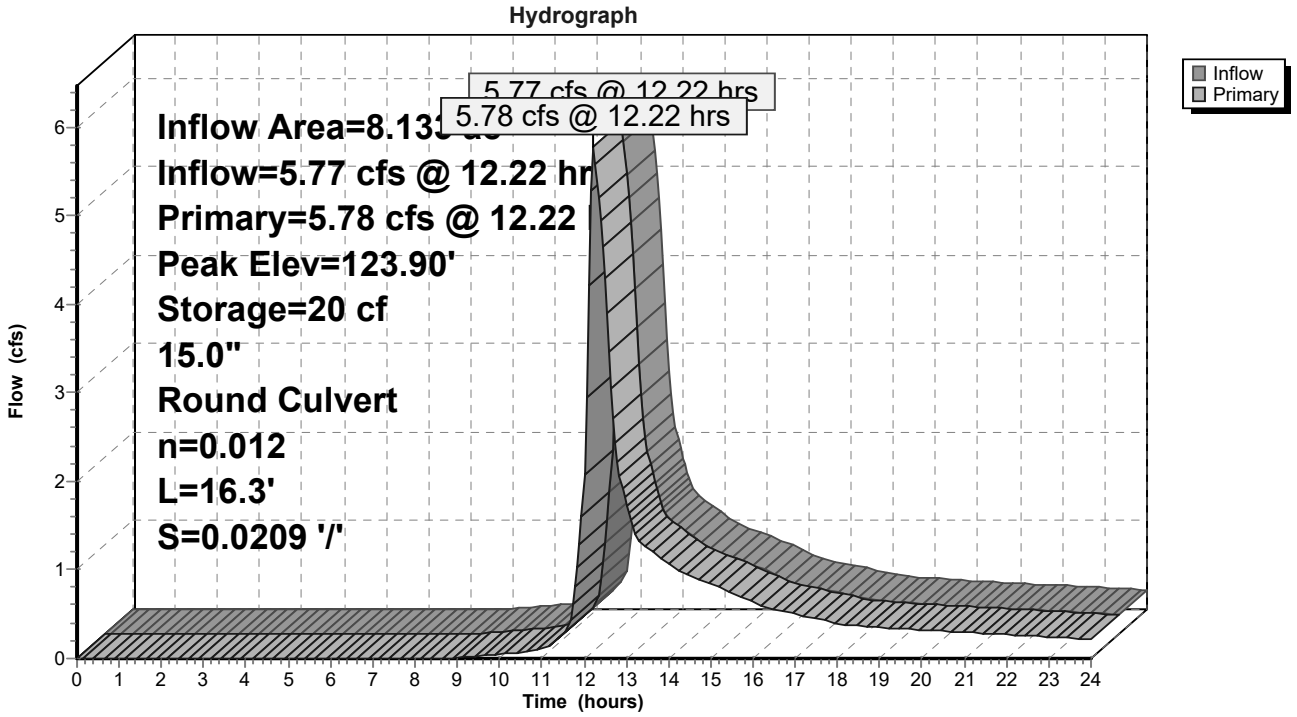
Plug-Flow detention time= 0.1 min calculated for 0.832 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (890.9 - 890.8)

Volume	Invert	Avail.Storage	Storage Description
#1	122.32'	62 cf	**4.00'D x 4.94'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	122.32'	**15.0" Round 15" HDPE N-12** L= 16.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 122.32' / 121.98' S= 0.0209 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=5.72 cfs @ 12.22 hrs HW=123.88' TW=118.15' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Inlet Controls 5.72 cfs @ 4.66 fps)

Pond C419RP: CB 4+19R



Summary for Pond C857LP: CB 8+57L

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[80] Warning: Exceeded Pond C857RP by 0.30' @ 12.10 hrs (3.23 cfs 0.019 af)

Inflow Area =	1.724 ac,	53.32% Impervious,	Inflow Depth >	3.60"	for 25yr-24hr event
Inflow =	6.17 cfs @	12.13 hrs,	Volume=	0.517 af	
Outflow =	6.18 cfs @	12.13 hrs,	Volume=	0.517 af,	Atten= 0%, Lag= 0.1 min
Primary =	6.18 cfs @	12.13 hrs,	Volume=	0.517 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 133.76' @ 12.13 hrs Surf.Area= 13 sf Storage= 22 cf
Flood Elev= 136.52' Surf.Area= 13 sf Storage= 56 cf

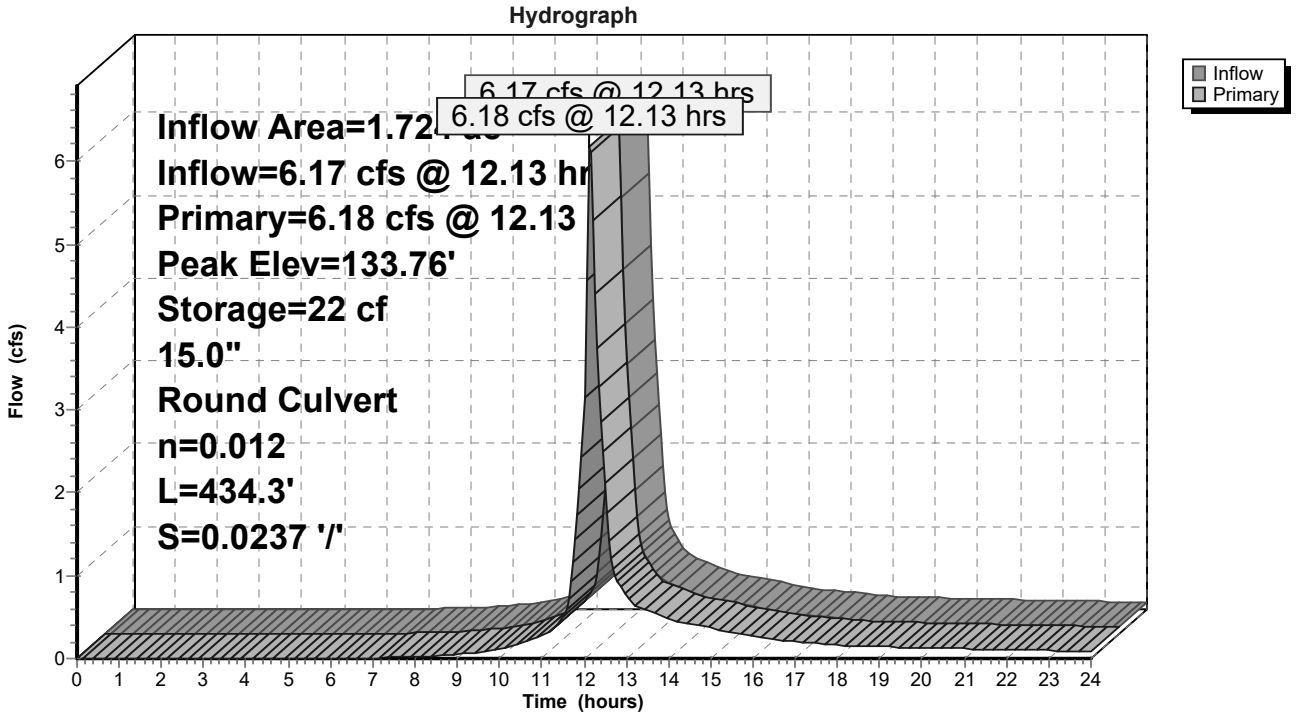
Plug-Flow detention time= 0.1 min calculated for 0.517 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (827.0 - 826.9)

Volume	Invert	Avail.Storage	Storage Description
#1	132.04'	56 cf	**4.00'D x 4.48'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	132.04'	**15.0" Round 15" HDPE N-12** L= 434.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 132.04' / 121.74' S= 0.0237 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=6.07 cfs @ 12.13 hrs HW=133.72' TW=118.24' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Inlet Controls 6.07 cfs @ 4.94 fps)

Pond C857LP: CB 8+57L



Summary for Pond C857RP: CB 8+57R

Inflow Area = 0.434 ac, 53.07% Impervious, Inflow Depth > 3.54" for 25yr-24hr event
Inflow = 1.70 cfs @ 12.11 hrs, Volume= 0.128 af
Outflow = 1.68 cfs @ 12.11 hrs, Volume= 0.128 af, Atten= 1%, Lag= 0.0 min
Primary = 1.68 cfs @ 12.11 hrs, Volume= 0.128 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 133.81' @ 12.18 hrs Surf.Area= 13 sf Storage= 18 cf
Flood Elev= 136.50' Surf.Area= 13 sf Storage= 52 cf

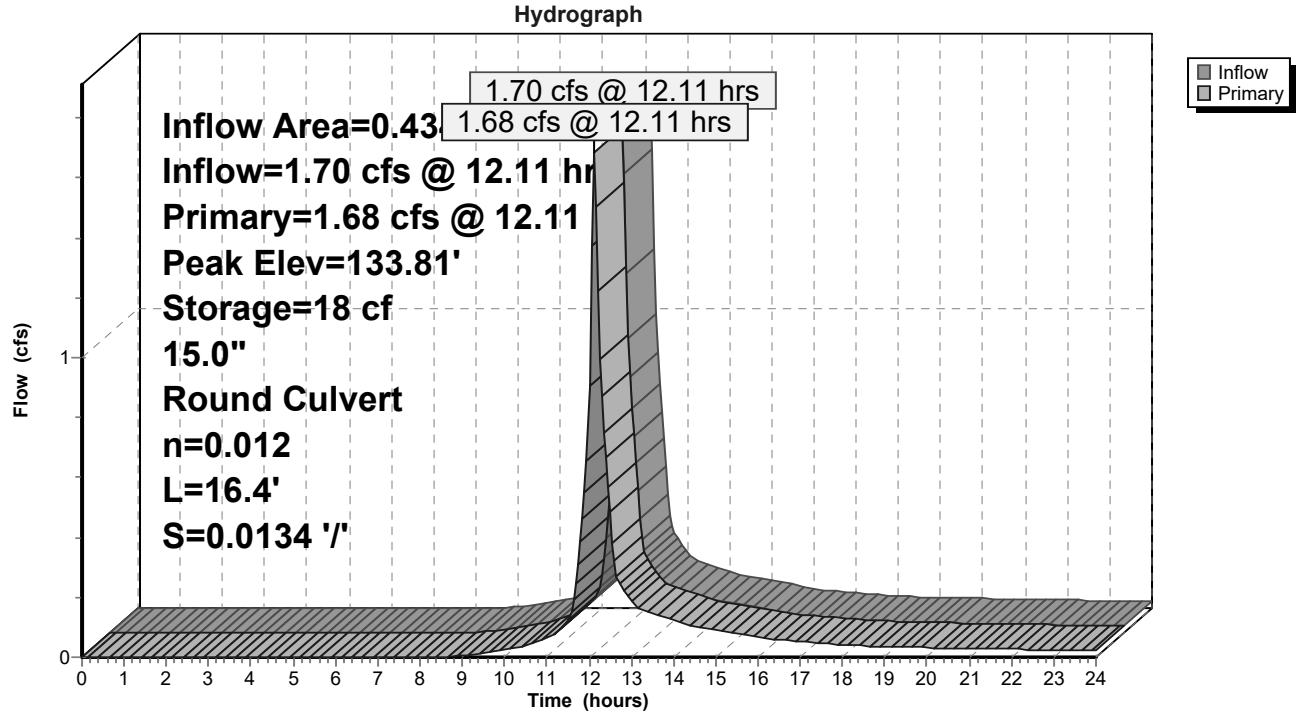
Plug-Flow detention time= 0.3 min calculated for 0.128 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (832.0 - 831.8)

Volume	Invert	Avail.Storage	Storage Description
#1	132.36'	52 cf	**4.00'D x 4.14'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	132.36'	**15.0" Round 15" HDPE N-12** L= 16.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 132.36' / 132.14' S= 0.0134 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.11 hrs HW=133.43' TW=133.69' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Controls 0.00 cfs)

Pond C857RP: CB 8+57R



Summary for Pond D100125CP: DMH 1001+25C

Inflow Area = 10.600 ac, 27.44% Impervious, Inflow Depth > 1.83" for 25yr-24hr event
Inflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af
Outflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af, Atten= 0%, Lag= 0.0 min
Primary = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 108.12' @ 12.16 hrs Surf.Area= 13 sf Storage= 24 cf
Flood Elev= 120.20' Surf.Area= 13 sf Storage= 176 cf

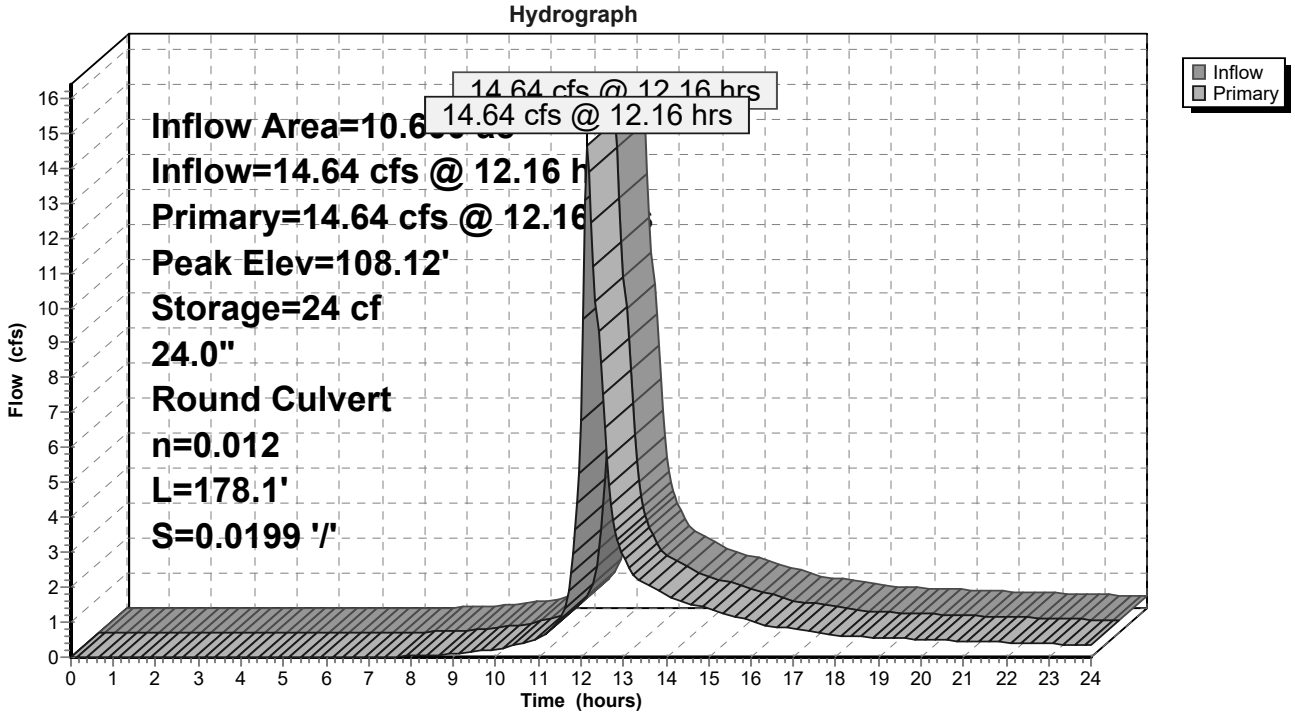
Plug-Flow detention time= 0.1 min calculated for 1.610 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (858.6 - 858.6)

Volume	Invert	Avail.Storage	Storage Description
#1	106.20'	176 cf	**4.00'D x 14.00'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	106.20'	**24.0" Round 24" HDPE N-12** L= 178.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 106.20' / 102.66' S= 0.0199 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=14.48 cfs @ 12.16 hrs HW=108.10' TW=105.11' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Inlet Controls 14.48 cfs @ 4.69 fps)

Pond D100125CP: DMH 1001+25C



Summary for Pond D100300CP: DMH 1003+00

Inflow Area = 10.600 ac, 27.44% Impervious, Inflow Depth > 1.83" for 25yr-24hr event
Inflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af
Outflow = 14.59 cfs @ 12.16 hrs, Volume= 1.613 af, Atten= 0%, Lag= 0.0 min
Primary = 14.59 cfs @ 12.16 hrs, Volume= 1.613 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 106.61' @ 12.28 hrs Surf.Area= 13 sf Storage= 51 cf
Flood Elev= 108.84' Surf.Area= 13 sf Storage= 79 cf

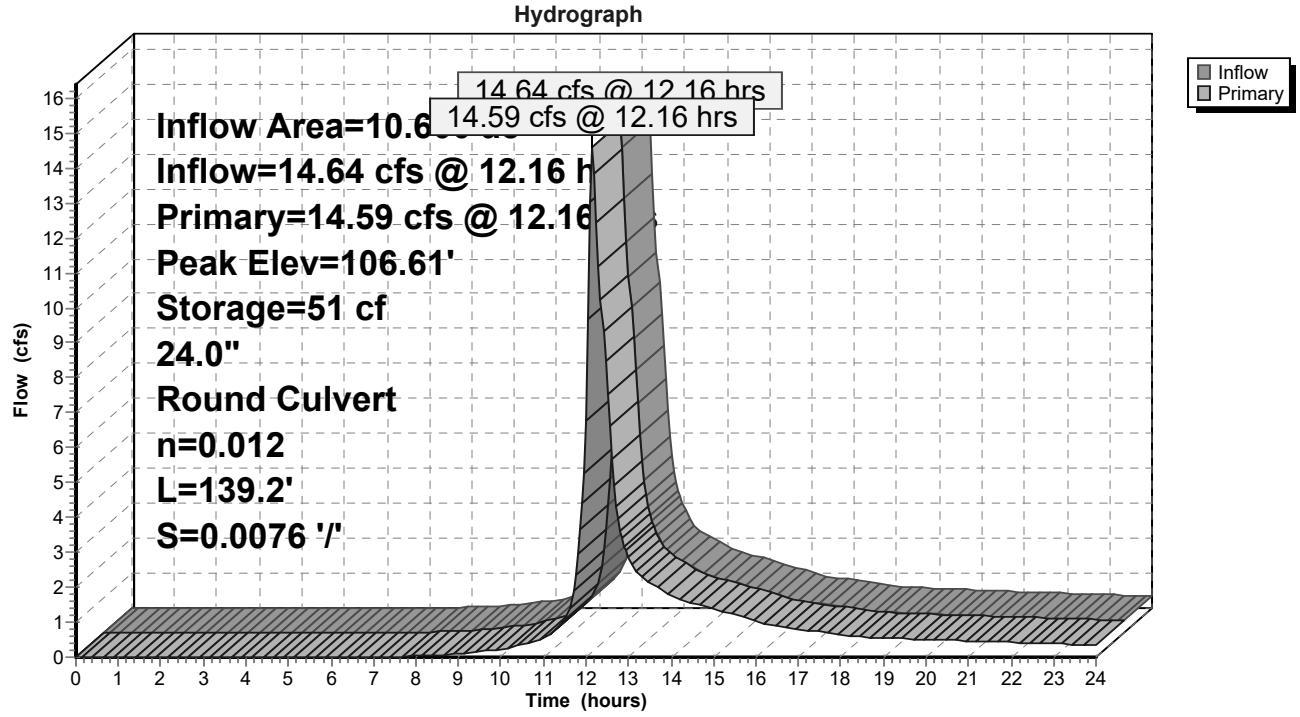
Plug-Flow detention time= 0.1 min calculated for 1.613 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (858.7 - 858.6)

Volume	Invert	Avail.Storage	Storage Description
#1	102.56'	79 cf	**4.00'D x 6.28'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	102.56'	**24.0" Round 24" HDPE N-12** L= 139.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 102.56' / 101.50' S= 0.0076 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=2.60 cfs @ 12.16 hrs HW=105.10' TW=105.07' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Outlet Controls 2.60 cfs @ 0.84 fps)

Pond D100300CP: DMH 1003+00



Summary for Pond D1869P: DMH 18+69

Inflow Area = 0.681 ac, 54.92% Impervious, Inflow Depth > 3.72" for 25yr-24hr event
Inflow = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af
Outflow = 2.55 cfs @ 12.12 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.1 min
Primary = 2.55 cfs @ 12.12 hrs, Volume= 0.211 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 127.10' @ 12.11 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 131.77' Surf.Area= 13 sf Storage= 71 cf

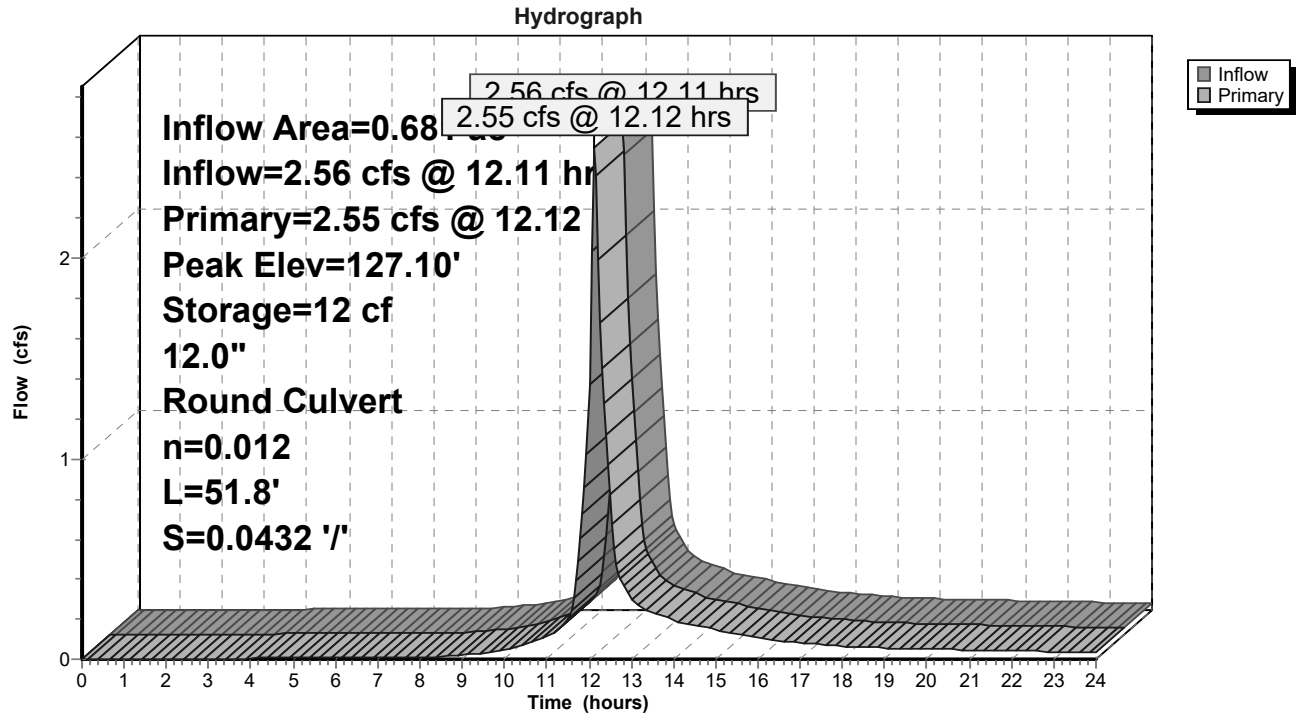
Plug-Flow detention time= 0.2 min calculated for 0.211 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (820.8 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	126.15'	71 cf	**4.00'D x 5.62'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	126.15'	**12.0" Round 12" HDPE N-12** L= 51.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 126.15' / 123.91' S= 0.0432 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.49 cfs @ 12.12 hrs HW=127.08' TW=123.86' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Inlet Controls 2.49 cfs @ 3.28 fps)

Pond D1869P: DMH 18+69



Summary for Pond D2168RP: DMH 21+68R

[42] Hint: Gap in defined storage above volume #1 at 108.51'
[93] Warning: Storage range exceeded by 0.73'
[58] Hint: Peaked 1.22' above defined flood level
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=10)
[80] Warning: Exceeded Pond 1000P by 3.06' @ 12.20 hrs (6.33 cfs 0.050 af)

Inflow Area = 1.646 ac, 25.38% Impervious, Inflow Depth > 1.27" for 25yr-24hr event
Inflow = 2.25 cfs @ 12.31 hrs, Volume= 0.174 af
Outflow = 1.97 cfs @ 12.31 hrs, Volume= 0.174 af, Atten= 13%, Lag= 0.1 min
Primary = 1.85 cfs @ 12.44 hrs, Volume= 0.163 af
Secondary = 1.10 cfs @ 12.33 hrs, Volume= 0.011 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 109.73' @ 12.25 hrs Surf.Area= 53 sf Storage= 65 cf
Flood Elev= 108.51' Surf.Area= 53 sf Storage= 45 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.3 min (905.9 - 905.6)

Volume	Invert	Avail.Storage	Storage Description
#1	104.91'	45 cf	**4.00'D x 3.60'H 4' Structure**
#2	108.51'	20 cf	**Overflow Storage (Prismatic)**Listed below (Recalc)
		65 cf	Total Available Storage

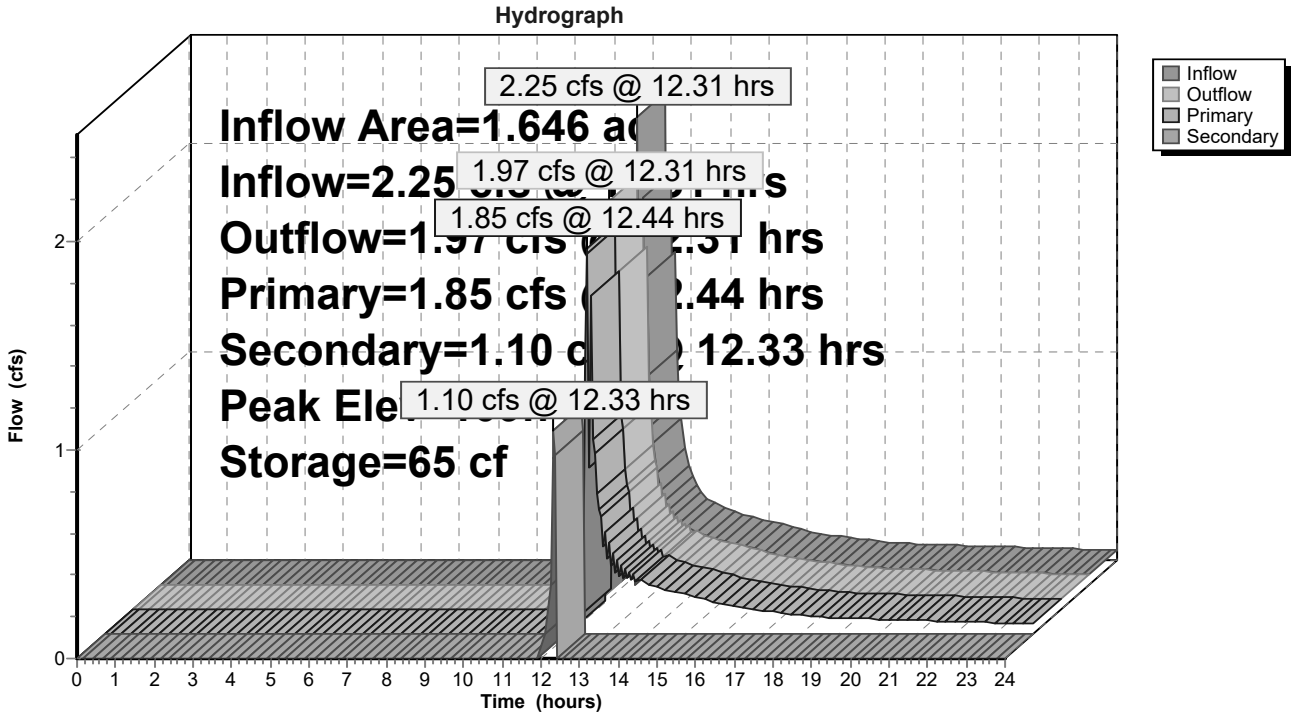
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.51	40	0	0
109.00	40	20	20

Device	Routing	Invert	Outlet Devices
#1	Primary	104.91'	**12.0" Round 12" HDPE N-12** L= 72.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 104.91' / 103.68' S= 0.0170 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Secondary	108.51'	**4.0' long x 4.0' 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=2.15 cfs @ 12.44 hrs HW=107.81' TW=107.41' (Dynamic Tailwater)
└**1=12" HDPE N-12** (Outlet Controls 2.15 cfs @ 2.74 fps)

Secondary OutFlow Max=6.03 cfs @ 12.33 hrs HW=109.25' TW=108.82' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 6.03 cfs @ 2.04 fps)

Pond D2168RP: DMH 21+68R



Summary for Pond D2195P: DMH 21+95R

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth > 3.74" for 25yr-24hr event
Inflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af
Outflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af, Atten= 0%, Lag= 0.0 min
Primary = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 117.33' @ 12.11 hrs Surf.Area= 13 sf Storage= 18 cf
Flood Elev= 121.80' Surf.Area= 13 sf Storage= 74 cf

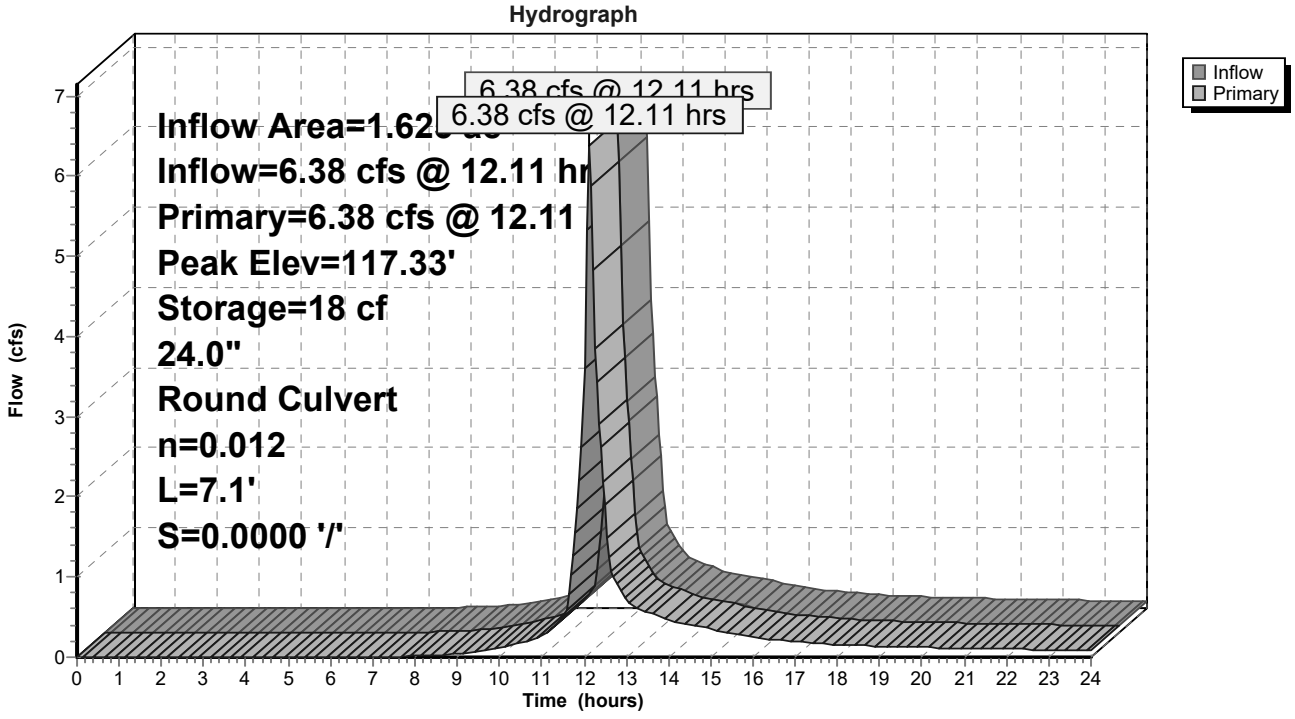
Plug-Flow detention time= 0.2 min calculated for 0.506 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (824.5 - 824.4)

Volume	Invert	Avail.Storage	Storage Description
#1	115.92'	74 cf	**4.00'D x 5.88'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	115.92'	**24.0" Round 24 " HDPE N-12** L= 7.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 115.92' / 115.92' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=6.26 cfs @ 12.11 hrs HW=117.31' TW=116.61' (Dynamic Tailwater)
↑—**1=24 " HDPE N-12** (Barrel Controls 6.26 cfs @ 3.77 fps)

Pond D2195P: DMH 21+95R



Summary for Pond D2215P: DMH 22+15R

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=12)

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth = 2.54" for 25yr-24hr event
Inflow = 5.64 cfs @ 12.16 hrs, Volume= 0.344 af
Outflow = 5.61 cfs @ 12.16 hrs, Volume= 0.344 af, Atten= 1%, Lag= 0.0 min
Primary = 5.61 cfs @ 12.16 hrs, Volume= 0.344 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 111.78' @ 12.22 hrs Surf.Area= 13 sf Storage= 49 cf
Flood Elev= 120.86' Surf.Area= 13 sf Storage= 156 cf

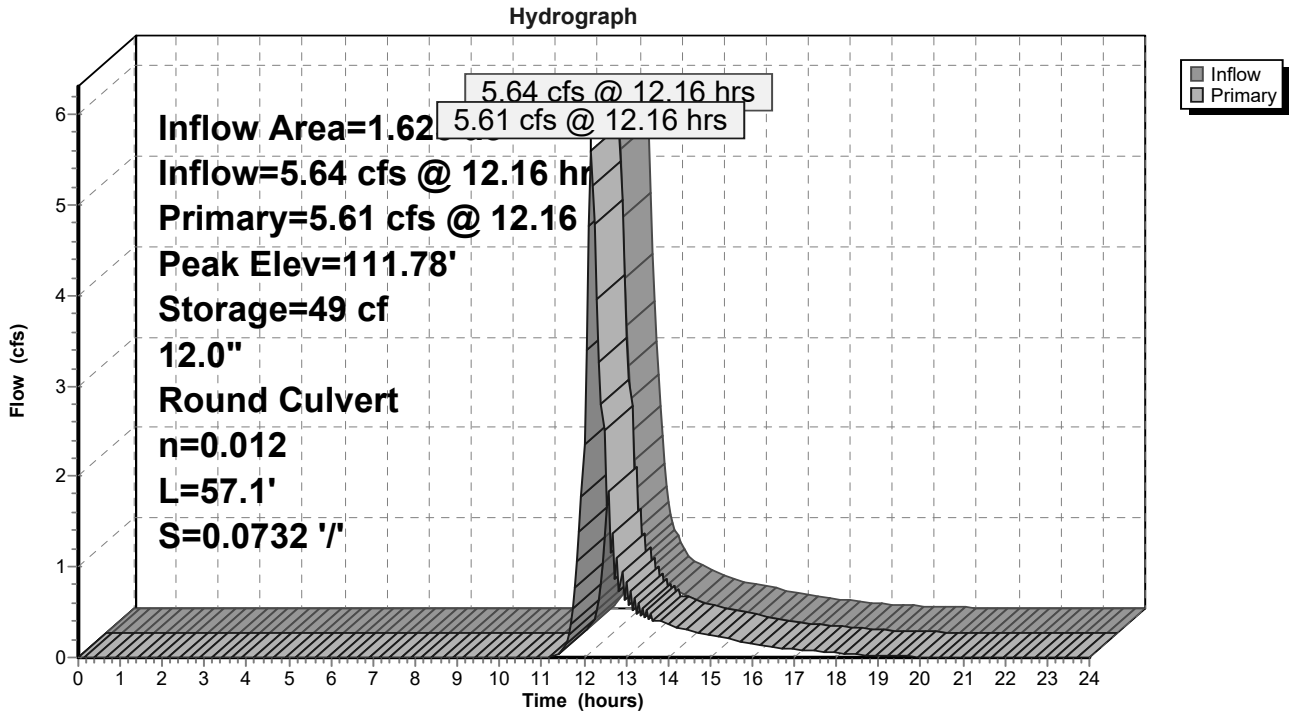
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.1 min (780.4 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	107.86'	156 cf	**4.00'D x 12.42'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	107.86'	**12.0" Round 12" HDPE N-12** L= 57.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 107.86' / 103.68' S= 0.0732 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=3.81 cfs @ 12.16 hrs HW=110.75' TW=109.65' (Dynamic Tailwater)
└**1=12" HDPE N-12** (Outlet Controls 3.81 cfs @ 4.85 fps)

Pond D2215P: DMH 22+15R



Summary for Pond D2241RP: DMH 22+41R

[58] Hint: Peaked 0.11' above defined flood level
[80] Warning: Exceeded Pond D2168RP by 3.24' @ 12.15 hrs (6.11 cfs 0.057 af)
[80] Warning: Exceeded Pond D2168RP by 3.24' @ 12.15 hrs (12.70 cfs 0.132 af)

Inflow Area =	3.271 ac,	40.38% Impervious,	Inflow Depth >	1.90" for 25yr-24hr event
Inflow =	6.17 cfs @	12.16 hrs, Volume=	0.518 af	
Outflow =	6.06 cfs @	12.18 hrs, Volume=	0.518 af,	Atten= 2%, Lag= 1.4 min
Primary =	5.87 cfs @	12.17 hrs, Volume=	0.516 af	
Secondary =	0.33 cfs @	12.20 hrs, Volume=	0.002 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 109.73' @ 12.20 hrs Surf.Area= 53 sf Storage= 80 cf
Flood Elev= 109.62' Surf.Area= 53 sf Storage= 75 cf

Plug-Flow detention time= 0.2 min calculated for 0.518 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (822.6 - 822.5)

Volume	Invert	Avail.Storage	Storage Description
#1	103.62'	75 cf	**4.00'D x 6.00'H 4' Structure**
#2	109.62'	15 cf	**Overflow Storage (Prismatic)**Listed below (Recalc)
		91 cf	Total Available Storage

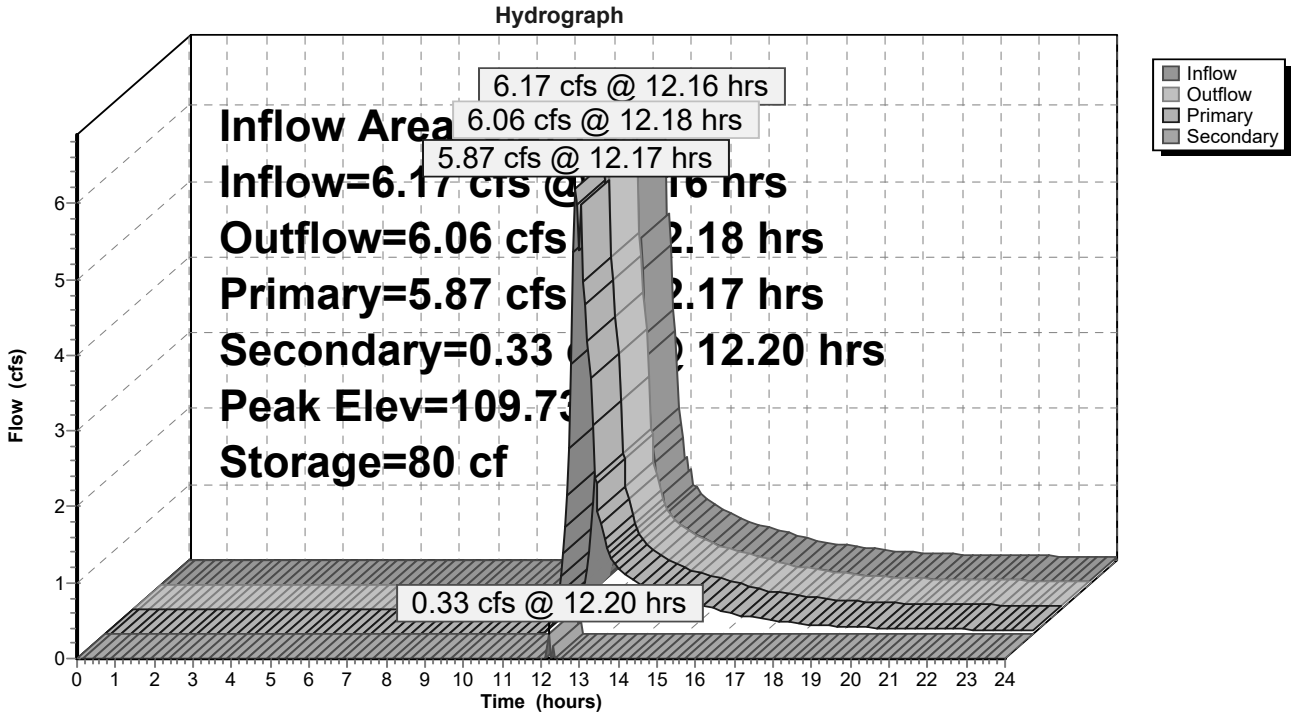
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
109.62	40	0	0
110.00	40	15	15

Device	Routing	Invert	Outlet Devices
#1	Primary	103.62'	**12.0" Round 12" HDPE N-12** L= 187.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 103.62' / 100.56' S= 0.0163 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Secondary	109.62'	**4.0' long x 4.0' 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=5.62 cfs @ 12.17 hrs HW=109.66' TW=104.48' (Dynamic Tailwater)
1=12" HDPE N-12 (Outlet Controls 5.62 cfs @ 7.16 fps)

Secondary OutFlow Max=0.33 cfs @ 12.20 hrs HW=109.73' TW=104.50' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 0.33 cfs @ 0.77 fps)

Pond D2241RP: DMH 22+41R



Summary for Pond D2428RP: DMH 24+28R

[58] Hint: Peaked 0.34' above defined flood level
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=29)

Inflow Area = 3.271 ac, 40.38% Impervious, Inflow Depth > 1.90" for 25yr-24hr event
Inflow = 6.06 cfs @ 12.18 hrs, Volume= 0.518 af
Outflow = 6.02 cfs @ 12.18 hrs, Volume= 0.518 af, Atten= 1%, Lag= 0.0 min
Primary = 4.88 cfs @ 12.11 hrs, Volume= 0.488 af
Secondary = 1.96 cfs @ 12.19 hrs, Volume= 0.030 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 104.50' @ 12.19 hrs Surf.Area= 53 sf Storage= 60 cf
Flood Elev= 104.16' Surf.Area= 53 sf Storage= 46 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.2 min (822.8 - 822.6)

Volume	Invert	Avail.Storage	Storage Description
#1	100.46'	46 cf	**4.00'D x 3.70'H 4' Structure**
#2	104.16'	14 cf	**Overflow Storage (Prismatic)**Listed below (Recalc)
		60 cf	Total Available Storage

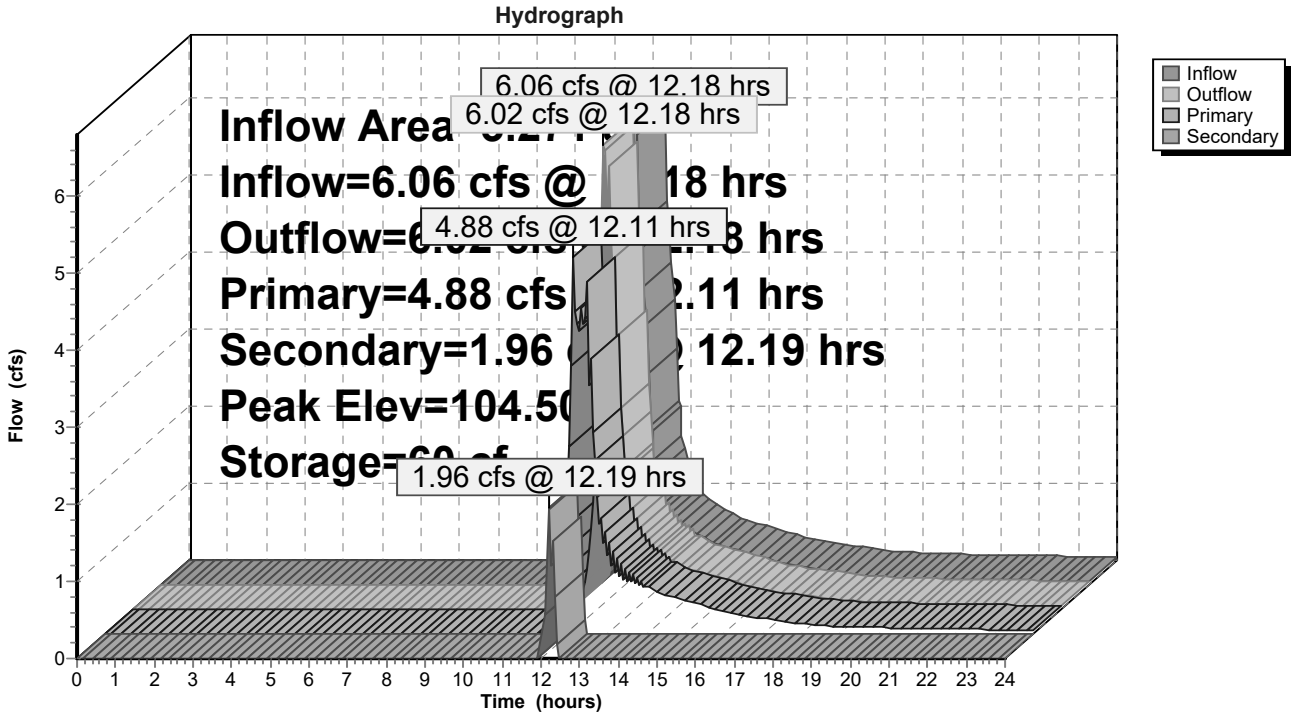
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
104.16	40	0	0
104.50	40	14	14

Device	Routing	Invert	Outlet Devices
#1	Primary	100.46'	**12.0" Round 12" HDPE N-12** L= 53.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.46' / 99.86' S= 0.0112 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Secondary	104.16'	**4.0' long x 4.0' breadth Overflow** 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=3.59 cfs @ 12.11 hrs HW=104.15' TW=103.20' (Dynamic Tailwater)
1=12" HDPE N-12 (Outlet Controls 3.59 cfs @ 4.57 fps)

Secondary OutFlow Max=1.87 cfs @ 12.19 hrs HW=104.49' TW=103.28' (Dynamic Tailwater)
2=Overflow (Weir Controls 1.87 cfs @ 1.42 fps)

Pond D2428RP: DMH 24+28R



Summary for Pond D2478RP: DMH 24+78R

[58] Hint: Peaked 0.35' above defined flood level
[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=36)
[80] Warning: Exceeded Pond D2428RP by 0.14' @ 12.05 hrs (1.36 cfs 0.006 af)

Inflow Area = 3.917 ac, 44.36% Impervious, Inflow Depth > 2.29" for 25yr-24hr event
Inflow = 8.62 cfs @ 12.16 hrs, Volume= 0.749 af
Outflow = 8.65 cfs @ 12.16 hrs, Volume= 0.748 af, Atten= 0%, Lag= 0.0 min
Primary = 6.60 cfs @ 12.16 hrs, Volume= 0.723 af
Secondary = 2.05 cfs @ 12.16 hrs, Volume= 0.026 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 103.31' @ 12.16 hrs Surf.Area= 53 sf Storage= 54 cf
Flood Elev= 102.96' Surf.Area= 53 sf Storage= 40 cf

Plug-Flow detention time= 0.4 min calculated for 0.747 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (819.0 - 818.9)

Volume	Invert	Avail.Storage	Storage Description
#1	99.76'	40 cf	**4.00'D x 3.20'H 4' Structure**
#2	102.96'	22 cf	**Overflow Storage (Prismatic)**Listed below (Recalc)
		62 cf	Total Available Storage

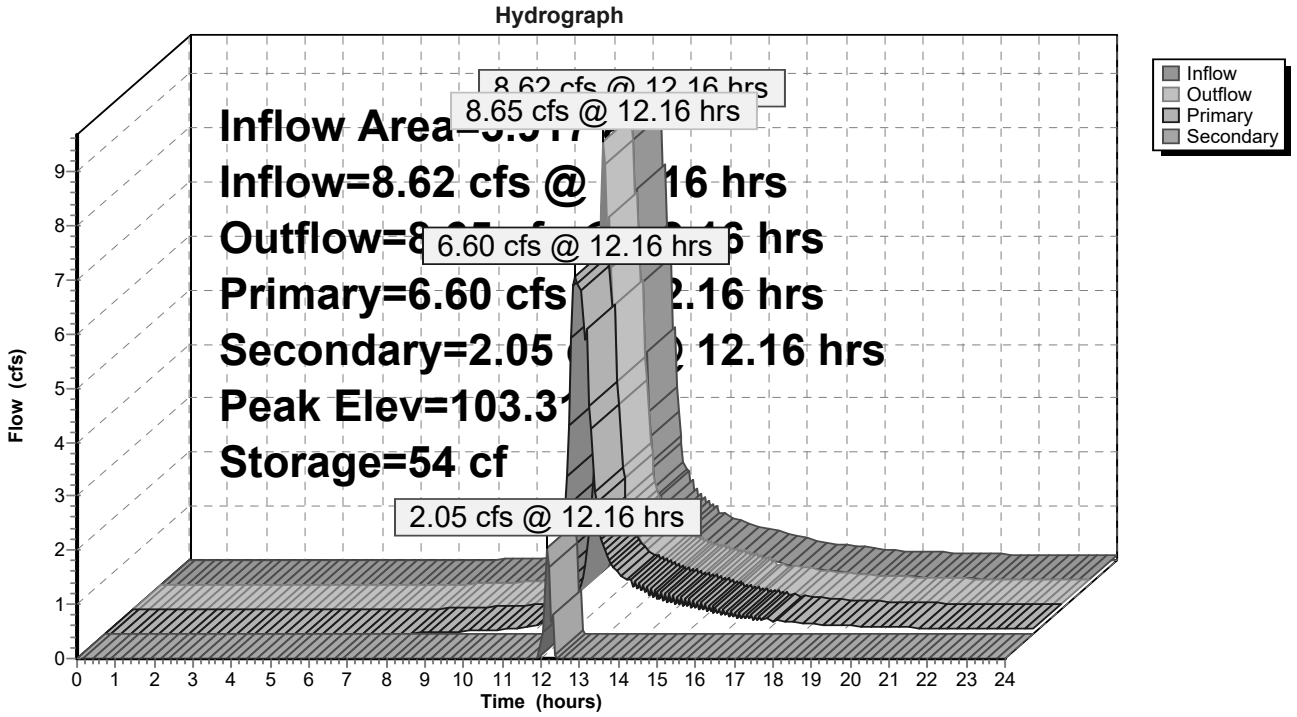
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.96	40	0	0
103.50	40	22	22

Device	Routing	Invert	Outlet Devices
#1	Primary	99.76'	**12.0" Round 12" HDPE N-12** L= 16.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 99.76' / 99.59' S= 0.0104 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Secondary	102.96'	**4.0' long x 4.0' breadth Overflow** 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) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=6.59 cfs @ 12.16 hrs HW=103.29' TW=99.10' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 6.59 cfs @ 8.39 fps)

Secondary OutFlow Max=1.92 cfs @ 12.16 hrs HW=103.29' TW=99.10' (Dynamic Tailwater)
2=Overflow (Weir Controls 1.92 cfs @ 1.44 fps)

Pond D2478RP: DMH 24+78R



Summary for Pond Y01P: Yard Drain

[42] Hint: Gap in defined storage above volume #1 at 108.50'
[58] Hint: Peaked 0.04' above defined flood level

Inflow Area = 5.898 ac, 19.52% Impervious, Inflow Depth > 1.03" for 25yr-24hr event
Inflow = 3.08 cfs @ 12.47 hrs, Volume= 0.504 af
Outflow = 3.08 cfs @ 12.48 hrs, Volume= 0.504 af, Atten= 0%, Lag= 0.3 min
Primary = 2.50 cfs @ 12.48 hrs, Volume= 0.492 af
Secondary = 0.58 cfs @ 12.48 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 111.47' @ 12.48 hrs Surf.Area= 18 sf Storage= 8 cf
Flood Elev= 111.43' Surf.Area= 7 sf Storage= 8 cf

Plug-Flow detention time= 0.3 min calculated for 0.503 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (922.7 - 922.6)

Volume	Invert	Avail.Storage	Storage Description
#1	106.00'	8 cf	**2.00'D x 2.50'H Vertical Cone/Cylinder**
#2	111.43'	30 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		38 cf	Total Available Storage

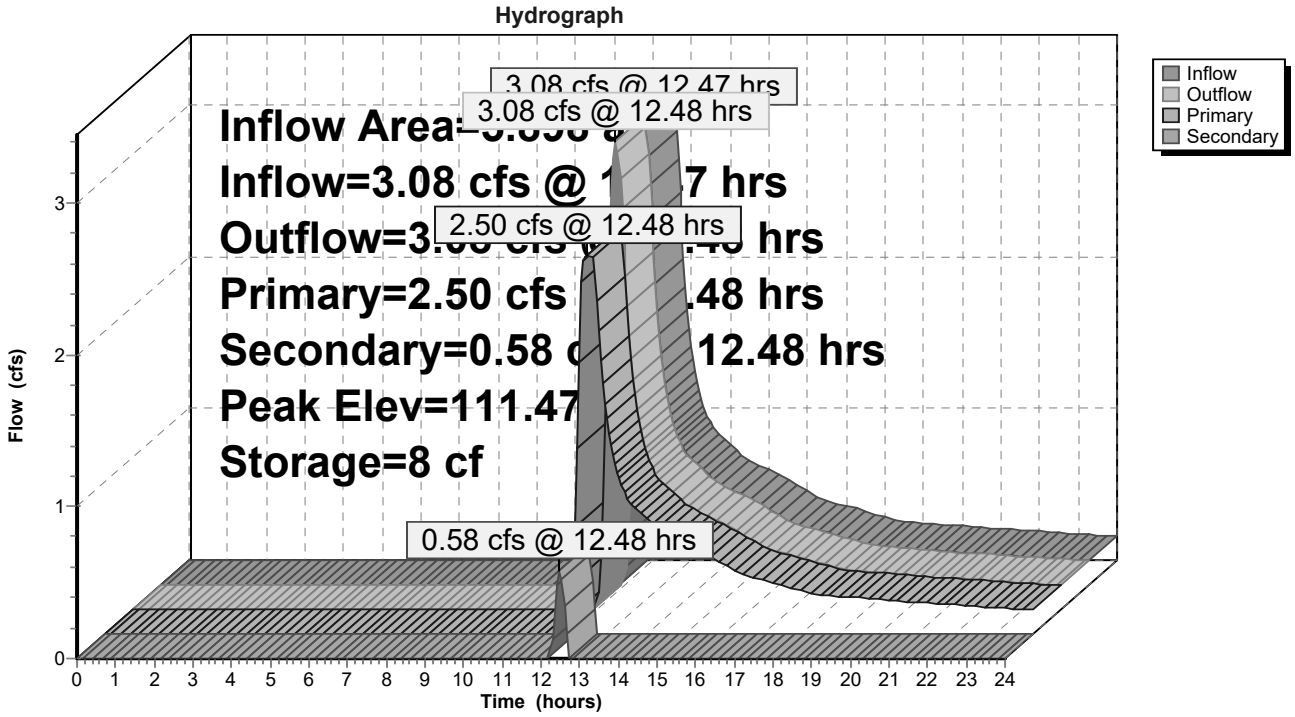
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
111.43	4	4.0	0	0	4
111.75	250	100.0	30	30	799

Device	Routing	Invert	Outlet Devices
#1	Primary	108.93'	**8.0" Round 8" HDPE N-12** L= 71.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 108.93' / 102.07' S= 0.0965 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Secondary	111.43'	**25.0' long x 15.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.50 cfs @ 12.48 hrs HW=111.47' TW=106.78' (Dynamic Tailwater)
1=8" HDPE N-12 (Inlet Controls 2.50 cfs @ 7.16 fps)

Secondary OutFlow Max=0.57 cfs @ 12.48 hrs HW=111.47' TW=103.53' (Dynamic Tailwater)
2=Overflow (Weir Controls 0.57 cfs @ 0.55 fps)

Pond Y01P: Yard Drain



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>0.42"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=4.09 cfs 0.961 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=98,319 sf 2.65% Impervious Runoff Depth>0.67"
Flow Length=507' Tc=17.7 min CN=62 Runoff=0.97 cfs 0.126 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.00 cfs 0.000 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=192,385 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=544' Tc=21.8 min CN=32 Runoff=0.00 cfs 0.000 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth=0.00"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.00 cfs 0.000 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>1.66"
Tc=6.0 min CN=79 Runoff=0.03 cfs 0.003 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.04"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.00 cfs 0.001 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>0.42"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.04 cfs 0.006 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>0.39"
Flow Length=290' Tc=12.5 min CN=55 Runoff=0.21 cfs 0.037 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>0.72"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.08 cfs 0.008 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.01"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=0.01 cfs 0.003 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>0.15"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.00 cfs 0.002 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>1.52"
Flow Length=428' Tc=10.2 min CN=77 Runoff=1.12 cfs 0.094 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>1.14"
Flow Length=380' Tc=15.1 min CN=71 Runoff=0.71 cfs 0.072 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>2.04"
Flow Length=283' Tc=9.2 min CN=84 Runoff=0.54 cfs 0.043 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>1.08"
Flow Length=207' Tc=7.2 min CN=70 Runoff=0.48 cfs 0.039 af

Subcatchment 900S: Rain Garden Area Runoff Area=113,960 sf 0.00% Impervious Runoff Depth>0.20"
Flow Length=184' Tc=11.1 min CN=49 Runoff=0.14 cfs 0.043 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>0.12"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=0.03 cfs 0.017 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.01"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>1.59"
Flow Length=172' Tc=9.7 min CN=78 Runoff=0.54 cfs 0.044 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>0.81"
Flow Length=278' Tc=10.4 min CN=65 Runoff=0.42 cfs 0.042 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.22 cfs 0.018 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>1.02"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.17 cfs 0.016 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>1.08"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.20 cfs 0.016 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>0.97"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.25 cfs 0.021 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>1.08"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.24 cfs 0.020 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>1.08"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.24 cfs 0.018 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>1.52"
Tc=6.0 min CN=77 Runoff=0.07 cfs 0.005 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>1.26"
Flow Length=297' Tc=6.0 min CN=73 Runoff=0.44 cfs 0.033 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>1.32"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.25 cfs 0.019 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>1.32"
Flow Length=384' Tc=9.4 min CN=74 Runoff=0.75 cfs 0.063 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=3,371 sf 100.00% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.27 cfs 0.022 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>1.32"
Flow Length=322' Tc=9.0 min CN=74 Runoff=0.59 cfs 0.049 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=3,173 sf 100.00% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.25 cfs 0.021 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>0.63"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.10 cfs 0.011 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>0.54"
Flow Length=548' Tc=10.4 min CN=59 Runoff=0.47 cfs 0.059 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=2,995 sf 100.00% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.24 cfs 0.019 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>0.06"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=0.05 cfs 0.032 af

Reach 15R: Overland Reach Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.00 cfs 0.000 af

Reach 100R: Final Reach #100 Inflow=4.09 cfs 0.961 af
Outflow=4.09 cfs 0.961 af

Reach 200R: Final Reach #200 Inflow=0.97 cfs 0.126 af
Outflow=0.97 cfs 0.126 af

Reach 300R: Final Reach #300 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 400R: Final Reach #400 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 500R: Final Reach #500 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Pond 900P: Detention Pond #900 Peak Elev=98.78' Storage=20,527 cf Inflow=7.18 cfs 0.794 af
Discarded=0.44 cfs 0.397 af Primary=0.00 cfs 0.000 af Outflow=0.44 cfs 0.397 af

Pond 1000P: Sediment Forebay Peak Elev=105.92' Storage=1 cf Inflow=0.03 cfs 0.017 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=0.03 cfs 0.017 af

Pond 1100P: StormTech Peak Elev=115.95' Storage=1,216 cf Inflow=2.01 cfs 0.165 af
Discarded=0.13 cfs 0.099 af Primary=1.12 cfs 0.065 af Outflow=1.25 cfs 0.164 af

Pond 2486RP: DMH 24+86R Peak Elev=105.75' Storage=6 cf Inflow=0.97 cfs 0.084 af
12.0" Round Culvert n=0.012 L=92.8' S=0.0270 '/' Outflow=0.97 cfs 0.084 af

Pond 2489RP: DMH 24+89R Peak Elev=103.24' Storage=6 cf Inflow=0.97 cfs 0.084 af
Primary=0.97 cfs 0.084 af Secondary=0.00 cfs 0.000 af Outflow=0.97 cfs 0.084 af

Pond 2625RP: DMH 26+25R Peak Elev=100.58' Storage=6 cf Inflow=0.82 cfs 0.069 af
12.0" Round Culvert n=0.012 L=18.6' S=0.0339 '/' Outflow=0.82 cfs 0.069 af

Pond 2723RP: DMH 27+23R Peak Elev=101.96' Storage=6 cf Inflow=0.82 cfs 0.069 af
12.0" Round Culvert n=0.012 L=99.0' S=0.0139 '/' Outflow=0.82 cfs 0.069 af

Pond C100P: CB #100 Peak Elev=102.48' Storage=6 cf Inflow=0.06 cfs 0.034 af
Primary=0.05 cfs 0.034 af Secondary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.034 af

Pond C1295GP: CB 12+95G Peak Elev=135.85' Storage=0 cf Inflow=0.00 cfs 0.000 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.00 cfs 0.000 af

Pond C1295LP: CB 12+95L Peak Elev=135.74' Storage=6 cf Inflow=0.95 cfs 0.086 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=0.95 cfs 0.086 af

Pond C1295RP: CB 12+95R Peak Elev=136.10' Storage=4 cf Inflow=0.42 cfs 0.042 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=0.42 cfs 0.042 af

Pond C148GP: CB 1+48G Peak Elev=125.61' Storage=0 cf Inflow=0.00 cfs 0.001 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.00 cfs 0.001 af

Pond C148RP: CB 1+48R Peak Elev=125.37' Storage=1 cf Inflow=0.04 cfs 0.007 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.04 cfs 0.007 af

Pond C1643LP: CB 16+43L Peak Elev=137.07' Storage=3 cf Inflow=0.22 cfs 0.018 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.22 cfs 0.018 af

Pond C1643RP: CB 16+43R Peak Elev=135.65' Storage=4 cf Inflow=0.34 cfs 0.034 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.34 cfs 0.034 af

Pond C1785LP: CB 17+85L Peak Elev=130.63' Storage=3 cf Inflow=0.20 cfs 0.016 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.20 cfs 0.016 af

Pond C1785RP: CB 17+85R Peak Elev=129.28' Storage=6 cf Inflow=0.79 cfs 0.070 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=0.79 cfs 0.070 af

Pond C1928LP: CB 19+28L Peak Elev=122.78' Storage=7 cf Inflow=1.26 cfs 0.108 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=1.26 cfs 0.108 af

Pond C1928RP: CB 19+28R Peak Elev=124.50' Storage=3 cf Inflow=0.24 cfs 0.018 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.24 cfs 0.018 af

Pond C1979RP: CB 19+79R Peak Elev=120.93' Storage=8 cf Inflow=1.33 cfs 0.113 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=1.33 cfs 0.113 af

Pond C2173LP: CB 21+73L Peak Elev=117.83' Storage=5 cf Inflow=0.44 cfs 0.033 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=0.43 cfs 0.033 af

Pond C2173RP: CB 21+73R Peak Elev=117.69' Storage=10 cf Inflow=2.01 cfs 0.165 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=2.01 cfs 0.165 af

Pond C2460LP: CB 24+60L Peak Elev=112.97' Storage=6 cf Inflow=0.75 cfs 0.063 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=0.75 cfs 0.063 af

Pond C2460RP: CB 24+60R Peak Elev=112.64' Storage=6 cf Inflow=0.97 cfs 0.084 af
12.0" Round Culvert n=0.012 L=55.3' S=0.0631 '/' Outflow=0.97 cfs 0.084 af

Pond C2610LP: CB 26+10L Peak Elev=108.89' Storage=6 cf Inflow=0.59 cfs 0.049 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=0.59 cfs 0.049 af

Pond C2610RP: CB 26+10R Peak Elev=108.69' Storage=6 cf Inflow=0.82 cfs 0.069 af
12.0" Round Culvert n=0.012 L=124.2' S=0.0534 '/' Outflow=0.82 cfs 0.069 af

Pond C3018GP: CB 30+18G Peak Elev=102.48' Storage=15 cf Inflow=4.01 cfs 0.436 af
Primary=4.01 cfs 0.436 af Secondary=0.00 cfs 0.000 af Outflow=4.01 cfs 0.436 af

Pond C3020LP: CB 30+20L Peak Elev=102.24' Storage=14 cf Inflow=4.47 cfs 0.496 af
Primary=4.47 cfs 0.496 af Secondary=0.00 cfs 0.000 af Outflow=4.47 cfs 0.496 af

Pond C3020RP: CB 30+20R Peak Elev=101.89' Storage=12 cf Inflow=4.64 cfs 0.515 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=4.64 cfs 0.515 af

Pond C303GP: CB 3+03G Peak Elev=125.12' Storage=3 cf Inflow=0.21 cfs 0.037 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=0.21 cfs 0.037 af

Pond C304RP: CB 3+04R Peak Elev=123.81' Storage=3 cf Inflow=0.31 cfs 0.052 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=0.31 cfs 0.052 af

Pond C390GP: CB 3+90G Peak Elev=123.19' Storage=1 cf Inflow=0.01 cfs 0.003 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=0.01 cfs 0.003 af

Pond C402GP: CB 4+02G Peak Elev=122.88' Storage=5 cf Inflow=0.31 cfs 0.057 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=0.31 cfs 0.057 af

Pond C419LP: CB 4+19L Peak Elev=117.22' Storage=11 cf Inflow=3.91 cfs 0.391 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=3.91 cfs 0.391 af

Pond C419RP: CB 4+19R Peak Elev=122.80' Storage=6 cf Inflow=1.01 cfs 0.129 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=1.01 cfs 0.129 af

Pond C857LP: CB 8+57L Peak Elev=132.72' Storage=9 cf Inflow=1.94 cfs 0.168 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=1.94 cfs 0.168 af

Pond C857RP: CB 8+57R Peak Elev=132.80' Storage=6 cf Inflow=0.48 cfs 0.039 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=0.48 cfs 0.039 af

Pond D100125CP: DMH 1001+25C Peak Elev=107.04' Storage=11 cf Inflow=3.91 cfs 0.391 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=3.91 cfs 0.391 af

Pond D100300CP: DMH 1003+00 Peak Elev=103.44' Storage=11 cf Inflow=3.91 cfs 0.391 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=3.90 cfs 0.391 af

Pond D1869P: DMH 18+69 Peak Elev=126.60' Storage=6 cf Inflow=0.79 cfs 0.070 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=0.79 cfs 0.070 af

Pond D2168RP: DMH 21+68R Peak Elev=104.99' Storage=1 cf Inflow=0.03 cfs 0.017 af
Primary=0.03 cfs 0.017 af Secondary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.017 af

Pond D2195P: DMH 21+95R Peak Elev=116.68' Storage=10 cf Inflow=2.01 cfs 0.165 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=2.01 cfs 0.165 af

Pond D2215P: DMH 22+15R Peak Elev=108.41' Storage=7 cf Inflow=1.12 cfs 0.065 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0732 '/' Outflow=1.12 cfs 0.065 af

Pond D2241RP: DMH 22+41R Peak Elev=104.17' Storage=7 cf Inflow=1.12 cfs 0.082 af
Primary=1.12 cfs 0.082 af Secondary=0.00 cfs 0.000 af Outflow=1.12 cfs 0.082 af

Pond D2428RP: DMH 24+28R Peak Elev=101.07' Storage=8 cf Inflow=1.12 cfs 0.082 af
Primary=1.12 cfs 0.082 af Secondary=0.00 cfs 0.000 af Outflow=1.12 cfs 0.082 af

Pond D2478RP: DMH 24+78R Peak Elev=100.59' Storage=10 cf Inflow=1.85 cfs 0.166 af
Primary=1.85 cfs 0.166 af Secondary=0.00 cfs 0.000 af Outflow=1.85 cfs 0.166 af

Pond Y01P: Yard Drain Peak Elev=109.06' Storage=8 cf Inflow=0.05 cfs 0.032 af
Primary=0.06 cfs 0.032 af Secondary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.032 af

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>1.27"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=17.48 cfs 2.935 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=98,319 sf 2.65% Impervious Runoff Depth>1.72"
Flow Length=507' Tc=17.7 min CN=62 Runoff=3.03 cfs 0.324 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.06"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.01 cfs 0.006 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=192,385 sf 0.00% Impervious Runoff Depth>0.06"
Flow Length=544' Tc=21.8 min CN=32 Runoff=0.04 cfs 0.023 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.02"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.01 cfs 0.007 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.06"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.07 cfs 0.043 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>3.20"
Tc=6.0 min CN=79 Runoff=0.07 cfs 0.005 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.39"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.04 cfs 0.010 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>1.28"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.19 cfs 0.017 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>1.21"
Flow Length=290' Tc=12.5 min CN=55 Runoff=1.12 cfs 0.117 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>1.80"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.24 cfs 0.021 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.26"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=0.27 cfs 0.117 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>0.71"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.08 cfs 0.010 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>3.01"
Flow Length=428' Tc=10.2 min CN=77 Runoff=2.25 cfs 0.186 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>2.46"
Flow Length=380' Tc=15.1 min CN=71 Runoff=1.64 cfs 0.156 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>3.69"
Flow Length=283' Tc=9.2 min CN=84 Runoff=0.96 cfs 0.078 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>2.38"
Flow Length=207' Tc=7.2 min CN=70 Runoff=1.13 cfs 0.086 af

Subcatchment 900S: Rain Garden Area Runoff Area=113,960 sf 0.00% Impervious Runoff Depth>0.82"
Flow Length=184' Tc=11.1 min CN=49 Runoff=1.42 cfs 0.180 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>0.65"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=0.51 cfs 0.089 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.30"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.01 cfs 0.002 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>3.10"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.06 cfs 0.086 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>1.96"
Flow Length=278' Tc=10.4 min CN=65 Runoff=1.16 cfs 0.100 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>2.29"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.40 cfs 0.036 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>2.38"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.46 cfs 0.034 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>2.21"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.61 cfs 0.047 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>2.38"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.57 cfs 0.043 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>2.38"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.55 cfs 0.040 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>3.01"
Tc=6.0 min CN=77 Runoff=0.14 cfs 0.010 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>2.64"
Flow Length=297' Tc=6.0 min CN=73 Runoff=0.95 cfs 0.069 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>2.73"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.54 cfs 0.039 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>2.73"
Flow Length=384' Tc=9.4 min CN=74 Runoff=1.60 cfs 0.129 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=3,371 sf 100.00% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.40 cfs 0.034 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>2.73"
Flow Length=322' Tc=9.0 min CN=74 Runoff=1.26 cfs 0.101 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=3,173 sf 100.00% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.38 cfs 0.032 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>1.65"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.33 cfs 0.030 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>1.50"
Flow Length=548' Tc=10.4 min CN=59 Runoff=1.81 cfs 0.165 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=2,995 sf 100.00% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.36 cfs 0.030 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>0.49"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=1.04 cfs 0.239 af

Reach 15R: Overland Reach Avg. Flow Depth=0.04' Max Vel=0.47 fps Inflow=0.07 cfs 0.043 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.06 cfs 0.041 af

Reach 100R: Final Reach #100 Inflow=17.48 cfs 2.935 af
Outflow=17.48 cfs 2.935 af

Reach 200R: Final Reach #200 Inflow=3.03 cfs 0.324 af
Outflow=3.03 cfs 0.324 af

Reach 300R: Final Reach #300 Inflow=0.36 cfs 0.283 af
Outflow=0.36 cfs 0.283 af

Reach 400R: Final Reach #400 Inflow=0.04 cfs 0.023 af
Outflow=0.04 cfs 0.023 af

Reach 500R: Final Reach #500 Inflow=0.07 cfs 0.048 af
Outflow=0.07 cfs 0.048 af

Pond 900P: Detention Pond #900 Peak Elev=99.99' Storage=60,010 cf Inflow=20.24 cfs 2.225 af
Discarded=0.83 cfs 0.786 af Primary=0.35 cfs 0.278 af Outflow=1.18 cfs 1.064 af

Pond 1000P: Sediment Forebay Peak Elev=106.20' Storage=8 cf Inflow=0.51 cfs 0.089 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=0.51 cfs 0.089 af

Pond 1100P: StormTech Peak Elev=116.42' Storage=1,896 cf Inflow=4.40 cfs 0.346 af
Discarded=0.13 cfs 0.139 af Primary=3.63 cfs 0.207 af Outflow=3.76 cfs 0.346 af

Pond 2486RP: DMH 24+86R Peak Elev=106.01' Storage=10 cf Inflow=1.94 cfs 0.163 af
12.0" Round Culvert n=0.012 L=92.8' S=0.0270 '/' Outflow=1.94 cfs 0.163 af

Pond 2489RP: DMH 24+89R Peak Elev=103.50' Storage=10 cf Inflow=1.94 cfs 0.163 af
Primary=1.94 cfs 0.163 af Secondary=0.00 cfs 0.000 af Outflow=1.94 cfs 0.163 af

Pond 2625RP: DMH 26+25R Peak Elev=100.80' Storage=9 cf Inflow=1.61 cfs 0.133 af
12.0" Round Culvert n=0.012 L=18.6' S=0.0339 '/' Outflow=1.61 cfs 0.133 af

Pond 2723RP: DMH 27+23R Peak Elev=102.18' Storage=9 cf Inflow=1.61 cfs 0.133 af
12.0" Round Culvert n=0.012 L=99.0' S=0.0139 '/' Outflow=1.61 cfs 0.133 af

Pond C100P: CB #100 Peak Elev=103.53' Storage=20 cf Inflow=1.11 cfs 0.243 af
Primary=1.08 cfs 0.243 af Secondary=0.00 cfs 0.000 af Outflow=1.08 cfs 0.243 af

Pond C1295GP: CB 12+95G Peak Elev=136.15' Storage=4 cf Inflow=0.01 cfs 0.002 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.01 cfs 0.002 af

Pond C1295LP: CB 12+95L Peak Elev=136.02' Storage=9 cf Inflow=2.22 cfs 0.189 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=2.22 cfs 0.189 af

Pond C1295RP: CB 12+95R Peak Elev=136.35' Storage=7 cf Inflow=1.16 cfs 0.102 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=1.16 cfs 0.102 af

Pond C148GP: CB 1+48G Peak Elev=125.68' Storage=1 cf Inflow=0.04 cfs 0.010 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.04 cfs 0.010 af

Pond C148RP: CB 1+48R Peak Elev=125.48' Storage=2 cf Inflow=0.19 cfs 0.027 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.19 cfs 0.027 af

Pond C1643LP: CB 16+43L Peak Elev=137.12' Storage=4 cf Inflow=0.33 cfs 0.027 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.33 cfs 0.027 af

Pond C1643RP: CB 16+43R Peak Elev=135.77' Storage=5 cf Inflow=0.66 cfs 0.063 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.66 cfs 0.063 af

Pond C1785LP: CB 17+85L Peak Elev=130.75' Storage=4 cf Inflow=0.46 cfs 0.034 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.46 cfs 0.034 af

Pond C1785RP: CB 17+85R Peak Elev=129.55' Storage=9 cf Inflow=1.73 cfs 0.145 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=1.73 cfs 0.145 af

Pond C1928LP: CB 19+28L Peak Elev=123.25' Storage=13 cf Inflow=2.84 cfs 0.228 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=2.84 cfs 0.228 af

Pond C1928RP: CB 19+28R Peak Elev=124.63' Storage=5 cf Inflow=0.55 cfs 0.040 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.55 cfs 0.040 af

Pond C1979RP: CB 19+79R Peak Elev=121.43' Storage=14 cf Inflow=2.97 cfs 0.238 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=2.96 cfs 0.238 af

Pond C2173LP: CB 21+73L Peak Elev=118.79' Storage=17 cf Inflow=0.95 cfs 0.069 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=0.91 cfs 0.069 af

Pond C2173RP: CB 21+73R Peak Elev=118.75' Storage=23 cf Inflow=4.40 cfs 0.346 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=4.40 cfs 0.346 af

Pond C2460LP: CB 24+60L Peak Elev=113.26' Storage=9 cf Inflow=1.60 cfs 0.129 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=1.59 cfs 0.129 af

Pond C2460RP: CB 24+60R Peak Elev=112.90' Storage=10 cf Inflow=1.94 cfs 0.163 af
12.0" Round Culvert n=0.012 L=55.3' S=0.0631 '/' Outflow=1.94 cfs 0.163 af

Pond C2610LP: CB 26+10L Peak Elev=109.15' Storage=9 cf Inflow=1.26 cfs 0.101 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=1.26 cfs 0.101 af

Pond C2610RP: CB 26+10R Peak Elev=108.91' Storage=9 cf Inflow=1.61 cfs 0.133 af
12.0" Round Culvert n=0.012 L=124.2' S=0.0534 '/' Outflow=1.61 cfs 0.133 af

Pond C3018GP: CB 30+18G Peak Elev=103.47' Storage=28 cf Inflow=9.82 cfs 1.260 af
Primary=9.80 cfs 1.260 af Secondary=0.00 cfs 0.000 af Outflow=9.80 cfs 1.260 af

Pond C3020LP: CB 30+20L Peak Elev=103.14' Storage=25 cf Inflow=11.61 cfs 1.425 af
Primary=11.61 cfs 1.425 af Secondary=0.00 cfs 0.000 af Outflow=11.61 cfs 1.425 af

Pond C3020RP: CB 30+20R Peak Elev=102.60' Storage=20 cf Inflow=11.87 cfs 1.454 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=11.87 cfs 1.454 af

Pond C303GP: CB 3+03G Peak Elev=125.41' Storage=6 cf Inflow=1.12 cfs 0.117 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=1.12 cfs 0.117 af

Pond C304RP: CB 3+04R Peak Elev=124.16' Storage=8 cf Inflow=1.51 cfs 0.165 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=1.51 cfs 0.165 af

Pond C390GP: CB 3+90G Peak Elev=123.45' Storage=4 cf Inflow=0.27 cfs 0.117 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=0.27 cfs 0.117 af

Pond C402GP: CB 4+02G Peak Elev=123.40' Storage=11 cf Inflow=1.59 cfs 0.292 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=1.58 cfs 0.292 af

Pond C419LP: CB 4+19L Peak Elev=117.78' Storage=18 cf Inflow=9.44 cfs 0.987 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=9.45 cfs 0.987 af

Pond C419RP: CB 4+19R Peak Elev=123.25' Storage=12 cf Inflow=3.21 cfs 0.448 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=3.21 cfs 0.448 af

Pond C857LP: CB 8+57L Peak Elev=133.17' Storage=14 cf Inflow=4.22 cfs 0.353 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=4.22 cfs 0.353 af

Pond C857RP: CB 8+57R Peak Elev=133.22' Storage=11 cf Inflow=1.13 cfs 0.086 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=1.12 cfs 0.086 af

Pond D100125CP: DMH 1001+25C Peak Elev=107.60' Storage=18 cf Inflow=9.45 cfs 0.987 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=9.45 cfs 0.987 af

Pond D100300CP: DMH 1003+00 Peak Elev=104.19' Storage=20 cf Inflow=9.45 cfs 0.987 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=9.44 cfs 0.987 af

Pond D1869P: DMH 18+69 Peak Elev=126.87' Storage=9 cf Inflow=1.73 cfs 0.145 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=1.73 cfs 0.145 af

Pond D2168RP: DMH 21+68R Peak Elev=105.46' Storage=7 cf Inflow=0.51 cfs 0.089 af
Primary=0.54 cfs 0.089 af Secondary=0.00 cfs 0.000 af Outflow=0.54 cfs 0.089 af

Pond D2195P: DMH 21+95R Peak Elev=117.07' Storage=14 cf Inflow=4.40 cfs 0.346 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=4.40 cfs 0.346 af

Pond D2215P: DMH 22+15R Peak Elev=109.28' Storage=18 cf Inflow=3.63 cfs 0.207 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0732 '/' Outflow=3.63 cfs 0.207 af

Pond D2241RP: DMH 22+41R Peak Elev=105.35' Storage=22 cf Inflow=3.78 cfs 0.295 af
Primary=3.79 cfs 0.295 af Secondary=0.00 cfs 0.000 af Outflow=3.79 cfs 0.295 af

Pond D2428RP: DMH 24+28R Peak Elev=103.43' Storage=37 cf Inflow=3.79 cfs 0.295 af
Primary=3.79 cfs 0.295 af Secondary=0.00 cfs 0.000 af Outflow=3.79 cfs 0.295 af

Pond D2478RP: DMH 24+78R Peak Elev=102.39' Storage=33 cf Inflow=5.54 cfs 0.458 af
Primary=5.52 cfs 0.458 af Secondary=0.00 cfs 0.000 af Outflow=5.52 cfs 0.458 af

Pond Y01P: Yard Drain Peak Elev=109.69' Storage=8 cf Inflow=1.04 cfs 0.239 af
Primary=1.10 cfs 0.239 af Secondary=0.00 cfs 0.000 af Outflow=1.10 cfs 0.239 af

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>2.14"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=31.66 cfs 4.931 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=98,319 sf 2.65% Impervious Runoff Depth>2.72"
Flow Length=507' Tc=17.7 min CN=62 Runoff=4.98 cfs 0.512 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.29"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.06 cfs 0.027 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=192,385 sf 0.00% Impervious Runoff Depth>0.29"
Flow Length=544' Tc=21.8 min CN=32 Runoff=0.21 cfs 0.107 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.19"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.09 cfs 0.053 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.29"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.36 cfs 0.197 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>4.50"
Tc=6.0 min CN=79 Runoff=0.09 cfs 0.007 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.88"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.14 cfs 0.023 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>2.16"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.34 cfs 0.029 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>2.06"
Flow Length=290' Tc=12.5 min CN=55 Runoff=2.08 cfs 0.199 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>2.83"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.39 cfs 0.033 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.66"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=1.44 cfs 0.299 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>1.36"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.21 cfs 0.019 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>4.28"
Flow Length=428' Tc=10.2 min CN=77 Runoff=3.19 cfs 0.265 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>3.64"
Flow Length=380' Tc=15.1 min CN=71 Runoff=2.44 cfs 0.230 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>5.05"
Flow Length=283' Tc=9.2 min CN=84 Runoff=1.30 cfs 0.107 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>3.54"
Flow Length=207' Tc=7.2 min CN=70 Runoff=1.70 cfs 0.128 af

Subcatchment 900S: Rain Garden Area Runoff Area=113,960 sf 0.00% Impervious Runoff Depth>1.53"
Flow Length=184' Tc=11.1 min CN=49 Runoff=3.26 cfs 0.333 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>1.27"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=1.30 cfs 0.174 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.73"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.03 cfs 0.005 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>4.39"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.49 cfs 0.122 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>3.03"
Flow Length=278' Tc=10.4 min CN=65 Runoff=1.84 cfs 0.155 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.035 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>3.43"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.61 cfs 0.054 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>3.54"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.70 cfs 0.051 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>3.33"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.93 cfs 0.071 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>3.54"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.85 cfs 0.064 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>3.54"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.83 cfs 0.060 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>4.28"
Tc=6.0 min CN=77 Runoff=0.19 cfs 0.014 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>3.85"
Flow Length=297' Tc=6.0 min CN=73 Runoff=1.39 cfs 0.101 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>3.96"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.78 cfs 0.057 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>3.96"
Flow Length=384' Tc=9.4 min CN=74 Runoff=2.32 cfs 0.187 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=3,371 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.51 cfs 0.043 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>3.96"
Flow Length=322' Tc=9.0 min CN=74 Runoff=1.83 cfs 0.147 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=3,173 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.48 cfs 0.040 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>2.63"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.55 cfs 0.047 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>2.44"
Flow Length=548' Tc=10.4 min CN=59 Runoff=3.11 cfs 0.268 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=2,995 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.46 cfs 0.038 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>1.03"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=3.08 cfs 0.504 af

Reach 15R: Overland Reach Avg. Flow Depth=0.08' Max Vel=0.79 fps Inflow=0.36 cfs 0.197 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.36 cfs 0.195 af

Reach 100R: Final Reach #100 Inflow=31.66 cfs 4.931 af
Outflow=31.66 cfs 4.931 af

Reach 200R: Final Reach #200 Inflow=4.98 cfs 0.512 af
Outflow=4.98 cfs 0.512 af

Reach 300R: Final Reach #300 Inflow=0.98 cfs 0.816 af
Outflow=0.98 cfs 0.816 af

Reach 400R: Final Reach #400 Inflow=0.21 cfs 0.107 af
Outflow=0.21 cfs 0.107 af

Reach 500R: Final Reach #500 Inflow=0.44 cfs 0.248 af
Outflow=0.44 cfs 0.248 af

Pond 900P: Detention Pond #900 Peak Elev=101.13' Storage=102,025 cf Inflow=33.30 cfs 3.746 af
Discarded=1.08 cfs 1.033 af Primary=0.95 cfs 0.789 af Outflow=2.03 cfs 1.822 af

Pond 1000P: Sediment Forebay Peak Elev=110.12' Storage=162 cf Inflow=1.30 cfs 0.174 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=2.25 cfs 0.174 af

Pond 1100P: StormTech Peak Elev=116.70' Storage=2,281 cf Inflow=6.38 cfs 0.506 af
Discarded=0.13 cfs 0.160 af Primary=5.64 cfs 0.344 af Outflow=5.77 cfs 0.504 af

Pond 2486RP: DMH 24+86R Peak Elev=106.27' Storage=13 cf Inflow=2.75 cfs 0.230 af
12.0" Round Culvert n=0.012 L=92.8' S=0.0270 '/' Outflow=2.75 cfs 0.230 af

Pond 2489RP: DMH 24+89R Peak Elev=103.79' Storage=13 cf Inflow=2.75 cfs 0.230 af
Primary=2.75 cfs 0.230 af Secondary=0.00 cfs 0.000 af Outflow=2.75 cfs 0.230 af

Pond 2625RP: DMH 26+25R Peak Elev=101.13' Storage=13 cf Inflow=2.27 cfs 0.187 af
12.0" Round Culvert n=0.012 L=18.6' S=0.0339 '/' Outflow=2.27 cfs 0.187 af

Pond 2723RP: DMH 27+23R Peak Elev=102.36' Storage=11 cf Inflow=2.27 cfs 0.187 af
12.0" Round Culvert n=0.012 L=99.0' S=0.0139 '/' Outflow=2.27 cfs 0.187 af

Pond C100P: CB #100 Peak Elev=107.89' Storage=74 cf Inflow=2.52 cfs 0.499 af
Primary=2.55 cfs 0.499 af Secondary=0.00 cfs 0.000 af Outflow=2.55 cfs 0.499 af

Pond C1295GP: CB 12+95G Peak Elev=136.56' Storage=9 cf Inflow=0.03 cfs 0.005 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.05 cfs 0.005 af

Pond C1295LP: CB 12+95L Peak Elev=136.27' Storage=13 cf Inflow=3.32 cfs 0.282 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=3.32 cfs 0.282 af

Pond C1295RP: CB 12+95R Peak Elev=136.56' Storage=10 cf Inflow=1.84 cfs 0.160 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=1.84 cfs 0.160 af

Pond C148GP: CB 1+48G Peak Elev=125.77' Storage=2 cf Inflow=0.14 cfs 0.023 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.14 cfs 0.023 af

Pond C148RP: CB 1+48R Peak Elev=125.58' Storage=4 cf Inflow=0.41 cfs 0.051 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.41 cfs 0.051 af

Pond C1643LP: CB 16+43L Peak Elev=137.16' Storage=4 cf Inflow=0.41 cfs 0.035 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.41 cfs 0.035 af

Pond C1643RP: CB 16+43R Peak Elev=135.86' Storage=6 cf Inflow=0.94 cfs 0.089 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.94 cfs 0.089 af

Pond C1785LP: CB 17+85L Peak Elev=130.83' Storage=5 cf Inflow=0.70 cfs 0.051 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.70 cfs 0.051 af

Pond C1785RP: CB 17+85R Peak Elev=129.78' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=2.56 cfs 0.211 af

Pond C1928LP: CB 19+28L Peak Elev=123.93' Storage=22 cf Inflow=4.22 cfs 0.335 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=4.21 cfs 0.335 af

Pond C1928RP: CB 19+28R Peak Elev=124.73' Storage=6 cf Inflow=0.83 cfs 0.060 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.83 cfs 0.060 af

Pond C1979RP: CB 19+79R Peak Elev=122.98' Storage=33 cf Inflow=4.40 cfs 0.349 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=4.35 cfs 0.349 af

Pond C2173LP: CB 21+73L Peak Elev=120.32' Storage=36 cf Inflow=1.39 cfs 0.101 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=1.28 cfs 0.101 af

Pond C2173RP: CB 21+73R Peak Elev=120.24' Storage=42 cf Inflow=6.38 cfs 0.506 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=6.38 cfs 0.506 af

Pond C2460LP: CB 24+60L Peak Elev=113.52' Storage=13 cf Inflow=2.32 cfs 0.187 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=2.31 cfs 0.187 af

Pond C2460RP: CB 24+60R Peak Elev=113.16' Storage=13 cf Inflow=2.77 cfs 0.230 af
12.0" Round Culvert n=0.012 L=55.3' S=0.0631 '/' Outflow=2.75 cfs 0.230 af

Pond C2610LP: CB 26+10L Peak Elev=109.35' Storage=12 cf Inflow=1.83 cfs 0.147 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=1.82 cfs 0.147 af

Pond C2610RP: CB 26+10R Peak Elev=109.09' Storage=11 cf Inflow=2.27 cfs 0.187 af
12.0" Round Culvert n=0.012 L=124.2' S=0.0534 '/' Outflow=2.27 cfs 0.187 af

Pond C3018GP: CB 30+18G Peak Elev=105.99' Storage=59 cf Inflow=15.94 cfs 2.160 af
Primary=15.88 cfs 2.160 af Secondary=0.00 cfs 0.000 af Outflow=15.88 cfs 2.160 af

Pond C3020LP: CB 30+20L Peak Elev=105.04' Storage=49 cf Inflow=18.98 cfs 2.440 af
Primary=18.93 cfs 2.440 af Secondary=0.00 cfs 0.000 af Outflow=18.93 cfs 2.440 af

Pond C3020RP: CB 30+20R Peak Elev=103.59' Storage=33 cf Inflow=19.26 cfs 2.478 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=19.26 cfs 2.478 af

Pond C303GP: CB 3+03G Peak Elev=125.62' Storage=9 cf Inflow=2.08 cfs 0.199 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=2.08 cfs 0.199 af

Pond C304RP: CB 3+04R Peak Elev=124.59' Storage=13 cf Inflow=2.85 cfs 0.283 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=2.84 cfs 0.283 af

Pond C390GP: CB 3+90G Peak Elev=124.26' Storage=14 cf Inflow=1.44 cfs 0.299 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=1.45 cfs 0.299 af

Pond C402GP: CB 4+02G Peak Elev=124.22' Storage=22 cf Inflow=3.34 cfs 0.601 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=3.33 cfs 0.601 af

