DEVELOPMENT APPLICATION FORM

Application Form: All Applications | **Rev.** 06/14/2024

INSTRUCTIONS: The following information is required pursuant to the City's Unified Land Development Regulations (ULDR), Section 47-24, Development Permits and Procedures, and must be filled out accurately with all applicable sections completed. Only complete the sections indicated for application type with N/A for those items not applicable. Refer to "*Specifications for Plan Submittal*" by application type for submittal requirements, which can be found on the City's website.

Select the application type and approval level in **SECTION A** and complete the sections specified under each type.

A APPLICATION TYPE AND APPROVAL LEVEL

Select the application type from the list below and check the applicable type.

☐ LEVEL I – ADMINISTRATIVE REVIEW COMMITTEE (ADMIN)

- ☐ New nonresidential less than 5,000 square feet
- ☐ Change of use *(if same impact or less than existing use)*
- ☐ Plat note or Nonvehicular access line (NVAL) amendment
- ☐ Administrative site plan
- ☐ Amendment to site plan*
- ☐ Affordable Housing per §166.04151(7) Fla. Stat. *(Live Local Act)*
- ☐ Property and right-of-way applications *(MOTs, construction staging)*
- ☐ Parking Agreements *(separate from site plans)*

COMPLETE SECTIONS B, C, D, G

☒ LEVEL II – DEVELOPMENT REVIEW COMMITTEE (DRC)

- ☒ New Nonresidential 5,000 square feet or greater
- ☐ Residential 5 units or more
- ☒ Nonresidential use within 100 feet of residential property
- ☐ Redevelopment proposals
- ☐ Change in use *(if greater impact than existing use)*
- ☐ Development in Regional Activity Centers (RAC)*
- ☐ Development in Uptown Project Area*
- ☐ Regional Activity Center Signage
- ☐ Affordable Housing (≥10%)

COMPLETE SECTIONS B, C, D, E, F

☐ LEVEL III – PLANNING AND ZONING BOARD (PZB)

- ☐ Conditional Use
- ☐ Parking Reduction
- ☐ Flex Allocation
- ☐ Cluster / Zero Lot Line
- ☐ Modification of Yards*
- ☐ Waterway Use
- ☐ Mixed Use Development
- ☐ Community Residences*
- ☐ Social Service Residential Facility (SSRF)
- ☐ Medical Cannabis Dispensing Facility*
- ☐ Community Business District for uses greater than 10,000 square feet

COMPLETE SECTIONS B, C, D, E, F

☐ LEVEL IV – CITY COMMISSION (CC)

- ☐ Land Use Amendment
- ☐ Rezoning
- ☐ Plat
- ☐ Public Purpose Use
- ☐ Central Beach Development of Significant Impact*
- ☐ Vacation of Right-of-Way

City Commission Review No PZB Review

- ☐ Vacation of Easement*

COMPLETE SECTIONS B, C, D, E, F

☐ MISCELLANEOUS

- ☐ Affordable Workforce Housing Tax Reimbursement
- ☐ Community Residence
- ☐ Construction Noise Waiver
- ☐ Design Review Team (DRT)

COMPLETE SECTIONS B, C, D, I

☐ EXTENSION OR DEFERRAL

- ☐ Request to defer after an application is scheduled for public hearing
- ☐ Request extension to previously approved application *(request must be within original approval date timeframe)*

COMPLETE SECTIONS B, C, H

☐ APPEAL

- ☐ Appeal decision by approving body and De Novo hearing items

COMPLETE SECTIONS B, C, H

☐ PROPERTY AND RIGHT-OF-WAY

- ☐ Road Closures
- ☐ Construction Staging Plan
- ☐ Revocable licenses

COMPLETE SECTIONS B, C, H

**Application is subject to specific review and approval process. Levels III and IV are reviewed by Development Review Committee unless otherwise noted.*

B APPLICANT INFORMATION

If applicant is the business operator, complete the agent column and provide property owner authorization.

Applicant/ Property Owner	Wallace Logistics Services LLC	Authorized Agent	Rodolfo Sucre
Address	776 ST Albasns ST	Address	4300 Biscayne Blvd, Ste 203
City, State, Zip	Boca Raton, FL 33486	City, State, Zip	Miami, FL,33137
Phone	6085129436	Phone	7866872677
Email	wallacelogisticsservices@gmail.com	Email	rsucre@rspengineers.com
Proof of Ownership	Tax Record	Authorization Letter	Provided
Applicant Signature:	Signature [signed]	**Agent Signature:**	Signature Rodolfo Enrique Sucre Digitally signed by Rodolfo Enrique Sucre DN: C=US, O=Unaffiliated, dnQualifier=A01410C0000019C94F76DAF00081996, CN=Rodolfo Enrique Sucre Reason: I am the author of this document Location: FL Date: 2026.05.14 11:16:11-04'00' Foxit PDF Editor Version: 12.0.1

C PARCEL INFORMATION

Address/General Location	808-814 W State Road 84, Fort Lauderdale
Folio Number(s)	5042 22 14 0140 / 5042 22 14 0150 / 5042 22 14 0160
Legal Description (Brief)	LAKEWAY 11-7 B LOT 16 W 59.17 W 59.18 W 59 LESS S
City Commission District	4 - Warren Sturman
Civic Association	Edgewood Civic Assoc.

D LAND USE INFORMATION

Existing Use	Vacant
Land Use	Commercial
Zoning District	Boulevard Business (B-1)
Proposed – Applications requesting land use amendments and rezonings	
Proposed Land Use	N/A
Proposed Zoning District	N/A

E PROJECT INFORMATION

Provide project information. Circle yes or no where noted. If item is not applicable, indicate N/A.

Project Name	Outdoor Storage Development
Project Description *(Describe in detail)*	The proposed development consists of a parking facility intended to serve the adjacent tire shop located immediately east of the subject property. The project includes the provision of shared access between the properties, along with the necessary drainage infrastructure and pavement improvements to support the proposed use. The design has been developed to ensure safe and efficient vehicular circulation while complying with applicable City of Fort Lauderdale regulations and standards.
Estimated Project Cost	$ *(Estimated total project cost including land costs for all new development applications only)*

	No			**Traffic Study Required**	No		
				Parking Reduction	No		
				Public Participation	No		
				Non-Residential Uses			
				Commercial			
				Restaurant			
				Office			
				Industrial			
				Other	14,351.33 sq.ft		
Total *(dwelling units)*				**Total** *(square feet)*	14,351.33 sq.ft		
Residential Unit Mix	Efficiency / Studio		1- Bedroom	2-Bedroom		3-Bedroom or More	
Affordable Housing Units			**% of AMI**				
Affordable Unit Mix	Efficiency / Studio		1- Bedroom	2-Bedroom		3-Bedroom or More	

F PROJECT DIMENSIONAL STANDARDS

Indicate all required and proposed standards for the project. Circle yes or no where indicated.

	Required Per ULDR	Proposed
Lot Size *(Square feet/acres)*	None	N/A
Lot Density *(Units/acres)*	None	N/A
Lot Width	None	N/A
Building Height *(Feet)*	150 max	N/A
Structure Length	None	N/A
Floor Area Ratio *(F.A.R)*	None	N/A
Lot Coverage	None	N/A
Open Space	None	N/A
Landscape Area	20%	38.8%
Parking Spaces	-	23
SETBACKS *(Indicate direction N,S,E,W)*	**Required Per ULDR**	**Proposed**
Front	None	N/A
Side	None	N/A
Corner / Side	None	N/A
Rear	None	N/A

Sides / Secondary Street		
Building Height		
Streetwall Length		
Podium Height		
Tower Separation		
Tower Floorplate *(square feet)*		
Residential Unit Size *(minimum)*		

G AMENDED PROJECT INFORMATION

Provide approved and proposed amendments for project. Circle yes or no where indicated.

Project Name	
Proposed Amendment Description *(Describe in detail)*	

	Original Approval	Proposed Amendment	Amended
Residential Uses *(dwelling units)*			
Non-Residential Uses *(square feet)*			
Lot Size *(Square feet/acres)*			
Lot Density *(Units/acres)*			
Lot Width			
Building Height *(Feet)*			
Structure Length			
Floor Area Ratio *(F.A.R.)*			
Lot Coverage			
Open Space			
Landscape Area			
Parking Spaces			
Tower Stepback			
Building Height			
Streetwall Length			
Podium Height			
Tower Separation			
Tower Floorplate *(square feet)*			
Residential Unit Size *(minimum)*			
Does this amendment require a revision to the traffic statement or traffic study completed for the project?			
Does this amendment require a revised water sewer capacity letter?			

H EXTENSION, DEFERRAL, APPEAL INFORMATION

Provide information for specific request. Circle approving body and yes or no.

Project Name	
Request Description	

EXTENSION REQUEST		DEFERRAL REQUEST		APPEAL REQUEST / DE NOVO HEARING	
Approving Body		Approving Body		Approving Body	
Original Approval Date		Scheduled Meeting Date		30 Days from Meeting (Provide Date)	
Expiration Date (Permit Submittal Deadline)		Requested Deferral Date		60 Days from Meeting (Provide Date)	
Expiration Date (Permit Issuance Deadline)		Previous Deferrals Granted		Appeal Request	
Requested Extension (No more than 24 months)		Justification Letter Provided		Indicate Approving Body Appealing	
Code Enforcement (Applicant Obtain by Code Compliance Division)				De Novo Hearing Due to City Commission Call-Up	

I MISCELLANEOUS

Provide information on the specific request.

Project Name	
Request Description	

AFFORDABLE HOUSING TAX REIMBURSEMENT*		COMMUNITY RESIDENCE		NOISE WAIVER*	
As Is Value	$	Residence Type		DRC Case Number	
Date		Certification		Request Start Date	
Completion Value	$	Length of Stay		Request End Date	
Date		Number of Residents		Construction Start Time	
Stabilized Value	$	Number of Live in Staff		Construction End Time	
Date		Habitable Rooms Gross Floor Area		Sunday Construction Times	
Acquisition Value	$	DEVELOPMENT REVIEW TEAM (DRT)* Complete Section F		Noise Mitigation Plan Date of Plan	
Date				Previous Extension Resolution No. (if applicable)	

**Application is subject to specific fees based on hourly rate with minimum amount of: DRT $477, Affordable Housing Tax Reimbursement $2,500, Noise Waiver $954*

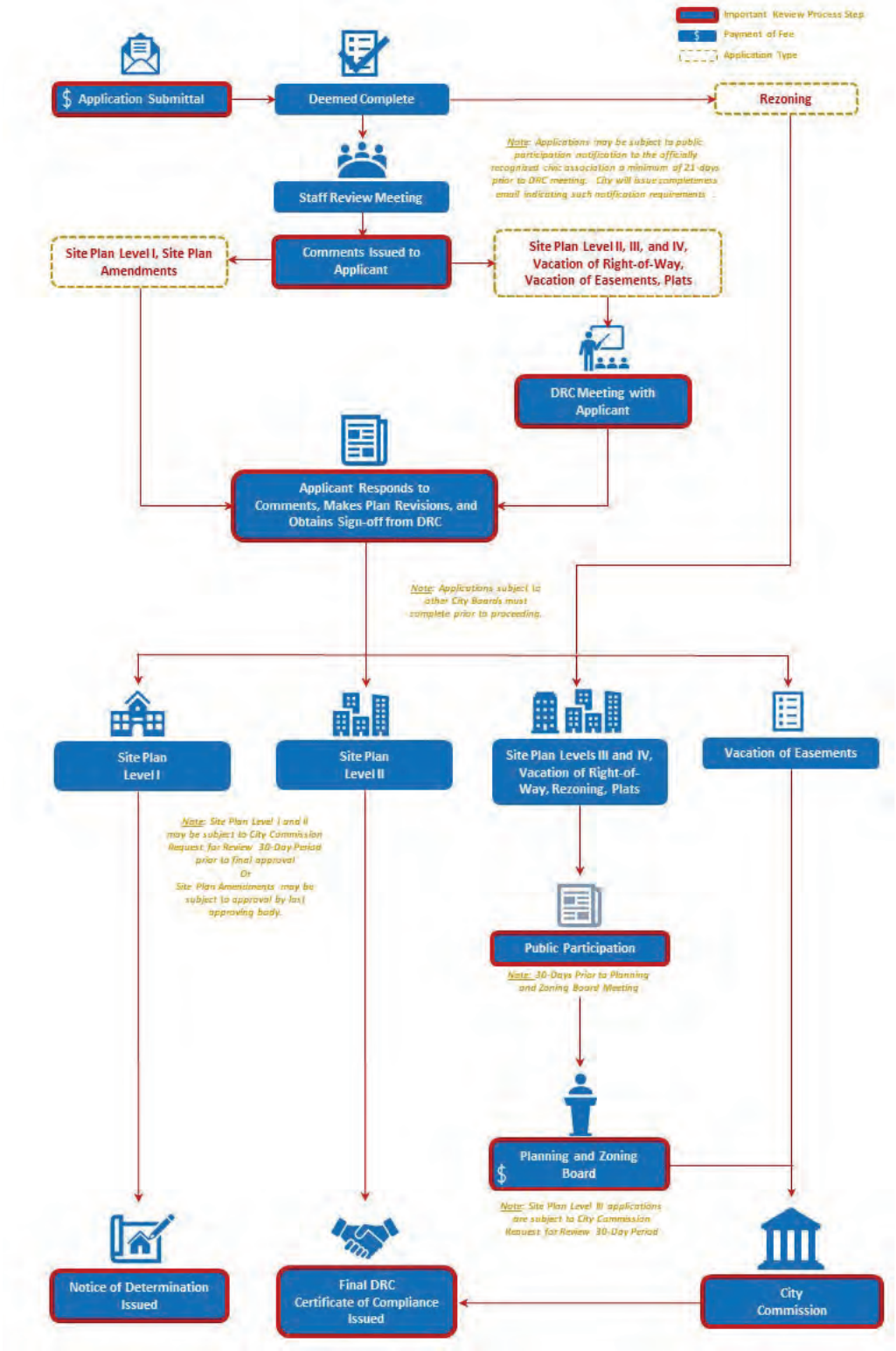
CHECKLIST FOR SUBMITTAL AND COMPLETENESS: The following outlines the necessary items for submittal to ensure the application is deemed complete. Failure to provide this information will result in your application being deemed **incomplete**.

- ☒ **Preliminary Development Meeting** completed on the following date: December 17, 2025
- ☒ **Development Application Form** completed with the applicable information including signatures.
- ☒ **Proof of Ownership** warranty deed or tax record including corporation documents and SunBiz verification name.
- ☐ **Address Verification Form** that includes all parcels within the proposed development.
- ☒ **Project and Unified Land Development Code Narratives** project narrative and the applicable ULDR sections and criteria as described in the specifications for submittal by application type.
- ☒ **Electronic Files, File Naming, and Documents** consistent with the applicable specifications for application type, consistent with the online submittal requirements including file naming convention, plan sets uploaded as single pdf.
- ☒ **Traffic Study or Statement** submittal of a traffic study or traffic statement.
- ☒ **Stormwater Calculations** signed and sealed by a Florida registered professional engineer consistent with calculations as described in the specifications for plan submittal for site plan applications.
- ☐ **Water and Wastewater Capacity Request** copy of email to Public Works requesting the capacity letter.

OVERVIEW FOR ONLINE SUBMITTAL REQUIREMENTS: Submittals must be conducted through LauderBuild. No hardcopy application submittals are accepted. Below only highlights the important submittal requirements that applicants must follow to submit online and be deemed complete. View all the requirements at LauderBuild Plan Room.

- **Uploading Entire Submittal** upload all documents at time the application is submitted to prevent delay in processing.
- **File Naming Convention** file names must adhere to the City's File Naming Convention.
- **Reduce File Size** plan sets and other large files must be merged or flattened to reduce file size.
- **Plan Sets** plan sets like site plans, plats, etc. must be submitted as a single pdf file. Staff will instruct when otherwise.
- **Document Categories** choose the correct document category when uploading.

DRC PROCESS OVERVIEW: Below is the development review process flowchart with key steps to guide applicants.



CONTACT INFORMATION: Questions regarding the development process or LauderBuild, see contact information below.

GENERAL URBAN DESIGN AND PLANNING QUESTIONS	LAUDERBUILD ASSISTANCE AND QUESTIONS
Planning Counter 954-828-6520, Option 5 planning@fortlauderdale.gov	DSD Customer Service 954-828-6520, Option 1 lauderbuild@fortlauderdale.gov

Page 1 of 2

(Survey Related Data) See sheet 2 of 2 for Sketch of survey. SURVEY IS NOT COMPLETE WITHOUT ALL SHEETS.

BOUNDARY SURVEY

Vicinity Map

Not-to-Scale

Surveyors Notes:

1. THIS SURVEY IS BASED UPON RECORD INFORMATION PROVIDED BY CLIENT. NO SPECIFIC SEARCH OF THE PUBLIC RECORD HAS BEEN MADE BY THIS OFFICE UNLESS OTHERWISE NOTED.
2. ANY FENCES SHOWN HEREON ARE ILLUSTRATIVE OF THEIR GENERAL POSITION ONLY. FENCE TIES SHOWN ARE TO GENERAL CENTERLINE OF FENCE. THIS OFFICE WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM THE REMOVAL OF, OR CHANGES MADE TO, ANY FENCES UNLESS WE HAVE PROVIDED A SURVEY SPECIFICALLY LOCATING SAID FENCES FOR SUCH PURPOSES.
3. GRAPHIC REPRESENTATIONS MAY HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE MEASURED RELATIONSHIPS - DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED POSITIONS.
4. UNDERGROUND IMPROVEMENTS HAVE NOT BEEN LOCATED EXCEPT AS SPECIFICALLY SHOWN.
5. ELEVATIONS ARE BASED UPON NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D. 1929) OR NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 1988) AS SHOWN HEREON.
6. ALL BOUNDARY AND CONTROL DIMENSIONS SHOWN ARE FIELD MEASURED AND CORRESPOND TO RECORD INFORMATION UNLESS SPECIFICALLY NOTED OTHERWISE.
7. ANY CORNERS SHOWN AS "SET" HAVE EITHER BEEN SET ON THE DATE OF FIELD WORK, OR WILL BE SET WITHIN 1-2 WEEKS OF SAID DATE AND ARE IDENTIFIED WITH A CAP MARKED LB (LICENSED BUSINESS) #8507.
8. UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OR DIGITAL SEAL OF A FLORIDA LICENSED SURVEYOR OR MAPPER THIS DRAWING, SKETCH, PLAT OR MAP IS FOR INFORMATIONAL PURPOSE ONLY AND IS NOT VALID.
9. ALL DATES SHOWN WITHIN THE REVISION BLOCK HEREON ARE FOR INTEROFFICE FILING USE ONLY AND IN NO WAY AFFECT THE DATE OF THE FIELD SURVEY STATED HEREIN. UNLESS OTHERWISE NOTED.
10. BEARINGS FOLLOWED BY A (M) HAVE BEEN COLLECTED IN FIELD AND ARE IN STATE PLANE (GRID) BEARING BASIS.
11. THE EXPECTED HORIZONTAL ACCURACY OF THE INFORMATION SHOWN HEREON IS +/- 0.10'
12. ELEVATIONS SHOWN HEREON, IF ANY, ARE IN FEET AND DECIMAL PARTS THEREOF AND ARE BASED ON NAVD-88. THE EXPECTED ACCURACY OF THE ELEVATIONS SHOWN HEREON IS 0.03' FOR THE HARD SURFACE ELEVATIONS AND 0.1' FOR THE SOFT SURFACE ELEVATIONS. ELEVATIONS SHOWN HEREON ARE SURVEY FEET UNLESS OTHERWISE NOTED.

Job Number : 273151-SE	Field:
Drawn By : A.C.V.	Date of Field Work : 03/18/2026
Revisions	

Bearing Basis:

THE WEST LINE OF LOT 20 - BLOCK 1 AS N 00°09'27" W AS REFERENCED IN SUBJECT PROPERTY LEGAL DESCRIPTION. ALL BEARINGS SHOWN HEREON REFERENCED THERETO.

Elevations, if shown:

Benchmark:	SW 503	Elevations on Drawing are in:
Benchmark Elev.:	5.54'	N.G.V.D.29 ☐ N.A.V.D.88 ■
Benchmark Datum:	NAVD 88	

CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY MEETS THE STANDARDS OF PRACTICE AS OUTLINED IN CHAPTER 5J-17.051 & 5J-17.052 OF THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES, AND THAT THE ELECTRONIC SIGNATURE AND SEAL (IF AFFIXED) HEREON MEETS PROCEDURES AS SET FORTH IN CHAPTER 5J-17.062. PURSUANT TO SECTION 472.025, FLORIDA STATUTES.

PABLO A. ALVAREZ LICENSE No. PSM #7274 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR

Digitally signed by Pablo A Alvarez
Date: 2026.03.27 11:05:59 -04'00'

SIGNATURE _____ DATE: 3-27-2026

PABLO ALVAREZ - PROFESSIONAL SURVEYOR AND MAPPER FLORIDA REGISTRATION NO. 7274 (NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR THE ELECTRONIC SEAL (IF AFFIXED) OF THE FLORIDA LICENSED SURVEYOR AND MAPPER SHOWN ABOVE)

Survey Related Information and Certifications:

CERTIFIED TO
WALLACE LOGISTICS SERVICES LLC

Abbreviation Legend (Some items in legend may not appear on drawing)

A OR AL = ARC LENGTH
AT&T = AMERICAN TELEPHONE & TELEGRAPH
BFP = BACKFLOW PREVENTER
BSL = BUILDING SETBACK LINE
C/O = CLEANOUT
CA = CENTRAL ANGLE
CATV = CABLE TV RISER
CF = CALCULATED FROM FIELD
CH = CHORD DISTANCE
CONC. = CONCRETE
CR = CALCULATED FROM RECORD
DE = DRAINAGE EASEMENT
EL OR ELEV = ELEVATION
EM = ELECTRIC METER
FPL = FLORIDA POWER AND LIGHT
F.F.E. = FINISHED FLOOR ELEV.
FIR = FOUND IRON ROD
FN = FOUND NAIL
FND = FOUND
G.F.F.E = GARAGE FINISHED FLOOR ELEV.
ICV - IRRIGATION CONTROL VALVE
L= LEGAL DESCRIPTION
M = MEASURED
OHC = OVERHEAD CABLE
P = PLAT
PC = POINT OF CURVATURE
PCC = POINT OF COMPOUND CURVATURE
PH = POOL HEATER
PI = POINT OF INTERSECTION
PK = PARKER KAELON
R = RADIUS
POB = POINT OF BEGINNING
POC = POINT OF COMMENCEMENT
PP = POOL PUMP
PRC = POINT OF REVERSE CURVATURE
QTR = QUARTER
RNG = RANGE
ROW = RIGHT OF WAY
SEC = SECTION
TR = TELEPHONE RISER
TWP = TOWNSHIP
UE = UTILITY EASEMENT
UP = UTILITY POLE
WM = WATER METER
WV = WATER VALVE
CMP = CORRUGATED METAL PIPE
RCP = REINFORCED CONCRETE PIPE

Symbols (Some items in legend may not appear on drawing - Not to Scale)

= UTILITY POLE
= LIGHT POLE
= CATCH BASIN
= FIRE HYDRANT
= MANHOLE
= WATER VALVE
WM = WATER METER
Ⓦ = WELL
℄ = CENTER LINE
℞ = PARTY WALL
A/C = AIR CONDITIONER
Ⓢ = SEPTIC LID
XXXX = ELEV. SHOT
= HANDICAP SPACES
CP = CONTROLLING POINT (POINT OF ROTATION)
HFA = HELD FOR ALIGNMENT
= SEC. QTR. CORNER
= SECTION CORNER
= TEMPORARY SITE BENCHMARK

Line types

BOUNDARY
BUILDING
EASEMENT
CHAIN LINK FENCE
WOOD FENCE
PLASTIC FENCE
OVERHEAD

Legal Description:

THAT PORTION OF LOTS 16, 17, 18, 19 AND 20, BLOCK 1, LYING SOUTH OF THE SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 84 (SOUTHWEST 24TH STREET), LESS THE EAST 60.00 FEET OF SAID LOTS 16, 17 AND 18, "LAKEWAY", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 11, PAGE 7, OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 20; THENCE NORTH 00 DEGREES 09 MINUTES 27 SECONDS WEST ON THE WEST LINE OF SAID LOT 20, A DISTANCE OF 80.75 FEET TO THE INTERSECTION WITH SAID SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 84 (SOUTHWEST 24TH STREET), SAID POINT BEING ON THE ARC OF A NON-TANGENT CURVE WHOSE RADIUS POINT BEARS SOUTH 03 DEGREES 14 MINUTES 20 SECONDS EAST; THENCE EASTERLY ON THE ARC OF SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 5679.65 FEET, A CENTRAL ANGLE OF 1 DEGREES 33 MINUTES 54 SECONDS, FOR AN ARC LENGTH OF 155.13 FEET TO THE INTERSECTION WITH THE WEST LINE OF THE EAST 60.00 FEET OF SAID LOT 18; THENCE SOUTH 00 DEGREES 09 MINUTES 27 SECONDS EAST ON SAID WEST LINE AND CONTINUING ON THE WEST LINE OF THE EAST 60.00 FEET OF LOTS 17 AND 16, FOR A DISTANCE OF 109.49

FEET TO THE INTERSECTION WITH THE SOUTH LINE OF SAID LOT 16; THENCE NORTH 89 DEGREES 58 MINUTES 08 SECONDS WEST ON SAID SOUTH LINE 59.00 FEET TO THE SOUTHWEST CORNER OF SAID LOT 16; THENCE NORTH 00 DEGREES 09 MINUTES 27 SECONDS WEST ON THE WEST LINE OF SAID LOT 16 FOR A DISTANCE OF 22.00 FEET TO THE SOUTHEAST CORNER OF SAID LOT 19; THENCE NORTH 89 DEGREES 58 MINUTES 08 SECONDS WEST ON THE SOUTH LINE OF LOTS 19 AND 20 FOR 96.00 FEET TO THE POINT OF BEGINNING.

Platted Easements & Notable Conditions (unplatted easements also listed if provided):
- COMMUNITY CONCRETE SIDEWALK CROSSES THE BOUNDARY LINE ON NORTHERLY SIDE OF LOT AS SHOWN.
- ASPHALT SURFACE CROSSES THE BOUNDARY LINE ON EASTERLY SIDE OF LOT AS SHOWN.

PRINTING INSTRUCTIONS

WHEN PRINTING THIS PDF IN ADOBE. SELECT "ACTUAL SIZE" TO ENSURE CORRECT SCALING. **DO NOT USE "FIT".**

This survey has been issued by the following Landtec Surveying office:
840 US Hwy 1, Suite 330
North Palm Beach, Florida 33408
Office: (561) 210-9344 www.LandtecSurvey.com
Email: Construction@landtecsurvey.com

Landtec SURVEYING & LIEN A PRO LAND COMPANY
LB No. 8507

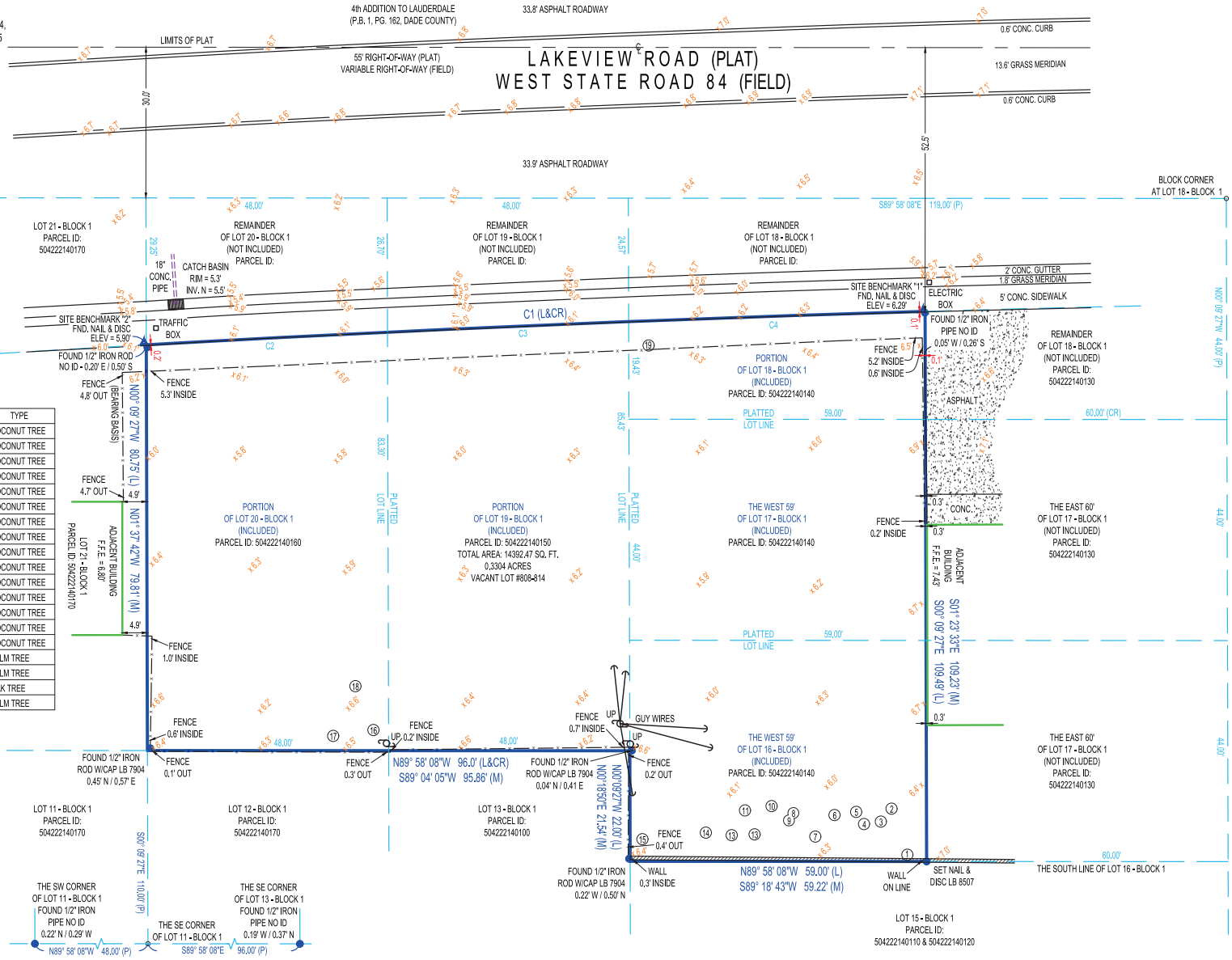
(Sketch of Survey) See sheet 1 of 2 for Survey Related Information. SURVEY IS NOT COMPLETE WITHOUT ALL SHEETS.

BOUNDARY SURVEY

SCALE:1"=20'

PROPERTY ADDRESS:
808-814 WEST STATE ROAD 84,
FORT LAUDERDALE, FL. 33315

FLOOD INFORMATION:
ZONE: "X500"
MAP PANEL#: 12011C0559J
EFFECTIVE DATE: 07/31/2024



CP
POINT OF COMPOUND CURVATURE AT PARCEL ID:504222140020 FOUND 5/8" IRON ROD NO ID

HFA
THE NE CORNER OF PARCEL ID: 504222140200 FOUND 1/2" IRON ROD NO ID ON LINE

NOTE:
(#) = TREE

CURVE TABLE				CHORD LENGTH	CHORD BEARING
	LENGTH	RADIUS	DELTA		
C1(L)	155.13'	5679.65'	01°33'54"	155.12'	N87°32'37"E
C1(M)				154.89'	N86°14'48"E
C2	48.07'	5679.65'	00°29'06"	48.07'	N87°00'13"E
C3	48.04'	5679.65'	00°29'05"	48.04'	N87°29'18"E
C4	59.03'	5679.65'	00°35'44"	59.03'	N88°01'42"E
C5(CR)	160.94'	5679.65'	01°37'25"	160.93'	S85°56'58"W
C5(M)				161.09'	S86°07'46"W
C6(CR)	390.06'	5679.65'	03°56'05"	389.98'	S84°47'37"W
C6(M)				390.14'	S84°52'07"W

# TREE	DBH	TYPE
1	8.4"	COCONUT TREE
2	12"	COCONUT TREE
3	8.4"	COCONUT TREE
4	8.4"	COCONUT TREE
5	8.4"	COCONUT TREE
6	8.4"	COCONUT TREE
7	8.4"	COCONUT TREE
8	8.4"	COCONUT TREE
9	6"	COCONUT TREE
10	6"	COCONUT TREE
11	6"	COCONUT TREE
12	6"	COCONUT TREE
13	12"	COCONUT TREE
14	12"	COCONUT TREE
15	15.6"	COCONUT TREE
16	15.6"	PALM TREE
17	15.6"	PALM TREE
18	48"	OAK TREE
19	15.6"	PALM TREE

Job Number : 273151-SE	Field:
Drawn By : A.C.V.	Date of Field Work : 03/18/2026
Revisions	

This survey has been issued by the following Landtec Surveying office:
840 US Hwy 1, Suite 330
North Palm Beach, Florida 33408
Office: (561) 210-9344 www.LandtecSurvey.com
Email: Construction@landtecsurvey.com

Landtec
SURVEYING & LIEN
A PRO LAND COMPANY
LB No. 8507

CITY'S DIGITAL APPROVAL STAMP

OUTDOOR STORAGE DEVELOPMENT
SECTION 22 - TOWNSHIP 50S - RANGE 42E
FORT LAUDERDALE, FLORIDA

DEVELOPMENT TEAM

CIVIL ENGINEER
RSP ENGINEERS, INC
1420 NE MIAMI PL
MIAMI FL 33132
EOR: RODOLFO SUCRE, P.E
O: 786-687-2677
E: RSUCRE@RSPENGINEERS.COM

SURVEYOR
LANDTEC SURVEYING & LIEN
840 US HWY 1, SUITE 330, NORTH
PALM BEACH, FL 33408
PABLO A. ALVAREZ
(561) 210-9344

OWNER:
WALLACE LOGISTICS SERVICES LLC
WALLACELOGISTICSSERVICES@GMAIL.COM

PERMITTING AGENCIES

BROWARD COUNTY PLANNING COUNCIL
115 SOUTH ANDREWS AVENUE, ROOM 307,
FORT LAUDERDALE, FL 33301
(954) 357-6695

CITY OF FORT LAUDERDALE URBAN DESIGN AND PLANNING DIVISION
700 NW 19TH AVE, FORT LAUDERDALE, FL 33311
(954) 828-6520

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
3301 GUN CLUB ROAD, WEST PALM BEACH, FL 33406
REGPERMITTING@SFWMD.GOV

AERIAL PHOTOGRAPH
SCALE : 1" = 100'

INDEX OF SHEETS	
Sheet Number	Sheet Title
C-1	COVER SHEET
C-2	GENERAL NOTES
C-3	GENERAL NOTES
C-4	SITE PLAN
C-5	PAVING GRADING AND DRAINAGE PLAN
C-6	PAVING GRADING AND DRAINAGE DETAILS
C-7	CROSS SECTIONS
C-8	STORMWATER POLLUTION PREVENTION PLAN
C-9	STORMWATER POLLUTION PREVENTION DETAILS
C-10	DEMOLITION PLAN

NOTES:
1. ALL CONSTRUCTION MUST MEET ALL FORT LAUDERDALE, FLORIDA CODES AND LAND DEVELOPMENT REGULATIONS.
2. ALL OTHER PERMITS REQUIRED FOR THIS PROJECT MUST BE OBTAINED. A FLORIDA DEP NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER AN NPDES PERMIT MUST BE FILED WITH FLORIDA DEP FOR ALL SITES WHICH ARE ONE (1) ACRE AND GREATER.
3. SOURCES OF INFORMATION USED FOR THE DEPICTION OF EXISTING UTILITY INFRASTRUCTURE INCLUDE THE RECORD DRAWINGS AND THE SURVEY.

PROPOSED OUTDOOR STORAGE
LEGAL DESCRIPTION: REFER TO SURVEY

ONE-CALL NOTIFICATION SYSTEM
CALL BEFORE YOU DIG!
EXISTING PUBLIC AND PRIVATE UTILITIES MAY EXIST IN THE WORK AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE CONSTRUCTION WITH THE PUBLIC AND PRIVATE UTILITY COMPANIES. EXISTING UTILITIES SHOWN ARE FROM INFORMATION AVAILABLE AND MAY NOT BE COMPLETE.

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RODOLFO ENRIQUE SUCRE LICENSE No. 95759 STATE OF FLORIDA PROFESSIONAL ENGINEER

Rodolfo Enrique Sucre
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Designed by: R.S
Drawn by: A.N
Checked by: D.C
Approved by: R.S
Date: 5/8/2026
Job No.: WL101

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Plans Prepared By:
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

COVER SHEET

OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

Sheet No.
C-1

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CITY'S DIGITAL APPROVAL STAMP

GENERAL PROVISIONS

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MAKE A PRE-CONSTRUCTION VIDEO (DVD FORMAT) ALONG THE PROPOSED ROUTE IN ACCORDANCE WITH THE SPECIFICATIONS. IN PARTICULAR, THE VIDEO SHALL DOCUMENT THE CONDITION OF EXISTING DRIVEWAYS, BUILDINGS, STRUCTURES, MAILBOXES, SIGNS, FENCES, AND LANDSCAPING ALONG PROPOSED CONSTRUCTION AREAS.
2. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (FS 553.60-553.64). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
3. ALL CONSTRUCTION PROJECTS 1 OR MORE ACRES IN SIZE THAT DISCHARGE TO OFFSITE AREAS ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGE FROM SMALL AND LARGE CONSTRUCTION ACTIVITIES. IN ORDER TO MEET NPDES REQUIREMENTS, THE CONTRACTOR IS RESPONSIBLE FOR PREPARING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), IMPLEMENTING, INSPECTING, MAINTAINING, AND REPORTING ON ALL ELEMENTS OF THE SWPPP, COMPLETING AND SUBMITTING THE REQUIRED NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) FORMS AS THE OPERATOR, AND PAYING ALL ASSOCIATED FEES. FOR PROJECTS LESS THAN 1 ACRE IN SIZE THAT ARE NOT REQUIRED TO COMPLY WITH THE NPDES GENERAL PERMIT, THE CONTRACTOR IS STILL RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO AND DURING CONSTRUCTION IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
4. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
5. BASE SURVEY INFORMATION INCLUDING BUT NOT LIMITED TO ELEVATIONS, EASEMENTS, RIGHTS OF WAY, AND OTHER TOPOGRAPHIC INFORMATION HAS BEEN PREPARED BY OTHER PROFESSIONALS. RSP ENGINEERS, INC. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.
6. THIS SET OF PLANS MAY CONTAIN DRAWINGS PREPARED BY OTHER PROFESSIONALS, WHICH CONTAIN THE NAME, ADDRESS, AND LOGO OF THE PROFESSIONAL. RSP ENGINEERS, INC. IS NOT RESPONSIBLE FOR DRAWINGS PREPARED BY OTHER PROFESSIONALS.
7. THE CONTRACTOR SHALL SUBMIT (6) COPIES OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION. PRIOR TO SUBMISSION, THE CONTRACTOR SHALL THOROUGHLY CHECK SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR COMPLETENESS AND FOR COMPLIANCE WITH THE CONSTRUCTION PLANS AND SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL COORDINATE THE SHOP DRAWINGS WITH THE REQUIREMENTS FOR OTHER RELATED WORK. THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF SUBMITTALS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING AT THE TIME OF SUBMISSION, OF DEVIATIONS IN SUBMITTALS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
8. PROTECT BENCHMARKS, PROPERTY CORNERS, AND OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF MARKER NEEDS TO BE REMOVED IT SHALL BE REFERENCED BY LICENSED LAND SURVEYOR AND REPLACED, AS NECESSARY, BY SAME.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING. AS A MINIMUM, TESTING SHALL INCLUDE A) PIPING AND STRUCTURAL EXCAVATION, BEDDING AND BACKFILL MATERIALS AND DENSITY TESTS; B) DETERMINATION OF COMPACTIVE EFFORT NEEDED FOR COMPLIANCE WITH THE DENSITY REQUIREMENTS; C) PORTLAND CEMENT CONCRETE AND ASPHALT PAVING QUALITY CONTROL TESTING INCLUDING DESIGN MIX REVIEW, MATERIALS, FIELD SLUMP AND AIR CONTENT, AND FIELD AND LAB CURED STRENGTH SAMPLES AND TESTING.
10. IN ADDITION TO QUALITY CONTROL TESTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TESTING OR APPROVALS FOR ANY WORK (OR ANY PART THEREOF) IF LAWS OR REGULATIONS OF ANY PUBLIC BODY HAVING JURISDICTION SPECIFICALLY REQUIRE TESTING, INSPECTIONS OR APPROVAL. THE CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION THEREWITH AND SHALL FURNISH THE OWNER AND ENGINEER THE REQUIRED CERTIFICATES OF INSPECTION, TESTING OR APPROVAL.
11. ANY DESIGN OR TESTING LABORATORY UTILIZED BY THE CONTRACTOR SHALL BE AN INDEPENDENT LABORATORY ACCEPTABLE TO THE OWNER AND THE ENGINEER, APPROVED IN WRITING, AND COMPLYING WITH THE LATEST EDITION OF THE "RECOMMENDED REQUIREMENTS FOR INDEPENDENT LABORATORY QUALIFICATION", PUBLISHED BY THE AMERICAN COUNCIL OF INDEPENDENT LABORATORIES.
12. TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR AND THE ENGINEER. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS.
13. THE ENTIRE PROJECT SITE SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE WORK. CLEAN ALL INSTALLED PIPELINES, STRUCTURES, SIDEWALKS, PAVED AREAS, ACCUMULATED SILT IN PONDS, PLUS ALL ADJACENT AREAS AFFECTED BY CONSTRUCTION, AS DIRECTED BY THE OWNER OR JURISDICTIONAL AGENCY. EQUIPMENT TO CLEAN THESE SURFACES SHALL BE SUBJECT TO APPROVAL BY THE OWNER.

UTILITY GENERAL NOTES

1. THE UTILITY DATA SHOWN ON THESE PLANS WAS LOCATED BY THE RESPECTIVE UTILITY, OR IS BASED ON UTILITY DRAWINGS, MAPS, OR FIELD RECONNAISSANCE.
2. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ANY UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY FOR RELOCATION OR PROPER INSTRUCTION.
3. A SINGLE POINT UTILITY IDENTIFICATION SERVICE HAS BEEN SET UP FOR EXISTING UTILITIES. THE CONTRACTOR IS TO CONTACT THE SUNSHINE STATE ONE CALL CENTER BY DIALING "811" AT LEAST TWO (2) AND NO MORE THAN FIVE (5) WORKING DAYS PRIOR TO THE SPECIFIC CONSTRUCTION ACTIVITY FOR FIELD LOCATION. NOTE THAT NOT ALL UTILITIES PARTICIPATE IN THIS PROGRAM. THE CONTRACTOR SHOULD CONTACT ALL NON-PARTICIPATING UTILITIES SEPARATELY FOR FIELD LOCATION OF THEIR FACILITIES AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION. PER FLORIDA STATUTE 553.851, THE CONTRACTOR OR EXCAVATOR IS REQUIRED TO NOTIFY THE GAS COMPANY TWO (2) WORKING DAYS PRIOR TO STARTING EXCAVATION.
4. THE CONTRACTOR SHALL KEEP LOCATE TICKETS UP TO DATE AT ALL TIMES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO COORDINATE NECESSARY RELOCATIONS OR OTHER CONSTRUCTION RELATED MATTERS WITH EACH UTILITY.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER AND THE ENGINEER.
7. TYPICAL DETAILS AS SHOWN ARE TO ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER THE METHOD OF CONSTRUCTION TO SUIT FIELD CONDITIONS, PROVIDING HE SUBMITS A PROPOSAL FOR AN ALTERNATE METHOD TO THE ENGINEER FOR APPROVAL AND USES MATERIALS AS DESIGNATED IN THE SPECIFICATIONS.
8. FOR EACH RESPECTIVE PIPELINE CONSTRUCTION REQUIRED, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH, AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC. TO BE CROSSED OR CONNECTED TO. IF THE CONTRACTOR DEEMS NECESSARY (A) A CHANGE IN ALIGNMENT OR DEPTH, OR THE NEED FOR ADDITIONAL FITTINGS, BENDS, OR COUPLINGS, WHICH REPRESENT A DEPARTURE FROM THE CONTRACT DRAWING, OR (B) A NEED FOR RELOCATION OF EXISTING UTILITIES, THEN DETAILS OF SUCH DEPARTURES, RELOCATIONS, OR ADDITIONAL FITTINGS, INCLUDING CHANGES IN RELATED PORTIONS OF THE PROJECT AND THE REASONS THEREFORE, SHALL BE SUBMITTED WITH SHOP DRAWINGS. APPROVED DEPARTURES FOR THE CONTRACTOR'S CONVENIENCE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC, LEAKAGE, AND PRESSURE TESTING. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION.
10. CONSTRUCTION OF ALL WATER, SANITARY SEWER AND ANY RECLAIMED WATER SHALL MEET OR EXCEED MANATEE COUNTY PUBLIC WORK UTILITY STANDARDS.

AS-BUILT DRAWING REQUIREMENTS

1. AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY.

2. AT THE COMPLETION OF THE WORK, DELIVER THE DRAWINGS DOCUMENTING AS-BUILT INFORMATION, MEASURED BY A LICENSED SURVEYOR, TO THE ENGINEER, IN GOOD CONDITION AND FREE FROM ANY EXTRANEOUS NOTATION. THE AS-BUILT INFORMATION IS TO INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:

   A. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS FOR ALL UTILITY AND STORM STRUCTURES INCLUDING BUT NOT LIMITED TO MANHOLES, INLETS AND CLEANOUTS, INCLUDING STRUCTURE TOP AND INVERT ELEVATIONS.
   B. DISTANCE ALONG PIPELINES BETWEEN STRUCTURES.
   C. STORMWATER POND TOP OF BERM AND POND BOTTOM ELEVATIONS AND HORIZONTAL DIMENSIONS MEASURED AT A MINIMUM OF TEN LOCATIONS PER POND, AT LOCATIONS DESIGNATED BY THE ENGINEER. TOP OF POND HORIZONTAL DIMENSIONS ARE ALSO TO BE TIED TO PROPERTY CORNERS, EASEMENTS, AND RIGHTS-OF-WAY.
   D. STORMWATER CONTROL STRUCTURE DIMENSIONS AND ELEVATIONS, INCLUDING ALL WEIRS, SLOTS, ORIFICES, GRATES, AND SKIMMERS.
   E. STORMWATER CONVEYANCE SYSTEMS INCLUDING DIMENSIONS, ELEVATIONS, CONTOURS, AND CROSS SECTIONS.
   F. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS OF ALL UTILITY VALVES, FITTINGS, CONNECTION POINTS, ETC.
   G. VERTICAL ELEVATIONS OF ALL PIPELINES AT CROSSINGS OF POTABLE WATER MAINS (WHETHER THE WATER MAIN IS EXISTING OR NEW) IN ORDER TO DOCUMENT THAT THE MINIMUM REQUIRED VERTICAL SEPARATION HAS BEEN MET.
   H. UTILITY PIPELINE TIED HORIZONTALLY TO EDGE OF PAVEMENT AND RIGHT-OF-WAY LINES, LOCATED EVERY 200-FT PLUS ALL CHANGES IN HORIZONTAL OFFSET.
   I. PAVEMENT WIDTH AND ELEVATIONS AT THE CENTERLINE AND EDGE OF PAVEMENT EVERY 200 FEET PLUS AT ALL CHANGES IN LONGITUDINAL SLOPE, CROSS SLOPE, INLET LOCATIONS, AND AT ALL DRIVEWAY AND STREET INTERSECTIONS. FOR PARKING LOTS, RECORD CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS ALONG ALL DRIVE AISLES AND ISLANDS.
   J. ALL PARKING AREAS AND SIDEWALK RAMPS DESIGNATED FOR HANDICAP ACCESS SHALL CONTAIN HORIZONTAL AND VERTICAL MEASUREMENTS IN ORDER TO VERIFY REQUIRED WIDTHS AND SLOPES HAVE BEEN MET.
   K. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION THAT DEVIATES FROM THE APPROVED ENGINEERING DRAWINGS.
   L. WHERE THE PLANS CONTAIN SPECIFIC HORIZONTAL LOCATION DATA, SUCH AS STATION AND OFFSET, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL HORIZONTAL LOCATION.
   M. WHERE THE PLANS CONTAIN SPECIFIC VERTICAL ELEVATION DATA, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL MEASURED VERTICAL ELEVATION.

3. AS-BUILT DRAWINGS SHALL ALSO INCLUDE ANY OTHER ADDITIONAL REQUIREMENTS STIPULATED BY CITY OF FORT LAUDERDALE UTILITY SERVICES AND BROWARD COUNTY.

STORM SEWER SYSTEMS

1. CONTRACTOR TO CHOOSE BETWEEN POLYETHYLENE PIPE (PE) MATERIAL AND REINFORCED CONCRETE PIPE (RCP) MATERIAL UNLESS SPECIFICALLY DESIGNATED IN THE PLANS. ROUND CONCRETE PIPE SHALL COMPLY WITH ASTM C76. ELLIPTICAL CONCRETE PIPE SHALL COMPLY WITH ASTM C507. PIPE JOINTS SHALL COMPLY WITH ASTM C443 AND FDOT SPECIFICATION SECTION 430, AND RUBBER GASKETS SHALL COMPLY WITH FDOT SPECIFICATION SECTION 942.

2. RCP PIPE SHALL NOT BE SHIPPED FROM MANUFACTURER UNTIL THE COMPRESSIVE STRENGTH OF THE PIPE HAS REACHED 4000 PSI AND A MINIMUM OF 5 DAYS HAVE PASSED SINCE THE MANUFACTURING OR REPAIR OF THE PIPE HAS BEEN COMPLETED.

3. CORRUGATED POLYETHYLENE PIPE AND FITTINGS 4 INCH THROUGH 10 INCH DIAMETER SHALL COMPLY WITH AASHTO M252, TYPE S. PIPE 12 INCH THROUGH 48 INCH DIAMETER SHALL COMPLY WITH AASHTO M294, TYPE S, AND ASTM F2306. PIPE 54 INCH THROUGH 60 INCH DIAMETER SHALL COMPLY WITH FDOT SPECIFICATION SECTION 948 (CLASS II PIPE) AND SHALL COMPLY WITH AASHTO M294. VIRGIN MATERIAL FOR THE PRODUCTION OF PIPE AND FITTINGS SHALL BE HIGH DENSITY POLYETHYLENE CONFORMING TO THE MINIMUM REQUIREMENTS OF CELL CLASSIFICATION 424420C FOR 4-INCH THROUGH 10-INCH DIAMETERS AND 435400C FOR 12-INCH THROUGH 60-INCH DIAMETERS PER ASTM D3350. THE 12-INCH THROUGH 60-INCH VIRGIN PIPE MATERIAL SHALL COMPLY WITH THE NOTCHED CONSTANT LIGAMENT-STRESS (NCLS) TEST AS SPECIFIED IN ASTM F2306. BELL JOINTS FOR 4 INCH THROUGH 10 INCH DIAMETER PIPE SHALL BE PUSH-ON SLEEVE. BELL JOINTS FOR 12 INCH THROUGH 60 INCH DIAMETER PIPE SHALL BE INTEGRALLY FORMED ON PIPE. PIPE JOINTS SHALL BE WATERTIGHT PER ASTM D3212. GASKETS SHALL BE INSTALLED BY PIPE MANUFACTURER AND SHALL COMPLY WITH ASTM F477.

4. UNDERDRAIN PIPE SHALL BE PERFORATED POLYVINYL CHLORIDE PIPE IN ACCORDANCE WITH ASTM F758. FILTER FABRIC UNDERDRAIN SOCK SHALL BE TYPE D-3 IN ACCORDANCE WITH FDOT INDEX NO. 199.

5. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE WITH FDOT INDEX NO. 199, TYPE D-3, A.O.S. 70-100. INSTALL IN ACCORDANCE WITH FDOT INDEX NO. 280. PROVIDE MINIMUM 12" OVERLAP.

6. INSTALL POLYETHYLENE PIPE IN ACCORDANCE WITH ASTM D2321. BACKFILL AND COMPACT EVENLY ON EACH SIDE TO PREVENT DISPLACEMENT. MINIMUM COVER OVER POLYETHYLENE PIPE SHALL BE AS FOLLOWS: A) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS SUITABLE SOILS AS DEFINED IN THE GENERAL NOTES: MINIMUM COVER SHALL BE 36 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER; B) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS MANUFACTURED AGGREGATES CLASS 1A OR 1B AS DEFINED IN ASTM D2321: MINIMUM COVER SHALL BE 30 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER.

7. INSTALL UNDERDRAINS IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 440. INSTALL CLEANOUTS AS SHOWN ON THE DRAWINGS.

8. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND STRUCTURES.

9. ALL STORM PIPE SHALL BE SUBJECTED TO LEAKAGE TESTING. WHEN THE GROUND WATER LEVEL IS ABOVE THE TOP OF THE PIPE, AN INFILTRATION TEST SHALL BE PERFORMED BY SEALING OFF A LENGTH OF PIPE AND MEASURING THE DEPTH OF FLOW OVER A MEASURING WEIR, OR BY PUMPING THE INFILTRATED WATER INTO CONTAINERS FOR MEASUREMENT. TESTS SHALL BE CONDUCTED FOR A MINIMUM OF FOUR HOURS. INFILTRATION LEAKAGE SHALL NOT EXCEED 150 GALLONS PER 24 HOURS, PER INCH DIAMETER, PER MILE OF PIPE. WHEN THE GROUND WATER LEVEL IS BELOW THE TOP OF THE PIPE, THE PIPE SHALL BE TESTED FOR LEAKAGE BY EXFILTRATION. EXFILTRATION LEAKAGE TEST SHALL CONSIST OF ISOLATING THE PARTICULAR SECTION, FILLING WITH WATER TO A POINT 4 FEET ABOVE THE TOP OF THE PIPE AT THE UPPER MANHOLE OR INLET, AND ALLOWING IT TO STAND NOT LESS THAN FOUR HOURS. THE SECTION SHALL THEN BE REFILLED WITH WATER UP TO THE ORIGINAL LEVEL AND AFTER TWO HOURS THE DROP IN WATER SURFACE SHALL BE MEASURED. THE COMPUTED LEAKAGE SHALL NOT EXCEED 150 GALLONS PER INCH DIAMETER, PER 24 HOURS, PER MILE OF PIPE.

SITE PREPARATION

1. UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THE PROPERTY, RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.
2. STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCH MARKS, BATTER BOARDS, CENTERLINES, BASELINES, AND REFERENCE POINTS FOR THE WORK, AND VERIFY ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN THE PROPOSED GRADES, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK.
3. PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.
4. WITHIN THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, THE INTENT IS TO ALLOW TREES AND SHRUBS TO REMAIN IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: NEW ROADWAY CONSTRUCTION - TREES AND SHRUBS TO REMAIN WHERE LOCATED MORE THAN 15 FEET FROM THE BACK OF CURB, OR OUTSIDE THE LIMITS OF EXCAVATION OR FILL AREAS, WHICHEVER IS FURTHER. UTILITY PIPELINE CONSTRUCTION - TREES AND SHRUBS TO REMAIN OUTSIDE A 15 FOOT WIDE PATH, CENTERED ON THE PIPELINE.
5. TREES TO REMAIN IN THE CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD
6. AREAS TO RECEIVE CLEARING AND GRUBBING SHALL INCLUDE ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AREAS FOR FILL AND SITE GRADING, AND BORROW SITES. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER.
7. CLEARING SHALL CONSIST OF REMOVING TREES AND BRUSH AND DISPOSAL OF OTHER MATERIALS THAT ENCROACH UPON OR OTHERWISE OBSTRUCT THE WORK.
8. EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR UTILITIES.
9. GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2" IN DIAMETER, AND MATTED ROOTS. REMOVE TO A DEPTH OF NOT LESS THAN 18" BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.
10. ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFFSITE DISPOSAL AREAS.

PAVING, SIDEWALKS, AND CURBING

1. MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY AND PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. ROADWAY PAVING, BASE, AND SUBGRADE THICKNESSES SHALL BE IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS. MATERIAL STABILITY AND DENSITY REQUIREMENTS ARE AS FOLLOWS:
   A. TYPE SP STRUCTURAL COURSE (SP-12.5)
   B. LIMEROCK BASE: MINIMUM LBR OF 100, PLACED IN 6" MAXIMUM LIFTS, COMPACTED TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR DRY DENSITY (AASHTO T-180). CONTRACTOR MAY SUBSTITUTE ASPHALT BASE COURSE TYPE 3 (MIN. STABILITY OF 1000 LBS) AT NO ADDITIONAL COST, PROVIDED STRUCTURAL NUMBER EQUALS OR EXCEEDS THAT OF THE SPECIFIED LIMEROCK BASE.
   C. SUBGRADE: STABILIZE TO A MIN. LBR OF 40, COMPACT TO A MINIMUM DENSITY OF 98% OF THE MODIFIED PROCTOR DRY DENSITY (AASTHO T-180). CONTRACTOR MAY SUBSTITUTE LIMEROCK SUBGRADE (MIN. LBR OF 100) OR CONTROLLED LOW STRENGTH MATERIAL ("FLOWABLE FILL"), F'c (28 DAY) = 100-125 PSI AT NO ADDITIONAL COST, PROVIDED THE STRUCTURAL NUMBER EQUALS OR EXCEEDS THAT OF THE SPECIFIED SUBGRADE.
3. SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREAS AS SHOWN ON THE CONSTRUCTION PLANS. THE SIDEWALK SHALL BE CONSTRUCTED OF 4" OF CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 3000 PSI. JOINTS SHALL BE EITHER TOOLED OR SAW CUT AT A DISTANCE OF 10'. HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, LATEST EDITION.
4. CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE FDOT CLASS "1" CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 3000 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.
5. FIELD COMPACTION DENSITY, STABILITY, AND THICKNESS TESTING FREQUENCIES OF SUB-BASE, BASE, AND ASPHALT SHALL BE TESTED ONCE EVERY 300 LINEAR FEET OF PAVING PER 24-FT WIDE STRIP, STAGGERED LEFT, CENTER AND RIGHT OF CENTERLINE. WHERE LESS THAN 300 LINEAR FEET OF SUB-BASE, BASE, AND ASPHALT IS PLACED IN ONE DAY, PROVIDE MIN. OF ONE TEST FOR EACH PER DAY'S CONSTRUCTION AT A LOCATION DESIGNATED BY THE ENGINEER. ASPHALT EXTRACTION GRADATION SHALL BE TESTED FROM GRAB SAMPLES COLLECTED ONCE EVERY 1800 SQUARE YARDS OF ASPHALT DELIVERED TO THE SITE (OR A MINIMUM OF ONCE PER DAY).

GRADING

1. GRADING SHOWN ON THESE PLANS IS PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS AND/OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.
2. ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. THE STANDARD CROWN MAY HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.
3. UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE-GRADER OPERATIONS.
4. SLOPE GRADES TO DRAIN AWAY FROM STRUCTURES AT A MINIMUM OF ¼-INCH PER FOOT FOR 10 FEET. FINISHED SURFACES ADJACENT TO PAVED AREAS AND WITHIN 10 FEET OF STRUCTURES SHALL BE WITHIN 1 INCH OF THE PROPOSED GRADE. ALL OTHER AREAS SHALL BE WITHIN 3 INCHES OF THE PROPOSED GRADE.
5. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER.

EXCAVATION, TRENCHING, AND FILL

1. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (FS 553.60-553.64). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
2. ROUGH EXCAVATE AND GRADE ANY PROPOSED STORMWATER PONDS AT THE START OF SITE GRADING ACTIVITIES. DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS.
3. POND CONSTRUCTION SHALL RESULT IN THE FINISHED POND HAVING SIDE SLOPES AND DIMENSIONS THAT ARE IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT THESE REQUIREMENTS HAVE BEEN MET. IF THE CONSTRUCTED SIDE SLOPES ARE STEEPER THAN THE REQUIRED SIDE SLOPES, OR THE POND VOLUME IS NOT WITHIN THREE (3) PERCENT OF THE DESIGN VOLUME, THE CONTRACTOR MAY BE REQUIRED TO MAKE CORRECTIONS TO THE POND AT NO ADDITIONAL COST TO THE OWNER.
4. FIELD DENSITY TESTING FREQUENCIES: A) ONE TEST FOR EACH 10,000 SQUARE FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING, MINIMUM 2 TESTS EACH LAYER; B) ONE TEST FOR EACH 100 SQUARE FEET OR FRACTION THEREOF OF BACKFILL AROUND AND UNDER STRUCTURES; C) ONE TEST FOR EACH 300 LINEAL FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING IN THE PIPELINE TRENCH; D) ONE TEST PER LIFT PER EACH CHANGE IN TYPE OF FILL; E) ONE TEST PER 1000 SQUARE FEET OF PAVEMENT SUBGRADE, MINIMUM OF 2 TESTS.
5. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED WHEREVER POSSIBLE.
   A. ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2-4, A-2-6; ASTM D2487 CLASSIFICATION GW, GP, GM, SM, SW, SP; UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.
   B. UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2-5, A-2-7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SC, ML, MH, CL, CH, OL, OH, PT; UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.
6. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.
7. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS AUTHORIZED BY THE ENGINEER, IN WHICH CASE ADEQUATE TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRIANS, AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.
8. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT REQUIRED TO KEEP EXCAVATIONS WITHIN THE PROPERTY OR EASEMENTS PROVIDED, TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.
9. SHEETING, SHORING, AND BRACING USED FOR THE SUPPORT OF EXCAVATIONS OVER 20 FEET DEEP SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF FLORIDA.
10. ALL EXCAVATIONS SHALL BE MADE BY OPEN CUT UNLESS OTHERWISE INDICATED. SLOPE SIDES OF TRENCHES IN ACCORDANCE WITH OSHA REQUIREMENTS AND THE RECOMMENDATIONS CONTAINED WITHIN THE PROJECT GEOTECHNICAL REPORT.
11. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED FOR INDICATED FLOW LINES AND INVERT ELEVATIONS. OVER EXCAVATE TRENCHES A MINIMUM OF 2 FEET WHERE EXCAVATIONS OCCUR WITHIN UNSUITABLE SOILS, AND REPLACE OVER EXCAVATED MATERIAL WITH SUITABLE SOILS.
12. EXCEPT AS OTHERWISE INDICATED, EXCAVATE FOR PRESSURE PIPING SO TOP OF PIPING IS MINIMUM 3 FEET BELOW FINISHED GRADE.
13. TRENCH BOTTOMS AND THE BOTTOMS OF ALL STRUCTURES SHALL BE KEPT DRY, COMPACTED, AND STABLE TO A DEPTH TWO FEET BELOW THE BOTTOM OF THE TRENCH OR STRUCTURE.
14. ALL BEDDING, FILL, AND BACKFILL MATERIAL SHALL BE SUITABLE SOILS OR FLOWABLE FILL. WHERE TRENCH OR EXCAVATION IS WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, FOUNDATIONS, OR SLABS, PLACE BACKFILL IN LAYERS OF 8 INCH LOOSE DEPTH. IN ALL OTHER AREAS, PLACE FILL AND BACKFILL IN LAYERS OF 12 INCH LOOSE DEPTH.
15. MINIMUM DENSITY REQUIREMENT (ASTM D1557 OR AASHTO T180): BACKFILL AND FILL UNDER AND WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, SLABS, FOUNDATIONS = 98 PERCENT; BACKFILL AND FILL PLACED WITHIN PUBLIC ROAD RIGHT-OF-WAY AND UTILITY EASEMENTS = 95 PERCENT; BACKFILL AND FILL PLACED WITHIN POND AND ROAD EMBANKMENT = 95 PERCENT; BACKFILL AND FILL PLACED IN ALL OTHER AREAS = 90 PERCENT.

PAVING TIMING REQUIREMENTS

1. INSTALL SUBGRADE AND BASE COURSE MATERIALS WITHIN 48 HOURS OF THE REMOVAL/OPEN CUTTING OF EXISTING PAVEMENT CONSISTING OF STREETS, DRIVEWAYS, OR SIDEWALK. INSTALL FINAL SURFACE COURSES WITHIN 14 DAYS AFTER REMOVAL OF EXISTING PAVEMENT.
2. AREAS TO RECEIVE ASPHALT SHALL RECEIVE EROSION CONTROL MEASURES NO LATER THAN 48 HOURS AFTER ACCEPTANCE OF BASE COURSE. TEMPORARY EROSION CONTROL CONSISTS OF PLACEMENT OF A BITUMINOUS PRIME COAT AND SANDING THE SURFACE. PERMANENT EROSION CONTROL CONSISTS OF PLACEMENT OF THE STRUCTURAL COURSE.
3. AREAS TO RECEIVE CONCRETE PAVING SHALL BE EITHER PROTECTED WITH A LAYER OF FDOT COARSE AGGREGATE MATERIAL OR SHALL BE PAVED WITHIN 48 HOURS OF ACCEPTANCE OF THE SUBGRADE.

SITE NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXITE PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED. SEE 02900 SPECIFICATION.
4. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
5. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
7. SITE BOUNDARY, TOPOGRAPHY, UTILITY AND ROAD INFORMATION TAKEN FROM A SURVEY BY A LAND SURVEYOR.
8. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED "THE SITE SPECIFIC SPECIFICATIONS".
9. PYLON SIGNS SHALL BE CONSTRUCTED BY OTHERS.
10. REFER TO ARCH. PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
11. ALL TARGET GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

FIRE PROTECTION SYSTEMS

1. COMBUSTIBLE CONSTRUCTION CANNOT OCCUR UNTIL PROPER DOCUMENTATION HAS BEEN SUBMITTED TO THE LOCAL FIRE MARSHAL. DOCUMENTATION SHALL SHOW THAT HYDRANTS HAVE BEEN INSTALLED, TESTED, AND ARE IN PROPER WORKING ORDER.
2. INSTALL ALL FIRE LINE PIPING AT A MINIMUM 36 INCHES OF COVER.
3. ALL FIRE LINE PIPING FROM POINT OF SERVICE AS DEFINED BY FS 633.102(24) SHALL BE C900 DR 14, CAST IRON OUTSIDE DIAMETER (CIOD). THE FIRE LINE SHALL BE PRESSURE TESTED TO 200 PSI FOR A MINIMUM OF TWO HOURS, TESTED IN ACCORDANCE WITH NFPA 24.
4. THE CONTRACTOR INSTALLING THE UNDERGROUND FIRE PROTECTION PIPING SHALL HOLD A CLASS I, II, OR LEVEL V CERTIFICATION AS ISSUED BY THE STATE OF FLORIDA, AS REQUIRED BY FS 633.021(5).
5. ALL FIRE PROTECTION SPRINKLER SYSTEMS INSTALLED SHALL COMPLY WITH NFPA 13, AND SHALL BE MONITORED BY A COMPANY LISTED AS A CENTRAL STATION.
6. HYDRANTS SHALL CONFORM TO AWWA C502 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE REQUIRED.
7. ALL HYDRANTS SHALL BE OF BREAKABLE TYPE, WITH THE BREAKABLE SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO-TWO AND A HALF INCH (2-1/2") HOSE CONNECTIONS AND ONE-FOUR AND A HALF INCH (4-1/2") STEAMER CONNECTIONS WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE QUARTER INCH (5-1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE-HALF INCH (1-1/2") PENTAGON OPERATING NUT. THE HYDRANTS SHALL OPEN COUNTERCLOCKWISE.
8. ALL HYDRANTS SHALL BE PAINTED IN AN APPROVED MANNER WITH THE PRIMER PAINT BEING KOPPER'S "GLAMORTEX" NO. 622 RUST PRIMER AND THE FINISH PAINT SHALL BE TWO COATS OF ENAMEL OR SPECIAL COATING TO COLOR AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
9. BLUE PAVEMENT REFLECTORS (CAT EYES) SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE DIRECTLY IN FRONT OF ALL FIRE HYDRANTS. THERE SHALL BE NO TREES, SHRUBS, OR LANDSCAPING PLANTED AROUND THE FIRE HYDRANTS OR IN AREAS DESIGNATED AS FIRE LANES.
10. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST: THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER; SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN; AND TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
11. THE SEQUENCE OF TESTING AND DISINFECTION SHALL BE AS FOLLOWS: 1) CONDUCT FIRE FLOW, PRESSURE AND LEAKAGE TESTING; 2) PERFORM FLUSHING PER UTILITY REQUIREMENTS AND AWWA C651; 3) DISINFECT THE WATER MAIN, INCLUDING VALVES AND FITTINGS; AND 4) FLUSH AFTER DISINFECTION.
12. THE CONTRACTOR SHALL PROVIDE A POST-CONSTRUCTION FIRE FLOW TEST WITNESSED AND APPROVED BY THE ENGINEER AND THE UTILITY. HYDRANTS SHALL DELIVER A MINIMUM OF 1250 GPM WITH A RESIDUAL PRESSURE OF 20 PSI.
13. APPLY LEAKAGE TEST PRESSURE OF 200 PSI (FIRE MAINS) MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
14. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
15. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA $L = SDP/148000$ WHERE L = MAXIMUM PERMISSIBLE LEAKAGE RATE, IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S = LENGTH OF LINE TESTED (IN FEET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
16. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS.
17. ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651.

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Designed by:	R.S
Drawn by:	A.N
Checked by:	D.C
Approved by:	R.S
Date:	5/8/2026
Job No.:	WL101

Plans Prepared By: RSP Engineers

NOT APPROVED FOR CONSTRUCTION

GENERAL NOTES

OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

Sheet No.

C-2

CITY'S DIGITAL APPROVAL STAMP

WATER DISTRIBUTION SYSTEMS

THE ENTITY THAT WILL OPERATE AND MAINTAIN THE WATER AND RECLAIMED WATER SYSTEMS SHOWN ON THESE PLANS IS WALLACE LOGISTICS SERVICES LLC. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OFWALLACE LOGISTICS SERVICES LLC FORT LAUDERDALE, FLORIDA

1. ALL WATER AND RECLAIMED MAIN PIPE SHALL BE EITHER DUCTILE IRON OR PVC, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
2. INSTALL ALL WATER AND RECLAIMED MAINS AT A MINIMUM 36 INCHES OF COVER.
3. BURIED DUCTILE IRON PIPE SHALL CONFORM WITH ANSI/AWWA C150/A21.50 AND C151/ A21.51, AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI. BURIED PIPE SHALL COMPLY WITH THE FOLLOWING PRESSURE CLASS (PC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: A) 12" DIAMETER AND SMALLER = PC 350; B) 14" THROUGH 24" DIAMETER = PC 250; C) 30" THROUGH 64" DIAMETER = PC 200.
4. EXPOSED PIPE 4" AND LARGER SHALL BE DUCTILE IRON FLANGED AND SHALL CONFORM WITH AWWA/ANSI C115/A21.15, AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI. FLANGED PIPE SHALL COMPLY WITH THE FOLLOWING THICKNESS CLASS (TC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: A) 4" DIAMETER = TC 54; B) 6" THROUGH 24" DIAMETER = TC 53
5. DUCTILE IRON PIPE AND FITTINGS WITHIN 10 FEET OF GAS MAINS SHALL HAVE AN 8-MIL POLYETHYLENE WRAP IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.
6. PVC PIPE 4" - 30" SHALL CONFORM TO AWWA C900. PIPE SHALL CONFORM TO ASTM D1784, TYPE I, GRADE I, 4000 PSI DESIGN STRESS, AND SHALL BE NATIONAL SANITATION FEDERATION (NSF) APPROVED. PIPE SHALL BE CLASS 235 (DR18) PVC PIPE WITH CAST IRON OUTSIDE DIAMETER (CIOD), AND SHALL CONTAIN MARKINGS ON EACH SECTION SHOWING CONFORMANCE TO THE ABOVE SPECIFICATIONS. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO AWWA C900. THE BELL SHALL BE INTEGRAL WITH THE PIPE AND OF EQUAL OR GREATER PRESSURE RATING. THE BELL OF PIPE AND FITTINGS USING PUSH-ON JOINTS SHALL HAVE AN INTEGRAL GROOVE TO RETAIN THE GASKET IN PLACE.
7. ALL FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON, CONFORMING TO ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53. ALL FULL BODY (C110/A21.10) FITTINGS SHALL BE PRESSURE RATED TO 250 PSI, MINIMUM. ALL COMPACT FITTINGS (C153/A21.53) SHALL BE PRESSURE RATED TO 350 PSI, MINIMUM.
8. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED AND COATED. INTERIOR LINING SHALL BE STANDARD THICKNESS CEMENT MORTAR LINING PER ANSI/AWWA C104/A21.4. EXTERIOR COATING FOR BURIED PIPE AND FITTINGS SHALL BE A PETROLEUM ASPHALTIC COATING IN ACCORDANCE WITH ANSI/AWWA C110/A21.10. EXTERIOR COATING OF EXPOSED PIPE AND FITTINGS SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL DFT TNEMEC COLOR HI-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TNEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
9. MECHANICAL AND PUSH ON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS SHALL BE RUBBER GASKETED, CONFORMING TO ANSI/AWWA C111/A21.11. LUBRICANTS OTHER THAN THAT FURNISHED BY THE PIPE MANUFACTURER WITH THE PIPE SHALL NOT BE USED.
10. RESTRAINED JOINTS FOR DUCTILE IRON PIPE BELL JOINTS SHALL BE AMERICAN FAST GRIP GASKET, MCWANE SURE GRIP 350 GASKET, U.S. PIPE FIELD LOK 350 GASKET, OR EBAA IRON MEGA LUG SERIES 1100HD. RESTRAINED JOINTS FOR DUCTILE IRON PIPE AND FITTING MECHANICAL JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1100, STAR GRIP SERIES 3000, OR TYLER UNION TUF-GRIP SERIES TLD. LOCKING BELL JOINT RESTRAINT SHALL BE AMERICAN FLEX RING JOINT, AMERICAN LOK-RING JOINT, OR U.S. PIPE TR-FLEX. RESTRAINED JOINTS FOR PVC PIPE MECHANICAL JOINTS SHALL BE TYLER UNION SERIES 2000 TUF GRIP TLP, JCM SUR-GRIP BELL RESTRAINER, FORD UNI-FLANGE SERIES 1500 CIRCLE LOCK, OR EBAA IRON MEGA LUG SERIES 2000PV. RESTRAINED JOINTS FOR PVC PIPE PUSH ON JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1500 OR SERIES 1600 (C900 PVC), SERIES 2800, FORD UNI-FLANGE SERIES 1390, OR SMITH-BLAIR BELL-LOK SERIES 165. PIPE JOINTS SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM OF FITTINGS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS OR THE TABLE SHOWN IN THE DRAWINGS, WHICHEVER IS GREATER. VALVES ARE TO BE RESTRAINED ON EACH SIDE OF THE VALVE AT THE CONNECTION TO ADJOINING PIPE.
11. POLYETHYLENE PIPE AND TUBING USED FOR SERVICE LINES ½-3 INCH DIAMETER SHALL BE POLYETHYLENE IN ACCORDANCE WITH AWWA C901, STANDARD CODE DESIGNATION PE 4710, SDR 9 (OUTSIDE DIAMETER BASED DIMENSION RATIO), 250 PSI. PIPE SHALL BE COLOR CODED BLUE (POTABLE WATER) OR PURPLE (RECLAIMED WATER). PIPE AND FITTINGS SHALL BE NSF APPROVED FOR THE USAGE TO WHICH THEY ARE TO BE APPLIED. JOINTS IN SDR-PR PE PIPE SHALL BE BUTT HEAT FUSION OR SOCKET HEAT FUSION TYPE. FITTINGS SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE PIPE AND SHALL BE OF THE SAME SDR OR LESS. PROVIDE ADAPTERS AS REQUIRED TO JOIN PE PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS.
12. SERVICE SADDLES SHALL MEET THE REQUIREMENTS OF AWWA C800 AND SHALL CONSIST OF EPOXY COATED DUCTILE IRON BODIES IN ACCORDANCE WITH ASTM A536, WITH DOUBLE STAINLESS STEEL STRAPS, BOLTS, WASHERS AND NUTS. STAINLESS STEEL SHALL BE TYPE 304, AND NUTS ARE TO BE TEFLON COATED. THE DUCTILE IRON BODY IS TO BE FUSION BONDED NYLON COATED, MINIMUM THICKNESS 12 MILS, OUTLET OF SADDLE IS TO HAVE NPT THREADS. SERVICE SADDLES SHALL BE MANUFACTURED BY FORD, MUELLER, OR SMITH-BLAIR.
13. ALL SERVICES SHALL INCLUDE THE FOLLOWING: CURB STOPS, UNIONS AS REQUIRED, CORPORATION STOPS. CONFORMANCE WITH AWWA C800 AND C901 IS REQUIRED. THE CONTRACTOR SHALL CUT "W" IN THE TOP CURB OF EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT.
14. UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS AND RECLAIMED WATER METERS. CONTRACTOR SHALL CONSTRUCT WATER SERVICE AND RECLAIMED WATER SERVICE TO THE CORPORATION STOP.
15. UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL VALVES TWO INCHES AND SMALLER SHALL BE ALL BRASS OR BRONZE; VALVES OVER TWO INCHES SHALL BE IRON BODY, FULLY BRONZE OR BRONZE MOUNTED.
16. VALVES 4 INCHES AND LARGER SHALL BE LINED AND COATED. BURIED AND EXPOSED VALVES SHALL BE COATED INSIDE AND OUT WITH A RUST INHIBITING EPOXY PRIMER, FOLLOWED BY AN EPOXY COATING MEETING THE REQUIREMENTS OF AWWA C550, APPLIED AT THE FACTORY. THE INTERIOR OF VALVES WITH A CAST IRON OR DUCTILE IRON BODY SHALL BE COATED WITH AN EPOXY PROTECTIVE COATING MEETING NSF INTERNATIONAL STANDARD 61 AND AWWA C550. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL DFT TNEMEC COLOR HI-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TNEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
17. ALL VALVES 12" AND SMALLER SHALL BE GATE VALVES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. GATE VALVES 3 INCHES TO 12 INCHES SHALL CONFORM TO AWWA C509 OR AWWA C515. THE VALVES SHALL BE IRON BODY, CAST IRON FULLY ENCAPSULATED MOLDED RUBBER WEDGE COMPLYING WITH ASTM D2000, NON-RISING STEM WITH O-RING SEALS. VALVES SHALL OPEN COUNTERCLOCKWISE.
18. TAPPING SLEEVES ARE TO BE 18-8 TYPE 304 STAINLESS STEEL AND STAINLESS STEEL OUTLET, AS MANUFACTURED BY JCM OR APPROVED EQUAL. TAPPING VALVES SHALL BE RESILIENT SEATED GATE VALVES AND SHALL CONFORM TO THE REQUIREMENTS OF AWWA C509. TAPPING VALVES SHALL BE AMERICAN FLOW CONTROL SERIES 2500, CLOW SERIES F-6100, OR MUELLER SERIES A2361.
19. VALVES 14" AND LARGER SHALL BE BUTTERFLY VALVES. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH, TESTING AND PERFORMANCE REQUIREMENTS OF AWWA C504, CLASS 150. VALVE BODY SHALL BE MECHANICAL JOINT END TYPE VALVE CONSTRUCTED OF CAST IRON OR DUCTILE IRON. DISC SHALL BE ONE PIECE CAST DESIGN WITH NO EXTERNAL RIBS TRANSVERSE TO FLOW. DISC SHALL BE CAST IRON OR DUCTILE IRON. THE RESILIENT SEAT SHALL MATE WITH A 304 OR 316 STAINLESS STEEL SURFACE.
20. VALVE SEATS SHALL BE MECHANICALLY RETAINED, AND MAY BE INSTALLED ON EITHER THE BODY OR DISC. O-RING SEATS ON VALVE DISCS ARE UNACCEPTABLE. SEATS FOR VALVES 14" DIAMETER AND LARGER SHALL BE FULLY FIELD REPLACEABLE WITHOUT THE USE OF SPECIAL TOOLS. OPERATORS OF THE ENCLOSED TRAVELING-NUT TYPE SHALL BE PROVIDED UNLESS OTHERWISE INDICATED.
21. ALL BURIED VALVES SHALL BE PROVIDED WITH ADJUSTABLE VALVE BOXES APPROXIMATELY 5 INCHES IN DIAMETER AND SHALL BE HEAVY DUTY TRAFFIC RATED. VALVE BOXES SHALL BE CAST IRON. VALVE BOX LIDS SHALL BE CAST IRON H-20 LOAD RATED. BOXES SHALL BE OF SUFFICIENT LENGTH TO OPERATE ALL VALVES BURIED IN THE GROUND, CONSISTING OF BASE, CENTER SECTION, AND TOP SECTION WITH COVER. ALL VALVE BOX EXTENSIONS SHALL BE CAST IRON. VALVE BOX LIDS IN PAVED AREAS SHALL BE LOCKABLE. VALVE BOXES LOCATED IN UNPAVED AREAS SHALL BE SLIP TYPE DESIGN AND VALVE BOXES IN PAVED AREAS SHALL BE ADJUSTABLE SCREW TYPE. VALVE BOX COVERS SHALL BE CAST WITH THE INSCRIPTION "WATER" OR "RECLAIMED WATER". IN UNPAVED AREAS, INSTALL A 2-FT X 2-FT X 6-IN THICK CONCRETE PAD (2500 PSI) AT EACH VALVE. ALL VALVE BOX COVERS SHALL BE PAINTED WITH A THREE COAT SYSTEM. THE FIRST COAT SHALL BE PRIMER, 2.5-3.5 MIL DRY FILM THICKNESS (DFT) TNEMEC SERIES 135 CHEMBUILD OR APPROVED EQUAL; THE INTERMEDIATE COAT SHALL BE 4.0-10.0 MIL DFT TNEMEC COLOR HI-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TNEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE BLUE (WATER) OR PURPLE (RECLAIMED WATER) OR AS APPROVED BY THE LOCAL UTILITY.
22. PVC PIPES SHALL BE COLOR CODED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS) AND STENCILED (0.75-INCH LETTERING ON THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION) "POTABLE WATER MAIN" OR "RECALIMED WATER MAIN" AS APPLICABLE.
23. INSTALL IDENTIFICATION TAPE ALONG ALL DUCTILE IRON PIPE AND PVC PIPE, MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. APPLY TAPE TO SURFACE OF PIPE, CONTINUOUSLY EXTENDING FROM JOINT TO JOINT. TAPE COLOR AND LETTERING SHALL BE BLACK PRINTING ON BLUE BACKGROUND (WATER MAINS), BLACK PRINTING ON PURPLE BACKGROUND (RECLAIMED WATER MAINS). PLACE TAPE AS FOLLOWS: 2" - 8" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
24. INSTALL WARNING TAPE ALONG ALL PIPELINES, PLACED 2 FEET ABOVE PIPE. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE. TAPE SHALL BE COLORED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS) WITH BLACK LETTERING, CODED AND WORDED "CAUTION: WATER MAIN BURIED BELOW", OR "CAUTION: RECLAIMED WATER MAIN BURIED BELOW", AS APPLICABLE.
25. INSTALL LOCATING WIRE ALONG ALL PVC PIPELINES. WIRE SHALL BE COLOR-CODED 10 GAUGE CONTINUOUS INSULATED WIRE. COLOR CODING SHALL BE SIMILAR TO WARNING TAPE COLORS. INSTALL LOCATOR WIRE ALONG ALL PRESSURIZED PIPELINES 2" AND LARGER. LOOP WIRE INTO ALL VALVE BOXES. LOOPING TO OCCUR EVERY 500 FEET MINIMUM. WHERE THERE ARE NO VALVE BOXES TO ALLOW LOOPING, PROVIDE ACCESS BOXES PER LOCAL UTILITY REQUIREMENTS. CHECK WIRE FOR ELECTRICAL CONTINUITY.
26. ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS OR APPROVED JOINT DEFLECTION. BENDING OF PIPE, EXCEPT COPPER AND POLYETHYLENE, IS PROHIBITED. JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
27. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.
28. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.
29. ALL SERVICE LINES SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.
30. THE SEQUENCE OF TESTING AND DISINFECTION SHALL BE AS FOLLOWS: 1) CONDUCT PRESSURE AND LEAKAGE TESTING; 2) PERFORM FLUSHING PER UTILITY REQUIREMENTS AND AWWA C651; 3) DISINFECT THE WATER MAIN, INCLUDING VALVES AND FITTINGS; AND 4) DECHLORINATE AND FLUSH AFTER DISINFECTION.
31. APPLY LEAKAGE TEST PRESSURE OF 150 PSI (WATER MAINS), 200 PSI (FIRE MAINS) OR 150 PSI (RECLAIMED WATER MAINS). MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
32. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
33. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA L = SDP/148000 WHERE L = MAXIMUM PERMISSIBLE LEAKAGE RATE, IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S = LENGTH OF LINE TESTED (IN FEET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
34. ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.
35. PRIOR TO DISINFECTION, CONDUCT FULL DIAMETER FLUSHING OF PIPELINE IN SECTIONS IN ORDER TO REMOVE ANY SOLIDS OR CONTAMINATED MATERIAL THAT MAY HAVE BECOME LODGED IN THE PIPE.
37. OBTAIN A MINIMUM FLUSHING VELOCITY OF 2.5 FEET PER SECOND PER AWWA C651.
38. ALL TAPS REQUIRED FOR FLUSHING AND THE TEMPORARY OR PERMANENT RELEASE OF AIR AS NEEDED FOR FLUSHING SHALL BE PROVIDED BY THE CONTRACTOR.
39. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651. THE DISCHARGE LOCATIONS FOR THE CHLORINATED WATER SHALL BE APPROVED BY THE OWNER. NEUTRALIZE THE CHLORINE RESIDUAL BY MEANS OF A REDUCING AGENT IN ACCORDANCE WITH AWWA C651.
40. ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. ALL BACTERIOLOGICAL TESTING INCLUDING COLLECTION OF SAMPLES FOR TESTING SHALL BE PERFORMED BY A STATE CERTIFIED LABORATORY CONTRACTED BY THE CONTRACTOR. ALL WATER SAMPLE COLLECTION SHALL TAKE PLACE WITH A REPRESENTATIVE OF THE UTILITY PRESENT. PROPER CHAIN OF CUSTODY PROCEDURES MUST BE FOLLOWED. COPIES OF ALL TESTING RESULTS AND ALL RELATED CORRESPONDENCE FROM THE TESTING LAB SHALL BE SUBMITTED TO THE OWNER, UTILITY, AND ENGINEER.
41. SAMPLE LOCATIONS SHALL BE ALONG EVERY 1200 FEET OF NEW MAIN, PLUS ONE FROM EACH END OF THE LINE AND AT LEAST ONE FROM EACH BRANCH. THE SAMPLE POINTS MUST HAVE A BRASS NON-THREADED SMOOTH-NOSED DOWNWARD SPOUTED HOSE BIBB MOUNTED ON A RIGID STAND PIPE AT LEAST THREE FEET ABOVE THE FINISH GRADE. NO HOSE OR FIRE HYDRANT SHALL BE USED IN THE COLLECTION OF SAMPLES. WARNING TAGS SHALL BE ATTACHED TO EACH SAMPLE POINT.

SANITARY SEWER SYSTEMS

1 THE ENTITY THAT WILL OPERATE AND MAINTAIN THE SEWER SYSTEM SHOWN ON THESE PLANS IS WALLACE LOGISTICS SERVICES LLC. THE CONTRACTOR SHALL MEET OR EXCEED ALL THE REQUIREMENTS OF WALLACE LOGISTICS SERVICES LLC AND FORT LAUDERDALE, FLORIDA

2. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS, PVC SEWER PIPE SHALL BE TYPE PSM PVC PIPE CONFORMING TO ASTM D3034 AND SHALL BE SDR 26 FOR 6" THROUGH 12" . PVC PIPE SIZES OVER 12" SHALL BE APPROVED BY THE CITY OF LARGO.

1. INSTALL ALL SEWER MAINS AT A MINIMUM 36 INCHES OF COVER UNLESS SPECIFICALLY DIRECTED OTHERWISE ON THE CONSTRUCTION PLANS.
2. JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D3212 USING RUBBER GASKETS CONFORMING TO ASTM F477.
3. FITTINGS SHALL CONFORM TO THE SAME REQUIREMENTS AS THE PIPE. PROVIDE ADAPTERS AS REQUIRED TO JOIN PVC PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS. SOLVENT CEMENT SHALL BE AS RECOMMENDED BY THE PIPE MANUFACTURER.
4. PVC SEWER PIPE SHALL BE COLOR CODED GREEN, STENCILED "SEWER LINE" (2" LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION). ALL PIPES SHALL BE CLEARLY MARKED WITH THE MANUFACTURER'S NAME OR TRADEMARK, THE NOMINAL PIPE SIZE, THE PVC CELL CLASSIFICATION, THE LEGEND "TYPE PSM SDR-26 PVC SEWER PIPE" AND THE DESIGNATION ASTM-3034.
5. INSTALL ADHESIVE IDENTIFICATION TAPE ALONG PIPELINE. TAPE SHALL BE MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. TAPE COLOR AND LETTERING SHALL BE "SEWER LINE", BLACK PRINTING ON GREEN BACKGROUND. PLACE TAPE AS FOLLOWS: 2" - 8" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
6. INSTALL WARNING TAPE ALONG ALL SEWER PIPELINES. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE, COLORED GREEN WITH BLACK LETTERING CODED AND WORDED "CAUTION: SEWER BURIED BELOW". INSTALL ALONG PIPELINE, 2 FEET ABOVE PIPE, MINIMUM OF 1 FOOT BELOW GRADE.
7. CONNECTIONS TO EXISTING SEWER SHALL BE CONDUCTED IN SUCH A MANNER THAT THE EXISTING SEWER REMAINS IN OPERATION. PROVIDE BY PASS PUMPING OF EXISTING FLOWS OR COLLECT AND LEGALLY DISPOSE OF EXISTING SEWER FLOW AS NEEDED TO ACCOMMODATE CONSTRUCTION WHILE KEEPING EXISTING SEWER IN SERVICE.
8. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND MANHOLES. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.
9. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.
10. ALL SERVICE LATERALS SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.
11. PROVIDE LIGHT SOURCE AND MIRRORS FOR LAMPING OF SEWER. ANY SEWER IN WHICH THE DIRECT LIGHT OF A LAMP CANNOT BE VIEWED IN EITHER DIRECTION, FULL CIRCLE, BETWEEN ADJACENT MANHOLES SHALL BE CONSIDERED UNSATISFACTORY, UNLESS THE LINE IS DESIGNED WITH HORIZONTAL DEFLECTIONS, AND SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
12. CONDUCT LOW PRESSURE AIR TESTING (4.0 PSI INITIAL PRESSURE) OF INSTALLED SEWER PIPING IN ACCORDANCE WITH ASTM F1417. MAXIMUM ALLOWABLE LEAKAGE IS 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE AREA BEING TESTED. ALLOWABLE AIR PRESSURE DROP DURING THE TEST IS 0.5 PSIG. MINIMUM REQUIRED TEST TIME (DURATION) IS: A) 4" PIPE = 1 MIN 53 SEC; B) 6" PIPE = 2 MIN 50 SEC, OR 0.427 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; C) 8" PIPE = 3 MIN 47 SEC, OR 0.760 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; D) 10" PIPE = 4 MIN 43 SEC, OR 1.187 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; E) 12" PIPE = 5 MIN 40 SEC, OR 1.709 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER.
13. PLUG PIPE LINES AND CONDUCT VACUUM TEST ON MANHOLES. INDUCE A BACKPRESSURE OF 5.0 PSI EQUIVALENT TO 10" HG (MERCURY). THE MANHOLE ASSEMBLY IS CONSIDERED SATISFACTORY IF THE VACUUM LOSS IS LESS THAN 1" HG FOR THE LENGTH OF TIME LISTED IN THE FOLLOWING TABLE. ANY MANHOLE NOT PASSING THE TEST MUST HAVE PROBLEMS CORRECTED AND THEN BE RETESTED.

	TIME OF TEST (SEC)		
DEPTH (FT)	4' DIA. MANHOLE	5' DIA. MANHOLE	6' DIA. MANHOLE
4	10	13	16
8	20	26	32
12	30	39	48
16	40	52	64
20	50	65	80
24	60	78	96
T*	5	6.5	8

14. *NOTE: ADD "T" SECONDS FOR EACH ADDITIONAL 2'-0" OF DEPTH.
15. CONDUCT DEFLECTION TESTING OF PIPELINE AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. MAXIMUM ALLOWABLE PIPE DEFLECTION IS 5%. MEASURE DEFLECTION BY MANUALLY PULLING A MANDREL THROUGH THE PIPE. THE MINIMUM MANDREL OUTER DIAMETER SHALL BE IN ACCORDANCE WITH THE FOLLOWING: 6" SEWER = 5.45" MANDREL; 8" SEWER = 7.28" MANDREL; 10" SEWER = 9.08" MANDREL; 12" SEWER = 10.79" MANDREL; 15" SEWER = 13.20" MANDREL; 18" SEWER = 16.13" MANDREL; 21" SEWER = 19.00" MANDREL; 24" SEWER = 21.36" MANDREL; 27" SEWER = 24.06" MANDREL.
16. DEFLECTION TESTING IS CONSIDERED SATISFACTORY IF THE MANDREL CAN BE PULLED BY HAND THROUGH THE PIPE BEING TESTED. IF THE MANDREL CANNOT BE PULLED THROUGH THE PIPE, REPLACE OR CORRECT THE PIPE AND RETEST UNTIL TESTING IS SATISFACTORY. ANY PIPE REMOVED OR CORRECTED DUE TO FAILING DEFLECTION TESTING SHALL ALSO BE RE-TESTED FOR LEAKAGE.

SIGNS AND PAVEMENT MARKINGS

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST IMPLEMENTED EDITION OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS. STANDARD INDEX NO. 11200, 11860, 11862, 11863, 11864, 11865, 17302, 17344, 17346, 17349, AND 17355 APPLY. GENERALLY, ALL MARKINGS SHALL CONFORM TO THE FOLLOWING: 6" EDGE LINES, 6" LANE LINES, 6" SINGLE CENTERLINES, AND 6" DOUBLE LINE PATTERNS, UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RAISED PAVEMENT MARKERS (TYPE 911 - 4" X 4"). RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND FDOT INDEX NO. 17352.
3. PARKING STALL PAVEMENT MARKINGS SHALL BE PAINTED. PAINT SHALL MEET THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 971, NON-REFLECTIVE WHITE TRAFFIC PAINT.
4. ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETROREFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.
5. INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETROREFLECTIVE.
6. THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
7. ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
8. PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

UTILITY SEPARATION REQUIREMENTS

1. THE HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER, STORM SEWER, WASTEWATER FORCE MAINS, STORMWATER FORCE MAINS, RECLAIMED WATER MAINS AND ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   A. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF THREE FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, VACUUM TYPE SANITARY SEWER AND RECLAIMED WATER MAIN.
   B. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF SIX FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN THE OUTSIDE OF WATER MAINS AND THE OUTSIDE OF GRAVITY SANITARY SEWERS CAN BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
   C. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF TEN FEET FROM ALL PARTS OF ANY EXISTING OR PROPOSED ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
2. THE VERTICAL SEPARATION BETWEEN WATER MAINS AND SANITARY AND STORM SEWER, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   A. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OUTSIDE OF THE SEWER. WHERE IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, THEN THE WATER MAIN CAN CROSS UNDER THESE TYPES OF PIPELINE SYSTEMS PROVIDED THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE PIPELINE. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM VACUUM TYPE SANITARY SEWER OR STORM SEWER JOINTS, AND AT LEAST SIX FEET FROM GRAVITY SANITARY SEWER JOINTS.
   B. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED RECLAIMED WATER MAINS, WASTEWATER FORCE MAINS AND STORMWATER FORCE MAINS. WHETHER THE WATER MAIN CROSSES OVER OR UNDER THESE TYPES OF PIPELINE SYSTEMS, THE OUTSIDE OF THE WATER MAIN SHALL BE AT LEAST 12 INCHES FROM THE OUTSIDE OF THE EXISTING OR PROPOSED RECLAIMED WATER MAIN, WASTEWATER FORCE MAIN AND STORMWATER FORCE MAIN. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM RECLAIMED WATER MAIN JOINTS AND STORMWATER FORCE MAIN JOINTS, AND AT LEAST SIX FEET FROM THE JOINTS OF WASTEWATER FORCE MAINS.
3. NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE.
4. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST:
   A. THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER.
   B. SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN.
   C. TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
5. THE FOLLOWING ARE ACCEPTABLE ALTERNATIVE CONSTRUCTION FEATURES TO BE CONSIDERED FOR COST EVALUATION WITH NO GUARANTEE THEY WILL BE APPROVED FOR IMPLEMENTATION WHERE IT IS NOT POSSIBLE TO MEET THE SEPARATION REQUIREMENTS. EXCEPTIONS FROM MEETING THE PIPE SEPARATION REQUIREMENTS, WITHOUT MITIGATION, SHALL BE ALLOWED ONLY BY FDEP IF TECHNICAL OR ECONOMIC JUSTIFICATIONS FOR EACH EXCEPTION PROVIDED BY THE ENGINEER ARE ACCEPTABLE TO FDEP AND ARE ONLY TO BE IMPLEMENTED UPON RECEIPT OF EXPRESSED WRITTEN CONSENT FROM THE ENGINEER AND APPROVAL FROM FDEP ON A CASE BY CASE BASIS. ALL POSSIBLE MEASURES TO ACHIEVE COMPLIANCE WITH THE PIPE SEPARATION REQUIREMENTS SHALL BE CONSIDERED FIRST ALONG WITH DESIGN CHANGES TO MEET THE REQUIREMENTS BEFORE THE ENGINEER SUBMITS A JUSTIFICATION OF AN EXCEPTION TO FDEP FOR APPROVAL. IMPLEMENTATION OF THESE MEASURES WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER AND APPROVAL BY FDEP COULD RESULT IN THE REQUIREMENT THAT THE INSTALLED UNAPPROVED MEASURES BE REMOVED AND REPLACED AT NO ADDITIONAL COST.
   A. WHERE A WATER MAIN IS LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE LESS THAN THE MINIMUM REQUIRED DISTANCE BETWEEN THE JOINTS IN THE OTHER PIPELINE:
      1) USE OF PRESSURE RATED PIPE CONFORMING TO AWWA STANDARDS FOR A GRAVITY OR VACUUM TYPE PIPELINE.
      2) USE OF WELDED, FUSED, OR OTHERWISE RESTRAINED JOINTS FOR EITHER PIPELINE.
      3) USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR EITHER PIPE.
   B. WHERE A WATER MAIN IS LESS THAN THREE FEET HORIZONTALLY FROM ANOTHER PIPELINE OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE LESS THAN THE REQUIRED MINIMUM SEPARATION:
      1) USE OF PIPE OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (AT LEAST EQUAL TO 0.25 INCH THICK DUCTILE IRON PIPE), OR CONCRETE ENCASEMENT AT LEAST FOUR INCHES THICK FOR THE WATER MAIN AND FOR THE OTHER PIPELINE IF THE OTHER PIPELINE COVEYS WASTEWATER OR RECLAIMED WATER.

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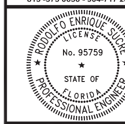

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No.	Date	Revision	By
1			
2			
3			
4			
5			
6			
7			

Designed by:	R.S
Drawn by:	A.N
Checked by:	D.C
Approved by:	R.S
Date:	5/8/2026
Job No.:	WL101

Plans Prepared By:
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

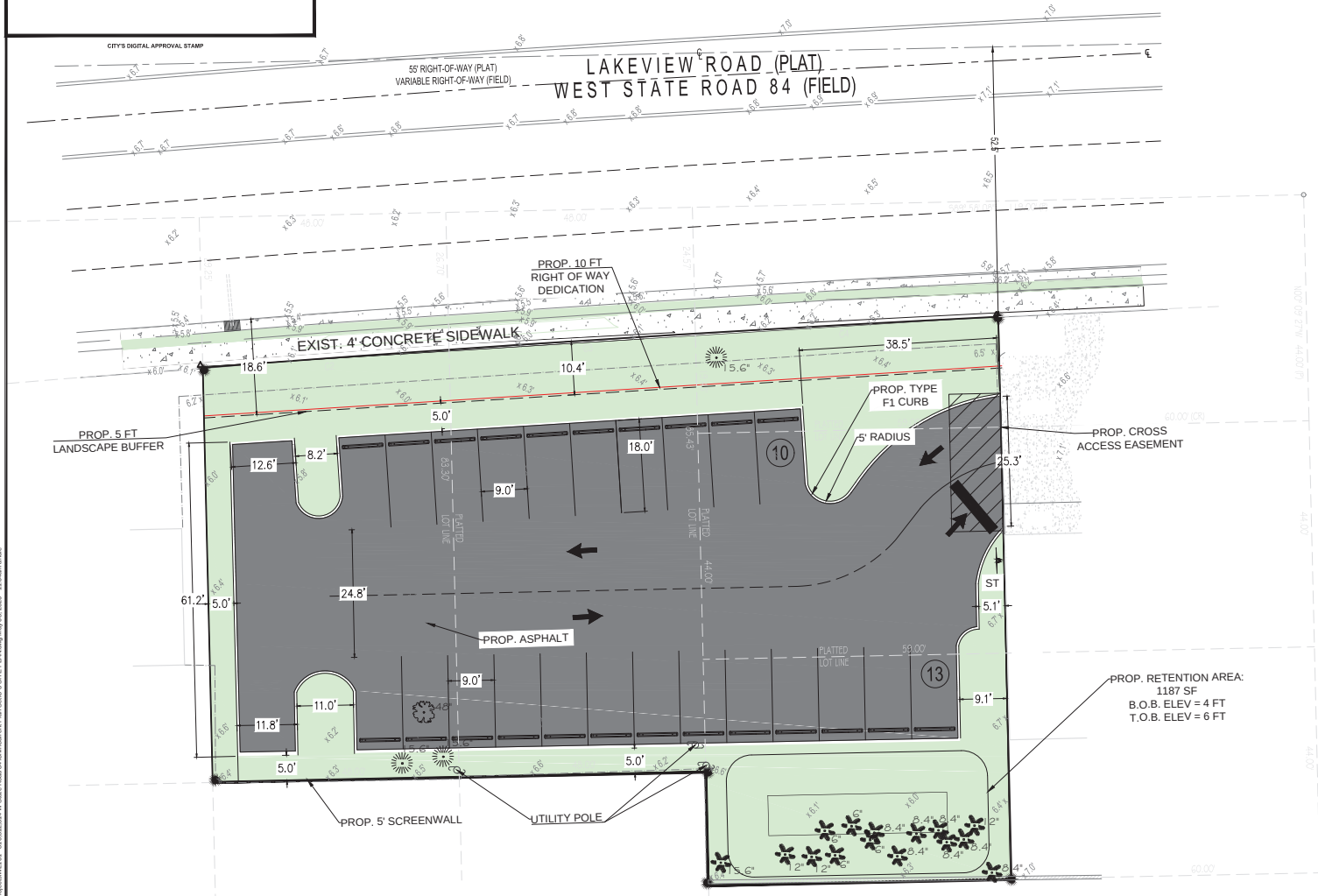
GENERAL NOTES

OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

Sheet No.
C-3

C:\Users\andre\OneDrive - Rodolfo Sucre\Rodolfo Sucre's files - Projects\WL101 - 810,812,814 W State Road 84\Civil\Current Plan Set\C-2 GENERAL NOTES.dwg May 08, 2026 - 11:03am Andres

CITY'S DIGITAL APPROVAL STAMP



GRAPHIC SCALE

10 0 10 20

Graphic Scale in Feet

(IN FEET)

SCALE: 1"=10'

SITE DATA

STATEMENT OF INTENT:
PROPOSED OUTDOOR STORAGE

SITE ADDRESS: 808-814 W STATE RD 84

EXISTING LAND USE: BOULEVARD BUSINESS DISTRICT (B-1)

PROPOSED LAND USE: BOULEVARD BUSINESS DISTRICT (B-1)

LANDSCAPE BUFFER

	REQUIRED
NORTH:	5'
WEST:	5'
EAST:	5'
SOUTH:	5'

ZONING:

SUBJECT SITE	B-1
NORTH	CF
EAST	B-1
SOUTH	B-1
WEST	B-1

PARKING

	PROVIDED
REGULAR PARKING SPACES	= 23
HANDICAP	= 0
TOTAL PARKING SPACES	= 23

OPEN SPACE	REQUIRED
Minimum	NONE

LAND AREAS

TOTAL LAND AREA = 14,351.33 FT² ± 0.33 ACRES ±
TOTAL IMPERVIOUS AREA = 8,780.0 FT² 61.2%
TOTAL PERVIOUS AREA= 5,571.33 FT² 38.8%

FLOOD ZONE:
THIS PROPERTY LIES WITHIN FLOOD ZONE "X", AS PER THE FLOOD INSURANCE RATE MAPS NUMBER # 12011C0559J, MAP REVISED JULY 31, 2024.

LEGEND

- PROPOSED SODD
- PROPOSED CONCRETE
- PROPOSED ASPHALT PAVEMENT
- EXISTING PROPERTY LINE
- EXISTING UTILITY AND ELECTRIC POLES
- EXISTING FIRE HYDRANT
- PROPOSED BUFFER LINE
- PROPOSED STOP SIGN

GENERAL NOTES

1. FOR LEGAL DESCRIPTION, BOUNDARY INFO., AND BENCHMARK INFO. SEE SITE SURVEY SHEETS.
2. PRIOR TO ANY CONSTRUCTION, CONTRACTOR SHALL FIELD STAKE ALL CENTERLINE GEOMETRY TO ENSURE PROPOSED DIMENSIONS FIT EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARISE.
3. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.
4. CONTRACTOR SHALL MATCH PROPOSED CURB AND GUTTER, CONCRETE AND PAVEMENT TO EXISTING IN GRADE AND ALIGNMENT.
5. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS, PAVEMENT AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS, AND GEOTECHNICAL REPORT. THE MORE STRINGENT CRITERIA SHALL APPLY.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN EXISTING CONDITIONS.
7. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL COUNTY REGULATIONS, CODES, AND O.S.H.A. STANDARDS.
8. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF CURB, BUILDING DIMENSIONS AND EXACT LOCATIONS AND UTILITY SERVICE LOCATIONS.
9. PLEASE NOTE THE LOCATION OF ALL ADJACENT, ROADWAYS, EXISTING DEVELOPMENTS, AND PROPOSED LANDS USES MUST BE SHOWN IN THE SITE PLAN.
11. PARKING SPACES MUST NOT BE LOCATED WITHIN 25' OF ANY STOP SIGN OR 25' FROM THE RIGHT OF WAY AT ENTRANCE DRIVEWAYS (THROAT DISTANCE).

LEGAL DESCRIPTION: REFER TO SURVEY

FOLIO NO: 504222140160, 504222140150, 504222140140

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No.	Date	Revision	By

Designed by:	R.S
Drawn by:	A.N
Checked by:	D.C
Approved by:	R.S
Date:	9/4/2026
Job No.:	WL101
Scale:	

Plans Prepared By:
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

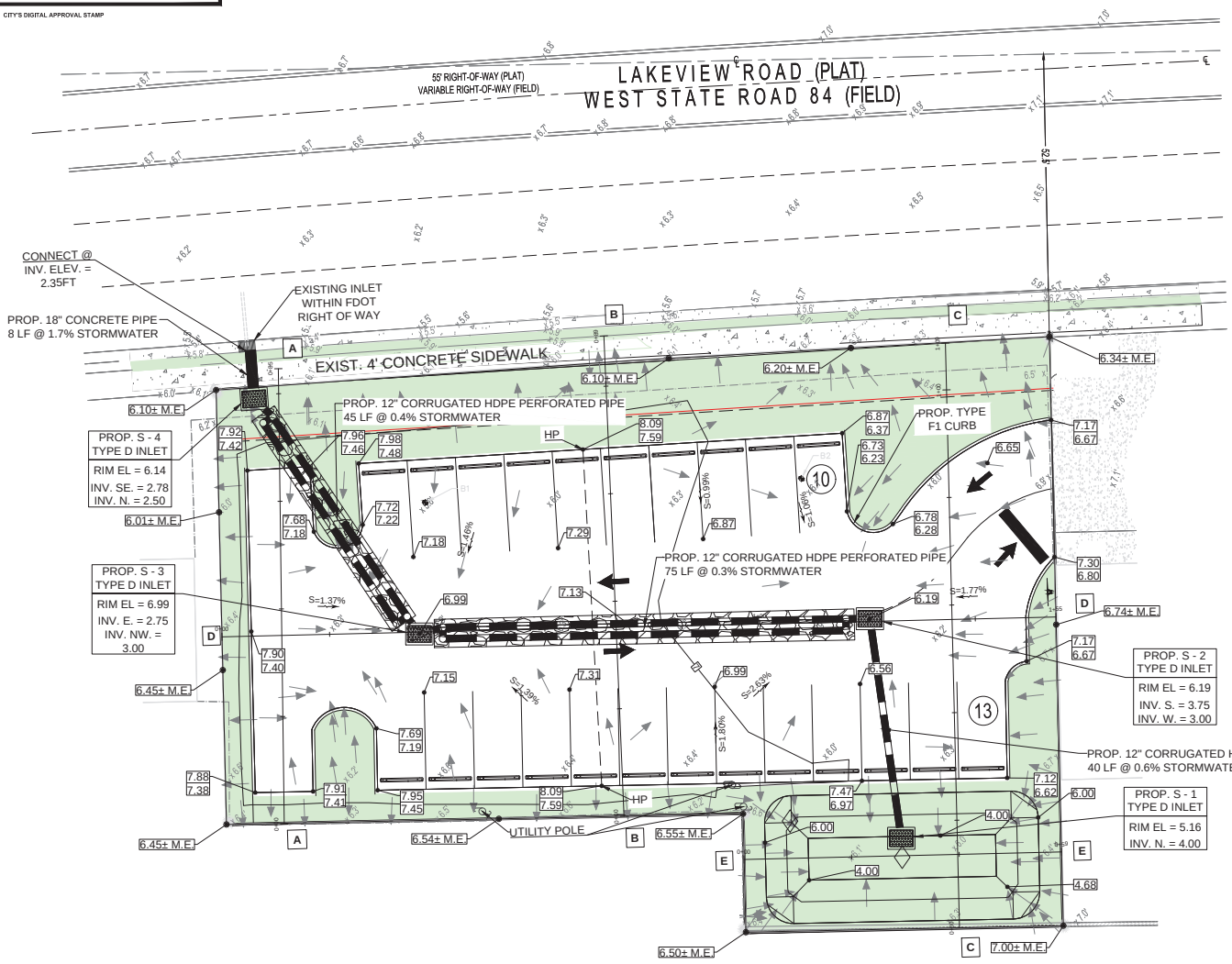
SITE PLAN

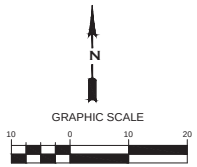
OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE ROAD 84
FORT LAUDERDALE BROWARD COUNTY

Sheet No.

C-4

CITY'S DIGITAL APPROVAL STAMP





LEGEND	
00.00	PROP. SPOT ELEVATION
ME 99.45	MATCH EXIST. GRADE
00.64 / 00.14	PROP. TOP AND BOTTOM OF CURB
	PROP. ASPHALT PAVEMENT
	PROP. CONCRETE
	PROP. GRASS
	EXIST. WATER METER
	EXIST. FIRE HYDRANT
	EXIST. LIGHT POLE
OHU	EXIST. ELECTRIC OVERHEAD UTILITY
T	EXIST. TRANSFORMER
	PROP. SEWER CLEAN OUT
	PROP. DIRECTIONAL SIGN

GENERAL NOTES

1. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS, PAVEMENT AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS, AND GEOTECHNICAL REPORT. THE MORE STRINGENT CRITERIA SHALL APPLY.
2. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN EXISTING CONDITIONS.
3. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL COUNTY REGULATIONS, CODES, AND O.S.H.A. STANDARDS.
4. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PRECISE BUILDING DIMENSIONS AND EXACT BUILDING AND UTILITY ENTRANCE LOCATIONS.
5. PLEASE NOTE THE LOCATION FOR ALL ADJACENT ROADWAYS, EXISTING DEVELOPMENTS, AND PROPOSED LANDS USES MUST BE SHOWN IN THE SITE PLAN.
6. REFER TO PAVING GRADING AND DRAINAGE DETAILS SHEET FOR PAVEMENT CROSS SECTION AND SPECIFICATIONS.

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Designed by:	R.S
Drawn by:	A.N
Checked by:	D.C
Approved by:	R.S
Date:	3/8/2016
Job No.:	WL101
Scale:	As noted

Plans Prepared By
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

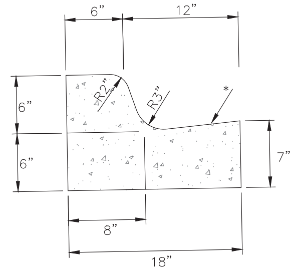
PAVING GRADING AND DRAINAGE PLAN

OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

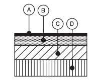
Sheet No.

C-5

CITY'S DIGITAL APPROVAL STAMP



TYPE F1 CURB
NTS



OPTIONAL BASE GROUP 1

- (A) 1.5" FC-9.5 (TRAFFIC LEVEL B) (PG 67-22)
- (B) 2" TYPE SP-9.5 STRUCTURAL COURSE (TRAFFIC LEVEL B)
- (C) 9" GRADED AGGREGATE BASE
- (D) 12" STABILIZED SUBGRADE

STANDARD DUTY ASPHALT PAVEMENT
NTS

EXFILTRATION TRENCH DESIGN

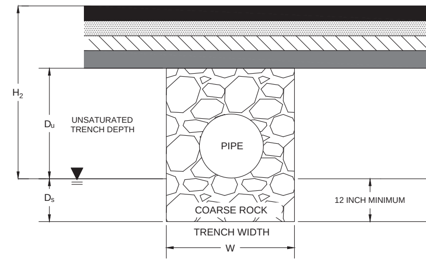
TRENCH SUMMARY

TRENCH LENGTH =	120.75 FT
TRENCH WIDTH =	5.00 FT
TRENCH DEPTH =	2.94 FT
TRENCH VOLUME =	1775.025 CF

	NAVD
LOWEST SURF. ELEV. ABOVE TRENCH =	6.19 FT
TOP OF TRENCH ELEV. =	4.69 FT

	DEPTH
H_2 =	4.44 FT
D_u =	2.94 FT
WT ELEVATION =	1.29 FT
D_s =	0.00 FT
BOTTOM OF TRENCH ELEV. =	1.75 FT

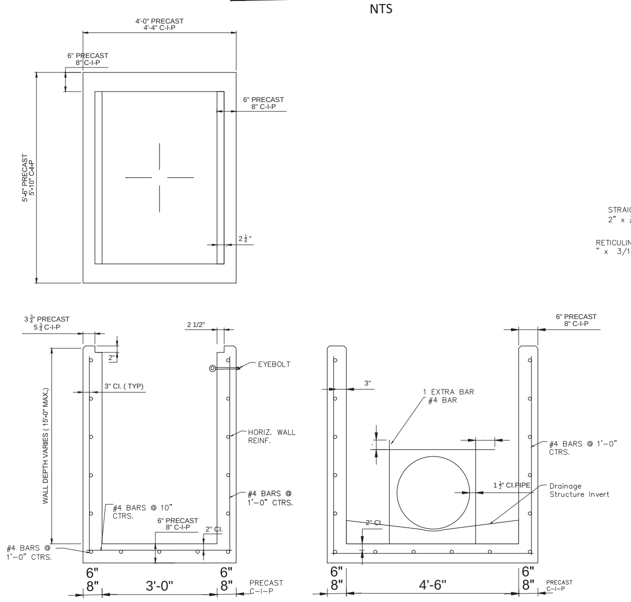
TYPICAL EXFILTRATION TRENCH
NTS

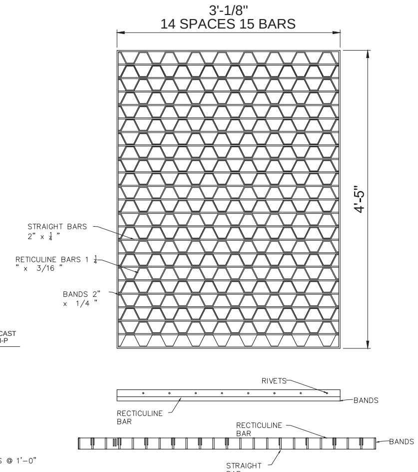


	DEPTH
FC-9.5	1.50 IN
SP-9.5	2.00 IN
BASE	9.00 IN
STABILIZED SUBGRADE	12.00 IN

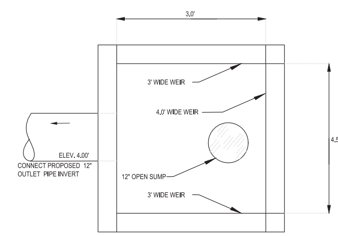
	PIPE	
PIPE COVER	3.90 FT	
PERFORATED PIPE	12.00 IN	= PIPE DIAMETER
	2.75 FT	= MIN. PIPE INV. ELEV. (REF. TO PGD PLAN)
PIPE BED	1.00 FT	= PIPE BED BOT. ELEV.

TRENCH WIDTH = 5.00 FT

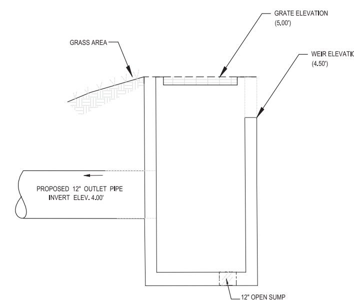




DITCH BOTTOM INLET TYPES C,D,E AND H
N.T.S.

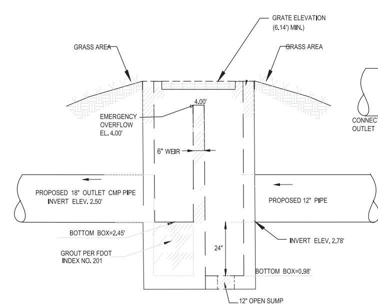


S-1 PLAN VIEW
TYPE "D" INLET

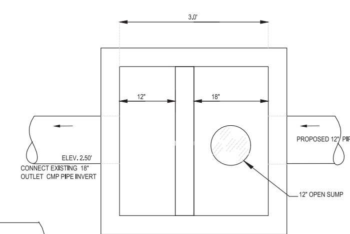


S-1 SECTION
TYPE "D" INLET

STRUCTURE S-1 DETAIL
N.T.S.



CONTROL STRUCTURE S-4 SECTION



S-4 PLAN VIEW
TYPE "D" INLET

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No.	Date	Revision	By

Designed by:	R.S
Drawn by:	A.N
Checked by:	D.C
Approved by:	R.S.
Date:	5/8/2026
Job No.:	WL101

Plans Prepared By
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

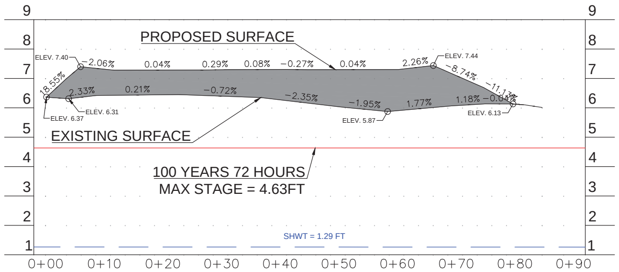
PAVING GRADING AND DRAINAGE DETAILS

OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

Sheet No.
C-6

CITY'S DIGITAL APPROVAL STAMP

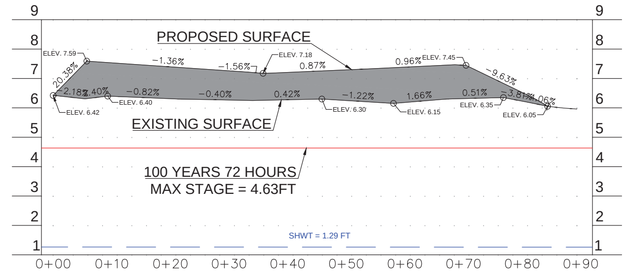
CROSS SECTION A-A



SCALE: 1" = 10' HORZ

1" = 2' VERT

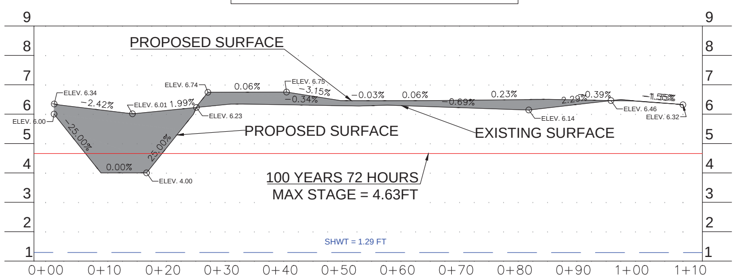
CROSS SECTION B-B



SCALE: 1" = 10' HORZ

1" = 2' VERT

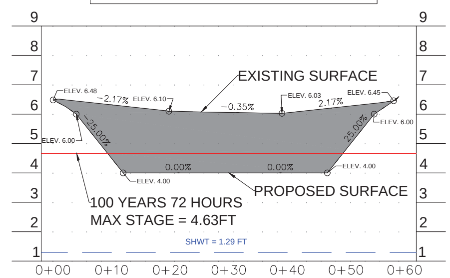
CROSS SECTION C-C



SCALE: 1" = 10' HORZ

1" = 2' VERT

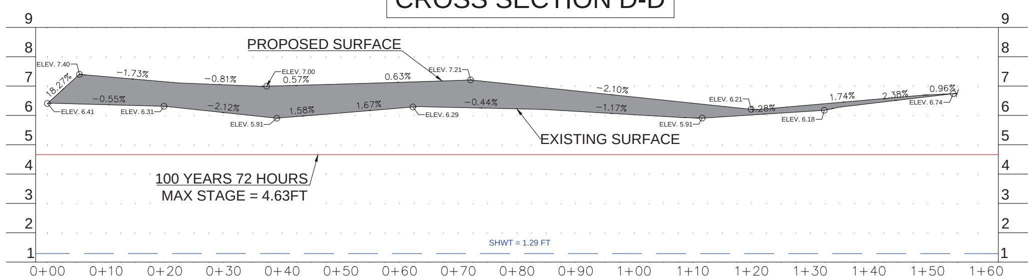
CROSS SECTION E-E



SCALE: 1" = 10' HORZ

1" = 2' VERT

CROSS SECTION D-D



SCALE: 1" = 10' HORZ

1" = 2' VERT

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LICENSE No. 95759
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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Drawn by:	A.N
Checked by:	D.C
Approved by:	R.S.
Date:	5/8/2026
Job No.:	WL101

Plans Prepared By:
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

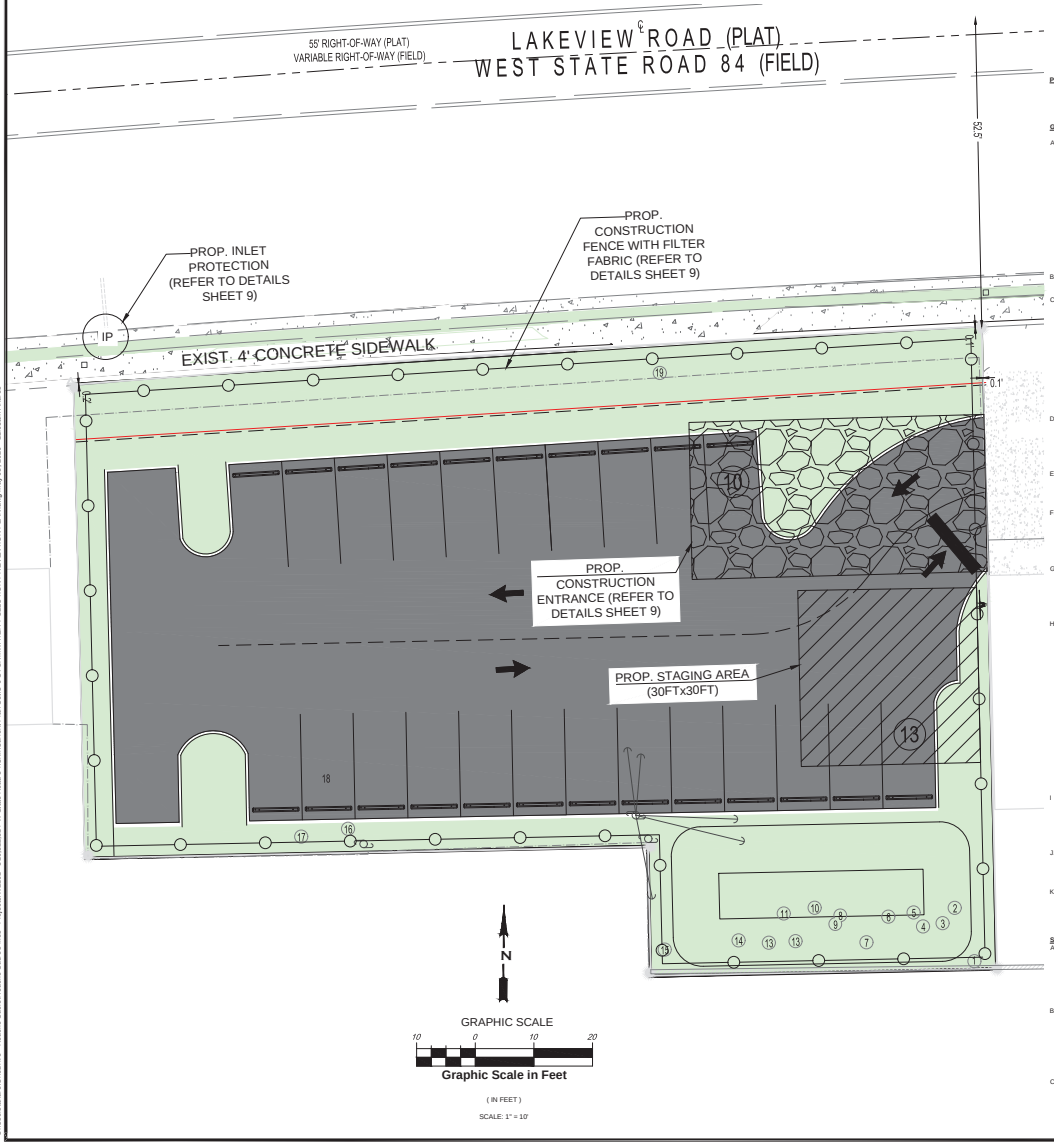
CROSS SECTIONS

OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

Sheet No.

C-7

CITY'S DIGITAL APPROVAL STAMP



STORMWATER POLLUTION PREVENTION NOTES

THIS PLAN HAS BEEN PREPARED TO ENSURE COMPLIANCE WITH RULES OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 17-25-FAC AND THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT.

SITE DESCRIPTION

A. SITE LOCATION:
THE SITE IS LOCATED AT B. SITE CONDITIONS & ACTIVITIES
NARRATIVE:
THE EXISTING CONDITION OF THE SITE IS DEVELOPED. IT INCLUDES TWO EXISTING RESIDENTIAL BUILDINGS. THE PROPOSED PROJECT IS FOR THE COMPLETE DEMOLITION OF THE EXISTING STRUCTURES.

C. LEVEL OF SOIL DISTURBANCE = 0.25

WETLANDS/BUFFERS

NO WETLANDS OR BUFFERS ARE ASSOCIATED WITH THIS PROJECT.

SWPPP INTENT

THE INTENT OF THIS SWPPP IS TO COMPLY WITH THE INTENT OF THE GENERIC PERMIT AND TO PREVENT THE RELEASE OF SOILS, TRASH, CHEMICALS, TOXINS AND OTHER POLLUTANTS, BY WATER , AIR, VEHICLE TRANSPORT OR OTHER MEANS THAT CAN IMPACT STORM WATER QUALITY. THE CONTRACTOR SHALL OBTAIN A COPY OF THE GENERIC PERMIT AND RETAIN ON-SITE FOR FUTURE REFERENCE. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PERMIT, AND ENSURE THAT THE BMP'S ARE INSTALLED AND THE EXECUTION OF THE WORK IS PERFORMED TO MEET THE INTENT OF THE GENERIC PERMIT AND THE SWPPP.

POTENTIAL SOURCES OF POLLUTION

THE POTENTIAL SOURCES OF POLLUTION THAT MAY REASONABLY BE EXPECTED TO AFFECT THE QUALITY OF STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY INCLUDE: *STORMWATER SHEET FLOW.*

GENERAL NOTES

A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FILE "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES" (DEP FORM 62-621.300(4)(B) OR LATEST VERSION) TO FDEP TO THE FOLLOWING ADDRESS OR THROUGH THE FDEP ON-LINE SYSTEM AT LEAST TWO (2) DAYS BEFORE COMMENCEMENT OF CONSTRUCTION.

NPDES STORMWATER NOTICES CENTER, MS #2510 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA 32399-2400

MS4 OPERATOR NAME (IF ANY): PALM BEACH COUNTY

THE CONTRACTOR SHALL PROVIDE A COPY OF THE NOI AND SUBSEQUENT NOT TO THE MS4. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE MS4 TO ENSURE THAT ALL SPECIFIC REQUIREMENTS ARE MET.

B. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES. SWALES SHALL BE CONSTRUCTED AS SHOWN ON PLANS.

C. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS LOCATED DOWNSTREAM OF ANY CONSTRUCTION ACTIVITY. WHILE THE VARIOUS MEASURES REQUIRED WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING:

I. SEDIMENT EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION

II. NEW AND EXISTING STORMWATER INLETS AND OUTFALL STRUCTURES SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION MEASURES SHALL BE EMPLOYED IMMEDIATELY AS REQUIRED DURING THE VARIOUS STAGES OF CONSTRUCTION.

III. PERIMETER EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION HAS BEEN ESTABLISHED

D. CLEARING AND GRUBBING OPERATIONS SHALL BE CONTROLLED SO AS TO MINIMIZE UNPROTECTED ERODIBLE AREAS EXPOSED TO WEATHER. GENERAL EROSION CONTROL BMP'S SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND OFF-SITE SEDIMENTATION. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED PRIOR TO ANY CONSTRUCTION ACTIVITY.

E. THE CONTRACTOR SHALL FURNISH, INSTALL PER THE SEQUENCE OF CONSTRUCTION, MAINTAIN AND SUBSEQUENTLY REMOVE, ALL NECESSARY TEMPORARY BMPS. THE CONTRACTOR WILL FURNISH AND INSTALL ALL NECESSARY PERMANENT BMPS.

F. THE CONTRACTOR SHALL ADJUST, ADD OR MODIFY BMPS AS NECESSARY TO COMPLY WITH THE INTENT OF THE GENERIC NPDES PERMIT AND THE SWPPP FOR NO ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL CONSULT WITH THE CEC PRIOR TO ADJUSTING, ADDING OR MODIFYING BMPS THAT AFFECT THE HYDRAULICS OF THE SITE OR BEFORE ADDING BMPS NOT DETAILED IN THE SWPPP.

