Bryant Planning Commission Meeting

Boswell Municipal Complex - City Hall Court Room

210 SW 3rd Street

YouTube: https://www.youtube.com/c/bryantarkansas

Date: November 09, 2026 - **Time:** 6:00 PM

Call to Order

Approval of Minutes

1. **Planning Commission Meeting Minutes 08/10/2026**
   - 2026-10-12 Planning Commission Minutes.pdf

Announcements

DRC Report

2. **Peak State Recovery - 1904 Evans Lp** - New Building Addition

   Chis Dickie - Requesting Approval for New Building Addition. - APPROVED

3. **Elite Medical Supplies - 8425 Hwy 5** - Site Plan

   Hope Consulting - Requesting Site Plan Approval - APPROVED

4. **Local Restaurant - 3424 Market Place Ave** - Site Plan

   Hope Consulting - Requesting Site Plan Approval - APPROVED

5. **Lot 2 Big Oak Addition - 302 Ethel Dr** - Conditional Use Permit

   Hope Consulting - Requesting Recommendation for Approval of a CUP for a Duplex in R-M Zoning. - RECOMMEND APPROVAL

6. **The Cottages of Bryant - PUD** - Preliminary Plat

   Hope Consulting - Requesting Recommendation for Approval of Preliminary Plat - RECOMMEND APPROVAL CONTIGENT UPON ALL COMMENTS BEING FULFILLED

7. **Springhill Crossing - Springhill Rd** - Preliminary Plat

   Holloway Engineering - Requesting Recommendation for Approval of Preliminary Plat - RECOMMEND APPROVAL CONTIGENT UPON ALL COMMENTS BEING FULFILLED

8. **Zyair Estates** - Preliminary Plat

   Richardson Engineering - Requesting Recommendation for Approval of Preliminary Plat

Public Hearing

9. Lot 2 Big Oak Addition - 302 Ethel Dr - Conditional Use Permit

Hope Consulting - Requesting Recommendation for Approval of a CUP for a Duplex in R-M Zoning.

- 1075-APP-01.pdf
- 1075-PLN-01.pdf

Old Business

New Business

10. The Cottages of Bryant - PUD - Preliminary Plat

Hope Consulting - Requesting Approval for Preliminary Plat

- 1071-DRN-02.pdf
- 1071-PLN-02.pdf
- 1071-RSP-01.pdf
- 1071-SMP-01.pdf

11. Springhill Crossing - Springhill Rd - Preliminary Plat

Holloway Engineering - Requesting Approval for Preliminary Plat

- 1063-BOA-01.pdf
- 1063-PLN-02.pdf
- 1063-PLT-02.pdf

12. Zyair Estates - Hilltop Road - Preliminary Plat

Richardson Engineering - Requesting Preliminary Plat Approval

- 1070-BOA-01.pdf
- 1070-DRN-02b.pdf
- 1070-GEO-01.pdf
- 1070-LTR-01.pdf
- 1070-PLN-01b.pdf
- 1070-PLT-03.pdf

Adjournments

Bryant Planning Commission Meeting Minutes
Monday, October 12, 2026
Boswell Municipal Complex – City Hall Courtroom
6:00 PM

Agenda

CALL TO ORDER

- Chairman Lance Penfield calls the meeting to order.
- Commissioners Present: Statton, Johnson, Thompson, Speed, Penfield, Lewis
- Commissioners Absent: Edwards

APPROVAL OF MINUTES

1. **Planning Commission Meeting Minutes 9/14/2026**

   Motion to Approve Minutes made by Commissioner Statton, Seconded by Commission Speed. Voice Vote, 6 Yays, 0 Nays, 1 Absent

ANNOUNCEMENTS

2. **Remove Zyair Estates from Agenda**

   Motion to remove Zyair Estates from the agenda made by Commissioner Speed, Seconded by Commissioner Thompson. Voice Vote 6 Yays, 0 Nays, 1 Absent

3. **November Planning Commission**

Motion to keep the original November 9th Planning Commission date as scheduled made by Commissioner Lewis, Seconded by Commissioner Speed.

DRC REPORT

4. **Autumn Hills –** Phase 1 **–** Sidewalk Waiver
   Richardson Engineering – Requesting Approval for Sidewalk Waiver – APPROVED

5. **Midland Estates –** Phase 2 – Final Plat

Hope Consulting – Requesting Recommendation for Final Plat Approval - RECOMMEND APPROVAL

6. **Autumn Hills Estates –** Phase 1 **–** Final Plat
   Richardson Engineering – Requesting Recommendation for Final Plat Approval - RECOMMEND APPROVAL

PUBLIC HEARING

OLD BUSINESS

NEW BUSINESS

7. **Midland Estates –** Phase 2 **–** Final Plat
   Hope Consulting – Requesting Approval for Final Plat – APPROVED

8. **Autumn Hills –** Phase 1 **–** Final Plat
   Richardson Engineering – Requesting Approval for Final Plat – APPROVED

ADJOURNMENT

Motion to Adjourn made by Commissioner Speed, seconded by Commissioner Edwards. Voice Vote, 6 Yays, 0 Nays, 1 Absent. The meeting was adjourned.

_____ _____

Chairman, Lance Penfield *Date*

_____ _____

Secretary, Ethan Godwin *Date*

Planning & Development
210 SW 3rd Street, Bryant, AR 72022
501-943-0943 | comdev@cityofbryant.com

Conditional Use Permit Application

Applicants are advised to read the Conditional Use Permit section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at www.BryantAR.gov under the Planning and Development tab.

Date: 10/22/24

Project Location:

Property Address: 302 Ethel Drive, Bryant, AR 72022 (Lot 2, Big Oaks Addition)

Parcel Number(s): 840-01251-000 Zoning Classification: R-M

Applicant or Designee:

Name: Jonathan Hope - Hope Consulting, Inc.

Address: 129 N. Main St, Benton, AR 72015

Phone: 501-860-0467 Email Address: jonathan@hopeconsulting.com

Property Owner (If different from Applicant):

Name: John & Danita Hunter

Address: 726 Woody Drive, Alexander, AR 72002

Phone: _____ Email Address: _____

Additional Information:

Subdivision Lot and Block Number or Legal Description (Attach description if necessary)

Lot 2, Big Oaks Addition

Current Use of Property Vacant Land

Description of Conditional Use Request / Proposed Use of Property (Attach any necessary drawings or images)

Proposed Duplex

Application Checklist

Requirements for Submission

- ☐ Completed Conditional Use Application (Not required if submitting through online portal.)
- ☐ Letter stating request of Conditional Use and reasoning for request
- ☐ Submit Conditional Use Permit Application Fee ($125)
- ☐ Submit Copy of completed Public Notice [Attachment 1]
- ☐ Submit one (1) copy of the Development Plan (Site Plan) showing:
  - Location, size, and use of buildings/signs/land or improvements
  - Location, size, and arrangement of driveways and parking. Ingress/Egress
  - Existing topography and proposed grading
  - Proposed and existing lighting
  - Proposed landscaping and screening
  - Use of adjacent properties
  - Scale, North Arrow, Vicinity Map
  - Additional information that may be requested by the administrative official due to unique conditions of the site.
- ☐ Public Notice Requirements: **NOTE: Failure to provide notice in the following manners shall require delay of the public hearing until notice has been properly made.**
  - Publication: Public Notice shall be published at least one (1) time **fifteen (15) days prior to the public hearing** at which the conditional use request will be heard. A copy of the public notice is provided with the application. [Attachment 1] Once published, the proof of publication must be provided to the Planning and Development office.
  - Posting of Property: The city shall provide a sign to post on the property involved for the **fifteen (15) consecutive days leading up to the public hearing.** One (1) sign is required for every two hundred (200) feet of street frontage.

Once the application is received, the material will be reviewed to make sure all the required information is provided. The applicant will be notified if additional information is required. The application will then go before the Development and Review Committee (DRC) for a recommendation to the Planning Commission. A public hearing will be held at this meeting for comments on the Conditional Use. After the public hearing, the Planning Commission will make a decision on the use.

READ CAREFULLY BEFORE SIGNING

I Jonathan Hope, do hereby certify that all information contained within this application is true and correct. I further certify that the owner of the property authorizes this proposed application. I understand that I must comply with all City Codes and that it is my responsibility to obtain all necessary permits required.

NOTICE

Notice is hereby given that a hearing will be held by the Planning Commission of the City of Bryant, AR on the 16th day of November at 6:00 pm. This is located at Boswell Municipal Complex – Bryant City Hall at 210 SW Third Street, Bryant, AR 72022. This will be for the petition of RJ Hawk for a Conditional Use Permit for the property described below:

302 Ethel Drive, Bryant, AR 72022

LEGAL DESCRIPTION:

Lot 2, Big Oaks Addition, Saline County, Arkansas

Please contact Hope Consulting, Inc., 129 N. Main Street, City of Benton, Saline County, Arkansas. 501-315-2626 with questions.

HOPE CONSULTING

129 North Main Street, Benton, Arkansas 72015
(t) 501-315-2626 (e) www.HopeConsulting.com

September 9, 2026

Colton Leonard
Planning & Development
210 SW Third Street
Bryant, AR 72022

Re: Conditional Use Permit Application — 302 Ethel Drive, Bryant, AR 72022 (Lot 2, Big Oaks Addition)

Dear Mr. Leonard:

On behalf of RJ Hawk, who is under contract to purchase the property located at 302 Ethel Drive (Lot 2, Big Oaks Addition) from its current owners, John and Danita Hunter, Hope Consulting respectfully requests approval of a Conditional Use Permit to allow a two-family dwelling (duplex) on the property. The property is zoned R-M, which by right permits single-family dwellings and manufactured homes. Under Section 5.2 of the City of Bryant zoning ordinance, however, a two-family dwelling in the R-M district is permitted only as a conditional use. A Conditional Use Permit is therefore required before construction can proceed.

Enclosed for the City's review are the completed Conditional Use Permit application, the filing fee, and the required site plan. We respectfully request that this matter be placed on the agenda for the DRC meeting being held on November 16, 2026 and we are happy to provide any additional information the City may need.

Thank you for your consideration.

Sincerely,

Jonathan Hope

Order Receipt

Saline Courier

321 N. Market St.
Benton, AR 72015

Phone: 501-315-8228

URL: https://www.bentoncourier.com/

Melanie Gentry
Hope Consulting, Inc (28)
129 N. Main Street
Benton, AR 72015

Acct #: 01119461
Phone: (501)315-2626
Date: 10/16/2026
Ad #: 00206978
Salesperson: SCL Ad Taker: SC5

Class: 101

Sort Line: NOTICE Notice is hereby given

Ad Notes:

Description	Amount
AVDT LEGAL AFFIDAVIT	4.50
28 Saline Courier 2026-10-20	46.80

Ad Text:

NOTICE
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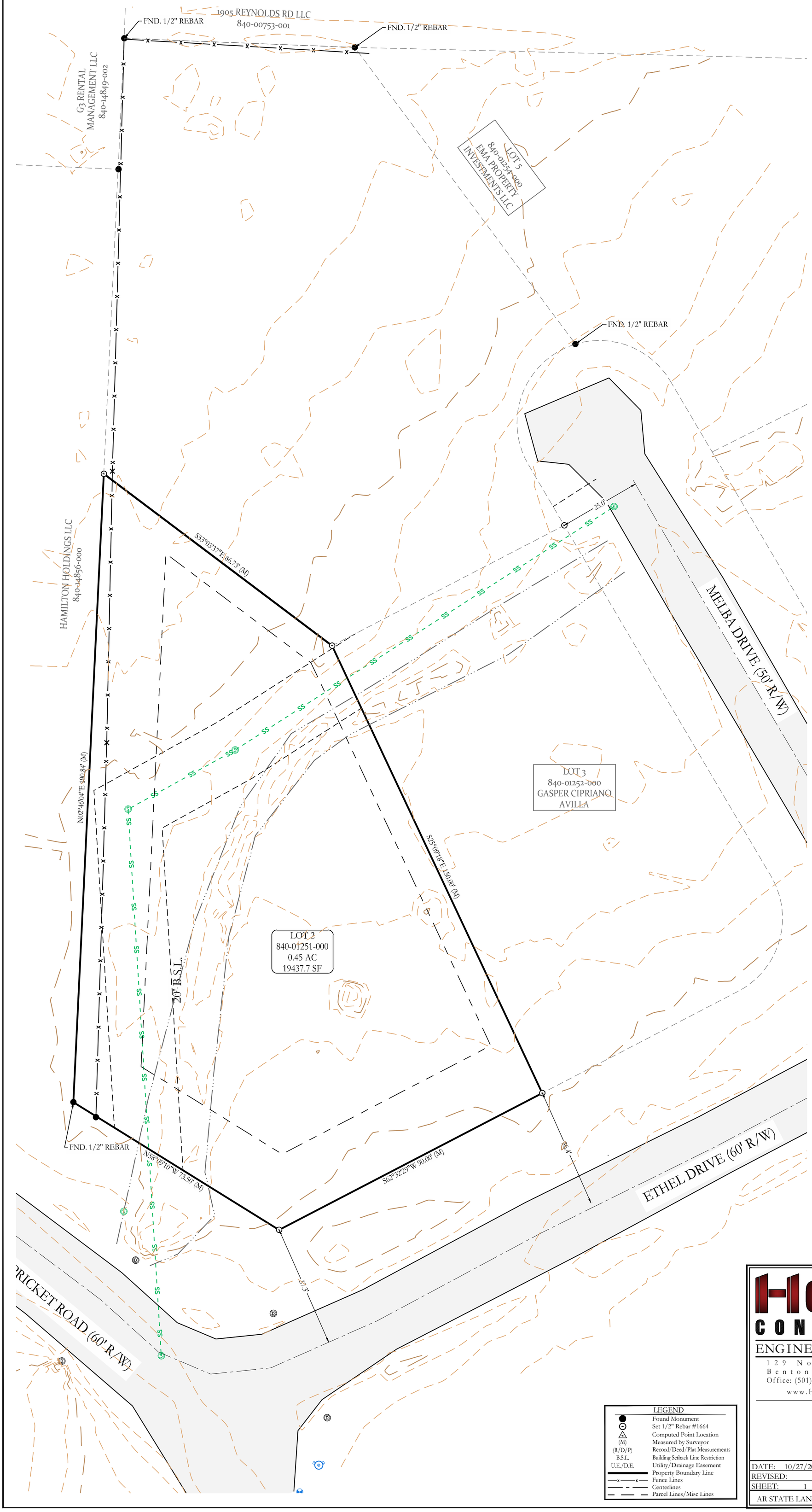
302 Ethel Drive, Bryant, AR 72022

LEGAL DESCRIPTION:
Lot 2, Big Oaks Addition, Saline County, Arkansas

Payment Reference:

Total:	51.30
Tax:	0.00
Net:	51.30
Prepaid:	0.00
Total Due	**51.30**

811 Know what's below. Call before you dig.



0 10' 20' 40'
SCALE: 1" = 20'

BASIS OF BEARINGS:
GRID NORTH, ARK SPCS
(NAD83), NORTH ZONE (0301)

RECORD PROPERTY DESCRIPTION
SALINE COUNTY INSTRUMENT 2002-25415, 2003-25793.

LOT 2 & LOT 4 OF BIG OAK ADDITION, A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

REFERENCE DOCUMENTS CITED
RECORDED SURVEY PLATS BY:
XXXX XXXXXX (PS #XX), FOR XXXXX, DATED XXXXXX
XXXX XXXXXX (PS #XX), FOR XXXXX, DATED XXXXXX

SURVEY DETAILS AND NOTES

OWNER OF RECORD:	HUNTER JOHN EDWARD & DANITA DEALVA
PHYSICAL ADDRESS:	302 ETHEL DR & 1805 MELBA CIR, BRYANT, AR-72022.
COUNTY PARCEL TAX ID:	840-01251-000, 840-01253-000.

ALL DIMENSIONS LISTED ARE AS MEASURED BY THIS SURVEYOR UNLESS OTHERWISE NOTED. FOR RECORD DIMENSIONS SEE DOCUMENTS OF RECORD.

OWNERSHIP INFORMATION, IF SHOWN, IS LISTED AS PUBLISHED BY THE LOCAL COUNTY TAX ASSESSOR AND IS LISTED FOR REFERENCE ONLY. NO STATEMENTS OF OWNERSHIP, RIGHTS, OR INTERESTS ARE MADE.

THIS SURVEY IS BASED ON PUBLIC RECORDS AND/OR TITLE INVESTIGATIONS FURNISHED BY THIRD PARTIES. NO INDEPENDENT SEARCH OR INVESTIGATION HAS BEEN MADE BY THIS FIRM FOR ANY RECORDS, PUBLIC OR PRIVATE. LISTED REFERENCE DOCUMENTS HEREON WERE USED AND CONSIDERED AS A PART OF THIS SURVEY; HOWEVER OTHER RECORDS, IF ANY, COULD FURTHER AFFECT THIS SURVEY. NO STATEMENT OR GUARANTEES OF OWNERSHIP, RIGHTS, OR OTHER INTERESTS ARE MADE BY THIS SURVEY PLAT.

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

REGISTERED
STATE OF ARKANSAS
No. 1664
SIGNATURE
WILLIAM CORBITT R. SHOFFNER
PROFESSIONAL LAND SURVEYOR

FLOOD ZONE INFORMATION
NO PORTION OF THE PROPERTY DESCRIBED HEREON LIES WITHIN A SPECIAL FLOOD HAZARD AREA, ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAP LISTED BELOW: PANEL # 05125C0380E , DATED: 06/05/2020 .

LEGEND

●	Found Monument
⊙	Set 1/2" Rebar #1664
△	Computed Point Location
(M)	Measured by Surveyor
(R/D/P)	Record/Deed/Plat Measurements
B.S.L.	Building Setback Line Restriction
U.E./D.E.	Utility/Drainage Easement
———	Property Boundary Line
—x—x—	Fence Lines
— — —	Centerlines
— — —	Parcel Lines/Misc Lines

HOPE CONSULTING
ENGINEERS • SURVEYORS
129 North Main Street
Benton, Arkansas 72015
Office: (501) 315-2626 | Fax: (501) 315-0024
www.HopeConsulting.com

TITLE/TYPE OF SURVEY
DESCRIPTION

FOR USE AND BENEFIT OF:
RJ HAWK

DATE: 10/27/2026	CAD BY: NCD OV	PROJECT NUMBER: 26-0797
REVISED:	CHECKED BY:	
SHEET: 1 OF 1	SCALE: 1" = 20'	

AR STATE LAND SURVEY FILING CODE: 500 - 01S - 14W - 0 - 27 - QTR - 62 - 1664

H:\Shared\HopeConsulting\Land Projects 2004\Surveys\2026\26-0797 Site Plan 302 Ethel Dr & 1805 Melba Cir, Bryant\SURVEY\DWG\26-0797-FINAL-Lot 2 and 4 Duplex D.dwg | Plotted: 11/2/2026 11:57 AM | ©2023 Hope Consulting, Inc.

THE COTTAGES OF BRYANT
PROPOSED RESIDENTIAL DEVELOPMENT
PRICKETT RD,BRYANT, AR

DRAINAGE REPORT

FOR
City of Bryant, Saline County, AR

October 2026

Owner & Developer: Heritage Homes LLC

By:

HOPE
CONSULTING
ENGINEERS • SURVEYORS

TABLE OF CONTENTS

ITEM DESCRIPTION

1. Narrative & Summary
2. Drainage Calculations
3. Detention pond plan
4. Hydrograph Report
5. Storm Analysis

Narrative & Summary

PROJECT TITLE

The Cottages of Bryant

PROJECT PROPERTY OWNER

Heritage Homes LLC

PROJECT LOCATION

The site is on Prickett Road at North Reynolds Road (minor arterial, 80' R/W) in Bryant, Saline County, Arkansas, in Section 28, Township 1 South, Range 14 West. The detention pond is in the northwest corner of the property. It discharges north through a grouted riprap outfall.

PROJECT DESCRIPTION

The project is a 20-lots multi-family duplex residential subdivision on 5.85 acres, owned and developed by Heritage Homes LLC. It includes 1200 LF of public curb-and-gutter street, an underground storm sewer of 14"×22" and 19"×30" horizontal elliptical concrete pipe with five curb inlets, water and sanitary sewer service, and one dry detention pond with a multi-stage concrete weir outlet.

Before development, 6.28 acres of areas drain to the northwest, with a composite C of 0.49 and a time of concentration of 16 min. After development, the area draining to the pond is 5.97 acres: 4.39 acres of developed on-site area (C = 0.80, Tc = 6 min) and 1.58 acres of offsite area A2 and A3 (C = 0.49, Tc = 16 min), for a composite C of 0.72. The offsite areas are unchanged by the project and are routed through the pond.

DRAINAGE ANALYSIS

On-Site Drainage:

Peak flows were computed with the Rational Method using the City of Bryant IDF relationship. Times of concentration were computed as the sum of sheet flow, shallow concentrated flow, and channelized flow (Sheet C-4.0). Hydrographs were generated and routed with Hydra flow Hydrographs Extension for Autodesk Civil 3D 2026, and the storm sewer was analyzed with Hydra flow Storm Sewers Extension 2026.

There will be one detention pond to detain water from this development. Detailed drainage calculations considering the expected development have been conducted to determine the required detention pond and culvert dimensions. A summary of the calculations is below:

Detention Pond -

- Pond is situated on the northwest side of the property.
- Pre-development area 6.28 acres.
- Post-development area 5.97 acres.
- Pre-development runoff coefficient 0.49
- Post-development composite runoff coefficient 0.72
- Pond has a bottom elevation of 393.0

- One outlet control structure is proposed for outflow.

Peak flows for the pre-and post-development phase of the onsite area have been tabulated below-

Time	Pre-development	Post-dev. With-out detention	Post-dev. With deten-tion (From Hydrograph)	Maximum High Water
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)	Elevation (ft)
2-Year	11.72	21.42	2.279	393.58
5-Year	13.96	25.41	3.418	393.69
10-Year	15.76	28.68	4.676	393.78
25-Year	18.07	32.90	6.465	393.89
50-Year	19.79	35.89	7.862	393.97
100-Year	21.44	38.99	9.253	394.05

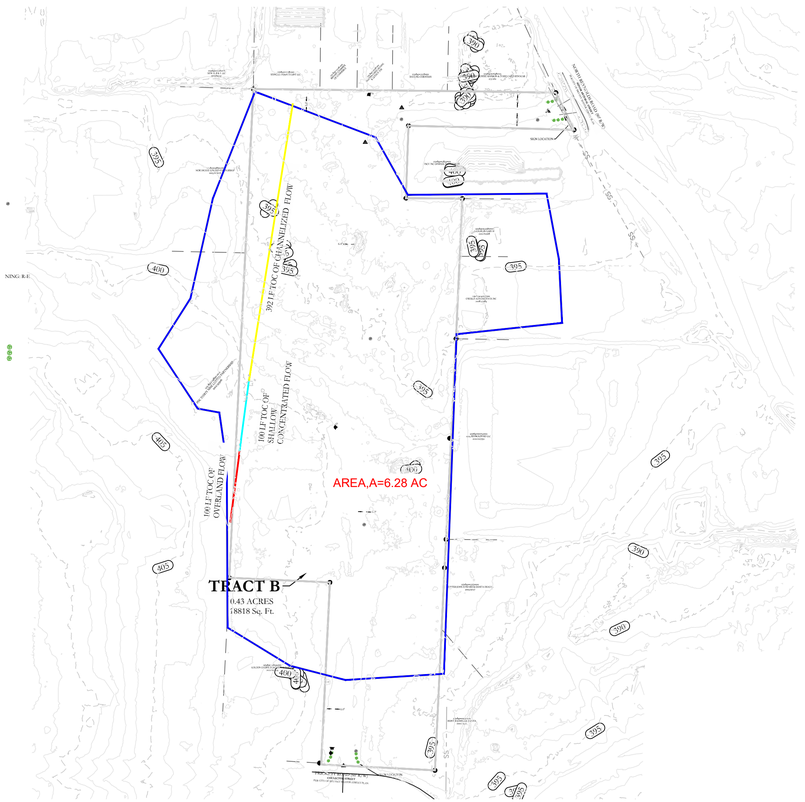
OUTLET CONTROL STRUCTURE:

The outlet is a reinforced concrete multi-stage rectangular weir in the north berm. Stage 1 is a 0.5' wide low-flow notch with its crest at 392.50. Stage 2 is a 4.5' wide opening with its crest at 393.50. Stage 3 is a 10.0' wide opening with its crest at 394.50. The top of the pond is at 395.50. It discharges onto grouted riprap (FL 392.35) with filter fabric conforming to AASHTO M288.

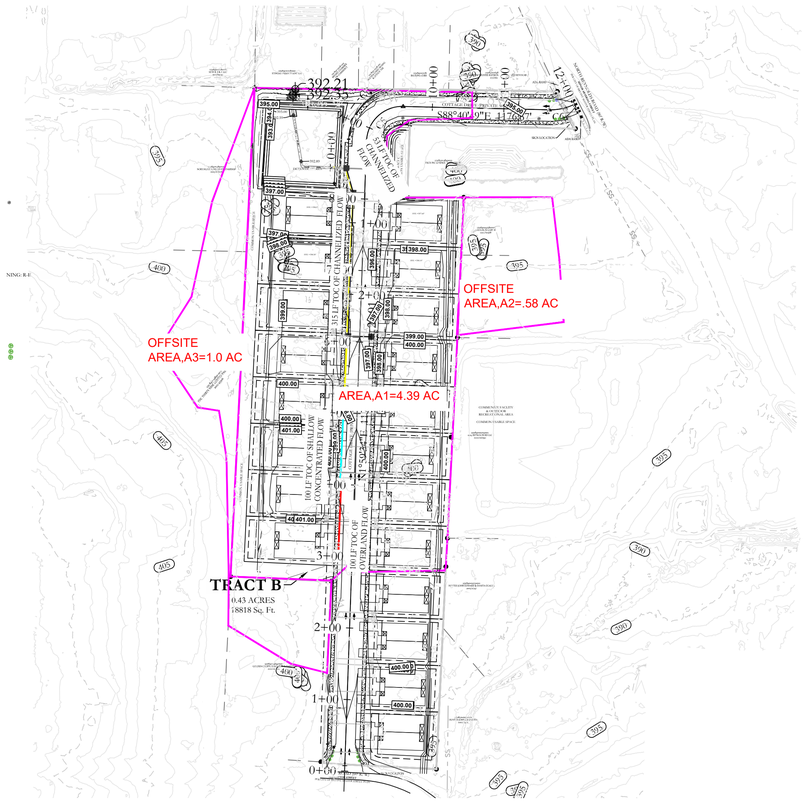
CONCLUSION

The onsite drainage calculation shows that the proposed detention pond decreases the flow for all storm events.

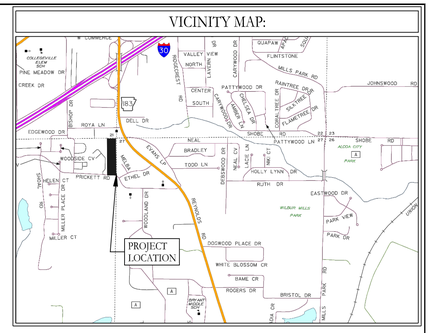
Hydrograph Summary Report



PRE DEVELOPMENT CONDITION:



POST DEVELOPMENT CONDITION:



OVERLAND FLOW

SHALLOW CONCENTRATED FLOW

CHANNELIZED FLOW

Peak flows for the pre-and post-development phase of the onsite area have been tabulated below-

Time	Pre-development	Post-dev. Without detention	Post-dev. With detention (From Hydrograph)	Maximum High Water
	Peak Flow (cfs)	Peak Flow (cfs)	Peak Flow (cfs)	Elevation (ft)
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100-Year	21.44	38.99	9.253	394.05

CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No. 1931 ARKANSAS

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER NO. 20876 KAZEL TAMZIDUL ISLAM

BASIS OF BEARING: GRID NORTH, ARKANSAS COORDINATE SYSTEM, SOUTHZONE BY GPS OBSERVATION

120 60 0 120

LEGEND
- Found Aliquot Corner
- Found monument
- Set ½" Rebar
- Computed point
(M)- Measured
(P) - Plat/Deed
——— Fence

HOPE CONSULTING ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

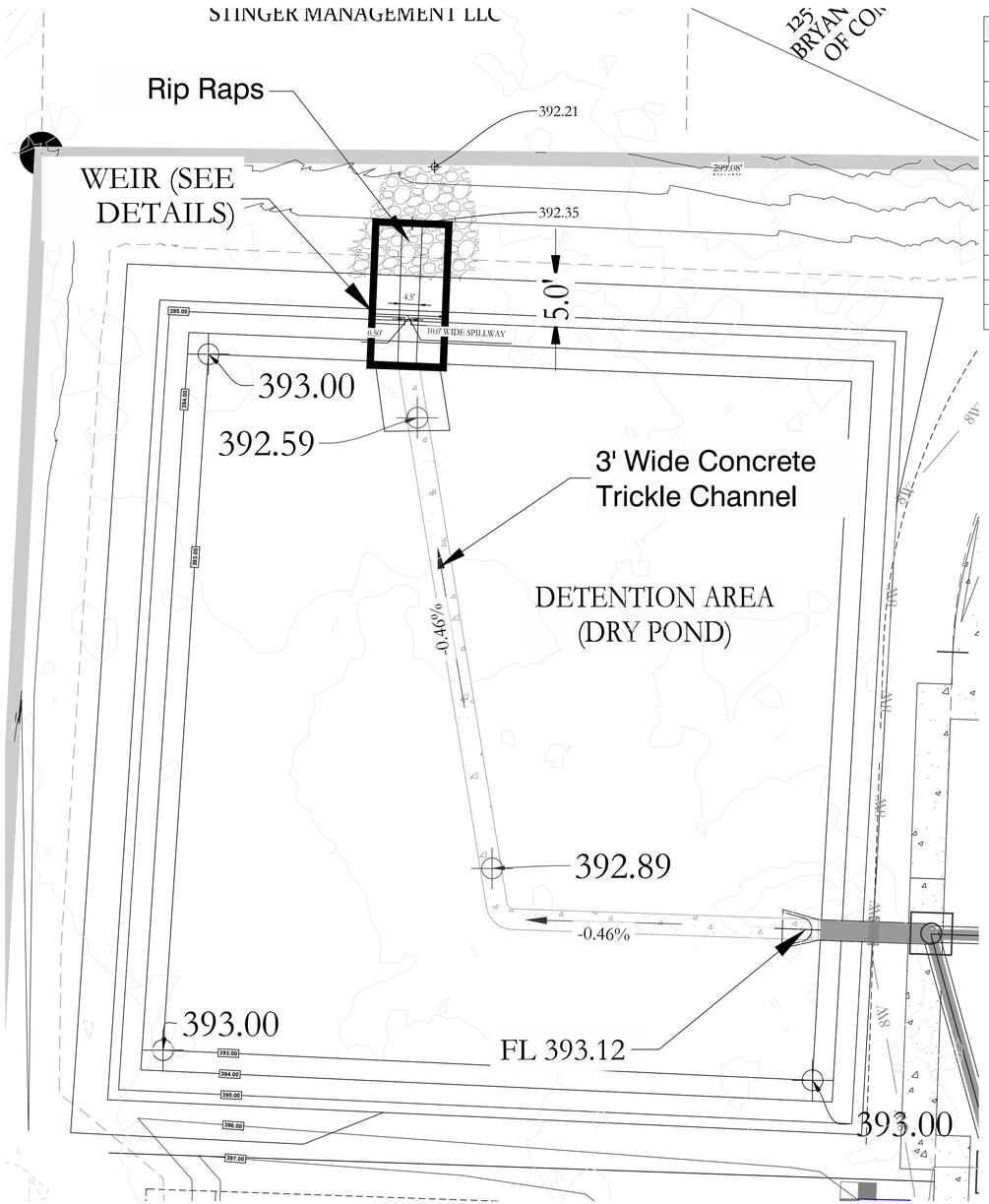
FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
DRAINAGE CALCULTIONS
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-4.0	SCALE:	

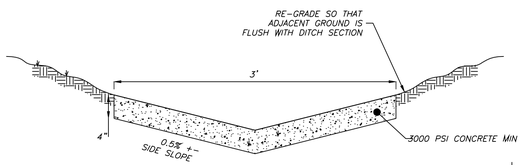
500	01S	14W	0	28		62	1664

SHARED:\HOPECONSULTING\LAND PROJECTS 2026\SUBDIVISIONS\2026-PED-PRICKETT ROAD DRAINAGE AND DETENTION 09-15-2026.DWG

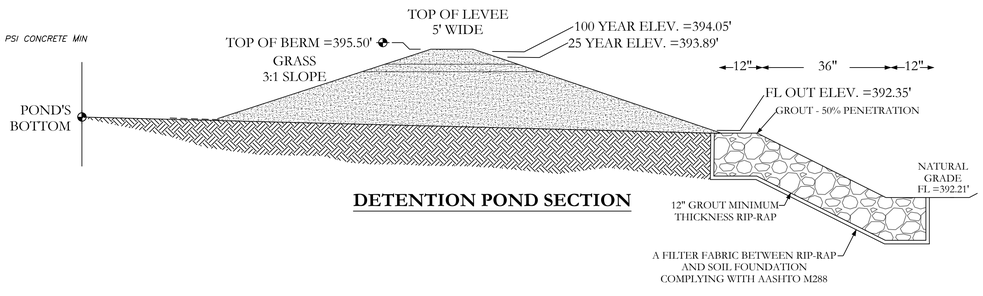


DETENTION POND

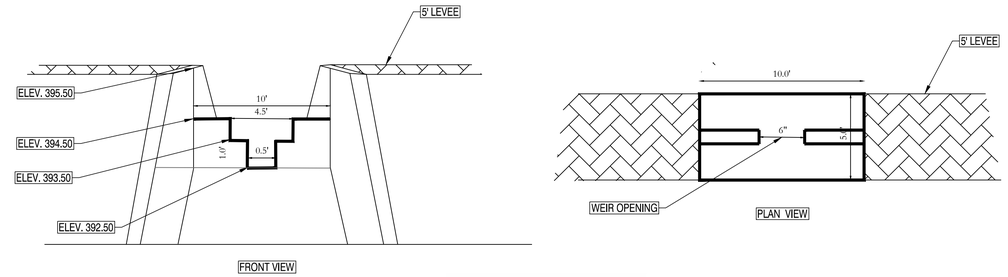
POND DETAILS	
Pond bottom	393.00' min. (at channel edges, weir end), graded at 0.5% min. toward trickle channel
FES invert / rim	393.12' / 394.99'
Trickle channel type	3'-0" wide x 6" deep concrete V-ditch, 3:1 side slopes
Trickle channel flowline, FES end	393.12' (top of edge 393.62')
Trickle channel flowline, weir end	392.50' (top of edge 393.00')
Trickle channel length / grade	135' at 0.46%
Weir opening invert	392.50'
Weir opening width	4.5'
25-year WSE	393.89'
100-year WSE	394.05'
Top of berm	395.50'



DETAIL (NTS)
TRICKLE CHANNEL SECTION



DETENTION POND SECTION

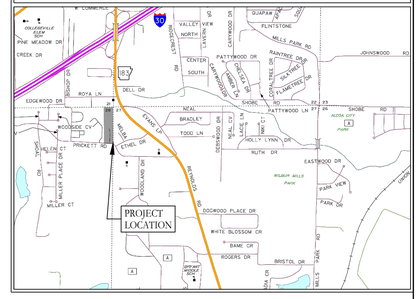


POND WEIR

EARTHEN SLOPE NOTE:
EARTHEN DETENTION POND SLOPES ON BOTH THE INTERIOR AND EXTERIOR OF THE POND SHALL HAVE A MAXIMUM SLOPE OF 3:1.

NOTE:
1. DETENTION POND WILL BE REQUIRED TO BE STABILIZED WITH SOLID SOD/SEED STABILIZATION PER THE STORM WATER MANAGEMENT MANUAL.
2. DETENTION POND WILL HAVE A 5' WIDE LEVEE.
3. SAFETY: UPON COMPLETION, THE DETENTION BASIN SHALL BE ENCLOSED WITH FENCING PER THE FENCE DETAIL ON THIS SHEET,WITH A LOCKABLE MAINTENANCE ACCESS GATE, IN ACCORDANCE WITH SECTION 1000.7 OF THE CITY OF BRYANT STORMWATER MANAGEMENT MANUAL.

VICINITY MAP:



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
KAZI TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING INC.
No. 1931
ARKANSAS

DETENTION POND MAINTENANCE PLAN

Background
The Detention pond is located at the North West of the subjected property. It is designed to temporarily detain stormwater to meet water quantity criteria before discharging off the property.

Routine Maintenance
Routine maintenance will include but not be limited to:
-Mowing of the bank slopes and area around the pond on a monthly basis during the growing season and as needed during the cooler months.

-The outlet pipe from the pond and other areas will be inspected monthly for debris which could inhibit the proper flow of discharge. Any debris will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up or downstream of the structure.

-Trash will be removed from around the pond to prevent entering the pond. Generally, the site should be kept free of loose trash which could be carried off site by wind or rain.

-Inspect the pond and outlet pipe for non-routine maintenance need.

-The pond shall be maintained in accordance with section 1000 of the city of bryant storm water management manual.

-Mosquito control: the detention pond is designed as a dry pond and shall drain completely within 72 hours after a storm event.

Standing water shall not be permitted. The owner shall correct any ponding areas by regrading and shall keep the trickle channel and outlet free of debris.

-The engineer of record shall be responsible for inspection of the detention pond, outlet structure,and trickle channel during construction and shall certify that the pond was constructed in accordance with the approved plans prior to final acceptance.

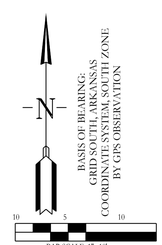
Periodic or Non-Routine Maintenance
The routine inspection of the pond area and discharge pipe will identify needed repairs and non-routine maintenance. These items may include but not be limited to:

-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond area.

-Sediment from the site may accumulate in the pond bottom and reduce the pond to below design volume requirements. The pond should be excavated if the pond bottom elevation reached a level that allows excessive aquatic growth or reduces the pond efficiency such, that the sediments are passing the discharge structure and release off site.

-Stabilization or re-grading of side slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.

-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.



HOPE CONSULTING
ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HERITAGE HOMES

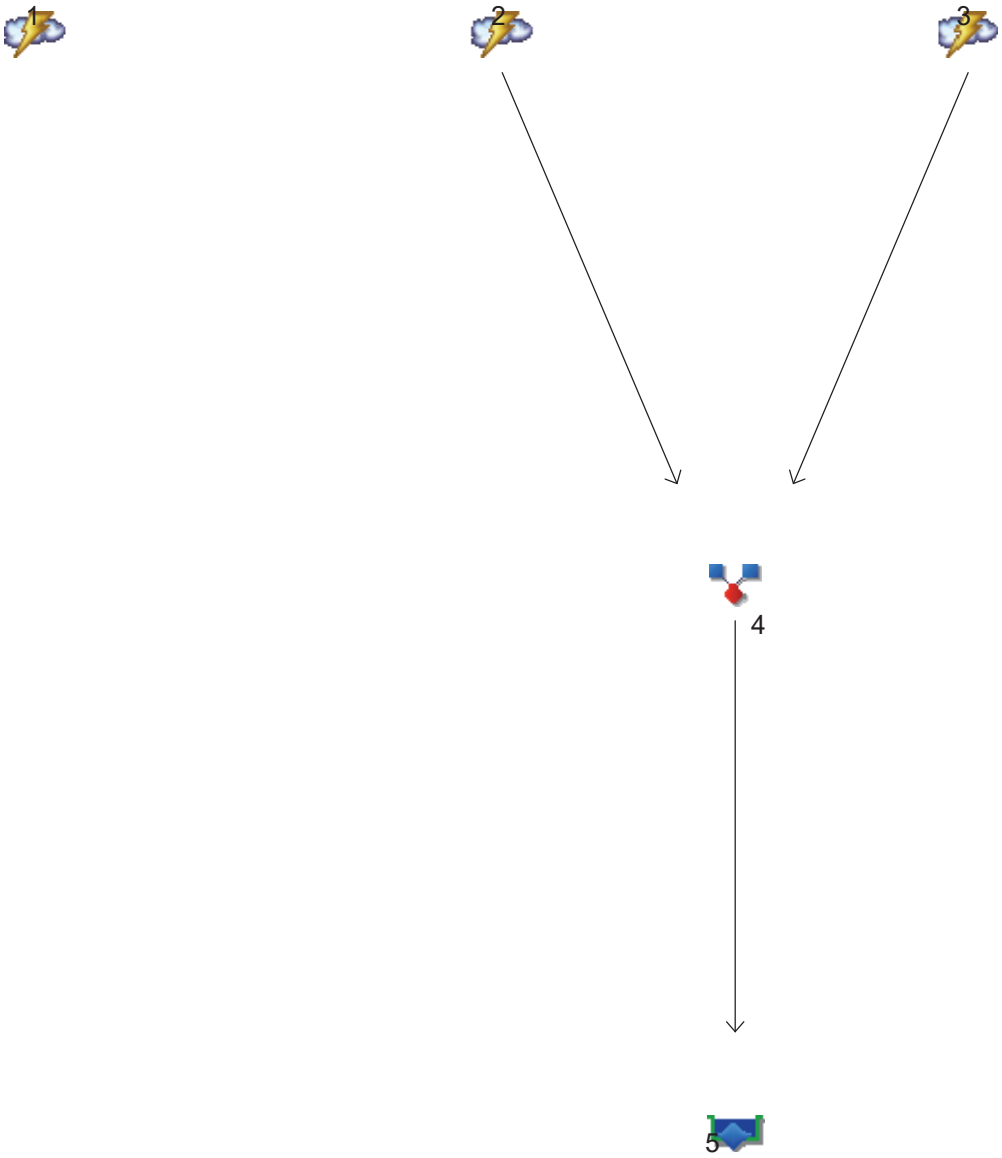
THE COTTAGES OF BRYANT
DETENTION POND
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-6.0	SCALE:	

500	01S	14W	0	28		62	1664

H:\SHARED\HOPECONSULTING\LAND PROJECTS 2004 SUBDIVISIONS\2026\26-0288 HERITAGE HOMES - PRICKETT RD\DWG\26-0288 PRICKETT ROAD DRAINAGE AND DETENTION 09-15-2026.DWG

Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	Rational	Pre Dev. Flow
2	Rational	DEV GENERATED FLOW-(ONSITE)
3	Rational	DEV GENERATED FLOW(OFF SITE)
4	Combine	<no description>
5	Reservoir	POST DEVELOPMENT FLOW

Multi-Hydrograph Plot

Hyd. No. 1

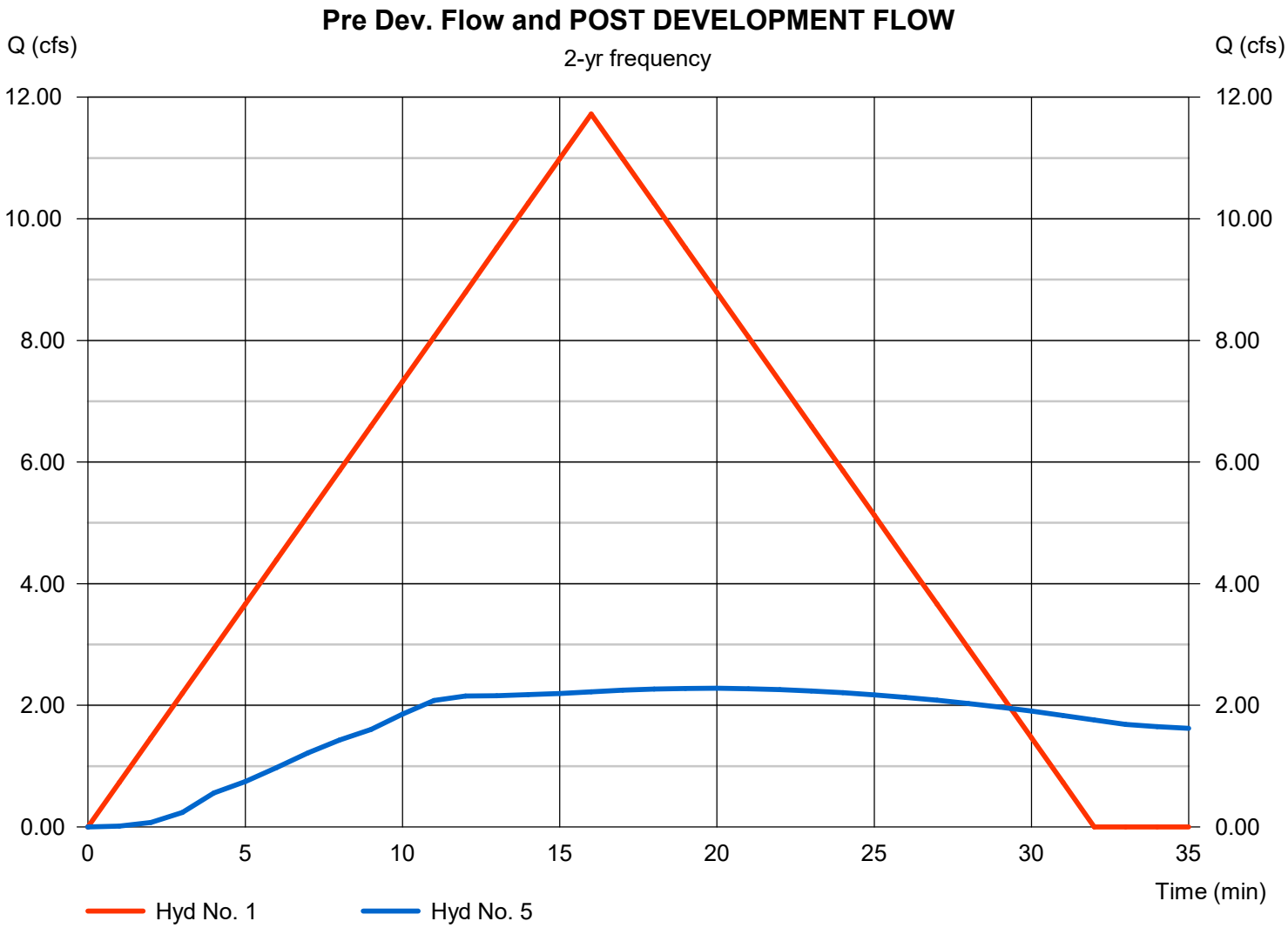
Pre Dev. Flow

Hydrograph type	=	Rational
Peak discharge	=	11.72 cfs
Time to peak	=	16 min
Hyd. Volume	=	11,251 cuft

Hyd. No. 5

POST DEVELOPMENT FLOW

Hydrograph type	=	Reservoir
Peak discharge	=	2.28 cfs
Time to peak	=	20 min
Hyd. Volume	=	10,135 cuft



Multi-Hydrograph Plot

Hyd. No. 1

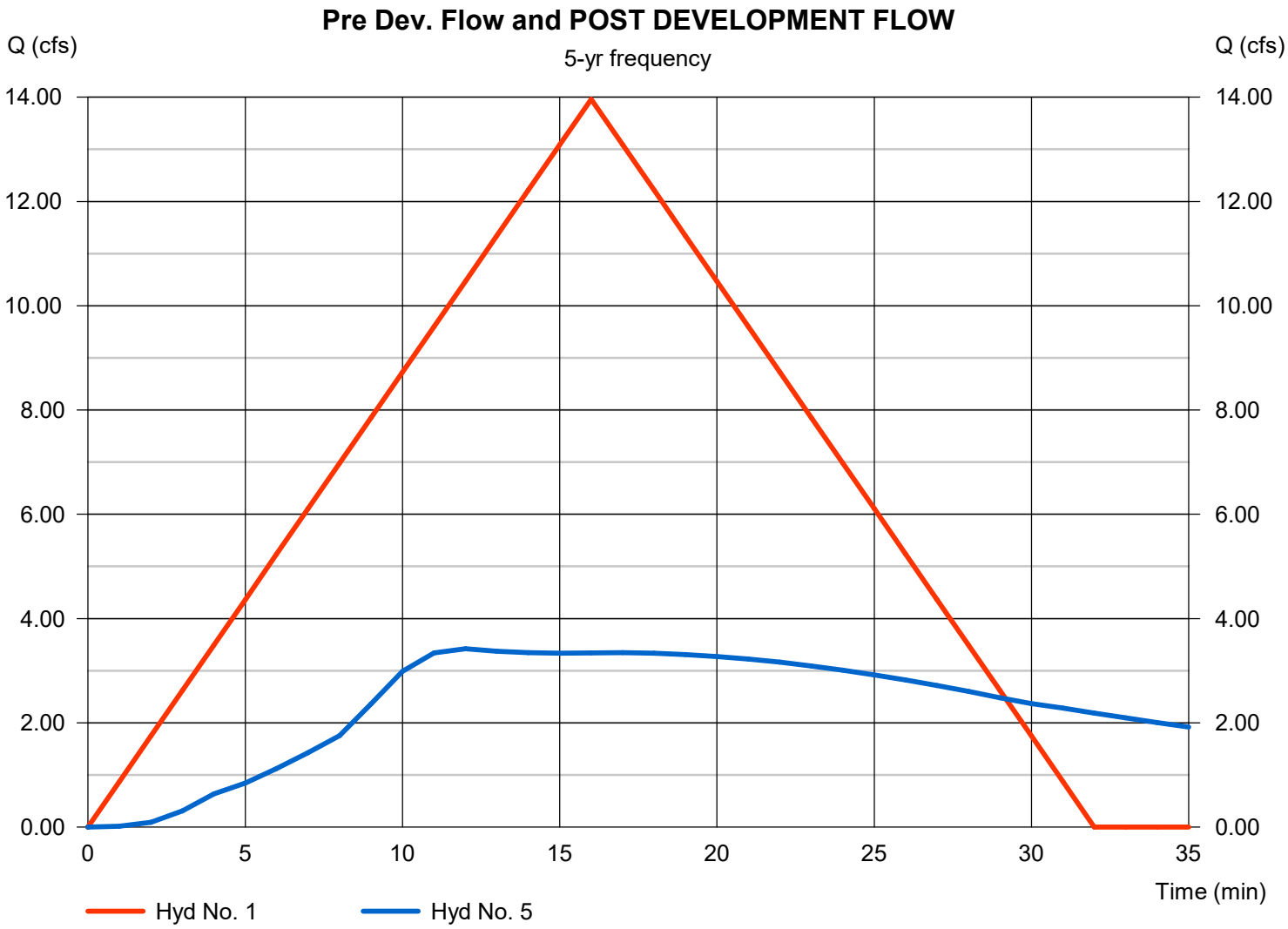
Pre Dev. Flow

Hydrograph type	=	Rational
Peak discharge	=	13.96 cfs
Time to peak	=	16 min
Hyd. Volume	=	13,401 cuft

Hyd. No. 5

POST DEVELOPMENT FLOW

Hydrograph type	=	Reservoir
Peak discharge	=	3.42 cfs
Time to peak	=	12 min
Hyd. Volume	=	12,037 cuft



Multi-Hydrograph Plot

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No. 1

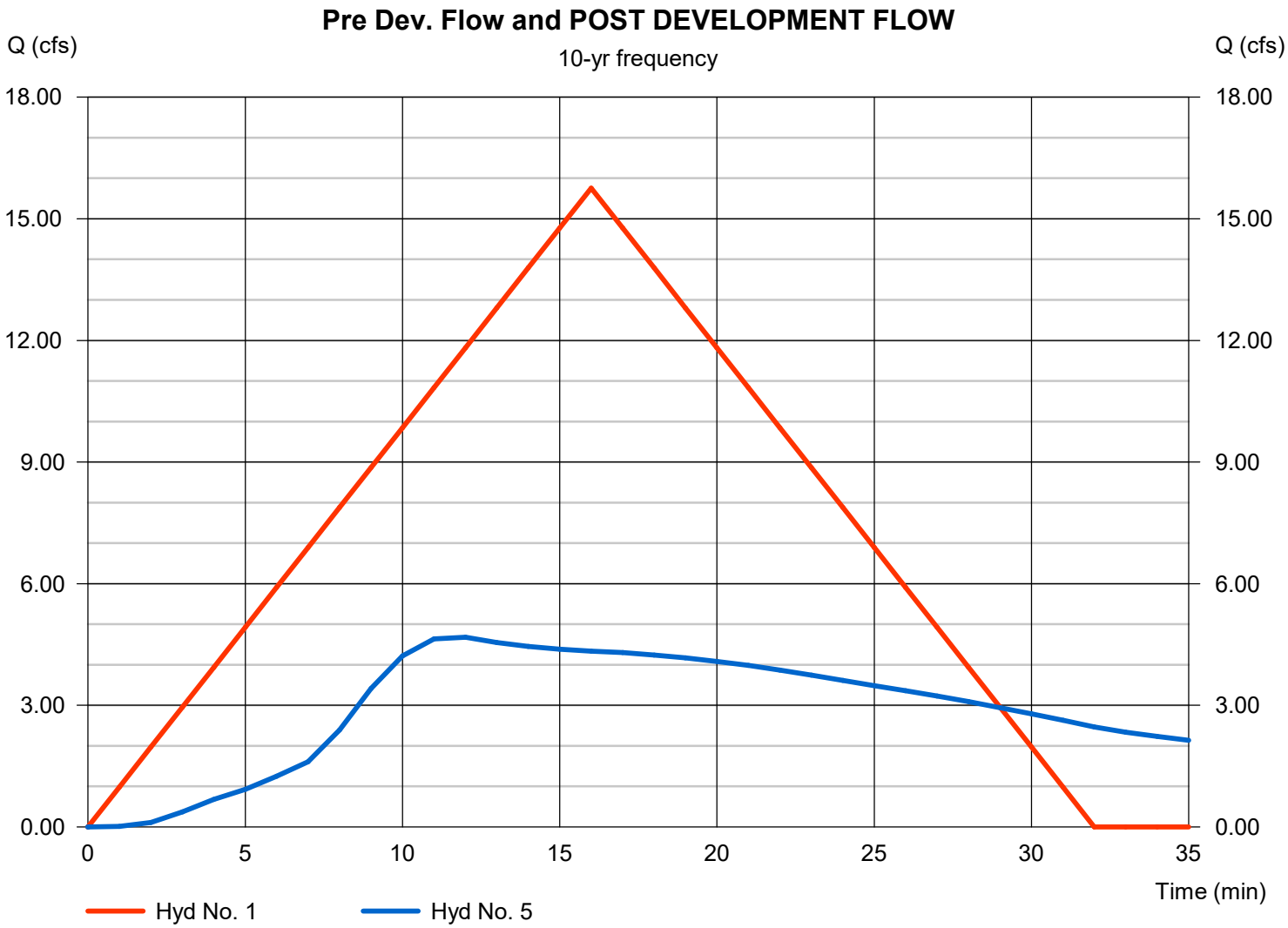
Pre Dev. Flow

Hydrograph type	=	Rational
Peak discharge	=	15.76 cfs
Time to peak	=	16 min
Hyd. Volume	=	15,128 cuft

Hyd. No. 5

POST DEVELOPMENT FLOW

Hydrograph type	=	Reservoir
Peak discharge	=	4.68 cfs
Time to peak	=	12 min
Hyd. Volume	=	13,586 cuft



Multi-Hydrograph Plot

Hyd. No. 1

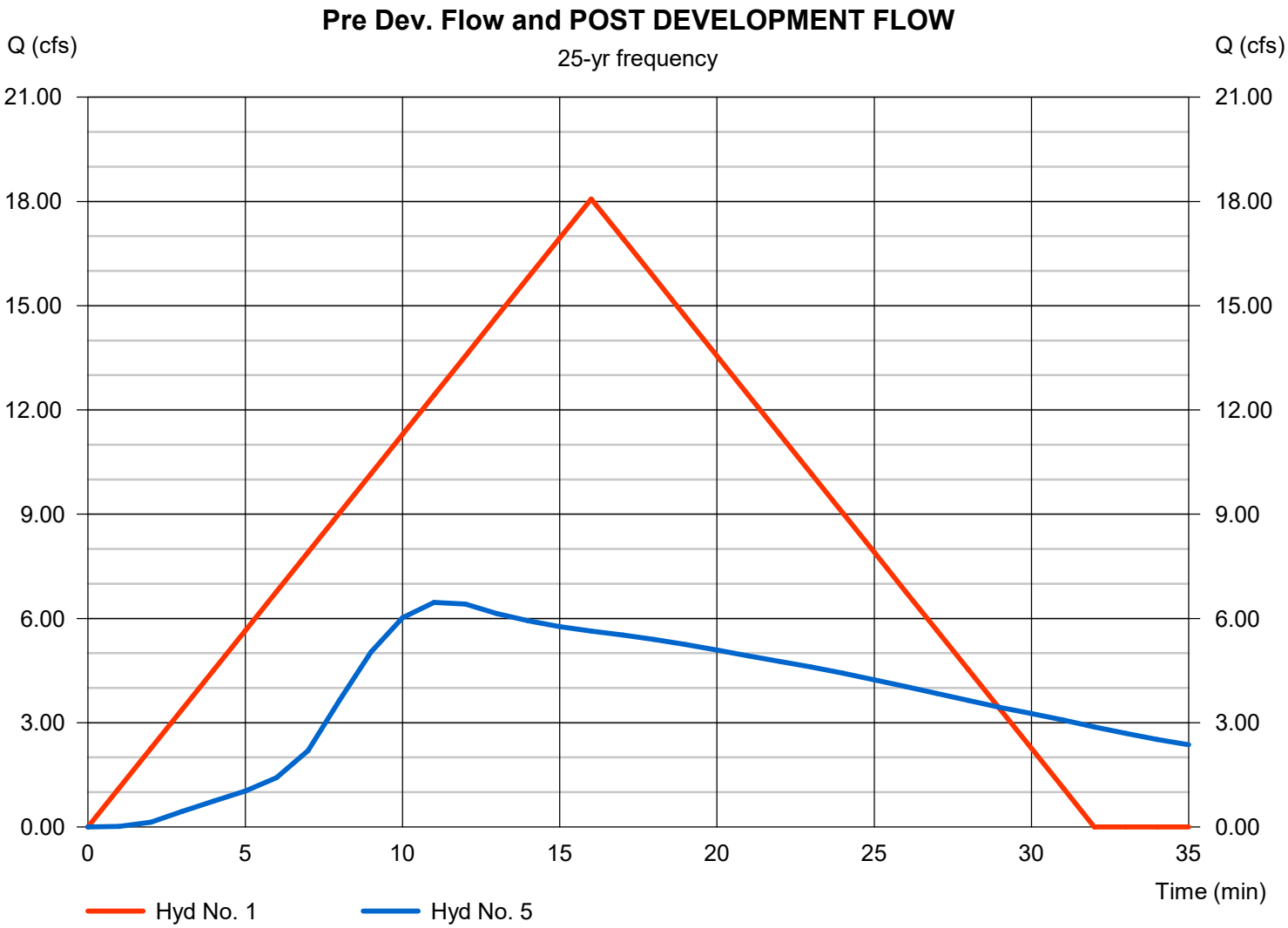
Pre Dev. Flow

Hydrograph type	=	Rational
Peak discharge	=	18.07 cfs
Time to peak	=	16 min
Hyd. Volume	=	17,350 cuft

Hyd. No. 5

POST DEVELOPMENT FLOW

Hydrograph type	=	Reservoir
Peak discharge	=	6.46 cfs
Time to peak	=	11 min
Hyd. Volume	=	15,585 cuft



Multi-Hydrograph Plot

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No. 1

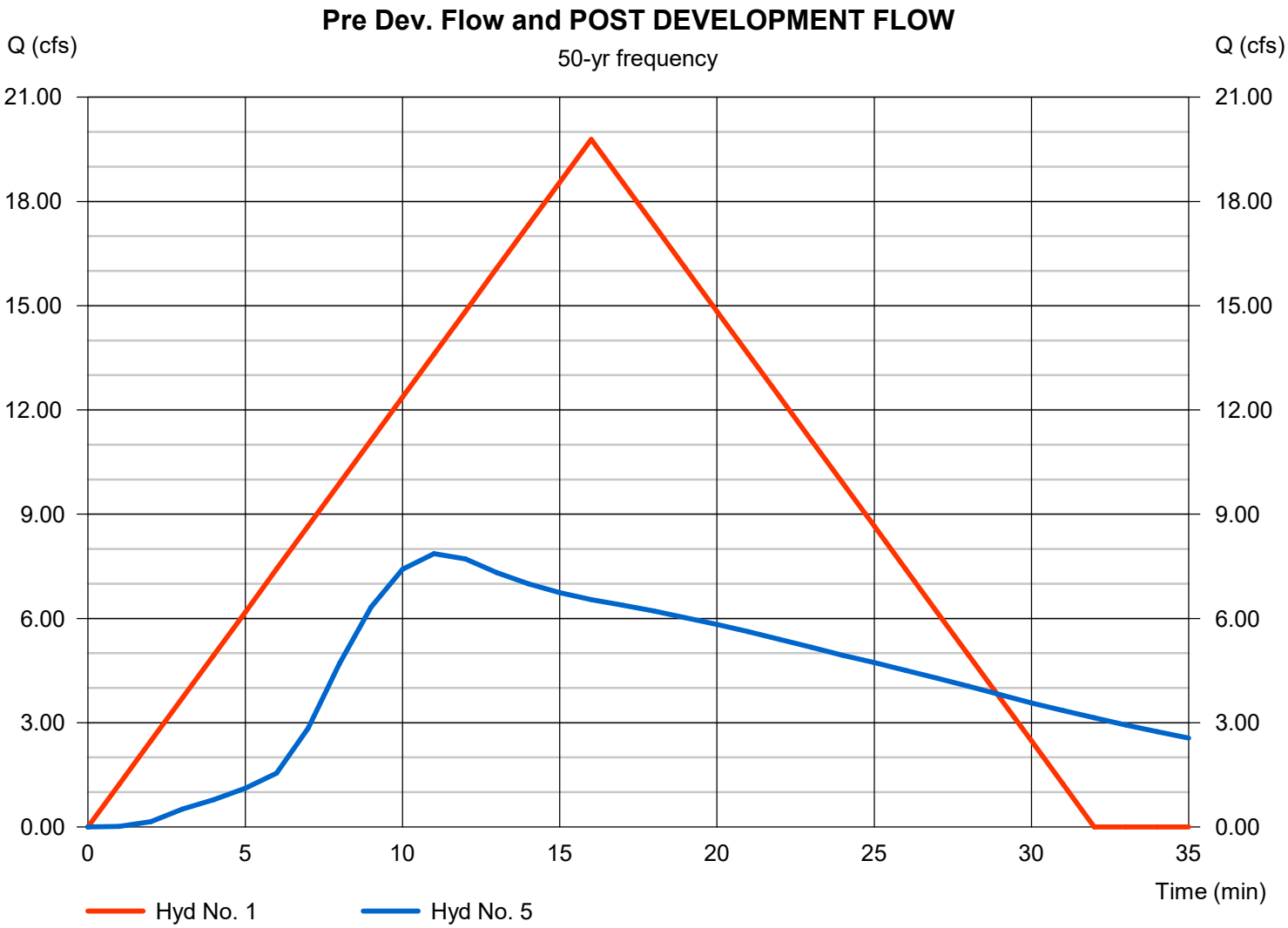
Pre Dev. Flow

Hydrograph type	=	Rational
Peak discharge	=	19.79 cfs
Time to peak	=	16 min
Hyd. Volume	=	18,995 cuft

Hyd. No. 5

POST DEVELOPMENT FLOW

Hydrograph type	=	Reservoir
Peak discharge	=	7.86 cfs
Time to peak	=	11 min
Hyd. Volume	=	17,017 cuft



Multi-Hydrograph Plot

Hyd. No. 1

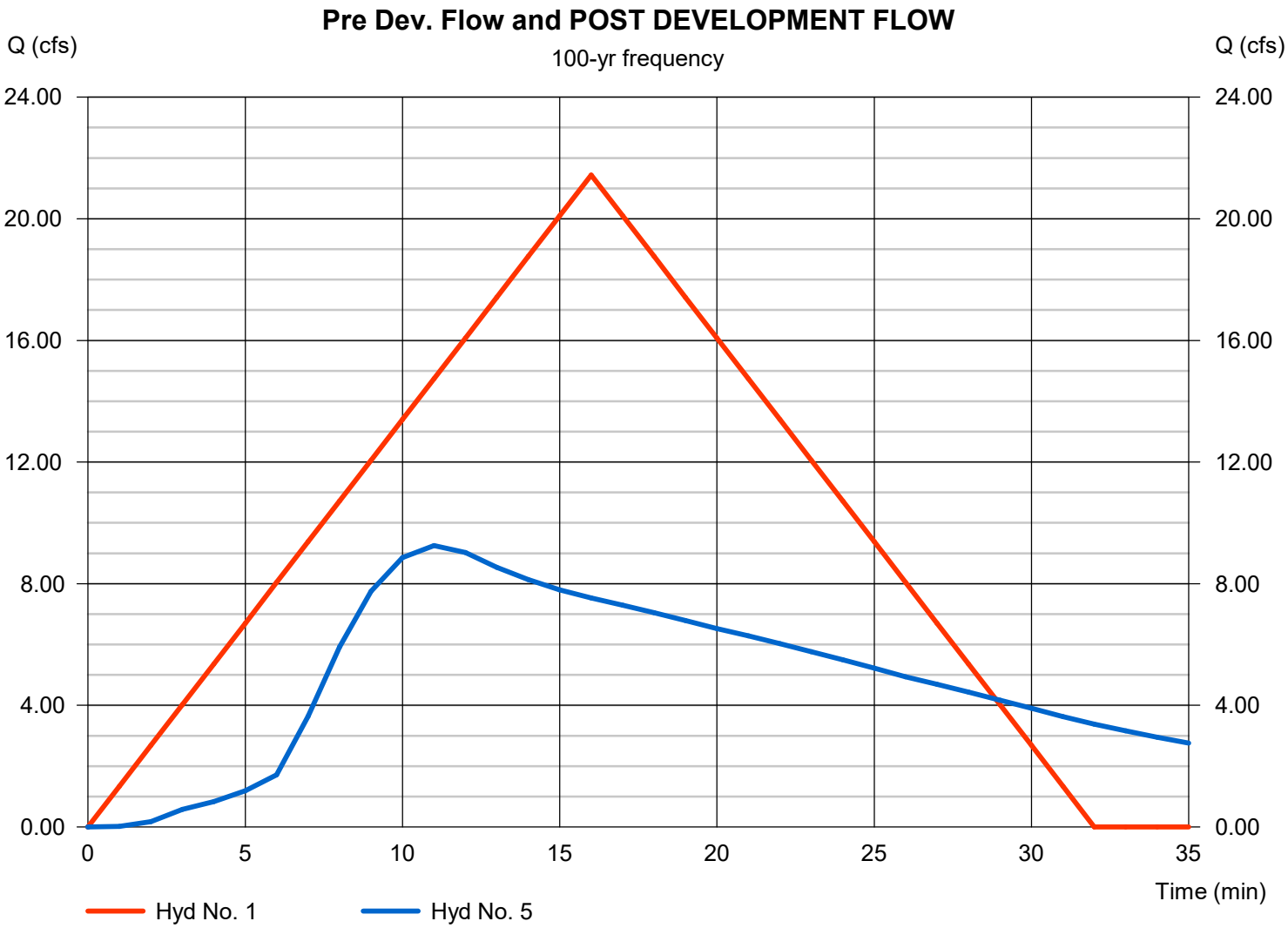
Pre Dev. Flow

Hydrograph type	=	Rational
Peak discharge	=	21.44 cfs
Time to peak	=	16 min
Hyd. Volume	=	20,582 cuft

Hyd. No. 5

POST DEVELOPMENT FLOW

Hydrograph type	=	Reservoir
Peak discharge	=	9.25 cfs
Time to peak	=	11 min
Hyd. Volume	=	18,476 cuft



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026 Thursday, 10 / 22 / 2026

Pond No. 1 - Detention Pond

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 392.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	392.50	100	0	0
0.50	393.00	9,384	1,742	1,742
1.50	394.00	10,584	9,977	11,719
2.50	395.00	11,857	11,213	22,932
3.00	395.50	12,520	6,093	29,025

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	Inactive	0.00	0.00	0.00
Span (in)	= 18.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 392.00	0.00	0.00	0.00
Length (ft)	= 24.00	0.00	0.00	0.00
Slope (%)	= 1.45	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

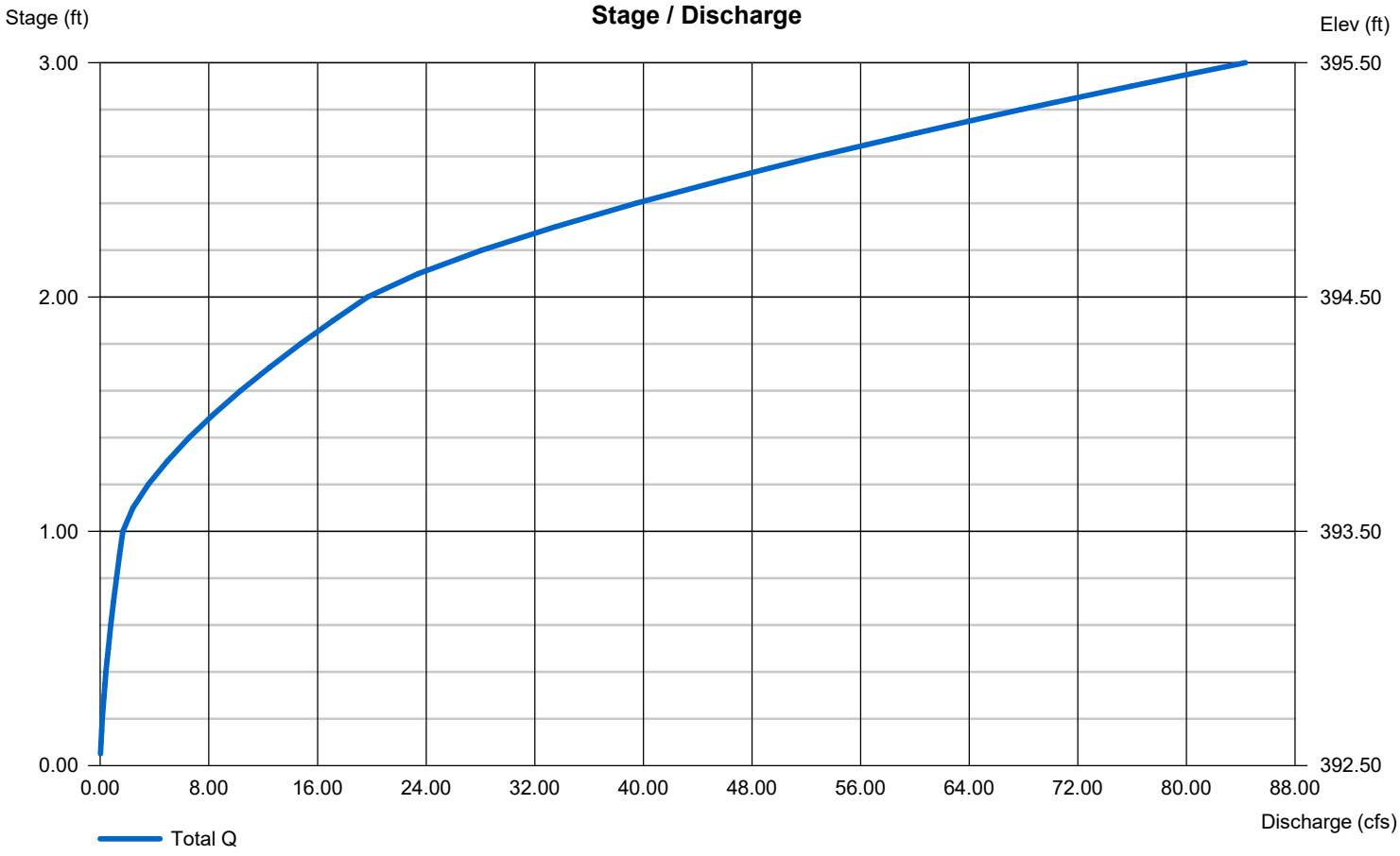
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.50	4.50	10.00	0.00
Crest El. (ft)	= 392.50	393.50	394.50	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	Rect	Rect	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	11.72	1	16	11,251	------	------	------	Pre Dev. Flow
2	Rational	20.31	1	6	7,313	------	------	------	DEV GENERATED FLOW-(ONSITE)
3	Rational	2.949	1	16	2,831	------	------	------	DEV GENERATED FLOW(OFF SITE
4	Combine	21.42	1	6	10,144	2, 3	------	------	<no description>
5	Reservoir	2.279	1	20	10,135	4	393.58	7,570	POST DEVELOPMENT FLOW

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	13.96	1	16	13,401	------	------	------	Pre Dev. Flow
2	Rational	24.10	1	6	8,675	------	------	------	DEV GENERATED FLOW-(ONSITE)
3	Rational	3.512	1	16	3,372	------	------	------	DEV GENERATED FLOW(OFF SITE
4	Combine	25.41	1	6	12,046	2, 3	------	------	<no description>
5	Reservoir	3.418	1	12	12,037	4	393.69	8,627	POST DEVELOPMENT FLOW

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	15.76	1	16	15,128	------	------	------	Pre Dev. Flow
2	Rational	27.19	1	6	9,789	------	------	------	DEV GENERATED FLOW-(ONSITE)
3	Rational	3.965	1	16	3,806	------	------	------	DEV GENERATED FLOW(OFF SITE
4	Combine	28.68	1	6	13,595	2, 3	------	------	<no description>
5	Reservoir	4.676	1	12	13,586	4	393.78	9,542	POST DEVELOPMENT FLOW

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	18.07	1	16	17,350	------	------	------	Pre Dev. Flow
2	Rational	31.19	1	6	11,229	------	------	------	DEV GENERATED FLOW-(ONSITE)
3	Rational	4.547	1	16	4,365	------	------	------	DEV GENERATED FLOW(OFF SITE
4	Combine	32.90	1	6	15,594	2, 3	------	------	<no description>
5	Reservoir	6.465	1	11	15,585	4	393.89	10,669	POST DEVELOPMENT FLOW

Hydrograph Summary Report

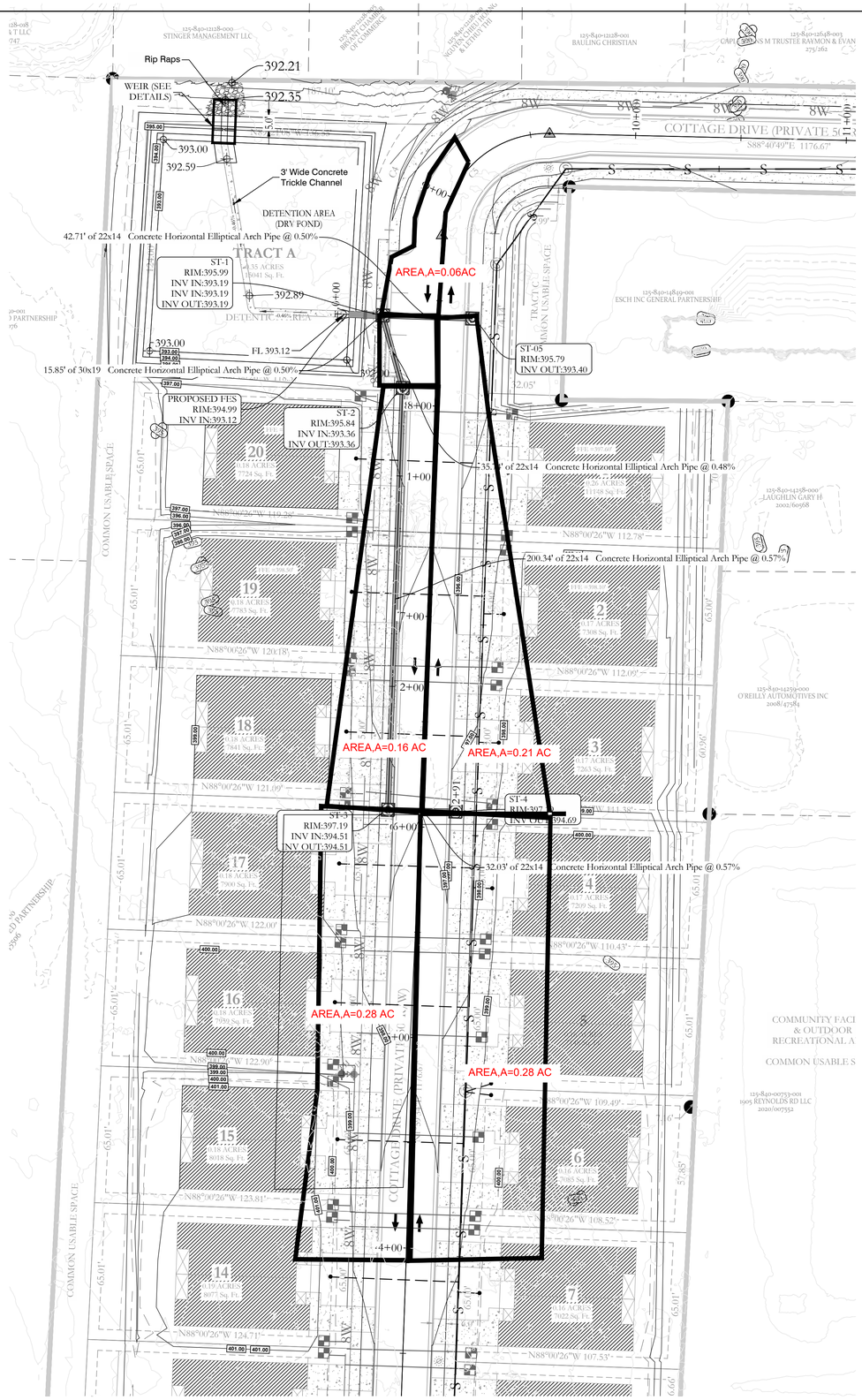
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	19.79	1	16	18,995	------	------	------	Pre Dev. Flow
2	Rational	34.02	1	6	12,247	------	------	------	DEV GENERATED FLOW-(ONSITE)
3	Rational	4.978	1	16	4,779	------	------	------	DEV GENERATED FLOW(OFF SITE
4	Combine	35.89	1	6	17,026	2, 3	------	------	<no description>
5	Reservoir	7.862	1	11	17,017	4	393.97	11,446	POST DEVELOPMENT FLOW

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2026

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	21.44	1	16	20,582	------	------	------	Pre Dev. Flow
2	Rational	36.96	1	6	13,307	------	------	------	DEV GENERATED FLOW-(ONSITE)
3	Rational	5.394	1	16	5,178	------	------	------	DEV GENERATED FLOW(OFF SITE
4	Combine	38.99	1	6	18,486	2, 3	------	------	<no description>
5	Reservoir	9.253	1	11	18,476	4	394.05	12,227	POST DEVELOPMENT FLOW



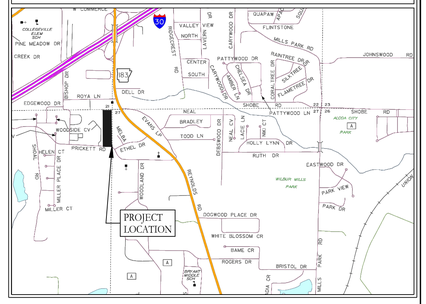
NOTES:

1. ALL WATER LINES CROSSING UNDER ANY STORM DRAIN, SHALL BE STEEL ENCASED A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN.

