



City Council
7224 GA Highway 21
Port Wentworth, GA 31407

Meeting: 07/12/22 06:30 PM
Department: Development Services
Category: Planning/Zoning Item
Prepared By: Melanie Ellis
Department Head: Brian Harvey

SUBMITTED

AGENDA ITEM (ID # 2695)

DOC ID: 2695

Site Plan Review Application submitted by Kim Thomas, Dewitt Tilton Group on behalf of Brian Orr for PIN # 7-0906-02-002 (8191 Old Highway 21) for a Specific Development Site Plan to allow a Truck Shop in a P-C-2 (Planned Community Business) Zoning District

Issue/Item: Site Plan Review Application submitted by Kim Thomas, Dewitt Tilton Group on behalf of Brian Orr for PIN # 7-0906-02-002 (8191 Old Highway 21) for a Specific Development Site Plan to allow a Truck Shop in a P-C-2 (Planned Community Business) Zoning District

Background: The subject property is currently vacant property. There are no buildings or structures on the subject property. This property was rezoned to P-C-2 during the November 18, 2021 Regular City Council Meeting.

Facts and Findings: The site plan consist of a truck retail shop associated parking, utilities, drainage and infrastructure improvements. This project will be served by a private well and septic system. This application is under review by City Engineers, T.R. Long Engineering. This project complies with the 2021-2041 City of Port Wentworth Comprehensive Plan.

Funding: N/A

Recommendation: The Planning Commission will hear this application on Monday, May 9, 2022 at 6:30 PM. / **UPDATE: THE PLANNING COMMISSION VOTED UNANIMOUSLY TO APPROVE THE APPLICATION WITH THE CONDITION THAT ALL ENGINEER COMMENTS BE ADDRESSED.**

ATTACHMENTS:

- 8191 OLD HWY 21 PW TRUCK SHOP S-SITE PLAN MAY 2022 - Application (PDF)
- 8191 OLD HWY 21 PW TRUCK SHOP S-SITE PLAN MAY 2022 - Timeline (DOCX)
- Planning Commission Minutes May 9, 2022 DRAFT (PDF)

220207

City of Port Wentworth
7224 Highway 21 Port Wentworth Georgia 31407 912-999-2084



Site Plan Review Application

Site Plan Application is required for all new construction in a "P" or "MPO" zone as defined in the Zoning Ordinance of the City of Port Wentworth.

Site Plan Type (Check One): ☐ General / Concept ☒ Specific Development
Site Plan Address: 8191 OLD HIGHWAY 21
PIN #(s): 70906 02002
Zoning: P-C-2 Estimated Cost of Construction: \$ 1,232,935
Type of Construction: Single Building
Project Name: Rice Hope Shop

Applicant's Name: Kim Thomas - Dewitt Tilton Group
Mailing Address: 119 Canal St Suite 119 Pooler, GA 31322
Phone #: 912-777-3404 Email: kim@dewitttiltongroup.com

Owner's Name (If Different form Applicant): Brian Orr
Mailing Address: 204 Wiley Bottom Road Savannah, GA 31411
Phone #: 912-429-0596 Email: brianporr@hotmail.com

I hereby acknowledge that the above information is true and correct.


Applicant's Signature

3/23/22
Date


Owner's Signature (If Different form Applicant)

3/23/22
Date

Please see page 2 for required submittal checklist


Site Plan Review Application Submittal Checklist

Documentation below is required for a complete submittal.

- ☒ Signed and Completed Application
- ☒ 3 Full size sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☒ 15 half size (11" X 17") sets of site plan civil drawings or concept plan (depending on type of site plan)
- ☐ 2 copies of hydrology reports (if applicable)
- ☒ Names, mailing address, and PIN number of all property owners within 250 feet of all property lines
- ☒ 1 8 ½" X 11" of site plan civil drawings or concept plan (depending on type of site plan)
- ☒ PDF of entire submittal on a flash drive or download link ONLY (NO CD'S)
- ☒ Other Engineering details or reports may be required once submittal has been received
- ☒ Site plan review fee check
 - No Land Disturbance- \$206.00 Site Plan Fee + \$50.00 Admin Fee = Total \$256.00
 - With Land Disturbance - \$836.00 Site Plan Fee + \$50.00 Admin Fee = Total \$886.00

Additional Fee Statement: If engineer review cost to the City exceeds the site plan review fee that is paid at the time of initial application submittal, you may be required to pay additional review cost.

I have read and agree to the above additional fee statement


Applicant's Signature

3/23/22
Date

CITY OF PORT WENTWORTH
(912) 964-4379

REC#: 00350560 4/11/2022 9:47 AM
OPER: ME TERM: 011
REF#: CK 4628

TRAN: 112.0000 BLDG PERMIT
220207 886.00CR
ORR, BRIAN
8191 OLD HIGHWAY 21
DEV-SPR 886.00CR

TENDERED: 886.00 CHECK
APPLIED: 886.00-

CHANGE: 0.00

WWW.CITYOFPORTWENTWORTH.COM

Project: Rice Hope Shop Orr Truck Yard
8191 Old Highway 21
70906 02002

NEIGHBORS

FOSTER BENJAMIN
8177 OLD HIGHWAY 21 SAVANNAH GA 31407
70906 02007

THE CLAUDE M KICKLIGHTER REVOCABLE TRUST& ELIZABETH E KICKLIGHTER REVOCABLE TRUST
1606 CRESTWOOD LANE MC LEAN VA 22101
96 MOORE DR 70906 02001A

WINBURN J RANDALL III
8210 HIGHWAY 21 PORT WENTWORTH GA 31407
70906 02001

BUCK ISLAND, LLC AND BEP LAND INVESTORS, LLC
100 LAKESIDE BLVD PORT WENTWORTH GA 31407
70906 04064

Project Timeline

Project Number: 220207

Project Name: PW Truck Shop

Applicant / Engineer: Kim Thomas Dewitt Tilton / Maupin Engineering

Owner: Brian Orr

City Review Engineer: TR Long

- 4/6/2022 – application received; missing PDF
- 4/8/2022 – sent email to Kim Thomas letting her know we were missing the PDF.
- 4/11/2022 – received PDF. Processed and sent files to TR Long for review.
- 5/2/2022 – Sent email to TR Long for review update.
- 5/9/2022 – Planning Commission voted unanimously to approve the application with the condition that all engineer comments be addressed
- 5/9/2022 – received 1st comment letter from TR Long
- 5/10/2022 – sent comment letter to Jay Maupin & Kim Thomas.
- 5/26/2022 – City Council voted to table the application.
- 6/14/2022 – Received 1st resubmittal from Maupin Engineering. Forwarded to TR Long.
- 7/5/2022 – sent email to TR Long for review update.
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CITY OF PORT WENTWORTH

PLANNING COMMISSION

MAY 9, 2022

Council Meeting Room

Regular Meeting

6:30 PM

7224 GA HIGHWAY 21
PORT WENTWORTH, GA 31407

1. CALL MEETING TO ORDER

Vice-Chairman Lauree Morris called the meeting to order.

2. PRAYER AND PLEDGE OF ALLEGIANCE

Commissioner Franklin led the Prayer and Pledge of Allegiance.

3. ROLL CALL - SECRETARY

Attendee Name	Title	Status	Arrived
Bill Herrin	Planning Commissioner	Present	
Rosetta Franklin	Planning Commissioner	Present	
Wanda Rollf	Planning Commissioner	Absent	
Lauree Morris	Planning Commissioner	Present	
CJ Neesmith	Planning Commissioner	Absent	
Janet Hester	Planning Commissioner	Present	
Brian Harvey	Director of Development Services	Present	
Melanie Ellis	Building Inspector	Present	

4. APPROVAL OF AGENDA

1. Approval of Agenda

RESULT: ADOPTED [UNANIMOUS]
MOVER: Rosetta Franklin, Planning Commissioner
SECONDER: Janet Hester, Planning Commissioner
AYES: Herrin, Franklin, Morris, Hester
ABSENT: Rollf, Neesmith

5. ADOPTION OF MINUTES

A. Planning Commission - Regular Meeting - Apr 11, 2022 6:30 PM

RESULT: ACCEPTED [UNANIMOUS]
MOVER: Janet Hester, Planning Commissioner
SECONDER: Bill Herrin, Planning Commissioner
AYES: Herrin, Franklin, Morris, Hester
ABSENT: Rollf, Neesmith

6. ZONING MAP AMENDMENTS (REZONING)

7. ZONING TEXT AMENDMENTS (ORDINANCES)

8. SITE PLAN/SUBDIVISION APPROVAL

- A. Site Plan Review Application submitted by Kim Thomas, Dewitt Tilton Group on behalf of Brian Orr for PIN # 7-0906-02-002 (8191 Old Highway 21) for a Specific Development Site Plan to allow a Truck Shop in a P-C-2 (Planned Community Business) Zoning District

The applicant, Kim Thomas, was present. Jay Maupin, Maupin Engineering was also present on behalf of the applicant. Mr. Maupin gave an brief overview of the project and offered to answer any questions the commission may have. Janet Hester asked if the hydrology report was submitted and that she had some stormwater concerns. Mr. Maupin responded that the report was submitted with site plan application and that part of the development plan they are showing to clear out the existing ditches and downstream drainage ditches. Lauree Morris asked why there would be no trees planted along highway 21. Mr. Maupin responded that they were going to screen for the residential properties. There were no public comments. Vice-chairman Morris made a motion to approve the application with the condition that all engineer comments be resolved. Commissioner Herrin seconded the motion with conditions. The vote was unanimous.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Lauree Morris, Planning Commissioner
SECONDER:	Bill Herrin, Planning Commissioner
AYES:	Herrin, Franklin, Morris, Hester
ABSENT:	Rollf, Neesmith

- B. Site Plan Review Application submitted by Allen Engineering Services, LLC., on behalf of Shane Malek, Next Chapter Neighborhoods for PIN # 7-0906-04-064 (Old Highway 21) for a Specific Development Site Plan to allow a Single-Family Home For Rent Development (Jasper Village Phase II) in a M-P-O (Master Plan Overlay) Zoning District

The owner, Shane Malek, was present and gave a brief presentation of the projects and offered to answer any questions the commission may have. Rosetta Franklin asked if the homes are available for purchase. Mr. Malek responded that they are for rent only. Janet Hester asked questions regarding if these would be "Airbnb rentals". Mr. Malek stated that lease agreement does not allow the unit to be used as a "Airbnb". Lauree Morris asked what the rent is for these units. Mr. Malek stated that the rent is at a premium rate. There were no public comments. Commissioner Hester made a motion to deny the application. Commissioner Franklin seconded the motion. Commissioners Hester and Franklin voted Yes. Commissioners Herrin and Morris voted No. The vote was a tie. After several minutes of discussion, Commissioner Herrin made a motion to approve the application with the condition that all engineer comments be addressed. Commissioner Franklin seconded the motion with conditions. Commissioners Herrin, Franklin and Morris voted Yes. Commissioner Hester voted no. The motion to approve with conditions passed 3-1.

RESULT:	APPROVED [3 TO 1]
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Morris
NAYS:	Hester
ABSENT:	Rollf, Neesmith

- C. Site Plan Review Application submitted by Felipe Toledo, P.E., Thomas & Hutton of behalf of LRE Crossgate North, LLC., for PIN # 7-0035-01-007 (Northeast corner of Crossgate Rd & Jimmy Deloach Parkway) for a Specific Development Site Plan to allow a warehouse development (NFI Crossgate Industrial Park) in a P-I-1 (Planned Industrial) Zoning District

The applicant was not present. There were no public comments. Commissioner Herrin made a motion that this application be tabled. Commissioner Franklin seconded the motion. The vote was unanimous.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Morris, Hester
ABSENT:	Rollf, Neesmith

- D. Site Plan Review Application submitted by Chad Zittrouer, Kern & Co., LLC., on behalf of CH Realty IV - Sansone, I, LLC., for PIN # 7-0977-01-028 (Hendley Road) for a Specific Development Site Plan to allow a Warehouse / Distribution Center (Legacy Park Building 2) in a P-I-2 (Planned Industrial) Zoning District

The applicant, Chad Zittrouer, was present. Mr. Zittrouer gave a brief presentation and offered to answer any questions the commission may have. Janet Hester asked several questions regarding the road closure and stormwater concerns. Lauree Morris asked if on the original rezoning application was all of the proposed development shown. Mr. Zittrouer responded that yes there was and excess of a million square feet of warehouse proposed. Lauree Morris asked questions regarding wetlands and any impacts to them. Mr. Zittrouer stated that they have the wetland permit and that the credits for any impacts have been paid for.

Public Hearing:

- Robin Shubert, 230 Monteith Road - spoke against the application
- Mable Thomas, 208 Monteith Road - spoke against the application

Commissioner Herin made a motion that the application be tabled. Commissioner Hester seconded the motion. The vote was unanimous.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Bill Herrin, Planning Commissioner
SECONDER:	Janet Hester, Planning Commissioner
AYES:	Herrin, Franklin, Morris, Hester
ABSENT:	Rollf, Neesmith

- E. Site Plan Review Application submitted by Chad Zittrouer, Kern & Co., LLC., on behalf of CH Realty IV - Sansone, I, LLC., for PIN # 7-0977-01-027 (Hendley Road) for a Specific Development Site Plan to allow a Warehouse / Distribution Center (Legacy Park Building 3) in a P-I-2 (Planned Industrial) Zoning District

The applicant, Chad Zittrouer, was present. Mr. Zittrouer gave a brief presentation and offered to answer any questions the commission may have. There were no public comments. Vice-Chairman Morris made a motion that the application be tabled until the concerns of the road closure was agreed upon. Commissioner Franklin seconded the motion. The vote was unanimous.

RESULT:	APPROVED [UNANIMOUS]
MOVER:	Lauree Morris, Planning Commissioner
SECONDER:	Rosetta Franklin, Planning Commissioner
AYES:	Herrin, Franklin, Morris, Hester
ABSENT:	Rollf, Neesmith

9. NEW BUSINESS

10. ADJOURNMENT

A. Adjournment

RESULT:	ADOPTED [UNANIMOUS]
MOVER:	Lauree Morris, Planning Commissioner
AYES:	Herrin, Franklin, Morris, Hester
ABSENT:	Rollf, Neesmith

Chairman

The foregoing minutes are true and correct and approved by me on this _____ day of _____, 2022.

Secretary

114 North Commerce Street
Hinesville, Georgia 31313
(912) 368-5664 Office
(912) 368-7206 Fax



1000 Towne Center Blvd.
Suite 304
Pooler, Georgia 31322
(912) 355-1046

May 9, 2022

Mr. Brian Harvey
City of Port Wentworth
7224 Georgia Highway 21
Port Wentworth, Georgia 31407

Re: 8191 Old Highway 21 PW Truck Shop Site Plan
Highway 21 at O'Leary Road
Port Wentworth, Georgia

Dear Mr. Harvey,

T. R. Long Engineering, P.C. has reviewed the specific development plan entitled "PW Truck Shop", prepared by Maupin Engineering dated April 1, 2022, and stamped by Jay A. Maupin. Our review comments are marked on the attached files:

1. 8191 OLD HWY 21 PW TRUCK SHOP S-SITE PLAN - Site Plan 4.1.22 -TRL review May 2022.pdf.
2. 8191 OLD HWY 21 PW TRUCK SHOP S-SITE PLAN- Hydro 4.6.22 - TRL Review May 2022.pdf

Should you have any questions, comments, or need any additional information, please contact us.

Sincerely,

A handwritten signature in blue ink that reads 'Trent R. Long'.

Trent R. Long, P.E.

GENERAL CONSTRUCTION NOTES:

ALL CONSTRUCTION SHALL BE IN CONFORMANCE TO THE CURRENT PORT WENTWORTH DESIGN STANDARDS, SPECIFICATIONS AND DETAILS OR AS OTHERWISE ISSUED FOR THIS PROJECT. WHERE ANY CONFLICT EXISTS BETWEEN THESE PLANS AND/OR SPECIFICATIONS AND/OR CONSTRUCTION DETAILS AND THE PORT WENTWORTH STANDARDS, SPECIFICATIONS, DETAILS AND DEVELOPMENT ORDINANCE(S), THE PORT WENTWORTH STANDARDS SHALL PREVAIL.

- LAYOUT TO BE CONTROLLED BY EXISTING BENCHMARK.
- DIMENSIONS TO CURB AND GUTTER ARE TO FACE OF CURB.
- DIMENSIONS TO WALK ARE TO FACE OF WALK.
- DIMENSIONS TO BUILDING ARE TO FACE OF BUILDING.
- DIMENSIONS TO STRIPING IS TO CENTERLINE OF STRIPING.
- ALL ANGLES ARE 90° UNLESS OTHERWISE NOTED.
- ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
- BLUE METAL REFLECTIVE SIGN AT LEAST 12" IN WIDTH AND 18" IN LENGTH AND ERECTED AT 7' ABOVE GRADE IN SUCH MANNER SO AS TO BE CLEARLY VISIBLE TO THE PARKING VEHICLE. THE SIGN SHALL HAVE PRINTED IN WHITE LETTERS NOT LESS THAN ONE INCH IN HEIGHT ON THREE SEPARATE LINES AND CENTERED THE FOLLOWING WORDS: "PERMIT PARKING ONLY", "TOW-AWAY ZONE" AND "MAXIMUM FINE \$500.00". SUCH SIGNS SHALL ALSO DISPLAY THE SYMBOL FOR HANDICAP ACCESSIBILITY CENTERED BETWEEN THE SECOND AND THIRD LINES. VAN ACCESSIBLE SPACE SHALL HAVE ADDITIONAL SIGN WITH THE FOLLOWING WORDS: "VAN ACCESSIBLE".
- TRAFFIC CONTROL DEVICES SHALL BE USED ON ALL WORK ON THIS PROJECT IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" CURRENT EDITION. THE COST TO COMPLY SHALL BE INCLUDED IN THE OVERALL COST OF THE PROJECT.
- REFERENCE SURVEYS:
 - BOUNDARY & TOPOGRAPHIC SURVEY - PREPARED BY ATLAS SURVEYING (10/2021).
 - VERTICAL DATUM: NAVD88 HORIZONTAL DATUM: NAD83
 - PROJECT IS ON STATE PLANE COORDINATES.
 - MAUPIN ENGINEERING, INC. DOES NOT ACCEPT ANY RESPONSIBILITY FOR ACCURACY OF PROVIDED SURVEY INFORMATION.
 - ONLY ABOVE GROUND, READILY VISIBLE STRUCTURES, UTILITIES AND SURFACE PAINT MARKINGS WERE LOCATED FOR THIS SURVEY. THIS SURVEYOR MAKES NO WARRANTY OR GUARANTEE AS TO THE LOCATION, EXISTENCE, OR NON-EXISTENCE OF ANY BELOWGROUND, NON-VISIBLE UTILITIES OR STRUCTURES. CONTRACTOR SHALL FIELD VERIFY LOCATION, TYPE, SIZE, MATERIAL AND GENERAL CONDITION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- ALL GRADED EARTH NOT OTHERWISE STABILIZED WITH BUILDING, PAVEMENT OR VEGETATION SHALL BE GRASSED OR SODDED.
- OWNER SHALL ACCEPT MAINTENANCE OF THE STORM DRAINAGE SYSTEM, INCLUDING ROOF DRAIN CONNECTIONS, WITHIN THE LIMITS OF THE PROPERTY. PORT WENTWORTH WILL NOT MAINTAIN THE STORM DRAINAGE SYSTEM WITHIN THE PROPERTY. THIS SITE IS DESIGNED TO DISCHARGE STORM WATER RUNOFF INTO THE APPROVED MASTER DRAINAGE CONVEYANCE AND DETENTION SYSTEM.
- DITCHES, ALL DRAINAGE STRUCTURES, ORIFICES AND PAVEMENT ELEVATIONS SHALL BE SURVEYED FOR "AS-BUILT" DRAWINGS ALONG WITH THE WATER AND SANITARY SEWER SERVICES.
- ADJUST EXISTING MANHOLE FRAMES, GRATES AND VALVE BOXES TO GRADE AS NEEDED.
- ALL STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
- MATCH EXISTING PAVEMENT GRADE ELEVATIONS WHERE CONNECTING TO EXISTING PAVEMENT.
- FILL BENEATH BUILDINGS SHALL BE COMPACTED IN ACCORDANCE WITH BUILDING STRUCTURAL SPECIFICATIONS.
- CONTRACTOR TO FIELD VERIFY DURING CONSTRUCTION ANY EXISTENCE OF SUB-SURFACE DEBRIS OR ORGANIC MATERIAL. ANY SUB-SURFACE DEBRIS OR ORGANIC MATERIAL FOUND SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 2' BELOW GRADED AGGREGATE BASE IN PAVEMENT AREAS AND 2' BELOW BOTTOM OF FOOTINGS FOR BUILDINGS (CONTRACTOR SHALL CONSULT WITH BUILDING STRUCTURAL ENGINEER FOR ANY WORK BENEATH OR ADJACENT TO BUILDING AND/OR ABOVE OR BELOW GRADE STRUCTURES). IF EXCESSIVE DEBRIS OR ORGANIC MATERIAL IS FOUND, ENGINEER SHALL BE CONTACTED FOR INSPECTION. REMOVAL OF INSPECTED MATERIAL SHALL BE DIRECTED BY THE ENGINEER.
- ALL EROSION AND SEDIMENT CONTROL DEVICES (BMPS) SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL AND BE MAINTAINED BY CONTRACTOR UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED IN ACCORDANCE WITH THE GOVERNING NPDES GENERAL PERMIT.
- IF A RIGHT-OF-WAY ENCROACHMENT PERMIT MUST BE OBTAINED, AND IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN SUCH PERMIT.
- THE PORT WENTWORTH INSPECTIONS DEPARTMENT RESERVES THE RIGHT TO ACCESS PROPERTY TO INSPECT STORM WATER FACILITIES AT ANY TIME.
- CHLORINATED, DISINFECTED WATER SHALL NOT BE DISCHARGED INTO THE STORM WATER SYSTEM.
- TRAFFIC CONTROL AND FLOW SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- A MINIMUM SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN ALL INSTALLED OR RELOCATED UTILITIES AND LARGE AND MEDIUM TREES.
- ANY AND ALL STREET LIGHTING, LANDSCAPE, SIDEWALK AND ACCESSIBILITY REQUIREMENTS TO BE PERFORMED, DESIGNED AND/OR CONSTRUCTED SHALL BE COORDINATED WITH CIVIL ENGINEER.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL AND/OR MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR THE ROOF DRAIN SYSTEM. COLLECTION AND DISCHARGE SHALL BE COORDINATED WITH CIVIL ENGINEER.
- SITE CIVIL PLANS SHALL TERMINATE 5' FROM BUILDING FACE UNLESS OTHERWISE NOTED. CONTINUATION OF WATER, SANITARY SEWER AND STORM DRAINAGE LATERALS SHALL BE COORDINATED WITH BUILDING CONTRACTOR IN ACCORDANCE WITH ARCHITECTURAL AND/OR MECHANICAL, ELECTRICAL AND PLUMBING PLANS.
- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE APPROPRIATE JURISDICTIONS APPROVED CONSTRUCTION SPECIFICATIONS AND DETAILS.
- THE OWNER, OWNER'S REPRESENTATIVES, PORT WENTWORTH AND OTHER REGULATORY AGENCIES SHALL HAVE THE RIGHT TO ACCESS THE SITE AT ANY TIME FOR PURPOSES OF OBSERVING WORK PERFORMED.
- ALL UTILITIES ARE SHOWN AS APPROXIMATE ON THE PLANS AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR. SOME UTILITIES AND SERVICE LINE LOCATIONS ARE UNKNOWN AND NOT SHOWN ON THE PLANS. THIS DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO PROTECT EXISTING UNDERGROUND FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID UTILITY LOCATE TICKET FROM THE GEORGIA UTILITIES PROTECTION CENTER (811 / 800-282-7411), AND COORDINATION WITH OTHER SUCH LOCAL UTILITIES AS MAY BE REQUIRED.
- THE CONTRACTOR WILL PROTECT ALL TREES NOTED TO REMAIN WITHIN AND ADJACENT TO THE CONSTRUCTION ZONE. ANY UNAUTHORIZED REMOVAL OF TREES NOTED TO REMAIN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REESTABLISH TO THE SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL BORROW MATERIAL NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT. ALL BORROW MATERIAL SHALL BE CLEAN AND FREE OF DEBRIS AND ORGANIC MATERIAL AND SUFFICIENT TO COMPACT TO A MINIMUM BEARING CAPACITY OF 2,500PSF OR AS OTHERWISE SPECIFIED.
- ALL ITEMS CLEARED OR DEMOLISHED FROM THE SITE, INCLUDING SPOIL MATERIAL TO BE REMOVED FOR OFF-SITE DISPOSAL, ARE THE PROPERTY OF THE CONTRACTOR UNLESS THEY ARE TO BE REUSED ON THE SITE OR OTHERWISE NOTED. NO BURYING OR BURNING OF DEBRIS WILL BE ALLOWED ON THIS SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING BEST MANAGEMENT PRACTICES (BMP'S) ON THE SITE AT ALL TIMES IN ACCORDANCE WITH THESE PLANS AND THE "MANUAL FOR EROSION AND SEDIMENT CONTROL OF GEORGIA".

GENERAL DEVELOPMENT NOTES:

- PIN: 70906 02002
ADDRESS: 8191 OLD HWY. 21
PORT WENTWORTH, GEORGIA
- CONSTRUCTION EXIT LOCATION
N: 32.236470°
W: 81.193608°
- TOTAL LAND ACREAGE = 3.93(±) AC
TOTAL DISTURBED ACREAGE = 4.1(±) AC

PRE DEVELOPMENT
TOTAL GREEN SPACE = 171.316 (±) 100(%)
PAVED AREA = 0 (±) 0 (%)
BUILDING COVERAGE AREA = 0 (±) 0 (%)

POST DEVELOPMENT
TOTAL GREEN SPACE = 112.096(±) 66(%)
PAVED AREA = 51.000(±) 29(%)
BUILDING COVERAGE AREA = 8.220(±) 05(%)
- EXISTING USE OF PROPERTY : VACANT
PROPOSED USE OF PROPERTY : TRUCK REPAIR SHOP

PRESENT SITE ZONING : P-C-2
- PROPERTY IS LOCATED IN ZONE X, NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD INSURANCE RATE MAP # 13051C0030G, DATED 08/16/2018
- THE SITE IS SERVED BY WELL AND SEPTIC SEWER SYSTEM.
- PARKING SPACE CALCULATIONS:
REQUIRED: 1 SPACE PER 400SF OF SHOP/GARAGE SPACE +1 STALL PER EMPLOYEE = **19 STALLS**
PROVIDED: **20 STALLS PROVIDED**
- SITE LIGHTING PLAN TO BE PROVIDED SEPARATELY

PW TRUCK SHOP
Specific Development Plan

MEI Proj #673-21-35 Plan Date: 4/1/22

PREPARED FOR:

DEWITT TILTON GROUP

KIM THOMAS

119 CANAL STREET SUITE 106

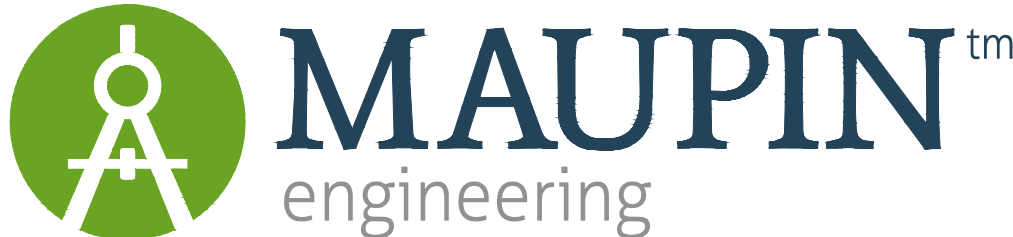
POOLER, GEORGIA 31322

912-777-3404

kim@dewitttiltongroup.com



VICINITY MAP



114 WEST 42nd STREET OFFICE PHONE (912) 235 - 2915
SAVANNAH, GA 31401 GENERAL@MAUPINENGINEERING.COM

SHEET INDEX

C.0	COVER - NOTES
C.1	STAMPED SURVEY
C.2	DEMOLITION PLAN
C.3	STAKING PLAN
C.4	UTILITY PLAN
C.5	GRADING PLAN
C.6	LANDSCAPING PLAN
C.E1	EROSION CONTROL PLAN - INITIAL
C.E2	EROSION CONTROL PLAN - INTERMEDIATE
C.E3	EROSION CONTROL PLAN -FINAL
C.D1-D3	DETAILS

REVISIONS		
NO.	DATE	DESCRIPTION

THIS SET IS RELEASED FOR PERMITTING 4/1/22
NOT FOR PRICING

©COPYRIGHT 2022 Maupin Engineering, Inc.



LEVEL II E&S CERT.
#21051 EXP: 12/1/2024

UTILITIES PROTECTION CENTER

Dig Safely.
CALL 811

CONTRACTOR IS REQUIRED TO CALL
AT LEAST 3 DAYS PRIOR TO
START OF CONSTRUCTION

Type: PLAT
Recorded: 9/6/2021 11:33:00 AM
Fee Amt: \$10.00 Page 1 of 1
Chatham, Ga. Clerk Superior Court
Tammie Mosley Clerk Superior Court

Participant ID: 5131489047

BK 53 PG 125

THIS BLOCK RESERVED FOR THE CLERK OF SUPERIOR COURT

ERROR OF CLOSURE:
FIELD: 1/212,618
ANGULAR ERROR OF 2" PER
ANGLE POINT AND ADJUSTED
BY COMPASS METHOD
PLAT CLOSURE 1/158,418
EQUIPMENT: TOPCON GTS236W
TOTAL STATION; SINGLE PRISM

- REFERENCES:
1. PRB 32P, PAGE 91
 2. PRB 3P, PAGE 58
 3. PRB 8P, PAGE 34
 4. SMB 2S, PAGE 81

- LEGEND
- IRF-IRON ROD FOUND
 - IPF-IRON PIPE FOUND
 - CMF-CONCRETE MONUMENT FOUND
 - IRS-IRON ROD SET

THE PROPERTY HEREON LIES COMPLETELY
WITHIN A JURISDICTION WHICH DOES NOT
REVIEW OR APPROVE ANY PLATS OR THIS
TYPE OF PLAT PRIOR TO RECORDING.
RECORDATION OF THIS PLAT DOES NOT IMPLY
APPROVAL OF ANY LOCAL JURISDICTION,
AVAILABILITY OF PERMITS, COMPLIANCE WITH
LOCAL REGULATIONS OR REQUIREMENTS, OR
SUITABILITY FOR ANY USE OR PURPOSE OF
THE LAND. FURTHERMORE, THE UNDERSIGNED
LAND SURVEYOR CERTIFIES THAT THIS PLAT
COMPLIES WITH THE MINIMUM TECHNICAL
STANDARDS FOR PROPERTY SURVEYS IN
GEORGIA AS SET FORTH IN THE RULES AND
REGULATIONS OF THE GEORGIA BOARD OF
REGISTRATION FOR PROFESSIONAL ENGINEERS
AND LAND SURVEYORS AND AS SET FORTH
IN O.C.G.A. SECTION 15-6-67.



VINCENT HELMLY NO. 1882 DATE

GRID NORTH
EAST ZONE - NAD 83

BENCHMARK
MAGNAIL IN ASPHALT
ELEV.= 22.26' (NAVD 1988)

GA HWY NO. 121
R/W
110.121

COUNTY ROAD
50' R/W

LOT 1C RICE HOPE
3.933 AC
171,316 SF

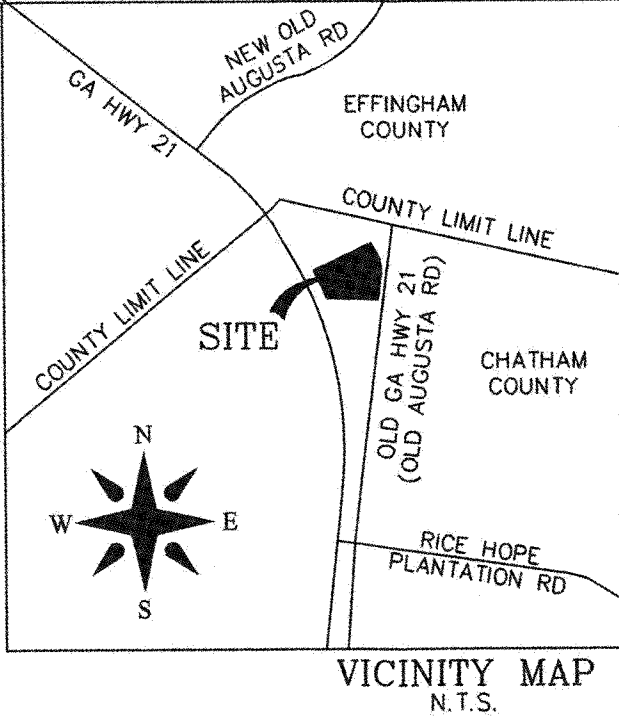
FORMER PROPERTY LINE

412.32'
417.77' N88°23'02"W

BENJAMIN FOSTER
PIN: 70906 02007

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	244.59'	2949.45'	N25°03'04"W	244.52'
C2	146.72'	220.00'	S12°27'50"E	144.02'

0' 60' 120' 180'
SCALE: 1"=60'



- NOTES:
1. THE TOTAL AREA IS 3.933 ACRES.
 2. THIS RECOMBINATION CREATES ONE LOT.
 3. CURRENT ZONING: R-A
 4. THE HORIZONTAL DATUM IS BASED ON REFERENCE #1.
 5. ACCORDING TO F.I.R.M. MAP NO. 13051C0030G EFFECTIVE DATE 8/16/2018, THE PARCELS SHOWN HEREON LIES IN ZONE X, NOT A SPECIAL FLOOD HAZARD AREA.
 6. THE HORIZONTAL DATUM IS BASED ON GRID NORTH, GEORGIA EAST ZONE, NAD 83.

LOT 1C RICE HOPE
BEING A RECOMBINATION OF TWO PORTIONS
OF LOT 1, RICE HOPE PLANTATION

8TH G.M. DISTRICT, PORT WENTWORTH,
CHATHAM COUNTY, GEORGIA

PARENT ADDRESSES: 8187 & 8191 OLD HIGHWAY 21
PARENT PINS: 70906 02002 & 70906 02008
Surveyed For: FIELDSTONE LAND GROUP, LLC

Vincent Helmlly
129-A BURTON ROAD
SAVANNAH, GEORGIA 31405
(912) 429-9395
FIELD SURVEY DATE : 8/29/2021
DATE : 9/1/2021 JOB No. 21-247

BENCHMARK
MAGNAIL IN ASPHALT
ELEV.= 22.26' (NAVD 1988)

LIMITS OF DISTURBANCE

MOORE ROAD
(COUNTY 50' R/W)

GEORGIA HIGHWAY NO. 21 110' R/W

LOT 1C RICE HOPE

9.933 AC

171,316 SF

FORMER LOT LINE
S84°28'26"E

EXISTING WELL
TO REMAIN

CLEAN OUT EXISTING
CULVERT PIPE
SAID TO BE IN THIS AREA

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)

LIMITS OF DISTURBANCE

CLEAN OUT DITCH TO
OUTFALL

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REVISIONS	DESCRIPTION	
	DATE	
NO.		



114 WEST 42ND STREET
SAVANNAH, GA 31401
OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

DEMOLITION PLAN

PW TRUCK SHOP



CERT.#21051 EXP: 12/1/2024
STATUS:

RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022

CHK'D: JAM DATE

15 0 30
SCALE: 1" = 30'

SHEET NO.

C.2
673-21-35

PROJECT NO.

1-26-22 SDF-OT Truck Stop.dwg

BENCHMARK
MAGNAIL IN ASPHALT
ELEV. = 22.26' (NAVD 1988)

GEORGIA HIGHWAY NO. 21 110' R/W

MOORE ROAD
(COUNTY 50' R/W)

WHAT ACTIVITIES
TAKE PLACE IN THE
SEPCO POWER LINE
R/W? IS A SEPCO
PERMIT REQUIRED?

ASPHALT MILLINGS

LOT 1C RICE HOPE
3.933 AC
171,316 SF

HEAVY DUTY
PAVEMENT

LIGHT DUTY
PAVEMENT

GREEN
SPACE

6" CHAINLINK FENCE WITH
OPTIONAL 3 STRAND TOP WIRE

UNMARKED
EMPLOYEE
STALLS

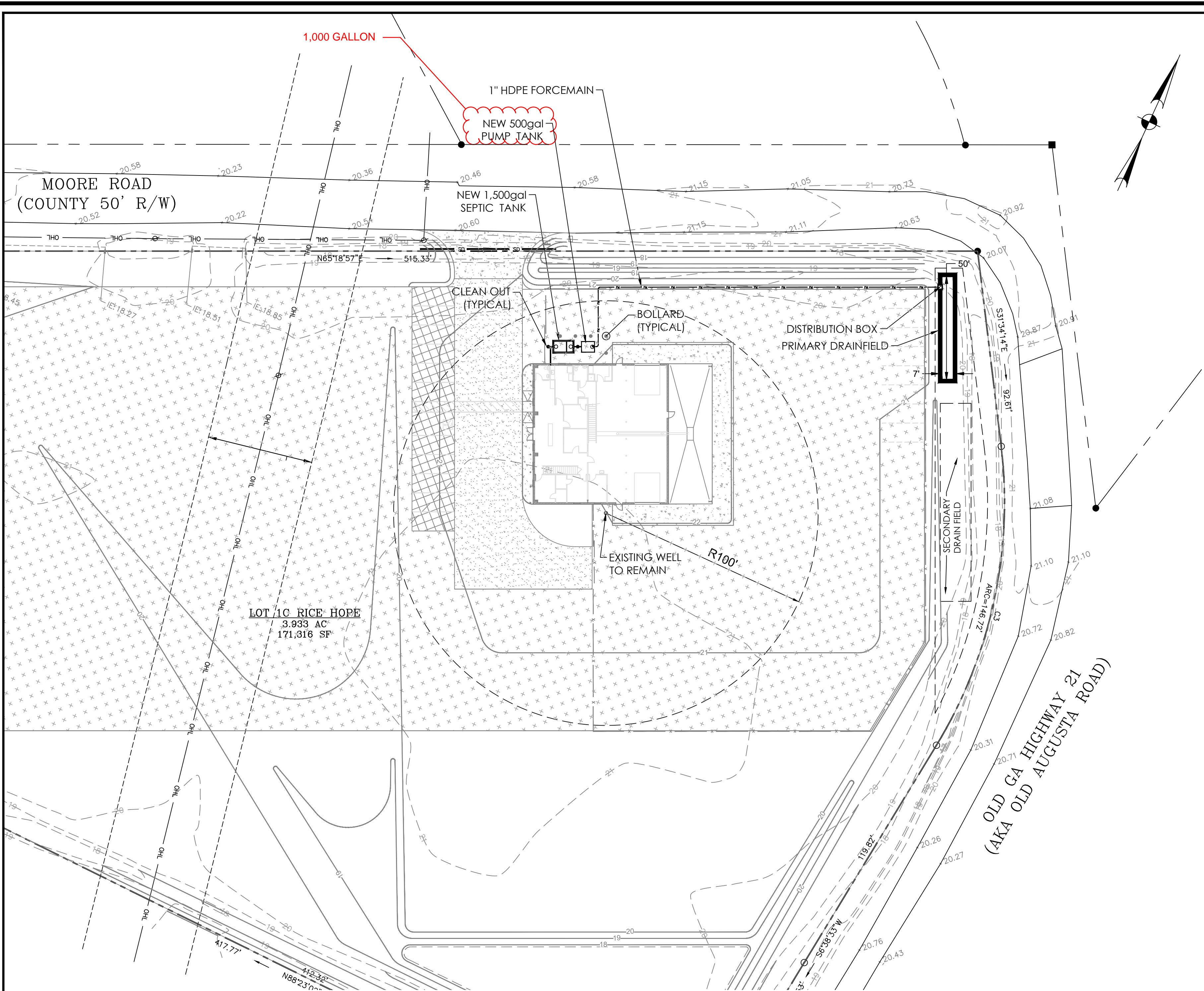
ASPHALT MILLINGS

CONCRETE APRON
IN CITY ROW

30" STOP SIGN (R1-1)

EARTHEN ROAD

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)



ABSORPTION FIELD SIZING:

BASED UPON BEST, INC. REPORT DATED ????
ABSORPTION RATE, T = 20MIN/IN

PROPOSED USE: TRUCK REPAIR (10 EMPLOYEES)

FLOW RATE (TABLE JT-1)
WORKERS COMMERCIAL = 25GDP/ EMPLOYEE

OF EMPLOYEES = 10 * 2 FACTOR OF SAFETY = 20

FLOW RATE, Q = 500GPD

(T^0.5/5) * Q / 3ft = LF REQUIRED

(20^0.5/5) * 500GPD / 3ft = 149lf

33% REDUCTION FOR USE OF MULTI-PIPE = 149lf * 0.67 = 100lf REQUIRED

114LF PROVIDED

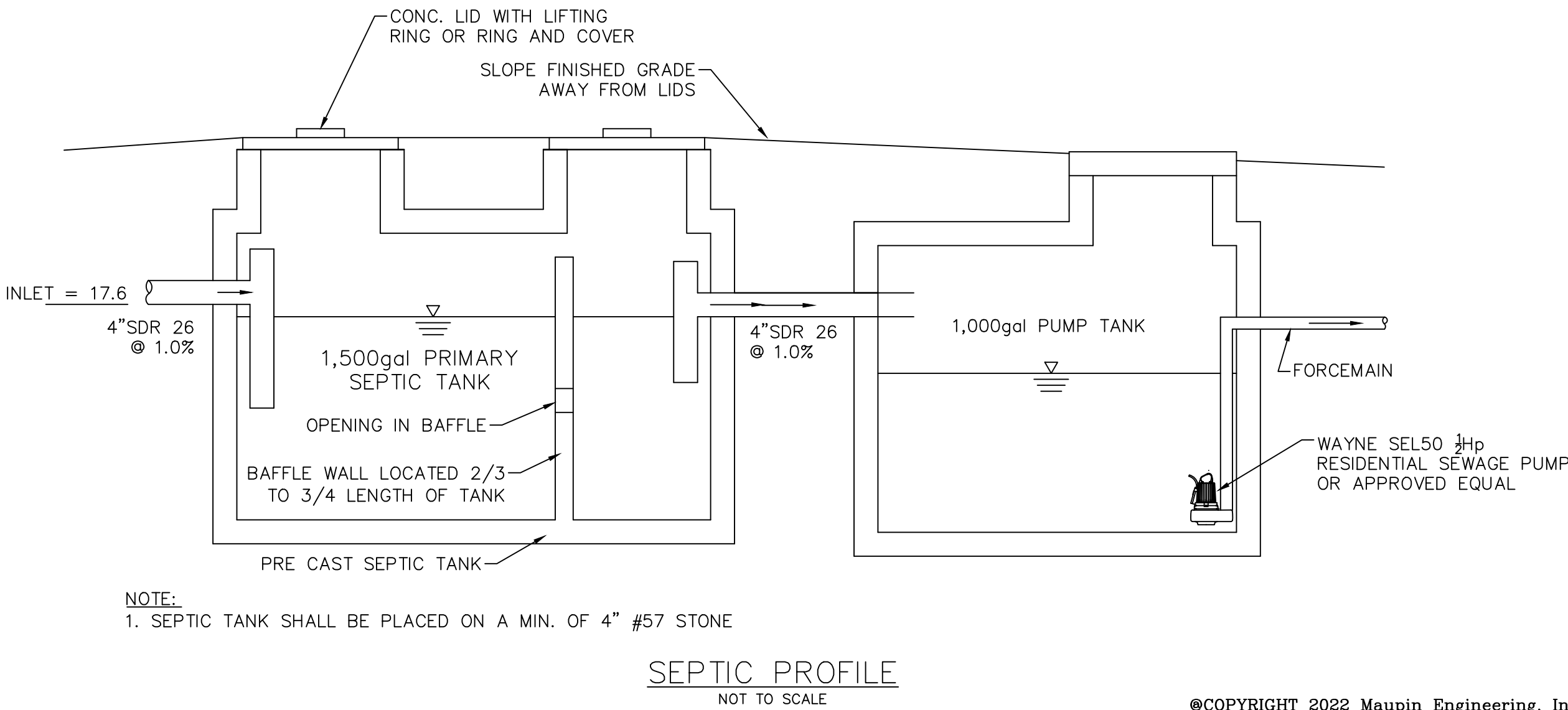
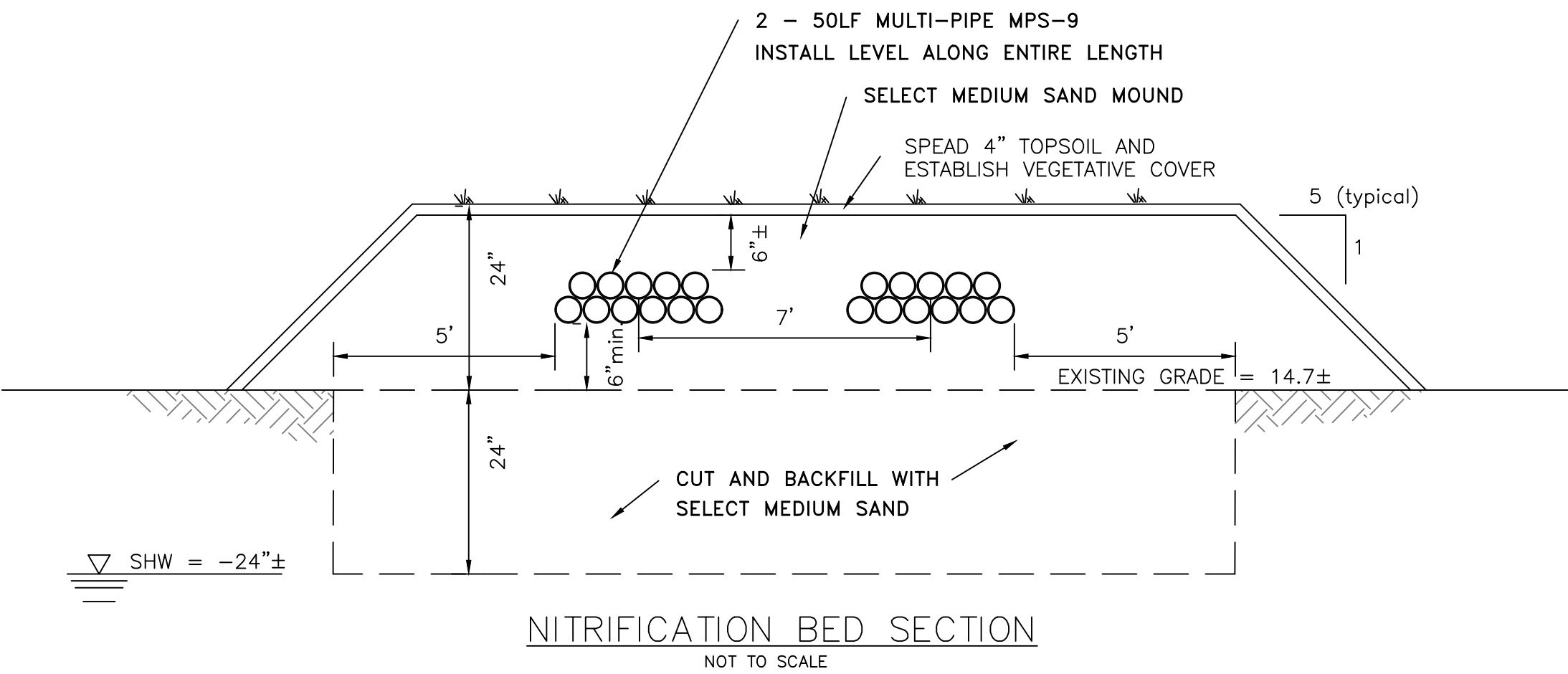
NOTE: NO EQUIPMENT WASH WATER IS ALLOWED IN THE SEPTIC SYSTEM.

- 1. PIN: 70906-02002
- 2. ADDRESS: 8191 Old Hwy 21
Port Wentworth, Ga 31407
- 3. High Ground: 0.5ac ±

I CERTIFY THIS ON-SITE SEWAGE MANAGEMENT SYSTEM MEETS THE MINIMUM DESIGN REQUIREMENTS ESTABLISHED BY THE DEPARTMENT OF COMMUNITY HEALTH. I HAVE MADE A SITE VISIT TO VERIFY THE SYSTEM CAN BE INSTALLED AS DESIGNED IN ACCORDANCE WITH THESE REGULATIONS.

JAY MAUPIN, P.E.

APPROVAL OF THE WATER WELL AND SEPTIC SYSTEM IS
REQUIRED BY THE CHATHAM COUNTY HEALTH DEPARTMENT.



REVISIONS
NO. DATE DESCRIPTION

MAUPINtm engineering
114 WEST 42ND STREET
SAVANNAH, GA 31401
OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

UTILITY PLAN
PW TRUCK SHOP

LEVEL II E&S
GEORGIA REGISTERED
ENGINEER
JAY A. MAUPIN
CERT.#21051 EXP: 12/1/2024
STATUS: RELEASED FOR PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE
15 0 30
SCALE: 1" = 30'
SHEET NO. C.4 673-21-35

BENCHMARK
MAGNAIL IN ASPHALT
ELEV. = 22.26' (NAVD 1988)

REMOVE EXISTING DRIVEWAY PIPES
AND RESTORE ROADSIDE DITCH

MOORE ROAD
(COUNTY 50' R/W)

WHAT IS THE PURPOSE OF THE 19'
FLAT SPOT/BERM SHOWN?

REGRADE
ROADSIDE DITCH

PLEASE CONSIDER DIRECTING
THIS STORM WATER TO THE POND.
DUE TO THE PROXIMITY OF THE
MAINTENANCE ACTIVITY, THIS
WATER SHOULD GO THROUGH THE
POND.

PLEASE CONSIDER A FEW
EXTRA SPOT ELEVATIONS
ALONG RIDGE (HIGH POINT)

REGRADE
ROADSIDE DITCH
AND MOVE INTO
RIGHT OF WAY

EXISTING CONTOUR
LABELS ARE
MISSING

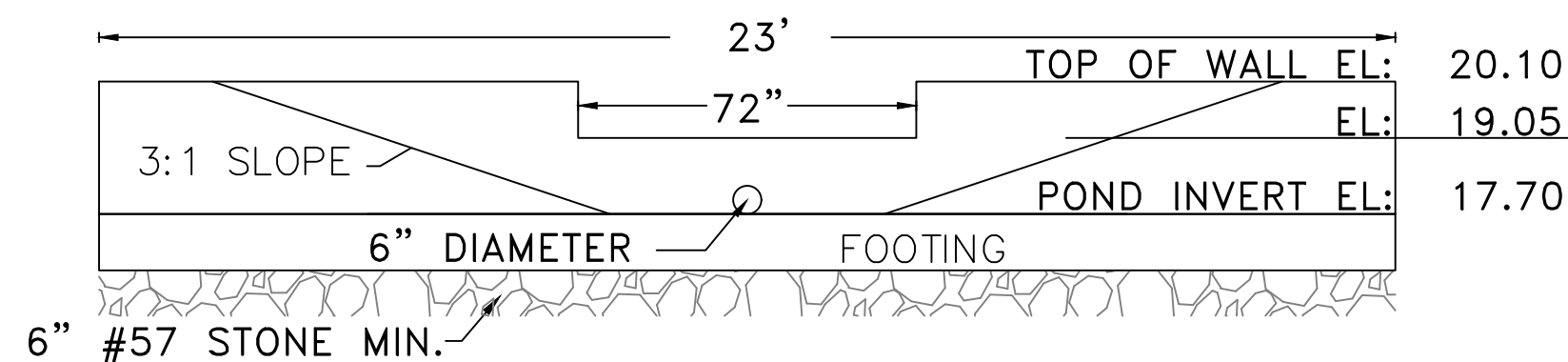
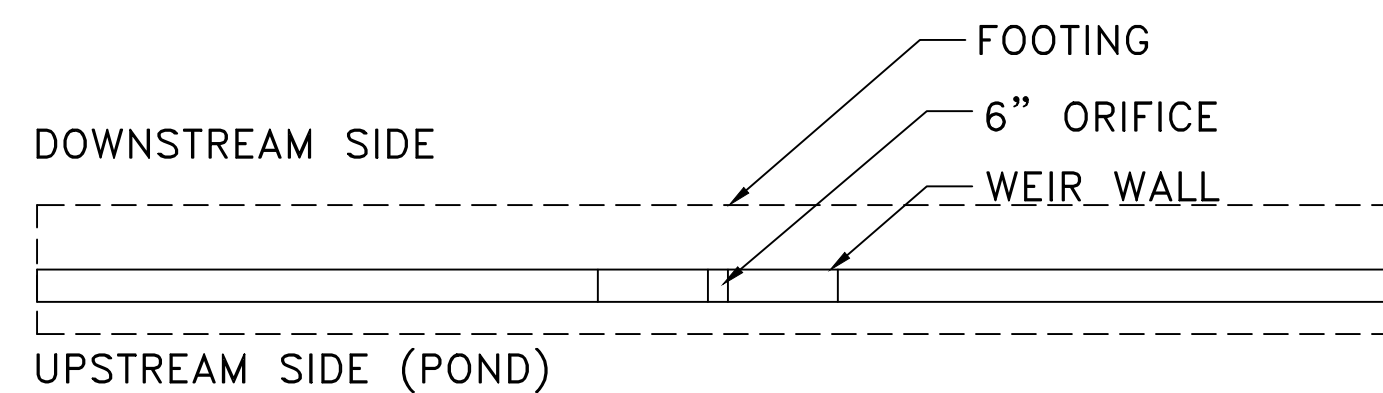
EXTEND DITCH
CLEANING TO
FRONT PROPERTY
LINE. DIRECT DITCH
AND STORM WATER
TO POND.

CALL OUT
PROPOSED DITCH
GRADES. DIRECT
WATER INTO POND

LABEL CONTOUR
LINES

WILL TREES BE RETAINED? IF
SO CALL FOR TREE
PROTECTION. IF NOT, CALL
FOR DEMOLITION.

SHOW EXISTING CONDITIONS
AND PROPOSED GRADES TO
OUTFALL TO DEMONSTRATE
POSITIVE FLOW FROM POND
TO OUTFALL DITCH.



OUTFALL CONTROL STRUCTURE
NOT TO SCALE

NOTE: STRUCTURAL DESIGN BY OTHERS

Designer's Certification Statement

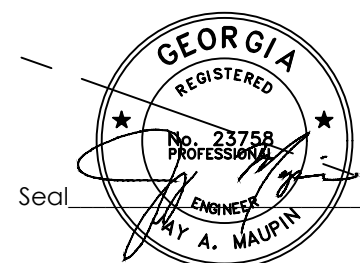
I, Jay Maupin, am a professional engineer registered in the State of Georgia, and am familiar with the requirements of PORT WENTWORTH Stormwater Management Ordinance, PORT WENTWORTH's Local Design Manual, PORT WENTWORTH's Flood Protection Ordinance, PORT WENTWORTH's Subdivision Ordinance, PORT WENTWORTH's Erosion and Sediment Control Ordinance, hydraulic engineering principles, and low impact design/green infrastructure design practices.

The attached design plans, Stormwater Management Report, and Stormwater Management Operations and Maintenance Plan for the site development known as PW TRUCK SHOP located at 8191 OLD HWY. 21, PORT WENTWORTH, GEORGIA are designed in compliance with the Local Design Manual of PORT WENTWORTH, PORT WENTWORTH's Stormwater Management Ordinance, PORT WENTWORTH's Flood Protection Ordinance, PORT WENTWORTH's Subdivision Ordinance, and PORT WENTWORTH's Erosion and Sediment Control Ordinance.

Further, when constructed according to the design plans, and operated according to the facility Stormwater Operations and Maintenance Plan, the facility will function in compliance with the Local Design Manual of PORT WENTWORTH's, PORT WENTWORTH's Stormwater Management Ordinance, PORT WENTWORTH's Flood Protection Ordinance, PORT WENTWORTH's Subdivision Ordinance, and PORT WENTWORTH's Erosion and Sediment Control Ordinance.

Name: Jay Maupin, PE
Address: 114 W. 42nd St.
City, State, Zip: Savannah, GA 31401
Daytime Telephone Number: 912-235-2915
Email Address: jay@maupinengineering.com
Cell Phone Number: 2-667-7757

Date: 4/4/22



REVISIONS
NO. DATE DESCRIPTION

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engineering
114 WEST 42ND STREET
SAVANNAH, GA 31401
OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

GRADING PLAN
PW TRUCK SHOP

LEVEL II E&S
GEORGIA
REGISTERED
ENGINEER
JAY A. MAUPIN
CERT.#21051 EXP: 12/1/2024
STATUS:

RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

SCALE: 1" = 30'

SHEET NO.

C.5
673-21-35

BENCHMARK
MAGNAIL IN ASPHALT
ELEV.= 22.26' (NAVD 1988)

GEORGIA HIGHWAY NO. 21 110' R/W

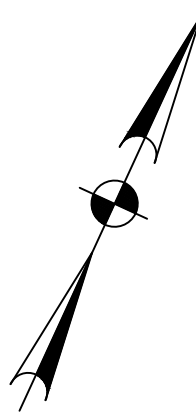
MOORE ROAD
(COUNTY 50' R/W)

LOT 1C RICE HOPE
3.933 AC
171,316 SF

50' SECO POWER LINE R/W
(CENTERED ON POWER LINE)

BENJAMIN FOSTER
PIN: 70906 02007

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)



PLANTING SCHEDULE					
ITEM	SCIENTIFIC NAME	COMMON NAME	QTY	SIZE	SPACING
UP	ULMUS PARVIFOLIA	DRAKE ELM	7	2.5" CALIPER	AS SHOWN
TD	TAXODIUM DISTICHUM	BALD CYPRESS	14	2.5" CALIPER	AS SHOWN

TOTAL 21

REVISIONS		DESCRIPTION
NO.	DATE	

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LANDSCAPING PLAN

PW TRUCK SHOP

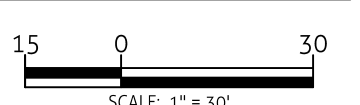
LEVEL II E&S



CERT.#21051 EXP: 12/1/2024
STATUS:

RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE



SHEET NO.



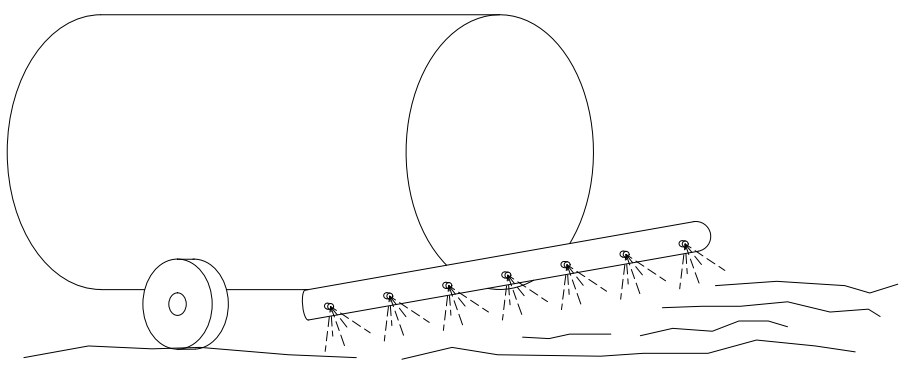
PROJECT NO.

INITIAL PHASE NOTES:

1. INSTALL THE CONSTRUCTION ENTRANCE AND THE CONCRETE WASHOUT AREA.
2. CONTROL SILT WITH INSTALLATION OF SEDIMENT BARRIERS, SILT FENCE, CHECKDAM HAYBALES 50 FEET ON CENTER, DUST CONTROL, TEMPORARY SEEDING, AND TEMPORARY SEDIMENT TRAPS



USGS QUAD - CHATHAM COUNTY - PORT WENTWORTH



CONTRACTOR SHALL EMPLOY THE FOLLOWING TEMPORARY METHODS TO LIMIT THE SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES:

- *TEMPORARY METHODS:
- MULCHES
 - SPRAY ON ADHESIVES
 - TILLING
 - IRRIGATION
 - BARRIERS
 - CALCIUM CHLORIDE

- *PERMANENT METHODS
- PERMANENT VEGETATION
 - TOPSOIL
 - STONE COVER

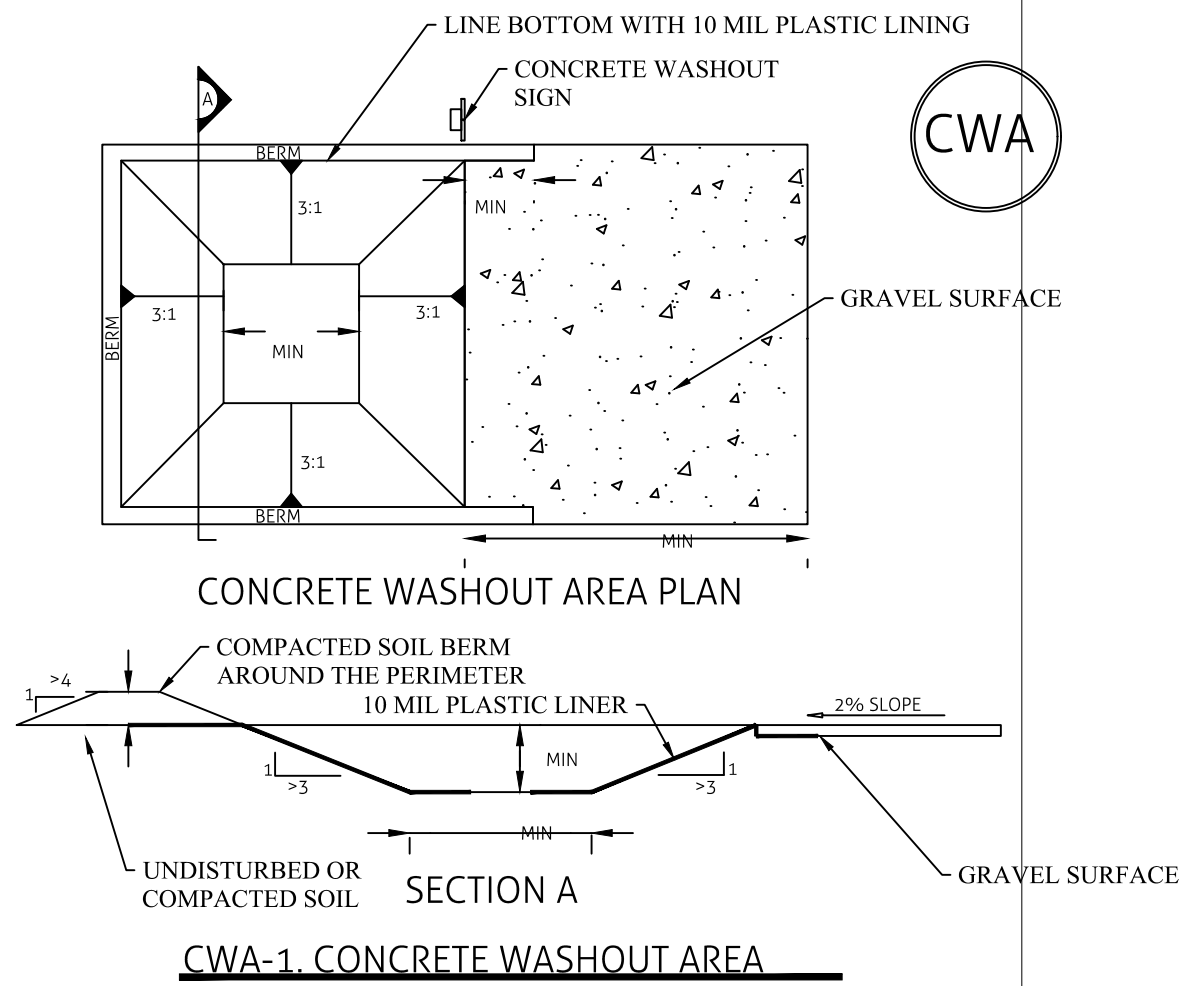
*CHEMICAL CONTROL

ADHESIVE	WATER DILUTION	TYPE OF NOZZLE	APPLICATION RATE (GAL/AC)
ANIOIC ASPHALT EMULSION	7:1	SPRAY	1200
LATEX EMULSION	12 1/2:1	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1	FINE SPRAY	300

DUST CONTROL ON DISTURBED AREAS **Du**

CONCRETE WASHOUT AREA

(CWA)



CONCRETE WASHOUT AREA PLAN

CONCRETE WASHOUT SIGN

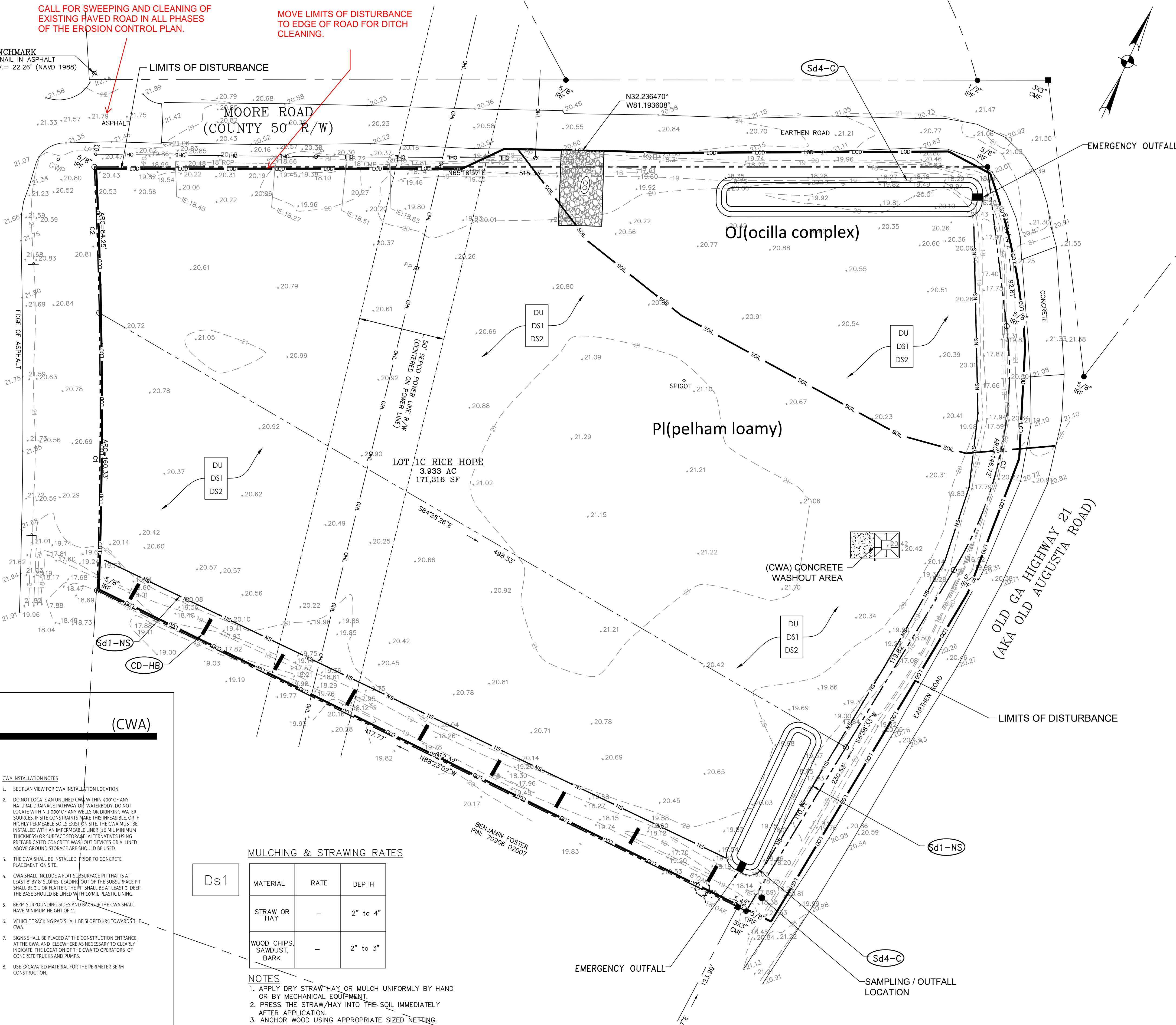
10 MIL PLASTIC LINER

GRAVEL SURFACE

UNDISTURBED OR COMPACTED SOIL

SECTION A

CWA-1. CONCRETE WASHOUT AREA



CALL FOR SWEEPING AND CLEANING OF EXISTING PAVED ROAD IN ALL PHASES OF THE EROSION CONTROL PLAN.

MOVE LIMITS OF DISTURBANCE TO EDGE OF ROAD FOR DITCH CLEANING.

BENCHMARK
MAGNAIL IN ASPHALT
ELEV.= 22.26' (NAVD 1988)

LIMITS OF DISTURBANCE

MOORE ROAD
(COUNTY 50 R/W)

N32.236470°
W81.193608°

OJ(ocilla complex)

PL(pelham loamy)

LOT 1C RICE HOPE
3.933 AC
171,316 SF

(CWA) CONCRETE
WASHOUT AREA

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)

LIMITS OF DISTURBANCE

MULCHING & STRAWING RATES

MATERIAL	RATE	DEPTH
STRAW OR HAY	—	2" to 4"
WOOD CHIPS, SAWDUST, BARK	—	2" to 3"

NOTES

1. APPLY DRY STRAW/HAY OR MULCH UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. PRESS THE STRAW/HAY INTO THE SOIL IMMEDIATELY AFTER APPLICATION.
3. ANCHOR WOOD USING APPROPRIATE SIZED NETTING.

REVISIONS	DESCRIPTION
NO.	DATE

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SAVANNAH, GA 31401

OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

SEDIMENT AND EROSION
CONTROL PLAN - INITIAL
PW TRUCK SHOP

LEVEL II E&S

GEORGIA
REGISTERED
ENGINEER
MAUPIN A. MAUPIN

CERT.#21051 EXP: 12/1/2024

STATUS:

RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

20 0 40
SCALE: 1" = 40'

SHEET NO.

C.e1
673-21-35

PROJECT NO.

SEEDING RATES FOR TEMPORARY & PERMANENT COVER						
Ds2	MONTH	TEMPORARY COVER	RATES PER ACRE	MONTH	PERMANENT COVER	RATES PER ACRE
	MARCH-JUNE	COMMON BERMUDA (HULLED) WEEDING LOVEGRASS	10 lbs. 4 lbs.	MARCH-JUNE	COMMON BERMUDA (HULLED) WEEDING LOVEGRASS	10 lbs. 4 lbs.
Ds3	APRIL-AUGUST	BROWN TOP MILLET SUJANGRASS PEARL MILLET	40 lbs. 60 lbs. 50 lbs.	JULY-AUGUST	COMMON BERMUDA (HULLED) & BROWN TOP MILLET COMMON BERMUDA (HULLED) & WEEDING LOVEGRASS COMMON BERMUDA (HULLED) & PENSACOLA BAHIA & BROWN TOP MILLET	10 lbs. 10 lbs. 6 lbs. 2 lbs. 30 lbs. 10 lbs.
	SEPT-FEBRUARY	RYE (MOST WINTER HARDY) RYEGRASS BARLEY WHEAT	3 BU 40 lbs. 3 BU 3 BU		PENSACOLA BAHIA & BROWN TOP MILLET PENSACOLA BAHIA & WEEDING LOVEGRASS & BROWN TOP MILLET WEEDING LOVEGRASS & BROWN TOP MILLET	60 lbs. 10 lbs. 30 lbs. 2 lbs. 4 lbs. 10 lbs.
NOTES						
1. CENTRIFUGED SOG CAN BE USED AS PERMANENT COVER						
2. LUSTINE EXCEPT JUNE THROUGH OCTOBER						
3. USED IN ORDER OF PREFERENCE						
4. SEEDS MUST BE OF THE FOLLOWING QUALITY						

NOTES
1. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT JUNE THROUGH OCTOBER.
2. LISTED IN ORDER OF PREFERENCE.
3. ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED.

Ds2-Ds4 NOTES:

- Ds2.
- A TEMPORARY GRASSING OF ANNUAL RYEGRASS SHALL BE APPLIED AT A RATE OF 40 LBS PER ACRE TO DISTURBED AREAS WITHIN 14 DAYS OF DISTURBANCE. THE PROPOSED ANNUAL RYEGRASS SHALL BE APPLIED DURING THE MONTHS OF SEPTEMBER THRU DECEMBER.
 - A 6-12-12 FERTILIZER SHALL BE USED ON THE DISTURBED AREA OF Ds2 AND SHALL BE APPLIED AT A RATE OF 1500 LBS. PER AC.
 - AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE.

- Ds3.
- A PERMANENT GRASSING OF UNHULLED COMMON BERMUDA SHALL BE APPLIED AT A RATE OF 10 LBS. PER ACRE DURING THE MONTHS OF SEPTEMBER THRU FEBRUARY. IF A HYDRAULIC SEEDER IS TO BE USED, REFER TO THE EROSION AND SEDIMENT CONTROL MANUAL FOR FURTHER DIRECTION ON THE METHOD OF APPLICATION.
 - A 6-12-12 FERTILIZER SHALL BE USED ON THE DISTURBED AREA OF Ds3 AND SHALL BE APPLIED AT RATE OF 1500 LBS. PER AC.
 - DRIED STRAW OR DRY HAY SHALL BE USED FOR MULCHING AND APPLIED AT A RATE OF 2 TONS PER ACRE. MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING. THE MULCH MAY BE SPREAD BY BLOWER-TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE.
 - AGRICULTURAL LIME IS REQUIRED AT A RATE OF 1 - 2 TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE.

- Ds4.
- SOIL SURFACE IS BROUGHT TO FINAL GRADE AND CLEAR OF ANY TRASH, DEBRIS, AND CLOUDS LARGER THAN 1".
 - SOD SHOULD BE APPLIED TO SOIL SURFACE ONLY (NOT TO FROZEN OR GRAVEL TYPE SOILS). CUT AND INSTALLED WITHIN 36 HOURS OF DIGGING.
 - LIME & FERTILIZER SHOULD BE APPLIED BASED ON SOIL TESTS OR AT A RATE OF 1 - 2 TONS PER ACRE.
 - SOD SHOULD BE ANCHORED WITH PINS ON SLOPES STEEPER THAN 3:1
 - IRRIGATION SHOULD BE USED AS A SUPPLEMENT TO RAINFALL FOR A MIN OF 2 - 3 WEEKS
 - GRASS HEIGHT SHOULD NOT BE CUT LESS THAN 2" - 3" WHEN MOWING

INTERMEDIATE PHASE NOTES:

- MAINTAIN ALL TEMPORARY BMPs AS SHOWN IN INITIAL PHASE.
- CONTINUE TO USE TEMPORARY SEEDING AND DUST CONTROL. PERMANENT SEEDING CAN BE APPLIED TO AREAS WHICH WILL RECEIVE SODDING IN THE FINAL PHASE.
- ADD SKIMMER TO WEIR WALL AND ADD RIP RAP TO OUTLET OF WEIR WALL BEING INSTALLED.

BENCHMARK
MAGNAIL IN ASPHALT
ELEV = 22.26' (NAVD 1988)

LIMITS OF DISTURBANCE

MOORE ROAD
(COUNTY 50' R/W)

OJ(ocilla complex)

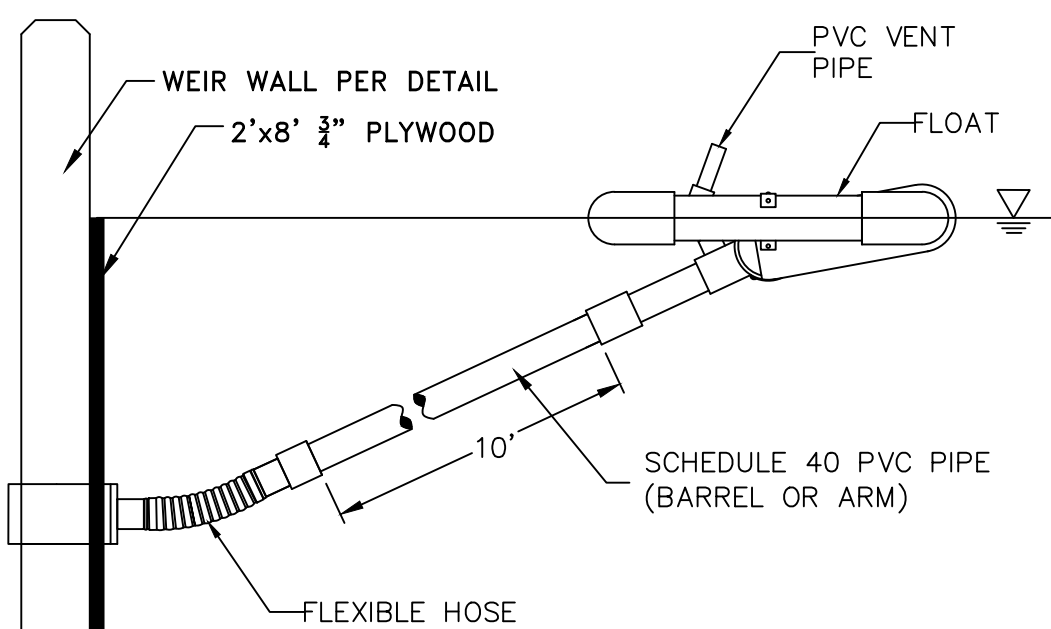
PI(pelham loamy)

LOT 1C RICE HOPE
3.933 AC
171,316 SF

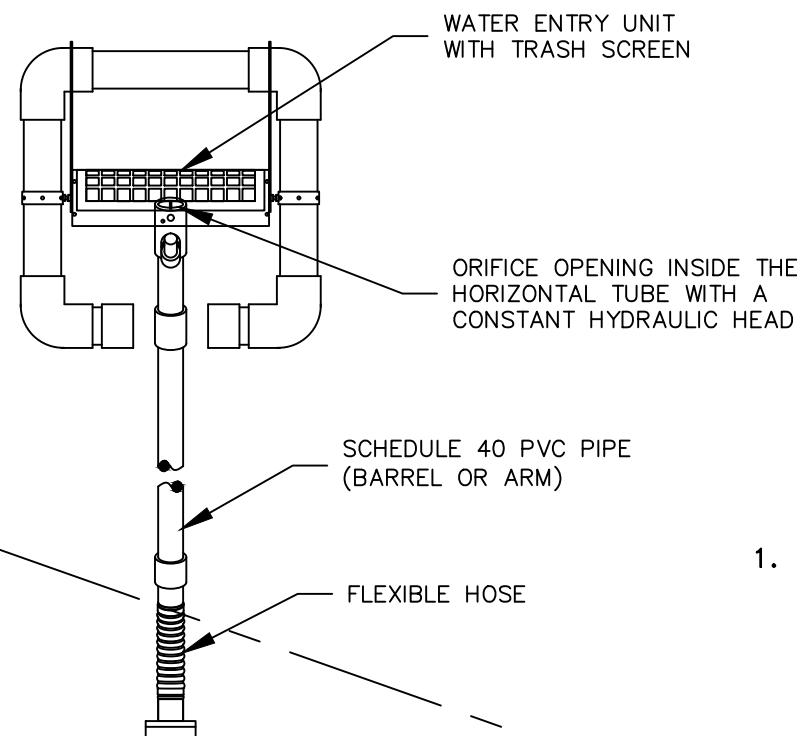
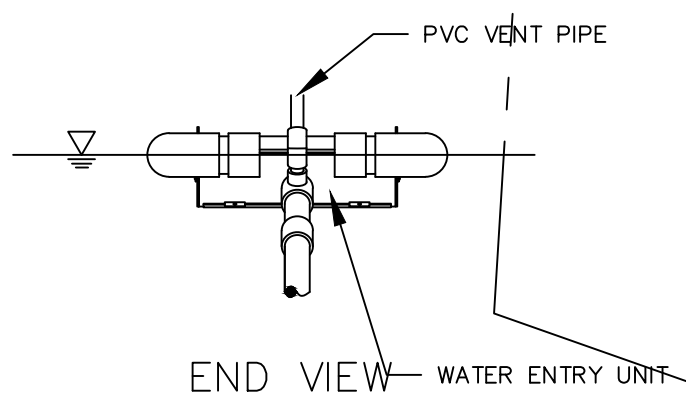
(CWA) CONCRETE
WASHOUT AREA

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)

LIMITS OF DISTURBANCE



SKIMMER DETAIL
NTS



TOP VIEW

- POND DIMENSIONS:
TOP LENGTH = 110'
BOTTOM LENGTH = 90'
TOP WIDTH = 65'
BOTTOM WIDTH = 45'
DEPTH = 1.35'
- DRAIN TIME = 72hrs
- SKIMMER SIZE = 2.0"

REVISIONS	DESCRIPTION	
	DATE	
NO.		

MAUPINtm
engineering

114 WEST 42ND STREET
SAVANNAH, GA 31401

OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

SEDIMENT AND EROSION
CONTROL PLAN - INTERMEDIATE
PW TRUCK SHOP

LEVEL II E&S

GEORGIA
REGISTERED
PROFESSIONAL
ENGINEER
RAY A. MAUPIN
CERT.#21051 EXP: 12/1/2024
STATUS:

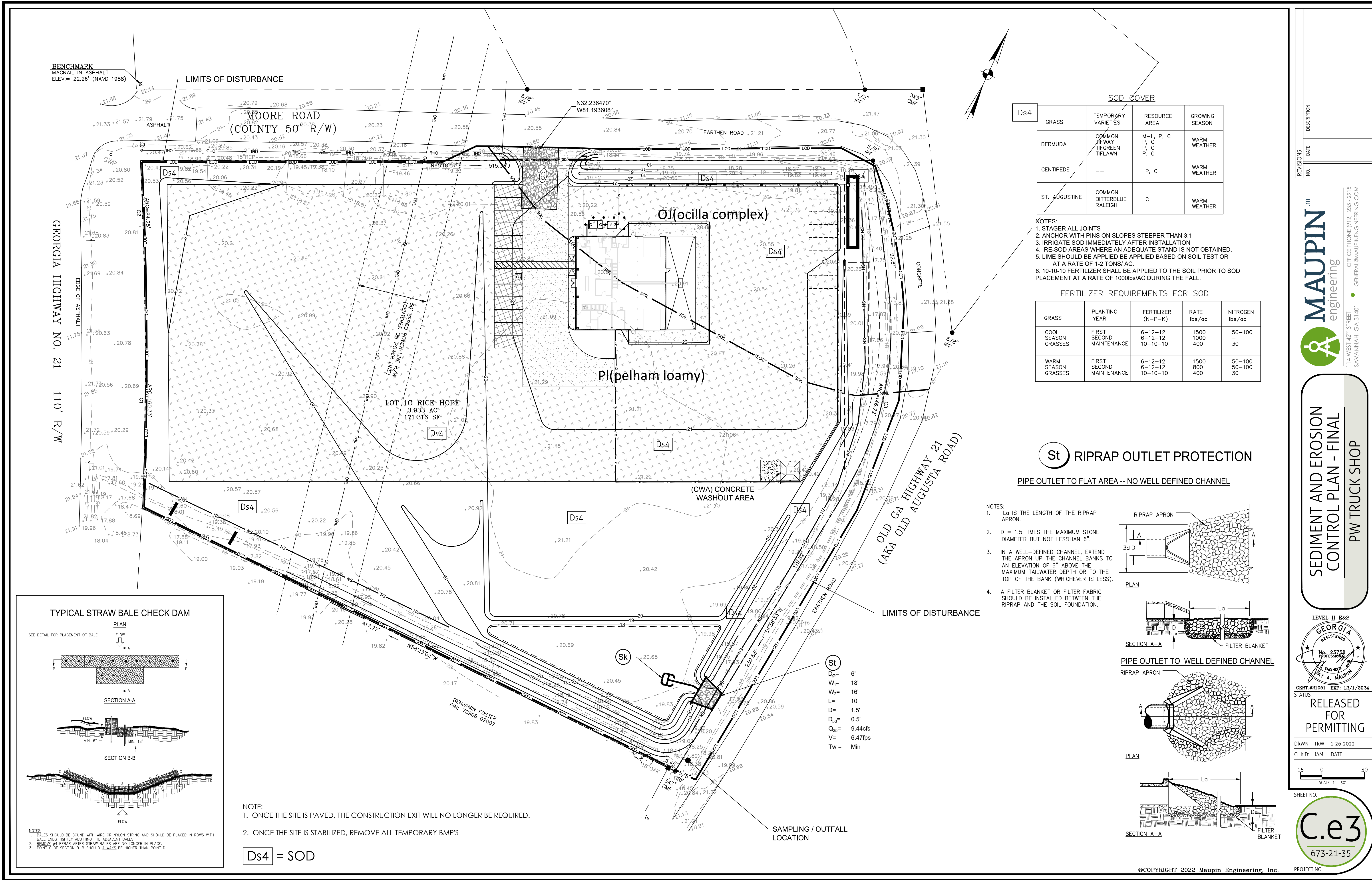
RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

15 0 30
SCALE: 1" = 30'

SHEET NO.

C.e2
673-21-35



ES&PC
ITEM#

THIS PLAN WAS PREPARED AS REQUIRED BY NPDES GENERAL PERMIT NO. GAR 100001. THESE PLAN SHEETS AND ALL REQUIREMENTS OF THE GENERAL PERMIT AS WELL AS LOCAL, STATE, AND FEDERAL REGULATIONS OR LAWS APPLY REGARDLESS OF SPECIFIC INCLUSION IN THIS PLAN.

OWNER/DEVELOPER (PRIMARY PERMITTEE) WILL OVERSEE SITE CONSTRUCTION LOCATED ON THE PROPERTY SITUATED IN THE UNINCORPORATED PORT WENTWORTH, PIN: 70906 02002

THE DESIGNER WAS NOT KNOWLEDGEABLE OF ANY SECONDARY PERMITTEES AT THE TIME OF PRODUCTION OF THE DRAWINGS.

2 DESIGN PROFESSIONAL'S CREDENTIALS:

ENGINEER'S NAME (PRINTED): JAY MAUPIN, PE
GEORGIA PE NUMBER: 23758
GSWCC LEVEL II CERTIFICATION NUMBER: 21051
CERTIFICATION NUMBER EXPIRATION DATE: 12/1/2024

24 HOUR CONTACT
KIM THOMAS
912-777-3404

5 PRIMARY PERMITEE:
KIM THOMAS
119 CANAL STREET SUITE 106
POOLER, GEORGIA 31322
o:912-777-3404
KIM@DEWITTILTONGROUP.COM

6 THE TOTAL PARCEL AREA IS 3.93(±) ACRES. THE DISTURBED AREA IS 4.1(±)ACRES.

7 CONSTRUCTION EXIT LOCATION

N: 32.236470°
W: 81.193608°


9 THE SITE OF THIS PROJECT IS CURRENTLY A VACANT COMMERCIAL DEVELOPMENT. THE SITE OF THIS PROJECT IS INTENDED TO BE DEVELOPED AS A TRUCK REPAIR SHOP.

11 NAME OF RECEIVING WATERS

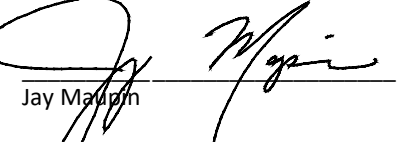
ON-SITE DETENTION ==> ABERCORN CREEK ==> SAVANNAH RIVER

THE FINAL RECEIVING WATERS SUPPORTS WARM WATER FISHERIES. THIS PROJECT DEVELOPMENT WILL NOT HAVE POST-DEVELOPMENT RUN-OFF THAT WILL AFFECT THE NEIGHBORING AREAS.

12 I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION.


Jay Maupin
4/4/22
Date

13 I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED. PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OF THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR100001.


Jay Maupin
4/4/22
Date

14 THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S WITHIN 7 DAYS AFTER INSTALLATION.

15 NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

17 AMENDMENTS / REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

18 WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

19 THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

20 EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

21 ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

24 CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE. CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLES AT THE SITE MUST BE DONE AT THE CONCRETE WASHOUT AREA (CWA) AS SHOWN ON PLANS. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS STRICTLY PROHIBITED.

25 PETROLEUM-BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ONSITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS, AND STORMWATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS, AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS. PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORMWATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

FERTILIZER/HERBICIDE - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIALS WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

SPILL CLEANUP AND CONTROL PRACTICES

LOCAL, STATE, AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.

FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS. FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED AND LOCAL AGENCIES CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED WITH PLAN IF MORE THAN 1,320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

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26 UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL MEASURES EXCEPT THE PERMANENT GRASSING AND RIP RAP IN AREAS OF HIGH VELOCITY DISCHARGE.

27 FOR BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE, THE CONTRACTOR SHALL PROVIDE COVER (E.G. PLASTIC SHEETING, TEMPORARY ROOFS) TO MINIMIZE THE EXPOSURE OF THESE PRODUCTS TO PRECIPITATION AND TO STORMWATER, OR A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THESE AREAS.

28 POLLUTANTS FROM THE SITE CONSTRUCTION WILL BE TREATED BY THE THE TEMPORARY SEDIMENT POND AND THE DETENTION POND INSTALLED DURING CONSTRUCTION

30 INSPECTIONS

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT:
(A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND
(B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(2). MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

(3). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST):
(A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE;
(B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND
(C) STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.

WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(4). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

(6). A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION SITE THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN, WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

31 SAMPLING FREQUENCY.

(1). THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

(2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORMWATER DISCHARGE.

(3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:

(A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;

(B). IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

(C). AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMP'S IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMP'S ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;

(D). WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND

(E). EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

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REPORTING.

1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

a. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
b. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
c. THE DATE(S) ANALYSES WERE PERFORMED;
d. THE TIME(S) ANALYSES WERE INITIATED;
e. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
h. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND
i. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

32 RETENTION RECORDS

1. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:
a. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
b. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
c. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
d. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
e. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
f. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
g. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.

2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

33 SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

(1). A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE STAND ALONE CONSTRUCTION; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORMWATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORMWATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

(2). A WRITTEN NARRATIVE OF SITE SPECIFIC ANALYTICAL METHODS USED TO COLLECT, HANDLE AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION;

(3). WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND

(4). ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL SAMPLE TYPE.

ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

(1). SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.

(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

(3). LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

(4). MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.

(5). SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

29

TENTATIVE ACTIVITY SCHEDULE											
	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11
CONSTRUCTION EXIT											
SILT FENCING AND OTHER E&SC PRACTICES											
CLEARING AND GRUBBING											
GRADING / UTILITY INSTALLATION											
DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)											
FINE GRADING AND PAVING											
BUILDING CONSTRUCTION											
DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)											
LANDSCAPE INSTALLATION											
MAINTAIN ES & PC BMPs											

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SAMPLING POINTS.

(1). FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORMWATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:

(A). THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.

(B). THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.

(C). IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORMWATER OUTFALL CHANNEL(S).

(D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER CHANNEL.

(E). THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

(F). THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

(G). PERMITTEES DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION).

(H). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORMWATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3 OR III.D.4., WHICHEVER IS APPLICABLE.

34 SAMPLE ANALYSIS

STORMWATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORMWATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001."

STORMWATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORMWATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 75, THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT NO. GAR 100001. THE NTU IS BASED UPON THE SITE ACREAGE OF 3.93 ACRES FOR THE PROJECT SITE, THE SURFACE WATER DRAINAGE AREA OF 0.04 SQUARE MILES, AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

45 RUNOFF COEFFICIENT

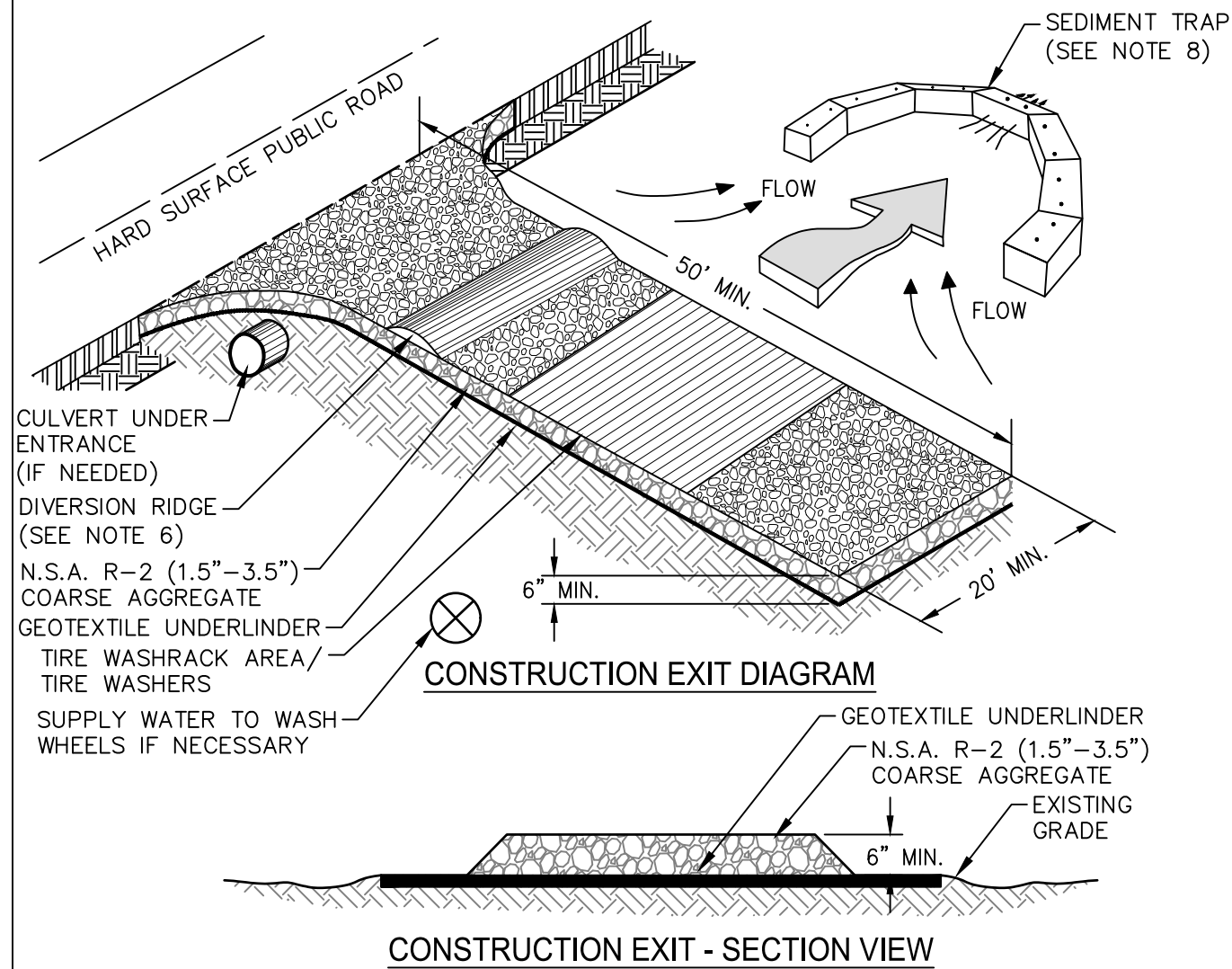
• WEIGHTED PRE-CONSTRUCTION CN CURVE NUMBER: 92
• WEIGHTED POST-CONSTRUCTION CN CURVE NUMBER: 89

25-YEAR EVENT RUNOFF ESTIMATE: 8.56 CFS
25-YEAR EVENT RUNOFF ESTIMATE: 7.96 CFS

49 SEDIMENT STORAGE CALCULATIONS:

BASIN NUMBER	DRAINAGE AREA A	REQUIRED STORAGE VOLUME SV _R (A*67cy)	STORAGE METHOD	PROVIDED STORAGE VOLUME SV _A	REQUIREMENT MET? YES/NO
PRE-1	2.16	144.7 CY	Sd4-C	200	YES
PRE-2	1.77	118.6 CY	Sd4-C	125	YES
POST-1	2.65	177.6 CY	DETENTION POND DETENTION POND	260	YES
POST-2	0.32	21.4 CY		25	YES
BYPASS-1	0.14	0 CY	--	0	YES
BYPASS-2	0.41	0 CY	--	0	YES
BYPASS-3	0.41	0 CY	--	0	YES

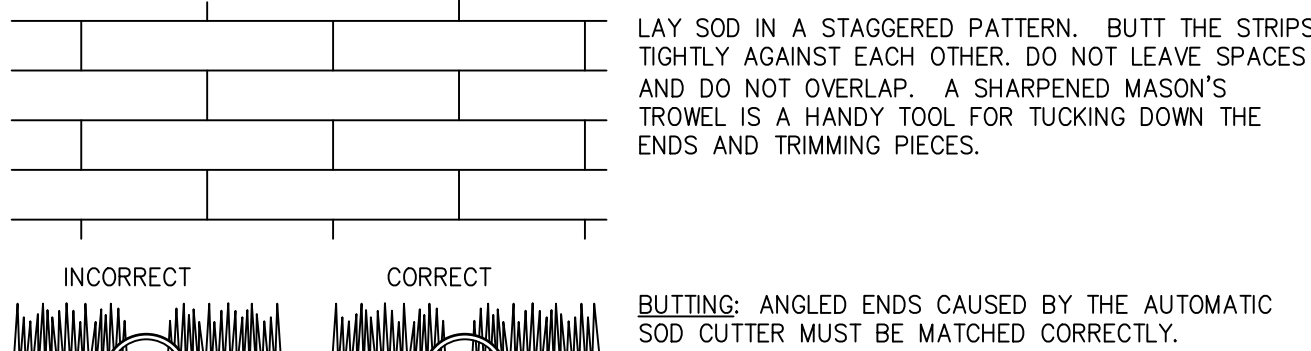
CRUSHED STONE CONSTRUCTION EXIT



- NOTES:**
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
 4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
 5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
 6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
 7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
 8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
 9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
 10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

SOD MAINTENANCE AND INSTALLATION

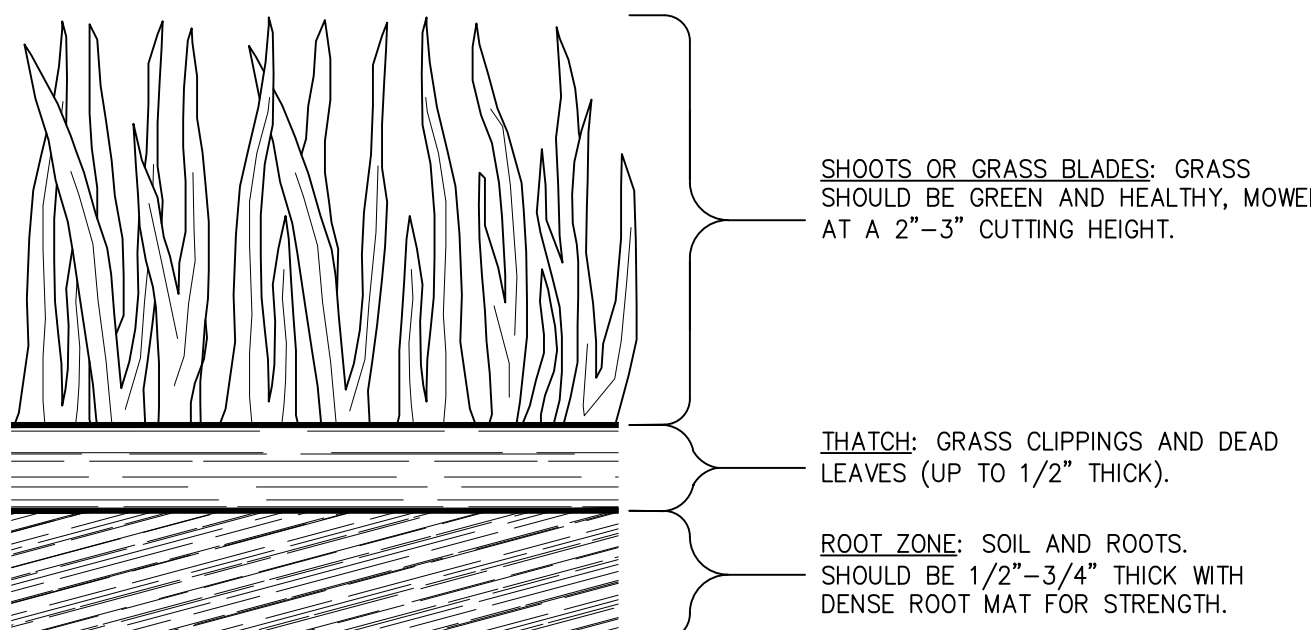
SOD LAYOUT AND PREPARATION



DIRECTIONS FOR INITIAL MAINTENANCE

- Step 1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL
- Step 2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.
- Step 3. MOW WHEN THE SOD IS ESTABLISHED -- IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").

APPEARANCE OF GOOD SOD



UNIFORM CODING SYSTEM

FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER			A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM			Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

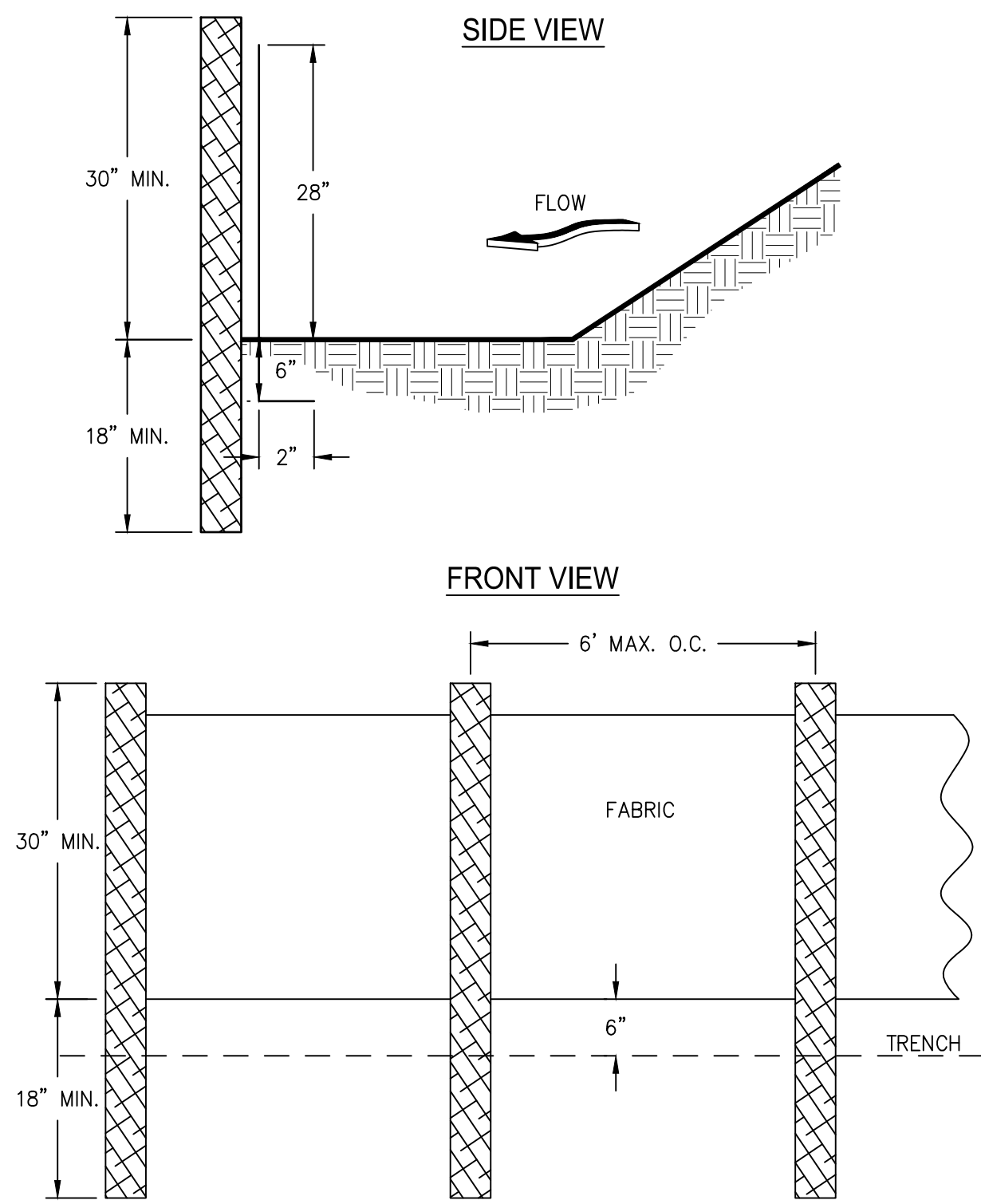
STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

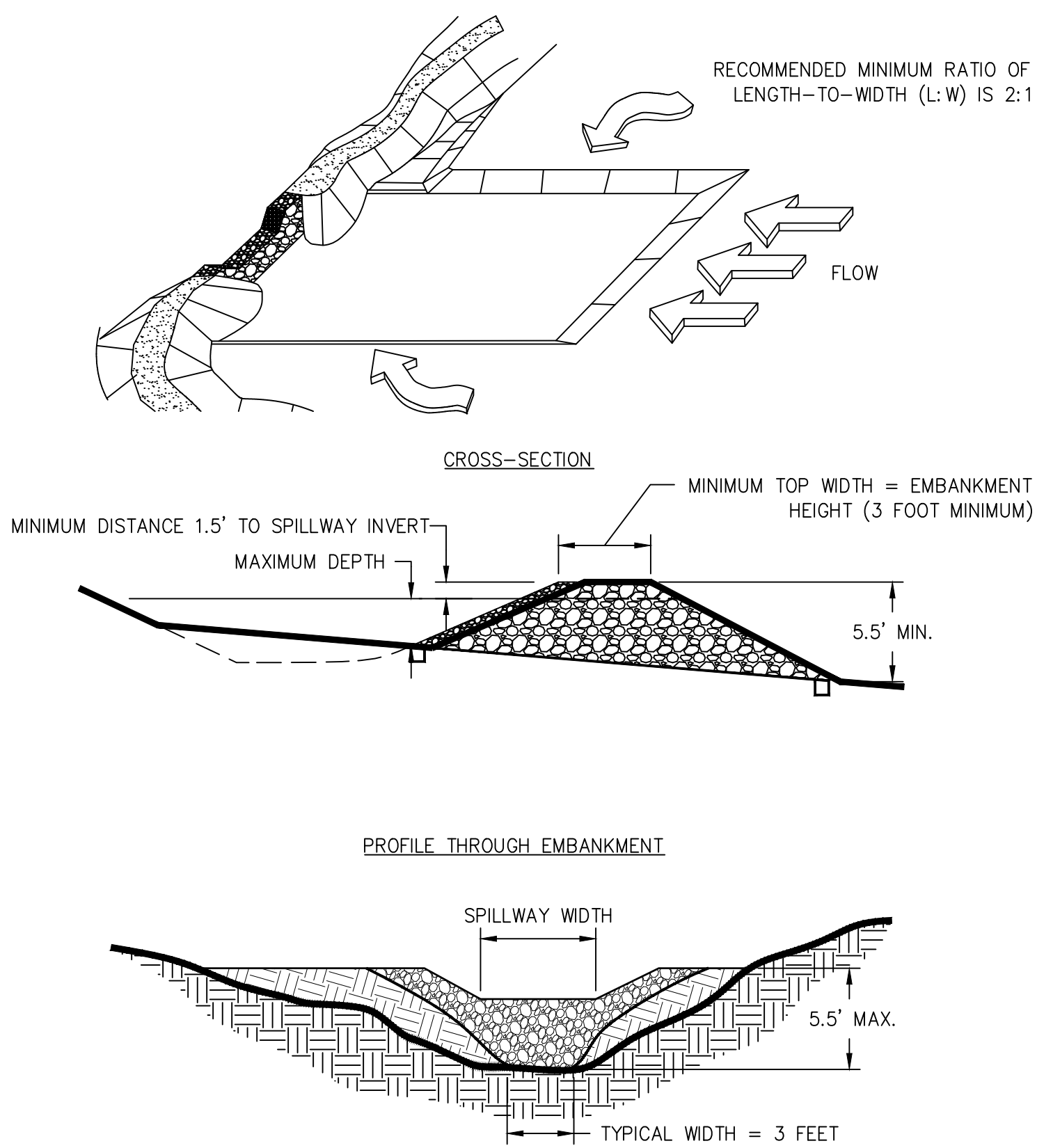
Sd1-NS SILT FENCE - TYPE NON-SENSITIVE



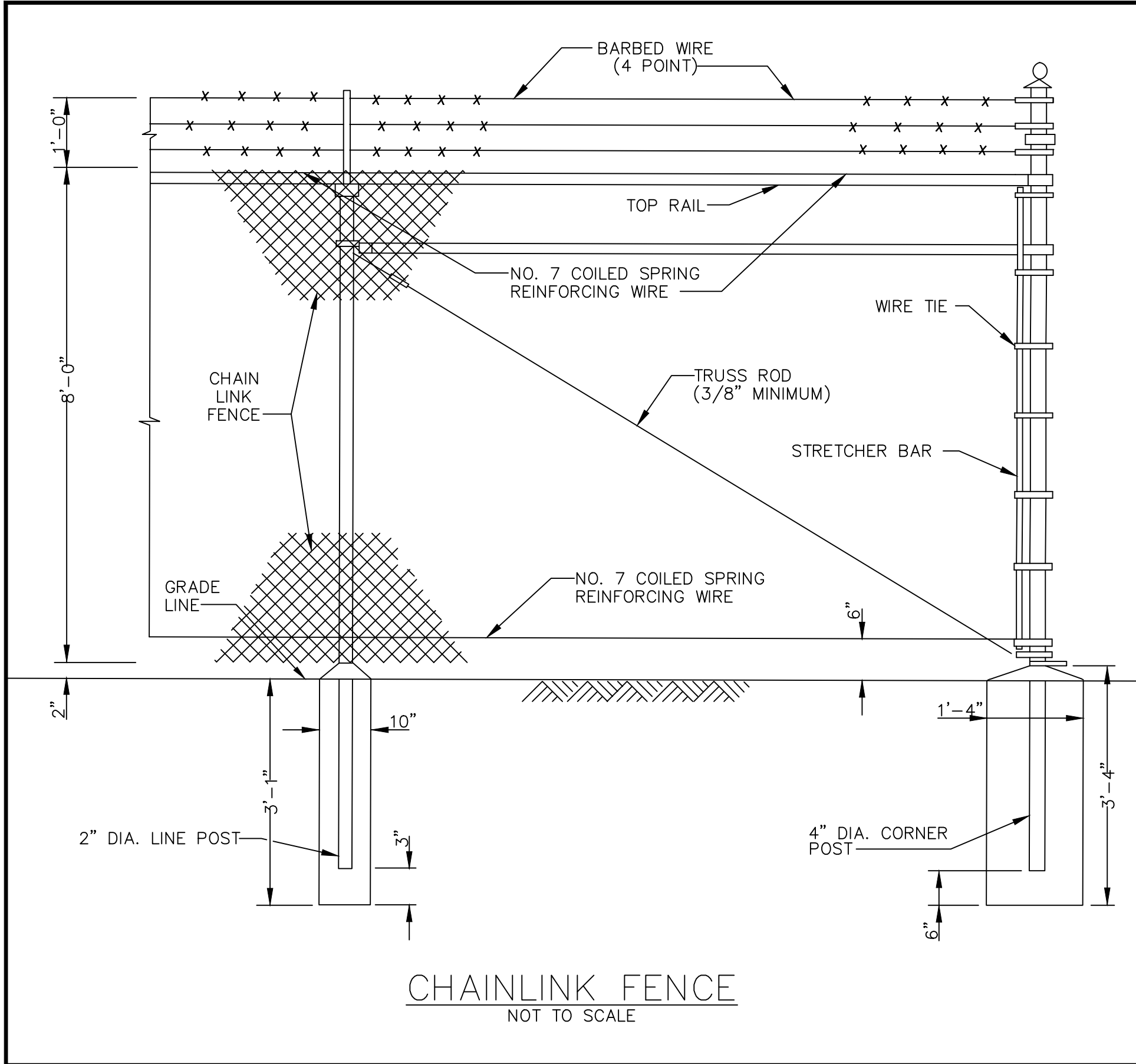
- NOTES:**
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
 2. HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

Sd4-C TEMPORARY SEDIMENT TRAP

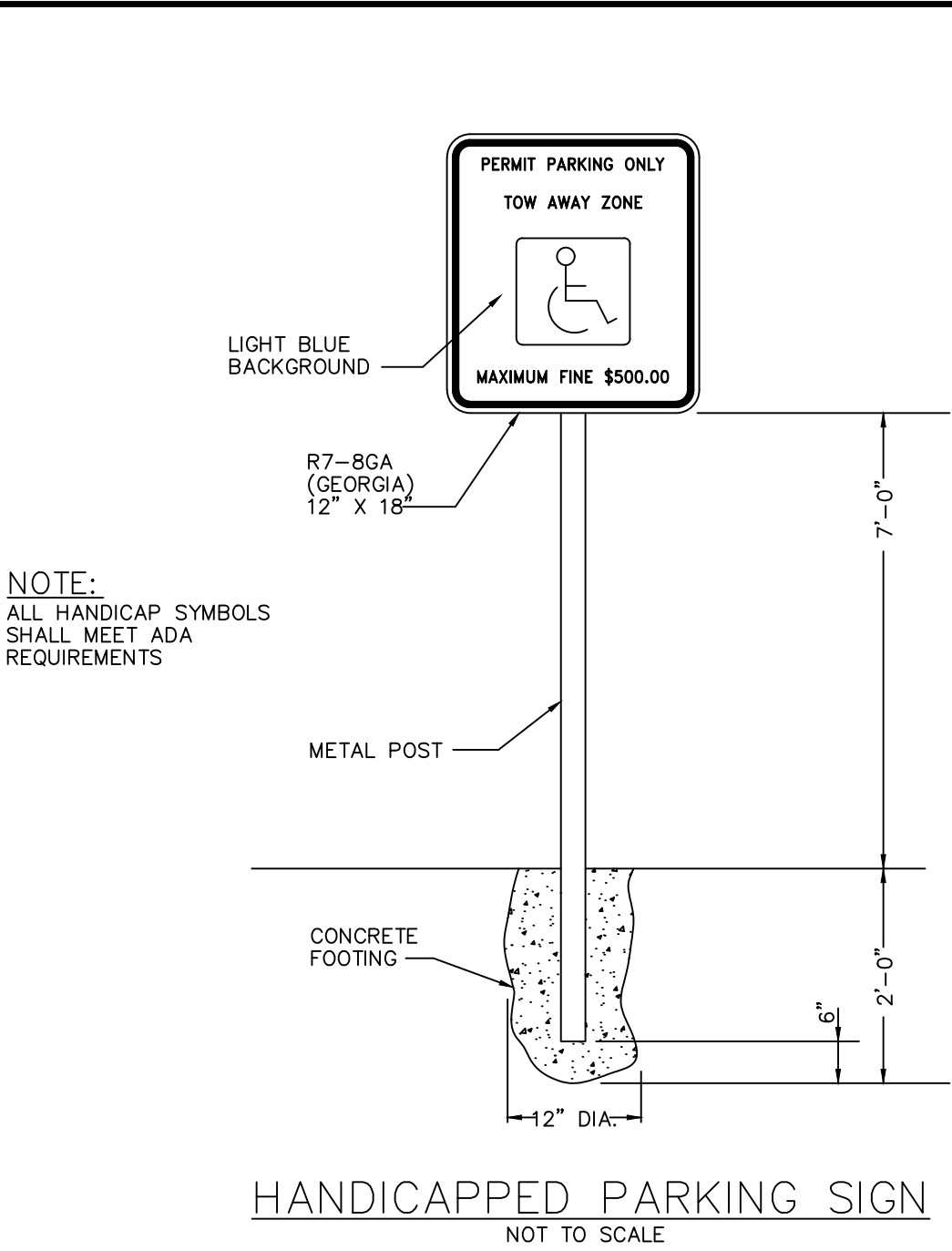
COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT ROCK OUTLET



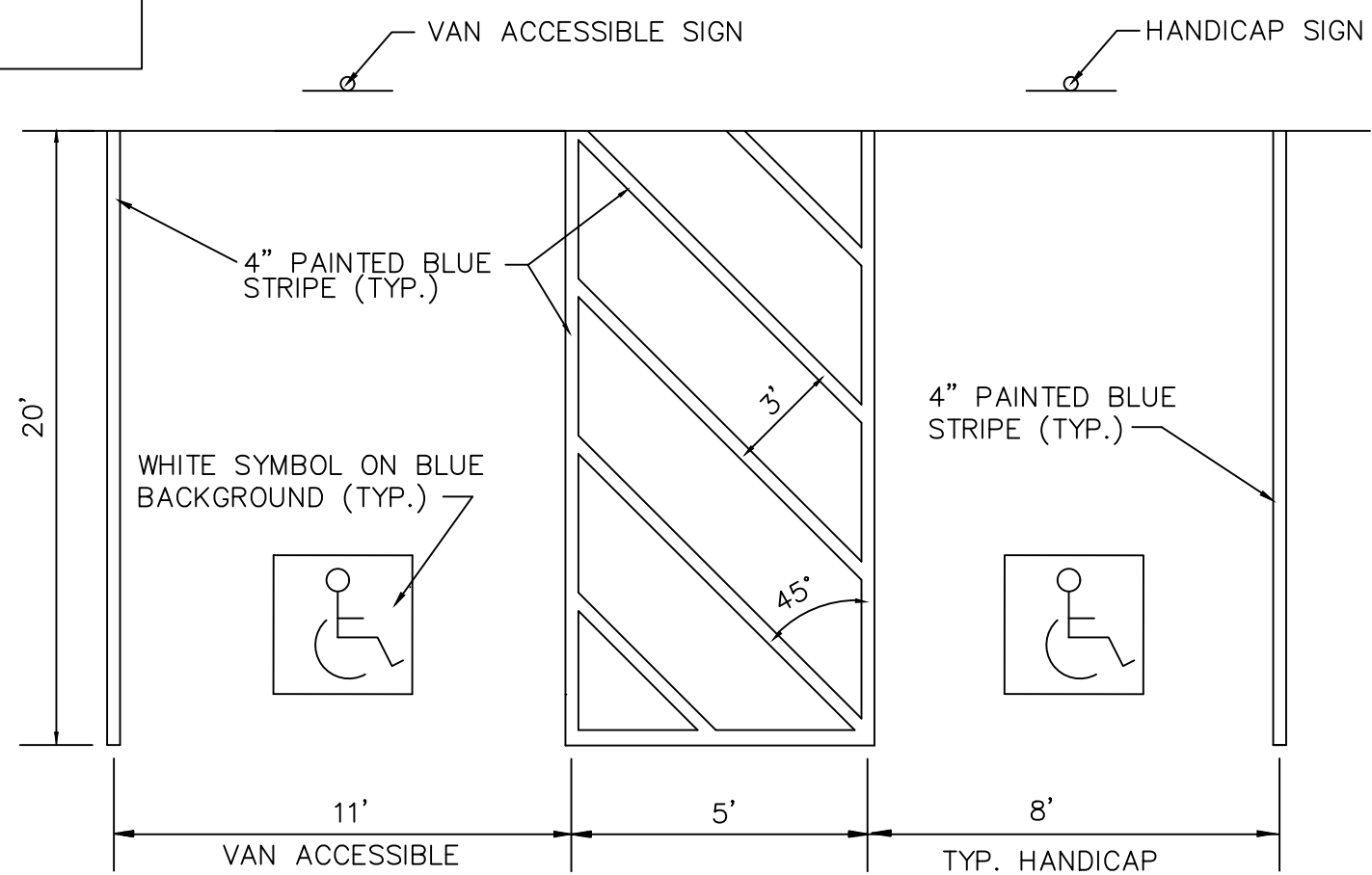
REVISIONS	DATE	DESCRIPTION
NO.		



CHAINLINK FENCE
NOT TO SCALE

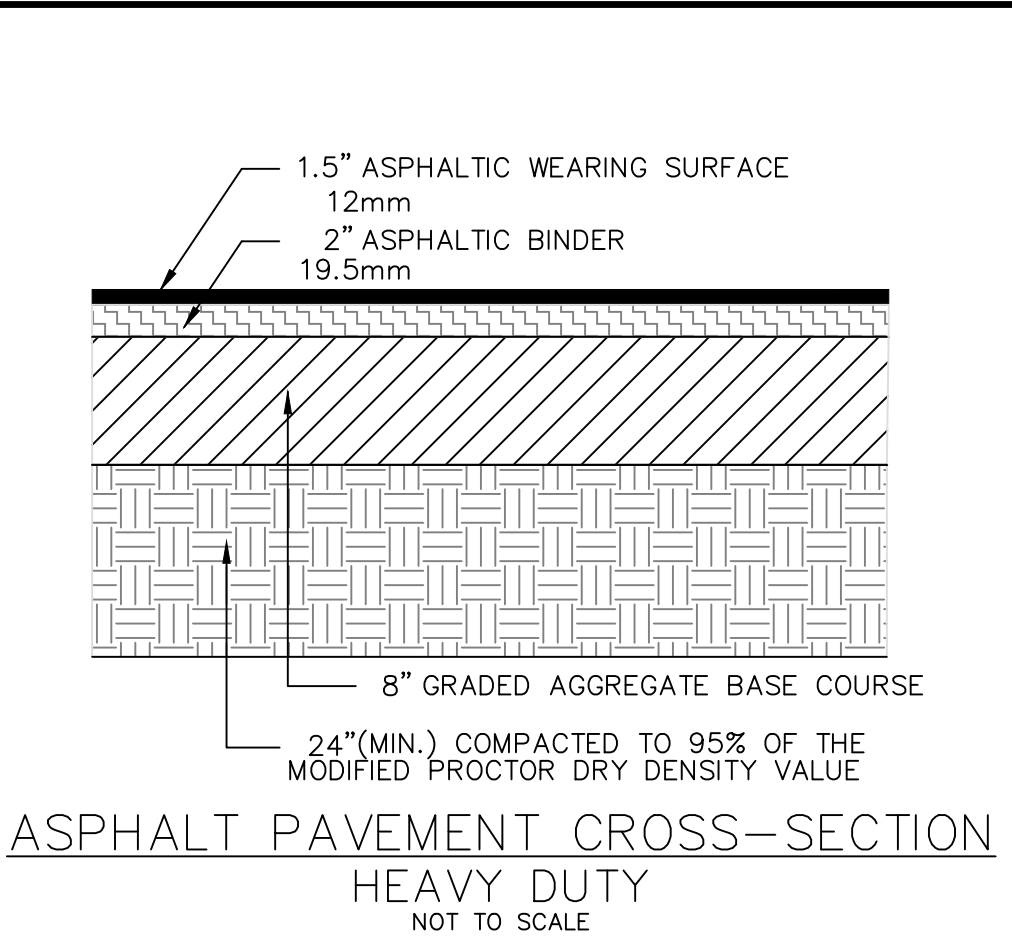


HANDICAPPED PARKING SIGN
NOT TO SCALE

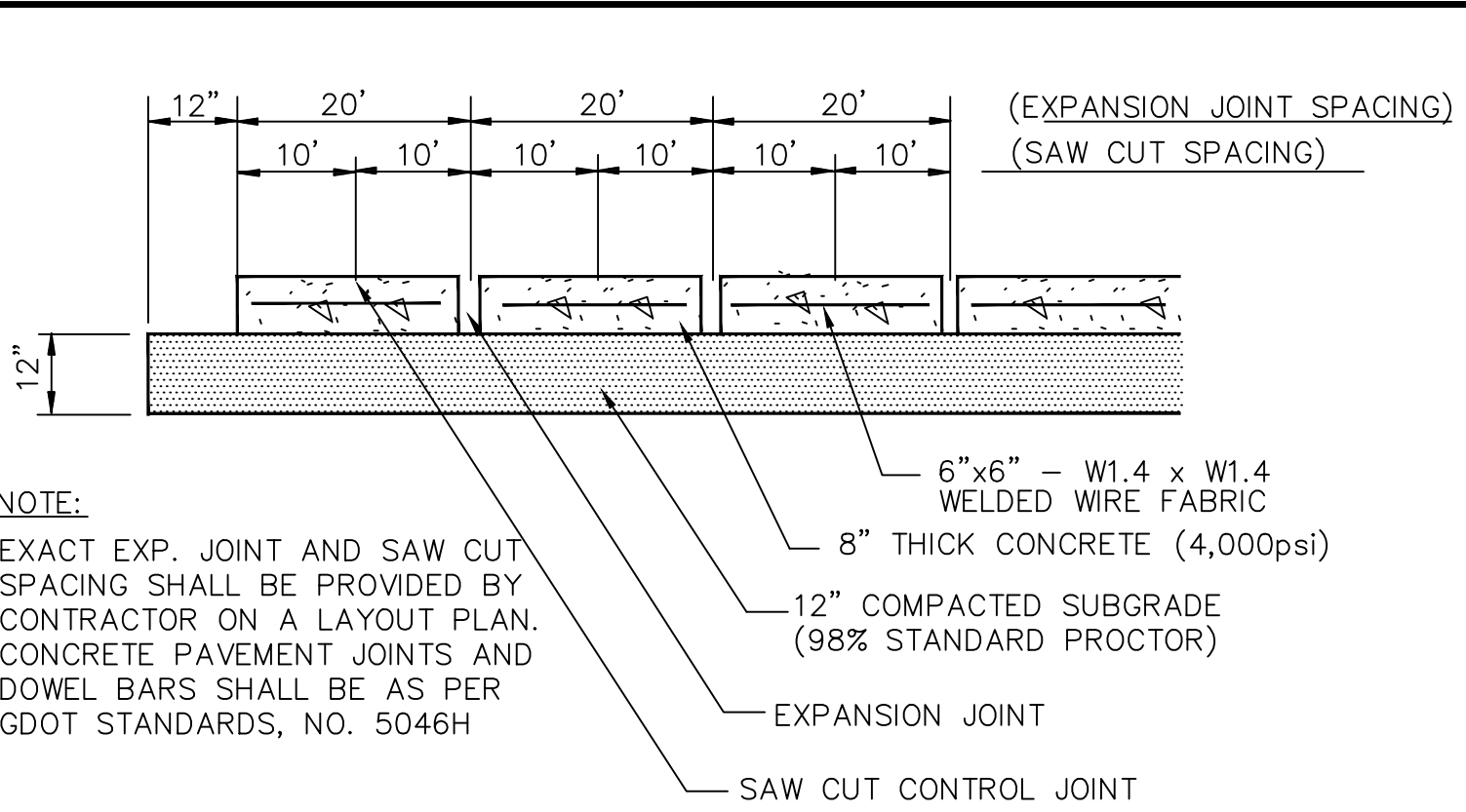


TYPICAL 90° HANDICAPPED PARKING STALLS
NOT TO SCALE

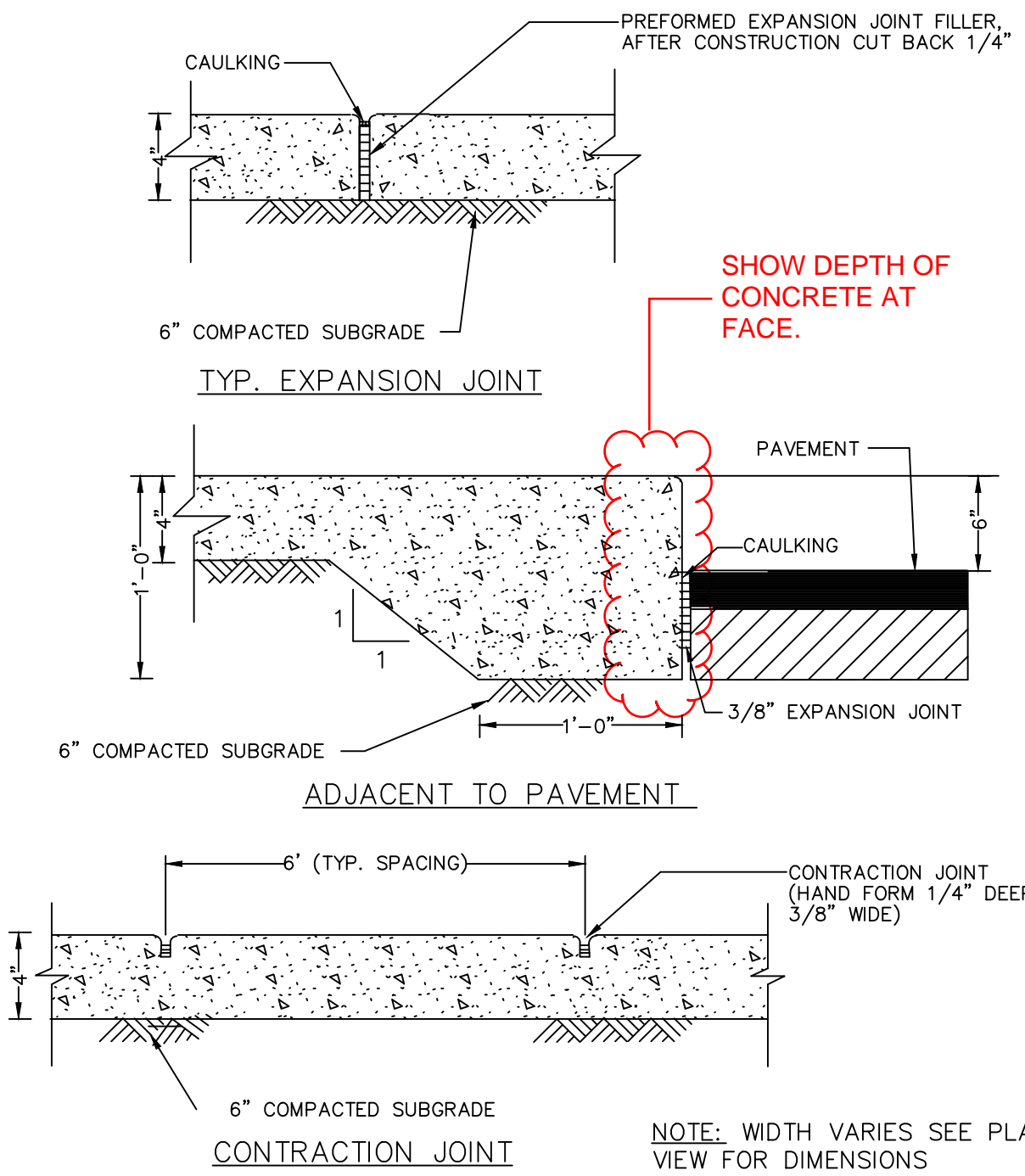
- NOTE:
1. ALL HANDICAPPED STALLS SHALL BE PAINTED LIGHT BLUE.
 2. LAYOUT AS PER FEDERAL REGISTER RULES AND REGULATIONS



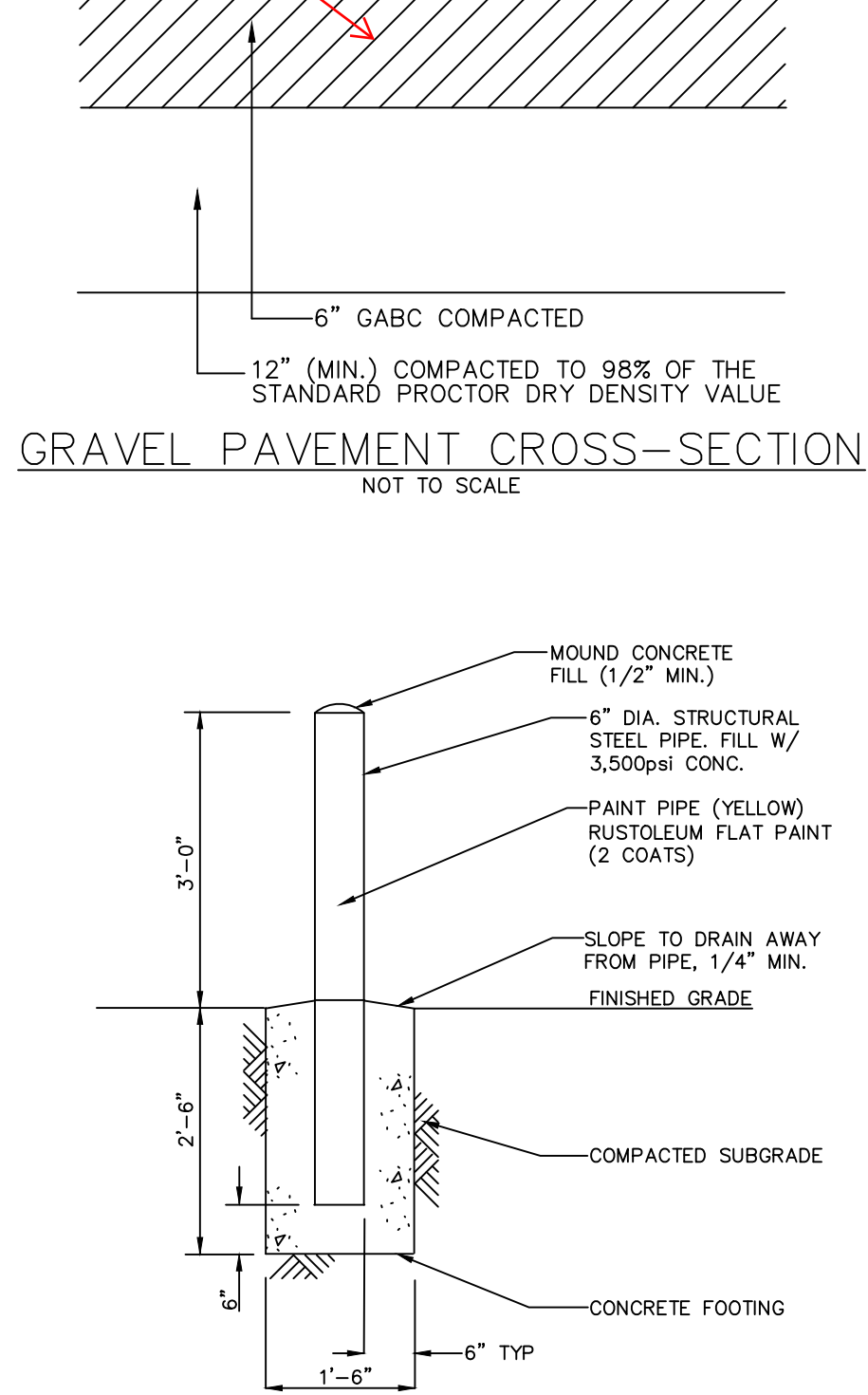
ASPHALT PAVEMENT CROSS-SECTION
HEAVY DUTY
NOT TO SCALE



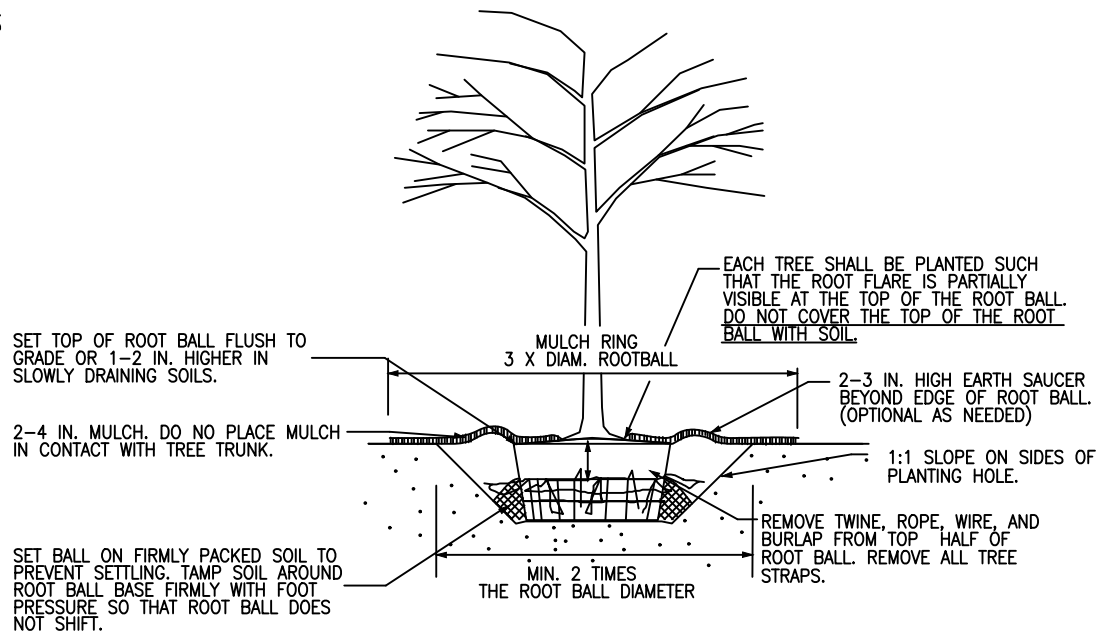
CONCRETE PAVEMENT SECTION
NOT TO SCALE



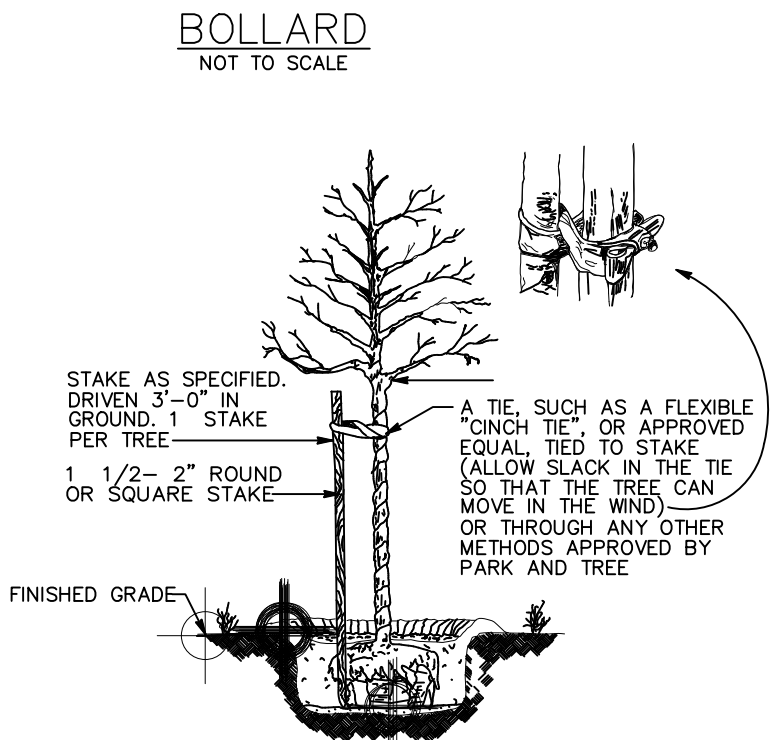
SIDEWALK SECTIONS
NOT TO SCALE



GRAVEL PAVEMENT CROSS-SECTION
NOT TO SCALE



Tree Planting
NTS



Tree Staking
NTS

REVISIONS	DESCRIPTION	
	DATE	
NO.		

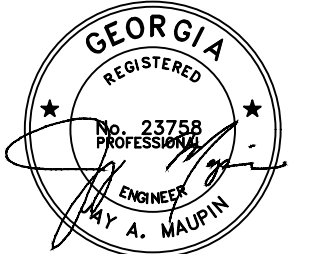
MAUPIN[™]
engineering

114 WEST 40TH STREET
SAVANNAH, GA 31401

OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

CONSTRUCTION DETAILS

PW TRUCK SHOP



STATUS: RELEASED FOR PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

NOT TO SCALE

SHEET NO.

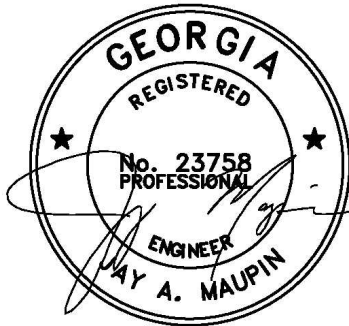
C.d3
673-21-35

Stormwater Management Plan

4/6/22



Port Wentworth Truck Shop
8191 Old Hwy 21
Port Wentworth, GA 31407



Prepared for:

DeWitt Tilton Group
119 Canal Street, Suite 106
Pooler, Ga 31322
912-777-3404

Project Narrative:

The proposed project is to convert an existing platted commercial lot from its current vacant state to an 8,200sf+/- truck shop and associated improvements. The current lot is vacant and grassed without any trees on the lot.

Vicinity Map:



Address:

8191 Old Hwy 21
Port Wentworth, GA 31407

Legal Description:

Lot 1C – Rice Hope
SMBook 53 page 125 – 3.933 ac


Natural Resources Inventory:

Existing topography:	Shown
Natural drainage features:	Shown (ditch on East side of site in Old Hwy 21 Right-of-way)
Perennial / Intermittent Streams:	None
Wetlands:	None
Riparian Buffers:	None
Floodplains:	None
Steep Slopes:	None
Soil Types:	Shown – HSG B
Groundwater Recharge Areas:	None
Areas with High Groundwater:	None
Conservation Areas:	None
Stands of Trees and or Vegetation:	None

April 6, 2022

City of Port Wentworth
Planning and Zoning Department
305 South Coastal Highway
Port Wentworth, GA 31407

RE: Port Wentworth Truck Shop
8191 Old Hwy 21
Owner Certification

I,  am the owner of Property Number 7-0906-02-002, 8191 Old Hwy 21, the future location of Port Wentworth Truck Shop. Please let this letter serve as verification that I certify all land disturbing and development activities that will take place on the aforementioned property shall be in accordance with the approved stormwater management design plan.

Sincerely,



Port Wentworth Truck Shop

Stormwater System Operation and Maintenance Plan

The stormwater treatment facilities will be maintained by the owner or their assigned heirs after construction is completed. The facility management staff will perform the inspections indicated below and retain a log on-site of the inspections performed. The building maintenance budget will include monies set aside for inspections and maintenance program for the stormwater system. Long-term operation and maintenance for the individual stormwater management entities is presented below.

Vegetated Areas:

Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. Inspect all slopes after major storms and any identified deficiencies will be corrected.

Ditches, Swales and other Open Stormwater Channels:

Inspect twice per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or sideslopes. Ditches will be inspected after major storms and any identified deficiencies will be corrected.

This document shall be reviewed by the property owner on an annual basis for determining of the need for additional stormwater inspection and maintenance procedures.



Owner

National Flood Hazard Layer FIRMette



81°11'55"W 32°14'25"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/29/2022 at 12:41 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Bryan and Chatham Counties, Georgia**

Orr Tract Truck Shop



March 29, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

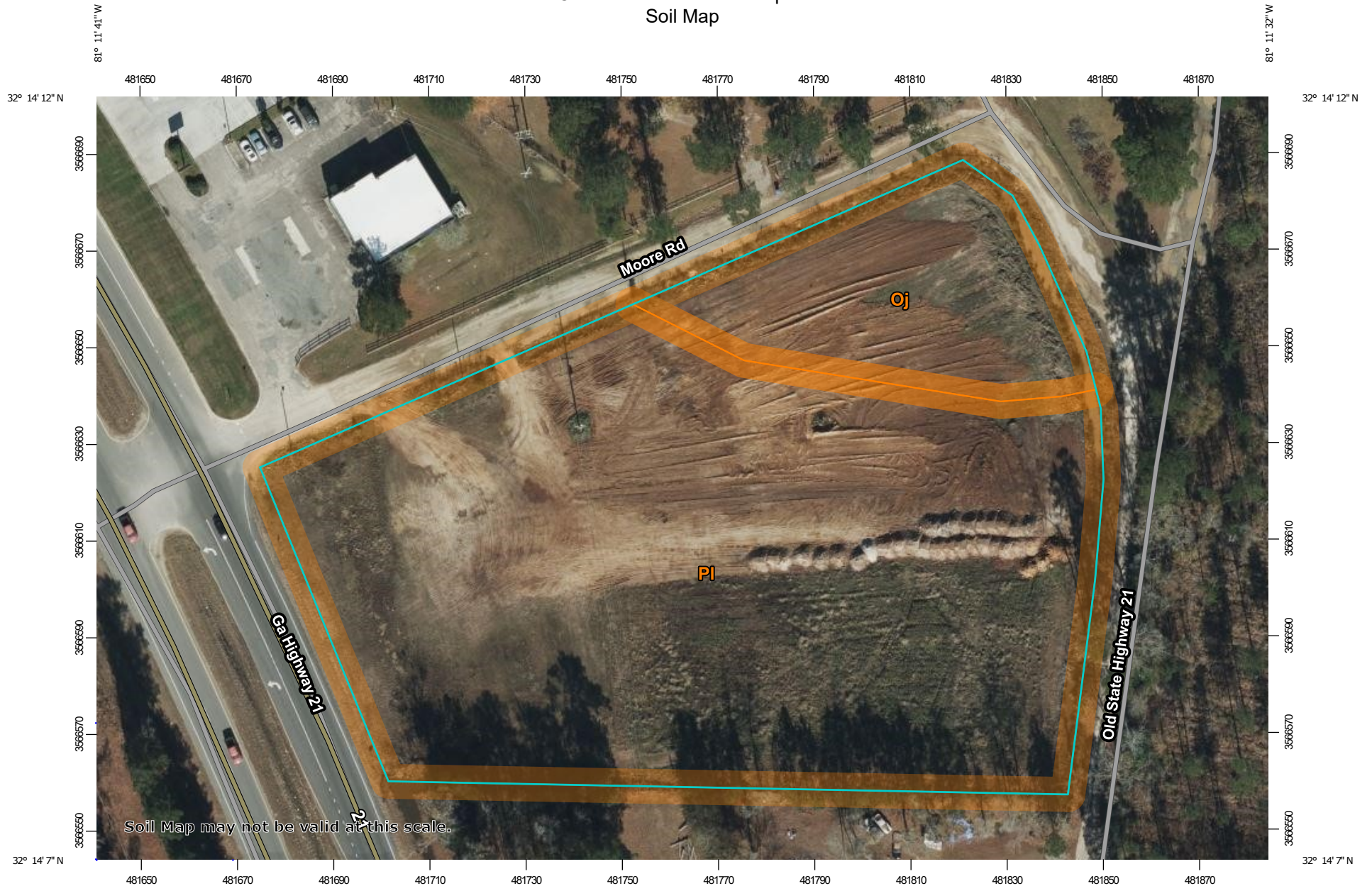
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

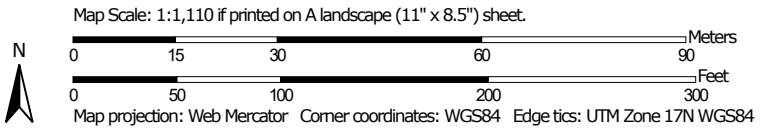
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



Custom Soil Resource Report


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Bryan and Chatham Counties, Georgia

Survey Area Data: Version 16, Aug 31, 2021

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

Date(s) aerial images were photographed: Jan 4, 2021—Jan 18, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Oj	Ocilla complex	0.7	16.6%
Pl	Pelham loamy sand, 0 to 2 percent slopes, frequently flooded	3.4	83.4%
Totals for Area of Interest		4.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bryan and Chatham Counties, Georgia

Oj—Ocilla complex

Map Unit Setting

National map unit symbol: 46gt
Elevation: 10 to 450 feet
Mean annual precipitation: 44 to 52 inches
Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 230 to 290 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Ocilla and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ocilla

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Marine deposits

Typical profile

H1 - 0 to 28 inches: loamy fine sand
H2 - 28 to 59 inches: sandy clay loam
H3 - 59 to 67 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: R153AY001GA - Loamy Rise, Moderately Wet
Hydric soil rating: No

Minor Components

Ellabelle

Percent of map unit: 3 percent
Landform: Depressions, drainageways
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Pelham

Percent of map unit: 2 percent
Landform: Depressions, flats
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

PI—Pelham loamy sand, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2tg59
Elevation: 0 to 300 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 54 to 78 degrees F
Frost-free period: 209 to 317 days
Farmland classification: Not prime farmland

Map Unit Composition

Pelham, frequently flooded, and similar soils: 95 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pelham, Frequently Flooded

Setting

Landform: Drainageways, depressions, flatwoods
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: loamy sand
Eg - 6 to 33 inches: loamy sand
Btg1 - 33 to 41 inches: sandy loam
Btg2 - 41 to 66 inches: sandy clay loam
Cg - 66 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

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Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Hydric soil rating: Yes

Minor Components

Surrency, frequently ponded

Percent of map unit: 2 percent

Landform: Depressions

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)

Hydric soil rating: Yes

Rains

Percent of map unit: 1 percent

Landform: Flatwoods

Landform position (three-dimensional): Talf

Down-slope shape: Concave, linear

Across-slope shape: Linear

Hydric soil rating: Yes

Pickney, frequently ponded

Percent of map unit: 1 percent

Landform: Depressions, drainageways

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

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- BYPASS BASIN 1
- BYPASS BASIN 2
- BYPASS BASIN 3
- BASIN 1
- BASIN 2
- ROOF
- PAVEMENT
- ASPHALT MILLINGS
- PERVIOUS AREA
- UNDISTURBED PERVIOUS AREA
- GRASS CHANNEL 1
- GRASS CHANNEL 2
- DETENTION POND

BENCHMARK
MAGNAIL IN ASPHALT
ELEV. = 22.26' (NAVD 1988)

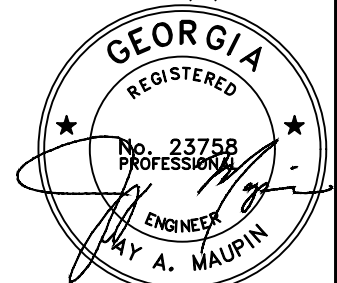
MOORE ROAD
(COUNTY 50' R/W)

GEORGIA HIGHWAY NO. 21 110' R/W

LOT 1C RICE HOPE
3.933 AC
171,816 SF

DIRECT THIS
BY-PASS AREA TO
POND

LEVEL II E&S
CERT.#21051
EXP: 12/1/2024



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REVISIONS

NO.	DATE	DESCRIPTION
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SHEET NO.

CSS

673-21-35

PROJECT NO.

SCALE: 1" = 60'

0 30 60

DRWN: BPM

CHKD: JAM

DATE

3/29/2022

CSS EXHIBIT

PW TRUCK SHOP

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SAVANNAH, GA 31401

OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

Coastal Stormwater Supplement Site Planning & Design Worksheet
Revised December 2013

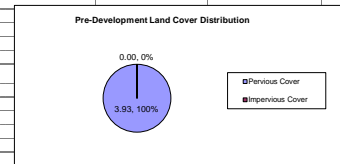
Site Data

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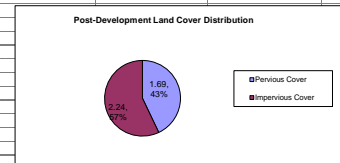
	data input cells
	calculation cells
	constant values

Step 1: Enter Site Information

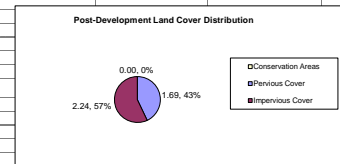
Pre-Development Land Cover (acres)					
Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Pervious Cover	0.00	3.93	0.00	0.00	3.93
Impervious Cover	0.00	0.00	0.00	0.00	0.00
			Total		3.93



Post-Development Land Cover (acres)					
Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Pervious Cover	0.00	1.69	0.00	0.00	1.69
Impervious Cover	0.00	2.24	0.00	0.00	2.24
			Total		3.93



Runoff Reduction Rainfall Event (inches)	1.2
Post-Development Site Imperviousness (%)	57%
Post-Development Site Runoff Coefficient, Rv	0.56
Target Runoff Reduction Volume, RRV (acre-feet)	0.22
Target Runoff Reduction Volume, RRV (cubic feet)	9,638

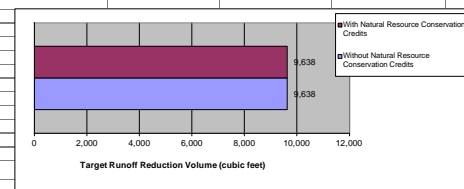


Step 2: Apply Better Site Planning Techniques

Natural Resource Conservation Credits					
	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Total
Primary Conservation Areas (acres)	0.0	0.0	0.0	0.0	0.0
Secondary Conservation Areas (acres)	0.0	0.0	0.0	0.0	0.0
Total (acres)					0.00

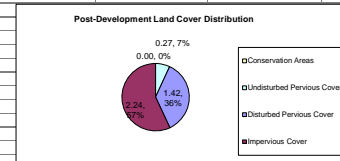
Target Runoff Reduction Volume with Natural Resource Conservation Credits, RRV

Target Runoff Reduction Volume, RRV (acre-feet)	0.22
Target Runoff Reduction Volume, RRV (cubic feet)	9,638



Step 3: Apply Better Site Design Techniques

Reduced Clearing and Grading Credits					
	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Total
Undisturbed Pervious Cover (Acres)	0.0	0.3	0.0	0.0	0.27

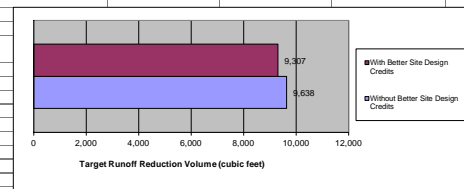


Revised Post-Development Land Cover (acres)					
Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Conservation Areas	0.00	0.00	0.00	0.00	0.00
Undisturbed Pervious Cover	0.00	0.27	0.00	0.00	0.27
Disturbed Pervious Cover	0.00	1.42	0.00	0.00	1.42
Impervious Cover	0.00	2.24	0.00	0.00	2.24
			Total		3.93

Restoration of Disturbed Pervious Surfaces	
Soil Restoration (Acres)	0.0
Site Reforestation/Vegetation (Acres)	0.0
Soil Restoration w/ Site Reforestation/Revegetation (Acres)	0.0

Target Runoff Reduction Volume After Application of Better Site Design Credits, RRV

Target Runoff Reduction Volume, RRV (acre-feet)	0.21
Target Runoff Reduction Volume, RRV (cubic feet)	9,307



Note: Remainder of Better Site Design Techniques are considered to be "self-crediting."

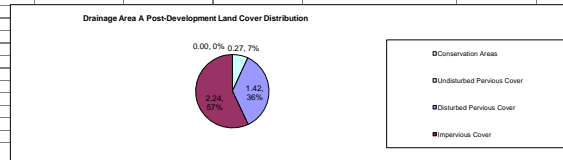
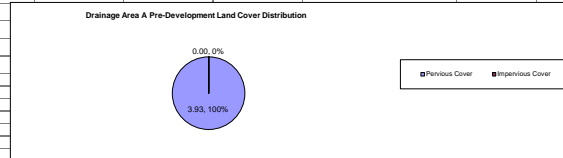
UPDATE CALCULATIONS FOR REDIRECTED FLOWS PER COMMENTS.

Coastal Stormwater Supplement Site Planning & Design Worksheet
Revised December 2013

Drainage Area A
Drainage Area Information

Drainage Area A Pre-Development Land Cover (acres)					
Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Previous Cover	0.00	3.93	0.00	0.00	3.93
Impervious Cover	0.00	0.00	0.00	0.00	0.00
				Total	3.93

Drainage Area A Post-Development Land Cover (acres)					
Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Conservation Areas	0.00	0.00	0.00	0.00	0.00
Undisturbed Previous Cover	0.00	0.27	0.00	0.00	0.27
Disturbed Previous Cover	0.00	1.42	0.00	0.00	1.42
Impervious Cover	0.00	2.24	0.00	0.00	2.24
				Total	3.93



Low Impact Development Practices

Alternatives to Impervious Surfaces

Low Impact Development Practice	Size of Contributing Drainage Area (acres)	Impervious Cover in Contributing Drainage Area (acres)	Direct Runoff Reduction Volume Received by Practice (cubic feet)	Description of Runoff Reduction Credit	Runoff Reduction Volume Received from Upstream Practices	Total Runoff Reduction Volume Received by Practice (cubic feet)	Treatment Volume Received from Upstream Practices (cubic feet)	Total Treatment Volume Received by Practice (cubic feet)	Method for Calculating Storage	Storage Volume Provided by Practice (cubic feet)	Adjustment to Runoff Reduction Volume (cubic feet)	Remaining Runoff Reduction Volume (cubic feet)	Adjustment to Treatment Volume (cubic feet)	Remaining Treatment Volume (cubic feet)	Downstream Practice to be Employed
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	

"Receiving" Low Impact Development Practices

Grass Channel, A/B or Amended Soils 1	0.32	0.28	1167.4	25% of volume received by the practice	0.0	1167.4	0.0	1167.4	N/A	N/A	291.9	875.6	291.9	875.6	Stormwater Pond, Wetland, or Wet Swale 1
Grass Channel, A/B or Amended Soils 2	0.69	0.19	895.2	25% of volume received by the practice	3886.4	4781.5	5.9	901.0	N/A	N/A	1195.4	3586.2	901.0	0.0	No Downstream Practice
Undisturbed Previous Area, A/B Soils 1	0.27	0.00	58.8	90% of volume received by the practice	0.0	58.8	0.0	58.8	N/A	N/A	52.9	5.9	52.9	5.9	Grass Channel, A/B or Amended Soils 2
Vegetated Filter Strip, A/B or Amended Soils 1	2.65	1.77	7512.4	60% of volume received by the practice	0.0	7512.4	0.0	7512.4	N/A	N/A	4507.4	3004.9	4507.4	3004.9	Stormwater Pond, Wetland, or Wet Swale 1
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	

Treatment Only Practices

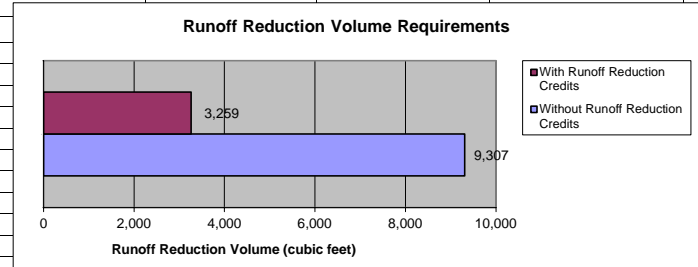
Stormwater Pond, Wetland, or Wet Swale 1	0.00	0.00	0.0	None	3880.5	3880.5	3880.5	3880.5	Volume in Wet Pool and Extended Detention	17515.0	0.0	3880.5	3880.5	0.0	Grass Channel, A/B or Amended Soils 2
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
Totals	3.93	2.24									6047.6		9633.7		

Coastal Stormwater Supplement Site Planning & Design Worksheet

Revised December 2013

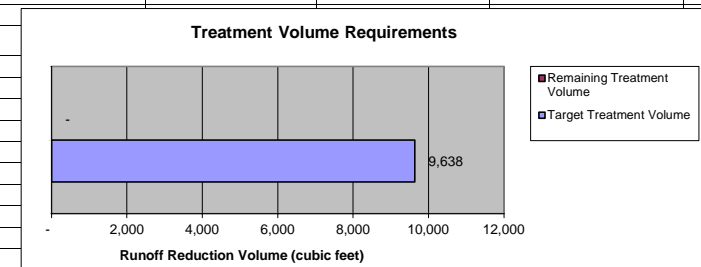
Stormwater Runoff Reduction Summary

Target Runoff Reduction and Treatment Volume, RRv (cubic feet)	9,638
Total Adjustment to Runoff Reduction Volume, RRv (cubic feet)	6,379
Percentage of Target Runoff Reduction Volume Achieved	66%
Runoff Reduction Volume Achieved (in)	0.79
Runoff Reduction Volume Remaining (cubic feet)	3,259



Note: If any of the target runoff reduction volume cannot be reduced on the development site, due to site characteristics or constraints, it should be intercepted and treated in one or more stormwater management practices that: (1) provide for at least an 80 percent reduction in TSS loads; and (2) reduce nitrogen and bacteria loads to the maximum extent practical.

Treatment Volume Achieved (cubic feet)	9,965
Treatment Volume Remaining (cubic feet)	-



BENCHMARK
MAGNAIL IN ASPHALT
ELEV. = 22.26' (NAVD 1988)

GEORGIA HIGHWAY NO. 21 110' R/W

MOORE ROAD
(COUNTY 50' R/W)

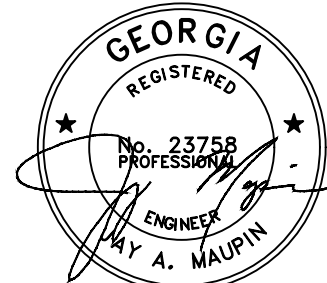
Pre-Development Basin 1
2.16 AC

LOT 1C RICE HOME
3.933 AC
171,316 SF

Pre-Development Basin
1.77 AC

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)

LEVEL II E&S
CERT.#21051
EXP: 12/1/2024



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REVISIONS

NO

DATE

DESCRIPTION

SHEET NO.
1 of 2

PROJECT NO.
673-21-35

SCALE: 1" = 60'

DRWN: BPM 3/29/2022
CHK'D: JAM DATE

PRE-DEVELOPMENT BASINS

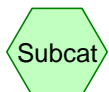
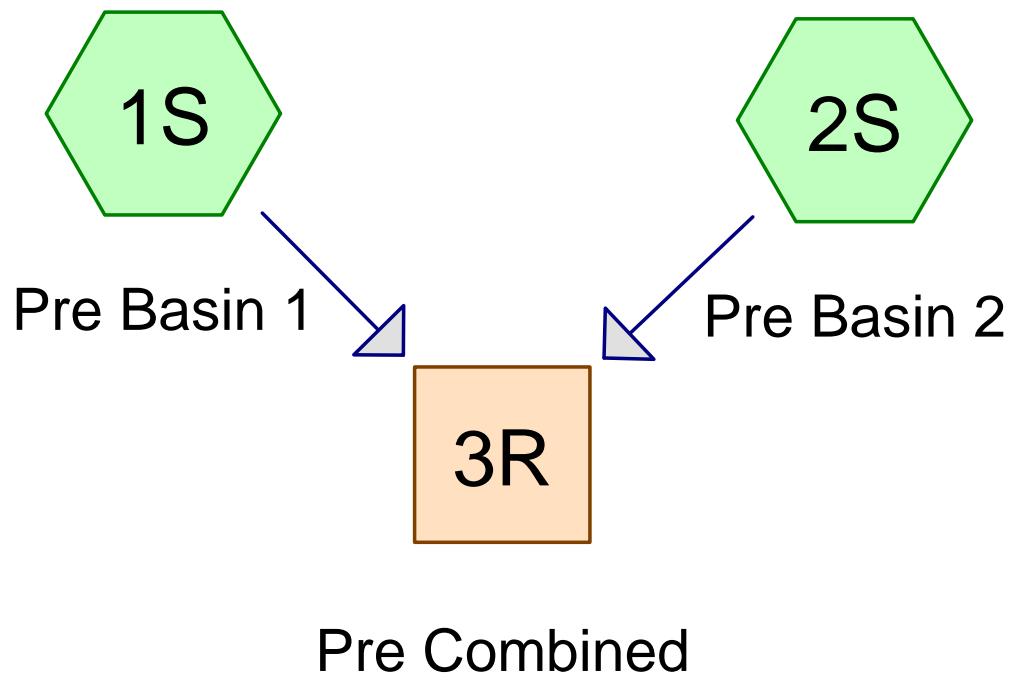
PW TRUCK SHOP



114 WEST 42ND STREET
SAVANNAH, GA 31401
OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

1:2022 SDP-GR TRUCKS.DWG

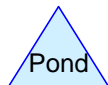
UPDATE HYDROCAD FOR
REDIRECTED FLOWS PER
COMMENTS.



Subcat



Reach



Pond



Link

Routing Diagram for Orr Track Pre

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Project Notes

Rainfall events imported from "pre hydro analysis.hcp"

Orr Track Pre

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Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type III 24-hr		Default	24.00	1	3.60	2
2	5-Year	Type III 24-hr		Default	24.00	1	4.80	2
3	10-Year	Type III 24-hr		Default	24.00	1	7.00	2
4	25-Year	Type III 24-hr		Default	24.00	1	8.00	2
5	50-Year	Type III 24-hr		Default	24.00	1	9.00	2
6	100-Year	Type III 24-hr		Default	24.00	1	9.84	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.930	61	>75% Grass cover, Good, HSG B (1S, 2S)
3.930	61	TOTAL AREA

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Page 5

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
3.930	HSG B	1S, 2S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
3.930		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	3.930	0.000	0.000	0.000	3.930	>75% Grass cover, Good	1S, 2S
0.000	3.930	0.000	0.000	0.000	3.930	TOTAL AREA	

Orr Track Pre*Type III 24-hr 1-Year Rainfall=3.60"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>0.54"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=0.89 cfs 0.098 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>0.54"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=0.73 cfs 0.080 af

Reach 3R: Pre Combined

Inflow=1.62 cfs 0.178 af

Outflow=1.62 cfs 0.178 af

Total Runoff Area = 3.930 ac Runoff Volume = 0.178 af Average Runoff Depth = 0.54"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 0.89 cfs @ 12.24 hrs, Volume= 0.098 af, Depth> 0.54"

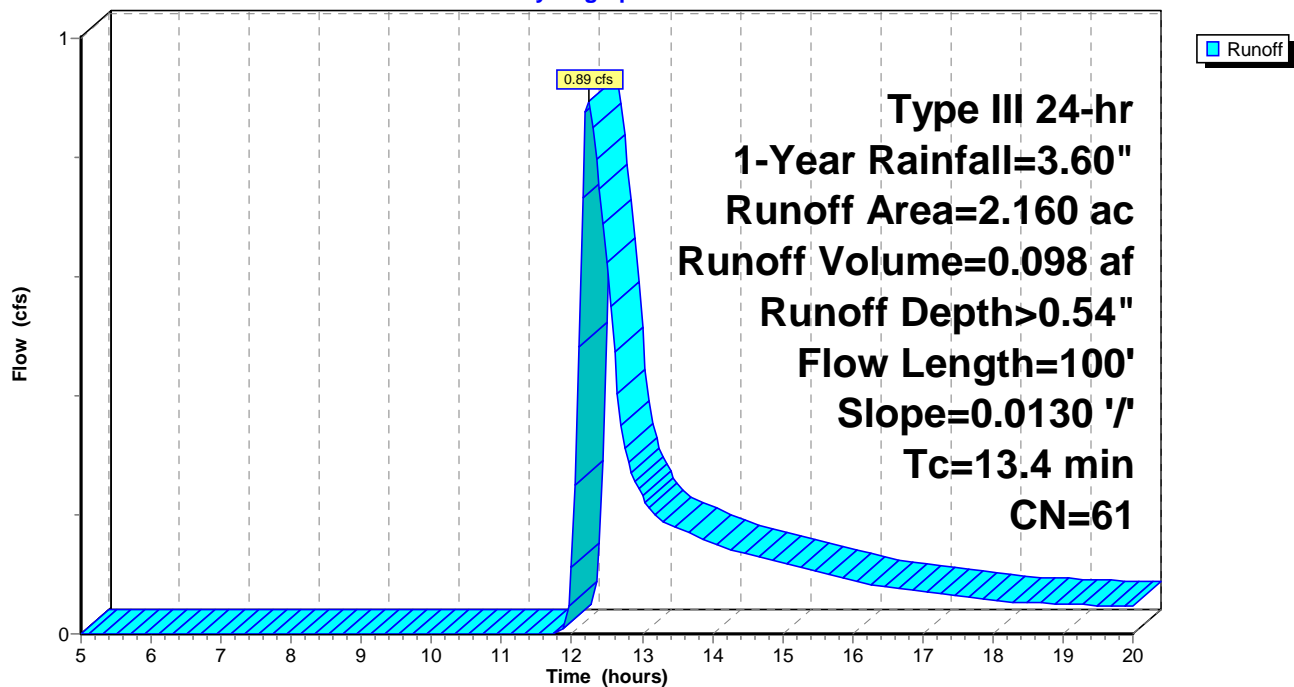
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



Orr Track Pre

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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 0.73 cfs @ 12.25 hrs, Volume= 0.080 af, Depth> 0.54"

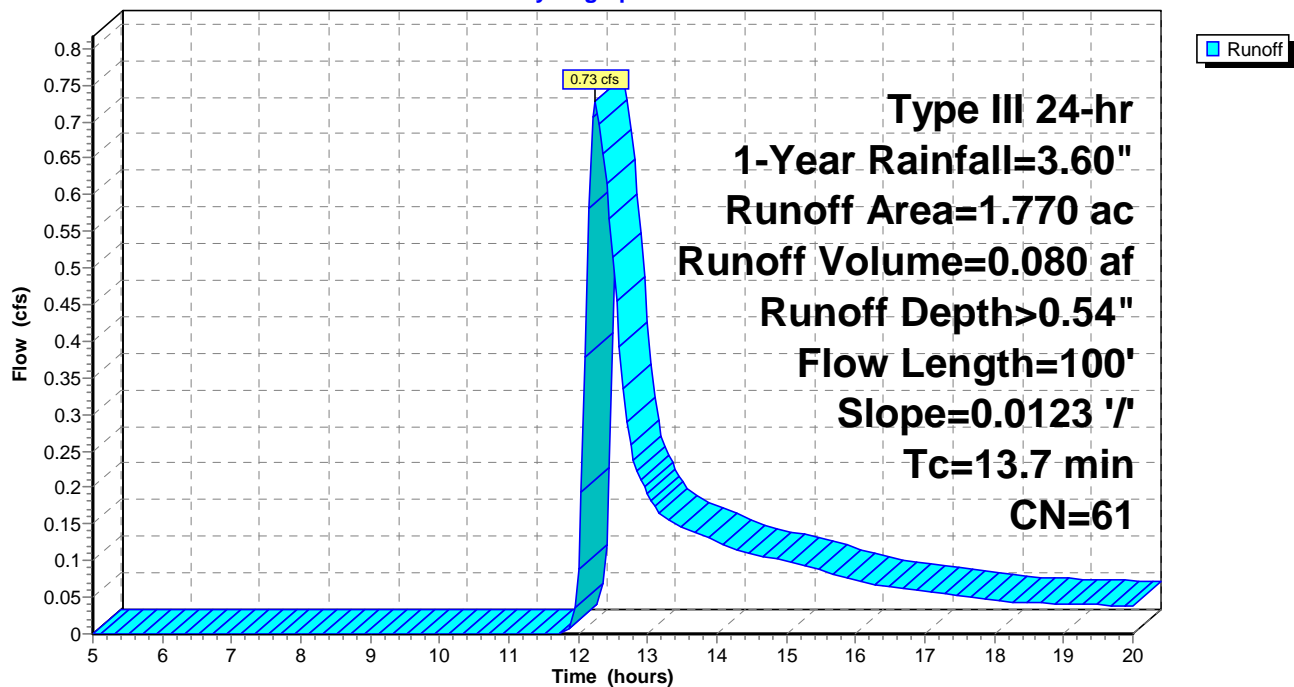
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



Orr Track Pre

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Type III 24-hr 1-Year Rainfall=3.60"

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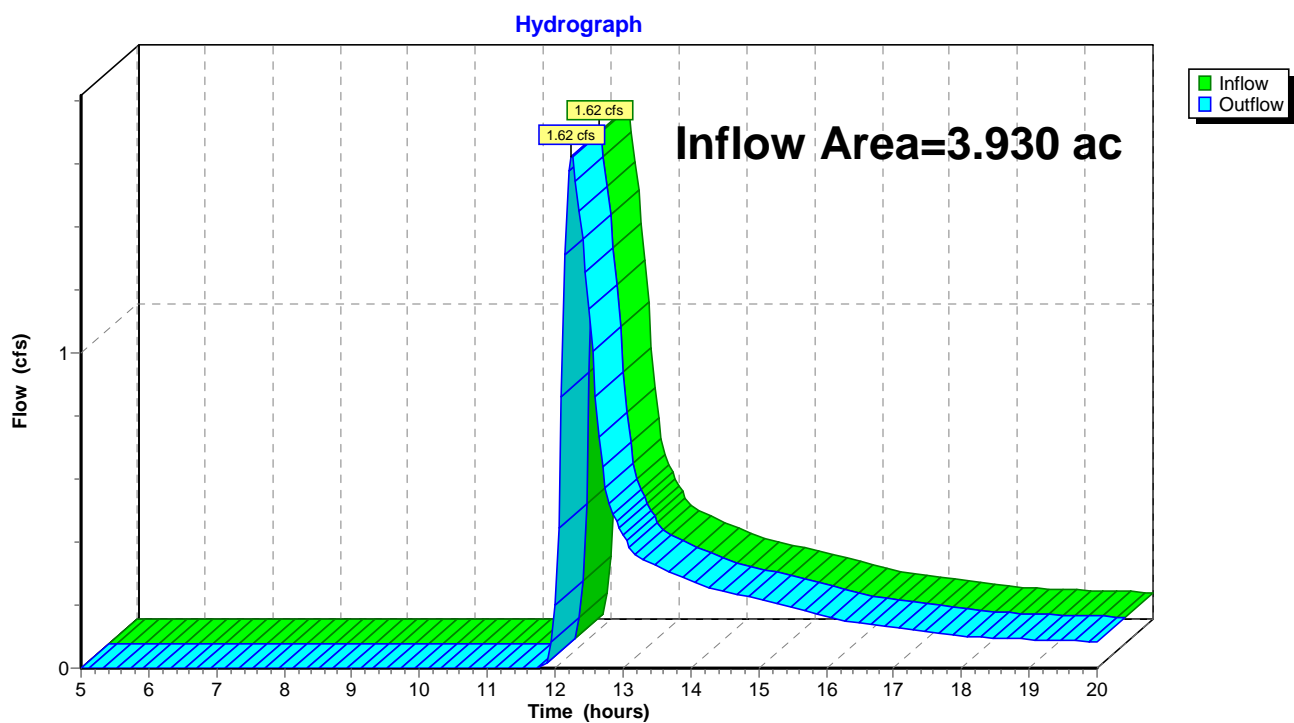
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 0.54" for 1-Year event
Inflow = 1.62 cfs @ 12.24 hrs, Volume= 0.178 af
Outflow = 1.62 cfs @ 12.24 hrs, Volume= 0.178 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 5-Year Rainfall=4.80"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>1.13"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=2.21 cfs 0.203 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>1.13"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=1.80 cfs 0.166 af

Reach 3R: Pre Combined

Inflow=4.01 cfs 0.369 af

Outflow=4.01 cfs 0.369 af

Total Runoff Area = 3.930 ac Runoff Volume = 0.369 af Average Runoff Depth = 1.13"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

Orr Track Pre

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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 2.21 cfs @ 12.21 hrs, Volume= 0.203 af, Depth> 1.13"

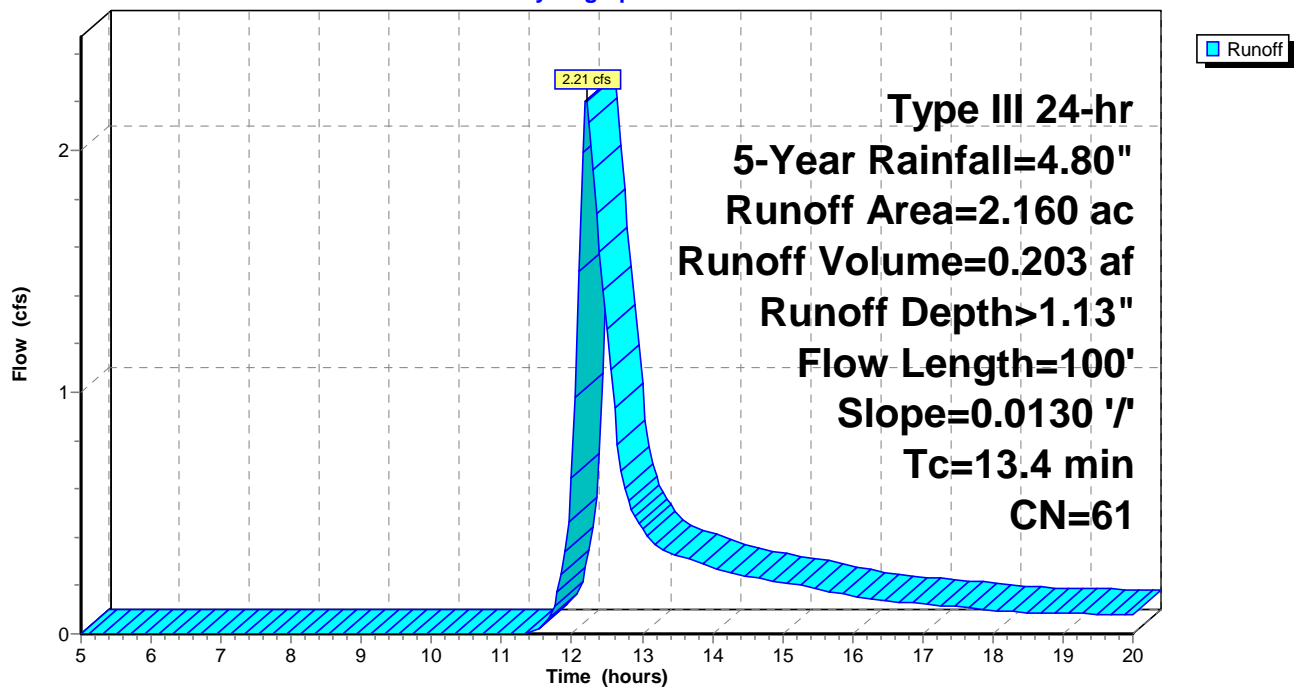
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 1.80 cfs @ 12.21 hrs, Volume= 0.166 af, Depth> 1.13"