G. THE CONTRACTOR IS ADVISED THAT THE CONTRACT DRAWINGS ONLY INDICATE EROSION, SEDIMENT, AND TURBIDITY CONTROLS AT LOCATIONS DETERMINED IN THE DESIGN PROCESS. HOWEVER, THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL CONTROLS NECESSARY TO PREVENT THE POSSIBILITY OF SILTING ANY ADJACENT LOWLAND PARCEL OR RECEIVING WATER.

H. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION, THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES, OR THE APPLICABLE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES (IF NEEDED) SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT SHOULD BE NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BEST MANAGEMENT PRACTICES (BMPS). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN FDOT INDEXES #100 THROUGH #102 AND AS NECESSARY FOR EACH SPECIFIC APPLICATION. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORMWATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE APPLICABLE JURISDICTIONAL AUTHORITIES.

I. DISCHARGES RESULTING FROM GROUND WATER DEWATERING ACTIVITIES ARE NOT COVERED BY THE NPDES GENERIC PERMIT. SEPARATE PERMIT COVERAGE MUST BE OBTAINED BY THE CONTRACTOR UNDER THE DEPARTMENTS GENERIC PERMIT FOR DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY PURSUANT TO SUBSECTION 62-621.300(2), F.A.C.

J. THE CONTRACTOR SHALL ENSURE THAT THE CONTRACTOR AND ALL SUBCONTRACTORS RESPONSIBLE FOR IMPLEMENTING SWPPP CONTROL MEASURES FILL OUT THE CONTRACTOR / SUBCONTRACTOR CERTIFICATION TABLE INCLUDED IN THIS SWPPP.

K. THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION SEQUENCE TABLE INCLUDING IN THIS SWPPP PRIOR TO PROCEEDING WITH THE INSTALLATION OF BMPS AND PRIOR TO GROUND DISTURBING ACTIVITIES. THE CONTRACTOR SHALL COMPLETE THE TABLE WITH ANTICIPATED DATES IN WHICH THE BMP WILL BE UTILIZED OR THE ACTIVITY WILL OCCUR.

STABILIZATION

A. STABILIZATION MEASURES SHALL BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED AND WILL REMAIN UNDISTURBED FOR 7 DAYS OR MORE. STABILIZE BY COVERING WITH ADEQUATE AMOUNTS OF MULCH OVER SEED AND PERIODICALLY WATER TO PROMOTE AND MAINTAIN GROWTH OF THE TEMPORARY GROUNDCOVER, OR BY THE USE OF AN APPROPRIATE ALTERNATIVE BMP.

B. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED IMMEDIATELY AFTER FINAL GRADING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATIONS, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED.

C. ALL GRASS SLOPES CONSTRUCTED STEEPER THAN 4H:1V SHALL BE SODDED IMMEDIATELY AFTER FINAL GRADE IS ESTABLISHED.

DUST CONTROL

A. BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER CONSTRUCTION.

B. AS REQUIRED AFTER COMPLETION OF CONSTRUCTION, BARE EARTH AREAS SHALL BE VEGETATED.

C. AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS MAY INCLUDE ERECTION OF DUST CONTROL FENCES. IF REQUIRED, DUST CONTROL FENCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL FOR A SILT FENCE EXCEPT THE MINIMUM HEIGHT SHALL BE 4 FEET.

WASTE MANAGEMENT

A. THE CONTRACTOR SHALL ENSURE THAT ALL WASTE AND DEBRIS ARE MANAGED DAILY SUCH THAT THEY WILL NOT IMPACT STORMWATER OR LEAVE THE PERMITTED AREA, AND DISPOSED OF PROPERLY IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS.

B. THE CONTRACTOR SHALL ENSURE THAT ALL CHEMICALS, OILS, FUELS, HAZARDOUS WASTE, UNIVERSAL WASTE AND TOXIC SUBSTANCES ARE PROPERLY MANAGED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL ENSURE THAT WASTE IS NOT DISCHARGED FROM THE SITE, AND DOES NOT IMPACT STORMWATER OR GROUNDWATER.

C. THE CONTRACTOR SHALL PROVIDE APPROPRIATE AND ADEQUATE WASHOUT FACILITIES TO ENSURE THAT CHEMICALS AND WASTE IS NOT DISCHARGED FROM THE SITE, AND DO NOT IMPACT STORMWATER OR GROUNDWATER. (E.G. CONCRETE/MASONRY WASHOUT, PAINT WASHOUT, EIFS, ETC.) THE CONTRACTOR SHALL CLEAN UP SPILLS PROMPTLY AND ENSURE THAT WASHOUT AREAS ARE PROPERLY MAINTAINED TO PROVIDE ADEQUATE VOLUME TO PREVENT OVERFLOW.

D. THE CONTRACTOR SHALL PROVIDE ADEQUATE SANITARY FACILITIES FOR SITE PERSONNEL. MAINTAIN THROUGHOUT CONSTRUCTION, AND PROVIDE FOR PROPER DISPOSAL IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. SANITARY FACILITIES SHALL BE PROPERLY SECURED TO PREVENT TIPPING.

E. WHEN A SPILL OF REPORTABLE QUANTITIES IS DISCOVERED ON THE SITE, THE CONTRACTOR SHALL CLEAN UP ALL SPILLED MATERIALS AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AUTHORITIES IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. THE OWNER AND PROJECT ENGINEER. THE CONTRACTOR SHALL RETAIN CLEANUP INFORMATION AS WELL AS DISPOSAL MANIFESTS WITH THEIR SWPPP.

MATERIALS MANAGEMENT, AND EQUIPMENT STAGING AND MAINTENANCE

A. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN LOCATIONS WHERE IT COULD BE WASHED AWAY BY HIGH WATER OR STORM WATER RUNOFF. STOCKPILED MATERIAL SHALL BE COVERED OR ENCIRCLED WITH SEDIMENT CONTAINMENT DEVICES.

B. HEAVY CONSTRUCTION EQUIPMENT PARKING AND MAINTENANCE AREAS SHALL BE DESIGNED TO PREVENT OIL, GREASE, AND LUBRICANTS FROM ENTERING SITE DRAINAGE FEATURES INCLUDING STORMWATER COLLECTION AND TREATMENT SYSTEMS. CONTRACTORS SHALL PROVIDE BROAD DIKES OR SILT SCREENS AROUND, AND SEDIMENT SUMPS WITHIN, SUCH AREAS AS REQUIRED TO CONTAIN SPILLS OR OIL, GREASE, LUBRICANTS, OR OTHER CONTAMINANTS. CONTRACTOR SHALL HAVE AVAILABLE, AND SHALL USE, ABSORBENT FILTER PADS TO CLEAN UP SPILLS IMMEDIATELY AFTER ANY OCCURRENCE.

C. THE CONTRACTOR SHALL ENSURE THAT ALL TOXIC / HAZARDOUS SUBSTANCES AND CHEMICALS ARE PROPERLY STORED, OUT OF THE WEATHER, AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL ENSURE THAT THESE PRODUCTS ARE USED IN SUCH A MANNER THAT WILL NOT NEGATIVELY IMPACT STORMWATER, GROUNDWATER OR PROTECTED SPECIES.

D. THE CONTRACTOR SHALL ENSURE THAT ALL MATERIALS, EQUIPMENT, DEBRIS, WASTE, TRAILERS, AND OTHER SUPPORT RELATED ITEMS ARE CONTAINED WITHIN THE PERMITTED LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL ENSURE THAT THE STORAGE AND USE OF SUCH ITEMS DOES NOT NEGATIVELY IMPACT STORMWATER OR GROUNDWATER.

OFFSITE VEHICLE TRACKING

A. THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION EXIT IS USED BY ALL VEHICLES AND EQUIPMENT ENTERING OR LEAVING THE JOBSITE. THE CONTRACTOR SHALL MONITOR AND MAINTAIN THE CONSTRUCTION EXIT TO ENSURE THAT NO SOILS ARE TRACKED OFFSITE BY TIRES OR TRACKS, AND THAT NO SOILS ARE SPILLED BY TRUCKS OR EQUIPMENT LEAVING THE SITE. ALL TRACKED OR SPILLED SOILS SHALL BE SHOVELED OR SWEPT FROM THE ROADWAY AND RETURNED TO THE SITE. WATER SHALL NOT BE USED TO CLEAN THE SOILS FROM THE ROADWAY UNLESS THE WATER AND SOILS ARE RECOVERED BY THE USE OF A VACUUM TRUCK OR SIMILAR DEVICE.

FERTILIZERS, HERBICIDES AND PESTICIDES

A. THE CONTRACTOR SHALL ENSURE THAT ALL FERTILIZERS, HERBICIDES, PESTICIDES AND SIMILAR PRODUCTS ARE PROPERLY STORED, OUT OF THE WEATHER, AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL ENSURE THAT THESE PRODUCTS ARE USED IN SUCH A MANNER THAT WILL NOT NEGATIVELY IMPACT STORMWATER, GROUNDWATER OR PROTECTED SPECIES.

B. NUTRIENTS SHALL BE APPLIED ONLY AT RATES NECESSARY TO ESTABLISH AND MAINTAIN VEGETATION.

INSPECTIONS AND MAINTENANCE

A. THE CONTRACTOR SHALL INSPECT BMPS (I.E. DISCHARGE LOCATIONS, CONSTRUCTION EXIT, PERIMETER CONTROLS, INLET PROTECTION, STABILIZATION, EROSION CONTROL, DOCUMENTATION, WASTE DISPOSAL AREAS, MATERIAL STORAGE AREAS, ETC.) TO DETERMINE IF CONSTRUCTION ACTIVITIES HAVE ALTERED THE EFFECTIVENESS BMPS, CONFIRM BMPS ARE ACHIEVING PERMIT COMPLIANCE, AND MAINTAIN BMPS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS, AND WITHIN 24 HOURS AFTER A RAINSTORM IN EXCESS OF 0.50 INCHES.

B. THE CONTRACTOR SHALL REPORT ALL INSPECTION FINDINGS AND CORRECTIVE ACTIONS TAKEN AS A RESULT OF THE INSPECTION USING THE STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM PROVIDED BY FDEP OR AN EQUIVALENT FORM. INSPECTION REPORTS SHALL BE SIGNED BY THE INSPECTOR AND MAINTAINED FOR FUTURE REFERENCE AS NEEDED. THE INSPECTOR MUST BE A QUALIFIED EROSION AND SEDIMENT CONTROL INSPECTOR AS DEFINED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

C. ANY MAINTENANCE, REPAIR AND NECESSARY REVISIONS TO BMP ITEMS SHALL BE ADDRESSED IN A TIMELY MANNER, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. UNLESS OTHERWISE SPECIFIED, ACCUMULATED SEDIMENTS SHOULD BE REMOVED BEFORE THEY REACH ONE-HALF OF THE CAPACITY OF THE CONTROL DEVICE.

ALLOWABLE NON-STORMWATER DISCHARGES

THE GENERIC PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES PROHIBIT MOST NON-STORMWATER DISCHARGES DURING THE CONSTRUCTION PHASE. ALLOWABLE NON-STORMWATER DISCHARGES THAT OCCUR DURING CONSTRUCTION ON THIS PROJECT PER PART IV.A.3 OF THE GENERIC PERMIT ARE: DISCHARGES FROM FIREFIGHTING ACTIVITIES; FIRE HYDRANT FLUSHING; WATER USED TO SPRAY OFF LOOSE SOLIDS FROM VEHICLES (WASTEWATER FROM A MORE THOROUGH CLEANING, INCLUDING THE USE OF DETERGENTS OR OTHER CLEANERS IS NOT AUTHORIZED BY THIS PART) OR CONTROL DUST IN ACCORDANCE WITH PART V.D.2.C.(2) OF THE GENERIC PERMIT; POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; IRRIGATION DRAINAGE; ROUTINE EXTERNAL BUILDING WASHDOWN WHICH DOES NOT USE DETERGENTS; PAVEMENT WASHWATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED; AIR CONDITIONING CONDENSATE; SPRINGS; AND FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.

RETENTION OF RECORDS

THE PERMITTEE SHALL RETAIN COPIES OF STORMWATER POLLUTION PREVENTION PLANS AND ALL REPORTS REQUIRED BY THIS PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT, FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED.

REFERENCES

THE CONSTRUCTION PLANS AND SPECIFICATIONS FOR JOB # 8101 AS PREPARED BY RSP ENGINEERS, INC. ON FEBRUARY, 2021 ARE HEREBY REFERENCED AND MADE A PART OF THIS PLAN.

NARRATIVE - SEQUENCE OF SOIL DISTURBING ACTIVITIES AND IMPLEMENTATION OF CONTROLS.

THE EXISTING CONDITION OF THE SITE IS VACANT.

PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES, ALL EROSION CONTROLS MUST BE IMPLEMENTED.

TEMPORARY STABILIZATION:
DISTURBED PORTIONS OF THE SITE (E.G. EMBANKMENT AT TEMPORARY RAMPS) WHERE CONSTRUCTION ACTIVITY CEASES FOR AT LEAST 21 DAYS, SHALL BE STABILIZED WITH TEMPORARY SOD OR TEMPORARY SEEDING AND MULCHING NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION IN THAT AREA.

PERMANENT STABILIZATION:
DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY PERMENTLY CEASES SHALL BE STABILIZED WITH SOD NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

1. EROSION AND SEDIMENT CONTROLS:

(1) STABILIZATION PRACTICES:
- ____ TEMPORARY SODDING
- X TEMPORARY GRASSING
- ____ PERMANENT SODDING, SEEDING OR SEED & MULCH
- ____ TEMPORARY MULCHING
- ____ ARTIFICIAL COVERING
- ____ BUFFER ZONES
- ____ PRESERVATION OF NATURAL RESOURCES

OTHER:

(2) STRUCTURAL PRACTICES:
- ____ SAND BAGGING
- X SILT FENCES
- X BERMS
- ____ DIVERSION, INTERCEPTOR, OR PERIMETER DITCHES
- ____ PIPE SLOPE DRAINS
- ____ FLUMES
- ____ ROCK BEDDING AT CONSTRUCTION EXIT
- X TIMBER BEDDING AT CONSTRUCTION EXIT
- ____ DITCH LINER
- X SEDIMENT TRAPS (DURING DE-WATERING)
- ____ STORM INLET SEDIMENT TRAP
- X STONE OUTLET STRUCTURES
- ____ CURBS AND GUTTERS
- ____ STORM SEWERS
- ____ VELOCITY CONTROL DEVICES
- ____ TURBIDITY BARRIER
- ____ RIP RAP
- ____ WIND SCREEN

OTHER CONTROLS

(1) WASTE DISPOSAL:
IN APPROVED OFFSITE AREAS PROVIDED BY THE CONTRACTOR.

(2) OFFSITE VEHICLE TRACKING:
- ____ HAUL ROADS DAMPENED FOR DUST CONTROL
- X LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- X EXCESS DIRT ON ROAD REMOVED DAILY
- X STABILIZED CONSTRUCTION ENTRANCE

OTHER:

(3) SANITARY WASTE:
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION OF A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

(4) FERTILIZERS AND PESTICIDES:
FERTILIZER TO BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. IF STORED ON-SITE STORAGE WILL BE IN COVERED SHED. THE CONTENT OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEPARATE PLASTIC BIN TO AVOID SPILLS.

(5) NON-STORM WATER DISCHARGE (INCLUDING SPILL REPORTING)
THE CONTRACTOR
IS RESPONSIBLE FOR REPORTING SPILLS TO MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) . THE DEMOLITION OF THE FOUNDATIONS FOR THIS PROJECT MAY REQUIRE DEWATERING. THE DEWATERING SYSTEM WILL BE FILTERED USING A WELL POINT SYSTEM IN ACCORDANCE WITH RER PERMIT REQUIREMENTS.

REMARKS:

IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED OR HAZARDOUS SPILLS OCCUR DURING CONSTRUCTION THE MIAMI-DADE COUNTY DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) SHALL BE CONTACTED AT THEIR PHONE NUMBER: 305-372-6955.

APPROVED STATE, LOCAL PLANS, OR STORM WATER PERMITS:
CITY OF MIAMI PUBLIC WORKS DEPARTMENT, MIAMI-DADE COUNTY RER, AND THE MIAMI-DADE COUNTY TRAFFIC DEPARTMENT.

MAINTENANCE
ITEM:

1. SILT FENCE ALL CONTROLS SHALL BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING CONSTRUCTION.

2. WIND SCREEN IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF BEING NOTED IN CONTRACTOR'S DAILY INSPECTION REPORT

3.CATCH BASIN BMP'S NOTED IN CONTRACTOR'S DAILY INSPECTION REPORT.

4. CONSTRUCTION ENTRANCE WHEN THE CONSTRUCTION ENTRANCE GRAVEL BEDS GRAVEL BED BECOME BECOME LOADED WITH SEDIMENTS, REWORK BEDS TO DISPLACE SEDIMENT LOAD AND RE-ESTABLISH EFFECTIVENESS OF THE GRAVEL BEDS.

INSPECTION

THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL FEATURES AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM OF 0.5" OR GREATER. IN ADDITION, A DAILY REVIEW OF THE LOCATION OF SILT FENCES SHALL BE MADE IN AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CHANGED THE NATURAL CONTOUR AND DRAINAGE RUNOFF. IN ORDER INSURE THAT SILT FENCES AND OTHER EROSION CONTROL DEVICES ARE PROPERLY LOCATED FOR EFFECTIVENESS, A FROM ACCEPTABLE TO THE FDEP WILL BE USED TO REPORT ALL INSPECTION FINDINGS AND CORRECTIVE ACTIONS TAKEN AS A RESULT OF THE INSPECTION. EACH INSPECTION REPORT SHALL BE SIGNED AND SUBMITTED WEEKLY TO THE PROJECT ENGINEER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF BEING NOTED IN CONTRACTOR'S INSPECTION REPORT.

LEVEL OF GROUND DISTURBANCE = 0.646

RSP
www.rspengineers.com
FLORIDA
MIAMI - ORLANDO - TAMPA - JACKSONVILLE
786- 687 2677, 407- 743 2754,
813 -375 0656 - 904-717 2831

RODOLFO ENRIQUE SUCRE LICENSE No. 95759 STATE OF FLORIDA PROFESSIONAL ENGINEER

RODOLFO ENRIQUE SUCRE, STATE OF FLORIDA, PROFESSIONAL ENGINEER, LICENSE NO [95759]. THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY RODOLFO ENRIQUE SUCRE ON THE DATE INDICATED HERE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

No.	Date	Revision	By
1	3/9/2026	WL101	

Designed by: R.S
Drawn by: A.N
Checked by: D.C
Approved by: R.S
Date: 3/9/2026
Job No.: WL101

Plans Prepared By
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

STORMWATER POLLUTION PREVENTION PLAN

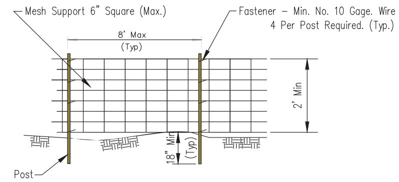
OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

Sheet No.
C-8

C:\Users\andre\OneDrive - Rodolfo Sucre\Rodolfo Sucre's files - Projects\WL101 - 810,812,814 W State Road 84\Civil\Current Plan Set\C-8 STORMWATER POLLUTION PREVENTION PLAN.dwg May 08, 2026 - 11:03am Andres

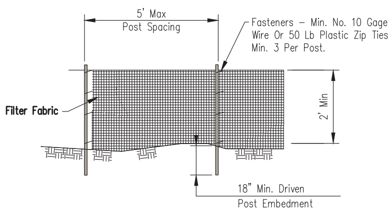
CITY'S DIGITAL APPROVAL STAMP

NOTES:
1. Temporary silt fence shall be installed prior to any grading work in the area to be protected. Fence shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either wood post with a minimum cross-sectional area of 1.5" X 1.5" or a standard steel post.
4. When splices are necessary make splice at post according to splice detail. Place the end post of the second fence inside the end post of the first fence. Rotate both posts together at least 180 degrees to create a tight seal with the fabric material. Cut the fabric near the bottom of the posts to accommodate the 6 inch flap. Then drive both posts and bury the flap. Compact backfill well.

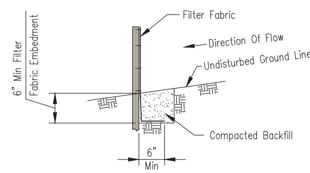


SILT FENCE WIRE SUPPORT ELEVATION

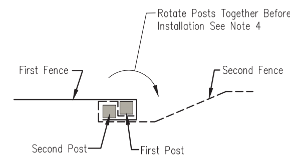
NOTES:
1. Wires of mesh support shall be minimum gage no. 12.
2. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
3. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
4. Fence posts shall be either wood post with a minimum cross-sectional area of 3.0 sq. in. or a standard steel post.



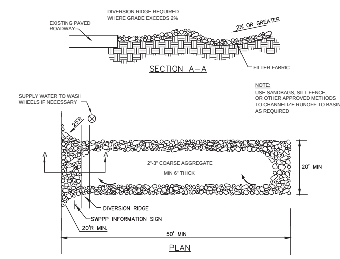
SILT FENCE ELEVATION



FABRIC ANCHOR DETAIL



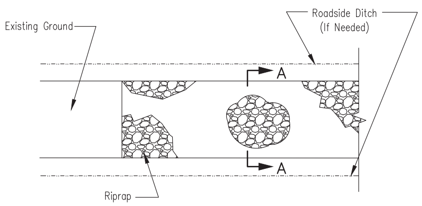
SPLICE DETAIL–PLAN VIEW



NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

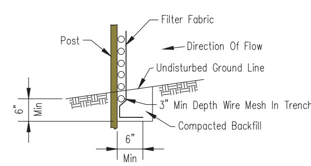
TEMPORARY CONSTRUCTION ENTRANCE DETAIL CE

N.T.S.

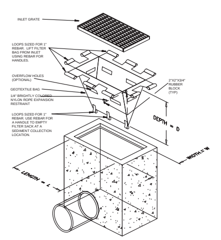


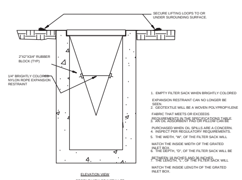
CONSTRUCTION ROAD STABILIZATION PLAN VIEW

NOTES:
1. Rock shall meet one of the following IDOT coarse aggregate gradations, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
2. See plans for construction road location, D and W dimensions.
3. Minimum width is 14 feet for one-way traffic and 20 feet for two-way traffic. Two-way traffic widths shall be increased a minimum of 4 feet for trailer traffic. Depending on the type of vehicle or equipment, speed, loads, climatic and other conditions under which vehicles and equipment operate an increase in the minimum widths may be required.
4. Roadway shall follow the contour of the natural terrain to the extent possible.
5. Geotextile (non-woven, needle punched) min. criteria:
   - Grab Tensile strength (lb) ASTM D 4632____________________202
   - Elongation at failure (%) ASTM D 4632____________________≥50
   - Trapezoidal tear strength (lb) ASTM D 4533________________79
   - Puncture strength (lb) ASTM D 6241 ______________________433
   - Ultraviolet light (% retained strength) ASTM 4355__________min 50
   - Apparent opening size (AOS) ASTM D 4751____ max 0.22 mm (US sieve size 70)
   - Permittivity sec^{-1}/ ASTM D 4491_____________________min 0.70
6. Any geotextile splices shall overlap a minimum of 18 inches, with upstream or upslope geotextile overlapping the abutting downslope geotextile.



SILT FENCE WIRE SUPPORT FABRIC ANCHOR DETAIL





1. EMPTY FILTER SACK WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE WILL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. AN OIL ADSORBENT PAD OR PILLOW CAN BE PURCHASED WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK WILL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK WILL BE BETWEEN 18 INCHES AND 36 INCHES.
7. THE LENGTH, "L", OF THE FILTER SACK WILL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

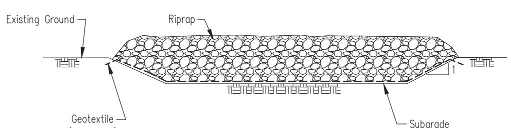
LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

FILTER SACKS (GRATED INLETS) IP1

N.T.S.

DO NOT USE ON ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.



SECTION A–A

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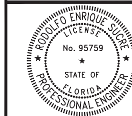

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No.	Date	Revision	By

Designed by:	R.S
Drawn by:	A.N
Checked by:	D.C
Approved by:	R.S
Date:	5/8/2026
Job No.:	WL101

Plans Prepared By: RSP Engineers

NOT APPROVED FOR CONSTRUCTION

STORMWATER POLLUTION PREVENTION DETAILS

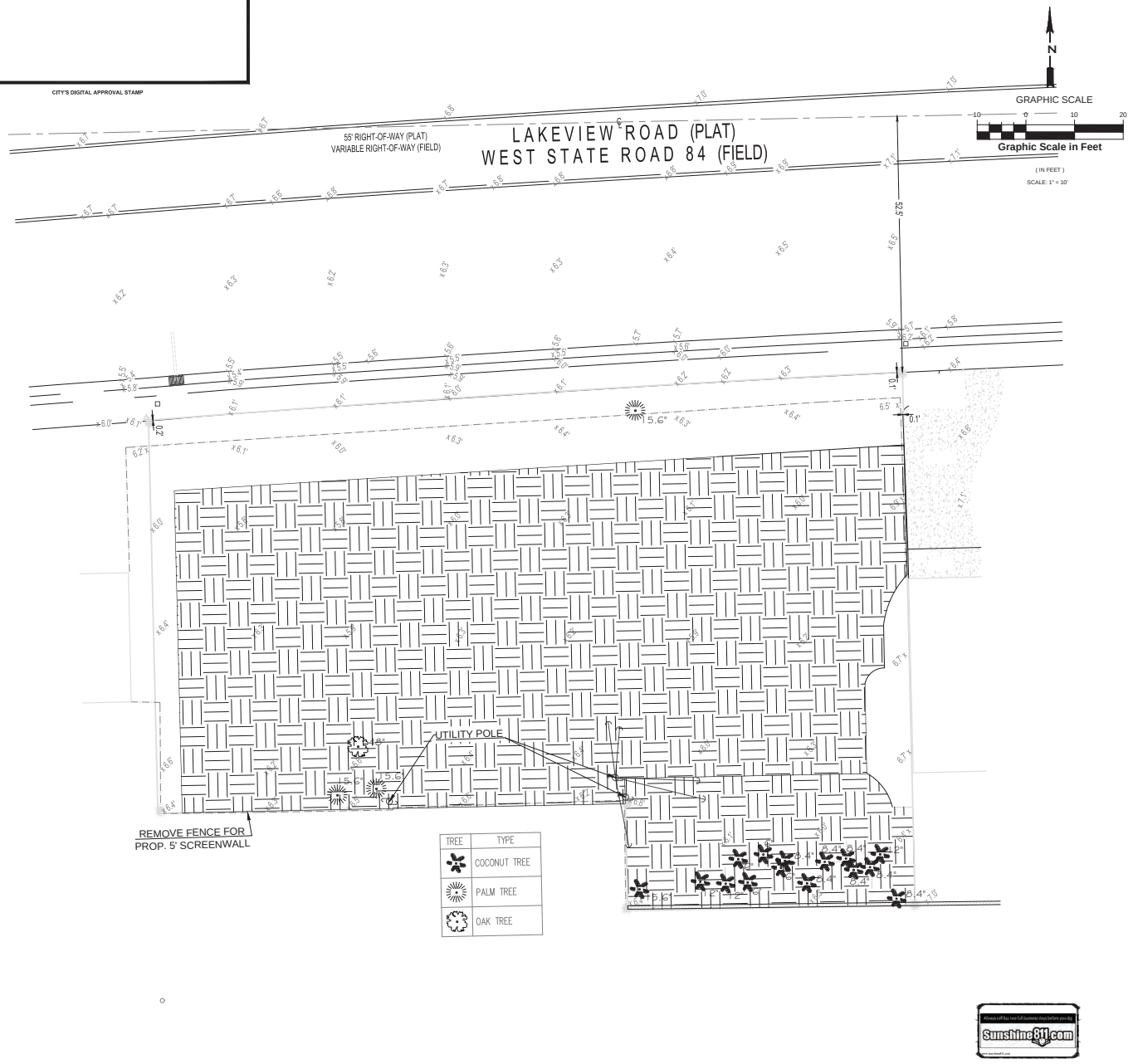
OUTDOOR STORAGE DEVELOPMENT 808-814 W STATE RD 84 FORT LAUDERDALE, FLORIDA

Sheet No.

C-9

C:\Users\andre\OneDrive - Rodolfo Sucre\Rodolfo Sucre's files - Projects\WL101 - 810,812,814 W State Road 84\Civil\Current Plan Set\C-6 STORMWATER POLLUTION PREVENTION PLAN.dwg May 08, 2026 - 11:03am Andres

CITY'S DIGITAL APPROVAL STAMP



DEMOLITION LEGEND

EXISTING BUILDING TO BE REMOVED.

EXIST. VEGETATION TO BE REMOVED.

DEMOLITION NOTES

1. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON SITE LOCATIONS OF EXISTING UTILITIES.
2. CHAPTER 553.851 OF THE FLORIDA STATUTES REQUIRES THAT AN EXCAVATOR NOTIFY ALL GAS UTILITIES A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATING.
3. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, SUPERVISION, AND EQUIPMENT REQUIRED FOR THE ORDERLY DEMOLITION AND REMOVAL OF EXISTING STRUCTURES, PAVEMENT AND UTILITIES AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.
4. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE HIMSELF WITH THE STRUCTURES TO BE DEMOLISHED. A BRIEF DESCRIPTION OF THE STRUCTURES IS INCLUDED FOR THE CONTRACTOR'S CONVENIENCE ONLY.
5. THE FOLLOWING LIST OF STRUCTURES REQUIRING DEMOLITION IS INCLUDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE DRAWINGS INDICATE THE SCOPE OF DEMOLITION WHERE DEMOLITION IS REQUIRED.
   A. DEMOLITION AND REMOVAL OF EXISTING CONC. BLOCK BUILDING
   B. DEMOLITION AND REMOVAL OF EXISTING ON SITE ASPHALT, CONCRETE PAVING AND CURBING TO LIMITS SHOWN.
   C. REMOVAL OF EXISTING ONSITE ABOVE-GROUND AND UNDERGROUND UTILITIES, INCLUDING REMOVAL AND/OR PLUGGING OF EXISTING UTILITIES AS SHOWN ON PLANS.
6. PRIOR TO REMOVAL OF ANY UNDERGROUND SEWAGE TANK AND COMPONENTS FROM SERVICE, CONTRACTOR MUST COMPLETELY DRAIN THE SYSTEMS TO AN APPROVED SANITATION TANK FOR DISPOSAL AT AN APPROVED LOCATION AND IN ACCORDANCE WITH LOCAL & STATE REQUIREMENTS.
7. ALL ON SITE UNDERGROUND STRUCTURES AND PIPING MUST BE COMPLETELY REMOVED AND OVEREXCAVATED BY A MINIMUM OF 12" BENEATH THE STRUCTURES. CONTRACTOR SHALL USE APPROVED FILLING MATERIAL FOR FILLING THESE AREAS. FILL SHALL BE OF CLEAN, FINE SAND AASHTO CLASS A-3 AND SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND COMPACTED TO AT LEAST 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557).
8. ALL EXISTING STRUCTURES, PAVEMENTS, SLABS, FOUNDATIONS, STEPS, AND OTHER EXISTING FEATURES INDICATED ON THE DRAWINGS TO BE REMOVED SHALL BE DEMOLISHED AND REMOVED BY THE CONTRACTOR. REMOVE NO STRUCTURE SUBSTANTIALLY AS A WHOLE. DEMOLISH COMPLETELY ON THE PREMISES.
9. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.
10. ELECTRICAL, TELEPHONE, CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY PRIOR TO COMMENCEMENT OF CONSTRUCTION. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS A NECESSITY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.
11. PROVIDE ADEQUATE PROTECTION FOR PERSONS AND PROPERTY AT ALL TIMES. EXECUTE THE WORK IN A MANNER TO AVOID HAZARDS TO PERSONS AND PROPERTY AND PREVENT INTERFERENCE WITH THE USE OF AND ACCESS TO ADJACENT BUILDINGS. STREETS AND SIDEWALKS SHALL NOT BE BLOCKED BY DEBRIS AND EQUIPMENT.
12. AIR HAMMERS OR OTHER DEVICES WILL BE PERMITTED ON EXTERIOR WORK.
13. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINATE IS ENCOUNTERED DURING THE DEMOLITION/EXCAVATION PROCESS.
14. REMOVE AND LEGALLY DISPOSE OF ALL OTHER RUBISH, RUBBLE, AND DEBRIS. COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS GOVERNING DISPOSAL OF WASTES AND DEBRIS.
15. PAVEMENT REMOVAL:
   A. WHERE EXISTING PAVEMENT IS TO BE REMOVED, SAW-CUT THE SURFACING LEAVING A UNIFORM AND STRAIGHT EDGE WITH MINIMUM DISTURBANCE TO THE REMAINING ADJACENT SURFACING. IF CONSTRUCTION RESULTS IN RAVELING OF THE SAW-CUT SURFACE, RECUT BACK FROM THE RAVELED EDGE PRIOR TO RESTORATION.
   B. WHERE EXISTING PAVEMENT, CURB, CURB AND GUTTER, SIDEWALK, DRIVEWAY, OR VALLEY GUTTER IS REMOVED FOR THE PURPOSE OF CONSTRUCTING OR REMOVING BOX CULVERTS, PIPE, INLETS, MANHOLES, APPURTENANCES, FACILITIES OR STRUCTURES, SAID PAVEMENT, ETC., SHALL BE REPLACED AND RESTORED IN EQUAL OR BETTER CONDITION THAN THE ORIGINAL. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOR, MATERIALS, EQUIPMENT, TOOLS, SUPPLIES, AND OTHER EQUIPMENT AS REQUIRED.
16. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.
17. PERMITTING: IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY REQUIRED PERMITTING FOR DEMOLITION FROM RESPONSIBLE REGULATORY AGENCIES AND FULLY ACKNOWLEDGE AND COMPLY WITH ALL REQUIREMENTS PRIOR TO COMMENCING DEMOLITION WORK.
18. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE EXTENT OF DEMOLITION REQUIRED IN ORDER TO PERFORM THE CONTRACT WORK FOR THIS PROJECT. THE CONTRACTOR SHALL CONDUCT SITE VISITS AND SHALL EXAMINE ALL OF THE INFORMATION WITHIN THESE DOCUMENTS. ALL DISCREPANCIES AND/OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID SUBMITTAL.
19. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
20. THE CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO COMMENCEMENT OF ANY WORK. ACTUAL REMOVAL AND/OR RELOCATION OF ALL EXISTING PLANTS IS TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE SITEWORK CONTRACTOR TO COORDINATE DEMOLITION ACTIVITIES WITH THE LANDSCAPE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND PRESERVING TREES AS INDICATED BY THE OWNER.
21. CONTRACTOR SHALL LIMIT ALL DEMOLITION ACTIVITY TO THAT AREA DELINEATED IN THE DRAWING. ALL OTHER EXIST. UTILITIES INCLUDING : STORM DRAINAGE, GAS, ELECTRIC, TELEPHONE, WATER & SEWER SHALL BE PRESERVED & PROTECTED.
22. A SEPARATE DEMOLITION PERMIT IS REQUIRED FOR THE DEMOLITION OF THE ACTUAL BUILDING.
23. ALL EXISTING LIGHT POLES ON SITE TO BE REMOVED AND REPLACED PER SHEET LT-1.
24. CONTRACTOR MAY LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THIS SHEET BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, SIDEWALK, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IT'S REMOVAL AND REPAIR.

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RODOLFO ENRIQUE SUCRE LICENSE No. 95759 STATE OF FLORIDA PROFESSIONAL ENGINEER

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No.	Date	Revision	By
1			
2			
3			
4			
5			

Designed by: R.S
Drawn by: A.N
Checked by: D.C
Approved by: R.S
Date: 3/30/2026
Job No.: WL101

Plans Prepared By
RSP Engineers

NOT APPROVED FOR CONSTRUCTION

DEMOLITION PLAN

OUTDOOR STORAGE DEVELOPMENT
808-814 W STATE RD 84
FORT LAUDERDALE, FLORIDA

Sheet No.
C-10

May 7, 2026
City of Fort Lauderdale Urban Design and Planning Division
Site plan Level II UDP-S26012
808-814 W State Road 84, Fort Lauderdale, FL 33315

PROJECT NARRATIVE LETTER

This letter is intended to provide a Project Narrative for the proposed Site Plan Level II application and summarize the proposed improvements for the subject property located at 808-814 W State Road 84.

To Whom it May Concern:

The subject property is located at **808-814 W State Road 84, Fort Lauderdale, FL**, and consists of a currently vacant commercial parcel encompassing approximately 0.33 acres (14,351.33 square feet). The property is located within the **B-1 Boulevard Business** zoning district under the jurisdiction of the City of Fort Lauderdale. Existing land use information obtained from Broward County identifies the parcel as Vacant Commercial. The proposed development is being submitted as a Site Plan Level II application.

The proposed development consists of a parking facility intended to serve the adjacent tire shop located immediately east of the subject property. The project includes the provision of shared access between the properties through a cross-access agreement, allowing safe and efficient vehicular circulation between both parcels. The proposed site layout includes twenty-three (23) parking spaces designed to support the operational needs of the adjacent commercial use while maintaining compliance with applicable City of Fort Lauderdale regulations and development standards.

The proposed site improvements include approximately 5,571.33 square feet of pavement and approximately 8,780.00 square feet of landscaped area. The design has been developed to enhance site functionality, provide organized vehicular circulation, and maintain compatibility with the surrounding commercial corridor along State Road 84.

The proposed stormwater management system has been designed to accommodate runoff generated by the proposed improvements through the use of an exfiltration trench in conjunction with a dry retention pond. In addition, the system contemplates a controlled discharge connection to the existing Florida Department of Transportation drainage infrastructure through an existing inlet located along the property frontage on State Road 84. The proposed drainage system has been designed to provide on-site stormwater treatment and attenuation in accordance with applicable regulatory criteria.

The site is located within Flood Zone X, identified as an area with a 0.2% annual chance flood hazard according to current FEMA flood mapping. No adverse floodplain impacts are anticipated as part of the proposed development.

The proposed improvements are intended to enhance the functionality of the adjacent commercial use by providing additional off-street parking, improved circulation, and compliant stormwater infrastructure while supporting safe access and compatibility with surrounding development patterns.

OUTDOOR STORAGE AND PARKING DEVELOPMENT
Wallace Logistics Services LLC

808-814 W State Road 84
FORT LAUDERDALE, FLORIDA

APPLICATION FOR SITE PLAN LEVEL II DEVELOPMENT PERMIT

PROJECT & ULDR NARRATIVES

June 1, 2026

Prepared by:

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TABLE OF CONTENTS

SECTION ONE: Project Narrative

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SECTION TWO: Adequacy Requirements – ULDR Sec. 47-25.2

A. *Applicability.* The adequacy requirements set forth herein shall be used by the city to evaluate the demand created on public services and facilities created by a proposed development permit.

B. *Communications network.* Buildings and structures shall not interfere with the city's communication network. Developments shall be modified to accommodate the needs of the city's communication network, to eliminate any interference a development would create or otherwise accommodate the needs of the city's communication network within the development proposal.

RESPONSE: N/A. The proposed development is not expected to interfere with the City's communication network.

C. *Drainage facilities.* Adequacy of stormwater management facilities shall be evaluated based upon the adopted level of service requiring the retention of the first inch of runoff from the entire site or two and one-half (2½) inches of runoff from the impervious surface whichever is greater.

RESPONSE: The project will comply with the City's stormwater management requirements. The drainage system will be designed in accordance with City and South Florida Water Management District (SFWMD) standards. Drainage calculations have been uploaded with this submittal.

D. *Environmentally sensitive lands.*

1. In addition to a finding of adequacy, a development shall be reviewed pursuant to applicable federal, state, regional and local environmental regulations. Specifically, an application for development shall be reviewed in accordance with the following Broward County Ordinances which address environmentally sensitive lands and wellfield protection which ordinances are incorporated herein by reference:
    a. Broward County Ordinance No. 89-6.
    b. Section 5-198(l), Chapter 5, Article IX of the Broward County Code of Ordinances.
    c. Broward County Ordinance No. 84-60.
2. The applicant must demonstrate that impacts of the proposed development to environmentally sensitive lands will be mitigated.

RESPONSE: The project is not located on any known environmentally sensitive lands and will comply with all applicable federal, state, regional, and local environmental regulations, including the above-mentioned Ordinances. There are no anticipated adverse environmental impacts from development.

E. *Fire protection.* Fire protection service shall be adequate to protect people and property in the proposed development. Adequate water supply, fire hydrants, fire apparatus and facilities shall be provided in accordance with the Florida Building Code, South Florida Fire Code and other accepted applicable fire and safety standards.

RESPONSE: Fire protection service will be fully adequate to protect people and property in accordance with the Florida Building Code, South Florida Fire Code, and other applicable fire and safety standards. The development will utilize the City's existing water distribution network and nearby fire hydrants. The project will not modify, hinder, or place an undue burden on the existing fire protection infrastructure.

F. *Parks and open space.*

1. The manner and amount of providing park and open space is as provided in Section 47-38A, Park Impact Fees, of the ULDR.
2. No building permit shall be issued until the park impact fee required by Section 47-38A of the ULDR has been paid in full by the applicant.

RESPONSE: N/A. The project is non-residential and is therefore not subject to Park Impact Fees.

G. *Police protection.* Police protection service shall be adequate to protect people and property in the proposed development. The development shall provide improvements which are consistent with Crime Prevention Through Environmental Design (CPTED) to minimize the risk to public safety and assure adequate police protection.

RESPONSE: The project will incorporate any necessary CPTED standards (proper signage and lighting, clearly designated vehicular access, etc.) to enhance safety and security.

H. *Potable water.*

1. Adequate potable water service shall be provided for the needs of the proposed development. The proposed development shall be designed to provide adequate areas and easements which may be needed for the installation and maintenance of potable water systems in accordance with city engineering standards, the Florida Building Code, and applicable health and environmental regulations. The existing water treatment facilities and systems shall have sufficient capacity to provide for the needs of the proposed development and for other developments in the service area which are occupied, available for occupancy, for which building permits are in effect or for which potable water treatment capacity has been reserved. Capital expansion charges for water and sewer facilities shall be paid by the developer in accordance with Resolution 85-265, as it is amended from time to time. Improvements to the potable water service and system shall be made in accordance with city engineering standards and other accepted applicable engineering standards.
2. *Potable water facilities.*
    a. If the system is tied into the city treatment facility, the available capacity shall be determined by subtracting committed capacity and present flow from design capacity. If there is available capacity, the city shall determine the impact of the proposed development utilizing Table 3, Water and Wastewater, on file with the department.

b. If there is adequate capacity available in the city treatment plant to serve the proposed development, the city shall reserve the necessary capacity to serve the development.

c. Where the county is the projected service provider, a similar written assurance will be required.

RESPONSE: The development will not require service lines, tap-ins, or meters; therefore, the property will not be connected to the City of Fort Lauderdale's potable water system.

I. *Sanitary sewer.*

1. If the system is tied into the city treatment facility, the available capacity shall be determined by subtracting committed capacity and present flow from the design capacity. If there is available capacity, the city shall determine the impact of the proposed development utilizing Table 3, Water and Wastewater, on file with the department.

2. If there is adequate capacity available in the city treatment plant to serve the proposed development, the city shall reserve the necessary capacity to serve the proposed development.

3. Where the county is the projected service provider, a written assurance will be required.

4. Where septic tanks will be utilized, the applicant shall secure and submit to the city a certificate from the Broward County Health Unit that certifies that the site is or can be made suitable for an on-site sewage disposal system for the proposed use.

RESPONSE: The property will not tie into the City of Fort Lauderdale's wastewater treatment facility, collection system, or lift stations. Because no connection is requested or required, there will be no impact on the City's available, committed, or design sewage treatment capacities.

J. *Public Schools.* For all development including residential units, the applicant shall be required to mitigate the impacts of such development on public school facilities in accordance with the Broward County Land Development Code or section 47-38C. Educational Mitigation, as applicable and shall provide a school capacity availability determination letter (SCAD) from Broward County Public Schools indicating that either the requirements of public school concurrency have been satisfied or that the application is exempt or vested pursuant to Section 47-38C.2 of the ULDR to the city prior to the issuance of a development permit.

RESPONSE: N/A. The project does not include residential units.

K. *Solid waste.*

1. Adequate solid waste collection facilities and service shall be obtained by the applicant in connection with the proposed development and evidence shall be provided to the city demonstrating that all solid waste will be disposed of in a manner that complies with all governmental requirements.

2. *Solid waste facilities.* Where the city provides solid waste collection service and adequate service can be provided, an adequacy finding shall be issued. Where there is another service provider, a written assurance will be required. The impacts of the proposed development will be determined based on Table 4, Solid Waste, on file with the department.

RESPONSE: The development will not generate typical solid waste or commercial garbage as it features no permanent tenants or structural square footage. Any minimal litter generated will be managed through basic, private routine property maintenance.

L. *Stormwater.* Adequate stormwater facilities and systems shall be provided so that the removal of stormwater will not adversely affect adjacent streets and properties or the public stormwater facilities and systems in accordance with the Florida Building Code, city engineering standards and other accepted applicable engineering standards.

RESPONSE: The Project's stormwater management system will be designed in accordance with the Florida Building Code, City and FDOT engineering standards, and accepted engineering practices to ensure that stormwater runoff does not adversely affect the surrounding area.

M. *Transportation facilities.*

1. The capacity for transportation facilities shall be evaluated based on Table 1, Generalized Daily Level of Service Maximum Volumes, on file with the department. If a development is within a compact deferral area, the available traffic capacity shall be determined in accordance with Table 2, Flowchart, on file with the department.

2. *Regional transportation network.* The regional transportation network shall have the adequate capacity, and safe and efficient traffic circulation to serve the proposed development. Adequate capacity and safe and efficient traffic circulation shall be determined by using existing and site-specific traffic studies, the adopted traffic elements of the city and the county comprehensive plans, and accepted applicable traffic engineering standards. Site-specific traffic studies may be required to be made and paid for by the applicant when the city determines such a study is needed in order to evaluate the impacts of the proposed development on proposed or existing roadways as provided for in subsection M.4. An applicant may submit such a study to the city which will be considered by the DRC in its review. Roadway improvements needed to upgrade the regional transportation network shall be made in accordance with the city, the county, and Florida Department of Transportation traffic engineering standards and plans as applicable.

3. *Local streets.* Local streets shall have adequate capacity, safe and efficient traffic circulation, and appropriate functional classification to serve the proposed development. Adequate capacity and safe and efficient traffic circulation shall be determined by using existing and site-specific traffic studies, the city's comprehensive plan and accepted applicable traffic engineering standards. Site-specific traffic studies may be required to be made and paid for by the applicant when the city determines such a study is required in order to evaluate the impact of the proposed development on proposed or existing roadways as provided for in subsection M.4. An applicant may

submit to the city such a study to be considered as part of the DRC review. Street improvements needed to upgrade the capacity or comply with the functional classification of local streets shall be made in accordance with the city engineering standards and acceptable applicable traffic engineering standards. Local streets are those streets that are not classified as federal, state or county roadways on the functional classification map adopted by the State of Florida.

4. *Traffic impact studies.*

   a. When the proposed development may generate over one thousand (1,000) daily trips; or

   b. When the daily trip generation is less than one thousand (1,000) trips; and (1) when more than twenty percent (20%) of the total daily trips are anticipated to arrive or depart, or both, within one-half (½) hour; or (2) when the proposed use creates varying trip generation each day, but has the potential to place more than twenty percent (20%) of its maximum twenty-four (24) hour trip generation onto the adjacent transportation system within a one-half (½) hour period; the applicant shall submit to the city a traffic impact analysis prepared by the county or a registered Florida engineer experienced in trafficways impact analysis which shall:

      i. Provide an estimate of the number of average and peak hour trips per day generated and directions or routes of travel for all trips with an external end.

      ii. Estimate how traffic from the proposed development will change traffic volumes, levels of service, and circulation on the existing and programmed trafficways.

      iii. If traffic generated by the proposed development requires any modification of existing or programmed components of the regional or local trafficways, define what city, county or state agencies have programmed the necessary construction and how this programming relates to the proposed development.

      iv. A further detailed analysis and any other information that the review committee considers relevant.

      v. The traffic impact study may be reviewed by an independent licensed professional engineer contracted by the city to determine whether it adequately addresses the impact and the study supports its conclusions. The cost of review by city's consultant shall be reimbursed to the city by the applicant.

      vi. When this subsection M.4.b. applies, the traffic study shall include an analysis of how the peak loading will affect the transportation system including, if necessary, an operational plan showing how the peak trips will be controlled and managed.

RESPONSE: The development provides safe, controlled, and efficient traffic circulation on-site. The proposed parking facility will not feature any direct vehicular access points,

curb cuts, or driveways connecting to State Road 84. The development functions as an accessory parking asset to support the existing, adjacent tire shop. It does not expand the primary commercial footprint or add new service bays, meaning it will not generate new, independent vehicular trips. A traffic statement report has been submitted.

5. *Dedication of rights-of-way.* Property shall be conveyed to the public by plat, deed or grant of easement as needed in accordance with the Broward County Trafficways Plan, the city's comprehensive plan, subdivision regulations and accepted applicable traffic engineering standards.

RESPONSE: Acknowledged.

6. *Pedestrian facilities.* Sidewalks, pedestrian crossing and other pedestrian facilities shall be provided to encourage safe and adequate pedestrian movement on-site and along roadways to adjacent properties. Transit service facilities shall be provided for as required by the city and Broward County Transit. Pedestrian facilities shall be designed and installed in accordance with city engineering standards and accepted applicable engineering standards.

RESPONSE: Acknowledged.

7. *Primary arterial street frontage.* Where a proposed development abuts a primary arterial street either existing or proposed in the trafficways plan, the development review committee (DRC) may require marginal access street, reverse frontage with screen planting contained in a nonaccess reservation along the rear property line, deep lots with or without rear service alleys, or such other treatment as may be necessary for adequate protection of residential properties and to assure separation of through and level traffic.

RESPONSE: Acknowledged.

8. *Other roadway improvements.* Roadways adjustments, traffic control devices, mechanisms, and access restrictions may be required to control traffic flow or divert traffic, as needed to reduce or eliminate development generated traffic.

RESPONSE: Acknowledged.

9. *Street trees.* In order to provide for adequate landscaping along streets within the city, street trees shall be required along the length of the property abutting a street. A minimum of fifty percent (50%) of the required street trees shall be shade trees, and the remaining street trees may be provided as flowering or palm trees. These percentages may be varied based on existing or proposed physical conditions which may prevent the ability to comply with the street tree requirements of this subsection. The street trees shall be planted at a minimum height and size in accordance with the requirements of Section 47-21, Landscape and Tree Preservation Requirements, except in the downtown RAC districts the requirements of Sec. 47-13.20.H.8 shall apply. The location and number of street trees shall be determined by the department based on the height, bulk, mass and design of the structures on the site and the proposed development's compatibility to surrounding properties. The requirements for street trees, as provided

herein, may be located within the public right-of-way as approved by the entity with jurisdiction over the abutting right-of-way.

RESPONSE: Acknowledged.

N. *Wastewater.*

1. *Wastewater.* Adequate wastewater services shall be provided for the needs of the proposed development. The proposed development shall be designed to provide adequate areas and easements which may be needed for the installation and maintenance of a wastewater and disposal system in accordance with applicable health, environmental and engineering regulations and standards. The existing wastewater treatment facilities and systems shall have adequate capacity to provide for the needs of the proposed development and for other developments in the service area which are occupied, available for occupancy, for which building permits are in effect or for which wastewater treatment or disposal capacity has been reserved. Capital expansion charges for water and sewer facilities shall be paid by the developer in accordance with Resolution 85-265, as it is amended for time to time. Improvements to the wastewater facilities and system shall be made in accordance with the city engineering and accepted applicable engineering standards.

RESPONSE: The project will not impact the city's wastewater treatment system as no wastewater generating structures are present or proposed for this development.

O. *Trash management requirements.* A trash management plan shall be required in connection with non-residential uses that provide prepackaged food or beverages for off-site consumption. Existing non-residential uses of this type shall adopt a trash management plan within six (6) months of the effective date of this provision.

RESPONSE: The Project does not include uses that provide prepackaged food or beverage sales for off-site consumption.

P. *Historic and archaeological resources.*

1. If a structure or site has been identified as having archaeological or historical significance by any entity within the State of Florida authorized by law to do same, the applicant shall be responsible for requesting this information from the state, county, local governmental or other entity with jurisdiction over historic or archaeological matters and submitting this information to the city at the time of, and together with, a development permit application. The reviewing entity shall include this information in its comments.

RESPONSE: The Property has not been identified as having historic or archeological significance by an authorized entity within the State of Florida.

Q. *Hurricane evacuation.* If a structure or site is located east of the Intracoastal Waterway, the applicant shall submit documentation from Broward County or such agency with jurisdiction over hurricane evacuation analysis either indicating that acceptable level of service of hurricane evacuation routes and hurricane emergency shelter capacity shall be maintained without impairment resulting from a proposed development or describing actions or

development modifications necessary to be implemented in order to maintain level of service and capacity.

RESPONSE: N/A. Site is not located east of the Intracoastal Waterway.

(Ord. No. C-97-19, § 1(47-25.2), 6-18-97; Ord. No. C-98-72, § 1, 12-15-98; Ord. No. C-99-14, § 14, 3-16-99; Ord. No. C-99-15, § 11, 3-16-99; Ord. No. C-00-26, § 6, 6-6-00; Ord. No. C-03-23, § 2, 7-1-03 ; Ord. No. C-06-14, § 1, 6-20-06; Ord. No. C-06-36, § 2, 10-17-06; Ord. No. C-22-06 , § 1, 3-1-22)

DRAINAGE REPORT

FOR

Wallace Logistics Services LLC

OUTDOOR STORAGE DEVELOPMENT

808-814 W STATE ROAD 84
FORT LAUDERDALE, FLORIDA

BROWARD COUNTY

Rodolfo Enrique Sucre

Digitally signed by Rodolfo Enrique Sucre
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Reason: I am the author of this document
Location: FL
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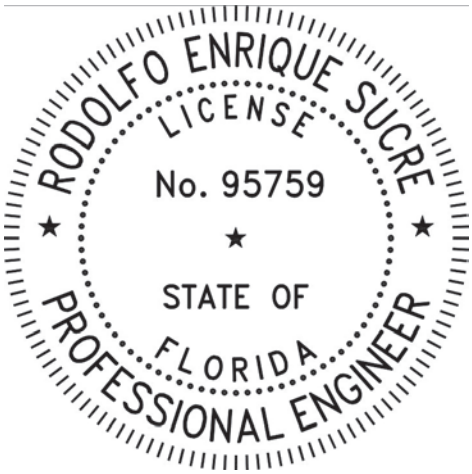


TABLE OF CONTENTS

SECTION ONE: PROJECT INFORMATION

PROJECT NAME: Outdoor Storage Development

PROJECT OWNERS: Wallace Logistics Services LLC

LOCATION: 808-814 W State Road 84, Fort Lauderdale, FL

EXISTING CONDITIONS: Vacant

FEMA FLOOD ZONE: X

PROPOSED CONDITIONS: Asphalt covered area for storage usage.

SECTION TWO: EXECUTIVE SUMMARY

Introduction

This report provides an overview of the outdoor storage development project taking place at 808-814 W State Road 84, Fort Lauderdale, FL. The project aims to transform the existing vacant sites into an outdoor storage able to accommodate equipment and vehicles, while incorporating the best stormwater management practices and design principles. This report outlines the existing conditions of the site and the proposed stormwater management system.

Existing Storm Water Basin Conditions

The site is currently vacant and spans a total lot size of 0.33 acres. The current site is an undeveloped pervious area.

The post-developed site is required to comply with the Broward County Land Development Code and the Florida Department of Transportation (FDOT) stormwater requirements. The post development site will be comprised of pervious and impervious areas and a stormwater management system including inlets, pipes and underground detention storages.

SECTION THREE: EXISTING CONDITIONS DATA AND COMPUTATIONS

The following breakdown demonstrates the existing stormwater conditions for the project site:

1. PRE-DEVELOPMENT

	Area			Grade		
	-	-	-	-	-	-
	14,350	0.329	100	5.80	6.90	
	14,350	0.329	100	5.80	6.90	6.35
	14,350	0.329	100	-	-	6.35

Table 2: Soil Storage (Pre-Development)		
Average Finished Grade (NAVD 88)	6.35	
Average Water Table (NAVD 88)	1.29 ft	
Depth to Water Table	5.06 ft	= (6.35 ft) - (1.29 ft)
Soil Storage SFWMD (S*)	6.75 in	
%Total Pervious Area (%A_P)	100%	
Site Specific Soil Storage (S)	6.8 in	= (S*) x (%Ap)
Curve Number (CN)	59.7	= Storm and Sanitary Analysis SCS TR 55 Curve Number Table

Table 3: Runoff and Max Stage (Pre-Development)				
SCS Equation	**Rainfall (P)**	**P Excess (Pe)**	**Runoff (Q)**	**Max Stage (ft)**
Storm Event	**Taken from NOAA**	$P_e = \frac{(P - 0.2S)^2}{P + 0.8S}$	$Q = P_e \times A \times \frac{1ft}{12in}$	
100 yr 72 hr	18.4 in	12.2 in	0.34 ac-ft	7.37 ft
50 yr 72 hr	15.9 in	9.9 in	0.27 ac-ft	7.19 ft
25 yr 72 hr	13.6 in	7.9 in	0.22 ac-ft	7.03 ft
10 yr 72 hr	10.8 in	5.5 in	0.15 ac-ft	6.84 ft
5 yr 72 hr	9.0 in	4.1 in	0.11 ac-ft	6.70 ft
3 yr 72 hr	7.7 in	3.1 in	0.08 ac-ft	6.58 ft
2 yr 72 hr	7.0 in	2.6 in	0.07 ac-ft	6.53 ft
100 yr 24 hr	16.0 in	10.0 in	0.28 ac-ft	7.19 ft
50 yr 24 hr	13.7 in	8.0 in	0.22 ac-ft	7.04 ft
25 yr 24 hr	11.6 in	6.2 in	0.17 ac-ft	6.90 ft

10 yr 24 hr	9.1 in	4.2 in	0.11 ac-ft	6.71 ft
5 yr 24 hr	7.5 in	2.9 in	0.08 ac-ft	6.57 ft
3 yr 24 hr	6.3 in	2.1 in	0.06 ac-ft	6.46 ft
2 yr 24 hr	5.6 in	1.7 in	0.05 ac-ft	6.42 ft
100 yr 8 hr	11.8 in	6.3 in	0.17 ac-ft	6.91 ft
50 yr 8 hr	10.1 in	4.9 in	0.14 ac-ft	6.80 ft
25 yr 8 hr	8.6 in	3.7 in	0.10 ac-ft	6.66 ft
10 yr 8 hr	6.8 in	2.4 in	0.07 ac-ft	6.51 ft
5 yr 8 hr	5.7 in	1.7 in	0.05 ac-ft	6.42 ft
3 yr 8 hr	4.8 in	1.2 in	0.03 ac-ft	6.36 ft
2 yr 8 hr	4.4 in	1.0 in	0.03 ac-ft	6.34 ft
100 yr 4 hr	9.3 in	4.3 in	0.12 ac-ft	6.73 ft
50 yr 4 hr	8.1 in	3.3 in	0.09 ac-ft	6.62 ft
25 yr 4 hr	6.9 in	2.5 in	0.07 ac-ft	6.52 ft
10 yr 4 hr	5.6 in	1.6 in	0.04 ac-ft	6.41 ft
5 yr 4 hr	4.7 in	1.1 in	0.03 ac-ft	6.35 ft
3 yr 4 hr	4.1 in	0.8 in	0.02 ac-ft	6.31 ft
2 yr 4 hr	3.8 in	0.6 in	0.02 ac-ft	6.30 ft
100 yr 2 hr	7.3 in	2.8 in	0.08 ac-ft	6.55 ft
50 yr 2 hr	6.4 in	2.2 in	0.06 ac-ft	6.48 ft
25 yr 2 hr	5.6 in	1.6 in	0.05 ac-ft	6.42 ft
10 yr 2 hr	4.6 in	1.1 in	0.03 ac-ft	6.35 ft
5 yr 2 hr	3.9 in	0.7 in	0.02 ac-ft	6.31 ft
3 yr 2 hr	3.4 in	0.5 in	0.01 ac-ft	6.21 ft
2 yr 2 hr	3.2 in	0.4 in	0.01 ac-ft	6.13 ft
100 yr 1 hr	5.6 in	1.7 in	0.05 ac-ft	6.42 ft
50 yr 1 hr	5.0 in	1.3 in	0.04 ac-ft	6.37 ft
25 yr 1 hr	4.4 in	0.9 in	0.03 ac-ft	6.33 ft
10 yr 1 hr	3.6 in	0.6 in	0.02 ac-ft	6.29 ft
5 yr 1 hr	3.1 in	0.4 in	0.01 ac-ft	6.10 ft
3 yr 1 hr	2.7 in	0.2 in	0.01 ac-ft	5.99 ft
2 yr 1 hr	2.5 in	0.2 in	0.00 ac-ft	5.94 ft

Table 4: Time of Concentration (Pre-Development)		
Manning's Roughness for	0.40	Vacant Lot (Mixed/Weeds)
	186.38 ft	Longest Travelled Distance
	5.64 in	(2 year 24 hr precipitation from NOAA)
	1.00%	Site Slope Average
Time of concentration Sheet flow equation	35.12 min	$= \frac{0.007(n \times Lf)^{0.8}}{P^{0.5} \times Sf^{0.4}} \times 60\ min/_{hour}$

2. POST DEVELOPMENT LAND USE BREAKDOWN

Table 5: Proposed Land Use Breakdown (Post-Development)						
	Area			Grade		
				Low	High	Average
	8,752	0.201	61.0	-	-	6.80
	-	-	-	-	-	-
	8,752	0.201	61.0	6.19	7.59	6.89
	5,598	0.129	39.0	-	-	5.98
	271	0.006	1.9	4.00	-	4.50
	916	0.021	6.4	4.00	6.00	5.25
	4,411	0.10	30.7	5.80	6.90	6.35
	14,350	0.3294	100	-	-	6.45

Table 6: Soil Storage (Post-Development)		
Average Finished Grade (NAVD 88)	6.45 ft	
Average Water Table (NAVD 88)	1.29 ft	
Depth to Water Table	5.16 ft	= (6.45 ft) - (1.29 ft)
Soil Storage SFWMD (S*)	6.75 in	
%Total Pervious Area (%A_P)	39.0%	
Site Specific Soil Storage (S)	2.6333 in	= (S*) x (%Ap)
Curve Number (CN)	79	= Storm and Sanitary Analysis SCS TR 55 Curve Number Table

Table 7: Runoff (Post-Development)		
SCS Equation	**Rainfall (P)**	**P Excess (Pe)**
Storm Event	**Taken from NOAA**	$P_e = \frac{(P - 0.2S)^2}{P + 0.8S}$
100 yr 72 hr	18.40 in	15.58 in
50 yr 72 hr	15.90 in	13.13 in
25 yr 72 hr	13.60 in	10.88 in
10 yr 72 hr	10.80 in	8.18 in
5 yr 72 hr	8.99 in	6.45 in
3 yr 72 hr	7.68 in	5.23 in
2 yr 72 hr	7.02 in	4.62 in
100 yr 24 hr	16.00 in	13.22 in
50 yr 24 hr	13.70 in	10.98 in
25 yr 24 hr	11.60 in	8.95 in
10 yr 24 hr	9.14 in	6.60 in
5 yr 24 hr	7.48 in	5.04 in
3 yr 24 hr	6.25 in	3.92 in
2 yr 24 hr	5.64 in	3.38 in
100 yr 8 hr	11.77 in	9.11 in
50 yr 8 hr	10.10 in	7.51 in
25 yr 8 hr	8.58 in	6.07 in
10 yr 8 hr	6.80 in	4.42 in
5 yr 8 hr	5.66 in	3.39 in
3 yr 8 hr	4.85 in	2.68 in
2 yr 8 hr	4.44 in	2.34 in
100 yr 4 hr	9.34 in	6.79 in
50 yr 4 hr	8.06 in	5.59 in
25 yr 4 hr	6.90 in	4.51 in
10 yr 4 hr	5.56 in	3.31 in
5 yr 4 hr	4.70 in	2.56 in
3 yr 4 hr	4.09 in	2.05 in
2 yr 4 hr	3.78 in	1.80 in
100 yr 2 hr	7.34 in	4.91 in

50 yr 2 hr	6.44 in	4.09 in
25 yr 2 hr	5.60 in	3.34 in
10 yr 2 hr	4.60 in	2.47 in
5 yr 2 hr	3.93 in	1.92 in
3 yr 2 hr	3.44 in	1.53 in
2 yr 2 hr	3.20 in	1.35 in
100 yr 1 hr	5.64 in	3.38 in
50 yr 1 hr	5.00 in	2.82 in
25 yr 1 hr	4.38 in	2.29 in
10 yr 1 hr	3.63 in	1.68 in
5 yr 1 hr	3.11 in	1.28 in
3 yr 1 hr	2.72 in	1.00 in
2 yr 1 hr	2.53 in	0.87 in

3. POST DEVELOPMENT STAGE – STORAGE ANALYSIS

Table 8: Stage Storage (Post-Development)	
Stage	**Total**
Feet	**Storage**
NAVD	**ac-ft**
1.29	0.00
1.79	0.00
2.29	0.02
2.79	0.03
3.29	0.05
3.79	0.07
4.29	0.09
4.79	0.10
5.29	0.11
5.79	0.12
6.29	0.21
6.79	0.37
7.29	0.54
7.79	0.70
8.29	0.87

PRE VS POST DEVELOPMENT WATER QUALITY

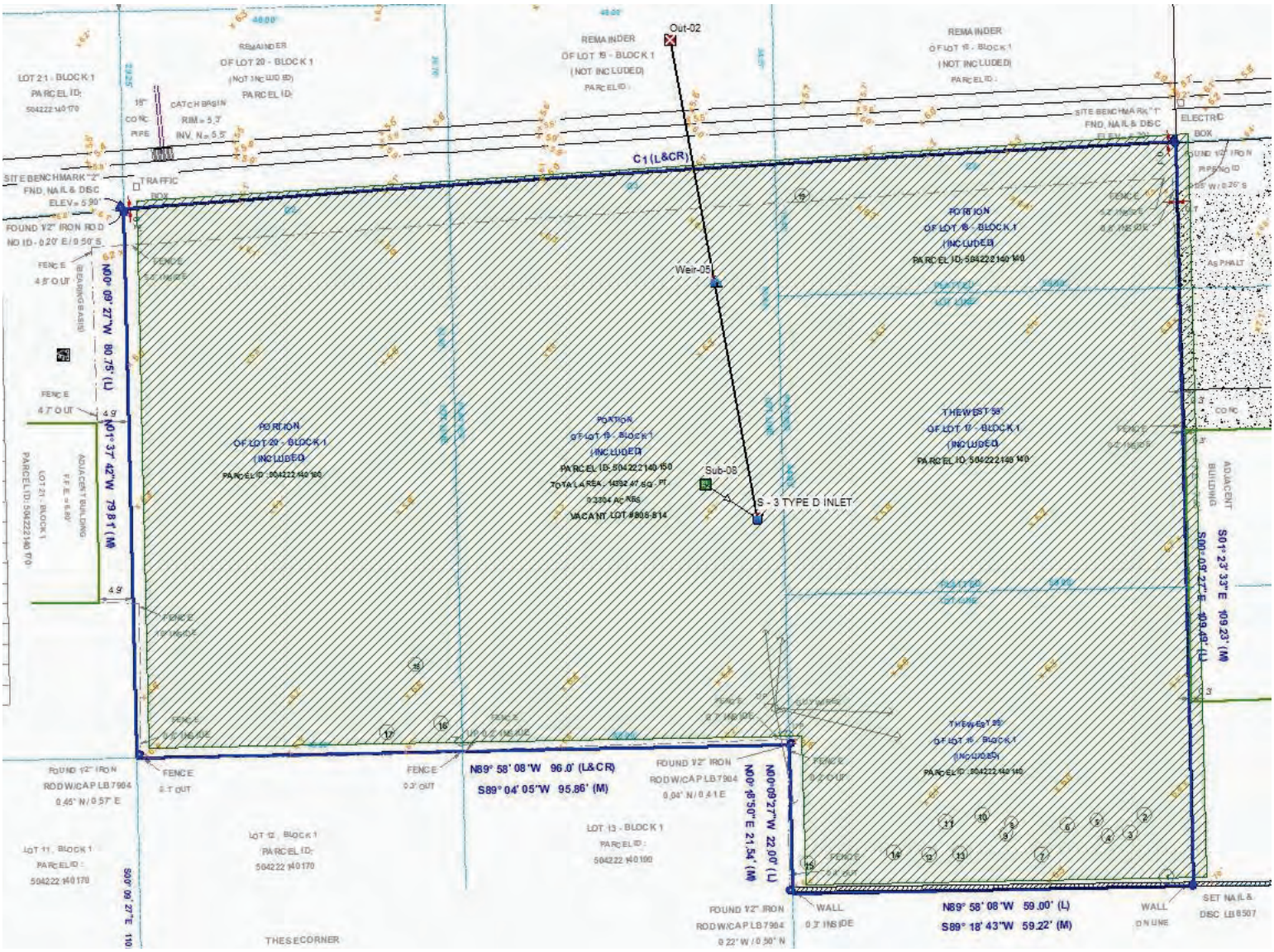
Applied to an 'off-line' system (retention area).

Table 9: Water Quality Calculations	Pre	Post
Compute First in. of Runoff times Site Area	0,329 ac-in 0,027 ac-ft	0,329 ac-in 0,027 ac-ft
Compute % of Imperviousness times depth: Site Area for WQ perv/imperv calc only Imperv Area for WQ perv/imperv calc only % of Imperviousness for WQ Depth times % Imperv = Depth to be treated	2,50 in 0,33 ac 0,00 ac 0,0% 0,00 in	2,50 in 0,33 ac 0,20 ac 61,0% 1,52 in
Volume required for WQ treatment	0,000 ac-in 0,000 ac-ft	0,502 ac-in 0,042 ac-ft
The greater of 1st in. of runoff or % imp. X depth controls & is the volume to be treated for WQ	0,329 ac-in 0,027 ac-ft	0,502 ac-in 0,042 ac-ft

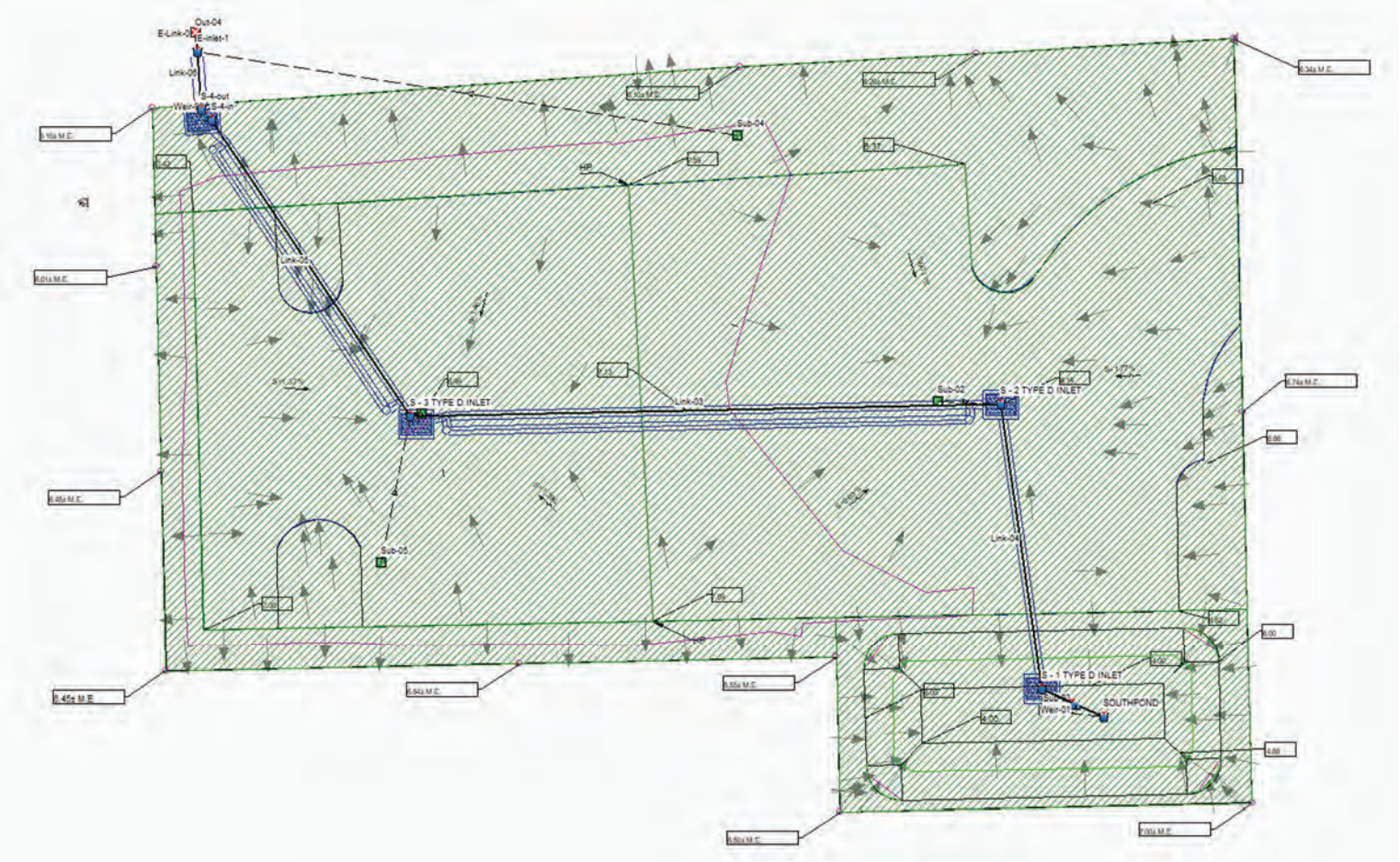
SECTION FOUR: FDOT REQUIREMENTS

1. General Site Information:

a. Pre-Development Drainage Map



b. Post-Development Drainage Map



c. Hydrologic Soil Classification

USCS Soil Survey (Appendix 2) was referenced to determine the onsite hydrologic soil classification.

Table 10: Soil Classification		
Soil Type	**Acres**	**Hydrological Soil Group**
Matlacha, Limestone Substratum	0.28	B
Urban land, 0 to 2 percent slopes	0.05	-

d. Existing Land use and Land Cover

The existing land use is 'B-1 - Boulevard Business' for all 3 parcels and the existing land cover consists of low grass covers with a few trees.

e. Acreage and Percentage of the Total Project

Table 11-A: Parcel Acreage	
Parcel ID	**Acreage**
504222140160	0.09
504222140150	0.09
504222140150	0.15

Table 11-B: Pre and Post Project Areas				
	Acreage		**Percentage**	
	Pre	**Post**	**Pre**	**Post**
Total Land Area	0.33	0.33	100	100
Impervious Surface	0.00	0.201	0.00	61.0
Pervious Surface	0.33	0.129	100	39.0

Runoff & Max Stage (Post-Development) POND			
SCS Equation	**Rainfall (P)**	**Outfall Discharge (cfs)**	**Max Stage (ft) SSA**
Storm Event	Taken from NOAA		
100 yr 72 hr	18.40 in	2.91 cfs	4.63 ft
50 yr 72 hr	15.90 in	2.81 cfs	4.55 ft
25 yr 72 hr	13.60 in	2.31 cfs	4.53 ft
10 yr 72 hr	10.80 in	1.69 cfs	4.52 ft
5 yr 72 hr	8.99 in	1.38 cfs	4.50 ft
2 yr 72 hr	7.02 in	0.95 cfs	4.31 ft
100 yr 24 hr	16.00 in	2.57 cfs	4.54 ft
50 yr 24 hr	13.70 in	2.11 cfs	4.53 ft
25 yr 24 hr	11.60 in	1.43 cfs	4.52 ft
10 yr 24 hr	9.14 in	1.24 cfs	4.51 ft
5 yr 24 hr	7.48 in	0.99 cfs	4.39 ft
2 yr 24 hr	5.64 in	0.66 cfs	4.17 ft

2. POND FREE-BOARD

Top of Bank Elevation (Pond 1)	6.00’
Max stage (Pond 1)	4.63’

1.0 ft of free board has been provided for the retention area (1187 sf) for the 100 ye 72 hr storm event.

SECTION SIX: SUMMARY AND CONCLUSION

After careful analysis of the stormwater drainage calculations, it has been proven that the post development improvements will meet the Broward County Land Development Code and FDOT stormwater requirements. The post-development volume has been carefully evaluated using an advanced stormwater modeling software and it has been proved that the design storm event of 100-year, 72-hour rainfall precipitation and the maximum Stage/HGL is being redirected offsite to the FDOT's road drainage system in accordance with the natural pre-development by the combination of retention area and underground detention/exfiltration system proposed. In this case is necessary that the stormwater captured in the site be redirected out as the site dimensions and layout does not allow the stormwater to be managed inside without significantly changing and reducing the usable space of the lots.

STAGE STORAGE SUMMARY TABLE FOR 25 YR-24 HR STORM EVENT						
SN	**Element ID**	**Invert elevation (ft)**	**Rim Elevation (ft)**	**Initial water elevation (ft)**	**Ponded area (sf)**	**Maximum HGL Elevation Attained (ft)**
2	E-inlet-1	0.00	5.30	1.29	10.00	2.76
3	S - 1 TYPE D INLET	2.50	5.00	1.29	671.40	4.29
4	S - 2 TYPE D INLET	2.00	6.19	1.29	20.00	4.29
5	S - 3 TYPE D INLET	2.00	6.99	1.29	20.00	4.27
6	S-4-in	0.00	6.20	1.29	3.00	4.25
7	S-4-out	0.00	6.20	1.29	10.00	2.94
8	SOUTHPOND	4.00	6.00	4.00	1187.00	4.52

STAGE STORAGE SUMMARY TABLE FOR 100 YR-24 HR STORM EVENT						
SN	**Element ID**	**Invert elevation (ft)**	**Rim Elevation (ft)**	**Initial water elevation (ft)**	**Ponded area (sf)**	**Maximum HGL Elevation Attained (ft)**
2	E-inlet-1	0.00	5.30	1.29	10.00	2.94
3	S - 1 TYPE D INLET	2.50	5.00	1.29	671.40	4.49
4	S - 2 TYPE D INLET	2.00	6.19	1.29	20.00	4.49
5	S - 3 TYPE D INLET	2.00	6.99	1.29	20.00	4.45
6	S-4-in	0.00	6.20	1.29	3.00	4.36
7	S-4-out	0.00	6.20	1.29	10.00	3.14
8	SOUTHPOND	4.00	6.00	4.00	1187.00	4.54

SUMMARY TABLE				
	PRE-DEVELOPMENT		POST DEVELOPMENT	
Site Specific Storage (S)	6.8 in		2.63 in	
100 yr 72 hr Peak Inflow	19.11 cfs		3.26 cfs	
100 yr 24 hr Peak Inflow	19.75 cfs		2.57 cfs	
100 yr 08 hr Peak Inflow	16.91 cfs		1.46 cfs	
100 yr 04 hr Peak Inflow	19.71 cfs		1.24 cfs	
100 yr 02 hr Peak Inflow	15.26 cfs		2.22 cfs	
100 yr 01 hr Peak Inflow	9.25 cfs		2.59 cfs	
50 yr 72 hr Peak Inflow	18.11 cfs		2.81 cfs	
50 yr 24 hr Peak Inflow	17.65 cfs		2.11 cfs	
25 yr 72 hr Peak Inflow	17.07 cfs		2.31 cfs	
25 yr 24 hr Peak Inflow	19.71 cfs		1.43 cfs	
10 yr 72 hr Peak Inflow	15.57 cfs		1.69 cfs	
10 yr 24 hr Peak Inflow	9.62 cfs		1.24 cfs	
5 yr 72 hr Peak Inflow	9.07 cfs		1.38 cfs	
5 yr 24 hr Peak Inflow	6.17 cfs		0.99 cfs	
2 yr 72 hr Peak Inflow	5.04 cfs		0.95 cfs	
2 yr 24 hr Peak Inflow	2.51 cfs		0.66 cfs	
	Calculated	Model	Calculated	Model
100 yr 72 hr Storm Runoff	0.34 ac-ft	0.34 ac-ft	0.43 ac-ft	0.44 ac-ft
100 yr 24 hr Storm Runoff	0.28 ac-ft	0.22 ac-ft	0.36 ac-ft	0.38 ac-ft
100 yr 08 hr Storm Runoff	0.17 ac-ft	0.18 ac-ft	0.25 ac-ft	0.27 ac-ft
100 yr 04 hr Storm Runoff	0.12 ac-ft	0.12 ac-ft	0.19 ac-ft	0.20 ac-ft
100 yr 02 hr Storm Runoff	0.08 ac-ft	0.08 ac-ft	0.13 ac-ft	0.15 ac-ft
100 yr 01 hr Storm Runoff	0.05 ac-ft	0.05 ac-ft	0.09 ac-ft	0.11 ac-ft
50 yr 72 hr Storm Runoff	0.27 ac-ft	0.28 ac-ft	0.36 ac-ft	0.37 ac-ft
50 yr 24 hr Storm Runoff	0.22 ac-ft	0.23 ac-ft	0.30 ac-ft	0.32 ac-ft
25 yr 72 hr Storm Runoff	0.22 ac-ft	0.22 ac-ft	0.30 ac-ft	0.31 ac-ft
25 yr 24 hr Storm Runoff	0.17 ac-ft	0.14 ac-ft	0.25 ac-ft	0.23 ac-ft
10 yr 72 hr Storm Runoff	0.15 ac-ft	0.16 ac-ft	0.22 ac-ft	0.24 ac-ft
10 yr 24 hr Storm Runoff	0.11 ac-ft	0.12 ac-ft	0.18 ac-ft	0.20 ac-ft
5 yr 72 hr Storm Runoff	0.11 ac-ft	0.12 ac-ft	0.18 ac-ft	0.19 ac-ft
5 yr 24 hr Storm Runoff	0.08 ac-ft	0.08 ac-ft	0.14 ac-ft	0.16 ac-ft
2 yr 72 hr Storm Runoff	0.07 ac-ft	0.07 ac-ft	0.13 ac-ft	0.14 ac-ft
2 yr 24 hr Storm Runoff	0.05 ac-ft	0.05 ac-ft	0.09 ac-ft	0.11 ac-ft

	Calculated	Model	Calculated	Model
100 yr 72 hr Max Site Stage	7.37 ft	7.79 ft	6.95 ft	4.63 ft
100 yr 24 hr Max Site Stage	7.19 ft	6.95 ft	6.76 ft	4.54 ft
100 yr 08 hr Max Site Stage	6.91 ft	6.94 ft	6.41 ft	4.52 ft
100 yr 04 hr Max Site Stage	6.73 ft	7.80 ft	6.16 ft	4.52 ft
100 yr 02 hr Max Site Stage	6.55 ft	6.96 ft	5.85 ft	4.52 ft
100 yr 01 hr Max Site Stage	6.42 ft	6.92 ft	4.37 ft	4.52 ft
50 yr 72 hr Max Site Stage	7.19 ft	6.95 ft	6.75 ft	4.55 ft
50 yr 24 hr Max Site Stage	7.04 ft	6.95 ft	6.57 ft	4.53 ft
25 yr 72 hr Max Site Stage	7.03 ft	6.94 ft	6.56 ft	4.53 ft
25 yr 24 hr Max Site Stage	6.90 ft	6.94 ft	6.40 ft	4.52 ft
10 yr 72 hr Max Site Stage	6.84 ft	6.95 ft	6.34 ft	4.52 ft
10 yr 24 hr Max Site Stage	6.71 ft	6.93 ft	6.12 ft	4.51 ft
5 yr 72 hr Max Site Stage	6.70 ft	6.95 ft	6.10 ft	4.50 ft
5 yr 24 hr Max Site Stage	6.57 ft	6.93 ft	5.87 ft	4.39 ft
2 yr 72 hr Max Site Stage	6.53 ft	6.93 ft	5.80 ft	4.31 ft
2 yr 24 hr Max Site Stage	6.42 ft	6.41 ft	4.46 ft	4.17 ft

APPENDIX 1: SITE NOAA RAINFALL PRECIPITATION

NOAA Atlas 14, Volume 9, Version 2
Location name: Fort Lauderdale, Florida, USA*
Latitude: 26.0925°, Longitude: -80.1511°
Elevation: 6 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.550** (0.439-0.696)	**0.638** (0.510-0.809)	**0.784** (0.624-0.996)	**0.906** (0.717-1.16)	**1.07** (0.824-1.41)	**1.20** (0.905-1.61)	**1.34** (0.972-1.83)	**1.47** (1.03-2.07)	**1.65** (1.11-2.38)	**1.78** (1.18-2.62)
10-min	**0.805** (0.643-1.02)	**0.935** (0.746-1.18)	**1.15** (0.914-1.46)	**1.33** (1.05-1.69)	**1.57** (1.21-2.07)	**1.76** (1.32-2.35)	**1.96** (1.42-2.68)	**2.15** (1.51-3.02)	**2.41** (1.63-3.49)	**2.61** (1.72-3.84)
15-min	**0.981** (0.784-1.24)	**1.14** (0.910-1.44)	**1.40** (1.11-1.78)	**1.62** (1.28-2.06)	**1.92** (1.47-2.52)	**2.15** (1.62-2.87)	**2.38** (1.74-3.26)	**2.62** (1.84-3.69)	**2.94** (1.99-4.25)	**3.18** (2.10-4.68)
30-min	**1.58** (1.27-2.01)	**1.85** (1.48-2.35)	**2.29** (1.82-2.91)	**2.65** (2.10-3.39)	**3.16** (2.42-4.15)	**3.55** (2.66-4.74)	**3.94** (2.87-5.39)	**4.34** (3.04-6.10)	**4.86** (3.29-7.04)	**5.27** (3.48-7.75)
60-min	**2.19** (1.75-2.77)	**2.53** (2.02-3.20)	**3.11** (2.48-3.95)	**3.63** (2.87-4.63)	**4.38** (3.38-5.82)	**5.00** (3.77-6.72)	**5.64** (4.12-7.77)	**6.33** (4.45-8.96)	**7.28** (4.94-10.6)	**8.04** (5.31-11.8)
2-hr	**2.79** (2.24-3.51)	**3.20** (2.57-4.03)	**3.93** (3.15-4.96)	**4.60** (3.66-5.83)	**5.60** (4.37-7.43)	**6.44** (4.90-8.64)	**7.34** (5.41-10.1)	**8.32** (5.90-11.7)	**9.70** (6.64-14.1)	**10.8** (7.19-15.8)
3-hr	**3.12** (2.52-3.91)	**3.57** (2.87-4.47)	**4.40** (3.53-5.53)	**5.18** (4.13-6.53)	**6.38** (5.01-8.49)	**7.42** (5.68-9.96)	**8.56** (6.34-11.8)	**9.80** (7.00-13.8)	**11.6** (7.98-16.8)	**13.1** (8.73-19.0)
6-hr	**3.64** (2.95-4.52)	**4.21** (3.41-5.25)	**5.30** (4.27-6.61)	**6.33** (5.08-7.94)	**7.95** (6.29-10.5)	**9.35** (7.21-12.5)	**10.9** (8.13-14.9)	**12.6** (9.05-17.7)	**15.1** (10.4-21.7)	**17.1** (11.5-24.7)
12-hr	**4.09** (3.33-5.05)	**4.90** (3.99-6.06)	**6.38** (5.18-7.91)	**7.74** (6.25-9.64)	**9.83** (7.80-12.9)	**11.6** (8.97-15.4)	**13.5** (10.1-18.3)	**15.6** (11.3-21.7)	**18.6** (12.9-26.5)	**21.0** (14.2-30.2)
24-hr	**4.61** (3.78-5.66)	**5.64** (4.62-6.93)	**7.48** (6.10-9.21)	**9.14** (7.42-11.3)	**11.6** (9.26-15.1)	**13.7** (10.7-18.0)	**16.0** (12.0-21.4)	**18.4** (13.3-25.3)	**21.8** (15.2-30.9)	**24.5** (16.7-35.0)
2-day	**5.35** (4.41-6.52)	**6.46** (5.32-7.88)	**8.44** (6.93-10.3)	**10.3** (8.37-12.6)	**13.0** (10.4-16.8)	**15.3** (11.9-19.9)	**17.7** (13.4-23.7)	**20.4** (14.9-28.0)	**24.2** (17.1-34.1)	**27.3** (18.7-38.7)
3-day	**5.93** (4.90-7.20)	**7.02** (5.79-8.52)	**8.99** (7.40-10.9)	**10.8** (8.84-13.2)	**13.6** (10.9-17.5)	**15.9** (12.5-20.7)	**18.4** (14.0-24.5)	**21.2** (15.5-28.9)	**25.1** (17.8-35.2)	**28.3** (19.5-40.0)
4-day	**6.45** (5.34-7.81)	**7.50** (6.20-9.08)	**9.40** (7.76-11.4)	**11.2** (9.18-13.6)	**13.9** (11.2-17.9)	**16.3** (12.8-21.1)	**18.8** (14.3-25.0)	**21.6** (15.9-29.4)	**25.5** (18.1-35.8)	**28.8** (19.9-40.6)
7-day	**7.88** (6.55-9.48)	**8.80** (7.31-10.6)	**10.5** (8.72-12.7)	**12.2** (10.1-14.8)	**14.8** (12.0-18.9)	**17.1** (13.6-22.1)	**19.6** (15.1-25.9)	**22.4** (16.6-30.4)	**26.4** (18.9-36.8)	**29.8** (20.6-41.7)
10-day	**9.08** (7.57-10.9)	**10.0** (8.35-12.0)	**11.8** (9.80-14.2)	**13.5** (11.1-16.3)	**16.1** (13.1-20.5)	**18.4** (14.6-23.7)	**20.9** (16.1-27.6)	**23.7** (17.6-32.1)	**27.8** (19.9-38.5)	**31.1** (21.6-43.4)
20-day	**12.1** (10.2-14.5)	**13.6** (11.4-16.2)	**16.1** (13.5-19.3)	**18.3** (15.2-22.0)	**21.5** (17.5-26.8)	**24.1** (19.1-30.4)	**26.8** (20.6-34.6)	**29.6** (22.0-39.4)	**33.5** (24.1-45.8)	**36.5** (25.6-50.7)
30-day	**14.6** (12.3-17.3)	**16.6** (13.9-19.7)	**19.8** (16.6-23.6)	**22.5** (18.7-26.9)	**26.1** (21.1-32.1)	**28.9** (22.9-36.1)	**31.7** (24.4-40.6)	**34.5** (25.7-45.5)	**38.2** (27.5-51.8)	**41.0** (28.8-56.6)
45-day	**17.8** (15.0-21.0)	**20.3** (17.1-24.0)	**24.2** (20.4-28.7)	**27.4** (22.9-32.6)	**31.5** (25.4-38.3)	**34.5** (27.4-42.7)	**37.3** (28.8-47.4)	**40.1** (29.8-52.3)	**43.4** (31.3-58.4)	**45.8** (32.4-63.1)
60-day	**20.5** (17.3-24.1)	**23.3** (19.7-27.5)	**27.8** (23.4-32.8)	**31.2** (26.2-37.1)	**35.6** (28.8-43.1)	**38.7** (30.8-47.6)	**41.5** (32.1-52.4)	**44.1** (32.9-57.3)	**47.2** (34.0-63.2)	**49.2** (34.9-67.6)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

APPENDIX 2: USCS SOIL SURVEY

Soil Map—Broward County, Florida, East Part

Map Scale: 1:287 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 4 8 16 24

Feet: 0 10 20 40 60

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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: Broward County, Florida, East Part
Survey Area Data: Version 21, Aug 29, 2025

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

Date(s) aerial images were photographed: Jan 14, 2022—Jan 24, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
20	Matlacha, limestone substratum-Urban land complex	0.3	85.5%
40	Urban land, 0 to 2 percent slopes	0.0	14.5%
Totals for Area of Interest		**0.3**	**100.0%**

Broward County, Florida, East Part

20—Matlacha, limestone substratum-Urban land complex

Map Unit Setting

National map unit symbol: 1hn90
Elevation: 0 to 30 feet
Mean annual precipitation: 60 to 68 inches
Mean annual air temperature: 72 to 79 degrees F
Frost-free period: 358 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Matlacha, limestone substratum, and similar soils: 50 percent
Urban land: 45 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Matlacha, Limestone Substratum

Setting

Landform: Flats on marine terraces
Landform position (three-dimensional): Talf
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Sandy mine spoil or earthy fill over limestone

Typical profile

C - 0 to 23 inches: gravelly fine sand
2Ab - 23 to 27 inches: fine sand
2Eb - 27 to 48 inches: fine sand
3R - 48 to 52 inches: unweathered bedrock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High 1.98 to 5.95 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F156AY340FL - Subtropical Pine Flatwoods and Palmetto Prairie of Miami Ridge / Atlantic Coastal Strip
Forage suitability group: Forage suitability group not assigned G156AC999FL)
Other vegetative classification: Forage suitability group not assigned (G156AC999FL)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Ecological site: F156AY340FL - Subtropical Pine Flatwoods and Palmetto Prairie of Miami Ridge / Atlantic Coastal Strip
Forage suitability group: Forage suitability group not assigned G156AC999FL)
Other vegetative classification: Forage suitability group not assigned (G156AC999FL)
Hydric soil rating: Unranked

Minor Components

Margate

Percent of map unit: 5 percent
Landform: Drainageways on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F156AY340FL - Subtropical Pine Flatwoods and Palmetto Prairie of Miami Ridge / Atlantic Coastal Strip
Other vegetative classification: Forage suitability group not assigned (G156AC999FL)
Hydric soil rating: Yes

Data Source Information

Soil Survey Area: Broward County, Florida, East Part
Survey Area Data: Version 21, Aug 29, 2025

Broward County, Florida, East Part

40—Urban land, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2x9fc
Elevation: 0 to 200 feet
Mean annual precipitation: 40 to 68 inches
Mean annual air temperature: 68 to 79 degrees F
Frost-free period: 345 to 365 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Hills on marine terraces, ridges on marine terraces, knolls on marine terraces, rises on marine terraces, flatwoods on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser, rise, talf
Down-slope shape: Linear, convex
Across-slope shape: Linear
Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified
Forage suitability group: Forage suitability group not assigned G155XB999FL)
Other vegetative classification: Forage suitability group not assigned (G155XB999FL)
Hydric soil rating: Unranked

Minor Components

Matlacha

Percent of map unit: 3 percent
Landform: Flats on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Other vegetative classification: Forage suitability group not assigned (G155XB999FL)
Hydric soil rating: No

St. augustine

Percent of map unit: 3 percent
Landform: Marine terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Linear
Across-slope shape: Convex
Other vegetative classification: Forage suitability group not assigned (G155XB999FL)
Hydric soil rating: No

Cypress lake

Percent of map unit: 1 percent
Landform: Flats on marine terraces, drainageways on marine terraces
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Convex, linear
Across-slope shape: Linear, concave
Other vegetative classification: South Florida Flatwoods R155XY003FL), Sandy over loamy soils on flats of hydric or mesic lowlands (G155XB241FL)
Hydric soil rating: Yes

Brynwood

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: Yes

Immokalee

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Myakka

Percent of map unit: 1 percent
Landform: Drainageways on flatwoods on marine terraces
Landform position (three-dimensional): Tread, dip, talf
Down-slope shape: Linear
Across-slope shape: Linear, concave
Other vegetative classification: South Florida Flatwoods R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)

Hydric soil rating: No

Paola

Percent of map unit: 1 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)
Hydric soil rating: No

Pomello

Percent of map unit: 1 percent
Landform: Ridges on marine terraces, knolls on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear
Other vegetative classification: Sand Pine Scrub (R155XY001FL), Sandy soils on rises and knolls of mesic uplands G155XB131FL)
Hydric soil rating: No

Eaugallie

Percent of map unit: 1 percent
Landform: Flatwoods on marine terraces
Landform position (three-dimensional): Tread, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: South Florida Flatwoods R155XY003FL), Sandy soils on flats of mesic or hydric lowlands (G155XB141FL)
Hydric soil rating: No

Adamsville

Percent of map unit: 1 percent
Landform: Rises on marine terraces, knolls on marine terraces
Landform position (three-dimensional): Tread, rise
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Upland Hardwood Hammock R155XY008FL), Sandy soils on rises and knolls of mesic uplands (G155XB131FL)
Hydric soil rating: No

Apopka

Percent of map unit: 1 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve, side slope, riser
Down-slope shape: Convex

Across-slope shape: Linear
Other vegetative classification: Longleaf Pine-Turkey Oak Hills R155XY002FL), Sandy soils on ridges and dunes of xeric uplands (G155XB111FL)
Hydric soil rating: No

Data Source Information

Soil Survey Area: Broward County, Florida, East Part
Survey Area Data: Version 21, Aug 29, 2025

APPENDIX 3: 100 YR-3DAY POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 72HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100YR 72HR	Cumulative	inches	Florida	Broward	100,00	18,40	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	18,38	18,14	1,62	1,00	0 00:10:00
2	Sub-02	0,12	484,00	98,00	18,38	18,14	2,18	1,35	0 00:10:00
3	Sub-03	0,04	484,00	61,00	18,38	12,34	0,46	0,36	0 00:10:00
4	Sub-04	0,06	484,00	61,00	18,38	12,38	0,78	0,60	0 00:10:00
5	Sub-05	0,02	484,00	61,00	18,38	12,19	0,25	0,18	0 00:10:00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					3,26	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	3,26	3,04				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,38	4,62				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	1,59	4,62				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	2,69	4,55				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	2,68	4,42				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	2,68	3,24				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,35	4,63				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	3,26	12,87	0,25	4,67	0,63	0,42	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	1,58	3,49	0,45	1,01	1,00	1,00	1001,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,39	2,37	0,17	0,69	0,74	0,74	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	2,68	4,01	0,67	1,70	1,00	1,00	1001,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	2,68	12,80	0,21	3,24	0,71	0,48	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,38							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				2,68							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

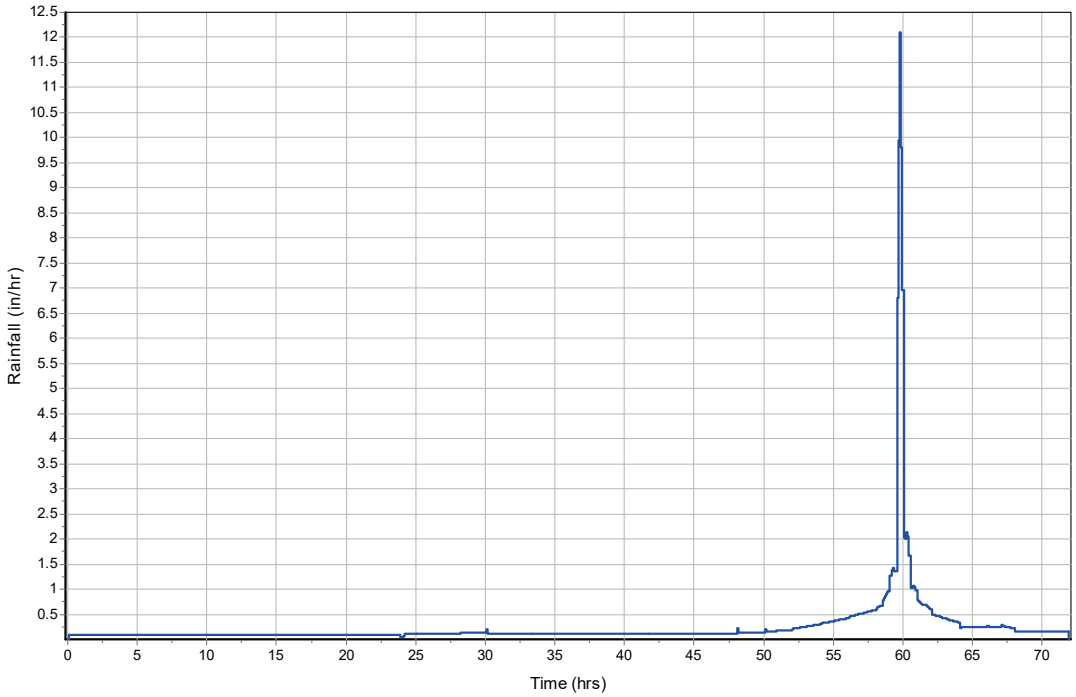
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

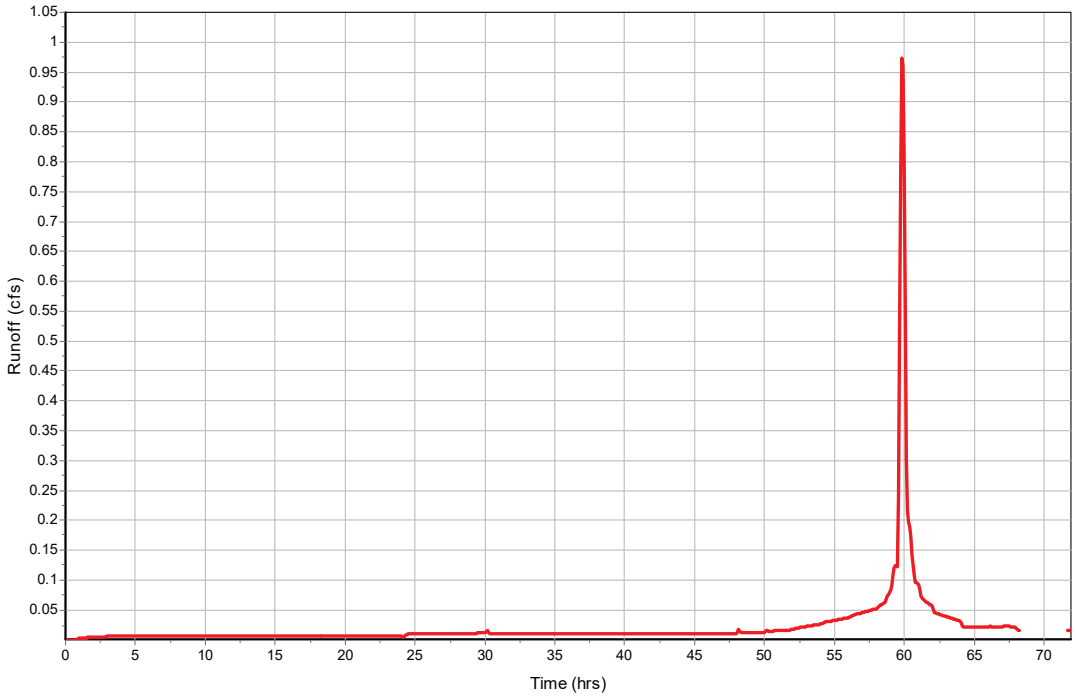
Total Rainfall (in)	18,38
Total Runoff (in)	18,14
Peak Runoff (cfs)	1
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

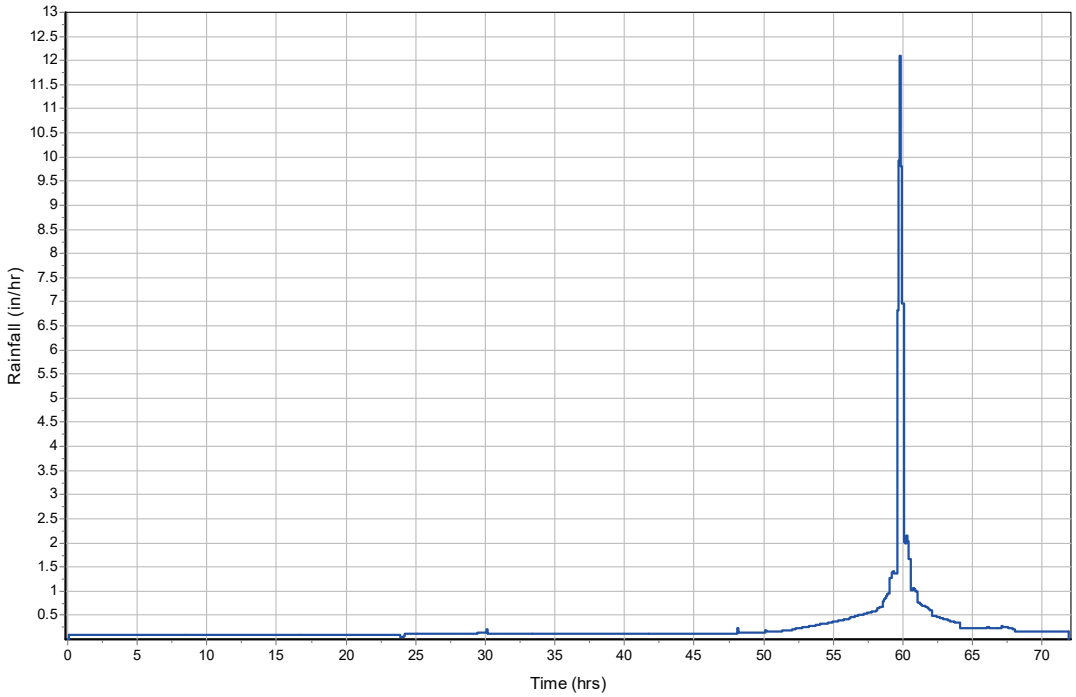
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

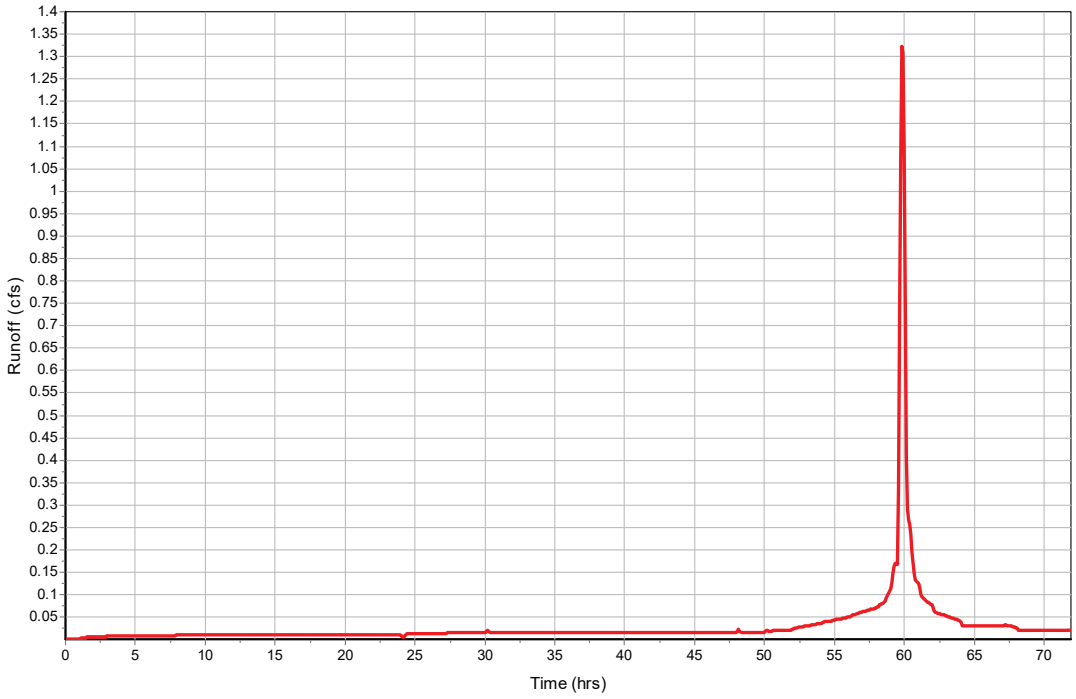
Total Rainfall (in)	18,38
Total Runoff (in)	18,14
Peak Runoff (cfs)	1,35
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

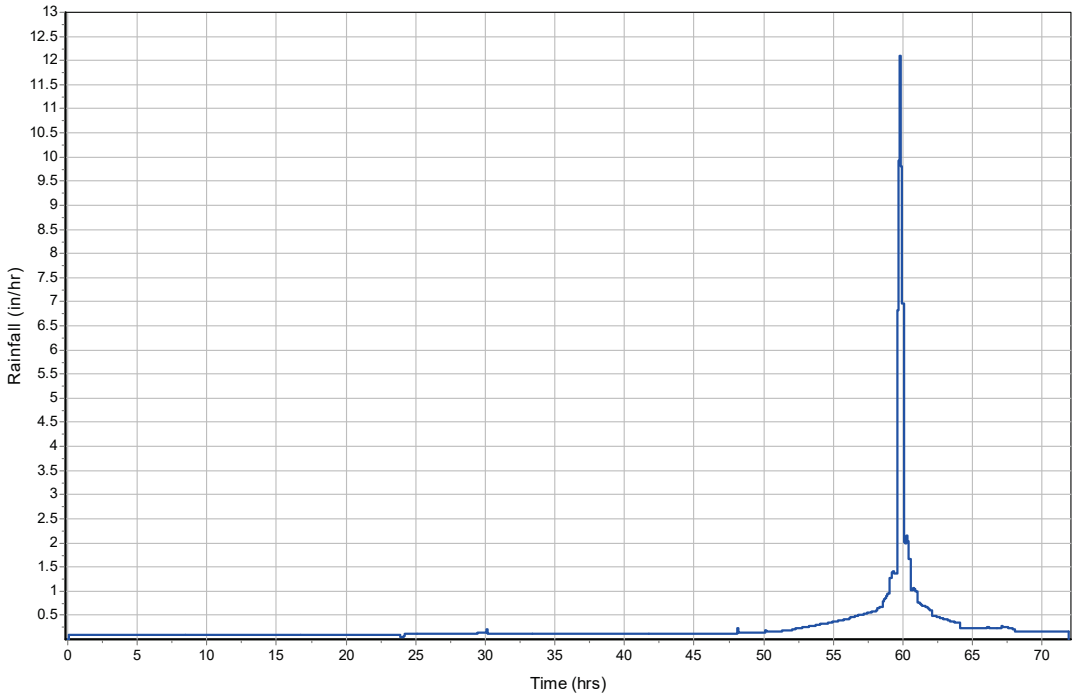
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

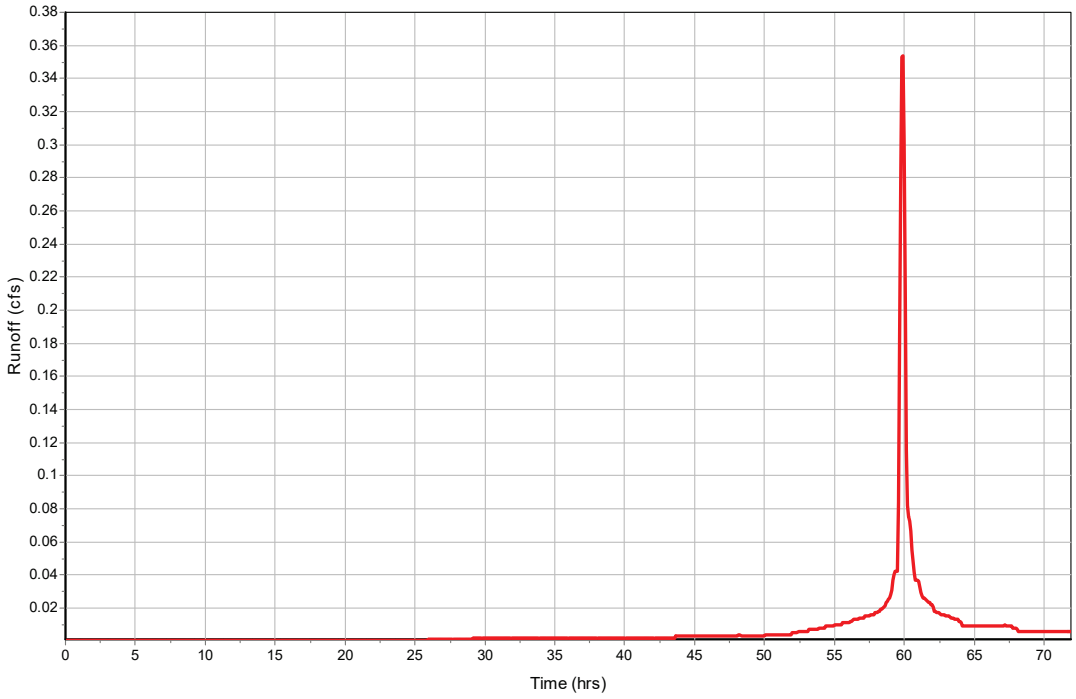
Total Rainfall (in)	18,38
Total Runoff (in)	12,34
Peak Runoff (cfs)	0,36
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

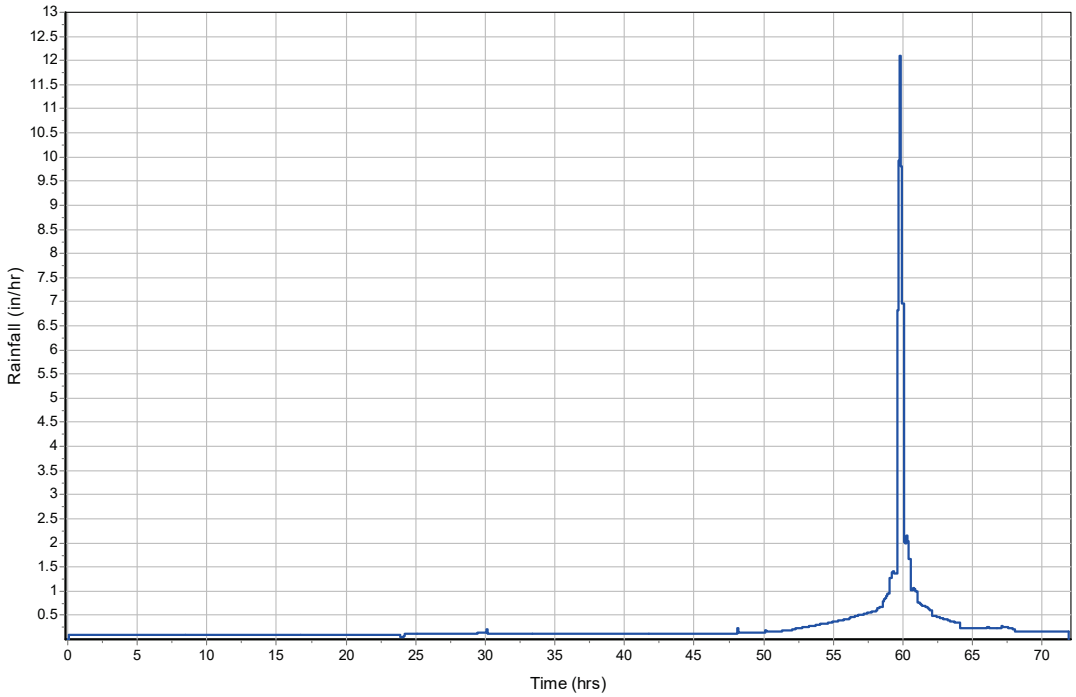
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

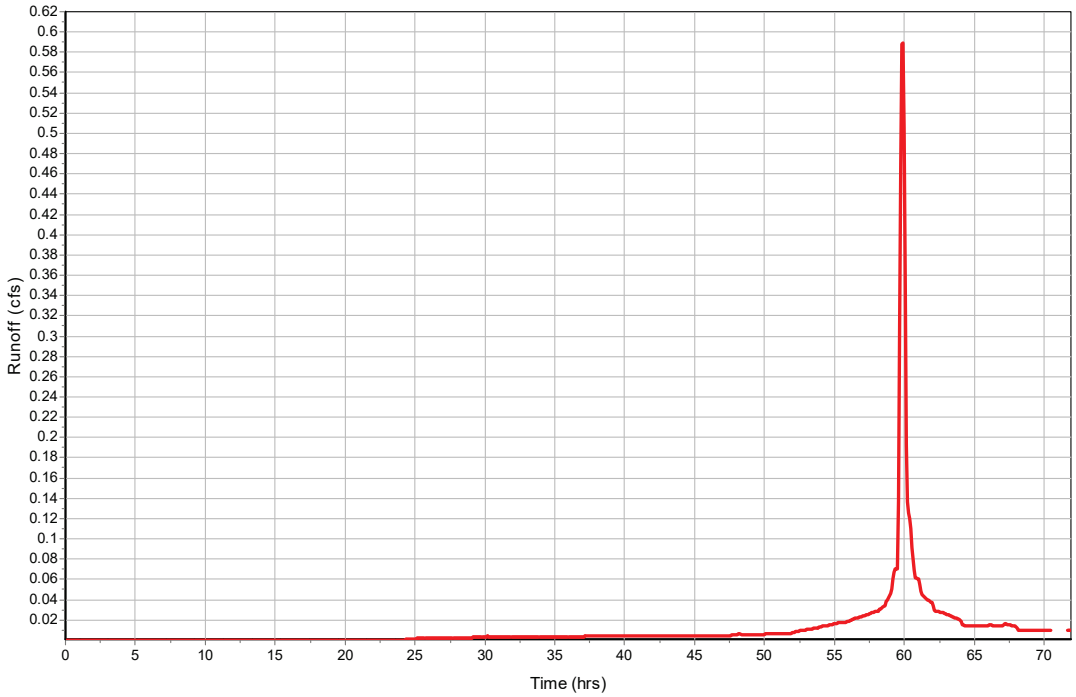
Total Rainfall (in)	18,38
Total Runoff (in)	12,38
Peak Runoff (cfs)	0,6
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

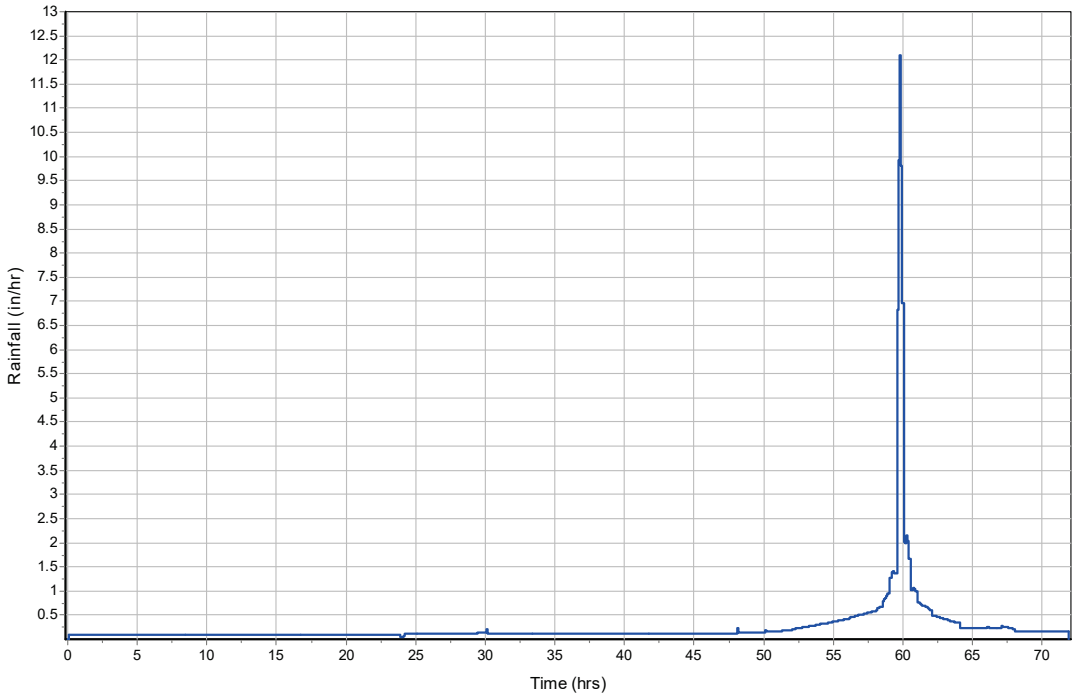
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

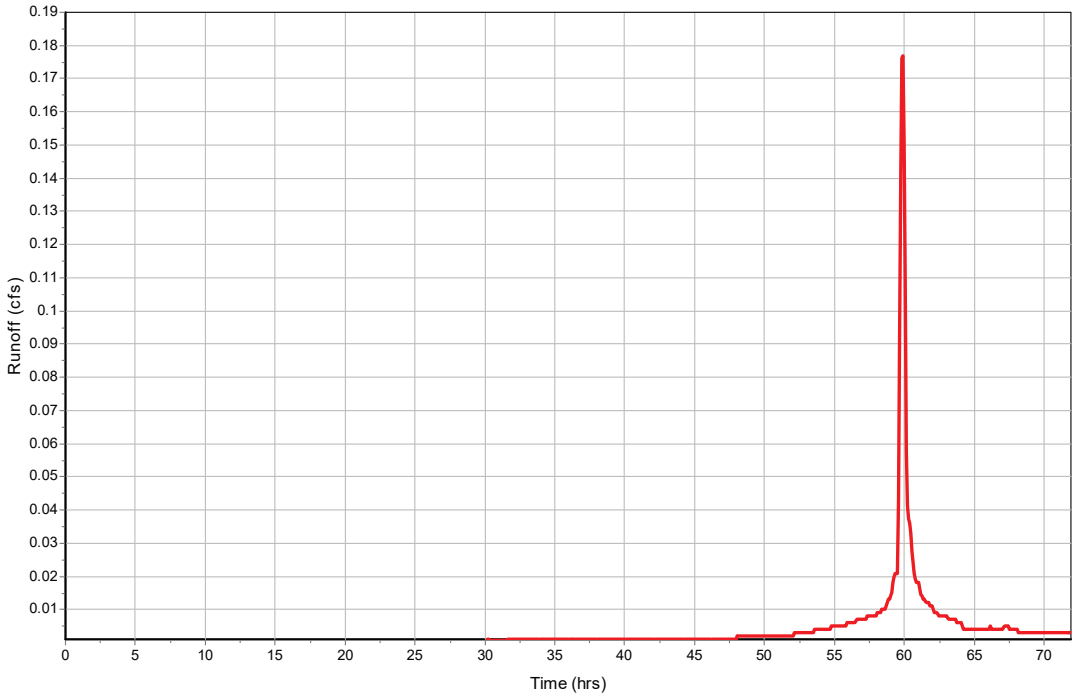
Total Rainfall (in)	18,38
Total Runoff (in)	12,19
Peak Runoff (cfs)	0,18
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	3,26	2 12:00	12,87	0,25	4,67	0,02	0,63	0,42	0,00		Calculated
2	Link-03	1,58	2 12:02	3,49	0,45	1,01	1,29	1,00	1,00	1001,00		SURCHARGED
3	Link-04	0,39	2 12:06	2,37	0,17	0,69	1,03	0,74	0,74	0,00		Calculated
4	Link-05	2,68	2 12:00	4,01	0,67	1,70	0,47	1,00	1,00	1001,00		SURCHARGED
5	Link-06	2,68	2 12:00	12,80	0,21	3,24	0,04	0,71	0,48	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	3,26
Peak Lateral Inflow (cfs)	0,59
Peak Outflow (cfs)	3,26
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,04
Max HGL Depth Attained (ft)	3,04
Average HGL Elevation Attained (ft)	2,12
Average HGL Depth Attained (ft)	2,12
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,38
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,39
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,62
Max HGL Depth Attained (ft)	2,12
Average HGL Elevation Attained (ft)	3,11
Average HGL Depth Attained (ft)	0,61
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

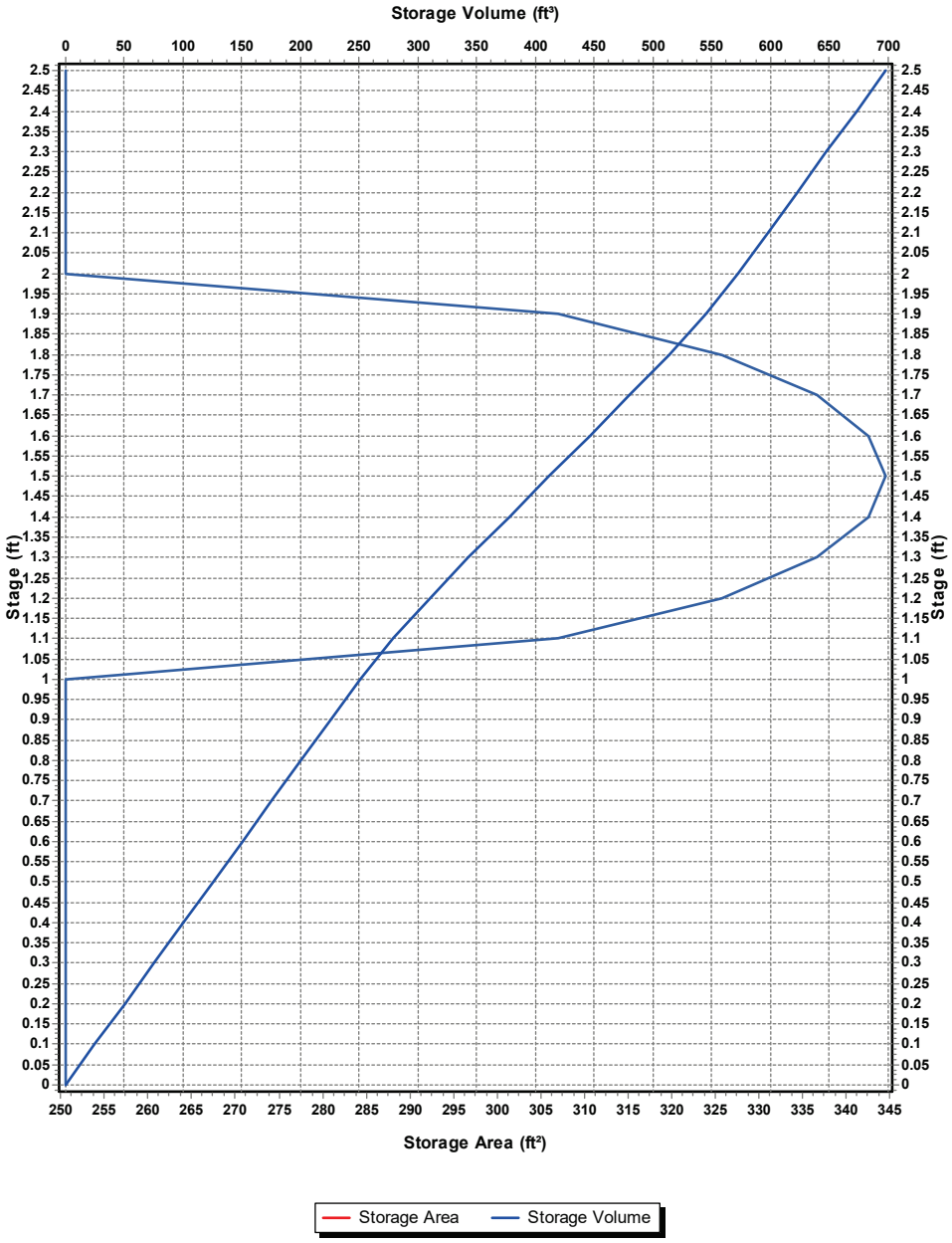
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,59
Peak Lateral Inflow (cfs)	1,32
Peak Outflow (cfs)	1,58
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,62
Max HGL Depth Attained (ft)	2,62
Average HGL Elevation Attained (ft)	3,09
Average HGL Depth Attained (ft)	1,09
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	2,945
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

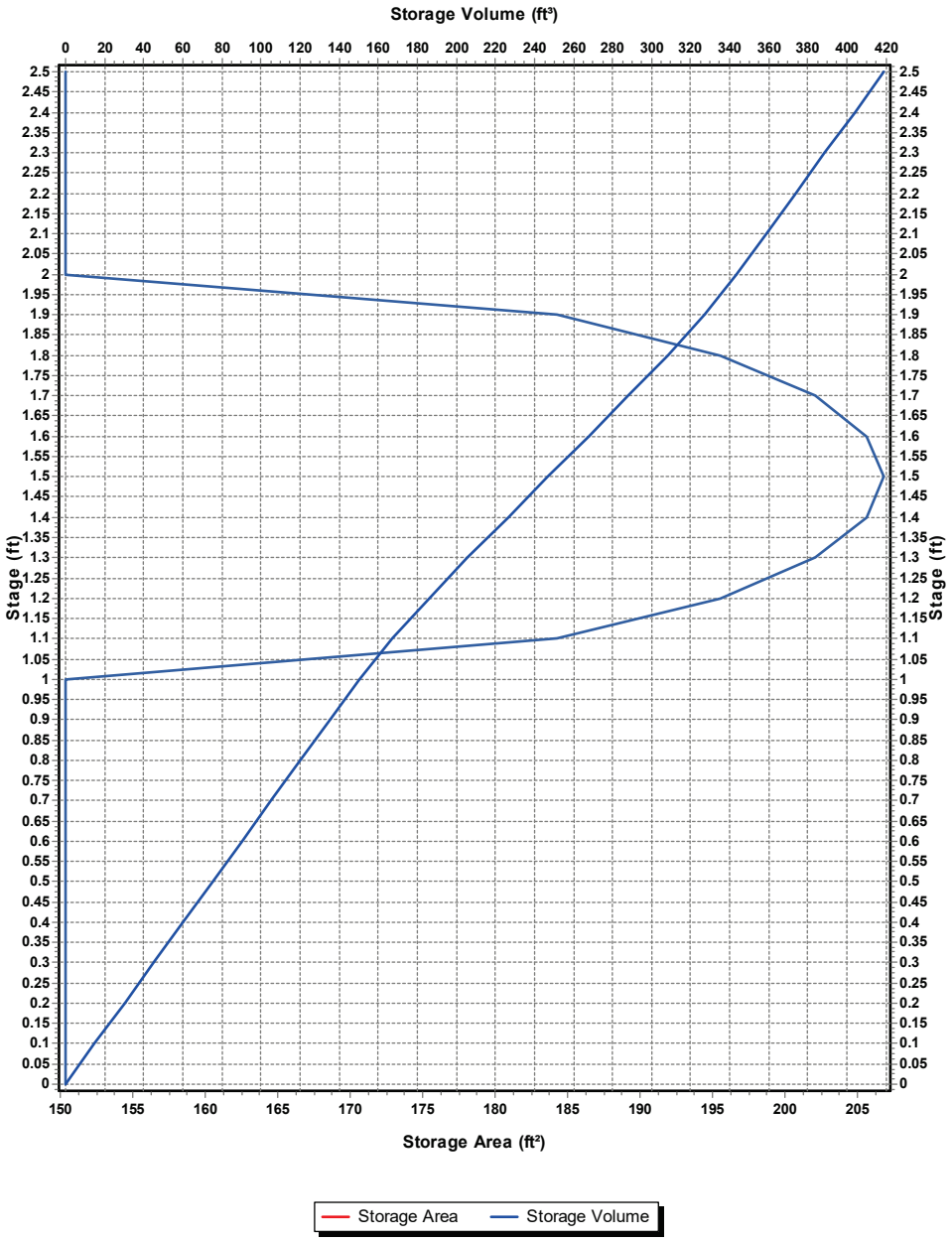
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	2,69
Peak Lateral Inflow (cfs)	1,15
Peak Outflow (cfs)	2,68
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,55
Max HGL Depth Attained (ft)	2,55
Average HGL Elevation Attained (ft)	3,13
Average HGL Depth Attained (ft)	1,13
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	1,858
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	2,68
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,68
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,42
Max HGL Depth Attained (ft)	4,42
Average HGL Elevation Attained (ft)	2,68
Average HGL Depth Attained (ft)	2,68
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,68
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,68
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,24
Max HGL Depth Attained (ft)	3,24
Average HGL Elevation Attained (ft)	1,83
Average HGL Depth Attained (ft)	1,83
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