Pond C419LP: CB 4+19L Peak Elev=118.30' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=14.64 cfs 1.614 af

Pond C419RP: CB 4+19R Peak Elev=123.90' Storage=20 cf Inflow=5.77 cfs 0.832 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=5.78 cfs 0.832 af

Pond C857LP: CB 8+57L Peak Elev=133.76' Storage=22 cf Inflow=6.17 cfs 0.517 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=6.18 cfs 0.517 af

Pond C857RP: CB 8+57R Peak Elev=133.81' Storage=18 cf Inflow=1.70 cfs 0.128 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=1.68 cfs 0.128 af

Pond D100125CP: DMH 1001+25C Peak Elev=108.12' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=14.64 cfs 1.614 af

Pond D100300CP: DMH 1003+00 Peak Elev=106.61' Storage=51 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=14.59 cfs 1.613 af

Pond D1869P: DMH 18+69 Peak Elev=127.10' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=2.55 cfs 0.211 af

Pond D2168RP: DMH 21+68R Peak Elev=109.73' Storage=65 cf Inflow=2.25 cfs 0.174 af
Primary=1.85 cfs 0.163 af Secondary=1.10 cfs 0.011 af Outflow=1.97 cfs 0.174 af

Pond D2195P: DMH 21+95R Peak Elev=117.33' Storage=18 cf Inflow=6.38 cfs 0.506 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=6.38 cfs 0.506 af

Pond D2215P: DMH 22+15R Peak Elev=111.78' Storage=49 cf Inflow=5.64 cfs 0.344 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0732 '/' Outflow=5.61 cfs 0.344 af

Pond D2241RP: DMH 22+41R Peak Elev=109.73' Storage=80 cf Inflow=6.17 cfs 0.518 af
Primary=5.87 cfs 0.516 af Secondary=0.33 cfs 0.002 af Outflow=6.06 cfs 0.518 af

Pond D2428RP: DMH 24+28R Peak Elev=104.50' Storage=60 cf Inflow=6.06 cfs 0.518 af
Primary=4.88 cfs 0.488 af Secondary=1.96 cfs 0.030 af Outflow=6.02 cfs 0.518 af

Pond D2478RP: DMH 24+78R Peak Elev=103.31' Storage=54 cf Inflow=8.62 cfs 0.749 af
Primary=6.60 cfs 0.723 af Secondary=2.05 cfs 0.026 af Outflow=8.65 cfs 0.748 af

Pond Y01P: Yard Drain Peak Elev=111.47' Storage=8 cf Inflow=3.08 cfs 0.504 af
Primary=2.50 cfs 0.492 af Secondary=0.58 cfs 0.012 af Outflow=3.08 cfs 0.504 af

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>3.04"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=46.53 cfs 7.028 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=98,319 sf 2.65% Impervious Runoff Depth>3.74"
Flow Length=507' Tc=17.7 min CN=62 Runoff=6.95 cfs 0.704 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.25 cfs 0.059 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=192,385 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=544' Tc=21.8 min CN=32 Runoff=0.94 cfs 0.232 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.47"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.34 cfs 0.130 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.62"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=1.36 cfs 0.427 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>5.75"
Tc=6.0 min CN=79 Runoff=0.12 cfs 0.009 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>1.46"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.30 cfs 0.038 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>3.07"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.50 cfs 0.041 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>2.95"
Flow Length=290' Tc=12.5 min CN=55 Runoff=3.09 cfs 0.285 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>3.87"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.54 cfs 0.045 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>1.16"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=3.27 cfs 0.526 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>2.08"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.36 cfs 0.029 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>5.50"
Flow Length=428' Tc=10.2 min CN=77 Runoff=4.09 cfs 0.341 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>4.79"
Flow Length=380' Tc=15.1 min CN=71 Runoff=3.22 cfs 0.304 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>6.34"
Flow Length=283' Tc=9.2 min CN=84 Runoff=1.62 cfs 0.135 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>4.68"
Flow Length=207' Tc=7.2 min CN=70 Runoff=2.26 cfs 0.169 af

Subcatchment 900S: Rain Garden Area Runoff Area=113,960 sf 0.00% Impervious Runoff Depth>2.30"
Flow Length=184' Tc=11.1 min CN=49 Runoff=5.37 cfs 0.500 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>1.97"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=2.26 cfs 0.270 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>1.26"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.07 cfs 0.009 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>5.62"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.90 cfs 0.157 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>4.10"
Flow Length=278' Tc=10.4 min CN=65 Runoff=2.52 cfs 0.209 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.50 cfs 0.042 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>4.56"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.82 cfs 0.072 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>4.68"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.92 cfs 0.068 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>4.45"
Flow Length=182' Tc=7.5 min CN=68 Runoff=1.25 cfs 0.095 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>4.68"
Flow Length=211' Tc=7.3 min CN=70 Runoff=1.13 cfs 0.085 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>4.68"
Flow Length=178' Tc=6.0 min CN=70 Runoff=1.09 cfs 0.079 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>5.51"
Tc=6.0 min CN=77 Runoff=0.25 cfs 0.018 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>5.04"
Flow Length=297' Tc=6.0 min CN=73 Runoff=1.81 cfs 0.131 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>5.15"
Flow Length=258' Tc=6.0 min CN=74 Runoff=1.01 cfs 0.074 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>5.15"
Flow Length=384' Tc=9.4 min CN=74 Runoff=3.00 cfs 0.244 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=3,371 sf 100.00% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.61 cfs 0.052 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>5.15"
Flow Length=322' Tc=9.0 min CN=74 Runoff=2.37 cfs 0.191 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=3,173 sf 100.00% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.58 cfs 0.049 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>3.64"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.77 cfs 0.065 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>3.41"
Flow Length=548' Tc=10.4 min CN=59 Runoff=4.44 cfs 0.375 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=2,995 sf 100.00% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.54 cfs 0.046 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>1.65"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=5.76 cfs 0.813 af

Reach 15R: Overland Reach Avg. Flow Depth=0.15' Max Vel=1.18 fps Inflow=1.36 cfs 0.427 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=1.33 cfs 0.424 af

Reach 100R: Final Reach #100 Inflow=46.53 cfs 7.028 af
Outflow=46.53 cfs 7.028 af

Reach 200R: Final Reach #200 Inflow=6.95 cfs 0.704 af
Outflow=6.95 cfs 0.704 af

Reach 300R: Final Reach #300 Inflow=2.65 cfs 1.552 af
Outflow=2.65 cfs 1.552 af

Reach 400R: Final Reach #400 Inflow=0.94 cfs 0.232 af
Outflow=0.94 cfs 0.232 af

Reach 500R: Final Reach #500 Inflow=1.66 cfs 0.554 af
Outflow=1.66 cfs 0.554 af

Pond 900P: Detention Pond #900 Peak Elev=102.16' Storage=143,915 cf Inflow=47.05 cfs 5.387 af
Discarded=1.32 cfs 1.264 af Primary=2.58 cfs 1.494 af Outflow=3.90 cfs 2.758 af

Pond 1000P: Sediment Forebay Peak Elev=110.47' Storage=220 cf Inflow=2.26 cfs 0.270 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=2.60 cfs 0.270 af

Pond 1100P: StormTech Peak Elev=116.91' Storage=2,562 cf Inflow=8.10 cfs 0.663 af
Discarded=0.13 cfs 0.167 af Primary=7.36 cfs 0.488 af Outflow=7.49 cfs 0.655 af

Pond 2486RP: DMH 24+86R Peak Elev=106.60' Storage=17 cf Inflow=3.51 cfs 0.296 af
12.0" Round Culvert n=0.012 L=92.8' S=0.0270 '/' Outflow=3.51 cfs 0.296 af

Pond 2489RP: DMH 24+89R Peak Elev=104.29' Storage=20 cf Inflow=3.51 cfs 0.296 af
Primary=3.49 cfs 0.296 af Secondary=0.00 cfs 0.000 af Outflow=3.49 cfs 0.296 af

Pond 2625RP: DMH 26+25R Peak Elev=102.16' Storage=26 cf Inflow=2.90 cfs 0.239 af
12.0" Round Culvert n=0.012 L=18.6' S=0.0339 '/' Outflow=2.89 cfs 0.239 af

Pond 2723RP: DMH 27+23R Peak Elev=102.58' Storage=14 cf Inflow=2.90 cfs 0.239 af
12.0" Round Culvert n=0.012 L=99.0' S=0.0139 '/' Outflow=2.90 cfs 0.239 af

Pond C100P: CB #100 Peak Elev=110.09' Storage=102 cf Inflow=2.59 cfs 0.684 af
Primary=2.58 cfs 0.684 af Secondary=0.00 cfs 0.000 af Outflow=2.58 cfs 0.684 af

Pond C1295GP: CB 12+95G Peak Elev=136.89' Storage=13 cf Inflow=0.07 cfs 0.009 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.09 cfs 0.009 af

Pond C1295LP: CB 12+95L Peak Elev=136.62' Storage=17 cf Inflow=4.46 cfs 0.375 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=4.45 cfs 0.375 af

Pond C1295RP: CB 12+95R Peak Elev=136.89' Storage=14 cf Inflow=2.59 cfs 0.219 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=2.57 cfs 0.219 af

Pond C148GP: CB 1+48G Peak Elev=126.86' Storage=16 cf Inflow=0.30 cfs 0.038 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.29 cfs 0.038 af

Pond C148RP: CB 1+48R Peak Elev=126.86' Storage=20 cf Inflow=0.71 cfs 0.079 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.70 cfs 0.079 af

Pond C1643LP: CB 16+43L Peak Elev=137.19' Storage=4 cf Inflow=0.50 cfs 0.042 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.50 cfs 0.042 af

Pond C1643RP: CB 16+43R Peak Elev=135.93' Storage=7 cf Inflow=1.20 cfs 0.114 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=1.20 cfs 0.114 af

Pond C1785LP: CB 17+85L Peak Elev=130.90' Storage=6 cf Inflow=0.92 cfs 0.068 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.92 cfs 0.068 af

Pond C1785RP: CB 17+85R Peak Elev=130.11' Storage=16 cf Inflow=3.36 cfs 0.276 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=3.35 cfs 0.276 af

Pond C1928LP: CB 19+28L Peak Elev=127.69' Storage=69 cf Inflow=5.55 cfs 0.440 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=5.51 cfs 0.440 af

Pond C1928RP: CB 19+28R Peak Elev=127.73' Storage=44 cf Inflow=1.09 cfs 0.079 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=1.10 cfs 0.079 af

Pond C1979RP: CB 19+79R Peak Elev=126.42' Storage=77 cf Inflow=5.75 cfs 0.458 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=5.46 cfs 0.458 af

Pond C2173LP: CB 21+73L Peak Elev=122.13' Storage=58 cf Inflow=1.81 cfs 0.131 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=1.65 cfs 0.131 af

Pond C2173RP: CB 21+73R Peak Elev=121.99' Storage=64 cf Inflow=8.09 cfs 0.663 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=8.09 cfs 0.663 af

Pond C2460LP: CB 24+60L Peak Elev=114.08' Storage=20 cf Inflow=3.00 cfs 0.244 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=2.98 cfs 0.244 af

Pond C2460RP: CB 24+60R Peak Elev=113.49' Storage=17 cf Inflow=3.53 cfs 0.296 af
12.0" Round Culvert n=0.012 L=55.3' S=0.0631 '/' Outflow=3.51 cfs 0.296 af

Pond C2610LP: CB 26+10L Peak Elev=109.68' Storage=16 cf Inflow=2.37 cfs 0.191 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=2.35 cfs 0.191 af

Pond C2610RP: CB 26+10R Peak Elev=109.32' Storage=14 cf Inflow=2.90 cfs 0.239 af
12.0" Round Culvert n=0.012 L=124.2' S=0.0534 '/' Outflow=2.90 cfs 0.239 af

Pond C3018GP: CB 30+18G Peak Elev=108.39' Storage=310 cf Inflow=23.28 cfs 3.036 af
Primary=22.68 cfs 2.905 af Secondary=9.16 cfs 0.132 af Outflow=22.39 cfs 3.036 af

Pond C3020LP: CB 30+20L Peak Elev=107.75' Storage=86 cf Inflow=27.42 cfs 3.549 af
Primary=26.49 cfs 3.524 af Secondary=2.72 cfs 0.025 af Outflow=27.37 cfs 3.549 af

Pond C3020RP: CB 30+20R Peak Elev=105.30' Storage=54 cf Inflow=27.64 cfs 3.595 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=27.60 cfs 3.595 af

Pond C303GP: CB 3+03G Peak Elev=126.97' Storage=26 cf Inflow=3.09 cfs 0.285 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=3.10 cfs 0.285 af

Pond C304RP: CB 3+04R Peak Elev=126.85' Storage=41 cf Inflow=4.30 cfs 0.409 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=4.29 cfs 0.409 af

Pond C390GP: CB 3+90G Peak Elev=126.87' Storage=47 cf Inflow=3.27 cfs 0.526 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=3.28 cfs 0.526 af

Pond C402GP: CB 4+02G Peak Elev=126.54' Storage=58 cf Inflow=6.32 cfs 0.965 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=6.35 cfs 0.965 af

Pond C419LP: CB 4+19L Peak Elev=119.22' Storage=36 cf Inflow=20.50 cfs 2.288 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=20.51 cfs 2.288 af

Pond C419RP: CB 4+19R Peak Elev=125.42' Storage=39 cf Inflow=9.29 cfs 1.268 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=9.29 cfs 1.268 af

Pond C857LP: CB 8+57L Peak Elev=134.54' Storage=31 cf Inflow=8.10 cfs 0.679 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=8.10 cfs 0.679 af

Pond C857RP: CB 8+57R Peak Elev=134.63' Storage=28 cf Inflow=2.26 cfs 0.169 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=2.21 cfs 0.169 af

Pond D100125CP: DMH 1001+25C Peak Elev=111.62' Storage=68 cf Inflow=20.51 cfs 2.288 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=20.50 cfs 2.288 af

Pond D100300CP: DMH 1003+00 Peak Elev=109.85' Storage=79 cf Inflow=20.50 cfs 2.288 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=20.35 cfs 2.288 af

Pond D1869P: DMH 18+69 Peak Elev=127.93' Storage=22 cf Inflow=3.35 cfs 0.276 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=3.35 cfs 0.276 af

Pond D2168RP: DMH 21+68R Peak Elev=110.03' Storage=65 cf Inflow=2.60 cfs 0.270 af
Primary=1.84 cfs 0.214 af Secondary=2.37 cfs 0.056 af Outflow=2.58 cfs 0.270 af

Pond D2195P: DMH 21+95R Peak Elev=117.53' Storage=20 cf Inflow=8.09 cfs 0.663 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=8.10 cfs 0.663 af

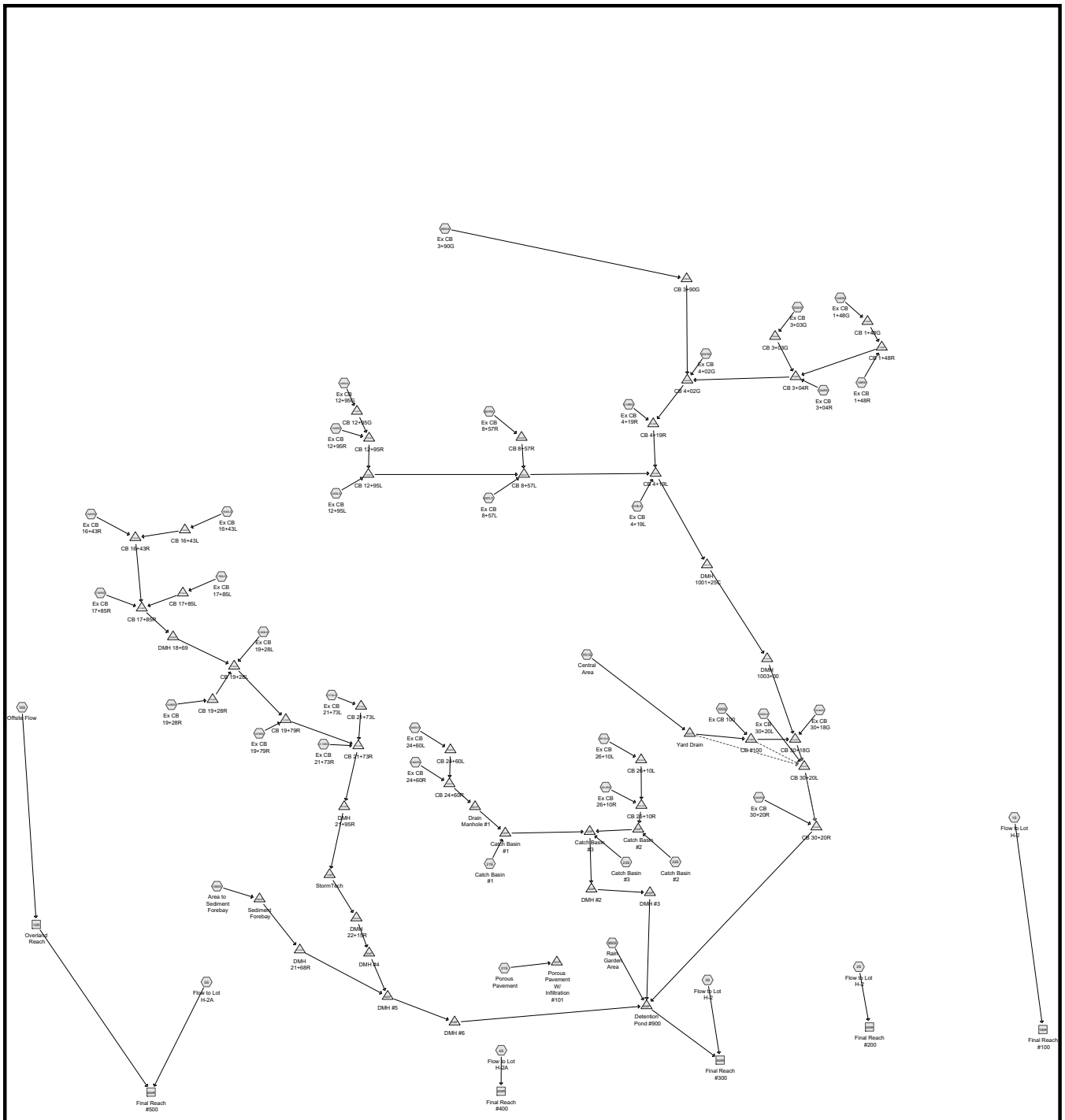
Pond D2215P: DMH 22+15R Peak Elev=113.93' Storage=76 cf Inflow=7.36 cfs 0.488 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0732 '/' Outflow=7.19 cfs 0.488 af

Pond D2241RP: DMH 22+41R Peak Elev=110.03' Storage=91 cf Inflow=8.22 cfs 0.758 af
Primary=5.93 cfs 0.707 af Secondary=2.65 cfs 0.051 af Outflow=8.36 cfs 0.758 af

Pond D2428RP: DMH 24+28R Peak Elev=104.71' Storage=60 cf Inflow=8.36 cfs 0.758 af
Primary=4.98 cfs 0.649 af Secondary=4.31 cfs 0.109 af Outflow=8.34 cfs 0.758 af

Pond D2478RP: DMH 24+78R Peak Elev=103.55' Storage=62 cf Inflow=11.70 cfs 1.053 af
Primary=6.86 cfs 0.950 af Secondary=4.84 cfs 0.103 af Outflow=11.69 cfs 1.053 af

Pond Y01P: Yard Drain Peak Elev=111.58' Storage=13 cf Inflow=5.76 cfs 0.813 af
Primary=2.53 cfs 0.675 af Secondary=4.03 cfs 0.138 af Outflow=5.78 cfs 0.813 af



Routing Diagram for 21-002 Proposed Analysis

Prepared by Berry Surveying & Engineering, Printed 4/11/2022

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
14.293	39	>75% Grass cover, Good, HSG A (2S, 3S, 4S, 5S, 15S, 21S, 22S, 23S, 31S, 100S, 148GS, 148RS, 303GS, 304RS, 390GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1000S, 1295GS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 1979RS, 2173LS, 2173RS, 2460LS, 2610LS, 3018GS, 3020LS, Y01S)
0.823	74	>75% Grass cover, Good, HSG C (900S, 3018GS, 3020LS)
3.846	30	Brush, Good, HSG A (3S, 4S, 5S)
0.003	73	Brush, Good, HSG D (1S)
7.496	39	Pasture/grassland/range, Good, HSG A (1S)
6.316	74	Pasture/grassland/range, Good, HSG C (1S)
5.855	80	Pasture/grassland/range, Good, HSG D (1S)
0.140	98	Paved parking (15S)
4.345	98	Paved parking, HSG A (21S, 22S, 23S, 31S, 100S, 148RS, 303GS, 304RS, 402GS, 419LS, 419RS, 857LS, 857RS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 1979RS, 2173LS, 2173RS, 2460LS, 2460RS, 2610LS, 2610RS, 3020LS, 3020RS)
0.008	98	Paved parking, HSG C (3018GS, 3020LS, 3020RS)
2.262	98	Roofs, HSG A (31S, 100S, 303GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 2173LS, 2173RS, 2460LS, 2610LS, 3018GS, 3020LS)
1.293	98	Unconnected pavement, HSG A (1S, 2S, 148GS, 390GS, Y01S)
0.249	98	Unconnected pavement, HSG C (1S, 2S)
2.003	98	Unconnected roofs, HSG A (2S, 4S, 390GS, 1000S, Y01S)
0.016	98	Water Surface, HSG A (303GS)
20.887	30	Woods, Good, HSG A (1S, 2S, 3S, 4S, 5S, 15S, 148GS, 148RS, 303GS, 390GS, 402GS, Y01S)
2.100	70	Woods, Good, HSG C (1S, 2S)
0.276	77	Woods, Good, HSG D (1S)
72.208	**52**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
56.440	HSG A	1S, 2S, 3S, 4S, 5S, 15S, 21S, 22S, 23S, 31S, 100S, 148GS, 148RS, 303GS, 304RS, 390GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1000S, 1295GS, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 1979RS, 2173LS, 2173RS, 2460LS, 2460RS, 2610LS, 2610RS, 3018GS, 3020LS, 3020RS, Y01S
0.000	HSG B	
9.495	HSG C	1S, 2S, 900S, 3018GS, 3020LS, 3020RS
6.133	HSG D	1S
0.140	Other	15S
72.208		**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
14.293	0.000	0.823	0.000	0.000	15.116	>75% Grass cover, Good	2S, 3S, 4S, 5S, 15S, 21S, 22S, 23S, 31S, 100S, 148GS, 148RS, 303GS, 304RS, 390GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1000S, 1295GS

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.846	0.000	0.000	0.003	0.000	3.848	Brush, Good	1S, 3S, 4S, 5S
7.496	0.000	6.316	5.855	0.000	19.667	Pasture/grassland/range, Good	1S
4.345	0.000	0.008	0.000	0.140	4.493	Paved parking	15S, 21S, 22S, 23S, 31S, 100S, 148RS, 303GS, 304RS, 402GS, 419LS, 419RS, 857LS, 857RS, 1295LS, 1295RS, 1643LS, 1643RS

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
2.262	0.000	0.000	0.000	0.000	2.262	Roofs	31S, 100S, 303GS, 402GS, 419LS, 419RS, 857LS, 857RS, 900S, 1295LS, 1295RS, 1643LS, 1643RS, 1785LS, 1785RS, 1928LS, 1928RS, 2173LS

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
1.293	0.000	0.249	0.000	0.000	1.542	Unconnected pavement	1S, 2S, 148 GS, 390 GS, Y01 S
2.003	0.000	0.000	0.000	0.000	2.003	Unconnected roofs	2S, 4S, 390 GS, 100 0S, Y01 S
0.016	0.000	0.000	0.000	0.000	0.016	Water Surface	303 GS
20.887	0.000	2.100	0.276	0.000	23.262	Woods, Good	1S, 2S, 3S, 4S, 5S, 15S , 148 GS, 148 RS, 303 GS, 390 GS, 402 GS, Y01 S

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
56.440	**0.000**	**9.495**	**6.133**	**0.140**	**72.208**	**TOTAL AREA**	

Pipe Listing (all 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	900P	97.50	97.17	21.2	0.0156	0.012	30.0	0.0	0.0
2	1000P	105.84	104.91	57.1	0.0163	0.012	12.0	0.0	0.0
3	1100P	115.39	115.39	5.0	0.0000	0.012	24.0	0.0	0.0
4	C01P	111.40	110.25	137.7	0.0084	0.012	12.0	0.0	0.0
5	C02P	107.75	106.75	90.0	0.0111	0.012	12.0	0.0	0.0
6	C03P	106.50	105.67	80.0	0.0104	0.012	15.0	0.0	0.0
7	C100P	101.97	101.26	141.7	0.0050	0.012	10.0	0.0	0.0
8	C1295GP	135.84	135.76	9.1	0.0088	0.012	15.0	0.0	0.0
9	C1295LP	135.27	132.04	433.9	0.0074	0.012	15.0	0.0	0.0
10	C1295RP	135.76	135.29	16.2	0.0290	0.012	15.0	0.0	0.0
11	C148GP	125.59	125.38	17.4	0.0121	0.012	15.0	0.0	0.0
12	C148RP	125.28	123.55	149.6	0.0116	0.012	15.0	0.0	0.0
13	C1643LP	136.84	136.14	15.7	0.0446	0.012	12.0	0.0	0.0
14	C1643RP	135.36	129.75	141.5	0.0396	0.012	12.0	0.0	0.0
15	C1785LP	130.41	129.73	15.4	0.0442	0.012	12.0	0.0	0.0
16	C1785RP	128.83	126.15	81.7	0.0328	0.012	12.0	0.0	0.0
17	C1928LP	122.19	120.32	52.1	0.0359	0.012	12.0	0.0	0.0
18	C1928RP	124.26	124.01	16.3	0.0153	0.012	12.0	0.0	0.0
19	C1979RP	120.32	116.94	189.6	0.0178	0.012	12.0	0.0	0.0
20	C2173LP	117.46	116.94	15.6	0.0333	0.012	12.0	0.0	0.0
21	C2173RP	116.90	115.76	27.6	0.0413	0.012	12.0	0.0	0.0
22	C2460LP	112.52	112.13	16.3	0.0239	0.012	12.0	0.0	0.0
23	C2460RP	112.13	111.85	7.0	0.0400	0.012	12.0	0.0	0.0
24	C2610LP	108.43	108.23	15.2	0.0132	0.012	12.0	0.0	0.0
25	C2610RP	108.23	107.85	10.7	0.0355	0.012	12.0	0.0	0.0
26	C3018GP	101.40	101.22	7.5	0.0240	0.012	24.0	0.0	0.0
27	C3020LP	101.16	101.05	16.6	0.0066	0.012	24.0	0.0	0.0
28	C3020RP	100.97	99.40	135.3	0.0116	0.012	24.0	0.0	0.0
29	C303GP	124.91	123.73	54.4	0.0217	0.012	15.0	0.0	0.0
30	C304RP	123.55	122.60	91.0	0.0104	0.012	15.0	0.0	0.0
31	C390GP	123.14	122.60	86.2	0.0063	0.012	15.0	0.0	0.0
32	C402GP	122.50	122.38	21.6	0.0056	0.012	15.0	0.0	0.0
33	C419LP	116.38	113.60	111.8	0.0249	0.012	24.0	0.0	0.0
34	C419RP	122.32	121.98	16.3	0.0209	0.012	15.0	0.0	0.0
35	C857LP	132.04	121.74	434.3	0.0237	0.012	15.0	0.0	0.0
36	C857RP	132.36	132.14	16.4	0.0134	0.012	15.0	0.0	0.0
37	D01P	111.75	111.50	27.0	0.0093	0.012	12.0	0.0	0.0
38	D02P	105.57	103.64	87.5	0.0221	0.012	15.0	0.0	0.0
39	D03P	103.54	102.00	60.0	0.0257	0.012	15.0	0.0	0.0
40	D04P	104.50	103.05	37.7	0.0385	0.012	12.0	0.0	0.0
41	D05P	102.55	99.50	145.0	0.0210	0.012	18.0	0.0	0.0
42	D06P	99.40	99.00	80.0	0.0050	0.012	18.0	0.0	0.0

Pipe Listing (all nodes) (continued)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
43	D100125CP	106.20	102.66	178.1	0.0199	0.012	24.0	0.0	0.0
44	D100300CP	102.56	101.50	139.2	0.0076	0.012	24.0	0.0	0.0
45	D1869P	126.15	123.91	51.8	0.0432	0.012	12.0	0.0	0.0
46	D2168RP	104.91	103.05	46.7	0.0398	0.012	12.0	0.0	0.0
47	D2195P	115.92	115.92	7.1	0.0000	0.012	24.0	0.0	0.0
48	D2215P	107.86	105.60	25.0	0.0904	0.012	12.0	0.0	0.0
49	Y01P	108.93	102.07	71.1	0.0965	0.012	8.0	0.0	0.0

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

Subcatchment 1S: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>2.14"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=31.66 cfs 4.931 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=94,062 sf 2.77% Impervious Runoff Depth>2.82"
Flow Length=507' Tc=17.7 min CN=63 Runoff=4.96 cfs 0.508 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.29"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.06 cfs 0.027 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=137,017 sf 3.20% Impervious Runoff Depth>0.29"
Flow Length=544' Tc=21.8 min UI Adjusted CN=32 Runoff=0.15 cfs 0.077 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.19"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.09 cfs 0.053 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.29"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.36 cfs 0.197 af

Subcatchment 21S: Catch Basin #1 Runoff Area=4,630 sf 13.05% Impervious Runoff Depth>1.36"
Tc=6.0 min CN=47 Runoff=0.13 cfs 0.012 af

Subcatchment 22S: Catch Basin #2 Runoff Area=1,761 sf 11.58% Impervious Runoff Depth>1.27"
Tc=6.0 min CN=46 Runoff=0.05 cfs 0.004 af

Subcatchment 23S: Catch Basin #3 Runoff Area=2,089 sf 11.68% Impervious Runoff Depth>1.27"
Tc=6.0 min CN=46 Runoff=0.05 cfs 0.005 af

Subcatchment 31S: Porous Pavement Runoff Area=105,090 sf 76.59% Impervious Runoff Depth>2.70"
Tc=732.0 min CN=84 Runoff=0.95 cfs 0.543 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>4.50"
Tc=6.0 min CN=79 Runoff=0.09 cfs 0.007 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.88"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.14 cfs 0.023 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>2.16"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.34 cfs 0.029 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>2.06"
Flow Length=290' Tc=12.5 min CN=55 Runoff=2.08 cfs 0.199 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>2.83"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.39 cfs 0.033 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.66"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=1.44 cfs 0.299 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>1.36"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.21 cfs 0.019 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>4.28"
Flow Length=428' Tc=10.2 min CN=77 Runoff=3.19 cfs 0.265 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>3.64"
Flow Length=380' Tc=15.1 min CN=71 Runoff=2.44 cfs 0.230 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>5.05"
Flow Length=283' Tc=9.2 min CN=84 Runoff=1.30 cfs 0.107 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>3.54"
Flow Length=207' Tc=7.2 min CN=70 Runoff=1.70 cfs 0.128 af

Subcatchment 900S: Rain Garden Area Runoff Area=56,894 sf 10.75% Impervious Runoff Depth>3.03"
Tc=6.0 min CN=65 Runoff=4.51 cfs 0.330 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>1.27"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=1.30 cfs 0.174 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.73"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.03 cfs 0.005 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>4.39"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.49 cfs 0.122 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>3.03"
Flow Length=278' Tc=10.4 min CN=65 Runoff=1.84 cfs 0.155 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.035 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>3.43"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.61 cfs 0.054 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>3.54"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.70 cfs 0.051 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>3.33"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.93 cfs 0.071 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>3.54"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.85 cfs 0.064 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>3.54"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.83 cfs 0.060 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>4.28"
Tc=6.0 min CN=77 Runoff=0.19 cfs 0.014 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>3.85"
Flow Length=297' Tc=6.0 min CN=73 Runoff=1.39 cfs 0.101 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>3.96"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.78 cfs 0.057 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>3.96"
Flow Length=384' Tc=9.4 min CN=74 Runoff=2.32 cfs 0.187 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=4,788 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.73 cfs 0.061 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>3.96"
Flow Length=322' Tc=9.0 min CN=74 Runoff=1.83 cfs 0.147 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=4,586 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.70 cfs 0.058 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>2.63"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.55 cfs 0.047 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>2.44"
Flow Length=548' Tc=10.4 min CN=59 Runoff=3.11 cfs 0.268 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=3,464 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.53 cfs 0.044 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>1.03"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=3.08 cfs 0.504 af

Reach 15R: Overland Reach Avg. Flow Depth=0.08' Max Vel=0.79 fps Inflow=0.36 cfs 0.197 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.36 cfs 0.195 af

Reach 100R: Final Reach #100 Inflow=31.66 cfs 4.931 af
Outflow=31.66 cfs 4.931 af

Reach 200R: Final Reach #200 Inflow=4.96 cfs 0.508 af
Outflow=4.96 cfs 0.508 af

Reach 300R: Final Reach #300 Inflow=0.96 cfs 0.800 af
Outflow=0.96 cfs 0.800 af

Reach 400R: Final Reach #400 Inflow=0.15 cfs 0.077 af
Outflow=0.15 cfs 0.077 af

Reach 500R: Final Reach #500 Inflow=0.44 cfs 0.248 af
Outflow=0.44 cfs 0.248 af

Pond 101P: Porous Pavement W/ Infiltration #101 Peak Elev=103.71' Storage=0 cf Inflow=0.95 cfs 0.543 af
Outflow=0.95 cfs 0.543 af

Pond 900P: Detention Pond #900 Peak Elev=101.10' Storage=104,337 cf Inflow=34.62 cfs 3.806 af
Discarded=1.11 cfs 1.073 af Primary=0.93 cfs 0.773 af Outflow=2.04 cfs 1.846 af

Pond 1000P: Sediment Forebay Peak Elev=106.44' Storage=15 cf Inflow=1.30 cfs 0.174 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=1.30 cfs 0.174 af

Pond 1100P: StormTech Peak Elev=116.70' Storage=2,281 cf Inflow=6.38 cfs 0.506 af
Discarded=0.13 cfs 0.160 af Primary=5.64 cfs 0.344 af Outflow=5.77 cfs 0.504 af

Pond C01P: Catch Basin #1 Peak Elev=112.55' Storage=15 cf Inflow=3.07 cfs 0.261 af
12.0" Round Culvert n=0.012 L=137.7' S=0.0084 '/' Outflow=3.07 cfs 0.260 af

Pond C02P: Catch Basin #2 Peak Elev=108.75' Storage=13 cf Inflow=2.52 cfs 0.209 af
12.0" Round Culvert n=0.012 L=90.0' S=0.0111 '/' Outflow=2.52 cfs 0.209 af

Pond C03P: Catch Basin #3 Peak Elev=108.04' Storage=19 cf Inflow=5.64 cfs 0.475 af
15.0" Round Culvert n=0.012 L=80.0' S=0.0104 '/' Outflow=5.63 cfs 0.475 af

Pond C100P: CB #100 Peak Elev=107.89' Storage=74 cf Inflow=2.52 cfs 0.499 af
Primary=2.55 cfs 0.499 af Secondary=0.00 cfs 0.000 af Outflow=2.55 cfs 0.499 af

Pond C1295GP: CB 12+95G Peak Elev=136.56' Storage=9 cf Inflow=0.03 cfs 0.005 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.05 cfs 0.005 af

Pond C1295LP: CB 12+95L Peak Elev=136.27' Storage=13 cf Inflow=3.32 cfs 0.282 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=3.32 cfs 0.282 af

Pond C1295RP: CB 12+95R Peak Elev=136.56' Storage=10 cf Inflow=1.84 cfs 0.160 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=1.84 cfs 0.160 af

Pond C148GP: CB 1+48G Peak Elev=125.77' Storage=2 cf Inflow=0.14 cfs 0.023 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.14 cfs 0.023 af

Pond C148RP: CB 1+48R Peak Elev=125.58' Storage=4 cf Inflow=0.41 cfs 0.051 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.41 cfs 0.051 af

Pond C1643LP: CB 16+43L Peak Elev=137.16' Storage=4 cf Inflow=0.41 cfs 0.035 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.41 cfs 0.035 af

Pond C1643RP: CB 16+43R Peak Elev=135.86' Storage=6 cf Inflow=0.94 cfs 0.089 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.94 cfs 0.089 af

Pond C1785LP: CB 17+85L Peak Elev=130.83' Storage=5 cf Inflow=0.70 cfs 0.051 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.70 cfs 0.051 af

Pond C1785RP: CB 17+85R Peak Elev=129.78' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=2.56 cfs 0.211 af

Pond C1928LP: CB 19+28L Peak Elev=123.93' Storage=22 cf Inflow=4.22 cfs 0.335 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=4.21 cfs 0.335 af

Pond C1928RP: CB 19+28R Peak Elev=124.73' Storage=6 cf Inflow=0.83 cfs 0.060 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.83 cfs 0.060 af

Pond C1979RP: CB 19+79R Peak Elev=122.98' Storage=33 cf Inflow=4.40 cfs 0.349 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=4.35 cfs 0.349 af

Pond C2173LP: CB 21+73L Peak Elev=120.32' Storage=36 cf Inflow=1.39 cfs 0.101 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=1.28 cfs 0.101 af

Pond C2173RP: CB 21+73R Peak Elev=120.24' Storage=42 cf Inflow=6.38 cfs 0.506 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=6.38 cfs 0.506 af

Pond C2460LP: CB 24+60L Peak Elev=113.72' Storage=15 cf Inflow=2.32 cfs 0.187 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=2.30 cfs 0.187 af

Pond C2460RP: CB 24+60R Peak Elev=113.51' Storage=17 cf Inflow=2.97 cfs 0.249 af
12.0" Round Culvert n=0.012 L=7.0' S=0.0400 '/' Outflow=2.95 cfs 0.249 af

Pond C2610LP: CB 26+10L Peak Elev=109.39' Storage=12 cf Inflow=1.83 cfs 0.147 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=1.82 cfs 0.147 af

Pond C2610RP: CB 26+10R Peak Elev=109.16' Storage=12 cf Inflow=2.48 cfs 0.205 af
12.0" Round Culvert n=0.012 L=10.7' S=0.0355 '/' Outflow=2.48 cfs 0.205 af

Pond C3018GP: CB 30+18G Peak Elev=106.00' Storage=60 cf Inflow=15.94 cfs 2.160 af
Primary=15.88 cfs 2.160 af Secondary=0.00 cfs 0.000 af Outflow=15.88 cfs 2.160 af

Pond C3020LP: CB 30+20L Peak Elev=105.05' Storage=49 cf Inflow=18.98 cfs 2.440 af
Primary=18.93 cfs 2.440 af Secondary=0.00 cfs 0.000 af Outflow=18.93 cfs 2.440 af

Pond C3020RP: CB 30+20R Peak Elev=103.60' Storage=33 cf Inflow=19.31 cfs 2.484 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=19.31 cfs 2.484 af

Pond C303GP: CB 3+03G Peak Elev=125.62' Storage=9 cf Inflow=2.08 cfs 0.199 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=2.08 cfs 0.199 af

Pond C304RP: CB 3+04R Peak Elev=124.59' Storage=13 cf Inflow=2.85 cfs 0.283 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=2.84 cfs 0.283 af

Pond C390GP: CB 3+90G Peak Elev=124.26' Storage=14 cf Inflow=1.44 cfs 0.299 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=1.45 cfs 0.299 af

Pond C402GP: CB 4+02G Peak Elev=124.22' Storage=22 cf Inflow=3.34 cfs 0.601 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=3.33 cfs 0.601 af

Pond C419LP: CB 4+19L Peak Elev=118.30' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=14.64 cfs 1.614 af

Pond C419RP: CB 4+19R Peak Elev=123.90' Storage=20 cf Inflow=5.77 cfs 0.832 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=5.78 cfs 0.832 af

Pond C857LP: CB 8+57L Peak Elev=133.76' Storage=22 cf Inflow=6.17 cfs 0.517 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=6.18 cfs 0.517 af

Pond C857RP: CB 8+57R Peak Elev=133.81' Storage=18 cf Inflow=1.70 cfs 0.128 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=1.68 cfs 0.128 af

Pond D01P: Drain Manhole #1 Peak Elev=113.09' Storage=17 cf Inflow=2.95 cfs 0.249 af
12.0" Round Culvert n=0.012 L=27.0' S=0.0093 '/' Outflow=2.94 cfs 0.248 af

Pond D02P: DMH #2 Peak Elev=107.10' Storage=19 cf Inflow=5.63 cfs 0.475 af
15.0" Round Culvert n=0.012 L=87.5' S=0.0221 '/' Outflow=5.62 cfs 0.475 af

Pond D03P: DMH #3 Peak Elev=105.06' Storage=19 cf Inflow=5.62 cfs 0.475 af
15.0" Round Culvert n=0.012 L=60.0' S=0.0257 '/' Outflow=5.61 cfs 0.475 af

Pond D04P: DMH #4 Peak Elev=107.21' Storage=34 cf Inflow=5.64 cfs 0.344 af
12.0" Round Culvert n=0.012 L=37.7' S=0.0385 '/' Outflow=5.63 cfs 0.344 af

Pond D05P: DMH #5 Peak Elev=103.87' Storage=17 cf Inflow=6.43 cfs 0.518 af
18.0" Round Culvert n=0.012 L=145.0' S=0.0210 '/' Outflow=6.43 cfs 0.518 af

Pond D06P: DMH #6 Peak Elev=101.10' Storage=21 cf Inflow=6.43 cfs 0.518 af
18.0" Round Culvert n=0.012 L=80.0' S=0.0050 '/' Outflow=6.43 cfs 0.518 af

Pond D100125CP: DMH 1001+25C Peak Elev=108.12' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=14.64 cfs 1.614 af

Pond D100300CP: DMH 1003+00 Peak Elev=106.62' Storage=51 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=14.59 cfs 1.613 af

Pond D1869P: DMH 18+69 Peak Elev=127.10' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=2.55 cfs 0.211 af

Pond D2168RP: DMH 21+68R Peak Elev=105.51' Storage=8 cf Inflow=1.30 cfs 0.174 af
12.0" Round Culvert n=0.012 L=46.7' S=0.0398 '/' Outflow=1.30 cfs 0.174 af

Pond D2195P: DMH 21+95R Peak Elev=117.33' Storage=18 cf Inflow=6.38 cfs 0.506 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=6.38 cfs 0.506 af

Pond D2215P: DMH 22+15R Peak Elev=110.58' Storage=34 cf Inflow=5.64 cfs 0.344 af
12.0" Round Culvert n=0.012 L=25.0' S=0.0904 '/' Outflow=5.64 cfs 0.344 af

Pond Y01P: Yard Drain Peak Elev=111.47' Storage=8 cf Inflow=3.08 cfs 0.504 af
Primary=2.50 cfs 0.492 af Secondary=0.58 cfs 0.012 af Outflow=3.08 cfs 0.504 af

Total Runoff Area = 72.208 ac Runoff Volume = 10.306 af Average Runoff Depth = 1.71"
85.72% Pervious = 61.894 ac 14.28% Impervious = 10.315 ac

Summary for Subcatchment 1S: Flow to Lot H-2

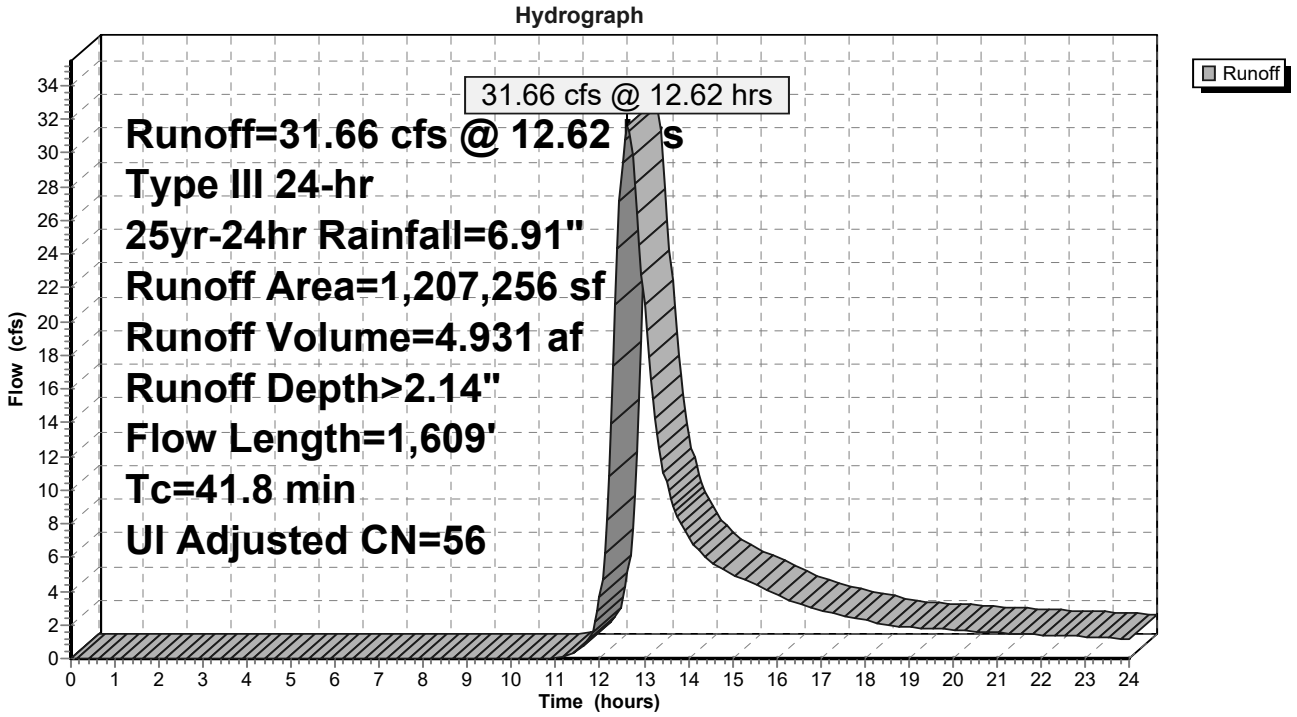
Runoff = 31.66 cfs @ 12.62 hrs, Volume= 4.931 af, Depth> 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
42,880	98		Unconnected pavement, HSG A
326,542	39		Pasture/grassland/range, Good, HSG A
264,890	30		Woods, Good, HSG A
10,706	98		Unconnected pavement, HSG C
275,112	74		Pasture/grassland/range, Good, HSG C
19,958	70		Woods, Good, HSG C
255,023	80		Pasture/grassland/range, Good, HSG D
120	73		Brush, Good, HSG D
12,025	77		Woods, Good, HSG D
1,207,256	57	56	Weighted Average, UI Adjusted
1,153,670			95.56% Pervious Area
53,586			4.44% Impervious Area
53,586			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	29	0.0255	0.07		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
8.1	71	0.0992	0.15		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.62"
4.3	312	0.0577	1.20		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
5.4	294	0.0170	0.91		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
5.7	373	0.0242	1.09		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
3.5	247	0.0284	1.18		**Shallow Concentrated Flow, Segment #6** Short Grass Pasture Kv= 7.0 fps
8.0	283	0.0071	0.59		**Shallow Concentrated Flow, Segment #7** Short Grass Pasture Kv= 7.0 fps
41.8	1,609	Total			

Subcatchment 1S: Flow to Lot H-2



Summary for Subcatchment 2S: Flow to Lot H-2

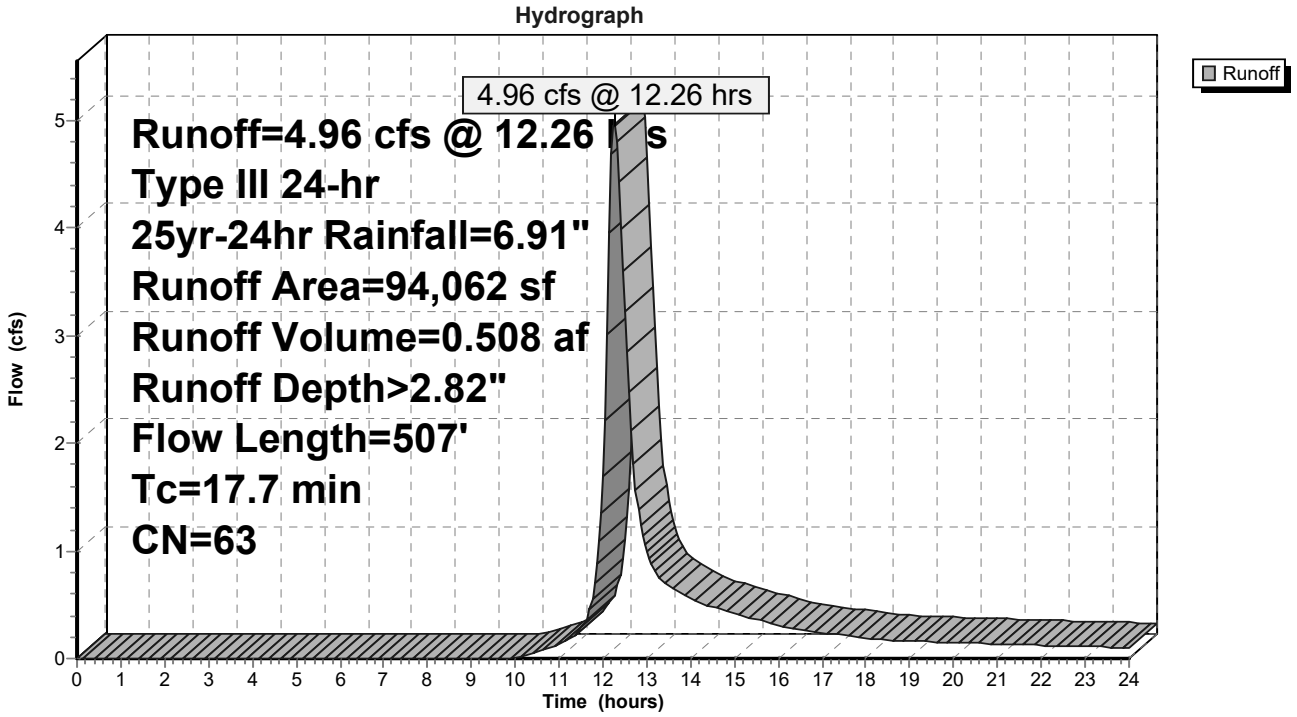
Runoff = 4.96 cfs @ 12.26 hrs, Volume= 0.508 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
2,409	98	Unconnected roofs, HSG A
8,291	39	>75% Grass cover, Good, HSG A
62	98	Unconnected pavement, HSG A
11,656	30	Woods, Good, HSG A
131	98	Unconnected pavement, HSG C
71,513	70	Woods, Good, HSG C
94,062	63	Weighted Average
91,460		97.23% Pervious Area
2,602		2.77% Impervious Area
2,602		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	38	0.0787	0.26		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
7.9	62	0.0808	0.13		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.62"
7.3	407	0.0344	0.93		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
17.7	507	Total			

Subcatchment 2S: Flow to Lot H-2



Summary for Subcatchment 3S: Flow to Lot H-2

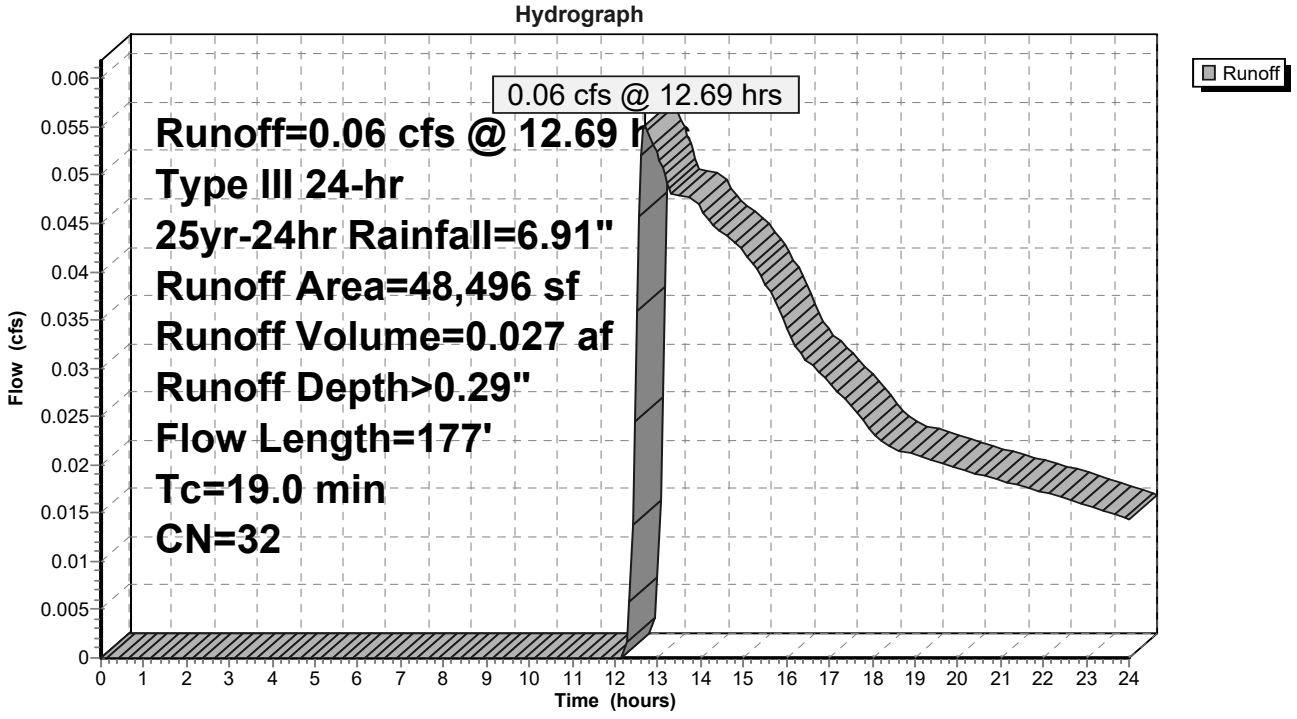
Runoff = 0.06 cfs @ 12.69 hrs, Volume= 0.027 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
8,920	39	>75% Grass cover, Good, HSG A
38,030	30	Brush, Good, HSG A
1,546	30	Woods, Good, HSG A
48,496	32	Weighted Average
48,496		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.2	100	0.0300	0.10		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
1.8	77	0.0196	0.70		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
19.0	177	Total			

Subcatchment 3S: Flow to Lot H-2



Summary for Subcatchment 4S: Flow to Lot H-2A

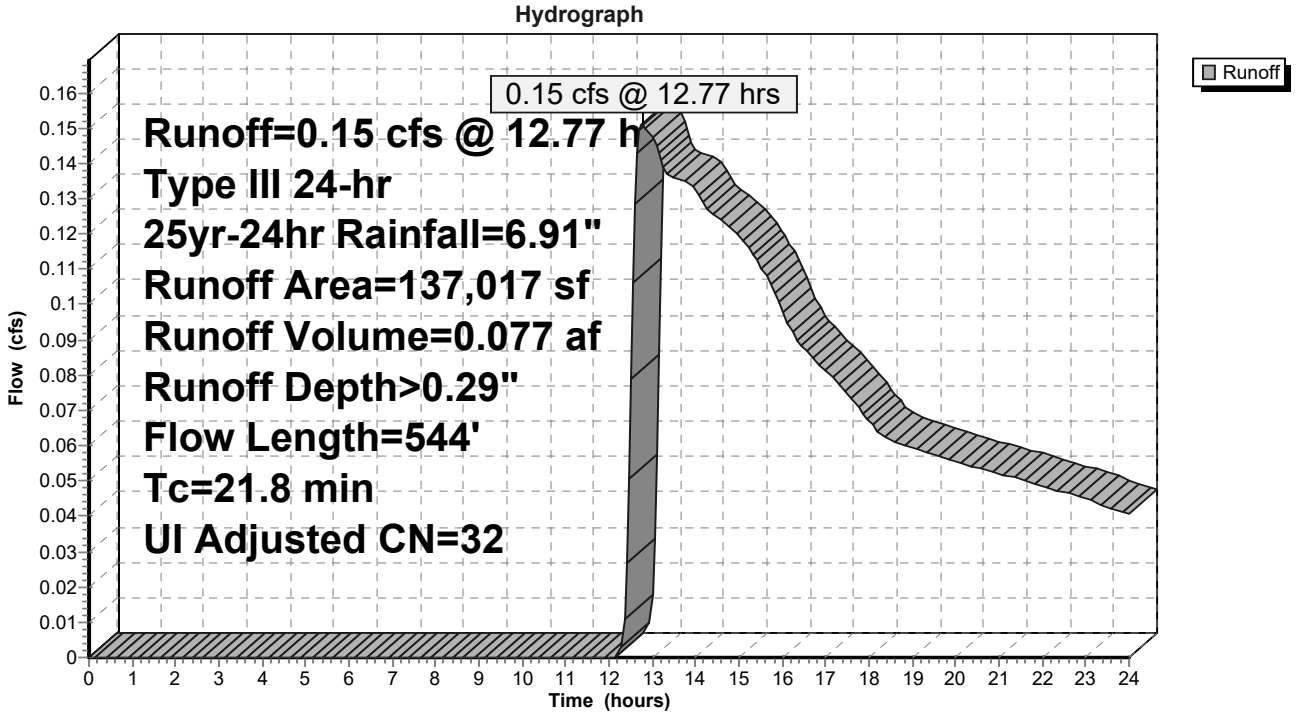
Runoff = 0.15 cfs @ 12.77 hrs, Volume= 0.077 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
4,378	98		Unconnected roofs, HSG A
9,558	39		>75% Grass cover, Good, HSG A
101,420	30		Brush, Good, HSG A
21,661	30		Woods, Good, HSG A
137,017	33	32	Weighted Average, UI Adjusted
132,639			96.80% Pervious Area
4,378			3.20% Impervious Area
4,378			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0500	0.12		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
2.0	121	0.0412	1.01		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
5.8	323	0.0341	0.92		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
21.8	544	Total			

Subcatchment 4S: Flow to Lot H-2A



Summary for Subcatchment 5S: Flow to Lot H-2A

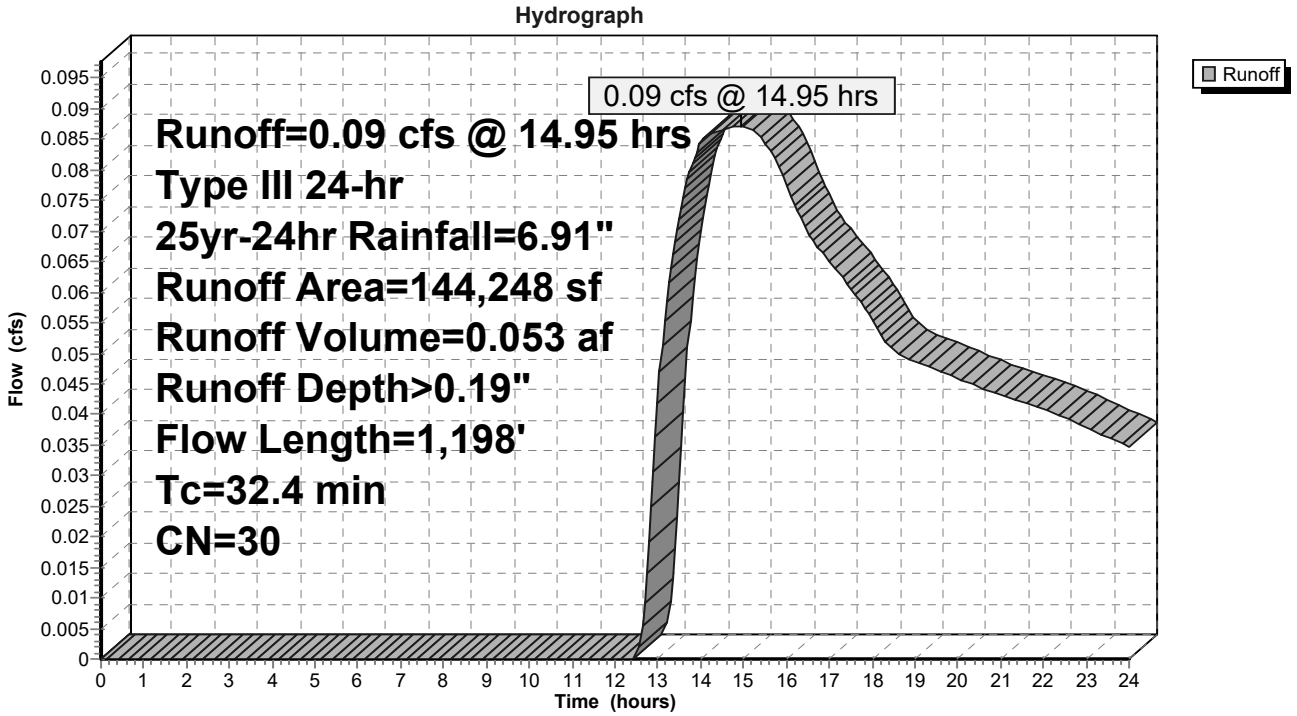
Runoff = 0.09 cfs @ 14.95 hrs, Volume= 0.053 af, Depth> 0.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
77	39	>75% Grass cover, Good, HSG A
28,063	30	Brush, Good, HSG A
116,108	30	Woods, Good, HSG A
144,248	30	Weighted Average
144,248		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.3	100	0.0400	0.11		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
3.2	188	0.0385	0.98		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
8.6	578	0.0502	1.12		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
5.3	332	0.0437	1.05		**Shallow Concentrated Flow, Segment #4** Woodland Kv= 5.0 fps
32.4	1,198	Total			

Subcatchment 5S: Flow to Lot H-2A



Summary for Subcatchment 15S: Offsite Flow

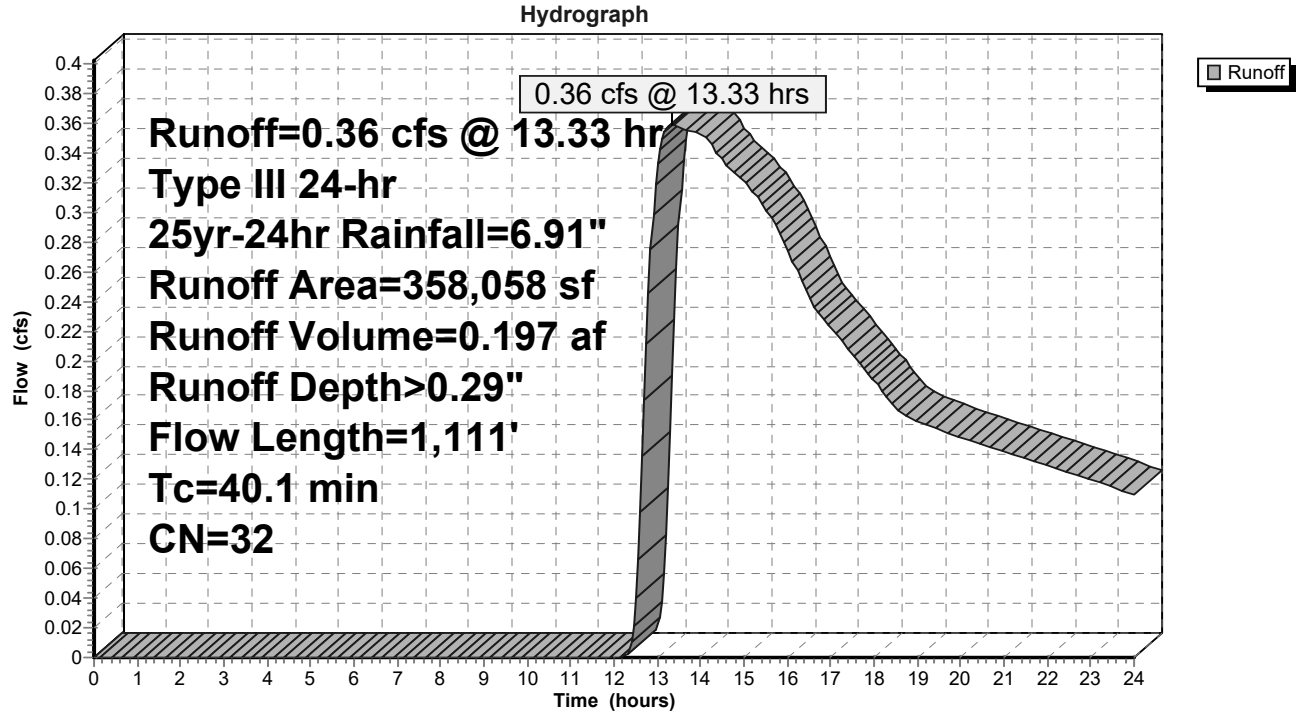
Runoff = 0.36 cfs @ 13.33 hrs, Volume= 0.197 af, Depth> 0.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

	Area (sf)	CN	Description
*	6,100	98	Paved parking
	43,560	39	>75% Grass cover, Good, HSG A
	308,398	30	Woods, Good, HSG A
	358,058	32	Weighted Average
	351,958		98.30% Pervious Area
	6,100		1.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.2	100	0.0200	0.08		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
9.5	385	0.0182	0.67		**Shallow Concentrated Flow, Segment #2** Woodland Kv= 5.0 fps
8.4	485	0.0371	0.96		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
2.0	141	0.0533	1.15		**Shallow Concentrated Flow, Segment #4** Woodland Kv= 5.0 fps
40.1	1,111	Total			

Subcatchment 15S: Offsite Flow



Summary for Subcatchment 21S: Catch Basin #1

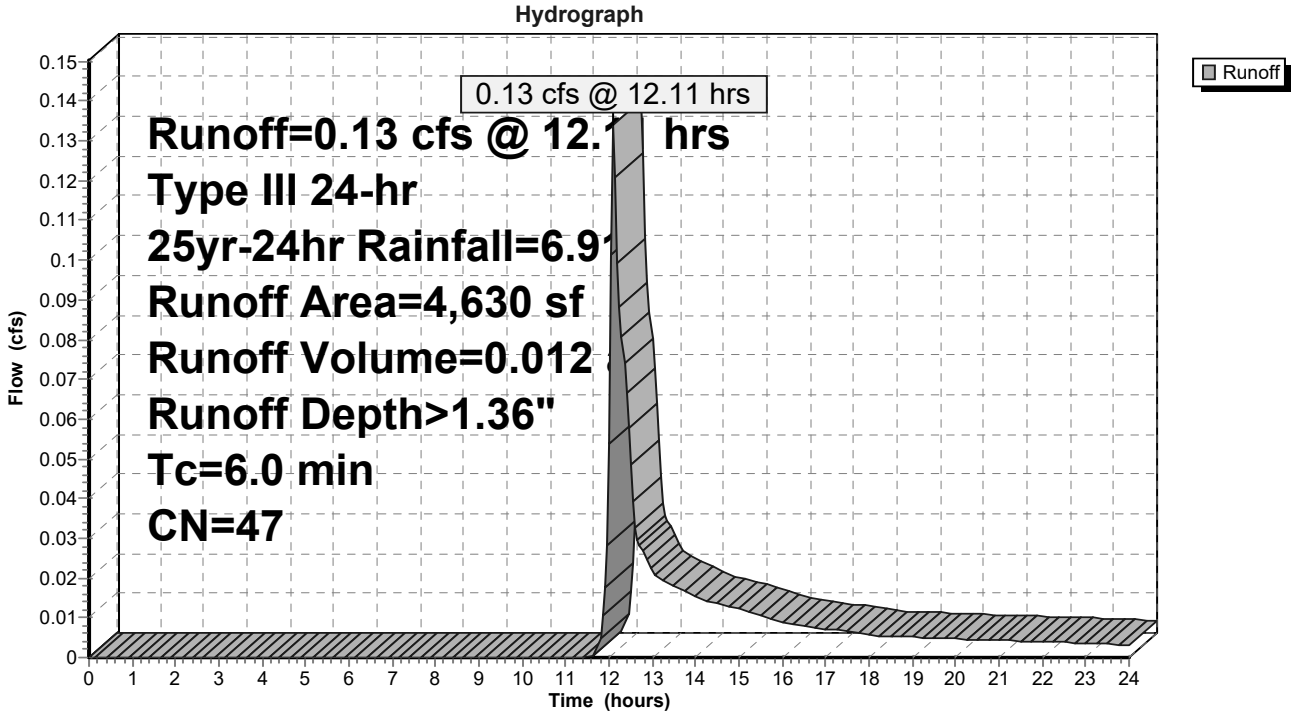
Runoff = 0.13 cfs @ 12.11 hrs, Volume= 0.012 af, Depth> 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
4,026	39	>75% Grass cover, Good, HSG A
604	98	Paved parking, HSG A
4,630	47	Weighted Average
4,026		86.95% Pervious Area
604		13.05% Impervious Area

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

Subcatchment 21S: Catch Basin #1



Summary for Subcatchment 22S: Catch Basin #2

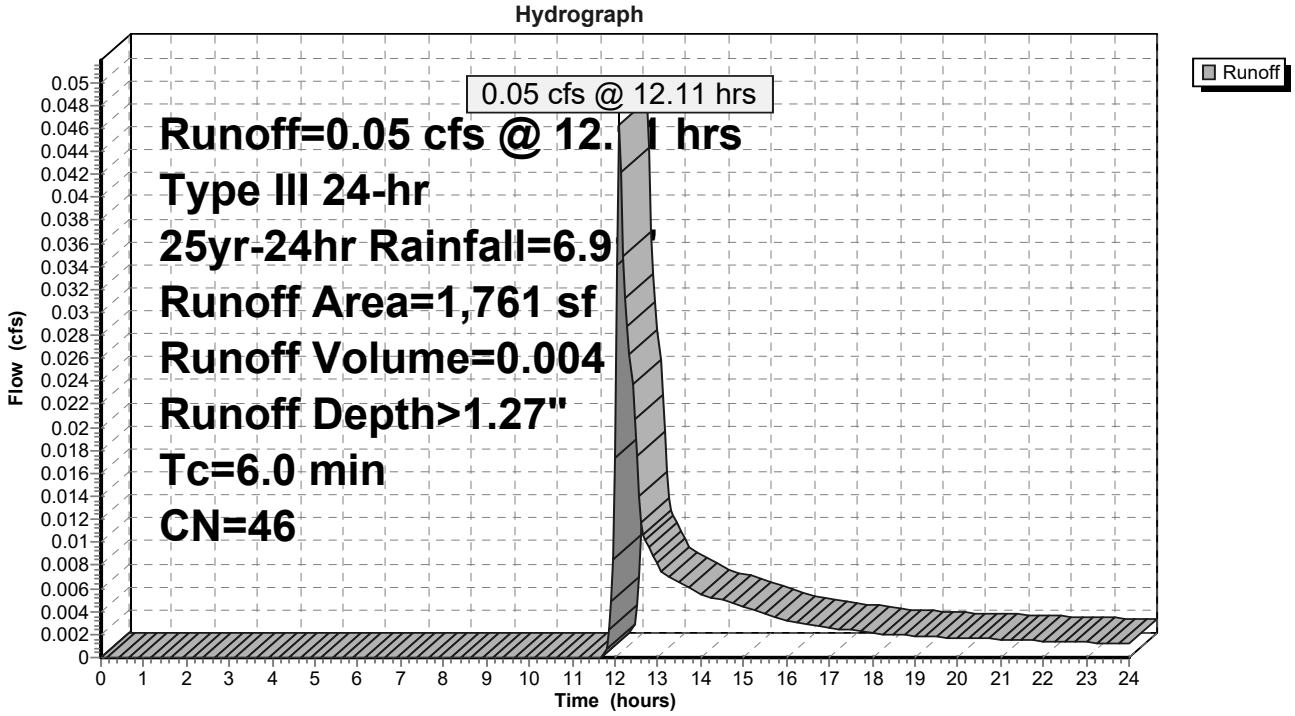
Runoff = 0.05 cfs @ 12.11 hrs, Volume= 0.004 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,557	39	>75% Grass cover, Good, HSG A
204	98	Paved parking, HSG A
1,761	46	Weighted Average
1,557		88.42% Pervious Area
204		11.58% Impervious Area

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

Subcatchment 22S: Catch Basin #2



Summary for Subcatchment 23S: Catch Basin #3

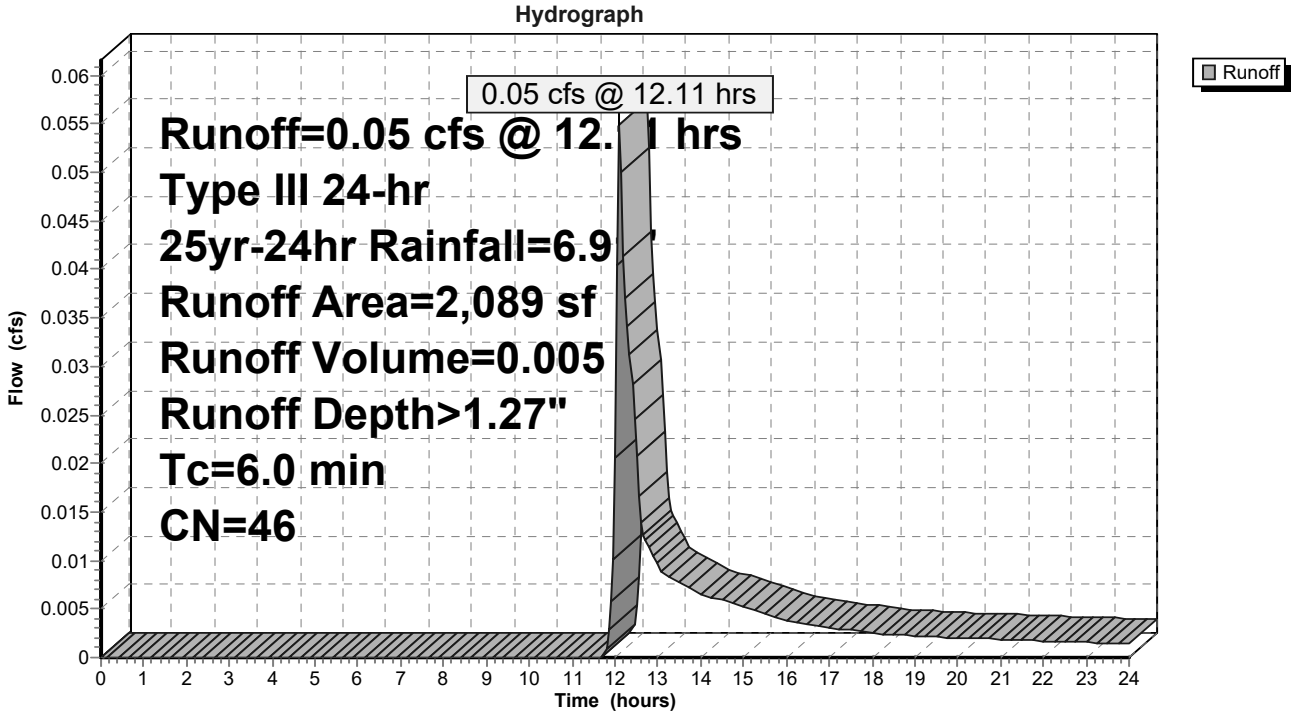
Runoff = 0.05 cfs @ 12.11 hrs, Volume= 0.005 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,845	39	>75% Grass cover, Good, HSG A
244	98	Paved parking, HSG A
2,089	46	Weighted Average
1,845		88.32% Pervious Area
244		11.68% Impervious Area

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

Subcatchment 23S: Catch Basin #3



Summary for Subcatchment 31S: Porous Pavement

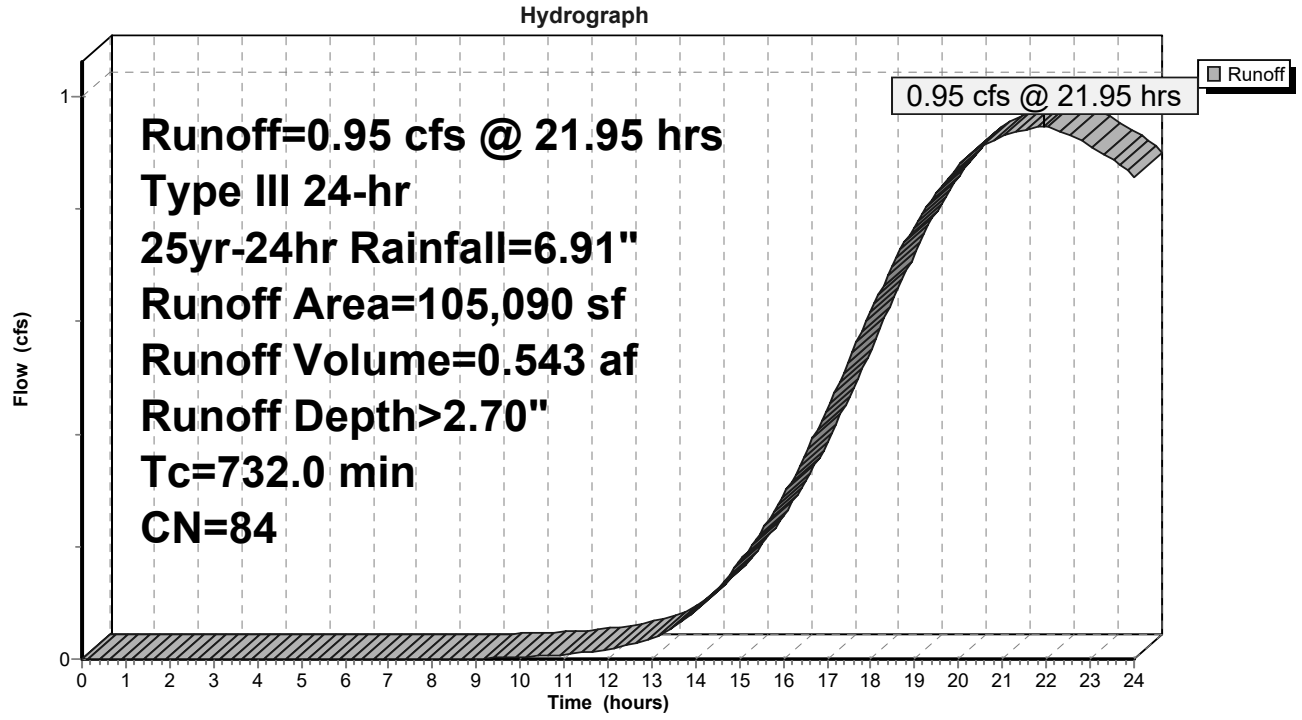
Runoff = 0.95 cfs @ 21.95 hrs, Volume= 0.543 af, Depth> 2.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
24,597	39	>75% Grass cover, Good, HSG A
34,697	98	Roofs, HSG A
45,796	98	Paved parking, HSG A
105,090	84	Weighted Average
24,597		23.41% Pervious Area
80,493		76.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
732.0					**Direct Entry, Segment #1 Porous Pavement**

Subcatchment 31S: Porous Pavement



Summary for Subcatchment 100S: Ex CB 100

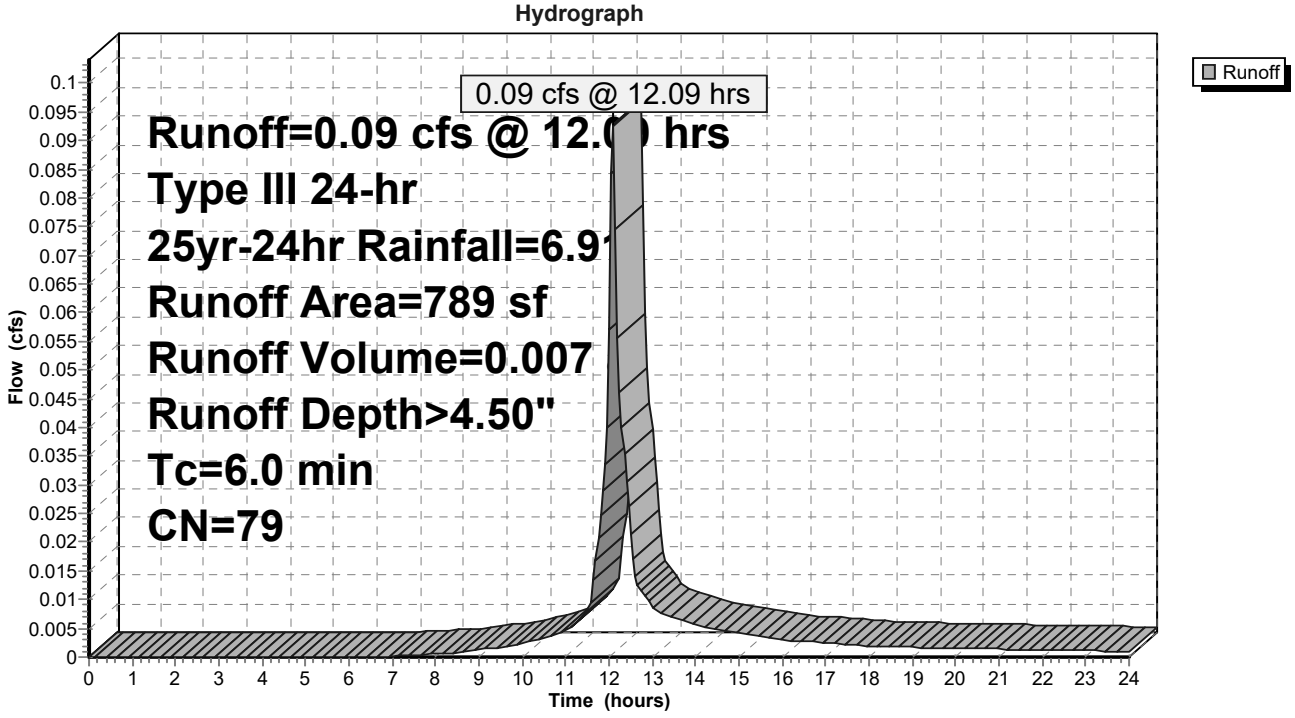
Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 4.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
507	98	Roofs, HSG A
258	39	>75% Grass cover, Good, HSG A
24	98	Paved parking, HSG A
789	79	Weighted Average
258		32.70% Pervious Area
531		67.30% Impervious Area

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

Subcatchment 100S: Ex CB 100



Summary for Subcatchment 148GS: Ex CB 1+48G

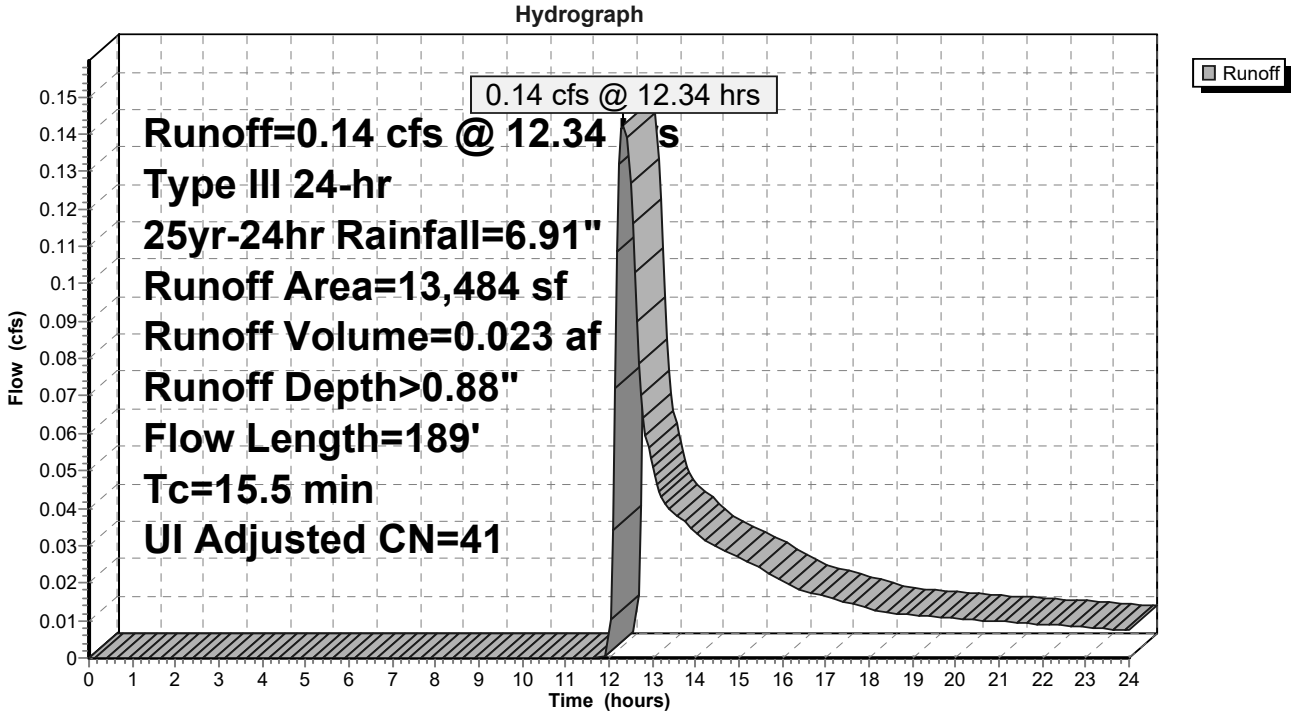
Runoff = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
6,867	39		>75% Grass cover, Good, HSG A
2,265	98		Unconnected pavement, HSG A
4,352	30		Woods, Good, HSG A
13,484	46	41	Weighted Average, UI Adjusted
11,219			83.20% Pervious Area
2,265			16.80% Impervious Area
2,265			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.0	100	0.0500	0.12		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
1.5	89	0.0198	0.98		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
15.5	189	Total			

Subcatchment 148GS: Ex CB 1+48G



Summary for Subcatchment 148RS: Ex CB 1+48R

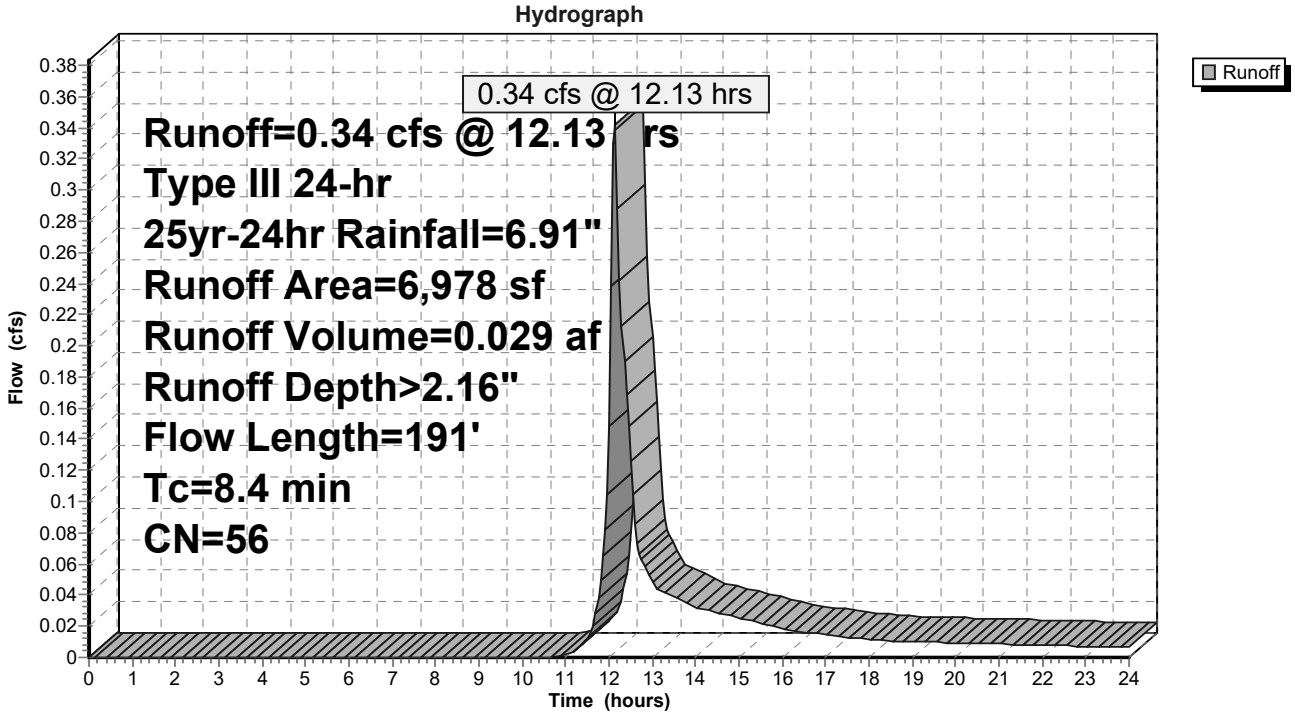
Runoff = 0.34 cfs @ 12.13 hrs, Volume= 0.029 af, Depth> 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,422	39	>75% Grass cover, Good, HSG A
2,171	98	Paved parking, HSG A
1,385	30	Woods, Good, HSG A
6,978	56	Weighted Average
4,807		68.89% Pervious Area
2,171		31.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0400	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.4	91	0.0247	1.10		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
8.4	191	Total			

Subcatchment 148RS: Ex CB 1+48R



Summary for Subcatchment 303GS: Ex CB 3+03G

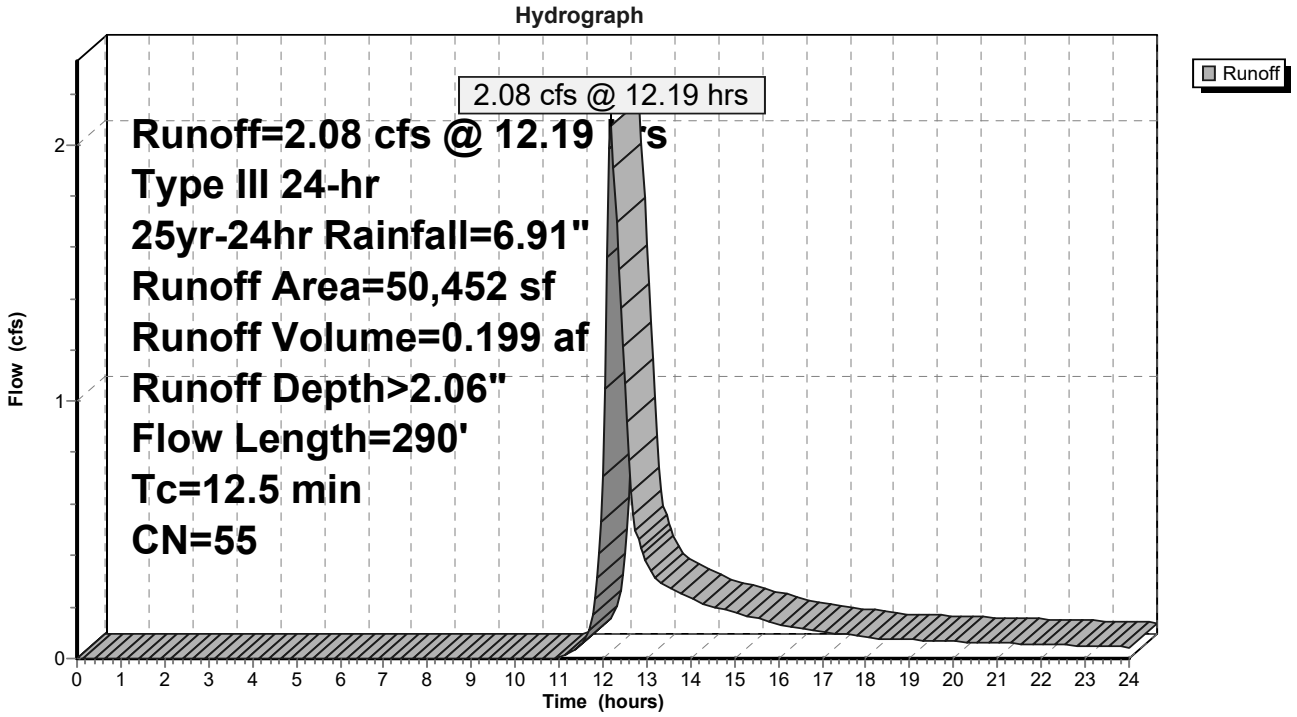
Runoff = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af, Depth> 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,226	98	Roofs, HSG A
16,471	39	>75% Grass cover, Good, HSG A
12,702	98	Paved parking, HSG A
17,377	30	Woods, Good, HSG A
676	98	Water Surface, HSG A
50,452	55	Weighted Average
33,848		67.09% Pervious Area
16,604		32.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.2	53	0.0236	0.17		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
5.2	47	0.1331	0.15		**Sheet Flow, Segment #2** Woods: Light underbrush n= 0.400 P2= 3.62"
0.4	35	0.0787	1.40		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
0.0	11	0.3537	4.16		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
1.6	127	0.0355	1.32		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
0.1	17	0.0584	4.91		**Shallow Concentrated Flow, Segment #6** Paved Kv= 20.3 fps
12.5	290	Total			