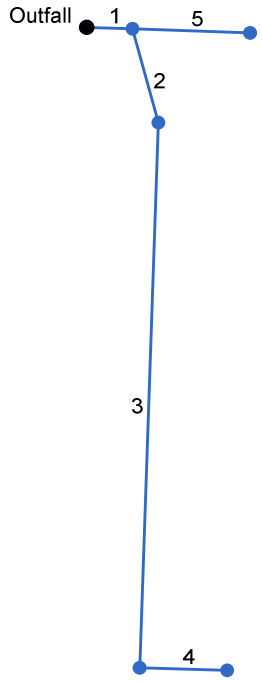
2. THE ENGINEER OF RECORD TO PROVIDE INSPECTIONS ON CONSTRUCTION ACTIVITIES FOR STORM LINES.

3. ALL THE STORM DRAINAGE HAVE BEEN DESIGNED IN COMPLIANCE WITH THE CITY OF BRYANT STANDARD SPECIFICATIONS AND STORM DRAINAGE MANUAL.

VICINITY MAP:


PROJECT LOCATION
PRICKETT RD
HIGHWAY 5
JOHNSWOOD RD
COTTAGE DRIVE
ROYA LN
DELL DR
EDGEWOOD DR
WOODLEY CV
WOODLEY LN
EVANS CV
EVANS LN
EVANS CIR
NEAL
BRADLEY
TODD LN
HOLLY LYNN DR
RUTH DR
EASTWOOD DR
WOODLAND DR
WOODLAND PLACE DR
WHITE BLOSSOM CR
RAME CR
ROGERS DR
BRISTOL DR
WILLOW CREEK DR
WILLOW CREEK PLACE DR
MILLER CT
HELEN CT
WILLOW CREEK DR
WILLOW CREEK CIR
VALLEY VIEW
NORTH
SOUTH
CENTER
FLINTSTONE
MILLE PARK RD
RAINTREE DR
PATTYWOOD DR
CARTWOOD DR
CHESTER DR
FLINTSTONE DR
SHORE
PATTYWOOD LN
ACORN CIFF PARK
WILDLIFE PARK
PARK VIEW
PARK DR
WOODLAND PLACE DR
WHITE BLOSSOM CR
RAME CR
ROGERS DR
BRISTOL DR
WILDLIFE PARK RD
QUAPAW
CREEK DR
MEADOW DR
POLKSVILLE CUT OFF
ROCKCREST
WILLOW CREEK DR
WILLOW CREEK PLACE DR
MILLER CT
HELEN CT
WILLOW CREEK CIR
WILDLIFE PARK RD
ACORN CIFF PARK
WILDLIFE PARK
PARK VIEW
PARK DR
WOODLAND PLACE DR
WHITE BLOSSOM CR
RAME CR
ROGERS DR
BRISTOL DR

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: storm analysis 9-21-2026.stm	Number of lines: 5	Date: 10/22/2026

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	Junc Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert El Dn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	16.793	1.818	Curb	0.00	0.06	0.80	6.0	393.12	0.42	393.19	19X30	Ell	0.012	1.44	395.92	Pipe - (9)
2	1	35.743	72.743	Curb	0.00	0.16	0.80	6.0	393.19	0.48	393.36	14X22	Ell	0.012	0.52	395.84	Pipe - (8)
3	2	200.344	17.431	Curb	0.00	0.28	0.80	6.0	393.36	0.57	394.51	14X22	Ell	0.012	1.50	397.19	Pipe - (10)
4	3	32.000	-90.463	Curb	0.00	0.26	0.80	6.0	394.51	0.56	394.69	14X22	Ell	0.012	1.00	397.19	Pipe - (13)
5	1	43.000	0.072	Curb	0.00	0.21	0.80	6.0	393.19	0.49	393.40	14X22	Ell	0.012	1.00	395.79	Pipe - (18)

Project File: storm analysis 9-21-2026.stm | Number of lines: 5 | Date: 10/22/2026

Structure Report

Struct No.	Structure ID	Junction Type	Rim Elev (ft)	Structure			Line Out			Line In		
				Shape	Length (ft)	Width (ft)	Size (in)	Shape	Invert (ft)	Size (in)	Shape	Invert (ft)
1	ST-1	Curb-	395.92	Cir	4.00	4.00	19x30	Ellip	393.19	14x22 14x22	Ellip Ellip	393.19 393.19
2	ST-2	Curb-	395.84	Cir	4.00	4.00	14x22	Ellip	393.36	14x22	Ellip	393.36
3	ST-3	Curb-	397.19	Cir	4.00	4.00	14x22	Ellip	394.51	14x22	Ellip	394.51
4	ST-4	Curb-	397.19	Cir	4.00	4.00	14x22	Ellip	394.69			
5	ST-05	Curb-	395.79	Cir	4.00	4.00	14x22	Ellip	393.40			

Project File: storm analysis 9-21-2026.stm | Number of Structures: 5 | Run Date: 10/22/2026

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	16.793	0.06	0.97	0.80	0.05	0.78	6.0	8.0	8.7	6.77	15.33	3.96	19 x 30 e	0.42	393.12	393.19	393.86	394.14	393.12	395.92	Pipe - (9)
2	1	35.743	0.16	0.70	0.80	0.13	0.56	6.0	7.8	8.8	4.93	7.21	4.12	14 x 22 e	0.48	393.19	393.36	394.32	394.20	395.92	395.84	Pipe - (8)
3	2	200.344	0.28	0.54	0.80	0.22	0.43	6.0	6.4	9.4	4.08	7.92	3.96	14 x 22 e	0.57	393.36	394.51	394.41	395.30	395.84	397.19	Pipe - (10)
4	3	32.000	0.26	0.26	0.80	0.21	0.21	6.0	6.0	9.7	2.01	7.84	2.94	14 x 22 e	0.56	394.51	394.69	395.47	395.25	397.19	397.19	Pipe - (13)
5	1	43.000	0.21	0.21	0.80	0.17	0.17	6.0	6.0	9.7	1.63	7.31	2.78	14 x 22 e	0.49	393.19	393.40	394.32	393.91	395.92	395.79	Pipe - (18)

Project File: storm analysis 9-21-2026.stm

Number of lines: 5

Run Date: 10/22/2026

NOTES:Intensity = 47.96 / (Inlet time + 5.50) ^ 0.65; Return period =Yrs. 50 ; c = cir e = ellip b = box

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	ST-1	0.46	0.00	0.47	0.00	Curb	4.0	8.00	0.00	0.00	0.00	Sag	1.50	0.050	0.020	0.013	0.12	3.57	0.12	3.57	0.0	Off
2	ST-2	1.24	0.18	1.42	0.00	Curb	4.0	8.00	0.00	0.00	0.00	0.005	1.50	0.050	0.020	0.013	0.21	8.34	0.20	0.59	2.0	1
3	ST-3	2.17	0.00	1.99	0.18	Curb	4.0	8.00	0.00	0.00	0.00	0.005	1.50	0.050	0.020	0.013	0.24	9.88	0.28	3.26	2.0	2
4	ST-4	2.01	0.00	2.01	0.00	Curb	4.0	12.00	0.00	0.00	0.00	0.005	1.50	0.050	0.020	0.013	0.24	9.59	0.25	0.00	3.0	3
5	ST-05	1.63	0.00	1.63	0.00	Curb	4.0	8.00	0.00	0.00	0.00	Sag	2.00	0.050	0.020	0.013	0.21	7.74	0.21	7.74	0.0	Off

Project File: storm analysis 9-21-2026.stm | Number of lines: 5 | Run Date: 10/22/2026

NOTES: Inlet N-Values = 0.016; Intensity = 47.96 / (Inlet time + 5.50) ^ 0.65; Return period = 50 Yrs. ; * Indicates Known Q added. All curb inlets are throat.

Storm Sewer Inlet Time Tabulation

Line No.	Line ID	Tc Method	Sheet Flow					Shallow Concentrated Flow					Channel Flow							Total Travel Time (min)
			n-Value	flow Length (ft)	2-yr 24h P (in)	Land Slope (%)	Travel Time (min)	flow Length (ft)	Water Slope (%)	Surf Descr	Ave Vel (ft/s)	Travel Time (min)	X-sec Area (sqft)	Wetted Perim (ft)	Chan Slope (%)	n-Value	Vel	flow Length (ft)	Travel Time (min)	
1	Pipe - (9)	User																		6.00
2	Pipe - (8)	User																		6.00
3	Pipe - (10)	User																		6.00
4	Pipe - (13)	User																		6.00
5	Pipe - (18)	User																		6.00

Project File: storm analysis 9-21-2026.stm | Min. Tc used for intensity calculations = 5 min | Number of lines: 5 | Date: 10/22/2026

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft/s)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	19 30 e	6.77	393.12	393.86	0.74	1.49	4.54	0.18	394.04	0.000	16.793	393.19	394.14	0.95**	2.01	3.38	0.18	394.32	0.000	0.000	n/a	1.44	0.26
2	14 22 e	4.93	393.19	394.32	1.13	1.08	4.55	0.21	394.53	0.000	35.743	393.36	394.20	0.84**	1.34	3.69	0.21	394.41	0.000	0.000	n/a	0.52	n/a
3	14 22 e	4.08	393.36	394.41	1.05	0.87	4.67	0.16	394.58	0.000	200.344	394.51	395.30	0.79**	1.26	3.24	0.16	395.47	0.000	0.000	n/a	1.50	0.24
4	14 22 e	2.01	394.51	395.47	0.96	0.60	3.38	0.10	395.56	0.000	32.000	394.69	395.25	0.56**	0.81	2.50	0.10	395.35	0.000	0.000	n/a	1.00	n/a
5	14 22 e	1.63	393.19	394.32	1.13	0.50	3.23	0.08	394.40	0.000	43.000	393.40	393.91	0.51**	0.70	2.33	0.08	394.00	0.000	0.000	n/a	1.00	0.08

Project File: storm analysis 9-21-2026.stm | Number of lines: 5 | Run Date: 10/22/2026

Notes: ; ** Critical depth. ; c = cir e = ellip b = box

Supplemental Friction Slope Calculation (Manning's Equation)

Project file: storm analysis 9-21-2026.stm Hydraflow run date: 10/22/2026 Manning's n: 0.012 (RCP)

Purpose

Hydraflow Storm Sewers does not report friction slope (Sf) for lines whose upstream end is controlled by critical depth. All five lines in this run are critical at the upstream end (see HGL Computations, ** notation). This sheet computes Sf separately to document pipe friction for each line. It supplements, and does not replace, the Hydraflow output.

Method

$S_f = [\, Q\, n / (1.486\, A\, R^{2/3}) \,]^2$ where R = A / P (Q = flow, cfs; A = flow area, sq ft; P = wetted perimeter, ft; R = hydraulic radius, ft)

Flow rates (Q) and flow areas (A) at each end of each line are taken directly from the Hydraflow HGL Computations report. Wetted perimeter is computed from horizontal elliptical pipe geometry at the flow depth that produces the Hydraflow area. Velocities (V) are as reported by Hydraflow. Average Sf = (Sf downstream + Sf upstream) / 2; friction loss h_f = Average Sf / 100 x Line length.

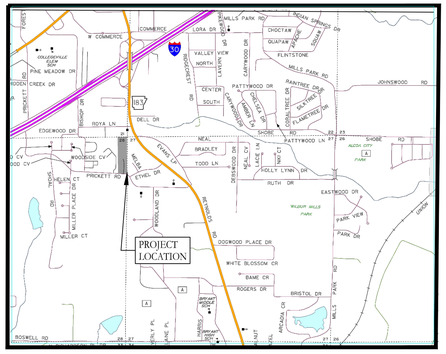
Line	Size (in, ellip)	Q (cfs)	DOWNSTREAM					UPSTREAM					Avg Sf (%)	Length (ft)	h_f (ft)
			A (sq ft)	P (ft)	R (ft)	V (ft/s)	Sf (%)	A (sq ft)	P (ft)	R (ft)	V (ft/s)	Sf (%)			
1	19 x 30	6.77	1.49	3.20	0.466	4.54	**0.372**	2.01	3.62	0.555	3.38	**0.162**	**0.267**	16.793	0.045
2	14 x 22	4.93	1.08	2.66	0.407	4.55	**0.451**	1.34	3.01	0.445	3.69	**0.260**	**0.355**	35.743	0.127
3	14 x 22	4.08	0.87	2.42	0.360	4.67	**0.560**	1.26	2.89	0.436	3.24	**0.207**	**0.384**	200.344	0.769
4	14 x 22	2.01	0.60	2.12	0.284	3.38	**0.393**	0.81	2.35	0.344	2.50	**0.166**	**0.280**	32.000	0.089
5	14 x 22	1.63	0.50	1.99	0.251	3.23	**0.437**	0.70	2.23	0.314	2.33	**0.166**	**0.302**	43.000	0.130

Notes

1. Hydraflow does not report friction slope for lines whose upstream end is controlled by critical depth. Friction slopes above were computed separately using Manning's equation and the flow areas reported by Hydraflow.
2. Lines 2, 4 and 5 contain supercritical flow with a hydraulic jump near the downstream end. Downstream flow areas are the supercritical (pre-jump) values reported by Hydraflow, so downstream Sf is conservative (high).
3. Energy loss (EGL upstream minus EGL downstream) is not reported for these reaches because friction alone does not balance the energy equation where critical depth and a hydraulic jump occur. The friction loss h_f shown is pipe friction only.
4. HGL and EGL elevations are as computed by Hydraflow and are not modified by this calculation.

CONSTRUCTION PLANS
PROPOSED RESIDENTIAL DEVELOPMENT

PRICKETT RD, BRYANT , AR


PROJECT LOCATION
W COMMERCE
COMMERCE
LORA DR
MILLS PARK RD
CHOCTAW
QUAPAW
FLINTSTONE
VALLEY VIEW
NORTH
CENTER
SOUTH
PATTYWOOD DR
RANTREE DR
JOHNSWOOD RD
EDGEWOOD DR
NOVA LN
BELL DR
NEAL
BRADLEY
TODD LN
SHORE
PATTYWOOD LN
ALCOA CITY PARK
HOLLY LYNN DR
RUTH DR
EASTWOOD DR
WILSON MILLS PARK
PARK VIEW
PARK DR
WOODWOOD PLACE DR
WHITE BLOSSOM CR
BAME CIR
ROGERS DR
BRISTOL DR
WILLIS PARK RD
PRICKETT RD
WOODSIDE CV
HIDDEN CREEK DR
PINE MEADOW DR
COLLEGEVILLE CLUB DEAN
WILLER PLACE
WILLER CT
HELEN CT
TROY DR
WILLIS DR
WOODLAND DR
BOSWELL RD
ROBINSON
ROBINSON PARK
ROBINSON PARK
ROBINSON PARK

125-840-12128-018
NEW B, B & T LLC
2013/69747

125-840-12128-000
STINGER MANAGEMENT LLC

125-840-12128-005
BRYANT CHAMBER OF COMMERCE

125-840-12128-010
NGUYEN CHIEU HOANG & LETHUY TH

125-840-12128-001
BAULING CHRISTIAN

125-840-12648-003
CAPLE EVANS M TRUSTEE RAYMON & EVANS CAPLE REVOCAB
275/262

NORTH REYNOLDS ROAD (80' R/W)
MINOR ARTERIAL STREET
PER CITY OF BRYANT MASTER STREET PLAN

ADA RAMP

COTTAGE DRIVE (PRIVATE 50' R/W)
S88°40'49"E 1176.67'

SIGN LOCATION

ADA RAMP

N

BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY
GPS OBSERVATION

30' 15' 0 30'

TRACT A
0.35 ACRES
15041 Sq. Ft.

DETENTION AREA

125-840-14849-001
ESCH INC GENERAL PARTNERSHIP

125-840-14850-001
NORTHGATE LIMITED PARTNERSHIP
2025/016076

TRACT C
COMMON USABLE SPACE

NOTES:

1. TRACTS B AND C WILL BE USED FOR RECREATIONAL USE AND WALKING TRAILS AND WILL BE MAINTAINED AND OWNED BY THE PROPERTY OWNERS ASSOCIATION.
2. TRACT A WILL BE UTILIZED AS A DETENTION AREA/DRY POND AND UTILITY EASEMENT MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	38.98	24.99	89.36	N46° 39' 06"E	35.14
C2	38.85	25.05	88.86	N42° 33' 19"W	35.08
C3	17.76	25.00	40.70	N22° 20' 37"E	17.39
C4	55.88	75.00	42.69	N23° 20' 10"E	54.59
C5	77.95	50.00	89.33	N46° 39' 22"E	70.29
C6	22.45	75.00	17.15	N82° 44' 41"E	22.37
C7	39.94	75.00	30.51	N59° 56' 01"E	39.47

20
0.18 ACRES
7724 Sq. Ft.

19
0.18 ACRES
7783 Sq. Ft.

18
0.18 ACRES
7841 Sq. Ft.

17
0.18 ACRES
7900 Sq. Ft.

16
0.18 ACRES
7959 Sq. Ft.

15
0.18 ACRES
8018 Sq. Ft.

14
0.19 ACRES
8077 Sq. Ft.

13
0.18 ACRES
8048 Sq. Ft.

TRACT B
0.43 ACRES
18818 Sq. Ft.

1
0.26 ACRES
11148 Sq. Ft.

2
0.17 ACRES
7308 Sq. Ft.

3
0.17 ACRES
7263 Sq. Ft.

4
0.17 ACRES
7209 Sq. Ft.

5
0.16 ACRES
7148 Sq. Ft.

6
0.16 ACRES
7085 Sq. Ft.

7
0.16 ACRES
7022 Sq. Ft.

8
0.16 ACRES
6952 Sq. Ft.

9
0.16 ACRES
6888 Sq. Ft.

10
0.16 ACRES
6836 Sq. Ft.

11
0.16 ACRES
6784 Sq. Ft.

12
0.18 ACRES
8039 Sq. Ft.

COMMON USABLE SPACE

COMMUNITY FACLITY
& OUTDOOR
RECREATIONAL AREA

COMMON USABLE SPACE

125-840-14258-000
LAUGHLIN GARY H
2002/60568

125-840-14259-000
O'REILLY AUTOMOTIVES INC
2008/47584

125-840-00753-001
1905 REYNOLDS RD LLC
2020/007552

125-840-01253-000
HUNTER JOHN EDWARD & DANITA DEALVA
2003/11747

125-840-01251-000
HUNTER JOHN E & DANITA
2002/25415

125-840-14849-000
GOLDEN CHERYL D JACKSON & DARRYL
2022/014424

125-840-14850-000
PDC THIRTY NINE LIMITED PARTNERSHIP
2012/45506

PRICKETT ROAD (60' R/W)
COLLECTOR STREET
PER CITY OF BRYANT MASTER STREET PLAN

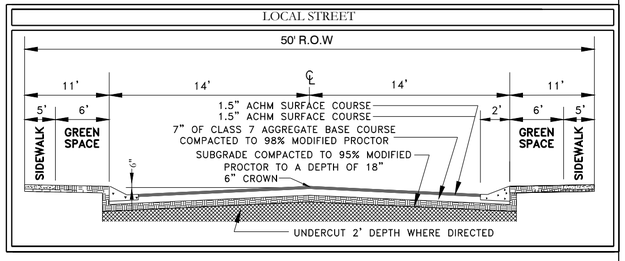
SIGN LOCATION

STREET CENTERLINE

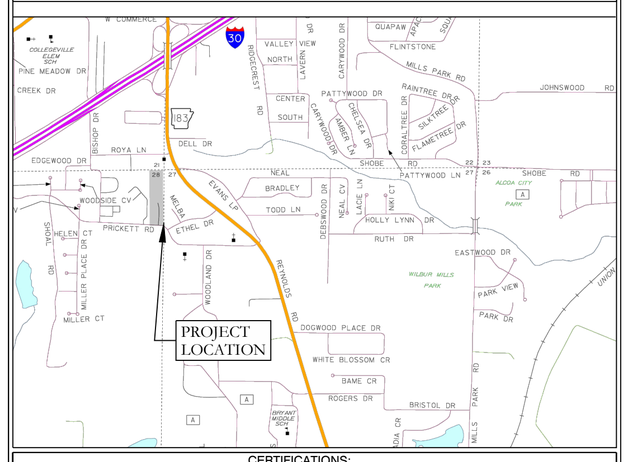
STREET RIGHT OF WAY

TYPICAL LOT
SETBACKS & EASEMENTS
NTS

LOCAL STREET



VICINITY MAP:



CERTIFICATIONS:

OWNER:

Name: HERITAGE HOMES, LLC
Address: 12585 SAMPLES ROAD
ALEXANDER , AR 72002

DEVELOPER:

Name: HERITAGE HOMES, LLC
Address: 12585 SAMPLES ROAD
ALEXANDER , AR 72002

CERTIFICATE OF OWNER:

We, the undersigned, owners of the real estate shown and described herein do hereby certify that we have caused to be laid off, platted and subdivided, and to hereby lay off, plat and subdivide said real estate in accordance with the plat.

Date of Execution _____ Name: HERITAGE HOMES, LLC
Address: 12585 SAMPLES ROAD
ALEXANDER , AR 72002

Source of Tile: D.R. BOOK 2023 PAGE 015874

CERTIFICATE OF SURVEYING ACCURACY:

I, Jonathan L. Hope, hereby certify that this plat correctly represents a boundary survey made by me or under my supervision; that all monuments shown hereon actually exist and their location, size, type and material are correctly shown; and that all interior lot lines are accurately described in terms of length and direction of the property sides.

Date of Execution

Jonathan L. Hope
Registered Professional
Land Surveyor No. 1762 Arkansas

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:

I, Kazi Tamzidul Islam, hereby certify that this plat correctly represents a plan made by me, and that the engineering requirements of the City of Bryant Subdivision Rules and Regulations have been complied with.

Date of Execution

Kazi Tamzidul Islam
Registered Professional Engineer
Arkansas No. 20876

CERTIFICATE OF PRELIMINARY PLAT APPROVAL:

Pursuant to the City of Bryant Subdivision Rules and Regulations, and all of the conditions of approval having been completed, this document is hereby accepted. This certificate is hereby executed under the authority of said rules and regulations.

Date of Execution

Lance Penfield
Bryant Planning Commission

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
KAZI TAMZIDUL ISLAM
NO. 20876

REGISTERED
STATE OF ARKANSAS
NO. 1762
SIGNATURE
JONATHAN L. HOPE
PROFESSIONAL LAND SURVEYOR

OPEN SPACE CALCULATION

TRACT A	DETENTION AREA / DRY POND	0.35 ACRES
TRACT B	GREEN SPACE / WALKING TRAIL	0.43 ACRES
TRACT C	COMMON / OUTER GREEN SPACE	0.10 ACRES
COMMON	GREEN SPACE BEHIND SIDEWALK	0.02 ACRES
		0.90 ACRES
GREEN SPACE BETWEEN BOC & SIDEWALK		0.31 ACRES
	TOTAL	1.21 ACRES OR 24.69%

RESIDENTIAL DENSITY CALCULATIONS

HOUSING UNITS	42 UNITS
TOTAL DEVELOPABLE AREA	4.90 ACRES
TOTAL COMMON USABLE OPEN SPACE	1.21 ACRES
RESIDENTIAL DENSITY	42 / (4.90+1.21) = 6.87 DUA.

LEGEND

- (P) – No Parking Sign
- – Stop Sign
- – Street light
- – Fire Hydrant
- – Computed point
- – Found monument
- – Set #4 RB/Plas. Cap (SIP)
- (D) -- Deeded
- (M) -- Measured
- (P) -- Platted

PROPERTY SPECIFICATIONS:

OWNER: HERITAGE HOMES, LLC
12585 SAMPLES ROAD
ALEXANDER , AR 72002

DEVELOPER/: HERITAGE HOMES, LLC
SUBDIVIDER 12585 SAMPLES ROAD
ALEXANDER , AR 72002

ENGINEERS: HOPE CONSULTING INC.
129 S MAIN STREET
BENTON, AR 72015

NAME OF SUBDIVISION: THE COTTAGES OF BRYANT

RESIDENTIAL DUPLEX HOMES.

ALLOWABLE FACADE: BRICK, VINYL, GLASS & WOOD

SOURCE OF TITLE: SALINE COUNTY DOCUMENT
BOOK 2023 PAGE 015874

MIN. LOT SIZE:
NUMBER OF LOTS: 20

EXISTING ZONING: R-E (RESIDENTIAL-NO SEWER)
PROPOSED ZONING: PLANNED UNIT DEVELOPMENT

SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: ENTERGY
SOURCE OF GAS: CENTERPOINT ENERGY

BUILDING SETBACKS:
FRONT - 25' OR AS SHOWN
REAR - 15' OR AS SHOWN
SIDE - 5' OR AS SHOWN

EASEMENTS: UTILITY & DRAINAGE (D.E. & U.E.)
FRONT - 10' OR AS SHOWN
REAR - 10' OR AS SHOWN
SIDE - 5' OR AS SHOWN

STREET RIGHT OF WAYS: 50' OR AS SHOWN
STREET WIDTH: 28' BOC TO BOC
LOT CORNERS: SET 1/2" REBAR WITH CAP

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HERITAGE HOMES, LLC

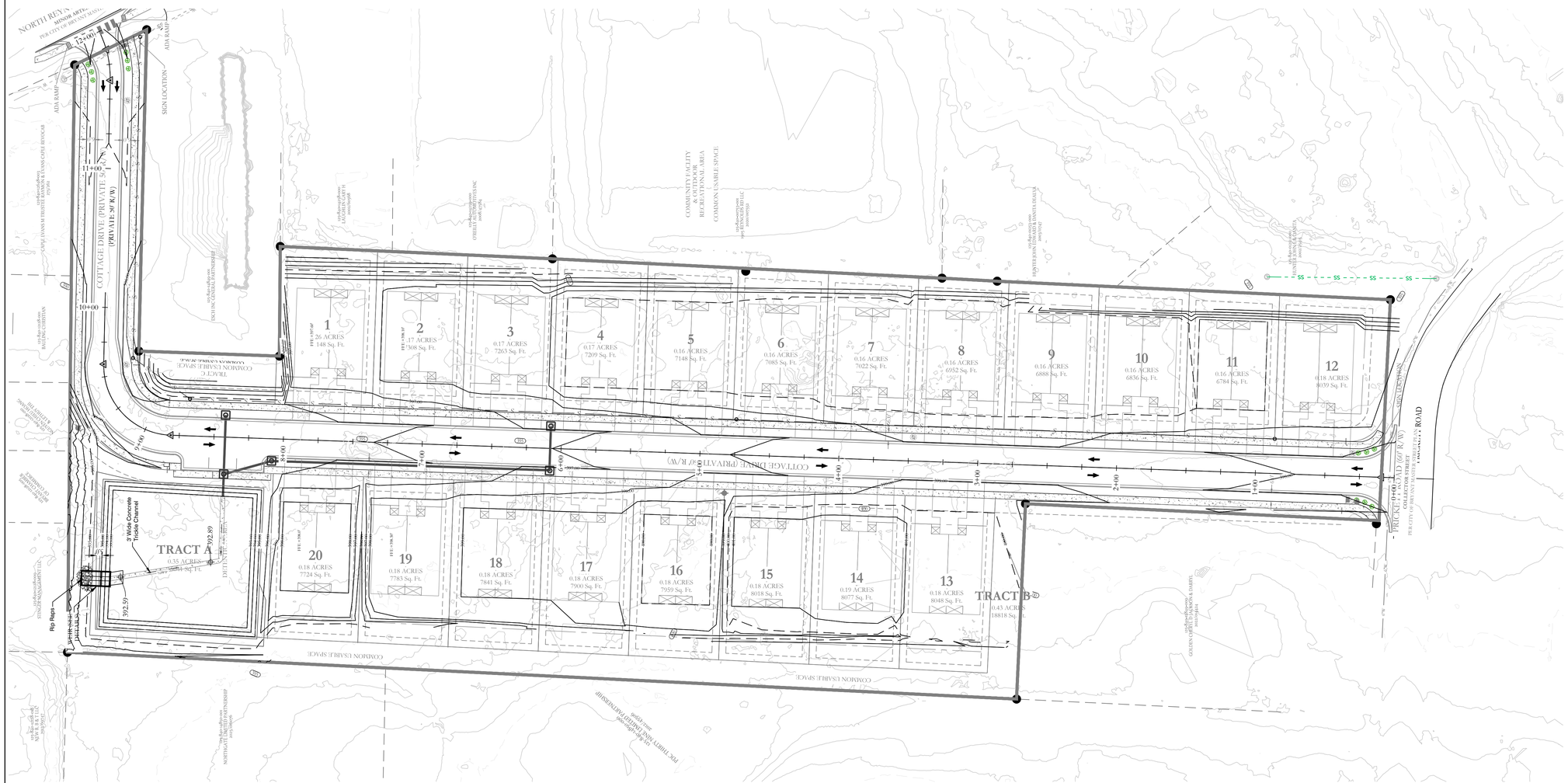
PLANNED UNIT DEVELOPMENT (PUD)
THE COTTAGES OF BRYANT

A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

DATE:	09-23-2026	C.A.D. BY:	GPW	DRAWING NUMBER:				
REVISED:	10-21-2026	CHECKED BY:		26-0288				
SHEET:	C-1.0	SCALE:	1" = 30'					
500	01S	14W	0	28	110	62	1762	

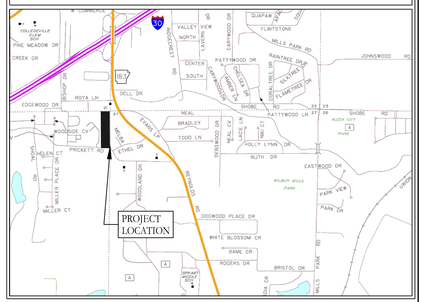
H:\Shared\Hope\Consulting\Land Projects 2\044\Subdivision\2026\26-0288 Heritage Homes - Prickett Rd\DWG\26-0288-PUD-08-17-26.dwg


Rip Raps
3' Wide Concrete Trickle Channel
TRACT A
0.95 ACRES
41411 Sq. Ft.
392.59
392.89
DETENTION AREA
COTTAGE DRIVE (PRIVATE 50' R/W)
(PRIVATE 30'R/W)
10+00
9+00
8+00
7+00
6+00
5+00
4+00
3+00
2+00
1+00
0+00
SIGN LOCATION
ADA RAMP
NORTH BRANCH ROAD (80' R/W)
NORTH BRANCH ROAD (80' R/W)
20
0.18 ACRES
7724 Sq. Ft.
N88°00'26"W 119.26'
19
0.18 ACRES
7783 Sq. Ft.
N88°00'26"W 120.18'
18
0.18 ACRES
7841 Sq. Ft.
N88°00'26"W 121.09'
17
0.18 ACRES
7900 Sq. Ft.
N88°00'26"W 122.00'
16
0.18 ACRES
7959 Sq. Ft.
N88°00'26"W 122.90'
15
0.18 ACRES
8018 Sq. Ft.
N88°00'26"W 123.81'
14
0.19 ACRES
8077 Sq. Ft.
N88°00'26"W 124.71'
13
0.18 ACRES
8048 Sq. Ft.
N87°22'20"W 125.61'
1
0.26 ACRES
11148 Sq. Ft.
N88°00'26"W 112.78'
2
0.17 ACRES
7308 Sq. Ft.
N88°00'26"W 112.09'
3
0.17 ACRES
7265 Sq. Ft.
N88°00'26"W 111.38'
4
0.17 ACRES
7209 Sq. Ft.
N88°00'26"W 110.48'
5
0.16 ACRES
7148 Sq. Ft.
N88°00'26"W 109.49'
6
0.16 ACRES
7085 Sq. Ft.
N88°00'26"W 108.52'
7
0.16 ACRES
7022 Sq. Ft.
N88°00'26"W 107.53'
8
0.16 ACRES
6952 Sq. Ft.
N88°00'26"W 106.36'
9
0.16 ACRES
6888 Sq. Ft.
N88°00'26"W 105.57'
10
0.16 ACRES
6836 Sq. Ft.
N88°00'26"W 104.77'
11
0.16 ACRES
6784 Sq. Ft.
N88°00'26"W 103.97'
12
0.18 ACRES
8039 Sq. Ft.
78.40'
TRACT B
0.43 ACRES
18818 Sq. Ft.
COMMUNITY FACILITY & OUTDOOR RECREATIONAL AREA
COMMON USABLE SPACE
COMMON USABLE SPACE
COMMON USABLE SPACE
COTTAGE DRIVE (PRIVATE 50' R/W)
PRICK 0+00
COLLECTOR STREET
PER CITY OF BRYANT MASTER STREET PLAN
PRICKETT ROAD
(60' R/W)
SIDEWALK
SIDEWALK
65.01'
65.00'
57.85'
79.75'
53.52'
370.50'
S5
S5
S5



811 Know what's below. Call before you dig.

VICINITY MAP:



GRADING PLAN NOTES

1. DESIGN CONTOURS SHOWN ARE FINISHED GRADE.
2. CLEAR AND GRUB AREAS OF THE SITE WHERE CUT OR FILL IS TO OCCUR.
3. FILL SHALL BE COMPACTED AT LEAST 98% OF THE MATERIALS MAXIMUM STANDARD PROCTOR DRY DENSITY.
4. THE MOISTURE CONTENT OF 1% BELOW TO 3% ABOVE THE OPTIMUM MOISTURE CONTENT.
5. SUB-GRADES SHALL BE PROOF-ROLLED WITH A LOADED DUMP TRUCK TO DETECT ZONES OF UNSUITABLE AND/OR EXCESSIVELY WET SOILS. IF PUMPING BEGINS, COMPACTION SHALL BE STOPPED IMMEDIATELY AND RESUMED ONLY WHEN THE MATERIAL IS SUFFICIENTLY DRY THAT PUMPING DOES NOT OCCUR.
6. ALL UNUSABLE SOILS SHALL BE USED ON SITE FOR FILL PURPOSES OUTSIDE THE AREAS OF BUILDING AND PAVEMENT CONSTRUCTION.
7. PROPER DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE PROJECT SITE TO PREVENT THE INCREASE OF THE IN-SITU SOILS MOISTURE CONTENT.

BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20076
RANDALL TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

40 20 0 40

HOPE CONSULTING
ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

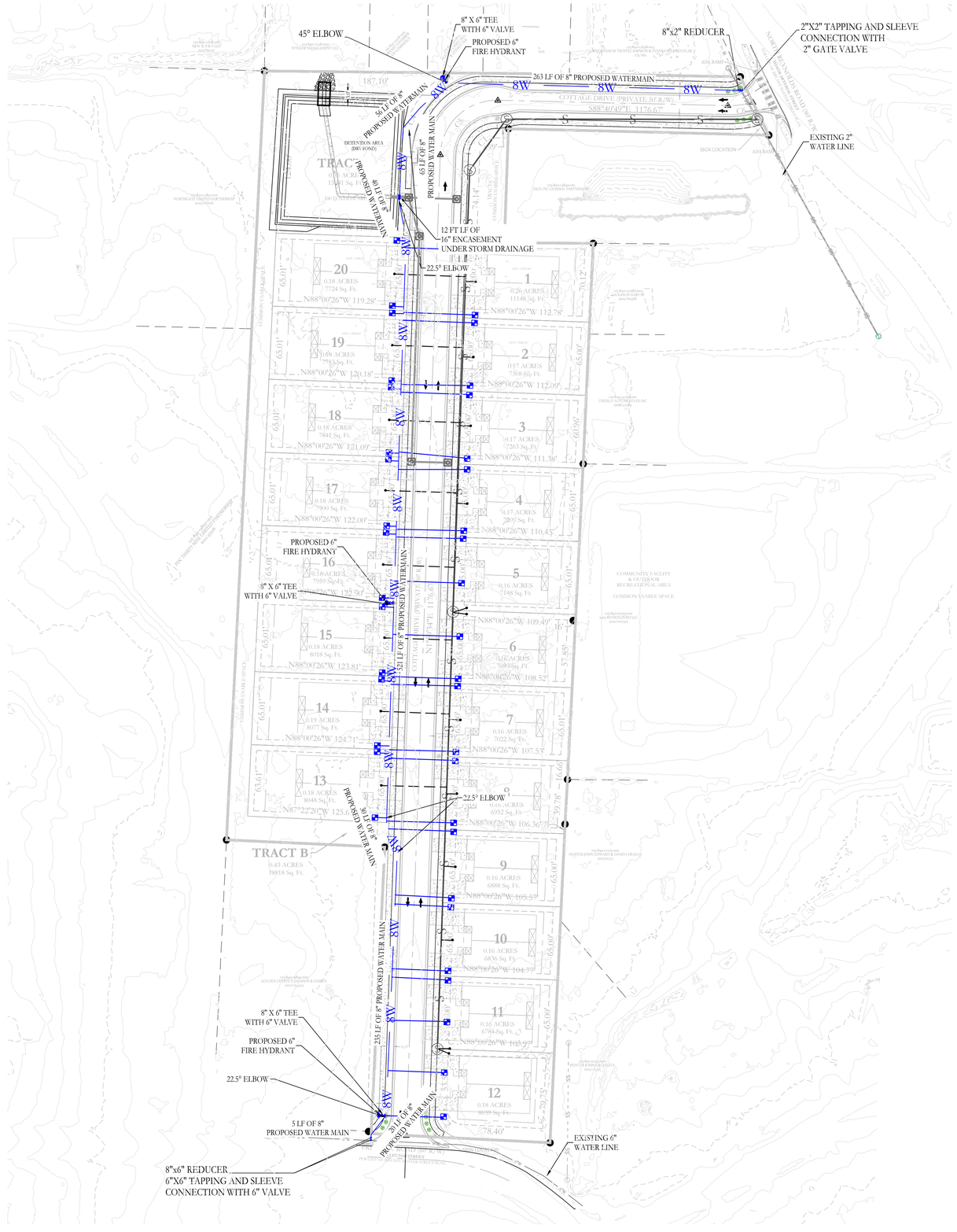
FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
GRADING PLAN
PRICKETT ROAD, BRYANT ,ARKANSAS

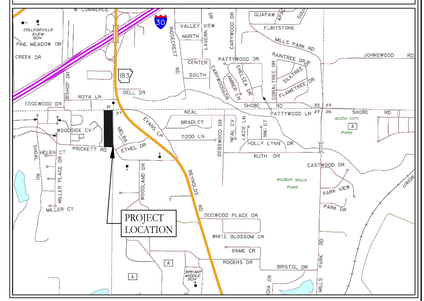
DATE:	9/23/2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-1.2	SCALE:	

500	01S	14W	0	28		62	1664

SURBED HOPECONSULTING\LAND PROJECTS\2026\SURDIVISIONS\2026-026 HERITAGE HOMES - PRICKETT RD\DWG\26-026 PRICKETT RD.DWG - 10/13/2026 3:58 PM



VICINITY MAP:



811 Know what's below. Call before you dig.

WATER UTILITY NOTES:

1. ALL NEW 6-INCH WATER MAINS TO BE CLASS 900.
2. ALL WATER CONSTRUCTION SHALL CONFORM TO " CITY OF BRYANT STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER LINES AND SEWER LINES".(2015 EDITION)
3. WATER SERVICE LINE UNDER PAVEMENT WILL HAVE 1.5"/ 2" SLEEVE.
4. ALL WATER MAIN FITTINGS SHALL BE MEGALUG BRAND MECHANICAL JOINT FITTINGS
5. ALL PVC WATER MAINS SHALL HAVE A 12-GAUGE COPPER TRACER WIRE.
6. WATER METERS SHALL BE FREE OF OBSTRUCTIONS FOR A MINIMUM OF A 3-FOOT RADIUS FROM THE CENTER OF THE WATER METER BOX.
7. MINIMUM DEPTH TO THE TOP OF PIPE FOR ALL WATER MAIN LINES SHALL BE 3.0 FEET.
8. MINIMUM DEPTH TO THE TOP OF PIPE FOR WATER LINES 18-INCHES AND GREATER SHALL BE 4.0 FEET.
9. SERVICE LINES SERVING SINGLE METER SETS AND DOUBLE METER SETS SHALL BE 1-INCH HDPE TUBING IN ACCORDANCE WITH THE CURRENT BRYANT WATER SYSTEM SPECIFICATIONS
10. SANITARY SEWERS SHALL BE INSTALLED AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER LINE.
11. SEWER LINES INSTALLED UNDER A WATER LINE MUST HAVE A CLEAR DISTANCE BETWEEN PIPES OF AT LEAST EIGHTEEN (18) INCHES.
12. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATERLINES AND SEWER LINES OR OTHER SOURCES OF CONTAMINATION. WATER LINES AND SEWERS SHALL NOT BE LAID INTHE SAME TRENCH EXCEPT ON THE WRITTEN APPROVAL OF THE ARKANSAS DEPARTMENT OF HEALTH. WATER MAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATERLINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH.
13. ALL WATER LINES CROSSINGS UNDER ANY STORM DRAIN SHALL BE STEEL ENCASES A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN.
14. THE ENGINEER OF RECORD TO PROVIDE INSPECTIONS ON CONSTRUCTION ACTIVITIES FOR WATER LINES.

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER NO. 29876 KAZI TAWZIUL ISLAM

CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No. 1011 ARKANSAS

BASIS OF BEARING: GRID NORTH, ARKANSAS COORDINATE SYSTEM, SOUTH ZONE BY GPS OBSERVATION

50 25 0 50

WATER LEGEND:

- DUAL WATER METERS
- SINGLE WATER METER
- GATE VALVE
- 45º FITTING
- 90º FITTING
- TEE FITTING
- CROSS FITTING
- FIRE HYDRANT

HOPE CONSULTING ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
WATER PLAN
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:		DRAWING NUMBER:	26-0288
REVISED:	10-21-2026	CHECKED BY:			
SHEET:	C-2.0	SCALE:			

500	01S	14W	0	28		62	1664

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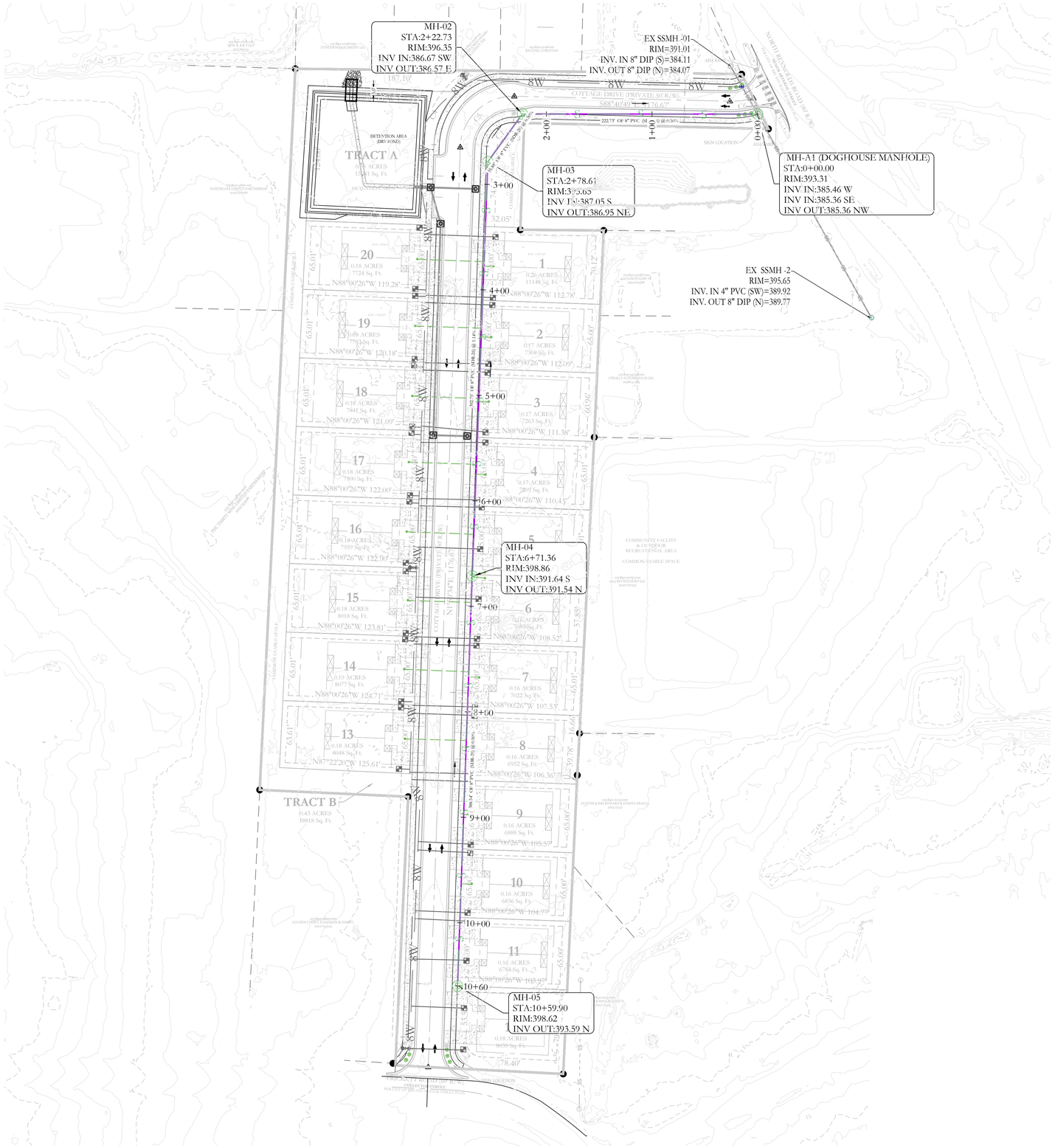

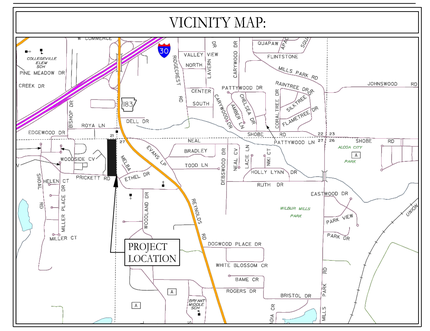

811 Know what's below. Call before you dig.

SEWER CONSTRUCTION NOTES:

1. ALL SEWER INSTALLATION TO BE IN ACCORDANCE WITH THE CITY OF BRYANT " STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATER LINES AND SEWER LINES, 2015 EDITION"
2. ALL SEWER LINES CROSSING UNDER ALL CONCRETE STORM DRAINS OR ANY STORM DRAIN 30-INCH DIAMETER AND LARGER, OR ALL STORM DRAINS WITH MULTIPLE PIPE RUNS, SHALL BE STEEL ENCASED A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN.
3. CASING SPACERS: SHALL BE STAINLESS STEEL, CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATER MFG. CO., OR APPROVED EQUAL.
4. THE TOP ELEVATION OF MH`S MUST BE EQUAL TO THE FINAL ASPHALT GRADE IN THE ROAD.
5. SEWER LINES SHALL BE EXTENDED TO EACH PROPERTY TO BE SERVED BY CITY OF BRYANT SEWER.
6. SEWER LINES SHALL BE LOCATED A MINIMUM OF 36-INCHES FROM ANY OTHER PARALLEL UTILITIES (EXCEPT FOR POTABLE WATER LINES) OR RELATED STRUCTURES.
7. MATERIALS FOR SEWER LINE MAINS SHALL BE PVC SDR-26
8. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATERLINES AND SEWER LINES OR OTHER SOURCES OF CONTAMINATION. WATER LINES AND SEWERS SHALL NOT BE LAID INTHE SAME TRENCH EXCEPT ON THE WRITTEN APPROVAL OF THE ARKANSAS DEPARTMENT OF HEALTH. WATERMAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATERLINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH.
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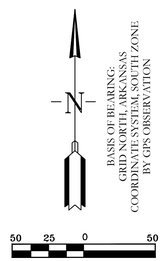

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
KARL TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
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www.hopeconsulting.com

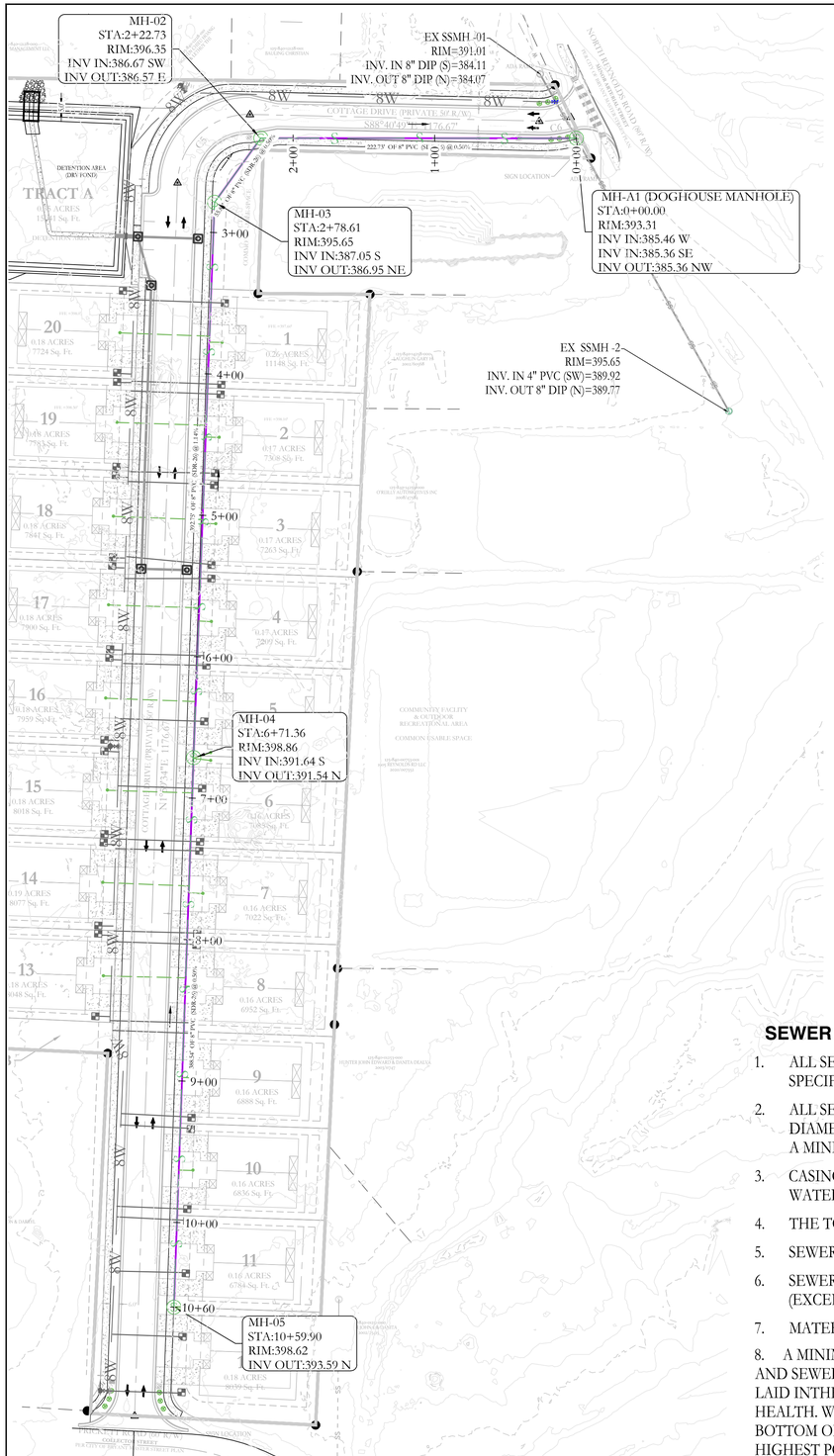
FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
SEWER PLAN
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-2.1	SCALE:	

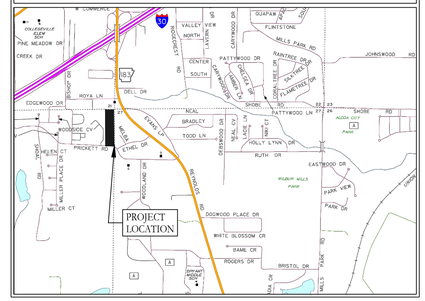
500	01S	14W	0	28		62	1664

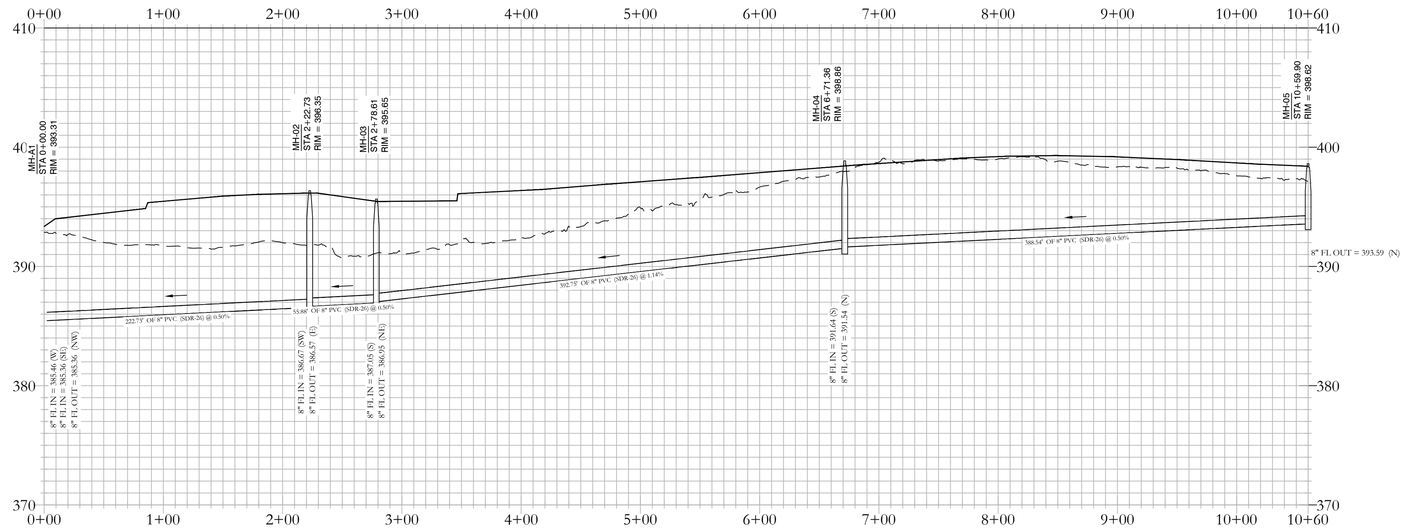
S:\SHARED\HOPE CONSULTING\LAND PROJECTS 2026\SEDIVISIONS\2026-26-038 HERITAGE HOMES - PRICKETT RD (DWG-26-038) PUD\PRICKETT ROAD DRAINAGE AND DETENTION 09-15-2026.DWG



811 Know what's below. Call before you dig.

VICINITY MAP:





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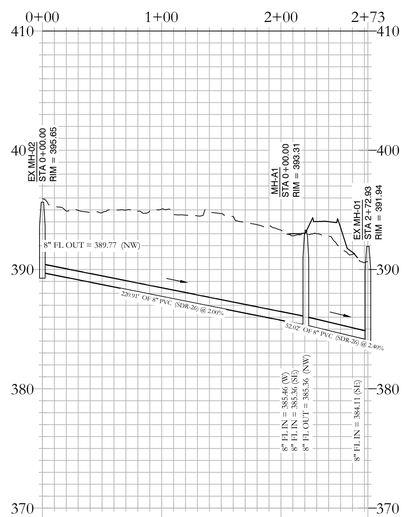
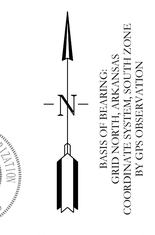


VERTICAL SCALE : 1"=6'
HORIZONTAL SCALE : 1"=60'



BASIS OF BEARING:
GRID NORTH ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20878
KAAL DAMZIDU ISIAH

HOPE CONSULTING
ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
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FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
SEWER PLAN & PROFILE

PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-2.2	SCALE:	

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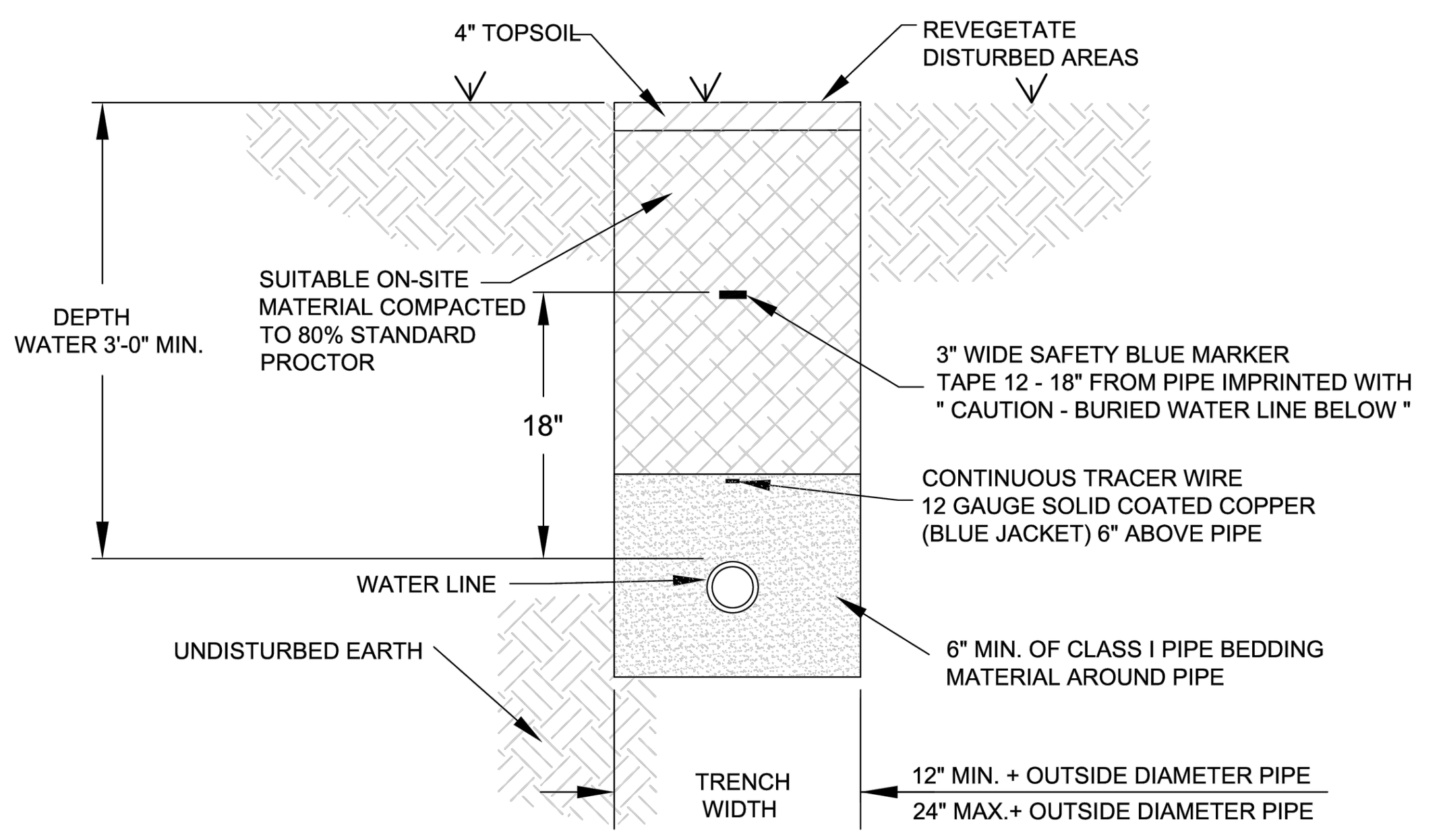
S:\SHARED\HOPECONSULTING\LAND PROJECTS 2026\SUBDIVISIONS 2026\26-0288 HERITAGE HOMES - PRICKETT RD\DWG\26-0288 PUD-PRICKETT ROAD DRAINAGE AND DETENTION 09-15-2026.DWG



NOTES:

1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
3. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
4. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.
5. MAXIMUM PIPE COVER SHALL BE 60" UNDER NORMAL CONDITIONS. COVER GREATER THAN 60" MAY BE ALLOWED FOR SHORT DISTANCES WHERE REQUIRED BY FIELD CONDITIONS. NO HYDRANT SHALL BE ALLOWED WHERE LINES ARE GREATER THAN 60" DEEP.