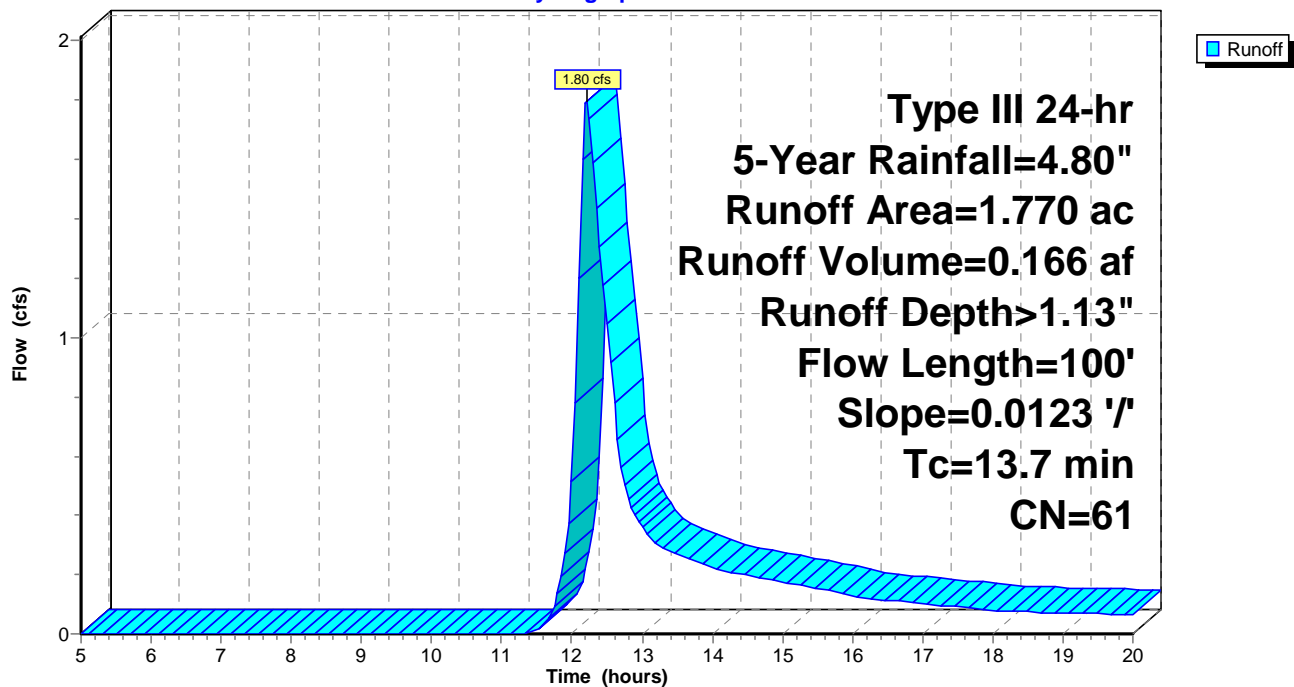
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



Orr Track Pre

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Type III 24-hr 5-Year Rainfall=4.80"

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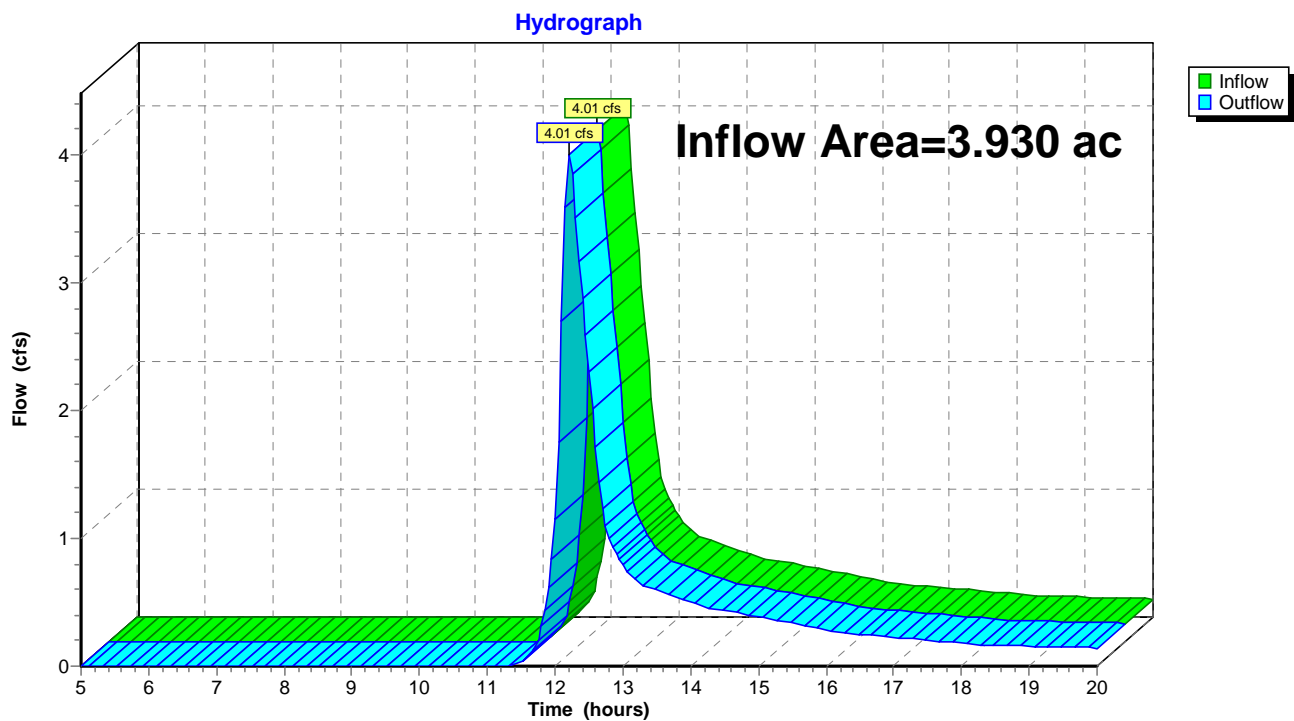
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 1.13" for 5-Year event
Inflow = 4.01 cfs @ 12.21 hrs, Volume= 0.369 af
Outflow = 4.01 cfs @ 12.21 hrs, Volume= 0.369 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 10-Year Rainfall=7.00"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>2.48"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=5.21 cfs 0.446 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>2.47"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=4.24 cfs 0.365 af

Reach 3R: Pre Combined

Inflow=9.44 cfs 0.811 af

Outflow=9.44 cfs 0.811 af

Total Runoff Area = 3.930 ac Runoff Volume = 0.811 af Average Runoff Depth = 2.47"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

Orr Track Pre

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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 5.21 cfs @ 12.20 hrs, Volume= 0.446 af, Depth> 2.48"

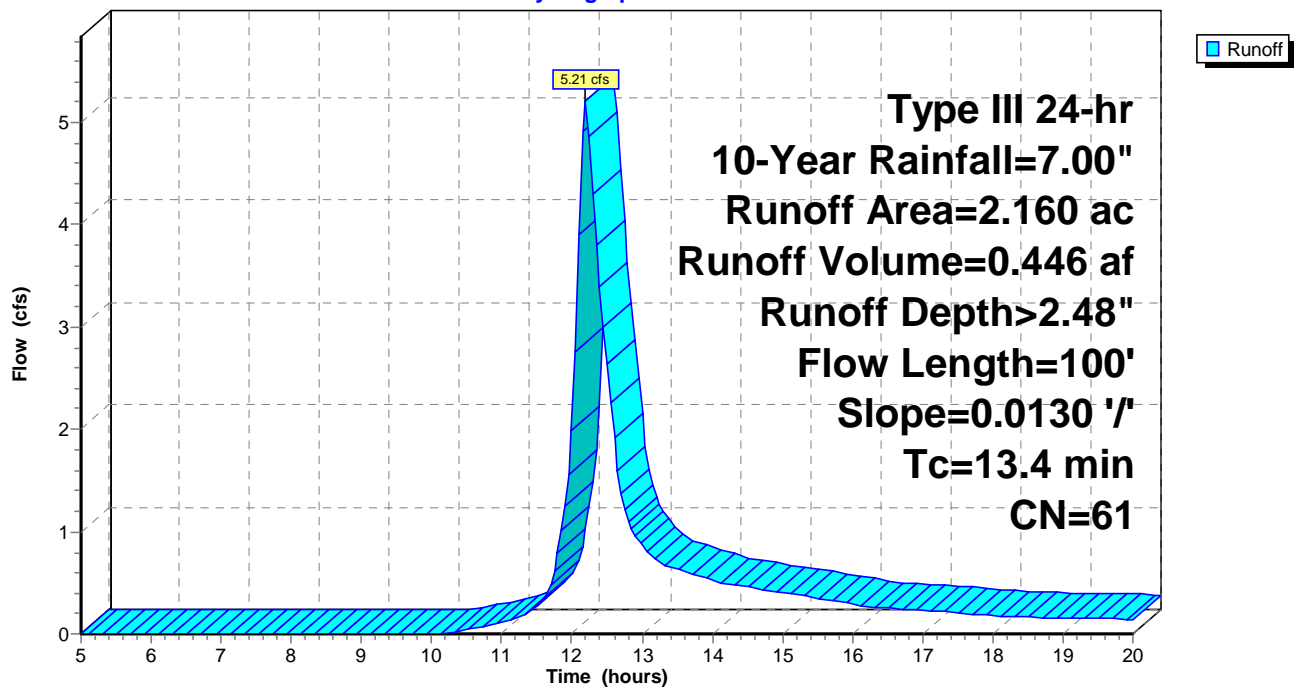
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



Orr Track Pre

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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 4.24 cfs @ 12.20 hrs, Volume= 0.365 af, Depth> 2.47"

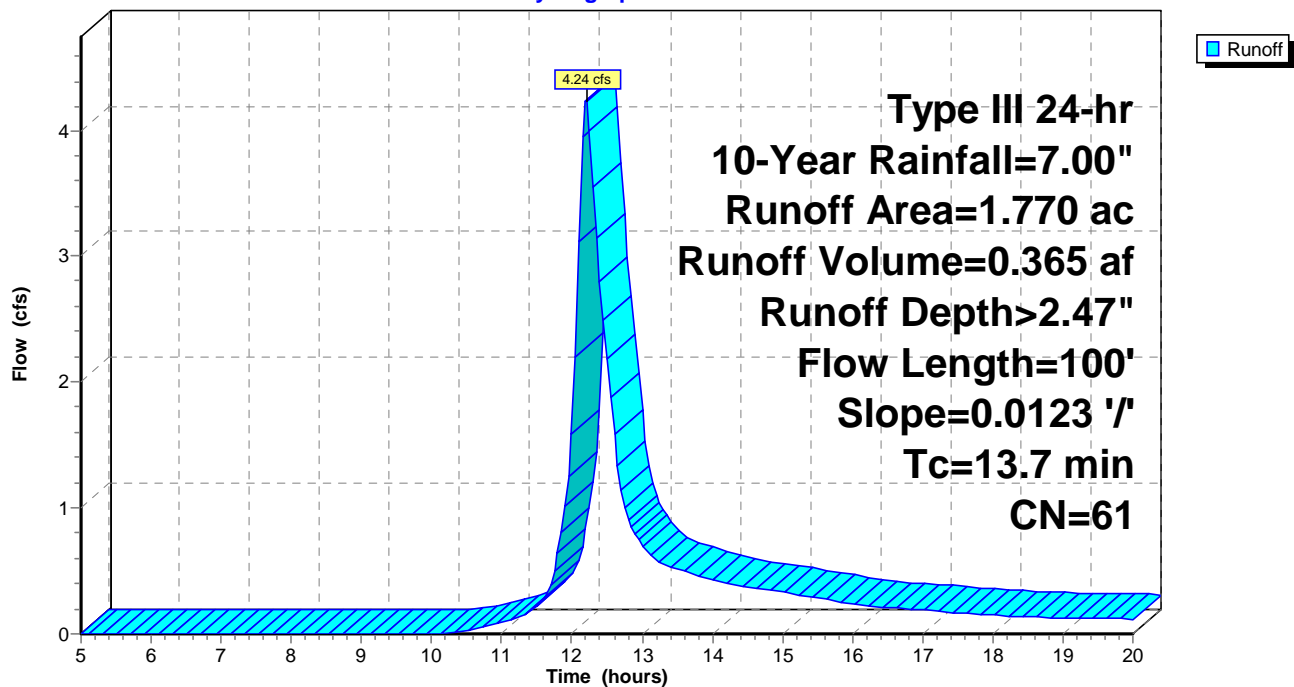
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



Orr Track Pre

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Type III 24-hr 10-Year Rainfall=7.00"

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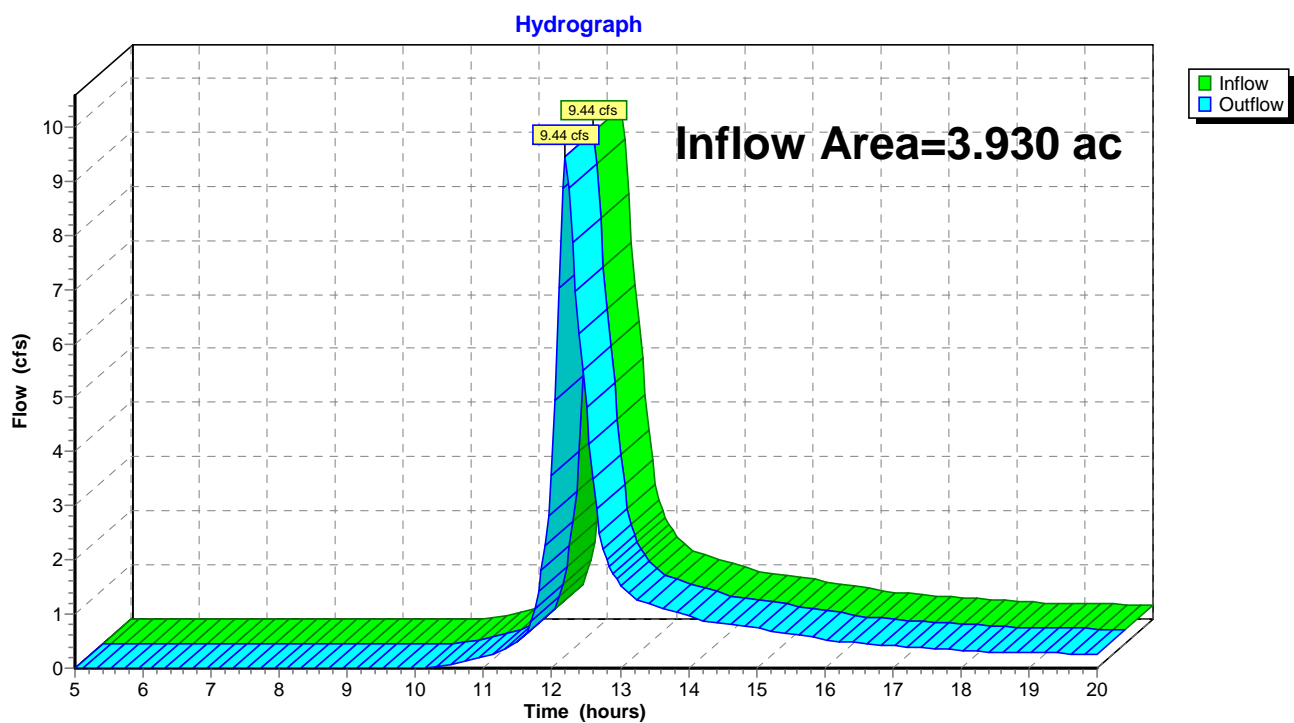
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 2.47" for 10-Year event
Inflow = 9.44 cfs @ 12.20 hrs, Volume= 0.811 af
Outflow = 9.44 cfs @ 12.20 hrs, Volume= 0.811 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 25-Year Rainfall=8.00"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>3.17"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=6.73 cfs 0.571 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>3.17"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=5.48 cfs 0.468 af

Reach 3R: Pre Combined

Inflow=12.20 cfs 1.038 af

Outflow=12.20 cfs 1.038 af

Total Runoff Area = 3.930 ac Runoff Volume = 1.038 af Average Runoff Depth = 3.17"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 6.73 cfs @ 12.20 hrs, Volume= 0.571 af, Depth> 3.17"

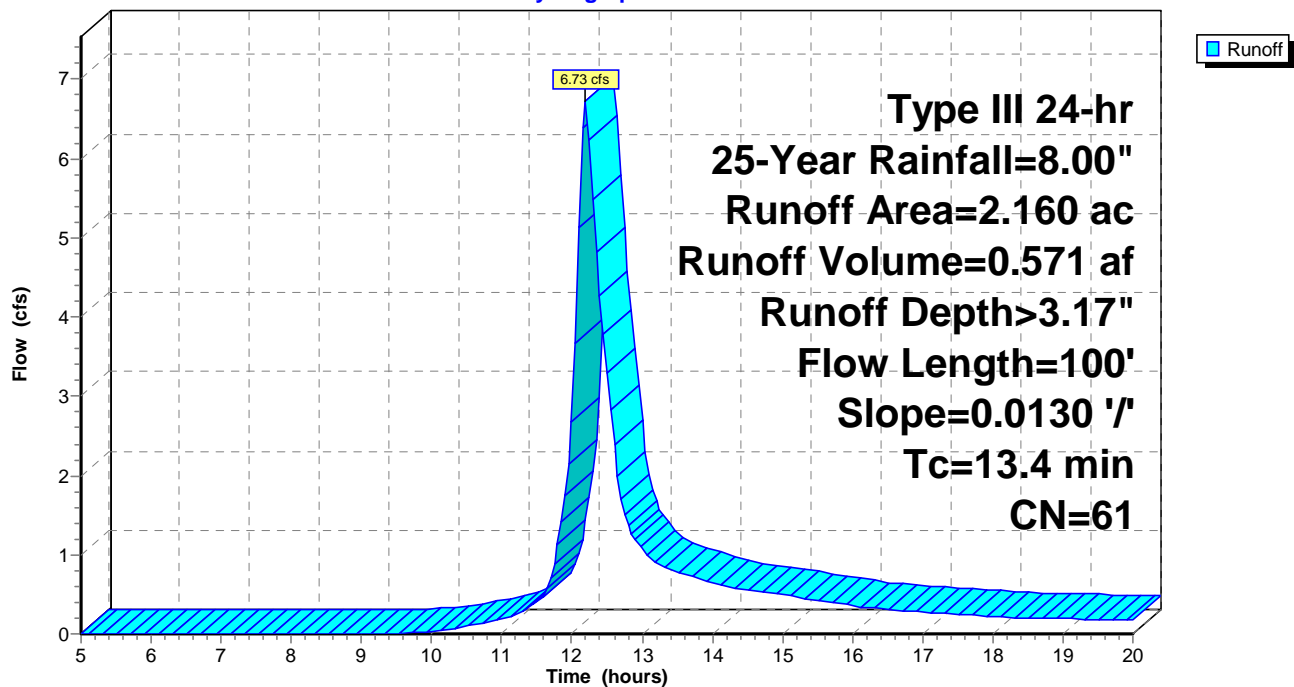
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 5.48 cfs @ 12.20 hrs, Volume= 0.468 af, Depth> 3.17"

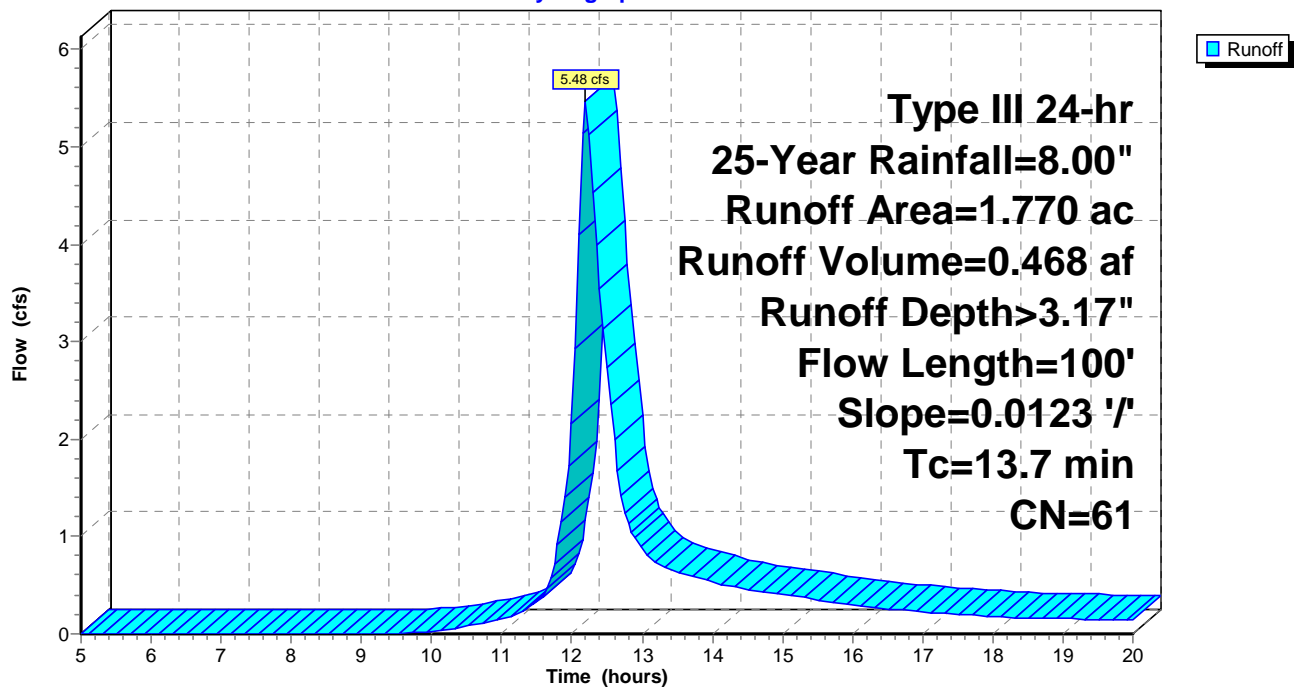
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



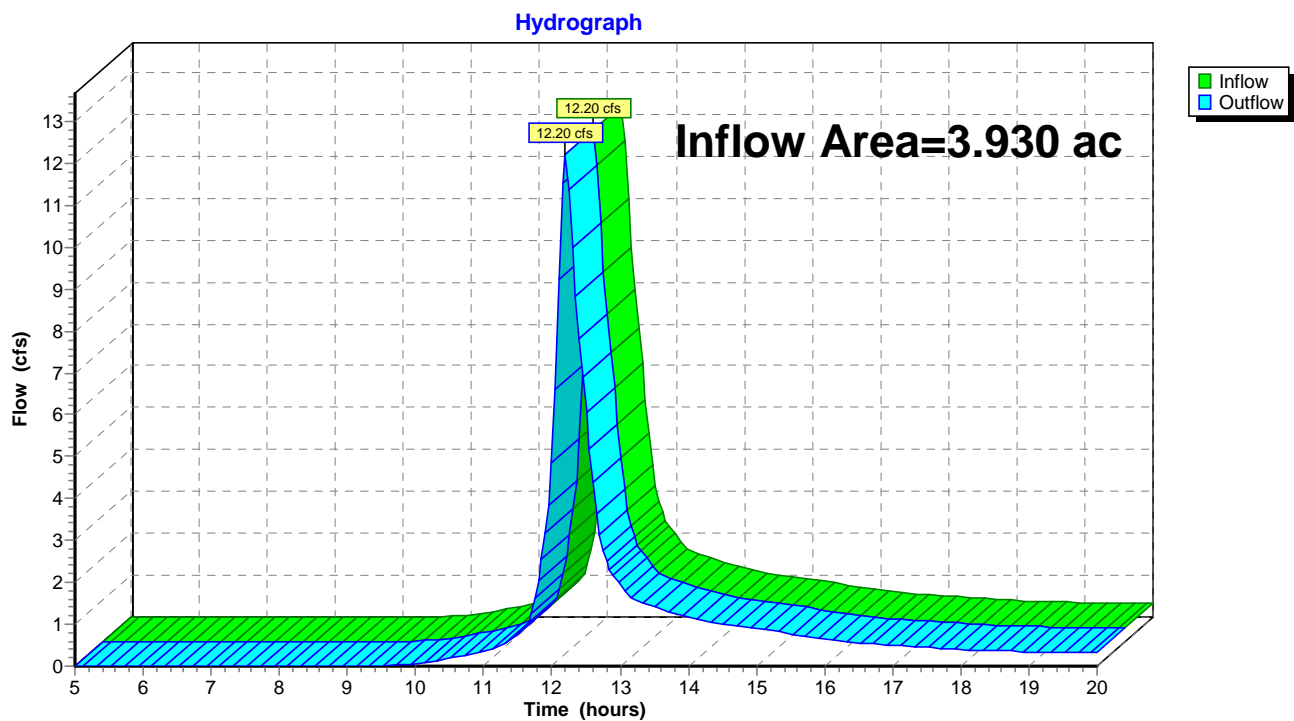
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 3.17" for 25-Year event
 Inflow = 12.20 cfs @ 12.20 hrs, Volume= 1.038 af
 Outflow = 12.20 cfs @ 12.20 hrs, Volume= 1.038 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 50-Year Rainfall=9.00"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>3.90"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=8.31 cfs 0.702 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>3.90"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=6.77 cfs 0.575 af

Reach 3R: Pre Combined

Inflow=15.08 cfs 1.278 af

Outflow=15.08 cfs 1.278 af

Total Runoff Area = 3.930 ac Runoff Volume = 1.278 af Average Runoff Depth = 3.90"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 8.31 cfs @ 12.19 hrs, Volume= 0.702 af, Depth> 3.90"

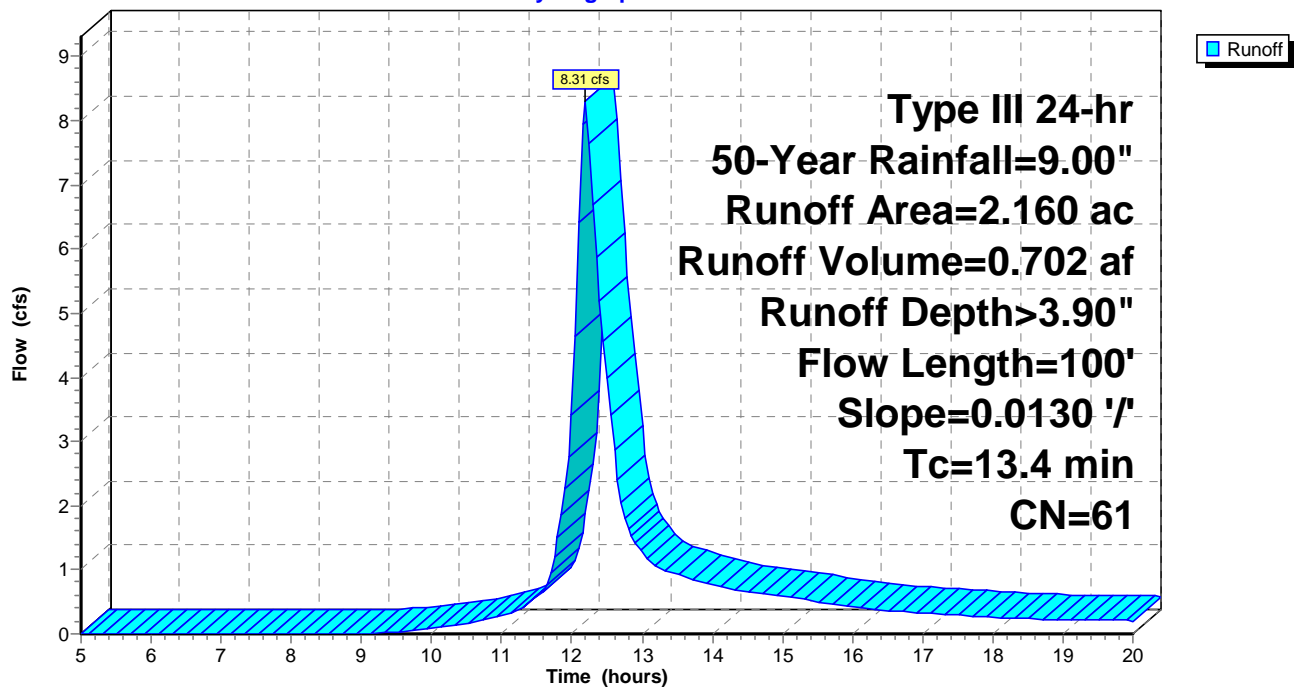
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 6.77 cfs @ 12.20 hrs, Volume= 0.575 af, Depth> 3.90"

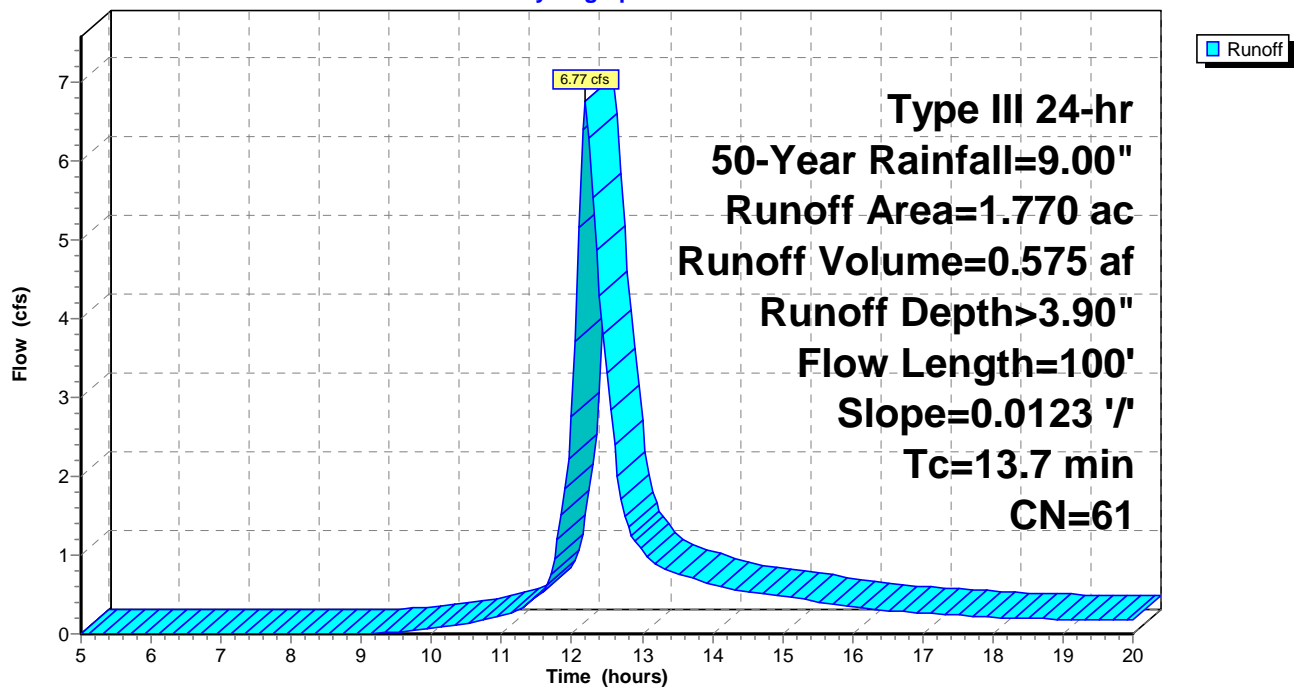
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

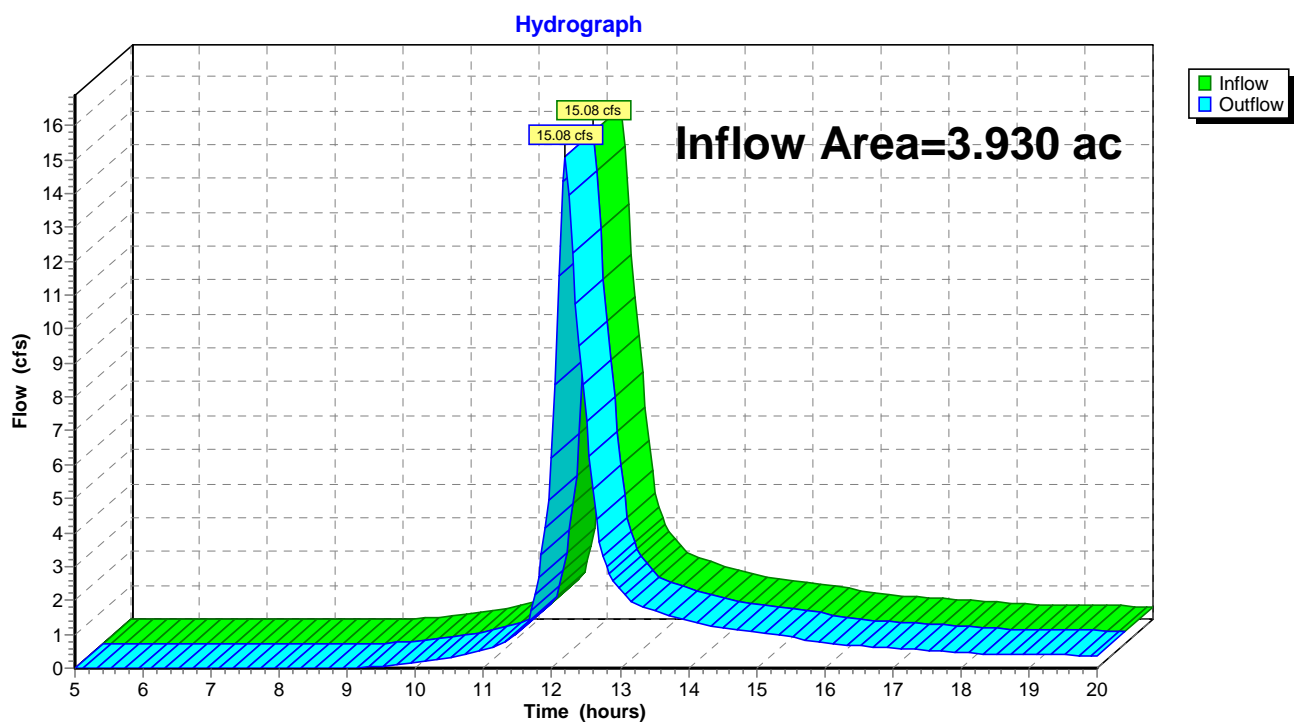
Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 3.90" for 50-Year event

Inflow = 15.08 cfs @ 12.19 hrs, Volume= 1.278 af

Outflow = 15.08 cfs @ 12.19 hrs, Volume= 1.278 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 100-Year Rainfall=9.84"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>4.54"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=9.68 cfs 0.817 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>4.54"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=7.88 cfs 0.669 af

Reach 3R: Pre Combined

Inflow=17.56 cfs 1.486 af

Outflow=17.56 cfs 1.486 af

Total Runoff Area = 3.930 ac Runoff Volume = 1.486 af Average Runoff Depth = 4.54"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 9.68 cfs @ 12.19 hrs, Volume= 0.817 af, Depth> 4.54"

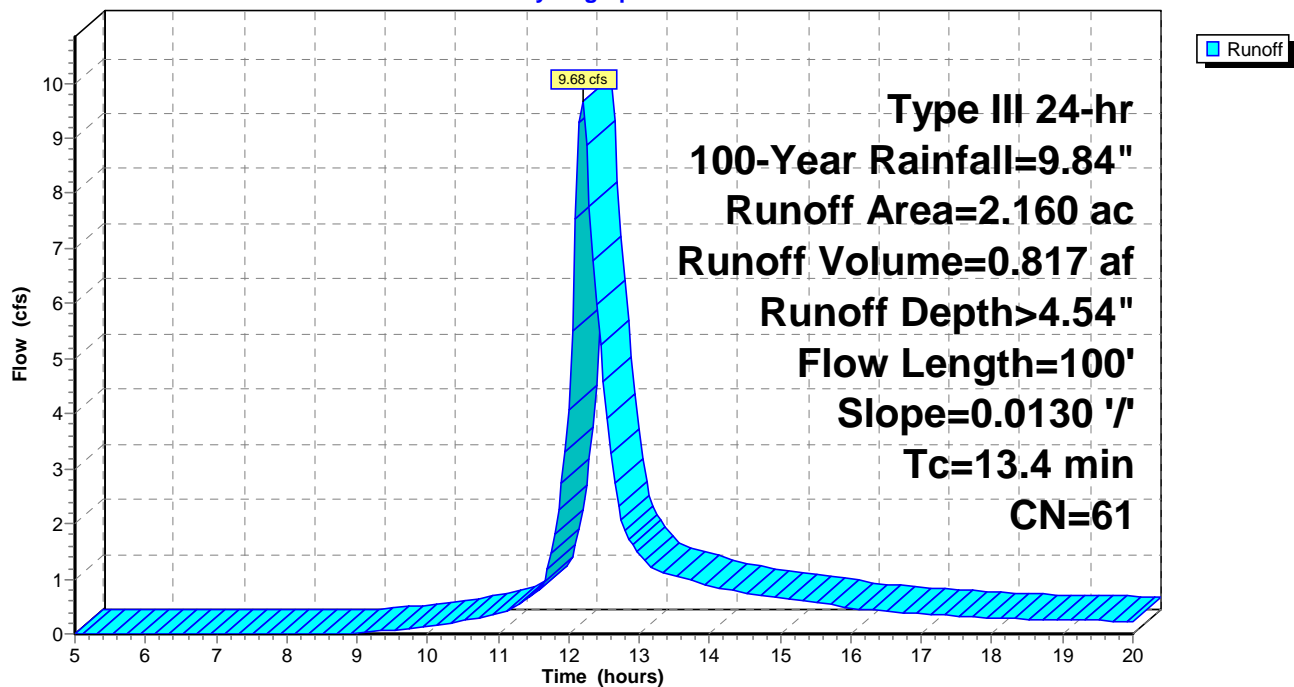
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 7.88 cfs @ 12.20 hrs, Volume= 0.669 af, Depth> 4.54"

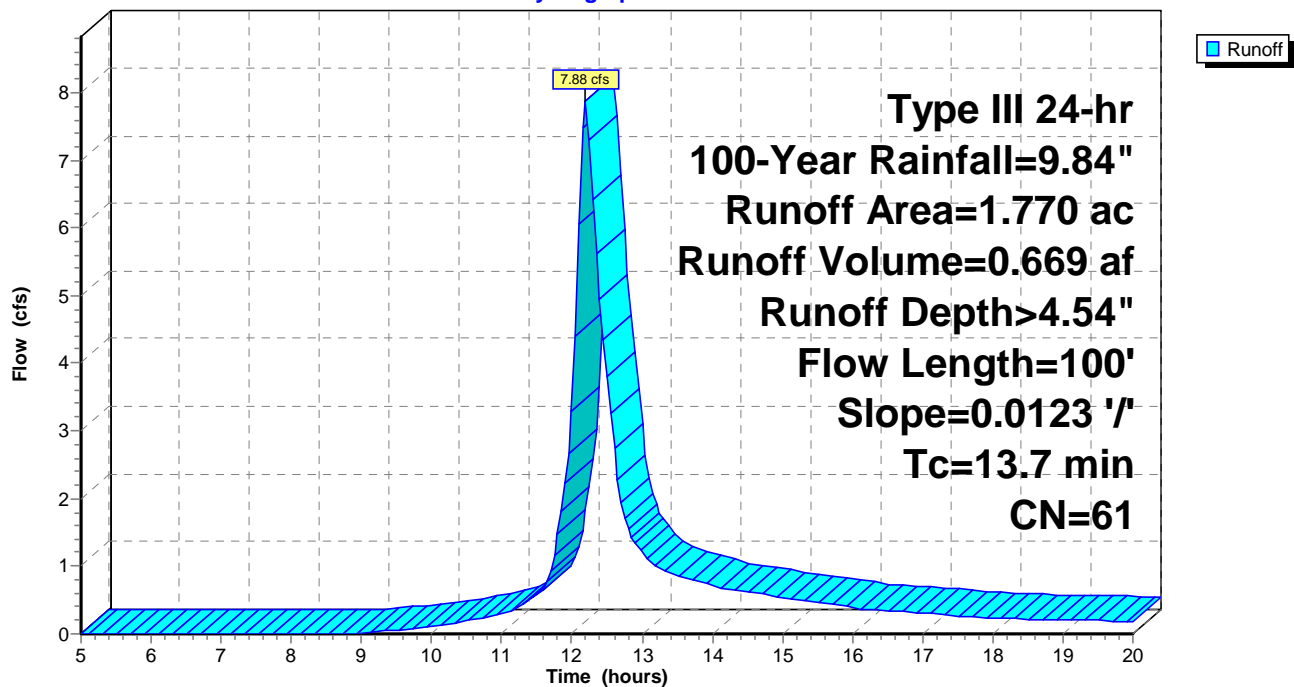
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

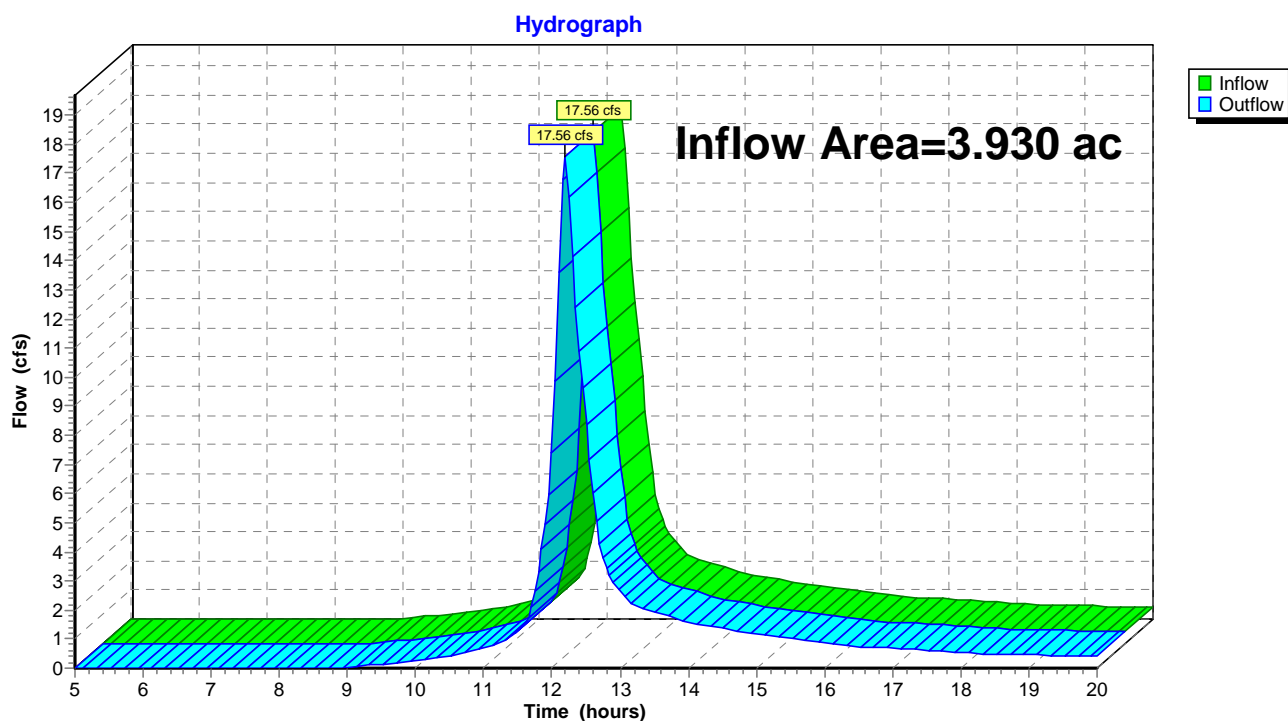
Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 4.54" for 100-Year event

Inflow = 17.56 cfs @ 12.19 hrs, Volume= 1.486 af

Outflow = 17.56 cfs @ 12.19 hrs, Volume= 1.486 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

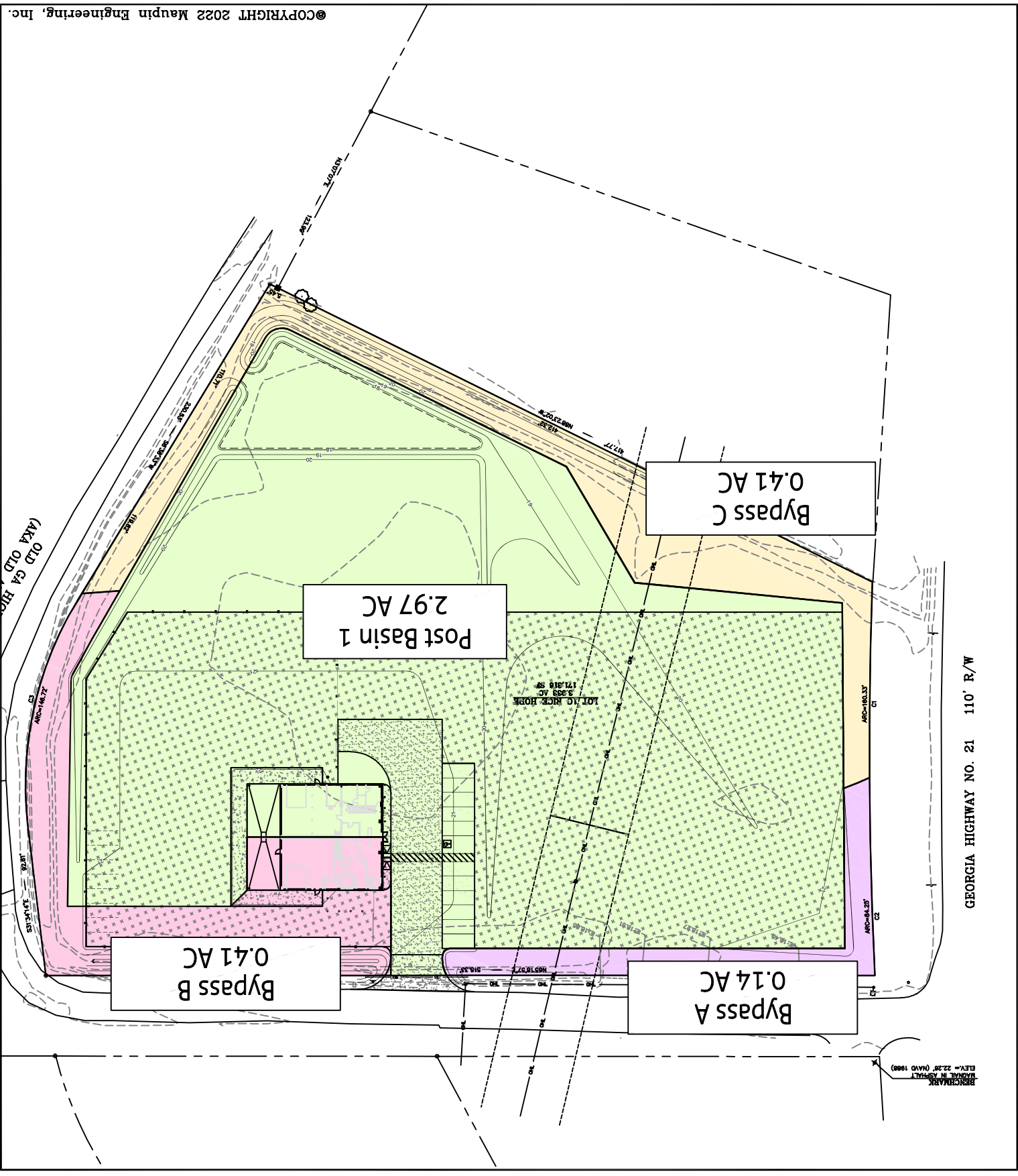
Reach 3R: Pre Combined



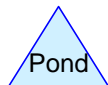
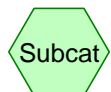
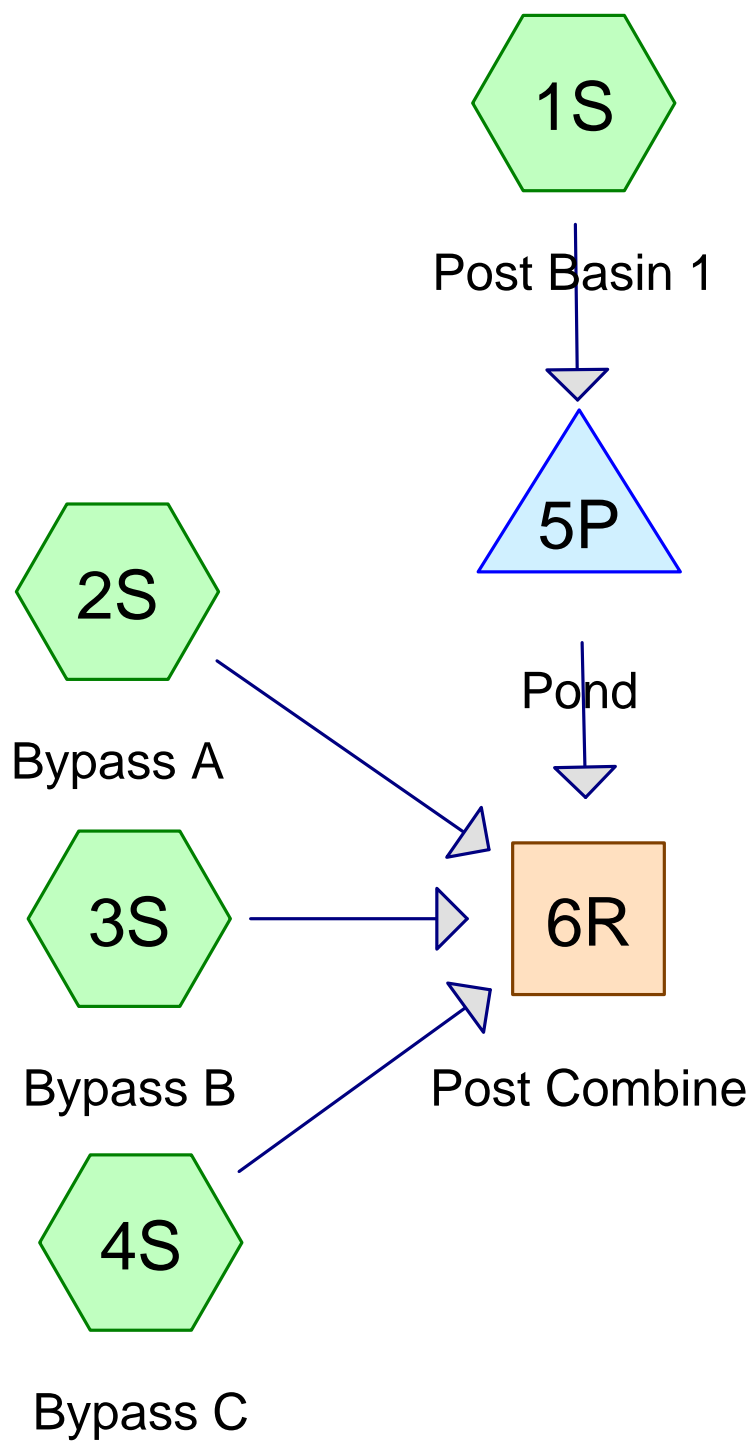
POST EXHIBIT
 PW TRUCK SHOP

SCALE: 1" = 80'
 0 40 80
 DRWN: TRW 1-26-2022
 CHKD: JAM DATE

SHEET NO.
 1 of 1
 PROJECT NO.
 673-21-35



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Routing Diagram for Orr Track Post

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Project Notes

Rainfall events imported from "pre hydro analysis.hcp"

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Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type III 24-hr		Default	24.00	1	3.60	2
2	5-Year	Type III 24-hr		Default	24.00	1	4.80	2
3	10-Year	Type III 24-hr		Default	24.00	1	7.00	2
4	25-Year	Type III 24-hr		Default	24.00	1	8.00	2
5	50-Year	Type III 24-hr		Default	24.00	1	9.00	2
6	100-Year	Type III 24-hr		Default	24.00	1	9.84	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.645	61	>75% Grass cover, Good, HSG B (1S, 2S, 3S, 4S)
0.119	85	Gravel roads, HSG B (3S)
1.817	91	Gravel, HSG B (1S)
0.219	98	Paved parking, HSG B (1S, 3S)
0.127	98	Roofs, HSG B (1S, 3S)
3.927	79	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
3.927	HSG B	1S, 2S, 3S, 4S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
3.927		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	1.645	0.000	0.000	0.000	1.645	>75% Grass cover, Good	1S, 2S, 3S, 4S
0.000	1.817	0.000	0.000	0.000	1.817	Gravel	1S
0.000	0.119	0.000	0.000	0.000	0.119	Gravel roads	3S
0.000	0.219	0.000	0.000	0.000	0.219	Paved parking	1S, 3S
0.000	0.127	0.000	0.000	0.000	0.127	Roofs	1S, 3S
0.000	3.927	0.000	0.000	0.000	3.927	TOTAL AREA	

Orr Track Post*Type III 24-hr 1-Year Rainfall=3.60"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1	Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=1.94" Tc=10.0 min CN=83 Runoff=5.84 cfs 0.481 af
Subcatchment 2S: Bypass A	Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=0.62" Tc=5.0 min CN=61 Runoff=0.08 cfs 0.007 af
Subcatchment 3S: Bypass B	Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=1.37" Tc=5.0 min CN=75 Runoff=0.64 cfs 0.047 af
Subcatchment 4S: Bypass C	Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=0.62" Tc=5.0 min CN=61 Runoff=0.23 cfs 0.021 af
Reach 6R: Post Combine	Inflow=1.54 cfs 0.548 af Outflow=1.54 cfs 0.548 af
Pond 5P: Pond	Peak Elev=18.94' Storage=9,031 cf Inflow=5.84 cfs 0.481 af Outflow=0.94 cfs 0.473 af

Total Runoff Area = 3.927 ac Runoff Volume = 0.556 af Average Runoff Depth = 1.70"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 1S: Post Basin 1

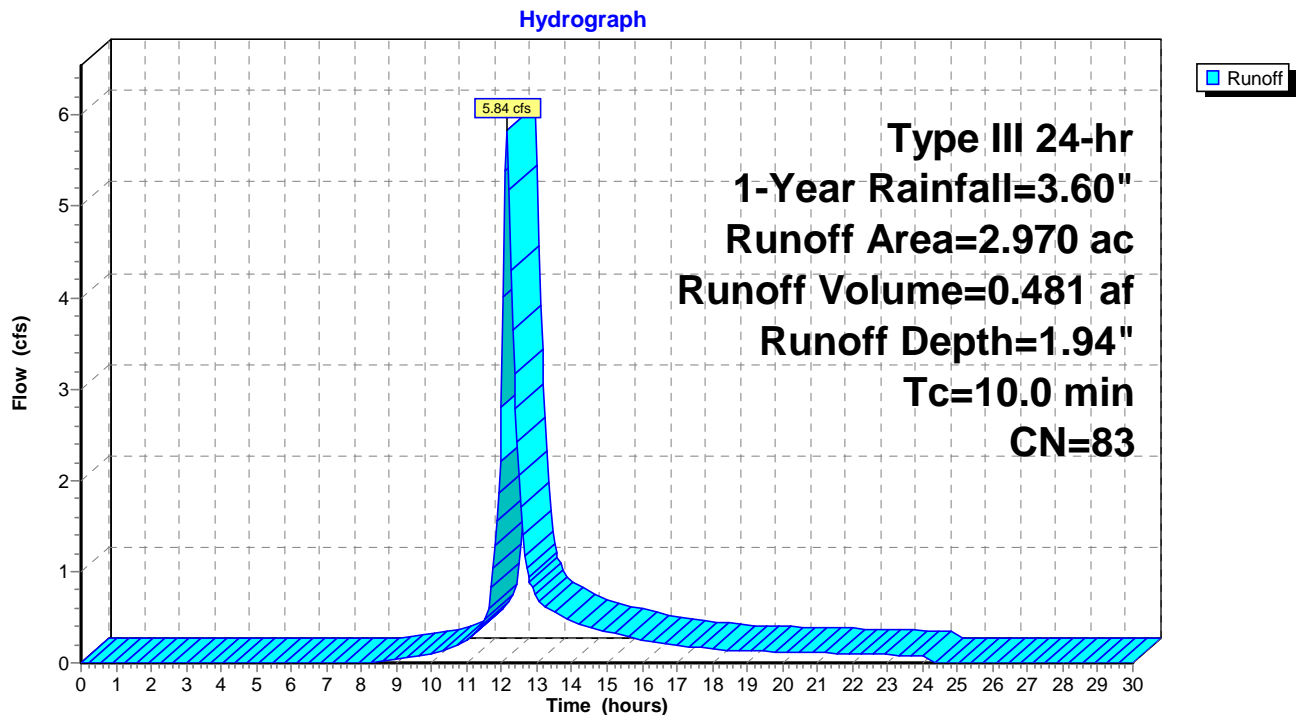
Runoff = 5.84 cfs @ 12.14 hrs, Volume= 0.481 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.08 cfs @ 12.10 hrs, Volume= 0.007 af, Depth= 0.62"

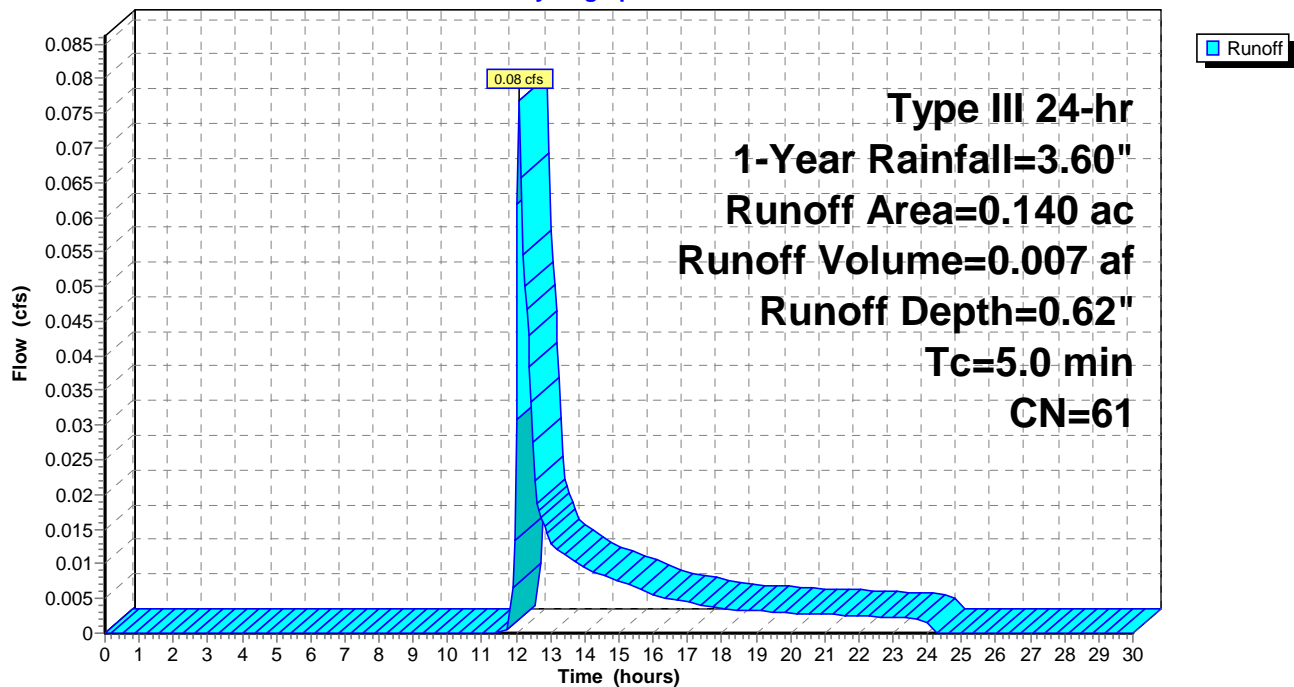
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.64 cfs @ 12.08 hrs, Volume= 0.047 af, Depth= 1.37"

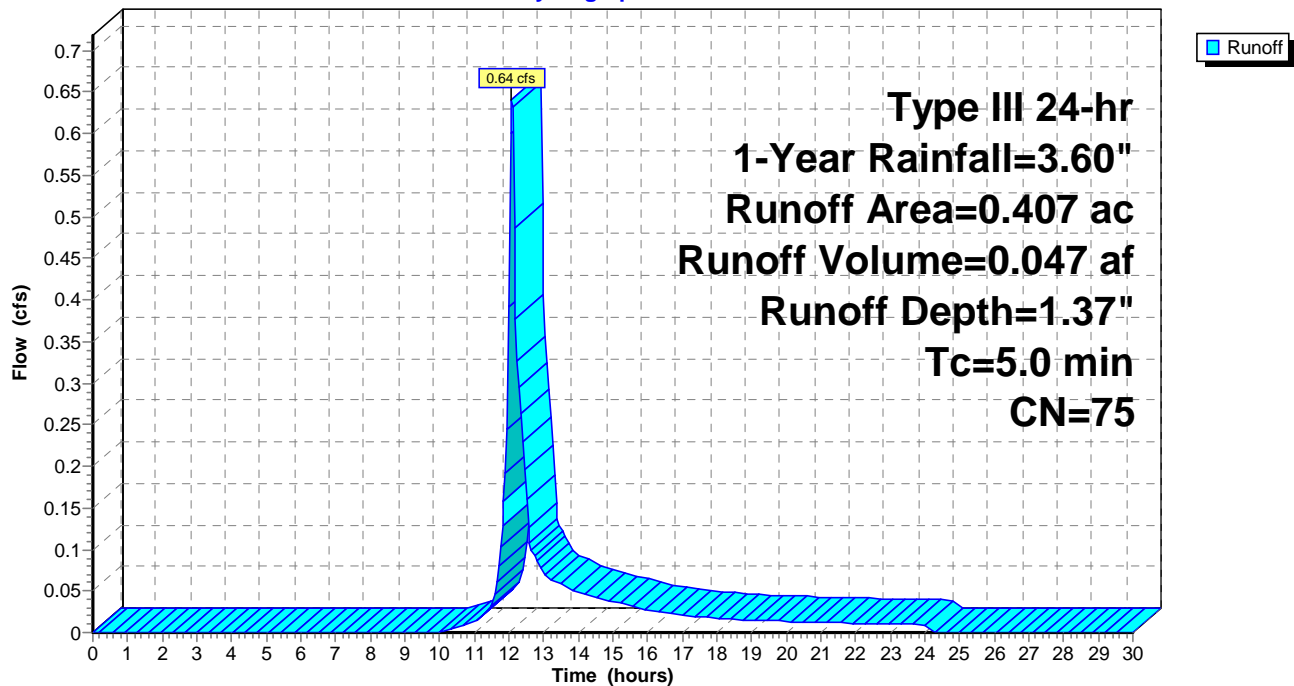
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B

Hydrograph



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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.23 cfs @ 12.10 hrs, Volume= 0.021 af, Depth= 0.62"

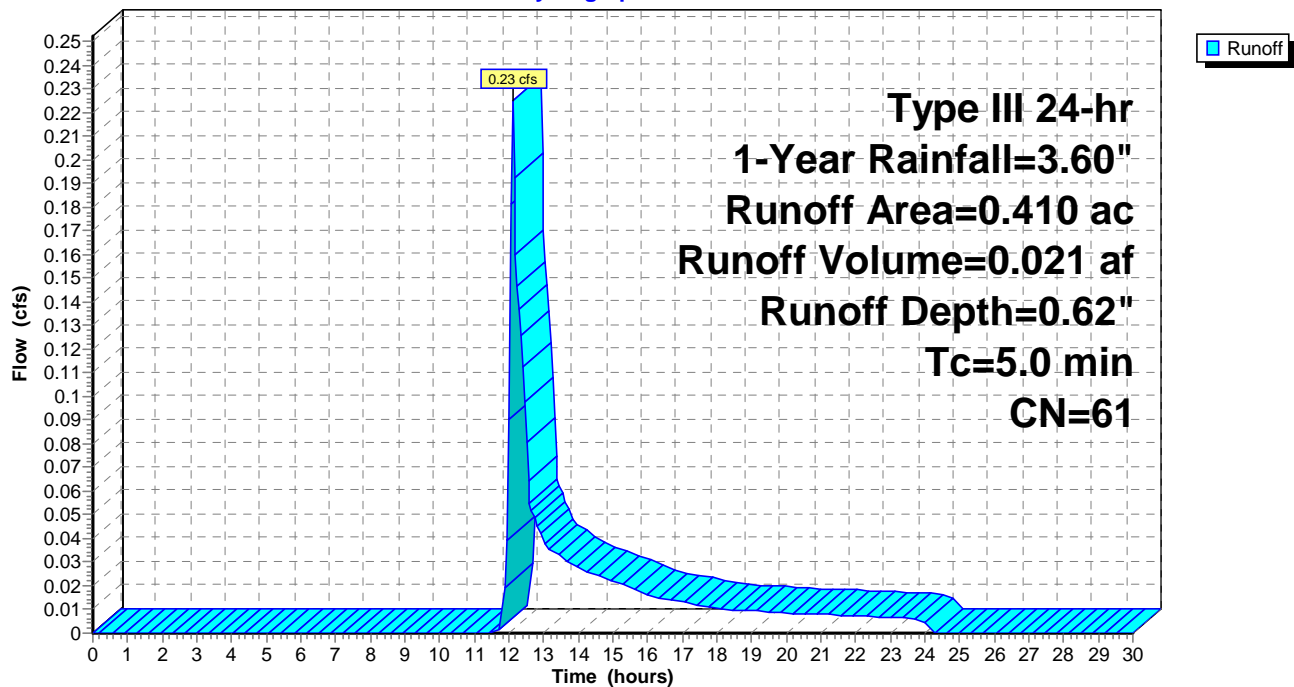
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C

Hydrograph



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Type III 24-hr 1-Year Rainfall=3.60"

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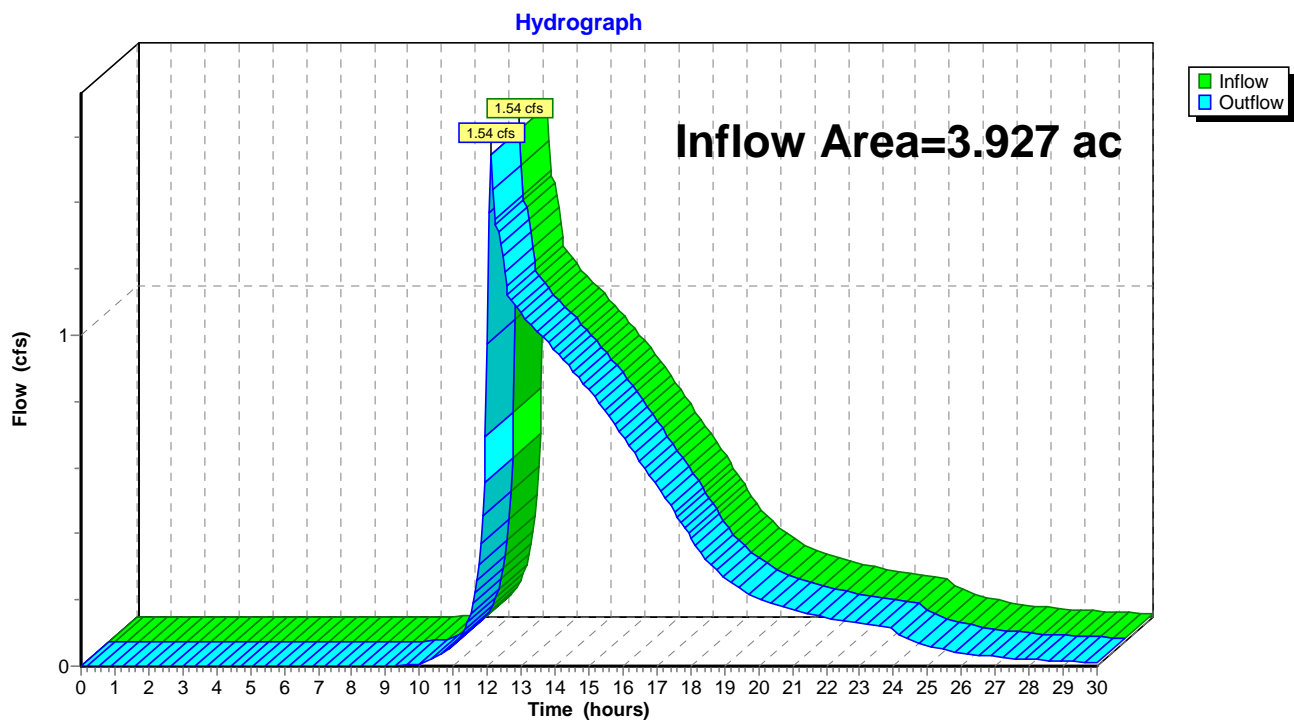
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 1.67" for 1-Year event
Inflow = 1.54 cfs @ 12.11 hrs, Volume= 0.548 af
Outflow = 1.54 cfs @ 12.11 hrs, Volume= 0.548 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 1.94" for 1-Year event
 Inflow = 5.84 cfs @ 12.14 hrs, Volume= 0.481 af
 Outflow = 0.94 cfs @ 12.76 hrs, Volume= 0.473 af, Atten= 84%, Lag= 36.8 min
 Primary = 0.94 cfs @ 12.76 hrs, Volume= 0.473 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 18.94' @ 12.76 hrs Surf.Area= 9,152 sf Storage= 9,031 cf

Plug-Flow detention time= 138.1 min calculated for 0.473 af (98% of inflow)
 Center-of-Mass det. time= 128.0 min (959.2 - 831.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.94 cfs @ 12.76 hrs HW=18.94' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 0.94 cfs @ 4.80 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

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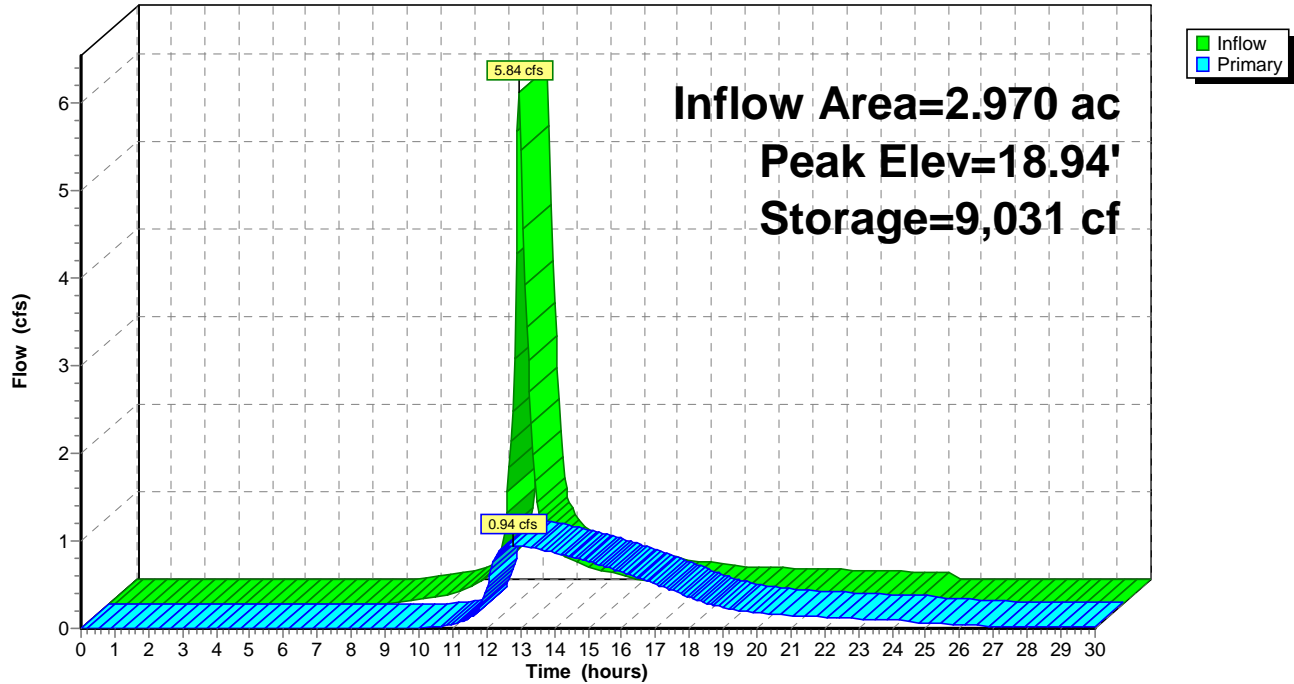
Type III 24-hr 1-Year Rainfall=3.60"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 5-Year Rainfall=4.80"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=2.99"
Tc=10.0 min CN=83 Runoff=8.97 cfs 0.741 af**Subcatchment 2S: Bypass A**Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=1.25"
Tc=5.0 min CN=61 Runoff=0.19 cfs 0.015 af**Subcatchment 3S: Bypass B**Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=2.29"
Tc=5.0 min CN=75 Runoff=1.09 cfs 0.078 af**Subcatchment 4S: Bypass C**Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=1.25"
Tc=5.0 min CN=61 Runoff=0.54 cfs 0.043 af**Reach 6R: Post Combine**Inflow=2.68 cfs 0.867 af
Outflow=2.68 cfs 0.867 af**Pond 5P: Pond**Peak Elev=19.35' Storage=13,621 cf Inflow=8.97 cfs 0.741 af
Outflow=2.30 cfs 0.732 af**Total Runoff Area = 3.927 ac Runoff Volume = 0.876 af Average Runoff Depth = 2.68"**
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 5-Year Rainfall=4.80"

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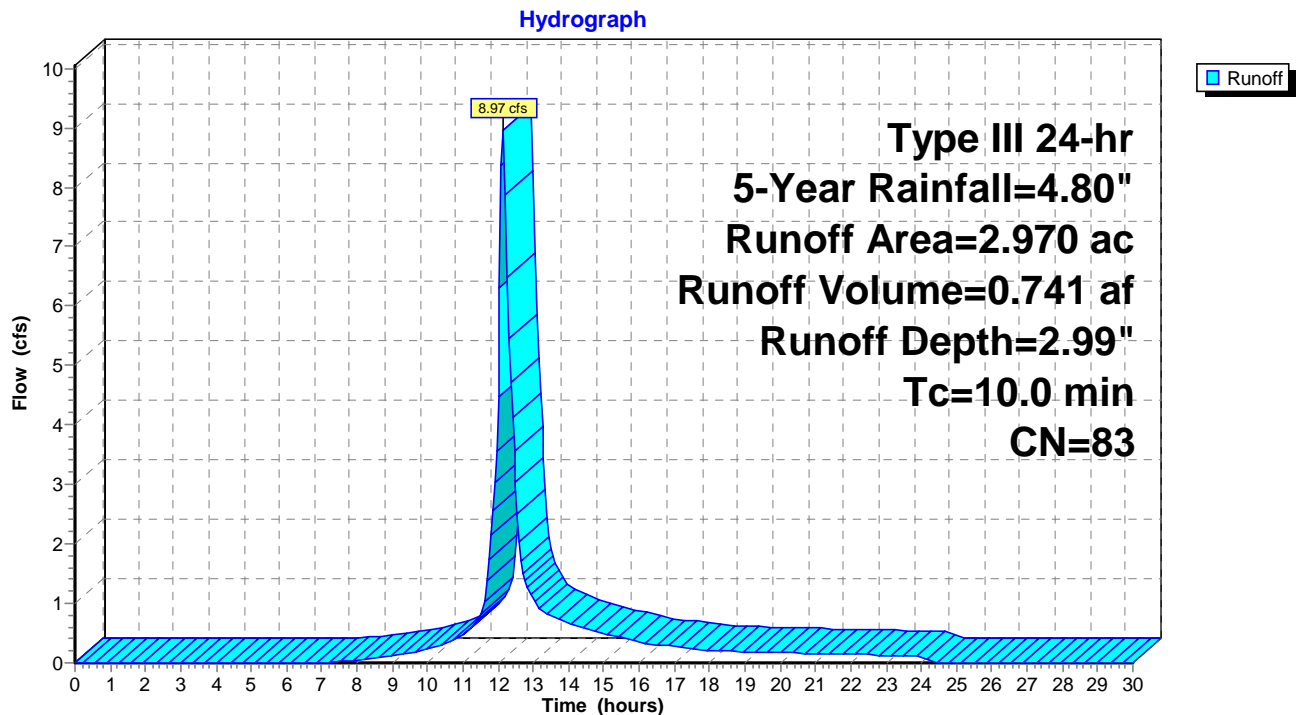
Summary for Subcatchment 1S: Post Basin 1

Runoff = 8.97 cfs @ 12.14 hrs, Volume= 0.741 af, Depth= 2.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1

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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

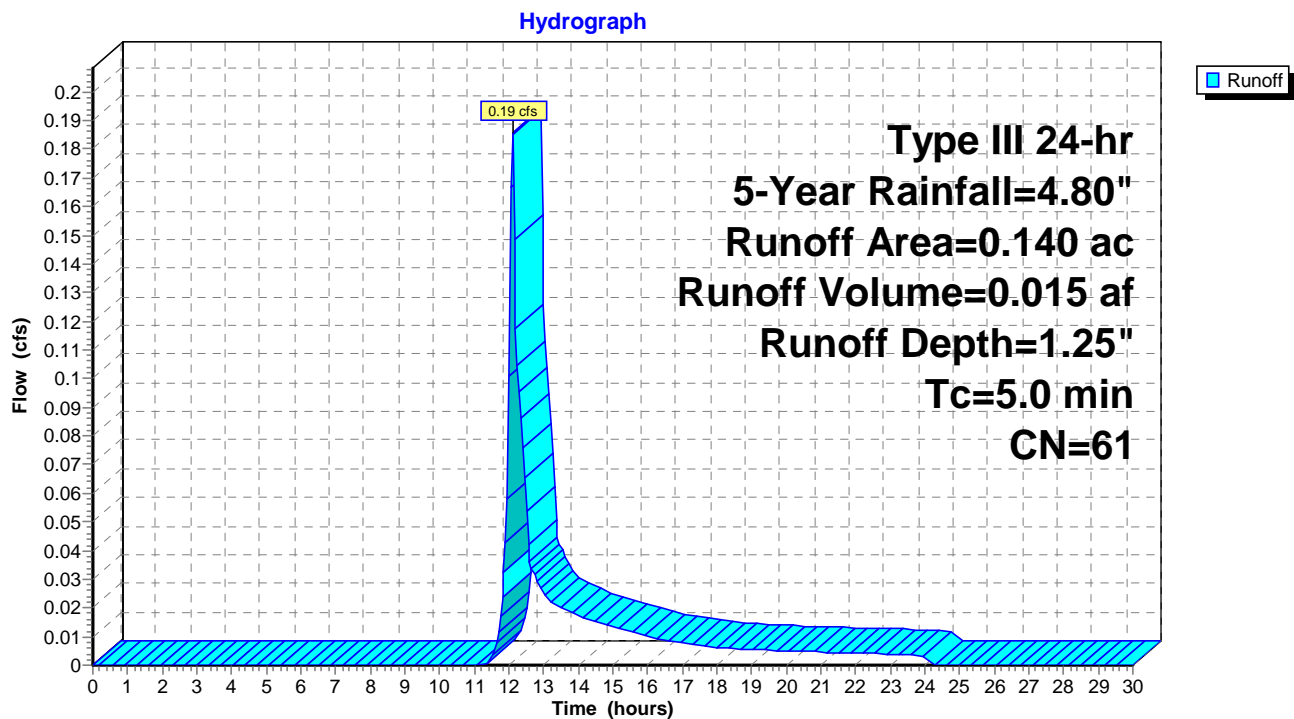
Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.015 af, Depth= 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A



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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

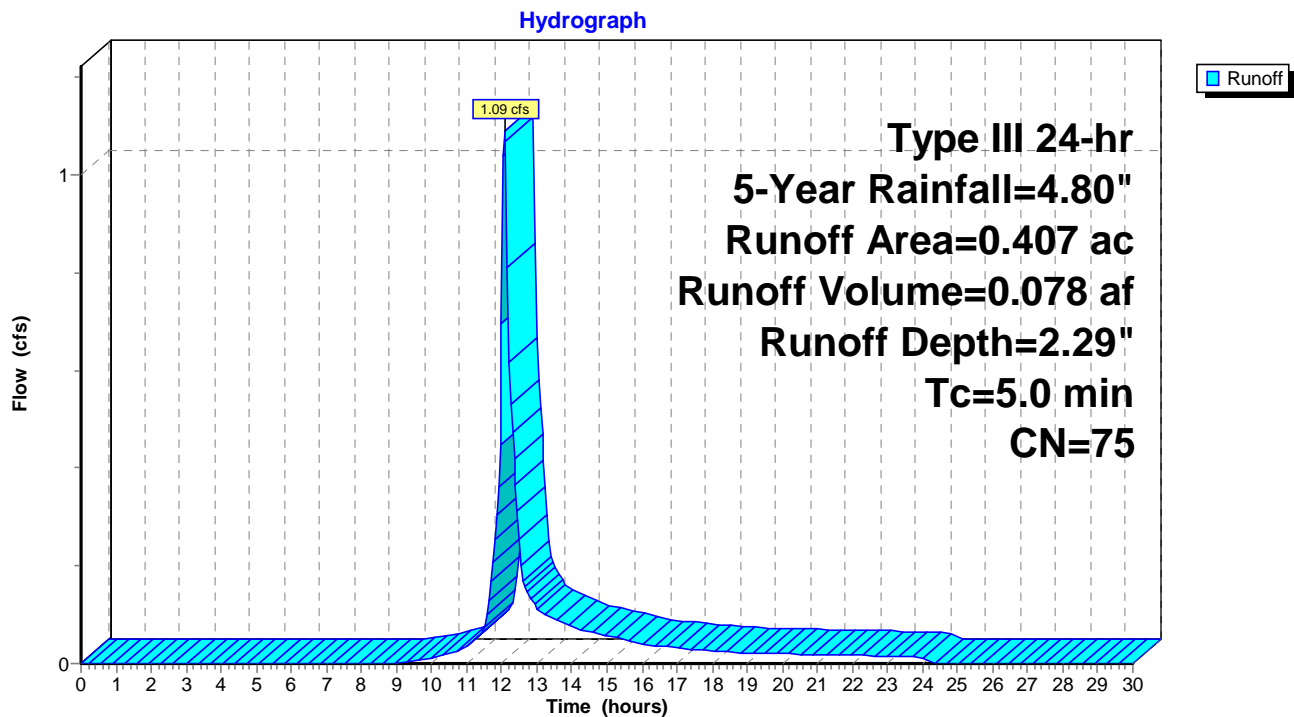
Runoff = 1.09 cfs @ 12.08 hrs, Volume= 0.078 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.54 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 1.25"

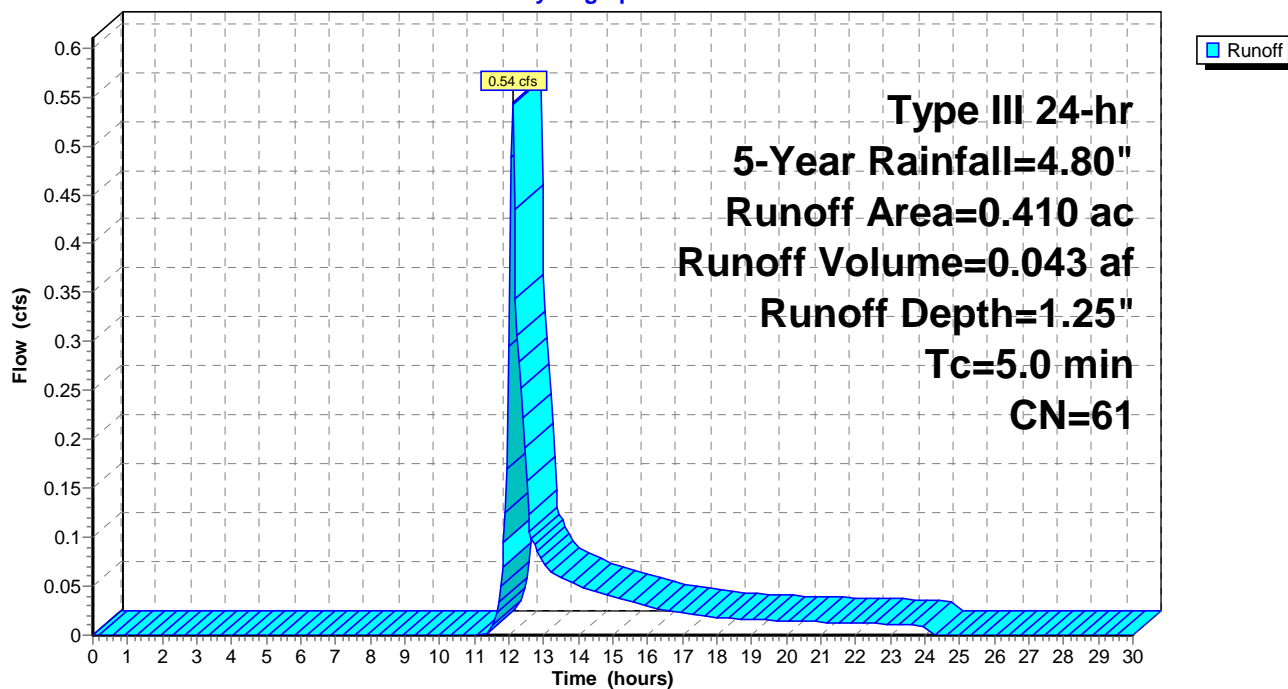
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C

Hydrograph



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Type III 24-hr 5-Year Rainfall=4.80"

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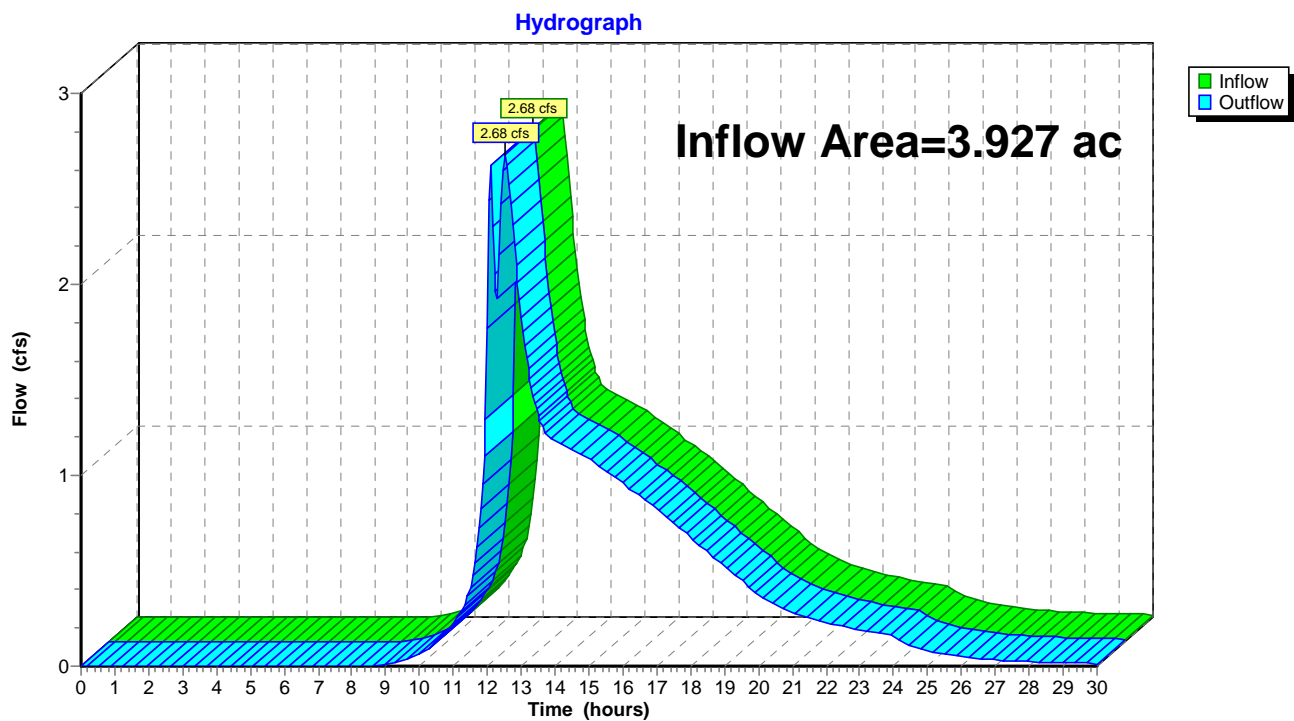
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 2.65" for 5-Year event
Inflow = 2.68 cfs @ 12.52 hrs, Volume= 0.867 af
Outflow = 2.68 cfs @ 12.52 hrs, Volume= 0.867 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 2.99" for 5-Year event
 Inflow = 8.97 cfs @ 12.14 hrs, Volume= 0.741 af
 Outflow = 2.30 cfs @ 12.57 hrs, Volume= 0.732 af, Atten= 74%, Lag= 25.9 min
 Primary = 2.30 cfs @ 12.57 hrs, Volume= 0.732 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.35' @ 12.57 hrs Surf.Area= 13,766 sf Storage= 13,621 cf

Plug-Flow detention time= 139.7 min calculated for 0.731 af (99% of inflow)
 Center-of-Mass det. time= 132.9 min (951.7 - 818.8)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=2.29 cfs @ 12.57 hrs HW=19.35' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.12 cfs @ 5.70 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 1.17 cfs @ 1.28 fps)

