



TOWN OF EAST HAMPTON  
Planning and Zoning Commission  
1-860-267-7450  
www.easthamptonct.gov

PZC -23-012  
Date 5/3/2023

Fee Paid \$4360  
Check # \_\_\_\_\_  
Rec'd. By \_\_\_\_\_

LOCATION 37 South Main St

MAP 20 BLK 51 LOT 27

PROJECT NAME Hampton Village

ZONE HOD

APPLICANT Michael Bakaj  
ADDRESS po. box 264 Lebanon, CT 06249

PHONE 860-234-1376  
EMAIL mbakaj@snet.net

CONTACT PERSON \_\_\_\_\_

PHONE \_\_\_\_\_  
EMAIL \_\_\_\_\_

OWNER Same  
ADDRESS \_\_\_\_\_

PHONE \_\_\_\_\_  
EMAIL \_\_\_\_\_

SURVEYOR/ENGINEER Mark Reynolds  
ADDRESS 63 Norwich Ave, #202, Colchester CT 06415

PHONE 860-516-0033  
EMAIL markreynoldsengineer@gmail.com

ATTORNEY \_\_\_\_\_  
ADDRESS \_\_\_\_\_

PHONE \_\_\_\_\_  
EMAIL \_\_\_\_\_

APPLICATION TYPE (application must be completed in FULL in order to be accepted)

- 1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS 22
- 3. SITE PLAN MODIFICATION Residential \_\_\_\_\_ Commercial \_\_\_\_\_
- 4. SPECIAL PERMIT--SECTION \_\_\_\_\_ OF THE ZONING REGS. FOR \_\_\_\_\_
- 5. ZONE CHANGE--FROM \_\_\_\_\_ TO \_\_\_\_\_
- 6. AMENDMENT TO ZONING REGULATIONS
- 7. LAKE POCOTOPAUG PROTECTION AREA \_\_\_\_\_
- 8. ACTIVE ADULT NO OF UNITS \_\_\_\_\_
- 7. OTHER (DESCRIBE) HOD - 33 Units on 22 Lots

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Land Use Office and shall be received by the Commission at the next regularly scheduled meeting. (see meeting schedule for deadline dates)

A complete application shall consist of an application, fees, maps /plans( A-2 survey) ,engineers report including drainage calculations and watershed calculations( pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications  
Abutters notice receipts (green cards) must be handed in to the Planning Office prior to the meeting

APPLICANTS SIGNATURE [Signature] DATE 5-3-23

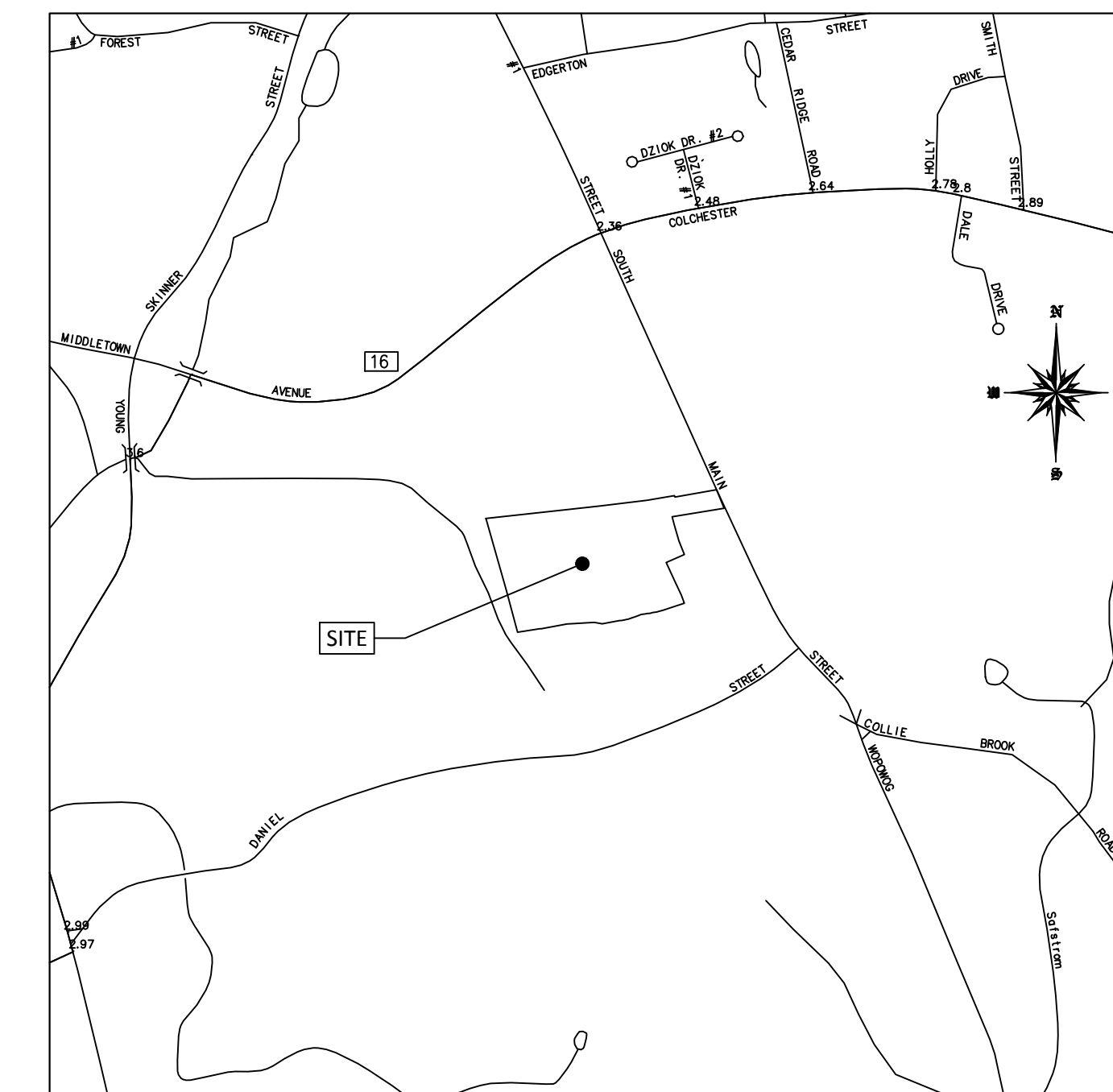
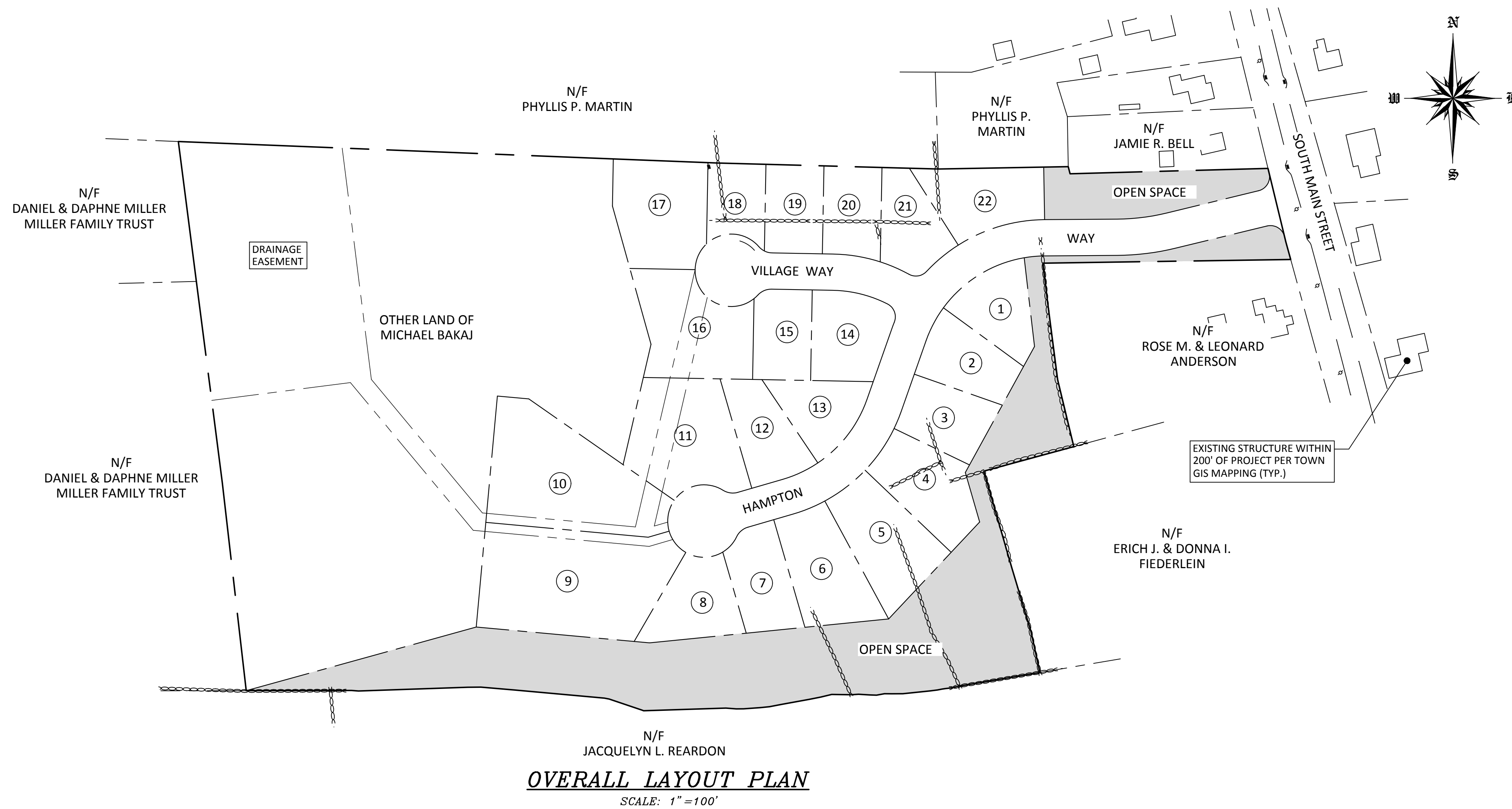
OWNER'S SIGNATURE [Signature] DATE 5-3-23

The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

# HOUSING OPPORTUNITY DEVELOPMENT SUBDIVISION HAMPTON VILLAGE

## 37 SOUTH MAIN STREET EAST HAMPTON, CONNECTICUT

PREPARED FOR  
BAKAJ CONSTRUCTION LLC



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APPROVED  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT

DATE: \_\_\_\_\_  
SIGNED: \_\_\_\_\_

**RECEIVED**  
**5.3.2023**  
East Hampton  
Land Use Dept.

**ROB HELLSTROM**  
**LAND SURVEYING LLC**  
32 MAIN STREET  
HEBRON, CT., 06248  
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hellstromsurveying@yahoo.com  
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Mailing Address:  
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Designed By:  
MAR

Drawn By:  
SAM

Checked By:  
MAR

CAD File:  
21-106

Drawing Scale:  
AS NOTED

Drawing date:  
7/26/2021

**COVER SHEET**

PROJECT TITLE: **HAMPTON VILLAGE**  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

PREPARED FOR: **BAKAJ CONSTRUCTION LLC**  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

CIVIL ENGINEERING CONSULTANTS  
63 NORWICH AVENUE  
COLCHESTER, CT  
(860) 516-0033

**RES**  
Reynolds Engineering Services, LLC

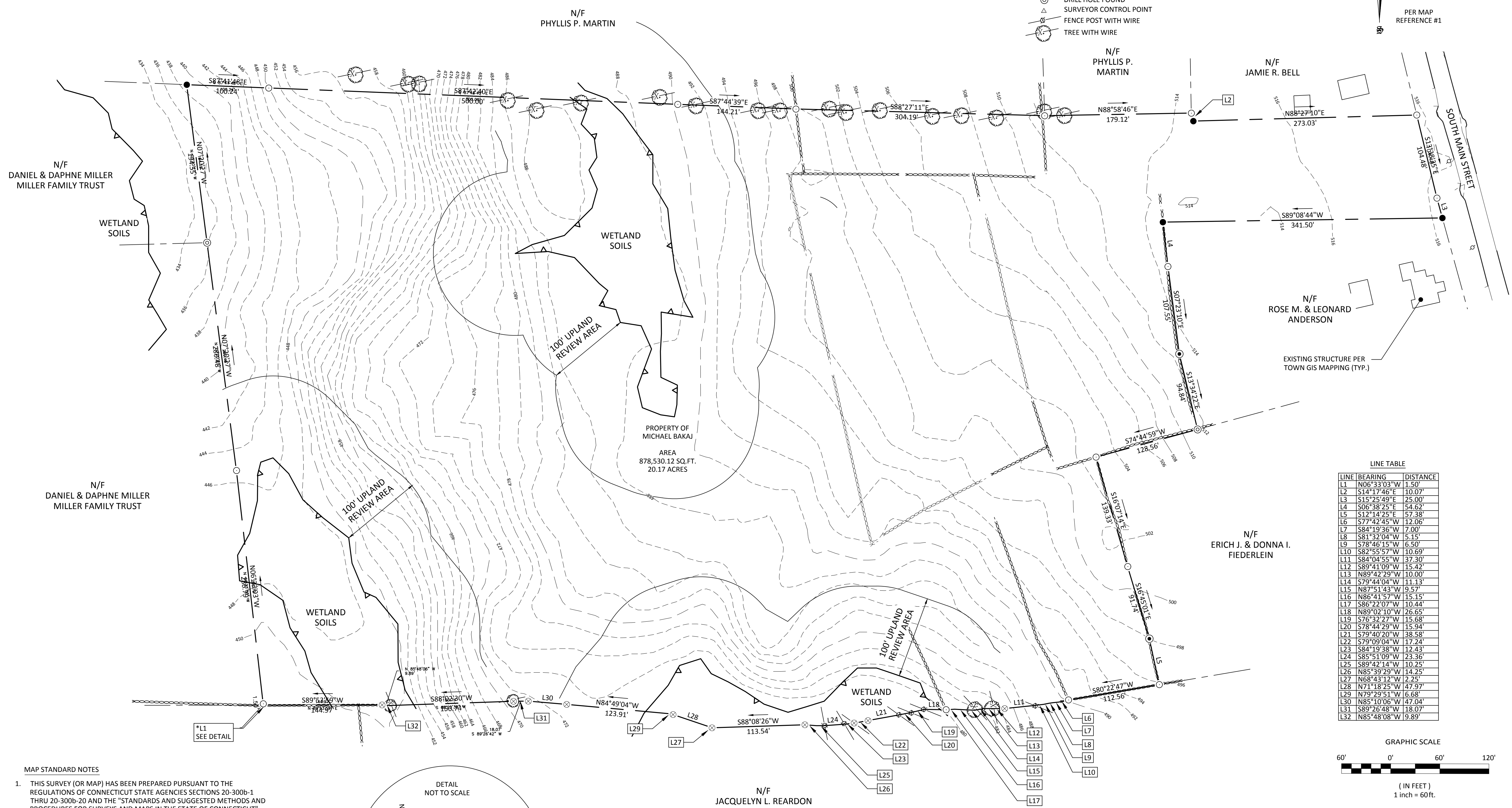
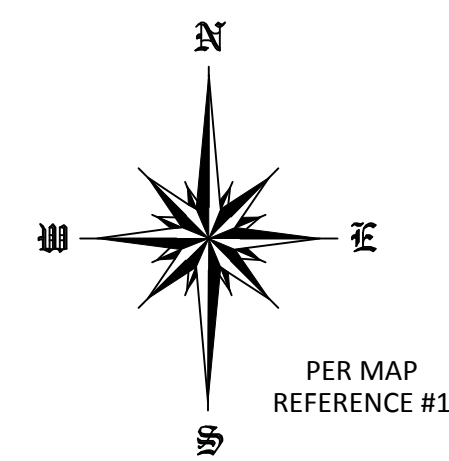
Drawing #:

1 OF 15

Job #: 21-106

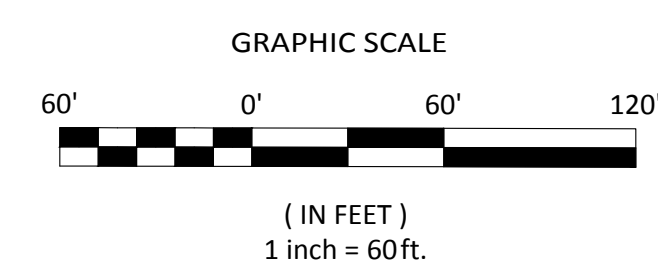
**LEGEND**

- PROPERTY LINE
- STONE WALL
- ZONE LINE
- WIRE FENCE REMAINS
- UTILITY POLE
- IRON PIN OR PIPE FOUND
- ANGLE POINT
- MONUMENT FOUND
- 
- DRILL HOLE SET
- DRILL HOLE FOUND
- SURVEYOR CONTROL POINT
- FENCE POST WITH WIRE
- TREE WITH WIRE



**LINE TABLE**

LINE	BEARING	DISTANCE
L1	N06°33'03\"/>	1.50'
L2	S14°17'46\"/>	10.07'
L3	S15°25'49\"/>	25.00'
L4	S06°38'25\"/>	54.62'
L5	S12°14'25\"/>	57.38'
L6	S77°42'45\"/>	12.06'
L7	S84°19'36\"/>	7.00'
L8	S81°32'04\"/>	5.15'
L9	S78°46'15\"/>	6.50'
L10	S82°55'57\"/>	10.69'
L11	S84°04'55\"/>	37.30'
L12	S89°41'09\"/>	15.42'
L13	N89°42'29\"/>	10.00'
L14	S79°44'04\"/>	11.13'
L15	N87°51'43\"/>	9.57'
L16	N86°41'57\"/>	15.15'
L17	S86°22'07\"/>	10.44'
L18	N89°02'10\"/>	26.65'
L19	S76°32'27\"/>	15.68'
L20	S78°44'29\"/>	15.94'
L21	S79°40'20\"/>	38.58'
L22	S79°09'04\"/>	17.24'
L23	S84°19'38\"/>	12.43'
L24	S85°51'09\"/>	23.36'
L25	S89°42'14\"/>	10.25'
L26	N85°39'29\"/>	14.25'
L27	N68°43'12\"/>	2.25'
L28	N71°18'25\"/>	47.97'
L29	N79°39'51\"/>	6.68'
L30	N85°10'06\"/>	47.04'
L31	S89°26'48\"/>	18.07'
L32	N85°48'08\"/>	9.89'



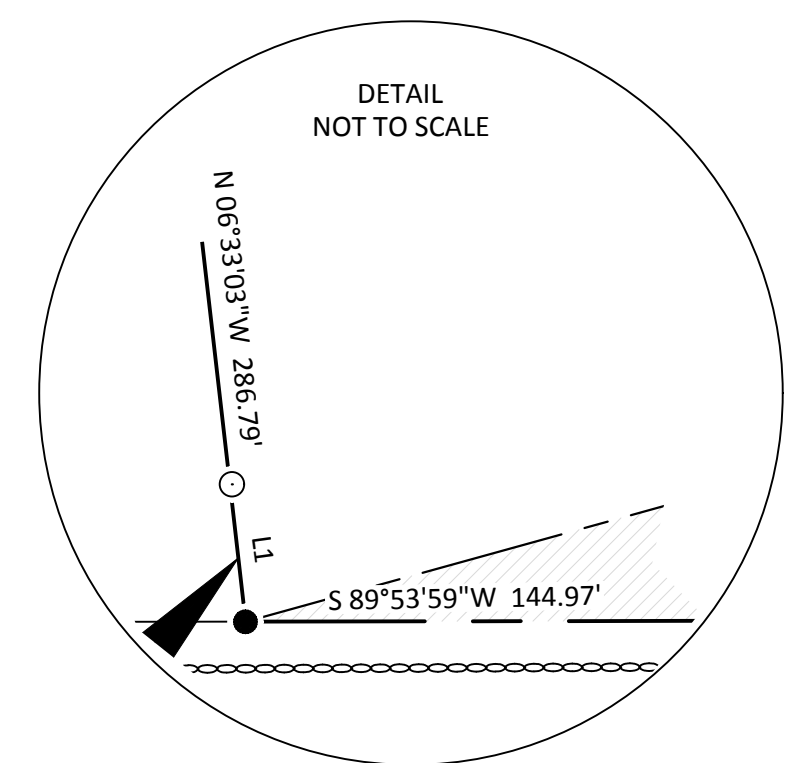
**MAP STANDARD NOTES**

- THIS SURVEY (OR MAP) HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS AND SUGGESTED METHODS AND PROCEDURES FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON AUGUST 29, 2019.

TYPE OF SURVEY: PROPERTY SURVEY  
 BOUNDARY DETERMINATION CATEGORY: RESURVEY  
 HORIZONTAL ACCURACY CLASS: "A-2"

**MAP REFERENCES:**

- "PLAN OF LAND TO BE CONVEYED TO DANIEL A. MILLER BELLTOWN PLACE ASSESSOR'S MAP 20, BLOCK 51, LOT 27, PREPARED FOR RELEASER DEVELOPMENT CP, LLC, FOR PROPERTY LOCATED AT SOUTH MAIN STREET, TOWN OF EAST HAMPTON, CONNECTICUT", DATED: 01-22-2008, SCALE: 1"=80', BY DUTTON ASSOCIATES, LLC.



*I have delineated state of Connecticut wetlands and watercourses present on the subject site and have reviewed this plan and it is my opinion that the limits of the wetlands and watercourses depicted hereon are representative of those delineated in the field.*

Richard Snarski

**APPROVED**  
 PLANNING AND ZONING  
 COMMISSION  
 EAST HAMPTON, CT

DATE: \_\_\_\_\_  
 SIGNED: \_\_\_\_\_

NOTE  
 \*SOUTHERLY PROPERTY LINE HELD PER MAP REFERENCE #1.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS DRAWING IS NOT VALID UNLESS IT BEARS AN ORIGINAL INK SIGNATURE AND EMBOSSED SEAL.

ROBERT W. HELLSTROM, L.S. #13626

**ROB HELLSTROM**  
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 hellstromsurveying@yahoo.com  
 WWW.RHLSCT.COM

Mailing Address:  
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 HEBRON, CT. 06248

**OVERALL BOUNDARY & EXISTING CONDITIONS**  
 PROJECT TITLE: HAMPTON VILLAGE  
 37 SOUTH MAIN STREET EAST HAMPTON, CT.  
 PREPARED FOR: BAKAJ CONSTRUCTION LLC  
 37 SOUTH MAIN STREET EAST HAMPTON, CT.

CIVIL ENGINEERING CONSULTANTS  
 63 NORWICH AVENUE  
 COLCHESTER, CT  
 (860) 516-0033  
**RES**  
 Reynolds Engineering Services, LLC

Designed By: MAR  
 Drawn By: SAM  
 Checked By: MAR  
 CAD File: 21-106

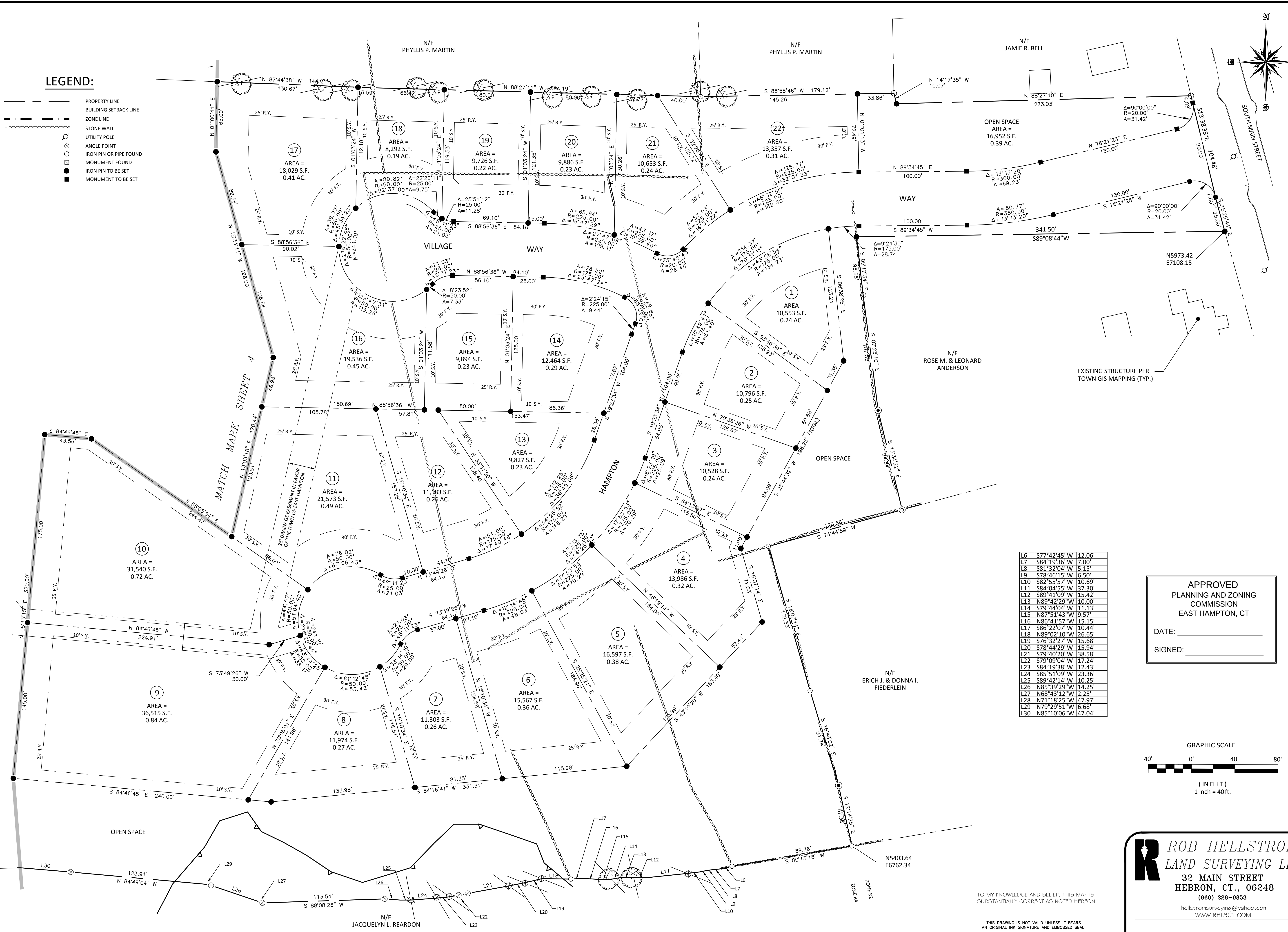
Drawing Scale: 1"=60'  
 Drawing date: 7/26/2021

Rev.	Date	By	Revision
1.	3/29/23	SAM	REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS
2.	5/03/23	SAM	

Drawing #: 2 OF 15  
 Job #: 21-106

**LEGEND:**

- PROPERTY LINE
- BUILDING SETBACK LINE
- ZONE LINE
- STONE WALL
- UTILITY POLE
- ANGLE POINT
- IRON PIN OR PIPE FOUND
- MONUMENT FOUND
- IRON PIN TO BE SET
- MONUMENT TO BE SET

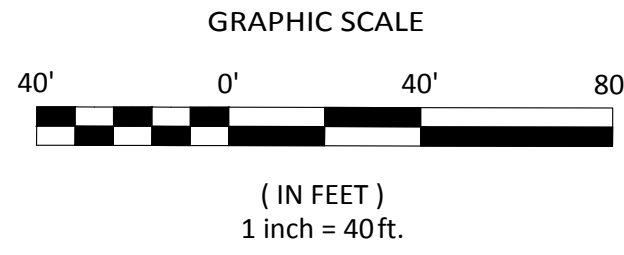


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**APPROVED**  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT

DATE: \_\_\_\_\_

SIGNED: \_\_\_\_\_



TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

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**DESIGNED BY:** MAR

**DRAWN BY:** SAM

**CHECKED BY:** MAR

**CAD FILE:** 21-106

**DRAWING DATE:** 7/26/2021

**DRAWING SCALE:** 1" = 40'

**REVISIONS:**

Rev.	Date	By	Description
1.	3/29/23	SAM	REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS
2.	5/03/23	SAM	EASEMENTS & DETAILS

**SUBDIVISION PLAN**

**PROJECT TITLE:** HAMPTON VILLAGE  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

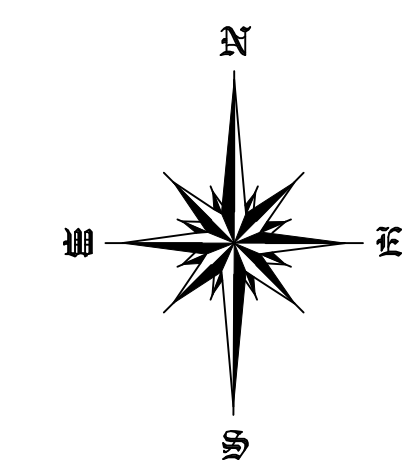
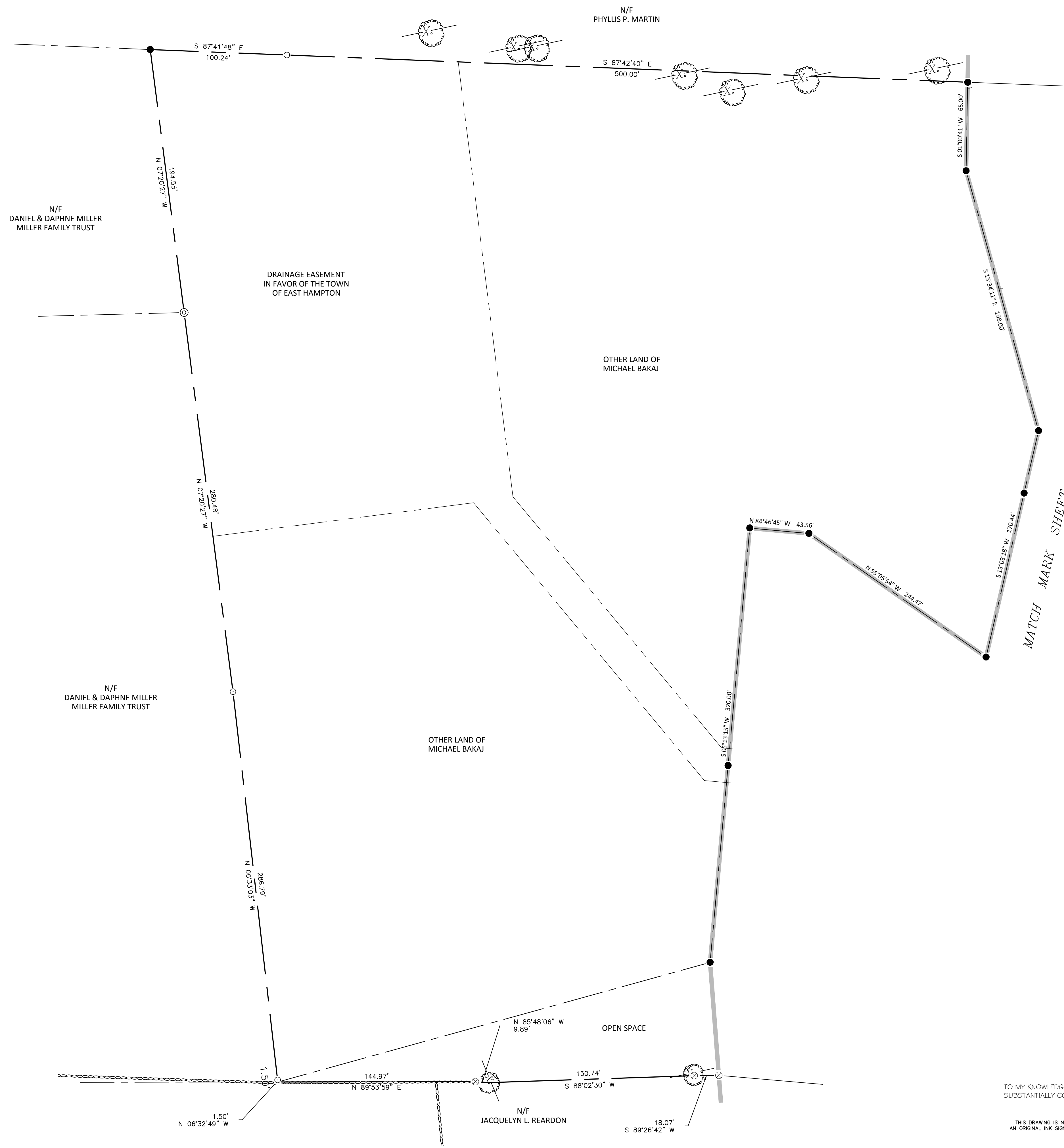
**PREPARED FOR:** BAKAJ CONSTRUCTION LLC  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

**CIVIL ENGINEERING CONSULTANTS**  
63 NORWICH AVENUE  
COLCHESTER, CT  
(860) 516-0033

**RES**  
**Reynolds Engineering Services, LLC**

**Drawing #:** 3 OF 15

**Job #:** 21-106

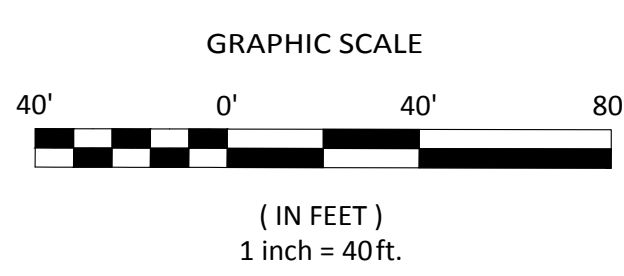


**LEGEND:**

---	PROPERTY LINE
- - -	BUILDING SETBACK LINE
---	ZONE LINE
---	STONE WALL
○	UTILITY POLE
⊙	ANGLE POINT
⊗	IRON PIN OR PIPE FOUND
⊙	MONUMENT FOUND
●	IRON PIN TO BE SET
■	MONUMENT TO BE SET

APPROVED  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT

DATE: \_\_\_\_\_  
SIGNED: \_\_\_\_\_



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TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HERON.

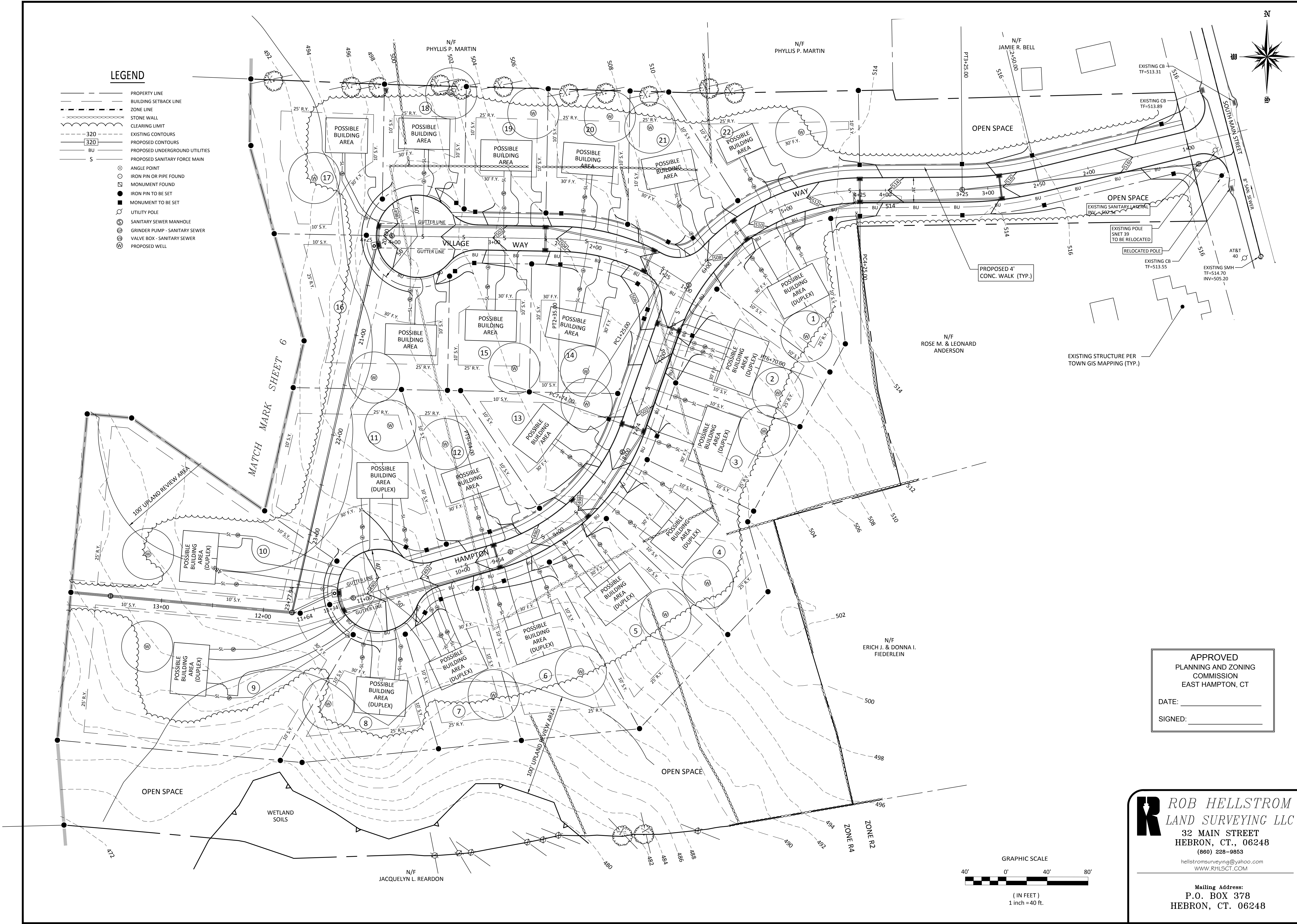
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ROBERT W. HELLSTROM, L.S. #13626

Designed By: MAR	Drawing Scale: 1"=40'	<b>SUBDIVISION PLAN</b> PROJECT TITLE: HAMPTON VILLAGE 37 SOUTH MAIN STREET EAST HAMPTON, CT. PREPARED FOR: BAKAJ CONSTRUCTION LLC 37 SOUTH MAIN STREET EAST HAMPTON, CT.								
Drawn By: SAM	Drawing Date: 7/26/2021									
Checked By: MAR	Revision	CIVIL ENGINEERING CONSULTANTS 63 NORWICH AVENUE COLCHESTER, CT (860) 516-0033 <b>RES</b> Reynolds Engineering Services, LLC								
CAD File: 21-106	<table border="1"> <thead> <tr> <th>Rev.</th> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>3/29/23</td> <td>SAM</td> </tr> <tr> <td>2.</td> <td>5/03/23</td> <td>SAM</td> </tr> </tbody> </table>		Rev.	Date	By	1.	3/29/23	SAM	2.	5/03/23
Rev.	Date	By								
1.	3/29/23	SAM								
2.	5/03/23	SAM								
	Drawing #:	4 OF 15								
	Job #:	21-106								

**LEGEND**

- PROPERTY LINE
- - - BUILDING SETBACK LINE
- - - ZONE LINE
- - - STONE WALL
- - - CLEARING LIMIT
- - - EXISTING CONTOURS
- - - PROPOSED CONTOURS
- BU --- PROPOSED UNDERGROUND UTILITIES
- S --- PROPOSED SANITARY FORCE MAIN
- ⊙ ANGLE POINT
- ⊙ IRON PIN OR PIPE FOUND
- ⊙ MONUMENT FOUND
- IRON PIN TO BE SET
- ⊙ MONUMENT TO BE SET
- ⊙ UTILITY POLE
- ⊙ SANITARY SEWER MANHOLE
- ⊙ GRINDER PUMP - SANITARY SEWER
- ⊙ VALVE BOX - SANITARY SEWER
- ⊙ PROPOSED WELL



Designed By: MAR  
 Drawn By: SAM  
 Checked By: MAR  
 CAD File: 21-106

Drawing Scale: 1" = 40'

Rev.	Date	By	Revision
1.	3/29/23	SAM	REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS
2.	5/03/23	SAM	

Drawing date: 7/26/2021

**TOPOGRAPHIC MAP**

**PROJECT TITLE: HAMPTON VILLAGE**  
 37 SOUTH MAIN STREET EAST HAMPTON, CT.

PREPARED FOR: **BAKAJ CONSTRUCTION LLC**  
 37 SOUTH MAIN STREET EAST HAMPTON, CT.

CIVIL ENGINEERING CONSULTANTS

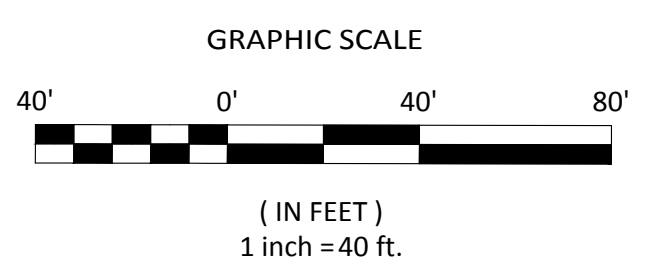
63 NORWICH AVENUE  
 COLCHESTER, CT  
 (860) 516-0033

**RES**  
 Reynolds Engineering Services, LLC

Drawing #: 5 OF 15  
 Job #: 21-106

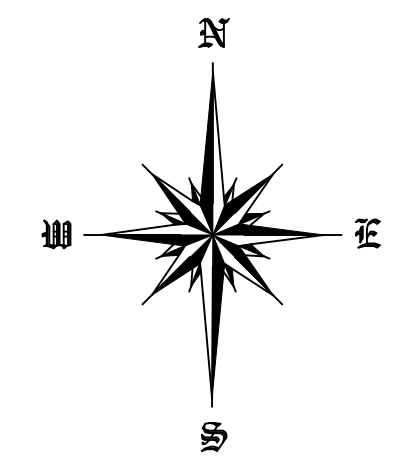
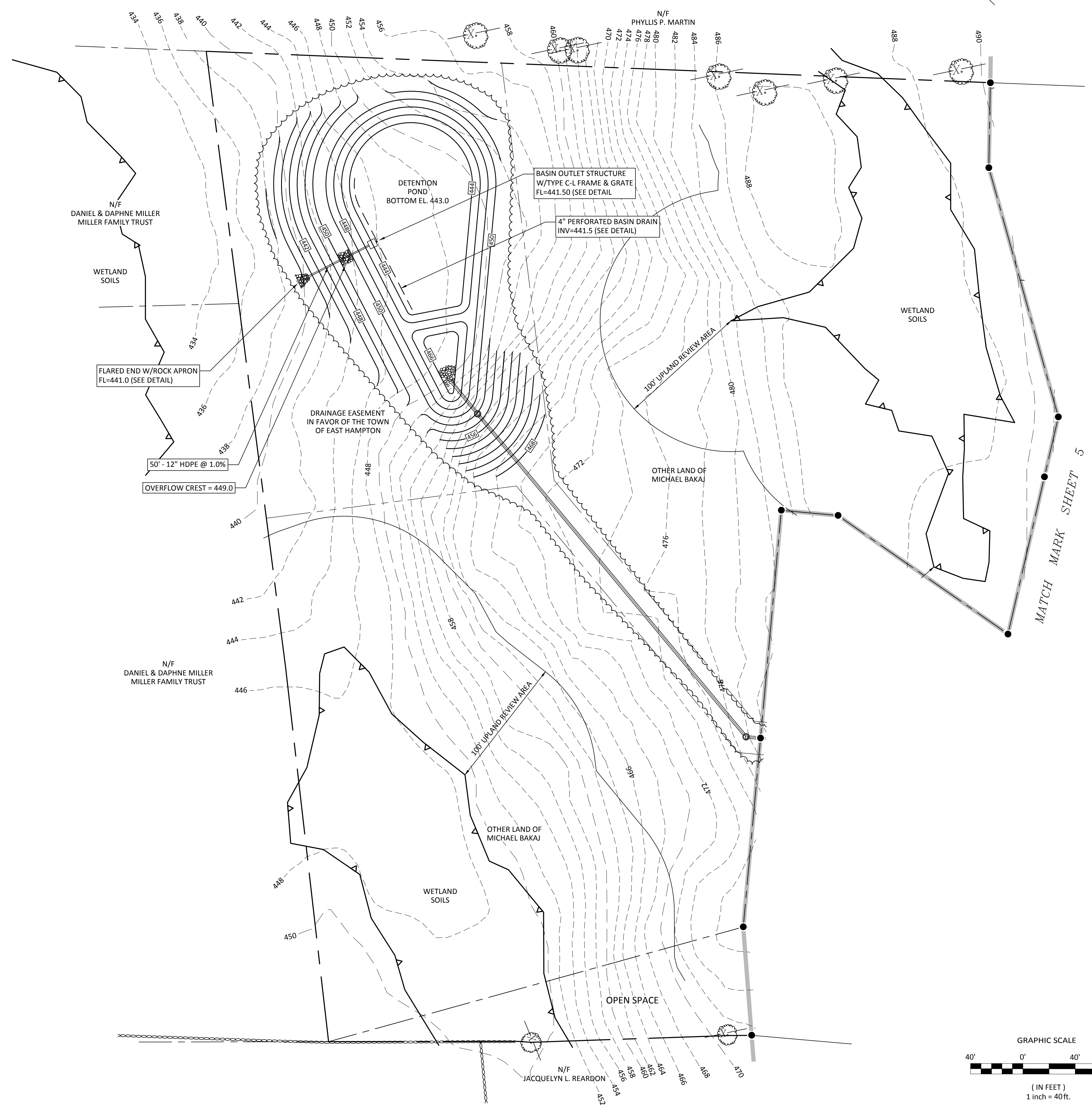
APPROVED  
 PLANNING AND ZONING  
 COMMISSION  
 EAST HAMPTON, CT

DATE: \_\_\_\_\_  
 SIGNED: \_\_\_\_\_



**ROB HELLSTROM**  
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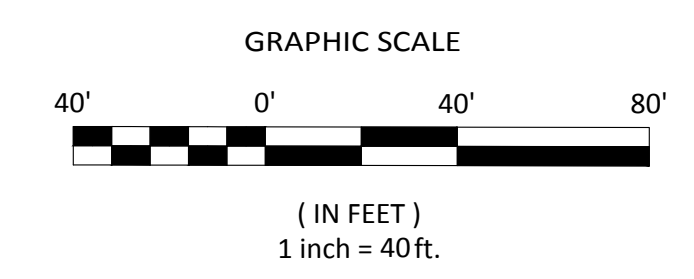


- LEGEND**
- PROPERTY LINE
  - - - BUILDING SETBACK LINE
  - - - ZONE LINE
  - - - STONE WALL
  - - - CLEARING LIMIT
  - - - EXISTING CONTOURS
  - - - PROPOSED CONTOURS
  - - - BU
  - - - PROPOSED UNDERGROUND UTILITIES
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  - ⊗ ANGLE POINT
  - IRON PIN OR PIPE FOUND
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  - ⊙ SANITARY SEWER MANHOLE
  - ⊙ GRINDER PUMP - SANITARY SEWER
  - ⊙ VALVE BOX - SANITARY SEWER
  - ⊙ PROPOSED WELL

**APPROVED**  
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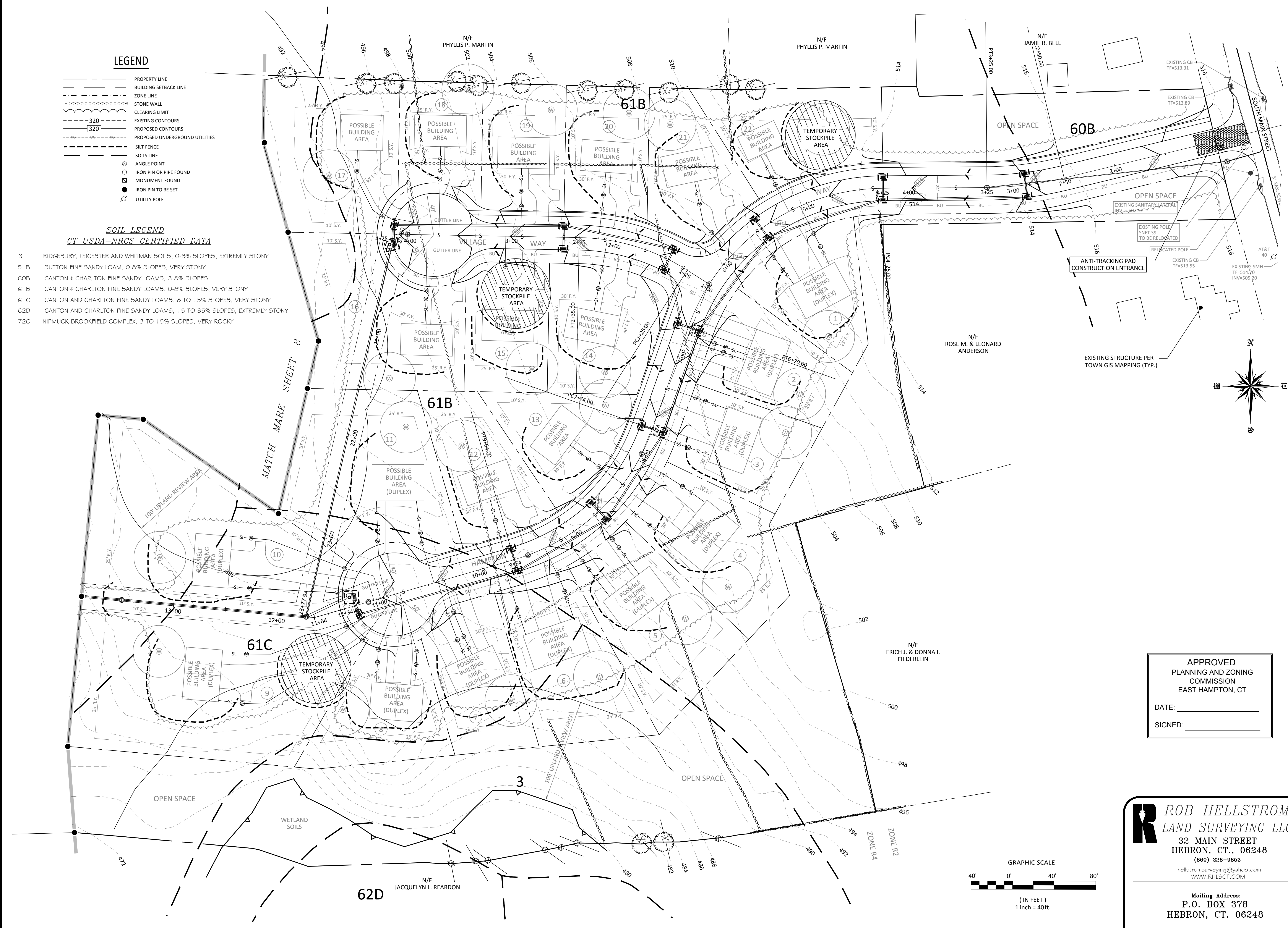
<b>TOPOGRAPHIC MAP</b>	Drawing date: 7/26/2021	Drawing Scale: 1"=40'	Designed By: MAR
<b>HAMPTON VILLAGE</b>	<b>37 SOUTH MAIN STREET</b>	<b>EAST HAMPTON, CT.</b>	Drawn By: SAM
<b>BAKAJ CONSTRUCTION LLC</b>	<b>37 SOUTH MAIN STREET</b>	<b>EAST HAMPTON, CT.</b>	Checked By: MAR
CIVIL ENGINEERING CONSULTANTS 63 NORWICH AVENUE COLCHESTER, CT (860) 516-0033	<b>RES</b>	<b>Reynolds Engineering Services, LLC</b>	CAD File: 21-106
DATE: _____	SIGNED: _____	DRAWING #: <b>6 OF 15</b>	JOB #: 21-106