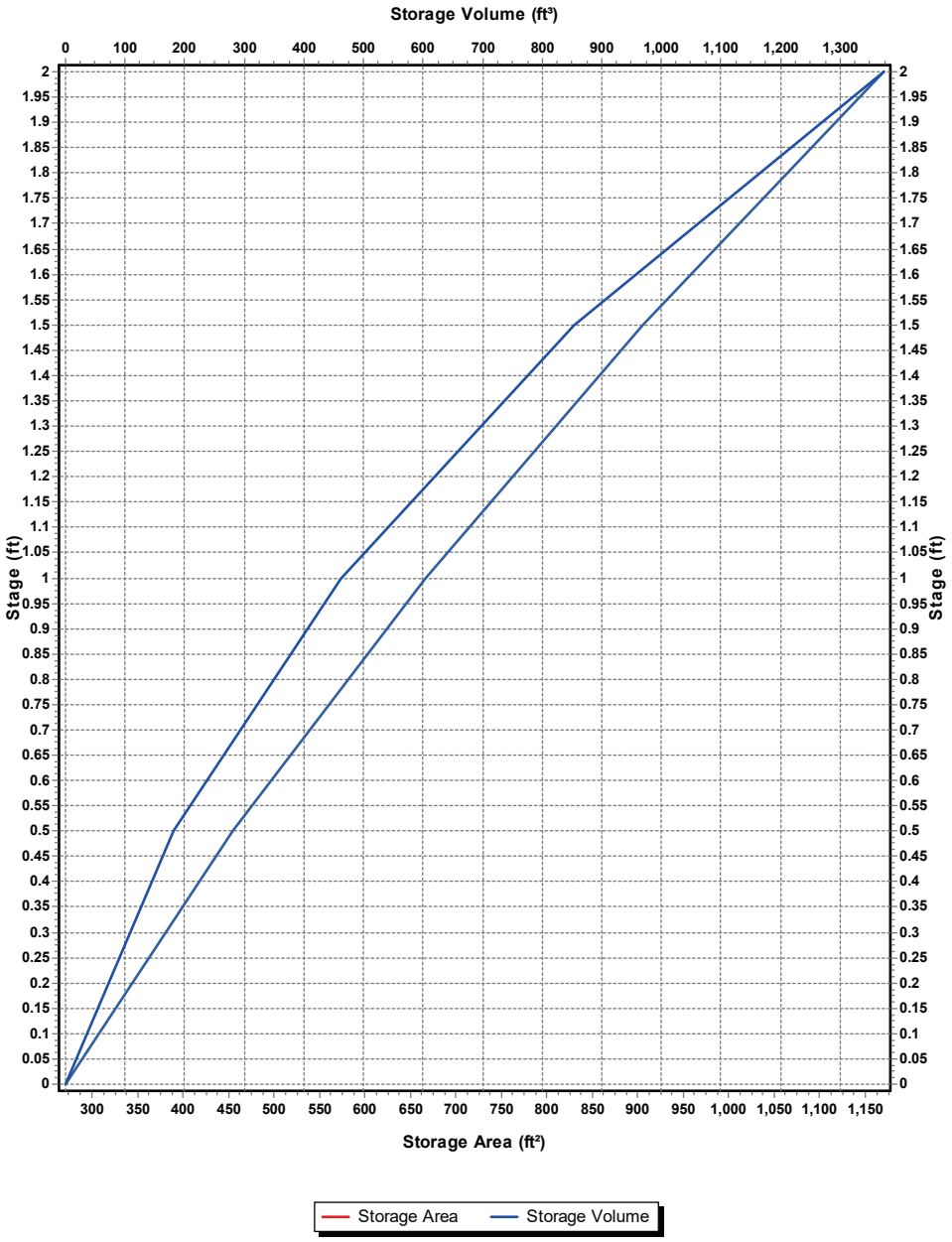
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,35
Peak Lateral Inflow (cfs)	0,35
Peak Outflow (cfs)	0,38
Peak Exfiltration Flow Rate (cfm)	1,41
Max HGL Elevation Attained (ft)	4,63
Max HGL Depth Attained (ft)	0,63
Average HGL Elevation Attained (ft)	4,13
Average HGL Depth Attained (ft)	0,13
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	1,196
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 4: 100 YR-24 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 24HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100YR 24HR	Cumulative	inches	Florida	Broward	100,00	16,00	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	16,00	15,76	1,40	0,79	0 00:10:00
2	Sub-02	0,12	484,00	98,00	16,00	15,76	1,89	1,07	0 00:10:00
3	Sub-03	0,04	484,00	61,00	16,00	10,25	0,38	0,25	0 00:10:00
4	Sub-04	0,06	484,00	61,00	16,00	10,26	0,65	0,42	0 00:10:00
5	Sub-05	0,02	484,00	61,00	16,00	10,23	0,21	0,13	0 00:10:00
							0,38		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					2,57	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	2,57	2,94				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,23	4,49				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	1,29	4,49				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	2,16	4,45				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	2,15	4,36				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	2,15	3,14				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,25	4,54				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	2,57	12,87	0,20	4,39	0,55	0,37	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	1,26	3,49	0,36	0,80	1,00	1,00	899,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,23	2,37	0,10	0,46	0,61	0,62	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	2,15	4,01	0,54	1,37	1,00	1,00	899,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	2,15	12,80	0,17	3,16	0,61	0,41	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,23							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				2,15							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

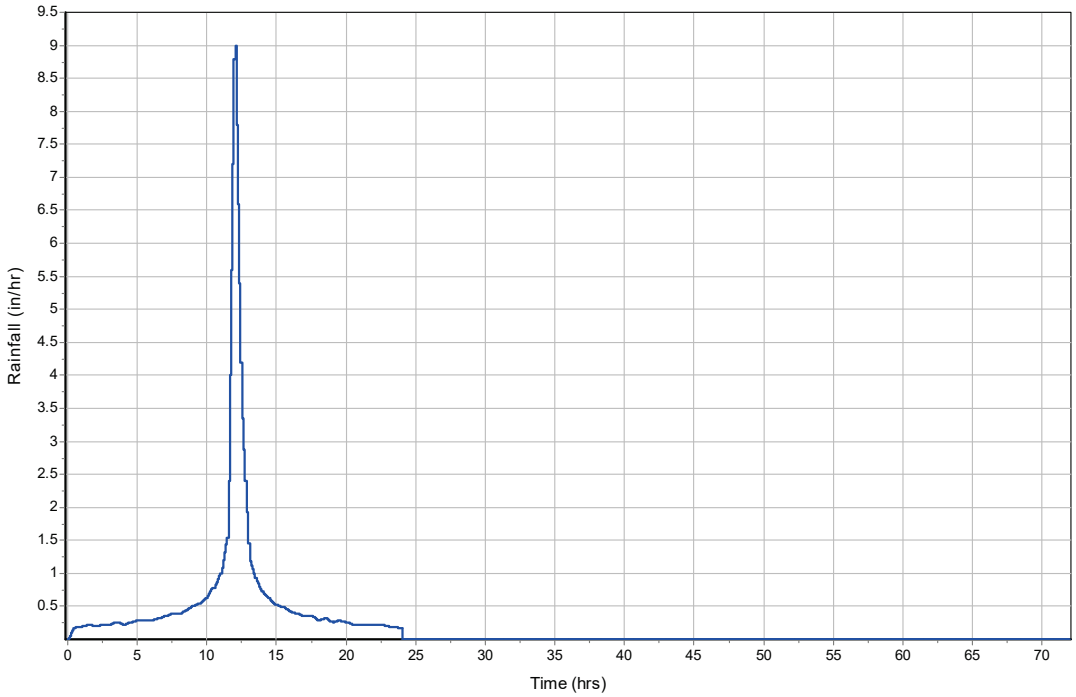
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

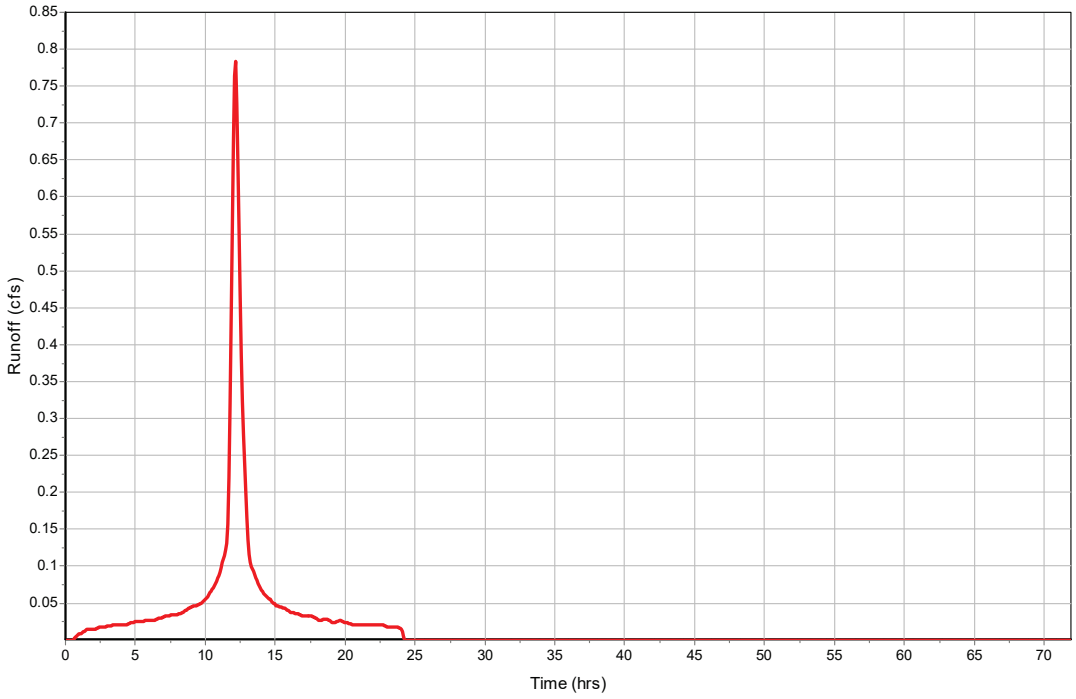
Total Rainfall (in)	16
Total Runoff (in)	15,76
Peak Runoff (cfs)	0,79
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

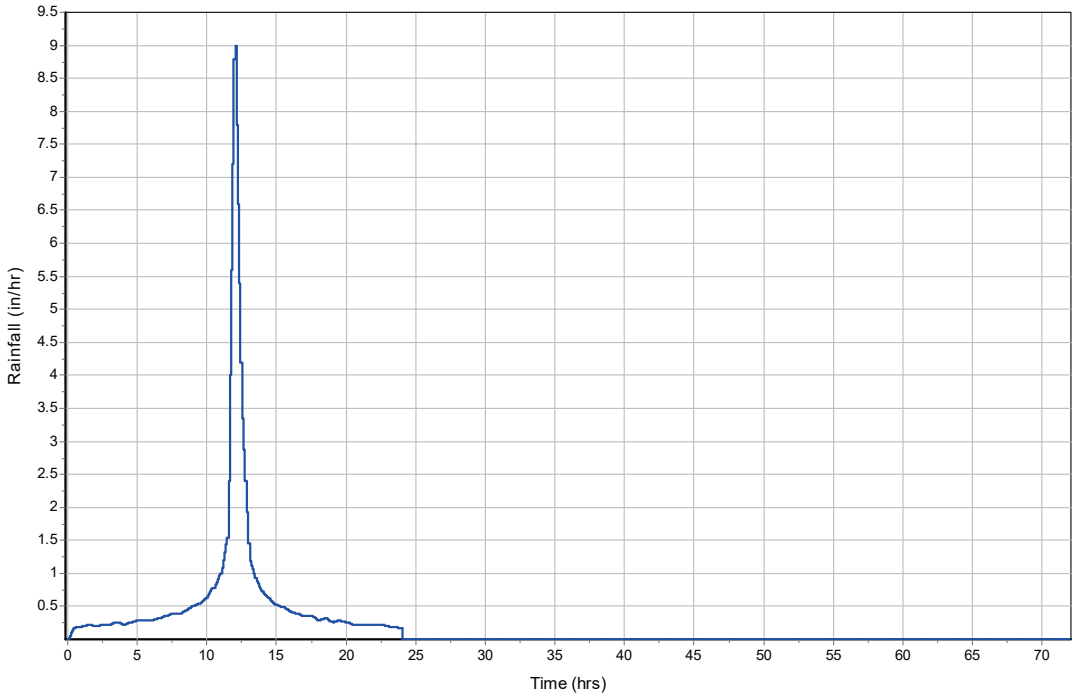
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

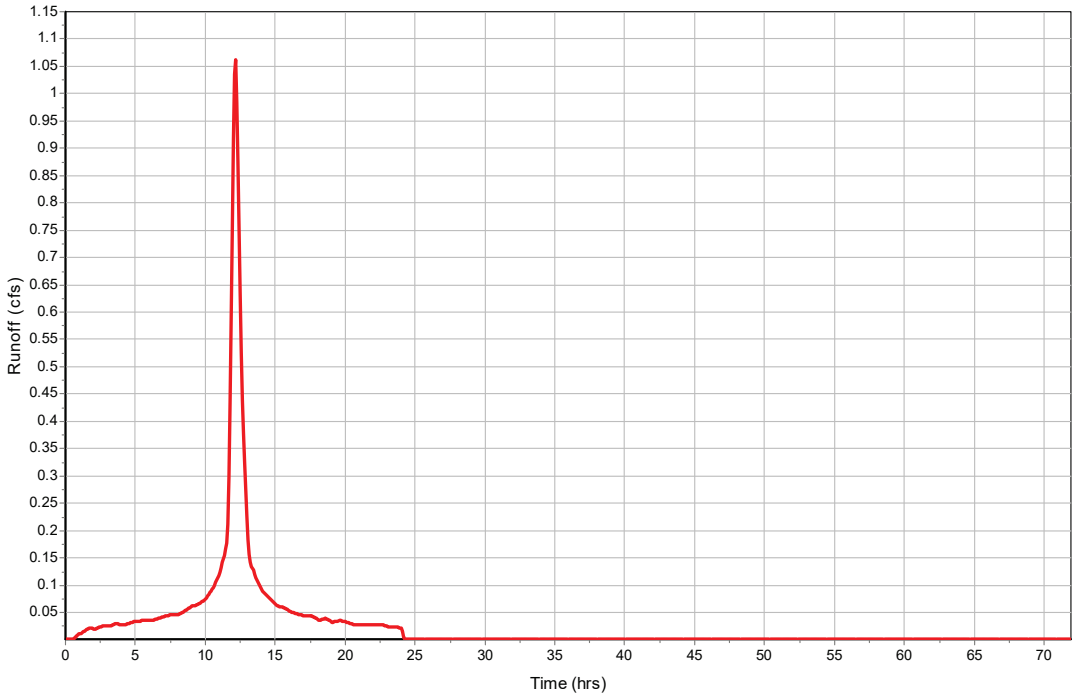
Total Rainfall (in)	16
Total Runoff (in)	15,76
Peak Runoff (cfs)	1,07
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

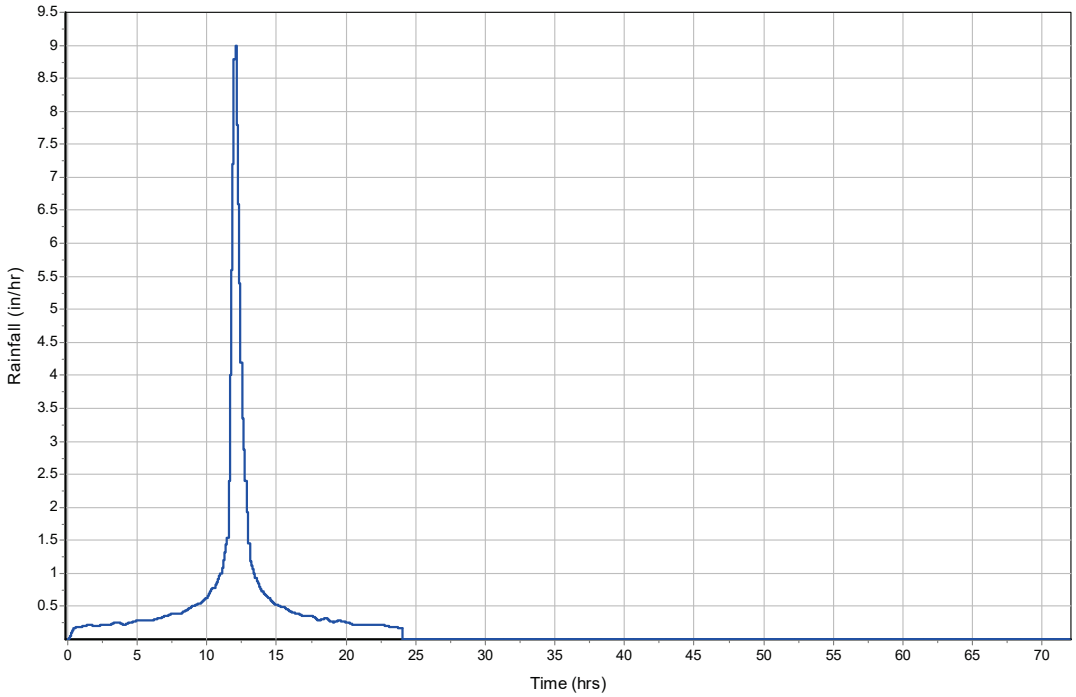
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

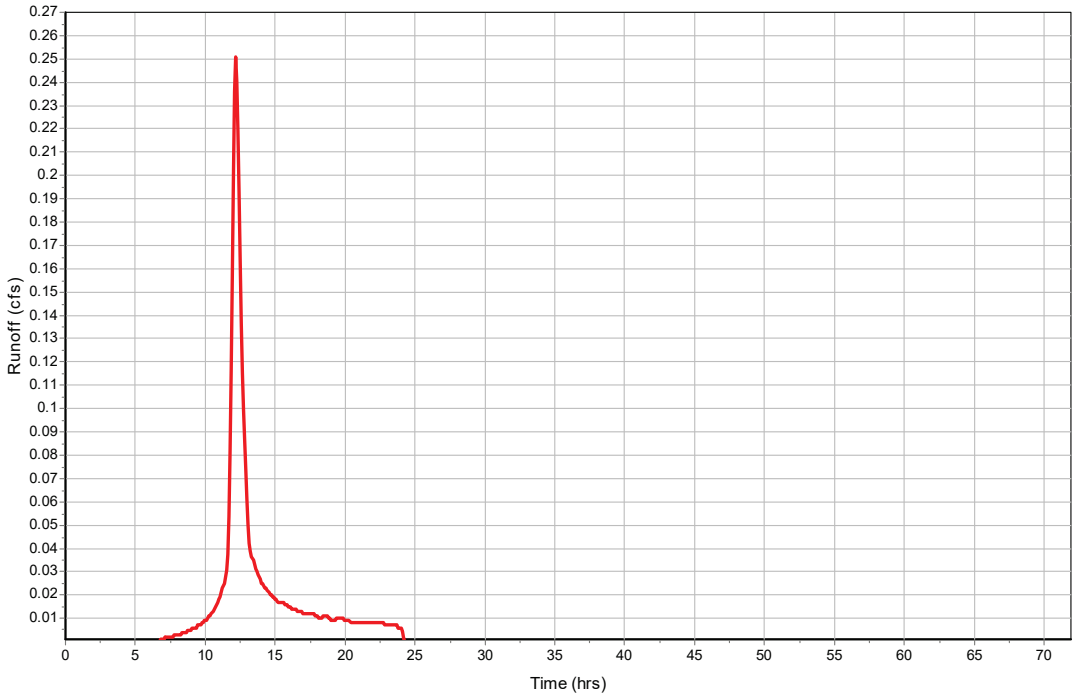
Total Rainfall (in)	16
Total Runoff (in)	10,25
Peak Runoff (cfs)	0,25
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

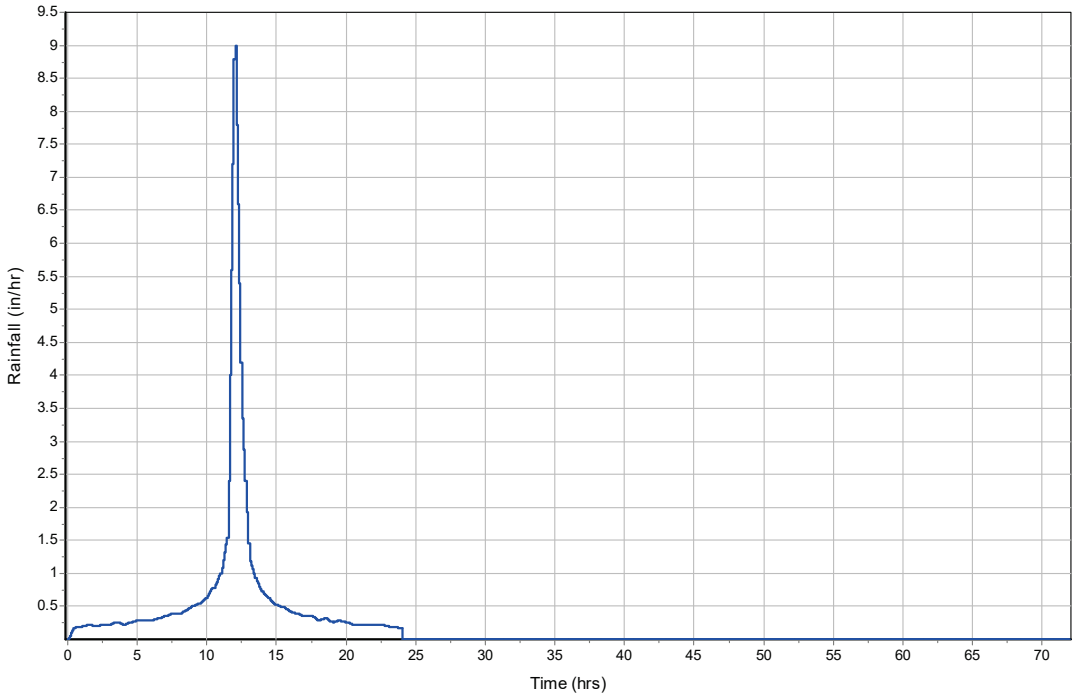
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

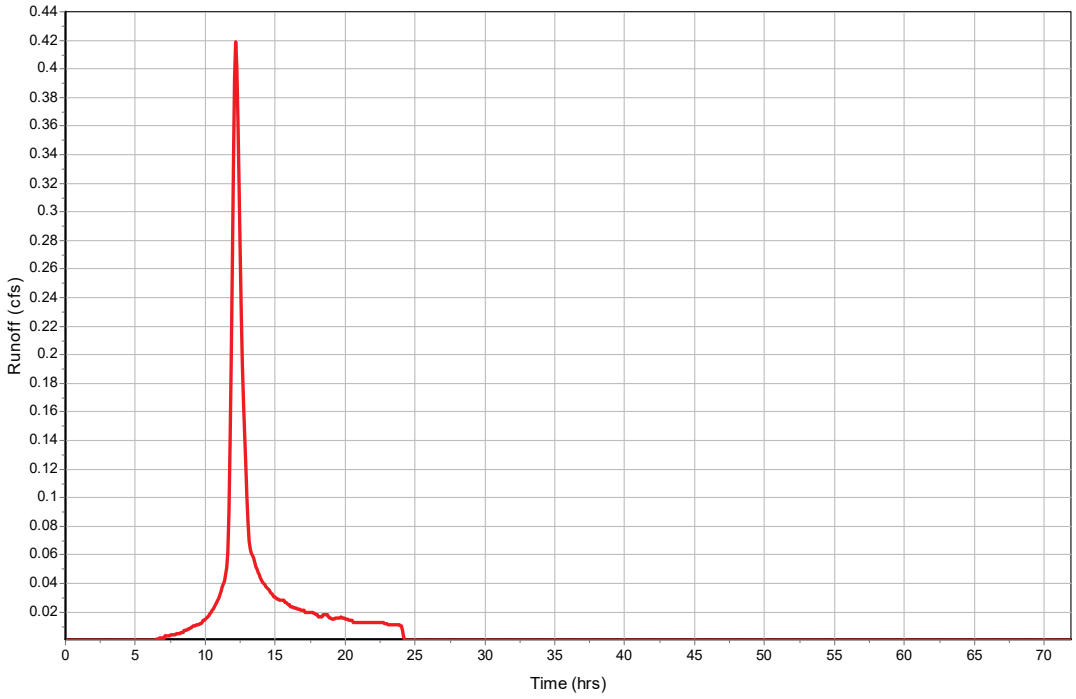
Total Rainfall (in)	16
Total Runoff (in)	10,26
Peak Runoff (cfs)	0,42
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

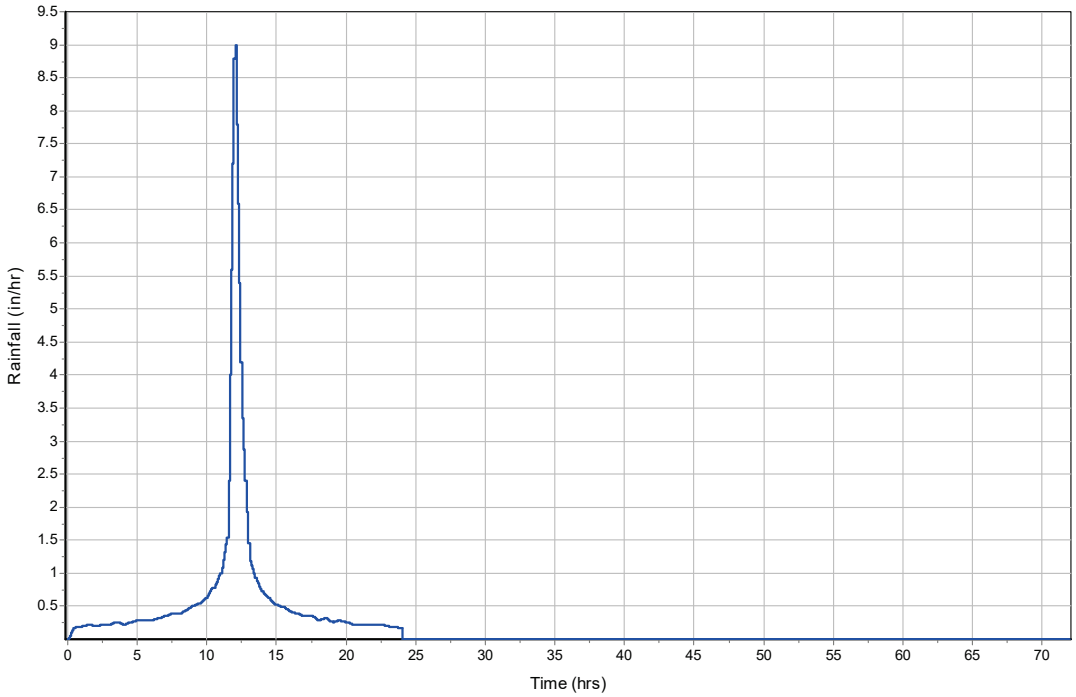
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

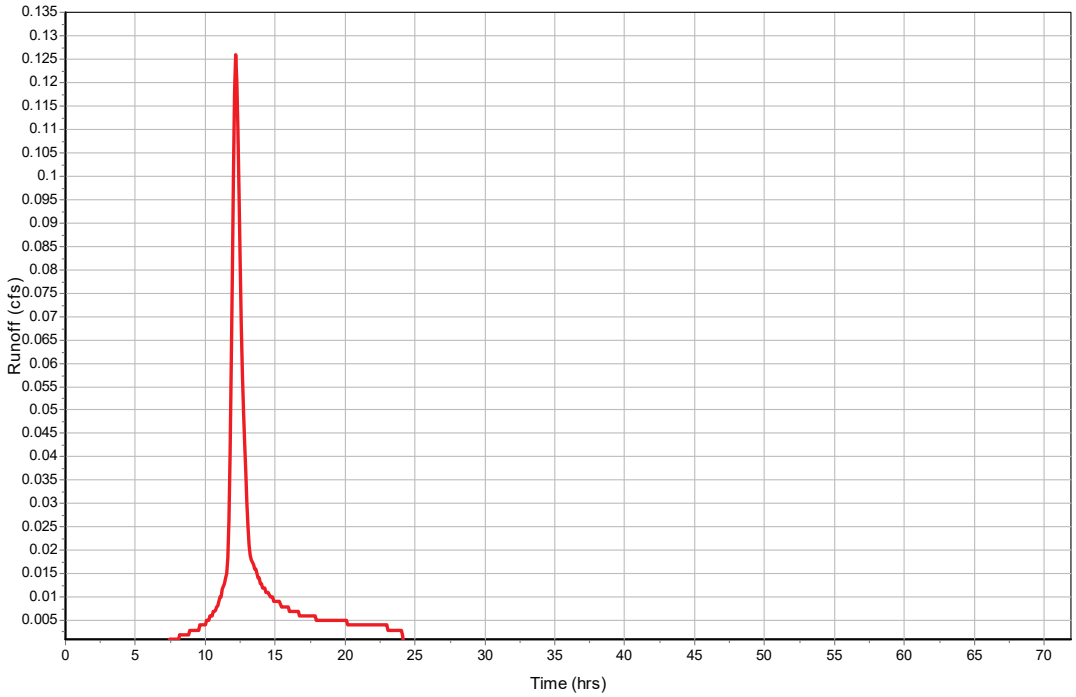
Total Rainfall (in)	16
Total Runoff (in)	10,23
Peak Runoff (cfs)	0,13
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	2,57	0 12:16	12,87	0,20	4,39	0,02	0,55	0,37	0,00		Calculated
2	Link-03	1,26	0 12:16	3,49	0,36	0,80	1,63	1,00	1,00	899,00		SURCHARGED
3	Link-04	0,23	0 12:16	2,37	0,10	0,46	1,54	0,61	0,62	0,00		Calculated
4	Link-05	2,15	0 12:16	4,01	0,54	1,37	0,58	1,00	1,00	899,00		SURCHARGED
5	Link-06	2,15	0 12:16	12,80	0,17	3,16	0,04	0,61	0,41	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,57
Peak Lateral Inflow (cfs)	0,42
Peak Outflow (cfs)	2,57
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,94
Max HGL Depth Attained (ft)	2,94
Average HGL Elevation Attained (ft)	2,36
Average HGL Depth Attained (ft)	2,36
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,23
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,23
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,49
Max HGL Depth Attained (ft)	1,99
Average HGL Elevation Attained (ft)	3,93
Average HGL Depth Attained (ft)	1,43
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

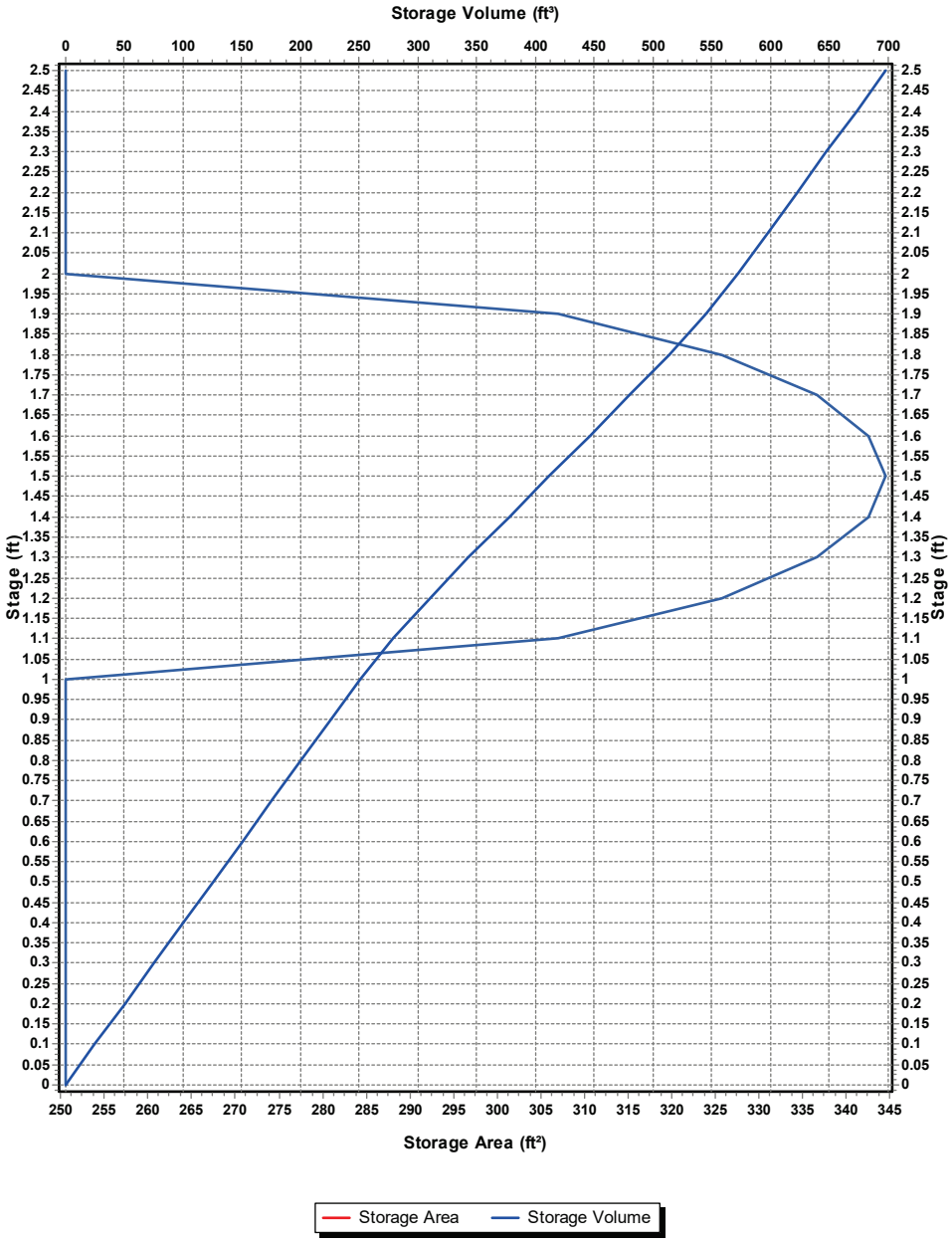
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,29
Peak Lateral Inflow (cfs)	1,06
Peak Outflow (cfs)	1,26
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,49
Max HGL Depth Attained (ft)	2,49
Average HGL Elevation Attained (ft)	3,1
Average HGL Depth Attained (ft)	1,1
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	1,73
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

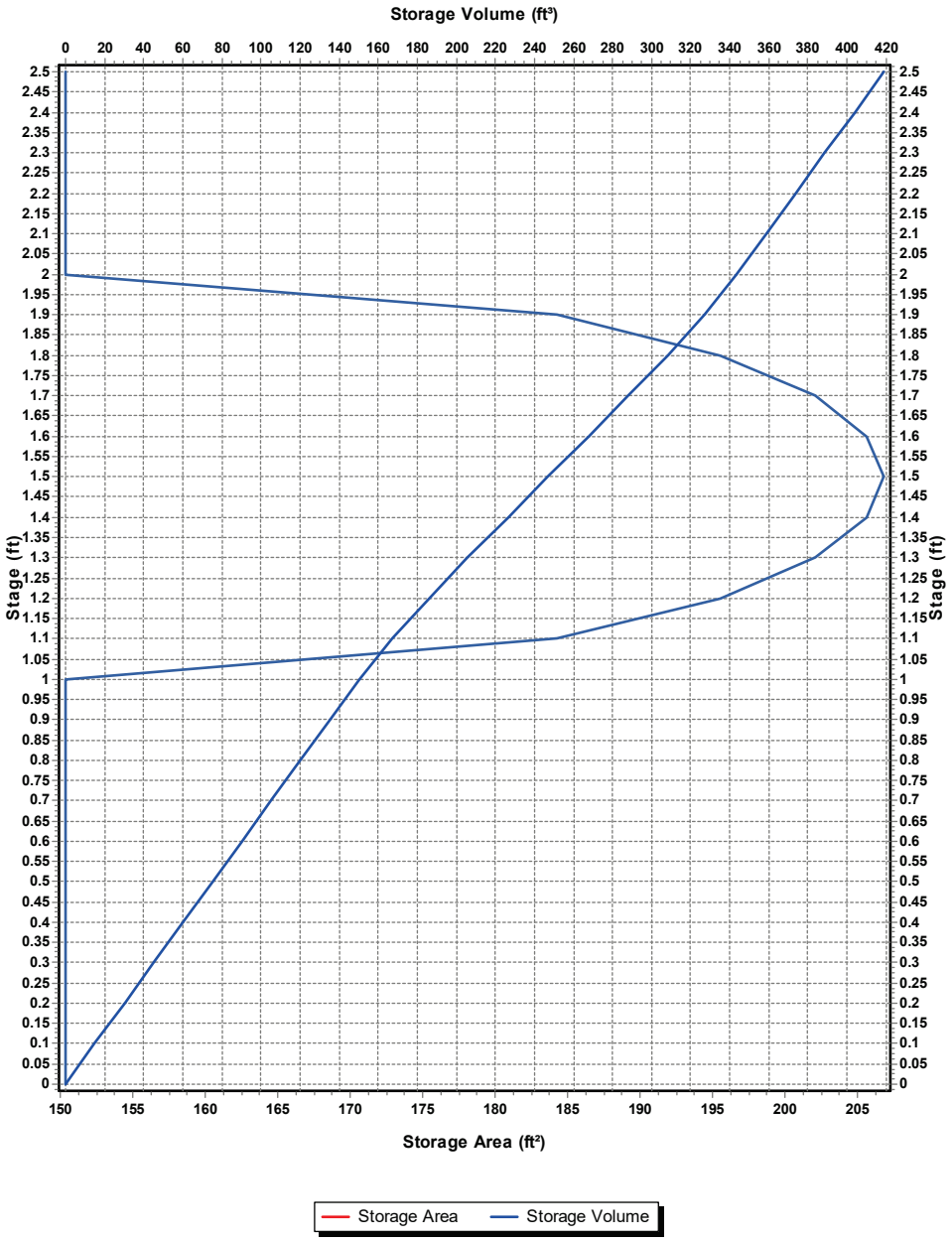
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	2,16
Peak Lateral Inflow (cfs)	0,91
Peak Outflow (cfs)	2,15
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,45
Max HGL Depth Attained (ft)	2,45
Average HGL Elevation Attained (ft)	3,11
Average HGL Depth Attained (ft)	1,11
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	1,051
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	2,15
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,15
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,36
Max HGL Depth Attained (ft)	4,36
Average HGL Elevation Attained (ft)	3,41
Average HGL Depth Attained (ft)	3,41
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,15
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,15
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,14
Max HGL Depth Attained (ft)	3,14
Average HGL Elevation Attained (ft)	2,51
Average HGL Depth Attained (ft)	2,51
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

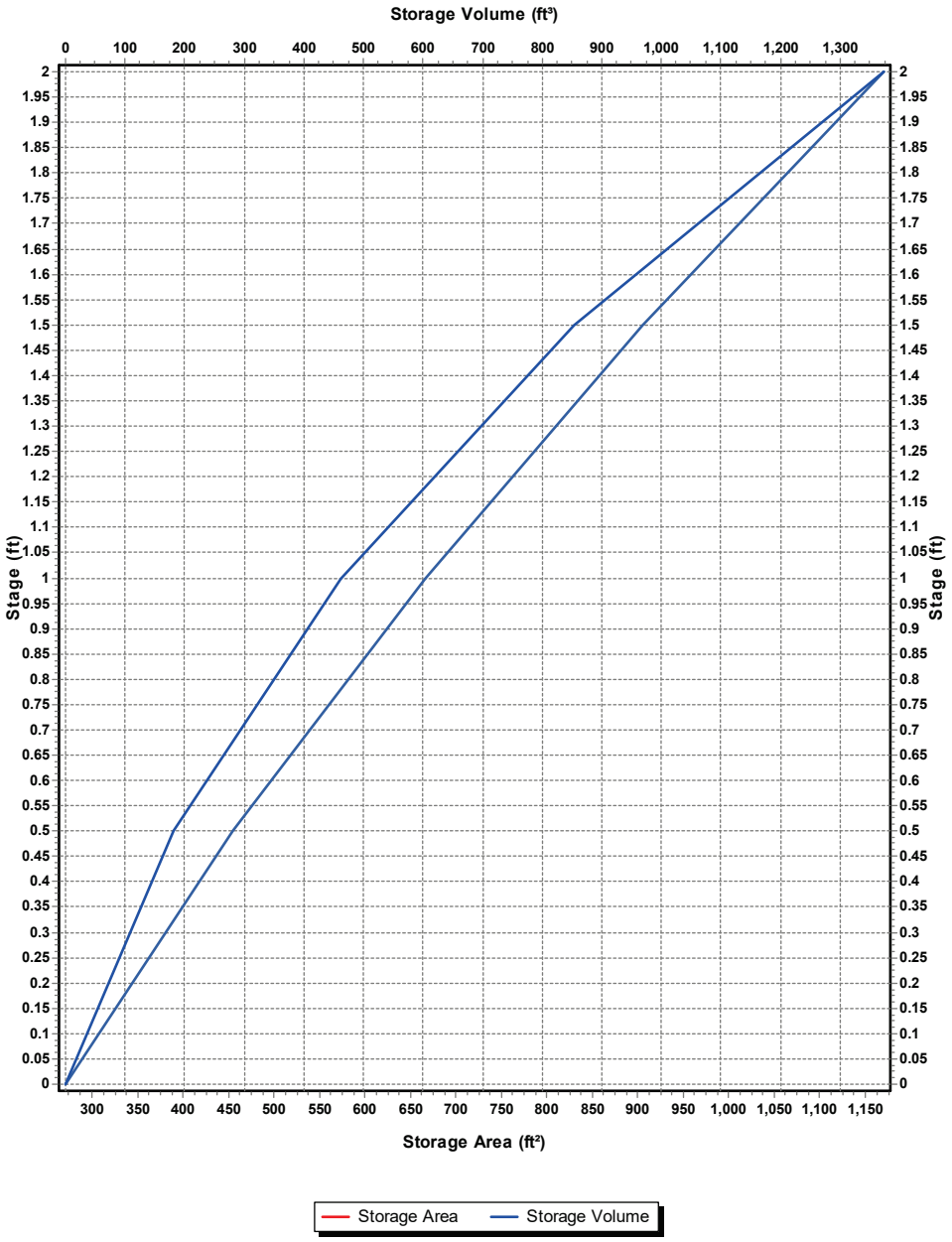
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,25
Peak Lateral Inflow (cfs)	0,25
Peak Outflow (cfs)	0,23
Peak Exfiltration Flow Rate (cfm)	1,31
Max HGL Elevation Attained (ft)	4,54
Max HGL Depth Attained (ft)	0,54
Average HGL Elevation Attained (ft)	4,15
Average HGL Depth Attained (ft)	0,15
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0,888
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 5: 100 YR-8 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 08HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100YR 08HR	Cumulative	inches	Florida	Broward	100,00	11,80	Florida DOT 8-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	11,80	11,56	1,03	0,45	0 00:10:00
2	Sub-02	0,12	484,00	98,00	11,80	11,56	1,39	0,61	0 00:10:00
3	Sub-03	0,04	484,00	61,00	11,80	6,54	0,25	0,14	0 00:10:00
4	Sub-04	0,06	484,00	61,00	11,80	6,54	0,41	0,24	0 00:10:00
5	Sub-05	0,02	484,00	61,00	11,80	6,54	0,13	0,07	0 00:10:00

0,27

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					1,46	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	1,46	2,77				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,12	4,29				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,73	4,29				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,23	4,28				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,23	4,25				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,23	2,94				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,14	4,52				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	1,46	12,87	0,11	3,80	0,41	0,27	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,72	3,49	0,21	0,46	1,00	1,00	357,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,12	2,37	0,05	0,40	0,42	0,42	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,23	4,01	0,31	1,20	1,00	1,00	357,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,23	12,80	0,10	2,94	0,43	0,29	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,12							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,23							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

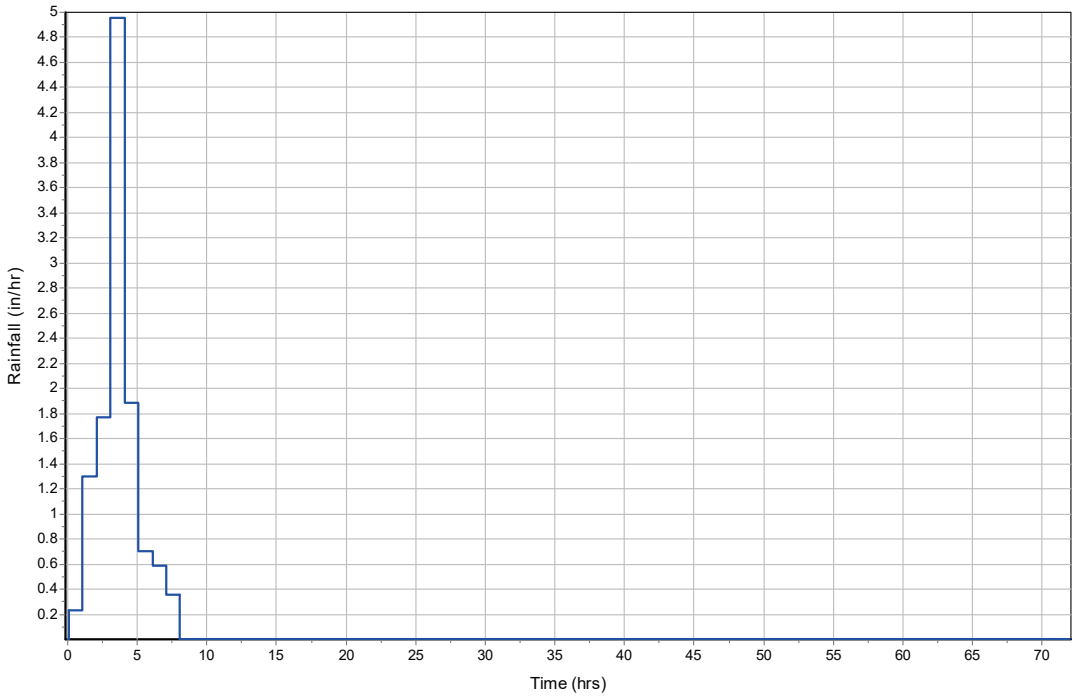
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

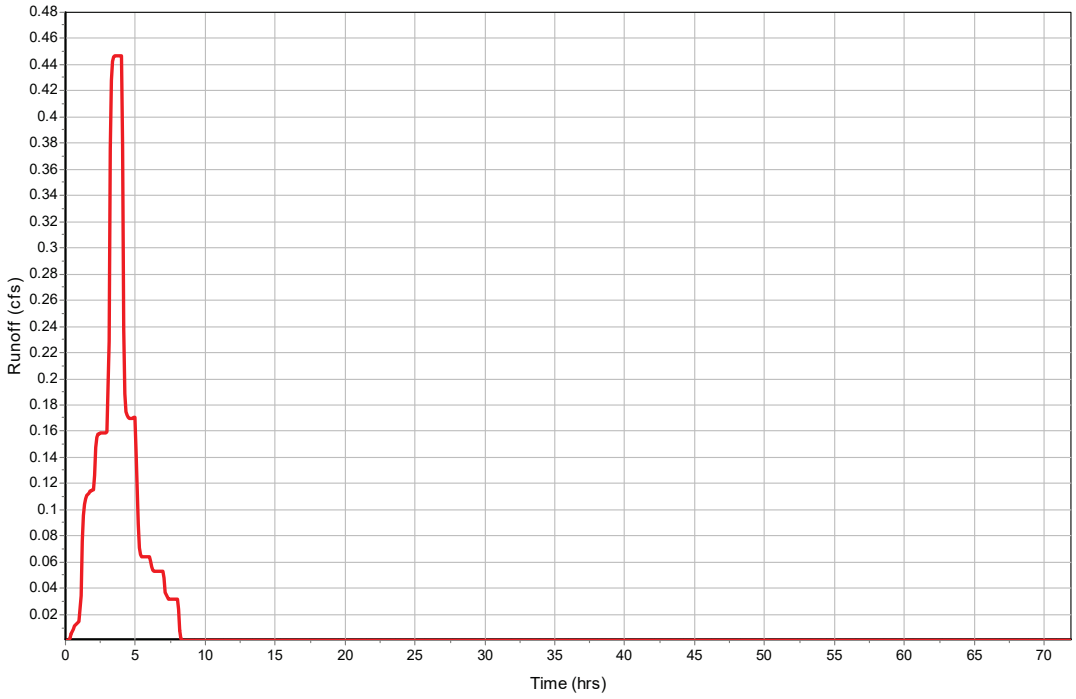
Total Rainfall (in)	11,8
Total Runoff (in)	11,56
Peak Runoff (cfs)	0,45
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

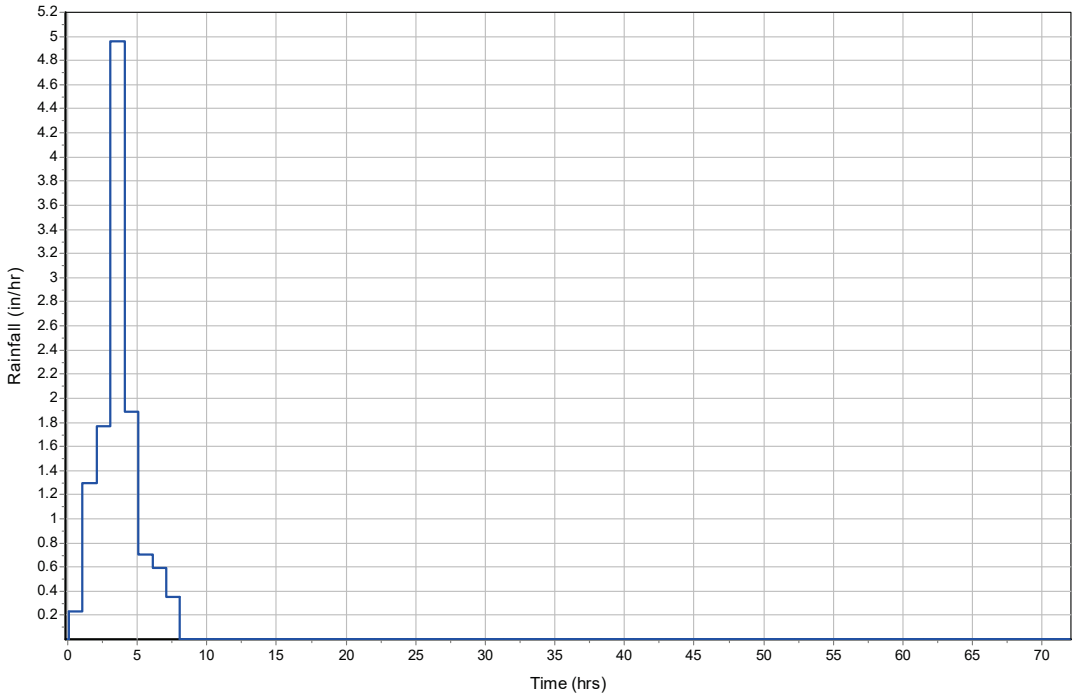
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

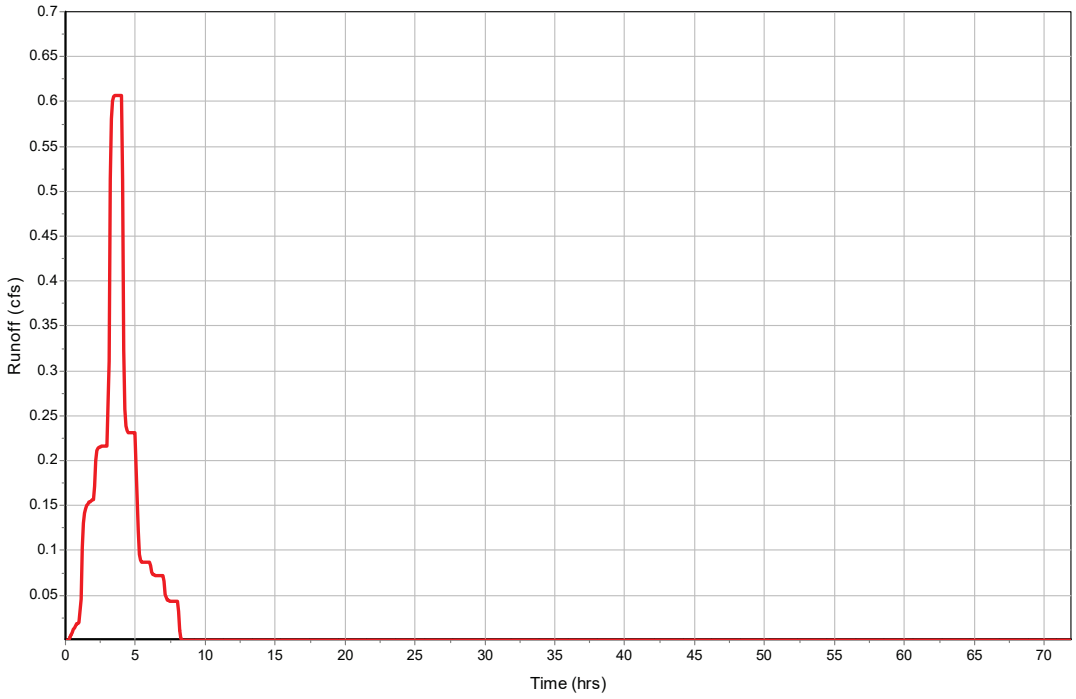
Total Rainfall (in)	11,8
Total Runoff (in)	11,56
Peak Runoff (cfs)	0,61
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

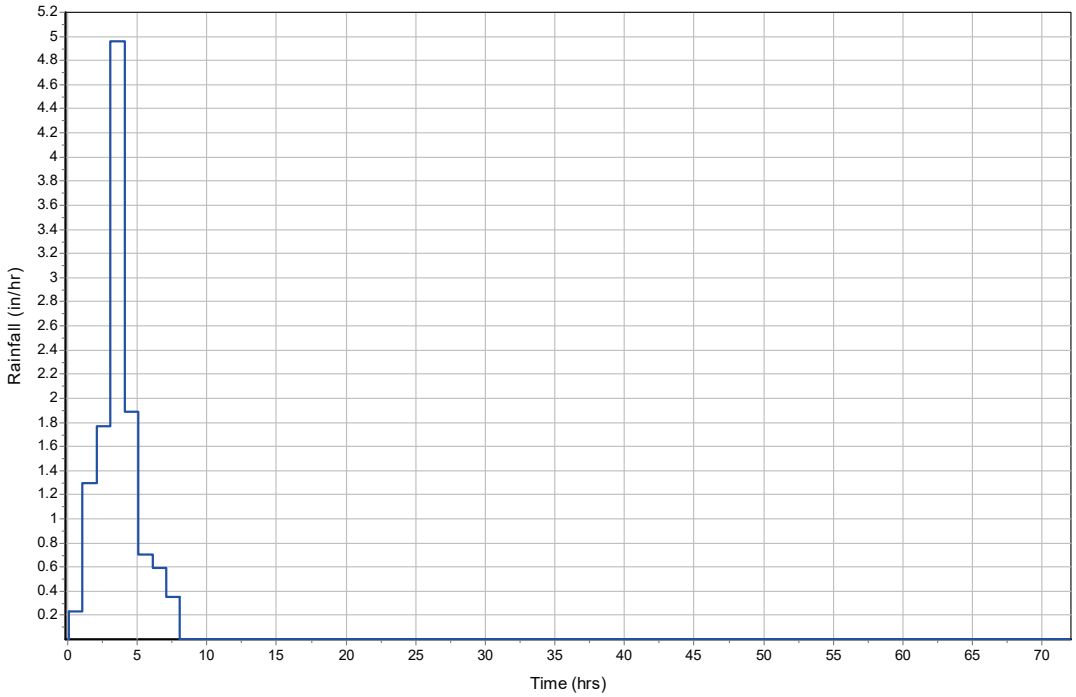
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

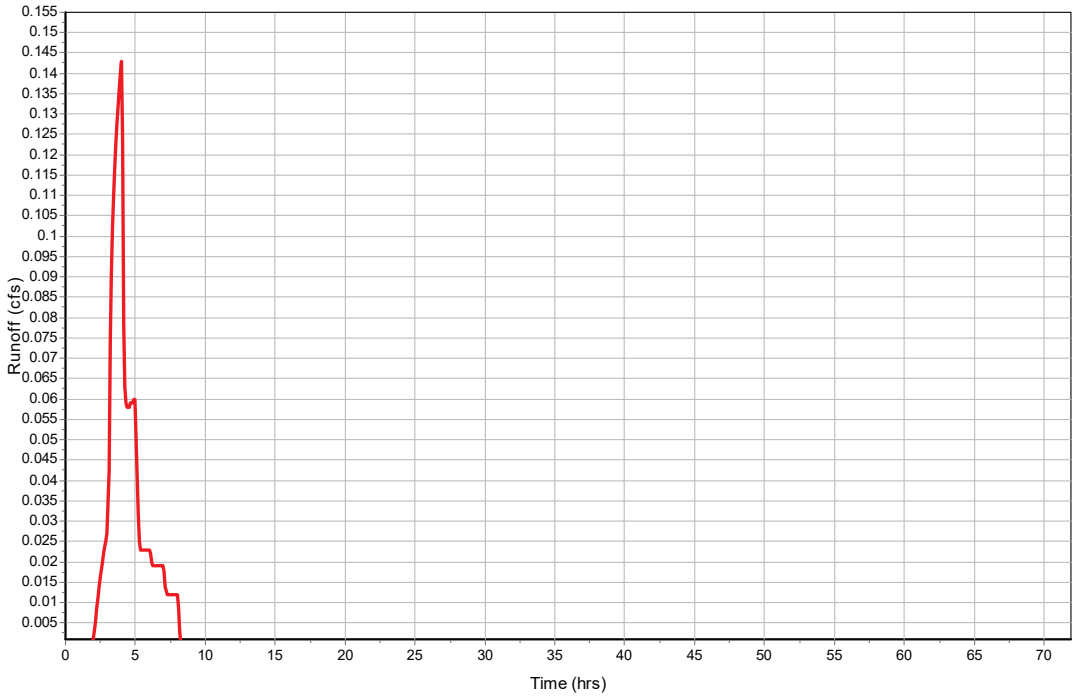
Total Rainfall (in)	11,8
Total Runoff (in)	6,54
Peak Runoff (cfs)	0,14
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

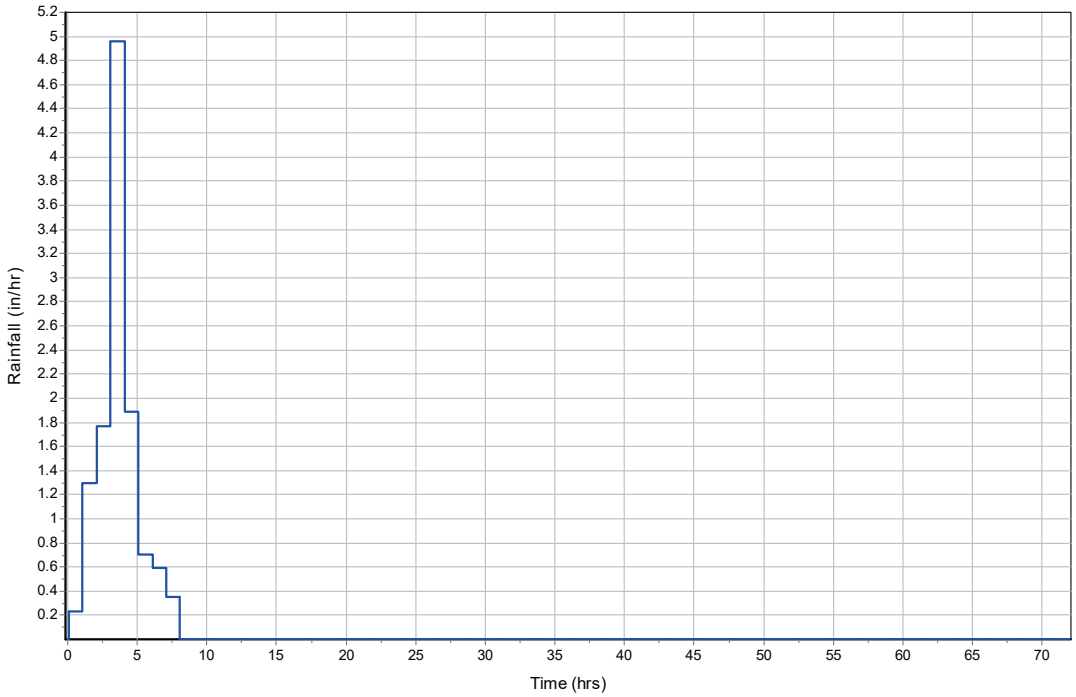
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

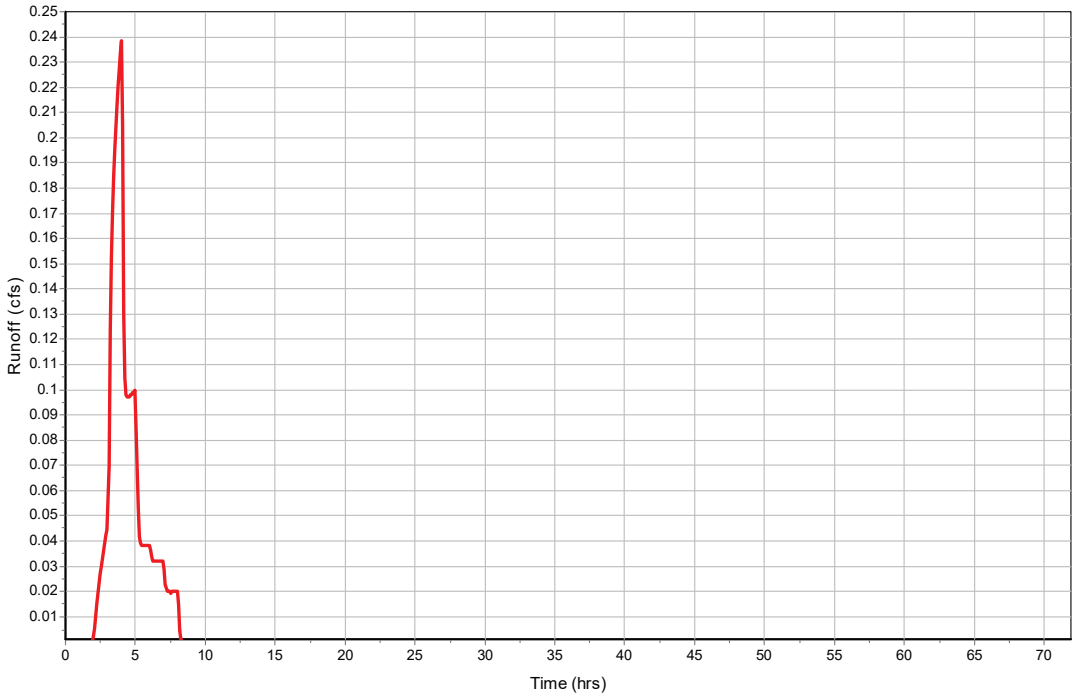
Total Rainfall (in)	11,8
Total Runoff (in)	6,54
Peak Runoff (cfs)	0,24
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

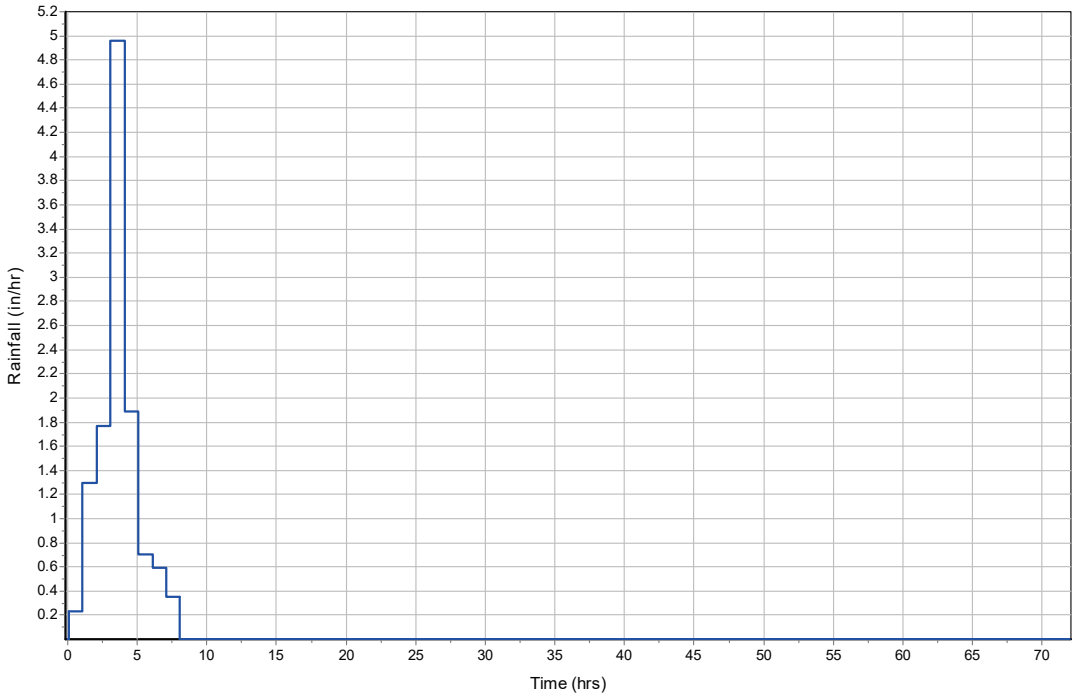
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

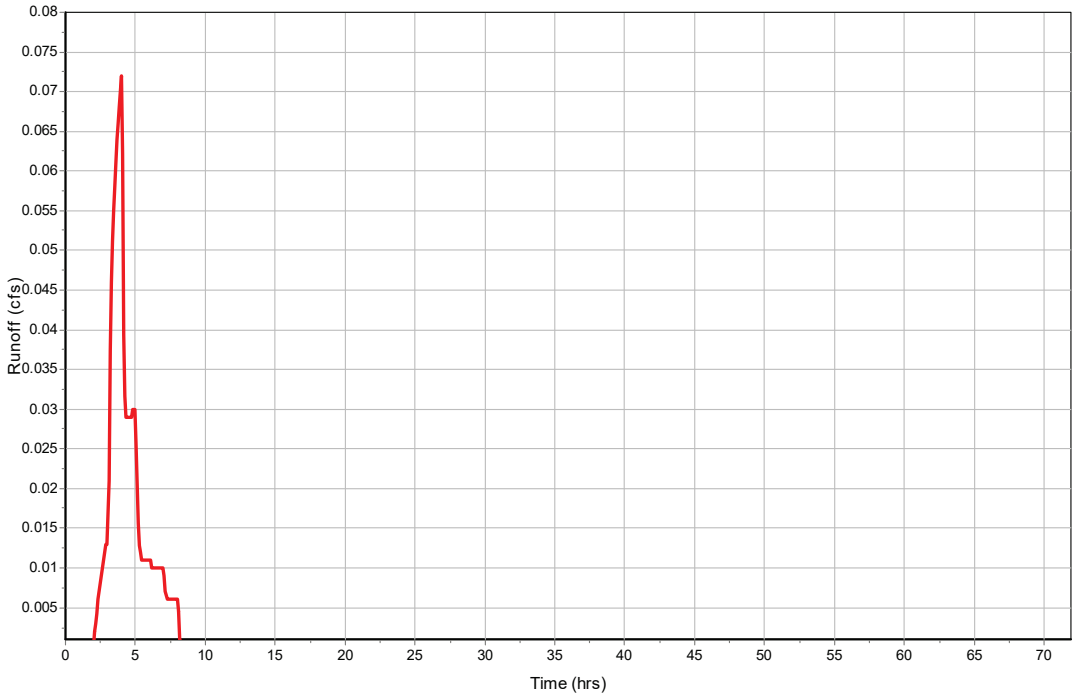
Total Rainfall (in)	11,8
Total Runoff (in)	6,54
Peak Runoff (cfs)	0,07
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	1,46	0 04:05	12,87	0,11	3,80	0,02	0,41	0,27	0,00		Calculated
2	Link-03	0,72	0 04:05	3,49	0,21	0,46	2,84	1,00	1,00	357,00		SURCHARGED
3	Link-04	0,12	0 04:05	2,37	0,05	0,40	1,77	0,42	0,42	0,00		Calculated
4	Link-05	1,23	0 04:05	4,01	0,31	1,20	0,66	1,00	1,00	357,00		SURCHARGED
5	Link-06	1,23	0 04:05	12,80	0,10	2,94	0,04	0,43	0,29	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,46
Peak Lateral Inflow (cfs)	0,24
Peak Outflow (cfs)	1,46
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,77
Max HGL Depth Attained (ft)	2,77
Average HGL Elevation Attained (ft)	2,38
Average HGL Depth Attained (ft)	2,38
Time of Max HGL Occurrence (days hh:mm)	0 04:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,12
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,12
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,29
Max HGL Depth Attained (ft)	1,79
Average HGL Elevation Attained (ft)	4,02
Average HGL Depth Attained (ft)	1,52
Time of Max HGL Occurrence (days hh:mm)	0 04:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

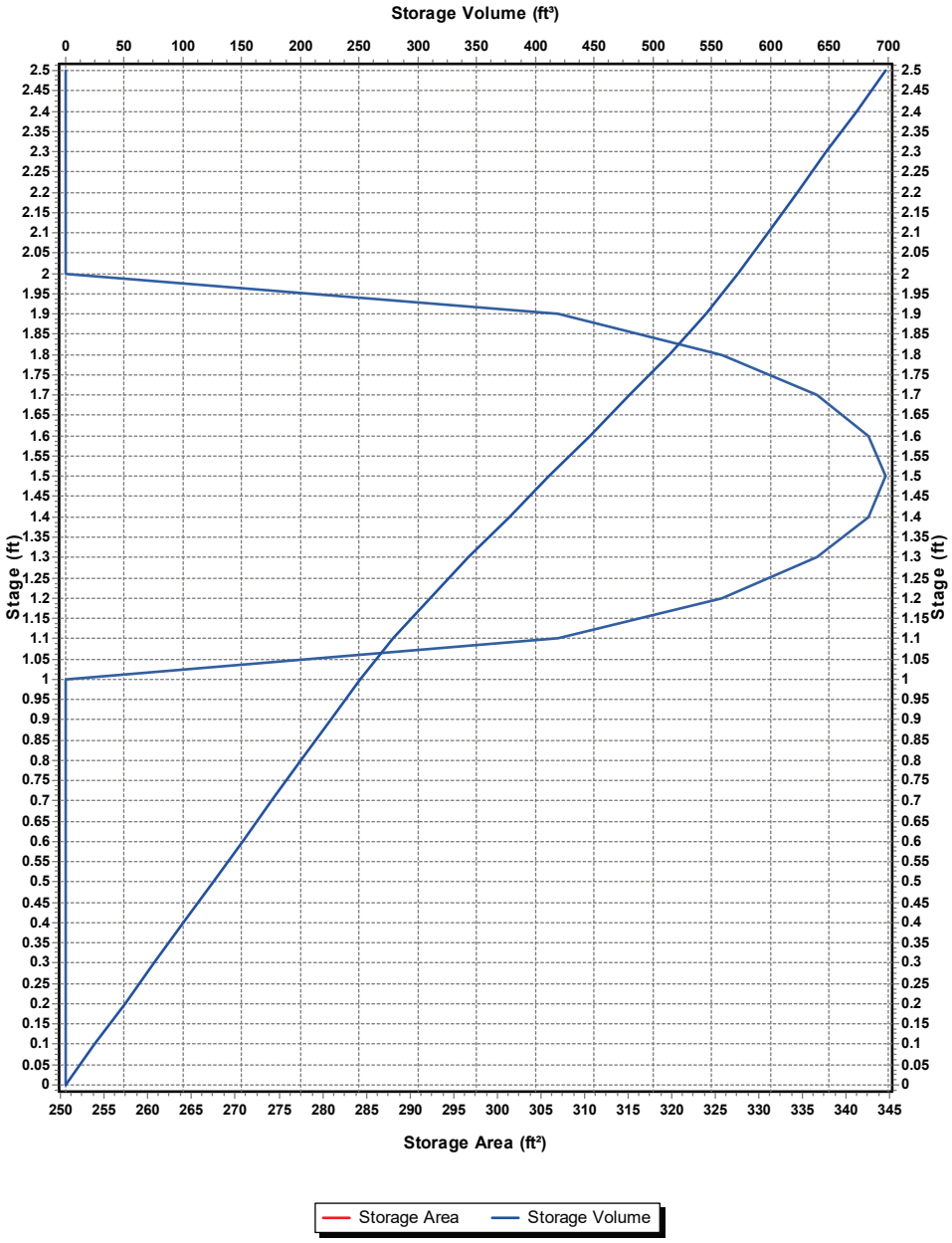
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,73
Peak Lateral Inflow (cfs)	0,61
Peak Outflow (cfs)	0,72
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,29
Max HGL Depth Attained (ft)	2,29
Average HGL Elevation Attained (ft)	2,79
Average HGL Depth Attained (ft)	0,79
Time of Max HGL Occurrence (days hh:mm)	0 04:05
Total Exfiltration Volume (1000-ft^3)	1,045
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

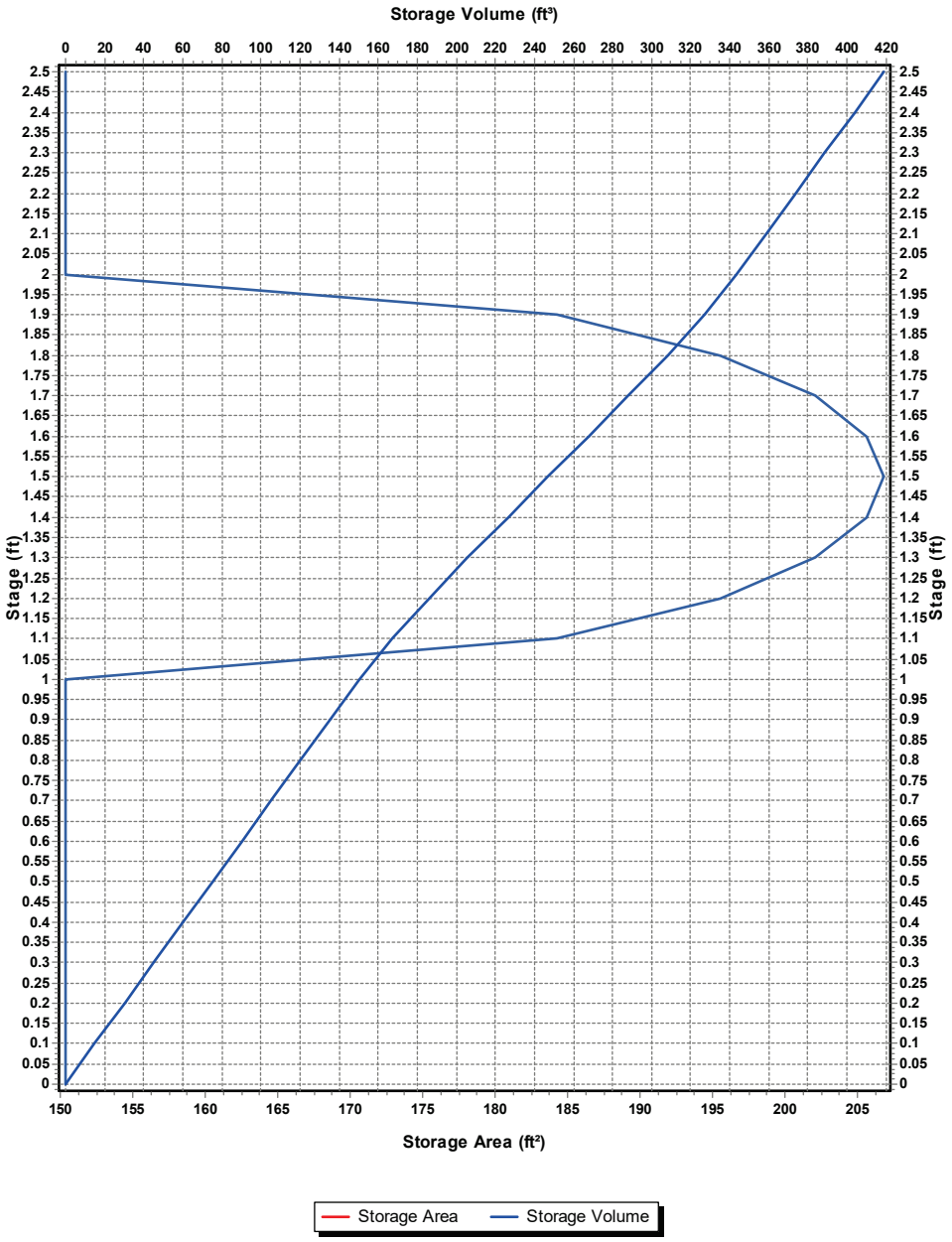
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,23
Peak Lateral Inflow (cfs)	0,52
Peak Outflow (cfs)	1,23
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,28
Max HGL Depth Attained (ft)	2,28
Average HGL Elevation Attained (ft)	2,79
Average HGL Depth Attained (ft)	0,79
Time of Max HGL Occurrence (days hh:mm)	0 04:05
Total Exfiltration Volume (1000-ft^3)	0,639
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,23
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,23
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,25
Max HGL Depth Attained (ft)	4,25
Average HGL Elevation Attained (ft)	3,34
Average HGL Depth Attained (ft)	3,34
Time of Max HGL Occurrence (days hh:mm)	0 04:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,23
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,23
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,94
Max HGL Depth Attained (ft)	2,94
Average HGL Elevation Attained (ft)	2,56
Average HGL Depth Attained (ft)	2,56
Time of Max HGL Occurrence (days hh:mm)	0 04:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

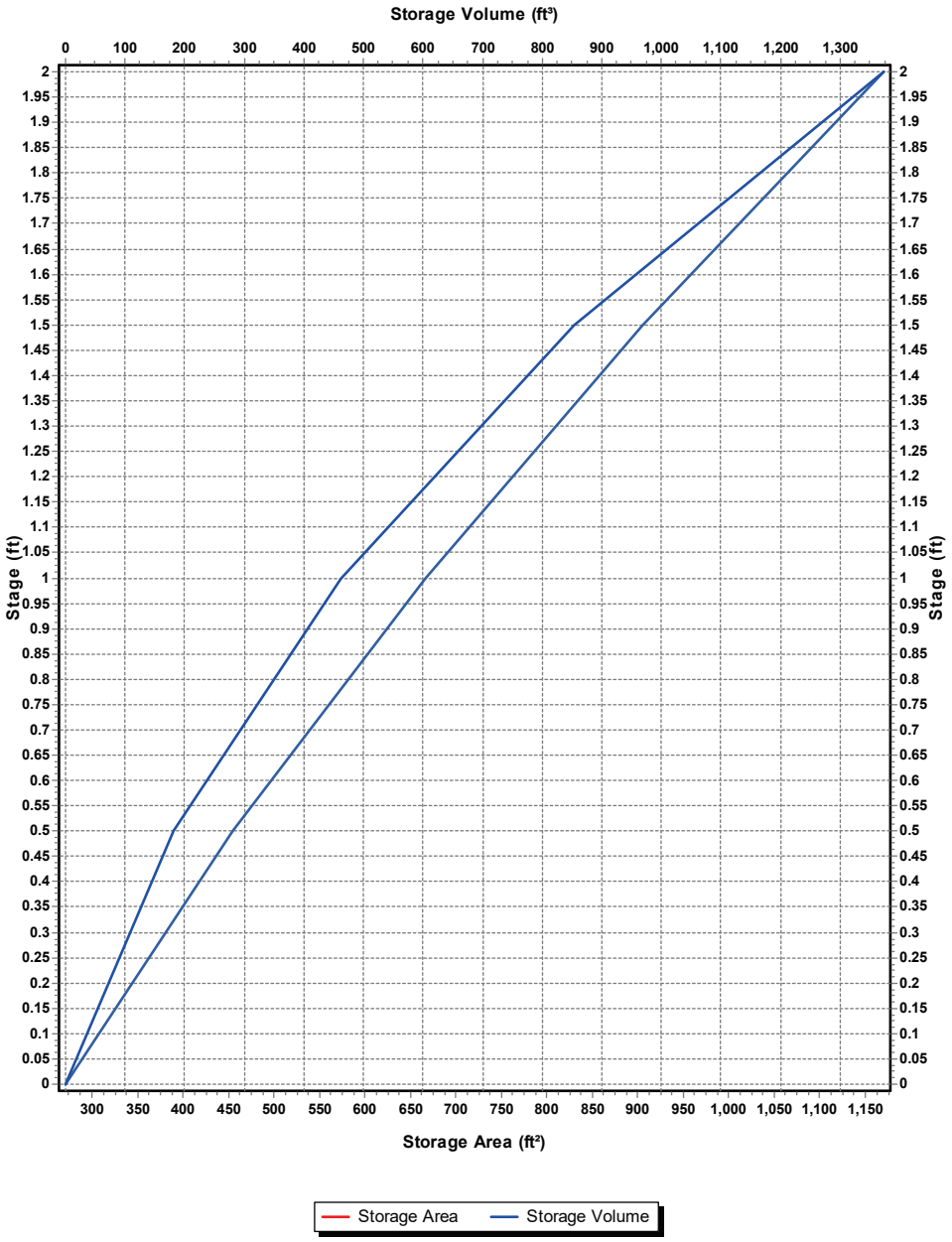
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,14
Peak Lateral Inflow (cfs)	0,14
Peak Outflow (cfs)	0,12
Peak Exfiltration Flow Rate (cfm)	1,29
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	0,52
Average HGL Elevation Attained (ft)	4,12
Average HGL Depth Attained (ft)	0,12
Time of Max HGL Occurrence (days hh:mm)	0 04:05
Total Exfiltration Volume (1000-ft^3)	0,56
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 6: 100 YR-4 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 04HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100YR 04HR	Cumulative	inches	Florida	Broward	100,00	9,30	Florida DOT 4-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	9,30	9,06	0,81	0,44	0 00:10:00
2	Sub-02	0,12	484,00	98,00	9,30	9,06	1,09	0,59	0 00:10:00
3	Sub-03	0,04	484,00	61,00	9,30	4,46	0,17	0,11	0 00:10:00
4	Sub-04	0,06	484,00	61,00	9,30	4,46	0,28	0,18	0 00:10:00
5	Sub-05	0,02	484,00	61,00	9,30	4,46	0,09	0,06	0 00:10:00

0,20

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					1,24	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	1,24	2,73				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,09	4,25				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,59	4,25				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,07	4,25				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,06	4,22				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,06	2,90				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,11	4,52				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	1,24	12,87	0,10	3,65	0,37	0,25	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,58	3,49	0,17	0,37	1,00	1,00	181,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,09	2,37	0,04	0,54	0,38	0,38	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,06	4,01	0,26	1,32	1,00	1,00	181,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,06	12,80	0,08	2,95	0,39	0,26	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,09							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,06							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

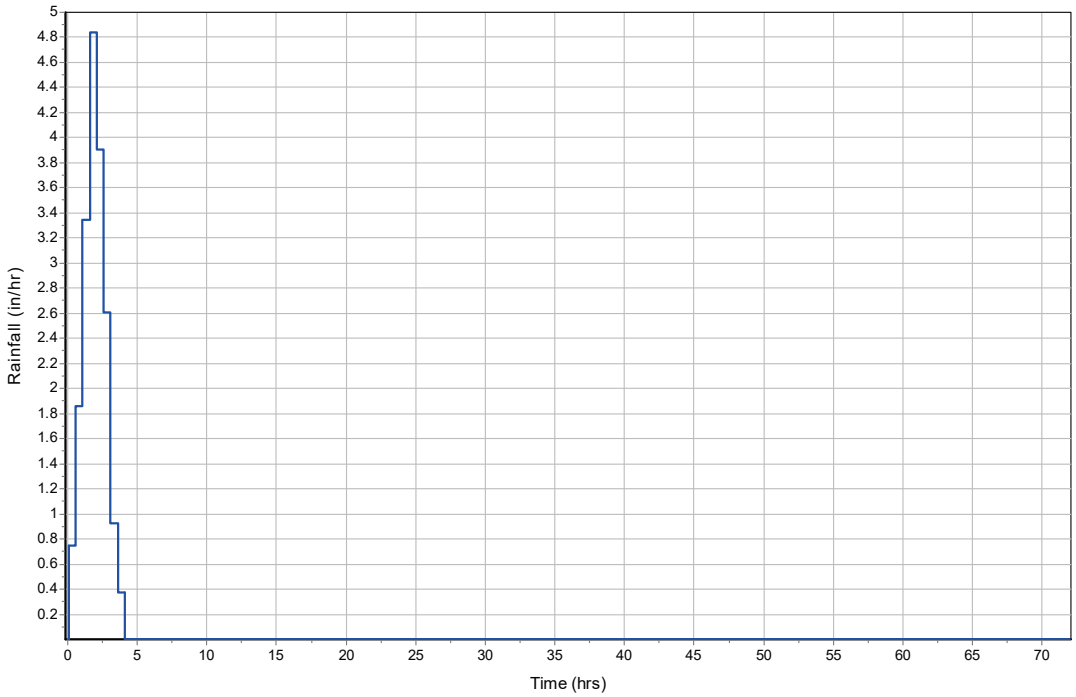
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

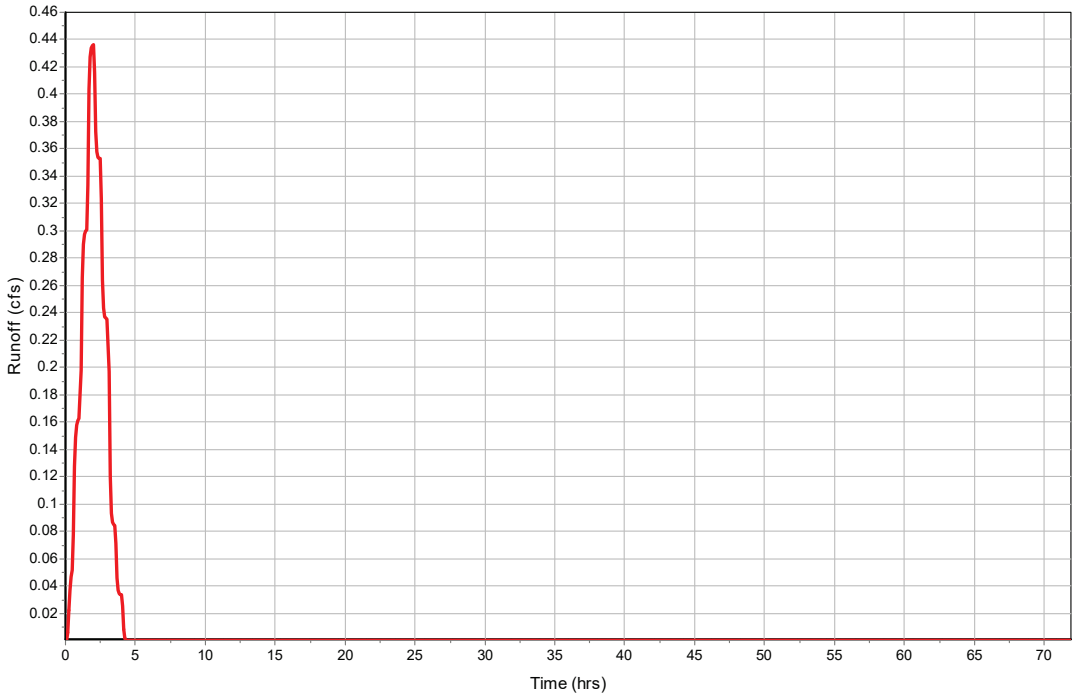
Total Rainfall (in)	9,3
Total Runoff (in)	9,06
Peak Runoff (cfs)	0,44
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

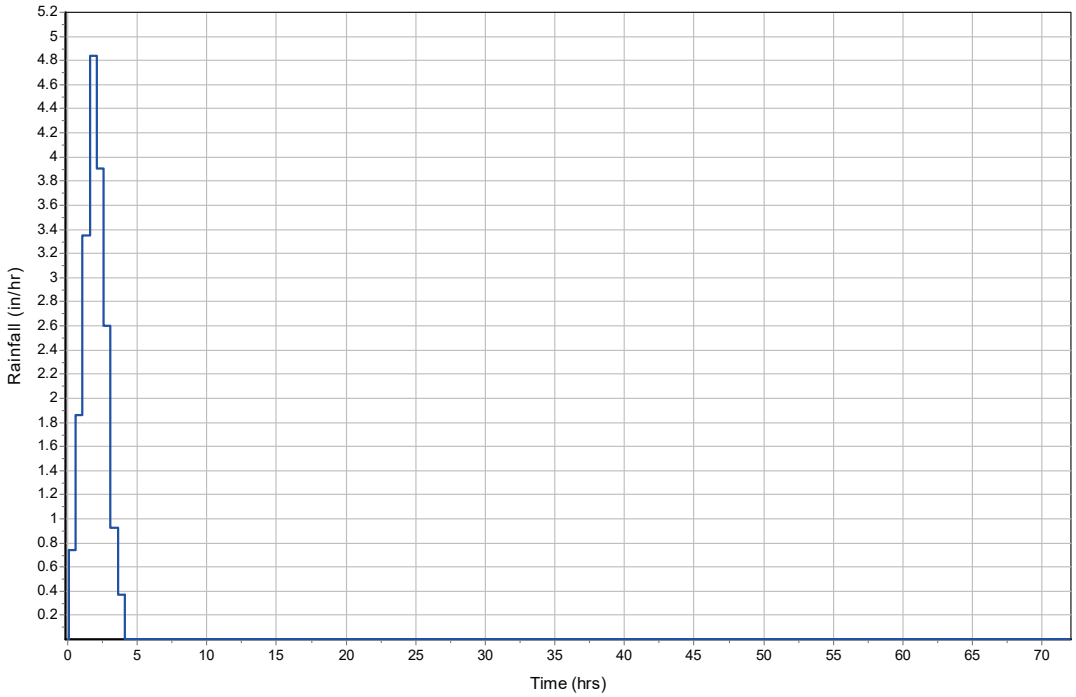
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

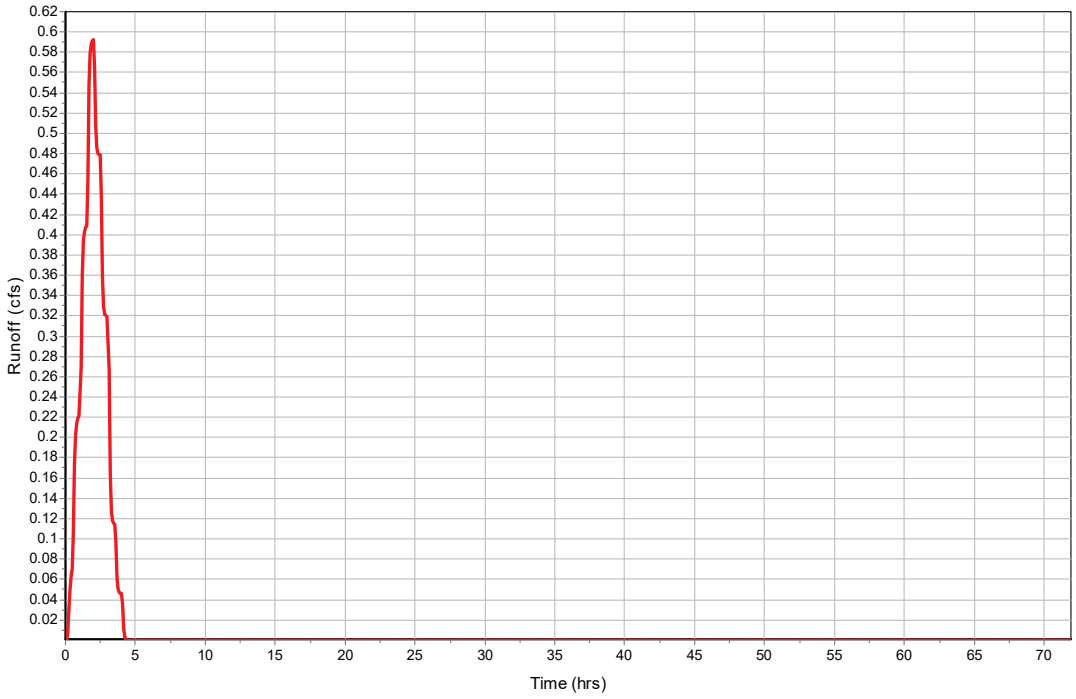
Total Rainfall (in)	9,3
Total Runoff (in)	9,06
Peak Runoff (cfs)	0,59
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

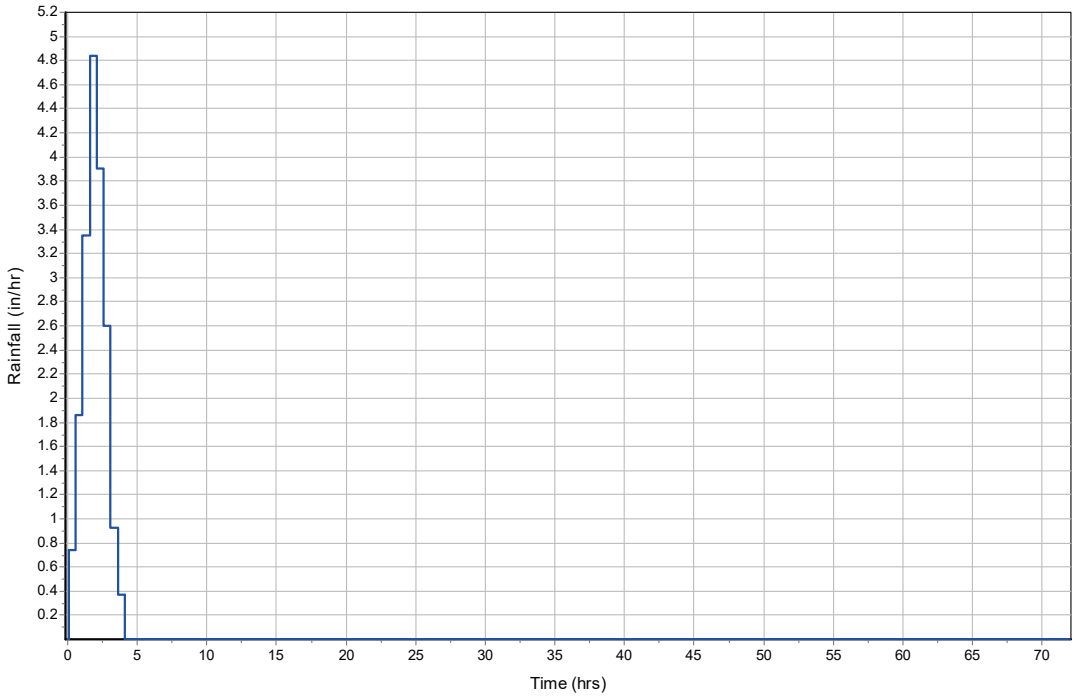
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

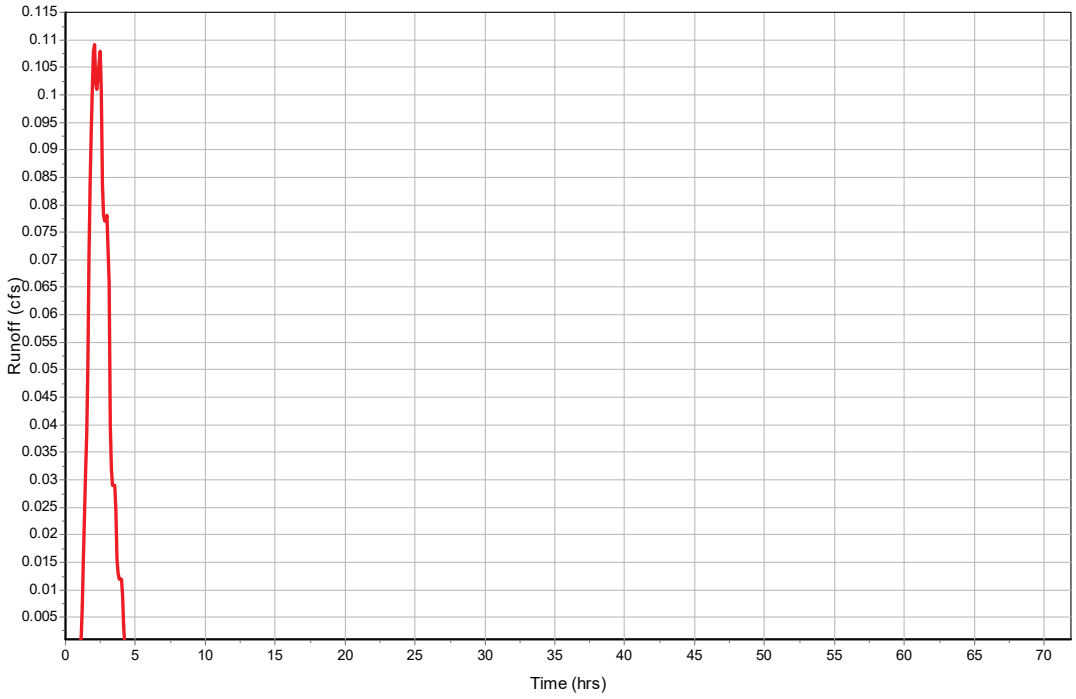
Total Rainfall (in)	9,3
Total Runoff (in)	4,46
Peak Runoff (cfs)	0,11
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

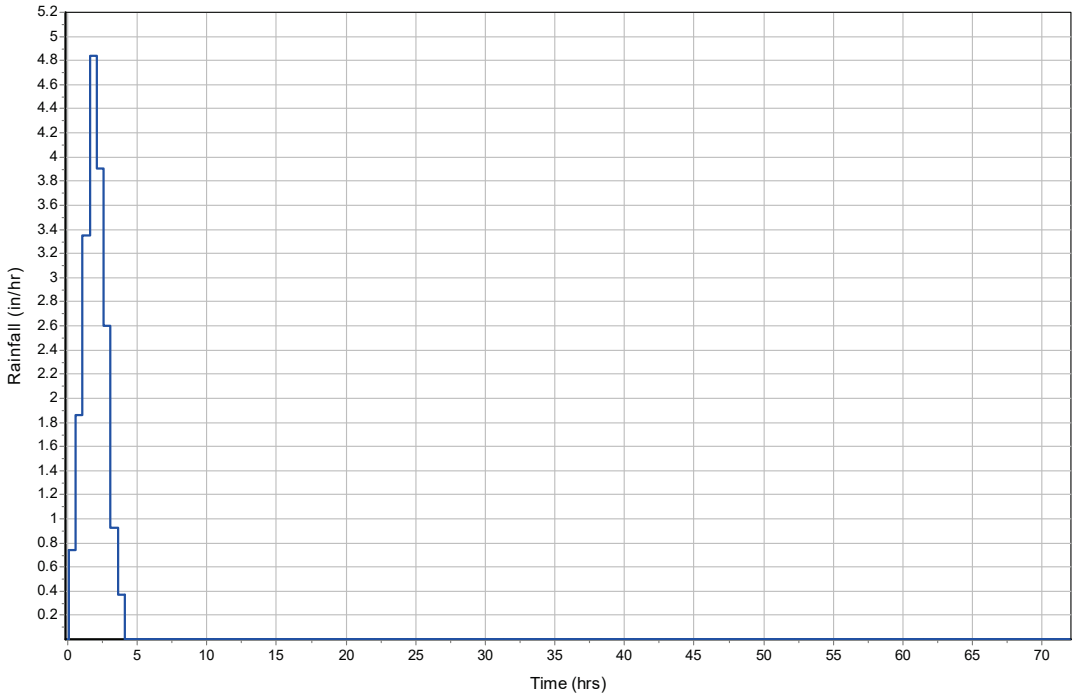
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

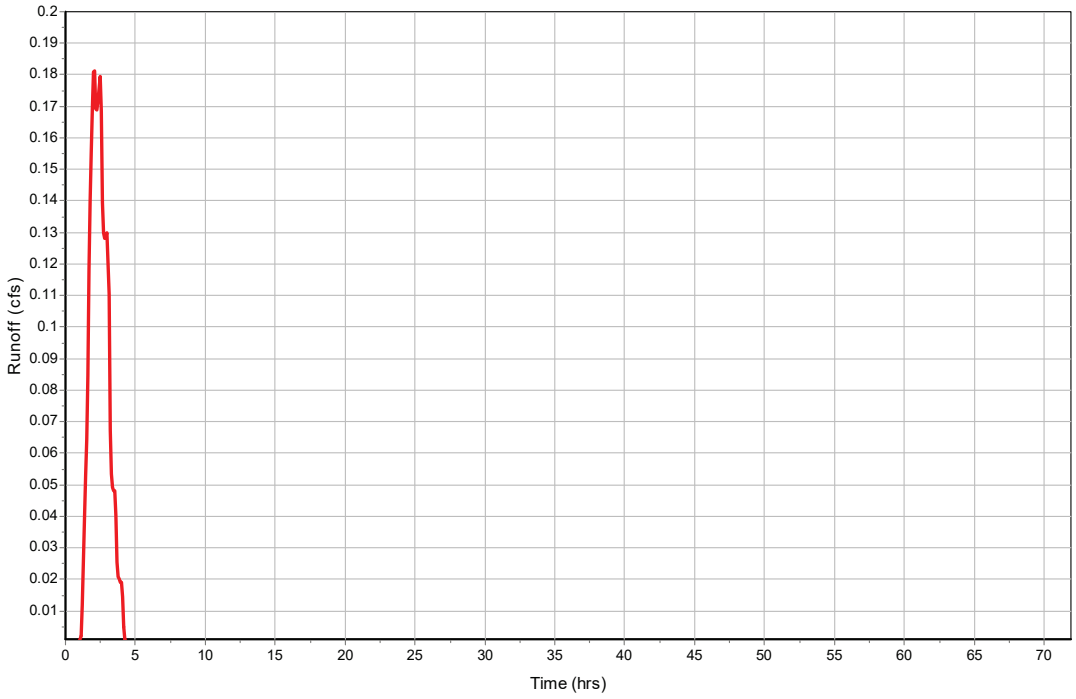
Total Rainfall (in)	9,3
Total Runoff (in)	4,46
Peak Runoff (cfs)	0,18
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

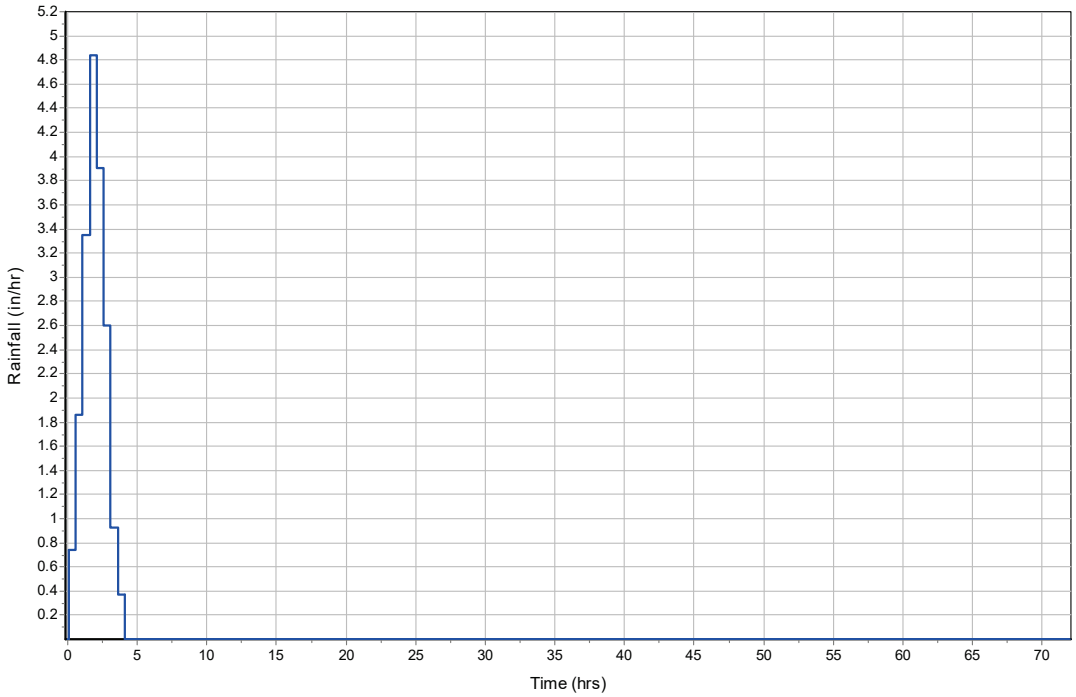
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

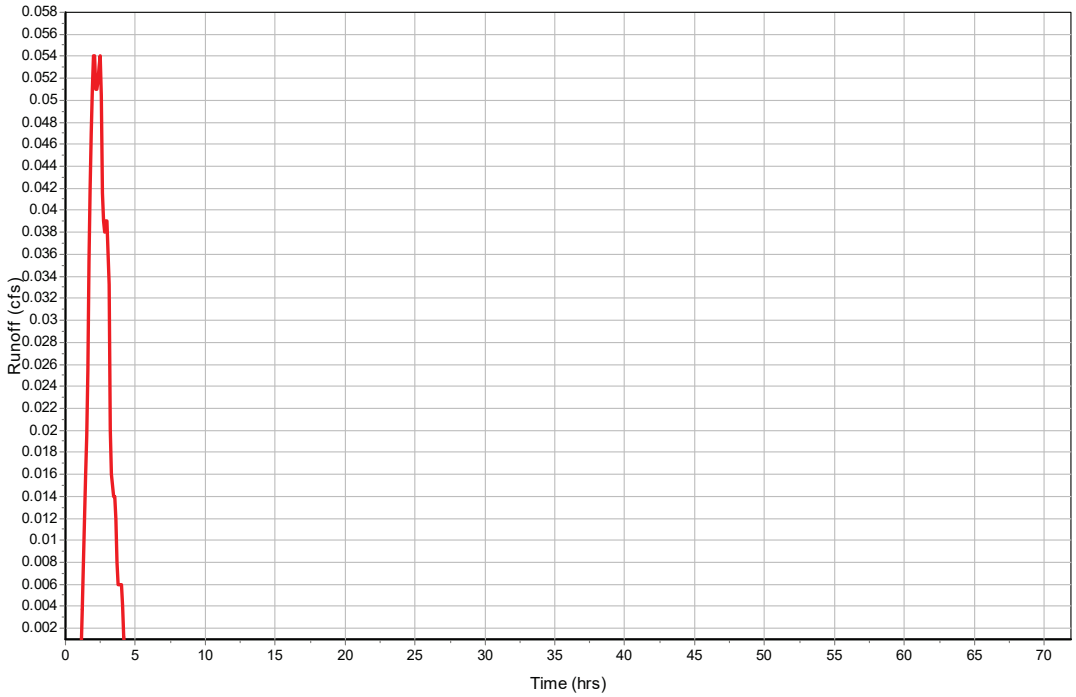
Total Rainfall (in)	9,3
Total Runoff (in)	4,46
Peak Runoff (cfs)	0,06
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	1,24	0 02:05	12,87	0,10	3,65	0,02	0,37	0,25	0,00		Calculated
2	Link-03	0,58	0 02:05	3,49	0,17	0,37	3,53	1,00	1,00	181,00		SURCHARGED
3	Link-04	0,09	0 01:28	2,37	0,04	0,54	1,31	0,38	0,38	0,00		Calculated
4	Link-05	1,06	0 02:05	4,01	0,26	1,32	0,60	1,00	1,00	181,00		SURCHARGED
5	Link-06	1,06	0 02:05	12,80	0,08	2,95	0,04	0,39	0,26	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,24
Peak Lateral Inflow (cfs)	0,18
Peak Outflow (cfs)	1,24
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,73
Max HGL Depth Attained (ft)	2,73
Average HGL Elevation Attained (ft)	2,4
Average HGL Depth Attained (ft)	2,4
Time of Max HGL Occurrence (days hh:mm)	0 02:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,09
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,09
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,25
Max HGL Depth Attained (ft)	1,75
Average HGL Elevation Attained (ft)	4,04
Average HGL Depth Attained (ft)	1,54
Time of Max HGL Occurrence (days hh:mm)	0 02:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

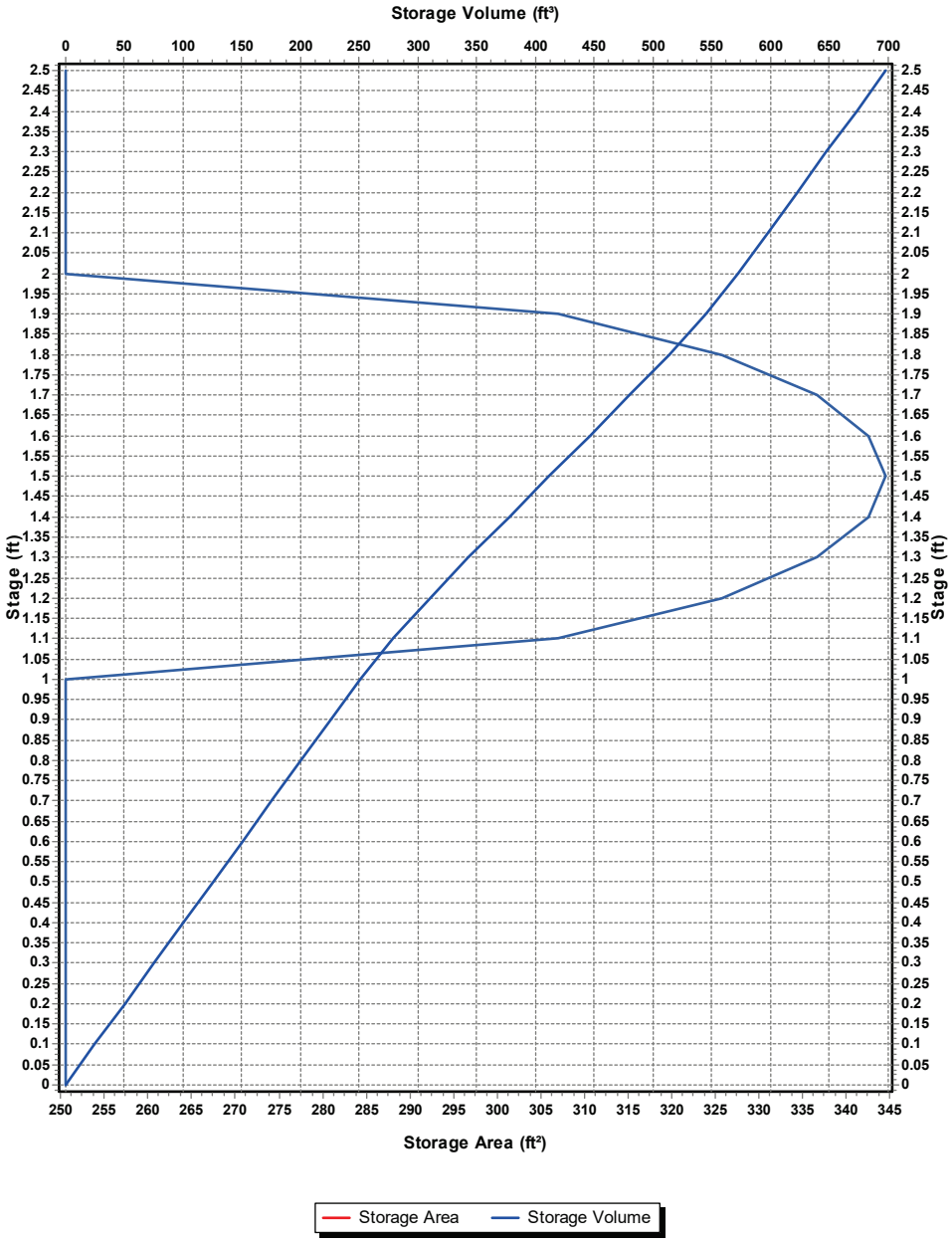
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,59
Peak Lateral Inflow (cfs)	0,59
Peak Outflow (cfs)	0,58
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,25
Max HGL Depth Attained (ft)	2,25
Average HGL Elevation Attained (ft)	2,82
Average HGL Depth Attained (ft)	0,82
Time of Max HGL Occurrence (days hh:mm)	0 02:05
Total Exfiltration Volume (1000-ft^3)	0,885
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

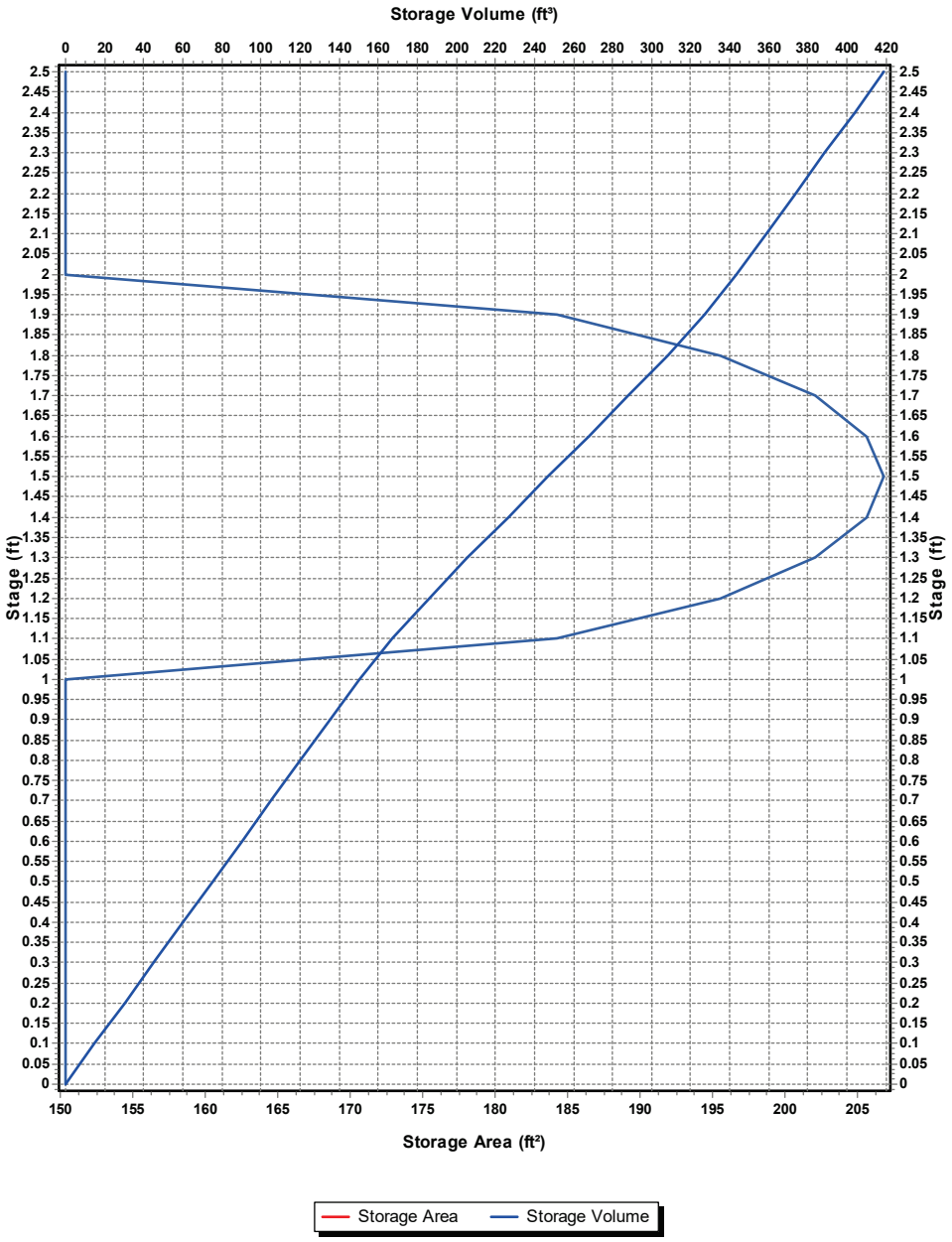
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,07
Peak Lateral Inflow (cfs)	0,49
Peak Outflow (cfs)	1,06
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,25
Max HGL Depth Attained (ft)	2,25
Average HGL Elevation Attained (ft)	2,83
Average HGL Depth Attained (ft)	0,83
Time of Max HGL Occurrence (days hh:mm)	0 02:05
Total Exfiltration Volume (1000-ft^3)	0,542
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,06
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,06
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,22
Max HGL Depth Attained (ft)	4,22
Average HGL Elevation Attained (ft)	3,38
Average HGL Depth Attained (ft)	3,38
Time of Max HGL Occurrence (days hh:mm)	0 02:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,06
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,06
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,9
Max HGL Depth Attained (ft)	2,9
Average HGL Elevation Attained (ft)	2,58
Average HGL Depth Attained (ft)	2,58
Time of Max HGL Occurrence (days hh:mm)	0 02:05
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

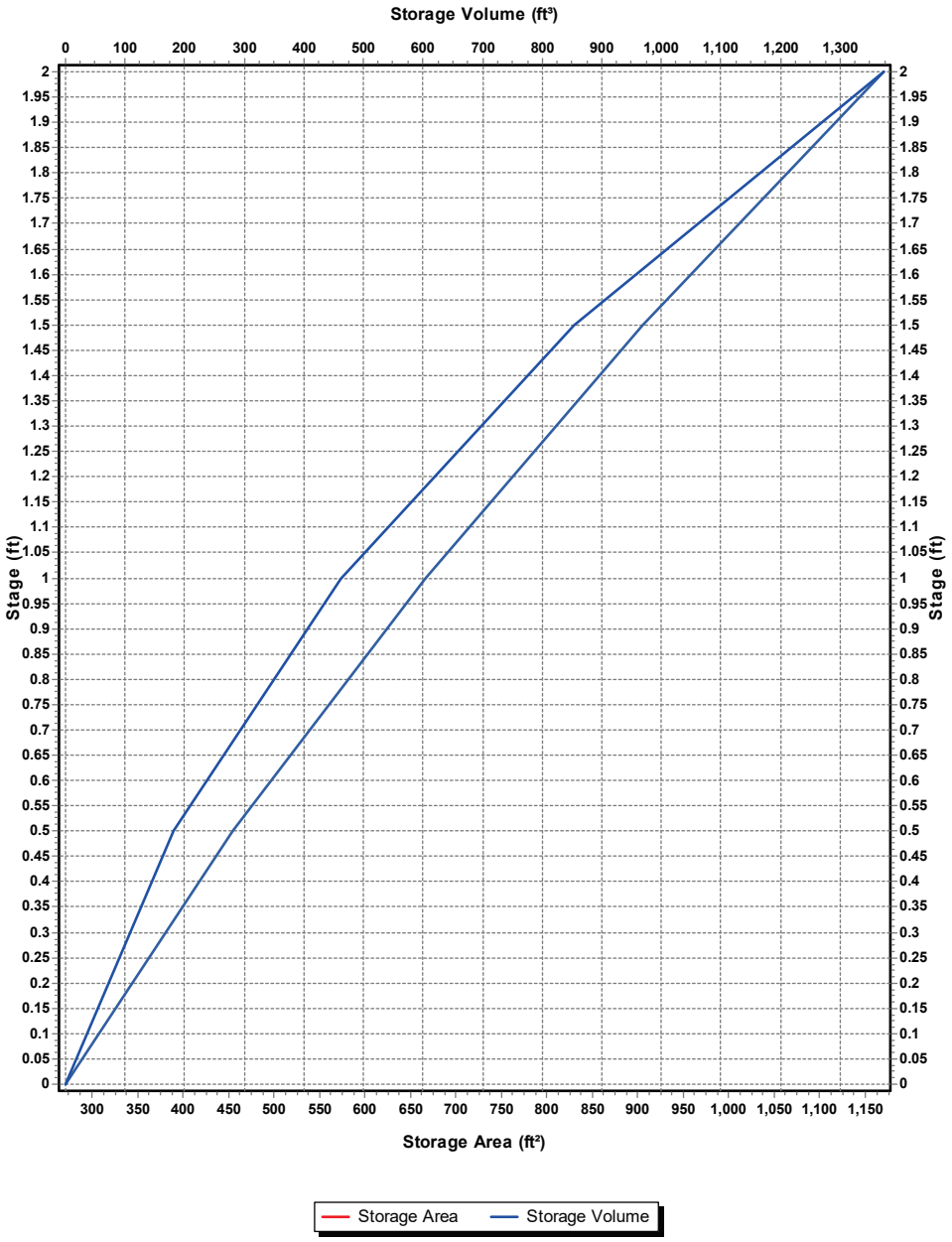
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,11
Peak Lateral Inflow (cfs)	0,11
Peak Outflow (cfs)	0,09
Peak Exfiltration Flow Rate (cfm)	1,29
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	0,52
Average HGL Elevation Attained (ft)	4,12
Average HGL Depth Attained (ft)	0,12
Time of Max HGL Occurrence (days hh:mm)	0 02:35
Total Exfiltration Volume (1000-ft^3)	0,374
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 7: 100 YR-2 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 02HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100YR 02HR	Cumulative	inches	Florida	Broward	100,00	7,30	Florida DOT 2-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	7,30	7,06	0,63	0,80	0 00:10:00
2	Sub-02	0,12	484,00	98,00	7,30	7,06	0,85	1,09	0 00:10:00
3	Sub-03	0,04	484,00	61,00	7,30	2,92	0,11	0,18	0 00:10:00
4	Sub-04	0,06	484,00	61,00	7,30	2,92	0,18	0,30	0 00:10:00
5	Sub-05	0,02	484,00	61,00	7,30	2,92	0,06	0,09	0 00:10:00

0,15

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					2,22	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	2,22	2,89				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,23	4,44				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	1,29	4,43				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,93	4,40				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,92	4,33				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,92	3,09				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,18	4,52				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	2,22	12,87	0,17	4,22	0,51	0,34	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	1,06	3,49	0,30	0,74	1,00	1,00	110,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,23	2,37	0,10	0,88	0,56	0,56	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,92	4,01	0,48	1,72	1,00	1,00	111,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,92	12,80	0,15	3,22	0,56	0,38	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,07							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,92							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

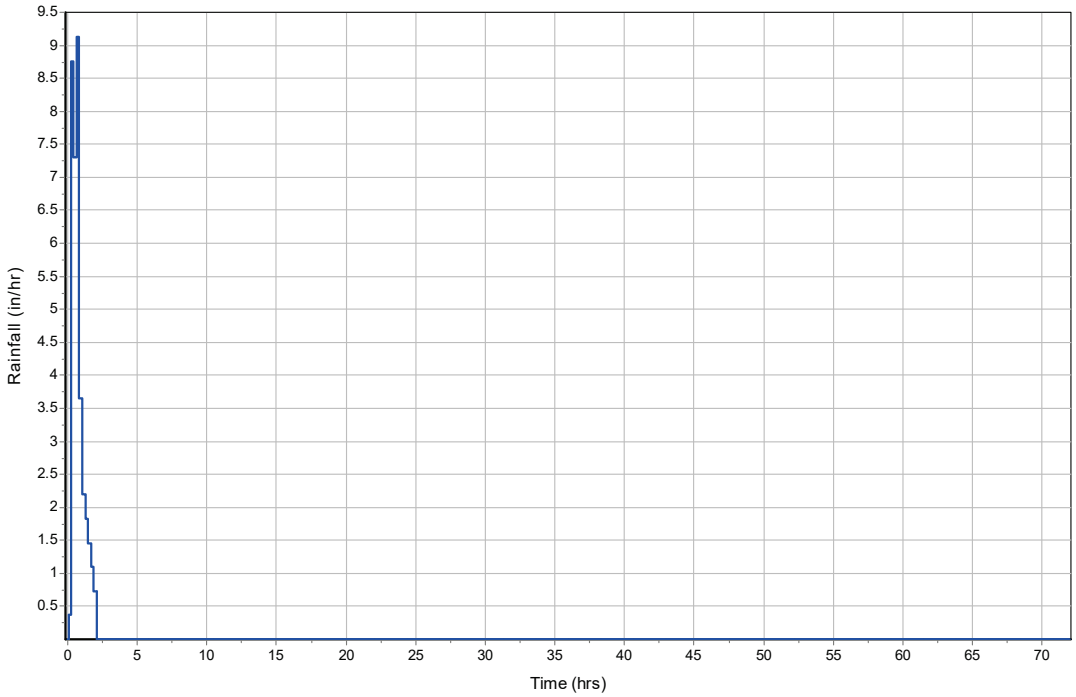
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

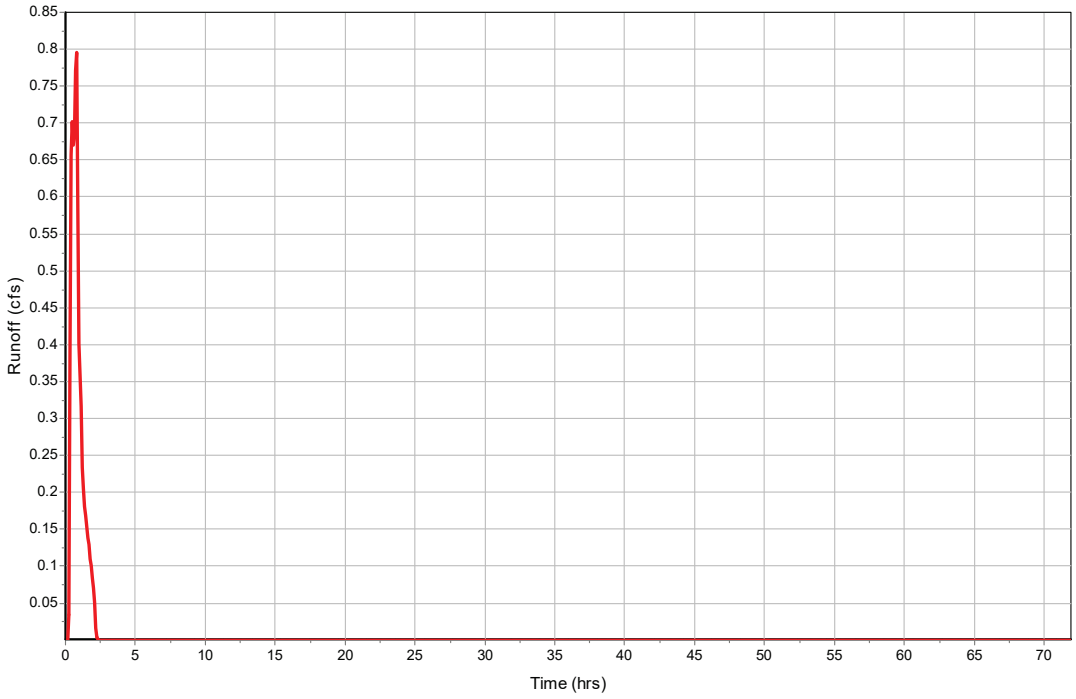
Total Rainfall (in)	7,3
Total Runoff (in)	7,06
Peak Runoff (cfs)	0,8
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

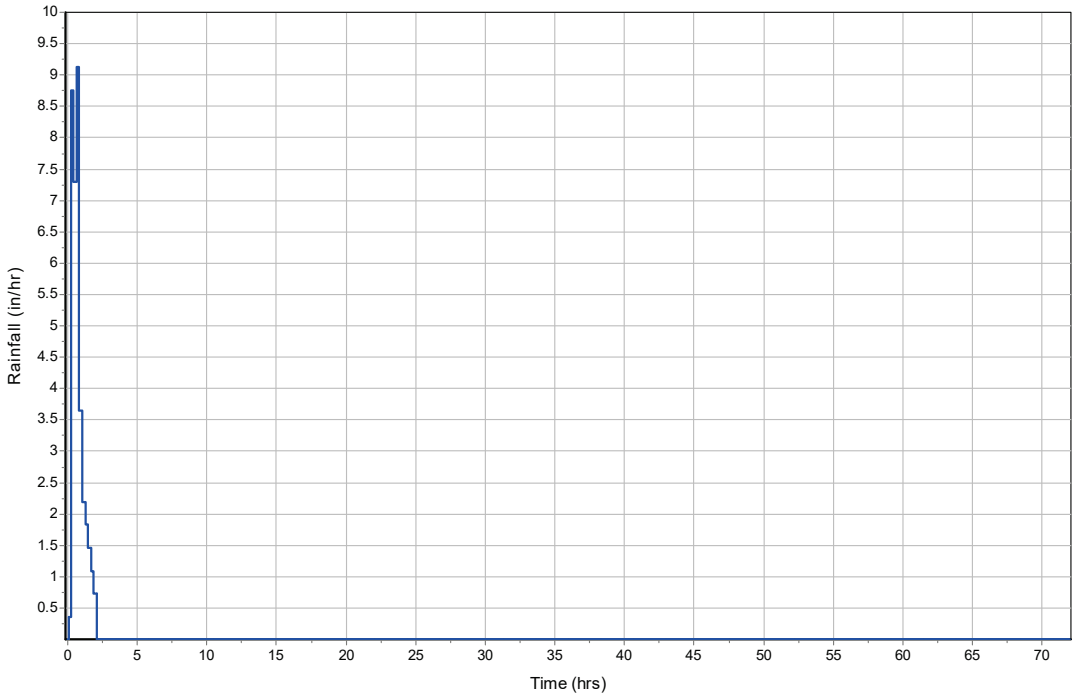
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

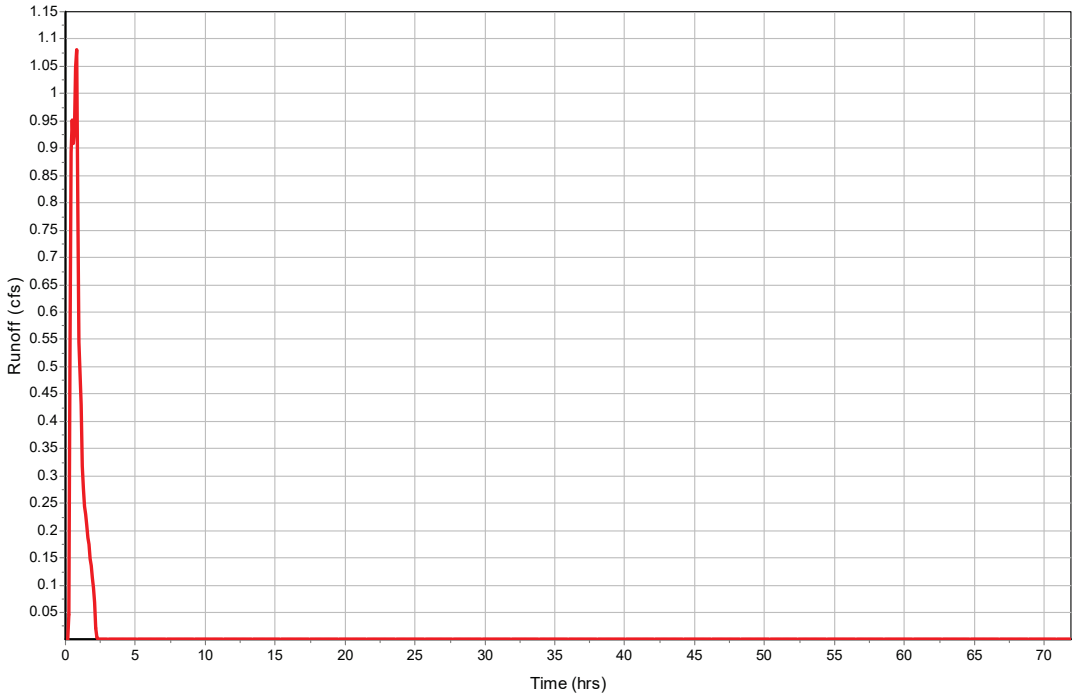
Total Rainfall (in)	7,3
Total Runoff (in)	7,06
Peak Runoff (cfs)	1,09
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

