CONSTRUCTION SEQUENCE

INSTALL SILT FENCING AND HAYBALES AS SHOWN ON PLAN. SECURE CROSSING WITH PLYWOOD. FILL AND STONE WILL BE BROUGHT TO THE NORTH END OF THE CROSSING. TWO EXCAVATORS WILL BE BROUGHT TO THE NORTH END. ONE WILL POSITION THE CULVERTS AS SHOWN ON THE PLAN AS IT RETURNS TO THE SOUTH END. THE EXCAVATOR ON THE NORTH WILL FILL BETWEEN CULVERTS, WORKING TO THE SOUTH, AS THE SOUTH MACHINE DOES THE SAME WORKING TO THE NORTH. THE POSTS FOR THE GUIDE RAILS WILL BE INSTALLED TO COINCIDE WITH THE SOLID PORTION OF EACH CULVERT. THE PROCESS BASE FOR THE POROUS DRIVEWAY WILL BE PLACED ACROSS THE AREA. THE POROUS PAVEMENT WILL BE PLACED.

ANY NECESSARY ROCK REMOVAL SHALL BE BY MEANS OF CHIPPING. REMOVED MATERIAL SHALL BE REMOVED FROM SITE IMMEDIATELY AND NOT STOCKPILED. HOURS OF OPERATION SHALL BE LIMITED TO 8 AM TO 6 PM, MONDAYS THROUGH FRIDAY, SUBJECT TO ANY FURTHER REGULATION FROM THE TOWN OF WILTON.

PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, A CERTIFIED AS-BUILT DRAWING AND CERTIFIED LETTER SIGNED BY A PROFESSIONAL ENGINEER INDICATING THAT ALL WORK WAS COMPLETED IN ACCORDANCE WITH THE DESIGN PLANS SHALL BE SUBMITTED TO THE TOWN OF WILTON.

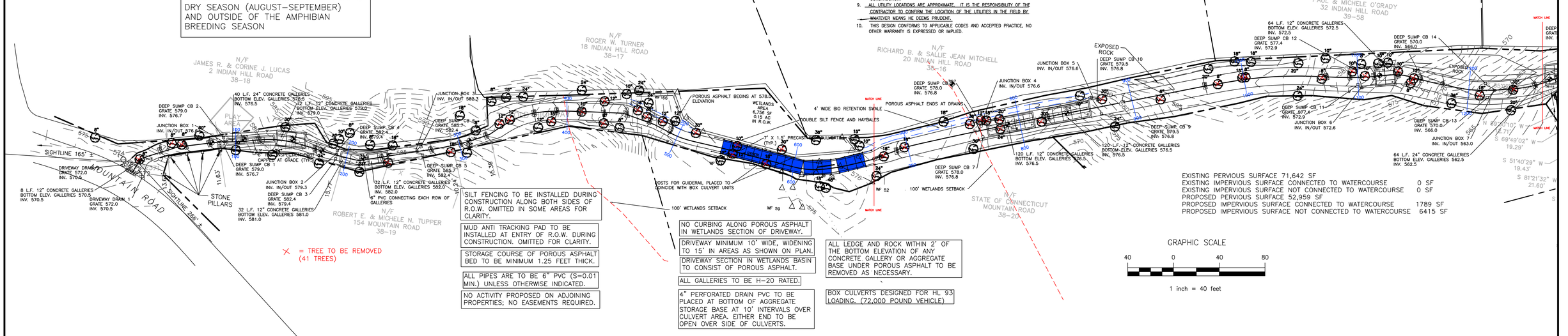
CROSSING TO BE CONSTRUCTED DURING DRY SEASON (AUGUST-SEPTEMBER) AND OUTSIDE OF THE AMPHIBIAN BREEDING SEASON

GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION AND STRUCTURES SHALL COMPLY WITH ALL MUNICIPAL OR STATE REQUIREMENTS. ALL WORK SHALL BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, TO THE SATISFACTION OF THE ENGINEERING BUREAU, THAT CONSTRUCTION IS IN ACCORDANCE WITH THESE PLANS.
2. THE ENGINEERING BUREAU OF THE DEPARTMENT OF PUBLIC WORKS AND THE ENGINEER OF RECORD SHALL BE NOTIFIED THREE DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION.
3. NO CERTIFICATE OF CONFORMANCE TO STANDARDS SHALL BE ISSUED BY THE DESIGN ENGINEER IF PROPER NOTICE IS NOT PROVIDED FOR INSPECTIONS OR IF INSPECTIONS ARE NOT MADE PRIOR TO BACKFILLING OF BELOW GROUND STRUCTURES AND APPURTENANCES.
4. SUBSURFACE STRUCTURES AND UTILITIES HAVE BEEN DETERMINED FROM EXISTING RECORDS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. IN ORDER TO AVOID CONFLICT OF THE PROPOSED WORK AND EXISTING UTILITIES, THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES BY EXCAVATING TEST HOLES. IF THE CONTRACTOR DETERMINES THAT A CONFLICT EXISTS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER, WHO WILL MAKE THE NECESSARY ADJUSTMENTS.
5. EXISTING PROPERTY AND UTILITY INFORMATION WAS TAKEN FROM A SURVEY BY ALL SEASONS LAND SURVEYING TITLED "TOPOGRAPHIC SURVEY PREPARED FOR OLD DRIFTWAY LLC", DATED MARCH 30, 2023.
6. THESE PLANS ARE FOR MUNICIPAL OR STATE AGENCY APPROVAL ONLY. NOT FOR CONSTRUCTION.
7. NO PIPE SHALL HAVE A BEND OF GREATER THAN 45 DEGREES.
8. THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455, OR OTHER APPROPRIATE CONTACT POINT PRIOR TO START OF CONSTRUCTION.
9. ALL UTILITY LOCATIONS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION OF THE UTILITIES IN THE FIELD BY WHATEVER MEANS HE DEEMS PRUDENT.
10. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE, NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.

SEDIMENTATION AND EROSION CONTROL NOTES

1. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. PERMANENT STABILIZATION SHALL BE SCHEDULED AS SOON AS FINAL GRADES ARE ESTABLISHED.
2. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED WITH AN APPROVED SEED MIXTURE. COVER NEWLY SEEDED AREAS WITH MULCH HAY OR SALT HAY.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE 2002 CONNECTICUT "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" HANDBOOK.
4. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. CHECK AFTER EACH STORM EVENT.
5. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF REQUIRED BY TOWN AUTHORITIES.
6. SEDIMENT DEPOSITS REMOVED FROM FILTER BARRIERS SHALL BE PLACED IN FILL AREAS OR SPREAD WHERE THERE IS PROPOSED VEGETATIVE COVER. ANY SEDIMENT DEPOSITS REMAINING AFTER THE FILTER BARRIER IS REMOVED SHALL BE FINE GRADED AND PLANTED ACCORDING TO PLAN.
7. THE SITE CONSTRUCTION CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PLANNING AND ZONING OFFICE (AND/OR THE CONSERVATION COMMISSION) OF ANY TRANSFER OF THIS RESPONSIBILITY AND CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED TO A NEW OWNER.



SILT FENCING TO BE INSTALLED DURING CONSTRUCTION ALONG BOTH SIDES OF R.O.W. OMITTED IN SOME AREAS FOR CLARITY.

MUD ANTI TRACKING PAD TO BE INSTALLED AT ENTRY OF R.O.W. DURING CONSTRUCTION. OMITTED FOR CLARITY.

STORAGE COURSE OF POROUS ASPHALT BED TO BE MINIMUM 1.25 FEET THICK.

ALL PIPES ARE TO BE 6" PVC (S=0.01 MIN.) UNLESS OTHERWISE INDICATED.

NO ACTIVITY PROPOSED ON ADJOINING PROPERTIES; NO EASEMENTS REQUIRED.

NO CURBING ALONG POROUS ASPHALT IN WETLANDS SECTION OF DRIVEWAY.

DRIVEWAY MINIMUM 10' WIDE, WIDENING TO 15' IN AREAS AS SHOWN ON PLAN.

DRIVEWAY SECTION IN WETLANDS BASIN TO CONSIST OF POROUS ASPHALT.

ALL GALLERIES TO BE H-20 RATED.

4" PERFORATED DRAIN PVC TO BE PLACED AT BOTTOM OF AGGREGATE STORAGE BASE AT 10' INTERVALS OVER CULVERT AREA. EITHER END TO BE OPEN OVER SIDE OF CULVERTS.

ALL LEDGE AND ROCK WITHIN 2' OF THE BOTTOM ELEVATION OF ANY CONCRETE GALLERY OR AGGREGATE BASE UNDER POROUS ASPHALT TO BE REMOVED AS NECESSARY.

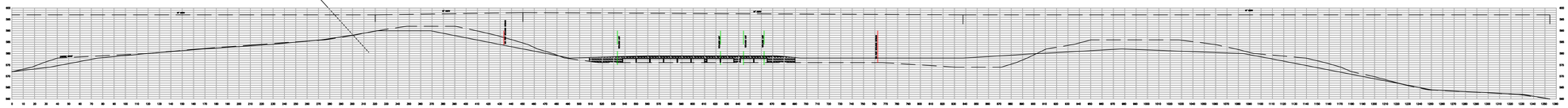
BOX CULVERTS DESIGNED FOR HL 93 LOADING. (72,000 POUND VEHICLE)

EXISTING PERVIOUS SURFACE 71,642 SF
EXISTING IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 0 SF
EXISTING IMPERVIOUS SURFACE NOT CONNECTED TO WATERCOURSE 0 SF
PROPOSED PERVIOUS SURFACE 52,959 SF
PROPOSED IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 1789 SF
PROPOSED IMPERVIOUS SURFACE NOT CONNECTED TO WATERCOURSE 6415 SF

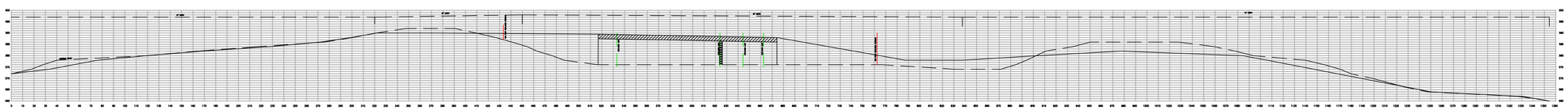
GRAPHIC SCALE

40 0 40 80

1 inch = 40 feet

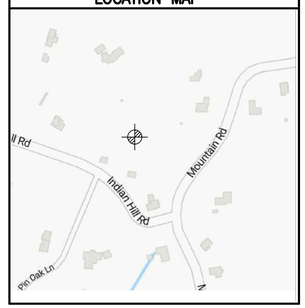


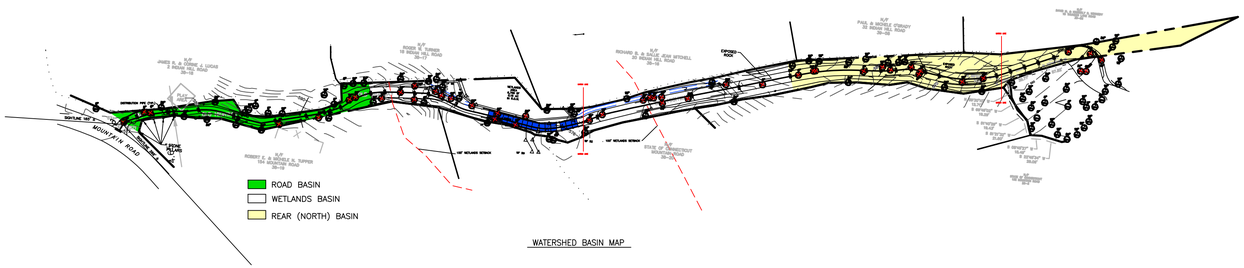
DRIVEWAY PROFILE
SCALE- H: 1"=50'
V: 1"=25'



DRIVEWAY PROFILE (ALTERNATE - BRIDGE)
SCALE- H: 1"=50'
V: 1"=25'

LOCATION MAP





WATERSHED BASIN MAP

STATE OF CONNECTICUT
WAYNE J. D'ANDREA
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-14-23
date

REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

RIGHT OF WAY PLAN

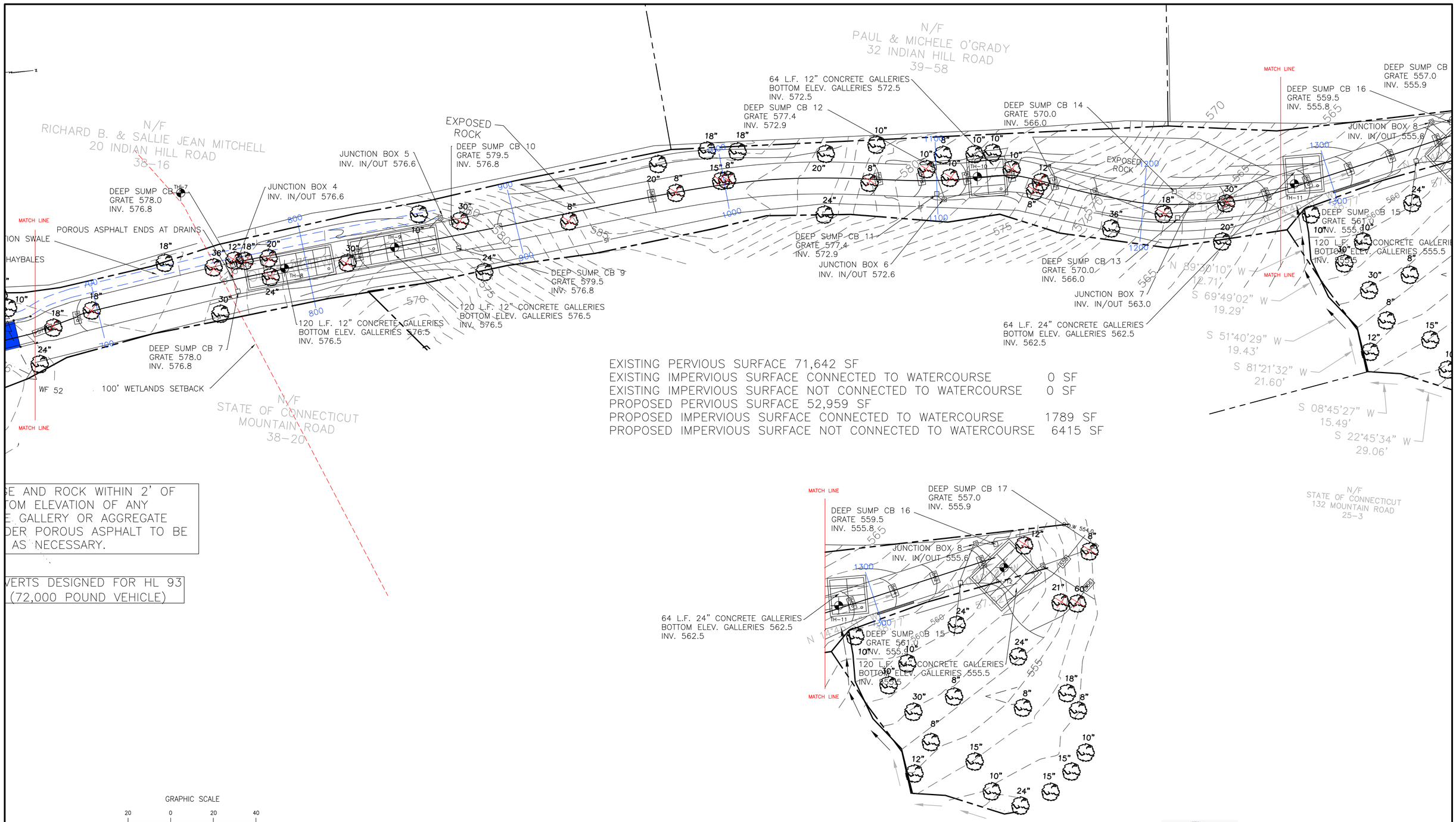
CIVIL ENGINEERS

2168 project

1 OF 6 sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240115ROW



EXISTING PERVIOUS SURFACE 71,642 SF
EXISTING IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 0 SF
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PROPOSED PERVIOUS SURFACE 52,959 SF
PROPOSED IMPERVIOUS SURFACE CONNECTED TO WATERCOURSE 1789 SF
PROPOSED IMPERVIOUS SURFACE NOT CONNECTED TO WATERCOURSE 6415 SF

SE AND ROCK WITHIN 2' OF
TOM ELEVATION OF ANY
E GALLERY OR AGGREGATE
DER POROUS ASPHALT TO BE
AS NECESSARY.

VERTS DESIGNED FOR HL 93
(72,000 POUND VEHICLE)

GRAPHIC SCALE
20 0 20 40
1 inch = 20 feet

REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

10-14-23
date

RIGHT OF WAY PLAN NORTH

Fairfield County Engineering LLC

CIVIL ENGINEERS

2168
project

3 OF 6
sheet

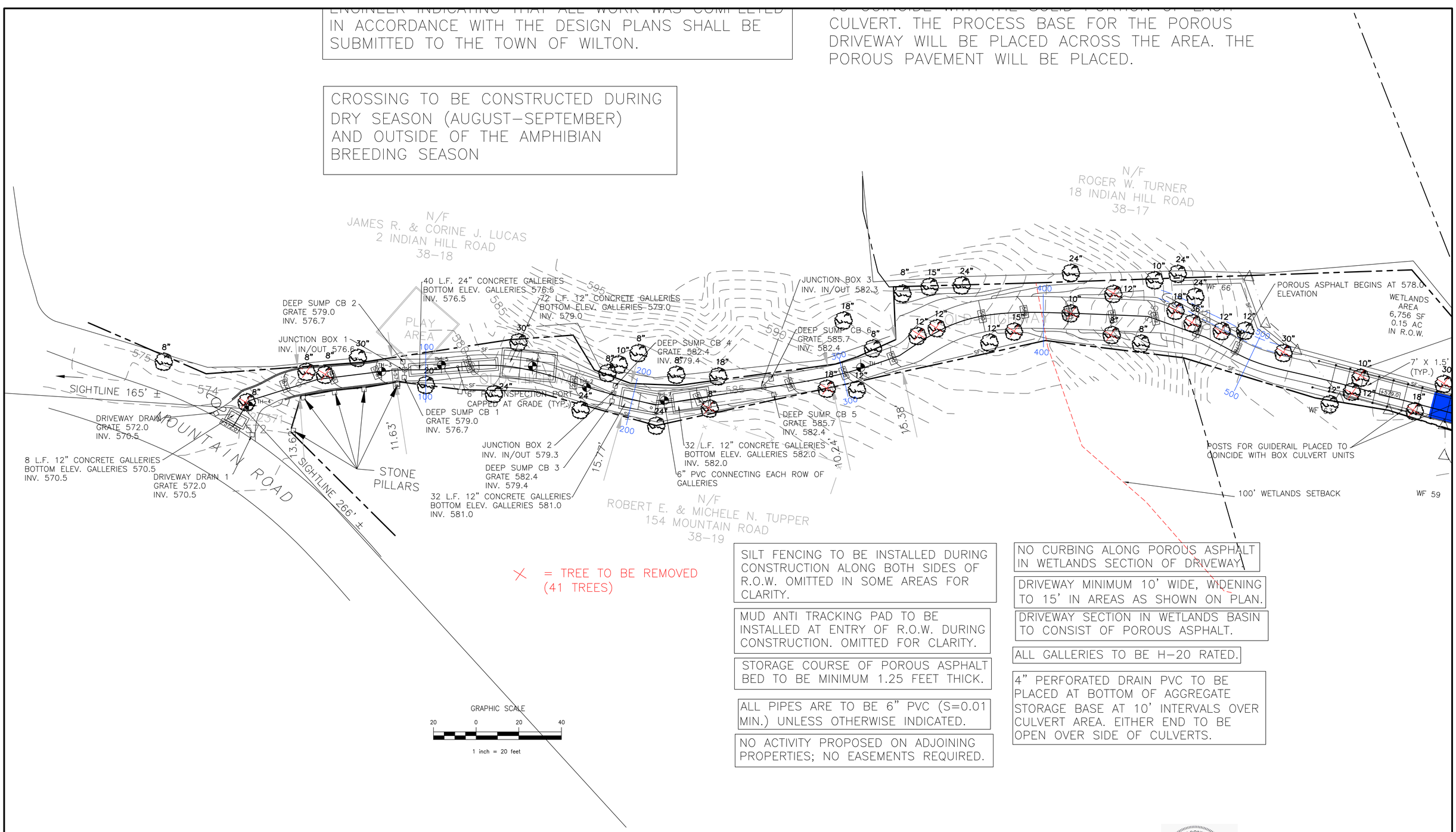
FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240115ROW

ENGINEER INDICATING THAT ALL WORK WAS COMPLETED IN ACCORDANCE WITH THE DESIGN PLANS SHALL BE SUBMITTED TO THE TOWN OF WILTON.

CROSSING TO BE CONSTRUCTED DURING DRY SEASON (AUGUST–SEPTEMBER) AND OUTSIDE OF THE AMPHIBIAN BREEDING SEASON

CULVERT. THE PROCESS BASE FOR THE POROUS DRIVEWAY WILL BE PLACED ACROSS THE AREA. THE POROUS PAVEMENT WILL BE PLACED.



× = TREE TO BE REMOVED (41 TREES)

GRAPHIC SCALE

20 0 20 40

1 inch = 20 feet

SILT FENCING TO BE INSTALLED DURING CONSTRUCTION ALONG BOTH SIDES OF R.O.W. OMITTED IN SOME AREAS FOR CLARITY.

MUD ANTI TRACKING PAD TO BE INSTALLED AT ENTRY OF R.O.W. DURING CONSTRUCTION. OMITTED FOR CLARITY.

STORAGE COURSE OF POROUS ASPHALT BED TO BE MINIMUM 1.25 FEET THICK.

ALL PIPES ARE TO BE 6" PVC (S=0.01 MIN.) UNLESS OTHERWISE INDICATED.

NO ACTIVITY PROPOSED ON ADJOINING PROPERTIES; NO EASEMENTS REQUIRED.

NO CURBING ALONG POROUS ASPHALT IN WETLANDS SECTION OF DRIVEWAY.

DRIVEWAY MINIMUM 10' WIDE, WIDENING TO 15' IN AREAS AS SHOWN ON PLAN.

DRIVEWAY SECTION IN WETLANDS BASIN TO CONSIST OF POROUS ASPHALT.

ALL GALLERIES TO BE H–20 RATED.

4" PERFORATED DRAIN PVC TO BE PLACED AT BOTTOM OF AGGREGATE STORAGE BASE AT 10' INTERVALS OVER CULVERT AREA. EITHER END TO BE OPEN OVER SIDE OF CULVERTS.

STATE OF CONNECTICUT
JOSEPH J. D'ANDREA
No. 24877
LICENSED PROFESSIONAL ENGINEER

10–14–23
date

REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

RIGHT OF WAY PLAN SOUTH

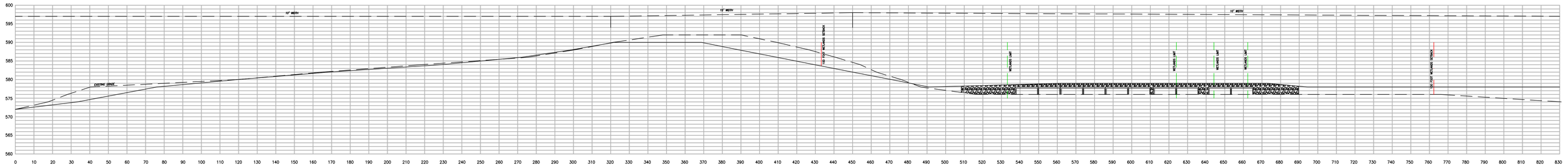
CIVIL ENGINEERS

2168 project

2 OF 6 sheet

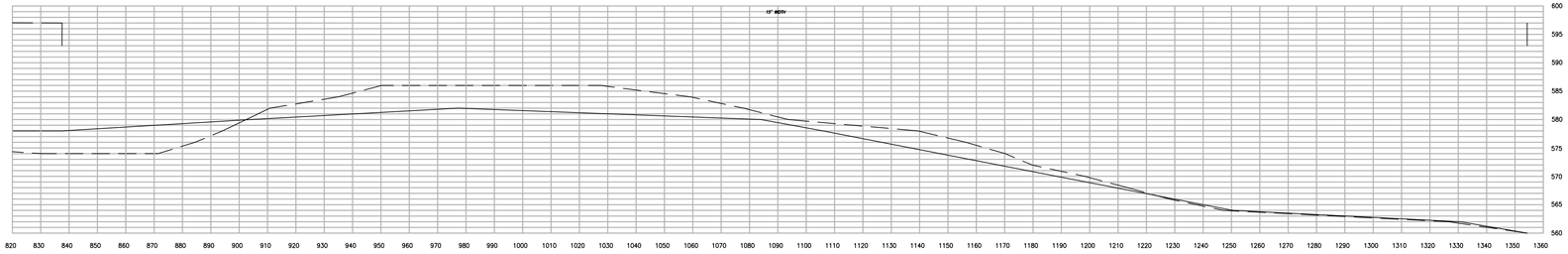
FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831–8005 FAX: (203) 831–8006

2168_240115



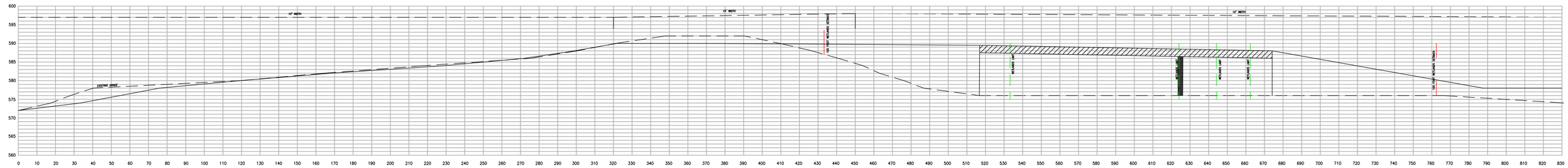
DRIVEWAY PROFILE

SCALE– H: 1"–25'
V: 1"–12.5'



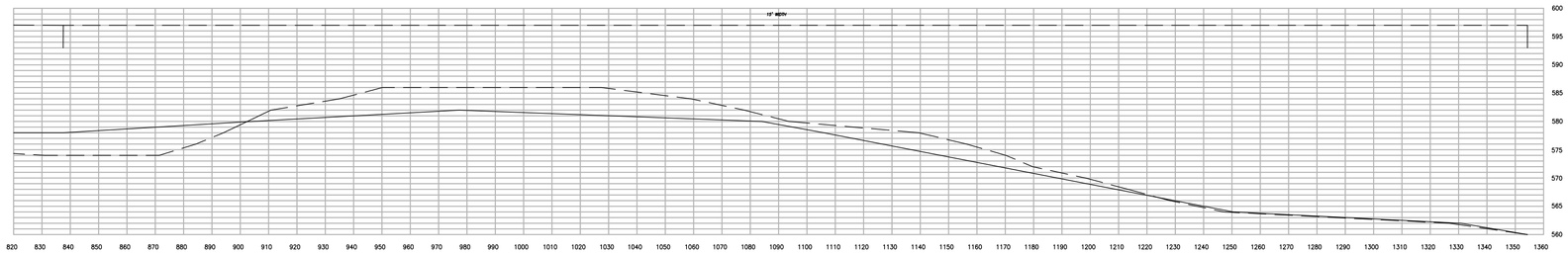
DRIVEWAY PROFILE

SCALE– H: 1"–25'
V: 1"–12.5'



DRIVEWAY PROFILE (ALTERNATE – BRIDGE)

SCALE– H: 1"–25'
V: 1"–12.5'



DRIVEWAY PROFILE (ALTERNATE – BRIDGE)

SCALE– H: 1"–25'
V: 1"–12.5'

STATE OF CONNECTICUT
MATTHEW J. D'AMATO
No. 24877
LICENSED PROFESSIONAL ENGINEER

10–14–23
date

Fairfield County Engineering LLC

REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

DETAIL SHEET

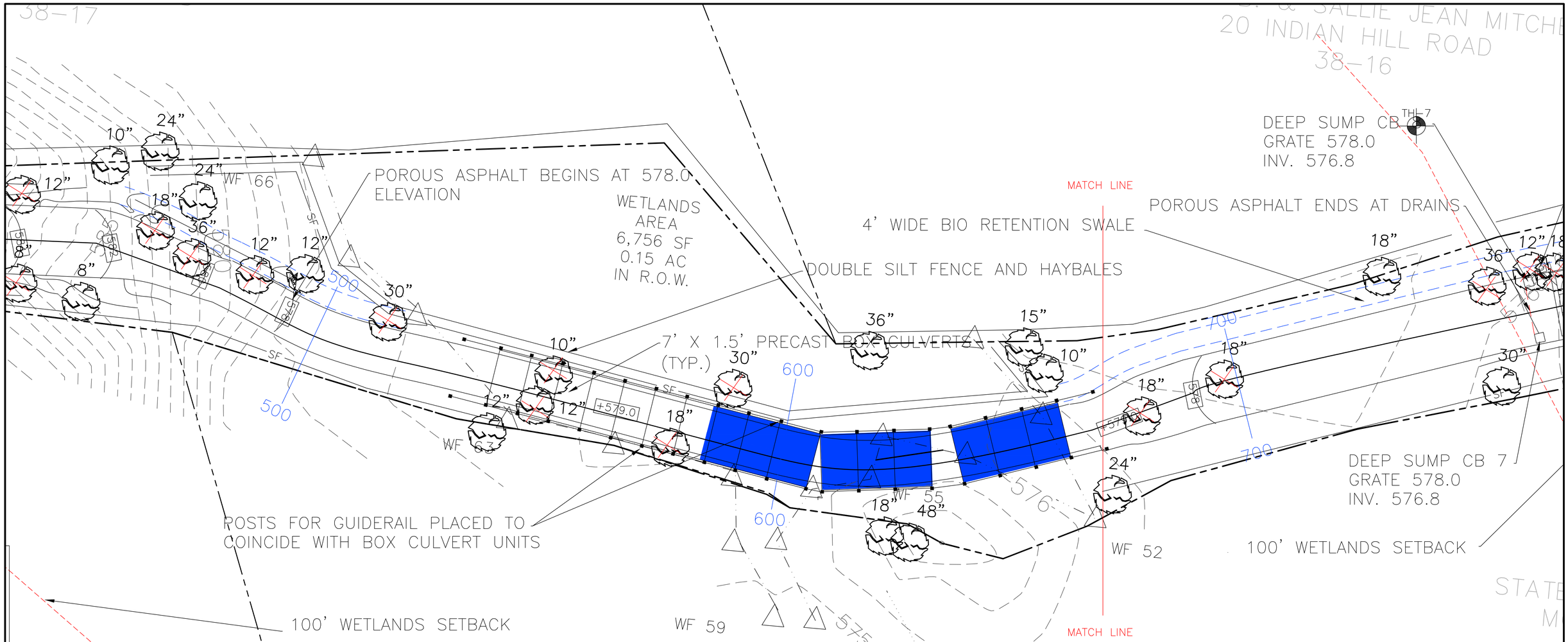
CIVIL ENGINEERS

2168
project

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831–8005 FAX: (203) 831–8006

5 OF 6
sheet

2168_240115ROW



NO CURBING ALONG POROUS ASPHALT IN WETLANDS SECTION OF DRIVEWAY.