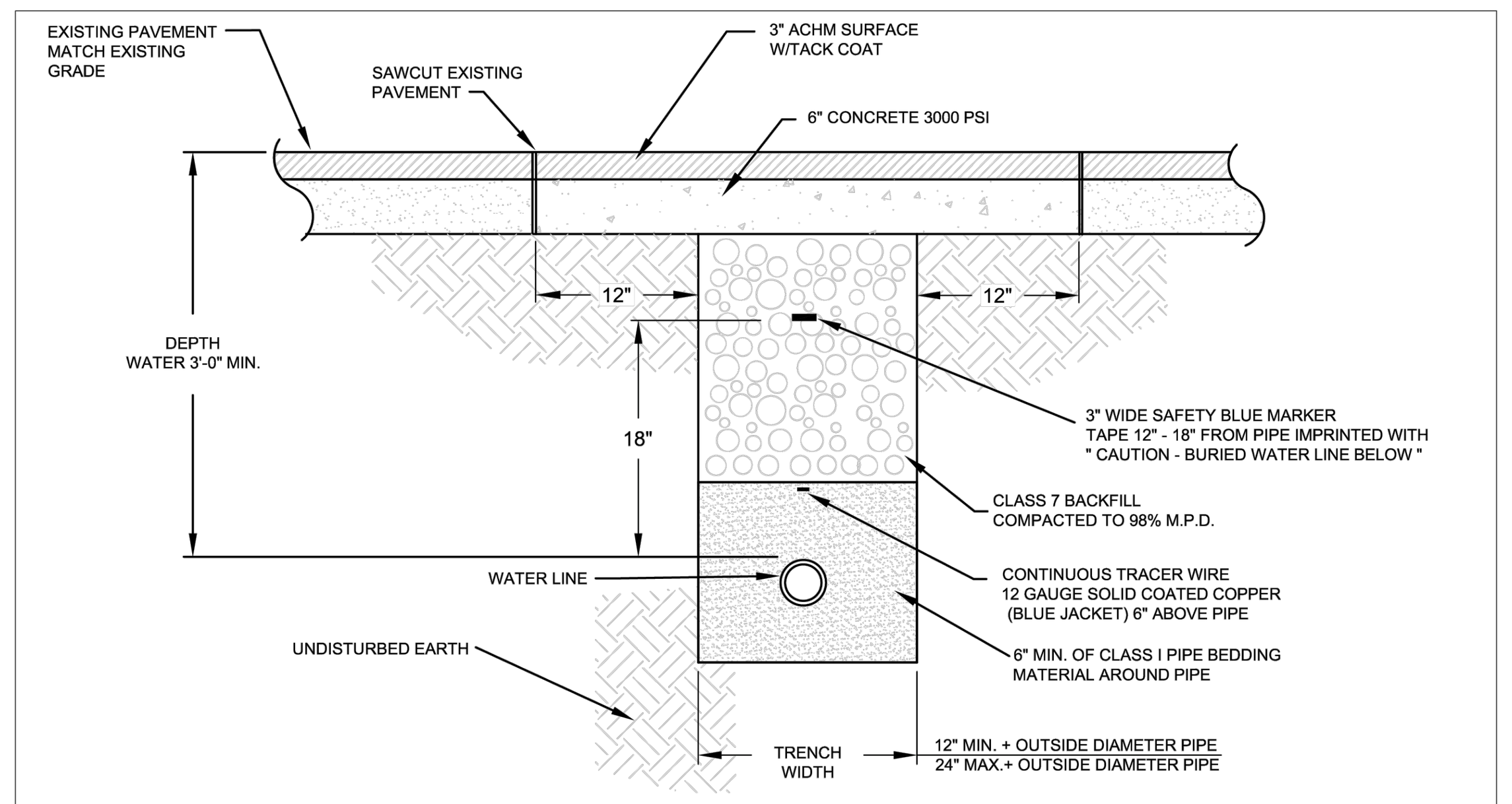
WATER MAIN TRENCH

(NON-PAVED AREA)

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

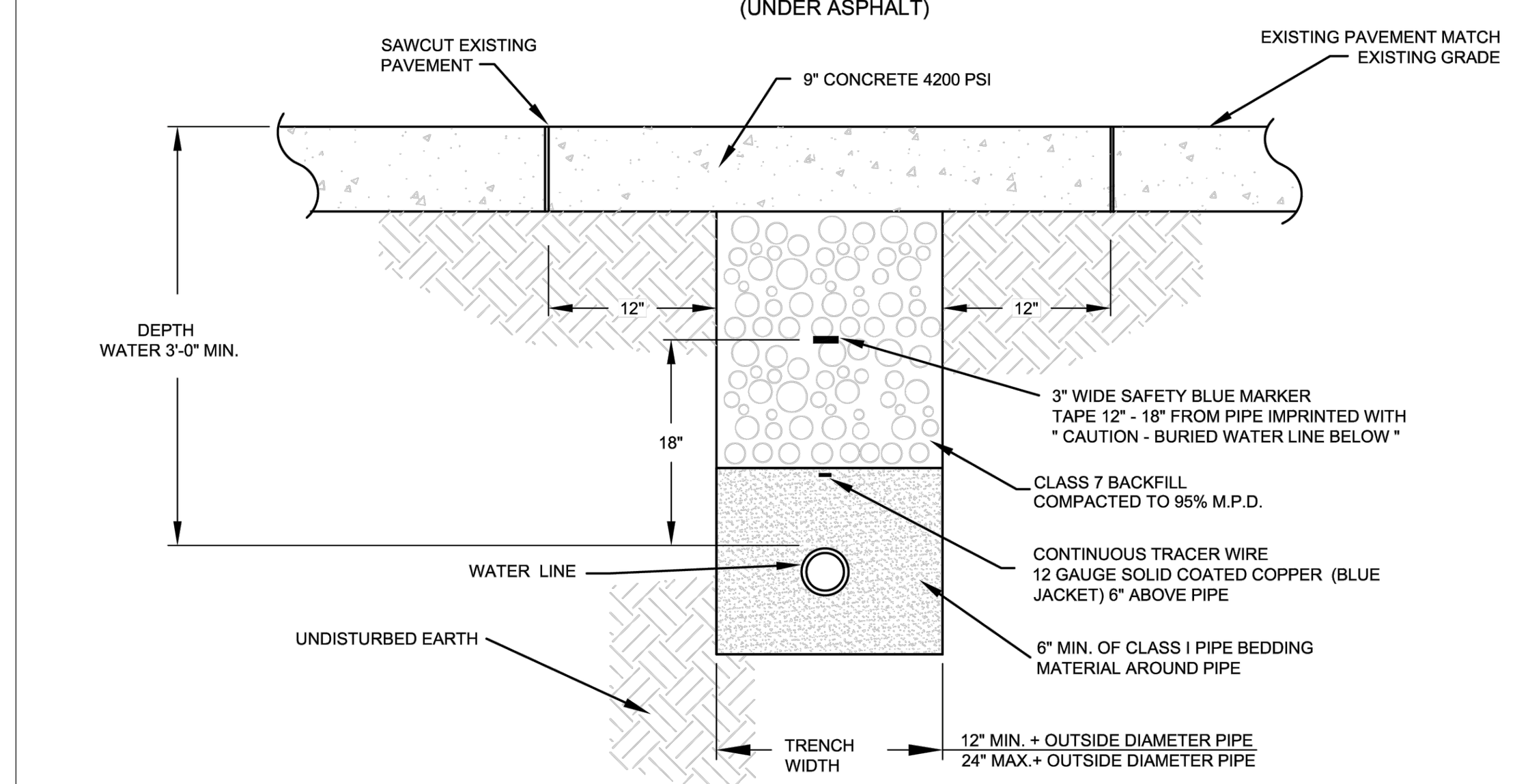
TITLE: **WATER DETAILS**
DESCRIPTION: WATER MAIN TRENCH (NON-PAVED AREA)
DATE: APRIL 2015 REVISED ---- SHEET: **W1**
DRAWN BY: CHECKED BY: FILE: W1-Water Trench (Non-Paved Area).dwg

4/16/2015 11:45:11 AM



WATER MAIN TRENCH

(UNDER ASPHALT)



WATER MAIN TRENCH

(UNDER CONCRETE)

NOTES:

1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
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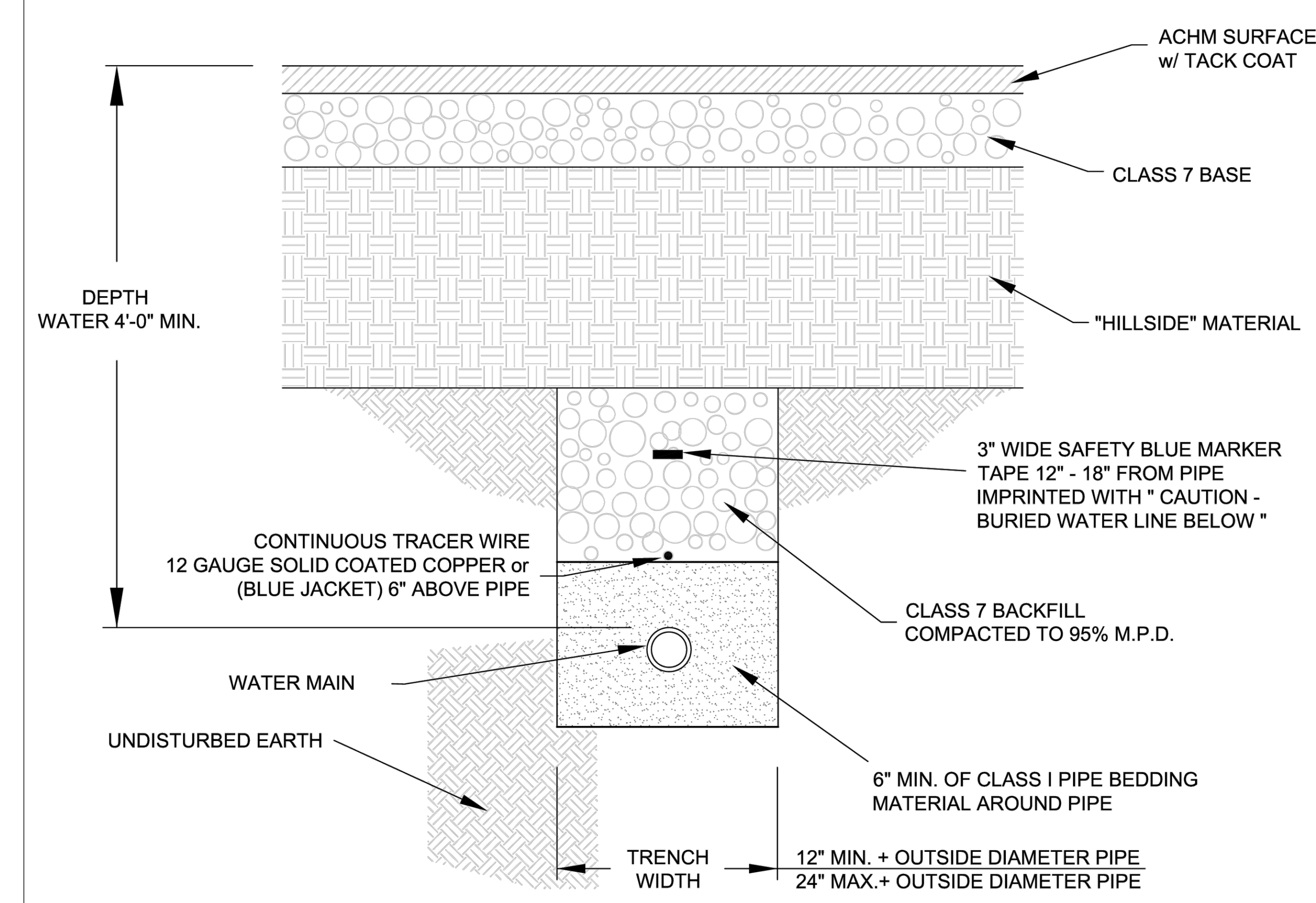
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: WATER MAIN TRENCH (UNDER PAVEMENT)
DATE: APRIL 2015 REVISED ---- SHEET: **W2**
DRAWN BY: CHECKED BY: FILE: W2-Water Trench (Under Pavement).dwg

4/16/2015 11:45:20 AM



WATER MAIN INSTALLATION PRIOR TO ROADWAY CONSTRUCTION

NOTES:

1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
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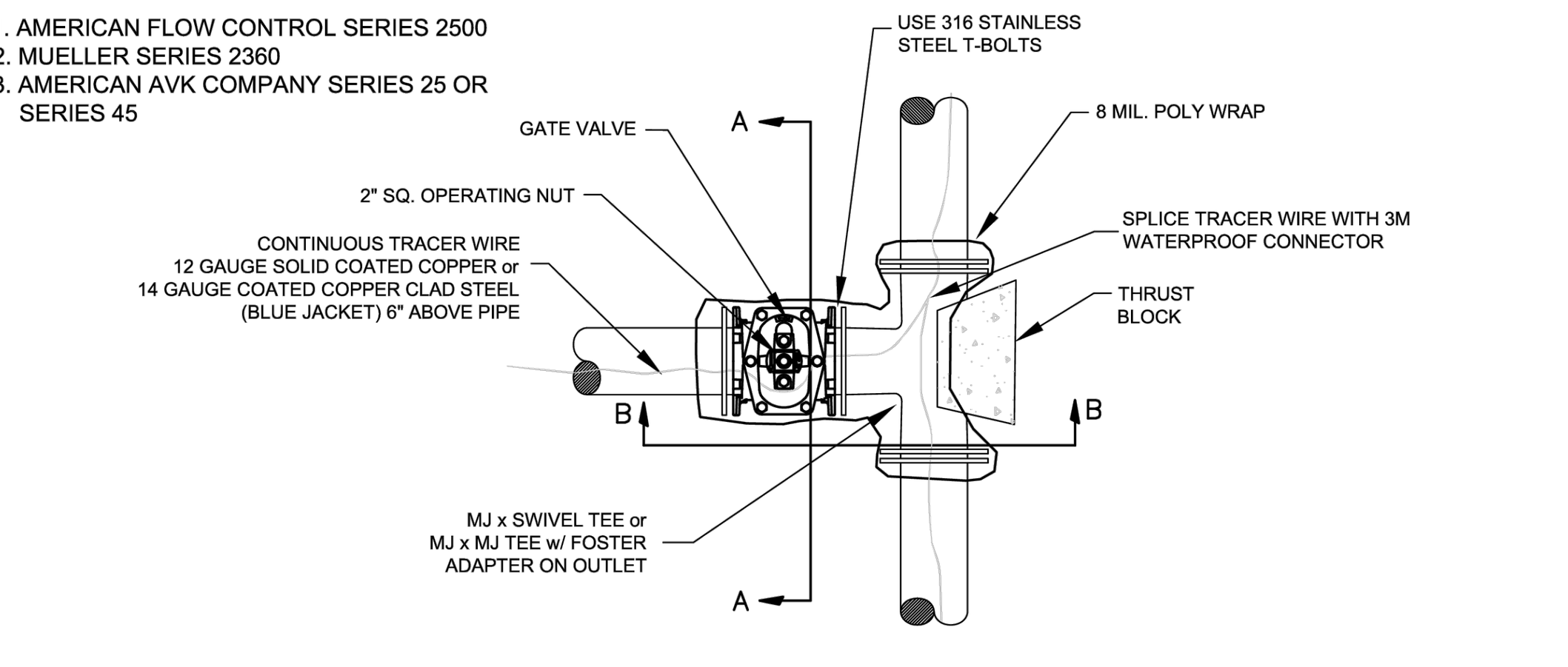
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: WATER MAIN INSTALLATION PRIOR TO ROADWAY CONSTRUCTION
DATE: APRIL 2015 REVISED ---- SHEET: **W3**
DRAWN BY: CHECKED BY: FILE: W3-Water Main Installation Prior to Roadway Const.dwg

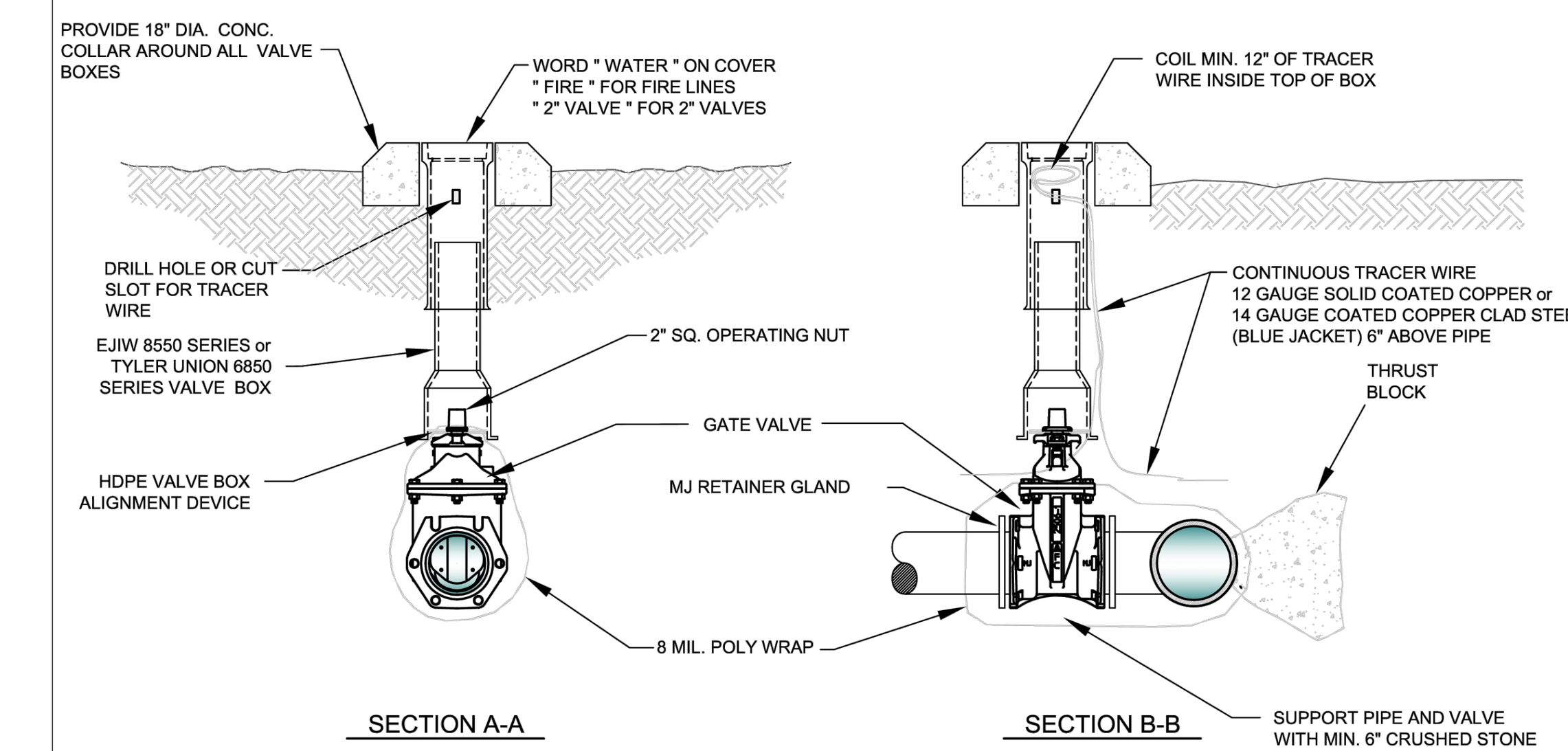
4/16/2015 11:45:26 AM

PERMITTED VALVES

1. AMERICAN FLOW CONTROL SERIES 2500
2. MUELLER SERIES 2360
3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45



PLAN



SECTION A-A   SECTION B-B

NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.

GATE VALVE DETAIL

2" - 12"

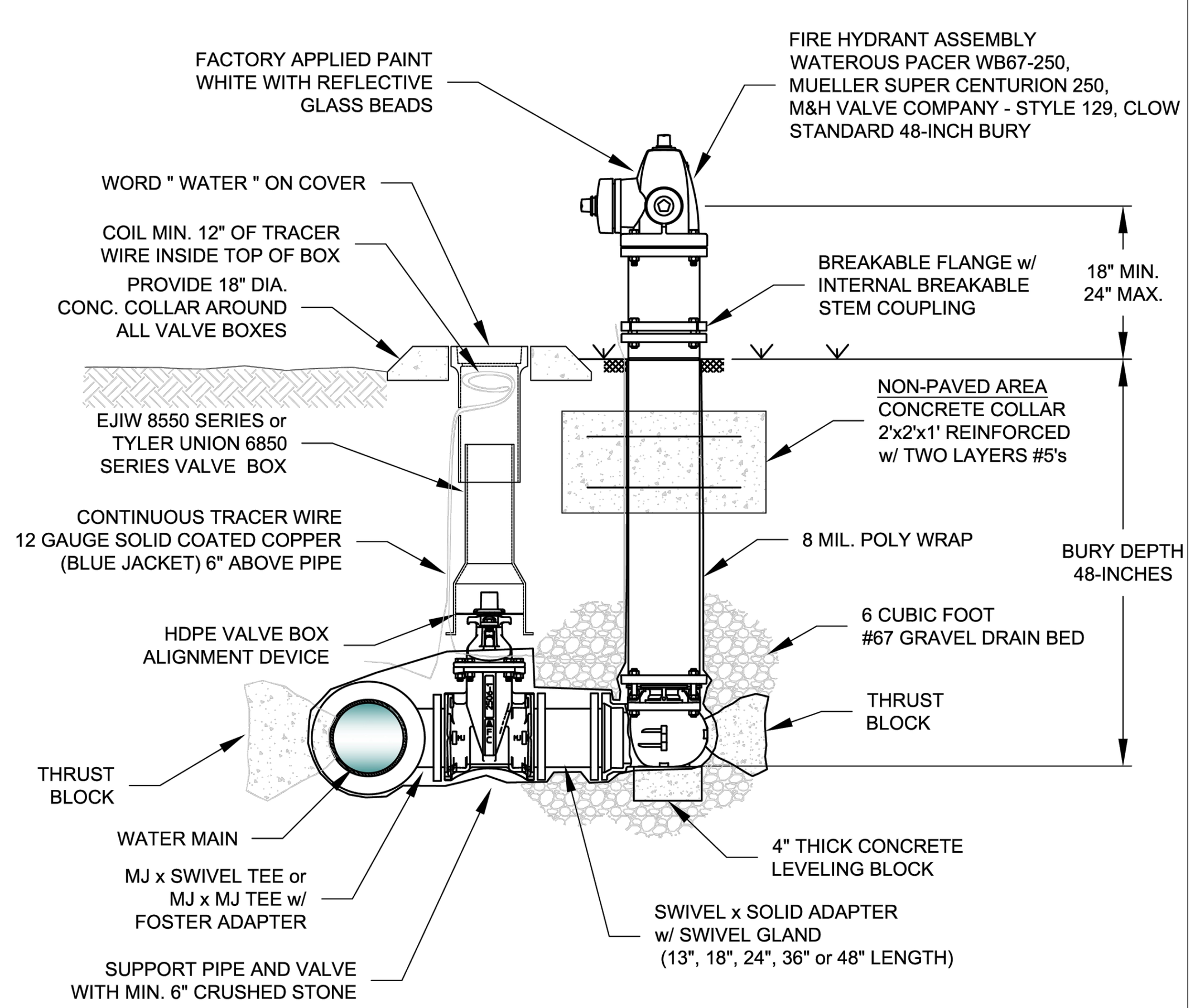
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: GATE VALVE
DATE: APRIL 2015 REVISED ---- SHEET: **W4**
DRAWN BY: CHECKED BY: FILE: W4-Gate Valve.dwg

4/16/2015 11:45:32 AM

NOTES:

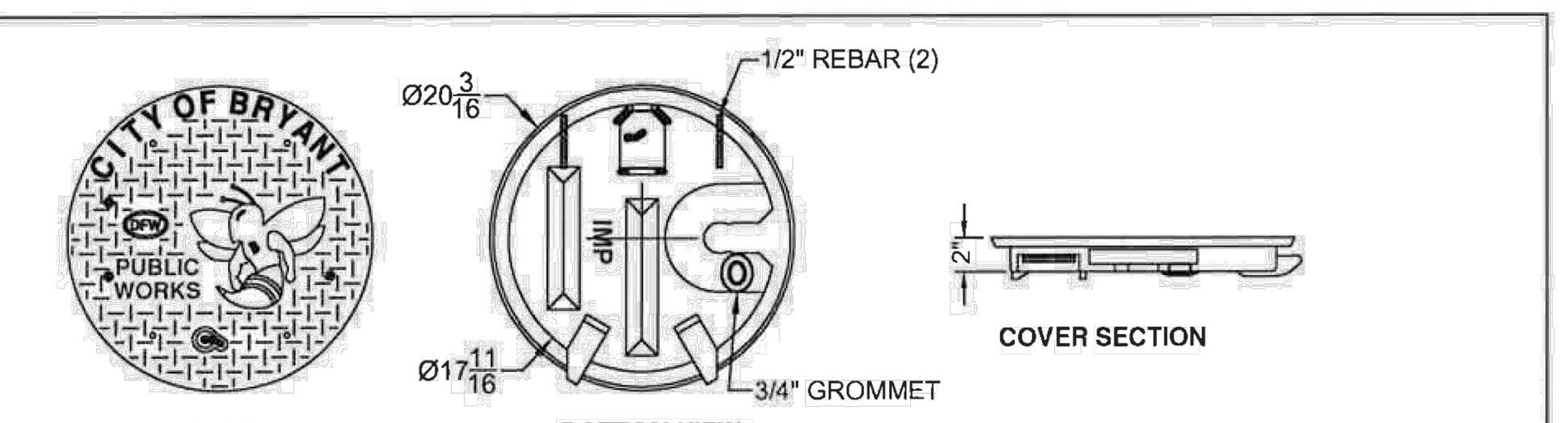
1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. BURY LINE OF HYDRANT SHALL BE NO LESS THAN THE PROPOSED FINISHED ELEVATION OF BACK OF CURB, OR SIDEWALK, WHICHEVER IS GREATER.
4. NO MORE THAN ONE EXTENSION PER HYDRANT.
5. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB.
6. DO NOT COVER UP WEEP HOLE WITH CONCRETE.
7. MJ RETAINER GLANDS ARE REQUIRED FOR ALL FITTINGS.
8. 7. 6" DUCTILE IRON PIPE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 48-INCHES FROM THE MAIN VALVE.
9. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.



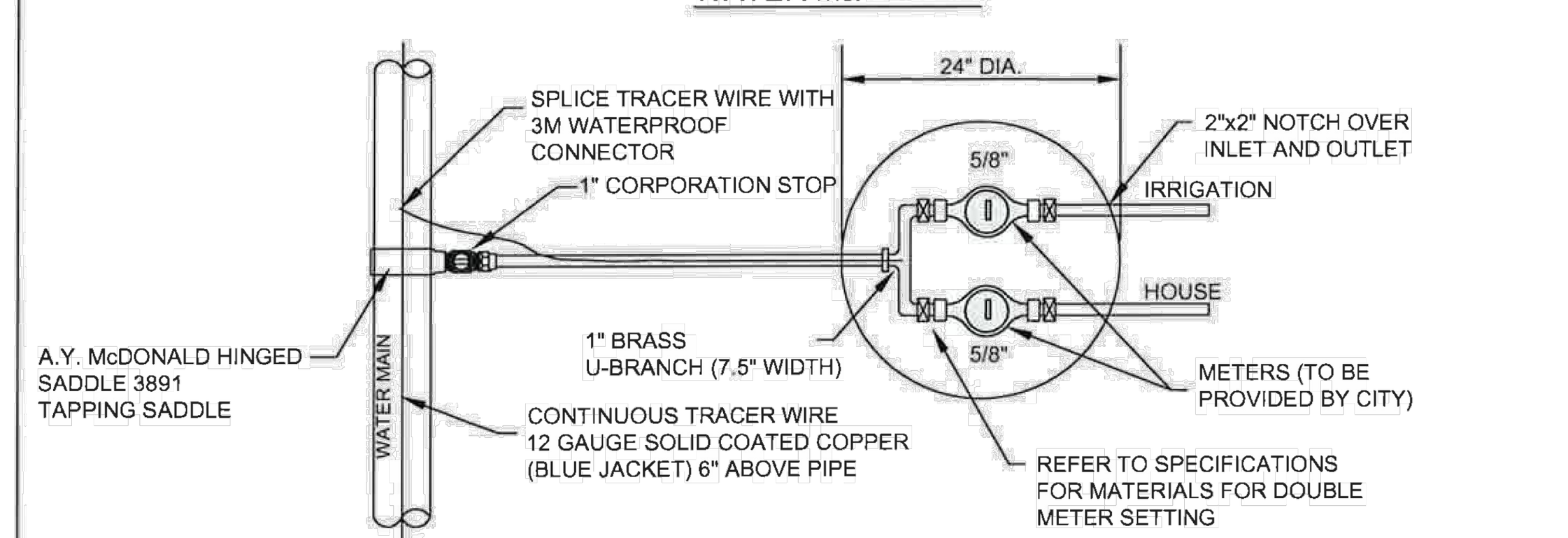
FIRE HYDRANT & VALVE CONNECTION

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

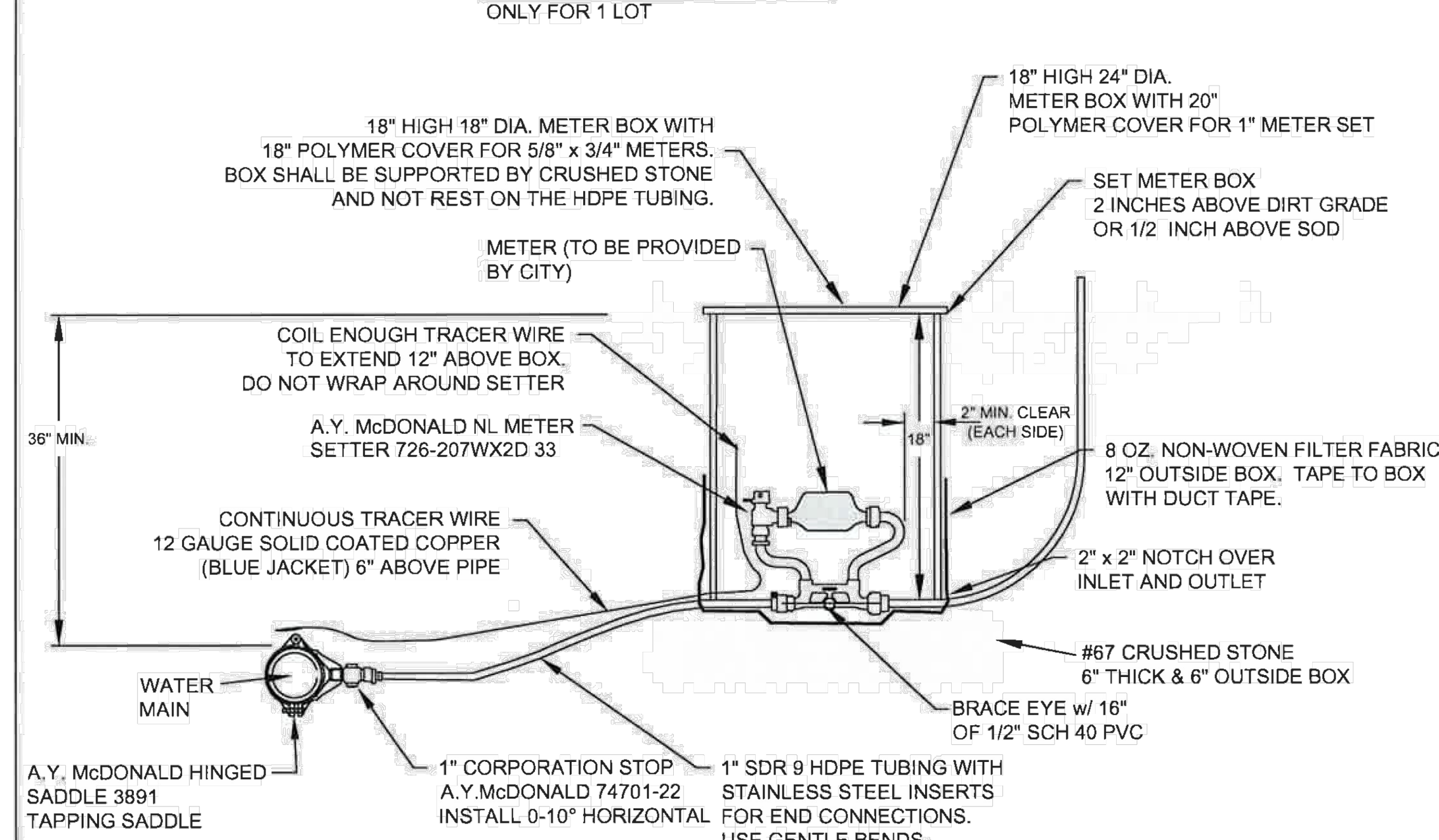
TITLE: **WATER DETAILS**
DESCRIPTION: FIRE HYDRANT AND VALVE CONNECTION
DATE: APRIL 2015 REVISED ---- SHEET: **W8**
DRAWN BY: CHECKED BY: FILE: W8-Fire Hydrant and Valve.dwg



WATER METER LID



DOUBLE METER SETTING
ONLY FOR 1 LOT



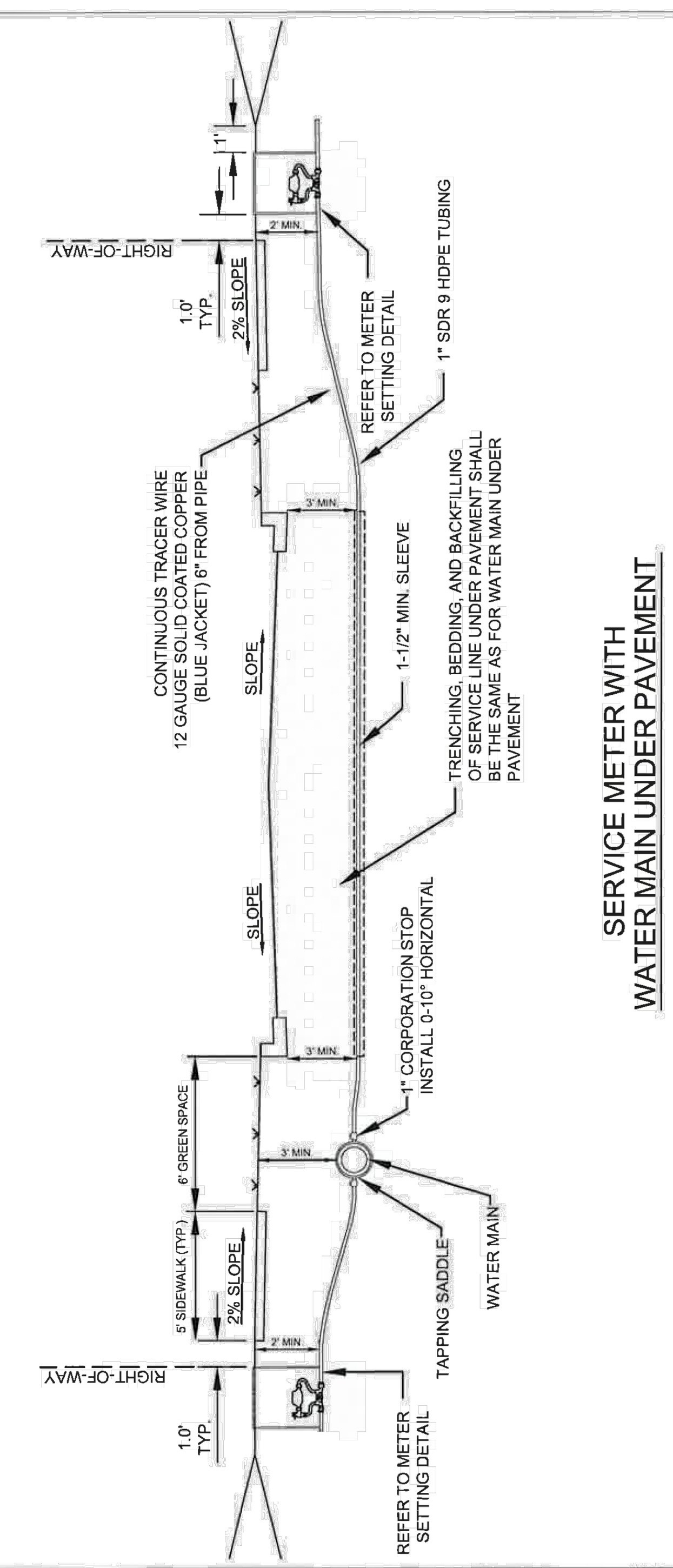
SINGLE METER SETTING

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: METER SETTINGS
DATE: APRIL 2015 REVISED ---- SHEET: **W10**
DRAWN BY: CHECKED BY: FILE: W10-Meter Settings.dwg

NOTES:

1. ALL WATER & SANITARY SEWER TRENCHES WHICH ARE UNDER THE PROPOSED STREETS MUST BE BACKFILLED AS SHOWN ON THE TRENCHING, BEDDING, AND BACKFILL STANDARD DETAIL.
2. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM OF HORIZONTAL SEPARATION DISTANCE OF 10 FEET AT ALL TIMES.
3. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18 INCHES WITH THE WATER LINE CROSSING ABOVE THE SEWER LINE.
4. ALL CORP. STOPS SHALL BE INSTALLED AT 0-10° ANGLE FROM HORIZONTAL.
5. A MINIMUM OF 24-INCHES OF SEPARATION IS REQUIRED BETWEEN SERVICE TAPS.
6. ALL METER BOXES SHALL BE INSTALLED ON THE CUSTOMER SIDE OF THE WATER MAIN.
7. ALL METER BOXES SHALL BE INSTALLED IN NON-PAVED AREAS. ANY METER BOX THAT GETS PLACED IN A PAVED AREA SHALL BE RELOCATED AT THE OWNER'S EXPENSE BEFORE A WATER METER WILL BE INSTALLED.



SERVICE METER WITH WATER MAIN UNDER PAVEMENT

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: METER SERVICE LINE UNDER PAVEMENT
DATE: APRIL 2015 REVISED ---- SHEET: **W11**
DRAWN BY: CHECKED BY: FILE: W11-Meter Service Line Under Pavement.dwg

STATE OF ARKANSAS ★★★ LICENSED PROFESSIONAL ENGINEER ★★★ NO. 20876 KAZI TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No. 1931 ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

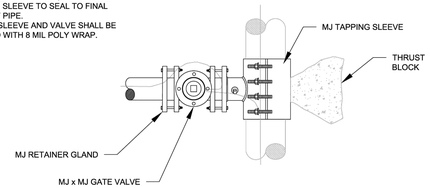
FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
WATER DETAILS
PRICKETT ROAD, BRYANT ,ARKANSAS

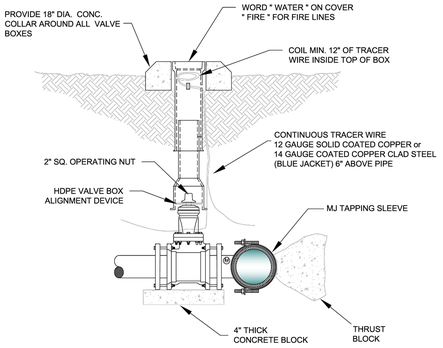
DATE:	09-23-2026		C.A.D. BY:			DRAWING NUMBER:		
REVISED:	10-21-2026		CHECKED BY:			26-0288		
SHEET:	C-3.0		SCALE:					
500	01S	14W	0	28		62	1664	

NOTES:

1. TAPPING SLEEVE SHALL BE SMITH-BLAIR 662 OR FORD FAST.
2. AFTER THE TAP IS MADE, RE-TORQUE BOLTS ON SLEEVE TO SEAL TO FINAL SHAPE OF PIPE.
3. TAPPING SLEEVE AND VALVE SHALL BE WRAPPED WITH 8 MIL POLY WRAP.



PLAN VIEW



PROFILE VIEW

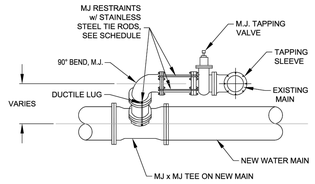
4/6/2015 11:40:04 AM

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	TAPPING SLEEVE AND VALVE	REVISED --- --- --- ---	W13
	DRAWN BY:	CHECKED BY:	FILE: W13-Tapping Sleeve and Valve.dwg	

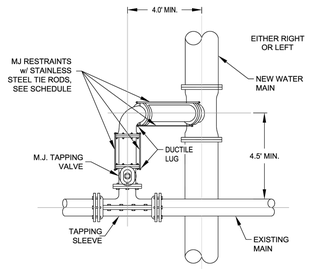
NOTES:

1. SWING CONNECTIONS USING 90° BENDS SHALL BE PERMITTED BY THE CITY ON A CASE BY CASE BASIS.
2. CONTRACTOR SHALL LOCATE EXISTING MAIN IN ADVANCE OF LAYING NEW LINE IN ORDER TO ASSURE ADEQUATE LENGTH TO ADJUST DEPTH OF NEW MAIN.
3. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS TO PROVIDE ADEQUATE ROOM FOR TIGHTENING BOLTS ON JOINTS (OTHER DIMENSIONS MAY BE USED).
4. PROVIDE ALL THREAD STAINLESS STEEL TIE RODS WITH DUCTILE LUGS FOR ANCHORING ALL JOINTS.
5. ROTATE TEE UP & ELBOW DOWN AS REQUIRED TO MATCH.
6. TRACER WIRE SHALL BE INSTALLED ON ALL NEW WATER LINES.
7. ALL FITTINGS, VALVES, AND DIP SHALL BE POLY WRAPPED.

SCHEDULE OF TIE RODS		
SIZE	NUMBER OF ROD PER FITTING	DIAMETER OF S.S. RODS
8"	4	3/4"
12"	4	3/4"



SECTION VIEW



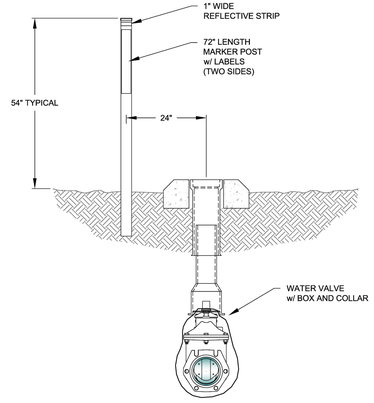
PLAN VIEW

4/6/2015 11:43:23 AM

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	SWING CONNECTION - NEW MAIN TO EXISTING MAIN	REVISED --- --- --- ---	W20
	DRAWN BY:	CHECKED BY:	FILE: W20-Swing Connection.dwg	

NOTES:

1. WATER LINE MARKERS SHALL BE TRI-VIEW MARKING SYSTEM BY RHINO MARKING AND PROTECTION SYSTEMS OR CARSONITE INTERNATIONAL DUAL-SIDED UTILITY MARKER (CIB-380).
2. THE UPPERMOST PORTION OF THE CARSONITE MARKER SHALL BE MADE OF VISIBILITY ENHANCER (CVE-360).
3. TRI-VIEW MARKERS DO NOT REQUIRE VISIBILITY ENHANCERS.
4. AN ADDITIONAL WHITE 1" WIDE REFLECTIVE TAPE (3M OR EQUAL) SHALL BE PLACED AROUND THE FULL CIRCUMFERENCE OF THE TOP OF THE MARKER.



VALVE MARKER

4/6/2015 11:47:01 AM

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	VALVE MARKER	REVISED --- --- --- ---	W22
	DRAWN BY:	CHECKED BY:	FILE: W22-Valve Marker.dwg	

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
KAL TAMZIDI

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

HOPE CONSULTING
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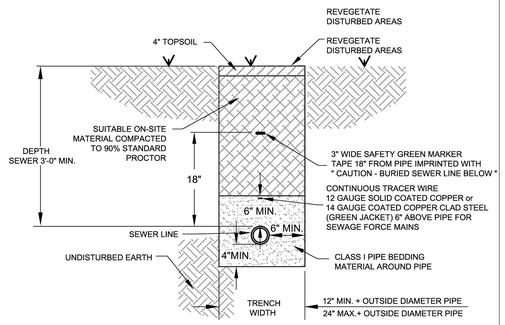
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
WATER DETAILS
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-3.1	SCALE:	

500	01S	14W	0	28		62	1664



NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

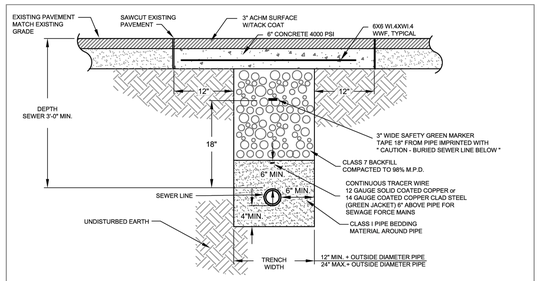
SEWER TRENCH

(NON-PAVED AREA)

4/15/2015 10:56:59 AM

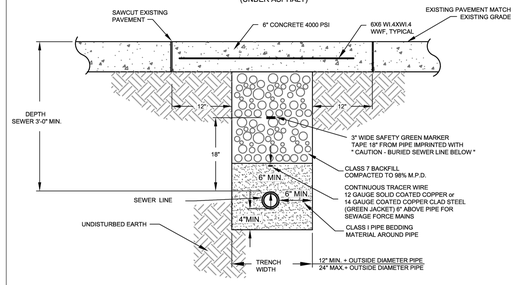
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE:	SEWER DETAILS	DATE: APRIL 2015	SHEET:
DESCRIPTION:	SEWER TRENCH (NON-PAVED AREA)	REVISED ----- ----- ----- -----	S1
DRAWN BY:	CHECKED BY:	FILE: S1--Sewer Trench (Non-Paved Area).dwg	



SEWER TRENCH

(UNDER ASPHALT)



SEWER TRENCH

(UNDER CONCRETE)

NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

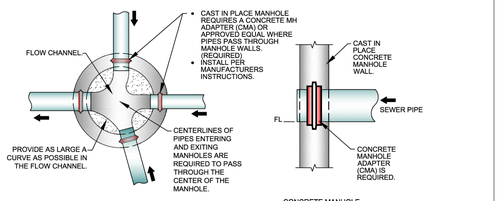
4/15/2015 10:56:13 AM

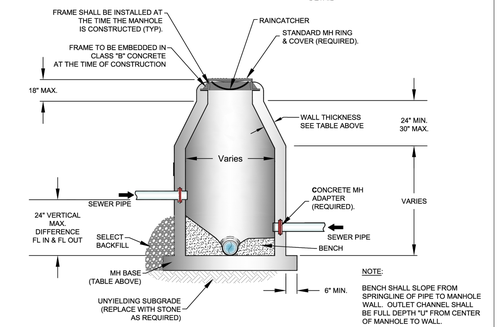
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE:	SEWER DETAILS	DATE: APRIL 2015	SHEET:
DESCRIPTION:	SEWER TRENCH (UNDER PAVEMENT)	REVISED ----- ----- ----- -----	S2
DRAWN BY:	CHECKED BY:	FILE: S2--Sewer Trench (Under Pavement).dwg	

Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	6"	6"	24" (< or Equal to 24" Pipes)
5' DIA	8"	8"	
6' DIA	8"	12"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE





NOTE:

BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

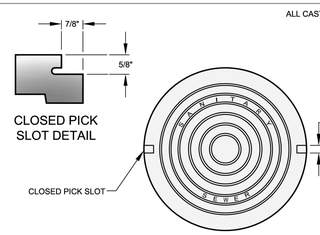
CAST-IN-PLACE MANHOLE

4/15/2015 10:56:22 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

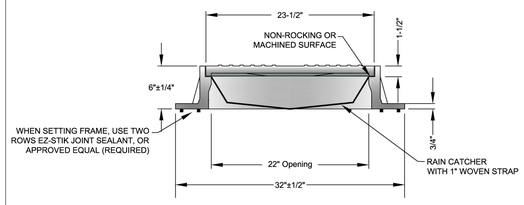
TITLE:	SEWER DETAILS	DATE: APRIL 2015	SHEET:
DESCRIPTION:	CAST-IN-PLACE MANHOLE	REVISED ----- ----- ----- -----	S4
DRAWN BY:	CHECKED BY:	FILE: S4--Cast In Place Manhole.dwg	

ALL CASTINGS SHALL BE "MADE IN USA"



1. MINIMUM WEIGHT OF RING: 100 POUNDS
2. MINIMUM WEIGHT OF COVER: 110 POUNDS
3. COVERS ARE FURNISHED WITH TWO CLOSED PICK SLOTS.
4. CASTINGS SHALL BE "MADE IN USA"

* DIMENSIONAL TOLERANCES SHALL NOT EXCEED 1/16 INCH PER FOOT

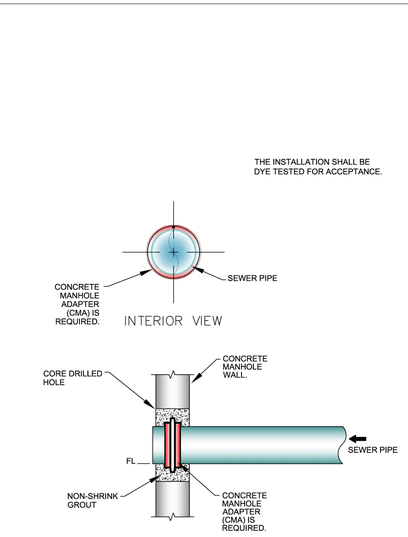


FRAME AND COVER DETAIL

4/15/2015 10:56:53 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE:	SEWER DETAILS	DATE: APRIL 2015	SHEET:
DESCRIPTION:	MANHOLE FRAME AND COVER	REVISED ----- ----- ----- -----	S6
DRAWN BY:	CHECKED BY:	FILE: S6--Manhole Frame and Cover.dwg	



MANHOLE CORING DETAILS

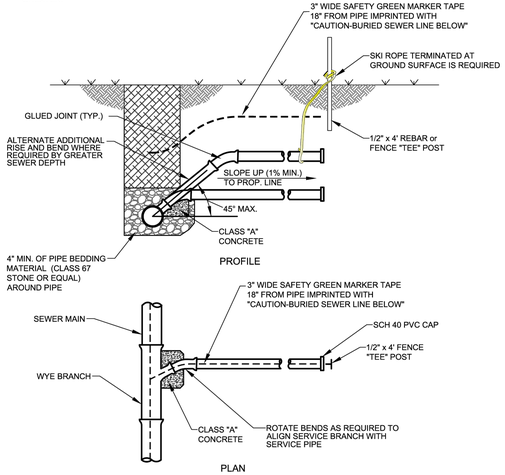
4/26/2015 10:57:34 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE:	SEWER DETAILS	DATE: APRIL 2015	SHEET:
DESCRIPTION:	MANHOLE CORING	REVISED ----- ----- ----- -----	S11
DRAWN BY:	CHECKED BY:	FILE: S11--Manhole Coring.dwg	

NOTES:

1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0"
2. PLACE CLASS "A" CONCRETE UNDER EACH WYE BRANCH TO PREVENT CRACKING OR TWISTING UNDER EARTH LOADS.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB TERMINATE AT A DISTANCE LESS THAN 8 FEET FROM THE SANITARY SEWER MAIN.
4. BURY A 1/2" x 4' STEEL TEE FENCE POST AT END OF SERVICE LATERAL STUB AND BACKFILL TO FINISHED GRADE OF PROPERTY.
5. 4" DUCTILE IRON PIPE, LINED FOR SANITARY SEWER AND 4" DUCTILE IRON M.J. FITTINGS, LINED FOR SANITARY SEWER, SHALL BE INSTALLED FOR SERVICES BURIED AT DEPTHS OF 14 FEET AND GREATER.



SEWER SERVICE LATERAL

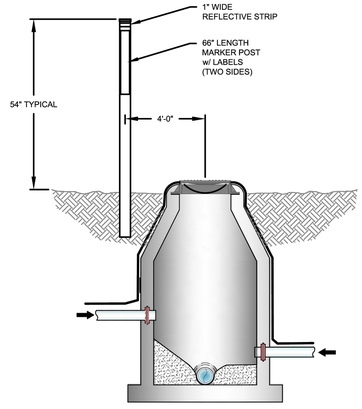
4/26/2015 10:58:06 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE:	SEWER DETAILS	DATE: APRIL 2015	SHEET:
DESCRIPTION:	SEWER SERVICE LATERAL	REVISED ----- ----- ----- -----	S15
DRAWN BY:	CHECKED BY:	FILE: S15--Sewer Service Lateral.dwg	

NOTES:

1. SEWER LINE MARKERS SHALL BE TRI-VIEW MARKING SYSTEM BY RHINO MARKING AND PROTECTION SYSTEMS OR CARSONITE INTERNATIONAL DUAL-SIDED UTILITY MARKER (CIB-380).
2. THE UPPERMOST PORTION OF THE CARSONITE MARKER SHALL BE MADE OF VISIBILITY ENHANCER (CVE-360).
3. TRI-VIEW MARKERS DO NOT REQUIRE VISIBILITY ENHANCERS.
4. AN ADDITIONAL WHITE 1" WIDE REFLECTIVE TAPE (3M OR EQUAL) SHALL BE PLACED AROUND THE FULL CIRCUMFERENCE OF THE TOP OF THE MARKER.



SEWER MARKER

4/26/2015 10:59:01 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE:	SEWER DETAILS	DATE: APRIL 2015	SHEET:
DESCRIPTION:	SEWER MARKER	REVISED ----- ----- ----- -----	S24
DRAWN BY:	CHECKED BY:	FILE: S24--Sewer Marker.dwg	

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
SAJJ TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1197
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

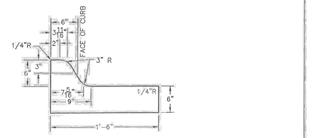
FOR USE AND BENEFIT OF:
HERITAGE HOMES

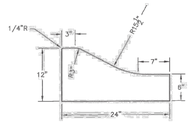
THE COTTAGES OF BRYANT
SEWER DETAILS
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:		DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:		26-0288
SHEET:	C-3.2	SCALE:		

500	01S	14W	0	28		62	1664

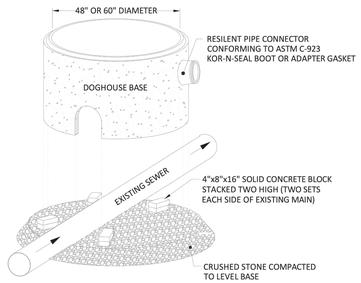
CITY OF BRYANT	CURB & GUTTER SECTIONS	Issue Date: APRIL 2013	Revision Date
		DETAIL 7	



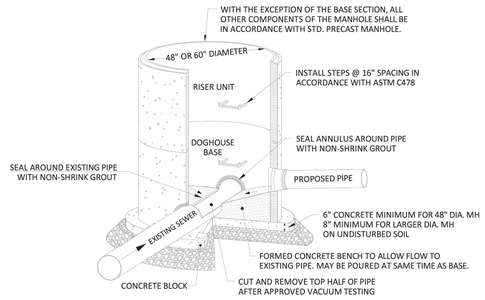


A7

P:\2022 Jnd Projects Projects\Engineering\22.0256 Stone Industrial Park\dwg\ 3/1/2023 9:52:57 AM



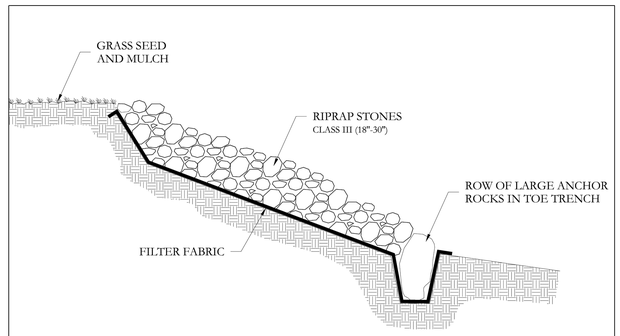
STEP 1



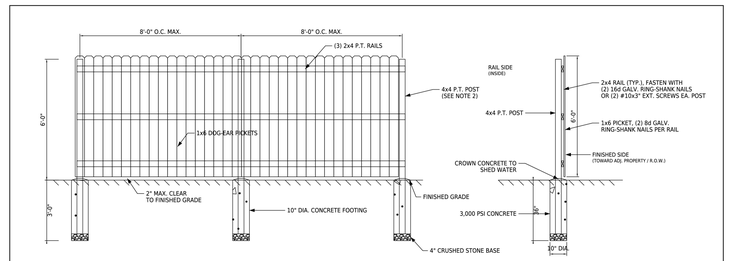
STEP 2

NOTES:
1. CAST-IN-PLACE CONCRETE SHALL BE 4000 PSI, PER ASTM C-94.
2. ALL PRECAST MANHOLE COMPONENTS SHALL MEET ASTM C-478.

Typical Doghouse Manhole Detail for Existing Sewer Mains



RIP RAP DETAIL
NTS

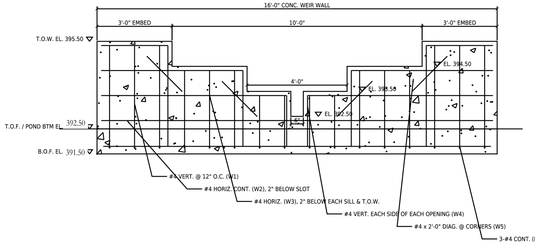


FENCE ELEVATION
(VIEWED FROM RAIL SIDE)

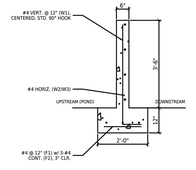
FENCE SECTION
N.T.S.

GENERAL NOTES:
1. FENCE SHALL BE 6'-0" HIGH ABOVE FINISHED GRADE AND MEET THE SCREENING REQUIREMENTS OF THE CITY OF BRYANT ZONING CODE.
2. POSTS: 4x4 NO. 2 SOUTHERN YELLOW PINE, PRESSURE TREATED FOR GROUND CONTACT (AWPA UC4A), 8'-0" O.C. MAX. USE 6x6 POSTS AT CORNERS, ENDS, GATES AND CHANGES IN DIRECTION. EMBED POSTS 32" MIN. ON 4" CRUSHED STONE.
3. FOOTINGS: 10" DIA. x 36" DEEP (12" DIA. AT 6x6 POSTS), 3,000 PSI CONCRETE, TOP CROWNED TO SHED WATER.
4. RAILS: (3) 2x4 P.T. (AWPA UC3B MIN.), SPLICED ONLY OVER POSTS. PICKETS: 1x6x6' DOG-EAR P.T. PINE OR CEDAR.
5. ALL FASTENERS AND HARDWARE HOT-DIP GALVANIZED (ASTM A153) OR STAINLESS STEEL FOR USE WITH TREATED LUMBER.
6. FINISHED (PICKET) SIDE SHALL FACE OUTWARD TOWARD ADJACENT PROPERTY OR PUBLIC RIGHT-OF-WAY.
7. BOTTOM OF PICKETS 2" MAX. ABOVE FINISHED GRADE. ON SLOPES, STEP OR RACK FENCE TO FOLLOW GRADE.
8. FENCE SHALL NOT BLOCK DRAINAGE SWALES, INLETS OR OVERLAND FLOW PATHS WITHIN DRAINAGE EASEMENTS, OR ACCESS TO THE DETENTION POND (TRACT A). PROVIDE OPENINGS OR GATES WHERE THE FENCE CROSSES A FLOW PATH.
9. CONTACT ARKANSAS ONE CALL (811) TO LOCATE UTILITIES BEFORE DIGGING POST HOLES.
10. FENCE LOCATION AND EXTENT AS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER.

6' WOOD PRIVACY FENCE DETAIL N.T.S.	THE COTTAGES OF BRYANT PRICKETT ROAD, BRYANT, ARKANSAS FOR: HERITAGE HOMES, LLC	HOPE CONSULTING, INC. 129 N. MAIN ST., BENTON, AR 72015 JOB NO. 26-0288 DATE: 10/21/2026

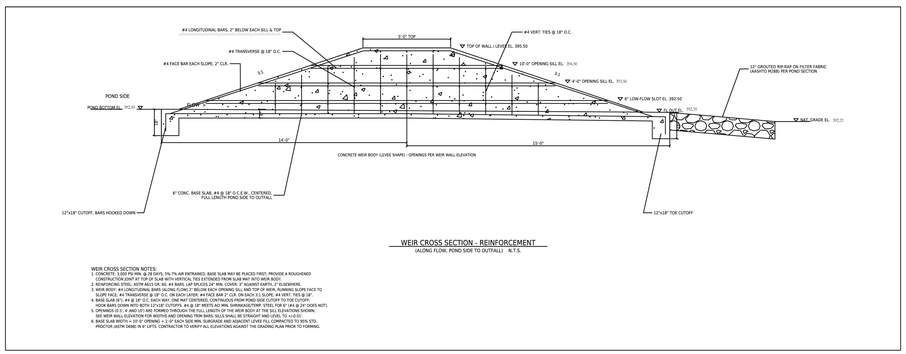


WEIR WALL ELEVATION
(LOOKING DOWNSTREAM) N.T.S.



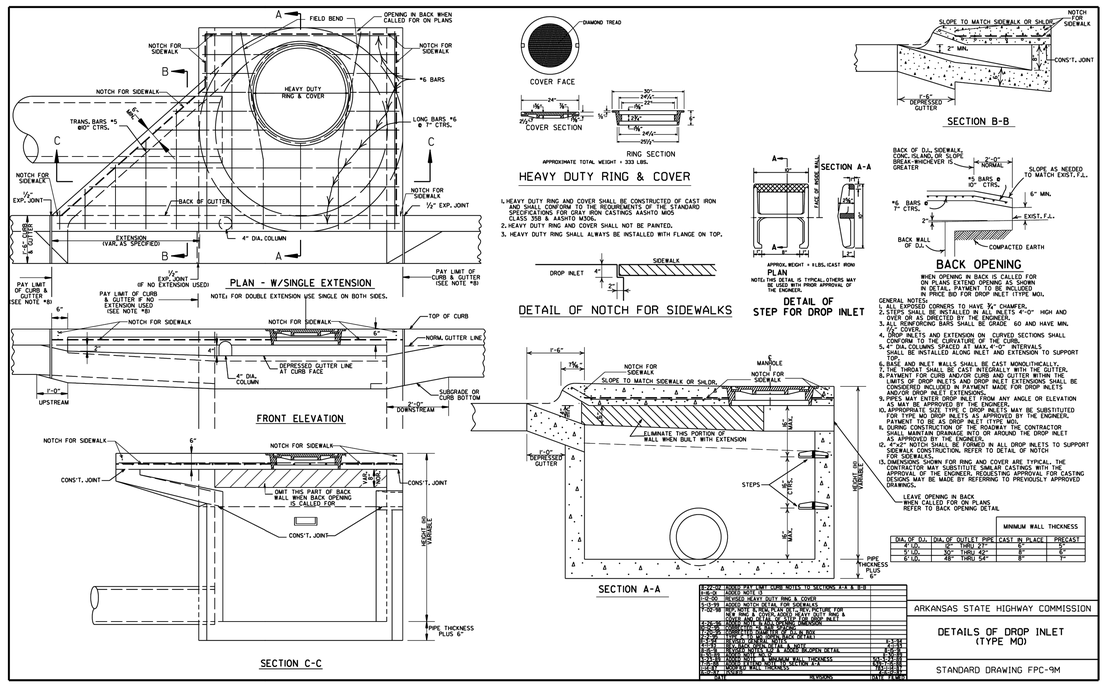
SECTION A-A
N.T.S.

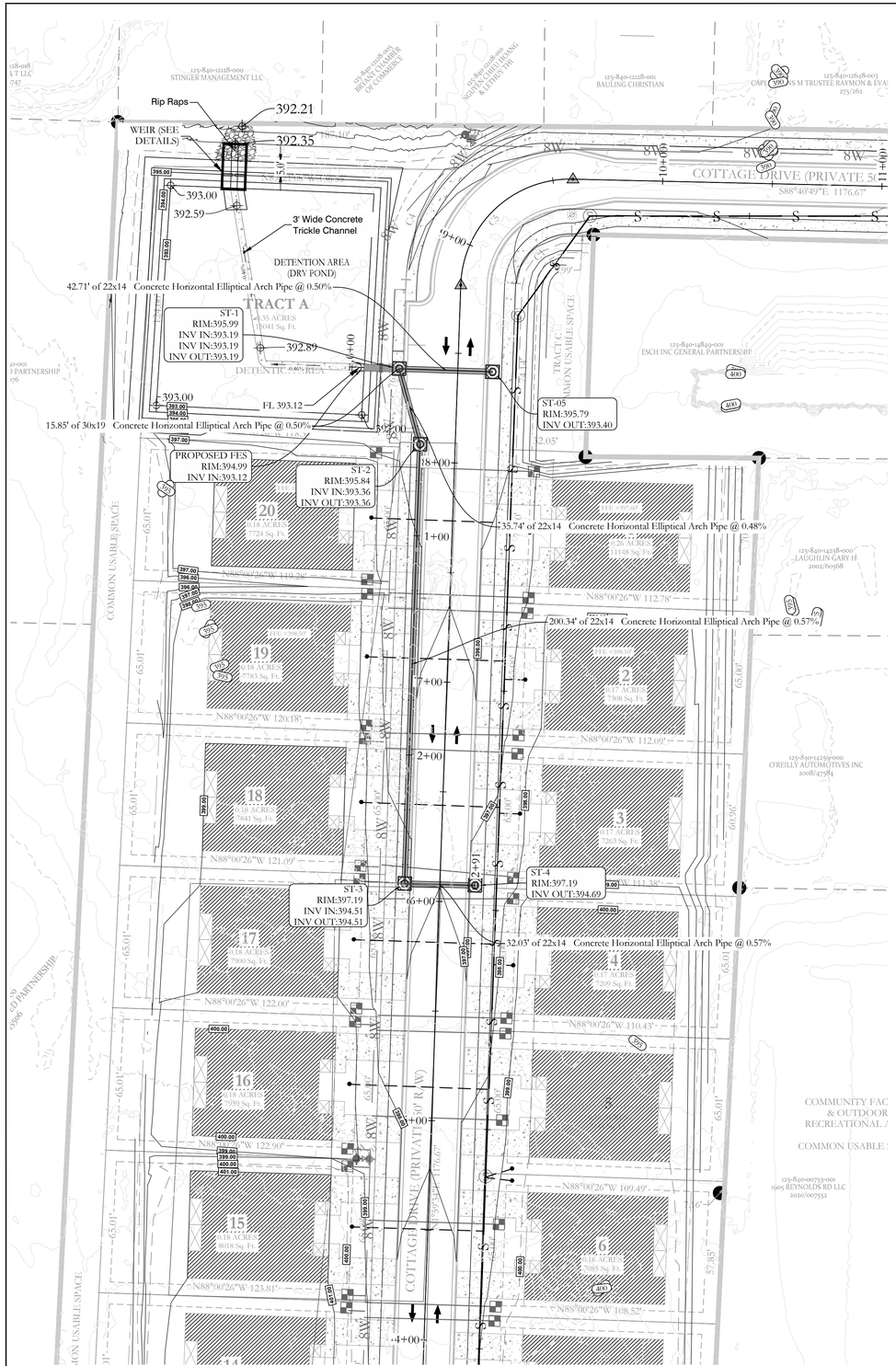
WEIR REINFORCEMENT NOTES:
1. CONCRETE: 3,000 PSI MIN. @ 28 DAYS, 5%-7% AIR ENTRAINED. CHAMFER EXPOSED EDGES 3/4" EXCEPT WEIR SILLS, WHICH SHALL BE STRAIGHT, LEVEL AND SHARP-EDGED; SET ALL SILL INVERTS TO +/-0.01' OF PLAN ELEVATIONS.
2. REINFORCING STEEL: ASTM A615 GRADE 60, #4 BARS UNLESS NOTED. LAP SPLICES 24" MIN.; HOOKS AS STANDARD 90°.
3. CLEAR COVER: 3" CONCRETE CAST AGAINST EARTH; 2" FORMED SURFACES AND TOP OF WALL/CRESTSLOT.
4. WALL (6" THK.): ONE MAT CENTERED - #4 VERT. @ 12" O.C. (W1) HOOKED INTO FOOTING; #4 HORIZ. CONTINUOUS (W2) 2" BELOW SLOT INVERT; #4 HORIZ. (W3) 2" BELOW EACH SILL AND T.O.W., STOPPED 2" CLR. AT OPENINGS; #4 VERT. (W4) 2" CLR. EACH SIDE OF EACH OPENING; #4 x 2'-0" DIAGONAL (W5) AT RE-ENTRANT CORNERS OF THE 4' AND 10' OPENINGS.
5. FOOTING (2'-0" x 12"): #4 @ 12" O.C. TRANSVERSE (F1) WITH 3-#4 CONTINUOUS (F2), 3" CLR. TO BOTTOM.
6. EXTEND WALL 3'-0" INTO LEVEE EACH SIDE OF THE WEIR OPENING; COMPACT LEVEE FILL AGAINST WALL IN 6" LIFTS TO 95% STD. PROCTOR (ASTM D698). FOUND FOOTING ON FIRM UNDISTURBED SOIL OR COMPACTED FILL.
7. PROVIDE RIP-RAP / SPLASH PAD DOWNSTREAM OF WEIR PER POND SECTION DETAIL.
8. CONTRACTOR TO VERIFY ALL ELEVATIONS AGAINST GRADING PLAN PRIOR TO FORMING.