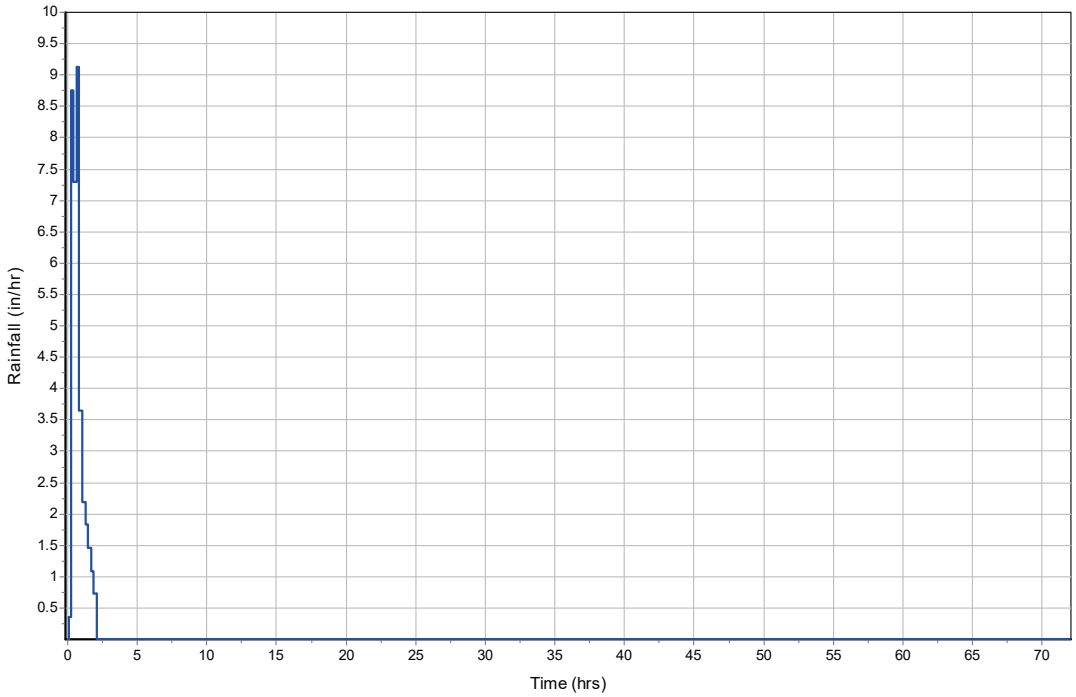
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

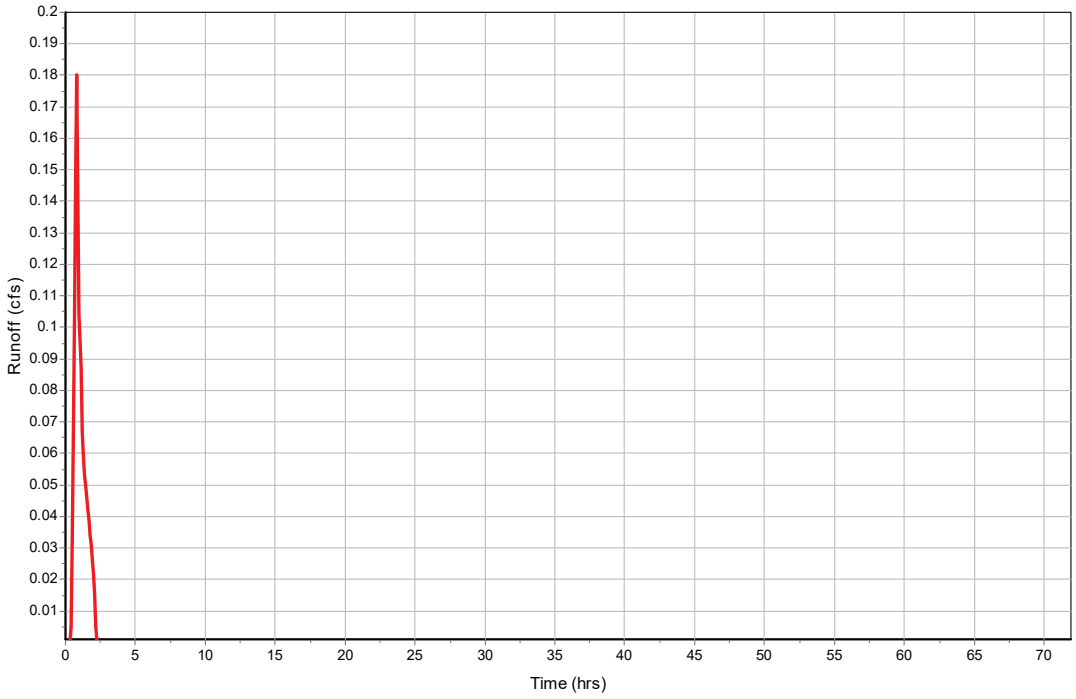
Total Rainfall (in)	7,3
Total Runoff (in)	2,92
Peak Runoff (cfs)	0,18
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

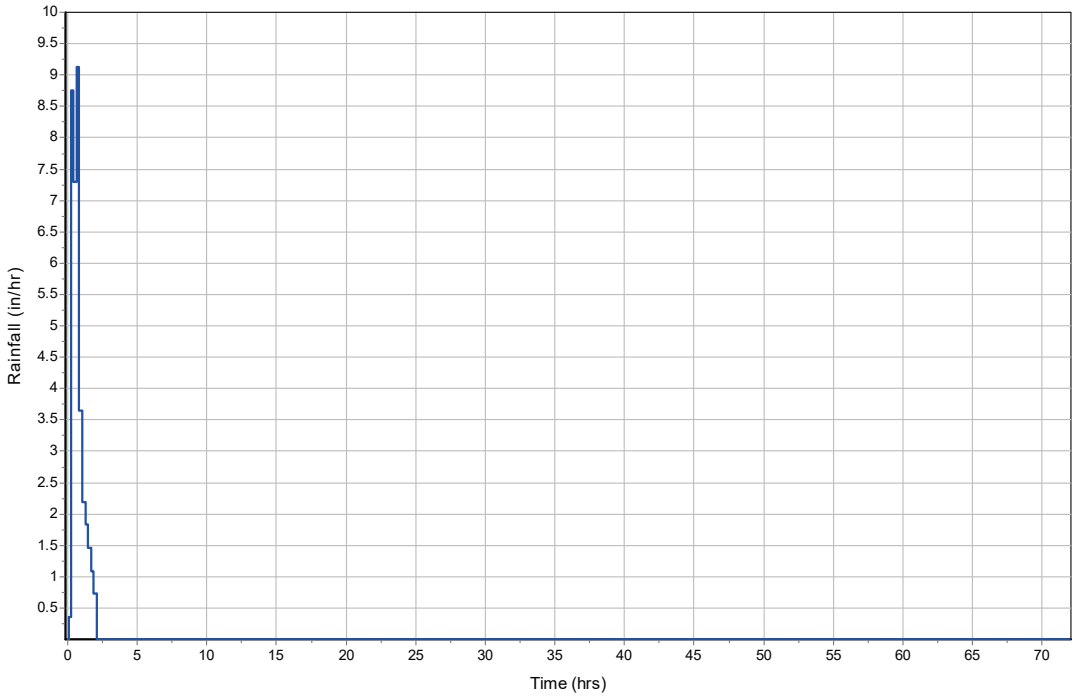
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

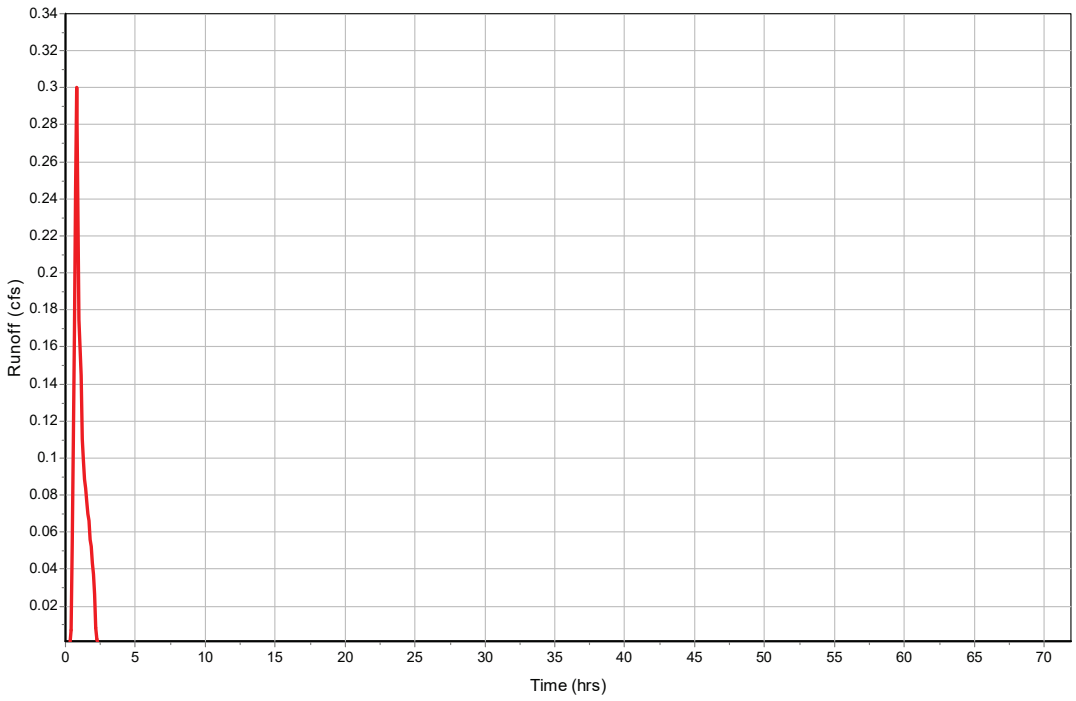
Total Rainfall (in)	7,3
Total Runoff (in)	2,92
Peak Runoff (cfs)	0,3
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

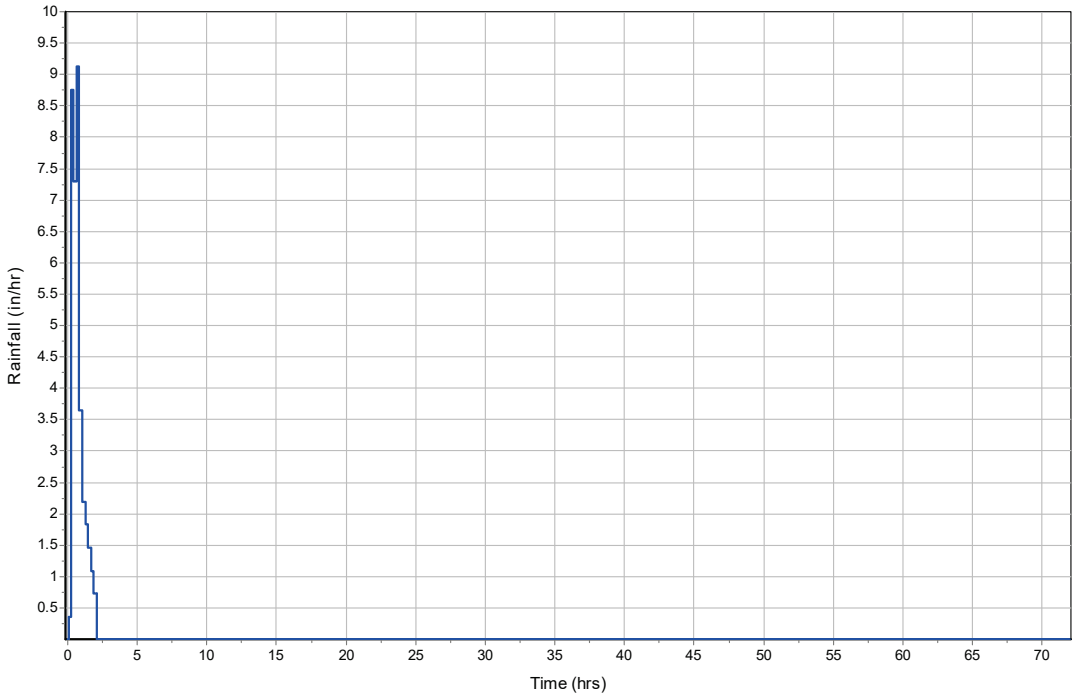
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

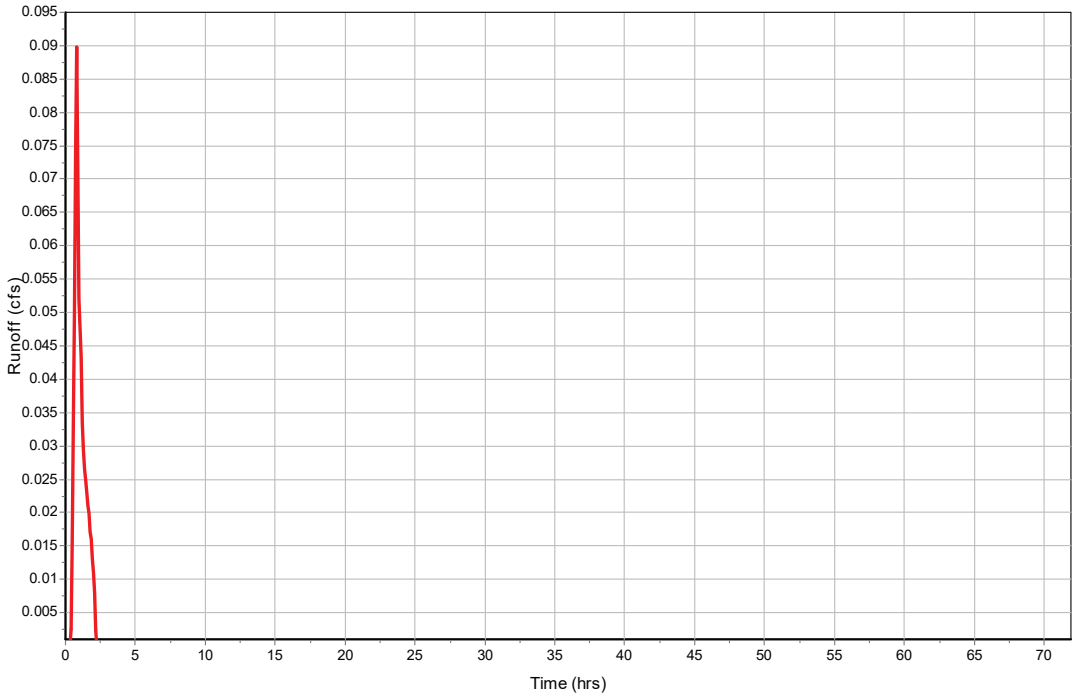
Total Rainfall (in)	7,3
Total Runoff (in)	2,92
Peak Runoff (cfs)	0,09
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	2,22	0 00:55	12,87	0,17	4,22	0,02	0,51	0,34	0,00		Calculated
2	Link-03	1,06	0 00:55	3,49	0,30	0,74	1,76	1,00	1,00	110,00		SURCHARGED
3	Link-04	0,23	0 00:39	2,37	0,10	0,88	0,80	0,56	0,56	0,00		Calculated
4	Link-05	1,92	0 00:55	4,01	0,48	1,72	0,46	1,00	1,00	111,00		SURCHARGED
5	Link-06	1,92	0 00:55	12,80	0,15	3,22	0,04	0,56	0,38	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,22
Peak Lateral Inflow (cfs)	0,3
Peak Outflow (cfs)	2,22
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,89
Max HGL Depth Attained (ft)	2,89
Average HGL Elevation Attained (ft)	2,37
Average HGL Depth Attained (ft)	2,37
Time of Max HGL Occurrence (days hh:mm)	0 00:55
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,23
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,11
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,44
Max HGL Depth Attained (ft)	1,94
Average HGL Elevation Attained (ft)	4,03
Average HGL Depth Attained (ft)	1,53
Time of Max HGL Occurrence (days hh:mm)	0 00:55
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

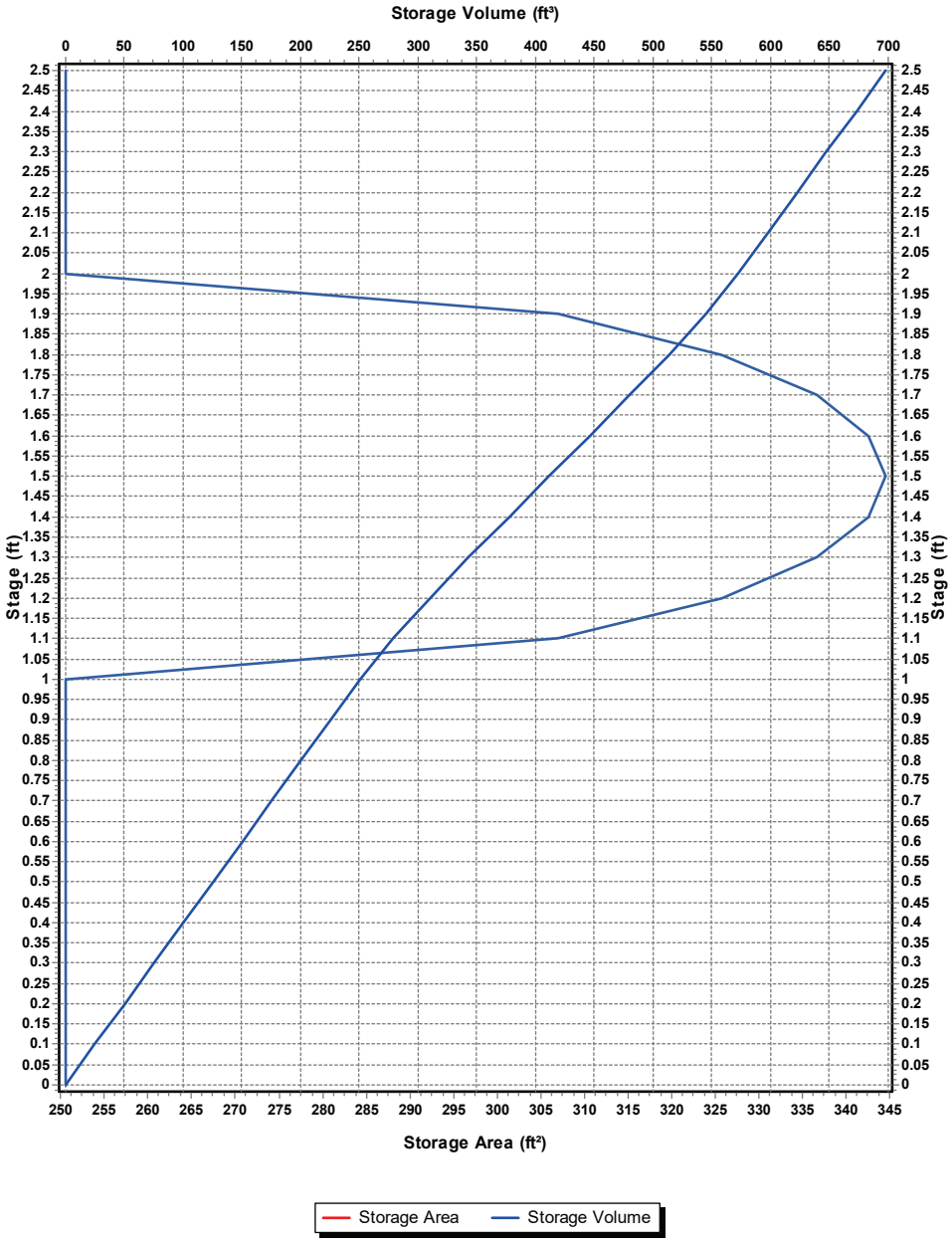
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,29
Peak Lateral Inflow (cfs)	1,08
Peak Outflow (cfs)	1,07
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,43
Max HGL Depth Attained (ft)	2,43
Average HGL Elevation Attained (ft)	2,57
Average HGL Depth Attained (ft)	0,57
Time of Max HGL Occurrence (days hh:mm)	0 00:55
Total Exfiltration Volume (1000-ft^3)	0,796
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

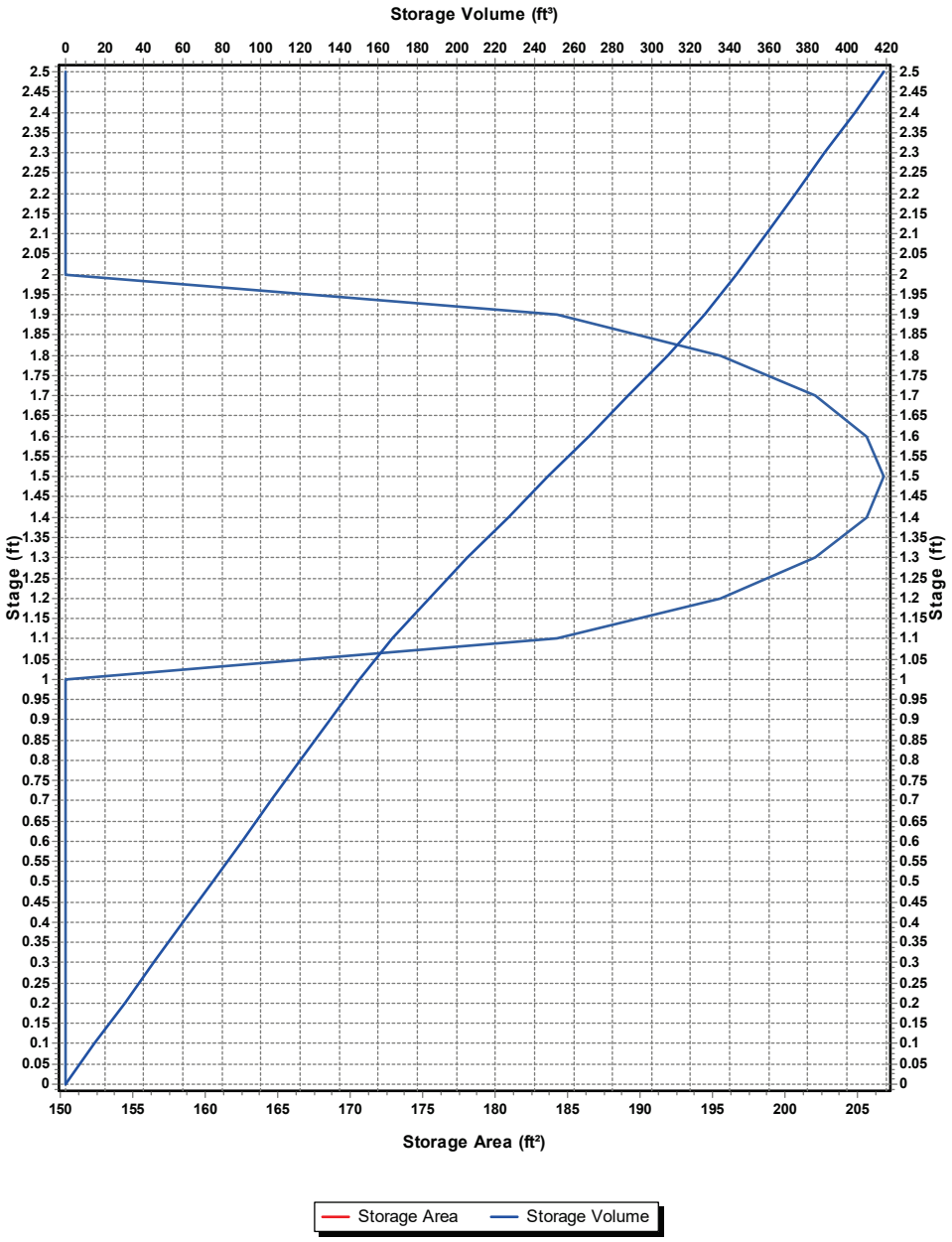
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,93
Peak Lateral Inflow (cfs)	0,89
Peak Outflow (cfs)	1,92
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,4
Max HGL Depth Attained (ft)	2,4
Average HGL Elevation Attained (ft)	2,57
Average HGL Depth Attained (ft)	0,57
Time of Max HGL Occurrence (days hh:mm)	0 00:55
Total Exfiltration Volume (1000-ft^3)	0,49
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,92
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,92
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,33
Max HGL Depth Attained (ft)	4,33
Average HGL Elevation Attained (ft)	3,25
Average HGL Depth Attained (ft)	3,25
Time of Max HGL Occurrence (days hh:mm)	0 00:55
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,92
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,92
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,09
Max HGL Depth Attained (ft)	3,09
Average HGL Elevation Attained (ft)	2,56
Average HGL Depth Attained (ft)	2,56
Time of Max HGL Occurrence (days hh:mm)	0 00:55
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

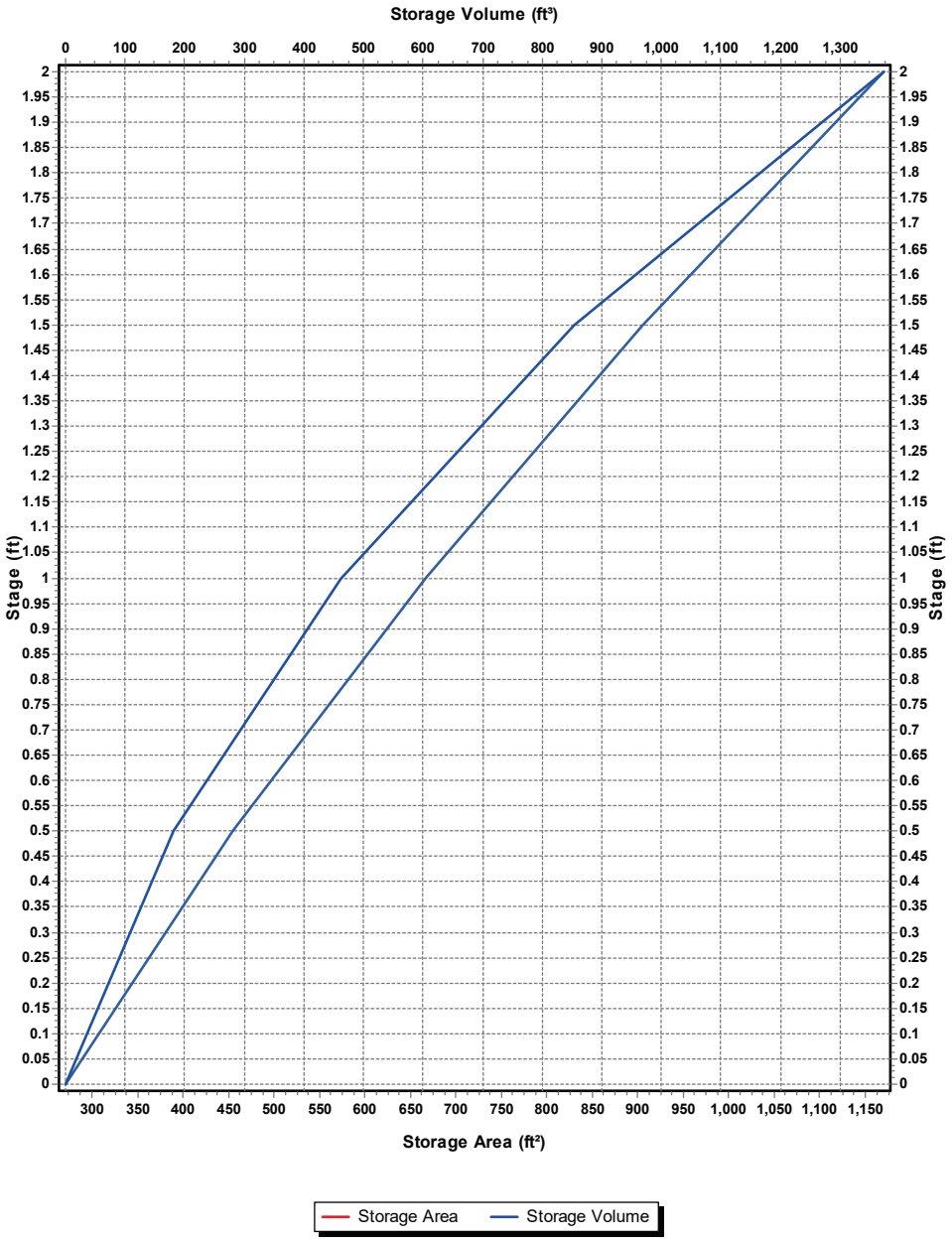
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,18
Peak Lateral Inflow (cfs)	0,18
Peak Outflow (cfs)	0,07
Peak Exfiltration Flow Rate (cfm)	1,28
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	0,52
Average HGL Elevation Attained (ft)	4,07
Average HGL Depth Attained (ft)	0,07
Time of Max HGL Occurrence (days hh:mm)	0 01:08
Total Exfiltration Volume (1000-ft^3)	0,301
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 8: 100 YR-1 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 01HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	100YR 01HR	Cumulative	inches	Florida	Broward	100,00	5,60	Florida DOT 1-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	5,60	5,36	0,48	1,03	0 00:10:00
2	Sub-02	0,12	484,00	98,00	5,60	5,36	0,64	1,39	0 00:10:00
3	Sub-03	0,04	484,00	61,00	5,60	1,74	0,07	0,18	0 00:10:00
4	Sub-04	0,06	484,00	61,00	5,60	1,74	0,11	0,30	0 00:10:00
5	Sub-05	0,02	484,00	61,00	5,60	1,74	0,04	0,09	0 00:10:00

0,11

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					2,59	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	2,59	2,95				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,34	4,52				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	1,59	4,52				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	2,34	4,48				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	2,32	4,38				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	2,32	3,16				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,25	4,52				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	2,59	12,87	0,20	4,40	0,55	0,37	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	1,26	3,49	0,36	0,80	1,00	1,00	52,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,34	2,37	0,15	1,07	0,64	0,64	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	2,32	4,01	0,58	1,71	1,00	1,00	52,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	2,32	12,80	0,18	3,32	0,62	0,42	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,09							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				2,32							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

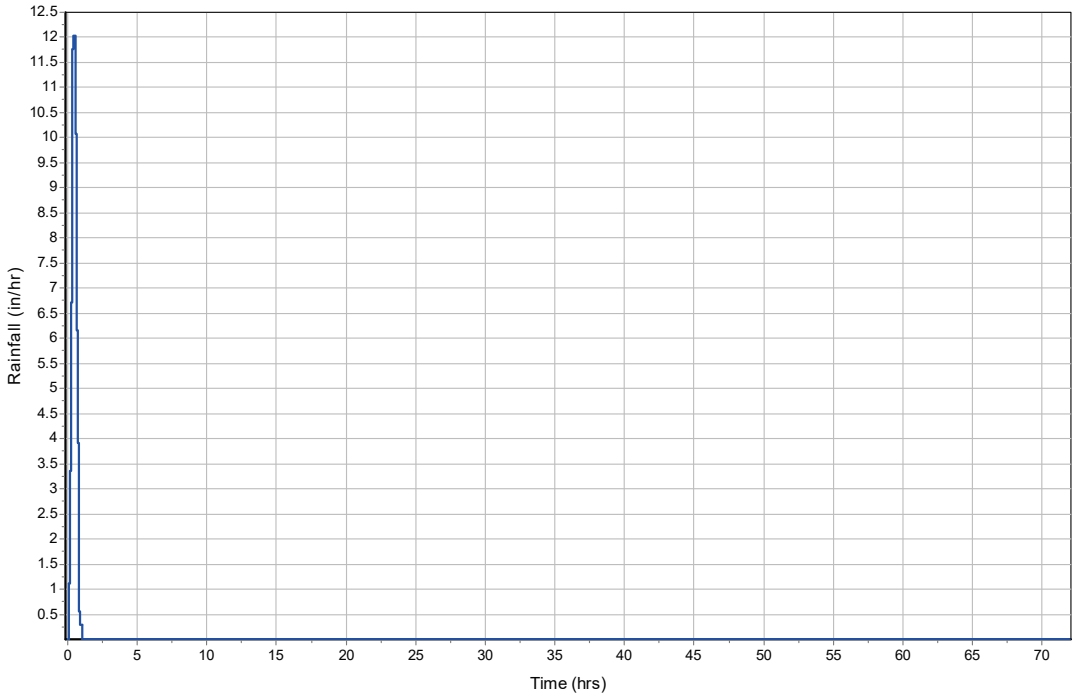
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

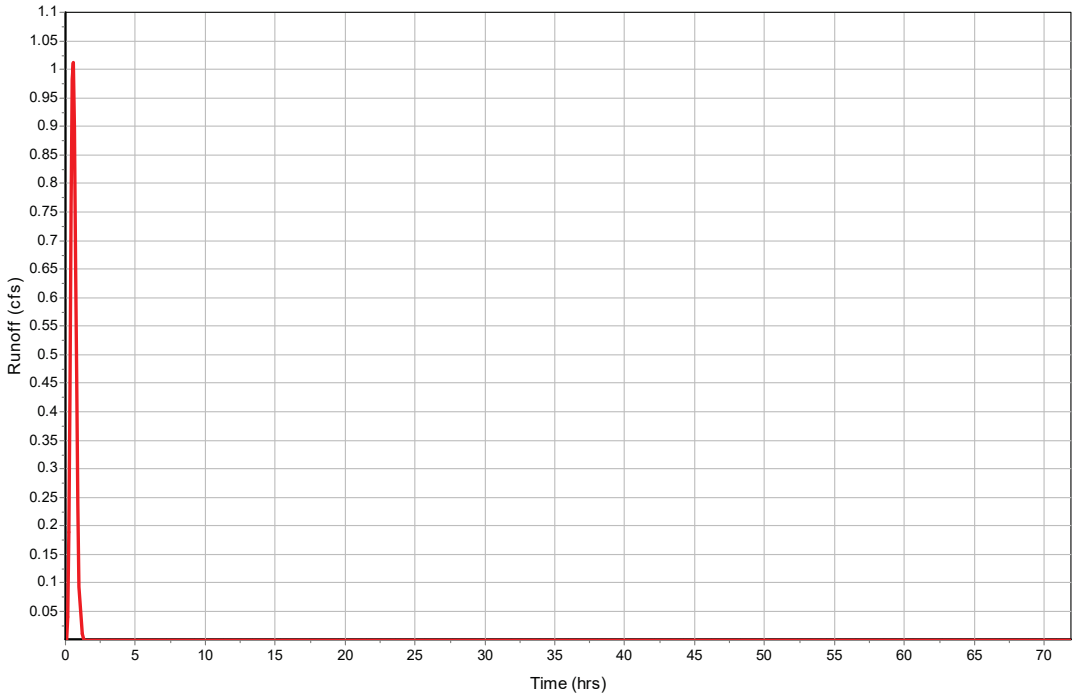
Total Rainfall (in)	5,6
Total Runoff (in)	5,36
Peak Runoff (cfs)	1,03
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

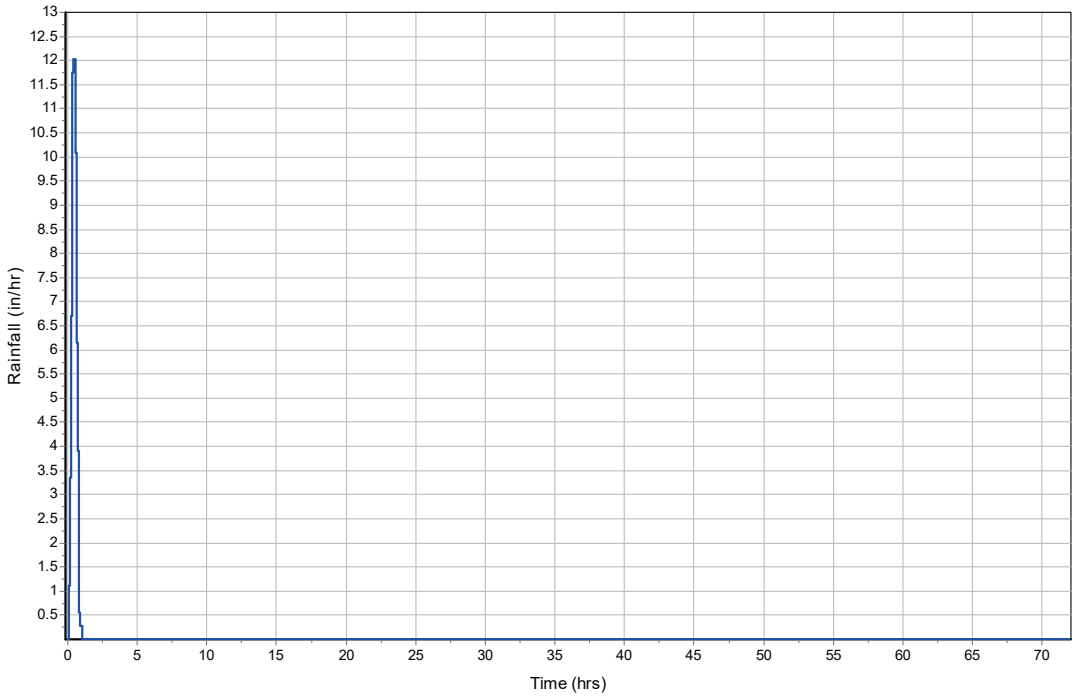
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

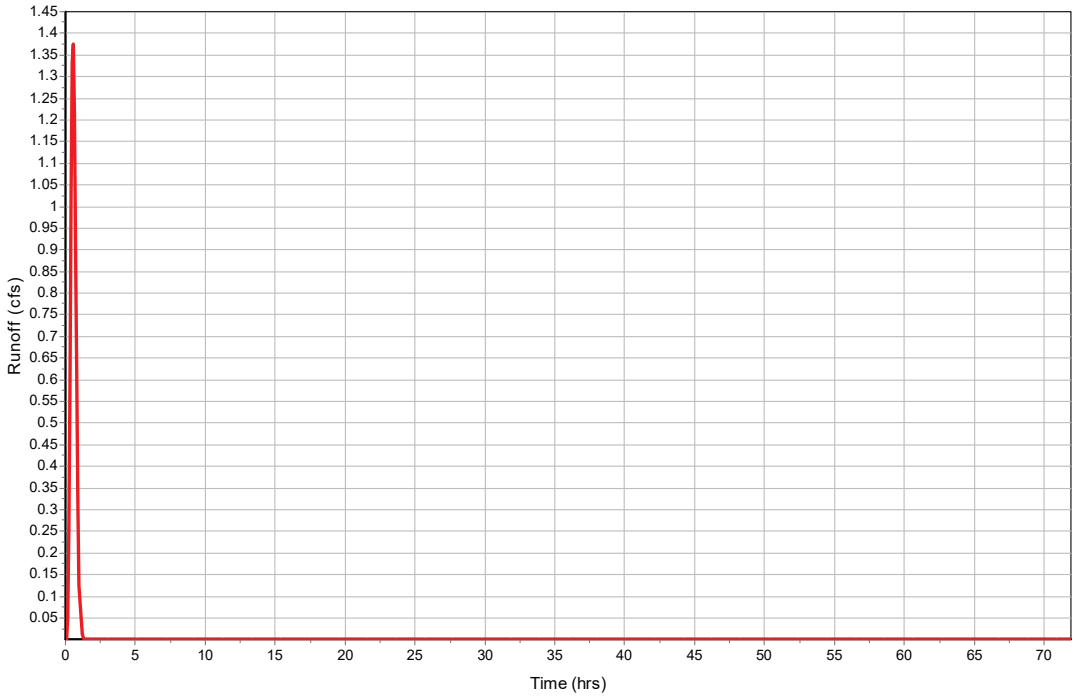
Total Rainfall (in)	5,6
Total Runoff (in)	5,36
Peak Runoff (cfs)	1,39
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

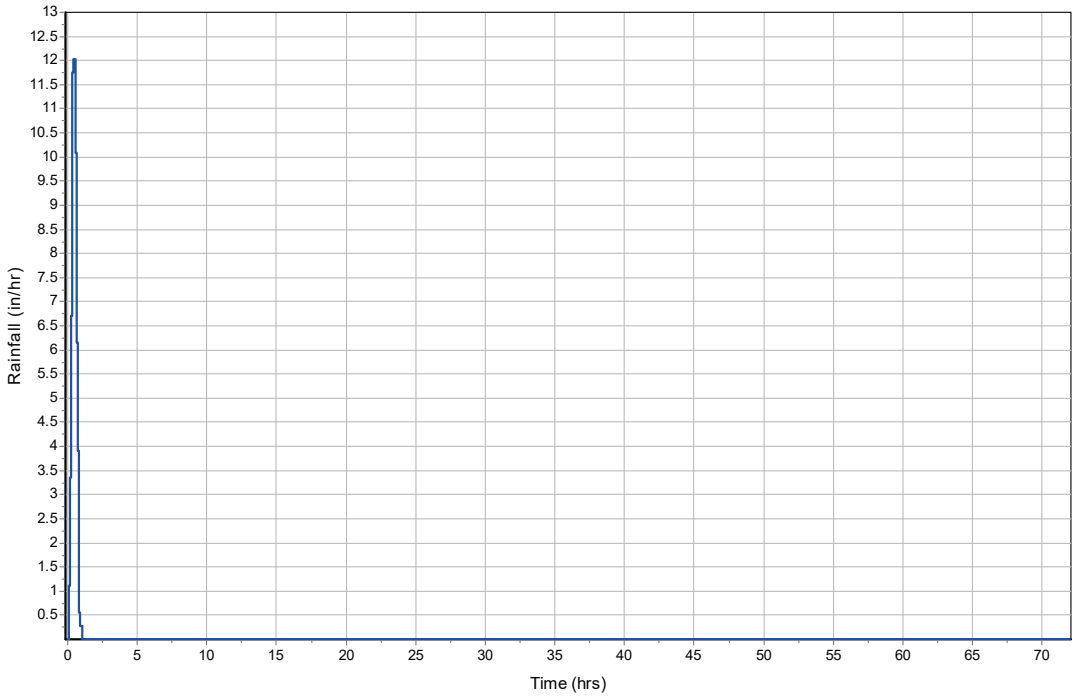
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

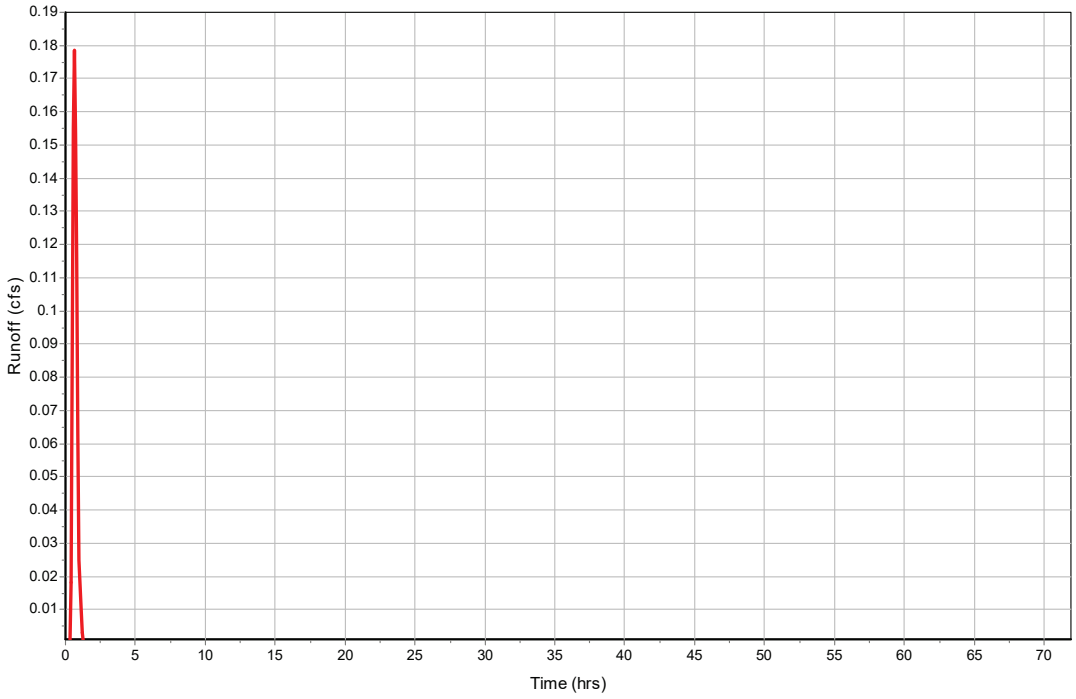
Total Rainfall (in)	5,6
Total Runoff (in)	1,74
Peak Runoff (cfs)	0,18
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

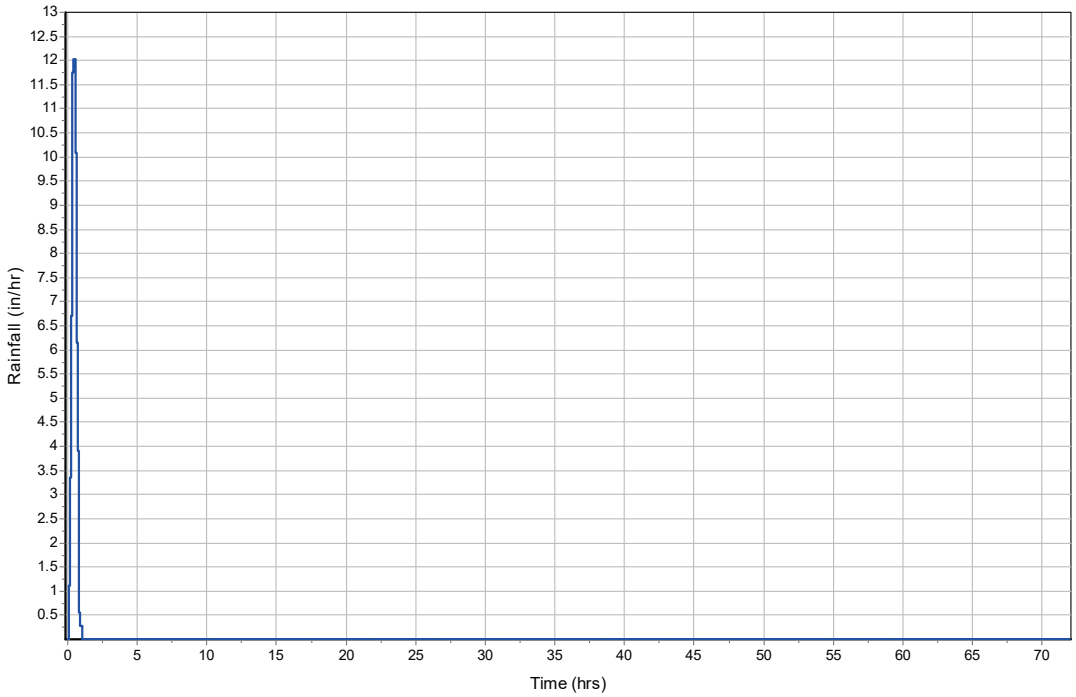
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

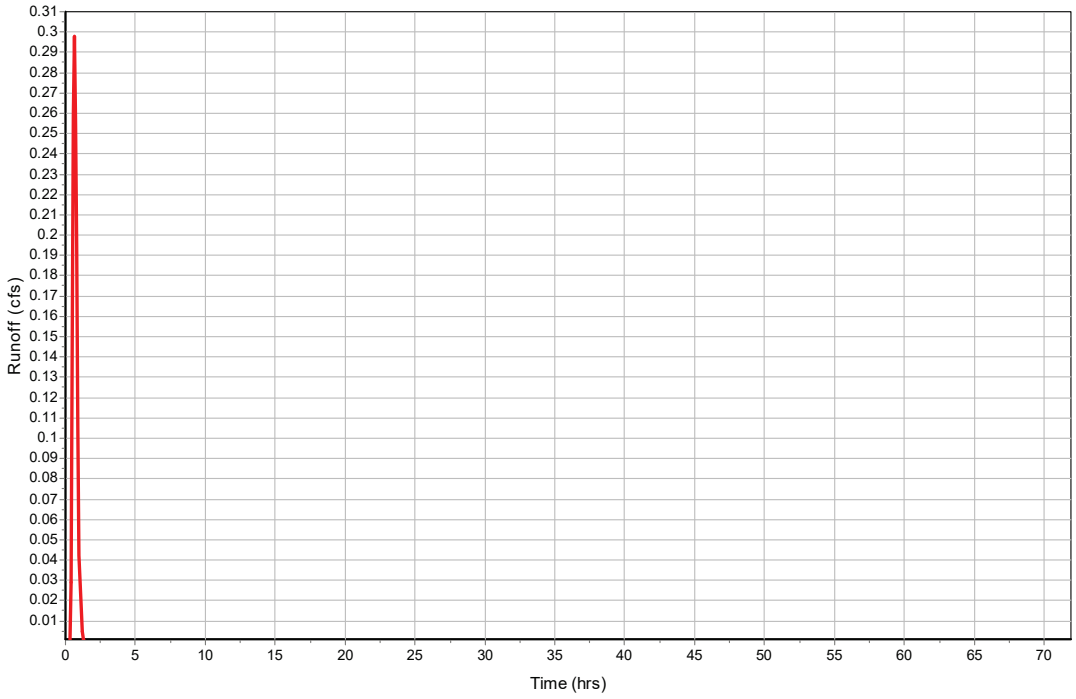
Total Rainfall (in)	5,6
Total Runoff (in)	1,74
Peak Runoff (cfs)	0,3
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

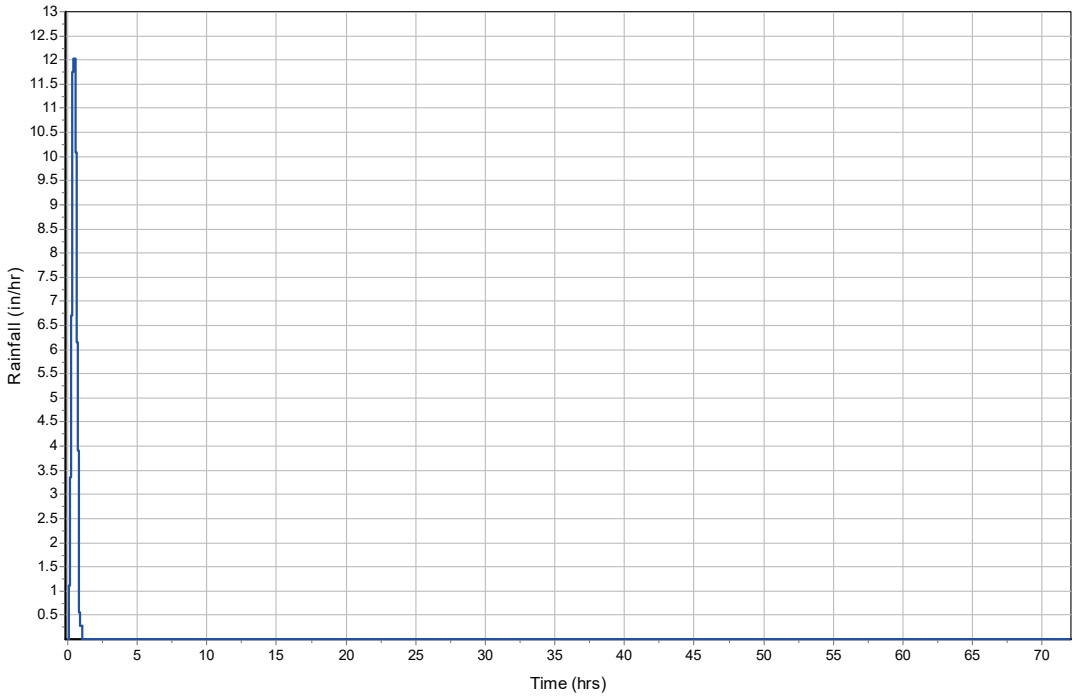
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

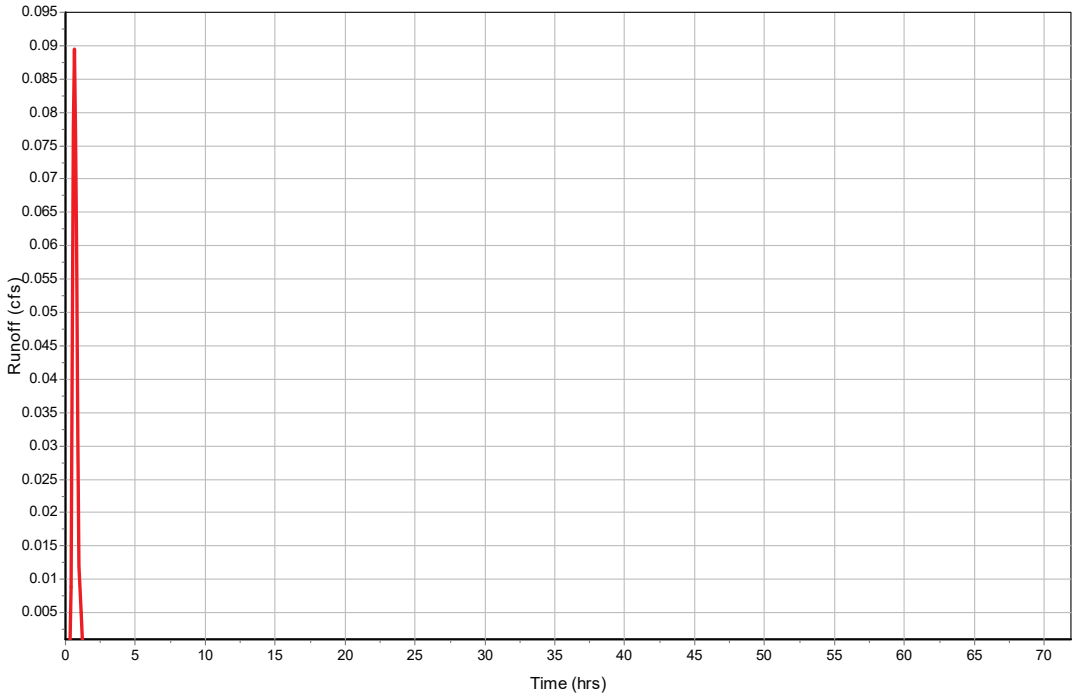
Total Rainfall (in)	5,6
Total Runoff (in)	1,74
Peak Runoff (cfs)	0,09
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	2,59	0 00:41	12,87	0,20	4,40	0,02	0,55	0,37	0,00		Calculated
2	Link-03	1,26	0 00:40	3,49	0,36	0,80	1,63	1,00	1,00	52,00		SURCHARGED
3	Link-04	0,34	0 00:36	2,37	0,15	1,07	0,66	0,64	0,64	0,00		Calculated
4	Link-05	2,32	0 00:40	4,01	0,58	1,71	0,46	1,00	1,00	52,00		SURCHARGED
5	Link-06	2,32	0 00:40	12,80	0,18	3,32	0,04	0,62	0,42	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,59
Peak Lateral Inflow (cfs)	0,3
Peak Outflow (cfs)	2,59
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,95
Max HGL Depth Attained (ft)	2,95
Average HGL Elevation Attained (ft)	2,35
Average HGL Depth Attained (ft)	2,35
Time of Max HGL Occurrence (days hh:mm)	0 00:41
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,34
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,16
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	2,02
Average HGL Elevation Attained (ft)	4,03
Average HGL Depth Attained (ft)	1,53
Time of Max HGL Occurrence (days hh:mm)	0 00:41
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

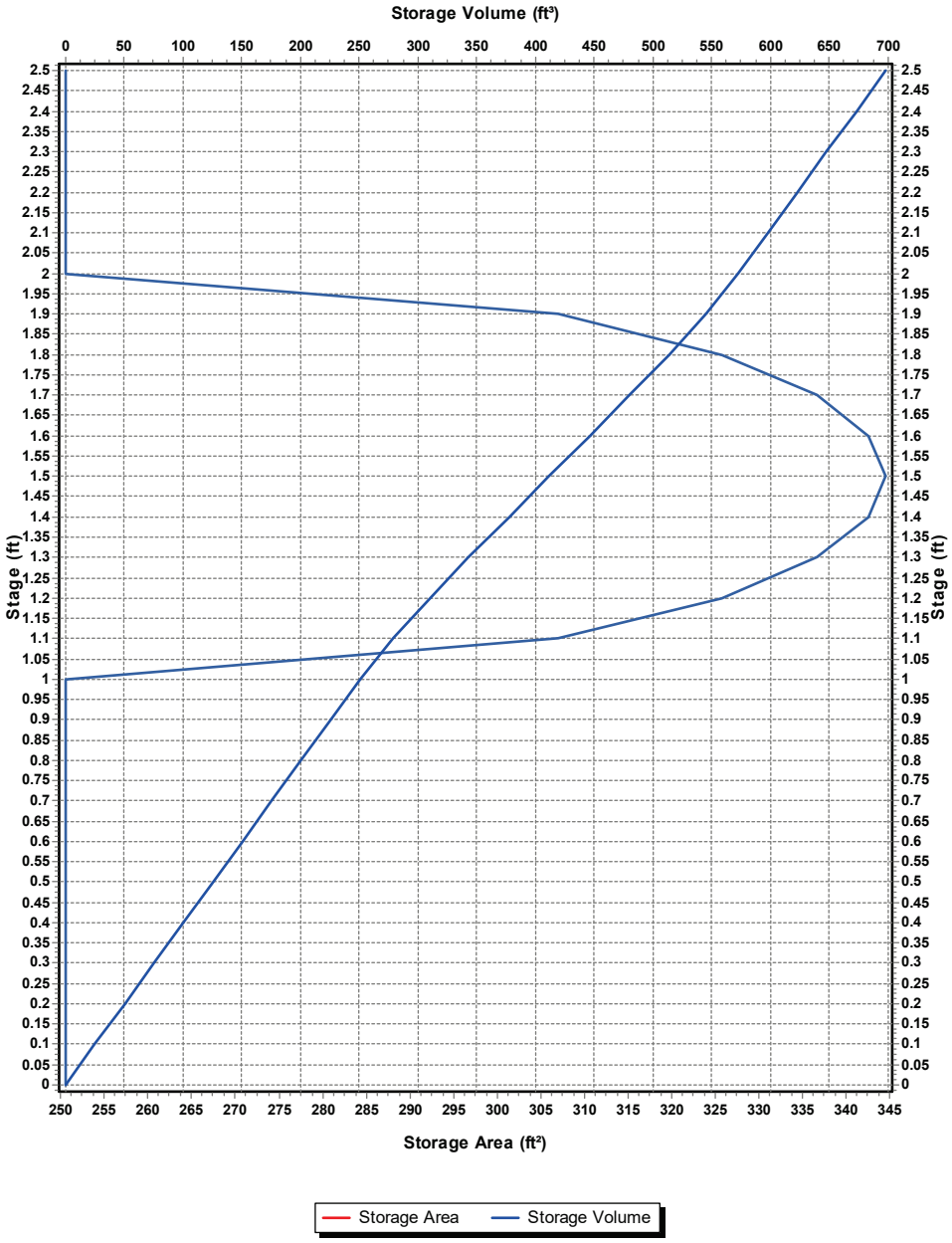
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,59
Peak Lateral Inflow (cfs)	1,38
Peak Outflow (cfs)	1,34
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	2,52
Average HGL Elevation Attained (ft)	2,47
Average HGL Depth Attained (ft)	0,47
Time of Max HGL Occurrence (days hh:mm)	0 00:40
Total Exfiltration Volume (1000-ft^3)	0,757
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

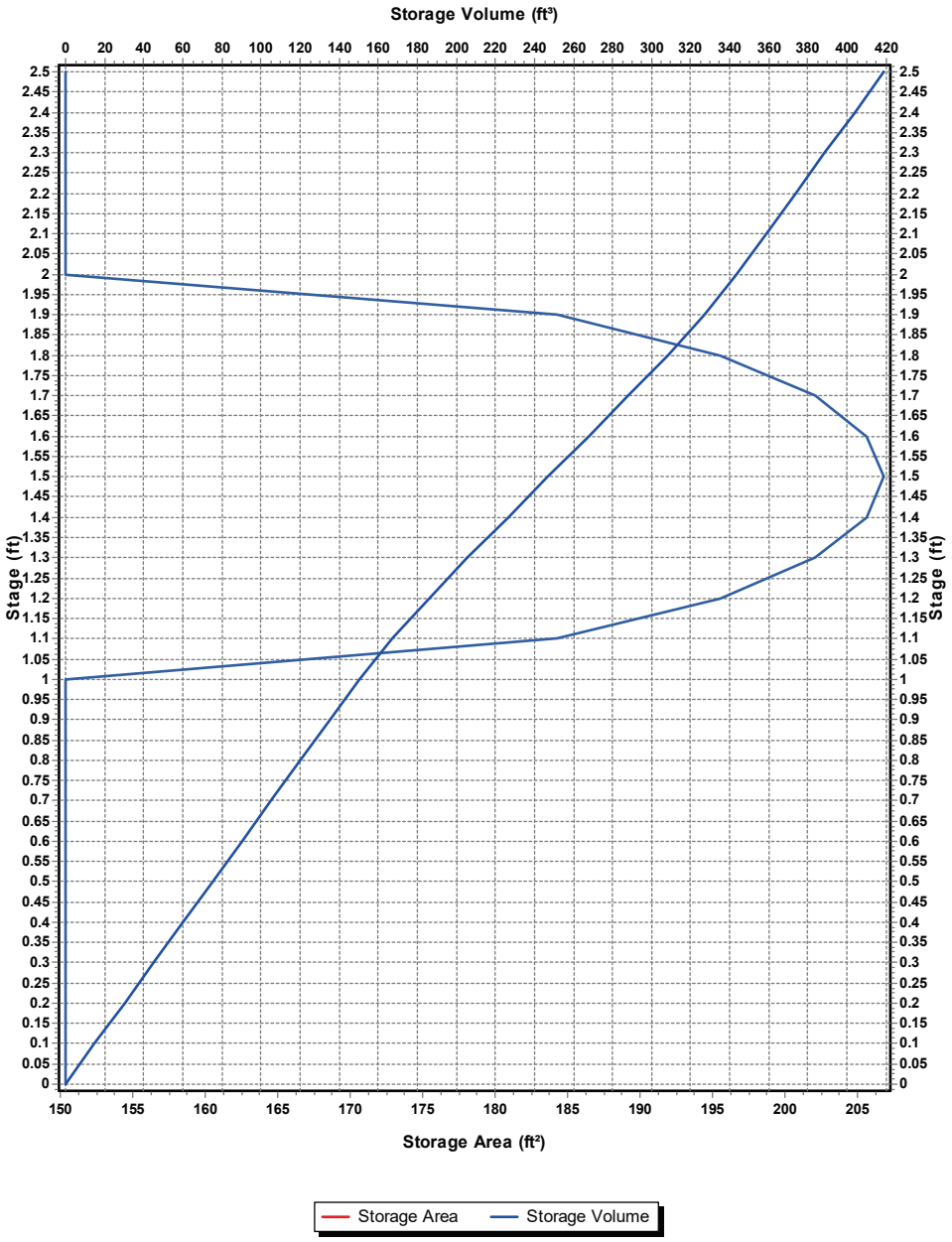
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	2,34
Peak Lateral Inflow (cfs)	1,09
Peak Outflow (cfs)	2,32
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,48
Max HGL Depth Attained (ft)	2,48
Average HGL Elevation Attained (ft)	2,47
Average HGL Depth Attained (ft)	0,47
Time of Max HGL Occurrence (days hh:mm)	0 00:40
Total Exfiltration Volume (1000-ft^3)	0,465
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	2,32
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,32
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,38
Max HGL Depth Attained (ft)	4,38
Average HGL Elevation Attained (ft)	3,19
Average HGL Depth Attained (ft)	3,19
Time of Max HGL Occurrence (days hh:mm)	0 00:40
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,32
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,32
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,16
Max HGL Depth Attained (ft)	3,16
Average HGL Elevation Attained (ft)	2,55
Average HGL Depth Attained (ft)	2,55
Time of Max HGL Occurrence (days hh:mm)	0 00:40
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

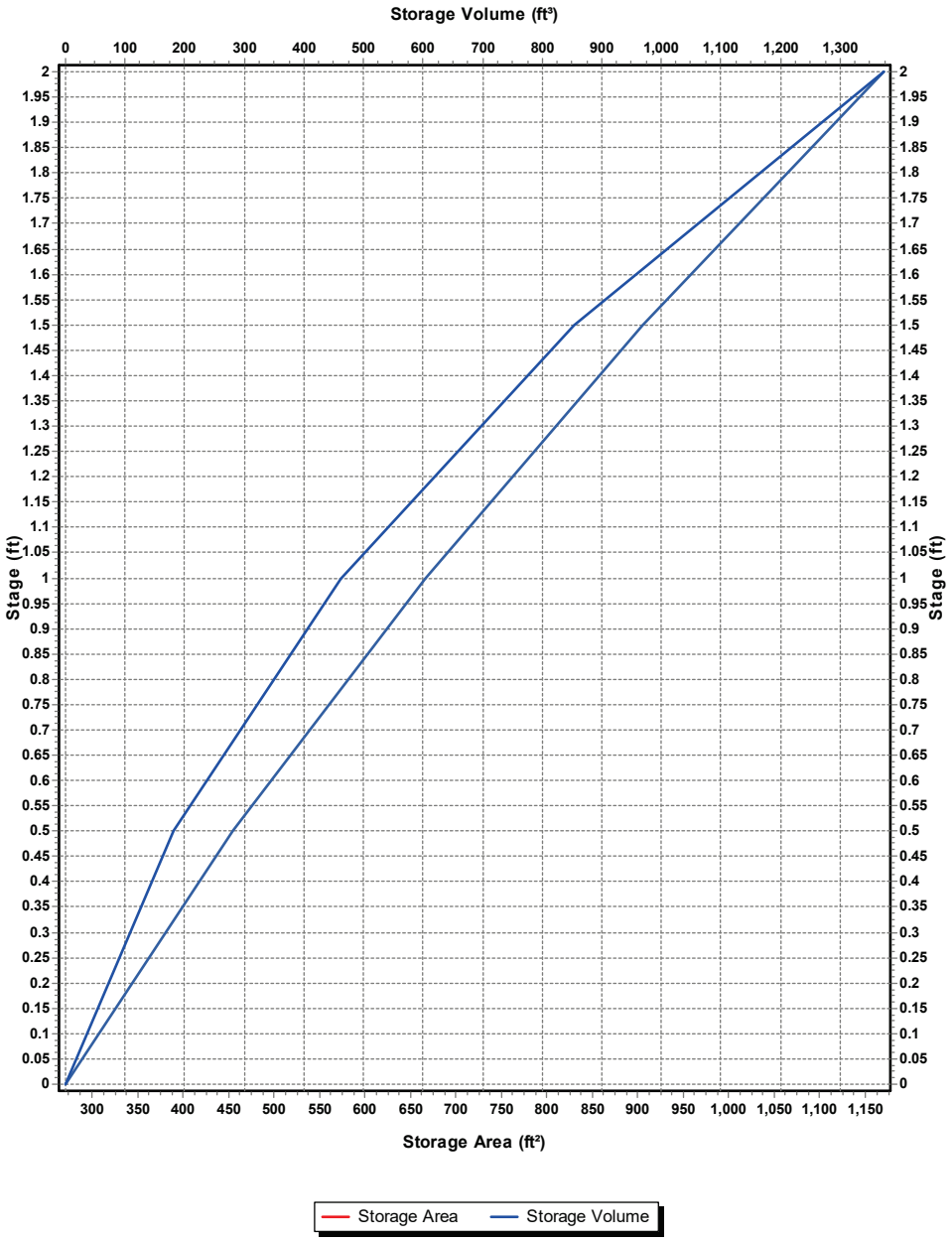
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,25
Peak Lateral Inflow (cfs)	0,18
Peak Outflow (cfs)	0,07
Peak Exfiltration Flow Rate (cfm)	1,28
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	0,52
Average HGL Elevation Attained (ft)	4,05
Average HGL Depth Attained (ft)	0,05
Time of Max HGL Occurrence (days hh:mm)	0 00:57
Total Exfiltration Volume (1000-ft^3)	0,23
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 9: 50 YR-3 DAY POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	050YR 72HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	050YR 72HR	Cumulative	inches	Florida	Broward	50,00	15,90	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	15,88	15,64	1,39	0,86	0 00:10:00
2	Sub-02	0,12	484,00	98,00	15,88	15,64	1,88	1,17	0 00:10:00
3	Sub-03	0,04	484,00	61,00	15,88	10,04	0,38	0,30	0 00:10:00
4	Sub-04	0,06	484,00	61,00	15,88	10,11	0,64	0,50	0 00:10:00
5	Sub-05	0,02	484,00	61,00	15,88	9,38	0,19	0,15	0 00:10:00
							0,37		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					2,81	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	2,81	2,98				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,28	4,54				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	1,38	4,53				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	2,33	4,48				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	2,32	4,38				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	2,32	3,17				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,29	4,55				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	2,81	12,87	0,22	4,49	0,58	0,38	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	1,37	3,49	0,39	0,87	1,00	1,00	903,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,28	2,37	0,12	0,53	0,66	0,66	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	2,32	4,01	0,58	1,48	1,00	1,00	903,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	2,32	12,80	0,18	3,68	0,65	0,43	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,28							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				2,32							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

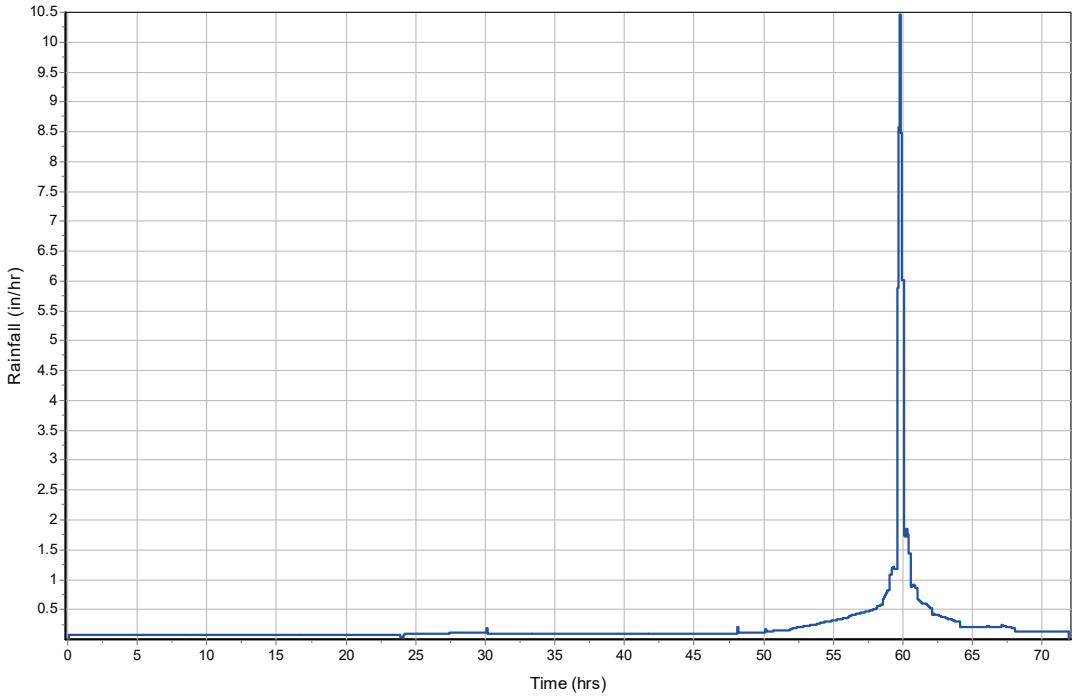
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

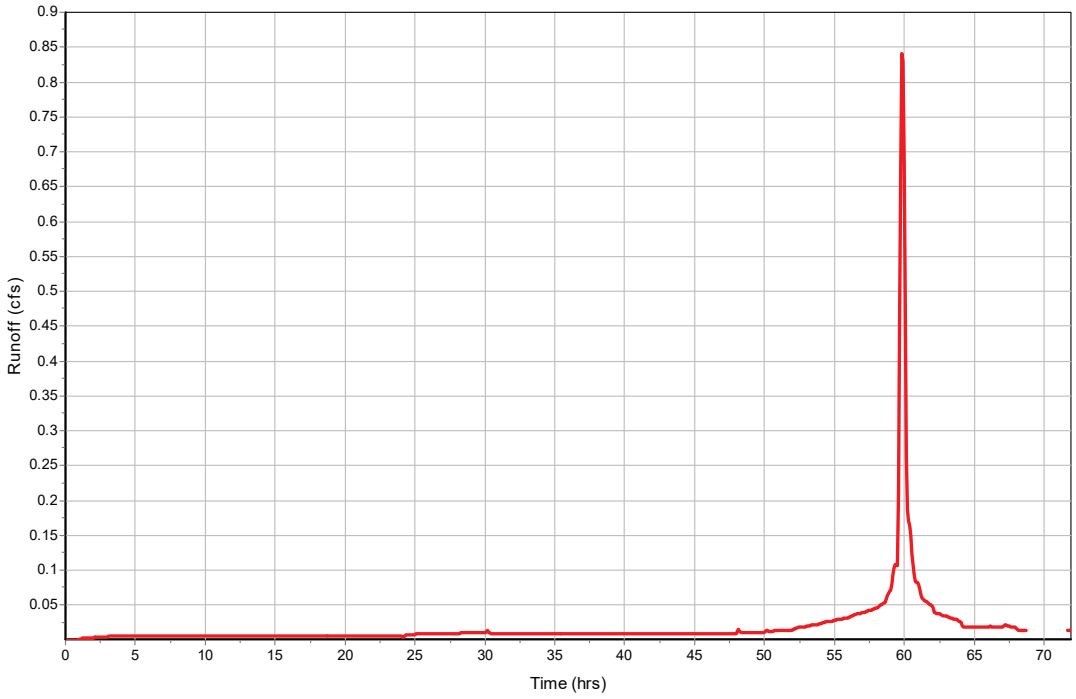
Total Rainfall (in)	15,88
Total Runoff (in)	15,64
Peak Runoff (cfs)	0,86
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

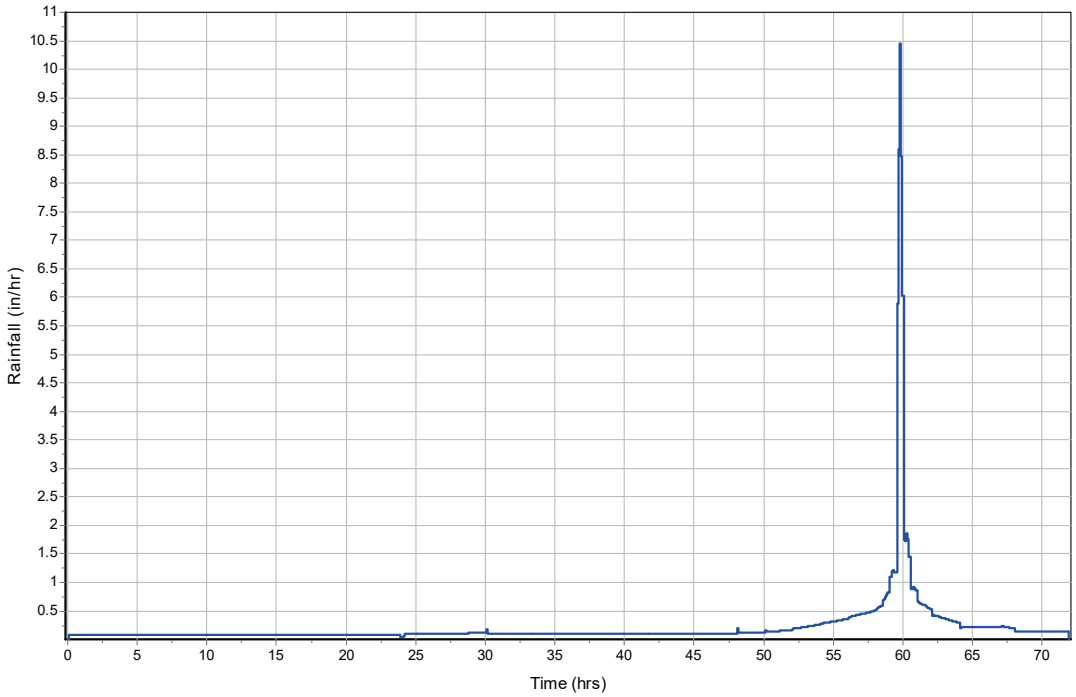
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

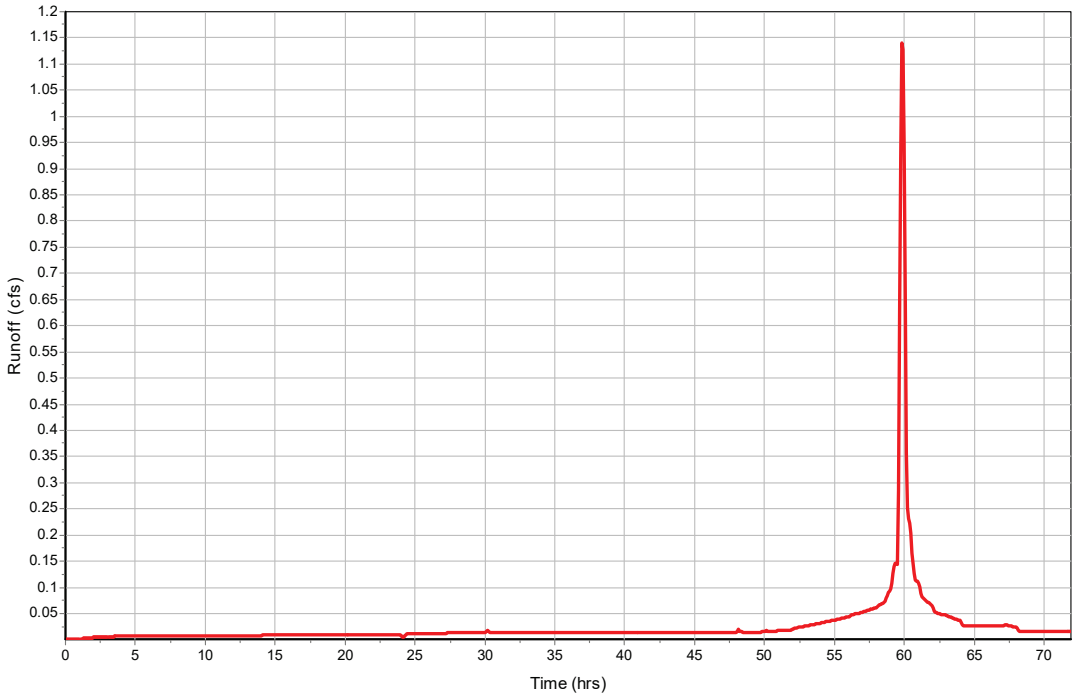
Total Rainfall (in)	15,88
Total Runoff (in)	15,64
Peak Runoff (cfs)	1,17
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

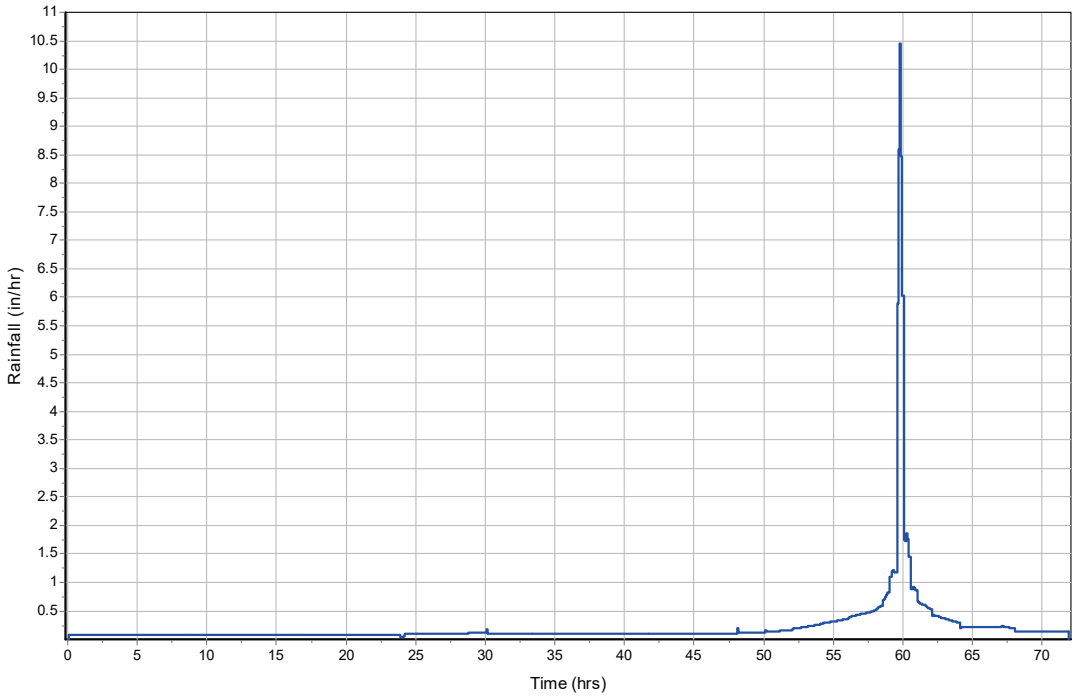
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

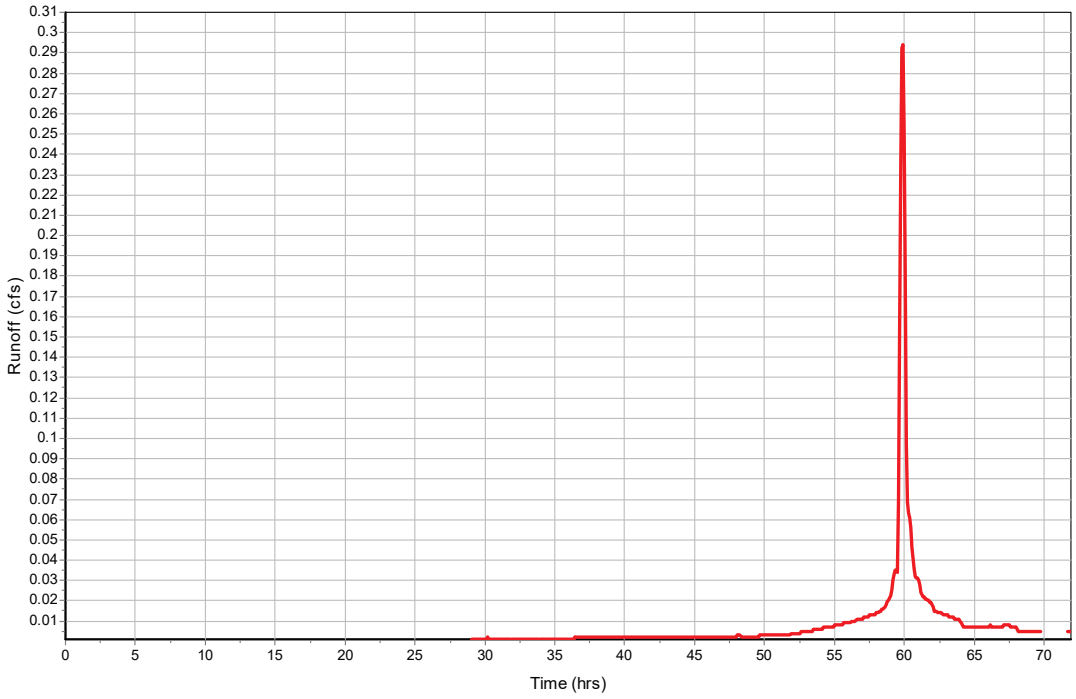
Total Rainfall (in)	15,88
Total Runoff (in)	10,04
Peak Runoff (cfs)	0,3
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

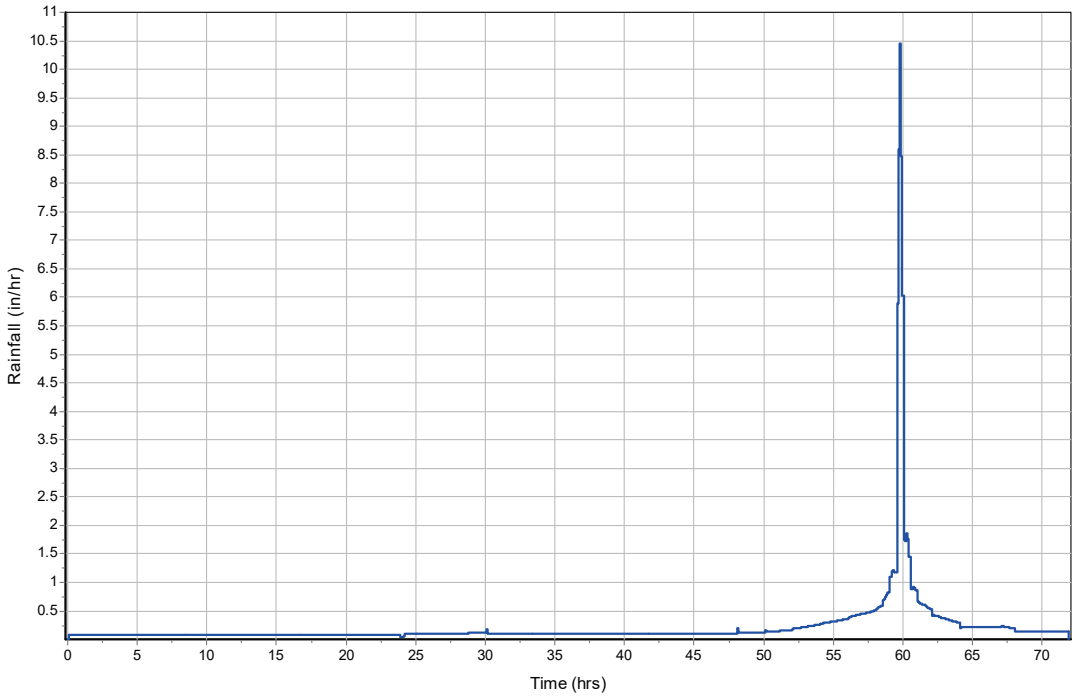
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

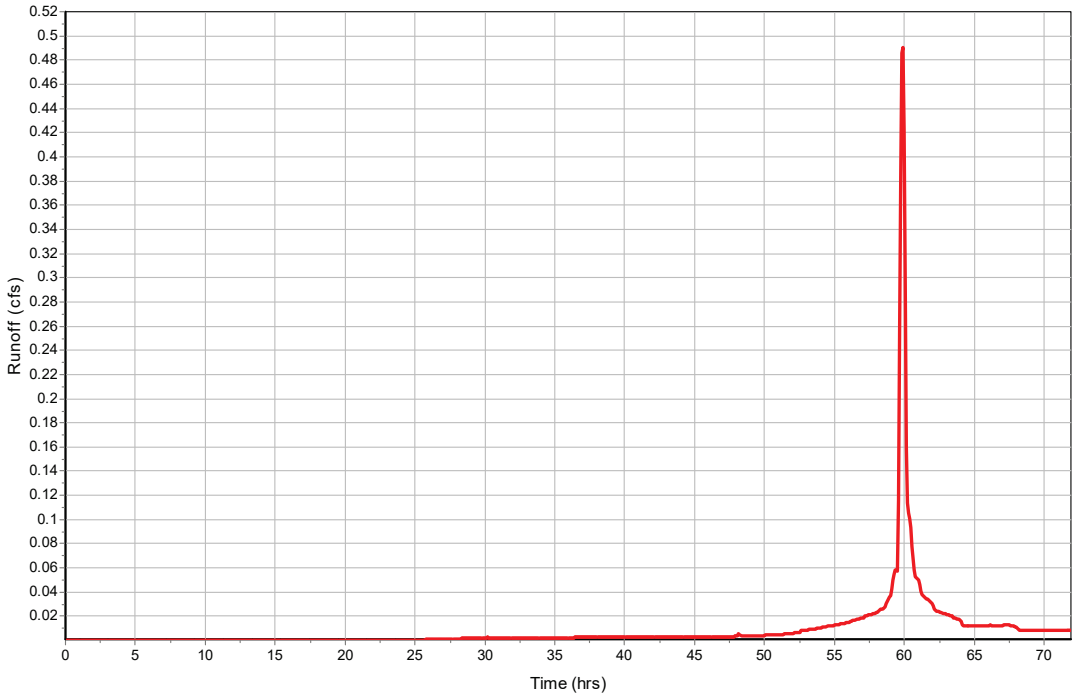
Total Rainfall (in)	15,88
Total Runoff (in)	10,11
Peak Runoff (cfs)	0,5
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

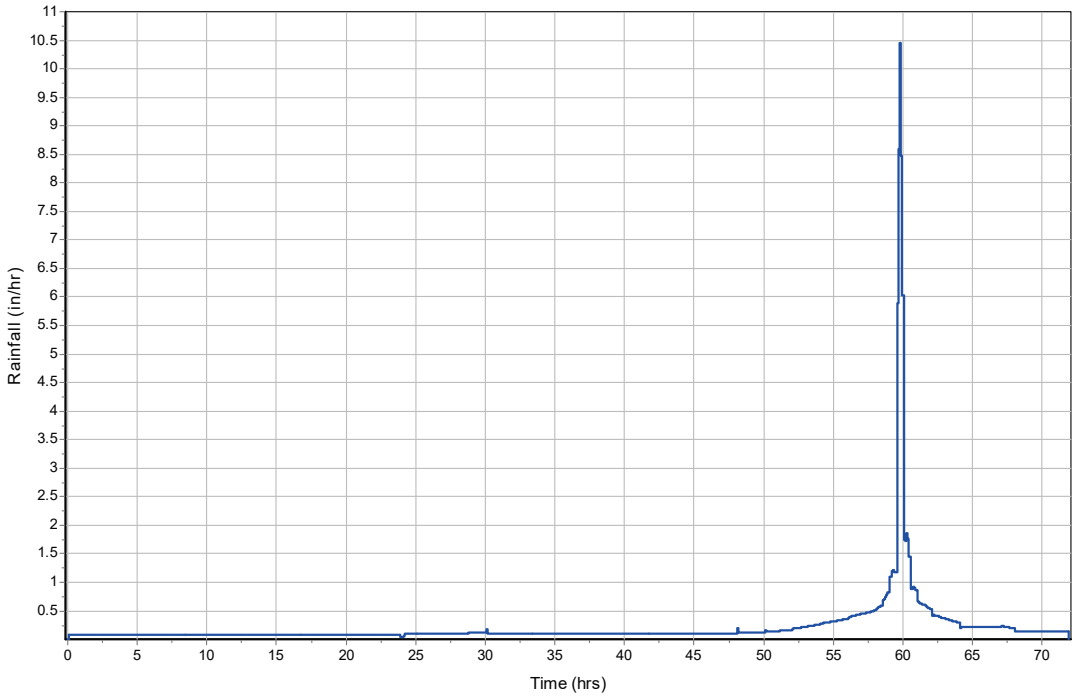
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

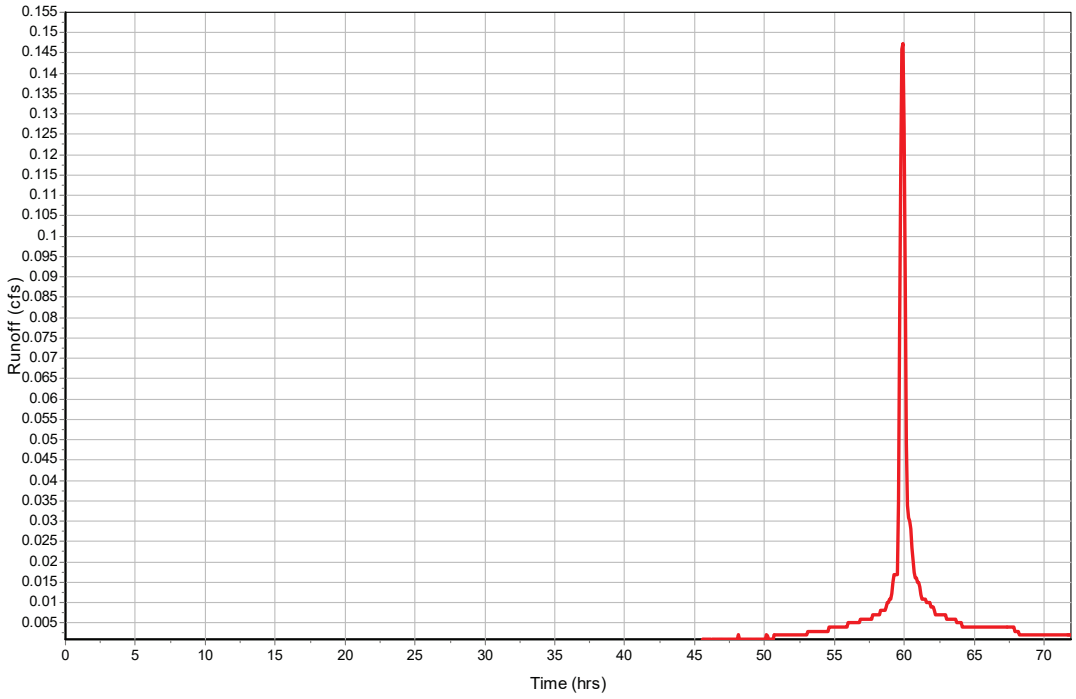
Total Rainfall (in)	15,88
Total Runoff (in)	9,38
Peak Runoff (cfs)	0,15
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	2,81	2 12:00	12,87	0,22	4,49	0,02	0,58	0,38	0,00		Calculated
2	Link-03	1,37	2 12:01	3,49	0,39	0,87	1,50	1,00	1,00	903,00		SURCHARGED
3	Link-04	0,28	2 12:02	2,37	0,12	0,53	1,33	0,66	0,66	0,00		Calculated
4	Link-05	2,32	2 12:00	4,01	0,58	1,48	0,53	1,00	1,00	903,00		SURCHARGED
5	Link-06	2,32	2 12:00	12,80	0,18	3,68	0,03	0,65	0,43	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,81
Peak Lateral Inflow (cfs)	0,49
Peak Outflow (cfs)	2,81
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,98
Max HGL Depth Attained (ft)	2,98
Average HGL Elevation Attained (ft)	2,07
Average HGL Depth Attained (ft)	2,07
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,28
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,28
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,54
Max HGL Depth Attained (ft)	2,04
Average HGL Elevation Attained (ft)	3,03
Average HGL Depth Attained (ft)	0,53
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

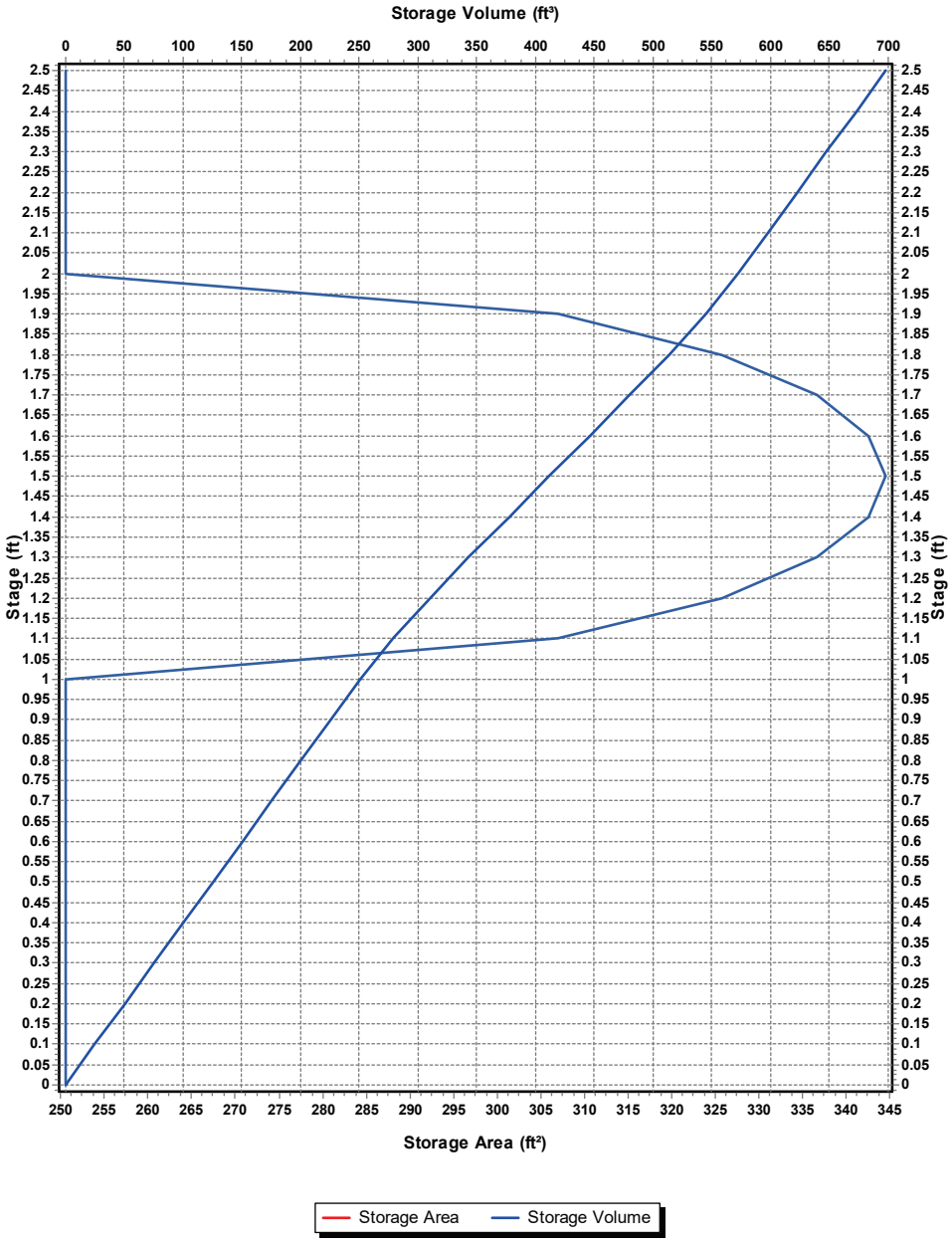
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,38
Peak Lateral Inflow (cfs)	1,14
Peak Outflow (cfs)	1,37
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,53
Max HGL Depth Attained (ft)	2,53
Average HGL Elevation Attained (ft)	2,88
Average HGL Depth Attained (ft)	0,88
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	2,719
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

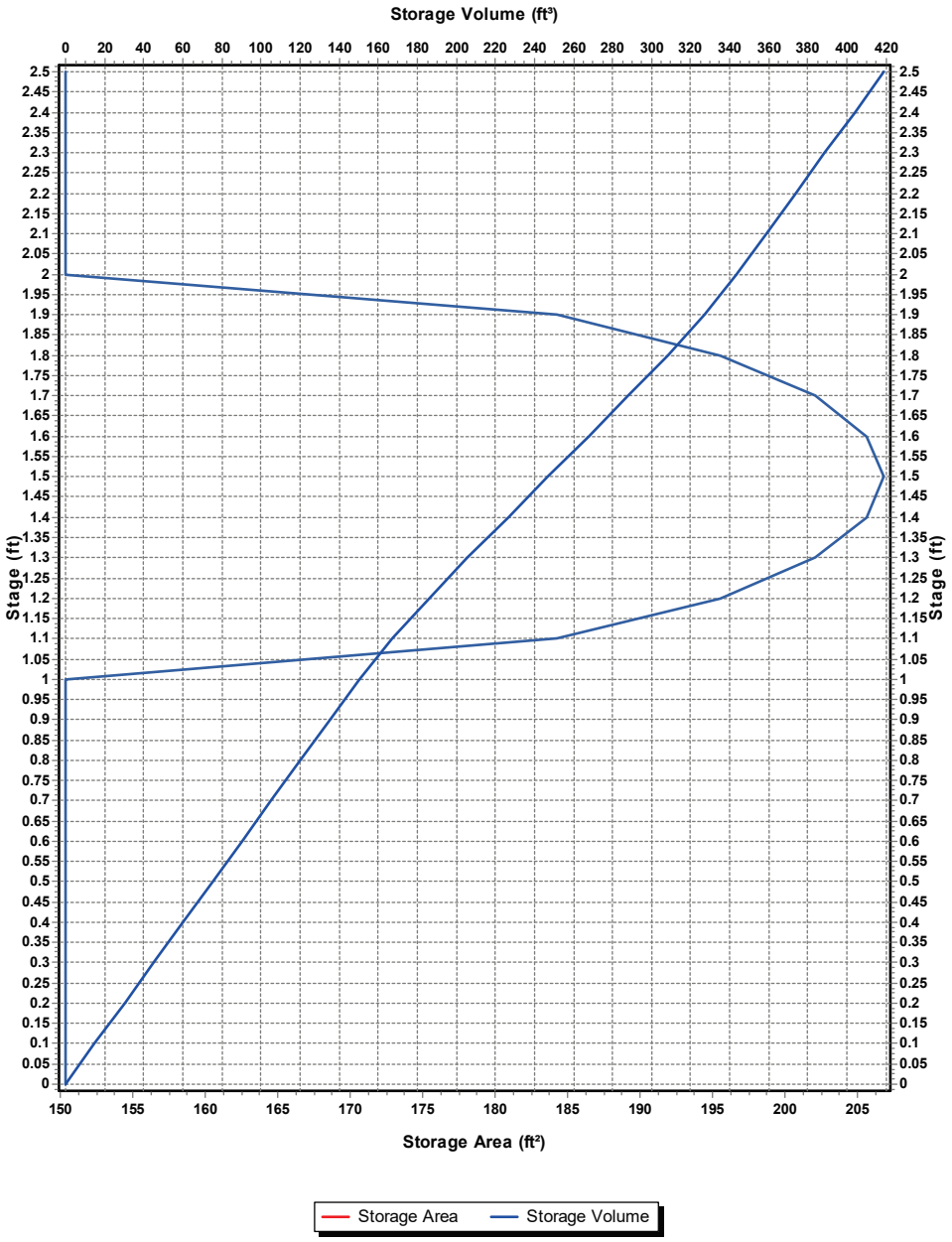
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	2,33
Peak Lateral Inflow (cfs)	0,99
Peak Outflow (cfs)	2,32
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,48
Max HGL Depth Attained (ft)	2,48
Average HGL Elevation Attained (ft)	2,99
Average HGL Depth Attained (ft)	0,99
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	1,708
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	2,32
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,32
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,38
Max HGL Depth Attained (ft)	4,38
Average HGL Elevation Attained (ft)	2,35
Average HGL Depth Attained (ft)	2,35
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,32
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	2,32
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,17
Max HGL Depth Attained (ft)	3,17
Average HGL Elevation Attained (ft)	1,77
Average HGL Depth Attained (ft)	1,77
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

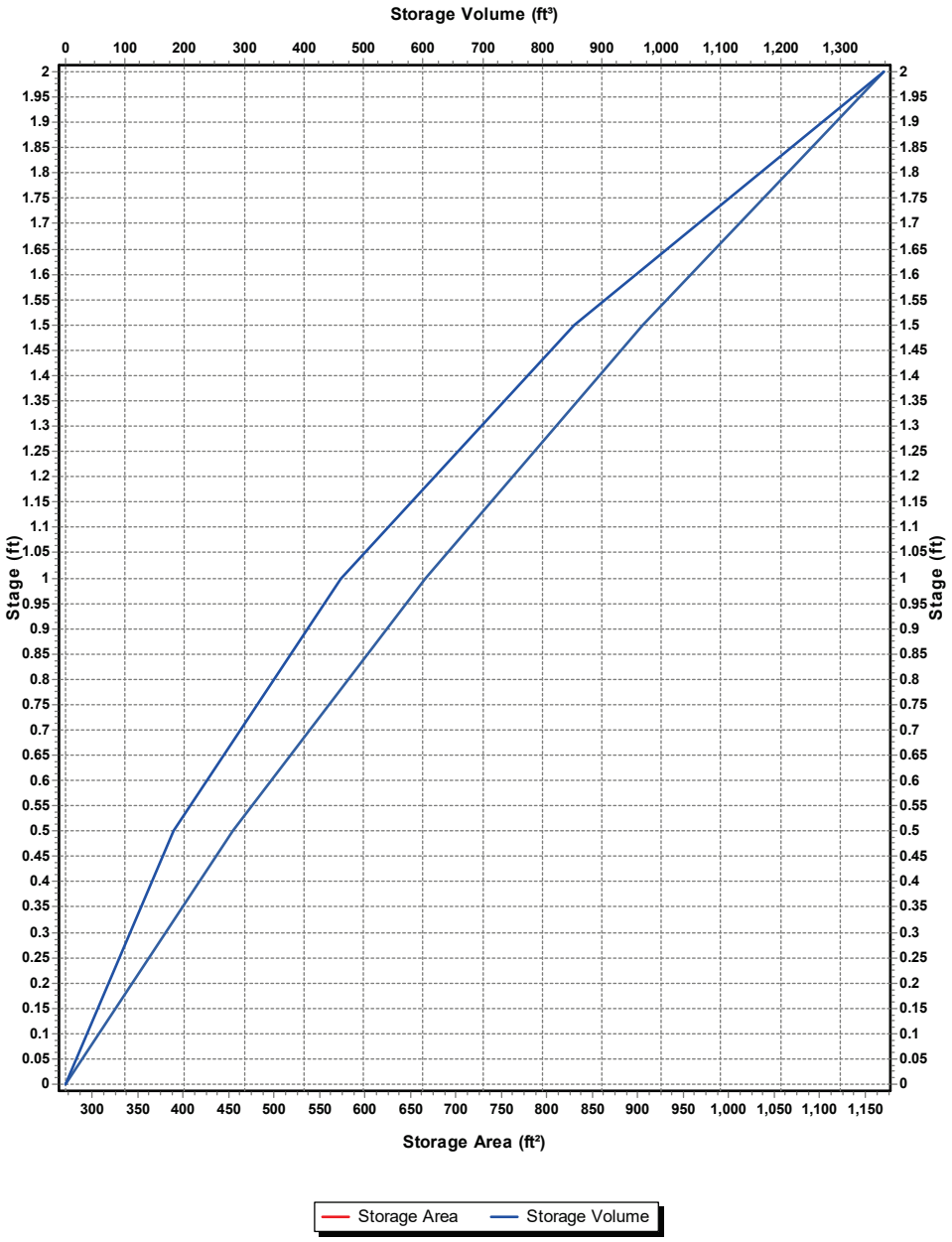
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,29
Peak Lateral Inflow (cfs)	0,29
Peak Outflow (cfs)	0,28
Peak Exfiltration Flow Rate (cfm)	1,32
Max HGL Elevation Attained (ft)	4,55
Max HGL Depth Attained (ft)	0,55
Average HGL Elevation Attained (ft)	4,1
Average HGL Depth Attained (ft)	0,1
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	1,028
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 10: 50 YR-24 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	050YR 24HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	050YR 24HR	Cumulative	inches	Florida	Broward	50,00	13,70	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	13,70	13,46	1,20	0,67	0 00:10:00
2	Sub-02	0,12	484,00	98,00	13,70	13,46	1,62	0,91	0 00:10:00
3	Sub-03	0,04	484,00	61,00	13,70	8,19	0,31	0,20	0 00:10:00
4	Sub-04	0,06	484,00	61,00	13,70	8,20	0,52	0,33	0 00:10:00
5	Sub-05	0,02	484,00	61,00	13,70	8,16	0,17	0,10	0 00:10:00
							0,32		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					2,11	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	2,11	2,88				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,18	4,41				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	1,07	4,41				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,79	4,38				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,78	4,32				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,78	3,06				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,20	4,53				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	2,11	12,87	0,16	4,17	0,49	0,33	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	1,04	3,49	0,30	0,66	1,00	1,00	844,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,18	2,37	0,07	0,42	0,53	0,53	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,78	4,01	0,44	1,13	1,00	1,00	844,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,78	12,80	0,14	3,09	0,54	0,36	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,18							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,78							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

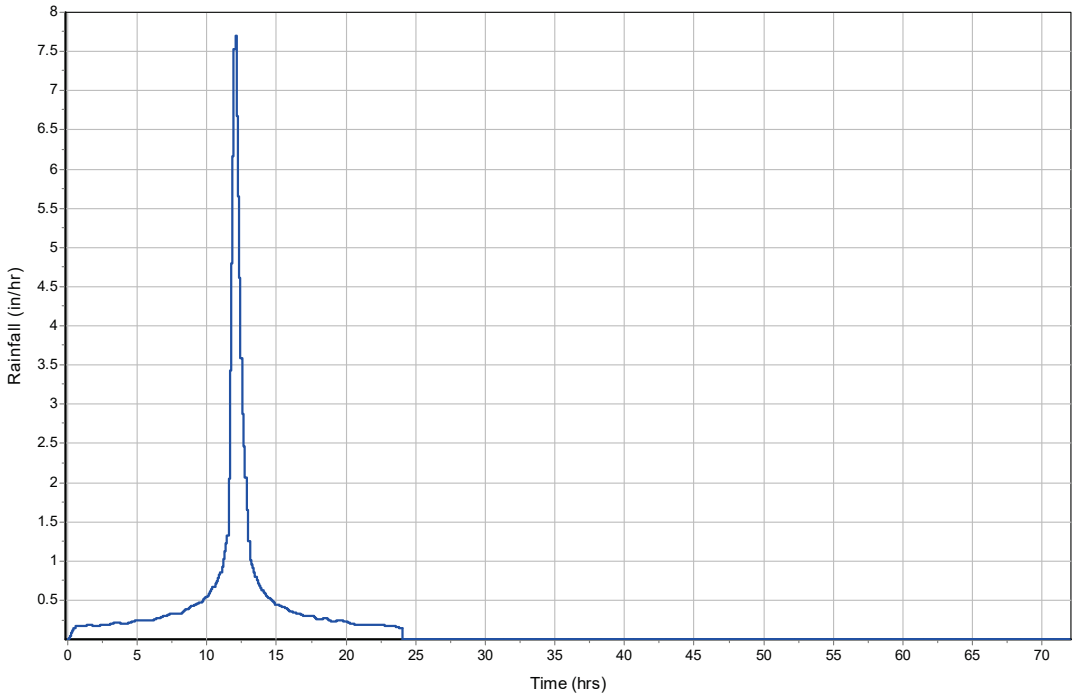
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

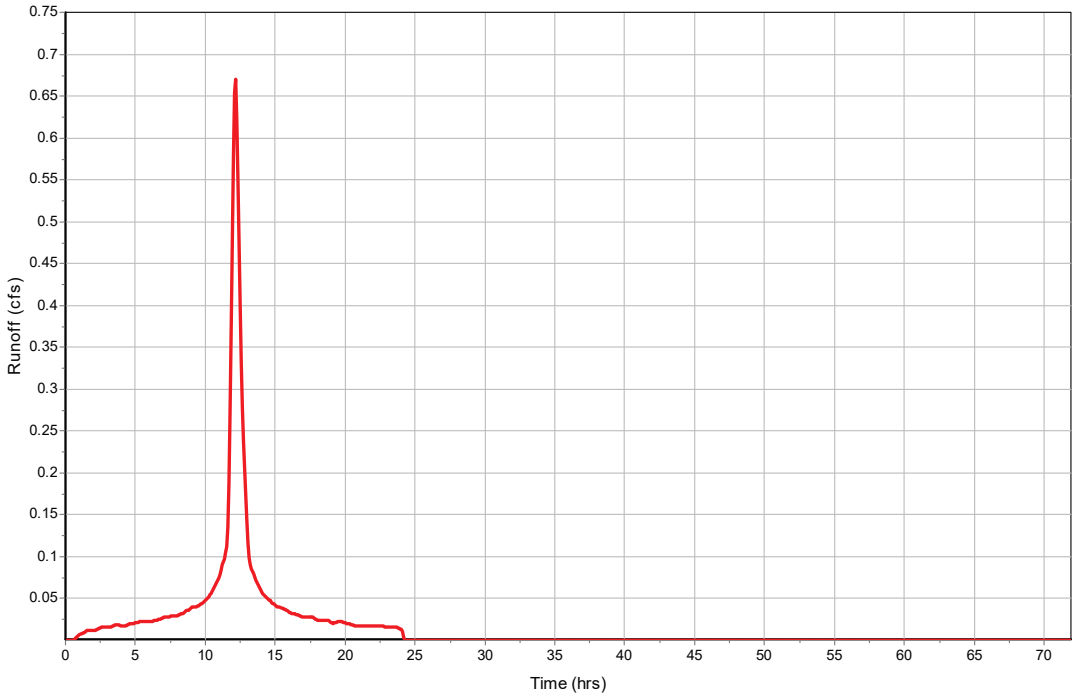
Total Rainfall (in)	13,7
Total Runoff (in)	13,46
Peak Runoff (cfs)	0,67
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

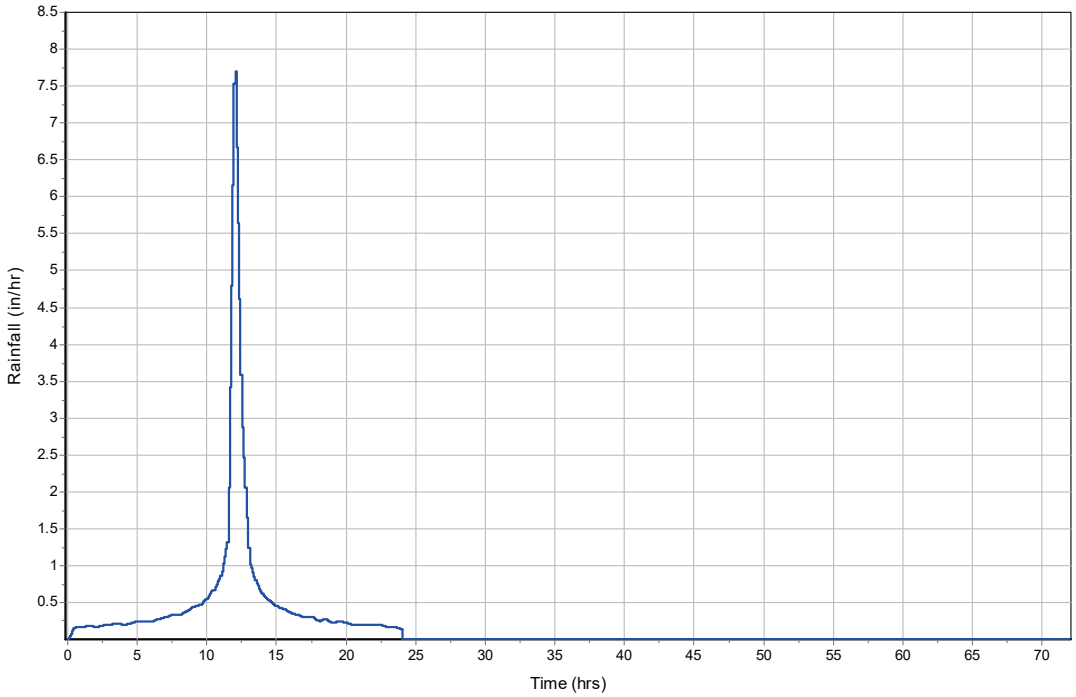
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

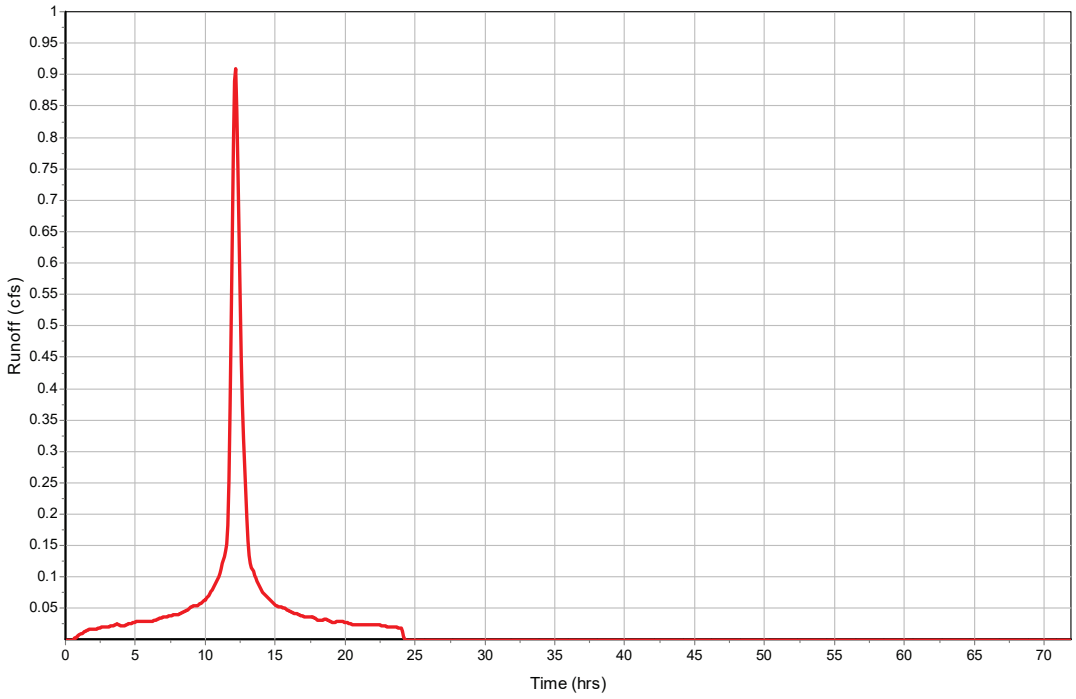
Total Rainfall (in)	13,7
Total Runoff (in)	13,46
Peak Runoff (cfs)	0,91
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

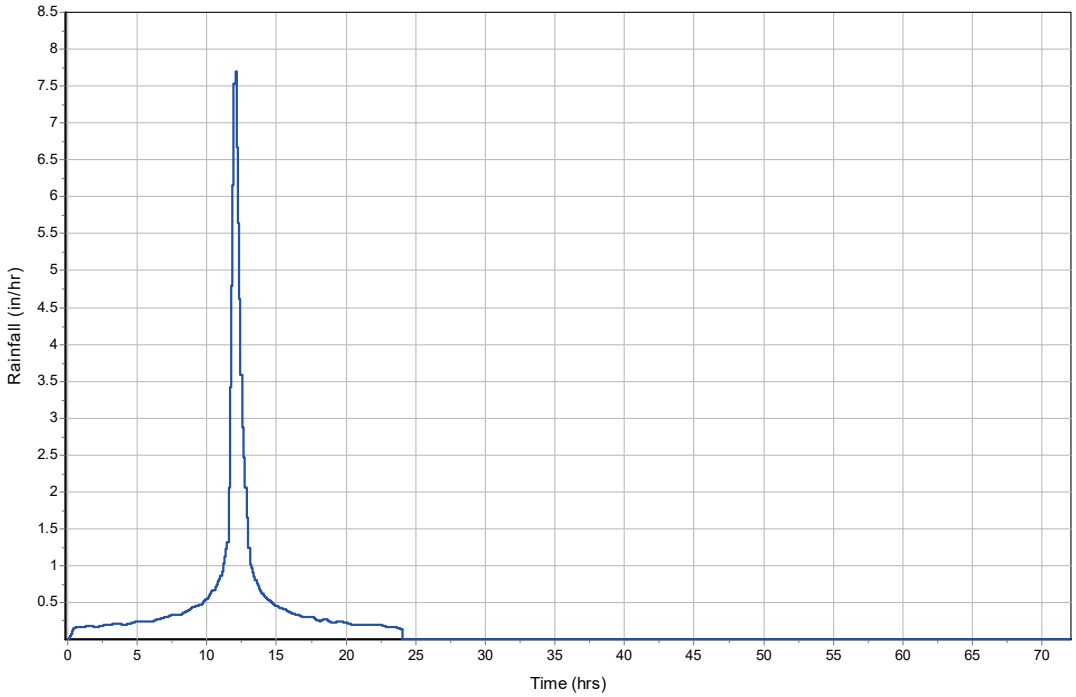
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

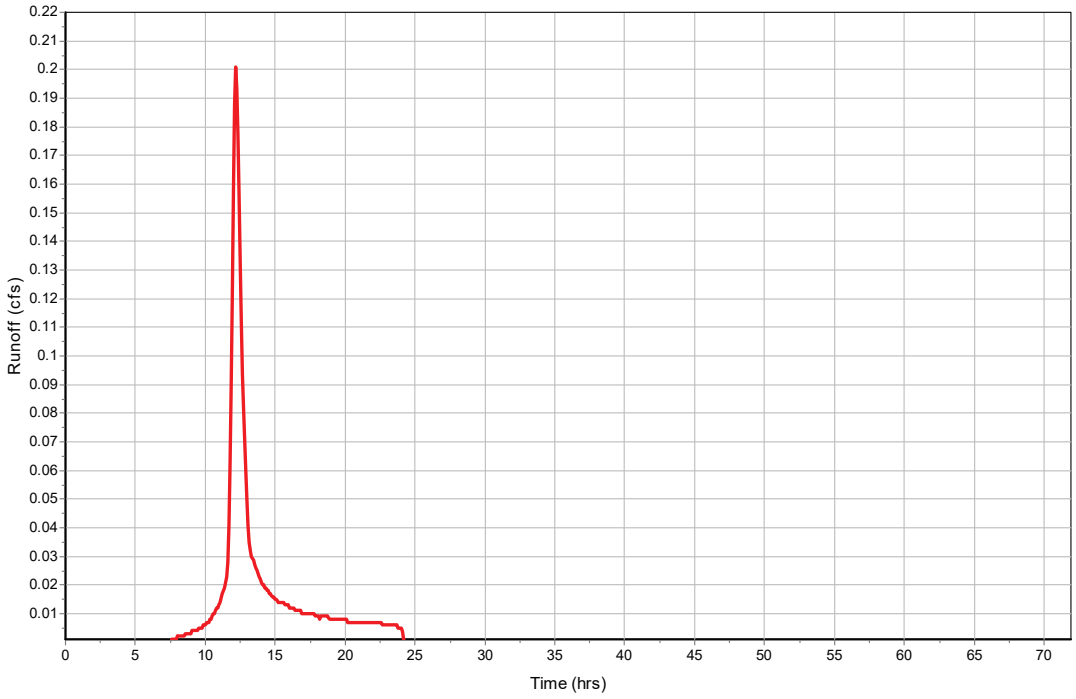
Total Rainfall (in)	13,7
Total Runoff (in)	8,19
Peak Runoff (cfs)	0,2
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

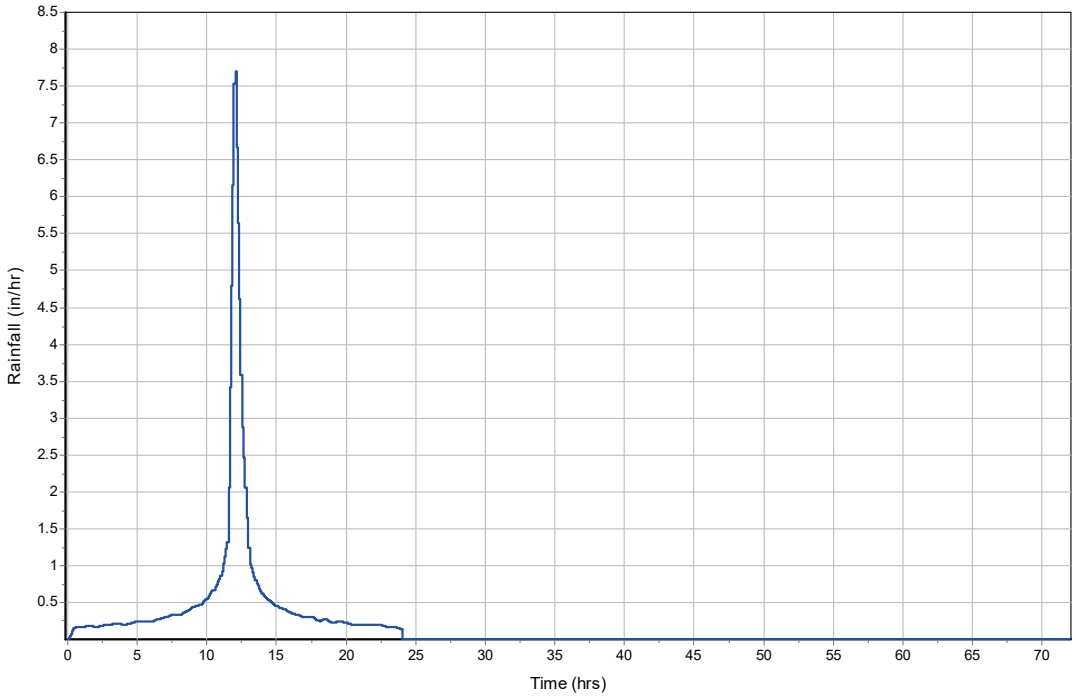
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

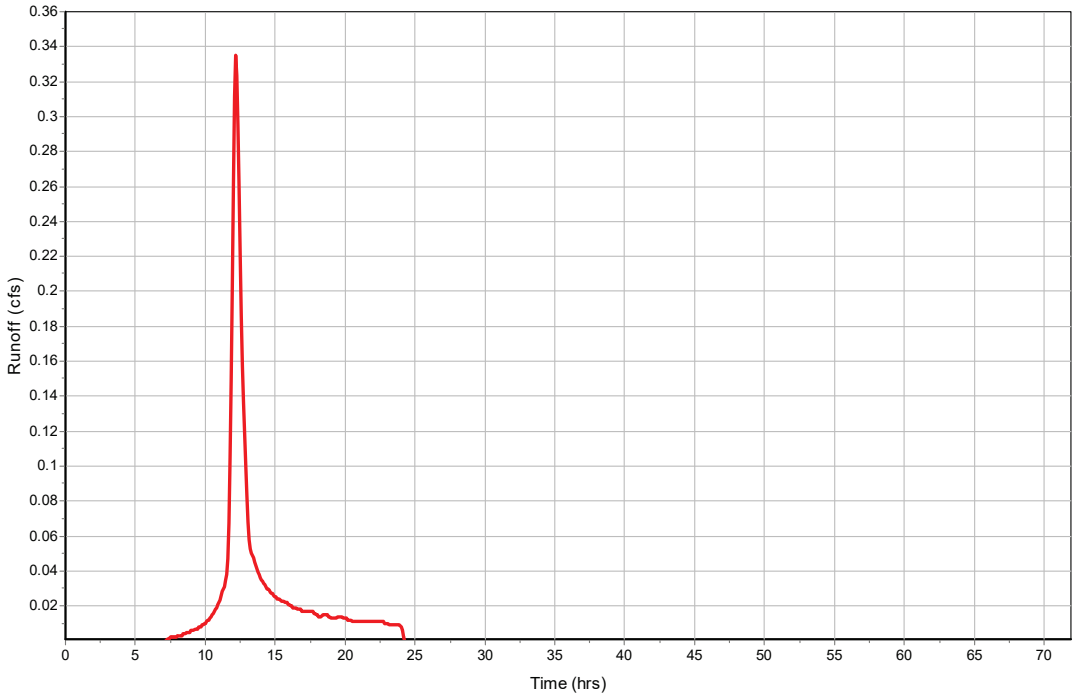
Total Rainfall (in)	13,7
Total Runoff (in)	8,2
Peak Runoff (cfs)	0,33
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

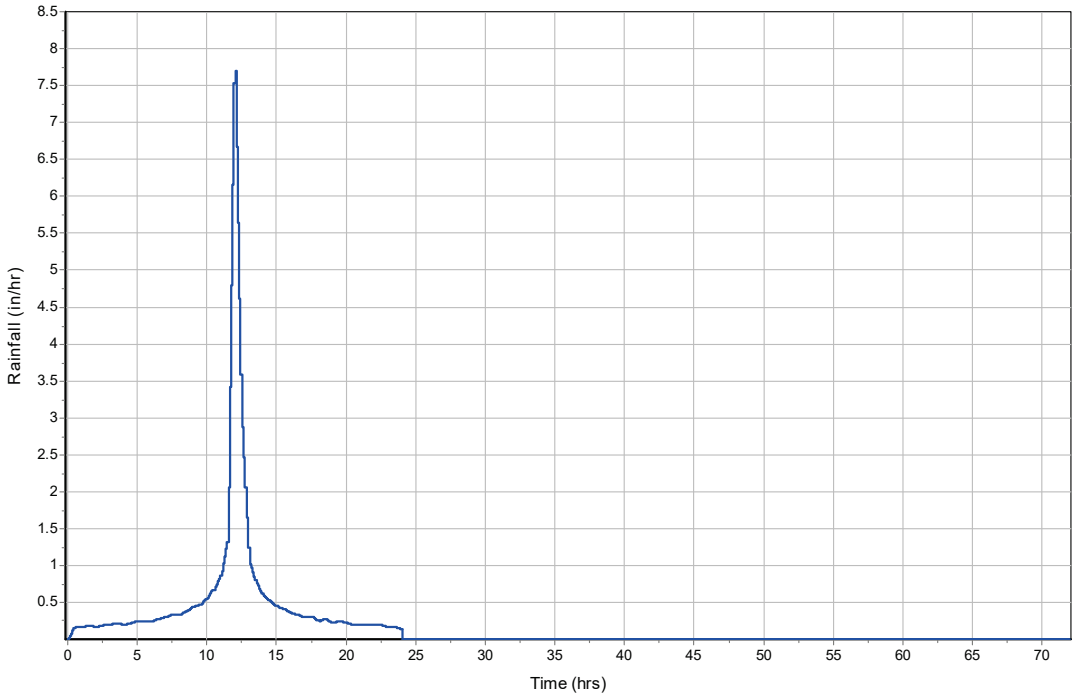
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