DRIVEWAY MINIMUM 10' WIDE, WIDENING TO 15' IN AREAS AS SHOWN ON PLAN.

DRIVEWAY SECTION IN WETLANDS BASIN TO CONSIST OF POROUS ASPHALT.

ALL GALLERIES TO BE H–20 RATED.

4" PERFORATED DRAIN PVC TO BE PLACED AT BOTTOM OF AGGREGATE STORAGE BASE AT 10' INTERVALS OVER CULVERT AREA. EITHER END TO BE

GRAPHIC SCALE

10 0 10 20

1 inch = 10 feet

STATE OF CONNECTICUT
DANIEL J. BAUER
No. 24877
LICENSED PROFESSIONAL ENGINEER

10–14–23
date

REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

RIGHT OF WAY PLAN WETLANDS CLOSEUP

CIVIL ENGINEERS

2168 project

4 OF 6 sheet

Fairfield County Engineering LLC

FAIRFIELD COUNTY ENGINEERING L.L.C.

60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831–8005 FAX: (203) 831–8006

DRAINAGE REPORT

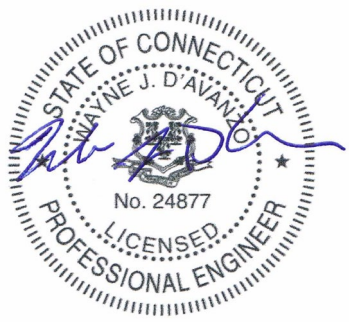
PREPARED FOR

EXISTING AND PROPOSED SITE CONDITIONS

LOCATED AT:

FCE #2168

0 MOUNTAIN ROAD RIGHT OF WAY



WILTON, CONNECTICUT

January 15, 2024

FAIRFIELD COUNTY ENGINEERING, LLC

CIVIL ENGINEERS

60 WINFIELD ST.
NORWALK, CONNECTICUT 06855
(203) 831-8005
FAX: (203) 831-8006
E-mail to: wayne@fairfieldce.com

Fairfield County Engineering LLC

NARRATIVE:

The subject of this report is the 1.644 acre accessway to the parcel located at 0 Mountain Road in Wilton. The purpose of this report is to determine the existing and proposed runoffs resulting from the proposed site improvements in order to design a stormwater management system.

EXISTING CONDITIONS:

The subject parcel is an accessway to the rear lot located at the northwest side of Mountain Road, approximately 200 feet from its intersection with Indian Hill Road. The accessway is currently vacant.

Existing soils at this location, as identified in the NRCS Soil Survey of Fairfield County, Connecticut, consist of Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky, which has a Hydrologic classification of 'B'.

The proposed driveway contains three local watershed basins; one that drains to the road, one that drains to the vernal pool/wetlands in the central section, and one that drains to the rear (north)

The existing runoff from a 25-Year rainfall event in the road basin is 0.43 c.f.s.
The existing runoff from a 25-Year rainfall event in the wetlands basin is 2.80 c.f.s.
The existing runoff from a 25-Year rainfall event in the north basin is 1.26 c.f.s.

PROPOSED CONDITIONS:

The proposal for this site is to construct a driveway to serve the proposed single family residence.

The proposed runoff (un-mitigated) from a 25-Year rainfall in the road basin event is 0.85 c.f.s.
The proposed runoff (un-mitigated) from a 25-Year rainfall in the wetlands basin event is 3.69 c.f.s.
The proposed runoff (un-mitigated) from a 25-Year rainfall in the north basin event is 1.94 c.f.s.

COMPUTATIONS:

The following computations of the existing and proposed conditions runoff flows were derived from the HydroCAD computer software. HydroCAD follows the NRCS TR-20 procedure for computing stormwater runoff. Computations were performed for a 25-year storm event, which has a 4% chance of occurring in any given 12 month period.

Existing Conditions (Road Basin):

Woods	6,862 s.f.	CN 61
Total -	6,862 s.f.	

Weighted CN - 61

Proposed Conditions (Road Basin):

Driveway	4,017 s.f.	CN 98
Woods	2,845 s.f.	CN 61
Total -	6,862 s.f.	

Weighted CN - 83

Water Quality Volume

I = (58.5 x 0.009) + 0.05 = 0.5765

WQV = (0.5765 (0.158 acres)/12) = 0.007590 ac-ft = 330.6 ft^3.

Groundwater Recharge Volume

GWV = 330.6 x 0.25 = 82.7 ft^3.

Existing Conditions (Wetlands Basin):

Woods	44,736 s.f.	CN 61
Total -	44,736 s.f.	

Weighted CN - 61

Proposed Conditions (Wetlands Basin):

Driveway	8,204 s.f.	CN 98
Woods	36,532 s.f.	CN 61
Total -	44,736 s.f.	

Weighted CN - 68

Water Quality Volume

I = (18.3 x 0.009) + 0.05 = 0.2147
WQV = (0.2147 (1.027 acres)/12) = 0.0183747 ac-ft = 800.4 ft^3.

Groundwater Recharge Volume

GWV = 800.4 x 0.25 = 200.1 ft^3.

Existing Conditions (North Basin):

Woods	20,044 s.f.	CN 61
Total -	20,044 s.f.	

Weighted CN - 61

Proposed Conditions (North Basin):

Driveway	6,462 s.f.	CN 98
Woods	13,582 s.f.	CN 61
Total -	20,044 s.f.	

Weighted CN - 73

Water Quality Volume

I = (32.2 x 0.009) + 0.05 = 0.3398
WQV = (0.3398 (0.460 acres)/12) = 0.01302566 ac-ft = 567.4 ft^3.

Groundwater Recharge Volume

GWV = 567.4 x 0.25 = 141.8 ft^3.

SUMMARY (Road Basin)

Existing Runoff (25 Year):	0.43 c.f.s.
Proposed Runoff (25 Year):	0.85 c.f.s.
Proposed Impervious Run-off Retained (25 Year):	0.44 c.f.s
Proposed Run-off from Areas Bypassing Retention plus overflow (25 Year):	0.36 c.f.s.

SUMMARY (Wetlands Basin)

Existing Runoff (25 Year):	2.80 c.f.s.
Proposed Runoff (25 Year):	3.69 c.f.s.
Proposed Impervious Run-off Retained (25 Year):	1.23 c.f.s
Proposed Run-off from Areas Bypassing Retention plus overflow (25 Year):	2.63 c.f.s.

SUMMARY (North Basin)

Existing Runoff (25 Year):	1.26 c.f.s.
Proposed Runoff (25 Year):	1.94 c.f.s.
Proposed Impervious Run-off Retained (25 Year):	0.96 c.f.s
Proposed Run-off from Areas	1.14 c.f.s.

CONCLUSIONS:

The increased runoff resulting from the proposed site improvements will be retained in an on-site retention system. The runoff from the driveway will be routed to concrete galleries, and in one section near the wetlands to the aggregate under the porous asphalt that comprises the driveway in that area.

The system in the road basin will decrease the net peak runoff during a 25 Year storm in the road basin from its current peak of 0.43 c.f.s. to 0.36 c.f.s.

The proposed retention system in the road basin consists of 40 linear feet of 24" concrete galleries and 136 linear feet of 12" concrete galleries, which provide 916 ft^3 of storage, which will accommodate the runoff from a 25 Year rainfall event routed to the system, meets the Water Quality Volume and provides groundwater recharge.

The system in the watershed basin will decrease the net peak runoff during a 25 Year storm in the road basin from its current peak of 2.80 c.f.s. to 2.63 c.f.s.

The proposed retention system in the wetlands basin consists of 240 linear feet of 12" concrete galleries and an approximately 278 foot portion of porous asphalt with aggregate under. The aggregate under the porous asphalt is to be 15" thick in the wetlands basin. The combined system provides 3,543 ft^3 of storage, which will accommodate the runoff from a 25 Year rainfall event routed to the system, meets the Water Quality Volume and provides groundwater recharge.

The model conservatively calculates a 9 foot width of the driveway for retention capacity of the aggregate, although its entire width will have aggregate under it. The driveway is a minimum of 10 feet wide, widening to 15 feet in areas.

The system in the north basin will decrease the net peak runoff during a 25 Year storm in the road basin from its current peak of 1.26 c.f.s. to 1.14 c.f.s.

The proposed retention system in the north basin consists of 64 linear feet of 12" concrete galleries and 184 linear feet of 24" concrete galleries, which provides 1,688 ft^3 of storage, which will accommodate the runoff from a 25 Year rainfall event routed to the system, meets the Water Quality Volume and provides groundwater recharge.

The proposed improvements will have no adverse impact on the road or surrounding properties.

DRAINAGE REPORT

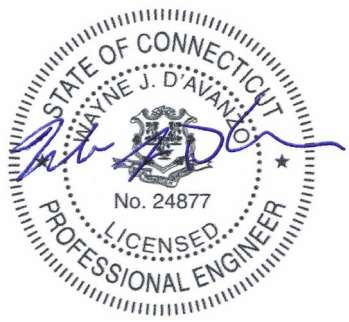
PREPARED FOR

EXISTING AND PROPOSED SITE CONDITIONS

LOCATED AT:

FCE #2168

0 MOUNTAIN ROAD



WILTON, CONNECTICUT

December 16, 2023

FAIRFIELD COUNTY ENGINEERING, LLC

CIVIL ENGINEERS

60 WINFIELD ST.
NORWALK, CONNECTICUT 06855
(203) 831-8005
FAX: (203) 831-8006
E-mail to: wayne@fairfieldce.com

NARRATIVE:

The subject of this report is a 2.82 acre parcel located at 0 Mountain Road in Wilton. The purpose of this report is to determine the existing and proposed runoffs resulting from the proposed site improvements in order to design a stormwater management system.

EXISTING CONDITIONS:

The subject parcel is a rear lot located at the northwest side of Mountain Road, approximately 200 feet from its intersection with Indian Hill Road. The lot is currently vacant. The lot slopes moderately to steeply towards the wetlands centrally located on the property; from the north and south.

Existing soils at this location, as identified in the NRCS Soil Survey of Fairfield County, Connecticut, consist of Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky, which has a Hydrologic classification of 'B'.

The existing runoff as developed from a 25-Year rainfall event is 7.70 c.f.s.

PROPOSED CONDITIONS:

The proposal for this site is to construct a new single family residence with associated driveway and pool.

The proposed runoff from a 25-Year rainfall event is 9.09 c.f.s.

COMPUTATIONS:

The following computations of the existing and proposed conditions runoff flows were derived from the HydroCAD computer software. HydroCAD follows the NRCS TR-20 procedure for computing stormwater runoff. Computations were performed for a 25-year storm event, which has a 4% chance of occurring in any given 12 month period.

Existing Conditions:

Woods	122,846 s.f.	CN 61
Total -	122,846 s.f.	

Weighted CN - 61

Proposed Conditions:

House	2,468 s.f.	CN 98
Driveway	5,115 s.f.	CN 98
Pool	525 s.f.	CN 98
Patio	1,395 s.f.	CN 98
Woods	90,855 s.f.	CN 61
Lawn	22,488 s.f.	CN 69
Total -	122,846 s.f.	

Weighted CN - 65

Water Quality Volume

I = (7.7 x 0.009) + 0.05 = 0.1193

WQV = (0.1193 (2.82 acres)/12) = 0.0280355 ac-ft = 1,221.2 ft^3.

Groundwater Recharge Volume

GWV = 1,221.2 x 0.25 = 305.3 ft^3.

SUMMARY

Existing Runoff (25 Year):	7.70 c.f.s.
Proposed Runoff (25 Year):	9.09 c.f.s.
Proposed Impervious Run-off Retained (25 Year):	1.43 c.f.s
Proposed Run-off from Areas Bypassing Retention plus overflow (25 Year):	7.70 c.f.s.

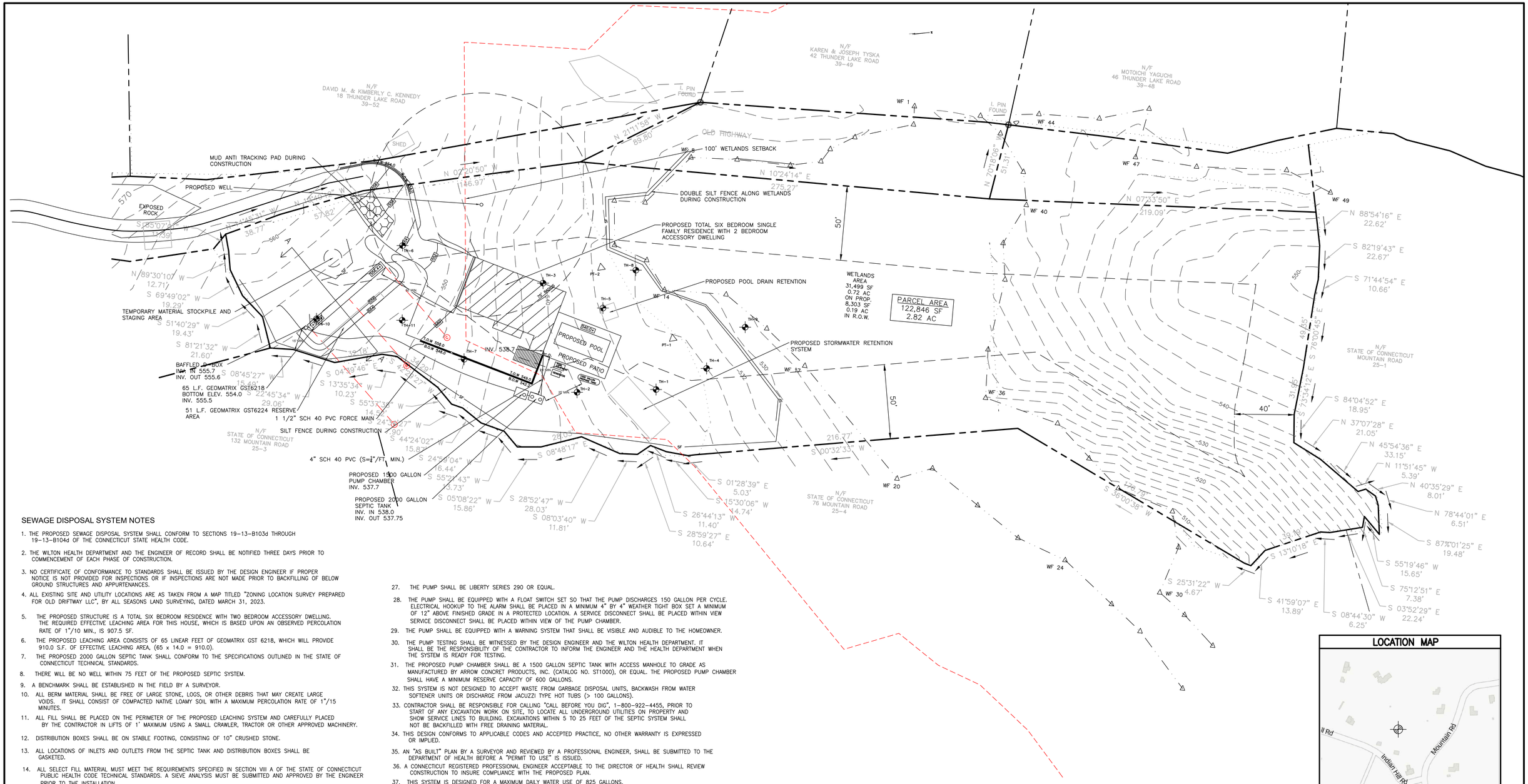
CONCLUSIONS:

The increased runoff resulting from the proposed site improvements will be retained in an on-site retention system. The runoff from the house roof, driveway and a portion of the lawn will be routed to 20 units of Cultec R-280 retention chambers.

This system will maintain the net peak runoff during a 25 Year storm at its current peak of 7.70 c.f.s.

The proposed retention system provides 1,165 ft^3 of storage, which will accommodate the runoff from a 25 Year rainfall event routed to the system, and provides groundwater recharge.

The proposed improvements will have no adverse impact on surrounding properties.



SEWAGE DISPOSAL SYSTEM NOTES

1. THE PROPOSED SEWAGE DISPOSAL SYSTEM SHALL CONFORM TO SECTIONS 19-13-B103d THROUGH 19-13-B104d OF THE CONNECTICUT STATE HEALTH CODE.
2. THE WILTON HEALTH DEPARTMENT AND THE ENGINEER OF RECORD SHALL BE NOTIFIED THREE DAYS PRIOR TO COMMENCEMENT OF EACH PHASE OF CONSTRUCTION.
3. NO CERTIFICATE OF CONFORMANCE TO STANDARDS SHALL BE ISSUED BY THE DESIGN ENGINEER IF PROPER NOTICE IS NOT PROVIDED FOR INSPECTIONS OR IF INSPECTIONS ARE NOT MADE PRIOR TO BACKFILLING OF BELOW GROUND STRUCTURES AND APPURTENANCES.
4. ALL EXISTING SITE AND UTILITY LOCATIONS ARE AS TAKEN FROM A MAP TITLED "ZONING LOCATION SURVEY PREPARED FOR OLD DRIFTWAY LLC", BY ALL SEASONS LAND SURVEYING, DATED MARCH 31, 2023.
5. THE PROPOSED STRUCTURE IS A TOTAL SIX BEDROOM RESIDENCE WITH TWO BEDROOM ACCESSORY DWELLING. THE REQUIRED EFFECTIVE LEACHING AREA FOR THIS HOUSE, WHICH IS BASED UPON AN OBSERVED PERCOLATION RATE OF 1"/10 MIN., IS 907.5 SF.
6. THE PROPOSED LEACHING AREA CONSISTS OF 65 LINEAR FEET OF GEOMATRIX GST 6218, WHICH WILL PROVIDE 910.0 S.F. OF EFFECTIVE LEACHING AREA, (65 x 14.0 = 910.0).
7. THE PROPOSED 2000 GALLON SEPTIC TANK SHALL CONFORM TO THE SPECIFICATIONS OUTLINED IN THE STATE OF CONNECTICUT TECHNICAL STANDARDS.
8. THERE WILL BE NO WELL WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM.
9. A BENCHMARK SHALL BE ESTABLISHED IN THE FIELD BY A SURVEYOR.
10. ALL BERM MATERIAL SHALL BE FREE OF LARGE STONE, LOGS, OR OTHER DEBRIS THAT MAY CREATE LARGE VOIDS. IT SHALL CONSIST OF COMPACTED NATIVE LOAMY SOIL WITH A MAXIMUM PERCOLATION RATE OF 1"/15 MINUTES.
11. ALL FILL SHALL BE PLACED ON THE PERIMETER OF THE PROPOSED LEACHING SYSTEM AND CAREFULLY PLACED BY THE CONTRACTOR IN LIFTS OF 1' MAXIMUM USING A SMALL CRAWLER, TRACTOR OR OTHER APPROVED MACHINERY.
12. DISTRIBUTION BOXES SHALL BE ON STABLE FOOTING, CONSISTING OF 10" CRUSHED STONE.
13. ALL LOCATIONS OF INLETS AND OUTLETS FROM THE SEPTIC TANK AND DISTRIBUTION BOXES SHALL BE GASKETED.
14. ALL SELECT FILL MATERIAL MUST MEET THE REQUIREMENTS SPECIFIED IN SECTION VIII A OF THE STATE OF CONNECTICUT PUBLIC HEALTH CODE TECHNICAL STANDARDS. A SIEVE ANALYSIS MUST BE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO THE INSTALLATION.
15. ALL SELECT FILL SHALL HAVE FEWER THAN 2.5% OF THE FINES PASSING THE #200 SIEVE, FEWER THAN 5% OF THE FINES PASSING #100 SIEVE, AND SHALL ACHIEVE AN AVERAGE PERCOLATION RATE OF 1"/5 MINUTES, AFTER BEING PLACED. ALL FILL SHALL BE PLACED IN LIFTS OF 1' MAXIMUM.
16. THE CONTRACTOR SHALL PROVIDE A REPRESENTATIVE SAMPLE OF ALL FILL MATERIAL TO THE ENGINEER OF RECORD FOR INSPECTION AND SIEVE ANALYSIS AT THE CONTRACTOR'S EXPENSE, PRIOR TO PLACEMENT. IT MAY BE ALSO NECESSARY FOR THE INSTALLER TO PROVIDE A SAMPLE OF THE SOIL TO THE LOCAL HEALTH DEPARTMENT.
17. THE SELECT FILL SHALL BE HARROWED INTO EXISTING SOIL, PAST THE TOPSOIL LAYER.
18. A RESERVE AREA OF 51 L.F. OF GEOMATRIX GST 6224 IS SHOWN ON THE PLAN.
19. THE SEPTIC TANK SHALL BE WATER-TIGHT AND BE SO CERTIFIED BY THE MANUFACTURER.
20. THE CONTRACTOR SHALL MORTAR ALL INLETS AND OUTLETS FROM SEPTIC TANK AND PUMP CHAMBER ONCE PIPES HAVE BEEN INSTALLED.
21. THE CONTRACTOR SHALL REMOVE ALL TREES, STUMPS, AND LARGE STONES WITHIN LIMITS OF THE SEWAGE DISPOSAL SYSTEM.
22. THE CONTRACTOR SHALL STRIP AND STOCKPILE TOPSOIL OUTSIDE THE LIMITS OF SEWAGE DISPOSAL SYSTEM AND REUSE IT TO FINISH GRADE THE AREA OF DISTURBANCE, ADDITIONAL TOPSOIL, IF REQUIRED TO COVER DISTURBED AREAS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
23. THE CONTRACTOR SHALL TOPSOIL, FINE RAKE, SEED AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION.
24. WHERE POSSIBLE THE CONTRACTOR SHALL SAVE EXISTING TREES IN AND AROUND THE AREA OF THE PROPOSED SEWAGE DISPOSAL SYSTEM BY WHATEVER MEANS HE DEEMS PRUDENT. NO TREES ARE TO BE REMOVED WITHOUT THE AUTHORIZATION OF THE OWNER.
25. THIS SYSTEM IS NOT DESIGNED TO ACCOMMODATE ANY FIXTURE FROM LEVELS LOWER THAN THE FIRST FLOOR. USE OF EJECTOR PUMP IS ASSUMED.
26. ALL UTILITY LOCATIONS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION OF THE UTILITIES IN THE FIELD BY WHATEVER MEANS HE DEEMS PRUDENT.
27. THE PUMP SHALL BE LIBERTY SERIES 290 OR EQUAL.
28. THE PUMP SHALL BE EQUIPPED WITH A FLOAT SWITCH SET SO THAT THE PUMP DISCHARGES 150 GALLON PER CYCLE. ELECTRICAL HOOKUP TO THE ALARM SHALL BE PLACED IN A MINIMUM 4" BY 4" WEATHER TIGHT BOX SET A MINIMUM OF 12" ABOVE FINISHED GRADE IN A PROTECTED LOCATION. A SERVICE DISCONNECT SHALL BE PLACED WITHIN VIEW SERVICE DISCONNECT SHALL BE PLACED WITHIN VIEW OF THE PUMP CHAMBER.
29. THE PUMP SHALL BE EQUIPPED WITH A WARNING SYSTEM THAT SHALL BE VISIBLE AND AUDIBLE TO THE HOMEOWNER.
30. THE PUMP TESTING SHALL BE WITNESSED BY THE DESIGN ENGINEER AND THE WILTON HEALTH DEPARTMENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM THE ENGINEER AND THE HEALTH DEPARTMENT WHEN THE SYSTEM IS READY FOR TESTING.
31. THE PROPOSED PUMP CHAMBER SHALL BE A 1500 GALLON SEPTIC TANK WITH ACCESS MANHOLE TO GRADE AS MANUFACTURED BY ARROW CONCRET PRODUCTS, INC. (CATALOG NO. ST1000), OR EQUAL. THE PROPOSED PUMP CHAMBER SHALL HAVE A MINIMUM RESERVE CAPACITY OF 600 GALLONS.
32. THIS SYSTEM IS NOT DESIGNED TO ACCEPT WASTE FROM GARBAGE DISPOSAL UNITS, BACKWASH FROM WATER SOFTENER UNITS OR DISCHARGE FROM JACUZZI TYPE HOT TUBS (> 100 GALLONS).
33. CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING "CALL BEFORE YOU DIG", 1-800-922-4455, PRIOR TO START OF ANY EXCAVATION WORK ON SITE, TO LOCATE ALL UNDERGROUND UTILITIES ON PROPERTY AND SHOW SERVICE LINES TO BUILDING. EXCAVATIONS WITHIN 5 TO 25 FEET OF THE SEPTIC SYSTEM SHALL NOT BE BACKFILLED WITH FREE DRAINING MATERIAL.
34. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE, NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.
35. AN "AS BUILT" PLAN BY A SURVEYOR AND REVIEWED BY A PROFESSIONAL ENGINEER, SHALL BE SUBMITTED TO THE DEPARTMENT OF HEALTH BEFORE A "PERMIT TO USE" IS ISSUED.
36. A CONNECTICUT REGISTERED PROFESSIONAL ENGINEER ACCEPTABLE TO THE DIRECTOR OF HEALTH SHALL REVIEW CONSTRUCTION TO INSURE COMPLIANCE WITH THE PROPOSED PLAN.
37. THIS SYSTEM IS DESIGNED FOR A MAXIMUM DAILY WATER USE OF 825 GALLONS.
38. MLSS REQUIREMENTS:

6 BEDROOM DWELLING: AND 2 BEDROOM ACCESSORY DWELLING	FF = 2.75 PF = 1.0 RL = 45.0" AVG.; 54.0" U.G. AVG. (TH 6 & TH 10); 36.0" D.G. AVG. (TH 11) SL = 6.7% HF = 18

MLSS = (2.75) (1.0) (18) = 49.5 L.F.

SPREAD PROVIDED: 65 L.F.

GRAPHIC SCALE

30 0 30 60

1 inch = 30 feet

SEDIMENTATION AND EROSION CONTROL NOTES

1. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. PERMANENT STABILIZATION SHALL BE SCHEDULED AS SOON AS FINAL GRADES ARE ESTABLISHED.
2. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED WITH AN APPROVED SEED MIXTURE. COVER NEWLY SEEDED AREAS WITH MULCH HAY OR SALT HAY.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE 2002 CONNECTICUT 'GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL' HANDBOOK.
4. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. CHECK AFTER EACH STORM EVENT.
5. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF REQUIRED BY TOWN AUTHORITIES.
6. SEDIMENT DEPOSITS REMOVED FROM FILTER BARRIERS SHALL BE PLACED IN FILL AREAS OR SPREAD WHERE THERE IS PROPOSED VEGETATIVE COVER. ANY SEDIMENT DEPOSITS REMAINING AFTER THE FILTER BARRIER IS REMOVED SHALL BE FINE GRADED AND PLANTED ACCORDING TO PLAN.
7. THE SITE CONSTRUCTION CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PLANNING AND ZONING OFFICE (AND/OR THE CONSERVATION COMMISSION) OF ANY TRANSFER OF THIS RESPONSIBILITY AND CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED TO A NEW OWNER.

LOCATION MAP

STATE OF CONNECTICUT
CHRISTINE I. BRADLEY
No. 24877
LICENSED PROFESSIONAL ENGINEER

7-26-23
date

REV. 1/15/24: TEST HOLES
REV. 12/16/23: PER WETLANDS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

SEPTIC PLAN

CIVIL ENGINEERS

2168
project

1 OF 2
sheet

Fairfield County Engineering LLC

FAIRFIELD COUNTY ENGINEERING L.L.C.

60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240115Septic

FCE Project #	2168	Date Performed:	6/21/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		

Test Hole 1:

0-5"	Topsoil	
5-24"	Tan Fine Gravel	
No Ground Water		
No Mottling		
Ledge @ 24"		
Roots to 20"		

Test Hole 2:

0-6"	Topsoil	
6-60"	Tan Fine Gravel	
No Ground Water		
No Mottling		
Ledge @ 60"		
Roots to 24"		

Test Hole 3:

0-8"	Topsoil	
8-30"	Tan Fine Gravel	
30-52"	Grey Fine Sand and Gravel	
No Ground Water		
No Mottling		
Ledge @ 52"		

Test Hole 4:

0-7"	Topsoil	
7-28"	Tan Fine Gravel	
28-49"	Grey Fine Sand and Gravel	
No Ground Water		
No Mottling		
Ledge @ 49"		
Roots to 21"		

Test Hole 5:

0-6"	Topsoil	
6-29"	Tan Fine Gravel	
29-48"	Grey Fine Sand and Gravel	
No Ground Water		
No Mottling		
Ledge @ 48"		
Roots to 26"		

Test Hole 6:

0-6"	Topsoil	
6-49"	Tan Fine Gravel	
No Ground Water		
No Mottling		
Ledge @ 49"		
Roots to 36"		

Test Hole 7:

0-6"	Topsoil	
6-49"	Tan Fine Gravel	
No Ground Water		
No Mottling		
Ledge @ 49"		
Roots to 40"		

Test Hole 8:

0-6"	Topsoil	
6-39"	Tan Fine Gravel	
No Ground Water		
No Mottling		
Ledge @ 39"		
Roots to 29"		

Test Hole 9:

0-6"	Topsoil	
6-46"	Tan Fine Gravel	
No Ground Water		
No Mottling		
Ledge @ 46"		
Roots to 26"		

SLOPE CALCULATIONS

SLOPE LINE A: 3.5'/81.2' 4.3% 553.5 to 550.0
SLOPE LINE B: 3.7'/56.9' 6.5% 553.7 to 550.0
SLOPE LINE C: 5.6'/59.7' 9.4% 553.6 to 548.0

AVG. SLOPE 6.73%

Conducted by:	Wayne D'Avanzo	Project:	2168
Location:	0 Mountain Road	Town:	Wilton
Client :	Old Driftway LLC	Date:	6/21/2023

Weather conditions prior to and during tests:
Clear

Single Lot:	X	Subdivision:	
Diameter of Hole:	8"	Depth of Hole:	19"

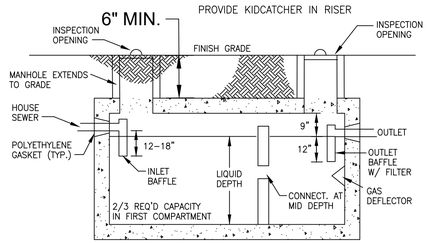
PT-1 **Design**
Pre-soak @ 9:30 AM **1"/10 Min.**

Time	Time Increment	Depth to Water	Drop in inches	Soil Percolation Rate Time to drop 1 inch	
10:30 AM	---	6"	---	---	
10:40 AM	10 Min.	14 1/2"	8 1/2"	1.2 Min.	Refill to 9 1/2"
10:50 AM	10 Min.	13 1/2"	4"	2.5 Min.	Refill to 8"
11:00 AM	10 Min.	13 1/8"	5 1/8"	2.0 Min.	
11:10 AM	10 Min.	15 1/8"	2"	5.0 Min.	Refill to 7 1/8"
11:20 AM	10 Min.	8 7/8"	1 3/4"	5.7 Min.	
11:30 AM	10 Min.	10 3/8"	1 1/2"	6.7 Min.	