Subcatchment 303GS: Ex CB 3+03G



Summary for Subcatchment 304RS: Ex CB 3+04R

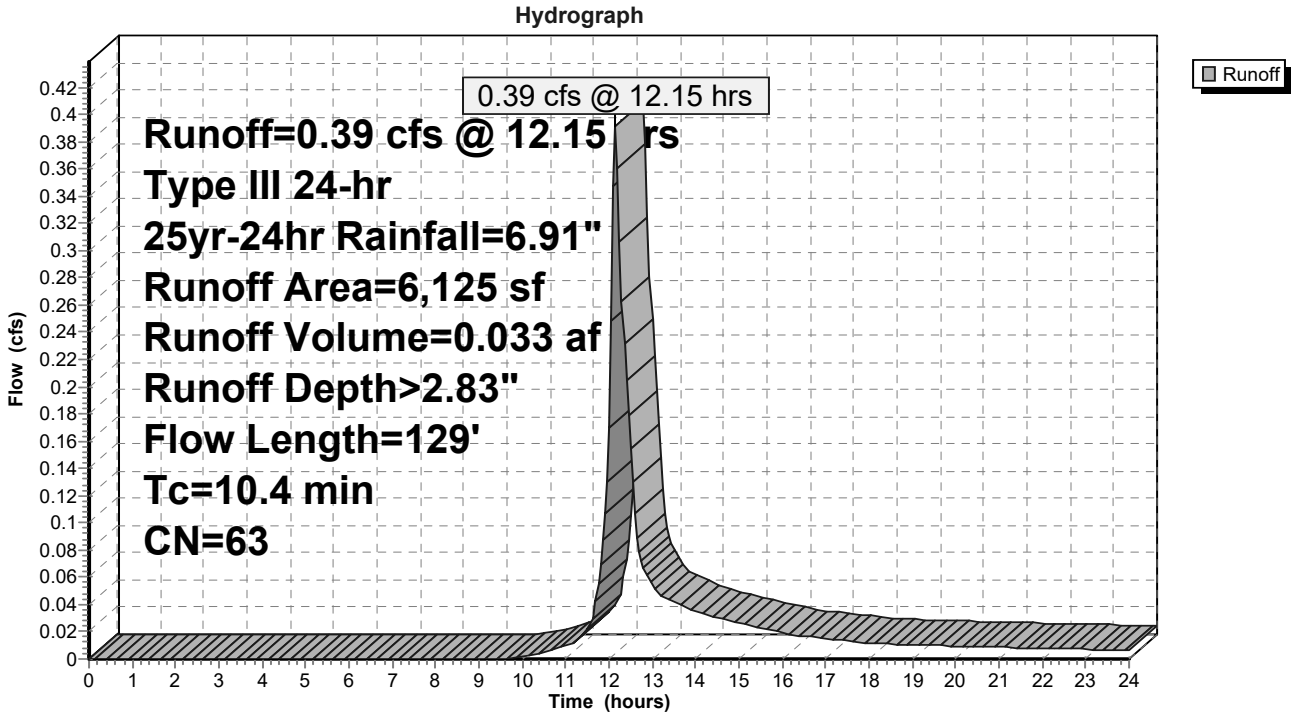
Runoff = 0.39 cfs @ 12.15 hrs, Volume= 0.033 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,618	39	>75% Grass cover, Good, HSG A
2,507	98	Paved parking, HSG A
6,125	63	Weighted Average
3,618		59.07% Pervious Area
2,507		40.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	81	0.0153	0.16		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.2	10	0.0250	1.01		**Sheet Flow, Segment #2** Smooth surfaces n= 0.011 P2= 3.62"
1.2	9	0.0278	0.13		**Sheet Flow, Segment #3** Grass: Short n= 0.150 P2= 3.62"
0.3	29	0.0509	1.58		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
10.4	129	Total			

Subcatchment 304RS: Ex CB 3+04R



Summary for Subcatchment 390GS: Ex CB 3+90G

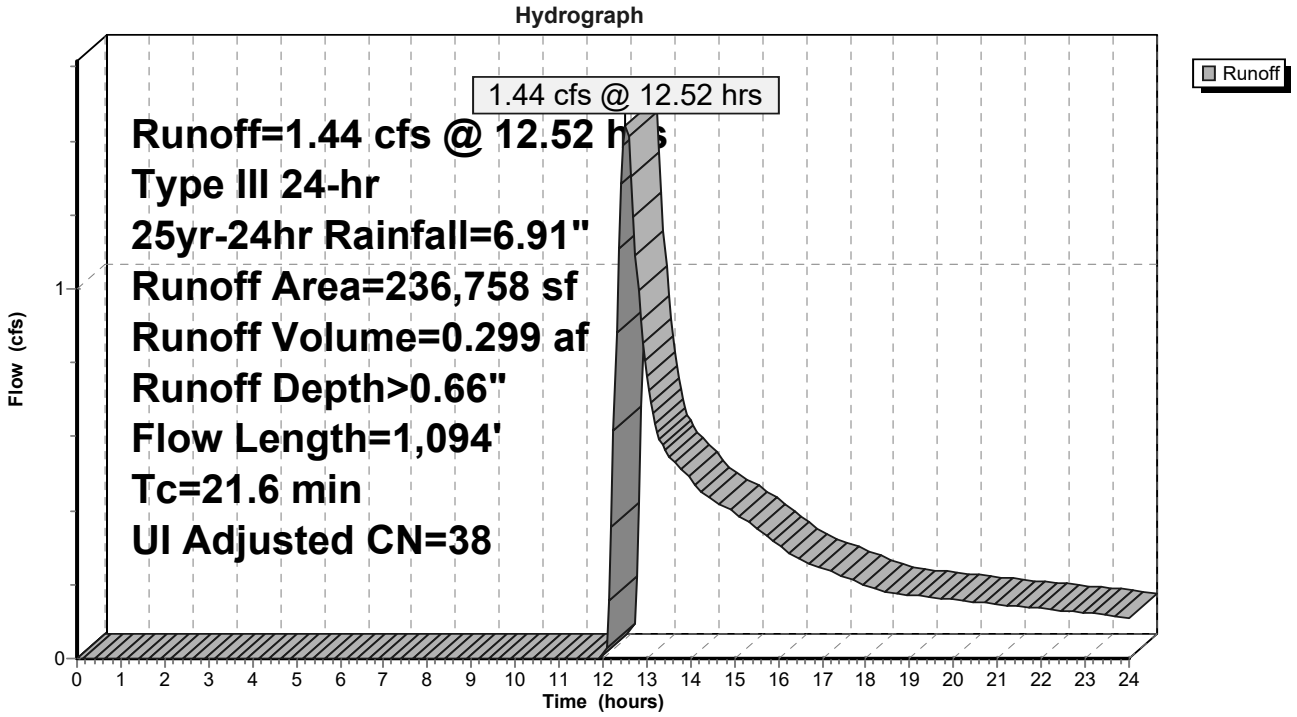
Runoff = 1.44 cfs @ 12.52 hrs, Volume= 0.299 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
14,979	98		Unconnected roofs, HSG A
108,159	39		>75% Grass cover, Good, HSG A
8,253	98		Unconnected pavement, HSG A
105,367	30		Woods, Good, HSG A
236,758	41	38	Weighted Average, UI Adjusted
213,526			90.19% Pervious Area
23,232			9.81% Impervious Area
23,232			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	100	0.0050	0.35		**Shallow Concentrated Flow, Segment #1** Woodland Kv= 5.0 fps
3.1	135	0.0111	0.74		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
2.8	161	0.0357	0.94		**Shallow Concentrated Flow, Segment #3** Woodland Kv= 5.0 fps
0.1	24	0.2514	3.51		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
10.9	674	0.0215	1.03		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
21.6	1,094	Total			

Subcatchment 390GS: Ex CB 3+90G



Summary for Subcatchment 402GS: Ex CB 4+02G

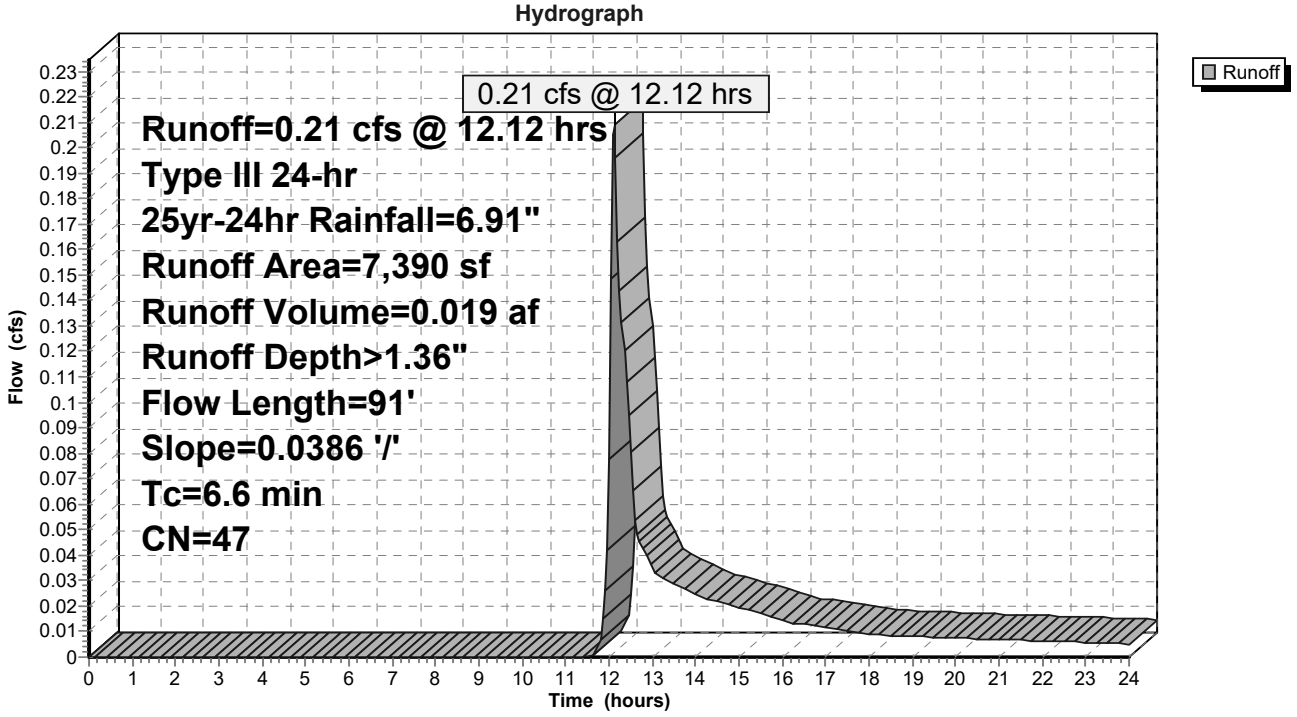
Runoff = 0.21 cfs @ 12.12 hrs, Volume= 0.019 af, Depth> 1.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
573	98	Roofs, HSG A
6,245	39	>75% Grass cover, Good, HSG A
435	98	Paved parking, HSG A
137	30	Woods, Good, HSG A
7,390	47	Weighted Average
6,382		86.36% Pervious Area
1,008		13.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	91	0.0386	0.23		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"

Subcatchment 402GS: Ex CB 4+02G



Summary for Subcatchment 419LS: Ex CB 4+19L

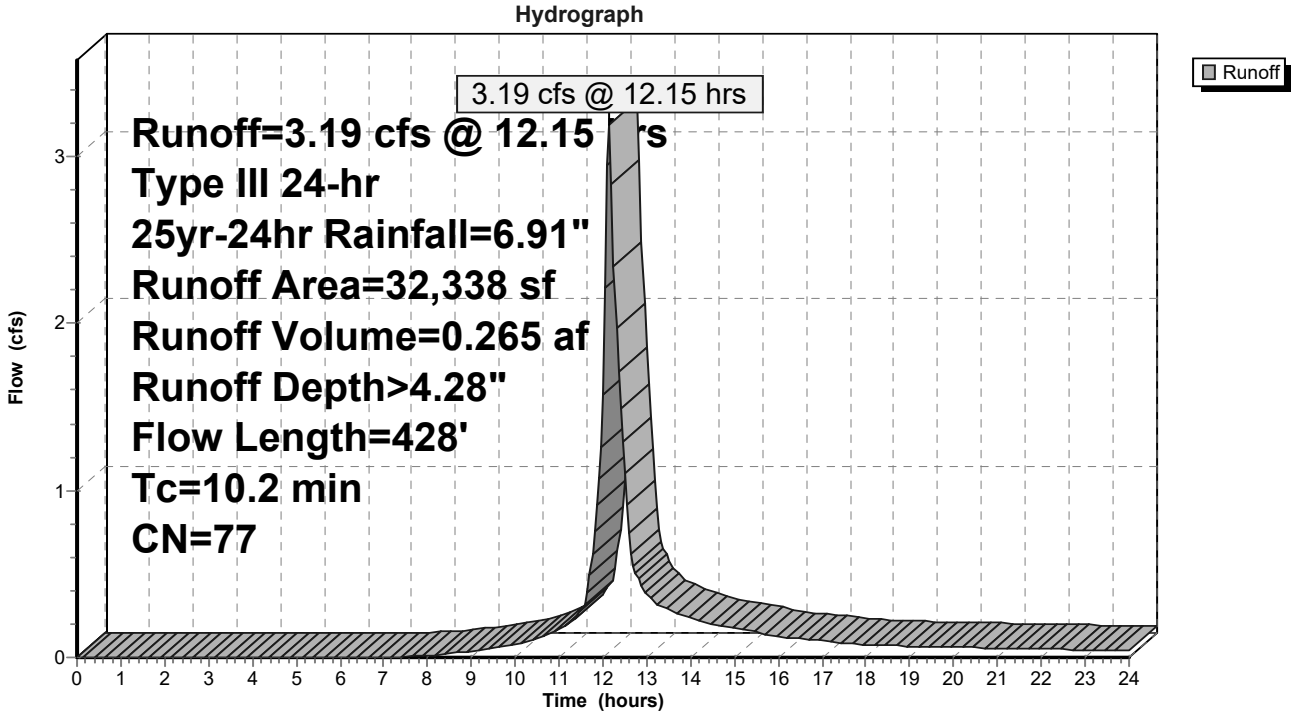
Runoff = 3.19 cfs @ 12.15 hrs, Volume= 0.265 af, Depth> 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,277	98	Roofs, HSG A
11,583	39	>75% Grass cover, Good, HSG A
19,478	98	Paved parking, HSG A
32,338	77	Weighted Average
11,583		35.82% Pervious Area
20,755		64.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	87	0.0201	0.18		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
2.0	341	0.0205	2.91		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
10.2	428	Total			

Subcatchment 419LS: Ex CB 4+19L



Summary for Subcatchment 419RS: Ex CB 4+19R

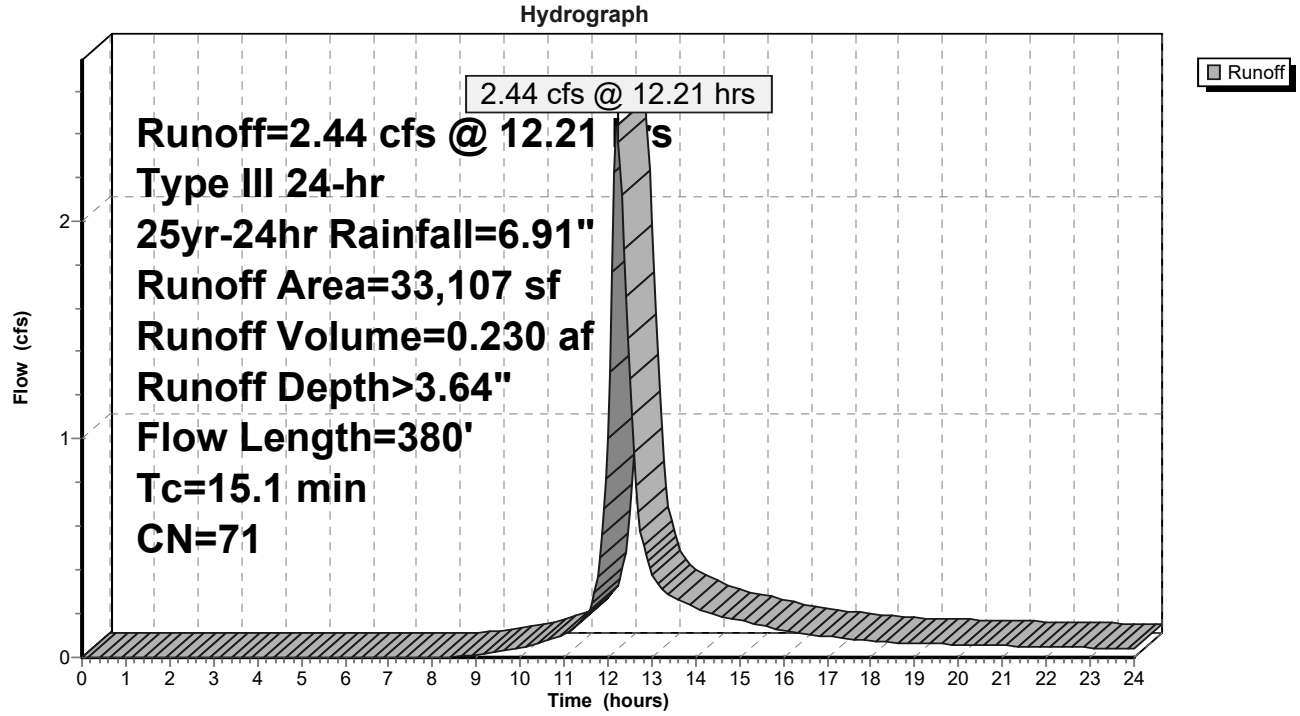
Runoff = 2.44 cfs @ 12.21 hrs, Volume= 0.230 af, Depth> 3.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
6,785	98	Roofs, HSG A
15,010	39	>75% Grass cover, Good, HSG A
11,312	98	Paved parking, HSG A
33,107	71	Weighted Average
15,010		45.34% Pervious Area
18,097		54.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0075	0.12		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.5	280	0.0241	3.15		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
15.1	380	Total			

Subcatchment 419RS: Ex CB 4+19R



Summary for Subcatchment 857LS: Ex CB 8+57L

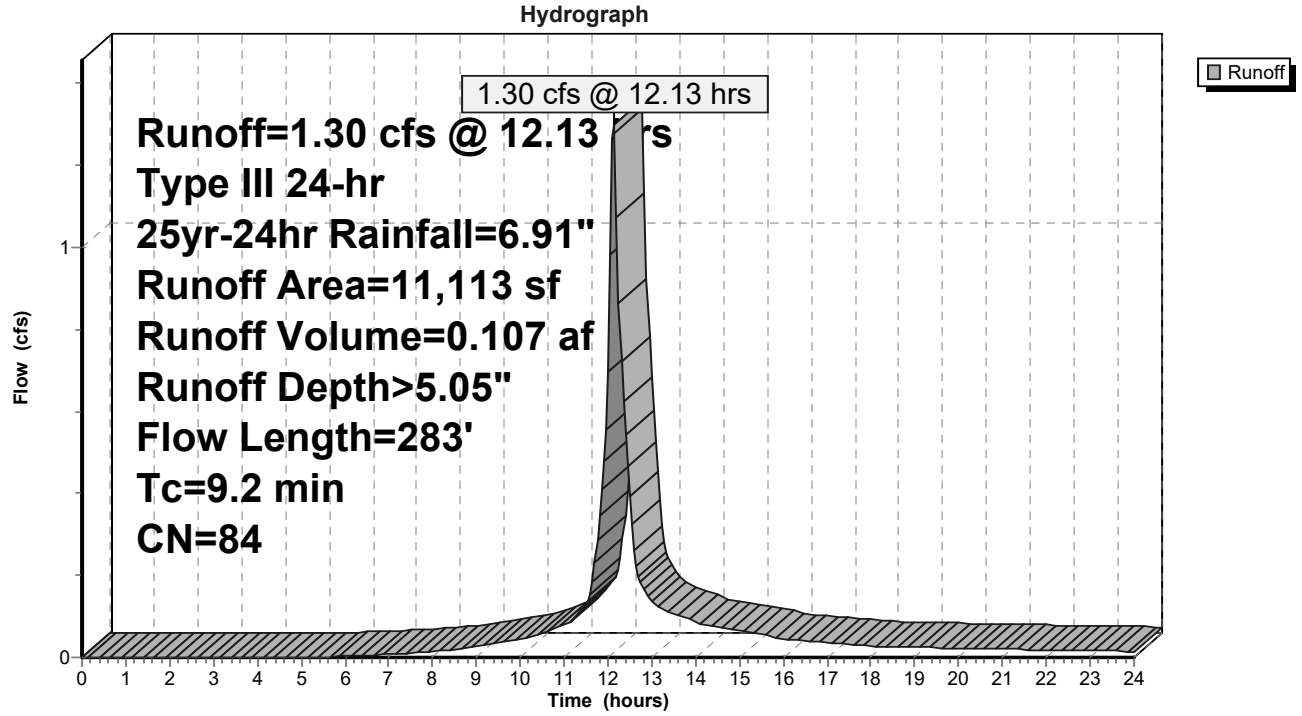
Runoff = 1.30 cfs @ 12.13 hrs, Volume= 0.107 af, Depth> 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
898	98	Roofs, HSG A
2,629	39	>75% Grass cover, Good, HSG A
7,586	98	Paved parking, HSG A
11,113	84	Weighted Average
2,629		23.66% Pervious Area
8,484		76.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	77	0.0163	0.16		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.1	206	0.0230	3.08		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
9.2	283	Total			

Subcatchment 857LS: Ex CB 8+57L



Summary for Subcatchment 857RS: Ex CB 8+57R

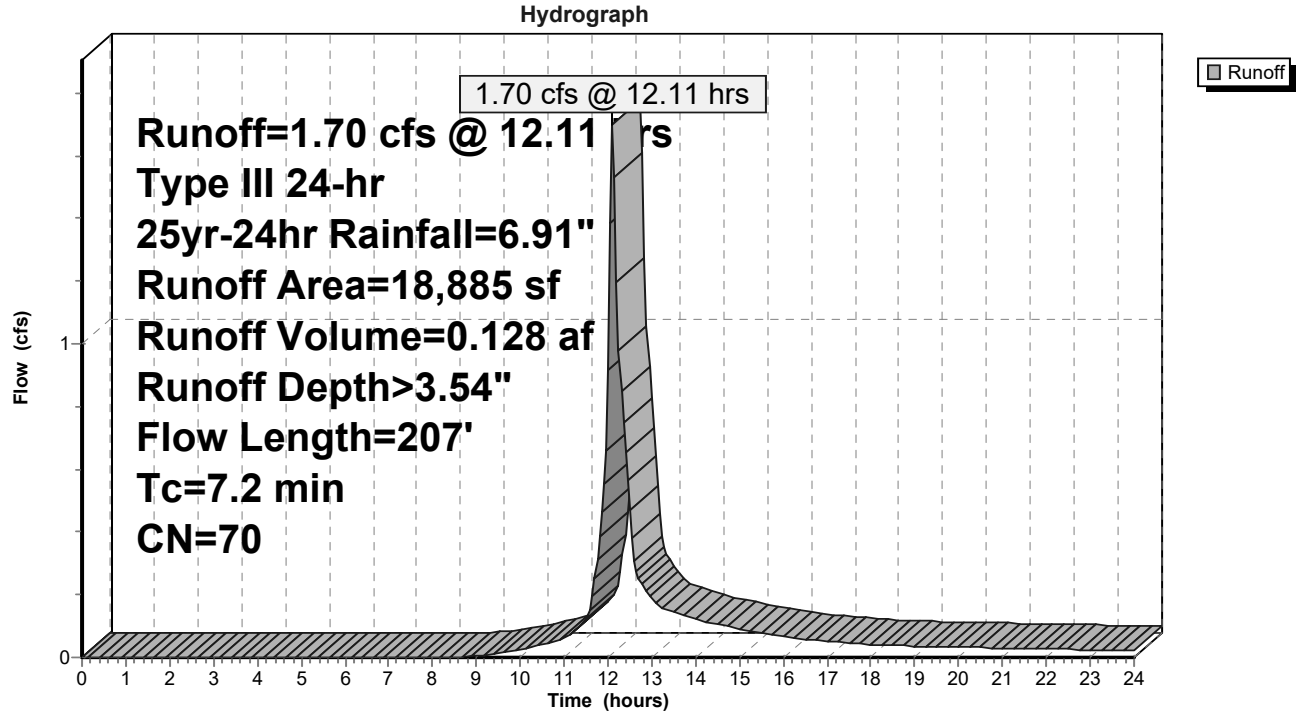
Runoff = 1.70 cfs @ 12.11 hrs, Volume= 0.128 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,834	98	Roofs, HSG A
8,863	39	>75% Grass cover, Good, HSG A
6,188	98	Paved parking, HSG A
18,885	70	Weighted Average
8,863		46.93% Pervious Area
10,022		53.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	78	0.0288	0.20		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.7	129	0.0214	2.97		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
7.2	207	Total			

Subcatchment 857RS: Ex CB 8+57R



Summary for Subcatchment 900S: Rain Garden Area

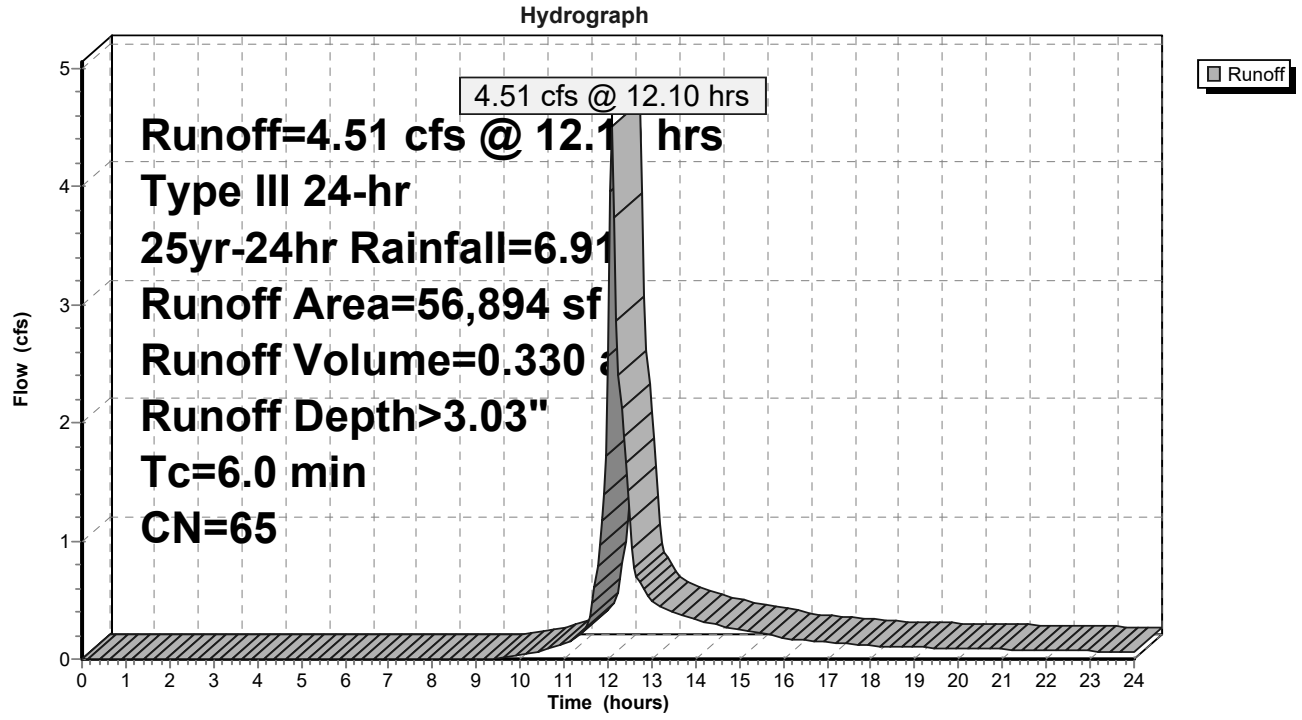
Runoff = 4.51 cfs @ 12.10 hrs, Volume= 0.330 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
6,117	98	Roofs, HSG A
18,524	39	>75% Grass cover, Good, HSG A
32,253	74	>75% Grass cover, Good, HSG C
56,894	65	Weighted Average
50,777		89.25% Pervious Area
6,117		10.75% Impervious Area

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

Subcatchment 900S: Rain Garden Area



Summary for Subcatchment 1000S: Area to Sediment Forebay

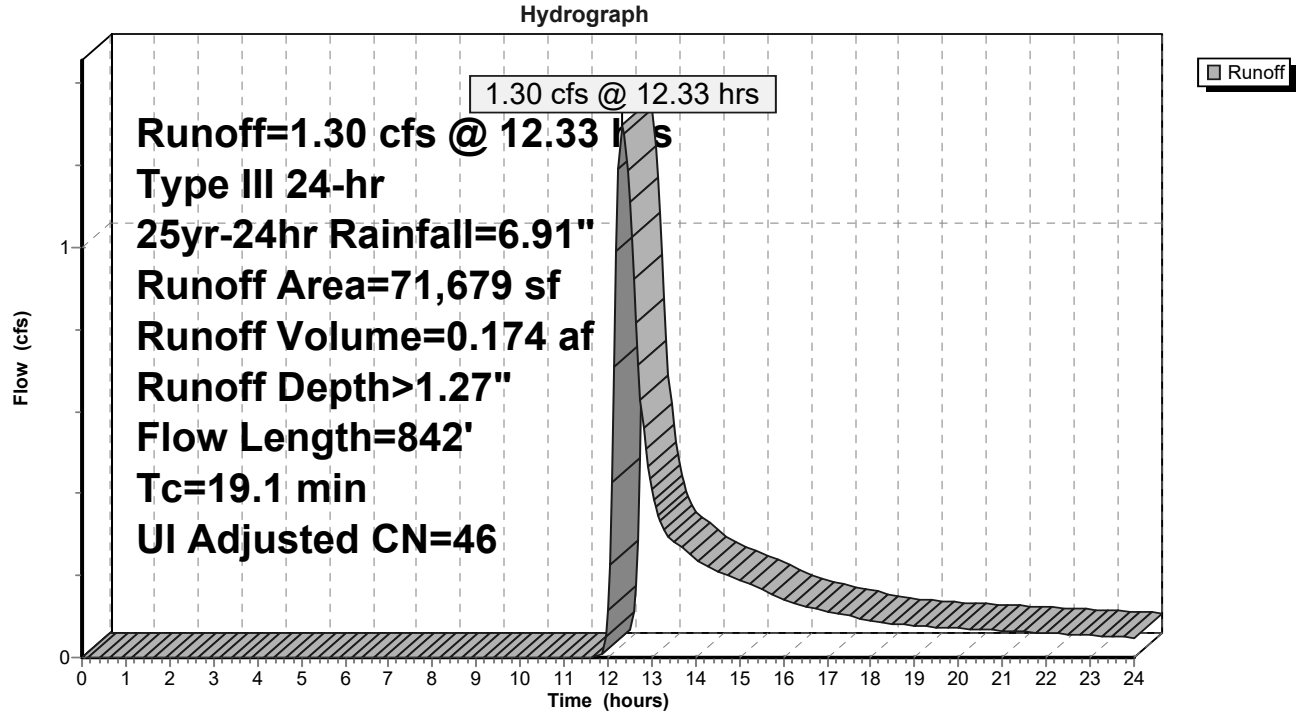
Runoff = 1.30 cfs @ 12.33 hrs, Volume= 0.174 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
18,191	98		Unconnected roofs, HSG A
53,488	39		>75% Grass cover, Good, HSG A
71,679	54	46	Weighted Average, UI Adjusted
53,488			74.62% Pervious Area
18,191			25.38% Impervious Area
18,191			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0150	0.16		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
2.5	171	0.0263	1.14		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
0.9	92	0.0546	1.64		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
5.4	479	0.0439	1.47		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
19.1	842	Total			

Subcatchment 1000S: Area to Sediment Forebay



Summary for Subcatchment 1295GS: Ex CB 12+95G

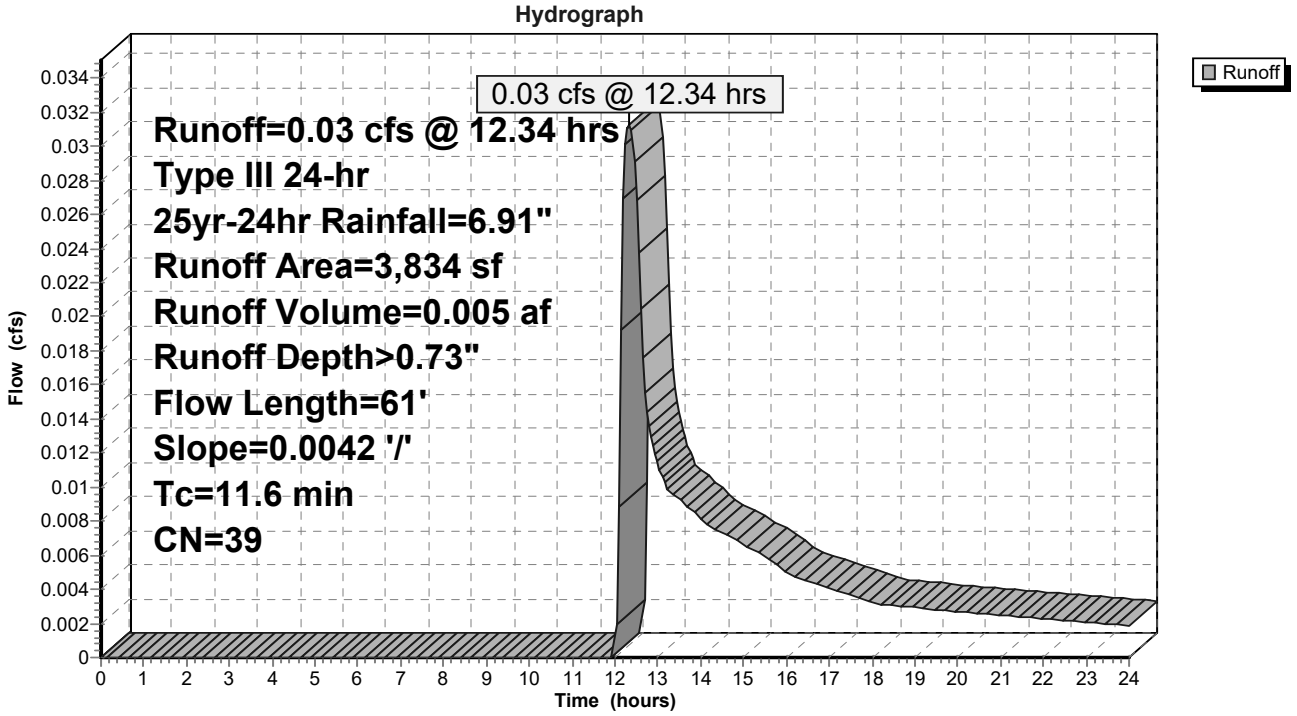
Runoff = 0.03 cfs @ 12.34 hrs, Volume= 0.005 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,834	39	>75% Grass cover, Good, HSG A
3,834		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	61	0.0042	0.09		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"

Subcatchment 1295GS: Ex CB 12+95G



Summary for Subcatchment 1295LS: Ex CB 12+95L

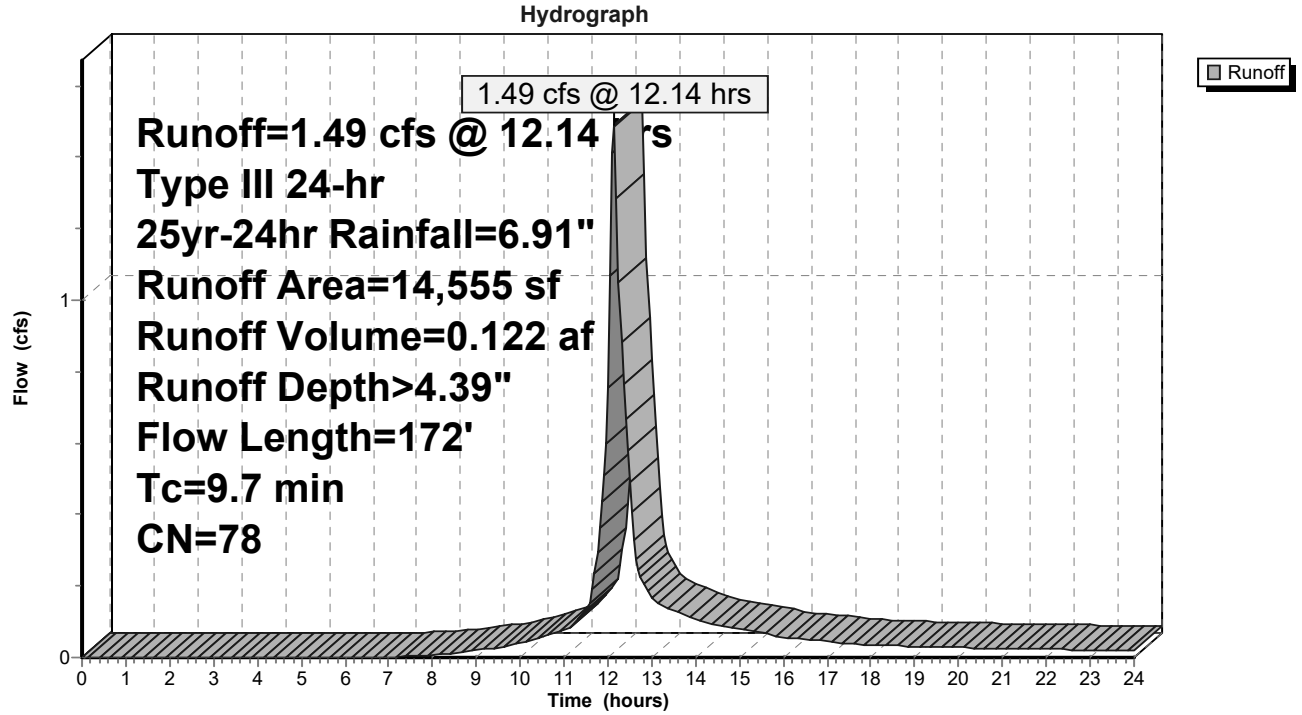
Runoff = 1.49 cfs @ 12.14 hrs, Volume= 0.122 af, Depth> 4.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,230	98	Roofs, HSG A
5,011	39	>75% Grass cover, Good, HSG A
8,314	98	Paved parking, HSG A
14,555	78	Weighted Average
5,011		34.43% Pervious Area
9,544		65.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0225	0.19		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.1	18	0.0141	2.41		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
0.6	31	0.0160	0.89		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
0.2	23	0.0107	2.10		**Shallow Concentrated Flow, Segment #4** Paved Kv= 20.3 fps
9.7	172	Total			

Subcatchment 1295LS: Ex CB 12+95L



Summary for Subcatchment 1295RS: Ex CB 12+95R

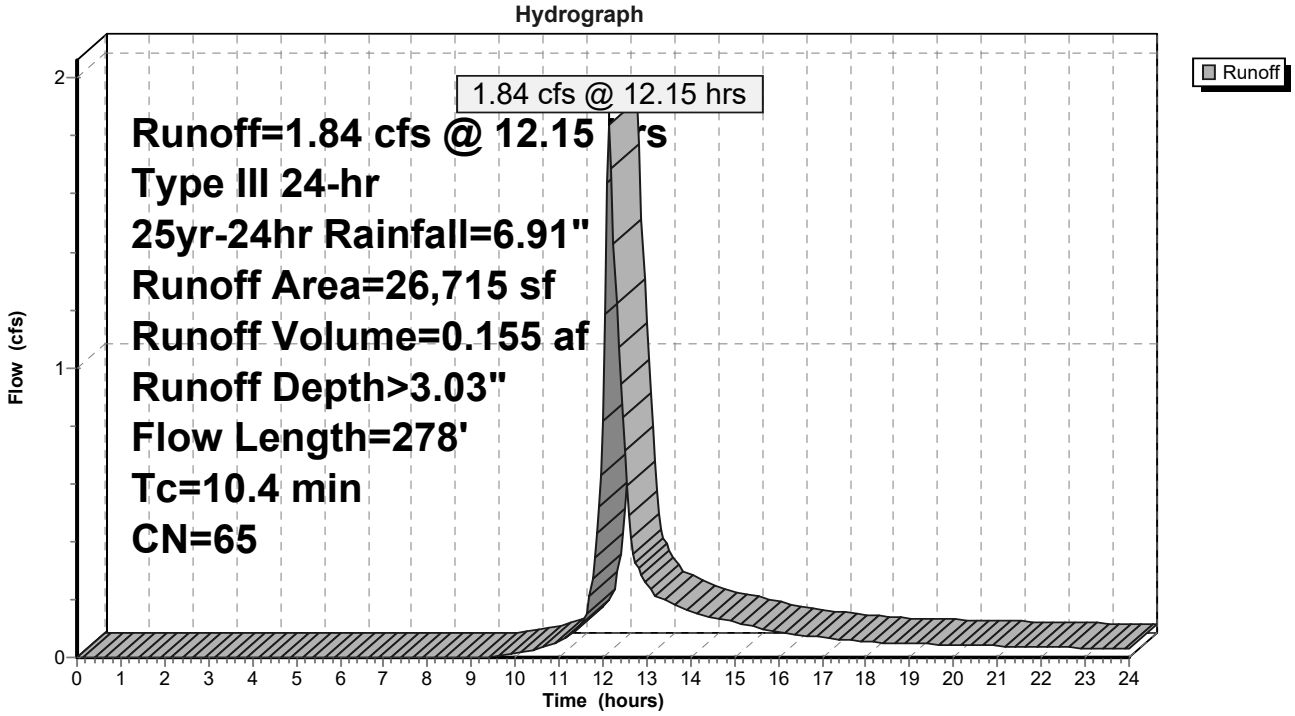
Runoff = 1.84 cfs @ 12.15 hrs, Volume= 0.155 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
4,673	98	Roofs, HSG A
14,723	39	>75% Grass cover, Good, HSG A
7,319	98	Paved parking, HSG A
26,715	65	Weighted Average
14,723		55.11% Pervious Area
11,992		44.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	79	0.0127	0.14		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.3	199	0.0151	2.49		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
10.4	278	Total			

Subcatchment 1295RS: Ex CB 12+95R



Summary for Subcatchment 1643LS: Ex CB 16+43L

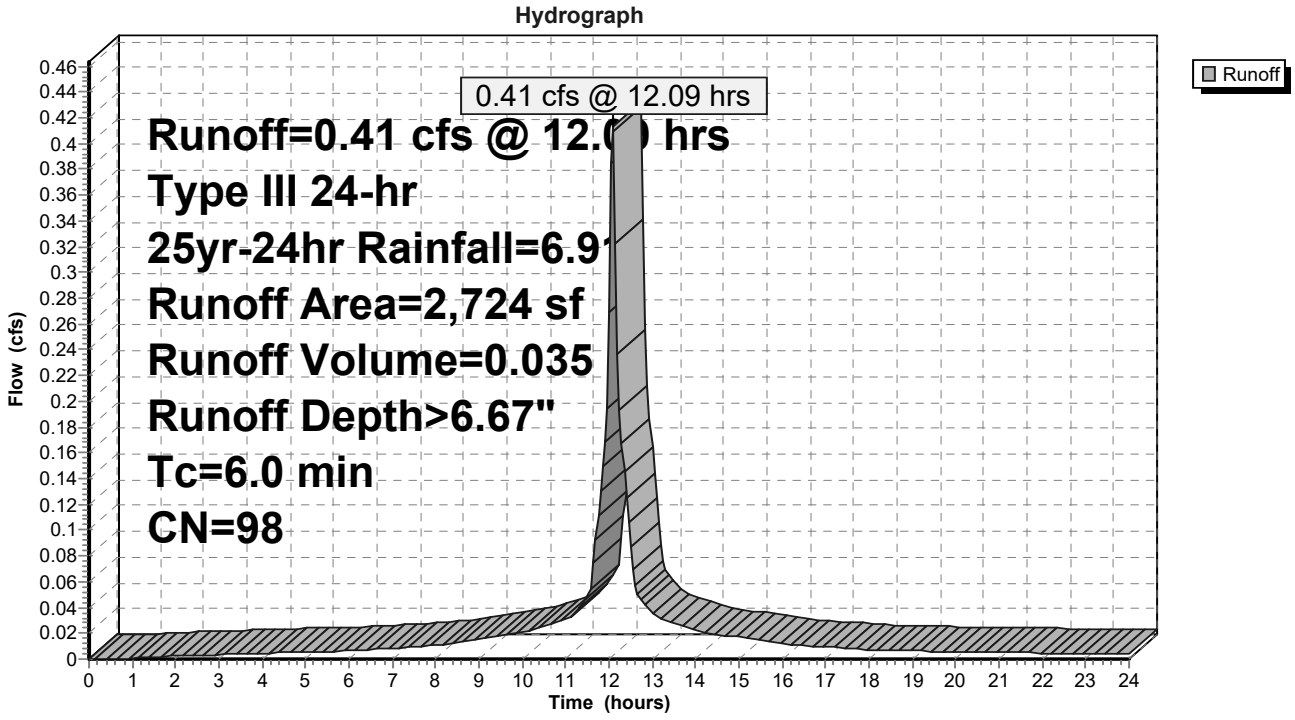
Runoff = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
845	98	Roofs, HSG A
12	39	>75% Grass cover, Good, HSG A
1,867	98	Paved parking, HSG A
2,724	98	Weighted Average
12		0.44% Pervious Area
2,712		99.56% Impervious Area

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

Subcatchment 1643LS: Ex CB 16+43L



Summary for Subcatchment 1643RS: Ex CB 16+43R

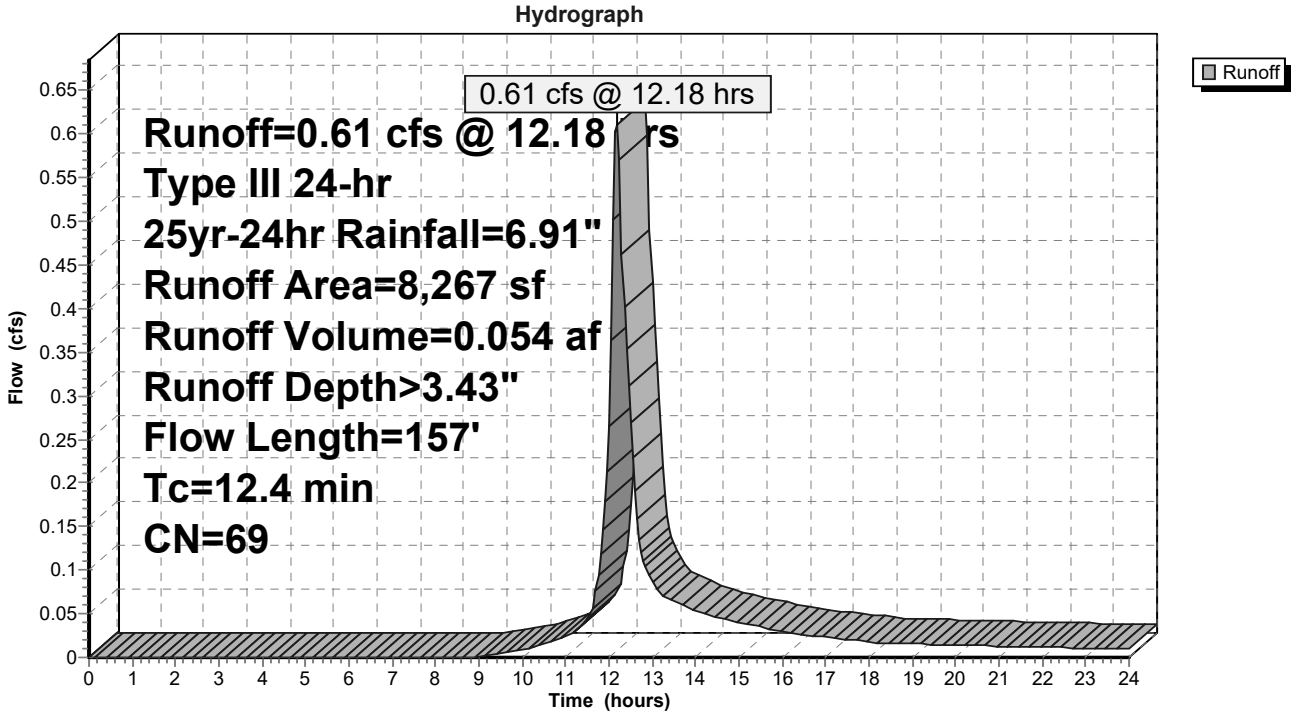
Runoff = 0.61 cfs @ 12.18 hrs, Volume= 0.054 af, Depth> 3.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,406	98	Roofs, HSG A
4,120	39	>75% Grass cover, Good, HSG A
2,741	98	Paved parking, HSG A
8,267	69	Weighted Average
4,120		49.84% Pervious Area
4,147		50.16% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	100	0.0100	0.14		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.2	57	0.0397	4.04		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
12.4	157	Total			

Subcatchment 1643RS: Ex CB 16+43R



Summary for Subcatchment 1785LS: Ex CB 17+85L

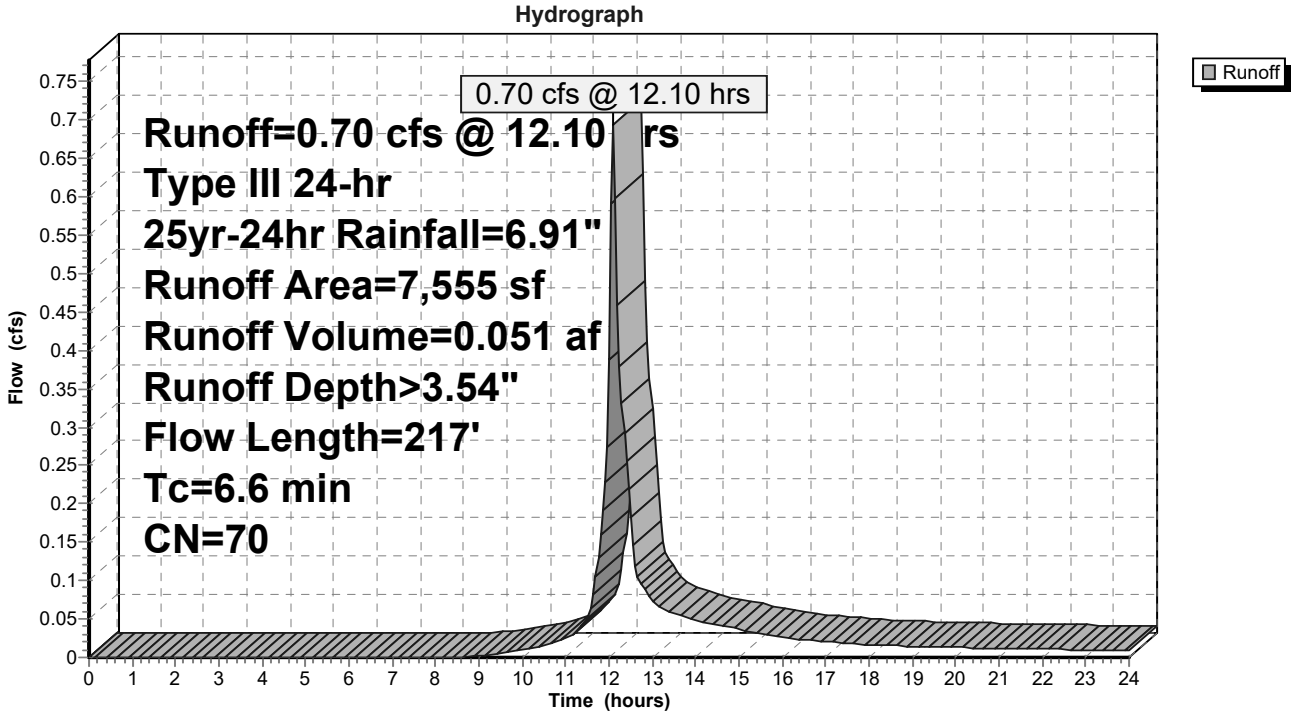
Runoff = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,105	98	Roofs, HSG A
3,580	39	>75% Grass cover, Good, HSG A
2,870	98	Paved parking, HSG A
7,555	70	Weighted Average
3,580		47.39% Pervious Area
3,975		52.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	100	0.0550	0.27		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.5	117	0.0363	3.87		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
6.6	217	Total			

Subcatchment 1785LS: Ex CB 17+85L



Summary for Subcatchment 1785RS: Ex CB 17+85R

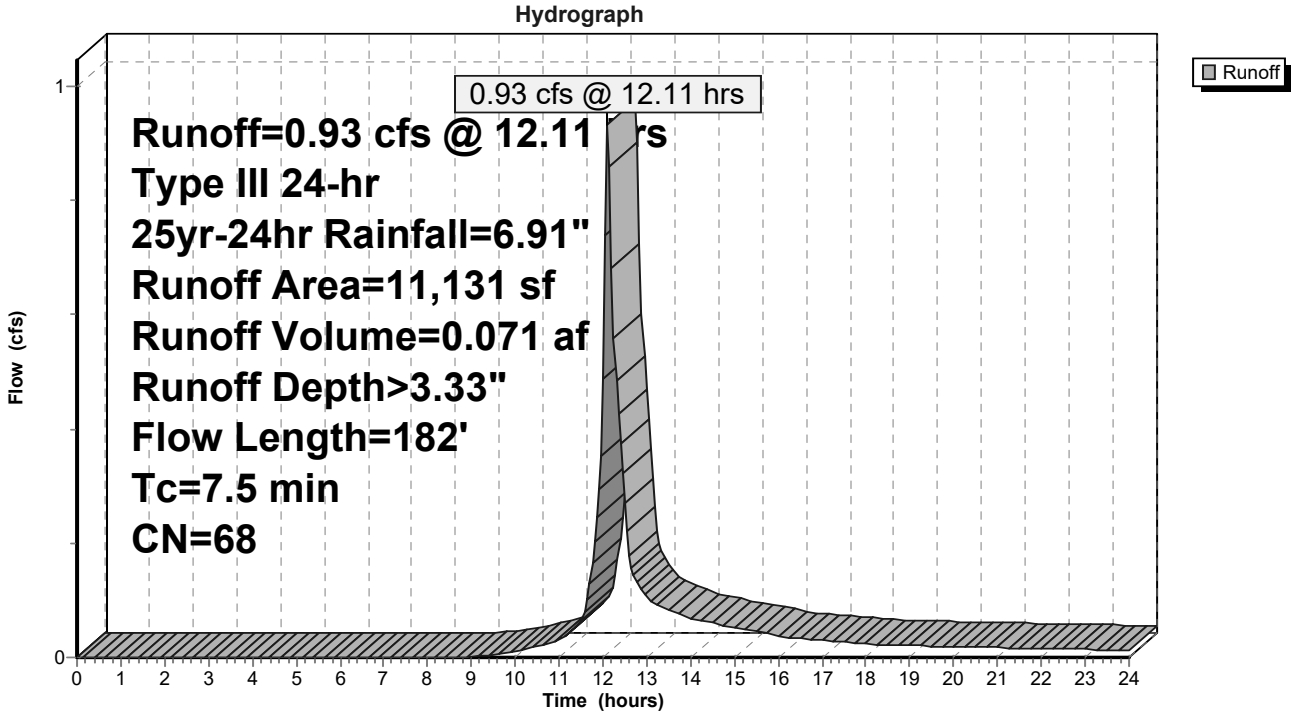
Runoff = 0.93 cfs @ 12.11 hrs, Volume= 0.071 af, Depth> 3.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,753	98	Roofs, HSG A
5,666	39	>75% Grass cover, Good, HSG A
3,712	98	Paved parking, HSG A
11,131	68	Weighted Average
5,666		50.90% Pervious Area
5,465		49.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	100	0.0375	0.23		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.3	82	0.0428	4.20		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
7.5	182	Total			

Subcatchment 1785RS: Ex CB 17+85R



Summary for Subcatchment 1928LS: Ex CB 19+28L

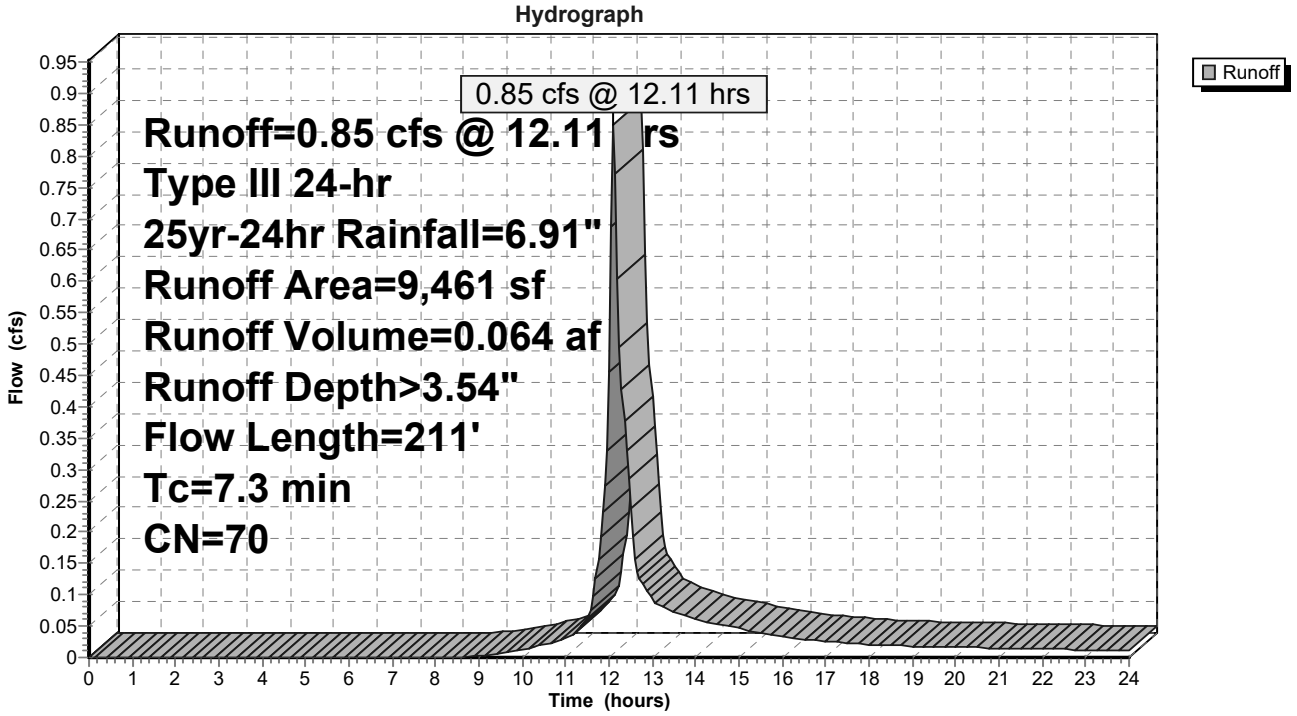
Runoff = 0.85 cfs @ 12.11 hrs, Volume= 0.064 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,895	98	Roofs, HSG A
4,519	39	>75% Grass cover, Good, HSG A
3,047	98	Paved parking, HSG A
9,461	70	Weighted Average
4,519		47.76% Pervious Area
4,942		52.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.8	100	0.0425	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.1	17	0.0877	2.07		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
0.4	94	0.0481	4.45		**Shallow Concentrated Flow, Segment #1** Paved Kv= 20.3 fps
7.3	211	Total			

Subcatchment 1928LS: Ex CB 19+28L



Summary for Subcatchment 1928RS: Ex CB 19+28R

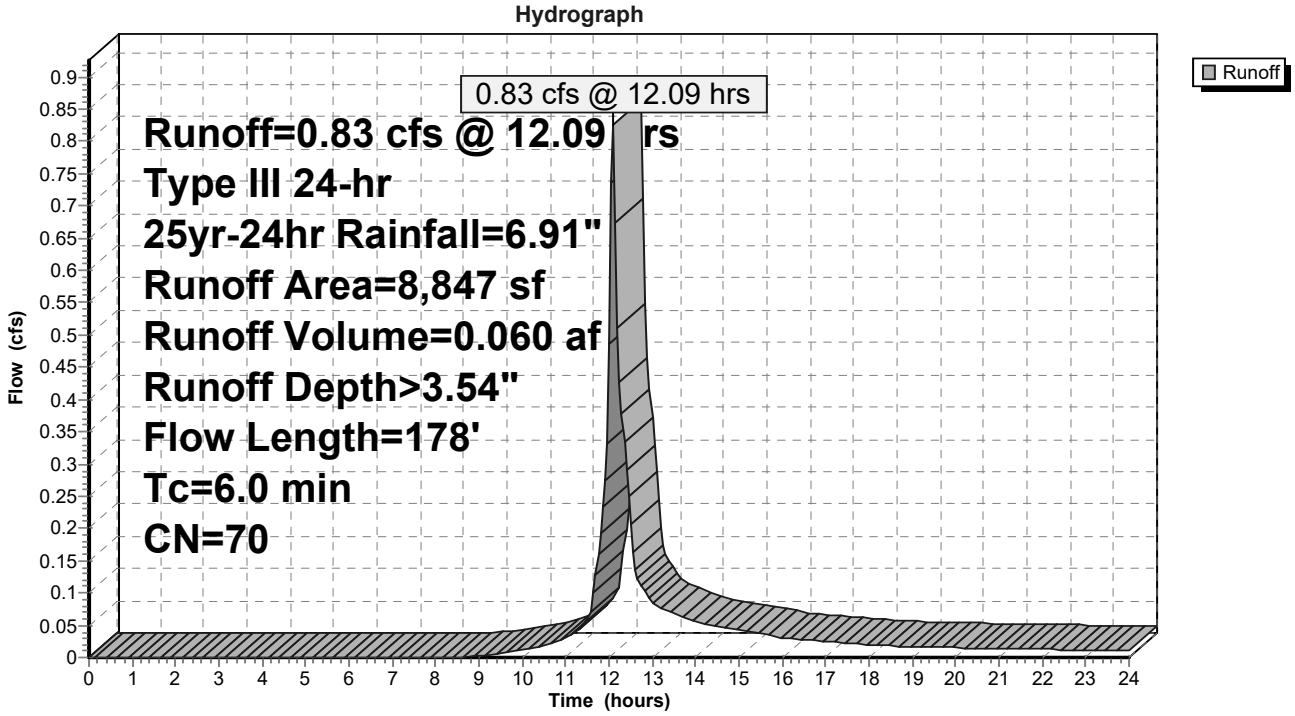
Runoff = 0.83 cfs @ 12.09 hrs, Volume= 0.060 af, Depth> 3.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
912	98	Roofs, HSG A
4,138	39	>75% Grass cover, Good, HSG A
3,797	98	Paved parking, HSG A
8,847	70	Weighted Average
4,138		46.77% Pervious Area
4,709		53.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	40	0.0681	0.25		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.6	60	0.0377	1.70		**Sheet Flow, Segment #2** Smooth surfaces n= 0.011 P2= 3.62"
0.3	78	0.0386	3.99		**Shallow Concentrated Flow, Segment #3** Paved Kv= 20.3 fps
3.6	178	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1928RS: Ex CB 19+28R



Summary for Subcatchment 1979RS: Ex CB 19+79R

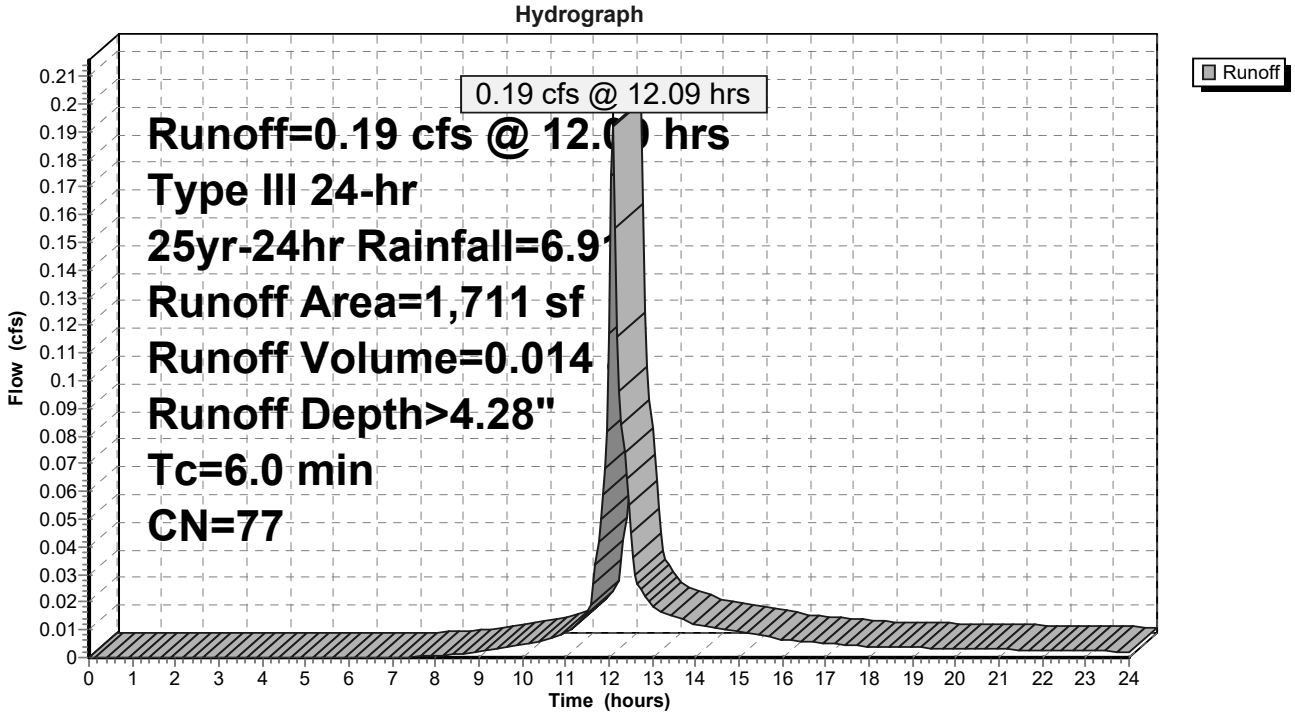
Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.014 af, Depth> 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
623	39	>75% Grass cover, Good, HSG A
1,088	98	Paved parking, HSG A
1,711	77	Weighted Average
623		36.41% Pervious Area
1,088		63.59% Impervious Area

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

Subcatchment 1979RS: Ex CB 19+79R



Summary for Subcatchment 2173LS: Ex CB 21+73L

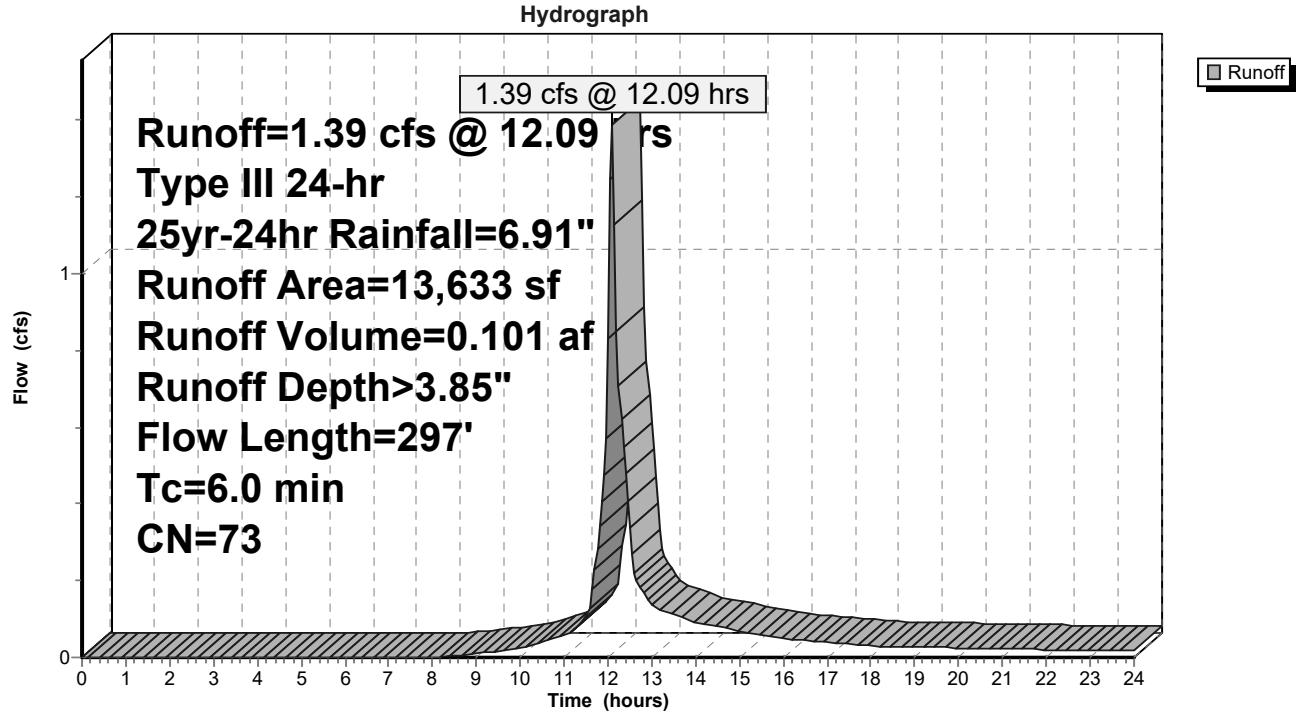
Runoff = 1.39 cfs @ 12.09 hrs, Volume= 0.101 af, Depth> 3.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
2,788	98	Roofs, HSG A
5,776	39	>75% Grass cover, Good, HSG A
5,069	98	Paved parking, HSG A
13,633	73	Weighted Average
5,776		42.37% Pervious Area
7,857		57.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	70	0.0891	0.31		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.1	227	0.0298	3.50		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
4.9	297	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 2173LS: Ex CB 21+73L



Summary for Subcatchment 2173RS: Ex CB 21+73R

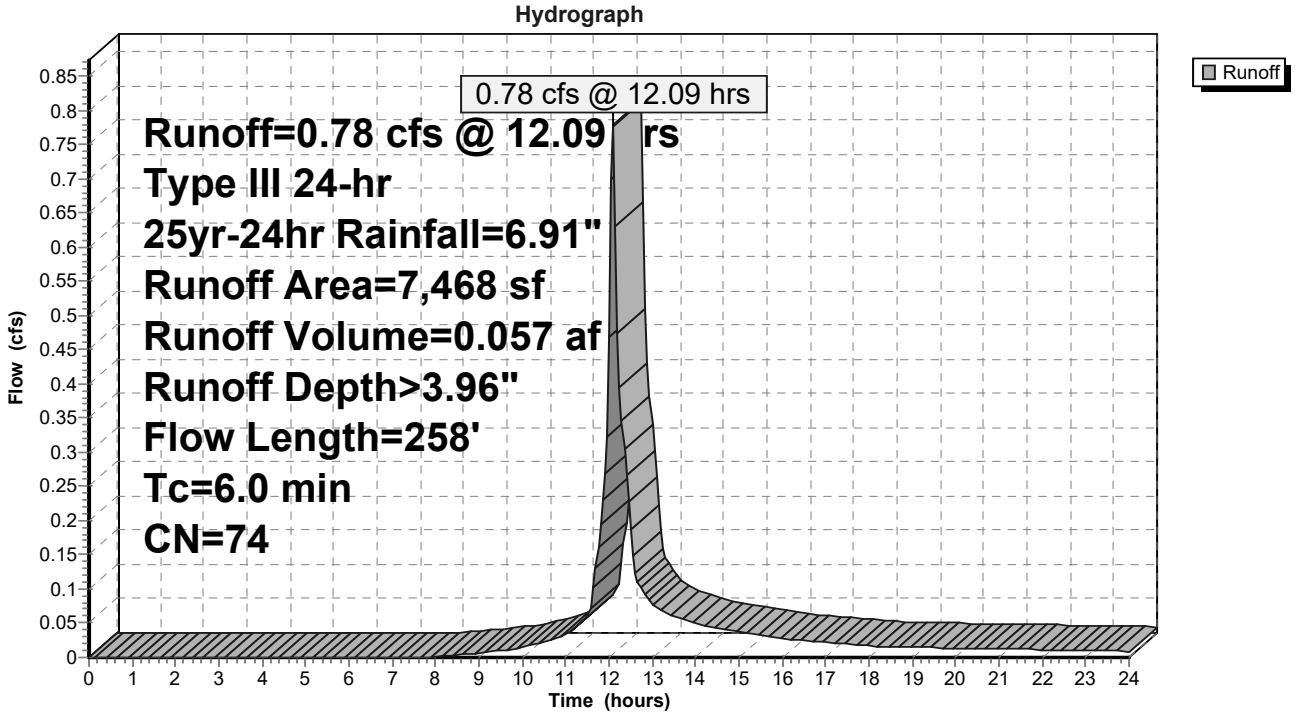
Runoff = 0.78 cfs @ 12.09 hrs, Volume= 0.057 af, Depth> 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
933	98	Roofs, HSG A
3,022	39	>75% Grass cover, Good, HSG A
3,513	98	Paved parking, HSG A
7,468	74	Weighted Average
3,022		40.47% Pervious Area
4,446		59.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.5	50	0.0300	0.19		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.7	50	0.0150	1.14		**Sheet Flow, Segment #2** Smooth surfaces n= 0.011 P2= 3.62"
0.8	158	0.0253	3.23		**Shallow Concentrated Flow, Segment #3** Paved Kv= 20.3 fps
6.0	258	Total			

Subcatchment 2173RS: Ex CB 21+73R



Summary for Subcatchment 2460LS: Ex CB 24+60L

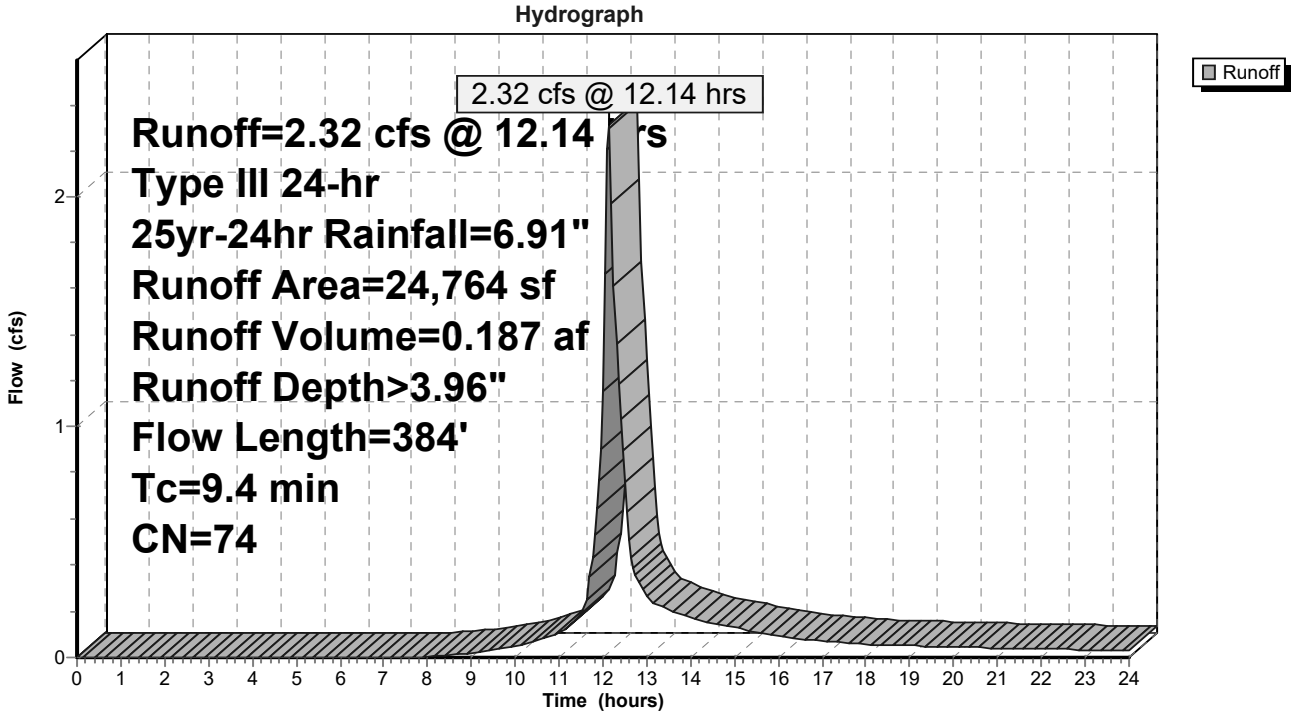
Runoff = 2.32 cfs @ 12.14 hrs, Volume= 0.187 af, Depth> 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
7,412	98	Roofs, HSG A
9,989	39	>75% Grass cover, Good, HSG A
7,363	98	Paved parking, HSG A
24,764	74	Weighted Average
9,989		40.34% Pervious Area
14,775		59.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0	100	0.0400	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
0.9	32	0.0079	0.62		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
1.5	252	0.0188	2.78		**Shallow Concentrated Flow, Segment #3** Paved Kv= 20.3 fps
9.4	384	Total			

Subcatchment 2460LS: Ex CB 24+60L



Summary for Subcatchment 2460RS: Ex CB 24+60R

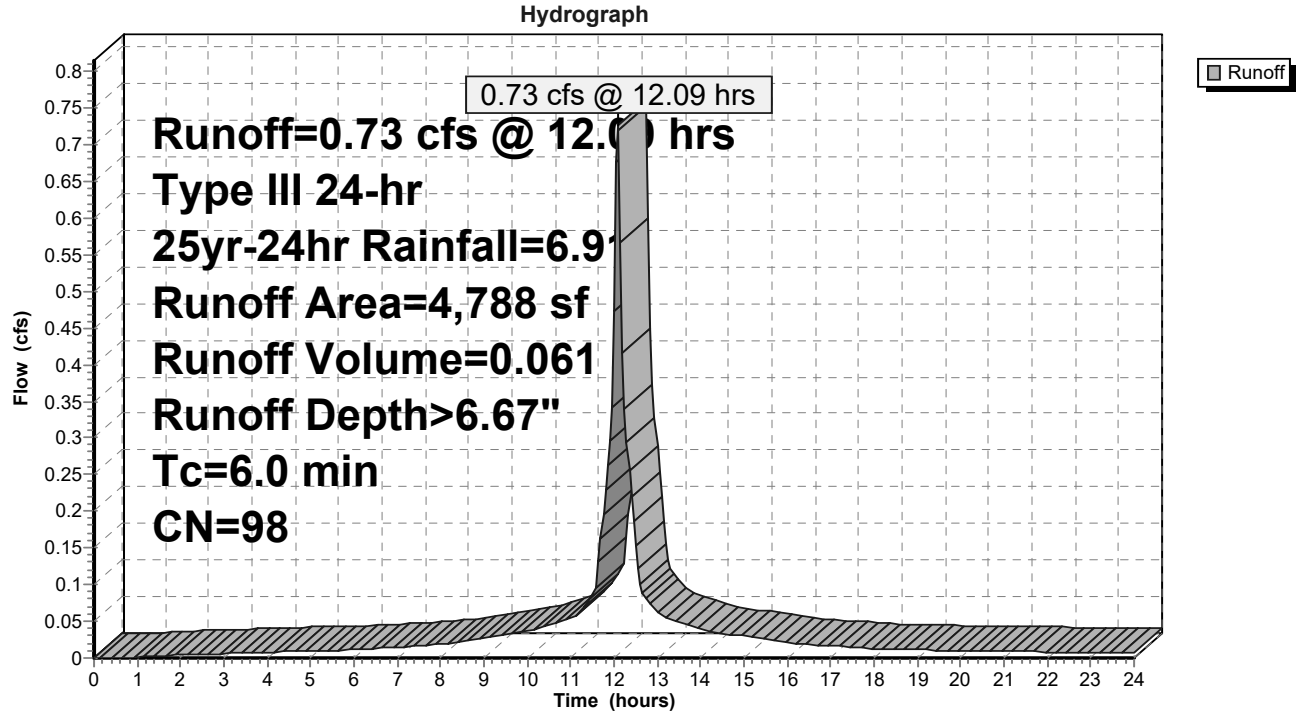
Runoff = 0.73 cfs @ 12.09 hrs, Volume= 0.061 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
4,788	98	Paved parking, HSG A
4,788		100.00% Impervious Area

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

Subcatchment 2460RS: Ex CB 24+60R



Summary for Subcatchment 2610LS: Ex CB 26+10L

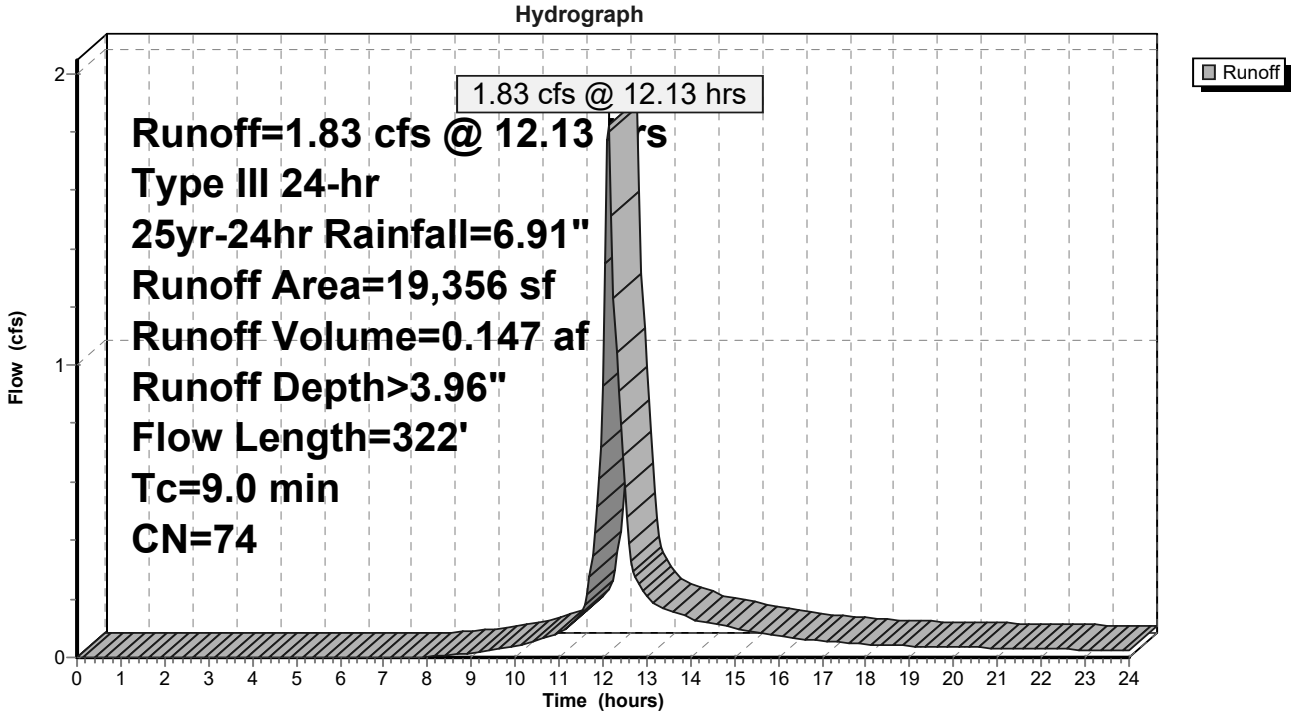
Runoff = 1.83 cfs @ 12.13 hrs, Volume= 0.147 af, Depth> 3.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
7,813	39	>75% Grass cover, Good, HSG A
6,142	98	Paved parking, HSG A
5,401	98	Roofs, HSG A
19,356	74	Weighted Average
7,813		40.36% Pervious Area
11,543		59.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	94	0.0291	0.21		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.5	228	0.0153	2.51		**Shallow Concentrated Flow, Segment #2** Paved Kv= 20.3 fps
9.0	322	Total			

Subcatchment 2610LS: Ex CB 26+10L



Summary for Subcatchment 2610RS: Ex CB 26+10R

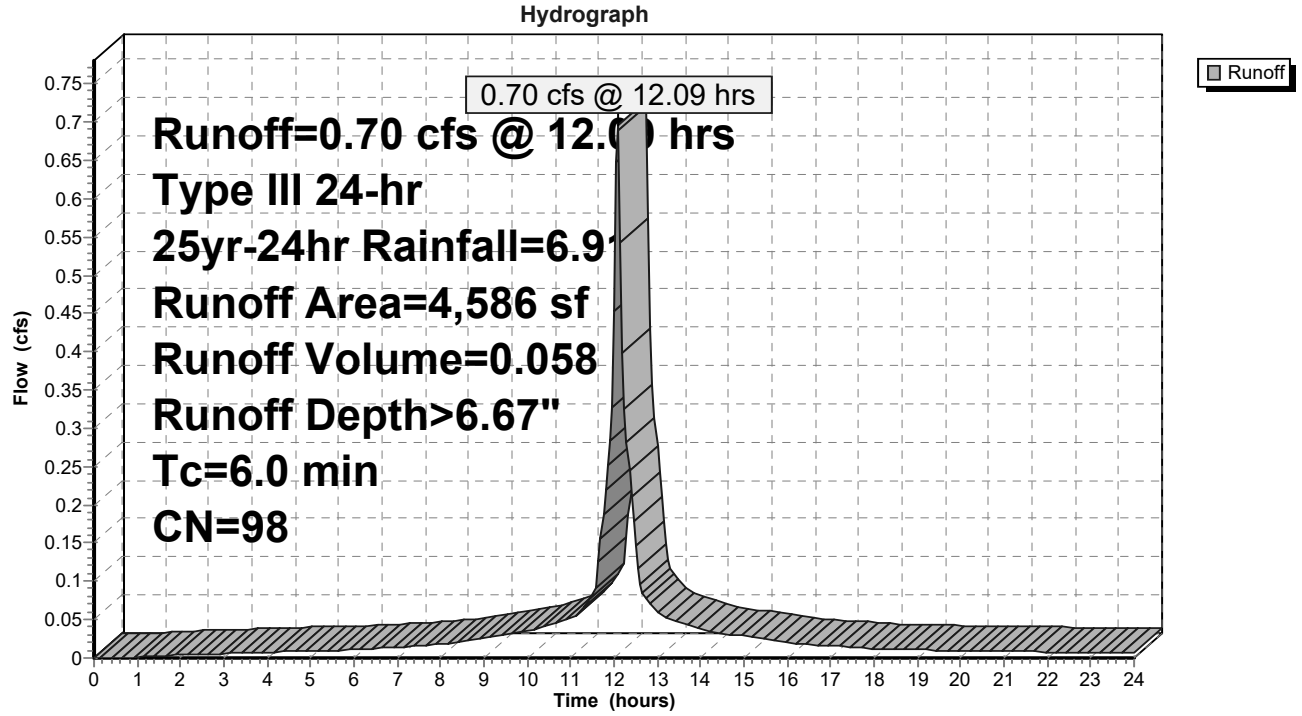
Runoff = 0.70 cfs @ 12.09 hrs, Volume= 0.058 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
4,586	98	Paved parking, HSG A
4,586		100.00% Impervious Area

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

Subcatchment 2610RS: Ex CB 26+10R



Summary for Subcatchment 3018GS: Ex CB 30+18G

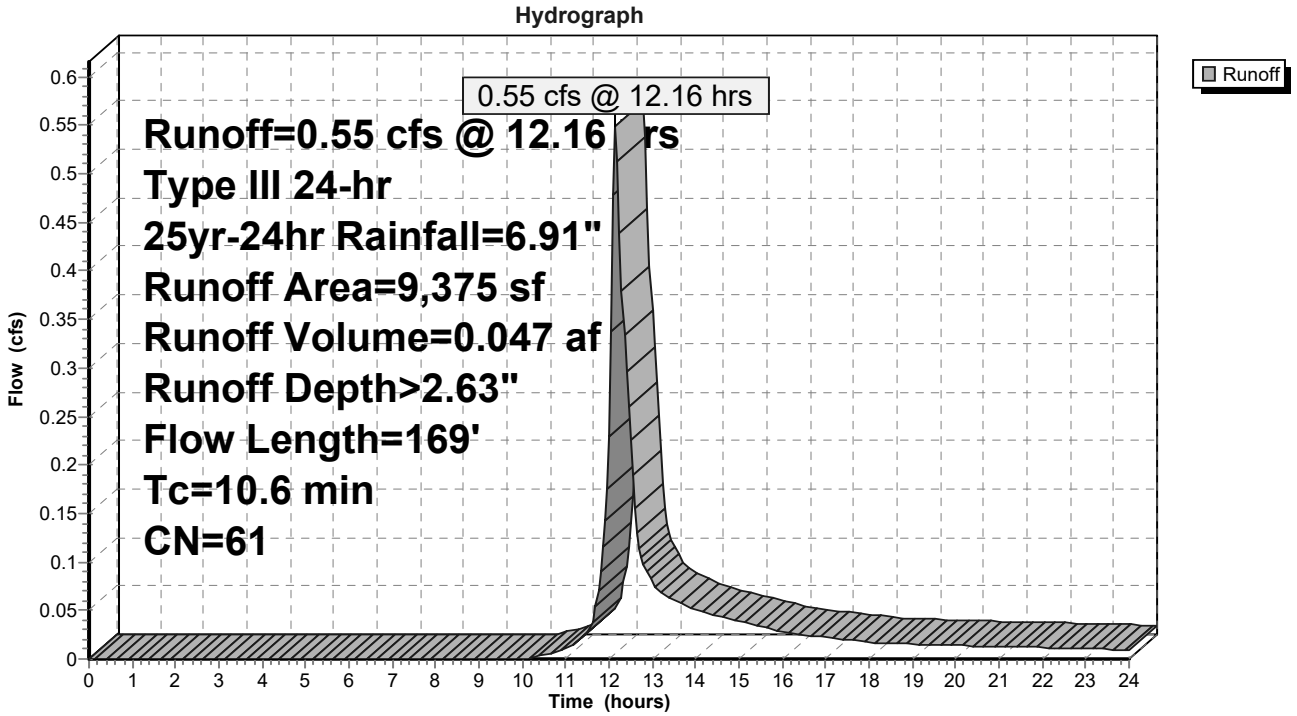
Runoff = 0.55 cfs @ 12.16 hrs, Volume= 0.047 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
1,132	98	Roofs, HSG A
4,436	39	>75% Grass cover, Good, HSG A
3,545	74	>75% Grass cover, Good, HSG C
262	98	Paved parking, HSG C
9,375	61	Weighted Average
7,981		85.13% Pervious Area
1,394		14.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	72	0.0139	0.15		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.0	20	0.1960	0.33		**Sheet Flow, Segment #2** Grass: Short n= 0.150 P2= 3.62"
1.4	77	0.0162	0.89		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
10.6	169	Total			