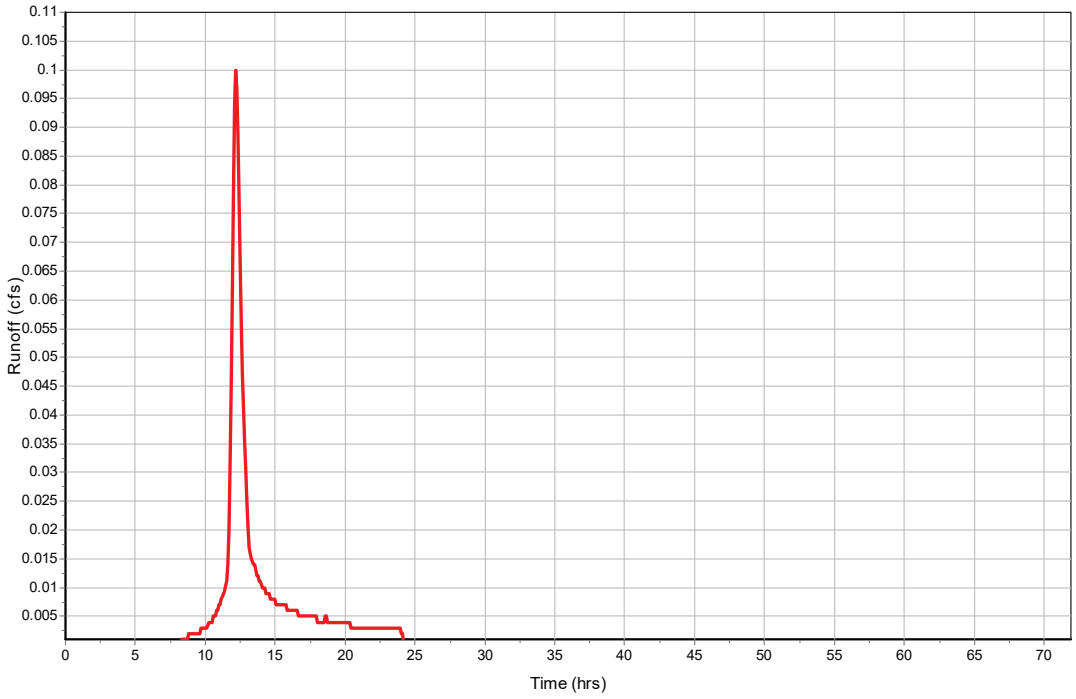
Total Rainfall (in)	13,7
Total Runoff (in)	8,16
Peak Runoff (cfs)	0,1
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	2,11	0 12:17	12,87	0,16	4,17	0,02	0,49	0,33	0,00		Calculated
2	Link-03	1,04	0 12:17	3,49	0,30	0,66	1,98	1,00	1,00	844,00		SURCHARGED
3	Link-04	0,18	0 12:18	2,37	0,07	0,42	1,68	0,53	0,53	0,00		Calculated
4	Link-05	1,78	0 12:17	4,01	0,44	1,13	0,70	1,00	1,00	844,00		SURCHARGED
5	Link-06	1,78	0 12:17	12,80	0,14	3,09	0,04	0,54	0,36	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,11
Peak Lateral Inflow (cfs)	0,33
Peak Outflow (cfs)	2,11
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,88
Max HGL Depth Attained (ft)	2,88
Average HGL Elevation Attained (ft)	2,33
Average HGL Depth Attained (ft)	2,33
Time of Max HGL Occurrence (days hh:mm)	0 12:17
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,18
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,18
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,41
Max HGL Depth Attained (ft)	1,91
Average HGL Elevation Attained (ft)	3,9
Average HGL Depth Attained (ft)	1,4
Time of Max HGL Occurrence (days hh:mm)	0 12:17
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

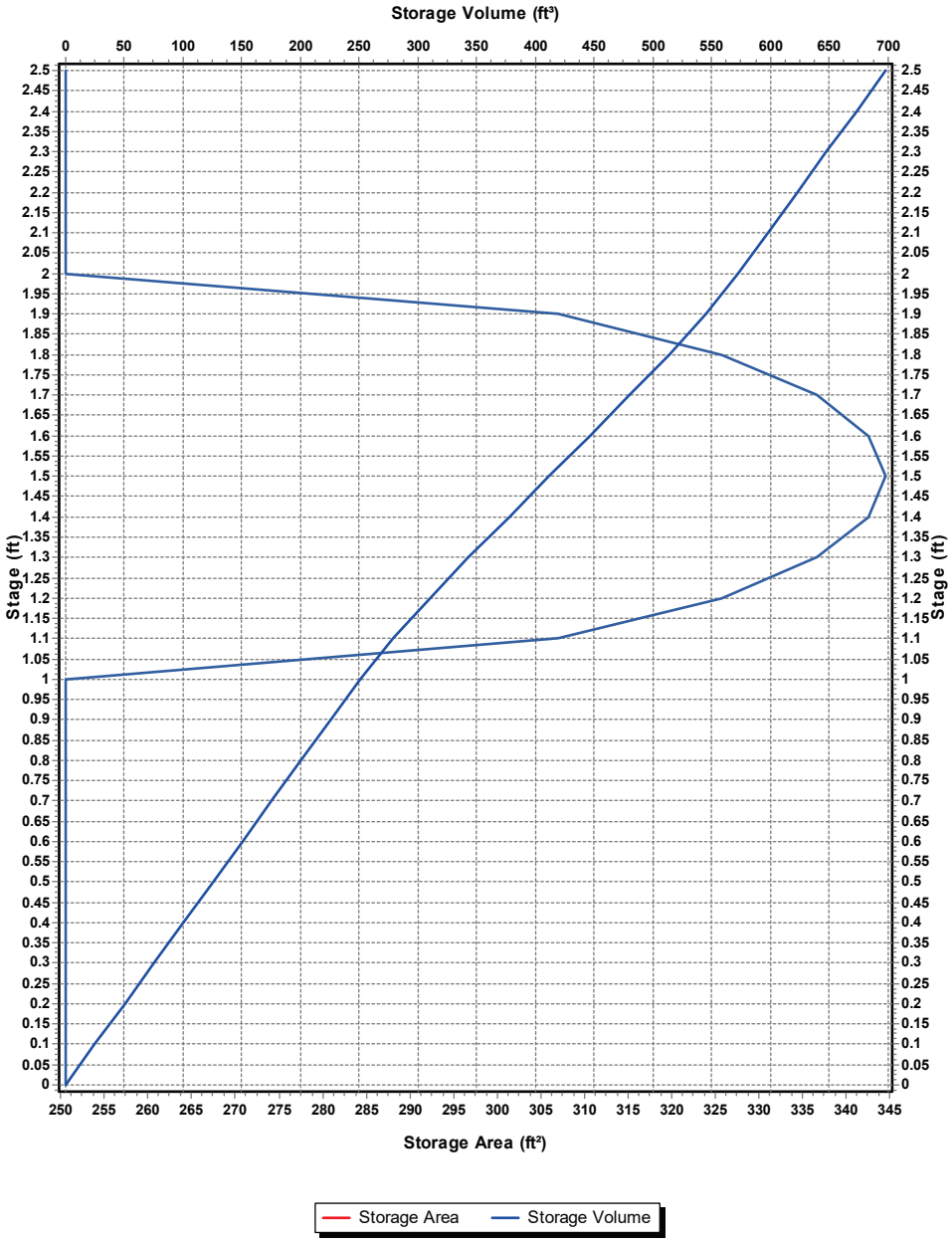
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,07
Peak Lateral Inflow (cfs)	0,91
Peak Outflow (cfs)	1,04
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,41
Max HGL Depth Attained (ft)	2,41
Average HGL Elevation Attained (ft)	3,04
Average HGL Depth Attained (ft)	1,04
Time of Max HGL Occurrence (days hh:mm)	0 12:17
Total Exfiltration Volume (1000-ft^3)	1,724
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

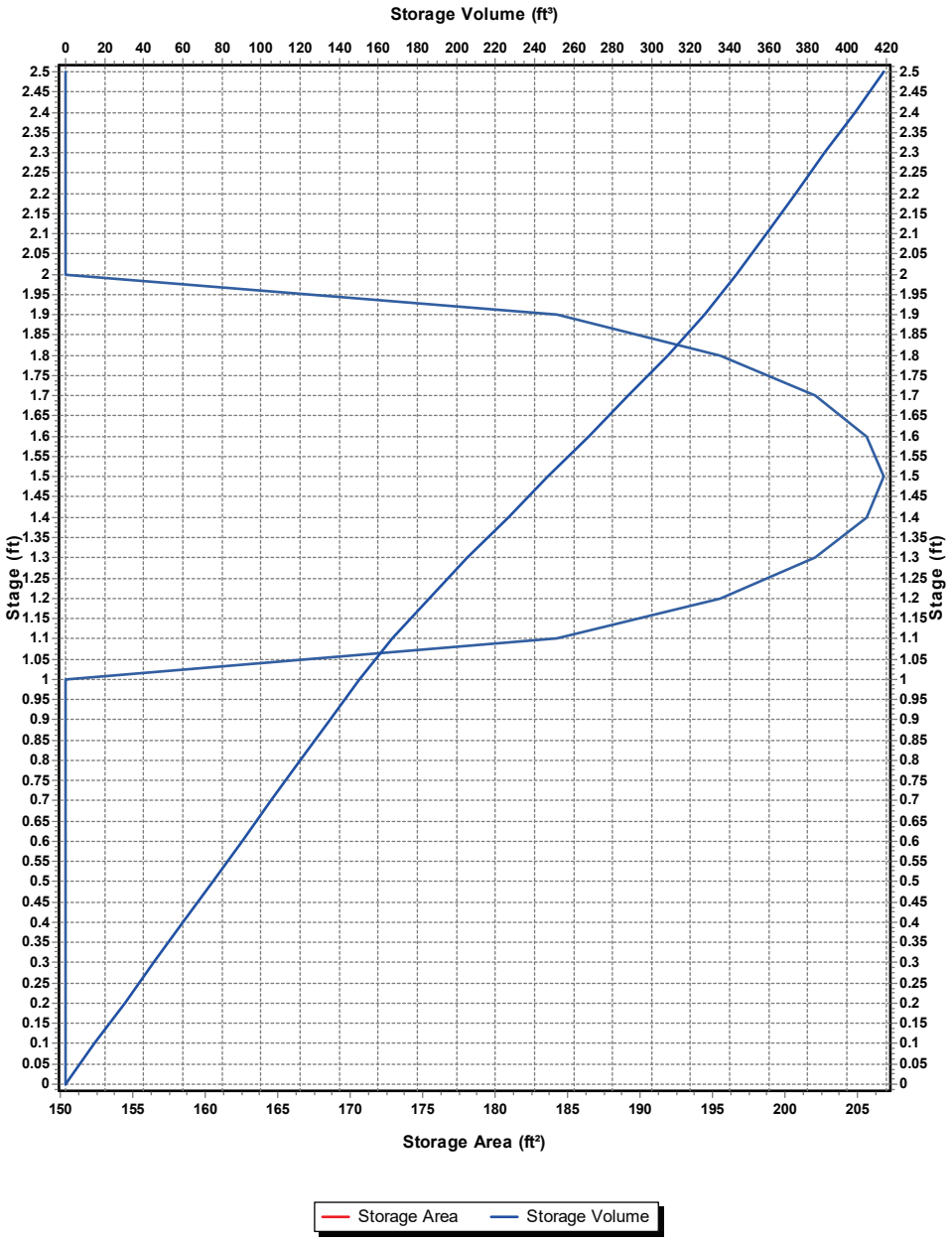
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,79
Peak Lateral Inflow (cfs)	0,77
Peak Outflow (cfs)	1,78
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,38
Max HGL Depth Attained (ft)	2,38
Average HGL Elevation Attained (ft)	3,05
Average HGL Depth Attained (ft)	1,05
Time of Max HGL Occurrence (days hh:mm)	0 12:17
Total Exfiltration Volume (1000-ft^3)	1,048
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,78
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,78
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,32
Max HGL Depth Attained (ft)	4,32
Average HGL Elevation Attained (ft)	3,36
Average HGL Depth Attained (ft)	3,36
Time of Max HGL Occurrence (days hh:mm)	0 12:17
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,78
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,78
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,06
Max HGL Depth Attained (ft)	3,06
Average HGL Elevation Attained (ft)	2,47
Average HGL Depth Attained (ft)	2,47
Time of Max HGL Occurrence (days hh:mm)	0 12:17
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

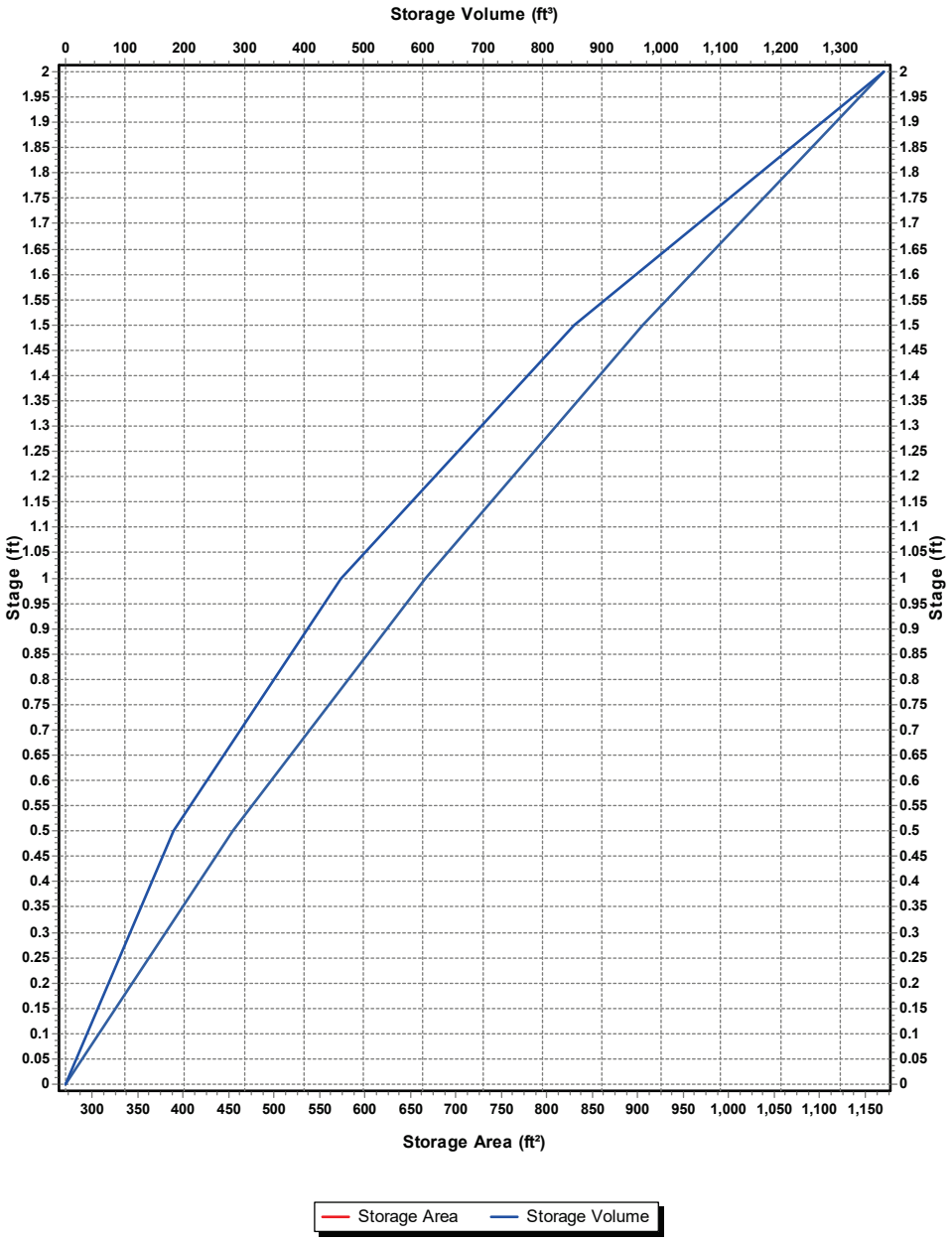
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,2
Peak Lateral Inflow (cfs)	0,2
Peak Outflow (cfs)	0,18
Peak Exfiltration Flow Rate (cfm)	1,3
Max HGL Elevation Attained (ft)	4,53
Max HGL Depth Attained (ft)	0,53
Average HGL Elevation Attained (ft)	4,13
Average HGL Depth Attained (ft)	0,13
Time of Max HGL Occurrence (days hh:mm)	0 12:17
Total Exfiltration Volume (1000-ft^3)	0,792
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 11: 25 YR-3 DAY POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	025YR 72HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	025YR 72HR	Cumulative	inches	Florida	Broward	25,00	13,60	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	13,59	13,34	1,19	0,74	0 00:10:00
2	Sub-02	0,12	484,00	98,00	13,59	13,34	1,60	1,00	0 00:10:00
3	Sub-03	0,04	484,00	61,00	13,59	7,91	0,30	0,25	0 00:10:00
4	Sub-04	0,06	484,00	61,00	13,59	8,05	0,51	0,41	0 00:10:00
5	Sub-05	0,02	484,00	61,00	13,59	7,49	0,15	0,12	0 00:10:00
							0,31		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					2,31	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	2,31	2,91				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,21	4,44				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	1,17	4,44				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,94	4,40				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,92	4,33				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,92	3,09				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,24	4,53				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	2,31	12,87	0,18	4,26	0,52	0,35	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	1,13	3,49	0,32	0,72	1,00	1,00	808,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,21	2,37	0,09	0,47	0,56	0,57	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,92	4,01	0,48	1,23	1,00	1,00	808,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,92	12,80	0,15	3,76	0,57	0,38	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,21							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,92							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

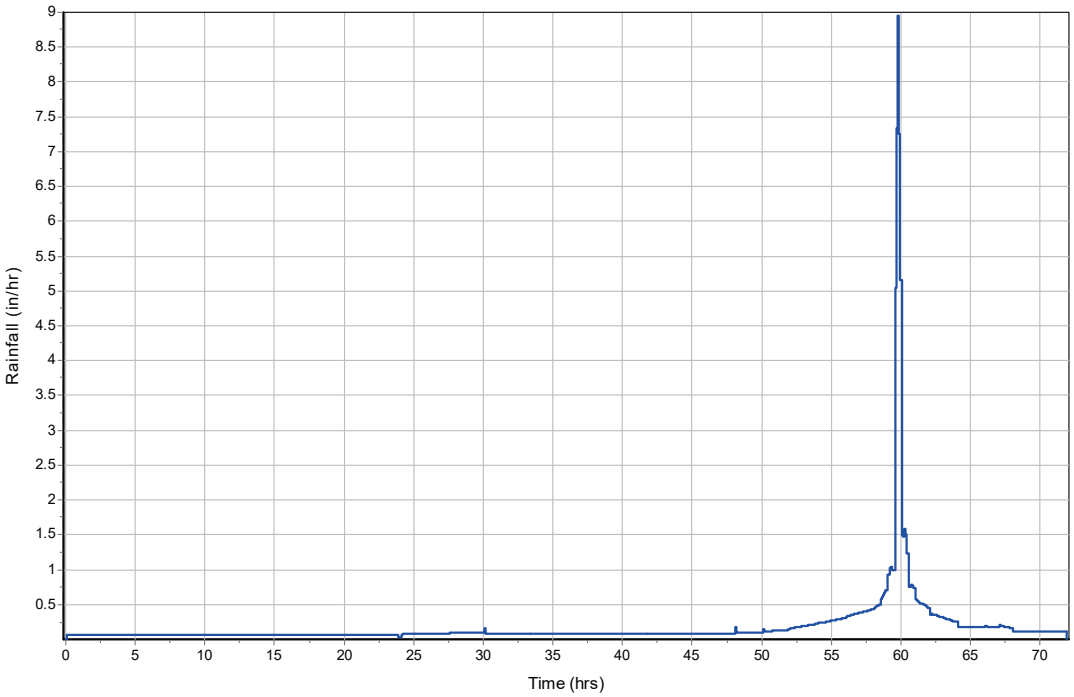
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

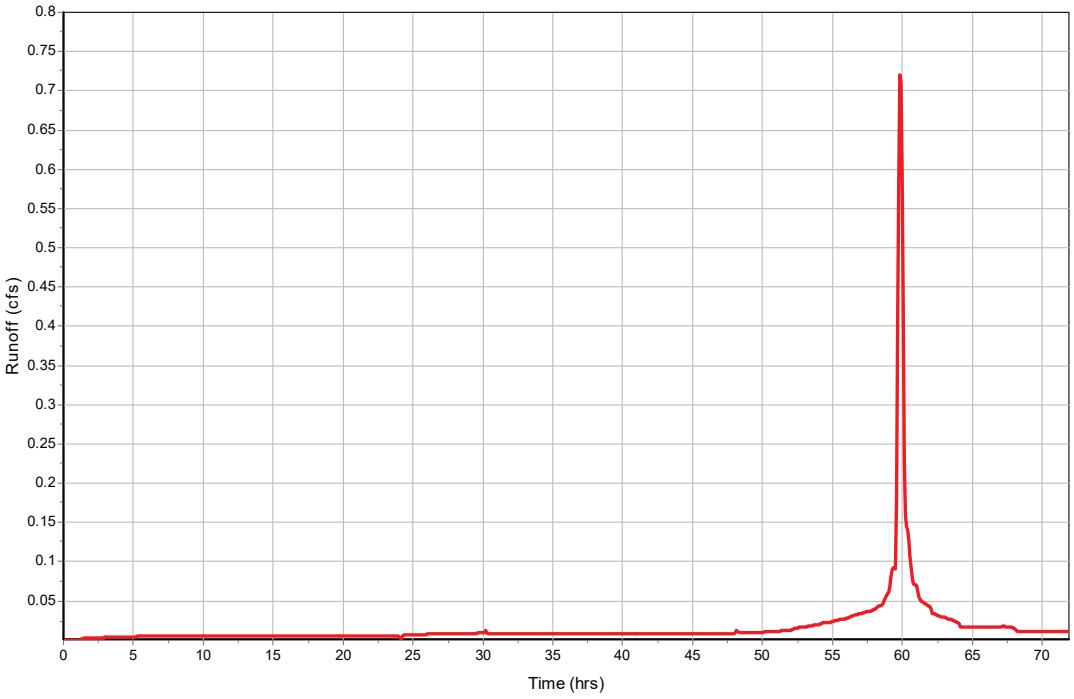
Total Rainfall (in)	13,59
Total Runoff (in)	13,34
Peak Runoff (cfs)	0,74
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

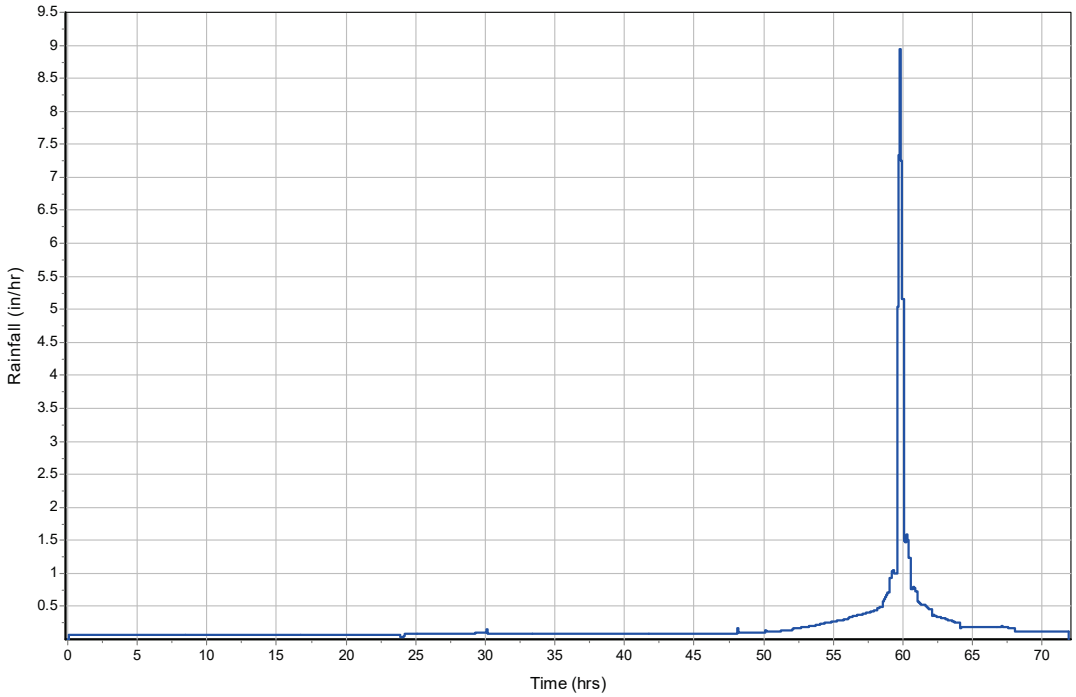
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

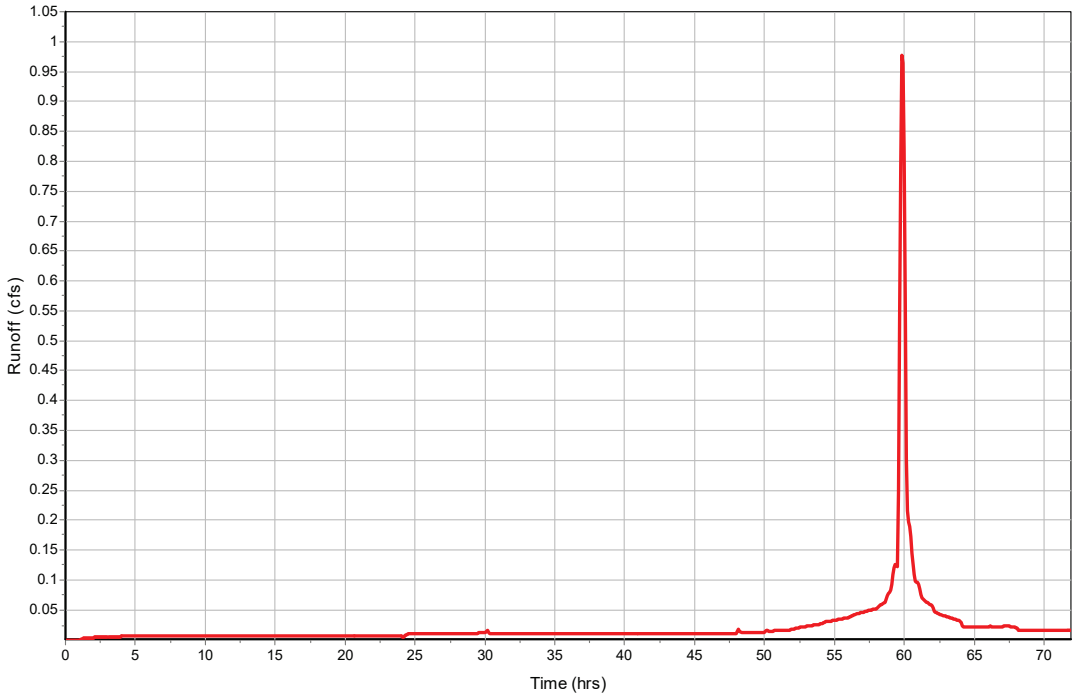
Total Rainfall (in)	13,59
Total Runoff (in)	13,34
Peak Runoff (cfs)	1
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

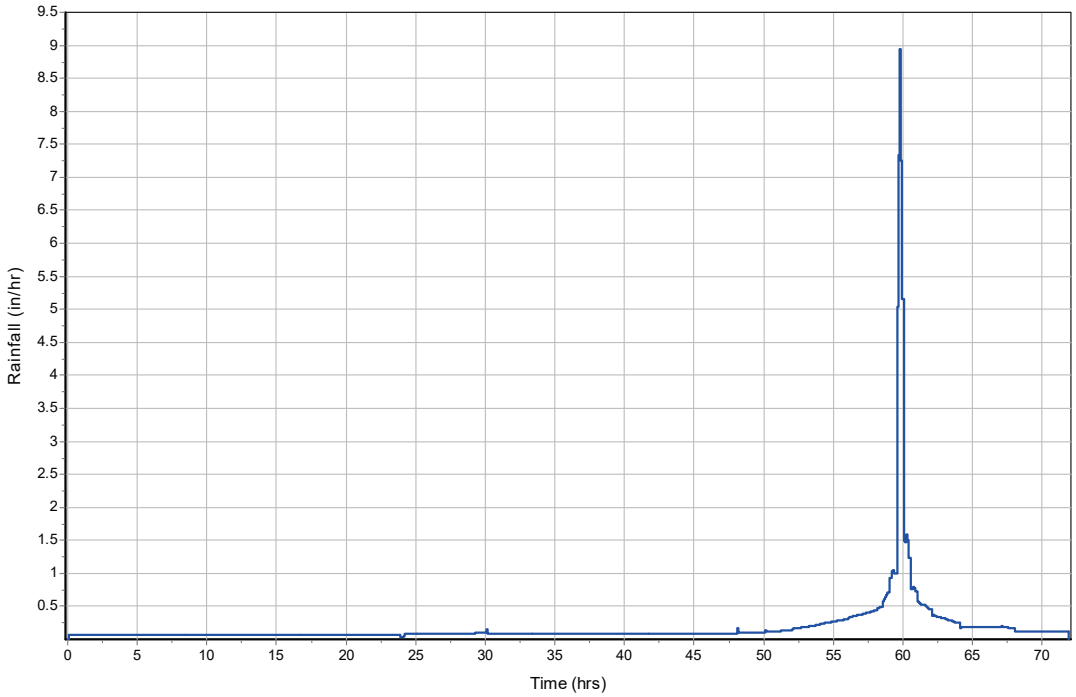
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

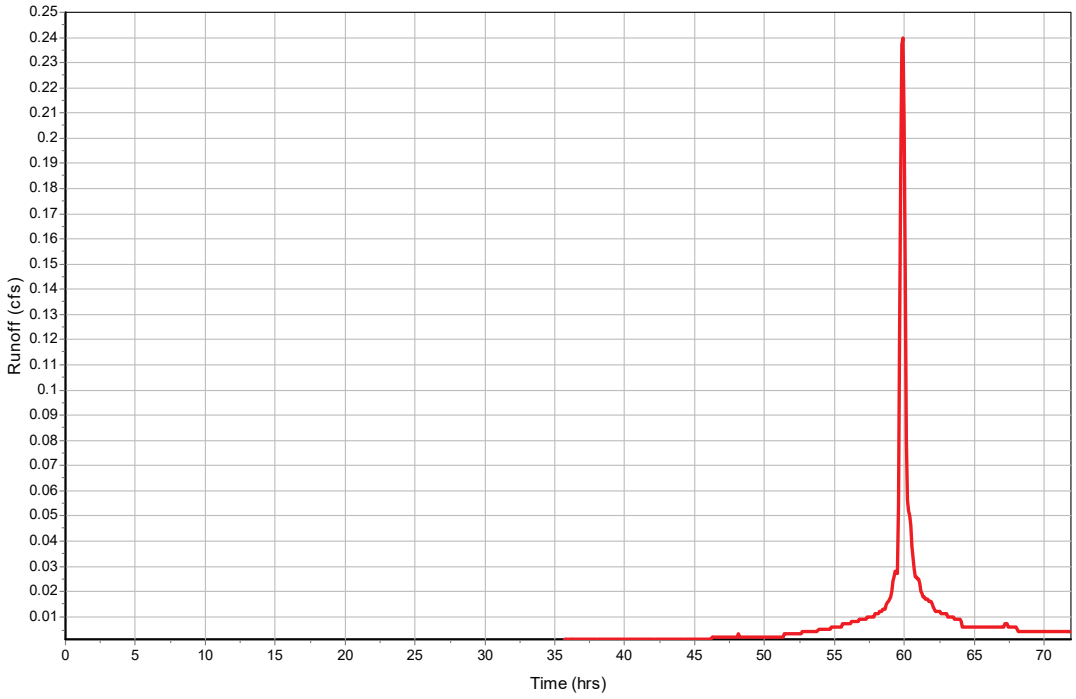
Total Rainfall (in)	13,59
Total Runoff (in)	7,91
Peak Runoff (cfs)	0,25
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

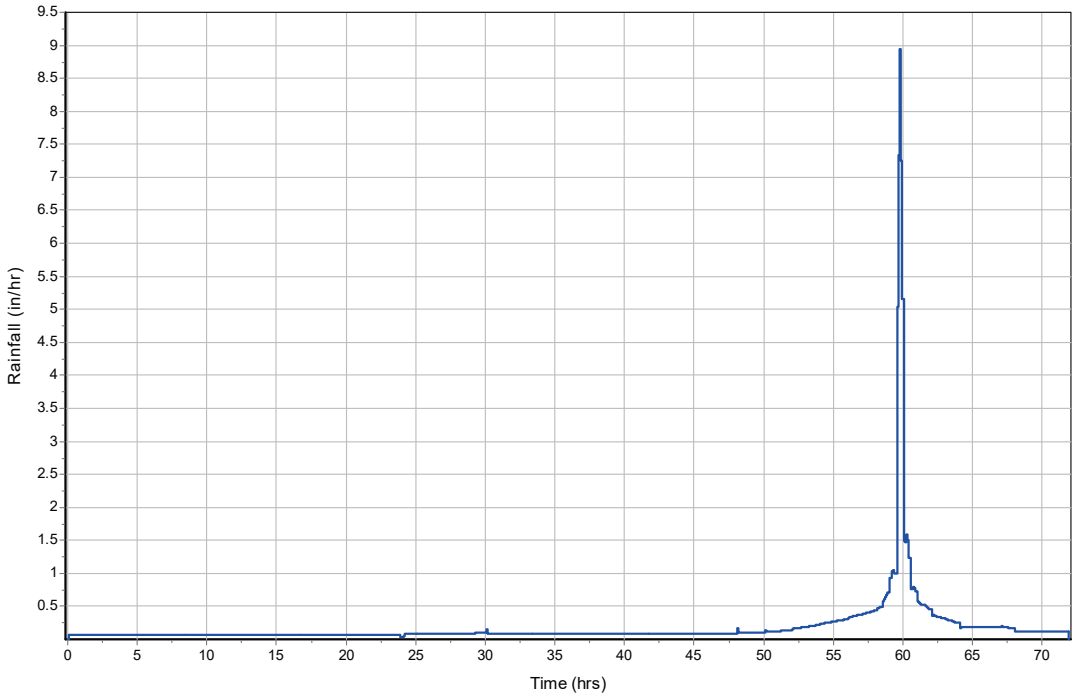
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

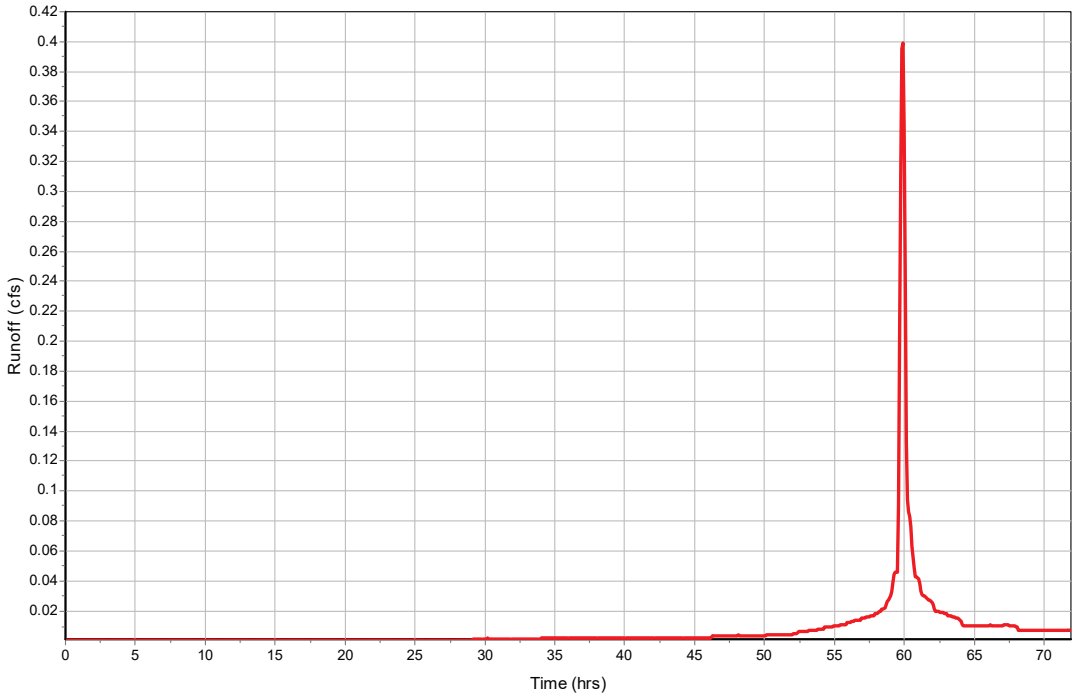
Total Rainfall (in)	13,59
Total Runoff (in)	8,05
Peak Runoff (cfs)	0,41
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

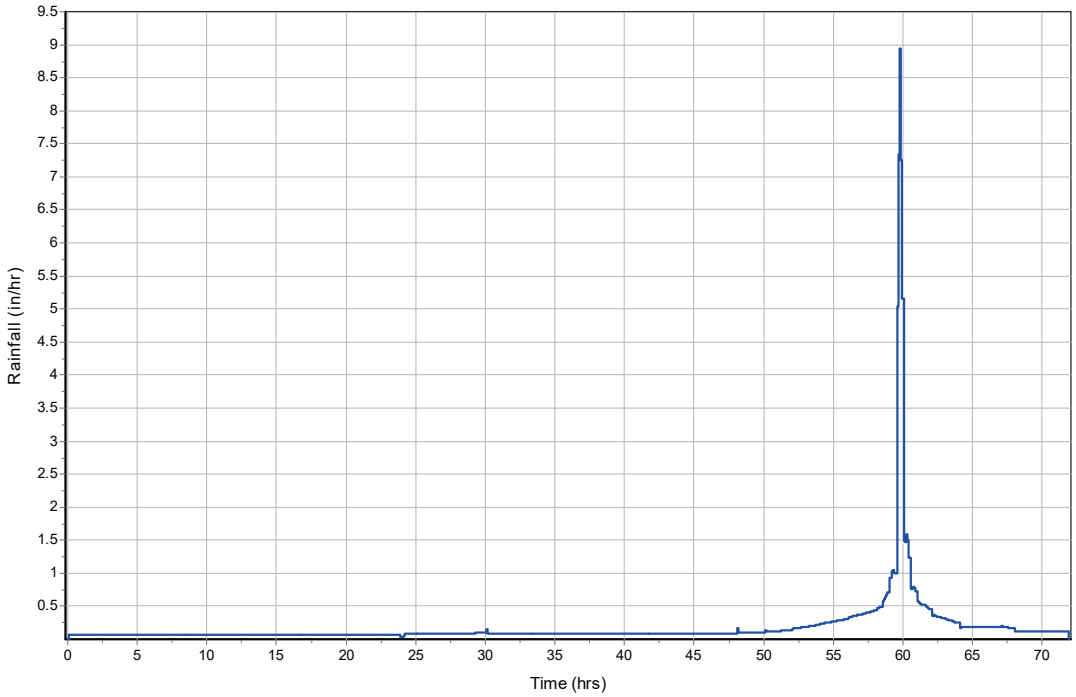
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

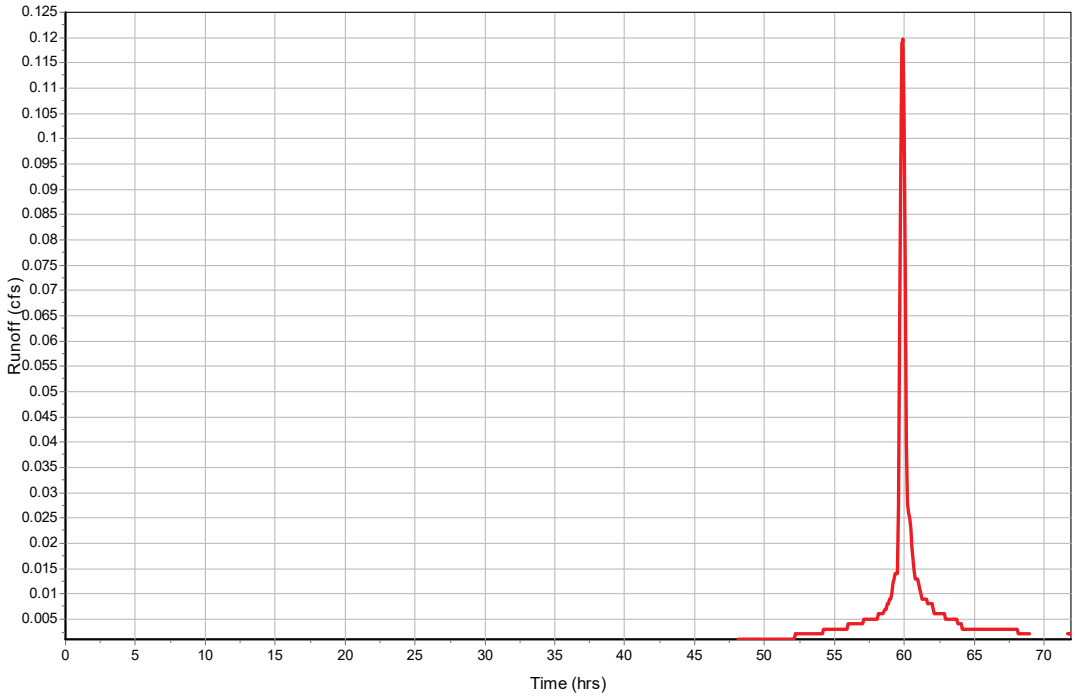
Total Rainfall (in)	13,59
Total Runoff (in)	7,49
Peak Runoff (cfs)	0,12
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	2,31	2 12:01	12,87	0,18	4,26	0,02	0,52	0,35	0,00		Calculated
2	Link-03	1,13	2 12:01	3,49	0,32	0,72	1,81	1,00	1,00	808,00		SURCHARGED
3	Link-04	0,21	2 12:01	2,37	0,09	0,47	1,51	0,56	0,57	0,00		Calculated
4	Link-05	1,92	2 12:01	4,01	0,48	1,23	0,64	1,00	1,00	808,00		SURCHARGED
5	Link-06	1,92	2 12:01	12,80	0,15	3,76	0,03	0,57	0,38	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	2,31
Peak Lateral Inflow (cfs)	0,4
Peak Outflow (cfs)	2,31
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,91
Max HGL Depth Attained (ft)	2,91
Average HGL Elevation Attained (ft)	2,01
Average HGL Depth Attained (ft)	2,01
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,21
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,21
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,44
Max HGL Depth Attained (ft)	1,94
Average HGL Elevation Attained (ft)	2,98
Average HGL Depth Attained (ft)	0,48
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

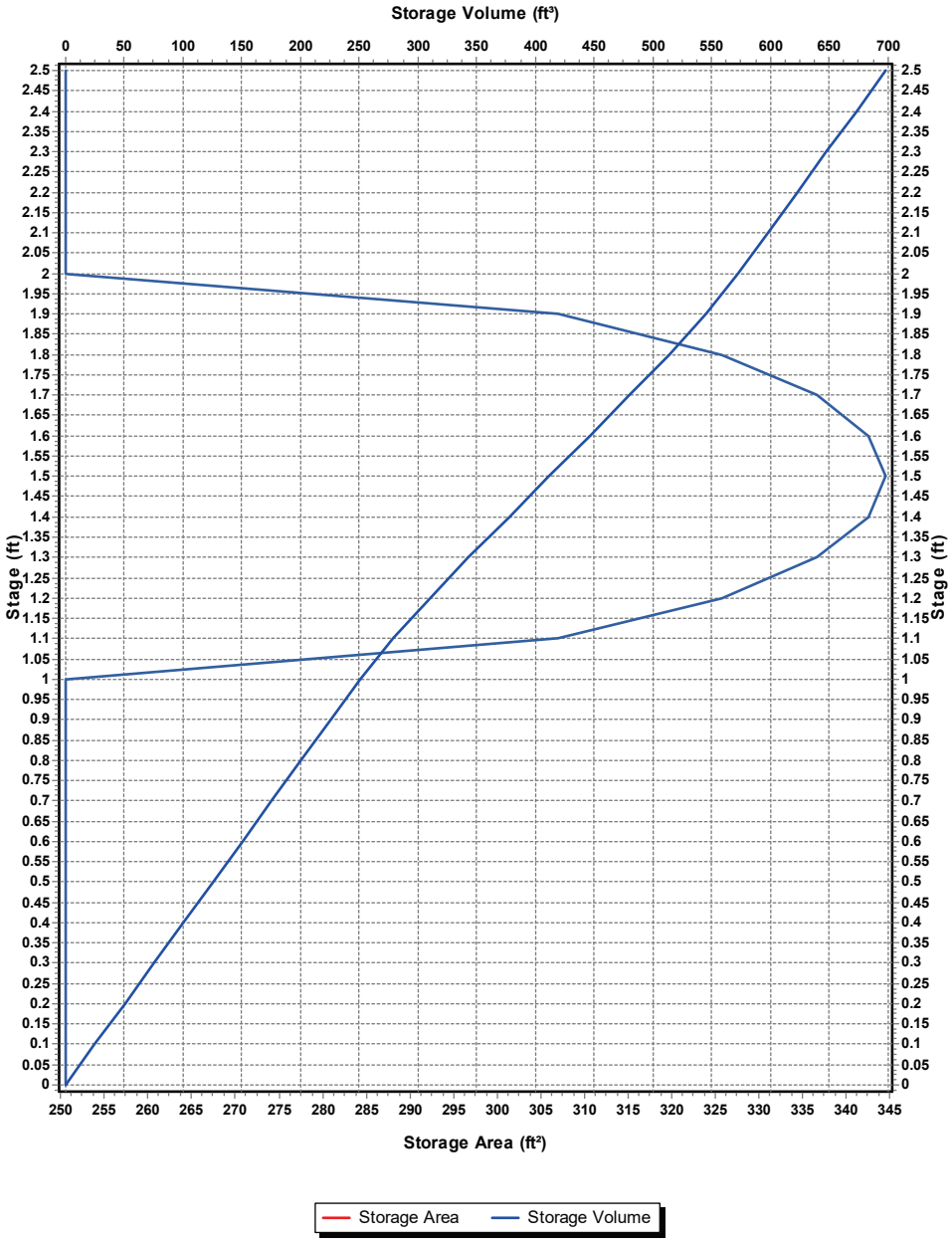
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,17
Peak Lateral Inflow (cfs)	0,98
Peak Outflow (cfs)	1,13
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,44
Max HGL Depth Attained (ft)	2,44
Average HGL Elevation Attained (ft)	2,71
Average HGL Depth Attained (ft)	0,71
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	2,52
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

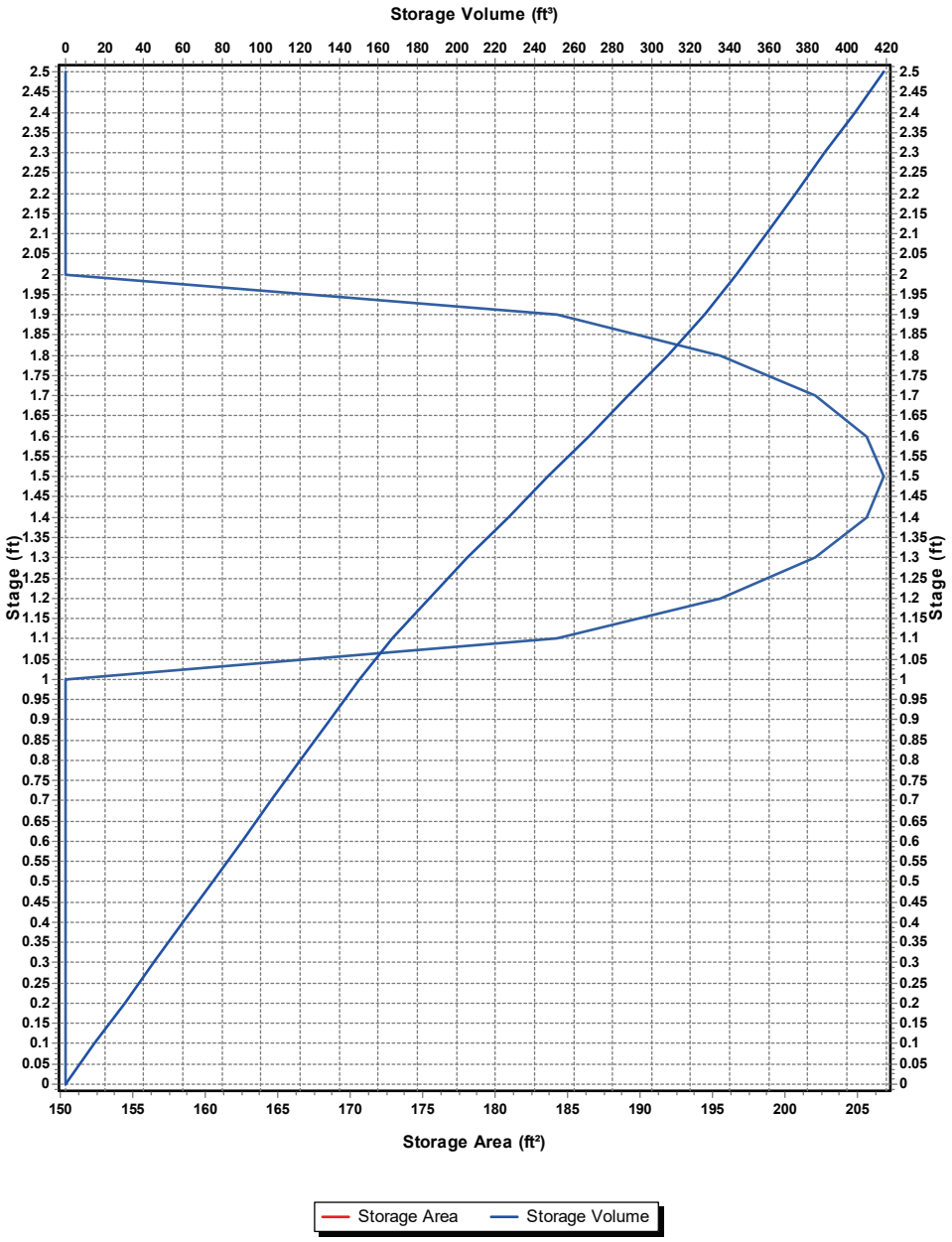
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,94
Peak Lateral Inflow (cfs)	0,84
Peak Outflow (cfs)	1,92
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,4
Max HGL Depth Attained (ft)	2,4
Average HGL Elevation Attained (ft)	2,84
Average HGL Depth Attained (ft)	0,84
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	1,615
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,92
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,92
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,33
Max HGL Depth Attained (ft)	4,33
Average HGL Elevation Attained (ft)	2,23
Average HGL Depth Attained (ft)	2,23
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,92
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,92
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	3,09
Max HGL Depth Attained (ft)	3,09
Average HGL Elevation Attained (ft)	1,72
Average HGL Depth Attained (ft)	1,72
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

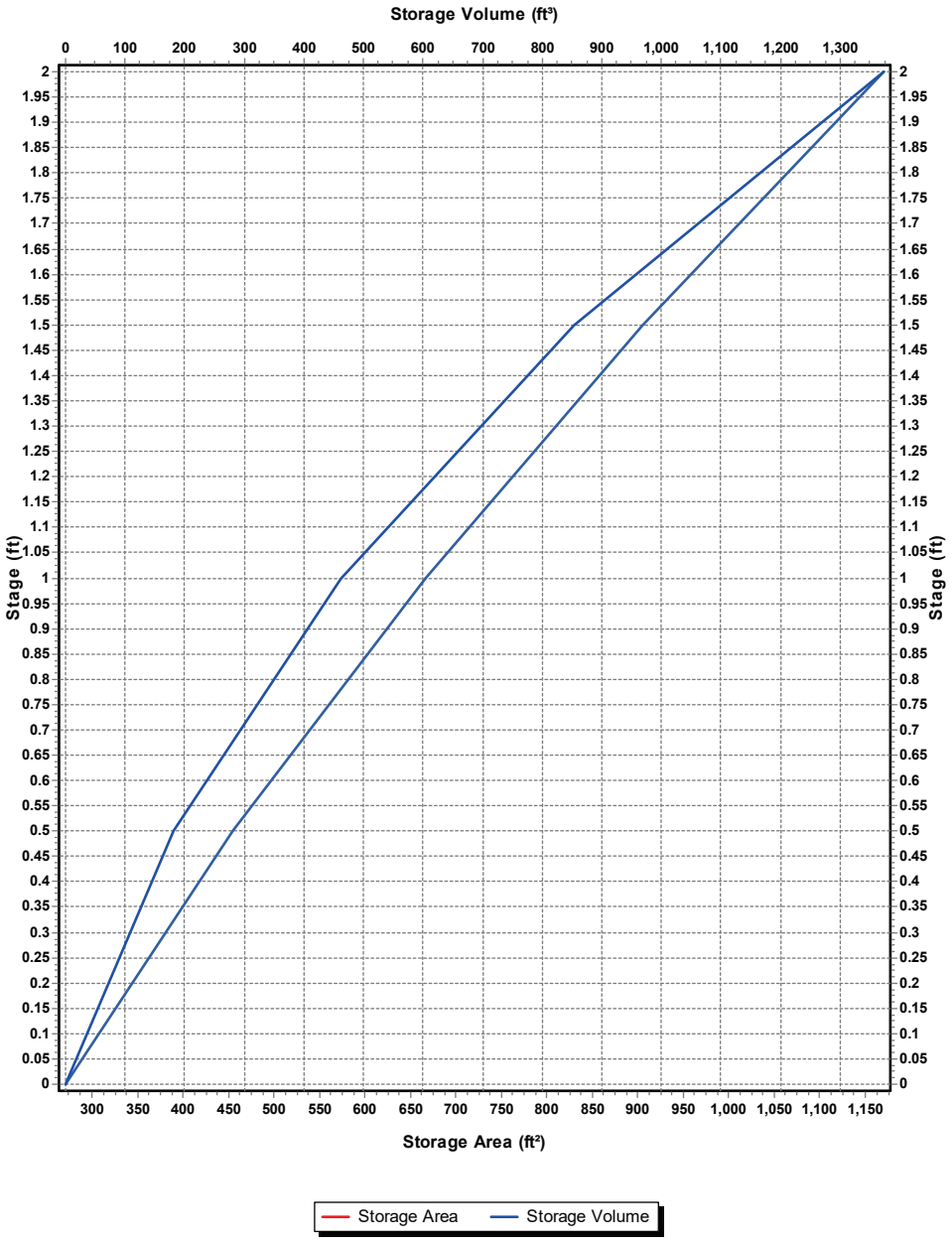
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,24
Peak Lateral Inflow (cfs)	0,24
Peak Outflow (cfs)	0,21
Peak Exfiltration Flow Rate (cfm)	1,3
Max HGL Elevation Attained (ft)	4,53
Max HGL Depth Attained (ft)	0,53
Average HGL Elevation Attained (ft)	4,09
Average HGL Depth Attained (ft)	0,09
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0,861
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 12: 25 YR-24 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	025YR 24HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	025YR 24HR	Cumulative	inches	Florida	Broward	25,00	10,25	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	10,25	10,01	0,89	0,50	0 00:10:00
2	Sub-02	0,12	484,00	98,00	10,25	10,01	1,20	0,68	0 00:10:00
3	Sub-03	0,04	484,00	61,00	10,25	5,23	0,20	0,13	0 00:10:00
4	Sub-04	0,06	484,00	61,00	10,25	5,23	0,33	0,21	0 00:10:00
5	Sub-05	0,02	484,00	61,00	10,25	5,20	0,11	0,06	0 00:10:00
							0,23		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					1,43	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	1,43	2,76				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,08	4,29				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,68	4,29				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,22	4,27				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,22	4,25				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,22	2,94				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,13	4,52				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	1,43	12,87	0,11	3,77	0,40	0,27	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,66	3,49	0,19	0,42	1,00	1,00	766,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,08	2,37	0,03	0,32	0,41	0,41	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,22	4,01	0,30	0,77	1,00	1,00	766,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,22	12,80	0,09	2,96	0,42	0,28	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,08							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,22							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

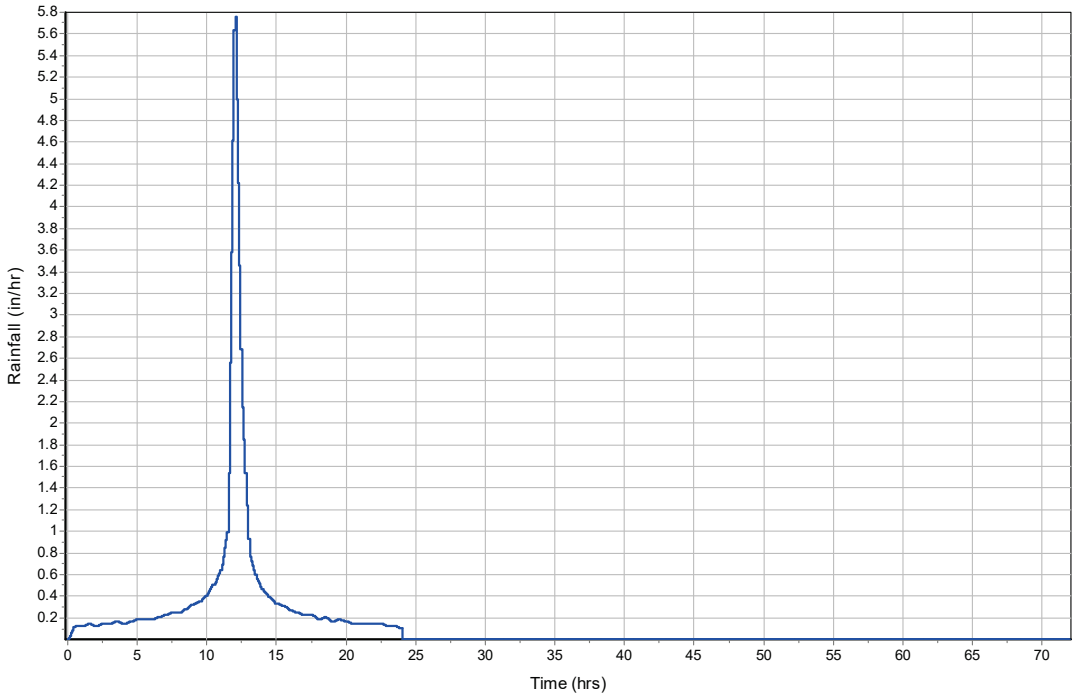
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

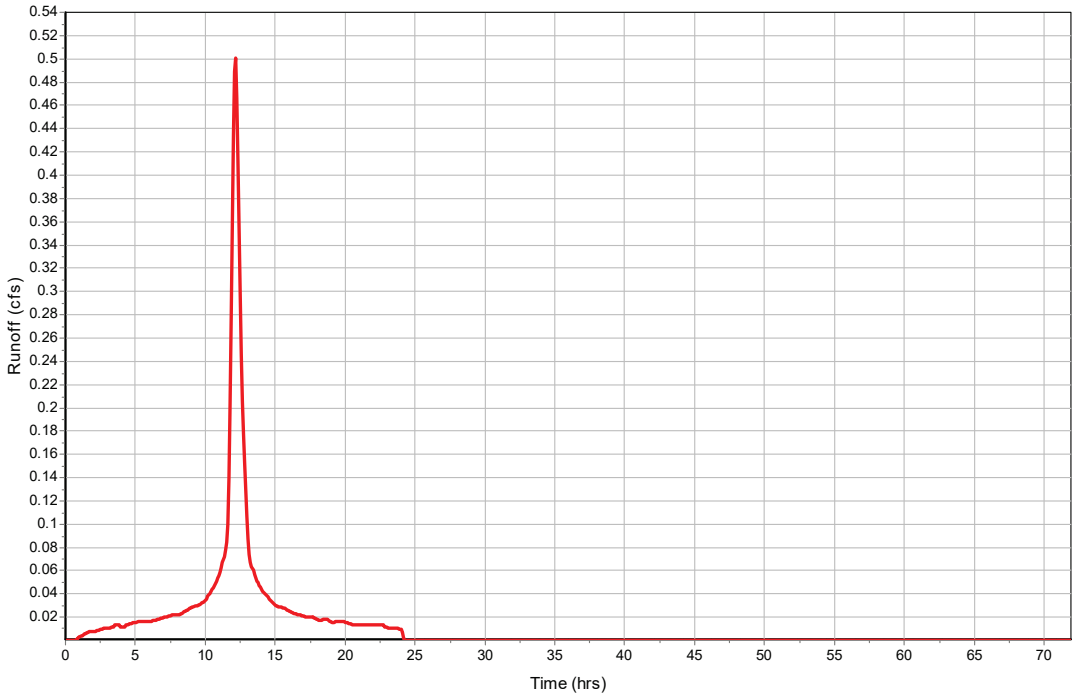
Total Rainfall (in)	10,25
Total Runoff (in)	10,01
Peak Runoff (cfs)	0,5
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

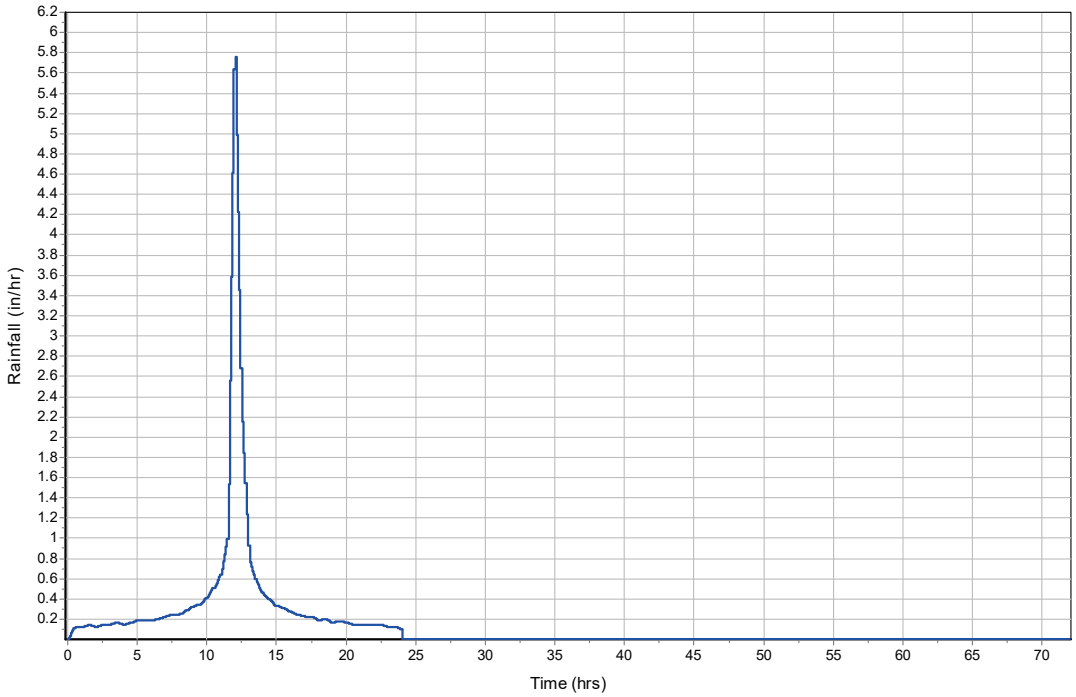
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

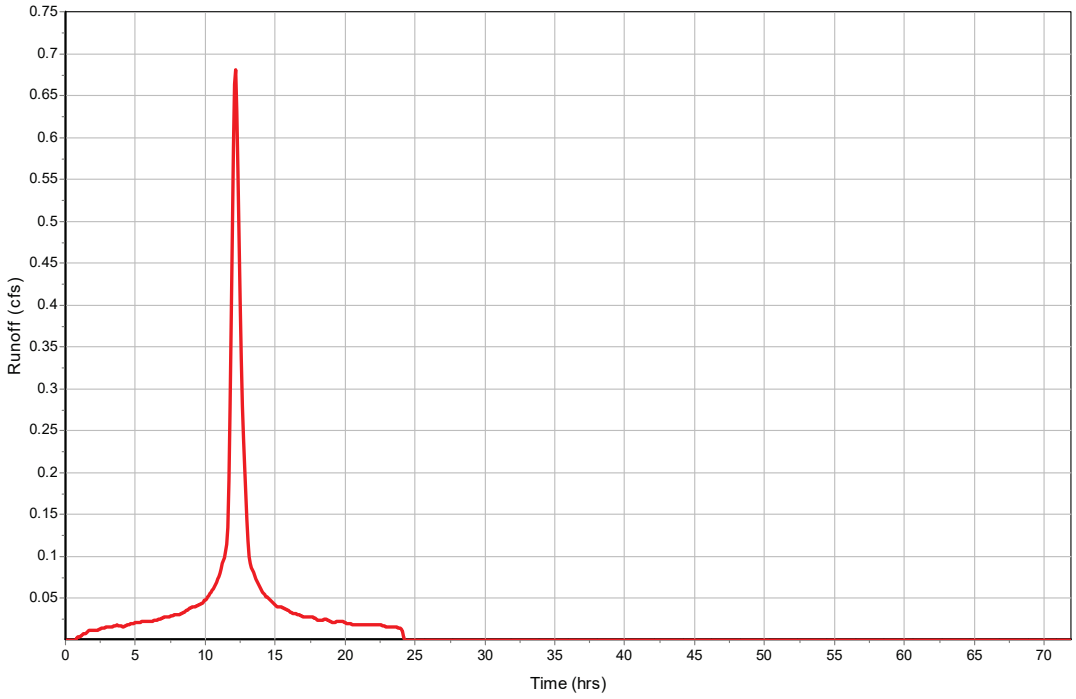
Total Rainfall (in)	10,25
Total Runoff (in)	10,01
Peak Runoff (cfs)	0,68
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

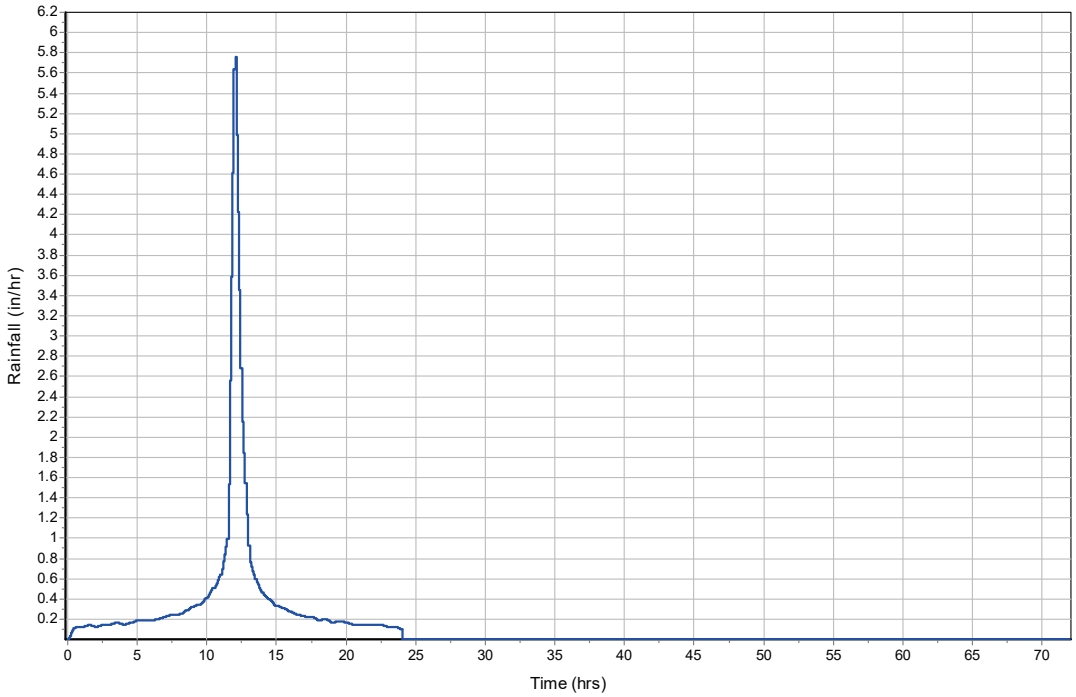
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

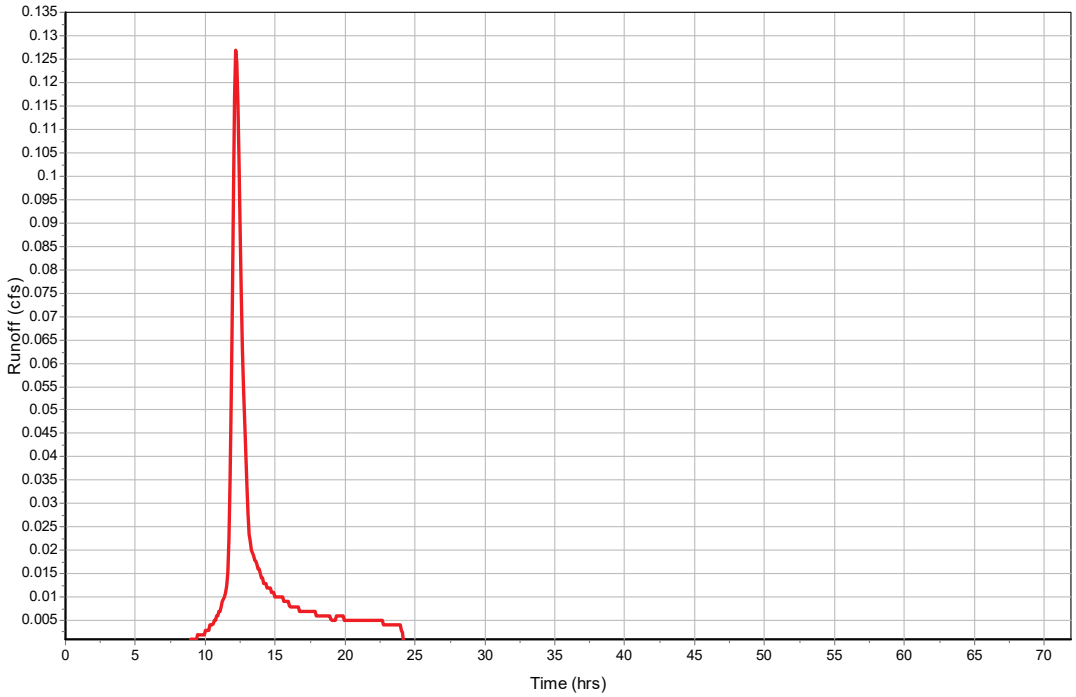
Total Rainfall (in)	10,25
Total Runoff (in)	5,23
Peak Runoff (cfs)	0,13
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

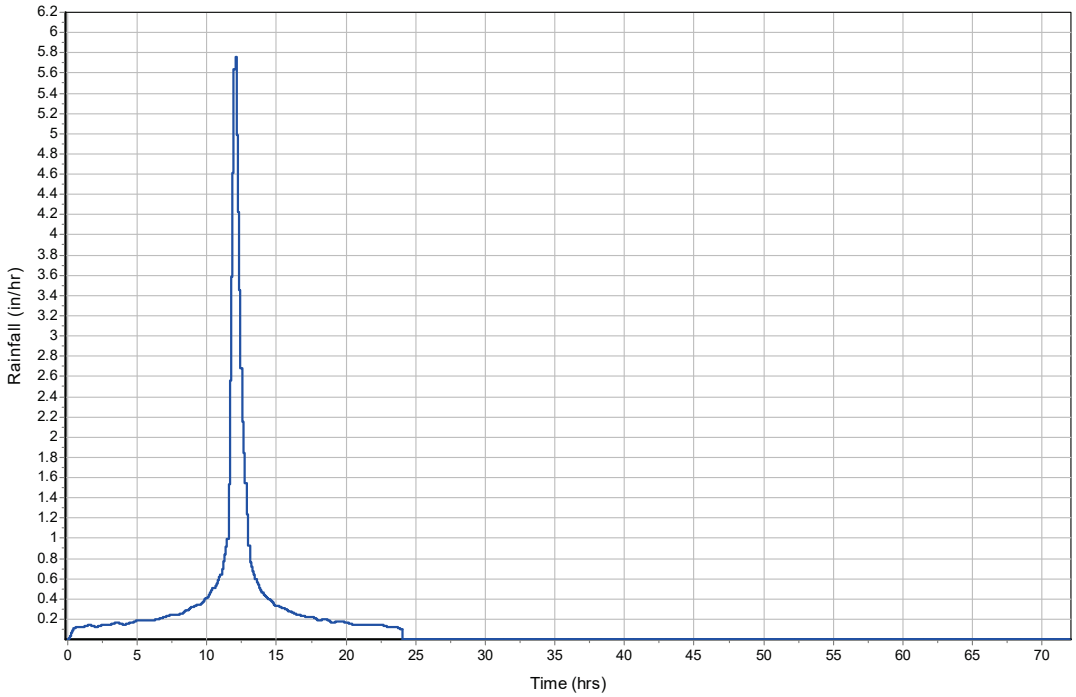
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

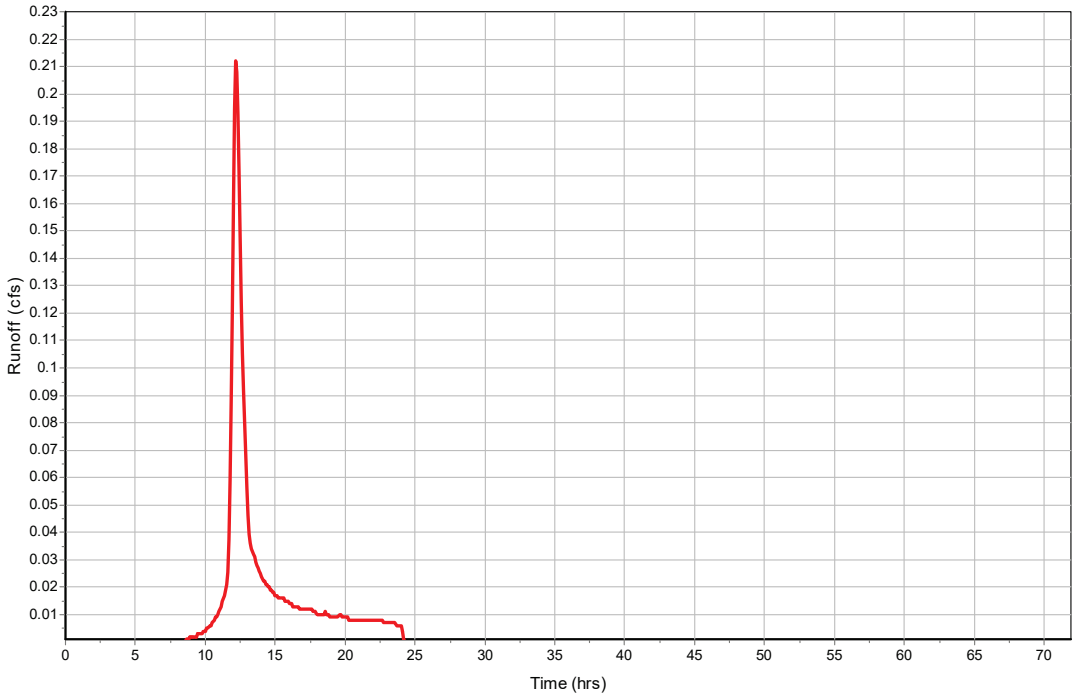
Total Rainfall (in)	10,25
Total Runoff (in)	5,23
Peak Runoff (cfs)	0,21
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

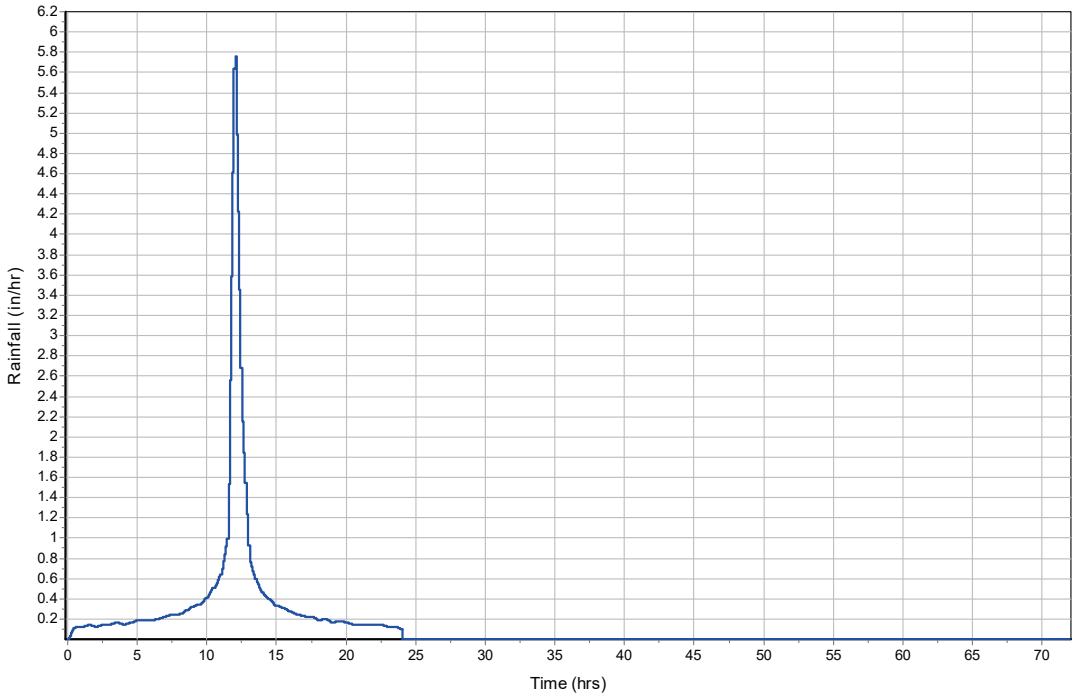
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

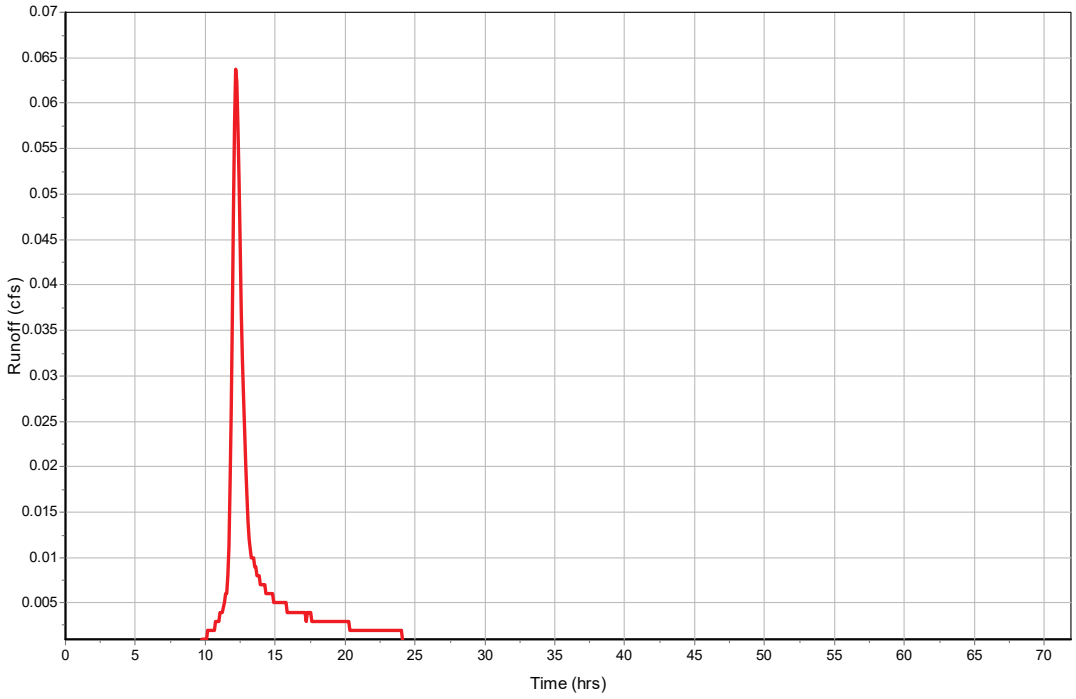
Total Rainfall (in)	10,25
Total Runoff (in)	5,2
Peak Runoff (cfs)	0,06
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	1,43	0 12:15	12,87	0,11	3,77	0,02	0,40	0,27	0,00		Calculated
2	Link-03	0,66	0 12:16	3,49	0,19	0,42	3,11	1,00	1,00	766,00		SURCHARGED
3	Link-04	0,08	0 12:31	2,37	0,03	0,32	2,21	0,41	0,41	0,00		Calculated
4	Link-05	1,22	0 12:15	4,01	0,30	0,77	1,03	1,00	1,00	766,00		SURCHARGED
5	Link-06	1,22	0 12:15	12,80	0,09	2,96	0,04	0,42	0,28	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,43
Peak Lateral Inflow (cfs)	0,21
Peak Outflow (cfs)	1,43
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,76
Max HGL Depth Attained (ft)	2,76
Average HGL Elevation Attained (ft)	2,27
Average HGL Depth Attained (ft)	2,27
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,08
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,08
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,29
Max HGL Depth Attained (ft)	1,79
Average HGL Elevation Attained (ft)	3,84
Average HGL Depth Attained (ft)	1,34
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

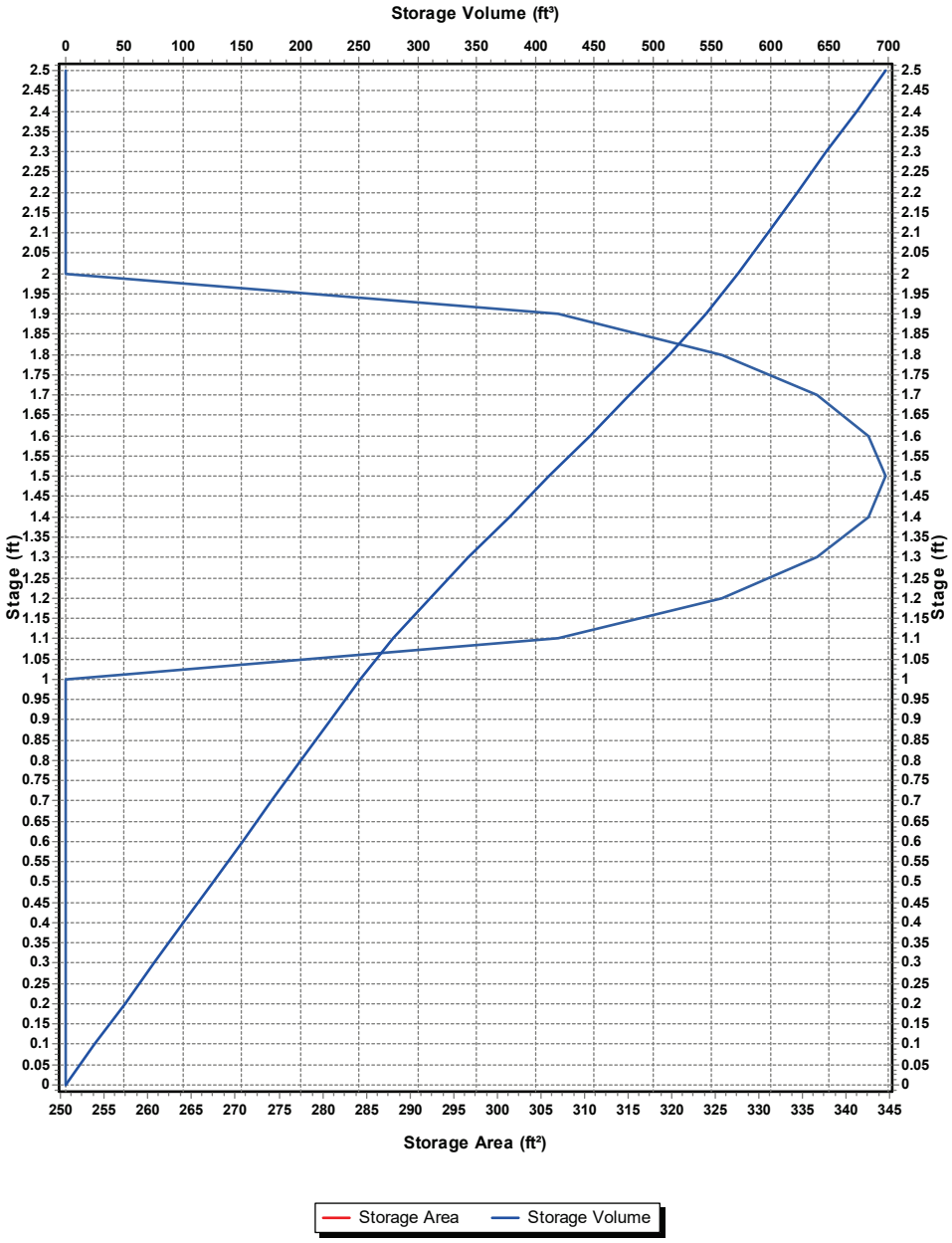
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,68
Peak Lateral Inflow (cfs)	0,68
Peak Outflow (cfs)	0,66
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,29
Max HGL Depth Attained (ft)	2,29
Average HGL Elevation Attained (ft)	2,91
Average HGL Depth Attained (ft)	0,91
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	1,698
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

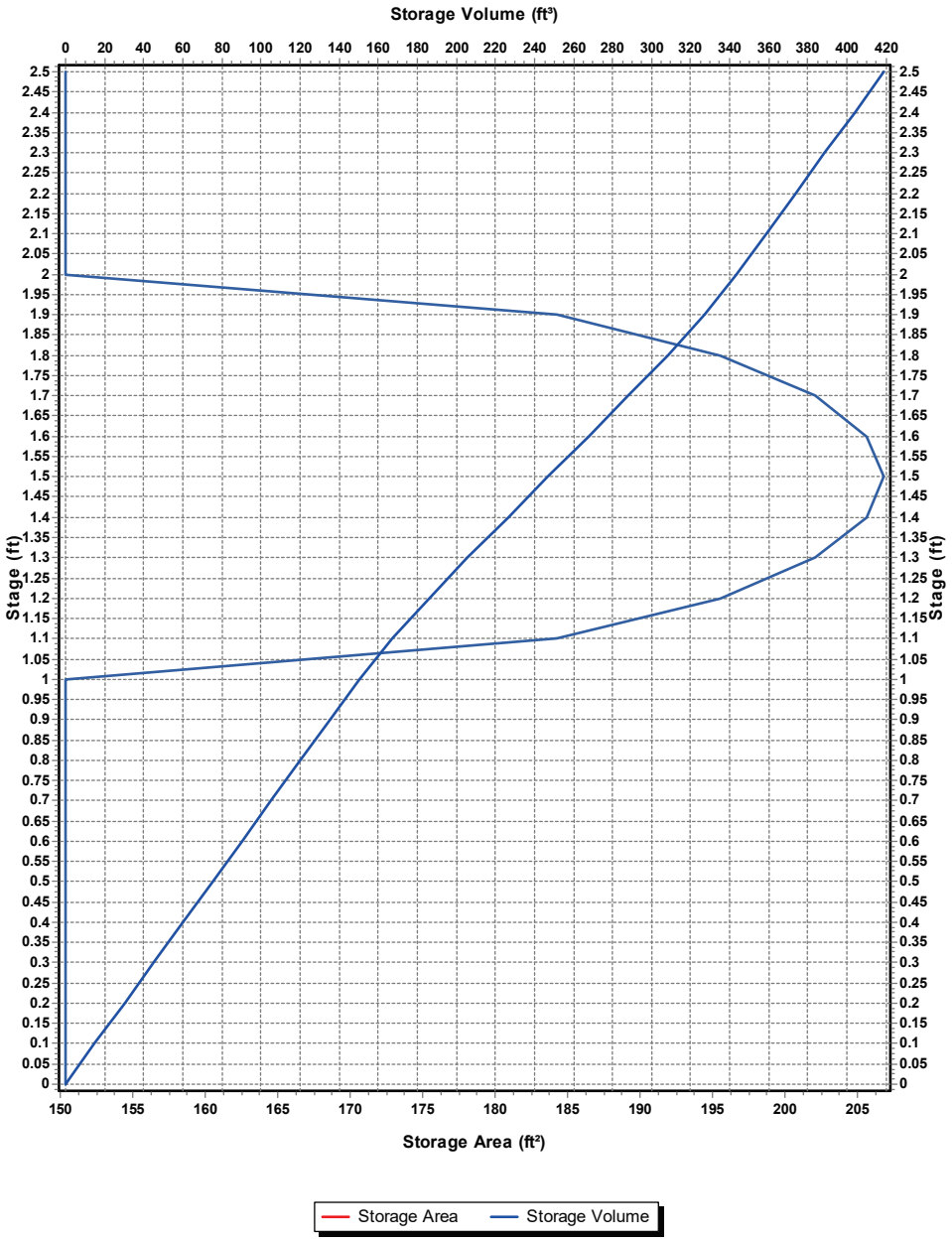
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,22
Peak Lateral Inflow (cfs)	0,56
Peak Outflow (cfs)	1,22
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,27
Max HGL Depth Attained (ft)	2,27
Average HGL Elevation Attained (ft)	2,93
Average HGL Depth Attained (ft)	0,93
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	1,034
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,22
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,22
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,25
Max HGL Depth Attained (ft)	4,25
Average HGL Elevation Attained (ft)	3,24
Average HGL Depth Attained (ft)	3,24
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,22
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,22
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,94
Max HGL Depth Attained (ft)	2,94
Average HGL Elevation Attained (ft)	2,41
Average HGL Depth Attained (ft)	2,41
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

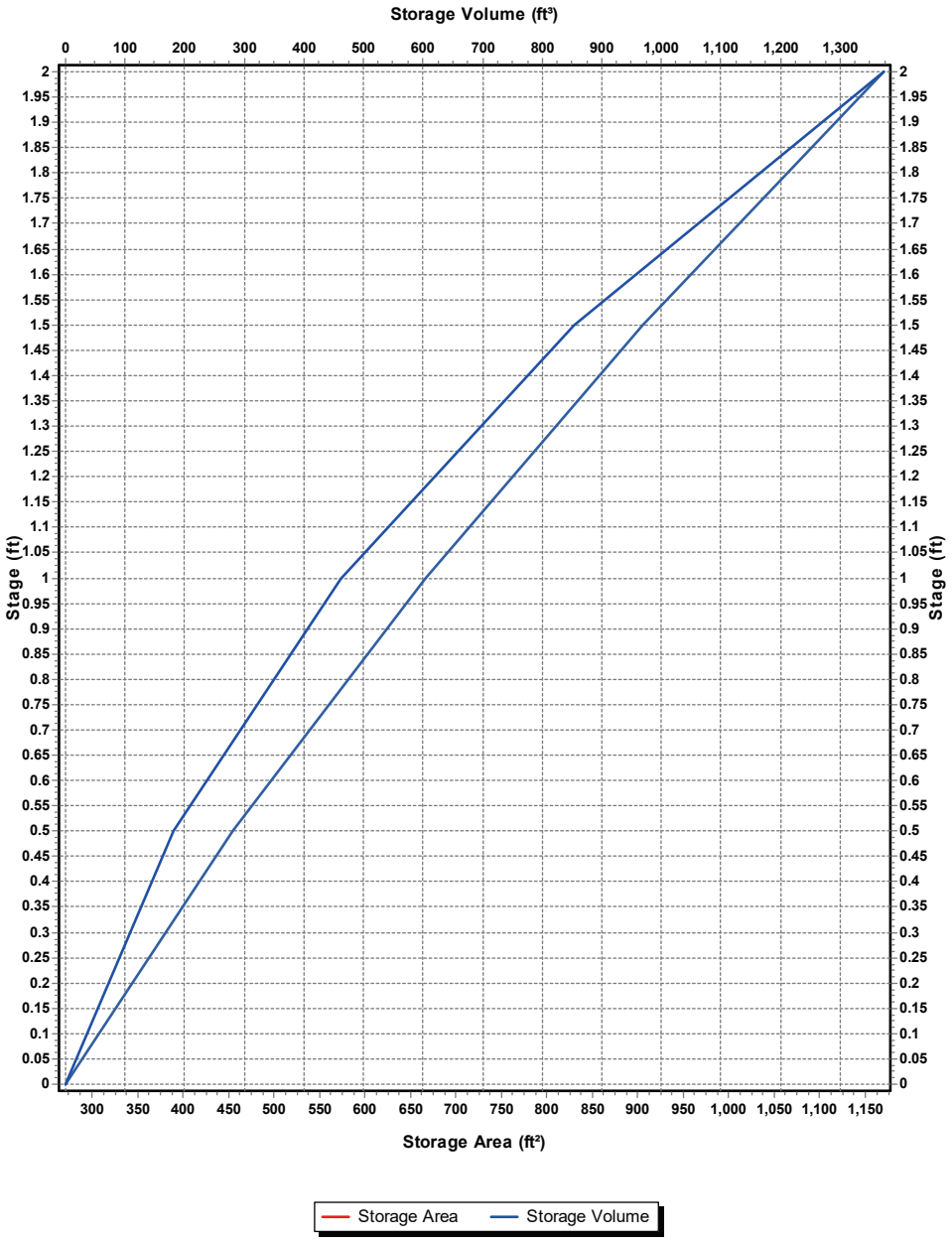
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,13
Peak Lateral Inflow (cfs)	0,13
Peak Outflow (cfs)	0,08
Peak Exfiltration Flow Rate (cfm)	1,28
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	0,52
Average HGL Elevation Attained (ft)	4,09
Average HGL Depth Attained (ft)	0,09
Time of Max HGL Occurrence (days hh:mm)	0 12:31
Total Exfiltration Volume (1000-ft^3)	0,623
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 13: 10 YR-3 DAY POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	010YR 72HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	010YR 72HR	Cumulative	inches	Florida	Broward	10,00	10,80	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	10,79	10,54	0,94	0,58	0 00:10:00
2	Sub-02	0,12	484,00	98,00	10,79	10,55	1,27	0,79	0 00:10:00
3	Sub-03	0,04	484,00	61,00	10,79	5,38	0,20	0,18	0 00:10:00
4	Sub-04	0,06	484,00	61,00	10,79	5,59	0,35	0,30	0 00:10:00
5	Sub-05	0,02	484,00	61,00	10,79	5,23	0,11	0,09	0 00:10:00
							0,24		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					1,69	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	1,69	2,81				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,10	4,32				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,78	4,32				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,41	4,31				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,40	4,27				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,40	2,98				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,17	4,52				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	1,69	12,87	0,13	3,94	0,44	0,29	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,76	3,49	0,22	0,48	1,00	1,00	743,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,11	2,37	0,05	0,55	0,45	0,45	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,40	4,01	0,35	0,89	1,00	1,00	743,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,40	12,80	0,11	2,96	0,47	0,31	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,10							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,40							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

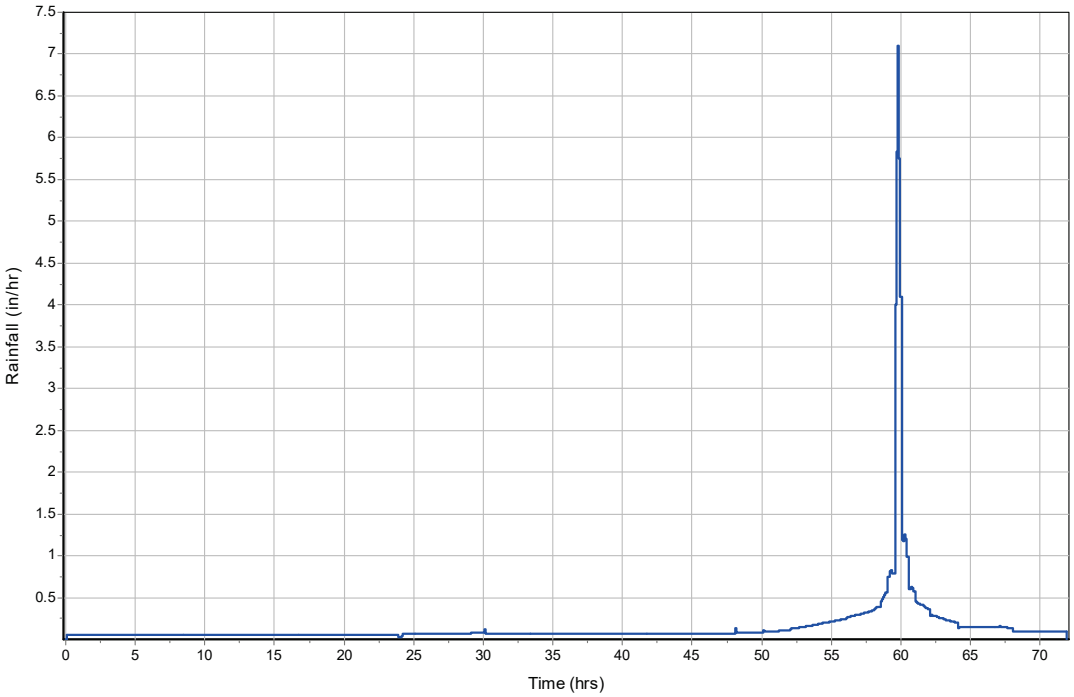
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

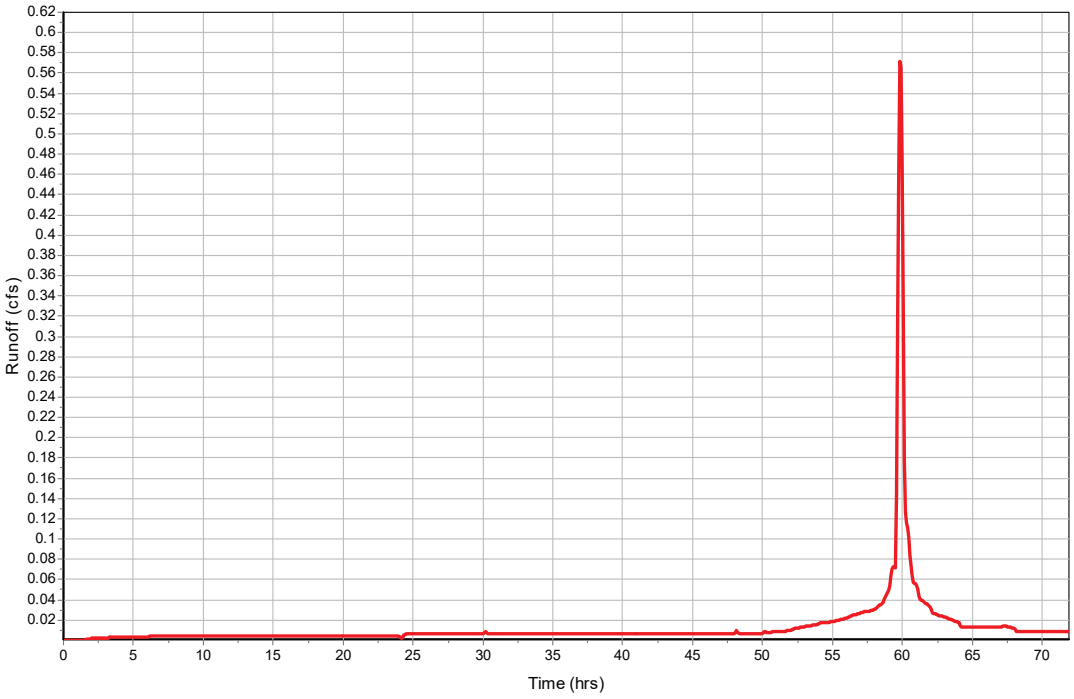
Total Rainfall (in)	10,79
Total Runoff (in)	10,54
Peak Runoff (cfs)	0,58
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

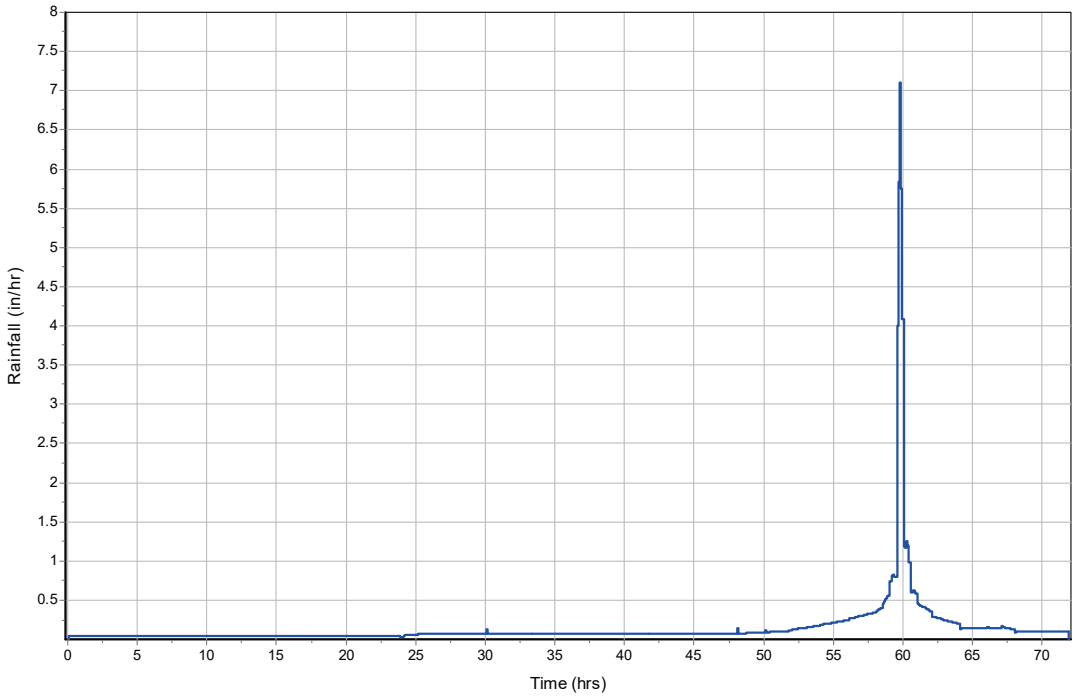
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

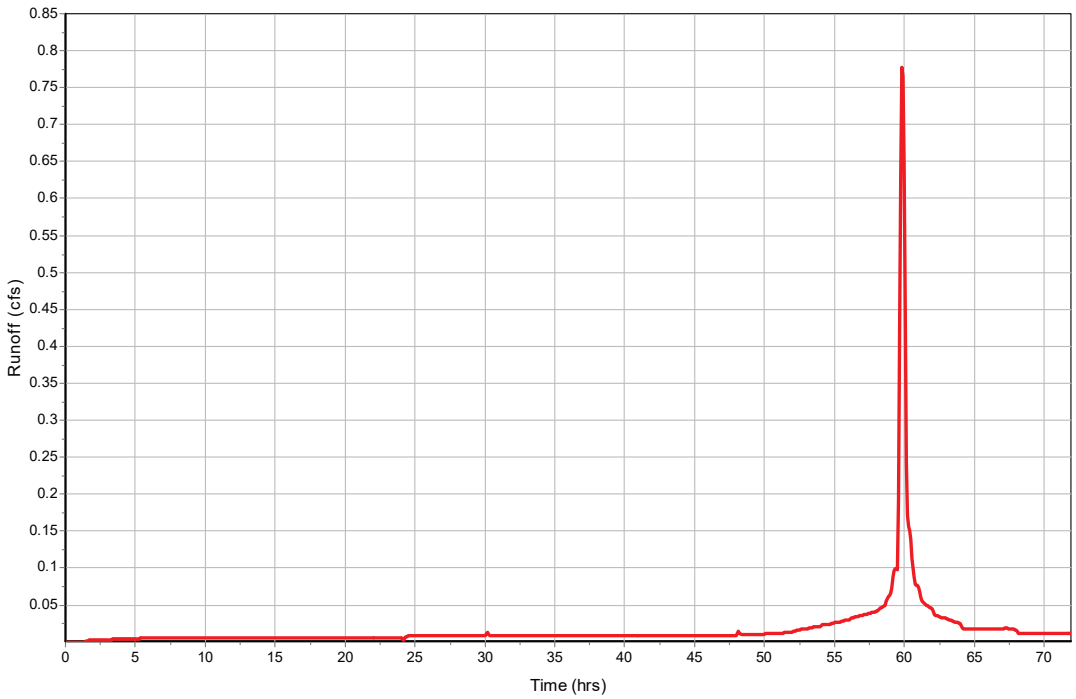
Total Rainfall (in)	10,79
Total Runoff (in)	10,55
Peak Runoff (cfs)	0,79
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

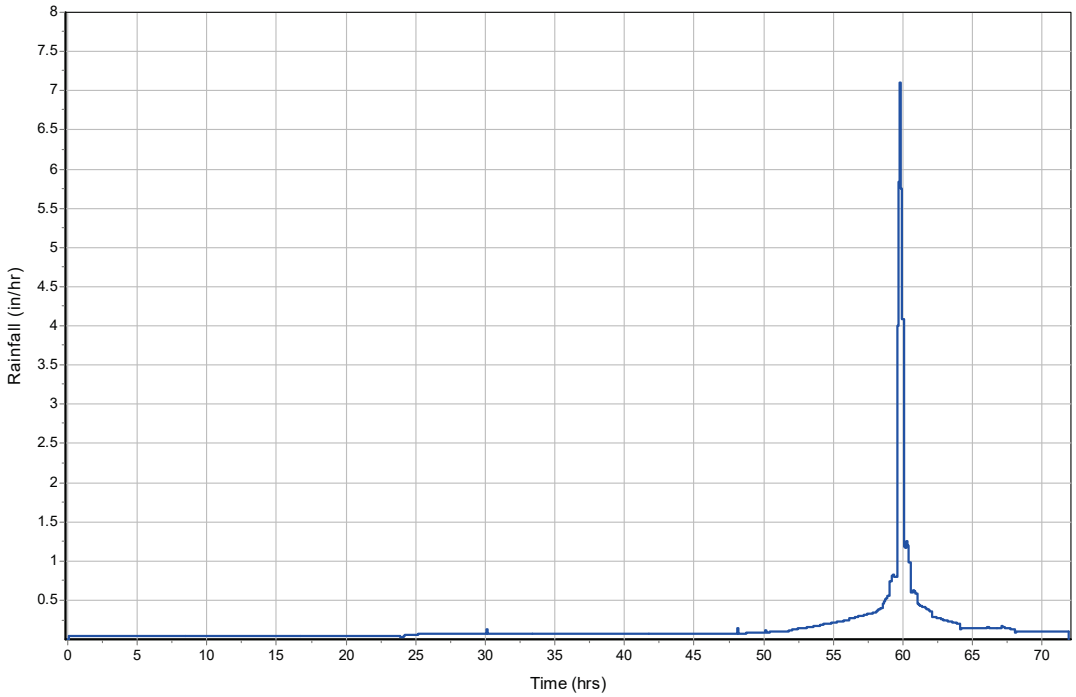
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

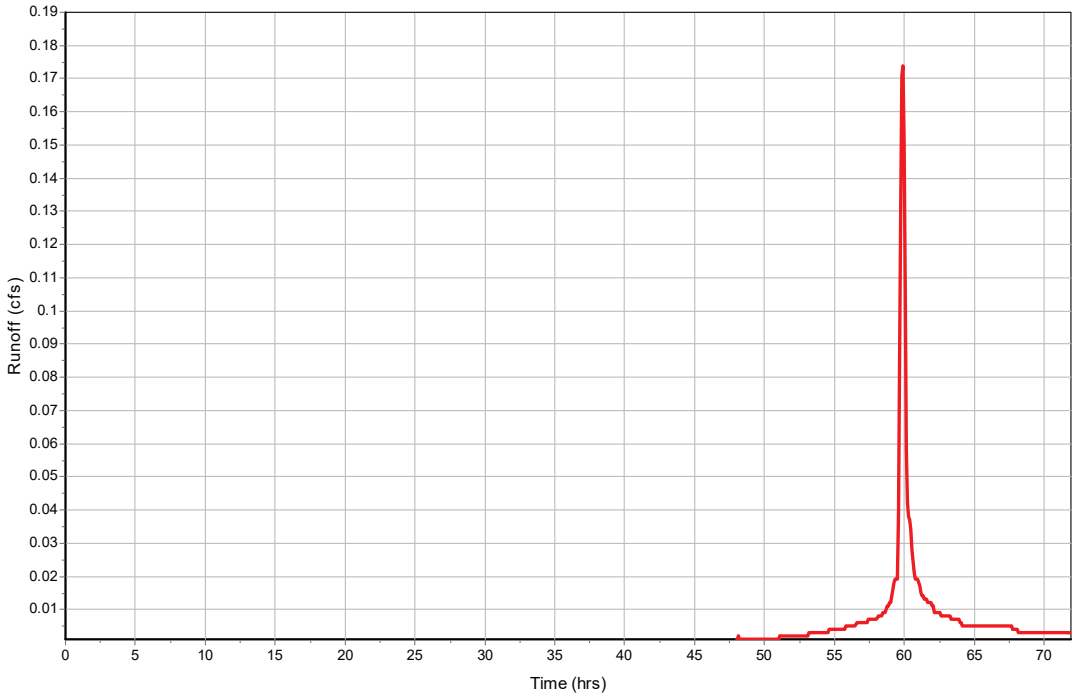
Total Rainfall (in)	10,79
Total Runoff (in)	5,38
Peak Runoff (cfs)	0,18
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

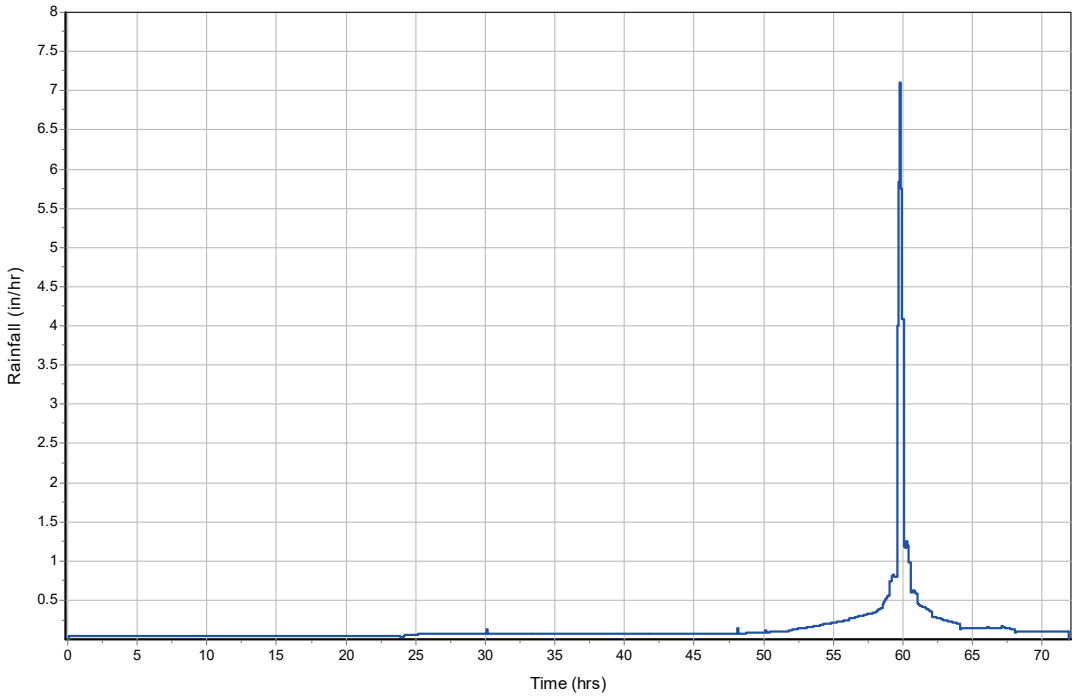
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

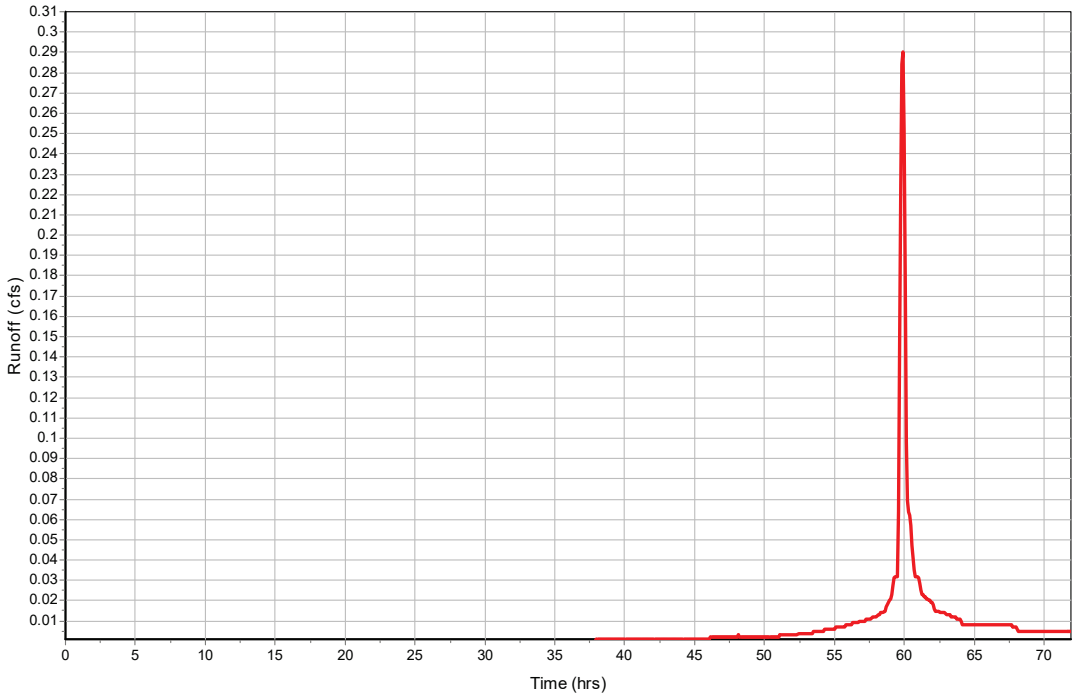
Total Rainfall (in)	10,79
Total Runoff (in)	5,59
Peak Runoff (cfs)	0,3
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

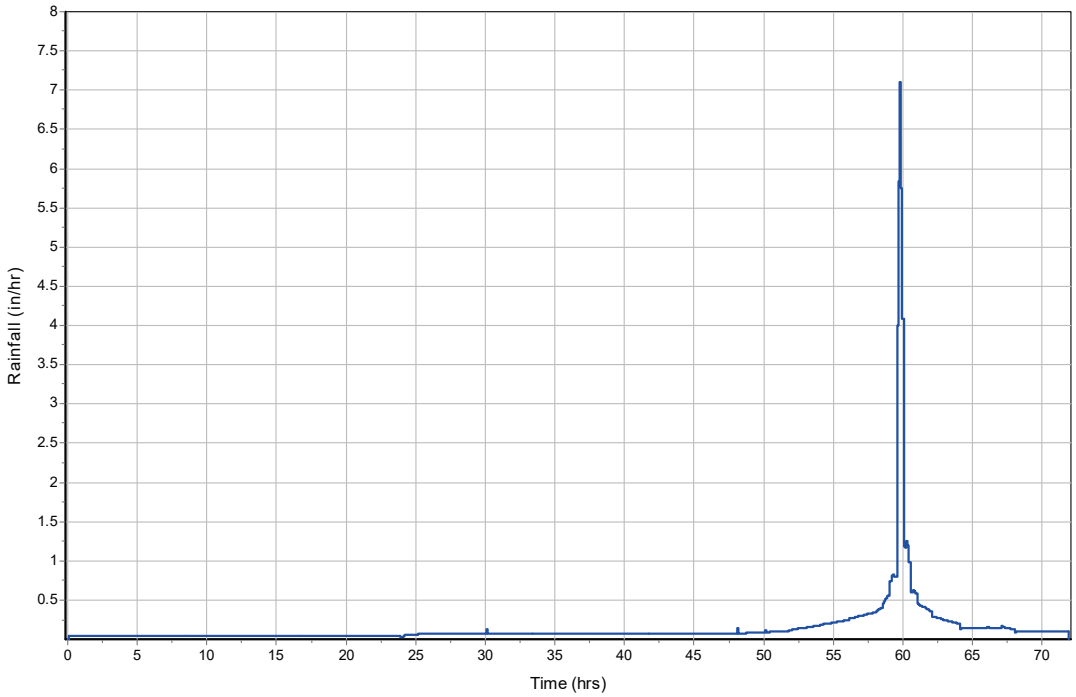
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

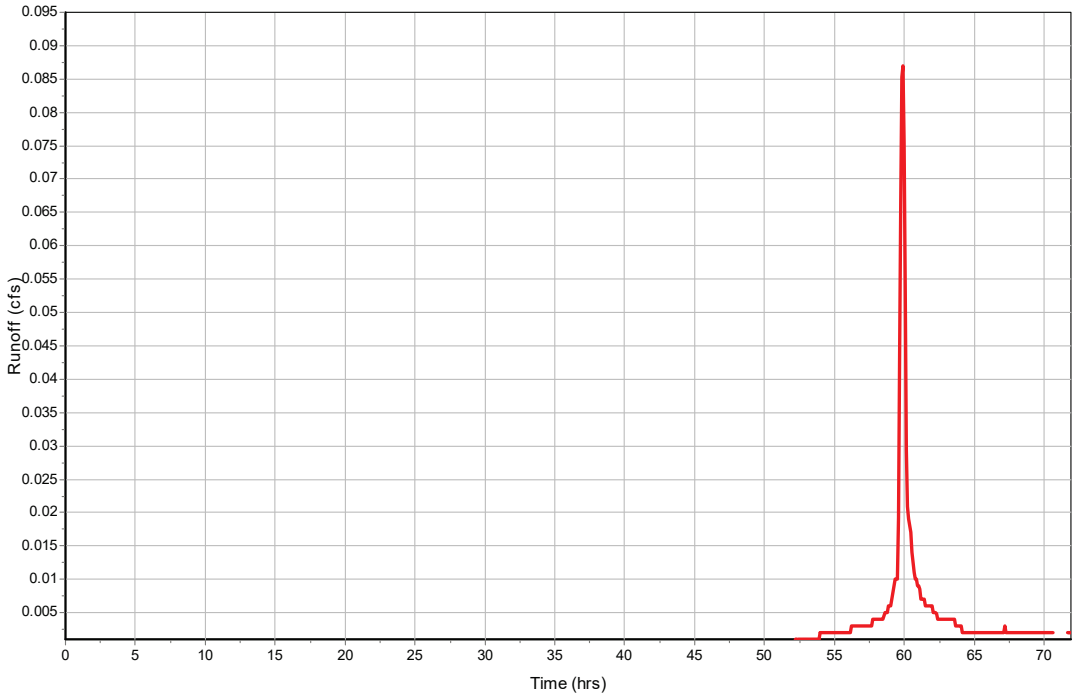
Total Rainfall (in)	10,79
Total Runoff (in)	5,23
Peak Runoff (cfs)	0,09
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	1,69	2 12:00	12,87	0,13	3,94	0,02	0,44	0,29	0,00		Calculated
2	Link-03	0,76	2 12:00	3,49	0,22	0,48	2,72	1,00	1,00	743,00		SURCHARGED
3	Link-04	0,11	2 12:07	2,37	0,05	0,55	1,29	0,45	0,45	0,00		Calculated
4	Link-05	1,40	2 12:00	4,01	0,35	0,89	0,89	1,00	1,00	743,00		SURCHARGED
5	Link-06	1,40	2 12:00	12,80	0,11	2,96	0,04	0,47	0,31	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,69
Peak Lateral Inflow (cfs)	0,29
Peak Outflow (cfs)	1,69
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,81
Max HGL Depth Attained (ft)	2,81
Average HGL Elevation Attained (ft)	1,87
Average HGL Depth Attained (ft)	1,87
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,1
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,11
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,32
Max HGL Depth Attained (ft)	1,82
Average HGL Elevation Attained (ft)	2,92
Average HGL Depth Attained (ft)	0,42
Time of Max HGL Occurrence (days hh:mm)	2 11:59
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

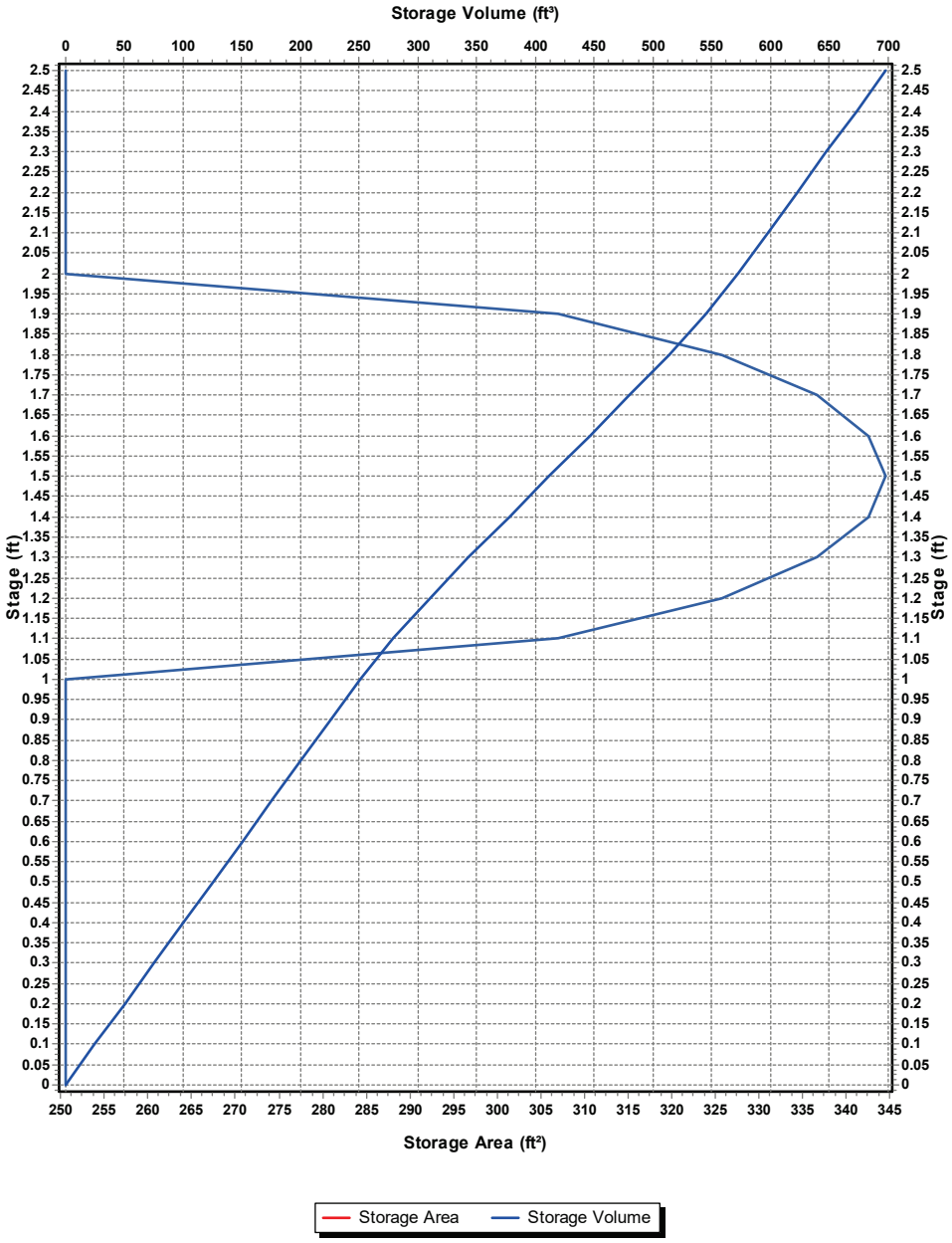
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,78
Peak Lateral Inflow (cfs)	0,78
Peak Outflow (cfs)	0,76
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,32
Max HGL Depth Attained (ft)	2,32
Average HGL Elevation Attained (ft)	2,62
Average HGL Depth Attained (ft)	0,62
Time of Max HGL Occurrence (days hh:mm)	2 11:59
Total Exfiltration Volume (1000-ft^3)	2,208
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

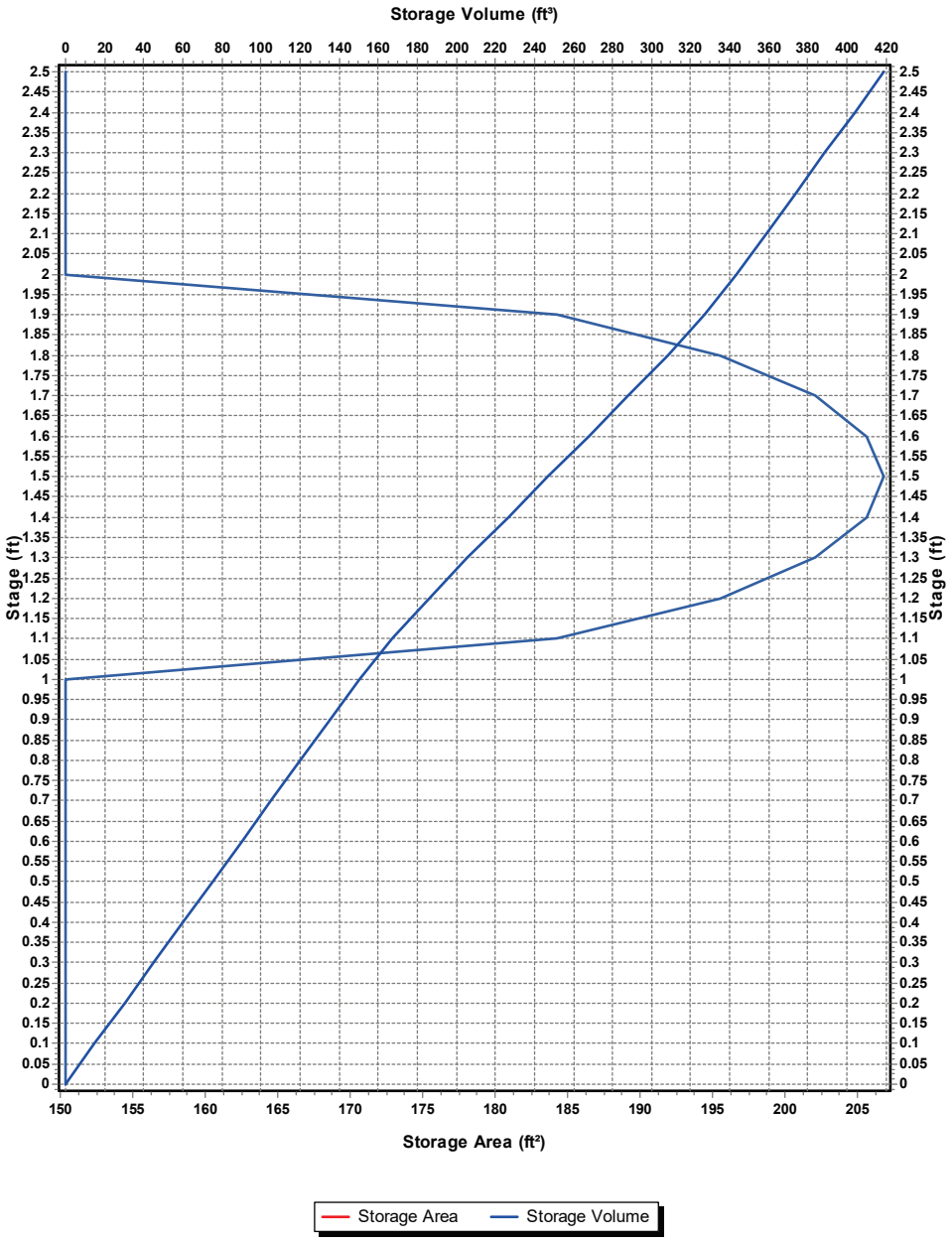
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,41
Peak Lateral Inflow (cfs)	0,66
Peak Outflow (cfs)	1,4
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,31
Max HGL Depth Attained (ft)	2,31
Average HGL Elevation Attained (ft)	2,64
Average HGL Depth Attained (ft)	0,64
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	1,443
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,4
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,4
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,27
Max HGL Depth Attained (ft)	4,27
Average HGL Elevation Attained (ft)	2,1
Average HGL Depth Attained (ft)	2,1
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,4
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,4
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,98
Max HGL Depth Attained (ft)	2,98
Average HGL Elevation Attained (ft)	1,66
Average HGL Depth Attained (ft)	1,66
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

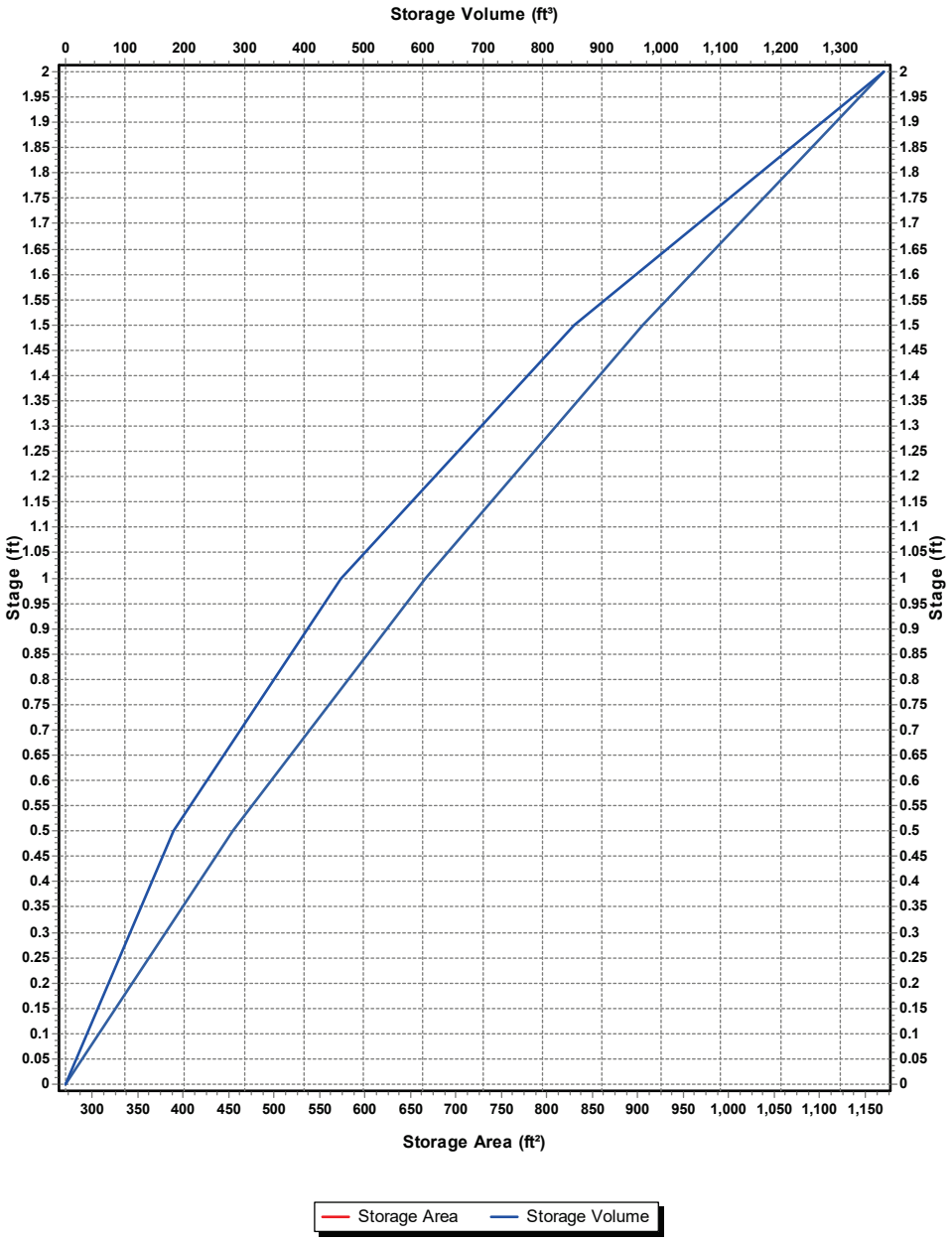
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,17
Peak Lateral Inflow (cfs)	0,17
Peak Outflow (cfs)	0,1
Peak Exfiltration Flow Rate (cfm)	1,29
Max HGL Elevation Attained (ft)	4,52
Max HGL Depth Attained (ft)	0,52
Average HGL Elevation Attained (ft)	4,07
Average HGL Depth Attained (ft)	0,07
Time of Max HGL Occurrence (days hh:mm)	2 12:07
Total Exfiltration Volume (1000-ft^3)	0,669
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 14: 10 YR-24 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	010YR 24HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	010YR 24HR	Cumulative	inches	Florida	Broward	10,00	9,10	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	9,10	8,86	0,79	0,45	0 00:10:00
2	Sub-02	0,12	484,00	98,00	9,10	8,86	1,06	0,61	0 00:10:00
3	Sub-03	0,04	484,00	61,00	9,10	4,29	0,16	0,10	0 00:10:00
4	Sub-04	0,06	484,00	61,00	9,10	4,30	0,27	0,17	0 00:10:00
5	Sub-05	0,02	484,00	61,00	9,10	4,27	0,09	0,05	0 00:10:00
							0,20		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					1,24	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	1,24	2,73				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,07	4,26				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,60	4,26				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,08	4,25				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,07	4,23				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,07	2,90				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,10	4,51				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	1,24	12,87	0,10	3,65	0,37	0,25	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,59	3,49	0,17	0,37	1,00	1,00	748,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,07	2,37	0,03	0,47	0,38	0,38	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,07	4,01	0,27	0,78	1,00	1,00	748,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,07	12,80	0,08	2,94	0,39	0,26	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,03							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,07							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