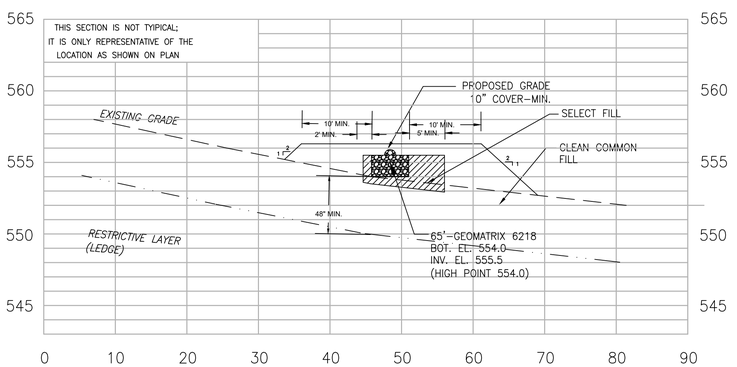
Single Lot:	X	Subdivision:	
Diameter of Hole:	8"	Depth of Hole:	20"

PT-2 **Design**
Pre-soak @ 9:35 AM **1"/10 Min.**

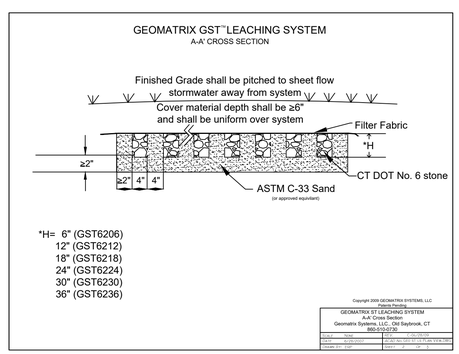
Time	Time Increment	Depth to Water	Drop in inches	Soil Percolation Rate Time to drop 1 inch	
10:35 AM	---	4"	---	---	
10:45 AM	10 Min.	11"	7"	1.4 Min.	
10:55 AM	10 Min.	15 1/4"	4 1/4"	2.4 Min.	Refill to 3"
11:05 AM	10 Min.	6 1/2"	3 1/2"	2.9 Min.	
11:15 AM	10 Min.	8 3/4"	2 1/4"	4.4 Min.	
11:25 AM	10 Min.	10 3/8"	1 5/8"	6.2 Min.	
11:35 AM	10 Min.	11 7/8"	1 1/2"	6.7 Min.	

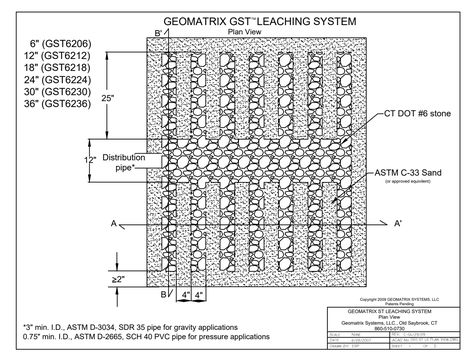


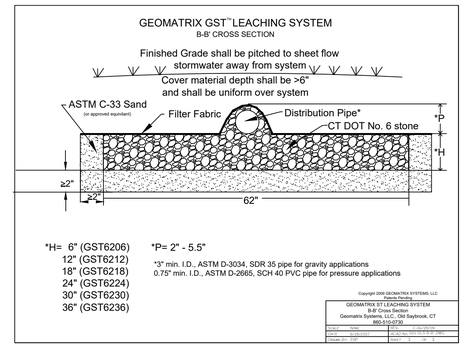
SEPTIC TANK (2000 GAL+)
NOT TO SCALE



SECTION A–A
SCALE– H: 1"–10'
V: 1"–5'







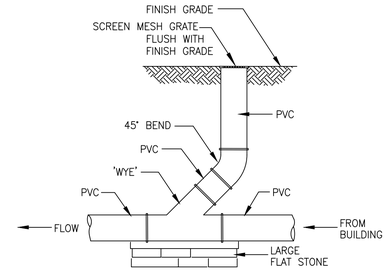
FCE Project #	2168	Date Performed:	1/30/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		

TH 10

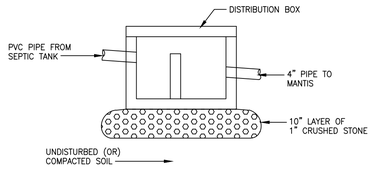
0-5"	Topsoil	
5-60"	Tan Fine Gravel	
No Ledge		

TH 11

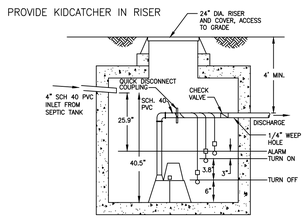
0-5"	Topsoil	
5-36"	Tan Fine Gravel	
Ledge @ 36"		



TYPICAL CLEANOUT
NOT TO SCALE



BAFFLED DISTRIBUTION BOX
NOT TO SCALE



1500 GALLON PUMP CHAMBER
NOT TO SCALE

65' OF GEOMATRIX GST 6218 CAPACITY = 899.6 GALLONS
MAX. DOSE FOR 65' OF GEOMATRIX GST 6212 = 449.8 GALLONS/CYCLE
DOSE PROPOSED = 150 GALLONS PER CYCLE
PUMP CHAMBER CAPACITY = APPROX. 40.0 GALLONS/INCH DEPTH
PUMP 6" OFF BOTTOM = 240 GALLONS; CYCLE = 3.8" = 150 GALLONS;
1,110 GALLONS RESERVE 3 BEDROOMS X 150 GALLONS/DAY + 5 (75) = 825 GALLONS
LIBERTY 290 SERIES PUMP DELIVERS APPROX. 30 GALLONS/MIN.

GEOMATRIX

GST™ Leaching System

Storage Volume and Dosing Recommendations

Product Name	Dimensions (W x H)	Storage Volume Gallons per LF	Maximum Recommended Dosing Volume Gallons per LF
GST 3706	37" x 6"	3.05	1.53
GST 3712	37" x 12"	6.11	3.05
GST 3718	37" x 18"	9.16	4.58
GST 3724	37" x 24"	12.22	6.11
GST 3730	37" x 30"	15.27	7.64
GST 3736	37" x 36"	18.32	9.16
GST 6206	62" x 6"	4.62	2.31
GST 6212	62" x 12"	9.23	4.61
GST 6218	62" x 18"	13.84	6.92
GST 6224	62" x 24"	18.45	9.23
GST 6230	62" x 30"	23.06	11.53
GST 6236	62" x 36"	27.68	13.84

Stone and Sand Volume Guide

Product	Amount of DOT No. 6 "t" Stone Required	Amount of ASTM C-33 Sand Required
	Yards per , Linear Foot	
GST 3706	0.10	0.18
GST 3712	0.19	0.25
GST 3718	0.22	0.32
GST 3724	0.25	0.39
GST 3730	0.28	0.46
GST 3736	0.31	0.53
GST 6206	0.20	0.25
GST 6212	0.27	0.35
GST 6218	0.35	0.45
GST 6224	0.43	0.56
GST 6230	0.50	0.66
GST 6236	0.58	0.76

NOTE: Amount, of stone calculated to fill form and to provide 6" over GST to accommodate distribution pipe. Installer is responsible for ordering additional necessary stone to account for spillage, etc. STONE MUST BE CLEAN AND WASHED #4 OR#57.

NOTE: Amount of sand calculated to fill the form, a base of 2" and a 2" perimeter around the form. Installer is responsible for ordering additional sand for larger and/or irregularly shaped excavations, to account for spillage, etc. MUST MEET ASTM C-33 SPEC.

114 Mill Rock Road East – Old Saybrook, CT 06475
Phone: 860-510-0730 – Fax: 860-510-0735

REV. 1/15/24: TEST HOLES
REV. 12/16/23: PER WETLANDS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

7–26–23
date

DETAIL SHEET

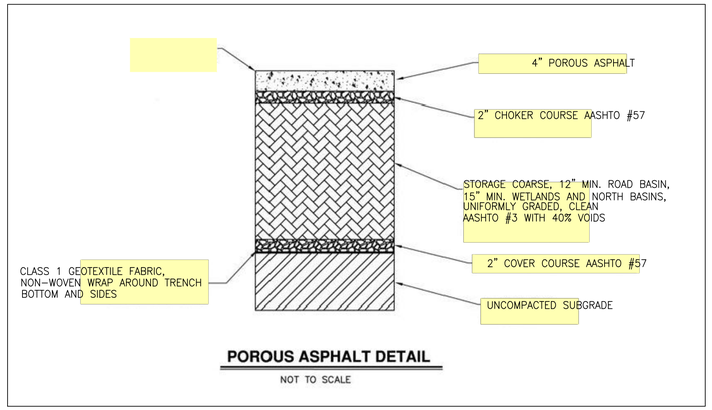
CIVIL ENGINEERS

2168
project

2 OF 2
sheet

Fairfield County Engineering LLC
FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831–8005 FAX: (203) 831–8006

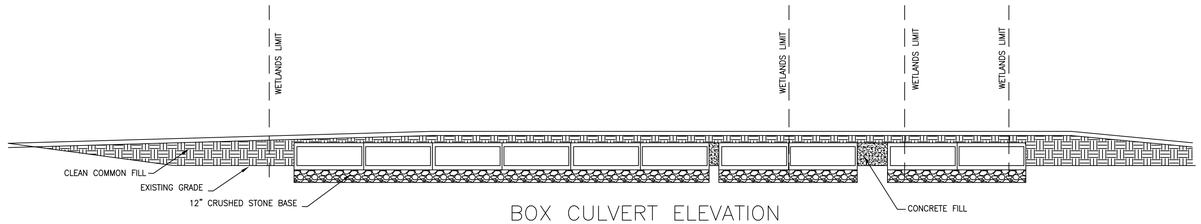
2168_240115Septic



POROUS ASPHALT DETAIL

NOT TO SCALE

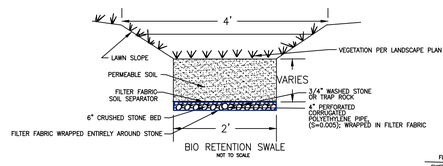
NOTE: SOILS BENEATH AGGREGATE SHALL BE SCARIFIED OR TILLED PRIOR TO INSTALLATION OF AGGRAGATE.



BOX CULVERT ELEVATION

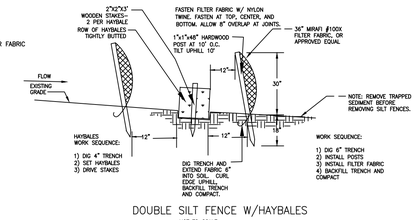
CONSTRUCTION SEQUENCE

1. Install silt fencing along both sides of R.O.W.
2. Install double silt fencing and haybales along wetlands.
3. Install mud anti tracking pad at entry.
4. Engage herpetologist as necessary.
5. Grade driveway, place box culverts.
6. Install driveway drains, coarse particle separators.
7. Install swales, plantings as indicated on Landscape Plan.
8. Pave porous and regular asphalt areas of driveway.
9. Fine grade, topsoil and seed all areas as necessary.
10. Remove erosion controls once site is stabilized.



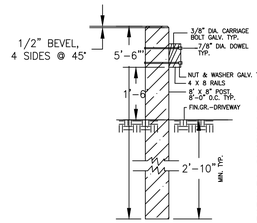
BIO RETENTION SWALE

NOT TO SCALE



DOUBLE SILT FENCE W/HAYBALES

NOT TO SCALE



NOTES

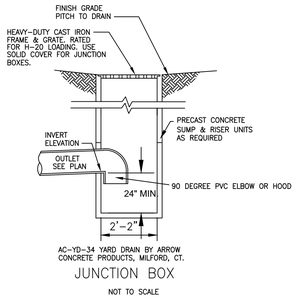
1. ALL FENCING SHALL BE AS SUPPLIED BY WALPOLE WOODWORKERS, WALPOLE, MASS. OR APPROVED EQUAL.
2. ALL FENCE MATERIAL SHALL BE ROUGH– SAWN NORTHERN WHITE CEDAR TO THE DIMENSIONS SHOWN ON THESE PLANS.
3. ALL FENCE POSTS SHALL BE TREATED WITH CREOSOTE ON ALL SIDES FOR 3 FT. FROM BUTT END OF POST.
4. POSTS SHALL BE EXTENDED TO MAINTAIN A MINIMUM BURIAL DEPTH OF 2'–10" TO ACCOMODATE CHANGES IN GRADE.
5. FENCE LINE TOP & BOTTOM SHALL BE INSTALLED STRAIGHT AND TRUE. ALL POSTS SHALL BE INSTALLED PARALLEL AND PLUMB. ALL RAILS SHALL BE PARALLEL AND TRUE.

WOOD GUIDERAIL

NOT TO SCALE

FCE Project #	2168	Date Performed:	1/30/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		

TH 5		
	0-5"	Topsoil
	5-62"	Brown Fine Gravel
	No Ledge	
TH 6		
	0-5"	Topsoil
	5-61"	Brown Fine Gravel
	No Ledge	
TH 7	0-10"	Topsoil
	Ledge @ 10"	
TH 8		
	0-5"	Topsoil
	5-61"	Brown Fine Gravel
	No Ledge	
TH 9		
	0-5"	Topsoil
	5-60"	Brown Fine Gravel
	No Ledge	
TH 10		
	0-5"	Topsoil
	5-62"	Brown Fine Gravel
	No Ledge	
TH 11		
	0-5"	Topsoil
	5-63"	Brown Fine Gravel
	No Ledge	
TH 12		
	0-5"	Topsoil
	5-62"	Brown Fine Gravel
	No Ledge	

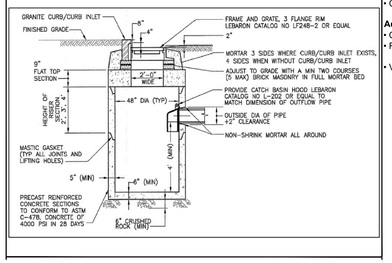


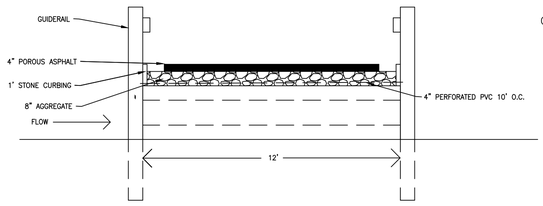
AC–YD–34 YARD DRAIN BY ARROW CONCRETE PRODUCTS, MILFORD, CT.

JUNCTION BOX

NOT TO SCALE

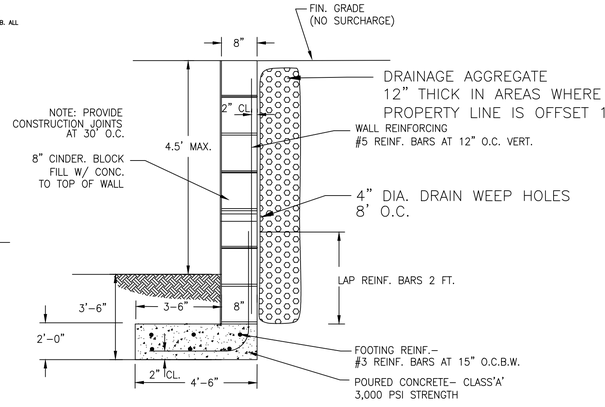
Stormwater BMP	Design References
Pretreatment BMPs	
Deep Sump Catch Basins	**Primary Reference:** • Connecticut Stormwater Quality Manual **Additional Information Sources:** • Connecticut Department of Transportation Drainage Manual • Rhode Island Stormwater Design and Installation Standards Manual • Vermont Stormwater Treatment Standards





BOX CULVERT DRIVEWAY CROSS SECTIOM

NOT TO SCALE

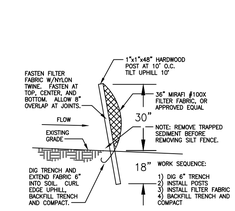


CONCRETE BLOCK RETAINING WALL

NOT TO SCALE

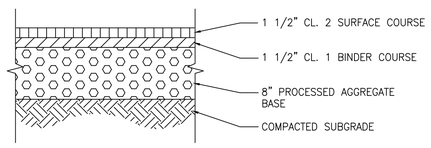
FCE Project #	2168	Date Performed:	10/6/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		

Test Hole 1:		
	0-4"	Topsoil
	4-38"	Tan Fine Gravel, rocky
	No Ground Water	
	No Mottling	
	No Ledge	
	Compacted at 38"	
	Roots to 30"	
Test Hole 2:		
	0-4"	Topsoil
	4-24"	Tan Fine Gravel
	No Ground Water	
	No Mottling	
	Ledge @ 24"	
	Roots to 19"	
Test Hole 3:		
	0-5"	Topsoil
	5-43"	Tan Fine Gravel, rocky
	No Ground Water	
	No Mottling	
	No Ledge	
	Roots to 28"	
Test Hole 4:		
	0-4"	Topsoil
	4-20"	Brown Fine Gravel
	No Ground Water	
	No Mottling	
	Ledge @ 20"	
	Roots to 12"	



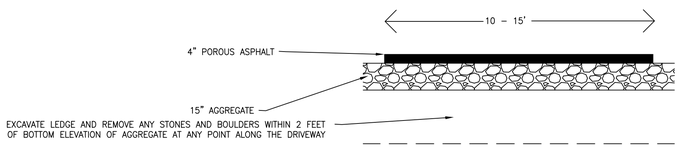
SILT FENCE

NOT TO SCALE



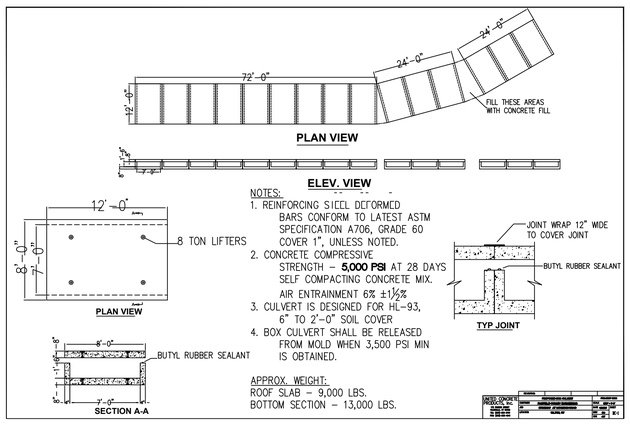
DRIVEWAY PAVEMENT

NOT TO SCALE



DRIVEWAY CROSS SECTIOM

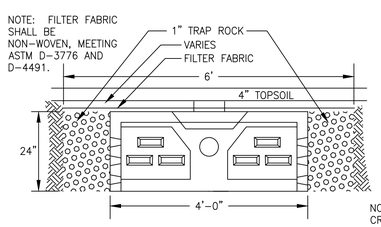
NOT TO SCALE



NOTES:

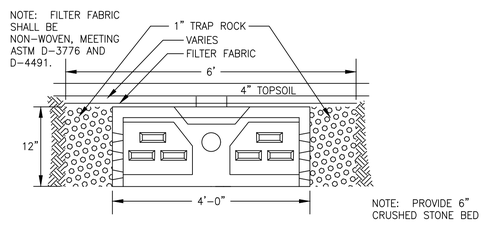
1. REINFORCING SIECL DEFORMED BARS CONFORM TO LATEST ASTM SPECIFICATION A706, GRADE 60 COVER 1", UNLESS NOTED.
2. CONCRETE COMPRESSIVE STRENGTH – **5,000 PSI** AT 28 DAYS SELF COMPACTING CONCRETE MIX. AIR ENTRAINMENT 6% ±1½%
3. CULVERT IS DESIGNED FOR HL–93, 6" TO 2'–0" SOIL COVER
4. BOX CULVERT SHALL BE RELEASED FROM MOLD WHEN 3,500 PSI MIN IS OBTAINED.

APPROX. WEIGHT:
ROOF SLAB – 9,000 LBS.
BOTTOM SECTION – 13,000 LBS.



24" LEACHING GALLERY H 20 RATED

NOT TO SCALE



12" LEACHING GALLERY H 20 RATED

NOT TO SCALE

STATE OF CONNECTICUT WAYNE J. D'AVANZO No. 24877 LICENSED PROFESSIONAL ENGINEER

REV. 1/15/24: PER ENGINEERING COMMENTS.
REV. 1/8/24: 1' TOPOGRAPHY ADDED.
REV. 12/13/23: PER ENGINEERING COMMENTS.
REV. 11/10/23: PER ENGINEERING COMMENTS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD — WILTON, CONNECTICUT

10–14–23 date

DETAIL SHEET

Fairfield County Engineering LLC

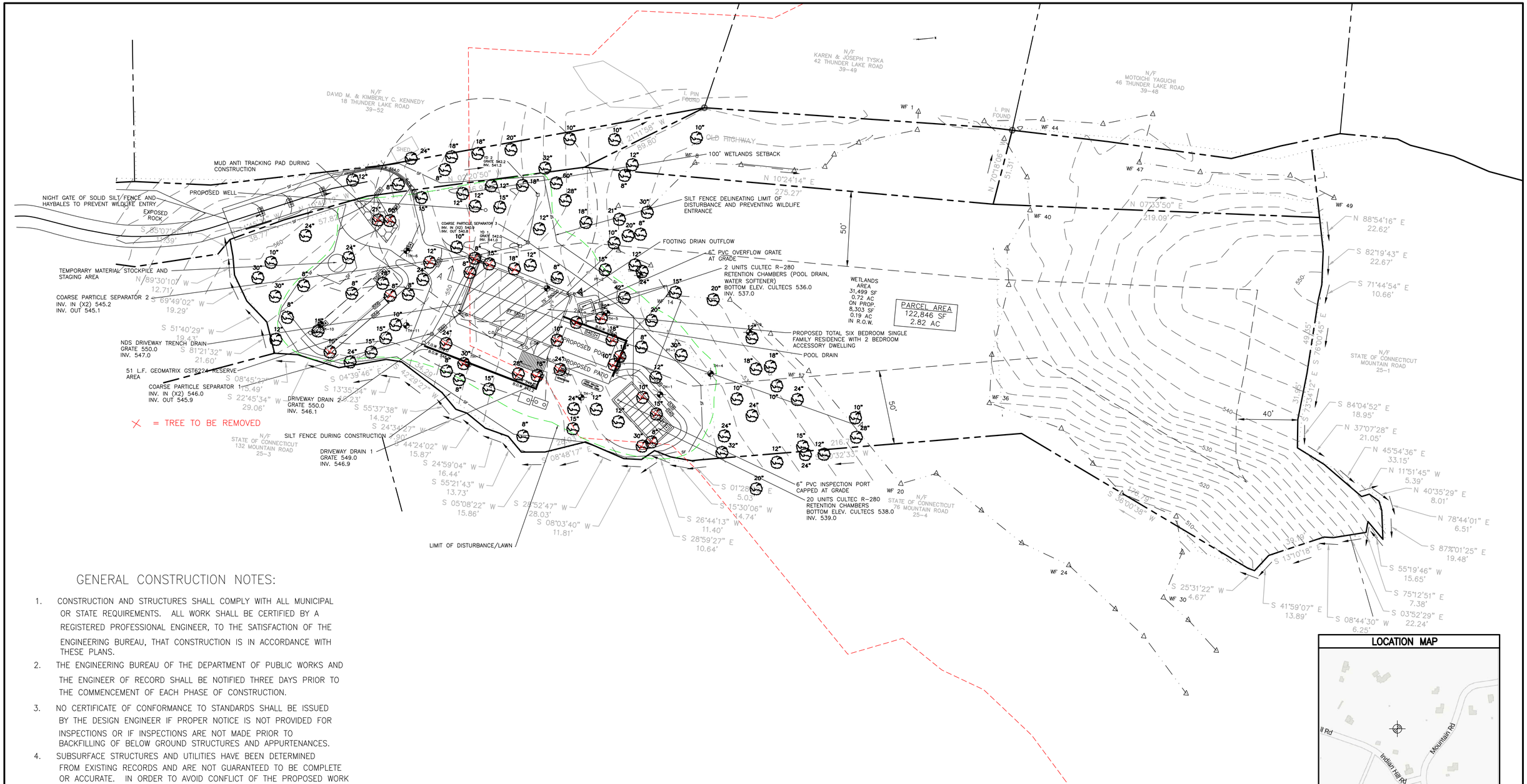
CIVIL ENGINEERS

2168 project

6 OF 6 sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831–8005 FAX: (203) 831–8006

2168_240115ROW



GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION AND STRUCTURES SHALL COMPLY WITH ALL MUNICIPAL OR STATE REQUIREMENTS. ALL WORK SHALL BE CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, TO THE SATISFACTION OF THE ENGINEERING BUREAU, THAT CONSTRUCTION IS IN ACCORDANCE WITH THESE PLANS.
2. THE ENGINEERING BUREAU OF THE DEPARTMENT OF PUBLIC WORKS AND THE ENGINEER OF RECORD SHALL BE NOTIFIED THREE DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION.
3. NO CERTIFICATE OF CONFORMANCE TO STANDARDS SHALL BE ISSUED BY THE DESIGN ENGINEER IF PROPER NOTICE IS NOT PROVIDED FOR INSPECTIONS OR IF INSPECTIONS ARE NOT MADE PRIOR TO BACKFILLING OF BELOW GROUND STRUCTURES AND APPURTENANCES.
4. SUBSURFACE STRUCTURES AND UTILITIES HAVE BEEN DETERMINED FROM EXISTING RECORDS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. IN ORDER TO AVOID CONFLICT OF THE PROPOSED WORK AND EXISTING UTILITIES, THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES BY EXCAVATING TEST HOLES. IF THE CONTRACTOR DETERMINES THAT A CONFLICT EXISTS, HE SHALL IMMEDIATLEY NOTIFY THE ENGINEER, WHO WILL MAKE THE NECESSARY ADJUSTMENTS.
5. EXISTING PROPERTY AND UTILITY INFORMATION WAS TAKEN FROM A SURVEY BY ALL SEASONS LAND SURVEYING TITLED "ZONING LOCATION SURVEY PREPARED FOR OLD DRIFTWAY LLC", DATED MARCH 31, 2023.
6. THESE PLANS ARE FOR MUNICIPAL OR STATE AGENCY APPROVAL ONLY. NOT FOR CONSTRUCTION.
7. NO PIPE SHALL HAVE A BEND OF GREATER THAN 45 DEGREES.
8. THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455, OR OTHER APPROPRIATE CONTACT POINT PRIOR TO START OF CONSTRUCTION.
9. ALL UTILITY LOCATIONS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION OF THE UTILITIES IN THE FIELD BY WHATEVER MEANS HE DEEMS PRUDENT.
10. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE, NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.
11. TOTAL SITE AREA = 2.82 ACRES

GRAPHIC SCALE

30 0 30 60

1 inch = 30 feet

SEDIMENTATION AND EROSION CONTROL NOTES

1. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. PERMANENT STABILIZATION SHALL BE SCHEDULED AS SOON AS FINAL GRADES ARE ESTABLISHED.
2. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED WITH AN APPROVED SEED MIXTURE. COVER NEWLY SEEDED AREAS WITH MULCH HAY OR SALT HAY.
3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE 2002 CONNECTICUT "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" HANDBOOK.
4. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. CHECK AFTER EACH STORM EVENT.
5. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF REQUIRED BY TOWN AUTHORITIES.
6. SEDIMENT DEPOSITS REMOVED FROM FILTER BARRIERS SHALL BE PLACED IN FILL AREAS OR SPREAD WHERE THERE IS PROPOSED VEGETATIVE COVER. ANY SEDIMENT DEPOSITS REMAINING AFTER THE FILTER BARRIER IS REMOVED SHALL BE FINE GRADED AND PLANTED ACCORDING TO PLAN.
7. THE SITE CONSTRUCTION CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PLANNING AND ZONING OFFICE (AND/OR THE CONSERVATION COMMISSION) OF ANY TRANSFER OF THIS RESPONSIBILITY AND CONVEYING A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED TO A NEW OWNER.

LOCATION MAP

STATE OF CONNECTICUT
JOSEPH T. DONAHUE
No. 24877
LICENSED PROFESSIONAL ENGINEER

10-6-23
date

REV. 1/15/24:
REV. 1/2/24: RETENTION RELOCATED.
REV. 12/16/23: PER WETLANDS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

DRAINAGE PLAN

CIVIL ENGINEERS

2168 project

1 OF 2 sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.
60 WINFIELD STREET, NORWALK, CONNECTICUT 06855 PH: (203) 831-8005 FAX: (203) 831-8006

2168_240115Drainage

FCE Project #	2168	**Date Performed:**	6/21/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		

Test Hole 1:

0-5"	Topsoil
5-24"	Tan Fine Gravel
No Ground Water	
No Mottling	
Ledge @ 24"	
Roots to 24"	

Test Hole 2:

0-6"	Topsoil
6-60"	Tan Fine Gravel
No Ground Water	
No Mottling	
Ledge @ 60"	
Roots to 24"	

Test Hole 3:

0-8"	Topsoil
8-30"	Tan Fine Gravel
30-52"	Grey Fine Sand and Gravel
No Ground Water	
No Mottling	
Ledge @ 52"	

Test Hole 4:

0-7"	Topsoil
7-28"	Tan Fine Gravel
28-48"	Grey Fine Sand and Gravel
No Ground Water	
No Mottling	
Ledge @ 48"	
Roots to 21"	

Test Hole 5:

0-6"	Topsoil
6-29"	Tan Fine Gravel
29-48"	Grey Fine Sand and Gravel
No Ground Water	
No Mottling	
Ledge @ 48"	
Roots to 26"	

Test Hole 6:

0-6"	Topsoil
6-49"	Tan Fine Gravel
No Ground Water	
No Mottling	
Ledge @ 49"	
Roots to 36"	

Test Hole 7:

0-6"	Topsoil
6-49"	Tan Fine Gravel
No Ground Water	
No Mottling	
Ledge @ 49"	
Roots to 40"	

Test Hole 8:

0-6"	Topsoil
6-39"	Tan Fine Gravel
No Ground Water	
No Mottling	
Ledge @ 39"	
Roots to 29"	

Test Hole 9:

0-6"	Topsoil
6-46"	Tan Fine Gravel
No Ground Water	
No Mottling	
Ledge @ 46"	
Roots to 26"	

Conducted by: Wayne D'Avanzo Project: 2168

Location: 0 Mountain Road Town: Wilton

Client: Old Driftway LLC Date: 6/21/2023

Weather conditions prior to and during tests:
Clear

Single Lot: X Subdivision:
Diameter of Hole: 8" Depth of Hole: 19"

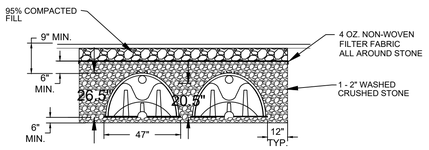
PT-1
Pre-soak @ 9:30 AM — Design 1"/10 Min.