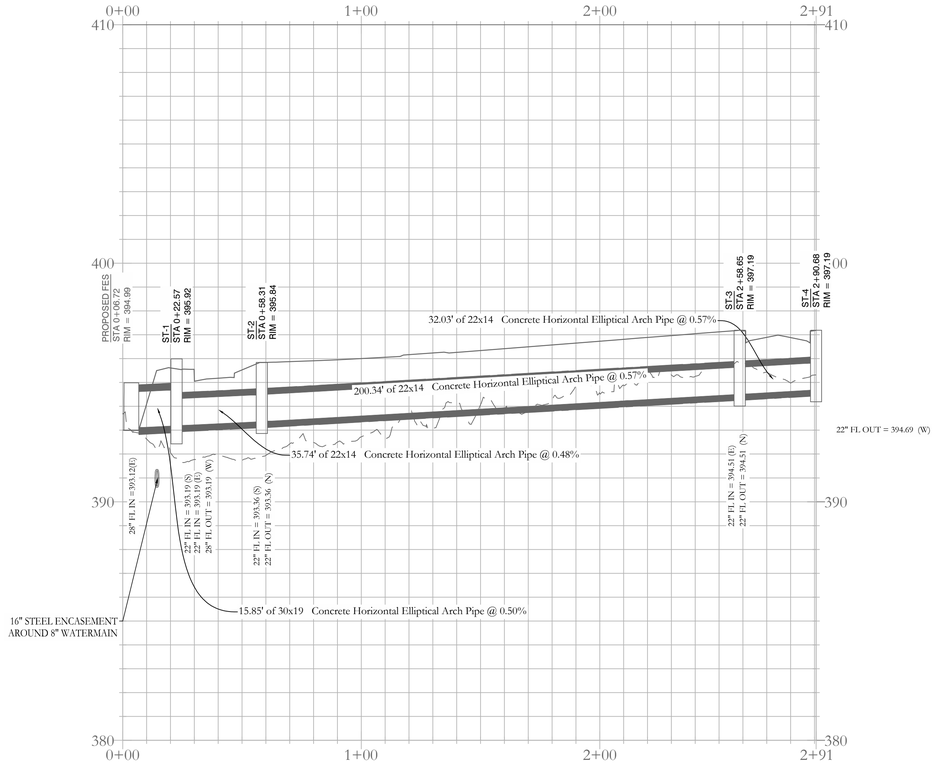


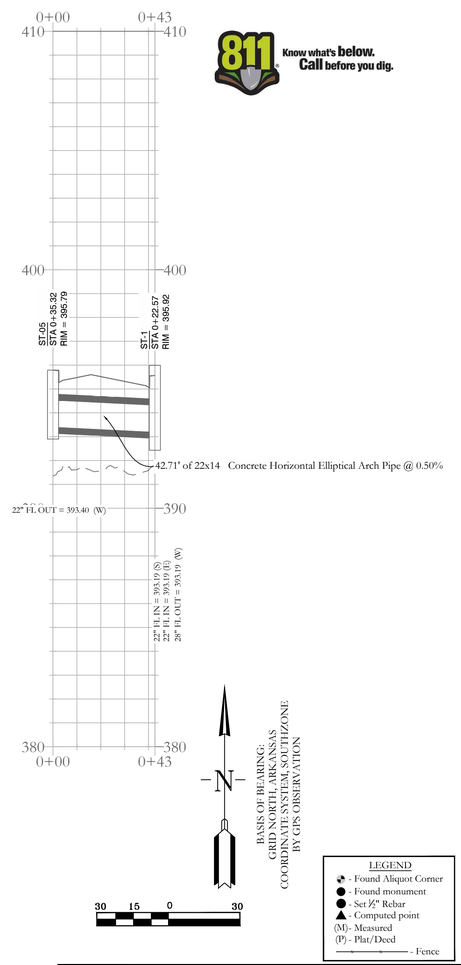
WEIR CROSS SECTION - REINFORCEMENT
(ALONG FLOW, POND SIDE TO OUTFALL) N.T.S.

WEIR CROSS SECTION NOTES:
1. CONCRETE: 3,000 PSI MIN. @ 28 DAYS, 5%-7% AIR ENTRAINED. BASE SLAB MAY BE PLACED FIRST. PROVIDE A ROUGHENED CONSTRUCTION JOINT AT TOP OF SLAB WITH VERTICAL TIES EXTENDED FROM SLAB MAT INTO WEIR BODY.
2. REINFORCING STEEL: ASTM A615 GRADE 60, #4 BARS UNLESS NOTED. LAP SPLICES 24" MIN.; HOOKS AS STANDARD 90°.
3. CLEAR COVER: 3" CONCRETE CAST AGAINST EARTH; 2" FORMED SURFACES AND TOP OF WALL/CRESTSLOT.
4. WEIR BODY (LEVEE SHAPE): #4 TRANSVERSE @ 18" O.C. ON EACH LAYER; #4 FACE BAR 2" CLR. ON EACH 3:1 SLOPE; #4 VERT. TIES @ 18".
5. BASE SLAB (6"): #4 @ 18" O.C. EACH WAY, ONE MAT CENTERED, CONTINUOUS FROM POND-SIDE CUTOFF TO TOE CUTOFF.
6. CUTOFFS (12"x18"): #4 CONTINUOUS, BENT TO HOOK AT BASE SLAB MID-DEPTH (POND-SIDE CUTOFF HOOKS DOWN; TOE CUTOFF HOOKS NOT).
7. OPENINGS (LO-F, 4' AND 10') ARE FORMED THROUGH THE FULL LENGTH OF THE WEIR BODY AT THE SILL ELEVATIONS SHOWN. SEE WEIR WALL ELEVATION FOR WIDTHS AND OPENING TRIM BARS. SILLS SHALL BE STRAIGHT AND LEVEL TO +/-0.01'.
8. BASE SLAB WIDTH = 15'-0" OPENING + 1'-0" EACH SIDE MIN. SUBGRADE AND ADJACENT LEVEE FILL COMPACTED TO 95% STD. PROCTOR (ASTM D698) IN 6" LIFTS. CONTRACTOR TO VERIFY ALL ELEVATIONS AGAINST THE GRADING PLAN PRIOR TO FORMING.


A
FIELD BEND
OPENING IN BACK WHEN CALLED FOR ON PLANS
NOTCH FOR SIDEWALK
*6 BARS
HEAVY DUTY RING & COVER
TRANS. BARS *5 @60° CTRS.
LONG BARS *6 @ 7" CTRS.
NOTCH FOR SIDEWALK
½" EXP. JOINT
BACK OF GUTTER
4" DIA. COLUMN
EXTENSION (VARIES AS SPECIFIED)
PAY LIMIT OF CURB & GUTTER (SEE NOTE *B)
PAY LIMIT OF CURB & GUTTER IF NO EXTENSION USED (SEE NOTE *B)
PLAN - W/SINGLE EXTENSION
NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.
TOP OF CURB
NORM. GUTTER LINE
DEPRESSED GUTTER LINE AT CURB FACE
SUBGRADE OR CURB BOTTOM
UPSTREAM
DOWNSTREAM
FRONT ELEVATION
CONS'T. JOINT
OMIT THIS PART OF BACK WALL WHEN BACK OPENING IS CALLED FOR
HEIGHT VARIES
PIPE THICKNESS PLUS 6"
SECTION C-C
DIAMOND TREAD
COVER FACE
COVER SECTION
RING SECTION
APPROXIMATE TOTAL WEIGHT = 333 LBS.
HEAVY DUTY RING & COVER
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
SIDEWALK
DROP INLET
DETAIL OF NOTCH FOR SIDEWALKS
SECTION A-A
TOP OF NORMAL
APPROX. WEIGHT = 9 LBS. (CAST IRON)
PLAN
NOTE: THIS DETAIL IS TYPICAL; OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.
DETAIL OF STEP FOR DROP INLET
SLOPE TO MATCH SIDEWALK OR SHLDR.
NOTCH FOR SIDEWALK
2" MIN.
CONS'T. JOINT
6"x6" DEPRESSED GUTTER
SECTION B-B
BACK OF D.I. SIDEWALK, CONC. SLOPE OR SLOPE BREAK-WHICHEVER IS GREATER
2'-0" NORMAL
SLOPE AS NEEDED TO MATCH EXIST. F.L.
*5 BARS @ 60° CTRS.
6" MIN.
*6 BARS @ 7" CTRS.
EXIST. F.L.
BACK WALL OF D.I.
COMPACTED EARTH
BACK OF CURB
BACK WALL
BACK OF SIDEWALK
BACK OF CURB
BACK OF SIDEWALK
BACK OF CURB
BACK WALL
BACK OF SIDEWALK
BACK OF CURB
BACK WALL
BACK OF SIDEWALK
BACK OF CURB
BACK WALL

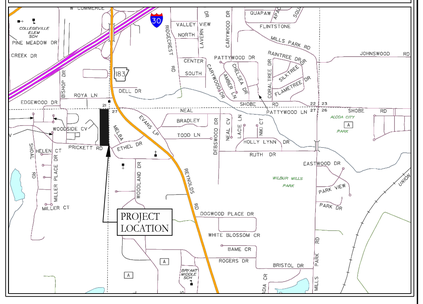






VERTICAL SCALE : 1"=6'
HORIZONTAL SCALE : 1"=60'

VICINITY MAP:



LEGEND
- Found Aliquot Corner
- Found monument
- Set ½" Rebar
- Computed point
(M)- Measured
(P) - Plat/Deed
- Fence

Know what's below. Call before you dig. 811

NOTES:

1. ALL WATER LINES CROSSING UNDER ANY STORM DRAIN, SHALL BE STEEL ENCASED A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN.

2. THE ENGINEER OF RECORD TO PROVIDE INSPECTIONS ON CONSTRUCTION ACTIVITIES FOR STORM LINES.

3. ALL THE STORM DRAINAGE HAVE BEEN DESIGNED IN COMPLIANCE WITH THE CITY OF BRYANT STANDARD SPECIFICATIONS AND STORM DRAINAGE MANUAL.

CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No.161 ARKANSAS

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER NO. 20876 KARL TAMZIUS

HOPE CONSULTING ENGINEERS - SURVEYORS
129N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
DRAINAGE PLAN & PROFILE
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-4.0	SCALE:	

500	01S	14W	0	28		62	1664

S:\HERITAGE HOMES\PROJECTS\2026\26-0288 PRICKETT ROAD DRAINAGE AND DETENTION\26-0288 PRICKETT RD DWG\26-0288 PLD PRICKETT ROAD DRAINAGE AND DETENTION 09-15-2026.DWG



PRE-CONSTRUCTION PHASE OR
INITIAL PHASE

EROSION CONTROL CONSTRUCTION PHASES

PRE-CONSTRUCTION:

1. INSTALL SILT FENCES AROUND THE PROJECT SITE.
2. ESTABLISH A CONSTRUCTION ENTRANCE TO CONTROL SITE ACCESS AND MINIMIZE DISTURBANCE.
3. MAINTAIN EXISTING DRAINAGE SWALES.

CONSTRUCTION:

1. INSTALL CONCRETE WASHOUT AREAS.
2. CONSTRUCT RIP-RAP CHECK DAMS FOR EROSION CONTROL.
3. MAINTAIN SILT FENCES THROUGHOUT CONSTRUCTION.

POST-CONSTRUCTION:

1. SEED OR SOD AND MULCH DISTURBED AREAS TO STABILIZE SOIL.
2. MAINTAIN SILT FENCES UNTIL VEGETATION IS FULLY ESTABLISHED.
3. REPAIR OR REPLACE DAMAGED BMPS WITHIN 3 BUSINESS DAYS OR BEFORE THE NEXT RAIN EVENT.

SWPPP SPECIFIC NOTES

1. ALL DEVELOPMENT SHALL COMPLY WITH CITY OF BRYANT AND ADEQ ARR150000 STORMWATER PERMIT REQUIREMENTS.

2. INSTALL SILT FENCE AS SHOWN ON THE PLANS; ADD ADDITIONAL FENCING WHERE HEAVY RUNOFF MAY OCCUR. CONTRACTOR SHALL INSPECT AND INSTALL SUPPLEMENTAL MEASURES AS NEEDED TO CONTAIN RUNOFF.

3. CONSTRUCT RIP-RAP CHECK DAMS PER ADEQ REQUIREMENTS. LOCATIONS SHOWN ARE APPROXIMATE; ADD ADDITIONAL CHECK DAMS AS SITE CONDITIONS REQUIRE.

4. MAINTAIN CONSTRUCTION ENTRANCES/EXITS TO PREVENT TRACKING OF MUD ONTO PUBLIC RIGHTS-OF-WAY.

5. IMPLEMENT ADDITIONAL EROSION-CONTROL MEASURES AS NECESSARY BASED ON SITE CONDITIONS.

6. CONTRACTOR SHALL UTILIZE ACCEPTED BEST MANAGEMENT PRACTICES (BMPS) FOR ALL SEDIMENT AND RUNOFF CONTROL MEASURES.

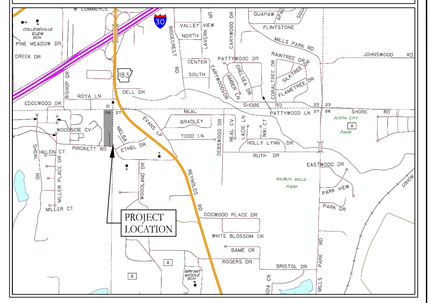
INSPECTION AND MAINTENANCE PLAN

QUALIFIED PERSONNEL MUST INSPECT ALL DISTURBED AREAS AT LEAST ONCE EVERY 7 DAYS, AND ALSO WITHIN 24 HOURS AFTER ANY STORM OF ≥ 0.5 IN.

DESCRIBE PROCEDURES TO KEEP THE FOLLOWING IN GOOD AND EFFECTIVE OPERATING CONDITION:

- VEGETATION
- EROSION & SEDIMENT CONTROL MEASURES
- ANY OTHER PROTECTIVE MEASURES LISTED IN THE SITE PLAN

VICINITY MAP:



SEQUENCE OF CONSTRUCTION PLAN

Step	Activity	ESC/Control Measures	Notes
1	Install temporary ESC	Silt fence, construction entrance, riprap	Must be installed before any land disturbing activity
2	Site Clearing	Maintain temporary ESC, protect sensitive areas	Limit disturbance to only necessary areas
3	Final Grading / Slope Stabilization	Temporary ESC still in place	Install permanent measures where needed
4	Permanent Control Installation	Permanent pond structures, spillway, riprap, ditches	Remove temporary ESC only after permanent controls installed and stabilized
5	Vegetation / Stabilization	Permanent seeding / sod	Stabilize slopes and disturbed areas as soon as possible
6	Monitoring & Maintenance	Weekly inspections, repair damaged ESC measures	Follow SWPPP inspection schedule (every 7 days or after rain ≥0.5")
7	Site Final Stabilization	Confirm 80% vegetative cover or equivalent permanent measures	Required before filing Notice of Termination (NOT)
8	Project Completion / Termination	Remove temporary measures, submit NOT	Only after full stabilization

(Reference: Bryant Stormwater Management Manual,Sections 1104.4.1-1104.4.7)

SILT FENCE MATERIAL: IT SHALL BE GEOTEXTILE FABRIC (ASTM D4632), MINIMUM 3 FT HEIGHT, HAVING 10 FT MAXIMUM SPACING WITH STEEL WIRE SUPPORT FENCE.

SILT FENCE NOTE:

1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.

2.) REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

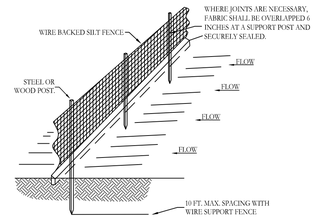
3.) SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

4.) USE ONLY WIRE BACKED SILT FENCE.

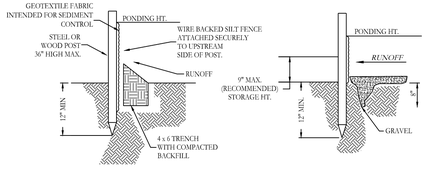
5.) IF THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER SHALL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

6.) ALL SILT FENCES SHALL BE PLACED AS CLOSE TO THE EXISTING CONTOUR AS POSSIBLE TO PREVENT CONCENTRATED FLOWS.

7.) SILT FENCES SHALL BE REMOVED AFTER THEY HAVE SERVED THEIR PURPOSE, AND ONLY AFTER ALL UPSLOPE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.



SILT FENCE



STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

ALTERNATE DETAIL
TRENCH WITH GRAVEL

EROSION CONTROL NOTES

- A COPY OF THE SWPPP MUST BE KEPT ON-SITE AT ALL TIMES.
- THE CONTRACTOR SHALL NOT BEGIN SOIL-DISTURBING ACTIVITIES UNTIL ALL PERIMETER CONTROLS ARE INSTALLED.
- THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS AND DRAINAGE PATTERNS BEFORE CLEARING BEGINS.
- ALL EXISTING VEGETATION WHICH ARE DESIGNATED TO REMAIN SHALL BE PROJECTED.
- THE CONTRACTOR SHALL ENSURE ALL EROSION CONTROL MATERIALS AND SUPPLIES ARE ON-SITE BEFORE DISTURBANCE BEGINS.
- ALL EXISTING DRAINAGE CHANNELS, CULVERTS, AND CONVEYANCES MUST BE PROTECTED FROM SEDIMENTATION.
- ALL DOWNSTREAM RECEIVING WATERS MUST BE PROTECTED PRIOR TO STARTING WORK.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE REMOVING OR ALTERING ANY EXISTING EROSION CONTROL FEATURES ON SITE.
- ALL STORM DRAINS INLETS HAVE TO BE PROTECTED PRIOR TO DISTURBANCE IN THEIR DRAINAGE AREA.
- ANY DEFICIENCIES IN EROSION CONTROL MEASURES MUST BE REPORT TO THE ENGINEER IMMEDIATELY AND CORRECT THEM BEFORE PROCEEDING.

ERC LEGEND

SITE POSTING

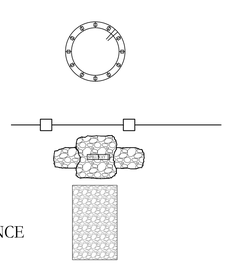
CONC. WASHOUT

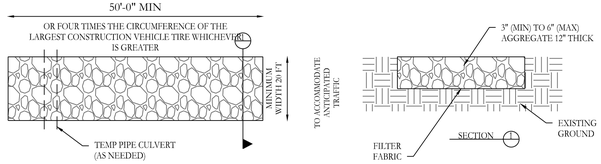
SILT FENCE

RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE

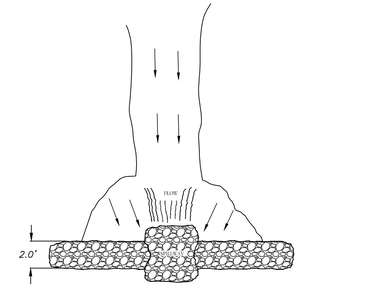
FLOW ARROW



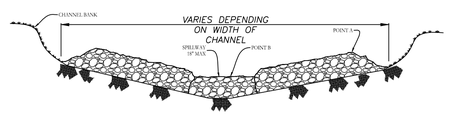


STABILIZED CONSTRUCTION ENTRANCE
N.T.S

811 Know what's below. Call before you dig.



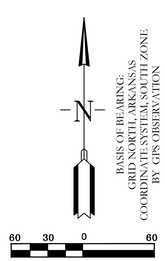
PLAN CHECK DAM



VIEW LOOKING UPSTREAM

NOTES:

1.) POINT "A" MUST BE HIGHER THAN POINT "B" (SPILLWAY HEIGHT)
2.) PLACE RIP-RAP BARRIER PERPENDICULAR TO THE FLOW WITH TIGHT GROUPING.
USE LOOSE ROCK OR AGGREGATE PLACED OVER SOIL SURFACES, BROKEN CONCRETE IS NOT ACCEPTABLE STRAW, ROCKS, OR FILTER FABRIC TO FILL ANY GAPS AND TAMP BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND THE DAM.
3.) USE CLEAN CRUSHED STONE OR COBBLE IN A SMALLER GRADATION IN CHECK DAM.
4.) SPILLWAY HEIGHT SHALL NOT EXCEED 18"-24".
5.) INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.







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FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
EROSION CONTROL PLAN-1

PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-5.0	SCALE:	

500	01S	14W	0	28		62	1664

H:\SHARED DRIVE\CONSULTING\LAND PROJECTS\2026\SUBDIVISIONS\2026-26-0288 HERITAGE HOMES - PRICKETT RD\ DWG\26-0288 PCD PRICKETT ROAD DRAINAGE AND DETENTION 09-15-2026.DWG



ERC LEGEND

SITE POSTING

CONC. WASHOUT

SILT FENCE

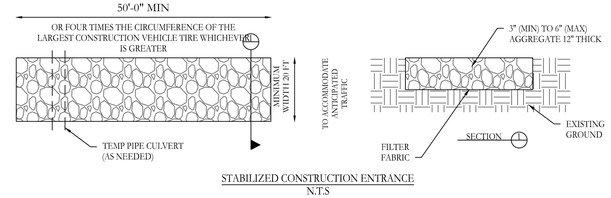
RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE

FLOW ARROW

CONSTRUCTION PHASE

LEGEND
BOC = TOP OF BACK OF CURB
FG = FINISHED GRADE
EG = EXISTING GRADE
SW = TOP OF SIDEWALK
T/AS = TOP OF ASPHALT



STABILIZED CONSTRUCTION ENTRANCE
N.T.S

EROSION CONTROL CONSTRUCTION PHASES

PRE-CONSTRUCTION:

1. INSTALL SILT FENCES AROUND THE PROJECT SITE.
2. ESTABLISH A CONSTRUCTION ENTRANCE TO CONTROL SITE ACCESS AND MINIMIZE DISTURBANCE.
3. MAINTAIN EXISTING DRAINAGE SWALES.

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POST-CONSTRUCTION:

1. SEED OR SOD AND MULCH DISTURBED AREAS TO STABILIZE SOIL.
2. MAINTAIN SILT FENCES UNTIL VEGETATION IS FULLY ESTABLISHED.
3. REPAIR OR REPLACE DAMAGED BMPS WITHIN 3 BUSINESS DAYS OR BEFORE THE NEXT RAIN EVENT.

SWPPP SPECIFIC NOTES

1. ALL DEVELOPMENT SHALL COMPLY WITH CITY OF BRYANT AND ADEQ ARR150000 STORMWATER PERMIT REQUIREMENTS.

2. INSTALL SILT FENCE AS SHOWN ON THE PLANS; ADD ADDITIONAL FENCING WHERE HEAVY RUNOFF MAY OCCUR. CONTRACTOR SHALL INSPECT AND INSTALL SUPPLEMENTAL MEASURES AS NEEDED TO CONTAIN RUNOFF.

3. CONSTRUCT RIP-RAP CHECK DAMS PER ADEQ REQUIREMENTS. LOCATIONS SHOWN ARE APPROXIMATE; ADD ADDITIONAL CHECK DAMS AS SITE CONDITIONS REQUIRE.

4. MAINTAIN CONSTRUCTION ENTRANCES/EXITS TO PREVENT TRACKING OF MUD ONTO PUBLIC RIGHTS-OF-WAY.

5. IMPLEMENT ADDITIONAL EROSION-CONTROL MEASURES AS NECESSARY BASED ON SITE CONDITIONS.

6. CONTRACTOR SHALL UTILIZE ACCEPTED BEST MANAGEMENT PRACTICES (BMPS) FOR ALL SEDIMENT AND RUNOFF CONTROL MEASURES.

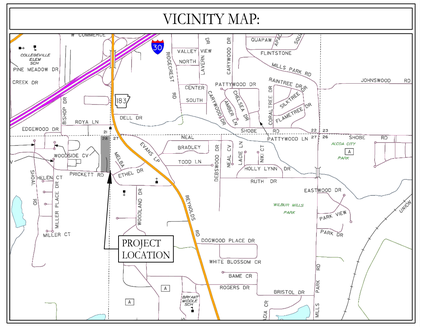
INSPECTION AND MAINTENANCE PLAN

QUALIFIED PERSONNEL MUST INSPECT ALL DISTURBED AREAS AT LEAST ONCE EVERY 7 DAYS, AND ALSO WITHIN 24 HOURS AFTER ANY STORM OF ≥ 0.5 IN.

DESCRIBE PROCEDURES TO KEEP THE FOLLOWING IN GOOD AND EFFECTIVE OPERATING CONDITION:

- VEGETATION
- EROSION & SEDIMENT CONTROL MEASURES
- ANY OTHER PROTECTIVE MEASURES LISTED IN THE SITE PLAN

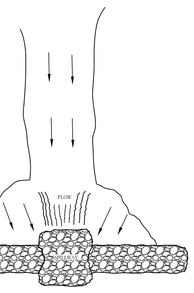
VICINITY MAP:



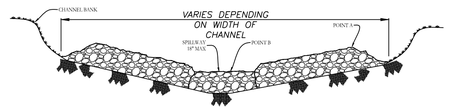
SEQUENCE OF CONSTRUCTION PLAN

Step	Activity	ESC/Control Measures	Notes
1	Install temporary ESC	Silt fence, construction entrance, riprap	Must be installed before any land disturbing activity
2	Site Clearing	Maintain temporary ESC, protect sensitive areas	Limit disturbance to only necessary areas
3	Final Grading / Slope Stabilization	Temporary ESC still in place	Install permanent measures where needed
4	Permanent Control Installation	Permanent pond structures, spillway, riprap, ditches	Remove temporary ESC only after permanent controls installed and stabilized
5	Vegetation / Stabilization	Permanent seeding / sod	Stabilize slopes and disturbed areas as soon as possible
6	Monitoring & Maintenance	Weekly inspections, repair damaged ESC measures	Follow SWPPP inspection schedule (every 7 days or after rain ≥0.5")
7	Site Final Stabilization	Confirm 80% vegetative cover or equivalent permanent measures	Required before filing Notice of Termination (NOT)
8	Project Completion / Termination	Remove temporary measures, submit NOT	Only after full stabilization

(Reference: Bryant Stormwater Management Manual,Sections 1104.4.1-1104.4.7)



CHECK DAM



VIEW LOOKING UPSTREAM

NOTES:

1) POINT 'A' MUST BE HIGHER THAN POINT 'B' (SPILLWAY HEIGHT)
2) PLACE RIP-RAP BARRIER PERPENDICULAR TO THE FLOW WITH TIGHT GROUPING. USE LOOSE ROCK OR AGGREGATE PLACED OVER SOIL SURFACES, BROKEN CONCRETE IS NOT ACCEPTABLE STRAW, ROCKS, OR FILTER FABRIC TO FILL ANY GAPS AND TAMP BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND THE DAM.
3) USE CLEAN CRUSHED STONE OR COBBLE IN A SMALLER GRADATION IN CHECK DAM.
4) SPILLWAY HEIGHT SHALL NOT EXCEED 18"-24".
5) INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

SILT FENCE MATERIAL: IT SHALL BE GEOTEXTILE FABRIC (ASTM D4632), MINIMUM 3 FT HEIGHT, HAVING 10 FT MAXIMUM SPACING WITH STEEL WIRE SUPPORT FENCE.

SILT FENCE NOTE:

1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.

2.) REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

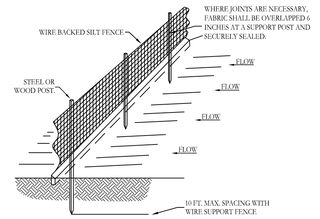
3.) SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

4.) USE ONLY WIRE BACKED SILT FENCE.

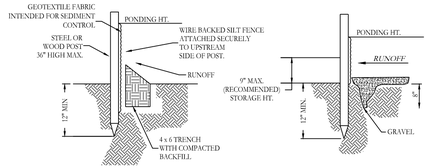
5.) IF THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER SHALL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

6.) ALL SILT FENCES SHALL BE PLACED AS CLOSE TO THE EXISTING CONTOUR AS POSSIBLE TO PREVENT CONCENTRATED FLOWS.

7.) SILT FENCES SHALL BE REMOVED AFTER THEY HAVE SERVED THEIR PURPOSE, AND ONLY AFTER ALL UPSLOPE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.



SILT FENCE

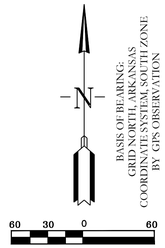


STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

ALTERNATE DETAIL
TRENCH WITH GRAVEL

EROSION CONTROL NOTES

- ALL DOWNSLOPE AND SIDESLOPE PERIMETER CONTROLS (SILT FENCE, STRAW BALES, BERMS) MUST BE INSTALLED BEFORE ANY LAND-DISTURBING ACTIVITIES BEGIN.
- ANY DISTURBED AREA WHERE CONSTRUCTION ACTIVITIES CEASE FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY STABILIZED USING MULCH, MATTING, SEED, OR OTHER APPROVED STABILIZATION MEASURES.
- SEDIMENT-TRAPPING DEVICES MUST BE INSTALLED AT ALL POINTS WHERE RUNOFF EXITS THE SITE TO PREVENT SEDIMENT FROM LEAVING THE PROJECT AREA.
- QUALIFIED PERSONNEL MUST INSPECT ALL EROSION AND SEDIMENT CONTROLS EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR GREATER.
- DAMAGED SILT FENCES, WASHED-OUT BERMS, CLOGGED INLETS, OR ERODED CHANNELS MUST BE REPAIRED IMMEDIATELY AFTER EACH INSPECTION.
- A STABILIZED CONSTRUCTION ENTRANCE MUST BE USED AT ALL SITE ACCESS POINTS AND MAINTAINED REGULARLY TO PREVENT MUD TRACKING ONTO PUBLIC ROADS. STREET SWEEPING SHALL OCCUR DAILY AS NEEDED.
- UNPAVED SURFACES AND DISTURBED AREAS SHALL BE WATERED OR COVERED TO PREVENT WIND-BLOWN DUST AND SOIL LOSS.
- SLOPES STEEPER THAN 3H:1V REQUIRE STABILIZATION USING EROSION CONTROL BLANKETS, MATS, OR TURF REINFORCEMENT. NO SLOPE MAY EXCEED 2H:1V WITHOUT ENGINEERED STABILIZATION.
- SEDIMENT BASINS AND TRAPS MUST BE REGULARLY CLEANED OUT WHEN SEDIMENT REACHES ONE-HALF OF THE DESIGN DEPTH.
- ANY SPILL OF OIL OR HAZARDOUS SUBSTANCES ABOVE REPORTABLE QUANTITIES MUST BE REPORTED TO REGULATORY AGENCIES AND RECORDED AS REQUIRED.
- ALL EROSION AND SEDIMENT CONTROL DEVICES MUST REMAIN IN PLACE AND FUNCTIONAL THROUGHOUT ALL PHASES OF CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
- ADDITIONAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS REQUIRED, BASED ON SITE-SPECIFIC CONDITIONS.
- ALL DISTURBED AREAS LEFT IDLE FOR 14 DAYS OR LONGER SHALL BE TREATED WITH TEMPORARY VEGETATION AND MULCHING.



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www.hopeconsulting.com

FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
EROSION CONTROL PLAN-2
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-5.1	SCALE:	

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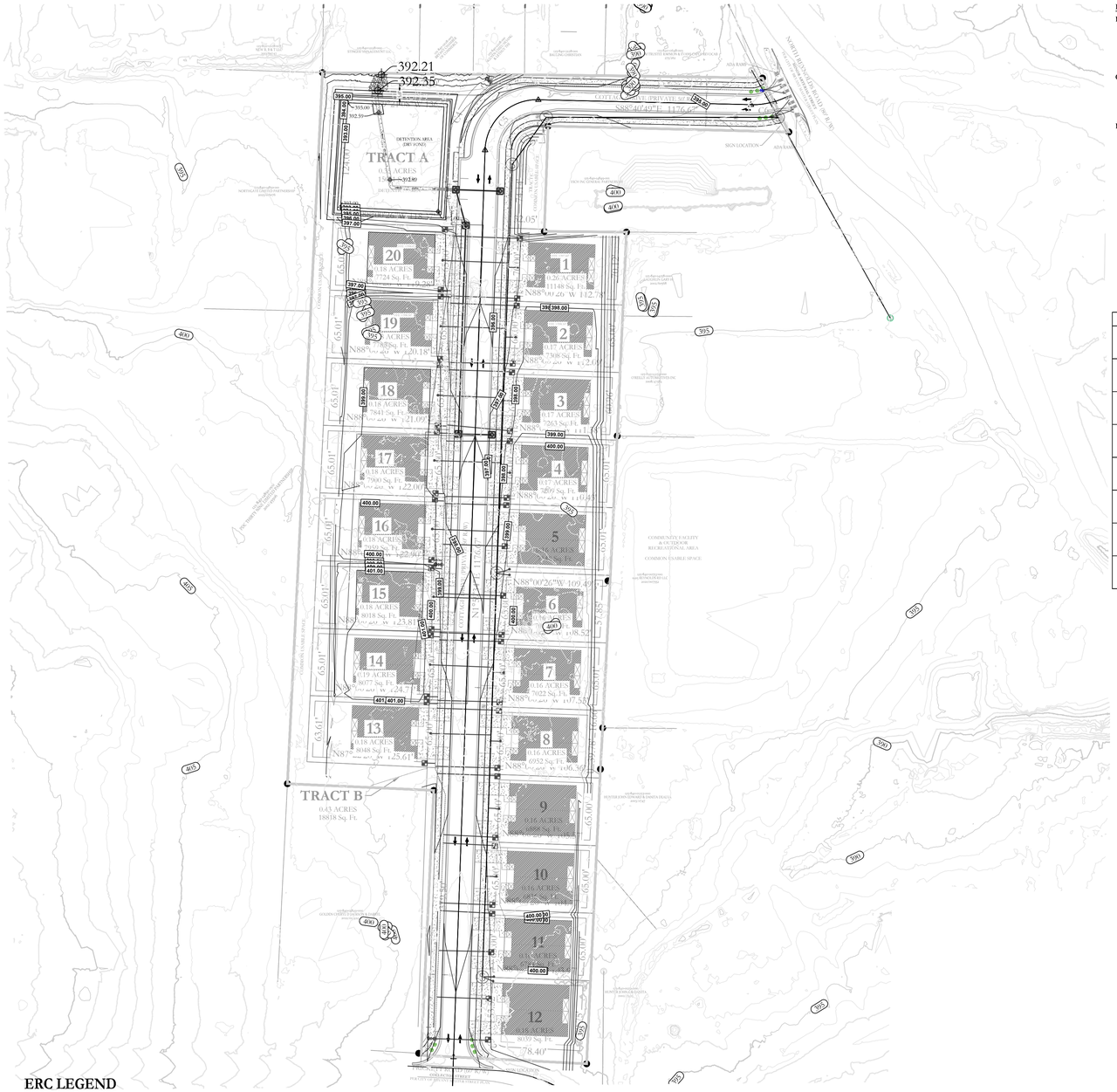
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20078
KAZI TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC
No. 1911
ARKANSAS



ERC LEGEND

SITE POSTING

CONC. WASHOUT

SILT FENCE

RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE

FLOW ARROW

POST-CONSTRUCTION PHASE

EROSION CONTROL CONSTRUCTION PHASES

PRE-CONSTRUCTION:

1. INSTALL SILT FENCES AROUND THE PROJECT SITE.
2. ESTABLISH A CONSTRUCTION ENTRANCE TO CONTROL SITE ACCESS AND MINIMIZE DISTURBANCE.
3. MAINTAIN EXISTING DRAINAGE SWALES.

CONSTRUCTION:

1. INSTALL CONCRETE WASHOUT AREAS.
2. CONSTRUCT RIP-RAP CHECK DAMS FOR EROSION CONTROL.
3. MAINTAIN SILT FENCES THROUGHOUT CONSTRUCTION.

POST-CONSTRUCTION:

1. SEED OR SOD AND MULCH DISTURBED AREAS TO STABILIZE SOIL.
2. MAINTAIN SILT FENCES UNTIL VEGETATION IS FULLY ESTABLISHED.
3. REPAIR OR REPLACE DAMAGED BMPS WITHIN 3 BUSINESS DAYS OR BEFORE THE NEXT RAIN EVENT.

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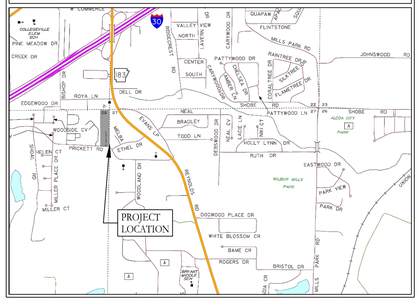

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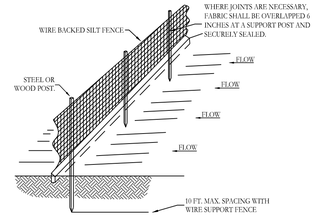
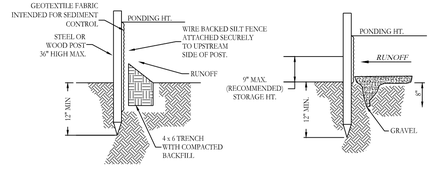


SILT FENCE



STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

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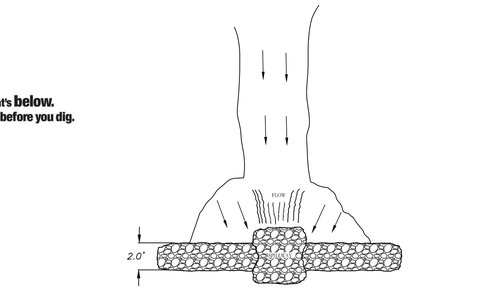
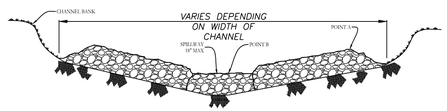


PLAN CHECK DAM



VIEW LOOKING UPSTREAM

NOTES:

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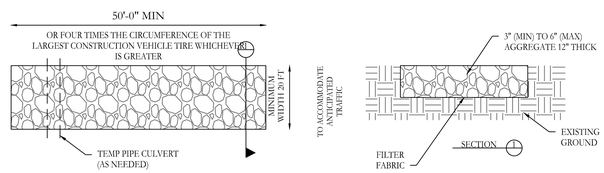
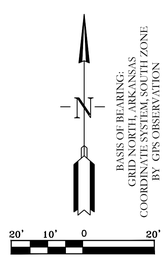


STABILIZED CONSTRUCTION ENTRANCE
N.T.S



EROSION CONTROL NOTES

- ALL EXPOSED SOIL AREAS MUST ACHIEVE A UNIFORM 80% VEGETATIVE COVER OR EQUIVALENT PERMANENT STABILIZATION BEFORE THE PROJECT CAN BE CONSIDERED COMPLETE.
- TEMPORARY BMPS (E.G., SILT FENCES, STRAW BALES, SEDIMENT BASINS) MUST BE REMOVED ONLY AFTER UPSTREAM AREAS ARE PERMANENTLY STABILIZED.
- ANY AREAS DISTURBED DURING THE REMOVAL OF TEMPORARY CONTROL MEASURES MUST BE RE-GRADED, SEEDED, AND STABILIZED IMMEDIATELY.
- ALL PERMANENT DRAINAGE CHANNELS, DITCHES, AND CONVEYANCE SYSTEMS MUST BE COMPLETED AND STABILIZED (VEGETATED OR ARMORED) TO PREVENT POST-CONSTRUCTION EROSION.
- INLET PROTECTION SHOULD REMAIN IN PLACE UNTIL SURROUNDING DRAINAGE AREAS ACHIEVE FINAL STABILIZATION AND NO LONGER CONTRIBUTE SEDIMENT.
- INSPECTIONS MUST CONTINUE UNTIL THE NOTICE OF TERMINATION (NOT) IS APPROVED. INSPECT MONTHLY OR AFTER MAJOR STORM EVENTS TO VERIFY STABILIZATION EFFECTIVENESS.
- ANY ACCUMULATED SEDIMENT IN STORMWATER PONDS, SWALES, OR CHANNELS MUST BE REMOVED TO RESTORE DESIGN CAPACITY.
- STREAM BUFFERS, CHANNELS, AND WETLANDS MUST BE RESTORED TO PRE-CONSTRUCTION CONDITION AND PROTECTED FROM FUTURE EROSION.

Know what's below. Call before you dig.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
KAZI TAMZIDUL ISLAM

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

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FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
EROSION CONTROL PLAN-3
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
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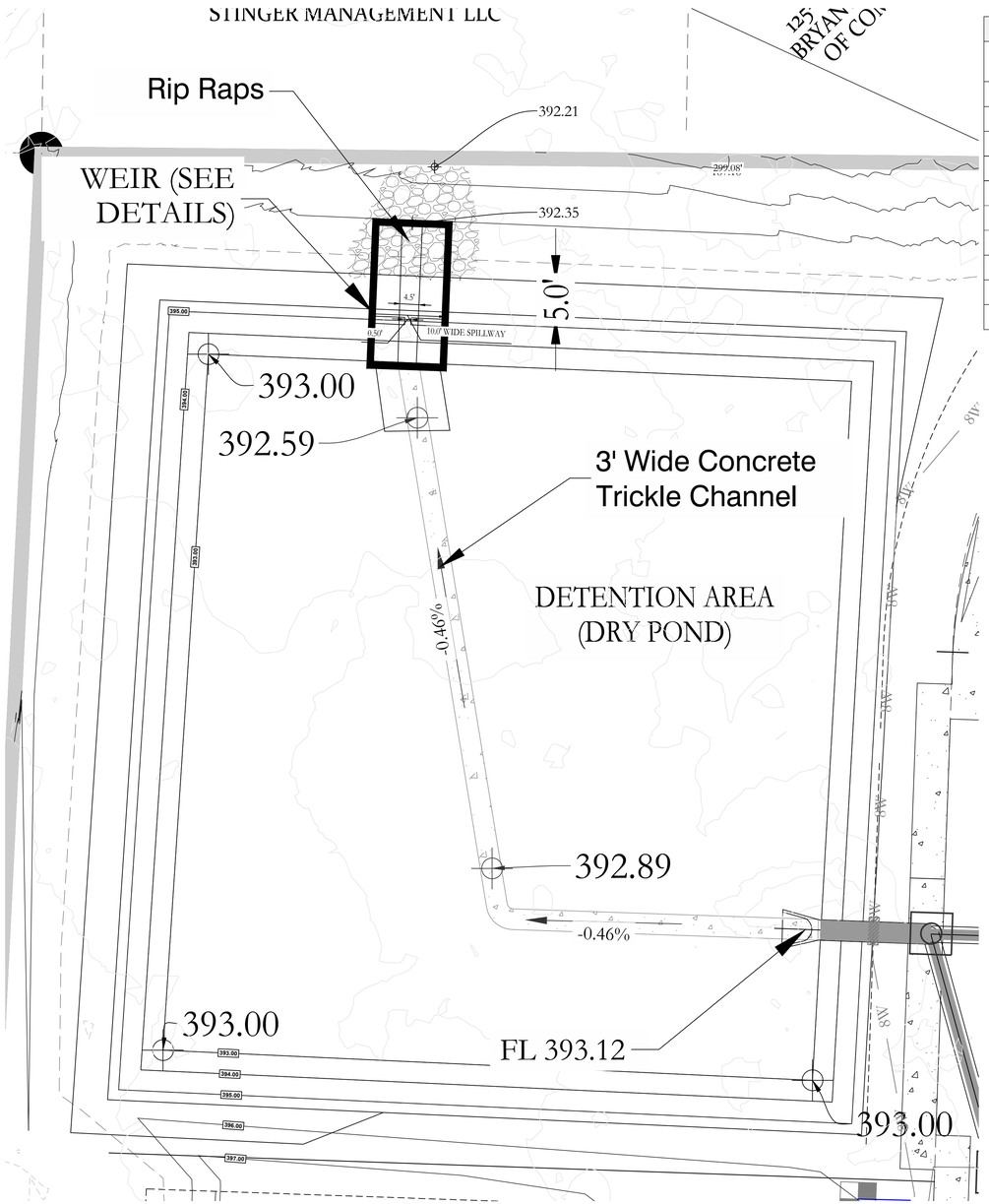
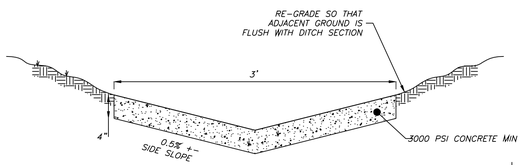
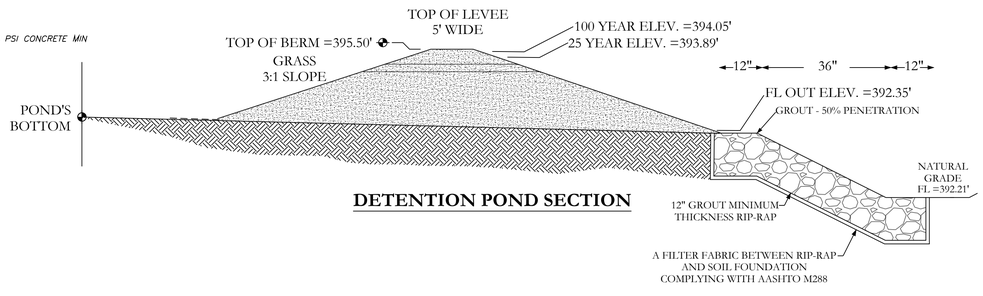


DETENTION POND

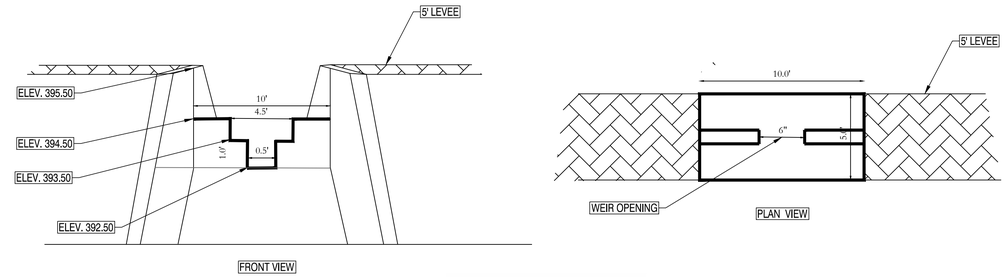
POND DETAILS	
Pond bottom	393.00' min. (at channel edges, weir end), graded at 0.5% min. toward trickle channel
FES invert / rim	393.12' / 394.99'
Trickle channel type	3'-0" wide x 6" deep concrete V-ditch, 3:1 side slopes
Trickle channel flowline, FES end	393.12' (top of edge 393.62')
Trickle channel flowline, weir end	392.50' (top of edge 393.00')
Trickle channel length / grade	135' at 0.46%
Weir opening invert	392.50'
Weir opening width	4.5'
25-year WSE	393.89'
100-year WSE	394.05'
Top of berm	395.50'



DETAIL (NTS)
TRICKLE CHANNEL SECTION



DETENTION POND SECTION

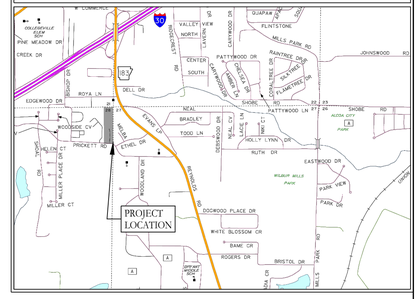


POND WEIR

EARTHEN SLOPE NOTE:
EARTHEN DETENTION POND SLOPES ON BOTH THE INTERIOR AND EXTERIOR OF THE POND SHALL HAVE A MAXIMUM SLOPE OF 3:1.

NOTE:
1. DETENTION POND WILL BE REQUIRED TO BE STABILIZED WITH SOLID SOD/SEED STABILIZATION PER THE STORM WATER MANAGEMENT MANUAL.
2. DETENTION POND WILL HAVE A 5' WIDE LEVEE.
3. SAFETY: UPON COMPLETION, THE DETENTION BASIN SHALL BE ENCLOSED WITH FENCING PER THE FENCE DETAIL ON THIS SHEET,WITH A LOCKABLE MAINTENANCE ACCESS GATE, IN ACCORDANCE WITH SECTION 1000.7 OF THE CITY OF BRYANT STORMWATER MANAGEMENT MANUAL.

VICINITY MAP:



STATE OF ARKANSAS
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HOPE CONSULTING INC.
No. 1931
ARKANSAS

DETENTION POND MAINTENANCE PLAN

Background
The Detention pond is located at the North West of the subjected property. It is designed to temporarily detain stormwater to meet water quantity criteria before discharging off the property.

Routine Maintenance
Routine maintenance will include but not be limited to:
-Mowing of the bank slopes and area around the pond on a monthly basis during the growing season and as needed during the cooler months.

-The outlet pipe from the pond and other areas will be inspected monthly for debris which could inhibit the proper flow of discharge. Any debris will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up or downstream of the structure.

-Trash will be removed from around the pond to prevent entering the pond. Generally, the site should be kept free of loose trash which could be carried off site by wind or rain.

-Inspect the pond and outlet pipe for non-routine maintenance need.

-The pond shall be maintained in accordance with section 1000 of the city of bryant storm water management manual.

-Mosquito control: the detention pond is designed as a dry pond and shall drain completely within 72 hours after a storm event.

Standing water shall not be permitted. The owner shall correct any ponding areas by regrading and shall keep the trickle channel and outlet free of debris.

-The engineer of record shall be responsible for inspection of the detention pond, outlet structure,and trickle channel during construction and shall certify that the pond was constructed in accordance with the approved plans prior to final acceptance.

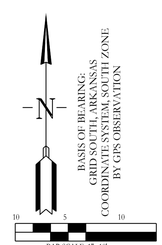
Periodic or Non-Routine Maintenance
The routine inspection of the pond area and discharge pipe will identify needed repairs and non-routine maintenance. These items may include but not be limited to:

-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond area.

-Sediment from the site may accumulate in the pond bottom and reduce the pond to below design volume requirements. The pond should be excavated if the pond bottom elevation reached a level that allows excessive aquatic growth or reduces the pond efficiency such, that the sediments are passing the discharge structure and release off site.

-Stabilization or re-grading of side slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.

-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.



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FOR USE AND BENEFIT OF:
HERITAGE HOMES

THE COTTAGES OF BRYANT
DETENTION POND
PRICKETT ROAD, BRYANT ,ARKANSAS

DATE:	09-23-2026	C.A.D. BY:	DRAWING NUMBER:
REVISED:	10-21-2026	CHECKED BY:	26-0288
SHEET:	C-6.0	SCALE:	

500	01S	14W	0	28		62	1664

H:\SHARED\HOPECONSULTING\LAND PROJECTS 2004 SUBDIVISIONS\2026\26-0288 HERITAGE HOMES - PRICKETT RD\DWG\26-0288 PRICKETT ROAD DRAINAGE AND DETENTION 09-15-2026.DWG

Comments Response Letter

Utilities

Construction Drawings

1. Water

a. Waterlines to fire hydrants must be a minimum of an 8-inch (section 1100-2-1.05.B)

-The comment has been addressed.

b. We need to discuss the water tie-in to the 2-inch on Reynolds Road. To obtain satisfactory fire flows the project might need to tie to the 8-inch on the east side of Reynolds Road.

- We can make sure the proposed main will have required fire flow from a hydraulic analysis. We are required to have the existing pressure and flow data from city.

c. Make sure to maintain minimum clearance from the existing sewer line.

-Minimum clearance from the existing sewer line has been maintained

d. Show a note on the drawing that the Engineer of record to provide inspections on construction activities for water lines.

-The note has been added to the updated plans.

e. Show encasement for water line where it crosses under the storm drain at the pond.

-The encasement has been provided under storm drainage.

f. Add a note that states "ALL WATER LINES CROSSING UNDER ANY STORM DRAIN, SHALL BE STEEL ENCASED A MINIMUM OF 5 FEET EITHER SIDE OF THE STORM DRAIN."

-The note has been added to the plans.

2. Sanitary Sewer

a. Provide a detail

-Details have been added. See Sewer detail sheet (C-3.3)

b. Correct Note #6 to replace " ... any other parallel utilities or structures." with " ... any other parallel utilities (except for potable water lines, see note 8) or related structures."

-The note has been corrected.

c. On Manhole A-1 provide details for the connection and show how flows are going to be directed to the north. Details need to meet City of Bryant specifications.

-Manhole A-1 will be a doghouse manhole on the existing sewer line.

d. Show a note on the drawing that the Engineer of record to provide inspections on construction activities for sewer lines.

- The note has been added.

Streets

1.On the inlets show the length of the opening in the notes for the curb inlets.

- The note has been added.

2. Show a note on the drawing that the Engineer of record to provide inspections on construction activities for streets and storm drainage.

- The note has been added.

3. Show flared end section on the profile.

-The flared end section has been shown on the profile.

4. Add general notes to the Drainage Plan & Profile drawing to indicate compliance with Bryant's standard specifications and also the Bryant Stormwater Manual.

- The note has been added.

StormWater

1. Add general notes to the Drainage Plan & Profile drawing to indicate compliance with Bryant's standard specifications and also the Bryant Stormwater Manual.
   - The note has been added.

2. Provide a stormwater management plan
   - Stormwater Management Plan has been provided.

3. Provide a SWPPP

   -A SWPPP will be provided

Engineering General Comments

1. Submit engineering review fee.
   - Fee will be provided

2. Drawings are mis-numbered, correct and re-submit

   -The comment has been addressed

Preliminary Plat

1. Show fire hydrants
   -Fire Hydrants have been shown on the plat.

2. Show tie ins for sidewalks on Reynolds Road

   -The comment has been addressed

3. Show finished floor elevations for those lots closest to the pond. See note 1 in Engineering comments.

   - The elevations have been shown in the updated plat

Construction Drawings

1. A minimum of two (2) feet of freeboard is required from the design water surface elevation of the detention basin to the Finished Floor Elevation of any adjacent structure. (1000.5.4)
   The comment has been addressed

2. Provide typical detail for curb and gutter.
   The detail has been provided. See sheet C-3.3

3. Provide typical detail for curb inlet.
   The detail has been provided.See sheet C-3.3

4. Drawing C1. 1
   a. Show detailed grading elevations in the detention basin
      -The elevations have been shown in the updated grading plan.
   b. Show elevations of the trickle channel
   - The elevations of the trickle channel have been shown
   c. Show elevations of the corners and drainage slopes towards the trickle channel.
      - The comment has been addressed.
   d. Show layout information for detention pond
      - The comment has been addressed.

5. Drawings C6.1 thru 6.3 - Erosion Control Plan

a. If using proposed detention basin as sedimentation basin during construction, provide details.

- The comment has been addressed.

6. C-6.0

a. Show layout information for the detention pond. Show dimensions to the location of the weir.

-The information has been provided.

b. Provide horizontal and vertical control information on the pond.

- USGS Type-C gauge will be provided at the pond outlet structure.

c. Provide typical cross section for concrete trickle channel.

- A typical section has been added for the concrete trickle channel: a 3'-0" wide by 6" deep V-ditch with 3:1 side slopes, 6" minimum thickness of 3,000 psi concrete

d. Show longitudinal slope for concrete trickle channel and demonstrate how a minimum flow velocity of 2 fps will be achieved.

-The trickle channel runs 135' from the FES invert (393.12') to the weir (392.50') at a longitudinal slope of 0.46%. Using Manning's equation (n = 0.013, 6" deep V-ditch with 3:1 side slopes), the velocity reaches 2.0 fps at a flow depth of 0.28' (Q = 0.46 cfs) and 3.0 fps at full depth.

e. Show flowline elevations and grades on the trickle channel.

- The comment has been addressed.

f. Add a curve to the trickle channel where the point of intersection shows a sharp turn.

- The curve has been added to the channel

g. Show slopes on the berm for the detention pond

-The slopes have been shown in the updated plan

h. Top of embankment shall generally be at least 2 feet above the top of the outlet structure. (1000.2.1)

- We have maintained required free board.

i. Show 4.5' width in weir structure. (based upon width shown in calculations)

- The comment has been addressed.

j.Add comment to address safety features/fencing around detention basin when completed. (1000.7)

-The comment has been addressed.

k. Add details for fencing

-The details have been provided. See sheet C-3.3

l. Provide construction details of the proposed weir, including the reinforcement, toe downs for scour protection, footers, wingwalls. The elevation and plan views shown does not reflect the elevations shown for the pond. Show full extension to the toe of the pond on both sides of the berm.

-The details have been provided.See sheet C-3.3

m. Clarify what the bottom of the detention pond is supposed to be graded at.

-The pond bottom will be gradually graded to 392.5’

n. Provide grade elevations on the bottom of the detention pond.

-The comment has been addressed.

o. Add a note that states that the Engineer of record is responsible for inspections.

-The note has been added.

p. Show construction staging schedule for the detention basin. Detention basins cannot be used as a sedimentation basin during construction.

-The comment has been addressed.

q. Provide specifications for the grouted riprap shown at the outfall.

-The detail has been provided.See sheet C-3.3

r. Add a note about mosquito control

-The note has been added.

s. Add a reference to Section 1000 of the stormwater manual in the DETENTION POND MAINTENANCE PLAN notes.

-The comment has been addressed.

Drainage Calculations

1. In Project Title it should show the actual project title which is "Cottages of Bryant" according to the construction drawings.

-The comment has been addressed.

2. In Project Description provide summary of pre- and post-development drainage conditions.

-A summary has been provided.

3. In Project Description provide information about the project, including what it entails.

-The comment has been addressed.

4. In Project Location provide a more detailed description of the project location.

-Detailed description has been provided.

5. In Drainage Analysis provide more detailed information about how the analysis was performed, what software was used, any assumptions, etc.

-The comment has been addressed.

6. Show how the runoff coefficients were determined (i.e. stormwater manual, calculations, etc.)

-The runoff coefficients were determined using “The City of Bryant Storm Drainage Manual”

7. Show the top of berm elevation in the summary.

-The top of berm has been shown in the pond summary on Sheet C-6.0.

8. Show the high water elevation.

-The elevations are shown in the updated drainage report

9. Show a more detailed description of the outlet control structure to be used.

- A description has been added in the drainage report summary sheet

10. Provide calculations that determine that the 1-ft of freeboard inside the detention basin is maintained during a 100-year event when the weir structures is blocked.

- Freeboard maintained.

11. Show the sub-basins for each curb inlet in the project, along with calculations to support the flows intercepted by each inlet.

-The sub-basins have been shown.

12.Verify the Gutter information on the Inlet Report. So is 0.005 ft/ft, Sw is 0.05 ft/ft, and Sx is shown as 0.02 ft/ft. When I calculate the cross sectional slope it's more than 2%. When I look at the street profile in the plans the slope in the gutter is more than 0.005. Provide a curb and gutter detail in the construction plans so the gutter slope can be determined accurately.

-The comment has been addressed.

Planning

1. Preliminary Plat Subdivision Review and Preliminary Plat stormwater review fees will need to be paid.
   -The fees will be provided.

2. Half-street improvement plans to Prickett Rd? Nothing shown on plat. No plans from crosswalk at Prickett intersection or Reynolds.

- No, we are not proposing any half street development

3. Fire Hydrants not on Plat

- The fire hydrants have been shown on the plat.

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Stormwater Infrastructure Maintenance Plan Agreement

The Cottages of Bryant

A subdivision in the City of Bryant, Saline County, Arkansas

Responsible party	The Cottages of Bryant Property Owners Association (POA)
Developer / Grantor	Heritage Homes, LLC 12585 Samples Road, Alexander, AR 72002 Will deed Tract A (detention area) and Tracts B and C (common areas) to the POA
Project location	Prickett Road, Bryant, Arkansas (Section 28, T-1-S, R-14-W)
Engineer of record	Hope Consulting, Inc., 129 N. Main Street, Benton, AR 72015 Kazi Tamzidul Islam, P.E. No. 20876
Hope job number	26-0288

This plan covers the detention pond (dry pond) in Tract A and the private storm sewer system that serve The Cottages of Bryant, a 20-lot residential Planned Unit Development. The Cottages of Bryant Property Owners Association (the POA) accepts the maintenance obligations below, and Heritage Homes, LLC, as owner and developer, will deed the detention area and common areas to the POA. This plan contains or upholds, without limitation, the following provisions:

(1) Property description and easements. The Cottages of Bryant is a part of Section 28, Township 1 South, Range 14 West, Saline County, Arkansas, containing 5.85 acres, more or less, as shown on The Cottages of Bryant plat (Hope Consulting Job No. 26-0288). The stormwater detention facility is located in Tract A (Detention Area / Dry Pond) at the northwest corner of the subdivision, north of Lot 20 and west of Cottage Drive. Runoff reaches the pond through the platted utility and drainage easements and the storm sewer in Cottage Drive, a private 50-foot right-of-way whose storm sewer is maintained by the POA. Tract A is platted as a detention area/dry pond and utility easement, and Tracts B and C as common green space, all maintained by the POA. Heritage Homes, LLC will convey Tracts A, B and C to the POA by deed, and the POA will own and maintain them, together with the private storm sewer system, from the date of conveyance.

(2) Size and configuration. The facility is one open earthen detention pond (dry pond) in Tract A, 0.35 acre (15,041 sq. ft.). Pond bottom is elevation 392.00 with a 3-foot-wide concrete trickle channel; top of berm is elevation 394.50 with a 5-foot-wide grassed levee and 3:1 maximum slopes. Storage is approximately 27,282 cu. ft. at top of berm; the 100-year storm peaks at elevation 393.32 (13,509 cu. ft.) and the 25-year at 393.19. The outlet is a rectangular weir structure with openings 0.5 foot wide at elevation 392.00, 4.5 feet wide at elevation 393.00 and 10.0 feet wide at elevation 393.50, discharging over a grouted rip-rap apron. The storm sewer consists of five structures (ST-1 through ST-5) and approximately 324 linear feet of concrete horizontal elliptical arch pipe (22 x 14 inch and 30 x 19 inch), entering the pond through a flared end section at flowline 392.00. The 100-year peak release is 5.17 cfs versus 21.44 cfs pre-development. Design details are as shown in the approved construction plans (Sheets C-4.1 and C-6.0) and drainage report dated September 2026, which are kept with the as-built drawings.

(3) Access rights. Properties served by the facilities are granted the right to construct, use, reconstruct, repair and maintain access to the facilities.

(4) Responsibility of lot owners. Each lot served by the facilities is responsible for repairs and maintenance of the facilities and for any unpaid ad valorem taxes, public assessments for improvements, and unsafe building and public nuisance abatement liens charged against the facilities, including all interest charges together with attorney fees, costs and expenses of collection. These responsibilities are delegated to the POA. Membership in the POA is mandatory for each parcel served by the facilities and for any successive buyer. The POA has the power to levy assessments for these obligations, and all unpaid assessments become a lien on the individual parcel.

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(5) Design and access. The facilities are designed to minimize the need for maintenance, to provide easy vehicle and personal access for maintenance, and to be structurally sound. The applicant is responsible for obtaining any easements or other property interests needed to allow access to the facilities for inspection or maintenance.

(6) General upkeep. The detention pond, levee and earthen slopes, storm structures ST-1 through ST-5, storm pipe, flared end section, concrete trickle channel, outlet weir, grouted rip-rap apron and any fencing are regularly inspected, maintained and repaired so that they operate properly and do not create hazards or nuisances.

(7) Sediment and surveys. Major deposits of sediment are removed from the pond annually, after any extreme storm event, and whenever sediment reduces design volume or begins to pass the outlet weir. Excavated material is disposed of off-site. Every five years the pond is surveyed to confirm the as-constructed contours, including pond bottom, top of berm and weir elevations.

(8) Piping and outlets. Every three months, storm structures ST-1 through ST-5 and the storm pipe are inspected and cleared of accumulated debris. The flared end section, trickle channel and outlet weir openings are inspected monthly and after rainfall events exceeding 1 inch in 24 hours. Debris that could restrict flow is removed immediately.

(9) Erosion. Erosion of the pond slopes, levee and drainage easements is promptly repaired, re-graded where needed, and stabilized with solid sod or seed per the City of Bryant Stormwater Management Manual, with erosion control matting or other Best Management Practices (BMPs) until grass is re-established. Damaged rip-rap or grout at the outlet apron is repaired.

(10) Mowing and vegetation. The pond and surrounding area are mowed monthly during the growing season, May through September, to keep turf height at 6 inches or less, and as needed during the cooler months. Brush or trees growing in the pond bottom, slopes or levee are cut and removed.

(11) Litter. Litter and foreign material are removed from the pond and its surroundings weekly. Large or noxious items are removed immediately. The pond and outlet are inspected visually after rainfall events exceeding 1 inch in 24 hours.

(12) Monthly inspections. The detention pond and its components are inspected monthly and conditions are noted on an inspection form. Any remedial action required is noted and corrected.

(13) Records. All inspection forms are retained on-site, together with the as-built drawings and photographs of the improvements in their original condition.

(14) Items 1 through 13 are listed on this Stormwater Infrastructure Maintenance Plan Agreement.

(15) Inspection forms for the stormwater infrastructure components are required. An inspection form is attached.

Agreed and accepted:

_____ _____

The Cottages of Bryant POA – authorized officer Date

_____ _____

Heritage Homes, LLC (Developer / Grantor) Date

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Attachment A – Stormwater Infrastructure Inspection Form

The Cottages of Bryant (Job No. 26-0288) | Retain on-site with the as-built drawings

Inspector: _____ Date: _____ Time: _____ Weather: _____ Rain in last 24 hrs (in.): _____

Component	Frequency	Condition OK (Y/N)	Action needed	Date corrected
Structures ST-1 to ST-5	Monthly			
Storm pipe – debris cleared	Every 3 months			
Outlet weir openings clear	Monthly			
Flared end and trickle channel	Monthly			
Levee – settlement, seepage, erosion	Monthly			
Pond bottom and slopes – erosion	Monthly			
Sediment depth / deposits	Annually and after extreme storm			
Turf height 6 in. or less (May–Sept.); brush and trees removed	Monthly			
Litter and foreign material removed	Weekly; after rain over 1 in.			
Rip-rap apron; fencing (if any)	Monthly			
Access and drainage easements clear	Monthly			
Five-year as-built contour survey	Every 5 years			

Remedial action taken / notes: _____

Attach dated photographs. Inspector signature: _____

DRAFT

BILL OF ASSURANCE
FOR
THE PRELIMINARY PLAT OF SPRINGHILL CROSSING RESIDENTIAL SUBDIVISION,
BRYANT, SALINE COUNTY, ARKANSAS

KNOW ALL MEN BY THESE PRESENTS:

THAT, WHEREAS, **Brock Custom Homes, LLC** ("Grantor") is the owner of the land platted as **The Preliminary Plat of Springhill Crossing Residential Subdivision**, an addition to the City of Bryant, Saline County, Arkansas, and described as follows:

LEGAL DESCRIPTION:

Lands lying in the Northeast Quarter of the Southeast quarter and the Southeast quarter of the Northeast quarter all in Section 20, Township 1 South, Range 14 west, Saline County, Arkansas. Being more particularly described as follows:

Commencing at the Southeast corner of the Northeast Quarter of the Southeast Quarter of said Section 20 also being a point on the centerline of Springhill road; thence along the South line of said Northeast Quarter North 88 degrees 20 minutes 26 seconds West 678.27 feet to the point of beginning; thence continuing along said South line North 88 degrees 04 minutes 54 seconds West 641.85 feet to the Southwest corner of said Northeast Quarter; thence along the West line of said Northeast Quarter North 01 degrees 41 minutes 44 seconds East 1323.54 feet to the Northwest corner of said Northeast Quarter; thence leaving said Northeast Quarter and along the West line of the Southeast Quarter of the Northeast Quarter North 02 degrees 56 minutes 57 seconds East 140.00 feet to a point on the South Right-Of-Way line of West Robinhood Drive; thence leaving West line of said Southeast Quarter and along said South Right-Of-Way line South 88 degrees 40 minutes 41 seconds East 150.31 feet to the Northeast corner of Lot 15 Sherwood Park Addition to the City of Bryant recorded as instrument #202409030 records of Saline County, Arkansas; thence leaving said South Right-Of-Way line and along the West line of said Lot 15 South 02 degrees 45 minutes 18 seconds West 140.00 feet to a point on the South Line of the Southeast Quarter of the Northeast Quarter also being the North line of the Northeast Quarter of the Southeast Quarter; thence along the North line of the Northeast Quarter of the Southeast Quarter South 88 degrees 40 minutes 30 seconds East 772.57 feet; thence leaving said North line South 02 degrees 34 minutes 55 seconds west 698.95 feet; thence south 88 degrees 32

minutes 52 seconds east 417.42 feet to a point on the East line of the Northeast Quarter of the Southeast Quarter also being a point on the centerline of Springhill Road; thence along said East line and said centerline South 02 degrees 34 minutes 55 seconds West 50.01 feet; thence leaving said East line and said centerline North 86 degrees 35 minutes 47 seconds West 249.93 feet; thence North 88 degrees 03 minutes 15 seconds West 412.69 feet; thence south 02 degrees 37 minutes 41 seconds West 286.12 feet; thence South 88 degrees 22 minutes 01 seconds East 24.12 feet; thence South 01 degrees 04 minutes 30 seconds West 208.79 feet to the point of beginning.