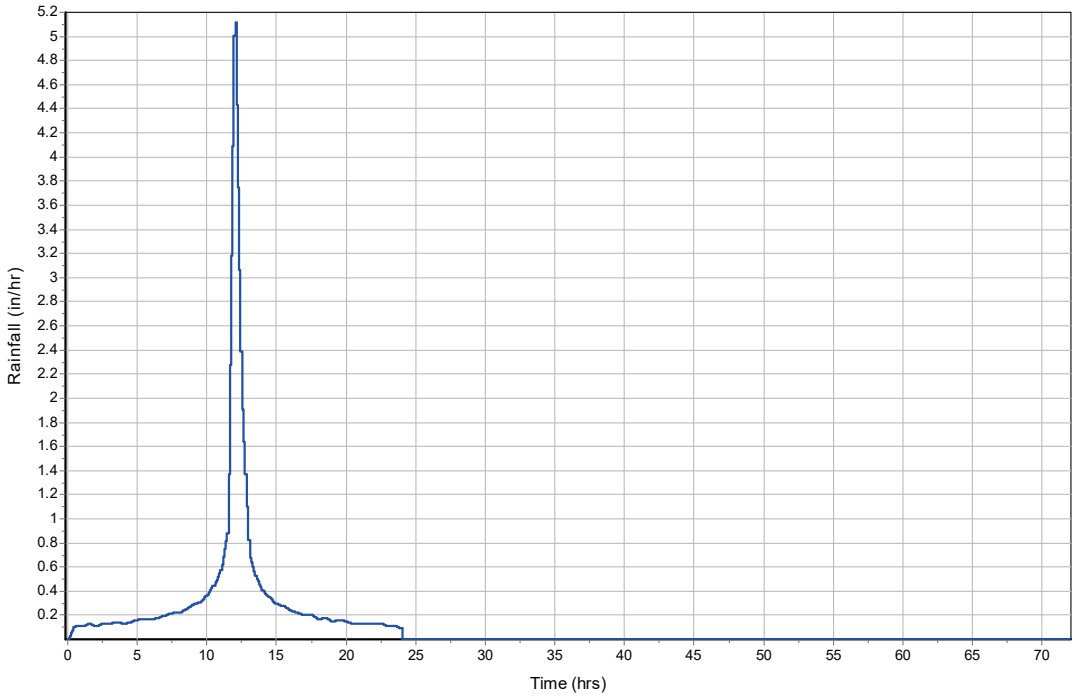
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

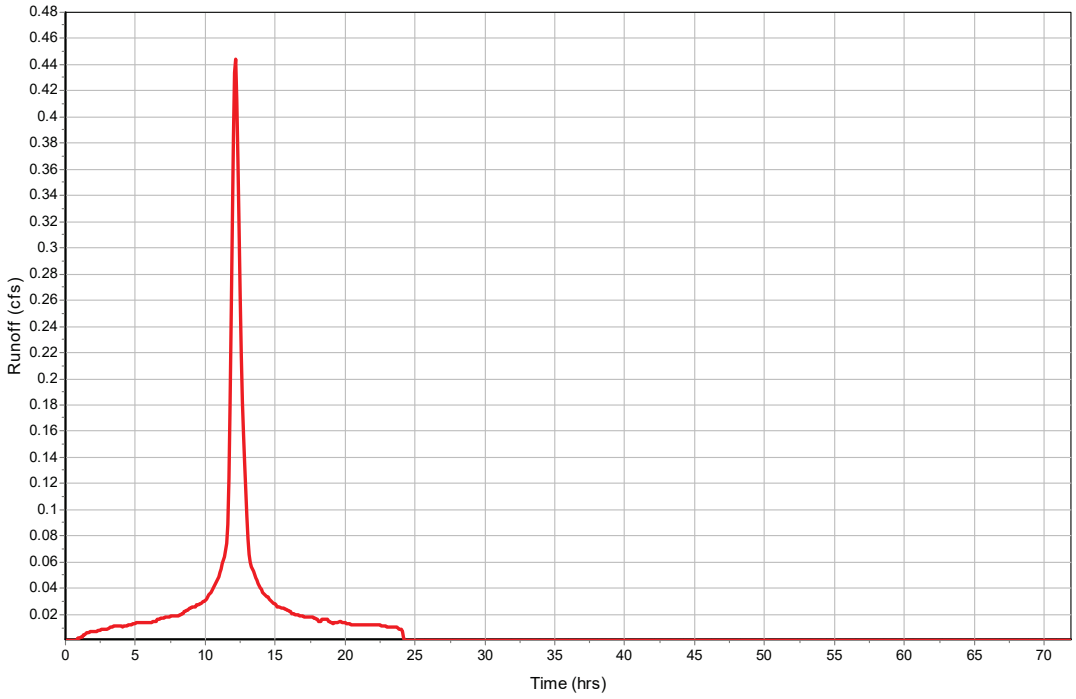
Total Rainfall (in)	9,1
Total Runoff (in)	8,86
Peak Runoff (cfs)	0,45
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

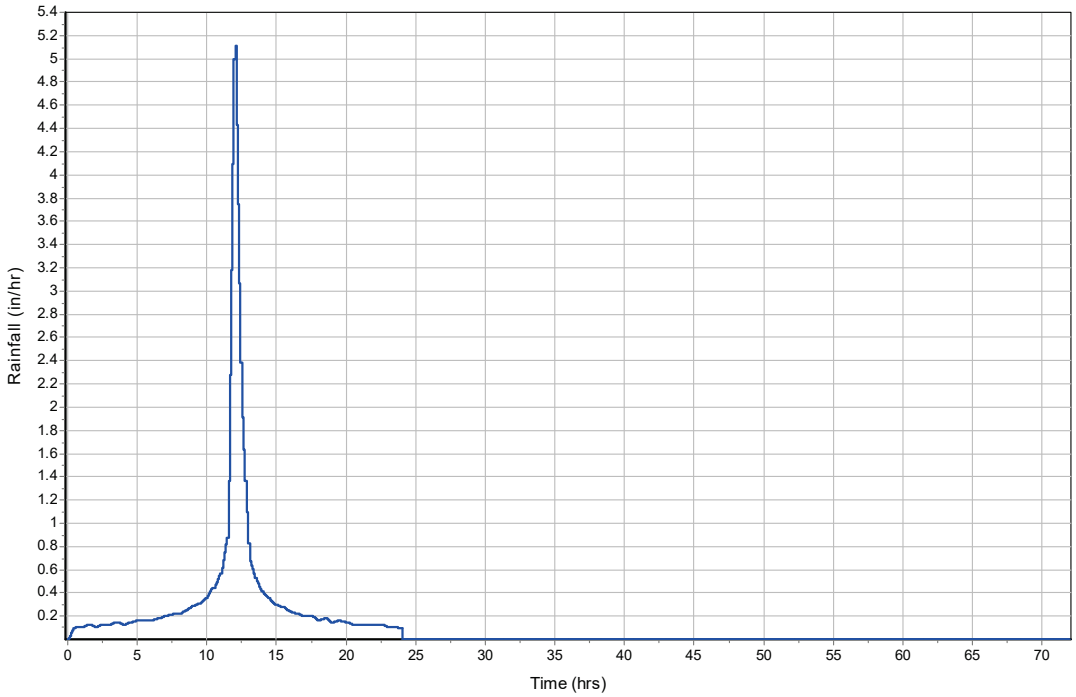
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

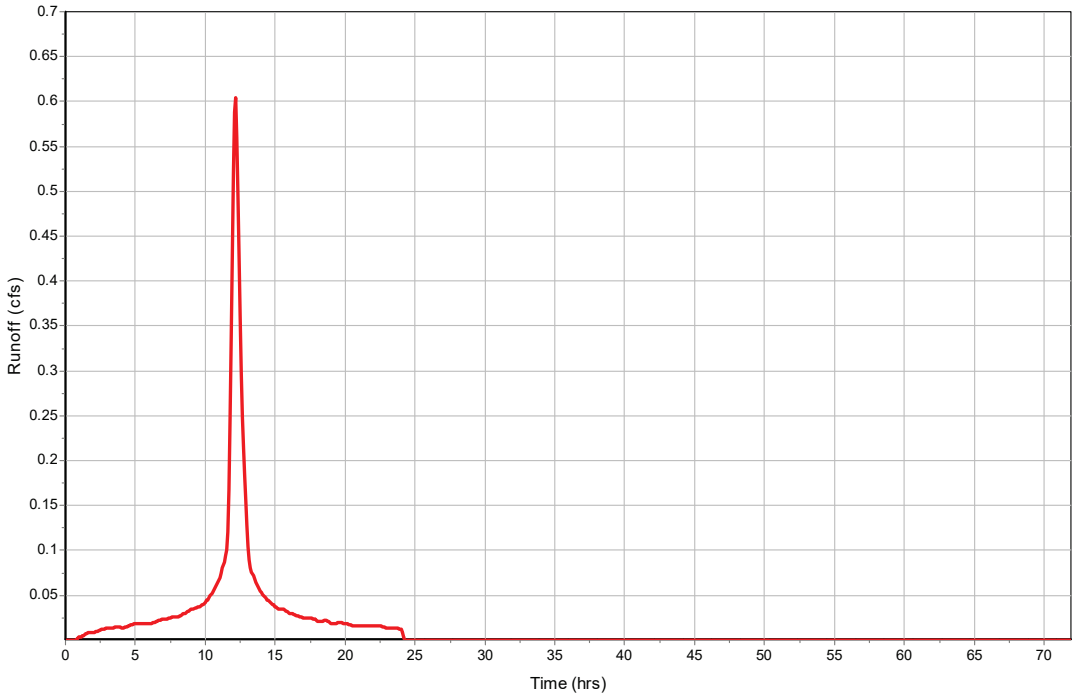
Total Rainfall (in)	9,1
Total Runoff (in)	8,86
Peak Runoff (cfs)	0,61
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

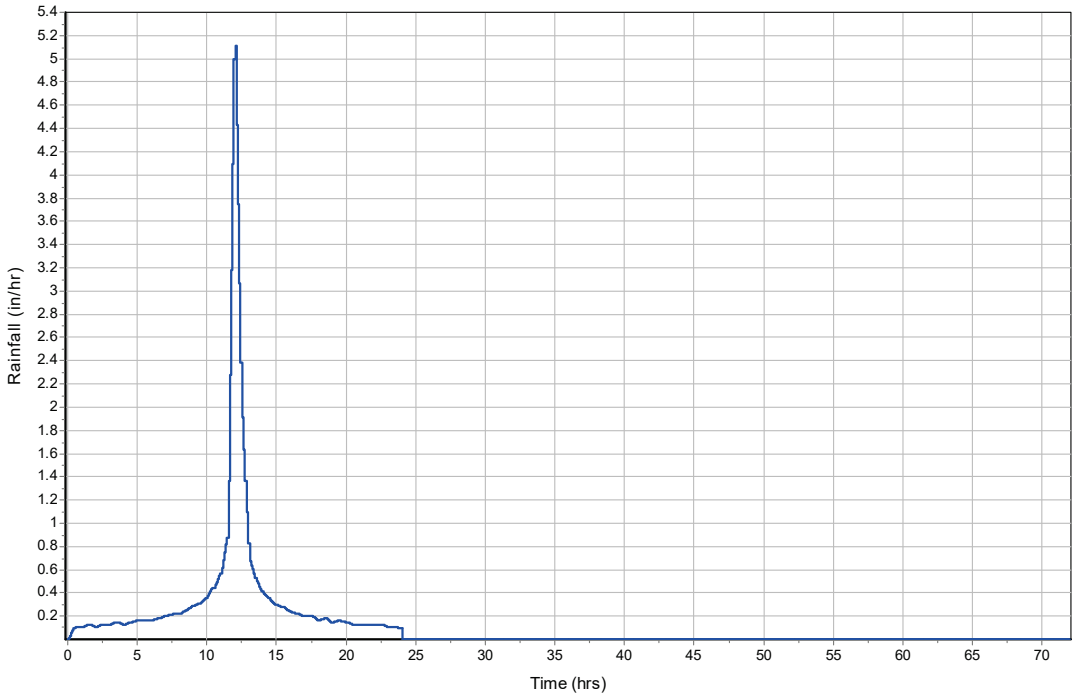
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

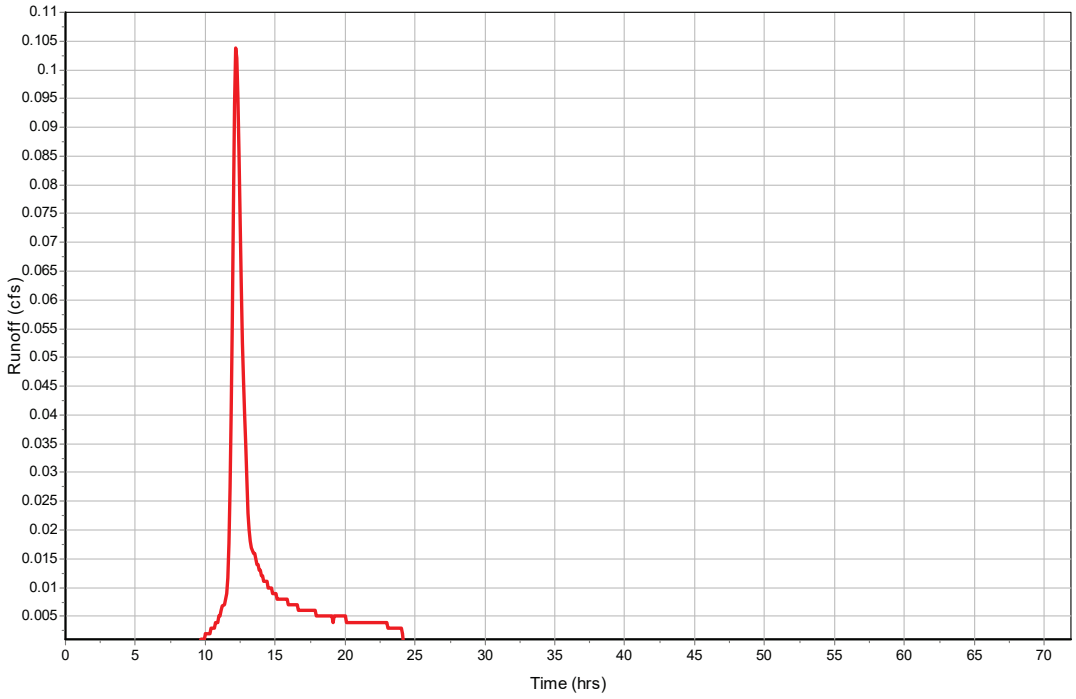
Total Rainfall (in)	9,1
Total Runoff (in)	4,29
Peak Runoff (cfs)	0,1
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

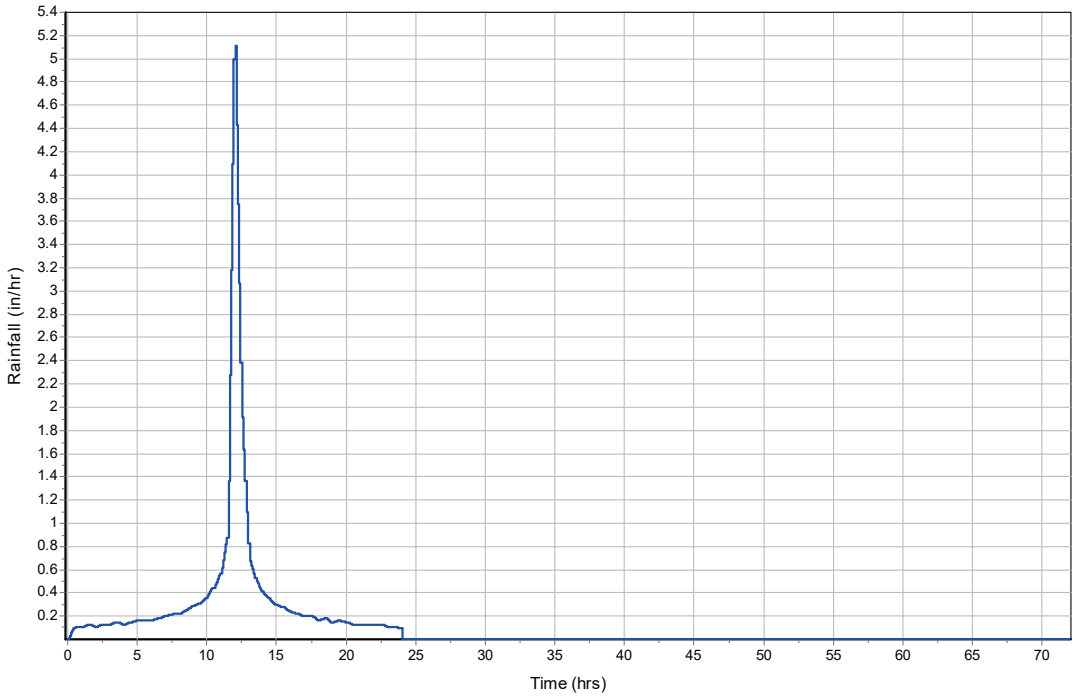
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

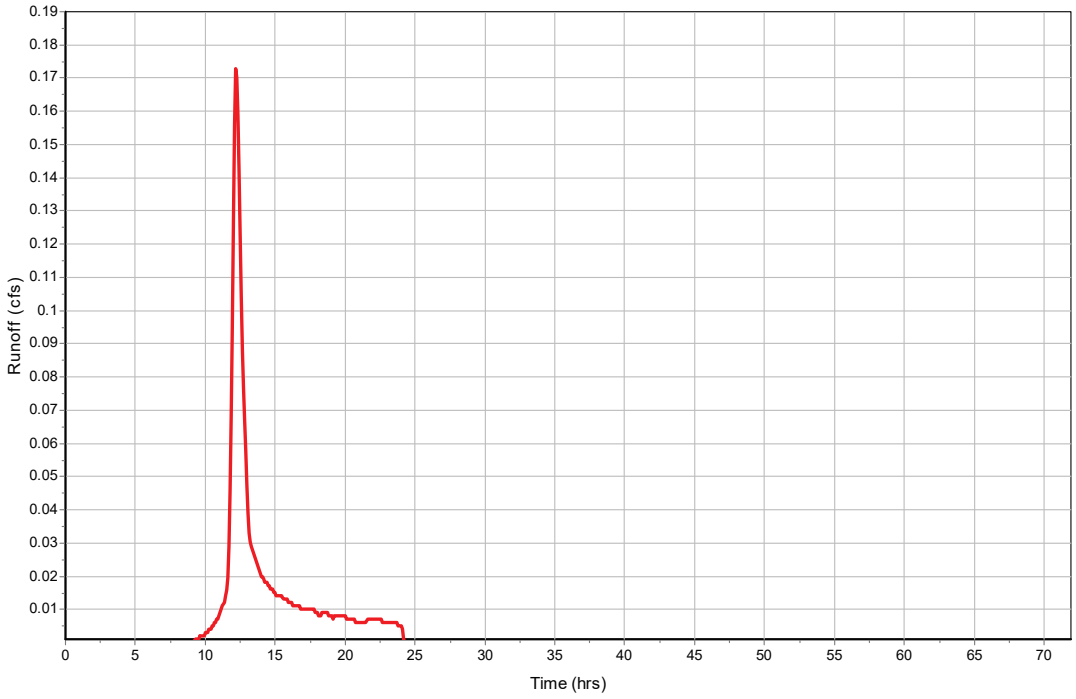
Total Rainfall (in)	9,1
Total Runoff (in)	4,3
Peak Runoff (cfs)	0,17
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

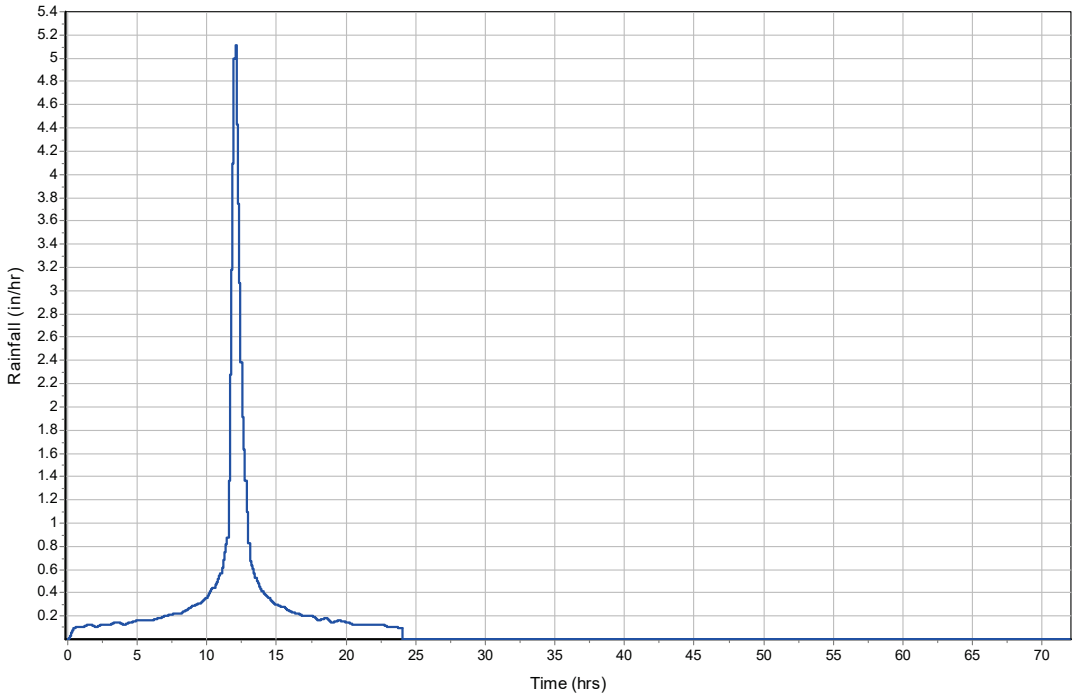
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

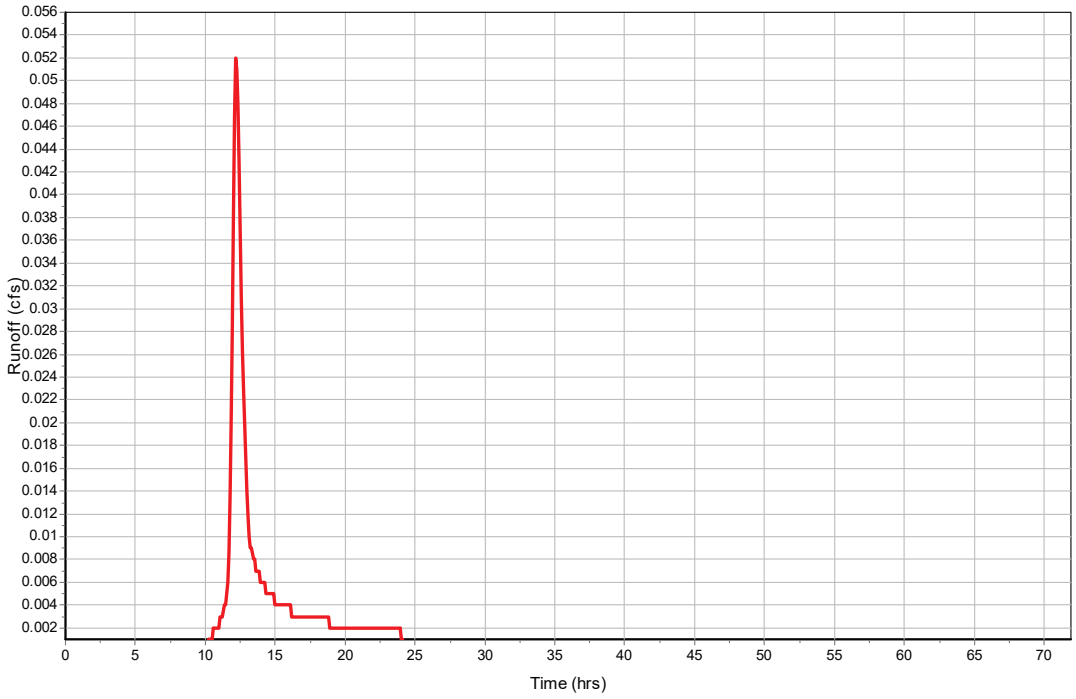
Total Rainfall (in)	9,1
Total Runoff (in)	4,27
Peak Runoff (cfs)	0,05
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	1,24	0 12:15	12,87	0,10	3,65	0,02	0,37	0,25	0,00		Calculated
2	Link-03	0,59	0 12:16	3,49	0,17	0,37	3,53	1,00	1,00	748,00		SURCHARGED
3	Link-04	0,07	0 11:55	2,37	0,03	0,47	1,51	0,38	0,38	0,00		Calculated
4	Link-05	1,07	0 12:15	4,01	0,27	0,78	1,01	1,00	1,00	748,00		SURCHARGED
5	Link-06	1,07	0 12:15	12,80	0,08	2,94	0,04	0,39	0,26	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,24
Peak Lateral Inflow (cfs)	0,17
Peak Outflow (cfs)	1,24
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,73
Max HGL Depth Attained (ft)	2,73
Average HGL Elevation Attained (ft)	2,24
Average HGL Depth Attained (ft)	2,24
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,07
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,04
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,26
Max HGL Depth Attained (ft)	1,76
Average HGL Elevation Attained (ft)	3,82
Average HGL Depth Attained (ft)	1,32
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

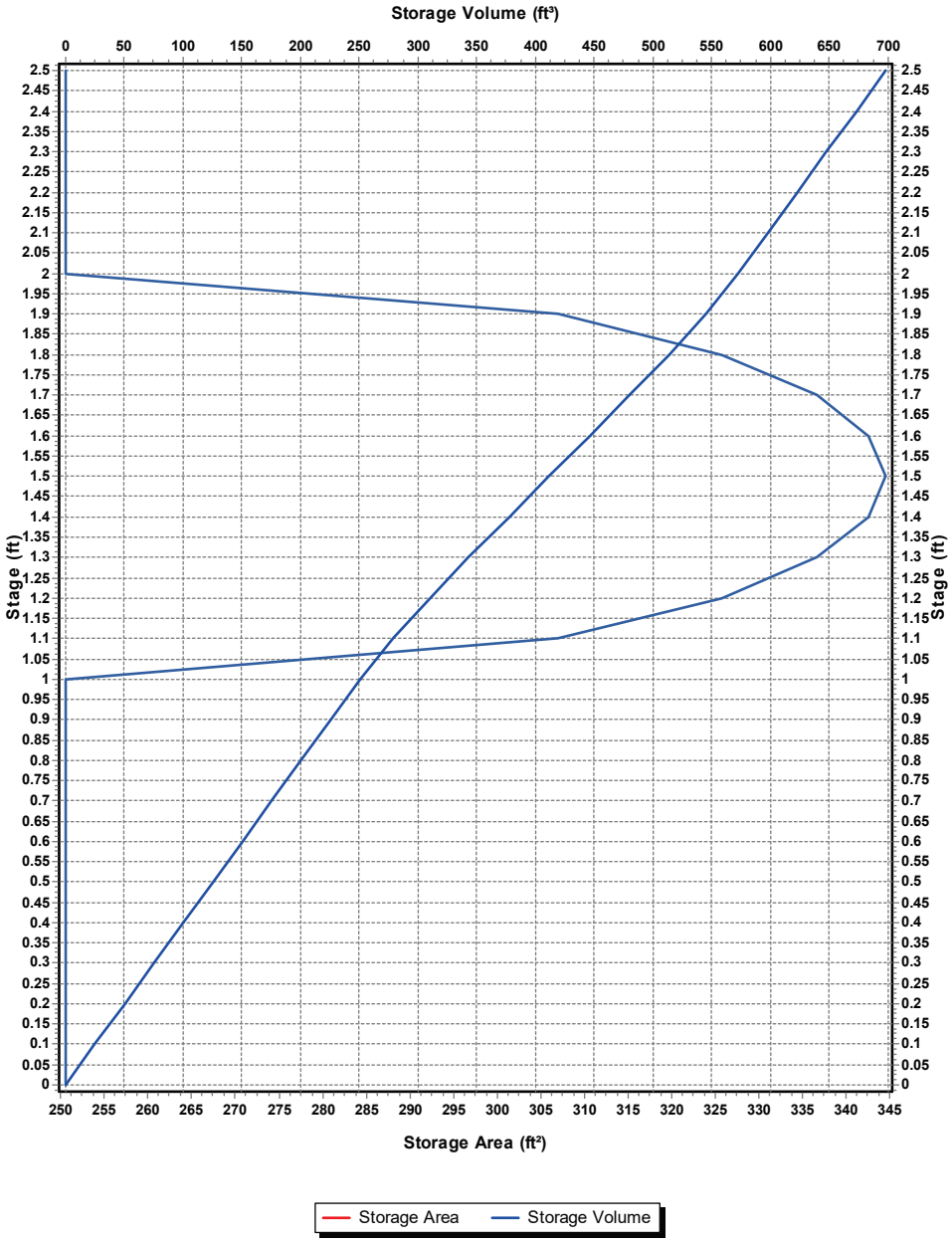
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,6
Peak Lateral Inflow (cfs)	0,6
Peak Outflow (cfs)	0,59
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,26
Max HGL Depth Attained (ft)	2,26
Average HGL Elevation Attained (ft)	2,86
Average HGL Depth Attained (ft)	0,86
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	1,683
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

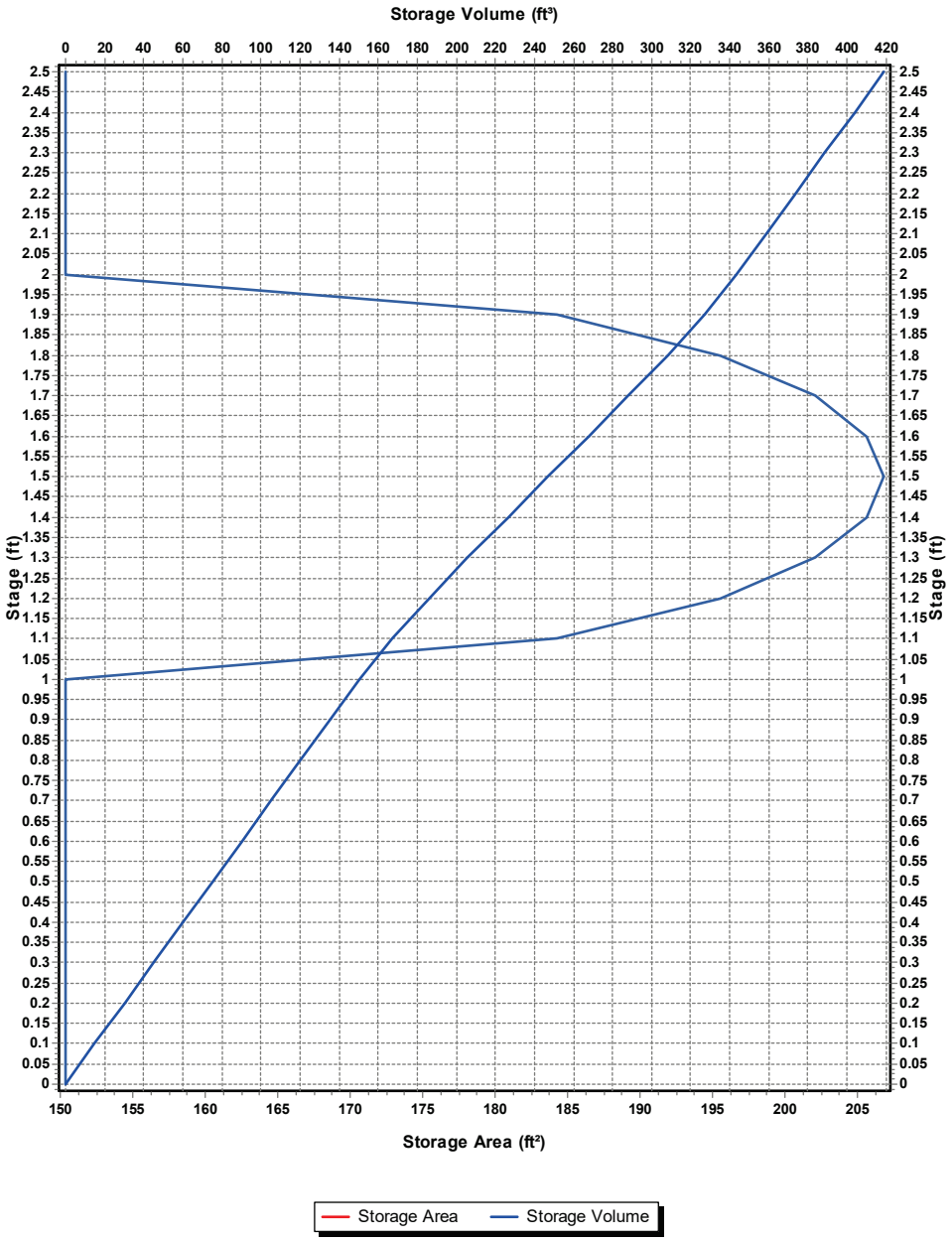
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,08
Peak Lateral Inflow (cfs)	0,5
Peak Outflow (cfs)	1,07
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,25
Max HGL Depth Attained (ft)	2,25
Average HGL Elevation Attained (ft)	2,87
Average HGL Depth Attained (ft)	0,87
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	1,027
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,07
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,07
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,23
Max HGL Depth Attained (ft)	4,23
Average HGL Elevation Attained (ft)	3,19
Average HGL Depth Attained (ft)	3,19
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,07
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,07
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,9
Max HGL Depth Attained (ft)	2,9
Average HGL Elevation Attained (ft)	2,39
Average HGL Depth Attained (ft)	2,39
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

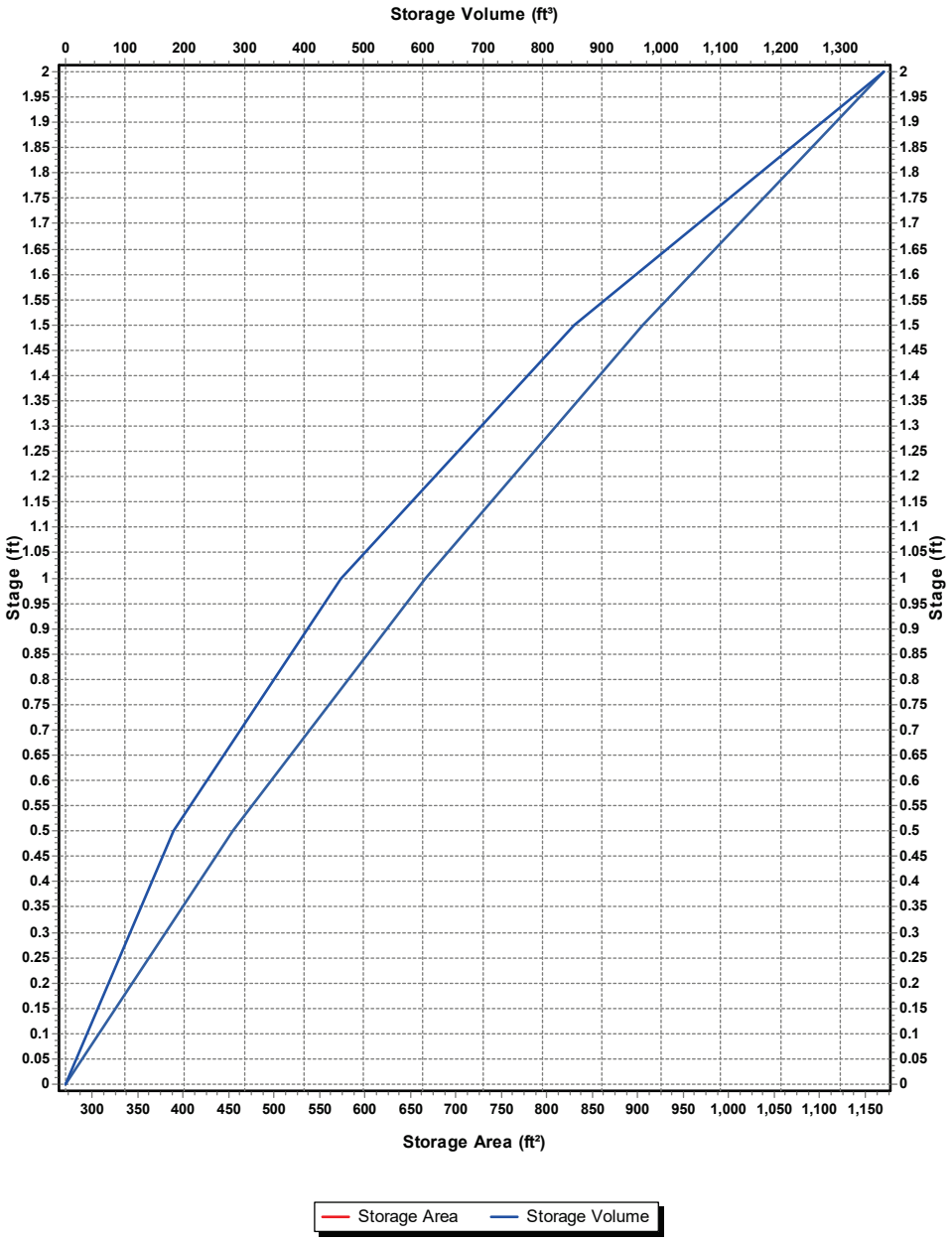
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,1
Peak Lateral Inflow (cfs)	0,1
Peak Outflow (cfs)	0,03
Peak Exfiltration Flow Rate (cfm)	1,28
Max HGL Elevation Attained (ft)	4,51
Max HGL Depth Attained (ft)	0,51
Average HGL Elevation Attained (ft)	4,07
Average HGL Depth Attained (ft)	0,07
Time of Max HGL Occurrence (days hh:mm)	0 12:43
Total Exfiltration Volume (1000-ft^3)	0,56
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 15: 5 YR-3 DAY POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	005YR 72HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	005YR 72HR	Cumulative	inches	Florida	Broward	5,00	9,00	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	8,99	8,75	0,78	0,49	0 00:10:00
2	Sub-02	0,12	484,00	98,00	8,99	8,75	1,05	0,66	0 00:10:00
3	Sub-03	0,04	484,00	61,00	8,99	3,99	0,15	0,13	0 00:10:00
4	Sub-04	0,06	484,00	61,00	8,99	4,06	0,26	0,22	0 00:10:00
5	Sub-05	0,02	484,00	61,00	8,99	3,89	0,08	0,07	0 00:10:00
							0,19		

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					1,38	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	1,38	2,75				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,14	4,28				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,67	4,27				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	1,17	4,26				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	1,16	4,24				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	1,16	2,92				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,13	4,50				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	1,38	12,87	0,11	3,74	0,39	0,26	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,63	3,49	0,18	0,40	1,00	1,00	541,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,14	2,37	0,06	0,68	0,40	0,40	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	1,16	4,01	0,29	0,74	1,00	1,00	542,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	1,16	12,80	0,09	2,92	0,41	0,28	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,00							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				1,16							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

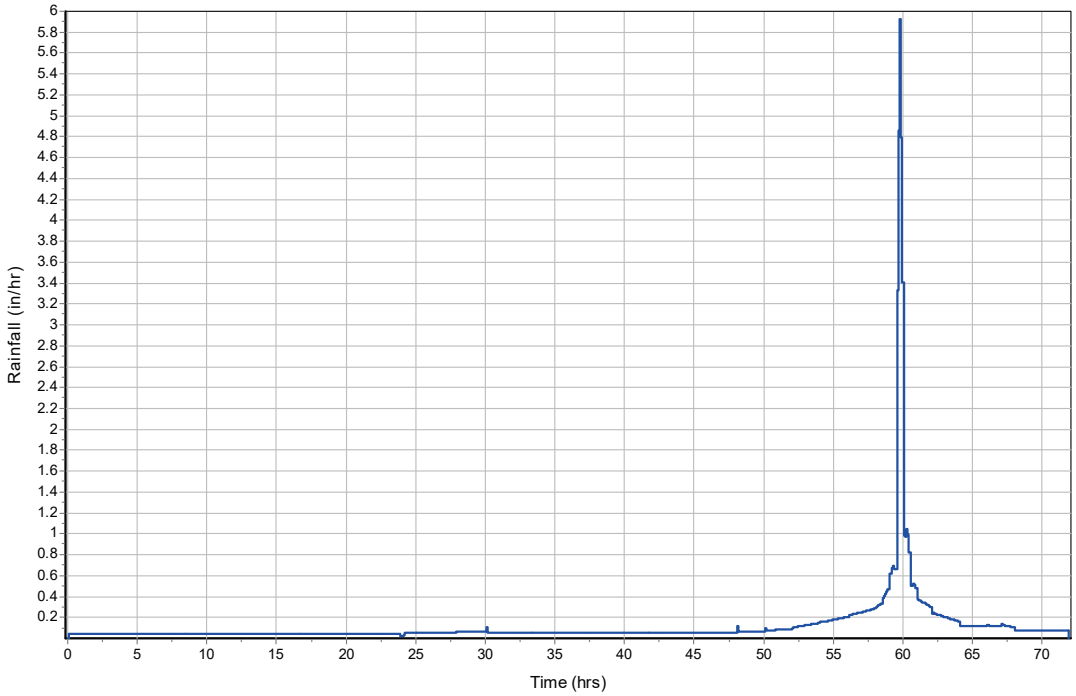
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

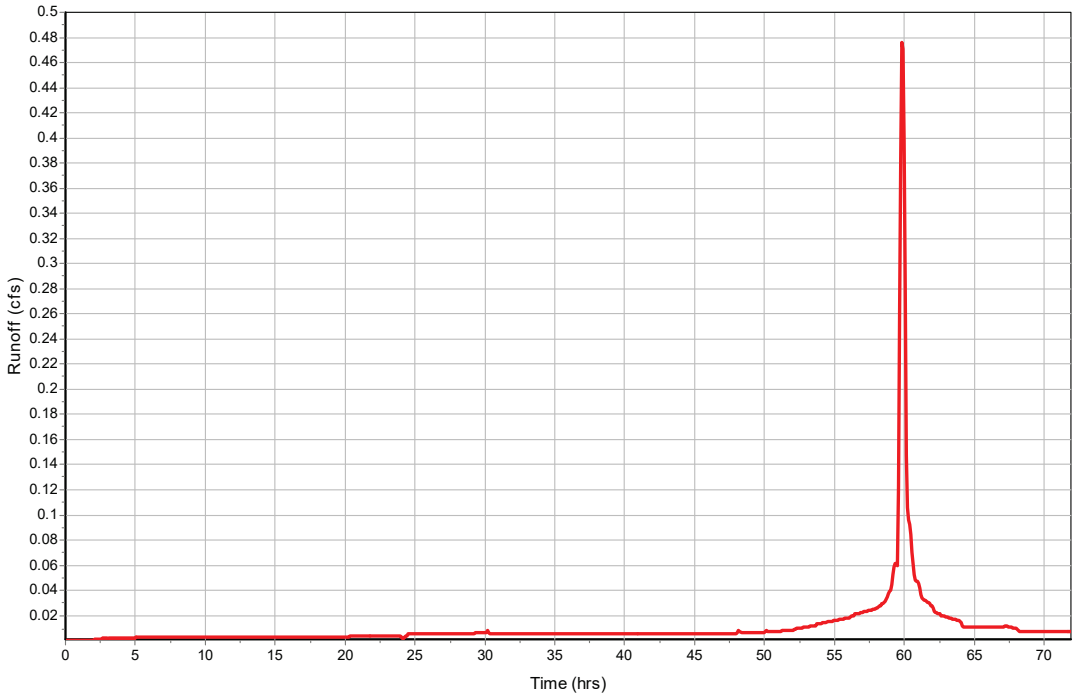
Total Rainfall (in)	8,99
Total Runoff (in)	8,75
Peak Runoff (cfs)	0,49
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

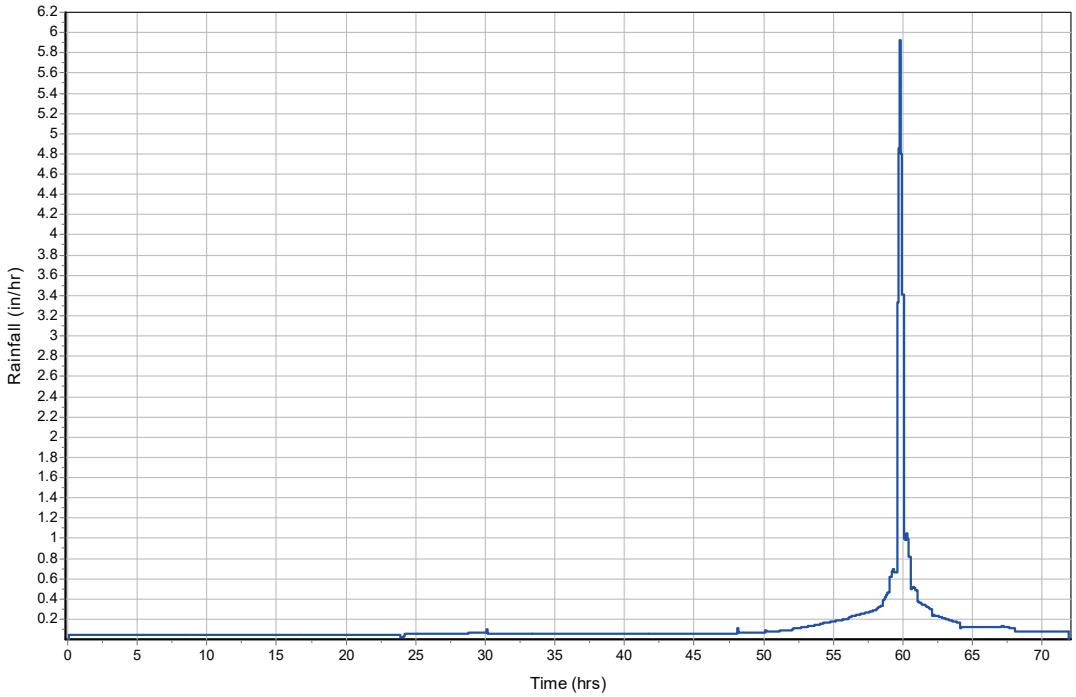
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

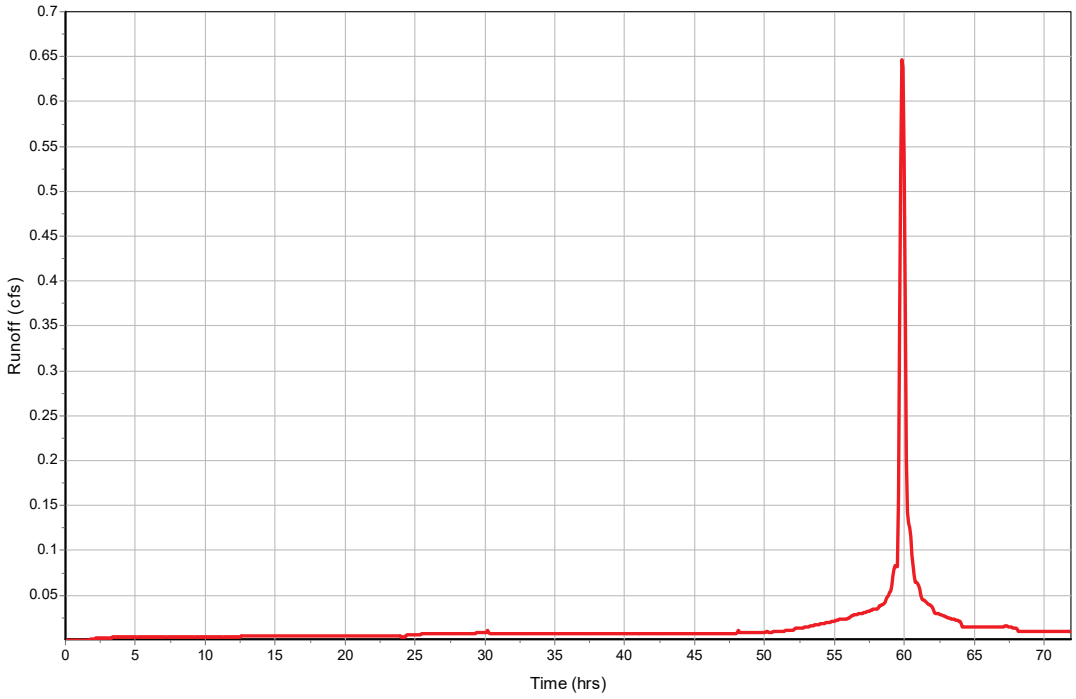
Total Rainfall (in)	8,99
Total Runoff (in)	8,75
Peak Runoff (cfs)	0,66
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

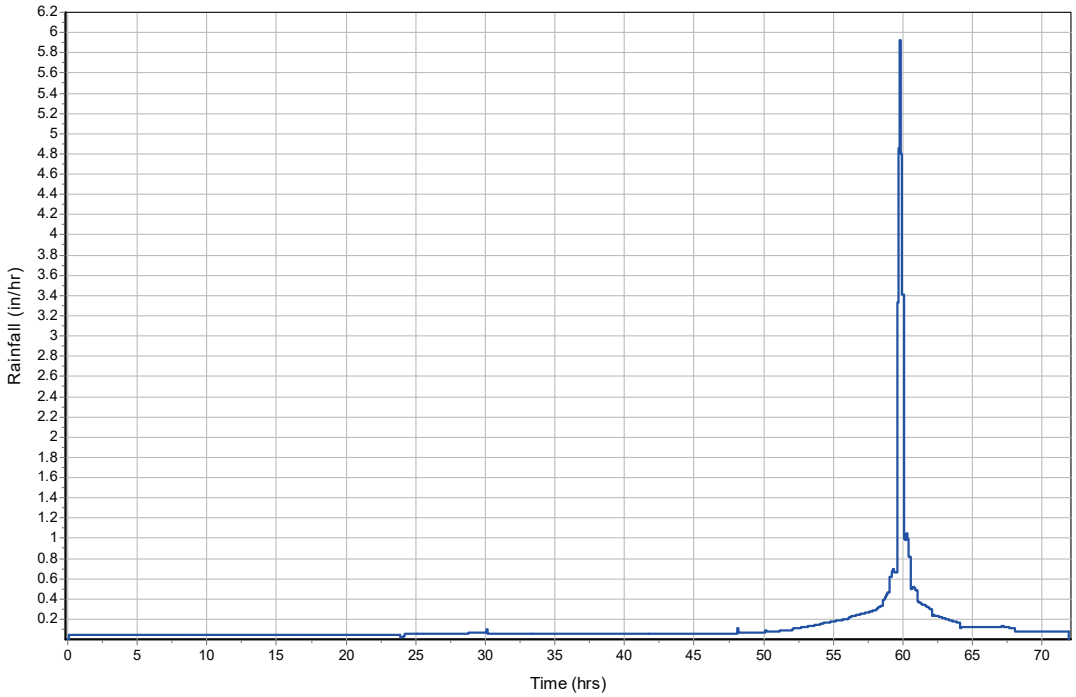
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

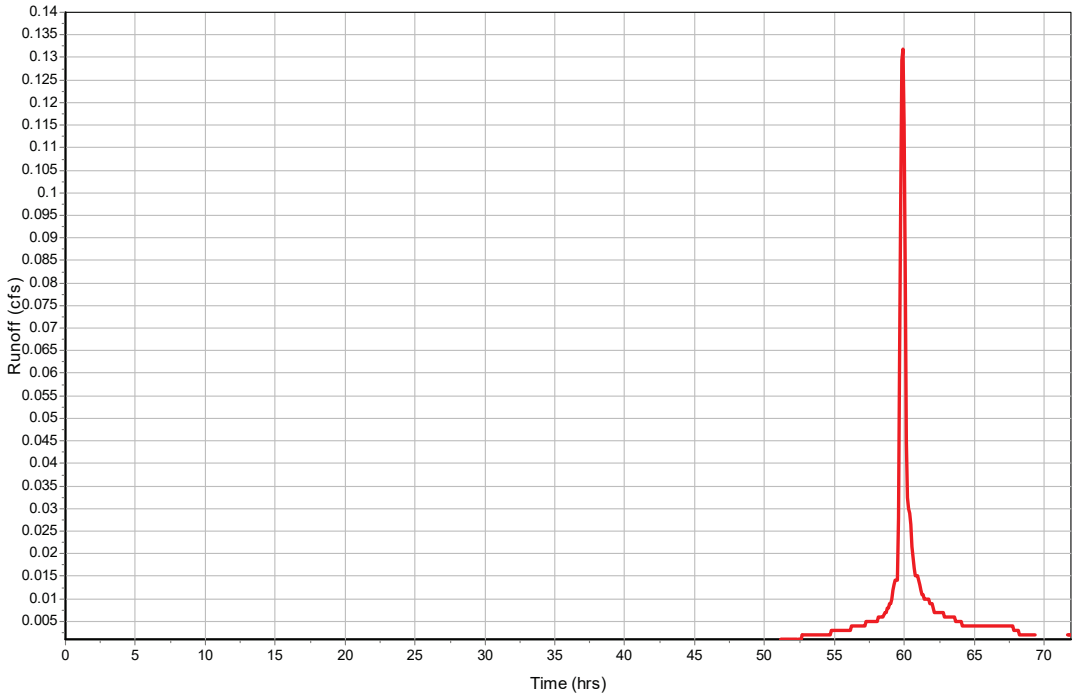
Total Rainfall (in)	8,99
Total Runoff (in)	3,99
Peak Runoff (cfs)	0,13
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

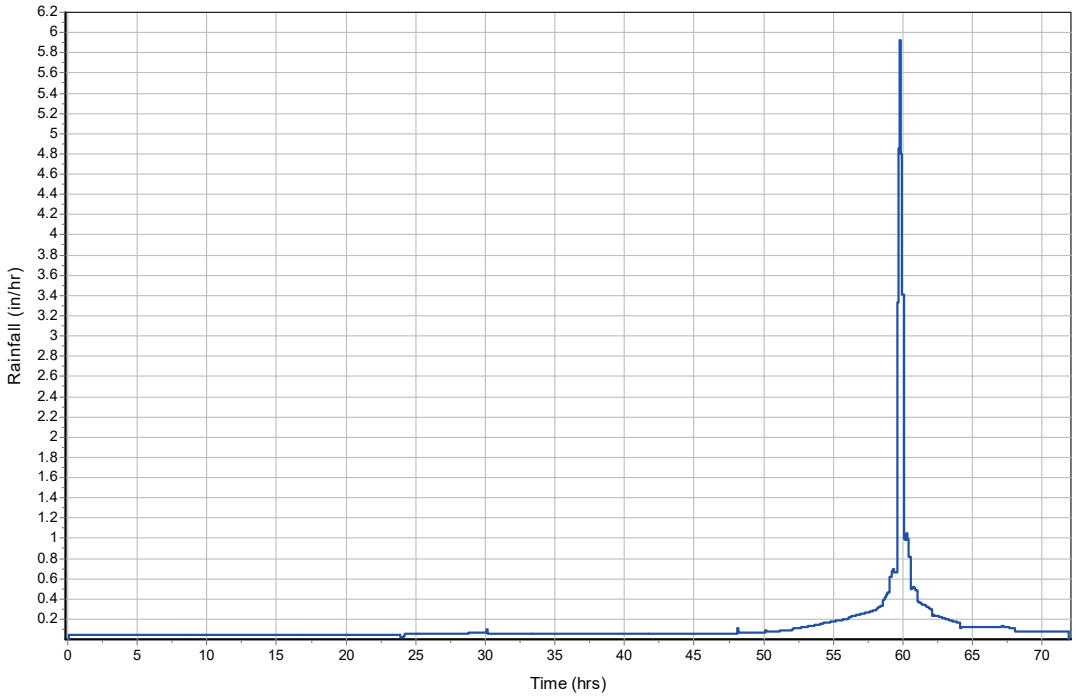
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

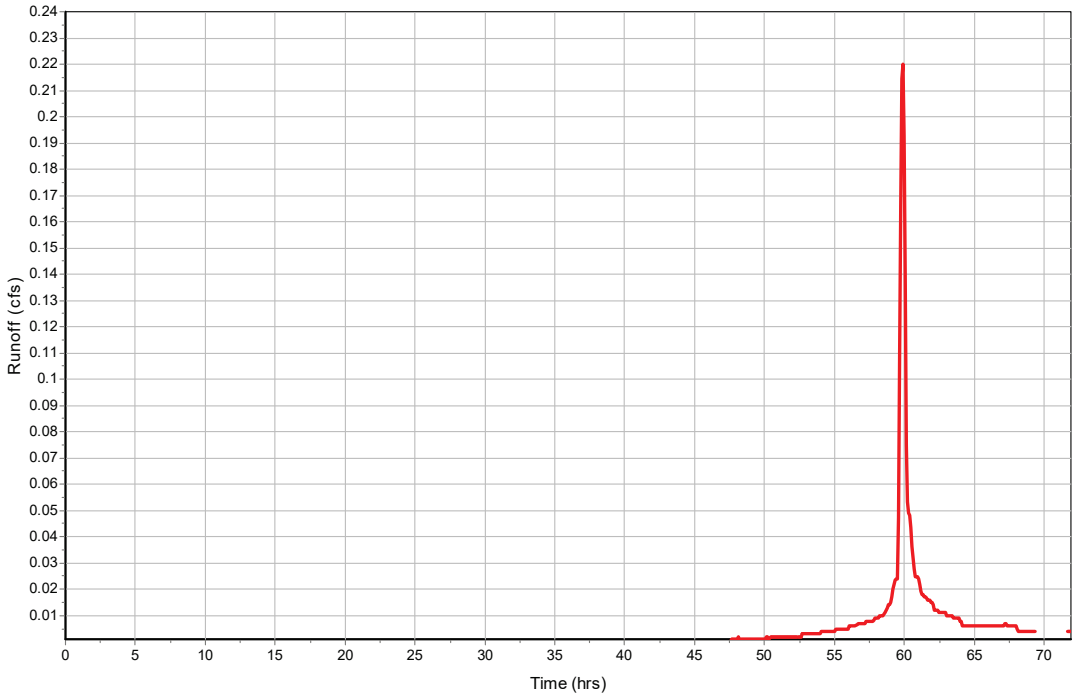
Total Rainfall (in)	8,99
Total Runoff (in)	4,06
Peak Runoff (cfs)	0,22
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

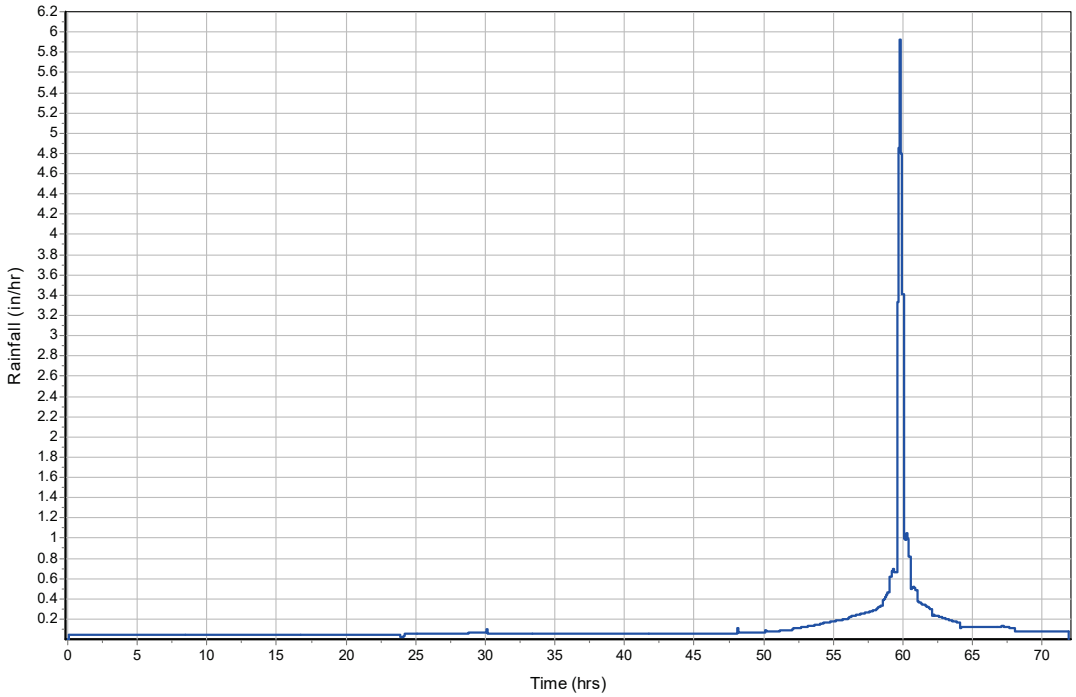
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

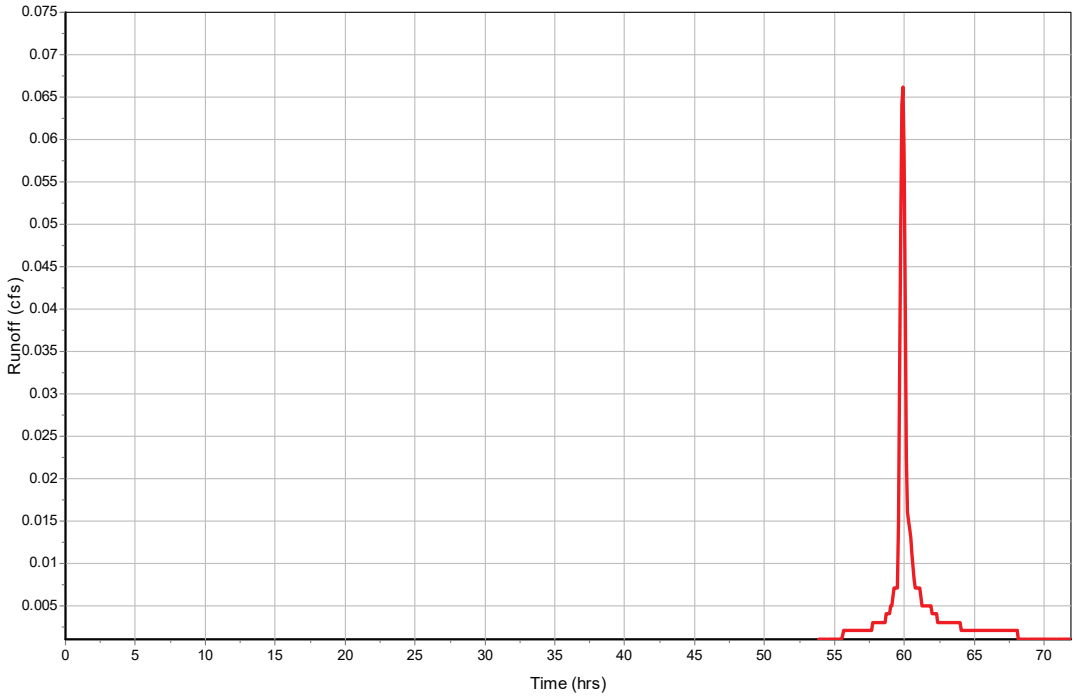
Total Rainfall (in)	8,99
Total Runoff (in)	3,89
Peak Runoff (cfs)	0,07
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	1,38	2 12:00	12,87	0,11	3,74	0,02	0,39	0,26	0,00		Calculated
2	Link-03	0,63	2 11:59	3,49	0,18	0,40	3,26	1,00	1,00	541,00		SURCHARGED
3	Link-04	0,14	2 11:52	2,37	0,06	0,68	1,04	0,40	0,40	0,00		Calculated
4	Link-05	1,16	2 12:00	4,01	0,29	0,74	1,07	1,00	1,00	542,00		SURCHARGED
5	Link-06	1,16	2 12:00	12,80	0,09	2,92	0,04	0,41	0,28	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,38
Peak Lateral Inflow (cfs)	0,22
Peak Outflow (cfs)	1,38
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,75
Max HGL Depth Attained (ft)	2,75
Average HGL Elevation Attained (ft)	1,71
Average HGL Depth Attained (ft)	1,71
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,14
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,06
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,28
Max HGL Depth Attained (ft)	1,78
Average HGL Elevation Attained (ft)	2,87
Average HGL Depth Attained (ft)	0,37
Time of Max HGL Occurrence (days hh:mm)	2 11:59
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

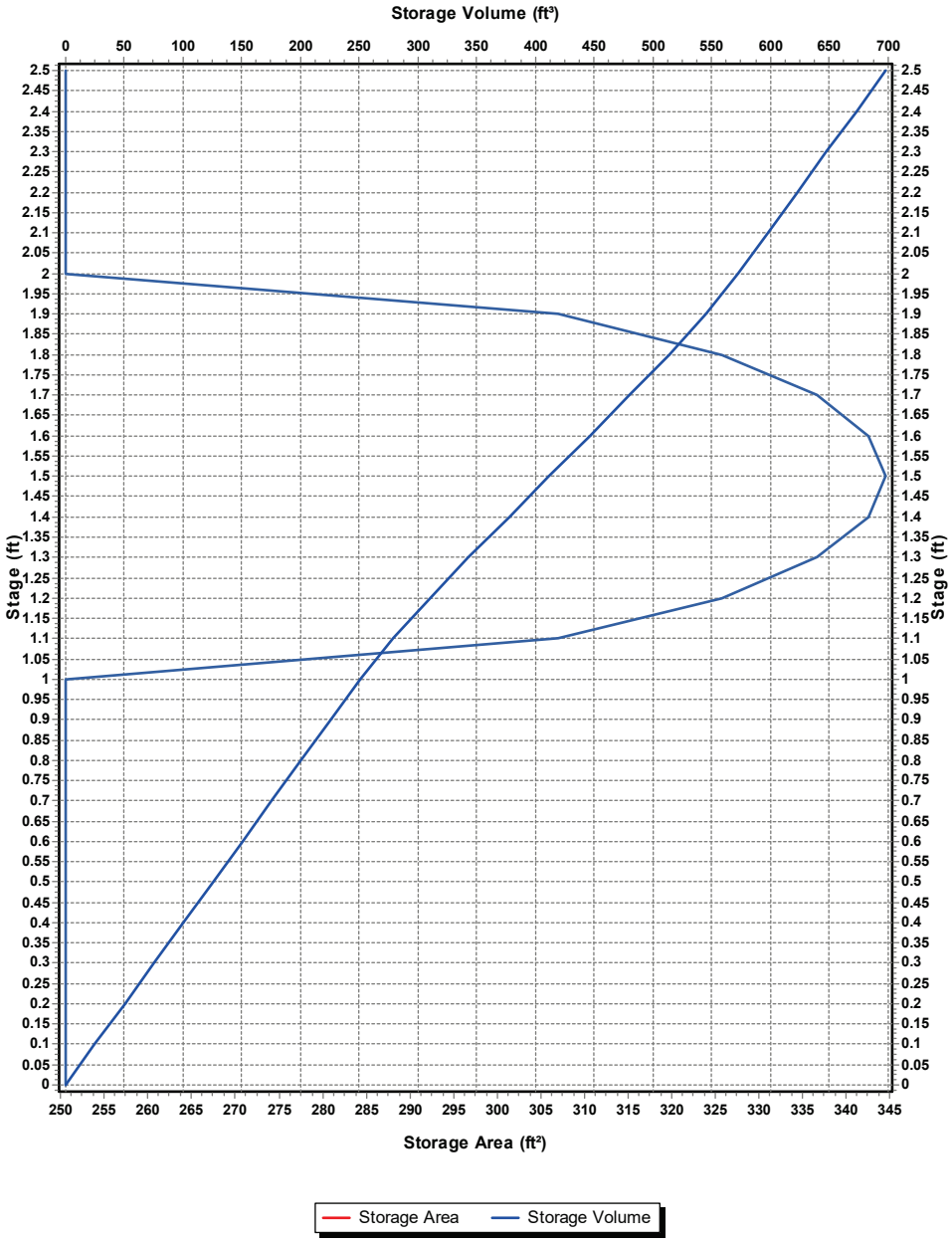
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,67
Peak Lateral Inflow (cfs)	0,65
Peak Outflow (cfs)	0,65
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,27
Max HGL Depth Attained (ft)	2,27
Average HGL Elevation Attained (ft)	2,55
Average HGL Depth Attained (ft)	0,55
Time of Max HGL Occurrence (days hh:mm)	2 11:59
Total Exfiltration Volume (1000-ft^3)	1,931
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

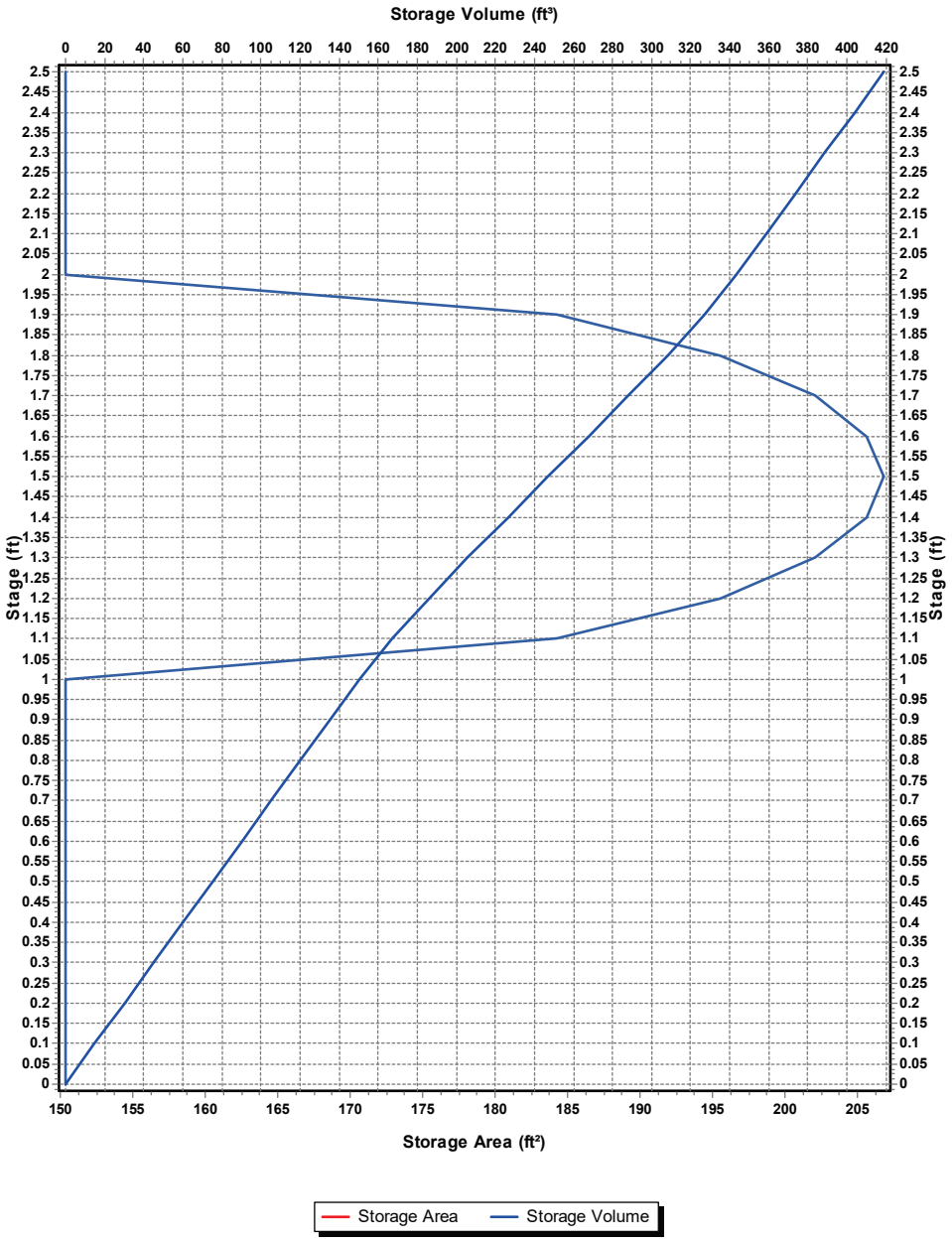
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	1,17
Peak Lateral Inflow (cfs)	0,54
Peak Outflow (cfs)	1,16
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,26
Max HGL Depth Attained (ft)	2,26
Average HGL Elevation Attained (ft)	2,56
Average HGL Depth Attained (ft)	0,56
Time of Max HGL Occurrence (days hh:mm)	2 11:59
Total Exfiltration Volume (1000-ft^3)	1,28
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	1,16
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,16
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,24
Max HGL Depth Attained (ft)	4,24
Average HGL Elevation Attained (ft)	2
Average HGL Depth Attained (ft)	2
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	1,16
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	1,16
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,92
Max HGL Depth Attained (ft)	2,92
Average HGL Elevation Attained (ft)	1,61
Average HGL Depth Attained (ft)	1,61
Time of Max HGL Occurrence (days hh:mm)	2 12:00
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

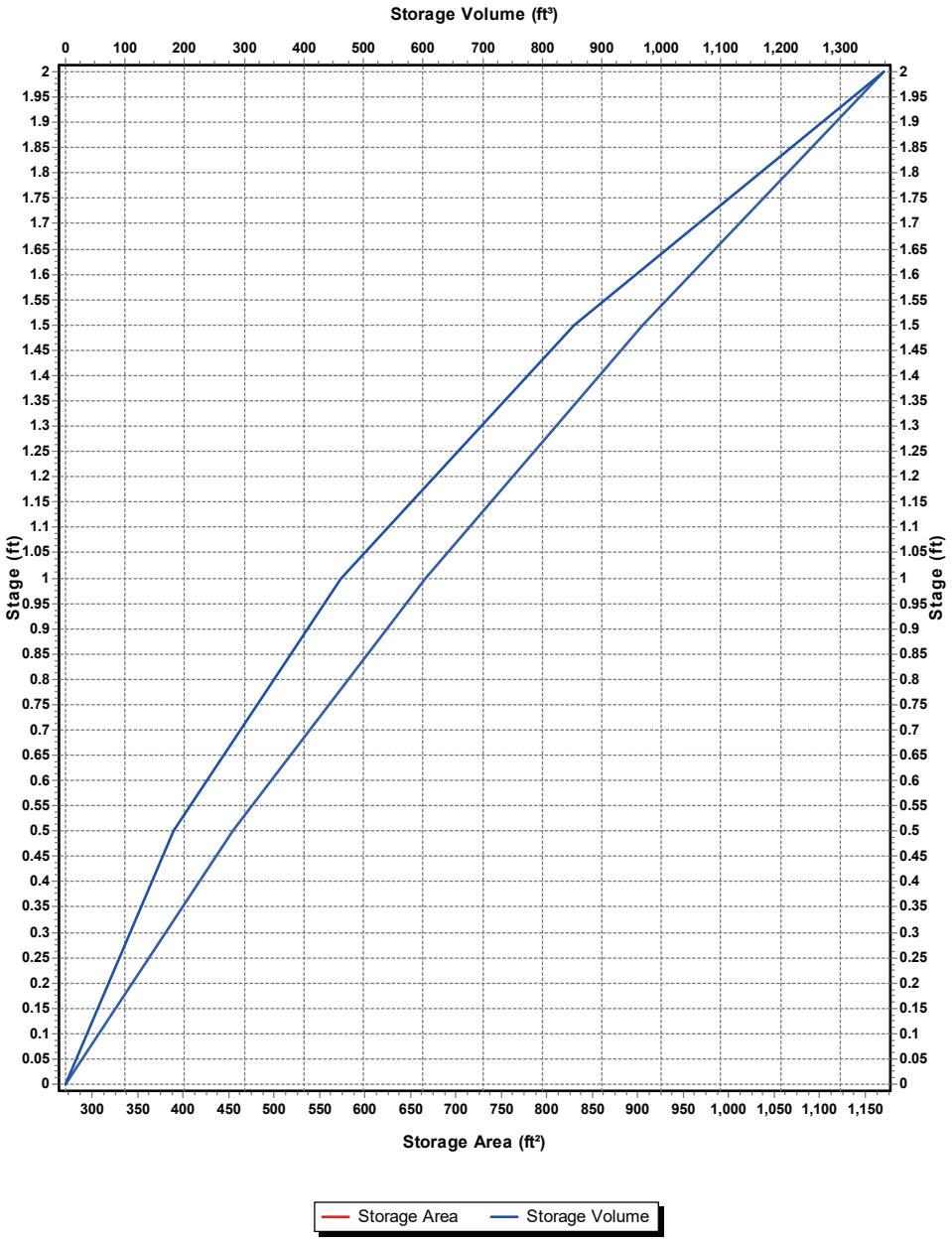
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,13
Peak Lateral Inflow (cfs)	0,13
Peak Outflow (cfs)	0
Peak Exfiltration Flow Rate (cfm)	1,26
Max HGL Elevation Attained (ft)	4,5
Max HGL Depth Attained (ft)	0,5
Average HGL Elevation Attained (ft)	4,05
Average HGL Depth Attained (ft)	0,05
Time of Max HGL Occurrence (days hh:mm)	2 12:40
Total Exfiltration Volume (1000-ft^3)	0,556
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 16: 5 YR-24 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	005YR 24HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	005YR 24HR	Cumulative	inches	Florida	Broward	5,00	7,50	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	7,50	7,26	0,65	0,37	0 00:10:00
2	Sub-02	0,12	484,00	98,00	7,50	7,26	0,87	0,50	0 00:10:00
3	Sub-03	0,04	484,00	61,00	7,50	3,06	0,11	0,07	0 00:10:00
4	Sub-04	0,06	484,00	61,00	7,50	3,06	0,19	0,12	0 00:10:00
5	Sub-05	0,02	484,00	61,00	7,50	3,04	0,06	0,04	0 00:10:00

0,16

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					0,99	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	0,99	2,68				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,10	4,22				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,50	4,22				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	0,88	4,21				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	0,87	4,20				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	0,87	2,85				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,07	4,39				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	0,99	12,87	0,08	3,45	0,33	0,22	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,48	3,49	0,14	0,31	1,00	1,00	730,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,10	2,37	0,04	0,56	0,34	0,34	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	0,87	4,01	0,22	0,83	1,00	1,00	729,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	0,87	12,80	0,07	2,90	0,34	0,23	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,00							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				0,87							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

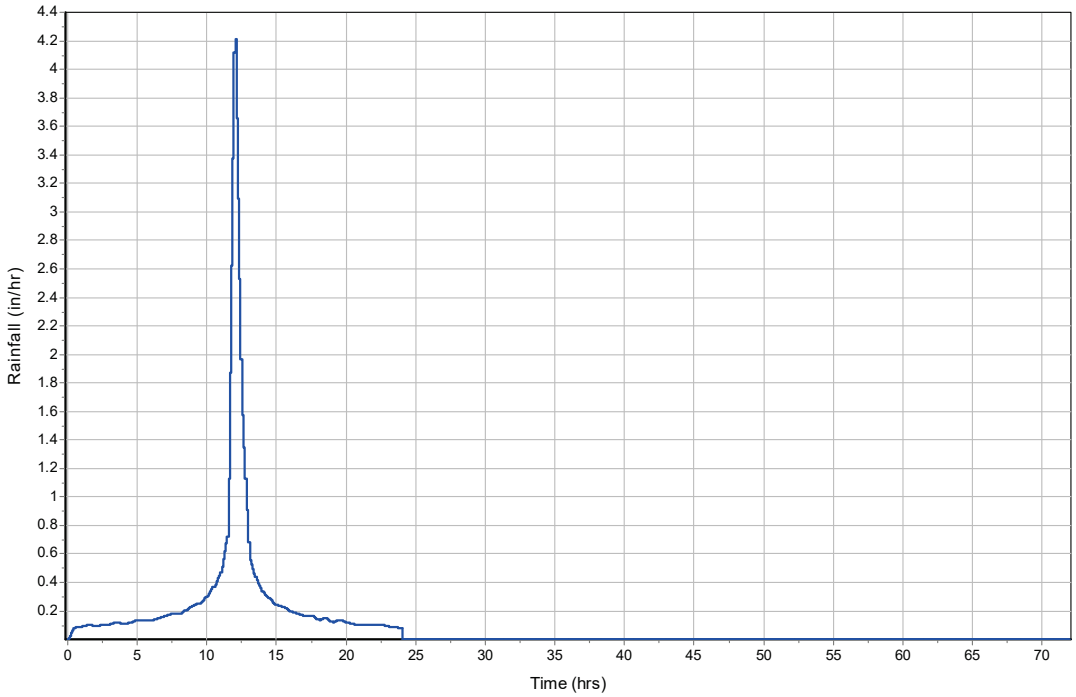
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

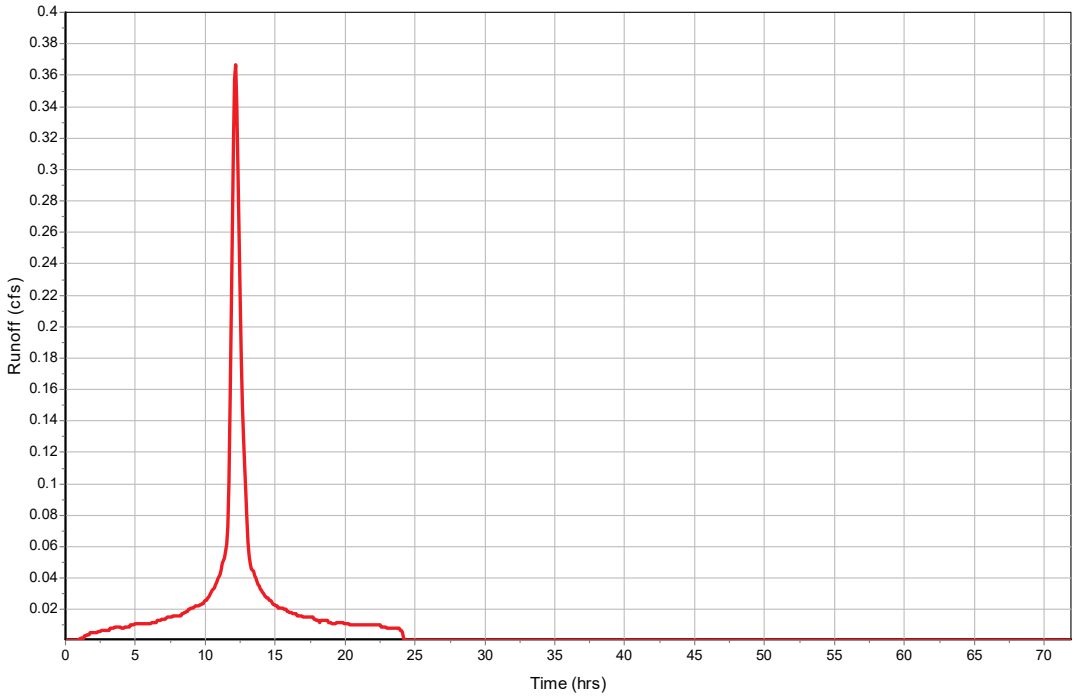
Total Rainfall (in)	7,5
Total Runoff (in)	7,26
Peak Runoff (cfs)	0,37
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

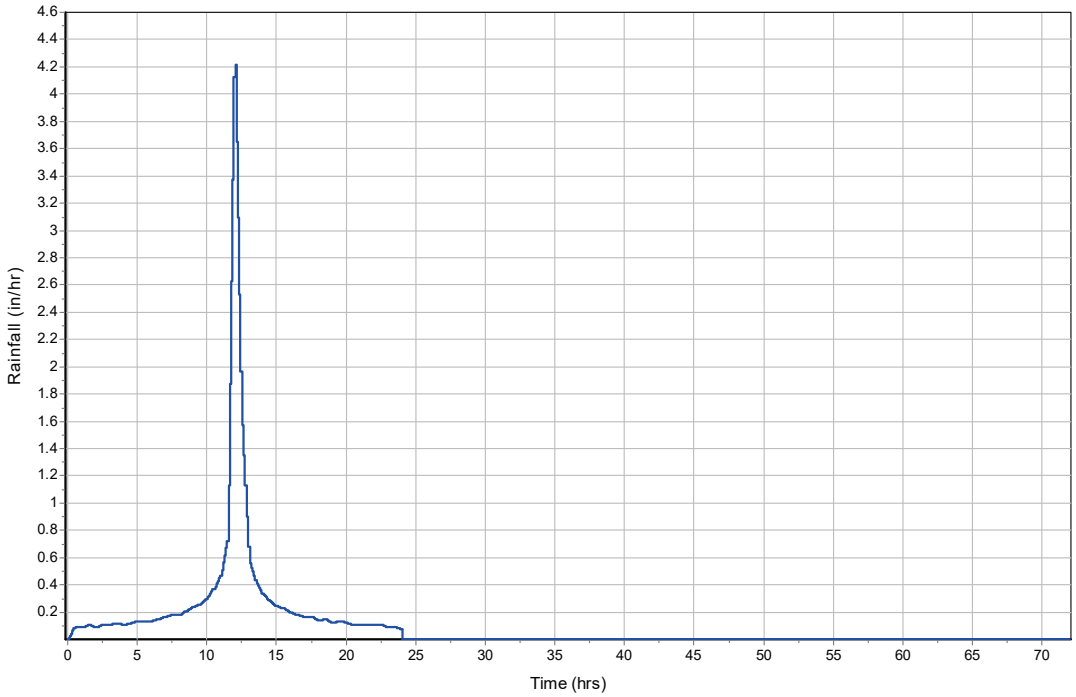
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

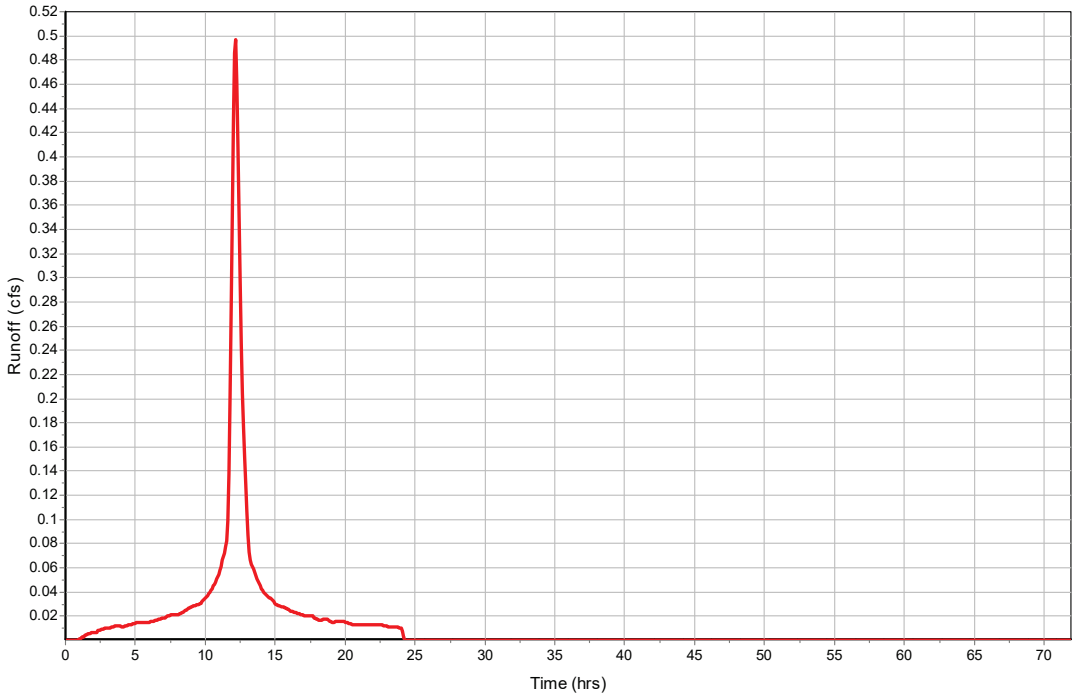
Total Rainfall (in)	7,5
Total Runoff (in)	7,26
Peak Runoff (cfs)	0,5
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

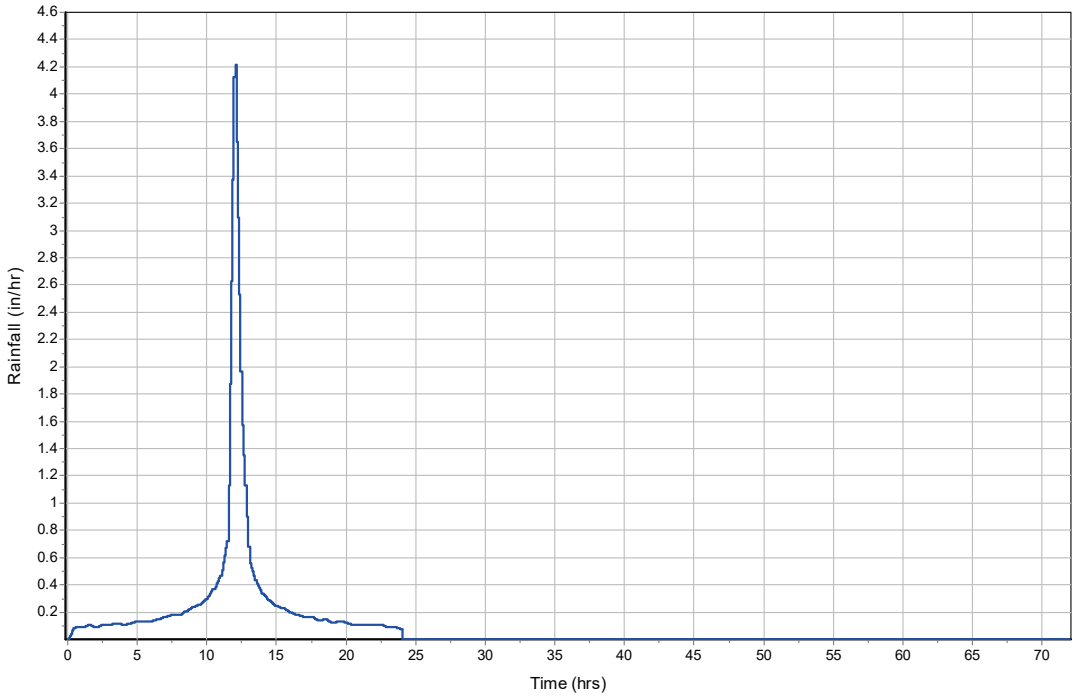
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

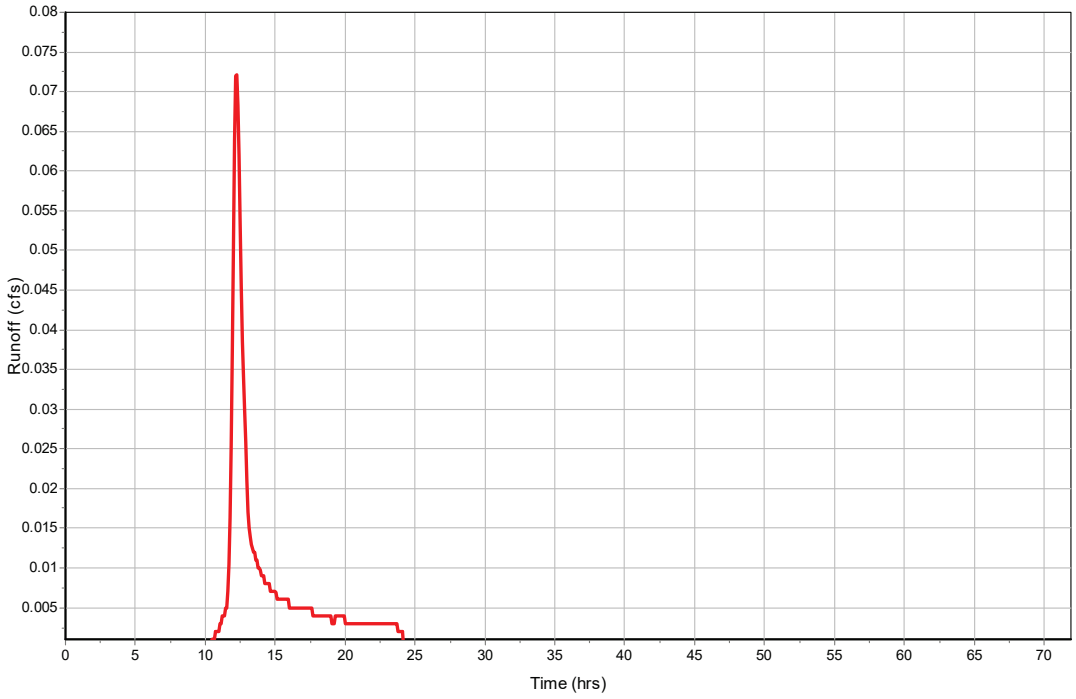
Total Rainfall (in)	7,5
Total Runoff (in)	3,06
Peak Runoff (cfs)	0,07
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

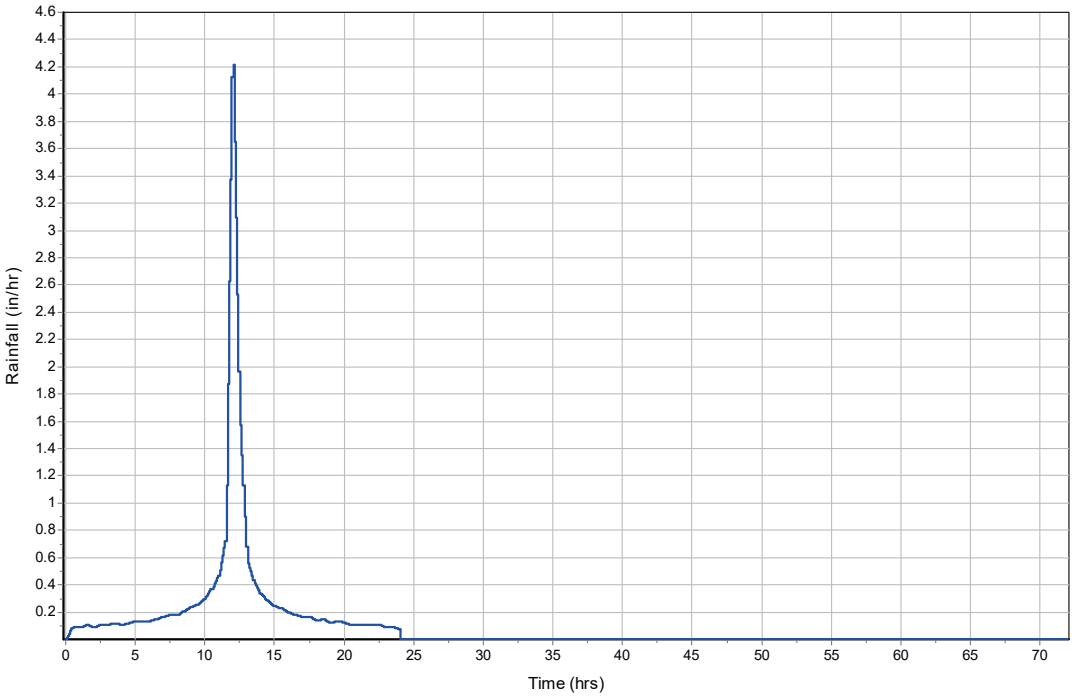
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

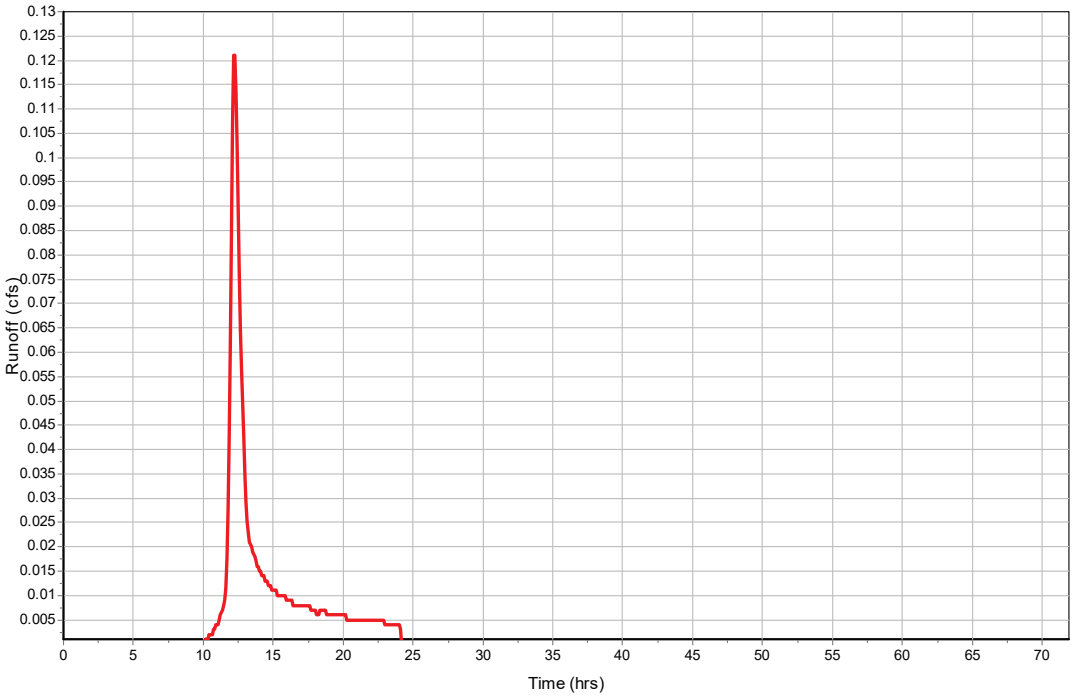
Total Rainfall (in)	7,5
Total Runoff (in)	3,06
Peak Runoff (cfs)	0,12
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

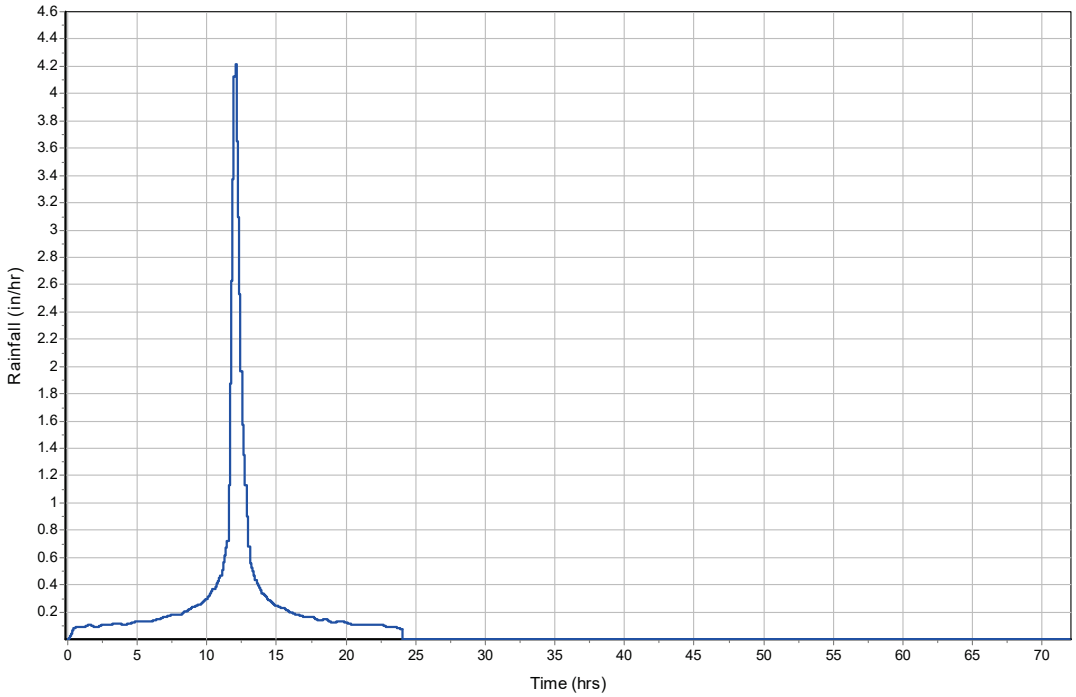
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

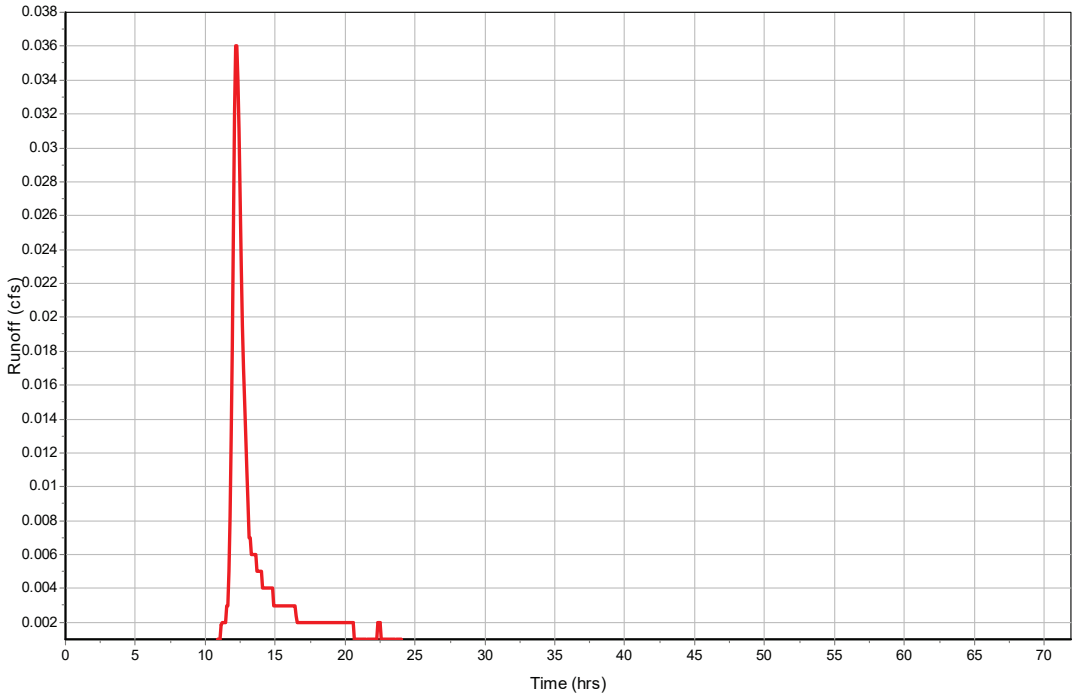
Total Rainfall (in)	7,5
Total Runoff (in)	3,04
Peak Runoff (cfs)	0,04
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	0,99	0 12:16	12,87	0,08	3,45	0,02	0,33	0,22	0,00		Calculated
2	Link-03	0,48	0 12:15	3,49	0,14	0,31	4,21	1,00	1,00	730,00		SURCHARGED
3	Link-04	0,10	0 12:05	2,37	0,04	0,56	1,26	0,34	0,34	0,00		Calculated
4	Link-05	0,87	0 12:16	4,01	0,22	0,83	0,95	1,00	1,00	729,00		SURCHARGED
5	Link-06	0,87	0 12:16	12,80	0,07	2,90	0,04	0,34	0,23	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	0,99
Peak Lateral Inflow (cfs)	0,12
Peak Outflow (cfs)	0,99
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,68
Max HGL Depth Attained (ft)	2,68
Average HGL Elevation Attained (ft)	2,21
Average HGL Depth Attained (ft)	2,21
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,1
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,05
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,22
Max HGL Depth Attained (ft)	1,72
Average HGL Elevation Attained (ft)	3,8
Average HGL Depth Attained (ft)	1,3
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

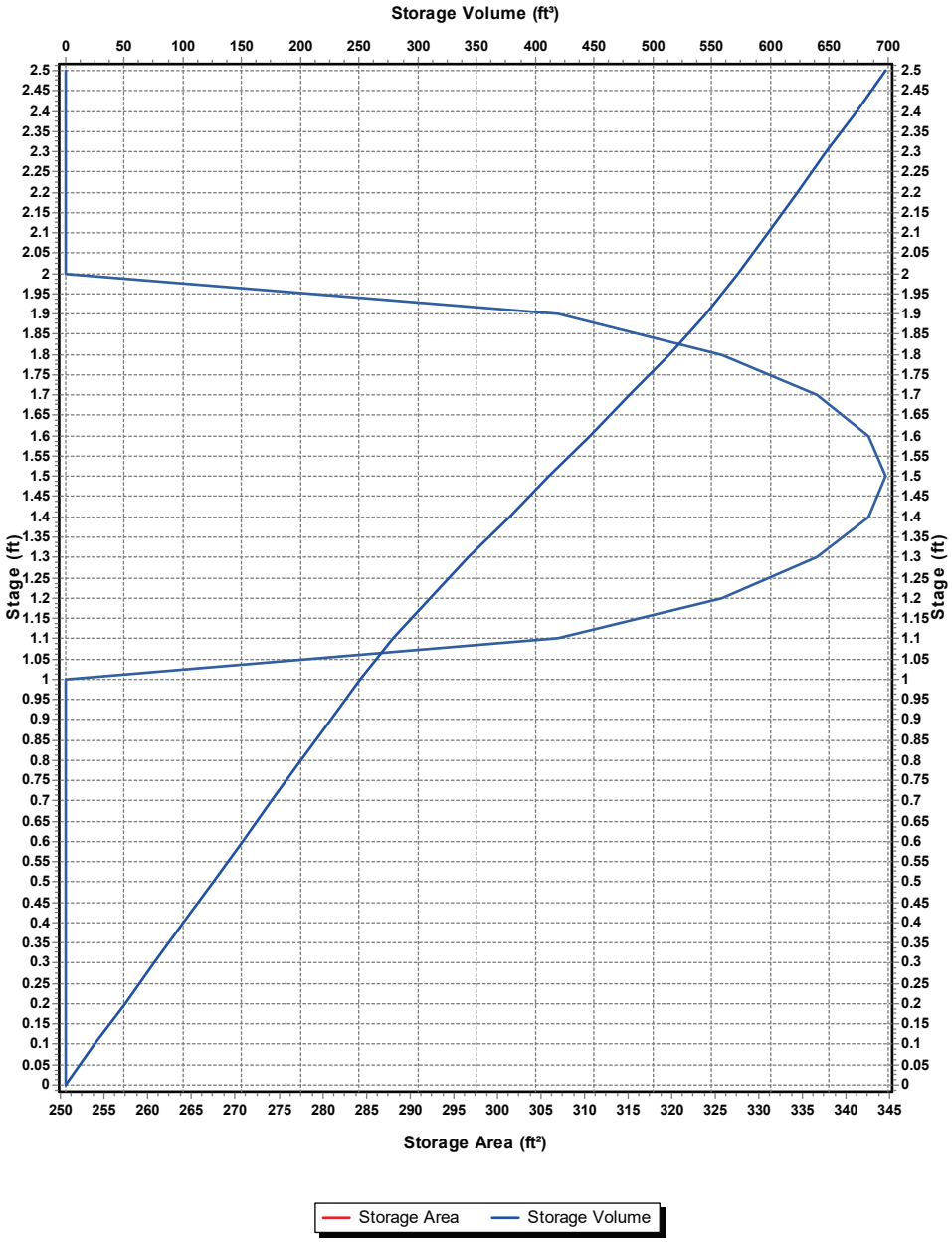
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,5
Peak Lateral Inflow (cfs)	0,5
Peak Outflow (cfs)	0,49
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,22
Max HGL Depth Attained (ft)	2,22
Average HGL Elevation Attained (ft)	2,76
Average HGL Depth Attained (ft)	0,76
Time of Max HGL Occurrence (days hh:mm)	0 12:15
Total Exfiltration Volume (1000-ft^3)	1,648
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

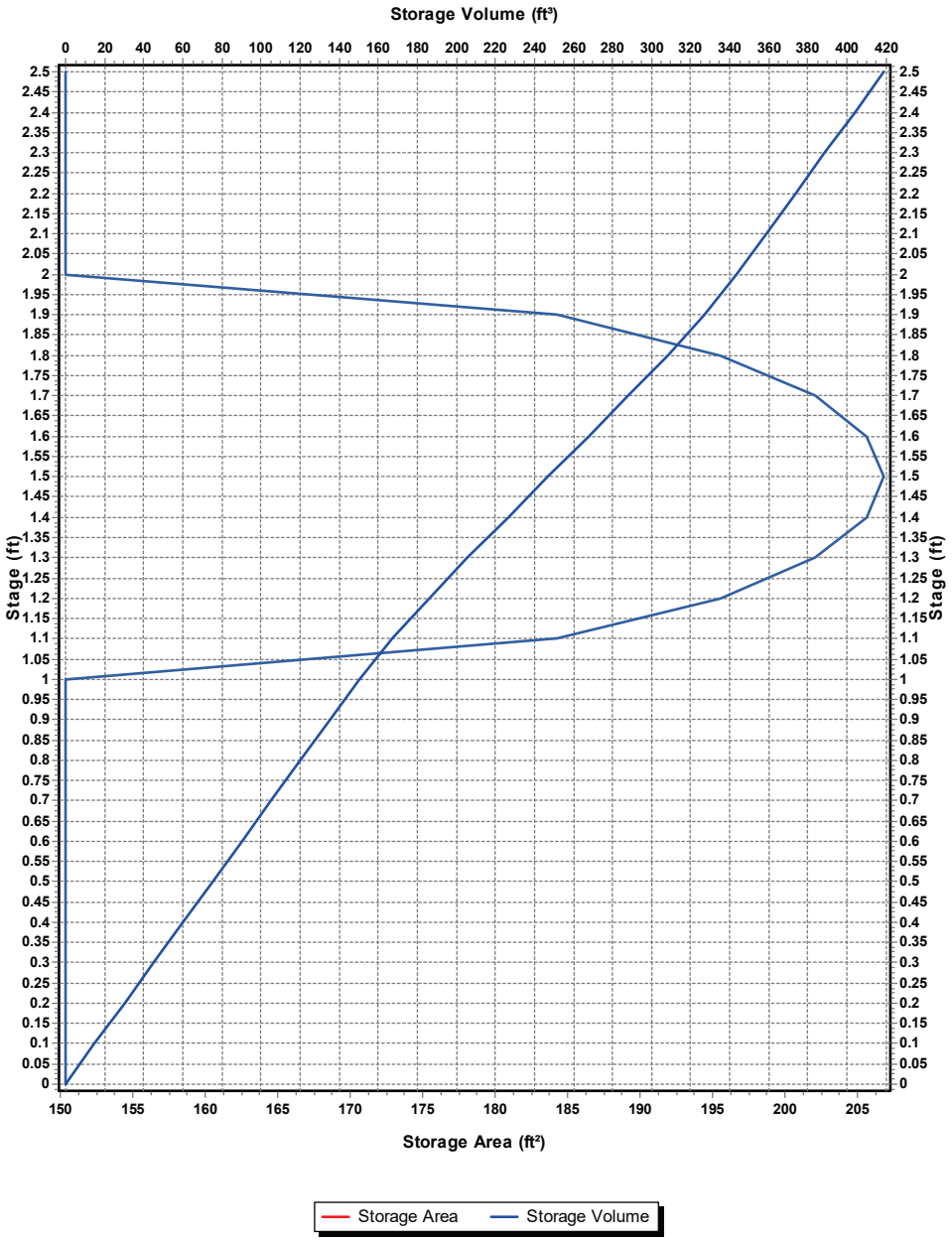
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,88
Peak Lateral Inflow (cfs)	0,4
Peak Outflow (cfs)	0,87
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,21
Max HGL Depth Attained (ft)	2,21
Average HGL Elevation Attained (ft)	2,78
Average HGL Depth Attained (ft)	0,78
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	1,01
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	0,87
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,87
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,2
Max HGL Depth Attained (ft)	4,2
Average HGL Elevation Attained (ft)	3,1
Average HGL Depth Attained (ft)	3,1
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	0,87
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,87
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,85
Max HGL Depth Attained (ft)	2,85
Average HGL Elevation Attained (ft)	2,36
Average HGL Depth Attained (ft)	2,36
Time of Max HGL Occurrence (days hh:mm)	0 12:16
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

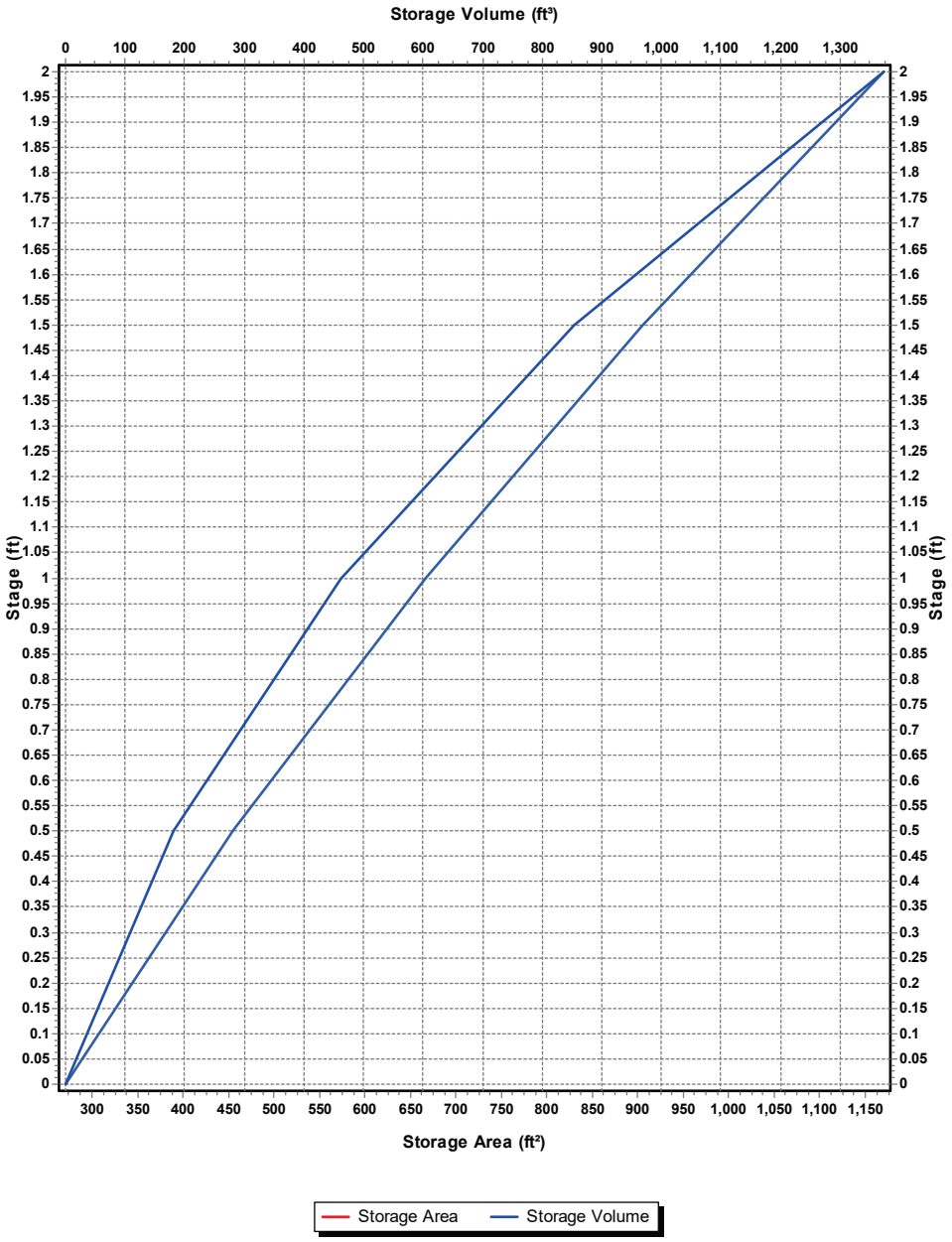
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,07
Peak Lateral Inflow (cfs)	0,07
Peak Outflow (cfs)	0
Peak Exfiltration Flow Rate (cfm)	1,16
Max HGL Elevation Attained (ft)	4,39
Max HGL Depth Attained (ft)	0,39
Average HGL Elevation Attained (ft)	4,03
Average HGL Depth Attained (ft)	0,03
Time of Max HGL Occurrence (days hh:mm)	0 13:07
Total Exfiltration Volume (1000-ft^3)	0,428
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 17: 2 YR-3 DAY POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	002YR 72HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	002YR 72HR	Cumulative	inches	Florida	Broward	2,00	7,00	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	6,99	6,74	0,60	0,38	0 00:10:00
2	Sub-02	0,12	484,00	98,00	6,99	6,75	0,81	0,51	0 00:10:00
3	Sub-03	0,04	484,00	61,00	6,99	2,57	0,10	0,09	0 00:10:00
4	Sub-04	0,06	484,00	61,00	6,99	2,61	0,16	0,15	0 00:10:00
5	Sub-05	0,02	484,00	61,00	6,99	2,31	0,05	0,04	0 00:10:00

0,14

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					0,95	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	0,95	2,67				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,12	4,23				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,55	4,21				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	0,86	4,20				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	0,81	4,19				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	0,81	2,84				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,09	4,31				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	0,95	12,87	0,07	3,41	0,32	0,21	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,47	3,49	0,14	0,30	1,00	1,00	499,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,12	2,37	0,05	0,63	0,33	0,33	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	0,81	4,01	0,20	0,87	1,00	1,00	499,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	0,81	12,80	0,06	2,84	0,32	0,22	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,00							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				0,81							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

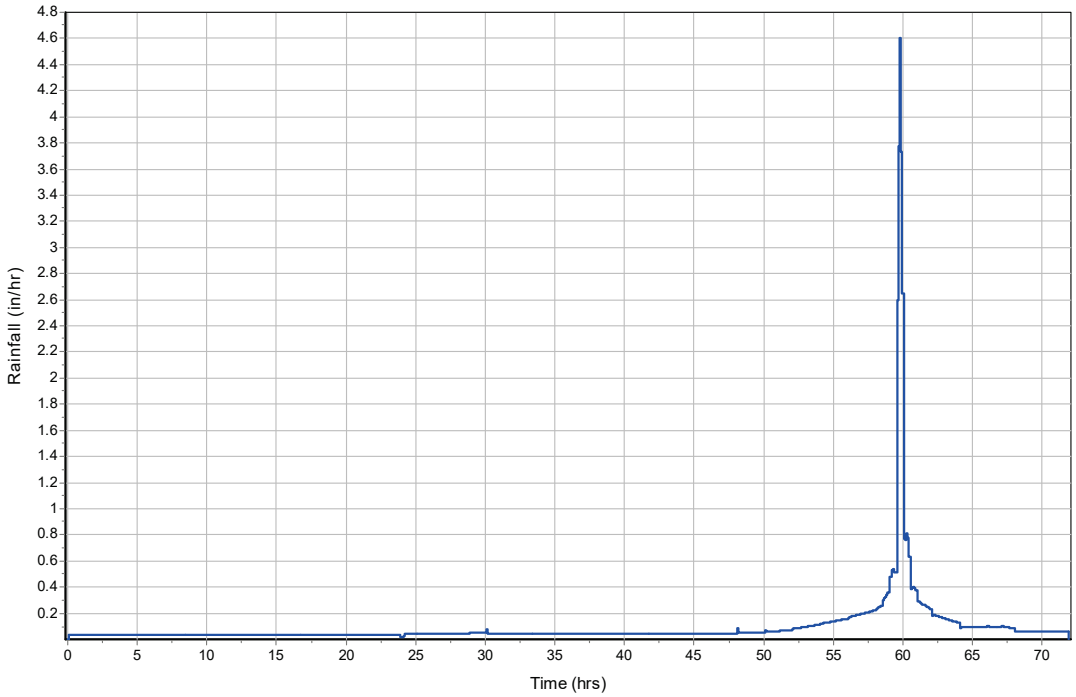
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

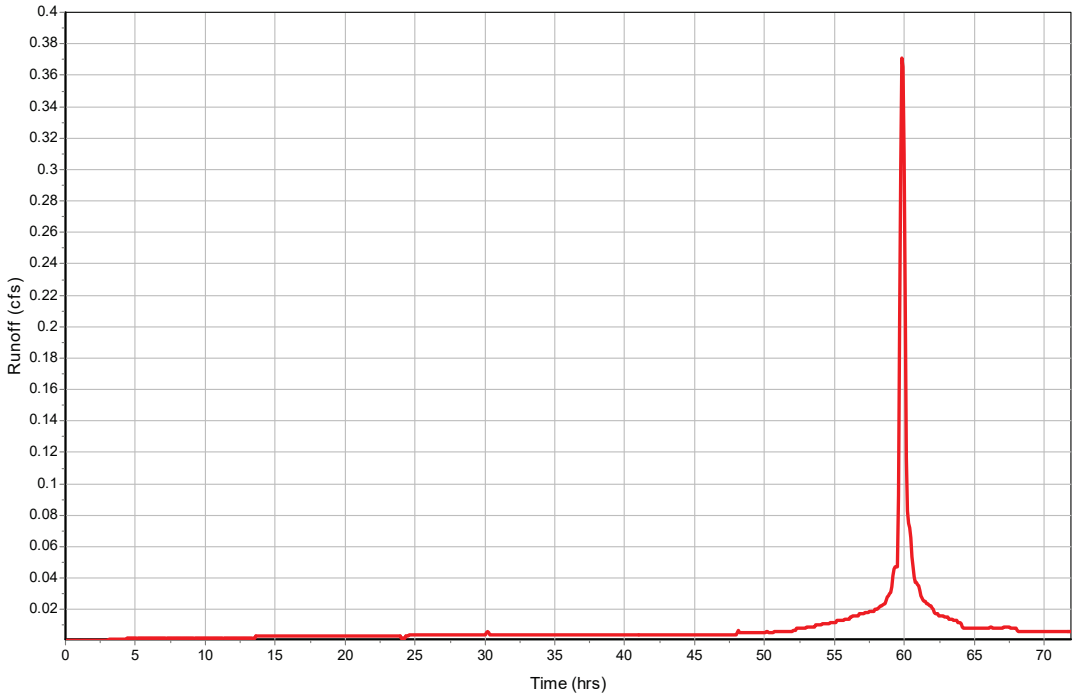
Total Rainfall (in)	6,99
Total Runoff (in)	6,74
Peak Runoff (cfs)	0,38
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

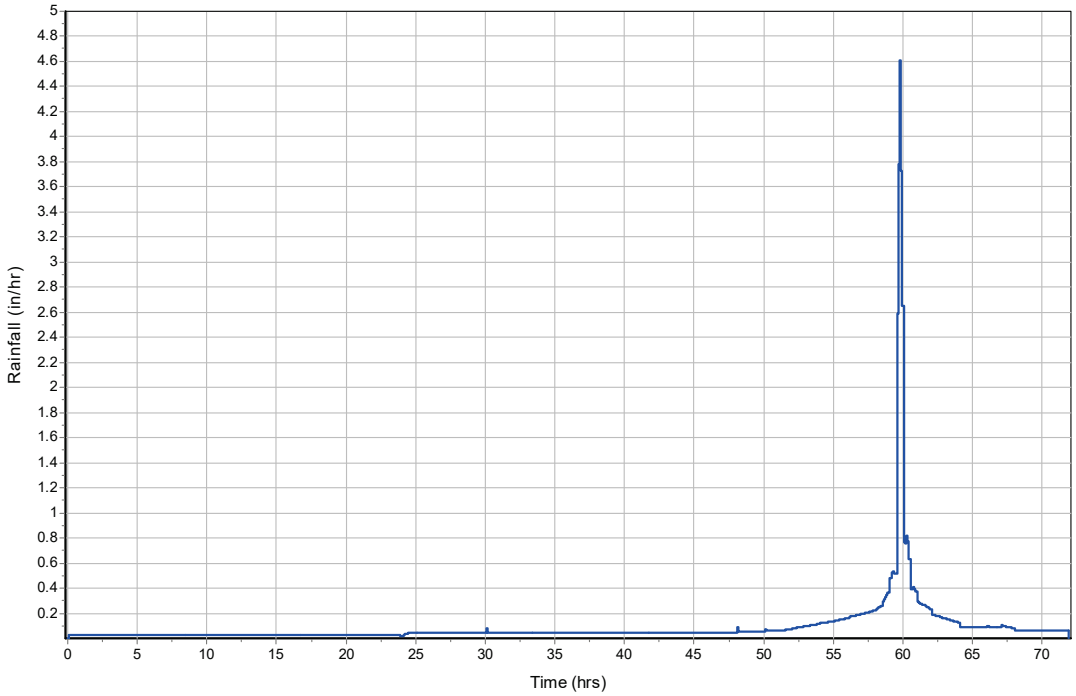
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

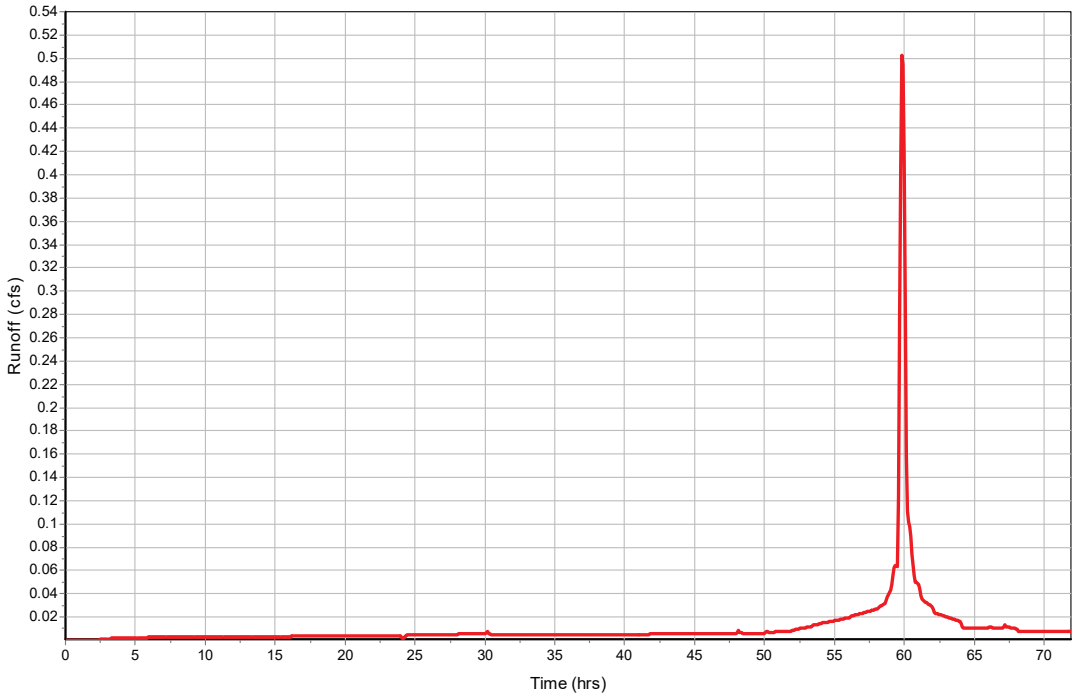
Total Rainfall (in)	6,99
Total Runoff (in)	6,75
Peak Runoff (cfs)	0,51
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

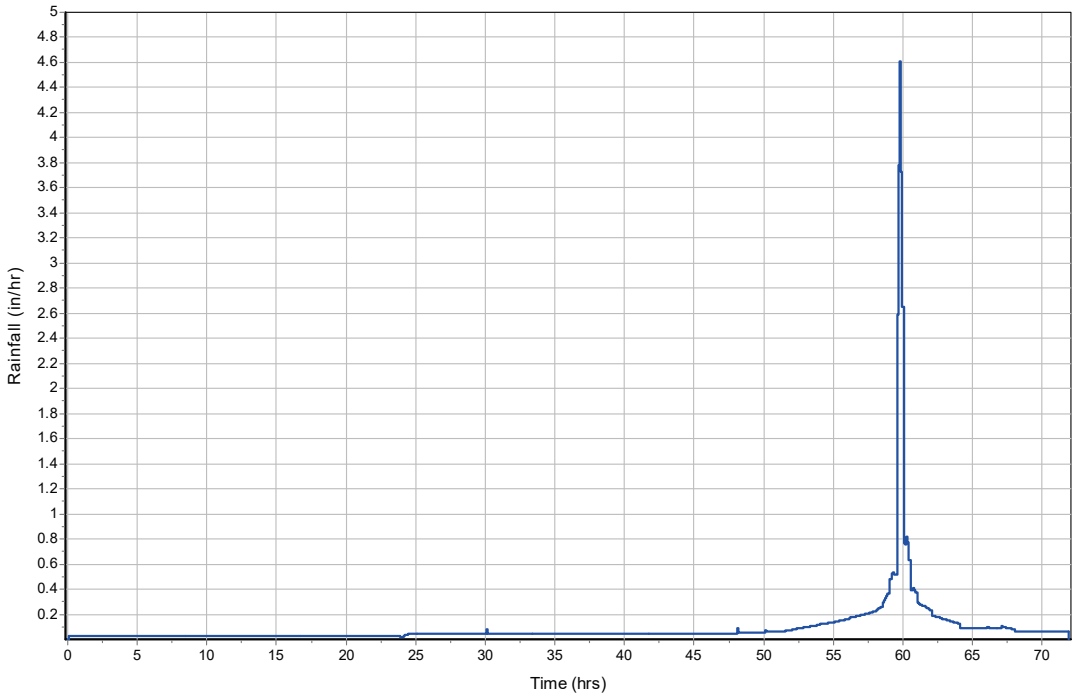
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