Subcatchment 3018GS: Ex CB 30+18G



Summary for Subcatchment 3020LS: Ex CB 30+20L

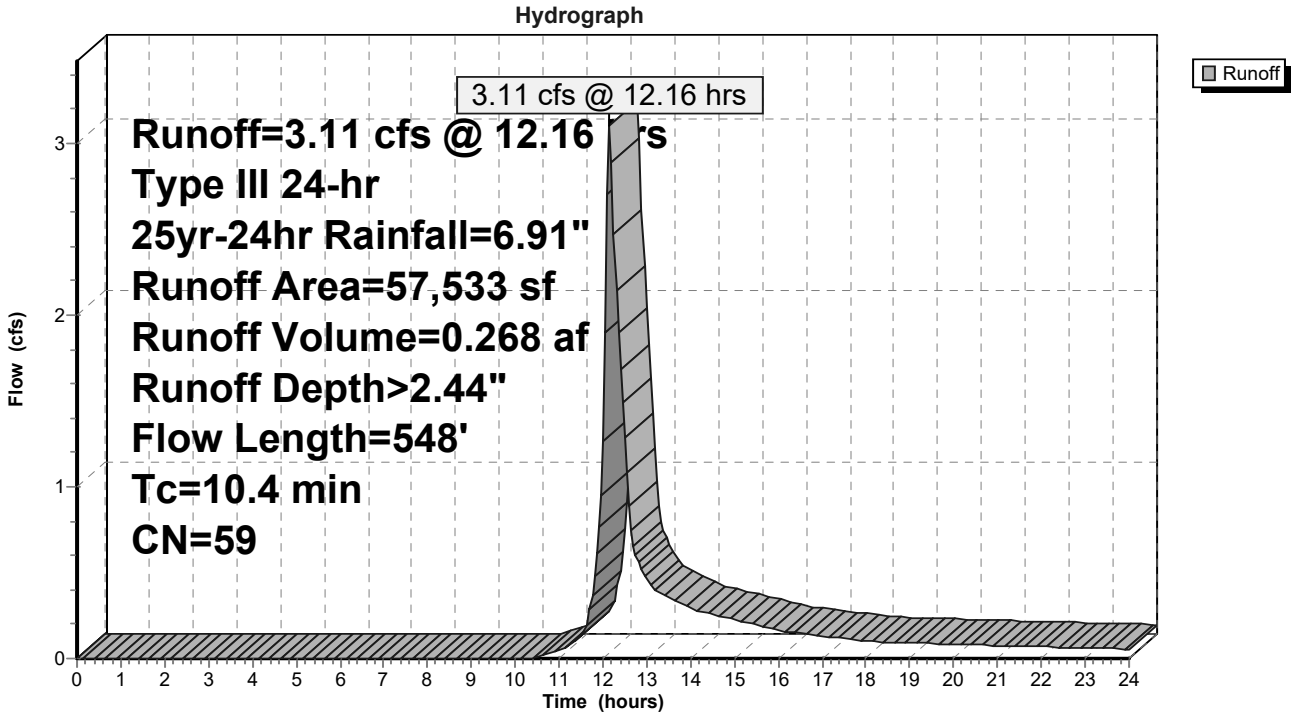
Runoff = 3.11 cfs @ 12.16 hrs, Volume= 0.268 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
9,134	98	Roofs, HSG A
37,949	39	>75% Grass cover, Good, HSG A
10,350	98	Paved parking, HSG A
42	74	>75% Grass cover, Good, HSG C
58	98	Paved parking, HSG C
57,533	59	Weighted Average
37,991		66.03% Pervious Area
19,542		33.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	77	0.0454	0.24		**Sheet Flow, Segment #1** Grass: Short n= 0.150 P2= 3.62"
1.4	23	0.1204	0.28		**Sheet Flow, Segment #2** Grass: Short n= 0.150 P2= 3.62"
0.4	44	0.0739	1.90		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
0.0	5	0.7394	6.02		**Shallow Concentrated Flow, Segment #4** Short Grass Pasture Kv= 7.0 fps
1.3	61	0.0124	0.78		**Shallow Concentrated Flow, Segment #5** Short Grass Pasture Kv= 7.0 fps
0.1	26	0.2268	3.33		**Shallow Concentrated Flow, Segment #6** Short Grass Pasture Kv= 7.0 fps
0.5	46	0.0592	1.70		**Shallow Concentrated Flow, Segment #7** Short Grass Pasture Kv= 7.0 fps
1.3	266	0.0282	3.41		**Shallow Concentrated Flow, Segment #8** Paved Kv= 20.3 fps
10.4	548	Total			

Subcatchment 3020LS: Ex CB 30+20L



Summary for Subcatchment 3020RS: Ex CB 30+20R

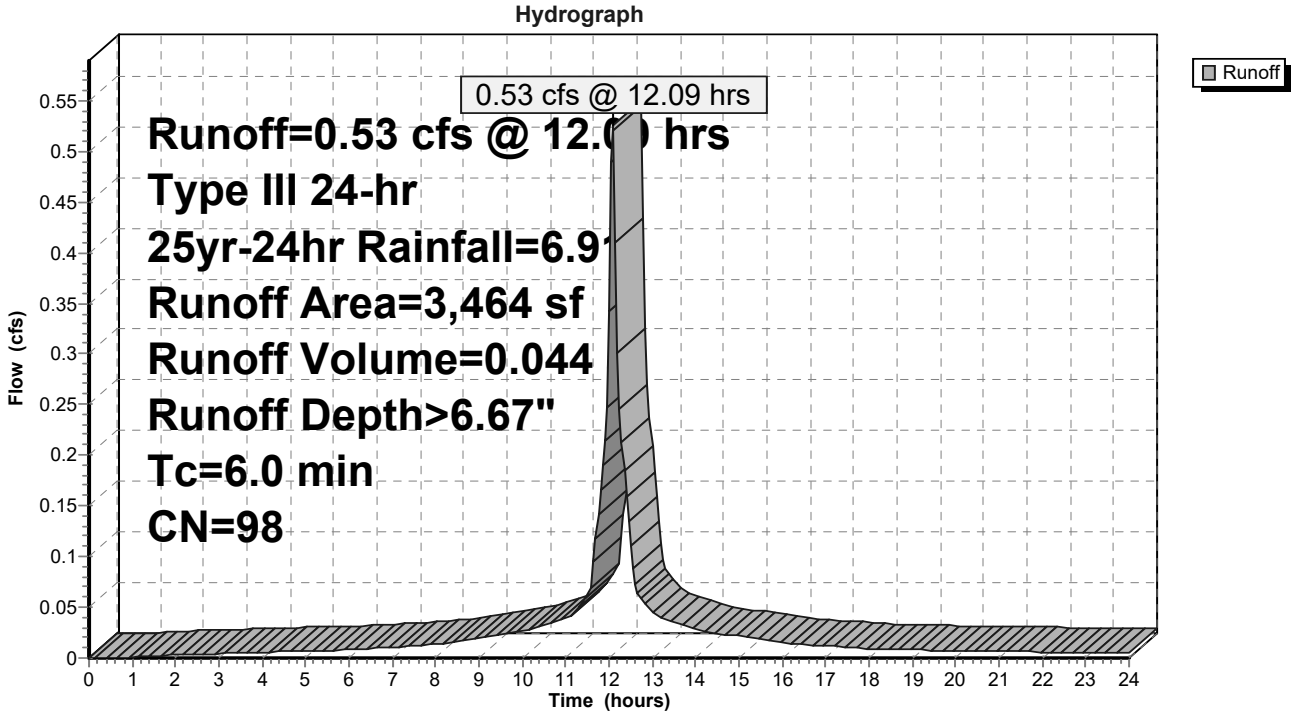
Runoff = 0.53 cfs @ 12.09 hrs, Volume= 0.044 af, Depth> 6.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Description
3,435	98	Paved parking, HSG A
29	98	Paved parking, HSG C
3,464	98	Weighted Average
3,464		100.00% Impervious Area

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

Subcatchment 3020RS: Ex CB 30+20R



Summary for Subcatchment Y01S: Central Area

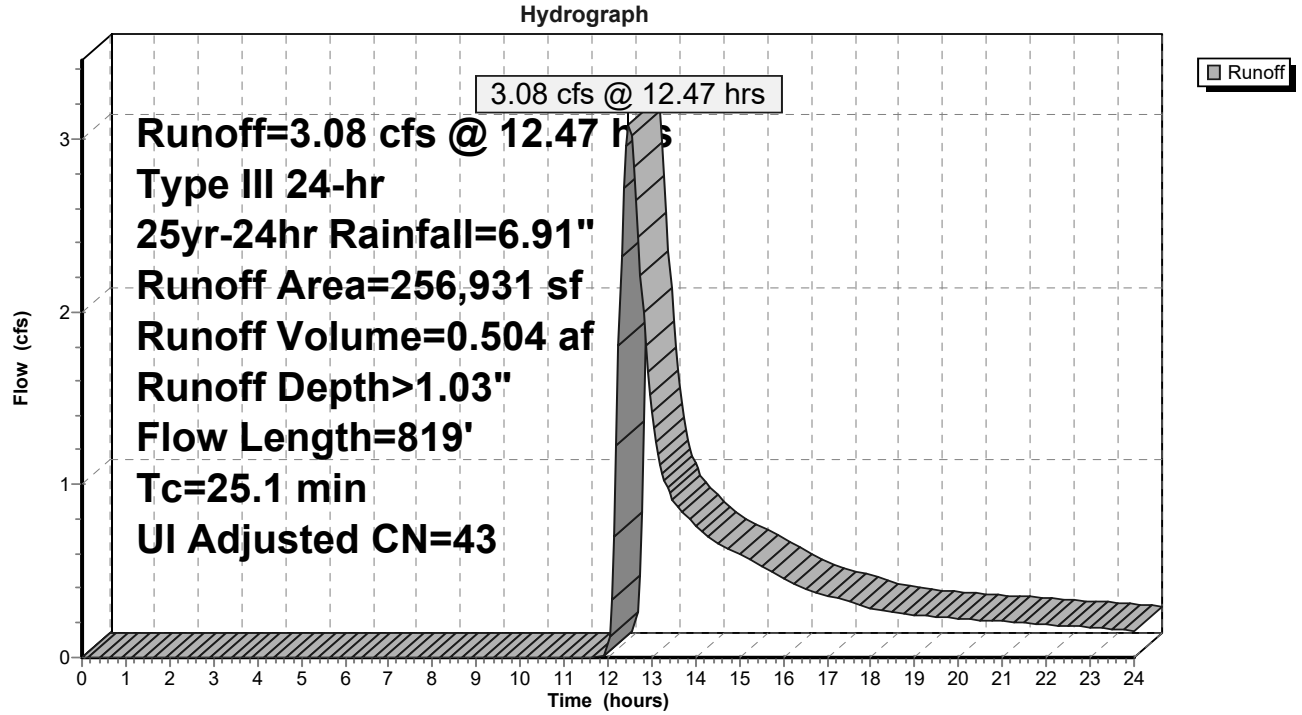
Runoff = 3.08 cfs @ 12.47 hrs, Volume= 0.504 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25yr-24hr Rainfall=6.91"

Area (sf)	CN	Adj	Description
47,289	98		Unconnected roofs, HSG A
149,841	39		>75% Grass cover, Good, HSG A
2,860	98		Unconnected pavement, HSG A
56,941	30		Woods, Good, HSG A
256,931	49	43	Weighted Average, UI Adjusted
206,782			80.48% Pervious Area
50,149			19.52% Impervious Area
50,149			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0650	0.13		**Sheet Flow, Segment #1** Woods: Light underbrush n= 0.400 P2= 3.62"
0.1	22	0.3200	3.96		**Shallow Concentrated Flow, Segment #2** Short Grass Pasture Kv= 7.0 fps
12.4	697	0.0178	0.93		**Shallow Concentrated Flow, Segment #3** Short Grass Pasture Kv= 7.0 fps
25.1	819	Total			

Subcatchment Y01S: Central Area



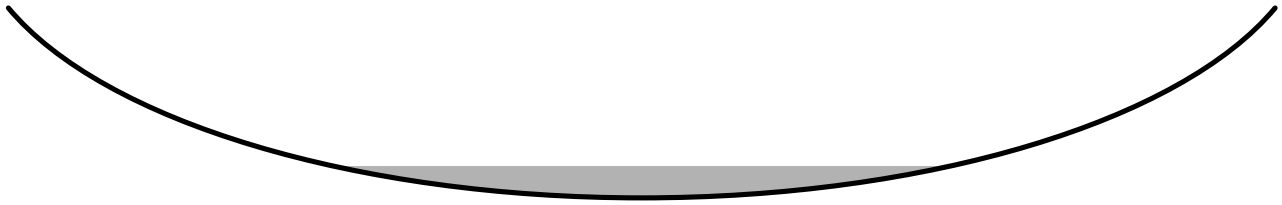
Summary for Reach 15R: Overland Reach

Inflow Area = 8.220 ac, 1.70% Impervious, Inflow Depth > 0.29" for 25yr-24hr event
Inflow = 0.36 cfs @ 13.33 hrs, Volume= 0.197 af
Outflow = 0.36 cfs @ 13.56 hrs, Volume= 0.195 af, Atten= 1%, Lag= 13.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.79 fps, Min. Travel Time= 10.3 min
Avg. Velocity = 0.64 fps, Avg. Travel Time= 12.7 min

Peak Storage= 221 cf @ 13.56 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 0.50' Flow Area= 6.7 sf, Capacity= 17.39 cfs

20.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 488.8' Slope= 0.0164 '/'
Inlet Invert= 140.00', Outlet Invert= 132.00'



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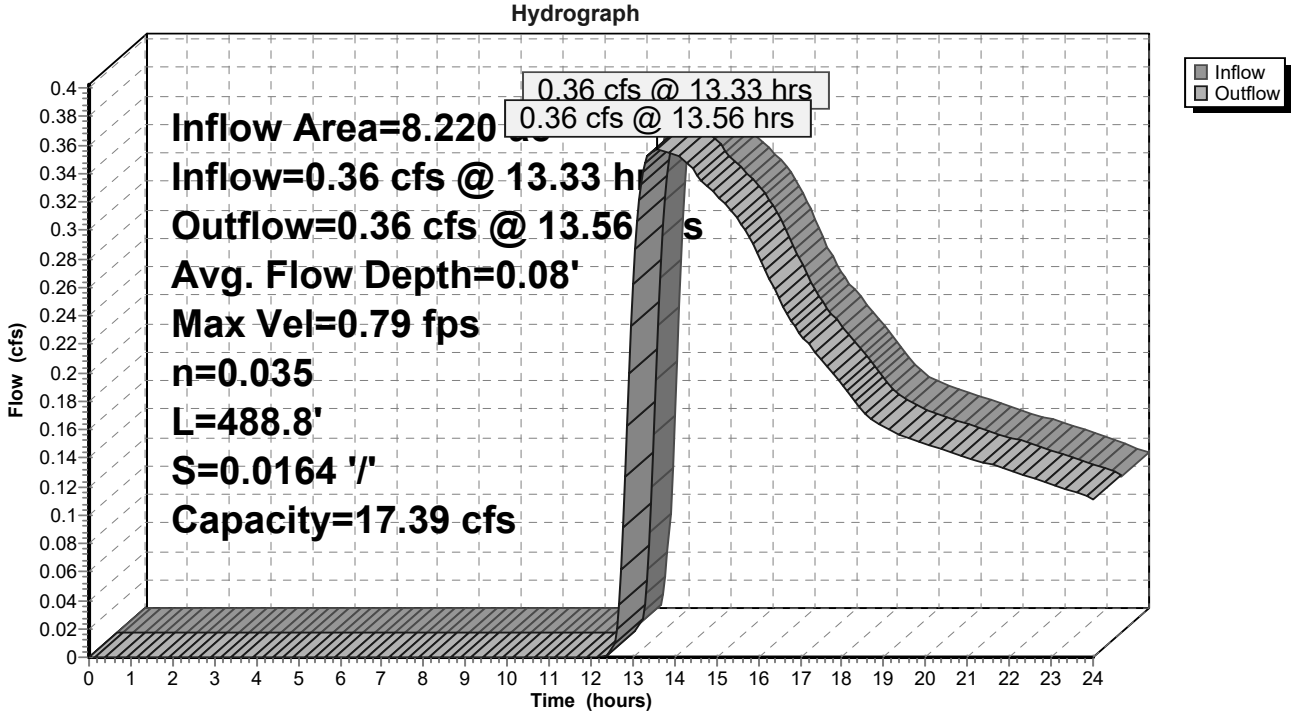
Reach 15R: Overland Reach



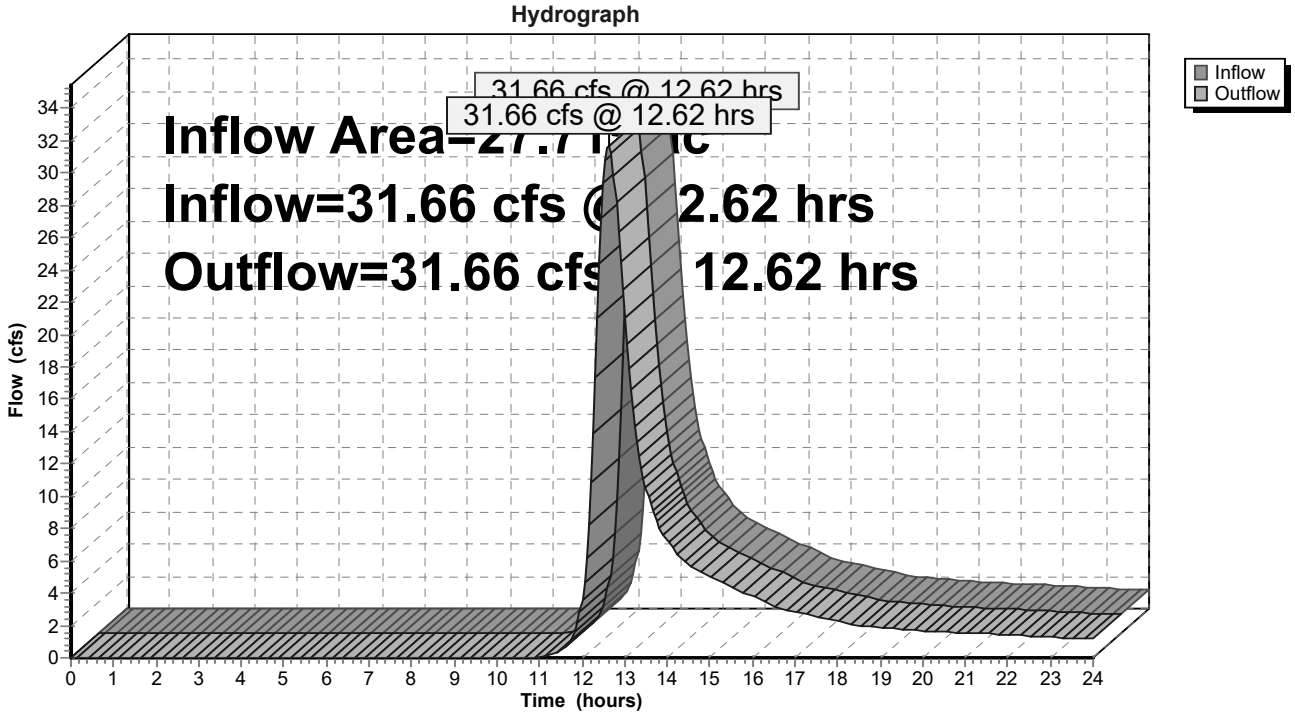
Summary for Reach 100R: Final Reach #100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 27.715 ac, 4.44% Impervious, Inflow Depth > 2.14" for 25yr-24hr event
Inflow = 31.66 cfs @ 12.62 hrs, Volume= 4.931 af
Outflow = 31.66 cfs @ 12.62 hrs, Volume= 4.931 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 100R: Final Reach #100



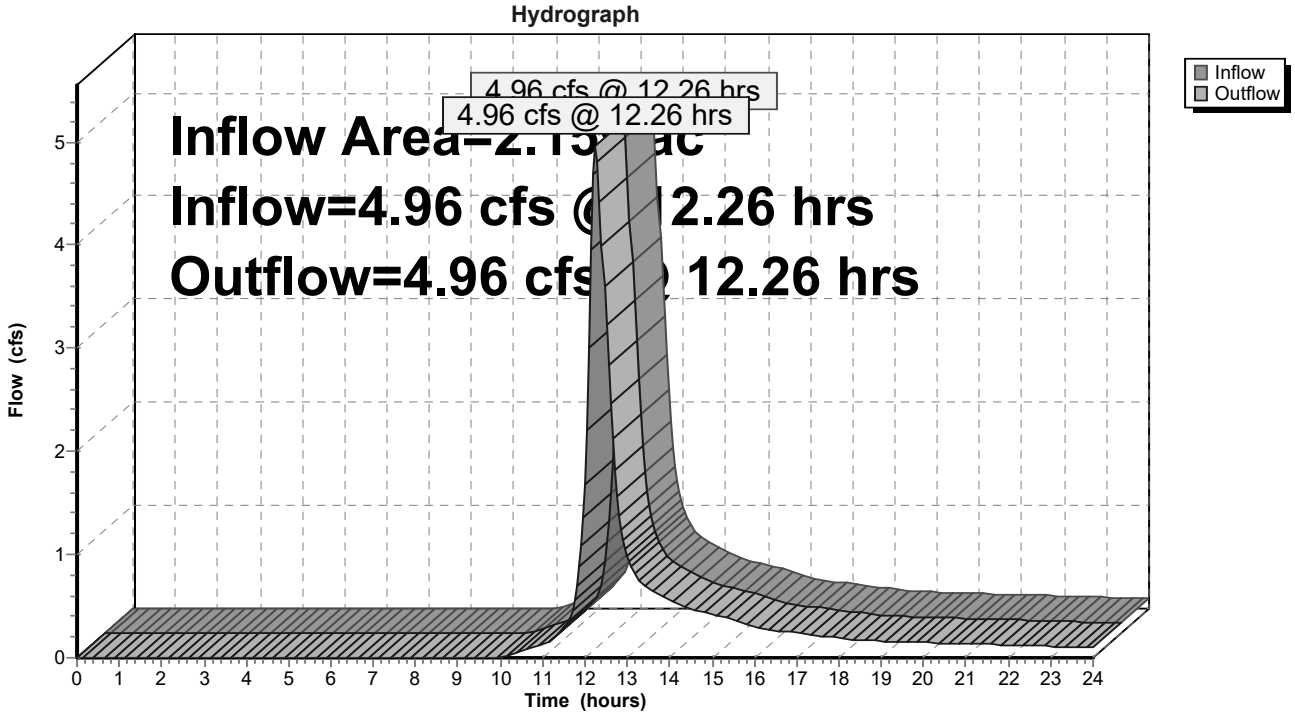
Summary for Reach 200R: Final Reach #200

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.159 ac, 2.77% Impervious, Inflow Depth > 2.82" for 25yr-24hr event
Inflow = 4.96 cfs @ 12.26 hrs, Volume= 0.508 af
Outflow = 4.96 cfs @ 12.26 hrs, Volume= 0.508 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 200R: Final Reach #200



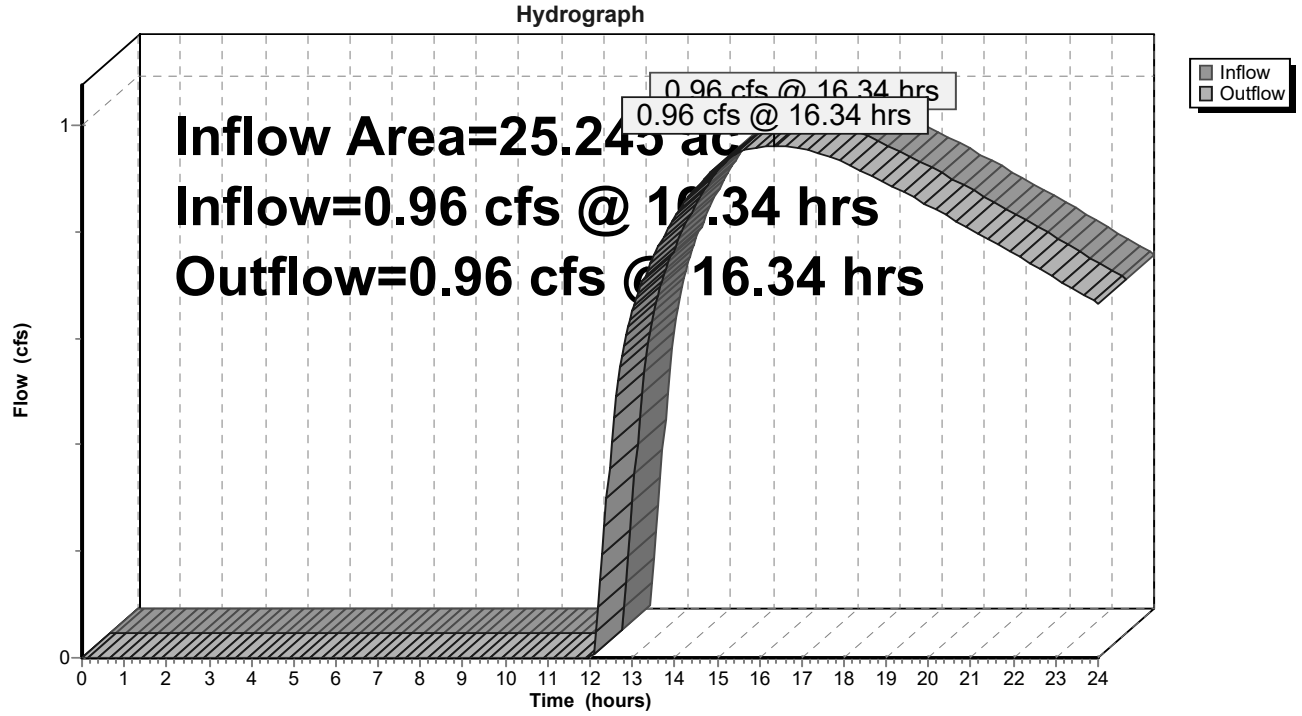
Summary for Reach 300R: Final Reach #300

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 25.245 ac, 27.48% Impervious, Inflow Depth > 0.38" for 25yr-24hr event
Inflow = 0.96 cfs @ 16.34 hrs, Volume= 0.800 af
Outflow = 0.96 cfs @ 16.34 hrs, Volume= 0.800 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 300R: Final Reach #300



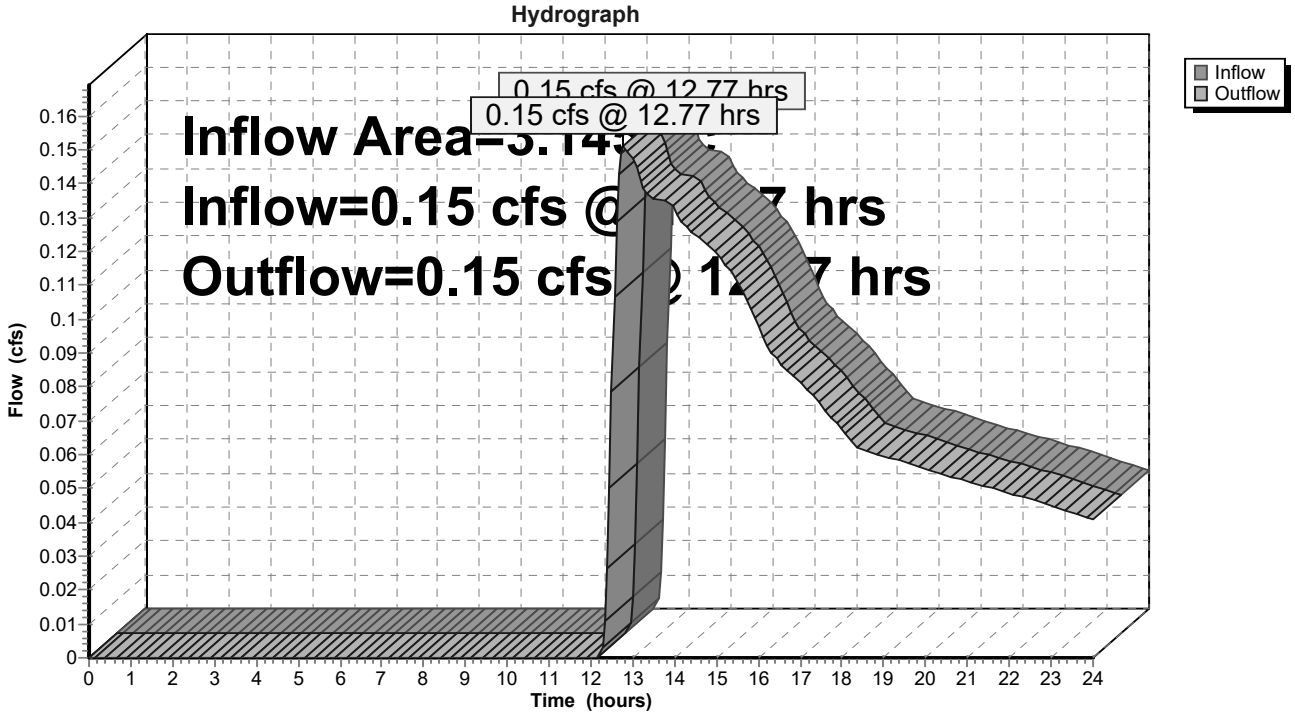
Summary for Reach 400R: Final Reach #400

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.145 ac, 3.20% Impervious, Inflow Depth > 0.29" for 25yr-24hr event
Inflow = 0.15 cfs @ 12.77 hrs, Volume= 0.077 af
Outflow = 0.15 cfs @ 12.77 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 400R: Final Reach #400



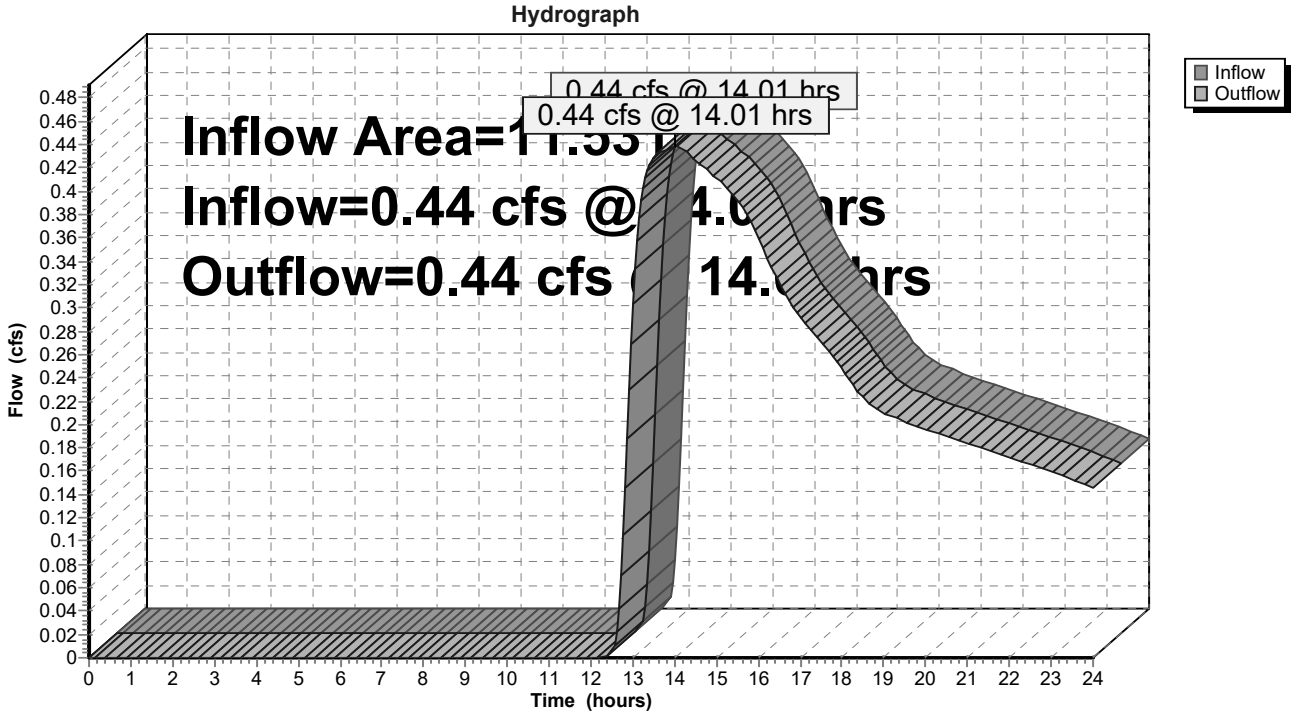
Summary for Reach 500R: Final Reach #500

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.531 ac, 1.21% Impervious, Inflow Depth > 0.26" for 25yr-24hr event
Inflow = 0.44 cfs @ 14.01 hrs, Volume= 0.248 af
Outflow = 0.44 cfs @ 14.01 hrs, Volume= 0.248 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 500R: Final Reach #500



Summary for Pond 101P: Porous Pavement W/ Infiltration #101

Inflow Area = 2.413 ac, 76.59% Impervious, Inflow Depth > 2.70" for 25yr-24hr event
Inflow = 0.95 cfs @ 21.95 hrs, Volume= 0.543 af
Outflow = 0.95 cfs @ 21.95 hrs, Volume= 0.543 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.95 cfs @ 21.95 hrs, Volume= 0.543 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 103.71' @ 21.95 hrs Surf.Area= 23,310 sf Storage= 0 cf
Flood Elev= 106.54' Surf.Area= 23,310 sf Storage= 19,394 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= (not calculated: outflow precedes inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	103.71'	9,324 cf	**Stone (Irregular)** Listed below (Recalc) 23,310 cf Overall x 40.0% Voids
#2	104.71'	6,993 cf	**Filter Media (Irregular)** Listed below (Recalc) -Impervious 34,965 cf Overall x 20.0% Voids
#3	106.21'	3,077 cf	**Choker Course (Irregular)** Listed below (Recalc) -Impervious 7,692 cf Overall x 40.0% Voids
		19,394 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
103.71	23,310	1,156.0	0	0	23,310
104.71	23,310	1,156.0	23,310	23,310	24,466

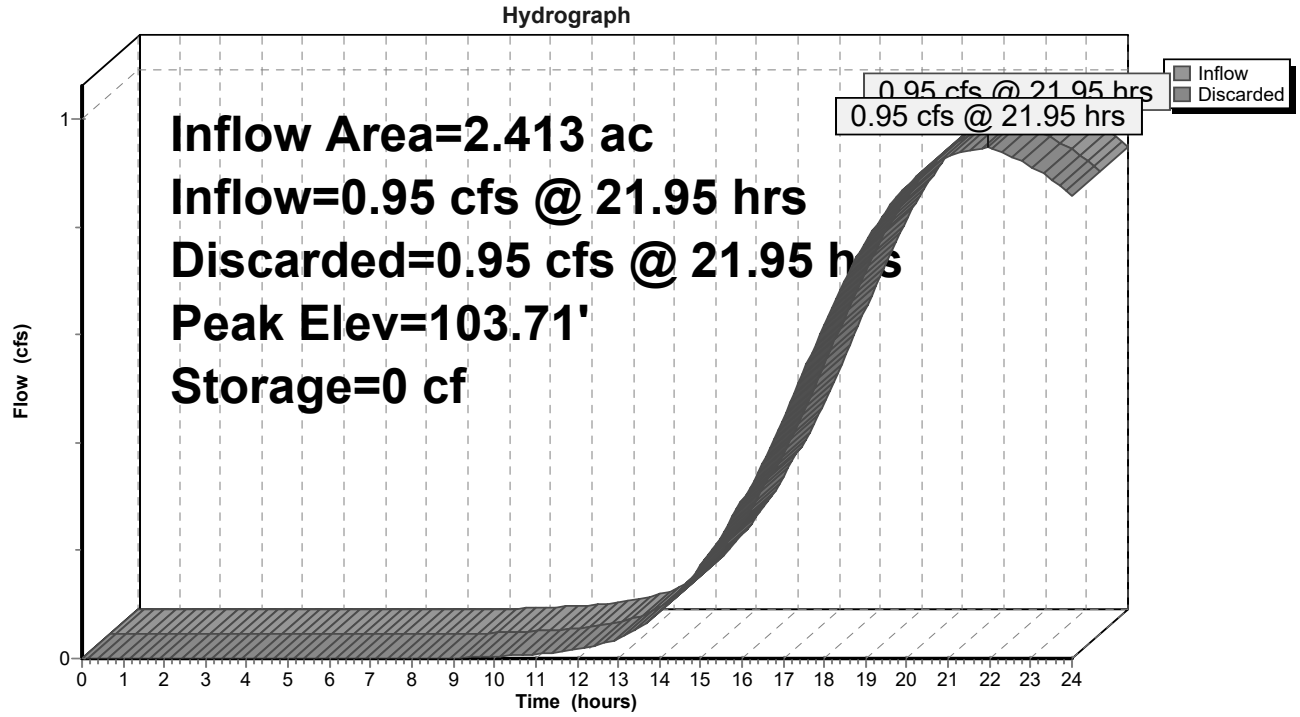
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
104.71	23,310	1,156.0	0	0	23,310
106.21	23,310	1,156.0	34,965	34,965	25,044

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
106.21	23,310	1,156.0	0	0	23,310
106.54	23,310	1,156.0	7,692	7,692	23,691

Device	Routing	Invert	Outlet Devices
#1	Discarded	103.71'	**3.000 in/hr Infiltration 3in/hr over Surface area**

Discarded OutFlow Max=1.62 cfs @ 21.95 hrs HW=103.71' (Free Discharge)
1=Infiltration 3in/hr (Exfiltration Controls 1.62 cfs)

Pond 101P: Porous Pavement W/ Infiltration #101



Summary for Pond 900P: Detention Pond #900

Inflow Area = 24.132 ac, 28.74% Impervious, Inflow Depth > 1.89" for 25yr-24hr event
Inflow = 34.62 cfs @ 12.15 hrs, Volume= 3.806 af
Outflow = 2.04 cfs @ 16.56 hrs, Volume= 1.846 af, Atten= 94%, Lag= 264.4 min
Discarded = 1.11 cfs @ 16.56 hrs, Volume= 1.073 af
Primary = 0.93 cfs @ 16.56 hrs, Volume= 0.773 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 101.10' @ 16.56 hrs Surf.Area= 39,545 sf Storage= 104,337 cf
Flood Elev= 103.00' Surf.Area= 45,130 sf Storage= 185,045 cf

Plug-Flow detention time= 356.2 min calculated for 1.842 af (48% of inflow)
Center-of-Mass det. time= 226.3 min (1,079.5 - 853.2)

Volume	Invert	Avail.Storage	Storage Description
#1	98.00'	184,955 cf	**Open Water Storage (Irregular)** Listed below (Recalc)
#2	97.50'	90 cf	**4.00'W x 5.00'L x 4.50'H Outlet Structure** Impervious
		185,045 cf	Total Available Storage

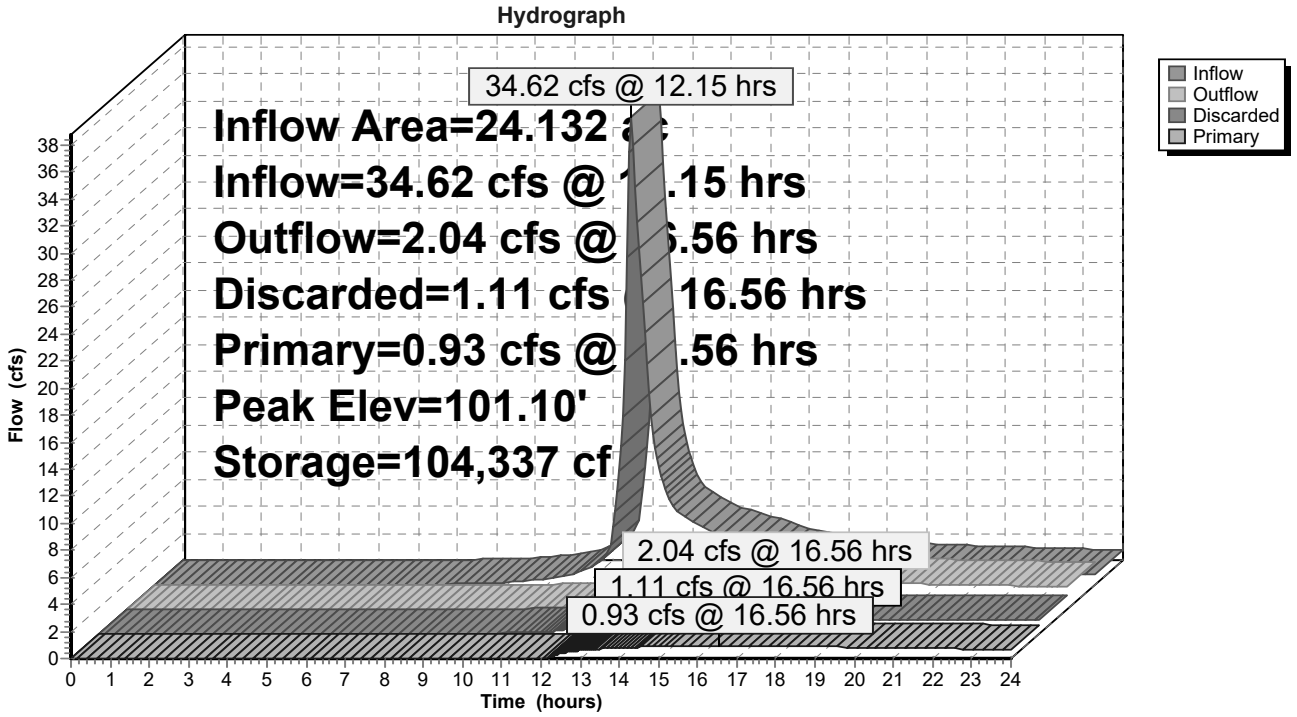
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
98.00	23,557	701.6	0	0	23,557
99.00	32,984	972.5	28,139	28,139	59,656
100.00	36,231	1,056.4	34,595	62,733	73,240
101.00	39,255	1,060.0	37,733	100,466	74,460
102.00	42,313	1,092.0	40,774	141,241	80,044
103.00	45,130	1,112.4	43,714	184,955	83,789

Device	Routing	Invert	Outlet Devices
#1	Discarded	98.00'	**3.000 in/hr 3In/Hr over Surface area above 98.00'** Excluded Surface area = 23,557 sf
#2	Primary	97.50'	**30.0" Round 30" HDPE N-12** L= 21.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 97.50' / 97.17' S= 0.0156 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#3	Device 2	98.80'	**1.0" W x 39.0" H Vert. 1" X 39" Orifice** C= 0.600
#4	Device 2	102.10'	**48.0" x 60.0" Horiz. Outlet Structure** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=1.11 cfs @ 16.56 hrs HW=101.10' (Free Discharge)
└**1=3In/Hr** (Exfiltration Controls 1.11 cfs)

Primary OutFlow Max=0.93 cfs @ 16.56 hrs HW=101.10' TW=0.00' (Dynamic Tailwater)
└**2=30" HDPE N-12** (Passes 0.93 cfs of 36.20 cfs potential flow)
  ├**3=1" X 39" Orifice** (Orifice Controls 0.93 cfs @ 4.86 fps)
  └**4=Outlet Structure** (Controls 0.00 cfs)

Pond 900P: Detention Pond #900



Summary for Pond 1000P: Sediment Forebay

Inflow Area = 1.646 ac, 25.38% Impervious, Inflow Depth > 1.27" for 25yr-24hr event
Inflow = 1.30 cfs @ 12.33 hrs, Volume= 0.174 af
Outflow = 1.30 cfs @ 12.34 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.3 min
Primary = 1.30 cfs @ 12.34 hrs, Volume= 0.174 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 106.44' @ 12.34 hrs Surf.Area= 41 sf Storage= 15 cf
Flood Elev= 113.00' Surf.Area= 2,618 sf Storage= 4,224 cf

Plug-Flow detention time= 0.3 min calculated for 0.174 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (905.3 - 905.1)

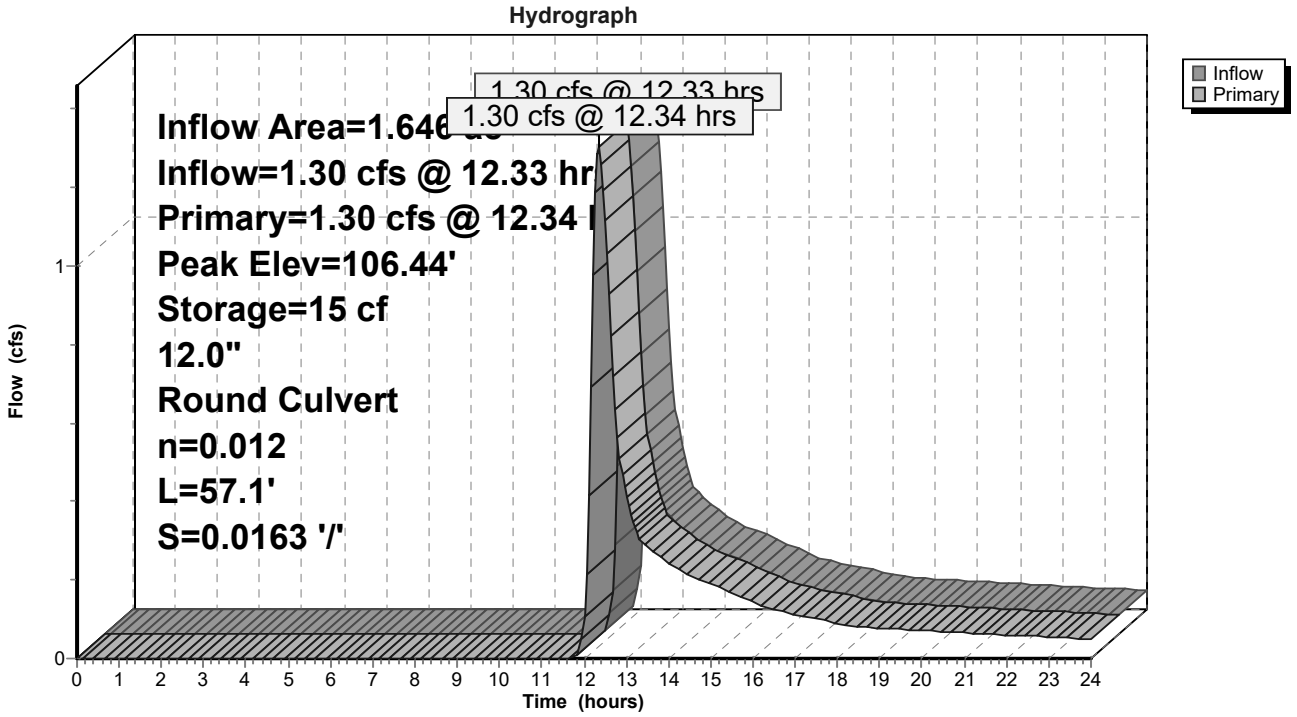
Volume	Invert	Avail.Storage	Storage Description
#1	110.34'	4,055 cf	**Open Water Storage (Irregular)**Listed below (Recalc)
#2	106.42'	50 cf	**4.00'D x 4.00'H CB 2109**
#3	106.01'	55 cf	**4.00'D x 4.40'H CB 2128**
#4	105.84'	64 cf	**4.50'D x 4.00'H CB 2148**
		4,224 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
110.34	4	8.0	0	0	4
110.42	675	128.3	19	19	1,309
111.00	926	159.8	462	482	2,036
112.00	1,858	209.2	1,365	1,847	3,498
113.00	2,577	253.8	2,208	4,055	5,158

Device	Routing	Invert	Outlet Devices
#1	Primary	105.84'	**12.0" Round 12" HDPE N-12** L= 57.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 105.84' / 104.91' S= 0.0163 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.30 cfs @ 12.34 hrs HW=106.44' TW=105.51' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 1.30 cfs @ 2.64 fps)

Pond 1000P: Sediment Forebay



Summary for Pond 1100P: StormTech

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth > 3.74" for 25yr-24hr event
Inflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af
Outflow = 5.77 cfs @ 12.16 hrs, Volume= 0.504 af, Atten= 10%, Lag= 3.2 min
Discarded = 0.13 cfs @ 10.50 hrs, Volume= 0.160 af
Primary = 5.64 cfs @ 12.16 hrs, Volume= 0.344 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 116.70' @ 12.16 hrs Surf.Area= 1,848 sf Storage= 2,281 cf
Flood Elev= 118.39' Surf.Area= 1,848 sf Storage= 3,965 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 20.5 min (845.1 - 824.5)

Volume	Invert	Avail.Storage	Storage Description
#1	114.89'	1,668 cf	**Stone (Irregular)** Listed below (Recalc) 6,468 cf Overall - 2,297 cf Embedded = 4,171 cf x 40.0% Voids
#2	115.39'	2,297 cf	**ADS_StormTech SC-740 +Cap** x 50 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		3,965 cf	Total Available Storage

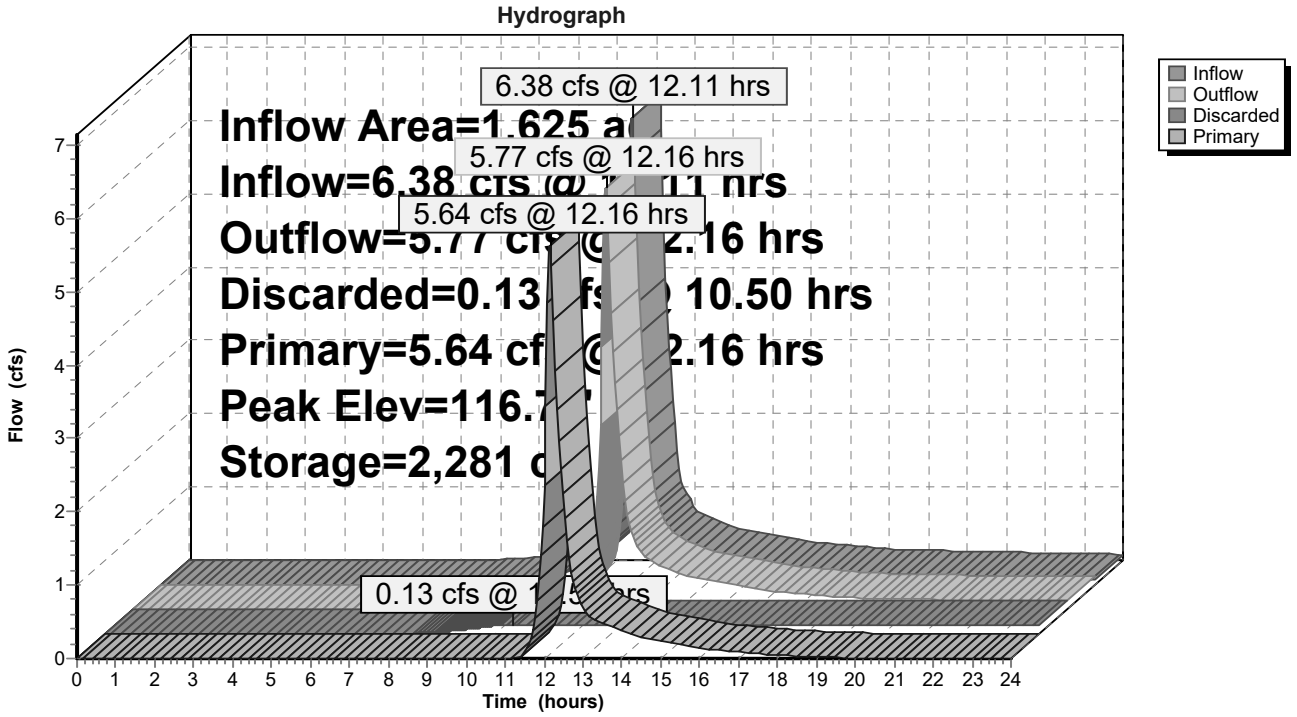
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
114.89	1,848	196.9	0	0	1,848
118.39	1,848	196.9	6,468	6,468	2,537

Device	Routing	Invert	Outlet Devices
#1	Discarded	114.89'	**3.000 in/hr 3 In/Hr Exfiltration over Surface area**
#2	Primary	115.39'	**24.0" Round 24" HDPE N-12** L= 5.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 115.39' / 115.39' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Discarded OutFlow Max=0.13 cfs @ 10.50 hrs HW=114.94' (Free Discharge)
↑—**1=3 In/Hr Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=5.54 cfs @ 12.16 hrs HW=116.69' TW=110.51' (Dynamic Tailwater)
↑—**2=24" HDPE N-12** (Barrel Controls 5.54 cfs @ 3.66 fps)

Pond 1100P: StormTech



Summary for Pond C01P: Catch Basin #1

Inflow Area = 0.785 ac, 59.00% Impervious, Inflow Depth > 3.98" for 25yr-24hr event
Inflow = 3.07 cfs @ 12.12 hrs, Volume= 0.261 af
Outflow = 3.07 cfs @ 12.12 hrs, Volume= 0.260 af, Atten= 0%, Lag= 0.1 min
Primary = 3.07 cfs @ 12.12 hrs, Volume= 0.260 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 112.55' @ 12.12 hrs Surf.Area= 13 sf Storage= 15 cf
Flood Elev= 115.65' Surf.Area= 13 sf Storage= 53 cf

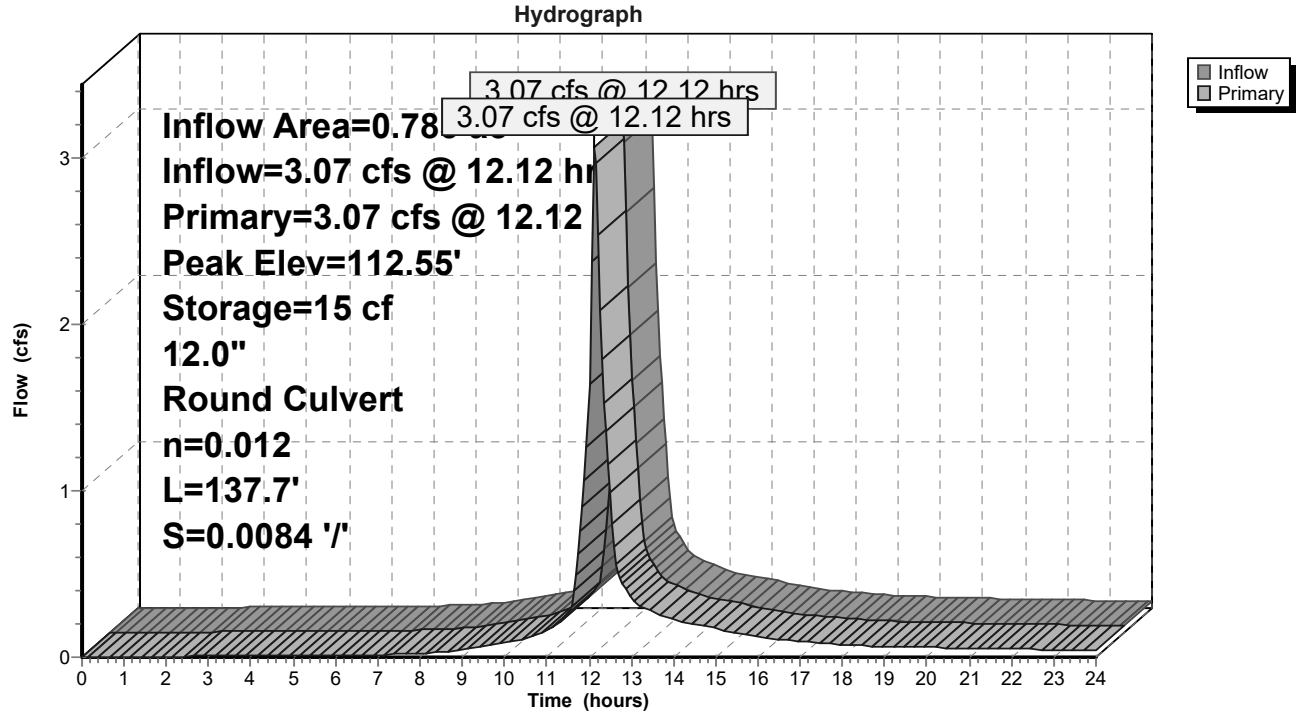
Plug-Flow detention time= 0.2 min calculated for 0.260 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (809.1 - 809.0)

Volume	Invert	Avail.Storage	Storage Description
#1	111.40'	53 cf	**4.00'D x 4.25'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	111.40'	**12.0" Round 12" HDPE N-12** L= 137.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 111.40' / 110.25' S= 0.0084 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.99 cfs @ 12.12 hrs HW=112.52' TW=108.00' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Inlet Controls 2.99 cfs @ 3.80 fps)

Pond C01P: Catch Basin #1



Summary for Pond C02P: Catch Basin #2

Inflow Area = 0.590 ac, 63.55% Impervious, Inflow Depth > 4.26" for 25yr-24hr event
Inflow = 2.52 cfs @ 12.12 hrs, Volume= 0.209 af
Outflow = 2.52 cfs @ 12.12 hrs, Volume= 0.209 af, Atten= 0%, Lag= 0.0 min
Primary = 2.52 cfs @ 12.12 hrs, Volume= 0.209 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 108.75' @ 12.15 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 112.50' Surf.Area= 13 sf Storage= 60 cf

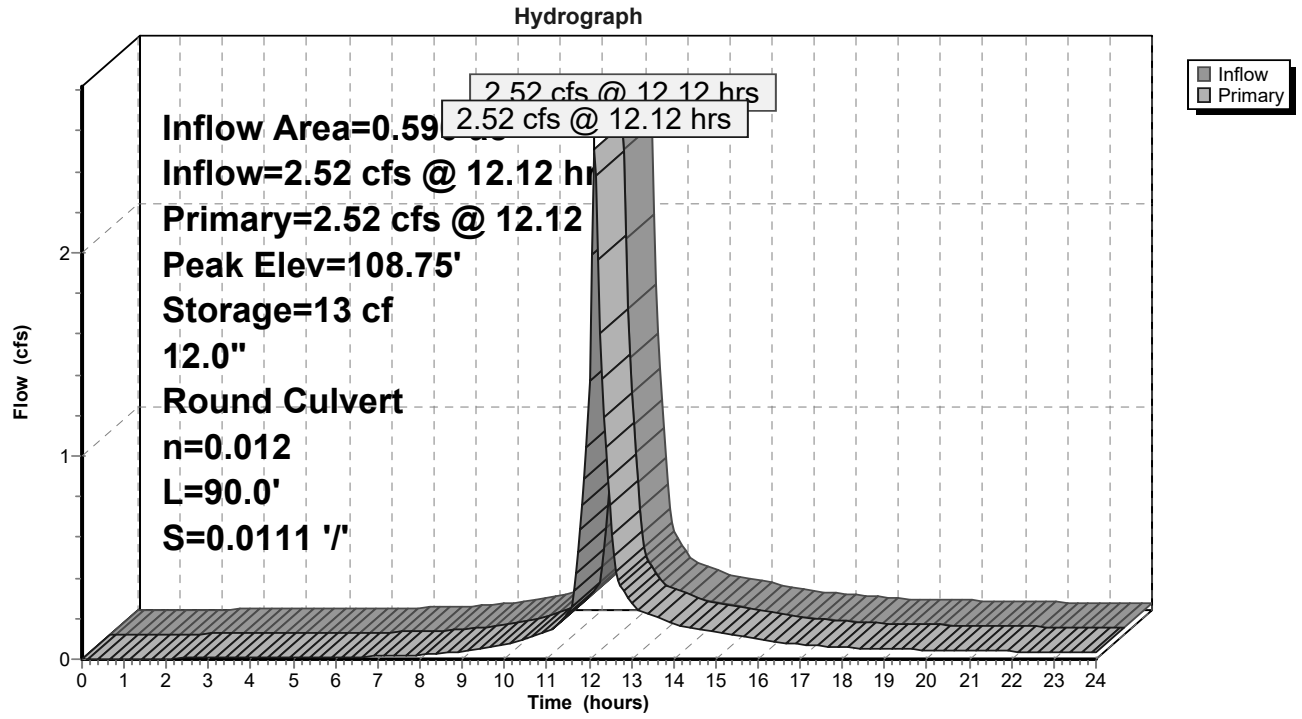
Plug-Flow detention time= 0.2 min calculated for 0.209 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (803.5 - 803.3)

Volume	Invert	Avail.Storage	Storage Description
#1	107.75'	60 cf	**4.00'D x 4.75'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	107.75'	**12.0" Round 12" HDPE N-12** L= 90.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 107.75' / 106.75' S= 0.0111 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.18 cfs @ 12.12 hrs HW=108.70' TW=108.00' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Outlet Controls 2.18 cfs @ 3.65 fps)

Pond C02P: Catch Basin #2



Summary for Pond C03P: Catch Basin #3

Inflow Area = 1.423 ac, 59.29% Impervious, Inflow Depth > 4.01" for 25yr-24hr event
Inflow = 5.64 cfs @ 12.12 hrs, Volume= 0.475 af
Outflow = 5.63 cfs @ 12.12 hrs, Volume= 0.475 af, Atten= 0%, Lag= 0.1 min
Primary = 5.63 cfs @ 12.12 hrs, Volume= 0.475 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 108.04' @ 12.12 hrs Surf.Area= 13 sf Storage= 19 cf
Flood Elev= 113.75' Surf.Area= 13 sf Storage= 91 cf

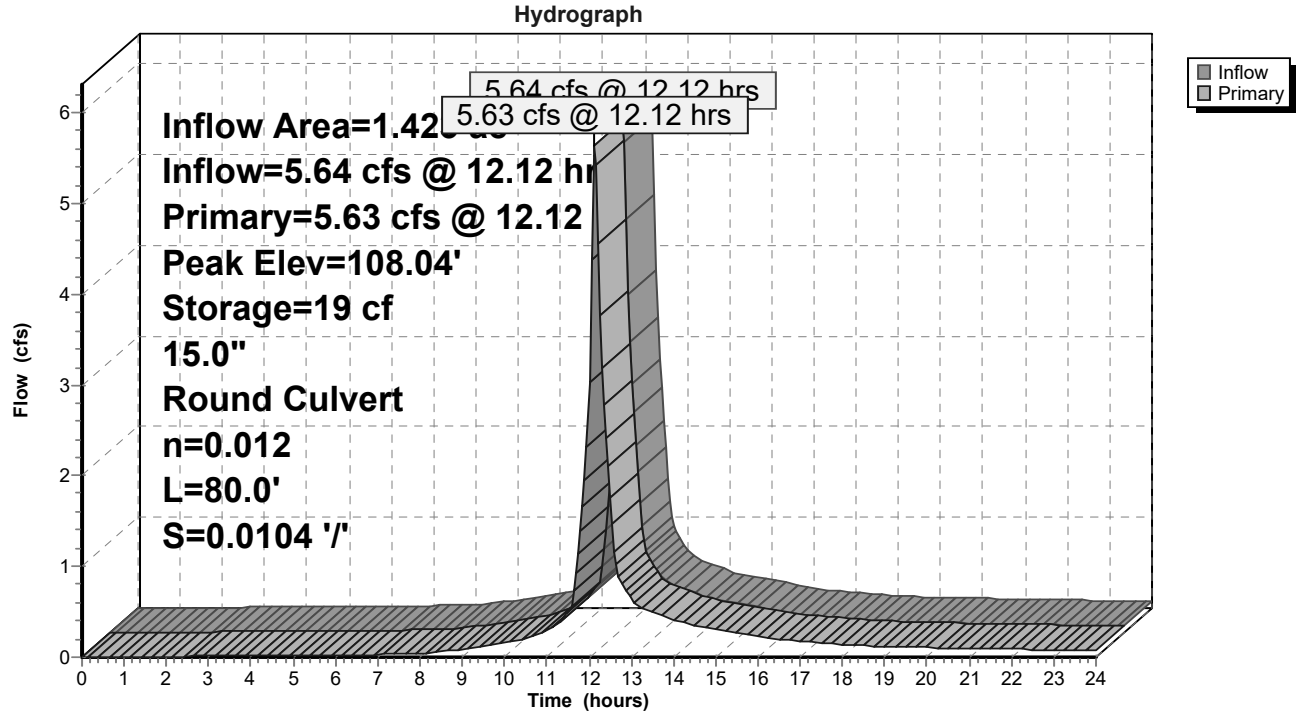
Plug-Flow detention time= 0.1 min calculated for 0.475 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (807.7 - 807.6)

Volume	Invert	Avail.Storage	Storage Description
#1	106.50'	91 cf	**4.00'D x 7.25'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	106.50'	**15.0" Round 15" HDPE N-12** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 106.50' / 105.67' S= 0.0104 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=5.45 cfs @ 12.12 hrs HW=108.00' TW=107.05' (Dynamic Tailwater)
↑—**1=15" HDPE N-12** (Outlet Controls 5.45 cfs @ 4.69 fps)

Pond C03P: Catch Basin #3



Summary for Pond C100P: CB #100

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 5.916 ac, 19.66% Impervious, Inflow Depth > 1.01" for 25yr-24hr event
Inflow = 2.52 cfs @ 12.46 hrs, Volume= 0.499 af
Outflow = 2.55 cfs @ 12.46 hrs, Volume= 0.499 af, Atten= 0%, Lag= 0.0 min
Primary = 2.55 cfs @ 12.46 hrs, Volume= 0.499 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 107.89' @ 12.32 hrs Surf.Area= 13 sf Storage= 74 cf
Flood Elev= 110.46' Surf.Area= 17 sf Storage= 107 cf

Plug-Flow detention time= 0.3 min calculated for 0.499 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (925.5 - 925.3)

Volume	Invert	Avail.Storage	Storage Description
#1	101.97'	107 cf	**4.00'D x 8.49'H 4' Structure**
#2	110.46'	28 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		134 cf	Total Available Storage

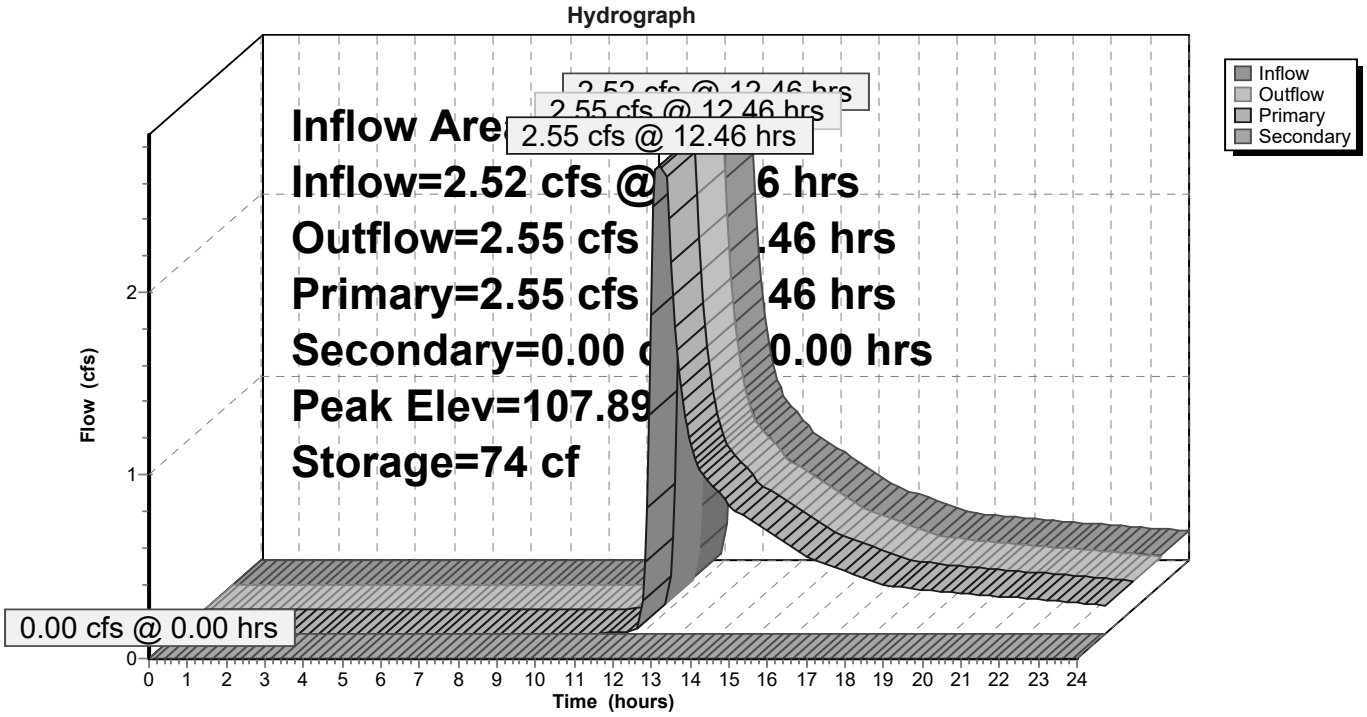
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
110.46	4	4.0	0	0	4
110.75	250	100.0	28	28	799

Device	Routing	Invert	Outlet Devices
#1	Primary	101.97'	**10.0" Round Culvert** L= 141.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 101.97' / 101.26' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf
#2	Secondary	110.46'	**10.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.73 cfs @ 12.46 hrs HW=106.88' TW=104.41' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.73 cfs @ 5.01 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=101.97' TW=101.16' (Dynamic Tailwater)
2=Overflow (Controls 0.00 cfs)

Pond C100P: CB #100



Summary for Pond C1295GP: CB 12+95G

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=32)

Inflow Area = 0.088 ac, 0.00% Impervious, Inflow Depth > 0.73" for 25yr-24hr event
Inflow = 0.03 cfs @ 12.34 hrs, Volume= 0.005 af
Outflow = 0.05 cfs @ 12.35 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.6 min
Primary = 0.05 cfs @ 12.35 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 136.56' @ 12.25 hrs Surf.Area= 13 sf Storage= 9 cf

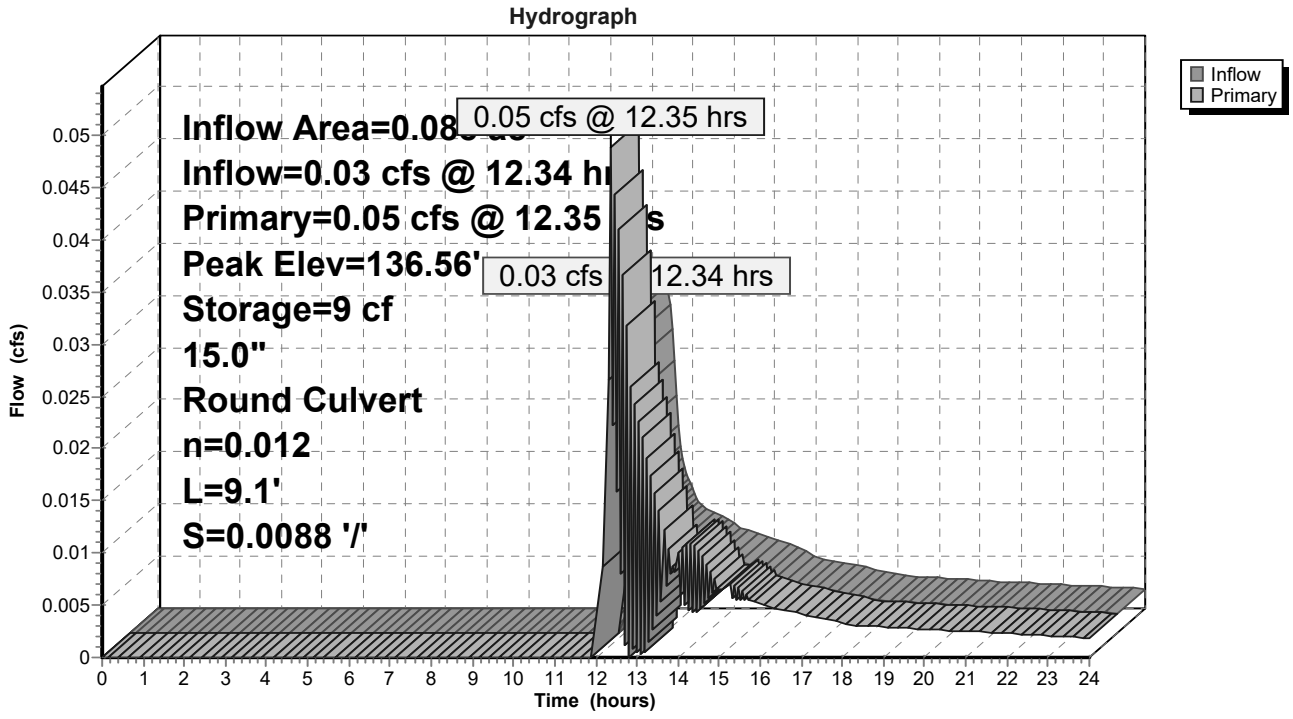
Plug-Flow detention time= 3.4 min calculated for 0.005 af (100% of inflow)
Center-of-Mass det. time= 2.6 min (938.4 - 935.8)

Volume	Invert	Avail.Storage	Storage Description
#1	135.84'	73 cf	**4.00'D x 5.78'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.84'	**15.0" Round 15 " HDPE N-12** L= 9.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 135.84' / 135.76' S= 0.0088 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.57 cfs @ 12.35 hrs HW=136.41' TW=136.34' (Dynamic Tailwater)
1=15 " HDPE N-12 (Outlet Controls 0.57 cfs @ 1.56 fps)

Pond C1295GP: CB 12+95G



Summary for Pond C1295LP: CB 12+95L

Inflow Area = 1.035 ac, 47.75% Impervious, Inflow Depth > 3.27" for 25yr-24hr event
Inflow = 3.32 cfs @ 12.15 hrs, Volume= 0.282 af
Outflow = 3.32 cfs @ 12.15 hrs, Volume= 0.282 af, Atten= 0%, Lag= 0.0 min
Primary = 3.32 cfs @ 12.15 hrs, Volume= 0.282 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 136.27' @ 12.16 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 141.63' Surf.Area= 13 sf Storage= 80 cf

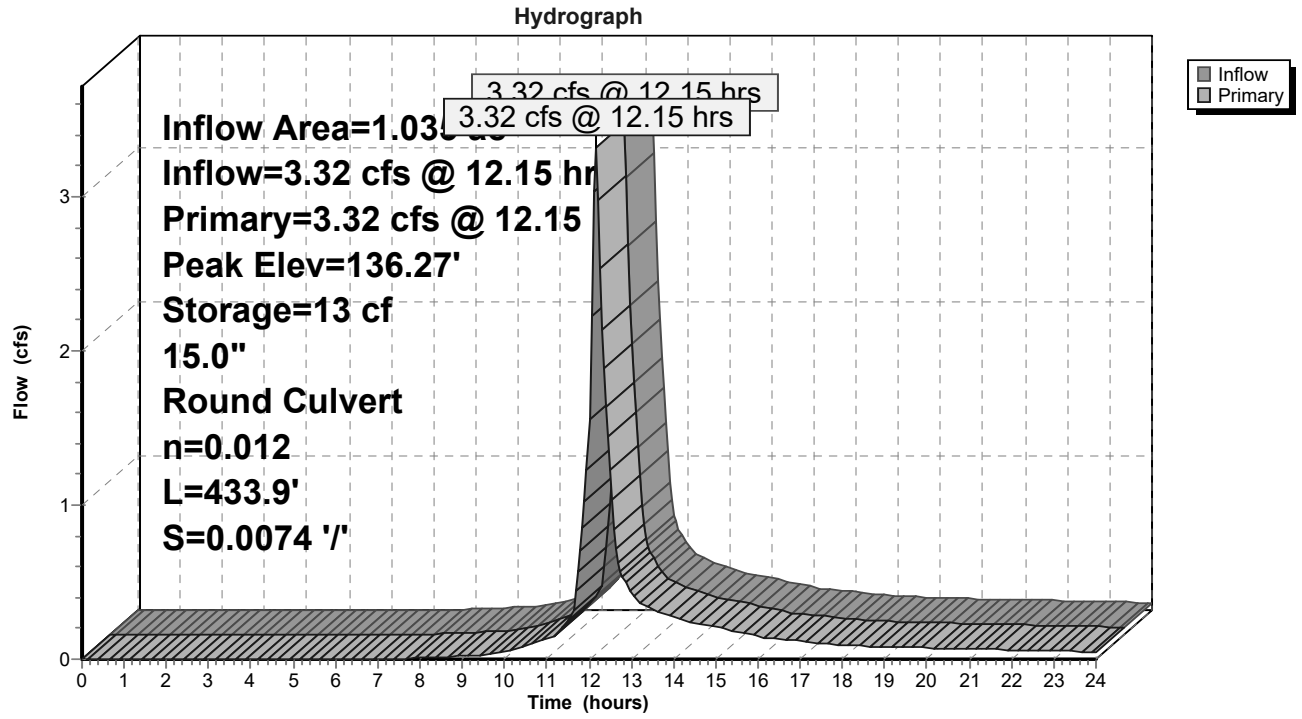
Plug-Flow detention time= 0.2 min calculated for 0.282 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (834.6 - 834.5)

Volume	Invert	Avail.Storage	Storage Description
#1	135.27'	80 cf	**4.00'D x 6.36'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.27'	**15.0" Round 15" HDPE N-12** L= 433.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 135.27' / 132.04' S= 0.0074 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=3.26 cfs @ 12.15 hrs HW=136.27' TW=133.74' (Dynamic Tailwater)
↑—**1=15" HDPE N-12** (Outlet Controls 3.26 cfs @ 4.25 fps)

Pond C1295LP: CB 12+95L



Summary for Pond C1295RP: CB 12+95R

[80] Warning: Exceeded Pond C1295GP by 0.54' @ 12.10 hrs (1.27 cfs 0.029 af)

Inflow Area = 0.701 ac, 39.25% Impervious, Inflow Depth > 2.74" for 25yr-24hr event
Inflow = 1.84 cfs @ 12.15 hrs, Volume= 0.160 af
Outflow = 1.84 cfs @ 12.15 hrs, Volume= 0.160 af, Atten= 0%, Lag= 0.0 min
Primary = 1.84 cfs @ 12.15 hrs, Volume= 0.160 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 136.56' @ 12.19 hrs Surf.Area= 13 sf Storage= 10 cf
Flood Elev= 141.62' Surf.Area= 13 sf Storage= 74 cf

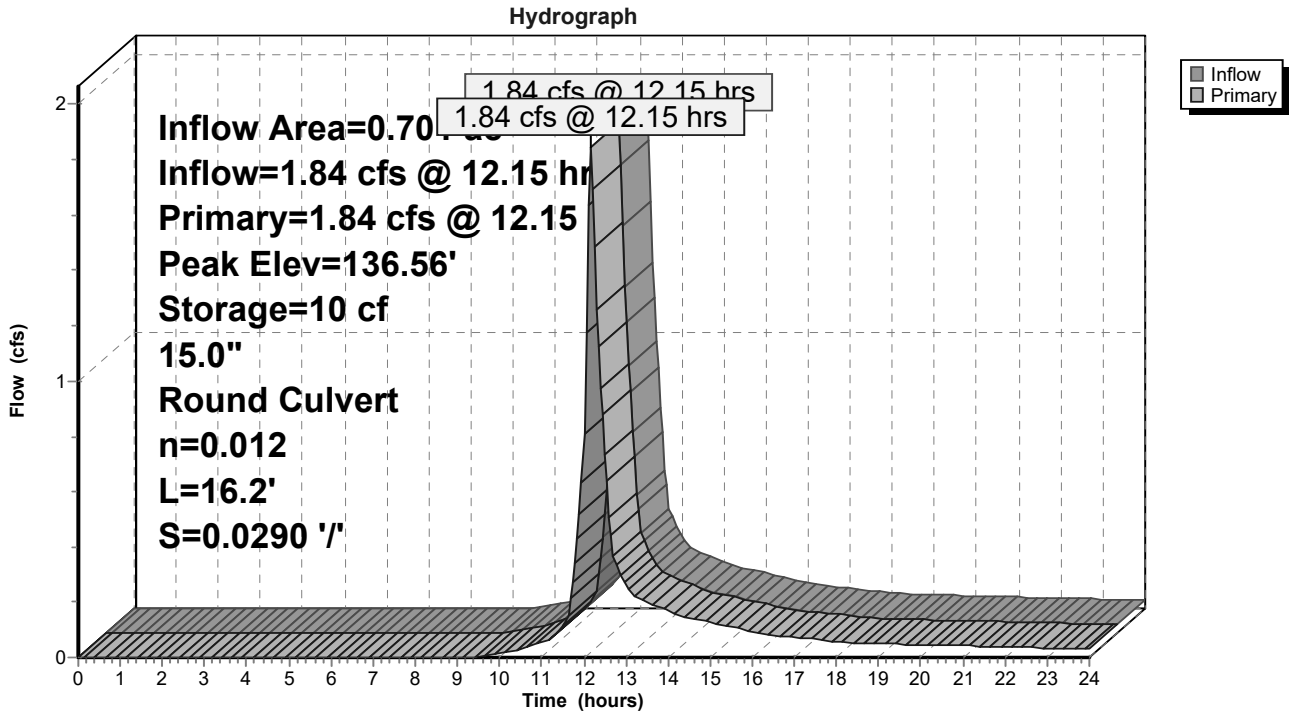
Plug-Flow detention time= 0.2 min calculated for 0.160 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (848.8 - 848.6)

Volume	Invert	Avail.Storage	Storage Description
#1	135.76'	74 cf	**4.00'D x 5.86'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.76'	**15.0" Round 15" HDPE N-12** L= 16.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 135.76' / 135.29' S= 0.0290 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.61 cfs @ 12.15 hrs HW=136.54' TW=136.27' (Dynamic Tailwater)
1=15" HDPE N-12 (Outlet Controls 1.61 cfs @ 2.83 fps)

Pond C1295RP: CB 12+95R



Summary for Pond C148GP: CB 1+48G

Inflow Area = 0.310 ac, 16.80% Impervious, Inflow Depth > 0.88" for 25yr-24hr event
Inflow = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af
Outflow = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min
Primary = 0.14 cfs @ 12.34 hrs, Volume= 0.023 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 125.77' @ 12.32 hrs Surf.Area= 13 sf Storage= 2 cf
Flood Elev= 132.24' Surf.Area= 13 sf Storage= 84 cf

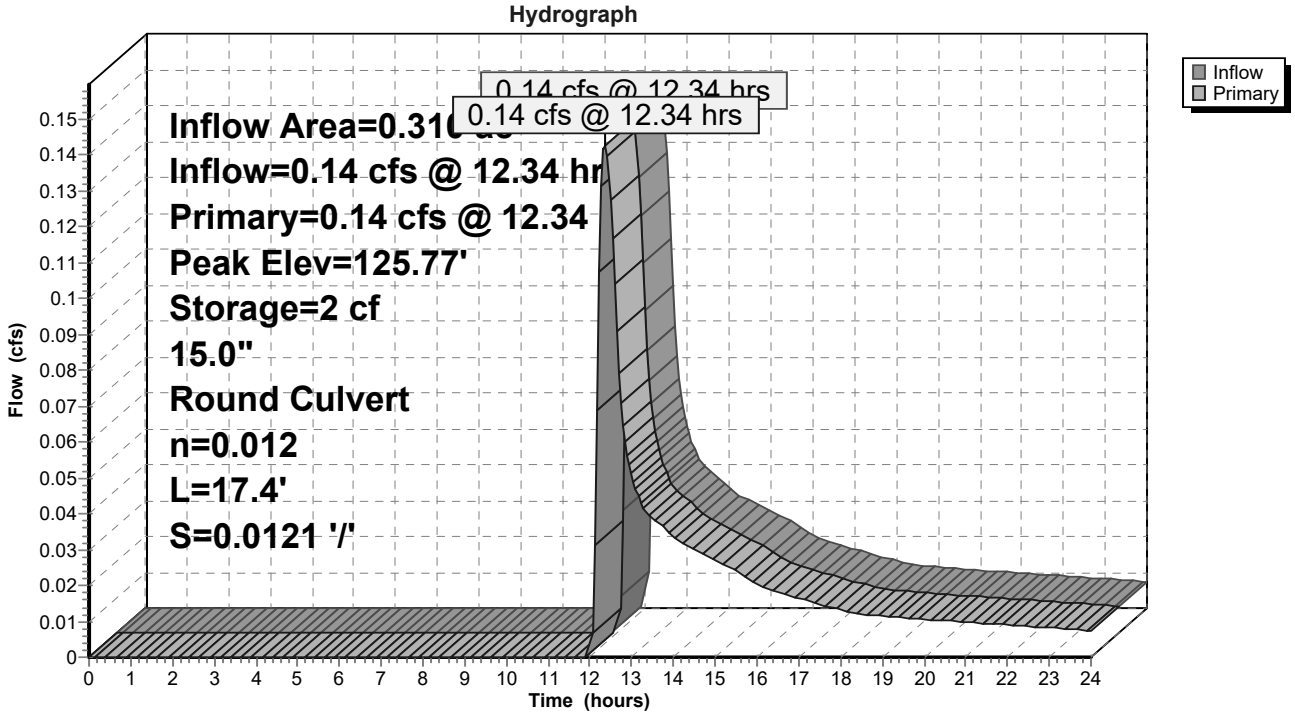
Plug-Flow detention time= 0.6 min calculated for 0.023 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (926.5 - 926.2)

Volume	Invert	Avail.Storage	Storage Description
#1	125.59'	84 cf	**4.00'D x 6.65'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	125.59'	**15.0" Round 15 " HDPE N-12** L= 17.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 125.59' / 125.38' S= 0.0121 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.14 cfs @ 12.34 hrs HW=125.77' TW=125.57' (Dynamic Tailwater)
1=15 " HDPE N-12 (Outlet Controls 0.14 cfs @ 1.97 fps)

Pond C148GP: CB 1+48G



Summary for Pond C148RP: CB 1+48R

Inflow Area = 0.470 ac, 21.68% Impervious, Inflow Depth > 1.31" for 25yr-24hr event
Inflow = 0.41 cfs @ 12.16 hrs, Volume= 0.051 af
Outflow = 0.41 cfs @ 12.17 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min
Primary = 0.41 cfs @ 12.17 hrs, Volume= 0.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 125.58' @ 12.20 hrs Surf.Area= 13 sf Storage= 4 cf
Flood Elev= 132.08' Surf.Area= 13 sf Storage= 85 cf

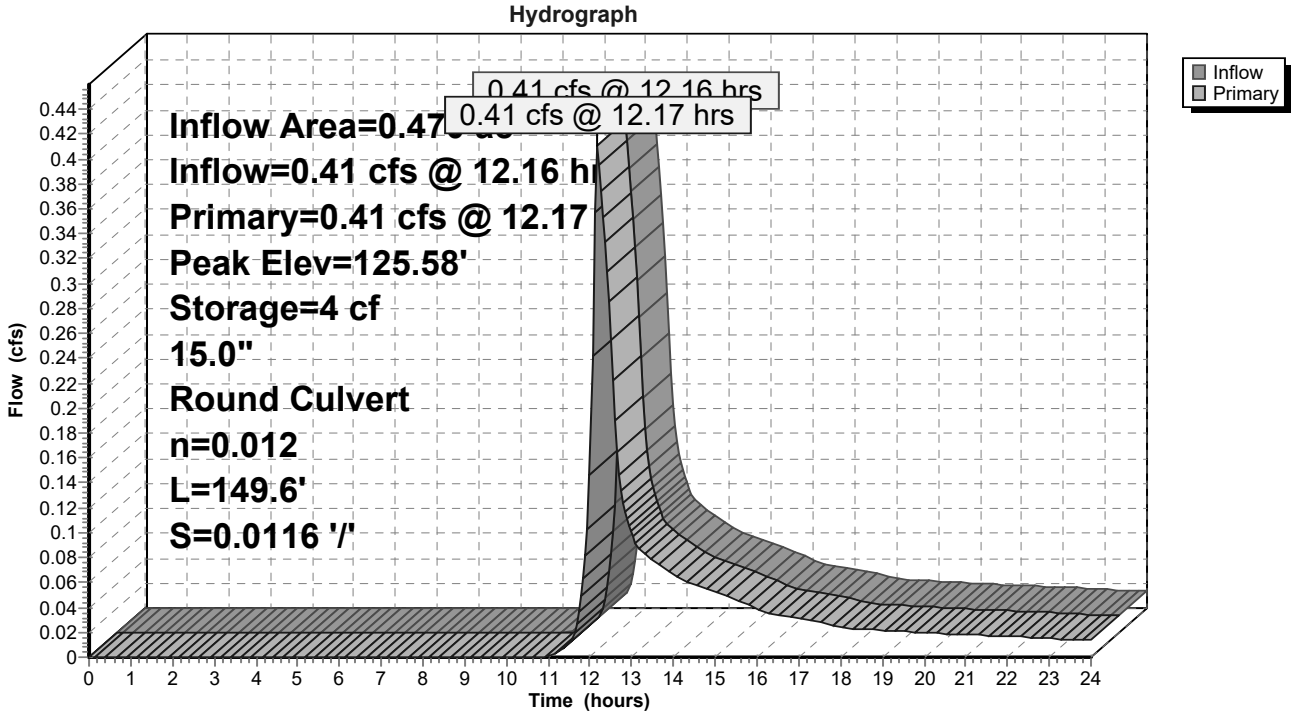
Plug-Flow detention time= 0.4 min calculated for 0.051 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (892.5 - 892.3)