Time	Time Increment	Depth to Water	Drop in Inches	Soil Percolation Rate Time to drop 1 Inch	
10:30 AM		6"	—	—	
10:40 AM	10 Min.	14 1/2"	8 1/2"	1.2 Min.	Refill to 9 1/2"
10:50 AM	10 Min.	13 1/2"	4"	2.5 Min.	Refill to 8"
11:00 AM	10 Min.	13 1/8"	5 1/8"	2.0 Min.	
11:10 AM	10 Min.	15 1/8"	2"	5.0 Min.	Refill to 7 1/8"
11:20 AM	10 Min.	8 7/8"	1 3/4"	5.7 Min.	
11:30 AM	10 Min.	10 3/8"	1 1/2"	6.7 Min.	

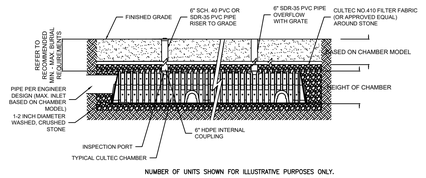
Single Lot: X Subdivision:
Diameter of Hole: 8" Depth of Hole: 20"

PT-2
Pre-soak @ 9:35 AM — Design 1"/10 Min.

Time	Time Increment	Depth to Water	Drop in Inches	Soil Percolation Rate Time to drop 1 Inch	
10:35 AM		4"	—	—	
10:45 AM	10 Min.	11"	7"	1.4 Min.	
10:55 AM	10 Min.	15 1/4"	4 1/4"	2.4 Min.	Refill to 3"
11:05 AM	10 Min.	6 1/2"	3 1/2"	2.9 Min.	
11:15 AM	10 Min.	8 3/4"	2 1/4"	4.4 Min.	
11:25 AM	10 Min.	10 3/8"	1 5/8"	6.2 Min.	
11:35 AM	10 Min.	11 7/8"	1 1/2"	6.7 Min.	

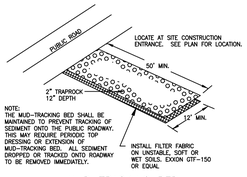


CULTEC RECHARGER 280HD
TYPICAL CROSS SECTION

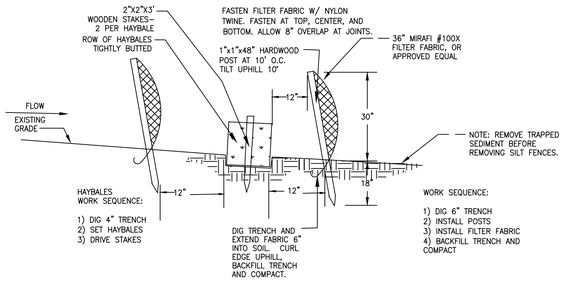


NUMBER OF UNITS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

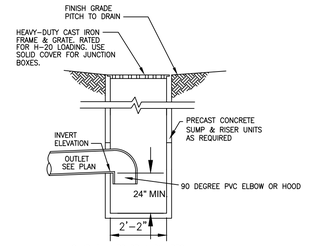
CULTEC INSPECTION PORT AND OVERFLOW
(AS APPLICABLE)



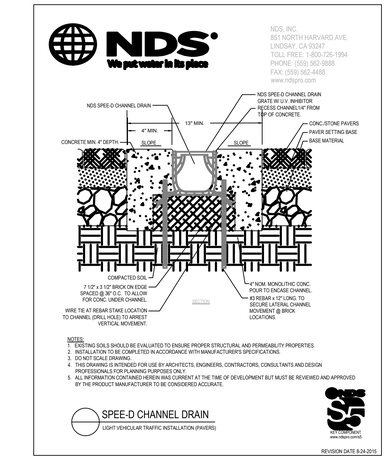
MUD-TRACKING BED
NOT TO SCALE



DOUBLE SILT FENCE W/HAYBALES
NOT TO SCALE



DRIVEWAY/YARD DRAIN
NOT TO SCALE



NOTES:
1. EXISTING SOILS SHOULD BE EVALUATED TO ENSURE PROPER STRUCTURAL AND PERMEABILITY PROPERTIES.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. DO NOT SCALE DRAWING.
4. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY.
5. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

SPEE-D CHANNEL DRAIN
LIGHT VEHICULAR TRAFFIC INSTALATION (PAVERS)

NDS is ISO 9001:2015 certified
www.ndspro.com/iso9001

REVISION DATE 8-24-2015

FCE Project #	2168	**Date Performed:**	1/30/2023
Client:	Old Driftway LLC		
Location:	0 Mountain Road, Wilton		
Observed by:	Wayne D'Avanzo		

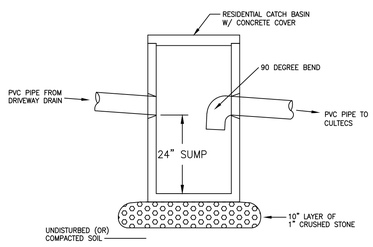
TH 10

0-5"	Topsoil
5-60"	Tan Fine Gravel
No Ledge	

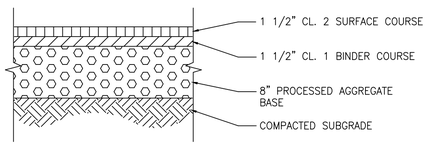
TH 11

0-5"	Topsoil
5-36"	Tan Fine Gravel
Ledge @ 36"	

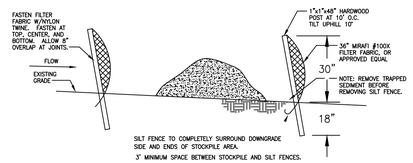
SECTION A-A
SCALE- H: 1"-10'
V: 1"-5'



COARSE PARTICLE SEPARATOR
NOT TO SCALE



DRIVEWAY PAVEMENT
NOT TO SCALE



STOCKPILE PROTECTION
NOT TO SCALE

STATE OF CONNECTICUT
WAYNE J. D'AVANZO
No. 24877
LICENSED PROFESSIONAL ENGINEER

REV. 1/15/24:
REV. 1/2/24: RETENTION RELOCATED.
REV. 12/16/23: PER WETLANDS.

OLD DRIFTWAY LLC

0 MOUNTAIN ROAD WILTON, CONNECTICUT

10-6-23
date

DETAIL SHEET

Fairfield County Engineering LLC

CIVIL ENGINEERS

2168
project

2 OF 2
sheet

FAIRFIELD COUNTY ENGINEERING L.L.C.

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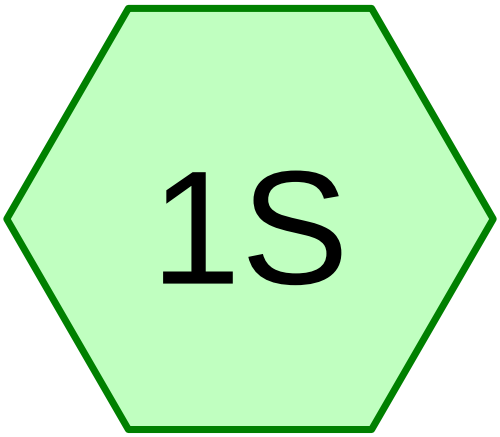
2168_240115Drainage



Existing Conditions

Subcat Reach Pond Link

Routing Diagram for 2168ROWExisting
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Summary for Subcatchment 1S: Existing Conditions

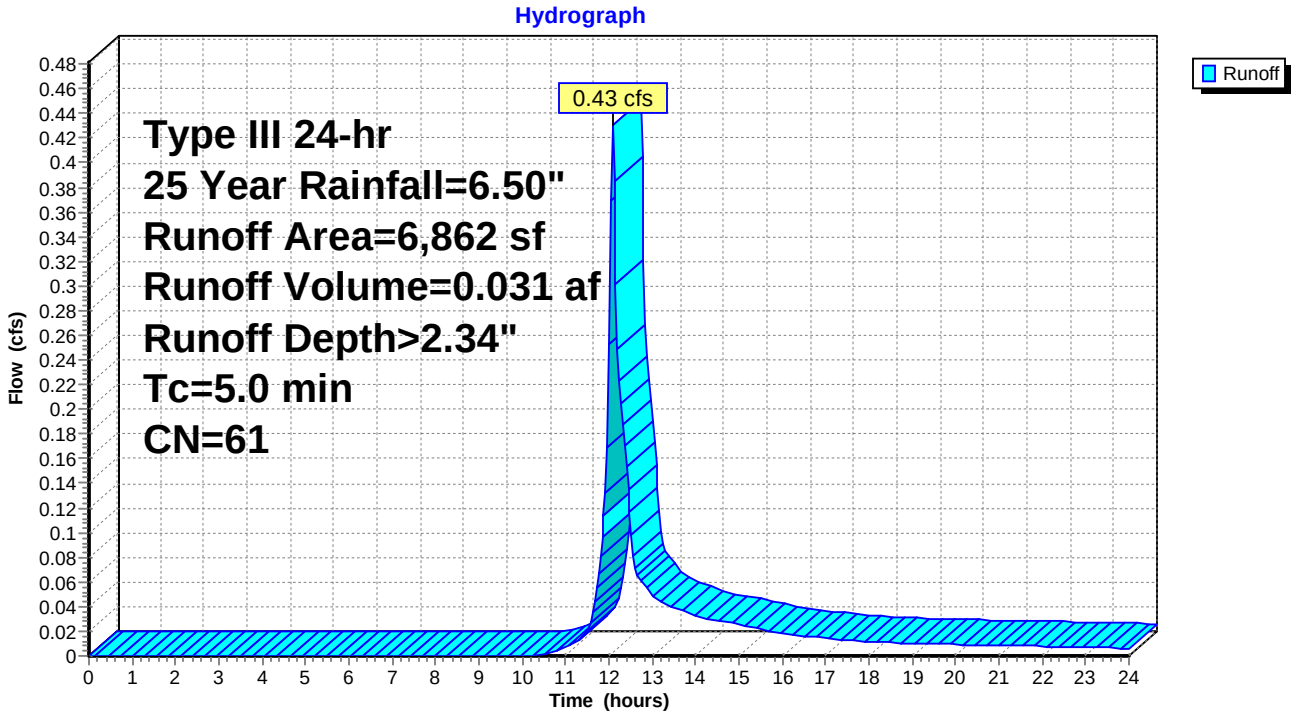
Runoff = 0.43 cfs @ 12.08 hrs, Volume= 0.031 af, Depth> 2.34"

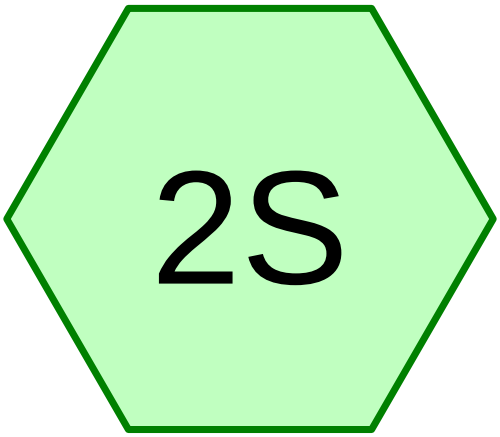
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	6,862	61	Woods, Fair, HSG B
	6,862		100.00% Pervious Area

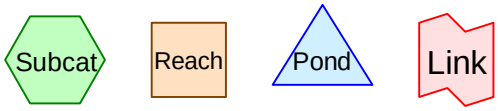
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct**

Subcatchment 1S: Existing Conditions





Proposed Conditions



Routing Diagram for 2168ROWProposed
Prepared by Fairfield County Engineering LLC, Printed 1/31/2024
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Summary for Subcatchment 2S: Proposed Conditions

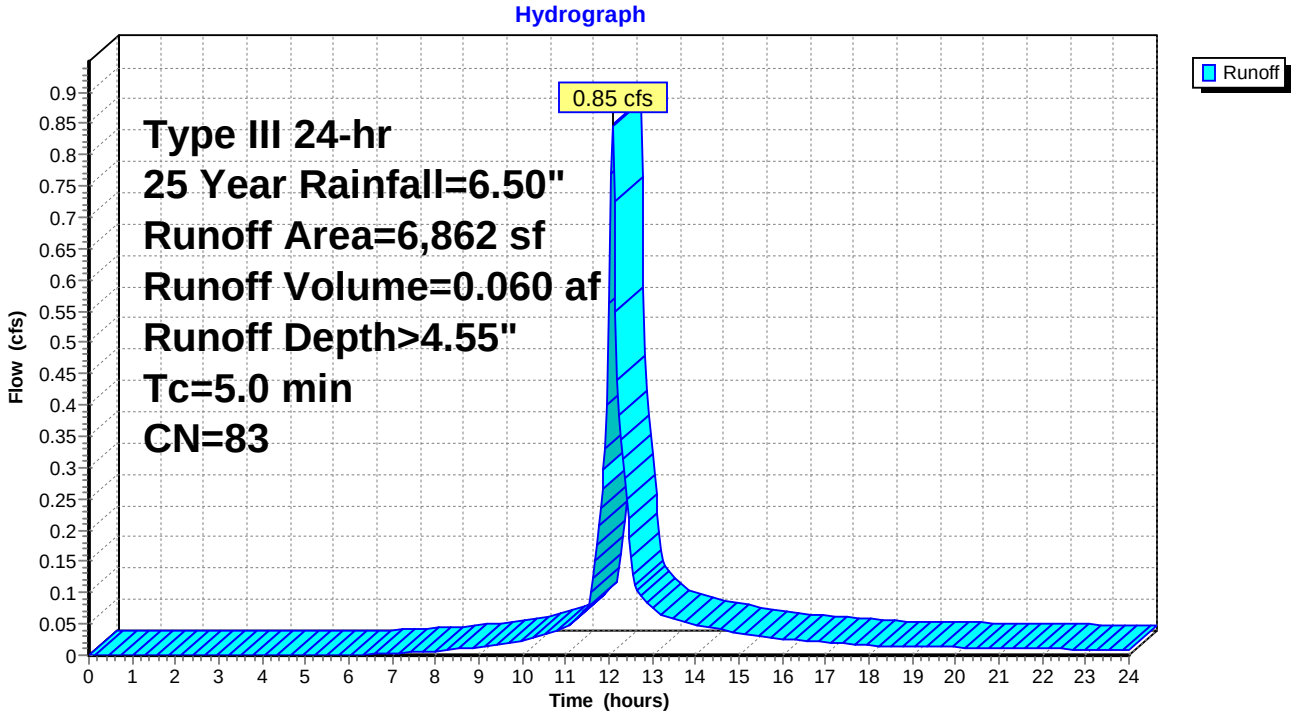
Runoff = 0.85 cfs @ 12.08 hrs, Volume= 0.060 af, Depth> 4.55"

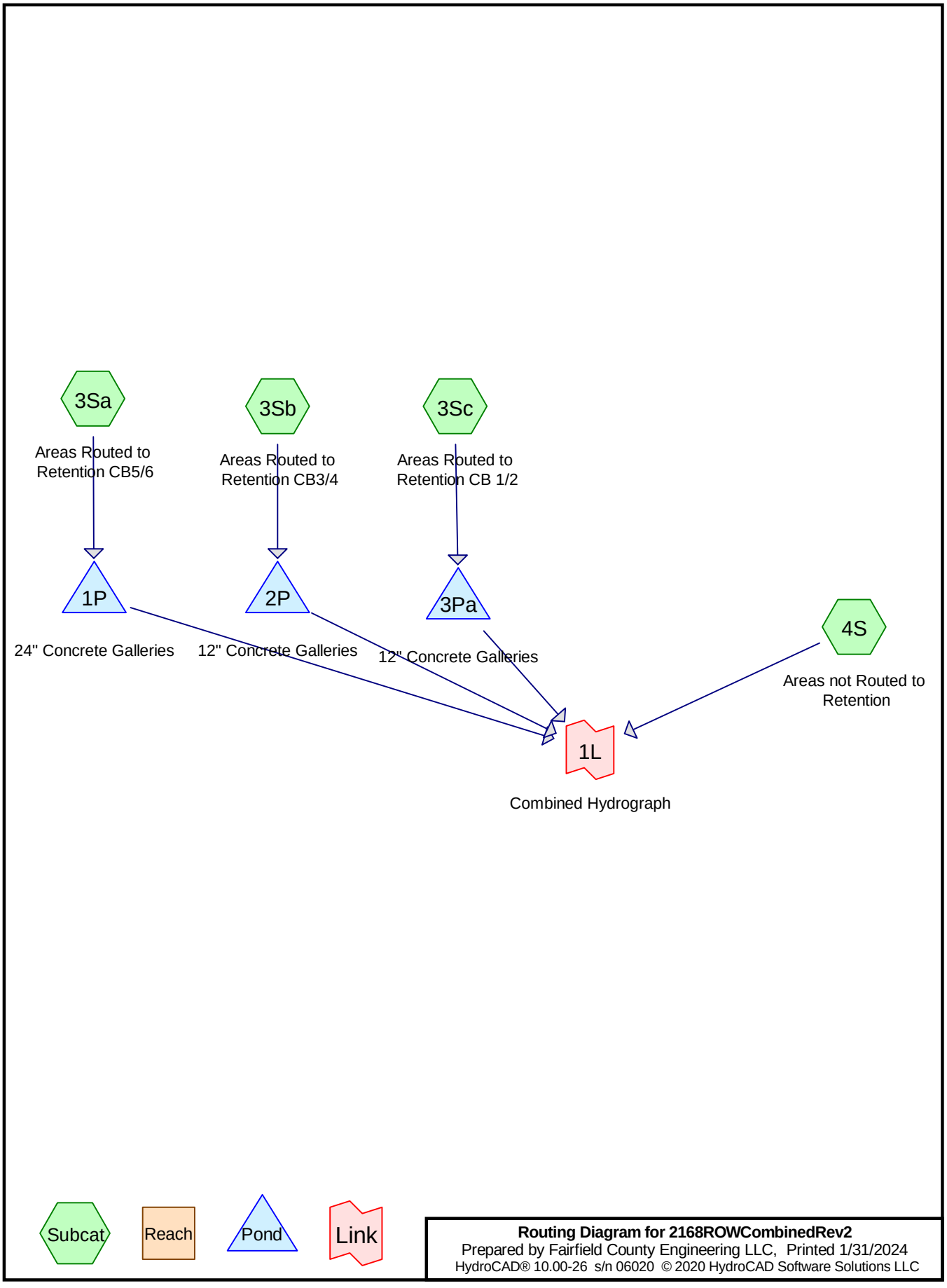
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	4,017	98	Driveway
*	2,845	61	Woods, Fair, HSG B
	6,862	83	Weighted Average
	2,845		41.46% Pervious Area
	4,017		58.54% Impervious Area

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

Subcatchment 2S: Proposed Conditions





Summary for Subcatchment 3Sa: Areas Routed to Retention CB5/6

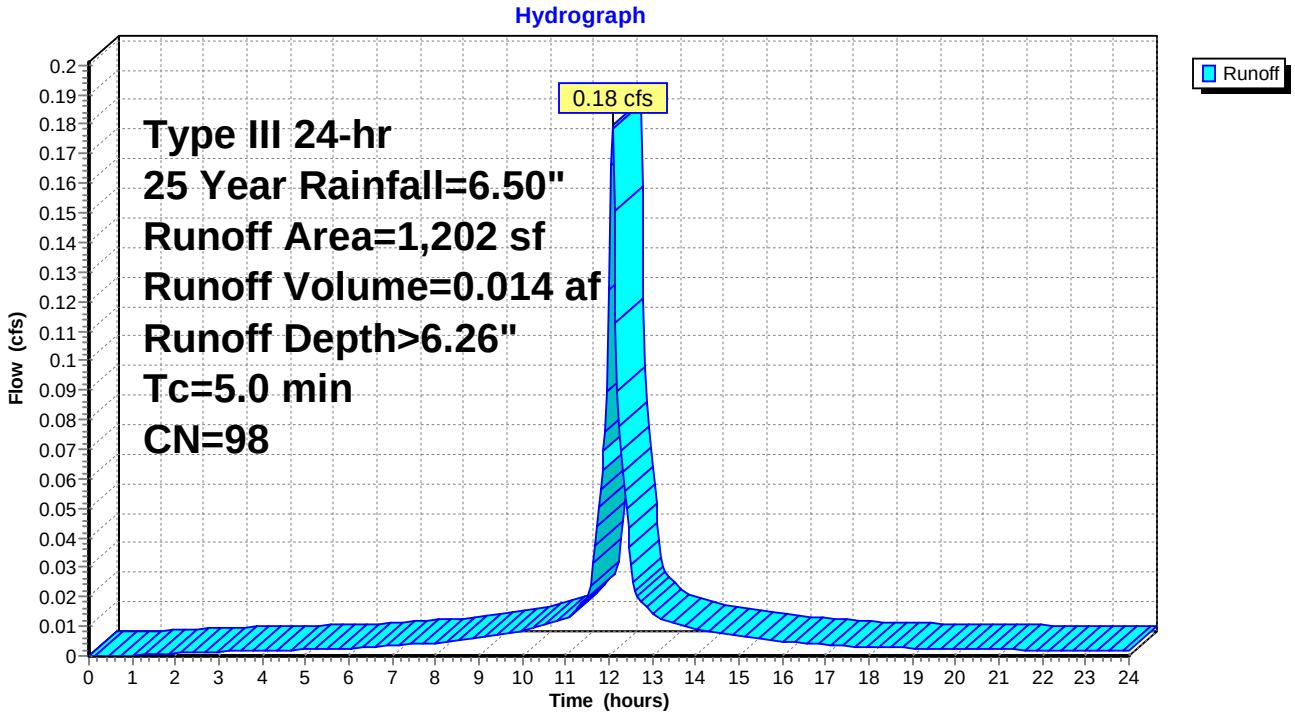
Runoff = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,202	98	Driveway
	1,202		100.00% Impervious Area

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

Subcatchment 3Sa: Areas Routed to Retention CB5/6



Summary for Subcatchment 3Sb: Areas Routed to Retention CB3/4

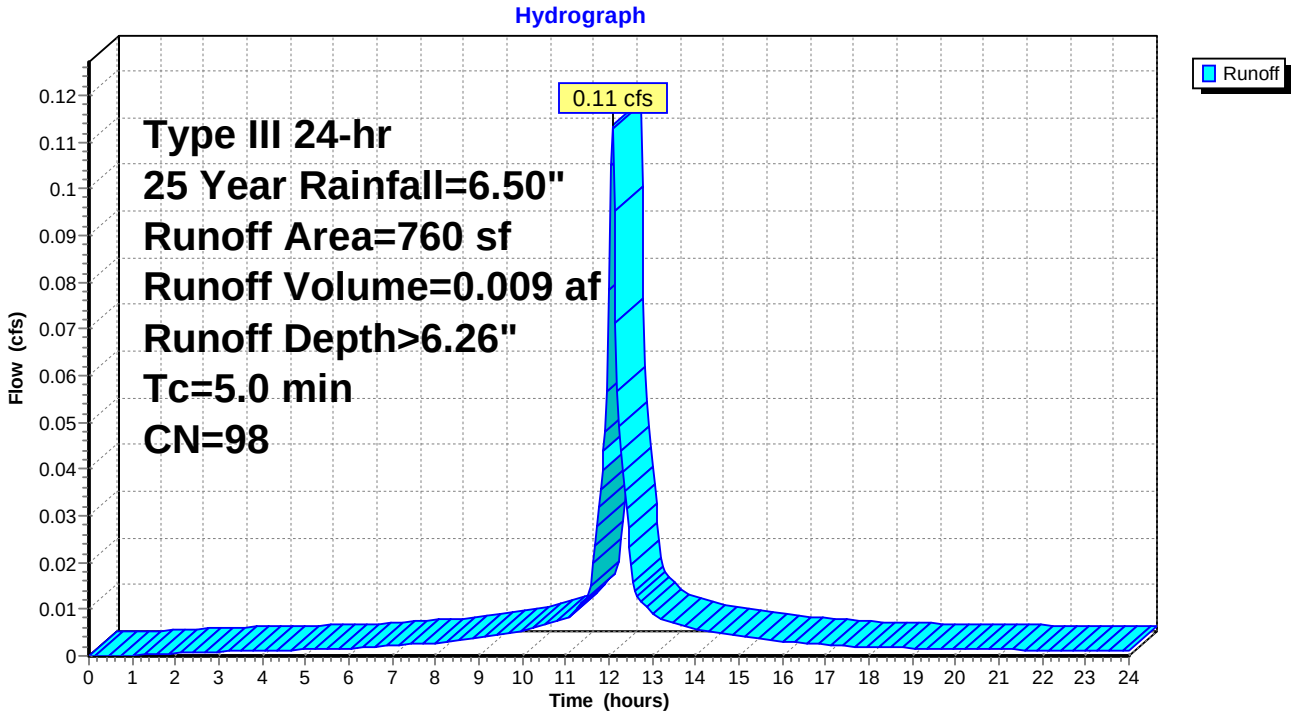
Runoff = 0.11 cfs @ 12.07 hrs, Volume= 0.009 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	760	98	Driveway
	760		100.00% Impervious Area

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

Subcatchment 3Sb: Areas Routed to Retention CB3/4



Summary for Subcatchment 3Sc: Areas Routed to Retention CB 1/2

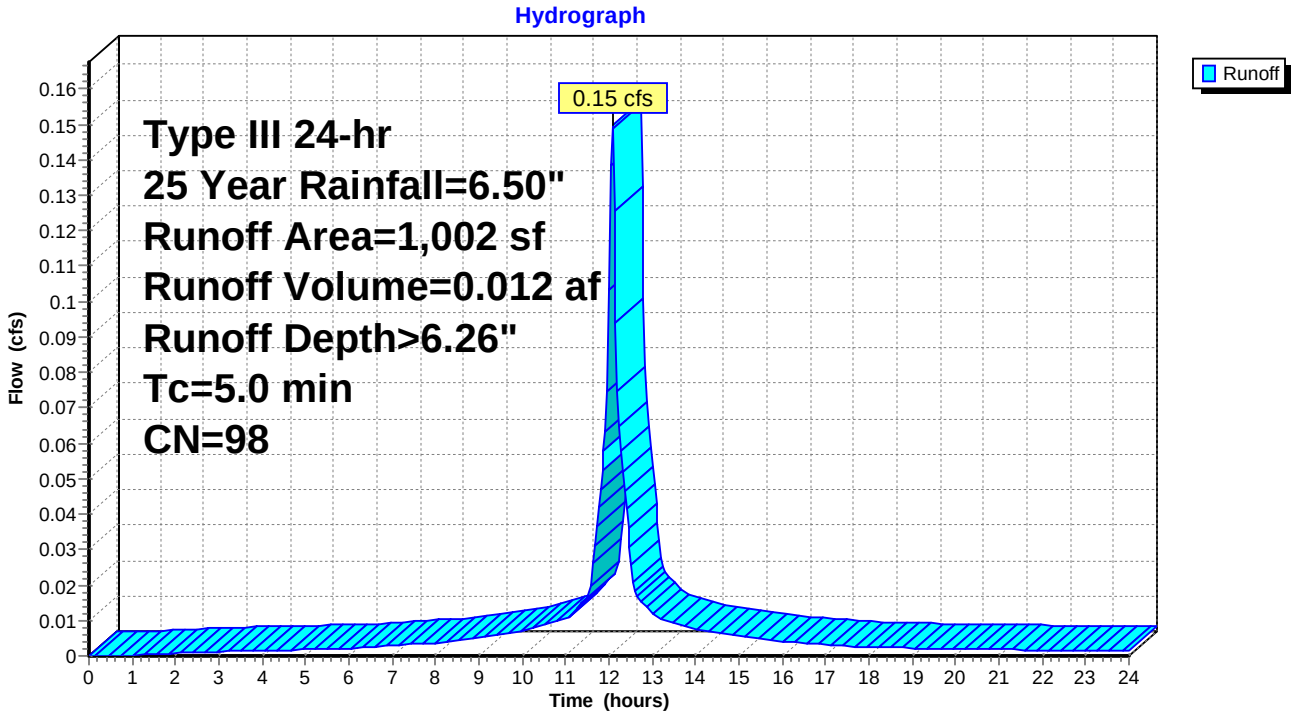
Runoff = 0.15 cfs @ 12.07 hrs, Volume= 0.012 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,002	98	Driveway
	1,002		100.00% Impervious Area