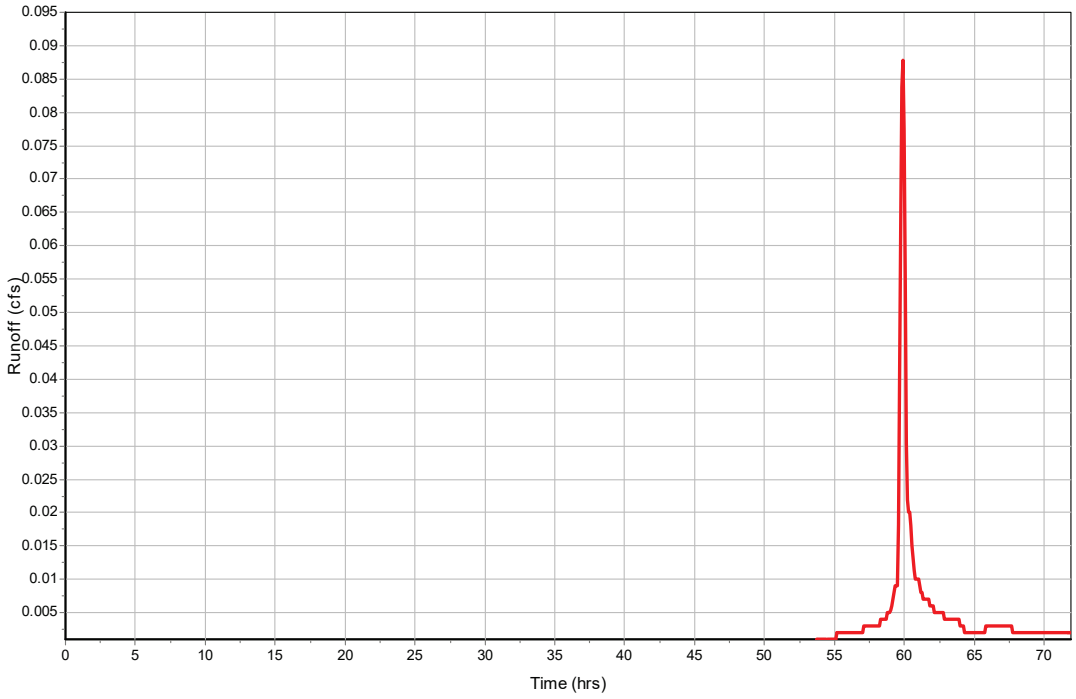
Total Rainfall (in)	6,99
Total Runoff (in)	2,57
Peak Runoff (cfs)	0,09
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

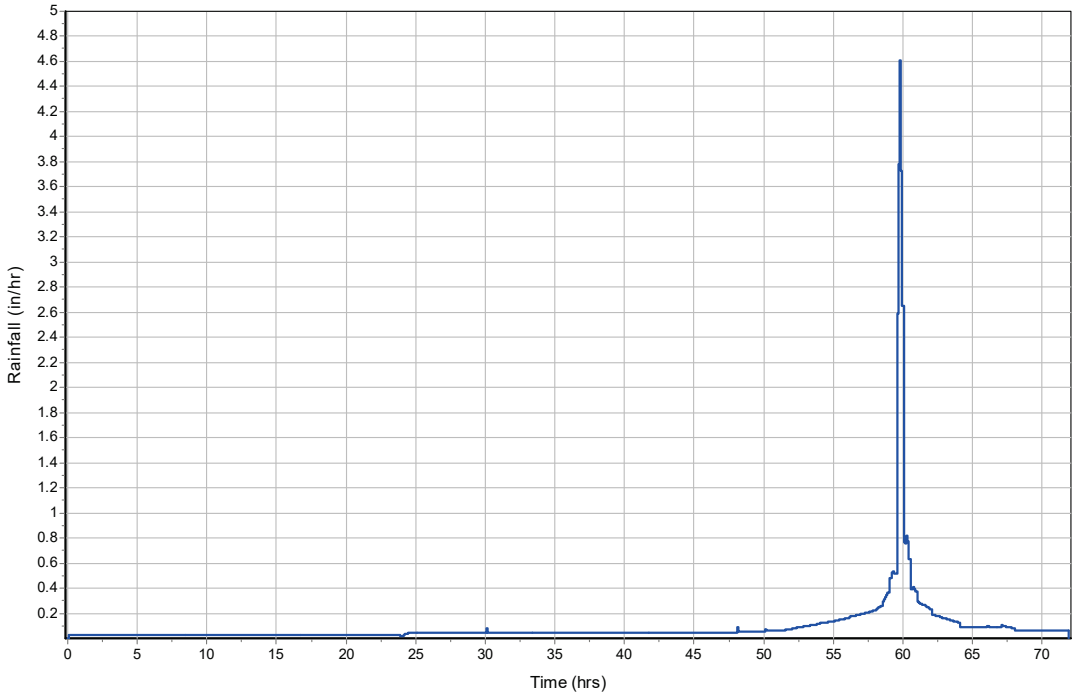
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

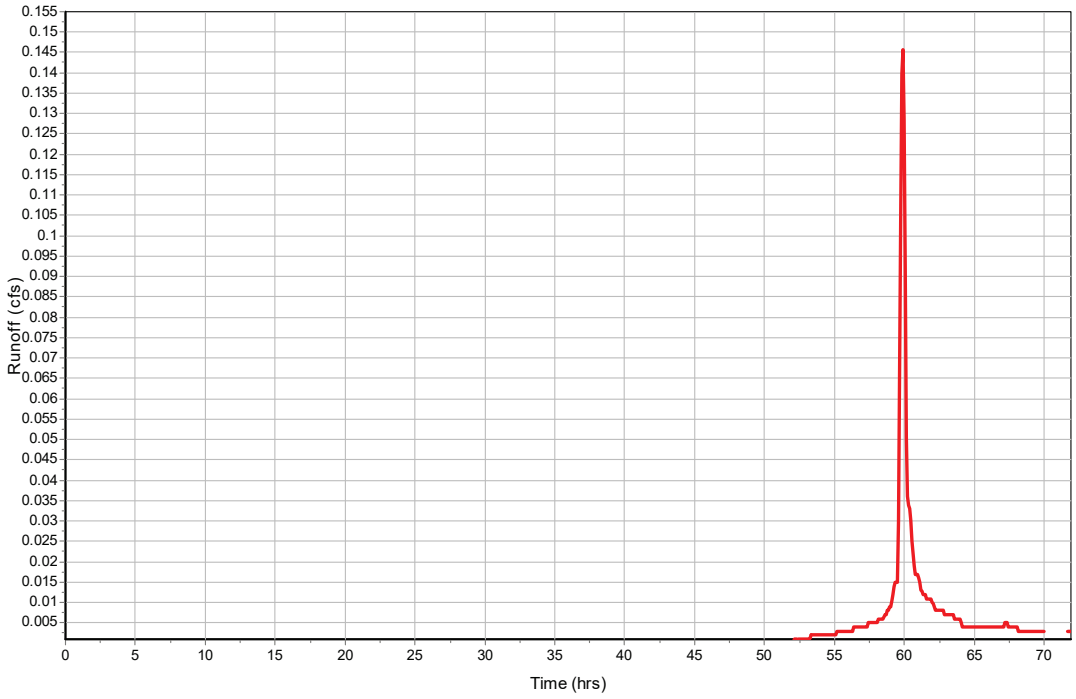
Total Rainfall (in)	6,99
Total Runoff (in)	2,61
Peak Runoff (cfs)	0,15
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

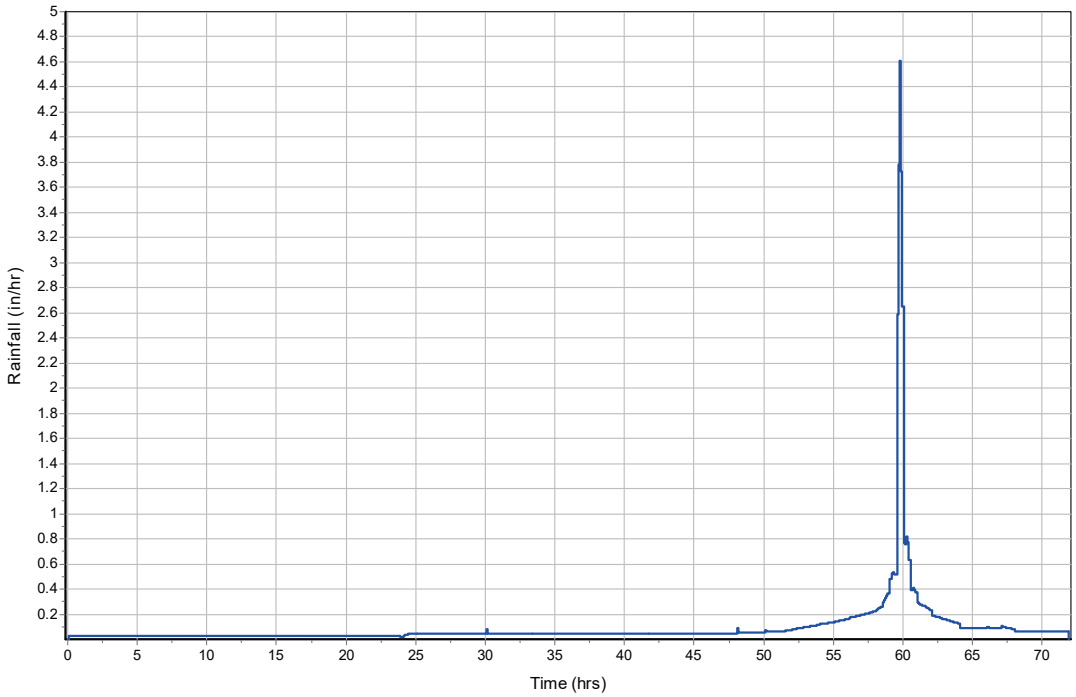
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

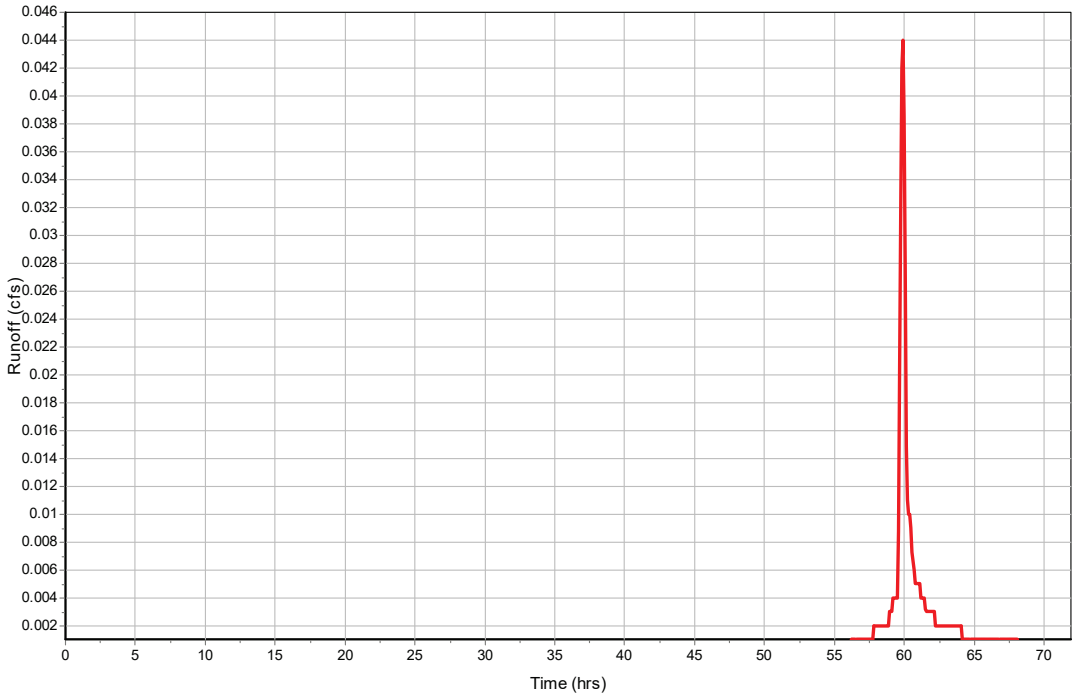
Total Rainfall (in)	6,99
Total Runoff (in)	2,31
Peak Runoff (cfs)	0,04
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	0,95	2 12:02	12,87	0,07	3,41	0,02	0,32	0,21	0,00		Calculated
2	Link-03	0,47	2 12:03	3,49	0,14	0,30	4,35	1,00	1,00	499,00		SURCHARGED
3	Link-04	0,12	2 12:00	2,37	0,05	0,63	1,12	0,33	0,33	0,00		Calculated
4	Link-05	0,81	2 12:03	4,01	0,20	0,87	0,91	1,00	1,00	499,00		SURCHARGED
5	Link-06	0,81	2 12:03	12,80	0,06	2,84	0,04	0,32	0,22	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	0,95
Peak Lateral Inflow (cfs)	0,15
Peak Outflow (cfs)	0,95
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,67
Max HGL Depth Attained (ft)	2,67
Average HGL Elevation Attained (ft)	1,6
Average HGL Depth Attained (ft)	1,6
Time of Max HGL Occurrence (days hh:mm)	2 12:02
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,12
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,06
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,23
Max HGL Depth Attained (ft)	1,73
Average HGL Elevation Attained (ft)	2,81
Average HGL Depth Attained (ft)	0,31
Time of Max HGL Occurrence (days hh:mm)	2 12:01
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

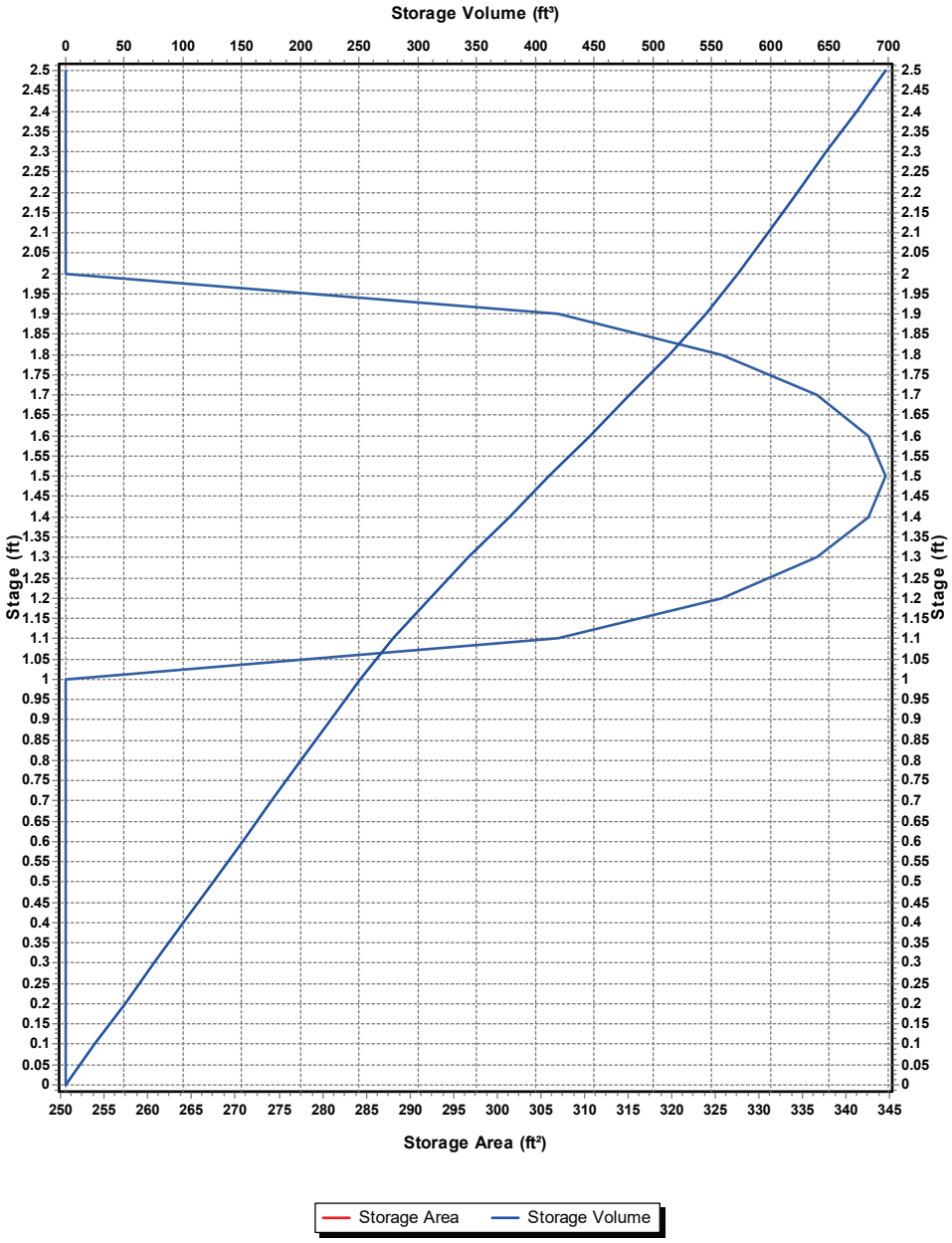
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,55
Peak Lateral Inflow (cfs)	0,5
Peak Outflow (cfs)	0,5
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,21
Max HGL Depth Attained (ft)	2,21
Average HGL Elevation Attained (ft)	2,44
Average HGL Depth Attained (ft)	0,44
Time of Max HGL Occurrence (days hh:mm)	2 12:03
Total Exfiltration Volume (1000-ft^3)	1,668
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

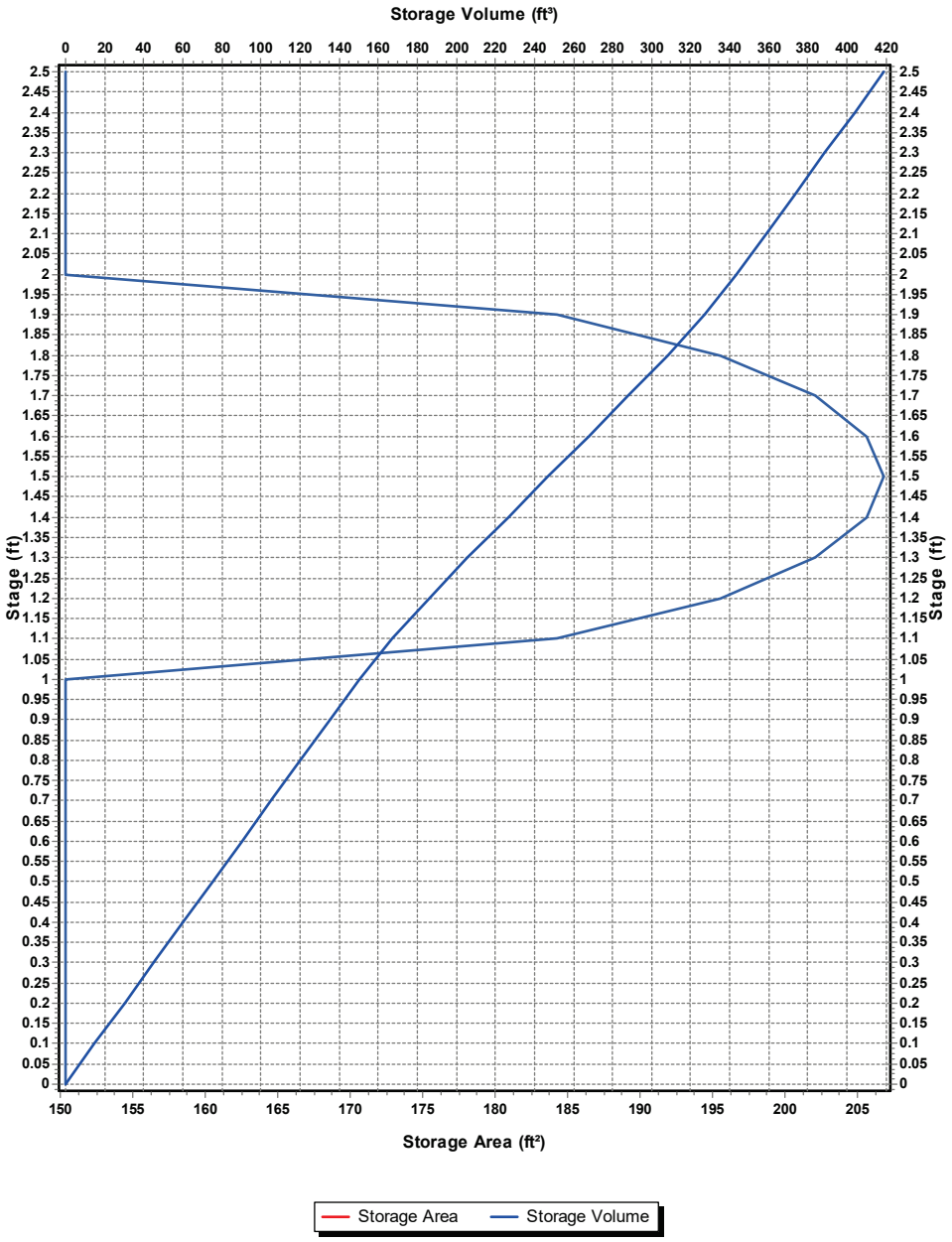
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,86
Peak Lateral Inflow (cfs)	0,41
Peak Outflow (cfs)	0,81
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,2
Max HGL Depth Attained (ft)	2,2
Average HGL Elevation Attained (ft)	2,46
Average HGL Depth Attained (ft)	0,46
Time of Max HGL Occurrence (days hh:mm)	2 12:03
Total Exfiltration Volume (1000-ft^3)	1,126
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	0,81
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,81
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,19
Max HGL Depth Attained (ft)	4,19
Average HGL Elevation Attained (ft)	1,86
Average HGL Depth Attained (ft)	1,86
Time of Max HGL Occurrence (days hh:mm)	2 12:03
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	0,81
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,81
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,84
Max HGL Depth Attained (ft)	2,84
Average HGL Elevation Attained (ft)	1,55
Average HGL Depth Attained (ft)	1,55
Time of Max HGL Occurrence (days hh:mm)	2 12:03
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

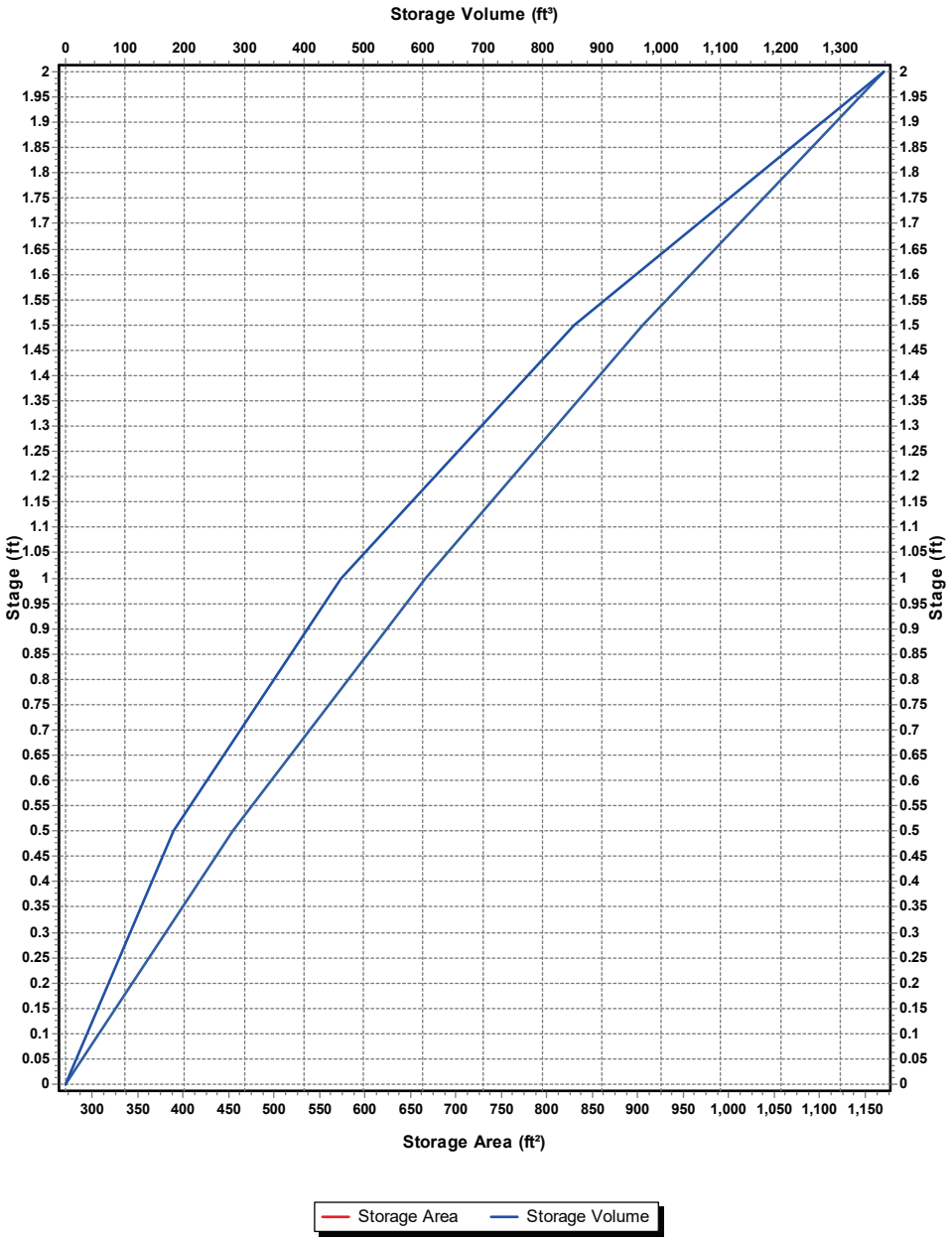
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,09
Peak Lateral Inflow (cfs)	0,09
Peak Outflow (cfs)	0
Peak Exfiltration Flow Rate (cfm)	1,07
Max HGL Elevation Attained (ft)	4,31
Max HGL Depth Attained (ft)	0,31
Average HGL Elevation Attained (ft)	4,02
Average HGL Depth Attained (ft)	0,02
Time of Max HGL Occurrence (days hh:mm)	2 12:35
Total Exfiltration Volume (1000-ft^3)	0,362
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 18: 2 YR-24 HOUR POST DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	002YR 24HR.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	User-Defined
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	10	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	5
Nodes	8
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	7
Links	7
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	2
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	Rain Gage-01	Time Series	002YR 24HR	Cumulative	inches	Florida	Broward	2,00	5,60	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-01	0,09	484,00	98,00	5,60	5,36	0,48	0,27	0 00:10:00
2	Sub-02	0,12	484,00	98,00	5,60	5,36	0,64	0,37	0 00:10:00
3	Sub-03	0,04	484,00	61,00	5,60	1,74	0,07	0,04	0 00:10:00
4	Sub-04	0,06	484,00	61,00	5,60	1,74	0,11	0,07	0 00:10:00
5	Sub-05	0,02	484,00	61,00	5,60	1,56	0,03	0,02	0 00:10:00

0,11

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-04	Outfall	2,00					0,66	2,00					
2	E-inlet-1	Storage Node	0,00	5,30	1,29		10,00	0,66	2,60				0,00	0,00
3	S - 1 TYPE D INLET	Storage Node	2,50	5,00	1,29		671,40	0,08	4,17				0,00	0,00
4	S - 2 TYPE D INLET	Storage Node	2,00	6,19	1,29		20,00	0,43	4,16				0,00	0,00
5	S - 3 TYPE D INLET	Storage Node	2,00	6,99	1,29		20,00	0,61	4,16				0,00	0,00
6	S-4-in	Storage Node	0,00	6,20	1,29		3,00	0,61	4,15				0,00	0,00
7	S-4-out	Storage Node	0,00	6,20	1,29		10,00	0,61	2,78				0,00	0,00
8	SOUTHPOND	Storage Node	4,00	6,00	4,00		1187,00	0,04	4,17				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	E-Link-01	Pipe	E-inlet-1	Out-04	5,00	2,30	2,20	2,0000	18,000	0,0150	0,66	12,87	0,05	3,14	0,26	0,18	0,00	Calculated
2	Link-03	Pipe	S - 2 TYPE D INLET	S - 3 TYPE D INLET	78,30	3,00	2,75	0,3200	12,000	0,0150	0,34	3,49	0,10	0,22	1,00	1,00	510,00	SURCHARGED
3	Link-04	Pipe	S - 1 TYPE D INLET	S - 2 TYPE D INLET	42,45	4,00	3,75	0,5900	12,000	0,0150	0,08	2,37	0,03	0,50	0,28	0,29	0,00	Calculated
4	Link-05	Pipe	S - 3 TYPE D INLET	S-4-in	47,46	3,00	2,80	0,4200	12,000	0,0150	0,61	4,01	0,15	1,02	1,00	1,00	510,00	SURCHARGED
5	Link-06	Pipe	S-4-out	E-inlet-1	7,59	2,50	2,35	1,9800	18,000	0,0150	0,60	12,80	0,05	2,87	0,25	0,18	0,00	Calculated
6	Weir-01	Weir	S - 1 TYPE D INLET	SOUTHPOND		2,50	4,00				0,00							
7	Weir-06	Weir	S-4-in	S-4-out		0,00	0,00				0,61							

Subbasin Hydrology

Subbasin : Sub-01

Input Data

Area (ac)	0,09
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

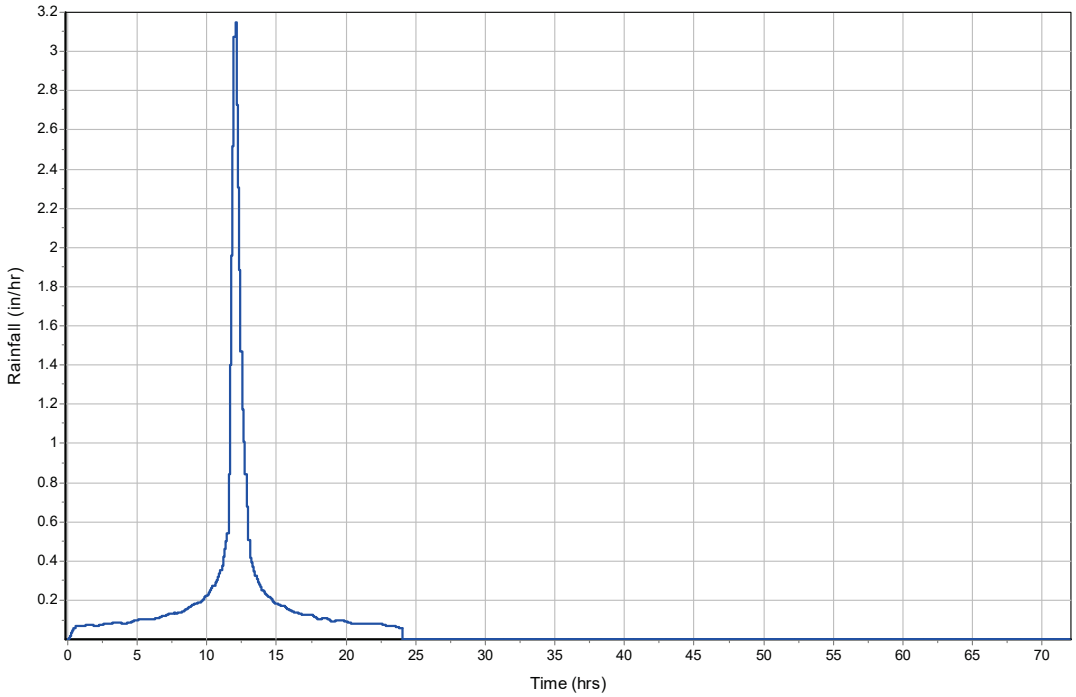
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
-	0,09	-	98
Composite Area & Weighted CN	0,09		98

Subbasin Runoff Results

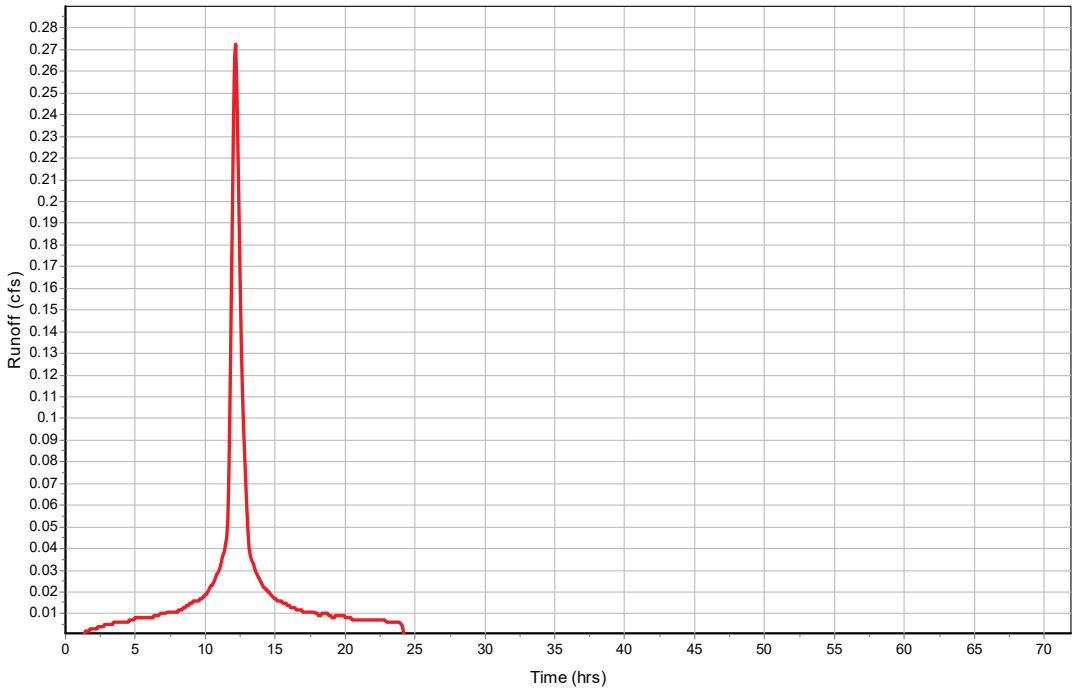
Total Rainfall (in)	5,6
Total Runoff (in)	5,36
Peak Runoff (cfs)	0,27
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-01

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-02

Input Data

Area (ac)	0,12
Peak Rate Factor	484
Weighted Curve Number	98
Rain Gage ID	Rain Gage-01

Composite Curve Number

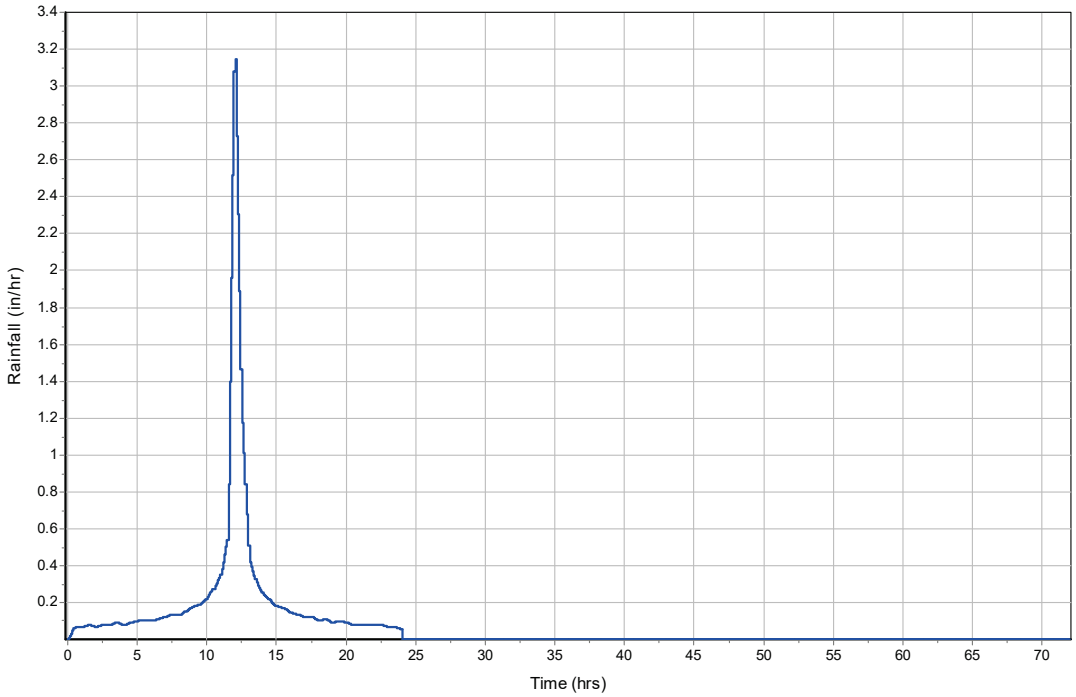
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,12	-	98
Composite Area & Weighted CN	0,12		98

Subbasin Runoff Results

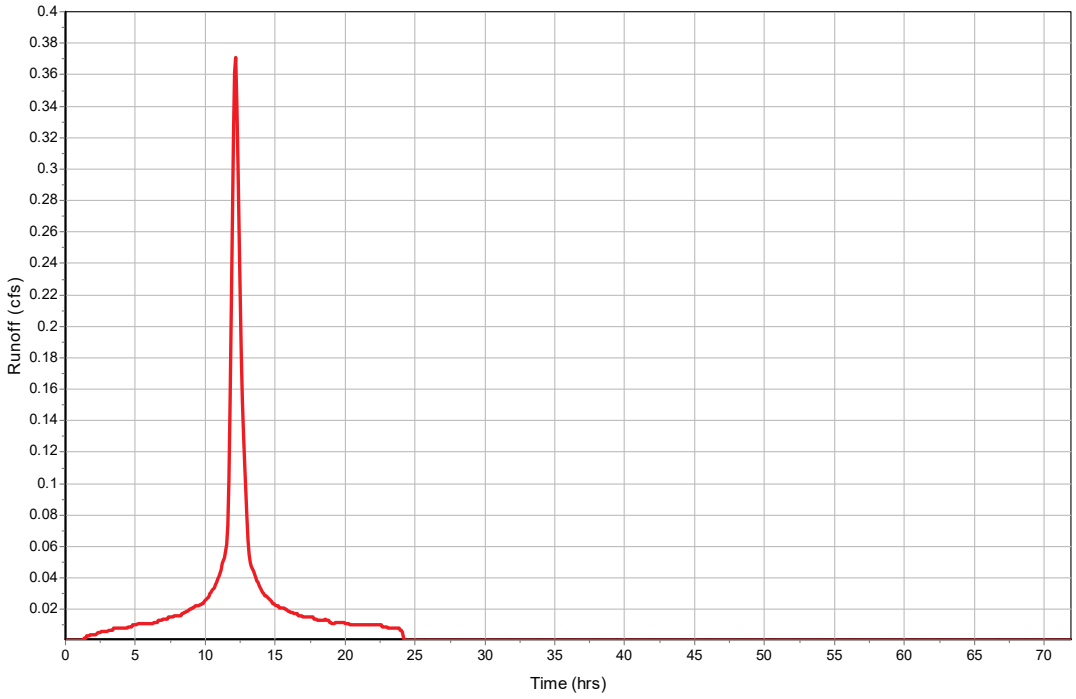
Total Rainfall (in)	5,6
Total Runoff (in)	5,36
Peak Runoff (cfs)	0,37
Weighted Curve Number	98
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-02

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-03

Input Data

Area (ac)	0,04
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

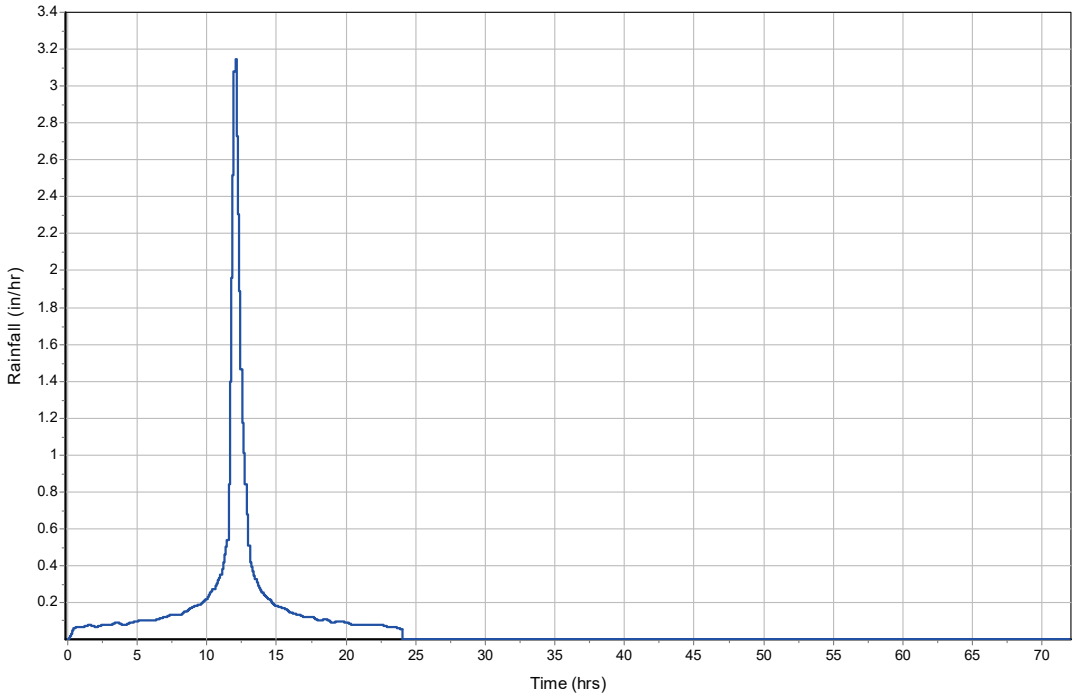
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,04	B	61
Composite Area & Weighted CN	0,04		61

Subbasin Runoff Results

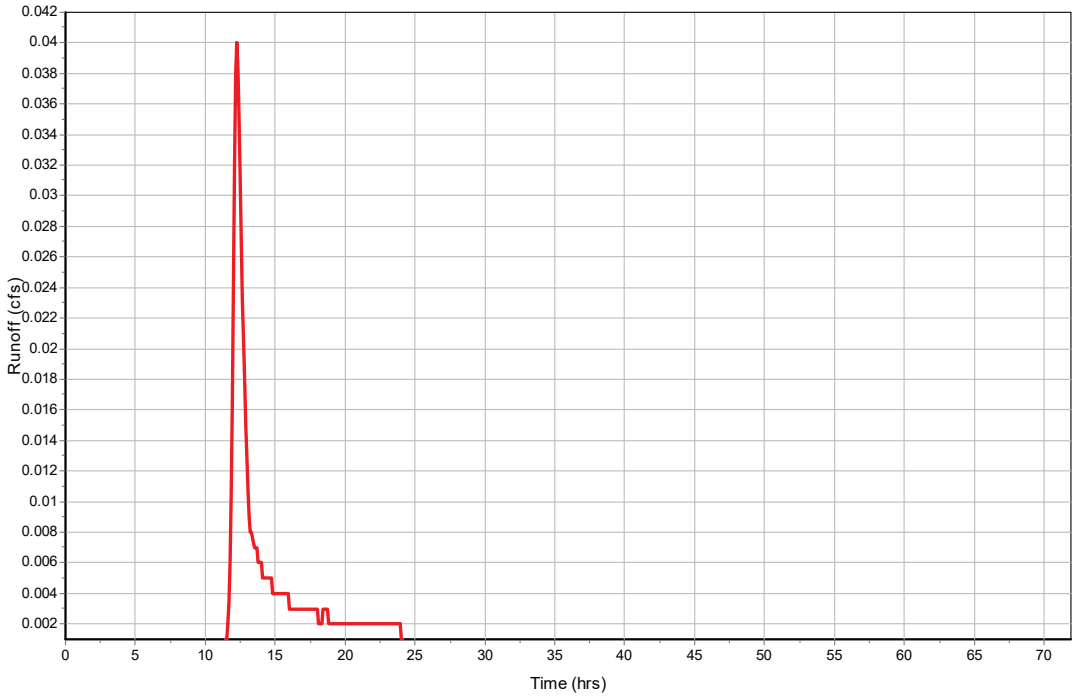
Total Rainfall (in)	5,6
Total Runoff (in)	1,74
Peak Runoff (cfs)	0,04
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-03

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-04

Input Data

Area (ac)	0,06
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

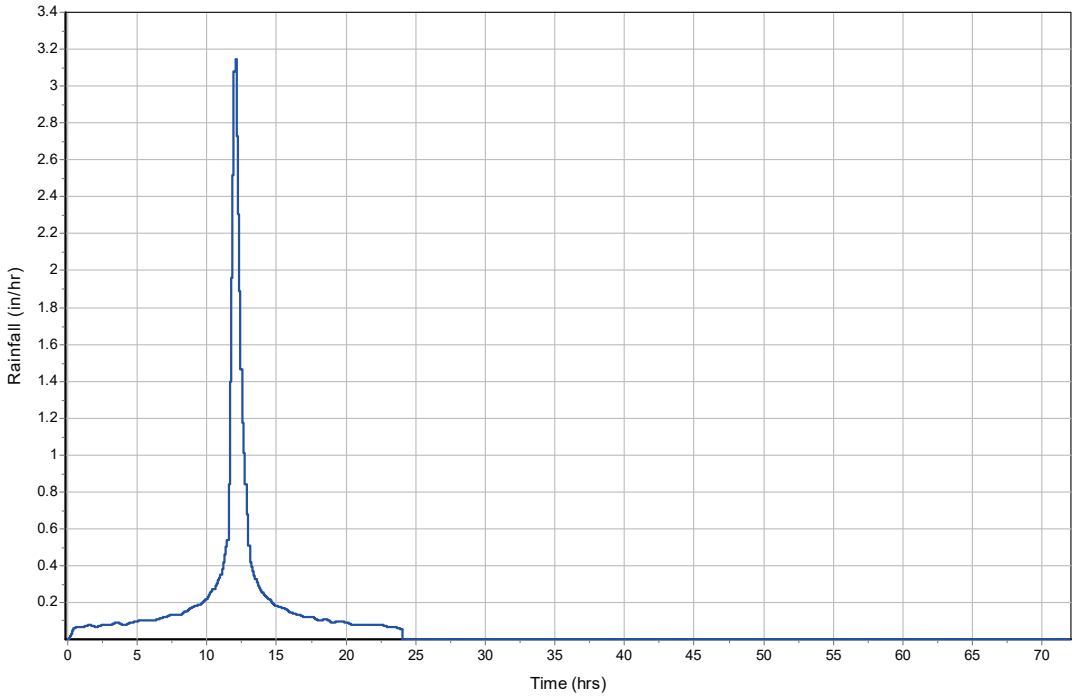
32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
-	0,06	-	61
Composite Area & Weighted CN	0,06		61

Subbasin Runoff Results

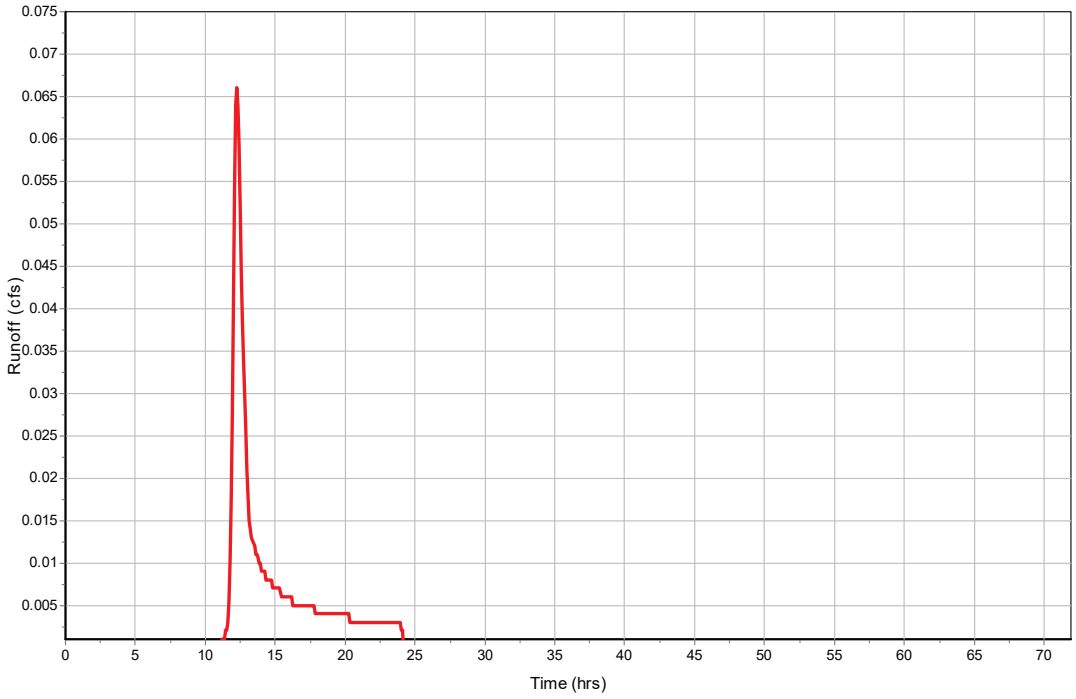
Total Rainfall (in)	5,6
Total Runoff (in)	1,74
Peak Runoff (cfs)	0,07
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-04

Rainfall Intensity Graph



Runoff Hydrograph



Subbasin : Sub-05

Input Data

Area (ac)	0,02
Peak Rate Factor	484
Weighted Curve Number	61
Rain Gage ID	Rain Gage-01

Composite Curve Number

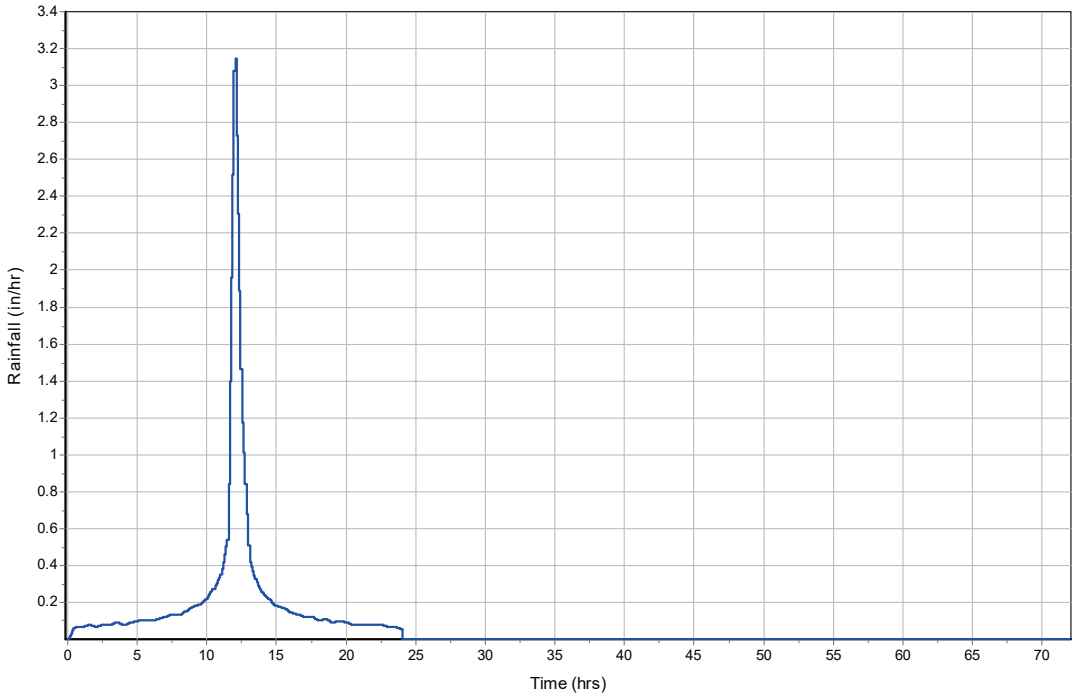
32	Area	Soil	Curve
Soil/Surface Description	(acres)	Group	Number
> 75% grass cover, Good	0,02	B	61
Composite Area & Weighted CN	0,02		61

Subbasin Runoff Results

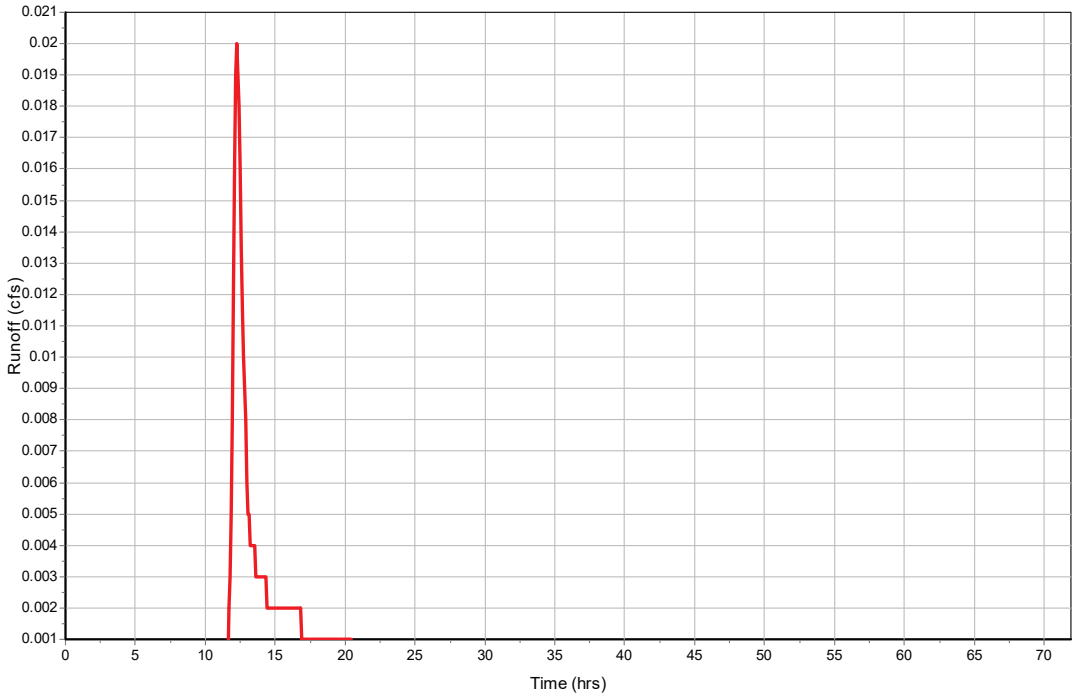
Total Rainfall (in)	5,6
Total Runoff (in)	1,56
Peak Runoff (cfs)	0,02
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:10:00

Subbasin : Sub-05

Rainfall Intensity Graph



Runoff Hydrograph



Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	E-Link-01	5,00	2,30	2,30	2,20	0,20	0,10	2,0000	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
2	Link-03	78,30	3,00	1,00	2,75	0,75	0,25	0,3200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
3	Link-04	42,45	4,00	1,50	3,75	1,75	0,25	0,5900	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1
4	Link-05	47,46	3,00	1,00	2,80	2,80	0,20	0,4200	CIRCULAR	12,000	12,000	0,0150	0,5000	0,5000	0,0000	0,00	No	2
5	Link-06	7,59	2,50	2,50	2,35	2,35	0,15	1,9800	CIRCULAR	18,000	18,000	0,0150	0,5000	0,5000	0,0000	0,00	No	1

Pipe Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Froude Number	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)		
1	E-Link-01	0,66	0 12:20	12,87	0,05	3,14	0,03	0,26	0,18	0,00		Calculated
2	Link-03	0,34	0 12:20	3,49	0,10	0,22	5,93	1,00	1,00	510,00		SURCHARGED
3	Link-04	0,08	0 12:18	2,37	0,03	0,50	1,42	0,28	0,29	0,00		Calculated
4	Link-05	0,61	0 12:20	4,01	0,15	1,02	0,78	1,00	1,00	510,00		SURCHARGED
5	Link-06	0,60	0 12:20	12,80	0,05	2,87	0,04	0,25	0,18	0,00		Calculated

Storage Nodes

Storage Node : E-inlet-1

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	5,30
Max (Rim) Offset (ft)	5,30
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	0,66
Peak Lateral Inflow (cfs)	0,07
Peak Outflow (cfs)	0,66
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,6
Max HGL Depth Attained (ft)	2,6
Average HGL Elevation Attained (ft)	2,15
Average HGL Depth Attained (ft)	2,15
Time of Max HGL Occurrence (days hh:mm)	0 12:20
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 1 TYPE D INLET

Input Data

Invert Elevation (ft)	2,50
Max (Rim) Elevation (ft)	5,00
Max (Rim) Offset (ft)	2,50
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-1,21
Ponded Area (ft^2)	671,40
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-01	Rectangular	No	4,50	2,00	10,00	0,50	3,33

Output Summary Results

Peak Inflow (cfs)	0,08
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,04
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,17
Max HGL Depth Attained (ft)	1,67
Average HGL Elevation Attained (ft)	3,75
Average HGL Depth Attained (ft)	1,25
Time of Max HGL Occurrence (days hh:mm)	0 12:19
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 2 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,19
Max (Rim) Offset (ft)	4,19
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

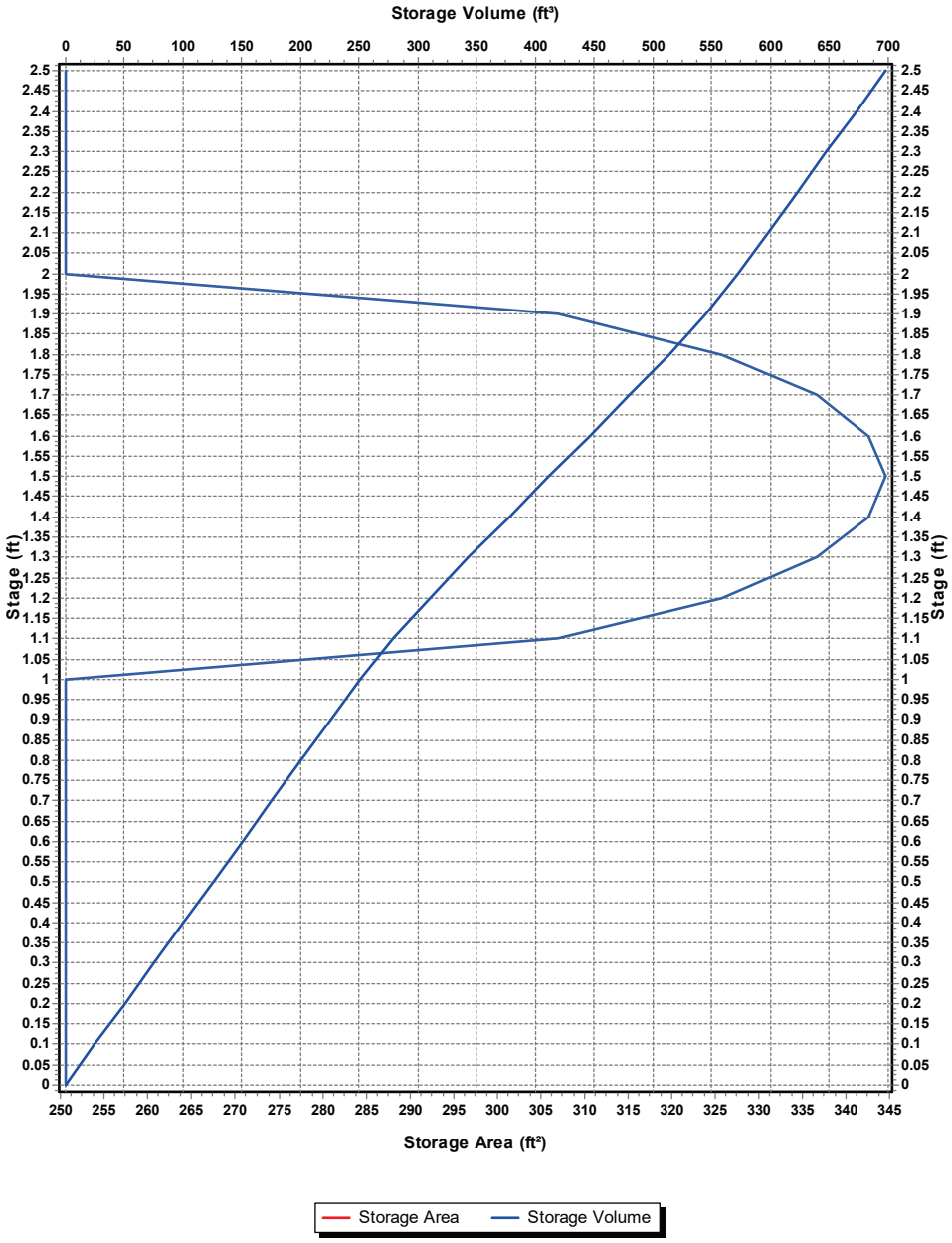
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 01

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	250,56	0
0,1	250,56	25,06
0,2	250,56	50,12
0,3	250,56	75,18
0,4	250,56	100,24
0,5	250,56	125,3
0,6	250,56	150,36
0,7	250,56	175,42
0,8	250,56	200,48
0,9	250,56	225,54
1	250,56	250,6
1,1	306,936	278,47
1,2	325,728	310,1
1,3	336,6758	343,22
1,4	342,6216	377,18
1,5	344,52	411,54
1,6	342,6216	445,9
1,7	336,6758	479,86
1,8	325,728	512,98
1,9	306,936	544,61
2	250,56	572,48
2,1	250,56	597,54
2,2	250,56	622,6
2,3	250,56	647,66
2,4	250,56	672,72
2,5	250,56	697,78

Storage Area Volume Curves



Storage Node : S - 2 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,43
Peak Lateral Inflow (cfs)	0,37
Peak Outflow (cfs)	0,35
Peak Exfiltration Flow Rate (cfm)	0,96
Max HGL Elevation Attained (ft)	4,16
Max HGL Depth Attained (ft)	2,16
Average HGL Elevation Attained (ft)	2,56
Average HGL Depth Attained (ft)	0,56
Time of Max HGL Occurrence (days hh:mm)	0 12:21
Total Exfiltration Volume (1000-ft^3)	1,57
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	2,00
Max (Rim) Elevation (ft)	6,99
Max (Rim) Offset (ft)	4,99
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	-0,71
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Infiltration/Exfiltration

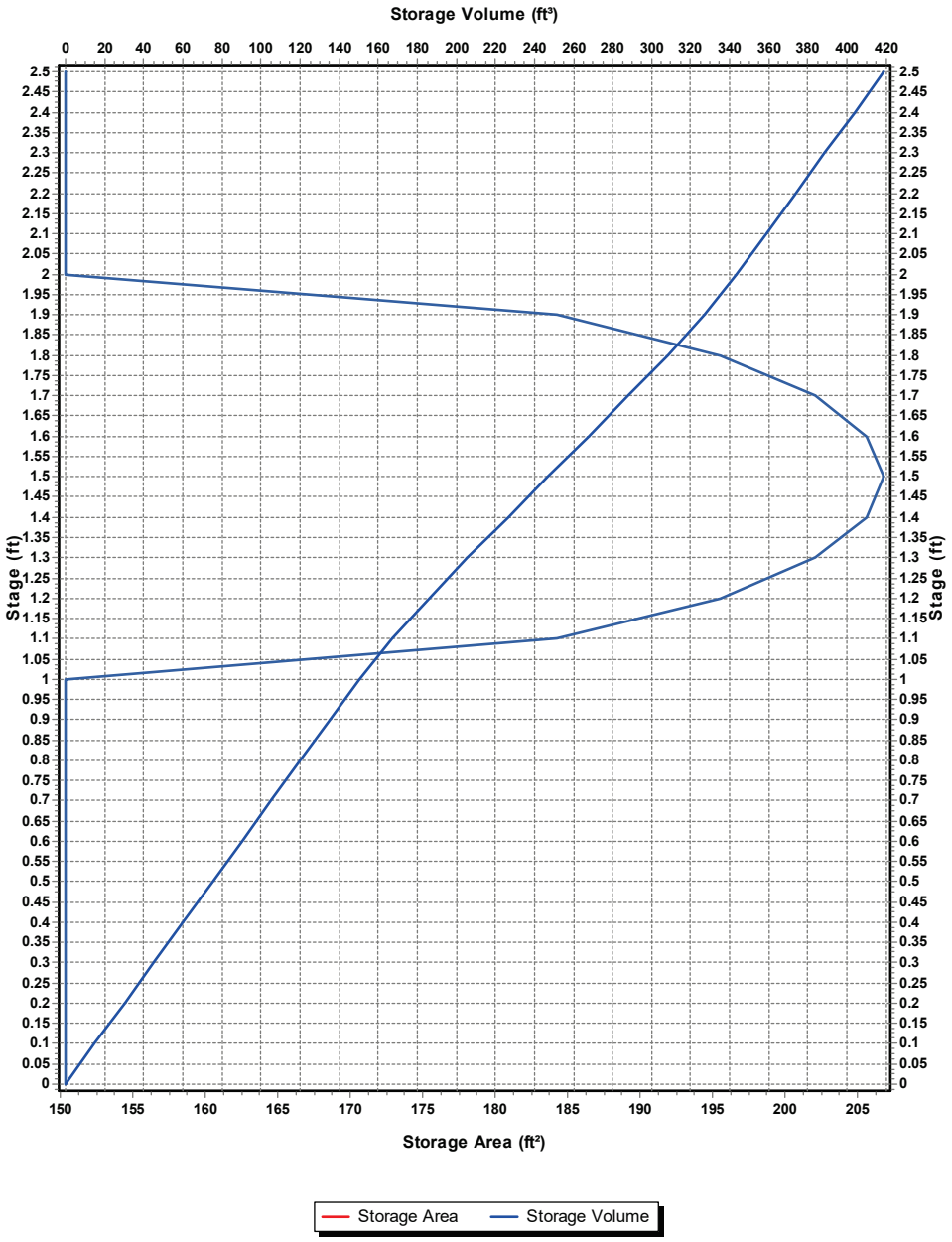
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : EXFIL 02

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	150,4	0
0,1	150,4	15,04
0,2	150,4	30,08
0,3	150,4	45,12
0,4	150,4	60,16
0,5	150,4	75,2
0,6	150,4	90,24
0,7	150,4	105,28
0,8	150,4	120,32
0,9	150,4	135,36
1	150,4	150,4
1,1	184,24	167,13
1,2	195,52	186,12
1,3	202,0915	206
1,4	205,6605	226,39
1,5	206,8	247,01
1,6	205,6605	267,63
1,7	202,0915	288,02
1,8	195,52	307,9
1,9	184,24	326,89
2	150,4	343,62
2,1	150,4	358,66
2,2	150,4	373,7
2,3	150,4	388,74
2,4	150,4	403,78
2,5	150,4	418,82

Storage Area Volume Curves



Storage Node : S - 3 TYPE D INLET (continued)

Output Summary Results

Peak Inflow (cfs)	0,61
Peak Lateral Inflow (cfs)	0,29
Peak Outflow (cfs)	0,61
Peak Exfiltration Flow Rate (cfm)	0,57
Max HGL Elevation Attained (ft)	4,16
Max HGL Depth Attained (ft)	2,16
Average HGL Elevation Attained (ft)	2,58
Average HGL Depth Attained (ft)	0,58
Time of Max HGL Occurrence (days hh:mm)	0 12:21
Total Exfiltration Volume (1000-ft^3)	0,968
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-in

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	3,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-06	Rectangular	No	4,00	4,00	3,00	2,20	3,33

Output Summary Results

Peak Inflow (cfs)	0,61
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,61
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,15
Max HGL Depth Attained (ft)	4,15
Average HGL Elevation Attained (ft)	2,94
Average HGL Depth Attained (ft)	2,94
Time of Max HGL Occurrence (days hh:mm)	0 12:20
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : S-4-out

Input Data

Invert Elevation (ft)	0,00
Max (Rim) Elevation (ft)	6,20
Max (Rim) Offset (ft)	6,20
Initial Water Elevation (ft)	1,29
Initial Water Depth (ft)	1,29
Ponded Area (ft^2)	10,00
Evaporation Loss	0,00

Output Summary Results

Peak Inflow (cfs)	0,61
Peak Lateral Inflow (cfs)	0
Peak Outflow (cfs)	0,6
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	2,78
Max HGL Depth Attained (ft)	2,78
Average HGL Elevation Attained (ft)	2,3
Average HGL Depth Attained (ft)	2,3
Time of Max HGL Occurrence (days hh:mm)	0 12:22
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Storage Node : SOUTHPOND

Input Data

Invert Elevation (ft)	4,00
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	2,00
Initial Water Elevation (ft)	4,00
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	1187,00
Evaporation Loss	0,00

Infiltration/Exfiltration

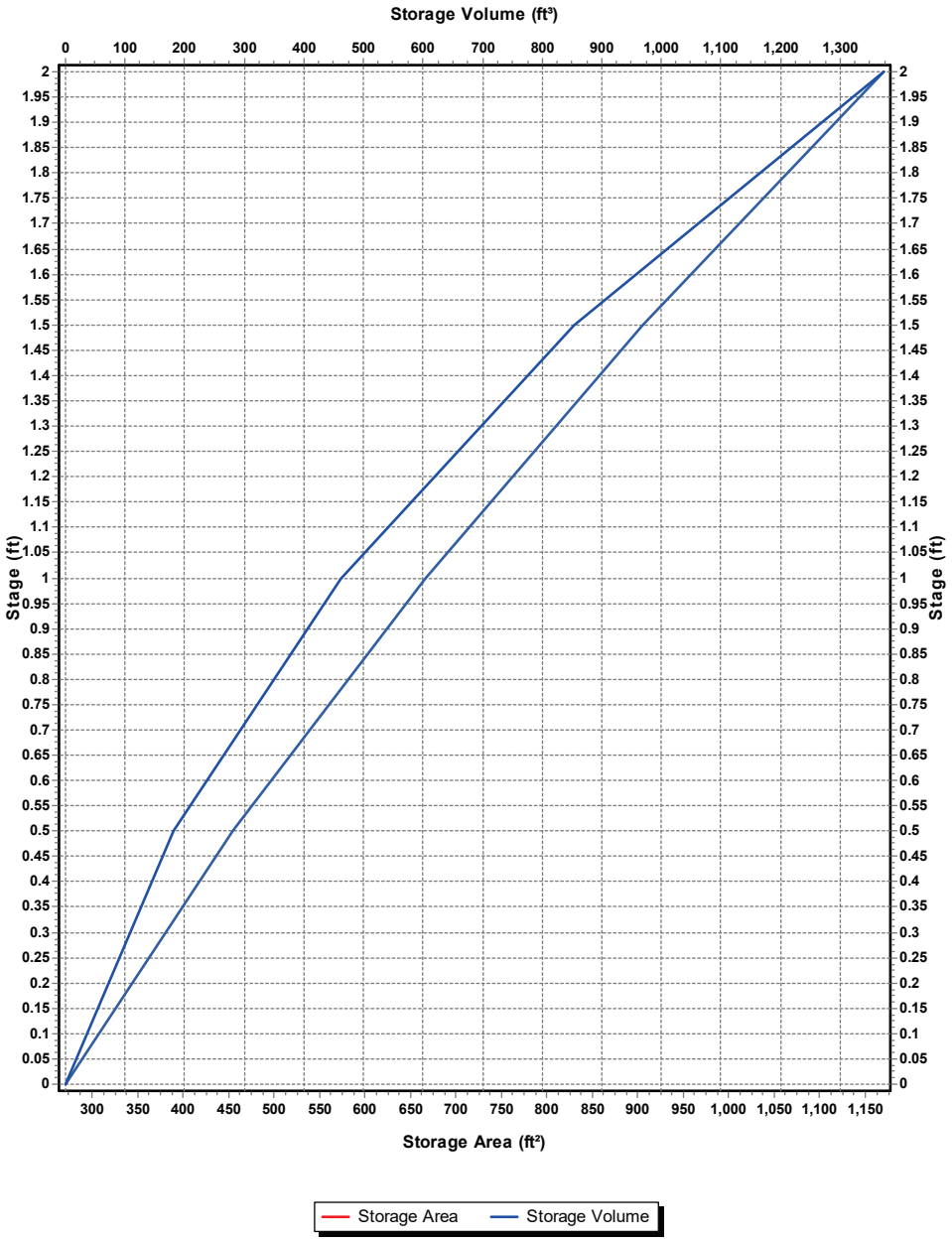
Exfiltration Rate (in/hr)	2

Storage Area Volume Curves

Storage Curve : SOUTH POND

Stage (ft)	Storage Area (ft^2)	Storage Volume (ft^3)
0	270,79	0
0,5	454,83	181,41
1	666,12	461,65
1,5	904,67	854,35
2	1170,46	1373,13

Storage Area Volume Curves



Storage Node : SOUTHPOND (continued)

Output Summary Results

Peak Inflow (cfs)	0,04
Peak Lateral Inflow (cfs)	0,04
Peak Outflow (cfs)	0
Peak Exfiltration Flow Rate (cfm)	0,93
Max HGL Elevation Attained (ft)	4,17
Max HGL Depth Attained (ft)	0,17
Average HGL Elevation Attained (ft)	4
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 12:59
Total Exfiltration Volume (1000-ft^3)	0,243
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 19: 100 YR-3DAY PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 72HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	100 yr-72 hr	Cumulative	inches	Florida	Broward	100,00	18,40	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	18,38	12,45	4,11	1,25	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					19,11	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	1,25	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				19,11							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

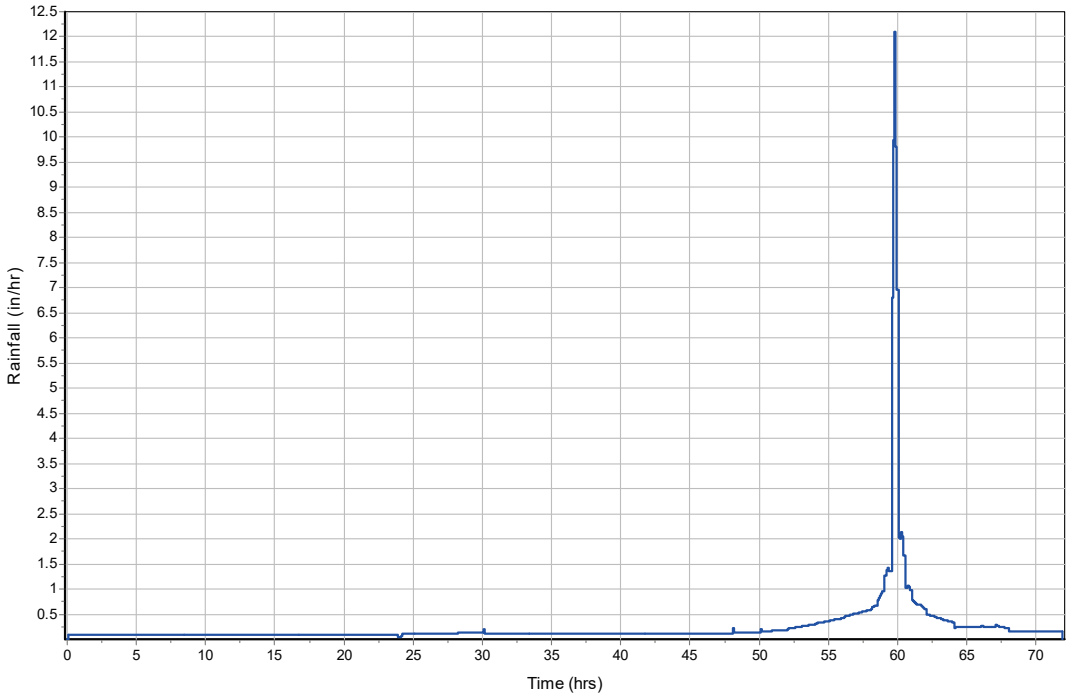
Total TOC (min) 35.12

Subbasin Runoff Results

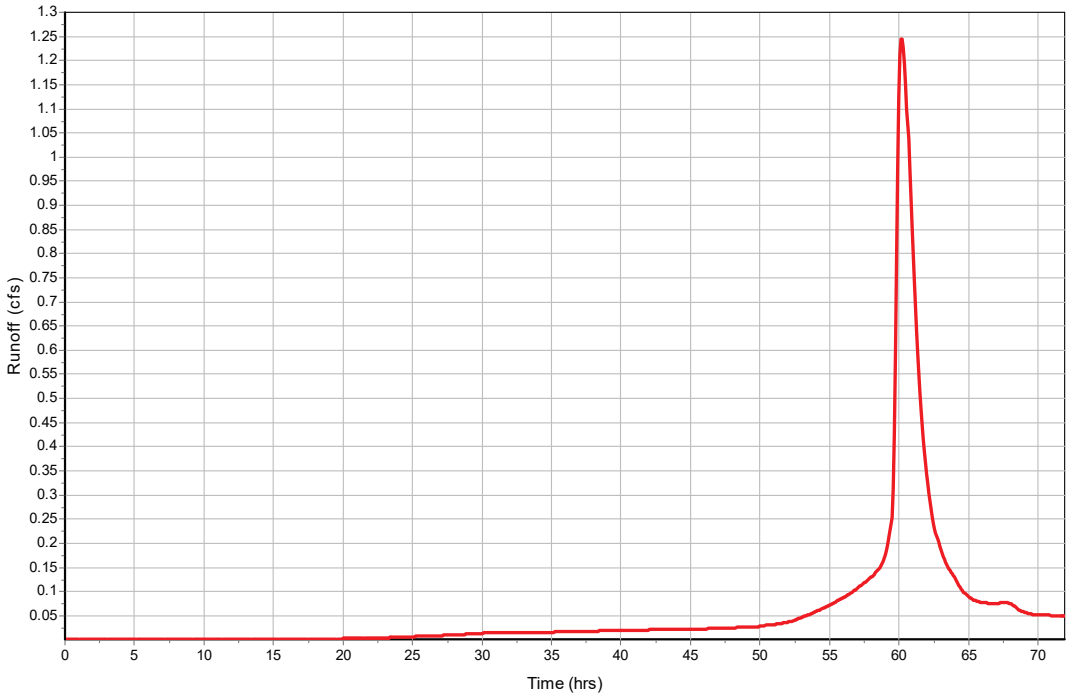
Total Rainfall (in)	18,38
Total Runoff (in)	12,45
Peak Runoff (cfs)	1,25
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	1,25
Peak Lateral Inflow (cfs)	1,25
Peak Outflow (cfs)	19,11
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	1 00:50
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 20: 100 YR-24 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 24HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	100 yr-24 hr	Cumulative	inches	Florida	Broward	100,00	16,00	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	16,00	10,26	3,39	1,18	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					19,75	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	1,18	6,00				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				19,75							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

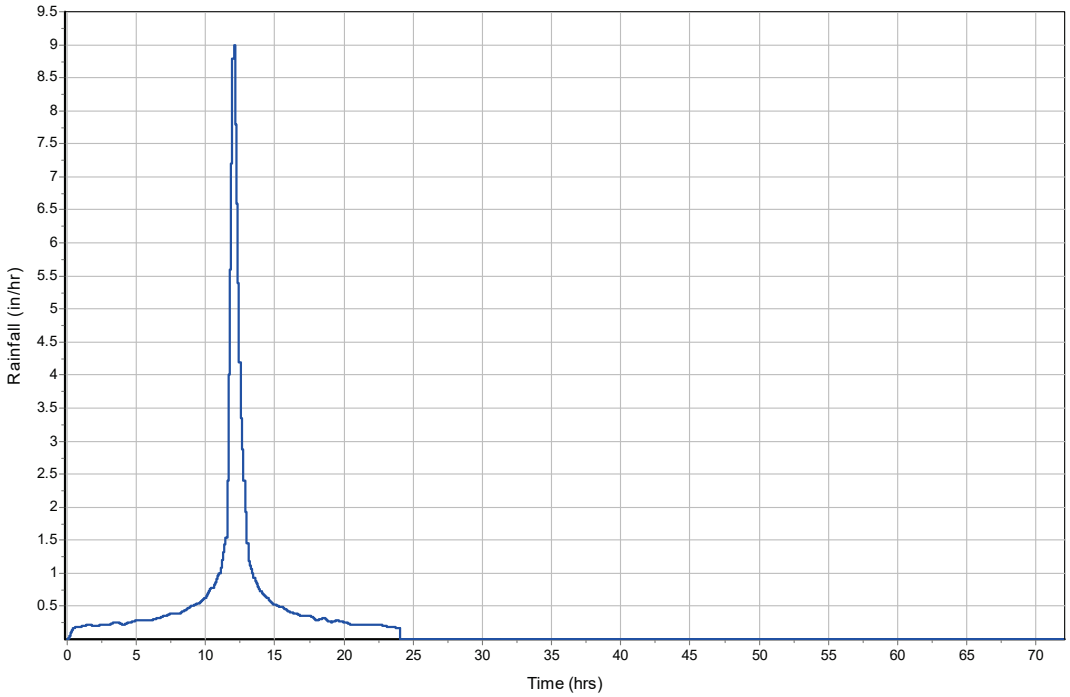
Total TOC (min) 35.12

Subbasin Runoff Results

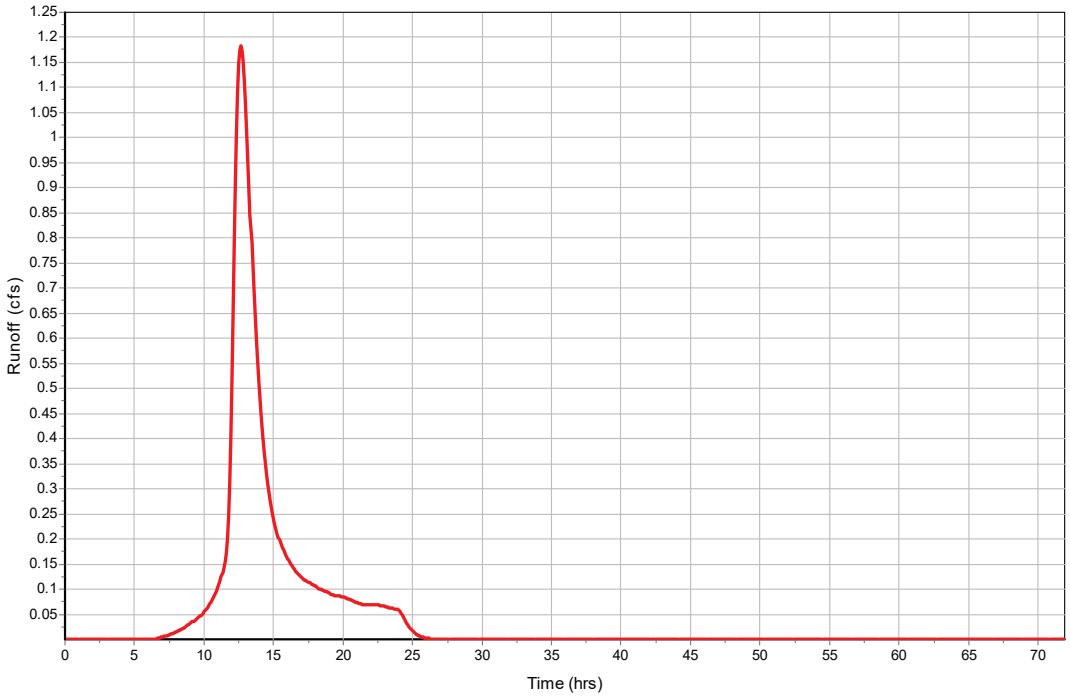
Total Rainfall (in)	16
Total Runoff (in)	10,26
Peak Runoff (cfs)	1,18
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	1,18
Peak Lateral Inflow (cfs)	1,18
Peak Outflow (cfs)	19,75
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	6
Max HGL Depth Attained (ft)	1,2
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 12:04
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 21: 100 YR-8 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 8HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	100 yr-08 hr	Cumulative	inches	Florida	Broward	100,00	11,80	Florida DOT 8-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	11,80	6,54	2,16	0,81	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					16,91	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,81	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				16,91							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

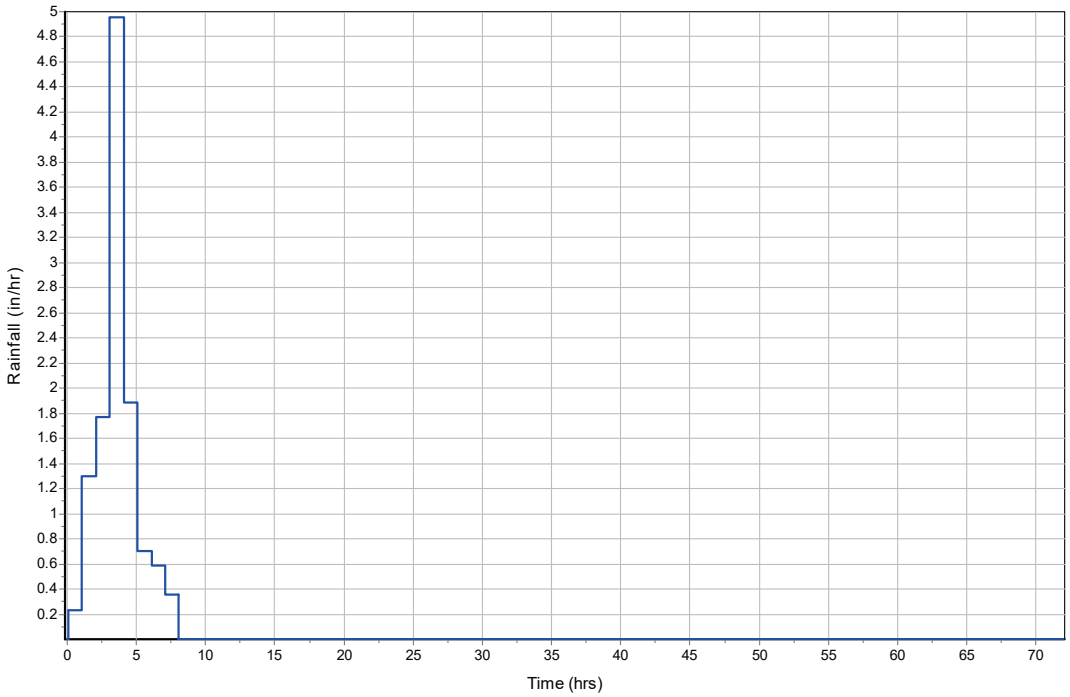
Total TOC (min) 35.12

Subbasin Runoff Results

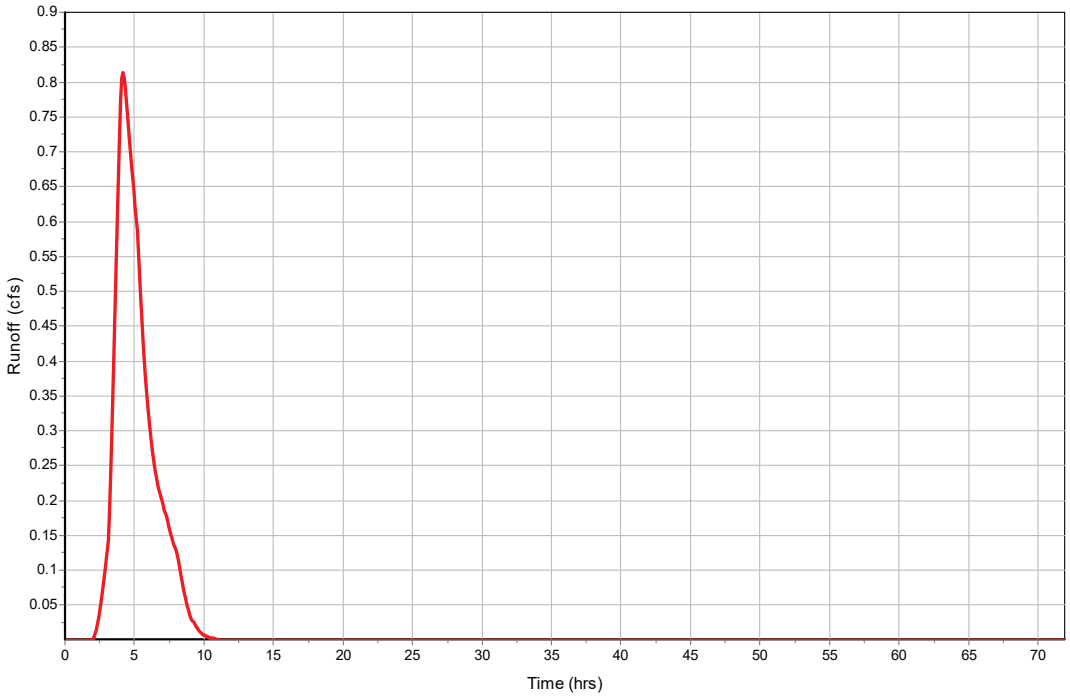
Total Rainfall (in)	11,8
Total Runoff (in)	6,54
Peak Runoff (cfs)	0,81
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,81
Peak Lateral Inflow (cfs)	0,81
Peak Outflow (cfs)	16,91
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 02:11
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 22: 100 YR-4 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 4HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	100 yr-04 hr	Cumulative	inches	Florida	Broward	100,00	9,30	Florida DOT 8-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	9,30	4,46	1,47	0,55	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					19,71	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,55	6,00				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				19,71							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

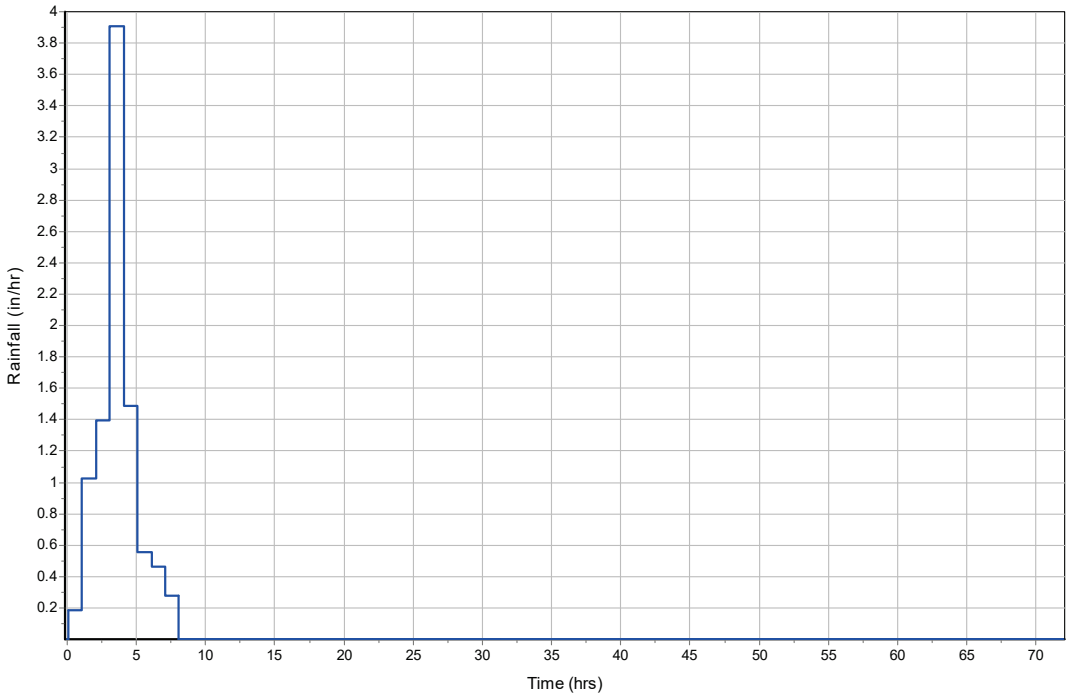
Total TOC (min) 35.12

Subbasin Runoff Results

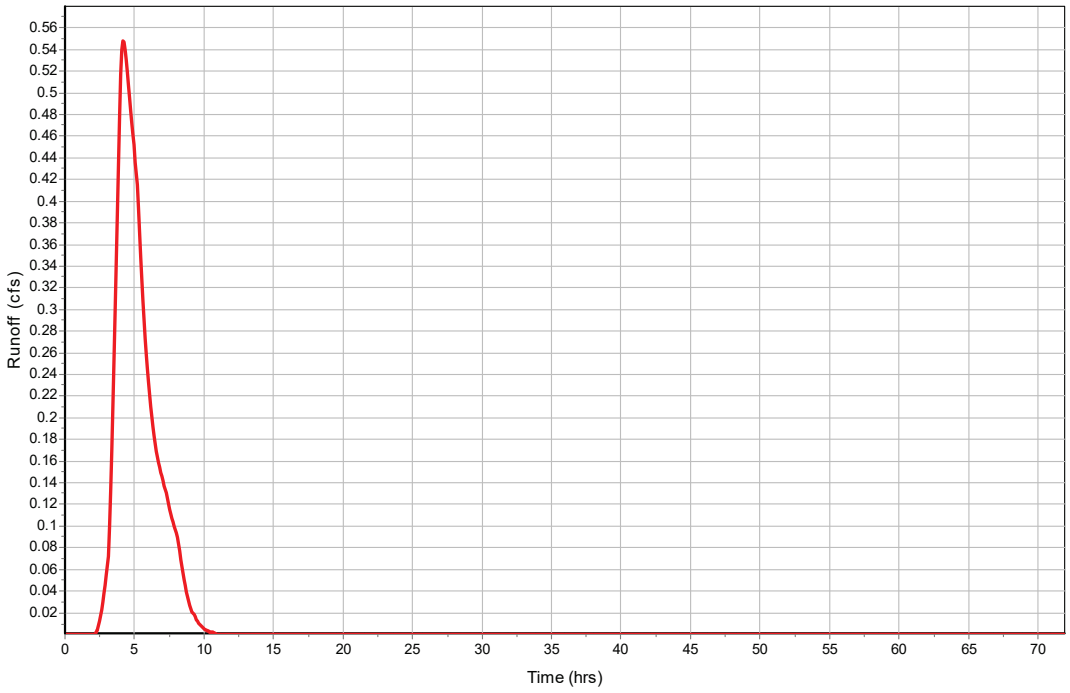
Total Rainfall (in)	9,3
Total Runoff (in)	4,46
Peak Runoff (cfs)	0,55
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,55
Peak Lateral Inflow (cfs)	0,55
Peak Outflow (cfs)	19,71
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	6
Max HGL Depth Attained (ft)	1,2
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 04:03
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 23: 100 YR-2 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 2HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	100 yr-02 hr	Cumulative	inches	Florida	Broward	100,00	7,30	Florida DOT 2-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	7,30	2,92	0,96	0,56	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					15,26	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,56	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				15,26							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

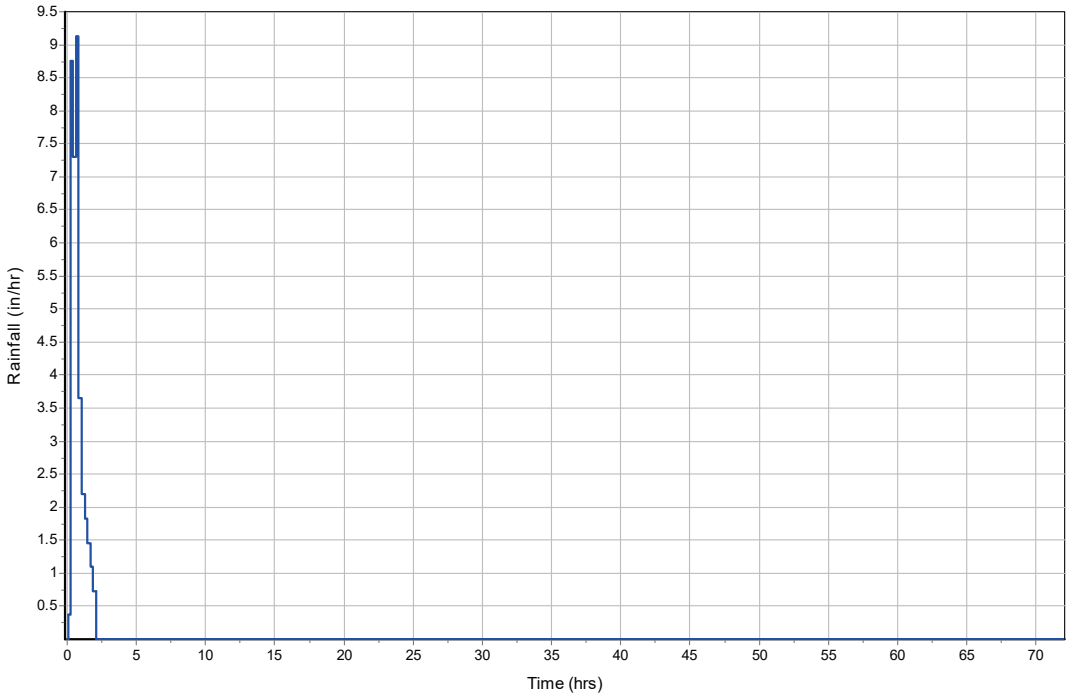
Total TOC (min) 35.12

Subbasin Runoff Results

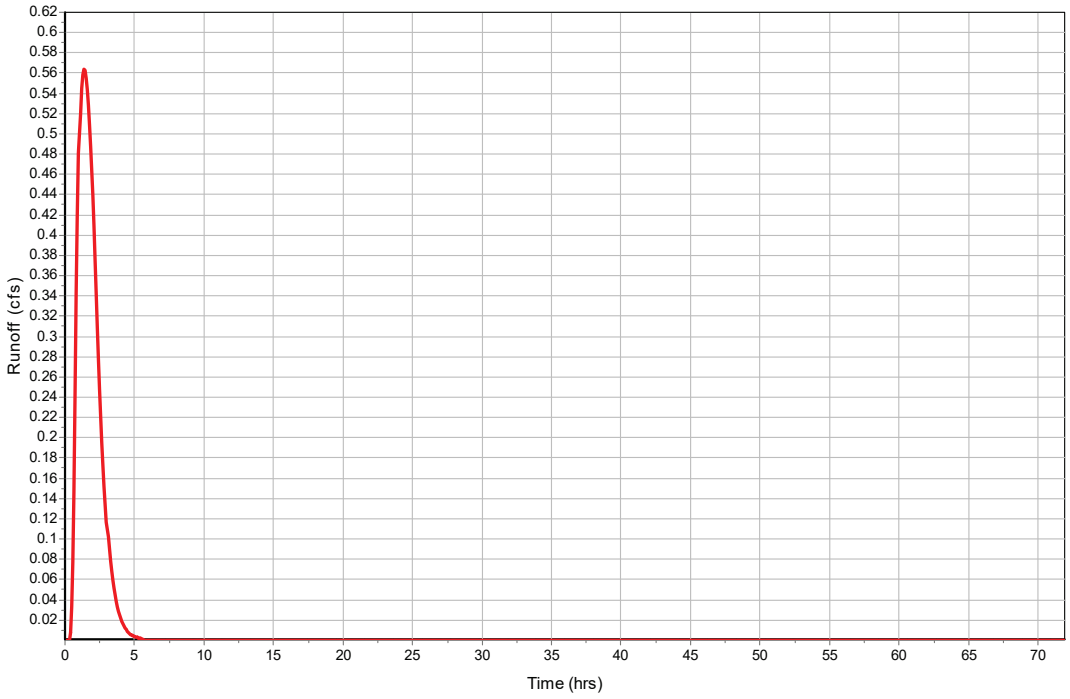
Total Rainfall (in)	7,3
Total Runoff (in)	2,92
Peak Runoff (cfs)	0,56
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,56
Peak Lateral Inflow (cfs)	0,56
Peak Outflow (cfs)	15,26
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 00:28
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 24: 100 YR-1 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	100YR 1HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	100 yr-01 hr	Cumulative	inches	Florida	Broward	100,00	5,60	Florida DOT 1-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	5,60	1,74	0,57	0,47	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					9,25	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,47	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				9,25							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

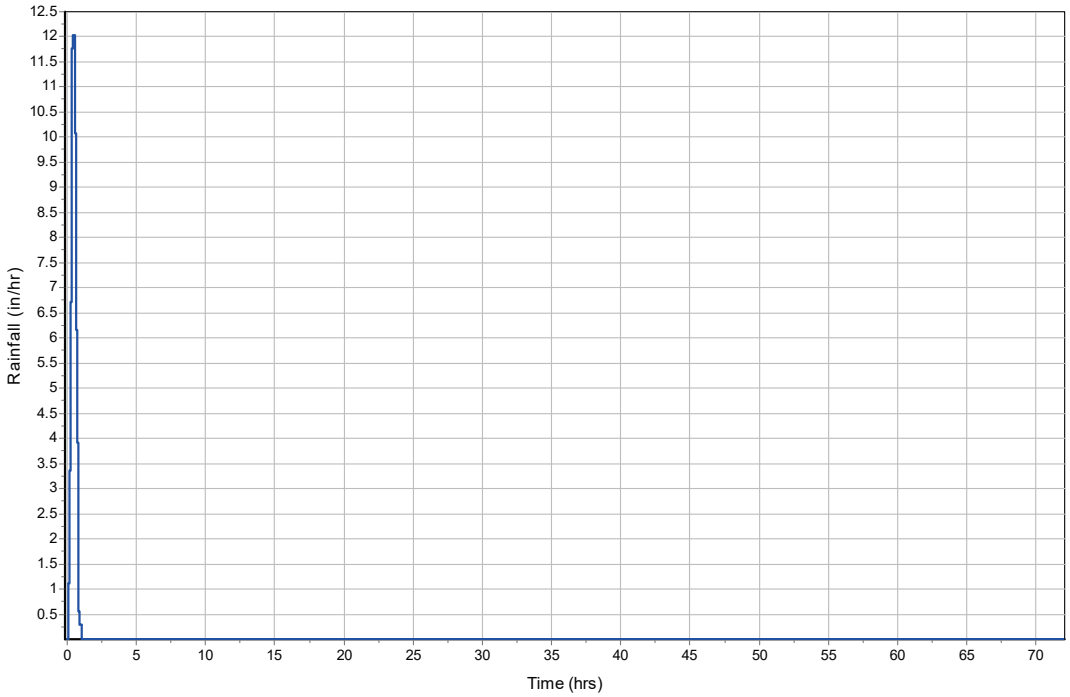
Total TOC (min) 35.12

Subbasin Runoff Results

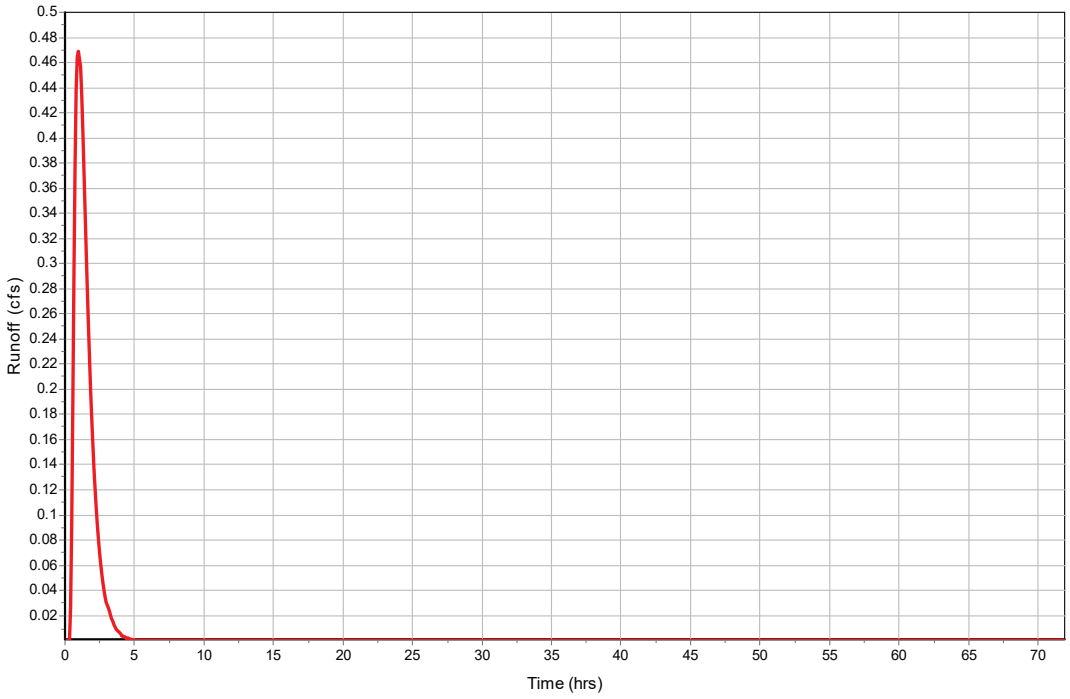
Total Rainfall (in)	5,6
Total Runoff (in)	1,74
Peak Runoff (cfs)	0,47
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,47
Peak Lateral Inflow (cfs)	0,47
Peak Outflow (cfs)	9,25
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 00:26
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 25: 50 YR-3 DAY PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	50YR 72HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	050 yr-72 hr	Cumulative	inches	Florida	Broward	50,00	15,90	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	15,88	10,15	3,35	1,04	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					18,11	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	1,03	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				18,11							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

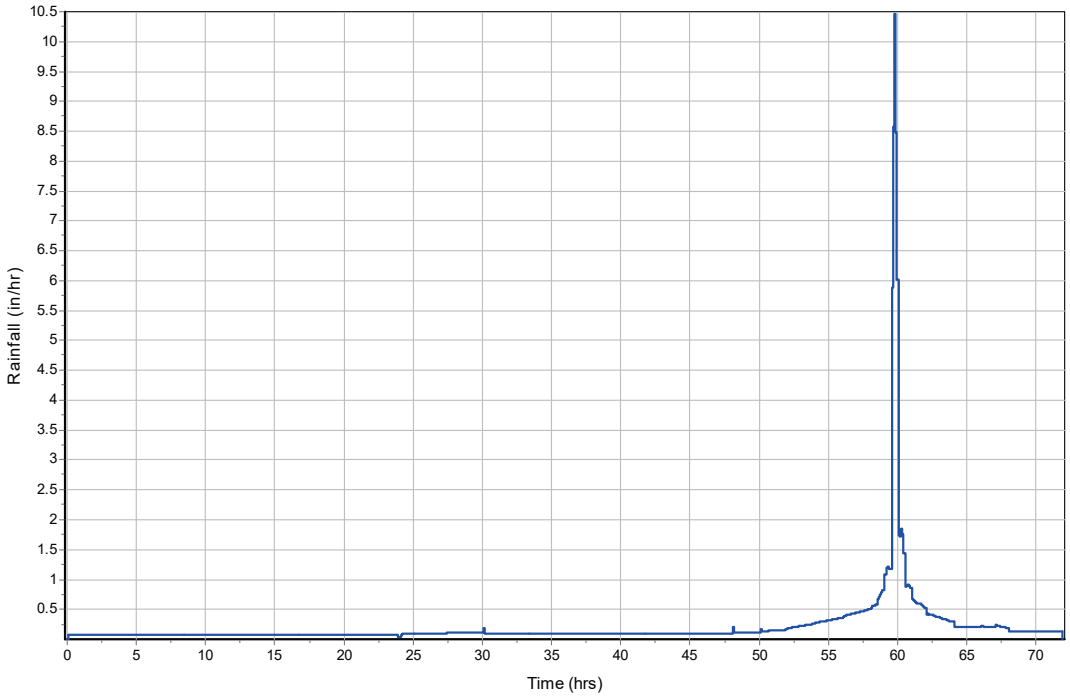
Total TOC (min) 35.12

Subbasin Runoff Results

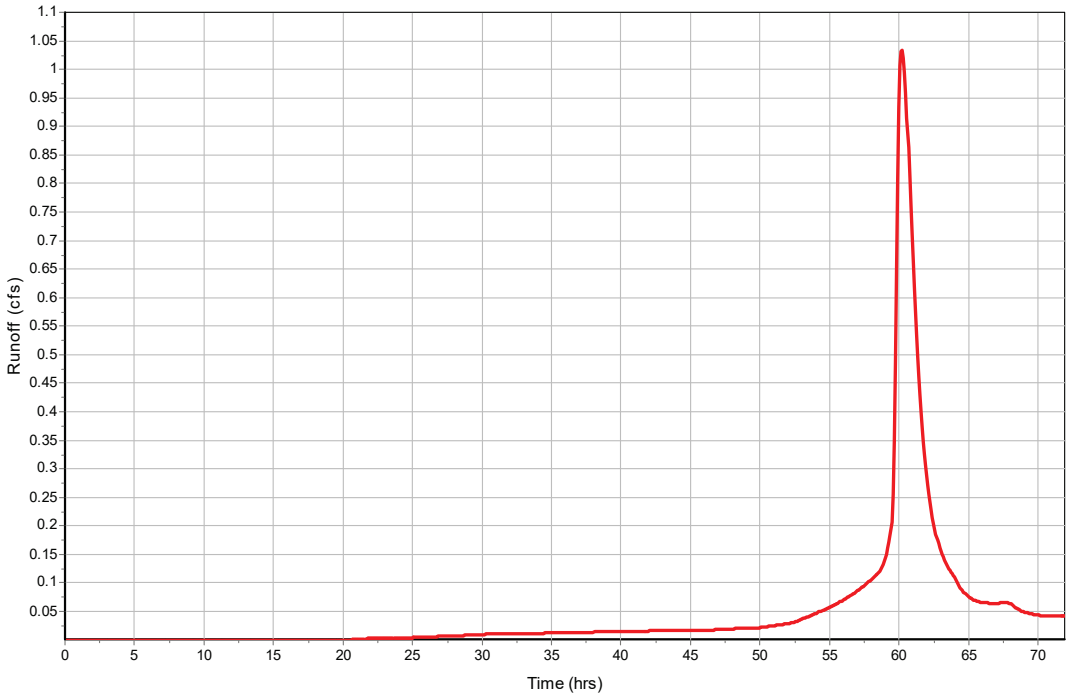
Total Rainfall (in)	15,88
Total Runoff (in)	10,15
Peak Runoff (cfs)	1,04
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	1,03
Peak Lateral Inflow (cfs)	1,03
Peak Outflow (cfs)	18,11
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	1 02:52
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 26: 50 YR-24 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	50YR 24HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	050 yr-24 hr	Cumulative	inches	Florida	Broward	50,00	13,70	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	13,70	8,20	2,71	0,95	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					17,65	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,94	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				17,65							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

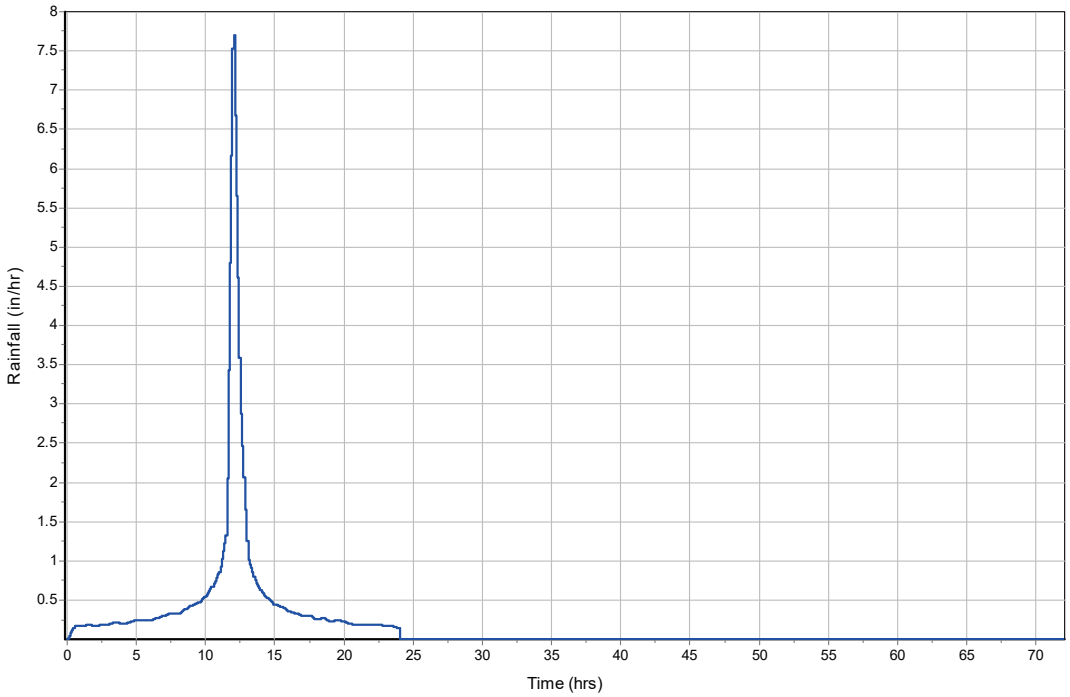
Total TOC (min) 35.12

Subbasin Runoff Results

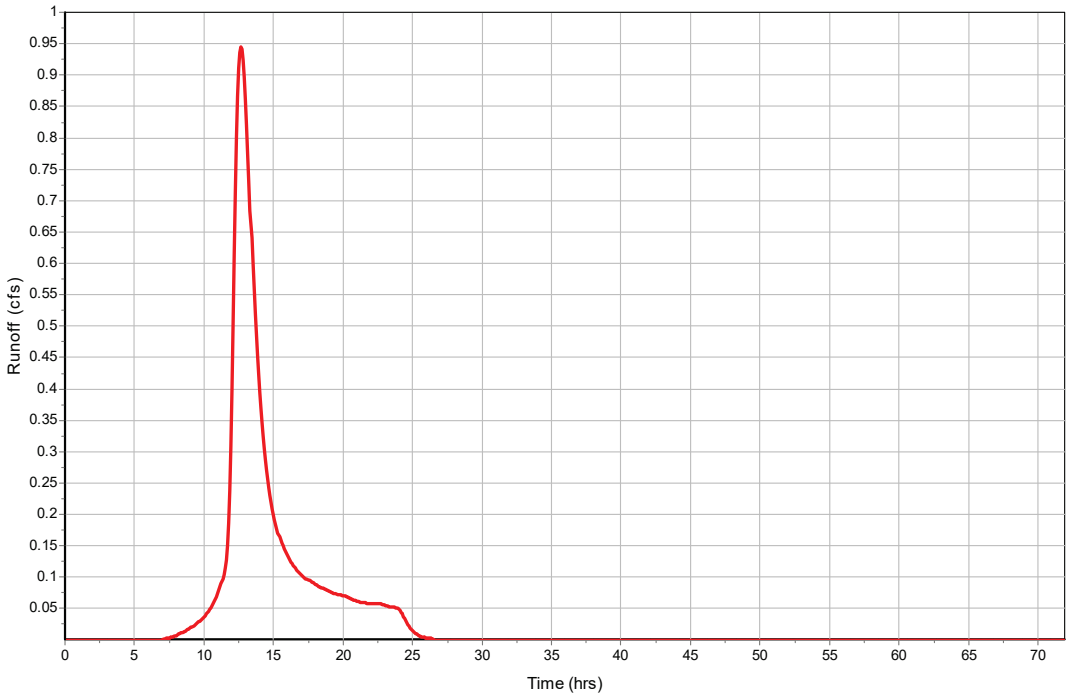
Total Rainfall (in)	13,7
Total Runoff (in)	8,2
Peak Runoff (cfs)	0,95
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,94
Peak Lateral Inflow (cfs)	0,94
Peak Outflow (cfs)	17,65
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 07:53
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 27: 25 YR-3 DAY PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	25YR 72HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	025 yr-72 hr	Cumulative	inches	Florida	Broward	25,00	13,60	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	13,59	8,09	2,67	0,84	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					17,07	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,84	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				17,07							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

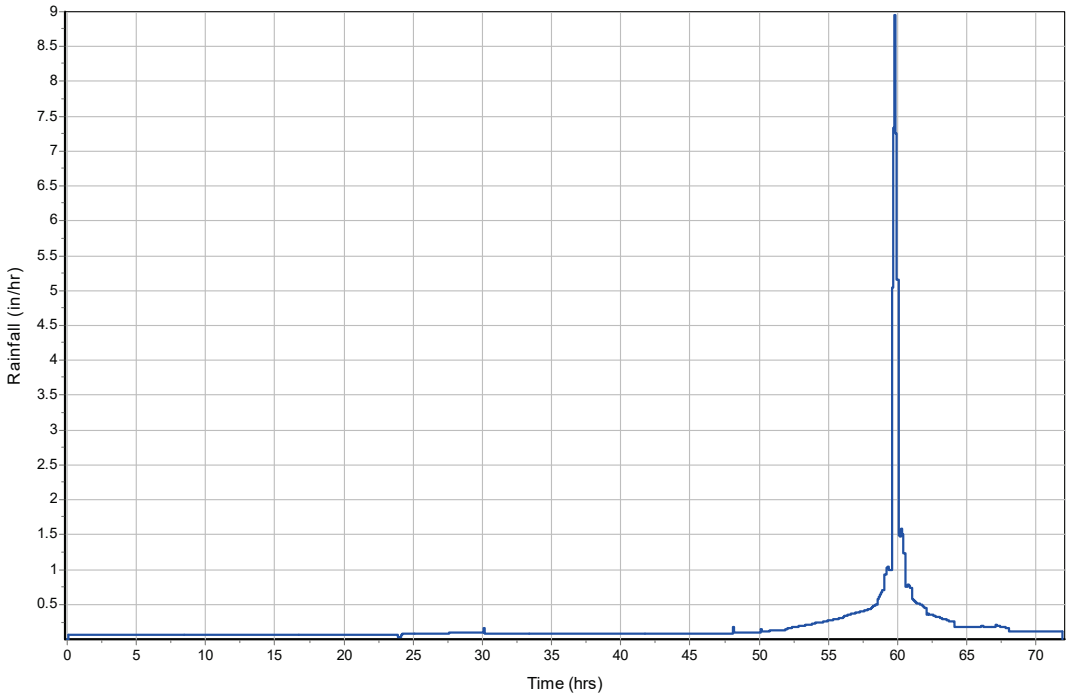
Total TOC (min) 35.12

Subbasin Runoff Results

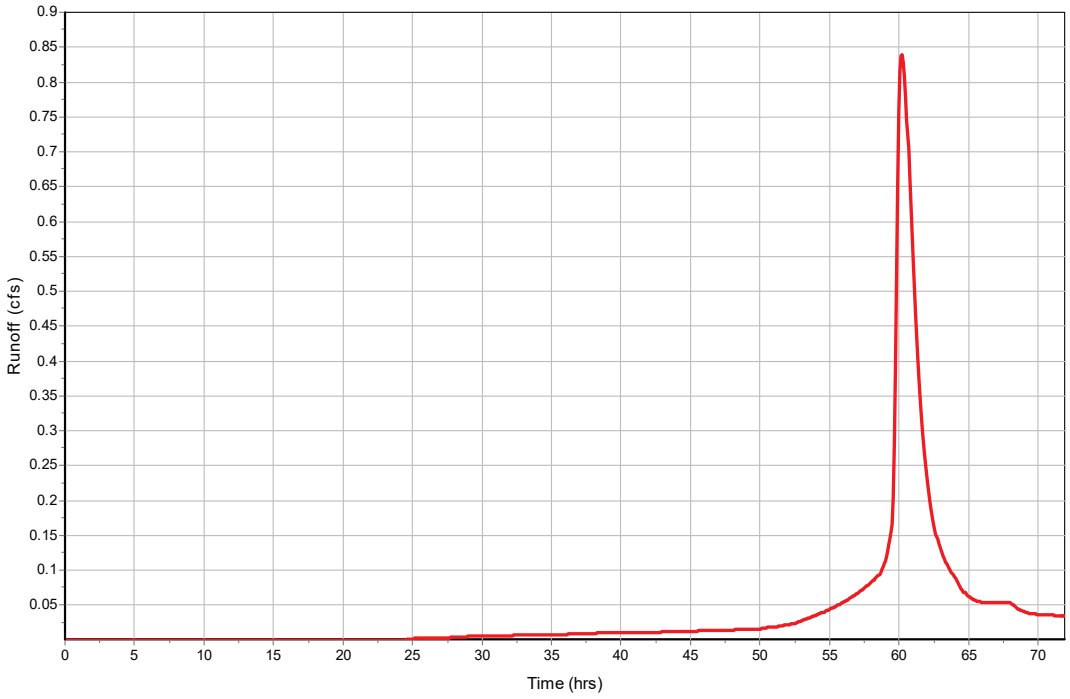
Total Rainfall (in)	13,59
Total Runoff (in)	8,09
Peak Runoff (cfs)	0,84
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,84
Peak Lateral Inflow (cfs)	0,84
Peak Outflow (cfs)	17,07
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	1 06:08
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 28: 25 YR-24 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	25YR 24HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	025yr-24hr	Cumulative	inches	Florida	Broward	25,00	11,60	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	11,60	6,37	2,10	0,73	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					19,71	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,73	6,00				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				19,71							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

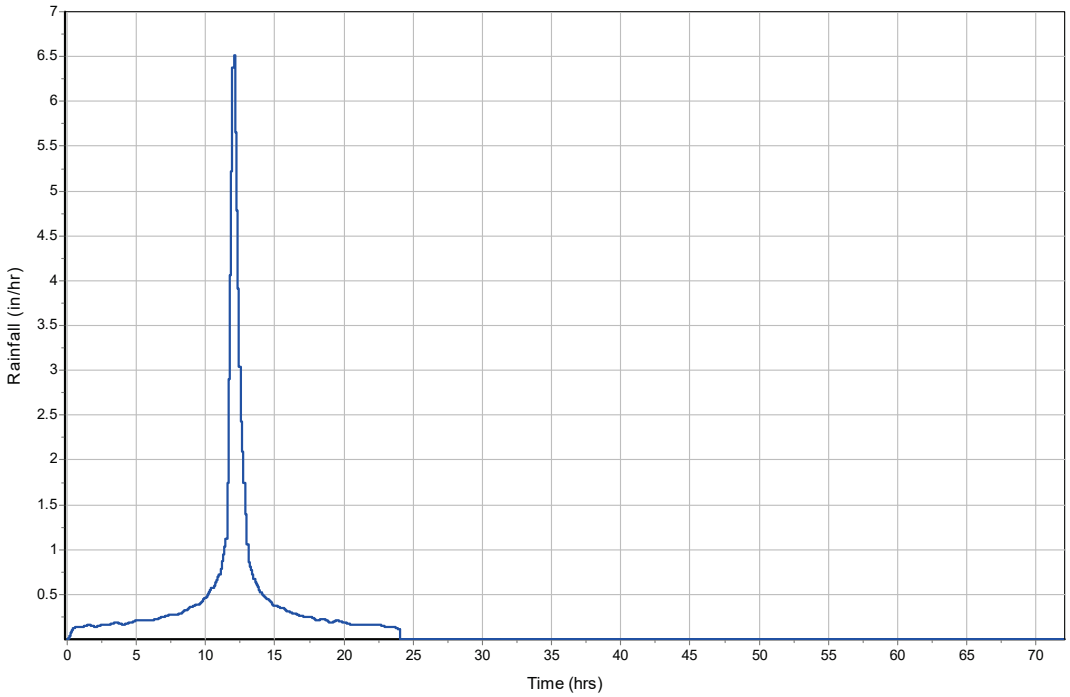
Total TOC (min) 35.12

Subbasin Runoff Results

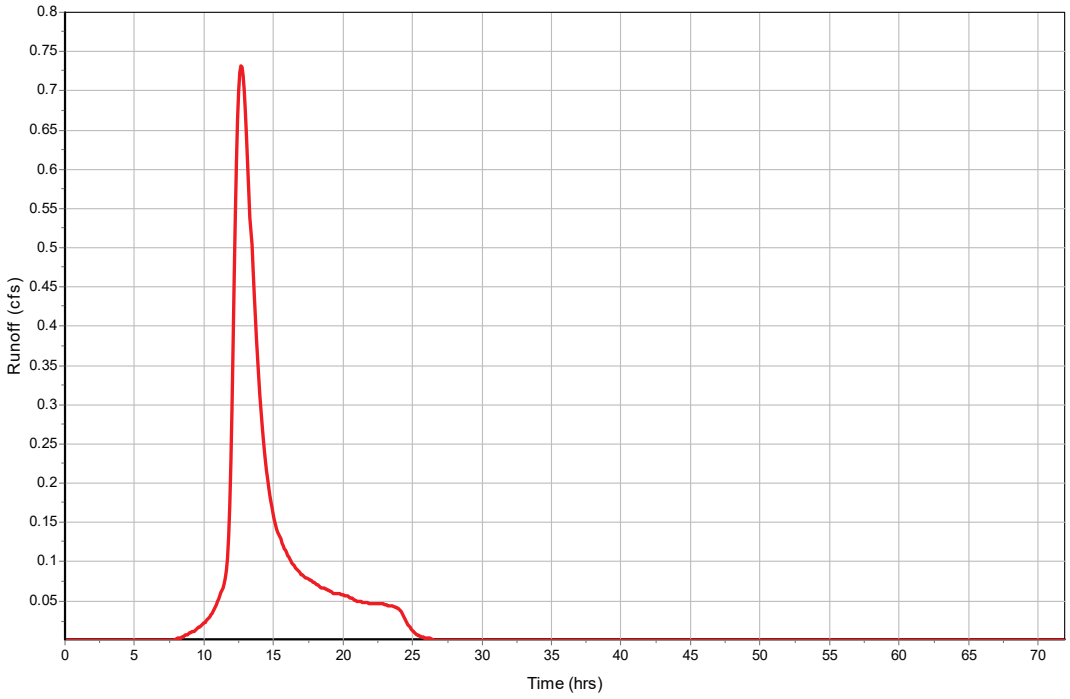
Total Rainfall (in)	11,6
Total Runoff (in)	6,37
Peak Runoff (cfs)	0,73
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,73
Peak Lateral Inflow (cfs)	0,73
Peak Outflow (cfs)	19,71
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	6
Max HGL Depth Attained (ft)	1,2
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 13:30
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 29: 10 YR-3 DAY PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	10YR 72HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	010 yr-72 hr	Cumulative	inches	Florida	Broward	10,00	10,80	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	10,79	5,68	1,88	0,61	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					15,57	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,61	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				15,57							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

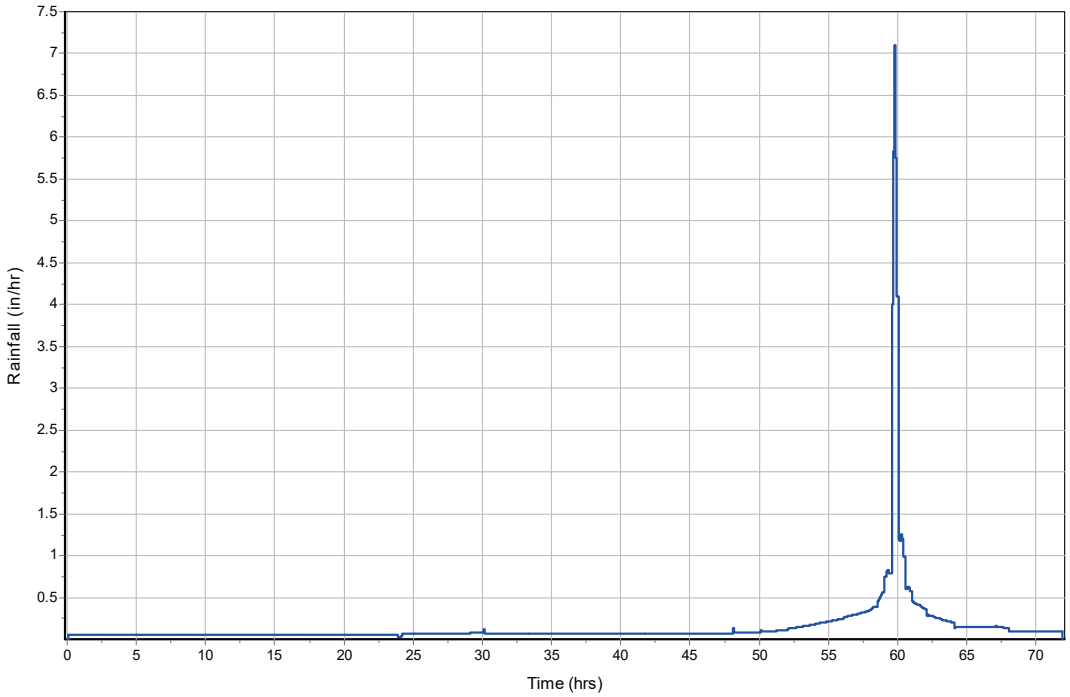
Total TOC (min) 35.12

Subbasin Runoff Results

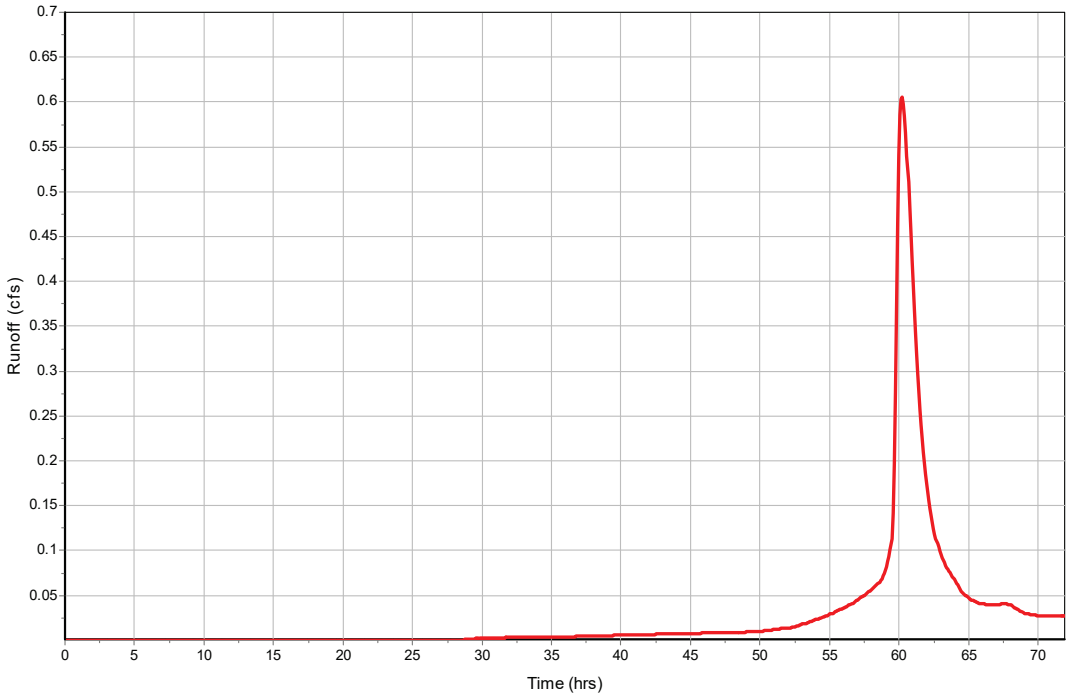
Total Rainfall (in)	10,79
Total Runoff (in)	5,68
Peak Runoff (cfs)	0,61
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,61
Peak Lateral Inflow (cfs)	0,61
Peak Outflow (cfs)	15,57
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	1 15:33
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 30: 10 YR-24 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	10YR 24HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	010 yr-24 hr	Cumulative	inches	Florida	Broward	10,00	9,10	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	9,10	4,30	1,42	0,49	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					9,62	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,49	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				9,62							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