Volume	Invert	Avail.Storage	Storage Description
#1	125.28'	85 cf	**4.00'D x 6.80'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	125.28'	**15.0" Round 15" HDPE N-12** L= 149.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 125.28' / 123.55' S= 0.0116 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.39 cfs @ 12.17 hrs HW=125.58' TW=124.44' (Dynamic Tailwater)
1=15" HDPE N-12 (Outlet Controls 0.39 cfs @ 2.63 fps)

Pond C148RP: CB 1+48R



Summary for Pond C1643LP: CB 16+43L

Inflow Area = 0.063 ac, 99.56% Impervious, Inflow Depth > 6.67" for 25yr-24hr event
Inflow = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af
Outflow = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.1 min
Primary = 0.41 cfs @ 12.09 hrs, Volume= 0.035 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 137.16' @ 12.09 hrs Surf.Area= 13 sf Storage= 4 cf
Flood Elev= 141.21' Surf.Area= 13 sf Storage= 55 cf

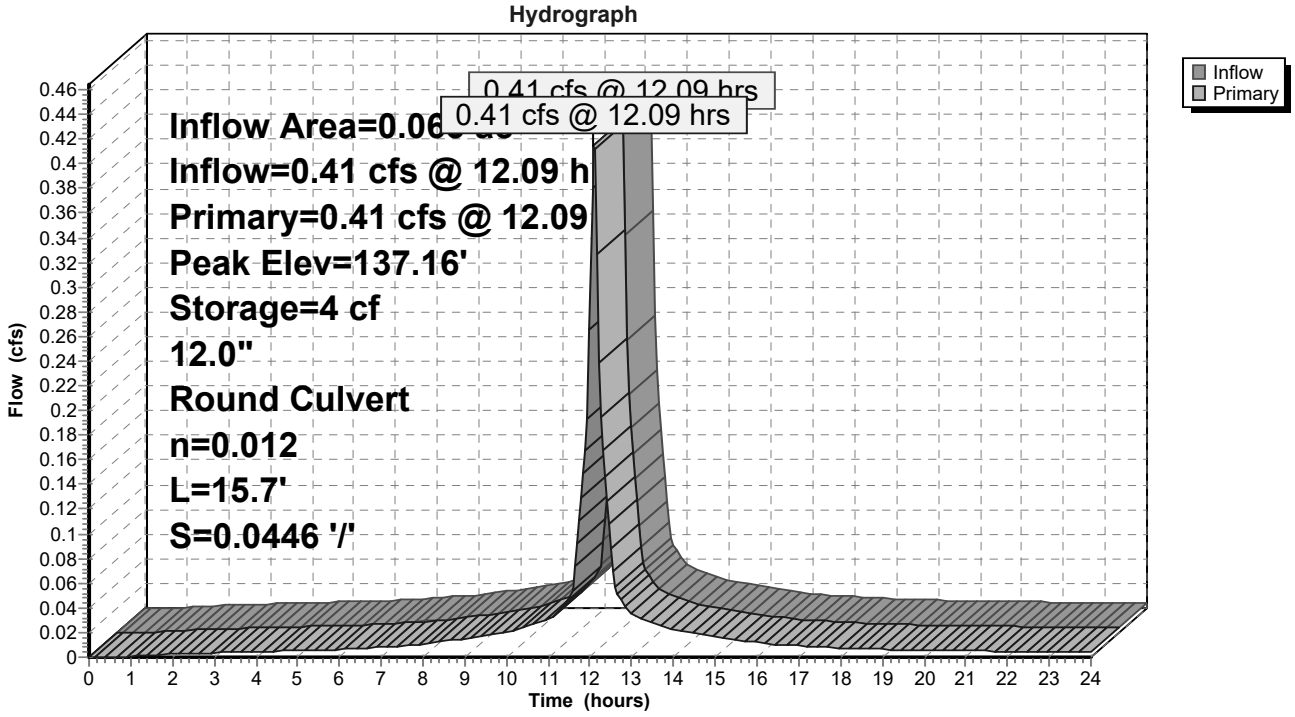
Plug-Flow detention time= 0.6 min calculated for 0.035 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (743.1 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	136.84'	55 cf	**4.00'D x 4.37'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	136.84'	**12.0" Round 12" HDPE N-12** L= 15.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 136.84' / 136.14' S= 0.0446 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.40 cfs @ 12.09 hrs HW=137.15' TW=135.84' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 0.40 cfs @ 1.91 fps)

Pond C1643LP: CB 16+43L



Summary for Pond C1643RP: CB 16+43R

Inflow Area = 0.252 ac, 62.41% Impervious, Inflow Depth > 4.23" for 25yr-24hr event
Inflow = 0.94 cfs @ 12.13 hrs, Volume= 0.089 af
Outflow = 0.94 cfs @ 12.13 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.1 min
Primary = 0.94 cfs @ 12.13 hrs, Volume= 0.089 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 135.86' @ 12.13 hrs Surf.Area= 13 sf Storage= 6 cf
Flood Elev= 141.18' Surf.Area= 13 sf Storage= 73 cf

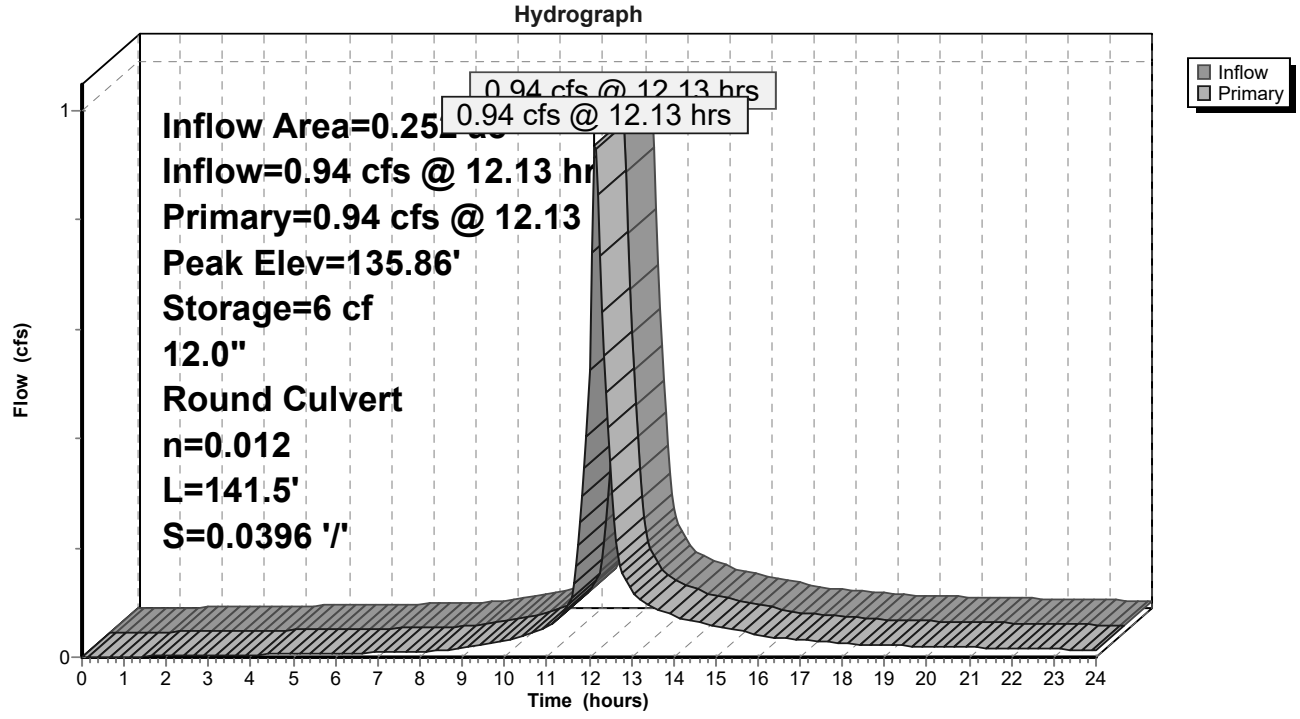
Plug-Flow detention time= 0.4 min calculated for 0.089 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (801.3 - 801.1)

Volume	Invert	Avail.Storage	Storage Description
#1	135.36'	73 cf	**4.00'D x 5.82'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	135.36'	**12.0" Round 12" HDPE N-12** L= 141.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 135.36' / 129.75' S= 0.0396 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.92 cfs @ 12.13 hrs HW=135.85' TW=129.74' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 0.92 cfs @ 2.39 fps)

Pond C1643RP: CB 16+43R



Summary for Pond C1785LP: CB 17+85L

Inflow Area = 0.173 ac, 52.61% Impervious, Inflow Depth > 3.54" for 25yr-24hr event
Inflow = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af
Outflow = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.1 min
Primary = 0.70 cfs @ 12.10 hrs, Volume= 0.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 130.83' @ 12.10 hrs Surf.Area= 13 sf Storage= 5 cf
Flood Elev= 135.25' Surf.Area= 13 sf Storage= 61 cf

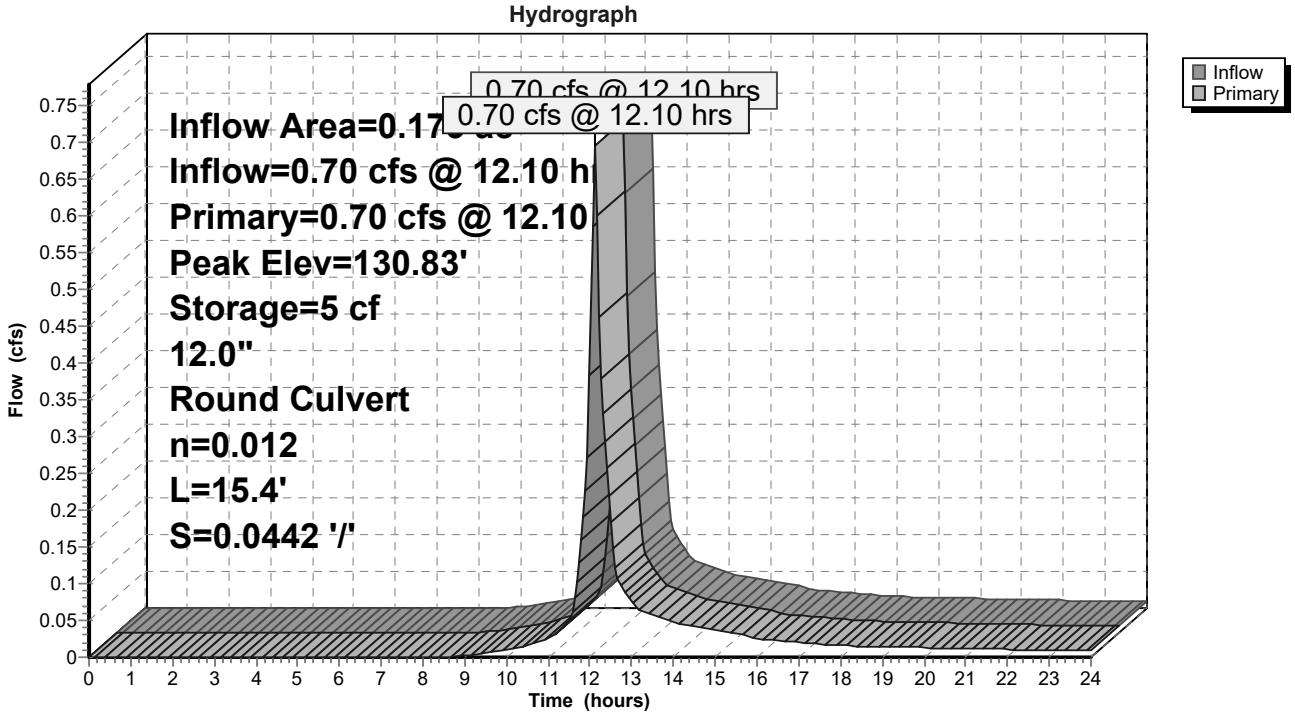
Plug-Flow detention time= 0.4 min calculated for 0.051 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (831.6 - 831.4)

Volume	Invert	Avail.Storage	Storage Description
#1	130.41'	61 cf	**4.00'D x 4.84'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	130.41'	**12.0" Round 12" HDPE N-12** L= 15.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 130.41' / 129.73' S= 0.0442 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.69 cfs @ 12.10 hrs HW=130.83' TW=129.77' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 0.69 cfs @ 2.21 fps)

Pond C1785LP: CB 17+85L



Summary for Pond C1785RP: CB 17+85R

Inflow Area = 0.681 ac, 54.92% Impervious, Inflow Depth > 3.72" for 25yr-24hr event
Inflow = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af
Outflow = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.1 min
Primary = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 129.78' @ 12.11 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 135.13' Surf.Area= 13 sf Storage= 79 cf

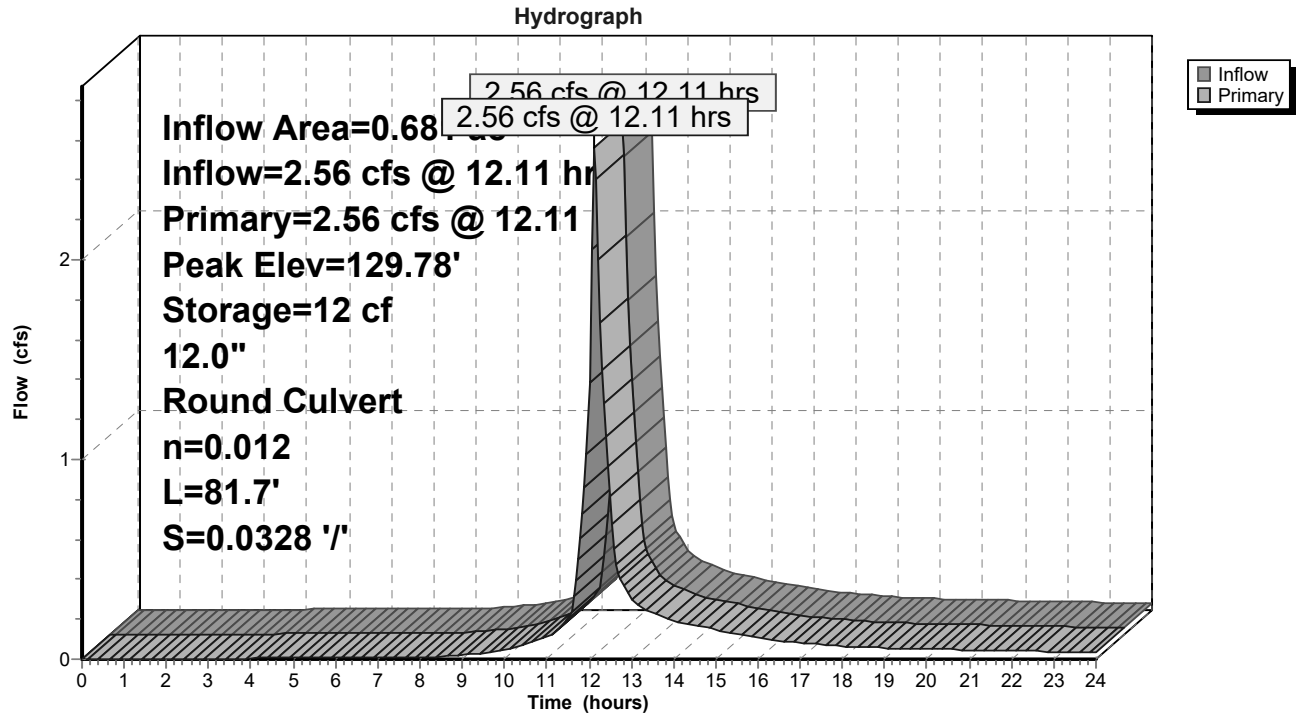
Plug-Flow detention time= 0.2 min calculated for 0.211 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (820.7 - 820.5)

Volume	Invert	Avail.Storage	Storage Description
#1	128.83'	79 cf	**4.00'D x 6.30'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	128.83'	**12.0" Round 12" HDPE N-12** L= 81.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 128.83' / 126.15' S= 0.0328 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.49 cfs @ 12.11 hrs HW=129.76' TW=127.08' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Inlet Controls 2.49 cfs @ 3.28 fps)

Pond C1785RP: CB 17+85R



Summary for Pond C1928LP: CB 19+28L

Inflow Area = 1.102 ac, 54.08% Impervious, Inflow Depth > 3.65" for 25yr-24hr event
Inflow = 4.22 cfs @ 12.11 hrs, Volume= 0.335 af
Outflow = 4.21 cfs @ 12.11 hrs, Volume= 0.335 af, Atten= 0%, Lag= 0.1 min
Primary = 4.21 cfs @ 12.11 hrs, Volume= 0.335 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 123.93' @ 12.11 hrs Surf.Area= 13 sf Storage= 22 cf
Flood Elev= 129.05' Surf.Area= 13 sf Storage= 86 cf

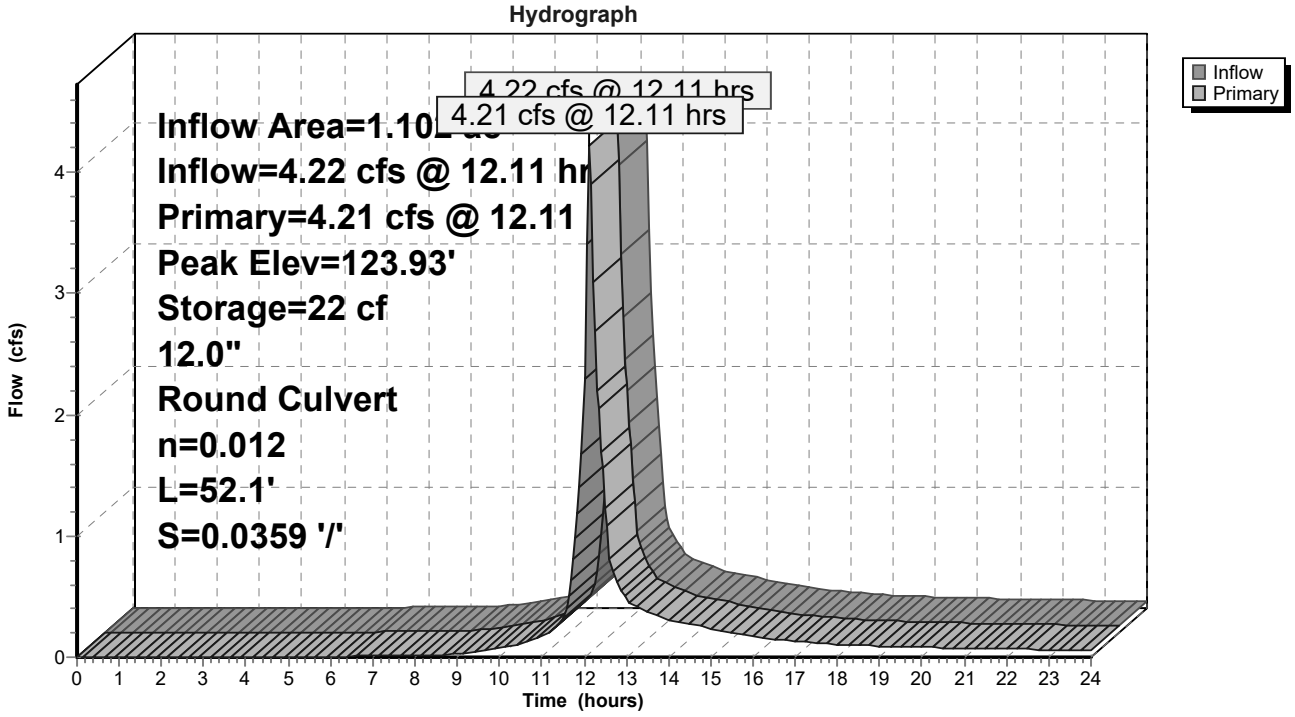
Plug-Flow detention time= 0.2 min calculated for 0.334 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (824.9 - 824.8)

Volume	Invert	Avail.Storage	Storage Description
#1	122.19'	86 cf	**4.00'D x 6.86'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	122.19'	**12.0" Round 12" HDPE N-12** L= 52.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 122.19' / 120.32' S= 0.0359 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=4.12 cfs @ 12.11 hrs HW=123.88' TW=122.58' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 4.12 cfs @ 5.25 fps)

Pond C1928LP: CB 19+28L



Summary for Pond C1928RP: CB 19+28R

Inflow Area = 0.203 ac, 53.23% Impervious, Inflow Depth > 3.54" for 25yr-24hr event
Inflow = 0.83 cfs @ 12.09 hrs, Volume= 0.060 af
Outflow = 0.83 cfs @ 12.10 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.1 min
Primary = 0.83 cfs @ 12.10 hrs, Volume= 0.060 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.73' @ 12.09 hrs Surf.Area= 13 sf Storage= 6 cf
Flood Elev= 128.92' Surf.Area= 13 sf Storage= 59 cf

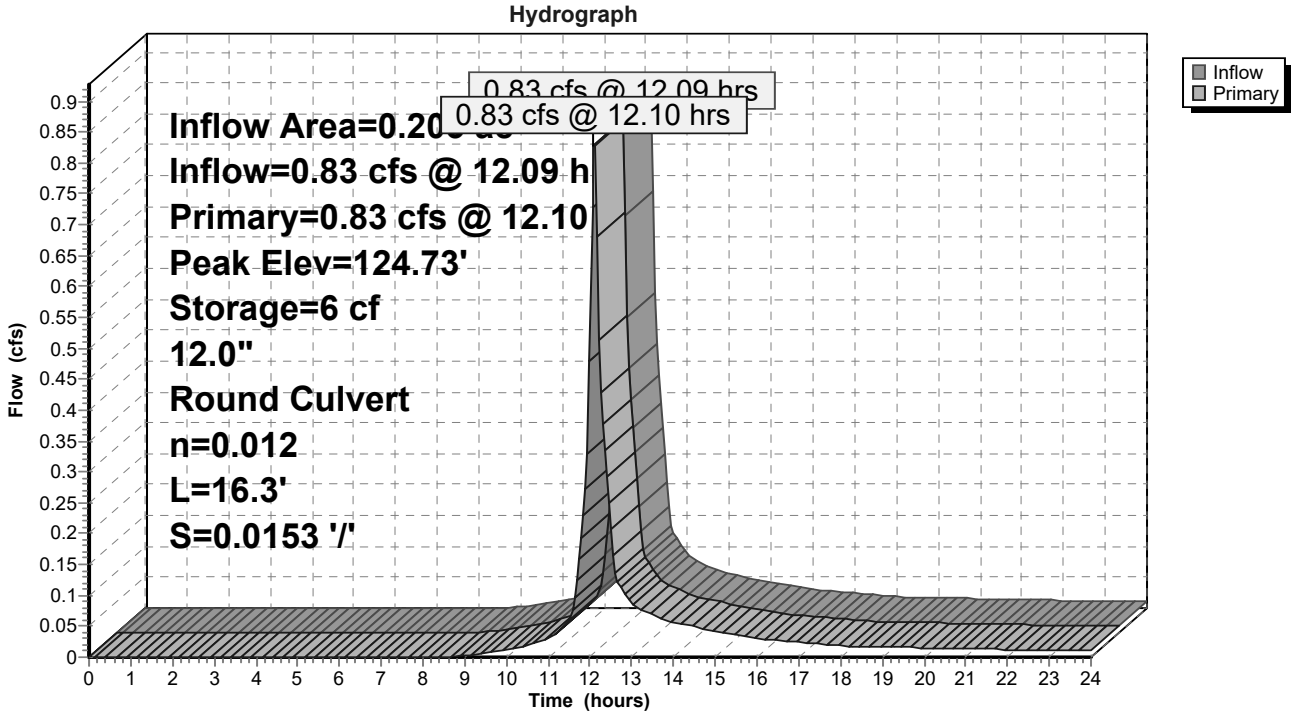
Plug-Flow detention time= 0.4 min calculated for 0.060 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (831.1 - 830.9)

Volume	Invert	Avail.Storage	Storage Description
#1	124.26'	59 cf	**4.00'D x 4.66'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	124.26'	**12.0" Round 12" HDPE N-12** L= 16.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 124.26' / 124.01' S= 0.0153 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.82 cfs @ 12.10 hrs HW=124.73' TW=123.87' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Barrel Controls 0.82 cfs @ 3.34 fps)

Pond C1928RP: CB 19+28R



Summary for Pond C1979RP: CB 19+79R

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=9)

Inflow Area = 1.141 ac, 54.41% Impervious, Inflow Depth > 3.67" for 25yr-24hr event
Inflow = 4.40 cfs @ 12.11 hrs, Volume= 0.349 af
Outflow = 4.35 cfs @ 12.11 hrs, Volume= 0.349 af, Atten= 1%, Lag= 0.1 min
Primary = 4.35 cfs @ 12.11 hrs, Volume= 0.349 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 122.98' @ 12.14 hrs Surf.Area= 13 sf Storage= 33 cf
Flood Elev= 126.96' Surf.Area= 13 sf Storage= 83 cf

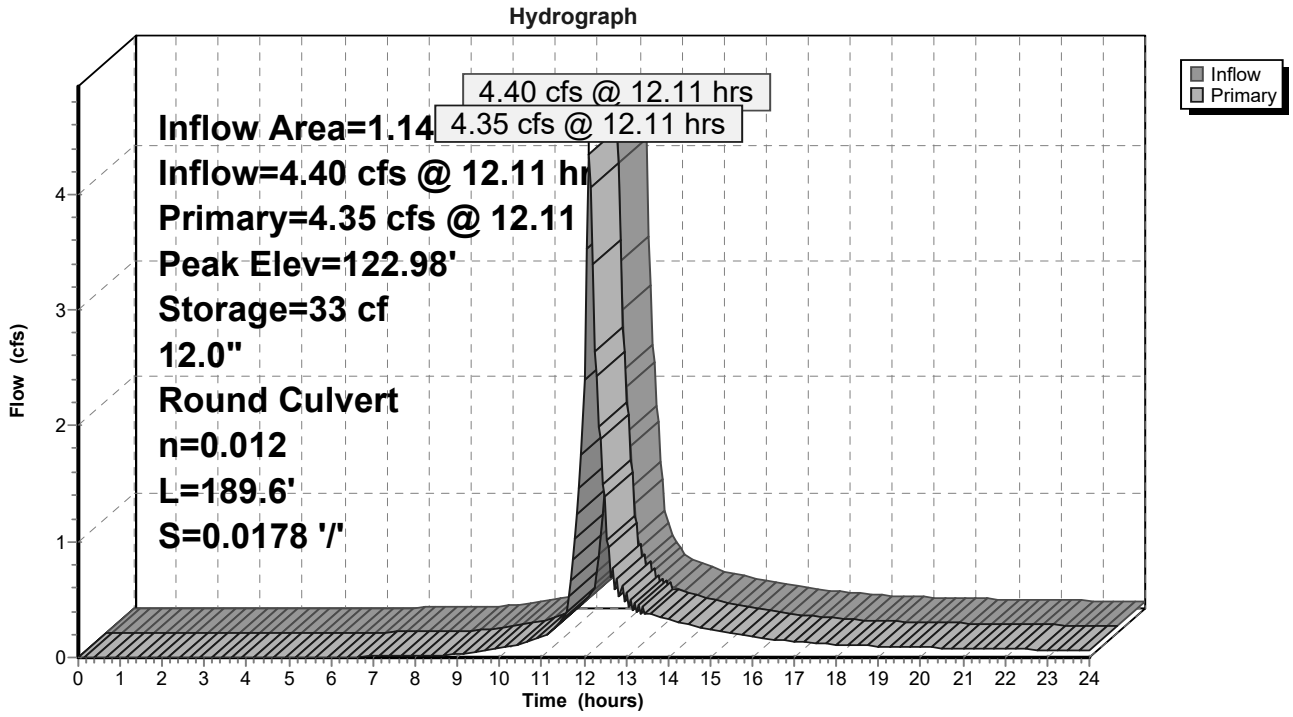
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.1 min (824.6 - 824.5)

Volume	Invert	Avail.Storage	Storage Description
#1	120.32'	83 cf	**4.00'D x 6.64'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	120.32'	**12.0" Round 12" HDPE N-12** L= 189.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 120.32' / 116.94' S= 0.0178 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=3.86 cfs @ 12.11 hrs HW=122.59' TW=120.12' (Dynamic Tailwater)
└**1=12" HDPE N-12** (Outlet Controls 3.86 cfs @ 4.92 fps)

Pond C1979RP: CB 19+79R



Summary for Pond C2173LP: CB 21+73L

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)

Inflow Area = 0.313 ac, 57.63% Impervious, Inflow Depth > 3.85" for 25yr-24hr event
Inflow = 1.39 cfs @ 12.09 hrs, Volume= 0.101 af
Outflow = 1.28 cfs @ 12.09 hrs, Volume= 0.101 af, Atten= 8%, Lag= 0.0 min
Primary = 1.28 cfs @ 12.09 hrs, Volume= 0.101 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 120.32' @ 12.16 hrs Surf.Area= 13 sf Storage= 36 cf
Flood Elev= 122.11' Surf.Area= 13 sf Storage= 58 cf

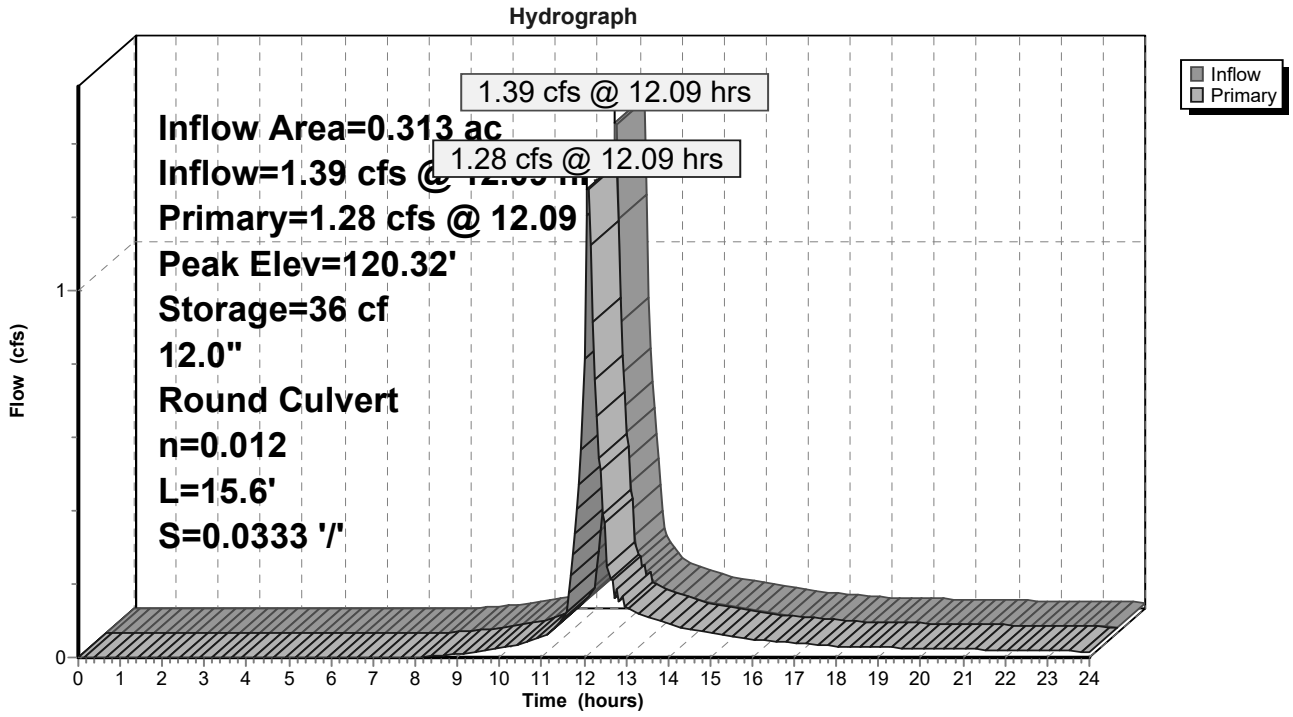
Plug-Flow detention time= 0.4 min calculated for 0.101 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (824.5 - 824.2)

Volume	Invert	Avail.Storage	Storage Description
#1	117.45'	58 cf	**4.00'D x 4.65'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	117.46'	**12.0" Round 12" HDPE N-12** L= 15.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 117.46' / 116.94' S= 0.0333 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.00 cfs @ 12.09 hrs HW=119.31' TW=120.07' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Controls 0.00 cfs)

Pond C2173LP: CB 21+73L



Summary for Pond C2173RP: CB 21+73R

[80] Warning: Exceeded Pond C2173LP by 0.96' @ 12.05 hrs (3.71 cfs 0.035 af)

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth > 3.74" for 25yr-24hr event
Inflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af
Outflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af, Atten= 0%, Lag= 0.2 min
Primary = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 120.24' @ 12.11 hrs Surf.Area= 13 sf Storage= 42 cf
Flood Elev= 122.04' Surf.Area= 13 sf Storage= 65 cf

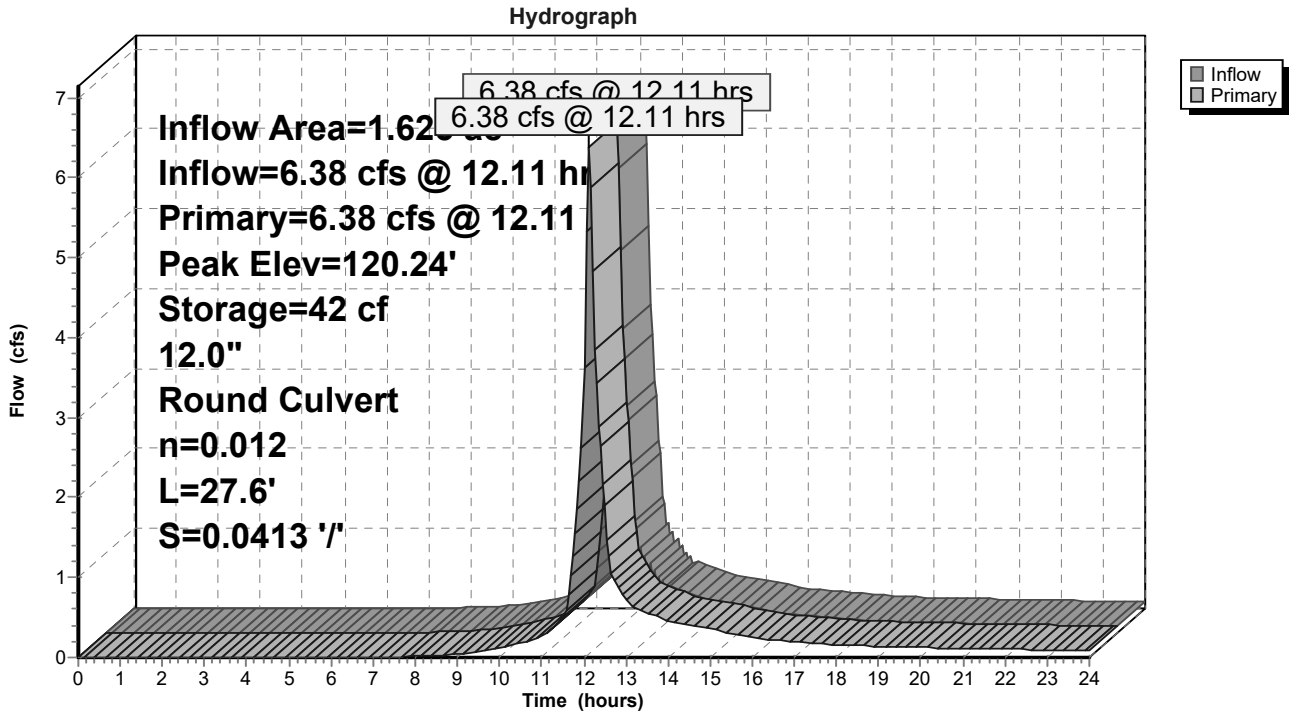
Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.1 min (824.4 - 824.3)

Volume	Invert	Avail.Storage	Storage Description
#1	116.90'	65 cf	**4.00'D x 5.14'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	116.90'	**12.0" Round 12" HDPE N-12** L= 27.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 116.90' / 115.76' S= 0.0413 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=6.27 cfs @ 12.11 hrs HW=120.15' TW=117.31' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 6.27 cfs @ 7.98 fps)

Pond C2173RP: CB 21+73R



Summary for Pond C2460LP: CB 24+60L

Inflow Area = 0.569 ac, 59.66% Impervious, Inflow Depth > 3.96" for 25yr-24hr event
Inflow = 2.32 cfs @ 12.14 hrs, Volume= 0.187 af
Outflow = 2.30 cfs @ 12.14 hrs, Volume= 0.187 af, Atten= 1%, Lag= 0.0 min
Primary = 2.30 cfs @ 12.14 hrs, Volume= 0.187 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 113.72' @ 12.21 hrs Surf.Area= 13 sf Storage= 15 cf
Flood Elev= 116.88' Surf.Area= 13 sf Storage= 55 cf

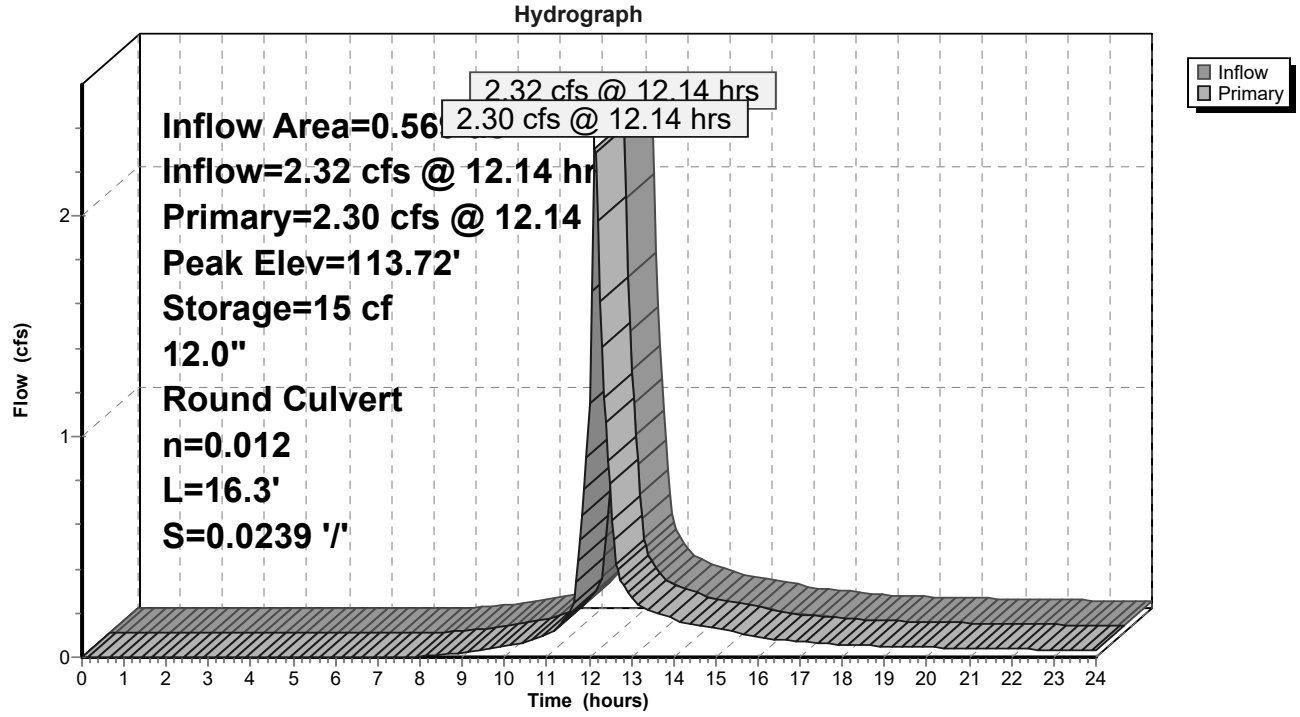
Plug-Flow detention time= 0.2 min calculated for 0.187 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (824.9 - 824.7)

Volume	Invert	Avail.Storage	Storage Description
#1	112.52'	55 cf	**4.00'D x 4.36'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	112.52'	**12.0" Round 12" HDPE N-12** L= 16.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 112.52' / 112.13' S= 0.0239 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.63 cfs @ 12.14 hrs HW=113.58' TW=113.40' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 1.63 cfs @ 2.07 fps)

Pond C2460LP: CB 24+60L



Summary for Pond C2460RP: CB 24+60R

Inflow Area = 0.678 ac, 66.20% Impervious, Inflow Depth > 4.40" for 25yr-24hr event
Inflow = 2.97 cfs @ 12.12 hrs, Volume= 0.249 af
Outflow = 2.95 cfs @ 12.12 hrs, Volume= 0.249 af, Atten= 1%, Lag= 0.1 min
Primary = 2.95 cfs @ 12.12 hrs, Volume= 0.249 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 113.51' @ 12.18 hrs Surf.Area= 13 sf Storage= 17 cf
Flood Elev= 116.53' Surf.Area= 13 sf Storage= 55 cf

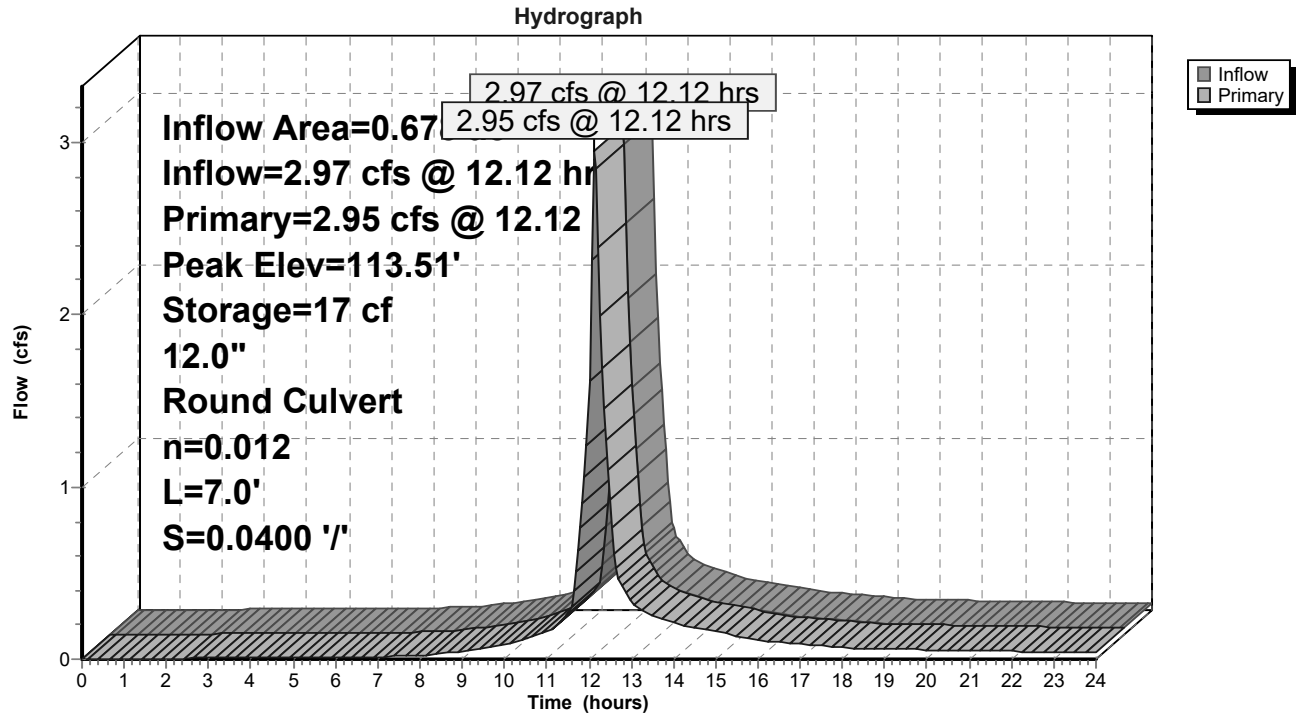
Plug-Flow detention time= 0.2 min calculated for 0.248 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (804.8 - 804.7)

Volume	Invert	Avail.Storage	Storage Description
#1	112.13'	55 cf	**4.00'D x 4.40'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	112.13'	**12.0" Round 12" HDPE N-12** L= 7.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 112.13' / 111.85' S= 0.0400 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.33 cfs @ 12.12 hrs HW=113.35' TW=112.97' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 2.33 cfs @ 2.97 fps)

Pond C2460RP: CB 24+60R



Summary for Pond C2610LP: CB 26+10L

Inflow Area = 0.444 ac, 59.64% Impervious, Inflow Depth > 3.96" for 25yr-24hr event
Inflow = 1.83 cfs @ 12.13 hrs, Volume= 0.147 af
Outflow = 1.82 cfs @ 12.13 hrs, Volume= 0.147 af, Atten= 0%, Lag= 0.1 min
Primary = 1.82 cfs @ 12.13 hrs, Volume= 0.147 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 109.39' @ 12.16 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 112.77' Surf.Area= 13 sf Storage= 55 cf

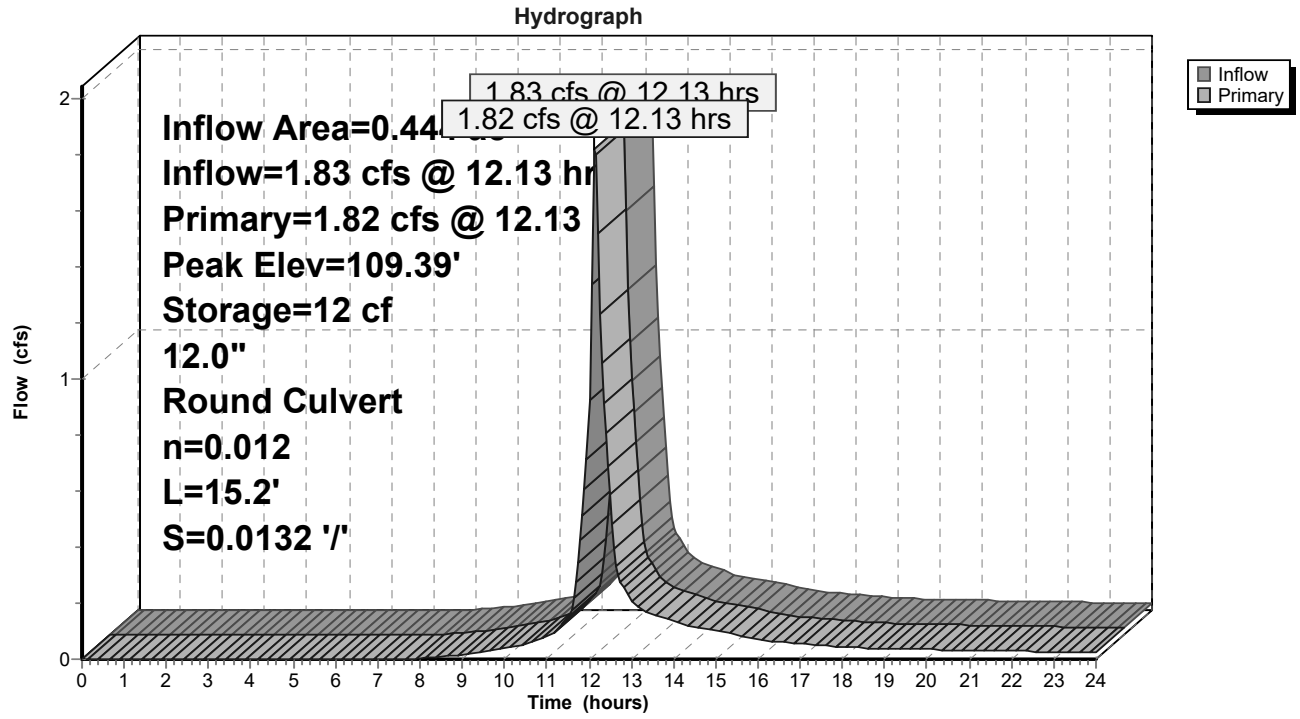
Plug-Flow detention time= 0.3 min calculated for 0.146 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (824.6 - 824.4)

Volume	Invert	Avail.Storage	Storage Description
#1	108.43'	55 cf	**4.00'D x 4.34'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	108.43'	**12.0" Round 12" HDPE N-12** L= 15.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 108.43' / 108.23' S= 0.0132 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.63 cfs @ 12.13 hrs HW=109.36' TW=109.14' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Outlet Controls 1.63 cfs @ 2.79 fps)

Pond C2610LP: CB 26+10L



Summary for Pond C2610RP: CB 26+10R

Inflow Area = 0.550 ac, 67.37% Impervious, Inflow Depth > 4.48" for 25yr-24hr event
Inflow = 2.48 cfs @ 12.12 hrs, Volume= 0.205 af
Outflow = 2.48 cfs @ 12.12 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.1 min
Primary = 2.48 cfs @ 12.12 hrs, Volume= 0.205 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 109.16' @ 12.12 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 112.87' Surf.Area= 13 sf Storage= 58 cf

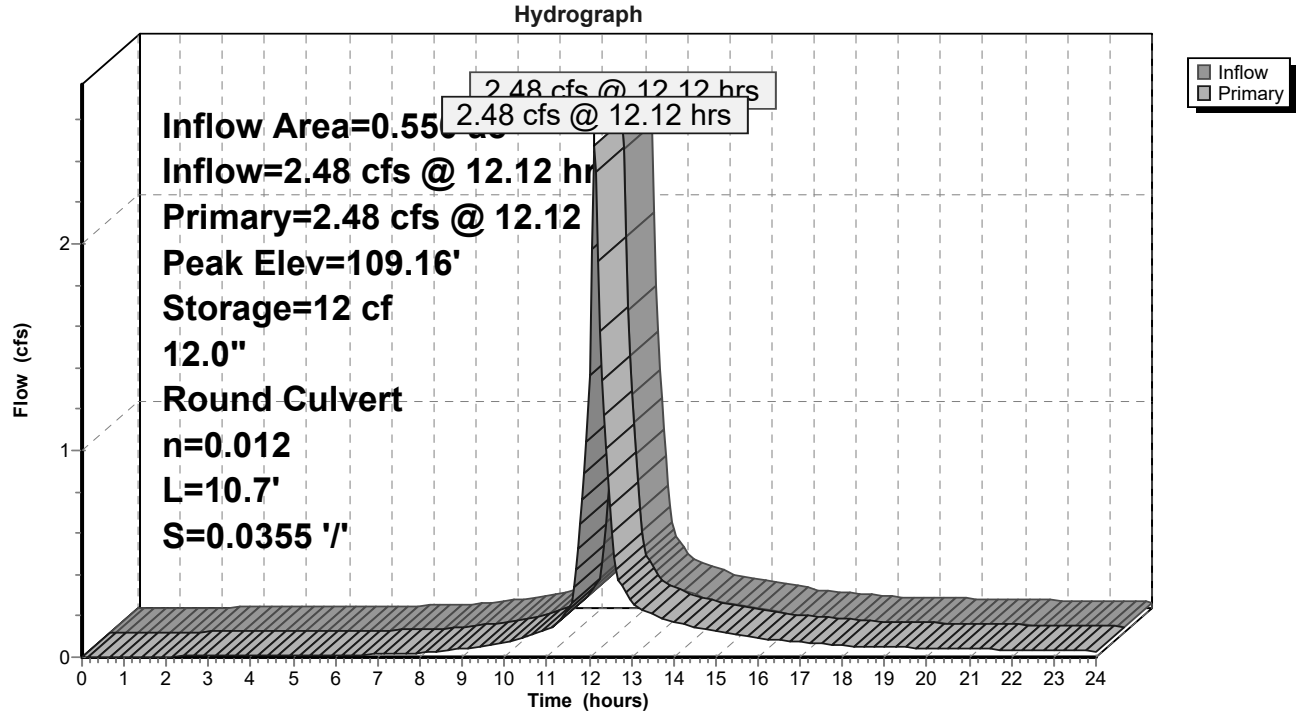
Plug-Flow detention time= 0.2 min calculated for 0.205 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (801.4 - 801.2)

Volume	Invert	Avail.Storage	Storage Description
#1	108.23'	58 cf	**4.00'D x 4.64'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	108.23'	**12.0" Round 12" HDPE N-12** L= 10.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 108.23' / 107.85' S= 0.0355 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.31 cfs @ 12.12 hrs HW=109.14' TW=108.70' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Outlet Controls 2.31 cfs @ 4.05 fps)

Pond C2610RP: CB 26+10R



Summary for Pond C3018GP: CB 30+18G

[80] Warning: Exceeded Pond C100P by 0.81' @ 12.15 hrs (1.57 cfs 0.029 af)

Inflow Area = 16.732 ac, 24.53% Impervious, Inflow Depth > 1.55" for 25yr-24hr event
Inflow = 15.94 cfs @ 12.17 hrs, Volume= 2.160 af
Outflow = 15.88 cfs @ 12.17 hrs, Volume= 2.160 af, Atten= 0%, Lag= 0.0 min
Primary = 15.88 cfs @ 12.17 hrs, Volume= 2.160 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 106.00' @ 12.24 hrs Surf.Area= 13 sf Storage= 60 cf

Plug-Flow detention time= 0.1 min calculated for 2.160 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (874.1 - 874.0)

Volume	Invert	Avail.Storage	Storage Description
#1	101.26'	78 cf	**4.00'D x 6.17'H 4' Structure**
#2	107.43'	277 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		355 cf	Total Available Storage

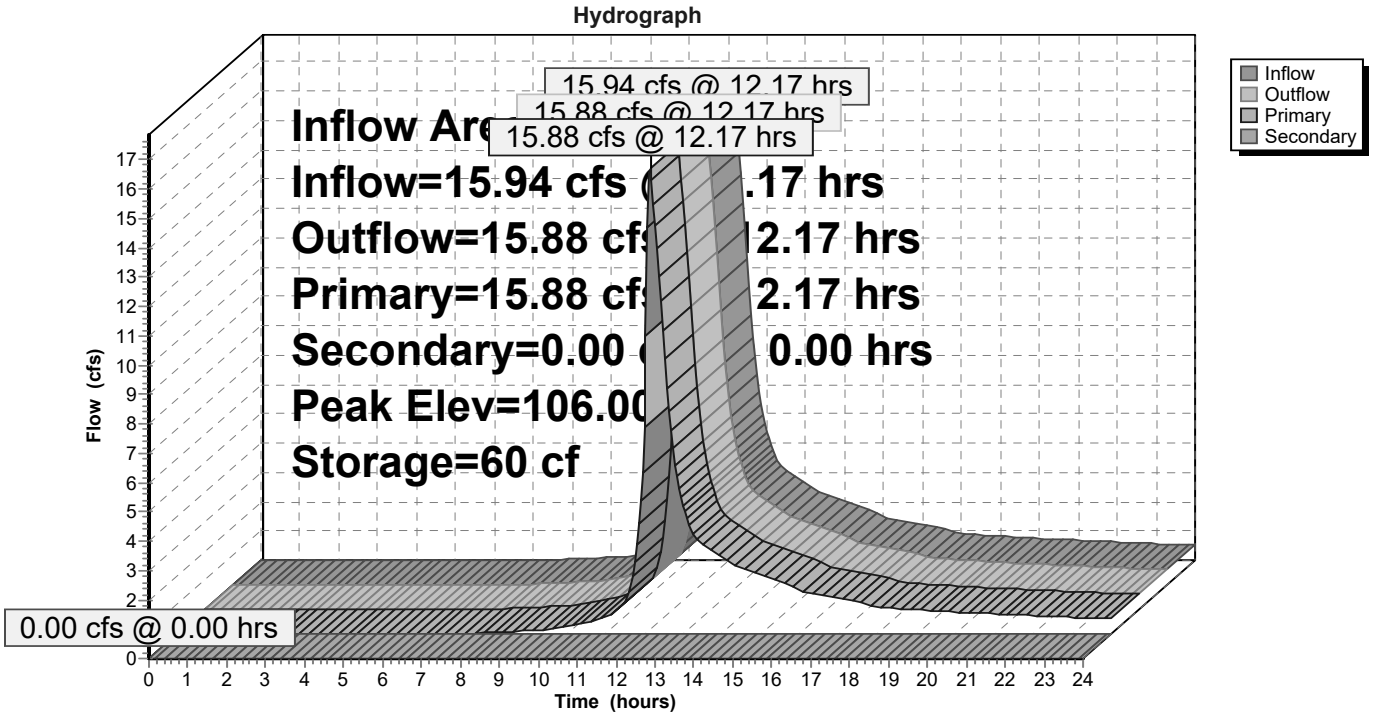
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
107.43	4	4.0	0	0	4
108.00	390	100.0	82	82	799
108.50	390	100.0	195	277	849

Device	Routing	Invert	Outlet Devices
#1	Primary	101.40'	**24.0" Round 24" HDPE N-12** L= 7.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 101.40' / 101.22' S= 0.0240 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	108.00'	**15.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=9.34 cfs @ 12.17 hrs HW=105.25' TW=104.87' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Inlet Controls 9.34 cfs @ 2.97 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=101.26' TW=101.16' (Dynamic Tailwater)
↑—**2=Overflow** (Controls 0.00 cfs)

Pond C3018GP: CB 30+18G



Summary for Pond C3020LP: CB 30+20L

Inflow Area = 18.052 ac, 25.22% Impervious, Inflow Depth > 1.62" for 25yr-24hr event
Inflow = 18.98 cfs @ 12.17 hrs, Volume= 2.440 af
Outflow = 18.93 cfs @ 12.17 hrs, Volume= 2.440 af, Atten= 0%, Lag= 0.1 min
Primary = 18.93 cfs @ 12.17 hrs, Volume= 2.440 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 105.05' @ 12.20 hrs Surf.Area= 13 sf Storage= 49 cf

Plug-Flow detention time= 0.1 min calculated for 2.435 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (871.9 - 871.9)

Volume	Invert	Avail.Storage	Storage Description
#1	101.16'	80 cf	**4.00'D x 6.36'H 4' Structure**
#2	107.52'	37 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		117 cf	Total Available Storage

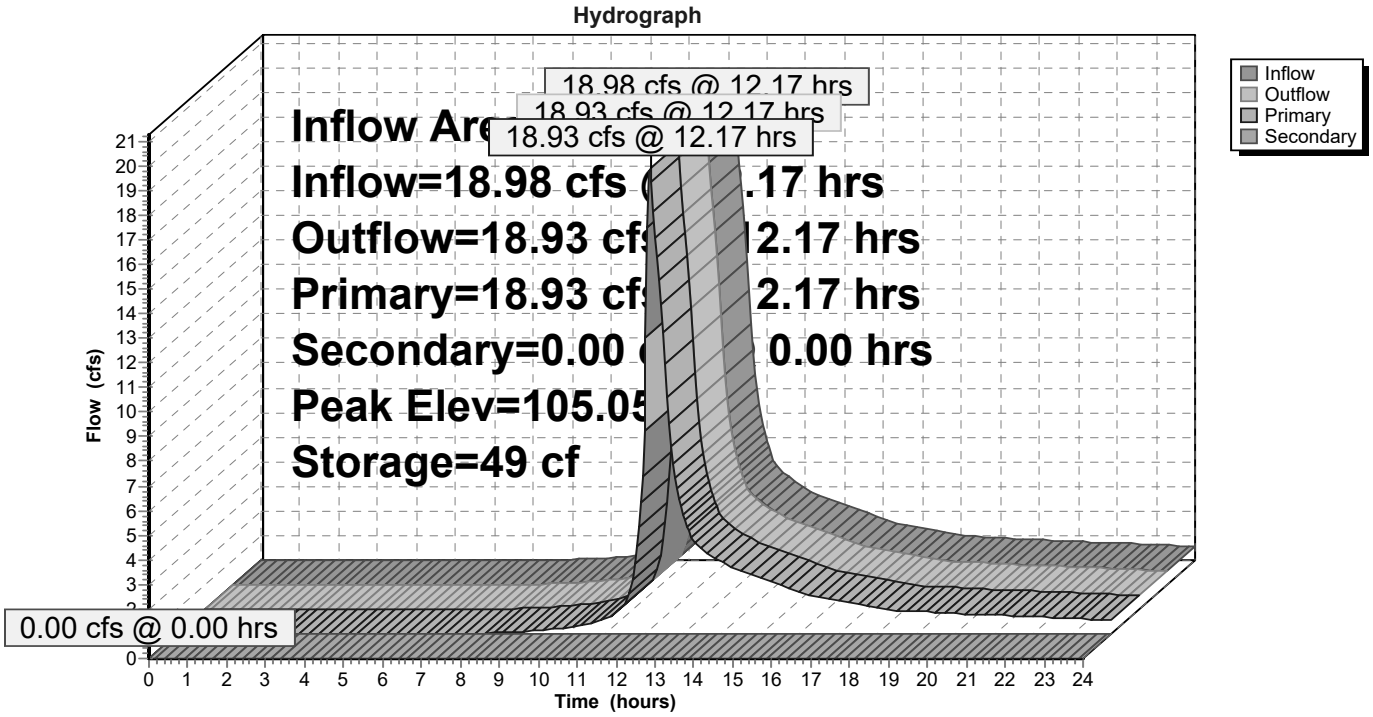
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
107.52	4	4.0	0	0	4
108.00	200	65.0	37	37	339

Device	Routing	Invert	Outlet Devices
#1	Primary	101.16'	**24.0" Round 24" HDPE N-12** L= 16.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 101.16' / 101.05' S= 0.0066 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf
#2	Secondary	107.52'	**10.0' long x 10.0' breadth Oveflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=17.37 cfs @ 12.17 hrs HW=104.87' TW=103.55' (Dynamic Tailwater)
1=24" HDPE N-12 (Inlet Controls 17.37 cfs @ 5.53 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=101.16' TW=100.97' (Dynamic Tailwater)
2=Oveflow (Controls 0.00 cfs)

Pond C3020LP: CB 30+20L



Summary for Pond C3020RP: CB 30+20R

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 18.132 ac, 25.54% Impervious, Inflow Depth > 1.64" for 25yr-24hr event
Inflow = 19.31 cfs @ 12.17 hrs, Volume= 2.484 af
Outflow = 19.31 cfs @ 12.17 hrs, Volume= 2.484 af, Atten= 0%, Lag= 0.0 min
Primary = 19.31 cfs @ 12.17 hrs, Volume= 2.484 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 103.60' @ 12.17 hrs Surf.Area= 13 sf Storage= 33 cf

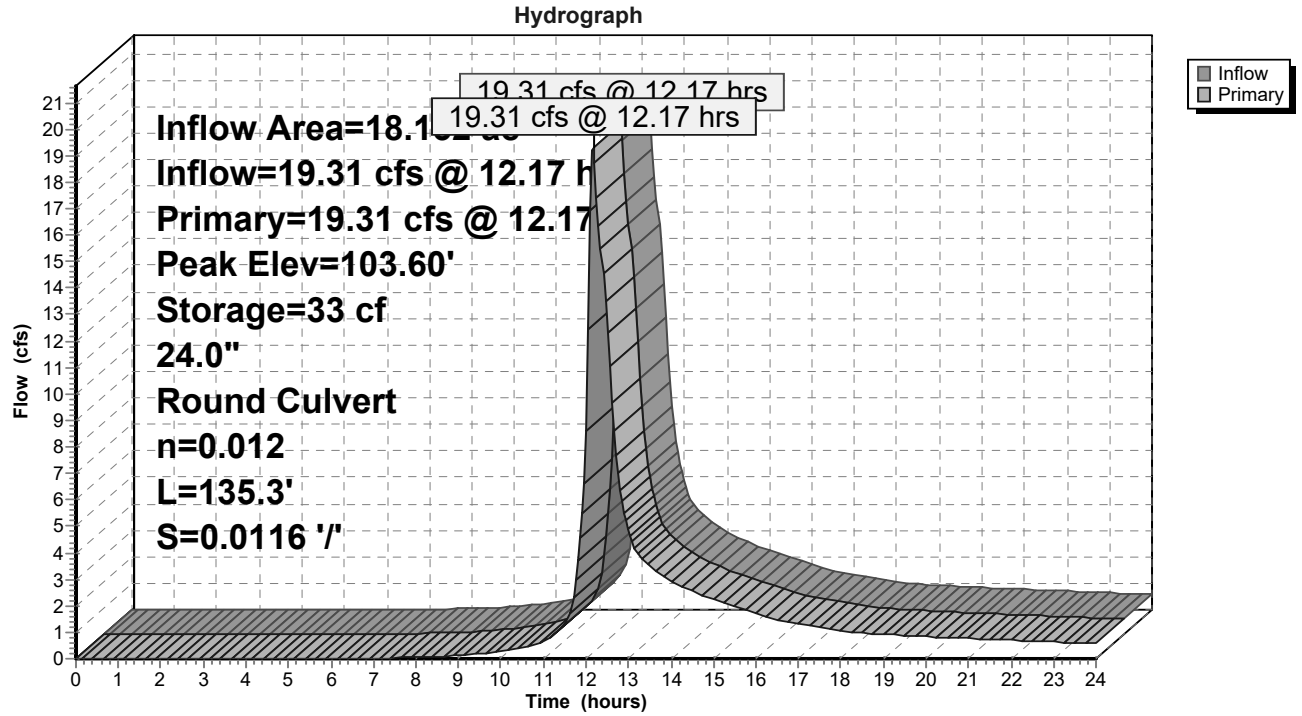
Plug-Flow detention time= 0.1 min calculated for 2.479 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (869.6 - 869.6)

Volume	Invert	Avail.Storage	Storage Description
#1	100.97'	81 cf	**4.00'D x 6.48'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	100.97'	**24.0" Round 24" HDPE N-12** L= 135.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 100.97' / 99.40' S= 0.0116 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=19.02 cfs @ 12.17 hrs HW=103.55' TW=99.19' (Dynamic Tailwater)
↑**1=24" HDPE N-12** (Inlet Controls 19.02 cfs @ 6.05 fps)

Pond C3020RP: CB 30+20R



Summary for Pond C303GP: CB 3+03G

Inflow Area = 1.158 ac, 32.91% Impervious, Inflow Depth > 2.06" for 25yr-24hr event
Inflow = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af
Outflow = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af, Atten= 0%, Lag= 0.0 min
Primary = 2.08 cfs @ 12.19 hrs, Volume= 0.199 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 125.62' @ 12.19 hrs Surf.Area= 13 sf Storage= 9 cf
Flood Elev= 129.25' Surf.Area= 13 sf Storage= 55 cf

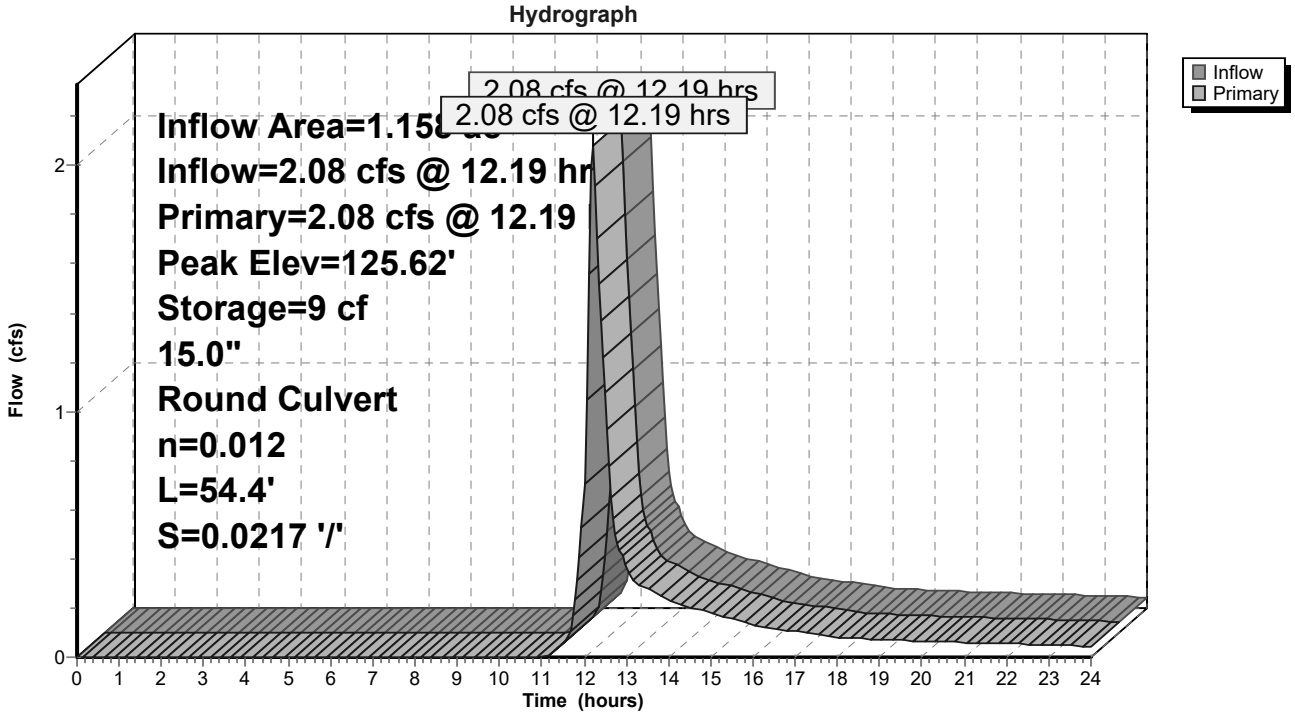
Plug-Flow detention time= 0.2 min calculated for 0.198 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (871.4 - 871.3)

Volume	Invert	Avail.Storage	Storage Description
#1	124.91'	55 cf	**4.00'D x 4.34'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	124.91'	**15.0" Round 15" HDPE N-12** L= 54.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 124.91' / 123.73' S= 0.0217 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=2.06 cfs @ 12.19 hrs HW=125.62' TW=124.48' (Dynamic Tailwater)
↑—**1=15" HDPE N-12** (Inlet Controls 2.06 cfs @ 2.87 fps)

Pond C303GP: CB 3+03G



Summary for Pond C304RP: CB 3+04R

Inflow Area = 1.769 ac, 30.57% Impervious, Inflow Depth > 1.92" for 25yr-24hr event
Inflow = 2.85 cfs @ 12.18 hrs, Volume= 0.283 af
Outflow = 2.84 cfs @ 12.18 hrs, Volume= 0.283 af, Atten= 0%, Lag= 0.0 min
Primary = 2.84 cfs @ 12.18 hrs, Volume= 0.283 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.59' @ 12.29 hrs Surf.Area= 13 sf Storage= 13 cf
Flood Elev= 128.75' Surf.Area= 13 sf Storage= 65 cf

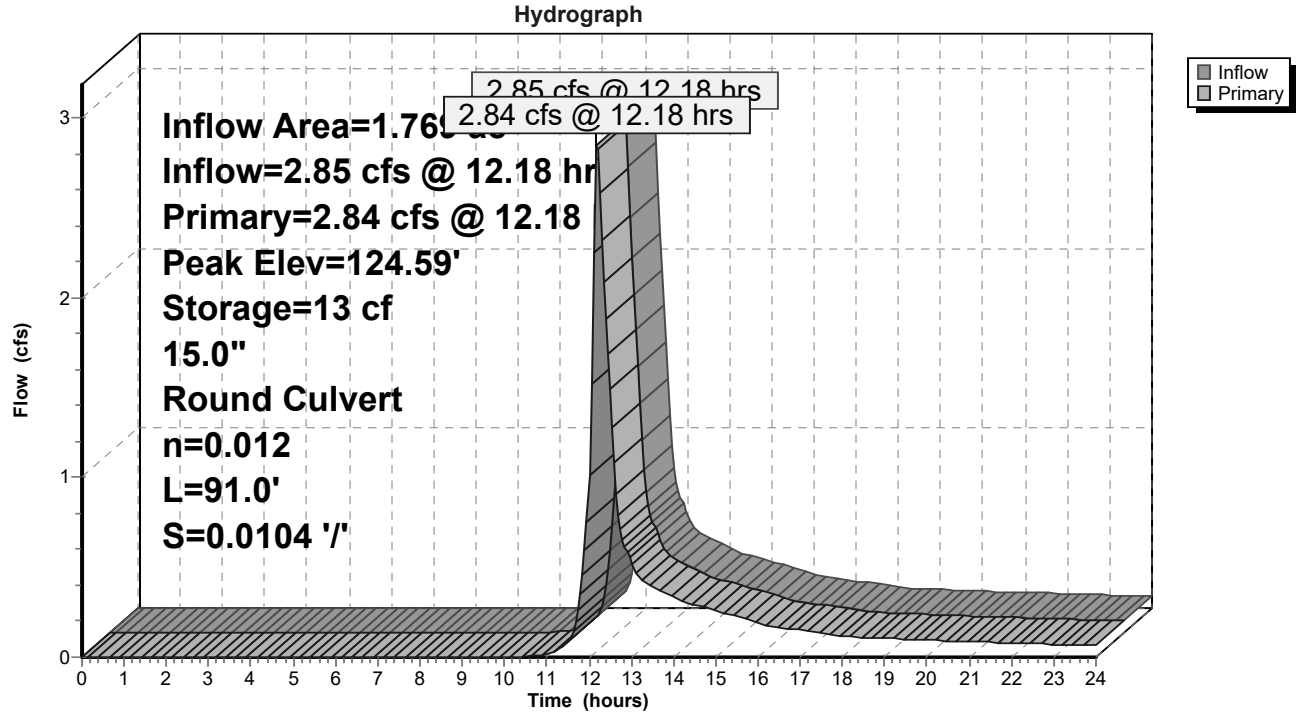
Plug-Flow detention time= 0.2 min calculated for 0.283 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (872.8 - 872.7)

Volume	Invert	Avail.Storage	Storage Description
#1	123.55'	65 cf	**4.00'D x 5.20'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	123.55'	**15.0" Round 15" HDPE N-12** L= 91.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 123.55' / 122.60' S= 0.0104 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=2.25 cfs @ 12.18 hrs HW=124.47' TW=123.96' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Outlet Controls 2.25 cfs @ 3.23 fps)

Pond C304RP: CB 3+04R



Summary for Pond C390GP: CB 3+90G

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 5.435 ac, 9.81% Impervious, Inflow Depth > 0.66" for 25yr-24hr event
Inflow = 1.44 cfs @ 12.52 hrs, Volume= 0.299 af
Outflow = 1.45 cfs @ 12.52 hrs, Volume= 0.299 af, Atten= 0%, Lag= 0.0 min
Primary = 1.45 cfs @ 12.52 hrs, Volume= 0.299 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.26' @ 12.33 hrs Surf.Area= 13 sf Storage= 14 cf
Flood Elev= 126.94' Surf.Area= 13 sf Storage= 48 cf

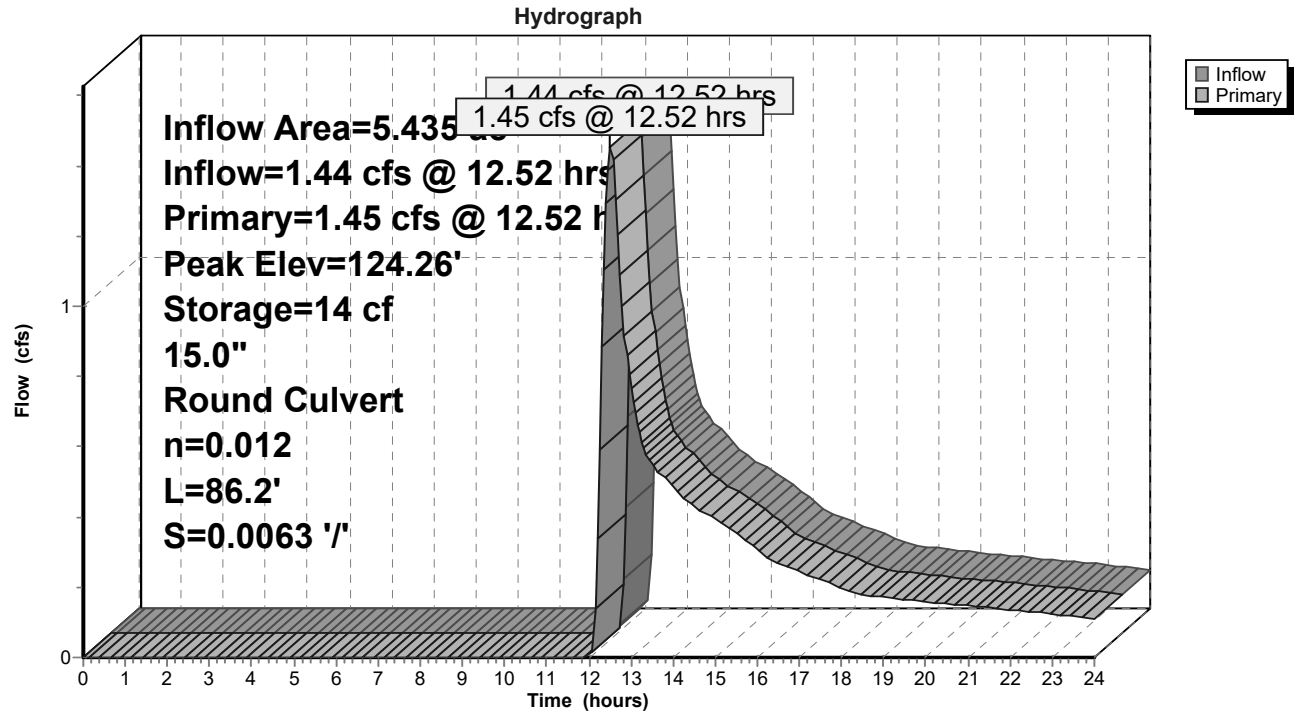
Plug-Flow detention time= 0.2 min calculated for 0.298 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (949.9 - 949.8)

Volume	Invert	Avail.Storage	Storage Description
#1	123.14'	48 cf	**4.00'D x 3.80'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	123.14'	**15.0" Round 15" HDPE N-12** L= 86.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 123.14' / 122.60' S= 0.0063 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=1.83 cfs @ 12.52 hrs HW=124.09' TW=123.78' (Dynamic Tailwater)
1=15" HDPE N-12 (Outlet Controls 1.83 cfs @ 2.54 fps)

Pond C390GP: CB 3+90G



Summary for Pond C402GP: CB 4+02G

[80] Warning: Exceeded Pond C390GP by 0.29' @ 12.20 hrs (1.70 cfs 0.017 af)

Inflow Area = 7.373 ac, 14.88% Impervious, Inflow Depth > 0.98" for 25yr-24hr event
Inflow = 3.34 cfs @ 12.29 hrs, Volume= 0.601 af
Outflow = 3.33 cfs @ 12.25 hrs, Volume= 0.601 af, Atten= 0%, Lag= 0.0 min
Primary = 3.33 cfs @ 12.25 hrs, Volume= 0.601 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 124.22' @ 12.27 hrs Surf.Area= 13 sf Storage= 22 cf
Flood Elev= 126.15' Surf.Area= 26 sf Storage= 46 cf

Plug-Flow detention time= 0.1 min calculated for 0.601 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (911.9 - 911.8)

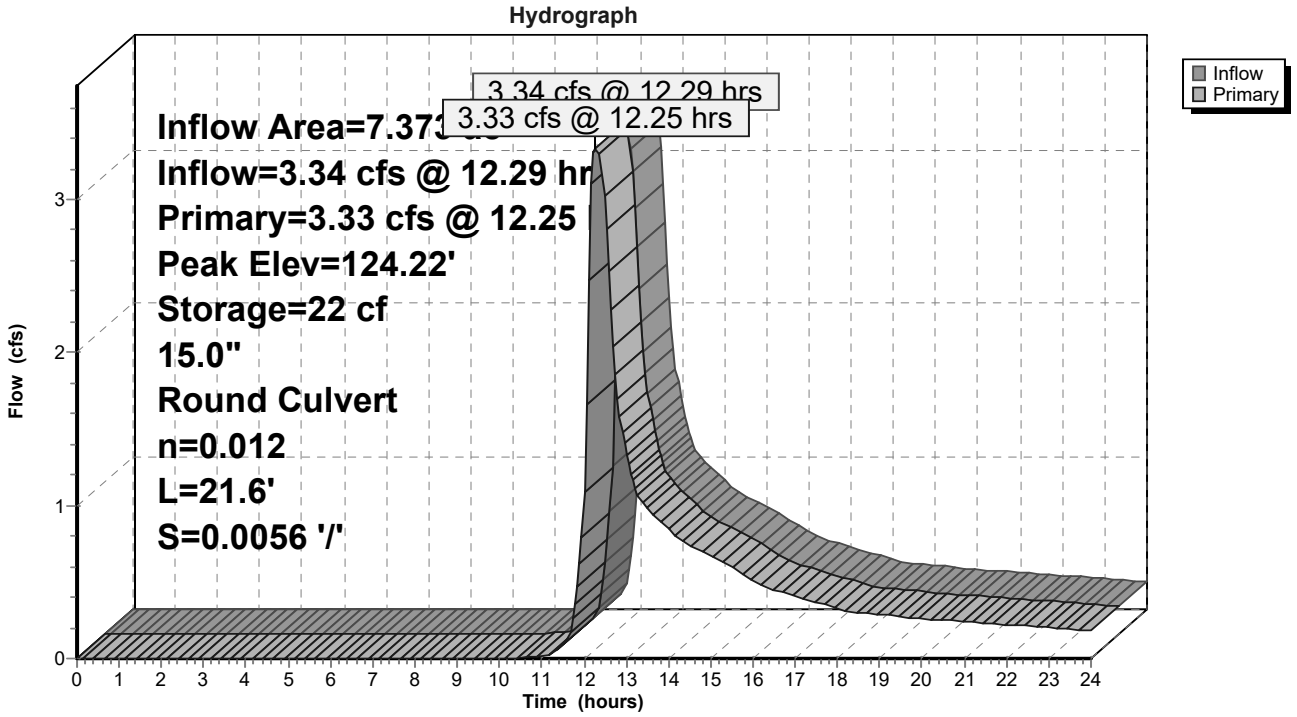
Volume	Invert	Avail.Storage	Storage Description
#1	122.50'	46 cf	**4.00'D x 3.65'H 4' Structure**
#2	126.15'	53 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		99 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
126.15	13	12.6	0	0	13
127.00	134	70.0	53	53	392

Device	Routing	Invert	Outlet Devices
#1	Primary	122.50'	**15.0" Round 15" HDPE N-12** L= 21.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 122.50' / 122.38' S= 0.0056 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=3.42 cfs @ 12.25 hrs HW=124.21' TW=123.87' (Dynamic Tailwater)
↑—**1=15" HDPE N-12** (Inlet Controls 3.42 cfs @ 2.78 fps)

Pond C402GP: CB 4+02G



Summary for Pond C419LP: CB 4+19L

Inflow Area = 10.600 ac, 27.44% Impervious, Inflow Depth > 1.83" for 25yr-24hr event
Inflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af
Outflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af, Atten= 0%, Lag= 0.0 min
Primary = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 118.30' @ 12.16 hrs Surf.Area= 13 sf Storage= 24 cf
Flood Elev= 127.08' Surf.Area= 13 sf Storage= 134 cf

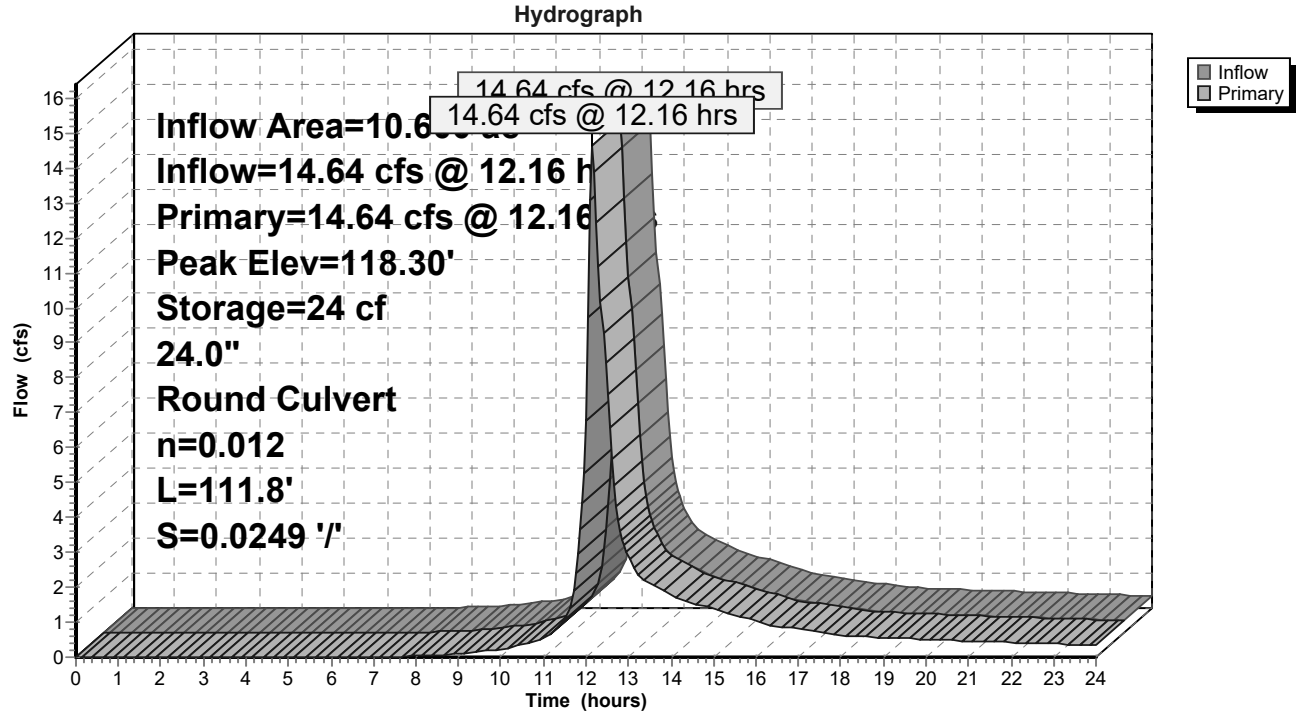
Plug-Flow detention time= 0.1 min calculated for 1.610 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (858.6 - 858.5)

Volume	Invert	Avail.Storage	Storage Description
#1	116.38'	134 cf	**4.00'D x 10.70'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	116.38'	**24.0" Round 24" HDPE N-12** L= 111.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 116.38' / 113.60' S= 0.0249 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=14.49 cfs @ 12.16 hrs HW=118.28' TW=108.10' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Inlet Controls 14.49 cfs @ 4.70 fps)

Pond C419LP: CB 4+19L



Summary for Pond C419RP: CB 4+19R

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[80] Warning: Exceeded Pond C402GP by 0.01' @ 12.15 hrs (0.62 cfs 0.003 af)

Inflow Area = 8.133 ac, 18.60% Impervious, Inflow Depth > 1.23" for 25yr-24hr event
Inflow = 5.77 cfs @ 12.22 hrs, Volume= 0.832 af
Outflow = 5.78 cfs @ 12.22 hrs, Volume= 0.832 af, Atten= 0%, Lag= 0.0 min
Primary = 5.78 cfs @ 12.22 hrs, Volume= 0.832 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 123.90' @ 12.22 hrs Surf.Area= 13 sf Storage= 20 cf
Flood Elev= 127.26' Surf.Area= 13 sf Storage= 62 cf

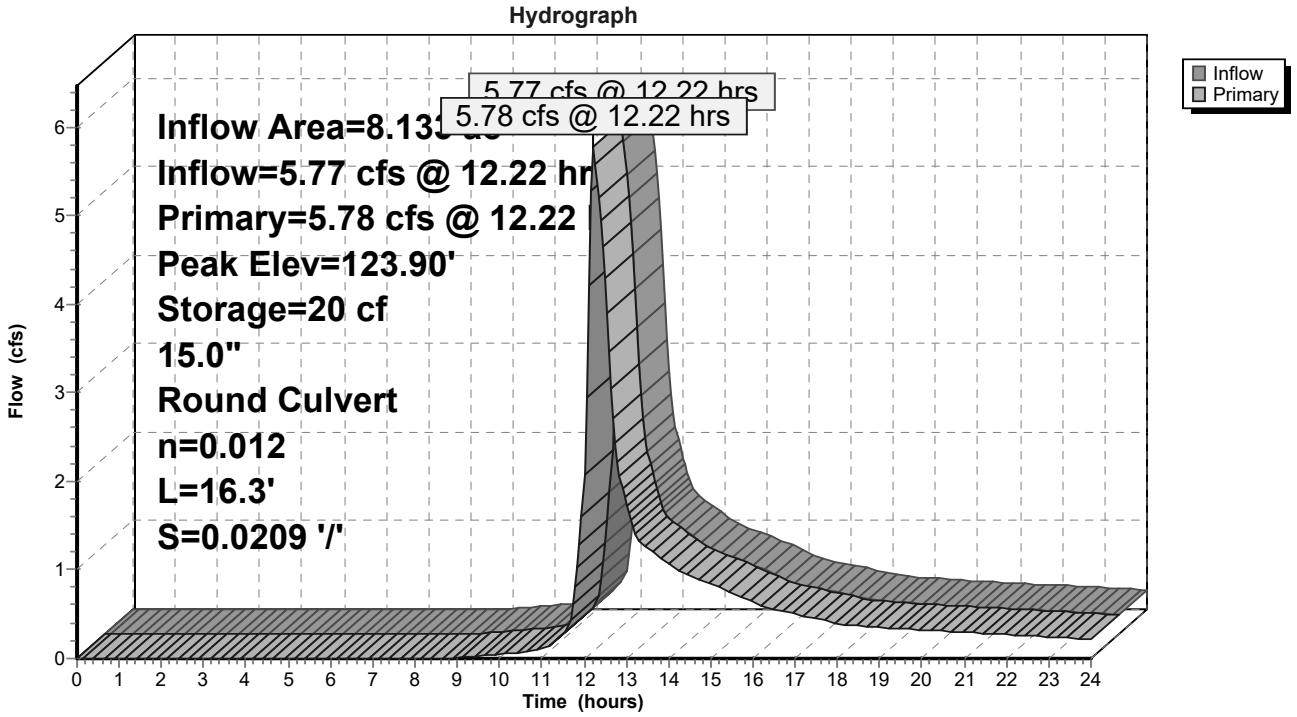
Plug-Flow detention time= 0.1 min calculated for 0.832 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (890.9 - 890.8)

Volume	Invert	Avail.Storage	Storage Description
#1	122.32'	62 cf	**4.00'D x 4.94'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	122.32'	**15.0" Round 15" HDPE N-12** L= 16.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 122.32' / 121.98' S= 0.0209 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=5.72 cfs @ 12.22 hrs HW=123.88' TW=118.15' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Inlet Controls 5.72 cfs @ 4.66 fps)

Pond C419RP: CB 4+19R



Summary for Pond C857LP: CB 8+57L

[90] Warning: Qout>Qin may require smaller dt or Finer Routing
[80] Warning: Exceeded Pond C857RP by 0.30' @ 12.10 hrs (3.23 cfs 0.019 af)