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

Subcatchment 3Sc: Areas Routed to Retention CB 1/2



Summary for Subcatchment 4S: Areas not Routed to Retention

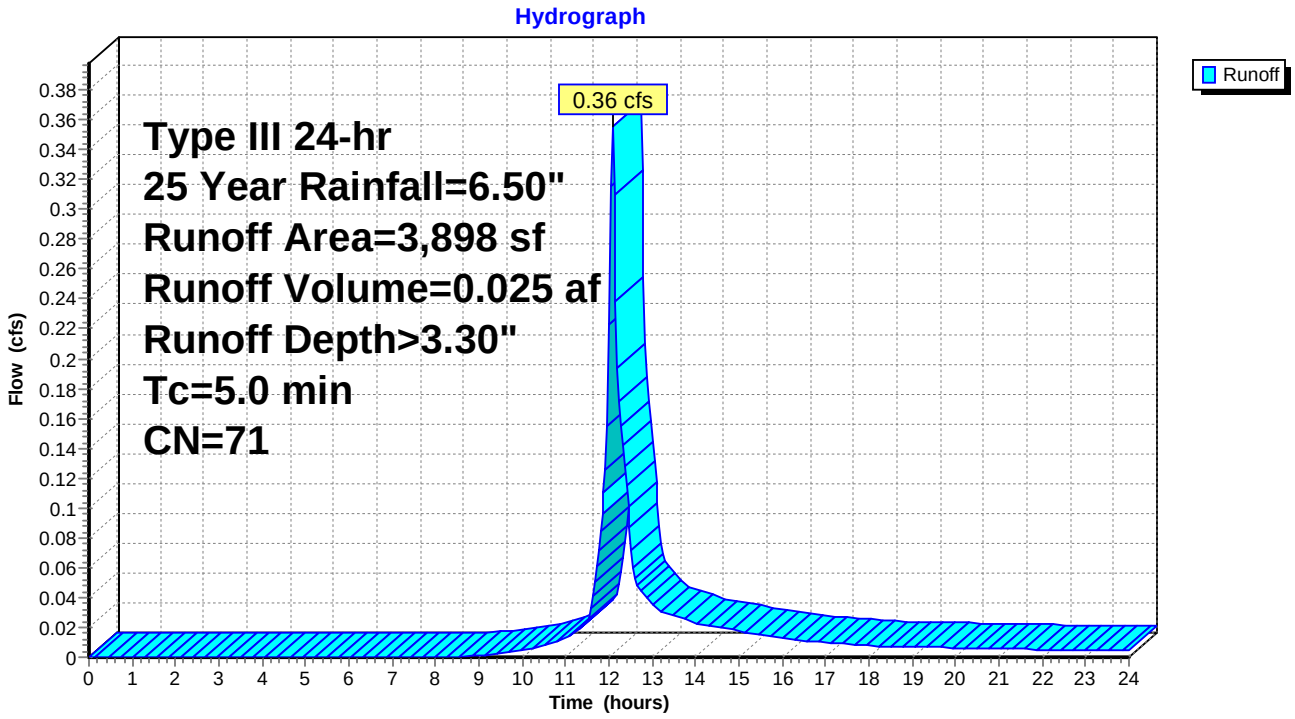
Runoff = 0.36 cfs @ 12.08 hrs, Volume= 0.025 af, Depth> 3.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,053	98	Driveway
*	2,845	61	Woods, Fair, HSG B
	3,898	71	Weighted Average
	2,845		72.99% Pervious Area
	1,053		27.01% Impervious Area

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

Subcatchment 4S: Areas not Routed to Retention



Summary for Pond 1P: 24" Concrete Galleries

Inflow Area = 0.028 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af
Outflow = 0.17 cfs @ 12.24 hrs, Volume= 0.006 af, Atten= 8%, Lag= 10.1 min
Primary = 0.17 cfs @ 12.24 hrs, Volume= 0.006 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 575.60' @ 12.24 hrs Surf.Area= 252 sf Storage= 362 cf

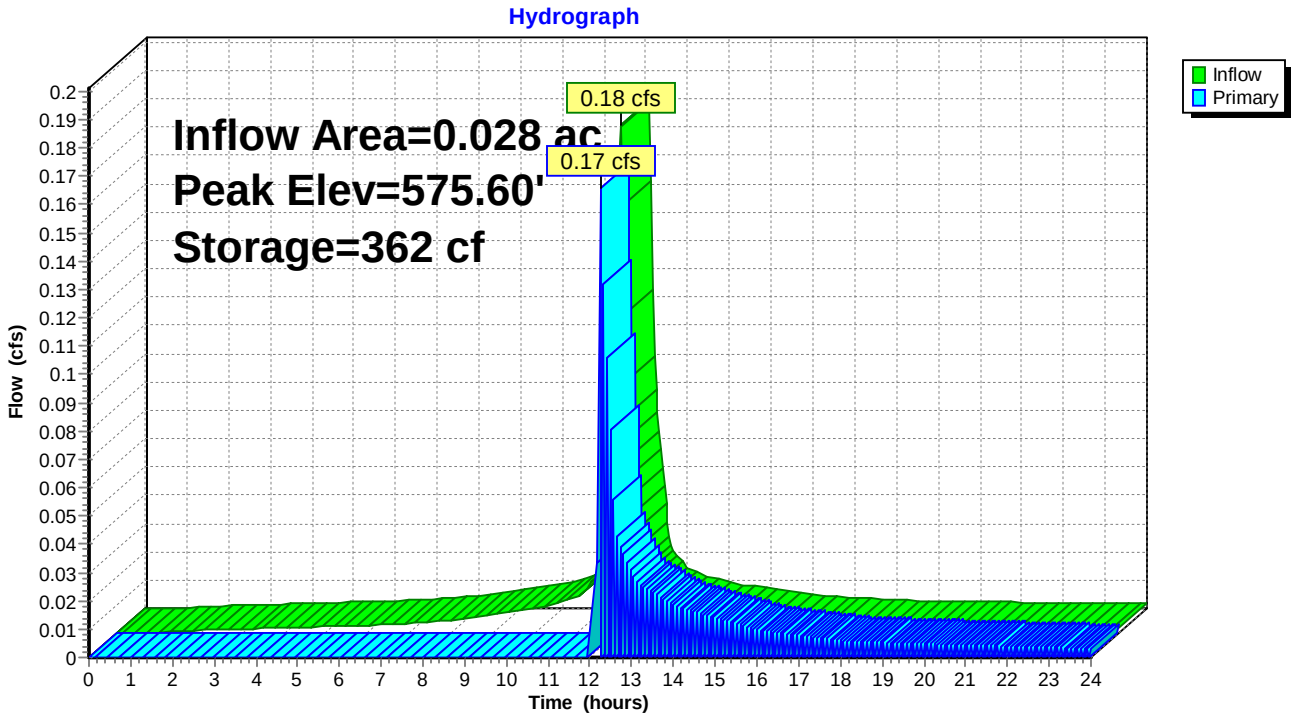
Plug-Flow detention time= 303.8 min calculated for 0.006 af (43% of inflow)
Center-of-Mass det. time= 155.8 min (898.5 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	573.50'	95 cf	**6.00'W x 42.00'L x 2.00'H Stone** 504 cf Overall - 267 cf Embedded = 237 cf x 40.0% Voids
#2	573.50'	267 cf	**4.00'W x 40.00'L x 1.67'H 24" Concrete Galleries** Inside #1
		362 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	575.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.17 cfs @ 12.24 hrs HW=575.60' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.17 cfs @ 1.04 fps)

Pond 1P: 24" Concrete Galleries



Summary for Pond 2P: 12" Concrete Galleries

Inflow Area = 0.017 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.11 cfs @ 12.07 hrs, Volume= 0.009 af
Outflow = 0.03 cfs @ 12.45 hrs, Volume= 0.003 af, Atten= 72%, Lag= 22.6 min
Primary = 0.03 cfs @ 12.45 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 579.54' @ 12.45 hrs Surf.Area= 364 sf Storage= 261 cf

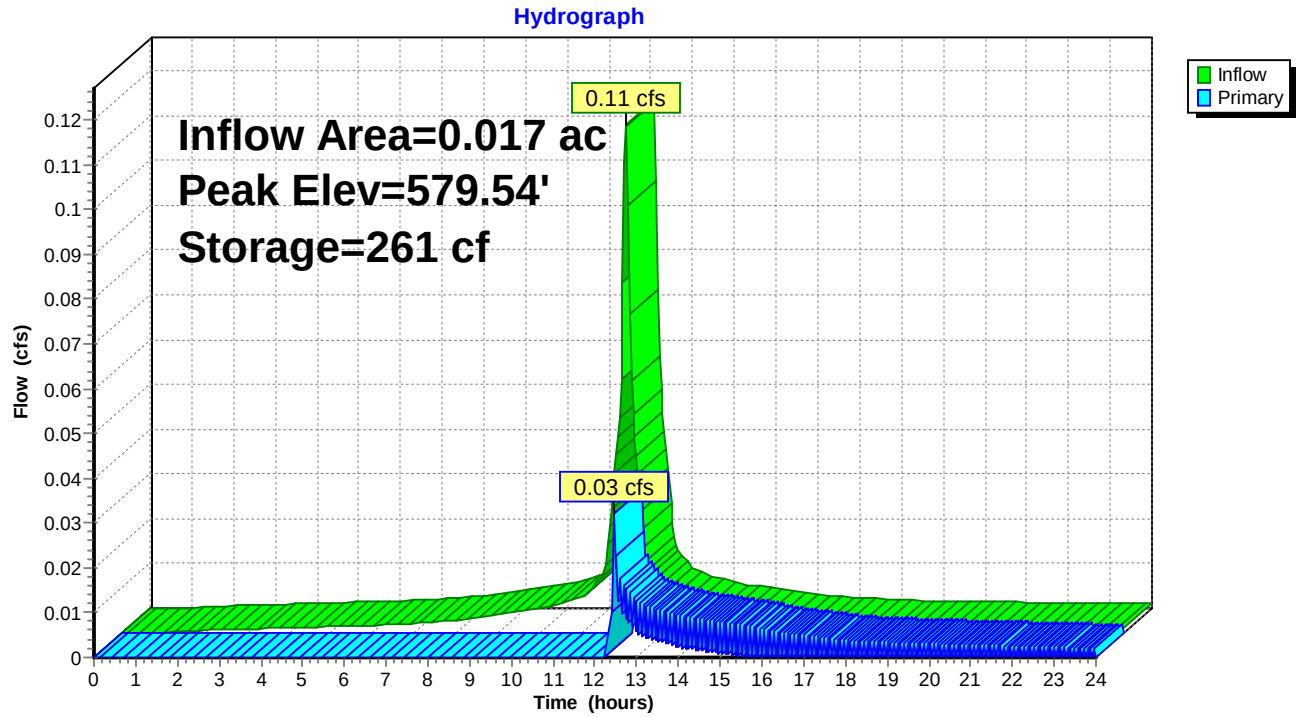
Plug-Flow detention time= 379.3 min calculated for 0.003 af (34% of inflow)
Center-of-Mass det. time= 197.8 min (940.5 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	578.50'	68 cf	**14.00'W x 26.00'L x 1.00'H Stone** 364 cf Overall - 193 cf Embedded = 171 cf x 40.0% Voids
#2	578.50'	193 cf	**12.00'W x 24.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		261 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	579.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.03 cfs @ 12.45 hrs HW=579.53' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.03 cfs @ 0.57 fps)

Pond 2P: 12" Concrete Galleries



Summary for Pond 3Pa: 12" Concrete Galleries

Inflow Area = 0.023 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.15 cfs @ 12.07 hrs, Volume= 0.012 af
Outflow = 0.12 cfs @ 12.20 hrs, Volume= 0.005 af, Atten= 21%, Lag= 7.8 min
Primary = 0.12 cfs @ 12.20 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 581.58' @ 12.20 hrs Surf.Area= 476 sf Storage= 293 cf

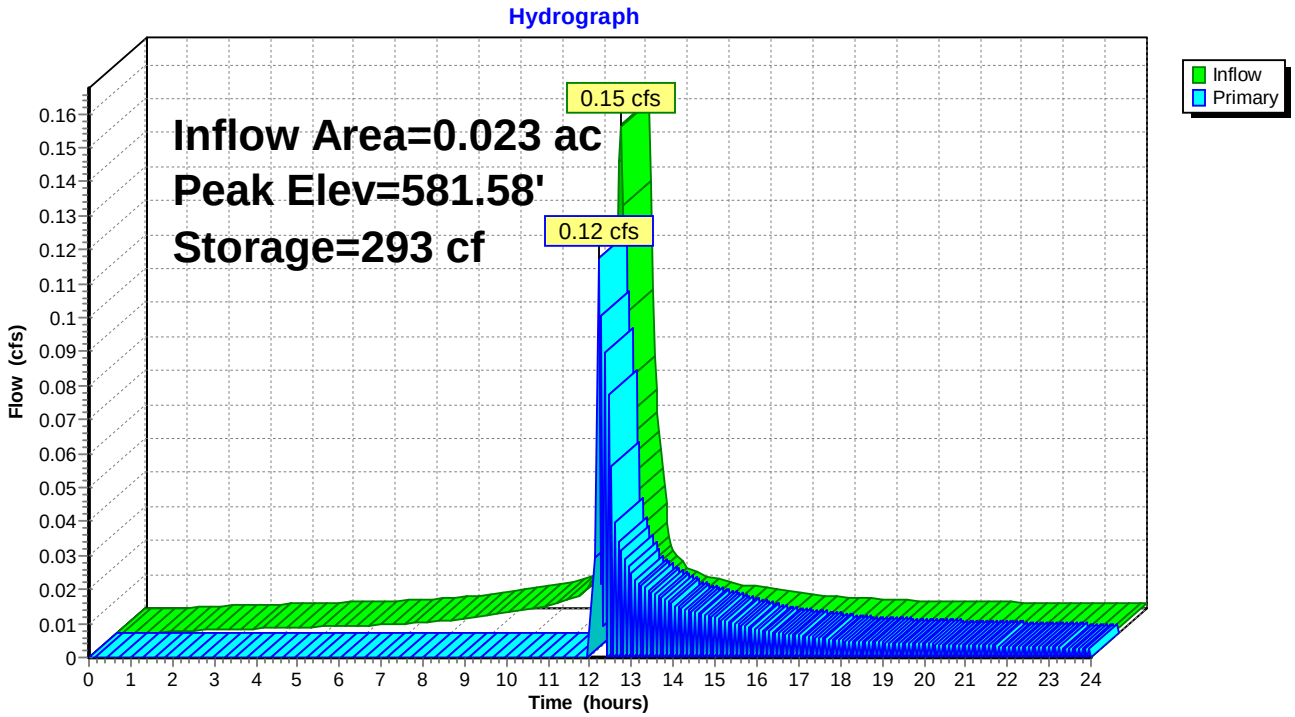
Plug-Flow detention time= 295.5 min calculated for 0.005 af (44% of inflow)
Center-of-Mass det. time= 150.8 min (893.5 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	580.50'	122 cf	**14.00'W x 34.00'L x 1.00'H Stone** 476 cf Overall - 172 cf Embedded = 304 cf x 40.0% Voids
#2	580.50'	172 cf	**8.00'W x 32.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		293 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	581.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.11 cfs @ 12.20 hrs HW=581.58' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.11 cfs @ 0.91 fps)

Pond 3Pa: 12" Concrete Galleries

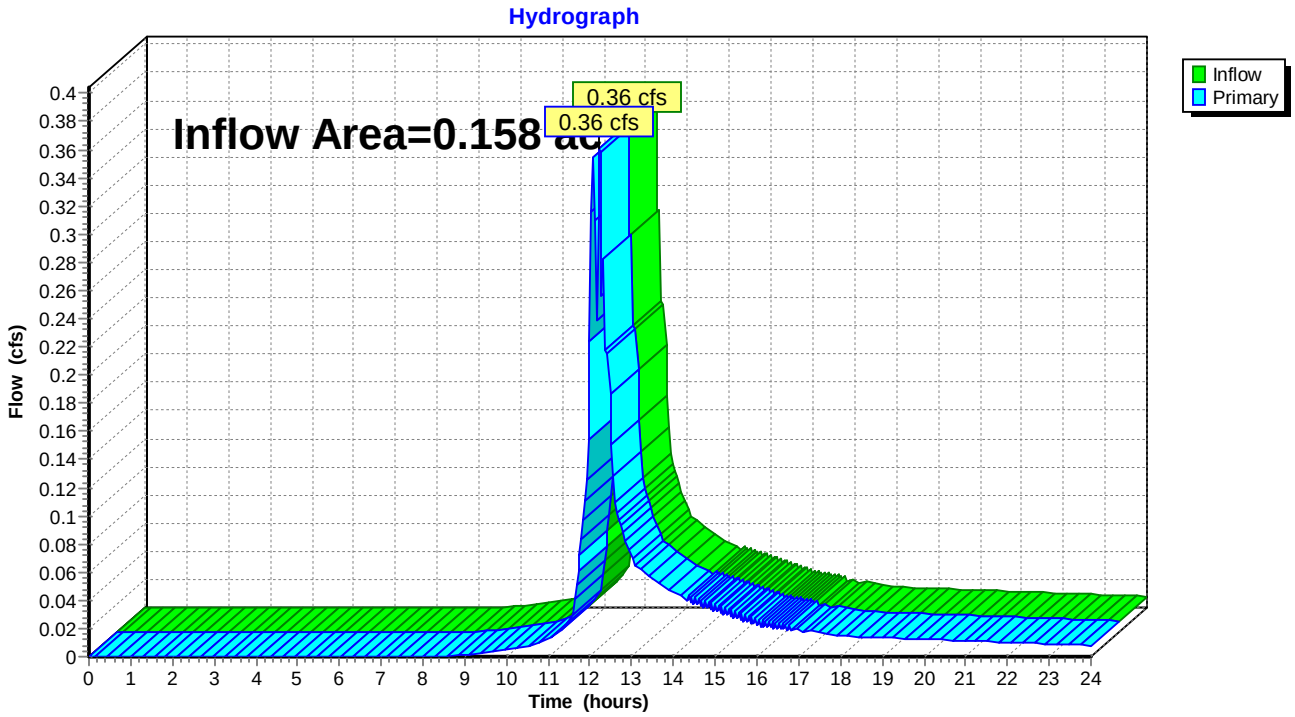


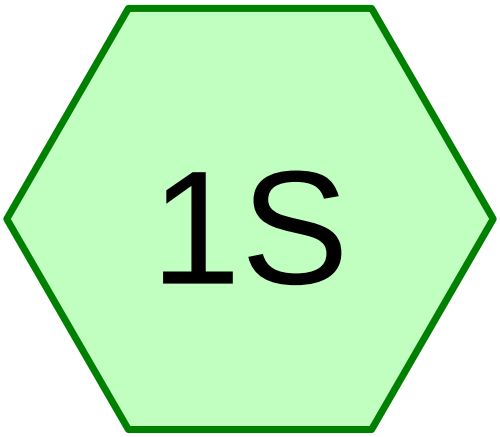
Summary for Link 1L: Combined Hydrograph

Inflow Area = 0.158 ac, 58.54% Impervious, Inflow Depth > 2.99" for 25 Year event
Inflow = 0.36 cfs @ 12.23 hrs, Volume= 0.039 af
Primary = 0.36 cfs @ 12.23 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

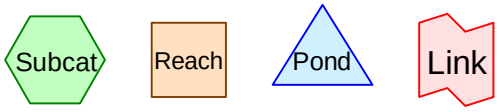
Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph





Existing Conditions Wetlands Basin



Routing Diagram for 2168ROWWetlandsExisting
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Summary for Subcatchment 1S: Existing Conditions Wetlands Basin

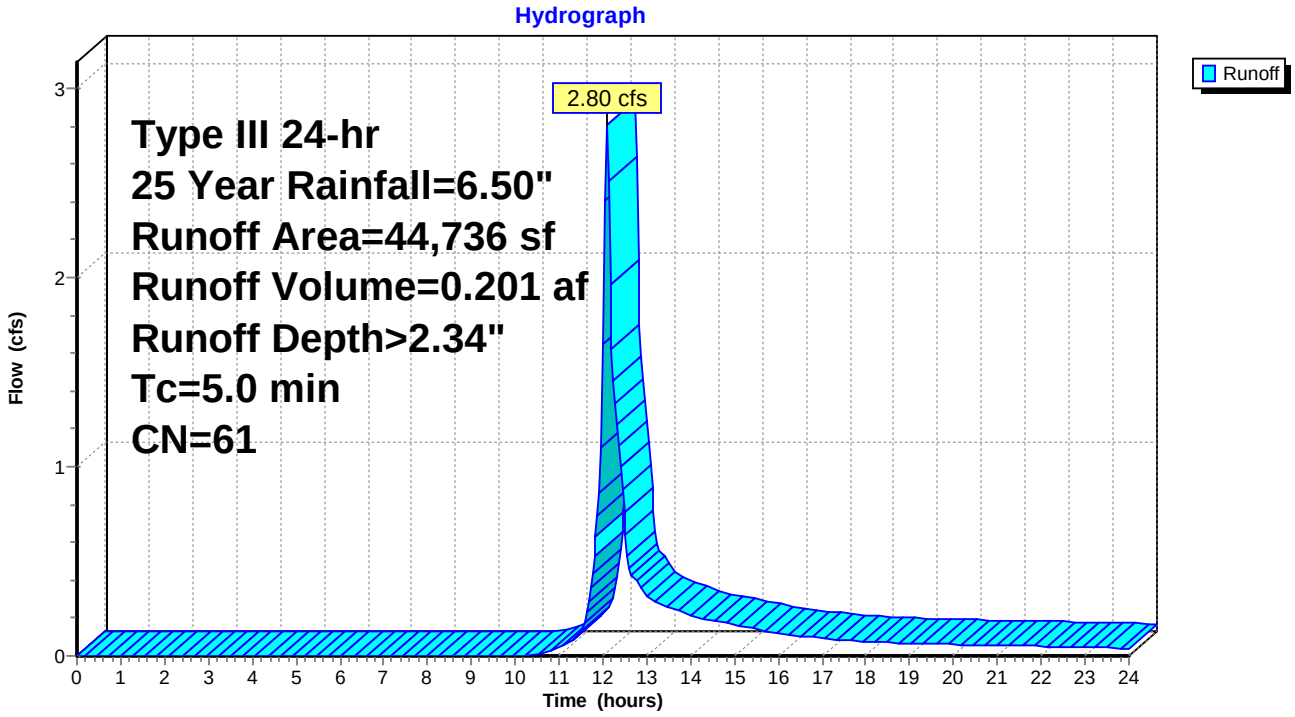
Runoff = 2.80 cfs @ 12.08 hrs, Volume= 0.201 af, Depth> 2.34"

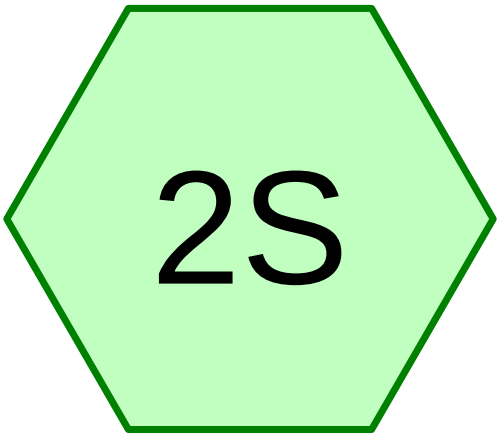
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	44,736	61	Woods, Fair, HSG B
	44,736		100.00% Pervious Area

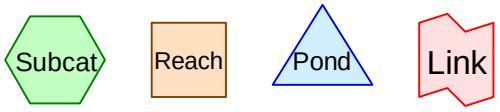
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct**

Subcatchment 1S: Existing Conditions Wetlands Basin





Proposed Conditions Wetlands Basin



Routing Diagram for 2168ROWWetlandsProposed
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Summary for Subcatchment 2S: Proposed Conditions Wetlands Basin

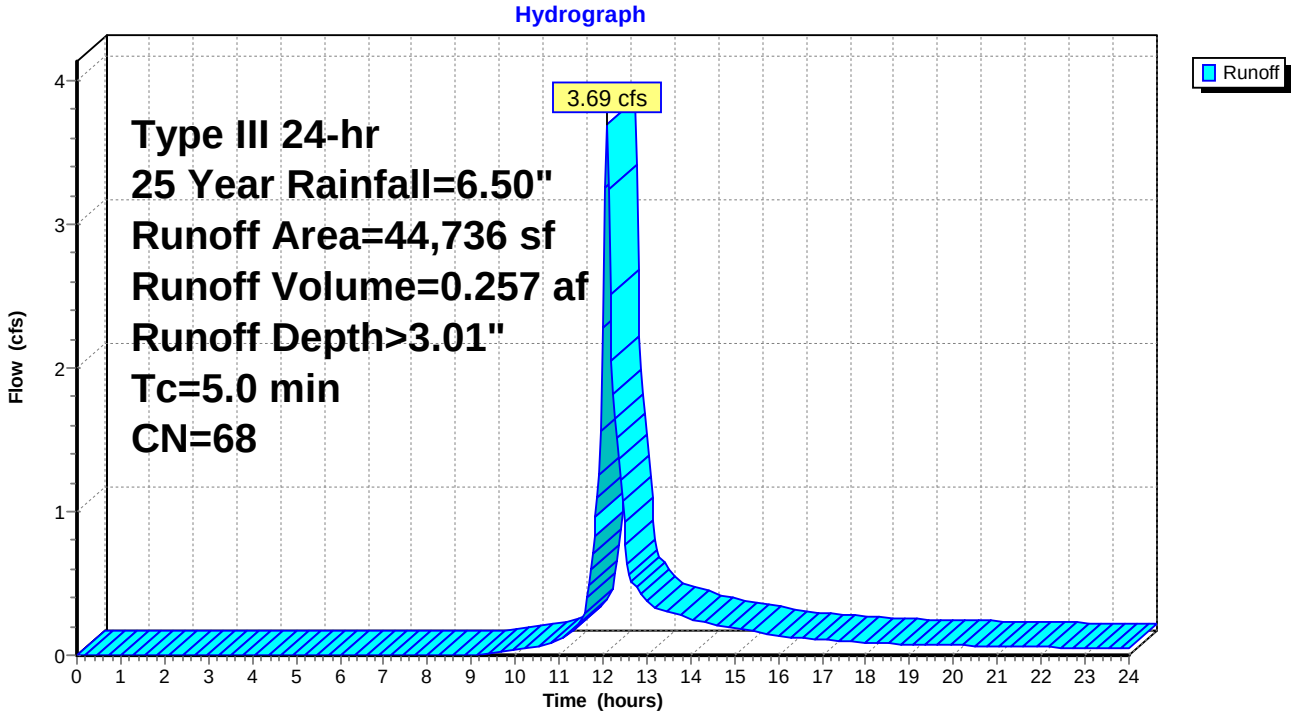
Runoff = 3.69 cfs @ 12.08 hrs, Volume= 0.257 af, Depth> 3.01"

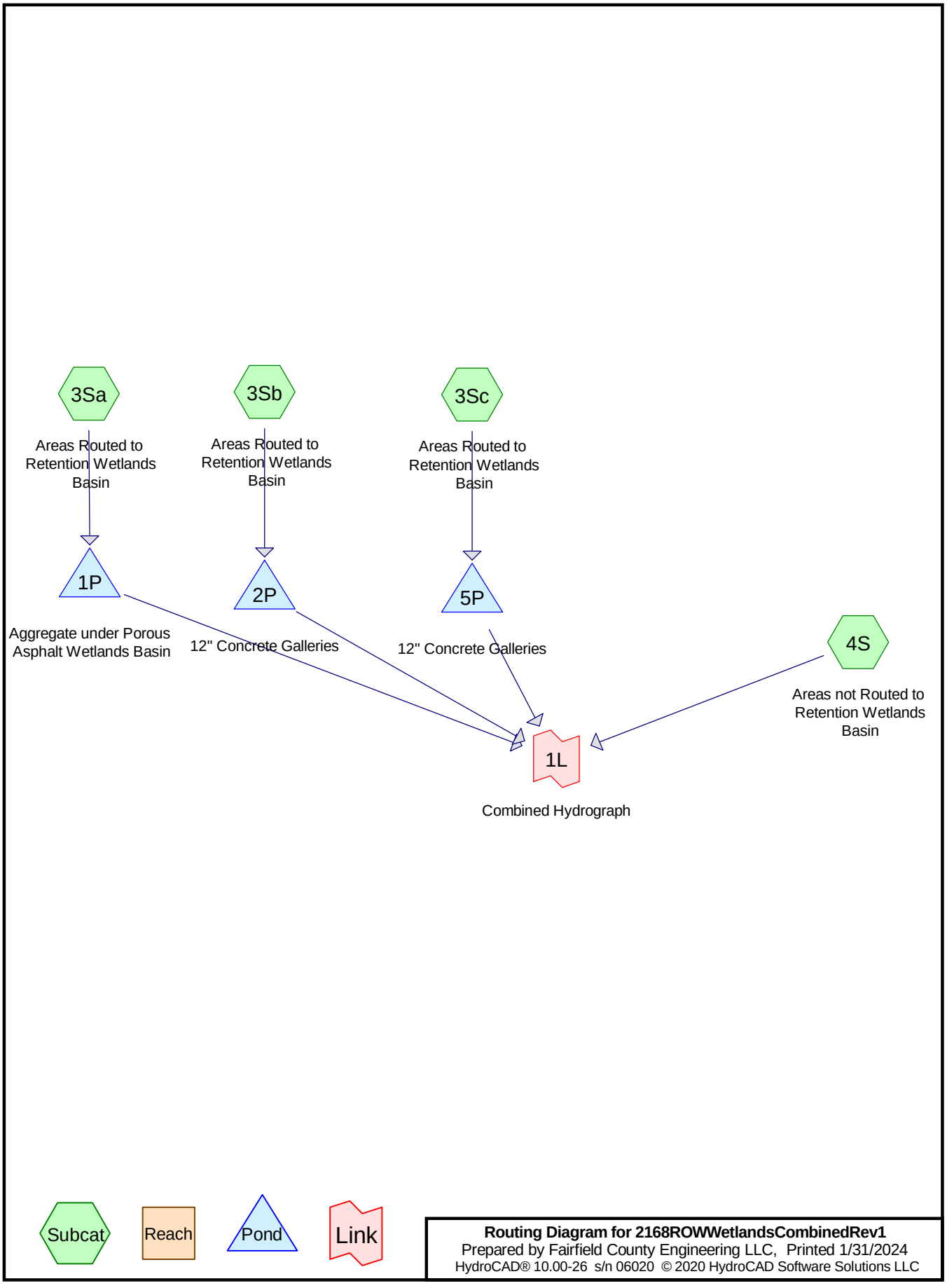
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	8,204	98	Driveway
*	36,532	61	Woods, Fair, HSG B
	44,736	68	Weighted Average
	36,532		81.66% Pervious Area
	8,204		18.34% Impervious Area