**LEGEND**

- PROPERTY LINE
- - - BUILDING SETBACK LINE
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- - - PROPOSED CONTOURS
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- - - SILT FENCE
- - - SOILS LINE
- ⊙ ANGLE POINT
- ⊙ IRON PIN OR PIPE FOUND
- ⊙ MONUMENT FOUND
- ⊙ IRON PIN TO BE SET
- ⊙ UTILITY POLE

**SOIL LEGEND**

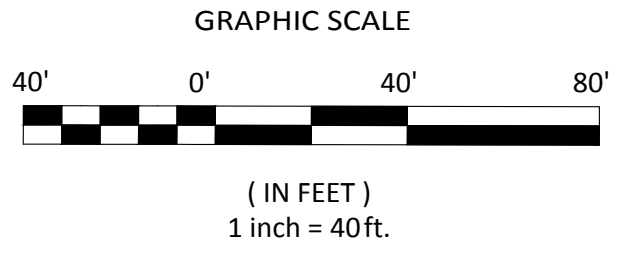
- CT USDA-NRCS CERTIFIED DATA*
- 3 RIDGEBURY, LEICESTER AND WHITMAN SOILS, 0-8% SLOPES, EXTREMELY STONY
  - 51B SUTTON FINE SANDY LOAM, 0-8% SLOPES, VERY STONY
  - 60B CANTON # CHARLTON FINE SANDY LOAMS, 3-8% SLOPES
  - 61B CANTON # CHARLTON FINE SANDY LOAMS, 0-8% SLOPES, VERY STONY
  - 61C CANTON AND CHARLTON FINE SANDY LOAMS, 0 TO 15% SLOPES, VERY STONY
  - 62D CANTON AND CHARLTON FINE SANDY LOAMS, 15 TO 35% SLOPES, EXTREMELY STONY
  - 72C NIPMUCK-BROOKFIELD COMPLEX, 3 TO 15% SLOPES, VERY ROCKY



APPROVED  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT

DATE: \_\_\_\_\_

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Drawing Scale: 1" = 40'

Rev.	Date	By	Revision
1.	3/29/23	SAM	REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS
2.	5/03/23	SAM	

Drawing date: 7/26/2021

**E & S CONTROL PLAN**

PROJECT TITLE: **HAMPTON VILLAGE**  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

PREPARED FOR: **BAKAJ CONSTRUCTION LLC**  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

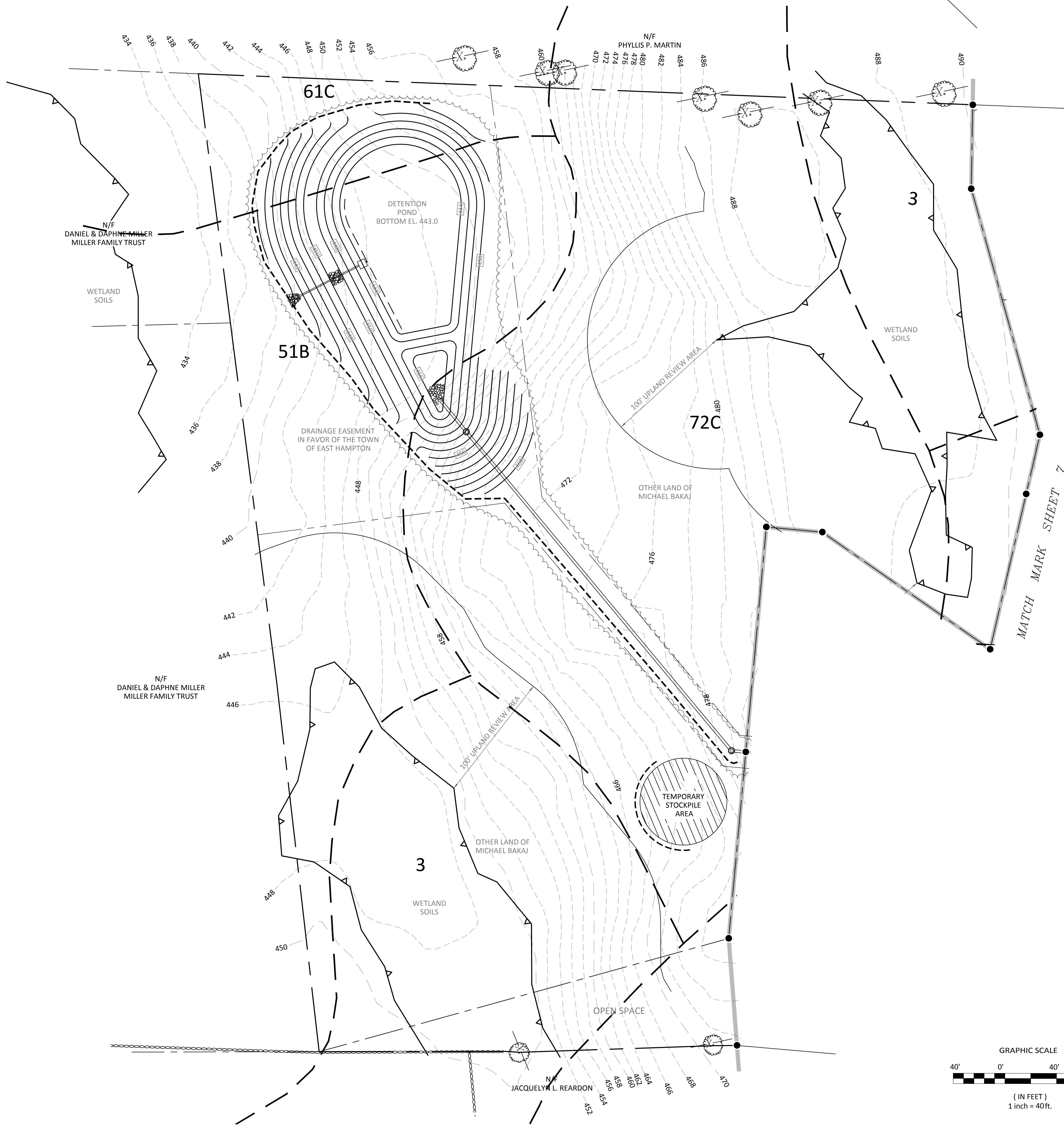
CIVIL ENGINEERING CONSULTANTS

63 NORWICH AVENUE  
COLCHESTER, CT  
(860) 516-0033

**RES**  
Reynolds Engineering Services, LLC

Drawing #: 7 OF 15  
Job #: 21-106





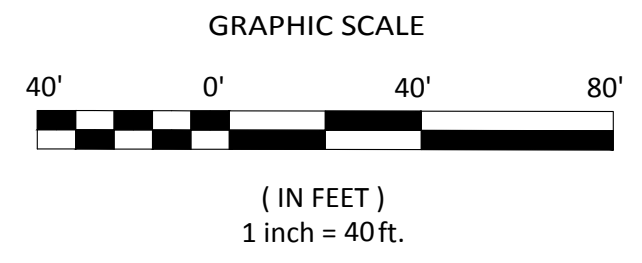
**LEGEND**

---	PROPERTY LINE
---	BUILDING SETBACK LINE
---	ZONE LINE
---	STONE WALL
---	CLEARING LIMIT
---	EXISTING CONTOURS
---	PROPOSED CONTOURS
---	PROPOSED UNDERGROUND UTILITIES
---	SILT FENCE
⊗	ANGLE POINT
⊙	IRON PIN OR PIPE FOUND
⊙	MONUMENT FOUND
●	IRON PIN TO BE SET
⊕	UTILITY POLE

APPROVED  
 PLANNING AND ZONING  
 COMMISSION  
 EAST HAMPTON, CT

DATE: \_\_\_\_\_

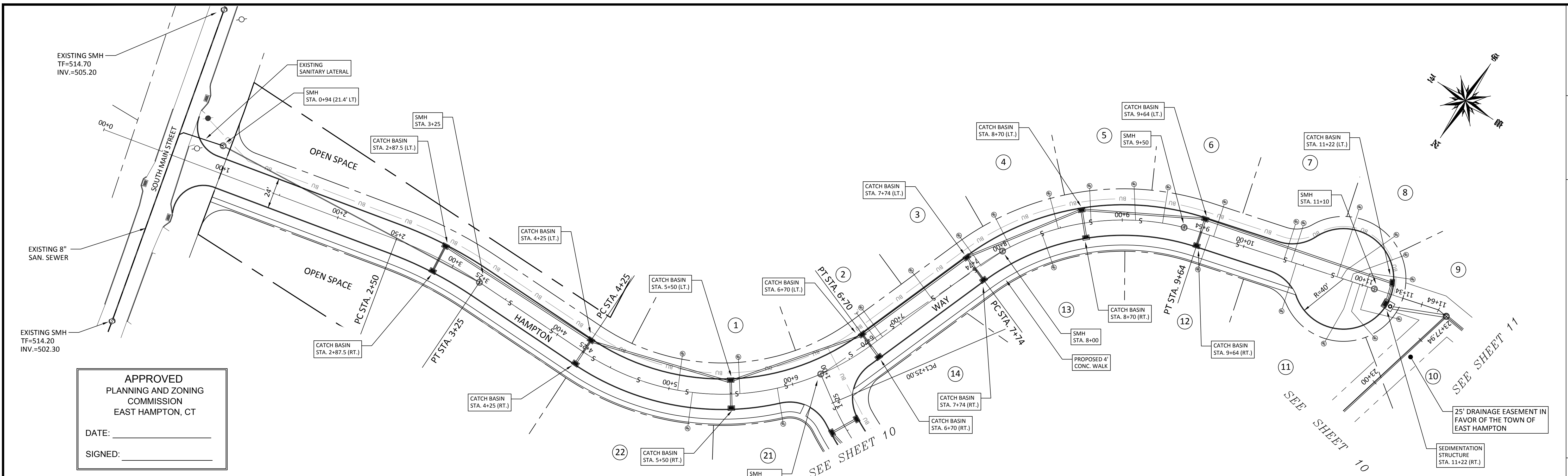
SIGNED: \_\_\_\_\_



**ROB HELLSTROM**  
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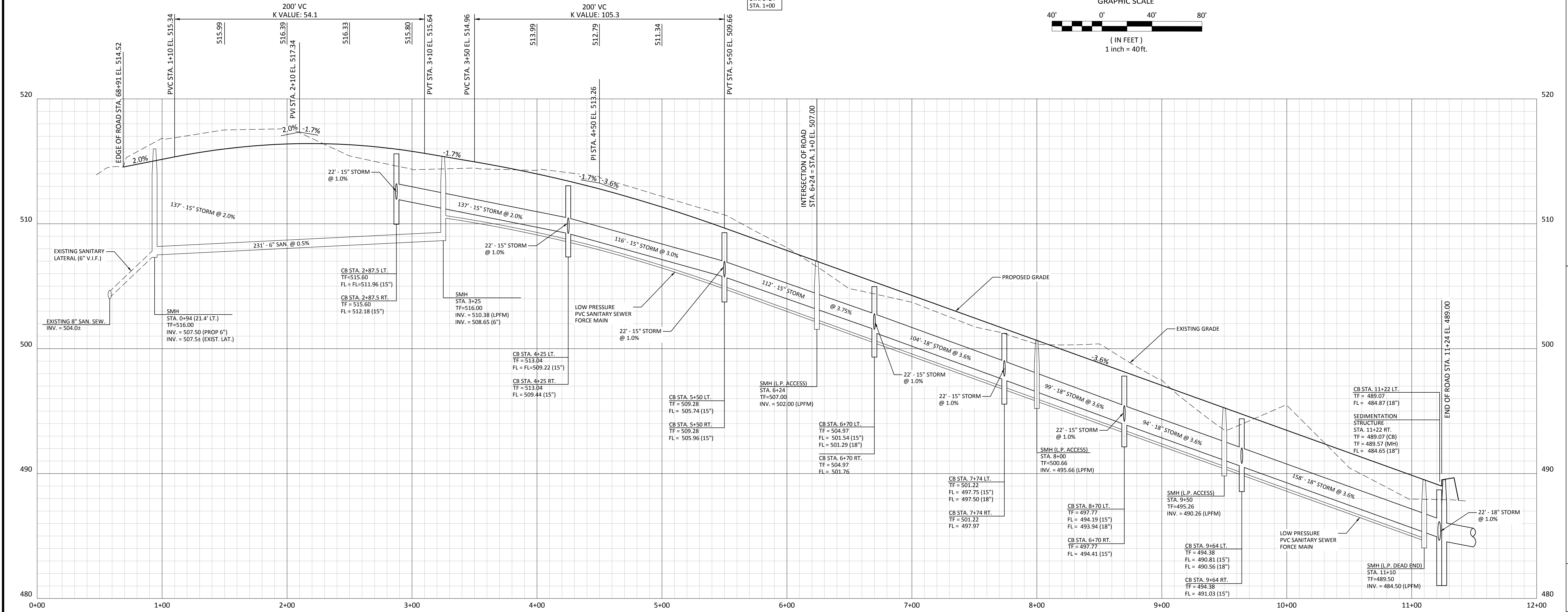
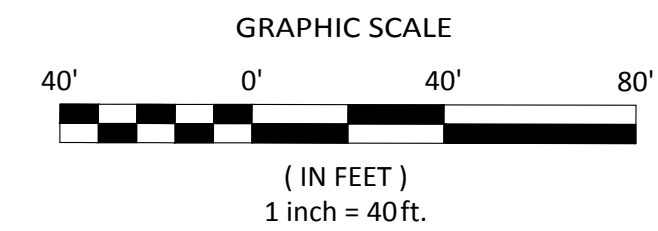
Drawing #: <b>8 OF 15</b>	Job #: 21-106	CIVIL ENGINEERING CONSULTANTS 63 NORWICH AVENUE COLCHESTER, CT (860) 516-0033 <b>RES</b> Reynolds Engineering Services, LLC	E & S CONTROL PLAN	Drawing date: 7/26/2021	Drawing Scale: 1" = 40'	Designed By: MAR
			PROJECT TITLE: HAMPTON VILLAGE 37 SOUTH MAIN STREET EAST HAMPTON, CT.	PREPARED FOR: BAKAJ CONSTRUCTION LLC 37 SOUTH MAIN STREET EAST HAMPTON, CT.	Revision 1. 3/29/23 REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS 2. 5/03/23	By SAM SAM



APPROVED  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT

DATE: \_\_\_\_\_

SIGNED: \_\_\_\_\_



SCALE:  
1" = 40' (HORIZONTAL)  
1" = 4' (VERTICAL)

Designed By: MAR	Drawn By: SAM	Checked By: MAR	CAD File: 21-106
Drawing Scale: 1" = 40'	Revision 1. REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS	By SAM	
Date 7/26/2021	Date 3/29/23	Date 5/03/23	
Rev. 1.	2.		

Drawing date: 7/26/2021

Revision 1. REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS

Revision 2.

By SAM

Date 3/29/23

Date 5/03/23

Rev. 1. 2.

PLANNING & PROFILE

PROJECT TITLE: HAMPTON VILLAGE  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

PREPARED FOR: BAKAJ CONSTRUCTION LLC  
37 SOUTH MAIN STREET  
EAST HAMPTON, CT.

CIVIL ENGINEERING CONSULTANTS

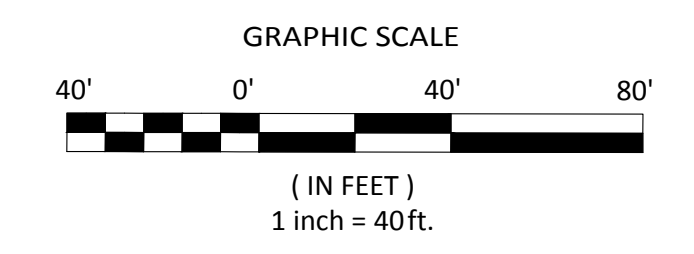
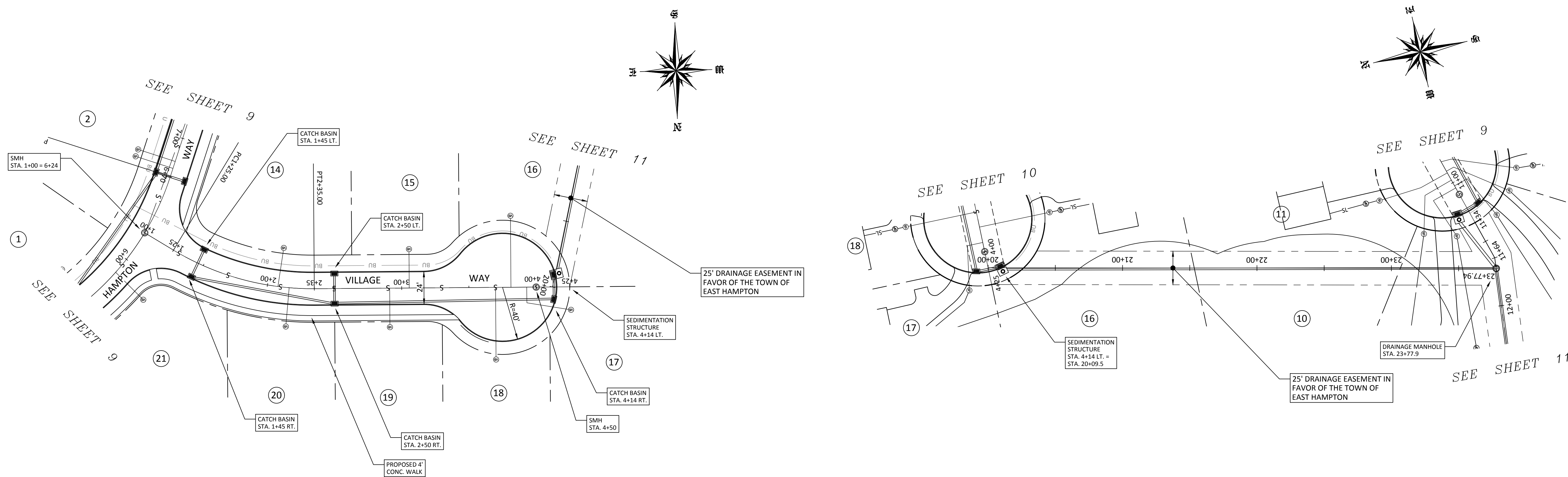
**RES**

63 NORWICH AVENUE  
COLCHESTER, CT  
(860) 516-0033

Reynolds Engineering Services, LLC

Drawing #:  
9 OF 15

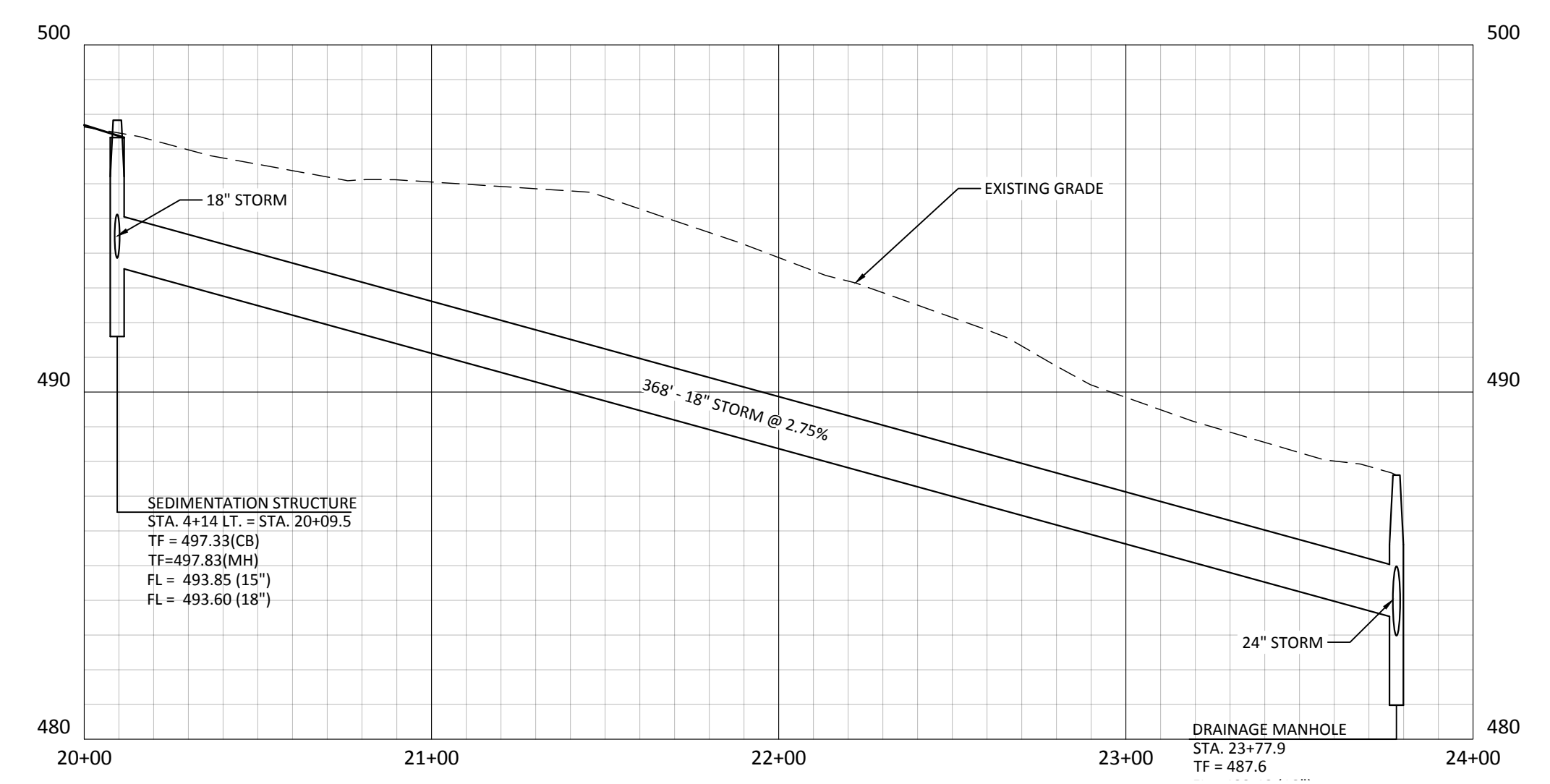
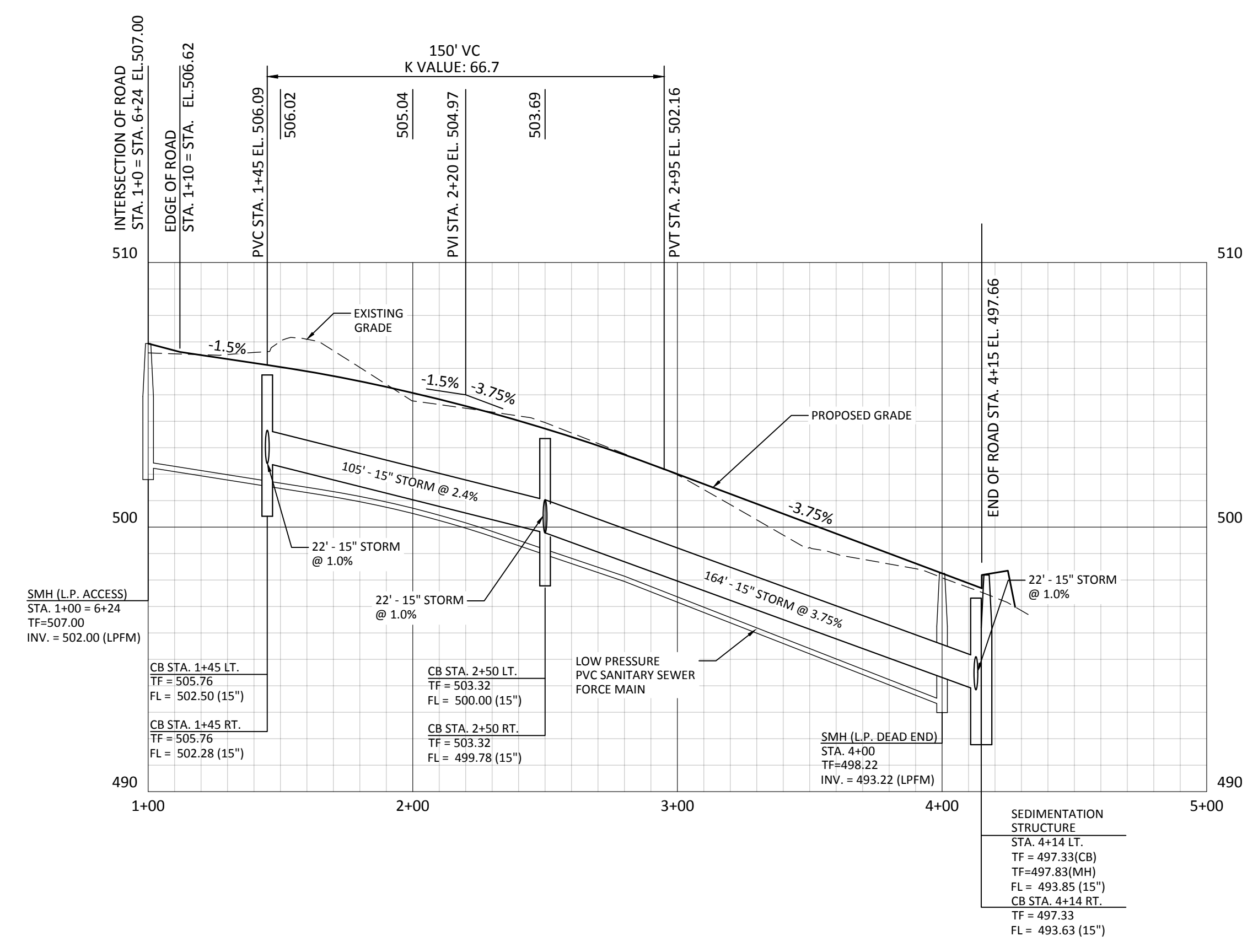
Job #: 21-106



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EAST HAMPTON, CT

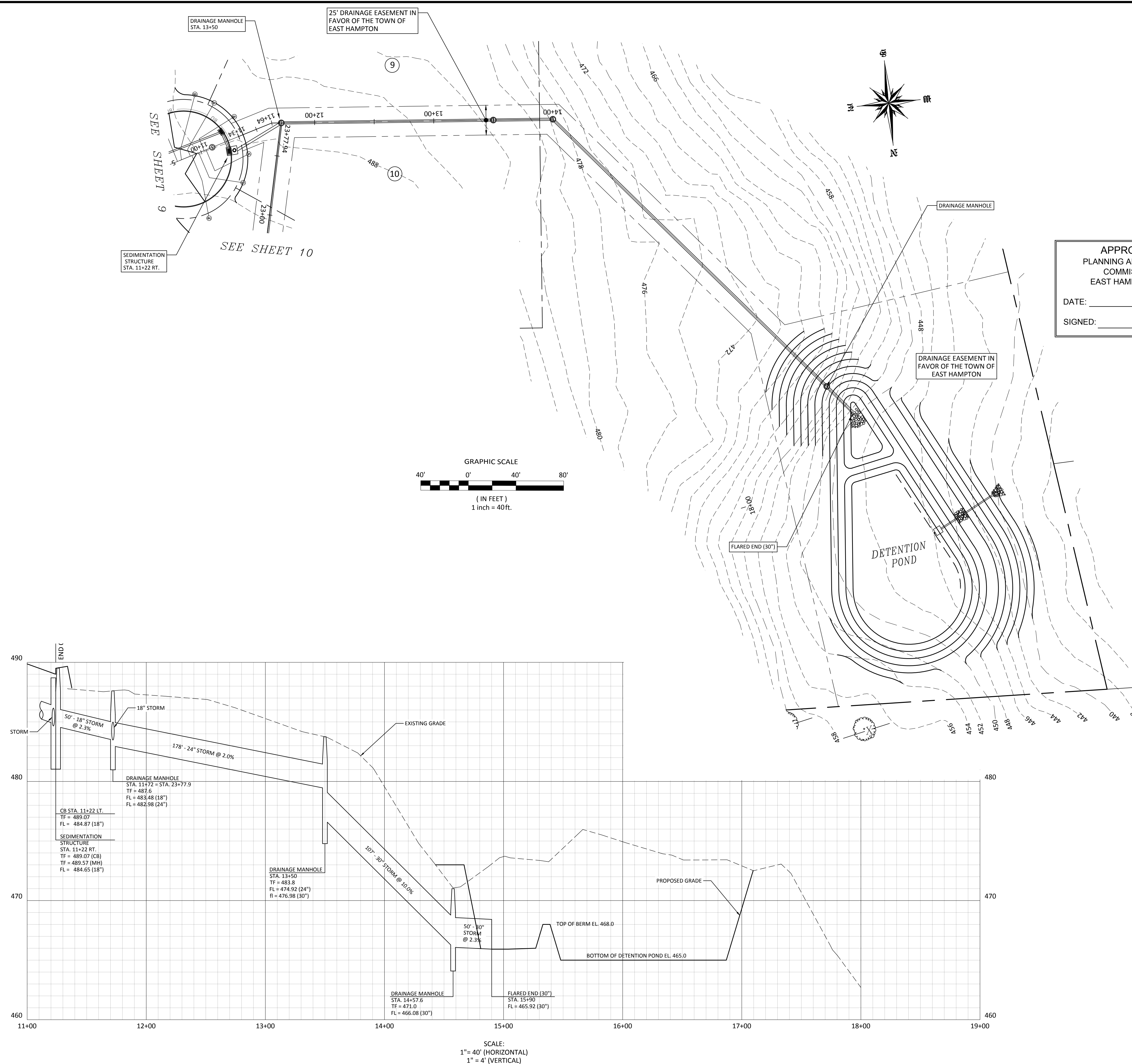
DATE: \_\_\_\_\_

SIGNED: \_\_\_\_\_

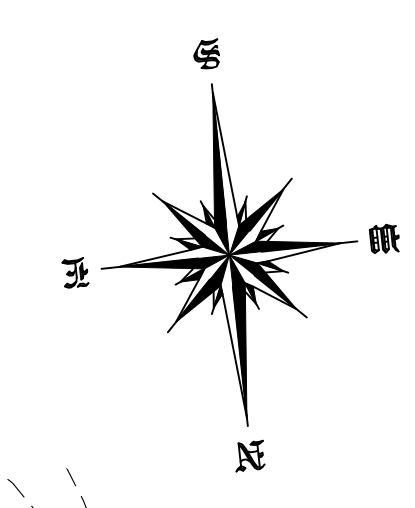
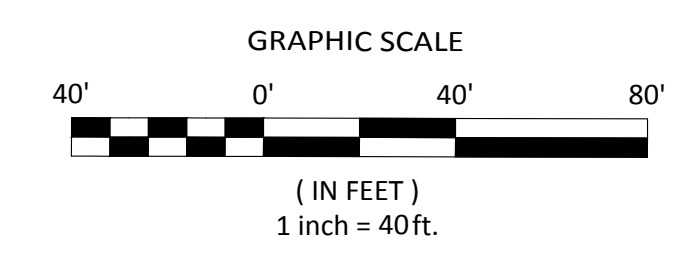


SCALE:  
1" = 40' (HORIZONTAL)  
1" = 4' (VERTICAL)

Drawing #: <b>10 OF 15</b>	Job #: 21-106	Drawing date: 7/26/2021	Drawing Scale: 1" = 40'	Designed By: MAR Drawn By: SAM Checked By: MAR CAD File: 21-106
<b>PLAN &amp; PROFILE</b>				
<b>PROJECT TITLE: HAMPTON VILLAGE</b> 37 SOUTH MAIN STREET EAST HAMPTON, CT.				
PREPARED FOR: <b>BAKAJ CONSTRUCTION LLC</b> 37 SOUTH MAIN STREET EAST HAMPTON, CT.				
CIVIL ENGINEERING CONSULTANTS <b>RES</b> Reynolds Engineering Services, LLC 63 NORWICH AVENUE COLCHESTER, CT (860) 516-0033				



SEE SHEET 9  
SEE SHEET 10



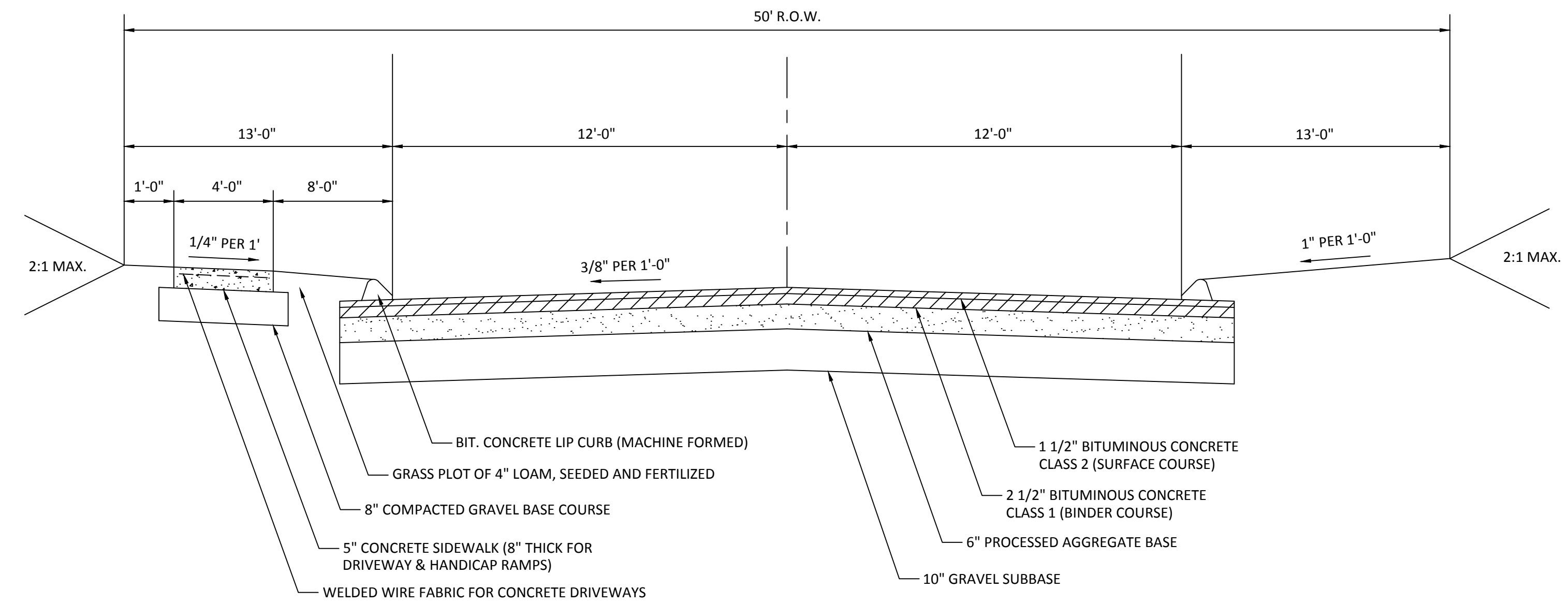
APPROVED  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT  
DATE: \_\_\_\_\_  
SIGNED: \_\_\_\_\_

Designed By: MAR		Drawing Scale: 1" = 40'	
Drawn By: SAM		Drawing date: 7/26/2021	
Checked By: MAR		Revision	
CAD File: 21-106		1. REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS	
		By SAM	
		Date 3/29/23	
		2. 5/03/23	
<b>PLAN &amp; PROFILE</b> PROJECT TITLE: <b>HAMPTON VILLAGE</b> 37 SOUTH MAIN STREET EAST HAMPTON, CT. PREPARED FOR: <b>BAKAJ CONSTRUCTION LLC</b> 37 SOUTH MAIN STREET EAST HAMPTON, CT.		CIVIL ENGINEERING CONSULTANTS <b>RES</b> 63 NORWICH AVENUE COLCHESTER, CT (860) 516-0033 <b>Reynolds Engineering Services, LLC</b>	
Drawing #:		11 OF 15	
Job #:		21-106	

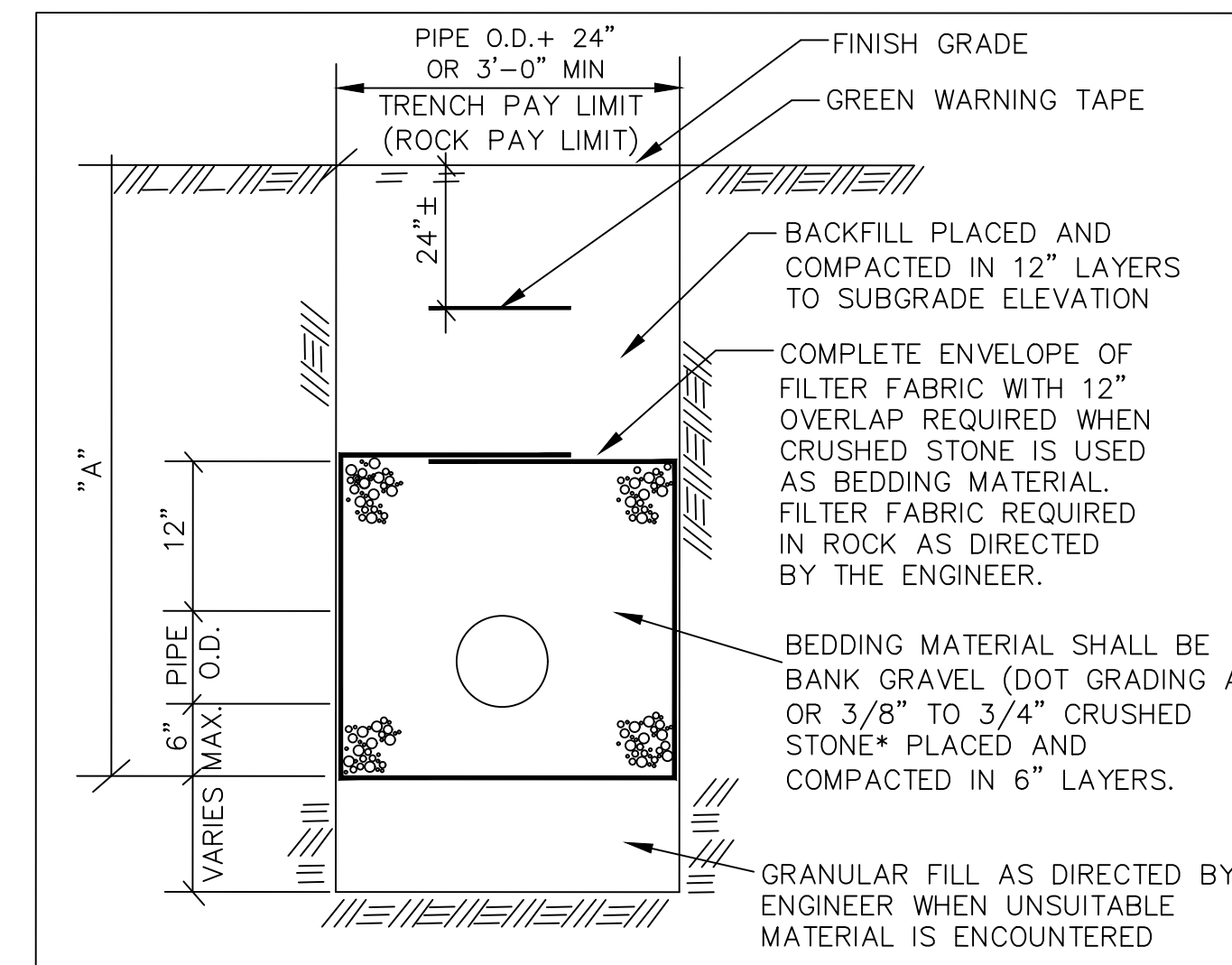


**GENERAL NOTES:**

1. LIMITS OF DISTURBANCE: Upon approval of individual site plan development, the limit of disturbance shall be established in the field for each proposed structure. Disturbance limits shall be 25-35 feet beyond the proposed building and shall be bounded by staked hay bales or silt fence.
2. EROSION CONTROLS: Area to be disturbed shall be bounded by staked hay bales or silt fence. All erosion controls, including silt fence and anti-tracking pad shall be installed and inspected by the Land use ZEO and Wetland Agenda prior to stumps being pulled, grubbing, or excavation. The ZEO and Wetland Agent may modify the erosion control requirement based on field conditions so as to adequately control erosion and siltation from the site.
3. TREES CLEARED: Trees shall be cleared and cut to length and stacked or removed from the site. Then the pulling of stumps, grubbing and/or excavation shall begin.
4. DRIVEWAY: Driveway and shoulder shall be stripped, graded as shown on plan, and graveled. Driveway shoulders shall be stabilized immediately upon grading, either by diverting runoff, mulching, or seeding and hay bales, silt fence or other approved measures the same day that cuts are made.
6. TOPSOIL: All topsoil shall be stripped and saved in area as shown on the plan or as approved by the Planner and Wetland Agent. Topsoil shall not be removed from the site except as in compliance with the Zoning Regulations.
7. CONSTRUCTION & DISTURBED AREA: Excavation and construction shall commence following inspection and approval of erosion control and construction of the driveway. The disturbed area shall be so as to contain runoff within the lot to the greatest extent possible.
8. SITES IN WINTER: When a site will be open during the winter months, rough grading and 4-6 inch mulching must occur prior to construction in order to minimize erosion and uncontrolled runoff.
9. DRAINS: Foundation and curtain drains shall be installed as shown on the approved plan. Any changes to the location of the drains or the additions of any drains shall be approved by the Wetlands Agenda prior to installation.
10. COMPLETE SITE WORK: Finish grading shall occur as soon as possible on all lots where there is potential for erosion and for degradation of wetlands and watercourses. Lots shall be finish graded, seeded with perennial grasses suitable for the respective amount of sun or shade and mulched prior to Certificate of Zoning Compliance.
11. FINAL STABILIZATION: Erosion controls shall be maintained on the lot as long as they are needed to control erosion and sedimentation.
12. E&S CONTROLS: All E&S controls shall be inspected on a daily basis and maintained as necessary until all disturbed areas are permanently re-vegetated or otherwise stabilized.

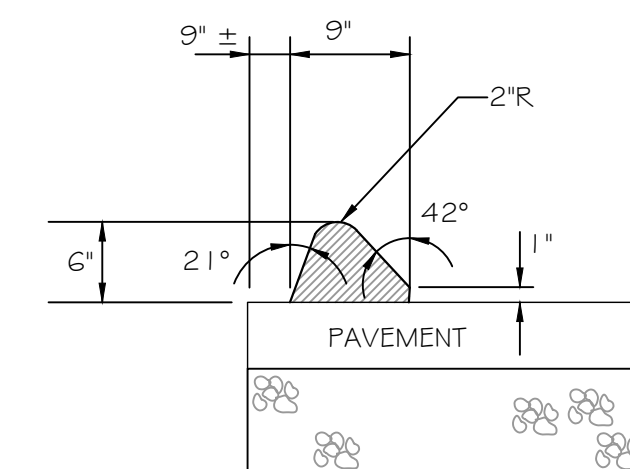


**TYPICAL STREET CROSS SECTION LAYOUT**  
NOT TO SCALE



\* CRUSHED STONE SHALL BE USED WHENEVER "A" IS GREATER THAN 15' AND PVC PIPE IS USED.

**TYPICAL TRENCH DETAIL (SANITARY SEWER)**  
NOT TO SCALE



**BITUMINOUS CONCRETE LIP CURB**  
NOT TO SCALE

APPROVED  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT  
  
DATE: \_\_\_\_\_  
SIGNED: \_\_\_\_\_

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Designed By: MAR		Drawing Scale: AS NOTED	
Drawn By: SAM		Revision	
Checked By: MAR		1. REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS	
CAD File: 21-106		By: SAM	
		Date: 3/29/23	
		2. 5/03/23	

**GENERAL NOTES AND DETAILS**

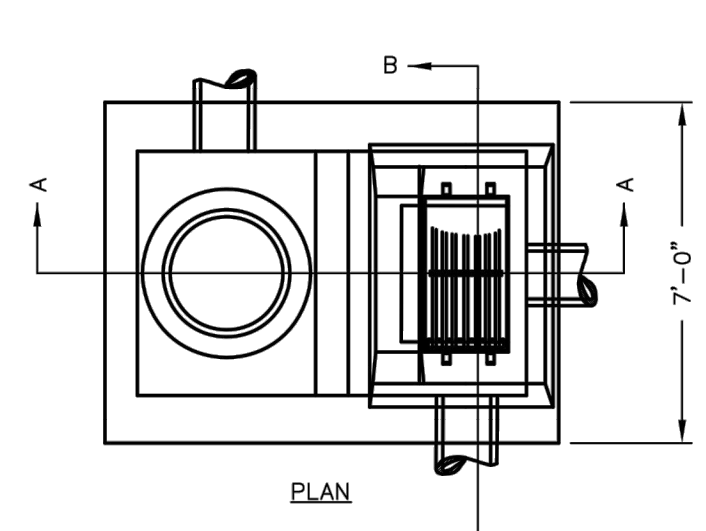
PROJECT TITLE: HAMPTON VILLAGE  
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PREPARED FOR: BAKAJ CONSTRUCTION LLC  
37 SOUTH MAIN STREET EAST HAMPTON, CT.