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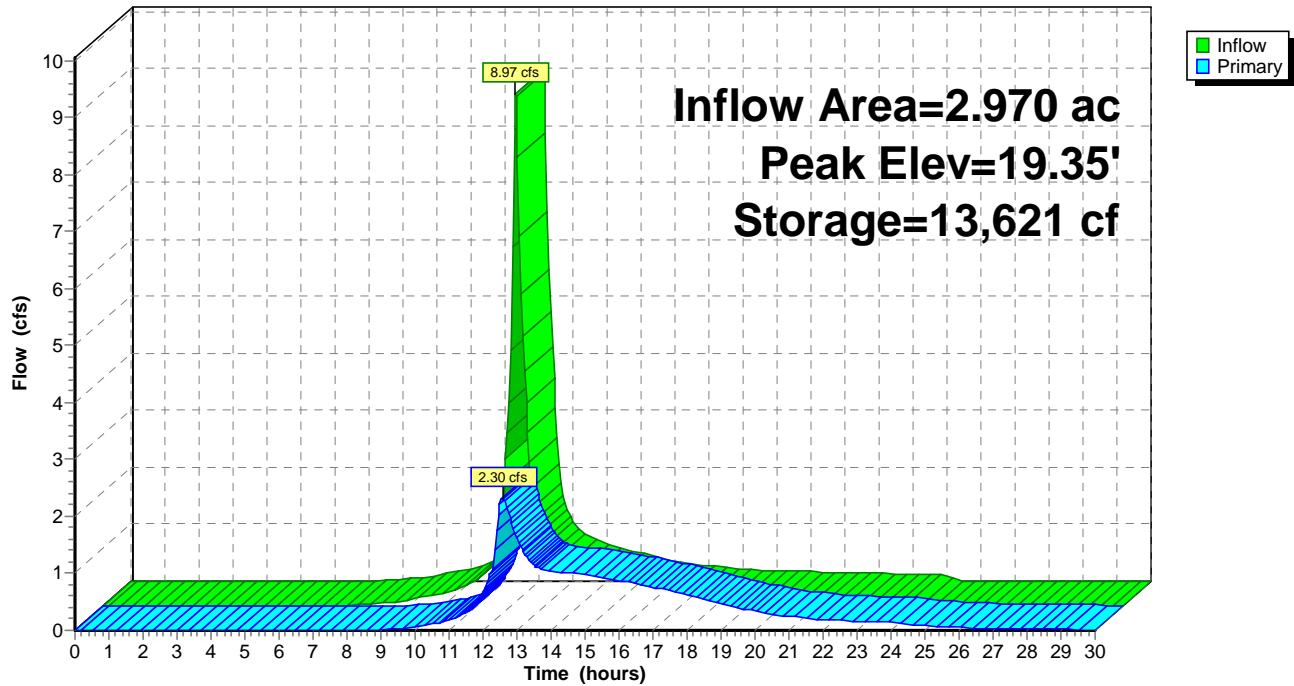
Type III 24-hr 5-Year Rainfall=4.80"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 10-Year Rainfall=7.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1

Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=5.03"
Tc=10.0 min CN=83 Runoff=14.84 cfs 1.244 af

Subcatchment 2S: Bypass A

Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=2.70"
Tc=5.0 min CN=61 Runoff=0.43 cfs 0.032 af

Subcatchment 3S: Bypass B

Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=4.15"
Tc=5.0 min CN=75 Runoff=1.98 cfs 0.141 af

Subcatchment 4S: Bypass C

Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=2.70"
Tc=5.0 min CN=61 Runoff=1.27 cfs 0.092 af

Reach 6R: Post Combine

Inflow=8.67 cfs 1.499 af
Outflow=8.67 cfs 1.499 af

Pond 5P: Pond

Peak Elev=19.65' Storage=18,336 cf Inflow=14.84 cfs 1.244 af
Outflow=7.25 cfs 1.235 af

Total Runoff Area = 3.927 ac Runoff Volume = 1.509 af Average Runoff Depth = 4.61"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 1S: Post Basin 1

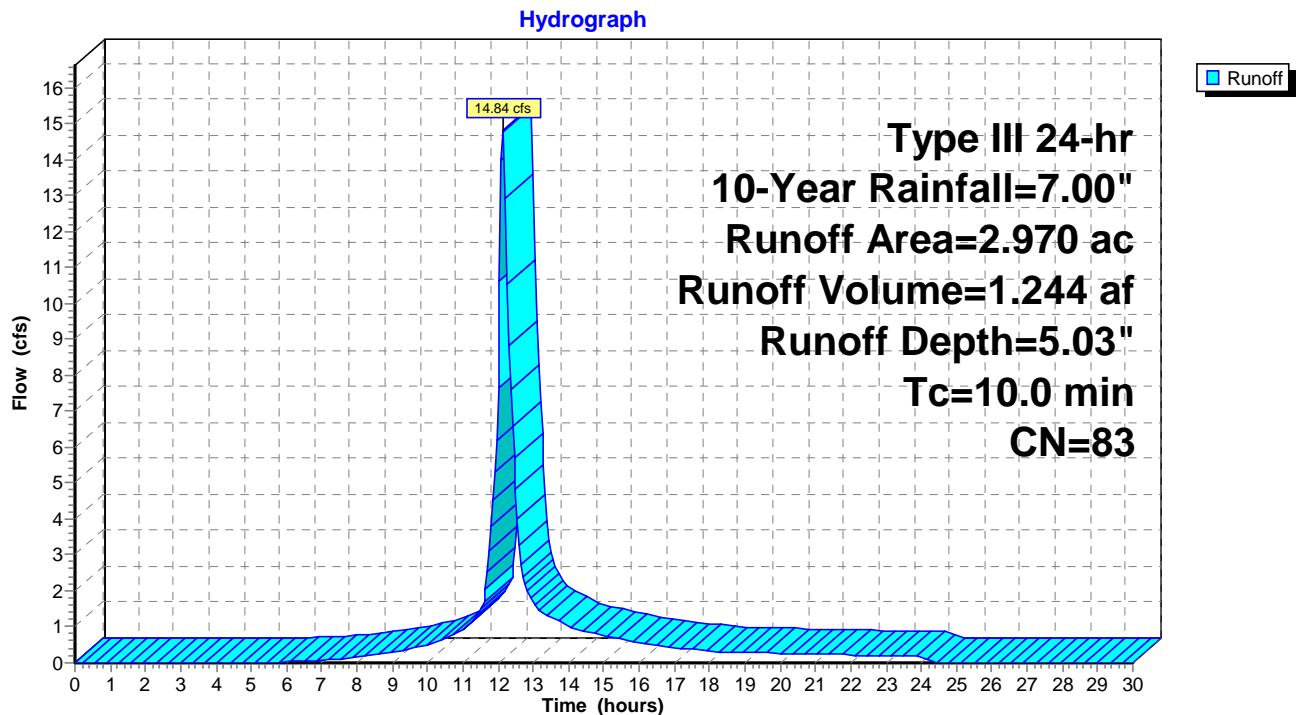
Runoff = 14.84 cfs @ 12.14 hrs, Volume= 1.244 af, Depth= 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.43 cfs @ 12.08 hrs, Volume= 0.032 af, Depth= 2.70"

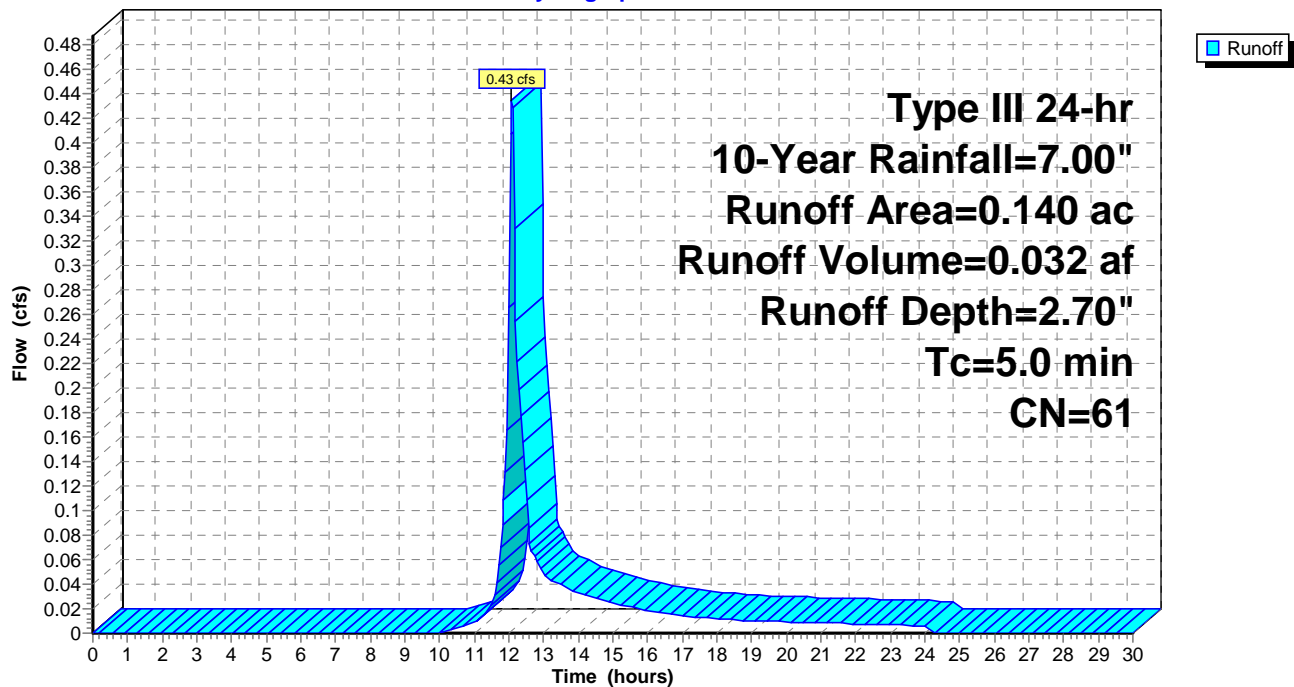
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

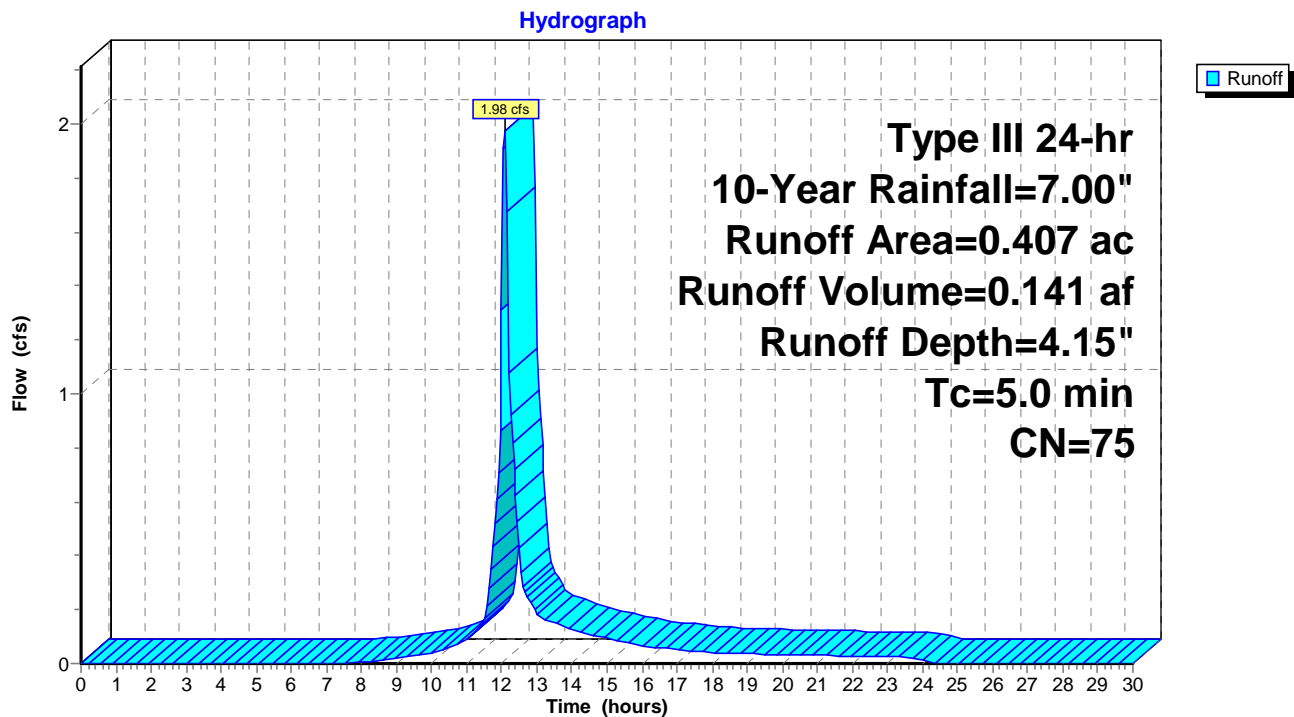
Runoff = 1.98 cfs @ 12.08 hrs, Volume= 0.141 af, Depth= 4.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

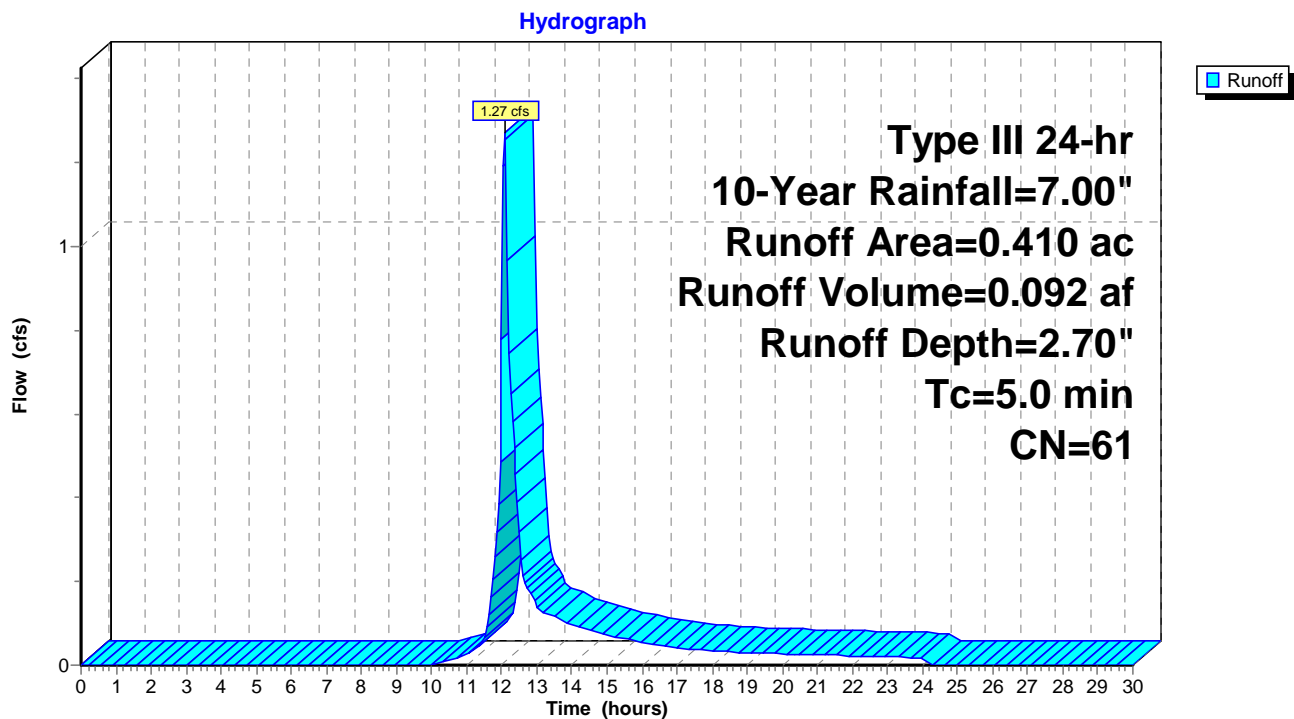
Runoff = 1.27 cfs @ 12.08 hrs, Volume= 0.092 af, Depth= 2.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



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Type III 24-hr 10-Year Rainfall=7.00"

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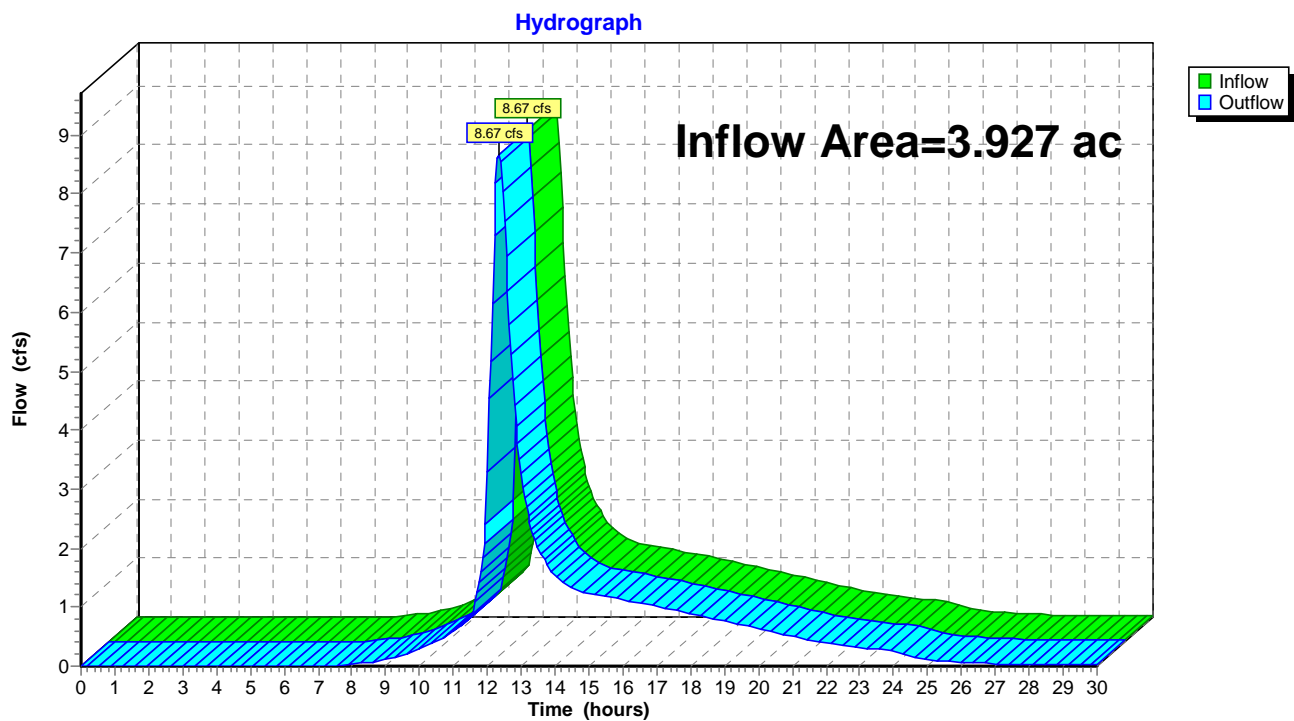
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 4.58" for 10-Year event
Inflow = 8.67 cfs @ 12.33 hrs, Volume= 1.499 af
Outflow = 8.67 cfs @ 12.33 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 5.03" for 10-Year event
 Inflow = 14.84 cfs @ 12.14 hrs, Volume= 1.244 af
 Outflow = 7.25 cfs @ 12.37 hrs, Volume= 1.235 af, Atten= 51%, Lag= 13.8 min
 Primary = 7.25 cfs @ 12.37 hrs, Volume= 1.235 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.65' @ 12.37 hrs Surf.Area= 17,551 sf Storage= 18,336 cf

Plug-Flow detention time= 111.9 min calculated for 1.235 af (99% of inflow)
 Center-of-Mass det. time= 107.1 min (911.3 - 804.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=7.22 cfs @ 12.37 hrs HW=19.65' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.23 cfs @ 6.28 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 5.99 cfs @ 2.20 fps)

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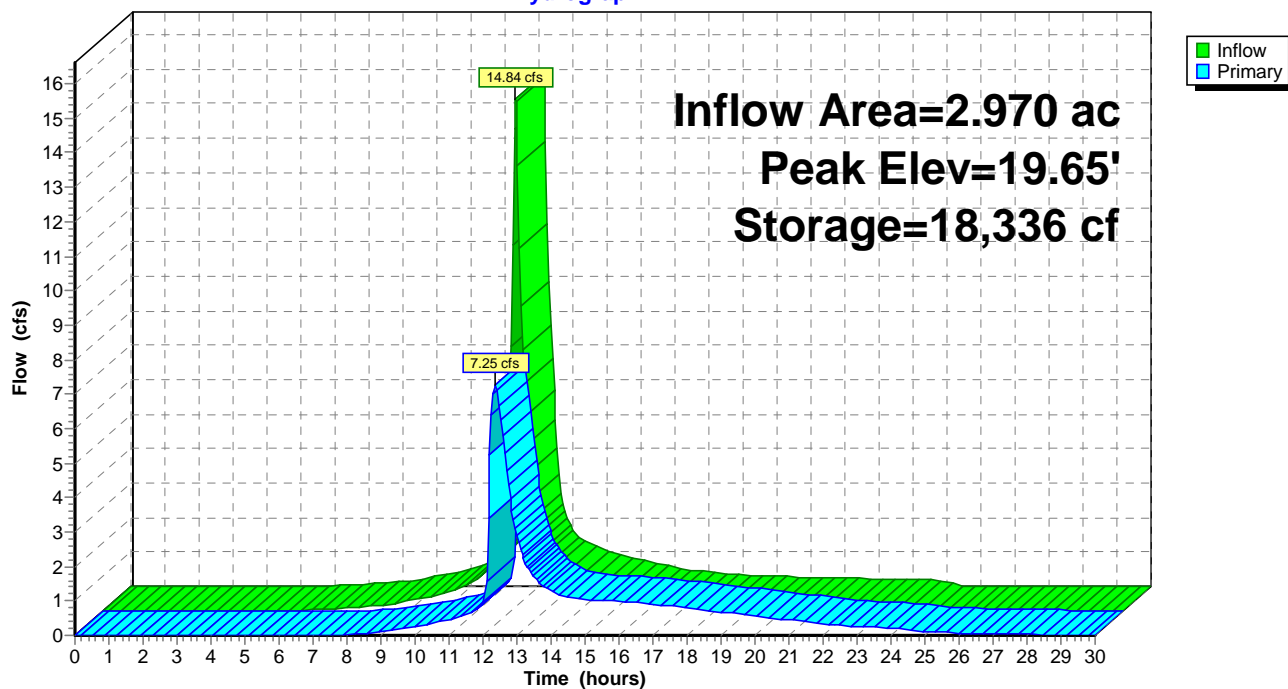
Type III 24-hr 10-Year Rainfall=7.00"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 25-Year Rainfall=8.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1	Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=5.98" Tc=10.0 min CN=83 Runoff=17.51 cfs 1.479 af
Subcatchment 2S: Bypass A	Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=3.44" Tc=5.0 min CN=61 Runoff=0.56 cfs 0.040 af
Subcatchment 3S: Bypass B	Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=5.04" Tc=5.0 min CN=75 Runoff=2.39 cfs 0.171 af
Subcatchment 4S: Bypass C	Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=3.44" Tc=5.0 min CN=61 Runoff=1.64 cfs 0.118 af
Reach 6R: Post Combine	Inflow=11.52 cfs 1.798 af Outflow=11.52 cfs 1.798 af
Pond 5P: Pond	Peak Elev=19.76' Storage=20,338 cf Inflow=17.51 cfs 1.479 af Outflow=9.60 cfs 1.469 af

Total Runoff Area = 3.927 ac Runoff Volume = 1.808 af Average Runoff Depth = 5.53"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

Orr Track Post

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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 1S: Post Basin 1

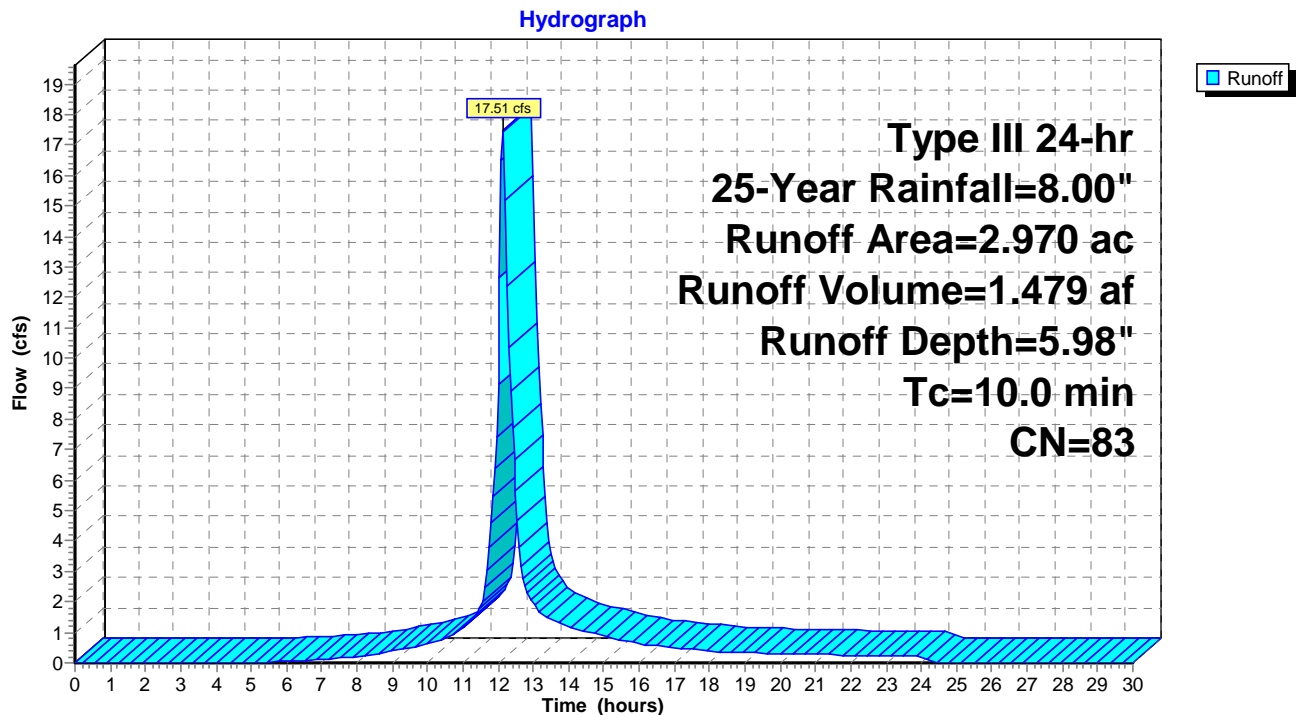
Runoff = 17.51 cfs @ 12.14 hrs, Volume= 1.479 af, Depth= 5.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.56 cfs @ 12.08 hrs, Volume= 0.040 af, Depth= 3.44"

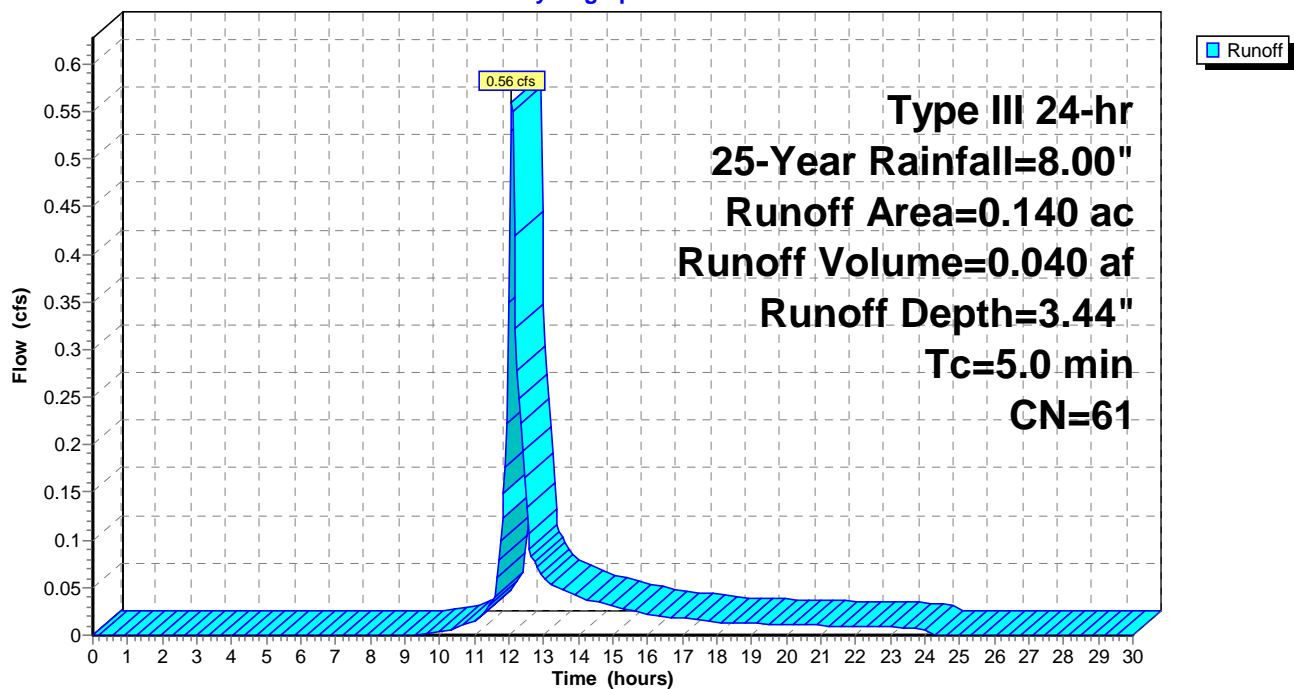
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

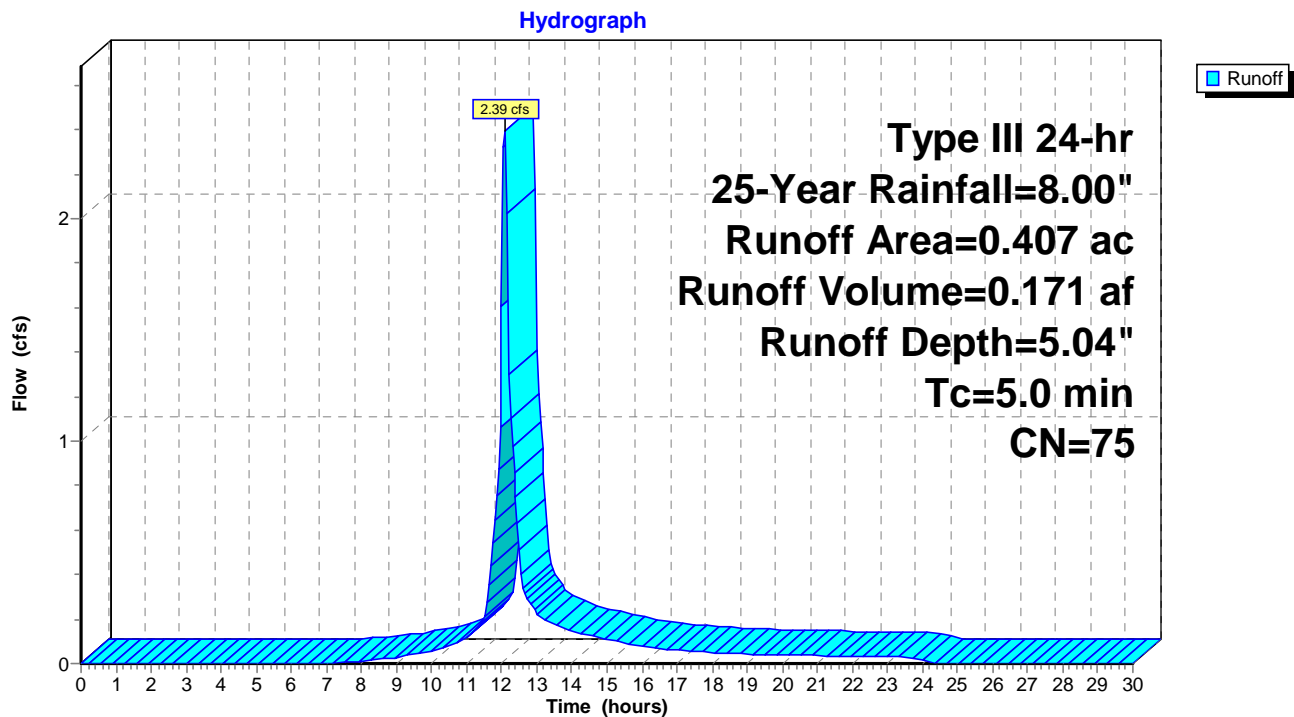
Runoff = 2.39 cfs @ 12.08 hrs, Volume= 0.171 af, Depth= 5.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

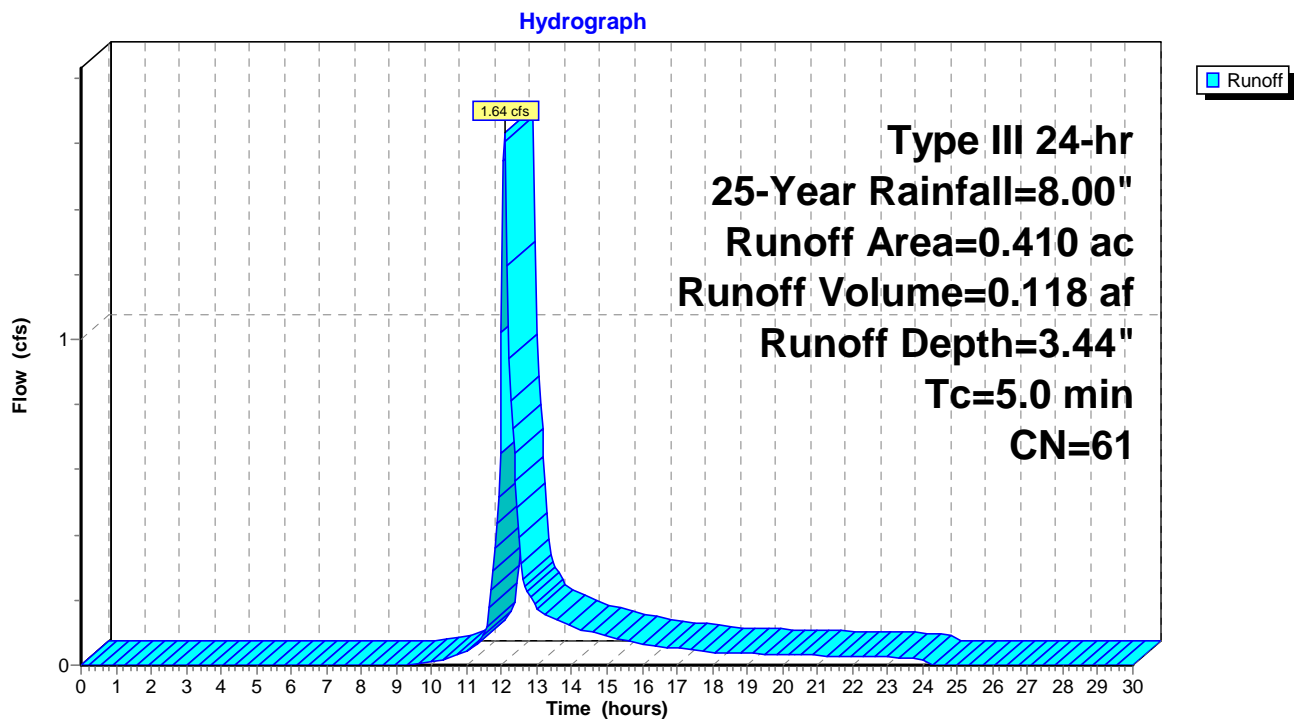
Runoff = 1.64 cfs @ 12.08 hrs, Volume= 0.118 af, Depth= 3.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

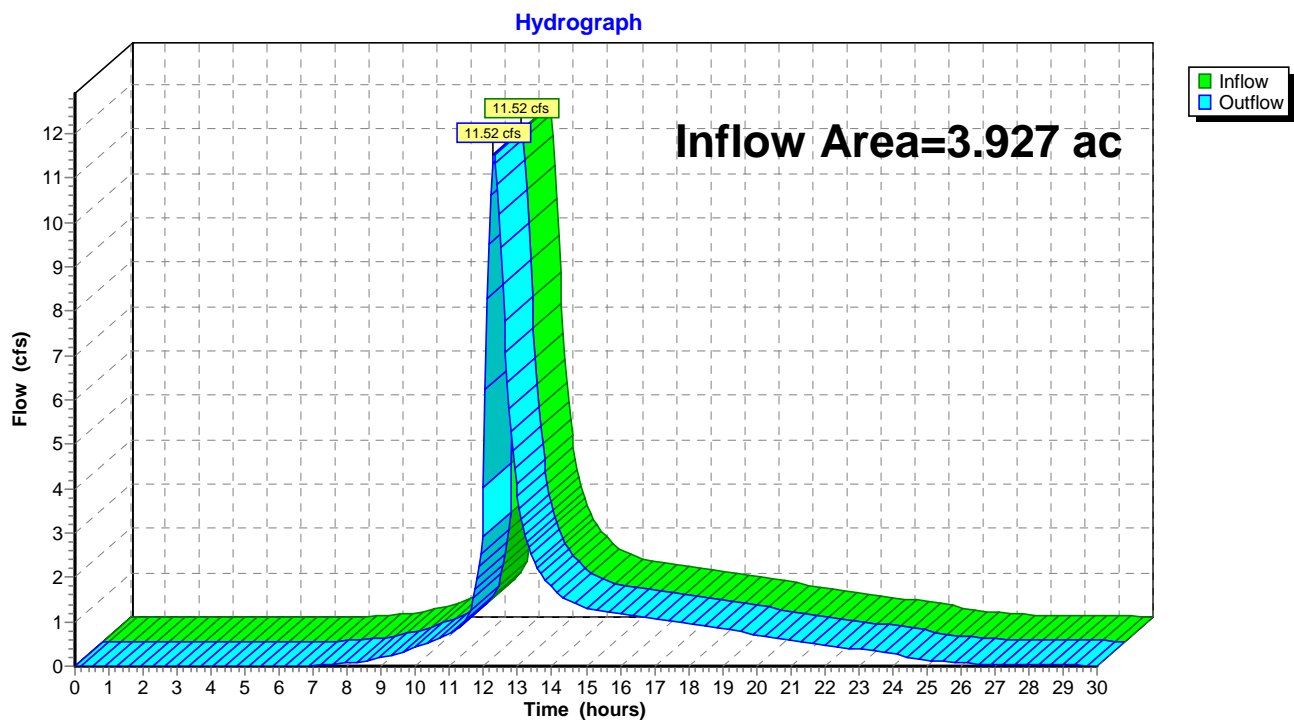
Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 5.50" for 25-Year event

Inflow = 11.52 cfs @ 12.30 hrs, Volume= 1.798 af

Outflow = 11.52 cfs @ 12.30 hrs, Volume= 1.798 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 5.98" for 25-Year event
 Inflow = 17.51 cfs @ 12.14 hrs, Volume= 1.479 af
 Outflow = 9.60 cfs @ 12.33 hrs, Volume= 1.469 af, Atten= 45%, Lag= 11.2 min
 Primary = 9.60 cfs @ 12.33 hrs, Volume= 1.469 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.76' @ 12.33 hrs Surf.Area= 18,930 sf Storage= 20,338 cf

Plug-Flow detention time= 103.7 min calculated for 1.467 af (99% of inflow)
 Center-of-Mass det. time= 100.0 min (899.3 - 799.3)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=9.57 cfs @ 12.33 hrs HW=19.76' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.27 cfs @ 6.48 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 8.30 cfs @ 2.46 fps)

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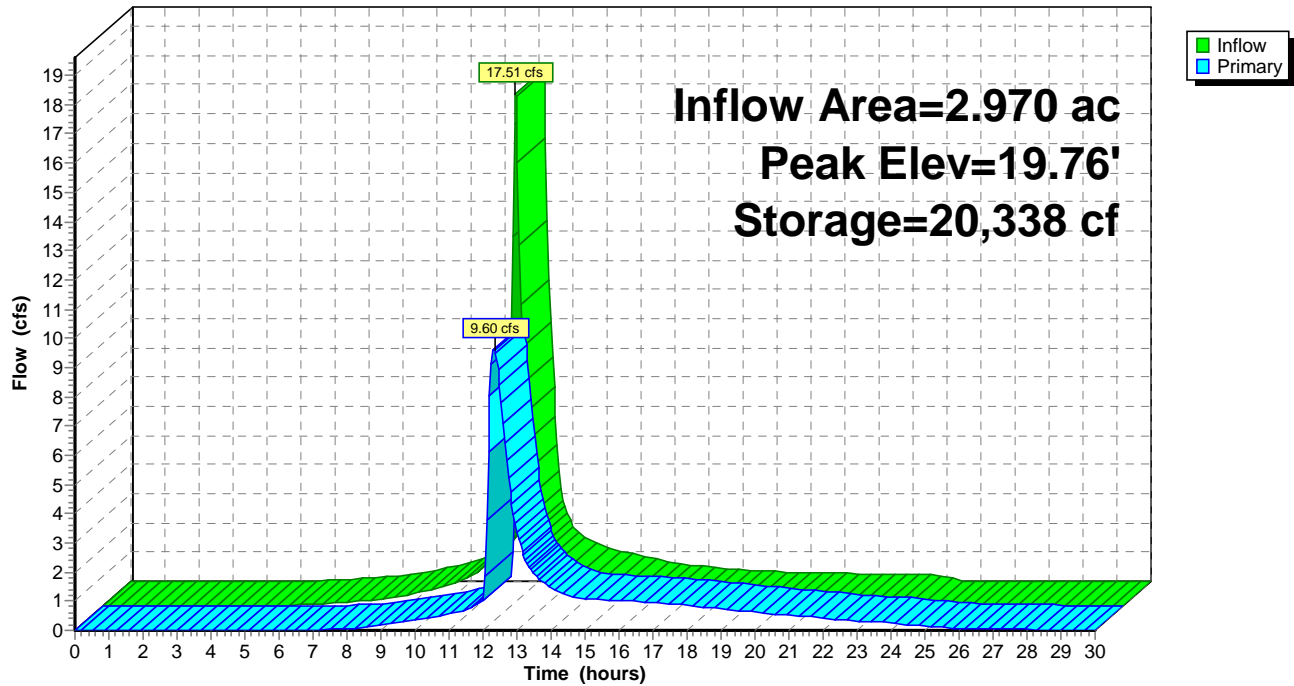
Type III 24-hr 25-Year Rainfall=8.00"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 50-Year Rainfall=9.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1	Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=6.94" Tc=10.0 min CN=83 Runoff=20.17 cfs 1.717 af
Subcatchment 2S: Bypass A	Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=4.22" Tc=5.0 min CN=61 Runoff=0.69 cfs 0.049 af
Subcatchment 3S: Bypass B	Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=5.95" Tc=5.0 min CN=75 Runoff=2.83 cfs 0.202 af
Subcatchment 4S: Bypass C	Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=4.22" Tc=5.0 min CN=61 Runoff=2.02 cfs 0.144 af
Reach 6R: Post Combine	Inflow=14.33 cfs 2.102 af Outflow=14.33 cfs 2.102 af
Pond 5P: Pond	Peak Elev=19.86' Storage=22,277 cf Inflow=20.17 cfs 1.717 af Outflow=11.93 cfs 1.707 af

Total Runoff Area = 3.927 ac Runoff Volume = 2.112 af Average Runoff Depth = 6.45"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 1S: Post Basin 1

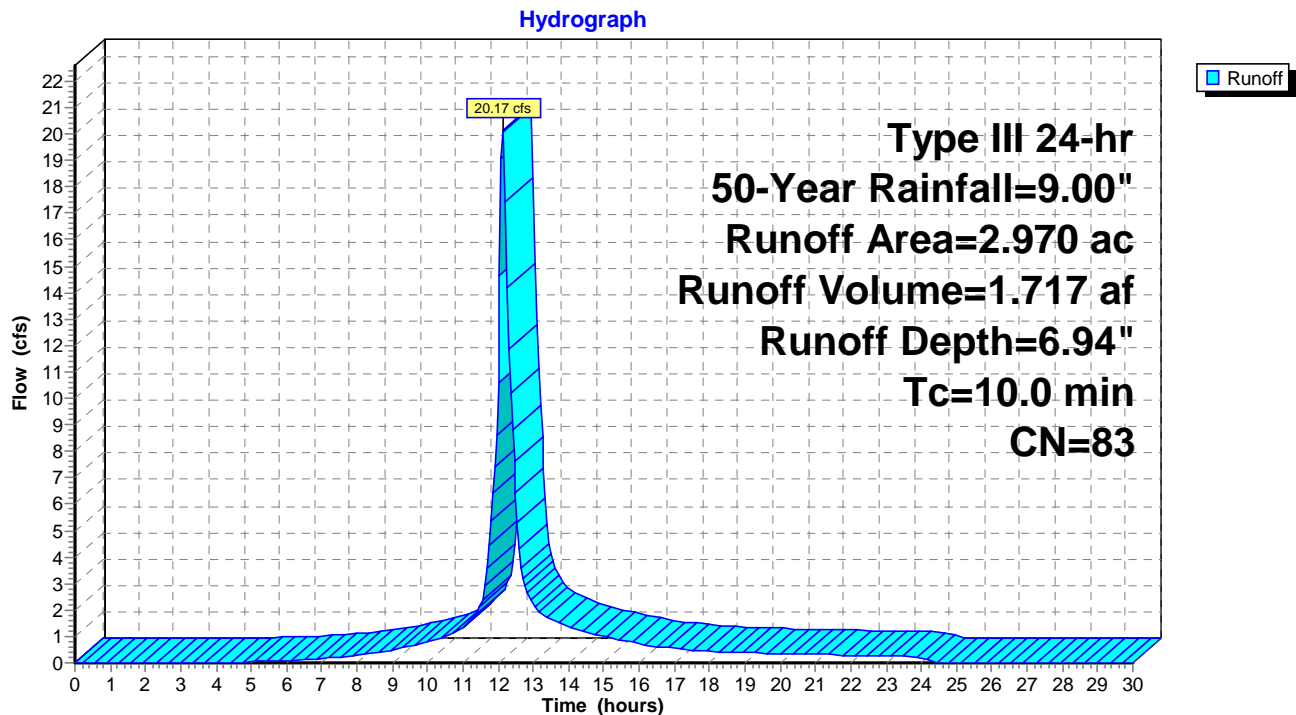
Runoff = 20.17 cfs @ 12.14 hrs, Volume= 1.717 af, Depth= 6.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.69 cfs @ 12.08 hrs, Volume= 0.049 af, Depth= 4.22"

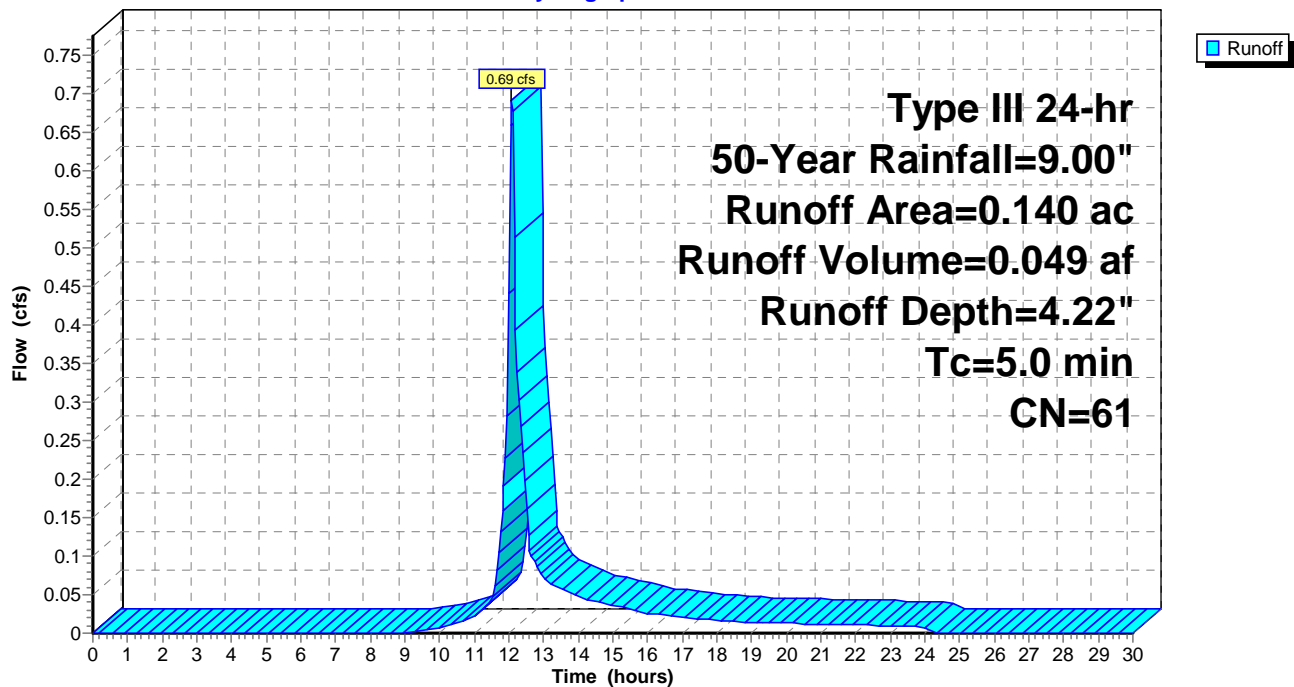
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 3S: Bypass B[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 2.83 cfs @ 12.07 hrs, Volume= 0.202 af, Depth= 5.95"

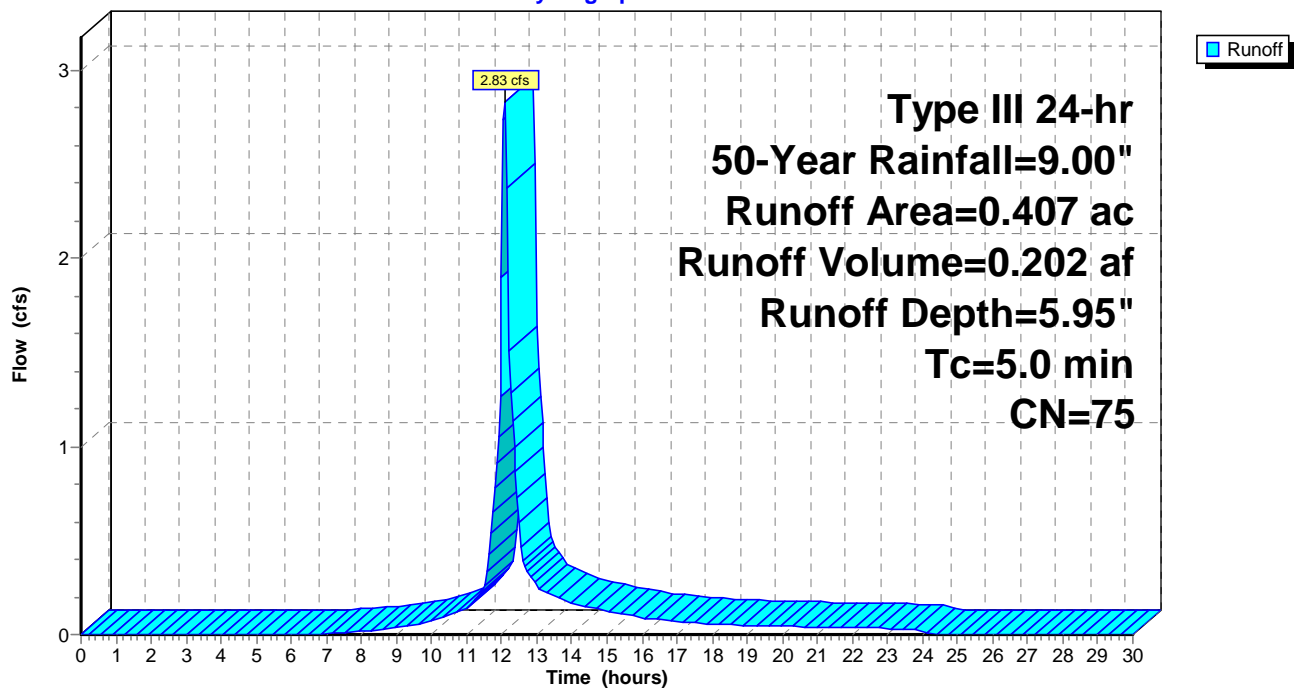
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B

Hydrograph



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

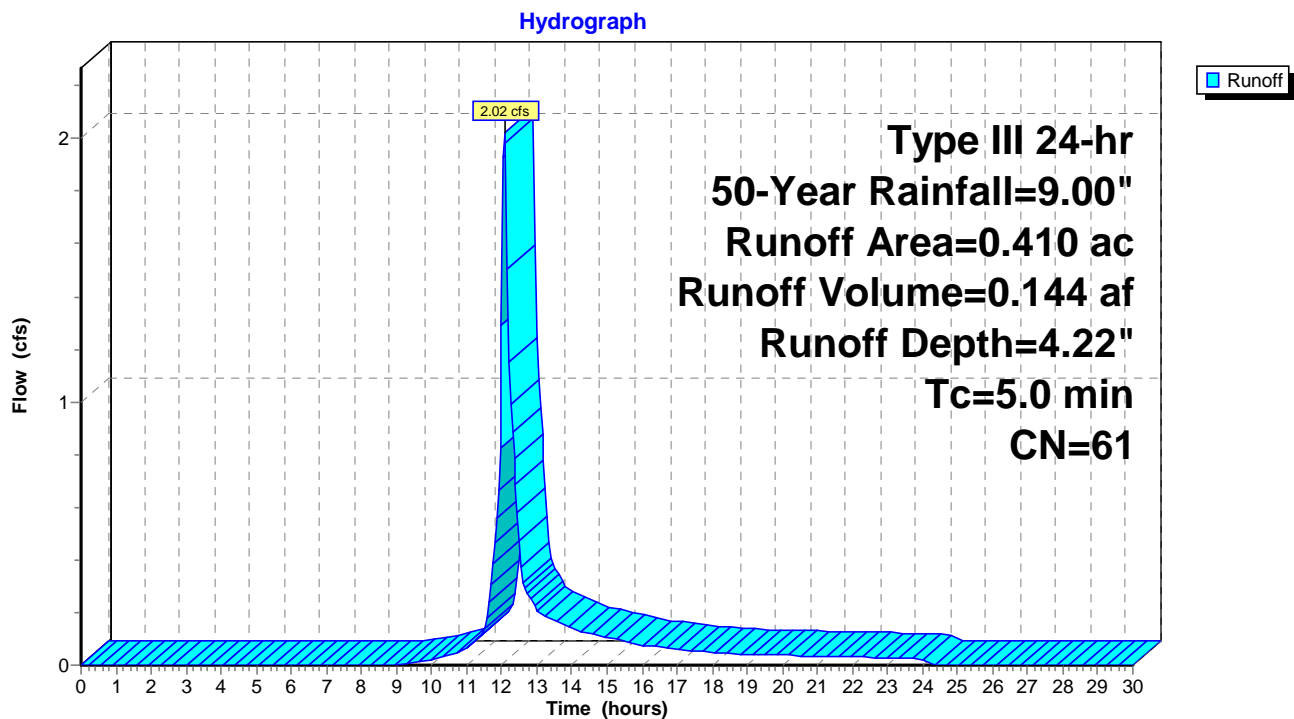
Runoff = 2.02 cfs @ 12.08 hrs, Volume= 0.144 af, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

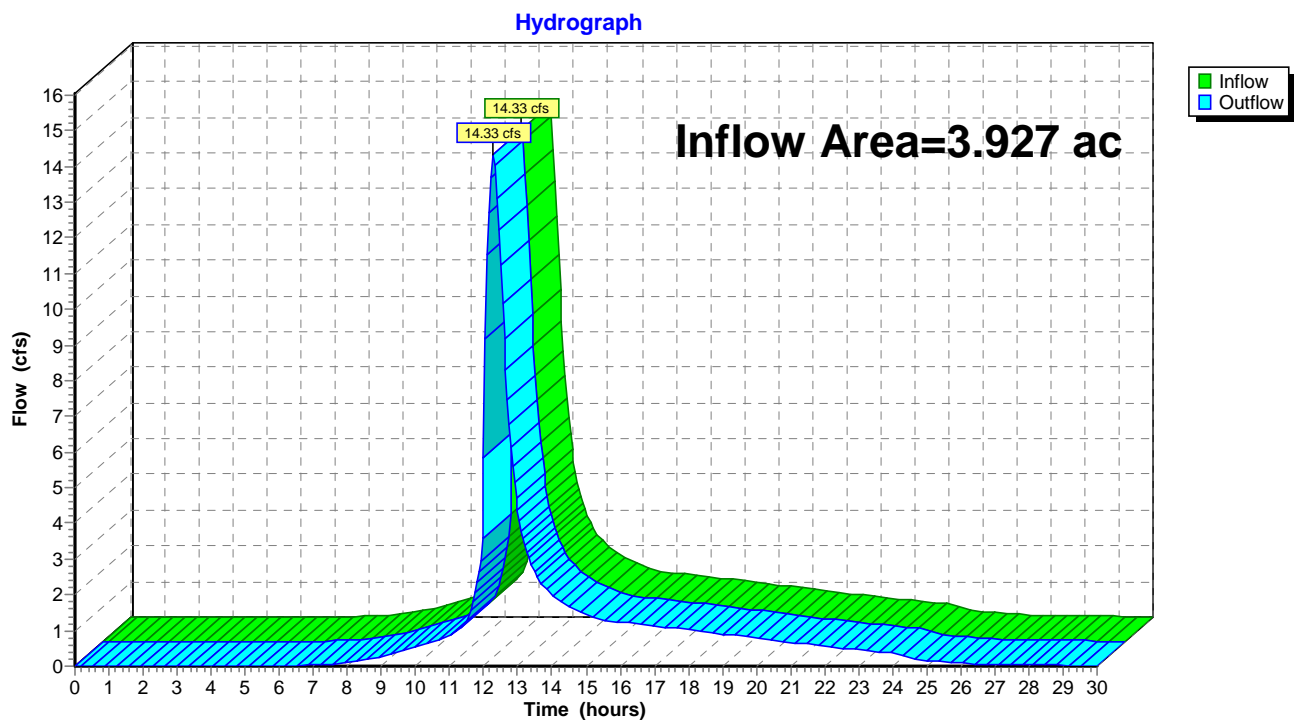
Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 6.42" for 50-Year event

Inflow = 14.33 cfs @ 12.27 hrs, Volume= 2.102 af

Outflow = 14.33 cfs @ 12.27 hrs, Volume= 2.102 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 6.94" for 50-Year event
 Inflow = 20.17 cfs @ 12.14 hrs, Volume= 1.717 af
 Outflow = 11.93 cfs @ 12.31 hrs, Volume= 1.707 af, Atten= 41%, Lag= 10.0 min
 Primary = 11.93 cfs @ 12.31 hrs, Volume= 1.707 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.86' @ 12.31 hrs Surf.Area= 20,176 sf Storage= 22,277 cf

Plug-Flow detention time= 97.7 min calculated for 1.704 af (99% of inflow)
 Center-of-Mass det. time= 94.3 min (889.6 - 795.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=11.90 cfs @ 12.31 hrs HW=19.86' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.31 cfs @ 6.66 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 10.60 cfs @ 2.67 fps)

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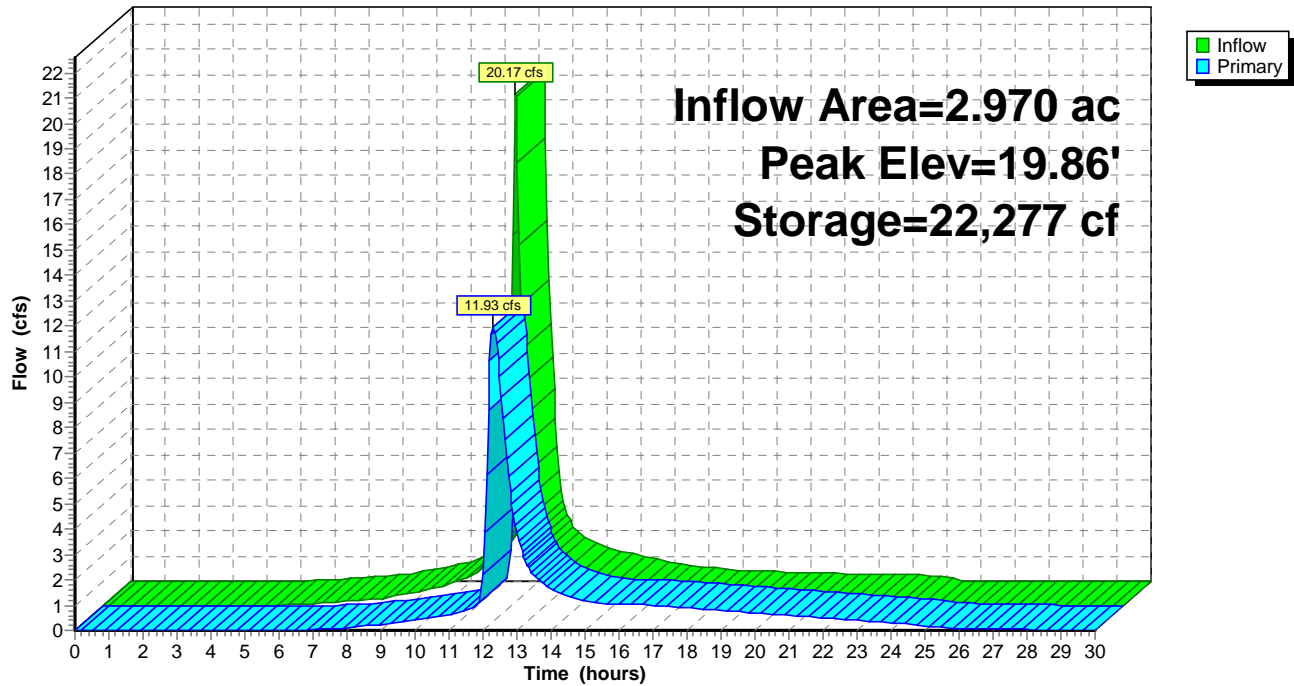
Type III 24-hr 50-Year Rainfall=9.00"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 100-Year Rainfall=9.84"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1

Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=7.75"
Tc=10.0 min CN=83 Runoff=22.40 cfs 1.918 af

Subcatchment 2S: Bypass A

Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=61 Runoff=0.80 cfs 0.057 af

Subcatchment 3S: Bypass B

Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=6.73"
Tc=5.0 min CN=75 Runoff=3.19 cfs 0.228 af

Subcatchment 4S: Bypass C

Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=61 Runoff=2.35 cfs 0.167 af

Reach 6R: Post Combine

Inflow=16.59 cfs 2.360 af
Outflow=16.59 cfs 2.360 af

Pond 5P: Pond

Peak Elev=19.94' Storage=23,806 cf Inflow=22.40 cfs 1.918 af
Outflow=13.78 cfs 1.907 af

Total Runoff Area = 3.927 ac Runoff Volume = 2.370 af Average Runoff Depth = 7.24"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 1S: Post Basin 1

Runoff = 22.40 cfs @ 12.14 hrs, Volume= 1.918 af, Depth= 7.75"

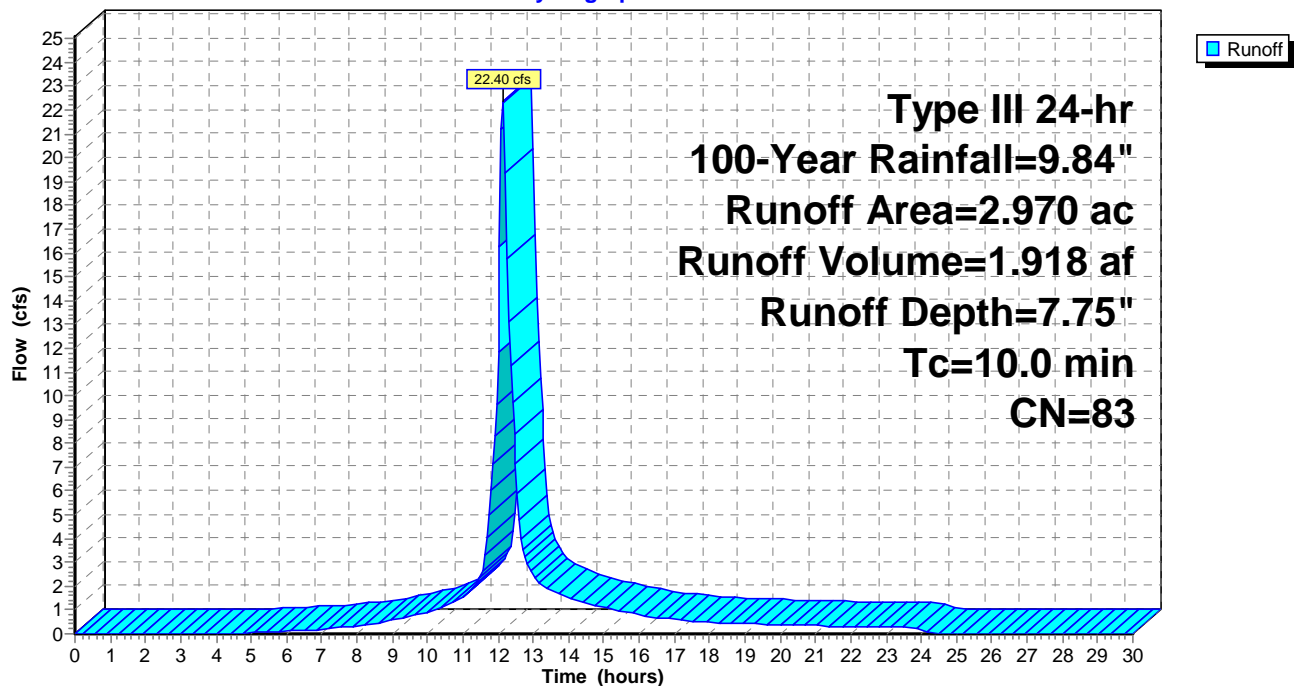
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1

Hydrograph



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.80 cfs @ 12.08 hrs, Volume= 0.057 af, Depth= 4.90"

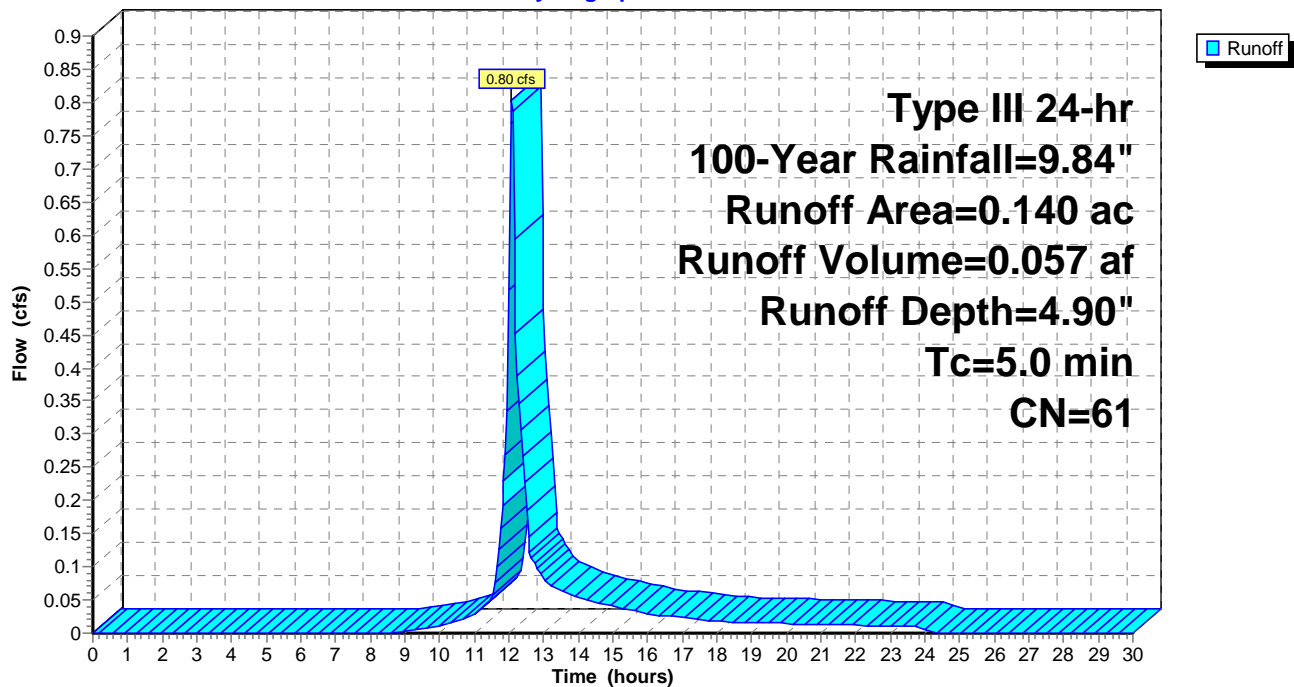
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

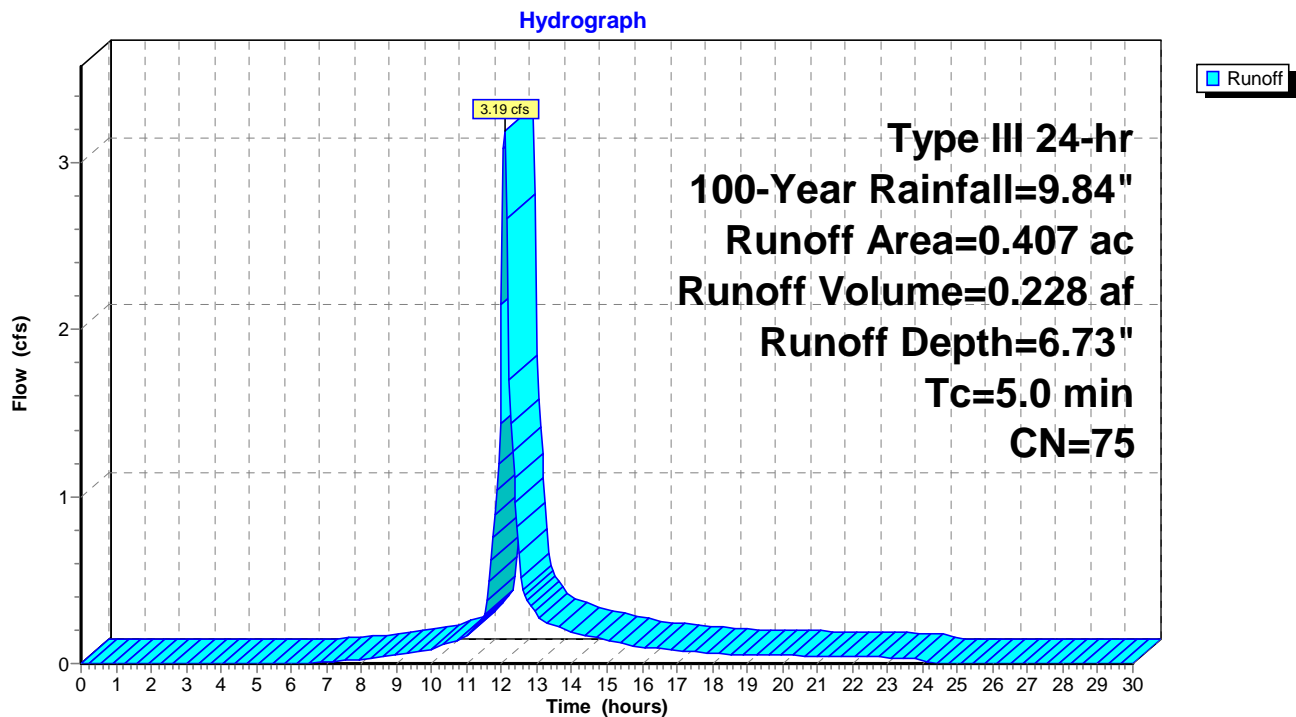
Runoff = 3.19 cfs @ 12.07 hrs, Volume= 0.228 af, Depth= 6.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

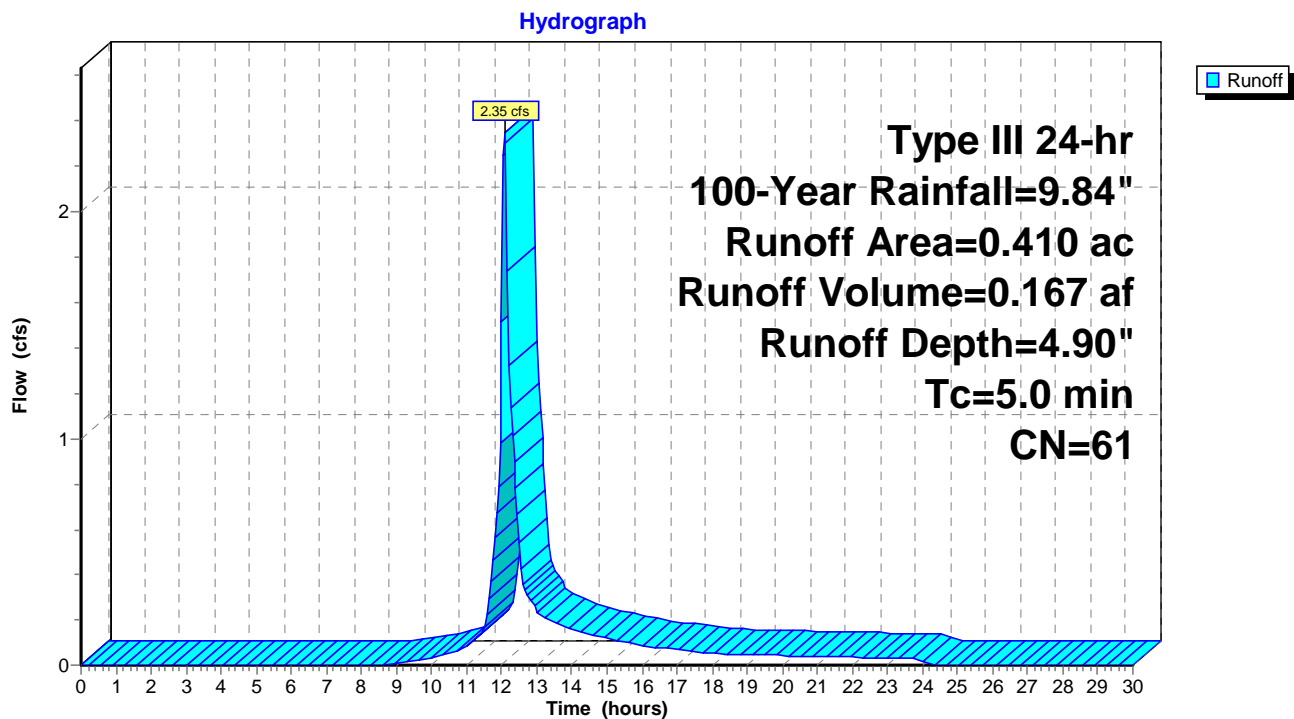
Runoff = 2.35 cfs @ 12.08 hrs, Volume= 0.167 af, Depth= 4.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



Orr Track Post

Prepared by {enter your company name here}

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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

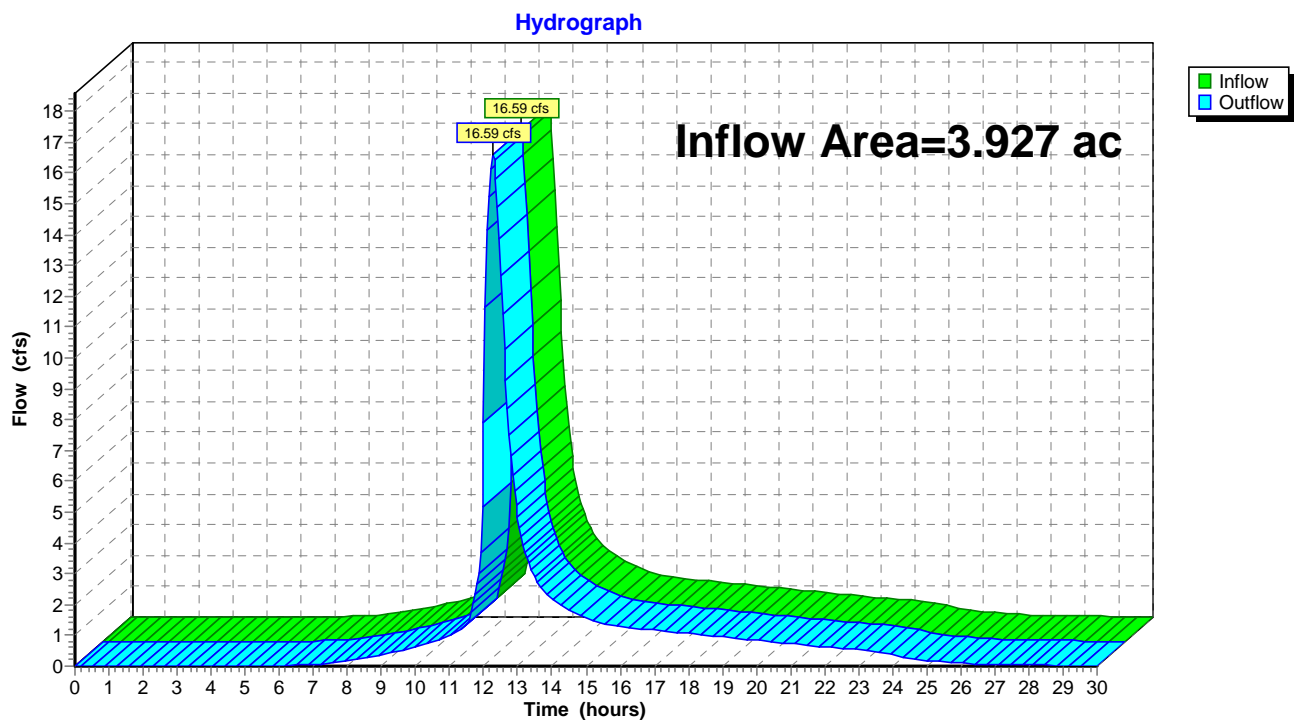
Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 7.21" for 100-Year event

Inflow = 16.59 cfs @ 12.26 hrs, Volume= 2.360 af

Outflow = 16.59 cfs @ 12.26 hrs, Volume= 2.360 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 100-Year Rainfall=9.84"

Prepared by {enter your company name here}

Printed 4/6/2022

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 7.75" for 100-Year event
 Inflow = 22.40 cfs @ 12.14 hrs, Volume= 1.918 af
 Outflow = 13.78 cfs @ 12.29 hrs, Volume= 1.907 af, Atten= 38%, Lag= 9.2 min
 Primary = 13.78 cfs @ 12.29 hrs, Volume= 1.907 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.94' @ 12.29 hrs Surf.Area= 21,107 sf Storage= 23,806 cf

Plug-Flow detention time= 93.5 min calculated for 1.904 af (99% of inflow)
 Center-of-Mass det. time= 90.5 min (882.7 - 792.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=13.75 cfs @ 12.29 hrs HW=19.94' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.33 cfs @ 6.79 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 12.41 cfs @ 2.81 fps)

Orr Track Post

Prepared by {enter your company name here}

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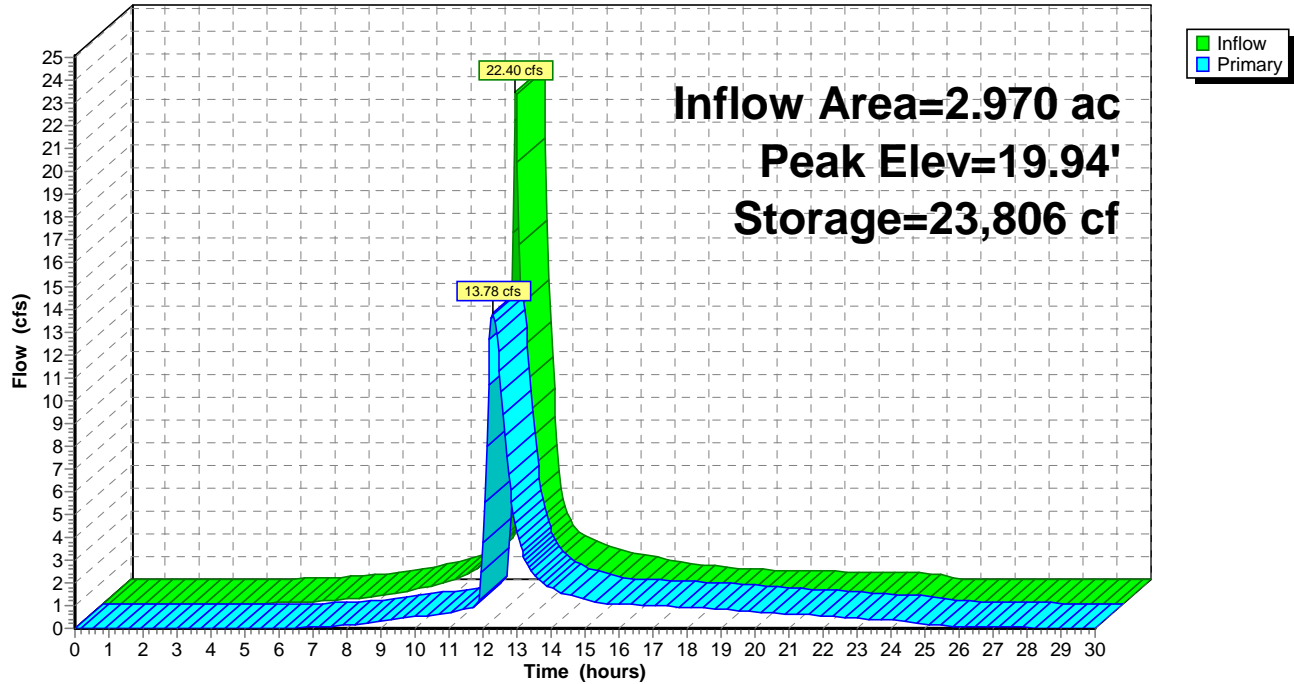
Type III 24-hr 100-Year Rainfall=9.84"

Printed 4/6/2022

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Pond 5P: Pond

Hydrograph



Areas of Significant Habitat:

None

Existing Conditions Map:

See the attached "Predevelopment Basin Map"

Existing Improvements: None

Existing Utilities and Easements: None

Existing Conservation Areas: None

Existing Low Impact Development and

Stormwater Management Practices: None

Existing Stormwater drainage

Infrastructure: Shown – Ditches within city Right-of-way

Existing Conditions Stormwater Runoff Summary (Q cfs)									
Basin	Area	"CN"	Tc	1-year	5-year	10-year	25-year	50-year	100-year
	(ac)		(min.)	3.60"	4.80"	6.72"	7.92"	9.00"	9.84"
1	2.16	61	13.4	0.89	2.21	5.21	6.73	8.31	9.68
2	1.77	61	13.7	0.73	1.80	4.24	5.48	6.77	7.88
Combined	3.93	61		1.62	4.01	9.44	12.20	15.08	17.58

Proposed Conditions Map:

See the attached "Post Development Basin Map"

Proposed topography: Shown

Proposed drainage divides
and patterns: Shown

Proposed roads, buildings, parking areas,
and other impervious surfaces: Shown

Proposed utilities and utility easements: Shown

Proposed limits of clearing: Shown

Proposed conservation areas: None

Proposed low impact development and
stormwater management practices: Shown

Proposed stormwater drainage

Infrastructure: Shown

Proposed Conditions Stormwater Runoff (Q cfs)									
Basin	Area	"CN"	Tc	1-year	5-year	10-year	25-year	50-year	100-year
	(ac)		(min.)	3.60"	4.80"	6.72"	7.92"	9.00"	9.84"
1*	2.97	83	10	0.94	2.30	7.25	9.60	11.93	13.78
Bypass A	0.14	61	5	0.08	0.19	0.43	0.56	0.69	0.80
Bypass B	0.41	75	5	0.64	1.09	1.98	2.39	2.83	3.19
Bypass C	0.41	61	5	0.23	0.54	1.27	1.64	2.02	2.35
Combined	3.93	79		1.54	2.68	8.67	11.52	14.33	16.59

*Routed

Pond B	1-year	5-year	10-year	25-year	50-year	100-year
Qin	5.84	8.97	14.84	17.51	20.17	22.40
Qout	0.94	2.30	7.25	9.60	11.93	13.78
WSE	18.94	19.35	19.65	19.76	19.86	19.94
V	9,031	13,621	18,336	20,338	22,277	23,806

Post-Construction Stormwater Management System Narrative:

The proposed development is an 8,200sf+/- truck shop with associated improvements. The facility will utilize an on-site ditch network to collect the surface run-off and transmit it to the bio-retention facility.

Please see the attached CSS spreadsheet for the determination of the RRv values.

Stormwater Management Design Plan: **Existing Condition Hydrologic Analysis**

Existing conditions map:

See the attached "Predevelopment Basin Map"

Information about the existing conditions of each of the drainage areas found on the development site:

The site is divided into two basins by a ridge line bisecting the site running East to West. It is currently a 3.93ac maintained grassed field.

Information about the existing conditions of any off-site drainage areas that contribute stormwater runoff to the development site:

There are no contributing off-site drainage areas.

Information about the stormwater runoff rates and volumes generated, under existing conditions, in each of the drainage areas found on the development site:

See the summary chart

Information about the stormwater runoff rates and volumes generated, under existing conditions, in each of the off-site drainage areas:

None

Documentation (e.g., model diagram) and calculations showing how the existing conditions hydrologic analysis was completed:

See the attached stormwater model results

Proposed conditions hydrologic analysis:

Proposed conditions map:

See the attached "Postdevelopment Basin Map"

Information about the proposed conditions of each of the drainage areas found on the development site (e.g., size, soil types, land cover characteristics):

See the Summary Chart

Information about the proposed conditions of any off-site drainage areas that contribute stormwater runoff to the development site (e.g., size, soil types, land cover characteristics):

None

Information about the stormwater runoff rates and volumes generated, under proposed conditions, in each of the drainage areas found on the development site:

See the Summary Chart

Information about the stormwater runoff rates and volumes generated, under proposed conditions, in each of the off-site drainage areas that contribute stormwater runoff to the development site:

None

Documentation (e.g., model diagram) and calculations showing how the proposed conditions hydrologic analysis was completed:

See the attached stormwater model results

Tailwater condition:

The downstream 100-yr flood elevation is 12. As a result, the downstream ditch as assumed to be flowing at a 2-foot depth, or a water surface elevation of 19.4 during the 25, 50-, & 100-year events. The tailwater depth was assumed to be 0 during the smaller rainfall events.

Post-construction stormwater management system plan:

Proposed topography:

See the attached "Postdevelopment Basin Map"

Proposed drainage divides and patterns:

See the attached "Postdevelopment Basin Map"

Existing and proposed roads, buildings, parking areas and other impervious surfaces:

See the attached "pre-development and Postdevelopment Basin Maps"

Existing and proposed primary and secondary conservation areas:

None

Plan view of existing and proposed low impact development and stormwater management practices:

See the attached "Postdevelopment Basin Map"

Cross-section and profile views of existing and proposed low impact development and stormwater management practices, including information about water surface elevations, storage volumes and inlet and outlet structures (e.g., orifice sizes);

See the construction plans

Plan view of existing and proposed storm drain infrastructure (e.g., inlets, manholes, storm drains):

See the attached "Postdevelopment Basin Map"

Cross-section and profile views of existing and proposed storm drain infrastructure (e.g., inlets, manholes, storm drains), including information about invert and water surface elevations:

See the construction plans

Existing and proposed channel modifications (e.g., bridge or culvert installations):

None

Post-construction stormwater management system narrative. The post-construction stormwater management system narrative shall include information about how post-construction stormwater runoff will be managed on the development site, including a list of the low impact development and stormwater management practices that will be used. It shall also include documentation and calculations that demonstrate how the selected low impact development and stormwater management practices satisfy the post-construction stormwater management criteria that apply to the development site, including information about the existing and proposed conditions of each of the drainage areas found on the development site (e.g., size, soil types, land cover characteristics):

See Post-Construction Stormwater Management System
Narrative above

Certification by plan preparer:

I, Jay Maupin, am a professional engineer registered in the State of Georgia and am familiar with the requirements of the City of Port Wentworth Stormwater Management Ordinance. The attached report and design plans for the site development known as Port Wentworth Truck Shop, 8191 Old Hwy 21, Port Wentworth, GA 31407 are designed in compliance with the Local Design Manual of the City of Port Wentworth.

Adverse Impacts Statement:

I, Jay Maupin, certify that there are no adverse impacts upstream or downstream of the site for any design storm analyzed.