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

Subcatchment 2S: Proposed Conditions Wetlands Basin





Summary for Subcatchment 3Sa: Areas Routed to Retention Wetlands Basin

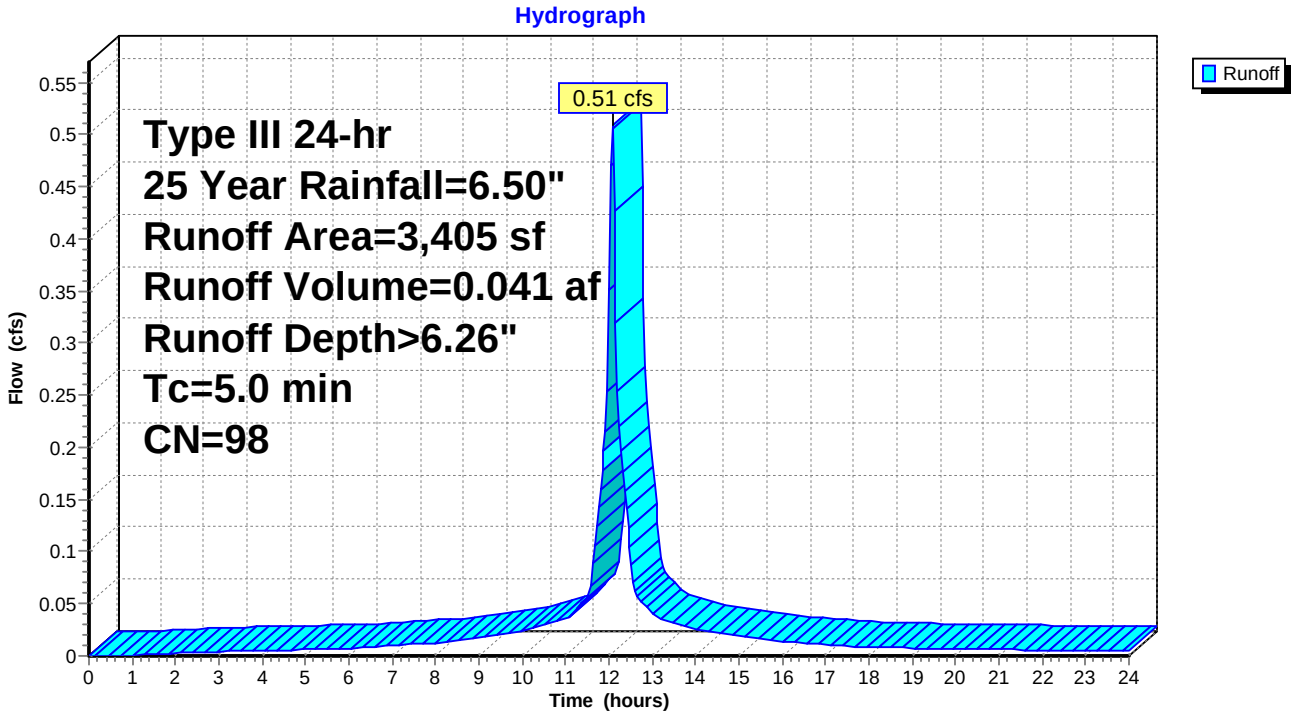
Runoff = 0.51 cfs @ 12.07 hrs, Volume= 0.041 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	3,405	98	Driveway
	3,405		100.00% Impervious Area

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

Subcatchment 3Sa: Areas Routed to Retention Wetlands Basin



Summary for Subcatchment 3Sb: Areas Routed to Retention Wetlands Basin

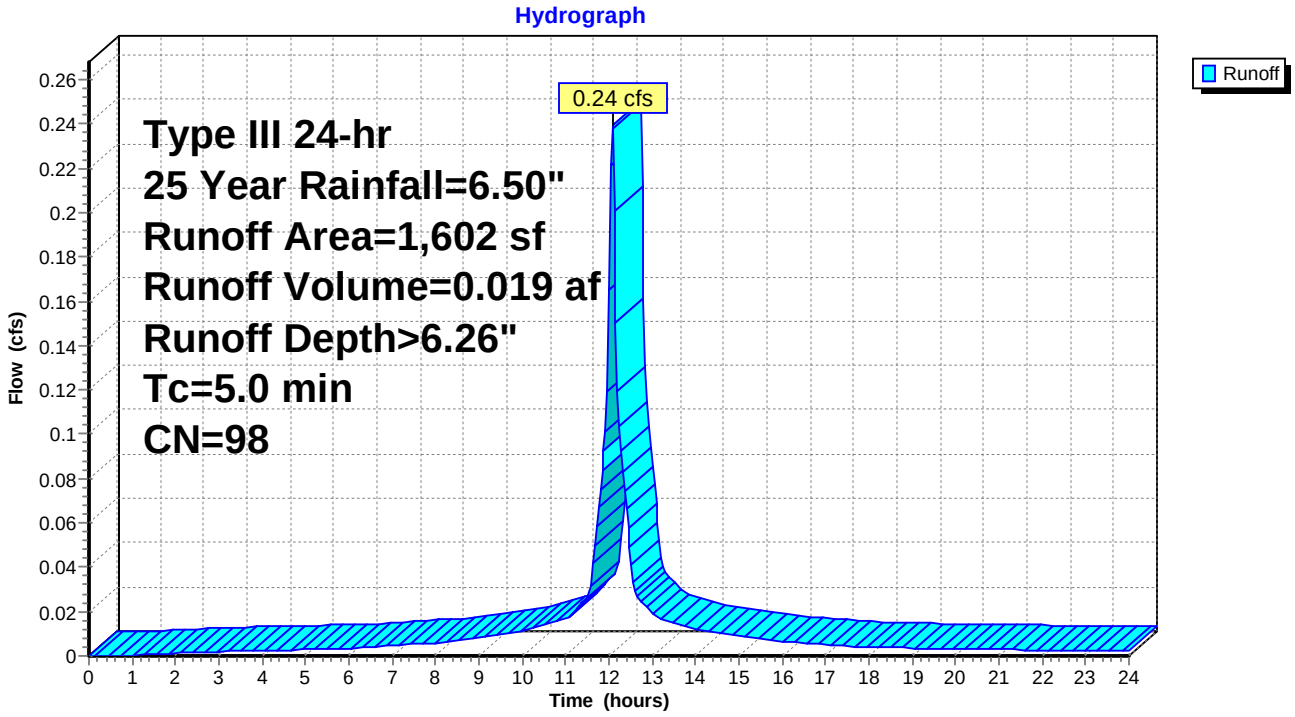
Runoff = 0.24 cfs @ 12.07 hrs, Volume= 0.019 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,602	98	Driveway
	1,602		100.00% Impervious Area

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

Subcatchment 3Sb: Areas Routed to Retention Wetlands Basin



Summary for Subcatchment 3Sc: Areas Routed to Retention Wetlands Basin

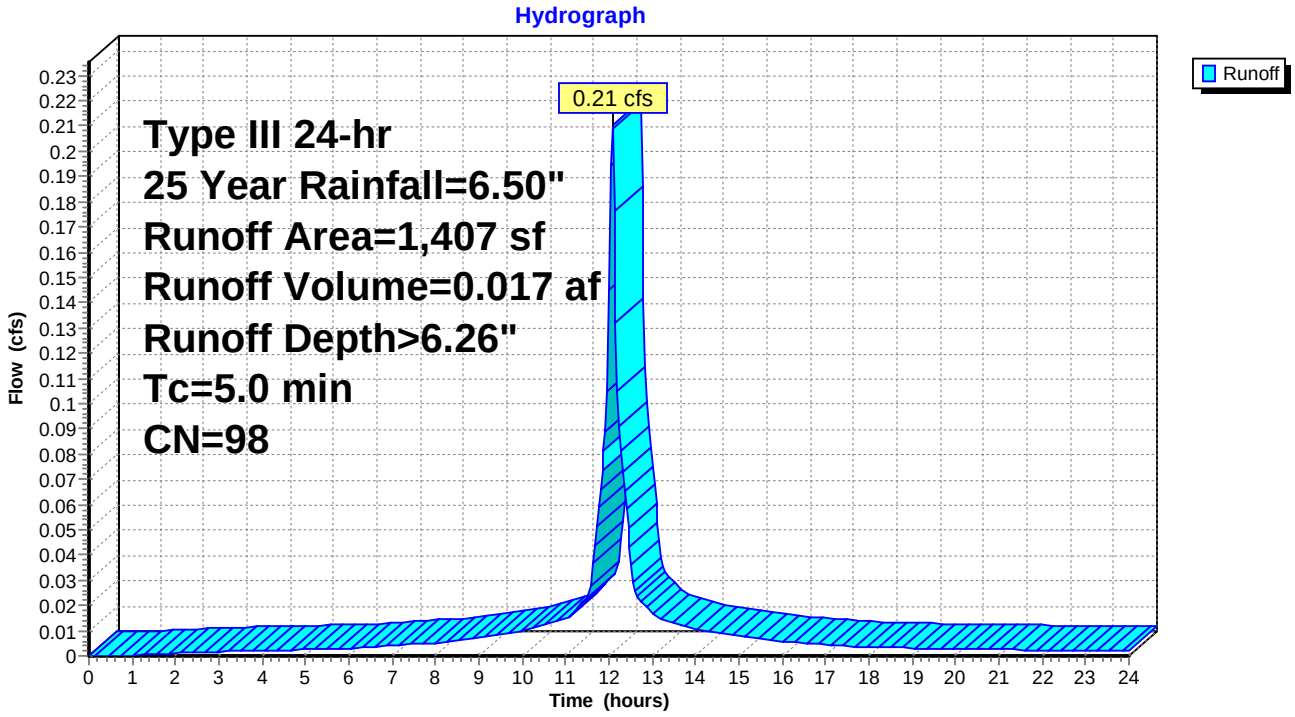
Runoff = 0.21 cfs @ 12.07 hrs, Volume= 0.017 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,407	98	Driveway
	1,407		100.00% Impervious Area

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

Subcatchment 3Sc: Areas Routed to Retention Wetlands Basin



Summary for Subcatchment 4S: Areas not Routed to Retention Wetlands Basin

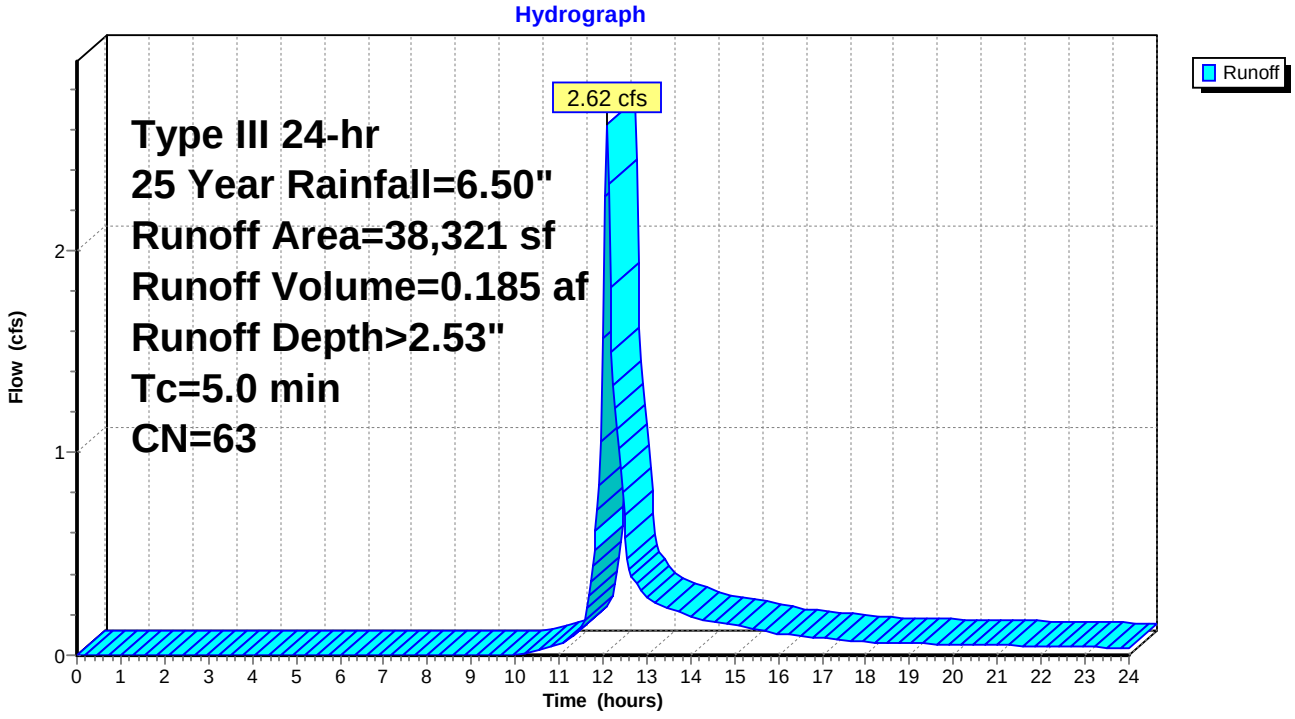
Runoff = 2.62 cfs @ 12.08 hrs, Volume= 0.185 af, Depth> 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,789	98	Driveway
*	36,532	61	Woods, Fair, HSG B
	38,321	63	Weighted Average
	36,532		95.33% Pervious Area
	1,789		4.67% Impervious Area

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

Subcatchment 4S: Areas not Routed to Retention Wetlands Basin



Summary for Pond 1P: Aggregate under Porous Asphalt Wetlands Basin

Inflow Area = 0.078 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.51 cfs @ 12.07 hrs, Volume= 0.041 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 0.83' @ 24.00 hrs Surf.Area= 5,373 sf Storage= 1,775 cf

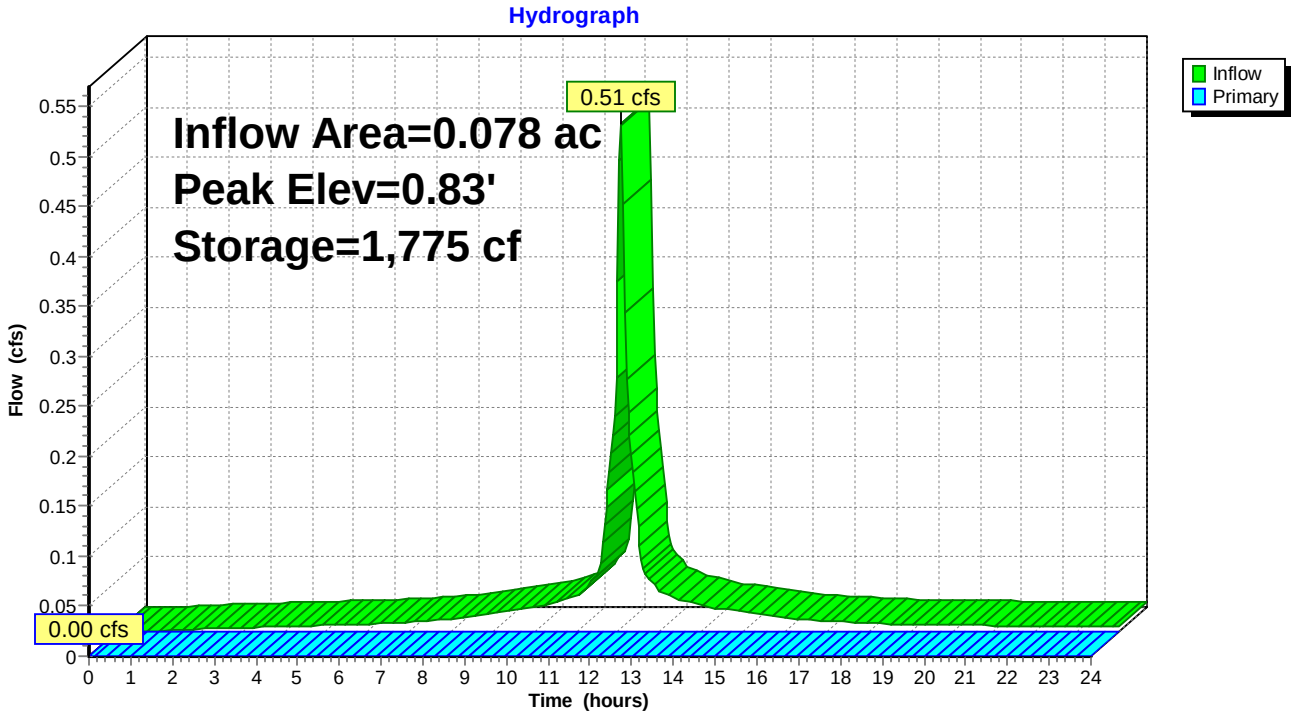
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	2,687 cf	**9.00'W x 597.00'L x 1.25'H Aggregate** 6,716 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	1.25'	**1.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1P: Aggregate under Porous Asphalt Wetlands Basin



Summary for Pond 2P: 12" Concrete Galleries

Inflow Area = 0.037 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.24 cfs @ 12.07 hrs, Volume= 0.019 af
Outflow = 0.22 cfs @ 12.15 hrs, Volume= 0.009 af, Atten= 8%, Lag= 4.9 min
Primary = 0.22 cfs @ 12.15 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 577.62' @ 12.15 hrs Surf.Area= 588 sf Storage= 428 cf

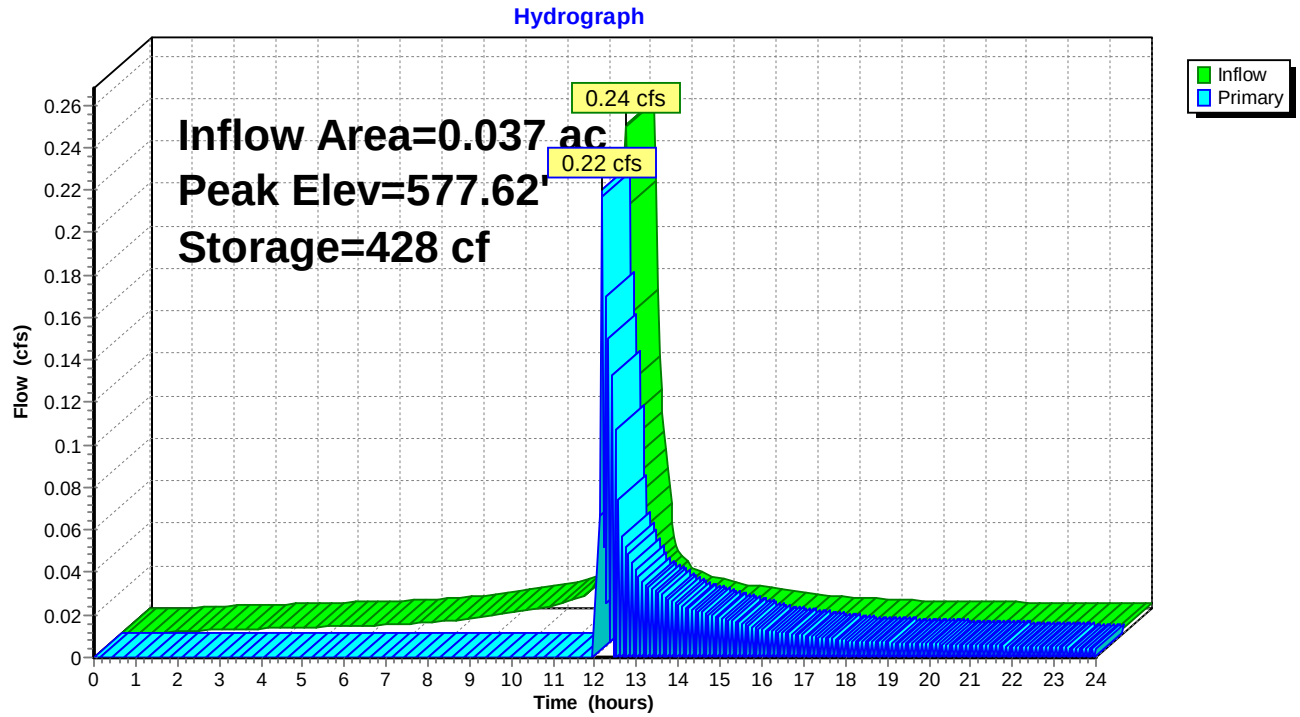
Plug-Flow detention time= 267.7 min calculated for 0.009 af (49% of inflow)
Center-of-Mass det. time= 134.9 min (877.6 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	576.50'	107 cf	**14.00'W x 42.00'L x 1.00'H Stone** 588 cf Overall - 322 cf Embedded = 266 cf x 40.0% Voids
#2	576.50'	322 cf	**12.00'W x 40.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		428 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	577.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.20 cfs @ 12.15 hrs HW=577.62' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.20 cfs @ 1.11 fps)

Pond 2P: 12" Concrete Galleries



Summary for Pond 5P: 12" Concrete Galleries

Inflow Area = 0.032 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.21 cfs @ 12.07 hrs, Volume= 0.017 af
Outflow = 0.13 cfs @ 12.24 hrs, Volume= 0.007 af, Atten= 36%, Lag= 10.3 min
Primary = 0.13 cfs @ 12.24 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 577.59' @ 12.24 hrs Surf.Area= 588 sf Storage= 428 cf

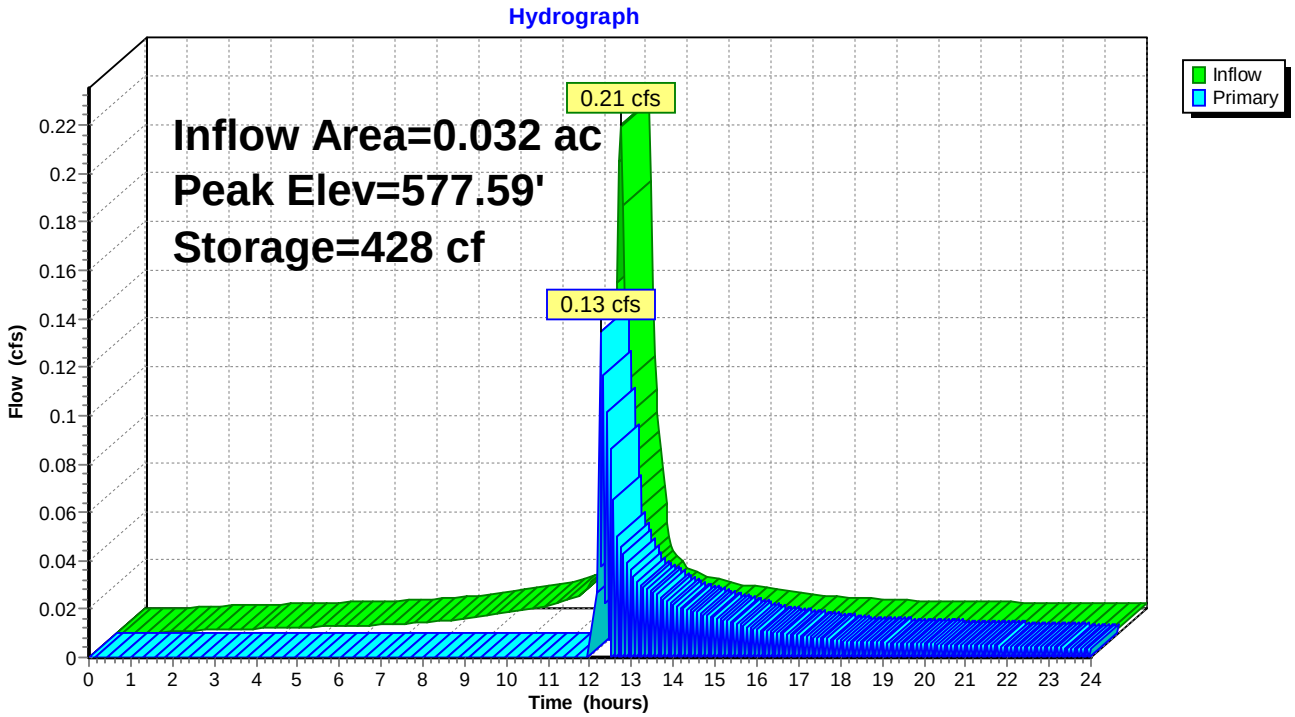
Plug-Flow detention time= 312.8 min calculated for 0.007 af (42% of inflow)
Center-of-Mass det. time= 160.4 min (903.1 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	576.50'	107 cf	**14.00'W x 42.00'L x 1.00'H Stone** 588 cf Overall - 322 cf Embedded = 266 cf x 40.0% Voids
#2	576.50'	322 cf	**12.00'W x 40.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		428 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	577.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.12 cfs @ 12.24 hrs HW=577.58' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.12 cfs @ 0.95 fps)

Pond 5P: 12" Concrete Galleries

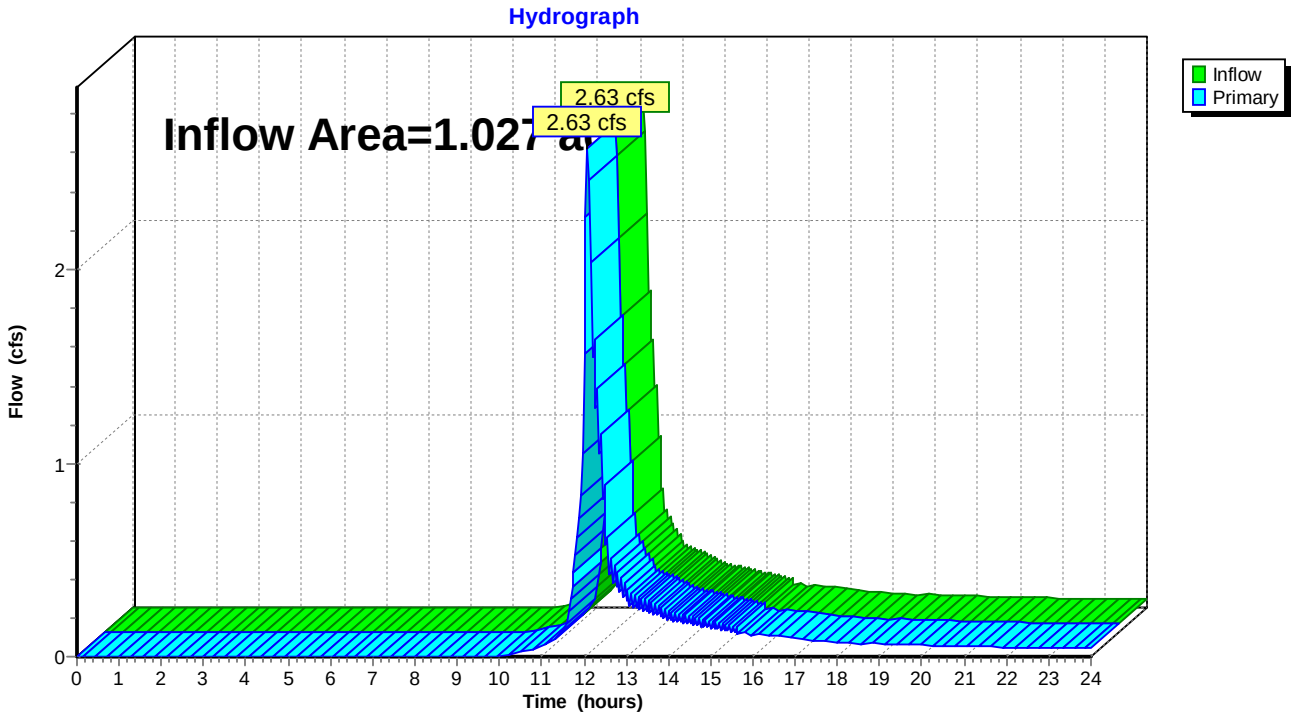


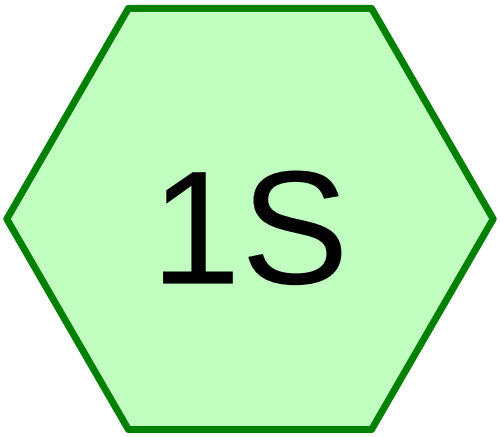
Summary for Link 1L: Combined Hydrograph

Inflow Area = 1.027 ac, 18.34% Impervious, Inflow Depth > 2.36" for 25 Year event
Inflow = 2.63 cfs @ 12.09 hrs, Volume= 0.202 af
Primary = 2.63 cfs @ 12.09 hrs, Volume= 0.202 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph





Existing Conditions North Basin

Subcat Reach Pond Link

Routing Diagram for 2168ROWNorthExisting
Prepared by Fairfield County Engineering LLC, Printed 1/31/2024
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Summary for Subcatchment 1S: Existing Conditions North Basin

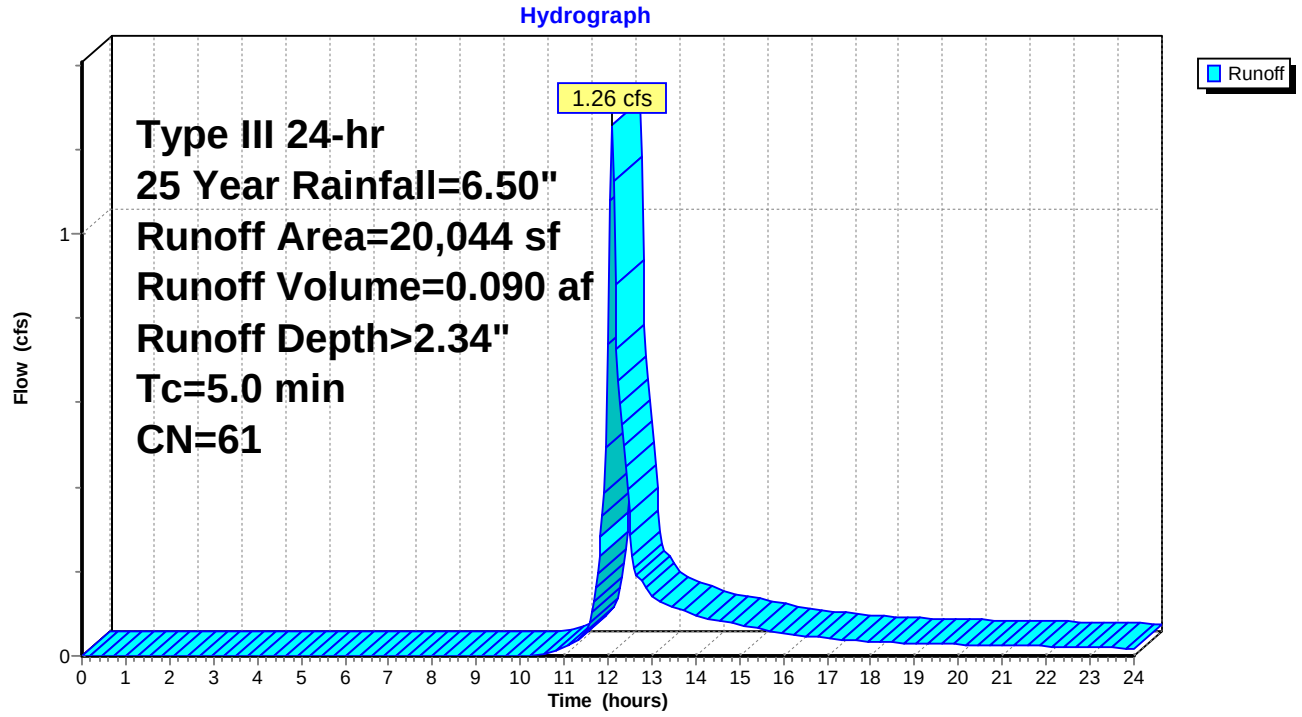
Runoff = 1.26 cfs @ 12.08 hrs, Volume= 0.090 af, Depth> 2.34"