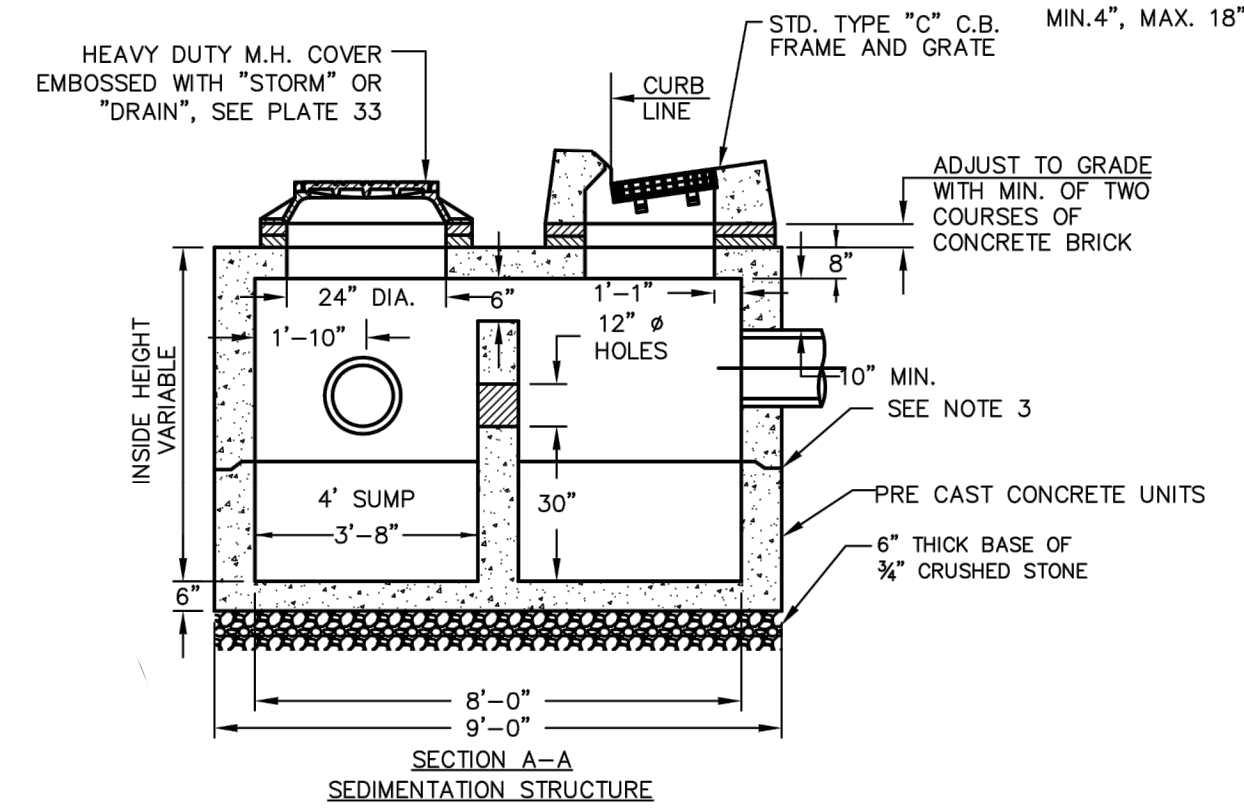
CIVIL ENGINEERING CONSULTANTS  
63 NORWICH AVENUE  
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**RES**  
Reynolds Engineering Services, LLC

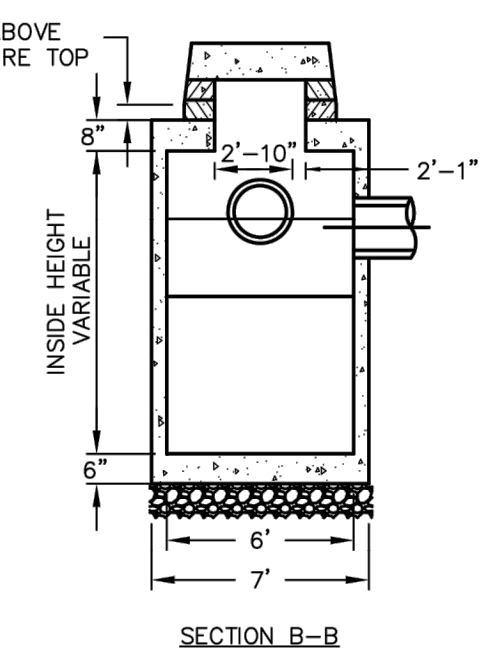
Drawing #: 13 OF 15  
Job #: 21-106



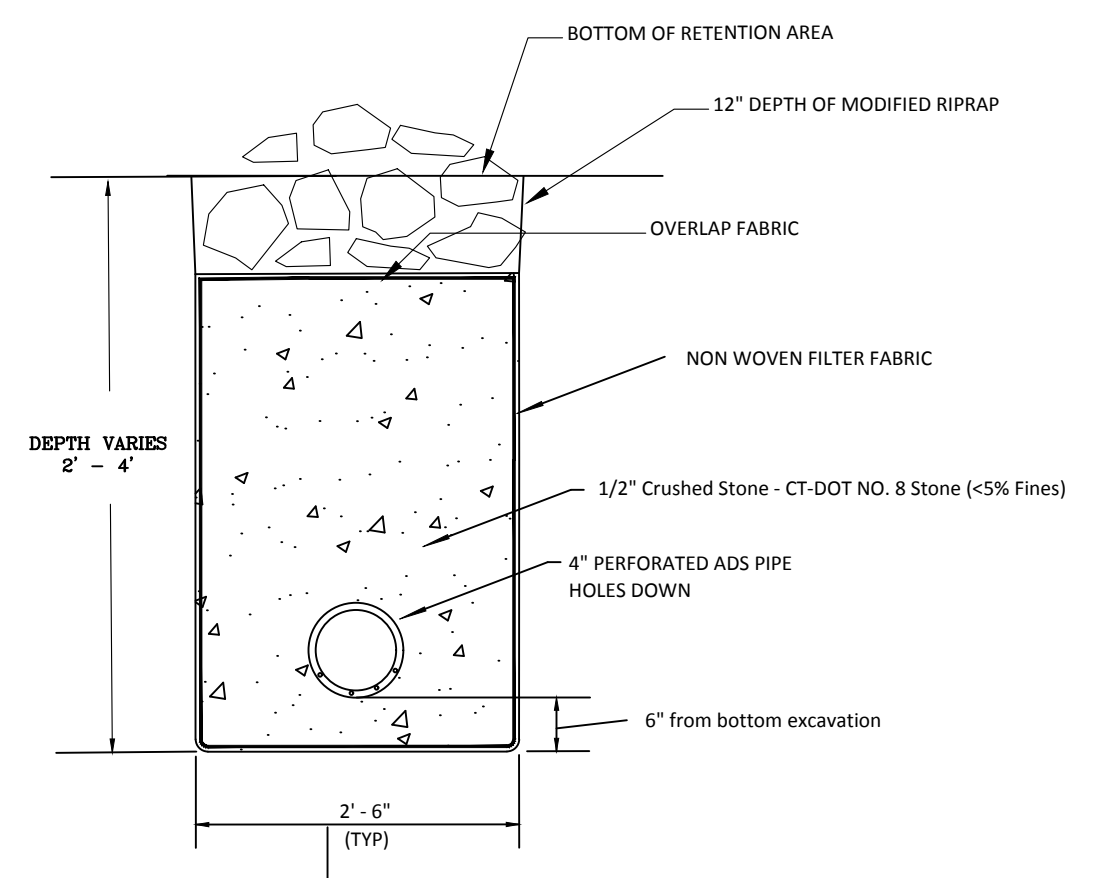
- NOTES:**
1. Baffle construction to be of cast material with thru holes above outlet flow line or mortared cement blocks with weep holes above outlet flow line.
  2. Adjust M.H. frame to suit required field height.
  3. Construction joint - sealed with 1" dia. butyl rubber or acceptable equivalent.
  4. Design loading - AASHTO HS20-44.
  5. Steel reinforcement - ASTM A-615-75, Grade 60, 2" min. cover.
  6. Concrete minimum strength - 5,000 P.S.I. @ 28 days.
  7. Maximum height of each additional piece 4'-0".
  8. Maximum inside height for 2 piece chamber 8'-0".
  9. Roof and side wall openings as specified.
  10. Structure to be installed in an "offline" configuration with diversion manholes as per town public improvement standards.



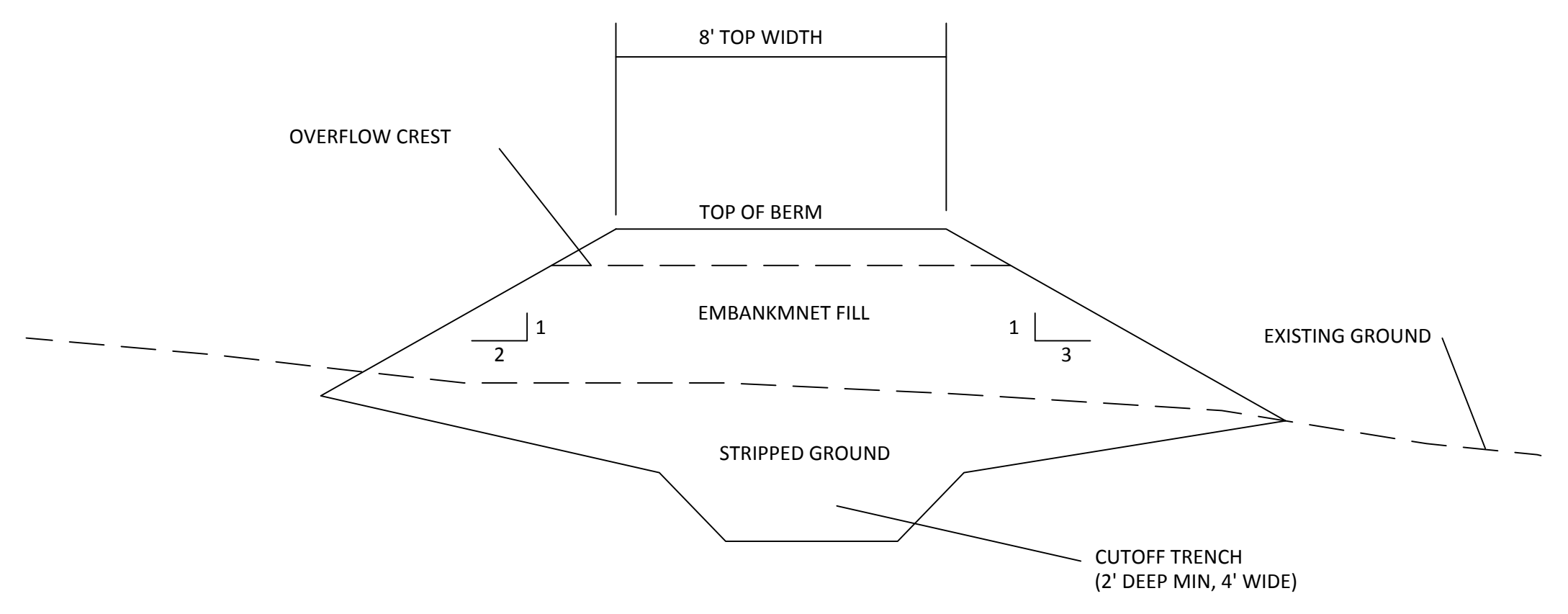
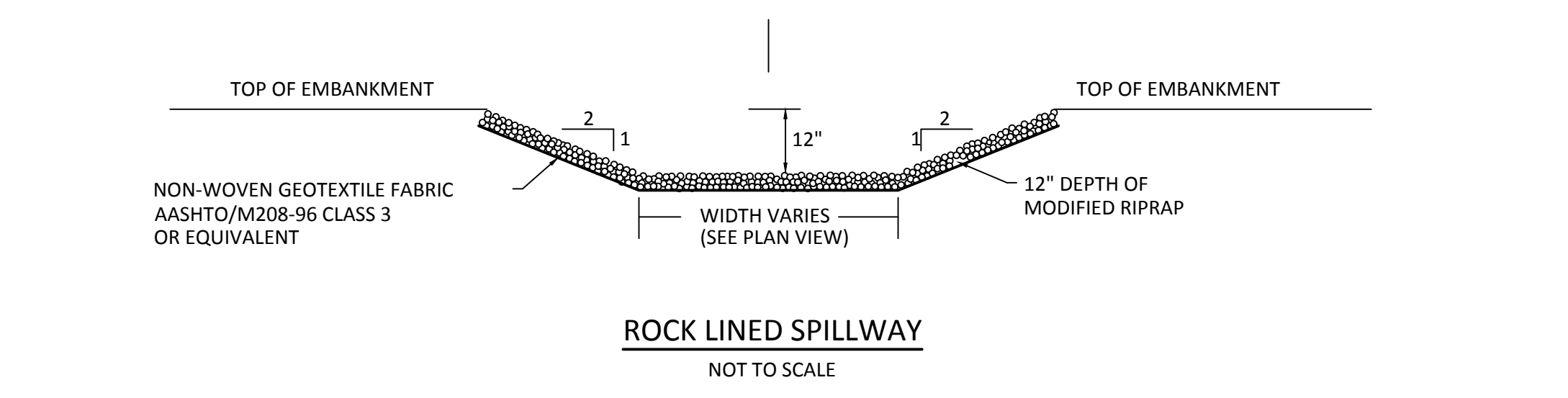
**SEDIMENTATION STRUCTURE DETAIL**  
NOT TO SCALE



**SECTION B-B**



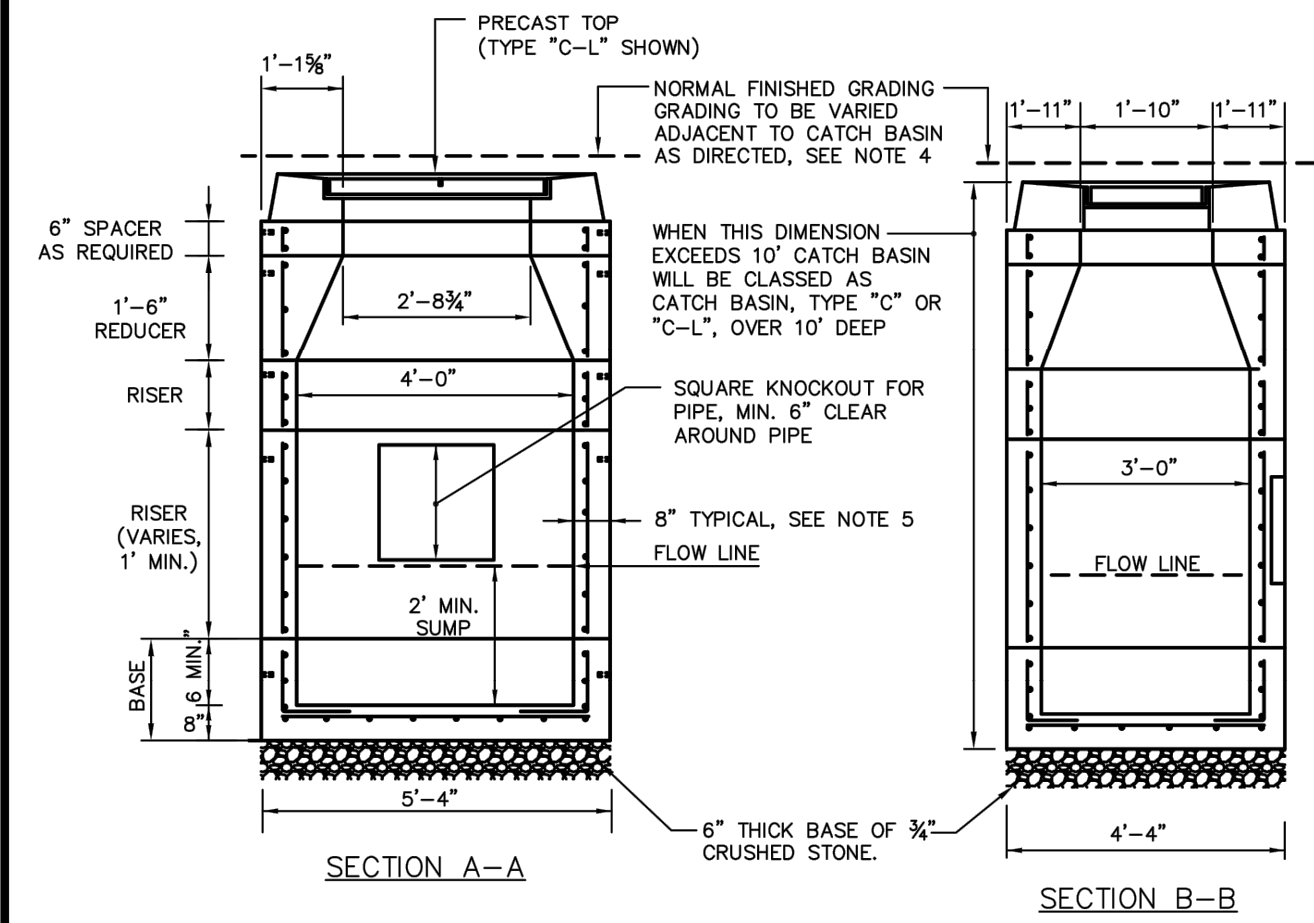
**BASIN DRAIN DETAIL**  
NOT TO SCALE



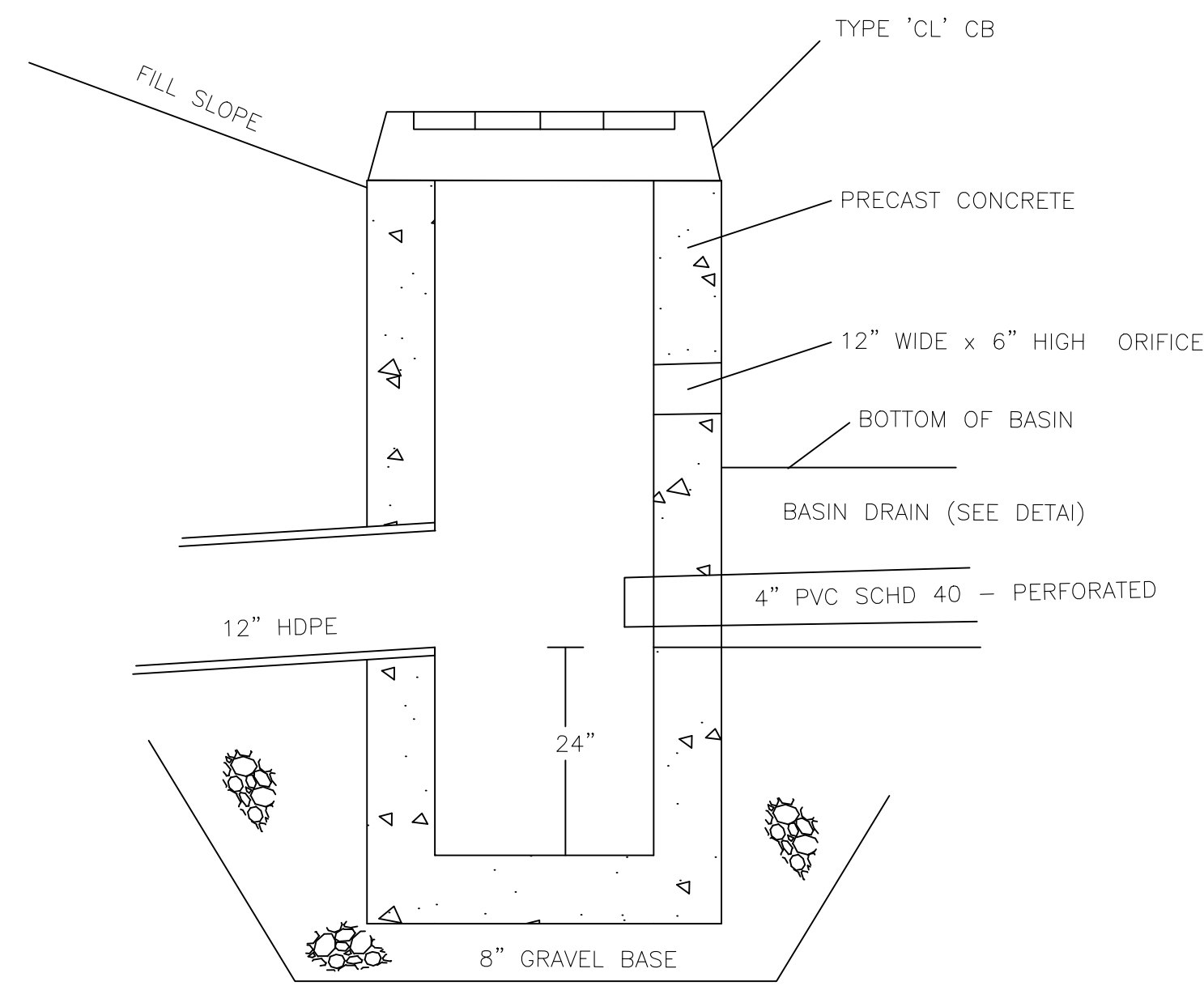
**EMBANKMENT CROSS SECTION FOR RETENTION AREA**  
(NOT TO SCALE)

- NOTES:**
1. THE FOUNDATION FOR THE EMBANKMENT SHALL BE STRIPPED TO REMOVE VEGETATION, ORGANIC SOILS AND UNSUITABLE SUB SOILS.
  2. THE STRIPPED FOUNDATION SHALL BE SCARIFIED PARALLEL TO THE AXIS OF THE FILL.
  3. THE EMBANKMENT FILL SHALL SUITABLE SILTY SANDS (USCS SM).
  4. EMBANKMENT FILL SHALL CONTAIN NO STONE GRATER THAN 3" AND SHALL MEET THE FOLLOWING GRADATION:  
 #4 SIEVE 75-90% PASSING BY WEIGHT  
 #10 SIEVE 65-90% PASSING BY WEIGHT  
 #40 SIEVE 50-85% PASSING BY WEIGHT  
 #200 SIEVE 10-50% PASSING BY WEIGHT
  5. PRIOR TO EMBANKMENT FILL PLACEMENT, REPRESENTATIVE SAMPLES OF THE PROPOSED BORROW MATERIAL SHALL BE TESTED BY A QUALIFIED SOIL TESTING LABORATORY TO DETERMINE THE OPTIMUM MOISTURE CONTENT AND MAXIMUM DENSITY.
  6. THE EMBANKMENT FILL SHALL BE PLACED IN A MAXIMUM LIFT THICKNESS OF NINE INCHES.
  7. DURING PLACEMENT OF THE EMBANKMENT FILL, THE MOISTURE CONTENT OF THE MATERIALS BEING PLACED SHALL BE MAINTAINED WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT.
  8. THE EMBANKMENT FILL SHALL BE COMPACTED AS NECESSARY TO A MINIMUM OF 95% MAXIMUM DENSITY BY ASTM D 1557, MODIFIED PROCTOR.

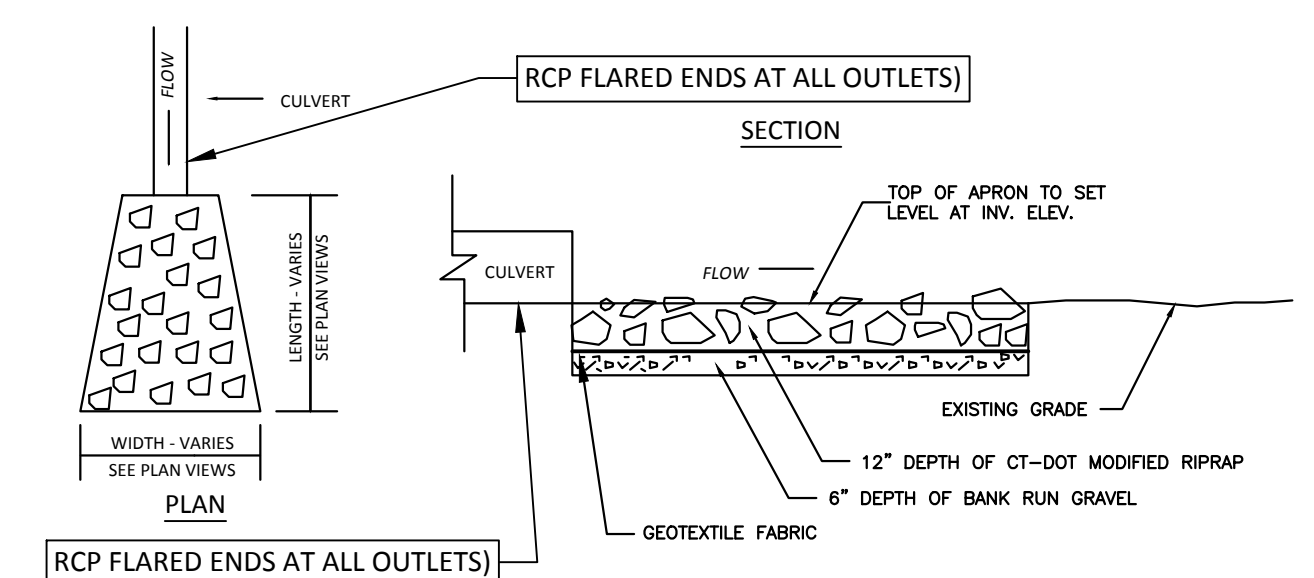
1. ALL CATCH BASINS SHALL CONFORM TO CONDOT STANDARD DETAIL SHEETS HW-507\_1 AND HW-507\_04 EXCEPT AS OTHERWISE NOTED ON THIS DETAIL. DOUBLE GRATE CATCH BASINS SHALL CONFORM TO CONDOT STANDARD SHEETS HW-507\_03 AND HW-507\_06.
2. PRECAST CATCH BASIN TOPS MUST BE PROPERLY ALIGNED AS SHOWN AND SHALL CONFORM TO CONDOT STANDARD DETAIL SHEETS HW-507\_07. CAPE COD CATCH BASIN TOPS SHALL HAVE AN OPEN THROAT.
3. ALL FRAMES AND GRATES SHALL BE GALVANIZED. FOR DETAILS OF FRAMES AND GRATES, SEE CONDOT STANDARD DETAIL SHEET HW-507\_08.
4. WHEN TYPE 'C' CATCH BASINS ARE CONSTRUCTED IN PAVEMENT, THE NORMAL CUTTER OF THE ROADWAY SHALL BE VARIED TO PROVIDE AN ADDITIONAL 2-INCH DEEPENED GUTTER AT THE CATCH BASIN.
5. WALL THICKNESS TO BE 12 INCHES WHEN HEIGHT OF STRUCTURE EXCEEDS 10 FEET FROM TOP OF FRAME TO BOTTOM OF BASE. THICKER WALLS APPLY ONLY TO PORTION OF STRUCTURE BELOW 10' DEEP.
6. PRECAST RISER SECTIONS SHALL NEVER HAVE CORNER PIPE ENTRIES. WHEN PIPE ALIGNMENT CANNOT BE CHANGED, A ROUND STRUCTURE SHALL BE USED PER CONDOT DETAIL HW-507\_04.
7. CATCH BASINS LEFT ABOVE THE FINISHED GUTTER GRADE FOR THE WINTER MUST BE PROPERLY SHIMMED FOR FLOWING AS SHOWN IN PLATE 4.
8. MORTAR MIX SHALL NOT CONTAIN LIME.
9. ENDS OF PIPE SHALL BE SAWCUT FLUSH WITH INSIDE WALLS.
10. IF CONCRETE MASONRY UNITS ARE USED THE FOLLOWING ADDITIONAL REQUIREMENTS SHALL BE MET:  
 • MAXIMUM CORBEL SHALL NOT EXCEED 2 INCHES;  
 • WHERE NECESSARY, BLOCKS MAY BE CUT OR CONCRETE BRICK USED (NO RED BRICK PERMITTED);  
 • CORNERS SHALL BE SQUARE, COURSES LEVEL, AND JOINTS PROPERLY STAGGERED;  
 • VOIDS IN EXTERIOR WALLS SHALL BE GROUTED, AND CORBELS SHALL BE WEDGED.



**CATCH BASIN DETAIL**  
NOT TO SCALE



**BASIN OUTLET STRUCTURE DETAIL**  
NOT TO SCALE



**ROCK APRON DETAIL**  
NOT TO SCALE

ROCK APRON TABLE		
APRON	LENGTH (ft.)	WIDTH (ft.)
FE 1	9	12

APPROVED  
PLANNING AND ZONING  
COMMISSION  
EAST HAMPTON, CT

DATE: \_\_\_\_\_  
SIGNED: \_\_\_\_\_

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**RES**  
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**GENERAL NOTES AND DETAILS**

PROJECT TITLE: **HAMPTON VILLAGE**  
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PREPARED FOR: **BAKAJ CONSTRUCTION LLC**  
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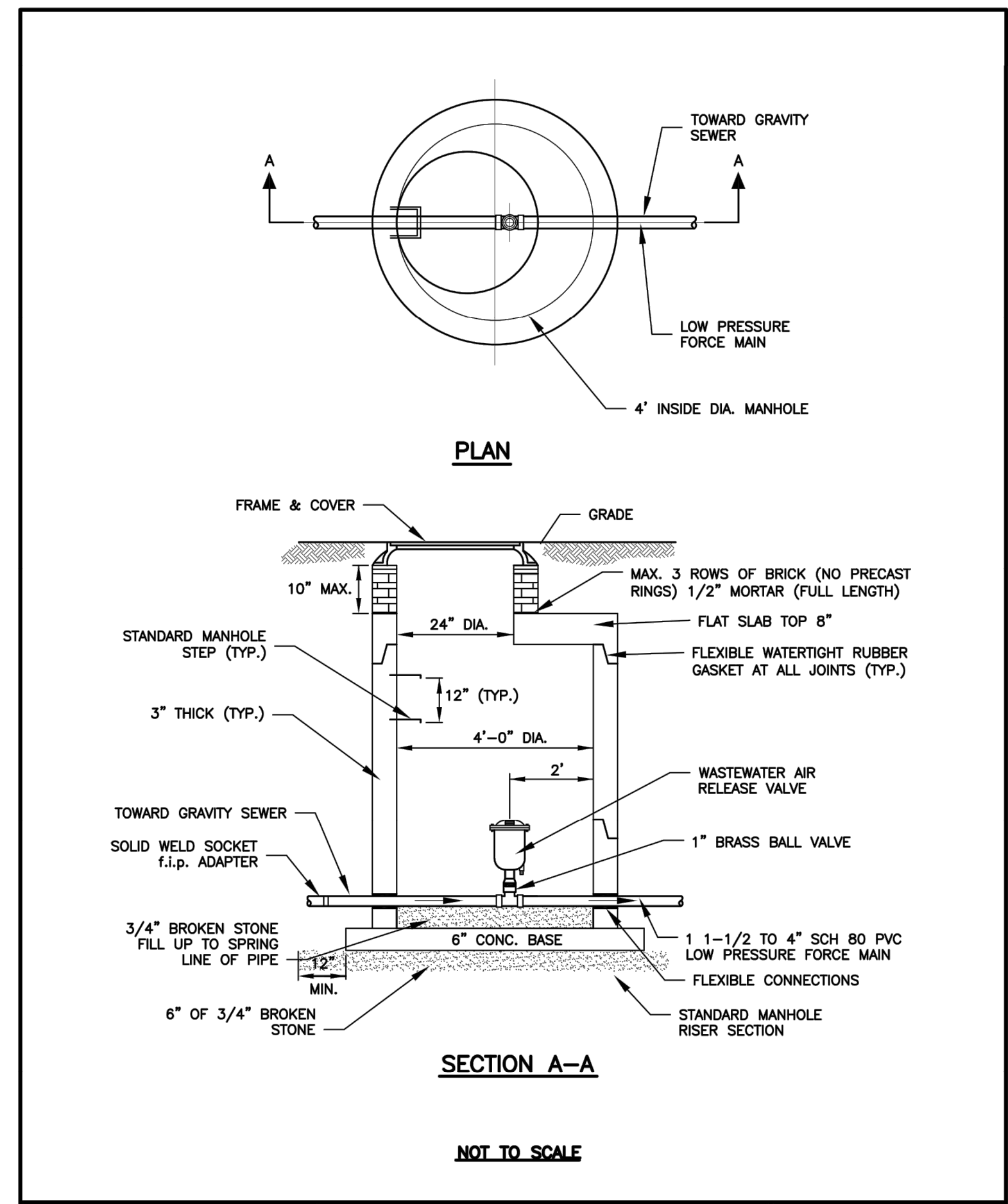
Drawing #:  
14 OF 15

Job #: 21-106

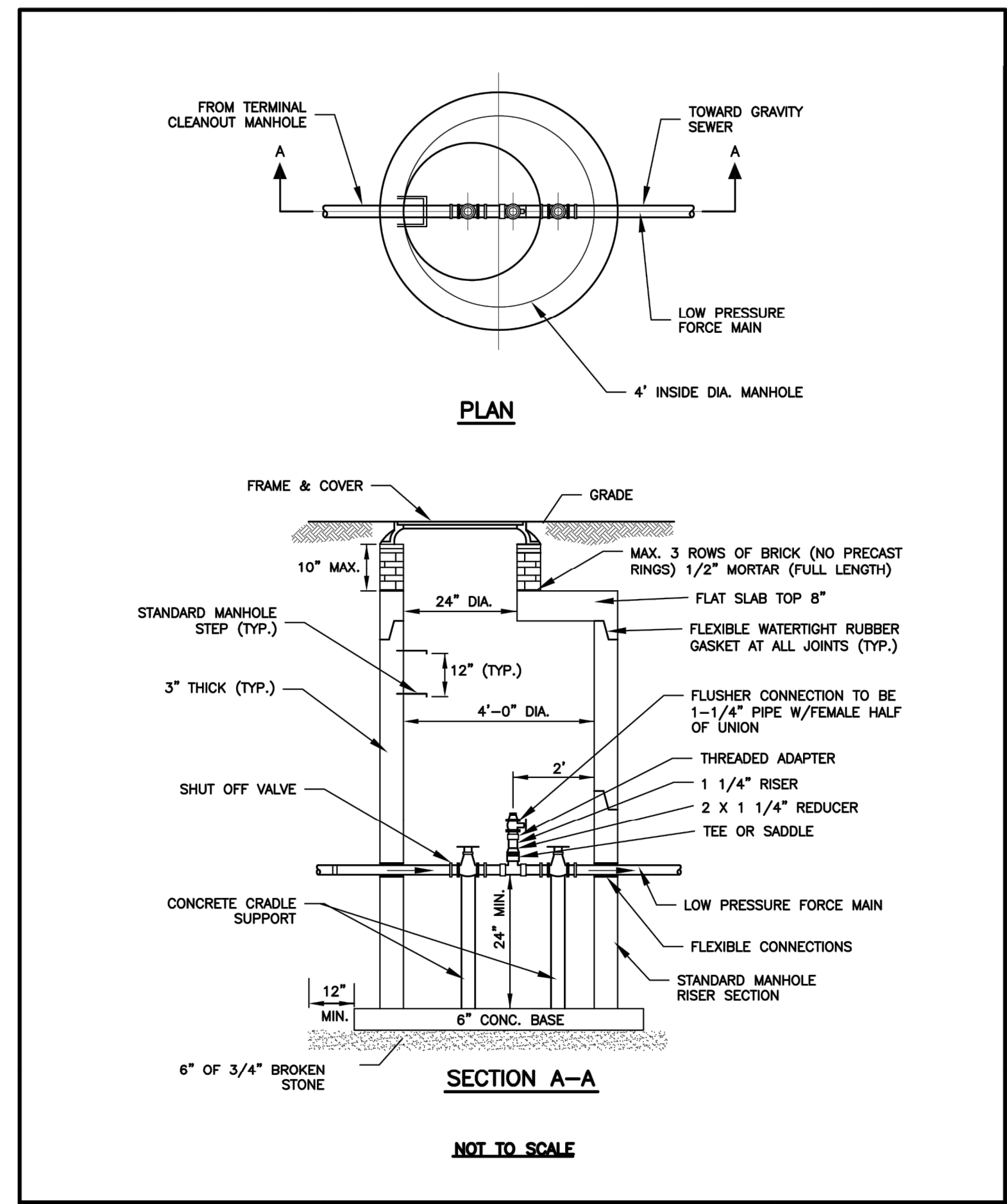
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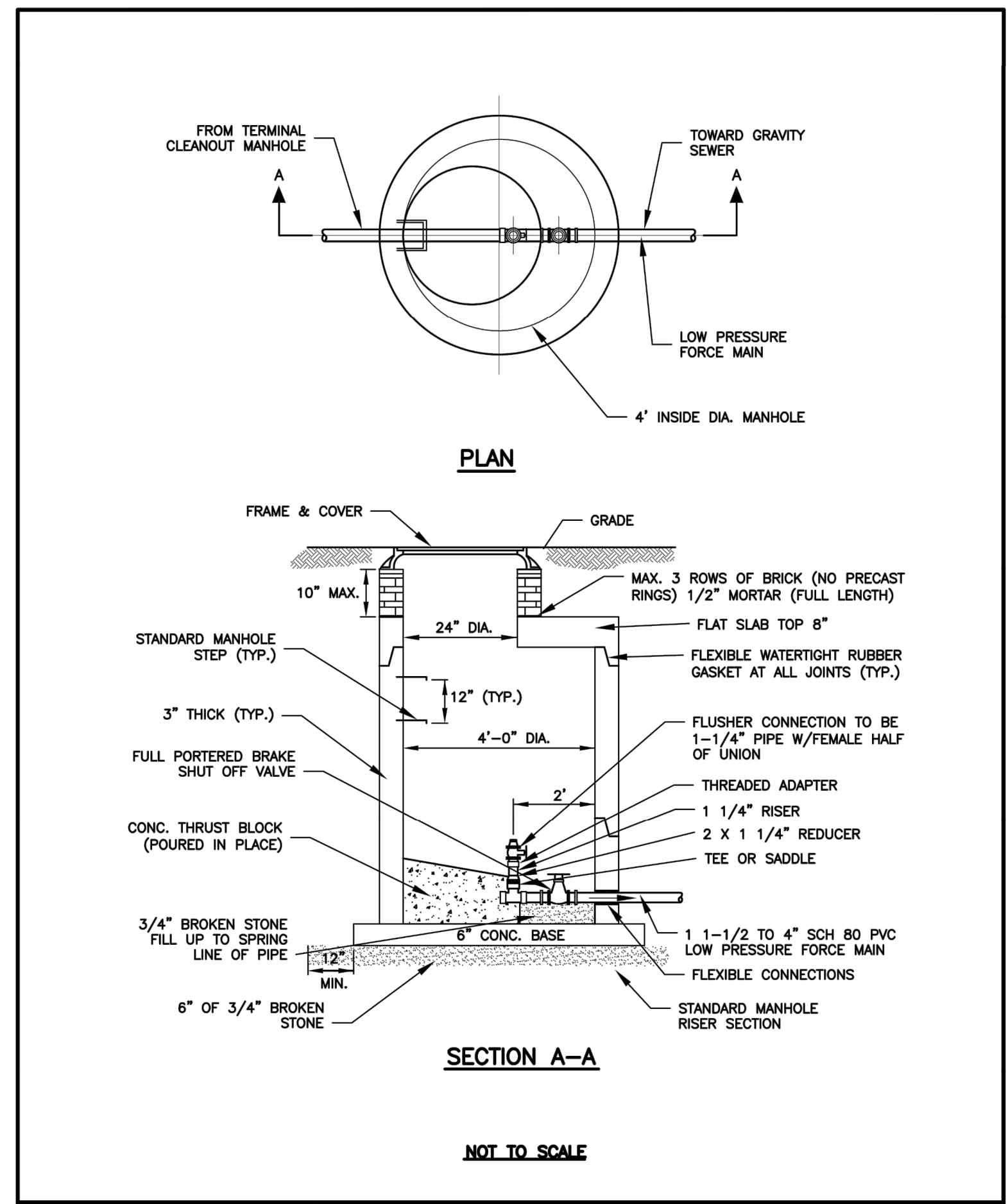
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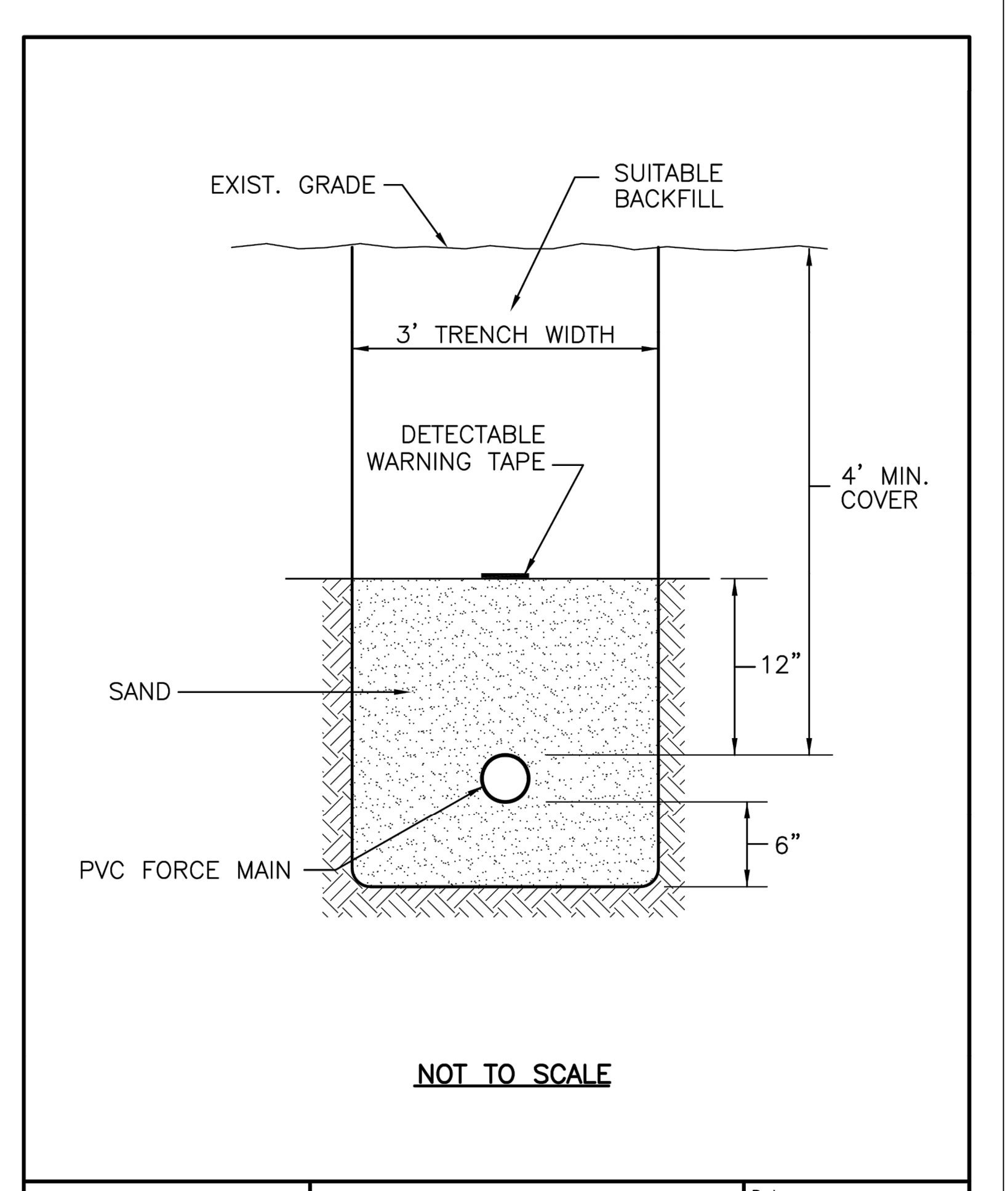
TOWN OF EAST HAMPTON TECHNICAL STANDARDS  
**LOW PRESSURE AIR RELEASE MANHOLE**  
 Date: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Detail No. **S-8**



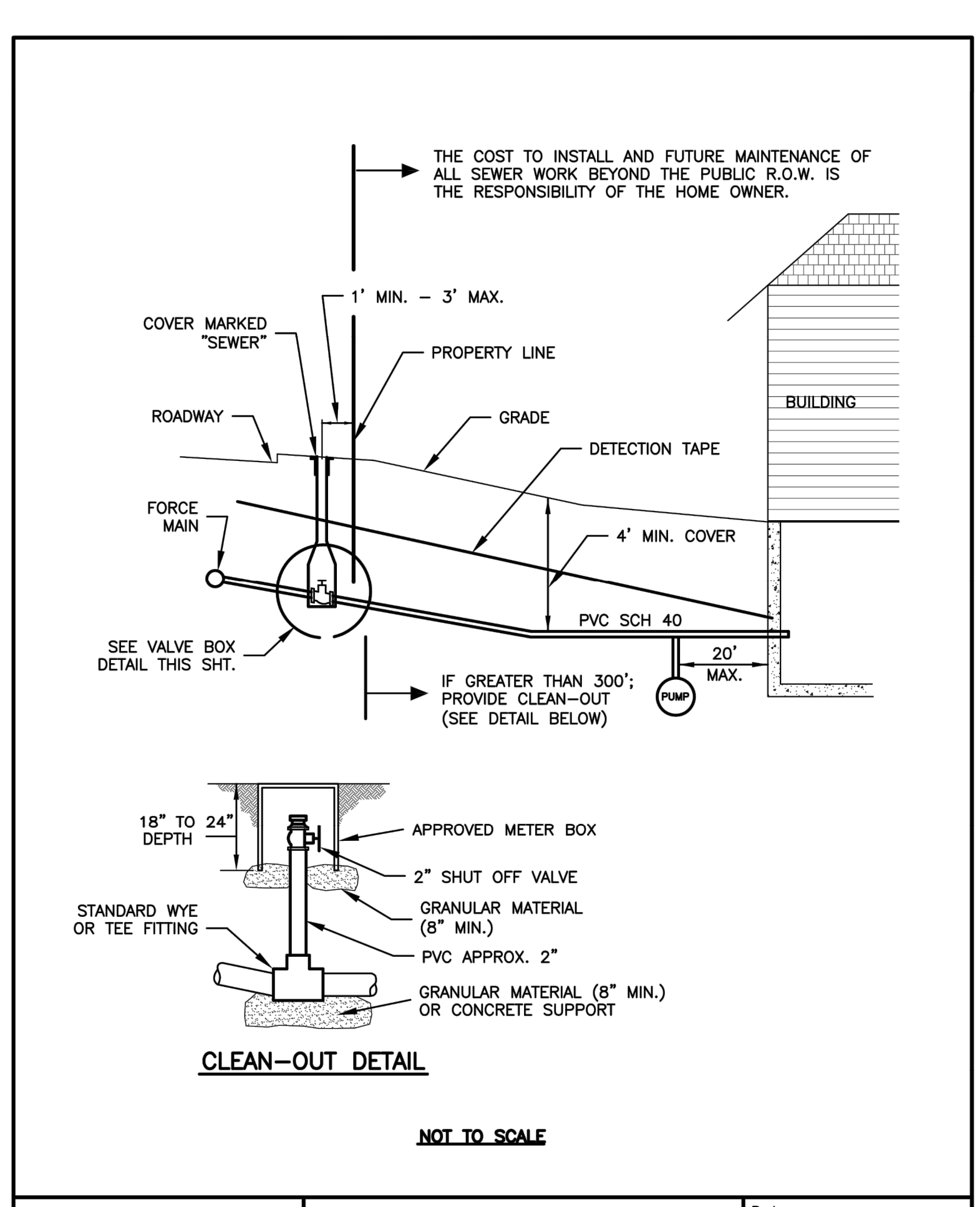
TOWN OF EAST HAMPTON TECHNICAL STANDARDS  
**LOW PRESSURE INLINE ACCESS MANHOLE**  
 Date: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Detail No. **S-9**



TOWN OF EAST HAMPTON TECHNICAL STANDARDS  
**LOW PRESSURE DEAD END MANHOLE**  
 Date: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Detail No. **S-10**



TOWN OF EAST HAMPTON TECHNICAL STANDARDS  
**FORCE MAIN TRENCH DETAIL**  
 Date: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Detail No. **S-6**



TOWN OF EAST HAMPTON TECHNICAL STANDARDS  
**LOW PRESSURE SERVICE CONNECTION**  
 Date: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Detail No. **S-12**

APPROVED  
 PLANNING AND ZONING  
 COMMISSION  
 EAST HAMPTON, CT  
 DATE: \_\_\_\_\_  
 SIGNED: \_\_\_\_\_

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DESIGNED BY: MAR  
 DRAWN BY: SAM  
 CHECKED BY: MAR  
 CAD FILE: 21-106

DRAWING SCALE: AS NOTED

DRAWING DATE: 7/26/2021

Rev.	Date	By	REVISION
1.	3/29/23	SAM	REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS
2.	5/03/23	SAM	EASEMENTS & DETAILS

GENERAL NOTES AND DETAILS

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 (860) 516-0033

**RES**  
 Reynolds Engineering Services, LLC

Drawing #: 15 OF 15  
 Job #: 21-106





**REYNOLDS ENGINEERING SERVICES, LLC**

63 Norwich Avenue      ♦      Colchester, CT 06415      ♦      Ph. (860) 465-7419      Fax (860) 456-1356  
Suite 202

May 1, 2023

Michael Bakaj  
Po Box 264  
Lebanon, CT 06249

RE:    **DRAINAGE DESIGN REPORT**  
Hampton Village – HOD Subdivision  
37 South Main Street  
East Hampton, Connecticut  
Proj. No. 21-106

Gentlemen:

Pursuant to your request, the following design report was prepared to address the drainage design proposed for the subdivision plan at 37 South Main Street, East Hampton, Connecticut.

**Existing Conditions**

The subject parcel (LOT) is approximately 20.2 acres and is located in the Town of East Hampton to the west of South Main Street. The property is predominantly wooded with areas of light woods and brush. The upland soils on the site and in the area of study are predominantly USDA Sutton, Canton and Charlton Series, moderately well drained with moderate runoff potential. There are also areas of wetlands on the site and immediately to the west and south.

The majority of the site drains toward the west to a wetland system on designated open space property. A portion of the site (Watershed E2) drains toward the south to an area of wetlands. For analysis, the site has been divided into 2 watershed areas with 2 points of analysis.

**Watershed Area E1:**

A wooded, 11.5-acre portion of the site forms a watershed that drains to a wetland system east of the site. An analysis point (DP-1) is designated for this watershed. The peak rate of runoff from the 11.5-acre drainage area was estimated using the TR-20 Method, (see attached computation sheets).

**Watershed Area E2:**

A wooded, 8.7-acre portion of the site forms a watershed that drains to a wetland system east of the site. An analysis point (DP-2) is designated for this watershed. The peak rate of runoff from the 8.7-acre drainage area was estimated using the TR-20 Method, (see attached computation sheets).

Analysis Point	Existing Condition Peak Rate of Runoff (cfs)				
	2-year	10-year	25-year	50-year	100-year
DPE1	1.1	6.4	11.0	14.8	19.2
DPE2	0.8	4.2	7.3	9.8	12.7

**Proposed Conditions**

The proposed development of the site consists of the construction of 22 residences with driveways from the proposed roads as shown on the plan entitled, "Hampton Village – HOD Subdivision, 37 South Main Street, East Hampton, Connecticut", sheets 1-15, dated 7/26/21, revised to 5/3/23. The proposed grading of the site includes a stormwater retention area to store excess storm runoff and maintain the existing drainage patterns on the site.

The proposed catch basin systems associated with the proposed roads will direct and convey storm water runoff from the roads to the retention area. The retention area has been located so as to closely follow the drainage patterns and watersheds discussed in the Existing Conditions section. The watershed areas associated with each of the storm water discharge areas were delineated. The stormwater discharge anticipated from each post development watershed was estimated. The results of these calculations are presented below.

The proposed retention area is designed to slow the velocity of runoff, encourage infiltration, and convey it toward the design point. The proposed retention area has been sized to store the increase in peak runoff due to the development estimated for the 100-year return period and convey it along the existing drainage paths.

Rock aprons are proposed to protect the pipe outlet from erosion. In addition, the rock apron will reduce the velocity of runoff exiting the drainage pipes to minimize impacts to the downstream areas.

**Watershed Area PE1:**

A 16.2-acre watershed that drains to a wetland system west of the site. An analysis point (DP-1) is designated for this watershed. The watershed was divided into 3 subwatershed areas for analysis.

Subwatershed Area PE1A (6.4 acres):

Includes areas of lot development and road runoff. Storm water runoff from this watershed is directed to a storm water retention area. Discharges from the retention area flow overland to Design Point #1. The retention basin is designed to encourage the infiltration of storm water runoff from the impervious areas and maintain the current drainage pattern.

Subwatershed Area PE1B (5.5 acres):

Includes areas of undeveloped woods and lot development. Storm water runoff from this watershed flows overland to the retention area.

Subwatershed Area PE1C (4.2 acres):

Includes areas of undeveloped woods. Storm water runoff from this watershed flows overland to Design Point #1.

The peak rate of runoff from the 16.2 acre drainage area was estimated using the TR-20 Method, (see attached computation sheets).

Watershed Area PE2:

A predominantly undeveloped, wooded 4.1-acre watershed that drains to a wetland system south of the site. An analysis point (DP-2) is designated for this watershed.

The peak rate of runoff from the 4.1-acre drainage area was estimated using the TR-20 Method, (see attached computation sheets).

Analysis Point	Proposed Condition Peak Rate of Runoff (cfs)				
	2-year	10-year	25-year	50-year	100-year
DPP1	0.9	2.9	6.0	8.5	10.8
DPP2	0.6	3.4	5.7	8.0	10.4

**Conclusion:**

The proposed development will not significantly change drainage patterns on the site. The catch basin system will collect, convey, retain and distribute stormwater runoff along existing drainage paths. Excess storm water runoff will be conveyed to the proposed stormwater retention area.