Certification by owner:

Please see the attached letter

Stormwater management inspection and maintenance agreement and plan:

Please see the attached signed plan

GENERAL CONSTRUCTION NOTES:

- ALL CONSTRUCTION SHALL BE IN CONFORMANCE TO THE CURRENT PORT WENTWORTH DESIGN STANDARDS, SPECIFICATIONS AND DETAILS OR AS OTHERWISE ISSUED FOR THIS PROJECT. WHERE ANY CONFLICT EXISTS BETWEEN THESE PLANS AND/OR SPECIFICATIONS AND/OR CONSTRUCTION DETAILS AND THE PORT WENTWORTH STANDARDS, SPECIFICATIONS, DETAILS AND DEVELOPMENT ORDINANCE(S), THE PORT WENTWORTH STANDARDS SHALL PREVAIL.
- LAYOUT TO BE CONTROLLED BY EXISTING BENCHMARK.
 - DIMENSIONS TO CURB AND GUTTER ARE TO FACE OF CURB.
 - DIMENSIONS TO WALK ARE TO FACE OF WALK.
 - DIMENSIONS TO BUILDING ARE TO FACE OF BUILDING.
 - DIMENSIONS TO STRIPING IS TO CENTERLINE OF STRIPING.
 - ALL ANGLES ARE 90° UNLESS OTHERWISE NOTED.
 - ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
 - BLUE METAL REFLECTIVE SIGN AT LEAST 12" IN WIDTH AND 18" IN LENGTH AND ERECTED AT 7' ABOVE GRADE IN SUCH MANNER SO AS TO BE CLEARLY VISIBLE TO THE PARKING VEHICLE. THE SIGN SHALL HAVE PRINTED IN WHITE LETTERS NOT LESS THAN ONE INCH IN HEIGHT ON THREE SEPARATE LINES AND CENTERED THE FOLLOWING WORDS: "PERMIT PARKING ONLY", "TOW-AWAY ZONE" AND "MAXIMUM FINE \$500.00". SUCH SIGNS SHALL ALSO DISPLAY THE SYMBOL FOR HANDICAP ACCESSIBILITY CENTERED BETWEEN THE SECOND AND THIRD LINES. VAN ACCESSIBLE SPACE SHALL HAVE ADDITIONAL SIGN WITH THE FOLLOWING WORDS: "VAN ACCESSIBLE".
 - TRAFFIC CONTROL DEVICES SHALL BE USED ON ALL WORK ON THIS PROJECT IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" CURRENT EDITION. THE COST TO COMPLY SHALL BE INCLUDED IN THE OVERALL COST OF THE PROJECT.
 - REFERENCE SURVEYS:
 - BOUNDARY & TOPOGRAPHIC SURVEY - PREPARED BY ATLAS SURVEYING (10/2021).
 - VERTICAL DATUM: NAVD88 HORIZONTAL DATUM: NAD83
 - PROJECT IS ON STATE PLANE COORDINATES.
 - MAUPIN ENGINEERING, INC. DOES NOT ACCEPT ANY RESPONSIBILITY FOR ACCURACY OF PROVIDED SURVEY INFORMATION.
 - ONLY ABOVE GROUND, READILY VISIBLE STRUCTURES, UTILITIES AND SURFACE PAINT MARKINGS WERE LOCATED FOR THIS SURVEY. THIS SURVEY MAKES NO WARRANTY OR GUARANTEE AS TO THE LOCATION, EXISTENCE, OR NON-EXISTENCE OF ANY BELOWGROUND, NON-VISIBLE UTILITIES OR STRUCTURES. CONTRACTOR SHALL FIELD VERIFY LOCATION, TYPE, SIZE, MATERIAL AND GENERAL CONDITION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
 - ALL GRADED EARTH NOT OTHERWISE STABILIZED WITH BUILDING, PAVEMENT OR VEGETATION SHALL BE GRASSED OR SODDED.
 - OWNER SHALL ACCEPT MAINTENANCE OF THE STORM DRAINAGE SYSTEM, INCLUDING ROOF DRAIN CONNECTIONS, WITHIN THE LIMITS OF THE PROPERTY. PORT WENTWORTH WILL NOT MAINTAIN THE STORM DRAINAGE SYSTEM WITHIN THE PROPERTY. THIS SITE IS DESIGNED TO DISCHARGE STORM WATER RUNOFF INTO THE APPROVED MASTER DRAINAGE CONVEYANCE AND DETENTION SYSTEM.
 - DITCHES, ALL DRAINAGE STRUCTURES, ORIFICES AND PAVEMENT ELEVATIONS SHALL BE SURVEYED FOR "AS-BUILT" DRAWINGS ALONG WITH THE WATER AND SANITARY SEWER SERVICES.
 - ADJUST EXISTING MANHOLE FRAMES, GRATES AND VALVE BOXES TO GRADE AS NEEDED.
 - ALL STORM DRAIN PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
 - MATCH EXISTING PAVEMENT GRADE ELEVATIONS WHERE CONNECTING TO EXISTING PAVEMENT.
 - FILL BENEATH BUILDINGS SHALL BE COMPACTED IN ACCORDANCE WITH BUILDING STRUCTURAL SPECIFICATIONS.
 - CONTRACTOR TO FIELD VERIFY DURING CONSTRUCTION ANY EXISTENCE OF SUB-SURFACE DEBRIS OR ORGANIC MATERIAL. ANY SUB-SURFACE DEBRIS OR ORGANIC MATERIAL FOUND SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 2' BELOW GRADED AGGREGATE BASE IN PAVEMENT AREAS AND 2' BELOW BOTTOM OF FOOTINGS FOR BUILDINGS (CONTRACTOR SHALL CONSULT WITH BUILDING STRUCTURAL ENGINEER FOR ANY WORK BENEATH OR ADJACENT TO BUILDING AND/OR ABOVE OR BELOW GRADE STRUCTURES). IF EXCESSIVE DEBRIS OR ORGANIC MATERIAL IS FOUND, ENGINEER SHALL BE CONTACTED FOR INSPECTION. REMOVAL OF INSPECTED MATERIAL SHALL BE DIRECTED BY THE ENGINEER.
 - ALL EROSION AND SEDIMENT CONTROL DEVICES (BMPs) SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL AND BE MAINTAINED BY CONTRACTOR UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED IN ACCORDANCE WITH THE GOVERNING NPDES GENERAL PERMIT.
 - IF A RIGHT-OF-WAY ENCROACHMENT PERMIT MUST BE OBTAINED, AND IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN SUCH PERMIT.
 - THE PORT WENTWORTH INSPECTIONS DEPARTMENT RESERVES THE RIGHT TO ACCESS PROPERTY TO INSPECT STORM WATER FACILITIES AT ANY TIME.
 - CHLORINATED, DISINFECTED WATER SHALL NOT BE DISCHARGED INTO THE STORM WATER SYSTEM.
 - TRAFFIC CONTROL AND FLOW SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
 - A MINIMUM SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN ALL INSTALLED OR RELOCATED UTILITIES AND LARGE AND MEDIUM TREES.
 - ANY AND ALL STREET LIGHTING, LANDSCAPE, SIDEWALK AND ACCESSIBILITY REQUIREMENTS TO BE PERFORMED, DESIGNED AND/OR CONSTRUCTED SHALL BE COORDINATED WITH CIVIL ENGINEER.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL AND/OR MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR THE ROOF DRAIN SYSTEM. COLLECTION AND DISCHARGE SHALL BE COORDINATED WITH CIVIL ENGINEER.
 - SITE CIVIL PLANS SHALL TERMINATE 5' FROM BUILDING FACE UNLESS OTHERWISE NOTED. CONTINUATION OF WATER, SANITARY SEWER AND STORM DRAINAGE LATERALS SHALL BE COORDINATED WITH BUILDING CONTRACTOR IN ACCORDANCE WITH ARCHITECTURAL AND/OR MECHANICAL, ELECTRICAL AND PLUMBING PLANS.
 - ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE APPROPRIATE JURISDICTIONS APPROVED CONSTRUCTION SPECIFICATIONS AND DETAILS.
 - THE OWNER, OWNER'S REPRESENTATIVES, PORT WENTWORTH AND OTHER REGULATORY AGENCIES SHALL HAVE THE RIGHT TO ACCESS THE SITE AT ANY TIME FOR PURPOSES OF OBSERVING WORK PERFORMED.
 - ALL UTILITIES ARE SHOWN AS APPROXIMATE ON THE PLANS AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR. SOME UTILITIES AND SERVICE LINE LOCATIONS ARE UNKNOWN AND NOT SHOWN ON THE PLANS. THIS DOES NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO PROTECT EXISTING UNDERGROUND FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID UTILITY LOCATE TICKET FROM THE GEORGIA UTILITIES PROTECTION CENTER (811/ 800-282-7411), AND COORDINATION WITH OTHER SUCH LOCAL UTILITIES AS MAY BE REQUIRED.
 - THE CONTRACTOR WILL PROTECT ALL TREES NOTED TO REMAIN WITHIN AND ADJACENT TO THE CONSTRUCTION ZONE. ANY UNAUTHORIZED REMOVAL OF TREES NOTED TO REMAIN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REESTABLISH TO THE SATISFACTION OF THE ENGINEER.
 - THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL BORROW MATERIAL NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT. ALL BORROW MATERIAL SHALL BE CLEAN AND FREE OF DEBRIS AND ORGANIC MATERIAL AND SUFFICIENT TO COMPACT TO A MINIMUM BEARING CAPACITY OF 2,500PSF OR AS OTHERWISE SPECIFIED.
 - ALL ITEMS CLEARED OR DEMOLISHED FROM THE SITE, INCLUDING SPOIL MATERIAL TO BE REMOVED FOR OFF-SITE DISPOSAL, ARE THE PROPERTY OF THE CONTRACTOR UNLESS THEY ARE TO BE REUSED ON THE SITE OR OTHERWISE NOTED. NO BURYING OR BURNING OF DEBRIS WILL BE ALLOWED ON THIS SITE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING BEST MANAGEMENT PRACTICES (BMP'S) ON THE SITE AT ALL TIMES IN ACCORDANCE WITH THESE PLANS AND THE "MANUAL FOR EROSION AND SEDIMENT CONTROL OF GEORGIA".

GENERAL DEVELOPMENT NOTES:

- PIN: 70906 02002
ADDRESS: 8191 OLD HWY. 21
PORT WENTWORTH, GEORGIA
- CONSTRUCTION EXIT LOCATION
N: 32.236470°
W: 81.193608°
- TOTAL LAND ACREAGE = 3.93(±) AC
TOTAL DISTURBED ACREAGE = 4.1(±) AC

PRE DEVELOPMENT
TOTAL GREEN SPACE = 171.316 (±) 100(%)
PAVED AREA = 0 (±) 0 (%)
BUILDING COVERAGE AREA = 0 (±) 0 (%)

POST DEVELOPMENT
TOTAL GREEN SPACE = 112.096(±) 66(%)
PAVED AREA = 51,000(±) 29(%)
BUILDING COVERAGE AREA = 8,220(±) 05(%)
- EXISTING USE OF PROPERTY : VACANT
PROPOSED USE OF PROPERTY : TRUCK REPAIR SHOP

PRESENT SITE ZONING : P-C-2
- PROPERTY IS LOCATED IN ZONE X, NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY FEMA FLOOD INSURANCE RATE MAP # 13051C0030G, DATED 08/16/2018
- THE SITE IS SERVED BY WELL AND SEPTIC SEWER SYSTEM.
- PARKING SPACE CALCULATIONS:

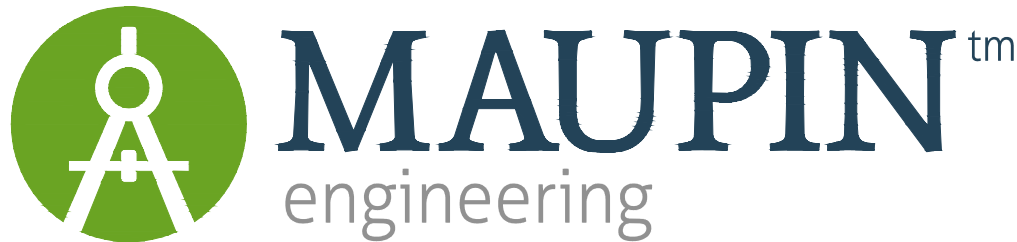
REQUIRED: 1 SPACE PER 400SF OF SHOP/GARAGE SPACE +1 STALL PER EMPLOYEE = **19 STALLS**
PROVIDED: **20 STALLS PROVIDED**
- SITE LIGHTING PLAN TO BE PROVIDED SEPARATELY

PW TRUCK SALES
Specific Development Plan

MEI Proj #673-21-35 Plan Date: 4/1/22

PREPARED FOR:

DEWITT TILTON GROUP
KIM THOMAS
119 CANAL STREET SUITE 106
POOLER, GEORGIA 31322
912-777-3404
kim@dewitttiltongroup.com



114 WEST 42ND STREET
SAVANNAH, GA 31401
OFFICE PHONE (912) 235 - 2915
GENERAL@MAUPINENGINEERING.COM

SHEET INDEX

C.0	COVER - NOTES
C.1	STAMPED SURVEY
C.2	DEMOLITION PLAN
C.3	STAKING PLAN
C.4	UTILITY PLAN
C.5	GRADING PLAN
C.6	LANDSCAPING PLAN
C.E1	EROSION CONTROL PLAN - INITIAL
C.E2	EROSION CONTROL PLAN - INTERMEDIATE
C.E3	EROSION CONTROL PLAN -FINAL
C.D1-D3	DETAILS

REVISIONS		
NO.	DATE	DESCRIPTION

THIS SET IS RELEASED FOR PERMITTING 4/1/22
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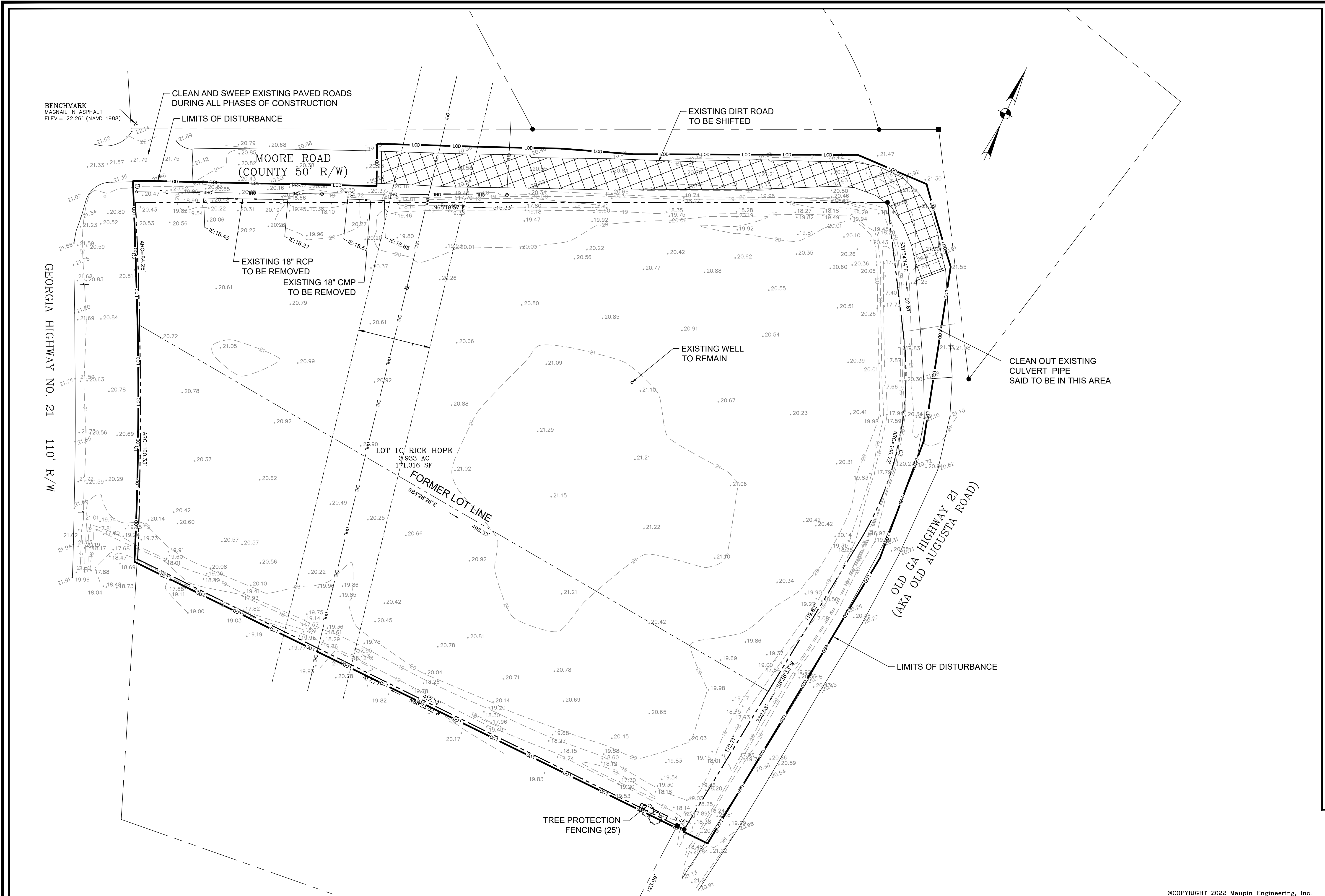


LEVEL II E&S CERT.
#21051 EXP: 12/1/2024

UTILITIES PROTECTION CENTER

Dig Safely.
CALL 811

CONTRACTOR IS REQUIRED TO CALL
AT LEAST 3 DAYS PRIOR TO
START OF CONSTRUCTION



REVISIONS	
NO.	DESCRIPTION

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DEMOLITION PLAN

PW TRUCK SALES

LEVEL II E&S

GEORGIA
REGISTERED
No. 23758
PROFESSIONAL
ENGINEER
MAUPIN

CERT. #21051 EXP. 12/1/2024

STATUS:

**RELEASED
FOR
PERMITTING**

DRWN: TRW 1-26-2022

CHK'D: JAM DATE

SCALE: 1" = 30'

SHEET NO.

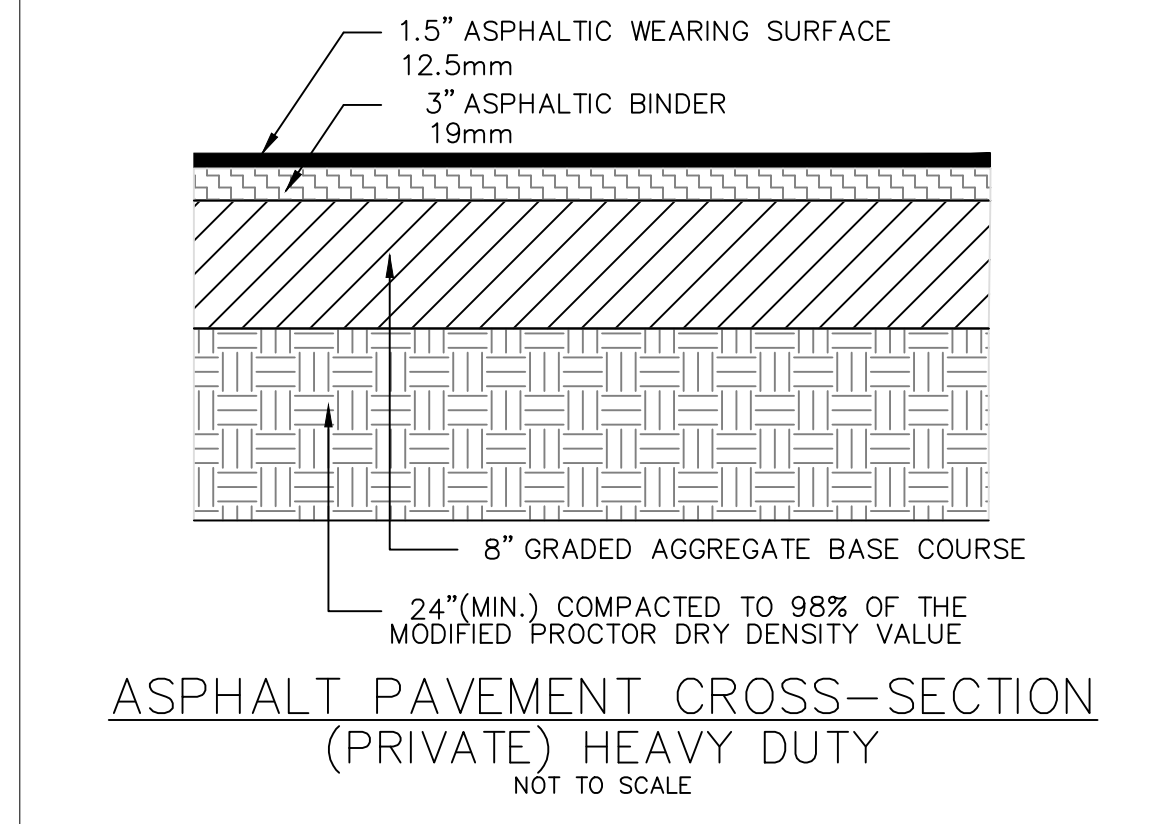
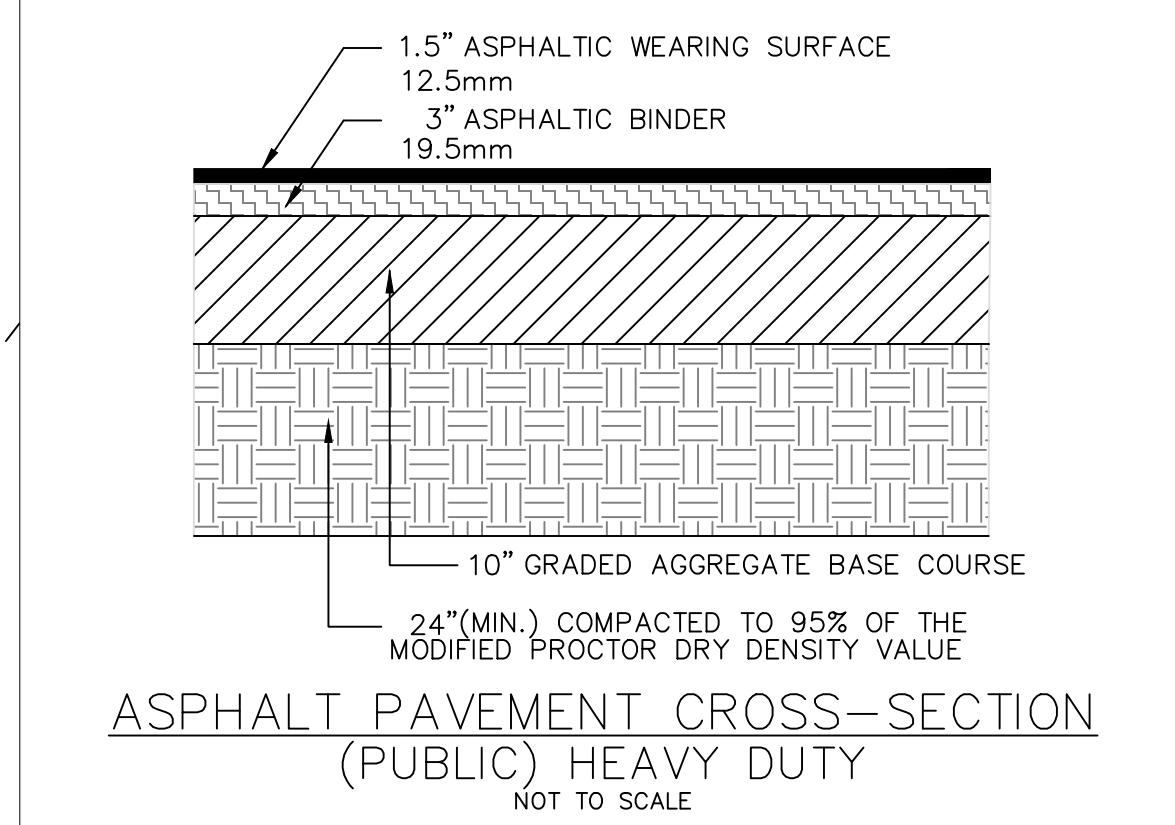
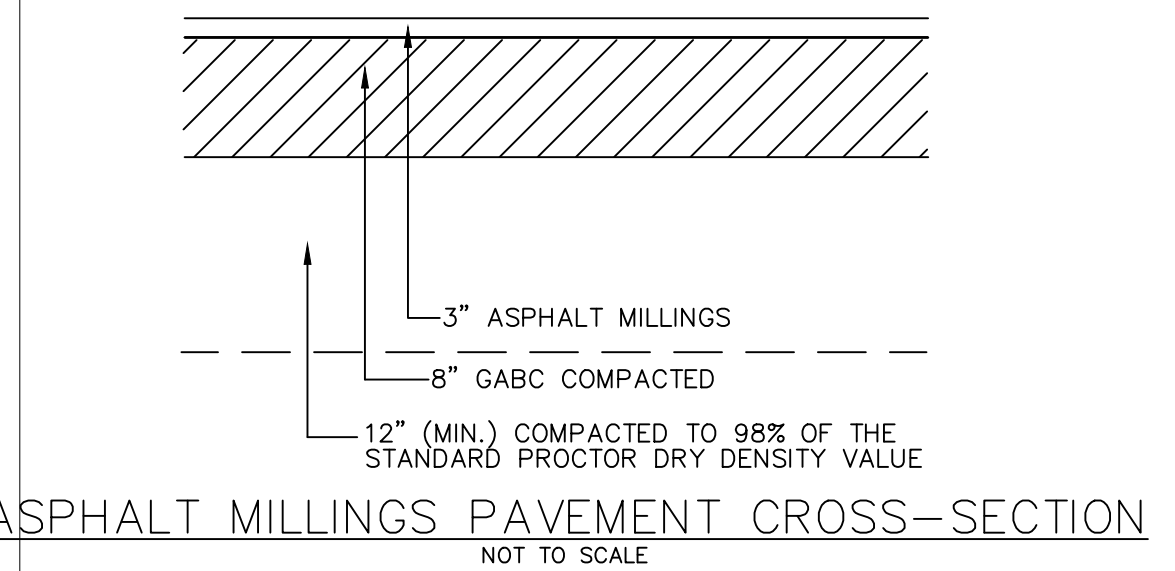
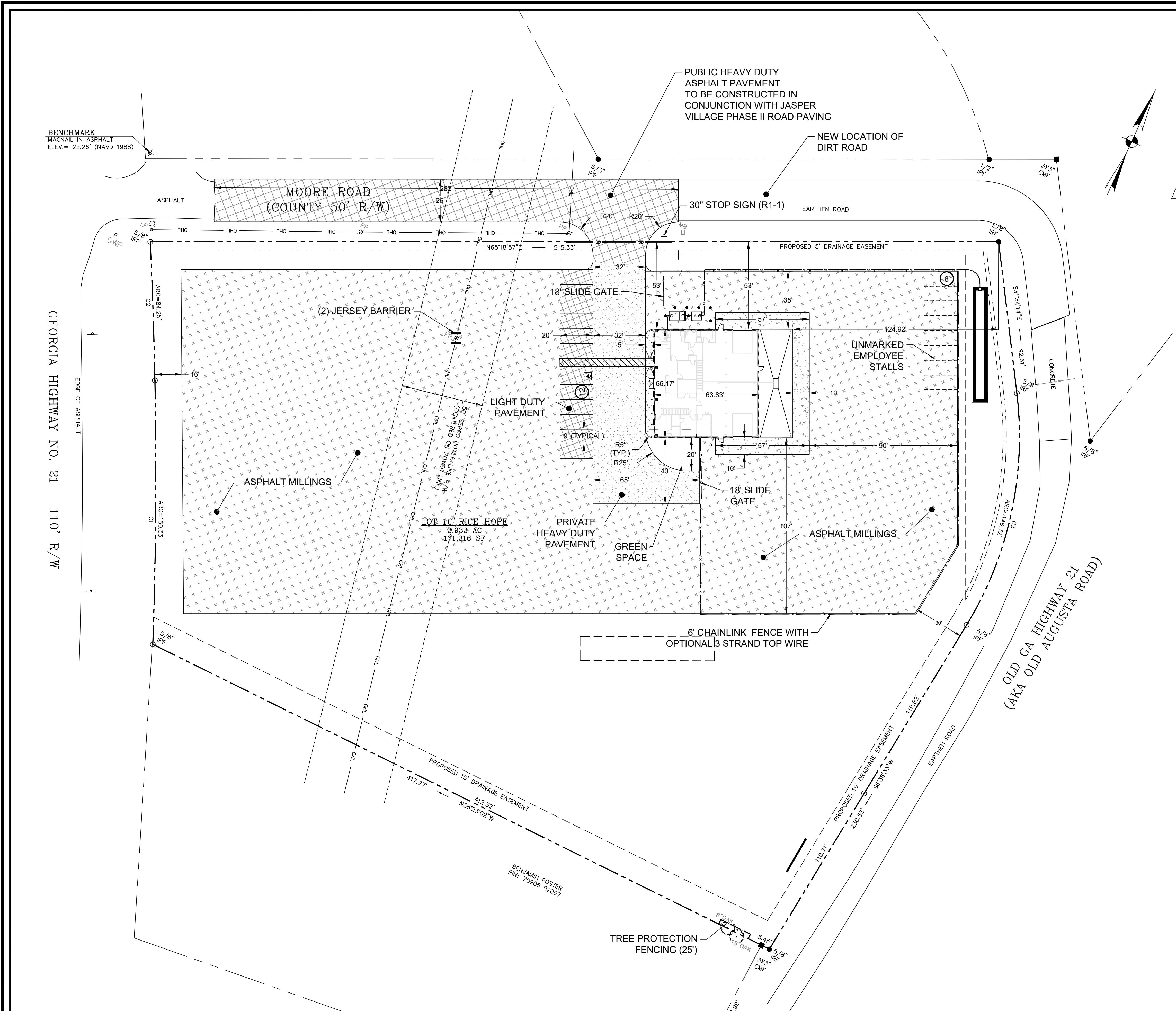
C.2

673-21-35

PROJECT NO.

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1-26-22 3017-Corr 100% Shop.dwg



REVISIONS	NO.	DATE	DESCRIPTION



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STAKING PLAN

PW TRUCK SALES

LEVEL II E&S



CERT. #21051 EXP. 12/1/2024

RELEASED FOR PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

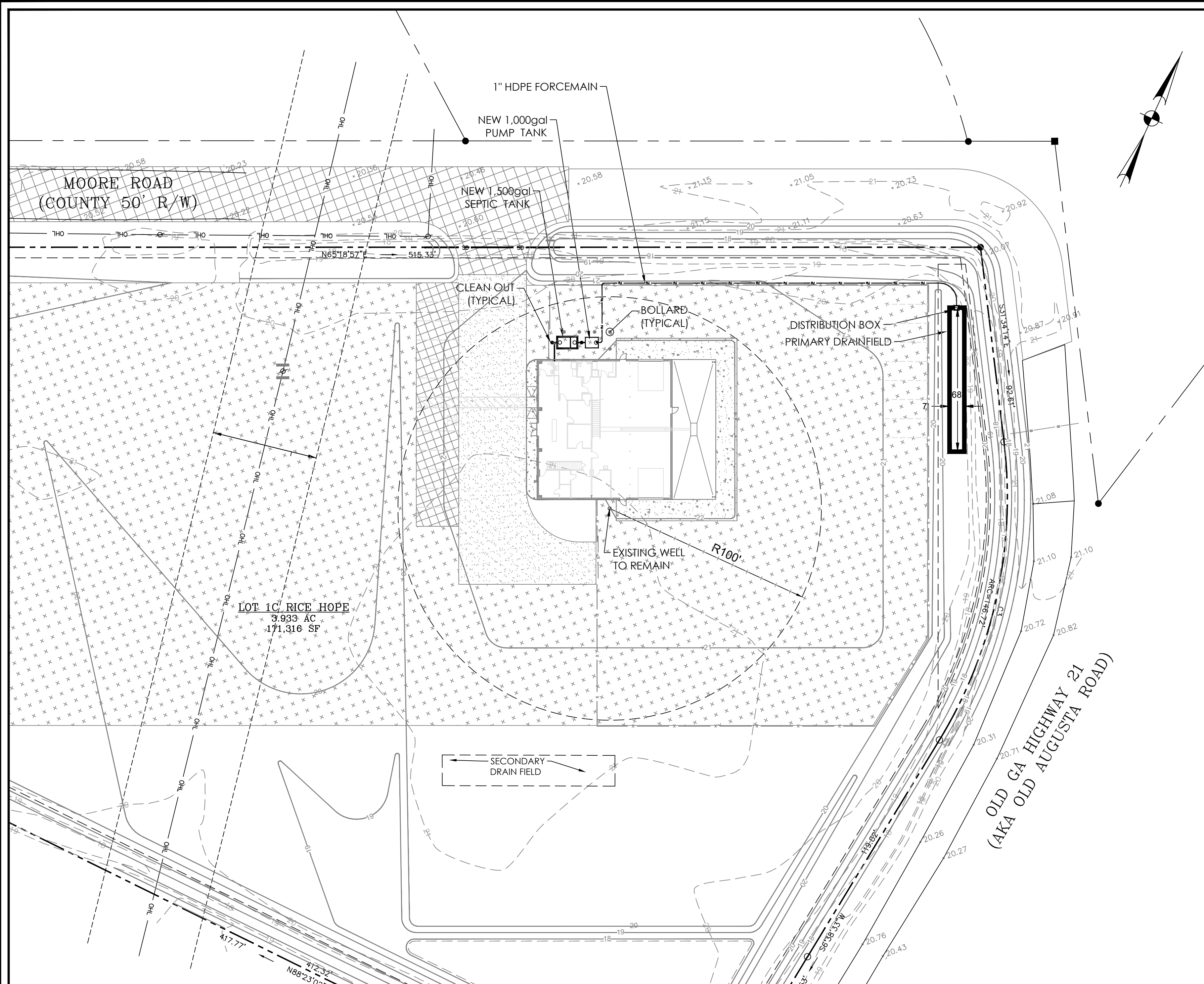
15 0 30
SCALE: 1" = 30'

SHEET NO.

C.3

673-21-35

PROJECT NO.



ABSORPTION FIELD SIZING:

BASED UPON BEST, INC. REPORT DATED 5/23/22
ABSORPTION RATE, T = 45MIN/IN

PROPOSED USE: TRUCK REPAIR (10 EMPLOYEES)

FLOW RATE (TABLE JT-1)
WORKERS COMMERCIAL = 25GDP/ EMPLOYEE

OF EMPLOYEES = 10 * 2 FACTOR OF SAFETY = 20

FLOW RATE, Q = 500GPD

$(T^{1/0.5/5}) * Q / 3ft = LF \text{ REQUIRED}$

$(45^{1/0.5/5}) * 500GPD / 3ft = 224lf$

33% REDUCTION FOR USE OF MULTI-PIPE = $224lf * 0.67 = 150lf \text{ REQUIRED}$

150LF PROVIDED

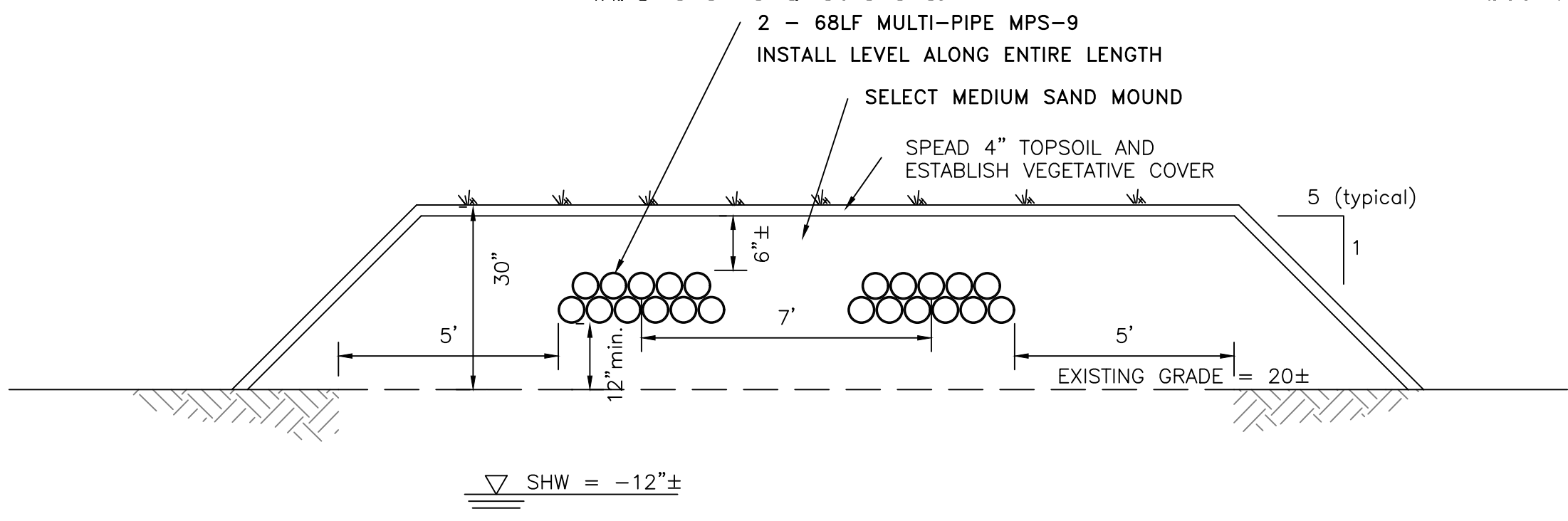
NOTE: NO EQUIPMENT WASH W/ATER IS ALLOWED IN THE SEPTIC SYSTEM.

NOTE:

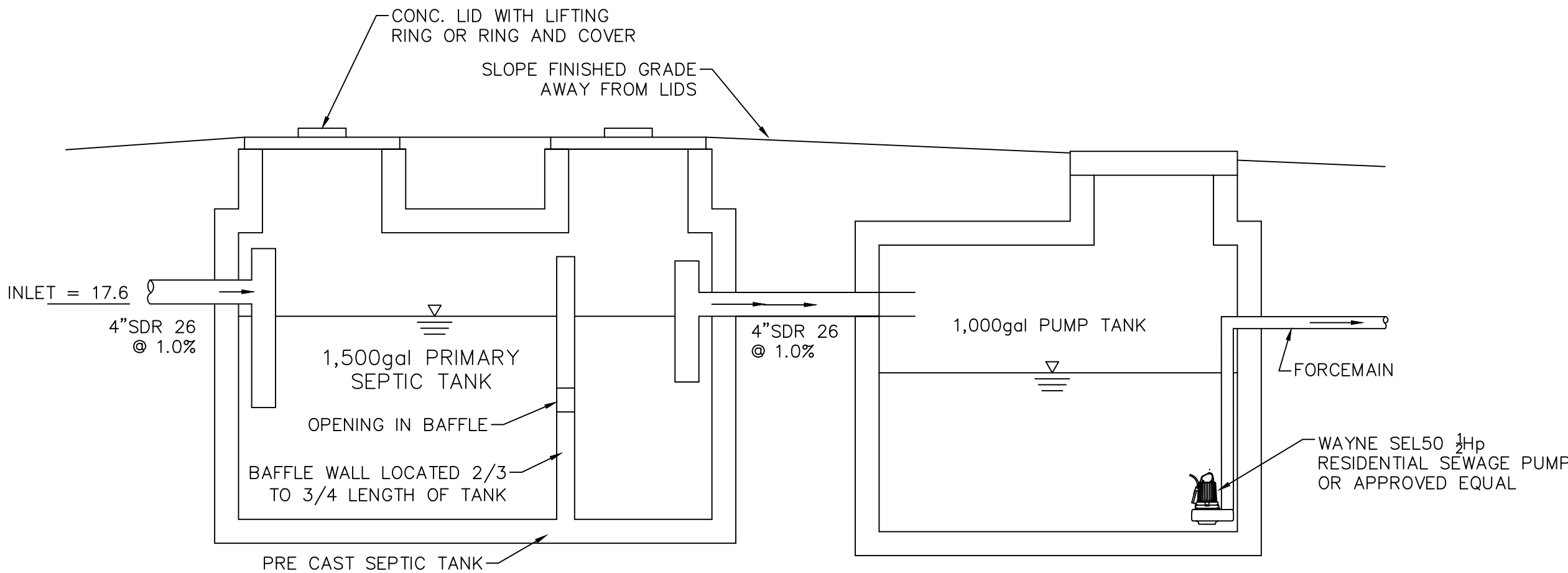
- PIN: 70906-02002
- ADDRESS: 8191 Old Hwy 21
Port Wentworth, Ga 31407
- High Ground: 3.9ac ±

I CERTIFY THIS ON-SITE SEWAGE MANAGEMENT SYSTEM MEETS THE MINIMUM DESIGN REQUIREMENTS ESTABLISHED BY THE DEPARTMENT OF COMMUNITY HEALTH. I HAVE MADE A SITE VISIT TO VERIFY THE SYSTEM CAN BE INSTALLED AS DESIGNED IN ACCORDANCE WITH THESE REGULATIONS.

Jay Maupin
JAY MAUPIN, P.E.



NITRIFICATION BED SECTION
NOT TO SCALE



NOTE:
1. SEPTIC TANK SHALL BE PLACED ON A MIN. OF 4" #57 STONE

SEPTIC PROFILE
NOT TO SCALE

REVISIONS	
NO.	DESCRIPTION

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engineering

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SAVANNAH, GA 31401

OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

UTILITY PLAN

PW TRUCK SALES

LEVEL II E&S

GEORGIA
REGISTERED
No. 23758
PROFESSIONAL
ENGINEER
JAY A. MAUPIN

CERT.#21051 EXP: 12/1/2024

STATUS:

RELEASED FOR PERMITTING

DRWN: TRW 1-26-2022

CHK'D: JAM DATE

SCALE: 1" = 30'

SHEET NO.

C.4

673-21-35

PROJECT NO.

BENCHMARK
MAGNAIL IN ASPHALT
ELEV. = 22.26' (NAVD 1988)

REESTABLISH ROADSIDE
DITCH AS REQUIRED

MOORE ROAD
(COUNTY 50' R/W)

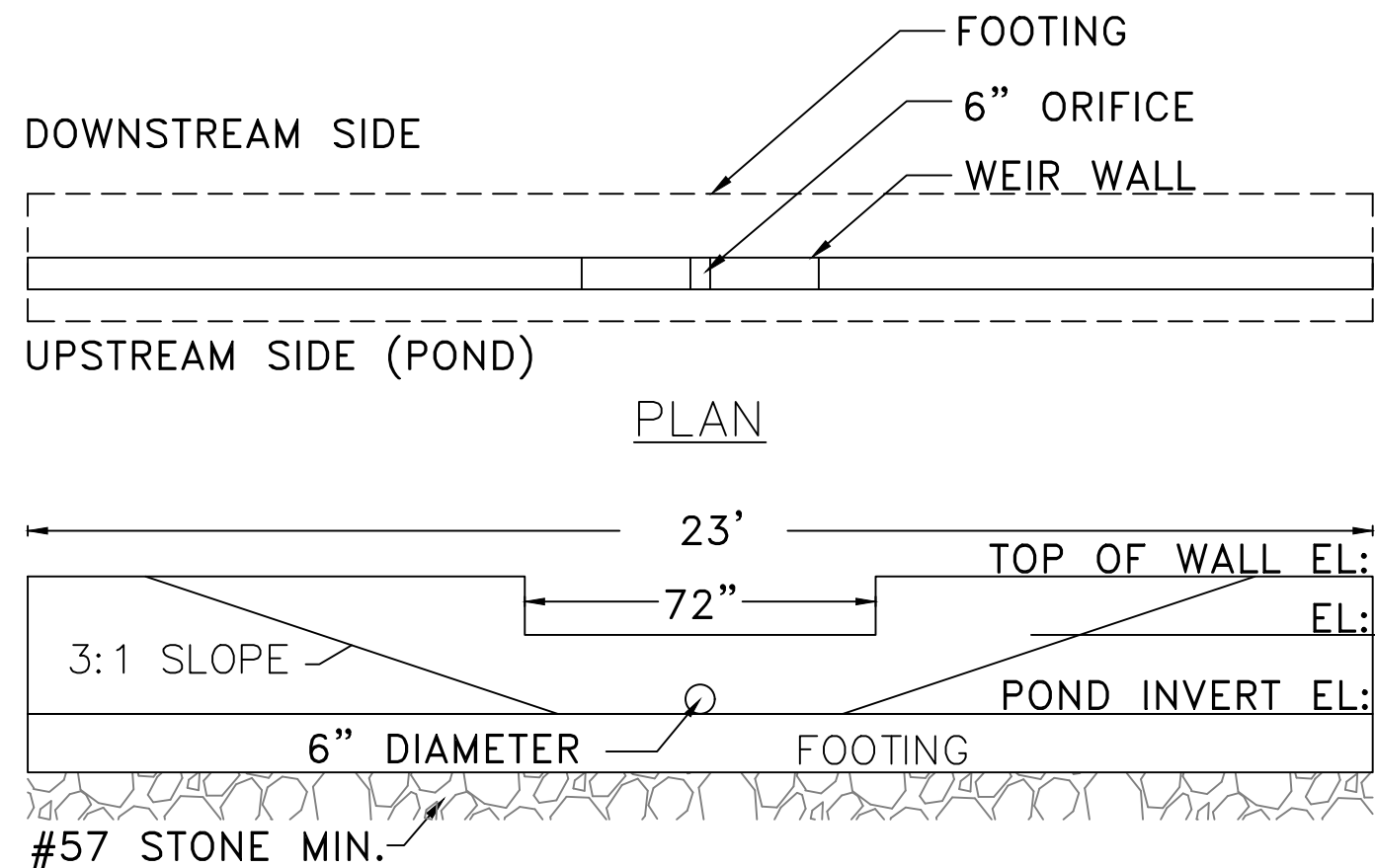
REESTABLISH ROADSIDE
DITCH

DOWNSTREAM WORK
PROPOSED BY JASPER VILLAGE

REESTABLISH ROADSIDE
DITCH AS REQUIRED

(OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD))

Pond	1-year	5-year	10-year	25-year	50-year	100-year
Qin	6.43	9.87	16.32	19.26	22.19	24.64
Qout	0.97	2.67	8.11	10.72	13.24	15.26
WSE	19.00	19.38	19.70	19.81	19.92	19.99
V	10,062	14,846	20,026	22,255	24,356	26,026



OUTFALL CONTROL STRUCTURE

NOT TO SCALE

NOTE: STRUCTURAL DESIGN BY OTHERS

Designer's Certification Statement

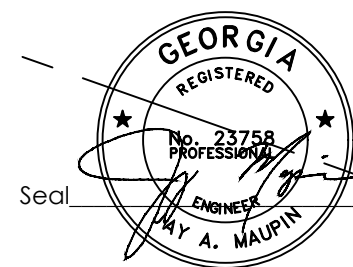
I, Jay Maupin, am a professional engineer registered in the State of Georgia, and am familiar with the requirements of PORT WENTWORTH Stormwater Management Ordinance, PORT WENTWORTH's Local Design Manual, PORT WENTWORTH's Flood Protection Ordinance, PORT WENTWORTH's Subdivision Ordinance, PORT WENTWORTH's Erosion and Sediment Control Ordinance, hydraulic engineering principles, and low impact design/green infrastructure design practices.

The attached design plans, Stormwater Management Report, and Stormwater Management Operations and Maintenance Plan for the site development known as PW TRUCK SALES located at 8191 OLD HWY. 21, PORT WENTWORTH, GEORGIA are designed in compliance with the Local Design Manual of PORT WENTWORTH, PORT WENTWORTH's Stormwater Management Ordinance, PORT WENTWORTH's Flood Protection Ordinance, PORT WENTWORTH's Subdivision Ordinance, and PORT WENTWORTH's Erosion and Sediment Control Ordinance.

Further, when constructed according to the design plans, and operated according to the facility Stormwater Operations and Maintenance Plan, the facility will function in compliance with the Local Design Manual of PORT WENTWORTH, PORT WENTWORTH's Stormwater Management Ordinance, PORT WENTWORTH's Flood Protection Ordinance, PORT WENTWORTH's Subdivision Ordinance, and PORT WENTWORTH's Erosion and Sediment Control Ordinance.

Name: Jay Maupin, PE
Address: 114 W. 42nd St.
City, State, Zip: Savannah, GA 31401
Daytime Telephone Number: 912-235-2915
Email Address: jay@maupinengineering.com
Cell Phone Number: 424-667-7757

Date: 6/14/22



REVISIONS

NO. DATE DESCRIPTION



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114 WEST 42ND STREET
SAVANNAH, GA 31401

GRADING PLAN

PW TRUCK SALES



RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022

CHK'D: JAM DATE

SHEET NO.

C.5
673-21-35

BENCHMARK
MAGNAIL IN ASPHALT
ELEV.= 22.26' (NAVD 1988)

GEORGIA HIGHWAY NO. 21 110' R/W

MOORE ROAD
(COUNTY 50' R/W)

LOT 1C RICE HOPE
9.933 AC
171,316 SF

TREE PROTECTION
FENCING (25')

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)

PLANTING SCHEDULE

ITEM	SCIENTIFIC NAME	COMMON NAME	QTY	SIZE	SPACING
UP	ULMUS PARVIFOLIA	DRAKE ELM	7	2.5" CALIPER	AS SHOWN
TD	TAXODIUM DISTICHUM	BALD CYPRESS	14	2.5" CALIPER	AS SHOWN

TOTAL 21

REVISIONS	NO.	DATE	DESCRIPTION



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LANDSCAPING PLAN

PW TRUCK SALES



CERT.#21051 EXP: 12/1/2024
STATUS:

RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

SCALE: 1" = 30'

SHEET NO.

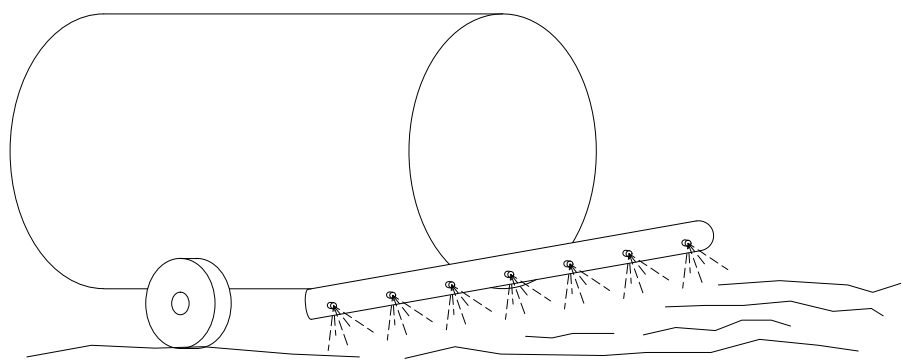
C.6
673-21-35
PROJECT NO.

INITIAL PHASE NOTES:

1. INSTALL THE CONSTRUCTION ENTRANCE AND THE CONCRETE WASHOUT AREA.
2. CONTROL SILT WITH INSTALLATION OF SEDIMENT BARRIERS, SILT FENCE, CHECKDAM HAYBALES 50 FEET ON CENTER, DUST CONTROL, TEMPORARY SEEDING, AND TEMPORARY SEDIMENT TRAPS



USGS QUAD - CHATHAM COUNTY - PORT WENTWORTH



CONTRACTOR SHALL EMPLOY THE FOLLOWING TEMPORARY METHODS TO LIMIT THE SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES:

*TEMPORARY METHODS:

- MULCHES
- SPRAY ON ADHESIVES
- TILLING
- IRRIGATION
- BARRIERS
- CALCIUM CHLORIDE

*PERMANENT METHODS

- PERMANENT VEGETATION
- TOPSOIL
- STONE COVER

*CHEMICAL CONTROL

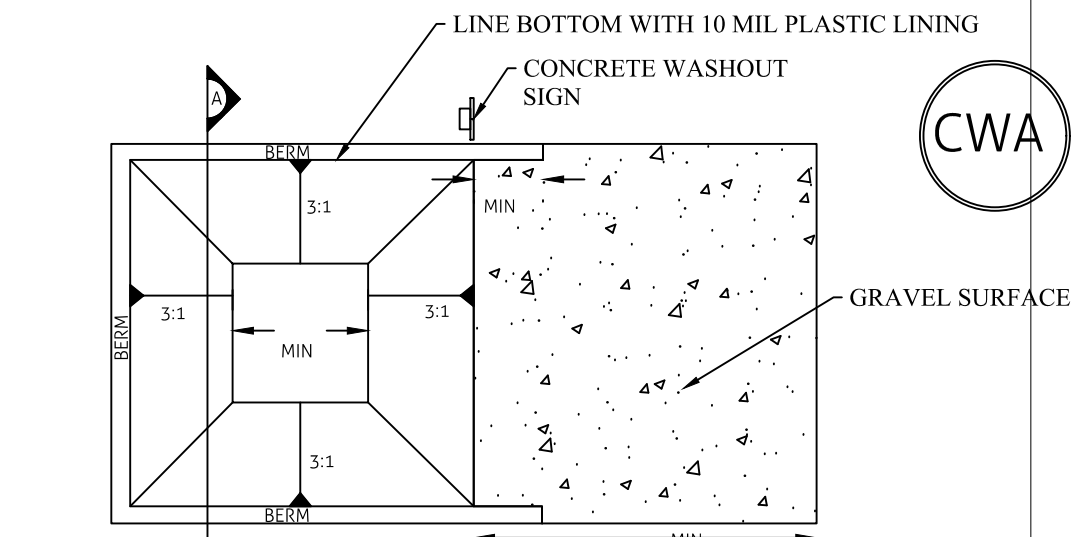
ADHESIVE	WATER DILUTION	TYPE OF NOZZLE	APPLICATION RATE (GAL/AC)
ANIOIC ASPHALT EMULSION	7:1	SPRAY	1200
LATEX EMULSION	12 1/2:1	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1	FINE SPRAY	300

DUST CONTROL ON DISTURBED AREAS

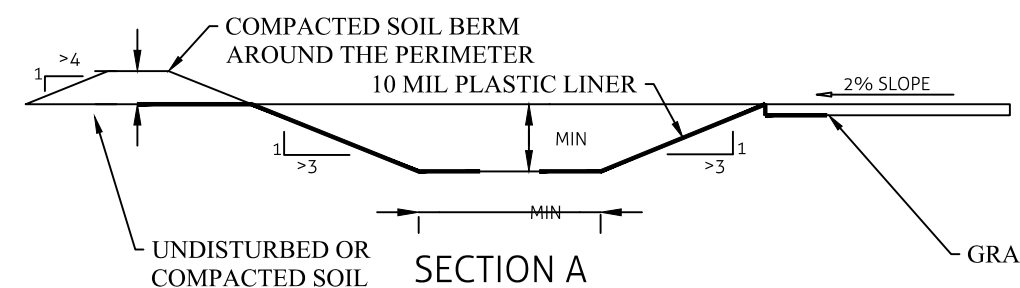
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CONCRETE WASHOUT AREA

(CWA)



CONCRETE WASHOUT AREA PLAN



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

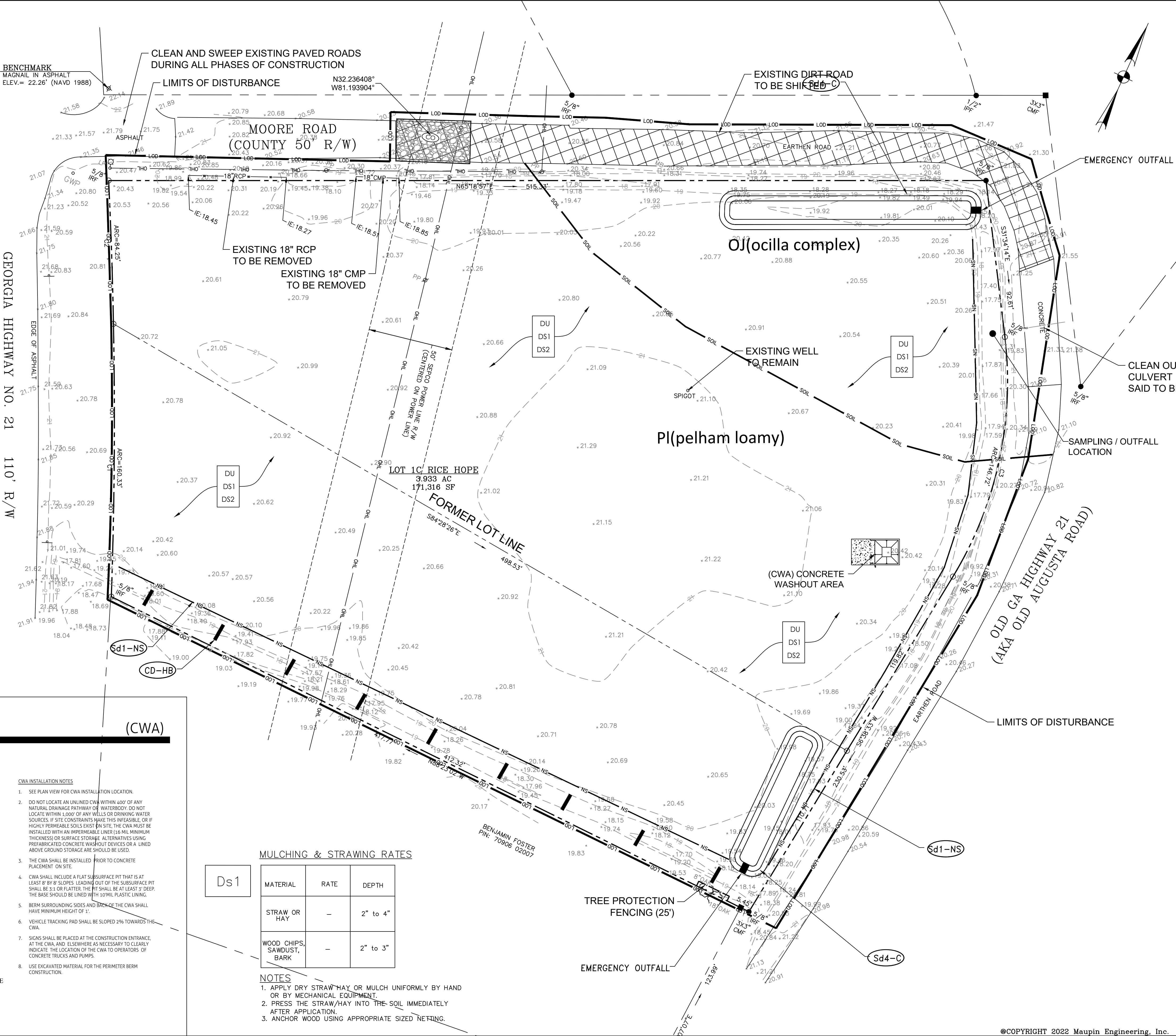
1. SEE PLAN VIEW FOR CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (6 MIL MINIMUM THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP. THE BASE SHOULD BE LINED WITH 10MIL PLASTIC LINING.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMPS.
8. USE EXCAVATED MATERIAL FOR THE PERIMETER BERM CONSTRUCTION.

MULCHING & STRAWING RATES

MATERIAL	RATE	DEPTH
STRAW OR HAY	-	2" to 4"
WOOD CHIPS, SAWDUST, BARK	-	2" to 3"

NOTES

1. APPLY DRY STRAW/HAY OR MULCH UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
2. PRESS THE STRAW/HAY INTO THE SOIL IMMEDIATELY AFTER APPLICATION.
3. ANCHOR WOOD USING APPROPRIATE SIZED NETTING.



REVISIONS	DATE	DESCRIPTION
NO.		

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**SEDIMENT AND EROSION
CONTROL PLAN - INITIAL**

PW TRUCK SALES

LEVEL II E&S

GEORGIA
REGISTERED
PROFESSIONAL
ENGINEER
MAUPIN

CERT.#21051 EXP: 12/1/2024

STATUS:

**RELEASED
FOR
PERMITTING**

DRWN: JAW 1-26-2022
CHKD: TRM DATE

SCALE: 1" = 40'

SHEET NO.

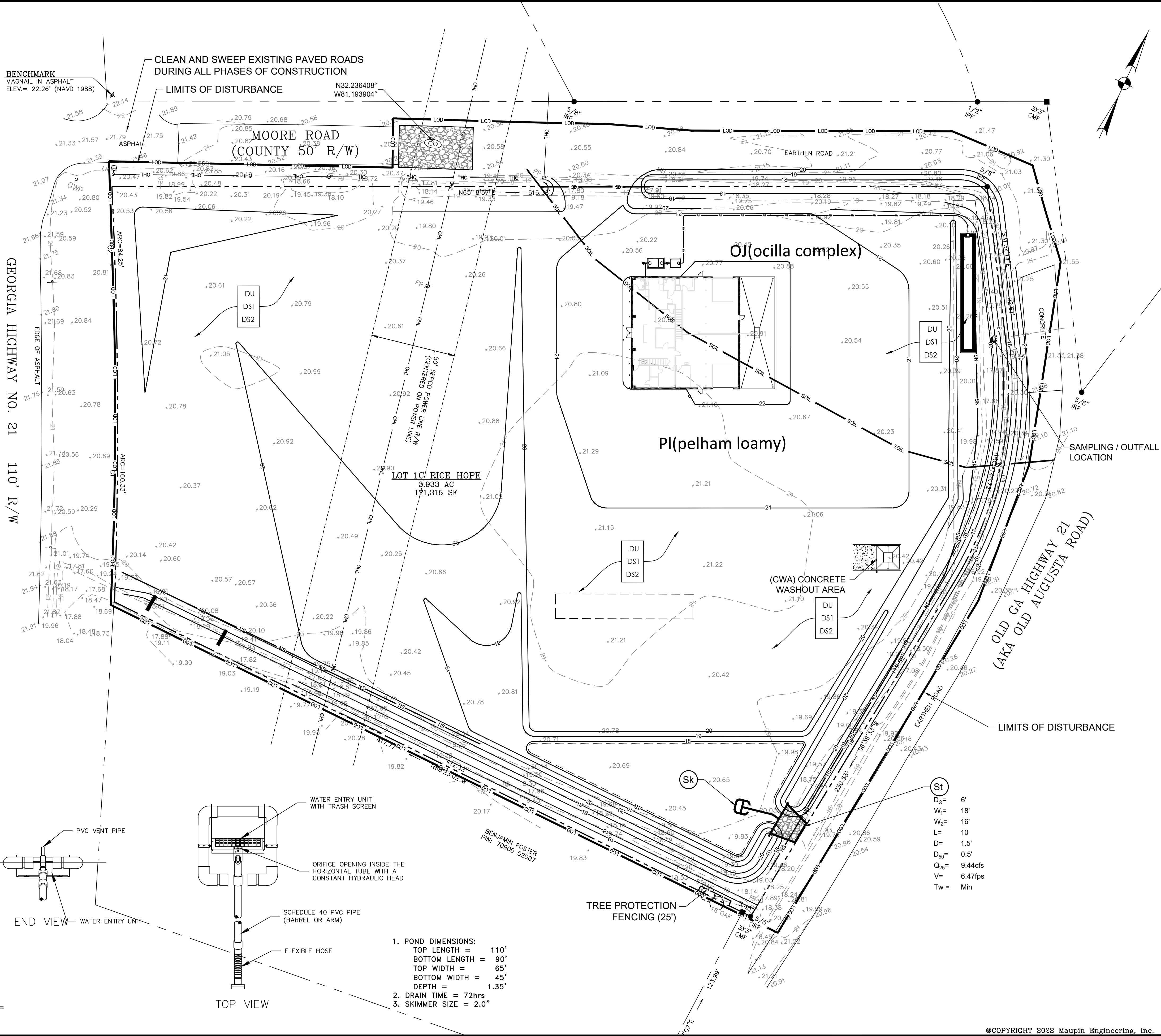
C.e1
673-21-35

PROJECT NO.

SEEDING RATES FOR TEMPORARY & PERMANENT COVER						
Ds2	MONTH	TEMPORARY COVER	RATES PER ACRE	MONTH	PERMANENT COVER	RATES PER ACRE
Ds3	MARCH-JUNE	COMMON BERMUDA (HULLED) WEeping LOVEGRASS	10 lbs. 4 lbs.	MARCH-JUNE	COMMON BERMUDA (HULLED) WEeping LOVEGRASS	10 lbs. 4 lbs.
	APRIL-AUGUST	BROWN TOP MILLET SUDANGRASS PEARL MILLET	40 lbs. 60 lbs. 50 lbs.	JULY-AUGUST	COMMON BERMUDA (HULLED) & BROWN TOP MILLET COMMON BERMUDA (HULLED) & WEeping LOVEGRASS COMMON BERMUDA (HULLED) & PENSACOLA BAHIA & BROWN TOP MILLET PENSACOLA BAHIA & WEeping LOVEGRASS & BROWNTOP MILLET	10 lbs. 10 lbs. 2 lbs. 6 lbs. 30 lbs. 10 lbs. 60 lbs. 10 lbs. 30 lbs. 2 lbs. 10 lbs.
	SEPT.-FEBRUARY	RYE (MOST WINTER HARD) RYEGRASS BARLEY WHEAT	3 BU 40 lbs. 3 BU 3 BU			
NOTES						
1. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT JUNE THROUGH OCTOBER.						
2. LISTED IN ORDER OF PREFERENCE.						
3. ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED.						

- Ds2-Ds4 NOTES:
- Ds2
- A TEMPORARY GRASSING OF ANNUAL RYEGRASS SHALL BE APPLIED AT A RATE OF 40 LBS PER ACRE TO DISTURBED AREAS WITHIN 14 DAYS OF DISTURBANCE. THE PROPOSED ANNUAL RYEGRASS SHALL BE APPLIED DURING THE MONTHS OF SEPTEMBER THRU DECEMBER.
 - A 6-12-12 FERTILIZER SHALL BE USED ON THE DISTURBED AREA OF Ds2 AND SHALL BE APPLIED AT A RATE OF 1500 LBS. PER AC.
 - AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE.
- Ds3
- A PERMANENT GRASSING OF UNHULLED COMMON BERMUDA SHALL BE APPLIED AT A RATE OF 10 LBS. PER ACRE DURING THE MONTHS OF SEPTEMBER THRU FEBRUARY. IF A HYDRAULIC SEEDER IS TO BE USED, REFER TO THE EROSION AND SEDIMENT CONTROL MANUAL FOR FURTHER DIRECTION ON THE METHOD OF APPLICATION.
 - A 6-12-12 FERTILIZER SHALL BE USED ON THE DISTURBED AREA OF Ds3 AND SHALL BE APPLIED AT RATE OF 1500 LBS. PER AC.
 - DRIED STRAW OR DRY HAY SHALL BE USED FOR MULCHING AND APPLIED AT A RATE OF 2 TONS PER ACRE. MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING. THE MULCH MAY BE SPREAD BY BLOWER-TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE.
 - AGRICULTURAL LIME IS REQUIRED AT A RATE OF 1 -2 TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE.
- Ds4
- SOIL SURFACE IS BROUGHT TO FINAL GRADE AND CLEAR OF ANY TRASH, DEBRIS, AND CLODS LARGER THAN 1".
 - SOD SHOULD BE APPLIED TO SOIL SURFACE ONLY (NOT TO FROZEN OR GRAVEL TYPE SOILS). CUT AND INSTALLED WITHIN 36 HOURS OF DIGGING.
 - LIME & FERTILIZER SHOULD BE APPLIED BASED ON SOIL TESTS OR AT A RATE OF 1 - 2 TONS PER ACRE.
 - SOD SHOULD BE ANCHORED WITH PINS ON SLOPES STEEPER THAN 3:1
 - IRRIGATION SHOULD BE USED AS A SUPPLEMENT TO RAINFALL FOR A MIN OF 2 - 3 WEEKS
 - GRASS HEIGHT SHOULD NOT BE CUT LESS THAN 2" - 3" WHEN MOWING

- INTERMEDIATE PHASE NOTES:
- MAINTAIN ALL TEMPORARY BMPs AS SHOWN IN INITIAL PHASE.
 - CONTINUE TO USE TEMPORARY SEEDING AND DUST CONTROL. PERMANENT SEEDING CAN BE APPLIED TO AREAS WHICH WILL RECEIVE SODDING IN THE FINAL PHASE.
 - ADD SKIMMER TO WEIR WALL AND ADD RIP RAP TO OUTLET OF WEIR WALL BEING INSTALLED.



REVISIONS

NO.	DATE	DESCRIPTION
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SEDIMENT AND EROSION
CONTROL PLAN - INTERMEDIATE

PW TRUCK SALES

LEVEL II E&S

REGISTERED PROFESSIONAL ENGINEER
MAUPIN
No. 23758
CERT.#21051 EXP. 12/1/2024

RELEASED FOR PERMITTING

DRWN: JAW 1-26-2022
CHK'D: TRM DATE

15 0 30
SCALE: 1" = 30'

SHEET NO.

C.e2
673-21-35

PROJECT NO.

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BENCHMARK
MAGNAIL IN ASPHALT
ELEV.= 22.26' (NAVD 1988)

CLEAN AND SWEEP EXISTING PAVED ROADS
DURING ALL PHASES OF CONSTRUCTION

LIMITS OF DISTURBANCE

N32.236408°
W81.193904°

MOORE ROAD
(COUNTY 50 R/W)

OJ(ocilla complex)

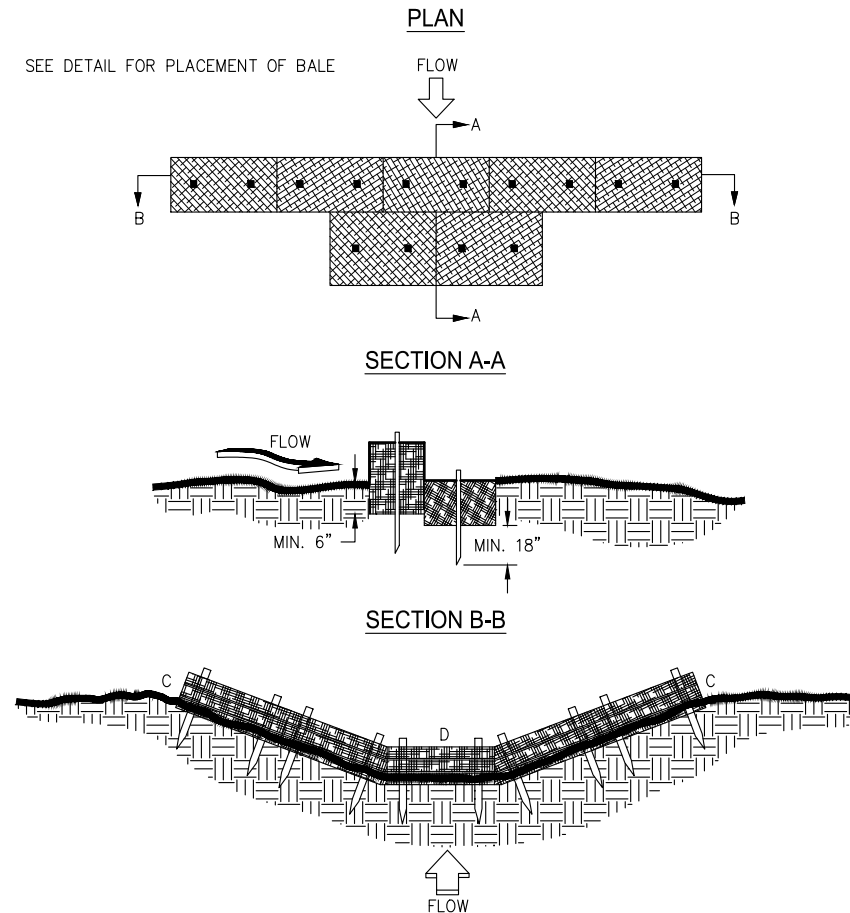
PI(pelham loamy)

LOT 1C RICE HOPE
3.933 AC
171,316 SF

GEORGIA HIGHWAY NO. 21
110' R/W

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)

TYPICAL STRAW BALE CHECK DAM



NOTES:
1. BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH
BALE ENDS TOGETHER ADJUTING THE ADJACENT BALES.
2. REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
3. POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

- NOTE:
1. ONCE THE SITE IS PAVED, THE CONSTRUCTION EXIT WILL NO LONGER BE REQUIRED.
2. ONCE THE SITE IS STABILIZED, REMOVE ALL TEMPORARY BMP'S

Ds4 = SOD

SOD COVER

Ds4	GRASS	TEMPORARY VARIETIES	RESOURCE AREA	GROWING SEASON
	BERMUDA	COMMON TIFWAY TIFGREEN TIFLAWN	M-L, P, C P, C P, C	WARM WEATHER
	CENTPEDE	---	P, C	WARM WEATHER
	ST. AUGUSTINE	COMMON BITTERBLUE RALEIGH	C	WARM WEATHER

- NOTES:
1. STAGER ALL JOINTS
2. ANCHOR WITH PINS ON SLOPES STEEPER THAN 3:1
3. IRRIGATE SOD IMMEDIATELY AFTER INSTALLATION
4. RE-SOD AREAS WHERE AN ADEQUATE STAND IS NOT OBTAINED.
5. LIME SHOULD BE APPLIED BASED ON SOIL TEST OR
AT A RATE OF 1-2 TONS/AC.
6. 10-10-10 FERTILIZER SHALL BE APPLIED TO THE SOIL PRIOR TO SOD
PLACEMENT AT A RATE OF 1000lbs/AC DURING THE FALL.

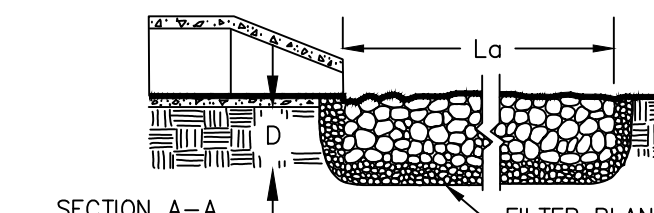
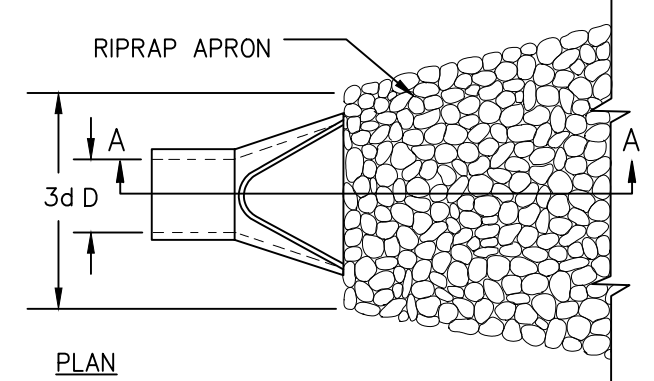
FERTILIZER REQUIREMENTS FOR SOD

GRASS	PLANTING YEAR	FERTILIZER (N-P-K)	RATE lbs/ac	NITROGEN lbs/ac
COOL SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 1000 400	50-100 - 30
WARM SEASON GRASSES	FIRST SECOND MAINTENANCE	6-12-12 6-12-12 10-10-10	1500 800 400	50-100 50-100 30

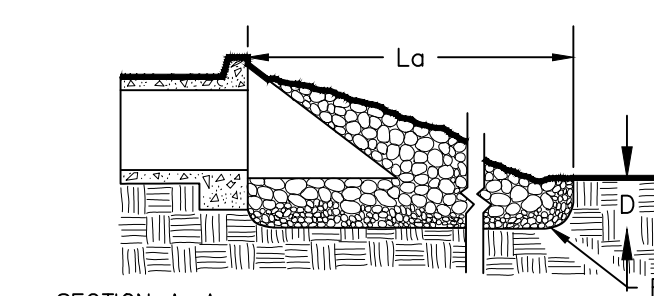
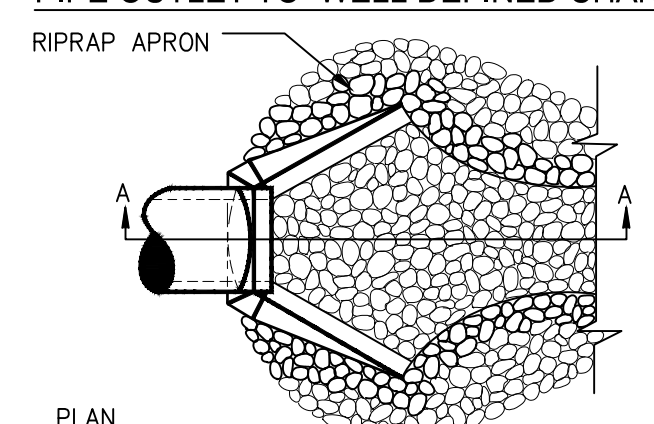
St RIPRAP OUTLET PROTECTION

PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL

- NOTES:
1. L_a IS THE LENGTH OF THE RIPRAP
APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE
DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL, EXTEND
THE APRON UP THE CHANNEL BANKS TO
AN ELEVATION OF 6" ABOVE THE
MAXIMUM TAILWATER DEPTH OR TO THE
TOP OF THE BANK (WHICHEVER IS LESS).
4. A FILTER BLANKET OR FILTER FABRIC
SHOULD BE INSTALLED BETWEEN THE
RIPRAP AND THE SOIL FOUNDATION.



PIPE OUTLET TO WELL DEFINED CHANNEL



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REVISIONS	DESCRIPTION
NO.	DATE

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SEDIMENT AND EROSION
CONTROL PLAN - FINAL
PW TRUCK SALES

LEVEL II E&S
REGISTERED
No. 23758
PROFESSIONAL
ENGINEER
MAUPIN
CERT.#21051 EXP. 12/1/2024

RELEASED
FOR
PERMITTING

DRWN: TRW 1-26-2022
CHKD: JAM DATE

SCALE: 1" = 30'

SHEET NO.

C.e3
673-21-35

PROJECT NO.

ES&PC
ITEM #

THIS PLAN WAS PREPARED AS REQUIRED BY NPDES GENERAL PERMIT NO. GAR 100001. THESE PLAN SHEETS AND ALL REQUIREMENTS OF THE GENERAL PERMIT AS WELL AS LOCAL, STATE, AND FEDERAL REGULATIONS OR LAWS APPLY REGARDLESS OF SPECIFIC INCLUSION IN THIS PLAN.

OWNER/DEVELOPER (PRIMARY PERMITTEE) WILL OVERSEE SITE CONSTRUCTION LOCATED ON THE PROPERTY SITUATED IN THE UNINCORPORATED PORT WENTWORTH. PIN: 70906 02002

THE DESIGNER WAS NOT KNOWLEDGEABLE OF ANY SECONDARY PERMITTEES AT THE TIME OF PRODUCTION OF THE DRAWINGS.

2 DESIGN PROFESSIONAL'S CREDENTIALS:

ENGINEER'S NAME (PRINTED): JAY MAUPIN, PE
GEORGIA PE NUMBER: 23758
GSWCC LEVEL I CERTIFICATION NUMBER: 21051
CERTIFICATION NUMBER EXPIRATION DATE: 12/1/2024

4

24 HOUR CONTACT
KIM THOMAS
912-777-3404

5 PRIMARY PERMITTEE:

KIM THOMAS
119 CANAL STREET SUITE 106
POOLER, GEORGIA 31322
o:912-777-3404
kim@DEWITTILTONGROUP.COM

6 THE TOTAL PARCEL AREA IS 3.93(+/-) ACRES. THE DISTURBED AREA IS 4.1(+/-)ACRES.

7 CONSTRUCTION EXIT LOCATION

N: 32.236470°
W: 81.193608°

9 THE SITE OF THIS PROJECT IS CURRENTLY A VACANT COMMERCIAL DEVELOPMENT. THE SITE OF THIS PROJECT IS INTENDED TO BE DEVELOPED AS A TRUCK REPAIR SHOP.

11 NAME OF RECEIVING WATERS

ON-SITE DETENTION ==> ABERCORN CREEK ==> SAVANNAH RIVER

THE FINAL RECEIVING WATERS SUPPORTS WARM WATER FISHERIES. THIS PROJECT DEVELOPMENT WILL NOT HAVE POST-DEVELOPMENT RUN-OFF THAT WILL AFFECT THE NEIGHBORING AREAS.

12 I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION.

Jay Maupin
6/14/22
Date

13 I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL), PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OF THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR100001.

Jay Maupin
6/14/22
Date

14 THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S WITHIN 7 DAYS AFTER INSTALLATION.

15 NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

17 AMENDMENTS / REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

18 WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

19 THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

20 EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

21 ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

24 CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE. CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLES AT THE SITE MUST BE DONE AT THE CONCRETE WASHOUT AREA (CWA) AS SHOWN ON PLANS. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS STRICTLY PROHIBITED.

25 PETROLEUM-BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ONSITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS, AND STORMWATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS, AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS. PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORMWATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

FERTILIZER/HERBICIDE - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIALS WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

SPILL CLEANUP AND CONTROL PRACTICES

LOCAL, STATE, AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS. SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS. FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.

FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802. FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS. FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED AND LOCAL AGENCIES CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED WITH PLAN IF MORE THAN 1,320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

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26 UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL MEASURES EXCEPT THE PERMANENT GRASSING AND RIP RAP IN AREAS OF HIGH VELOCITY DISCHARGE.

27 FOR BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE, THE CONTRACTOR SHALL PROVIDE COVER (E.G. PLASTIC SHEETING, TEMPORARY ROOFS) TO MINIMIZE THE EXPOSURE OF THESE PRODUCTS TO PRECIPITATION AND TO STORMWATER, OR A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THESE AREAS.

28 POLLUTANTS FROM THE SITE CONSTRUCTION WILL BE TREATED BY THE THE TEMPORARY SEDIMENT POND AND THE DETENTION POND INSTALLED DURING CONSTRUCTION

30 INSPECTIONS

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT:
(A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND
(B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(2). MEASURE AND RECORD RAINFALL WITHIN DISTURBED AREAS OF THE SITE THAT HAVE NOT MET FINAL STABILIZATION ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY. THE DATA COLLECTED FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

(3). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST):
(A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE;
(B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND
(C) STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY.

WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

(4). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS(S).

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.

(6). A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION SITE THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

SAMPLING FREQUENCY.

(1). THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.

(2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORMWATER DISCHARGE.

(3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:

(A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;

(B). IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORMWATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

(C). AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;

(D). WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED. PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND

(E). EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL, SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

REPORTING.

1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD USING THE ELECTRONIC SUBMITTAL SERVICE PROVIDED BY EPD. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

- THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
- THE DATE(S) ANALYSES WERE PERFORMED;
- THE TIME(S) ANALYSES WERE INITIATED;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
- REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
- THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
- RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND
- CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

32 RETENTION RECORDS

1. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:

- A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
- A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
- THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
- A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
- A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
- A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART II.D.2. OF THIS PERMIT; AND
- DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.

2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE

33 SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:

(1). A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE STAND ALONE CONSTRUCTION; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP; AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION. INTO WHICH THE STORMWATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORMWATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

(2). A WRITTEN NARRATIVE OF SITE SPECIFIC ANALYTICAL METHODS USED TO COLLECT, HANDLE AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION;

(3). WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE SAMPLED, A RATIONALE MUST BE INCLUDED ON THE PLAN FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND

(4). ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL SAMPLE TYPE.

ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

(1). SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.

(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

(3). LARGE MOUTH, WELL CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

(4). MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. IF AUTOMATIC SAMPLING IS UTILIZED AND THE AUTOMATIC SAMPLER IS NOT ACTIVATED DURING THE QUALIFYING EVENT, THE PERMITTEE MUST UTILIZE MANUAL SAMPLING OR RISING STAGE SAMPLING DURING THE NEXT QUALIFYING EVENT. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.

(5). SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

29

TENTATIVE ACTIVITY SCHEDULE											
	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11
CONSTRUCTION EXIT											
SILT FENCING AND OTHER E&S PRACTICES											
CLEARING AND GRUBBING											
GRADING / UTILITY INSTALLATION											
DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)											
FINE GRADING AND PAVING											
BUILDING CONSTRUCTION											
DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)											
LANDSCAPE INSTALLATION											
MAINTAIN ES & PC BMPs											

SAMPLING POINTS.

(1). FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORMWATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:

(A). THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.

(B). THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.

(C). IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORMWATER OUTFALL CHANNEL(S).

(D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER CHANNEL.

(E). THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

(F). THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

(G). PERMITTEES DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR LANDSCAPED ACCORDING TO THE PLAN (UNIFORMLY COVERED WITH LANDSCAPING MATERIALS IN PLANNED LANDSCAPED AREAS), OR EQUIVALENT PERMANENT STABILIZATION MEASURES AS DEFINED IN THE MANUAL (EXCLUDING A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION).

(H). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORMWATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS II.D.3 OR II.D.4., WHICHEVER IS APPLICABLE.

34 SAMPLE ANALYSIS

STORMWATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORMWATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001".