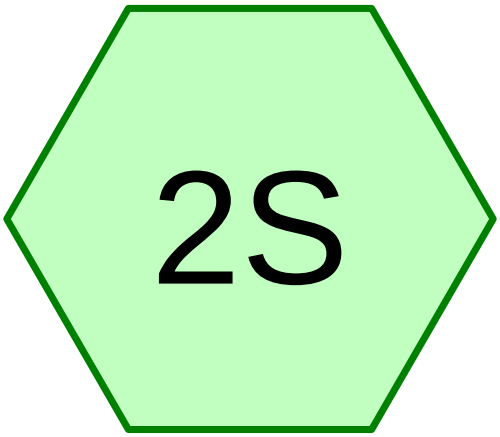
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	20,044	61	Woods, Fair, HSG B
	20,044		100.00% Pervious Area

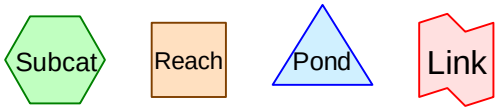
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Direct**

Subcatchment 1S: Existing Conditions North Basin





Proposed Conditions North Basin



Routing Diagram for 2168ROWNorthProposed
Prepared by Fairfield County Engineering LLC, Printed 1/31/2024
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Summary for Subcatchment 2S: Proposed Conditions North Basin

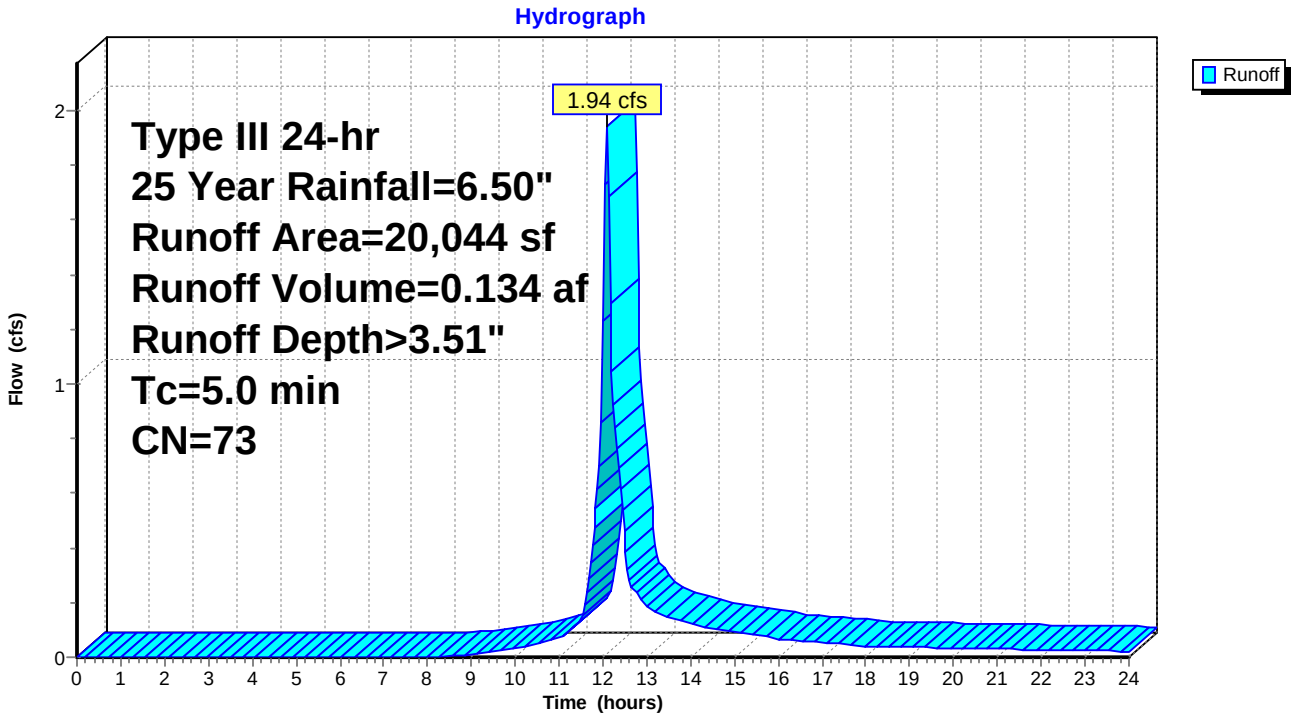
Runoff = 1.94 cfs @ 12.08 hrs, Volume= 0.134 af, Depth> 3.51"

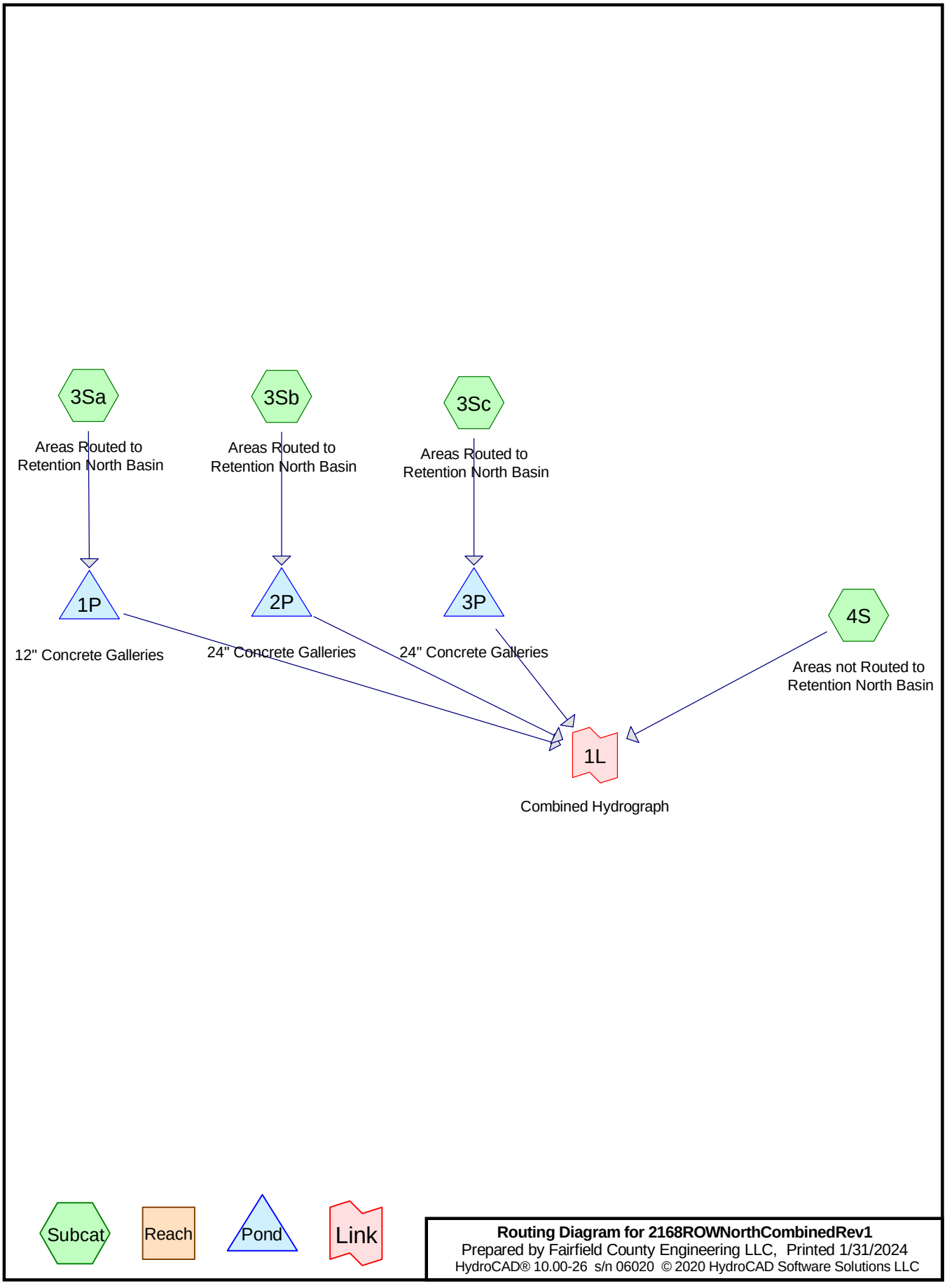
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	6,462	98	Driveway
*	13,582	61	Woods, Fair, HSG B
	20,044	73	Weighted Average
	13,582		67.76% Pervious Area
	6,462		32.24% Impervious Area

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

Subcatchment 2S: Proposed Conditions North Basin





Summary for Subcatchment 3Sa: Areas Routed to Retention North Basin

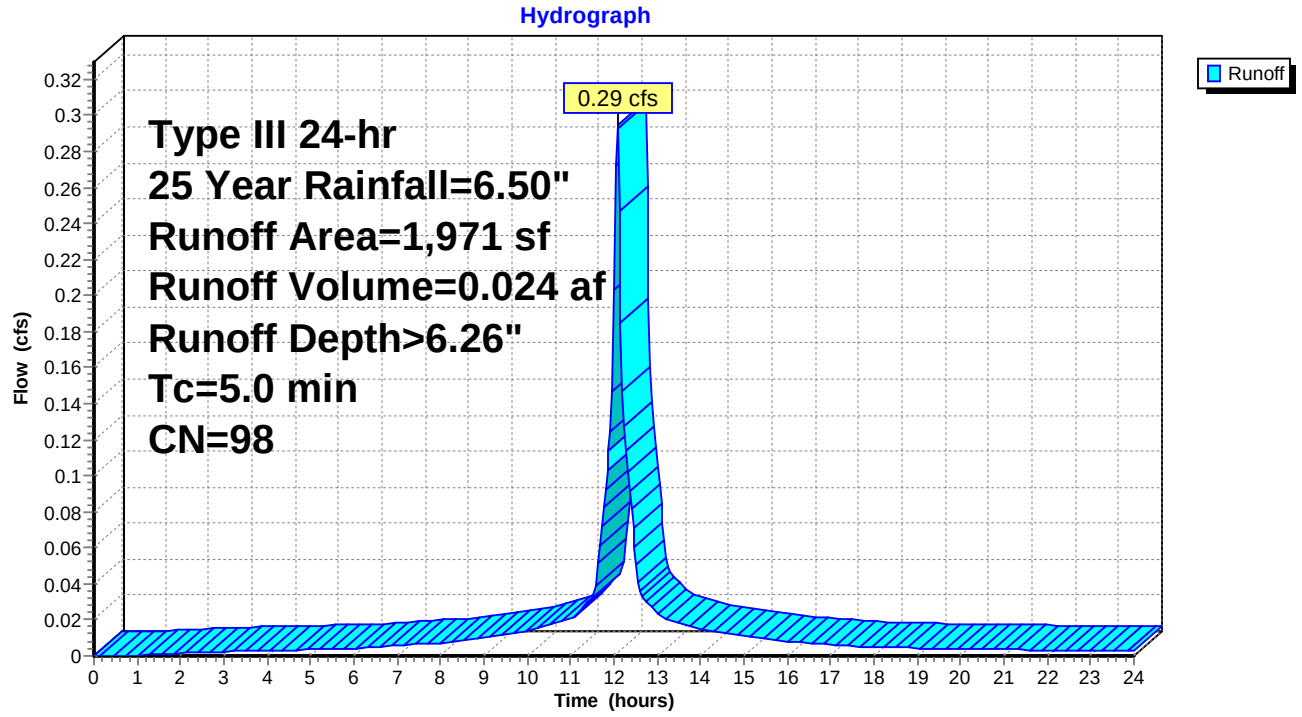
Runoff = 0.29 cfs @ 12.07 hrs, Volume= 0.024 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,971	98	Driveway
	1,971		100.00% Impervious Area

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

Subcatchment 3Sa: Areas Routed to Retention North Basin



Summary for Subcatchment 3Sb: Areas Routed to Retention North Basin

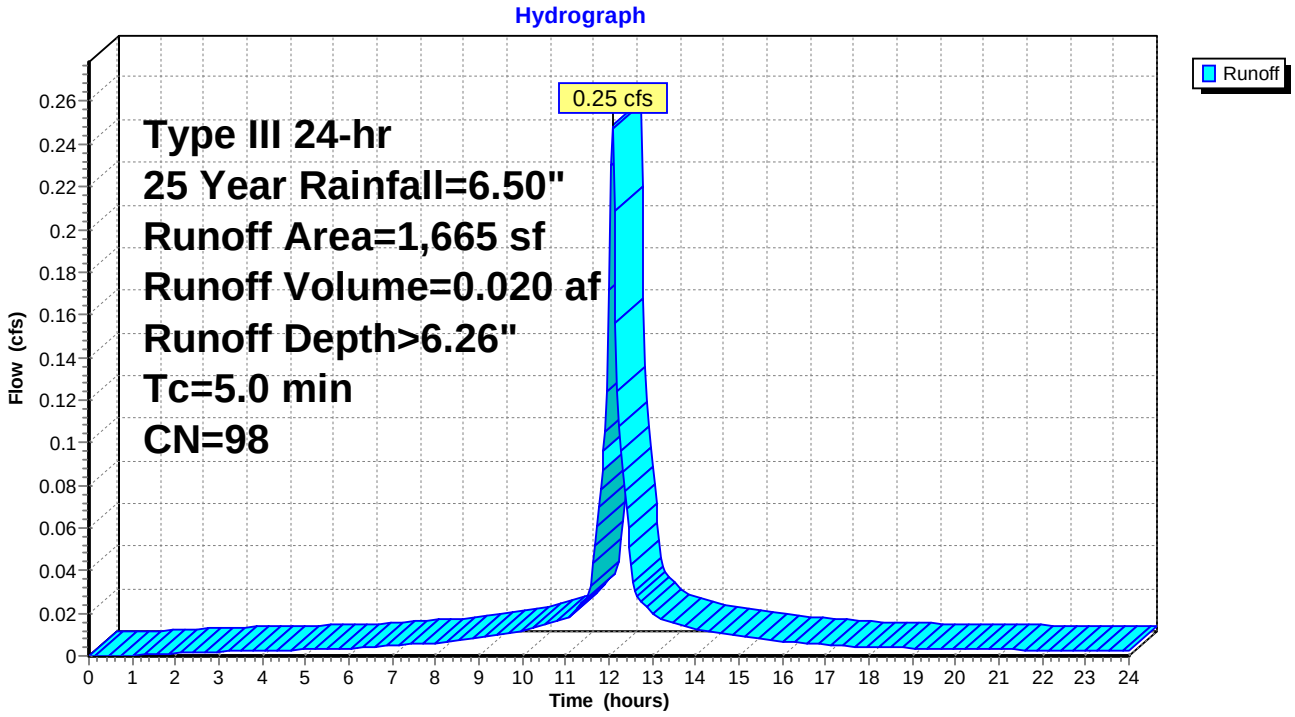
Runoff = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	1,665	98	Driveway
	1,665		100.00% Impervious Area

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

Subcatchment 3Sb: Areas Routed to Retention North Basin



Summary for Subcatchment 3Sc: Areas Routed to Retention North Basin

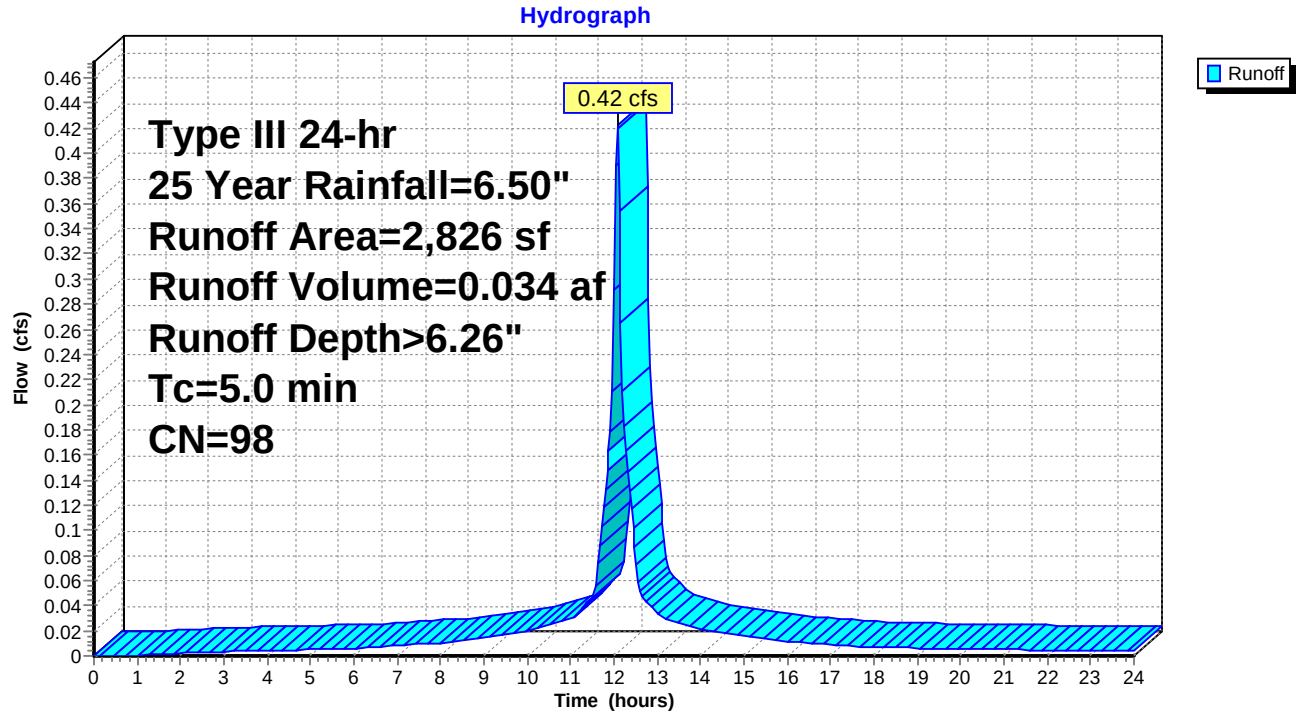
Runoff = 0.42 cfs @ 12.07 hrs, Volume= 0.034 af, Depth> 6.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	2,826	98	Driveway
	2,826		100.00% Impervious Area

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

Subcatchment 3Sc: Areas Routed to Retention North Basin



Summary for Subcatchment 4S: Areas not Routed to Retention North Basin

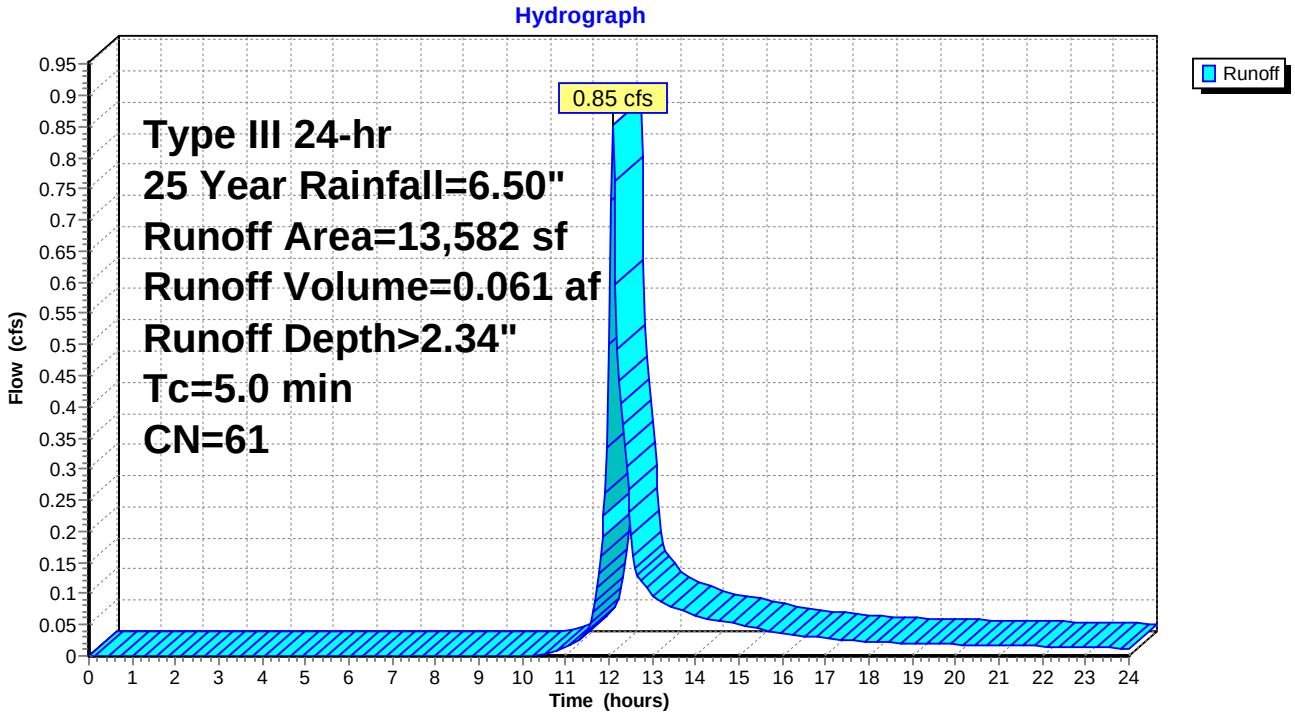
Runoff = 0.85 cfs @ 12.08 hrs, Volume= 0.061 af, Depth> 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	13,582	61	Woods, Fair, HSG B
	13,582		100.00% Pervious Area

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

Subcatchment 4S: Areas not Routed to Retention North Basin



Summary for Pond 1P: 12" Concrete Galleries

Inflow Area = 0.045 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.29 cfs @ 12.07 hrs, Volume= 0.024 af
Outflow = 0.29 cfs @ 12.07 hrs, Volume= 0.018 af, Atten= 1%, Lag= 0.0 min
Primary = 0.29 cfs @ 12.07 hrs, Volume= 0.018 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 573.65' @ 12.07 hrs Surf.Area= 324 sf Storage= 233 cf

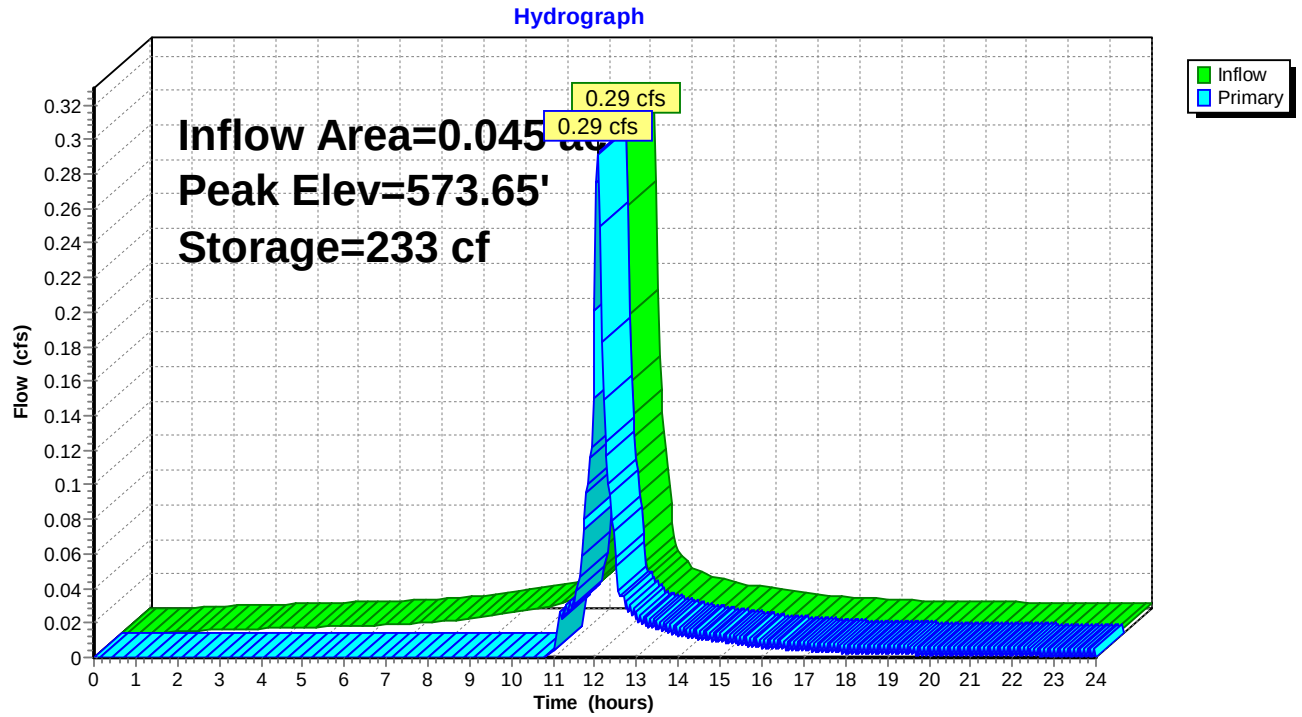
Plug-Flow detention time= 154.8 min calculated for 0.018 af (77% of inflow)
Center-of-Mass det. time= 73.2 min (815.9 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	572.50'	61 cf	**18.00'W x 18.00'L x 1.00'H Stone** 324 cf Overall - 172 cf Embedded = 152 cf x 40.0% Voids
#2	572.50'	172 cf	**16.00'W x 16.00'L x 0.67'H 12" Concrete Galleries** Inside #1
		233 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	573.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.29 cfs @ 12.07 hrs HW=573.65' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.29 cfs @ 1.25 fps)

Pond 1P: 12" Concrete Galleries



Summary for Pond 2P: 24" Concrete Galleries

Inflow Area = 0.038 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.25 cfs @ 12.07 hrs, Volume= 0.020 af
Outflow = 0.17 cfs @ 12.28 hrs, Volume= 0.008 af, Atten= 31%, Lag= 12.4 min
Primary = 0.17 cfs @ 12.28 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 569.60' @ 12.28 hrs Surf.Area= 324 sf Storage= 516 cf

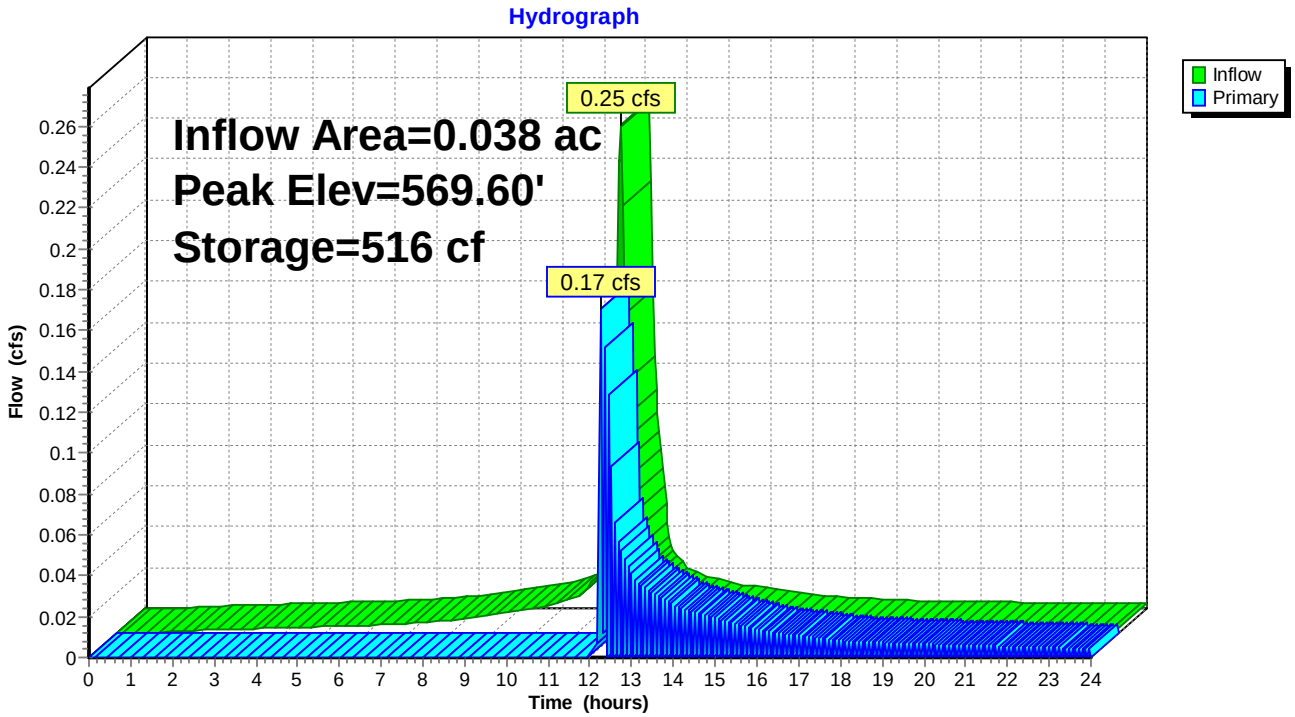
Plug-Flow detention time= 318.7 min calculated for 0.008 af (41% of inflow)
Center-of-Mass det. time= 163.5 min (906.2 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	567.50'	88 cf	**18.00'W x 18.00'L x 2.00'H Stone**
			648 cf Overall - 428 cf Embedded = 220 cf x 40.0% Voids
#2	567.50'	428 cf	**16.00'W x 16.00'L x 1.67'H 24" Concrete Galleries** Inside #1
		516 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	569.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.16 cfs @ 12.28 hrs HW=569.60' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.16 cfs @ 1.04 fps)

Pond 2P: 24" Concrete Galleries



Summary for Pond 3P: 24" Concrete Galleries

Inflow Area = 0.065 ac,100.00% Impervious, Inflow Depth > 6.26" for 25 Year event
Inflow = 0.42 cfs @ 12.07 hrs, Volume= 0.034 af
Outflow = 0.14 cfs @ 12.39 hrs, Volume= 0.012 af, Atten= 67%, Lag= 19.2 min
Primary = 0.14 cfs @ 12.39 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 557.59' @ 12.39 hrs Surf.Area= 572 sf Storage= 939 cf