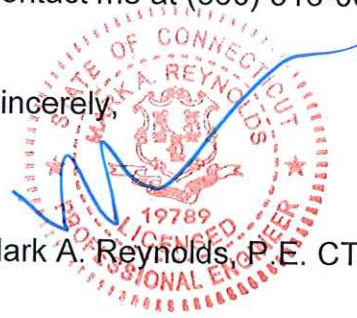
The proposed retention area is a stable outlet for the proposed drainage system. Further, the proposed rock aprons will reduce the velocity of runoff exiting the drainage system, thus minimizing impacts to the areas downstream.

The proposed development will not adversely impact the drainage of surface runoff on the site or in the surrounding area.

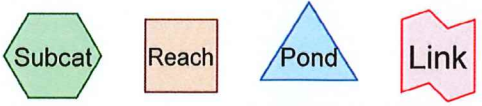
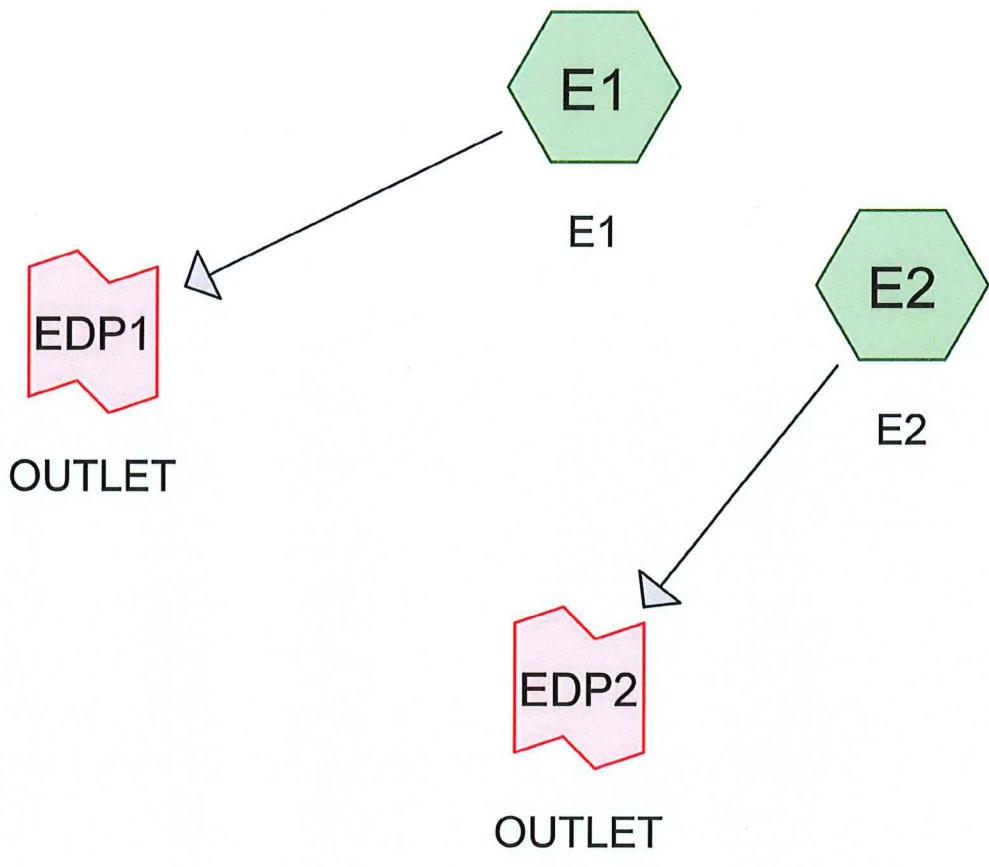
If you have any questions, please contact me at (860) 516-0033.

Sincerely,

Mark A. Reynolds, P.E. CT #19789



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**Routing Diagram for HV\_EX**  
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**HV\_EX**

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
20.200	55	Woods, Good, HSG B (E1, E2)
<b>20.200</b>	<b>55</b>	<b>TOTAL AREA</b>

**HV\_EX**

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
20.200	HSG B	E1, E2
0.000	HSG C	
0.000	HSG D	
0.000	Other	
<b>20.200</b>		<b>TOTAL AREA</b>

**HV\_EX**

**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	20.200	0.000	0.000	0.000	20.200	Woods, Good	E1, E2
<b>0.000</b>	<b>20.200</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>20.200</b>	<b>TOTAL AREA</b>	



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

**Subcatchment E1: E1**

Runoff Area=11.500 ac 0.00% Impervious Runoff Depth>0.26"  
Flow Length=1,120' Tc=34.8 min CN=55 Runoff=1.14 cfs 0.246 af

**Subcatchment E2: E2**

Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>0.25"  
Flow Length=1,100' Tc=45.1 min CN=55 Runoff=0.76 cfs 0.185 af

**Link EDP1: OUTLET**

Inflow=1.14 cfs 0.246 af  
Primary=1.14 cfs 0.246 af

**Link EDP2: OUTLET**

Inflow=0.76 cfs 0.185 af  
Primary=0.76 cfs 0.185 af

**Total Runoff Area = 20.200 ac Runoff Volume = 0.431 af Average Runoff Depth = 0.26"**  
**100.00% Pervious = 20.200 ac 0.00% Impervious = 0.000 ac**



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Type III 24-hr 2 YR Rainfall=3.39"

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### Summary for Subcatchment E1: E1

Runoff = 1.14 cfs @ 12.72 hrs, Volume= 0.246 af, Depth> 0.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2 YR Rainfall=3.39"

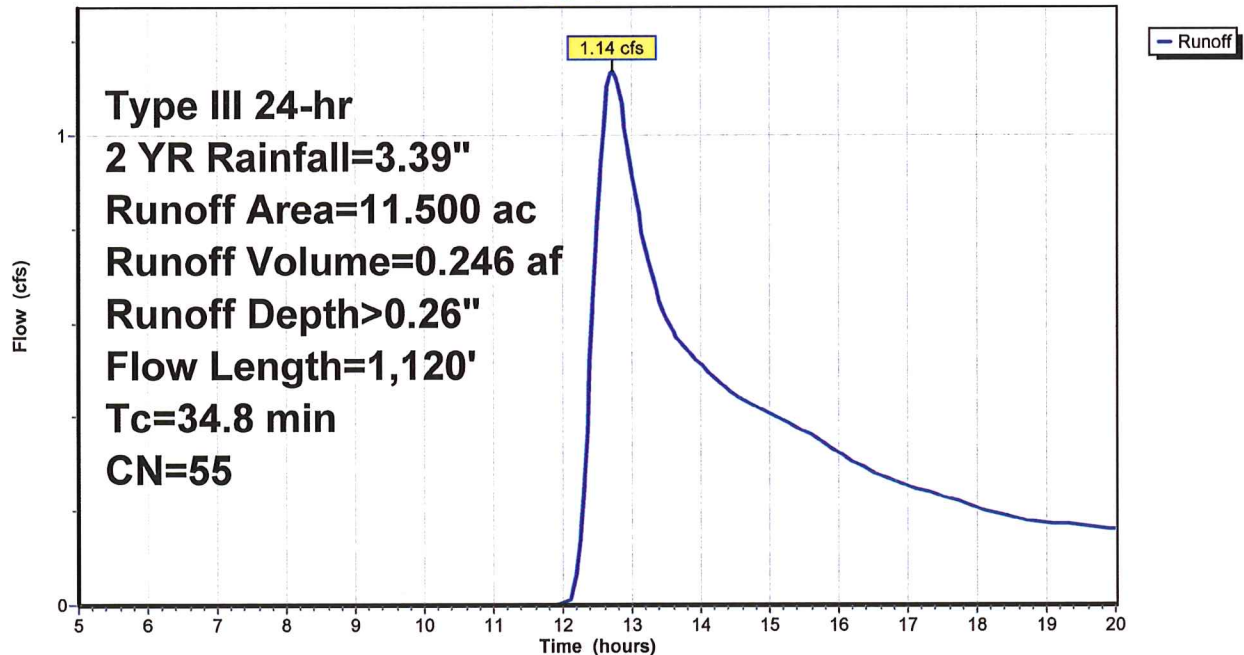
Area (ac)	CN	Description
11.500	55	Woods, Good, HSG B
11.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	100	0.0200	0.08		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
9.8	600	0.0420	1.02		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
4.1	420	0.1190	1.72		<b>Shallow Concentrated Flow, SC2</b> Woodland Kv= 5.0 fps
34.8	1,120	Total			

### Subcatchment E1: E1

Hydrograph



### Summary for Subcatchment E2: E2

Runoff = 0.76 cfs @ 12.88 hrs, Volume= 0.185 af, Depth> 0.25"

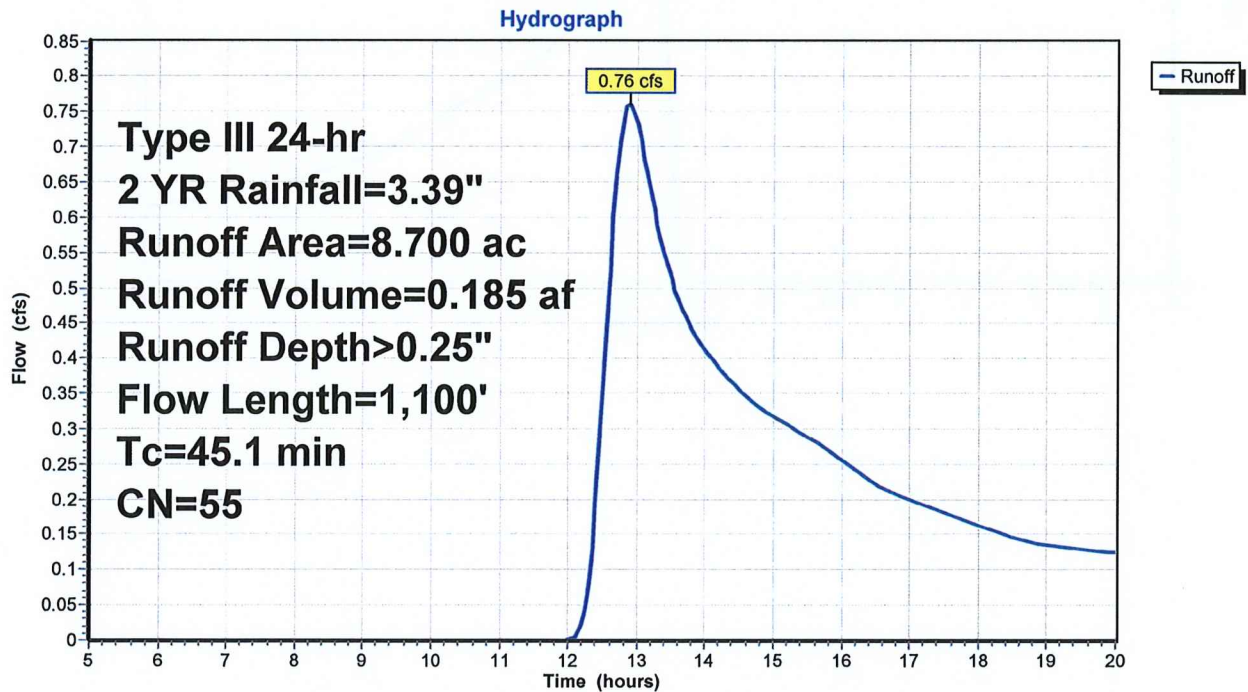
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2 YR Rainfall=3.39"

Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0100	0.06		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
17.6	1,000	0.0360	0.95		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
45.1	1,100	Total			

### Subcatchment E2: E2



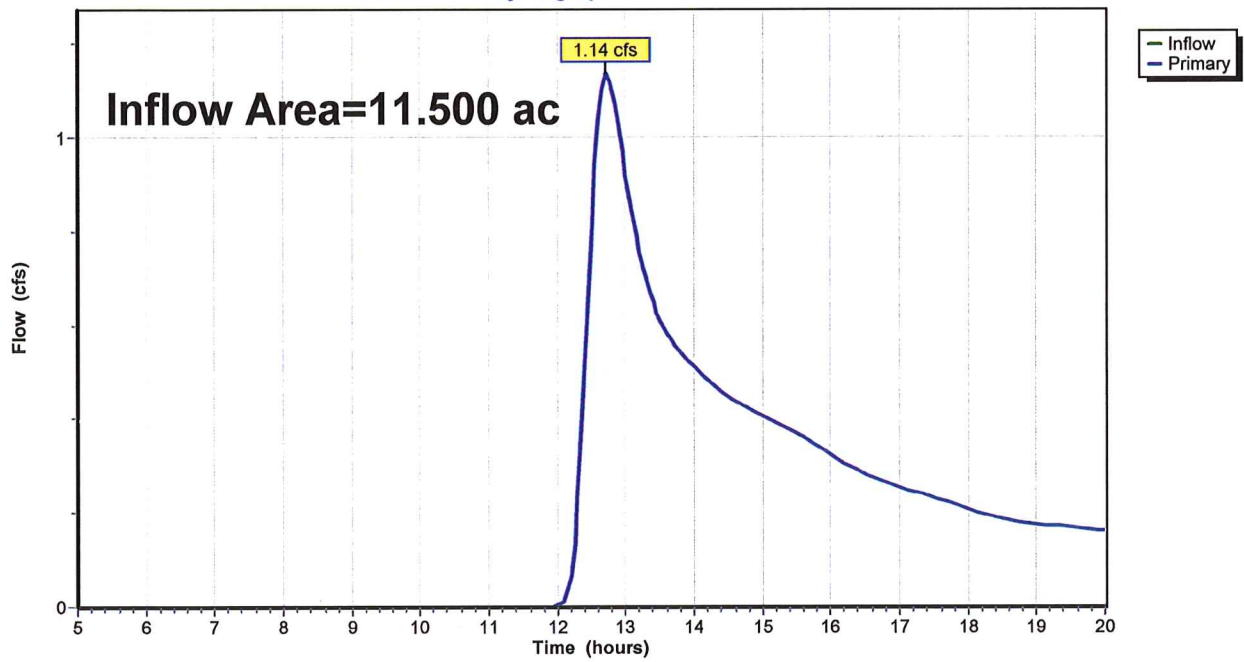
### Summary for Link EDP1: OUTLET

Inflow Area = 11.500 ac, 0.00% Impervious, Inflow Depth > 0.26" for 2 YR event  
Inflow = 1.14 cfs @ 12.72 hrs, Volume= 0.246 af  
Primary = 1.14 cfs @ 12.72 hrs, Volume= 0.246 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP1: OUTLET

Hydrograph



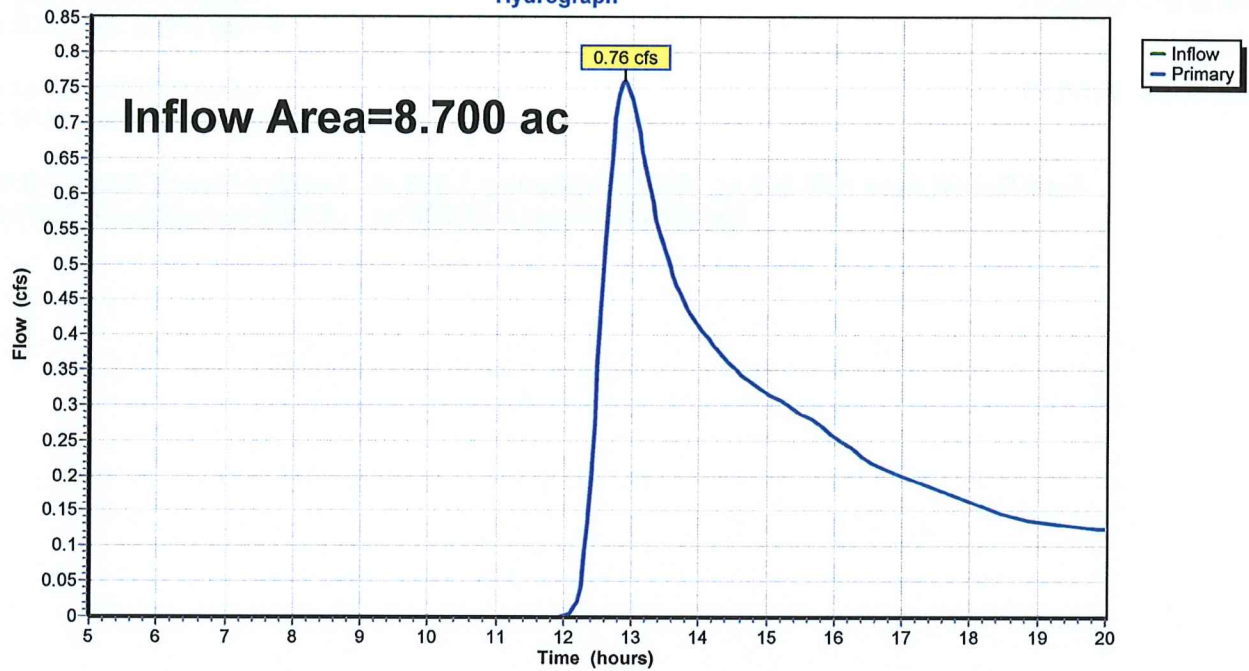
### Summary for Link EDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 0.25" for 2 YR event  
Inflow = 0.76 cfs @ 12.88 hrs, Volume= 0.185 af  
Primary = 0.76 cfs @ 12.88 hrs, Volume= 0.185 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP2: OUTLET

Hydrograph



**HV\_EX**

Type III 24-hr 10 YR Rainfall=5.19"

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

**Subcatchment E1: E1**

Runoff Area=11.500 ac 0.00% Impervious Runoff Depth>0.95"  
Flow Length=1,120' Tc=34.8 min CN=55 Runoff=6.36 cfs 0.906 af

**Subcatchment E2: E2**

Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>0.94"  
Flow Length=1,100' Tc=45.1 min CN=55 Runoff=4.20 cfs 0.682 af

**Link EDP1: OUTLET**

Inflow=6.36 cfs 0.906 af  
Primary=6.36 cfs 0.906 af

**Link EDP2: OUTLET**

Inflow=4.20 cfs 0.682 af  
Primary=4.20 cfs 0.682 af

**Total Runoff Area = 20.200 ac Runoff Volume = 1.588 af Average Runoff Depth = 0.94"  
100.00% Pervious = 20.200 ac 0.00% Impervious = 0.000 ac**

**Summary for Subcatchment E1: E1**

Runoff = 6.36 cfs @ 12.57 hrs, Volume= 0.906 af, Depth> 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 10 YR Rainfall=5.19"

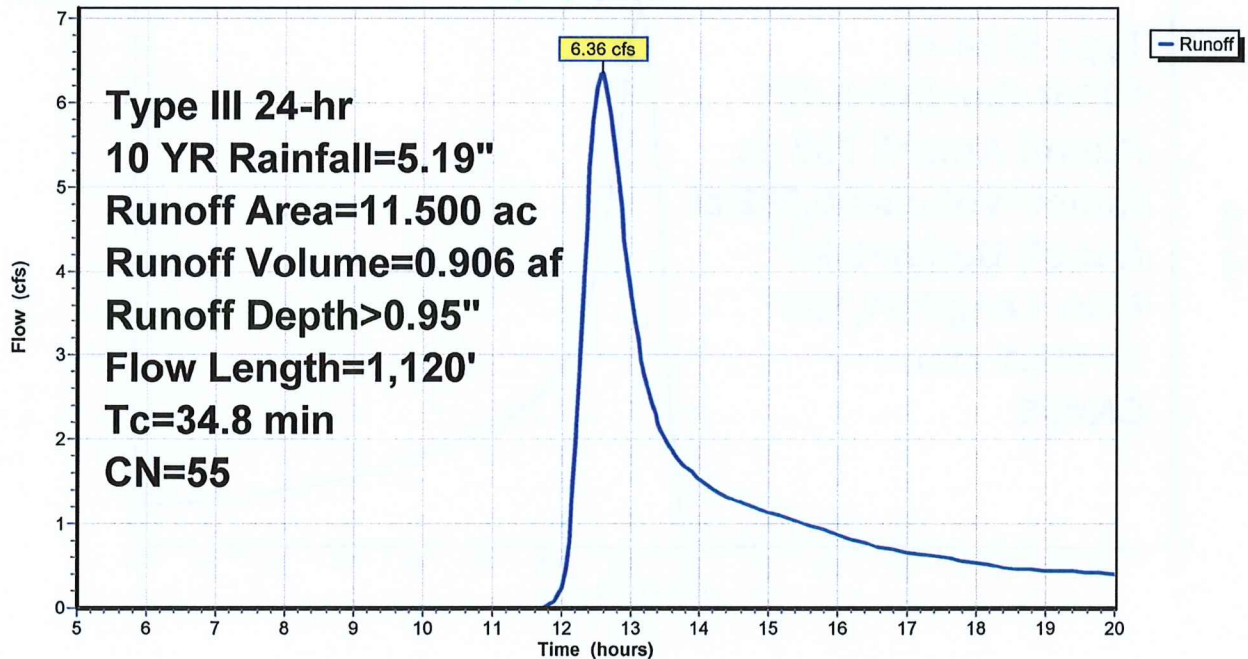
Area (ac)	CN	Description
11.500	55	Woods, Good, HSG B
11.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	100	0.0200	0.08		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
9.8	600	0.0420	1.02		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
4.1	420	0.1190	1.72		<b>Shallow Concentrated Flow, SC2</b> Woodland Kv= 5.0 fps
34.8	1,120	Total			

**Subcatchment E1: E1**

Hydrograph



**Summary for Subcatchment E2: E2**

Runoff = 4.20 cfs @ 12.72 hrs, Volume= 0.682 af, Depth> 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 10 YR Rainfall=5.19"

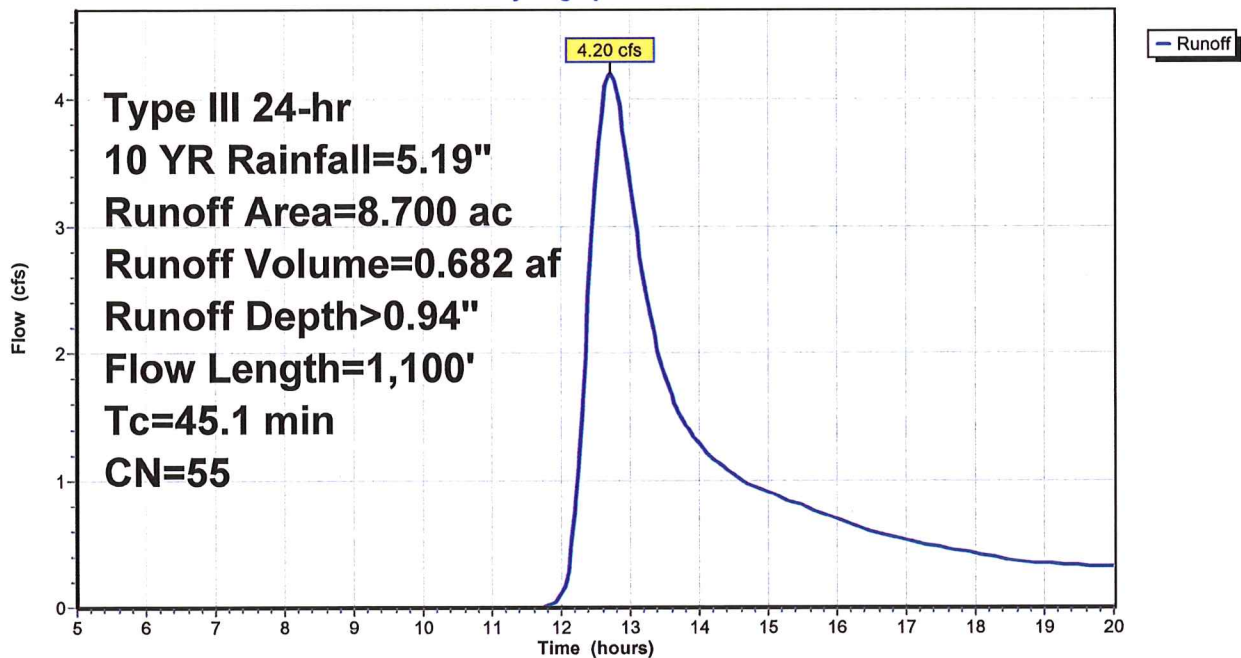
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0100	0.06		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
17.6	1,000	0.0360	0.95		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
45.1	1,100	Total			

**Subcatchment E2: E2**

Hydrograph





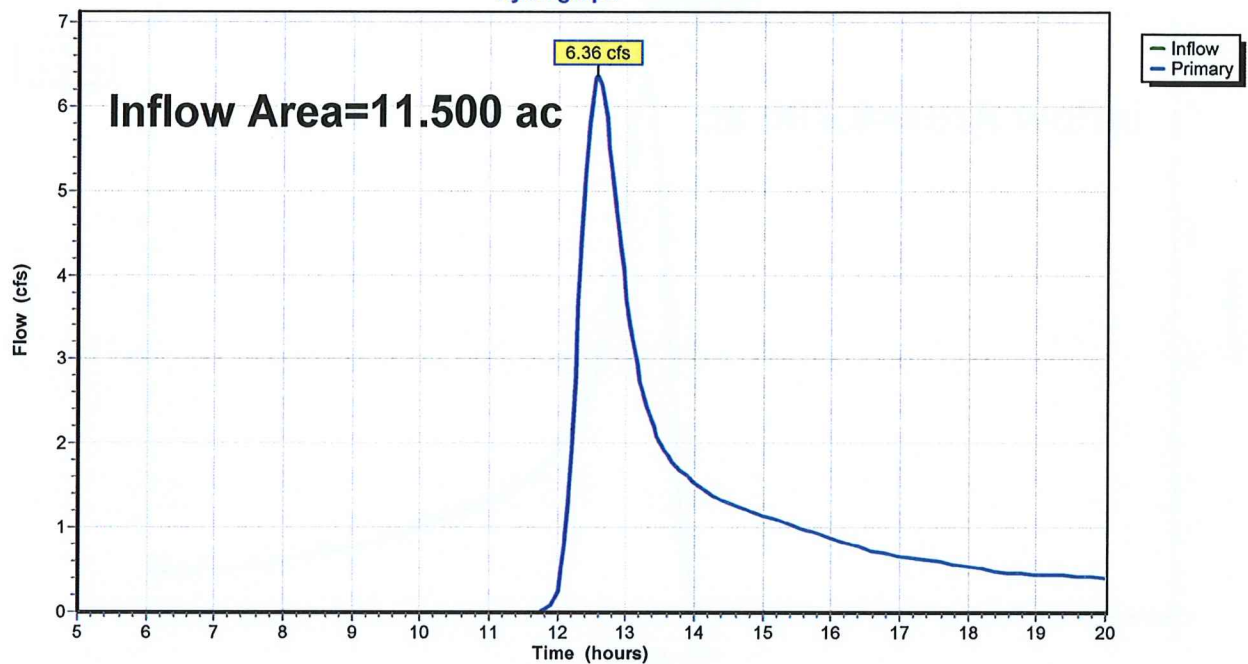
### Summary for Link EDP1: OUTLET

Inflow Area = 11.500 ac, 0.00% Impervious, Inflow Depth > 0.95" for 10 YR event  
Inflow = 6.36 cfs @ 12.57 hrs, Volume= 0.906 af  
Primary = 6.36 cfs @ 12.57 hrs, Volume= 0.906 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP1: OUTLET

Hydrograph



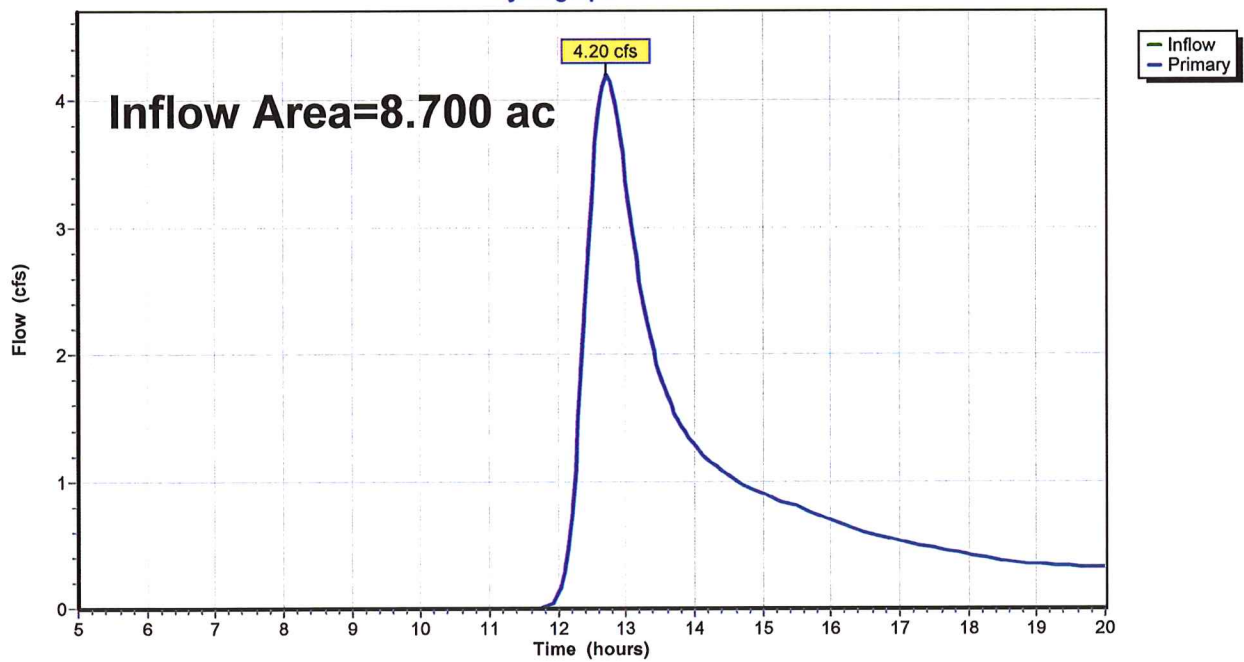
### Summary for Link EDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 0.94" for 10 YR event  
Inflow = 4.20 cfs @ 12.72 hrs, Volume= 0.682 af  
Primary = 4.20 cfs @ 12.72 hrs, Volume= 0.682 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP2: OUTLET

Hydrograph



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Type III 24-hr 25 YR Rainfall=6.32"

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

**Subcatchment E1: E1**

Runoff Area=11.500 ac 0.00% Impervious Runoff Depth>1.52"  
Flow Length=1,120' Tc=34.8 min CN=55 Runoff=10.98 cfs 1.457 af

**Subcatchment E2: E2**

Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>1.51"  
Flow Length=1,100' Tc=45.1 min CN=55 Runoff=7.26 cfs 1.096 af

**Link EDP1: OUTLET**

Inflow=10.98 cfs 1.457 af  
Primary=10.98 cfs 1.457 af

**Link EDP2: OUTLET**

Inflow=7.26 cfs 1.096 af  
Primary=7.26 cfs 1.096 af

**Total Runoff Area = 20.200 ac Runoff Volume = 2.553 af Average Runoff Depth = 1.52"**  
**100.00% Pervious = 20.200 ac 0.00% Impervious = 0.000 ac**

**Summary for Subcatchment E1: E1**

Runoff = 10.98 cfs @ 12.54 hrs, Volume= 1.457 af, Depth> 1.52"

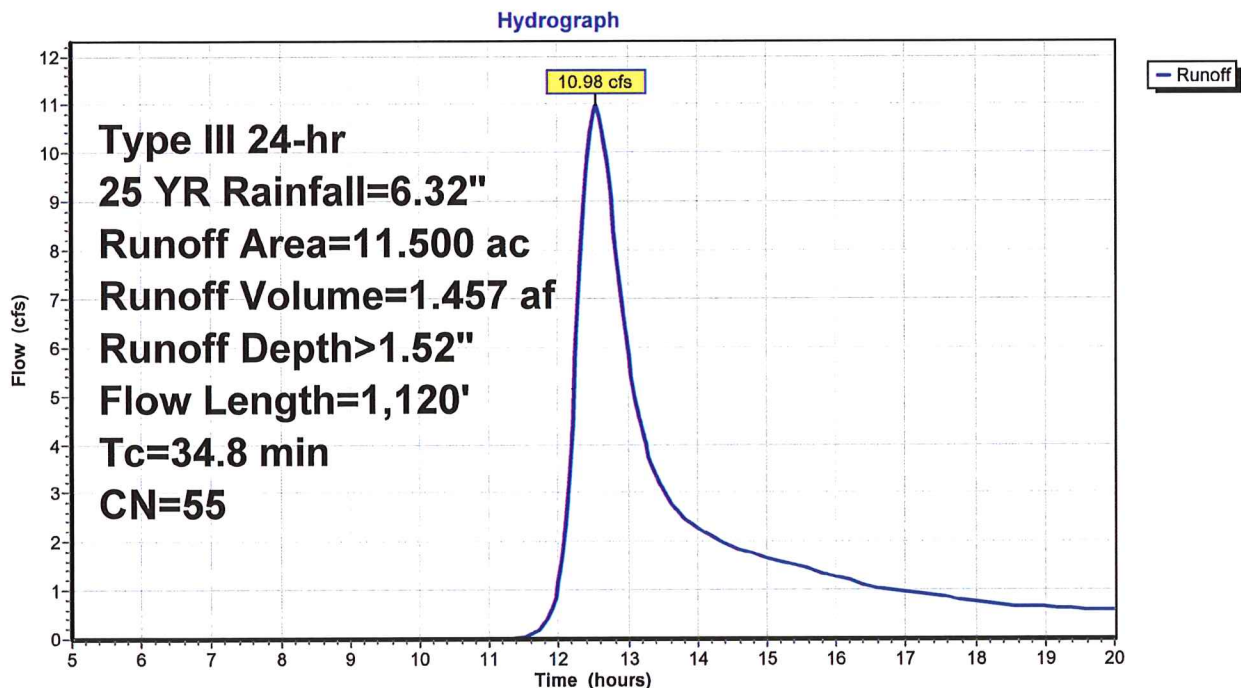
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 25 YR Rainfall=6.32"

Area (ac)	CN	Description
11.500	55	Woods, Good, HSG B
11.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	100	0.0200	0.08		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
9.8	600	0.0420	1.02		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
4.1	420	0.1190	1.72		<b>Shallow Concentrated Flow, SC2</b> Woodland Kv= 5.0 fps
34.8	1,120	Total			

**Subcatchment E1: E1**



### Summary for Subcatchment E2: E2

Runoff = 7.26 cfs @ 12.69 hrs, Volume= 1.096 af, Depth> 1.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=6.32"

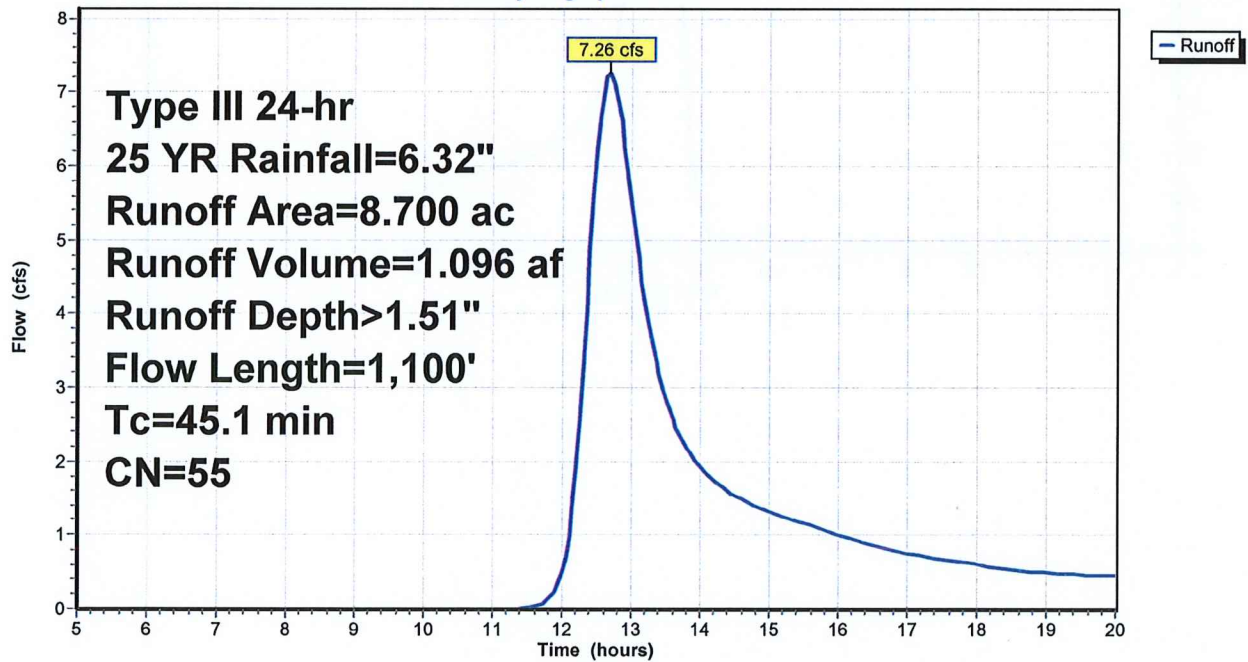
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0100	0.06		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
17.6	1,000	0.0360	0.95		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
45.1	1,100	Total			

### Subcatchment E2: E2

Hydrograph



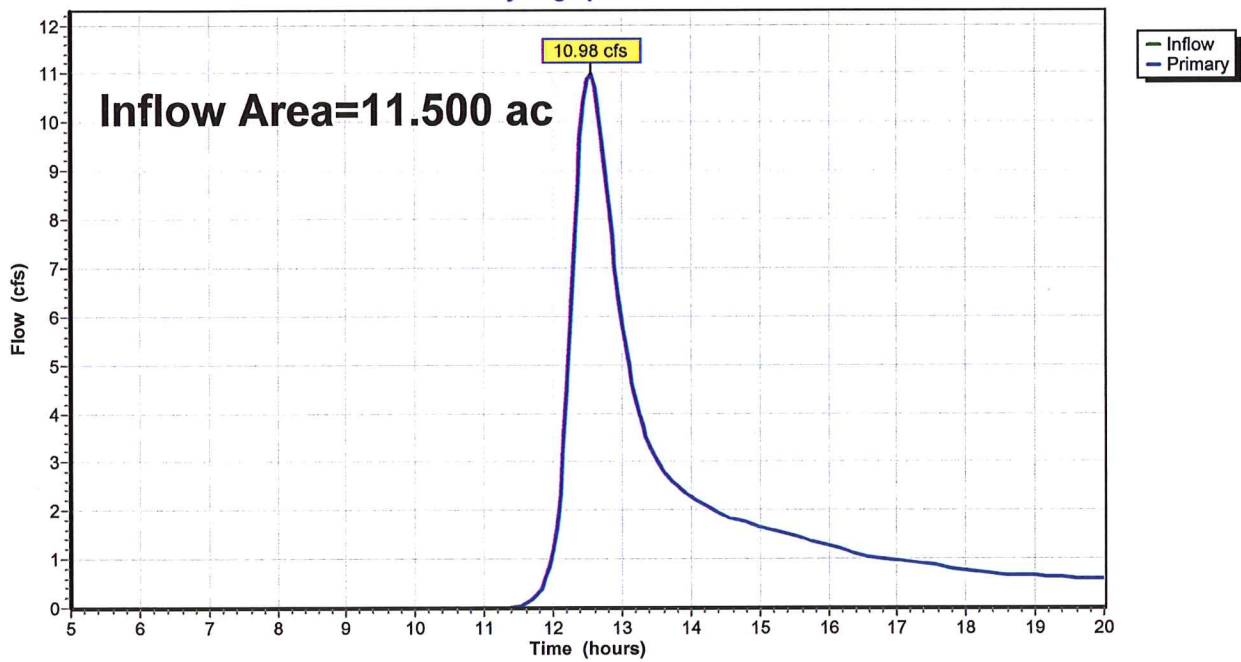
### Summary for Link EDP1: OUTLET

Inflow Area = 11.500 ac, 0.00% Impervious, Inflow Depth > 1.52" for 25 YR event  
Inflow = 10.98 cfs @ 12.54 hrs, Volume= 1.457 af  
Primary = 10.98 cfs @ 12.54 hrs, Volume= 1.457 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP1: OUTLET

Hydrograph



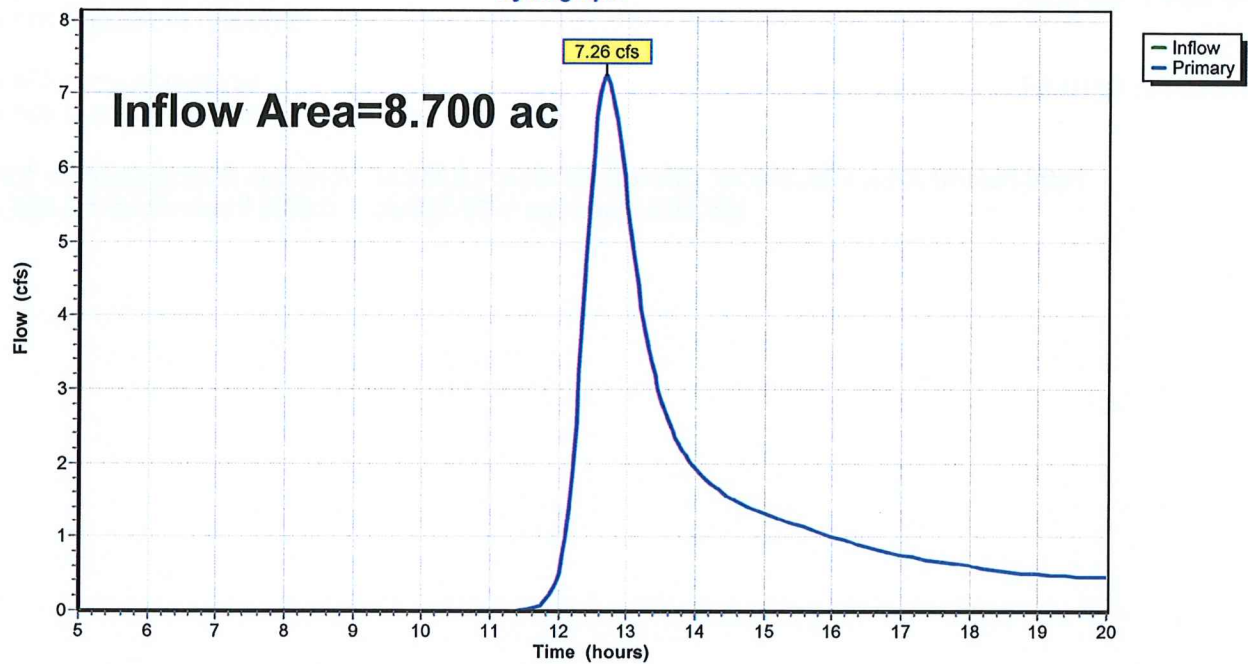
### Summary for Link EDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 1.51" for 25 YR event  
Inflow = 7.26 cfs @ 12.69 hrs, Volume= 1.096 af  
Primary = 7.26 cfs @ 12.69 hrs, Volume= 1.096 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP2: OUTLET

Hydrograph



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Type III 24-hr 50 YR Rainfall=7.15"

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

**Subcatchment E1: E1**

Runoff Area=11.500 ac 0.00% Impervious Runoff Depth>1.99"  
Flow Length=1,120' Tc=34.8 min CN=55 Runoff=14.78 cfs 1.911 af

**Subcatchment E2: E2**

Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>1.98"  
Flow Length=1,100' Tc=45.1 min CN=55 Runoff=9.78 cfs 1.438 af

**Link EDP1: OUTLET**

Inflow=14.78 cfs 1.911 af  
Primary=14.78 cfs 1.911 af

**Link EDP2: OUTLET**

Inflow=9.78 cfs 1.438 af  
Primary=9.78 cfs 1.438 af

**Total Runoff Area = 20.200 ac Runoff Volume = 3.349 af Average Runoff Depth = 1.99"**  
**100.00% Pervious = 20.200 ac 0.00% Impervious = 0.000 ac**



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Type III 24-hr 50 YR Rainfall=7.15"

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**Summary for Subcatchment E1: E1**

Runoff = 14.78 cfs @ 12.53 hrs, Volume= 1.911 af, Depth> 1.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50 YR Rainfall=7.15"

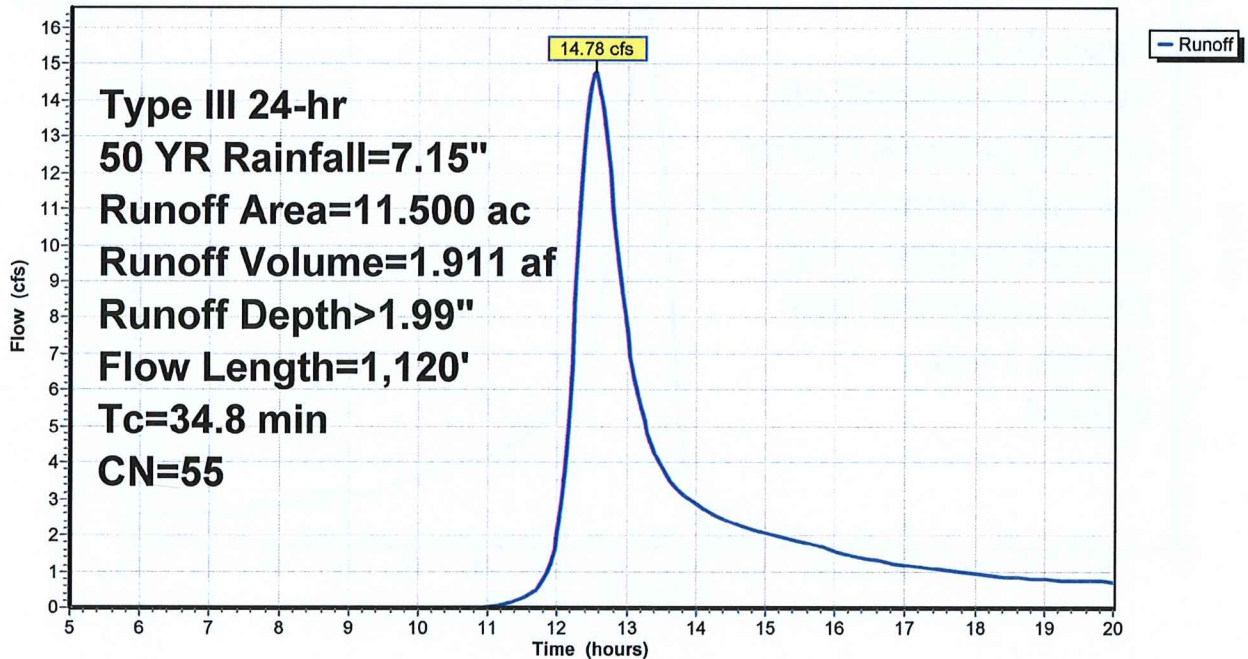
Area (ac)	CN	Description
11.500	55	Woods, Good, HSG B
11.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	100	0.0200	0.08		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
9.8	600	0.0420	1.02		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
4.1	420	0.1190	1.72		<b>Shallow Concentrated Flow, SC2</b> Woodland Kv= 5.0 fps
34.8	1,120	Total			

**Subcatchment E1: E1**

Hydrograph



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Type III 24-hr 50 YR Rainfall=7.15"

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### Summary for Subcatchment E2: E2

Runoff = 9.78 cfs @ 12.68 hrs, Volume= 1.438 af, Depth> 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50 YR Rainfall=7.15"

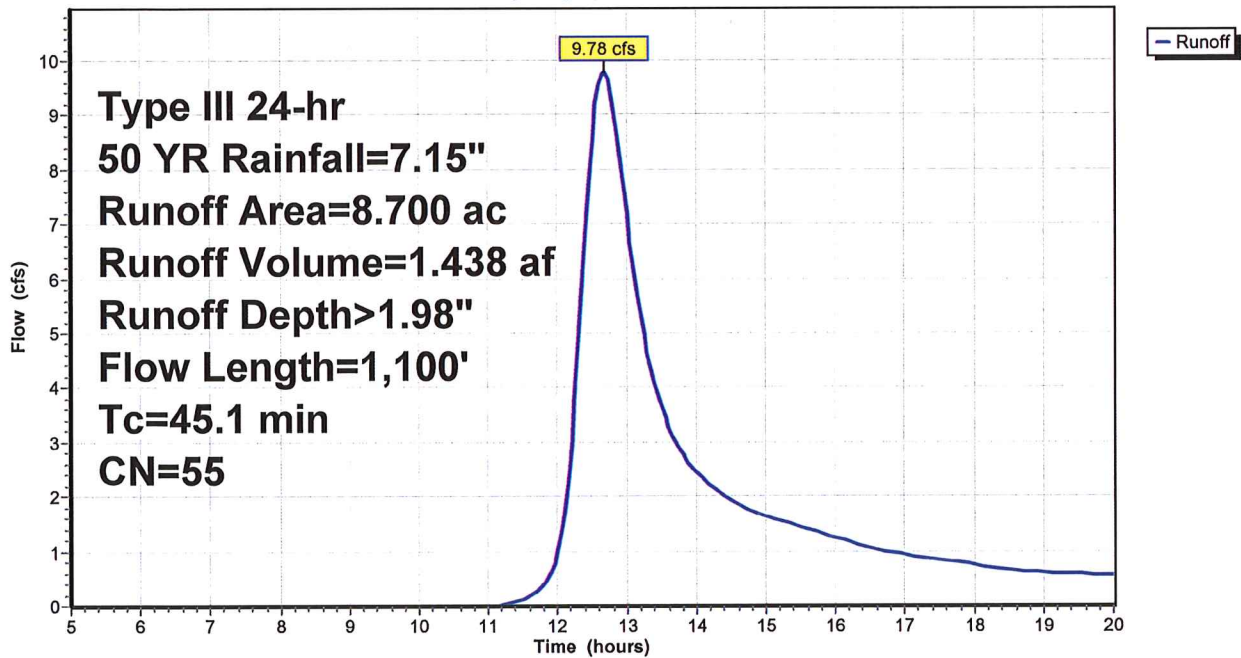
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0100	0.06		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
17.6	1,000	0.0360	0.95		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
45.1	1,100	Total			