NOW, THEREFORE WITHNESSETH:

That **Brock Custom Homes, LLC** termed Grantor, have caused said tract of land to be surveyed by Holloway Engineering, Surveying & Civil Design, PLLC, Registered Professional Engineers and Registered Land Surveyors in the State of Arkansas, and a plat thereof made, which is identified by the title, and shall be forever known, conveyed and described as **The Preliminary Plat of Springhill Crossing Residential Subdivision**, an addition to the City of Bryant, Saline County, Arkansas , dated _____ day of _____ 2026 and by the signature of the said engineer and the said Grantor and bears a certificate of approval executed by the City of Bryant Planning Commission and the Grantor does hereby make this Bill of Assurance.

The Grantor does hereby certify that he has platted said real estate in accordance with said plat. The lands embraced in said plat shall be forever known as designated on said plat; and every deed of conveyance for said property shall use this designation.

The filing of the Bill of Assurance and plat for record in the office the Circuit Clerk and Ex-Officio Recorder or Saline County shall be a valid and complete delivery and dedication of the easements and right-of-way (ROW) shown on the said plat.

All buildings constructed on said lot shall be constructed no nearer to the street than the building line shown on the plat.

The Bill of Assurance may be amended upon the consent of the owners of **The Preliminary Plat of Springhill Crossing Residential Subdivision**, an addition to the City of Bryant, Saline County, Arkansas and the approval of City of Bryant Planning Commission.

WITNESS OUR HANDS THIS _____ DAY OF _____ 2026.

_____

ACKNOWLEDGMENT

STATE OF ARKANSAS)
) ss:
COUNTY OF _____)

On this day personally appeared before the undersigned, a Notary Public within and for the County and State aforesaid, duly qualified, commissioned and acting, the within named _____, _____ of Brock Custom Homes, LLC an _____, and stated that he/she was duly authorized in his capacity to execute the foregoing instrument for and in the name and behalf of said limited liability company, and further stated and acknowledged that he had so signed, executed and delivered the foregoing instrument for the consideration, uses and purposes therein mentioned and set forth.

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal this _____ day of _____, 2026.

Notary Public

_____

My commission expires:

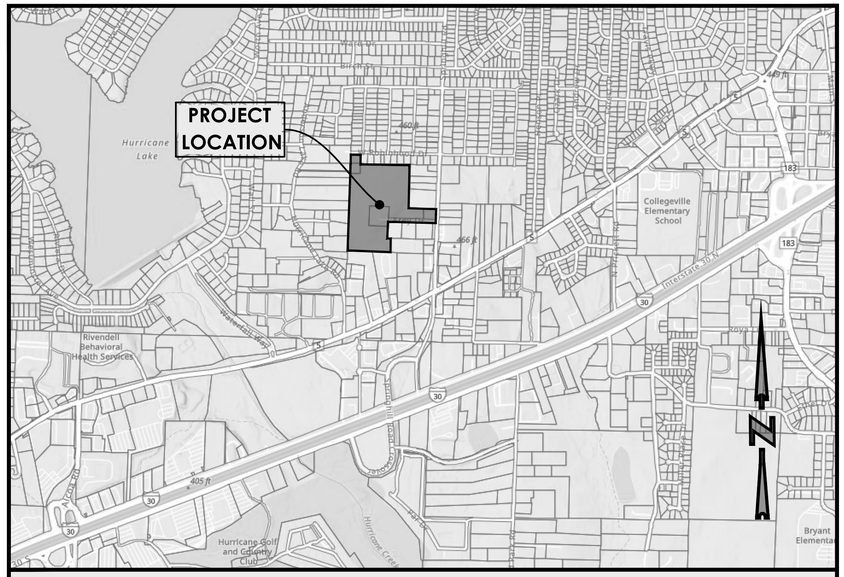
_____
(SEAL)

SPRINGHILL CROSSING
RESIDENTIAL SUBDIVISION
BRYANT, SALINE COUNTY, ARKANSAS

CIVIL CONSTRUCTION PLANS
October 2026

HOLLOWAY ENGINEERING JOB NO. 2026-071

LEGEND		
PROPOSED	DESCRIPTION	EXISTING
W	WATER LINE	W
G	GAS LINE	G
SS	SANITARY SEWER LINE	SS
FO	FIBER OPTIC LINE	FO
UGT	UNDERGROUND PHONE LINE	UGT
OHE	OVERHEAD ELECTRIC LINE	OHE
UGE	UNDERGROUND ELECTRIC LINE	
	STORM DRAINAGE PIPE	
X-X	DRAINAGE STRUCTURE - NO.	X-X
UGTV	CATV CABLE LINE	UGTV
x	FENCE	X
	DITCH FLOW LINE	
	CURB INLET/JUNCTION BOX	
	CONTROL POINT	
GM	GAS METER	GM
	GAS REGULATOR	
M	WATER METER	WM
	WATER VALVE	
	FIRE HYDRANT	
	AIR RELEASE VALVE	
	FIRE DEPARTMENT CONNECTION	
	GUY ANCHOR	
	UTILITY POLE	
	LIGHT POLE	
E	ELECTRICAL BOX	E
	SANITARY SEWER MANHOLE	
CO	SANITARY SEWER CLEAN-OUT	CO
	TELEPHONE PEDESTAL/RISER	
	SIGN	



VICINITY MAP

SHEET LIST TABLE	
Sheet Number	Sheet Title
C0.00	COVER SHEET
C0.01	PRELIMINARY PLAT (1 OF 3)
C0.02	PRELIMINARY PLAT (2 OF 3)
C0.03	PRELIMINARY PLAT (3 OF 3)
C1.00	ROADWAY OVERVIEW
C1.01	SPRINGHILL CROSSING P&P (1 OF 2)
C1.02	SPRINGHILL CROSSING P&P (2 OF 2)
C1.03	DYLAN RIDGE P&P (1 OF 2)
C1.04	DYLAN RIDGE P&P (2 OF 2)
C1.05	AUSTIN TRAIL P&P
C1.06	LEXIE LOOP P&P (1 OF 2)
C1.07	LEXIE LOOP P&P (2 OF 2)
C1.08	MACEY TRAIL P&P
C1.09	LEXIE TRAIL P&P (1 OF 2)
C1.10	LEXIE TRAIL P&P (2 OF 2)
C1.50	ROADWAY DETAILS
C2.00	GRADING & DRAINAGE OVERALL
C2.01	GRADING & DRAINAGE PLAN (2 OF 3)
C2.02	GRADING & DRAINAGE PLAN (3 OF 3)
C2.03	STORM SEWER OVERVIEW
C2.04	STORM SEWER TABLES
C2.05	STORM SEWER P&P MAIN 1
C2.06	STORM SEWER P&P MAIN 2
C2.07	STORM SEWER P&P MAIN 3
C2.08	STORM SEWER P&P MAIN 4
C2.09	STORM SEWER P&P MAINS 5 & 6
C2.10	STORM SEWER P&P MAIN 7
C2.11	STORM SEWER P&P MAIN 8
C2.12	STORM SEWER P&P LATERALS 1 & 2
C2.13	STORM SEWER P&P LATERAL 4
C2.14	STORM SEWER P&P LATERALS 5 & 6
C2.15	STORM SEWER P&P LATERALS 7 & 8
C2.16	STORM SEWER P&P LATERALS 9 & 10
C2.17	STORM SEWER P&P LATERALS 11 & 12
C2.18	STORM SEWER P&P LATERALS 13 & 14
C2.50	GRADING & DRAINAGE DETAILS
C3.00	SWPPP-EROSION CONTROL PLAN INITIAL
C3.01	SWPPP-EROSION CONTROL PLAN INTERMEDIATE
C3.02	SWPPP-EROSION CONTROL PLAN FINAL
C3.10	SWPPP DETAILS
C4.00	UTILITY COORDINATION PLAN
C5.00	SANITARY SEWER OVERVIEW
C5.01	SANITARY SEWER P&P MAIN 1 (1 OF 5)
C5.02	SANITARY SEWER P&P MAIN 1 (2 OF 5)
C5.03	SANITARY SEWER P&P MAIN 1 (3 OF 5)
C5.04	SANITARY SEWER P&P MAIN 1 (4 OF 5)
C5.05	SANITARY SEWER P&P MAIN 1 (5 OF 5)
C5.06	SANITARY SEWER P&P LATERAL 1
C5.07	SANITARY SEWER P&P LATERAL 2 (1 OF 3)
C5.08	SANITARY SEWER P&P LATERAL 2 (2 OF 3)
C5.09	SANITARY SEWER P&P LATERAL 2 (3 OF 3)
C5.10	SANITARY SEWER P&P LATERAL 3
C5.50	SANITARY SEWER DETAILS (1 OF 2)
C5.51	SANITARY SEWER DETAILS (2 OF 2)
C6.00	WATER PLAN
C6.50	WATER DETAILS (1 OF 2)
C6.51	WATER DETAILS (2 OF 2)
C7.00	LIGHTING & SIGNAGE

DATE	PLAN SET	SHEET NO.

OWNER / DEVELOPER

BROCK CUSTOM HOMES
PO BOX 11140
CONWAY, AR 72034

ENGINEER/ SURVEYOR

HOLLOWAY ENGINEERING
200 CASEY DRIVE
MAUMELLE, AR 72113
(501) 851-3366

811 Know what's below. Call before you dig.

CAUTION: UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. HOWEVER, ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THE ACTUAL LOCATIONS OF THE UTILITIES MAY VARY FROM THE LOCATIONS SHOWN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES INVOLVED AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITIES ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY. ARKANSAS STATE LAW, THE UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, REQUIRES TWO WORKING DAYS ADVANCE NOTIFICATION THROUGH THE ARKANSAS ONE-CALL SYSTEM CENTER BEFORE EXCAVATING USING MECHANIZED EQUIPMENT OR EXPLOSIVES (EXCEPT IN THE CASE OF AN EMERGENCY). THE ONE-CALL SYSTEM PHONE NUMBER IS 1-800-482-8998. THE CONTRACTOR IS ADVISED THAT THERE IS A SEVERE PENALTY FOR NOT MAKING THIS CALL. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE-CALL SYSTEM; THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES, AS WELL AS THE ONE-CALL SYSTEM.

Holloway Engineering, Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

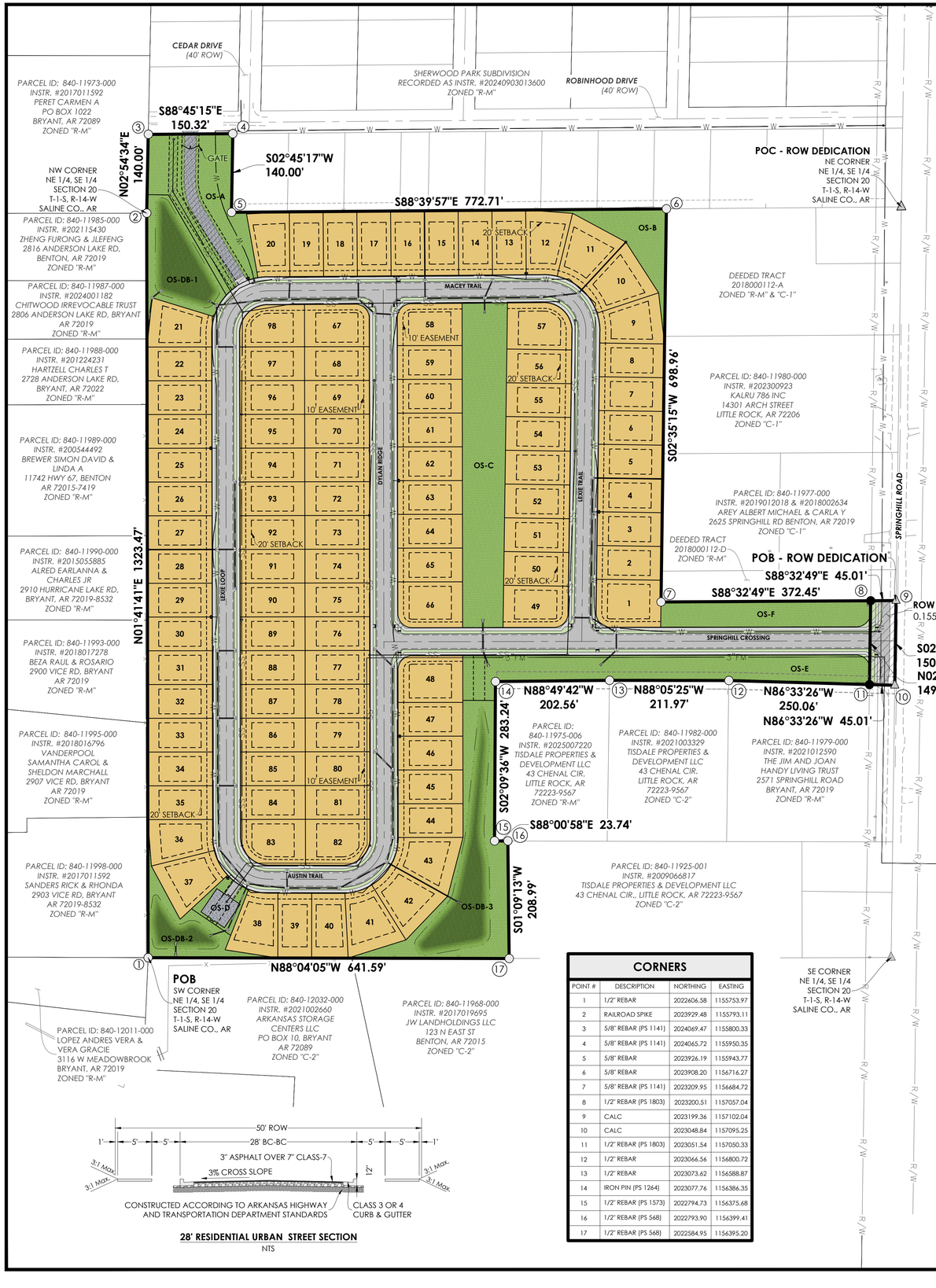
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
COVER SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

Holloway Engineering, Surveying & Civil Design, PLLC #1879 CERTIFICATE OF AUTHORIZATION ARKANSAS - ENGINEERS

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C0.00



28' RESIDENTIAL URBAN STREET SECTION

NTS

CORNERS			
POINT #	DESCRIPTION	NORTHING	EASTING
1	1/2" REBAR	2022606.58	1155753.97
2	RAILROAD SPIKE	2023929.48	1155793.11
3	5/8" REBAR (PS 1141)	2024069.47	1155800.33
4	5/8" REBAR (PS 1141)	2024065.72	1155950.35
5	5/8" REBAR	2023926.19	1155943.77
6	5/8" REBAR	2023908.20	1156716.27
7	5/8" REBAR (PS 1141)	2023209.95	1156684.72
8	1/2" REBAR (PS 1803)	2023200.51	1157057.04
9	CALC	2023199.36	1157102.04
10	CALC	2023048.84	1157095.25
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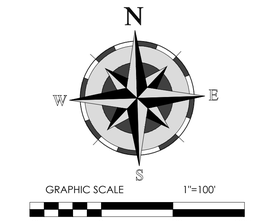
17	1/2" REBAR (PS 568)	2022584.95	1156395.20



BASIS OF BEARING
STATE PLANE COORDINATES
ARKANSAS SOUTH ZONE NAD-83

ACREAGE PER 40

NE 1/4, SE 1/4, SECTION 20	26.053 ACRES
SE 1/4, NE 1/4, SECTION 20	0.484 ACRES
TOTAL	26.537 ACRES

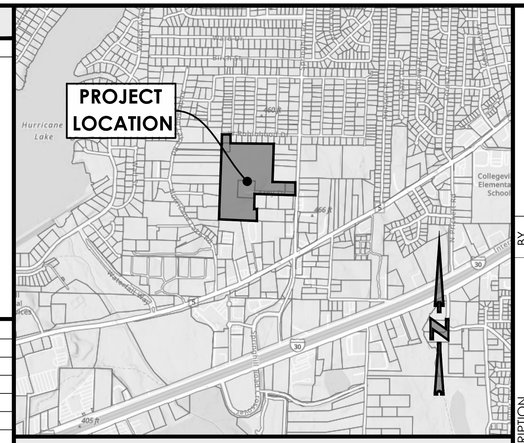
OPEN SPACE:

TRACT A	0.731 AC
TRACT B	0.272 AC
TRACT C	1.009 AC
TRACT D	0.125 AC
TRACT E	0.812 AC
TRACT F	0.387 AC
TRACT DB-1	0.440 AC
TRACT DB-2	0.311 AC
TRACT DB-3	0.977 AC
TOTAL:	5.064 AC

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
	EASEMENT
	BUILDING SETBACK
W	WATER LINE
SS	SANITARY SEWER LINE
	STORM DRAINAGE PIPE
	FD MONUMENT (AS NOTED)
	SET MONUMENT (AS NOTED)
	CALCULATED POINT
	CURB INLET/JUNCTION BOX
M	WATER METER
	WATER VALVE
	FIRE HYDRANT
	SANITARY SEWER MANHOLE

TOTAL PARCEL SIZE	26.537 ACRES
PROPOSED USAGE	RESIDENTIAL "R-M"
COMMON OPEN SPACE	5.484 ACRES (19.08%)
LENGTH OF NEW ROADS	4420 LF
MINIMUM LOT SIZE	0.158 AC
# OF LOTS (RESIDENTIAL)	98 LOTS
LOTS PER GROSS ACRE	3.693 LOTS/ACRE
AVERAGE LOT SIZE	0.167 AC



VICINITY MAP

PRELIMINARY PLAT
OF
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
10/9/26
ZONED "R-M"

TRACT 2018000112-F CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED AND SUBDIVIDED, AND DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — CAROLYN COUNTS, 324 OSMOND LN, BISMARK, AR 71929

INSTRUMENT NO. 2018000112

TRACT 2018004312 CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — CAROLYN R. COUNTS WALLACE, 324 OSMOND LN, BISMARK, AR 71929

INSTRUMENT NO. 2018004312

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY

I, J. ERIC HOLLOWAY, HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS A BOUNDARY SURVEY MADE OR VERIFIED BY ME THAT ALL SURVEYING REQUIREMENTS OF THE STATE OF ARKANSAS AND CITY OF BRYANT SUBDIVISION RULES AND REGULATIONS HAVE BEEN COMPLIED WITH AND FILED FOR RECORD AS REQUIRED.

10/9/26
DATE — J. ERIC HOLLOWAY, PROFESSIONAL SURVEYOR NO. 1803, AR

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY

I, J. ERIC HOLLOWAY HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS A PLAT MADE BY ME, AND THAT ENGINEERING REQUIREMENTS OF THE BRYANT SUBDIVISION RULES AND REGULATIONS HAVE BEEN COMPLIED WITH.

10/9/26
DATE — J. ERIC HOLLOWAY, PROFESSIONAL ENGINEER, AR NO. 18898

FLOOD STATEMENT:

GRAPHIC PLOTTING OF THE INFORMATION SHOWN ON FLOOD INSURANCE RATE MAP NO. 05125C0360E, DATED MAY 5, 2020, INDICATES THAT NO PORTION OF THE PROPERTIES SHOWN HEREON LIE WITHIN A SPECIAL FLOOD HAZARD.

TRACT 2007077496 CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED AND SUBDIVIDED, AND DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — BETTY L. HOPPER & BILLY R. HOPPER, 271 MOCCASIN LANE, BISMARK, AR 71929-6435

INSTRUMENT NO. 2007077496

TRACT 1998014967 CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED AND SUBDIVIDED, AND DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — CAROLYN A. COUNTS, ADDRESS, CITY, AR ZIP

INSTRUMENT NO. 1998014967

CERTIFICATE OF PRELIMINARY PLAT APPROVAL

PURSUANT TO THE CITY OF BRYANT SUBDIVISION RULES AND REGULATIONS, AND ALL OF THE CONDITIONS OF APPROVAL HAVING BEEN COMPLETED, THIS DOCUMENT IS HEREBY ACCEPTED. THIS CERTIFICATE IS HEREBY EXECUTED UNDER THE AUTHORITY OF SAID RULES AND REGULATIONS.

DATE — LANCE PENFIELD, CHAIRMAN, BRYANT PLANNING COMMISSION

REGISTERED PROFESSIONAL LAND SURVEYOR — STATE OF ARKANSAS — No. 1803 — J. ERIC HOLLOWAY — SIGNATURE

DEVELOPER

BROCK CUSTOM HOMES
PO BOX 11140
CONWAY, AR 72034

LEGAL DESCRIPTION:

Lands lying in the Northeast Quarter of the Southeast quarter and the Southeast quarter of the Northeast quarter all in Section 20, Township 1 South, Range 14 west, Saline County, Arkansas. Being more particularly described as follows:

Beginning at the Southwest corner of the Northeast Quarter of the Southeast Quarter of Section 20, Township 1 South, Range 14 West, Saline County, Arkansas; thence along the West line of said Northeast Quarter of the Southeast Quarter North 01 degrees 41 minutes 41 seconds East 1323.47 feet to the Northwest corner of said Northeast Quarter of the Southeast Quarter; thence leaving said Northeast corner North 02 degrees 54 minutes 34 seconds East 140.00 feet to the South Right of Way line of W Robinhood Drive; thence along said South Right of Way line South 88 degrees 45 minutes 15 seconds East 150.32 feet; thence leaving said South Right of Way line South 02 degrees 45 minutes 17 seconds West 140.00 feet to a point on the North line of said Northeast Quarter of the Southeast Quarter; thence South 88 degrees 39 minutes 57 seconds East 772.71 feet; thence leaving said North line South 02 degrees 35 minutes 15 seconds West 698.96 feet; thence South 88 degrees 32 minutes 49 seconds East 417.46 feet; thence South 02 degrees 34 minutes 55 seconds West 150.68 feet; thence North 86 degrees 33 minutes 26 seconds West 295.07 feet; thence North 88 degrees 05 minutes 25 seconds West 211.97 feet; thence North 88 degrees 49 minutes 42 seconds West 202.56 feet; thence South 02 degrees 09 minutes 36 seconds West 283.24 feet; thence South 88 degrees 00 minutes 58 seconds East 23.74 feet; thence South 01 degrees 09 minutes 13 seconds West 208.99 feet; thence North 88 degrees 04 minutes 05 seconds West 641.59 feet to the Point of Beginning, containing 26.537 acres more or less.

LEGAL DESCRIPTION - ROW DEDICATION:

Lands lying in the Northeast Quarter of the Southeast quarter and the Southeast quarter of the Northeast quarter all in Section 20, Township 1 South, Range 14 west, Saline County, Arkansas. Being more particularly described as follows:

Commencing at the Northeast corner of the Northeast Quarter of the Southeast Quarter of Section 20, Township 1 South, Range 14 West, Saline County, Arkansas; thence along the East line of said Northeast Quarter of the Southeast Quarter South 02 degrees 34 minutes 55 seconds West 699.88 feet to the Point of Beginning; thence South 02 degrees 34 minutes 55 seconds West 150.68 feet; thence leaving said East line of the Northeast Quarter of the Southeast Quarter North 86 degrees 33 minutes 26 seconds West 45.01 feet; thence North 02 degrees 34 minutes 55 seconds East 149.12 feet; thence South 88 degrees 32 minutes 49 seconds East 45.01 feet to the Point of Beginning, containing 0.155 acres more or less.

GENERAL NOTES:

1. ALL FRONT YARD SETBACKS ARE 20' UNLESS OTHERWISE NOTED.
2. ALL REAR YARD SETBACKS ARE 20' UNLESS OTHERWISE NOTED.
3. ALL INTERIOR SIDE YARD SETBACKS ARE 8' UNLESS OTHERWISE NOTED.
4. ALL EXTERIOR SIDE YARD SETBACKS ARE 15' UNLESS OTHERWISE NOTED.
5. ALL LOTS HAVE A FRONT, REAR AND EXTERIOR SIDE 10' DRAINAGE & UTILITY EASEMENT.
6. ALL LOTS HAVE A INTERIOR SIDE 5' DRAINAGE AND UTILITY EASEMENT.
7. ALL OPEN SPACES ARE ACCESS, DRAINAGE AND UTILITY EASEMENTS.
8. ALL ACCESS EASEMENTS, PARKS, AND OPEN SPACES SHALL BE MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.
9. ALL STREET RADII ARE 25' UNLESS OTHERWISE NOTED.
10. ALL SIDEWALKS ARE 5' WIDE CONCRETE.
11. ALL LOTS ARE SINGLE FAMILY HOUSING.
12. RESIDENTIAL FLOOR ELEVATIONS SHALL BE 3'-0" ABOVE THE 100 YEAR FLOOD ELEVATION.
13. WATER IS SUPPLIED BY BRYANT WATER DISTRIBUTION.
14. WASTEWATER DISPOSAL IS SUPPLIED BY BRYANT WASTEWATER UTILITIES.
15. ALL WATER MAINS ARE 8" CL-50 DUCTILE IRON PIPE.
16. ALL SEWER MAINS ARE 8" SDR-26 PVC PIPE.
17. ALL DETENTION AND DRAINAGE SHALL BE BUILT TO CITY STANDARDS AND APPROVED BY ENGINEER.
18. MINIMUM SQ FT TO BE THE SAME AS CITY OF BRYANT R-M ZONING. (6,000 SQ FT)

Holloway Engineering, Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
PRELIMINARY PLAT (1 OF 3)

STATE OF ARKANSAS — LICENSED PROFESSIONAL ENGINEER — No. 18898 — J. ERIC HOLLOWAY — 10/9/26

CERTIFICATE OF AUTHORIZATION — J. Eric Holloway — Engineering, Surveying & Civil Design, PLLC — #1879 — ARKANSAS ENGINEER

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C0.01

PRELIMINARY PLAT
OF
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
10/9/26

CORNERS			
POINT #	DESCRIPTION	NORTHING	EASTING
1	1/2" REBAR	2022606.58	1155753.97
2	RAILROAD SPIKE	2023929.48	1155793.11
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13	1/2" REBAR	2023073.62	1156588.87
14	IRON PIN (PS 1264)	2023077.76	1156386.35
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16	1/2" REBAR (PS 568)	2022793.90	1156399.41
17	1/2" REBAR (PS 568)	2022584.95	1156395.20

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C1	119.45'	75.00'	S43°02'21"E	107.22'
C2	117.34'	75.00'	N46°30'52"E	105.73'
C3	117.50'	75.00'	N43°11'12"W	105.85'
C4	118.12'	75.00'	S46°48'48"W	106.29'

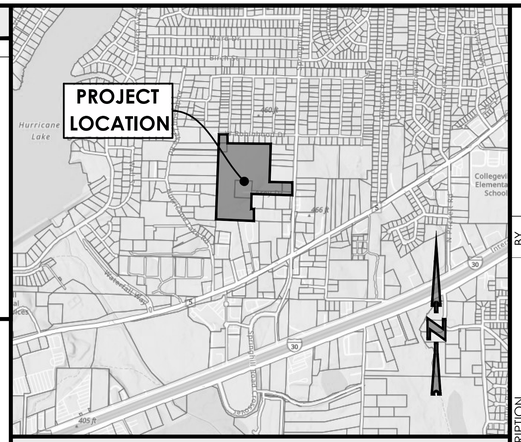
N
W E
S

GRAPHIC SCALE 1"=50'
50 0 50 100

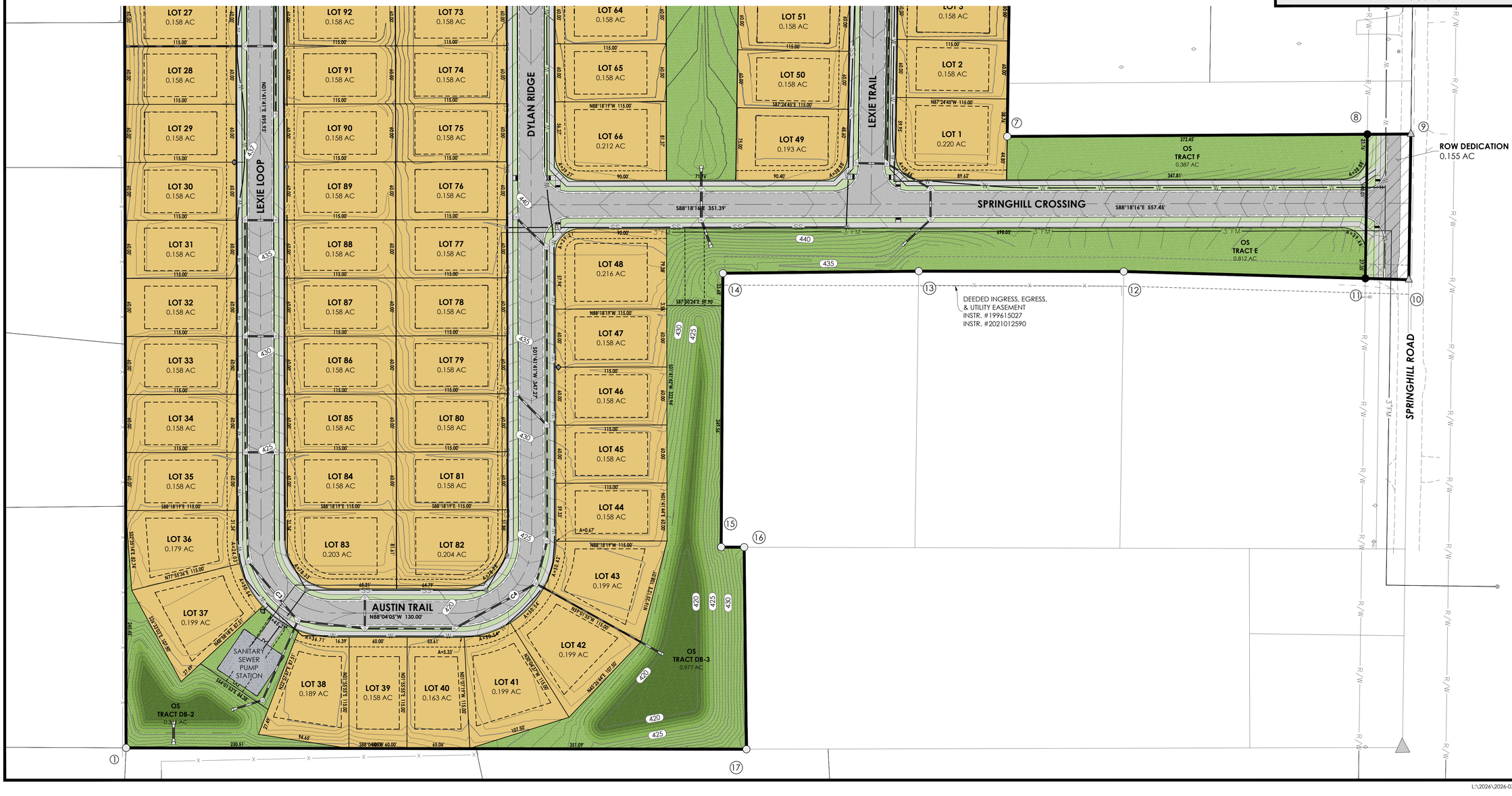
BASIS OF BEARING
STATE PLANE COORDINATES
ARKANSAS SOUTH ZONE NAD-83

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
	EASEMENT
	BUILDING SETBACK
W	WATER LINE
SS	SANITARY SEWER LINE
	STORM DRAINAGE PIPE
	FD MONUMENT (AS NOTED)
	SET MONUMENT (AS NOTED)
	CALCULATED POINT
	CURB INLET/JUNCTION BOX
M	WATER METER
	WATER VALVE
	FIRE HYDRANT
	SANITARY SEWER MANHOLE



VICINITY MAP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LOT 28 0.158 AC
LOT 29 0.158 AC
LOT 30 0.158 AC
LOT 31 0.158 AC
LOT 32 0.158 AC
LOT 33 0.158 AC
LOT 34 0.158 AC
LOT 35 0.158 AC
LOT 36 0.179 AC
LOT 37 0.199 AC
LOT 92 0.158 AC
LOT 91 0.158 AC
LOT 90 0.158 AC
LOT 89 0.158 AC
LOT 88 0.158 AC
LOT 87 0.158 AC
LOT 86 0.158 AC
LOT 85 0.158 AC
LOT 84 0.158 AC
LOT 83 0.203 AC
LOT 73 0.158 AC
LOT 74 0.158 AC
LOT 75 0.158 AC
LOT 76 0.158 AC
LOT 77 0.158 AC
LOT 78 0.158 AC
LOT 79 0.158 AC
LOT 80 0.158 AC
LOT 81 0.158 AC
LOT 82 0.204 AC
LOT 64 0.158 AC
LOT 65 0.158 AC
LOT 66 0.212 AC
LOT 51 0.158 AC
LOT 50 0.158 AC
LOT 49 0.193 AC
LOT 48 0.216 AC
LOT 47 0.158 AC
LOT 46 0.158 AC
LOT 45 0.158 AC
LOT 44 0.158 AC
LOT 43 0.199 AC
LOT 42 0.199 AC
LOT 38 0.189 AC
LOT 39 0.158 AC
LOT 40 0.163 AC
LOT 41 0.199 AC
LOT 2 0.158 AC
LOT 1 0.220 AC
OS TRACT F 0.387 AC
OS TRACT E 0.812 AC
OS TRACT DB-3 0.977 AC
OS TRACT DB-2 0.344 AC
ROW DEDICATION 0.155 AC
SANITARY SEWER PUMP STATION
DYLAN RIDGE
LEXIE LOOP
LEXIE TRAIL
AUSTIN TRAIL
N88°04'05"W 130.00'
SPRINGHILL CROSSING
S88°18'16"E 351.39'
S88°18'16"E 557.45'
SPRINGHILL ROAD
DEEDED INGRESS, EGRESS, & UTILITY EASEMENT INSTR. #199615027 INSTR. #2021012590
N01°41'41"E 956.95'
S01°41'41"W 347.27'
N88°18'19"W 115.00'
S87°24'45"E 115.00'
N87°24'45"W 115.00'
S87°30'24"E 97.90'
S88°18'19"E 115.00'
N77°55'34"E 115.00'
S07°55'34"E 82.74'
N88°18'16"E 87.51'
S54°01'55"E 44.62'
S07°57'57"E 8.91'
N01°55'55"E 119.00'
N88°04'05"W 115.00'
N45°24'45"W 107.50'
N11°24'12"E 108.01'
S01°55'55"W 115.00'
S87°30'24"E 97.90'
S88°04'05"E 60.00'
65.06'
94.65'
230.51'
351.09'
372.45'
347.81'
89.62'
90.40'
90.00'
898.00'
75.00'
75.38'
51.74'
53.32'
81.37'
54.57'
44.62'
31.34'
27.49'
16.39'
60.00'
53.61'
65.21'
44.79'
A=34.71'
A=5.33'
A=50.64'
A=0.47'
A=50.42'
A=34.57'
A=50.64'
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PRELIMINARY PLAT
OF
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
10/9/26

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C4	118.12'	75.00'	S46°48'48"W	106.29'

N
W E
S

GRAPHIC SCALE 1"=50'
50 0 50 100

BASIS OF BEARING
STATE PLANE COORDINATES
ARKANSAS SOUTH ZONE NAD-83

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
	EASEMENT
	BUILDING SETBACK
W	WATER LINE
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	WATER VALVE
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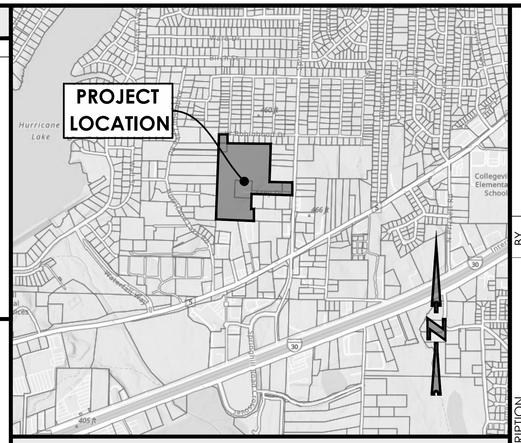

VICINITY MAP

WEST ROBINHOOD DRIVE
(40' ROW)

30' EMERGENCY ACCESS GRAVEL DRIVE

SHERWOOD PARK SUBDIVISION
RECORDED AS INSTR. #20240903013600
ZONED "R-M"

OS TRACT A 0.731 AC

OS TRACT B 0.272 AC

OS TRACT C 1.009 AC

OS TRACT DB-1 0.440 AC

MACEY TRAIL
S88°39'57"E 284.52'

LEXIE LOOP

DYLAN RIDGE

LEXIE TRAIL

SPRINGHILL ROAD

LOT 1 0.158 AC
LOT 2 0.158 AC
LOT 3 0.158 AC
LOT 4 0.158 AC
LOT 5 0.158 AC
LOT 6 0.158 AC
LOT 7 0.158 AC
LOT 8 0.158 AC
LOT 9 0.186 AC
LOT 10 0.199 AC
LOT 11 0.199 AC
LOT 12 0.180 AC
LOT 13 0.158 AC
LOT 14 0.158 AC
LOT 15 0.158 AC
LOT 16 0.158 AC
LOT 17 0.158 AC
LOT 18 0.158 AC
LOT 19 0.158 AC
LOT 20 0.174 AC
LOT 21 0.184 AC
LOT 22 0.158 AC
LOT 23 0.158 AC
LOT 24 0.158 AC
LOT 25 0.158 AC
LOT 26 0.158 AC
LOT 27 0.158 AC
LOT 51 0.158 AC
LOT 52 0.158 AC
LOT 53 0.158 AC
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LOT 55 0.158 AC
LOT 56 0.158 AC
LOT 57 0.207 AC
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LOT 92 0.158 AC
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LOT 94 0.158 AC
LOT 95 0.158 AC
LOT 96 0.158 AC
LOT 97 0.158 AC
LOT 98 0.185 AC

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REV.	DATE	DESCRIPTION	BY

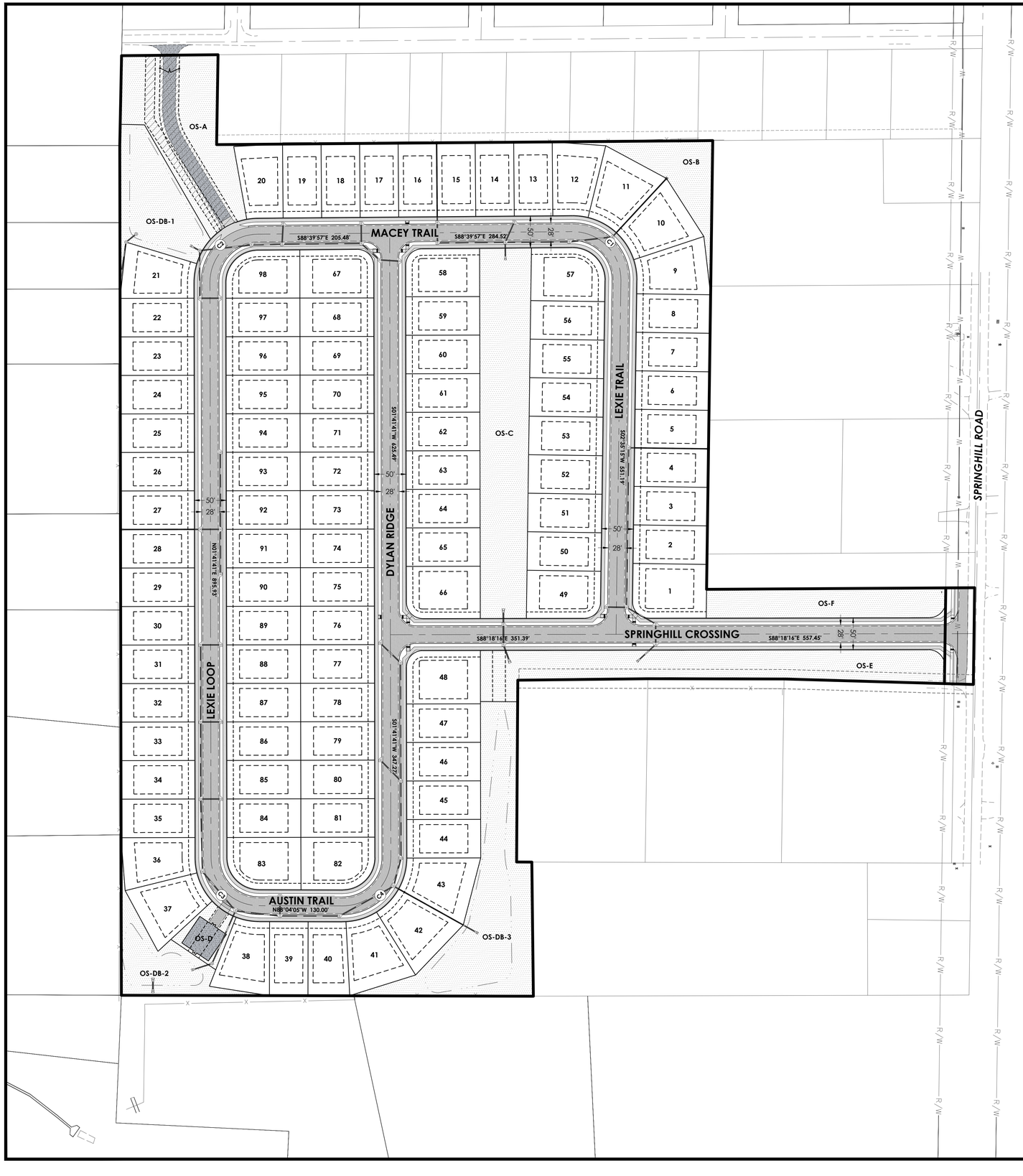
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
PRELIMINARY PLAT (3 OF 3)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS ENGINEER

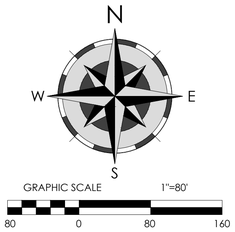
JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

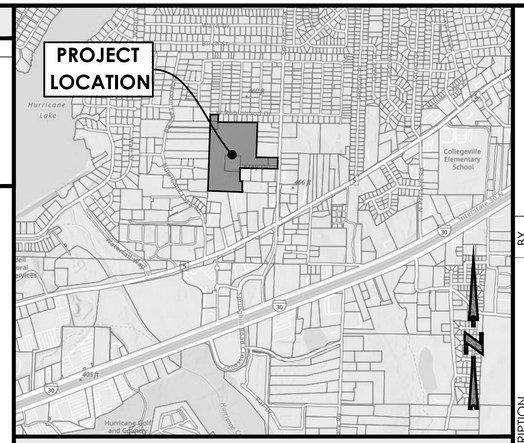
C0.03



LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
R/W	RIGHT-OF-WAY
	EASEMENT
	BUILDING SETBACK
	STORM DRAINAGE PIPE
	CURB INLET/JUNCTION BOX





VICINITY MAP

SPRINGHILL CROSSING

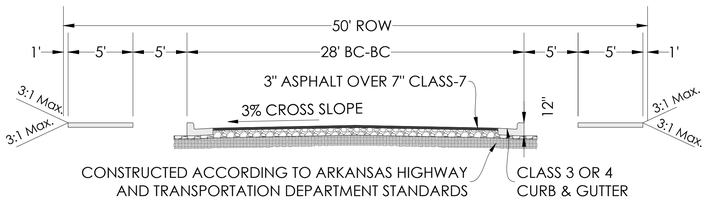
RESIDENTIAL SUBDIVISION

BRYANT, SALINE COUNTY, ARKANSAS

ROADWAY PLANS

October 2026

HOLLOWAY ENGINEERING JOB NO. 2026-071



28' RESIDENTIAL URBAN STREET SECTION

NTS

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C1	119.45'	75.00'	S43°02'21"E	107.22'
C2	117.34'	75.00'	N46°30'52"E	105.73'
C3	117.50'	75.00'	N43°11'12"W	105.85'
C4	118.12'	75.00'	S46°48'48"W	106.29'

SHEET LIST TABLE	
Sheet Number	Sheet Title
C1.00	ROADWAY OVERVIEW
C1.01	SPRINGHILL CROSSING P&P (1 OF 2)
C1.02	SPRINGHILL CROSSING P&P (2 OF 2)
C1.05	AUSTIN TRAIL P&P
C1.04	DYLAN RIDGE P&P (2 OF 2)
C1.03	DYLAN RIDGE P&P (1 OF 2)
C1.06	LEXIE LOOP P&P (1 OF 2)
C1.07	LEXIE LOOP P&P (2 OF 2)
C1.08	MACEY TRAIL P&P
C1.09	LEXIE TRAIL P&P (1 OF 2)
C1.10	LEXIE TRAIL P&P (2 OF 2)
C1.50	ROADWAY DETAILS

ROADWAY NOTES:

1. LOCATIONS OF THE EXISTING UTILITIES ARE BASED ON RECORDS FROM SAID UTILITY COMPANIES AND ARE HORIZONTALLY FIELD LOCATED ONLY. THE CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL LOCATION.
2. CONTRACTOR TO MARK UTILITY LINES BEFORE CONSTRUCTION AND UNCOVER AS NEEDED.
3. EXISTING UTILITIES TO REMAIN SHALL BE PROTECTED. CONTRACTOR SHALL BEAR ALL RESPONSIBILITY AND COST OF REPAIR OR REPLACEMENT OF EXISTING UTILITIES, DAMAGED OR INTERRUPTED AS A RESULT OF THIS CONSTRUCTION PROJECT.
4. CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE OWNER OF ANY DAMAGED OR INTERRUPTED UTILITIES IMMEDIATELY.
5. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL EXISTING SITE CONDITIONS DISTURBED BY CONSTRUCTION ACTIVITIES BACK TO EXISTING OR BETTER CONDITION.
6. ALL SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE AHJ STANDARD SPECIFICATIONS FOR SEWER CONSTRUCTION, LATEST EDITION.
7. ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH AHJ STANDARD PIPELINE MATERIALS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.
8. EXISTING UTILITIES TO REMAIN ARE TO BE PROTECT AND ADJUSTED TO MATCH PROPOSED GRADE.
9. CONTRACTOR SHALL NOTIFY PROJECT ENGINEER PRIOR TO BEGINNING WORK.
10. AFTER NEW INLETS ARE CONSTRUCTED, GRAVEL FILTER BERMS OR SILT FENCE ARE TO BE PLACED TO ALLOW FLOW THROUGH THE EROSION CONTROL DEVICE.
11. CONTRACTOR WILL CONTROL AND PREVENT OFF-SITE TRACKING OF CONSTRUCTION RUNOFF AND SEDIMENT TO ADJACENT PROPERTY AND PUBLIC ROADS.
12. CONTRACTOR IS TO PROTECT EXISTING STORM DRAINAGE SYSTEM ACCORDING TO PROTECTION ILLUSTRATIONS PROVIDED.
13. CONTRACTOR TO CONFORM TO ALL CONSTRUCTION STORM WATER AND EROSION CONTROL PERMITTING REQUIREMENTS BY "EPA PHASE II STORM WATER REGULATIONS" AS ADMINISTERED BY THE DIVISION OF ENVIRONMENTAL QUALITY. WHERE PERMITTING IS REQUIRED, A COPY OF THE NOTICE OF INTENT SHALL BE PROVIDED TO THE LOCAL MUNICIPAL AUTHORITY.
14. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN ACCORDANCE WITH THE ARKANSAS UNDERGROUND FACILITIES DAMAGE PREVENTION ACT. THIS LAW REQUIRES THAT THE CONTRACTOR MAKE A TELEPHONE CALL TO THE ARKANSAS ONE-CALL SYSTEM AT 1-800-482-8898 AT LEAST THREE WORKING DAYS PRIOR TO EXCAVATION TO ENSURE THAT ANY EXISTING UTILITIES CAN BE LOCATED.
15. CONTRACTOR TO CONSTRUCT ALL ACCESS RAMPS AND PAVING TO AHJ AND/OR ADA STANDARDS.
16. TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
17. CONTRACTOR SHALL NOTIFY ENGINEER AND REVIEW ALL REVISIONS TO THE PLANS PRIOR TO EXECUTING A CHANGE.

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(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
ROADWAY OVERVIEW

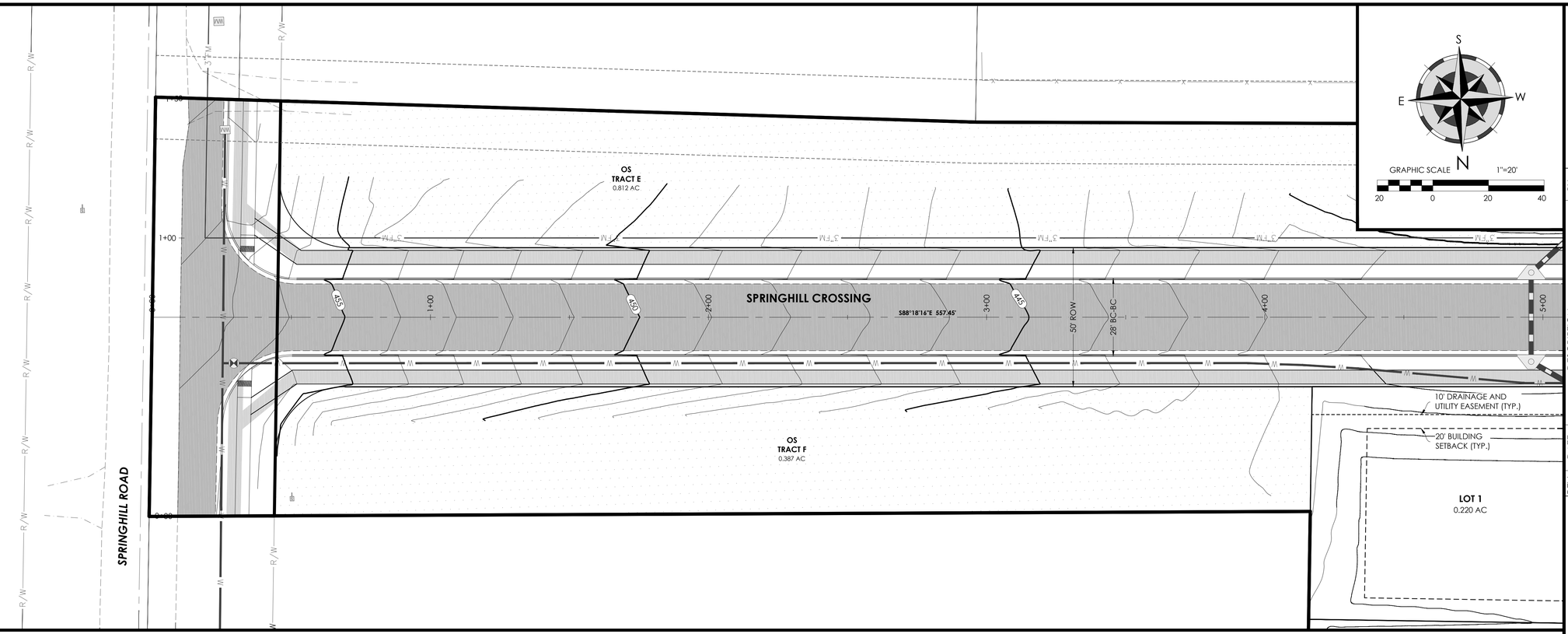
STATE OF ARKANSAS
ERIC HOLLOWAY
REGISTERED PROFESSIONAL ENGINEER
No. 18898
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

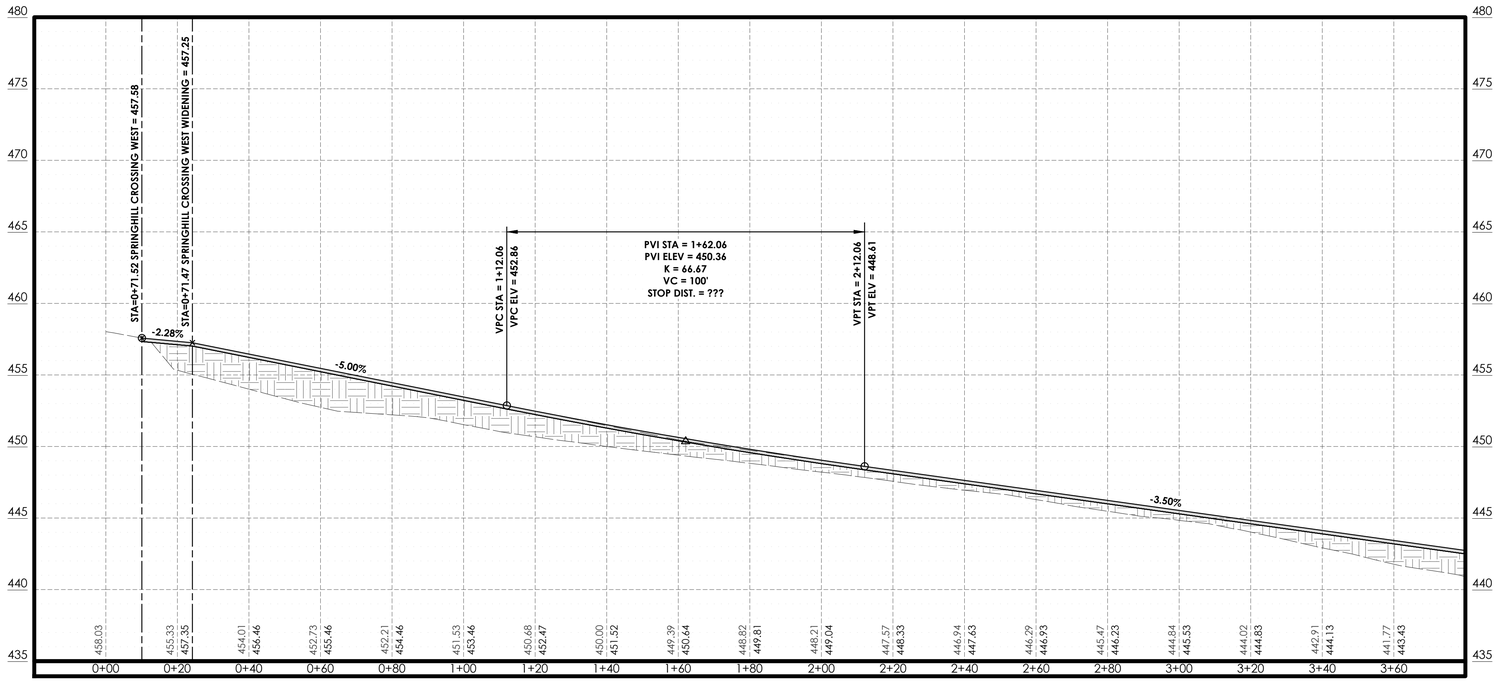
JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.00

PLAN VIEW - SCALE 1"=20'



PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

SPRINGHILL CROSSING
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SPRINGHILL CROSSING P&P (1 OF 2)

STATE OF ARKANSAS
ERIC HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18698

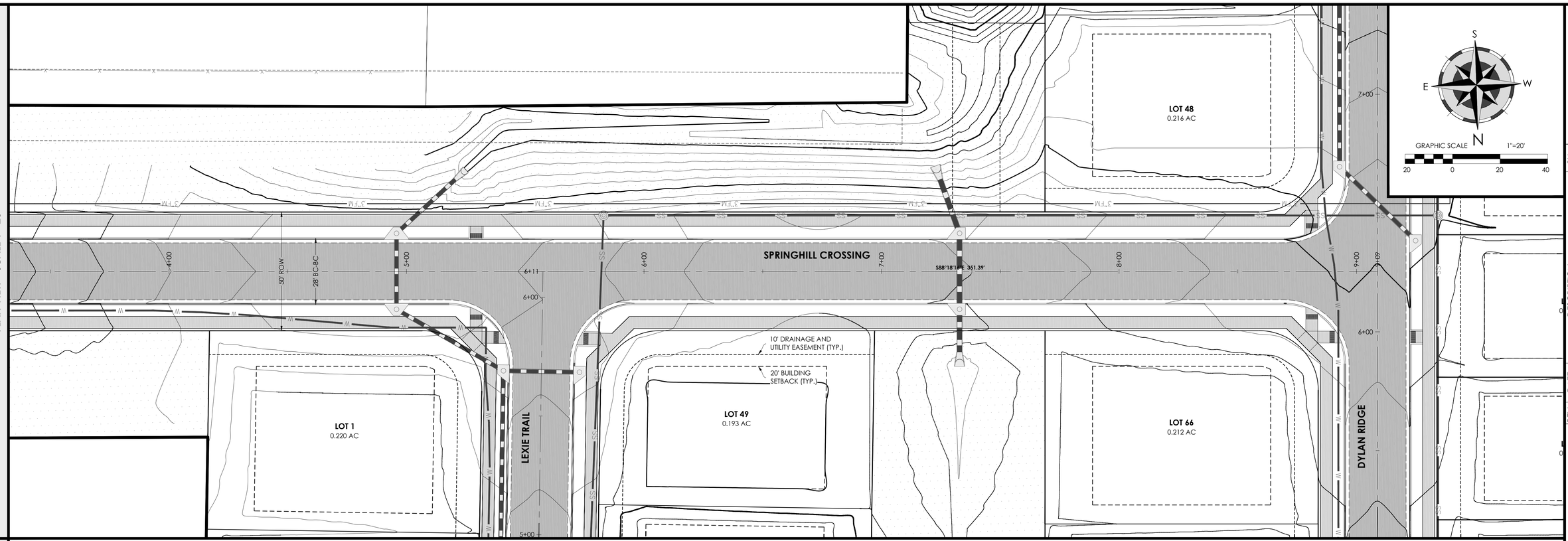
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

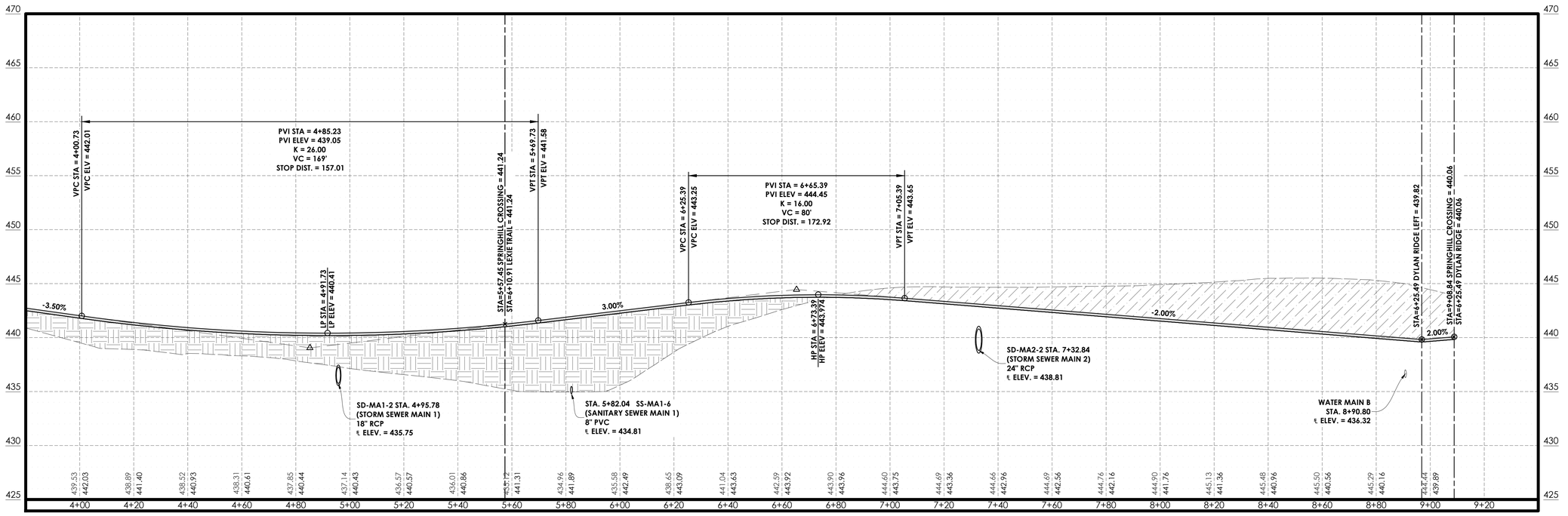
JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.01

PLAN VIEW - SCALE 1"=20'



PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

SPRINGHILL CROSSING
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SPRINGHILL CROSSING P&P (2 OF 2)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18698
ERIC HOLLOWAY
10/9/26

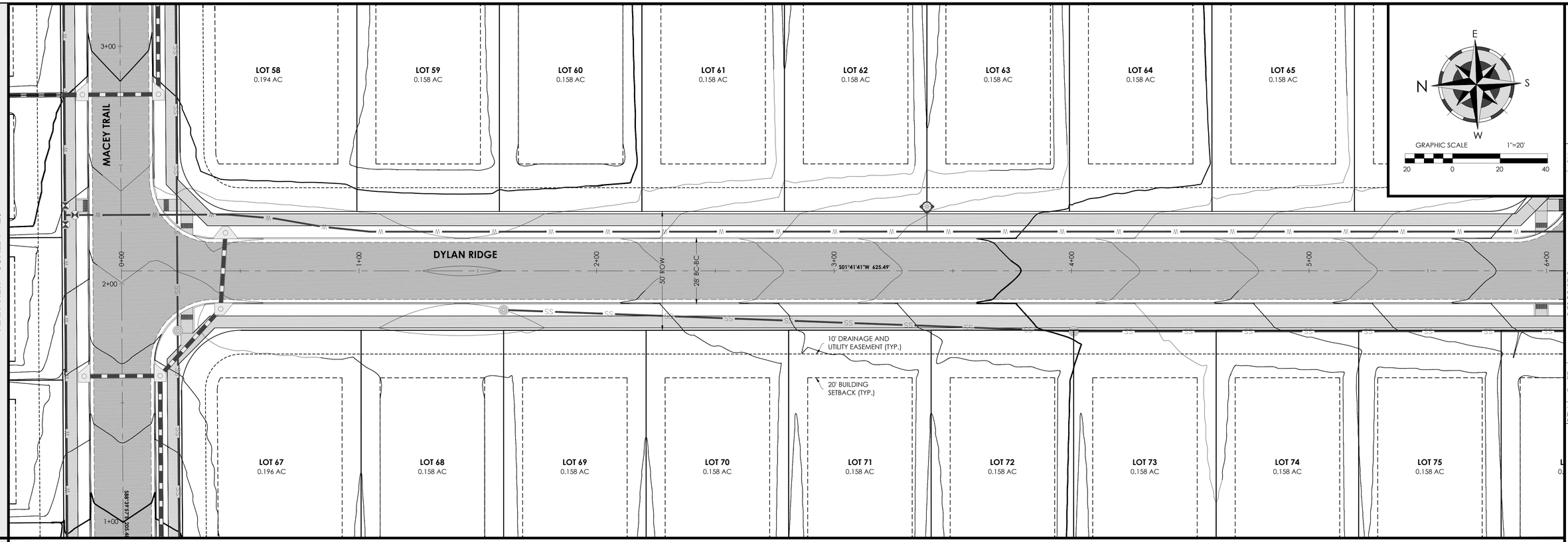
CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.02

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C1.00 ROADWAY OVERVIEW.dwg

PLAN VIEW - SCALE 1"=20'



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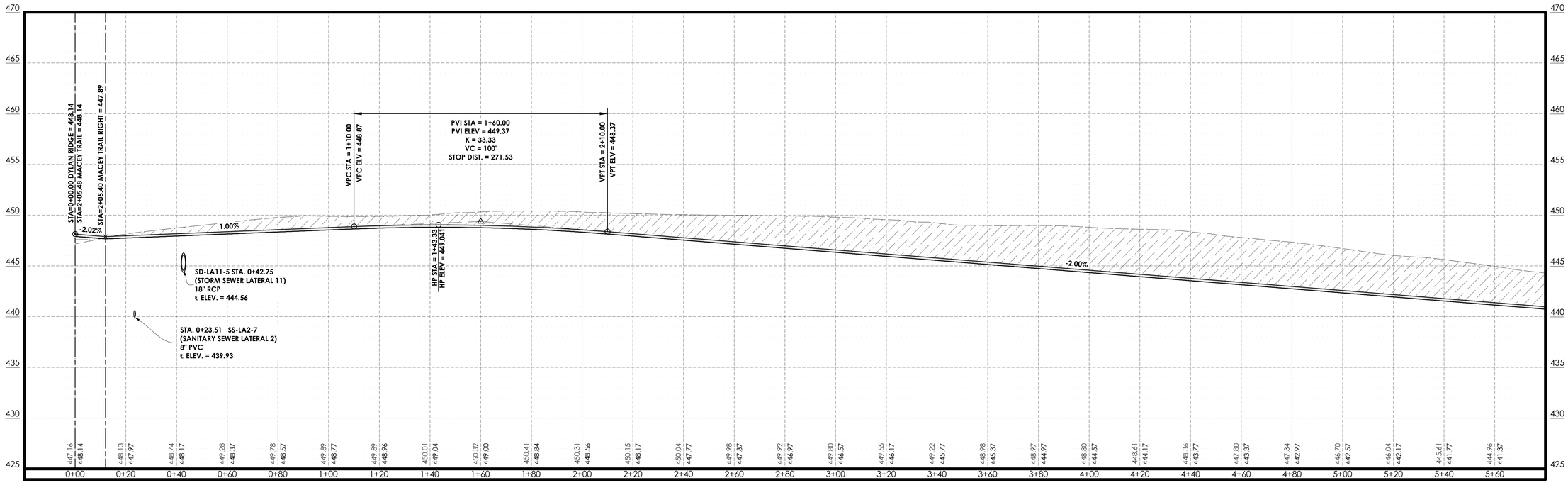

PROPOSED
EXISTING

DYLAN RIDGE
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

DYLAN RIDGE P&P (1 OF 2)

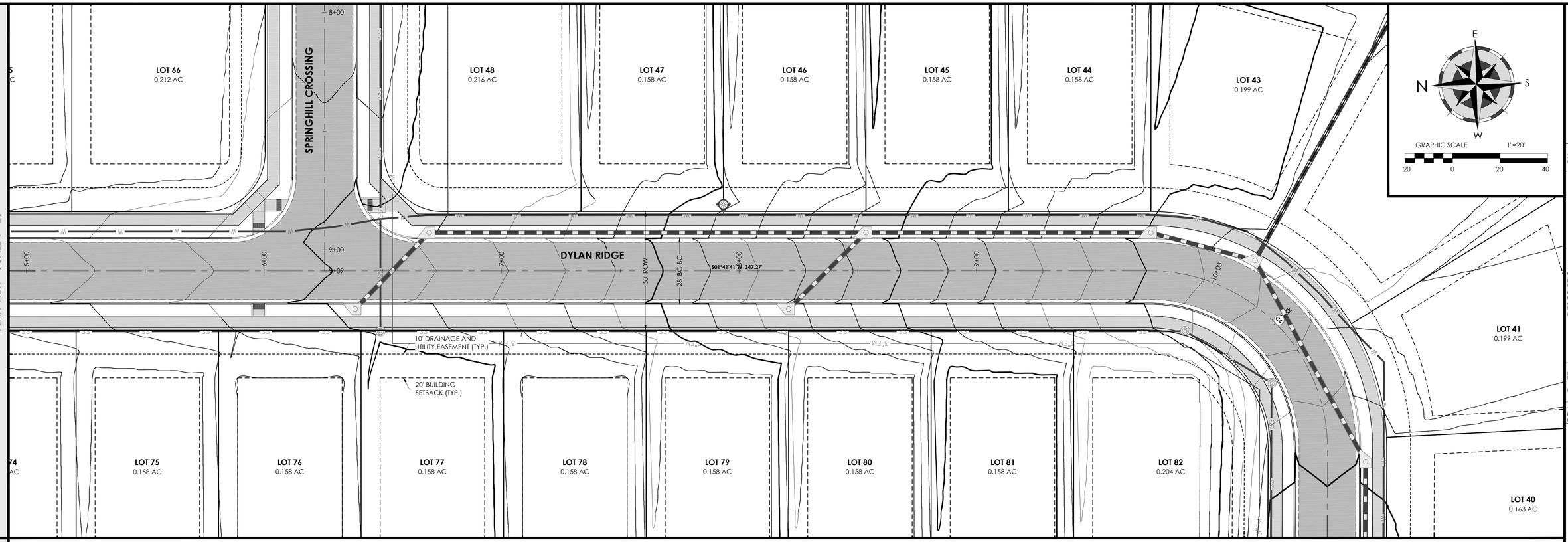
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
JUSTIN HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.03

PLAN VIEW - SCALE 1"=20'