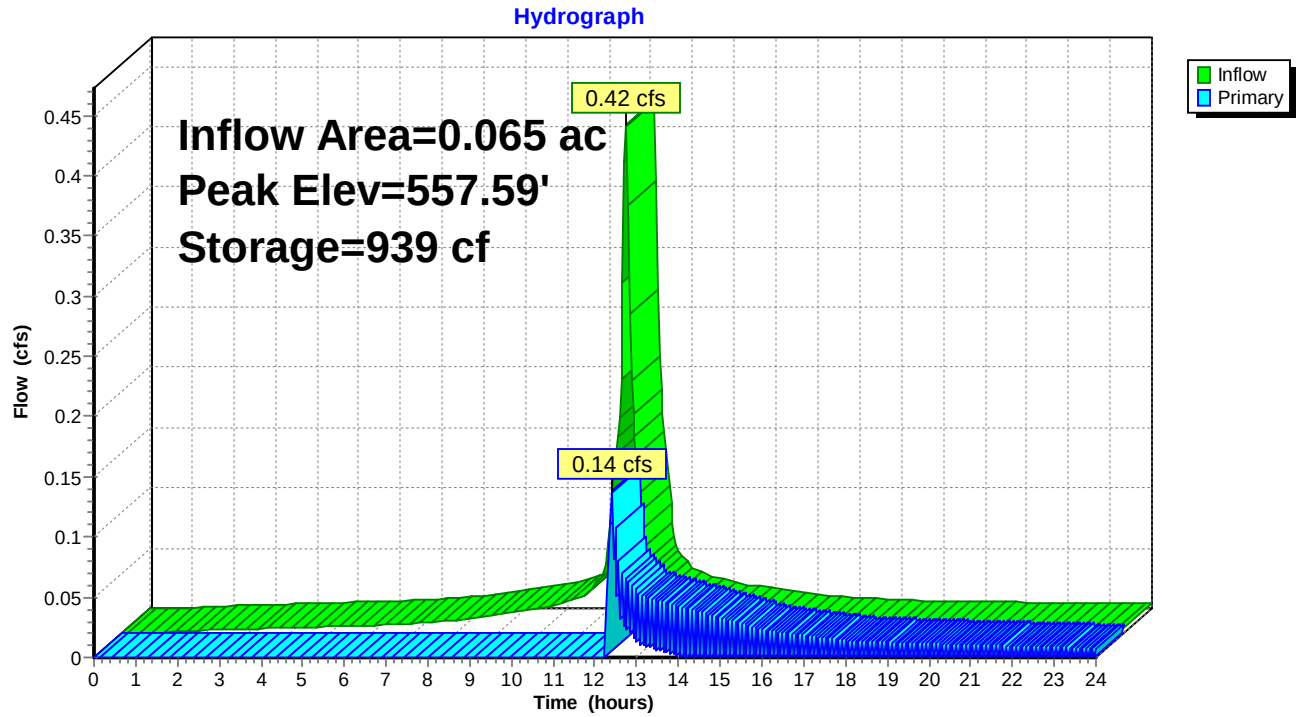
Plug-Flow detention time= 358.3 min calculated for 0.012 af (36% of inflow)
Center-of-Mass det. time= 186.0 min (928.7 - 742.7)

Volume	Invert	Avail.Storage	Storage Description
#1	555.50'	137 cf	**22.00'W x 26.00'L x 2.00'H Stone** 1,144 cf Overall - 802 cf Embedded = 342 cf x 40.0% Voids
#2	555.50'	802 cf	**20.00'W x 24.00'L x 1.67'H 24" Concrete Galleries** Inside #1
		939 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	557.50'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.13 cfs @ 12.39 hrs HW=557.59' (Free Discharge)
1=Orifice/Grate (Weir Controls 0.13 cfs @ 0.96 fps)

Pond 3P: 24" Concrete Galleries

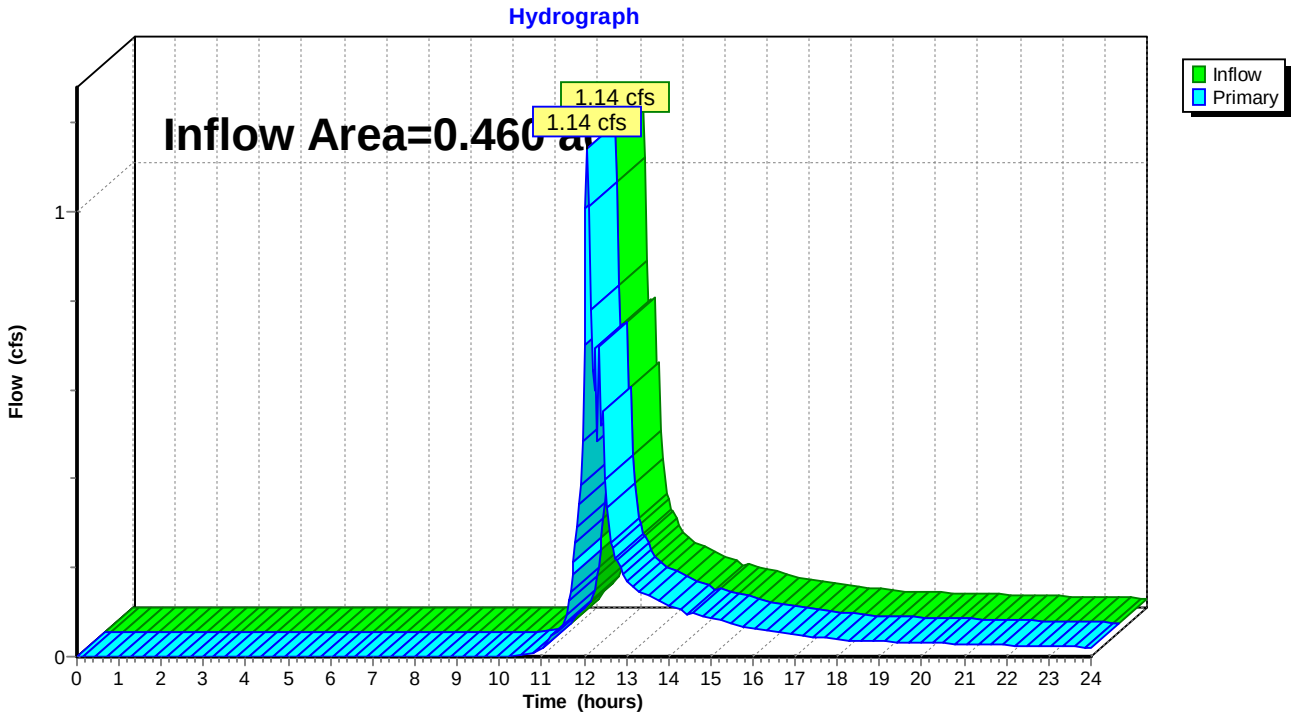


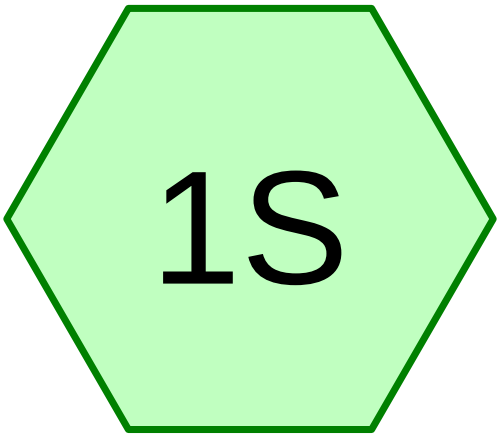
Summary for Link 1L: Combined Hydrograph

Inflow Area = 0.460 ac, 32.24% Impervious, Inflow Depth > 2.60" for 25 Year event
Inflow = 1.14 cfs @ 12.08 hrs, Volume= 0.100 af
Primary = 1.14 cfs @ 12.08 hrs, Volume= 0.100 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph





Existing Conditions

Subcat Reach Pond Link

Routing Diagram for 2168ExistingRev1
Prepared by Fairfield County Engineering LLC, Printed 12/18/2023
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Summary for Subcatchment 1S: Existing Conditions

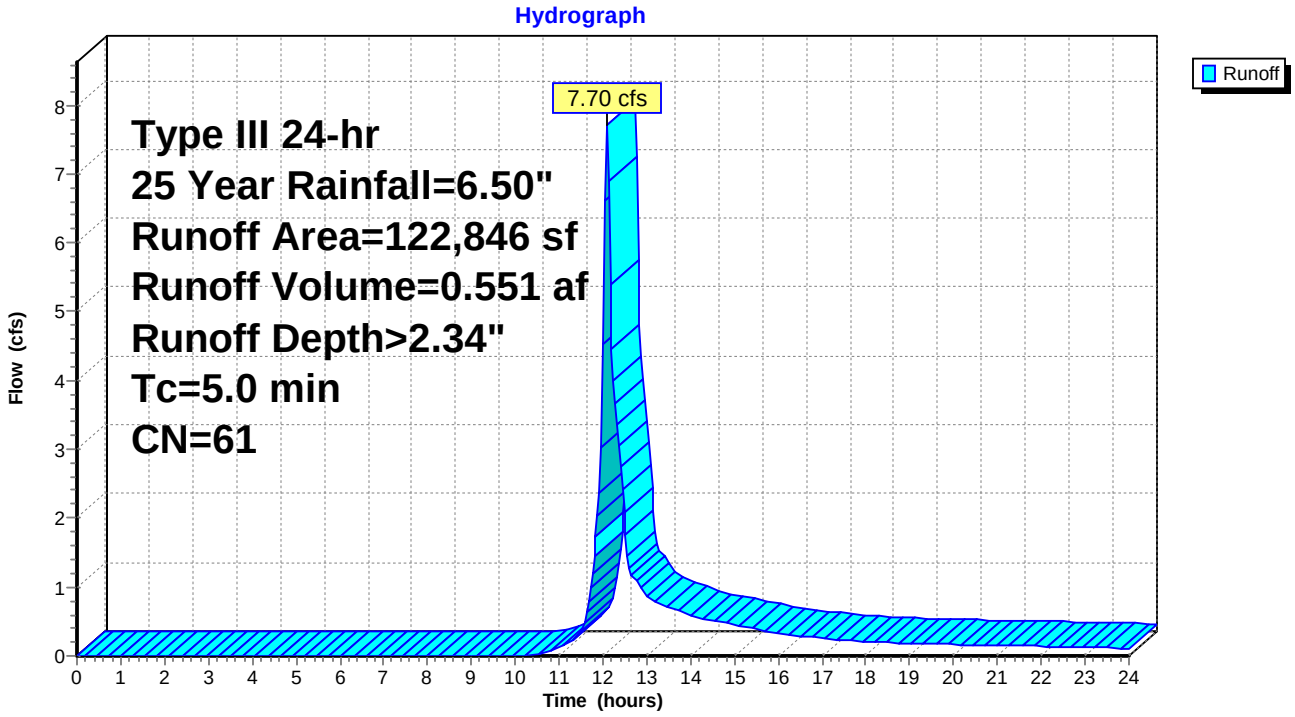
Runoff = 7.70 cfs @ 12.08 hrs, Volume= 0.551 af, Depth> 2.34"

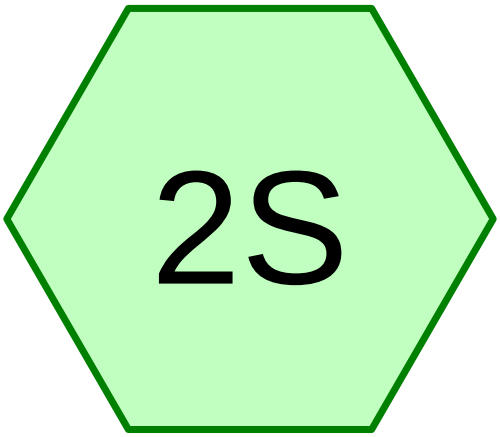
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	122,846	61	Woods, Fair, HSG B
	122,846		100.00% Pervious Area

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

Subcatchment 1S: Existing Conditions





Proposed Conditions

Subcat Reach Pond Link

Routing Diagram for 2168ProposedRev3
Prepared by Fairfield County Engineering LLC, Printed 12/18/2023
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Summary for Subcatchment 2S: Proposed Conditions

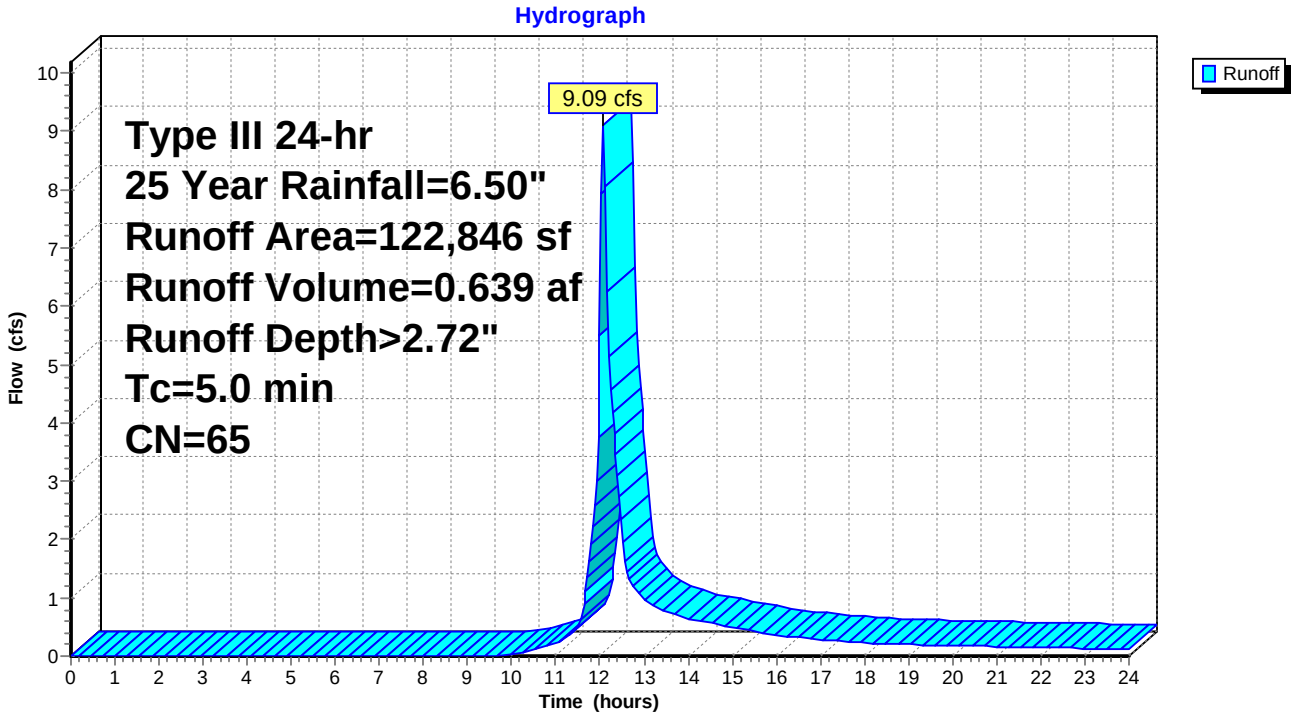
Runoff = 9.09 cfs @ 12.08 hrs, Volume= 0.639 af, Depth> 2.72"

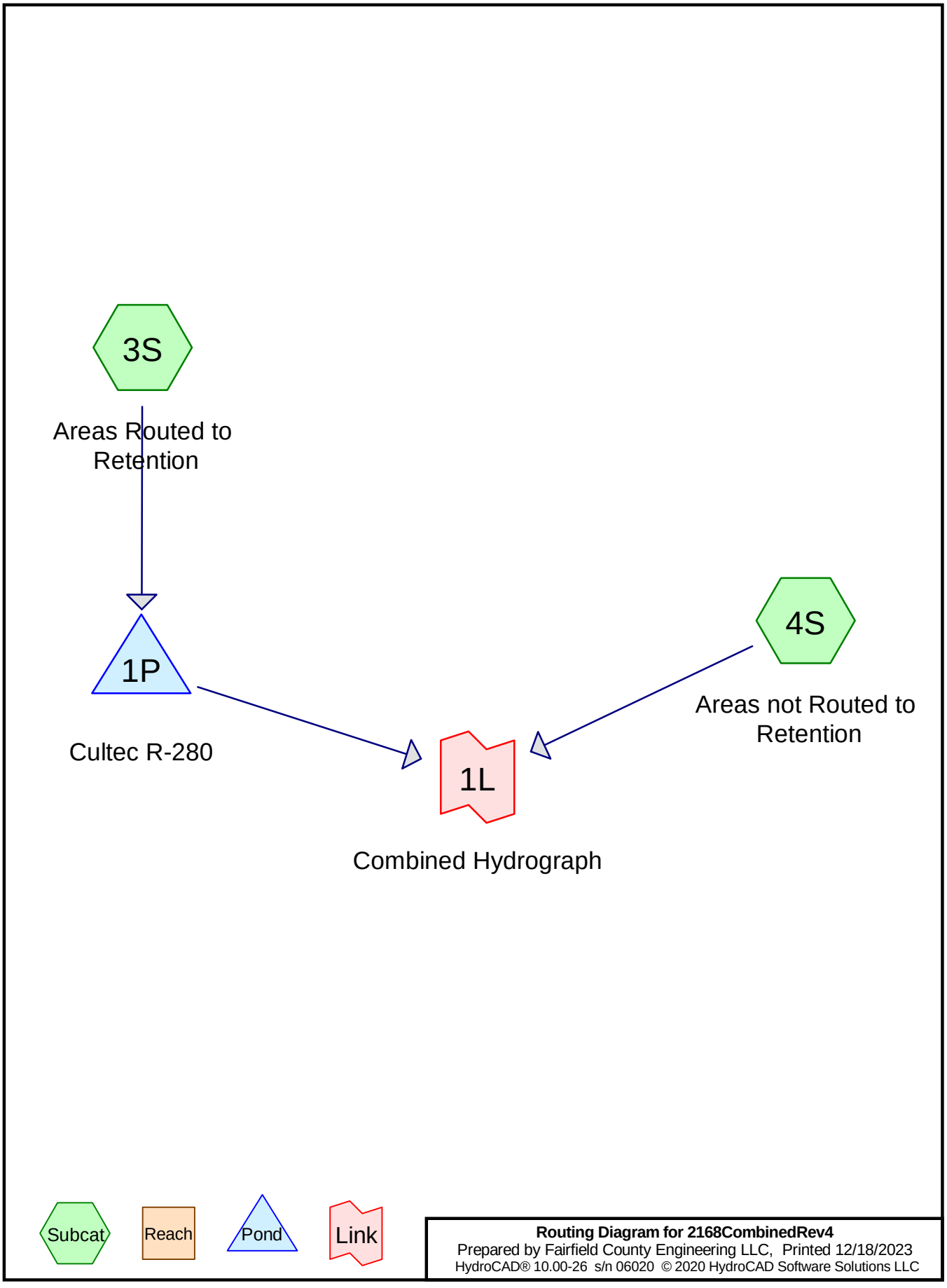
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	2,468	98	House
*	5,115	98	Driveway
*	525	98	Pool
*	1,395	98	Patio
	22,488	69	50-75% Grass cover, Fair, HSG B
*	90,855	61	Woods, Fair, HSG B
	122,846	65	Weighted Average
	113,343		92.26% Pervious Area
	9,503		7.74% Impervious Area

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

Subcatchment 2S: Proposed Conditions





Summary for Subcatchment 3S: Areas Routed to Retention

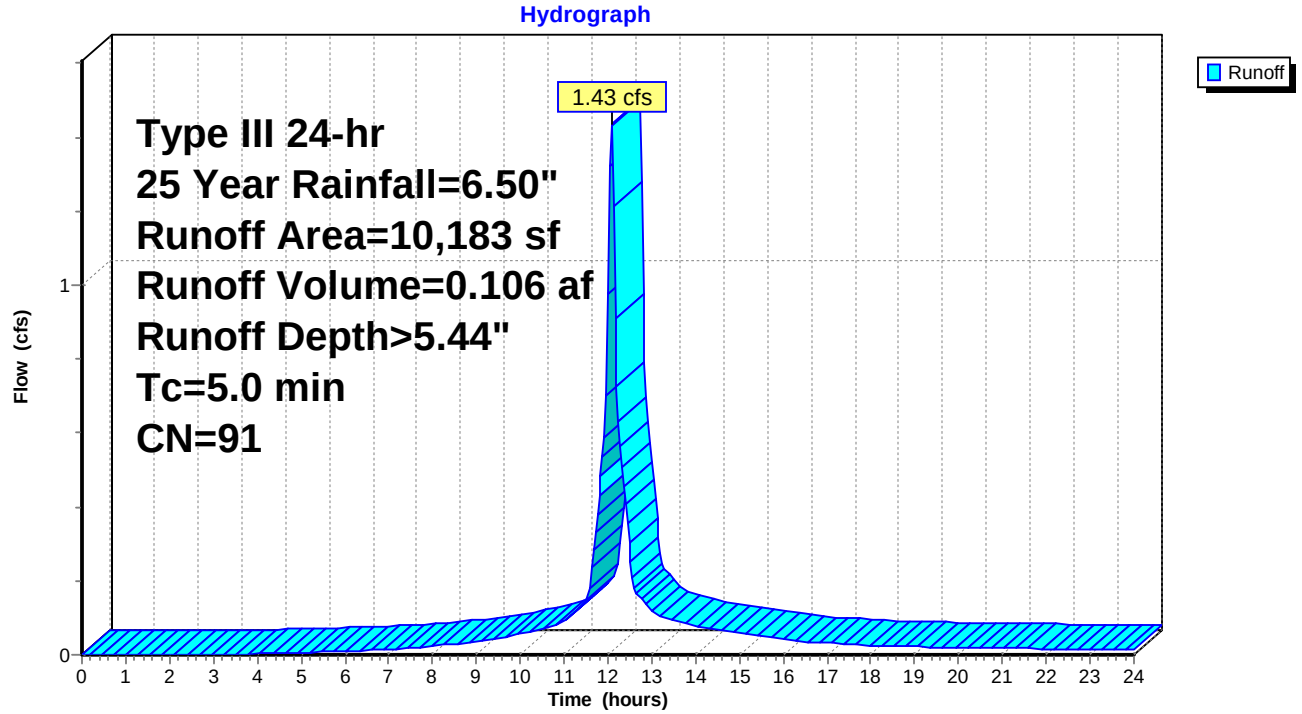
Runoff = 1.43 cfs @ 12.07 hrs, Volume= 0.106 af, Depth> 5.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	5,115	98	Driveway
*	2,468	98	House
	2,600	69	50-75% Grass cover, Fair, HSG B
	10,183	91	Weighted Average
	2,600		25.53% Pervious Area
	7,583		74.47% Impervious Area

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

Subcatchment 3S: Areas Routed to Retention



Summary for Subcatchment 4S: Areas not Routed to Retention

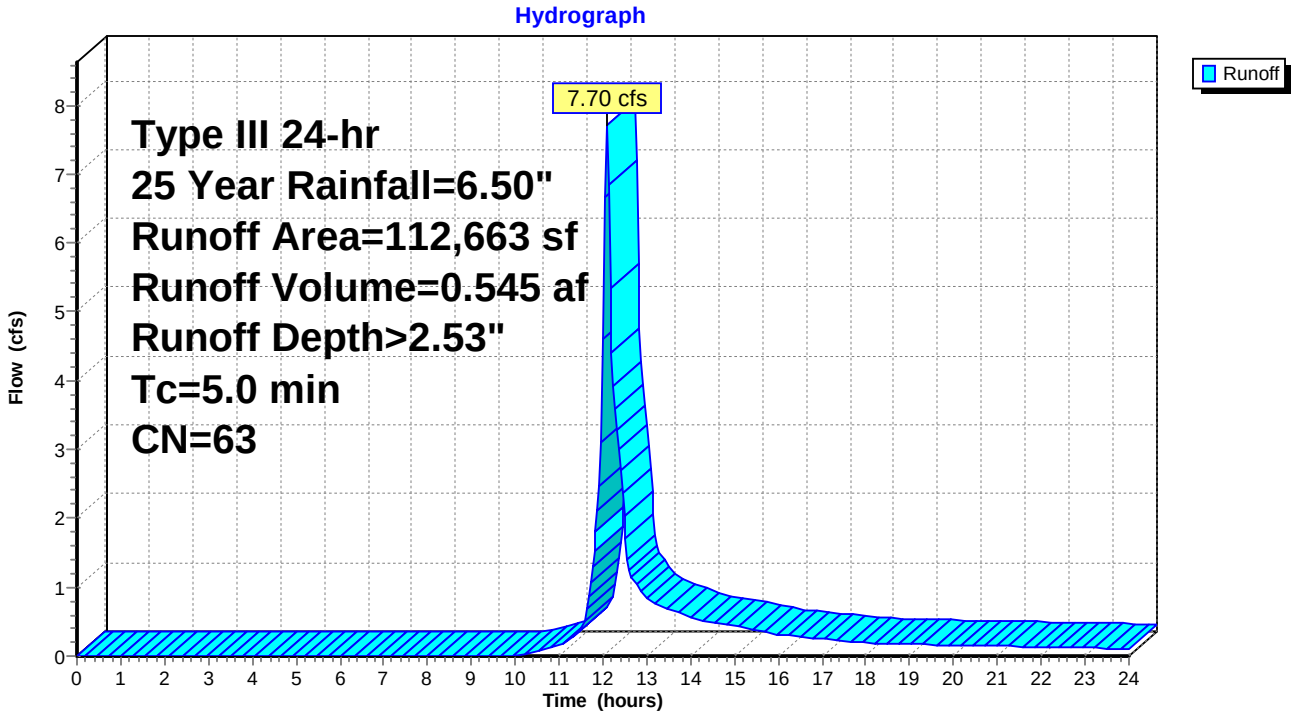
Runoff = 7.70 cfs @ 12.08 hrs, Volume= 0.545 af, Depth> 2.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 25 Year Rainfall=6.50"

	Area (sf)	CN	Description
*	525	98	Pool
*	1,395	98	Patio
	19,888	69	50-75% Grass cover, Fair, HSG B
*	90,855	61	Woods, Fair, HSG B
	112,663	63	Weighted Average
	110,743		98.30% Pervious Area
	1,920		1.70% Impervious Area

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

Subcatchment 4S: Areas not Routed to Retention



Summary for Pond 1P: Cultec R-280

Inflow Area = 0.234 ac, 74.47% Impervious, Inflow Depth > 5.44" for 25 Year event
Inflow = 1.43 cfs @ 12.07 hrs, Volume= 0.106 af
Outflow = 1.15 cfs @ 12.16 hrs, Volume= 0.106 af, Atten= 20%, Lag= 5.5 min
Discarded = 0.10 cfs @ 11.16 hrs, Volume= 0.090 af
Primary = 1.05 cfs @ 12.16 hrs, Volume= 0.016 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 541.42' @ 12.16 hrs Surf.Area= 700 sf Storage= 1,165 cf

Plug-Flow detention time= 78.1 min calculated for 0.106 af (100% of inflow)
Center-of-Mass det. time= 77.8 min (855.1 - 777.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	538.00'	254 cf	**41.17'W x 17.00'L x 2.21'H Field A** 1,545 cf Overall - 911 cf Embedded = 635 cf x 40.0% Voids
#2A	538.00'	911 cf	**Cultec R-280HD** x 20 Inside #1 Effective Size= 46.9"W x 26.0"H => 6.07 sf x 7.00'L = 42.5 cf Overall Size= 47.0"W x 26.5"H x 8.00'L with 1.00' Overlap Row Length Adjustment= +1.00' x 6.07 sf x 10 rows
		1,165 cf	Total Available Storage

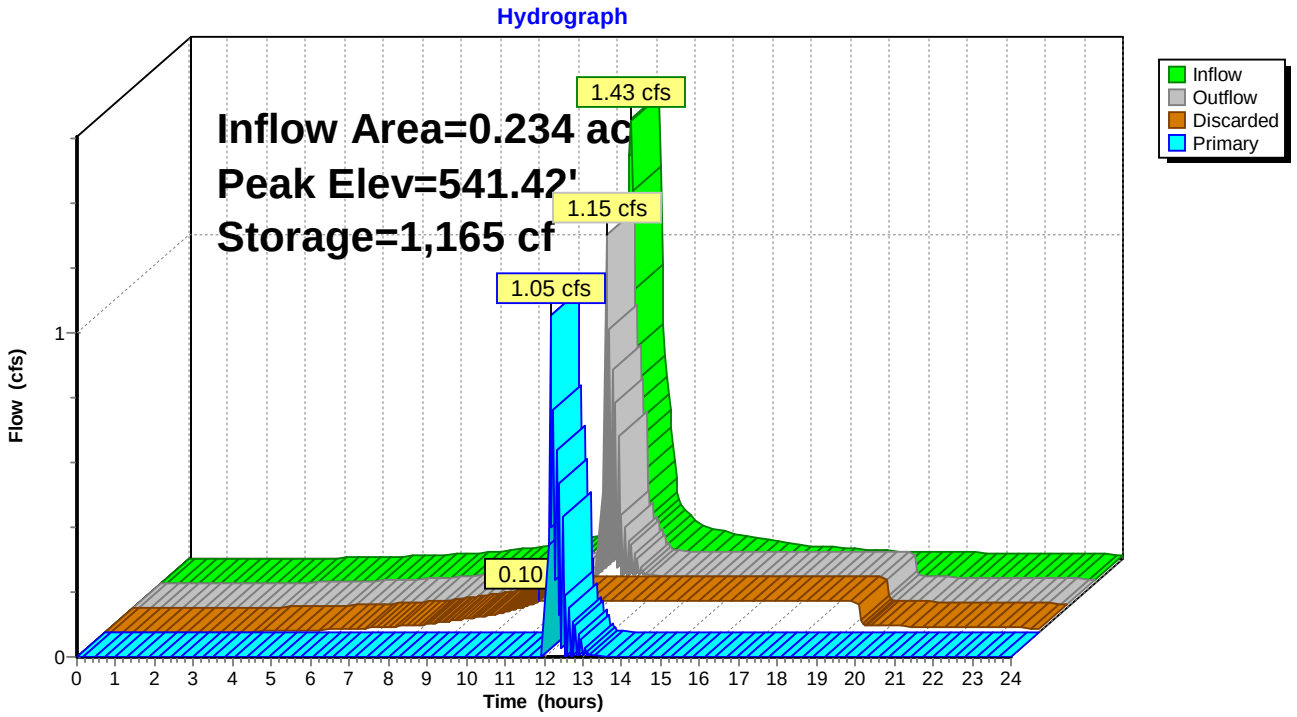
Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	540.20'	**6.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Discarded	538.00'	**6.000 in/hr Exfiltration over Horizontal area**

Discarded OutFlow Max=0.10 cfs @ 11.16 hrs HW=538.02' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.99 cfs @ 12.16 hrs HW=541.29' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.99 cfs @ 5.03 fps)

Pond 1P: Cultec R-280



Summary for Link 1L: Combined Hydrograph

Inflow Area = 2.820 ac, 7.74% Impervious, Inflow Depth > 2.39" for 25 Year event
Inflow = 7.70 cfs @ 12.08 hrs, Volume= 0.562 af
Primary = 7.70 cfs @ 12.08 hrs, Volume= 0.562 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Link 1L: Combined Hydrograph