### Subcatchment E2: E2

Hydrograph



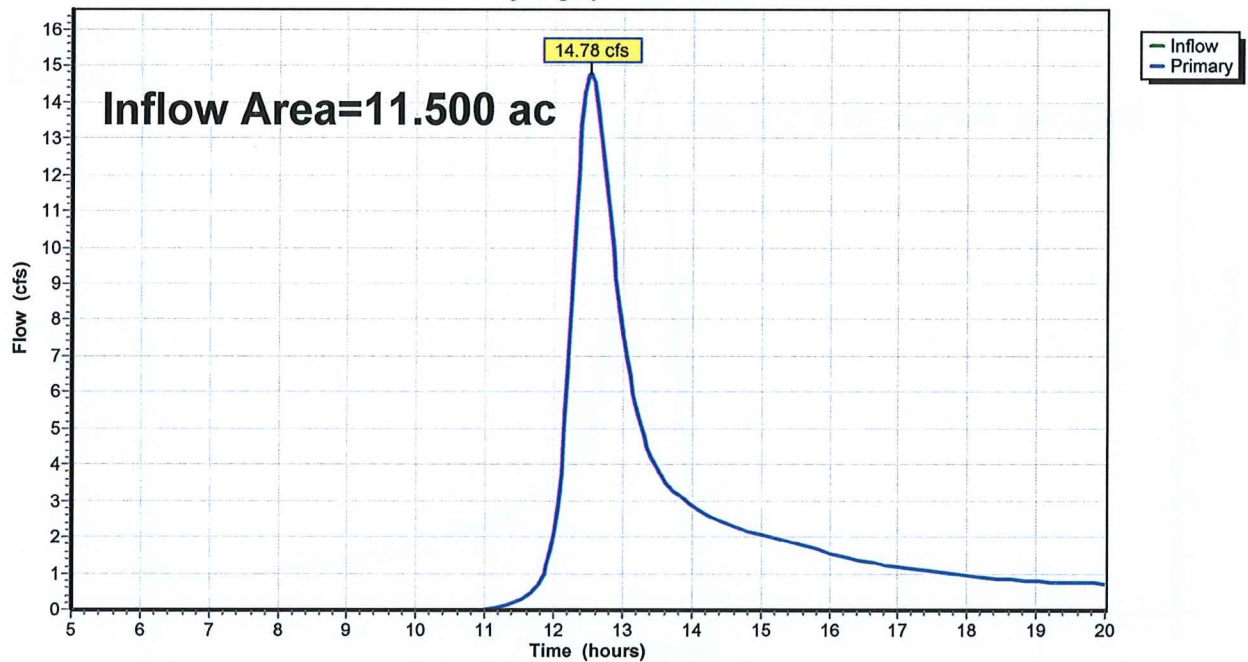
### Summary for Link EDP1: OUTLET

Inflow Area = 11.500 ac, 0.00% Impervious, Inflow Depth > 1.99" for 50 YR event  
Inflow = 14.78 cfs @ 12.53 hrs, Volume= 1.911 af  
Primary = 14.78 cfs @ 12.53 hrs, Volume= 1.911 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP1: OUTLET

Hydrograph



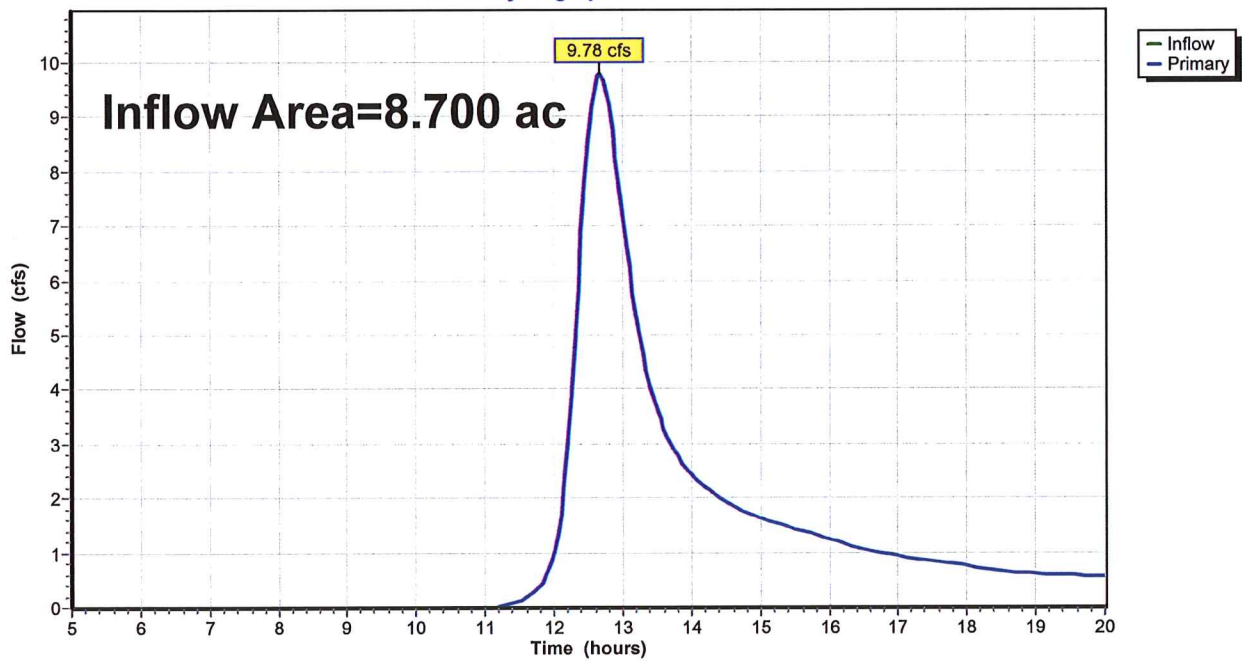
### Summary for Link EDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 1.98" for 50 YR event  
Inflow = 9.78 cfs @ 12.68 hrs, Volume= 1.438 af  
Primary = 9.78 cfs @ 12.68 hrs, Volume= 1.438 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP2: OUTLET

Hydrograph



HV\_EX

Type III 24-hr 100 YR Rainfall=8.05"

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

**Subcatchment E1: E1**

Runoff Area=11.500 ac 0.00% Impervious Runoff Depth>2.55"  
Flow Length=1,120' Tc=34.8 min CN=55 Runoff=19.21 cfs 2.440 af

**Subcatchment E2: E2**

Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>2.53"  
Flow Length=1,100' Tc=45.1 min CN=55 Runoff=12.70 cfs 1.837 af

**Link EDP1: OUTLET**

Inflow=19.21 cfs 2.440 af  
Primary=19.21 cfs 2.440 af

**Link EDP2: OUTLET**

Inflow=12.70 cfs 1.837 af  
Primary=12.70 cfs 1.837 af

**Total Runoff Area = 20.200 ac Runoff Volume = 4.278 af Average Runoff Depth = 2.54"**  
**100.00% Pervious = 20.200 ac 0.00% Impervious = 0.000 ac**

HV\_EX

Type III 24-hr 100 YR Rainfall=8.05"

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### Summary for Subcatchment E1: E1

Runoff = 19.21 cfs @ 12.52 hrs, Volume= 2.440 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100 YR Rainfall=8.05"

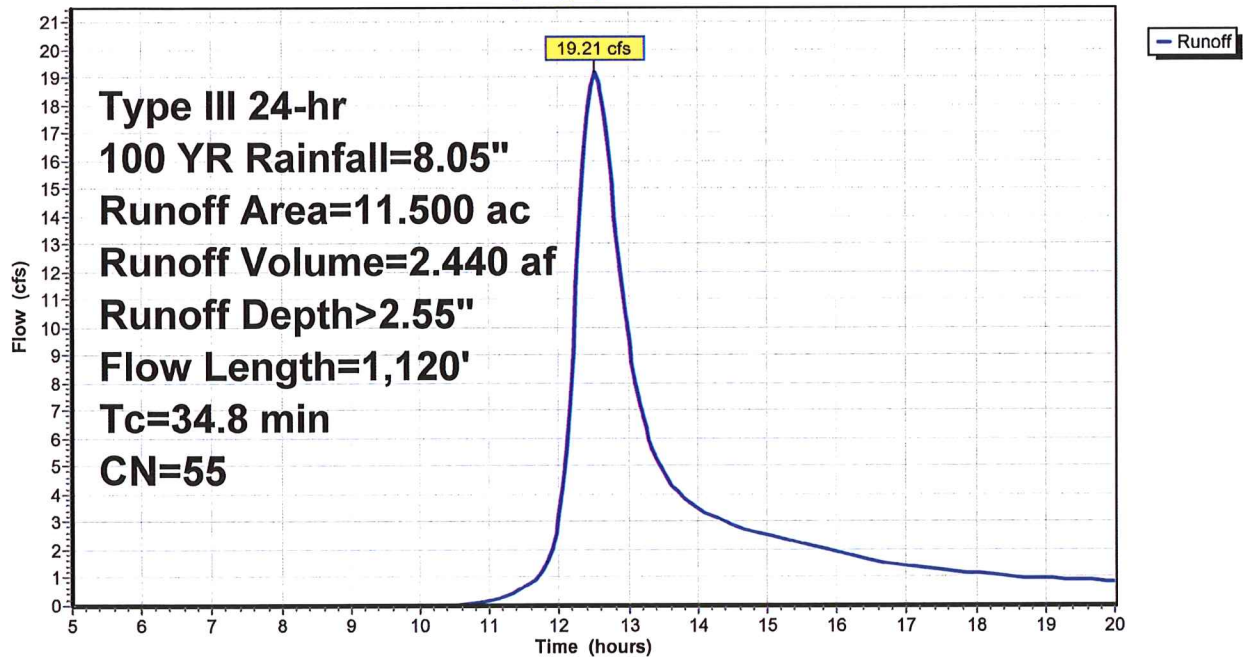
Area (ac)	CN	Description
11.500	55	Woods, Good, HSG B
11.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	100	0.0200	0.08		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
9.8	600	0.0420	1.02		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
4.1	420	0.1190	1.72		<b>Shallow Concentrated Flow, SC2</b> Woodland Kv= 5.0 fps
34.8	1,120	Total			

### Subcatchment E1: E1

Hydrograph



### Summary for Subcatchment E2: E2

Runoff = 12.70 cfs @ 12.66 hrs, Volume= 1.837 af, Depth> 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100 YR Rainfall=8.05"

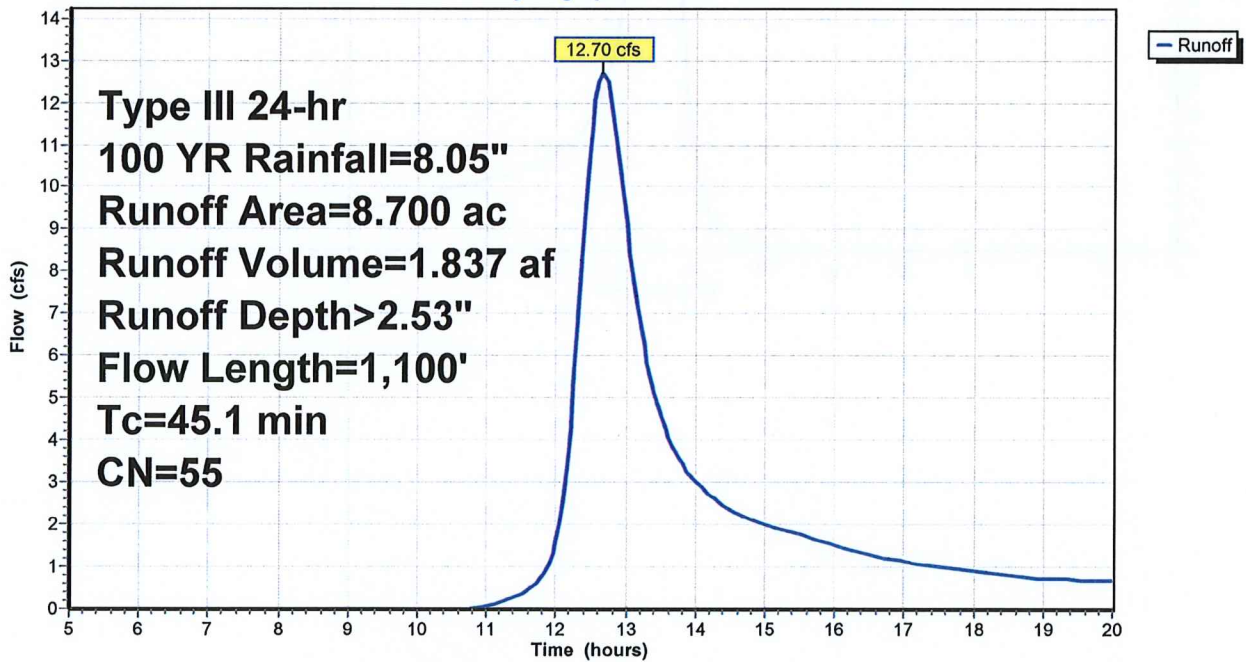
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.5	100	0.0100	0.06		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
17.6	1,000	0.0360	0.95		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
45.1	1,100	Total			

### Subcatchment E2: E2

Hydrograph



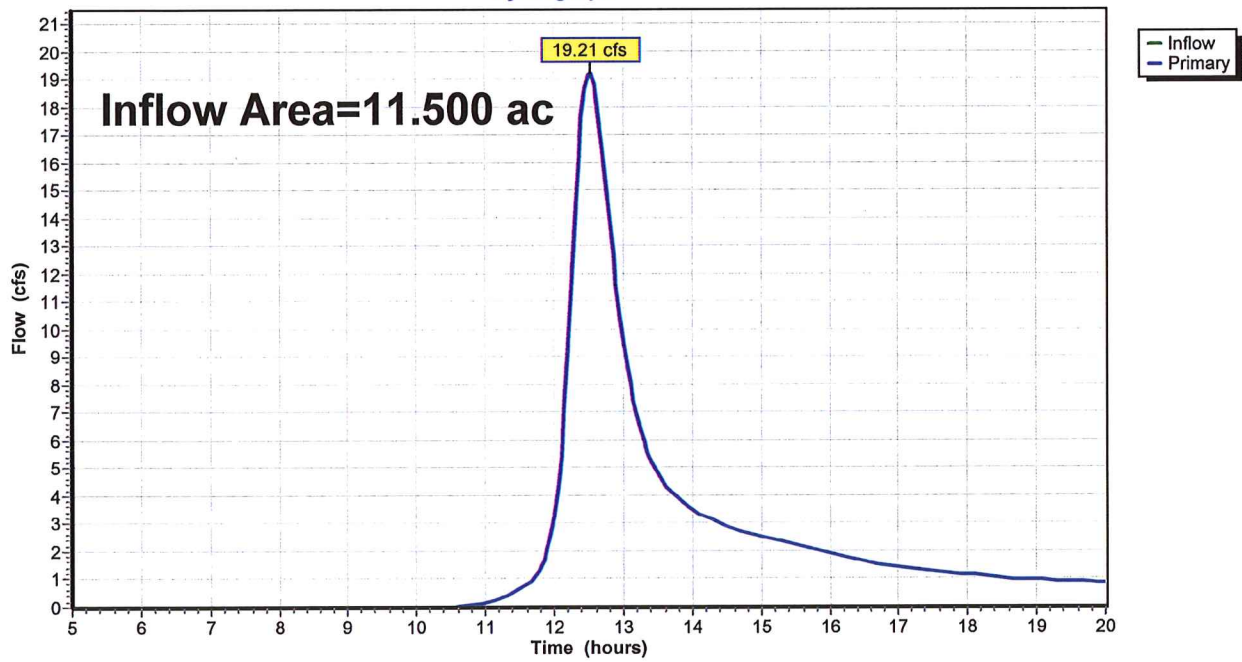
### Summary for Link EDP1: OUTLET

Inflow Area = 11.500 ac, 0.00% Impervious, Inflow Depth > 2.55" for 100 YR event  
Inflow = 19.21 cfs @ 12.52 hrs, Volume= 2.440 af  
Primary = 19.21 cfs @ 12.52 hrs, Volume= 2.440 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP1: OUTLET

Hydrograph





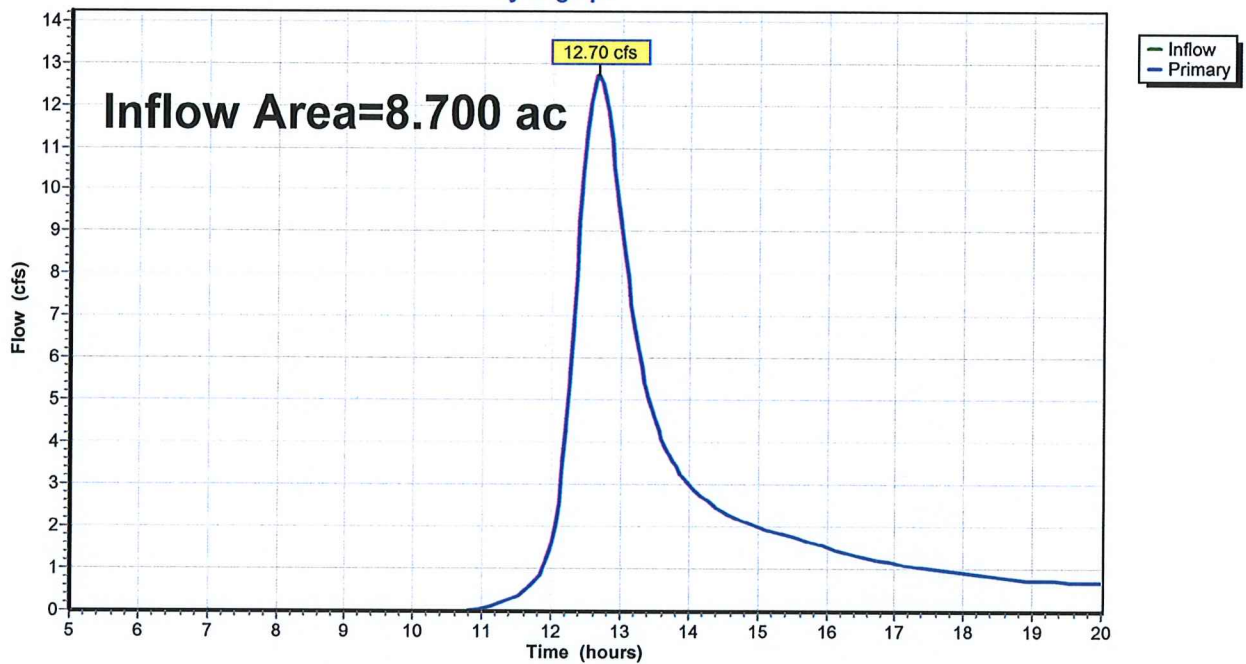
### Summary for Link EDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 2.53" for 100 YR event  
Inflow = 12.70 cfs @ 12.66 hrs, Volume= 1.837 af  
Primary = 12.70 cfs @ 12.66 hrs, Volume= 1.837 af, Atten= 0%, Lag= 0.0 min

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

### Link EDP2: OUTLET

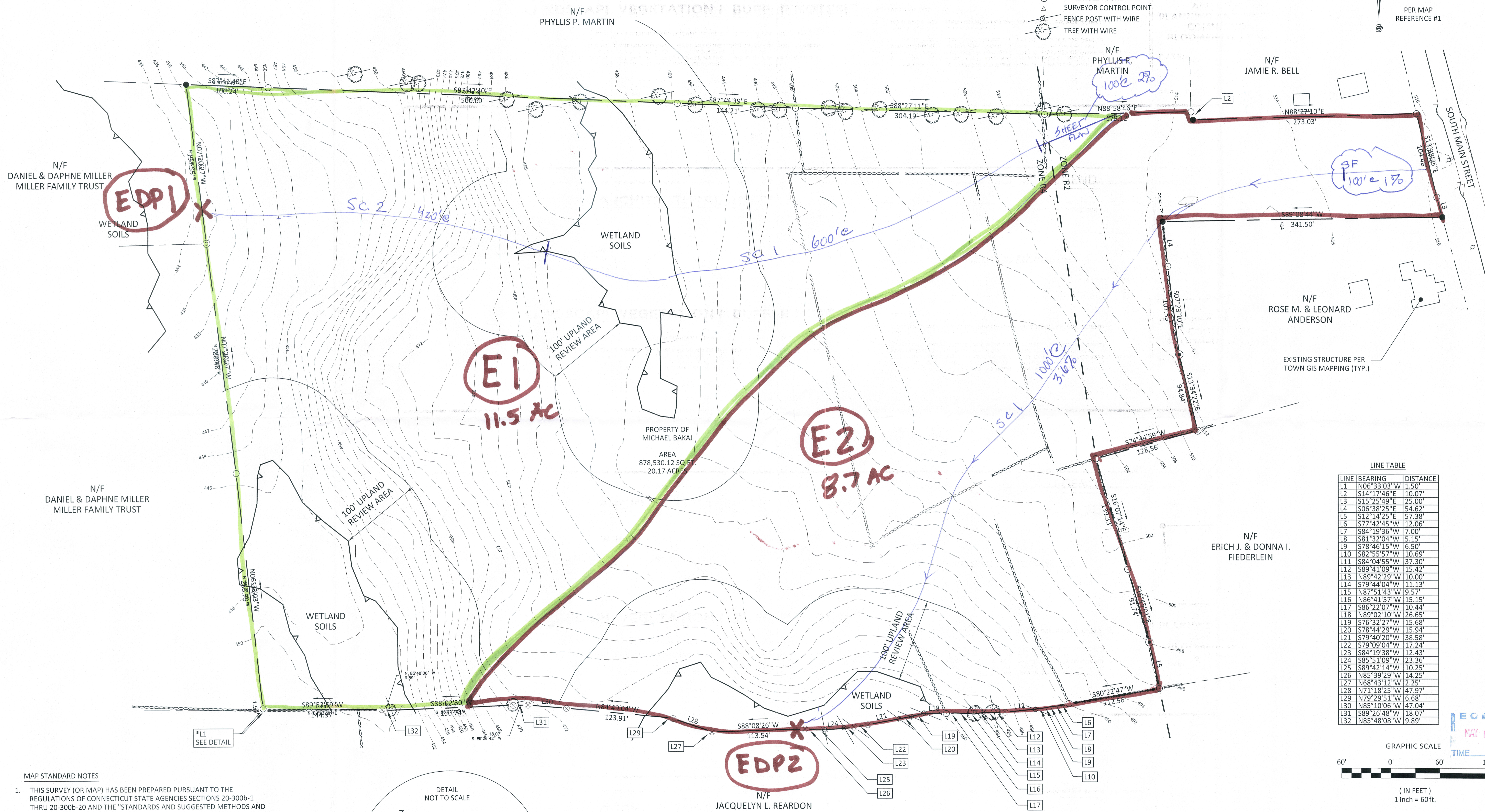
Hydrograph





**LEGEND**

- PROPERTY LINE
- - - STONE WALL
- - - ZONE LINE
- - - WIRE FENCE REMAINS
- UTILITY POLE
- IRON PIN OR PIPE FOUND
- ANGLE POINT
- MONUMENT FOUND
- IRON PIN SET 5/8" REBAR
- DRILL HOLE SET
- DRILL HOLE FOUND
- SURVEYOR CONTROL POINT
- FENCE POST WITH WIRE
- TREE WITH WIRE



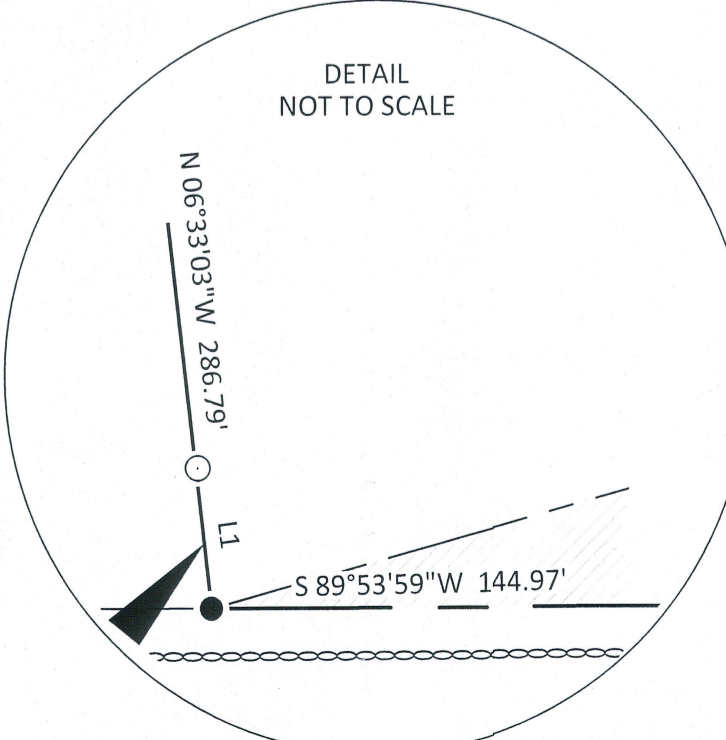
**MAP STANDARD NOTES**

- THIS SURVEY (OR MAP) HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THRU 20-300b-20 AND THE "STANDARDS AND SUGGESTED METHODS AND PROCEDURES FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON AUGUST 29, 2019.

TYPE OF SURVEY: PROPERTY SURVEY  
 BOUNDARY DETERMINATION CATEGORY: RESURVEY  
 HORIZONTAL ACCURACY CLASS: "A-2"

**MAP REFERENCES:**

- "PLAN OF LAND TO BE CONVEYED TO DANIEL A. MILLER BELLTOWN PLACE ASSessor's MAP 20, BLOCK 51, LOT 27, PREPARED FOR PELLETIER DEVELOPMENT CP, LLC, FOR PROPERTY LOCATED AT SOUTH MAIN STREET, TOWN OF EAST HAMPTON, CONNECTICUT", DATED: 01-22-2008, SCALE: 1"=80', BY DUTTON ASSOCIATES, LLC.



*I have delineated state of Connecticut wetlands and watercourses present on the subject site and have reviewed this plan and it is my opinion that the limits of the wetlands and watercourses depicted hereon are representative of those delineated in the field.*

Richard Snarski

**APPROVED**  
 PLANNING AND ZONING  
 COMMISSION  
 EAST HAMPTON, CT

DATE: \_\_\_\_\_  
 SIGNED: \_\_\_\_\_

NOTE  
 \*SOUTHERLY PROPERTY LINE HELD PER MAP REFERENCE #1.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS DRAWING IS NOT VALID UNLESS IT BEARS AN ORIGINAL INK SIGNATURE AND EMBOSSED SEAL.

ROBERT W. HELLSTROM, L.S. #13626

**ROB HELLSTROM**  
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 HEBRON, CT., 06248  
 (860) 228-9853  
 hellstromsurveying@yahoo.com  
 WWW.RHLSCT.COM

Mailing Address:  
 P.O. BOX 378  
 HEBRON, CT. 06248

EXISTING CONDITIONS DRAINAGE MAP

**RES**  
 Reynolds Engineering Services, LLC  
 CIVIL ENGINEERING CONSULTANTS  
 63 NORWICH AVENUE  
 COLCHESTER, CT  
 (860) 516-0033

Drawing #: 2 OF 15  
 Job #: 21-106

Designed By: MAR  
 Drawn By: SAM  
 Checked By: MAR  
 CAD File: 21-106

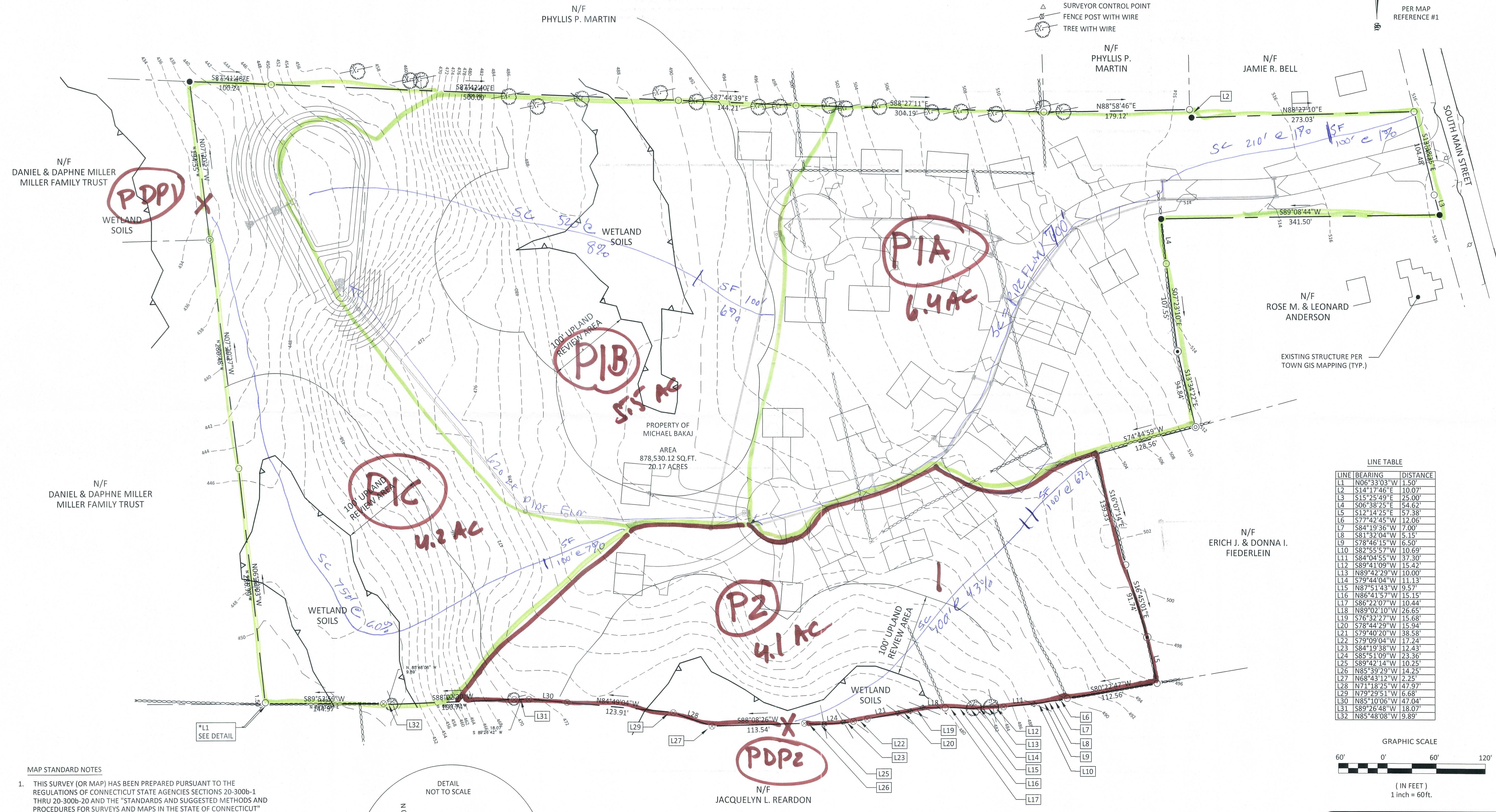
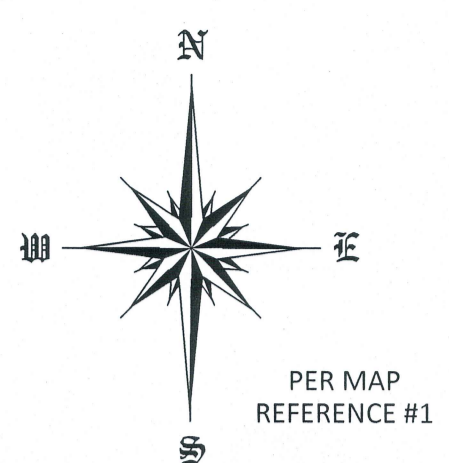
Drawing Scale: 1"=60'  
 Drawing date: 7/26/2021

Rev.	Date	By	Revision
1.	3/29/23	SAM	REVISED LAYOUT FOR H.O.D. ZONE EASEMENTS & DETAILS
2.	5/03/23	SAM	

**OVERALL BOUNDARY & EXISTING CONDITIONS**  
 PROJECT TITLE: HAMPTON VILLAGE  
 37 SOUTH MAIN STREET  
 EAST HAMPTON, CT.  
 PREPARED FOR: BAKAJ CONSTRUCTION LLC  
 37 SOUTH MAIN STREET  
 EAST HAMPTON, CT.

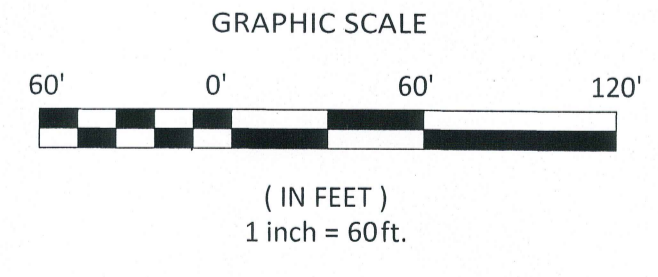
**LEGEND**

---	PROPERTY LINE
- - - - -	STONE WALL
- - - - -	ZONE LINE
- - - - -	WIRE FENCE REMAINS
○	UTILITY POLE
○	IRON PIN OR PIPE FOUND
○	ANGLE POINT
○	MONUMENT FOUND
●	IRON PIN SET 5/8" REBAR
○	DRILL HOLE SET
○	DRILL HOLE FOUND
○	SURVEYOR CONTROL POINT
○	FENCE POST WITH WIRE
○	TREE WITH WIRE



**LINE TABLE**

LINE	BEARING	DISTANCE
L1	N06°33'03"W	1.50'
L2	S14°17'46"E	10.07'
L3	S15°25'49"E	25.00'
L4	S06°38'25"E	54.62'
L5	S12°14'25"E	57.38'
L6	S77°42'45"W	12.06'
L7	S84°19'36"W	7.00'
L8	S81°32'04"W	5.15'
L9	S78°46'15"W	6.50'
L10	S82°55'57"W	10.69'
L11	S84°04'55"W	37.30'
L12	S89°41'09"W	15.42'
L13	N89°42'29"W	10.00'
L14	S79°44'04"W	11.13'
L15	N87°51'43"W	9.57'
L16	N86°41'57"W	15.15'
L17	S86°22'07"W	10.44'
L18	N89°02'10"W	26.65'
L19	S76°32'27"W	15.68'
L20	S78°44'29"W	15.94'
L21	S79°40'20"W	38.58'
L22	S79°09'04"W	17.24'
L23	S84°19'38"W	12.43'
L24	S85°51'09"W	23.36'
L25	S89°42'14"W	10.25'
L26	N85°39'29"W	14.25'
L27	N68°43'13"W	2.25'
L28	N71°18'25"W	47.97'
L29	N79°29'51"W	6.68'
L30	N85°10'06"W	47.04'
L31	S89°26'48"W	18.07'
L32	N85°48'08"W	19.89'



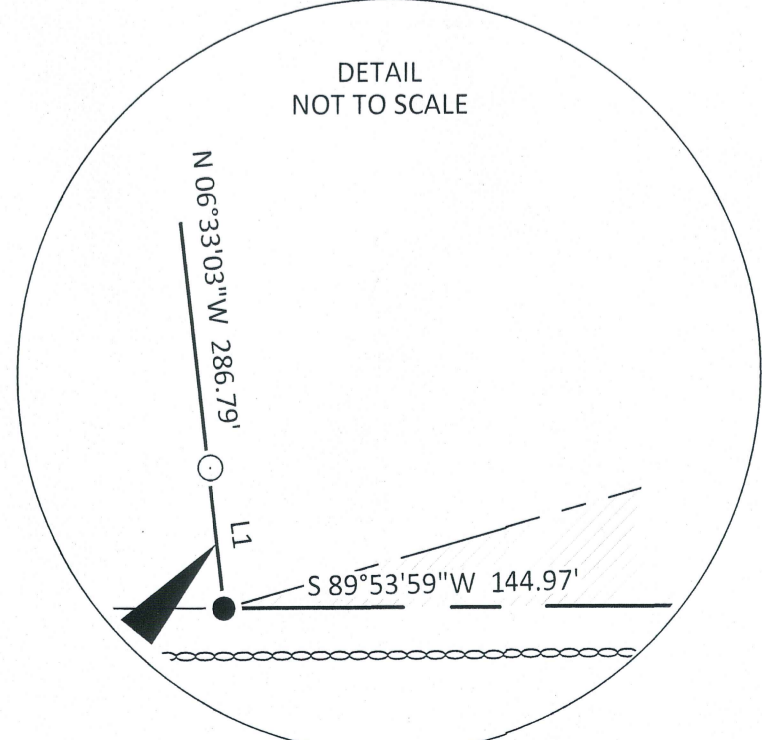
**MAP STANDARD NOTES**

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TYPE OF SURVEY: PROPERTY SURVEY  
 BOUNDARY DETERMINATION CATEGORY: RESURVEY  
 HORIZONTAL ACCURACY CLASS: "A-2"

**MAP REFERENCES:**

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*I have delineated state of Connecticut wetlands and watercourses present on the subject site and have reviewed this plan and it is my opinion that the limits of the wetlands and watercourses depicted hereon are representative of those delineated in the field.*

Richard Snarski

APPROVED  
 PLANNING AND ZONING  
 COMMISSION  
 EAST HAMPTON, CT

DATE: \_\_\_\_\_  
 SIGNED: \_\_\_\_\_

NOTE  
 \*SOUTHERLY PROPERTY LINE HELD PER MAP REFERENCE #1.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS DRAWING IS NOT VALID UNLESS IT BEARS AN ORIGINAL INK SIGNATURE AND EMBOSSED SEAL

ROBERT W. HELLSTROM, L.S. #13626

**ROB HELLSTROM**  
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 (860) 228-9853  
 hellstromsurveying@yahoo.com  
 WWW.RHLSCT.COM

Mailing Address:  
 P.O. BOX 378  
 HEBRON, CT. 06248

Designed By: MAR  
 Drawn By: SAM  
 Checked By: MAR  
 CAD File: 21-106

Drawing Scale: 1"=60'

Drawing date: 7/26/2021

Rev. 1. 3/29/23  
 2. 5/09/23

BY: SAM  
 REVISION: REVISED LAYOUT FOR F.L.O.D. ZONE EASEMENTS & DETAILS  
 BY: SAM

OVERALL BOUNDARY & EXISTING CONDITIONS  
 PROJECT TITLE: HAMPTON VILLAGE  
 37 SOUTH MAIN STREET  
 EAST HAMPTON, CT.

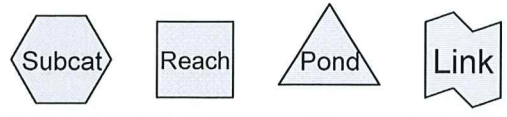
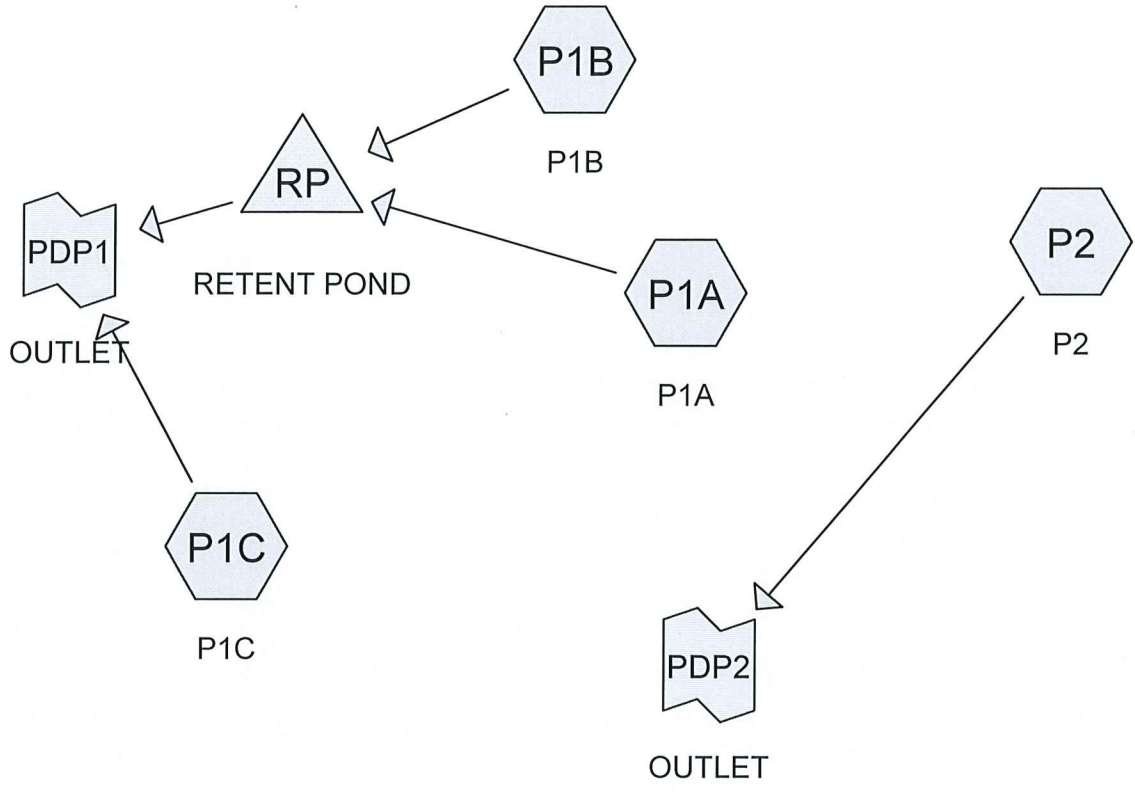
CIVIL ENGINEERING CONSULTANTS  
 63 NORWICH AVENUE  
 COLCHESTER, CT  
 (860) 571-60033

PREPARED FOR: BAKAJ CONSTRUCTION LLC  
 37 SOUTH MAIN STREET  
 EAST HAMPTON, CT.

**RES**  
 Reynolds Engineering Services, LLC

Drawing #: 2 OF 15  
 Job #: 21-106

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TIME \_\_\_\_\_



**Routing Diagram for HV\_PRO**  
Prepared by Reynolds Engineering Svcs, LLC, Printed 5/3/2023  
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**HV\_PRO**

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
6.400	75	1/4 acre lots, 38% imp, HSG B (P1A)
18.400	55	Woods, Good, HSG B (P1B, P1C, P2)
<b>24.800</b>	<b>60</b>	<b>TOTAL AREA</b>

**HV\_PRO**

**Soil Listing (all nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
24.800	HSG B	P1A, P1B, P1C, P2
0.000	HSG C	
0.000	HSG D	
0.000	Other	
<b>24.800</b>		<b>TOTAL AREA</b>

**HV\_PRO**

**Ground Covers (all nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	6.400	0.000	0.000	0.000	6.400	1/4 acre lots, 38% imp	P1A
0.000	18.400	0.000	0.000	0.000	18.400	Woods, Good	P1B, P1C, P2
<b>0.000</b>	<b>24.800</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>24.800</b>	<b>TOTAL AREA</b>	



# HV\_PRO

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Page 5

## 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	P1A	0.00	0.00	1,320.0	0.0600	0.012	15.0	0.0	0.0

**HV\_PRO**

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Type III 24-hr 2 YR Rainfall=3.39"

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Page 6

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

**Subcatchment P1A: P1A** Runoff Area=6.400 ac 38.00% Impervious Runoff Depth>1.11"  
Flow Length=1,630' Tc=24.9 min CN=75 Runoff=5.42 cfs 0.594 af

**Subcatchment P1B: P1B** Runoff Area=5.500 ac 0.00% Impervious Runoff Depth>0.26"  
Flow Length=620' Tc=19.5 min CN=55 Runoff=0.67 cfs 0.119 af

**Subcatchment P1C: P1C** Runoff Area=4.200 ac 0.00% Impervious Runoff Depth>0.26"  
Flow Length=850' Tc=32.2 min CN=55 Runoff=0.43 cfs 0.090 af

**Subcatchment P2: P2** Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>0.25"  
Flow Length=1,100' Tc=64.0 min CN=55 Runoff=0.63 cfs 0.182 af

**Pond RP: RETENT POND** Peak Elev=444.25' Storage=17,932 cf Inflow=6.00 cfs 0.713 af  
Outflow=0.50 cfs 0.343 af

**Link PDP1: OUTLET** Inflow=0.93 cfs 0.433 af  
Primary=0.93 cfs 0.433 af

**Link PDP2: OUTLET** Inflow=0.63 cfs 0.182 af  
Primary=0.63 cfs 0.182 af

**Total Runoff Area = 24.800 ac Runoff Volume = 0.985 af Average Runoff Depth = 0.48"**  
**90.19% Pervious = 22.368 ac 9.81% Impervious = 2.432 ac**

**Summary for Subcatchment P1A: P1A**

Runoff = 5.42 cfs @ 12.37 hrs, Volume= 0.594 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 2 YR Rainfall=3.39"

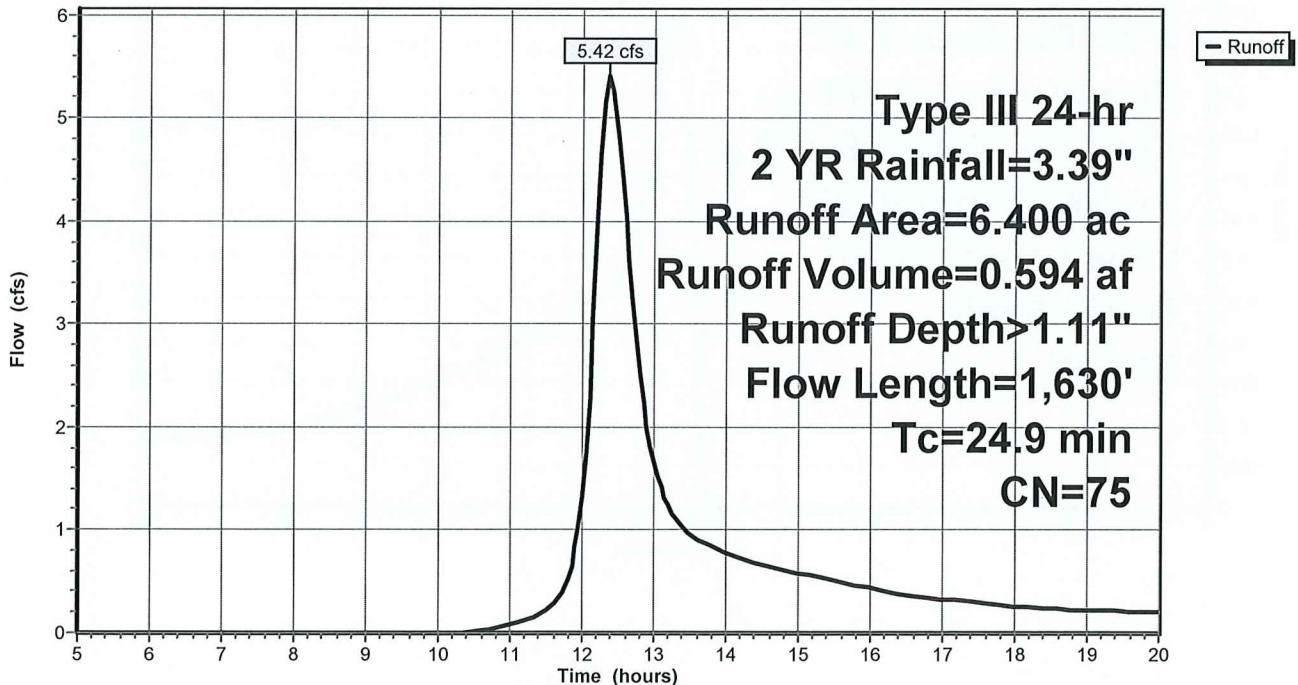
Area (ac)	CN	Description
6.400	75	1/4 acre lots, 38% imp, HSG B
3.968		62.00% Pervious Area
2.432		38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	100	0.0100	0.09		<b>Sheet Flow, SF</b> Grass: Dense n= 0.240 P2= 3.39"
5.0	210	0.0100	0.70		<b>Shallow Concentrated Flow, SC1</b> Short Grass Pasture Kv= 7.0 fps
1.6	1,320	0.0600	13.97	17.14	<b>Pipe Channel, PIPE</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
24.9	1,630	Total			

**Subcatchment P1A: P1A**

Hydrograph



**Summary for Subcatchment P1B: P1B**

Runoff = 0.67 cfs @ 12.51 hrs, Volume= 0.119 af, Depth> 0.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 2 YR Rainfall=3.39"

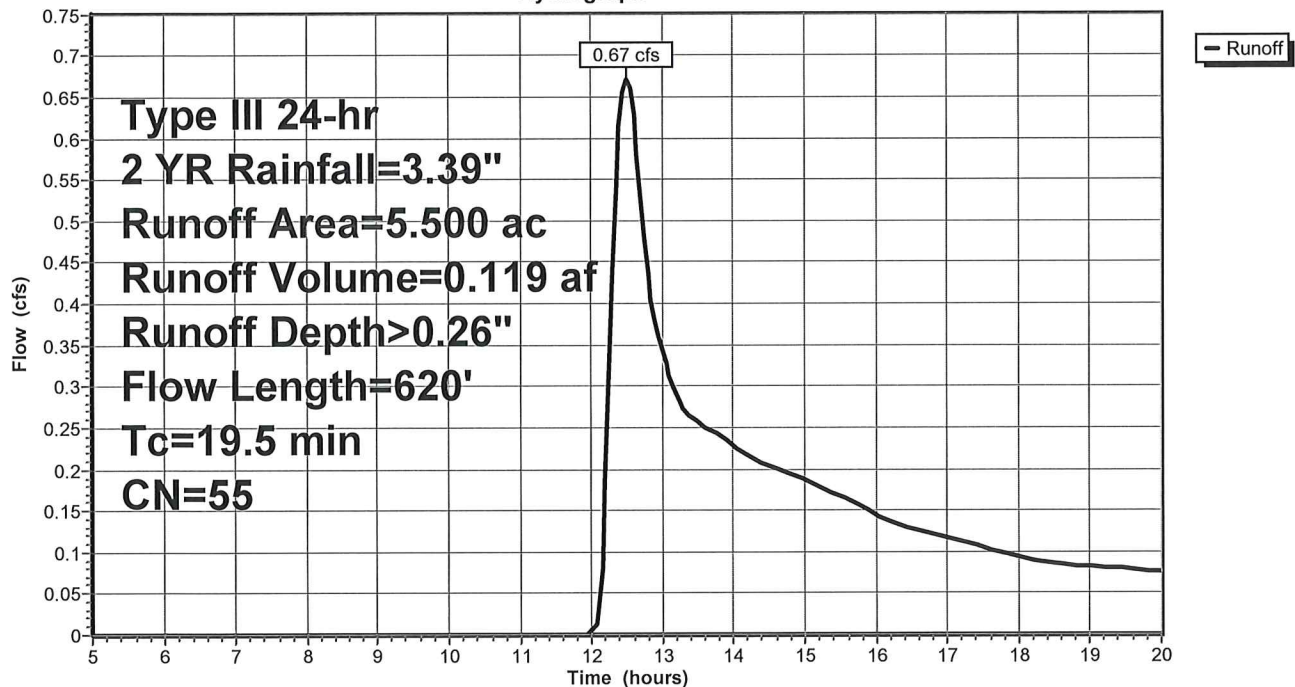
Area (ac)	CN	Description
5.500	55	Woods, Good, HSG B
5.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0600	0.12		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
6.1	520	0.0800	1.41		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
19.5	620	Total			