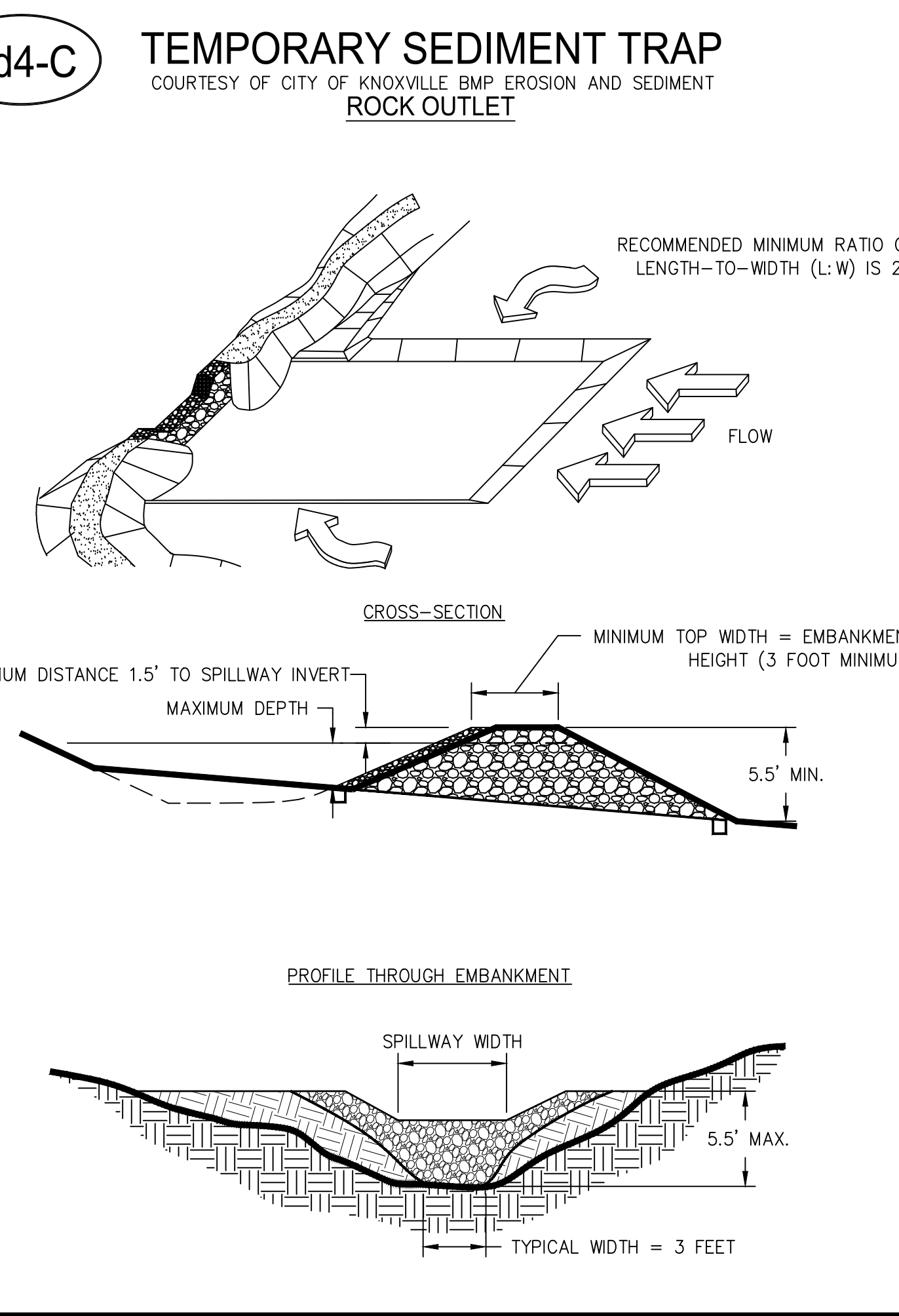
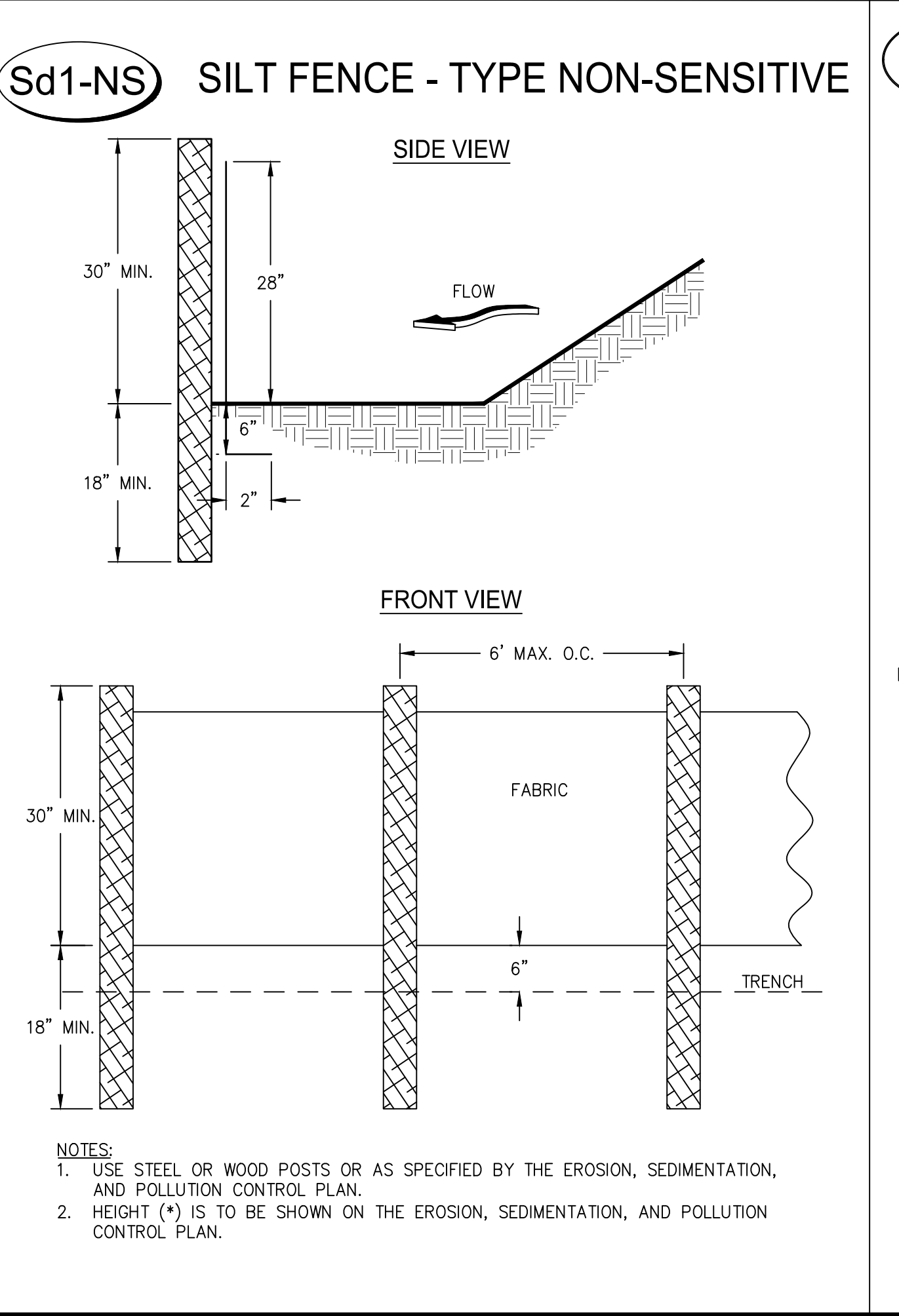
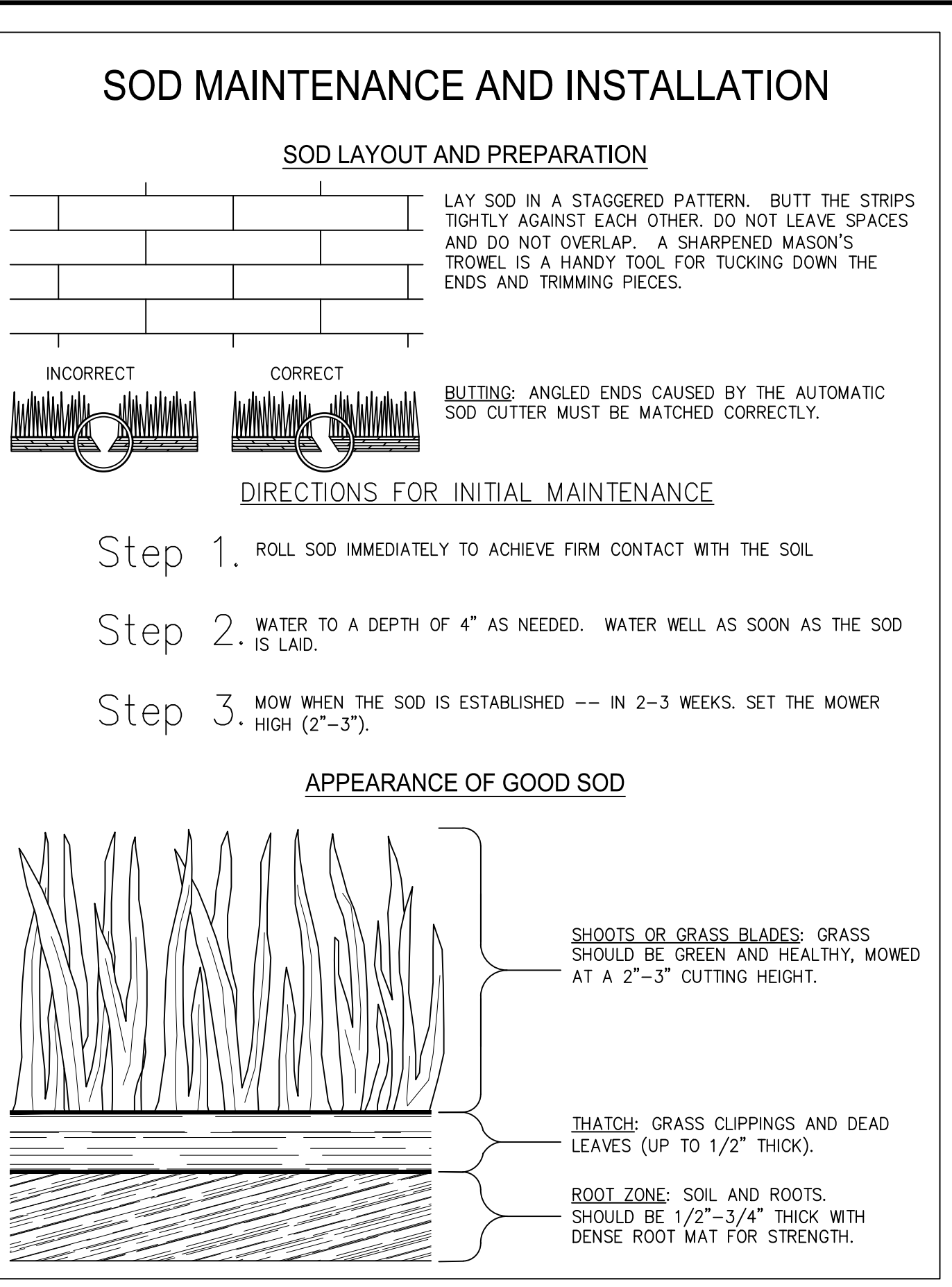
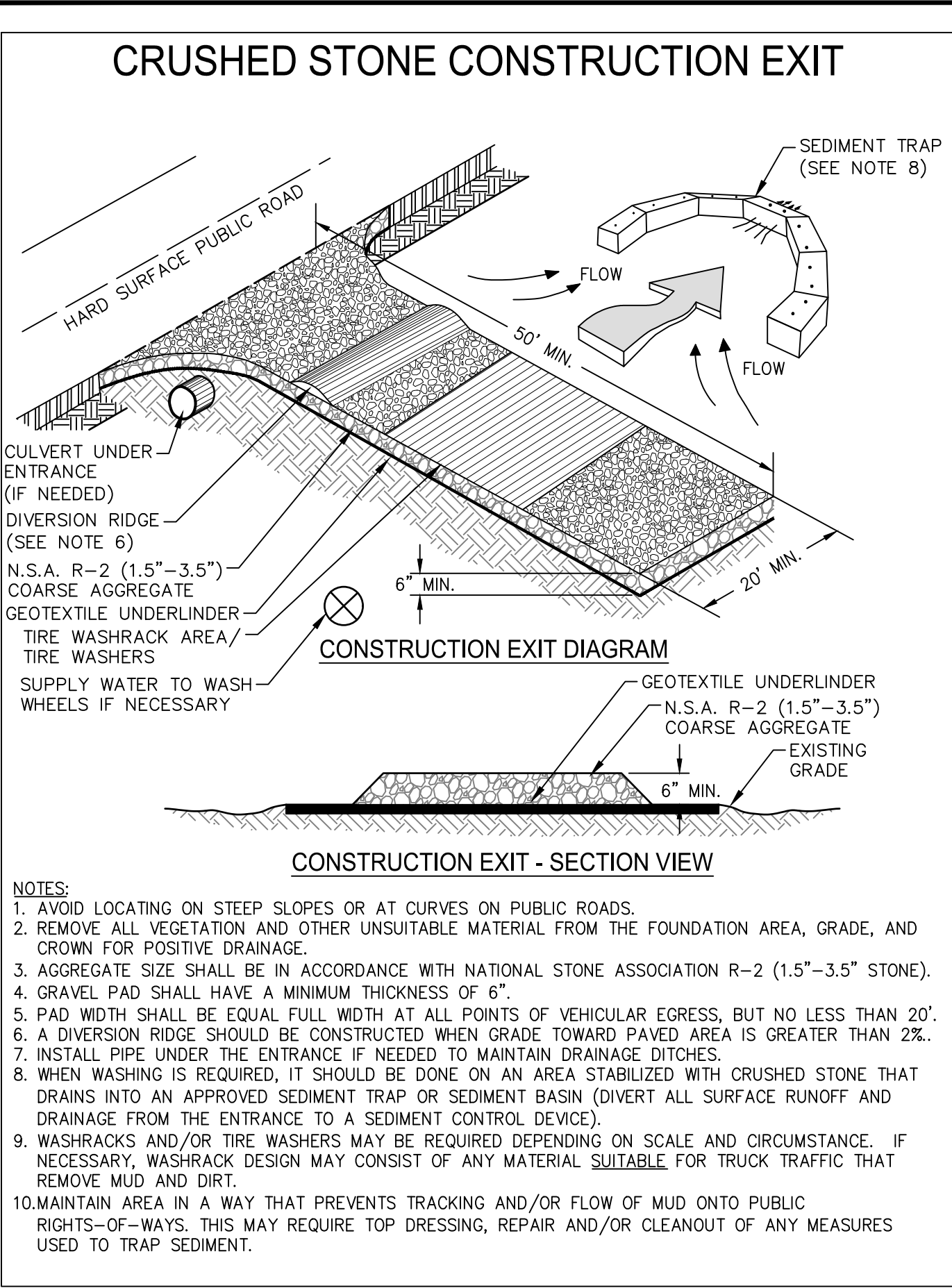
STORMWATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORMWATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 75. THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT NO. GAR 100001. THE NTU IS BASED UPON THE SITE ACREAGE OF 3.93 ACRES FOR THE PROJECT SITE, THE SURFACE WATER DRAINAGE AREA OF 0.04 SQUARE MILES, AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

45 RUNOFF COEFFICIENT

• WEIGHTED PRE-CONSTRUCTION CN CURVE NUMBER: 92 25-YEAR EVENT RUNOFF ESTIMATE: 8.56 CFS
• WEIGHTED POST-CONSTRUCTION CN CURVE NUMBER: 89 25-YEAR EVENT RUNOFF ESTIMATE: 7.96 CFS

49 SEDIMENT STORAGE CALCULATIONS:

BASIN NUMBER	DRAINAGE AREA A	REQUIRED STORAGE VOLUME SVR, (A*67cy)	STORAGE METHOD	PROVIDED STORAGE VOLUME SVA	REQUIREMENT MET? YES/NO
PRE-1	2.16	144.7 CY	Sd4-C	200	YES
PRE-2	1.77	118.6 CY	Sd4-C	125	YES
POST-1	2.65	177.6 CY	DETENTION POND	260	YES
POST-2	0.32	21.4 CY	DETENTION POND	25	YES
BYPASS-1	0.14	0 CY	--	0	YES
BYPASS-2	0.41	0 CY	--	0	YES
BYPASS-3	0.41	0 CY	--	0	YES



STRUCTURAL PRACTICES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER			A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM			Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wl	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)			A permanent vegetative cover using sods on highly erodable or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

REVISIONS

DATE

DESCRIPTION

NO.

MAUPINtm

engineering

114 WEST 42ND STREET
SAVANNAH, GA 31401

OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

EROSION CONTROL DETAILS

PW TRUCK SALES

LEVEL II E&S

REGISTERED PROFESSIONAL ENGINEER
NO. 23758
STATE OF GEORGIA
W. A. MAUPIN

CERT.#21051 EXP-12/1/2024

STATUS: RELEASED FOR PERMITTING

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

NOT TO SCALE

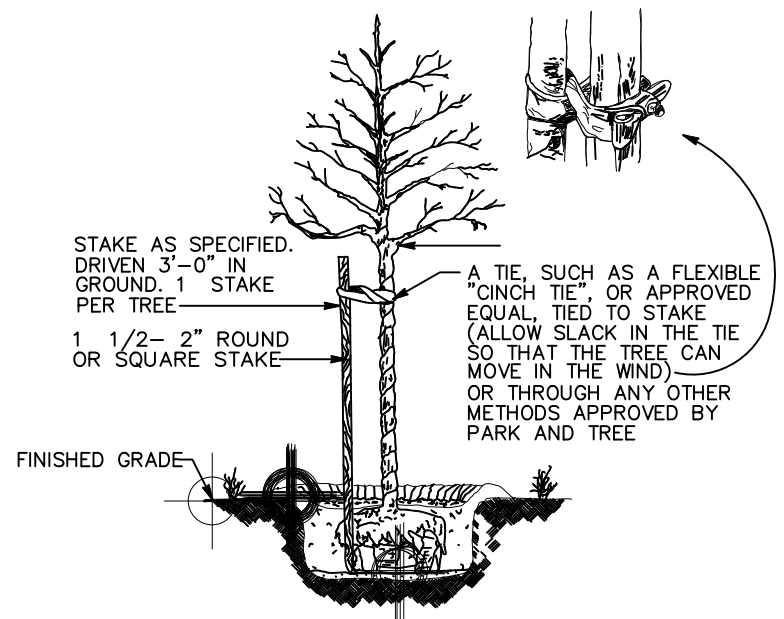
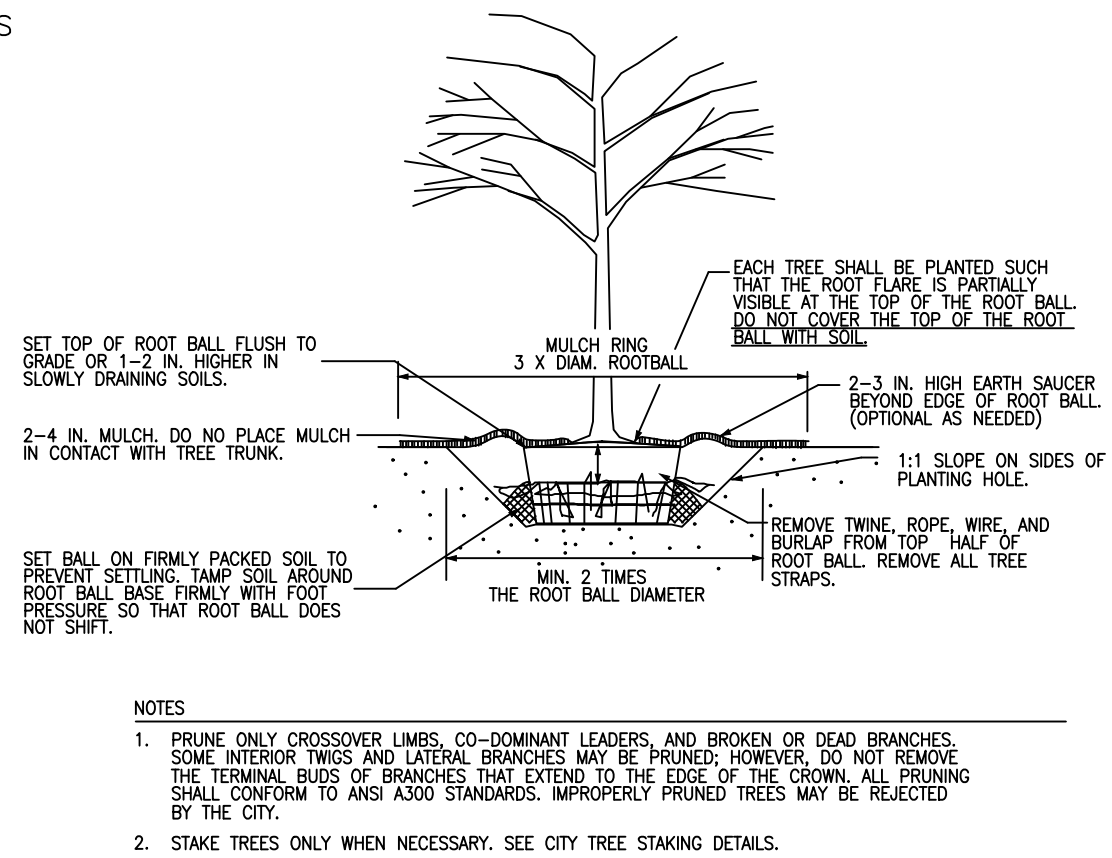
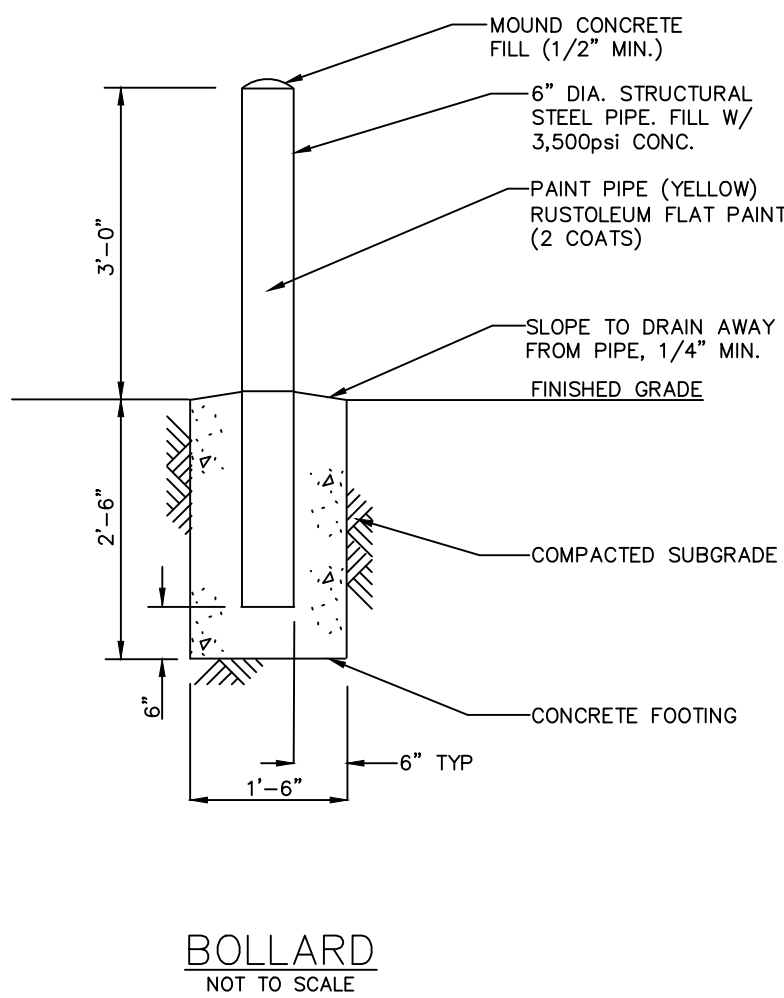
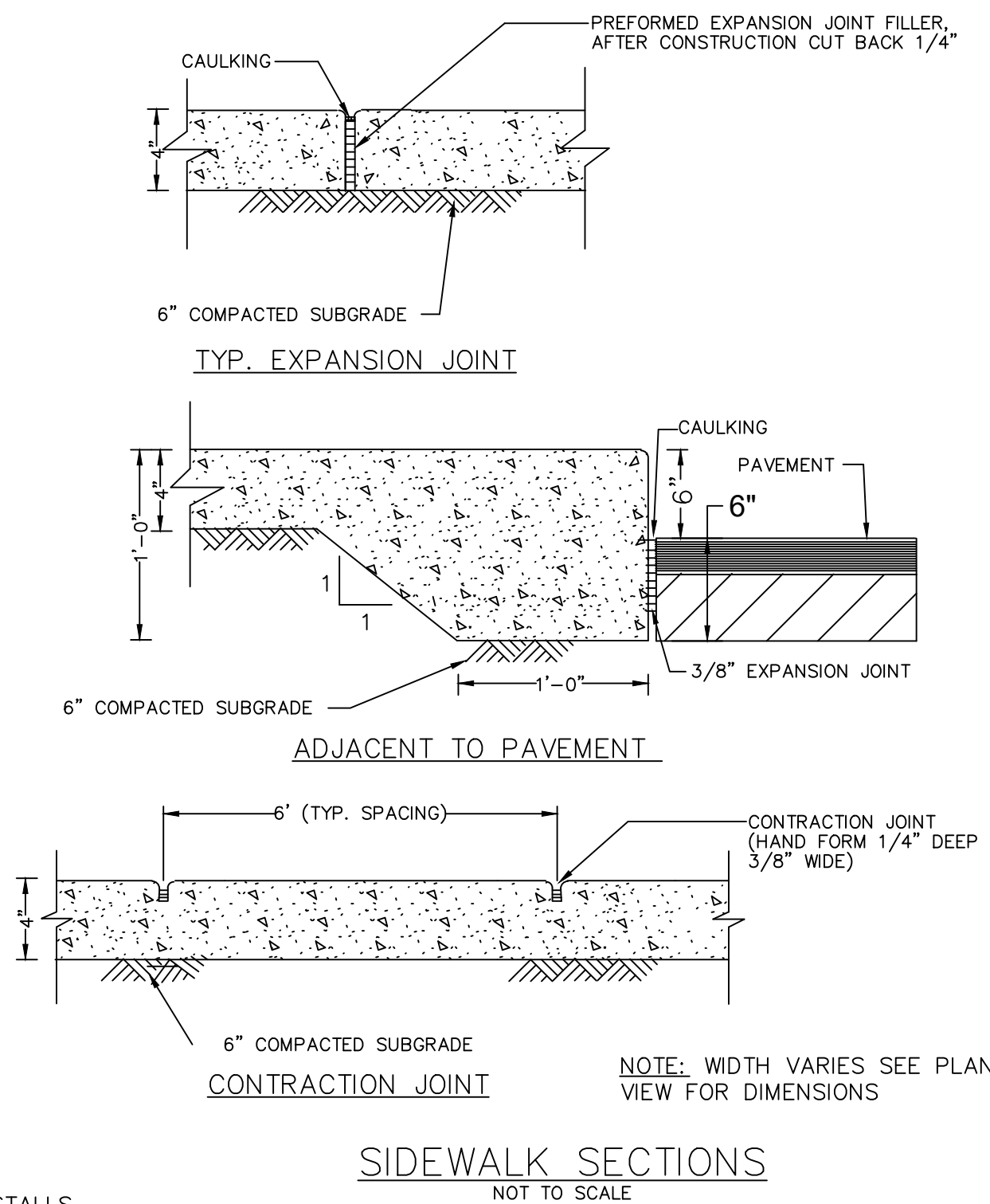
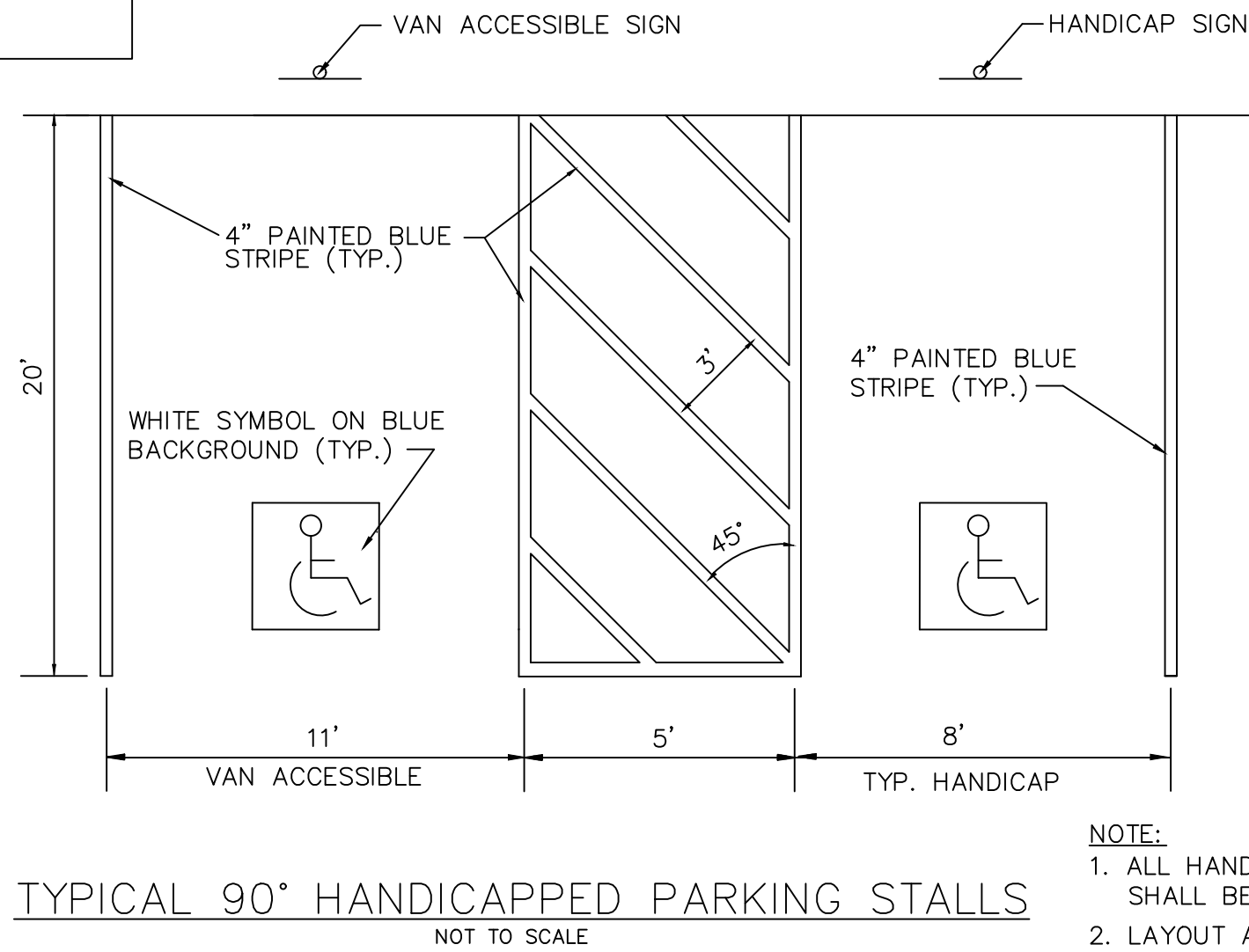
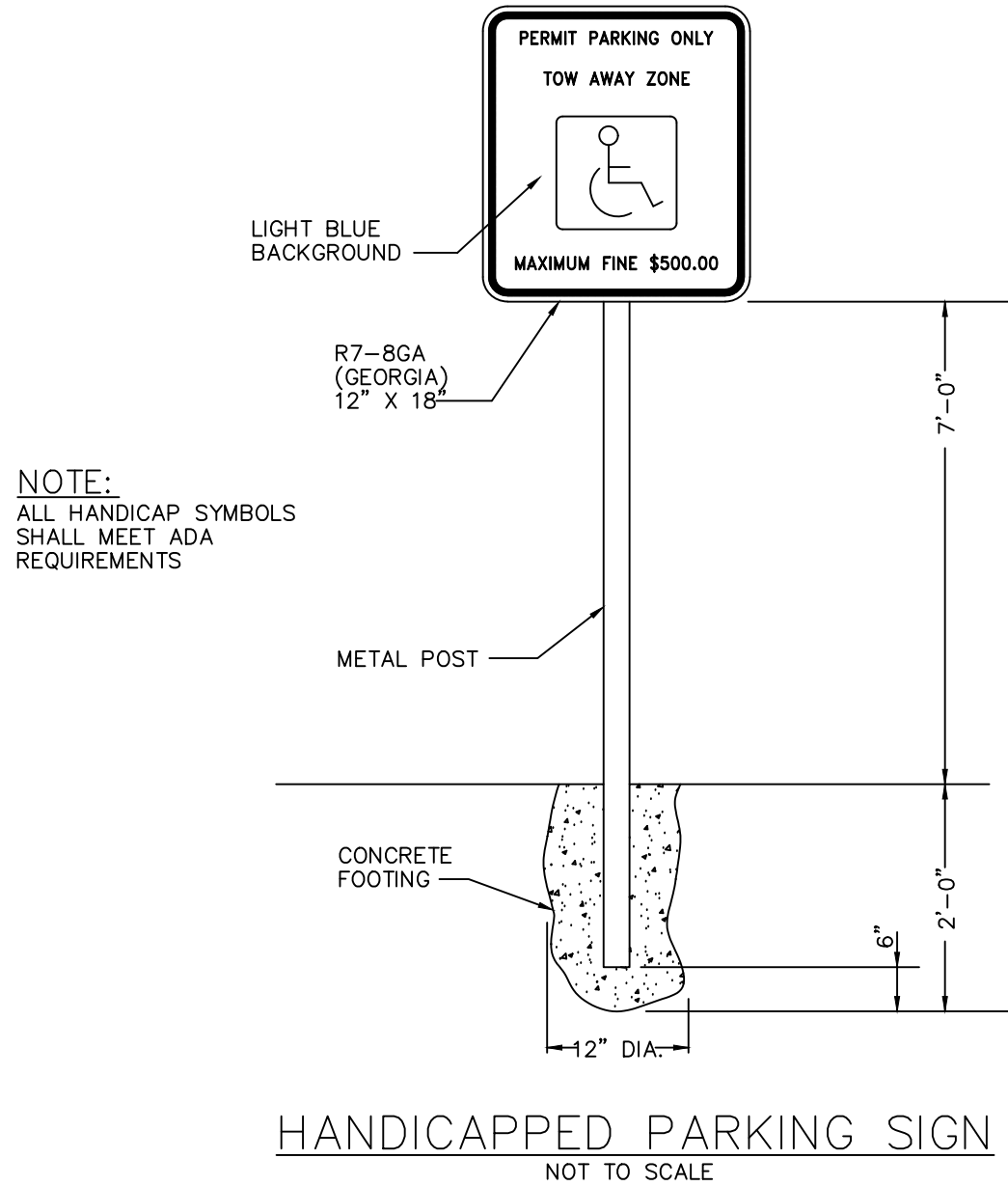
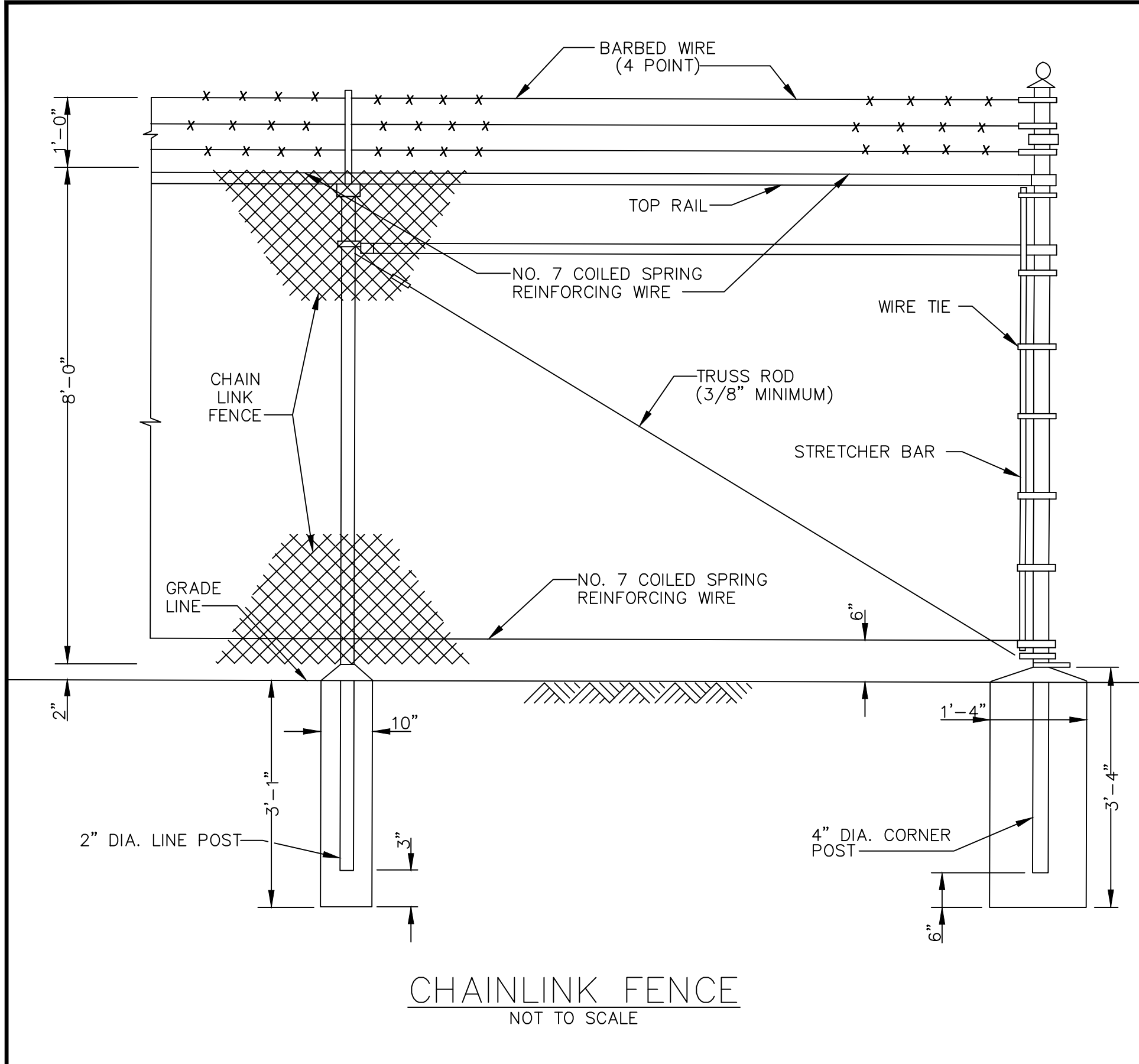
SHEET NO.

C.d2
673-21-35

PROJECT NO.

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114 WEST 42ND STREET, SUITE 200, SAVANNAH, GA 31401



REVISIONS		DESCRIPTION
NO.	DATE	

MAUPINtm
engineering

114 WEST 42ND STREET
SAVANNAH, GA 31401

OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

CONSTRUCTION DETAILS

PW TRUCK SALES

GEORGIA
REGISTERED
No. 23758
PROFESSIONAL
ENGINEER
MAUPIN

STATUS: **RELEASED FOR PERMITTING**

DRWN: TRW 1-26-2022
CHK'D: JAM DATE

NOT TO SCALE

SHEET NO.

C.d3
673-21-35

PROJECT NO.

Tree Planting
NTS

Tree Staking
NTS

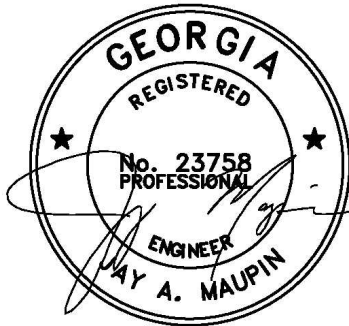
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Stormwater Management Plan

4/6/22



Port Wentworth Truck Shop
8191 Old Hwy 21
Port Wentworth, GA 31407



Prepared for:

DeWitt Tilton Group
119 Canal Street, Suite 106
Pooler, Ga 31322
912-777-3404

Project Narrative:

The proposed project is to convert an existing platted commercial lot from its current vacant state to an 8,200sf+/- truck shop and associated improvements. The current lot is vacant and grassed without any trees on the lot.

Vicinity Map:



Address:

8191 Old Hwy 21
Port Wentworth, GA 31407

Legal Description:

Lot 1C – Rice Hope
SMBook 53 page 125 – 3.933 ac


Natural Resources Inventory:

Existing topography:	Shown
Natural drainage features:	Shown (ditch on East side of site in Old Hwy 21 Right-of-way)
Perennial / Intermittent Streams:	None
Wetlands:	None
Riparian Buffers:	None
Floodplains:	None
Steep Slopes:	None
Soil Types:	Shown – HSG B
Groundwater Recharge Areas:	None
Areas with High Groundwater:	None
Conservation Areas:	None
Stands of Trees and or Vegetation:	None

April 6, 2022

City of Port Wentworth
Planning and Zoning Department
305 South Coastal Highway
Port Wentworth, GA 31407

RE: Port Wentworth Truck Shop
8191 Old Hwy 21
Owner Certification

I,  am the owner of Property Number 7-0906-02-002, 8191 Old Hwy 21, the future location of Port Wentworth Truck Shop. Please let this letter serve as verification that I certify all land disturbing and development activities that will take place on the aforementioned property shall be in accordance with the approved stormwater management design plan.

Sincerely,



Port Wentworth Truck Shop

Stormwater System Operation and Maintenance Plan

The stormwater treatment facilities will be maintained by the owner or their assigned heirs after construction is completed. The facility management staff will perform the inspections indicated below and retain a log on-site of the inspections performed. The building maintenance budget will include monies set aside for inspections and maintenance program for the stormwater system. Long-term operation and maintenance for the individual stormwater management entities is presented below.

Vegetated Areas:

Inspect slopes and embankments early in the growing season to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. Inspect all slopes after major storms and any identified deficiencies will be corrected.

Ditches, Swales and other Open Stormwater Channels:

Inspect twice per year (preferably in Spring and Fall) to ensure they are working in their intended fashion and that they are free of sediment and debris. Remove any obstructions to flow, including accumulated sediments and debris and vegetated growth. Repair any erosion of the ditch lining. Vegetated ditches will be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation growing through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric is showing through the stone or where stones have dislodged. Correct any erosion of the channel's bottom or sideslopes. Ditches will be inspected after major storms and any identified deficiencies will be corrected.

This document shall be reviewed by the property owner on an annual basis for determining of the need for additional stormwater inspection and maintenance procedures.



Owner

National Flood Hazard Layer FIRMMette



81°11'55"W 32°14'25"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/29/2022 at 12:41 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Bryan and Chatham Counties, Georgia**

Orr Tract Truck Shop



March 29, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

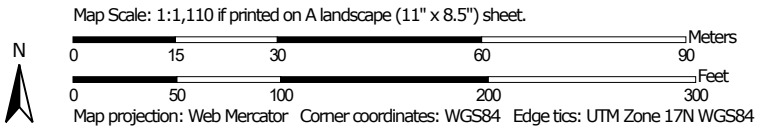
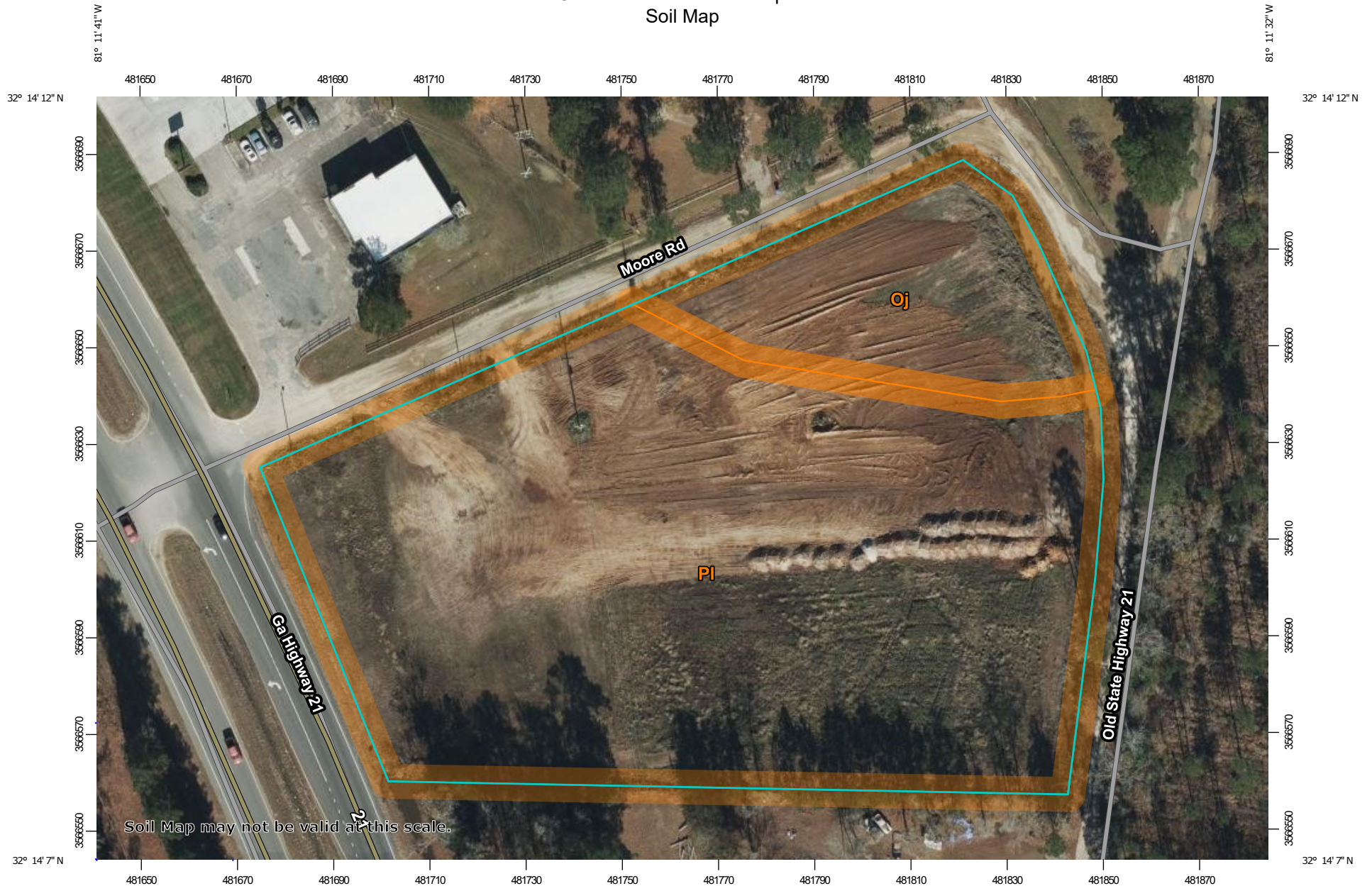
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

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

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

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

Soil Survey Area: Bryan and Chatham Counties, Georgia
Survey Area Data: Version 16, Aug 31, 2021

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

Date(s) aerial images were photographed: Jan 4, 2021—Jan 18, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Oj	Ocilla complex	0.7	16.6%
Pl	Pelham loamy sand, 0 to 2 percent slopes, frequently flooded	3.4	83.4%
Totals for Area of Interest		4.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bryan and Chatham Counties, Georgia

Oj—Ocilla complex

Map Unit Setting

National map unit symbol: 46gt
Elevation: 10 to 450 feet
Mean annual precipitation: 44 to 52 inches
Mean annual air temperature: 64 to 70 degrees F
Frost-free period: 230 to 290 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Ocilla and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ocilla

Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Marine deposits

Typical profile

H1 - 0 to 28 inches: loamy fine sand
H2 - 28 to 59 inches: sandy clay loam
H3 - 59 to 67 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)
Depth to water table: About 12 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: R153AY001GA - Loamy Rise, Moderately Wet
Hydric soil rating: No

Minor Components

Ellabelle

Percent of map unit: 3 percent
Landform: Depressions, drainageways
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Pelham

Percent of map unit: 2 percent
Landform: Depressions, flats
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

PI—Pelham loamy sand, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2tg59
Elevation: 0 to 300 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 54 to 78 degrees F
Frost-free period: 209 to 317 days
Farmland classification: Not prime farmland

Map Unit Composition

Pelham, frequently flooded, and similar soils: 95 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pelham, Frequently Flooded

Setting

Landform: Drainageways, depressions, flatwoods
Landform position (three-dimensional): Dip, talf
Down-slope shape: Linear, concave
Across-slope shape: Concave, linear
Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 6 inches: loamy sand
Eg - 6 to 33 inches: loamy sand
Btg1 - 33 to 41 inches: sandy loam
Btg2 - 41 to 66 inches: sandy clay loam
Cg - 66 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Custom Soil Resource Report

Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Hydric soil rating: Yes

Minor Components

Surrency, frequently ponded

Percent of map unit: 2 percent

Landform: Depressions

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave

Other vegetative classification: Sandy over loamy soils on stream terraces, flood plains, or in depressions (G153AA245FL)

Hydric soil rating: Yes

Rains

Percent of map unit: 1 percent

Landform: Flatwoods

Landform position (three-dimensional): Talf

Down-slope shape: Concave, linear

Across-slope shape: Linear

Hydric soil rating: Yes

Pickney, frequently ponded

Percent of map unit: 1 percent

Landform: Depressions, drainageways

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Across-slope shape: Concave, linear

Hydric soil rating: Yes

References














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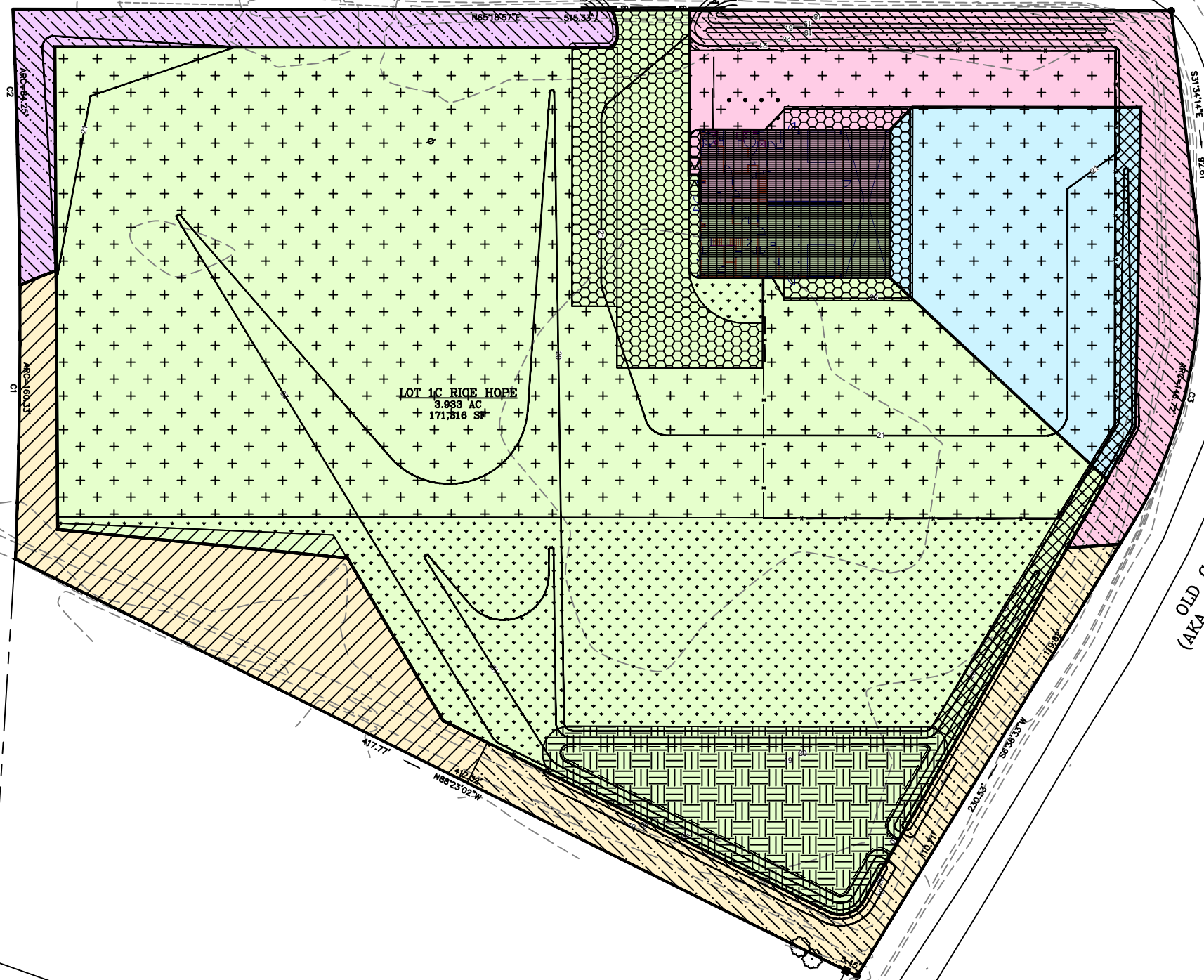
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-  BYPASS BASIN 1
-  BYPASS BASIN 2
-  BYPASS BASIN 3
-  BASIN 1
-  BASIN 2
-  ROOF
-  PAVEMENT
-  ASPHALT MILLINGS
-  PERVIOUS AREA
-  UNDISTURBED PERVIOUS AREA
-  GRASS CHANNEL 1
-  GRASS CHANNEL 2
-  DETENTION POND

BENCHMARK
MAGNAIL IN ASPHALT
ELEV. = 22.26' (NAVD 1988)

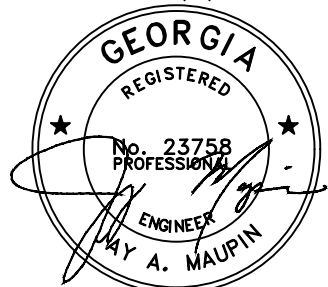
MOORE ROAD
(COUNTY 50' R/W)

GEORGIA HIGHWAY NO. 21 110' R/W

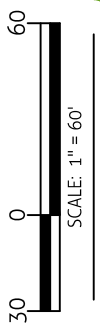


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LEVEL II E&S
CERT.#21051
EXP: 12/1/2024



REVISIONS	
NO.	DATE



DRWN: BPM 3/29/2022
CHK'D: JAM DATE

SHEET NO.
CSS
673-21-35
PROJECT NO.

CSS EXHIBIT
PW TRUCK SHOP

MAUPINtm
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114 WEST 42ND STREET
SAVANNAH, GA 31401
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Coastal Stormwater Supplement Site Planning & Design Worksheet
Revised December 2013

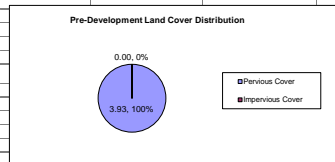
Site Data

Site Name:

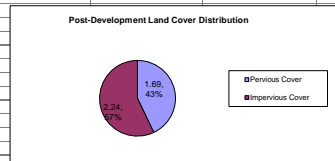
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Step 1: Enter Site Information

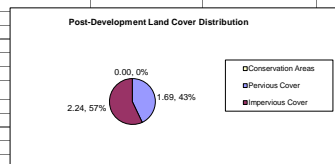
Pre-Development Land Cover (acres)					
Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Pervious Cover	0.00	3.93	0.00	0.00	3.93
Impervious Cover	0.00	0.00	0.00	0.00	0.00
			Total		3.93



Post-Development Land Cover (acres)					
Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Pervious Cover	0.00	1.69	0.00	0.00	1.69
Impervious Cover	0.00	2.24	0.00	0.00	2.24
			Total		3.93



Runoff Reduction Rainfall Event (inches)	1.2
Post-Development Site Imperviousness (%)	57%
Post-Development Site Runoff Coefficient, Rv	0.56
Target Runoff Reduction Volume, RRV (acre-feet)	0.22
Target Runoff Reduction Volume, RRV (cubic feet)	9,638

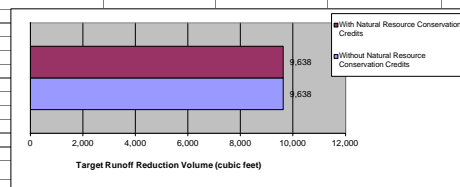


Step 2: Apply Better Site Planning Techniques

Natural Resource Conservation Credits					
	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Total
Primary Conservation Areas (acres)	0.0	0.0	0.0	0.0	0.0
Secondary Conservation Areas (acres)	0.0	0.0	0.0	0.0	0.0
Total (acres)					0.00

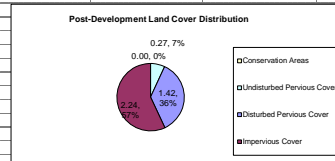
Target Runoff Reduction Volume with Natural Resource Conservation Credits, RRV

Target Runoff Reduction Volume, RRV (acre-feet)	0.22
Target Runoff Reduction Volume, RRV (cubic feet)	9,638



Step 3: Apply Better Site Design Techniques

Reduced Clearing and Grading Credits					
	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Total
Undisturbed Pervious Cover (Acres)	0.0	0.3	0.0	0.0	0.27

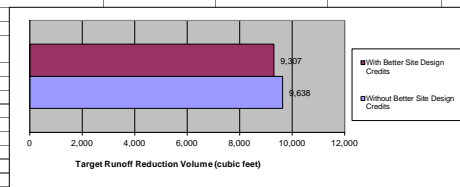


Revised Post-Development Land Cover (acres)					
Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Conservation Areas	0.00	0.00	0.00	0.00	0.00
Undisturbed Pervious Cover	0.00	0.27	0.00	0.00	0.27
Disturbed Pervious Cover	0.00	1.42	0.00	0.00	1.42
Impervious Cover	0.00	2.24	0.00	0.00	2.24
			Total		3.93

Restoration of Disturbed Pervious Surfaces	
Soil Restoration (Acres)	0.0
Site Reforestation/Vegetation (Acres)	0.0
Soil Restoration w/ Site Reforestation/Revegetation (Acres)	0.0

Target Runoff Reduction Volume After Application of Better Site Design Credits, RRV

Target Runoff Reduction Volume, RRV (acre-feet)	0.21
Target Runoff Reduction Volume, RRV (cubic feet)	9,307



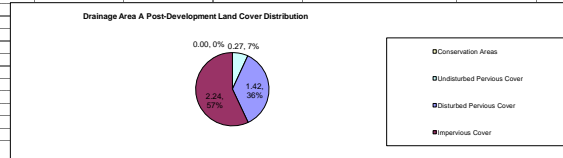
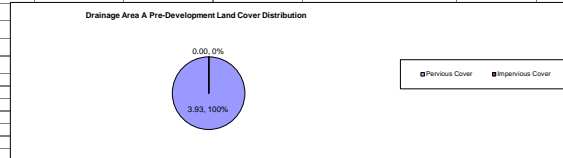
Note: Remainder of Better Site Design Techniques are considered to be "self-crediting."

Coastal Stormwater Supplement Site Planning & Design Worksheet
Revised December 2013

Drainage Area A
Drainage Area Information

Drainage Area A Pre-Development Land Cover (acres)					
Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Previous Cover	0.00	3.93	0.00	0.00	3.93
Impervious Cover	0.00	0.00	0.00	0.00	0.00
				Total	3.93

Drainage Area A Post-Development Land Cover (acres)					
Land Cover Type	HSG A soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Conservation Areas	0.00	0.00	0.00	0.00	0.00
Undisturbed Previous Cover	0.00	0.27	0.00	0.00	0.27
Disturbed Previous Cover	0.00	1.42	0.00	0.00	1.42
Impervious Cover	0.00	2.24	0.00	0.00	2.24
				Total	3.93



Low Impact Development Practices
Alternatives to Impervious Surfaces

Low Impact Development Practice	Size of Contributing Drainage Area (acres)	Impervious Cover in Contributing Drainage Area (acres)	Direct Runoff Reduction Volume Received by Practice (cubic feet)	Description of Runoff Reduction Credit	Runoff Reduction Volume Received from Upstream Practices	Total Runoff Reduction Volume Received by Practice (cubic feet)	Treatment Volume Received from Upstream Practices (cubic feet)	Total Treatment Volume Received by Practice (cubic feet)	Method for Calculating Storage	Storage Volume Provided by Practice (cubic feet)	Adjustment to Runoff Reduction Volume (cubic feet)	Remaining Runoff Reduction Volume (cubic feet)	Adjustment to Treatment Volume (cubic feet)	Remaining Treatment Volume (cubic feet)	Downstream Practice to be Employed
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	

"Receiving" Low Impact Development Practices															
Grass Channel, A/B or Amended Soils 1	0.32	0.28	1167.4	25% of volume received by the practice	0.0	1167.4	0.0	1167.4	N/A	N/A	291.9	875.6	291.9	875.6	Stormwater Pond, Wetland, or Wet Swale 1
Grass Channel, A/B or Amended Soils 2	0.69	0.19	895.2	25% of volume received by the practice	3886.4	4781.5	5.9	901.0	N/A	N/A	1195.4	3586.2	901.0	0.0	No Downstream Practice
Undisturbed Previous Area, A/B Soils 1	0.27	0.00	58.8	90% of volume received by the practice	0.0	58.8	0.0	58.8	N/A	N/A	52.9	5.9	52.9	5.9	Grass Channel, A/B or Amended Soils 2
Vegetated Filter Strip, A/B or Amended Soils 1	2.65	1.77	7512.4	60% of volume received by the practice	0.0	7512.4	0.0	7512.4	N/A	N/A	4507.4	3004.9	4507.4	3004.9	Stormwater Pond, Wetland, or Wet Swale 1
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	

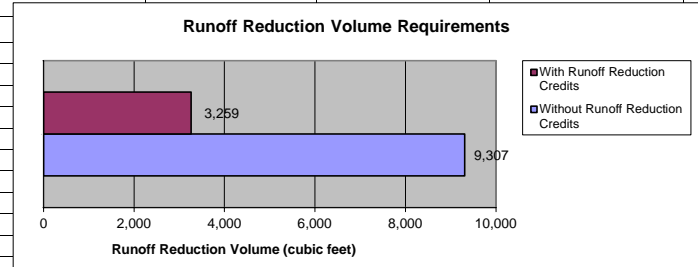
Treatment Only Practices															
Stormwater Pond, Wetland, or Wet Swale 1	0.00	0.00	0.0	None	3880.5	3880.5	3880.5	3880.5	Volume in Wet Pool and Extended Detention	17515.0	0.0	3880.5	3880.5	0.0	Grass Channel, A/B or Amended Soils 2
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
None	0.00	0.00	0.0	N/A	0.0	0.0	0.0	0.0	N/A	N/A	0.0	0.0	0.0	0.0	
Totals	3.93	2.24									6047.6		9633.7		

Coastal Stormwater Supplement Site Planning & Design Worksheet

Revised December 2013

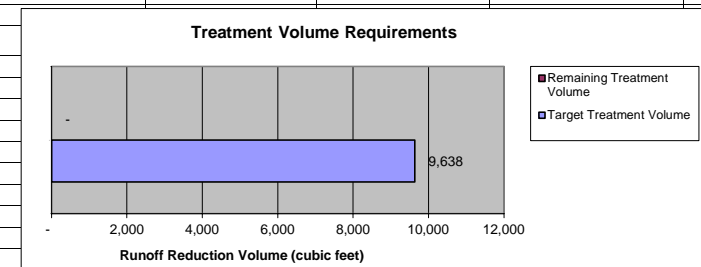
Stormwater Runoff Reduction Summary

Target Runoff Reduction and Treatment Volume, RRv (cubic feet)	9,638
Total Adjustment to Runoff Reduction Volume, RRv (cubic feet)	6,379
Percentage of Target Runoff Reduction Volume Achieved	66%
Runoff Reduction Volume Achieved (in)	0.79
Runoff Reduction Volume Remaining (cubic feet)	3,259



Note: If any of the target runoff reduction volume cannot be reduced on the development site, due to site characteristics or constraints, it should be intercepted and treated in one or more stormwater management practices that: (1) provide for at least an 80 percent reduction in TSS loads; and (2) reduce nitrogen and bacteria loads to the maximum extent practical.

Treatment Volume Achieved (cubic feet)	9,965
Treatment Volume Remaining (cubic feet)	-



BENCHMARK
MAGNAIL IN ASPHALT
ELEV. = 22.26' (NAVD 1988)

GEORGIA HIGHWAY NO. 21 110' R/W

MOORE ROAD
(COUNTY 50' R/W)

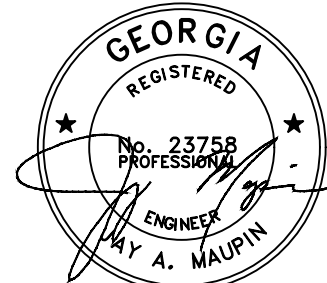
Pre-Development Basin 1
2.16 AC

LOT 1C RICE HOME
3.933 AC
171,316 SF

Pre-Development Basin
1.77 AC

OLD GA HIGHWAY 21
(AKA OLD AUGUSTA ROAD)

LEVEL II E&S
CERT.#21051
EXP: 12/1/2024



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REVISIONS
NO. DATE DESCRIPTION

SHEET NO.
1 of 2
PROJECT NO.
673-21-35

SCALE: 1" = 60'
0 30 60

DRWN: BPM 3/29/2022
CHK'D: JAM DATE

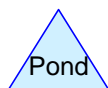
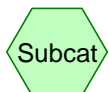
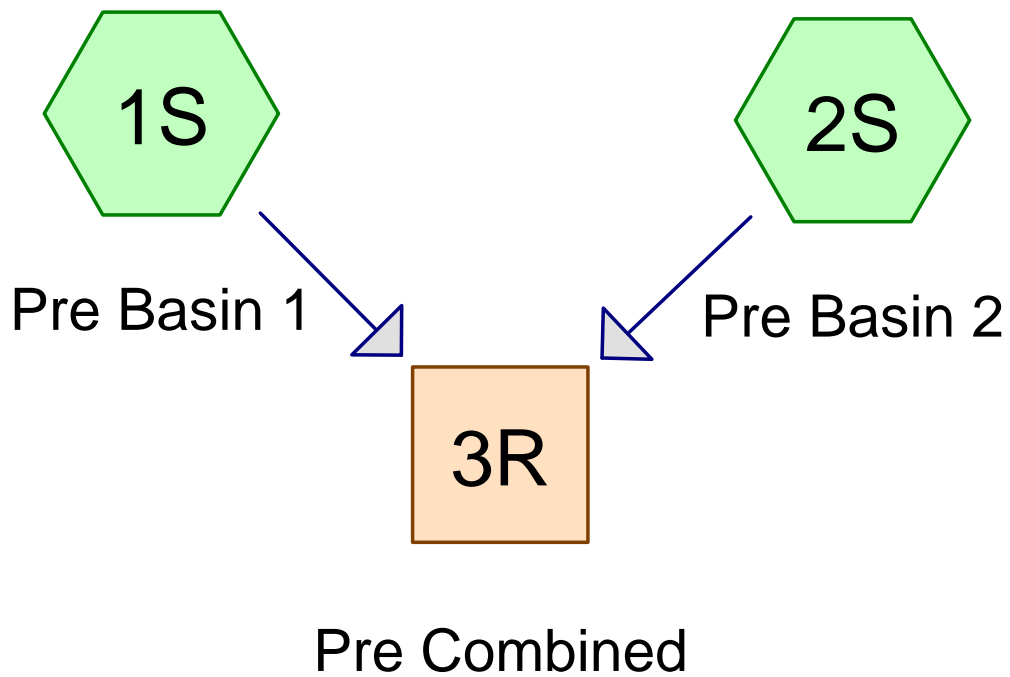
PRE-DEVELOPMENT BASINS

PW TRUCK SHOP



114 WEST 42ND STREET
SAVANNAH, GA 31401
OFFICE PHONE (912) 235-2915
GENERAL@MAUPINENGINEERING.COM

1:2022 SDP-GR TRUCKS.DWG



Routing Diagram for Orr Track Pre

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Project Notes

Rainfall events imported from "pre hydro analysis.hcp"

Orr Track Pre

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Page 3

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type III 24-hr		Default	24.00	1	3.60	2
2	5-Year	Type III 24-hr		Default	24.00	1	4.80	2
3	10-Year	Type III 24-hr		Default	24.00	1	7.00	2
4	25-Year	Type III 24-hr		Default	24.00	1	8.00	2
5	50-Year	Type III 24-hr		Default	24.00	1	9.00	2
6	100-Year	Type III 24-hr		Default	24.00	1	9.84	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.930	61	>75% Grass cover, Good, HSG B (1S, 2S)
3.930	61	TOTAL AREA

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Page 5

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
3.930	HSG B	1S, 2S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
3.930		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	3.930	0.000	0.000	0.000	3.930	>75% Grass cover, Good	1S, 2S
0.000	3.930	0.000	0.000	0.000	3.930	TOTAL AREA	

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Type III 24-hr 1-Year Rainfall=3.60"

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>0.54"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=0.89 cfs 0.098 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>0.54"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=0.73 cfs 0.080 af

Reach 3R: Pre Combined

Inflow=1.62 cfs 0.178 af

Outflow=1.62 cfs 0.178 af

Total Runoff Area = 3.930 ac Runoff Volume = 0.178 af Average Runoff Depth = 0.54"

100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac

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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 0.89 cfs @ 12.24 hrs, Volume= 0.098 af, Depth> 0.54"

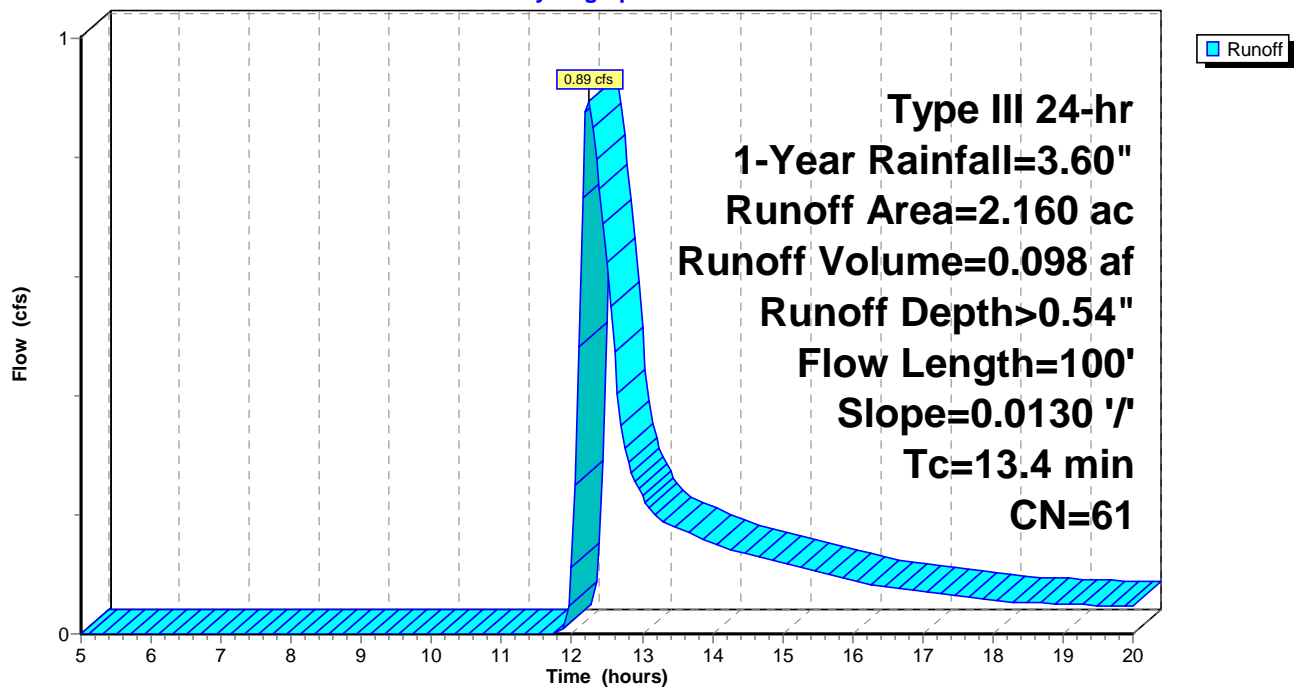
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



Orr Track Pre

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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 0.73 cfs @ 12.25 hrs, Volume= 0.080 af, Depth> 0.54"

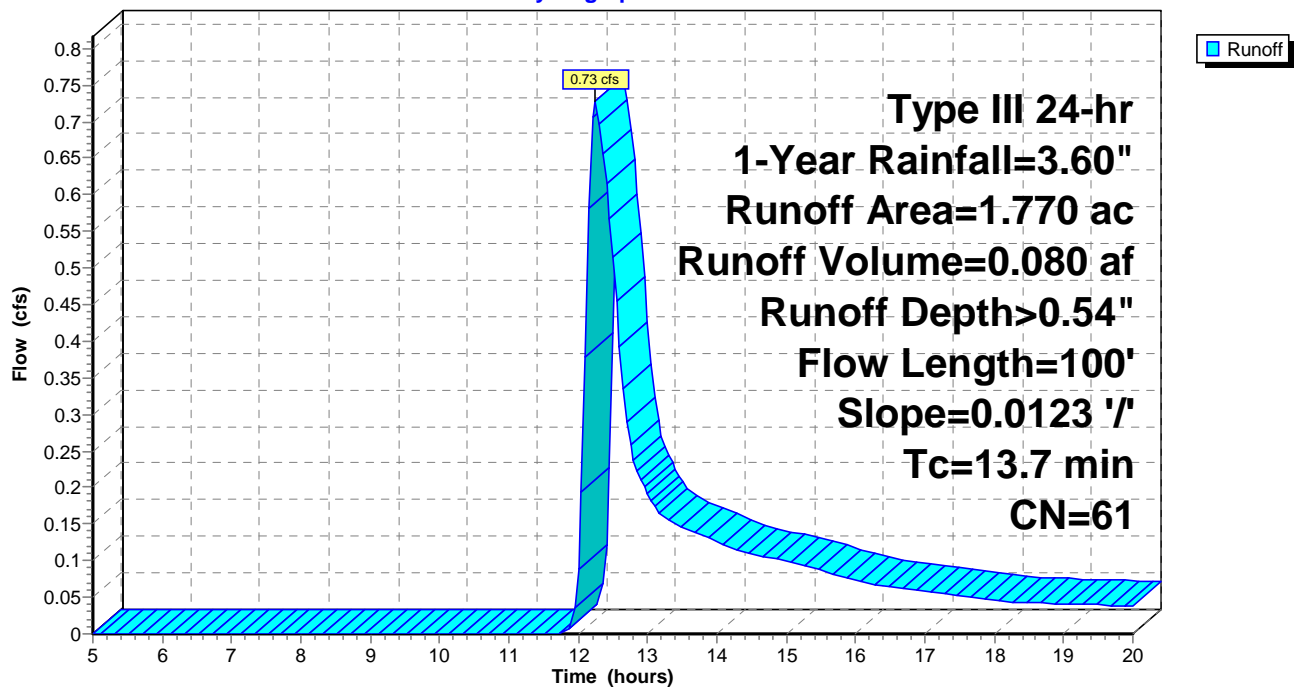
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



Orr Track Pre

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Type III 24-hr 1-Year Rainfall=3.60"

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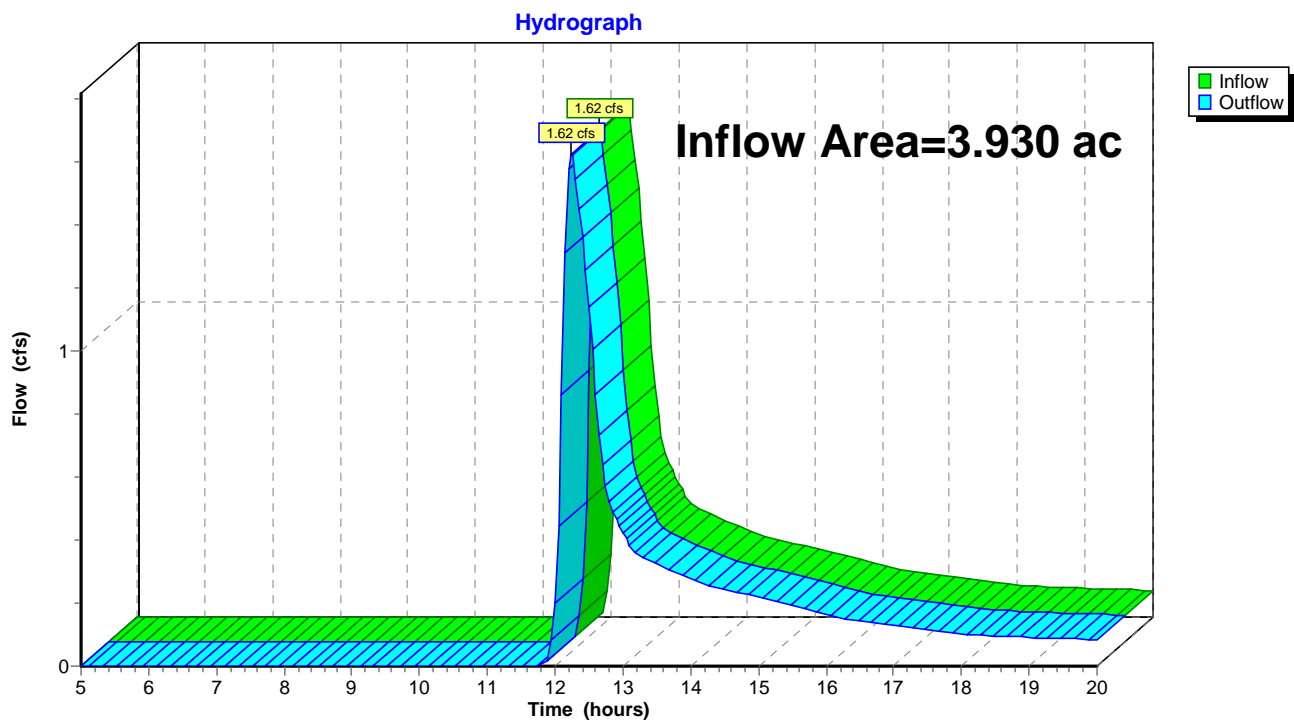
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 0.54" for 1-Year event
Inflow = 1.62 cfs @ 12.24 hrs, Volume= 0.178 af
Outflow = 1.62 cfs @ 12.24 hrs, Volume= 0.178 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 5-Year Rainfall=4.80"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>1.13"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=2.21 cfs 0.203 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>1.13"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=1.80 cfs 0.166 af

Reach 3R: Pre Combined

Inflow=4.01 cfs 0.369 af

Outflow=4.01 cfs 0.369 af

Total Runoff Area = 3.930 ac Runoff Volume = 0.369 af Average Runoff Depth = 1.13"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

Orr Track Pre

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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 2.21 cfs @ 12.21 hrs, Volume= 0.203 af, Depth> 1.13"

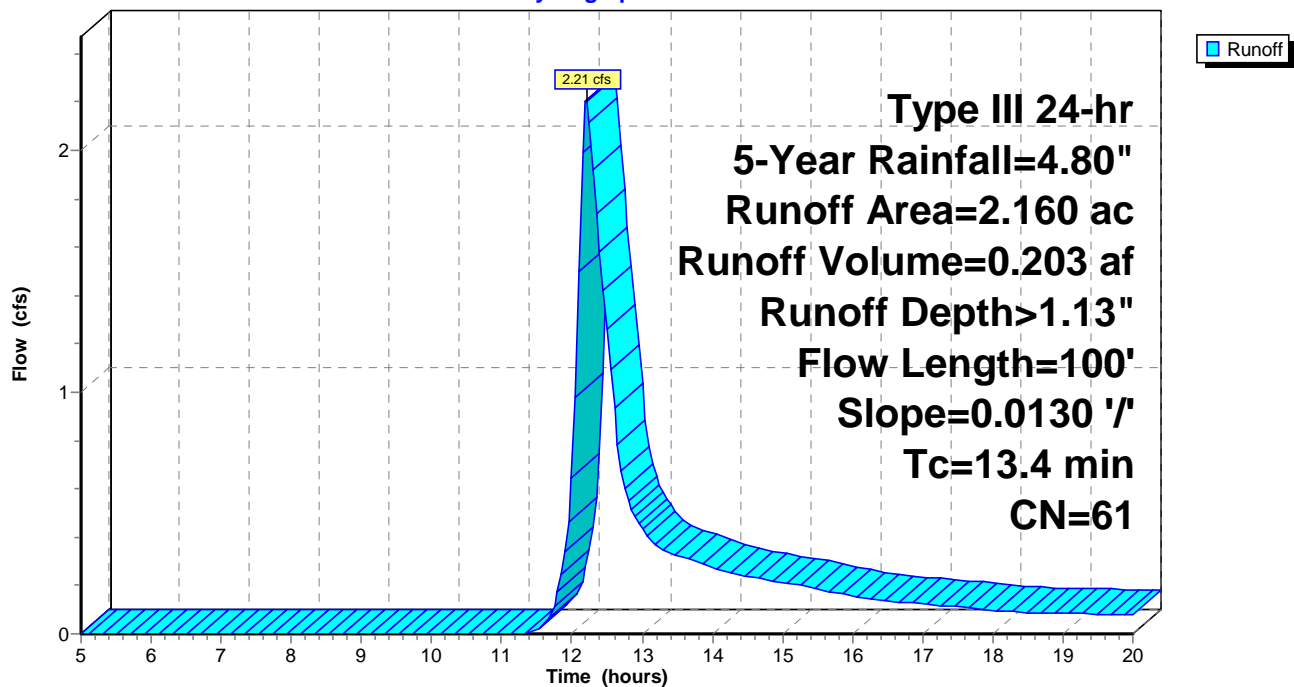
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



Orr Track Pre

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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 1.80 cfs @ 12.21 hrs, Volume= 0.166 af, Depth> 1.13"

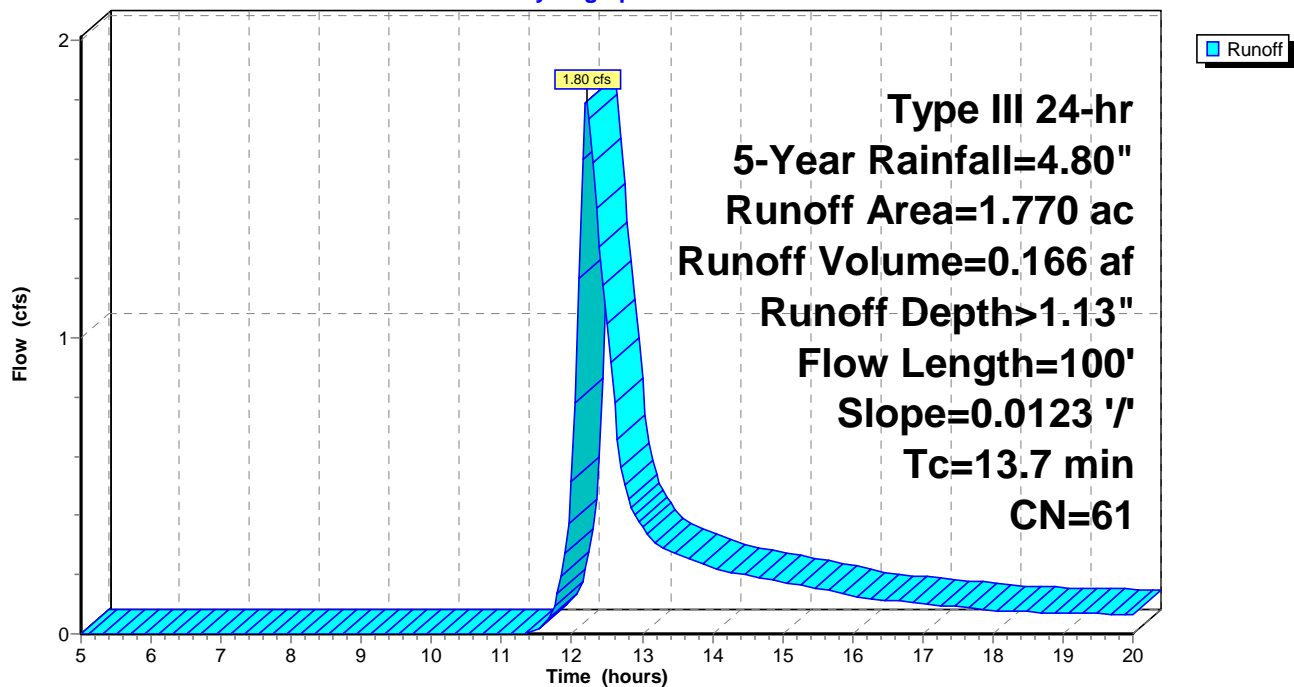
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



Orr Track Pre

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Type III 24-hr 5-Year Rainfall=4.80"

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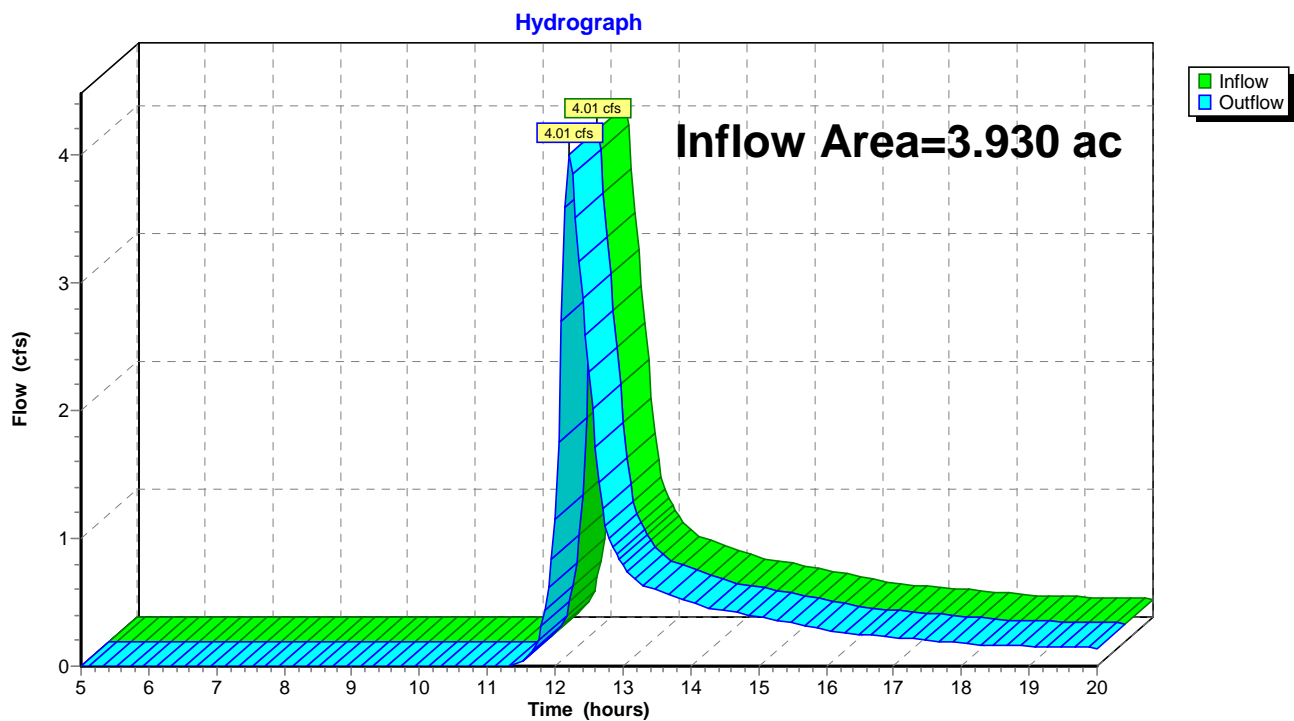
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 1.13" for 5-Year event
Inflow = 4.01 cfs @ 12.21 hrs, Volume= 0.369 af
Outflow = 4.01 cfs @ 12.21 hrs, Volume= 0.369 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 10-Year Rainfall=7.00"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>2.48"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=5.21 cfs 0.446 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>2.47"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=4.24 cfs 0.365 af

Reach 3R: Pre Combined

Inflow=9.44 cfs 0.811 af

Outflow=9.44 cfs 0.811 af

Total Runoff Area = 3.930 ac Runoff Volume = 0.811 af Average Runoff Depth = 2.47"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

Orr Track Pre

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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 5.21 cfs @ 12.20 hrs, Volume= 0.446 af, Depth> 2.48"

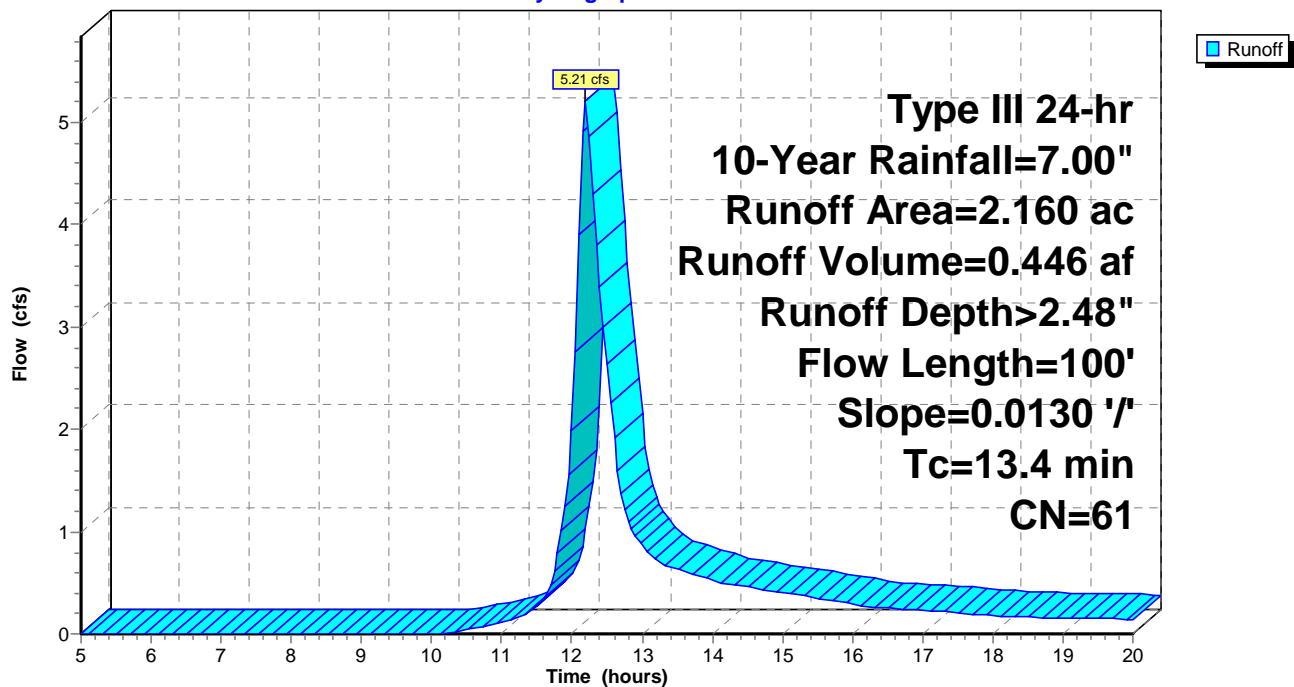
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



Orr Track Pre

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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 4.24 cfs @ 12.20 hrs, Volume= 0.365 af, Depth> 2.47"

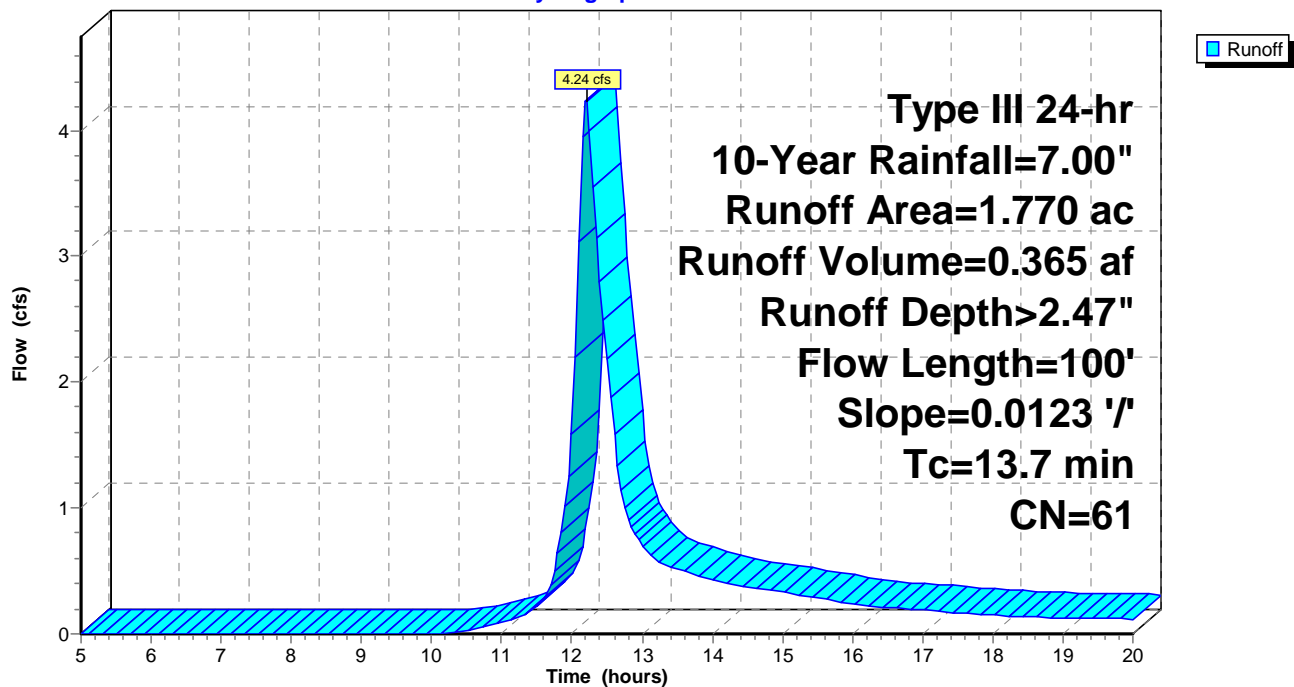
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



Orr Track Pre

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Type III 24-hr 10-Year Rainfall=7.00"