Inflow Area = 1.724 ac, 53.32% Impervious, Inflow Depth > 3.60" for 25yr-24hr event
Inflow = 6.17 cfs @ 12.13 hrs, Volume= 0.517 af
Outflow = 6.18 cfs @ 12.13 hrs, Volume= 0.517 af, Atten= 0%, Lag= 0.1 min
Primary = 6.18 cfs @ 12.13 hrs, Volume= 0.517 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 133.76' @ 12.13 hrs Surf.Area= 13 sf Storage= 22 cf
Flood Elev= 136.52' Surf.Area= 13 sf Storage= 56 cf

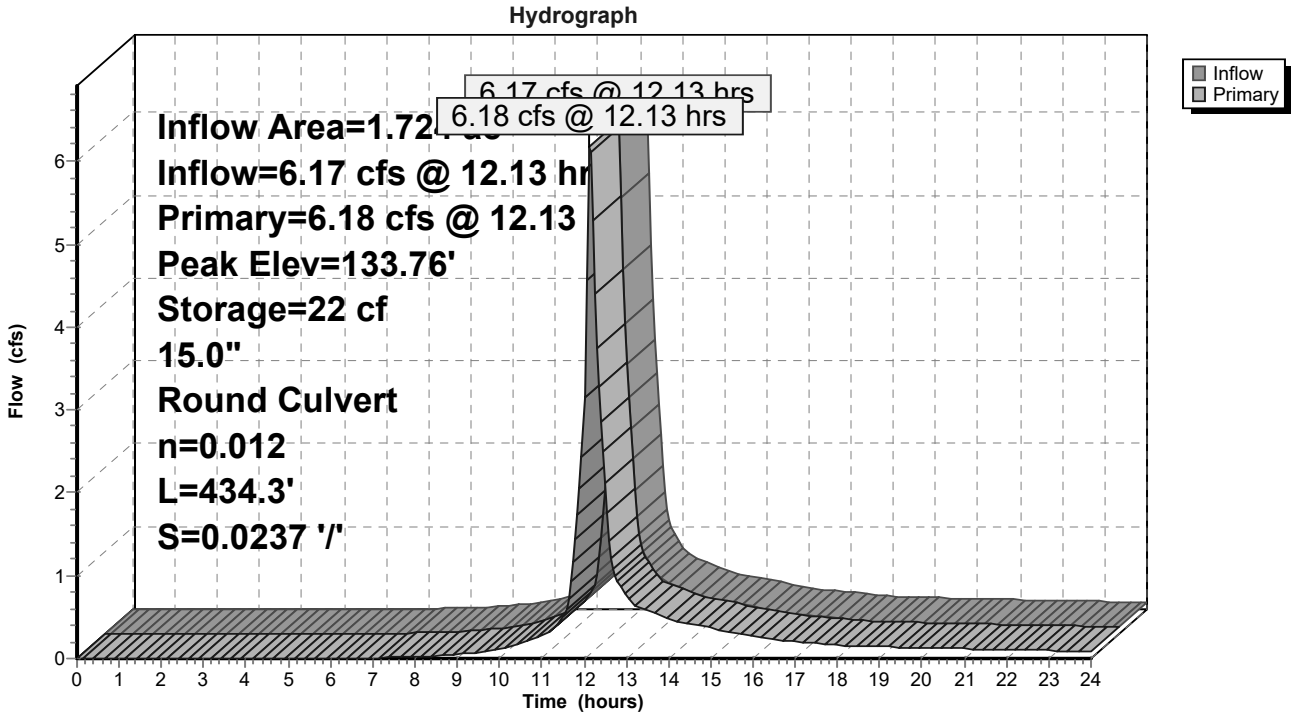
Plug-Flow detention time= 0.1 min calculated for 0.517 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (827.0 - 826.9)

Volume	Invert	Avail.Storage	Storage Description
#1	132.04'	56 cf	**4.00'D x 4.48'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	132.04'	**15.0" Round 15" HDPE N-12** L= 434.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 132.04' / 121.74' S= 0.0237 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=6.07 cfs @ 12.13 hrs HW=133.72' TW=118.24' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Inlet Controls 6.07 cfs @ 4.94 fps)

Pond C857LP: CB 8+57L



Summary for Pond C857RP: CB 8+57R

Inflow Area = 0.434 ac, 53.07% Impervious, Inflow Depth > 3.54" for 25yr-24hr event
Inflow = 1.70 cfs @ 12.11 hrs, Volume= 0.128 af
Outflow = 1.68 cfs @ 12.11 hrs, Volume= 0.128 af, Atten= 1%, Lag= 0.0 min
Primary = 1.68 cfs @ 12.11 hrs, Volume= 0.128 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 133.81' @ 12.18 hrs Surf.Area= 13 sf Storage= 18 cf
Flood Elev= 136.50' Surf.Area= 13 sf Storage= 52 cf

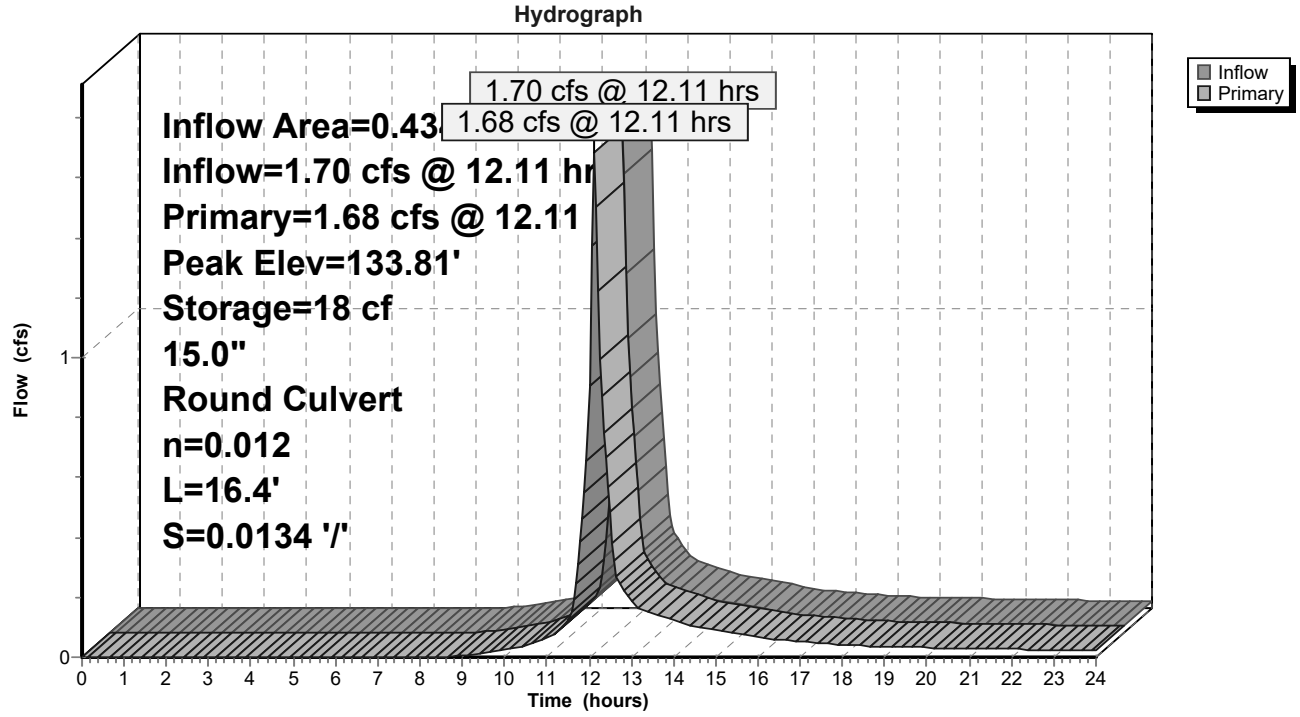
Plug-Flow detention time= 0.3 min calculated for 0.128 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (832.0 - 831.8)

Volume	Invert	Avail.Storage	Storage Description
#1	132.36'	52 cf	**4.00'D x 4.14'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	132.36'	**15.0" Round 15" HDPE N-12** L= 16.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 132.36' / 132.14' S= 0.0134 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.00 cfs @ 12.11 hrs HW=133.43' TW=133.69' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Controls 0.00 cfs)

Pond C857RP: CB 8+57R



Summary for Pond D01P: Drain Manhole #1

Inflow Area = 0.678 ac, 66.20% Impervious, Inflow Depth > 4.40" for 25yr-24hr event
Inflow = 2.95 cfs @ 12.12 hrs, Volume= 0.249 af
Outflow = 2.94 cfs @ 12.12 hrs, Volume= 0.248 af, Atten= 0%, Lag= 0.0 min
Primary = 2.94 cfs @ 12.12 hrs, Volume= 0.248 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 113.09' @ 12.15 hrs Surf.Area= 13 sf Storage= 17 cf
Flood Elev= 117.00' Surf.Area= 13 sf Storage= 66 cf

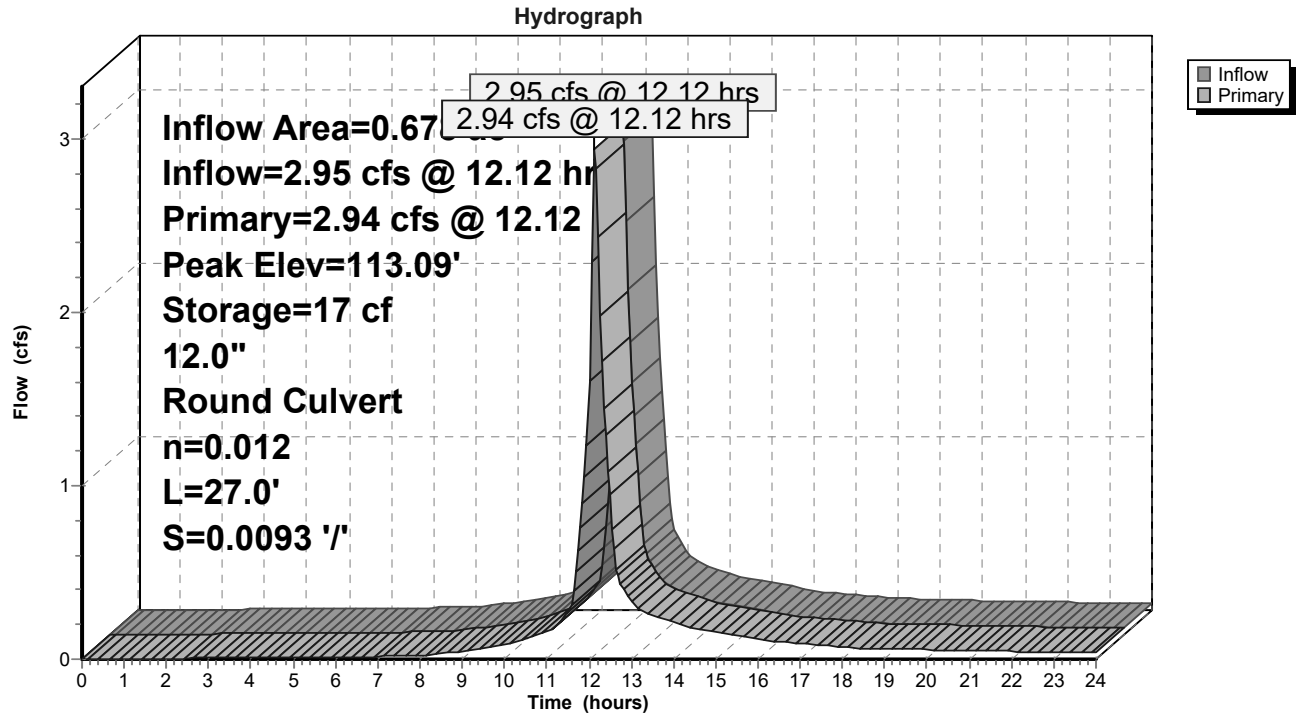
Plug-Flow detention time= 0.2 min calculated for 0.248 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (805.0 - 804.8)

Volume	Invert	Avail.Storage	Storage Description
#1	111.75'	66 cf	**4.00'D x 5.25'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	111.75'	**12.0" Round 12" HDPE N-12** L= 27.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 111.75' / 111.50' S= 0.0093 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.51 cfs @ 12.12 hrs HW=112.96' TW=112.52' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 2.51 cfs @ 3.19 fps)

Pond D01P: Drain Manhole #1



Summary for Pond D02P: DMH #2

Inflow Area = 1.423 ac, 59.29% Impervious, Inflow Depth > 4.00" for 25yr-24hr event
Inflow = 5.63 cfs @ 12.12 hrs, Volume= 0.475 af
Outflow = 5.62 cfs @ 12.12 hrs, Volume= 0.475 af, Atten= 0%, Lag= 0.1 min
Primary = 5.62 cfs @ 12.12 hrs, Volume= 0.475 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 107.10' @ 12.12 hrs Surf.Area= 13 sf Storage= 19 cf
Flood Elev= 109.07' Surf.Area= 13 sf Storage= 44 cf

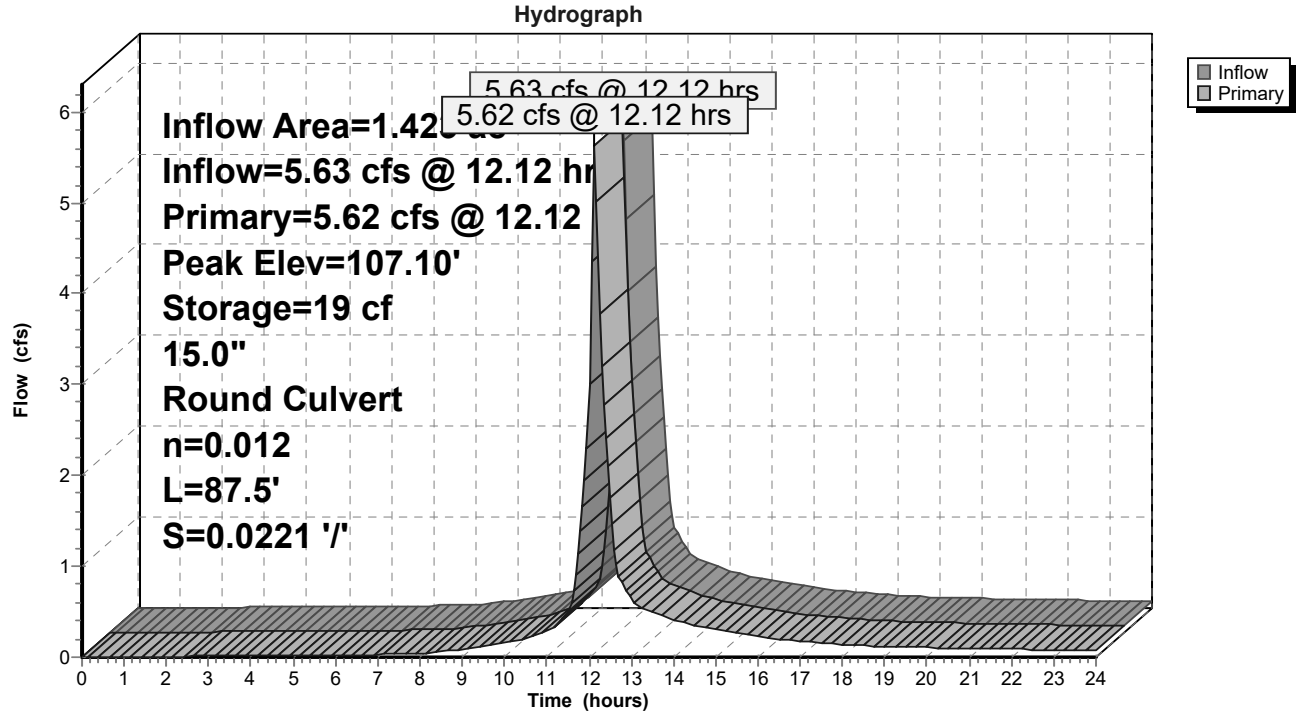
Plug-Flow detention time= 0.1 min calculated for 0.474 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (807.8 - 807.7)

Volume	Invert	Avail.Storage	Storage Description
#1	105.57'	44 cf	**4.00'D x 3.50'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	105.57'	**15.0" Round 15" HDPE N-12** L= 87.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 105.57' / 103.64' S= 0.0221 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=5.47 cfs @ 12.12 hrs HW=107.05' TW=105.02' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Inlet Controls 5.47 cfs @ 4.46 fps)

Pond D02P: DMH #2



Summary for Pond D03P: DMH #3

Inflow Area = 1.423 ac, 59.29% Impervious, Inflow Depth > 4.00" for 25yr-24hr event
Inflow = 5.62 cfs @ 12.12 hrs, Volume= 0.475 af
Outflow = 5.61 cfs @ 12.12 hrs, Volume= 0.475 af, Atten= 0%, Lag= 0.1 min
Primary = 5.61 cfs @ 12.12 hrs, Volume= 0.475 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 105.06' @ 12.12 hrs Surf.Area= 13 sf Storage= 19 cf
Flood Elev= 107.54' Surf.Area= 13 sf Storage= 50 cf

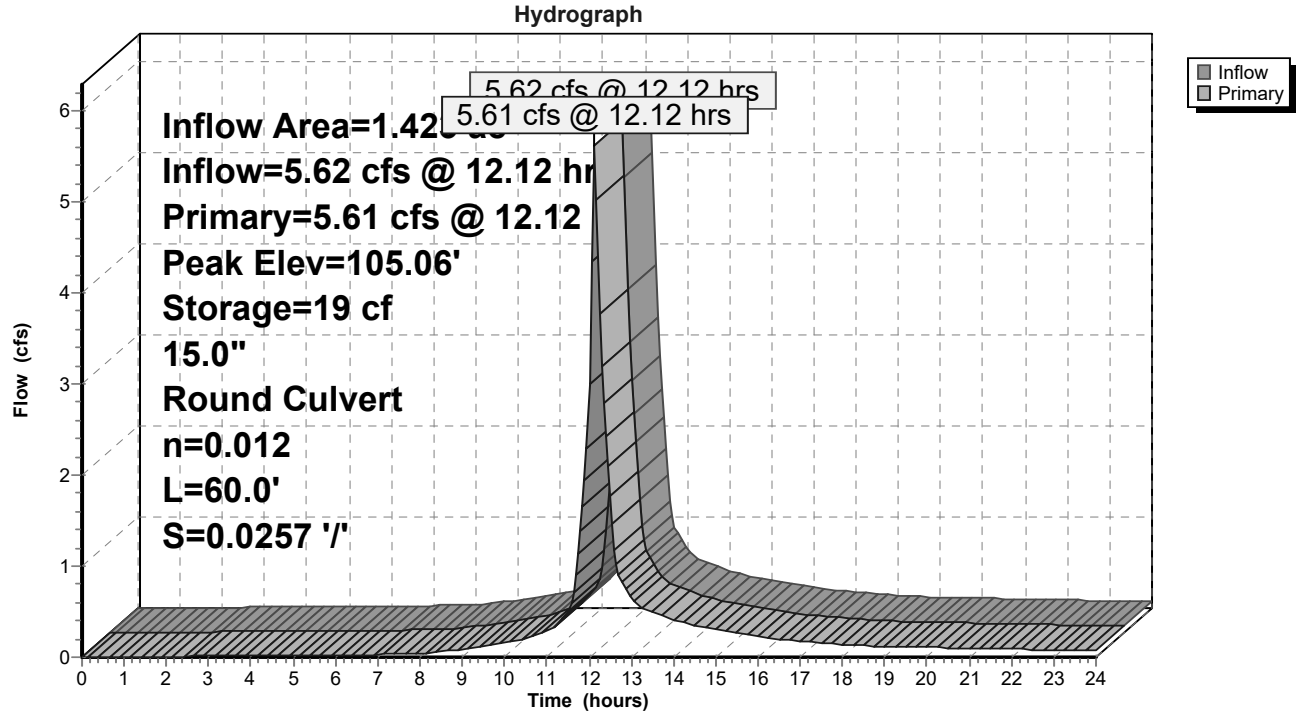
Plug-Flow detention time= 0.1 min calculated for 0.474 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (807.9 - 807.8)

Volume	Invert	Avail.Storage	Storage Description
#1	103.54'	50 cf	**4.00'D x 4.00'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	103.54'	**15.0" Round 15" HDPE N-12** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 103.54' / 102.00' S= 0.0257 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=5.47 cfs @ 12.12 hrs HW=105.02' TW=99.04' (Dynamic Tailwater)
↑**1=15" HDPE N-12** (Inlet Controls 5.47 cfs @ 4.46 fps)

Pond D03P: DMH #3



Summary for Pond D04P: DMH #4

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth = 2.54" for 25yr-24hr event
Inflow = 5.64 cfs @ 12.17 hrs, Volume= 0.344 af
Outflow = 5.63 cfs @ 12.17 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.2 min
Primary = 5.63 cfs @ 12.17 hrs, Volume= 0.344 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 107.21' @ 12.17 hrs Surf.Area= 13 sf Storage= 34 cf
Flood Elev= 109.00' Surf.Area= 13 sf Storage= 57 cf

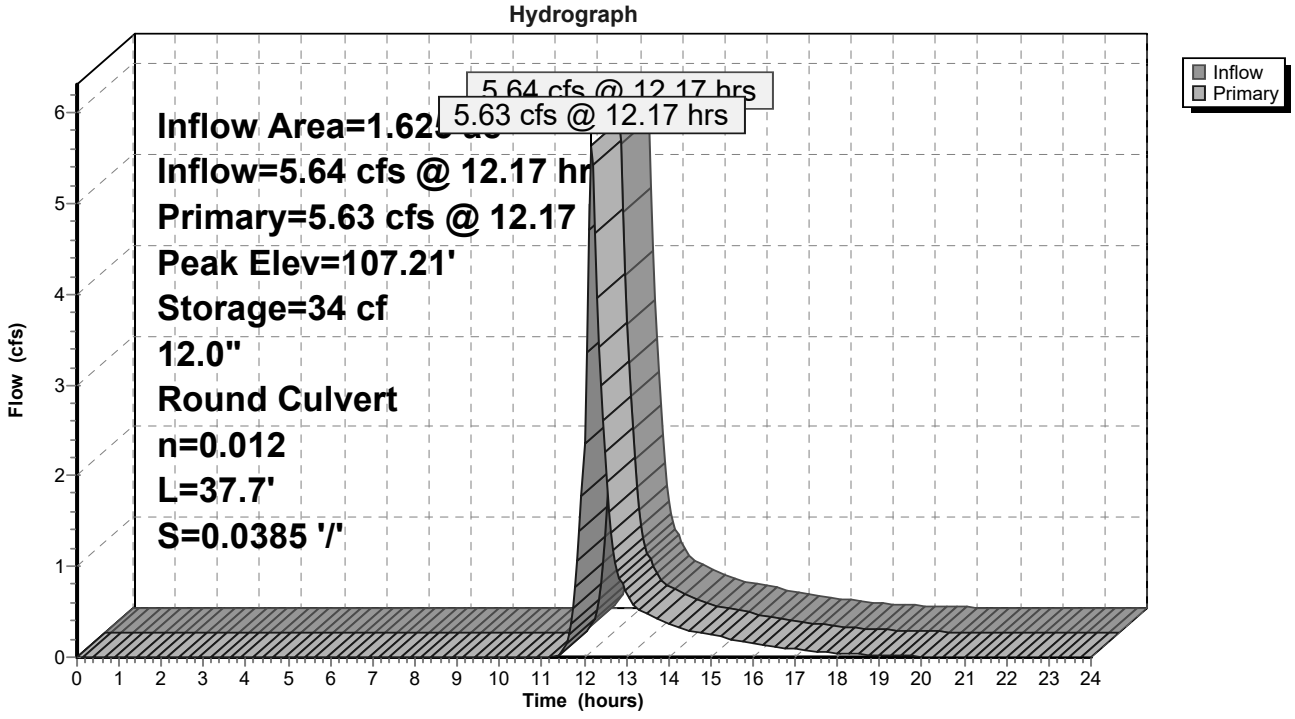
Plug-Flow detention time= 0.1 min calculated for 0.344 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (780.5 - 780.4)

Volume	Invert	Avail.Storage	Storage Description
#1	104.50'	57 cf	**4.00'D x 4.50'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	104.50'	**12.0" Round 12" HDPE N-12** L= 37.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 104.50' / 103.05' S= 0.0385 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=5.52 cfs @ 12.17 hrs HW=107.13' TW=103.85' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 5.52 cfs @ 7.03 fps)

Pond D04P: DMH #4



Summary for Pond D05P: DMH #5

Inflow Area = 3.271 ac, 40.38% Impervious, Inflow Depth > 1.90" for 25yr-24hr event
Inflow = 6.43 cfs @ 12.19 hrs, Volume= 0.518 af
Outflow = 6.43 cfs @ 12.19 hrs, Volume= 0.518 af, Atten= 0%, Lag= 0.0 min
Primary = 6.43 cfs @ 12.19 hrs, Volume= 0.518 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 103.87' @ 12.19 hrs Surf.Area= 13 sf Storage= 17 cf
Flood Elev= 108.80' Surf.Area= 13 sf Storage= 79 cf

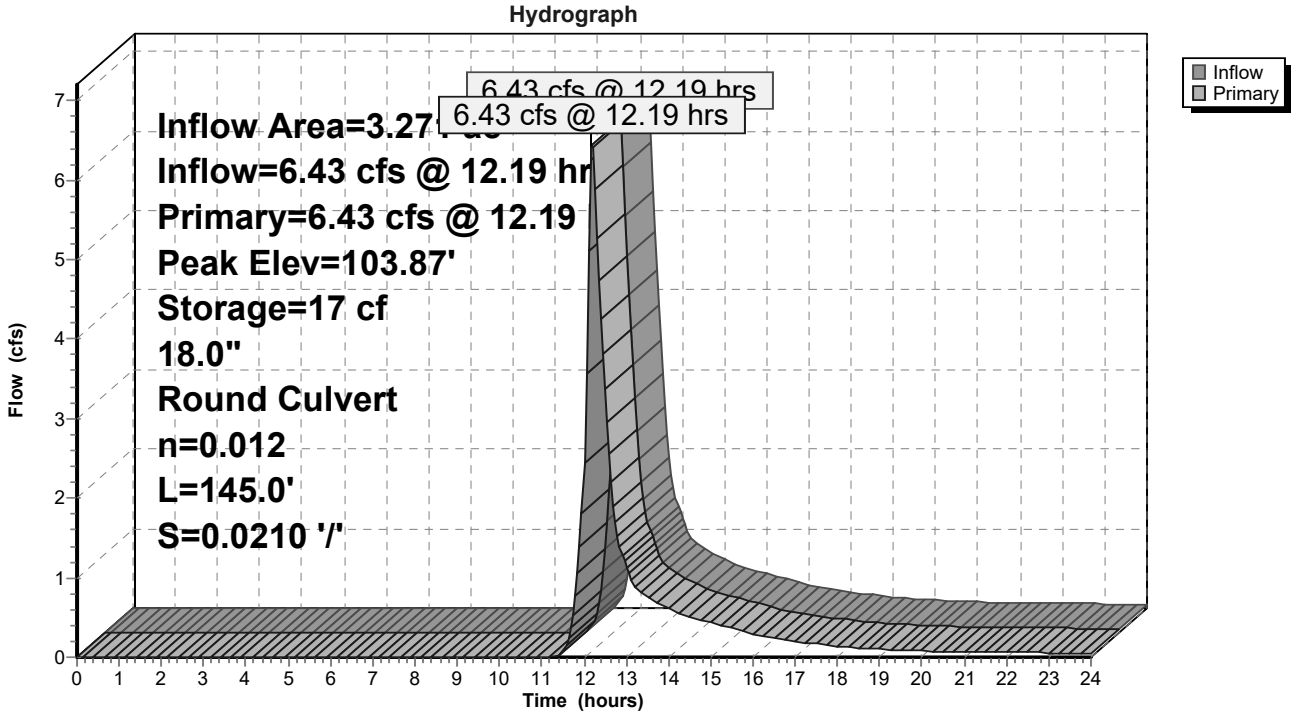
Plug-Flow detention time= 0.1 min calculated for 0.517 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (822.5 - 822.4)

Volume	Invert	Avail.Storage	Storage Description
#1	102.55'	79 cf	**4.00'D x 6.25'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	102.55'	**18.0" Round 18" HDPE N-12** L= 145.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 102.55' / 99.50' S= 0.0210 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=6.36 cfs @ 12.19 hrs HW=103.86' TW=100.90' (Dynamic Tailwater)
↑—**1=18" HDPE N-12** (Inlet Controls 6.36 cfs @ 3.89 fps)

Pond D05P: DMH #5



Summary for Pond D06P: DMH #6

Inflow Area = 3.271 ac, 40.38% Impervious, Inflow Depth > 1.90" for 25yr-24hr event
Inflow = 6.43 cfs @ 12.19 hrs, Volume= 0.518 af
Outflow = 6.43 cfs @ 12.19 hrs, Volume= 0.518 af, Atten= 0%, Lag= 0.0 min
Primary = 6.43 cfs @ 12.19 hrs, Volume= 0.518 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 101.10' @ 16.60 hrs Surf.Area= 13 sf Storage= 21 cf
Flood Elev= 103.40' Surf.Area= 13 sf Storage= 50 cf

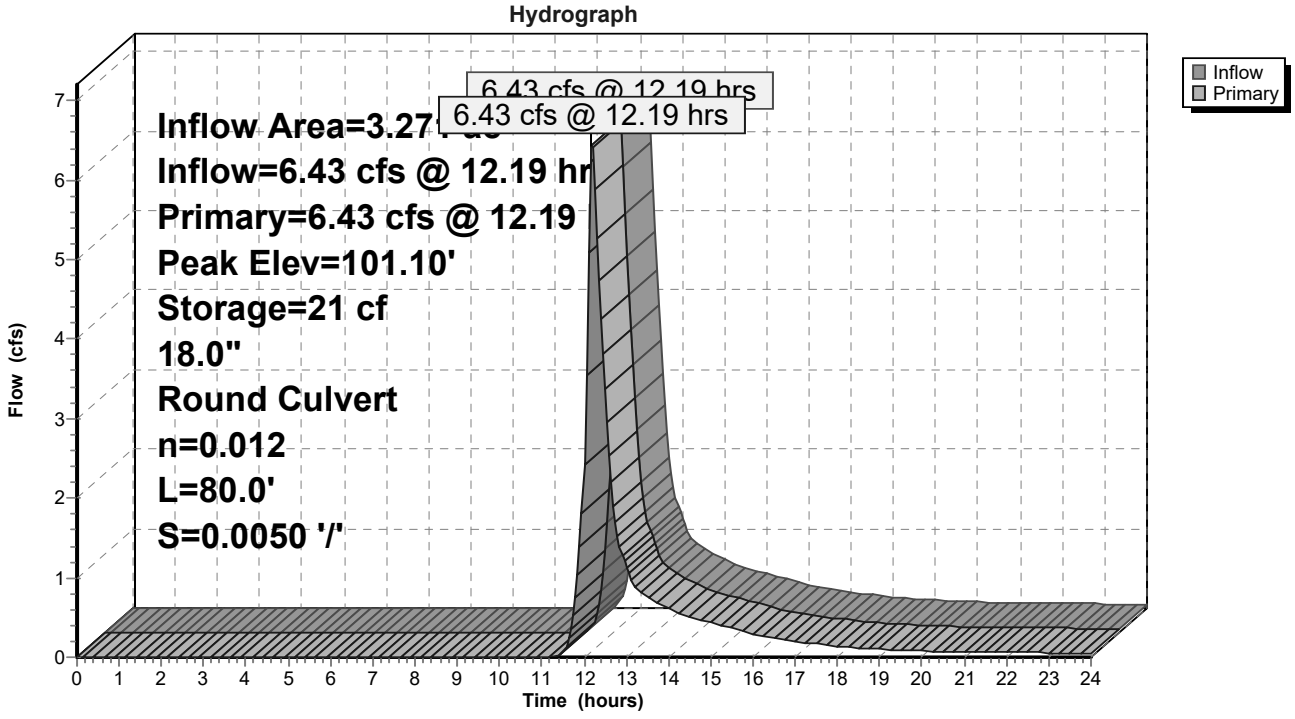
Plug-Flow detention time= 0.6 min calculated for 0.518 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (822.7 - 822.5)

Volume	Invert	Avail.Storage	Storage Description
#1	99.40'	50 cf	**4.00'D x 4.00'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	99.40'	**18.0" Round 18" HDPE N-12** L= 80.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 99.40' / 99.00' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 1.77 sf

Primary OutFlow Max=6.37 cfs @ 12.19 hrs HW=100.90' TW=99.26' (Dynamic Tailwater)
↑—**1=18" HDPE N-12** (Barrel Controls 6.37 cfs @ 4.49 fps)

Pond D06P: DMH #6



Summary for Pond D100125CP: DMH 1001+25C

Inflow Area = 10.600 ac, 27.44% Impervious, Inflow Depth > 1.83" for 25yr-24hr event
Inflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af
Outflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af, Atten= 0%, Lag= 0.0 min
Primary = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 108.12' @ 12.16 hrs Surf.Area= 13 sf Storage= 24 cf
Flood Elev= 120.20' Surf.Area= 13 sf Storage= 176 cf

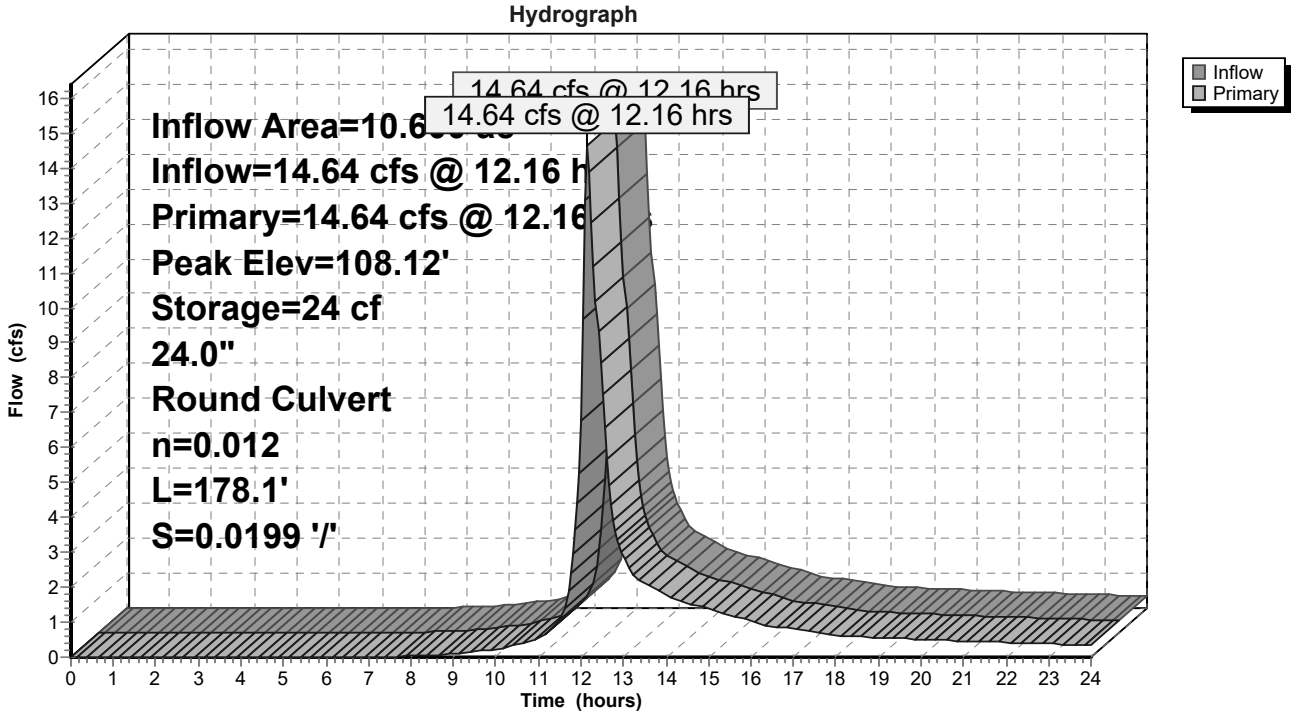
Plug-Flow detention time= 0.1 min calculated for 1.614 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (858.6 - 858.6)

Volume	Invert	Avail.Storage	Storage Description
#1	106.20'	176 cf	**4.00'D x 14.00'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	106.20'	**24.0" Round 24" HDPE N-12** L= 178.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 106.20' / 102.66' S= 0.0199 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=14.48 cfs @ 12.16 hrs HW=108.10' TW=105.11' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Inlet Controls 14.48 cfs @ 4.69 fps)

Pond D100125CP: DMH 1001+25C



Summary for Pond D100300CP: DMH 1003+00

Inflow Area = 10.600 ac, 27.44% Impervious, Inflow Depth > 1.83" for 25yr-24hr event
Inflow = 14.64 cfs @ 12.16 hrs, Volume= 1.614 af
Outflow = 14.59 cfs @ 12.16 hrs, Volume= 1.613 af, Atten= 0%, Lag= 0.0 min
Primary = 14.59 cfs @ 12.16 hrs, Volume= 1.613 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 106.62' @ 12.28 hrs Surf.Area= 13 sf Storage= 51 cf
Flood Elev= 108.84' Surf.Area= 13 sf Storage= 79 cf

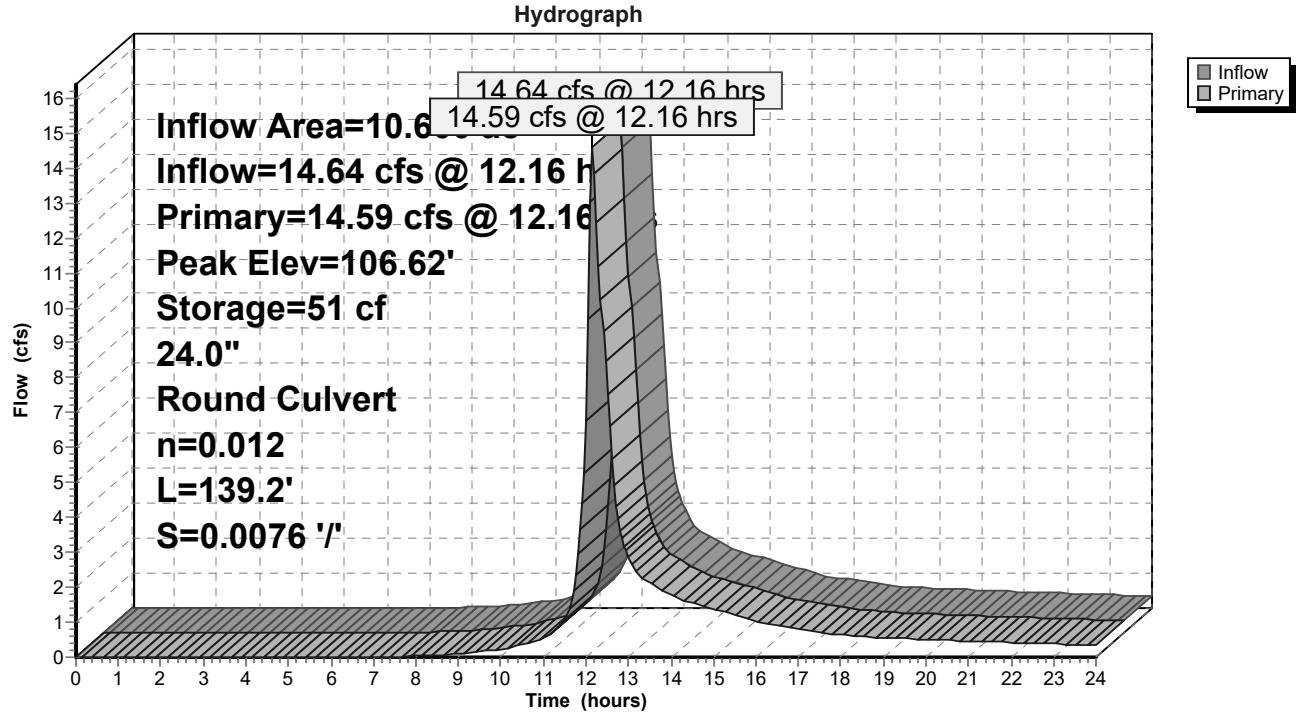
Plug-Flow detention time= 0.1 min calculated for 1.613 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (858.7 - 858.6)

Volume	Invert	Avail.Storage	Storage Description
#1	102.56'	79 cf	**4.00'D x 6.28'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	102.56'	**24.0" Round 24" HDPE N-12** L= 139.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 102.56' / 101.50' S= 0.0076 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=2.34 cfs @ 12.16 hrs HW=105.10' TW=105.08' (Dynamic Tailwater)
↑—**1=24" HDPE N-12** (Outlet Controls 2.34 cfs @ 0.76 fps)

Pond D100300CP: DMH 1003+00



Summary for Pond D1869P: DMH 18+69

Inflow Area = 0.681 ac, 54.92% Impervious, Inflow Depth > 3.72" for 25yr-24hr event
Inflow = 2.56 cfs @ 12.11 hrs, Volume= 0.211 af
Outflow = 2.55 cfs @ 12.12 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.1 min
Primary = 2.55 cfs @ 12.12 hrs, Volume= 0.211 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 127.10' @ 12.11 hrs Surf.Area= 13 sf Storage= 12 cf
Flood Elev= 131.77' Surf.Area= 13 sf Storage= 71 cf

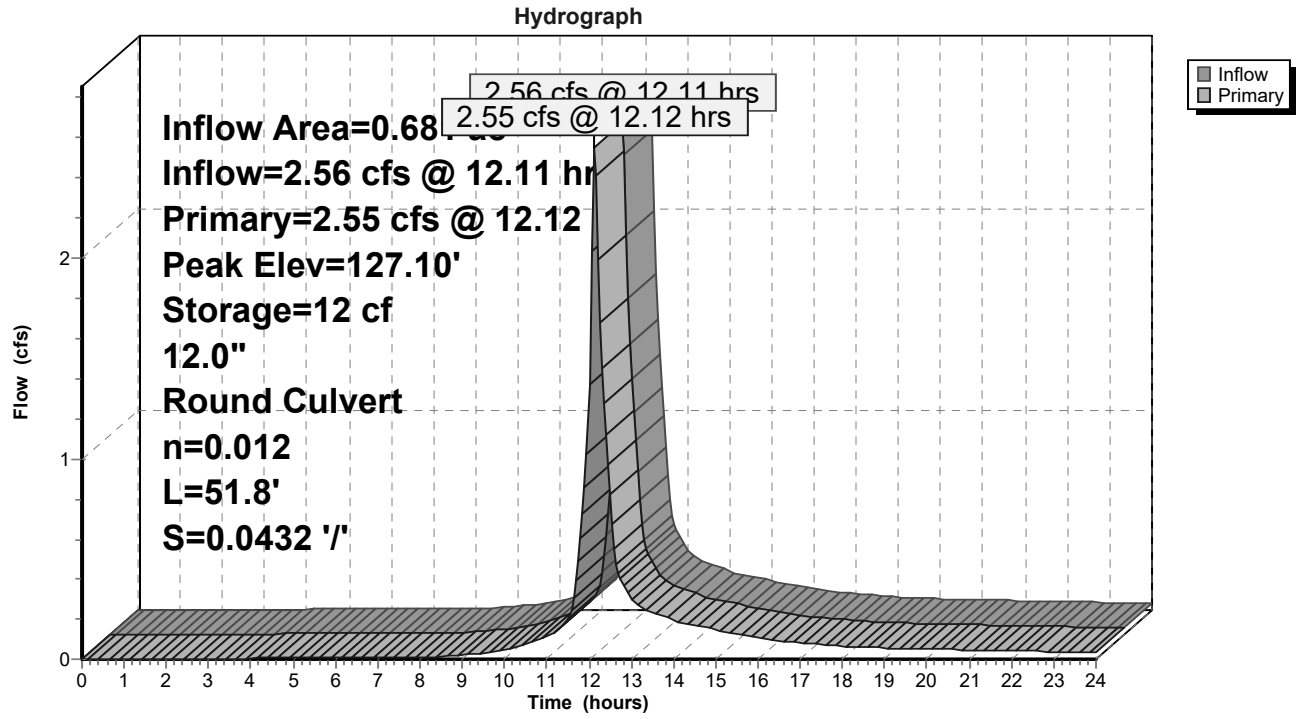
Plug-Flow detention time= 0.2 min calculated for 0.211 af (100% of inflow)
Center-of-Mass det. time= 0.2 min (820.8 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	126.15'	71 cf	**4.00'D x 5.62'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	126.15'	**12.0" Round 12" HDPE N-12** L= 51.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 126.15' / 123.91' S= 0.0432 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=2.49 cfs @ 12.12 hrs HW=127.08' TW=123.86' (Dynamic Tailwater)
1=12" HDPE N-12 (Inlet Controls 2.49 cfs @ 3.28 fps)

Pond D1869P: DMH 18+69



Summary for Pond D2168RP: DMH 21+68R

Inflow Area = 1.646 ac, 25.38% Impervious, Inflow Depth > 1.27" for 25yr-24hr event
Inflow = 1.30 cfs @ 12.34 hrs, Volume= 0.174 af
Outflow = 1.30 cfs @ 12.34 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.1 min
Primary = 1.30 cfs @ 12.34 hrs, Volume= 0.174 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 105.51' @ 12.34 hrs Surf.Area= 13 sf Storage= 8 cf
Flood Elev= 108.51' Surf.Area= 13 sf Storage= 45 cf

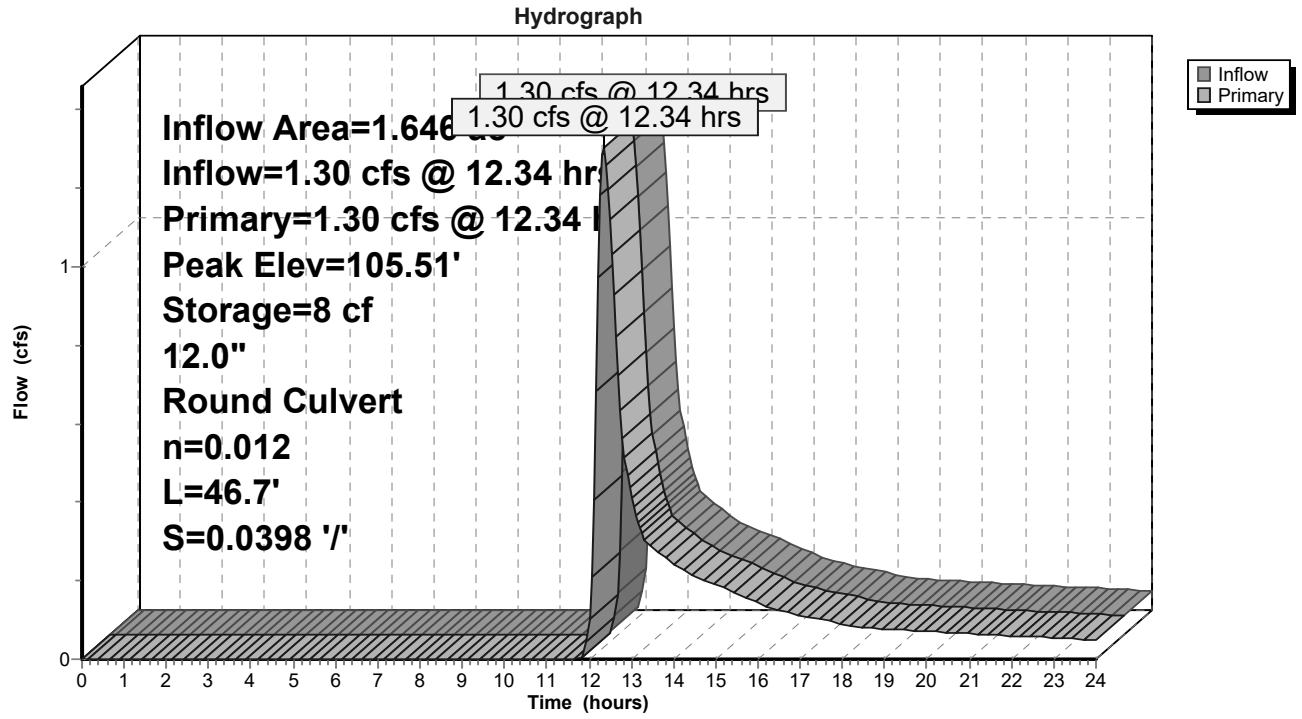
Plug-Flow detention time= 0.2 min calculated for 0.174 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (905.5 - 905.3)

Volume	Invert	Avail.Storage	Storage Description
#1	104.91'	45 cf	**4.00'D x 3.60'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	104.91'	**12.0" Round 12" HDPE N-12** L= 46.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 104.91' / 103.05' S= 0.0398 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=1.30 cfs @ 12.34 hrs HW=105.51' TW=103.63' (Dynamic Tailwater)
↑**1=12" HDPE N-12** (Inlet Controls 1.30 cfs @ 2.64 fps)

Pond D2168RP: DMH 21+68R



Summary for Pond D2195P: DMH 21+95R

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth > 3.74" for 25yr-24hr event
Inflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af
Outflow = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af, Atten= 0%, Lag= 0.0 min
Primary = 6.38 cfs @ 12.11 hrs, Volume= 0.506 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 117.33' @ 12.11 hrs Surf.Area= 13 sf Storage= 18 cf
Flood Elev= 121.80' Surf.Area= 13 sf Storage= 74 cf

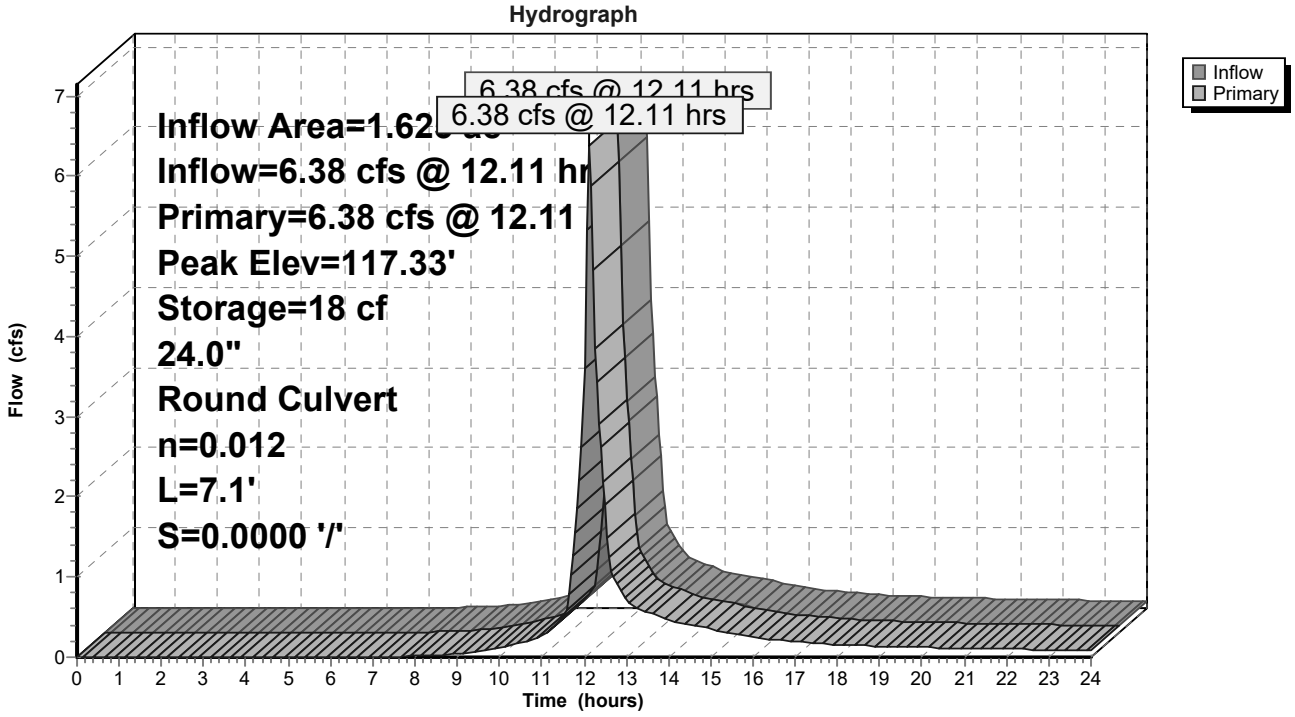
Plug-Flow detention time= 0.2 min calculated for 0.506 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (824.5 - 824.4)

Volume	Invert	Avail.Storage	Storage Description
#1	115.92'	74 cf	**4.00'D x 5.88'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	115.92'	**24.0" Round 24 " HDPE N-12** L= 7.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 115.92' / 115.92' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 3.14 sf

Primary OutFlow Max=6.26 cfs @ 12.11 hrs HW=117.31' TW=116.61' (Dynamic Tailwater)
↑—**1=24 " HDPE N-12** (Barrel Controls 6.26 cfs @ 3.77 fps)

Pond D2195P: DMH 21+95R



Summary for Pond D2215P: DMH 22+15R

Inflow Area = 1.625 ac, 55.57% Impervious, Inflow Depth = 2.54" for 25yr-24hr event
Inflow = 5.64 cfs @ 12.16 hrs, Volume= 0.344 af
Outflow = 5.64 cfs @ 12.17 hrs, Volume= 0.344 af, Atten= 0%, Lag= 0.2 min
Primary = 5.64 cfs @ 12.17 hrs, Volume= 0.344 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 110.58' @ 12.16 hrs Surf.Area= 13 sf Storage= 34 cf
Flood Elev= 120.86' Surf.Area= 13 sf Storage= 156 cf

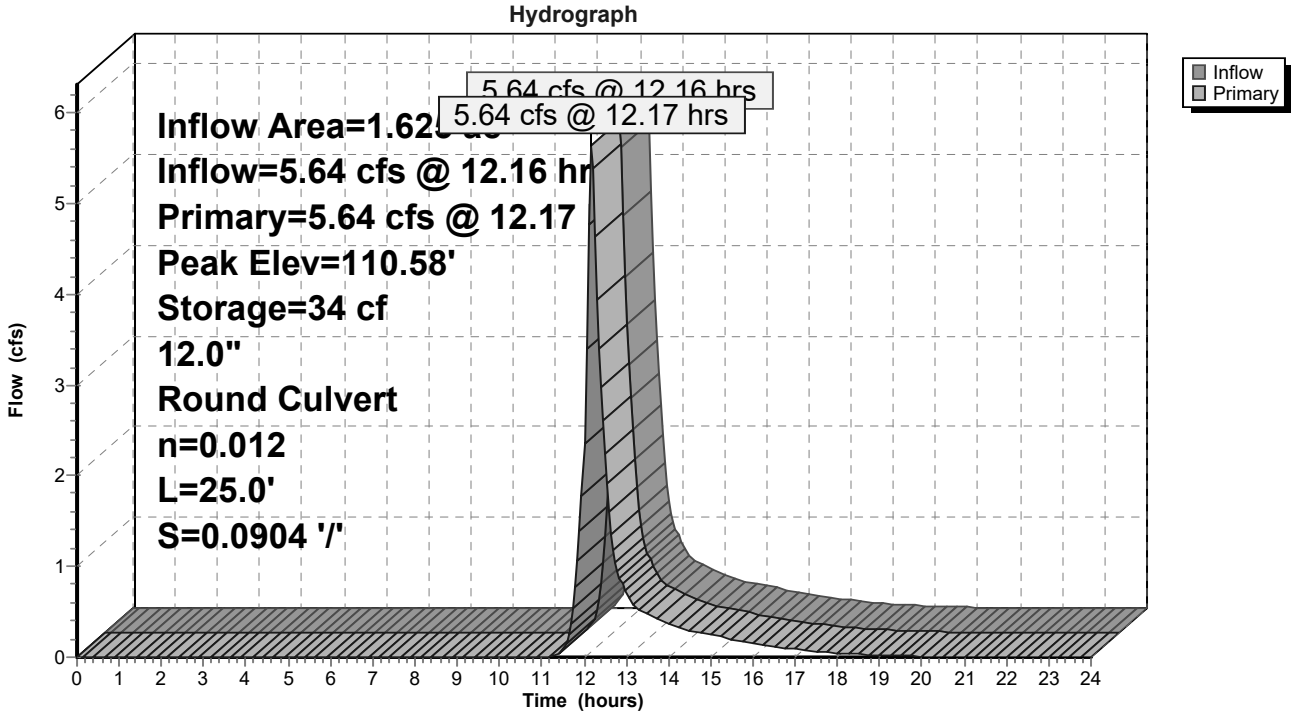
Plug-Flow detention time= 0.3 min calculated for 0.344 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (780.4 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	107.86'	156 cf	**4.00'D x 12.42'H 4' Structure**

Device	Routing	Invert	Outlet Devices
#1	Primary	107.86'	**12.0" Round 12" HDPE N-12** L= 25.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 107.86' / 105.60' S= 0.0904 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=5.53 cfs @ 12.17 hrs HW=110.50' TW=107.13' (Dynamic Tailwater)
↑—**1=12" HDPE N-12** (Inlet Controls 5.53 cfs @ 7.04 fps)

Pond D2215P: DMH 22+15R



Summary for Pond Y01P: Yard Drain

[42] Hint: Gap in defined storage above volume #1 at 108.50'
[58] Hint: Peaked 0.04' above defined flood level

Inflow Area = 5.898 ac, 19.52% Impervious, Inflow Depth > 1.03" for 25yr-24hr event
Inflow = 3.08 cfs @ 12.47 hrs, Volume= 0.504 af
Outflow = 3.08 cfs @ 12.48 hrs, Volume= 0.504 af, Atten= 0%, Lag= 0.3 min
Primary = 2.50 cfs @ 12.48 hrs, Volume= 0.492 af
Secondary = 0.58 cfs @ 12.48 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 111.47' @ 12.48 hrs Surf.Area= 18 sf Storage= 8 cf
Flood Elev= 111.43' Surf.Area= 7 sf Storage= 8 cf

Plug-Flow detention time= 0.3 min calculated for 0.504 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (922.7 - 922.6)

Volume	Invert	Avail.Storage	Storage Description
#1	106.00'	8 cf	**2.00'D x 2.50'H Vertical Cone/Cylinder**
#2	111.43'	30 cf	**Ponding Area (Irregular)**Listed below (Recalc)
		38 cf	Total Available Storage

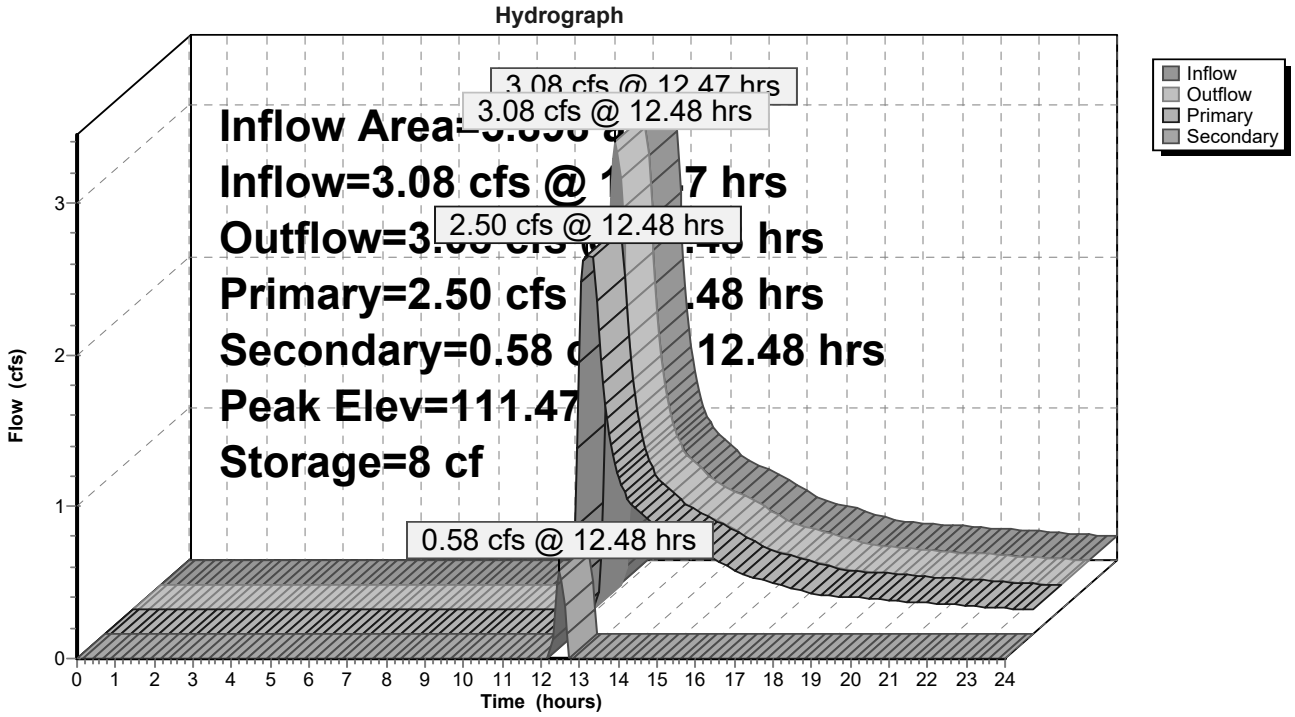
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
111.43	4	4.0	0	0	4
111.75	250	100.0	30	30	799

Device	Routing	Invert	Outlet Devices
#1	Primary	108.93'	**8.0" Round 8" HDPE N-12** L= 71.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 108.93' / 102.07' S= 0.0965 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Secondary	111.43'	**25.0' long x 15.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=2.50 cfs @ 12.48 hrs HW=111.47' TW=106.78' (Dynamic Tailwater)
1=8" HDPE N-12 (Inlet Controls 2.50 cfs @ 7.16 fps)

Secondary OutFlow Max=0.57 cfs @ 12.48 hrs HW=111.47' TW=103.53' (Dynamic Tailwater)
2=Overflow (Weir Controls 0.57 cfs @ 0.55 fps)

Pond Y01P: Yard Drain



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>0.42"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=4.09 cfs 0.961 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=94,062 sf 2.77% Impervious Runoff Depth>0.71"
Flow Length=507' Tc=17.7 min CN=63 Runoff=1.03 cfs 0.129 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.00 cfs 0.000 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=137,017 sf 3.20% Impervious Runoff Depth=0.00"
Flow Length=544' Tc=21.8 min UI Adjusted CN=32 Runoff=0.00 cfs 0.000 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth=0.00"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.00 cfs 0.000 af

Subcatchment 21S: Catch Basin #1 Runoff Area=4,630 sf 13.05% Impervious Runoff Depth>0.15"
Tc=6.0 min CN=47 Runoff=0.00 cfs 0.001 af

Subcatchment 22S: Catch Basin #2 Runoff Area=1,761 sf 11.58% Impervious Runoff Depth>0.12"
Tc=6.0 min CN=46 Runoff=0.00 cfs 0.000 af

Subcatchment 23S: Catch Basin #3 Runoff Area=2,089 sf 11.68% Impervious Runoff Depth>0.12"
Tc=6.0 min CN=46 Runoff=0.00 cfs 0.000 af

Subcatchment 31S: Porous Pavement Runoff Area=105,090 sf 76.59% Impervious Runoff Depth>1.03"
Tc=732.0 min CN=84 Runoff=0.38 cfs 0.207 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>1.66"
Tc=6.0 min CN=79 Runoff=0.03 cfs 0.003 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.04"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.00 cfs 0.001 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>0.42"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.04 cfs 0.006 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>0.39"
Flow Length=290' Tc=12.5 min CN=55 Runoff=0.21 cfs 0.037 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>0.72"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.08 cfs 0.008 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.01"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=0.01 cfs 0.003 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>0.15"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.00 cfs 0.002 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>1.52"
Flow Length=428' Tc=10.2 min CN=77 Runoff=1.12 cfs 0.094 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>1.14"
Flow Length=380' Tc=15.1 min CN=71 Runoff=0.71 cfs 0.072 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>2.04"
Flow Length=283' Tc=9.2 min CN=84 Runoff=0.54 cfs 0.043 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>1.08"
Flow Length=207' Tc=7.2 min CN=70 Runoff=0.48 cfs 0.039 af

Subcatchment 900S: Rain Garden Area Runoff Area=56,894 sf 10.75% Impervious Runoff Depth>0.81"
Tc=6.0 min CN=65 Runoff=1.05 cfs 0.089 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>0.12"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=0.03 cfs 0.017 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.01"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>1.59"
Flow Length=172' Tc=9.7 min CN=78 Runoff=0.54 cfs 0.044 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>0.81"
Flow Length=278' Tc=10.4 min CN=65 Runoff=0.42 cfs 0.042 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.22 cfs 0.018 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>1.02"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.17 cfs 0.016 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>1.08"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.20 cfs 0.016 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>0.97"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.25 cfs 0.021 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>1.08"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.24 cfs 0.020 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>1.08"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.24 cfs 0.018 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>1.52"
Tc=6.0 min CN=77 Runoff=0.07 cfs 0.005 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>1.26"
Flow Length=297' Tc=6.0 min CN=73 Runoff=0.44 cfs 0.033 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>1.32"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.25 cfs 0.019 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>1.32"
Flow Length=384' Tc=9.4 min CN=74 Runoff=0.75 cfs 0.063 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=4,788 sf 100.00% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.38 cfs 0.031 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>1.32"
Flow Length=322' Tc=9.0 min CN=74 Runoff=0.59 cfs 0.049 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=4,586 sf 100.00% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.36 cfs 0.030 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>0.63"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.10 cfs 0.011 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>0.54"
Flow Length=548' Tc=10.4 min CN=59 Runoff=0.47 cfs 0.059 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=3,464 sf 100.00% Impervious Runoff Depth>3.38"
Tc=6.0 min CN=98 Runoff=0.27 cfs 0.022 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>0.06"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=0.05 cfs 0.032 af

Reach 15R: Overland Reach Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.00 cfs 0.000 af

Reach 100R: Final Reach #100 Inflow=4.09 cfs 0.961 af
Outflow=4.09 cfs 0.961 af

Reach 200R: Final Reach #200 Inflow=1.03 cfs 0.129 af
Outflow=1.03 cfs 0.129 af

Reach 300R: Final Reach #300 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 400R: Final Reach #400 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Reach 500R: Final Reach #500 Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Pond 101P: Porous Pavement W/ Infiltration #101 Peak Elev=103.71' Storage=0 cf Inflow=0.38 cfs 0.207 af
Outflow=0.38 cfs 0.207 af

Pond 900P: Detention Pond #900 Peak Elev=98.80' Storage=21,891 cf Inflow=8.25 cfs 0.863 af
Discarded=0.52 cfs 0.466 af Primary=0.00 cfs 0.000 af Outflow=0.52 cfs 0.466 af

Pond 1000P: Sediment Forebay Peak Elev=105.92' Storage=1 cf Inflow=0.03 cfs 0.017 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=0.03 cfs 0.017 af

Pond 1100P: StormTech Peak Elev=115.95' Storage=1,216 cf Inflow=2.01 cfs 0.165 af
Discarded=0.13 cfs 0.099 af Primary=1.12 cfs 0.065 af Outflow=1.25 cfs 0.164 af

Pond C01P: Catch Basin #1 Peak Elev=111.94' Storage=7 cf Inflow=1.08 cfs 0.095 af
12.0" Round Culvert n=0.012 L=137.7' S=0.0084 '/' Outflow=1.08 cfs 0.095 af

Pond C02P: Catch Basin #2 Peak Elev=108.24' Storage=6 cf Inflow=0.92 cfs 0.079 af
12.0" Round Culvert n=0.012 L=90.0' S=0.0111 '/' Outflow=0.92 cfs 0.079 af

Pond C03P: Catch Basin #3 Peak Elev=107.20' Storage=9 cf Inflow=2.00 cfs 0.174 af
15.0" Round Culvert n=0.012 L=80.0' S=0.0104 '/' Outflow=2.00 cfs 0.174 af

Pond C100P: CB #100 Peak Elev=102.48' Storage=6 cf Inflow=0.06 cfs 0.034 af
Primary=0.05 cfs 0.034 af Secondary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.034 af

Pond C1295GP: CB 12+95G Peak Elev=135.85' Storage=0 cf Inflow=0.00 cfs 0.000 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.00 cfs 0.000 af

Pond C1295LP: CB 12+95L Peak Elev=135.74' Storage=6 cf Inflow=0.95 cfs 0.086 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=0.95 cfs 0.086 af

Pond C1295RP: CB 12+95R Peak Elev=136.10' Storage=4 cf Inflow=0.42 cfs 0.042 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=0.42 cfs 0.042 af

Pond C148GP: CB 1+48G Peak Elev=125.61' Storage=0 cf Inflow=0.00 cfs 0.001 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.00 cfs 0.001 af

Pond C148RP: CB 1+48R Peak Elev=125.37' Storage=1 cf Inflow=0.04 cfs 0.007 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.04 cfs 0.007 af

Pond C1643LP: CB 16+43L Peak Elev=137.07' Storage=3 cf Inflow=0.22 cfs 0.018 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.22 cfs 0.018 af

Pond C1643RP: CB 16+43R Peak Elev=135.65' Storage=4 cf Inflow=0.34 cfs 0.034 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.34 cfs 0.034 af

Pond C1785LP: CB 17+85L Peak Elev=130.63' Storage=3 cf Inflow=0.20 cfs 0.016 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.20 cfs 0.016 af

Pond C1785RP: CB 17+85R Peak Elev=129.28' Storage=6 cf Inflow=0.79 cfs 0.070 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=0.79 cfs 0.070 af

Pond C1928LP: CB 19+28L Peak Elev=122.78' Storage=7 cf Inflow=1.26 cfs 0.108 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=1.26 cfs 0.108 af

Pond C1928RP: CB 19+28R Peak Elev=124.50' Storage=3 cf Inflow=0.24 cfs 0.018 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.24 cfs 0.018 af

Pond C1979RP: CB 19+79R Peak Elev=120.93' Storage=8 cf Inflow=1.33 cfs 0.113 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=1.33 cfs 0.113 af

Pond C2173LP: CB 21+73L Peak Elev=117.83' Storage=5 cf Inflow=0.44 cfs 0.033 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=0.43 cfs 0.033 af

Pond C2173RP: CB 21+73R Peak Elev=117.69' Storage=10 cf Inflow=2.01 cfs 0.165 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=2.01 cfs 0.165 af

Pond C2460LP: CB 24+60L Peak Elev=112.98' Storage=6 cf Inflow=0.75 cfs 0.063 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=0.75 cfs 0.063 af

Pond C2460RP: CB 24+60R Peak Elev=112.67' Storage=7 cf Inflow=1.08 cfs 0.094 af
12.0" Round Culvert n=0.012 L=7.0' S=0.0400 '/' Outflow=1.08 cfs 0.094 af

Pond C2610LP: CB 26+10L Peak Elev=108.90' Storage=6 cf Inflow=0.59 cfs 0.049 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=0.59 cfs 0.049 af

Pond C2610RP: CB 26+10R Peak Elev=108.72' Storage=6 cf Inflow=0.92 cfs 0.079 af
12.0" Round Culvert n=0.012 L=10.7' S=0.0355 '/' Outflow=0.92 cfs 0.079 af

Pond C3018GP: CB 30+18G Peak Elev=102.48' Storage=15 cf Inflow=4.01 cfs 0.436 af
Primary=4.01 cfs 0.436 af Secondary=0.00 cfs 0.000 af Outflow=4.01 cfs 0.436 af

Pond C3020LP: CB 30+20L Peak Elev=102.24' Storage=14 cf Inflow=4.47 cfs 0.496 af
Primary=4.47 cfs 0.496 af Secondary=0.00 cfs 0.000 af Outflow=4.47 cfs 0.496 af

Pond C3020RP: CB 30+20R Peak Elev=101.90' Storage=12 cf Inflow=4.67 cfs 0.518 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=4.67 cfs 0.518 af

Pond C303GP: CB 3+03G Peak Elev=125.12' Storage=3 cf Inflow=0.21 cfs 0.037 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=0.21 cfs 0.037 af

Pond C304RP: CB 3+04R Peak Elev=123.81' Storage=3 cf Inflow=0.31 cfs 0.052 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=0.31 cfs 0.052 af

Pond C390GP: CB 3+90G Peak Elev=123.19' Storage=1 cf Inflow=0.01 cfs 0.003 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=0.01 cfs 0.003 af

Pond C402GP: CB 4+02G Peak Elev=122.88' Storage=5 cf Inflow=0.31 cfs 0.057 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=0.31 cfs 0.057 af

Pond C419LP: CB 4+19L Peak Elev=117.22' Storage=11 cf Inflow=3.91 cfs 0.391 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=3.91 cfs 0.391 af

Pond C419RP: CB 4+19R Peak Elev=122.80' Storage=6 cf Inflow=1.01 cfs 0.129 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=1.01 cfs 0.129 af

Pond C857LP: CB 8+57L Peak Elev=132.72' Storage=9 cf Inflow=1.94 cfs 0.168 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=1.94 cfs 0.168 af

Pond C857RP: CB 8+57R Peak Elev=132.80' Storage=6 cf Inflow=0.48 cfs 0.039 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=0.48 cfs 0.039 af

Pond D01P: Drain Manhole #1 Peak Elev=112.33' Storage=7 cf Inflow=1.08 cfs 0.094 af
12.0" Round Culvert n=0.012 L=27.0' S=0.0093 '/' Outflow=1.08 cfs 0.094 af

Pond D02P: DMH #2 Peak Elev=106.27' Storage=9 cf Inflow=2.00 cfs 0.174 af
15.0" Round Culvert n=0.012 L=87.5' S=0.0221 '/' Outflow=2.00 cfs 0.174 af

Pond D03P: DMH #3 Peak Elev=104.24' Storage=9 cf Inflow=2.00 cfs 0.174 af
15.0" Round Culvert n=0.012 L=60.0' S=0.0257 '/' Outflow=2.00 cfs 0.174 af

Pond D04P: DMH #4 Peak Elev=105.05' Storage=7 cf Inflow=1.12 cfs 0.065 af
12.0" Round Culvert n=0.012 L=37.7' S=0.0385 '/' Outflow=1.12 cfs 0.065 af

Pond D05P: DMH #5 Peak Elev=103.02' Storage=6 cf Inflow=1.12 cfs 0.082 af
18.0" Round Culvert n=0.012 L=145.0' S=0.0210 '/' Outflow=1.12 cfs 0.082 af

Pond D06P: DMH #6 Peak Elev=99.93' Storage=7 cf Inflow=1.12 cfs 0.082 af
18.0" Round Culvert n=0.012 L=80.0' S=0.0050 '/' Outflow=1.13 cfs 0.082 af

Pond D100125CP: DMH 1001+25C Peak Elev=107.04' Storage=11 cf Inflow=3.91 cfs 0.391 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=3.91 cfs 0.391 af

Pond D100300CP: DMH 1003+00 Peak Elev=103.44' Storage=11 cf Inflow=3.91 cfs 0.391 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=3.90 cfs 0.391 af

Pond D1869P: DMH 18+69 Peak Elev=126.60' Storage=6 cf Inflow=0.79 cfs 0.070 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=0.79 cfs 0.070 af

Pond D2168RP: DMH 21+68R Peak Elev=104.99' Storage=1 cf Inflow=0.03 cfs 0.017 af
12.0" Round Culvert n=0.012 L=46.7' S=0.0398 '/' Outflow=0.03 cfs 0.017 af

Pond D2195P: DMH 21+95R Peak Elev=116.68' Storage=10 cf Inflow=2.01 cfs 0.165 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=2.01 cfs 0.165 af

Pond D2215P: DMH 22+15R Peak Elev=108.41' Storage=7 cf Inflow=1.12 cfs 0.065 af
12.0" Round Culvert n=0.012 L=25.0' S=0.0904 '/' Outflow=1.12 cfs 0.065 af

Pond Y01P: Yard Drain Peak Elev=109.06' Storage=8 cf Inflow=0.05 cfs 0.032 af
Primary=0.06 cfs 0.032 af Secondary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.032 af

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>1.27"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=17.48 cfs 2.935 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=94,062 sf 2.77% Impervious Runoff Depth>1.80"
Flow Length=507' Tc=17.7 min CN=63 Runoff=3.06 cfs 0.324 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.06"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.01 cfs 0.006 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=137,017 sf 3.20% Impervious Runoff Depth>0.06"
Flow Length=544' Tc=21.8 min UI Adjusted CN=32 Runoff=0.03 cfs 0.017 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.02"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.01 cfs 0.007 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.06"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.07 cfs 0.043 af

Subcatchment 21S: Catch Basin #1 Runoff Area=4,630 sf 13.05% Impervious Runoff Depth>0.71"
Tc=6.0 min CN=47 Runoff=0.05 cfs 0.006 af

Subcatchment 22S: Catch Basin #2 Runoff Area=1,761 sf 11.58% Impervious Runoff Depth>0.65"
Tc=6.0 min CN=46 Runoff=0.02 cfs 0.002 af

Subcatchment 23S: Catch Basin #3 Runoff Area=2,089 sf 11.68% Impervious Runoff Depth>0.65"
Tc=6.0 min CN=46 Runoff=0.02 cfs 0.003 af

Subcatchment 31S: Porous Pavement Runoff Area=105,090 sf 76.59% Impervious Runoff Depth>1.94"
Tc=732.0 min CN=84 Runoff=0.69 cfs 0.390 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>3.20"
Tc=6.0 min CN=79 Runoff=0.07 cfs 0.005 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.39"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.04 cfs 0.010 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>1.28"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.19 cfs 0.017 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>1.21"
Flow Length=290' Tc=12.5 min CN=55 Runoff=1.12 cfs 0.117 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>1.80"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.24 cfs 0.021 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.26"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=0.27 cfs 0.117 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>0.71"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.08 cfs 0.010 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>3.01"
Flow Length=428' Tc=10.2 min CN=77 Runoff=2.25 cfs 0.186 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>2.46"
Flow Length=380' Tc=15.1 min CN=71 Runoff=1.64 cfs 0.156 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>3.69"
Flow Length=283' Tc=9.2 min CN=84 Runoff=0.96 cfs 0.078 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>2.38"
Flow Length=207' Tc=7.2 min CN=70 Runoff=1.13 cfs 0.086 af

Subcatchment 900S: Rain Garden Area Runoff Area=56,894 sf 10.75% Impervious Runoff Depth>1.96"
Tc=6.0 min CN=65 Runoff=2.86 cfs 0.214 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>0.65"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=0.51 cfs 0.089 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.30"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.01 cfs 0.002 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>3.10"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.06 cfs 0.086 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>1.96"
Flow Length=278' Tc=10.4 min CN=65 Runoff=1.16 cfs 0.100 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.33 cfs 0.027 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>2.29"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.40 cfs 0.036 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>2.38"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.46 cfs 0.034 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>2.21"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.61 cfs 0.047 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>2.38"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.57 cfs 0.043 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>2.38"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.55 cfs 0.040 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>3.01"
Tc=6.0 min CN=77 Runoff=0.14 cfs 0.010 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>2.64"
Flow Length=297' Tc=6.0 min CN=73 Runoff=0.95 cfs 0.069 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>2.73"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.54 cfs 0.039 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>2.73"
Flow Length=384' Tc=9.4 min CN=74 Runoff=1.60 cfs 0.129 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=4,788 sf 100.00% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.57 cfs 0.048 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>2.73"
Flow Length=322' Tc=9.0 min CN=74 Runoff=1.26 cfs 0.101 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=4,586 sf 100.00% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.55 cfs 0.046 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>1.65"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.33 cfs 0.030 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>1.50"
Flow Length=548' Tc=10.4 min CN=59 Runoff=1.81 cfs 0.165 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=3,464 sf 100.00% Impervious Runoff Depth>5.22"
Tc=6.0 min CN=98 Runoff=0.42 cfs 0.035 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>0.49"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=1.04 cfs 0.239 af

Reach 15R: Overland Reach Avg. Flow Depth=0.04' Max Vel=0.47 fps Inflow=0.07 cfs 0.043 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.06 cfs 0.041 af

Reach 100R: Final Reach #100 Inflow=17.48 cfs 2.935 af
Outflow=17.48 cfs 2.935 af

Reach 200R: Final Reach #200 Inflow=3.06 cfs 0.324 af
Outflow=3.06 cfs 0.324 af

Reach 300R: Final Reach #300 Inflow=0.35 cfs 0.280 af
Outflow=0.35 cfs 0.280 af

Reach 400R: Final Reach #400 Inflow=0.03 cfs 0.017 af
Outflow=0.03 cfs 0.017 af

Reach 500R: Final Reach #500 Inflow=0.07 cfs 0.048 af
Outflow=0.07 cfs 0.048 af

Pond 101P: Porous Pavement W/ Infiltration #101 Peak Elev=103.71' Storage=0 cf Inflow=0.69 cfs 0.390 af
Outflow=0.69 cfs 0.390 af

Pond 900P: Detention Pond #900 Peak Elev=99.98' Storage=62,162 cf Inflow=21.76 cfs 2.303 af
Discarded=0.88 cfs 0.843 af Primary=0.34 cfs 0.274 af Outflow=1.22 cfs 1.117 af

Pond 1000P: Sediment Forebay Peak Elev=106.20' Storage=8 cf Inflow=0.51 cfs 0.089 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=0.51 cfs 0.089 af

Pond 1100P: StormTech Peak Elev=116.42' Storage=1,896 cf Inflow=4.40 cfs 0.346 af
Discarded=0.13 cfs 0.139 af Primary=3.63 cfs 0.207 af Outflow=3.76 cfs 0.346 af

Pond C01P: Catch Basin #1 Peak Elev=112.23' Storage=10 cf Inflow=2.15 cfs 0.183 af
12.0" Round Culvert n=0.012 L=137.7' S=0.0084 '/' Outflow=2.15 cfs 0.183 af

Pond C02P: Catch Basin #2 Peak Elev=108.48' Storage=9 cf Inflow=1.78 cfs 0.149 af
12.0" Round Culvert n=0.012 L=90.0' S=0.0111 '/' Outflow=1.78 cfs 0.149 af

Pond C03P: Catch Basin #3 Peak Elev=107.57' Storage=13 cf Inflow=3.95 cfs 0.335 af
15.0" Round Culvert n=0.012 L=80.0' S=0.0104 '/' Outflow=3.95 cfs 0.335 af

Pond C100P: CB #100 Peak Elev=103.53' Storage=20 cf Inflow=1.11 cfs 0.243 af
Primary=1.08 cfs 0.243 af Secondary=0.00 cfs 0.000 af Outflow=1.08 cfs 0.243 af

Pond C1295GP: CB 12+95G Peak Elev=136.15' Storage=4 cf Inflow=0.01 cfs 0.002 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.01 cfs 0.002 af

Pond C1295LP: CB 12+95L Peak Elev=136.02' Storage=9 cf Inflow=2.22 cfs 0.189 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=2.22 cfs 0.189 af

Pond C1295RP: CB 12+95R Peak Elev=136.35' Storage=7 cf Inflow=1.16 cfs 0.102 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=1.16 cfs 0.102 af

Pond C148GP: CB 1+48G Peak Elev=125.68' Storage=1 cf Inflow=0.04 cfs 0.010 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.04 cfs 0.010 af

Pond C148RP: CB 1+48R Peak Elev=125.48' Storage=2 cf Inflow=0.19 cfs 0.027 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.19 cfs 0.027 af

Pond C1643LP: CB 16+43L Peak Elev=137.12' Storage=4 cf Inflow=0.33 cfs 0.027 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.33 cfs 0.027 af

Pond C1643RP: CB 16+43R Peak Elev=135.77' Storage=5 cf Inflow=0.66 cfs 0.063 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.66 cfs 0.063 af

Pond C1785LP: CB 17+85L Peak Elev=130.75' Storage=4 cf Inflow=0.46 cfs 0.034 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.46 cfs 0.034 af

Pond C1785RP: CB 17+85R Peak Elev=129.55' Storage=9 cf Inflow=1.73 cfs 0.145 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=1.73 cfs 0.145 af

Pond C1928LP: CB 19+28L Peak Elev=123.25' Storage=13 cf Inflow=2.84 cfs 0.228 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=2.84 cfs 0.228 af

Pond C1928RP: CB 19+28R Peak Elev=124.63' Storage=5 cf Inflow=0.55 cfs 0.040 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.55 cfs 0.040 af

Pond C1979RP: CB 19+79R Peak Elev=121.43' Storage=14 cf Inflow=2.97 cfs 0.238 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=2.96 cfs 0.238 af

Pond C2173LP: CB 21+73L Peak Elev=118.79' Storage=17 cf Inflow=0.95 cfs 0.069 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=0.91 cfs 0.069 af

Pond C2173RP: CB 21+73R Peak Elev=118.75' Storage=23 cf Inflow=4.40 cfs 0.346 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=4.40 cfs 0.346 af

Pond C2460LP: CB 24+60L Peak Elev=113.29' Storage=10 cf Inflow=1.60 cfs 0.129 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=1.59 cfs 0.129 af

Pond C2460RP: CB 24+60R Peak Elev=112.99' Storage=11 cf Inflow=2.11 cfs 0.177 af
12.0" Round Culvert n=0.012 L=7.0' S=0.0400 '/' Outflow=2.11 cfs 0.177 af

Pond C2610LP: CB 26+10L Peak Elev=109.17' Storage=9 cf Inflow=1.26 cfs 0.101 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=1.26 cfs 0.101 af

Pond C2610RP: CB 26+10R Peak Elev=108.96' Storage=9 cf Inflow=1.77 cfs 0.147 af
12.0" Round Culvert n=0.012 L=10.7' S=0.0355 '/' Outflow=1.77 cfs 0.147 af

Pond C3018GP: CB 30+18G Peak Elev=103.47' Storage=28 cf Inflow=9.82 cfs 1.260 af
Primary=9.80 cfs 1.260 af Secondary=0.00 cfs 0.000 af Outflow=9.80 cfs 1.260 af

Pond C3020LP: CB 30+20L Peak Elev=103.14' Storage=25 cf Inflow=11.61 cfs 1.425 af
Primary=11.61 cfs 1.425 af Secondary=0.00 cfs 0.000 af Outflow=11.61 cfs 1.425 af

Pond C3020RP: CB 30+20R Peak Elev=102.60' Storage=20 cf Inflow=11.91 cfs 1.459 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=11.91 cfs 1.459 af

Pond C303GP: CB 3+03G Peak Elev=125.41' Storage=6 cf Inflow=1.12 cfs 0.117 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=1.12 cfs 0.117 af

Pond C304RP: CB 3+04R Peak Elev=124.16' Storage=8 cf Inflow=1.51 cfs 0.165 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=1.51 cfs 0.165 af

Pond C390GP: CB 3+90G Peak Elev=123.45' Storage=4 cf Inflow=0.27 cfs 0.117 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=0.27 cfs 0.117 af

Pond C402GP: CB 4+02G Peak Elev=123.40' Storage=11 cf Inflow=1.59 cfs 0.292 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=1.58 cfs 0.292 af

Pond C419LP: CB 4+19L Peak Elev=117.78' Storage=18 cf Inflow=9.44 cfs 0.987 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=9.45 cfs 0.987 af

Pond C419RP: CB 4+19R Peak Elev=123.25' Storage=12 cf Inflow=3.21 cfs 0.448 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=3.21 cfs 0.448 af

Pond C857LP: CB 8+57L Peak Elev=133.17' Storage=14 cf Inflow=4.22 cfs 0.353 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=4.22 cfs 0.353 af

Pond C857RP: CB 8+57R Peak Elev=133.22' Storage=11 cf Inflow=1.13 cfs 0.086 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=1.12 cfs 0.086 af

Pond D01P: Drain Manhole #1 Peak Elev=112.65' Storage=11 cf Inflow=2.11 cfs 0.177 af
12.0" Round Culvert n=0.012 L=27.0' S=0.0093 '/' Outflow=2.10 cfs 0.177 af

Pond D02P: DMH #2 Peak Elev=106.64' Storage=13 cf Inflow=3.95 cfs 0.335 af
15.0" Round Culvert n=0.012 L=87.5' S=0.0221 '/' Outflow=3.95 cfs 0.335 af

Pond D03P: DMH #3 Peak Elev=104.61' Storage=13 cf Inflow=3.95 cfs 0.335 af
15.0" Round Culvert n=0.012 L=60.0' S=0.0257 '/' Outflow=3.95 cfs 0.335 af

Pond D04P: DMH #4 Peak Elev=105.90' Storage=18 cf Inflow=3.63 cfs 0.207 af
12.0" Round Culvert n=0.012 L=37.7' S=0.0385 '/' Outflow=3.59 cfs 0.207 af

Pond D05P: DMH #5 Peak Elev=103.48' Storage=12 cf Inflow=3.80 cfs 0.295 af
18.0" Round Culvert n=0.012 L=145.0' S=0.0210 '/' Outflow=3.80 cfs 0.295 af

Pond D06P: DMH #6 Peak Elev=100.46' Storage=13 cf Inflow=3.80 cfs 0.295 af
18.0" Round Culvert n=0.012 L=80.0' S=0.0050 '/' Outflow=3.80 cfs 0.295 af

Pond D100125CP: DMH 1001+25C Peak Elev=107.60' Storage=18 cf Inflow=9.45 cfs 0.987 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=9.45 cfs 0.987 af

Pond D100300CP: DMH 1003+00 Peak Elev=104.19' Storage=20 cf Inflow=9.45 cfs 0.987 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=9.44 cfs 0.987 af

Pond D1869P: DMH 18+69 Peak Elev=126.87' Storage=9 cf Inflow=1.73 cfs 0.145 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=1.73 cfs 0.145 af

Pond D2168RP: DMH 21+68R Peak Elev=105.27' Storage=4 cf Inflow=0.51 cfs 0.089 af
12.0" Round Culvert n=0.012 L=46.7' S=0.0398 '/' Outflow=0.51 cfs 0.089 af

Pond D2195P: DMH 21+95R Peak Elev=117.07' Storage=14 cf Inflow=4.40 cfs 0.346 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=4.40 cfs 0.346 af

Pond D2215P: DMH 22+15R Peak Elev=109.28' Storage=18 cf Inflow=3.63 cfs 0.207 af
12.0" Round Culvert n=0.012 L=25.0' S=0.0904 '/' Outflow=3.63 cfs 0.207 af

Pond Y01P: Yard Drain Peak Elev=109.69' Storage=8 cf Inflow=1.04 cfs 0.239 af
Primary=1.10 cfs 0.239 af Secondary=0.00 cfs 0.000 af Outflow=1.10 cfs 0.239 af

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>2.14"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=31.66 cfs 4.931 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=94,062 sf 2.77% Impervious Runoff Depth>2.82"
Flow Length=507' Tc=17.7 min CN=63 Runoff=4.96 cfs 0.508 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.29"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.06 cfs 0.027 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=137,017 sf 3.20% Impervious Runoff Depth>0.29"
Flow Length=544' Tc=21.8 min UI Adjusted CN=32 Runoff=0.15 cfs 0.077 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.19"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.09 cfs 0.053 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.29"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=0.36 cfs 0.197 af