**Subcatchment P1B: P1B**

Hydrograph



**Summary for Subcatchment P1C: P1C**

Runoff = 0.43 cfs @ 12.68 hrs, Volume= 0.090 af, Depth> 0.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 2 YR Rainfall=3.39"

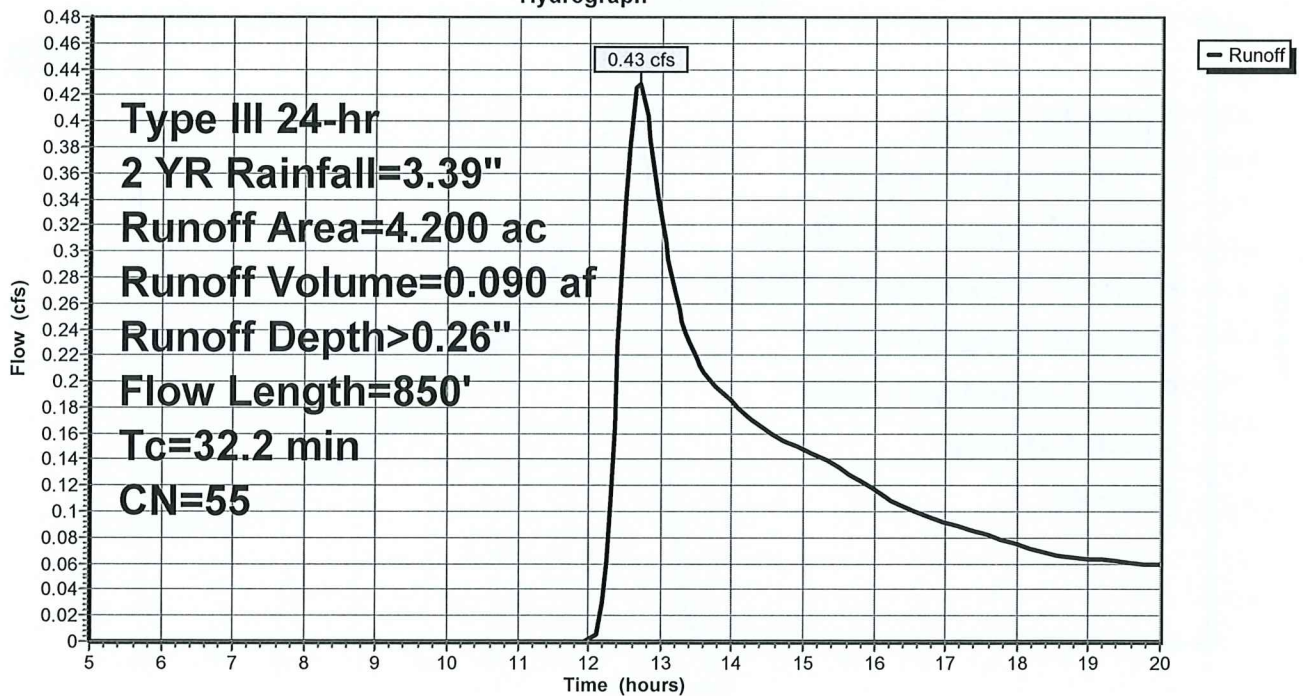
Area (ac)	CN	Description
4.200	55	Woods, Good, HSG B
4.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.0	100	0.0700	0.08		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
10.2	750	0.0600	1.22		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
32.2	850	Total			

**Subcatchment P1C: P1C**

Hydrograph



**Summary for Subcatchment P2: P2**

Runoff = 0.63 cfs @ 13.19 hrs, Volume= 0.182 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 2 YR Rainfall=3.39"

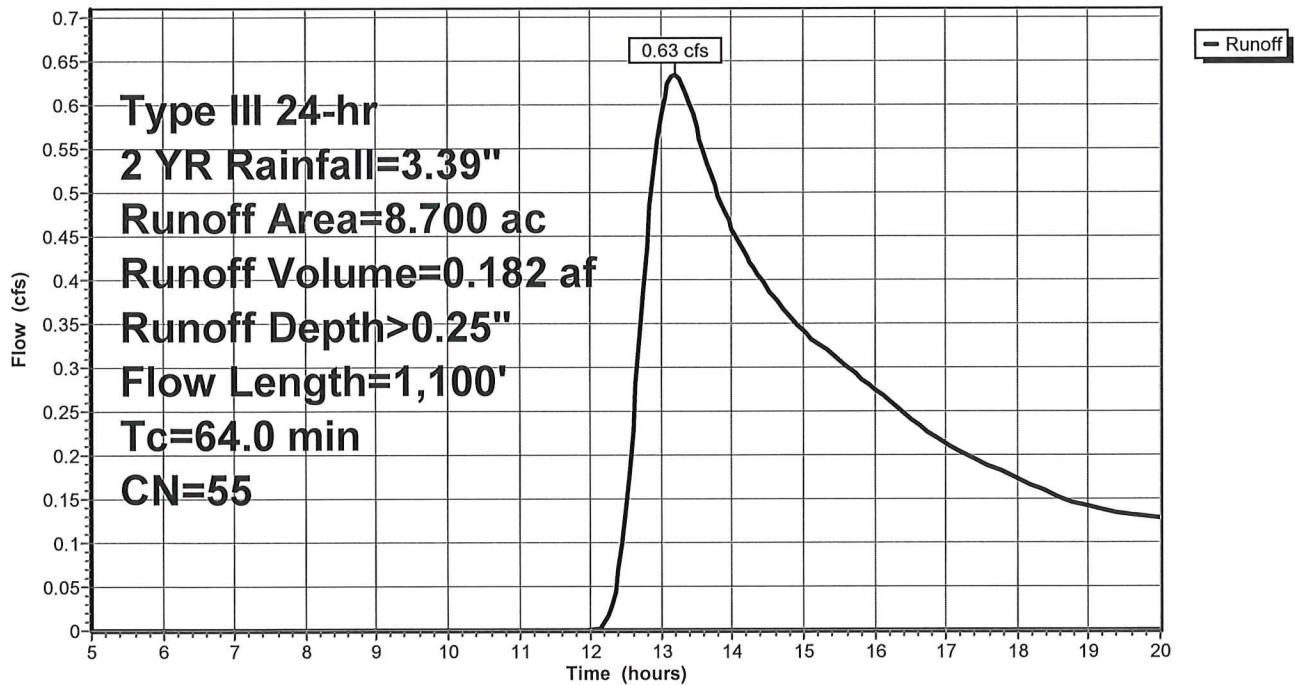
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.9	100	0.0100	0.03		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
16.1	1,000	0.0430	1.04		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
64.0	1,100	Total			

**Subcatchment P2: P2**

Hydrograph



**Summary for Pond RP: RETENT POND**

Inflow Area = 11.900 ac, 20.44% Impervious, Inflow Depth > 0.72" for 2 YR event  
 Inflow = 6.00 cfs @ 12.39 hrs, Volume= 0.713 af  
 Outflow = 0.50 cfs @ 12.05 hrs, Volume= 0.343 af, Atten= 92%, Lag= 0.0 min  
 Primary = 0.50 cfs @ 12.05 hrs, Volume= 0.343 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 444.25' @ 16.45 hrs Surf.Area= 15,071 sf Storage= 17,932 cf

Plug-Flow detention time= 207.5 min calculated for 0.342 af (48% of inflow)  
 Center-of-Mass det. time= 114.5 min ( 952.2 - 837.7 )

Volume	Invert	Avail.Storage	Storage Description
#1	443.00'	122,953 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
443.00	13,695	0	0
449.00	20,318	102,039	102,039
450.00	21,510	20,914	122,953

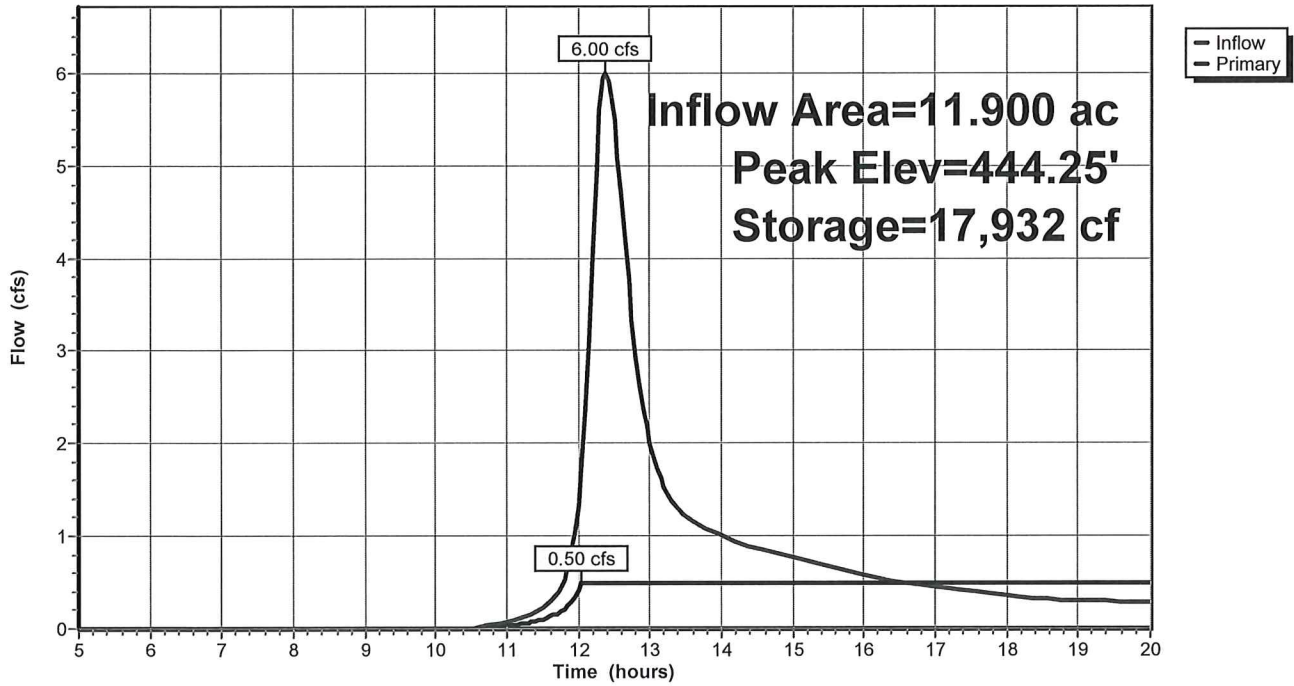
Device	Routing	Invert	Outlet Devices
#1	Primary	449.00'	<b>8.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74
#2	Primary	443.00'	<b>0.50 cfs Trench Drain when above 442.00'</b>
#3	Primary	445.00'	<b>12.0" W x 6.0" H Vert. Orifice/Grate C= 0.600</b>

**Primary OutFlow** Max=0.50 cfs @ 12.05 hrs HW=443.07' (Free Discharge)

- 1=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)
- 2=Trench Drain (Exfiltration Controls 0.50 cfs)
- 3=Orifice/Grate ( Controls 0.00 cfs)

**Pond RP: RETENT POND**

Hydrograph





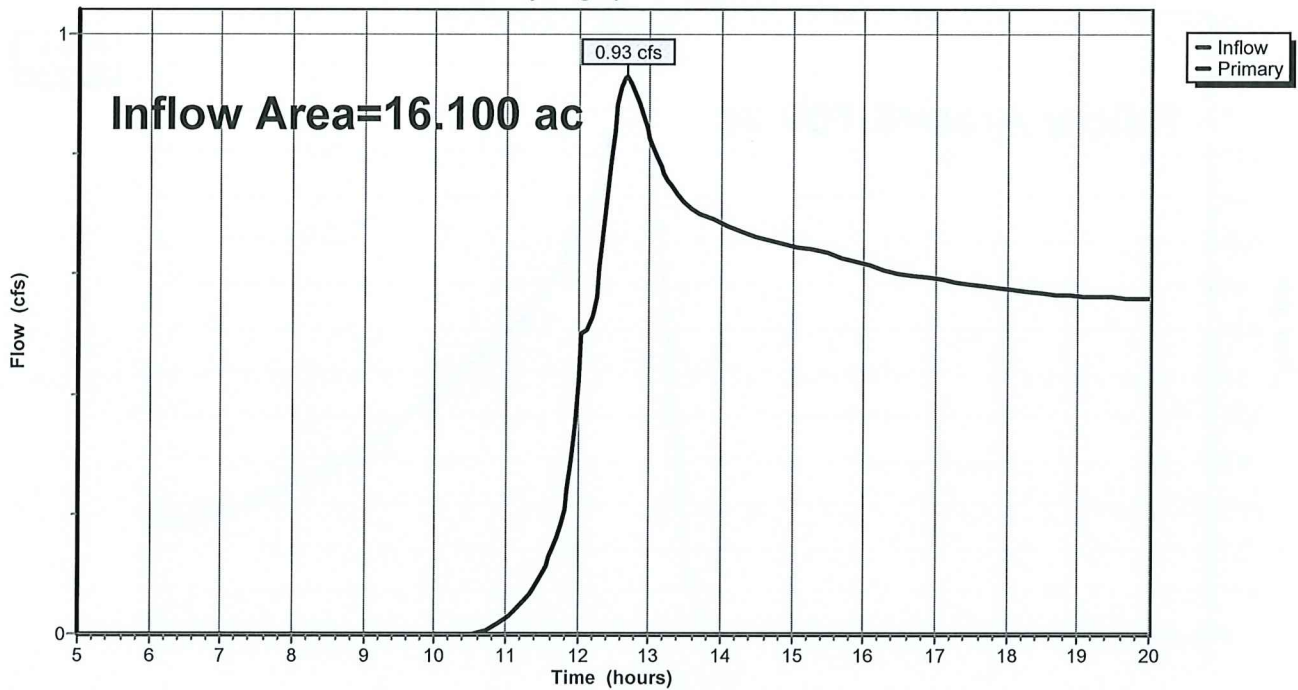
### Summary for Link PDP1: OUTLET

Inflow Area = 16.100 ac, 15.11% Impervious, Inflow Depth > 0.32" for 2 YR event  
Inflow = 0.93 cfs @ 12.68 hrs, Volume= 0.433 af  
Primary = 0.93 cfs @ 12.68 hrs, Volume= 0.433 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP1: OUTLET

Hydrograph



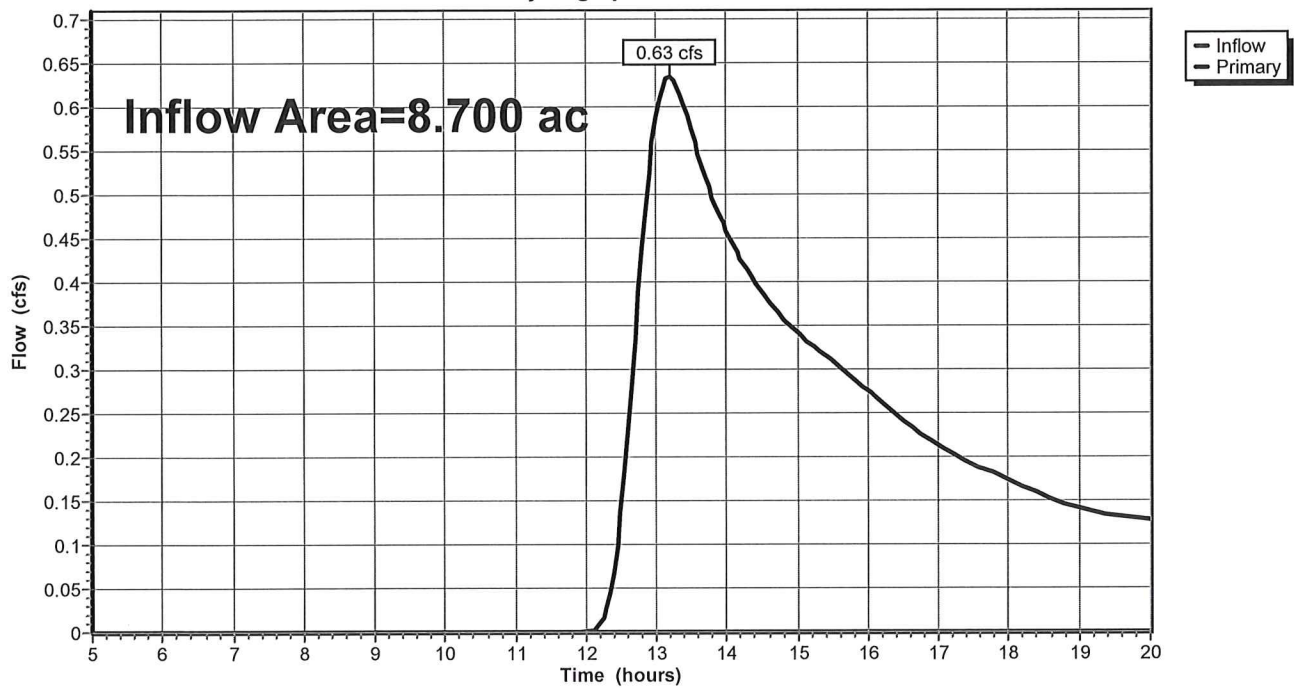
### Summary for Link PDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 0.25" for 2 YR event  
Inflow = 0.63 cfs @ 13.19 hrs, Volume= 0.182 af  
Primary = 0.63 cfs @ 13.19 hrs, Volume= 0.182 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP2: OUTLET

Hydrograph



**HV\_PRO**

Type III 24-hr 10 YR Rainfall=5.19"

Prepared by Reynolds Engineering Svcs, LLC

Printed 5/3/2023

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

<b>Subcatchment P1A: P1A</b>	Runoff Area=6.400 ac 38.00% Impervious Runoff Depth>2.40" Flow Length=1,630' Tc=24.9 min CN=75 Runoff=11.93 cfs 1.281 af
<b>Subcatchment P1B: P1B</b>	Runoff Area=5.500 ac 0.00% Impervious Runoff Depth>0.95" Flow Length=620' Tc=19.5 min CN=55 Runoff=3.86 cfs 0.437 af
<b>Subcatchment P1C: P1C</b>	Runoff Area=4.200 ac 0.00% Impervious Runoff Depth>0.95" Flow Length=850' Tc=32.2 min CN=55 Runoff=2.41 cfs 0.332 af
<b>Subcatchment P2: P2</b>	Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>0.93" Flow Length=1,100' Tc=64.0 min CN=55 Runoff=3.41 cfs 0.674 af
<b>Pond RP: RETENT POND</b>	Peak Elev=445.66' Storage=40,354 cf Inflow=15.76 cfs 1.718 af Outflow=2.02 cfs 0.968 af
<b>Link PDP1: OUTLET</b>	Inflow=2.91 cfs 1.299 af Primary=2.91 cfs 1.299 af
<b>Link PDP2: OUTLET</b>	Inflow=3.41 cfs 0.674 af Primary=3.41 cfs 0.674 af

**Total Runoff Area = 24.800 ac Runoff Volume = 2.724 af Average Runoff Depth = 1.32"**  
**90.19% Pervious = 22.368 ac 9.81% Impervious = 2.432 ac**

**Summary for Subcatchment P1A: P1A**

Runoff = 11.93 cfs @ 12.35 hrs, Volume= 1.281 af, Depth> 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 10 YR Rainfall=5.19"

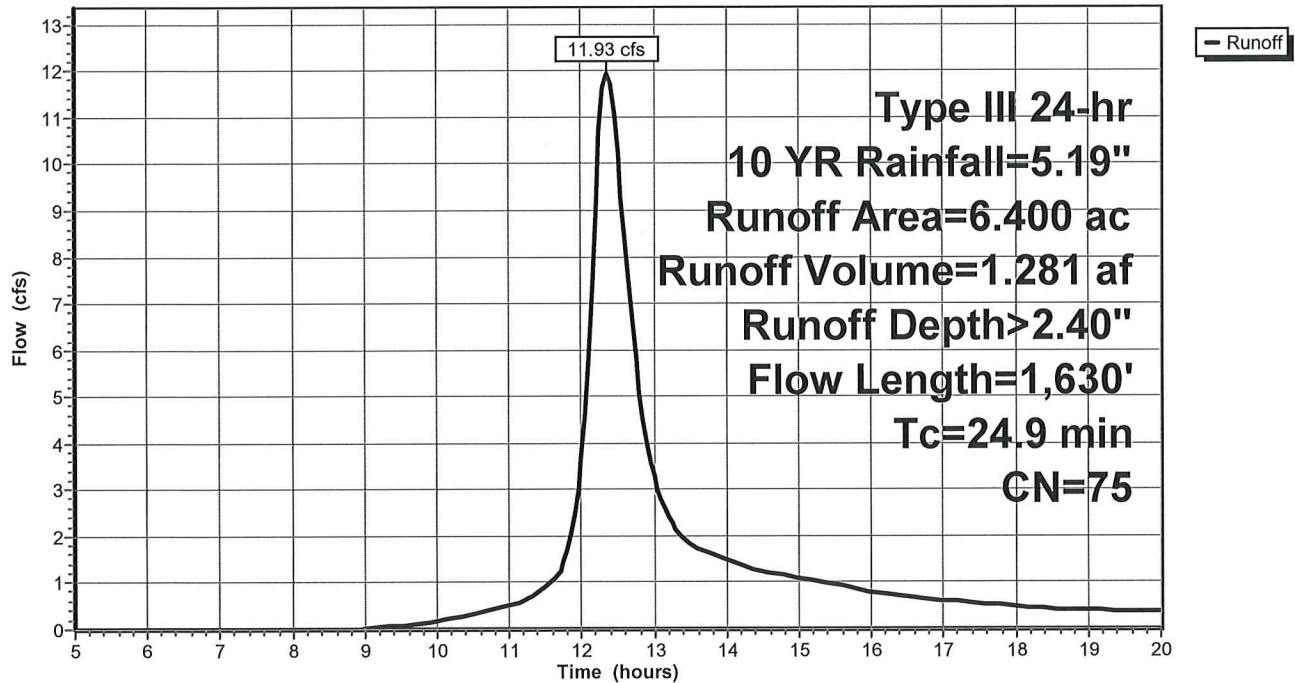
Area (ac)	CN	Description
6.400	75	1/4 acre lots, 38% imp, HSG B
3.968		62.00% Pervious Area
2.432		38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	100	0.0100	0.09		<b>Sheet Flow, SF</b> Grass: Dense n= 0.240 P2= 3.39"
5.0	210	0.0100	0.70		<b>Shallow Concentrated Flow, SC1</b> Short Grass Pasture Kv= 7.0 fps
1.6	1,320	0.0600	13.97	17.14	<b>Pipe Channel, PIPE</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
24.9	1,630	Total			

**Subcatchment P1A: P1A**

Hydrograph



**Summary for Subcatchment P1B: P1B**

Runoff = 3.86 cfs @ 12.32 hrs, Volume= 0.437 af, Depth> 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 10 YR Rainfall=5.19"

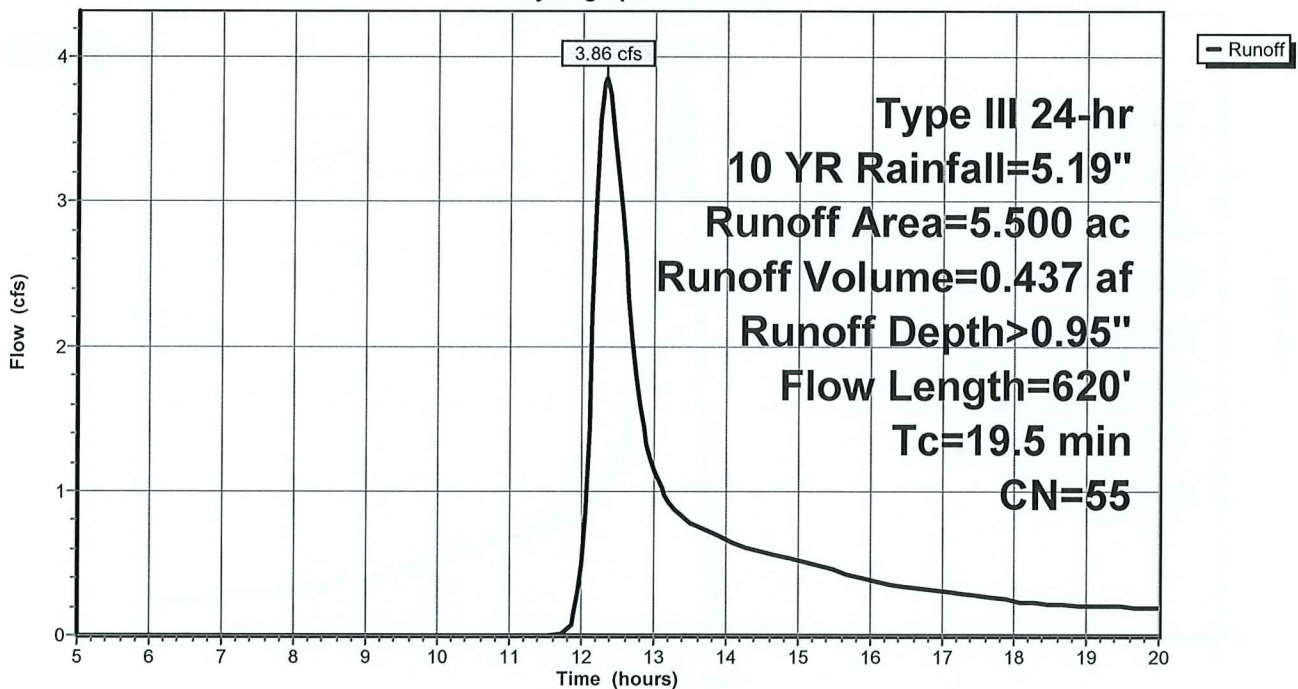
Area (ac)	CN	Description
5.500	55	Woods, Good, HSG B
5.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0600	0.12		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
6.1	520	0.0800	1.41		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
19.5	620	Total			

**Subcatchment P1B: P1B**

Hydrograph



**Summary for Subcatchment P1C: P1C**

Runoff = 2.41 cfs @ 12.53 hrs, Volume= 0.332 af, Depth> 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 10 YR Rainfall=5.19"

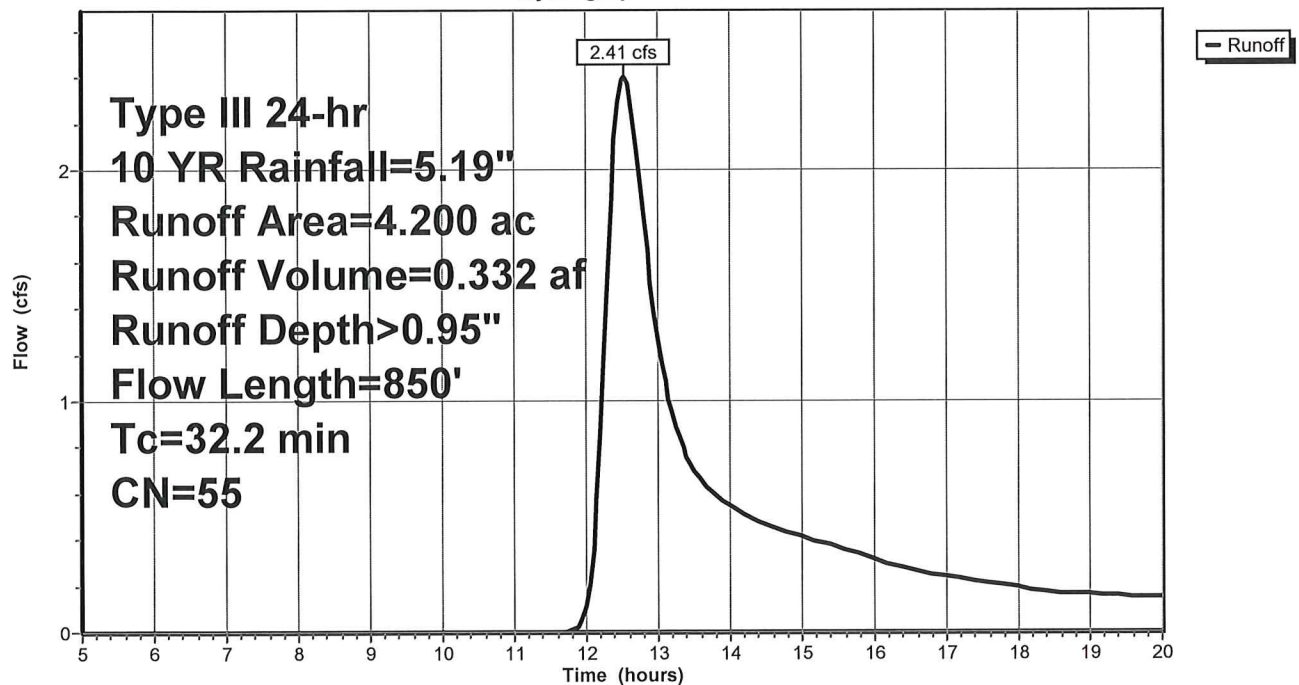
Area (ac)	CN	Description
4.200	55	Woods, Good, HSG B
4.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.0	100	0.0700	0.08		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
10.2	750	0.0600	1.22		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
32.2	850	Total			

**Subcatchment P1C: P1C**

Hydrograph



**Summary for Subcatchment P2: P2**

Runoff = 3.41 cfs @ 13.00 hrs, Volume= 0.674 af, Depth> 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 10 YR Rainfall=5.19"

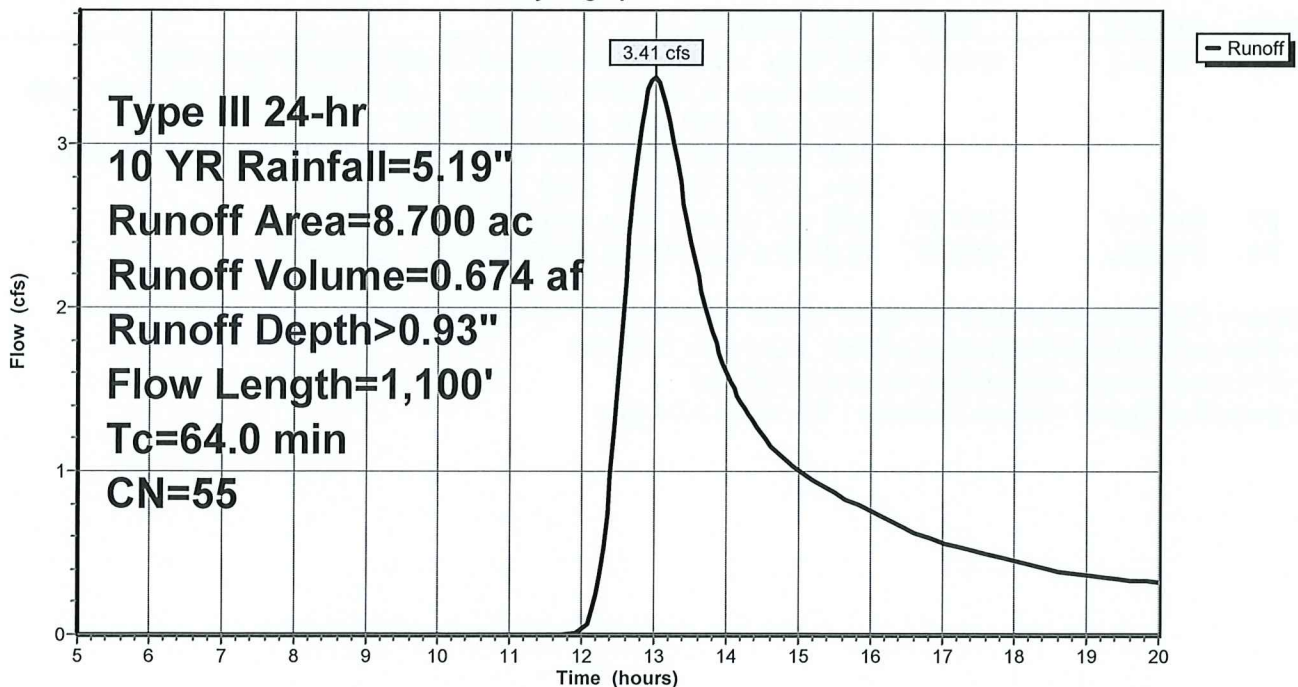
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.9	100	0.0100	0.03		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
16.1	1,000	0.0430	1.04		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
64.0	1,100	Total			

**Subcatchment P2: P2**

Hydrograph



**Summary for Pond RP: RETENT POND**

Inflow Area = 11.900 ac, 20.44% Impervious, Inflow Depth > 1.73" for 10 YR event  
 Inflow = 15.76 cfs @ 12.35 hrs, Volume= 1.718 af  
 Outflow = 2.02 cfs @ 14.16 hrs, Volume= 0.968 af, Atten= 87%, Lag= 108.7 min  
 Primary = 2.02 cfs @ 14.16 hrs, Volume= 0.968 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 445.66' @ 14.16 hrs Surf.Area= 16,633 sf Storage= 40,354 cf

Plug-Flow detention time= 189.6 min calculated for 0.968 af (56% of inflow)  
 Center-of-Mass det. time= 107.4 min ( 927.8 - 820.4 )

Volume	Invert	Avail.Storage	Storage Description
#1	443.00'	122,953 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
443.00	13,695	0	0
449.00	20,318	102,039	102,039
450.00	21,510	20,914	122,953

Device	Routing	Invert	Outlet Devices
#1	Primary	449.00'	<b>8.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b> 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74
#2	Primary	443.00'	<b>0.50 cfs Trench Drain when above 442.00'</b>
#3	Primary	445.00'	<b>12.0" W x 6.0" H Vert. Orifice/Grate C= 0.600</b>

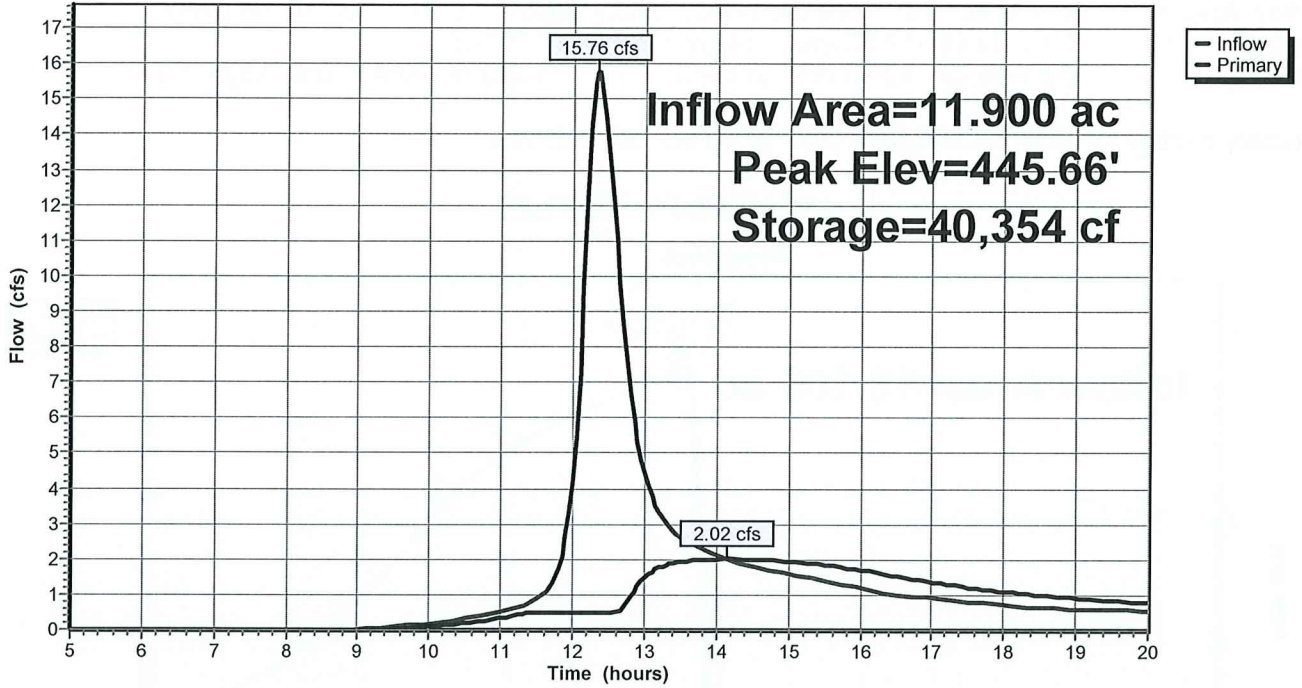
**Primary OutFlow** Max=2.02 cfs @ 14.16 hrs HW=445.66' (Free Discharge)

- 1=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)
- 2=Trench Drain (Exfiltration Controls 0.50 cfs)
- 3=Orifice/Grate (Orifice Controls 1.52 cfs @ 3.04 fps)



### Pond RP: RETENT POND

Hydrograph



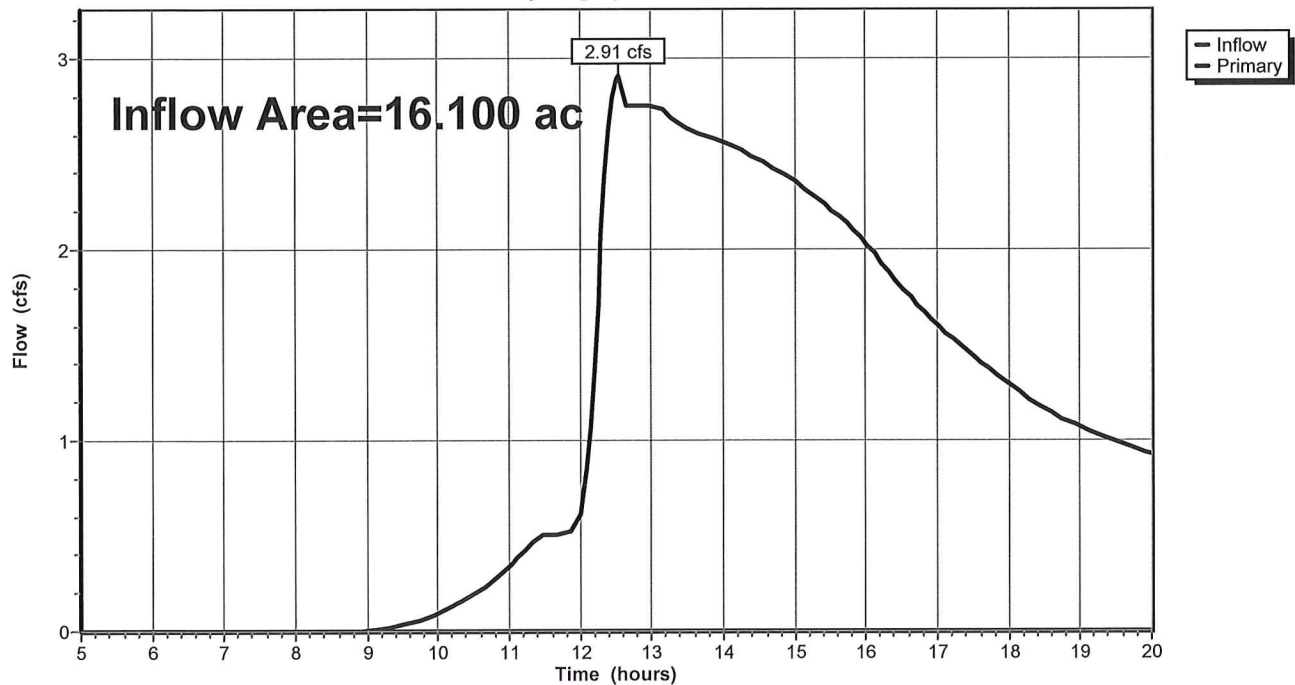
### Summary for Link PDP1: OUTLET

Inflow Area = 16.100 ac, 15.11% Impervious, Inflow Depth > 0.97" for 10 YR event  
Inflow = 2.91 cfs @ 12.53 hrs, Volume= 1.299 af  
Primary = 2.91 cfs @ 12.53 hrs, Volume= 1.299 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP1: OUTLET

Hydrograph



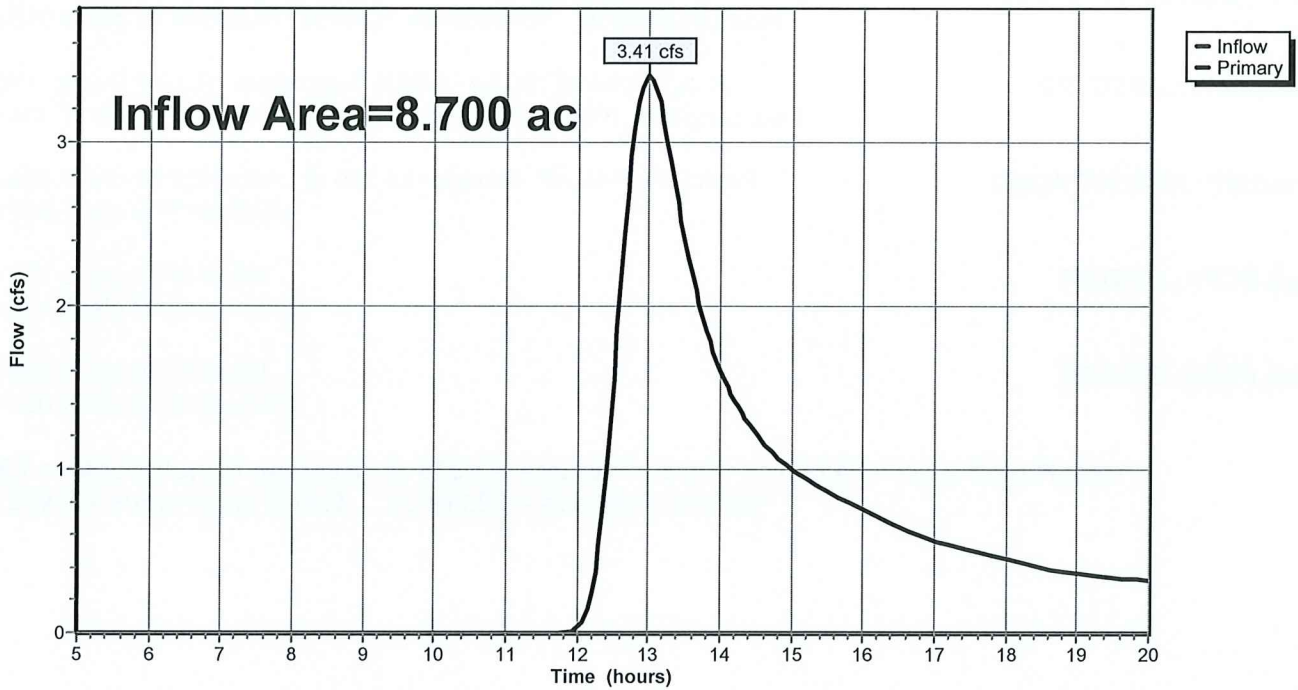
### Summary for Link PDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 0.93" for 10 YR event  
Inflow = 3.41 cfs @ 13.00 hrs, Volume= 0.674 af  
Primary = 3.41 cfs @ 13.00 hrs, Volume= 0.674 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP2: OUTLET

Hydrograph



**HV\_PRO**

Type III 24-hr 25 YR Rainfall=6.24"

Prepared by Reynolds Engineering Svcs, LLC

Printed 5/3/2023

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

**Subcatchment P1A: P1A** Runoff Area=6.400 ac 38.00% Impervious Runoff Depth>3.23"  
Flow Length=1,630' Tc=24.9 min CN=75 Runoff=16.04 cfs 1.724 af

**Subcatchment P1B: P1B** Runoff Area=5.500 ac 0.00% Impervious Runoff Depth>1.49"  
Flow Length=620' Tc=19.5 min CN=55 Runoff=6.50 cfs 0.682 af

**Subcatchment P1C: P1C** Runoff Area=4.200 ac 0.00% Impervious Runoff Depth>1.48"  
Flow Length=850' Tc=32.2 min CN=55 Runoff=4.02 cfs 0.518 af

**Subcatchment P2: P2** Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>1.45"  
Flow Length=1,100' Tc=64.0 min CN=55 Runoff=5.70 cfs 1.054 af

**Pond RP: RETENT POND** Peak Elev=446.48' Storage=54,270 cf Inflow=22.42 cfs 2.406 af  
Outflow=3.16 cfs 1.604 af

**Link PDP1: OUTLET** Inflow=6.03 cfs 2.122 af  
Primary=6.03 cfs 2.122 af

**Link PDP2: OUTLET** Inflow=5.70 cfs 1.054 af  
Primary=5.70 cfs 1.054 af

**Total Runoff Area = 24.800 ac Runoff Volume = 3.978 af Average Runoff Depth = 1.92"**  
**90.19% Pervious = 22.368 ac 9.81% Impervious = 2.432 ac**

**Summary for Subcatchment P1A: P1A**

Runoff = 16.04 cfs @ 12.35 hrs, Volume= 1.724 af, Depth> 3.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 25 YR Rainfall=6.24"

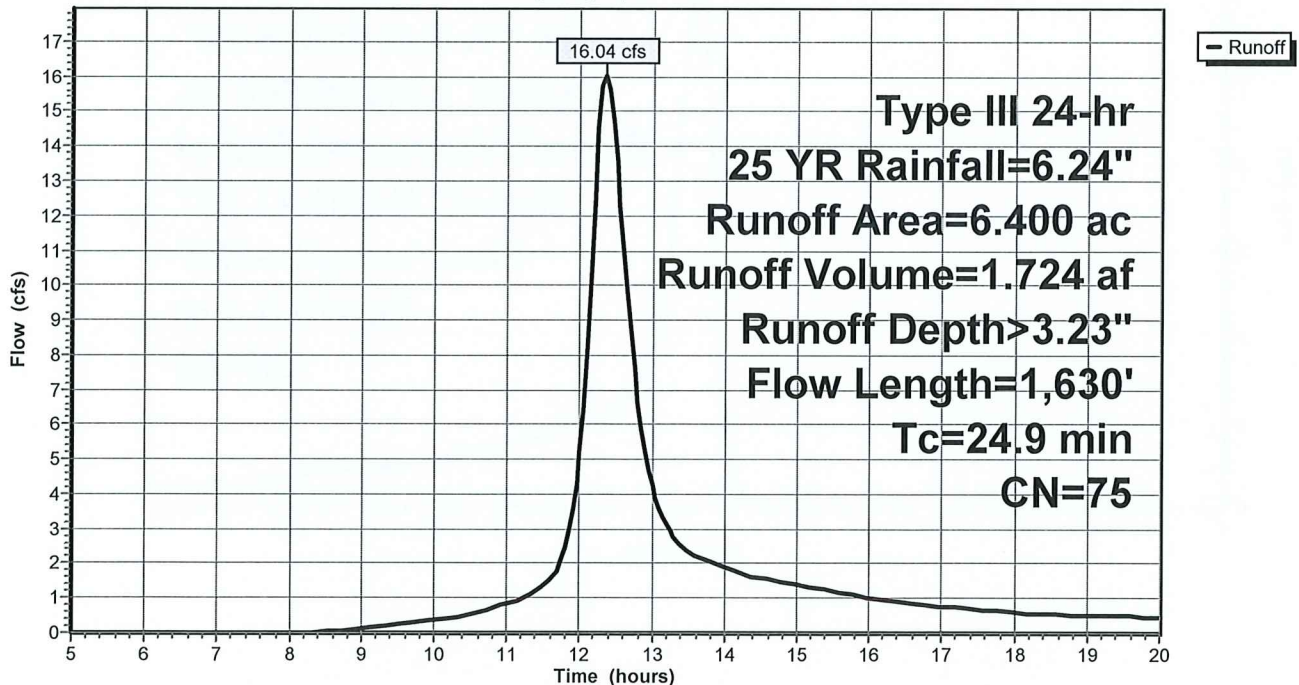
Area (ac)	CN	Description
6.400	75	1/4 acre lots, 38% imp, HSG B
3.968		62.00% Pervious Area
2.432		38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	100	0.0100	0.09		<b>Sheet Flow, SF</b> Grass: Dense n= 0.240 P2= 3.39"
5.0	210	0.0100	0.70		<b>Shallow Concentrated Flow, SC1</b> Short Grass Pasture Kv= 7.0 fps
1.6	1,320	0.0600	13.97	17.14	<b>Pipe Channel, PIPE</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
24.9	1,630	Total			

**Subcatchment P1A: P1A**

Hydrograph



### Summary for Subcatchment P1B: P1B

Runoff = 6.50 cfs @ 12.31 hrs, Volume= 0.682 af, Depth> 1.49"