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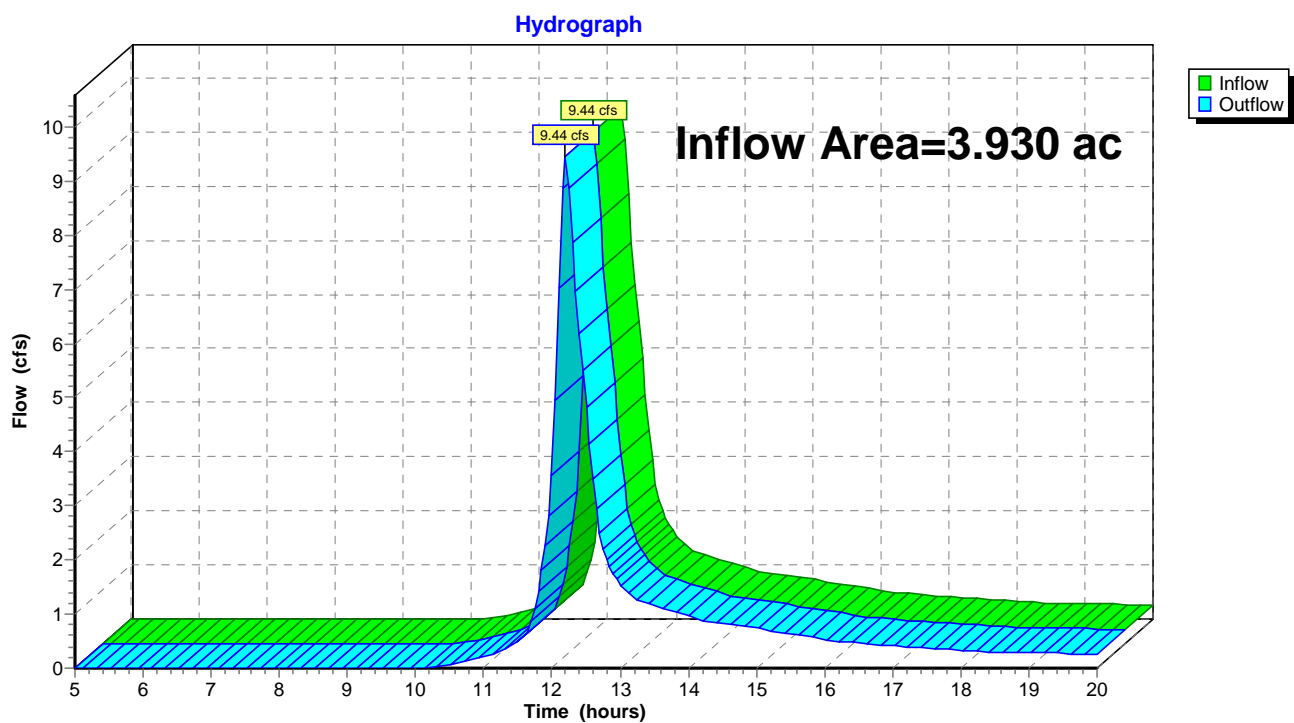
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 2.47" for 10-Year event
Inflow = 9.44 cfs @ 12.20 hrs, Volume= 0.811 af
Outflow = 9.44 cfs @ 12.20 hrs, Volume= 0.811 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 25-Year Rainfall=8.00"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>3.17"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=6.73 cfs 0.571 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>3.17"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=5.48 cfs 0.468 af

Reach 3R: Pre Combined

Inflow=12.20 cfs 1.038 af

Outflow=12.20 cfs 1.038 af

Total Runoff Area = 3.930 ac Runoff Volume = 1.038 af Average Runoff Depth = 3.17"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

Orr Track Pre

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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 6.73 cfs @ 12.20 hrs, Volume= 0.571 af, Depth> 3.17"

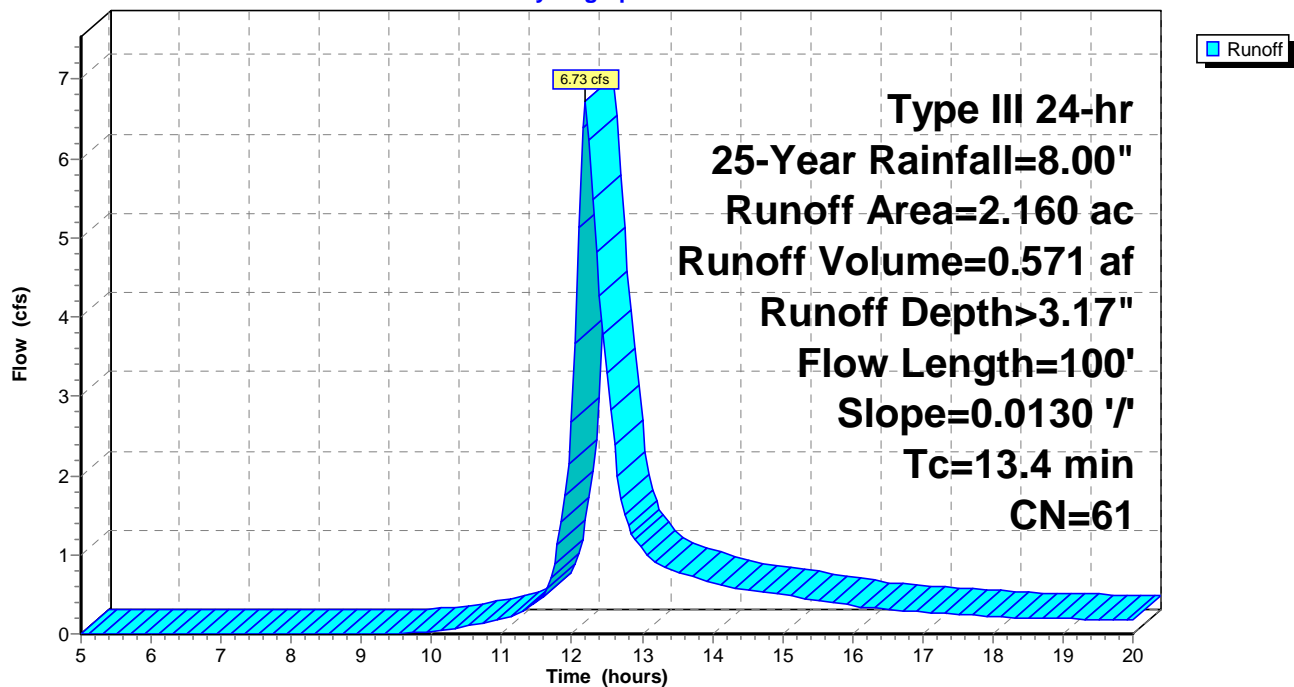
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



Orr Track Pre

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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 5.48 cfs @ 12.20 hrs, Volume= 0.468 af, Depth> 3.17"

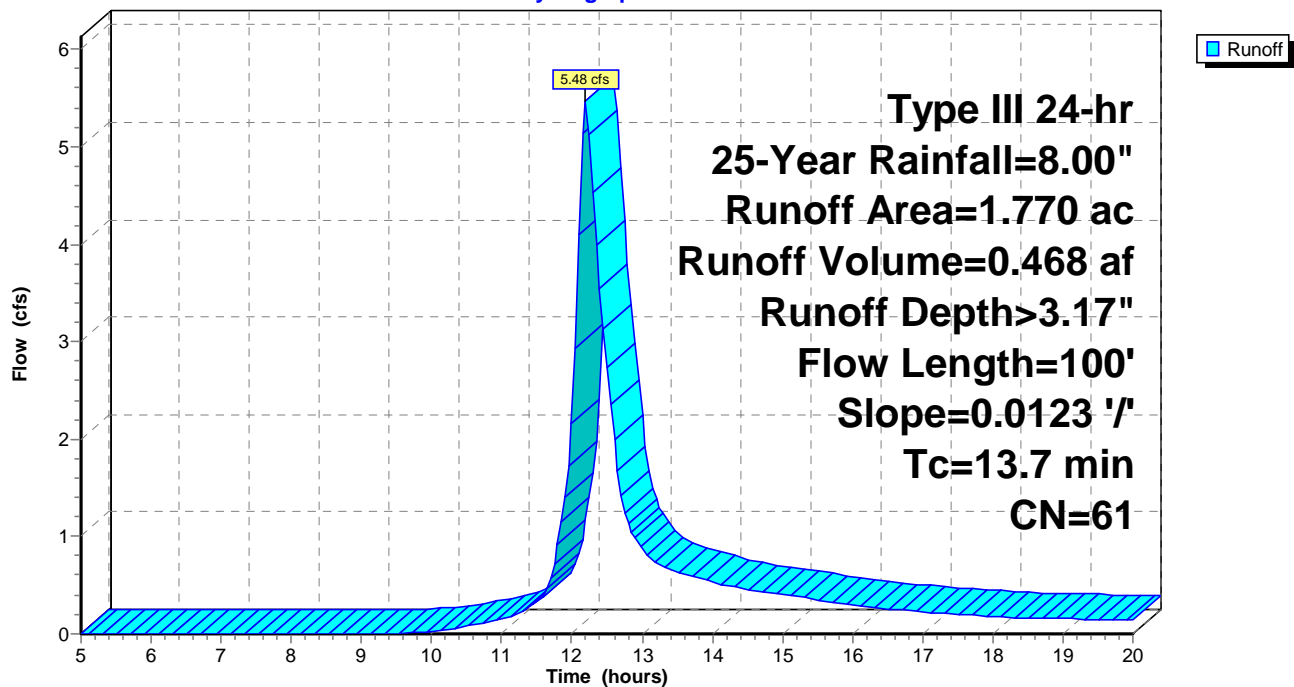
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



Orr Track Pre

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Type III 24-hr 25-Year Rainfall=8.00"

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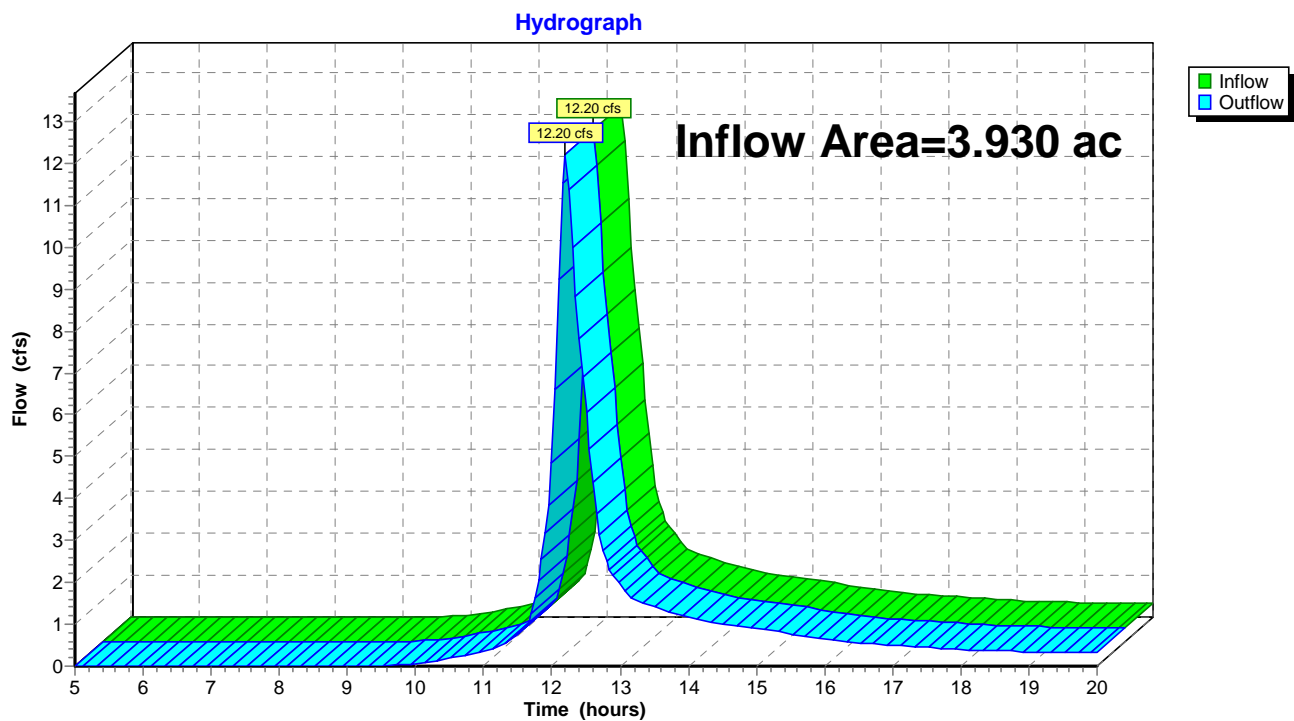
Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 3.17" for 25-Year event
Inflow = 12.20 cfs @ 12.20 hrs, Volume= 1.038 af
Outflow = 12.20 cfs @ 12.20 hrs, Volume= 1.038 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 50-Year Rainfall=9.00"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>3.90"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=8.31 cfs 0.702 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>3.90"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=6.77 cfs 0.575 af

Reach 3R: Pre Combined

Inflow=15.08 cfs 1.278 af

Outflow=15.08 cfs 1.278 af

Total Runoff Area = 3.930 ac Runoff Volume = 1.278 af Average Runoff Depth = 3.90"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 8.31 cfs @ 12.19 hrs, Volume= 0.702 af, Depth> 3.90"

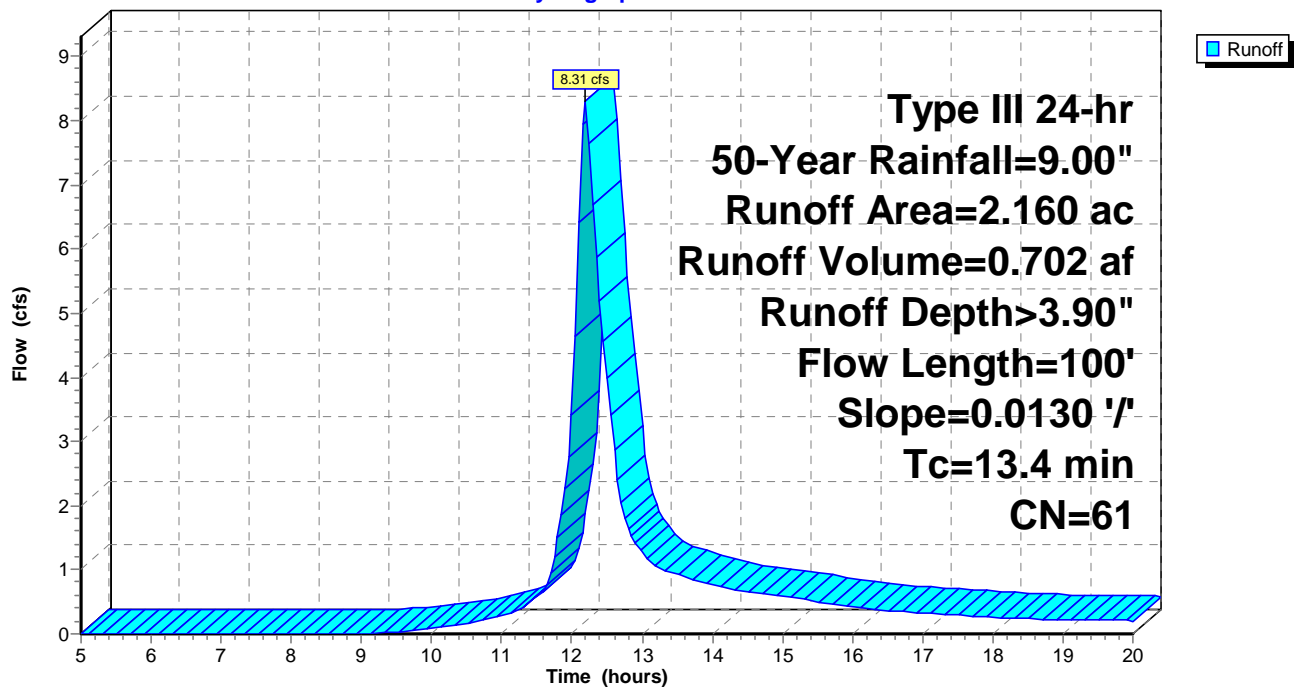
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 6.77 cfs @ 12.20 hrs, Volume= 0.575 af, Depth> 3.90"

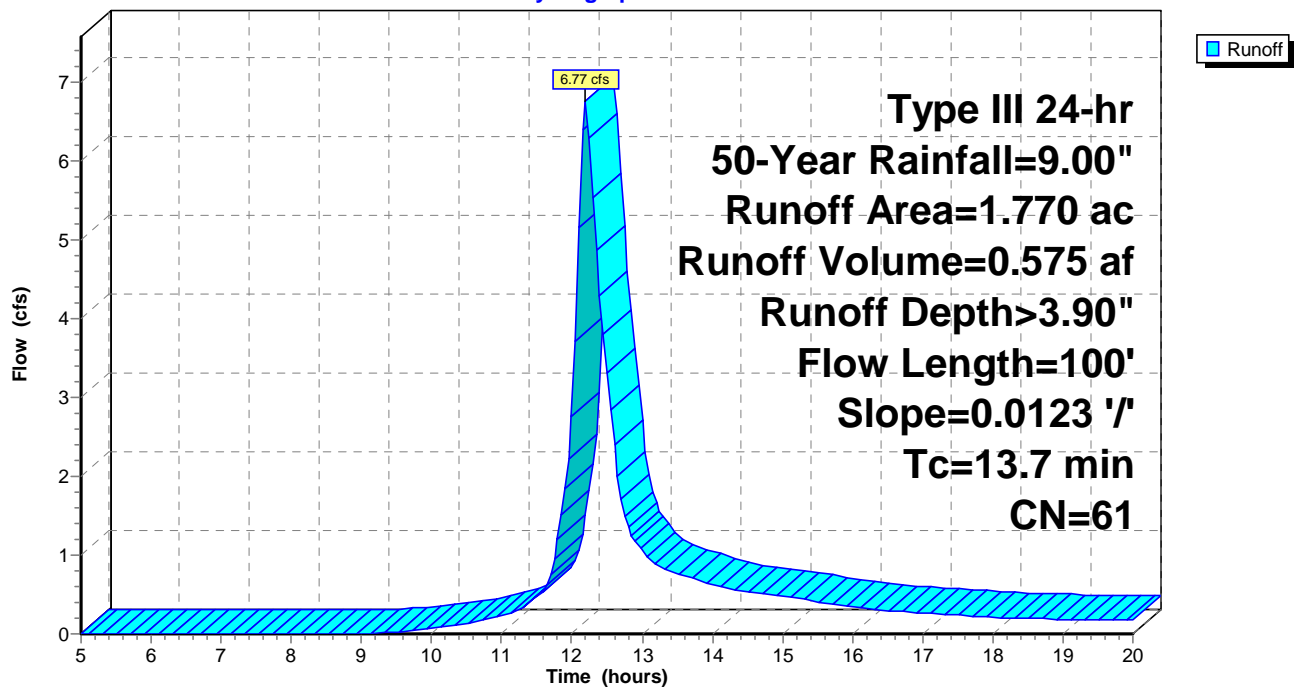
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

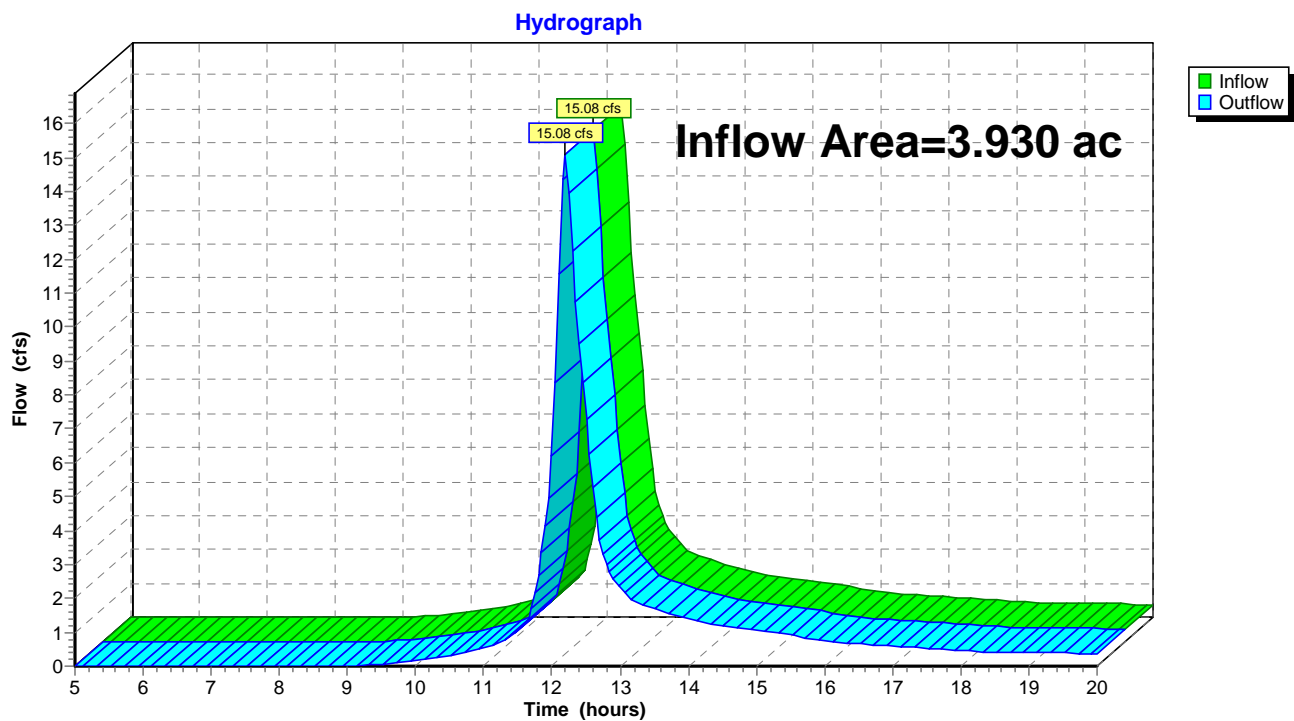
Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 3.90" for 50-Year event

Inflow = 15.08 cfs @ 12.19 hrs, Volume= 1.278 af

Outflow = 15.08 cfs @ 12.19 hrs, Volume= 1.278 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 3R: Pre Combined



Orr Track Pre*Type III 24-hr 100-Year Rainfall=9.84"*

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

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Basin 1

Runoff Area=2.160 ac 0.00% Impervious Runoff Depth>4.54"

Flow Length=100' Slope=0.0130 '/' Tc=13.4 min CN=61 Runoff=9.68 cfs 0.817 af

Subcatchment 2S: Pre Basin 2

Runoff Area=1.770 ac 0.00% Impervious Runoff Depth>4.54"

Flow Length=100' Slope=0.0123 '/' Tc=13.7 min CN=61 Runoff=7.88 cfs 0.669 af

Reach 3R: Pre Combined

Inflow=17.56 cfs 1.486 af

Outflow=17.56 cfs 1.486 af

Total Runoff Area = 3.930 ac Runoff Volume = 1.486 af Average Runoff Depth = 4.54"**100.00% Pervious = 3.930 ac 0.00% Impervious = 0.000 ac**

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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 1S: Pre Basin 1

Runoff = 9.68 cfs @ 12.19 hrs, Volume= 0.817 af, Depth> 4.54"

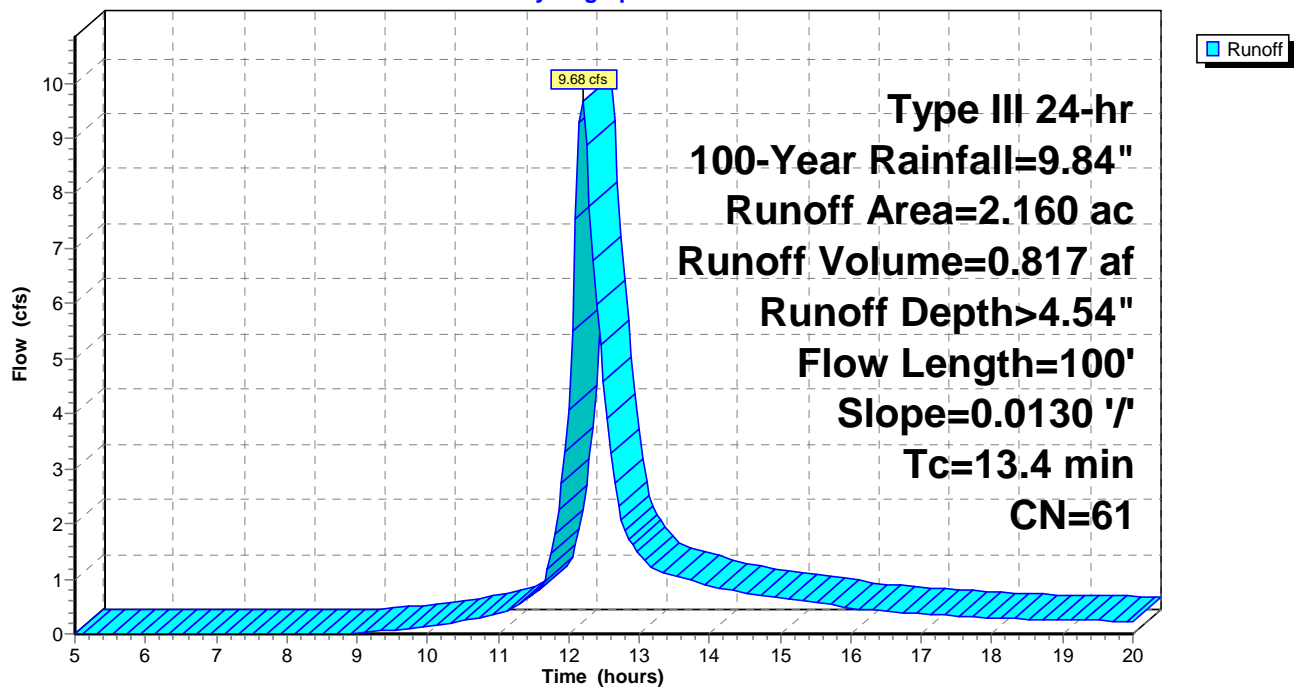
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
2.160	61	>75% Grass cover, Good, HSG B
2.160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	100	0.0130	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 1S: Pre Basin 1

Hydrograph



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 2S: Pre Basin 2

Runoff = 7.88 cfs @ 12.20 hrs, Volume= 0.669 af, Depth> 4.54"

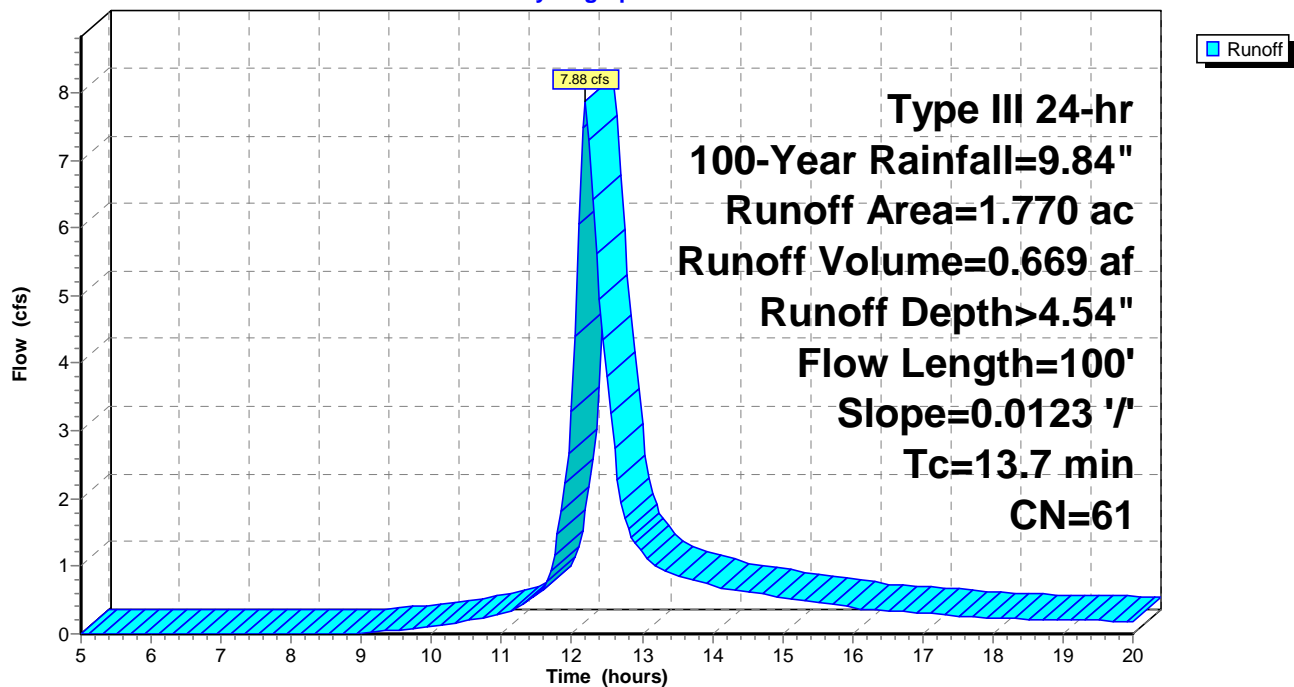
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
1.770	61	>75% Grass cover, Good, HSG B
1.770		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0123	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.42"

Subcatchment 2S: Pre Basin 2

Hydrograph



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Reach 3R: Pre Combined

[40] Hint: Not Described (Outflow=Inflow)

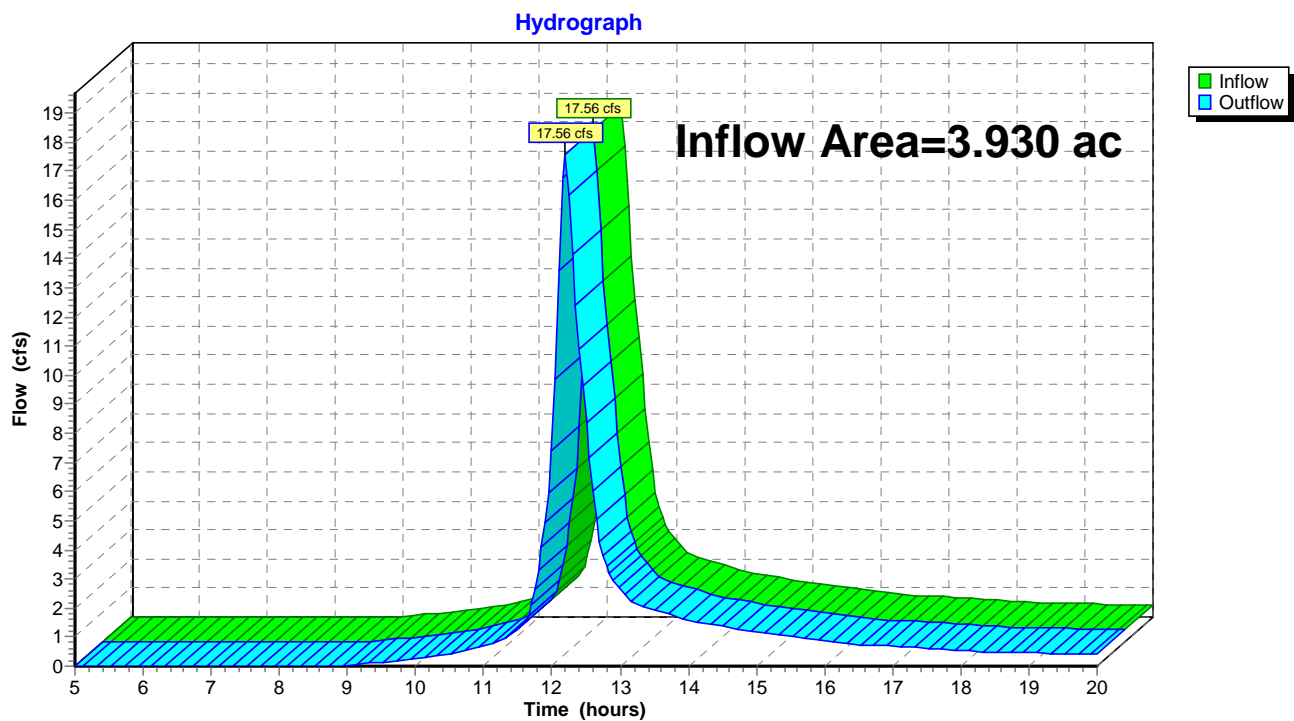
Inflow Area = 3.930 ac, 0.00% Impervious, Inflow Depth > 4.54" for 100-Year event

Inflow = 17.56 cfs @ 12.19 hrs, Volume= 1.486 af

Outflow = 17.56 cfs @ 12.19 hrs, Volume= 1.486 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

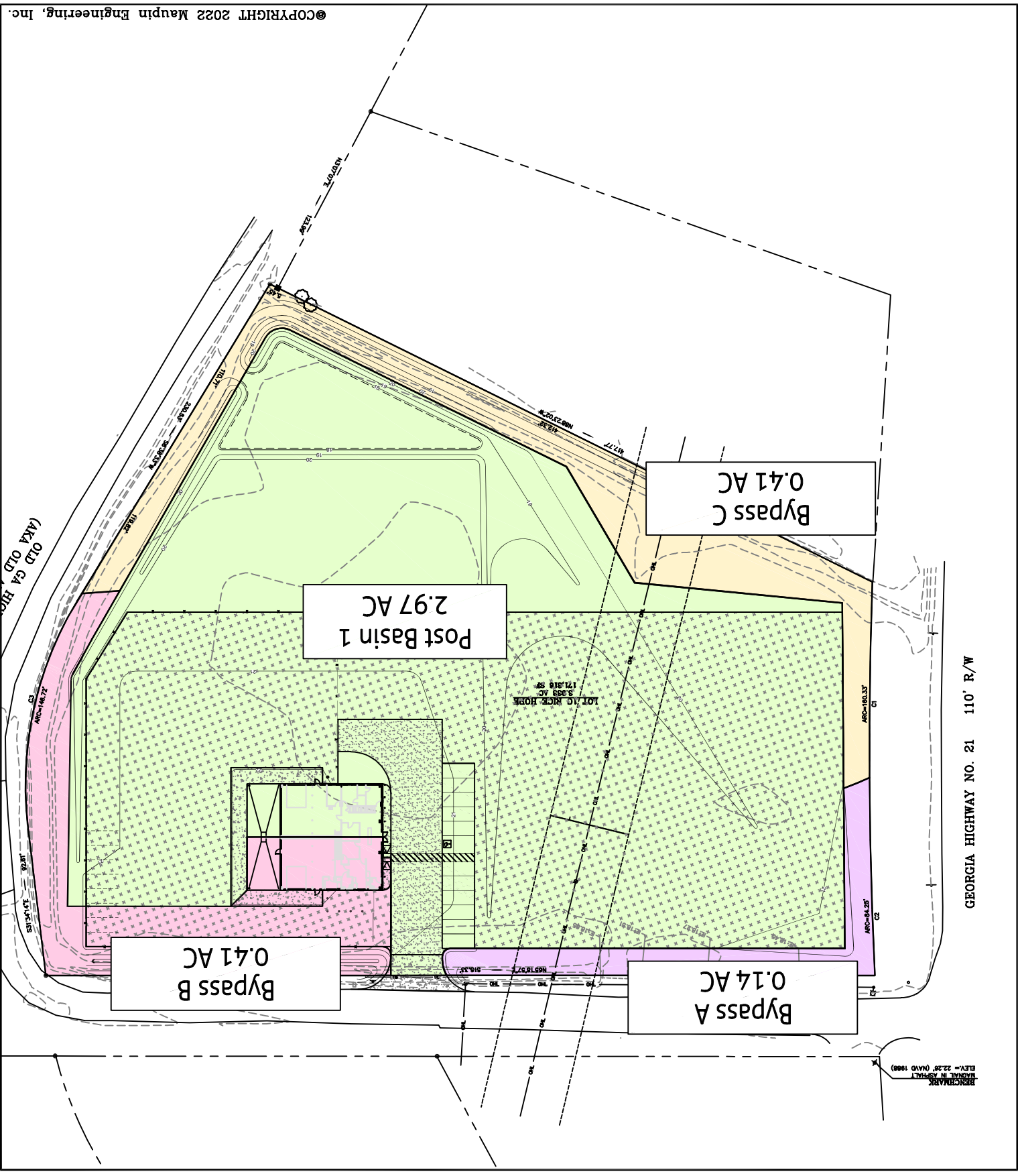
Reach 3R: Pre Combined



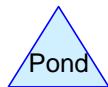
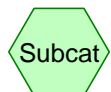
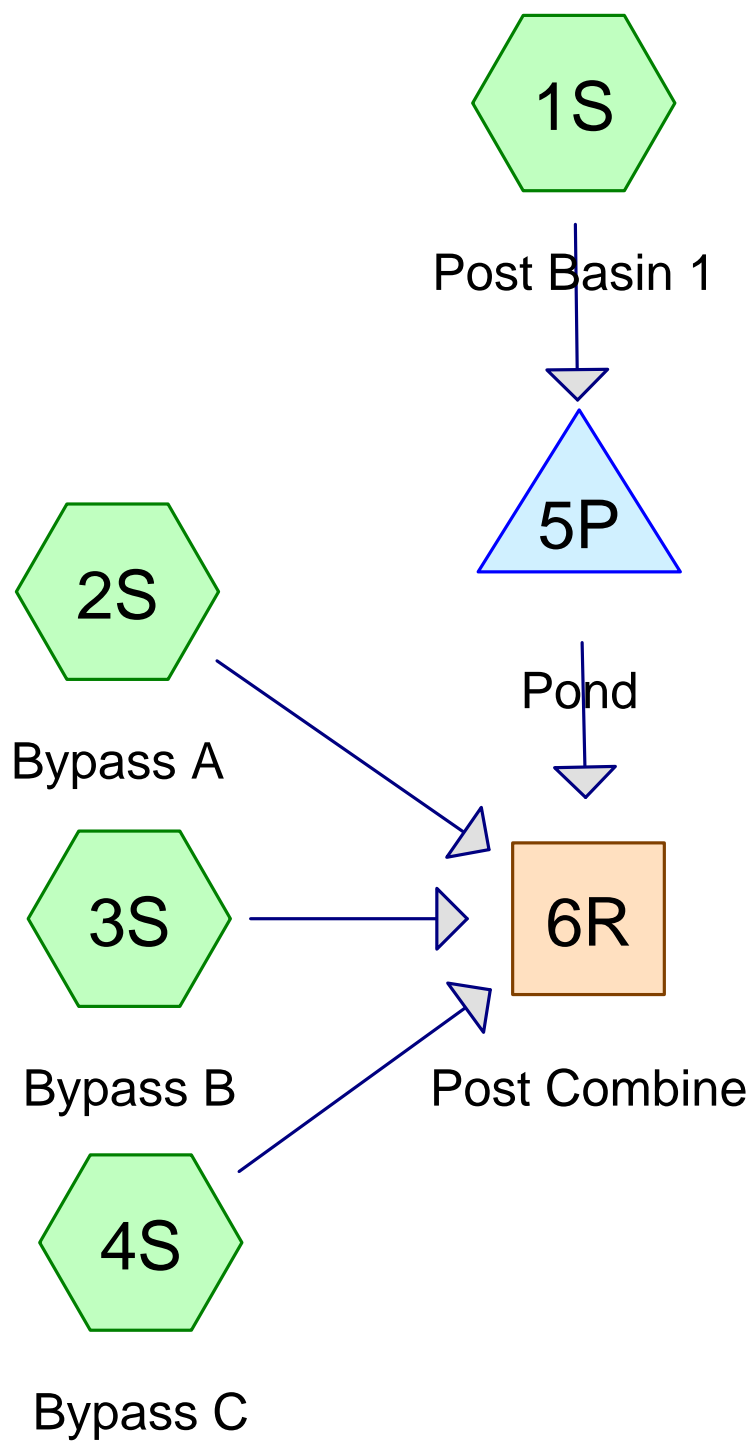
POST EXHIBIT
 PW TRUCK SHOP

SCALE: 1" = 80'
 0 40 80
 DRWN: TRW 1-26-2022
 CHKD: JAM DATE

SHEET NO.
 1 of 1
 PROJECT NO.
 673-21-35



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Routing Diagram for Orr Track Post

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Project Notes

Rainfall events imported from "pre hydro analysis.hcp"

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Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type III 24-hr		Default	24.00	1	3.60	2
2	5-Year	Type III 24-hr		Default	24.00	1	4.80	2
3	10-Year	Type III 24-hr		Default	24.00	1	7.00	2
4	25-Year	Type III 24-hr		Default	24.00	1	8.00	2
5	50-Year	Type III 24-hr		Default	24.00	1	9.00	2
6	100-Year	Type III 24-hr		Default	24.00	1	9.84	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.645	61	>75% Grass cover, Good, HSG B (1S, 2S, 3S, 4S)
0.119	85	Gravel roads, HSG B (3S)
1.817	91	Gravel, HSG B (1S)
0.219	98	Paved parking, HSG B (1S, 3S)
0.127	98	Roofs, HSG B (1S, 3S)
3.927	79	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
3.927	HSG B	1S, 2S, 3S, 4S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
3.927		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	1.645	0.000	0.000	0.000	1.645	>75% Grass cover, Good	1S, 2S, 3S, 4S
0.000	1.817	0.000	0.000	0.000	1.817	Gravel	1S
0.000	0.119	0.000	0.000	0.000	0.119	Gravel roads	3S
0.000	0.219	0.000	0.000	0.000	0.219	Paved parking	1S, 3S
0.000	0.127	0.000	0.000	0.000	0.127	Roofs	1S, 3S
0.000	3.927	0.000	0.000	0.000	3.927	TOTAL AREA	

Orr Track Post*Type III 24-hr 1-Year Rainfall=3.60"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1	Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=1.94" Tc=10.0 min CN=83 Runoff=5.84 cfs 0.481 af
Subcatchment 2S: Bypass A	Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=0.62" Tc=5.0 min CN=61 Runoff=0.08 cfs 0.007 af
Subcatchment 3S: Bypass B	Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=1.37" Tc=5.0 min CN=75 Runoff=0.64 cfs 0.047 af
Subcatchment 4S: Bypass C	Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=0.62" Tc=5.0 min CN=61 Runoff=0.23 cfs 0.021 af
Reach 6R: Post Combine	Inflow=1.54 cfs 0.548 af Outflow=1.54 cfs 0.548 af
Pond 5P: Pond	Peak Elev=18.94' Storage=9,031 cf Inflow=5.84 cfs 0.481 af Outflow=0.94 cfs 0.473 af

Total Runoff Area = 3.927 ac Runoff Volume = 0.556 af Average Runoff Depth = 1.70"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 1S: Post Basin 1

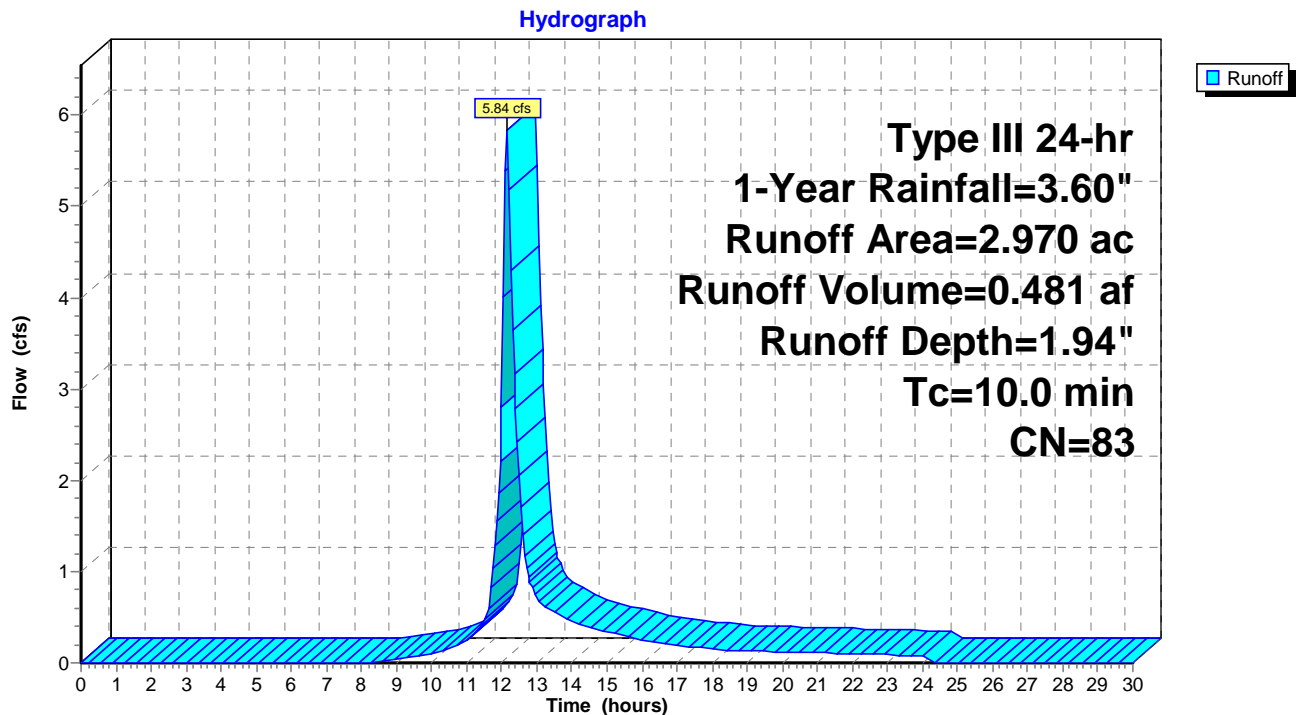
Runoff = 5.84 cfs @ 12.14 hrs, Volume= 0.481 af, Depth= 1.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.08 cfs @ 12.10 hrs, Volume= 0.007 af, Depth= 0.62"

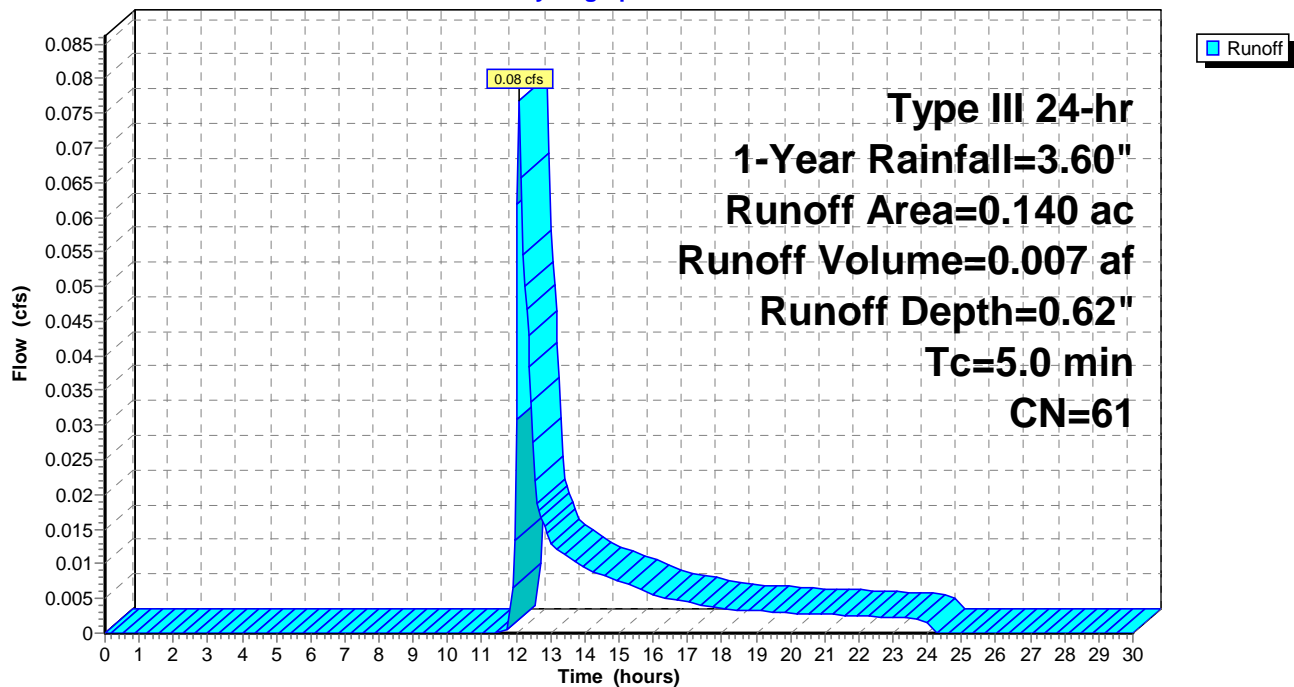
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.64 cfs @ 12.08 hrs, Volume= 0.047 af, Depth= 1.37"

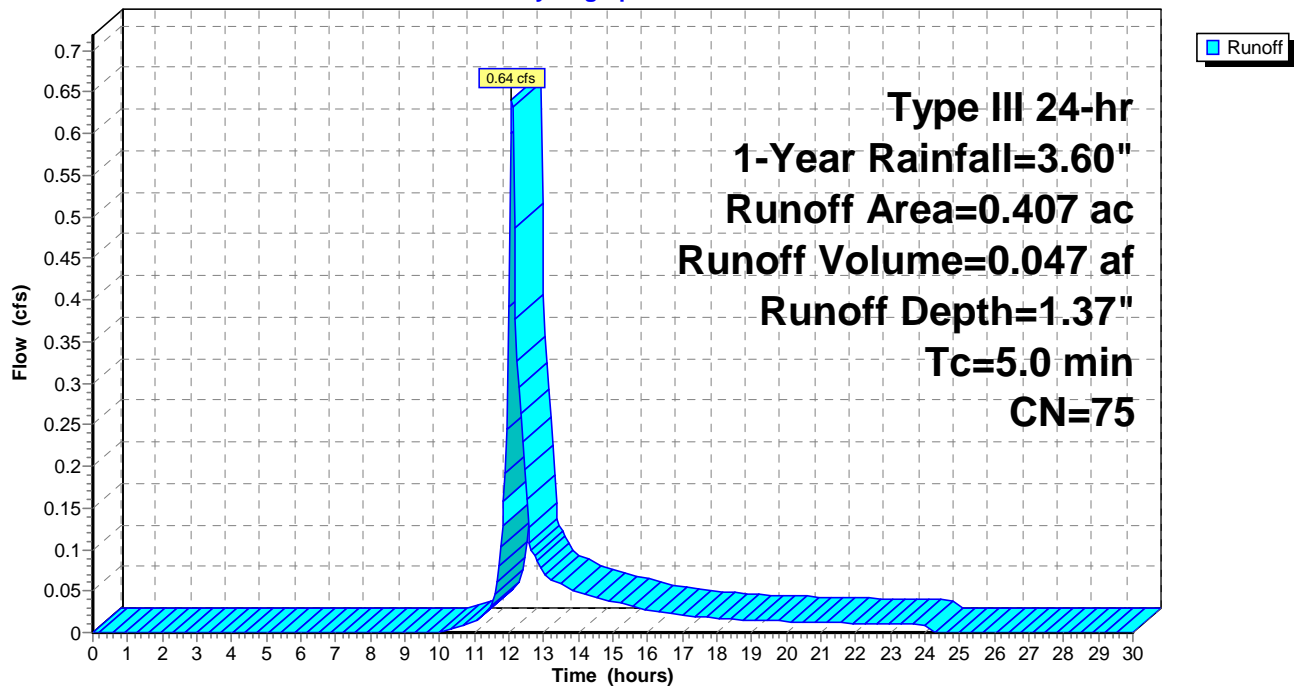
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B

Hydrograph



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Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.23 cfs @ 12.10 hrs, Volume= 0.021 af, Depth= 0.62"

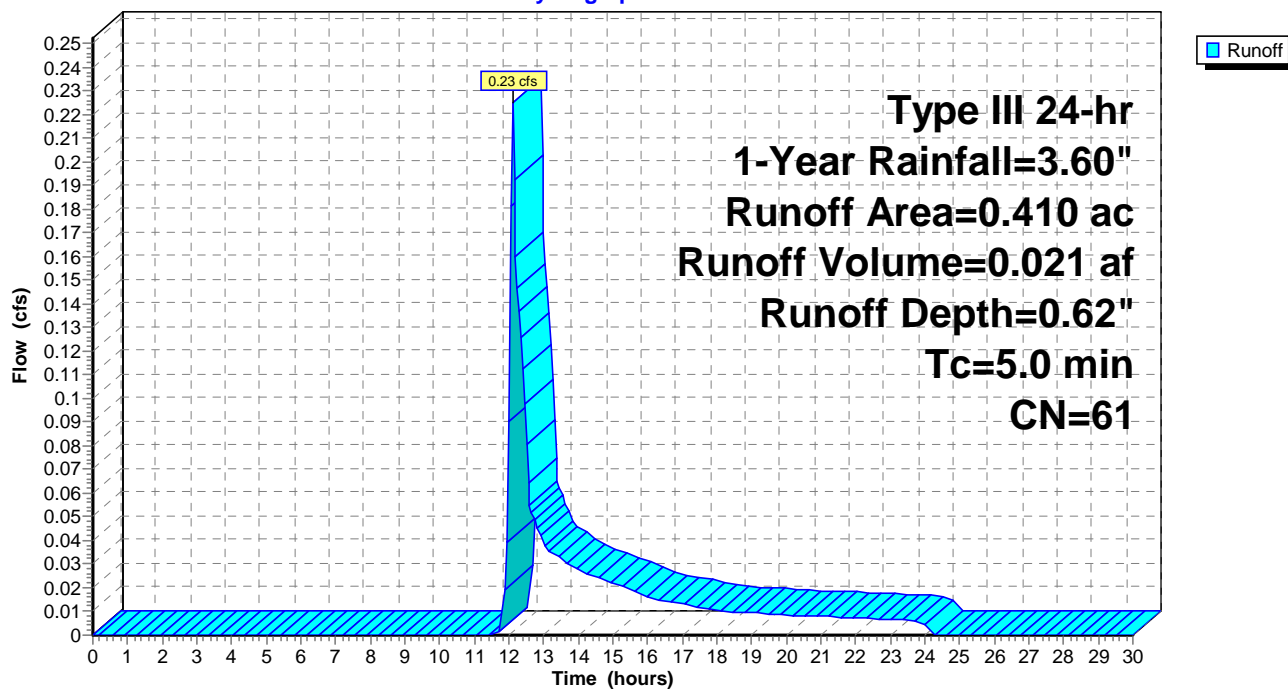
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 1-Year Rainfall=3.60"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C

Hydrograph



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Type III 24-hr 1-Year Rainfall=3.60"

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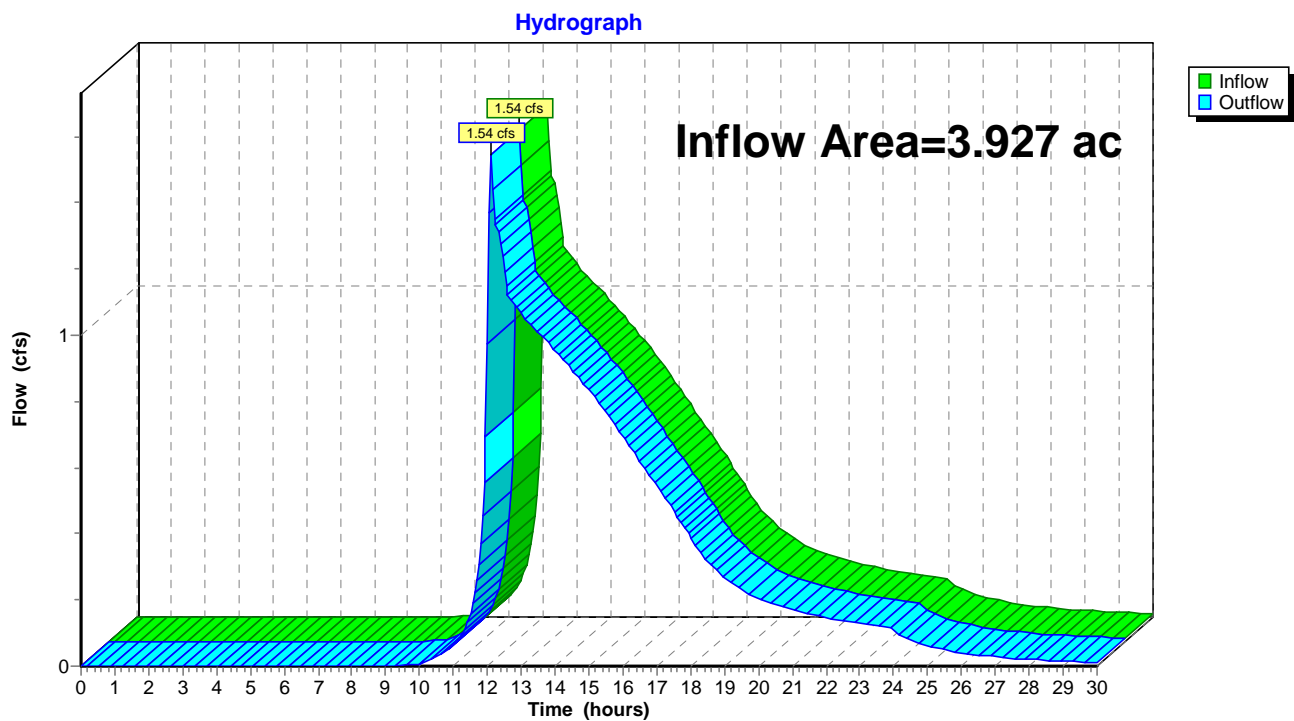
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 1.67" for 1-Year event
Inflow = 1.54 cfs @ 12.11 hrs, Volume= 0.548 af
Outflow = 1.54 cfs @ 12.11 hrs, Volume= 0.548 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 1-Year Rainfall=3.60"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 1.94" for 1-Year event
 Inflow = 5.84 cfs @ 12.14 hrs, Volume= 0.481 af
 Outflow = 0.94 cfs @ 12.76 hrs, Volume= 0.473 af, Atten= 84%, Lag= 36.8 min
 Primary = 0.94 cfs @ 12.76 hrs, Volume= 0.473 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 18.94' @ 12.76 hrs Surf.Area= 9,152 sf Storage= 9,031 cf

Plug-Flow detention time= 138.1 min calculated for 0.473 af (98% of inflow)
 Center-of-Mass det. time= 128.0 min (959.2 - 831.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=0.94 cfs @ 12.76 hrs HW=18.94' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 0.94 cfs @ 4.80 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)

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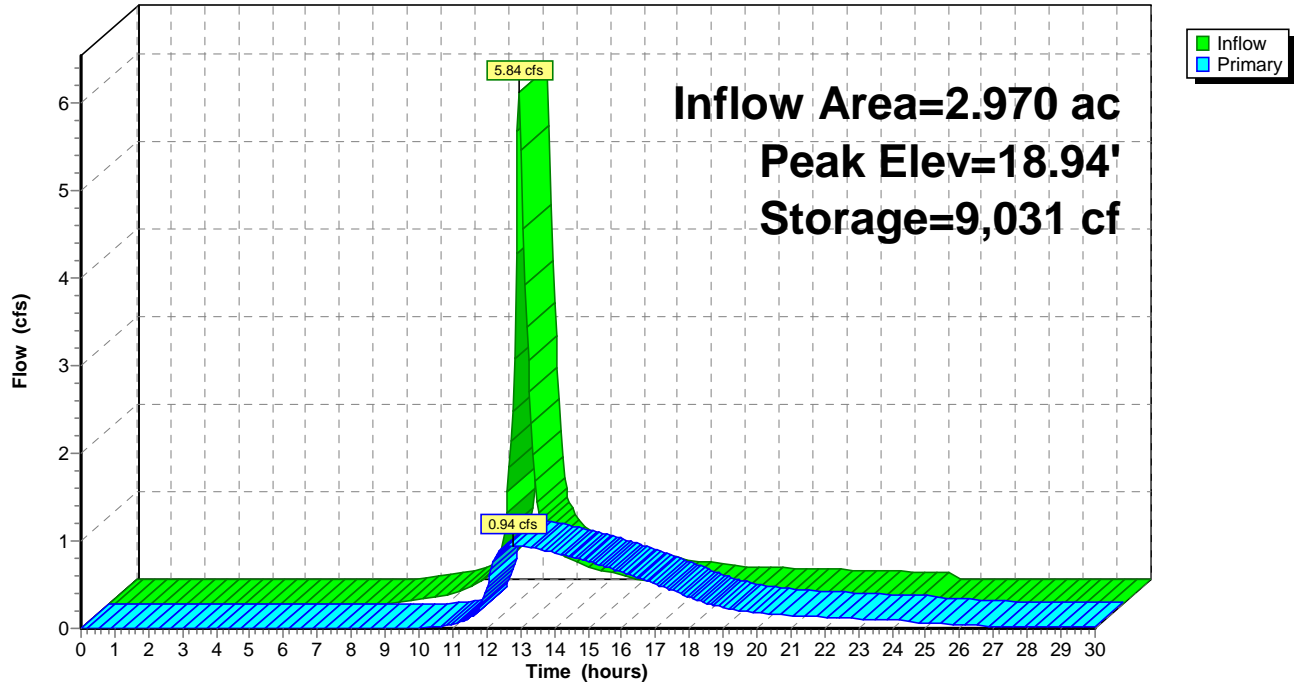
Type III 24-hr 1-Year Rainfall=3.60"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 5-Year Rainfall=4.80"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1

Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=2.99"
Tc=10.0 min CN=83 Runoff=8.97 cfs 0.741 af

Subcatchment 2S: Bypass A

Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=1.25"
Tc=5.0 min CN=61 Runoff=0.19 cfs 0.015 af

Subcatchment 3S: Bypass B

Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=2.29"
Tc=5.0 min CN=75 Runoff=1.09 cfs 0.078 af

Subcatchment 4S: Bypass C

Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=1.25"
Tc=5.0 min CN=61 Runoff=0.54 cfs 0.043 af

Reach 6R: Post Combine

Inflow=2.68 cfs 0.867 af
Outflow=2.68 cfs 0.867 af

Pond 5P: Pond

Peak Elev=19.35' Storage=13,621 cf Inflow=8.97 cfs 0.741 af
Outflow=2.30 cfs 0.732 af

Total Runoff Area = 3.927 ac Runoff Volume = 0.876 af Average Runoff Depth = 2.68"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 5-Year Rainfall=4.80"

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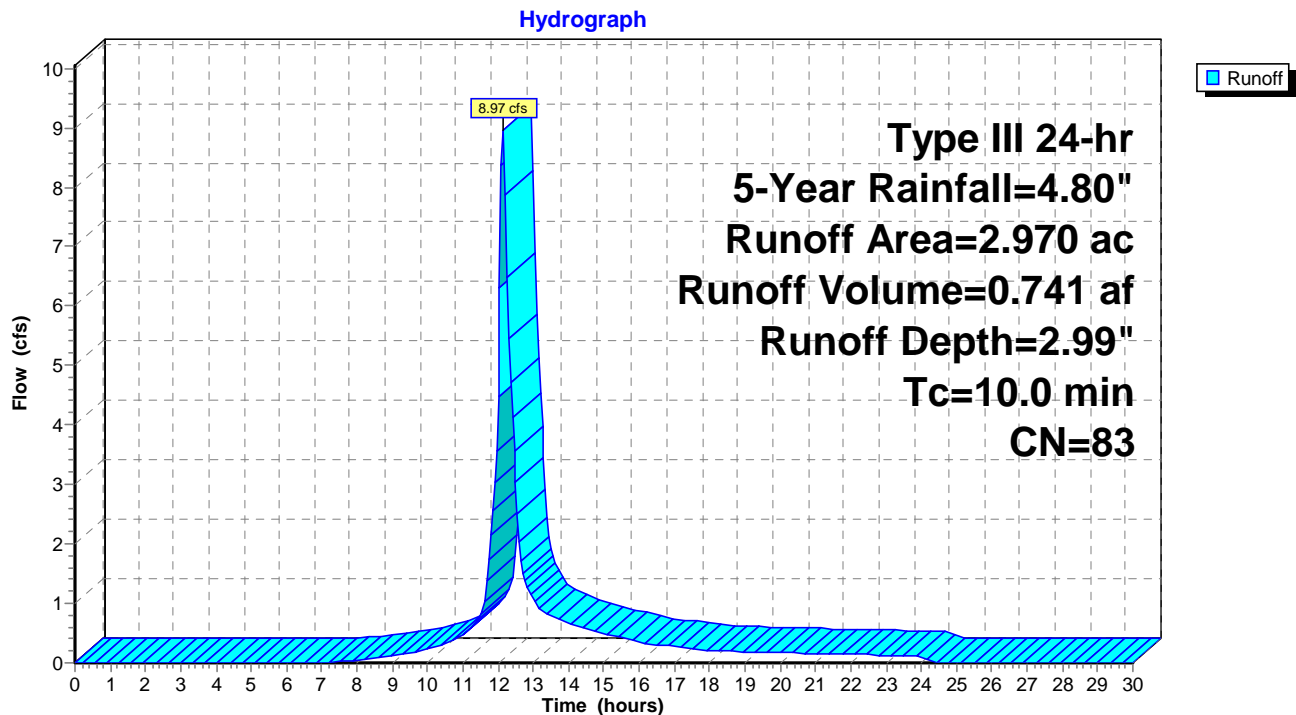
Summary for Subcatchment 1S: Post Basin 1

Runoff = 8.97 cfs @ 12.14 hrs, Volume= 0.741 af, Depth= 2.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1

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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

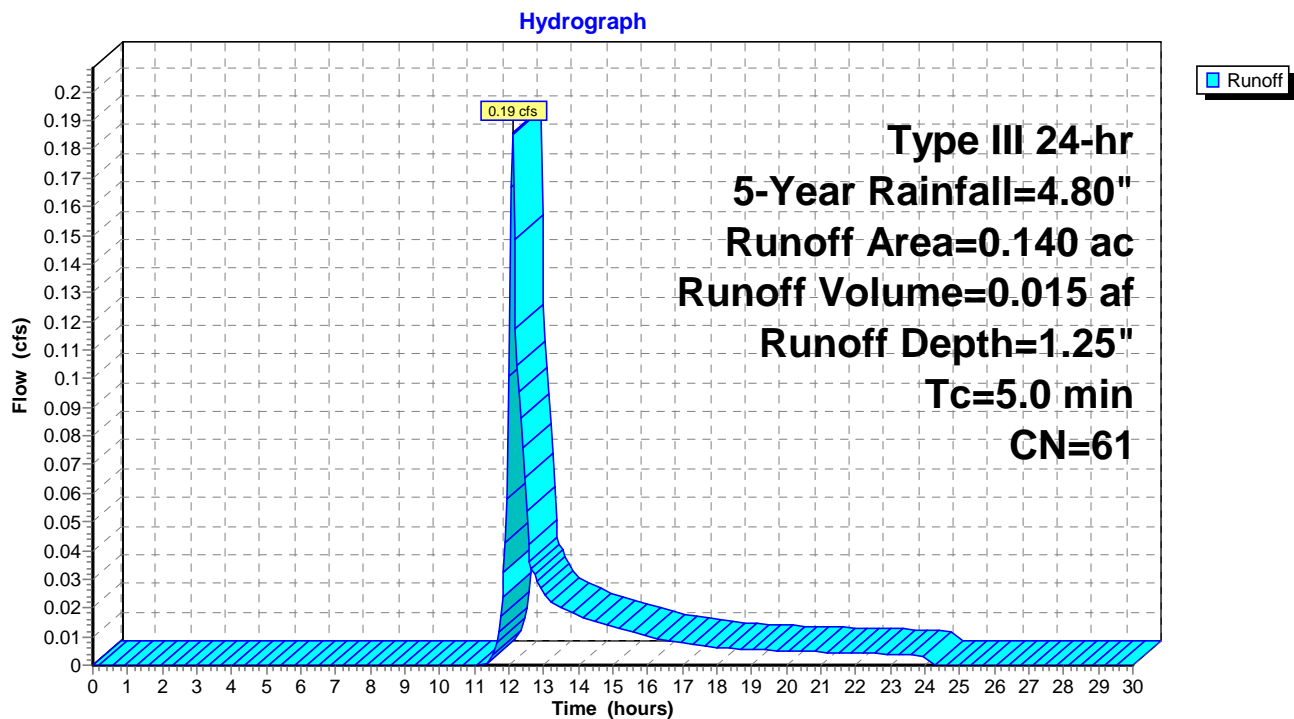
Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.015 af, Depth= 1.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A



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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

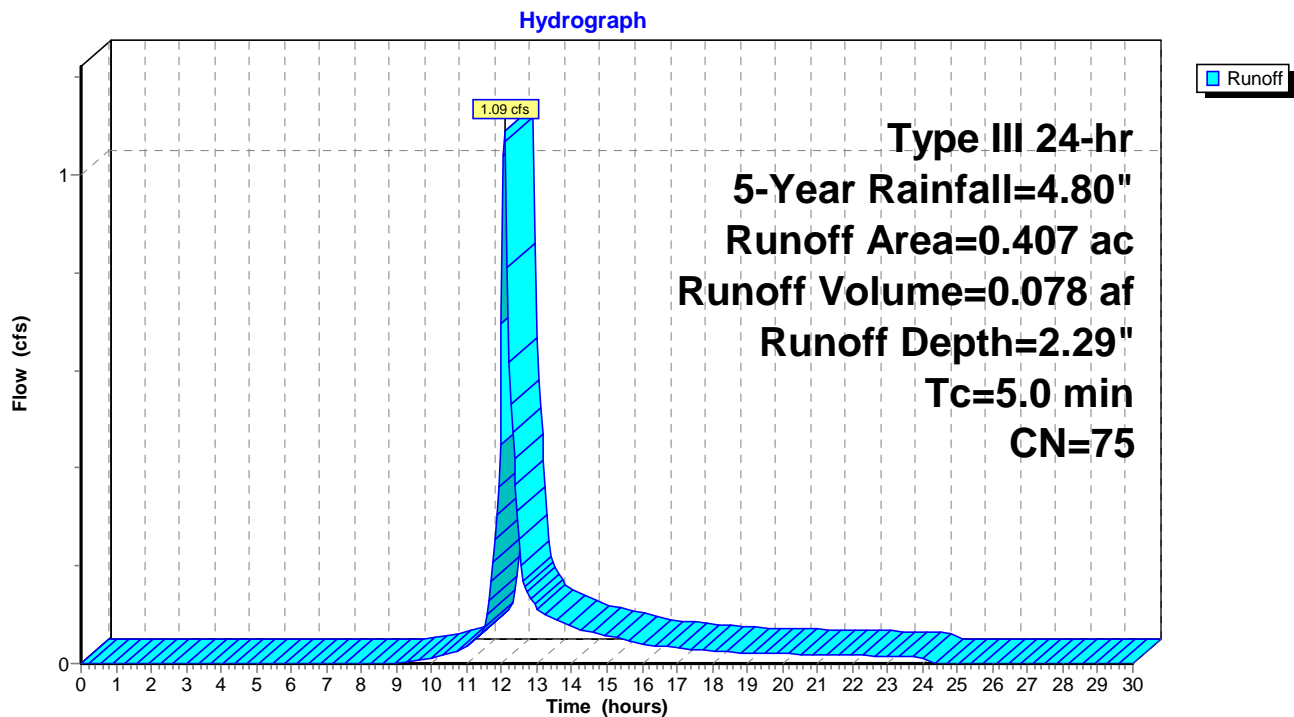
Runoff = 1.09 cfs @ 12.08 hrs, Volume= 0.078 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.54 cfs @ 12.09 hrs, Volume= 0.043 af, Depth= 1.25"

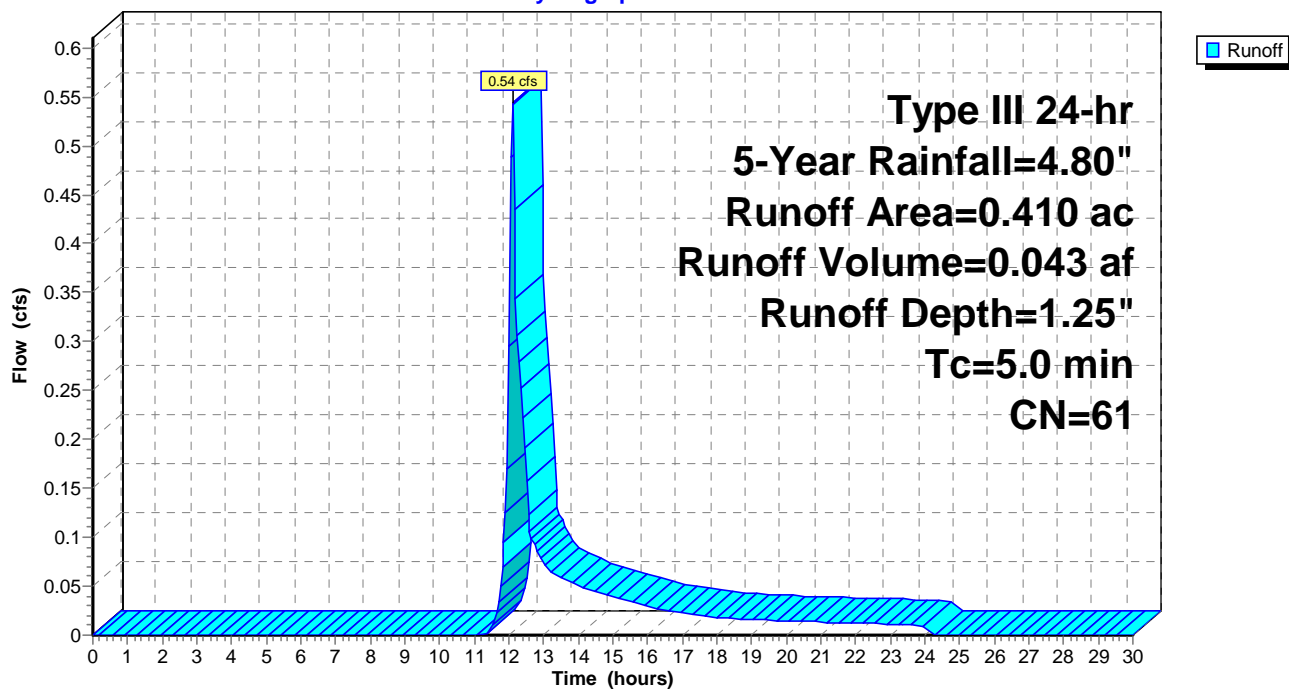
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 5-Year Rainfall=4.80"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C

Hydrograph



Orr Track Post

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Type III 24-hr 5-Year Rainfall=4.80"

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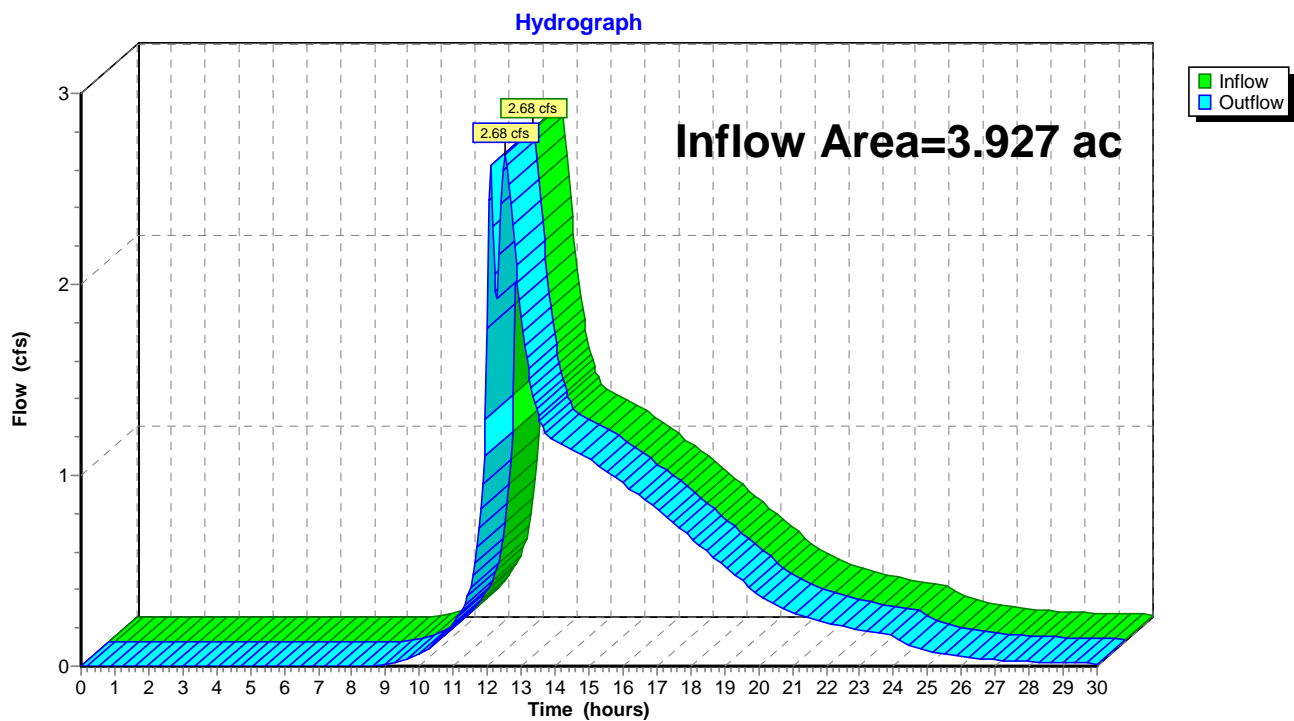
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 2.65" for 5-Year event
Inflow = 2.68 cfs @ 12.52 hrs, Volume= 0.867 af
Outflow = 2.68 cfs @ 12.52 hrs, Volume= 0.867 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 5-Year Rainfall=4.80"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 2.99" for 5-Year event
 Inflow = 8.97 cfs @ 12.14 hrs, Volume= 0.741 af
 Outflow = 2.30 cfs @ 12.57 hrs, Volume= 0.732 af, Atten= 74%, Lag= 25.9 min
 Primary = 2.30 cfs @ 12.57 hrs, Volume= 0.732 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.35' @ 12.57 hrs Surf.Area= 13,766 sf Storage= 13,621 cf

Plug-Flow detention time= 139.7 min calculated for 0.731 af (99% of inflow)
 Center-of-Mass det. time= 132.9 min (951.7 - 818.8)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=2.29 cfs @ 12.57 hrs HW=19.35' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.12 cfs @ 5.70 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 1.17 cfs @ 1.28 fps)

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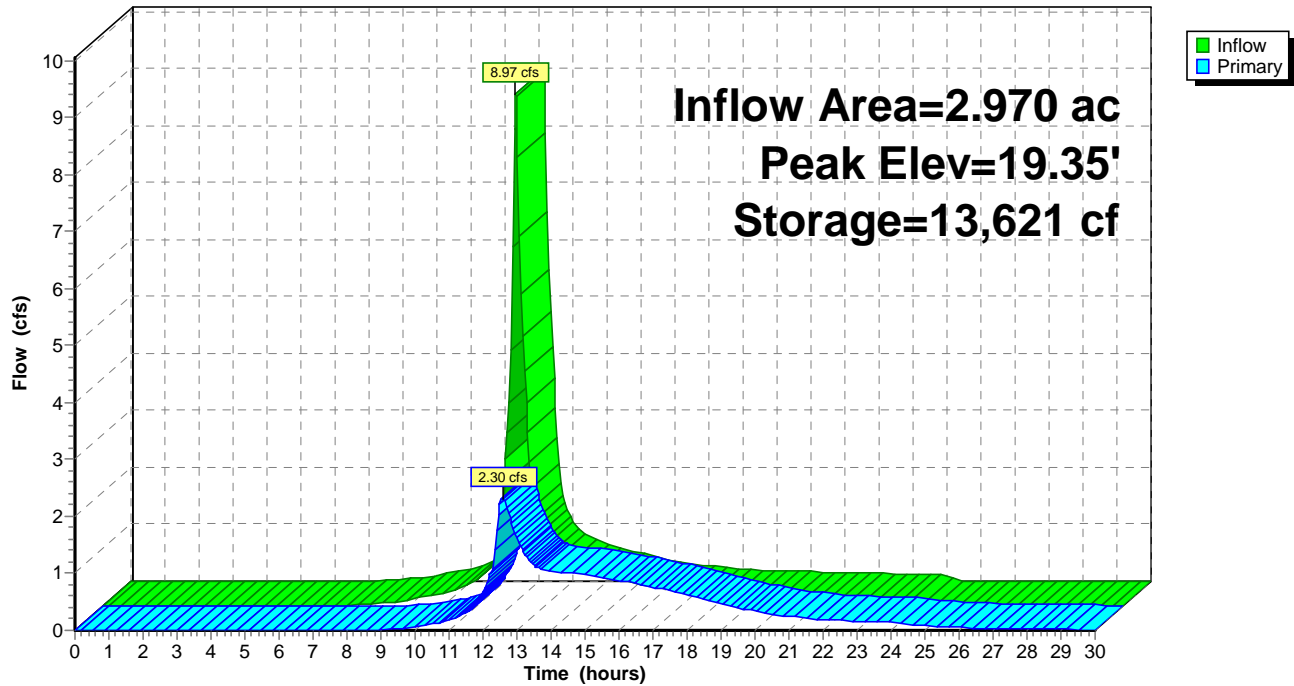
Type III 24-hr 5-Year Rainfall=4.80"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 10-Year Rainfall=7.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

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

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=5.03"
Tc=10.0 min CN=83 Runoff=14.84 cfs 1.244 af**Subcatchment 2S: Bypass A**Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=2.70"
Tc=5.0 min CN=61 Runoff=0.43 cfs 0.032 af**Subcatchment 3S: Bypass B**Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=4.15"
Tc=5.0 min CN=75 Runoff=1.98 cfs 0.141 af**Subcatchment 4S: Bypass C**Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=2.70"
Tc=5.0 min CN=61 Runoff=1.27 cfs 0.092 af**Reach 6R: Post Combine**Inflow=8.67 cfs 1.499 af
Outflow=8.67 cfs 1.499 af**Pond 5P: Pond**Peak Elev=19.65' Storage=18,336 cf Inflow=14.84 cfs 1.244 af
Outflow=7.25 cfs 1.235 af**Total Runoff Area = 3.927 ac Runoff Volume = 1.509 af Average Runoff Depth = 4.61"**
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 1S: Post Basin 1

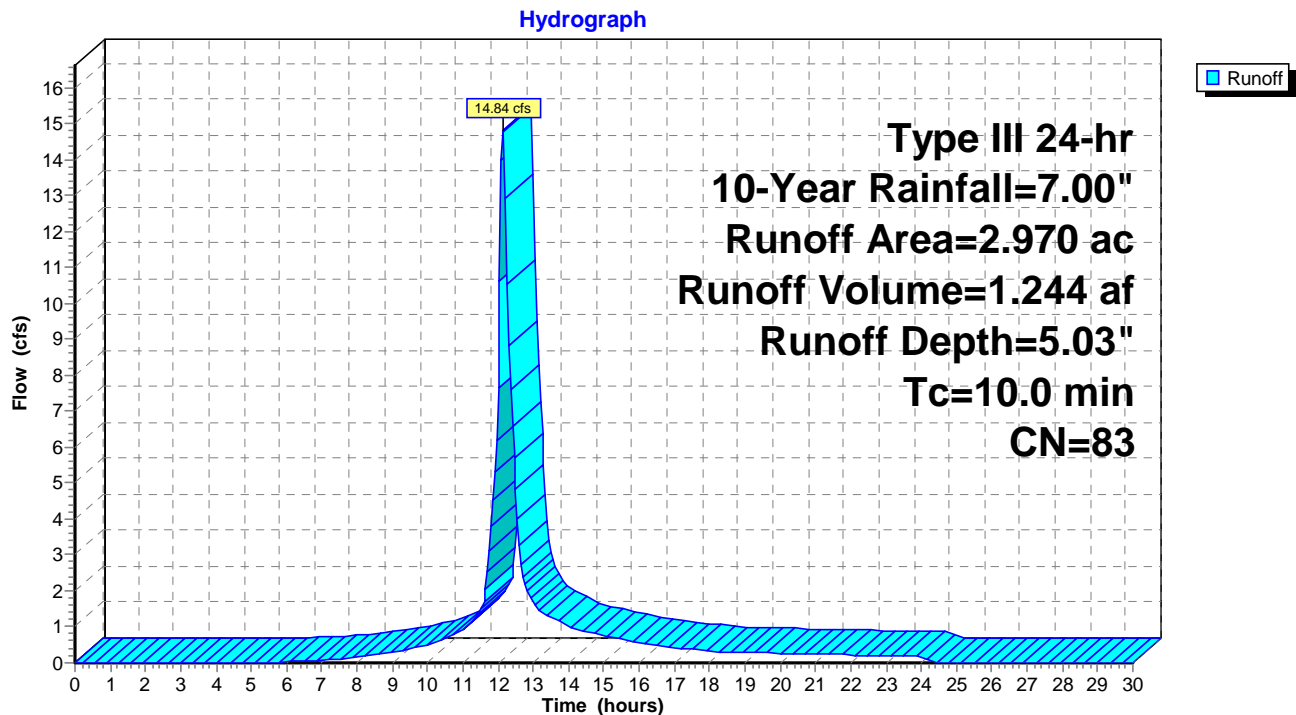
Runoff = 14.84 cfs @ 12.14 hrs, Volume= 1.244 af, Depth= 5.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.43 cfs @ 12.08 hrs, Volume= 0.032 af, Depth= 2.70"

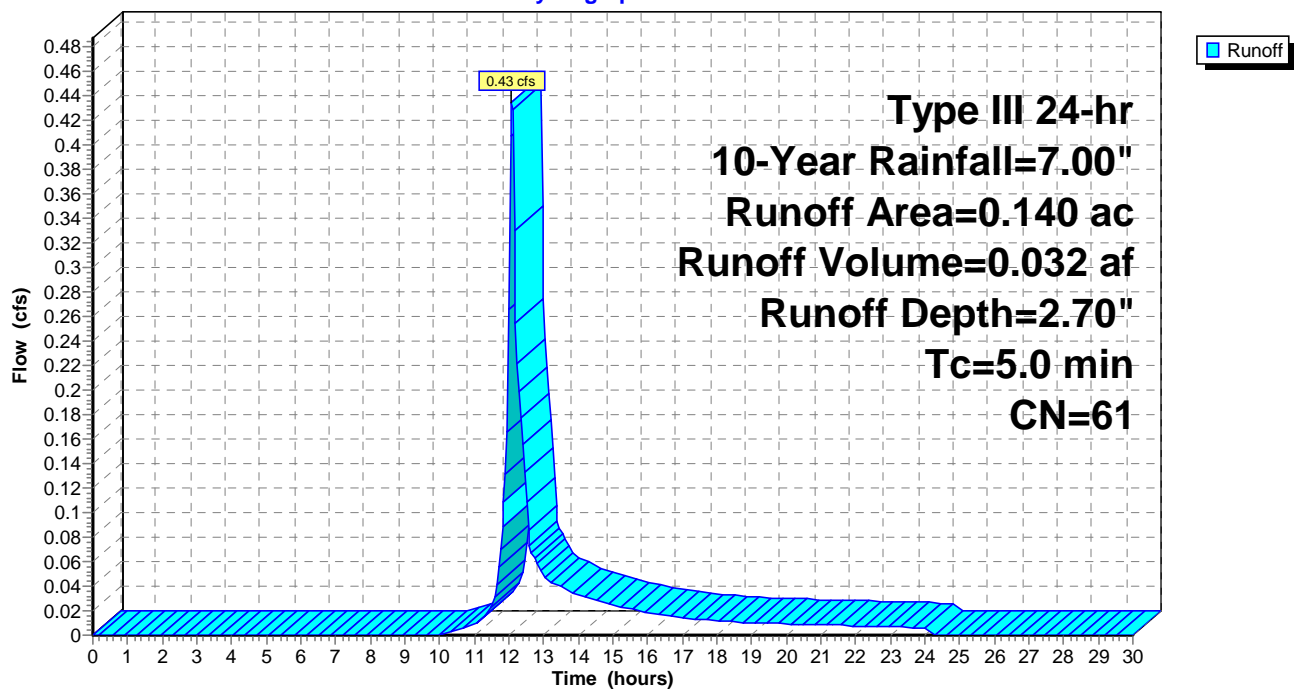
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

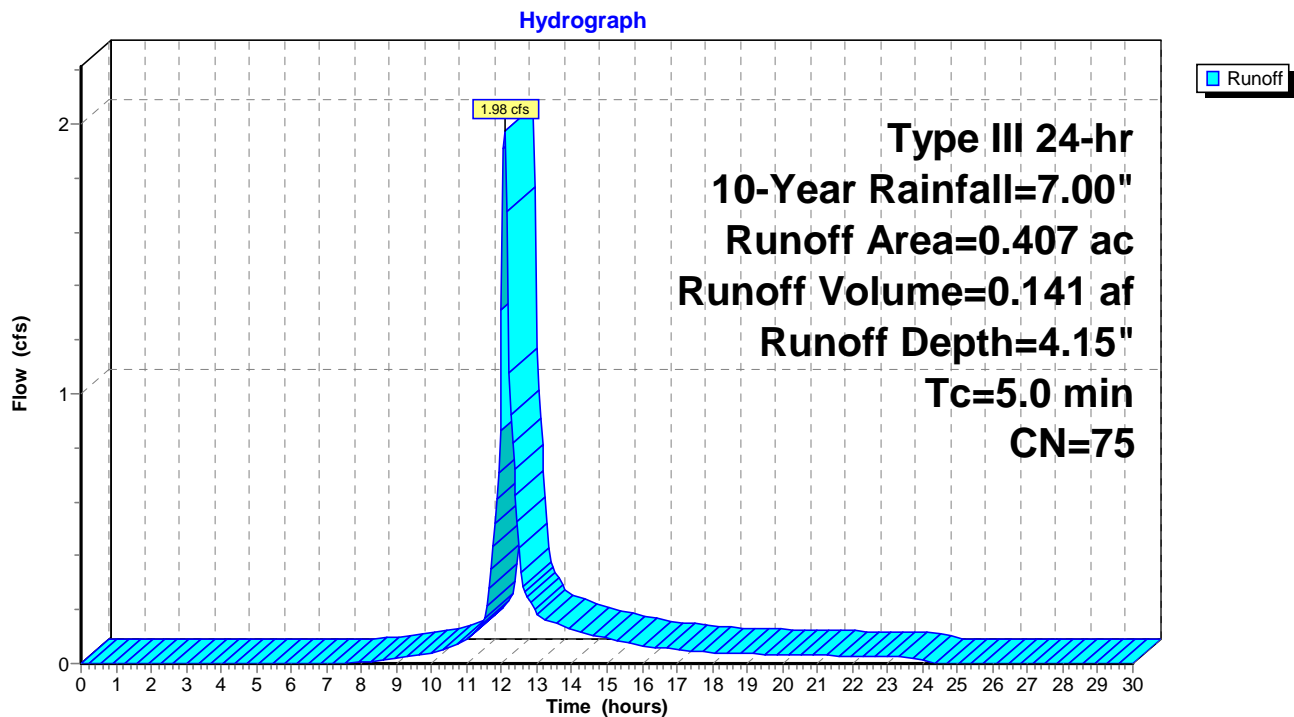
Runoff = 1.98 cfs @ 12.08 hrs, Volume= 0.141 af, Depth= 4.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