Subcatchment 21S: Catch Basin #1 Runoff Area=4,630 sf 13.05% Impervious Runoff Depth>1.36"
Tc=6.0 min CN=47 Runoff=0.13 cfs 0.012 af

Subcatchment 22S: Catch Basin #2 Runoff Area=1,761 sf 11.58% Impervious Runoff Depth>1.27"
Tc=6.0 min CN=46 Runoff=0.05 cfs 0.004 af

Subcatchment 23S: Catch Basin #3 Runoff Area=2,089 sf 11.68% Impervious Runoff Depth>1.27"
Tc=6.0 min CN=46 Runoff=0.05 cfs 0.005 af

Subcatchment 31S: Porous Pavement Runoff Area=105,090 sf 76.59% Impervious Runoff Depth>2.70"
Tc=732.0 min CN=84 Runoff=0.95 cfs 0.543 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>4.50"
Tc=6.0 min CN=79 Runoff=0.09 cfs 0.007 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>0.88"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.14 cfs 0.023 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>2.16"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.34 cfs 0.029 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>2.06"
Flow Length=290' Tc=12.5 min CN=55 Runoff=2.08 cfs 0.199 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>2.83"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.39 cfs 0.033 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>0.66"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=1.44 cfs 0.299 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>1.36"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.21 cfs 0.019 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>4.28"
Flow Length=428' Tc=10.2 min CN=77 Runoff=3.19 cfs 0.265 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>3.64"
Flow Length=380' Tc=15.1 min CN=71 Runoff=2.44 cfs 0.230 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>5.05"
Flow Length=283' Tc=9.2 min CN=84 Runoff=1.30 cfs 0.107 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>3.54"
Flow Length=207' Tc=7.2 min CN=70 Runoff=1.70 cfs 0.128 af

Subcatchment 900S: Rain Garden Area Runoff Area=56,894 sf 10.75% Impervious Runoff Depth>3.03"
Tc=6.0 min CN=65 Runoff=4.51 cfs 0.330 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>1.27"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=1.30 cfs 0.174 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>0.73"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.03 cfs 0.005 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>4.39"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.49 cfs 0.122 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>3.03"
Flow Length=278' Tc=10.4 min CN=65 Runoff=1.84 cfs 0.155 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.41 cfs 0.035 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>3.43"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.61 cfs 0.054 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>3.54"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.70 cfs 0.051 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>3.33"
Flow Length=182' Tc=7.5 min CN=68 Runoff=0.93 cfs 0.071 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>3.54"
Flow Length=211' Tc=7.3 min CN=70 Runoff=0.85 cfs 0.064 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>3.54"
Flow Length=178' Tc=6.0 min CN=70 Runoff=0.83 cfs 0.060 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>4.28"
Tc=6.0 min CN=77 Runoff=0.19 cfs 0.014 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>3.85"
Flow Length=297' Tc=6.0 min CN=73 Runoff=1.39 cfs 0.101 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>3.96"
Flow Length=258' Tc=6.0 min CN=74 Runoff=0.78 cfs 0.057 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>3.96"
Flow Length=384' Tc=9.4 min CN=74 Runoff=2.32 cfs 0.187 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=4,788 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.73 cfs 0.061 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>3.96"
Flow Length=322' Tc=9.0 min CN=74 Runoff=1.83 cfs 0.147 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=4,586 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.70 cfs 0.058 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>2.63"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.55 cfs 0.047 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>2.44"
Flow Length=548' Tc=10.4 min CN=59 Runoff=3.11 cfs 0.268 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=3,464 sf 100.00% Impervious Runoff Depth>6.67"
Tc=6.0 min CN=98 Runoff=0.53 cfs 0.044 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>1.03"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=3.08 cfs 0.504 af

Reach 15R: Overland Reach Avg. Flow Depth=0.08' Max Vel=0.79 fps Inflow=0.36 cfs 0.197 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=0.36 cfs 0.195 af

Reach 100R: Final Reach #100 Inflow=31.66 cfs 4.931 af
Outflow=31.66 cfs 4.931 af

Reach 200R: Final Reach #200 Inflow=4.96 cfs 0.508 af
Outflow=4.96 cfs 0.508 af

Reach 300R: Final Reach #300 Inflow=0.96 cfs 0.800 af
Outflow=0.96 cfs 0.800 af

Reach 400R: Final Reach #400 Inflow=0.15 cfs 0.077 af
Outflow=0.15 cfs 0.077 af

Reach 500R: Final Reach #500 Inflow=0.44 cfs 0.248 af
Outflow=0.44 cfs 0.248 af

Pond 101P: Porous Pavement W/ Infiltration #101 Peak Elev=103.71' Storage=0 cf Inflow=0.95 cfs 0.543 af
Outflow=0.95 cfs 0.543 af

Pond 900P: Detention Pond #900 Peak Elev=101.10' Storage=104,337 cf Inflow=34.62 cfs 3.806 af
Discarded=1.11 cfs 1.073 af Primary=0.93 cfs 0.773 af Outflow=2.04 cfs 1.846 af

Pond 1000P: Sediment Forebay Peak Elev=106.44' Storage=15 cf Inflow=1.30 cfs 0.174 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=1.30 cfs 0.174 af

Pond 1100P: StormTech Peak Elev=116.70' Storage=2,281 cf Inflow=6.38 cfs 0.506 af
Discarded=0.13 cfs 0.160 af Primary=5.64 cfs 0.344 af Outflow=5.77 cfs 0.504 af

Pond C01P: Catch Basin #1 Peak Elev=112.55' Storage=15 cf Inflow=3.07 cfs 0.261 af
12.0" Round Culvert n=0.012 L=137.7' S=0.0084 '/' Outflow=3.07 cfs 0.260 af

Pond C02P: Catch Basin #2 Peak Elev=108.75' Storage=13 cf Inflow=2.52 cfs 0.209 af
12.0" Round Culvert n=0.012 L=90.0' S=0.0111 '/' Outflow=2.52 cfs 0.209 af

Pond C03P: Catch Basin #3 Peak Elev=108.04' Storage=19 cf Inflow=5.64 cfs 0.475 af
15.0" Round Culvert n=0.012 L=80.0' S=0.0104 '/' Outflow=5.63 cfs 0.475 af

Pond C100P: CB #100 Peak Elev=107.89' Storage=74 cf Inflow=2.52 cfs 0.499 af
Primary=2.55 cfs 0.499 af Secondary=0.00 cfs 0.000 af Outflow=2.55 cfs 0.499 af

Pond C1295GP: CB 12+95G Peak Elev=136.56' Storage=9 cf Inflow=0.03 cfs 0.005 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.05 cfs 0.005 af

Pond C1295LP: CB 12+95L Peak Elev=136.27' Storage=13 cf Inflow=3.32 cfs 0.282 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=3.32 cfs 0.282 af

Pond C1295RP: CB 12+95R Peak Elev=136.56' Storage=10 cf Inflow=1.84 cfs 0.160 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=1.84 cfs 0.160 af

Pond C148GP: CB 1+48G Peak Elev=125.77' Storage=2 cf Inflow=0.14 cfs 0.023 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.14 cfs 0.023 af

Pond C148RP: CB 1+48R Peak Elev=125.58' Storage=4 cf Inflow=0.41 cfs 0.051 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.41 cfs 0.051 af

Pond C1643LP: CB 16+43L Peak Elev=137.16' Storage=4 cf Inflow=0.41 cfs 0.035 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.41 cfs 0.035 af

Pond C1643RP: CB 16+43R Peak Elev=135.86' Storage=6 cf Inflow=0.94 cfs 0.089 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=0.94 cfs 0.089 af

Pond C1785LP: CB 17+85L Peak Elev=130.83' Storage=5 cf Inflow=0.70 cfs 0.051 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.70 cfs 0.051 af

Pond C1785RP: CB 17+85R Peak Elev=129.78' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=2.56 cfs 0.211 af

Pond C1928LP: CB 19+28L Peak Elev=123.93' Storage=22 cf Inflow=4.22 cfs 0.335 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=4.21 cfs 0.335 af

Pond C1928RP: CB 19+28R Peak Elev=124.73' Storage=6 cf Inflow=0.83 cfs 0.060 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=0.83 cfs 0.060 af

Pond C1979RP: CB 19+79R Peak Elev=122.98' Storage=33 cf Inflow=4.40 cfs 0.349 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=4.35 cfs 0.349 af

Pond C2173LP: CB 21+73L Peak Elev=120.32' Storage=36 cf Inflow=1.39 cfs 0.101 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=1.28 cfs 0.101 af

Pond C2173RP: CB 21+73R Peak Elev=120.24' Storage=42 cf Inflow=6.38 cfs 0.506 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=6.38 cfs 0.506 af

Pond C2460LP: CB 24+60L Peak Elev=113.72' Storage=15 cf Inflow=2.32 cfs 0.187 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=2.30 cfs 0.187 af

Pond C2460RP: CB 24+60R Peak Elev=113.51' Storage=17 cf Inflow=2.97 cfs 0.249 af
12.0" Round Culvert n=0.012 L=7.0' S=0.0400 '/' Outflow=2.95 cfs 0.249 af

Pond C2610LP: CB 26+10L Peak Elev=109.39' Storage=12 cf Inflow=1.83 cfs 0.147 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=1.82 cfs 0.147 af

Pond C2610RP: CB 26+10R Peak Elev=109.16' Storage=12 cf Inflow=2.48 cfs 0.205 af
12.0" Round Culvert n=0.012 L=10.7' S=0.0355 '/' Outflow=2.48 cfs 0.205 af

Pond C3018GP: CB 30+18G Peak Elev=106.00' Storage=60 cf Inflow=15.94 cfs 2.160 af
Primary=15.88 cfs 2.160 af Secondary=0.00 cfs 0.000 af Outflow=15.88 cfs 2.160 af

Pond C3020LP: CB 30+20L Peak Elev=105.05' Storage=49 cf Inflow=18.98 cfs 2.440 af
Primary=18.93 cfs 2.440 af Secondary=0.00 cfs 0.000 af Outflow=18.93 cfs 2.440 af

Pond C3020RP: CB 30+20R Peak Elev=103.60' Storage=33 cf Inflow=19.31 cfs 2.484 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=19.31 cfs 2.484 af

Pond C303GP: CB 3+03G Peak Elev=125.62' Storage=9 cf Inflow=2.08 cfs 0.199 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=2.08 cfs 0.199 af

Pond C304RP: CB 3+04R Peak Elev=124.59' Storage=13 cf Inflow=2.85 cfs 0.283 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=2.84 cfs 0.283 af

Pond C390GP: CB 3+90G Peak Elev=124.26' Storage=14 cf Inflow=1.44 cfs 0.299 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=1.45 cfs 0.299 af

Pond C402GP: CB 4+02G Peak Elev=124.22' Storage=22 cf Inflow=3.34 cfs 0.601 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=3.33 cfs 0.601 af

Pond C419LP: CB 4+19L Peak Elev=118.30' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=14.64 cfs 1.614 af

Pond C419RP: CB 4+19R Peak Elev=123.90' Storage=20 cf Inflow=5.77 cfs 0.832 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=5.78 cfs 0.832 af

Pond C857LP: CB 8+57L Peak Elev=133.76' Storage=22 cf Inflow=6.17 cfs 0.517 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=6.18 cfs 0.517 af

Pond C857RP: CB 8+57R Peak Elev=133.81' Storage=18 cf Inflow=1.70 cfs 0.128 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=1.68 cfs 0.128 af

Pond D01P: Drain Manhole #1 Peak Elev=113.09' Storage=17 cf Inflow=2.95 cfs 0.249 af
12.0" Round Culvert n=0.012 L=27.0' S=0.0093 '/' Outflow=2.94 cfs 0.248 af

Pond D02P: DMH #2 Peak Elev=107.10' Storage=19 cf Inflow=5.63 cfs 0.475 af
15.0" Round Culvert n=0.012 L=87.5' S=0.0221 '/' Outflow=5.62 cfs 0.475 af

Pond D03P: DMH #3 Peak Elev=105.06' Storage=19 cf Inflow=5.62 cfs 0.475 af
15.0" Round Culvert n=0.012 L=60.0' S=0.0257 '/' Outflow=5.61 cfs 0.475 af

Pond D04P: DMH #4 Peak Elev=107.21' Storage=34 cf Inflow=5.64 cfs 0.344 af
12.0" Round Culvert n=0.012 L=37.7' S=0.0385 '/' Outflow=5.63 cfs 0.344 af

Pond D05P: DMH #5 Peak Elev=103.87' Storage=17 cf Inflow=6.43 cfs 0.518 af
18.0" Round Culvert n=0.012 L=145.0' S=0.0210 '/' Outflow=6.43 cfs 0.518 af

Pond D06P: DMH #6 Peak Elev=101.10' Storage=21 cf Inflow=6.43 cfs 0.518 af
18.0" Round Culvert n=0.012 L=80.0' S=0.0050 '/' Outflow=6.43 cfs 0.518 af

Pond D100125CP: DMH 1001+25C Peak Elev=108.12' Storage=24 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=14.64 cfs 1.614 af

Pond D100300CP: DMH 1003+00 Peak Elev=106.62' Storage=51 cf Inflow=14.64 cfs 1.614 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=14.59 cfs 1.613 af

Pond D1869P: DMH 18+69 Peak Elev=127.10' Storage=12 cf Inflow=2.56 cfs 0.211 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=2.55 cfs 0.211 af

Pond D2168RP: DMH 21+68R Peak Elev=105.51' Storage=8 cf Inflow=1.30 cfs 0.174 af
12.0" Round Culvert n=0.012 L=46.7' S=0.0398 '/' Outflow=1.30 cfs 0.174 af

Pond D2195P: DMH 21+95R Peak Elev=117.33' Storage=18 cf Inflow=6.38 cfs 0.506 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=6.38 cfs 0.506 af

Pond D2215P: DMH 22+15R Peak Elev=110.58' Storage=34 cf Inflow=5.64 cfs 0.344 af
12.0" Round Culvert n=0.012 L=25.0' S=0.0904 '/' Outflow=5.64 cfs 0.344 af

Pond Y01P: Yard Drain Peak Elev=111.47' Storage=8 cf Inflow=3.08 cfs 0.504 af
Primary=2.50 cfs 0.492 af Secondary=0.58 cfs 0.012 af Outflow=3.08 cfs 0.504 af

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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: Flow to Lot H-2 Runoff Area=1,207,256 sf 4.44% Impervious Runoff Depth>3.04"
Flow Length=1,609' Tc=41.8 min UI Adjusted CN=56 Runoff=46.53 cfs 7.028 af

Subcatchment 2S: Flow to Lot H-2 Runoff Area=94,062 sf 2.77% Impervious Runoff Depth>3.86"
Flow Length=507' Tc=17.7 min CN=63 Runoff=6.87 cfs 0.695 af

Subcatchment 3S: Flow to Lot H-2 Runoff Area=48,496 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=177' Tc=19.0 min CN=32 Runoff=0.25 cfs 0.059 af

Subcatchment 4S: Flow to Lot H-2A Runoff Area=137,017 sf 3.20% Impervious Runoff Depth>0.63"
Flow Length=544' Tc=21.8 min UI Adjusted CN=32 Runoff=0.67 cfs 0.165 af

Subcatchment 5S: Flow to Lot H-2A Runoff Area=144,248 sf 0.00% Impervious Runoff Depth>0.47"
Flow Length=1,198' Tc=32.4 min CN=30 Runoff=0.34 cfs 0.130 af

Subcatchment 15S: Offsite Flow Runoff Area=358,058 sf 1.70% Impervious Runoff Depth>0.62"
Flow Length=1,111' Tc=40.1 min CN=32 Runoff=1.36 cfs 0.427 af

Subcatchment 21S: Catch Basin #1 Runoff Area=4,630 sf 13.05% Impervious Runoff Depth>2.08"
Tc=6.0 min CN=47 Runoff=0.23 cfs 0.018 af

Subcatchment 22S: Catch Basin #2 Runoff Area=1,761 sf 11.58% Impervious Runoff Depth>1.98"
Tc=6.0 min CN=46 Runoff=0.08 cfs 0.007 af

Subcatchment 23S: Catch Basin #3 Runoff Area=2,089 sf 11.68% Impervious Runoff Depth>1.98"
Tc=6.0 min CN=46 Runoff=0.10 cfs 0.008 af

Subcatchment 31S: Porous Pavement Runoff Area=105,090 sf 76.59% Impervious Runoff Depth>3.43"
Tc=732.0 min CN=84 Runoff=1.19 cfs 0.690 af

Subcatchment 100S: Ex CB 100 Runoff Area=789 sf 67.30% Impervious Runoff Depth>5.75"
Tc=6.0 min CN=79 Runoff=0.12 cfs 0.009 af

Subcatchment 148GS: Ex CB 1+48G Runoff Area=13,484 sf 16.80% Impervious Runoff Depth>1.46"
Flow Length=189' Tc=15.5 min UI Adjusted CN=41 Runoff=0.30 cfs 0.038 af

Subcatchment 148RS: Ex CB 1+48R Runoff Area=6,978 sf 31.11% Impervious Runoff Depth>3.07"
Flow Length=191' Tc=8.4 min CN=56 Runoff=0.50 cfs 0.041 af

Subcatchment 303GS: Ex CB 3+03G Runoff Area=50,452 sf 32.91% Impervious Runoff Depth>2.95"
Flow Length=290' Tc=12.5 min CN=55 Runoff=3.09 cfs 0.285 af

Subcatchment 304RS: Ex CB 3+04R Runoff Area=6,125 sf 40.93% Impervious Runoff Depth>3.87"
Flow Length=129' Tc=10.4 min CN=63 Runoff=0.54 cfs 0.045 af

Subcatchment 390GS: Ex CB 3+90G Runoff Area=236,758 sf 9.81% Impervious Runoff Depth>1.16"
Flow Length=1,094' Tc=21.6 min UI Adjusted CN=38 Runoff=3.27 cfs 0.526 af

Subcatchment 402GS: Ex CB 4+02G Runoff Area=7,390 sf 13.64% Impervious Runoff Depth>2.08"
Flow Length=91' Slope=0.0386 '/' Tc=6.6 min CN=47 Runoff=0.36 cfs 0.029 af

Subcatchment 419LS: Ex CB 4+19L Runoff Area=32,338 sf 64.18% Impervious Runoff Depth>5.50"
Flow Length=428' Tc=10.2 min CN=77 Runoff=4.09 cfs 0.341 af

Subcatchment 419RS: Ex CB 4+19R Runoff Area=33,107 sf 54.66% Impervious Runoff Depth>4.79"
Flow Length=380' Tc=15.1 min CN=71 Runoff=3.22 cfs 0.304 af

Subcatchment 857LS: Ex CB 8+57L Runoff Area=11,113 sf 76.34% Impervious Runoff Depth>6.34"
Flow Length=283' Tc=9.2 min CN=84 Runoff=1.62 cfs 0.135 af

Subcatchment 857RS: Ex CB 8+57R Runoff Area=18,885 sf 53.07% Impervious Runoff Depth>4.68"
Flow Length=207' Tc=7.2 min CN=70 Runoff=2.26 cfs 0.169 af

Subcatchment 900S: Rain Garden Area Runoff Area=56,894 sf 10.75% Impervious Runoff Depth>4.10"
Tc=6.0 min CN=65 Runoff=6.15 cfs 0.446 af

Subcatchment 1000S: Area to Sediment Runoff Area=71,679 sf 25.38% Impervious Runoff Depth>1.97"
Flow Length=842' Tc=19.1 min UI Adjusted CN=46 Runoff=2.26 cfs 0.270 af

Subcatchment 1295GS: Ex CB 12+95G Runoff Area=3,834 sf 0.00% Impervious Runoff Depth>1.26"
Flow Length=61' Slope=0.0042 '/' Tc=11.6 min CN=39 Runoff=0.07 cfs 0.009 af

Subcatchment 1295LS: Ex CB 12+95L Runoff Area=14,555 sf 65.57% Impervious Runoff Depth>5.62"
Flow Length=172' Tc=9.7 min CN=78 Runoff=1.90 cfs 0.157 af

Subcatchment 1295RS: Ex CB 12+95R Runoff Area=26,715 sf 44.89% Impervious Runoff Depth>4.10"
Flow Length=278' Tc=10.4 min CN=65 Runoff=2.52 cfs 0.209 af

Subcatchment 1643LS: Ex CB 16+43L Runoff Area=2,724 sf 99.56% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.50 cfs 0.042 af

Subcatchment 1643RS: Ex CB 16+43R Runoff Area=8,267 sf 50.16% Impervious Runoff Depth>4.56"
Flow Length=157' Tc=12.4 min CN=69 Runoff=0.82 cfs 0.072 af

Subcatchment 1785LS: Ex CB 17+85L Runoff Area=7,555 sf 52.61% Impervious Runoff Depth>4.68"
Flow Length=217' Tc=6.6 min CN=70 Runoff=0.92 cfs 0.068 af

Subcatchment 1785RS: Ex CB 17+85R Runoff Area=11,131 sf 49.10% Impervious Runoff Depth>4.45"
Flow Length=182' Tc=7.5 min CN=68 Runoff=1.25 cfs 0.095 af

Subcatchment 1928LS: Ex CB 19+28L Runoff Area=9,461 sf 52.24% Impervious Runoff Depth>4.68"
Flow Length=211' Tc=7.3 min CN=70 Runoff=1.13 cfs 0.085 af

Subcatchment 1928RS: Ex CB 19+28R Runoff Area=8,847 sf 53.23% Impervious Runoff Depth>4.68"
Flow Length=178' Tc=6.0 min CN=70 Runoff=1.09 cfs 0.079 af

Subcatchment 1979RS: Ex CB 19+79R Runoff Area=1,711 sf 63.59% Impervious Runoff Depth>5.51"
Tc=6.0 min CN=77 Runoff=0.25 cfs 0.018 af

Subcatchment 2173LS: Ex CB 21+73L Runoff Area=13,633 sf 57.63% Impervious Runoff Depth>5.04"
Flow Length=297' Tc=6.0 min CN=73 Runoff=1.81 cfs 0.131 af

Subcatchment 2173RS: Ex CB 21+73R Runoff Area=7,468 sf 59.53% Impervious Runoff Depth>5.15"
Flow Length=258' Tc=6.0 min CN=74 Runoff=1.01 cfs 0.074 af

Subcatchment 2460LS: Ex CB 24+60L Runoff Area=24,764 sf 59.66% Impervious Runoff Depth>5.15"
Flow Length=384' Tc=9.4 min CN=74 Runoff=3.00 cfs 0.244 af

Subcatchment 2460RS: Ex CB 24+60R Runoff Area=4,788 sf 100.00% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.87 cfs 0.073 af

Subcatchment 2610LS: Ex CB 26+10L Runoff Area=19,356 sf 59.64% Impervious Runoff Depth>5.15"
Flow Length=322' Tc=9.0 min CN=74 Runoff=2.37 cfs 0.191 af

Subcatchment 2610RS: Ex CB 26+10R Runoff Area=4,586 sf 100.00% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.83 cfs 0.070 af

Subcatchment 3018GS: Ex CB 30+18G Runoff Area=9,375 sf 14.87% Impervious Runoff Depth>3.64"
Flow Length=169' Tc=10.6 min CN=61 Runoff=0.77 cfs 0.065 af

Subcatchment 3020LS: Ex CB 30+20L Runoff Area=57,533 sf 33.97% Impervious Runoff Depth>3.41"
Flow Length=548' Tc=10.4 min CN=59 Runoff=4.44 cfs 0.375 af

Subcatchment 3020RS: Ex CB 30+20R Runoff Area=3,464 sf 100.00% Impervious Runoff Depth>8.02"
Tc=6.0 min CN=98 Runoff=0.63 cfs 0.053 af

Subcatchment Y01S: Central Area Runoff Area=256,931 sf 19.52% Impervious Runoff Depth>1.65"
Flow Length=819' Tc=25.1 min UI Adjusted CN=43 Runoff=5.76 cfs 0.813 af

Reach 15R: Overland Reach Avg. Flow Depth=0.15' Max Vel=1.18 fps Inflow=1.36 cfs 0.427 af
n=0.035 L=488.8' S=0.0164 '/' Capacity=17.39 cfs Outflow=1.33 cfs 0.424 af

Reach 100R: Final Reach #100 Inflow=46.53 cfs 7.028 af
Outflow=46.53 cfs 7.028 af

Reach 200R: Final Reach #200 Inflow=6.87 cfs 0.695 af
Outflow=6.87 cfs 0.695 af

Reach 300R: Final Reach #300 Inflow=2.25 cfs 1.485 af
Outflow=2.25 cfs 1.485 af

Reach 400R: Final Reach #400 Inflow=0.67 cfs 0.165 af
Outflow=0.67 cfs 0.165 af

Reach 500R: Final Reach #500 Inflow=1.66 cfs 0.554 af
Outflow=1.66 cfs 0.554 af

Pond 101P: Porous Pavement W/ Infiltration #101 Peak Elev=103.71' Storage=0 cf Inflow=1.19 cfs 0.690 af
Outflow=1.19 cfs 0.690 af

Pond 900P: Detention Pond #900 Peak Elev=102.14' Storage=147,479 cf Inflow=47.70 cfs 5.417 af
Discarded=1.33 cfs 1.291 af Primary=2.18 cfs 1.427 af Outflow=3.51 cfs 2.718 af

Pond 1000P: Sediment Forebay Peak Elev=106.70' Storage=26 cf Inflow=2.26 cfs 0.270 af
12.0" Round Culvert n=0.012 L=57.1' S=0.0163 '/' Outflow=2.26 cfs 0.270 af

Pond 1100P: StormTech Peak Elev=116.91' Storage=2,562 cf Inflow=8.10 cfs 0.663 af
Discarded=0.13 cfs 0.167 af Primary=7.36 cfs 0.488 af Outflow=7.49 cfs 0.655 af

Pond C01P: Catch Basin #1 Peak Elev=113.19' Storage=22 cf Inflow=3.89 cfs 0.336 af
12.0" Round Culvert n=0.012 L=137.7' S=0.0084 '/' Outflow=3.86 cfs 0.336 af

Pond C02P: Catch Basin #2 Peak Elev=109.72' Storage=25 cf Inflow=3.21 cfs 0.268 af
12.0" Round Culvert n=0.012 L=90.0' S=0.0111 '/' Outflow=3.19 cfs 0.268 af

Pond C03P: Catch Basin #3 Peak Elev=109.07' Storage=32 cf Inflow=7.14 cfs 0.611 af
15.0" Round Culvert n=0.012 L=80.0' S=0.0104 '/' Outflow=7.11 cfs 0.611 af

Pond C100P: CB #100 Peak Elev=110.10' Storage=102 cf Inflow=2.59 cfs 0.684 af
Primary=2.58 cfs 0.683 af Secondary=0.00 cfs 0.000 af Outflow=2.58 cfs 0.683 af

Pond C1295GP: CB 12+95G Peak Elev=136.89' Storage=13 cf Inflow=0.07 cfs 0.009 af
15.0" Round Culvert n=0.012 L=9.1' S=0.0088 '/' Outflow=0.09 cfs 0.009 af

Pond C1295LP: CB 12+95L Peak Elev=136.62' Storage=17 cf Inflow=4.46 cfs 0.375 af
15.0" Round Culvert n=0.012 L=433.9' S=0.0074 '/' Outflow=4.45 cfs 0.375 af

Pond C1295RP: CB 12+95R Peak Elev=136.89' Storage=14 cf Inflow=2.59 cfs 0.219 af
15.0" Round Culvert n=0.012 L=16.2' S=0.0290 '/' Outflow=2.57 cfs 0.219 af

Pond C148GP: CB 1+48G Peak Elev=126.86' Storage=16 cf Inflow=0.30 cfs 0.038 af
15.0" Round Culvert n=0.012 L=17.4' S=0.0121 '/' Outflow=0.29 cfs 0.038 af

Pond C148RP: CB 1+48R Peak Elev=126.86' Storage=20 cf Inflow=0.71 cfs 0.079 af
15.0" Round Culvert n=0.012 L=149.6' S=0.0116 '/' Outflow=0.70 cfs 0.079 af

Pond C1643LP: CB 16+43L Peak Elev=137.19' Storage=4 cf Inflow=0.50 cfs 0.042 af
12.0" Round Culvert n=0.012 L=15.7' S=0.0446 '/' Outflow=0.50 cfs 0.042 af

Pond C1643RP: CB 16+43R Peak Elev=135.93' Storage=7 cf Inflow=1.20 cfs 0.114 af
12.0" Round Culvert n=0.012 L=141.5' S=0.0396 '/' Outflow=1.20 cfs 0.114 af

Pond C1785LP: CB 17+85L Peak Elev=130.90' Storage=6 cf Inflow=0.92 cfs 0.068 af
12.0" Round Culvert n=0.012 L=15.4' S=0.0442 '/' Outflow=0.92 cfs 0.068 af

Pond C1785RP: CB 17+85R Peak Elev=130.11' Storage=16 cf Inflow=3.36 cfs 0.276 af
12.0" Round Culvert n=0.012 L=81.7' S=0.0328 '/' Outflow=3.35 cfs 0.276 af

Pond C1928LP: CB 19+28L Peak Elev=127.69' Storage=69 cf Inflow=5.55 cfs 0.440 af
12.0" Round Culvert n=0.012 L=52.1' S=0.0359 '/' Outflow=5.51 cfs 0.440 af

Pond C1928RP: CB 19+28R Peak Elev=127.73' Storage=44 cf Inflow=1.09 cfs 0.079 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0153 '/' Outflow=1.10 cfs 0.079 af

Pond C1979RP: CB 19+79R Peak Elev=126.42' Storage=77 cf Inflow=5.75 cfs 0.458 af
12.0" Round Culvert n=0.012 L=189.6' S=0.0178 '/' Outflow=5.46 cfs 0.458 af

Pond C2173LP: CB 21+73L Peak Elev=122.13' Storage=58 cf Inflow=1.81 cfs 0.131 af
12.0" Round Culvert n=0.012 L=15.6' S=0.0333 '/' Outflow=1.65 cfs 0.131 af

Pond C2173RP: CB 21+73R Peak Elev=121.99' Storage=64 cf Inflow=8.09 cfs 0.663 af
12.0" Round Culvert n=0.012 L=27.6' S=0.0413 '/' Outflow=8.09 cfs 0.663 af

Pond C2460LP: CB 24+60L Peak Elev=114.96' Storage=31 cf Inflow=3.00 cfs 0.244 af
12.0" Round Culvert n=0.012 L=16.3' S=0.0239 '/' Outflow=2.95 cfs 0.244 af

Pond C2460RP: CB 24+60R Peak Elev=114.64' Storage=32 cf Inflow=3.76 cfs 0.317 af
12.0" Round Culvert n=0.012 L=7.0' S=0.0400 '/' Outflow=3.71 cfs 0.317 af

Pond C2610LP: CB 26+10L Peak Elev=110.12' Storage=21 cf Inflow=2.37 cfs 0.191 af
12.0" Round Culvert n=0.012 L=15.2' S=0.0132 '/' Outflow=2.35 cfs 0.191 af

Pond C2610RP: CB 26+10R Peak Elev=110.03' Storage=23 cf Inflow=3.14 cfs 0.261 af
12.0" Round Culvert n=0.012 L=10.7' S=0.0355 '/' Outflow=3.13 cfs 0.261 af

Pond C3018GP: CB 30+18G Peak Elev=108.39' Storage=310 cf Inflow=23.28 cfs 3.036 af
Primary=22.66 cfs 2.904 af Secondary=9.16 cfs 0.132 af Outflow=22.38 cfs 3.036 af

Pond C3020LP: CB 30+20L Peak Elev=107.75' Storage=86 cf Inflow=27.39 cfs 3.549 af
Primary=26.44 cfs 3.523 af Secondary=2.77 cfs 0.026 af Outflow=27.35 cfs 3.549 af

Pond C3020RP: CB 30+20R Peak Elev=105.30' Storage=54 cf Inflow=27.66 cfs 3.602 af
24.0" Round Culvert n=0.012 L=135.3' S=0.0116 '/' Outflow=27.62 cfs 3.602 af

Pond C303GP: CB 3+03G Peak Elev=126.97' Storage=26 cf Inflow=3.09 cfs 0.285 af
15.0" Round Culvert n=0.012 L=54.4' S=0.0217 '/' Outflow=3.10 cfs 0.285 af

Pond C304RP: CB 3+04R Peak Elev=126.85' Storage=41 cf Inflow=4.30 cfs 0.409 af
15.0" Round Culvert n=0.012 L=91.0' S=0.0104 '/' Outflow=4.29 cfs 0.409 af

Pond C390GP: CB 3+90G Peak Elev=126.87' Storage=47 cf Inflow=3.27 cfs 0.526 af
15.0" Round Culvert n=0.012 L=86.2' S=0.0063 '/' Outflow=3.28 cfs 0.526 af

Pond C402GP: CB 4+02G Peak Elev=126.54' Storage=58 cf Inflow=6.32 cfs 0.965 af
15.0" Round Culvert n=0.012 L=21.6' S=0.0056 '/' Outflow=6.35 cfs 0.965 af

Pond C419LP: CB 4+19L Peak Elev=119.22' Storage=36 cf Inflow=20.50 cfs 2.288 af
24.0" Round Culvert n=0.012 L=111.8' S=0.0249 '/' Outflow=20.51 cfs 2.288 af

Pond C419RP: CB 4+19R Peak Elev=125.42' Storage=39 cf Inflow=9.29 cfs 1.268 af
15.0" Round Culvert n=0.012 L=16.3' S=0.0209 '/' Outflow=9.29 cfs 1.268 af

Pond C857LP: CB 8+57L Peak Elev=134.54' Storage=31 cf Inflow=8.10 cfs 0.679 af
15.0" Round Culvert n=0.012 L=434.3' S=0.0237 '/' Outflow=8.10 cfs 0.679 af

Pond C857RP: CB 8+57R Peak Elev=134.63' Storage=28 cf Inflow=2.26 cfs 0.169 af
15.0" Round Culvert n=0.012 L=16.4' S=0.0134 '/' Outflow=2.21 cfs 0.169 af

Pond D01P: Drain Manhole #1 Peak Elev=114.02' Storage=28 cf Inflow=3.71 cfs 0.317 af
12.0" Round Culvert n=0.012 L=27.0' S=0.0093 '/' Outflow=3.66 cfs 0.317 af

Pond D02P: DMH #2 Peak Elev=107.63' Storage=26 cf Inflow=7.11 cfs 0.611 af
15.0" Round Culvert n=0.012 L=87.5' S=0.0221 '/' Outflow=7.10 cfs 0.611 af

Pond D03P: DMH #3 Peak Elev=105.60' Storage=26 cf Inflow=7.10 cfs 0.611 af
15.0" Round Culvert n=0.012 L=60.0' S=0.0257 '/' Outflow=7.10 cfs 0.611 af

Pond D04P: DMH #4 Peak Elev=108.77' Storage=54 cf Inflow=7.36 cfs 0.488 af
12.0" Round Culvert n=0.012 L=37.7' S=0.0385 '/' Outflow=7.35 cfs 0.488 af

Pond D05P: DMH #5 Peak Elev=104.38' Storage=23 cf Inflow=8.85 cfs 0.758 af
18.0" Round Culvert n=0.012 L=145.0' S=0.0210 '/' Outflow=8.86 cfs 0.758 af

Pond D06P: DMH #6 Peak Elev=102.15' Storage=35 cf Inflow=8.86 cfs 0.758 af
18.0" Round Culvert n=0.012 L=80.0' S=0.0050 '/' Outflow=8.88 cfs 0.757 af

Pond D100125CP: DMH 1001+25C Peak Elev=111.63' Storage=68 cf Inflow=20.51 cfs 2.288 af
24.0" Round Culvert n=0.012 L=178.1' S=0.0199 '/' Outflow=20.50 cfs 2.288 af

Pond D100300CP: DMH 1003+00 Peak Elev=109.86' Storage=79 cf Inflow=20.50 cfs 2.288 af
24.0" Round Culvert n=0.012 L=139.2' S=0.0076 '/' Outflow=20.35 cfs 2.288 af

Pond D1869P: DMH 18+69 Peak Elev=127.93' Storage=22 cf Inflow=3.35 cfs 0.276 af
12.0" Round Culvert n=0.012 L=51.8' S=0.0432 '/' Outflow=3.35 cfs 0.276 af

Pond D2168RP: DMH 21+68R Peak Elev=105.77' Storage=11 cf Inflow=2.26 cfs 0.270 af
12.0" Round Culvert n=0.012 L=46.7' S=0.0398 '/' Outflow=2.26 cfs 0.270 af

Pond D2195P: DMH 21+95R Peak Elev=117.53' Storage=20 cf Inflow=8.09 cfs 0.663 af
24.0" Round Culvert n=0.012 L=7.1' S=0.0000 '/' Outflow=8.10 cfs 0.663 af

Pond D2215P: DMH 22+15R Peak Elev=112.21' Storage=55 cf Inflow=7.36 cfs 0.488 af
12.0" Round Culvert n=0.012 L=25.0' S=0.0904 '/' Outflow=7.36 cfs 0.488 af

Pond Y01P: Yard Drain Peak Elev=111.58' Storage=13 cf Inflow=5.76 cfs 0.813 af
Primary=2.53 cfs 0.675 af Secondary=4.03 cfs 0.138 af Outflow=5.78 cfs 0.813 af

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	70.897 degrees West
Latitude	43.167 degrees North
Elevation	0 feet
Date/Time	Tue, 08 Mar 2022 08:26:16 -0500

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.03	**1yr**	0.70	0.98	1.20	1.55	2.00	2.60	2.85	**1yr**	2.30	2.75	3.14	3.87	4.44	**1yr**
2yr	0.32	0.49	0.61	0.81	1.01	1.29	**2yr**	0.88	1.17	1.50	1.91	2.45	3.14	3.49	**2yr**	2.78	3.36	3.85	4.58	5.22	**2yr**
5yr	0.37	0.57	0.72	0.96	1.23	1.58	**5yr**	1.06	1.44	1.85	2.38	3.07	3.97	4.47	**5yr**	3.52	4.30	4.92	5.79	6.55	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.84	**10yr**	1.22	1.69	2.18	2.82	3.66	4.74	5.40	**10yr**	4.20	5.19	5.92	6.92	7.79	**10yr**
25yr	0.46	0.74	0.94	1.29	1.72	2.26	**25yr**	1.48	2.09	2.69	3.52	4.60	6.01	6.92	**25yr**	5.32	6.66	7.56	8.75	9.79	**25yr**
50yr	0.51	0.83	1.06	1.48	1.99	2.66	**50yr**	1.72	2.46	3.17	4.18	5.49	7.18	8.36	**50yr**	6.36	8.04	9.11	10.47	11.65	**50yr**
100yr	0.58	0.93	1.20	1.70	2.31	3.11	**100yr**	2.00	2.88	3.74	4.95	6.53	8.59	10.11	**100yr**	7.60	9.72	10.98	12.52	13.87	**100yr**
200yr	0.64	1.04	1.35	1.94	2.69	3.66	**200yr**	2.32	3.39	4.41	5.88	7.79	10.28	12.22	**200yr**	9.10	11.75	13.23	14.98	16.51	**200yr**
500yr	0.75	1.24	1.61	2.34	3.28	4.52	**500yr**	2.83	4.21	5.48	7.36	9.82	13.04	15.71	**500yr**	11.54	15.10	16.94	18.99	20.82	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.60	0.74	0.90	**1yr**	0.64	0.88	0.91	1.26	1.57	2.08	2.48	**1yr**	1.84	2.38	2.90	3.32	4.02	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.18	**2yr**	0.86	1.16	1.36	1.83	2.36	3.04	3.39	**2yr**	2.69	3.26	3.74	4.46	5.05	**2yr**
5yr	0.35	0.54	0.67	0.91	1.16	1.40	**5yr**	1.00	1.37	1.61	2.15	2.78	3.71	4.12	**5yr**	3.28	3.96	4.60	5.41	6.11	**5yr**
10yr	0.38	0.59	0.73	1.02	1.31	1.60	**10yr**	1.13	1.56	1.82	2.45	3.13	4.27	4.79	**10yr**	3.78	4.60	5.31	6.25	7.02	**10yr**
25yr	0.44	0.66	0.83	1.18	1.55	1.91	**25yr**	1.34	1.87	2.11	2.85	3.66	4.98	5.80	**25yr**	4.41	5.58	6.49	7.58	8.45	**25yr**
50yr	0.48	0.73	0.91	1.31	1.76	2.19	**50yr**	1.52	2.14	2.35	3.20	4.11	5.69	6.70	**50yr**	5.04	6.44	7.54	8.76	9.71	**50yr**
100yr	0.54	0.81	1.01	1.47	2.01	2.50	**100yr**	1.74	2.45	2.63	3.59	4.59	6.50	7.74	**100yr**	5.75	7.44	8.77	10.12	11.13	**100yr**
200yr	0.59	0.90	1.13	1.64	2.29	2.86	**200yr**	1.98	2.80	2.94	4.01	5.13	7.41	8.93	**200yr**	6.56	8.59	10.19	11.71	12.79	**200yr**
500yr	0.69	1.03	1.33	1.93	2.74	3.45	**500yr**	2.37	3.37	3.40	4.65	5.96	8.79	10.79	**500yr**	7.78	10.38	12.43	14.21	15.31	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.08	**1yr**	0.75	1.05	1.24	1.74	2.22	2.86	3.06	**1yr**	2.53	2.94	3.40	4.20	4.79	**1yr**
2yr	0.33	0.51	0.62	0.85	1.04	1.25	**2yr**	0.90	1.22	1.48	1.96	2.51	3.27	3.60	**2yr**	2.90	3.46	3.97	4.73	5.42	**2yr**
5yr	0.39	0.60	0.75	1.03	1.31	1.58	**5yr**	1.13	1.55	1.85	2.50	3.20	4.23	4.82	**5yr**	3.74	4.63	5.25	6.20	6.96	**5yr**
10yr	0.46	0.70	0.87	1.21	1.57	1.92	**10yr**	1.35	1.88	2.23	3.05	3.85	5.21	6.01	**10yr**	4.61	5.78	6.58	7.60	8.49	**10yr**
25yr	0.55	0.84	1.05	1.50	1.97	2.47	**25yr**	1.70	2.42	2.88	3.96	4.95	7.04	8.06	**25yr**	6.23	7.75	8.78	10.01	11.06	**25yr**
50yr	0.64	0.97	1.21	1.74	2.34	2.99	**50yr**	2.02	2.92	3.49	4.83	6.01	8.70	10.09	**50yr**	7.70	9.70	10.94	12.30	13.53	**50yr**
100yr	0.74	1.12	1.41	2.03	2.79	3.61	**100yr**	2.41	3.53	4.23	5.91	7.30	10.76	12.62	**100yr**	9.52	12.14	13.62	15.15	16.55	**100yr**
200yr	0.86	1.30	1.64	2.38	3.32	4.38	**200yr**	2.86	4.28	5.15	7.24	8.86	13.34	15.82	**200yr**	11.81	15.21	16.96	18.64	20.28	**200yr**
500yr	1.05	1.57	2.01	2.93	4.16	5.62	**500yr**	3.59	5.50	6.65	9.47	11.47	17.76	21.32	**500yr**	15.71	20.50	22.70	24.55	26.55	**500yr**

Powered by ACIS Northeast Regional Climate Center

RIP RAP CALCULATIONS

21-002 Heron Bay Partners, LLC
Cielo Drive
Dover, NH

Berry Surveying & Engineering
335 Second Crown Point Road
Barrington, NH
7-Apr-22

Rip Rap equations were obtained from the *Stormwater Management and Erosion Control Handbook for Urban and Developing Areas in New Hampshire.* Rip Rap was sized for the 25 year storm event. (Some d50 sizes and T values have been modified)

TAILWATER < HALF THE Do

La = (1.8 x Q) / Do 3/2 + (7 x Do) Q = Peak Flow & Do is Pipe Diameter
W = La + 3*Do or defined channel width
d50 = (0.02 x Q4/3) / (Tw x Do) Tw = Tailwater Depth
T = Largest Stone Size x 1.5

Culvert or Catch Basin	Tailwater (Feet) Tw	Discharge (C.F.S.) Q	Diameter of Pipe Do	Length of Rip Rap La (feet)	Width of Rip Rap W (feet)	d50-Stone Rip Rap d50(ft.)	Actual Size	Thickness
15" HDPE (Pond #101AP)	0.25	5.55	1.25	15.9	19.6	0.63	0.67	2.00
18" HDPE (Pond #D06P)	0.30	6.43	1.50	16.8	21.3	0.53	0.67	2.00

Please note that the designer chose to use the 25 Year Event for the dimensional calculations.

Table 7-24 -- Recommended Rip Rap Gradation Ranges				
d50 Size =	0.67	Feet	8	Inches
% of Weight Smaller Than the Given d50 Size	Size of Stone (Inches) From		To	
100%	12		16	
85%	10		14	
50%	8		12	
15%	0		1	

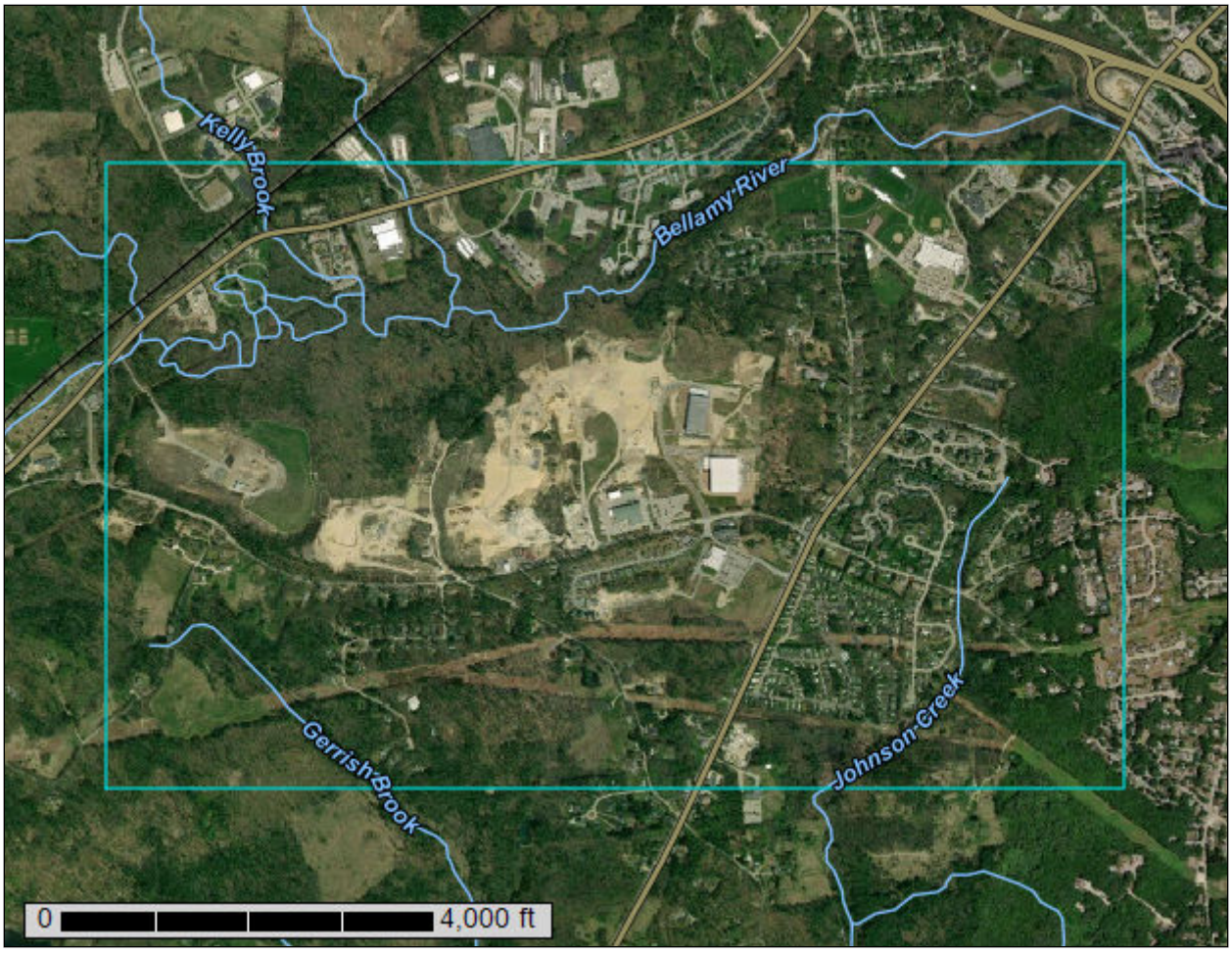
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Strafford County, New Hampshire



March 8, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

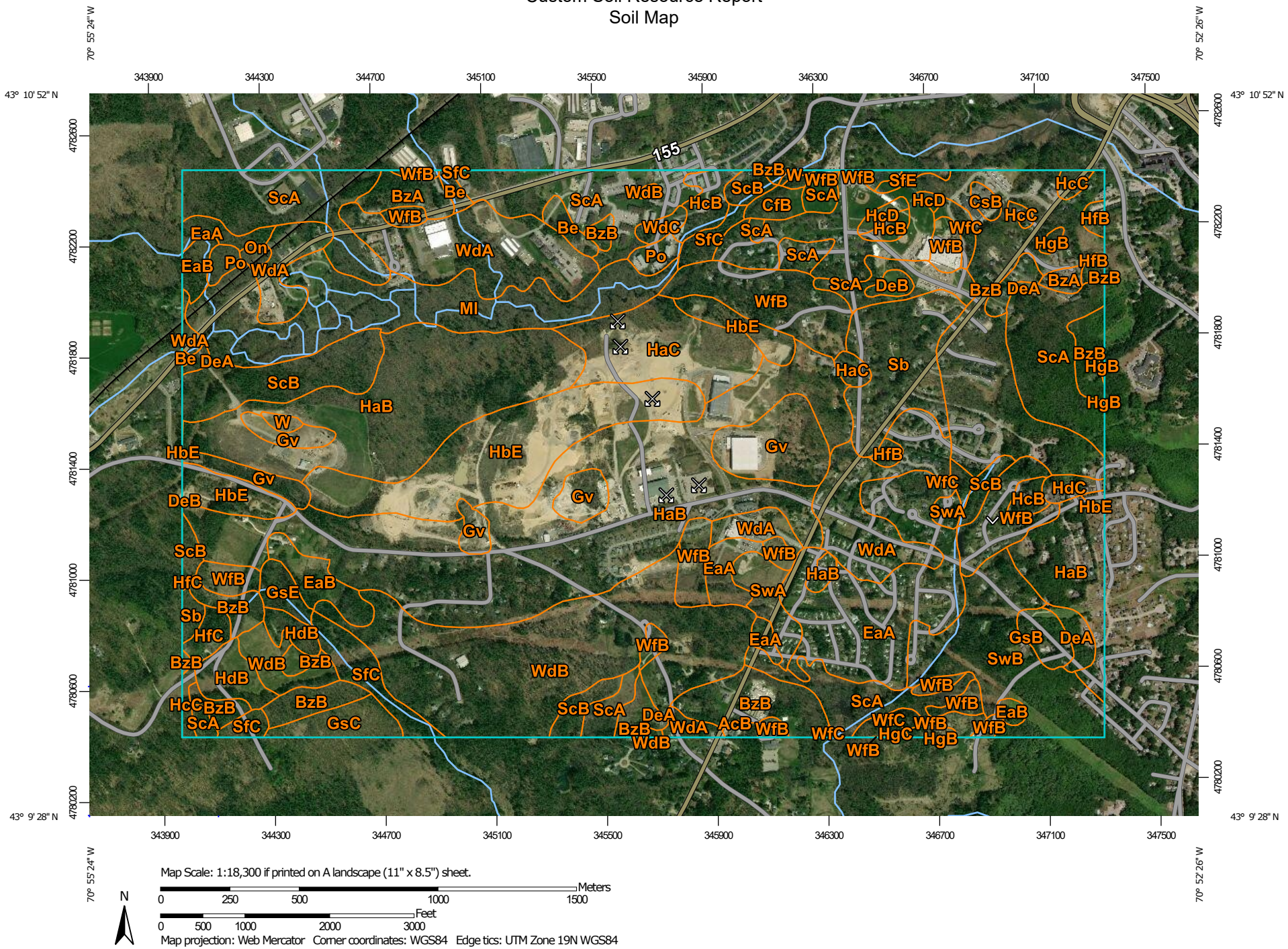
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: Strafford County, New Hampshire
Survey Area Data: Version 22, Aug 31, 2021

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

Date(s) aerial images were photographed: Dec 31, 2009—Sep 9, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AcB	Acton fine sandy loam, 0 to 8 percent slopes	1.7	0.1%
Be	Biddeford silty clay loam	6.7	0.4%
BzA	Buxton silt loam, 0 to 3 percent slopes	12.0	0.7%
BzB	Buxton silt loam, 3 to 8 percent slopes	170.2	10.1%
CfB	Charlton fine sandy loam, 3 to 8 percent slopes	4.9	0.3%
CsB	Charlton fine sandy loam, 3 to 8 percent slopes, very stony	2.4	0.1%
DeA	Deerfield loamy fine sand, 0 to 3 percent slopes	16.3	1.0%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	2.9	0.2%
EaA	Elmwood fine sandy loam, 0 to 3 percent slopes	83.4	4.9%
EaB	Elmwood fine sandy loam, 3 to 8 percent slopes	18.6	1.1%
GsB	Gloucester very stony fine sandy loam, 3 to 8 percent slopes	7.4	0.4%
GsC	Gloucester very stony fine sandy loam, 8 to 15 percent slopes	11.1	0.7%
GsE	Gloucester very stony fine sandy loam, 25 to 60 percent slopes	6.3	0.4%
Gv	Gravel and borrow pits	47.4	2.8%
HaB	Hinckley loamy sand, 3 to 8 percent slopes	323.1	19.1%
HaC	Hinckley loamy sand, 8 to 15 percent slopes	43.0	2.5%
HbE	Hinckley loamy sand, 15 to 60 percent slopes	94.6	5.6%
HcB	Hollis-Charlton fine sandy loams, 3 to 8 percent slopes	14.4	0.9%
HcC	Hollis-Charlton fine sandy loams, 8 to 15 percent slopes	6.0	0.4%
HcD	Hollis-Charlton fine sandy loams, 15 to 25 percent slopes	3.6	0.2%
HdB	Hollis-Charlton very rocky fine sandy loams, 3 to 8 percent slopes	15.3	0.9%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HdC	Hollis-Charlton very rocky fine sandy loams, 8 to 15 percent slopes	4.1	0.2%
HfB	Hollis-Gloucester fine sandy loams, 3 to 8 percent slopes	5.8	0.3%
HfC	Hollis-Gloucester fine sandy loams, 8 to 15 percent slopes	5.6	0.3%
HgB	Hollis-Gloucester very rocky fine sandy loams, 3 to 8 percent slopes	1.6	0.1%
HgC	Hollis-Gloucester very rocky fine sandy loams, 8 to 15 percent slopes	0.8	0.0%
Ml	Mixed alluvial land, wet	81.9	4.8%
On	Ondawa fine sandy loam	1.9	0.1%
Po	Podunk fine sandy loam	7.2	0.4%
Sb	Saugatuck loamy sand	41.9	2.5%
ScA	Scantic silt loam, 0 to 3 percent slopes	160.0	9.5%
ScB	Scantic silt loam, 3 to 8 percent slopes	45.7	2.7%
SfC	Suffield silt loam, 8 to 15 percent slopes	21.7	1.3%
SfE	Suffield silt loam, 15 to 35 percent slopes	2.0	0.1%
SwA	Swanton fine sandy loam, 0 to 3 percent slopes	14.1	0.8%
SwB	Swanton fine sandy loam, 3 to 8 percent slopes	54.7	3.2%
W	Water	2.4	0.1%
WdA	Windsor loamy sand, 0 to 3 percent slopes	111.2	6.6%
WdB	Windsor loamy sand, 3 to 8 percent slopes	136.3	8.1%
WdC	Windsor loamy sand, 8 to 15 percent slopes	3.2	0.2%
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	85.4	5.1%
WfC	Windsor loamy fine sand, clay subsoil variant, 8 to 15 percent slopes	9.7	0.6%
Totals for Area of Interest		**1,688.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas

shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Strafford County, New Hampshire

AcB—Acton fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d6j
Elevation: 80 to 920 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Acton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Acton

Setting

Parent material: Till

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 23 inches: very gravelly loamy sand
H3 - 23 to 42 inches: very cobbly loamy coarse sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A/D
Ecological site: F144AY008CT - Moist Till Uplands
Hydric soil rating: No

Minor Components

Not named pan

Percent of map unit: 10 percent
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Be—Biddeford silty clay loam

Map Unit Setting

National map unit symbol: 9d6m
Elevation: 0 to 200 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Biddeford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Biddeford

Setting

Landform: Marine terraces
Parent material: Glaciomarine

Typical profile

H1 - 0 to 7 inches: silty clay loam
H2 - 7 to 26 inches: silty clay
H3 - 26 to 41 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Moderate (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 10 percent
Landform: Marine terraces
Hydric soil rating: Yes

Scantic

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

BzA—Buxton silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9d6n
Elevation: 0 to 280 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Buxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buxton

Setting

Parent material: Glaciomarine

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 28 inches: silty clay loam
H3 - 28 to 43 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F145XY006CT - Semi-Rich Moist Lake Plain
Hydric soil rating: No

Minor Components

Scantic
Percent of map unit: 10 percent
Landform: Marine terraces
Hydric soil rating: Yes

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

BzB—Buxton silt loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d6p
Elevation: 0 to 260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Buxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buxton

Setting
Parent material: Glaciomarine

Typical profile
H1 - 0 to 10 inches: silt loam
H2 - 10 to 28 inches: silty clay loam
H3 - 28 to 43 inches: silty clay

Properties and qualities
Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C/D
Ecological site: F145XY006CT - Semi-Rich Moist Lake Plain
Hydric soil rating: No

Minor Components

Elmwood
Percent of map unit: 10 percent
Hydric soil rating: No

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

CfB—Charlton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 2wh0n
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Charlton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting
Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile
Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities
Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Sutton

Percent of map unit: 8 percent
Landform: Hills, ground moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Leicester

Percent of map unit: 1 percent
Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Chatfield

Percent of map unit: 1 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

CsB—Charlton fine sandy loam, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2wh0r
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Charlton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton, Very Stony

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B

Ecological site: F142XB009VT - Acidic Till Upland
Hydric soil rating: No

Minor Components

Sutton, very stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton, very stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Chatfield, very stony
Percent of map unit: 3 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester, very stony
Percent of map unit: 2 percent
Landform: Depressions, drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

DeA—Deerfield loamy fine sand, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2xfg8
Elevation: 0 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition
Deerfield and similar soils: 85 percent

Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Outwash terraces, outwash deltas, outwash plains, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 7 percent
Landform: Kame terraces, outwash deltas, outwash plains, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Wareham

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sudbury

Percent of map unit: 2 percent

Landform: Outwash plains, kame terraces, outwash deltas, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Ninigret

Percent of map unit: 1 percent
Landform: Kame terraces, outwash plains, outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Convex, concave
Hydric soil rating: No

DeB—Deerfield loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xfg9
Elevation: 0 to 1,190 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Deerfield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 7 percent
Landform: Outwash terraces, outwash plains, kame terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Wareham

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sudbury

Percent of map unit: 2 percent
Landform: Kame terraces, outwash deltas, outwash terraces, outwash plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Ninigret

Percent of map unit: 1 percent
Landform: Outwash plains, outwash terraces, kame terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Convex, concave
Hydric soil rating: No

EaA—Elmwood fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9d70

Elevation: 0 to 1,000 feet
Mean annual precipitation: 28 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition
Elmwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elmwood

Setting
Parent material: Glaciomarine

Typical profile
H1 - 0 to 16 inches: fine sandy loam
H2 - 16 to 20 inches: fine sandy loam
H3 - 20 to 43 inches: silty clay

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Deerfield
Percent of map unit: 5 percent
Hydric soil rating: No

Swanton
Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

EaB—Elmwood fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d71
Elevation: 0 to 1,000 feet
Mean annual precipitation: 28 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elmwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elmwood

Setting

Parent material: Glaciomarine

Typical profile

H1 - 0 to 16 inches: fine sandy loam
H2 - 16 to 20 inches: fine sandy loam
H3 - 20 to 43 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY018NY - Moist Lake Plain
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 10 percent
Hydric soil rating: No

Deerfield
Percent of map unit: 5 percent
Hydric soil rating: No

GsB—Gloucester very stony fine sandy loam, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d75
Elevation: 30 to 1,260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting
Parent material: Till

Typical profile
H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities
Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

Acton
Percent of map unit: 5 percent
Hydric soil rating: No

Hollis
Percent of map unit: 5 percent
Hydric soil rating: No

GsC—Gloucester very stony fine sandy loam, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9d76
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting
Parent material: Till

Typical profile
H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities
Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Hollis

Percent of map unit: 5 percent
Hydric soil rating: No

Acton

Percent of map unit: 5 percent
Hydric soil rating: No

GsE—Gloucester very stony fine sandy loam, 25 to 60 percent slopes

Map Unit Setting

National map unit symbol: 9d78
Elevation: 30 to 1,200 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Gloucester and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 25 to 60 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained

Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

Minor Components

Not named
Percent of map unit: 10 percent
Hydric soil rating: No

Hollis
Percent of map unit: 5 percent
Hydric soil rating: No

Gv—Gravel and borrow pits

Map Unit Setting
National map unit symbol: 9d7c
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Gravel and borrow pits: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gravel And Borrow Pits

Typical profile
H1 - 0 to 6 inches: extremely gravelly sand
H2 - 6 to 60 inches: extremely gravelly sand

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

HaB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, kames, kame terraces, moraines, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Base slope, crest, nose slope, side slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 8 percent
Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Base slope, crest, nose slope, side slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, outwash terraces, moraines, outwash plains, kame terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, head slope, side slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Agawam

Percent of map unit: 2 percent
Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Base slope, crest, nose slope, side slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

HaC—Hinckley loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svm9
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Crest, head slope, nose slope, side slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, moraines, outwash plains, kame terraces, outwash terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear

Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames, outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Kames, outwash plains, outwash terraces, moraines, eskers
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

HbE—Hinckley loamy sand, 15 to 60 percent slopes

Map Unit Setting

National map unit symbol: 2svmh
Elevation: 0 to 890 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Crest, nose slope, side slope, head slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 60 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 10 percent
Landform: Outwash terraces, moraines, eskers, kames, kame terraces, outwash deltas, outwash plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Crest, nose slope, side slope, head slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Outwash plains, outwash terraces, moraines, eskers, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Crest, side slope, head slope, nose slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

HcB—Hollis-Charlton fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d7j
Elevation: 0 to 1,020 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Hollis and similar soils: 55 percent
Charlton and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: fine sandy loam

H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Buxton

Percent of map unit: 5 percent
Hydric soil rating: No

HcC—Hollis-Charlton fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d7k
Elevation: 0 to 1,080 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Hollis and similar soils: 55 percent
Charlton and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Buxton

Percent of map unit: 5 percent
Hydric soil rating: No

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

HcD—Hollis-Charlton fine sandy loams, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9d7l
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 55 percent
Charlton and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting
Parent material: Till

Typical profile
H1 - 0 to 13 inches: fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities
Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Not named
Percent of map unit: 10 percent
Hydric soil rating: No

HdB—Hollis-Charlton very rocky fine sandy loams, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d7m
Elevation: 0 to 1,000 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 40 percent
Charlton and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: very stony fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 10 percent
Hydric soil rating: No

Buxton

Percent of map unit: 5 percent
Hydric soil rating: No

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Sutton

Percent of map unit: 5 percent
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

HdC—Hollis-Charlton very rocky fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d7n
Elevation: 0 to 1,200 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 40 percent
Charlton and similar soils: 30 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton

Setting

Parent material: Till

Typical profile

H1 - 0 to 13 inches: very stony fine sandy loam
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 40 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Not named
Percent of map unit: 10 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 10 percent
Hydric soil rating: No

Woodbridge
Percent of map unit: 5 percent
Hydric soil rating: No

Sutton
Percent of map unit: 5 percent
Hydric soil rating: No

HfB—Hollis-Gloucester fine sandy loams, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 9d7s
Elevation: 30 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Hollis and similar soils: 55 percent
Gloucester and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting
Parent material: Till

Typical profile
H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities
Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Acton

Percent of map unit: 3 percent
Hydric soil rating: No

Leicester

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

HfC—Hollis-Gloucester fine sandy loams, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d7t
Elevation: 30 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 55 percent
Gloucester and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 7 percent
Hydric soil rating: No

Acton

Percent of map unit: 3 percent
Hydric soil rating: No

HgB—Hollis-Gloucester very rocky fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d7v
Elevation: 30 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 50 percent
Gloucester and similar soils: 30 percent
Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A

Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop
Percent of map unit: 10 percent
Hydric soil rating: No

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

Acton
Percent of map unit: 3 percent
Hydric soil rating: No

Leicester
Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

HgC—Hollis-Gloucester very rocky fine sandy loams, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9d7w
Elevation: 30 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Hollis and similar soils: 50 percent
Gloucester and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting
Parent material: Till

Typical profile
H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 18 inches: bedrock

Properties and qualities
Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Gloucester

Setting

Parent material: Till

Typical profile

H1 - 0 to 14 inches: very stony fine sandy loam
H2 - 14 to 28 inches: very gravelly loamy sand
H3 - 28 to 40 inches: very gravelly coarse sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 10 percent
Hydric soil rating: No

Not named

Percent of map unit: 7 percent
Hydric soil rating: No

Acton

Percent of map unit: 3 percent
Hydric soil rating: No

Ml—Mixed alluvial land, wet

Map Unit Setting

National map unit symbol: 9d86
Elevation: 300 to 1,800 feet
Mean annual precipitation: 30 to 50 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Mixed alluvial land: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mixed Alluvial Land

Setting

Landform: Flood plains

Typical profile

H1 - 0 to 5 inches: loam
H2 - 5 to 72 inches: very gravelly silt loam

Properties and qualities

Slope: 0 to 2 percent
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 20.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: FrequentNone
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydric soil rating: Yes

On—Ondawa fine sandy loam

Map Unit Setting

National map unit symbol: 9d88
Elevation: 0 to 430 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ondawa and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ondawa

Setting

Parent material: Sandy and/or coarse-loamy alluvium derived from granite, gneiss or schist

Typical profile

H1 - 0 to 30 inches: fine sandy loam
H2 - 30 to 42 inches: stratified loamy fine sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Suncook

Percent of map unit: 5 percent
Hydric soil rating: No

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Podunk

Percent of map unit: 5 percent
Hydric soil rating: No

Po—Podunk fine sandy loam

Map Unit Setting

National map unit symbol: 9d8j
Elevation: 0 to 440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Prime farmland if protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Podunk and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Podunk

Setting

Parent material: Sandy and/or coarse-loamy alluvium derived from granite, gneiss or schist

Typical profile

H1 - 0 to 30 inches: fine sandy loam
H2 - 30 to 42 inches: stratified loamy fine sand to very gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A/D
Hydric soil rating: No

Minor Components

Rumney
Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Not named
Percent of map unit: 5 percent
Hydric soil rating: No

Suncook
Percent of map unit: 5 percent
Hydric soil rating: No

Sb—Saugatuck loamy sand

Map Unit Setting
National map unit symbol: 9d8r
Elevation: 300 to 1,000 feet
Mean annual precipitation: 27 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 125 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Saugatuck and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Saugatuck

Setting
Landform: Outwash terraces
Parent material: Outwash

Typical profile
H1 - 0 to 4 inches: loamy sand
H2 - 4 to 7 inches: sand
H3 - 7 to 26 inches: loamy sand
H4 - 26 to 42 inches: sand

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: 10 to 16 inches to undefined
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 15 percent
Landform: Outwash terraces
Hydric soil rating: Yes

ScA—Scantic silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9d8s
Elevation: 0 to 260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Scantic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scantic

Setting

Landform: Marine terraces

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 23 inches: silty clay loam
H3 - 23 to 40 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Biddeford

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Swanton

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Not named wet

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

ScB—Scantic silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d8t
Elevation: 0 to 260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Scantic and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scantic

Setting

Landform: Marine terraces

Typical profile

H1 - 0 to 13 inches: silt loam
H2 - 13 to 23 inches: silty clay loam
H3 - 23 to 40 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Buxton

Percent of map unit: 5 percent
Hydric soil rating: No

Swanton

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

Not named wet

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

SfC—Suffield silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9d8v
Elevation: 0 to 250 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Suffield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Suffield

Typical profile

H1 - 0 to 19 inches: silt loam

H2 - 19 to 28 inches: silt loam
H3 - 28 to 41 inches: silty clay

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144AY017NH - Well Drained Lake Plain
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 9 percent
Hydric soil rating: No

Buxton

Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

SfE—Suffield silt loam, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9d8w
Elevation: 0 to 210 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Suffield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Suffield

Typical profile

H1 - 0 to 19 inches: silt loam
H2 - 19 to 28 inches: silt loam
H3 - 28 to 41 inches: silty clay

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F144AY017NH - Well Drained Lake Plain
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 14 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

SwA—Swanton fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9d90
Elevation: 0 to 260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Swanton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swanton

Setting

Landform: Marine terraces

Typical profile

H1 - 0 to 19 inches: fine sandy loam
H2 - 19 to 26 inches: sandy loam
H3 - 26 to 41 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 10 percent
Landform: Marine terraces
Hydric soil rating: Yes

Scantic

Percent of map unit: 5 percent
Landform: Marine terraces
Hydric soil rating: Yes

SwB—Swanton fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d91
Elevation: 0 to 250 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Swanton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swanton

Setting

Landform: Marine terraces

Typical profile

H1 - 0 to 19 inches: fine sandy loam
H2 - 19 to 26 inches: sandy loam
H3 - 26 to 41 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Not named wet

Percent of map unit: 10 percent
Landform: Marine terraces
Hydric soil rating: Yes

Elmwood

Percent of map unit: 5 percent
Hydric soil rating: No

W—Water

Map Unit Composition

Water (less than 40 acres): 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

WdA—Windsor loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svkg
Elevation: 0 to 990 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Outwash plains, outwash terraces, deltas, dunes
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Deerfield, loamy sand

Percent of map unit: 10 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Hinckley, loamy sand

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, head slope, nose slope, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

WdB—Windsor loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svkf
Elevation: 0 to 1,210 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Dunes, outwash plains, deltas, outwash terraces
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand

Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Hinckley, loamy sand

Percent of map unit: 10 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, head slope, nose slope, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Deerfield, loamy sand

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

WdC—Windsor loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svkq
Elevation: 0 to 1,260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Windsor and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor

Setting

Landform: — error in exists on —
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, riser
Down-slope shape: Convex
Across-slope shape: Convex, linear
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
Ap - 1 to 11 inches: loamy sand
Bw - 11 to 31 inches: loamy sand
C - 31 to 65 inches: sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 10 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, head slope, nose slope, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Deerfield

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

WfB—Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d9b
Elevation: 0 to 280 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Windsor variant and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor Variant

Typical profile

H1 - 0 to 26 inches: loamy fine sand
H2 - 26 to 30 inches: loamy sand
H3 - 30 to 42 inches: silt loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Not named
Percent of map unit: 15 percent
Hydric soil rating: No

WfC—Windsor loamy fine sand, clay subsoil variant, 8 to 15 percent slopes

Map Unit Setting
National map unit symbol: 9d9c
Elevation: 0 to 230 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Windsor variant and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor Variant

Typical profile
H1 - 0 to 26 inches: loamy fine sand
H2 - 26 to 30 inches: loamy sand
H3 - 30 to 42 inches: silt loam

Properties and qualities
Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 15 percent
Hydric soil rating: No

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BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

Stormwater System Management:

Inspection and Maintenance Manual

Windsor Way, Dover, NH

Prepared for:

Heron Bay Partners, LLC.
42 Central Ave.
Dover, NH 03820

Prepared By

Berry Surveying & Engineering
335 Second Crown Point Road
Barrington, NH 03825
603-332-2863

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Stormwater System Management:

Inspection and Maintenance Manual

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Introduction

The Best Management Practices (BMP) described in this manual are specified in more detail within the plan set giving design details and specifications. The New Hampshire Stormwater Manual, Volume 2, Post-Construction Best Management Practices Selection & Design (December 2008, NHDES & US EPA) is included by reference to this manual. Additional details, construction specifications, and example drawings are provided within this reference. (http://des.nh.gov/organization/divisions/water/stormwater/)

The BMP's are covered below in the general order in which the storm water flows. Each BMP has a description and maintenance consideration listed. A Check List table is proved after the narrative to summarize the maintenance responsibilities and schedule. A Log Form is also provided for the owners use.

For details regarding the design of the Storm Water System see also Drainage Analysis & Sediment and Erosion Control Plan also published by Berry Surveying & Engineering dated April 7, 2022. See also plan set completed for Heron Bay Partners, LLC dated April 7, 2022, as revised.

Heron Bay Partners, LLC, David Paolini, Managing Member, is responsible for the Stormwater System Operation and Maintenance that will be constructed on this property. A significant step in this responsibility is the Inspection and Maintenance of each component of the system. Ongoing, semi-annual, and annual inspection and maintenance requirement are documented below and must be taken seriously. Failure of any component of the system can result in surface water run-off ponding and/or freezing in the driveway and parking lots, leaving the developed site untreated, and/or causing violations to issued permits. The owner must maintain, and have available, plans of the Stormwater System in order properly inspect and maintain the system. (Reduced copies attached) Heron Bay Partners, LLC is responsible to ensure that any subsequent owner, owners association, or subcontractor has copies of the Log Form and Annual Report records and fully understands the responsibilities of this plan. The grantor owner will ensure this document is provided to the grantee owner by duplicating the Ownership Responsibility Sheet which is found toward the back of this document, which will be maintained with the Inspection & Maintenance Logs, provided to the City of Dover Engineering Department, DPW, Dover Community Services with the Annual Report.

The owner of Tax Map H, Lot 4, Heron Bay Partners, LLC, is proposing the construction of 55 townhouses and 1005 linear feet of road.

The following drainage features will all require periodic inspections and maintenance based on this manual in addition to deep sump catch basins throughout:

Porous Pavement w/ Infiltration #101

Detention Basin #900

Sediment Forebay

Conveyance Swale

Deep Sumps & Catch Basins

Stabilization for Long Term Cover

Deep Sump Catch Basin, Drain Manholes, & Water Quality Inlets

Description: Deep Sump Catch Basins are used throughout the site as a pretreatment measure to remove sediment and debris from storm water runoff. Deep Sump Catch Basins will be designed with a sump that is four times the depth of the discharge culvert and a minimum of four feet. All pretreatment deep sump catch basins will have an outlet pipe hood which extends one-foot below the outlet invert and will include a hood vent. During construction the catch basins will be protected by inlet protection per the approved construction plans. The practice of street sweeping on a bi-annual basis will help reduce maintenance of these deep sumps. NHDES SWM Volume 2, 4-4 Pretreatment, 5. Deep Sump Catch Basin, Page 152.

Even though each of the Treatment Practices is preceded by a Sediment Forebay so the catch basins within the subdivision will have deep sumps.

Maintenance Considerations: Sediment must be removed from Deep Sump Catch Basins and Deep Sump Manholes on a regular basis, at least twice a year and more often if the sumps become half-full. Inspections should be conducted periodically. At a minimum they should be cleaned after snow-melt and after leaf-drop. Damaged outlet hoods must be replaced. It is recommended that a vacuum truck be utilized as contrasted to a clam-shell method to avoid damage to the hood. Hydrocarbons found to be floating in the basin should be removed by skimming, absorbent materials, or other method. Disposal of all material, sediment, and debris must be done in accordance with state and federal regulations. Culvert pipes will be inspected to ensure that surface water runoff is capable of leaving the structures.

Porous Asphalt Pavement & Infiltration Bed

Description: The Permeable Pavement system consists of a porous pavement surface and permeable sub-base materials that is going to allow infiltration of surface water runoff into the native subsoil. The layers of the sub-base materials serve as a filter for the runoff prior to infiltration. Care must be taken during the preparation of the sub-base materials to ensure operation of the infiltration bed and the sub-soil under the system must be scarified to a depth of two-feet below the system to ensure that the soil has not become compacted and does not contain topsoil remnants or boulders.

Maintenance Considerations: No winter sand will be used on permeable pavement and will minimize application of salt for ice control. **Pavement Vacuuming** - Due to the nature of porous pavement, sand must be removed by vacuuming on a regular basis when the pores become clogged two to four times per year. This process varies due to the amount of sand and sweeping efforts but should be investigated two to four times every year. The life expectancy of the porous asphalt pavement system is about 20 years following the prescribed regular maintenance schedule.

Detention Ponds

Description: Detention Ponds are constructed ponds with the purpose of detaining runoff but not for infiltration purposes. During construction it is important that the ground surface not be exposed to traffic or construction equipment to preserve the infiltration capabilities of the existing soil. Construction specifications are included in the plan set and New Hampshire Stormwater Manual, Volume 2, 4-3 Treatment Practices, 3B, In-ground Infiltration Basin and Section 4-6, Conveyance Practices, 2. Detention Basins.

Maintenance Considerations:
Infiltration Basins and Detention Ponds should be inspected at least twice annually and following any rainfall event exceeding 0.25 inches in a twenty-four-hour period. Maintenance rehabilitation will be conducted as warranted by each inspection. Trash and debris will be removed at each inspection.

On an annual basis the infiltration capabilities need to be confirmed by evaluation the drawdown time. If the infiltration system does not drain within 72-hours following a rainfall event, a qualified professional will assess the condition of the basin to determine measures required to restore the infiltration function. This is normally the direct result of sediment accumulation which will be removed to restore the filter media ratio.

Also, on an annual basis the vegetation should be inspected to ensure healthy condition. Invasive species need to be removed along with dead or diseased vegetation.

Sediment Forebay

Description: A sediment forebay is designed to reduce the velocity of incoming surface water runoff allowing sediment to fall out of suspension initially pre-treating the runoff before it is sent to a treatment structure. This earthen basin will have vegetated side-slopes and a check dam to further reduce and pretreat the runoff. At the point of incoming runoff, the basin will be protected by rip rap outlet protection construction and the outgoing edge will be protected with rip rap. The check dam will be constructed from one side of the basin to the other and cause runoff to either go through or over. The volume of the forebay is generally 25% the volume of the Water Quality Volume (WQV). A dewatering drain is designed into the rip-rap berm of the forebay. Construction specifications are included in the plan set and New Hampshire Stormwater Manual, Volume 2, 4-4 Pretreatment Practices 1, Sediment Forebays.

If it determined that too much sediment is by-passing the sediment forebay into the stormwater practice, semi-permanent sediment barriers may be warranted in the form of check dams by using a filtering media such as Filtrexx Silt Soxx.

Maintenance Considerations: The basin and slopes will be periodically mowed, at least twice per year ensuring that woody material does not get an opportunity to grow. Sediment accumulated in the basin will be removed and properly disposed of when it reaches half the height of the check dam. Erosion or other damage to the basin will be repaired and revegetated. (See Outlet Protection) Inspect and clean the dewatering drain to ensure runoff is not trapped for more than 72 hours in the forebay.

Conveyance Swales

Description: "Swales are stabilized channels designed to convey runoff at non-erosive velocities." (NHDES SWM) They will be trapezoidal or parabolic in section view. A conveyance swale is intended to move surface water runoff from one point to another where as a treatment swale will slow the velocity to a point where sediment will settle out of the stormwater flow. A treatment swale will be constructed to a width of between four and eight feet and have a minimum length of 100 feet. The flow characteristics will also meet design criteria. See SWM Volume 2, 4.3 Treatment Practices, 5. Treatment Swales, page 123.

Project Intent: The swales are individually designed in the drainage analysis and specified on the design plans. The designed swales must have greater than 85% vegetated growth prior to receiving runoff. The bottom of a treatment swale must be above the seasonal high-water table.

Maintenance Considerations: Grassed swales will be inspected twice annually, removing accumulated sediment and gross solids. Grass will be mowed periodically but to a depth of not less than 4 inches. Any damage to the vegetation will be repaired and woody vegetation and invasive vegetation will be removed.

Stabilization for Long Term Cover

Vegetated Stabilization – Original Planting
All areas that are disturbed during construction will be stabilized with vegetated material within 30 days of breaking ground. Construction will be managed in such a manner that erosion is prevented and that no abutter's property will be subjected to any siltation, unless otherwise permitted. All areas to be planted with grass for long-term cover will follow the specification and on Sheet E-102 using seeding mixture C, as follows:

Mixture	Pounds per Acre	Pounds per 1,000 Sq. Ft.
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Conservation Mix

Mixture	Pounds per Acre	Pounds per 1,000 Sq. Ft.
Tall Fescue	15	0.35
Creeping Red Fescue	15	0.35
Annual Ryegrass	5	0.12
Perennial Ryegrass	5	0.12
Kentucky Bluegrass	15	0.35
White Clover	7	0.16
Total	**62**	**1.45**

Conservation Mix will used to stabilize all 2:1 slopes and all land area disturbed within the wetland buffer. As the site is to be stabilized with erosion control mix as a mulch, the vegetation should be established with a high percentage of white clover for growth to be established. Conservation Mix will also be used to plant and stabilize the erosion control mix mulch. Seed will originally be applied by hydroseeding which includes a tackifier. Due to the shade factor of the solar panels, special care must be taken to establish growth.

Maintenance Considerations: Permanent seeded areas for long-term cover will be inspected on a periodic basis looking for signs of growth loss or erosion. Any areas found to be damaged will be repaired and replanted to reestablish the growth. The grass should be mowed at least twice per year and any dead material removed. Any woody growth that becomes established will need to be cut and removed.

Long-term maintenance of the land cover is critical and must be maintained at least 85% grass / vegetation coverage, must be inspected for concentrated flow, rills, and channels; and must be repaired as necessary to prevent erosion.

Snow Storage Areas & Winter Maintenance

Description: The effective use of salt and sand for winter maintenance is both a cost and an environmental consideration. In accordance with City of Dover Chapter 149-14 A, Snow and ice removal shall be performed by a contractor certified by the "Green SnoPro" program, or approved equivalent, following the Best Management Practices for the application of deicing materials. The use of salt for deicing will be minimized. De-icing logs will be maintained for the development.

Maintenance Considerations: Snow will be stockpiled in designated area during the course of the winter and any excess snow will be taken off-site and disposed of in an appropriate area. As the snow is melting in the spring, sand will be swept and removed

from the site. The catch basin sumps will be scheduled for one of the two annual cleanings in the early spring.

Reference is made to the NHDES Green SnoPro program and Minnesota Pollution Control Agency document "Winter Parking Lot and Sidewalk Maintenance Manual".

CONTROL OF INVASIVE PLANTS

During maintenance activities, check for the presence of invasive plants and remove in a safe manner as described on the following pages. They should be controlled as described on the following pages.

Invasive plants are introduced, alien, or non-native plants, which have been moved by people from their native habitat to a new area. Some exotic plants are imported for human use such as landscaping, erosion control, or food crops. They also can arrive as "hitchhikers" among shipments of other plants, seeds, packing materials, or fresh produce. Some exotic plants become invasive and cause harm by:

- becoming weedy and overgrown;
- killing established shade trees;
- obstructing pipes and drainage systems;
- forming dense beds in water;
- lowering water levels in lakes, streams, and wetlands;
- destroying natural communities;
- promoting erosion on stream banks and hillsides; and
- resisting control except by hazardous chemical.

See the attached pages prepared by the New Hampshire Department of Agriculture.

Annual Report

Description: The owner is responsible to keep an **I & M Activity Log** that documents inspection, maintenance and repairs to the storm water management system, and a **Deicing Log** to track the amount and type of deicing material applied to the site. The original owner is responsible to ensure that any subsequent owner (s) have copies of the Stormwater System Management: Inspection and Maintenance Manual, copies of past logs and check lists. This includes any owner association for potential condominium conversion of the property. The Annual Report will be prepared and submitted to the City of Dover Engineering Department with copies of both logs and check lists no later than December 15th of each year. Upon an ownership change, the Annual Report will include the Transfer of Ownership Responsibility Forms duplicated from the form found below.

The plan set that accompanies this project includes a grading and drainage plan, construction details, and a sediment & erosion control plan. The Inspection and Maintenance Plan is attached.

Respectfully
BERRY SURVEYING & ENGINEERING

Kevin R. Poulin, EIT
Design Engineer &
Project Manager

Kenneth A. Berry, PE, LLS
CPSWQ, CPESC, CESSWI
Principal, VP – Technical Operations

STORMWATER SYSTEM OPERATION AND MAINTENANCE PLAN

Inspection & Maintenance Manual Checklist

Residential Development

Knox Marsh Development, LLC
Copper Lane (36-38 New Rochester Road)
Dover, NH

☑	Date	BMP / System	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
		Pavement Sweeping	Three Times Per Year	N/A	N/A
		Litter/Trash Removal	Routinely	Inspect dumpsters, outdoor waste receptacles area, and yard areas.	Parcel will be free of litter/trash.
		Deicing Agents	N/A	N/A	Use salt as the primary agent for roadway safety during winter.
		Porous Pavement	2-4 times per year	Check for sediment and debris accumulation buildup.	Vacuum pavement to remove debris

☑	Date	BMP / System	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
		Drainage Pipes & Inlet Sumps	2 years per year	Check for sediment accumulation & clogging.	Less than 2" sediment depth
		Catch Basins & Deep Sumps	2 times per year	Check for sediment accumulation & clogging.	Sediment accumulated to a depth of 2 feet.
		Post Winter Maintenance	Annually	Remove excess sand, gross solids, and repair vegetation and plantings	Parcel will be free of excess sand, litter/trash. Vegetation per approved plans.
		Annual Report	1 time per year	Submit Annual Report to Rochester Engineering Department and kept on file by the owner.	Report to be submitted on or before December 15th each year.

Inspection Checklist: Page 3

Porous Pavement w/ Infiltration #101

Detention Basin / Wet Pond #900

Sediment Forebay

Deep Sump Catch Basins & Drainage Pipes

Conveyance Swale

Inspection Notes:

STORMWATER SYSTEM OPERATION AND MAINTENANCE PLAN

Inspection & Maintenance Manual Log Form

Residential Development
Heron Bay Partners, LLC
Windsor Way
Dover, NH

BMP / System	Date Inspected	Inspector	Cleaning/Repair (List Items & Comments)	Repair Date	Performed By:

STORMWATER SYSTEM OPERATION AND MAINTENANCE PLAN

Deicing Log Form

Residential Development
Heron Bay Partners, LLC
Windsor Way
Dover, NH

Date	Amount Applied	Performed By:	Date	Amount Applied	Performed By:

STORMWATER SYSTEM OPERATION & MAINTENANCE PLAN CERTIFICATION

Owner	Responsibility
Name: HERON BAY PARTNERS, LLC DAVID PAOLINI, MANAGING MEMBER Address: 242 Central Avenue DOVER, NH 03820 Telephone: 603-742-2121 E-Mail Address: dave@centralfallsrealty.com	The owner is responsible for the conduct of all construction activities, and ultimate compliance with all the provisions of the Stormwater System Operation & Maintenance Plan and the implementation of the Inspection and Maintenance Manual.

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Date: _____

Printed Name:

Representing:

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) S.C.R.D. BOOK 3561, PAGE 656

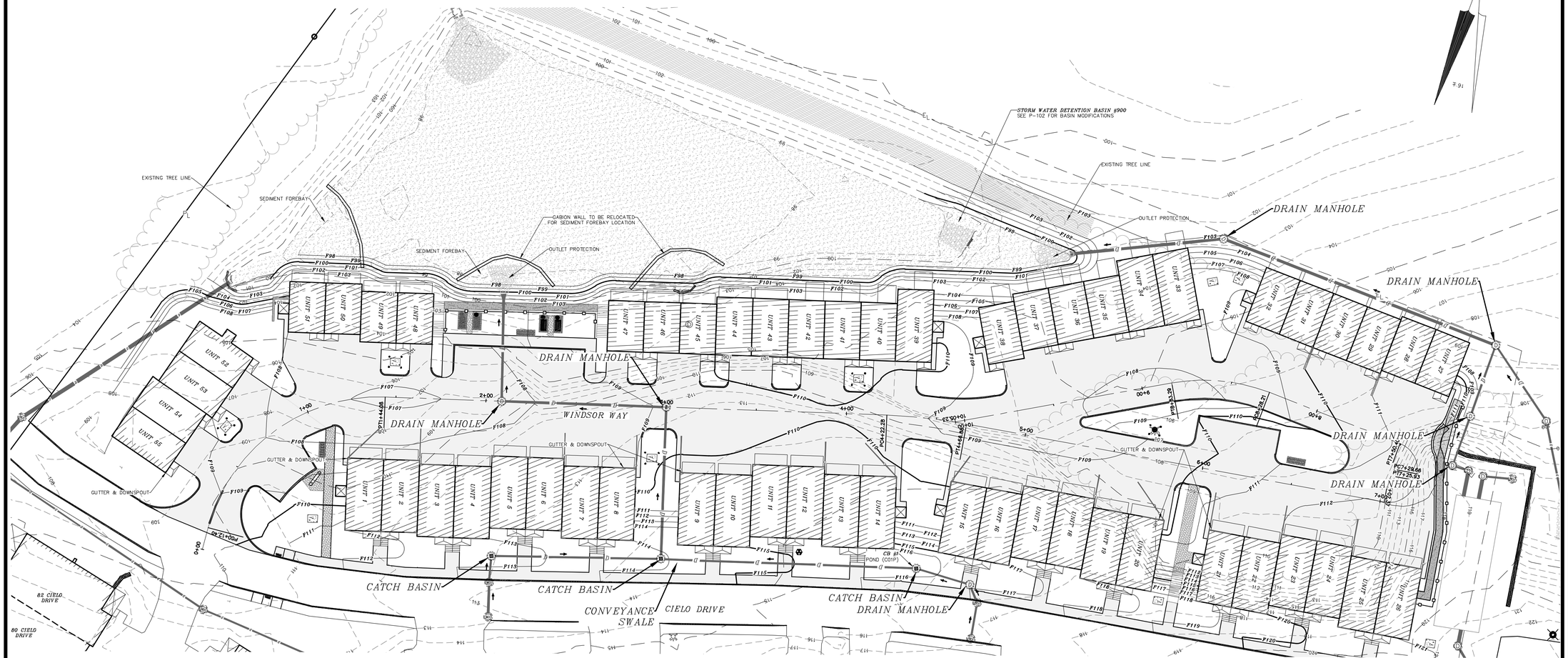
5.) THE INTENT OF THIS PLAN IS TO DEMONSTRATE THE DRAINAGE INFRASTRUCTURE THAT REQUIRES PERIODIC INSPECTION AND MAINTENANCE. IT IS TO ACCOMPANY A DOCUMENT ENTITLES "INSPECTION AND MAINTENANCE MANUAL, STORMWATER SYSTEM MANAGEMENT PUBLISHED BY BERRY SURVEYING & ENGINEERING ON THE SAME DATE.

6.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.