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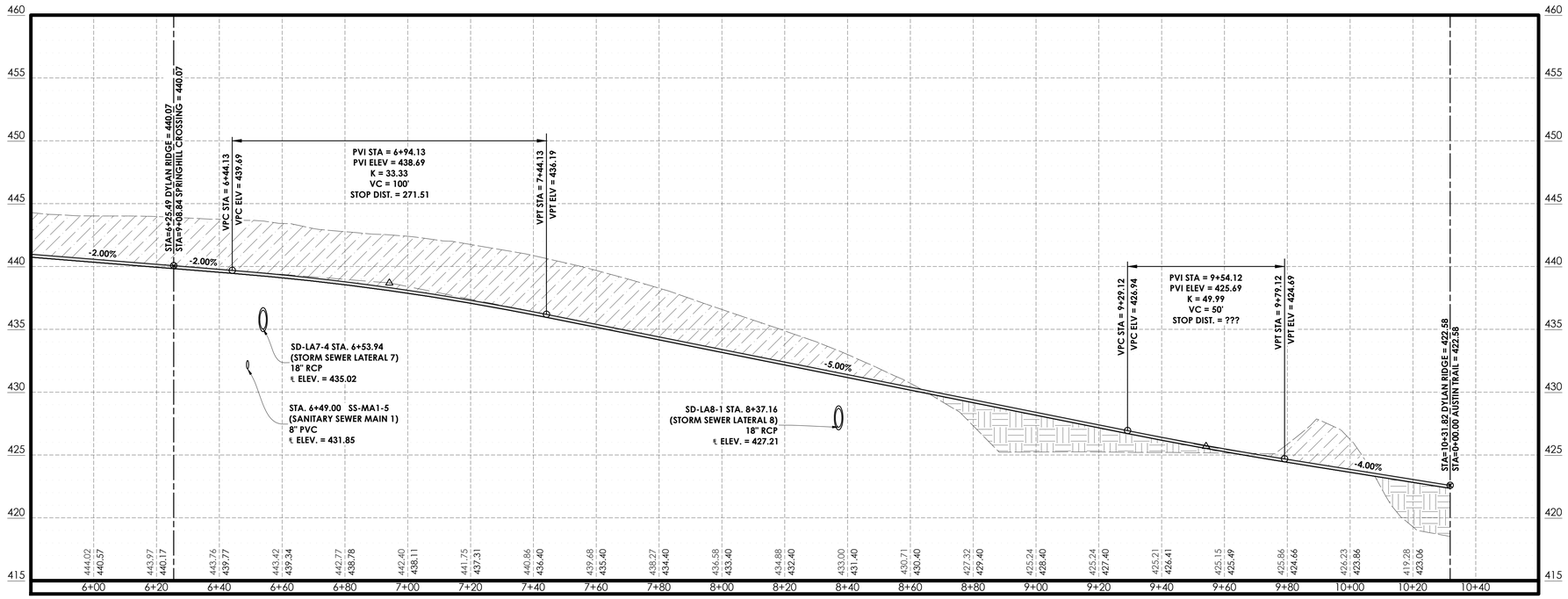

PROPOSED
EXISTING

DYLAN RIDGE
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

DYLAN RIDGE P&P (2 OF 2)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
JEFFREY HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES 6/30/2027

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.04

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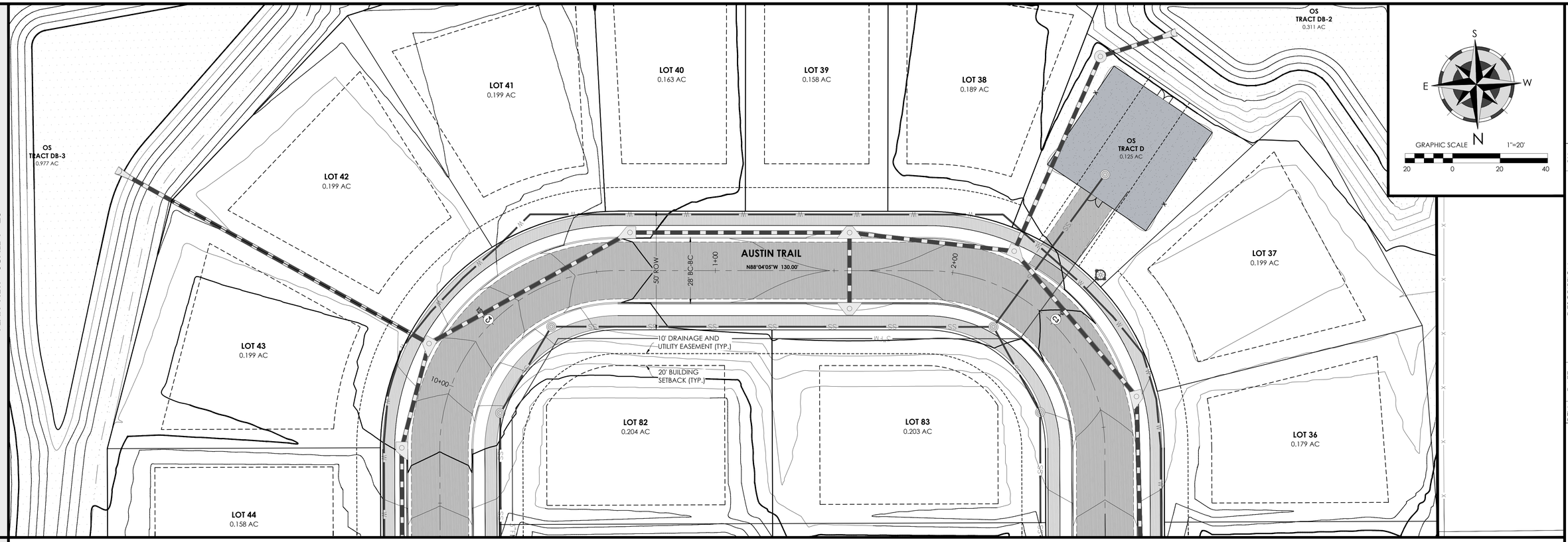

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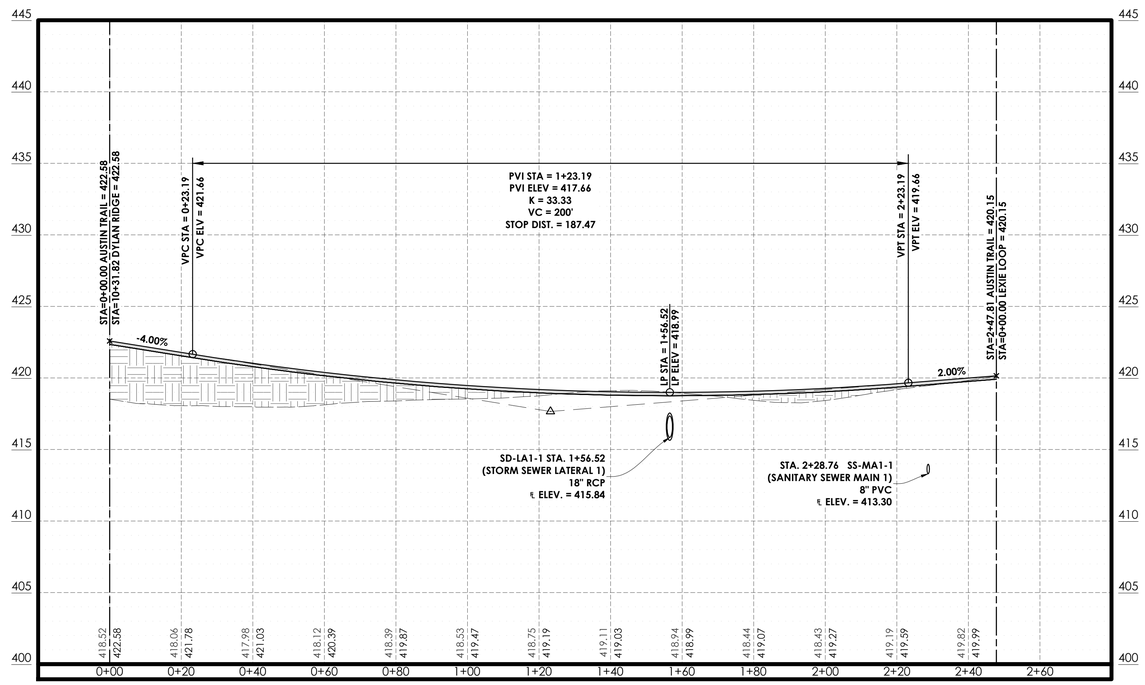

PROPOSED
EXISTING

AUSTIN TRAIL
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

AUSTIN TRAIL P&P

STATE OF ARKANSAS
ERIC HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18698
10/9/26

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Holloway Engineering, Surveying & Civil Design, PLLC
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ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.05

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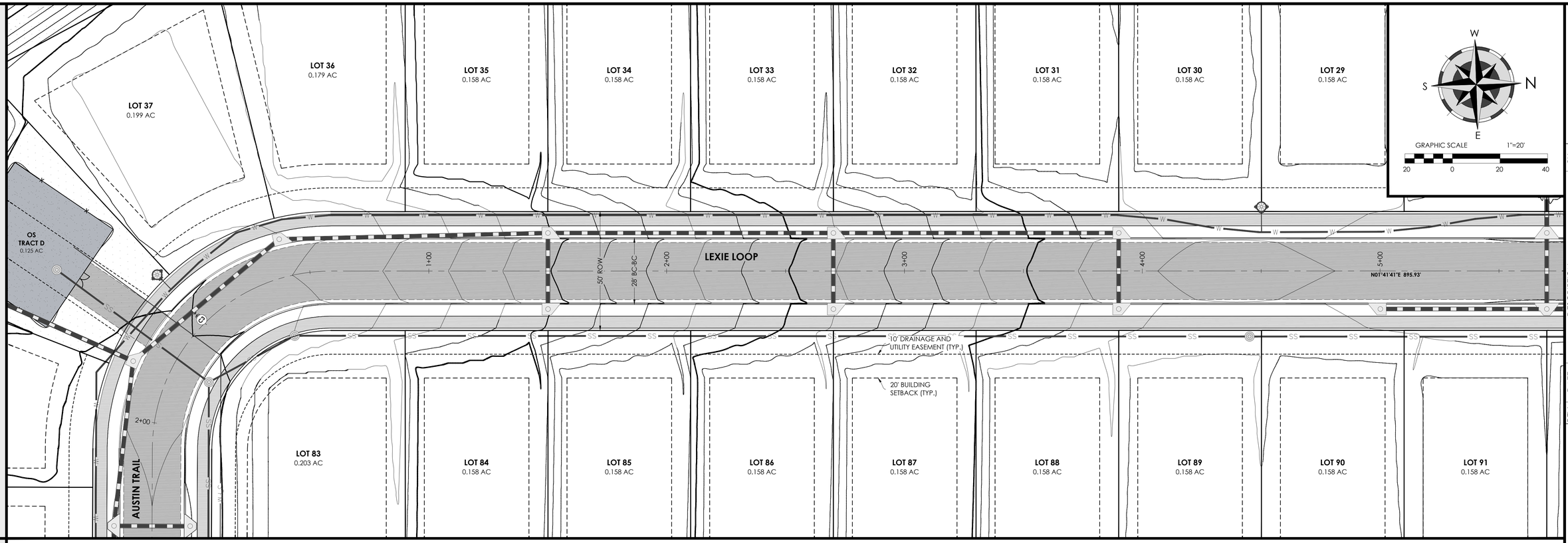

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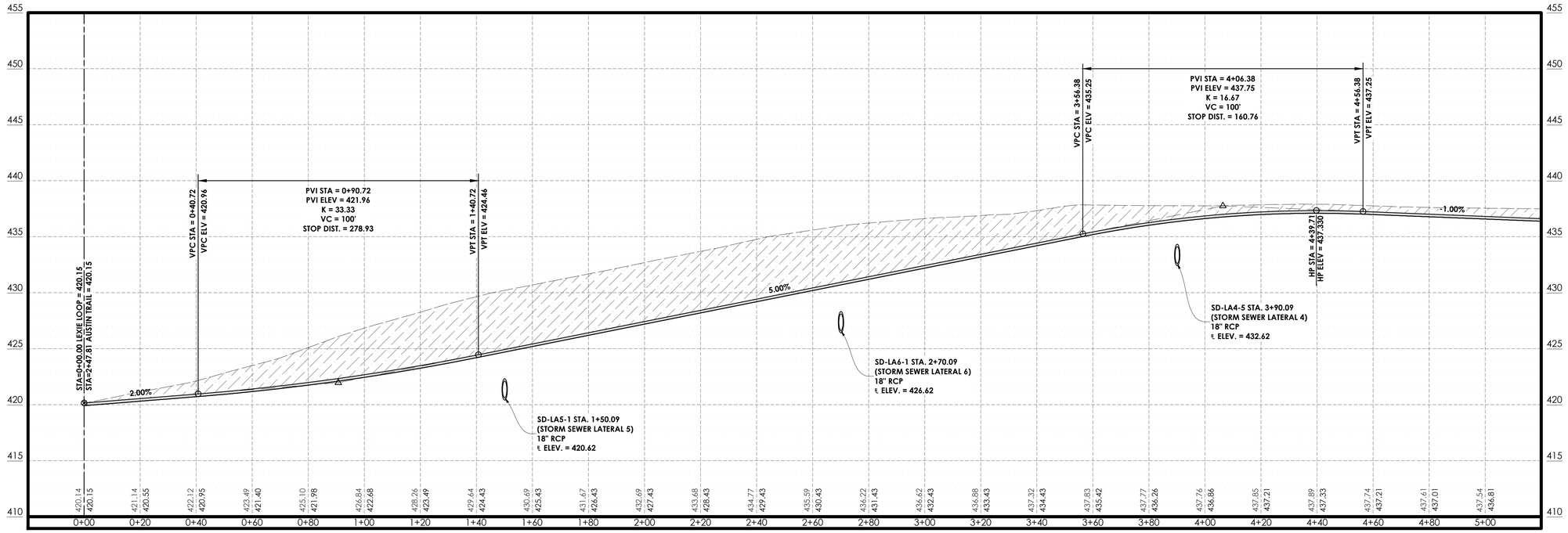

PROPOSED
EXISTING

LEXIE LOOP
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

Holloway Engineering, Surveying & Civil Design

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Maumelle, AR 72113
(501) 851-3366
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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

LEXIE LOOP P&P (1 OF 2)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18698
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.06

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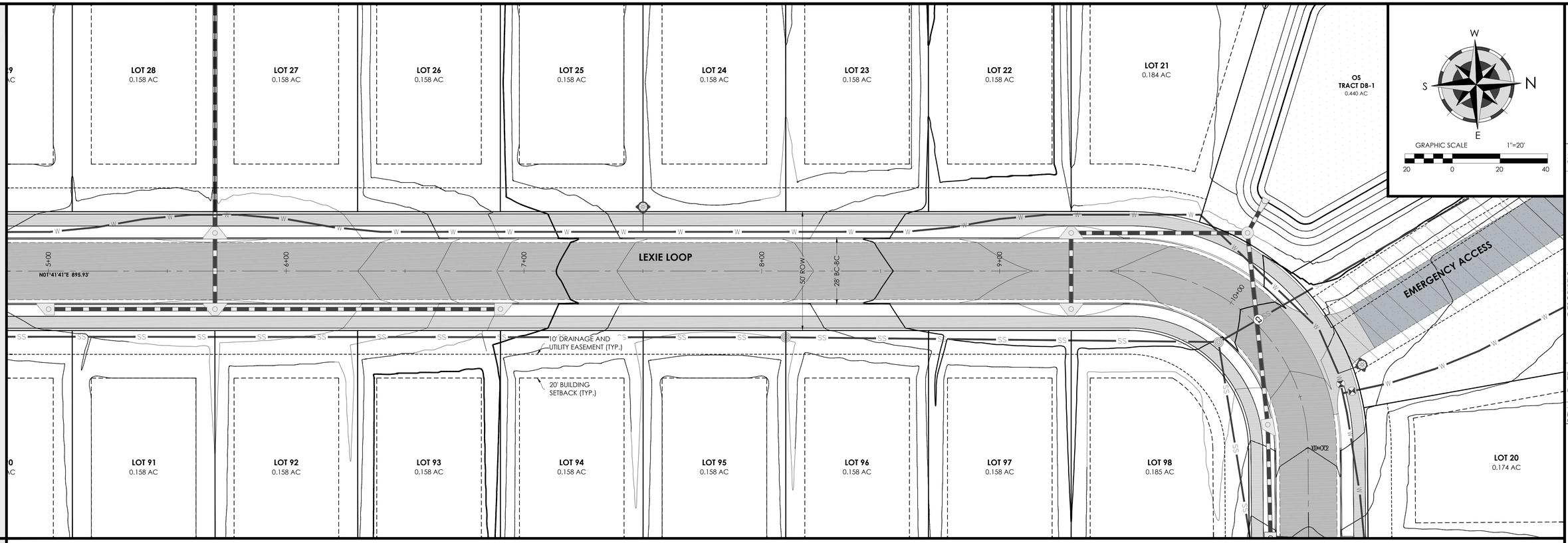

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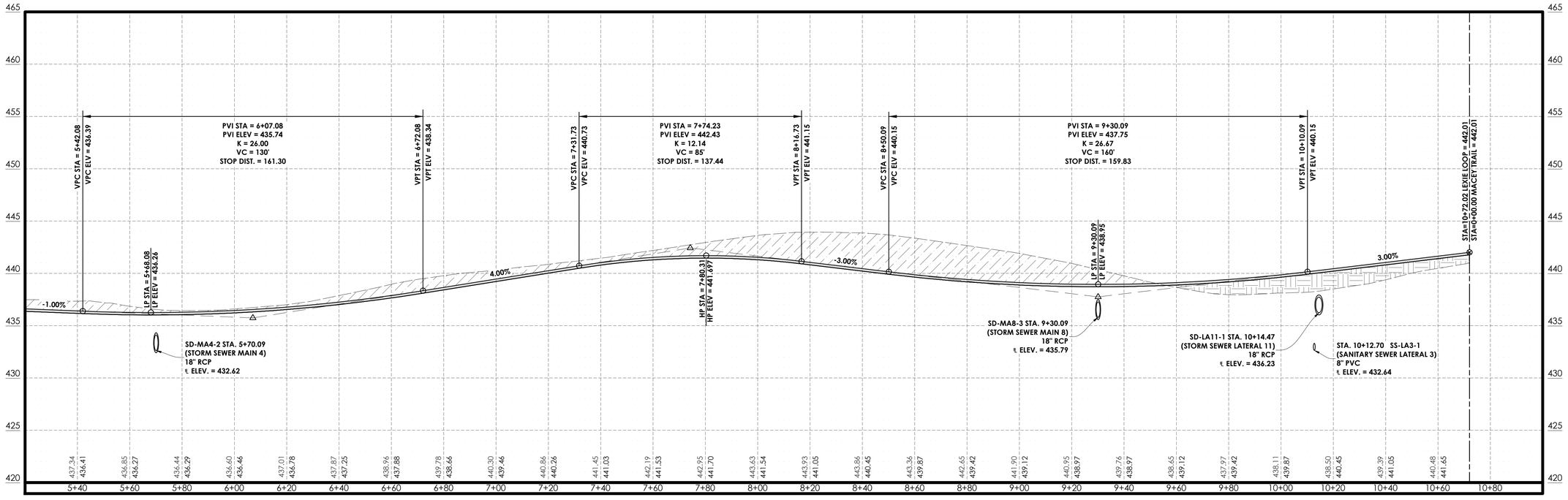

PROPOSED
EXISTING

LEXIE LOOP
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

Holloway Engineering, Surveying & Civil Design

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

LEXIE LOOP P&P (2 OF 2)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18698
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.07

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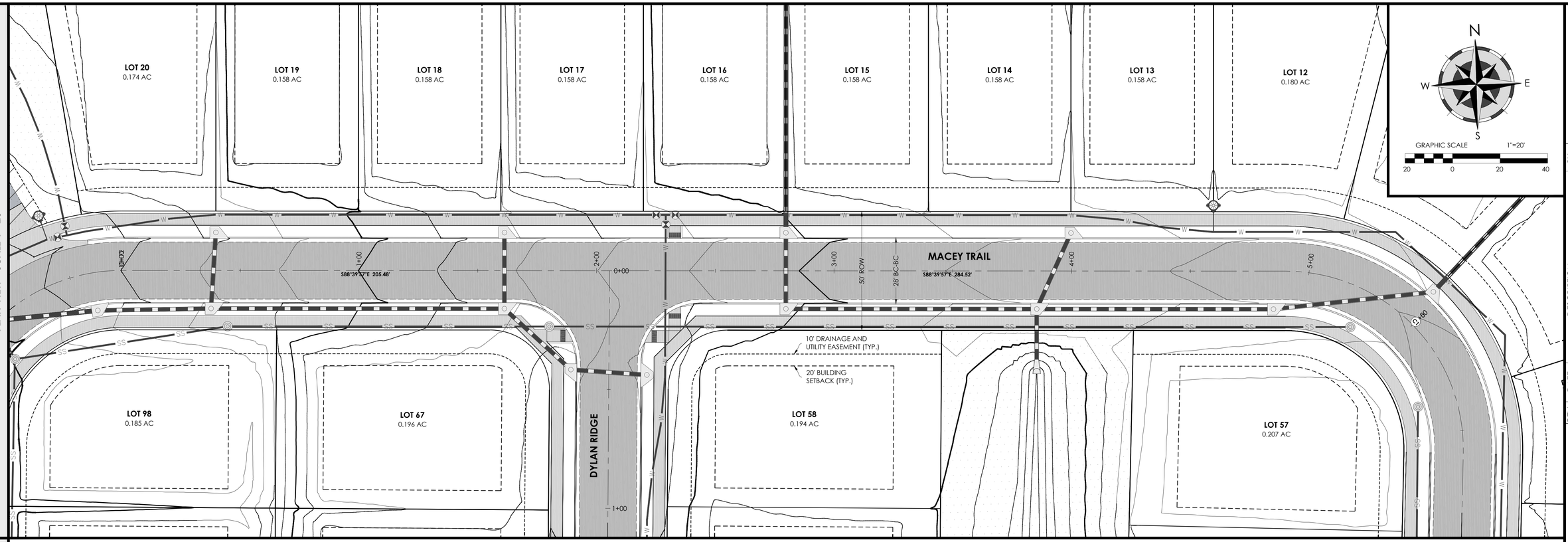

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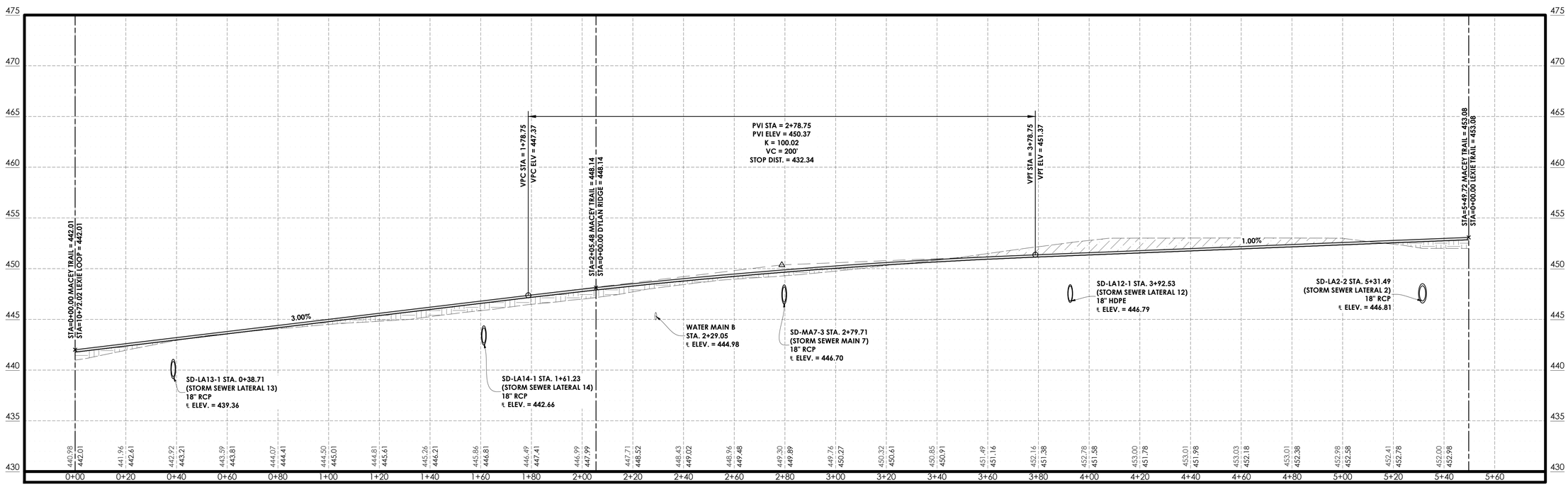

PROPOSED
EXISTING

MACEY TRAIL
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

Holloway Engineering, Surveying & Civil Design

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Maumelle, AR 72113
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www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

MACEY TRAIL P&P

STATE OF ARKANSAS
ERIC HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18698
10/9/26

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#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.08

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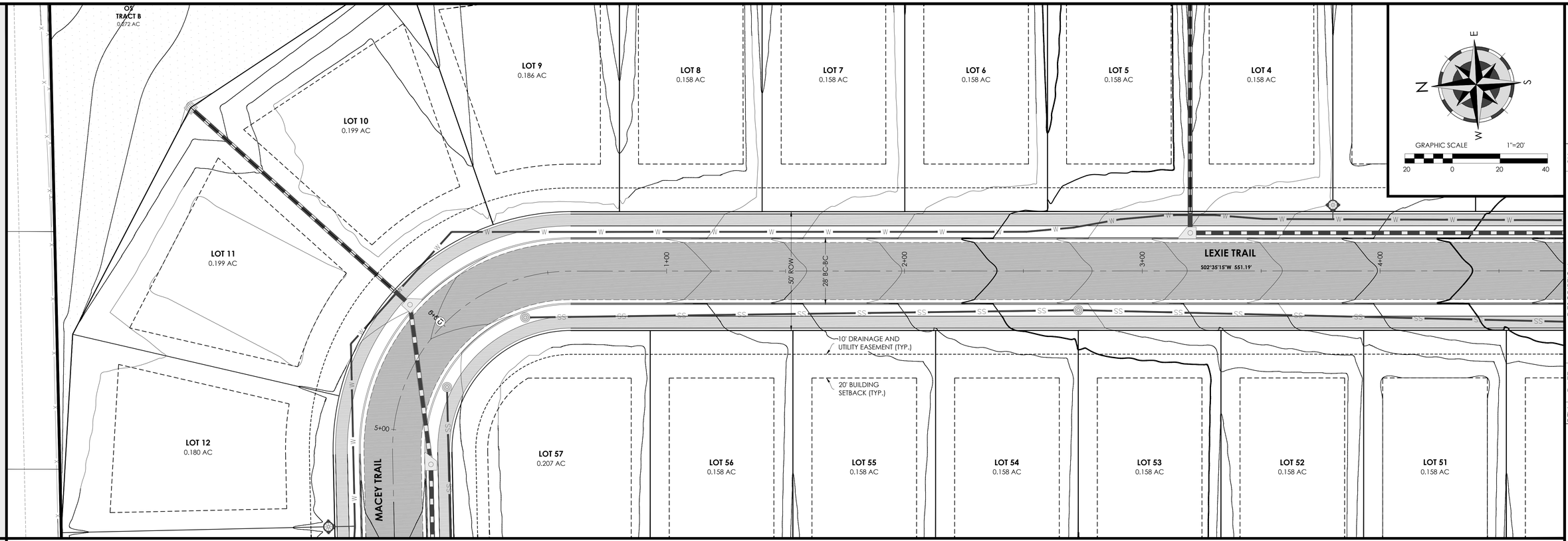
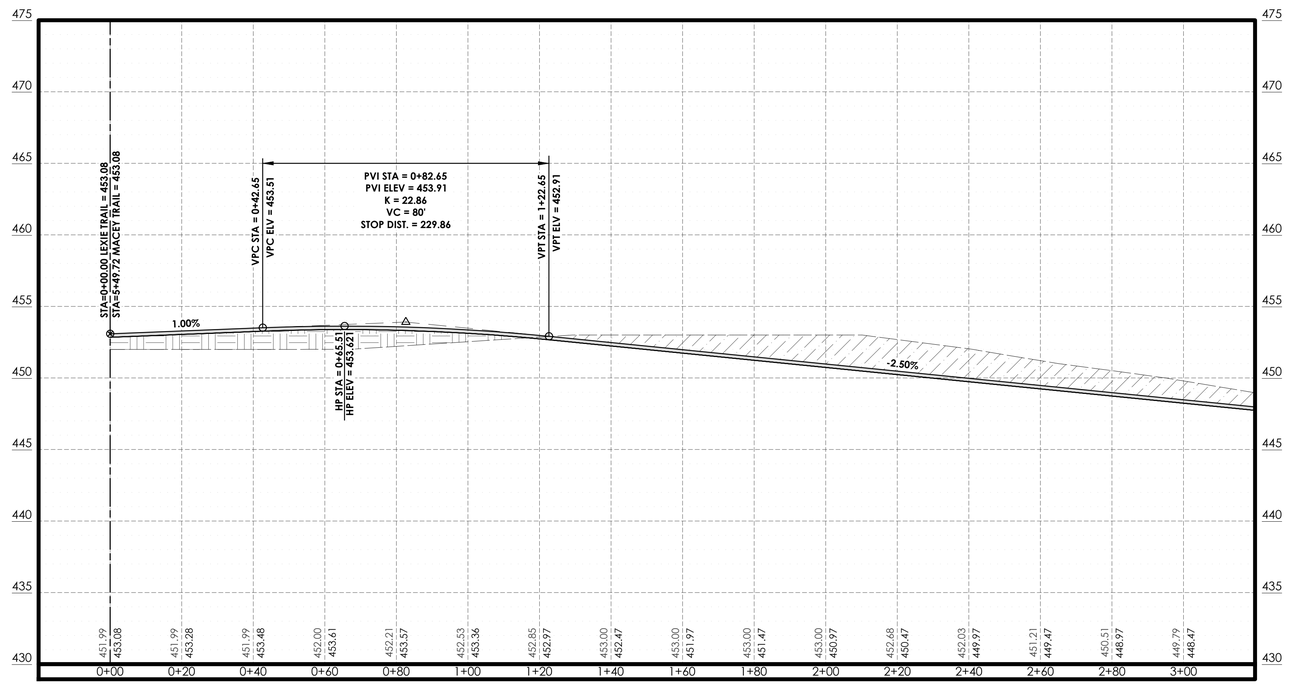


PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

LEXIE TRAIL
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

Holloway Engineering,
Surveying & Civil Design

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

LEXIE TRAIL P&P (1 OF 2)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES - DECEMBER 31, 2026

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.09

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C1.00 ROADWAY OVERVIEW.dwg

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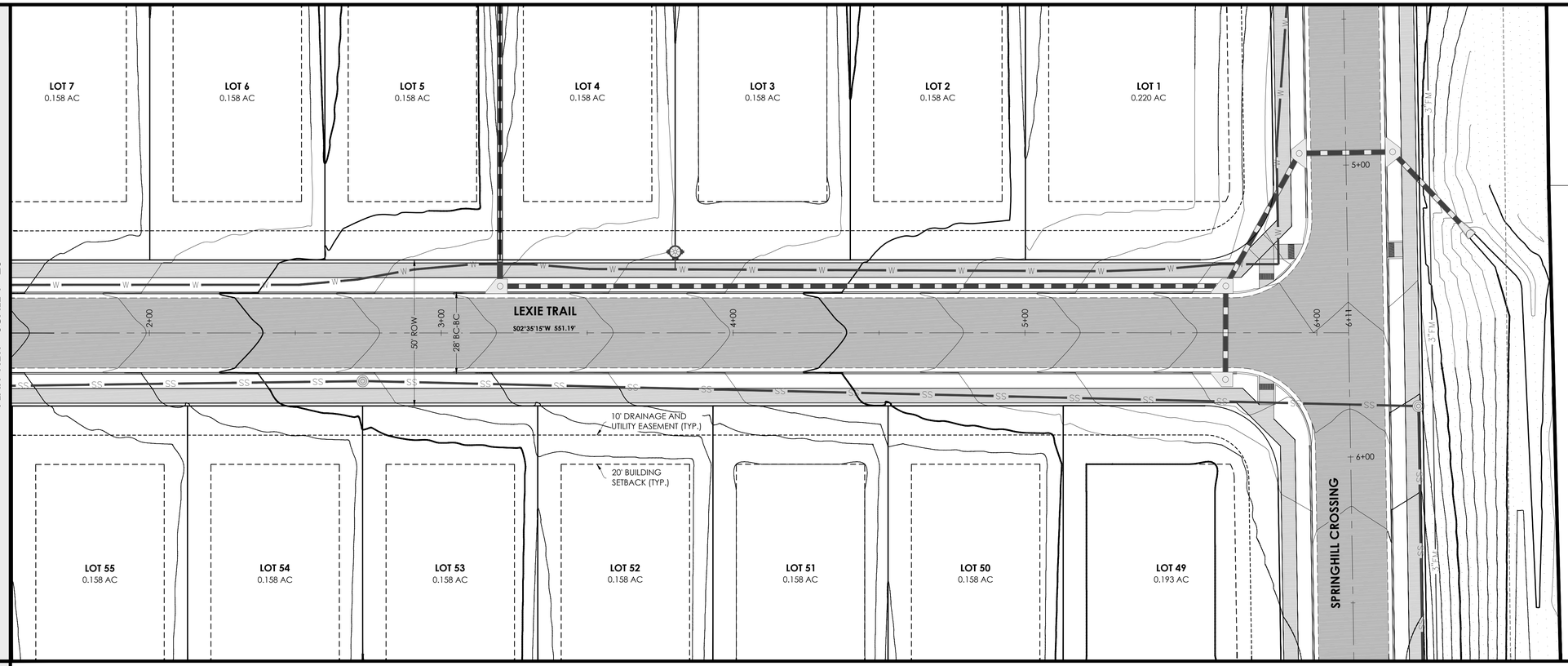
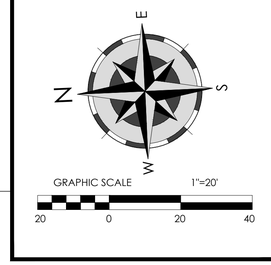
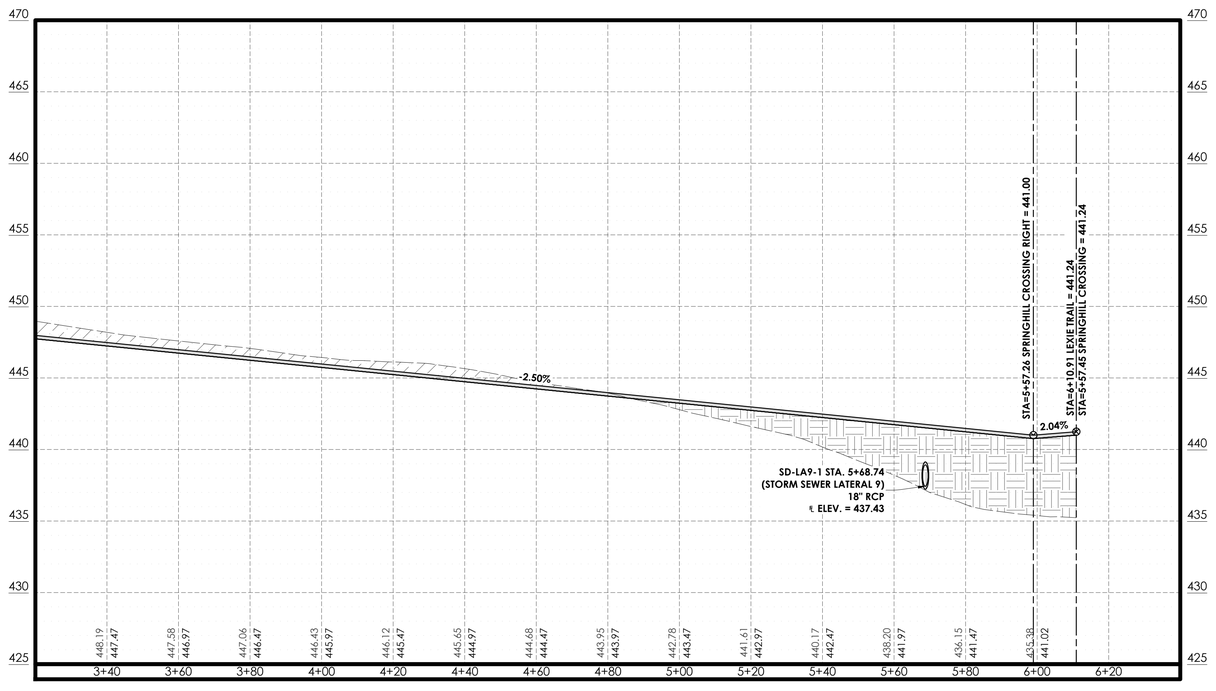




PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

LEXIE TRAIL
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

LEXIE TRAIL P&P (2 OF 2)

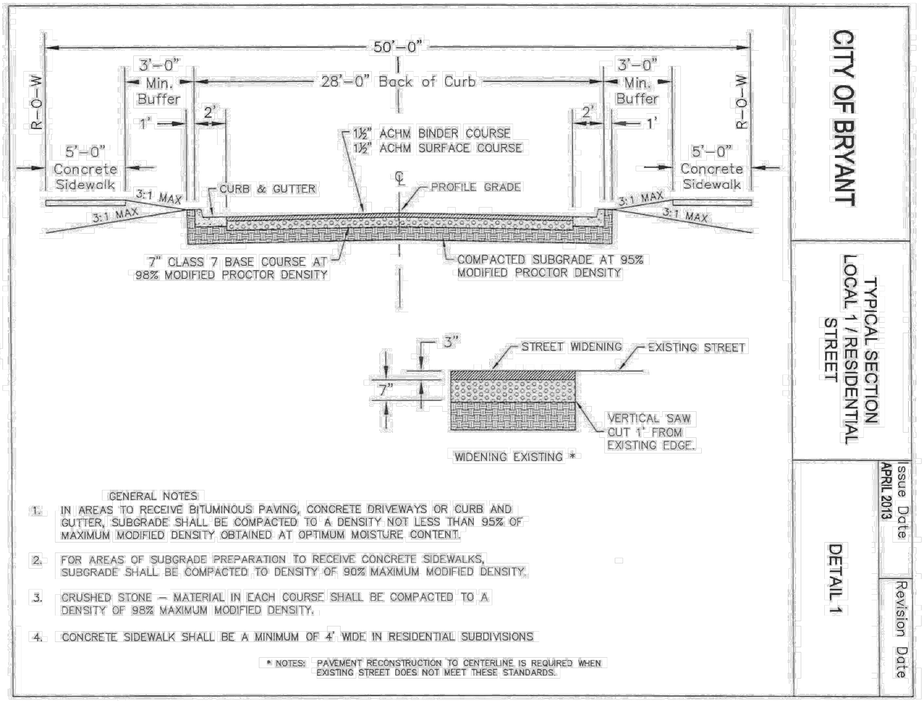
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.10

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C1.00 ROADWAY OVERVIEW.dwg



GENERAL NOTES:

1. IN AREAS TO RECEIVE BITUMINOUS PAVING, CONCRETE DRIVEWAYS OR CURB AND GUTTER, SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OF MAXIMUM MODIFIED DENSITY OBTAINED AT OPTIMUM MOISTURE CONTENT.
2. FOR AREAS OF SUBGRADE PREPARATION TO RECEIVE CONCRETE SIDEWALKS, SUBGRADE SHALL BE COMPACTED TO DENSITY OF 90% MAXIMUM MODIFIED DENSITY.
3. CRUSHED STONE – MATERIAL IN EACH COURSE SHALL BE COMPACTED TO A DENSITY OF 98% MAXIMUM MODIFIED DENSITY.
4. CONCRETE SIDEWALK SHALL BE A MINIMUM OF 4' WIDE IN RESIDENTIAL SUBDIVISIONS

* NOTES: PAVEMENT RECONSTRUCTION TO CENTERLINE IS REQUIRED WHEN EXISTING STREET DOES NOT MEET THESE STANDARDS.

CITY OF BRYANT

TYPICAL SECTION LOCAL 1 / RESIDENTIAL STREET

Issue Date: APRIL 2013

Revision Date:

DETAIL 1

A1

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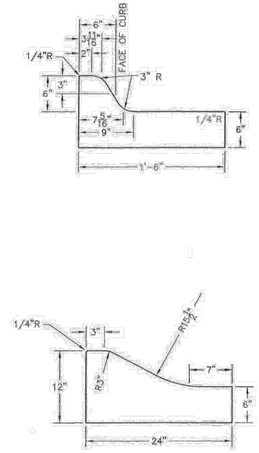
CITY OF BRYANT

CURB & GUTTER SECTIONS

Issue Date: APRIL 2013

Revision Date:

DETAIL 7



A7

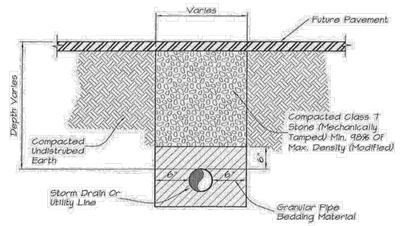
CITY OF BRYANT

TYPICAL SECTION DRAINAGE AND UTILITY CUT BACKFILL ON STREET UNDER CONSTRUCTION

Issue Date: APRIL 2013

Revision Date:

DETAIL 8



Note: This Backfill Procedure Shall Be Utilized For All Trenches Excavated In Area To Be Paved.

A8

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

ROADWAY DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY

10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEER

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C1.50

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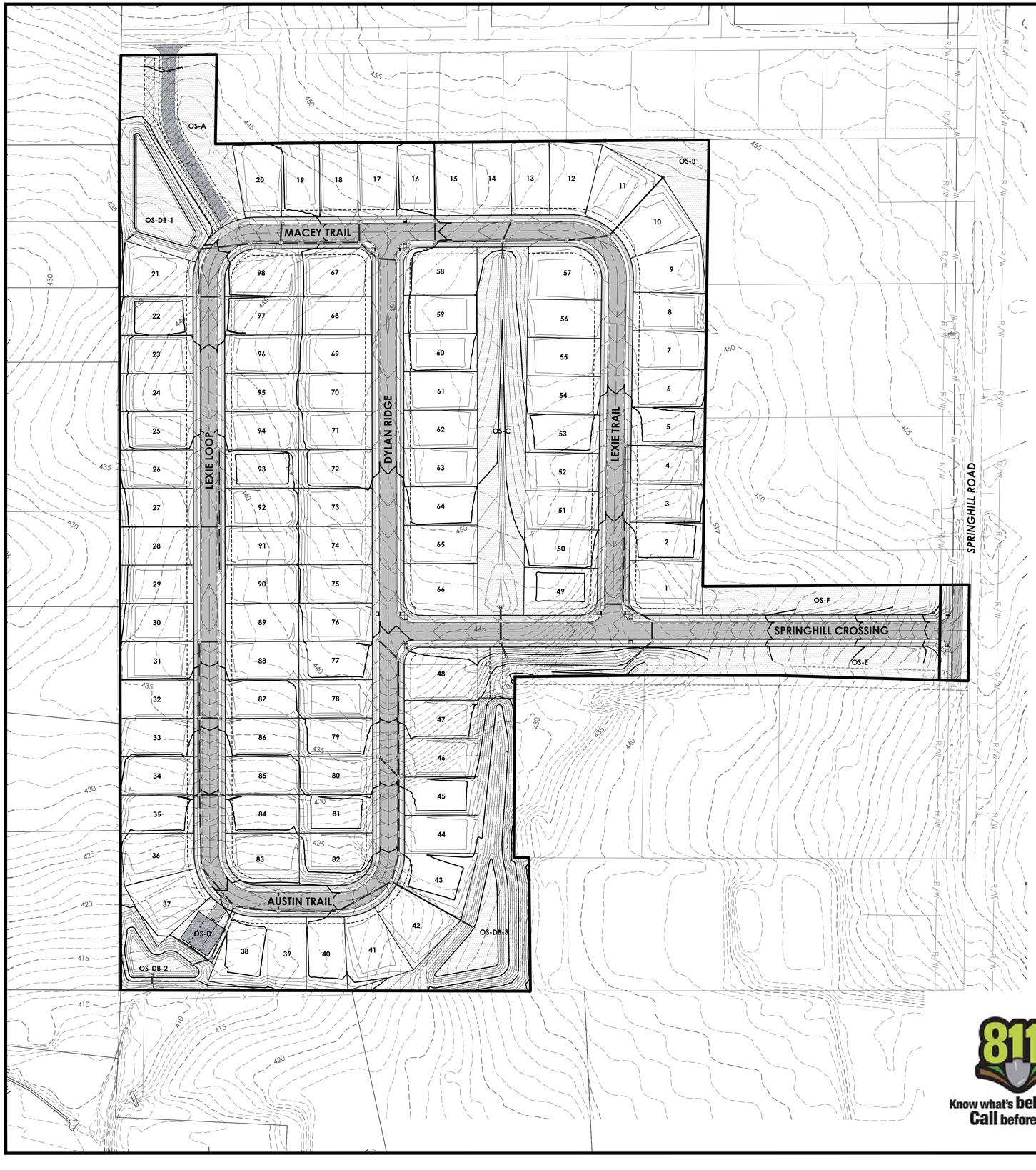

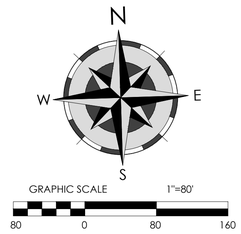

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
R/W	RIGHT-OF-WAY
	EASEMENT
	BUILDING SETBACK
	STORM DRAINAGE PIPE
	CURB INLET/JUNCTION BOX

Know what's **below.** **Call** before you dig.

CAUTION: UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. HOWEVER, ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THE ACTUAL LOCATIONS OF THE UTILITIES MAY VARY FROM THE LOCATIONS SHOWN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES INVOLVED AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITIES ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.

ARKANSAS STATE LAW, THE UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, REQUIRES TWO WORKING DAYS ADVANCE NOTIFICATION THROUGH THE ARKANSAS ONE-CALL SYSTEM CENTER BEFORE EXCAVATING USING MECHANIZED EQUIPMENT OR EXPLOSIVES (EXCEPT IN THE CASE OF AN EMERGENCY). THE ONE-CALL SYSTEM PHONE NUMBER IS 1-800-482-8998. THE CONTRACTOR IS ADVISED THAT THERE IS A SEVERE PENALTY FOR NOT MAKING THIS CALL. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE-CALL SYSTEM; THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES, AS WELL AS THE ONE-CALL SYSTEM.

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

GRADING & DRAINAGE OVERALL

STATE OF ARKANSAS
DARYL HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18898
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEER

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.00

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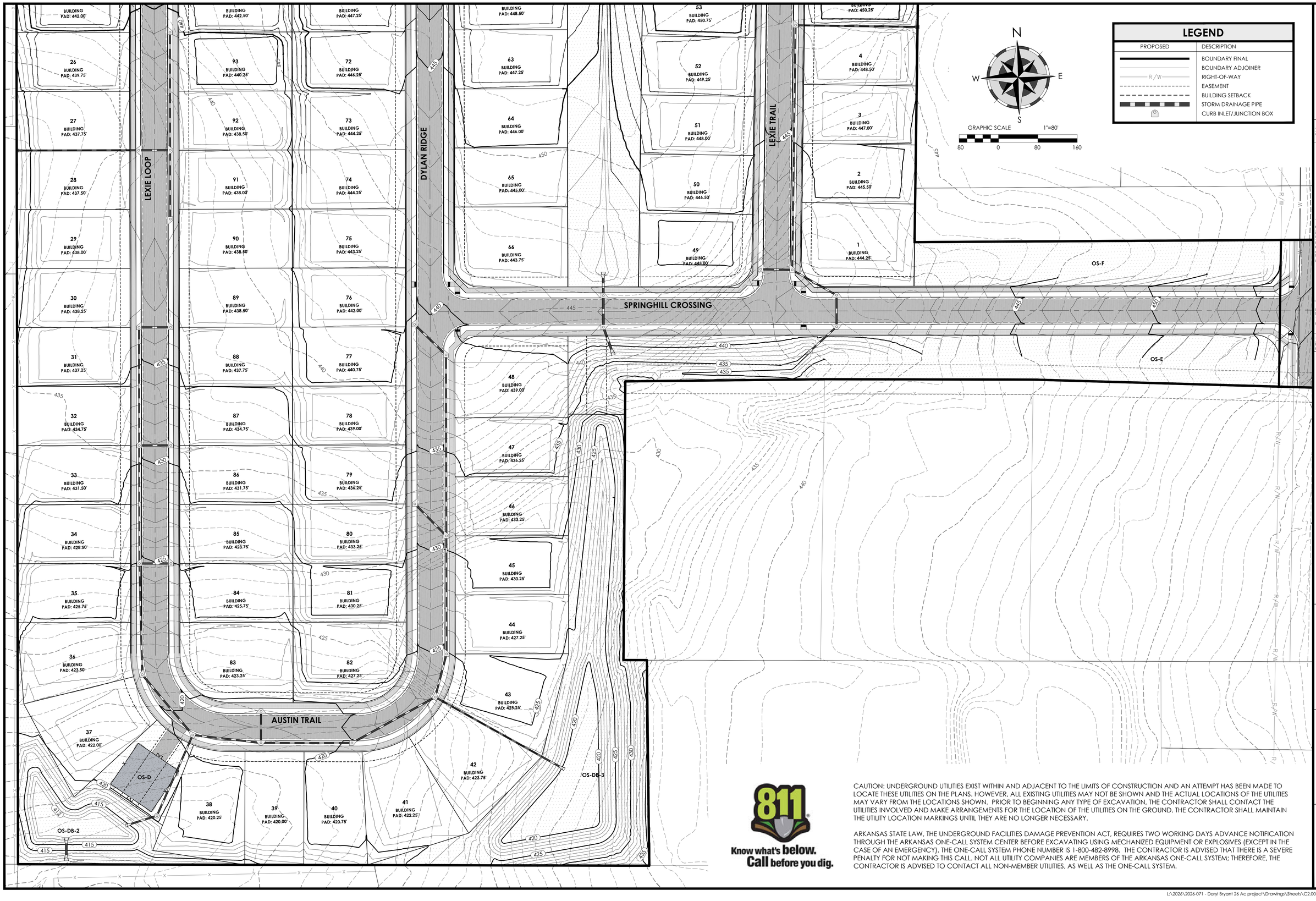

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

GRADING & DRAINAGE PLAN (2 OF 3)

STATE OF ARKANSAS
ERIC HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18898
10/9/26

Holloway Engineering, Surveying & Civil Design, PLLC
CERTIFICATE OF AUTHORIZATION
#1879

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.01

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N
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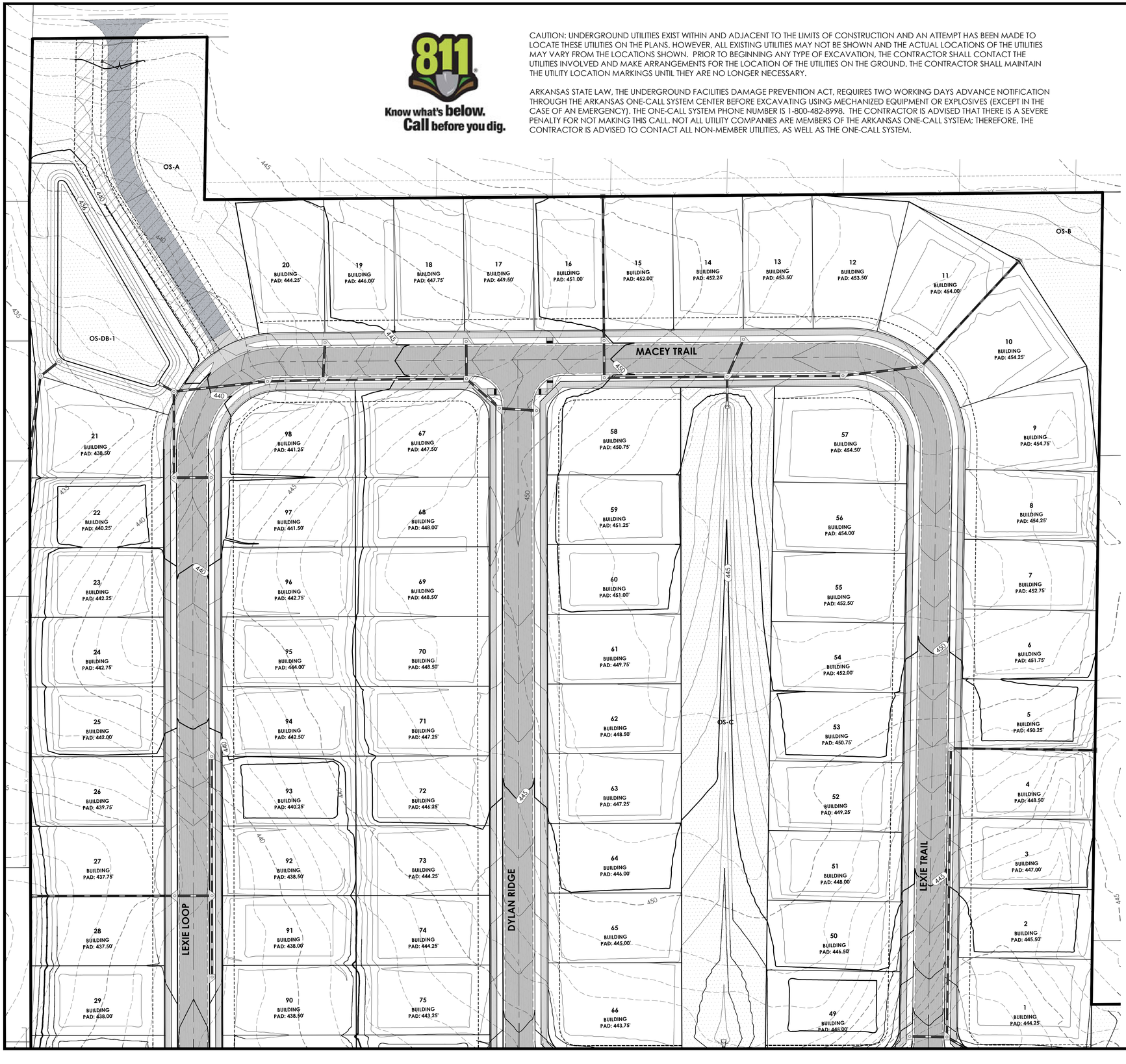
S

GRAPHIC SCALE 1"=80'
80 0 80 160

LEGEND	
PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
R/W	RIGHT-OF-WAY
	EASEMENT
	BUILDING SETBACK
	STORM DRAINAGE PIPE
	CURB INLET/JUNCTION BOX



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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

GRADING & DRAINAGE PLAN (3 OF 3)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
JOHN HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
STATE OF ARKANSAS

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.02

SPRINGHILL CROSSING

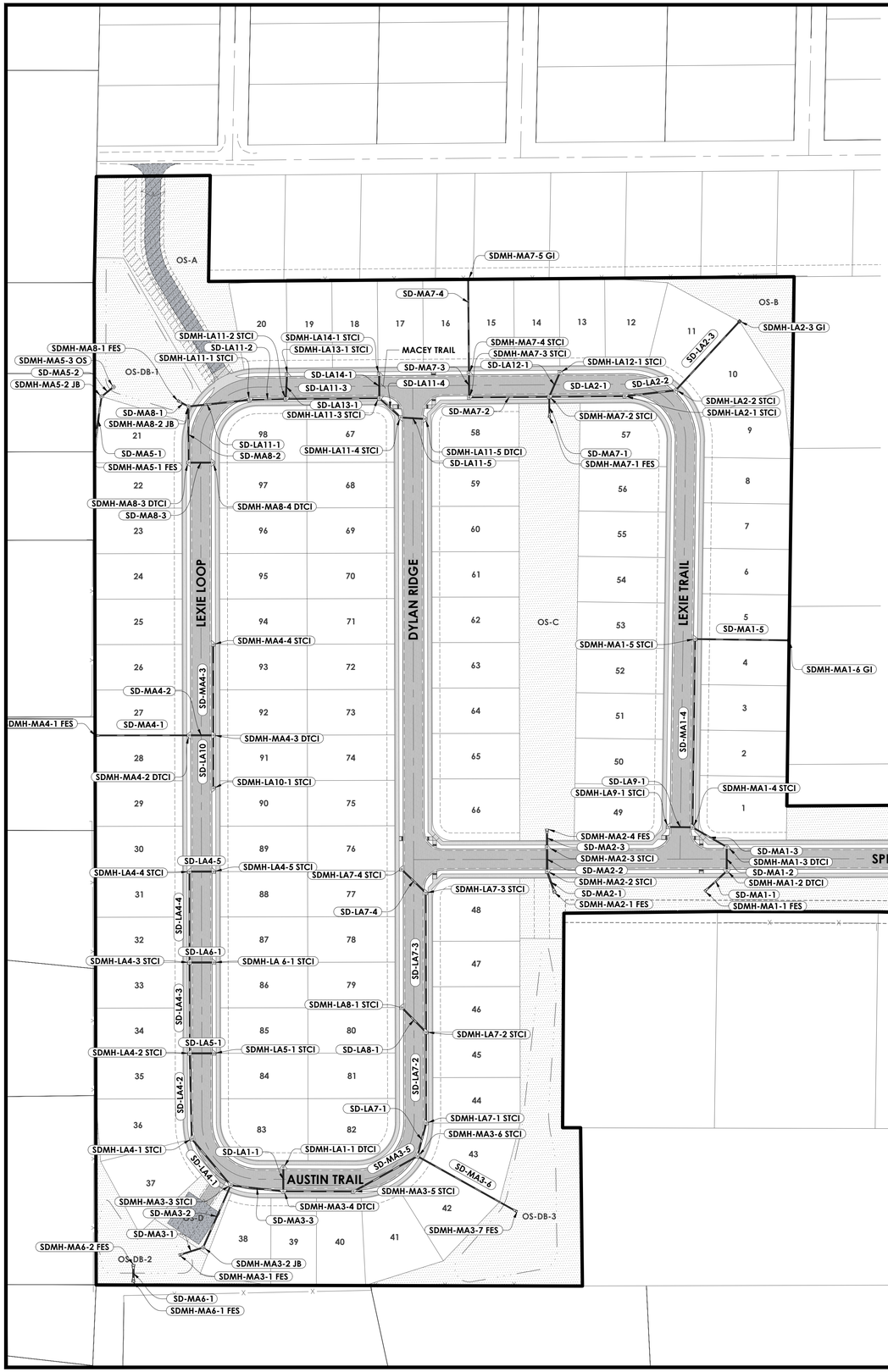
RESIDENTIAL SUBDIVISION

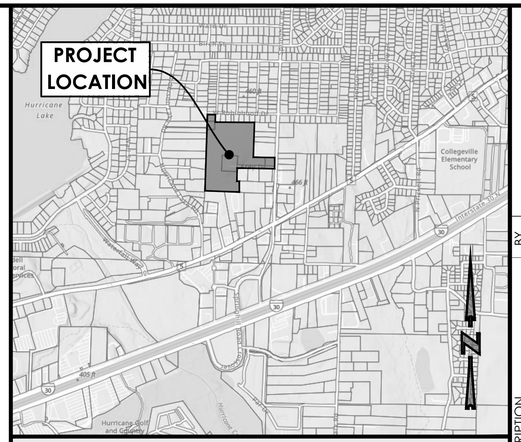
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER PLANS

October 2026

HOLLOWAY ENGINEERING JOB NO. 2026-071





VICINITY MAP

STORM SEWER NOTES:

1. CONTRACTOR TO NOTIFY "ARKANSAS ONE-CALL" AND ALL APPROPRIATE UTILITIES, CABLE COMPANIES, ETC., PRIOR TO STARTING ANY EXCAVATION. DIAL 811
2. VEGETATION MUST BE ESTABLISHED ON DISTURBED AREAS WITHIN 14 DAYS OF COMPLETION OF GRADING ACTIVITIES.
3. ADEQ STORMWATER PERMIT MUST BE OBTAINED AND EROSION CONTROL MEASURES MUST BE INSTALLED TO COMPLY WITH ALL STORMWATER RUNOFF REGULATIONS AS DEFINED BY THE SITE EROSION CONTROL PLAN.
4. ALL SIDEWALK AREAS TO MAINTAIN A MAXIMUM 2% CROSS SLOPE AND A 5% RUNNING SLOPE & CONFORM TO ALL ADA REGULATIONS, ALL ADA PARKING TO BE MAX. 2% SLOPE ALL DIRECTIONS.
5. ALL CONCRETE SPILLWAY SECTIONS TO BE INSTALLED WITH A MINIMUM 6" (0.5 FEET) GRADE CHANGE/SLOPE AWAY FROM GUTTER LINE OF CURB.
6. THE LOCATION OF ANY UTILITIES SHOWN IS ONLY APPROXIMATE OR PROPOSED. THERE WAY EXIST MORE UTILITIES THAN THOSE SHOWN.
7. ALL DRAINAGE PIPE SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
R/W	RIGHT-OF-WAY
	EASEMENT
	STORM DRAINAGE PIPE
X-X	DRAINAGE STRUCTURE - NO.
	CURB INLET/JUNCTION BOX

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER OVERVIEW

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES 6-30-2027

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.03

STORM SEWER STRUCTURE TABLE

STRUCTURE NAME	DETAILS	PIPES IN	PIPES OUT
SDMH-LA 6-1 STCI	RIM ELEV. = 430.93		SD-LA6-1 - 18" RCP INV OUT = 427.26
SDMH-LA1-1 DTCI	RIM ELEV. = 418.99		SD-LA1-1 - 18" RCP INV OUT = 416.00
SDMH-LA2-1 STCI	RIM ELEV. = 452.43	SD-LA2-2 - 18" RCP INV IN = 446.59	SD-LA2-1 - 18" HDPE INV OUT = 446.59
SDMH-LA2-2 STCI	RIM ELEV. = 453.05	SD-LA2-3 - 18" HDPE INV IN = 446.93	SD-LA2-2 - 18" RCP INV OUT = 446.93
SDMH-LA2-3 GI	RIM ELEV. = 450.89		SD-LA2-3 - 18" HDPE INV OUT = 447.55
SDMH-LA4-1 STCI	RIM ELEV. = 420.96	SD-LA4-2 - 18" HDPE INV IN = 416.58	SD-LA4-1 - 18" RCP INV OUT = 416.59
SDMH-LA4-2 STCI	RIM ELEV. = 424.93	SD-LA4-3 - 18" HDPE INV IN = 419.98 SD-LA5-1 - 18" RCP INV IN = 419.98	SD-LA4-2 - 18" HDPE INV OUT = 419.98
SDMH-LA4-3 STCI	RIM ELEV. = 430.93	SD-LA4-4 - 18" HDPE INV IN = 425.98 SD-LA6-1 - 18" RCP INV IN = 425.98	SD-LA4-3 - 18" HDPE INV OUT = 425.98
SDMH-LA4-4 STCI	RIM ELEV. = 436.59	SD-LA4-5 - 18" RCP INV IN = 431.98	SD-LA4-4 - 18" HDPE INV OUT = 431.98
SDMH-LA4-5 STCI	RIM ELEV. = 436.59		SD-LA4-5 - 18" RCP INV OUT = 433.26
SDMH-LA5-1 STCI	RIM ELEV. = 424.93		SD-LA5-1 - 18" RCP INV OUT = 421.26
SDMH-LA7-1 STCI	RIM ELEV. = 424.93	SD-LA7-2 - 18" HDPE INV IN = 420.30	SD-LA7-1 - 18" HDPE INV OUT = 420.30
SDMH-LA7-2 STCI	RIM ELEV. = 430.72	SD-LA7-3 - 18" HDPE INV IN = 426.30 SD-LA8-1 - 18" RCP INV IN = 426.30	SD-LA7-2 - 18" HDPE INV OUT = 426.30
SDMH-LA7-3 STCI	RIM ELEV. = 439.09	SD-LA7-4 - 18" RCP INV IN = 434.57	SD-LA7-3 - 18" HDPE INV OUT = 434.57
SDMH-LA7-4 STCI	RIM ELEV. = 439.80		SD-LA7-4 - 18" RCP INV OUT = 435.47
SDMH-LA8-1 STCI	RIM ELEV. = 432.35		SD-LA8-1 - 18" RCP INV OUT = 428.12
SDMH-LA9-1 STCI	RIM ELEV. = 441.75		SD-LA9-1 - 18" RCP INV OUT = 437.91
SDMH-LA10-1 STCI	RIM ELEV. = 436.81		SD-LA10 - 18" HDPE INV OUT = 433.40
SDMH-LA11-1 STCI	RIM ELEV. = 441.62	SD-LA11-2 - 18" HDPE INV IN = 437.21	SD-LA11-1 - 18" RCP INV OUT = 437.21
SDMH-LA11-2 STCI	RIM ELEV. = 443.14	SD-LA13-1 - 18" RCP INV IN = 438.64 SD-LA11-3 - 18" HDPE INV IN = 438.64	SD-LA11-2 - 18" HDPE INV OUT = 438.64
SDMH-LA11-3 STCI	RIM ELEV. = 446.84	SD-LA11-4 - 18" HDPE INV IN = 442.34 SD-LA14-1 - 18" RCP INV IN = 442.34	SD-LA11-3 - 18" HDPE INV OUT = 442.34
SDMH-LA11-4 STCI	RIM ELEV. = 448.19	SD-LA11-5 - 18" RCP INV IN = 444.24	SD-LA11-4 - 18" HDPE INV OUT = 444.24
SDMH-LA11-5 DTCI	RIM ELEV. = 448.21		SD-LA11-5 - 18" RCP INV OUT = 444.88
SDMH-LA12-1 STCI	RIM ELEV. = 451.58		SD-LA12-1 - 18" HDPE INV OUT = 447.50
SDMH-LA13-1 STCI	RIM ELEV. = 443.20		SD-LA13-1 - 18" RCP INV OUT = 440.08
SDMH-LA14-1 STCI	RIM ELEV. = 446.84		SD-LA14-1 - 18" RCP INV OUT = 442.98
SDMH-MA1-1 FES	RIM ELEV. = 436.72	SD-MA1-1 - 18" HDPE INV IN = 435.00	
SDMH-MA1-2 DTCI	RIM ELEV. = 440.41	SD-MA1-2 - 18" RCP INV IN = 435.59	SD-MA1-1 - 18" HDPE INV OUT = 435.59
SDMH-MA1-3 DTCI	RIM ELEV. = 440.41	SD-MA1-3 - 18" HDPE INV IN = 435.91	SD-MA1-2 - 18" RCP INV OUT = 435.91
SDMH-MA1-4 STCI	RIM ELEV. = 441.75	SD-MA1-4 - 18" HDPE INV IN = 436.95 SD-LA9-1 - 18" RCP INV IN = 436.95	SD-MA1-3 - 18" HDPE INV OUT = 436.95
SDMH-MA1-5 STCI	RIM ELEV. = 447.97	SD-MA1-5 - 18" HDPE INV IN = 441.53	SD-MA1-4 - 18" HDPE INV OUT = 441.53

STORM SEWER STRUCTURE TABLE

STRUCTURE NAME	DETAILS	PIPES IN	PIPES OUT
SDMH-MA1-6 GI	RIM ELEV. = 445.30		SD-MA1-5 - 18" HDPE INV OUT = 442.77
SDMH-MA2-1 FES	RIM ELEV. = 439.24	SD-MA2-1 - 24" HDPE INV IN = 437.01	
SDMH-MA2-2 STCI	RIM ELEV. = 443.10	SD-MA2-2 - 24" RCP INV IN = 438.17	SD-MA2-1 - 24" HDPE INV OUT = 438.17
SDMH-MA2-3 STCI	RIM ELEV. = 443.10	SD-MA2-3 - 24" HDPE INV IN = 439.45	SD-MA2-2 - 24" RCP INV OUT = 439.45
SDMH-MA2-4 FES	RIM ELEV. = 442.76		SD-MA2-3 - 24" HDPE INV OUT = 440.53
SDMH-MA3-1 FES	RIM ELEV. = 415.72	SD-MA3-1 - 18" HDPE INV IN = 414.00	
SDMH-MA3-2 JB	RIM ELEV. = 420.36	SD-MA3-2 - 18" HDPE INV IN = 414.27	SD-MA3-1 - 18" HDPE INV OUT = 414.27
SDMH-MA3-3 STCI	RIM ELEV. = 419.60	SD-MA3-3 - 18" HDPE INV IN = 414.98 SD-LA4-1 - 18" RCP INV IN = 414.98	SD-MA3-2 - 18" HDPE INV OUT = 414.98
SDMH-MA3-4 DTCI	RIM ELEV. = 418.99	SD-MA3-4 - 18" HDPE INV IN = 415.68 SD-LA1-1 - 18" RCP INV IN = 415.68	SD-MA3-3 - 18" HDPE INV OUT = 415.68
SDMH-MA3-5 STCI	RIM ELEV. = 420.27	SD-MA3-5 - 18" RCP INV IN = 416.61	SD-MA3-4 - 18" HDPE INV OUT = 416.61
SDMH-MA3-6 STCI	RIM ELEV. = 423.41	SD-MA3-6 - 18" HDPE INV IN = 417.58 SD-LA7-1 - 18" HDPE INV IN = 417.58	SD-MA3-5 - 18" RCP INV OUT = 417.57
SDMH-MA3-7 FES	RIM ELEV. = 420.72		SD-MA3-6 - 18" HDPE INV OUT = 419.00
SDMH-MA4-1 FES	RIM ELEV. = 433.63	SD-MA4-1 - 18" HDPE INV IN = 431.92	
SDMH-MA4-2 DTCI	RIM ELEV. = 436.26	SD-MA4-2 - 18" RCP INV IN = 432.54	SD-MA4-1 - 18" HDPE INV OUT = 432.54
SDMH-MA4-3 DTCI	RIM ELEV. = 436.26	SD-MA4-3 - 18" HDPE INV IN = 432.70 SD-LA10 - 18" HDPE INV IN = 432.70	SD-MA4-2 - 18" RCP INV OUT = 432.70
SDMH-MA4-4 STCI	RIM ELEV. = 439.06		SD-MA4-3 - 18" HDPE INV OUT = 435.10
SDMH-MA5-1 FES	RIM ELEV. = 434.74	SD-MA5-1 - 18" HDPE INV IN = 433.02	
SDMH-MA5-2 JB	RIM ELEV. = 436.21	SD-MA5-2 - 18" HDPE INV IN = 433.34	SD-MA5-1 - 18" HDPE INV OUT = 433.34
SDMH-MA5-3 OS	RIM ELEV. = 437.99		SD-MA5-2 - 18" HDPE INV OUT = 433.54
SDMH-MA6-1 FES	RIM ELEV. = 413.24	SD-MA6-1 - 24" HDPE INV IN = 411.00	
SDMH-MA6-2 FES	RIM ELEV. = 414.24		SD-MA6-1 - 24" HDPE INV OUT = 412.00
SDMH-MA7-1 FES	RIM ELEV. = 447.67	SD-MA7-1 - 18" HDPE INV IN = 445.96	
SDMH-MA7-2 STCI	RIM ELEV. = 451.43	SD-MA7-2 - 18" HDPE INV IN = 446.09 SD-LA2-1 - 18" HDPE INV IN = 446.09 SD-LA12-1 - 18" HDPE INV IN = 446.09	SD-MA7-1 - 18" HDPE INV OUT = 446.09
SDMH-MA7-3 STCI	RIM ELEV. = 449.89	SD-MA7-3 - 18" RCP INV IN = 446.62	SD-MA7-2 - 18" HDPE INV OUT = 446.62
SDMH-MA7-4 STCI	RIM ELEV. = 449.89	SD-MA7-4 - 18" HDPE INV IN = 446.78	SD-MA7-3 - 18" RCP INV OUT = 446.78
SDMH-MA7-5 GI	RIM ELEV. = 450.63		SD-MA7-4 - 18" HDPE INV OUT = 447.40
SDMH-MA8-1 FES	RIM ELEV. = 436.97	SD-MA8-1 - 18" HDPE INV IN = 435.26	
SDMH-MA8-2 JB	RIM ELEV. = 439.05	SD-MA8-2 - 18" HDPE INV IN = 435.34 SD-LA11-1 - 18" RCP INV IN = 435.34	SD-MA8-1 - 18" HDPE INV OUT = 435.34
SDMH-MA8-3 DTCI	RIM ELEV. = 438.95	SD-MA8-3 - 18" RCP INV IN = 435.71	SD-MA8-2 - 18" HDPE INV OUT = 435.71
SDMH-MA8-4 DTCI	RIM ELEV. = 438.95		SD-MA8-3 - 18" RCP INV OUT = 435.87

STORM SEWER PIPE TABLE

NAME	SIZE / PIPE MATERIAL	LENGTH	SLOPE %
SD-LA1-1	18" RCP	32.00'	1.00%
SD-LA2-1	18" HDPE	99.65'	0.50%
SD-LA2-2	18" RCP	67.73'	0.50%
SD-LA2-3	18" HDPE	124.00'	0.50%
SD-LA4-1	18" RCP	80.01'	2.00%
SD-LA4-2	18" HDPE	113.03'	3.00%
SD-LA4-3	18" HDPE	120.00'	5.00%
SD-LA4-4	18" HDPE	120.00'	5.00%
SD-LA4-5	18" RCP	32.00'	4.00%
SD-LA5-1	18" RCP	32.00'	4.00%
SD-LA6-1	18" RCP	32.00'	4.00%
SD-LA7-1	18" HDPE	45.40'	6.00%
SD-LA7-2	18" HDPE	119.94'	5.00%
SD-LA7-3	18" HDPE	183.94'	4.50%
SD-LA7-4	18" RCP	44.63'	2.00%
SD-LA8-1	18" RCP	45.64'	4.00%
SD-LA9-1	18" RCP	32.00'	3.00%
SD-LA10	18" HDPE	70.00'	1.00%
SD-LA11-1	18" RCP	81.12'	2.30%
SD-LA11-2	18" HDPE	47.69'	3.00%
SD-LA11-3	18" HDPE	123.52'	3.00%
SD-LA11-4	18" HDPE	37.96'	5.00%
SD-LA11-5	18" RCP	32.07'	2.00%
SD-LA12-1	18" HDPE	35.08'	4.00%
SD-LA13-1	18" RCP	32.06'	4.50%
SD-LA14-1	18" RCP	32.00'	2.00%
SD-MA1-1	18" HDPE	39.55'	1.50%

STORM SEWER PIPE TABLE

NAME	SIZE / PIPE MATERIAL	LENGTH	SLOPE %
SD-MA1-2	18" RCP	32.01'	1.00%
SD-MA1-3	18" HDPE	51.92'	2.00%
SD-MA1-4	18" HDPE	248.63'	1.84%
SD-MA1-5	18" HDPE	123.83'	1.00%
SD-MA2-1	24" HDPE	30.13'	3.85%
SD-MA2-2	24" RCP	32.00'	4.00%
SD-MA2-3	24" HDPE	24.00'	4.50%
SD-MA3-1	18" HDPE	33.45'	0.80%
SD-MA3-2	18" HDPE	89.70'	0.80%
SD-MA3-3	18" HDPE	69.76'	1.00%
SD-MA3-4	18" HDPE	92.46'	1.00%
SD-MA3-5	18" RCP	96.66'	1.00%
SD-MA3-6	18" HDPE	150.46'	0.95%
SD-MA4-1	18" HDPE	124.00'	0.50%
SD-MA4-2	18" RCP	32.00'	0.50%
SD-MA4-3	18" HDPE	120.00'	2.00%
SD-MA5-1	18" HDPE	63.60'	0.50%
SD-MA5-2	18" HDPE	20.00'	1.00%
SD-MA6-1	24" HDPE	23.47'	4.26%
SD-MA7-1	18" HDPE	27.23'	0.50%
SD-MA7-2	18" HDPE	105.63'	0.50%
SD-MA7-3	18" RCP	32.00'	0.50%
SD-MA7-4	18" HDPE	124.00'	0.50%
SD-MA8-1	18" HDPE	16.37'	0.50%
SD-MA8-2	18" HDPE	74.17'	0.50%
SD-MA8-3	18" RCP	32.00'	0.50%

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BY | DESCRIPTION | DATE | REV.