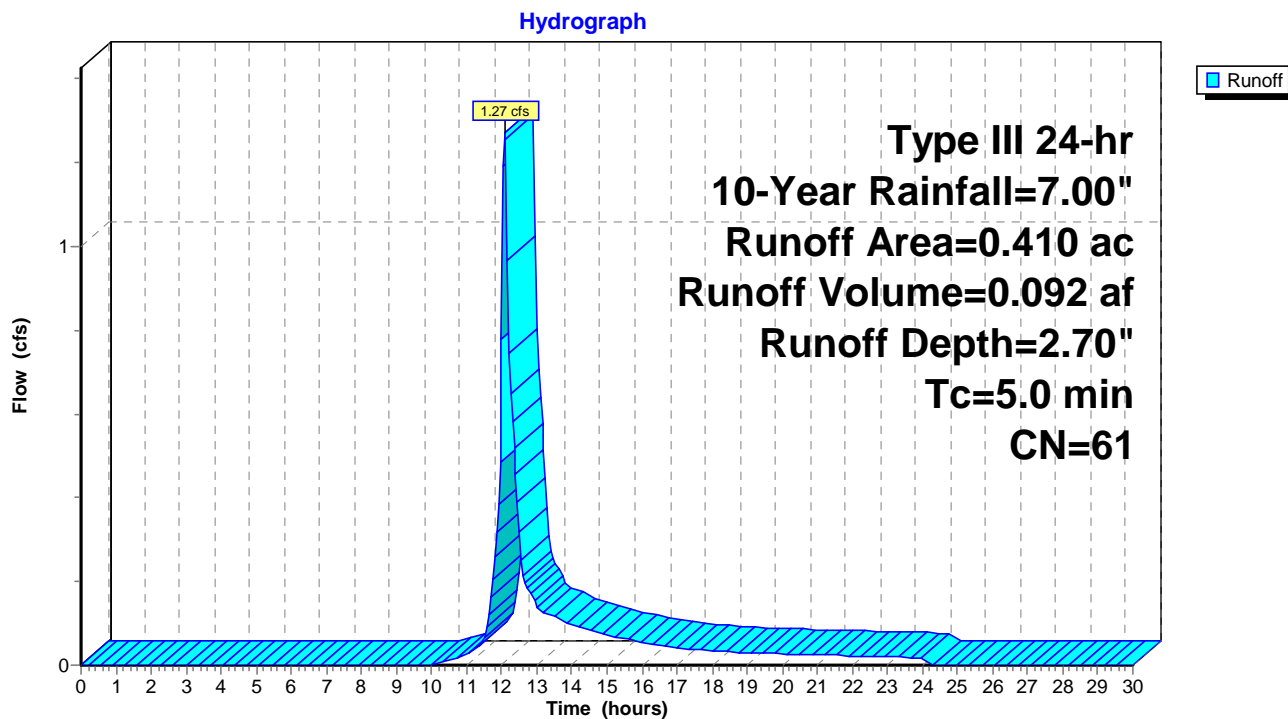
Runoff = 1.27 cfs @ 12.08 hrs, Volume= 0.092 af, Depth= 2.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 10-Year Rainfall=7.00"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



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Type III 24-hr 10-Year Rainfall=7.00"

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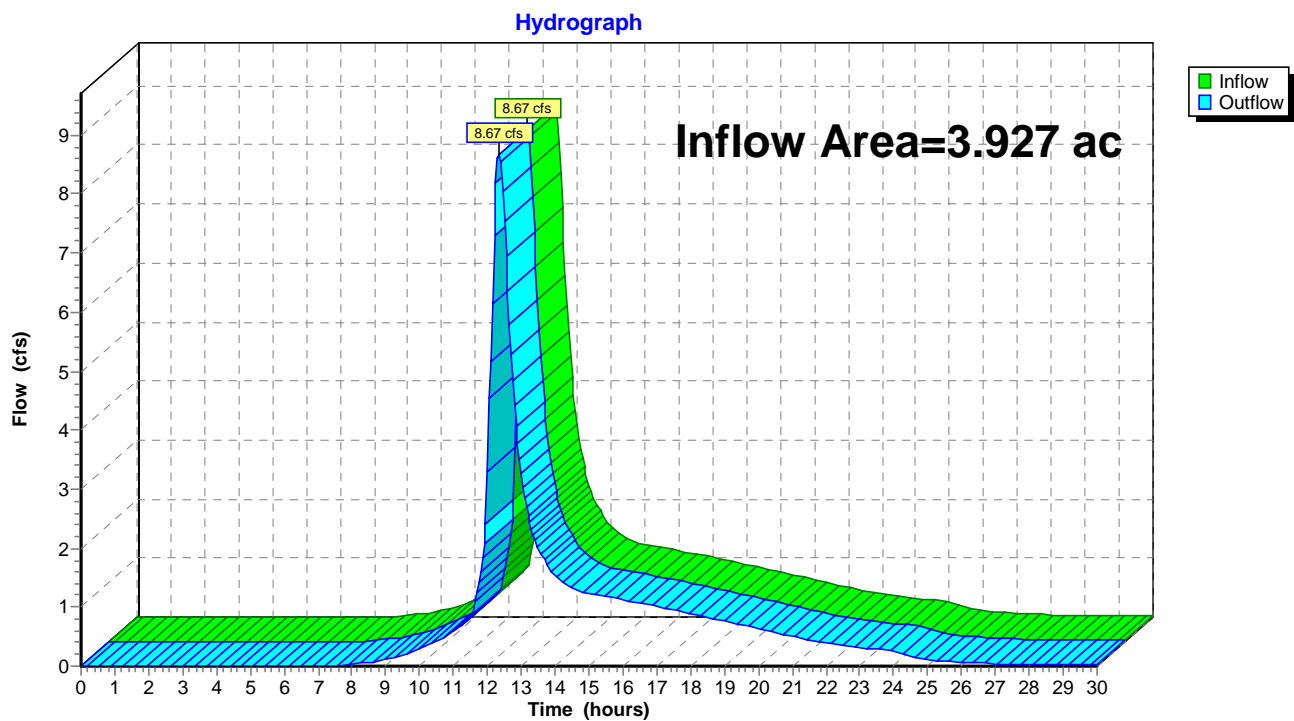
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 4.58" for 10-Year event
Inflow = 8.67 cfs @ 12.33 hrs, Volume= 1.499 af
Outflow = 8.67 cfs @ 12.33 hrs, Volume= 1.499 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 10-Year Rainfall=7.00"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 5.03" for 10-Year event
 Inflow = 14.84 cfs @ 12.14 hrs, Volume= 1.244 af
 Outflow = 7.25 cfs @ 12.37 hrs, Volume= 1.235 af, Atten= 51%, Lag= 13.8 min
 Primary = 7.25 cfs @ 12.37 hrs, Volume= 1.235 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.65' @ 12.37 hrs Surf.Area= 17,551 sf Storage= 18,336 cf

Plug-Flow detention time= 111.9 min calculated for 1.235 af (99% of inflow)
 Center-of-Mass det. time= 107.1 min (911.3 - 804.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=7.22 cfs @ 12.37 hrs HW=19.65' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.23 cfs @ 6.28 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 5.99 cfs @ 2.20 fps)

Orr Track Post

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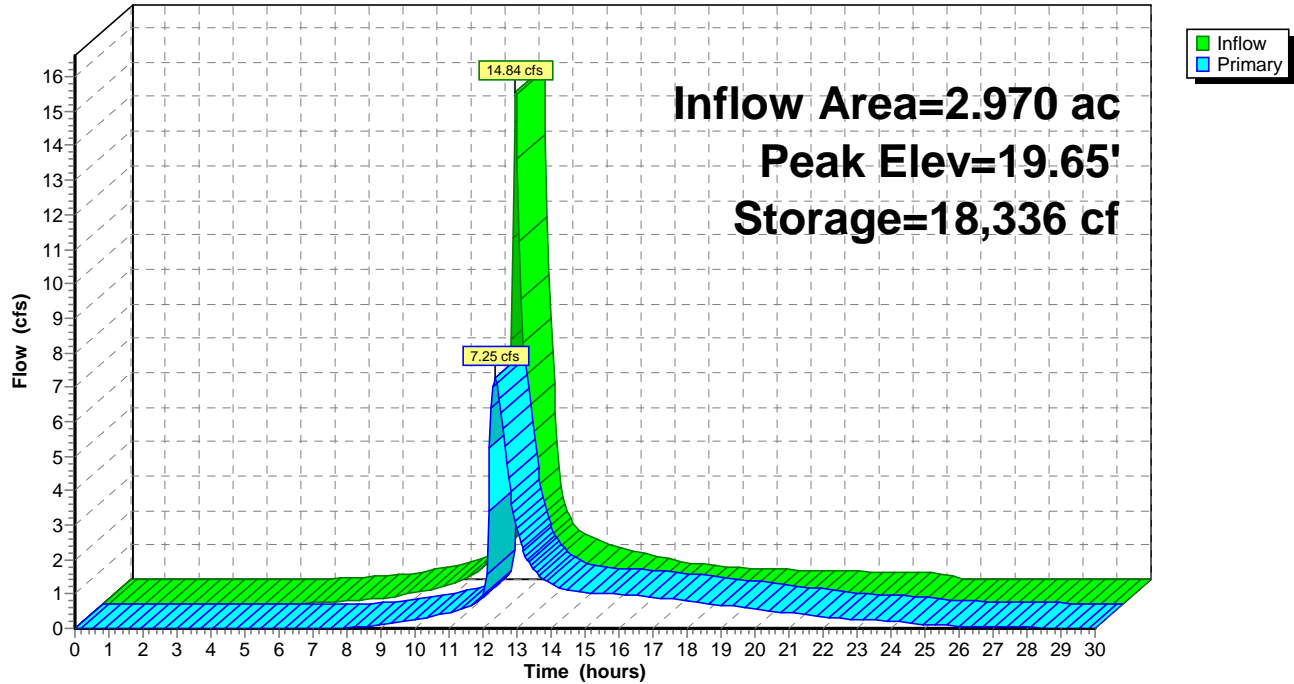
Type III 24-hr 10-Year Rainfall=7.00"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 25-Year Rainfall=8.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1

Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=5.98"
Tc=10.0 min CN=83 Runoff=17.51 cfs 1.479 af

Subcatchment 2S: Bypass A

Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=3.44"
Tc=5.0 min CN=61 Runoff=0.56 cfs 0.040 af

Subcatchment 3S: Bypass B

Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=5.04"
Tc=5.0 min CN=75 Runoff=2.39 cfs 0.171 af

Subcatchment 4S: Bypass C

Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=3.44"
Tc=5.0 min CN=61 Runoff=1.64 cfs 0.118 af

Reach 6R: Post Combine

Inflow=11.52 cfs 1.798 af
Outflow=11.52 cfs 1.798 af

Pond 5P: Pond

Peak Elev=19.76' Storage=20,338 cf Inflow=17.51 cfs 1.479 af
Outflow=9.60 cfs 1.469 af

Total Runoff Area = 3.927 ac Runoff Volume = 1.808 af Average Runoff Depth = 5.53"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

Orr Track Post

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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 1S: Post Basin 1

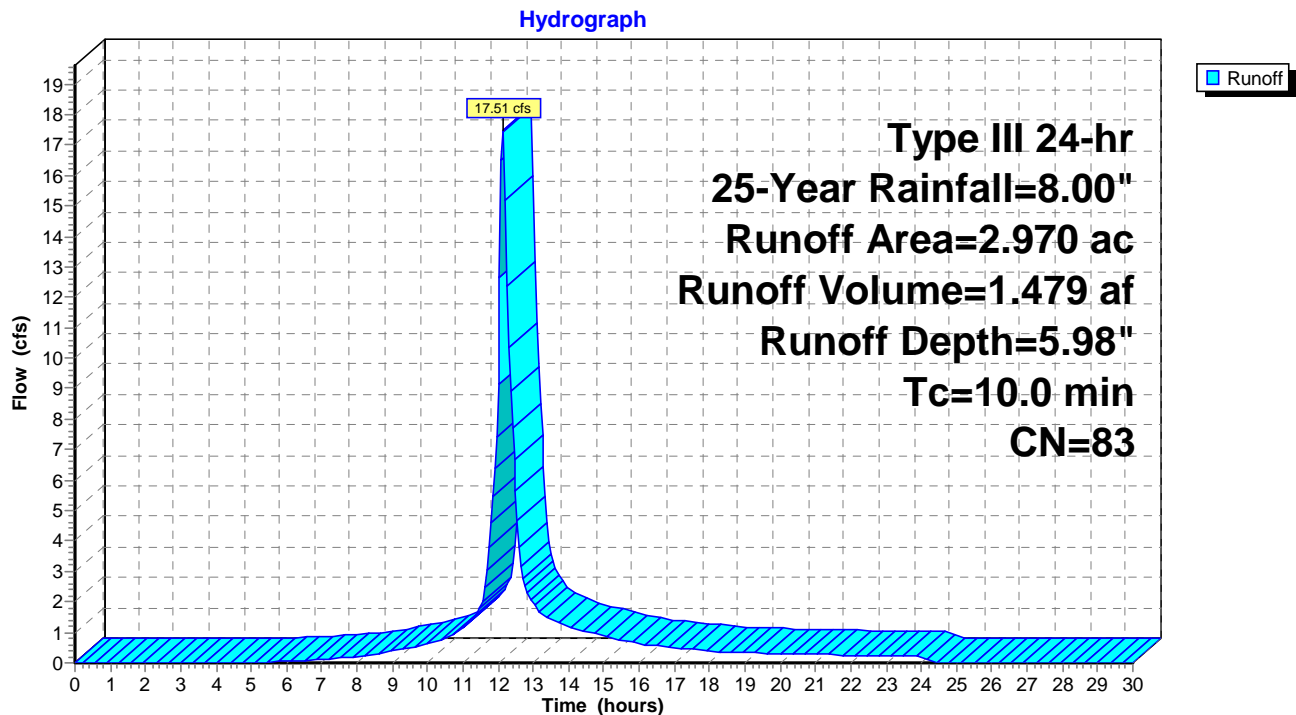
Runoff = 17.51 cfs @ 12.14 hrs, Volume= 1.479 af, Depth= 5.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.56 cfs @ 12.08 hrs, Volume= 0.040 af, Depth= 3.44"

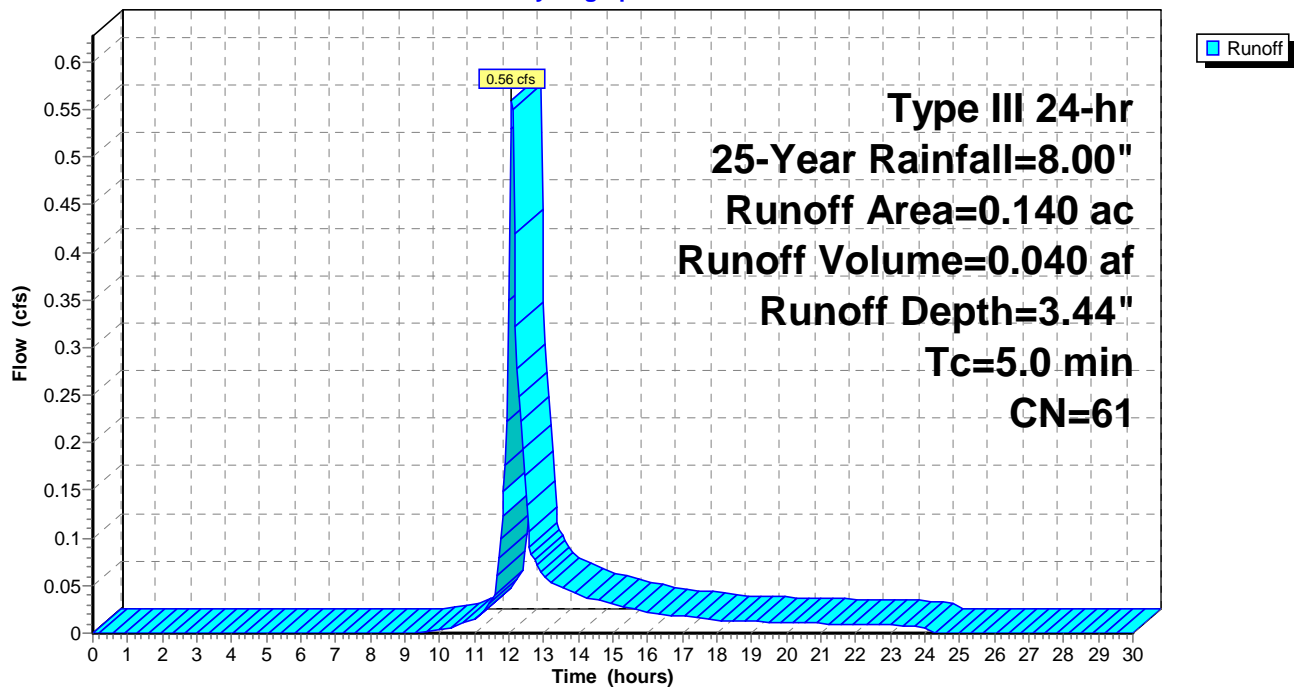
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



Orr Track Post

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Type III 24-hr 25-Year Rainfall=8.00"

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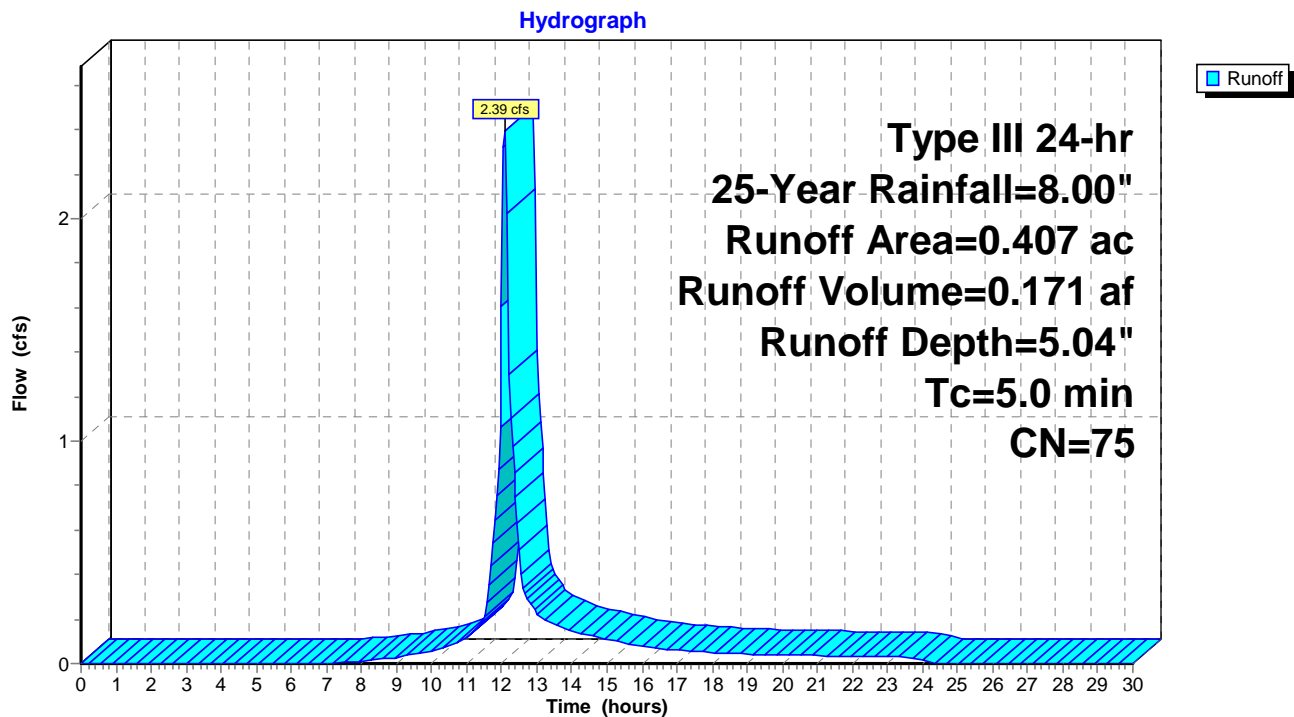
Summary for Subcatchment 3S: Bypass B[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 2.39 cfs @ 12.08 hrs, Volume= 0.171 af, Depth= 5.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B

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Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

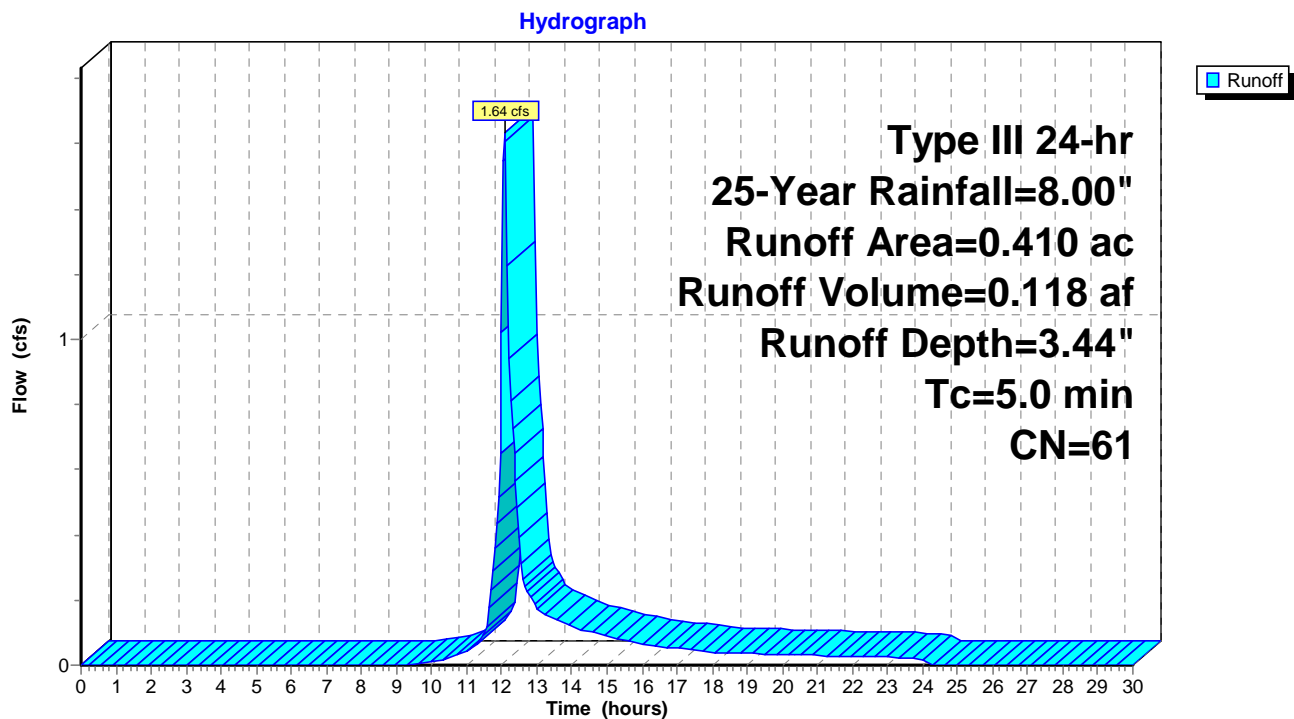
Runoff = 1.64 cfs @ 12.08 hrs, Volume= 0.118 af, Depth= 3.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 25-Year Rainfall=8.00"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



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Type III 24-hr 25-Year Rainfall=8.00"

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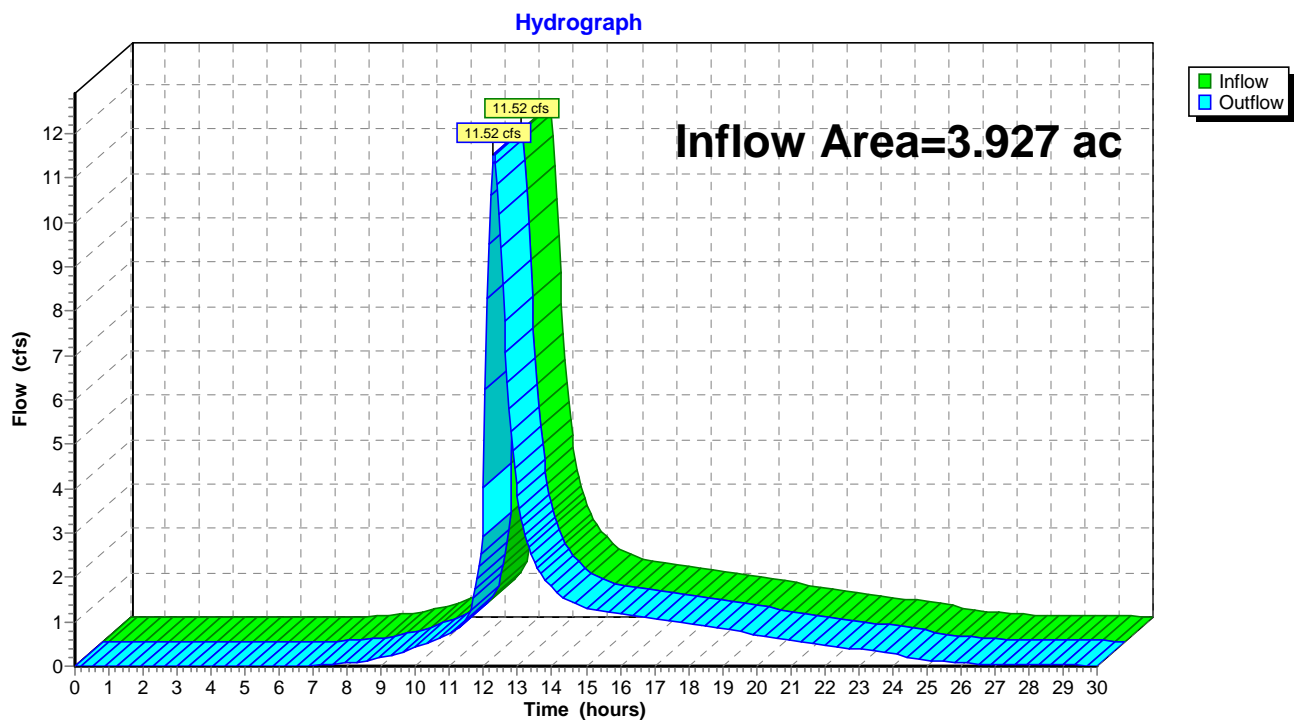
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 5.50" for 25-Year event
Inflow = 11.52 cfs @ 12.30 hrs, Volume= 1.798 af
Outflow = 11.52 cfs @ 12.30 hrs, Volume= 1.798 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 25-Year Rainfall=8.00"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 5.98" for 25-Year event
 Inflow = 17.51 cfs @ 12.14 hrs, Volume= 1.479 af
 Outflow = 9.60 cfs @ 12.33 hrs, Volume= 1.469 af, Atten= 45%, Lag= 11.2 min
 Primary = 9.60 cfs @ 12.33 hrs, Volume= 1.469 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.76' @ 12.33 hrs Surf.Area= 18,930 sf Storage= 20,338 cf

Plug-Flow detention time= 103.7 min calculated for 1.467 af (99% of inflow)
 Center-of-Mass det. time= 100.0 min (899.3 - 799.3)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=9.57 cfs @ 12.33 hrs HW=19.76' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.27 cfs @ 6.48 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 8.30 cfs @ 2.46 fps)

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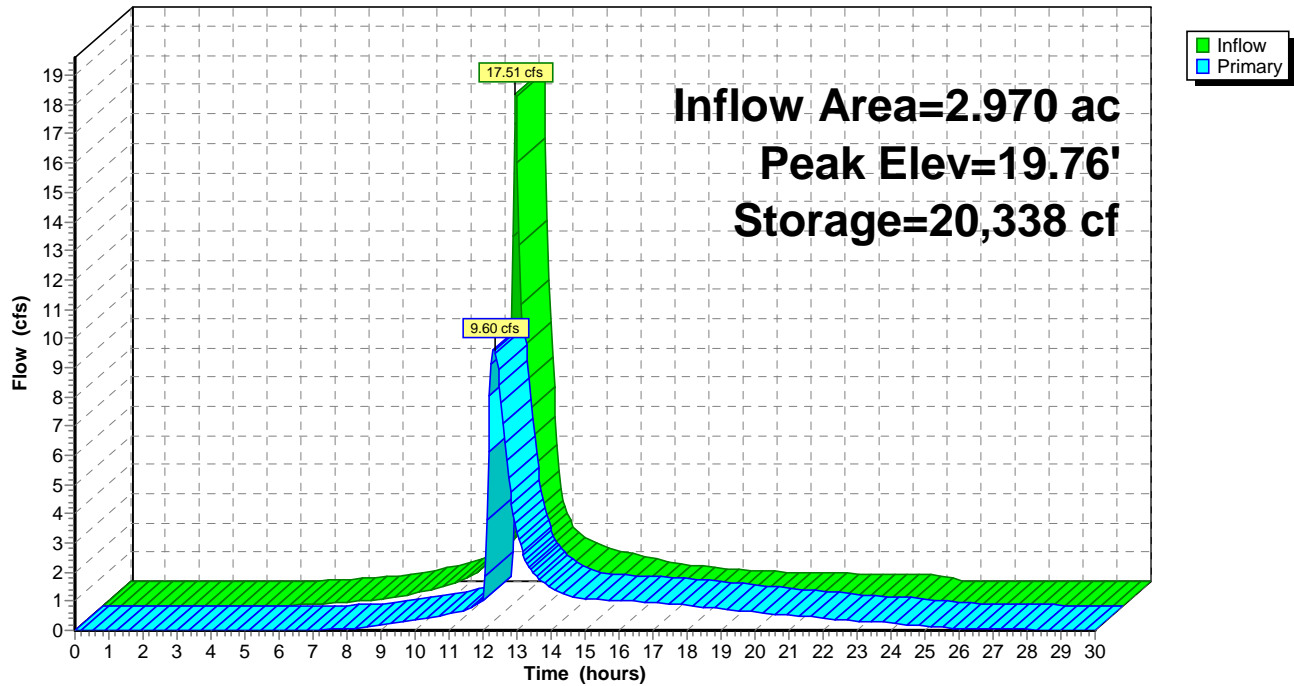
Type III 24-hr 25-Year Rainfall=8.00"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 50-Year Rainfall=9.00"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1	Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=6.94" Tc=10.0 min CN=83 Runoff=20.17 cfs 1.717 af
Subcatchment 2S: Bypass A	Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=4.22" Tc=5.0 min CN=61 Runoff=0.69 cfs 0.049 af
Subcatchment 3S: Bypass B	Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=5.95" Tc=5.0 min CN=75 Runoff=2.83 cfs 0.202 af
Subcatchment 4S: Bypass C	Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=4.22" Tc=5.0 min CN=61 Runoff=2.02 cfs 0.144 af
Reach 6R: Post Combine	Inflow=14.33 cfs 2.102 af Outflow=14.33 cfs 2.102 af
Pond 5P: Pond	Peak Elev=19.86' Storage=22,277 cf Inflow=20.17 cfs 1.717 af Outflow=11.93 cfs 1.707 af

Total Runoff Area = 3.927 ac Runoff Volume = 2.112 af Average Runoff Depth = 6.45"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 1S: Post Basin 1

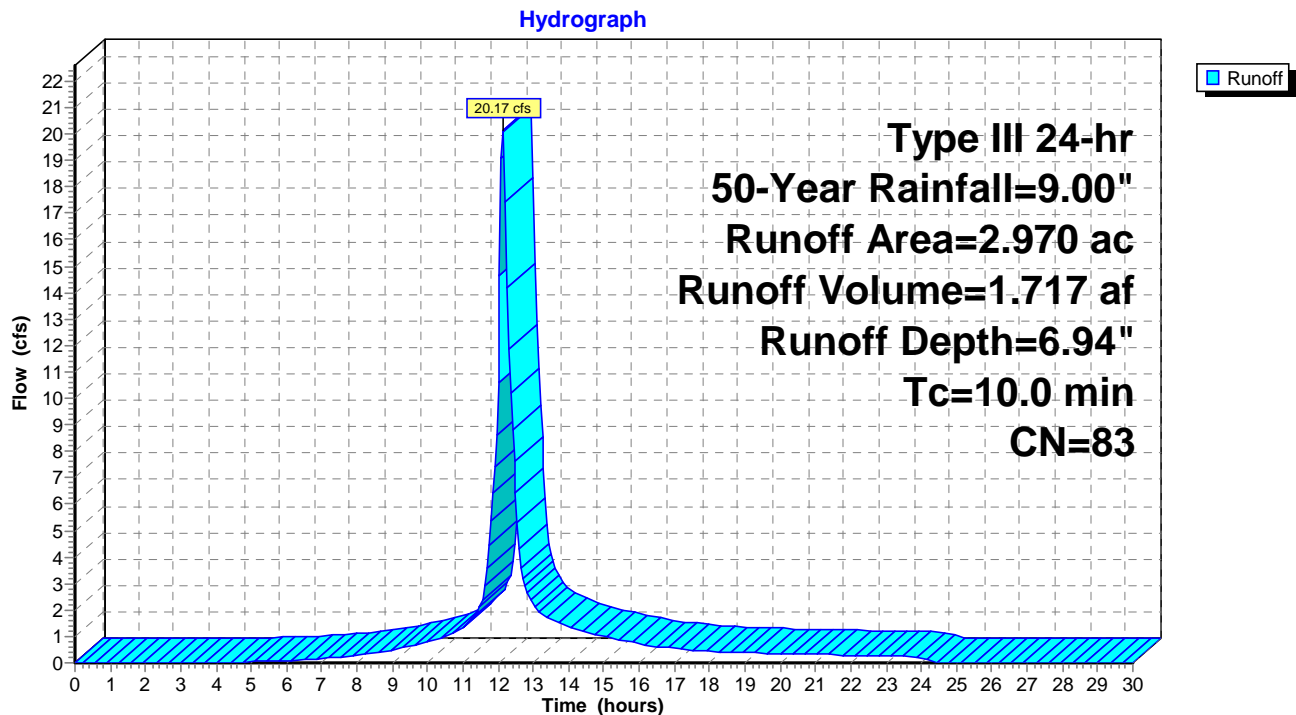
Runoff = 20.17 cfs @ 12.14 hrs, Volume= 1.717 af, Depth= 6.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.69 cfs @ 12.08 hrs, Volume= 0.049 af, Depth= 4.22"

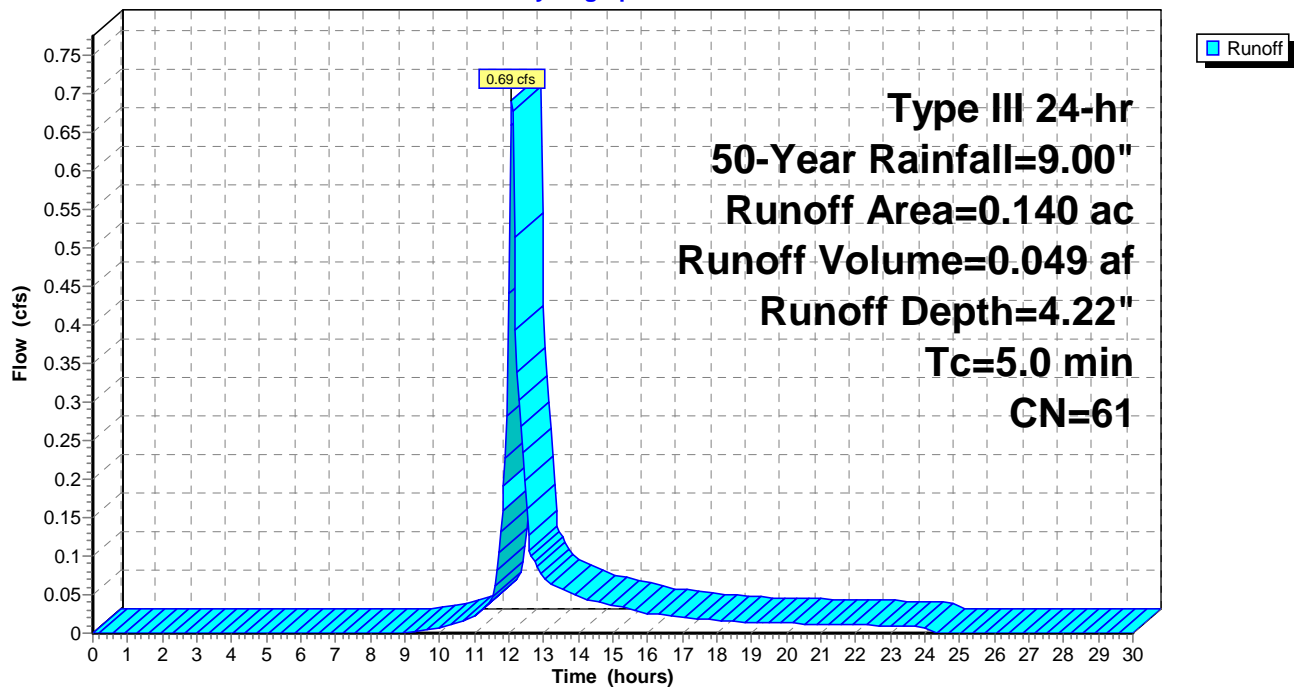
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

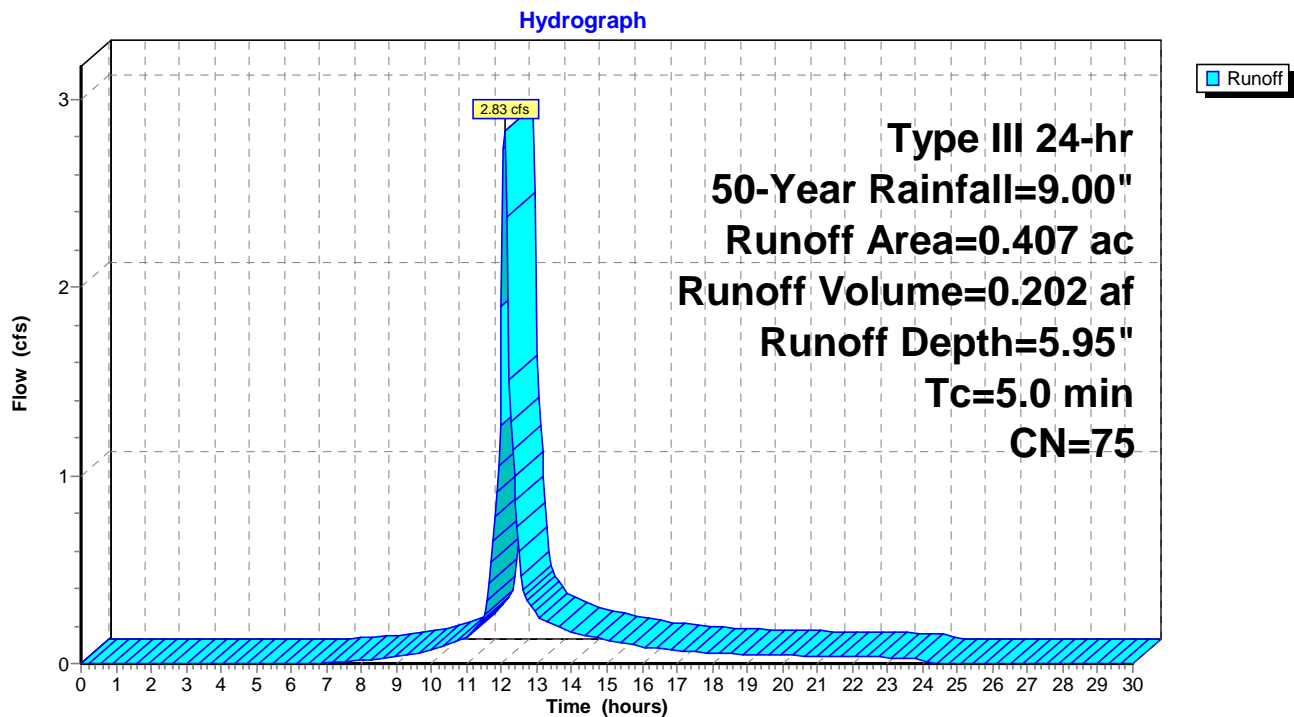
Runoff = 2.83 cfs @ 12.07 hrs, Volume= 0.202 af, Depth= 5.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

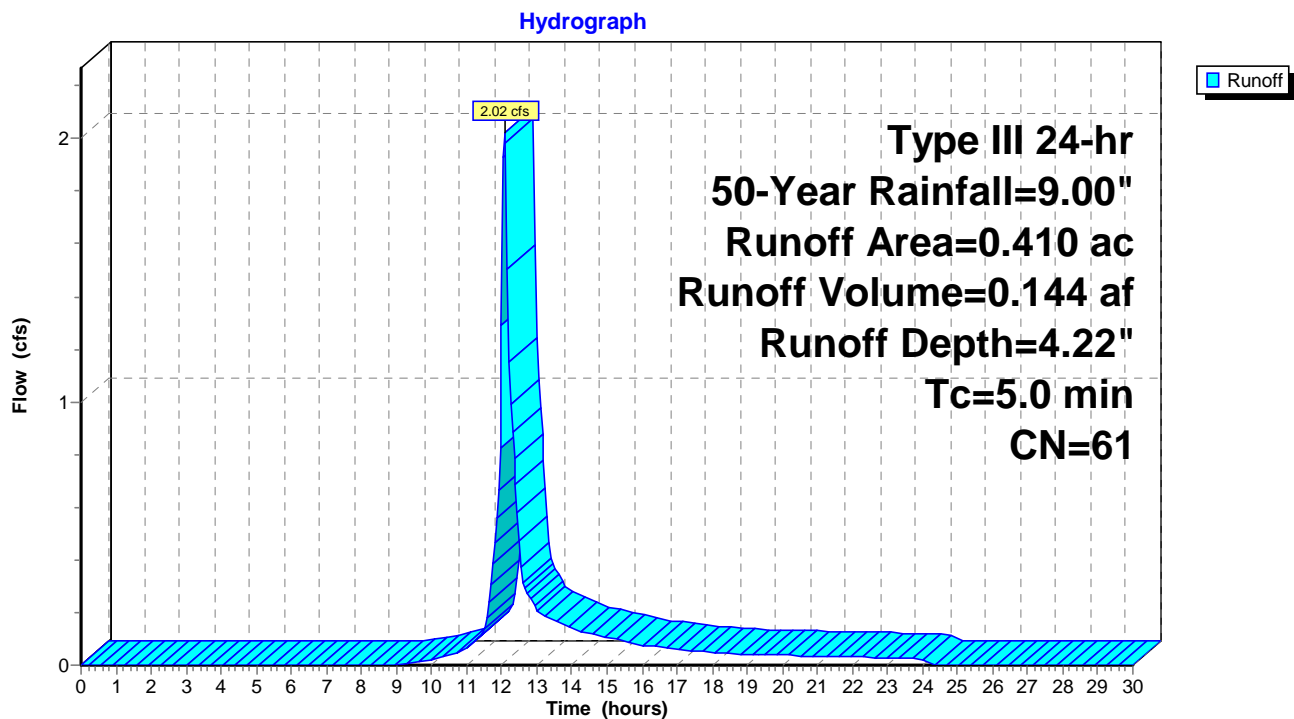
Runoff = 2.02 cfs @ 12.08 hrs, Volume= 0.144 af, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 50-Year Rainfall=9.00"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



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Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

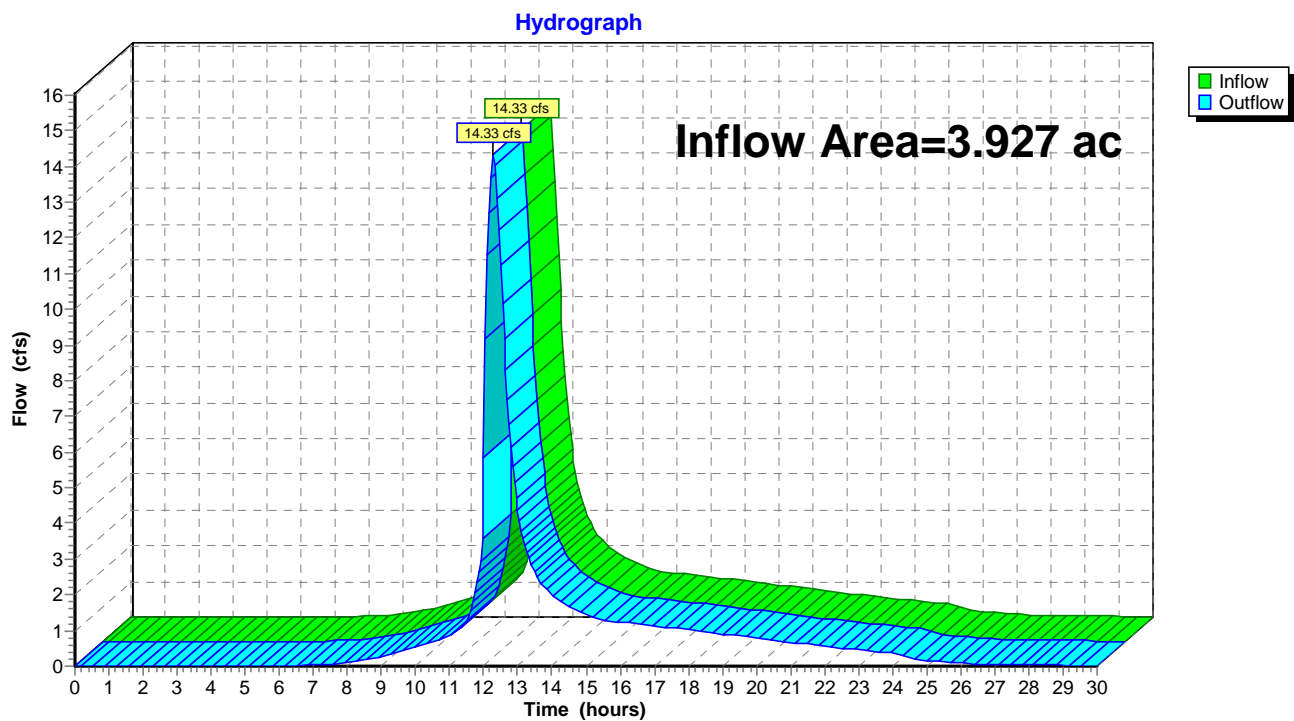
Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 6.42" for 50-Year event

Inflow = 14.33 cfs @ 12.27 hrs, Volume= 2.102 af

Outflow = 14.33 cfs @ 12.27 hrs, Volume= 2.102 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 50-Year Rainfall=9.00"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 6.94" for 50-Year event
 Inflow = 20.17 cfs @ 12.14 hrs, Volume= 1.717 af
 Outflow = 11.93 cfs @ 12.31 hrs, Volume= 1.707 af, Atten= 41%, Lag= 10.0 min
 Primary = 11.93 cfs @ 12.31 hrs, Volume= 1.707 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.86' @ 12.31 hrs Surf.Area= 20,176 sf Storage= 22,277 cf

Plug-Flow detention time= 97.7 min calculated for 1.704 af (99% of inflow)
 Center-of-Mass det. time= 94.3 min (889.6 - 795.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=11.90 cfs @ 12.31 hrs HW=19.86' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.31 cfs @ 6.66 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 10.60 cfs @ 2.67 fps)

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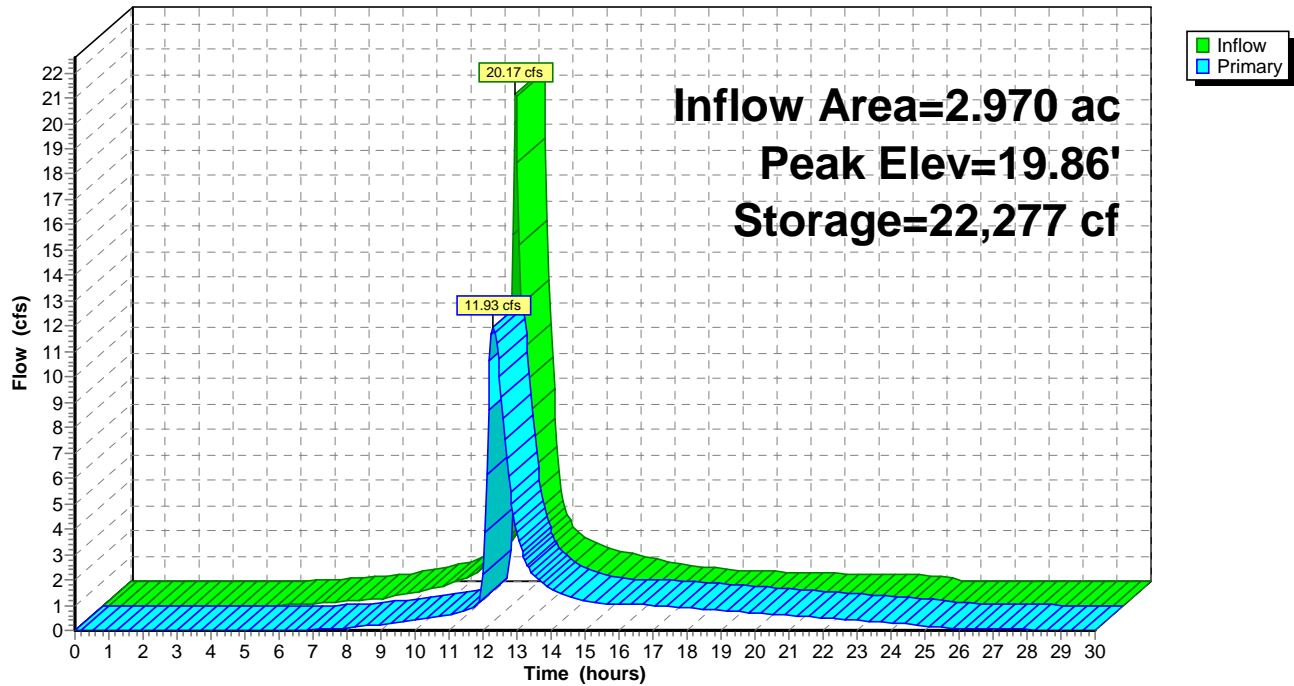
Type III 24-hr 50-Year Rainfall=9.00"

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Pond 5P: Pond

Hydrograph



Orr Track Post*Type III 24-hr 100-Year Rainfall=9.84"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post Basin 1	Runoff Area=2.970 ac 9.06% Impervious Runoff Depth=7.75" Tc=10.0 min CN=83 Runoff=22.40 cfs 1.918 af
Subcatchment 2S: Bypass A	Runoff Area=0.140 ac 0.00% Impervious Runoff Depth=4.90" Tc=5.0 min CN=61 Runoff=0.80 cfs 0.057 af
Subcatchment 3S: Bypass B	Runoff Area=0.407 ac 18.92% Impervious Runoff Depth=6.73" Tc=5.0 min CN=75 Runoff=3.19 cfs 0.228 af
Subcatchment 4S: Bypass C	Runoff Area=0.410 ac 0.00% Impervious Runoff Depth=4.90" Tc=5.0 min CN=61 Runoff=2.35 cfs 0.167 af
Reach 6R: Post Combine	Inflow=16.59 cfs 2.360 af Outflow=16.59 cfs 2.360 af
Pond 5P: Pond	Peak Elev=19.94' Storage=23,806 cf Inflow=22.40 cfs 1.918 af Outflow=13.78 cfs 1.907 af

Total Runoff Area = 3.927 ac Runoff Volume = 2.370 af Average Runoff Depth = 7.24"
91.19% Pervious = 3.581 ac 8.81% Impervious = 0.346 ac

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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 1S: Post Basin 1

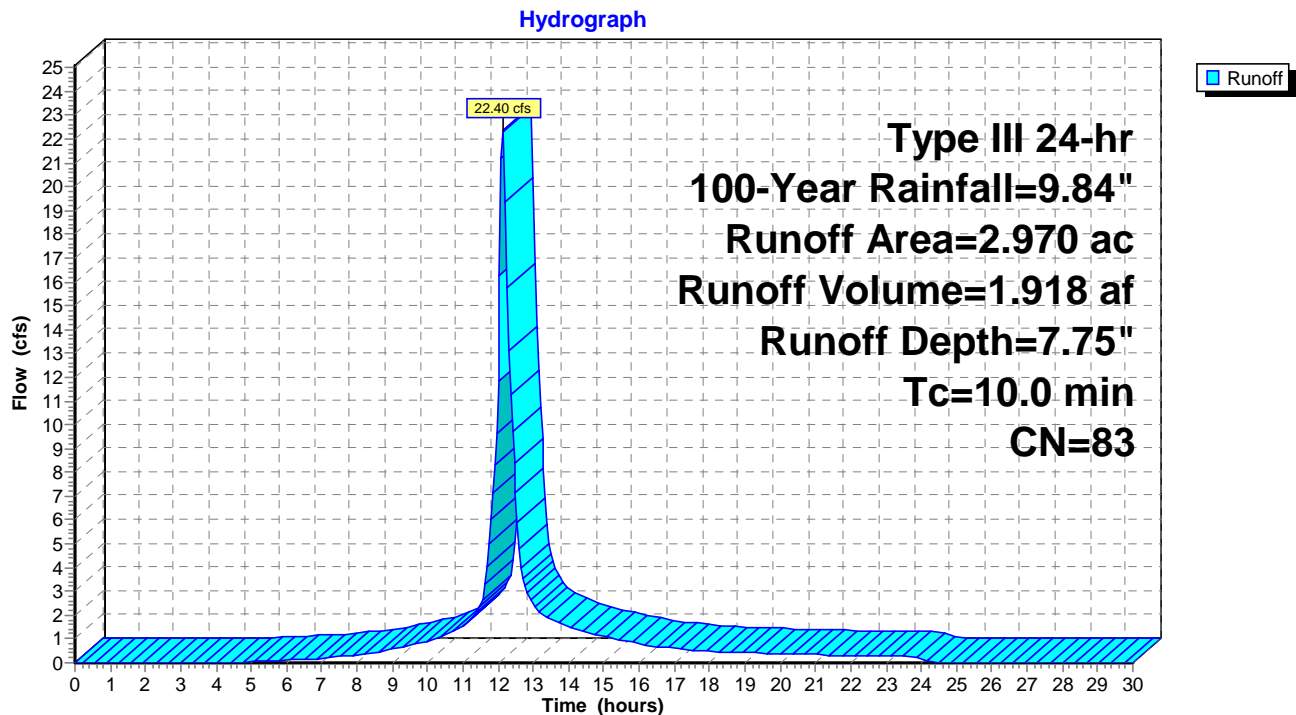
Runoff = 22.40 cfs @ 12.14 hrs, Volume= 1.918 af, Depth= 7.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.064	98	Roofs, HSG B
* 1.817	91	Gravel, HSG B
0.205	98	Paved parking, HSG B
0.884	61	>75% Grass cover, Good, HSG B
2.970	83	Weighted Average
2.701		90.94% Pervious Area
0.269		9.06% Impervious Area

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

Subcatchment 1S: Post Basin 1



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 2S: Bypass A

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.80 cfs @ 12.08 hrs, Volume= 0.057 af, Depth= 4.90"

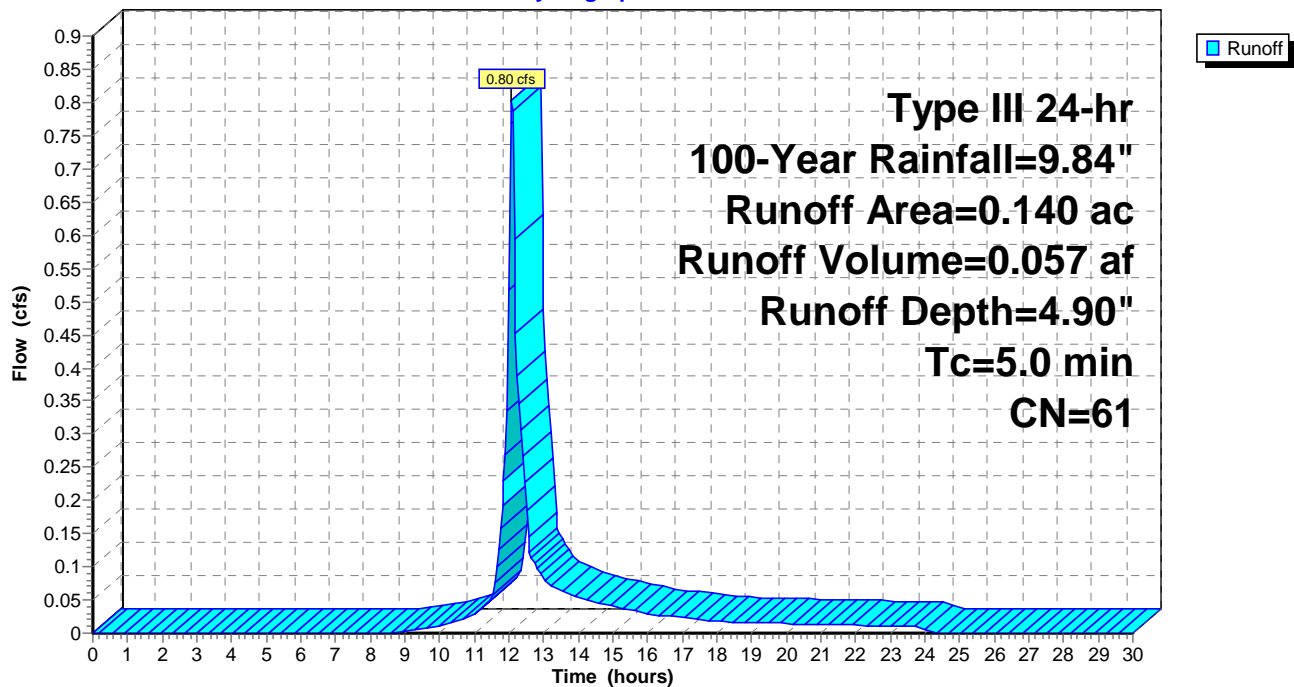
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.140	61	>75% Grass cover, Good, HSG B
0.140		100.00% Pervious Area

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

Subcatchment 2S: Bypass A

Hydrograph



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 3S: Bypass B

[49] Hint: $T_c < 2dt$ may require smaller dt

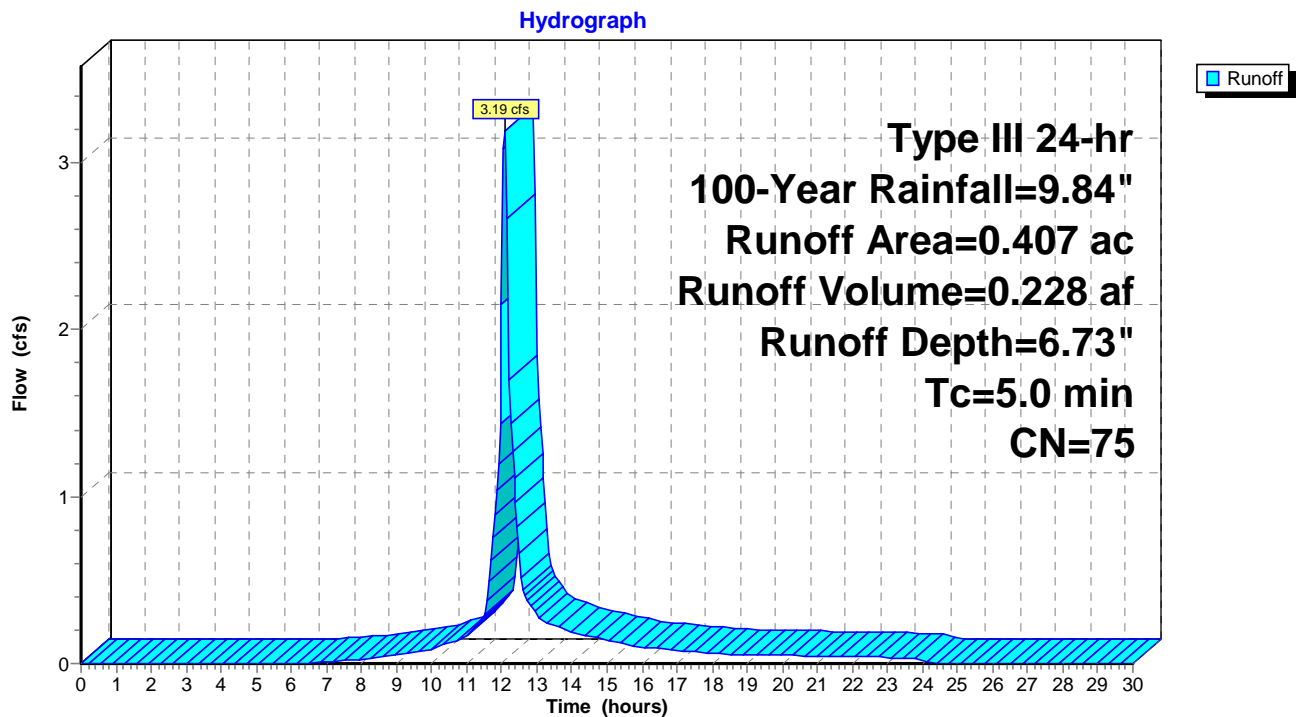
Runoff = 3.19 cfs @ 12.07 hrs, Volume= 0.228 af, Depth= 6.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.063	98	Roofs, HSG B
0.119	85	Gravel roads, HSG B
0.014	98	Paved parking, HSG B
0.211	61	>75% Grass cover, Good, HSG B
0.407	75	Weighted Average
0.330		81.08% Pervious Area
0.077		18.92% Impervious Area

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

Subcatchment 3S: Bypass B



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Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Subcatchment 4S: Bypass C

[49] Hint: $T_c < 2dt$ may require smaller dt

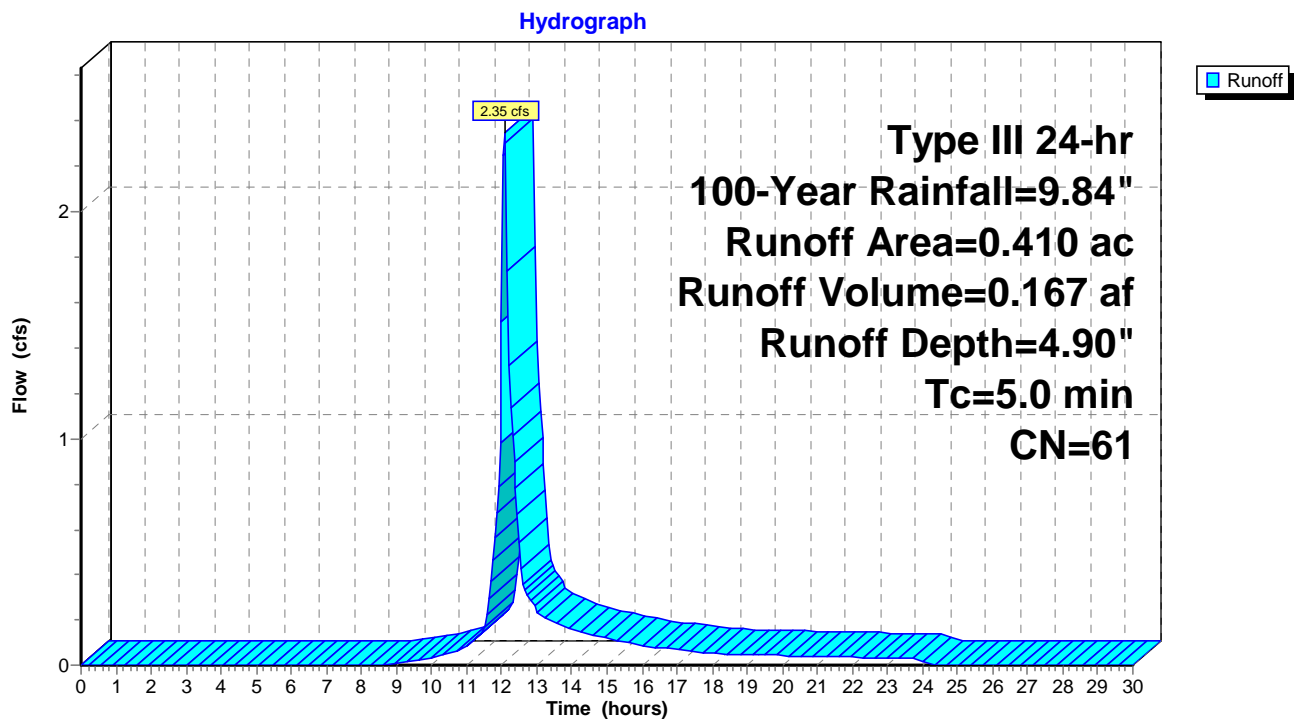
Runoff = 2.35 cfs @ 12.08 hrs, Volume= 0.167 af, Depth= 4.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, $dt=0.05$ hrs
Type III 24-hr 100-Year Rainfall=9.84"

Area (ac)	CN	Description
0.410	61	>75% Grass cover, Good, HSG B
0.410		100.00% Pervious Area

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

Subcatchment 4S: Bypass C



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Type III 24-hr 100-Year Rainfall=9.84"

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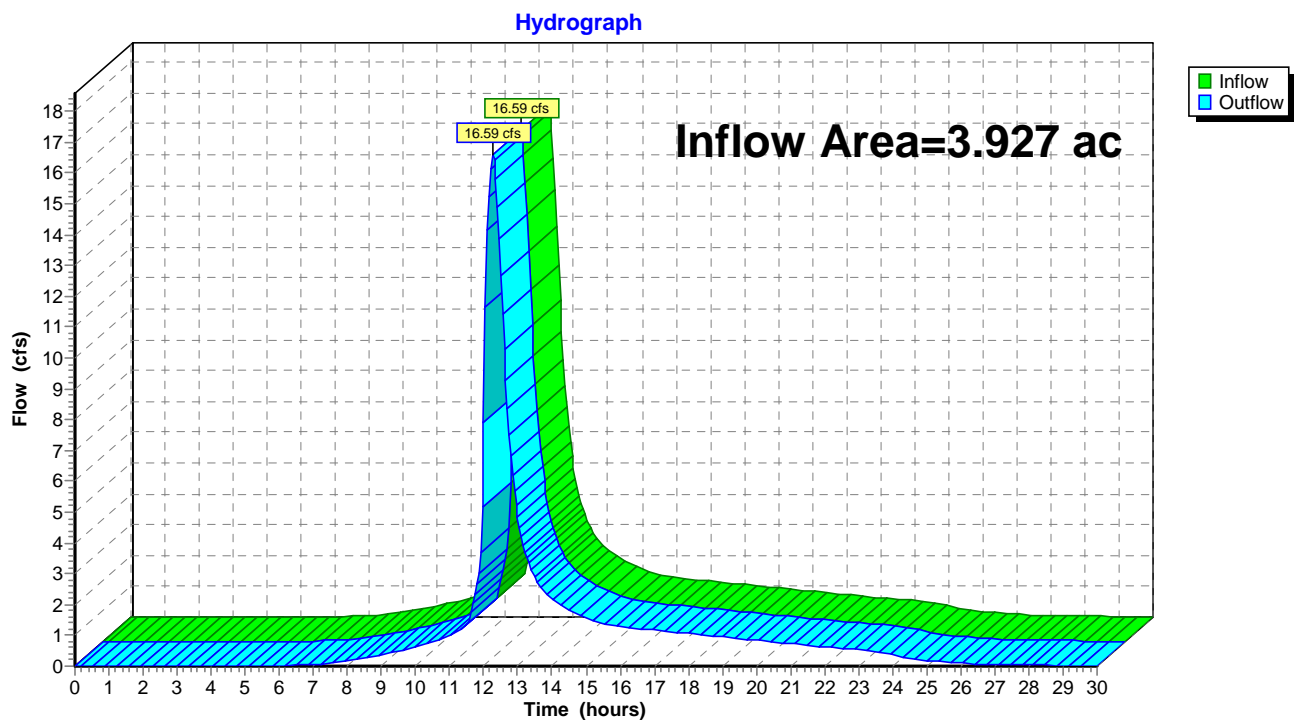
Summary for Reach 6R: Post Combine

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.927 ac, 8.81% Impervious, Inflow Depth > 7.21" for 100-Year event
Inflow = 16.59 cfs @ 12.26 hrs, Volume= 2.360 af
Outflow = 16.59 cfs @ 12.26 hrs, Volume= 2.360 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Reach 6R: Post Combine



Orr Track Post

Type III 24-hr 100-Year Rainfall=9.84"

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Summary for Pond 5P: Pond

Inflow Area = 2.970 ac, 9.06% Impervious, Inflow Depth = 7.75" for 100-Year event
 Inflow = 22.40 cfs @ 12.14 hrs, Volume= 1.918 af
 Outflow = 13.78 cfs @ 12.29 hrs, Volume= 1.907 af, Atten= 38%, Lag= 9.2 min
 Primary = 13.78 cfs @ 12.29 hrs, Volume= 1.907 af

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 19.94' @ 12.29 hrs Surf.Area= 21,107 sf Storage= 23,806 cf

Plug-Flow detention time= 93.5 min calculated for 1.904 af (99% of inflow)
 Center-of-Mass det. time= 90.5 min (882.7 - 792.2)

Volume	Invert	Avail.Storage	Storage Description
#1	17.70'	25,151 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
17.70	5,782	0	0
18.00	6,171	1,793	1,793
19.00	9,326	7,749	9,541
20.00	21,893	15,610	25,151

Device	Routing	Invert	Outlet Devices
#1	Primary	17.70'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	19.20'	6.0' long Sharp-Crested Vee/Trap Weir Cv= 2.62 (C= 3.28)

Primary OutFlow Max=13.75 cfs @ 12.29 hrs HW=19.94' (Free Discharge)

↑ **1=Orifice/Grate** (Orifice Controls 1.33 cfs @ 6.79 fps)

— **2=Sharp-Crested Vee/Trap Weir** (Weir Controls 12.41 cfs @ 2.81 fps)

Orr Track Post

Prepared by {enter your company name here}

HydroCAD® 10.10-4b s/n 03510 © 2020 HydroCAD Software Solutions LLC

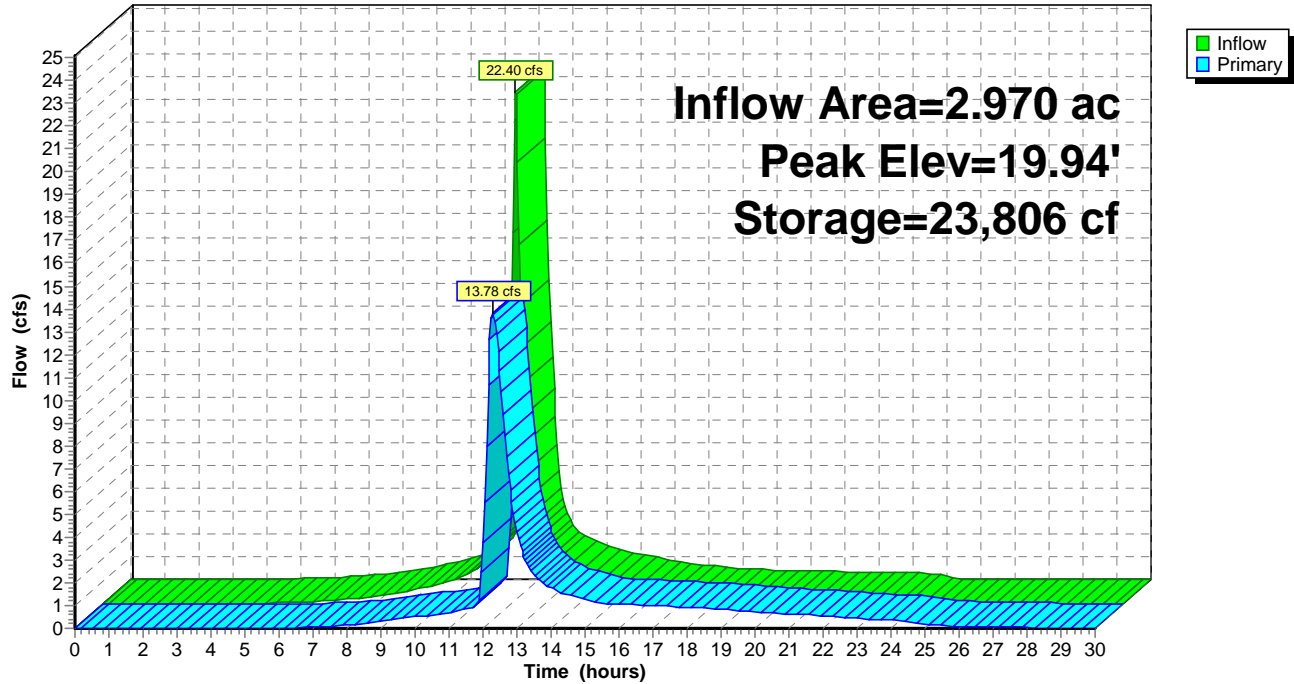
Type III 24-hr 100-Year Rainfall=9.84"

Printed 4/6/2022

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Pond 5P: Pond

Hydrograph



Areas of Significant Habitat:

None

Existing Conditions Map:

See the attached "Predevelopment Basin Map"

Existing Improvements: None

Existing Utilities and Easements: None

Existing Conservation Areas: None

Existing Low Impact Development and

Stormwater Management Practices: None

Existing Stormwater drainage

Infrastructure: Shown – Ditches within city Right-of-way

Existing Conditions Stormwater Runoff Summary (Q cfs)									
Basin	Area	"CN"	Tc	1-year	5-year	10-year	25-year	50-year	100-year
	(ac)		(min.)	3.60"	4.80"	6.72"	7.92"	9.00"	9.84"
1	2.16	61	13.4	0.89	2.21	5.21	6.73	8.31	9.68
2	1.77	61	13.7	0.73	1.80	4.24	5.48	6.77	7.88
Combined	3.93	61		1.62	4.01	9.44	12.20	15.08	17.58

Proposed Conditions Map:

See the attached "Post Development Basin Map"

Proposed topography: Shown

Proposed drainage divides
and patterns: Shown

Proposed roads, buildings, parking areas,
and other impervious surfaces: Shown

Proposed utilities and utility easements: Shown

Proposed limits of clearing: Shown

Proposed conservation areas: None

Proposed low impact development and
stormwater management practices: Shown

Proposed stormwater drainage

Infrastructure: Shown

Proposed Conditions Stormwater Runoff (Q cfs)									
Basin	Area	"CN"	Tc	1-year	5-year	10-year	25-year	50-year	100-year
	(ac)		(min.)	3.60"	4.80"	6.72"	7.92"	9.00"	9.84"
1*	2.97	83	10	0.94	2.30	7.25	9.60	11.93	13.78
Bypass A	0.14	61	5	0.08	0.19	0.43	0.56	0.69	0.80
Bypass B	0.41	75	5	0.64	1.09	1.98	2.39	2.83	3.19
Bypass C	0.41	61	5	0.23	0.54	1.27	1.64	2.02	2.35
Combined	3.93	79		1.54	2.68	8.67	11.52	14.33	16.59

*Routed

Pond B	1-year	5-year	10-year	25-year	50-year	100-year
Qin	5.84	8.97	14.84	17.51	20.17	22.40
Qout	0.94	2.30	7.25	9.60	11.93	13.78
WSE	18.94	19.35	19.65	19.76	19.86	19.94
V	9,031	13,621	18,336	20,338	22,277	23,806

Post-Construction Stormwater Management System Narrative:

The proposed development is an 8,200sf+/- truck shop with associated improvements. The facility will utilize an on-site ditch network to collect the surface run-off and transmit it to the bio-retention facility.

Please see the attached CSS spreadsheet for the determination of the RRv values.

Stormwater Management Design Plan: **Existing Condition Hydrologic Analysis**

Existing conditions map:

See the attached "Predevelopment Basin Map"

Information about the existing conditions of each of the drainage areas found on the development site:

The site is divided into two basins by a ridge line bisecting the site running East to West. It is currently a 3.93ac maintained grassed field.

Information about the existing conditions of any off-site drainage areas that contribute stormwater runoff to the development site:

There are no contributing off-site drainage areas.

Information about the stormwater runoff rates and volumes generated, under existing conditions, in each of the drainage areas found on the development site:

See the summary chart

Information about the stormwater runoff rates and volumes generated, under existing conditions, in each of the off-site drainage areas:

None

Documentation (e.g., model diagram) and calculations showing how the existing conditions hydrologic analysis was completed:

See the attached stormwater model results

Proposed conditions hydrologic analysis:

Proposed conditions map:

See the attached "Postdevelopment Basin Map"

Information about the proposed conditions of each of the drainage areas found on the development site (e.g., size, soil types, land cover characteristics):

See the Summary Chart

Information about the proposed conditions of any off-site drainage areas that contribute stormwater runoff to the development site (e.g., size, soil types, land cover characteristics):

None

Information about the stormwater runoff rates and volumes generated, under proposed conditions, in each of the drainage areas found on the development site:

See the Summary Chart

Information about the stormwater runoff rates and volumes generated, under proposed conditions, in each of the off-site drainage areas that contribute stormwater runoff to the development site:

None

Documentation (e.g., model diagram) and calculations showing how the proposed conditions hydrologic analysis was completed:

See the attached stormwater model results

Tailwater condition:

The downstream 100-yr flood elevation is 12. As a result, the downstream ditch as assumed to be flowing at a 2-foot depth, or a water surface elevation of 19.4 during the 25, 50-, & 100-year events. The tailwater depth was assumed to be 0 during the smaller rainfall events.

Post-construction stormwater management system plan:

Proposed topography:

See the attached "Postdevelopment Basin Map"

Proposed drainage divides and patterns:

See the attached "Postdevelopment Basin Map"

Existing and proposed roads, buildings, parking areas and other impervious surfaces:

See the attached "pre-development and Postdevelopment Basin Maps"

Existing and proposed primary and secondary conservation areas:

None

Plan view of existing and proposed low impact development and stormwater management practices:

See the attached "Postdevelopment Basin Map"

Cross-section and profile views of existing and proposed low impact development and stormwater management practices, including information about water surface elevations, storage volumes and inlet and outlet structures (e.g., orifice sizes);

See the construction plans

Plan view of existing and proposed storm drain infrastructure (e.g., inlets, manholes, storm drains):

See the attached "Postdevelopment Basin Map"

Cross-section and profile views of existing and proposed storm drain infrastructure (e.g., inlets, manholes, storm drains), including information about invert and water surface elevations:

See the construction plans

Existing and proposed channel modifications (e.g., bridge or culvert installations):

None

Post-construction stormwater management system narrative. The post-construction stormwater management system narrative shall include information about how post-construction stormwater runoff will be managed on the development site, including a list of the low impact development and stormwater management practices that will be used. It shall also include documentation and calculations that demonstrate how the selected low impact development and stormwater management practices satisfy the post-construction stormwater management criteria that apply to the development site, including information about the existing and proposed conditions of each of the drainage areas found on the development site (e.g., size, soil types, land cover characteristics):

See Post-Construction Stormwater Management System
Narrative above

Certification by plan preparer:

I, Jay Maupin, am a professional engineer registered in the State of Georgia and am familiar with the requirements of the City of Port Wentworth Stormwater Management Ordinance. The attached report and design plans for the site development known as Port Wentworth Truck Shop, 8191 Old Hwy 21, Port Wentworth, GA 31407 are designed in compliance with the Local Design Manual of the City of Port Wentworth.

Adverse Impacts Statement:

I, Jay Maupin, certify that there are no adverse impacts upstream or downstream of the site for any design storm analyzed.

Certification by owner:

Please see the attached letter

Stormwater management inspection and maintenance agreement and plan:

Please see the attached signed plan



1st Reading Zoning Map Amendment Application submitted by the City of Port Wentworth, for PIN #'s 70913 01013 (18 Gulfstream Road), 70913 01012 (60 Clifton Boulevard), 70913 01007 (84 Clifton Boulevard), 70913 01010 (Gulfstream Road), 70913 01008 (34 Gulfstream Road), 70913 01011 (116 Gulfstream Road), 70913 01001 (120 Gulfstream Road), 70914 01001B (120 Gulfstream Road), 70914 01001A (Gulfstream Road), 70970A02004 (Gulfstream Road), 70970A02006 (20 Mincey Boulevard), 70970A02007 (24 Mincey Boulevard), 70970A02003 (32 Mincey Boulevard), 70914 01003 (46 Mincey Boulevard), 70914 01004 (60 Mincey Boulevard), and 70970A01002 (190 Gulfstream Road) to zone the properties P-I-2 (Planned Industrial) for the purpose of establishing City of Port Wentworth Zoning Districts.

Issue/Item: 1st Reading Zoning Map Amendment Application submitted by the City of Port Wentworth, for PIN #'s 70913 01013 (18 Gulfstream Road), 70913 01012 (60 Clifton Boulevard), 70913 01007 (84 Clifton Boulevard), 70913 01010 (Gulfstream Road), 70913 01008 (34 Gulfstream Road), 70913 01011 (116 Gulfstream Road), 70913 01001 (120 Gulfstream Road), 70914 01001B (120 Gulfstream Road), 70914 01001A (Gulfstream Road), 70970A02004 (Gulfstream Road), 70970A02006 (20 Mincey Boulevard), 70970A02007 (24 Mincey Boulevard), 70970A02003 (32 Mincey Boulevard), 70914 01003 (46 Mincey Boulevard), 70914 01004 (60 Mincey Boulevard), and 70970A01002 (190 Gulfstream Road) to zone the properties P-I-2 (Planned Industrial) for the purpose of establishing City of Port Wentworth Zoning Districts.

Background: These parcels was annexed by the City of Port Wentworth in 2014 and was never assigned City of Port Wentworth zoning.

Facts and Findings:

Funding: N/A

Recommendation: The Planning Commission will hear this item on July 11, 2022 at 6:30 PM.

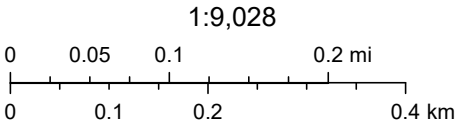
ATTACHMENTS:

- Annexation Gulfstream Rd Rezoning - map numbered (PDF)
- Annexation Gulfstream Rd Rezoning - Map Number Key (PDF)
- Annexation Gulfstream Rd Rezoning - APO Master List (PDF)

Annexation Gulfstream Rd Rezoning



 Property Boundaries (Parcels)



Annexation Gulfstream Rd Rezoning Map Key

Map #	PIN #	Address	Owner	Estimated Acreage	Current Zoning	Proposed Zoning
1	70913 01013	18 Gulfstream Rd	Clifton Landfill Inc	8.66	PUD-IN	P-I-2
2	70913 01012	60 Clifton Blvd	Brasstown Chili LLC	2	PUD-IN	P-I-2
3	70913 01007	84 Clifton Blvd	Savannah Regional Industrial Landfill In Republic Services Property Tax	120.52	PDR-IL	P-I-2
4	70913 01010	Gulfstream Rd	Clifton Landfill Inc	55.38	M	P-I-2
5	70913 01008	34 Gulfstream Rd	Sapp Capital Management LLC	2.9	M	P-I-2
6	70913 01011	116 Gulfstream Rd	116 Gulfstream Road LLC	10.02	M	P-I-2
7	70913 01001	120 Gulfstream Rd	Georgia Power Company	17.25	PDR-L	P-I-2
8	70914 01001B	120 Gulfstream Rd	Georgia Power Company	8	PDR-L	P-I-2
9	70914 01001A	Gulfstream Rd	Georgia Power Company	8	M	P-I-2
10	70970A02004	Gulfstream Rd	Williams Brothers Trucking Inc	3	PUD-IN	P-I-2
11	70970A02006	20 Mincey Blvd	Mincey Investments, LLC	1.02	PUD-IN	P-I-2
12	70970A02007	24 Mincey Blvd	Davenport & Smith Daniel & Jack	0.8	PUD-IN	P-I-2
13	70970A02003	32 Mincey Blvd	IG Mincey LLC	3.99	PUD-IN	P-I-2
14	70914 01003	46 Mincey Blvd	Gim Corporation	3.01	PUD-IN	P-I-2
15	70914 01004	60 Mincey Blvd	Sloan Theresa Joyce	2	PDR-IL	P-I-2
16	70970A01002	190 Gulfstream Rd	Duke Realty Limited Partnership ATTN: VP, Property Management	9.99	PUD-IN	P-I-2

PIN	Owner	Mailing_Address	Mailing_City	Mailing_State	Mailing_Zip
70913 01007	SAVANNAH REGIONAL INDUSTRIAL LANDFILL IN	PO BOX 29246	PHOENIX	AZ	85038
70913 01008	SAPP CAPITAL MANAGEMENT LLC	34 GULFSTREAM ROAD	PORT WENTWORTH	GA	31407
70913 01010	CLIFTON LANDFILL INC	PO BOX 7003	SAVANNAH	GA	31418
70913 01011	116 GULFSTREAM ROAD LLC	9 CEDAR VIEW DR	SAVANNAH	GA	31410
70913 01012	BRASSTOWN CHILI LLC	315 COMMERCIAL DR STE B-7	SAVANNAH	GA	31406
70913 01013	CLIFTON LANDFILL INC	PO BOX 7003	SAVANNAH	GA	31418
70914 01001A	GEORGIA POWER COMPANY	241 RALPH MCGILL BLVD NE TAX DEPT. BIN 10120	ATLANTA	GA	30308
70914 01001B	GEORGIA POWER COMPANY	241 RALPH MCGILL BLVD NE TAX DEPT. BIN 10120	ATLANTA	GA	30308
70914 01004	SLOAN THERESA JOYCE	103 LAKE TOMACHEECHEE DRIVE	RINCON	GA	31326
70970A02004	WILLIAMS BROTHERS TRUCKING INC	PO BOX 188	HAZELHURST	GA	31539
70970A02006	MINCEY INVESTMENTS, LLC	10 BRADLEY PINES DR	SAVANNAH	GA	31410
70970A02007	DAVENPORT & SMITH DANIEL & JACK	PO BOX 7207	GARDEN CITY	GA	31418
10970A03003	DUKE REALTY LIMITED PARTNERSHIP	PO BOX 40509	INDIANAPOLIS	IN	46240
20912 01001	MAYOR & ALDERMEN OF SAVANNAH	PO BOX 1027	SAVANNAH	GA	31412
20912 01002	MAYOR & ALDERMEN OF SAVANNAH	PO BOX 1027	SAVANNAH	GA	31412
20970A04001	SOUTHERN REGION INDUSTRIAL REALTY INC	C/O NORFOLK SOUTHERN TAX DEPT 650 W PEACHTREE ST.	ATLANTA	GA	30308
60892 01001	BOASSO AMERICA CORPORATION	1208 E KENNEDY BLVD SUITE 132	TAMPA	FL	33602
60892 01002	BOASSO AMERICA CORPORATION	1208 E KENNEDY BLVD SUITE 132	TAMPA	FL	33602
60892 01025	COMMERCE COURT INDUSTRIAL LLC	C/O CRITERION GROUP, LLC, 28-18 STEINWAY	LONG ISLAND CITY	NY	11103
60892 01026	COMMERCE COURT INDUSTRIAL LLC	C/O CRITERION GROUP, LLC, 28-18 STEINWAY	LONG ISLAND CITY	NY	11103
60892 01029	CENTERPOINT GARDEN CITY LLC	1808 SWIFT DRIVE SUITE A	OAK BROOK	IL	60523
70970A01002	DUKE REALTY LIMITED PARTNERSHIP	PO BOX 40509	INDIANAPOLIS	IN	46240
70970A02003	IG MINCEY LLC	261 FIFTH AVENUE SUITE 1501	NEW YORK	NY	10016
20970 01001	STATE OF GEORGIA	C/O COASTAL STATE PRISON POST OFFICE BOX 7150	GARDEN CITY	GA	31418
70913 01001	GEORGIA POWER COMPANY	241 RALPH MCGILL BLVD NE TAX DEPT. BIN 10120	ATLANTA	GA	30308
70914 01003	GIM CORPORATION	C/O C JAMES MCCALLER JR 115 W OGLETHORPE AVE	SAVANNAH	GA	31401
10916 01001	WAREHOUSE RENTALS LLC	PO BOX 126	VALDOSTA	GA	31601