DRAINAGE INSPECTION & MAINTENANCE PLAN
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

REVISION	DATE	DESCRIPTION

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 13242
LICENSED PROFESSIONAL ENGINEER

John P. Hayes III CSS, CWS,
7 Limestone Way
North Hampton, NH 03862
603-205-4396
johnphayes@comcast.net

4/6/22

Christopher Berry
Berry Surveying and Engineering
335 Second Crown Point Road
Barrington NH 03825

Job # 22-008

3/30/22
Site Specific Soil Survey
Map H Lot 4
Cielo Drive Dover , NH

Dear Chris,

This letter report presents the findings of a Site Specific Soil Survey conducted on the referenced properties by John P. Hayes III on March 30, 2022. The soil survey was conducted in accordance with the New Hampshire Supplement of the Site-Specific Soil Mapping Standard For New Hampshire and Vermont, Version 5.0, December 2017, Special Publication # 3, published by the Society of Soil Scientist of Northern New England.

The property that is subject of the soil survey is located on the south side of Cielo Drive, southeast of Mast Road, and northwest of Route 108, in Dover, NH. The The Parcel is approximately 34.4 acres in size. Only a portion of the parcel, the undeveloped section, on the southeast portion of the lot, was mapped. The plans used for these soil maps are a 40 scale plan, where 1 inch equals 40 feet, with one foot contours.

The purpose of the soil survey is to provide the client with soils information for urban and suburban or rural land planning. The client is proposing to erect additional housing units in this area. The majority of the mapped area has been disturbed. The southeastern portion of the mapped area contains a manmade, excavated, detention pond which presently contains poorly drained soil. The southern section of the mapped area, near Cielo Drive, has been filled. The majority of the fill material is a silty clay loam in texture, and is at varing depths. This soil map is of the present conditions on the site. The client plans to excavate all of the silty clay loam material down to the sandy subsoil. I plan to remap the soil map in this area, and update this report with the new onsite soil mapping information after the excavation has taken place.

Soil characteristics on the property were evaluated through observation of numerous test pits, and hand auger probes conducted throughout the property. Slope phases were determined with the use of the topography provided on the plan. The Site-specific Soil Map Units identified are taken from the New Hampshire State-Wide Numerical Soils Legend, Issue #10 January 2011, and are briefly described below. Official Series Descriptions (OSD) for each of these soil series are enclosed with this report. The soil map units comply with the Range In Characteristics described in the OSD. Any limiting enclusions on the site, do not exceed 15 percent of any of the soil map units. Dissimilar inclusions, if any, will be noted in the report. Limits of the Site Specific mapping units are highlighted on the plan. The Hydrological Soil Groups for each of the soil series was determined using SSSNNE Publication No. 5 Ksat Values for New Hampshire Soils September 2009. Limits of the Site Specific mapping units are highlighted on the plan.

Portions of the soil map with the map unit 299, contain disturbed soils that have been filled as mentioned previously. Portions of the soil map with the map unit 300 and 350 contain disturbed soils that have been excavated and/or regraded, are well drained, and moderately well drained respectively, and sandy in texture. Portions of the soil map with the map unit 900P, contain disturbed soils that have been excavated, and are poorly drained. A Disturbed Soil Mapping Unit Supplement for New Hampshire DES AoT Site Specific Soil Maps, is also included. This supplement explains the additional information given about each of the disturbed soil map units that are present on the site.

MAP UNIT #	SOIL TAXANOMIC NAME	SLOPES	HYDROLOGIC SOIL GROUP	DESCRIPTION
Wd (State No. 26)	**Windsor**	**A B**	**A**	The Windsor series consists of very deep, excessively drained soils formed in sandy outwash or eolian deposits. They are nearly level through very steep soils on glaciofluvial landforms. These soils are found in the southwest portion of the property. These soils are deep to bedrock. Saturated hydraulic conductivity is high or very high. Some inclusions of Deerfield soils may be present, but are less than 10 percent of the mapped areas.Estimated seasonal high water tables in these soils range from 38 to 46 inches.
299 (cbcde)	**Udorthents (smoothed)**	**A B C E**	**not determined**	This map unit represents areas that have been cut and filled to create a nearly level area. Soil material making up the map units typically came from the immediate area. These disturbed soils are located on the northeast portion of the mapped area, near the road and around the present structures. These disturbed soils were originally of the Windsor soil series. They presently have a sandy substratum overlain with a layer of silty clay loam fill material that ranges from 40 to 102 inches. These soils are would presently be considered well drained, and are deep to bedrock. Saturated hydraulic conductivity would be slow to very slow if the fill material and high to very high in the substratum. Estimated seasonal high water tables in these soils are greater than 40 inches. inches.
300 (cbada)	**Udipsamments**	**A B C D E**	**A**	This map unit is characterized by soil textures of loamy fine sand to sand and gravel throughout the entire particle-size class control section.These disturbed soils are located throughout the mapped area and were originally of the Windsor soil series. These soils are well drained and are deep to bedrock. The saturated hydraulic conductivity is high. Estimated seasonal high water tables in these soils range from 38 to 60 inches.

MAP UNIT #	SOIL TAXANOMIC NAME	SLOPES	HYDROLOGIC SOIL GROUP	DESCRIPTION
350 (dbada)	**Udipsamments**	**E**	**A**	This map unit is characterized by soil textures of loamy fine sand to sand and gravel throughout the entire particle-size class control section.These disturbed soils are located on the slopes surrounding the man made detention pond, and were originally of the Windsor soil series. These soils are moderately well drained and are deep to bedrock. The saturated hydraulic conductivity is high. Estimated seasonal high water tables in these soils range from 24 to 36 inches.
900 P (fbadc)	**Endoquents (sandy or gravelly)**	**A**	**C**	This map unit represents areas of poorly drained soils where soil material was excavated down to, or near the water table. These disturbed soils are located in the southeast portion of the mapped area, in a man made detention pond. These soils are poorly drained and are deep to bedrock. These soils were most likely derrived from the Windsor soil series. Saturated hydraulic conductivity is moderately high or high. Estimated seasonal high water table in these soils is less than 10 inches.

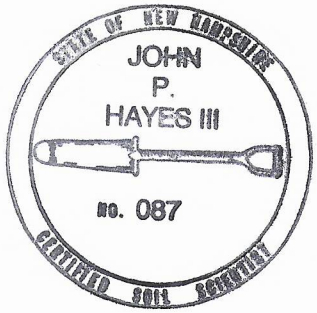
Slope Phases

Alpha Slope Symbol	Range
A	0 – 3%
B	3 – 8%
C	8 – 15%
D	15 – 25%
E	25 – 50%
F	> 50%

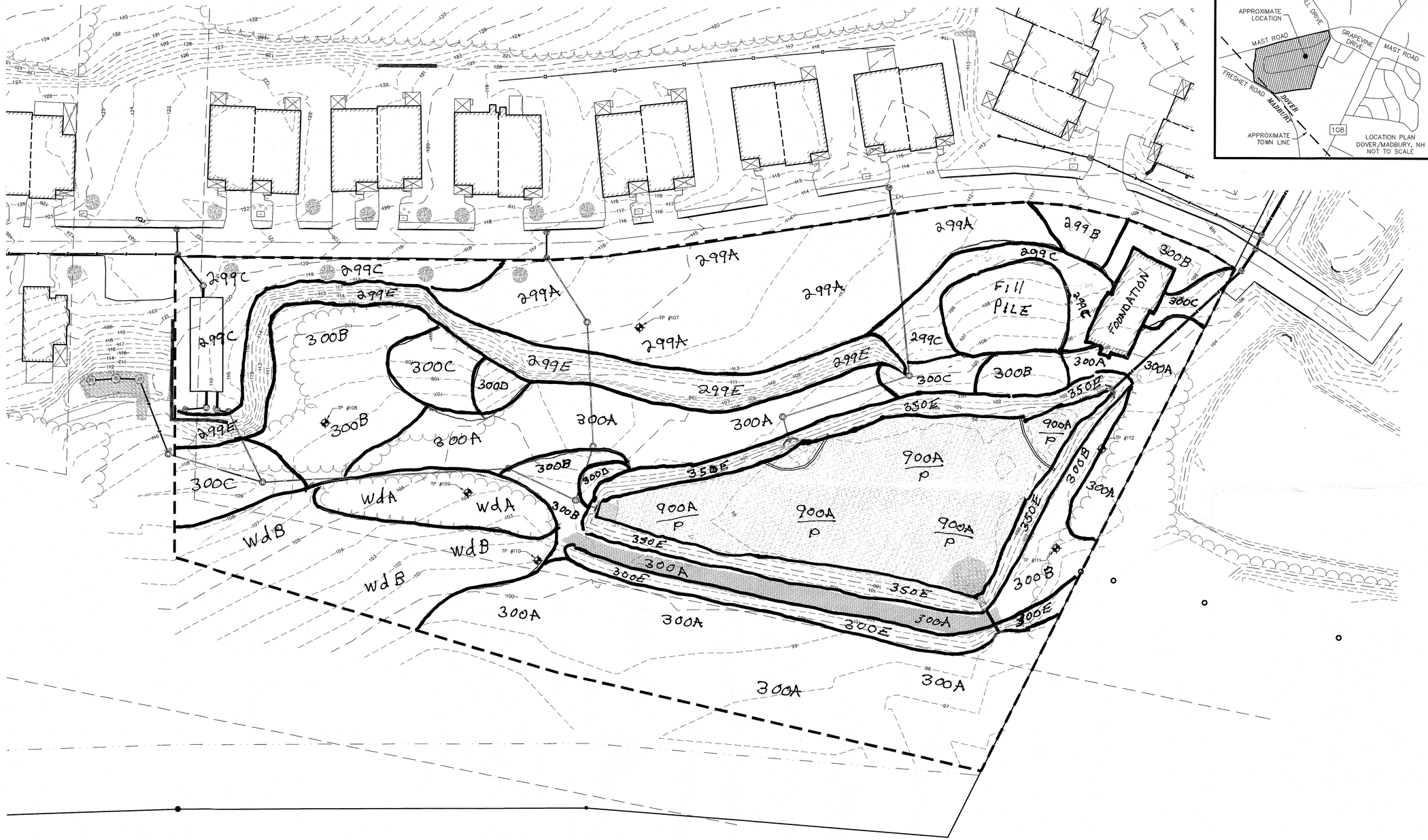
I trust that this Soil Survey and report meet your current planning needs. Please do not hesitate to contact me if you have any questions.

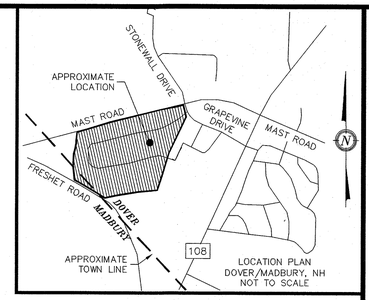
Sincerely:

John P. Hayes III



John P. Hayes III CSS, CWS





LOCATION PLAN
DOVER/MADBURY, NH
NOT TO SCALE

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

REVISION	DATE	DESCRIPTION

SITE SPECIFIC SOILS MAP
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 40 FT.
DATE : MARCH 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
LICENSED LAND SURVEYOR
NO. 805
KENNETH A. BERRY
SIGNATURE

SHEET #### OF ####

Welcome to New Hampshire's Watershed Report Cards built from the 2020/2022, 305(b)/303(d)

Each Watershed Report Card covers a single 12-digit Hydrologic Unit Code (HUC12), on average a 34 square mile area. Each Watershed Report Card has three components;

1. REPORT CARD - A one page card that summarizes the overall use support for Aquatic Life Integrity, Primary Contact (i.e. Swimming), and Secondary Contact (i.e. Boating) Designated Uses on every Assessment Unit ID (AUID) within the HUC12.
2. HUC 12 MAP - A map of the watershed with abbreviated labels for each AUID within the HUC12.
3. ASSESSMENT DETAILS - Anywhere from one to forty pages with the detailed assessment information for each and every AUID in the Report Card and Map.

How are the Surface Water Quality Assessment determinations made?

All readily available data with reliable Quality Assurance/Quality Control is used in the biennial surface water quality assessments. For a full understanding of how the Surface Water Quality Standards (Env-Wq 1700) are translated into surface water quality assessments we urge the reader to review the 2020/2022 Consolidated Assessment and Listing Methodology (CALM).

Where can I find more advanced mapping resources?

GIS files are available by assessment cycle at the NHDES FTP site.

I'd like to see the more raw water quality data?

The web mapping tool allows you to download the data used in the assessment of the primary contact and aquatic life designated uses by clicking on the "Data Access Waterbody Data (Aquatic Life and Swimming Uses)" link for any assessment unit.

How are assessments coded in the report card?

Assessment outcomes are displayed on a color scale as well as an alpha numeric scale that provides additional distinctions for the designated use and parameter level assessments as outlined in the table below.

		Severe Not Supporting, Severe	**Poor** Not Supporting, Marginal	**Likely Bad** Insufficient Information – Potentially Not Supporting	**No Data** No Data	**Likely Good** Insufficient Information – Potentially Full Supporting	**Marginal** Full Support, Marginal	**Good** Full Support, Good
CATEGORY	**Description**							
Category 2	Meets standards						2-M or 2-OBS	2-G
Category 3	Insufficient Information			3-PNS	3-ND	3-PAS		
Category 4	Does not Meet Standards;							
4A	TMDL* Completed	4A-P	4A-M or 4A-T					
4B	Other enforceable measure will correct the issue.	4B-P	4B-M or 4B-T					
4C	Non-pollutant (i.e. exotic weeds)	4C-P	4C-M					
Category 5	TMDL* Needed	5-P	5-M or 5-T					

* TMDL stands for Total Maximum Daily Load studies

Watershed 305(b) Assessment Summary Report:

Assessment Cycle: 2020/2022

HUC 12: 010600030902

HUC 12 Name: Oyster River

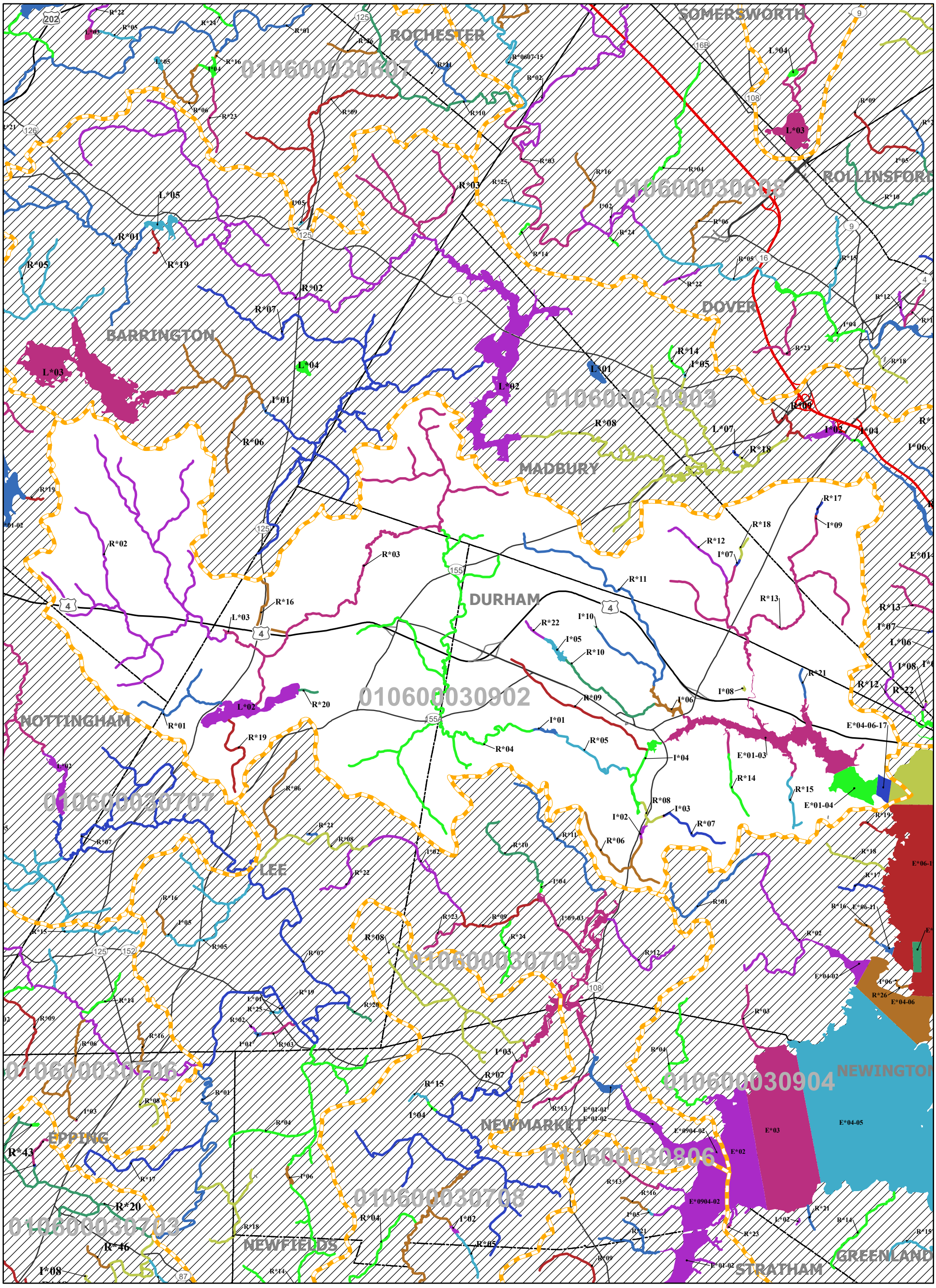
(Locator map on next page only applies to this HUC12)

Good	Meets water quality standards/thresholds by a relatively large margin.
Marginal	Meets water quality standards/thresholds but only marginally.
Likely Good	Limited data available, however, the data that is available suggests that the parameter is Potentially Attaining Standards (PAS).
No Current Data	Insufficient information to make an assessment decision.
Likely Bad	Limited data available, however, the data that is available suggests that the parameter is Potentially Not Supporting (PNS) water quality standards.
Poor	Not meeting water quality standards/thresholds. The impairment is marginal.
Severe	Not meeting water quality standards/thresholds. The impairment is more severe and causes poor water quality.

Assessment Unit ID	Map Label	Assessment Unit Name	Aquatic Life	Fish Consump.	Swimming	Boating
NHEST600030902-01-03	E*01-03	Upper Oyster River Wwtf Sz		5-M	4A-P	4A-M
NHEST600030902-01-04		Lower Oyster River	5-P	3-ND	3-ND	3-ND
NHIMP600030902-01	I*01	Oyster River - Oyster Reservoir	3-ND	4A-M	3-ND	3-ND
NHIMP600030902-02	I*02	Longmarsh Brook - Lonsinger Dam	3-ND	4A-M	3-ND	3-ND
NHIMP600030902-03	I*03	Hamel Brook - Fernandez Pond	3-ND	4A-M	3-ND	3-ND
NHIMP600030902-04	I*04	Oyster River - Mill Pond Dam	5-P	4A-M	5-M	2-G
NHIMP600030902-05	I*05	Durham Reservoir - Durham Reservoir Dam	3-ND	4A-M	3-ND	3-ND
NHIMP600030902-06	I*06	Beards Creek	5-M	4A-M	4A-M	4A-M
NHIMP600030902-07	I*07	Gerrish Brook - Hoyt Pond	3-ND	4A-M	3-ND	3-ND
NHIMP600030902-08	I*08	Johnson Creek - Farm Pond	3-ND	4A-M	3-ND	3-ND
NHIMP600030902-09	I*09	Unnamed Brook - Redden Pond Dam	3-ND	4A-M	3-ND	3-ND
NHIMP600030902-10	I*10	Unnamed Brook - Ejarque Pond Dam	3-ND	4A-M	3-ND	3-ND

NHLAK600030902-02	L*02	Wheelwright Pond	5-P	4A-M	3-PAS	3-ND
NHLAK600030902-03	L*03	Unnamed Pond	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-01	R*01	Unnamed Tributary - To Wheelwright Pond	5-P	4A-M	3-ND	3-ND
NHRIV600030902-02	R*02	Oyster River - Caldwell Brook	5-P	4A-M	4A-P	4A-P
NHRIV600030902-03	R*03	Oyster River	5-P	4A-M	4A-P	4A-P
NHRIV600030902-04	R*04	Oyster River - Chelsey Brook	5-P	4A-M	4A-P	4A-P
NHRIV600030902-05	R*05	Oyster River - Unnamed Brook	3-ND	4A-M	4A-P	3-ND
NHRIV600030902-06	R*06	Longmarsh Brook - Beaudette Brook	5-M	4A-M	4A-P	3-ND
NHRIV600030902-07	R*07	Hamel Brook	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-08	R*08	Hamel Brook - Longmarsh Brook	5-P	4A-M	4A-P	4A-P
NHRIV600030902-09	R*09	College Brook	5-P	4A-M	4A-P	4A-P
NHRIV600030902-10	R*10	Reservoir Brook	5-P	4A-M	4A-P	4A-P
NHRIV600030902-11	R*11	Littlehole Creek	5-P	4A-M	4A-P	4A-P
NHRIV600030902-12	R*12	Gerrish Brook	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-13	R*13	Johnson Creek - Gerrish Brook	5-M	4A-M	4A-P	2-M
NHRIV600030902-14	R*14	Horsehide Brook	5-M	4A-M	3-ND	3-ND
NHRIV600030902-15	R*15	Chase Brook	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-16	R*16	Wendys Brook	5-M	4A-M	4A-P	4A-P
NHRIV600030902-17	R*17	Johnson Creek	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-18	R*18	Unnamed Brook	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-19	R*19	Unnamed Brook	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-20	R*20	Unnamed Brook	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-21	R*21	Bunker Creek	3-ND	4A-M	3-ND	3-ND
NHRIV600030902-22	R*22	Reservoir Brook	3-ND	4A-M	3-ND	3-ND

AUIDs For HUC12: 010600030902 - Oyster River



HUC12 Boundaries
Town Boundaries
Major Roads
Interstate Highway
US Highway
State Highway

Assessment Unit Coloring
AUs Ending with:
0 =
1 =
2 =
3 =
4 =
5 =
6 =
7 =
8 =
9 =

N
W E
S

Abbrv. Label	HUC 12
L* 03	010 700060201

AUID = NH L AK 700060201 - 03

Assessment Unit IDs are derived from the HUC12 they reside within. The labels have been shortened on this map for presentation purposes.
Example: the Label "L*03" in HUC12 = 010700060201 represents AUID = "NHLAK700060201-03"
In rare cases where an AUID extends beyond the boundary of a single HUC12, additional portions of the end of the HUC 12 number have also been replaced.

0 0.65 1.3 1.95 2.6 Miles

Scale:1:65,130

S:\WD-Watershed\WQ_Planning\305b_303d\2020\Report_Cards\HUC12_maps

Assessment Unit ID: NHRIV600030902-13
Assessment Unit Name: Johnson Creek - Gerrish Brook
Town(s) Primary Town is Listed First: Dover, Durham, Madbury

Size: 5.8460 MILES
Assessment Unit Category: 5-M
Beach: N

2020/2022, 305(b)/303(d) - All Reviewed Parameters by Assessment Unit

Designated Use Description	Desig. Use Category	Parameter Name	Parameter Threatened (Y/N)	Last Sample	Last Exceed	Parameter Category	TMDL Priority
Aquatic Life Integrity	5-M	AMMONIA (TOTAL)	N	2008	N/A	3-ND	
		Benthic-Macroinvertebrate Bioassessments (Streams)	N			3-ND	
		CHLORIDE	N	2019	N/A	3-PAS	
		DISSOLVED OXYGEN SATURATION	N	2019	N/A	2-G	
		Fishes Bioassessments (Streams)	N			3-ND	
		OXYGEN, DISSOLVED	N	2019	2016	2-M	
		PH	N	2019	2019	5-M	LOW
		TURBIDITY	N	2019	2019	3-PAS	
Fish Consumption	4A-M	MERCURY - FISH CONSUMPTION ADVISORY	N			4A-M	
Potential Drinking Water Supply	2-G	ESCHERICHIA COLI	N	2019	2019	3-PNS	
		SULFATES	N	2008	N/A	3-ND	
Primary Contact Recreation	4A-P	ESCHERICHIA COLI	N	2019	2019	4A-P	
Secondary Contact Recreation	2-M	ESCHERICHIA COLI	N	2019	2012	2-M	
Wildlife	3-ND						

Good	Marginal	Likely Good	No Current Data	Likely Bad	Poor	Severe
Meets water quality standards/thresholds by a relatively large margin.	Meets water quality standards/thresholds but only marginally.	Limited data available. The data that is available suggests that the parameter is Potentially Attaining Standards (PAS)	Insufficient information to make an assessment decision.	Limited data available The data that is available suggests that the parameter is Potentially Not Supporting (PNS) water quality standards.	Not meeting water quality standards/thresholds. The impairment is marginal.	Not meeting water quality standards/thresholds The impairment is more severe and causes poor water quality.

2018	NHRIV600030806-14	STUART DAIRY FARM BROOK	STRATHAM	0.124	MILES	Primary Contact Recreatior	Escherichia coli	4A-M	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CO	NORTH HAMPTON, HAMPTON, STRATHAN	15.194	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessme	5-P			Non-ORW
2018	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CO	NORTH HAMPTON, HAMPTON, STRATHAN	15.194	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CO	NORTH HAMPTON, HAMPTON, STRATHAN	15.194	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CO	NORTH HAMPTON, HAMPTON, STRATHAN	15.194	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CO	NORTH HAMPTON, HAMPTON, STRATHAN	15.194	MILES	Primary Contact Recreatior	Escherichia coli	5-P			Non-ORW
2018	NHRIV600030901-02	WINNICUT RIVER - BARTON BROOK - MAR	GREENLAND, NORTH HAMPTON, STRATHA	12.729	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030901-02	WINNICUT RIVER - BARTON BROOK - MAR	GREENLAND, NORTH HAMPTON, STRATHA	12.729	MILES	Primary Contact Recreatior	Escherichia coli	4A-M	9/27/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030901-03	HAINES BROOK	GREENLAND	0.619	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030901-05	PACKER BROOK	GREENLAND	1.756	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030901-05	PACKER BROOK	GREENLAND	1.756	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030901-05	PACKER BROOK	GREENLAND	1.756	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030901-06	NORTON BROOK	GREENLAND	0.883	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030901-06	NORTON BROOK	GREENLAND	0.883	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030901-06	NORTON BROOK	GREENLAND	0.883	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	8/29/2011	58 NH BACTERIA IMPAIRED WA	40663 Non-ORW
2018	NHRIV600030901-07	WINNICUT RIVER - UNNAMED BROOK	NORTH HAMPTON, HAMPTON, STRATHAN	8.462	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030901-07	WINNICUT RIVER - UNNAMED BROOK	NORTH HAMPTON, HAMPTON, STRATHAN	8.462	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030901-07	WINNICUT RIVER - UNNAMED BROOK	NORTH HAMPTON, HAMPTON, STRATHAN	8.462	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030902-01	UNNAMED TRIBUTARY - TO WHEELWRIGH	LEE, NOTTINGHAM	1.483	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030902-01	UNNAMED TRIBUTARY - TO WHEELWRIGH	LEE, NOTTINGHAM	1.483	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030902-01	UNNAMED TRIBUTARY - TO WHEELWRIGH	LEE, NOTTINGHAM	1.483	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030902-02	OYSTER RIVER - CALDWELL BROOK	BARRINGTON, LEE, NOTTINGHAM	11.406	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030902-02	OYSTER RIVER - CALDWELL BROOK	BARRINGTON, LEE, NOTTINGHAM	11.406	MILES	Aquatic Life Integrity	pH	5-P			Non-ORW
2018	NHRIV600030902-02	OYSTER RIVER - CALDWELL BROOK	BARRINGTON, LEE, NOTTINGHAM	11.406	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39269 Non-ORW
2018	NHRIV600030902-03	OYSTER RIVER	MADBURY, BARRINGTON, LEE	8.537	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030902-03	OYSTER RIVER	MADBURY, BARRINGTON, LEE	8.537	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030902-03	OYSTER RIVER	MADBURY, BARRINGTON, LEE	8.537	MILES	Aquatic Life Integrity	pH	5-P			Non-ORW
2018	NHRIV600030902-03	OYSTER RIVER	MADBURY, BARRINGTON, LEE	8.537	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39269 Non-ORW
2018	NHRIV600030902-04	OYSTER RIVER - CHELSEY BROOK	LEE, DURHAM, MADBURY	10.5	MILES	Aquatic Life Integrity	Aluminum	5-M			Non-ORW
2018	NHRIV600030902-04	OYSTER RIVER - CHELSEY BROOK	LEE, DURHAM, MADBURY	10.5	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030902-04	OYSTER RIVER - CHELSEY BROOK	LEE, DURHAM, MADBURY	10.5	MILES	Aquatic Life Integrity	pH	5-P			Non-ORW
2018	NHRIV600030902-04	OYSTER RIVER - CHELSEY BROOK	LEE, DURHAM, MADBURY	10.5	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39269 Non-ORW
2018	NHRIV600030902-05	OYSTER RIVER - UNNAMED BROOK	DURHAM	1.156	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030902-06	LONGMARSH BROOK - BEAUDETTE BROOK	DURHAM	1.675	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M			Non-ORW
2018	NHRIV600030902-06	LONGMARSH BROOK - BEAUDETTE BROOK	DURHAM	1.675	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030902-06	LONGMARSH BROOK - BEAUDETTE BROOK	DURHAM	1.675	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030902-08	HAMEL BROOK - LONGMARSH BROOK	DURHAM	0.462	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030902-08	HAMEL BROOK - LONGMARSH BROOK	DURHAM	0.462	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030902-08	HAMEL BROOK - LONGMARSH BROOK	DURHAM	0.462	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030902-08	HAMEL BROOK - LONGMARSH BROOK	DURHAM	0.462	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030902-09	COLLEGE BROOK	DURHAM	1.892	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessme	5-M			Non-ORW
2018	NHRIV600030902-09	COLLEGE BROOK	DURHAM	1.892	MILES	Aquatic Life Integrity	Chloride	5-M			Non-ORW
2018	NHRIV600030902-09	COLLEGE BROOK	DURHAM	1.892	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030902-09	COLLEGE BROOK	DURHAM	1.892	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	1.343	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessme	5-M			Non-ORW
2018	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	1.343	MILES	Aquatic Life Integrity	Chloride	5-M			Non-ORW
2018	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	1.343	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	1.343	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	1.343	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	1.343	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW
2018	NHRIV600030902-11	LITTLEHOLE CREEK	DURHAM, MADBURY	3.781	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030902-11	LITTLEHOLE CREEK	DURHAM, MADBURY	3.781	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030902-11	LITTLEHOLE CREEK	DURHAM, MADBURY	3.781	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	8/29/2011	58 NH BACTERIA IMPAIRED WA	40663 Non-ORW
2018	NHRIV600030902-13	JOHNSON CREEK - GERRISH BROOK	MADBURY, DOVER, DURHAM	5.846	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030902-13	JOHNSON CREEK - GERRISH BROOK	MADBURY, DOVER, DURHAM	5.846	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39273 Non-ORW
2018	NHRIV600030902-14	HORSEHIDE BROOK	DURHAM	0.749	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M			Non-ORW
2018	NHRIV600030902-16	WENDYS BROOK	LEE	0.972	MILES	Aquatic Life Integrity	Chloride	5-M			Non-ORW
2018	NHRIV600030902-16	WENDYS BROOK	LEE	0.972	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030902-16	WENDYS BROOK	LEE	0.972	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	8/29/2011	58 NH BACTERIA IMPAIRED WA	40664 Non-ORW
2018	NHRIV600030903-01	MADLA BROOK	BARRINGTON	4.902	MILES	Aquatic Life Integrity	pH	5-P			Non-ORW
2018	NHRIV600030903-02	MALLEGO BROOK	BARRINGTON, MADBURY	9.543	MILES	Aquatic Life Integrity	pH	5-P			Non-ORW
2018	NHRIV600030903-06	BELLAMY RIVER - UNNAMED BROOK	BARRINGTON	3.387	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M			Non-ORW
2018	NHRIV600030903-06	BELLAMY RIVER - UNNAMED BROOK	BARRINGTON	3.387	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030903-07	BELLAMY RIVER	BARRINGTON, LEE, MADBURY	11.507	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M			Non-ORW
2018	NHRIV600030903-07	BELLAMY RIVER	BARRINGTON, LEE, MADBURY	11.507	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P			Non-ORW
2018	NHRIV600030903-07	BELLAMY RIVER	BARRINGTON, LEE, MADBURY	11.507	MILES	Aquatic Life Integrity	pH	5-P			Non-ORW
2018	NHRIV600030903-07	BELLAMY RIVER	BARRINGTON, LEE, MADBURY	11.507	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39269 Non-ORW
2018	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MA	MADBURY, DOVER	9.454	MILES	Aquatic Life Integrity	Aluminum	5-M			Non-ORW
2018	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MA	MADBURY, DOVER	9.454	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessme	5-P			Non-ORW
2018	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MA	MADBURY, DOVER	9.454	MILES	Aquatic Life Integrity	Habitat Assessment (Streams)	4C-P			Non-ORW
2018	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MA	MADBURY, DOVER	9.454	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MA	MADBURY, DOVER	9.454	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39269 Non-ORW
2018	NHRIV600030903-09	BELLAMY RIVER - UNNAMED BROOK	DOVER	0.756	MILES	Aquatic Life Integrity	pH	5-M			Non-ORW
2018	NHRIV600030903-09	BELLAMY RIVER - UNNAMED BROOK	DOVER	0.756	MILES	Primary Contact Recreatior	Escherichia coli	4A-P	9/21/2010	NEW HAMPSHIRE STATEWIDE E	39272 Non-ORW

2020	NHRIV600030806-09	UNNAMED BROOK - TO SQUAMSCOTT RIVER	NEWFIELDS	Yes	1.412	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2004	2001
2020	NHRIV600030806-09	UNNAMED BROOK - TO SQUAMSCOTT RIVER	NEWFIELDS	Yes	1.412	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M	LOW	N	2004	2001
2020	NHRIV600030806-09	UNNAMED BROOK - TO SQUAMSCOTT RIVER	NEWFIELDS	Yes	1.412	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2004	2004
2020	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CORNELIUS BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	15.194	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessments (Streams)	5-P	LOW	N	2003	2003
2020	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CORNELIUS BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	15.194	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-P	LOW	N	2018	2012
2020	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CORNELIUS BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	15.194	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2018	2018
2020	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CORNELIUS BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	15.194	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2018	2018
2020	NHRIV600030901-01	WINNICUT RIVER - UNNAMED BROOK - CORNELIUS BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	15.194	MILES	Primary Contact Recreation	Escherichia coli	5-M	LOW	N	2018	2017
2020	NHRIV600030901-02	WINNICUT RIVER - BARTON BROOK - MARSH BROOK - THOMPSON BROOK	GREENLAND, NORTH HAMPTON, STRATHAM	Yes	12.729	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-P	LOW	N	2018	2016
2020	NHRIV600030901-02	WINNICUT RIVER - BARTON BROOK - MARSH BROOK - THOMPSON BROOK	GREENLAND, NORTH HAMPTON, STRATHAM	Yes	12.729	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2018	2018
2020	NHRIV600030901-05	PACKER BROOK	GREENLAND	Yes	1.756	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2015	2015
2020	NHRIV600030901-05	PACKER BROOK	GREENLAND	Yes	1.756	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2015	2015
2020	NHRIV600030901-05	PACKER BROOK	GREENLAND	Yes	1.756	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2015	2014
2020	NHRIV600030901-06	NORTON BROOK	GREENLAND		0.883	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-P	LOW	N	2017	2017
2020	NHRIV600030901-06	NORTON BROOK	GREENLAND		0.883	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2017	2017
2020	NHRIV600030901-06	NORTON BROOK	GREENLAND		0.883	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2017	2017
2020	NHRIV600030901-07	WINNICUT RIVER - UNNAMED BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	8.462	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2018	2018
2020	NHRIV600030901-07	WINNICUT RIVER - UNNAMED BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	8.462	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2018	2018
2020	NHRIV600030901-07	WINNICUT RIVER - UNNAMED BROOK	NORTH HAMPTON, HAMPTON, STRATHAM	Yes	8.462	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2018	2018
2020	NHRIV600030902-01	UNNAMED TRIBUTARY - TO WHEELWRIGHT POND	LEE, NOTTINGHAM		1.483	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2007	2007
2020	NHRIV600030902-01	UNNAMED TRIBUTARY - TO WHEELWRIGHT POND	LEE, NOTTINGHAM		1.483	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2007	2007
2020	NHRIV600030902-01	UNNAMED TRIBUTARY - TO WHEELWRIGHT POND	LEE, NOTTINGHAM		1.483	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2007	2007
2020	NHRIV600030902-02	OYSTER RIVER - CALDWELL BROOK	BARRINGTON, LEE, NOTTINGHAM		11.406	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-P	LOW	N	2019	2016
2020	NHRIV600030902-02	OYSTER RIVER - CALDWELL BROOK	BARRINGTON, LEE, NOTTINGHAM		11.406	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2019	2019
2020	NHRIV600030902-02	OYSTER RIVER - CALDWELL BROOK	BARRINGTON, LEE, NOTTINGHAM		11.406	MILES	Aquatic Life Integrity	pH	5-P	LOW	N	2019	2019
2020	NHRIV600030902-03	OYSTER RIVER	MADBURY, BARRINGTON, LEE		8.537	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2019	2019
2020	NHRIV600030902-03	OYSTER RIVER	MADBURY, BARRINGTON, LEE		8.537	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2019	2019
2020	NHRIV600030902-03	OYSTER RIVER	MADBURY, BARRINGTON, LEE		8.537	MILES	Aquatic Life Integrity	pH	5-P	LOW	N	2019	2019
2020	NHRIV600030902-04	OYSTER RIVER - CHELSEY BROOK	LEE, DURHAM, MADBURY	Yes	10.500	MILES	Aquatic Life Integrity	Aluminum	5-M	LOW	N	2019	2018
2020	NHRIV600030902-04	OYSTER RIVER - CHELSEY BROOK	LEE, DURHAM, MADBURY	Yes	10.500	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2019	2018
2020	NHRIV600030902-04	OYSTER RIVER - CHELSEY BROOK	LEE, DURHAM, MADBURY	Yes	10.500	MILES	Aquatic Life Integrity	pH	5-P	LOW	N	2019	2019
2020	NHRIV600030902-06	LONGMARSH BROOK - BEAUDETTE BROOK	DURHAM	Yes	1.675	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M	LOW	N	2007	2007
2020	NHRIV600030902-06	LONGMARSH BROOK - BEAUDETTE BROOK	DURHAM	Yes	1.675	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2007	2007
2020	NHRIV600030902-08	HAMEL BROOK - LONGMARSH BROOK	DURHAM	Yes	0.462	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2019	2019
2020	NHRIV600030902-08	HAMEL BROOK - LONGMARSH BROOK	DURHAM	Yes	0.462	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2019	2019
2020	NHRIV600030902-08	HAMEL BROOK - LONGMARSH BROOK	DURHAM	Yes	0.462	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2019
2020	NHRIV600030902-09	COLLEGE BROOK	DURHAM	Yes	1.892	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessments (Streams)	5-M	LOW	N	2001	2001
2020	NHRIV600030902-09	COLLEGE BROOK	DURHAM	Yes	1.892	MILES	Aquatic Life Integrity	Chloride	5-M	LOW	N	2019	2019
2020	NHRIV600030902-09	COLLEGE BROOK	DURHAM	Yes	1.892	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-P	LOW	N	2019	2017
2020	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	Yes	1.343	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessments (Streams)	5-M	LOW	N	2001	2001
2020	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	Yes	1.343	MILES	Aquatic Life Integrity	Chloride	5-M	LOW	N	2019	2019
2020	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	Yes	1.343	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2019	2006
2020	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	Yes	1.343	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2019	2006
2020	NHRIV600030902-10	RESERVOIR BROOK	DURHAM	Yes	1.343	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2017
2020	NHRIV600030902-11	LITTLEHOLE CREEK	DURHAM, MADBURY	Yes	3.781	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-P	LOW	N	2016	2011
2020	NHRIV600030902-11	LITTLEHOLE CREEK	DURHAM, MADBURY	Yes	3.781	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2016	2011
2020	NHRIV600030902-13	JOHNSON CREEK - GERRISH BROOK	MADBURY, DOVER, DURHAM	Yes	5.846	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2019
2020	NHRIV600030902-14	HORSEHIDE BROOK	DURHAM	Yes	0.749	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M	LOW	N	2007	2007
2020	NHRIV600030902-16	WENDYS BROOK	LEE		0.972	MILES	Aquatic Life Integrity	Chloride	5-M	LOW	N	2019	2019
2020	NHRIV600030902-16	WENDYS BROOK	LEE		0.972	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2019	2017
2020	NHRIV600030902-16	WENDYS BROOK	LEE		0.972	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M	LOW	N	2019	2017
2020	NHRIV600030902-16	WENDYS BROOK	LEE		0.972	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2018
2020	NHRIV600030903-01	MADLA BROOK	BARRINGTON		4.902	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2019
2020	NHRIV600030903-02	MALLEGO BROOK	BARRINGTON, MADBURY	Yes	9.543	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2019	2017
2020	NHRIV600030903-02	MALLEGO BROOK	BARRINGTON, MADBURY	Yes	9.543	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M	LOW	N	2019	2018
2020	NHRIV600030903-02	MALLEGO BROOK	BARRINGTON, MADBURY	Yes	9.543	MILES	Aquatic Life Integrity	pH	5-P	LOW	N	2019	2019
2020	NHRIV600030903-06	BELLAMY RIVER - UNNAMED BROOK	BARRINGTON		3.387	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-M	LOW	N	2019	2013
2020	NHRIV600030903-06	BELLAMY RIVER - UNNAMED BROOK	BARRINGTON		3.387	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2019
2020	NHRIV600030903-07	BELLAMY RIVER	BARRINGTON, LEE, MADBURY		11.507	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2019	2018
2020	NHRIV600030903-07	BELLAMY RIVER	BARRINGTON, LEE, MADBURY		11.507	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2019	2019
2020	NHRIV600030903-07	BELLAMY RIVER	BARRINGTON, LEE, MADBURY		11.507	MILES	Aquatic Life Integrity	pH	5-P	LOW	N	2019	2019
2020	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MARSH BROOK	MADBURY, DOVER	Yes	9.454	MILES	Aquatic Life Integrity	Aluminum	5-M	LOW	N	2019	2017
2020	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MARSH BROOK	MADBURY, DOVER	Yes	9.454	MILES	Aquatic Life Integrity	Benthic-Macroinvertebrate Bioassessments (Streams)	5-P	LOW	N	2000	2000
2020	NHRIV600030903-08	BELLAMY RIVER - KELLY BROOK - KNOX MARSH BROOK	MADBURY, DOVER	Yes	9.454	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2019
2020	NHRIV600030903-09	BELLAMY RIVER - UNNAMED BROOK	DOVER	Yes	0.756	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2019	2017
2020	NHRIV600030904-06	PICKERING BROOK	PORTSMOUTH, GREENLAND	Yes	6.432	MILES	Aquatic Life Integrity	Chloride	5-M	LOW	N	2005	2005
2020	NHRIV600030904-06	PICKERING BROOK	PORTSMOUTH, GREENLAND	Yes	6.432	MILES	Aquatic Life Integrity	Copper	5-P	LOW	N	1992	1992
2020	NHRIV600030904-06	PICKERING BROOK	PORTSMOUTH, GREENLAND	Yes	6.432	MILES	Aquatic Life Integrity	Dissolved oxygen saturation	5-M	LOW	N	2005	2005
2020	NHRIV600030904-06	PICKERING BROOK	PORTSMOUTH, GREENLAND	Yes	6.432	MILES	Aquatic Life Integrity	Iron	5-P	LOW	N	1992	1992
2020	NHRIV600030904-06	PICKERING BROOK	PORTSMOUTH, GREENLAND	Yes	6.432	MILES	Aquatic Life Integrity	Oxygen, Dissolved	5-P	LOW	N	2005	2005
2020	NHRIV600030904-06	PICKERING BROOK	PORTSMOUTH, GREENLAND	Yes	6.432	MILES	Aquatic Life Integrity	pH	5-M	LOW	N	2005	2005
2020	NHRIV600030904-09	KNIGHT BRANCH	NEWINGTON		0.565	MILES	Aquatic Life Integrity	Aluminum	5-M	LOW	N	1992	1992
2020	NHRIV600030904-11	MCINTYRE BROOK - PEASE AIR FORCE BASE	NEWINGTON		0.621	MILES	Aquatic Life Integrity	Manganese	5-M	LOW	N	1992	1992
2020	NHRIV600030904-12	PEVERLY BROOK - PEASE AIR FORCE BASE	NEWINGTON		0.131	MILES	Aquatic Life Integrity	Arsenic	5-M	LOW	N	1992	1992

NOTE:

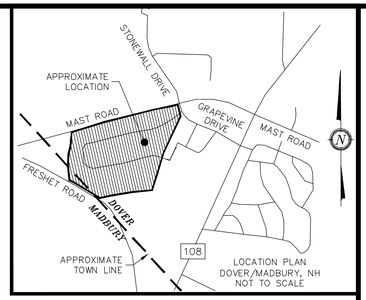
A PRE-EXISTING CONDITIONS ANALYSIS (W-1) WAS COMPLETED FOR THE PROPERTY BASED ON THE DATA ON PUBLIC RECORD AT NHDES ALTERATION OF TERRAIN (AoT). THE PURPOSE OF THE PRE-EXISTING CONDITIONS ANALYSIS WAS TO MAINTAIN THE SUBCATCHMENT DIVIDING LINES WHICH RESULTED IN THE ANALYSIS OF PEAK RATES OF RUNOFF AND VOLUME AT THE FIVE ANALYSIS POINTS ALONG THE SOUTHERN PROPERTY LINE, WHICH HAVE BEEN MAINTAINED.

THE RECORDED ANALYSIS WAS COMPLETED BASED ON ADMINISTRATIVE RULES AND REGULATIONS IN EFFECT PRIOR TO 2008 ALTHOUGH THE APPROVAL IS DATED 2010. LIKEWISE, THE RAINFALL DATA USED FOR STORM EVENTS PREDATES THE CURRENT EXTREME PRECIPITATION STANDARDS. THE PRE-EXISTING CONDITIONS DRAINAGE ANALYSIS PROVIDED IN APPENDIX I IS PROVIDED TO COMPARE THE RECORDED ANALYSIS TO THE CURRENT STANDARDS. THIS ANALYSIS ALSO REPRESENTS MORE CURRENT ANALYSIS METHODOLOGIES.

NRCS SOILS:

EoA – ELMWOOD FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
HoB – HINCKLEY LOAMY SAND, 3 TO 8 PERCENT SLOPES
SwA – SWANTON FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
WdA – WINDSOR LOAMY SAND, 0 TO 3 PERCENT SLOPES
WdB – WINDSOR LOAMY SAND, 3 TO 8 PERCENT SLOPES
WfB – WINDSOR LOAMY FINE SAND, CLAY SUBSOIL, 0 TO 8 PERCENT SLOPES

SEE WEBSOIL USDA-NRCS



NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

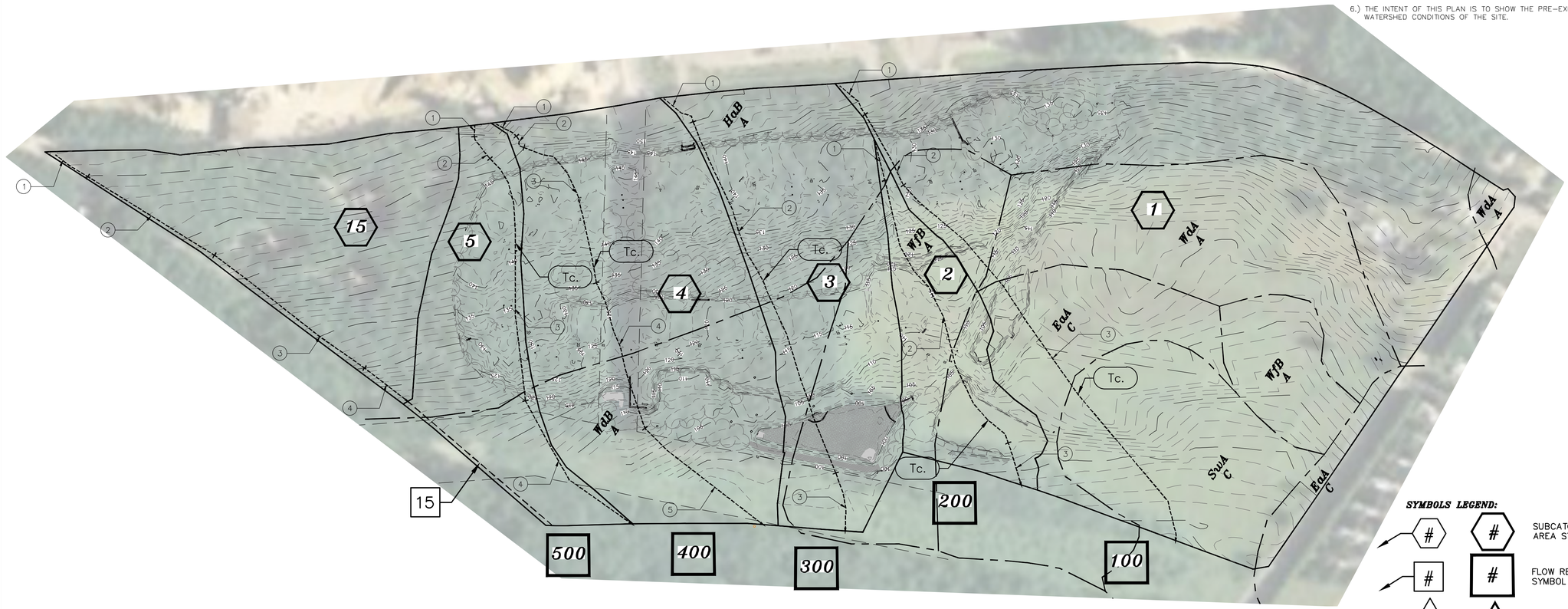
2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PREFORMED BY BERRY SURVEYING AND ENGINEERING IN 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 IN 10,000.

5.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PRE-EXISTING ANALYZED WATERSHED CONDITIONS OF THE SITE.



16° ±
MAGNETIC
MARS HILL UTOPIA PLANE

SYMBOLS LEGEND:

- # — SUBCATCHMENT AREA SYMBOL
- # — FLOW REACH SYMBOL
- # — POND DEVICE SYMBOL
- Tc. — TIME OF CONCENTRATION SEGMENT (#)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

REVISION	DATE	DESCRIPTION

W-1 PRE-EXISTING WATERSHED OVERVIEW
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 150 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14249
LICENSED PROFESSIONAL ENGINEER

WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

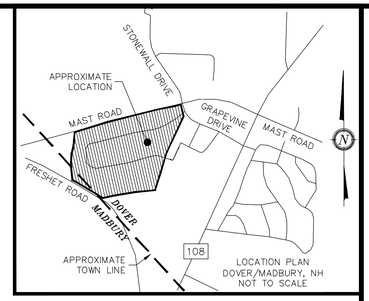
1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295

NRCS SOILS:

EmA – ELMWOOD FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
HnB – HINCKLEY LOAMY SAND, 3 TO 8 PERCENT SLOPES
SwA – SWANTON FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
WdA – WINDSOR LOAMY SAND, 0 TO 3 PERCENT SLOPES
WdB – WINDSOR LOAMY SAND, 3 TO 8 PERCENT SLOPES
WfB – WINDSOR LOAMY FINE SAND, CLAY SUBSOIL, 0 TO 8 PERCENT SLOPES

SEE WEBSOIL USDA–NRCS



LOCATION PLAN
DOVER/MADBURY, NH
NOT TO SCALE

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

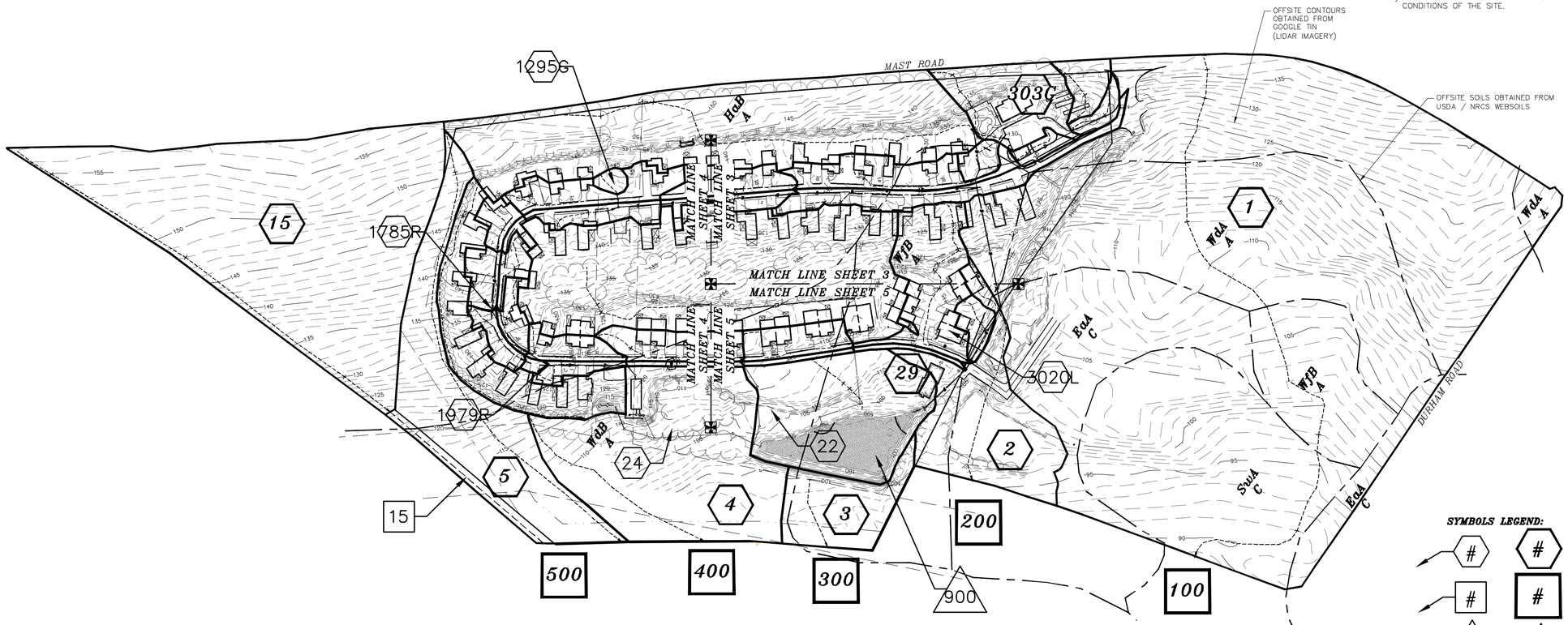
2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PREFORMED BY BERRY SURVEYING AND ENGINEERING IN 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 IN 10,000.

5.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING WATERSHED CONDITIONS OF THE SITE.



LEGEND:

299 / 100	EXISTING CONTOUR MINOR / EXISTING CONTOUR MAJOR
	STONE WALL
	WETLAND LINE
	PROPERTY LINE
	SOIL LINE
448A	SOIL SERIES
HfB	NRCS SOIL LINE / NRCS SOIL LABEL
	LIMIT OF WATERSHED
	TIME OF CONCENTRATION PATH
	FLOW REACH
	MATCH LINE
S.C.R.D.	STRAFFORD COUNTY REGISTRY OF DEEDS
TYP.	TYPICAL
FND	FOUND
TBR	TO BE REMOVED

SYMBOLS LEGEND:

- # — SUBCATCHMENT AREA SYMBOL
- # — FLOW REACH SYMBOL
- # — POND DEVICE SYMBOL
- Tc. / # — TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

150 0 75 150 300 600

(IN FEET)
1 inch = 150 ft.

REVISION	DATE	DESCRIPTION

W-2 EXISTING WATERSHED OVERVIEW
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 150 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14142
LICENSED PROFESSIONAL ENGINEER

WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

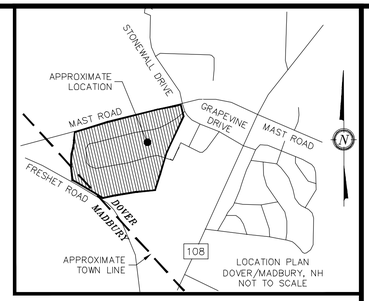
1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295

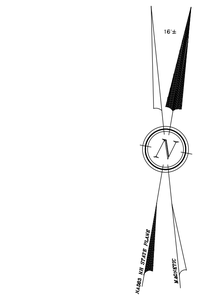
NRCS SOILS:

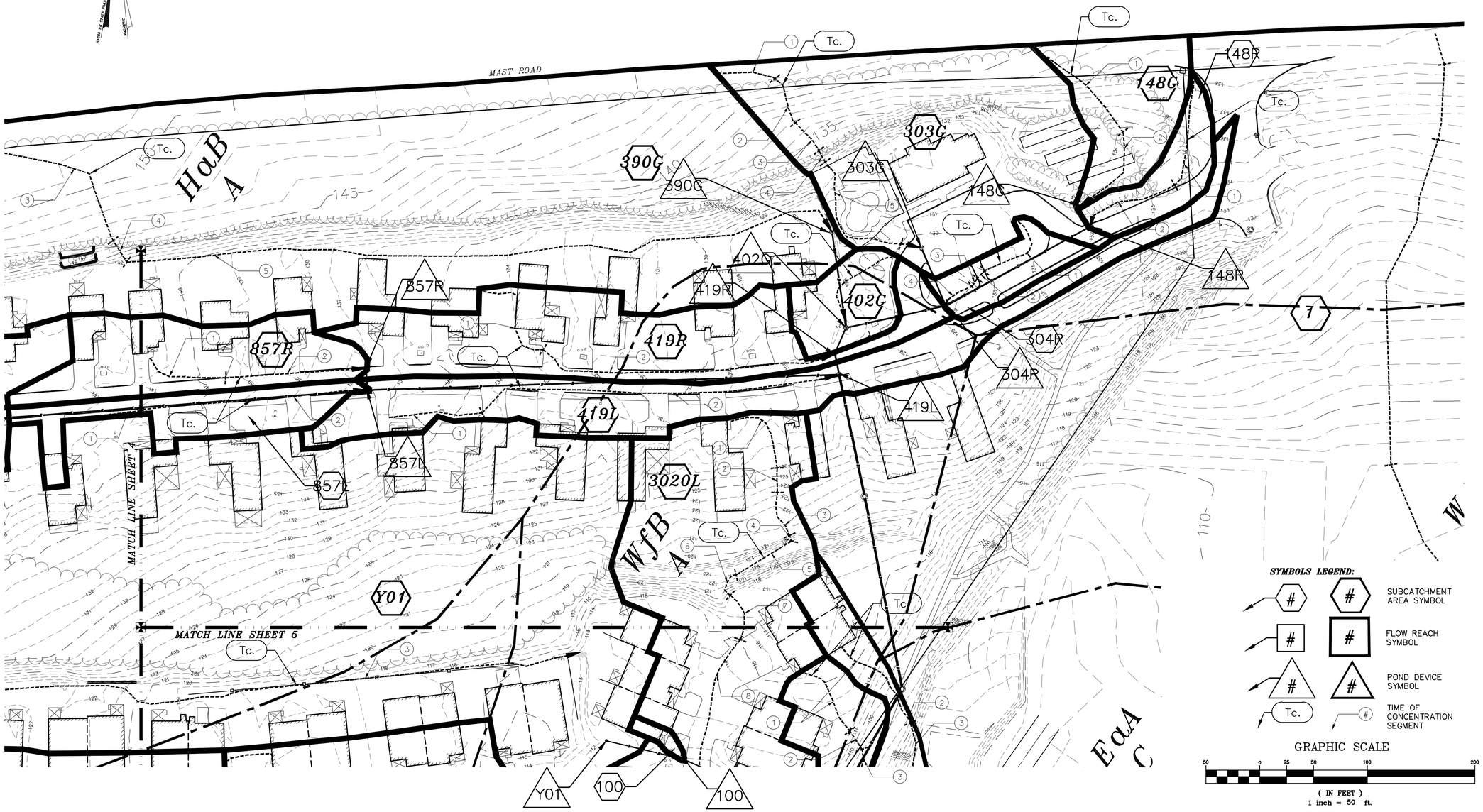
EaA – ELMWOOD FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
HaB – HINCKLEY LOAMY SAND, 3 TO 8 PERCENT SLOPES
ScA – SCANTIC SILT LOAM, 0 TO 3 PERCENT SLOPES
SwA – SWANTON FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
WdA – WINDSOR LOAMY SAND, 0 TO 3 PERCENT SLOPES
WdB – WINDSOR LOAMY SAND, 3 TO 8 PERCENT SLOPES
WfB – WINDSOR LOAMY FINE SAND, CLAY SUBSOIL, 0 TO 8 PERCENT SLOPES

SEE WEBSOIL USDA–NRCS



LOCATION PLAN
DOVER/MADBURY, NH
NOT TO SCALE





SYMBOLS LEGEND:

- SUBCATCHMENT AREA SYMBOL
- FLOW REACH SYMBOL
- POND DEVICE SYMBOL
- TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

REVISION	DATE	DESCRIPTION

W-2 EXISTING WATERSHED DETAIL NORTH
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

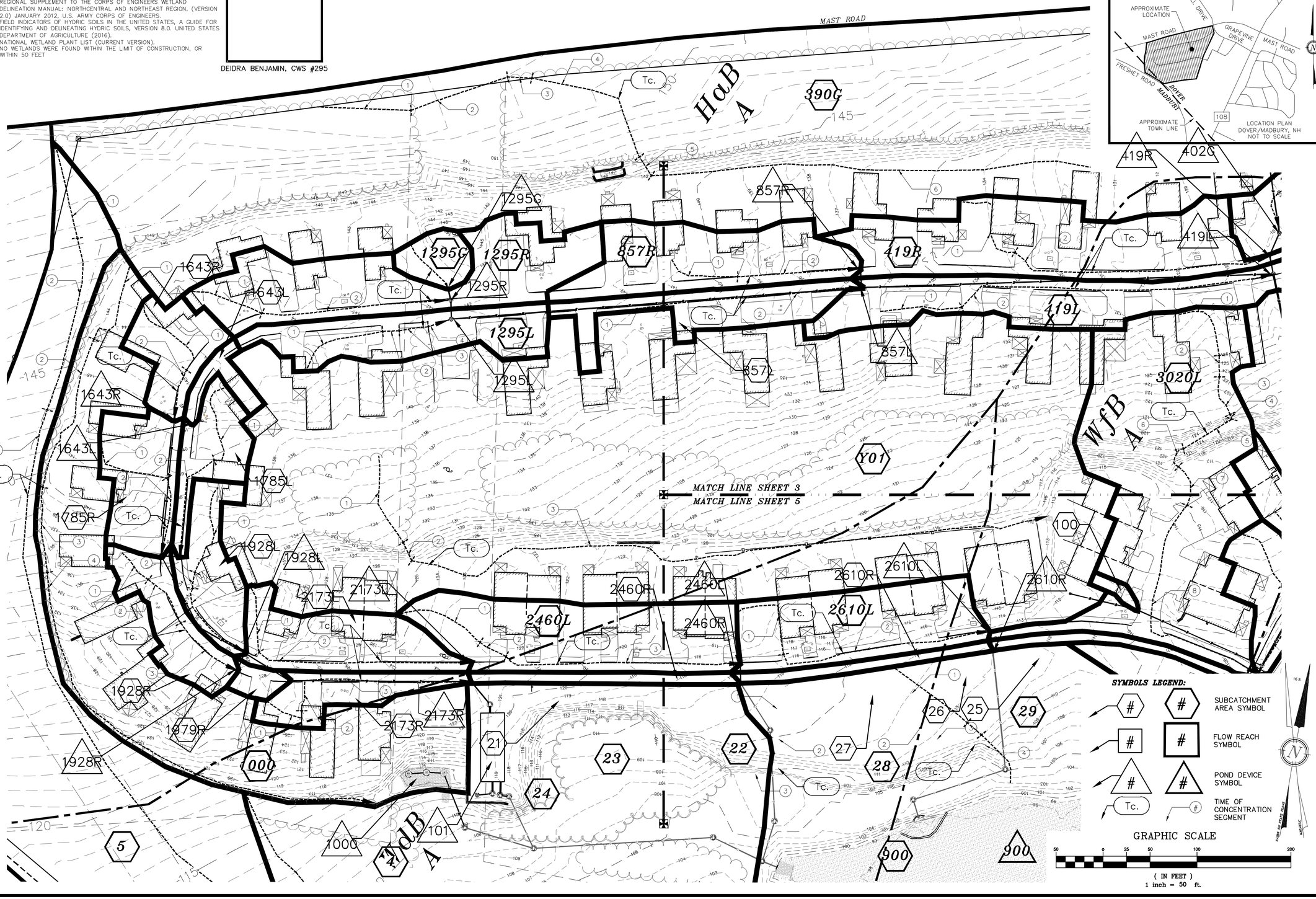
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7442
LICENSED PROFESSIONAL ENGINEER

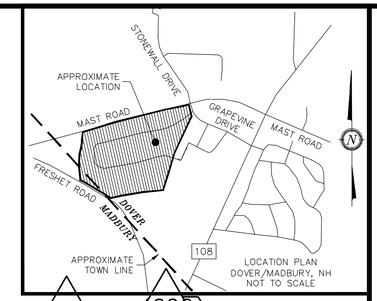
WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295





SYMBOLS LEGEND:

- # — SUBCATCHMENT AREA SYMBOL
- # — FLOW REACH SYMBOL
- # — POND DEVICE SYMBOL
- Tc. — TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

REVISION	DATE	DESCRIPTION

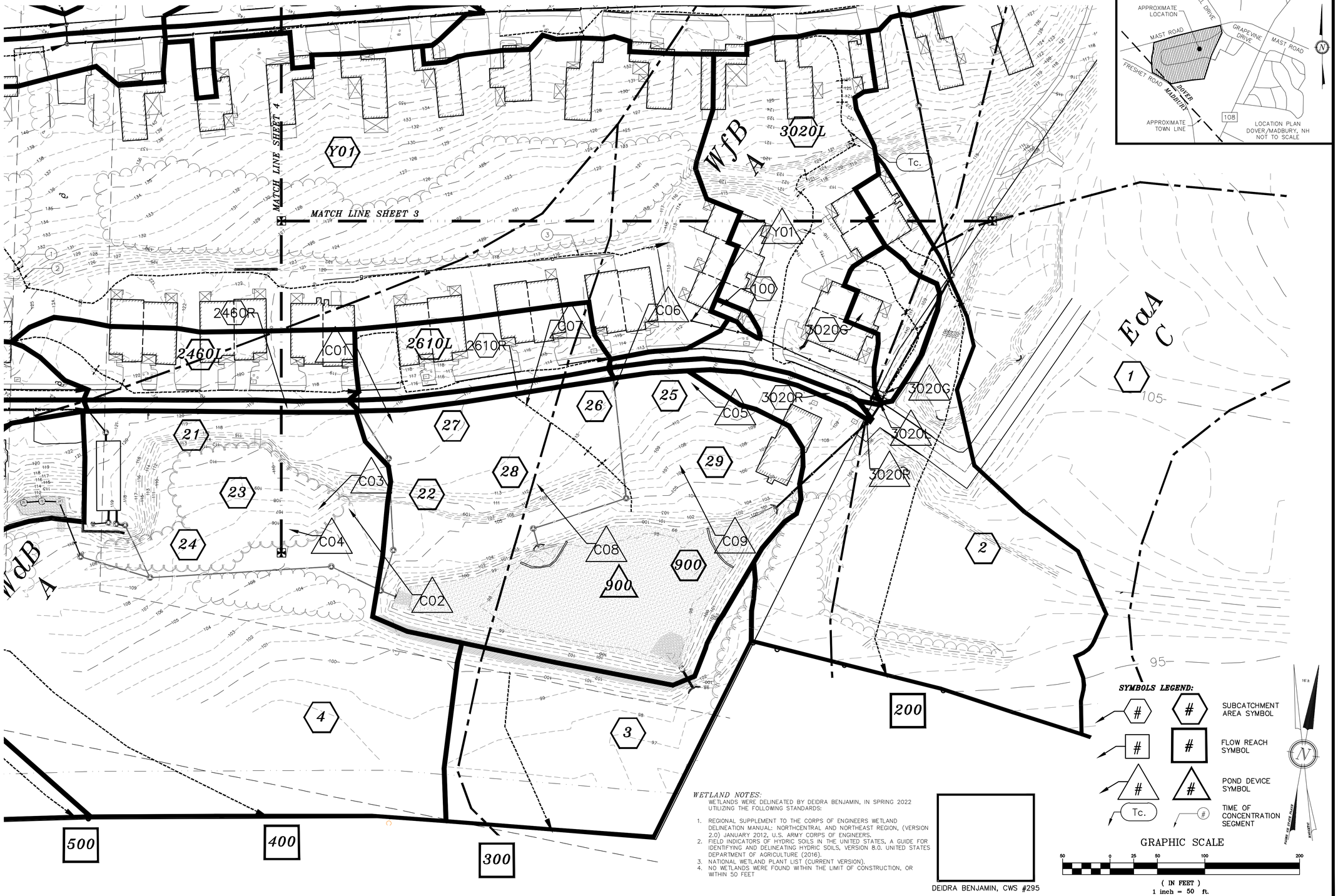
W-2 EXISTING WATERSHED DETAIL WEST

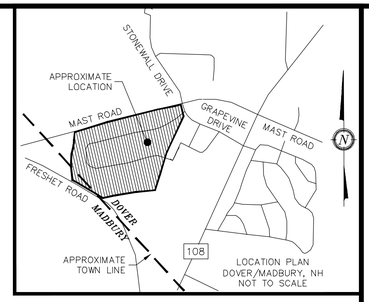
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14247
LICENSED PROFESSIONAL ENGINEER





WETLAND NOTES:
WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295

SYMBOLS LEGEND:

- SUBCATCHMENT AREA SYMBOL
- FLOW REACH SYMBOL
- POND DEVICE SYMBOL
- TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

REVISION	DATE	DESCRIPTION

W-2 EXISTING WATERSHED DETAIL SOUTH
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14273
LICENSED PROFESSIONAL ENGINEER

WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

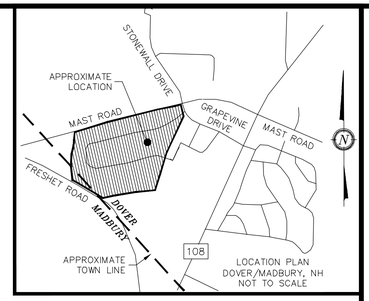
1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295

NRCS SOILS:

EmA — ELMWOOD FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
HnB — HINCKLEY LOAMY SAND, 3 TO 8 PERCENT SLOPES
SwA — SWANTON FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
WdA — WINDSOR LOAMY SAND, 0 TO 3 PERCENT SLOPES
WdB — WINDSOR LOAMY SAND, 3 TO 8 PERCENT SLOPES
WfB — WINDSOR LOAMY FINE SAND, CLAY SUBSOIL, 0 TO 8 PERCENT SLOPES

SEE WEBSOIL USDA-NRCS



LOCATION PLAN
DOVER/MADBURY, NH
NOT TO SCALE

NOTES:

1.) OWNER: HERON BAY PARTNERS, LLC
242 CENTRAL AVE
DOVER, NH 03820

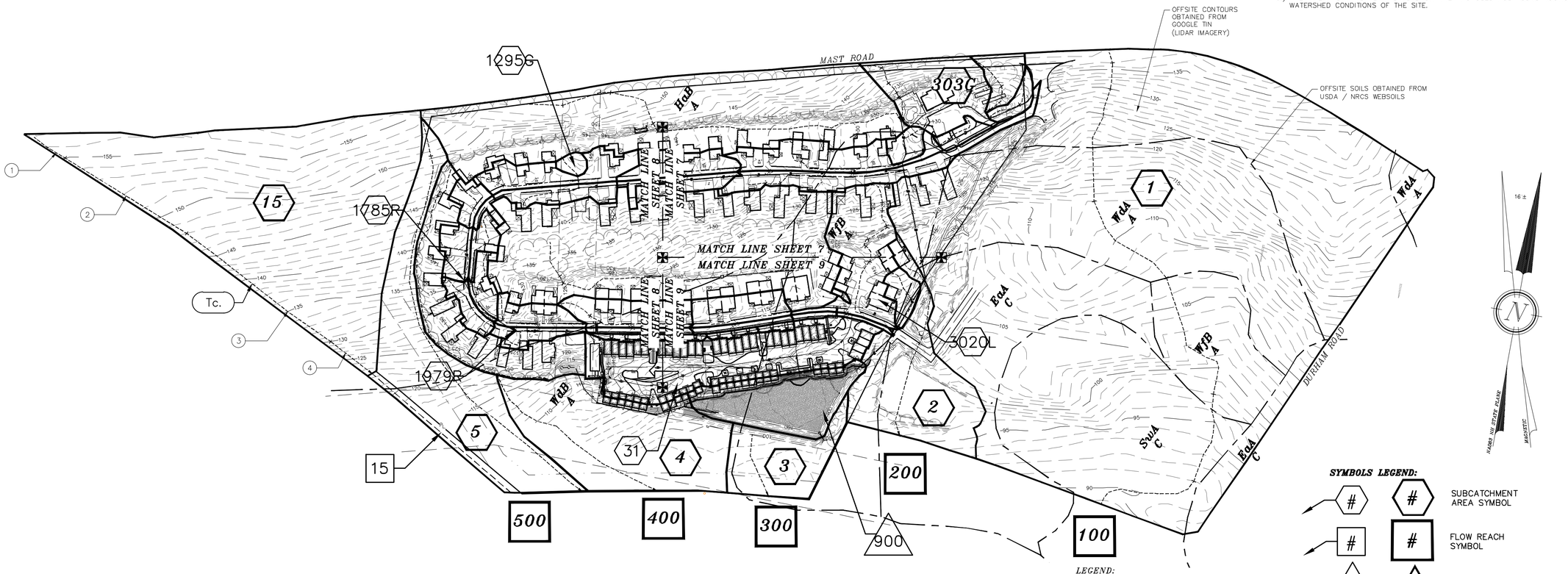
2.) TAX MAP H, LOT 4

3.) TOTAL AREA: 1,500,405 ± Sq. Ft., 34.44 ± Ac.

4.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PREFORMED BY BERRY SURVEYING AND ENGINEERING IN 2020 WITH AN ERROR OF CLOSURE BETTER THAN 1 IN 10,000.

5.) VERTICAL DATUM IS BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD27 NH STATE PLANE COORDINATES. COORDINATES GATHERED FROM TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

6.) THE INTENT OF THIS PLAN IS TO SHOW THE PROPOSED POST CONSTRUCTION WATERSHED CONDITIONS OF THE SITE.



LEGEND:

299	EXISTING CONTOUR MINOR
300	EXISTING CONTOUR MAJOR
	STONE WALL
	WETLAND LINE
	PROPERTY LINE
	SOIL LINE
448A	SOIL SERIES
HfB	NRCS SOIL LINE
	NRCS SOIL LABEL
	LIMIT OF WATERSHED
	TIME OF CONCENTRATION PATH
	FLOW REACH
	MATCH LINE
S.C.R.D.	STRAFFORD COUNTY REGISTRY OF DEEDS
TYP.	TYPICAL
FND	FOUND
TBR	TO BE REMOVED

SYMBOLS LEGEND:

- SUBCATCHMENT AREA SYMBOL
- FLOW REACH SYMBOL
- POND DEVICE SYMBOL
- TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

150 0 75 150 300 600

(IN FEET)
1 inch = 150 ft.

REVISION	DATE	DESCRIPTION

W-3 PROPOSED WATERSHED OVERVIEW
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 150 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14142
LICENSED PROFESSIONAL ENGINEER

WETLAND NOTES:

WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

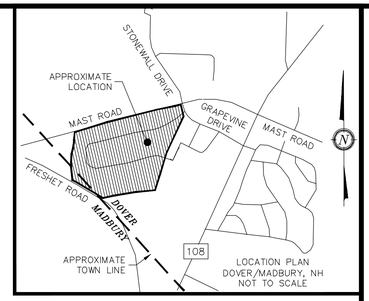
1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS.
2. FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, VERSION 8.0. UNITED STATES DEPARTMENT OF AGRICULTURE (2016).
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295

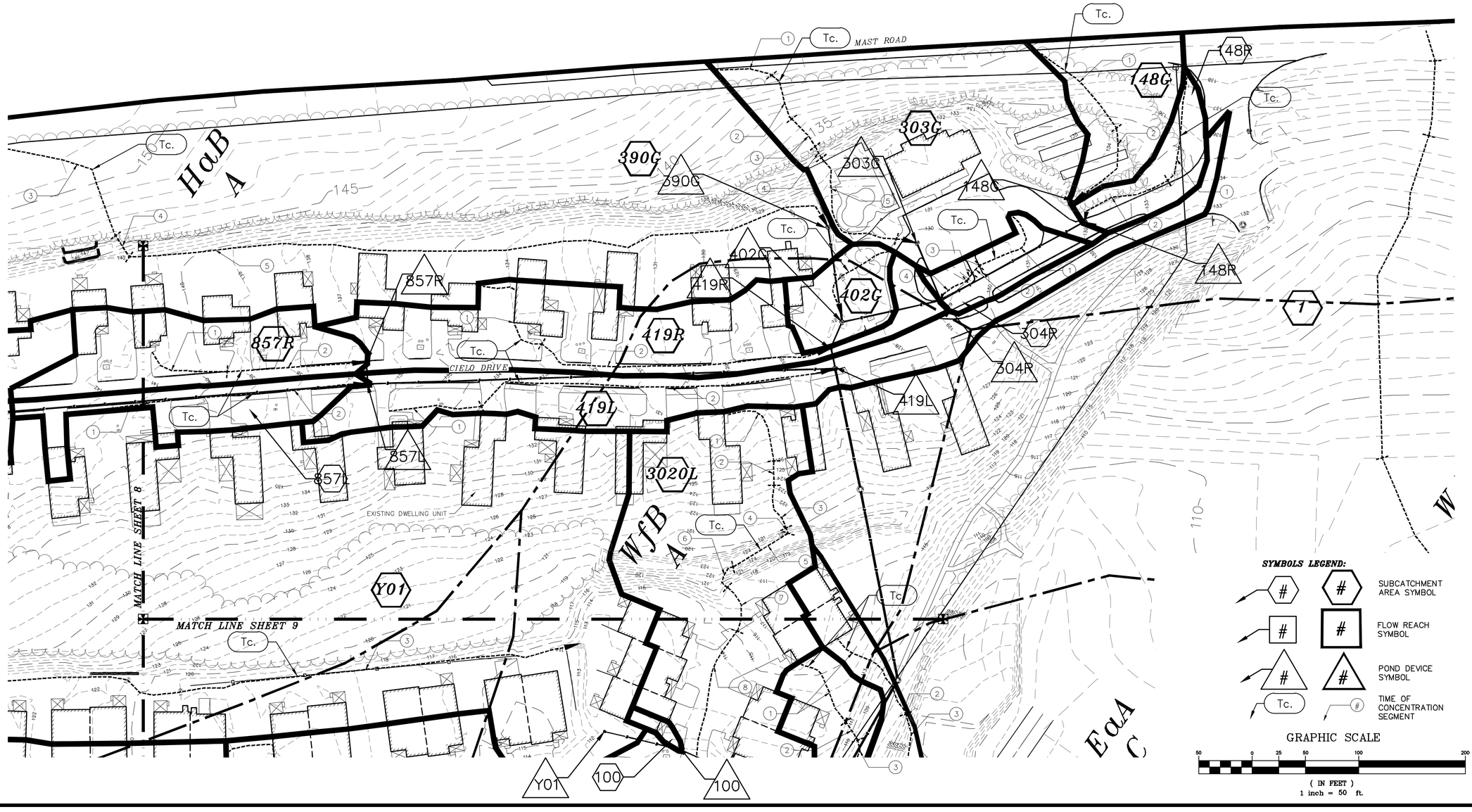
NRCS SOILS:

EmA – ELMWOOD FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
HaB – HINCKLEY LOAMY SAND, 3 TO 8 PERCENT SLOPES
ScA – SCANTIC SILT LOAM, 0 TO 3 PERCENT SLOPES
SwA – SWANTON FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES
WdA – WINDSOR LOAMY SAND, 0 TO 3 PERCENT SLOPES
WdB – WINDSOR LOAMY SAND, 3 TO 8 PERCENT SLOPES
WfB – WINDSOR LOAMY FINE SAND, CLAY SUBSOIL, 0 TO 8 PERCENT SLOPES

SEE WEBSOIL USDA–NRCS



LOCATION PLAN
DOVER/MADBURY, NH
NOT TO SCALE



SYMBOLS LEGEND:

- SUBCATCHMENT AREA SYMBOL
- FLOW REACH SYMBOL
- POND DEVICE SYMBOL
- TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

REVISION	DATE	DESCRIPTION

W-3 PROPOSED WATERSHED DETAILED NORTH
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A BERRY
No. 14241
LICENSED PROFESSIONAL ENGINEER

WETLAND NOTES:
WETLANDS WERE DELINEATED BY DEIDRA BENJAMIN, IN SPRING 2022 UTILIZING THE FOLLOWING STANDARDS:

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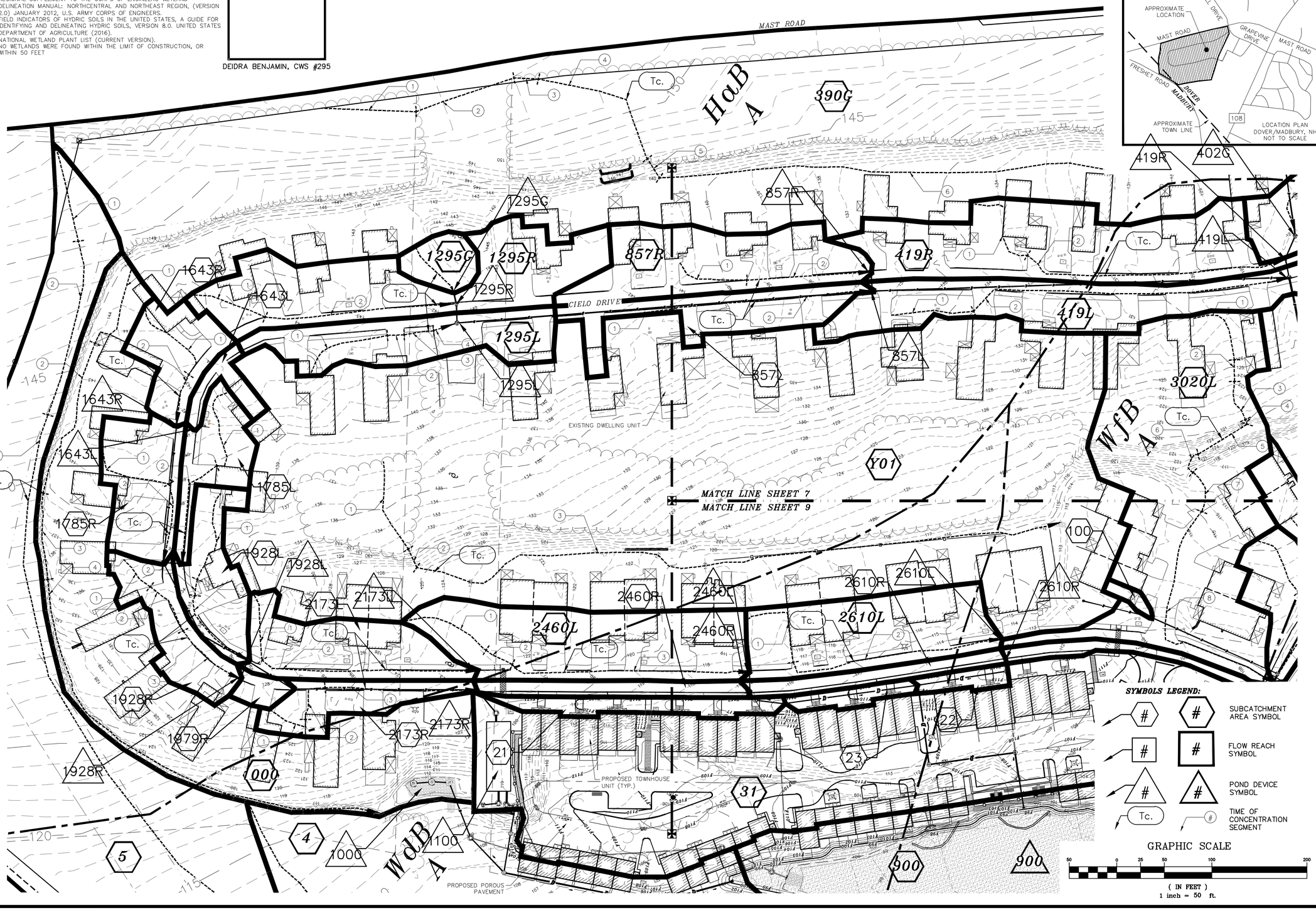
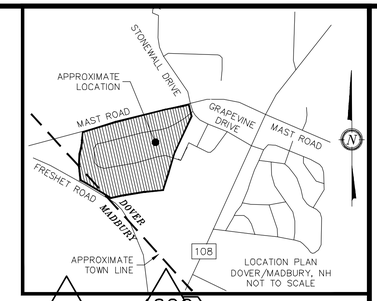
3. NATIONAL WETLAND PLANT LIST (CURRENT VERSION).
4. NO WETLANDS WERE FOUND WITHIN THE LIMIT OF CONSTRUCTION, OR WITHIN 50 FEET

DEIDRA BENJAMIN, CWS #295





SYMBOLS LEGEND:

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- FLOW REACH SYMBOL
- POND DEVICE SYMBOL
- TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

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(IN FEET)
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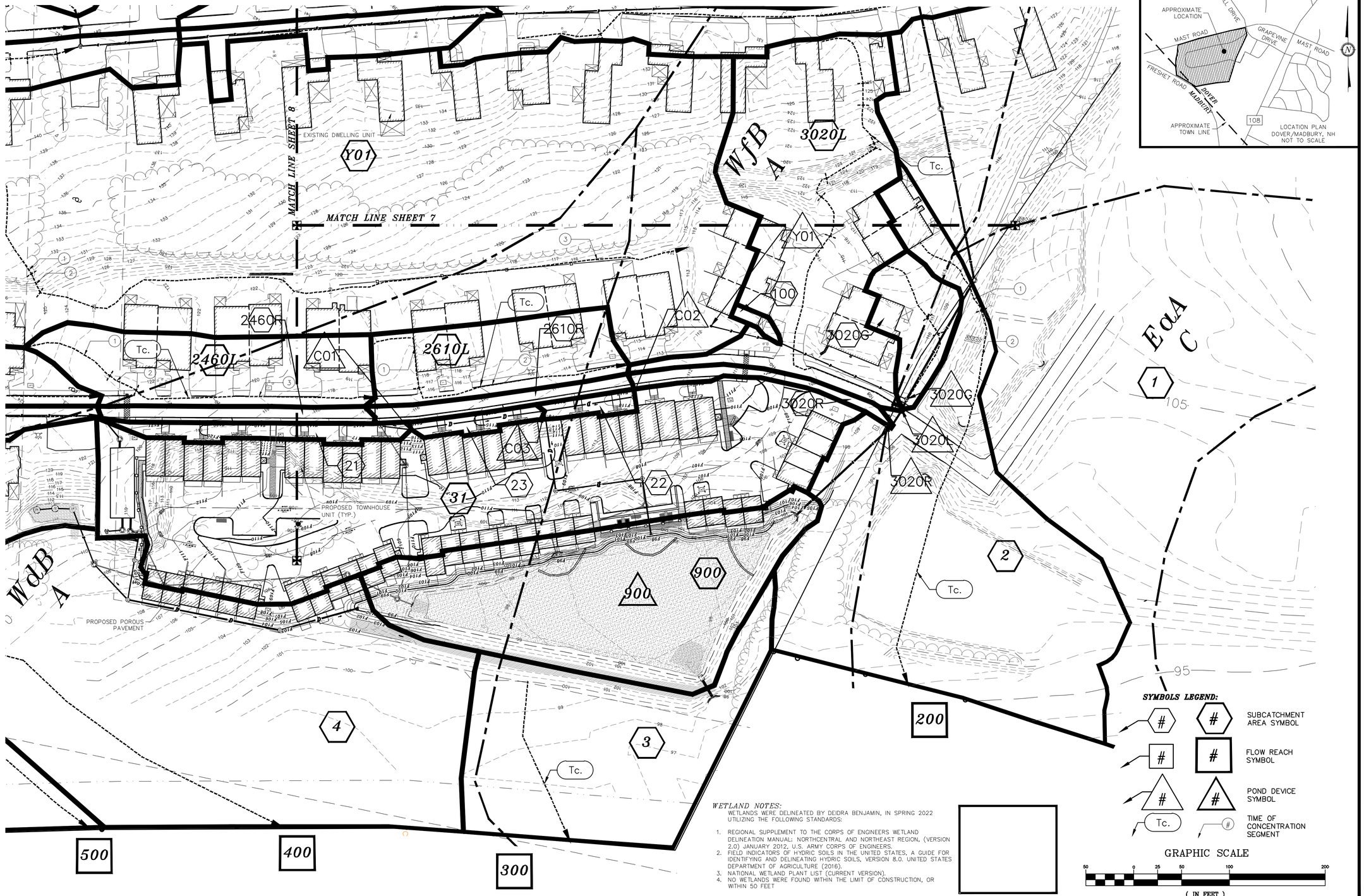
REVISION	DATE	DESCRIPTION

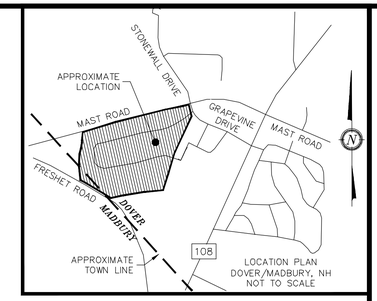
W-3 PROPOSED WATERSHED DETAIL WEST
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14242
LICENSED PROFESSIONAL ENGINEER





WETLAND NOTES:

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DEIDRA BENJAMIN, CWS #295

SYMBOLS LEGEND:

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- FLOW REACH SYMBOL
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- TIME OF CONCENTRATION SEGMENT

GRAPHIC SCALE

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(IN FEET)
1 inch = 50 ft.

REVISION	DATE	DESCRIPTION

W-3 PROPOSED WATERSHED DETAIL SOUTH
LAND OF
HERON BAY PARTNERS, LLC
CIELO DRIVE
DOVER, N.H.
TAX MAP H, LOT 4

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 50 FT.
DATE : APRIL 7, 2022
FILE NO. : DB 2021-002

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14247
LICENSED PROFESSIONAL ENGINEER