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER TABLES

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
JOE HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.04

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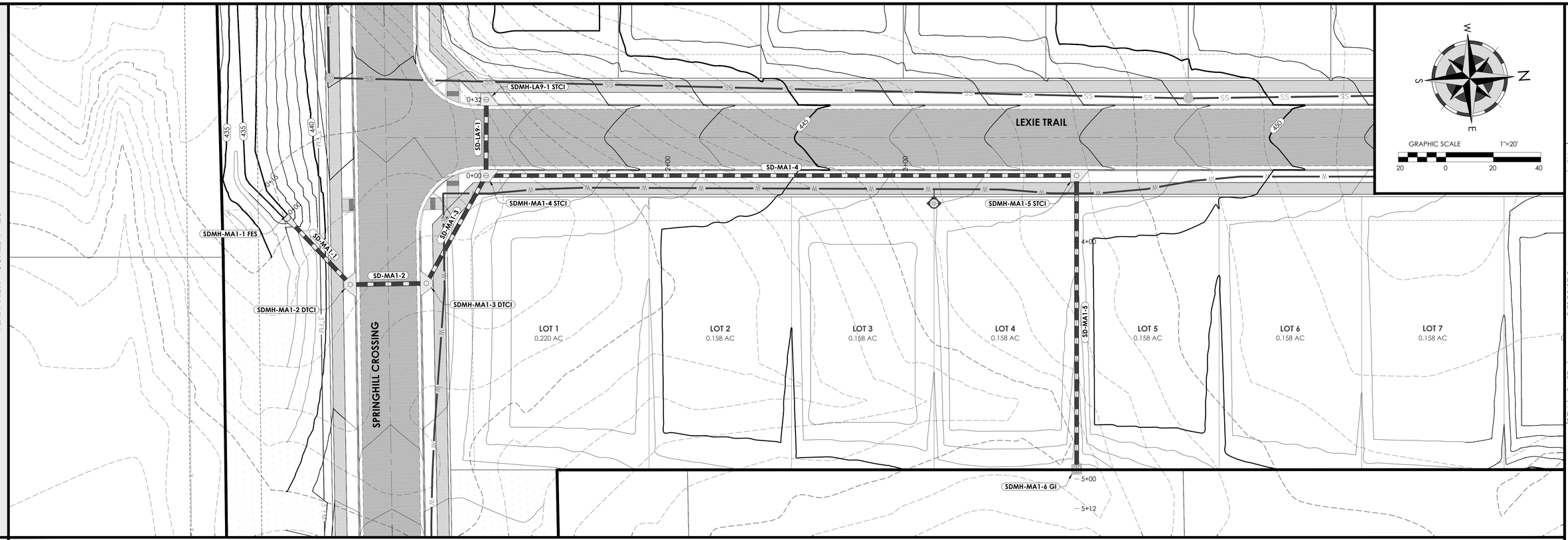
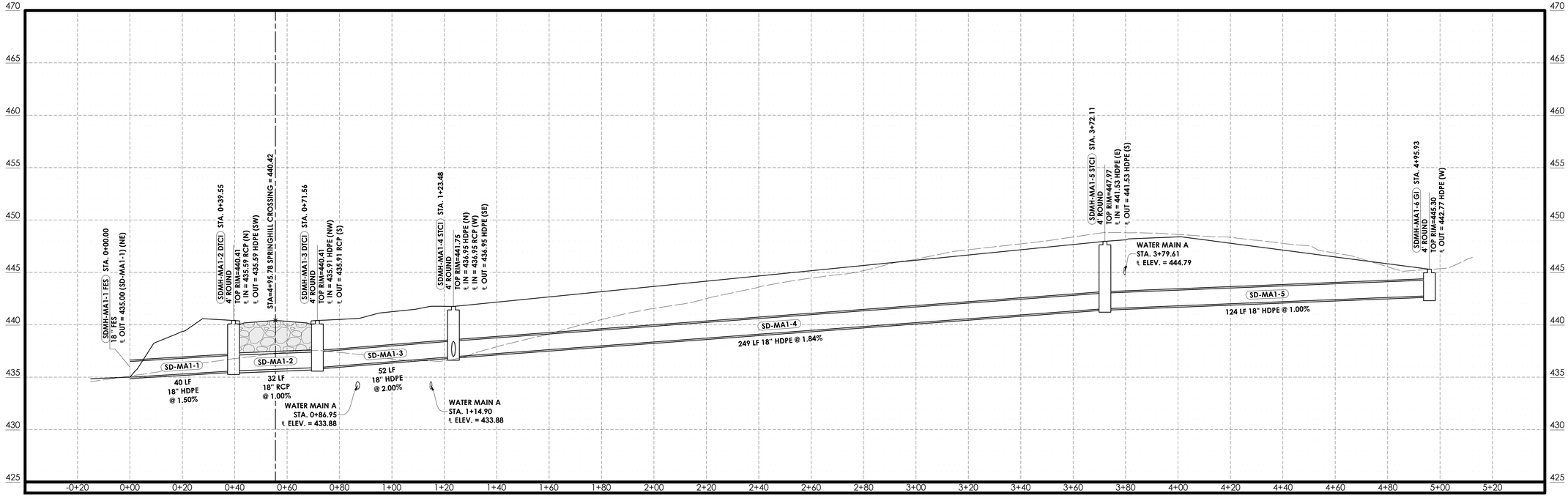


PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

STORM SEWER MAIN 1
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P MAIN 1

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES 6/30

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.05

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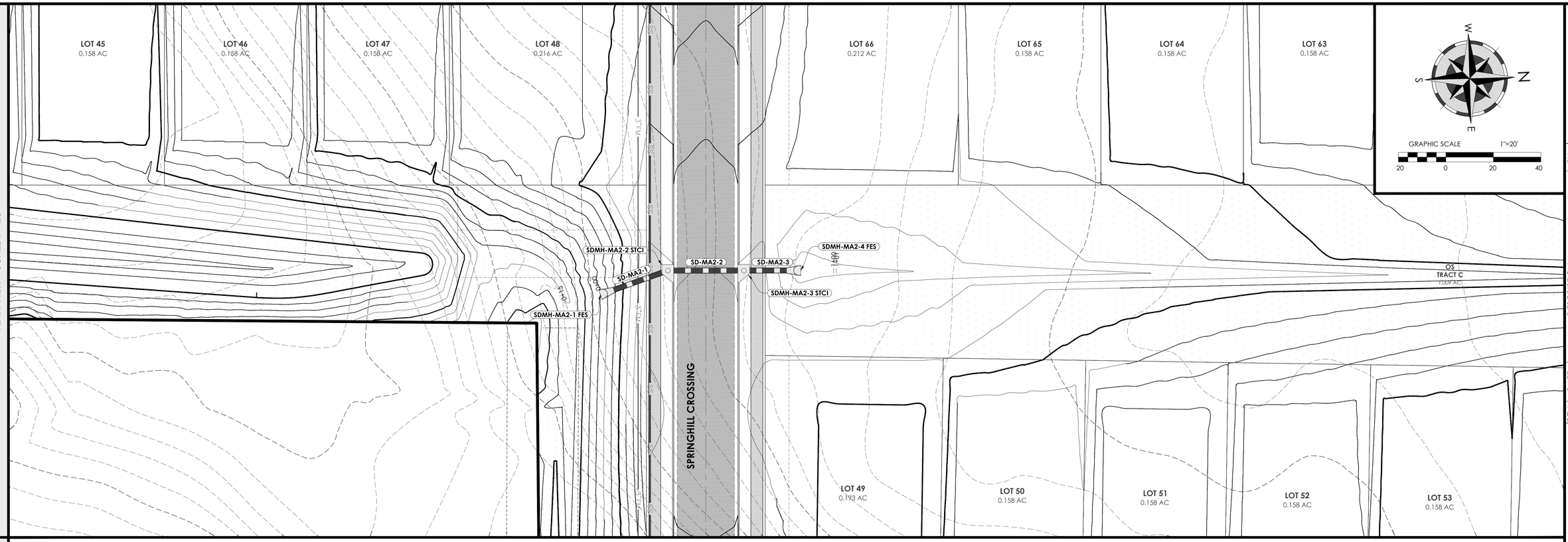

PROFILE VIEW - SCALE 1"=20'

PROPOSED
EXISTING

STORM SEWER MAIN 2
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P MAIN 2

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS ENGINEERING EXPIRES 12/31/27

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.06

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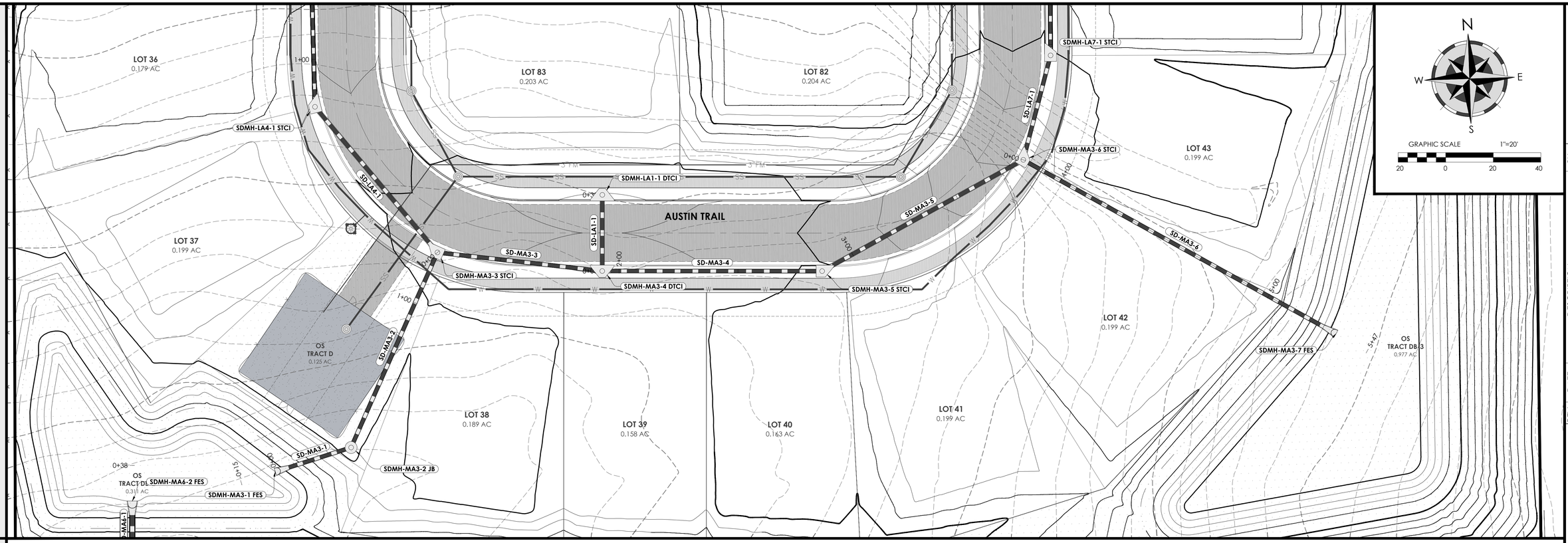
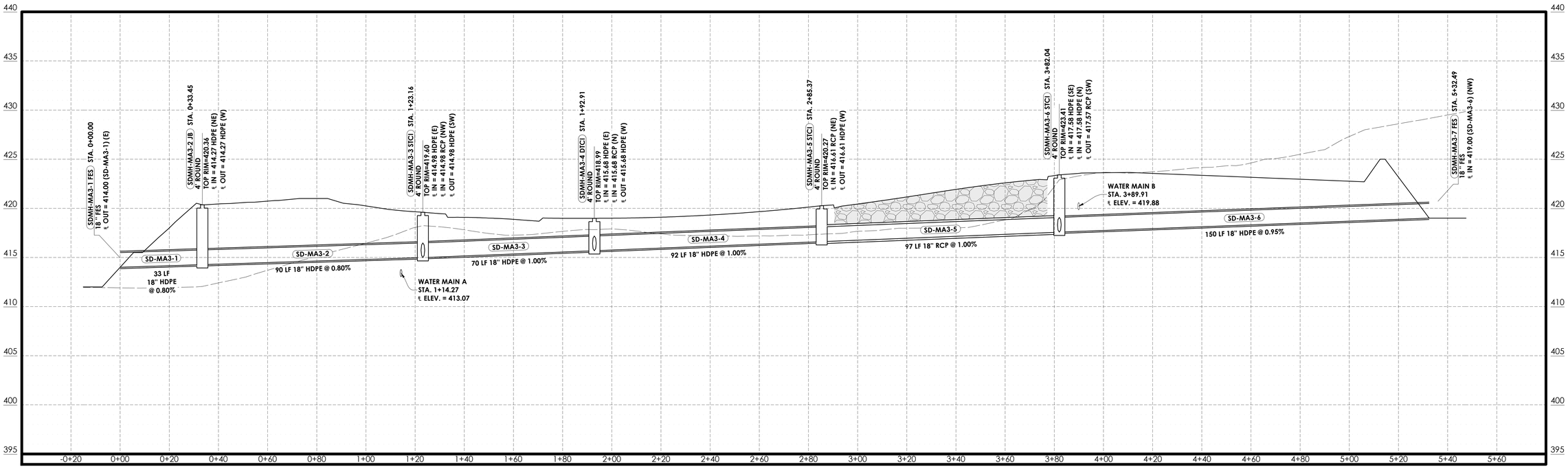


PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

STORM SEWER MAIN 3
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

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BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P MAIN 3

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES: 12/31/27

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.07

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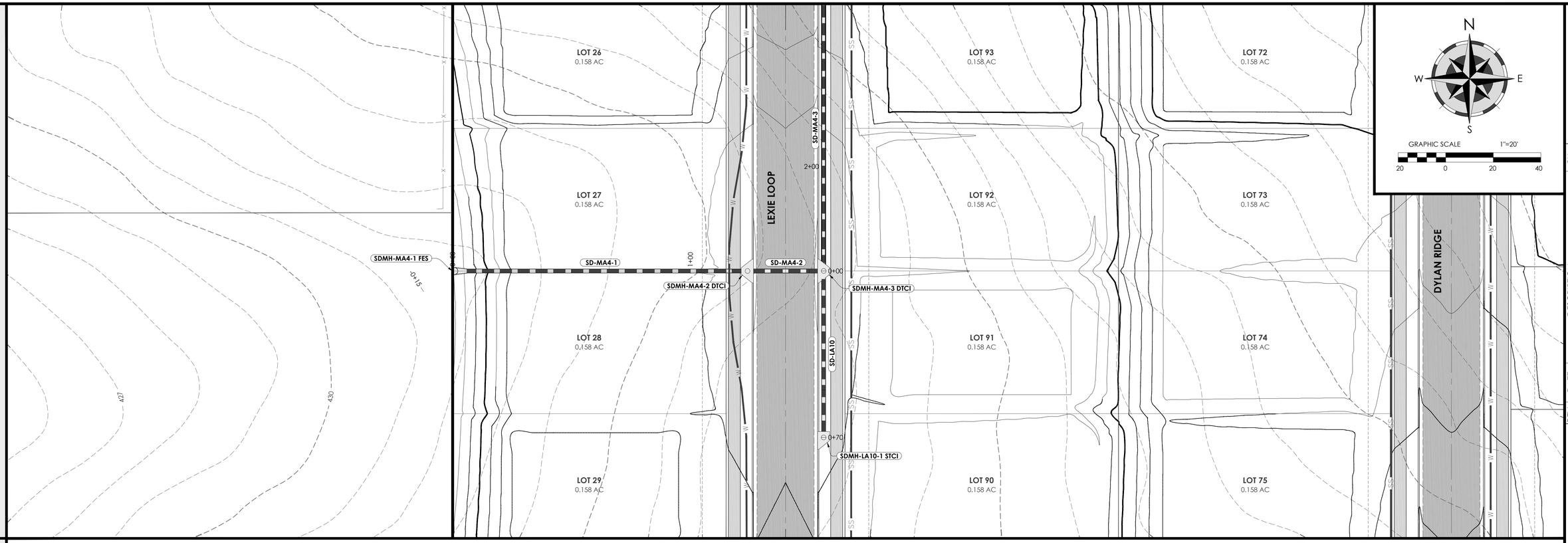

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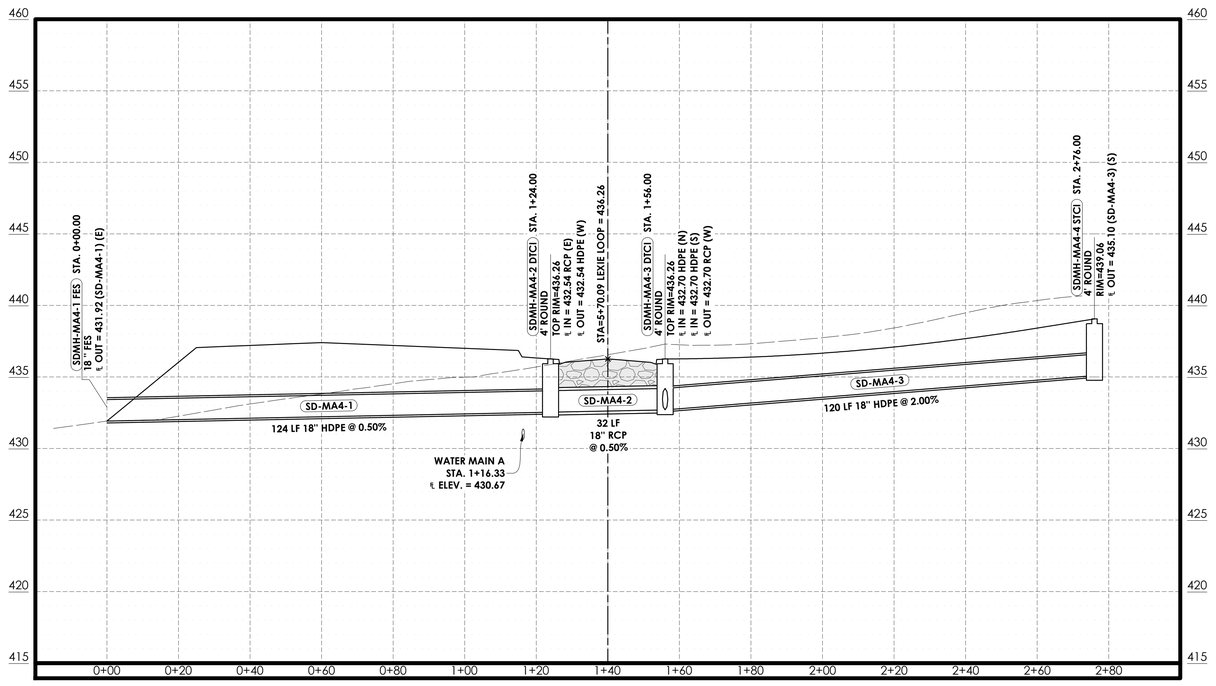

STORM SEWER MAIN 4
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P MAIN 4

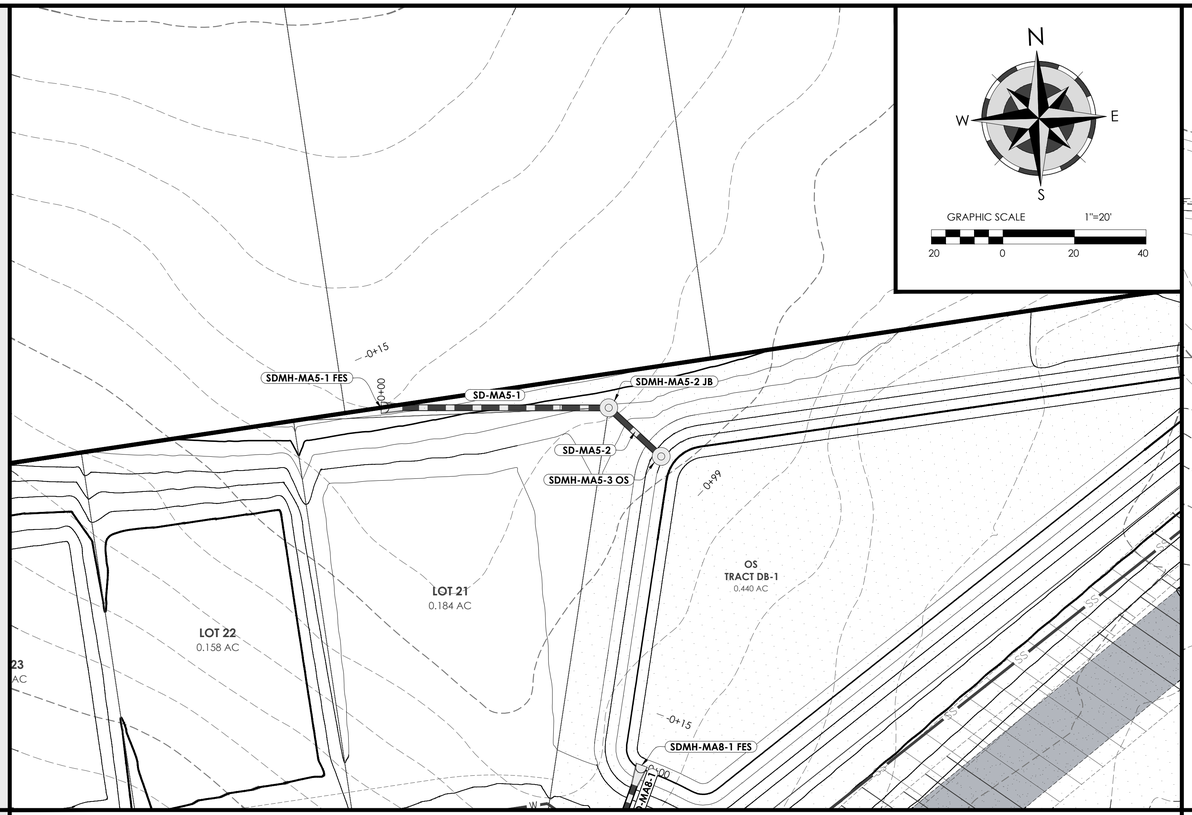
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

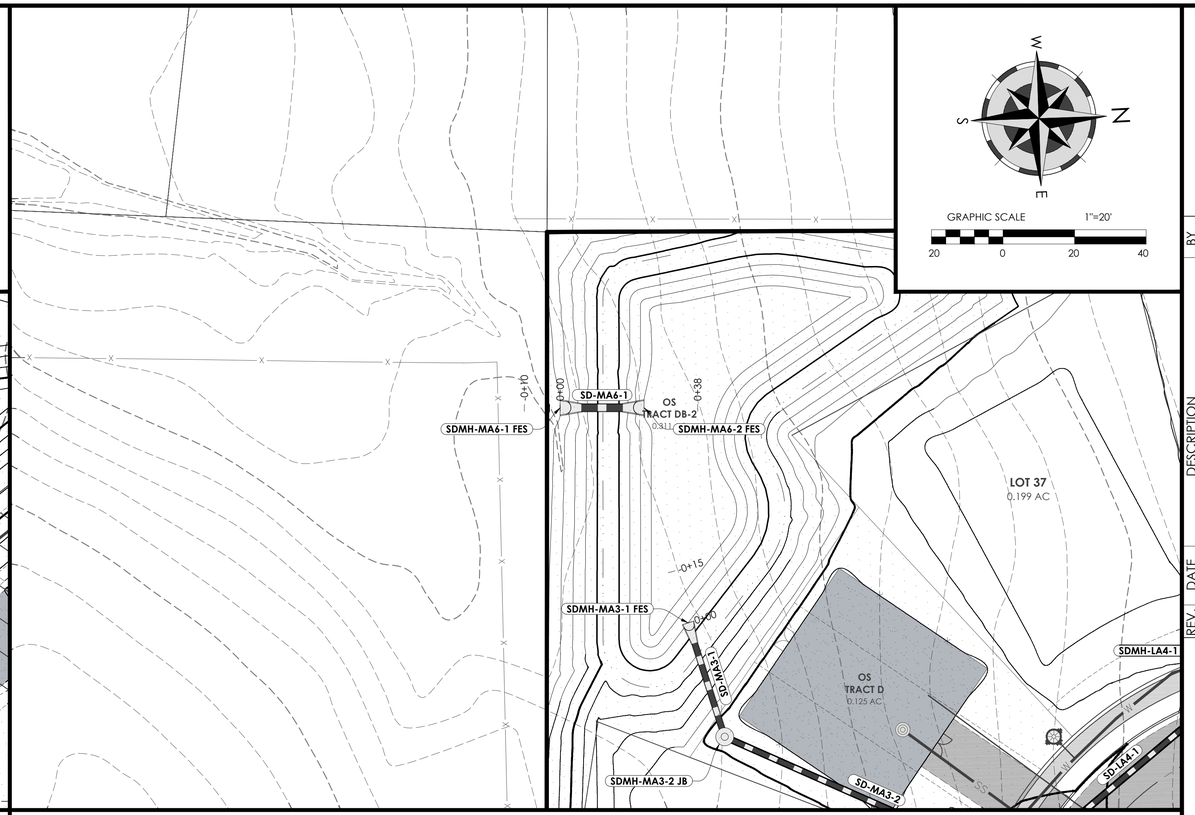
CERTIFICATE OF AUTHORIZATION
Holloway
Engineering, Surveying
& Civil Design, PLLC
#1879
STATE OF ARKANSAS

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

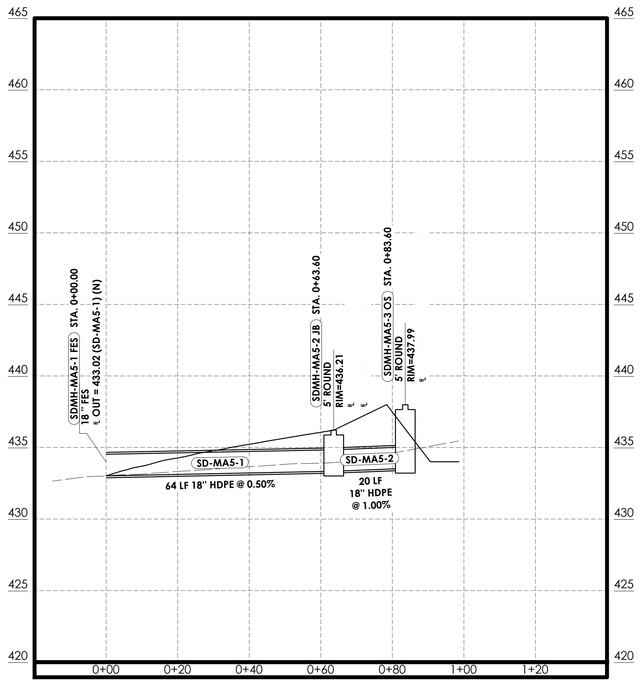
C2.08

PLAN VIEW - SCALE 1"=20'





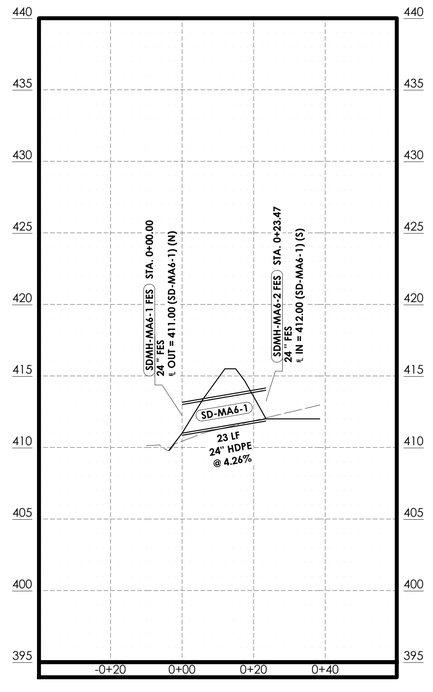
PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

STORM SEWER MAIN 5
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)



PROPOSED
EXISTING

STORM SEWER MAIN 6
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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STORM SEWER P&P MAINS 5 & 6

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

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#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.09

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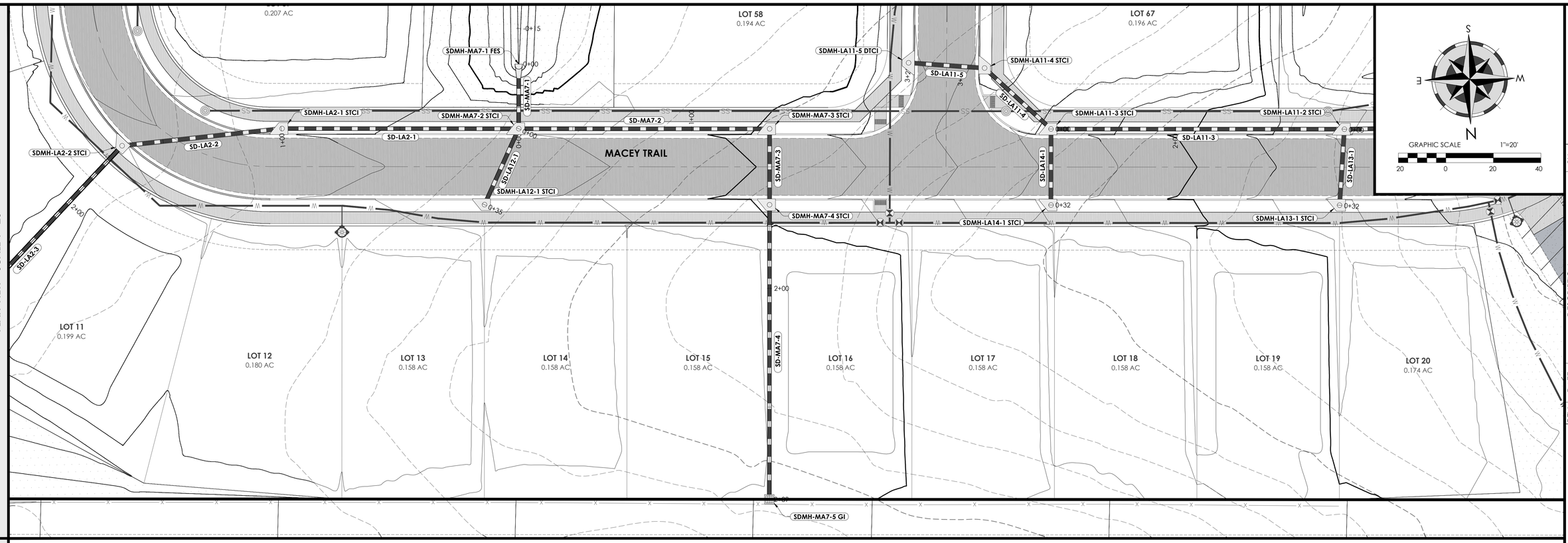
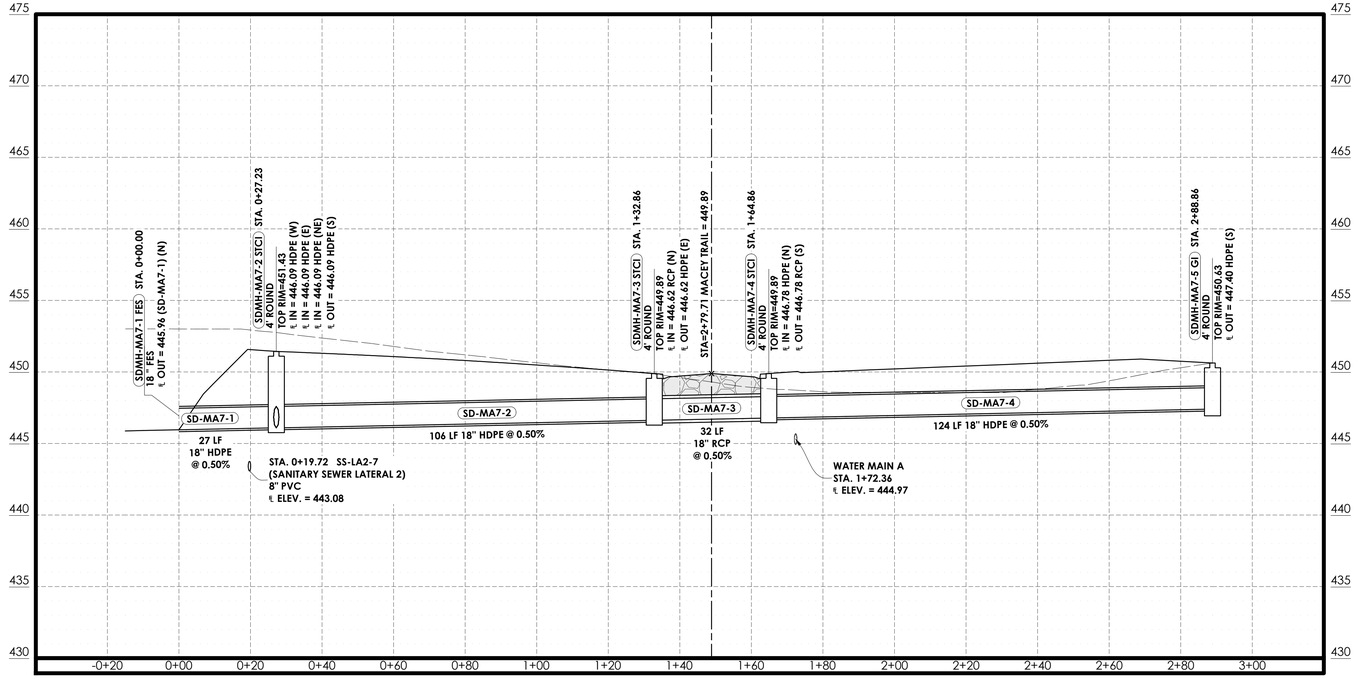


PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

STORM SEWER MAIN 7
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN. 95% COMPACTION (TYP.)

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BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P MAIN 7

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

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ARKANSAS ENGINEER

JOB NO.: 2026-071
DATE: 10/9/26
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C2.10

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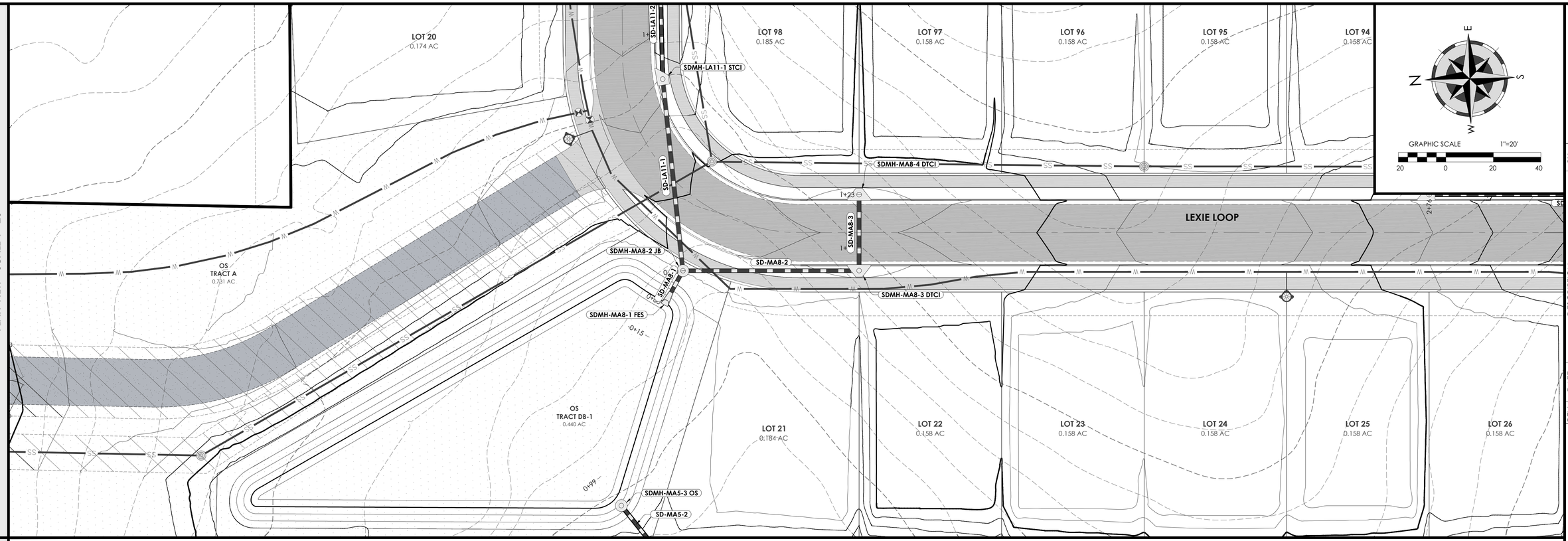
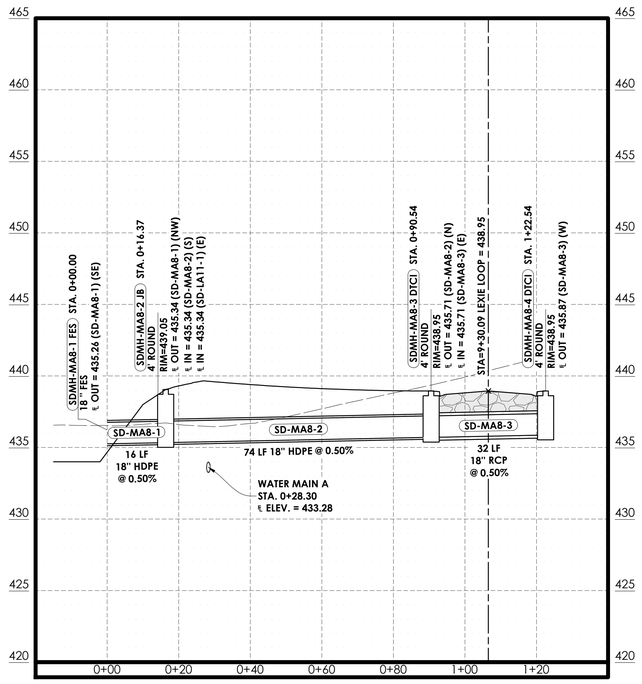


PROFILE VIEW - SCALE 1"=20'



STORM SEWER MAIN 8
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P MAIN 8

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES 12/31/27

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.11

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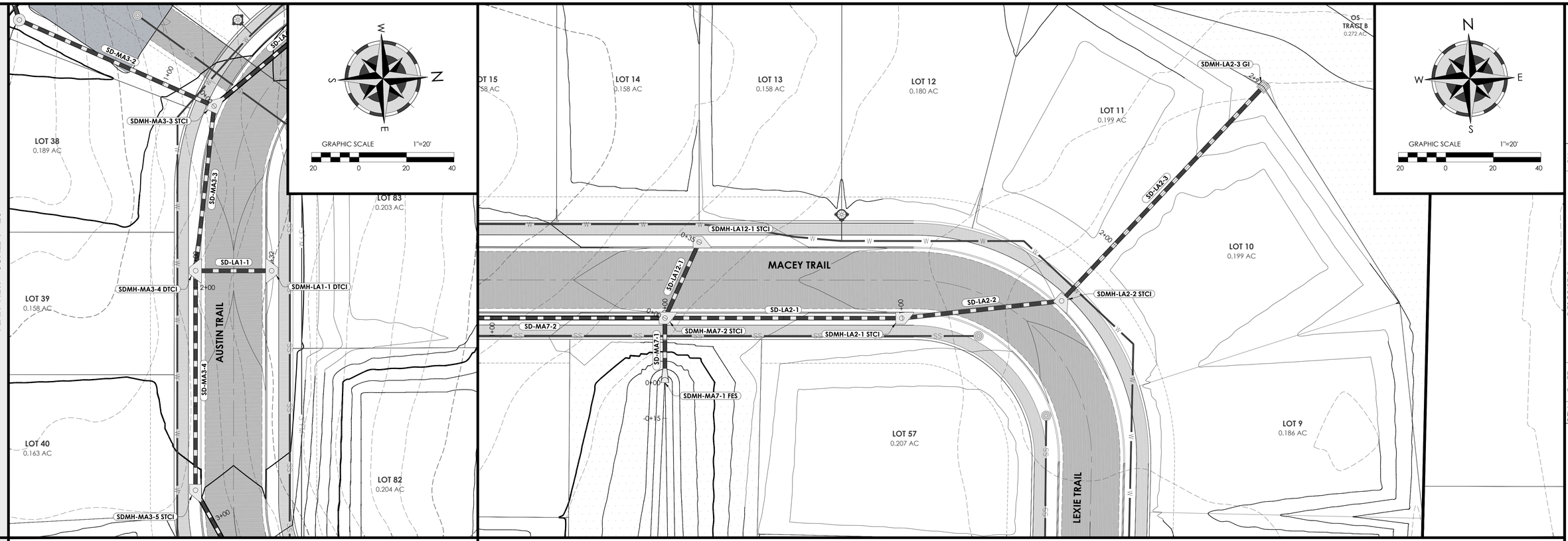

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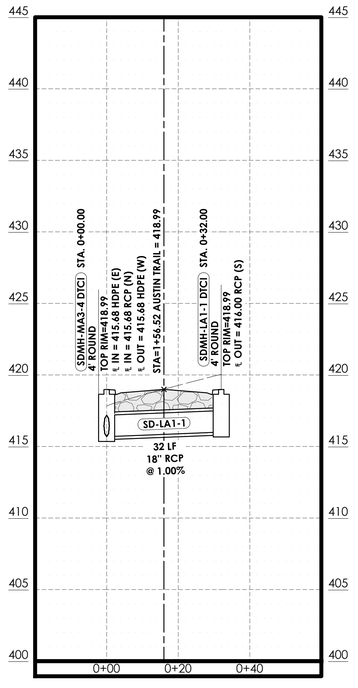
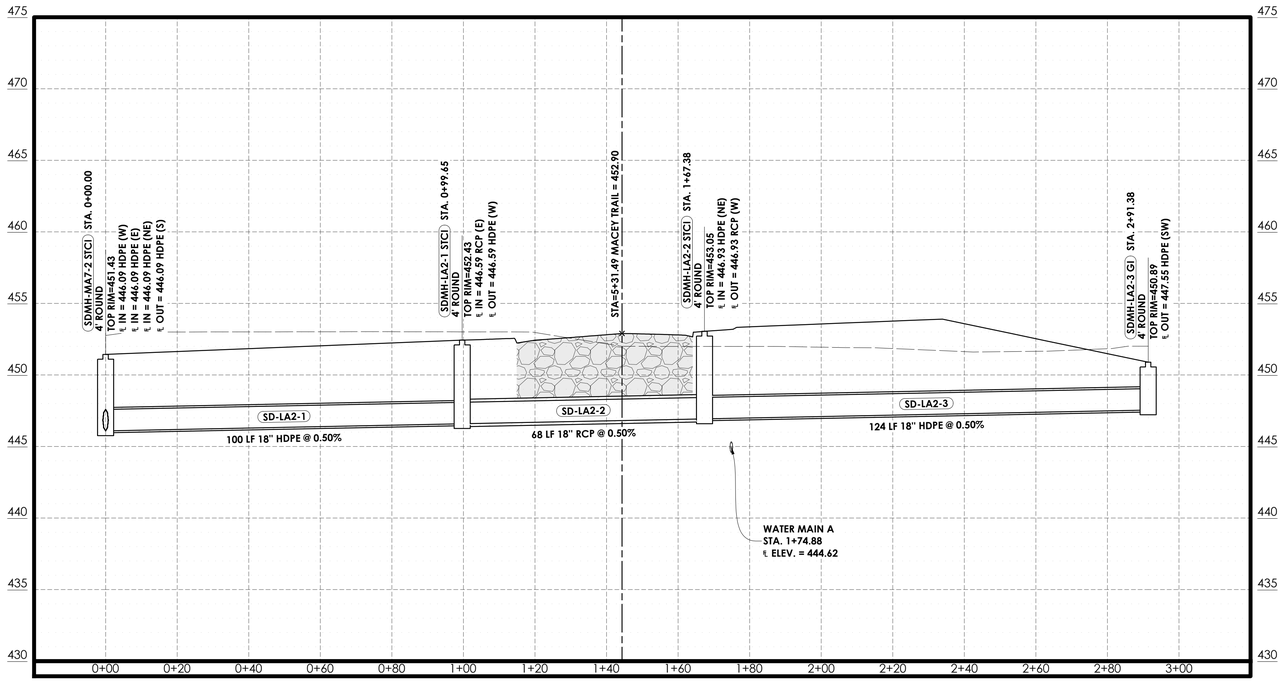


PROPOSED
EXISTING

STORM SEWER LATERAL 1
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)



PROPOSED
EXISTING

STORM SEWER LATERAL 2
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

Holloway Engineering,
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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P LATERALS 1 & 2

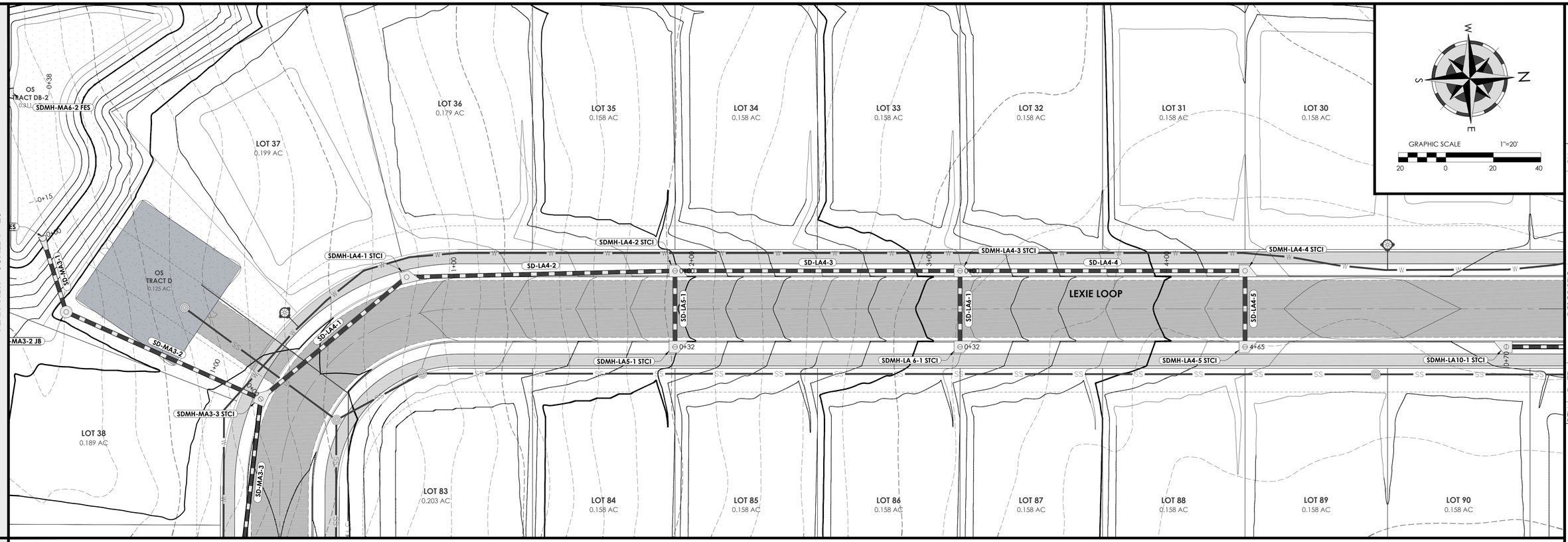
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

STATE OF ARKANSAS
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
CERTIFICATE OF AUTHORIZATION EXPIRES AS - ENGINEERING

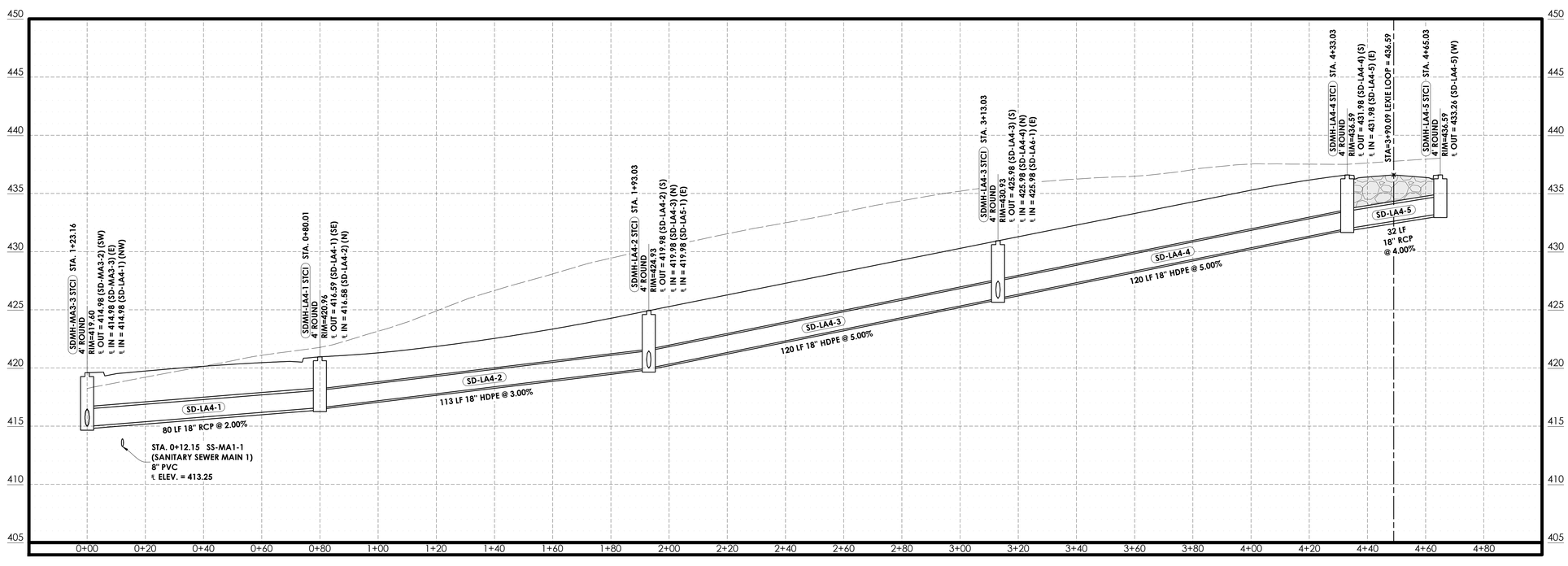
JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.12

PLAN VIEW - SCALE 1"=20'



PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

STORM SEWER LATERAL 4
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

Holloway Engineering,
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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P LATERAL 4

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES: JUNE 30, 2027

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.13

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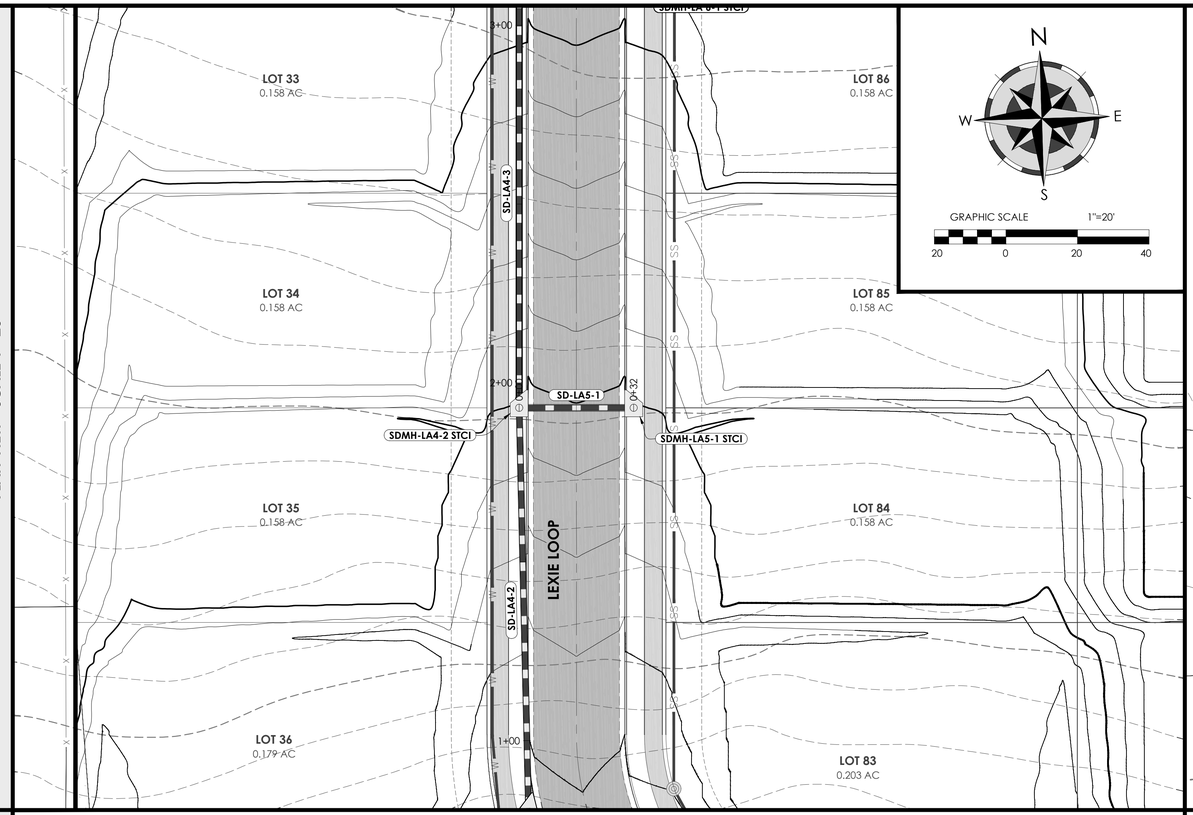
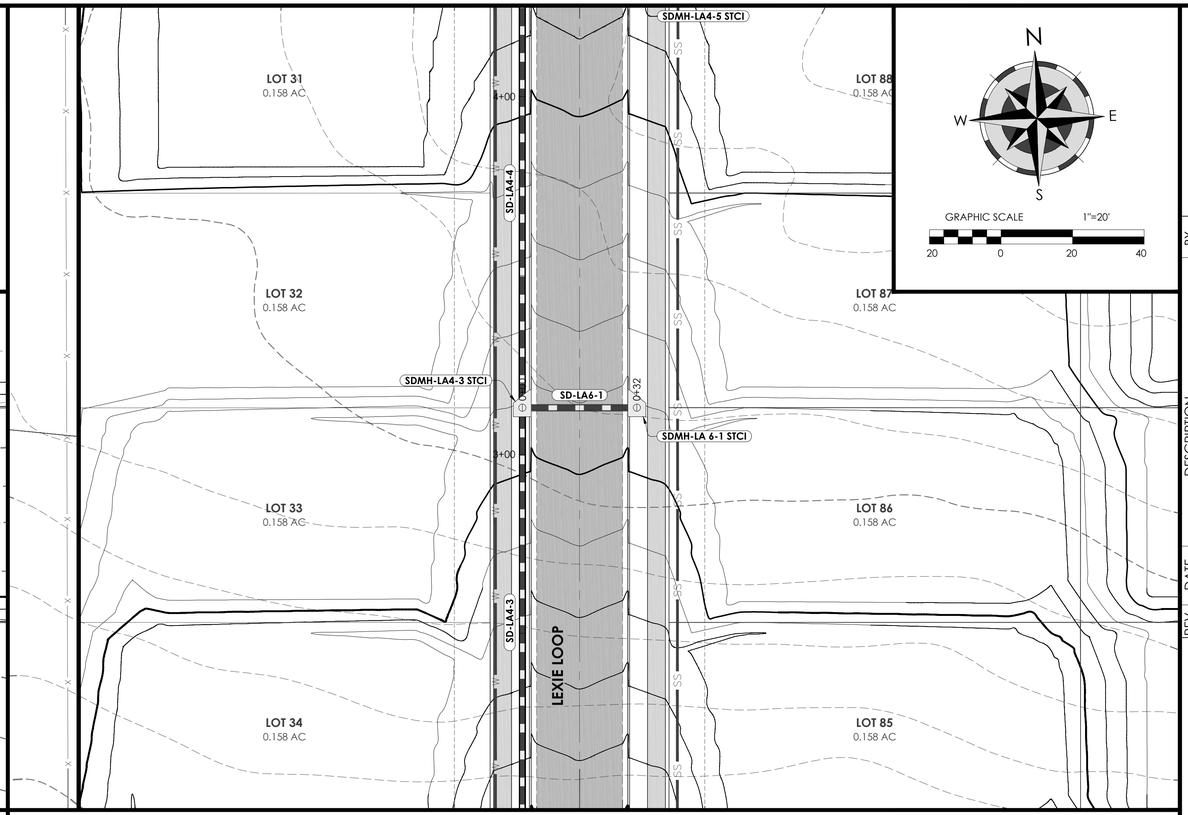
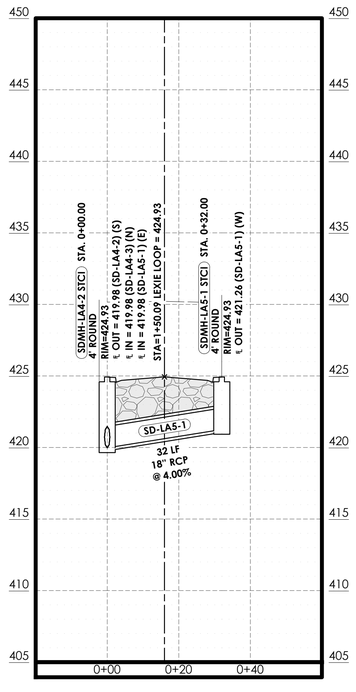
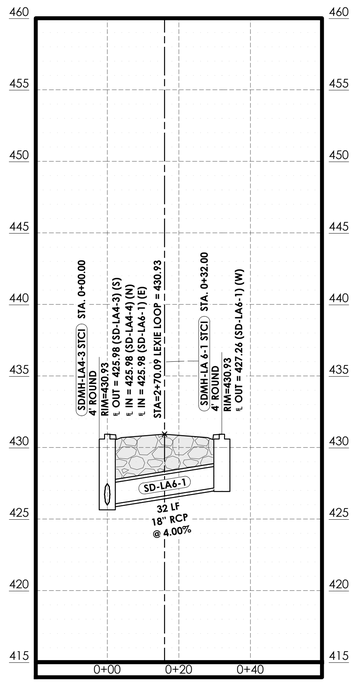




PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING
STORM SEWER LATERAL 5
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'
CLASS 7 BACKFILL MIN. 95% COMPACTION (TYP.)



PROPOSED
EXISTING
STORM SEWER LATERAL 6
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'
CLASS 7 BACKFILL MIN. 95% COMPACTION (TYP.)