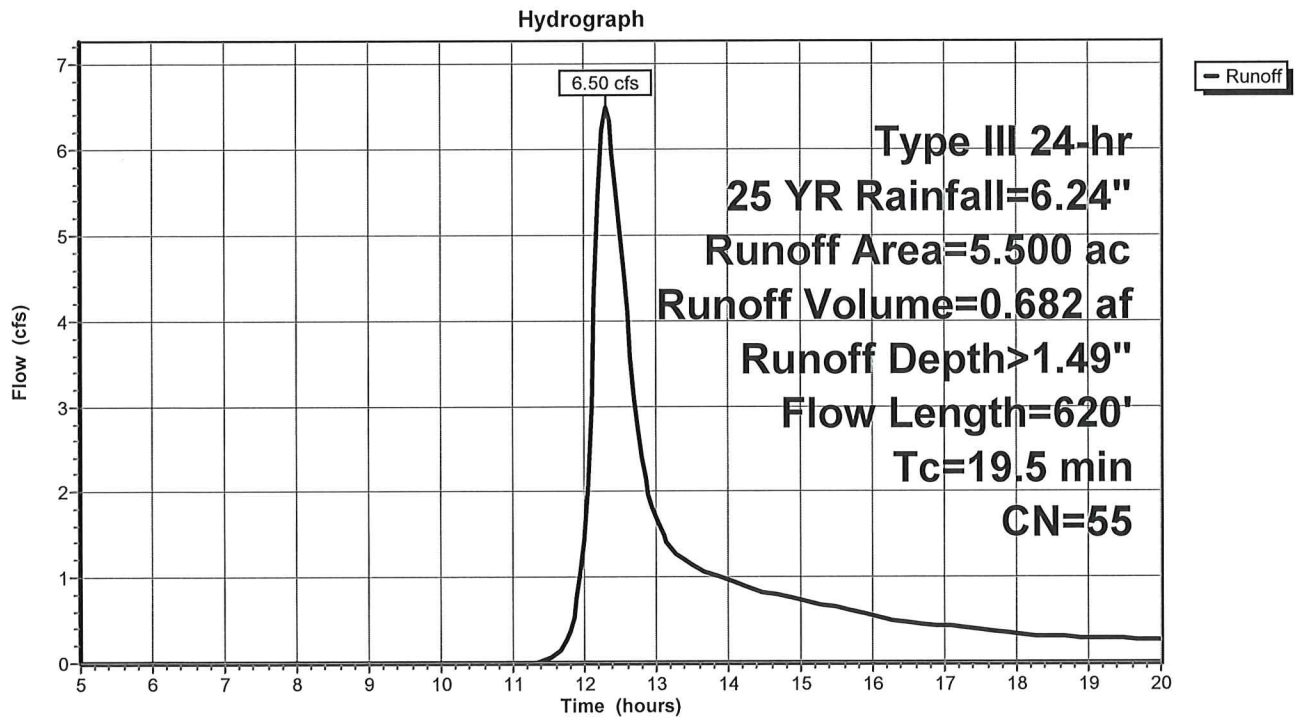
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 YR Rainfall=6.24"

Area (ac)	CN	Description
5.500	55	Woods, Good, HSG B
5.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0600	0.12		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
6.1	520	0.0800	1.41		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
19.5	620	Total			

### Subcatchment P1B: P1B



**Summary for Subcatchment P1C: P1C**

Runoff = 4.02 cfs @ 12.51 hrs, Volume= 0.518 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 25 YR Rainfall=6.24"

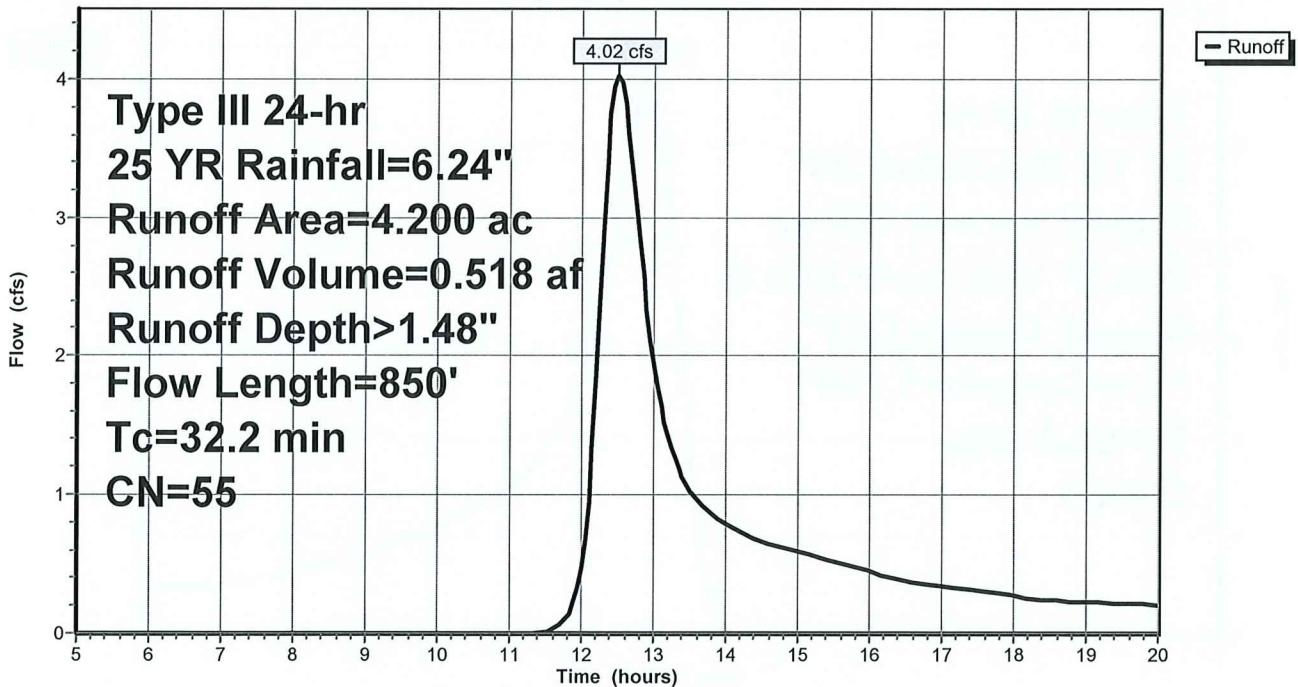
Area (ac)	CN	Description
4.200	55	Woods, Good, HSG B
4.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.0	100	0.0700	0.08		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
10.2	750	0.0600	1.22		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
32.2	850	Total			

**Subcatchment P1C: P1C**

Hydrograph



**Summary for Subcatchment P2: P2**

Runoff = 5.70 cfs @ 12.96 hrs, Volume= 1.054 af, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 25 YR Rainfall=6.24"

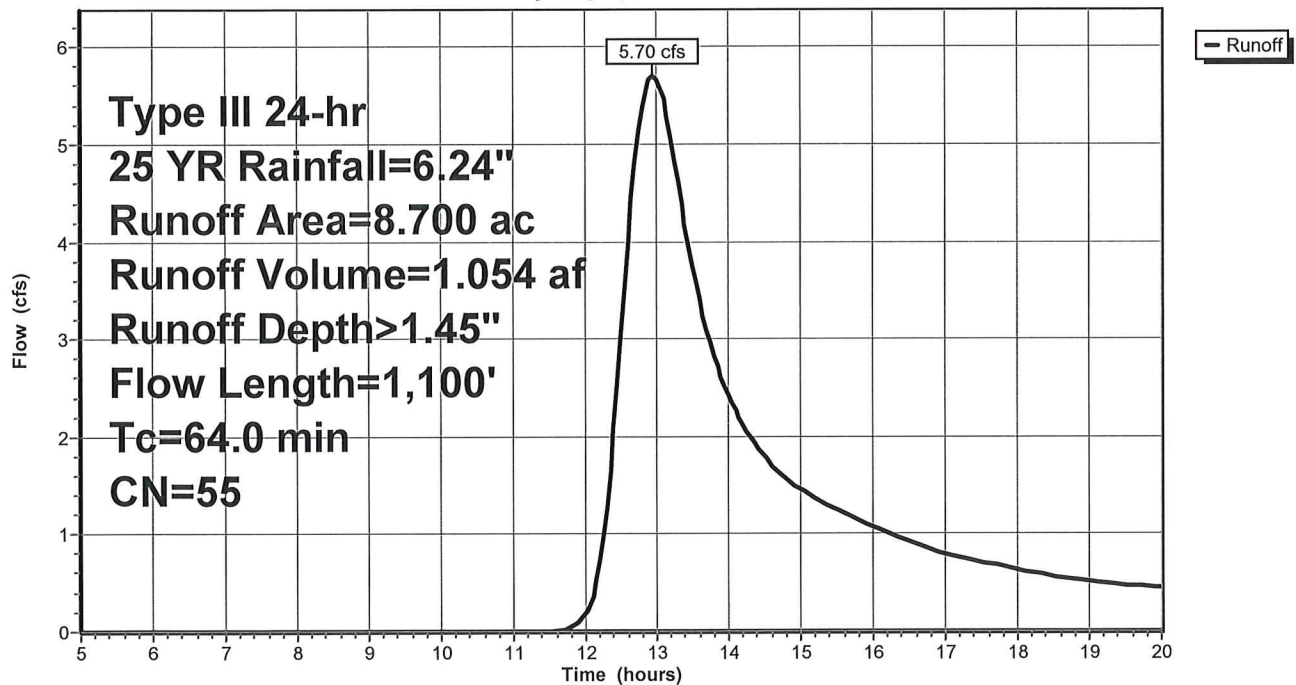
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.9	100	0.0100	0.03		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
16.1	1,000	0.0430	1.04		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
64.0	1,100	Total			

**Subcatchment P2: P2**

Hydrograph





**Summary for Pond RP: RETENT POND**

Inflow Area = 11.900 ac, 20.44% Impervious, Inflow Depth > 2.43" for 25 YR event  
 Inflow = 22.42 cfs @ 12.33 hrs, Volume= 2.406 af  
 Outflow = 3.16 cfs @ 13.73 hrs, Volume= 1.604 af, Atten= 86%, Lag= 84.0 min  
 Primary = 3.16 cfs @ 13.73 hrs, Volume= 1.604 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 446.48' @ 13.73 hrs Surf.Area= 17,532 sf Storage= 54,270 cf

Plug-Flow detention time= 183.1 min calculated for 1.604 af (67% of inflow)  
 Center-of-Mass det. time= 111.6 min ( 925.3 - 813.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	443.00'	122,953 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
443.00	13,695	0	0
449.00	20,318	102,039	102,039
450.00	21,510	20,914	122,953

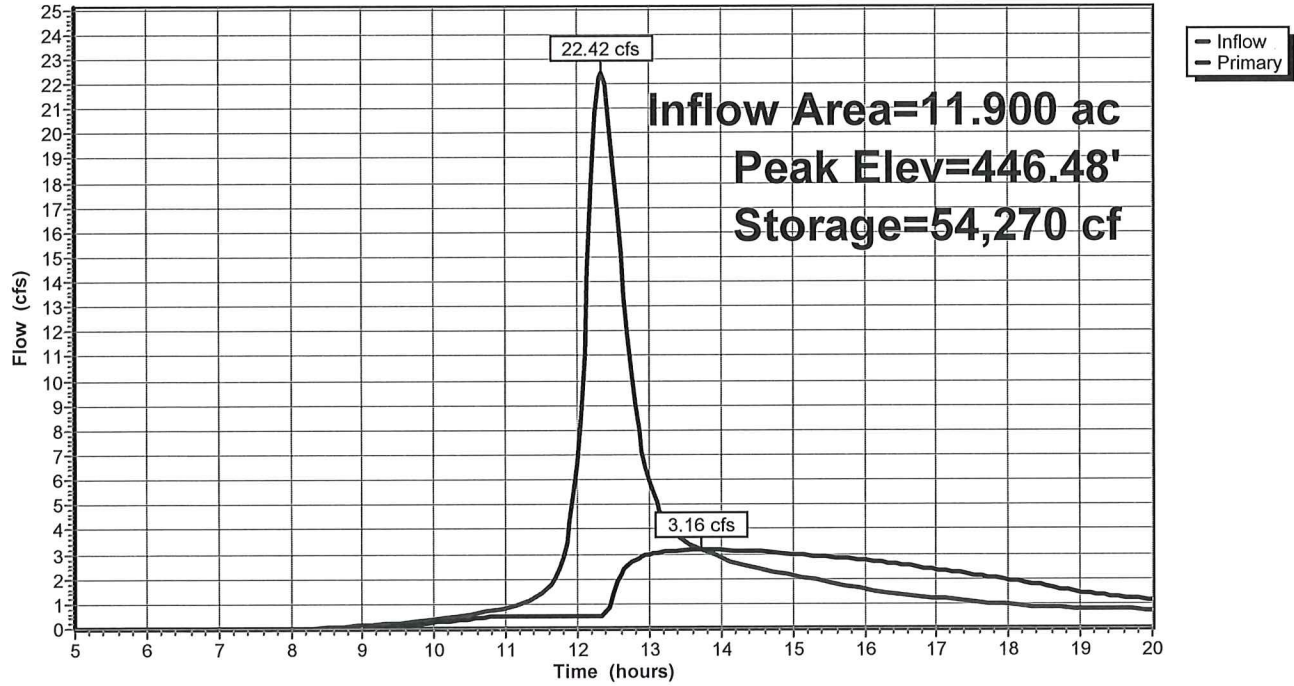
Device	Routing	Invert	Outlet Devices
#1	Primary	449.00'	<b>8.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74
#2	Primary	443.00'	<b>0.50 cfs Trench Drain when above 442.00'</b>
#3	Primary	445.00'	<b>12.0" W x 6.0" H Vert. Orifice/Grate C= 0.600</b>

**Primary OutFlow** Max=3.16 cfs @ 13.73 hrs HW=446.48' (Free Discharge)

- 1=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)
- 2=Trench Drain (Exfiltration Controls 0.50 cfs)
- 3=Orifice/Grate (Orifice Controls 2.66 cfs @ 5.32 fps)

**Pond RP: RETENT POND**

Hydrograph



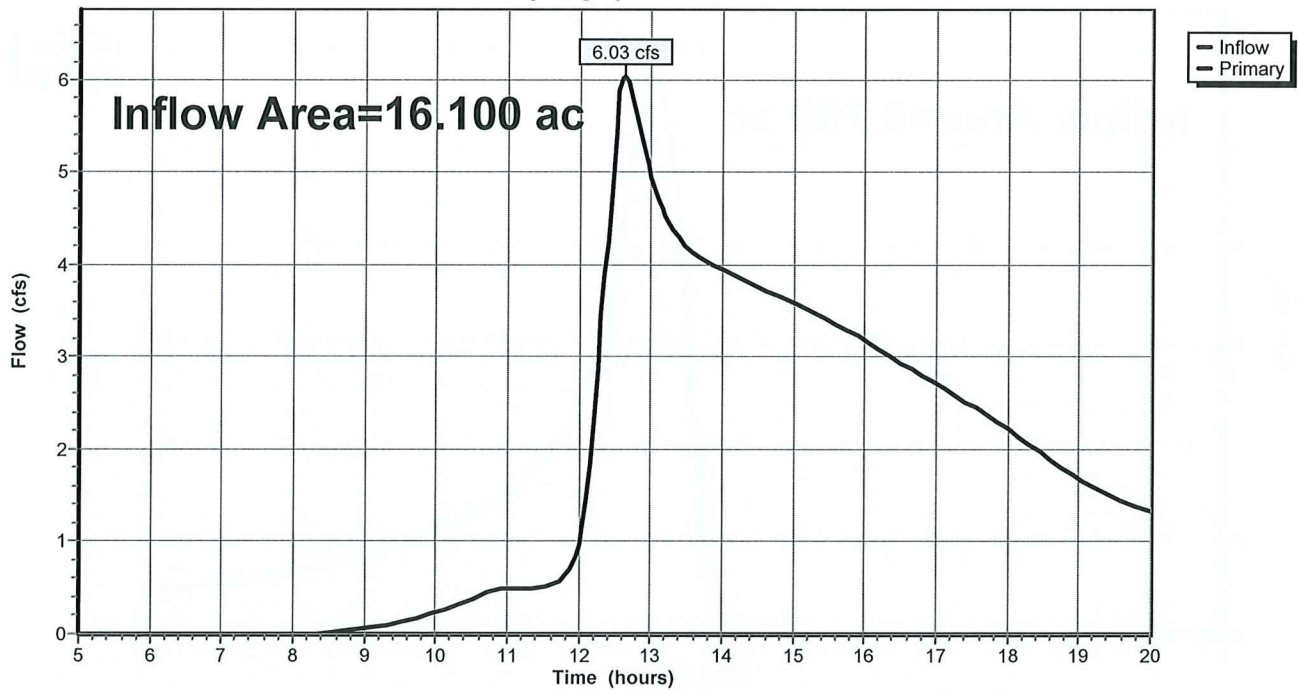
### Summary for Link PDP1: OUTLET

Inflow Area = 16.100 ac, 15.11% Impervious, Inflow Depth > 1.58" for 25 YR event  
Inflow = 6.03 cfs @ 12.62 hrs, Volume= 2.122 af  
Primary = 6.03 cfs @ 12.62 hrs, Volume= 2.122 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP1: OUTLET

Hydrograph



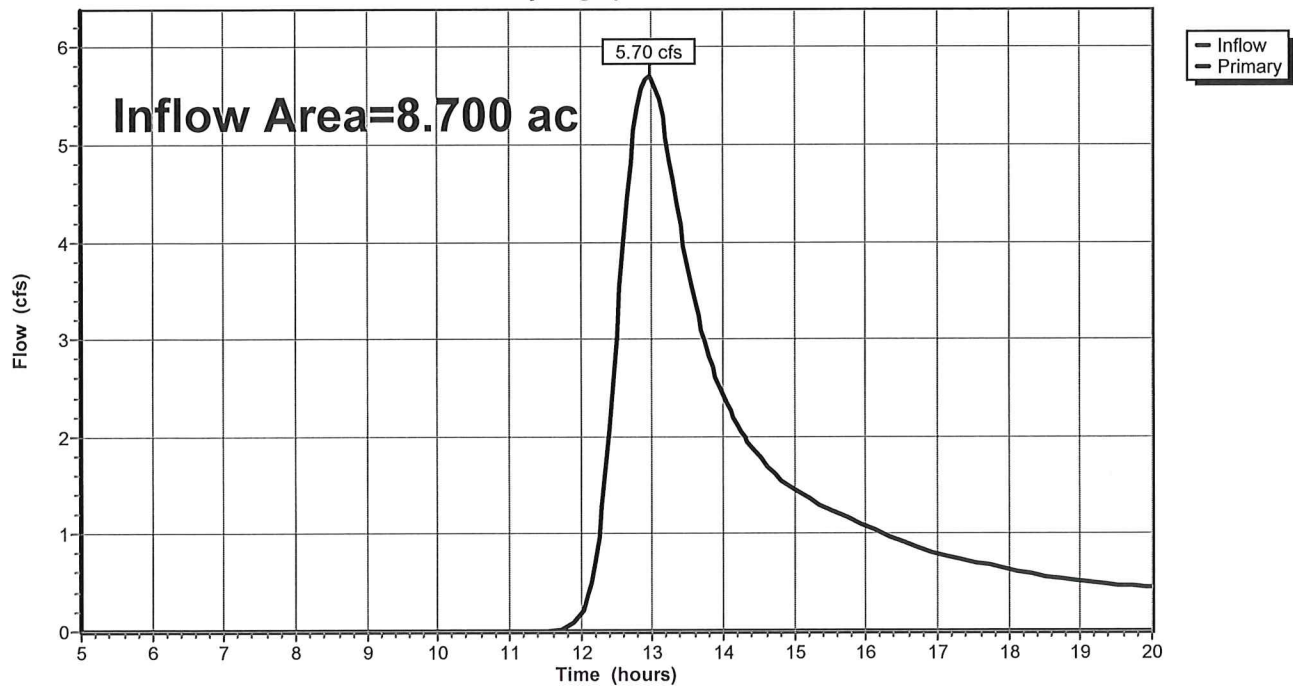
### Summary for Link PDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 1.45" for 25 YR event  
Inflow = 5.70 cfs @ 12.96 hrs, Volume= 1.054 af  
Primary = 5.70 cfs @ 12.96 hrs, Volume= 1.054 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP2: OUTLET

Hydrograph



**HV\_PRO**

Type III 24-hr 50 YR Rainfall=7.15"

Prepared by Reynolds Engineering Svcs, LLC

Printed 5/3/2023

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

<b>Subcatchment P1A: P1A</b>	Runoff Area=6.400 ac 38.00% Impervious Runoff Depth>3.98" Flow Length=1,630' Tc=24.9 min CN=75 Runoff=19.68 cfs 2.123 af
<b>Subcatchment P1B: P1B</b>	Runoff Area=5.500 ac 0.00% Impervious Runoff Depth>2.01" Flow Length=620' Tc=19.5 min CN=55 Runoff=9.06 cfs 0.920 af
<b>Subcatchment P1C: P1C</b>	Runoff Area=4.200 ac 0.00% Impervious Runoff Depth>2.00" Flow Length=850' Tc=32.2 min CN=55 Runoff=5.59 cfs 0.699 af
<b>Subcatchment P2: P2</b>	Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>1.96" Flow Length=1,100' Tc=64.0 min CN=55 Runoff=7.95 cfs 1.424 af
<b>Pond RP: RETENT POND</b>	Peak Elev=447.32' Storage=69,427 cf Inflow=28.55 cfs 3.044 af Outflow=3.96 cfs 2.151 af
<b>Link PDP1: OUTLET</b>	Inflow=8.49 cfs 2.850 af Primary=8.49 cfs 2.850 af
<b>Link PDP2: OUTLET</b>	Inflow=7.95 cfs 1.424 af Primary=7.95 cfs 1.424 af

**Total Runoff Area = 24.800 ac Runoff Volume = 5.167 af Average Runoff Depth = 2.50"**  
**90.19% Pervious = 22.368 ac 9.81% Impervious = 2.432 ac**

**Summary for Subcatchment P1A: P1A**

Runoff = 19.68 cfs @ 12.34 hrs, Volume= 2.123 af, Depth> 3.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 50 YR Rainfall=7.15"

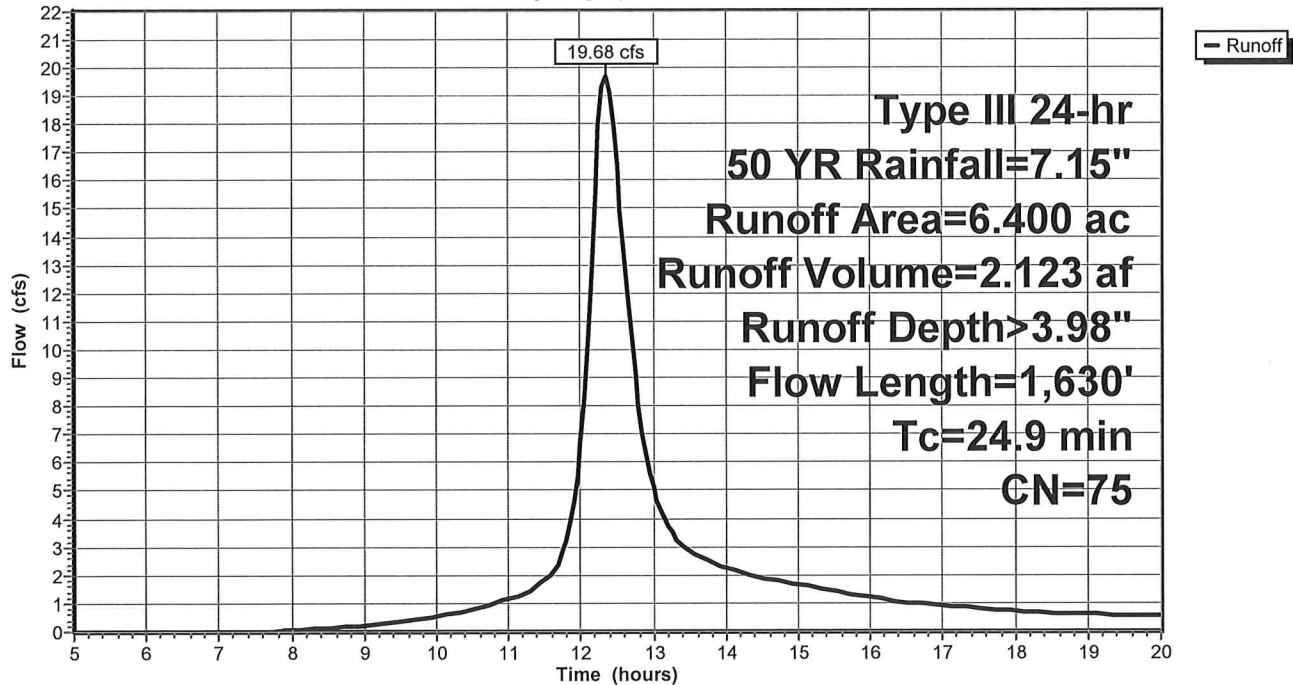
Area (ac)	CN	Description
6.400	75	1/4 acre lots, 38% imp, HSG B
3.968		62.00% Pervious Area
2.432		38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	100	0.0100	0.09		<b>Sheet Flow, SF</b> Grass: Dense n= 0.240 P2= 3.39"
5.0	210	0.0100	0.70		<b>Shallow Concentrated Flow, SC1</b> Short Grass Pasture Kv= 7.0 fps
1.6	1,320	0.0600	13.97	17.14	<b>Pipe Channel, PIPE</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
24.9	1,630	Total			

**Subcatchment P1A: P1A**

Hydrograph



**Summary for Subcatchment P1B: P1B**

Runoff = 9.06 cfs @ 12.30 hrs, Volume= 0.920 af, Depth> 2.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 50 YR Rainfall=7.15"

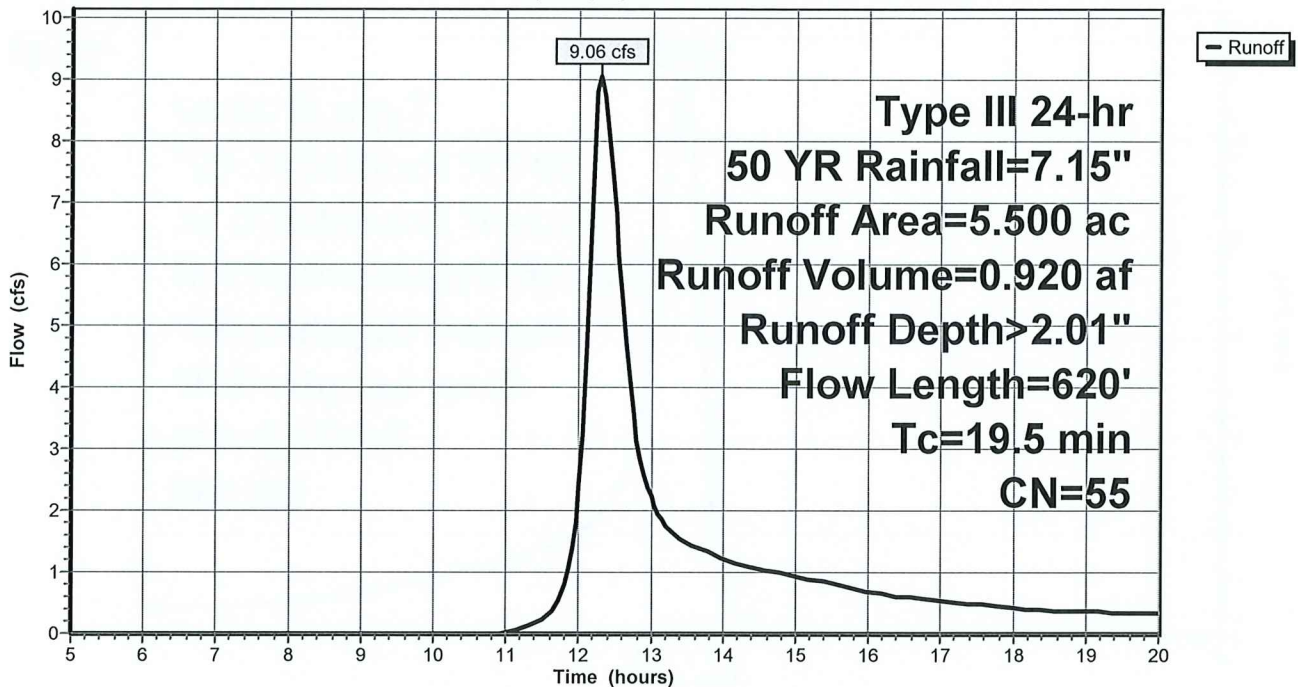
Area (ac)	CN	Description
5.500	55	Woods, Good, HSG B
5.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0600	0.12		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
6.1	520	0.0800	1.41		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
19.5	620	Total			

**Subcatchment P1B: P1B**

Hydrograph



**Summary for Subcatchment P1C: P1C**

Runoff = 5.59 cfs @ 12.49 hrs, Volume= 0.699 af, Depth> 2.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 50 YR Rainfall=7.15"

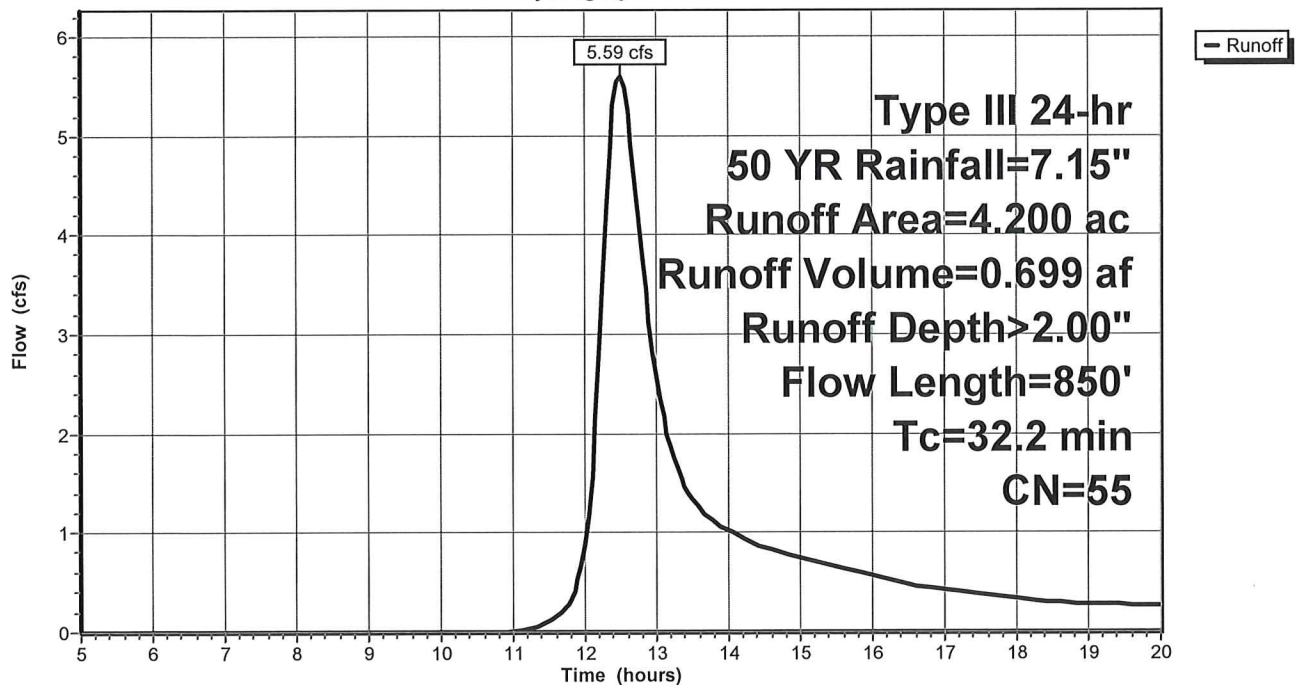
Area (ac)	CN	Description
4.200	55	Woods, Good, HSG B
4.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.0	100	0.0700	0.08		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
10.2	750	0.0600	1.22		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
32.2	850	Total			

**Subcatchment P1C: P1C**

Hydrograph





**Summary for Subcatchment P2: P2**

Runoff = 7.95 cfs @ 12.93 hrs, Volume= 1.424 af, Depth> 1.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 50 YR Rainfall=7.15"

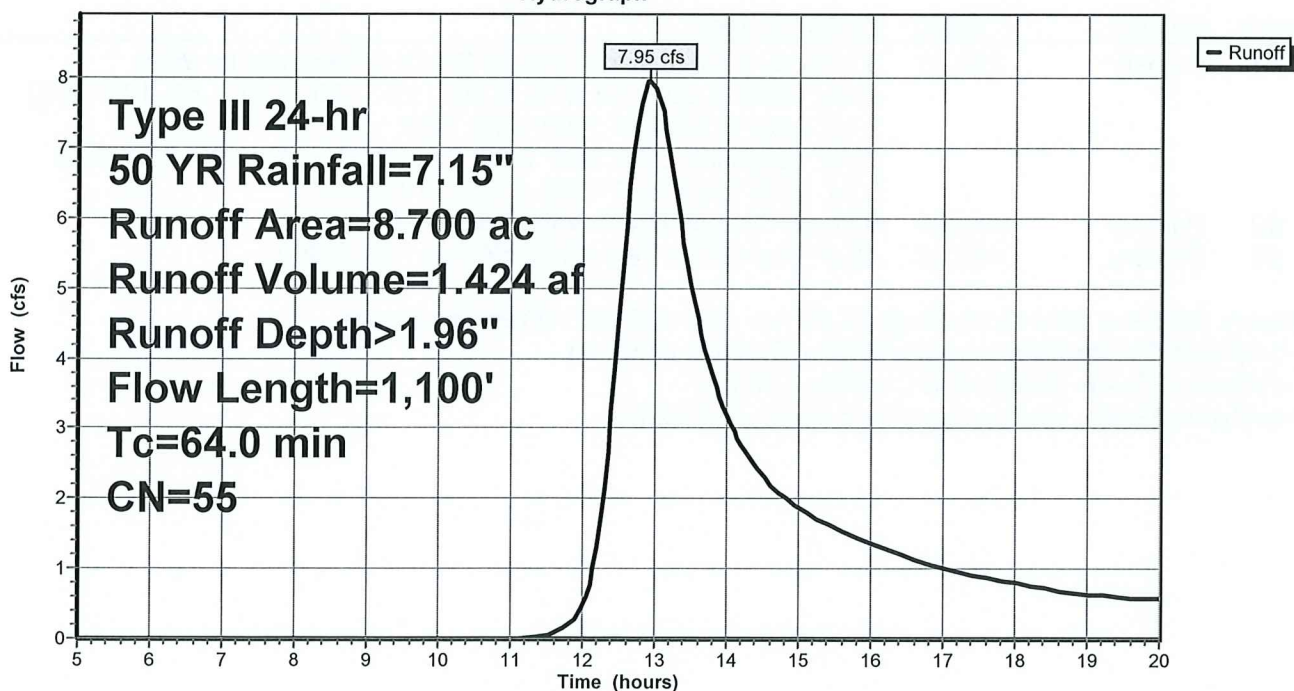
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.9	100	0.0100	0.03		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
16.1	1,000	0.0430	1.04		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
64.0	1,100	Total			

**Subcatchment P2: P2**

Hydrograph



**Summary for Pond RP: RETENT POND**

Inflow Area = 11.900 ac, 20.44% Impervious, Inflow Depth > 3.07" for 50 YR event  
 Inflow = 28.55 cfs @ 12.33 hrs, Volume= 3.044 af  
 Outflow = 3.96 cfs @ 13.67 hrs, Volume= 2.151 af, Atten= 86%, Lag= 80.8 min  
 Primary = 3.96 cfs @ 13.67 hrs, Volume= 2.151 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 447.32' @ 13.67 hrs Surf.Area= 18,461 sf Storage= 69,427 cf

Plug-Flow detention time= 189.2 min calculated for 2.151 af (71% of inflow)  
 Center-of-Mass det. time= 123.0 min ( 931.9 - 808.9 )

Volume	Invert	Avail.Storage	Storage Description
#1	443.00'	122,953 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
443.00	13,695	0	0
449.00	20,318	102,039	102,039
450.00	21,510	20,914	122,953

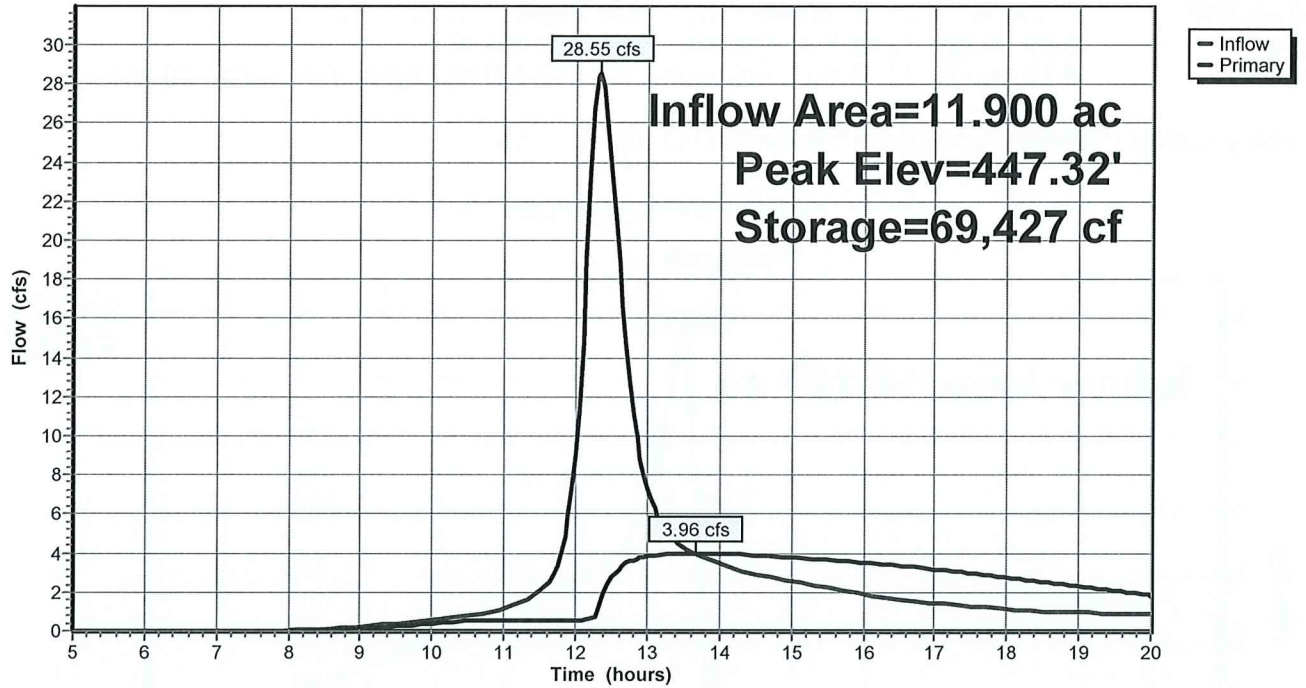
Device	Routing	Invert	Outlet Devices
#1	Primary	449.00'	<b>8.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74
#2	Primary	443.00'	<b>0.50 cfs Trench Drain when above 442.00'</b>
#3	Primary	445.00'	<b>12.0" W x 6.0" H Vert. Orifice/Grate C= 0.600</b>

**Primary OutFlow** Max=3.96 cfs @ 13.67 hrs HW=447.32' (Free Discharge)

- 1=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)
- 2=Trench Drain (Exfiltration Controls 0.50 cfs)
- 3=Orifice/Grate (Orifice Controls 3.46 cfs @ 6.92 fps)

### Pond RP: RETENT POND

Hydrograph



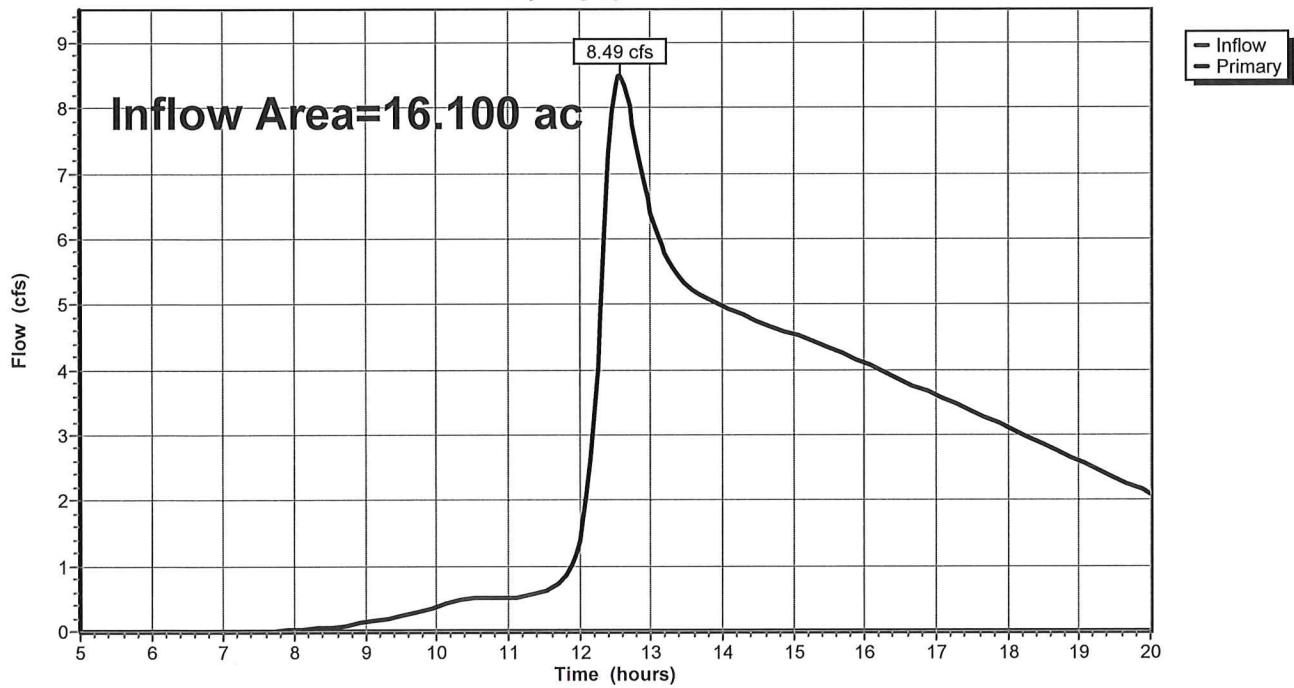
### Summary for Link PDP1: OUTLET

Inflow Area = 16.100 ac, 15.11% Impervious, Inflow Depth > 2.12" for 50 YR event  
Inflow = 8.49 cfs @ 12.56 hrs, Volume= 2.850 af  
Primary = 8.49 cfs @ 12.56 hrs, Volume= 2.850 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP1: OUTLET

Hydrograph



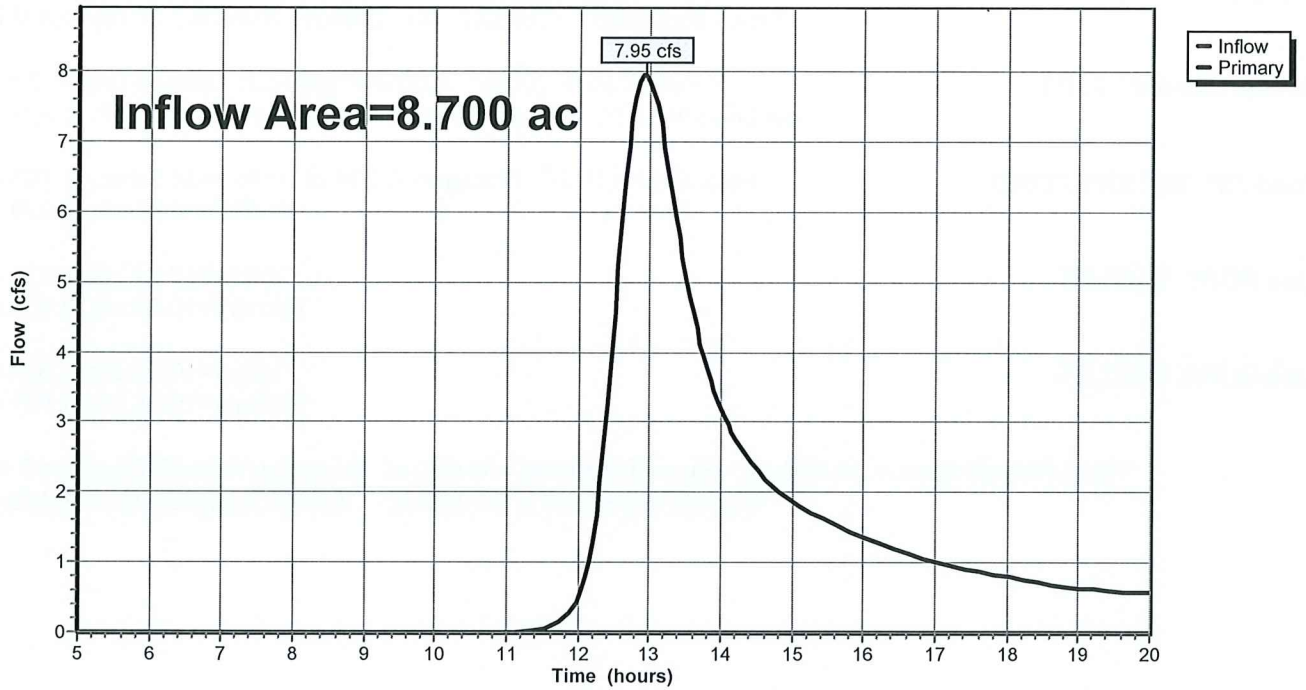
### Summary for Link PDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 1.96" for 50 YR event  
Inflow = 7.95 cfs @ 12.93 hrs, Volume= 1.424 af  
Primary = 7.95 cfs @ 12.93 hrs, Volume= 1.424 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP2: OUTLET

Hydrograph



**HV\_PRO**

Type III 24-hr 100 YR Rainfall=8.05"

Prepared by Reynolds Engineering Svcs, LLC

Printed 5/3/2023

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

**Subcatchment P1A: P1A**

Runoff Area=6.400 ac 38.00% Impervious Runoff Depth>4.74"  
 Flow Length=1,630' Tc=24.9 min CN=75 Runoff=23.33 cfs 2.528 af

**Subcatchment P1B: P1B**

Runoff Area=5.500 ac 0.00% Impervious Runoff Depth>2.56"  
 Flow Length=620' Tc=19.5 min CN=55 Runoff=11.78 cfs 1.175 af

**Subcatchment P1C: P1C**

Runoff Area=4.200 ac 0.00% Impervious Runoff Depth>2.55"  
 Flow Length=850' Tc=32.2 min CN=55 Runoff=7.26 cfs 0.892 af

**Subcatchment P2: P2**

Runoff Area=8.700 ac 0.00% Impervious Runoff Depth>2.51"  
 Flow Length=1,100' Tc=64.0 min CN=55 Runoff=10.35 cfs 1.821 af

**Pond RP: RETENT POND**

Peak Elev=448.20' Storage=86,234 cf Inflow=34.92 cfs 3.703 af  
 Outflow=4.64 cfs 2.639 af

**Link PDP1: OUTLET**

Inflow=10.84 cfs 3.531 af  
 Primary=10.84 cfs 3.531 af

**Link PDP2: OUTLET**

Inflow=10.35 cfs 1.821 af  
 Primary=10.35 cfs 1.821 af

**Total Runoff Area = 24.800 ac Runoff Volume = 6.417 af Average Runoff Depth = 3.10"**  
**90.19% Pervious = 22.368 ac 9.81% Impervious = 2.432 ac**

**Summary for Subcatchment P1A: P1A**

Runoff = 23.33 cfs @ 12.34 hrs, Volume= 2.528 af, Depth> 4.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 100 YR Rainfall=8.05"

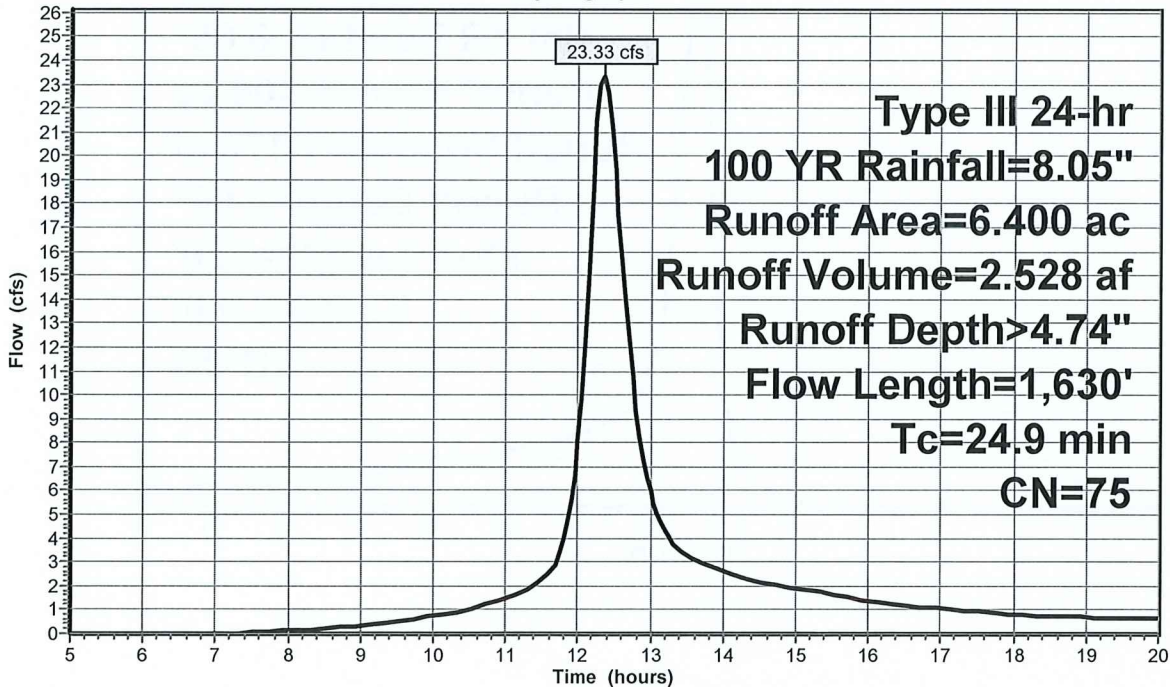
Area (ac)	CN	Description
6.400	75	1/4 acre lots, 38% imp, HSG B
3.968		62.00% Pervious Area
2.432		38.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.3	100	0.0100	0.09		<b>Sheet Flow, SF</b> Grass: Dense n= 0.240 P2= 3.39"
5.0	210	0.0100	0.70		<b>Shallow Concentrated Flow, SC1</b> Short Grass Pasture Kv= 7.0 fps
1.6	1,320	0.0600	13.97	17.14	<b>Pipe Channel, PIPE</b> 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012
24.9	1,630	Total			