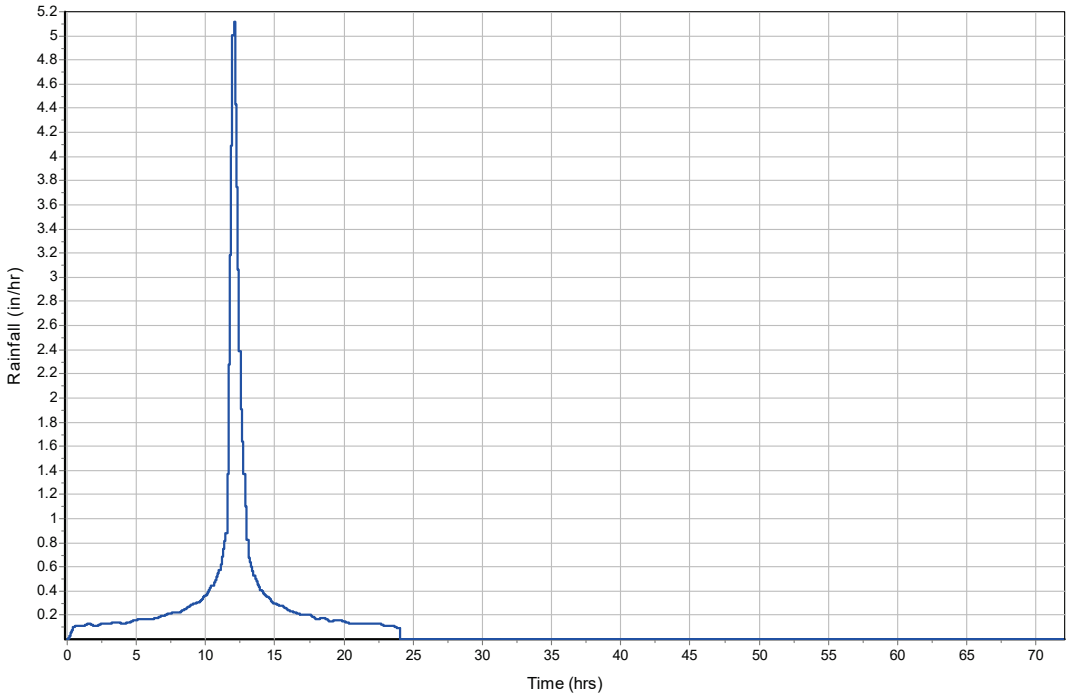
Total TOC (min) 35.12

Subbasin Runoff Results

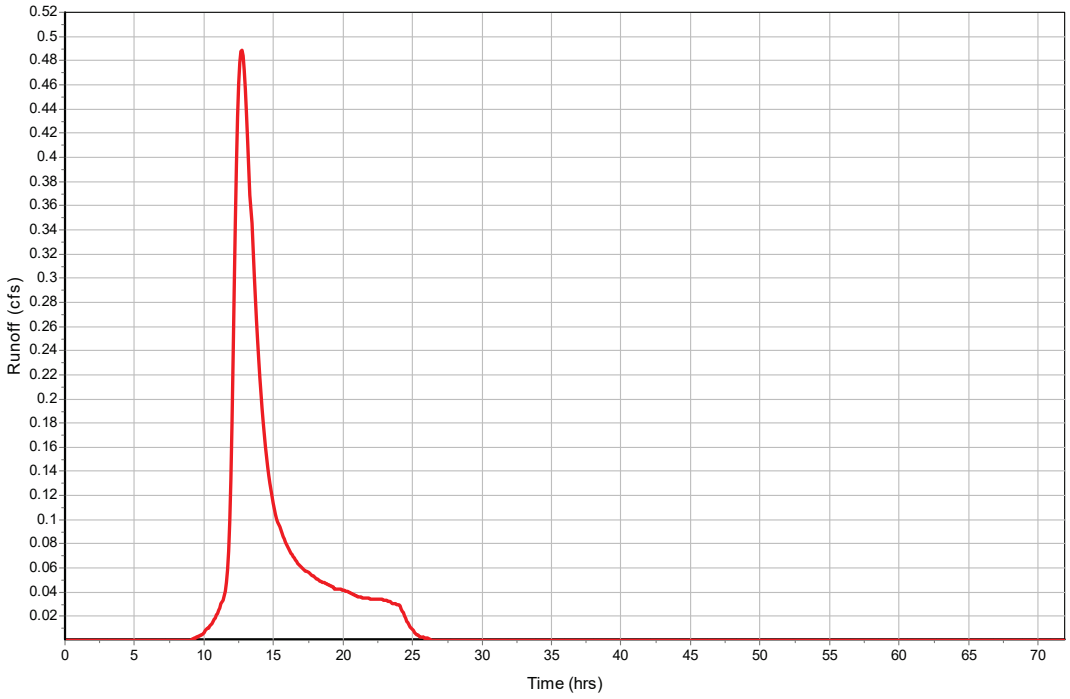
Total Rainfall (in)	9,1
Total Runoff (in)	4,3
Peak Runoff (cfs)	0,49
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,49
Peak Lateral Inflow (cfs)	0,49
Peak Outflow (cfs)	9,62
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 09:58
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 31: 5 YR-3 DAY PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	5YR 72HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	005 yr-72 hr	Cumulative	inches	Florida	Broward	5,00	9,00	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	8,99	4,21	1,39	0,46	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					9,07	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,46	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				9,07							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

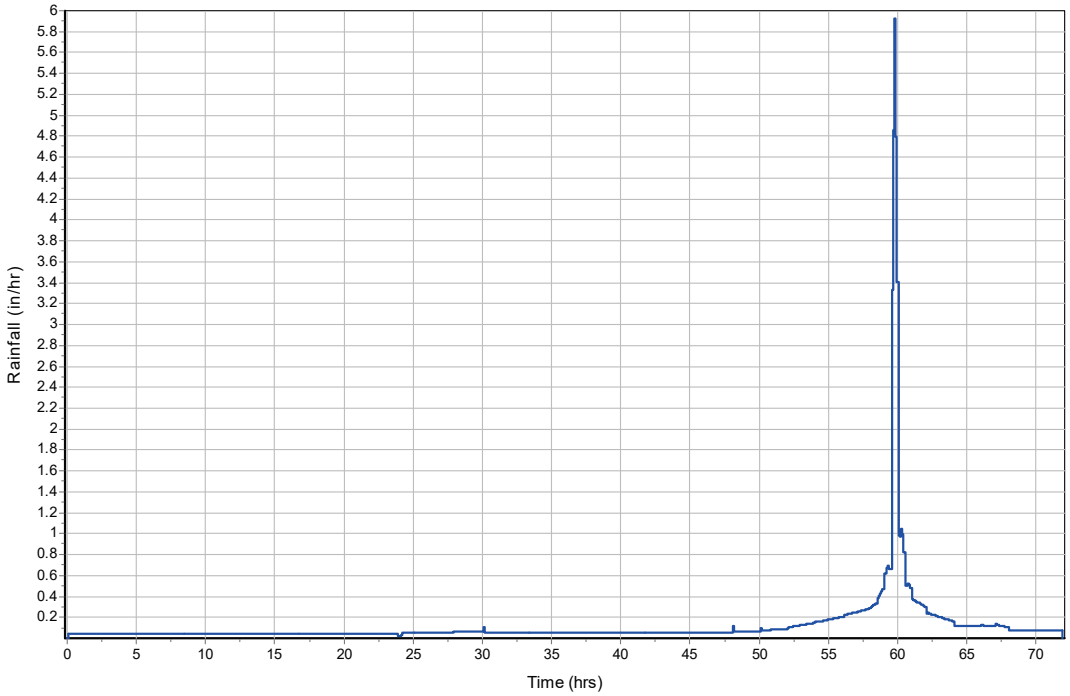
Total TOC (min) 35.12

Subbasin Runoff Results

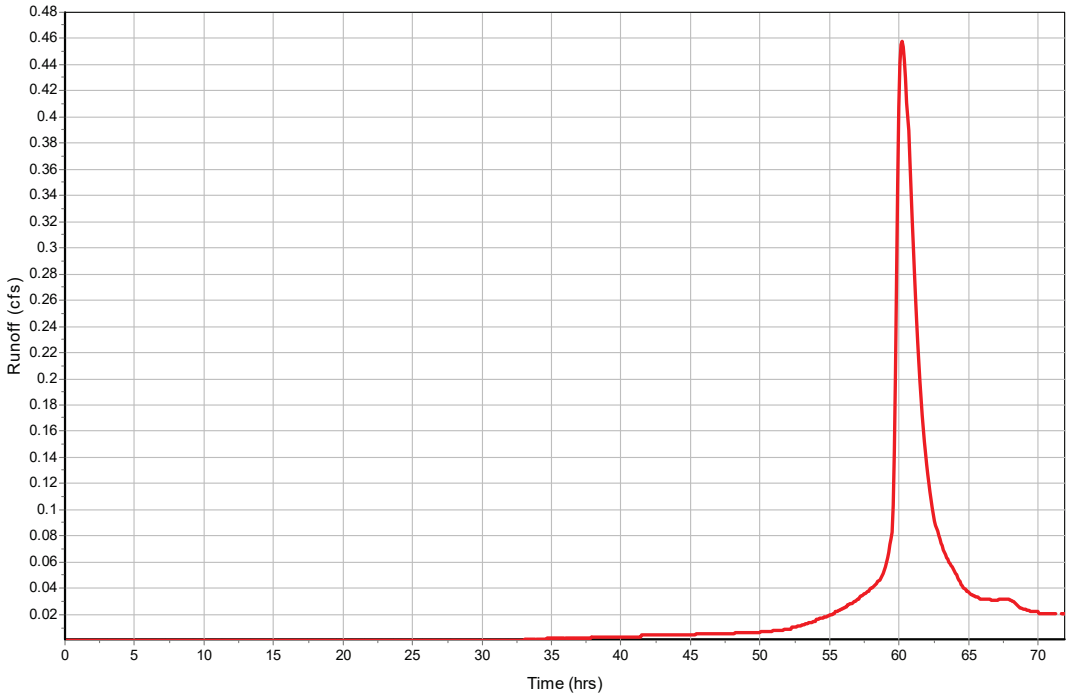
Total Rainfall (in)	8,99
Total Runoff (in)	4,21
Peak Runoff (cfs)	0,46
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,46
Peak Lateral Inflow (cfs)	0,46
Peak Outflow (cfs)	9,07
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	2 00:19
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 32: 5 YR-24 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	5YR 24HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	005 yr-24 hr	Cumulative	inches	Florida	Broward	5,00	7,50	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	7,50	3,07	1,01	0,34	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					6,17	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,34	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				6,17							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

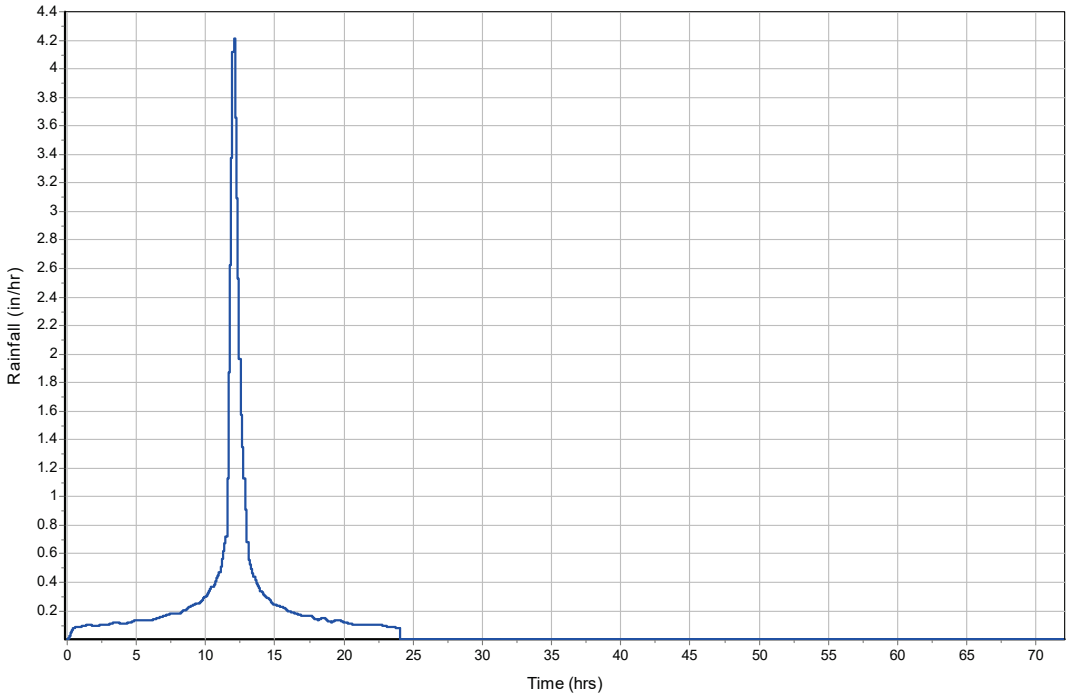
Total TOC (min) 35.12

Subbasin Runoff Results

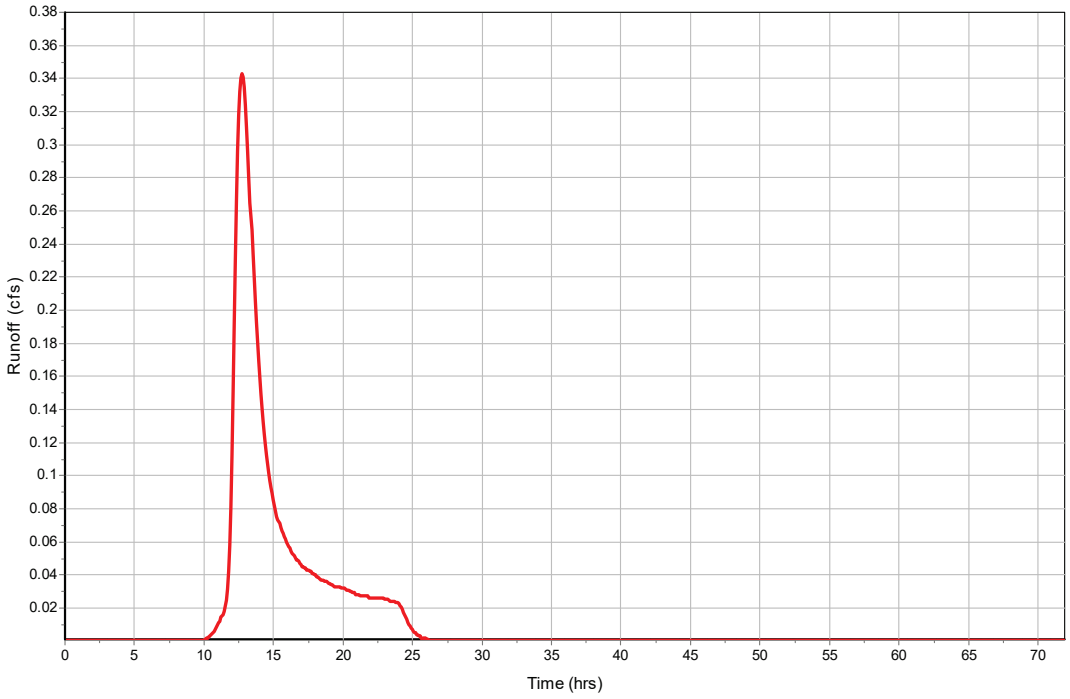
Total Rainfall (in)	7,5
Total Runoff (in)	3,07
Peak Runoff (cfs)	0,34
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,34
Peak Lateral Inflow (cfs)	0,34
Peak Outflow (cfs)	6,17
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 10:48
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 33: 2 YR-3 DAY PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	2YR 72HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	002 yr-72 hr	Cumulative	inches	Florida	Broward	2,00	7,00	SFWMD 72-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	6,99	2,69	0,89	0,30	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					5,04	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,30	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				5,04							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

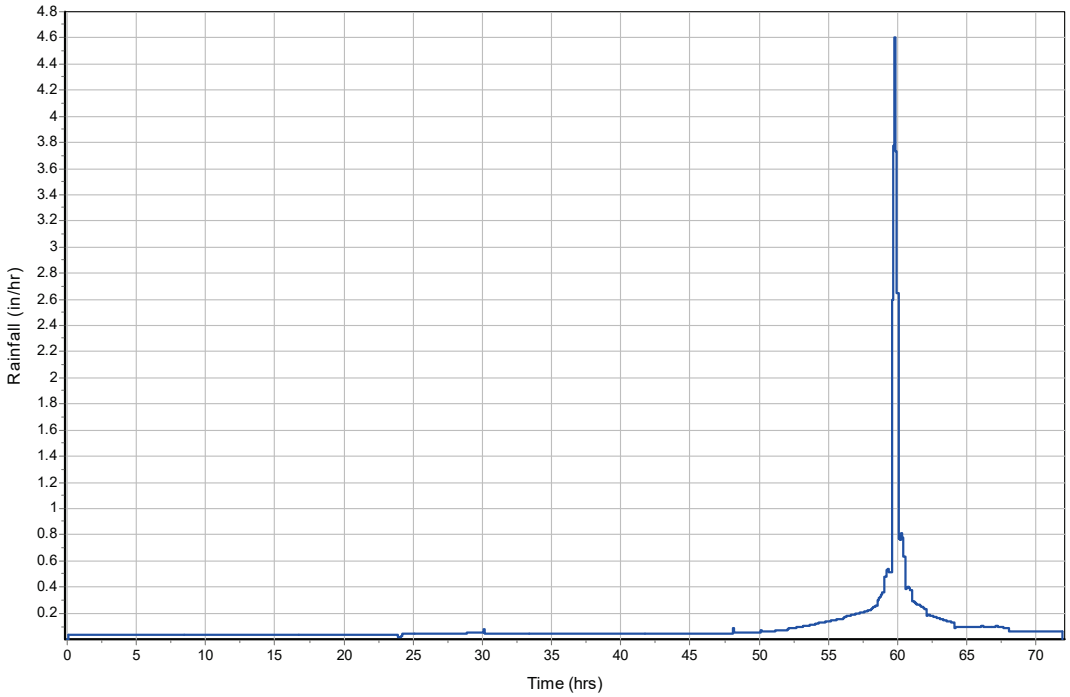
Total TOC (min) 35.12

Subbasin Runoff Results

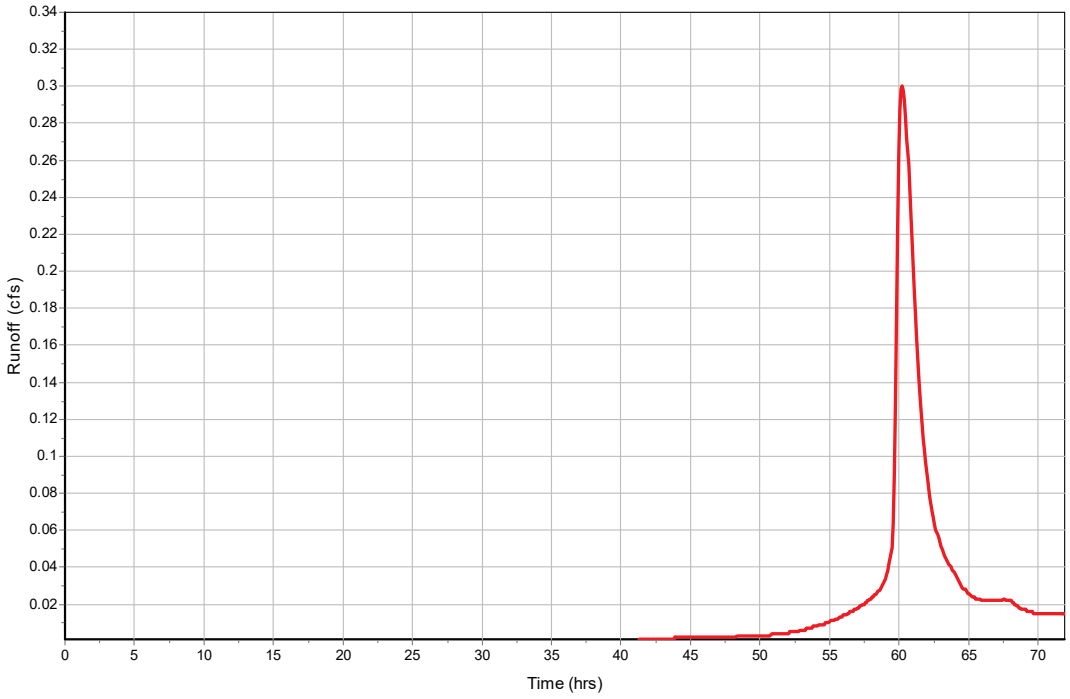
Total Rainfall (in)	6,99
Total Runoff (in)	2,69
Peak Runoff (cfs)	0,3
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,3
Peak Lateral Inflow (cfs)	0,3
Peak Outflow (cfs)	5,04
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	2 04:51
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

APPENDIX 34: 2 YR-24 HOUR PRE DEVELOPMENT SSA MODEL OUTPUT

Project Description

File Name	2YR 24HR PRE-DEV.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	SCS TR-55
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	YES

Analysis Options

Start Analysis On	00:00:00	0:00:00
End Analysis On	00:00:00	0:00:00
Start Reporting On	00:00:00	0:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

Number of Elements

	Qty
Rain Gages	1
Subbasins	1
Nodes	2
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	0
Storage Nodes	1
Links	1
Channels	0
Pipes	0
Pumps	0
Orifices	0
Weirs	1
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	RAIN25YR24HR	Time Series	002 yr-24 hr	Cumulative	inches	Florida	Broward	2,00	5,64	SCS Type II FL 24-hr

Subbasin Summary

SN	Subbasin ID	Area (ac)	Peak Rate Factor	Weighted Curve Number	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-08	0,33	200,00	61,00	5,64	1,77	0,58	0,19	0 00:35:07

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft^2)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	Out-02	Outfall	4,80					2,51	4,80					
2	S - 3 TYPE D INLET	Storage Node	4,80	6,00	4,80		20,00	0,19	4,80				0,00	0,00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)		(min)	
1	Weir-05	Weir	S - 3 TYPE D INLET	Out-02		4,80	4,80				2,51							

Subbasin Hydrology

Subbasin : Sub-08

Input Data

Area (ac)	0,33
Peak Rate Factor	200
Weighted Curve Number	61
Rain Gage ID	RAIN25YR24HR

Composite Curve Number

32 Soil/Surface Description	Area (acres)	Soil Group	Curve Number
> 75% grass cover, Good	0,33	B	61
Composite Area & Weighted CN	0,33		61

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft^2)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's roughness

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0,4	0	0
Flow Length (ft) :	186,38	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	5,64	0	0
Velocity (ft/sec) :	0,09	0	0
Computed Flow Time (min) :	35,12	0	0

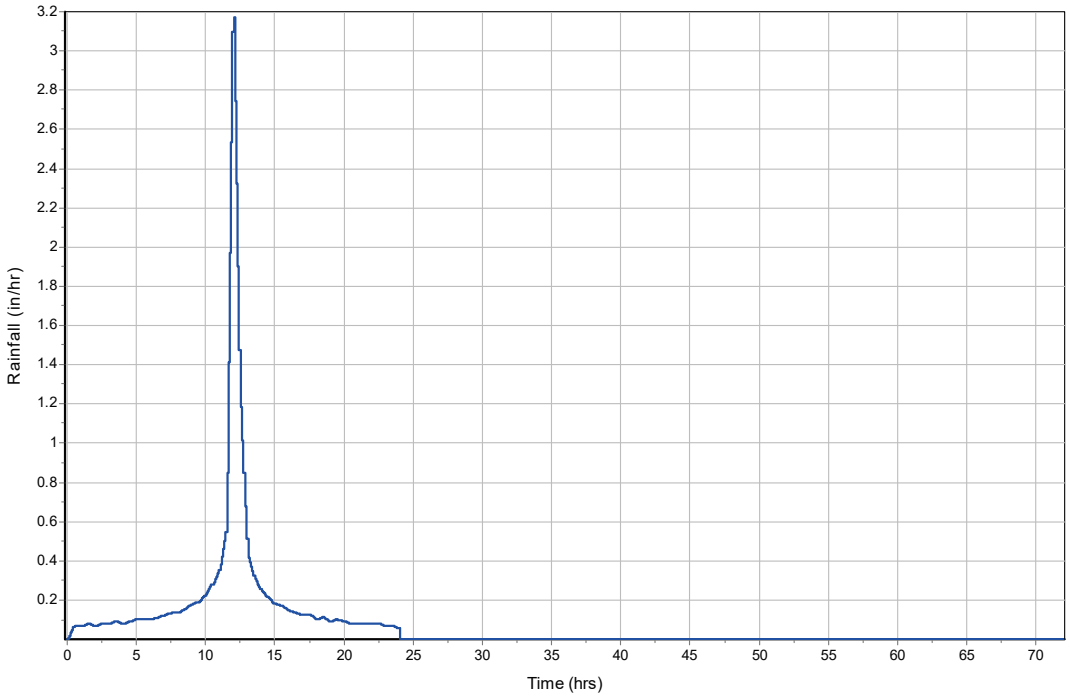
Total TOC (min) 35.12

Subbasin Runoff Results

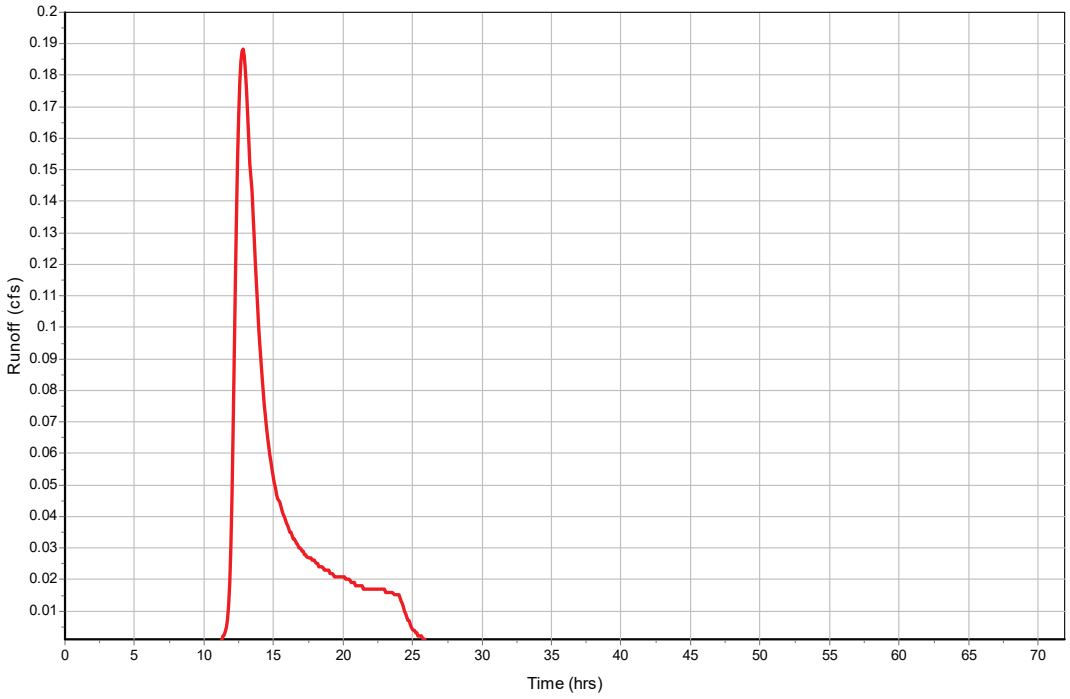
Total Rainfall (in)	5,64
Total Runoff (in)	1,77
Peak Runoff (cfs)	0,19
Weighted Curve Number	61
Time of Concentration (days hh:mm:ss)	0 00:35:07

Subbasin : Sub-08

Rainfall Intensity Graph



Runoff Hydrograph



Storage Nodes

Storage Node : S - 3 TYPE D INLET

Input Data

Invert Elevation (ft)	4,80
Max (Rim) Elevation (ft)	6,00
Max (Rim) Offset (ft)	1,20
Initial Water Elevation (ft)	4,80
Initial Water Depth (ft)	0,00
Ponded Area (ft^2)	20,00
Evaporation Loss	0,00

Outflow Weirs

SN	Element ID	Weir Type	Flap Gate	Crest Elevation (ft)	Crest Offset (ft)	Length (ft)	Weir Total Height (ft)	Discharge Coefficient
1	Weir-05	Rectangular	No	4,80	0,00	10,00	1,00	3,33

Output Summary Results

Peak Inflow (cfs)	0,19
Peak Lateral Inflow (cfs)	0,19
Peak Outflow (cfs)	2,51
Peak Exfiltration Flow Rate (cfm)	0
Max HGL Elevation Attained (ft)	4,8
Max HGL Depth Attained (ft)	0
Average HGL Elevation Attained (ft)	4,8
Average HGL Depth Attained (ft)	0
Time of Max HGL Occurrence (days hh:mm)	0 11:42
Total Exfiltration Volume (1000-ft^3)	0
Total Flooded Volume (ac-in)	0
Total Time Flooded (min)	0
Total Retention Time (sec)	0

Nathan Poole
2025.11.14 10:53:22-05'00'

November 14, 2025

Nathan Poole, Professional Engineer, State of Florida, License No. 79444

This item has been digitally signed and sealed by Nathan Poole, PE on 11/14/2025.

Signature must be verified on any electronic copies.

Daniela Candiales
RSP Engineers, Inc.
1420 NE Miami PL, #2609
Miami, FL 33132

RE: 808-814 West State Road 84 Outdoor Storage Trip Generation Memo

Dear Daniela Candiales:

This project is located at 808-814 West State Road 84 in Ft. Lauderdale, Florida. A location map is provided as Attachment 1. The property is currently vacant. The proposed site will include approximately 14,000 square feet of outdoor storage. The survey of the property is included as Attachment 2.

Trip Generation

Trips for the Project were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual 12th Edition, ITE Land Use Code (LUC) 150 Warehouse. While this LUC is typically used for warehouse buildings, there is no LUC specifically for an outdoor storage area. In addition, this LUC best fits the intended use of the space, just without an overhead structure. Using this LUC, a trip generation of 3 trips (1 in and 2 out) for the PM peak hour was estimated. A summary of the trip generation is shown in Table 1. The description for LUC 150 Warehouse and the associated ITE Trip Generation graphs are included as Attachment 3.

Table 1: Trip Generation

Land Use	ITE LUC	Size	Units	Avg Rate or Equation	Gross Daily Trips*	Gross AM Peak Hour Trips*			Gross PM Peak Hour Trips*		
						In	Out	Total	In	Out	Total
Warehouse	150	18.00	1000 Sq. Ft. GFA	Avg Rate	25	2	0	2	1	2	3

*Source: ITE Trip Generation Manual, 12th Edition

Conclusion

Using LUC 150 Warehouse, this development is projected to generate 3 trips (1 in and 2 out) for the PM peak hour.

Sincerely,

Nathan Poole, PE
Senior Traffic/ITS Engineer

Attachments

ATTACHMENT 1

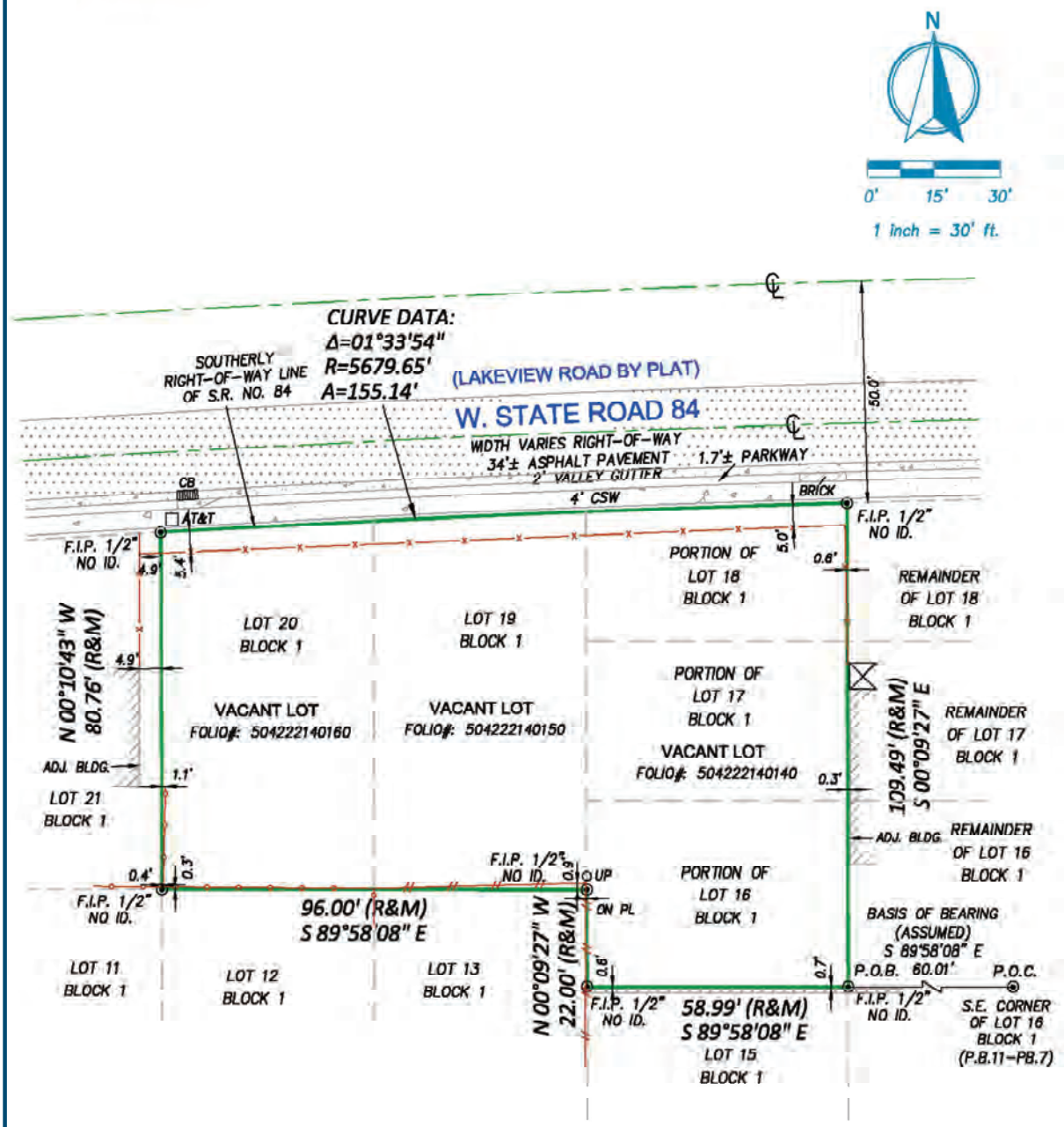
LOCATION MAP


N
SW 4th Ave
SW 8th Ave
SW 9th Ave
SW 3rd Ave
SW 4th Ave
SW 6th Ave
SW 21st St
SW 22nd St
SW 23rd St
SW 24th St
SW 25th St
SW 26th St
SW 26th Ct
Martin Luther King Jr Blvd

ATTACHMENT 2

PROPERTY SURVEY

Ordered By:
COTTRELL TITLE



POINTS OF INTEREST:
NONE VISIBLE.

MAP OF BOUNDARY SURVEY

Property Address:
808-814 W STATE RD 84
FORT LAUDERDALE, FL 33315

OnlineLand SURVEYORS, INC.
6175 NW 153rd St # 401,
Miami Lakes, FL 33014
www.OnlineLandSurveyors.Com

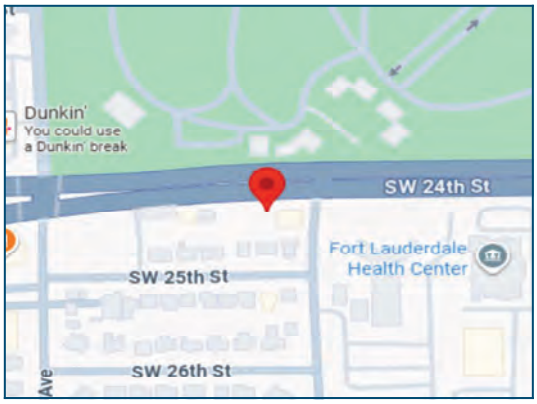
SURVEYOR'S CERTIFICATION: *I HEREBY CERTIFY THAT THIS "BOUNDARY SURVEY" IS A TRUE AND CORRECT REPRESENTATION OF THE SURVEY PREPARED UNDER MY DIRECTION. THIS COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS, AS SET FORTH BY THE STATE OF FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPER IN CHAPTER 5J-17.051, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.*

No. 6453 STATE OF FLORIDA REGISTERED SURVEYOR & MAPPER

SIGNED _____ **FOR THE FIRM**

GUILLERMO A. GUERRERO ***P.S.M. No. 6453***
STATE OF FLORIDA

NOT VALID WITHOUT AN AUTHENTIC ELECTRONIC SIGNATURE AND AUTHENTICATED ELECTRONIC SEAL AND/OR THIS MAP IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A LICENSE SURVEYOR AND MAPPER.



LOCATION MAP N.T.S.

PROPERTY FRONT VIEW

CERTIFIED TO:

WALLACE LOGISTICS SERVICES LLC
COTTRELL TITLE LLC
WFG NATIONAL TITLE INSURANCE CO.
ITS SUCCESSORS AND/OR ASSIGNS AS THEIR INTEREST MAY APPEAR.

FLOOD INFORMATION:

Community Number:	CITY OF FORT LAUDERDALE 125105
Panel Number:	12011C0559J
Suffix:	J
Date of Firm Index:	7/31/2024
Flood Zone:	X
Base Flood Elevation:	N/A
Date of Survey:	10/20/2025

LEGAL DESCRIPTION: Please see the last page for long Legal Description.

Surveyor's Legend

PROPERTY LINE
STRUCTURE
CONC. BLOCK WALL
CHAIN-LINK or WIRE FENCE
WOOD FENCE
IRON FENCE
EASEMENT
CENTER LINE
WOOD DECK
CONCRETE
ASPHALT
BRICK/TILE
WATER
APPROXIMATE EDGE OF WATER
COVERED AREA

	TREE
P.P.	POWER POLE
C.B.	CATCH BASIN
C.U.E.	COUNTY UTILITY ESMT.
I.E./E.E.	INGRESS/ EGRESS ESMT.
U.E.	UTILITY EASEMENT
FND. OR F	FOUND IRON PIPE/ REBAR
	PIN AS NOTED ON PLAT
LB#	LICENSE # - BUSINESS
LS#	LICENSE # - SURVEYOR
CALC	CALCULATED POINT
SET	SET MONUMENT
▲	CONTROL POINT
■	CONCRETE MONUMENT
ELEV	ELEVATION
P.T.	POINT OF TANGENCY
P.C.	POINT OF CURVATURE
P.R.M.	PERMANENT REFERENCE MONUMENT
P.C.C.	POINT OF COMPOUND CURVATURE
P.R.C.	POINT OF REVERSE CURVATURE
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
P.C.P.	PERMANENT CONTROL POINT
M	FIELD MEASURED
P	PLATTED MEASURMENT
D	DEED
C	CALCULATED

L.M.E.	LAKE or LANDSCAPE MAINT. ESMT.
R.O.E.	ROOF OVERHANG EASEMENT
P.P.	POOL PUMP
PL	PLANTER OR PROPERTY LINE
I.D.	IDENTIFICATION
B.C.	BLOCK CORNER
B.R.	BEARING REFERENCE
Δ	CENTRAL ANGLE or DELTA
R	RECORD OR RADIUS
RAD.	RADIAL
N.R.	NON RADIAL
TYP.	TYPICAL
I.R.	IRON ROD
I.P.	IRON PIPE
N&D	NAIL & DISK
PK NAIL	PARKER-KALON NAIL
D.H.	DRILL HOLE
◎	WELL
	FIRE HYDRANT
M.H.	MAN HOLE
O.H.	OVERHEAD LINES
TX	TRANSFORMER
CATV	CABLE TV. RISER
W.M.	WATER METER
P/E	POOL EQUIPMENT
CONC	CONCRETE
ML	MONUMENT LINE

ESMT.	EASEMENT
D.E.	DRAINAGE EASEMENT
L.B.E.	LANDSCAPE BUFFER ESMT.
L.A.E.	LIMITED ACCESS EASEMENT
TEL.	TELEPHONE FACILITIES
U.P.	UTILITY POLE
E.U.B.	ELECTRIC UTILITY BOX
SEP. T.	SEPTIC TANK
D.F.	DRAIN-FIELD
AC	AIR CONDITIONER
CSW	CONC SIDEWALK
DRIVE	DRIVEWAY
SCR.	SCREENED AREA
GAR.	GARAGE
ENCL.	ENCLOSURE
N.T.S.	NOT TO SCALE
F.F.E.	FINISHED FLOOR ELEVATION
T.O.B.	TOP OF BANK
E.O.W.	EDGE OF WATER
E/P OR E.O.P.	EDGE OF PAVEMENT
C.V.G.	CONCRETE VALLEY GUTTER
B.S.L.	BUILDING SETBACK LINE
S.T.L.	SURVEY TIE LINE
℄	CENTER LINE
R/W	RIGHT OF WAY
P.U.E.	PUBLIC UTILITY EASEMENT
C.M.E.	CANAL MAINTENANCE EASEMENT
A.E.	ANCHOR ESMT / ACCESS ESMT

GENERAL NOTES:

1) *LEGAL DESCRIPTION PROVIDED BY OTHERS.*
2) *EXAMINATION OF THE ABSTRACT OF TITLE WILL HAVE TO BE MADE TO DETERMINE RECORDED INSTRUMENTS, IF ANY, AFFECTING PROPERTY.*
3) *THE LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR EASEMENT OR OTHER RECORDED ENCUMBRANCES NOT SHOWN ON THE PLAT.*
4) *THE PURPOSE OF THIS SURVEY IS FOR USE IN OBTAINING TITLE INSURANCE AND FINANCING AND SHOULD NOT BE USED FOR CONSTRUCTION, PERMITTING DESIGN, OR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF ONLINE LAND SURVEYORS INC.*
5) *UNDERGROUND PORTIONS OF FOOTINGS, FOUNDATIONS OR OTHER IMPROVEMENTS WERE NOT LOCATED.*
6) *ONLY VISIBLE AND ABOVE GROUND IMPROVEMENTS AND ENCROACHMENTS LOCATED ARE SHOWN ON SKETCH.*
7) *FENCE OWNERSHIP NOT DETERMINED.*
8) *WALL TIES ARE TO THE FACE OF THE WALL.*
9) *BEARINGS ARE BASED ON AN ASSUMED MERIDIAN UNLESS OTHERWISE SHOWN. BOUNDARY SURVEY MEANS A DRAWING AND/OR GRAPHIC REPRESENTATION OF THE*
10) *SURVEY WORK PERFORMED IN THE FIELD, COULD BE DRAWN AT A SHOWN SCALE AND/OR NOT TO SCALE(N.T.S.) ALL DIMENSIONS ARE ROUNDED TO THE NEAREST TENTH.*
11) *NO IDENTIFICATION FOUND ON PROPERTY CORNERS UNLESS NOTED.*
12) *NOT VALID UNLESS SEALED WITH THE SIGNING SURVEYORS EMBOSSED SEAL OR ELECTRONIC SEAL.*
13) *DIMENSIONS SHOWN ARE PER PLAT AND MEASURED IN THE FIELD UNLESS OTHERWISE SHOWN.*
14) *ELEVATIONS IF SHOWN ARE BASED UPON N.G.V.D. 1929 UNLESS OTHERWISE NOTED. THIS IS A BOUNDARY SURVEY UNLESS OTHERWISE NOTED.*
15) *THIS BOUNDARY SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE*
16) *ENTITIES NAMED HEREON; THE CERTIFICATIONS DO NOT EXTEND TO ANY UNNAMED PARTIES.*
THE EXISTENCE OF ADDITIONAL RECORDED OR UNRECORDED INSTRUMENTS,
17) *EASEMENTS AND /OR RESOLUTIONS NOT AVAILABLE TO SURVEYOR MAY EXIST AND ARE NOT DEPICTED IN THIS SKETCH.*

Florida Land Title Association
FLTA
Affiliate Member

Printing to Scale:

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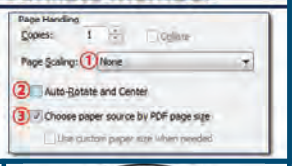
2. Deselect "Auto-Rotate and Center"
3. Select "Choose paper source by PDF page size"



FIELD WORK:	***10/17/2025***
DRAWN BY:	***C.S.***
CHECKED BY:	***G.A.G.***
FINAL REVISION:	***10/20/2025***
COMPLETED:	***10/20/2025***
SCALE:	***1" = 30'***
SURVEY CODE:	***O-134542***

G. A. GUERRERO
CERTIFICATE
No. 6453
STATE OF
FLORIDA
REGISTERED SURVEYOR & MAPPER

LB# 7904

OnlineLand SURVEYORS, INC.

6175 NW 153rd St # 401
Miami Lakes, FL 33014
Phone: (305) 910-0123
Fax: (305) 675-0999
www.OnlineLandSurveyors.Com

LEGAL DESCRIPTION:

THAT PORTION OF LOTS 16, 17, 18, 19 AND 20, BLOCK 1, LYING SOUTH OF THE SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 84 (S.W. 24TH STREET), LESS THE EAST 60.00 FEET OF SAID LOTS 16, 17 AND 18, "LAKEWAY", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 11, PAGE 7, OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 20; THENCE NORTH 00°09'27" WEST ON THE WEST LINE OF SAID LOT 20, A DISTANCE OF 80.75 FEET TO THE INTERSECTION WITH SAID SOUTHERLY RIGHT-OF - WAY LINE OF STATE ROAD NO. 84 (S.W. 24TH STREET), SAID POINT BEING ON THE ARC OF A NON-TANGENT CURVE WHOSE RADIUS POINT BEARS SOUTH 03°14'20" EAST; THENCE EASTERLY ON THE ARC OF SAID CURVE TO THE RIGHT, HAVING A RADIUS OF 5679.65 FEET, A CENTRAL ANGLE OF 01°33'54", FOR AN ARC LENGTH OF 155.13 FEET TO THE INTERSECTION WITH THE WEST LINE OF THE EAST 60.00 FEET OF SAID LOT 18; THENCE SOUTH 00°09'27" EAST ON SAID WEST LINE AND CONTINUING ON THE WEST LINE OF THE EAST 60.00 FEET OF LOTS 17 AND 16, FOR A DISTANCE OF 109.49 FEET TO THE INTERSECTION WITH THE SOUTH LINE OF SAID LOT 16; THENCE NORTH 89°58'08" WEST ON SAID SOUTH LINE 59.00 FEET TO THE SOUTHWEST CORNER OF SAID LOT 16; THENCE NORTH 00°09'27" WEST ON THE WEST LINE OF SAID LOT 16 FOR A DISTANCE OF 22.00 FEET TO THE SOUTHEAST CORNER OF SAID LOT 19; THENCE NORTH 89°58'08" WEST ON THE SOUTH LINE OF LOTS 19 AND 20 FOR 96.00 FEET TO THE POINT OF BEGINNING.

SURVEYOR'S CERTIFICATION: I HEREBY CERTIFY THAT THIS "BOUNDARY SURVEY" IS A TRUE AND CORRECT REPRESENTATION OF A SURVEY PREPARED UNDER MY DIRECTION. THIS COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS, AS SET FORTH BY THE STATE OF FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPER IN CHAPTER 5J-17.051, FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

No. 6453 STATE OF FLORIDA REGISTERED SURVEYOR & MAPPER

SIGNED _____ **FOR THE FIRM**

GUILLERMO A. GUERRERO ***P.S.M. No. 6453***

STATE OF FLORIDA

NOT VALID WITHOUT AN AUTHENTIC ELECTRONIC SIGNATURE AND AUTHENTICATED ELECTRONIC SEAL AND/OR THIS MAP IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A LICENSE SURVEYOR AND MAPPER.

OnlineLand SURVEYORS,INC.

6175 NW 153rd St # 401
Miami Lakes, FL 33014
Phone: (305) 910-0123
Fax: (305) 675-0999
LB #: 7904
www.OnlineLandSurveyors.Com

Accepted By: _____

ATTACHMENT 3

ITE LUC 150 DESCRIPTION AND TRIP GENERATION GRAPHS

Land Use: 150
Warehouse

Description

A warehouse is a large building primarily devoted to the storage of goods and materials but may also include office and maintenance areas. Stored goods can include raw materials, packing materials, parts, or other finished goods. A warehouse may provide long-term storage or serve as a distribution center for transferring goods between carriers (e.g., from long-haul carrier to a local delivery vehicle). A warehouse typically has loading docks to load and unload goods from trucks.

Additional Data

An additional resource which provides more information about warehouse types and definitions is available from NAIOP Research Foundation: Commercial Real Estate Terms and Definitions report from April 2024. https://www.naiop.org/globalassets/research-and-publications/report/terms-and-definitions-/naiop-2024-terms-and-definitions.pdf

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in California, Connecticut, Florida, Minnesota, New Jersey, Ohio, Oregon, Pennsylvania, and Texas.

Source Numbers

406, 411, 443, 579, 583, 596, 598, 611, 619, 642, 752, 869, 875, 876, 914, 940, 1050, 1214, 1221, 1257, 1286

Warehouse
(150)

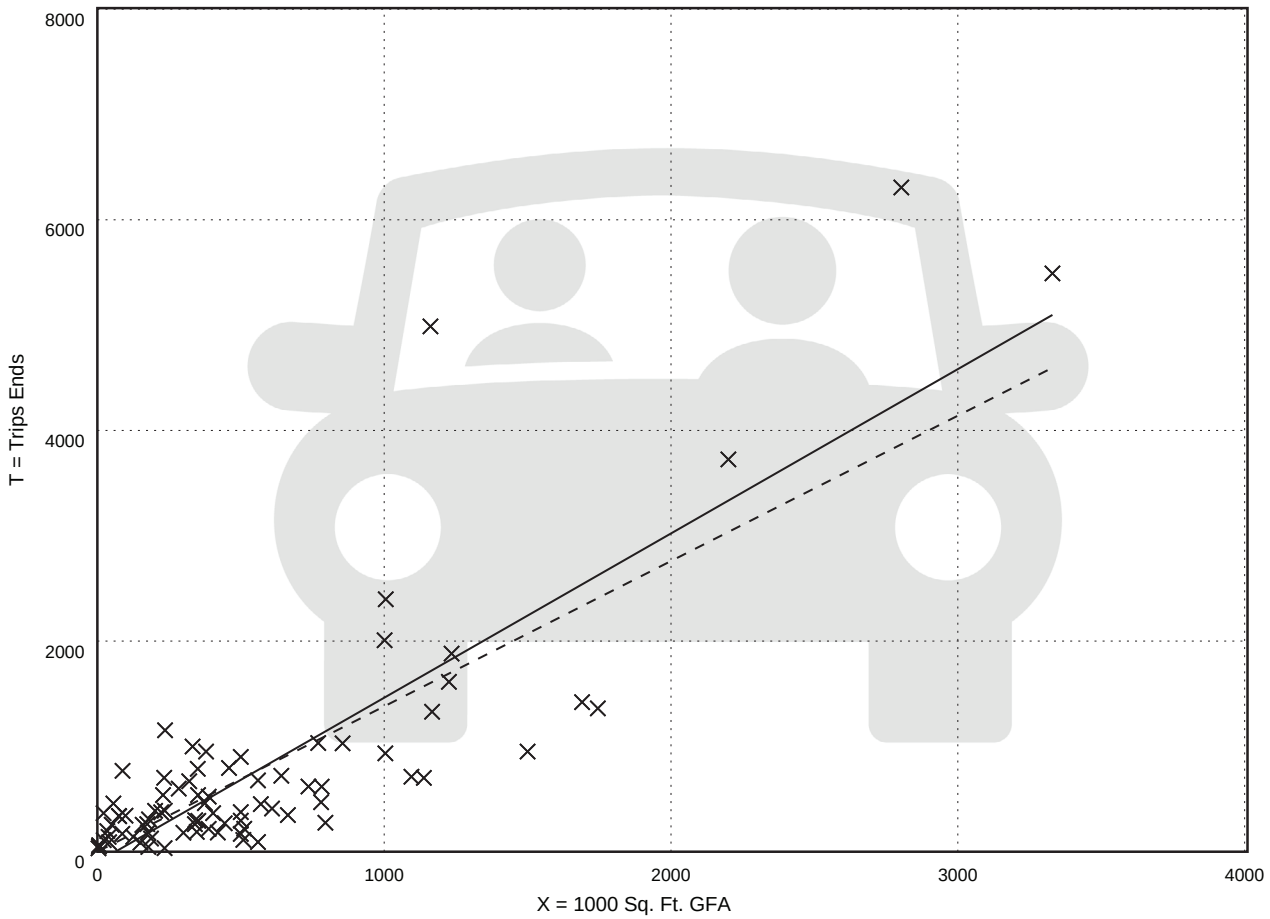
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 81
Avg. 1000 Sq. Ft. GFA: 554
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.38	0.15 - 16.93	1.05

Data Plot and Equation



Fitted Curve Equation: T = 1.56(X) - 97.97

R^2= 0.69

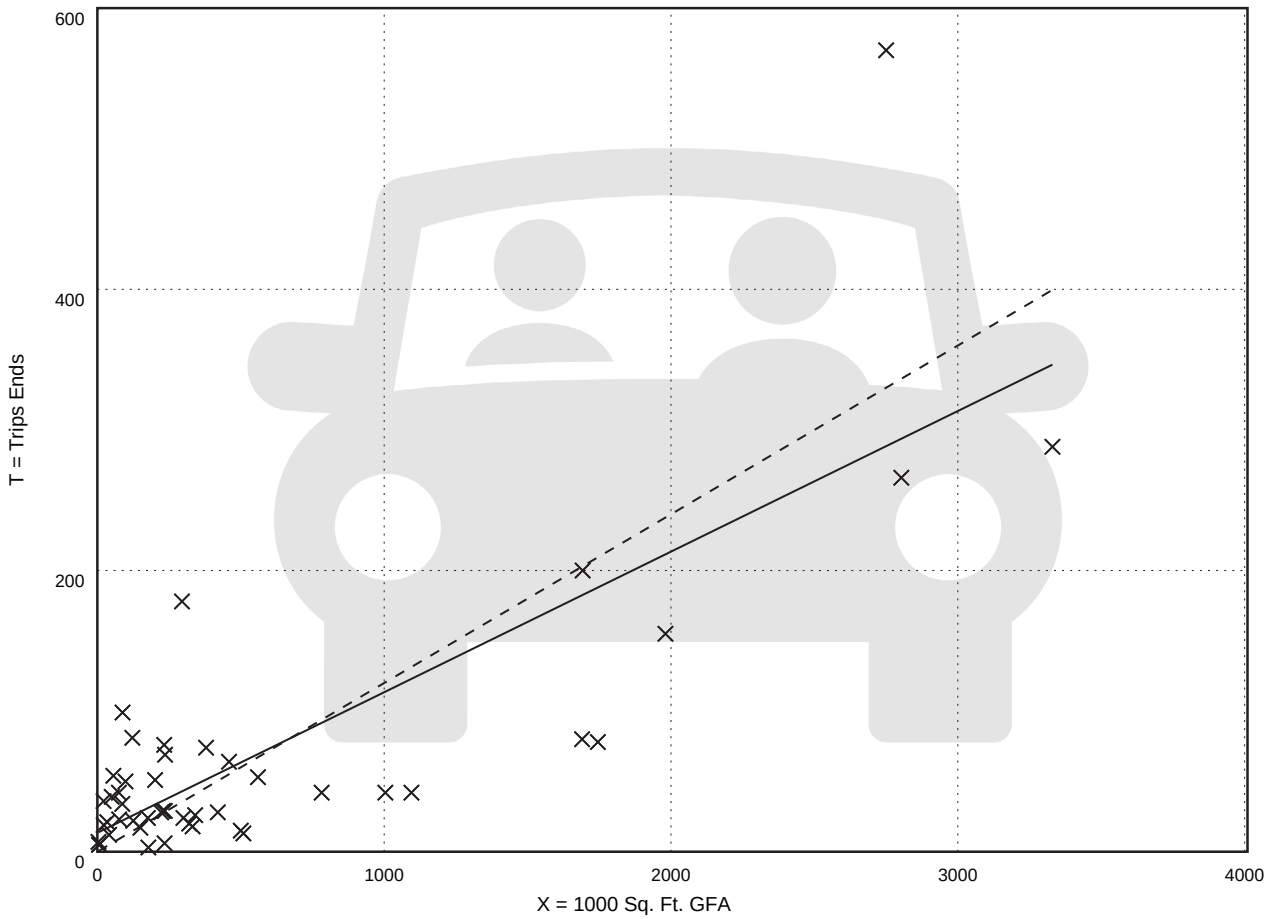
Warehouse
(150)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	47
Avg. 1000 Sq. Ft. GFA:	559
Directional Distribution:	77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.12	0.02 - 1.80	0.14

Data Plot and Equation



Fitted Curve Equation: T = 0.10(X) + 13.43

R^2= 0.62

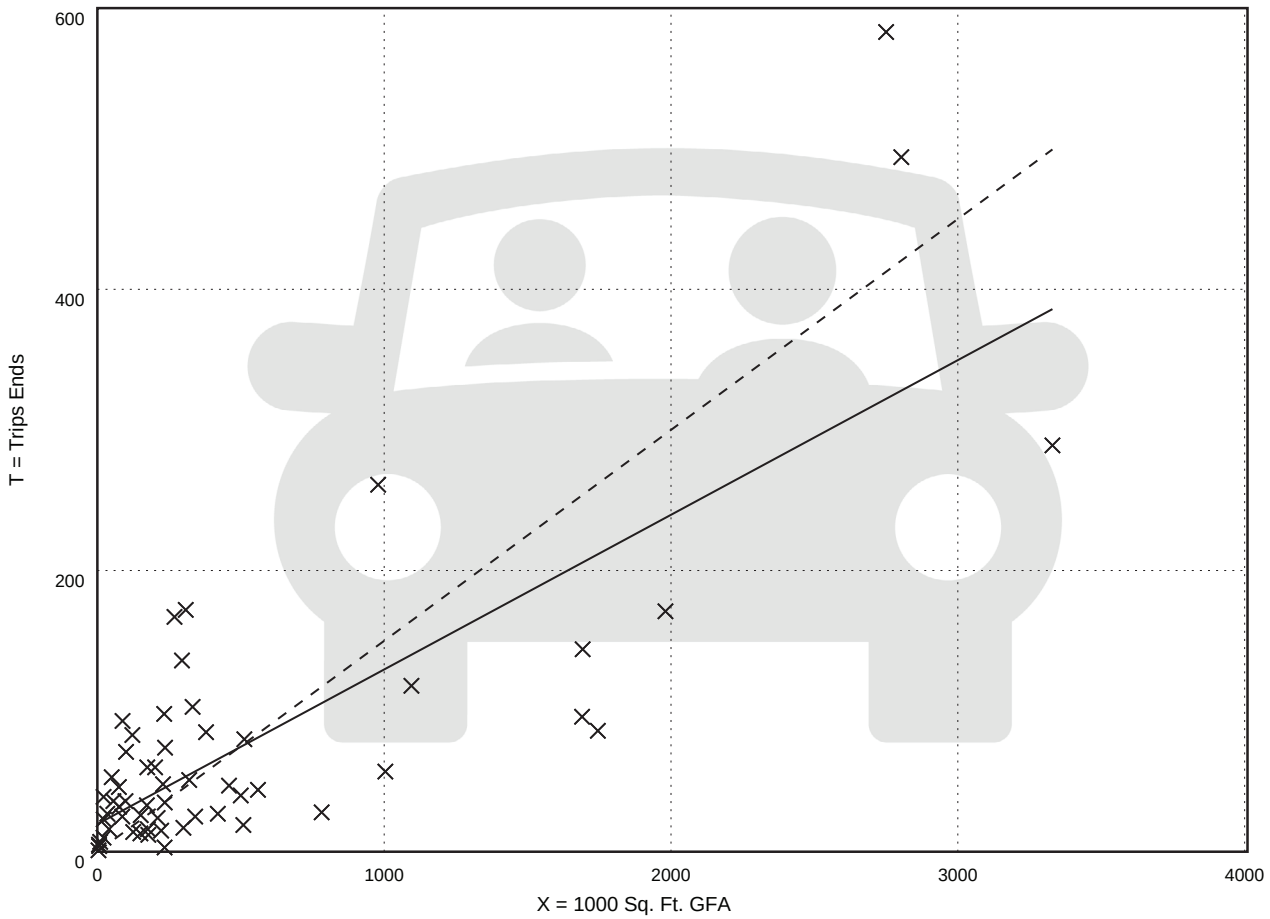
Warehouse
(150)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	58
Avg. 1000 Sq. Ft. GFA:	503
Directional Distribution:	28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.15	0.01 - 1.80	0.15

Data Plot and Equation



Fitted Curve Equation: T = 0.11(X) + 19.62

R^2= 0.63

Warehouse
(150)

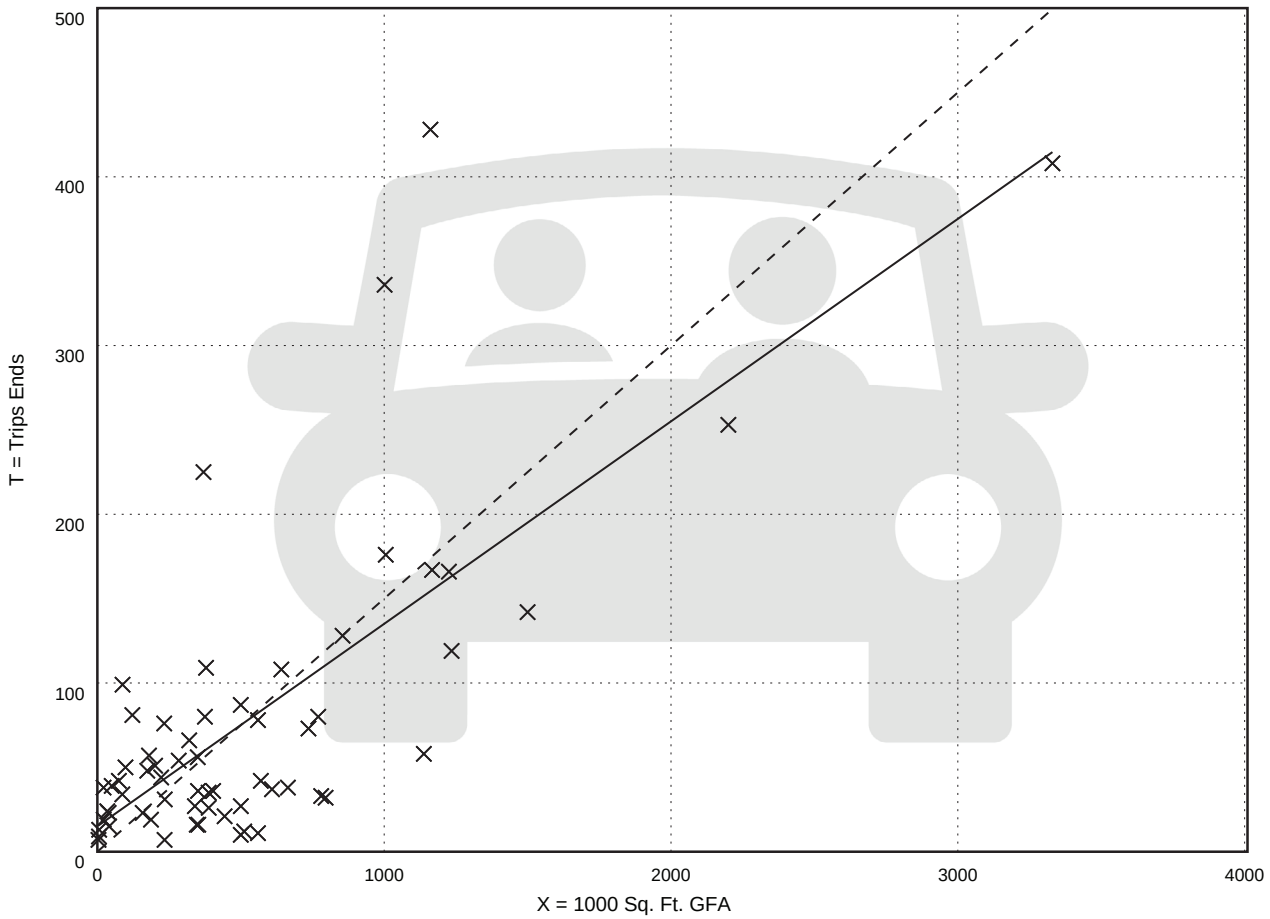
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 62
Avg. 1000 Sq. Ft. GFA: 518
Directional Distribution: 70% entering, 30% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.15	0.02 - 2.08	0.14

Data Plot and Equation



Fitted Curve Equation: T = 0.12(X) + 15.07

R^2= 0.54

Warehouse
(150)

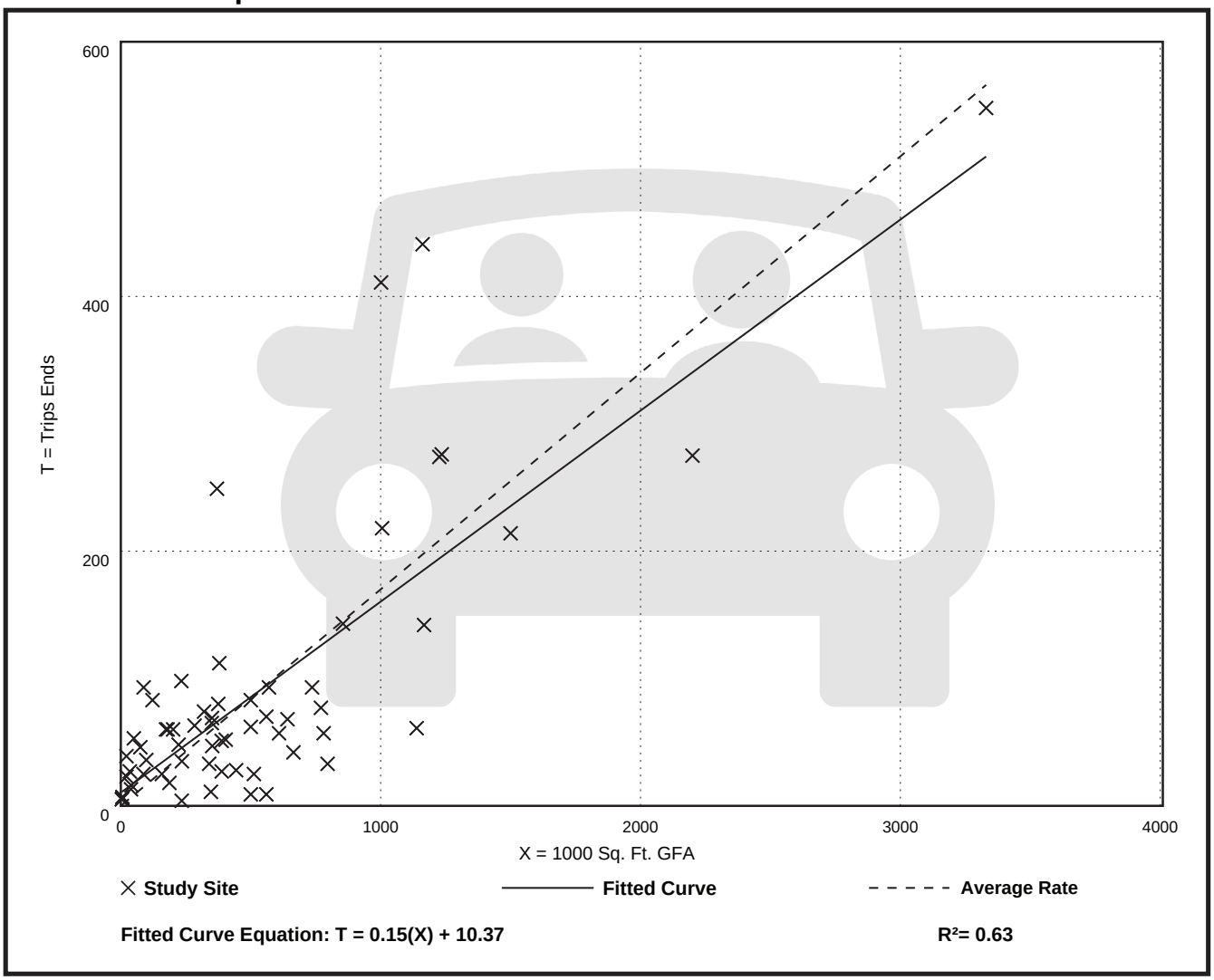
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 62
Avg. 1000 Sq. Ft. GFA: 518
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.80	0.14

Data Plot and Equation



Fitted Curve Equation: T = 0.15(X) + 10.37

R^2= 0.63

Warehouse
(150)

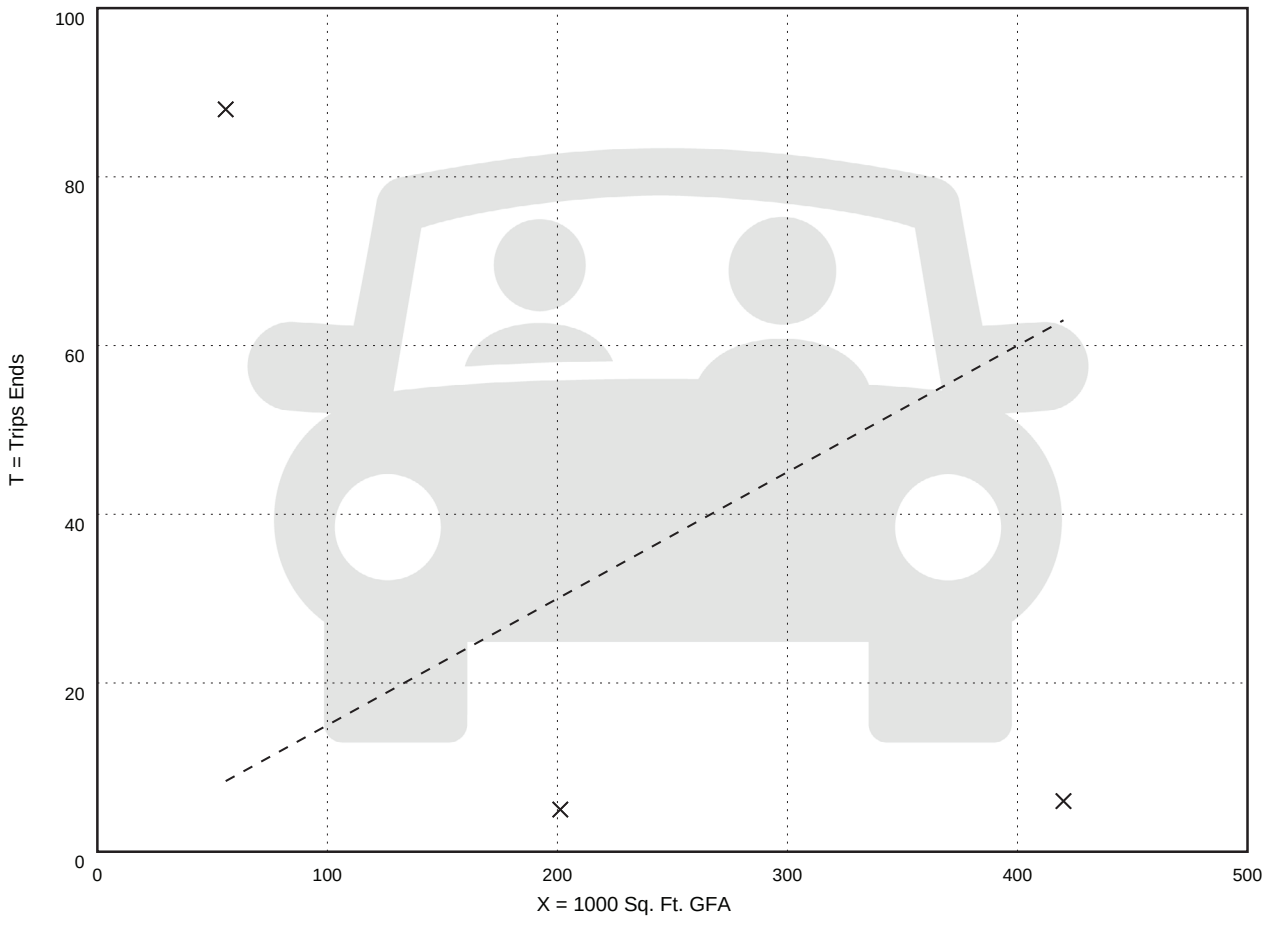
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 226
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.15	0.01 - 1.58	0.53

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= *

Warehouse
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Saturday, Peak Hour of Generator**

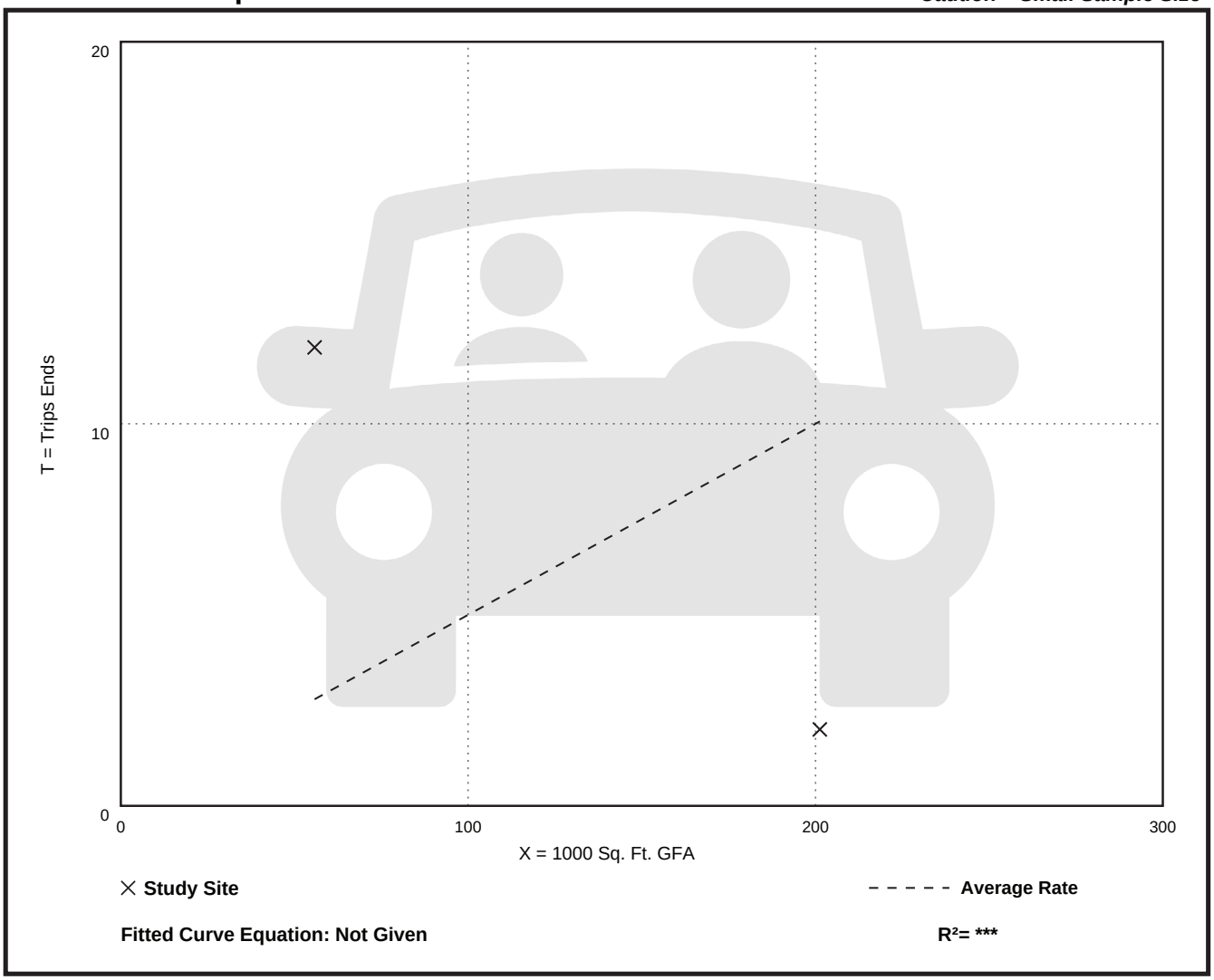
Setting/Location: **General Urban/Suburban**
Number of Studies: 2
Avg. 1000 Sq. Ft. GFA: 129
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.05	0.01 - 0.22	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Warehouse
(150)

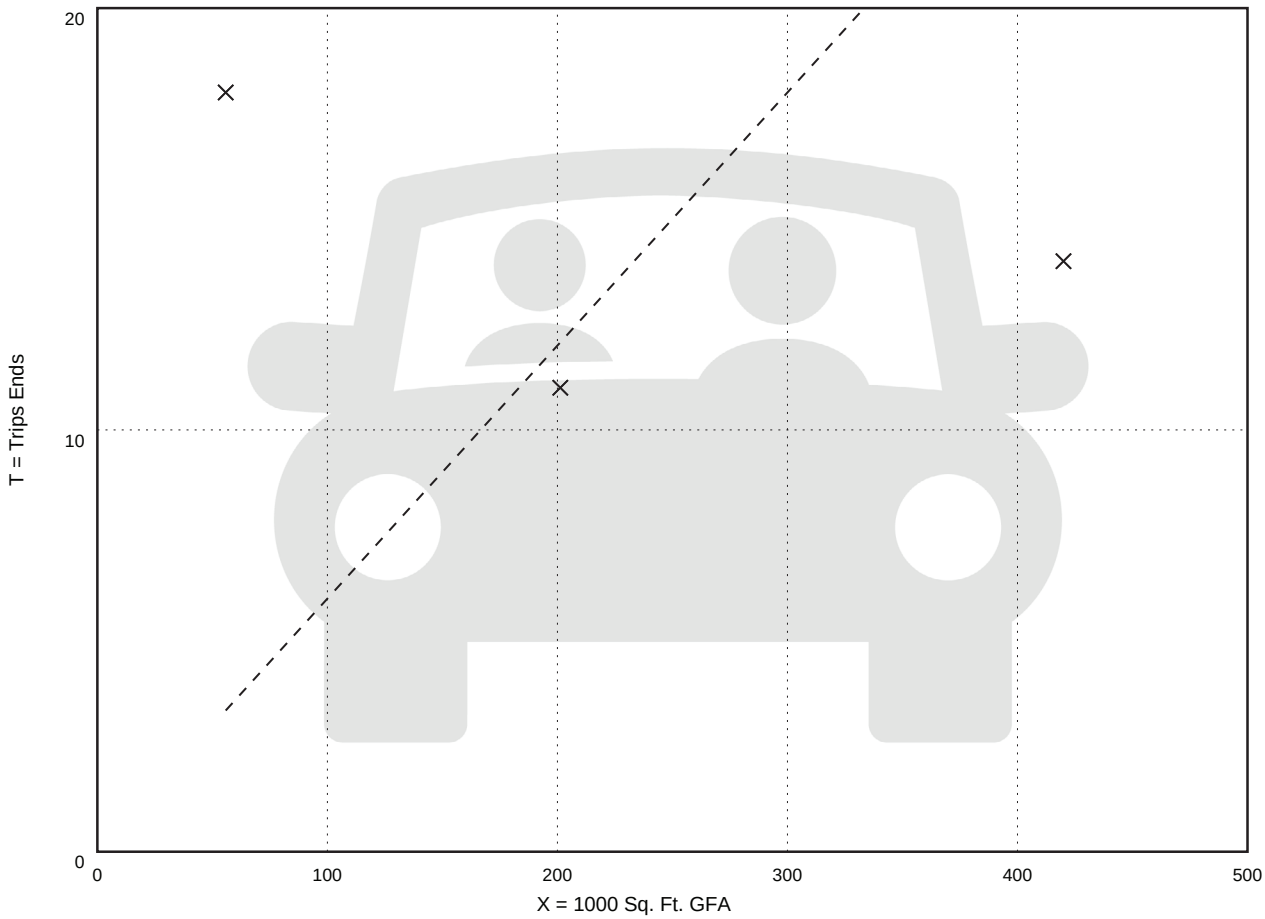
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Sunday

Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. 1000 Sq. Ft. GFA: 226
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.06	0.03 - 0.32	0.10

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= *

Warehouse
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Sunday, Peak Hour of Generator**

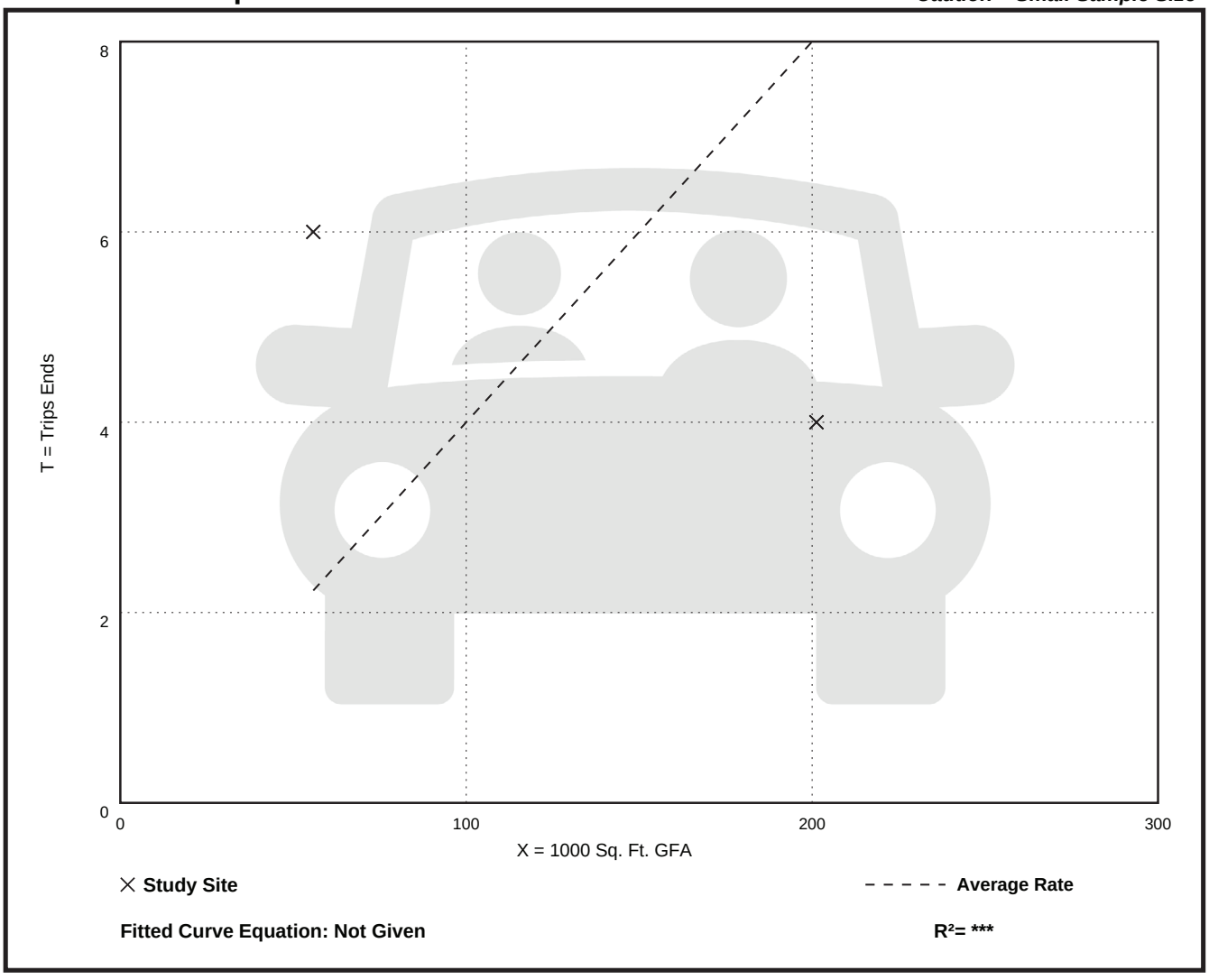
Setting/Location: **General Urban/Suburban**
Number of Studies: 2
Avg. 1000 Sq. Ft. GFA: 129
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.04	0.02 - 0.11	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Warehouse
(150)

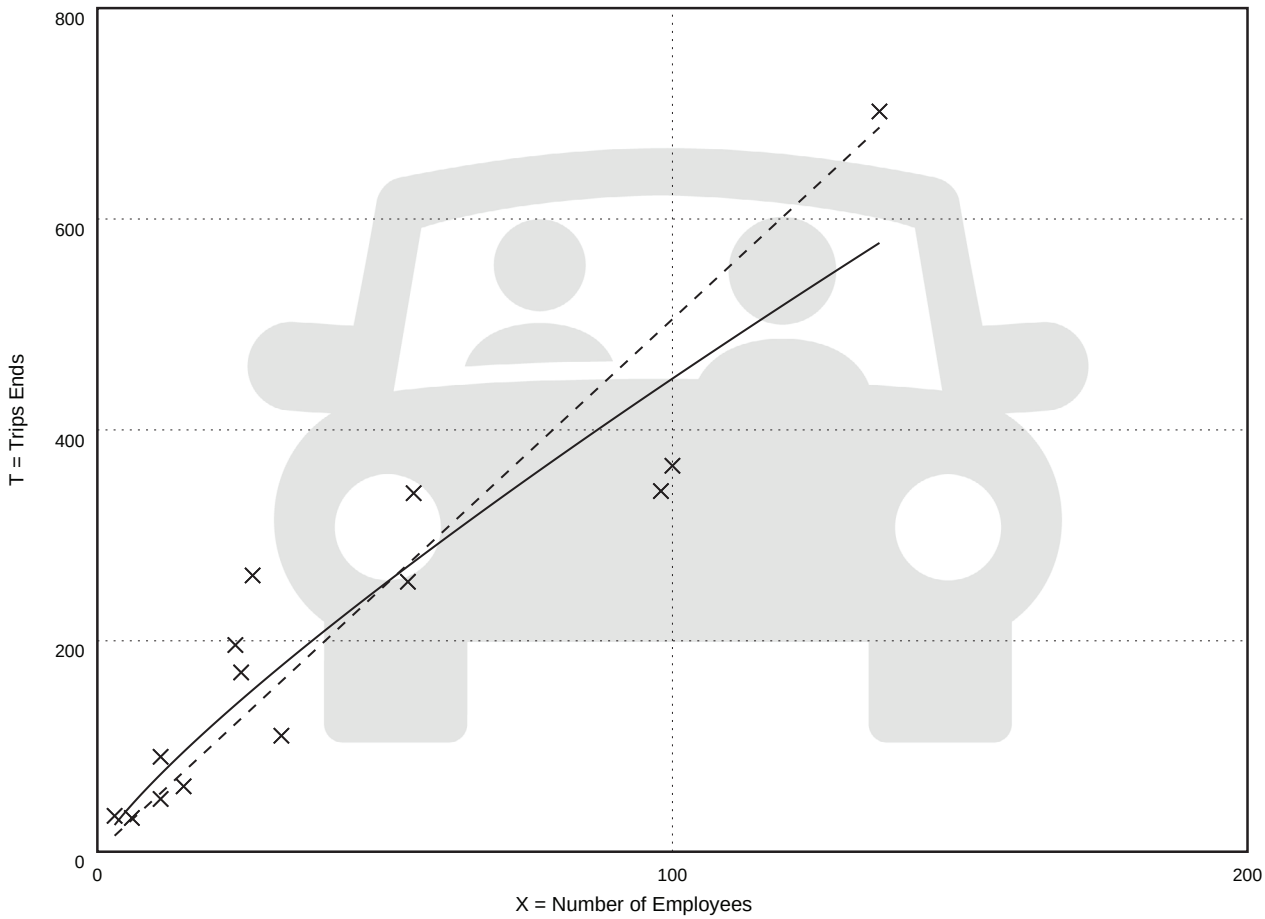
Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. Num. of Employees: 43
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
5.05	3.44 - 11.33	1.77

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 2.33

R^2= 0.88

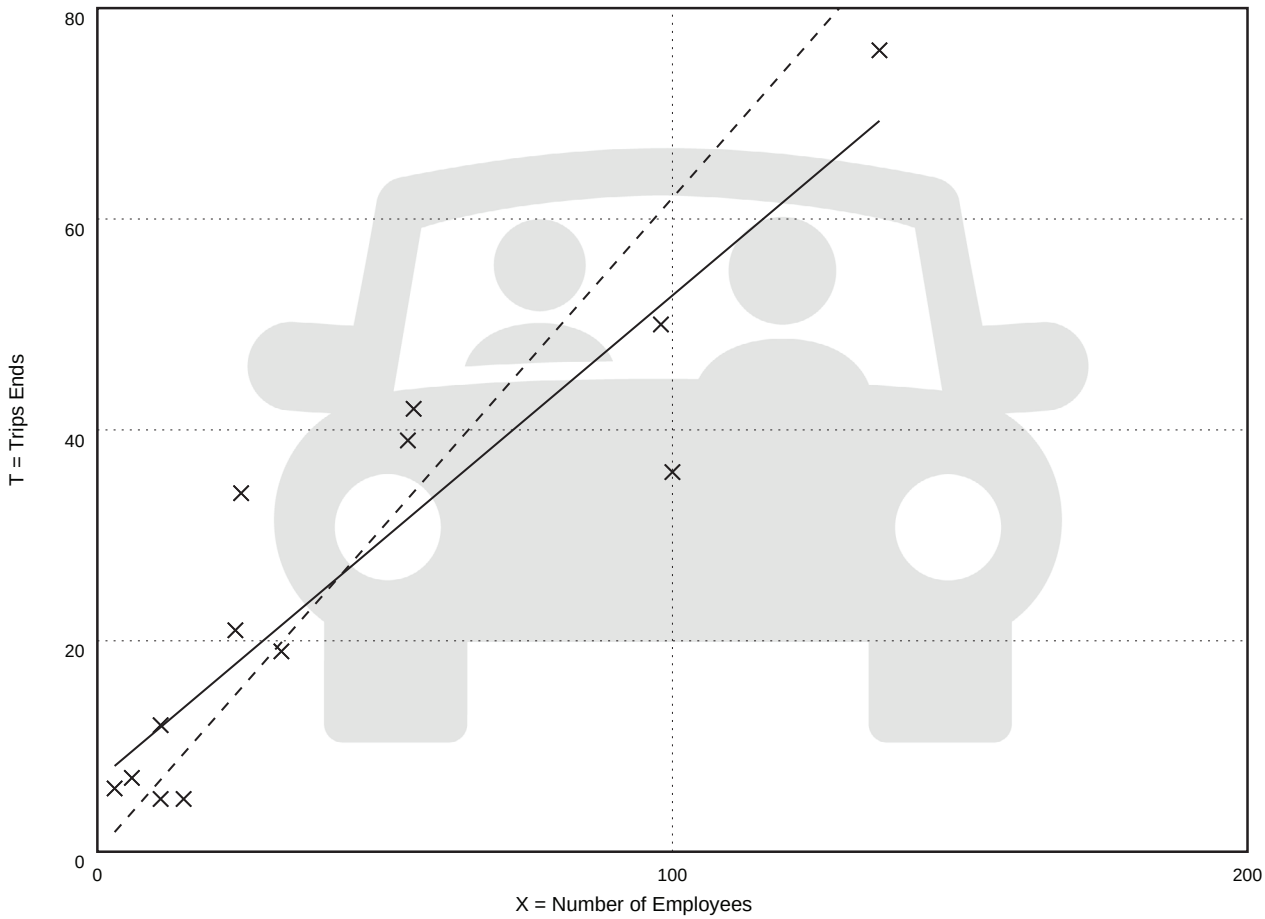
Warehouse
(150)

Vehicle Trip Ends vs:	**Employees**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	13
Avg. Num. of Employees:	44
Directional Distribution:	72% entering, 28% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.62	0.33 - 2.00	0.26

Data Plot and Equation



Fitted Curve Equation: T = 0.46(X) + 6.75

R^2= 0.84

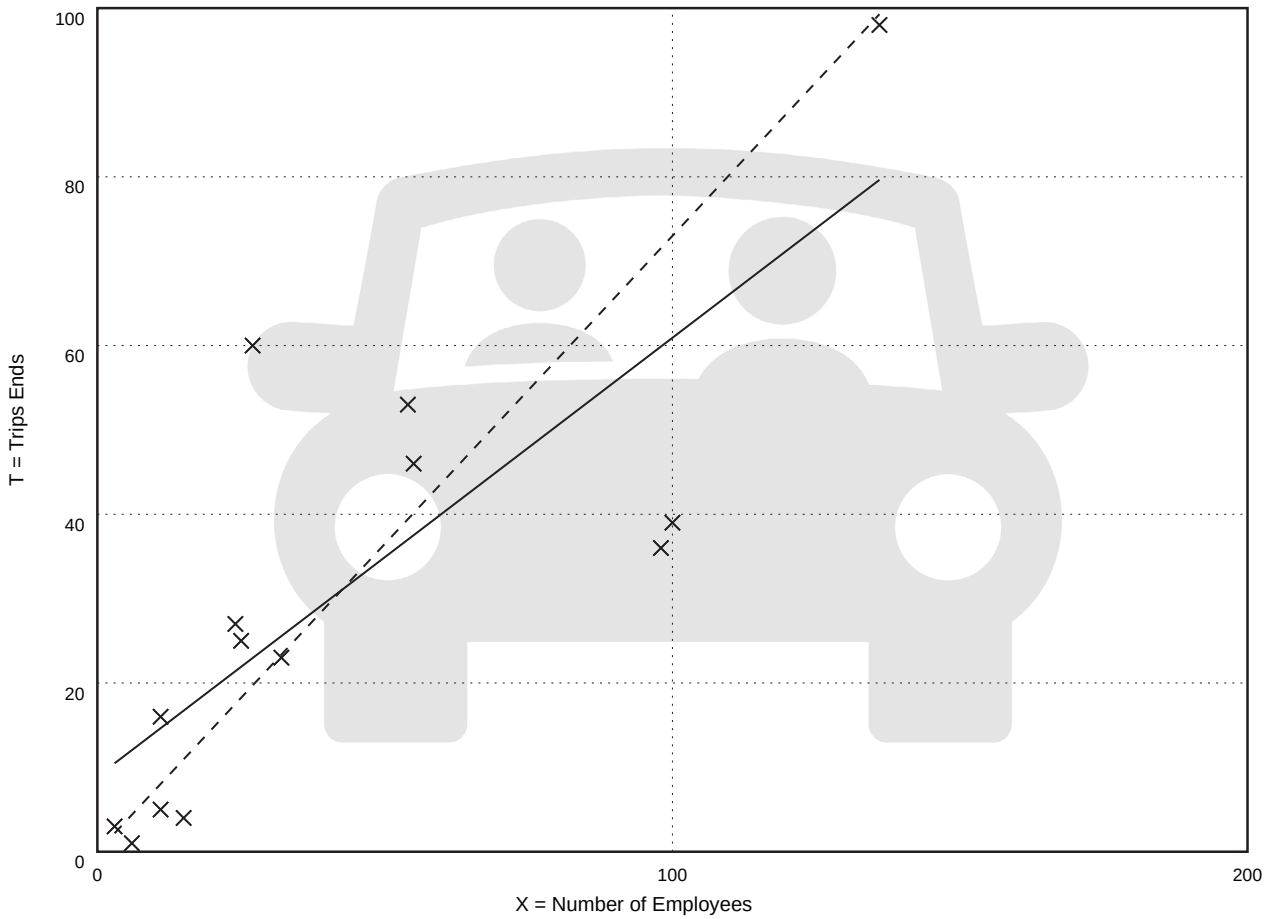
Warehouse
(150)

Vehicle Trip Ends vs:	**Employees**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	14
Avg. Num. of Employees:	43
Directional Distribution:	36% entering, 64% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.73	0.17 - 2.22	0.44

Data Plot and Equation



Fitted Curve Equation: T = 0.52(X) + 8.92

R^2= 0.63

Warehouse
(150)

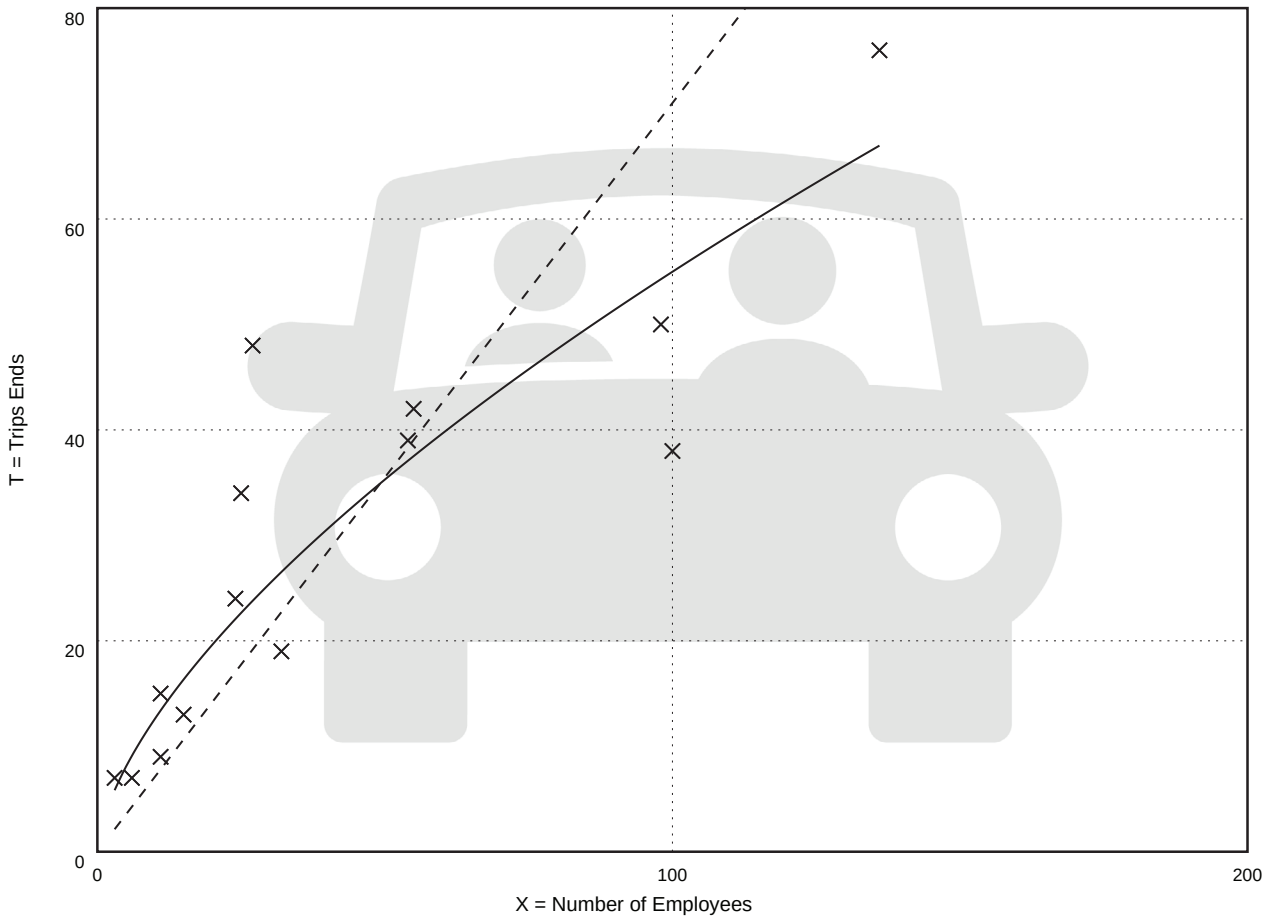
Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 14
Avg. Num. of Employees: 43
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.71	0.38 - 2.33	0.37

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.64 Ln(X) + 1.06

R^2= 0.84

Warehouse
(150)

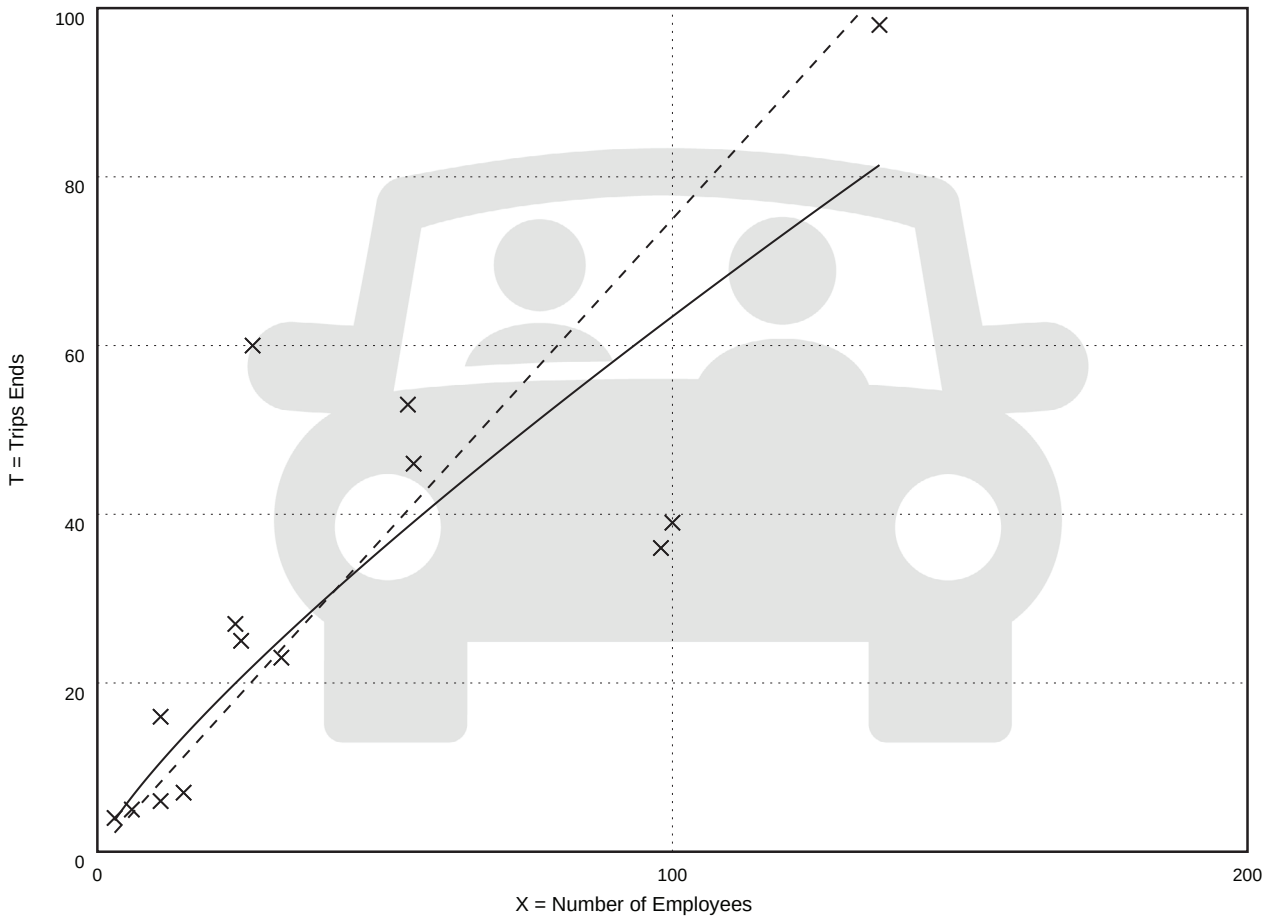
Vehicle Trip Ends vs: **Employees**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 14
Avg. Num. of Employees: 43
Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.75	0.37 - 2.22	0.43

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.81 Ln(X) + 0.42

R^2= 0.79

Warehouse
(150)

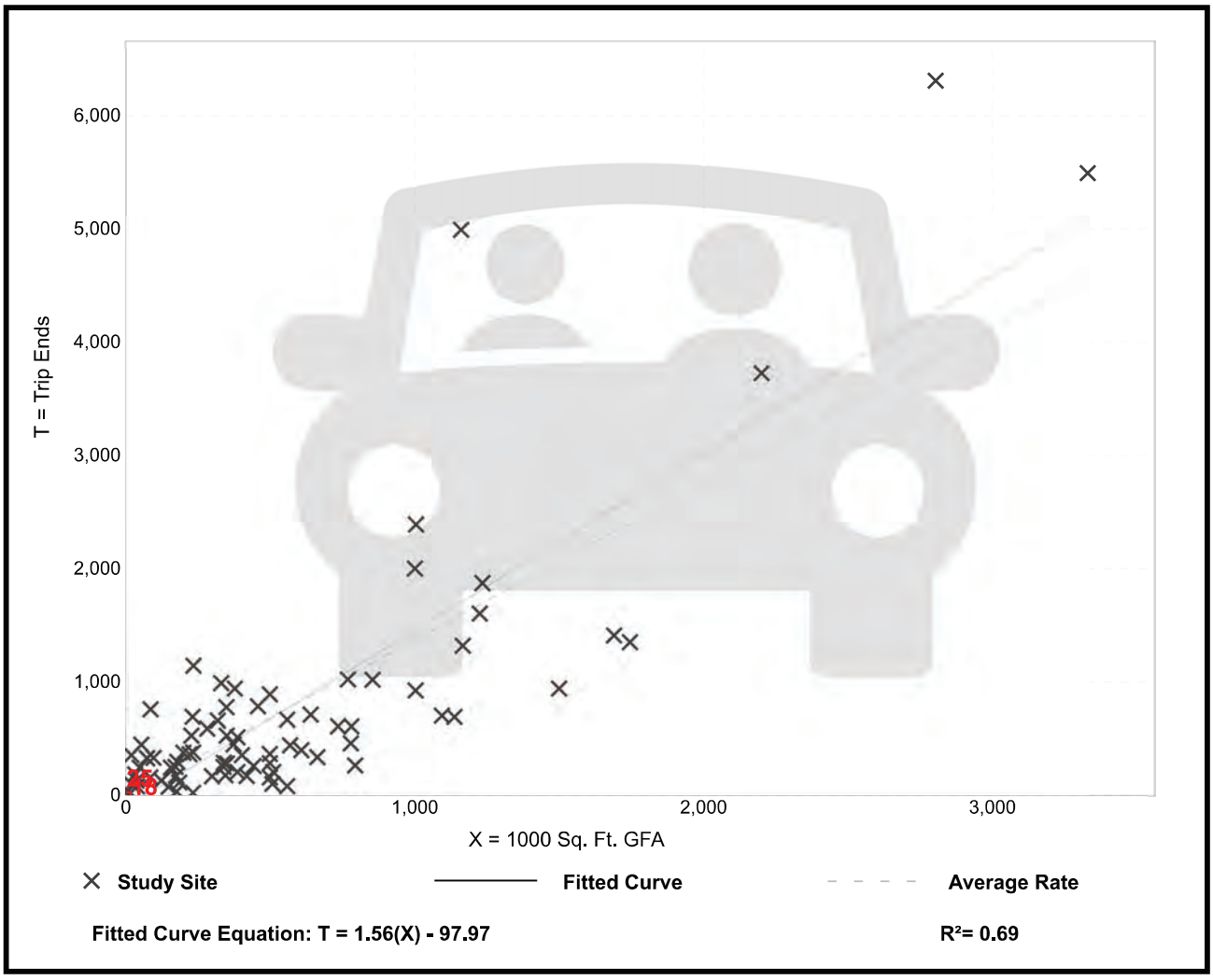
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 81
Avg. 1000 Sq. Ft. GFA: 554
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.38	0.15 - 16.93	1.05

Data Plot and Equation



Fitted Curve Equation: T = 1.56(X) - 97.97

R^2= 0.69

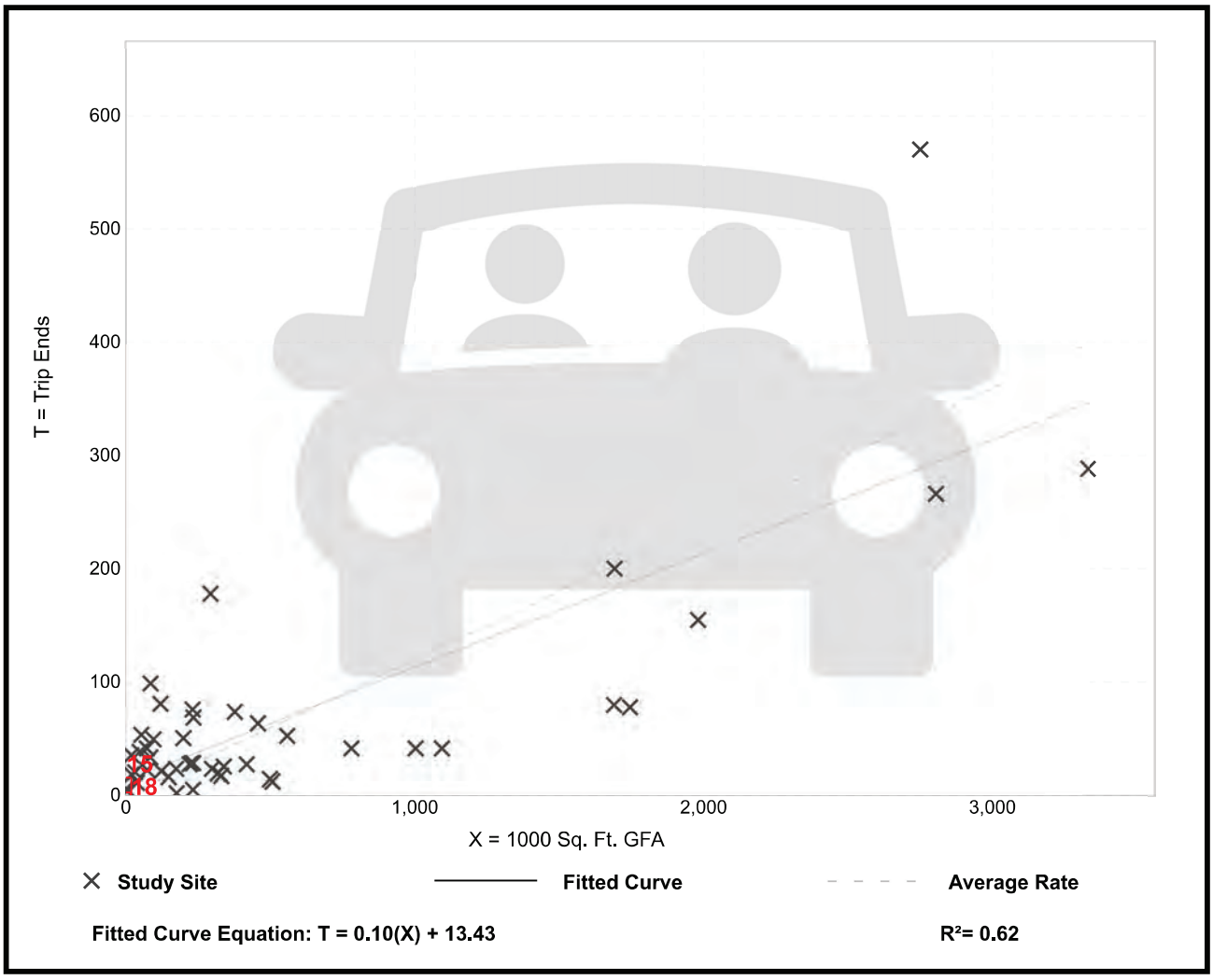
Warehouse
(150)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	47
Avg. 1000 Sq. Ft. GFA:	559
Directional Distribution:	77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.12	0.02 - 1.80	0.14

Data Plot and Equation



Fitted Curve Equation: T = 0.10(X) + 13.43

R^2= 0.62

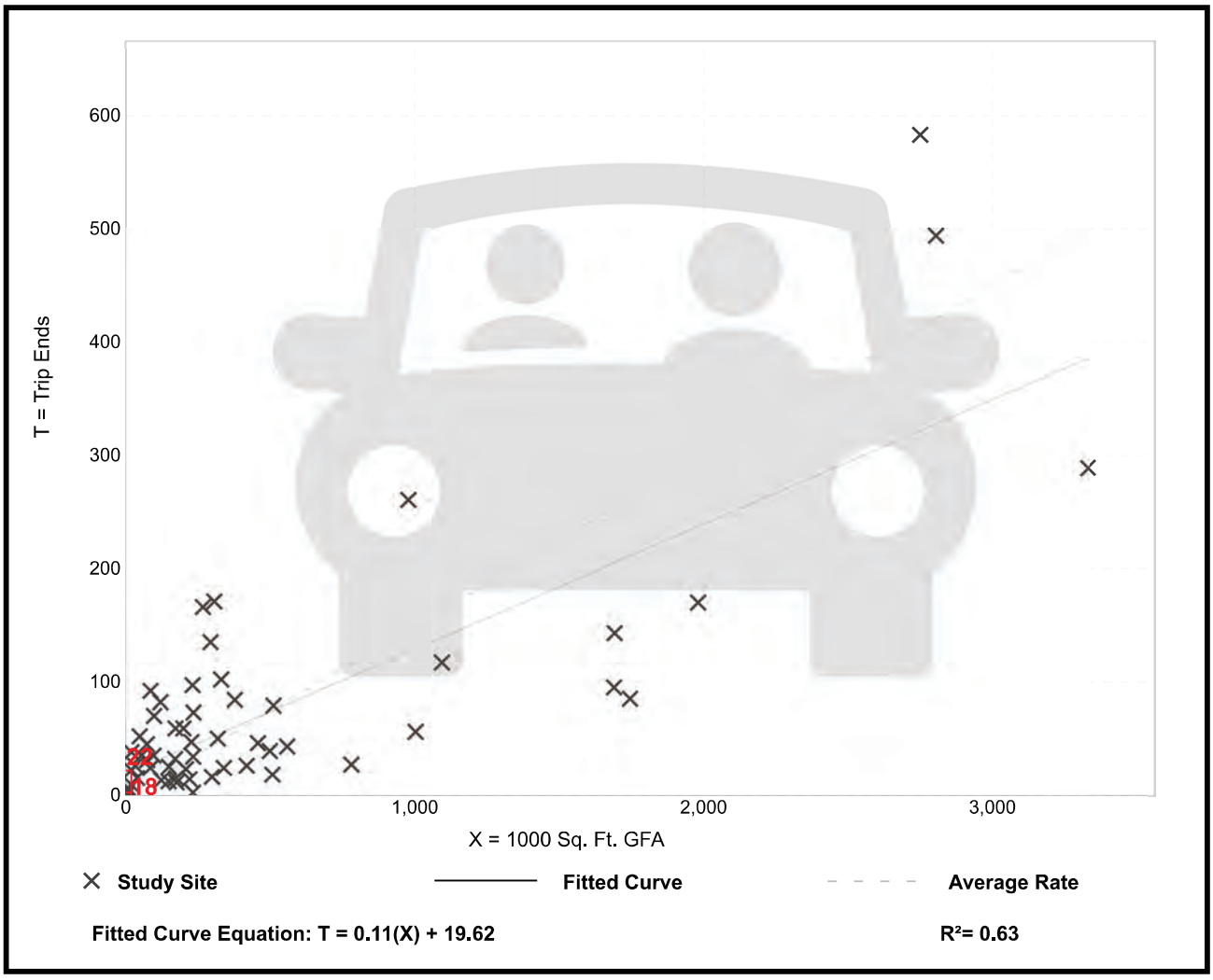
Warehouse
(150)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 58
Avg. 1000 Sq. Ft. GFA: 503
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.15	0.01 - 1.80	0.15

Data Plot and Equation



Fitted Curve Equation: T = 0.11(X) + 19.62

R^2= 0.63

CITY OF FORT LAUDERDALE

All-America City

Sent Via Email

Date of Letter: May 29, 2026

This letter provides the status of the development application described below submitted for the Development Review Committee (DRC), which the City has reviewed to determine whether the application is complete in accordance with Section 166.033(1), State Statute, as amended.

This package includes the following:

- **Information Sheet**
- **Complete/Incomplete** Application Review Notice
- **Waiver Form:** A waiver to the maximum period of time for the review of a development application to determine if an application is approved, approved with conditions, or denied per State Statute 166.033(1). Within 120 days after the municipality has deemed the application complete, or 180 days for applications that require final action through a quasi-judicial hearing or a public hearing.
- **Extension Form:** An extension to the maximum period of time for the review of a development application per State Statute 166.033(1) for a period of time that corresponds to the application type. Per the ULDR, only one extension may be granted for each development permit.

APPLICATION FEES: All initial Application Fees must be paid prior to development of staff comments and placement on a DRC agenda. An invoice for payment of fees will be sent via email from LauderBuild.*

NOTICE REQUIREMENTS: A minimum of 21 days prior to the scheduled DRC meeting, the applicant is required to provide a notice of the upcoming meeting to any official city-recognized civic association(s) within 300 feet of the project, notifying the date, time, and location of the DRC meeting. A minimum of 10 days prior to the DRC meeting, the applicant will then submit an affidavit documenting that notice was provided to the applicable civic associations. All other notice requirements based on the request submitted will be provided by your Case Planner.

APPLICATION REVIEW TIMELINE: Review the Development Review Schedule that is available on the DRC webpage for important dates and deadlines including recommended dates for resubmittal to stay within the required state review timeframes. Additional information is available on this webpage including the DRC Dates and Deadlines and the DRC Process Flowchart.

DRC MEETING: The DRC meeting takes place the Development Services Building in the Urban Design and Planning Conference Rooms. Prior to the meeting, a comment report will be emailed the Friday before the meeting to the applicant and is also available on LauderBuild. At the meeting, the comment report will be reviewed with the assigned staff, and the applicant will have the opportunity to ask questions. The meeting is open to the public and is recorded.

Meetings take place in the:
Development Services Department
Urban Design and Planning Conference Rooms
700 NW 19 Avenue
Fort Lauderdale, Florida 33311

If there are any questions regarding this notice, please contact the case planner.

CASE PLANNER	**Nancy Garcia, Urban Planner II**
CASE PLANNER EMAIL	**Ngarcia@fortlauderdale.gov**
CASE PLANNER PHONE	**954-828-8958**

***FRAUD ALERT:** The City of Fort Lauderdale has been made aware of fraudulent emails and payment requests sent to applicants that do not originate from the City. Always verify the sender's email address and avoid clicking on suspicious links or opening unexpected attachments. Any suspicious communications that appear to be sent on behalf of the City should be reported to City staff immediately.*

- *The City of Fort Lauderdale does not send unsolicited requests for payment or sensitive personal information.*
- *The Development Services Department does not accept payments over the phone.*
- *The City will never threaten enforcement action or demand payment by gift card, wire transfer, or digital currency.*
- *The City will never request personal or financial information such as bank account numbers, credit or debit card numbers, Social Security numbers, or passwords via email or phone.*

CITY OF FORT LAUDERDALE

APPLICATION STATUS	COMPLETE	DATE: May 29, 2026
CASE	UDP-S26012	
PROJECT NAME	808 Parking Lot	
APPLICATION TYPE	Site Plan Level II Review	
APPROVAL LEVEL	Development Review Committee	
REQUEST	Twenty-Three (23) Spaces Parking Facility	
APPLICANT	Wallace Logistics Services, LLC.	
AGENT	Rodolfo Sucre, P.E., RSP Engineers, Inc.	
PROPERTY ADDRESS	808-814 W. State Road 84	
ABBREVIATED LEGAL DESCRIPTION	Lakeway 11-7 B Lot 16, 19, and 20 Less St Rd Blk 1	
ZONING DISTRICT	Boulevard Business (B-1) District	
LAND USE	Commercial	
COMMISSION DISTRICT	4 - Ben Sorensen	
NEIGHBORHOOD ASSOCIATION	Edgewood Civic Association	
SUBMITTED	May 14, 2026	Online Submittal Accepted
COMPLETENESS ISSUED	**May 29, 2026**	
STATE STATUTE 166.033 EXPIRATION	**September 26, 2026 (120 Days)**	
DRC MEETING DATE	**June 23, 2026**	
CASE PLANNER	Nancy Garcia, Urban Planner II	

COMPLETE APPLICATIONS: In accordance with Section 166.033(1), Florida Statutes, the City will approve, approve with conditions, or deny the application within 120 days of the date of this letter, **September 26, 2026**. The applicant may request a waiver to this timeline by completing the waiver below. Note that only one extension of 120 or 180 days is permitted.

NOTICE REQUIREMENTS: A minimum of 21 days prior to the scheduled DRC or Administrative Review meeting, the applicant is required to provide a notice of the upcoming meeting to any official city-recognized civic association(s) within 300 feet of the project, notifying the date, time, and location of the DRC meeting. A minimum of 10 days prior to the DRC meeting, the applicant will then submit an affidavit documenting that notice was provided to the applicable civic associations. All other notice requirements based on the request submitted will be provided by your Case Planner.

CITY OF FORT LAUDERDALE

WAIVER FORM

DEVELOPMENT REVIEW APPLICATION
WAIVER TO SECTION 166.033, FLORIDA STATUTES

Pursuant to State Statute 166.033(1):

Within 30 days after receiving an application for approval of a development permit or development order, a municipality must review the application for completeness and issue a letter indicating that all required information is submitted or specifying with particularity any areas that are deficient. If the application is deficient, the applicant has 30 days to address the deficiencies by submitting the required additional information. Within 120 days after the municipality has deemed the application complete, or 180 days for applications that require final action through a quasi-judicial hearing or a public hearing, the municipality must approve, approve with conditions, or deny the application for a development permit or development order. Both parties may agree to a reasonable request for an extension of time, particularly in the event of a force majeure or other extraordinary circumstance. An approval, approval with conditions, or denial of the application for a development permit or development order must include written findings supporting the municipality's decision. The timeframes contained in this subsection do not apply in an area of critical state concern, as designated in s. 380.0552 or chapter 28-36, Florida Administrative Code.

Instructions: Please check both of the boxes, sign, date, and email to the Case Planner.

CASE	UDP-S26012
PROJECT NAME	808 Parking Lot
APPLICATION TYPE	Site Plan Level II Review
APPROVAL LEVEL	Development Review Committee
REQUEST	Twenty-Three (23) Spaces Parking Facility
APPLICANT	Wallace Logistics Services, LLC.
AGENT	Rodolfo Sucre, P.E., RSP Engineers, Inc.
PROPERTY ADDRESS	808-814 W. State Road 84
ABBREVIATED LEGAL DESCRIPTION	Lakeway 11-7 B Lot 16, 19, and 20 Less St Rd Blk 1
ZONING DISTRICT	Boulevard Business (B-1) District
LAND USE	Commercial
COMMISSION DISTRICT	4 - Ben Sorensen
NEIGHBORHOOD ASSOCIATION	Edgewood Civic Association
CASE PLANNER	**Nancy Garcia, Urban Planner II**
CASE PLANNER EMAIL	**ngarcia@fortlauderdale.gov**
CASE PLANNER PHONE	**954-828-8958**

☐ For the above-mentioned case number, the applicant acknowledges and agrees to waive the time limits in Section 166.033(1), Florida Statutes, as amended.

☐ For the above-mentioned case number, the applicant acknowledges and agrees to waive the limitation of three requests for additional information by the City of Fort Lauderdale, in accordance with Section 166.033(2), Florida Statutes, as amended.

_____ _____
Printed Name of Owner or Agent | Corporate Title (if applicable)

_____ _____
Signature of Owner or Agent | Date

CITY OF FORT LAUDERDALE

EXTENSION FORM

DEVELOPMENT REVIEW APPLICATION
EXTENSION TO SECTION 166.033, FLORIDA STATUTES

Pursuant to State Statute 166.033(1):

Within 30 days after receiving an application for approval of a development permit or development order, a municipality must review the application for completeness and issue a letter indicating that all required information is submitted or specifying with particularity any areas that are deficient. If the application is deficient, the applicant has 30 days to address the deficiencies by submitting the required additional information. Within 120 days after the municipality has deemed the application complete, or 180 days for applications that require final action through a quasi-judicial hearing or a public hearing, the municipality must approve, approve with conditions, or deny the application for a development permit or development order. ***Both parties may agree to a reasonable request for an extension of time, particularly in the event of a force majeure or other extraordinary circumstance.*** *An approval, approval with conditions, or denial of the application for a development permit or development order must include written findings supporting the municipality's decision. The timeframes contained in this subsection do not apply in an area of critical state concern, as designated in s. 380.0552 or chapter 28-36, Florida Administrative Code.*

Instructions: Please check the boxes, sign, date, and email to the Case Planner. Note: it is the applicant's responsibility to request an extension of time prior to the expiration date and if the applicant fails to request an extension, the City will deny the application for failure to meet ULDR, Section 47-24.1.E, Review Process.

CASE	UDP-S26012	
PROJECT NAME	808 Parking Lot	
APPLICATION TYPE	Site Plan Level II Review	
APPROVAL LEVEL	Development Review Committee	
REQUEST	Twenty-Three (23) Spaces Parking Facility	
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ZONING DISTRICT	Boulevard Business (B-1) District	
LAND USE	Commercial	
COMMISSION DISTRICT	4 - Ben Sorensen	
NEIGHBORHOOD ASSOCIATION	Edgewood Civic Association	
SUBMITTED	May 14, 2026	
COMPLETENESS ISSUED	May 28, 2026	
EXPIRATION	September 26, 2026	
EXTENSION	January 24, 2027 (additional 120 days)	
CASE PLANNER	Nancy Garcia Urban Planner II	**Signature:**
CASE PLANNER EMAIL	ngarcia@fortlauderdale.gov	
CASE PLANNER PHONE	954-828-8958	
APPLICANT OR AGENT	Rodolfo Sucre, P.E. RSP Engineers, Inc.	**Signature:**
DATE		

This notice provides an official extension of time for the development permit application described above as agreed upon by the City and applicant.

AGENT OF RECORD LETTER

TO SFWMD, CITY OF FORT LAUDERDALE, STATE OF FLORIDA AND/OR OTHER GOVERNMENTAL AGENCIES AND DEPARTMENTS OF SAME AND PUBLIC UTILITIES.

For the property identified as vacant commercial property zoned **B-1** at **808-814 W State Road 84, Fort Lauderdale, FL 33315, WALLACE LOGISTICS SERVICES LLC**, as the owner of Parcels ID **5042-22-14-0140 / 5042-22-14-0150 / 5042-22-14-0160**, hereby designates and appoints **RODOLFO SUCRE**, Principal of **RSP ENGINEERS INC**, as its authorized **AGENT OF RECORD** for the purposes of representing WALLACE LOGISTICS SERVICES LLC during the permitting process including without limitation site plan review, construction plan review, utility and drainage plan review and signage. The AGENT OF RECORD is hereby vested with authority to make any representations, agreements, or promises that are necessary or desirable in conjunction with the review process. The AGENT OF RECORD is also authorized to accept or reject any conditions imposed by any reviewing board or entity.

Date: 5/8/2026

Kyle Wallace

APPLICANT/OWNER (PRINT)

APPLICANT/OWNER'S SIGNATURE

Rodolfo Sucre, PE

APPLICANT'S REPRESENTATIVE (PRINT)

APPLICANT REPRESENTATIVE'S SIGNATURE

4300 Biscayne Blvd, Miami FL 33137

ADDRESS

Miami FL 33137

CITY, STATE, ZIP

786-687-2677

TELEPHONE

STATE OF FLORIDA

COUNTY OF Broward

I HEREBY CERTIFY that on this day personally appeared before me this 12 day of May, 2026 Kyle Wallace, who is personally known to me or who has produced W420-504-86-022-0 as identification. WITNESS my hand and official seal in the County and State last aforesaid this 12 day of May, 2026.

NOTARY PUBLIC

State of Florida at Large

Notary Public State of Florida
Paola Arias
My Commission HH 75795
Expires 1/19/2030

My Commission expires:

Property Address	808-814 W STATE ROAD 84, FORT LAUDERDALE FL 33315
Property Owner	WALLACE LOGISTICS SERVICES LLC
Mailing Address	776 ST ALBANS ST BOCA RATON FL 33486

ID #	5042 22 14 0140
Millage	0312
Use	10-01

Abbr Legal Description	LAKEWAY 11-7 B LOT 16 W 59,17 W 59,18 W 59 LESS ST RD BLK 1

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

* 2026 values are considered "working values" and are subject to change.

Property Assessment Values

Year	Land	Building / Improvement	Just / Market Value	Assessed / SOH Value	Tax
2026*	$319,150		$319,150	$319,150	
2025	$255,320		$255,320	$152,900	$3,605.47
2024	$255,320		$255,320	$139,000	$3,434.70

2026* Exemptions and Taxable Values by Taxing Authority

	County	School Board	Municipal	Independent
Just Value	$319,150	$319,150	$319,150	$319,150
Portability	0	0	0	0
Assessed/SOH	$319,150	$319,150	$319,150	$319,150
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exempt Type	0	0	0	0
Taxable	$319,150	$319,150	$319,150	$319,150

Sales History

Date	Type	Price	Book/Page or CIN
11/25/2025	WD*-E	$632,500	120570470
2/3/2016	SW*-E	$500,000	113500523
7/22/2015	WD*-E	$279,000	113126574
10/11/2000	WD*	$143,000	30945 / 681
12/1/1982	WD	$100	10571 / 80

* Denotes Multi-Parcel Sale (See Deed)

Land Calculations

Price	Factor	Type
$50.00	6,383	SF
Adj. Bldg. S.F.		

Special Assessments

Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
03						F3		
L								
1						6383		

Property Address	808-814 W STATE ROAD 84, FORT LAUDERDALE FL 33315
Property Owner	WALLACE LOGISTICS SERVICES LLC
Mailing Address	776 ST ALBANS ST BOCA RATON FL 33486

ID #	5042 22 14 0150
Millage	0312
Use	10-01

Abbr Legal Description	LAKEWAY 11-7 B LOT 19 LESS ST RD BLK 1

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

* 2026 values are considered "working values" and are subject to change.

Property Assessment Values

Year	Land	Building / Improvement	Just / Market Value	Assessed / SOH Value	Tax
2026*	$201,550		$201,550	$201,550	
2025	$161,240		$161,240	$96,560	$2,276.94
2024	$161,240		$161,240	$87,790	$2,169.18

2026* Exemptions and Taxable Values by Taxing Authority

	County	School Board	Municipal	Independent
Just Value	$201,550	$201,550	$201,550	$201,550
Portability	0	0	0	0
Assessed/SOH	$201,550	$201,550	$201,550	$201,550
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exempt Type	0	0	0	0
Taxable	$201,550	$201,550	$201,550	$201,550

Sales History

Date	Type	Price	Book/Page or CIN
11/25/2025	WD*-E	$632,500	120570470
2/3/2016	SW*-E	$500,000	113500523
7/22/2015	WD*-E	$279,000	113126574
10/11/2000	WD*	$143,000	30945 / 681

* Denotes Multi-Parcel Sale (See Deed)

Land Calculations

Price	Factor	Type
$50.00	4,031	SF
Adj. Bldg. S.F.		

Special Assessments

Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
03						F3		
L								
1						4031		

Property Address	808-814 W STATE ROAD 84, FORT LAUDERDALE FL 33315
Property Owner	WALLACE LOGISTICS SERVICES LLC
Mailing Address	776 ST ALBANS ST BOCA RATON FL 33486

ID #	5042 22 14 0160
Millage	0312
Use	10-01

Abbr Legal Description	LAKEWAY 11-7 B LOT 20 LESS ST RD BLK 1

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

* 2026 values are considered "working values" and are subject to change.

Property Assessment Values

Year	Land	Building / Improvement	Just / Market Value	Assessed / SOH Value	Tax
2026*	$195,750		$195,750	$195,750	
2025	$156,600		$156,600	$93,780	$2,211.40
2024	$156,600		$156,600	$85,260	$2,106.72

2026* Exemptions and Taxable Values by Taxing Authority

	County	School Board	Municipal	Independent
Just Value	$195,750	$195,750	$195,750	$195,750
Portability	0	0	0	0
Assessed/SOH	$195,750	$195,750	$195,750	$195,750
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exempt Type	0	0	0	0
Taxable	$195,750	$195,750	$195,750	$195,750

Sales History

Date	Type	Price	Book/Page or CIN
11/25/2025	WD*-E	$632,500	120570470
2/3/2016	SW*-E	$500,000	113500523
7/22/2015	WD*-E	$279,000	113126574
12/6/2000	WD*	$179,000	31095 / 230
6/12/1998	WD	$100	28431 / 561

* Denotes Multi-Parcel Sale (See Deed)

Land Calculations

Price	Factor	Type
$50.00	3,915	SF
Adj. Bldg. S.F.		

Special Assessments

Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
03						F3		
L								
1						3915		