**Subcatchment P1A: P1A**

Hydrograph



**Summary for Subcatchment P1B: P1B**

Runoff = 11.78 cfs @ 12.29 hrs, Volume= 1.175 af, Depth> 2.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 100 YR Rainfall=8.05"

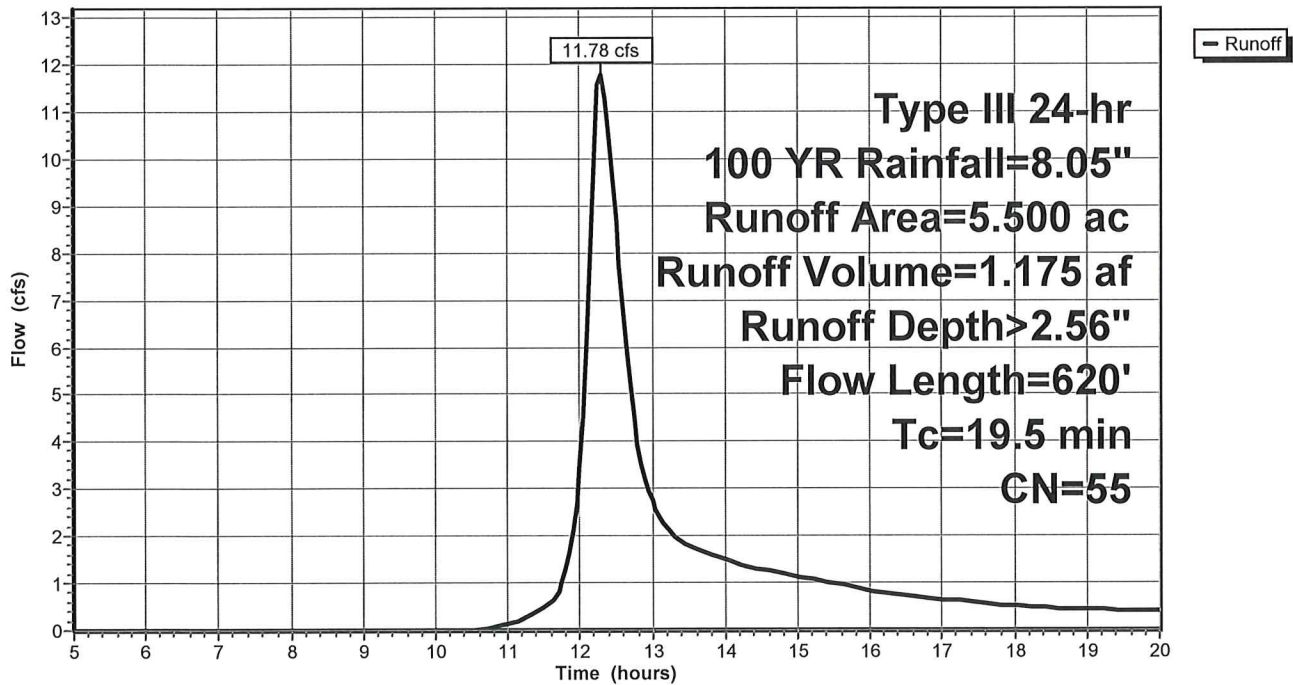
Area (ac)	CN	Description
5.500	55	Woods, Good, HSG B
5.500		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0600	0.12		<b>Sheet Flow, SF</b> Woods: Light underbrush n= 0.400 P2= 3.39"
6.1	520	0.0800	1.41		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
19.5	620	Total			

**Subcatchment P1B: P1B**

Hydrograph





**Summary for Subcatchment P1C: P1C**

Runoff = 7.26 cfs @ 12.48 hrs, Volume= 0.892 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 100 YR Rainfall=8.05"

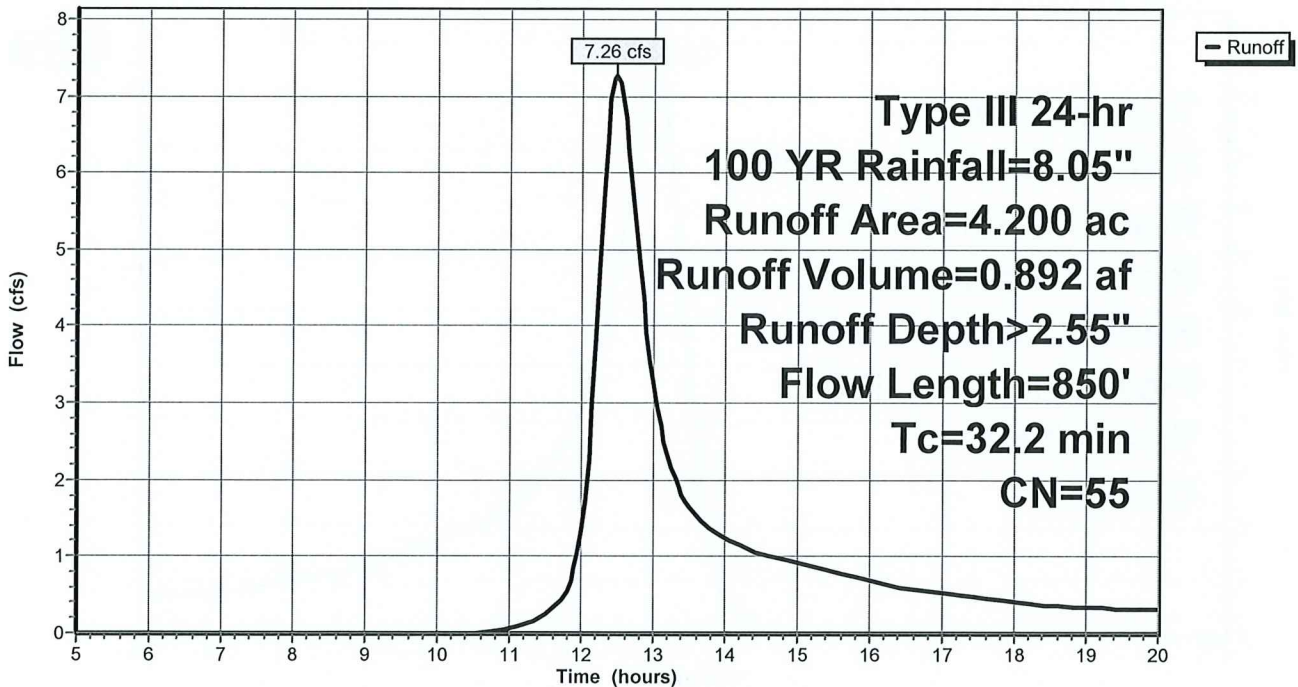
Area (ac)	CN	Description
4.200	55	Woods, Good, HSG B
4.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.0	100	0.0700	0.08		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
10.2	750	0.0600	1.22		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
32.2	850	Total			

**Subcatchment P1C: P1C**

Hydrograph



**Summary for Subcatchment P2: P2**

Runoff = 10.35 cfs @ 12.91 hrs, Volume= 1.821 af, Depth> 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Type III 24-hr 100 YR Rainfall=8.05"

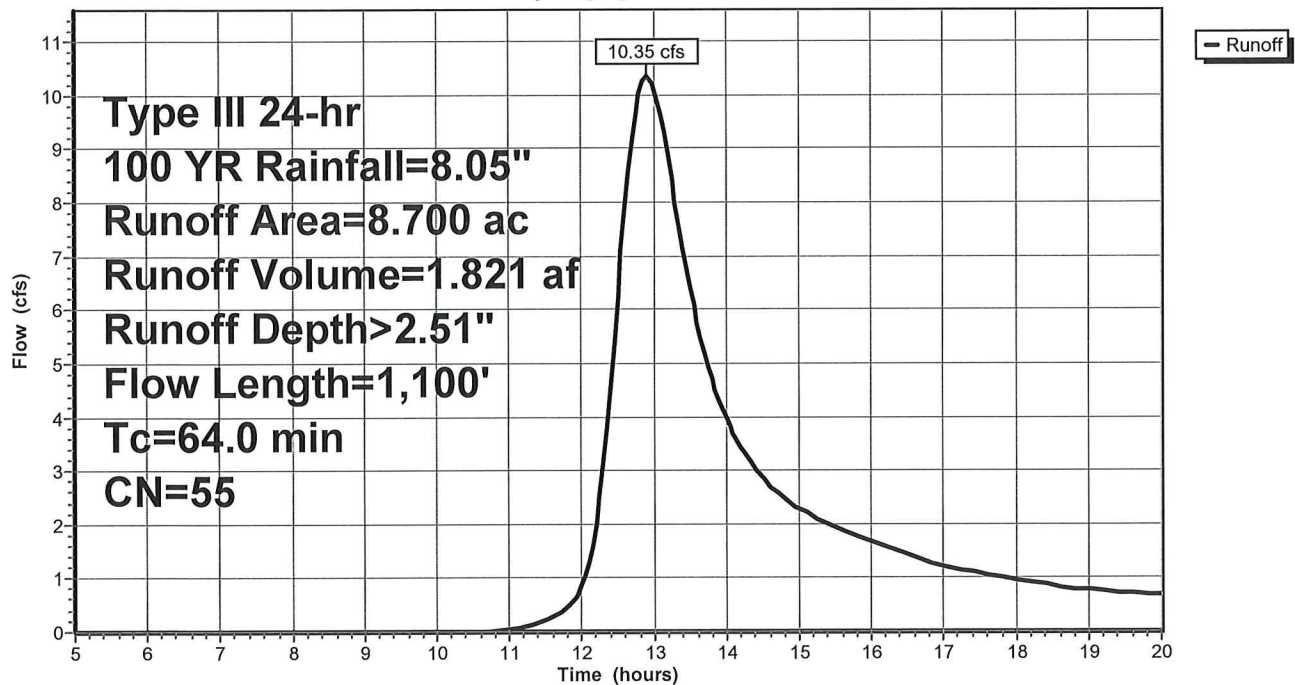
Area (ac)	CN	Description
8.700	55	Woods, Good, HSG B
8.700		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
47.9	100	0.0100	0.03		<b>Sheet Flow, SF</b> Woods: Dense underbrush n= 0.800 P2= 3.39"
16.1	1,000	0.0430	1.04		<b>Shallow Concentrated Flow, SC</b> Woodland Kv= 5.0 fps
64.0	1,100	Total			

**Subcatchment P2: P2**

Hydrograph



**Summary for Pond RP: RETENT POND**

Inflow Area = 11.900 ac, 20.44% Impervious, Inflow Depth > 3.73" for 100 YR event  
 Inflow = 34.92 cfs @ 12.32 hrs, Volume= 3.703 af  
 Outflow = 4.64 cfs @ 13.70 hrs, Volume= 2.639 af, Atten= 87%, Lag= 82.6 min  
 Primary = 4.64 cfs @ 13.70 hrs, Volume= 2.639 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 448.20' @ 13.70 hrs Surf.Area= 19,440 sf Storage= 86,234 cf

Plug-Flow detention time= 196.0 min calculated for 2.639 af (71% of inflow)  
 Center-of-Mass det. time= 130.9 min ( 935.8 - 804.9 )

Volume	Invert	Avail.Storage	Storage Description
#1	443.00'	122,953 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
443.00	13,695	0	0
449.00	20,318	102,039	102,039
450.00	21,510	20,914	122,953

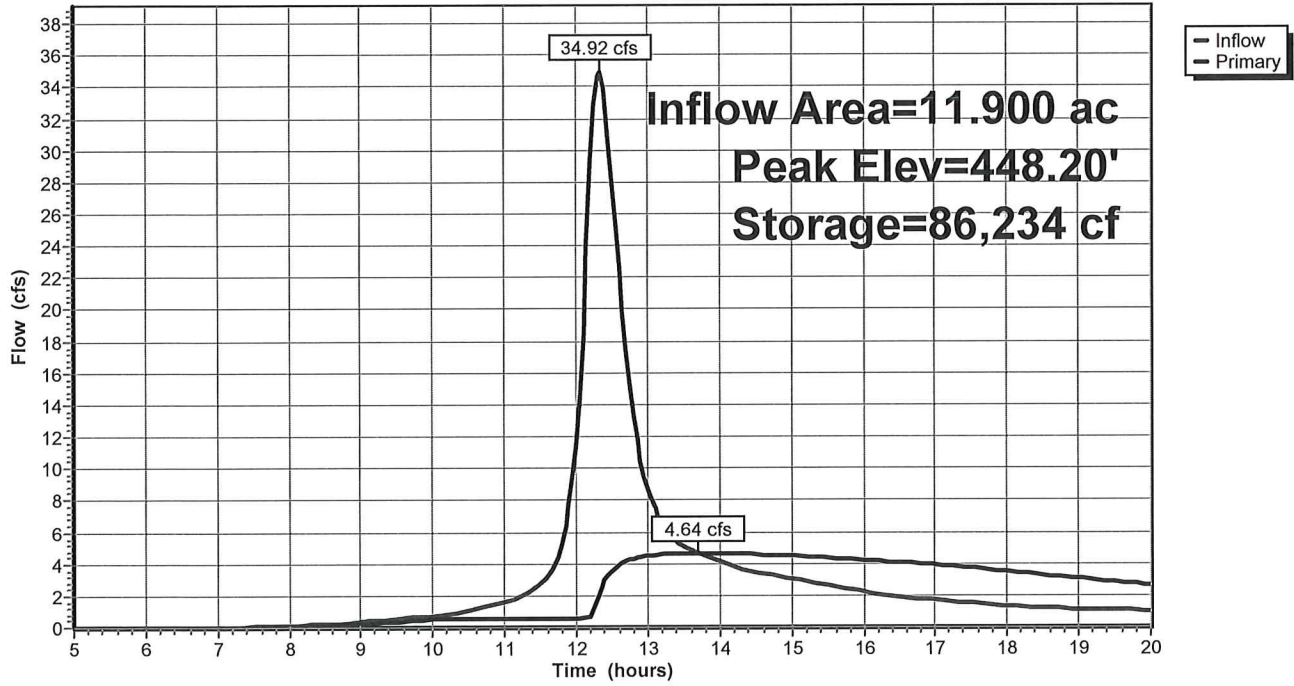
Device	Routing	Invert	Outlet Devices
#1	Primary	449.00'	<b>8.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74
#2	Primary	443.00'	<b>0.50 cfs Trench Drain when above 442.00'</b>
#3	Primary	445.00'	<b>12.0" W x 6.0" H Vert. Orifice/Grate C= 0.600</b>

**Primary OutFlow** Max=4.64 cfs @ 13.70 hrs HW=448.20' (Free Discharge)

- 1=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)
- 2=Trench Drain (Exfiltration Controls 0.50 cfs)
- 3=Orifice/Grate (Orifice Controls 4.14 cfs @ 8.27 fps)

### Pond RP: RETENT POND

Hydrograph

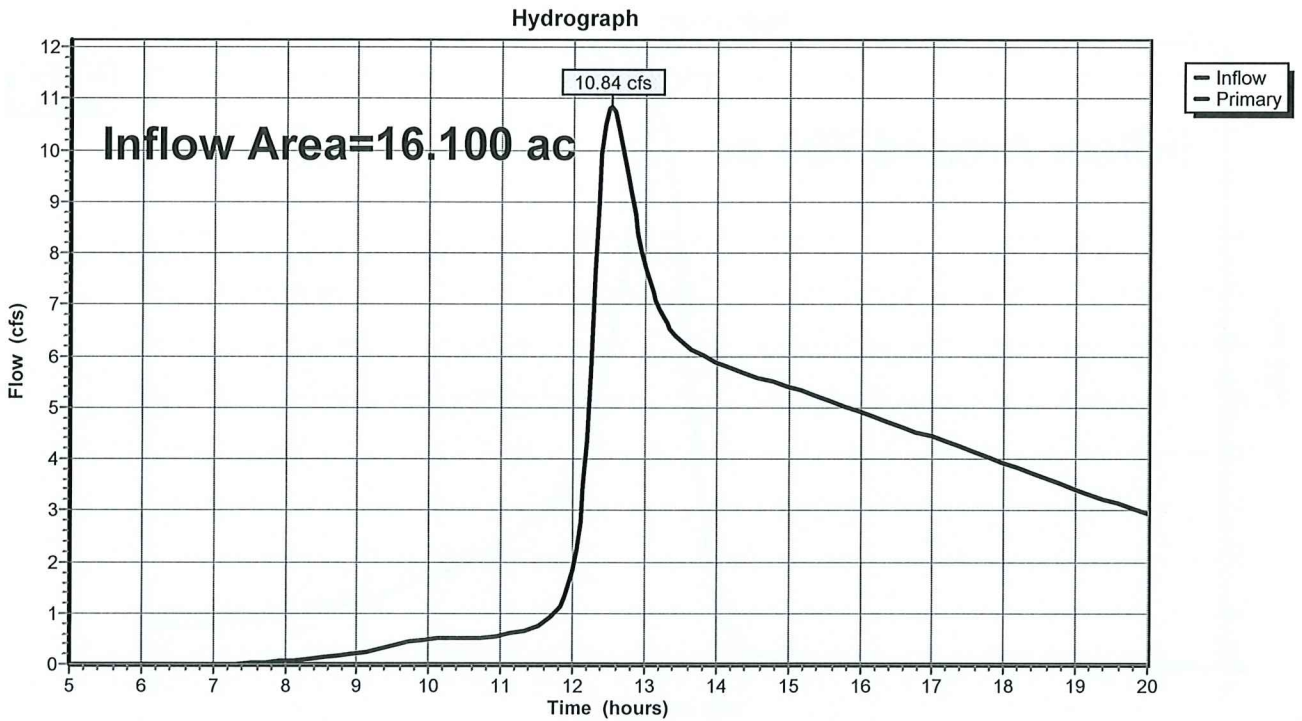


### Summary for Link PDP1: OUTLET

Inflow Area = 16.100 ac, 15.11% Impervious, Inflow Depth > 2.63" for 100 YR event  
Inflow = 10.84 cfs @ 12.53 hrs, Volume= 3.531 af  
Primary = 10.84 cfs @ 12.53 hrs, Volume= 3.531 af, Atten= 0%, Lag= 0.0 min

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

### Link PDP1: OUTLET



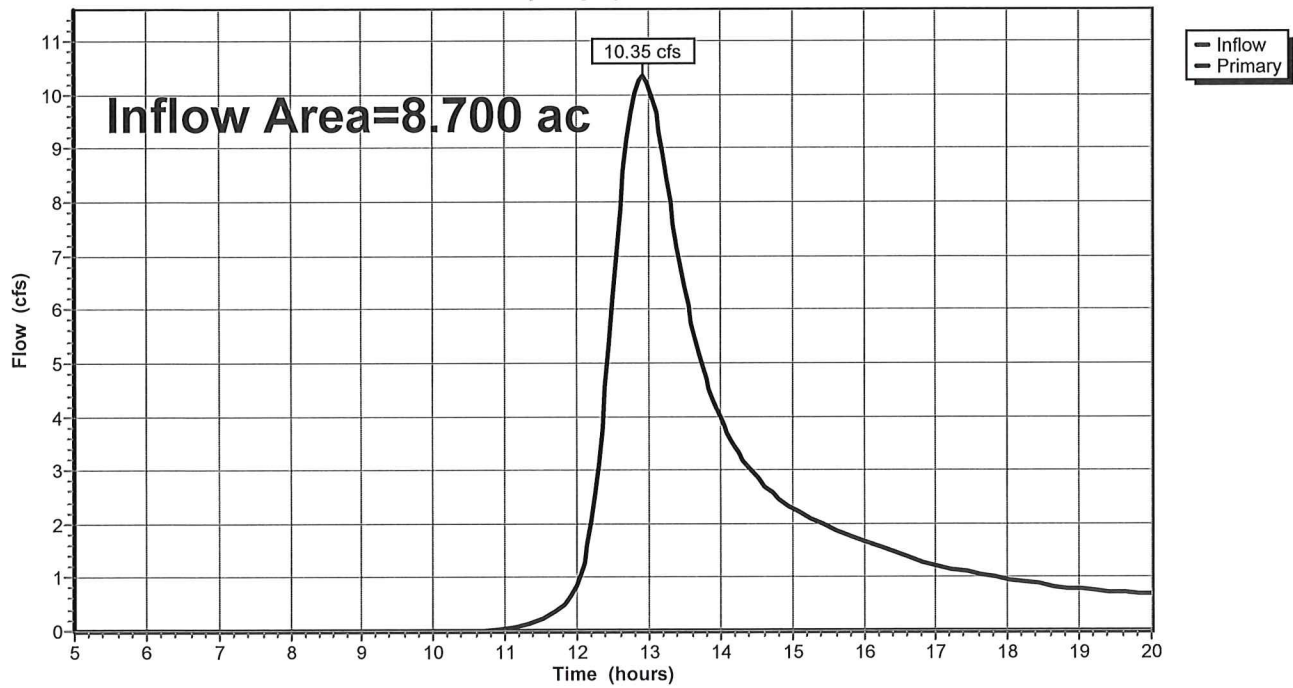
### Summary for Link PDP2: OUTLET

Inflow Area = 8.700 ac, 0.00% Impervious, Inflow Depth > 2.51" for 100 YR event  
Inflow = 10.35 cfs @ 12.91 hrs, Volume= 1.821 af  
Primary = 10.35 cfs @ 12.91 hrs, Volume= 1.821 af, Atten= 0%, Lag= 0.0 min

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

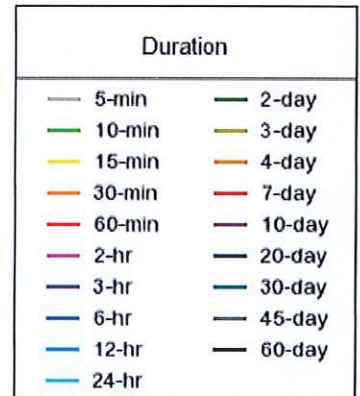
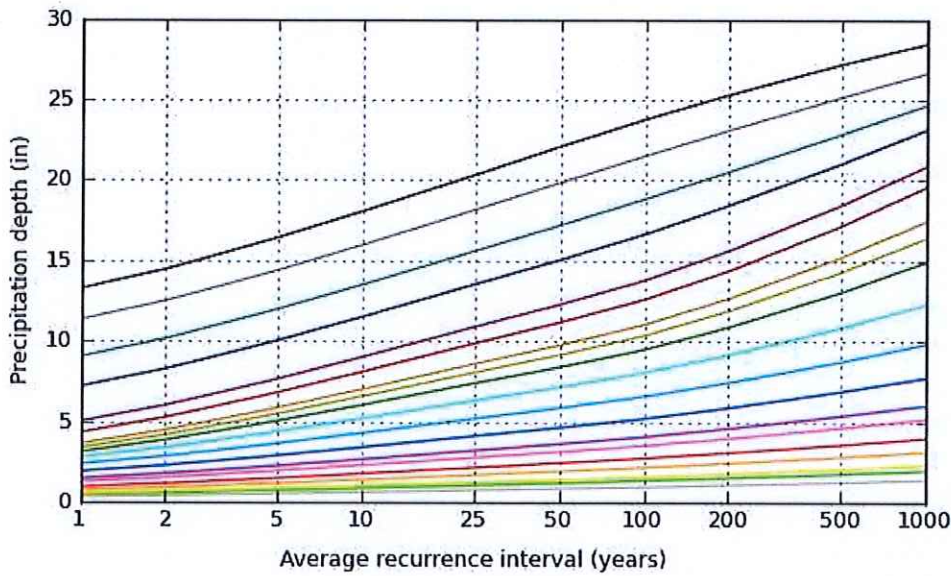
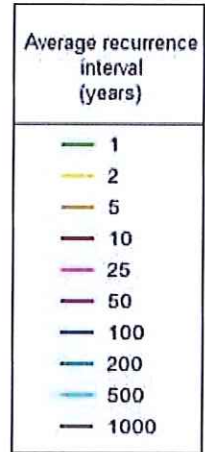
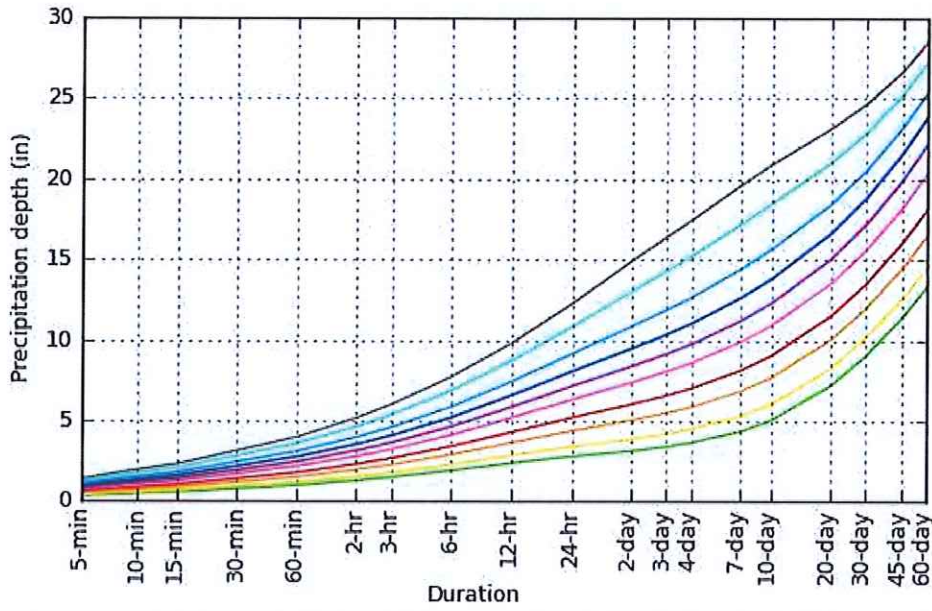
### Link PDP2: OUTLET

Hydrograph





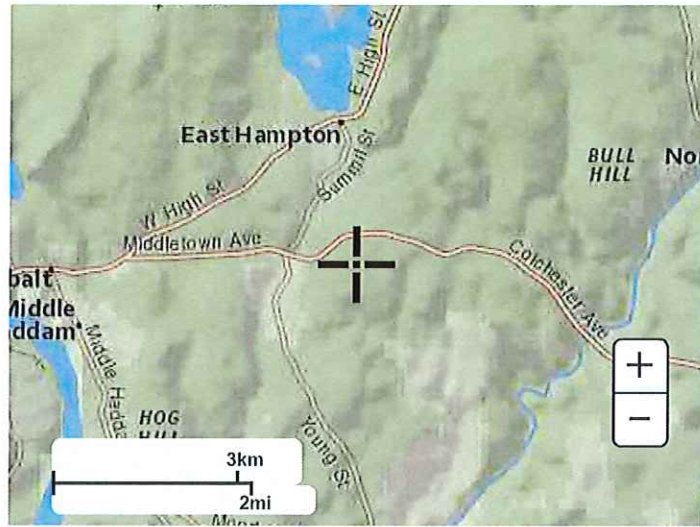
PDS-based depth-duration-frequency (DDF) curves  
 Latitude: 41.5629°, Longitude: -72.4950°



**Maps & aerials**

Small scale terrain





Large scale terrain



Large scale map



Large scale aerial



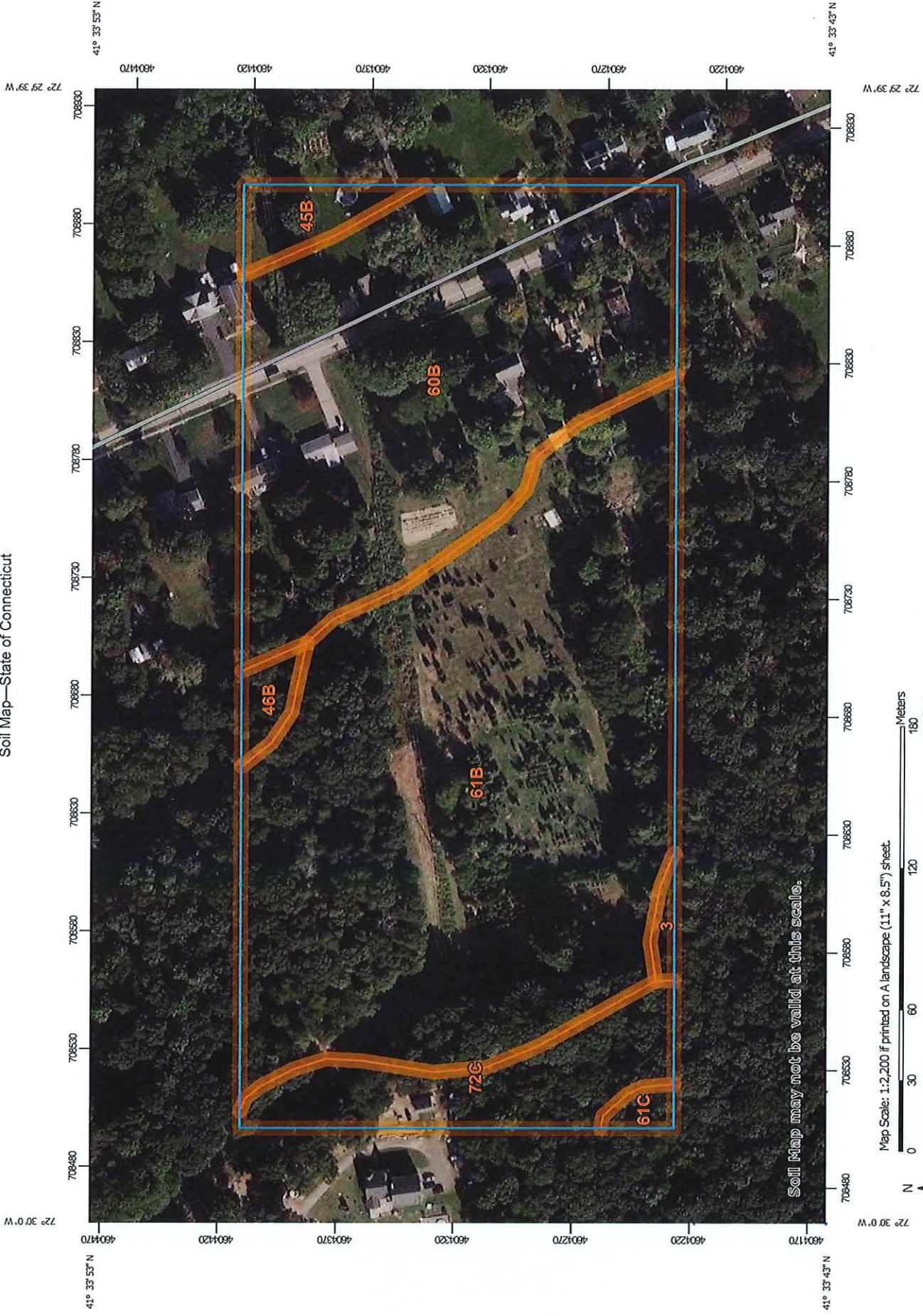
[Back to Top](#)

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[US Department of Commerce](#)  
[National Oceanic and Atmospheric Administration](#)  
[National Weather Service](#)  
[National Water Center](#)  
1325 East West Highway  
Silver Spring, MD 20910  
Questions?: [HDSC.Questions@noaa.gov](mailto:HDSC.Questions@noaa.gov)

[Disclaimer](#)

Soil Map—State of Connecticut



Soil Map may not be valid at this scale.

Map Scale: 1:2,200 if printed on A landscape (11" x 8.5") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

## MAP LEGEND

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

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: State of Connecticut  
 Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	0.1	0.5%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	0.4	2.1%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	0.2	1.1%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	6.3	34.5%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	9.7	53.3%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	0.1	0.6%
72C	Nipmuck-Brookfield complex, 3 to 15 percent slopes, very rocky	1.4	7.8%
<b>Totals for Area of Interest</b>		<b>18.3</b>	<b>100.0%</b>

**From:** [DeCarli, Jeremy](#)  
**To:** [pbz-counter](#)  
**Subject:** FW: Subdivision Application  
**Date:** Wednesday, May 17, 2023 10:18:59 AM  
**Attachments:** [Request for Environmental Health Services.pdf](#)  
[image001.png](#)

---

Hello Jeremy, Mike and Mark,

Jeremy, in response to your inquiry to your email concerning the 22 Lots off of South Main Street, I provide the following:

- I need a Chatham Health District Request for Environmental Health Services Form (Please see the attachment) filled out along with payment of \$880.00 (\$40.00 per Lot), payable to the Chatham Health District, along with;
- A hard copy of the plans to review. I cannot and will not review any pdf plans, as I need scaled drawings to conduct my review:
  - I need to review the proposed well locations in relation to the any and all external and or below grade sewer ejector pumps. There must be a minimum of a 75' separation between the two;
  - I cannot tell if all the lots will be gravity feed or Grinder Pumps will be installed;
  - I cannot tell if the well radius shown is 25' or 75',
  - Will there be a main sewer pump vault installed for the entire property to be pumped to the sewer main line off of South Main Street;
  - What is the proposed status of the approximately 7 drilled wells for the previous subdivision;
- When I have received both of the above items, I will conduct my review in a timely manner to try to meet your requested end date of June 7, 2023.

If I can be of assistance, I can be reached at [jim.karrenberg@chathamhealth.org](mailto:jim.karrenberg@chathamhealth.org) by phone at 860-537-7214 in Colchester, Monday, Wednesday and Friday or at 860-365-0884 Ext. 106 in East Hampton, Tuesday and Thursday.

Sincerely,

*James G. Karrenberg, R.S.*

**James G. Karrenberg, R.S.**  
**Chatham Health District**

---

**From:** DeCarli, Jeremy <[jdecarli@easthamptonct.gov](mailto:jdecarli@easthamptonct.gov)>  
**Sent:** Monday, May 15, 2023 3:06 PM  
**To:** Fire Marshal <[firemarshal@easthamptonct.gov](mailto:firemarshal@easthamptonct.gov)>; Woessner, Dennis <[dwoessner@easthamptonct.gov](mailto:dwoessner@easthamptonct.gov)>; Walsh, Matthew <[mwalsh@easthamptonct.gov](mailto:mwalsh@easthamptonct.gov)>; Clayton, Scott <[sclayton@easthamptonct.gov](mailto:sclayton@easthamptonct.gov)>; Jim Karrenberg <[jim.karrenberg@chathamhealth.org](mailto:jim.karrenberg@chathamhealth.org)>; Hall, Jeremy <[jhall@easthamptonct.gov](mailto:jhall@easthamptonct.gov)>  
**Cc:** pbz-counter <[pbz-counter@easthamptonct.gov](mailto:pbz-counter@easthamptonct.gov)>  
**Subject:** Subdivision Application

Good Afternoon,

The East Hampton Planning and Zoning Commission has received an application for subdivision at property located at 37 South Main Street. The current proposal is for a development consisting of 33 homes on 22 lots (11 single family units and 11 duplexes). Please see the attached plans and provide any feedback you may have.

It would be appreciated if comments can be sent back prior to June 7, so that the engineer has time to incorporate any changes prior to the Commissions next review on July 5.

If you have any questions or want printed plan sets, please feel free to reach out to me.

Thank you,

Jeremy

**Jeremy DeCarli**, AICP, CZEO  
Planning & Zoning Official  
Town of East Hampton  
1 Community Drive  
East Hampton, CT 06424  
T: 860-267-7450  
E: [jdecarli@easthamptonct.gov](mailto:jdecarli@easthamptonct.gov)  
[www.easthamptonct.gov](http://www.easthamptonct.gov)

Office Hours:

M,W,Th: 8:00am – 4:00pm  
T: 8:00am – 6:30pm  
Fri: 8:00am – 12:30pm

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**From:** [Mark Reynolds](#)  
**To:** [Jim Karrenberg](#)  
**Cc:** [DeCarli, Jeremy](#); [mbakaj@snet.net](#); [pbz-counter](#); [Fire Marshal](#); [Woessner, Dennis](#); [Walsh, Matthew](#); [Clayton, Scott](#); [Hall, Jeremy](#)  
**Subject:** Re: Subdivision Application  
**Date:** Wednesday, May 17, 2023 1:04:59 PM  
**Attachments:** [Outlook-hlstku3s.png](#)  
[Document\\_20230517\\_0001.pdf](#)

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**CAUTION:**

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. Remember to hover over any links and if you suspect the email is not legitimate or a phishing email, please contact Tom McMahon at x3363.

Hi Jim,

Everything that you need to conduct your review will be provided in short order.

1. The request form is attached to this email.
2. Mike will bring a check for the fee to you in Colchester.
3. I will have a hard copy of the plan delivered to you in Colchester tomorrow.
4. We understand the required separation distances. We have provided 75'. The proposed design is a low pressure sewer system with a force main running under the road. This system will pump to a new sewer manhole and then sewer will flow by gravity to the existing system in South Main Street. Generally the plan is grinder pumps in the front of each house and wells in the rear. This configuration will eliminate any potential conflicts between any part of the sewer and the proposed wells.
5. The existing wells will be maintained to the extent possible. Any of these wells that do not meet separating distances will be abandoned in accordance with Health Department standards.
6. Be assured that all of these lots can meet health department requirements with regard to wells and we will provide all the information you need to make this determination.

**Mark Reynolds**

[Professional Engineer](#)

**Reynolds Engineering Services, LLC**

[63 Norwich Avenue](#)

[Suite 202](#)

[Colchester, CT 06415](#)

[860-516-0033](#)

On Tue, May 16, 2023 at 7:04 PM Jim Karrenberg <[jim.karrenberg@chathamhealth.org](mailto:jim.karrenberg@chathamhealth.org)> wrote:

**Hello Jeremy, Mike and Mark,**

**Jeremy, in response to your inquiry to your email concerning the 22 Lots off of South Main Street, I provide the following:**

- **I need a Chatham Health District Request for Environmental Health Services**



**Form (Please see the attachment) filled out along with payment of \$880.00 (\$40.00 per Lot), payable to the Chatham Health District, along with;**

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**Sincerely,**

*James G. Karrenberg, R.S.*

**James G. Karrenberg, R.S.  
Chatham Health District**

---

**From:** DeCarli, Jeremy <[jdecarli@easthamptonct.gov](mailto:jdecarli@easthamptonct.gov)>

**Sent:** Monday, May 15, 2023 3:06 PM

**To:** Fire Marshal <[firemarshal@easthamptonct.gov](mailto:firemarshal@easthamptonct.gov)>; Woessner, Dennis <[dwoessner@easthamptonct.gov](mailto:dwoessner@easthamptonct.gov)>; Walsh, Matthew <[mwalsh@easthamptonct.gov](mailto:mwalsh@easthamptonct.gov)>; Clayton, Scott <[sclayton@easthamptonct.gov](mailto:sclayton@easthamptonct.gov)>; Jim Karrenberg <[jim.karrenberg@chathamhealth.org](mailto:jim.karrenberg@chathamhealth.org)>; Hall, Jeremy <[jhall@easthamptonct.gov](mailto:jhall@easthamptonct.gov)>

**Cc:** pbz-counter <[pbz-counter@easthamptonct.gov](mailto:pbz-counter@easthamptonct.gov)>

**Subject:** Subdivision Application

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If you have any questions or want printed plan sets, please feel free to reach out to me.

Thank you,

Jeremy

**Jeremy DeCarli**, AICP, CZEO

Planning & Zoning Official

Town of East Hampton

1 Community Drive

East Hampton, CT 06424

T: 860-267-7450

E: [jdecarli@easthamptonct.gov](mailto:jdecarli@easthamptonct.gov)

[www.easthamptonct.gov](http://www.easthamptonct.gov)

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May 17, 2023

Mr. Mark Reynolds, PE  
Reynolds Engineering Services, LLC  
63 Norwich Ave.  
Colchester, CT 06415  
[markreynoldsenineer@gmail.com](mailto:markreynoldsenineer@gmail.com)

Re: HOD Subdivision Application #PZC-23-012  
Plan Set Dated 7/26/2021 updated to 5/3/2023

Dear Mr. Reynolds,

I have conducted a review of the application for an HOD Subdivision in accordance with Section 6.3 of the Zoning Regulations at 37 South Main Street. Below are my comments.

#### **General Notes**

1. Submit an application to the Chatham Health District for approval.
2. Submit an application and plans to the WPCA.
3. Due to the fact that more than 5 acres will be disturbed, this project will require an application to CT DEEP for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. Once received, please submit a copy of the permit.
4. I have referred the plans to various departments in Town. As comments are received, they will be forwarded to you.
5. The project lies in an area shown in the CT DEEP Natural Diversity Database (NDDDB) which could potentially house endangered or threatened species. Please provide proof that a NDDDB Environmental Review request was made to CT DEEP and provide their response when available.
6. Please submit estimated construction costs of all parts of the project that will be publicly owned, along with a performance bond estimate calculated in accordance with Section 9.1.E of the Zoning Regulations.
7. When a bond is submitted, please provide a draft Developers Agreement to accompany the performance bond. If needed, my department can provide a model agreement.
8. Please provide information on the future ownership of the Open Space and how it will be conveyed.
9. Will an HOA be established? If so, please provide draft declaration documents.
10. The final plan set will require the signature of the Surveyor, Engineer, and Soil Scientist.
11. Please provide a Housing Affordability Plan in accordance with Section 6.3.S.8.

#### **Plan Considerations**

1. Lots 9, 10, and 17 do not appear to meet the minimum lot frontage of 50 feet as required in Section 6.3.H.
2. Please provide a location for mailboxes, along with a vehicle pull off for pick-up and delivery.
3. Please provide a location for an underground fire suppression tank.
4. Will there be an entrance sign to the subdivision? If so, please provide location and proposed sign mock-up.
5. Please consider changing the name of "Hampton Way" as East Hampton already contains a "Hampton Court"
6. The plan should include an access drive to the stormwater basin.

7. The development schedule on sheet 12 indicates a construction schedule beginning in fall 2020. Please revise.
8. Please show sight line distances at the intersection of the new proposed road and South Main Street.
9. Please consider extending the sidewalk along South Main Street to the property line. A sidewalk exists approximately 400 feet to the north and the Town may consider connecting the two in the future.
10. Please show ADA compliant sidewalk ramps and crosswalks at appropriate locations (intersections, etc) and include a construction detail of the ramps.
11. Please indicate location of traffic control signage and pavement markings. Details showing compliant breakaway posts and heights should be included.
12. If a fence will be installed surrounding the detention basin, please include the location on the plans.
13. If any street lighting is proposed, please indicate locations and provide details on the fixtures to be used.
14. Please provide approval blocks for the IWWA and PZC on the cover sheet. The approval block for the PZC can be removed from all other sheets.

#### **Stormwater and Erosion and Sedimentation Control Plans**

1. Erosion control fencing needs to be included down-gradient of the area where the stormwater pipe will be installed between the two cul-de-sacs.
2. A temporary soil stockpile is shown on sheet 8 as being outside the limits of clearing. Please either change the limits of clearing, or relocate the stockpile area.
3. The General Erosion and Sedimentation Control notes on sheet 12 indicate that a third party will be retained to monitor conditions during construction. Please provide contact information for the proposed third party.
4. The General Erosion and Sedimentation Control notes on sheet 12 reference check dams to control turbid water during construction. No check dams are present on the plans.
5. Sheet 12 includes a detail for stone barriers, however, no stone barriers appear on the plan.
6. On Sheet 8, the bottom elevation of the stormwater basin is shown to be 443. However, on sheet 11, the profile indicates the bottom of the basin lies at elevation 465. This discrepancy is throughout, including top of berm, etc. Drainage manholes include a similar discrepancy between pages 8 and 11. Please rectify.
7. Please indicate where construction stormwater will be directed. Will the stormwater basin be constructed first, or are temporary sediment ponds being used? If so, where and how will they be maintained?
8. In the General Notes on Page 13 "Wetland Agenda" appears multiple times when it should read "Wetland Agent." This includes Note #2, line 3, and Note #9, line 3.
9. References to hay bales should be revised to straw bales as hay bales can encourage spreading of invasive species.

In addition to the items above, you will receive a review from the Town's engineer, Barton & Loguidice. Once all revisions have been made, please submit an updated plan set.

Thank you,



Jeremy DeCarli  
Planning & Zoning Official

**From:** [Walsh, Matthew](#)  
**To:** [DeCarli, Jeremy](#)  
**Subject:** Re: 37 South Main  
**Date:** Monday, June 26, 2023 2:06:52 PM  
**Attachments:** [image001.png](#)  
[Outlook-zk1iyppp.png](#)

---

Hi Jeremy

I have reviewed the plans and comments for the development at 37 South main Street. My comments are below.

1. The proposed detention basin is in a remote location of the property. This causes major issues for future maintenance due to lack of access to the basin. Please find and alternative location for the basin which provides better access. or revise plans to show a wide graded access road that allows truck and equipment access to the basin.
2. The storm manhole at station 13+50 is to deep at nearly 10'. Revise all drainage runs and structures to be less than 6' deep as typical.
3. The detention basin as designed has no emergency spillway.
4. The detention basin is shown in an area of a 12' cut. it is also located at the bottom of a steep slope. It is questionable if there will be any capacity for storm water storage in the basin due to ground water and overland runoff from the slope. Please redesign the basin in a different area of the project.
5. Identify on the plans all pipe material types.
6. Sidewalks should be configured to meet ADA requirements. Show crosswalks and accessible walks as required.
7. please submit revised plans for further review.

**Matthew Walsh P.E.**  
**Director of Public Works**  
**Tree Warden**  
**1 Public Works Drive**  
**East Hampton, CT 06424**  
**860-267-4747**



May 24, 2023

Mr. Jeremy DeCarli, AICP, CZEO  
Office of Planning & Zoning Official  
Town of East Hampton  
1 Community Drive  
East Hampton, CT 06424

Re: HOD Subdivision Application #PZC-23-012  
37 South Main Street, East Hampton, CT  
Plans dated through 5/3/23; Drainage Report (May 1, 2023) and associated HydroCAD  
calculations printed 5/3/2023

Dear Mr. DeCarli:

Barton & Loguidice, LLC has completed an engineering review of the proposed subdivision particularly concerning stormwater and erosion control. We offer the following:

Stormwater and Erosion Control:

1. Provide watershed maps for the existing and the proposed conditions and include the time of concentration paths. The total area analyzed should be the same for both conditions.
2. Show the design analysis points on the watershed maps and confirm the descriptions in the drainage report describing the direction of flow for the existing conditions.
3. Please confirm the proposed watershed areas. The area described in the drainage report for area PE2 does not match the area used in the analysis and the total for PE1 appears to be 16.1 acres. Also confirm the input information for the time of concentration calculations because "Woods with dense underbrush" was used in the proposed conditions and "Woods with light underbrush" in the existing condition.
4. The grading and storm drainage design for the proposed development should maintain existing flow patterns as much as possible. The pre and post development stormwater review should be revised to represent the four existing design points that appear to receive runoff (Each wetland soil area: 1. Interior to the parcel; 2. Along the southern property line; 3. The southwest corner of site and 4. Offsite wetlands to the northwest) to ensure no increase for each area.
5. Submit Water Quality Volume/Flow calculations and provide treatment(s) sized accordingly.
6. Submit the proposed storm drainage pipe sizing analysis.
7. Provide storm outlet riprap apron sizing calculations and label accordingly on the plans.
8. Label the required elevations/inverts on the Basin Outlet Structure Detail.

9. Recommend providing additional groundwater recharge opportunities for proposed stormwater.
10. Consider outletting the stormwater from Village Way into a swale or level spreader outlet rather than piping and combining flow with the remainder of the roadway to increase opportunities for infiltration and maintain current drainage patterns.
11. Recommend alternative design(s) for retention/detention to minimize length of piping and disturbance required in the northwest corner of the site. The current design directs the majority of the proposed impervious surface flow to outlet at the northwest corner of the site which currently receives only a small portion of the existing flow from the site.
12. The proposed detention basin includes a cut of up to 7 feet for the bottom. Soil testing should be conducted to determine the high groundwater elevation and suitability of the soils in the area.
13. Consider utilizing shallower retention area(s) that provide infiltration for groundwater recharge and peak flow attenuation.
14. The contour label for the sediment forebay appears to be incorrect.
15. As noted in comments from Jeremy DeCarli, please confirm the lengths of piping, manhole locations, stationing as well as elevations and inverts shown on the plan & profile sheets.
16. Review the catch basin locations and spacing. Eliminate catch basins if possible in accordance with gutter flow, distance from high points and as needed at proposed roadway intersection with Village Way. Consider storm manholes to accommodate roadway curvature if catch basins not warranted. Recommend modifying the cul-de-sac grading to include only one grated structure at a low point (double grate if necessary) to minimize future town maintenance.
17. The E&S Control plans should include locations and sizing calculations for temporary sedimentation basins/traps. Provide a detail on the plans.

General Comments:

1. Additional proposed grading should be included on the plans to show swales and grade to drain flow arrows to eliminate flow across adjacent properties as much as possible. For the interior lots (11-16), it is recommended to provide a swale along the common rear property line to outlet toward the wetlands and away from the lower lots.
2. Recommend including intersection grading with spot grades and flow direction arrows at the road intersection with South Main Street and with Village Way to ensure flow of stormwater and no ponding of water.
3. A note should be added to the subdivision plan on the two areas of "other land of Michael Bakaj" that these are not approved building lots. Note that these two areas of land as shown become landlocked with no existing roadway frontage.
4. Recommend including the required Height, Area and Yard Requirements chart for 2. Single-Family Detached dwellings on Subdivided Lots on the subdivision plan as well as the maximum Coverage by Impervious Surfaces and the calculated total for the development.

Mr. Jeremy DeCarli  
May 24, 2023



Page 3

5. Provide information to address the minimum requirement of two parking spaces per dwelling unit.
6. Provide proposed provisions for social/recreational facilities with this development in accordance with Section 6.3.F.2. and strategies for energy-efficient patterns of development (Section 6.3.F.4.).
7. It is recommended that a note be added to the plans regarding the subdivision regulations requirement that the subdivider shall be responsible for the maintenance of proposed stormwater detention structures (Section VIII 4.).

If you have any questions regarding the above, please contact me at (860) 633-8770.

Sincerely,

A handwritten signature in blue ink that reads "Denise P. Lord".

Denise P. Lord, P.E.  
Lead Engineer