Holloway Engineering, Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P LATERALS 5 & 6

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
CERTIFICATE OF AUTHORIZATION EXPIRES 6/30/2027
ARKANSAS AS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.14

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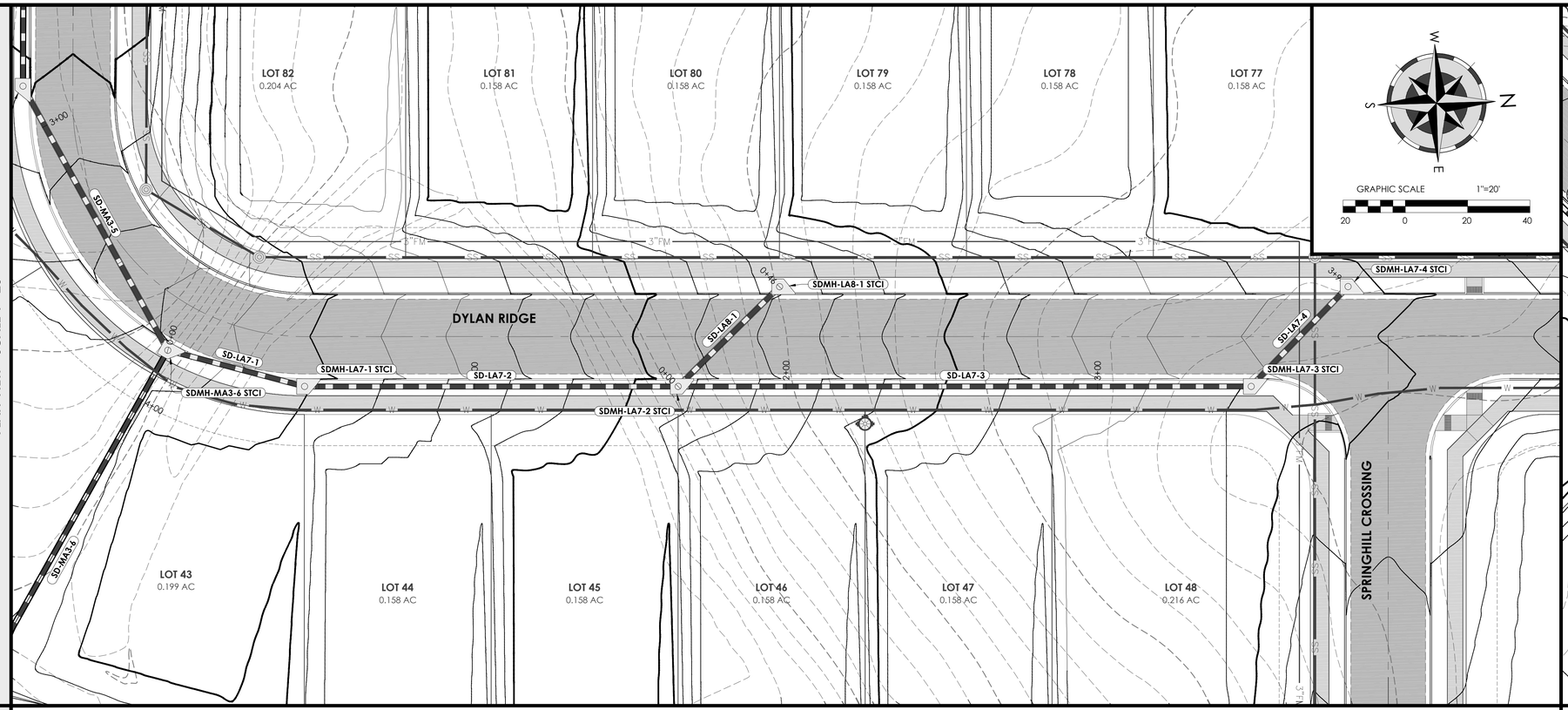
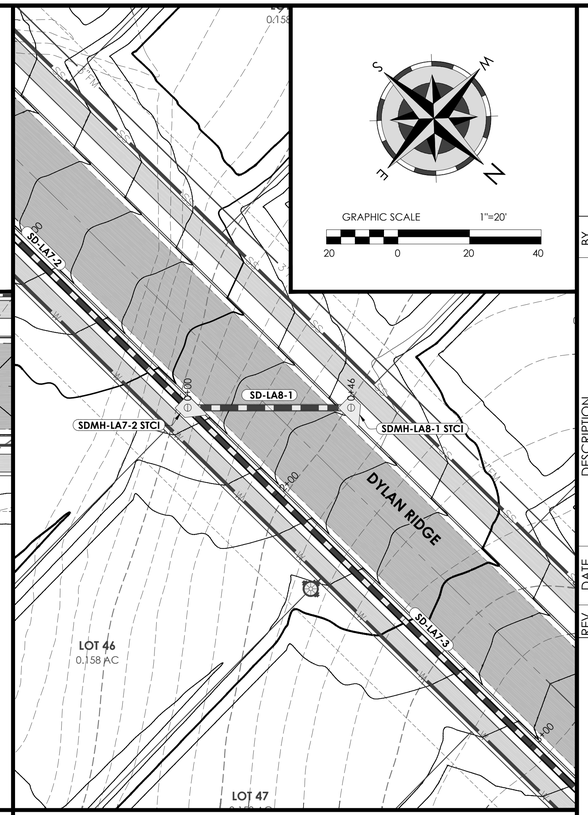
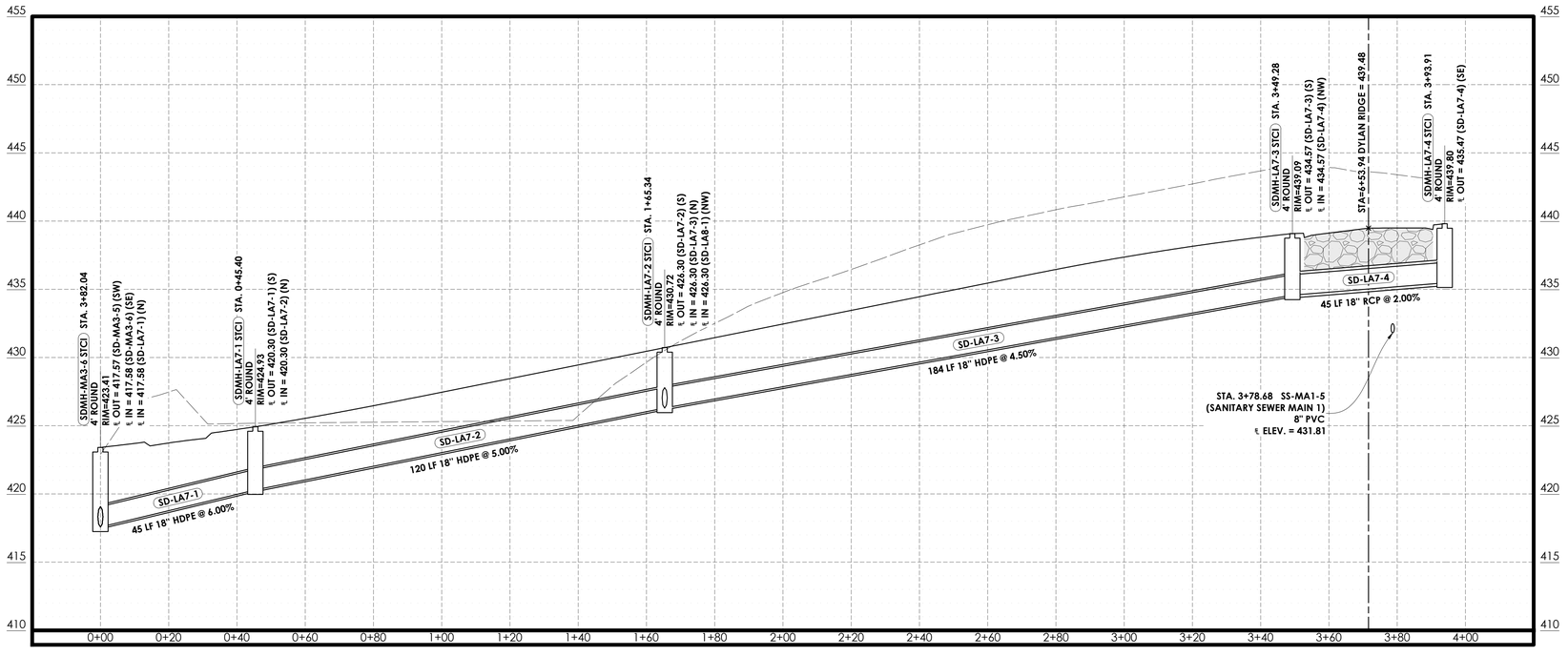
PLAN VIEW - SCALE 1"=20'





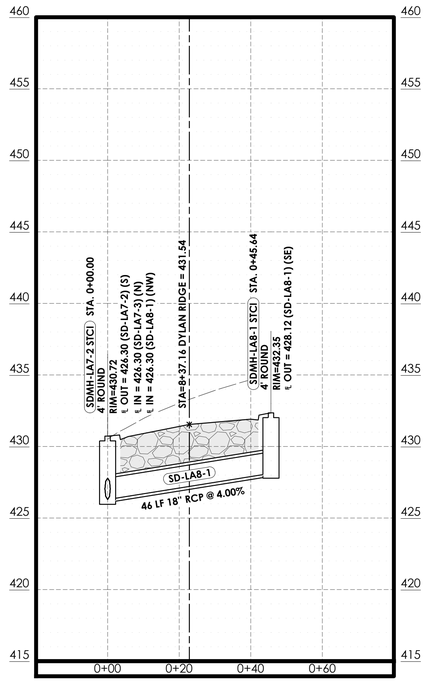
PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

STORM SEWER LATERAL 7
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)



PROPOSED
EXISTING

STORM SEWER LATERAL 8
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

Holloway Engineering,
Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P LATERALS 7 & 8

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.15

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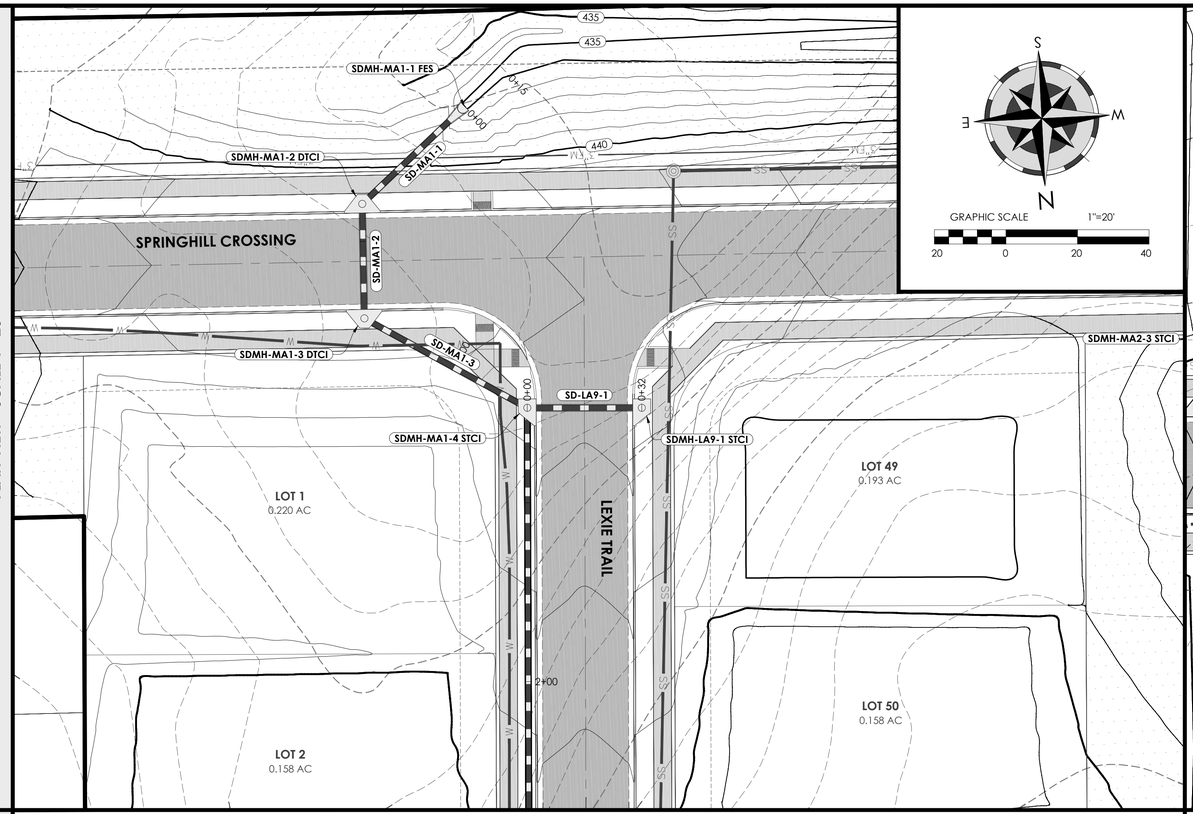
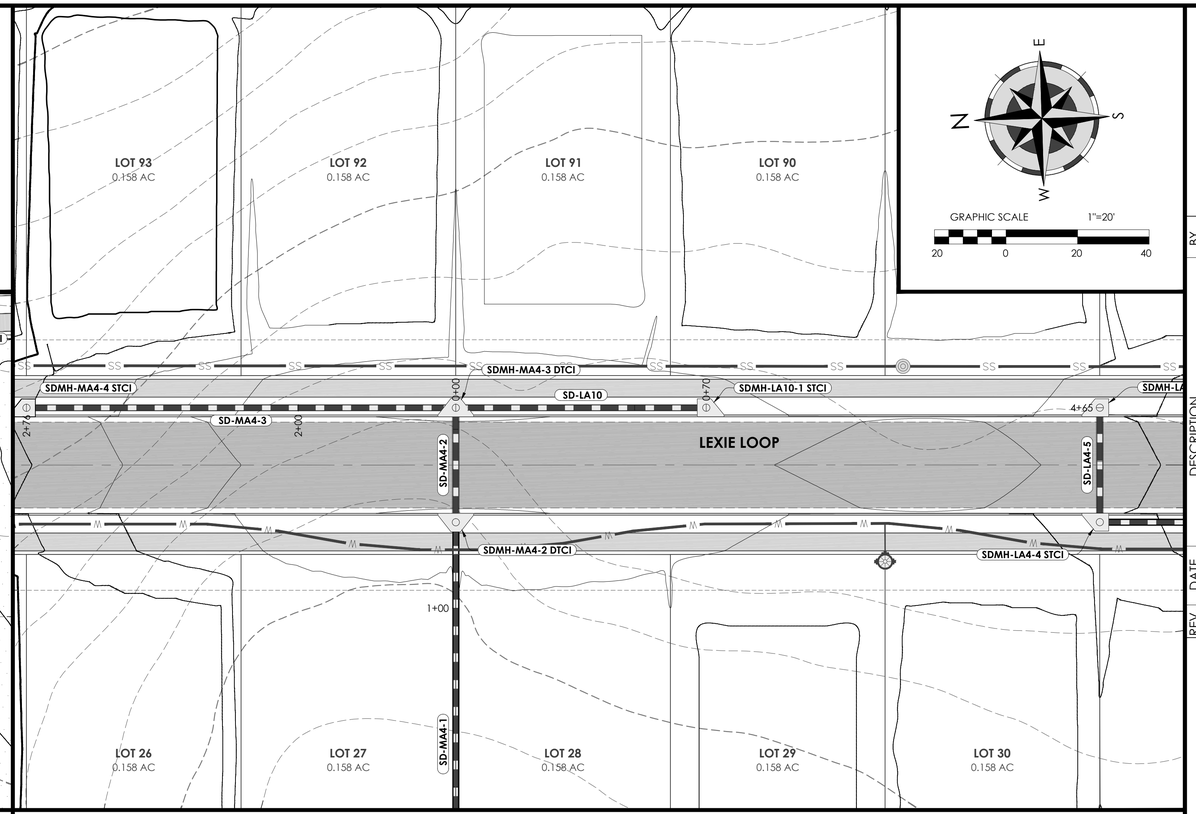
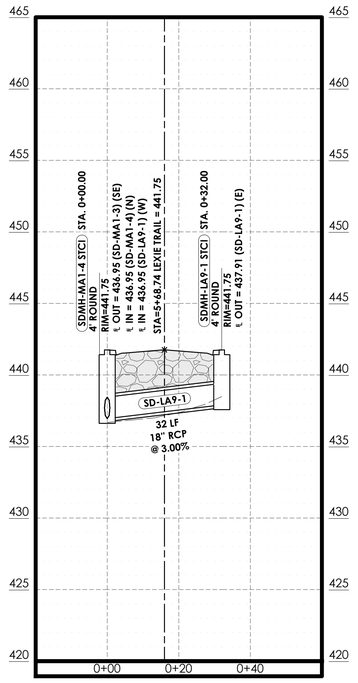
PLAN VIEW - SCALE 1"=20'





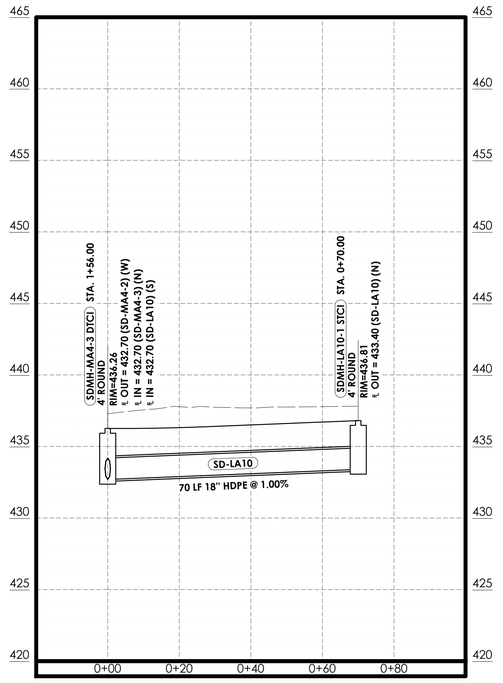
PROFILE VIEW - SCALE 1"=20'



PROPOSED — EXISTING

STORM SEWER LATERAL 9
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN. 95% COMPACTION (TYP.)



PROPOSED — EXISTING

STORM SEWER LATERAL 10
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P LATERALS 9 & 10

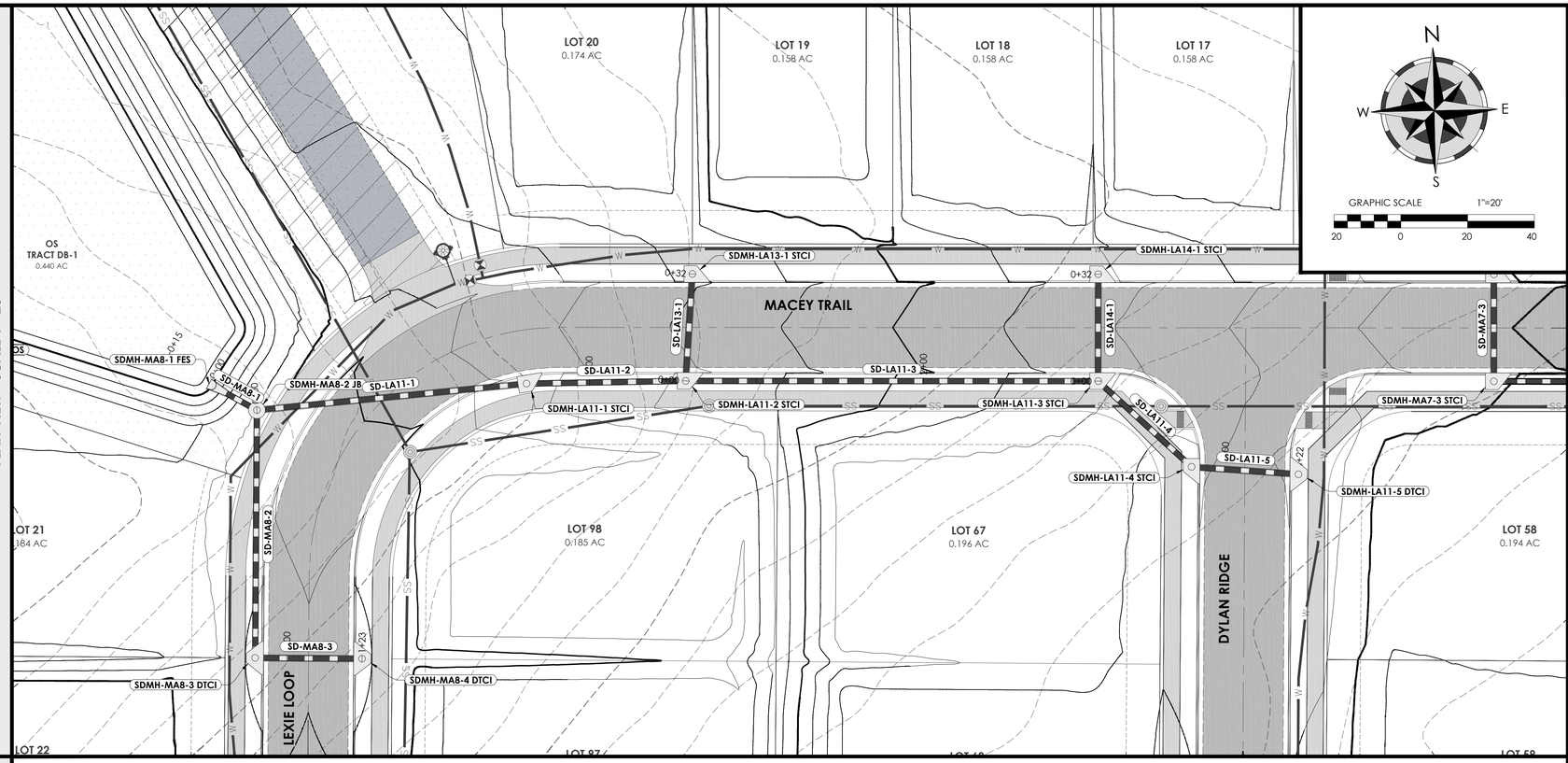
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

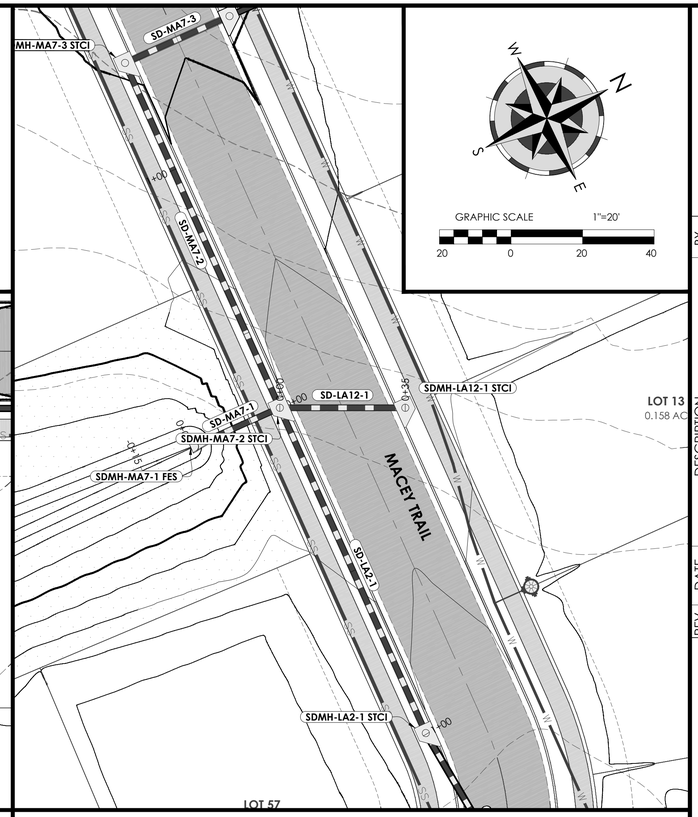
CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

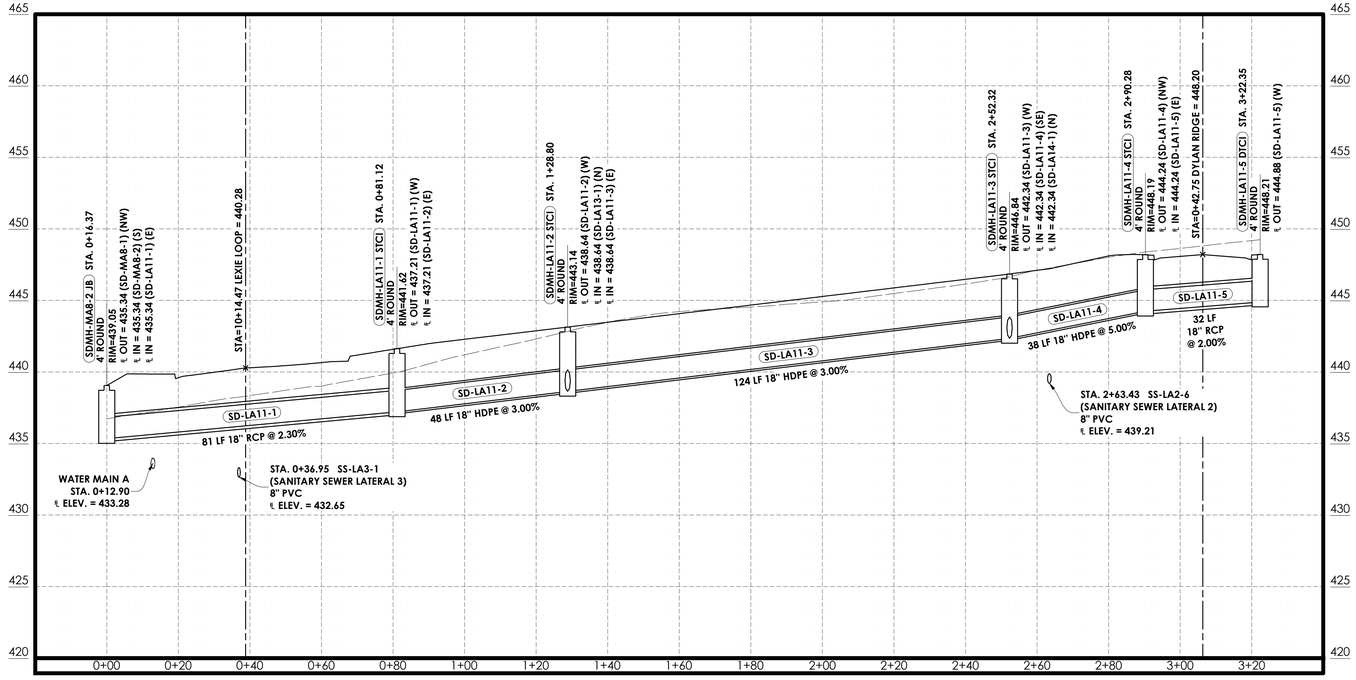
C2.16

PLAN VIEW - SCALE 1"=20'





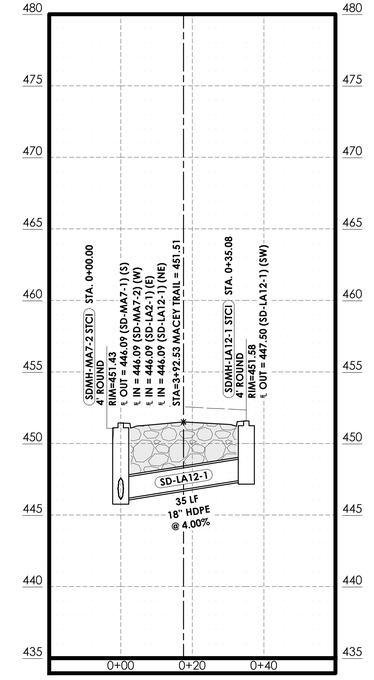
PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

STORM SEWER LATERAL 11
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)



PROPOSED
EXISTING

STORM SEWER LATERAL 12
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

Holloway Engineering, Surveying & Civil Design

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Maumelle, AR 72113
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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P LATERALS 11 & 12

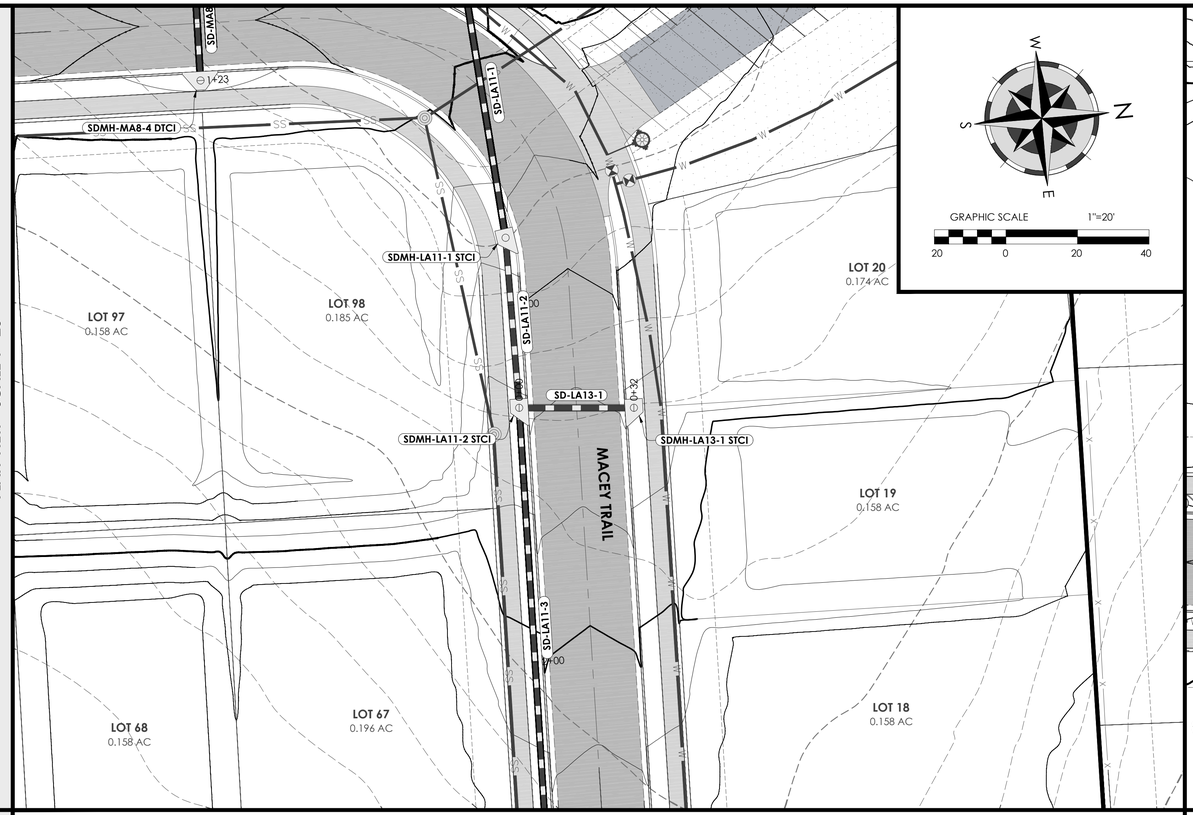
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

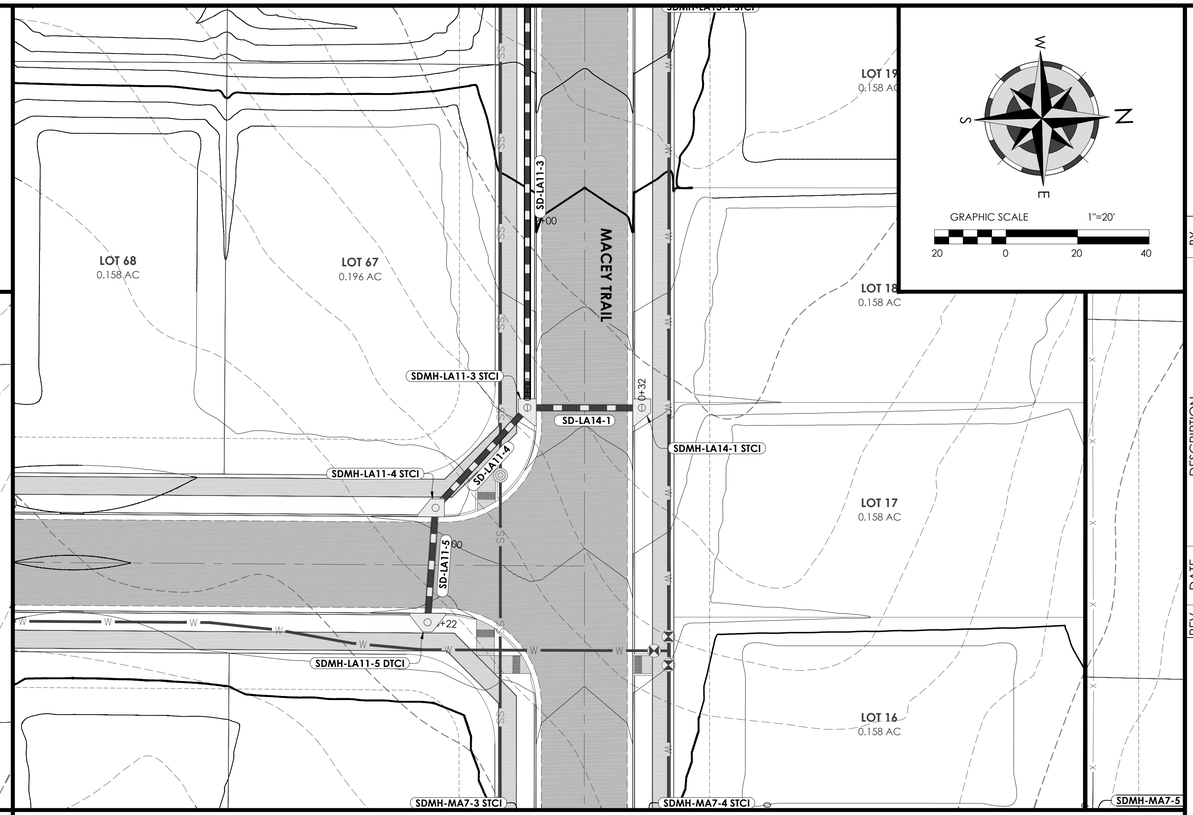
CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES: 12/31/2027

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

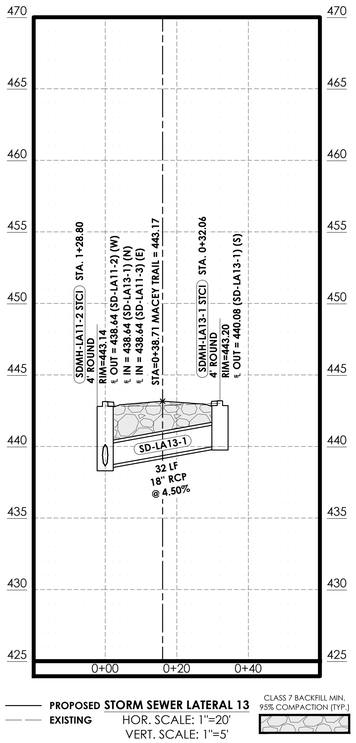
C2.17

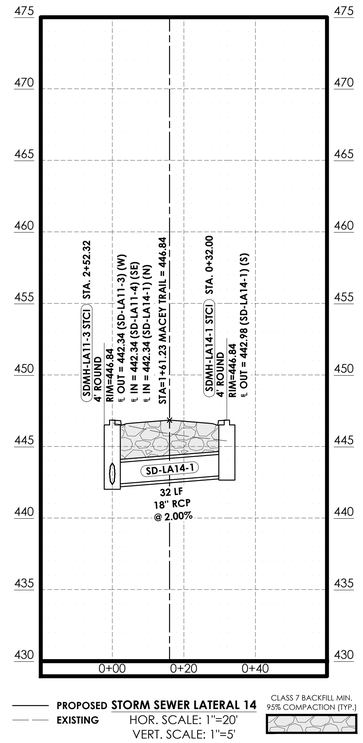
PLAN VIEW - SCALE 1"=20'





PROFILE VIEW - SCALE 1"=20'





Holloway Engineering, Surveying & Civil Design

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(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

STORM SEWER P&P LATERALS 13 & 14

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18998
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS REGISTERED ENGINEERING CORPORATION

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.18

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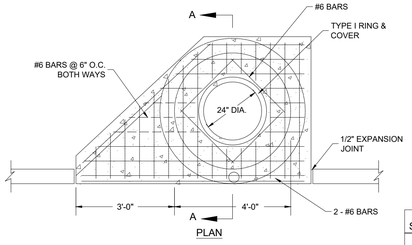
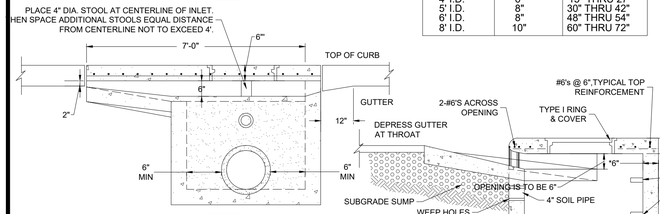
GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MINIMUM 1" COVER.
4. ALL WORK SHALL COMPLY WITH SECTION 609 OF THE AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.
5. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
6. 4" DIAMETER COLUMNS SPACED AT MAX 4'0-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION SUPPORT TOP.
7. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
8. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. ALTERNATE DROP INLET DESIGNS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 3-1/2"X1-1/2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. HEAVY DUTY RING AND COVER SHALL BE USED WHEN INLET IS LOCATED WITHIN A RADIUS. STANDARD DUTY ("NON-TRAFFIC" RATED) RING AND COVER MAY BE USED IN OTHER AREAS OUTSIDE OF ROADWAY.
14. HEAVY DUTY RING AND COVER TO BE EAST JORDAN V-1600-2 & 1346A OR APPROVED EQUAL.
15. STANDARD DUTY RING AND COVER TO BE EAST JORDAN V-1865 MANHOLE ASSEMBLY OR APPROVED EQUAL.



PLAN

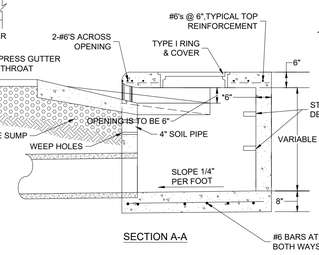
*DIA. OF STRUCTURE	WALL THICKNESS	DIA. OF OUTLET PIPE
4' I.D.	6"	15" THRU 27"
5' I.D.	8"	30" THRU 42"
6' I.D.	8"	48" THRU 54"
8' I.D.	10"	60" THRU 72"



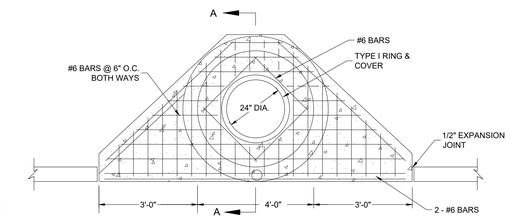
SECTION

NOTE:
TYPE II RING & COVER REQUIRED WHEN SUBJECTED TO TRAFFIC.

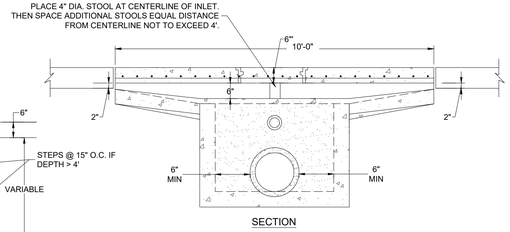
SINGLE THROAT CURB INLET



SECTION A-A



PLAN

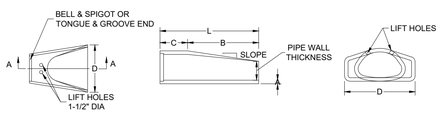


SECTION

NOTE:
TYPE II RING & COVER REQUIRED WHEN SUBJECTED TO TRAFFIC.

DOUBLE THROAT CURB INLET

C-1
C1.50 N.T.S.



PLAN

SECTION A-A

ARCH FLARED END SECTION DIMENSIONS

EQUIV. SIZE	SPAN-RISE (NOMINAL)	METRIC EQUIV.	WALL THICK.	WT. LBS/SEC	SLOPE	A IN.	B IN.	C IN.	D IN.	L IN.
18"	22X13	560X345	2-1/2	1,050	3:1	7	27	45	36	72
24"	29X18	725X460	3	1,580	3:1	8	39	33	48	72
30"	36X23	920X570	3-1/2	2,250	3:1	10	48	24	60	72
36"	44X27	1110X675	4	3,900	3:1	10	60	36	72	96
42"	51X31	1300X795	4-1/2	5,420	3:1	15	60	36	78	96
48"	58X36	1485X915	5	6,540	3:1	21	60	36	84	96
54"	65X40	1650X1015	5-1/2	7,640	3:1	25	60	36	90	96
60"	73X45	1855X1145	6	9,510	3:1	26	75	21	96	96
72"	88X54	2235X1370	7	14,840	3:1	35	78	22	120	100

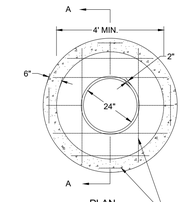
ROUND FLARED END SECTION DIMENSIONS

PIPE DIA.	METRIC EQUIV.	WALL THICK.	WT. LBS./SEC	SLOPE	A IN.	B IN.	C IN.	D IN.	L IN.
15"	375	2-1/4	1000	3:1	6	27	46	32	73
18"	450	2-1/2	1180	3:1	9	27	46	36	73
24"	600	3	1666	3:1	10	44	30	48	74
30"	750	3-1/2	1960	3:1	12	54	20	60	74
36"	900	4	4430	3:1	15	63	35	72	98
42"	1050	4-1/2	5630	3:1	21	63	35	78	98
48"	1200	5	6870	3:1	24	72	26	84	98
54"	1350	5-1/2	8320	3:1	28	78	22	90	100
60"	1500	6	10,660	3:1	34	78	22	96	100
66"	1650	6-1/2	12,700	3:1	40	78	22	102	100
72"	1800	7	14,820	3:1	46	78	22	102	100

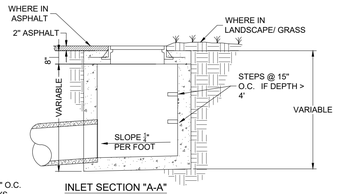
C-2
C1.50 N.T.S.

NOTE: RING AND COVER ARE 24" TRAFFIC RATED TYPE MATERIALS. PROJECTIONS THROUGH PAVEMENT SUCH AS MANHOLE RINGS, VALVE BOXES, ETC. ARE TO BE WRAPPED WITH EXP. JOINT MATERIAL TO PREVENT BOND WITH CONCRETE BOXES 4' DEEP OR GREATER ARE TO HAVE STANDARD MANHOLE STEPS.

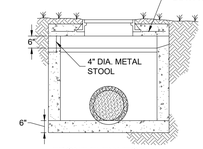
SEE PLANS FOR JUNCTION BOX LOCATION. WHEN IN LANDSCAPE BEDS OR GRASS AREAS ALLOW FOR 3" OF TOPSOIL AND SOD OR PLANT MATERIAL TO BE PLACED OVER THE BOX SO THAT MANHOLE LID IS VISIBLE BUT CONCRETE TOP IS NOT.



PLAN



INLET SECTION "A-A"



FRONT ELEVATION

*DIA. OF STRUCTURE	WALL THICKNESS	DIA. OF OUTLET PIPE
4' I.D.	6"	15" THRU 27"
5' I.D.	8"	30" THRU 42"
6' I.D.	8"	48" THRU 54"
8' I.D.	10"	60" THRU 72"

NOTE:
TYPE II RING & COVER REQUIRED WHEN SUBJECTED TO TRAFFIC.

C-3
C1.50 N.T.S.

Holloway Engineering, Surveying & Civil Design
200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

GRADING & DRAINAGE DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C2.50

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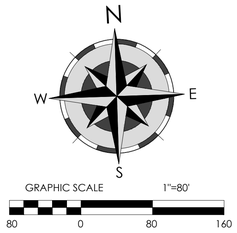
EROSION CONTROL LEGEND

SYMBOL	DESCRIPTION
SF	SILT FENCE
	CENTER DITCH & FLOW DIRECTION



SWPPP NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION BY CALLING ARKANSAS ONE-CALL AT 1-800-482-8998 OR 811.
2. WHEN SOIL IS EXPOSED FOR MORE THAN 14 DAYS WITH NO CONSTRUCTION ACTIVITY IMMINENT, THE SOIL SHALL BE STABILIZED WITH SEED AND MULCH.
3. ADDITIONAL EROSION CONTROL MEASURES SHALL BE EMPLOYED AS CONDITIONS WARRANT.
4. CONSTRUCTION EXITS SHALL BE MAINTAINED TO PREVENT THE TRACKING OR FLOW OF MUD AND DEBRIS ONTO PUBLIC RIGHT-OF-WAYS.
5. ALL EROSION CONTROL DEVICES MUST BE INSPECTED WEEKLY AND AFTER EVERY PRECIPITATION EVENT. THE DEVICES MUST BE REPAIRED OR REPLACED IF THEIR CONDITION WARRANTS IT. A RECORD OF ALL INSPECTIONS AND REPAIRS MUST BE KEPT ONSITE.
6. EROSION CONTROL DEVICES MUST REMAIN IN PLACE UNTIL ALL UPSTREAM GROUND HAS BEEN STABILIZED.
7. SEDIMENT MUST BE REMOVED FROM SILT FENCES, SEDIMENT TRAPS AND BASINS ONCE THE VOLUME OF SEDIMENT REACHES ONE HALF OR THE DEVICES' CAPACITY.
8. A CONCRETE WASH OUT AREA MUST BE PROVIDED BY THE CONTRACTOR IN ORDER TO ISOLATE THE WASHOUT FROM CONCRETE TRUCKS FROM INTERMINGLING WITH STORMWATER.
9. THE CONTRACTOR MUST STORE ALL ON-SITE FUELS AND HAZARDOUS MATERIALS SUCH THAT NO SPILL OF THE HAZARDOUS MATERIAL CAN CONTAMINATE STORMWATER RUNOFF, SURFACE OR GROUND WATER.

Holloway Engineering,
Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

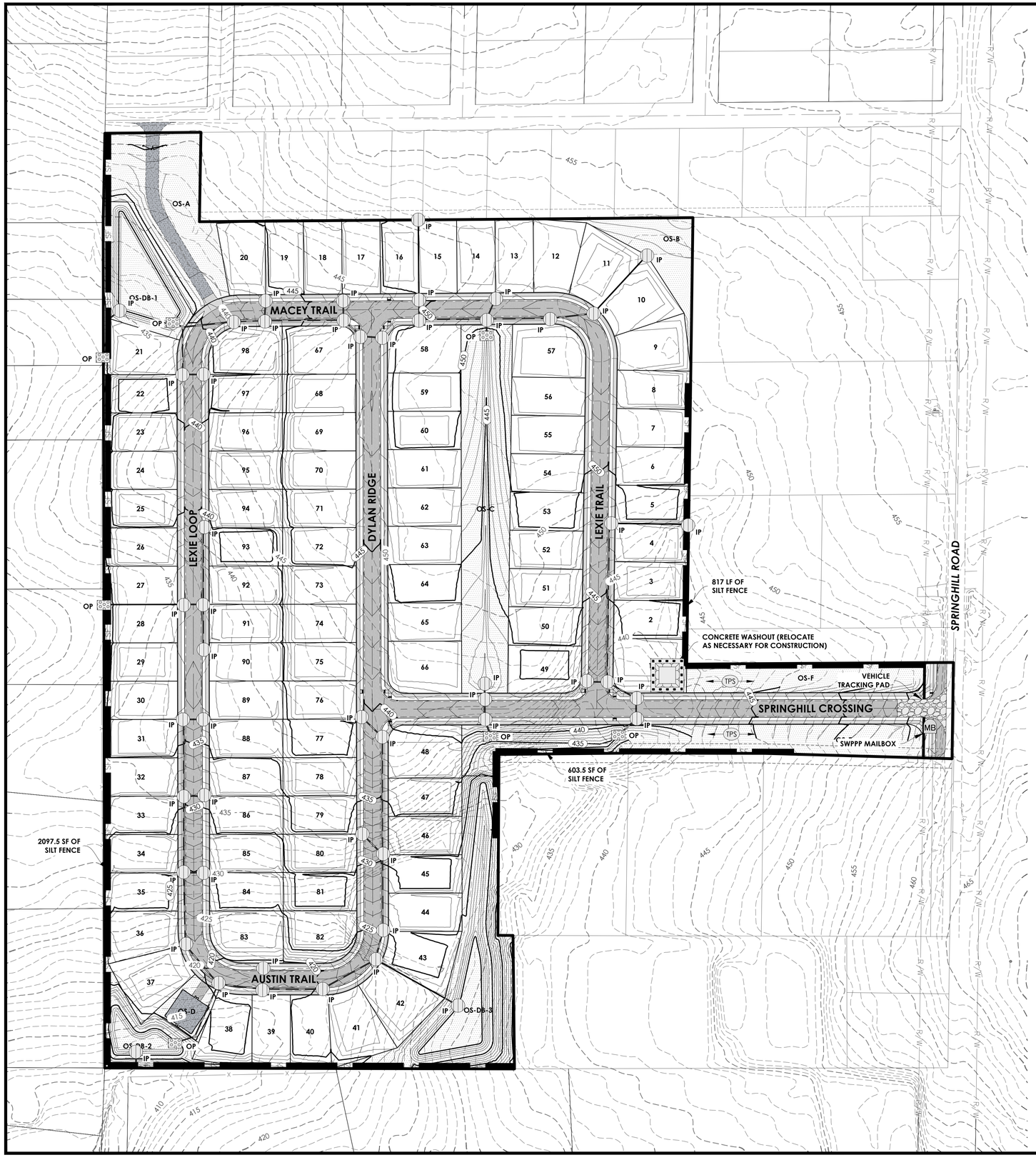
SWPPP-EROSION CONTROL PLAN INITIAL

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRATION: 6/30/2027

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C3.00



EROSION CONTROL LEGEND

SYMBOL	DESCRIPTION
SF	SILT FENCE
	CENTER DITCH & FLOW DIRECTION
	VEHICULAR TRACKING PAD (CONSTRUCTION ENTRANCE)
IP	INLET PROTECTION
TPS	TEMPORARY PARKING & STORAGE
OP	OUTLET PROTECTION RIPRAP PAD

N
W E
S

GRAPHIC SCALE 1"=80'

80 0 80 160

SWPPP NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION BY CALLING ARKANSAS ONE-CALL AT 1-800-482-8998 OR 811.
2. WHEN SOIL IS EXPOSED FOR MORE THAN 14 DAYS WITH NO CONSTRUCTION ACTIVITY IMMINENT, THE SOIL SHALL BE STABILIZED WITH SEED AND MULCH.
3. ADDITIONAL EROSION CONTROL MEASURES SHALL BE EMPLOYED AS CONDITIONS WARRANT.
4. CONSTRUCTION EXITS SHALL BE MAINTAINED TO PREVENT THE TRACKING OR FLOW OF MUD AND DEBRIS ONTO PUBLIC RIGHT-OF-WAYS.
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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SWPPP-EROSION CONTROL PLAN
INTERMEDIATE

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY

10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRATION: 6/30/27

JOB NO.: 2026-071
DATE: 10/9/26
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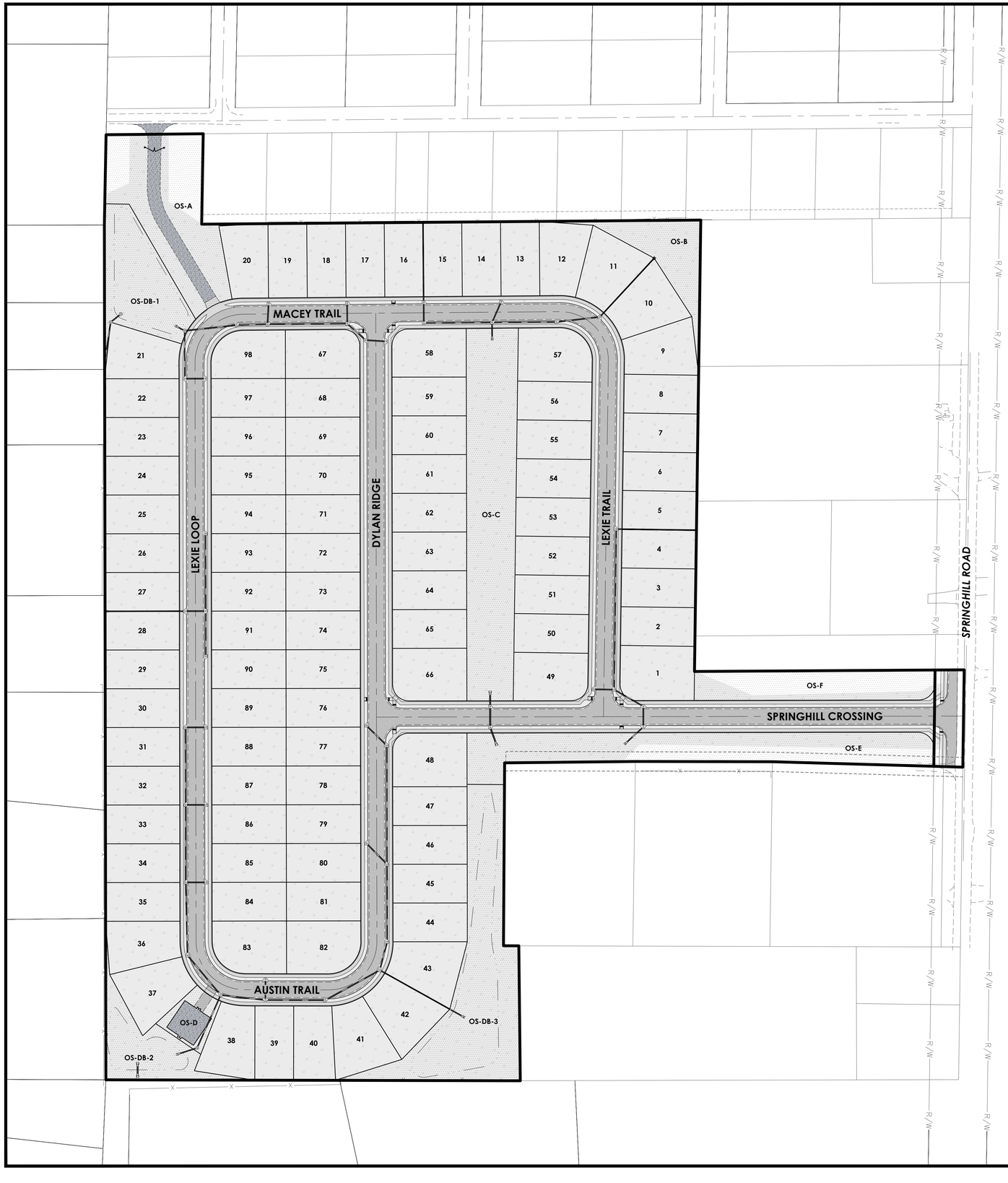

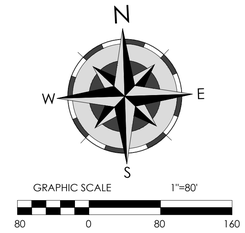

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SWPPP-EROSION CONTROL PLAN FINAL

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18698
ERIC HOLLOWAY

10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

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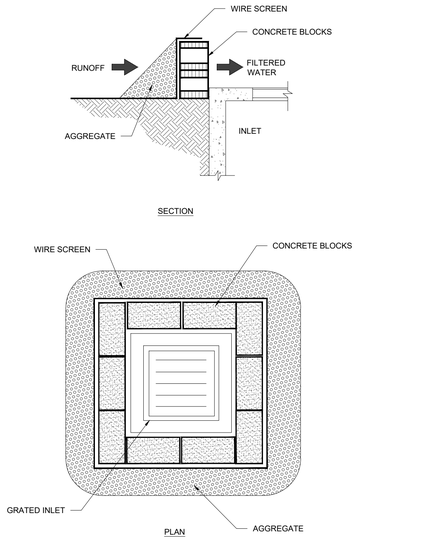
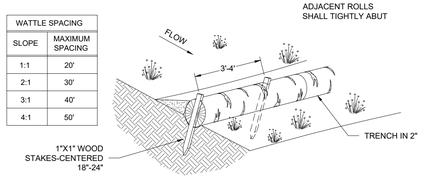


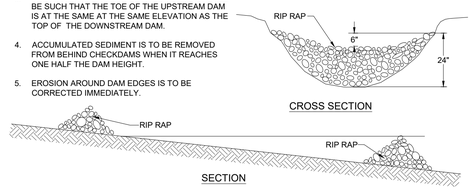
C-1 C3.10 BLOCK & STONE INLET PROTECTION
N.T.S.



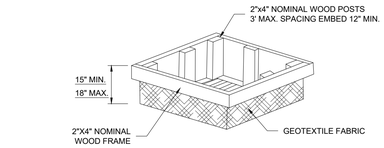
INSTALLATION NOTES
1. WATTLES SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
2. NOT FOR USE IN CONCENTRATED FLOW AREAS.
3. THE WATTLES SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF TWO (2) INCHES.
4. WATTLES SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
5. ON SLOPES, WATTLES SHOULD BE INSTALLED ON CONTOUR WITH A SLIGHT UPWARD CURVE AT THE END OF THE ROW IN ORDER TO CREATE PONDING.
6. RUNNING LENGTHS OF WATTLES SHOULD BE ABUTTED FIRMLY TO ENSURE NO LEAKAGE AT THE ABUTMENTS.
7. WHEN INSTALLING RUNNING LENGTHS OF WATTLES, BUTT THE SECOND WATTLE TIGHTLY AGAINST THE FIRST, DO NOT OVERLAP THE ENDS. STAKE THE WATTLES AT EACH END AND FOUR FOOT ON CENTER.
8. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE. LEAVING 2 - 3 INCHES OF THE STAKE PROTRUDING ABOVE THE WATTLE. WHEN INSTALLING WATTLES ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE.
9. DRIVE THE FIRST END STAKE OF THE SECOND WATTLE AT AN ANGLE TOWARD THE FIRST WATTLE IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER.
10. THE CITY RECOMMENDS USING WOOD STAKES TO SECURE THE WATTLES. 1/2" TO 5/8" REBAR IS ALSO ACCEPTABLE WITH A SAFETY CAP. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE.
11. THE CONTRACTOR SHALL INSPECT WATTLES EVERY TWO WEEKS AND AFTER ANY SIGNIFICANT STORM EVENT AND MAKE REPAIRS OR REMOVE SEDIMENT ACCUMULATED BEHIND WATTLE AS NECESSARY.
12. SEDIMENT ACCUMULATED BEHIND WATTLE SHALL BE REMOVED WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DIAMETER OF THE WATTLE.
13. WATTLES SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND IS ACCEPTED BY THE CITY.

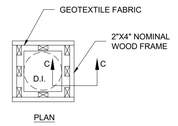
C-2 C3.10 WATTLE
N.T.S.

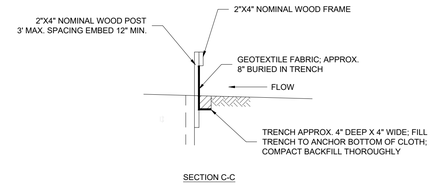
NOTES:
1. THE MAXIMUM HEIGHT OF THE CHECK DAM IS 2 FEET.
2. CHECK DAM CENTER MUST BE BE 6 INCHES LOWER THAN OUTER EDGES.
3. THE MAXIMUM SPACING BETWEEN DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
4. ACCUMULATED SEDIMENT IS TO BE REMOVED FROM BEHIND CHECKDAMS WHEN IT REACHES ONE HALF THE DAM HEIGHT.
5. EROSION AROUND DAM EDGES IS TO BE CORRECTED IMMEDIATELY.



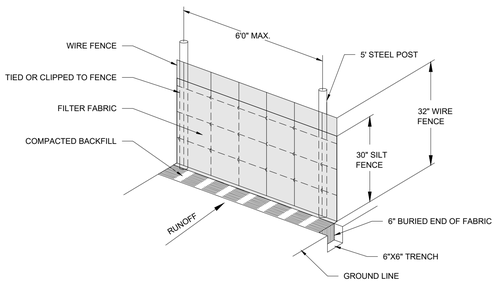
C-3 C3.10 CHECK DAM
N.T.S.





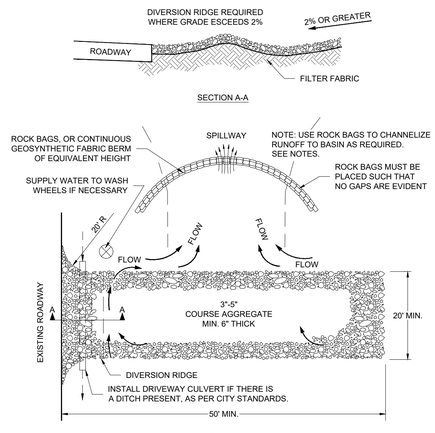


C-4 C3.10 SILT FENCE AT DROP INLET
N.T.S.



SILT FENCE NOTES
1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. REPAIR OF REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

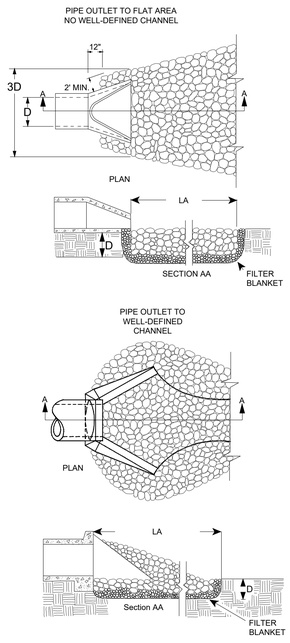
C-5 C3.10 WIRE REINFORCED SILT FENCE
N.T.S.



NOTE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

NOTES:
1. STONE SIZE: 3"-5" OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 50'.
3. THICKNESS: NOT LESS THAN 8".
4. WIDTH: NOT LESS THAN 8".
WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE CONDITIONS DEMAND, AND REPAIR AND CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENTS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

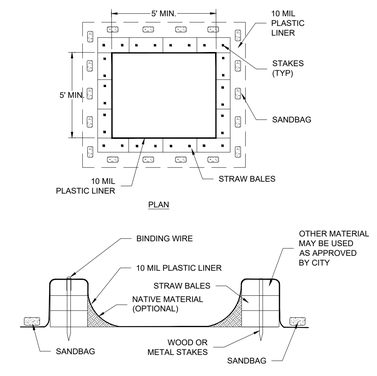
C-6 C3.10 STABILIZED CONSTRUCTION EXIT
N.T.S.



NOTES:
1. LA IS THE LENGTH OF THE RIPRAP APRON. PLEASE SEE DESIGN PLANS FOR LENGTH.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL BANK TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OF TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION COMPLYING WITH AASHTO M288.
5. PLEASE SEE DETAIL PW-60 FOR GROUTING.

C-7 C3.10 FLARED END CHECK DAM
N.T.S.

WASHOUT NOTES:
1. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS WILL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES AS DETERMINED IN THE FIELD.
4. TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
5. WASHOUT FACILITIES WILL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL.
6. PLASTIC LINING MATERIAL WILL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
7. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OF OFFSITE. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF.



C-8 C3.10 CONCRETE WASHOUT
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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SWPPP DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
CHRIS HOLLOWAY
10/9/26

STATE OF ALABAMA
CHRISTOPHER ALAN HOLLOWAY
#31879
REGISTERED
PROFESSIONAL ENGINEER

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

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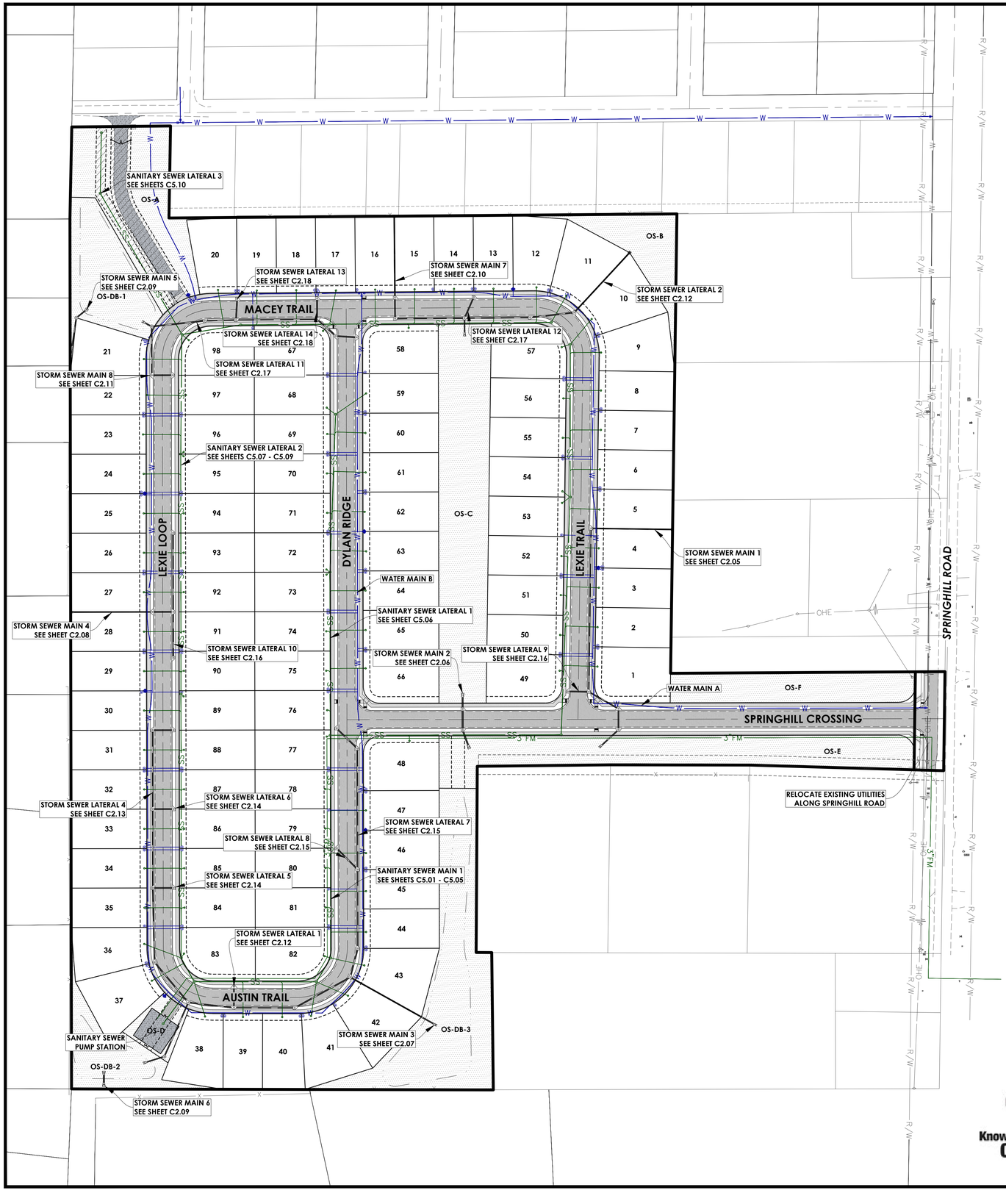

LEGEND

- BOUNDARY FINAL
- BOUNDARY ADJOINER
- R/W — RIGHT-OF-WAY
- EASEMENT
- BUILDING SETBACK
- W — WATER LINE
- SS — SANITARY SEWER LINE
- UGE — UNDERGROUND ELECTRIC LINE
- STORM DRAINAGE PIPE
- X-X — DRAINAGE STRUCTURE - NO.
- CURB INLET/JUNCTION BOX
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- SANITARY SEWER MANHOLE
- LIGHT POLE
- ELECTRICAL BOX
- TELEPHONE PEDESTAL/RISER

N W E S

GRAPHIC SCALE 1"=80'

80 0 80 160

UTILITY COORDINATION PLAN NOTES:

1. ALL WATER UTILITY CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF BRYANT WATER DISTRIBUTION'S STANDARD SPECIFICATIONS AND DETAILS.
2. ALL WATER MAINS TO BE DUCTILE IRON WATER PIPE, CLASS DETERMINED BY SIZE OF MAINS. ALL WATERLINE 3" OR GREATER SHALL BE CLASS 50 DUCTILE IRON & ALL WATERLINES LESS THAN 3" SHALL BE PVC SDR 17 RATED FOR 250 PSI.
3. ALL SEWER PIPE SHALL BE APPROVED SEWER PIPE AS SPECIFIED IN THE LATEST EDITION OF BRYANT WASTEWATER UTILITIES STANDARDS. ALL SEWER MAIN LINES 8" OR LARGER SHALL BE PVC SDR 26 & ALL 4"-6" SEWER SERVICE LINES SHALL BE PVC SDR 21. ALL SANITARY SEWER SERVICE LINES SHALL HAVE CLEANOUTS LOCATED EVERY 80 LF MIN. & AT EVERY CHANGE IN DIRECTION.
4. ALL WATER AND SEWER MAINS AND SERVICES CROSSING ROADWAYS ARE TO BE BACKFILLED WITH CLASS 7 AGGREGATE BASE COURSE AND COMPACTED WITH A SHEEPS FOOT VIBRATORY ROLLER AS DIRECTED IN THE SPECIFICATION BOOK.
5. ALL WATER MAINS ARE TO BE A MINIMUM OF 1' BELOW STORM DRAINS OR AS DIRECTED BY CENTRAL ARKANSAS WATER PERSONNEL. ALL UTILITIES SHALL HAVE 24" OF MIN. COVER & ALL WATERLINES SHALL HAVE 36" OF MIN. COVER.
6. CONTRACTOR WILL NEED TO CALCULATE THE EXACT NUMBER OF DUCTILE IRON FITTINGS THIS PROJECT REQUIRES.
7. CONTROL POINTS AND PROPERTY PINS EXCAVATED BY CONTRACTOR ARE TO BE REPLACED PRIOR TO FINAL PAYMENT.
8. ALL WATER MAINS ARE TO BE PRESSURE TESTED AT 200 PSI OR DOUBLE THE SYSTEM PRESSURE, WHICHEVER IS THE HIGHEST ACCORDING TO THE LATEST EDITION OF THE BRYANT WATER DISTRIBUTION'S STANDARDS AND SPECIFICATIONS.
9. ALL SEWER MAINS AND SERVICES ARE TO BE AIR TESTED AS STATED IN THE LATEST EDITION OF BRYANT WASTEWATER UTILITIES STANDARDS.
10. ALL PVC SEWER MAINS ARE TO BE MANDREL TESTED AS STATED IN THE LATEST EDITION OF BRYANT WASTEWATER UTILITIES STANDARDS.
11. ALL MANHOLES ARE TO BE VACUUM TESTED AS STATED IN THE LATEST EDITION OF BRYANT WASTEWATER UTILITIES STANDARDS.
12. WATER SERVICES ARE TO BE INSTALLED BY EXCAVATING WITH A TRENCHING DEVICE OR AS DIRECTED BY CENTRAL ARKANSAS WATER PERSONNEL.
13. ALL SEWER LINES AND MANHOLES SHALL BE DRY AND FREE OF ALL DEBRIS WHEN TESTING AND UPON ACCEPTANCE OF MANHOLES, MAINS AND SERVICES.
14. ALL EXISTING UTILITIES ARE TO BE LOCATED PRIOR TO ANY EXCAVATING.
15. CONTRACTOR SHALL DISPOSE OF ALL TREES AND BRUSH EXCAVATED IN THIS PROJECT. THE COST OF CLEARING AND DISPOSING TREES AND BRUSH IS TO BE INCLUDED IN THE PRICE FOR TRENCHING.
16. ALL SEWER PIPE SHALL BE ENCASED IN CLEAN WASHED STONE OR CRUSHED STONE OF 3/4" MAXIMUM SIZE.
17. THE COST OF ALL STUB OUTS, WATER TIGHT PLUGS, CAPS AND WATERTIGHT GASKETS IN MANHOLES ARE TO BE INCLUDED IN PRICE OF MANHOLES.
18. ALL FIRE HYDRANT LEADS ARE TO BE INCLUDED IN THE PRICE OF FIRE HYDRANTS.
19. RETAINER GLANDS WITH SET SCREWS ARE TO BE USED ON ALL DUCTILE IRON WATER MAIN FITTINGS.
20. ALL WATER AND SEWER SERVICES ARE TO BE MARKED WITH PAINTED 2" PLASTIC PIPE.
21. ROCK EXCAVATION AS A PAY ITEM WILL INCLUDE ONLY THAT MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, CAN NOT BE EXCAVATED EFFICIENTLY WITHOUT BLASTING OR USING A HYDRAULIC JACKHAMMER.
22. REVIEW TRENCH SAFETY, AS A PAY ITEM, AS DESCRIBED IN THE SPECIFICATION BOOK.
23. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
24. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINES. WATER MAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATER LINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH. A MINIMUM HORIZONTAL DISTANCE OF THREE FEET SHALL BE MAINTAINED BETWEEN WATER LINES AND OTHER UNDERGROUND UTILITIES OF A NON SANITARY NATURE (GAS, ELECTRIC, ETC.). EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH AND HUMAN SERVICES.

Know what's below. Call before you dig.

CAUTION: UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. HOWEVER, ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THE ACTUAL LOCATIONS OF THE UTILITIES MAY VARY FROM THE LOCATIONS SHOWN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES INVOLVED AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITIES ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.

ARKANSAS STATE LAW, THE UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, REQUIRES TWO WORKING DAYS ADVANCE NOTIFICATION THROUGH THE ARKANSAS ONE-CALL SYSTEM CENTER BEFORE EXCAVATING USING MECHANIZED EQUIPMENT OR EXPLOSIVES (EXCEPT IN THE CASE OF AN EMERGENCY). THE ONE-CALL SYSTEM PHONE NUMBER IS 1-800-482-8998. THE CONTRACTOR IS ADVISED THAT THERE IS A SEVERE PENALTY FOR NOT MAKING THIS CALL. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE-CALL SYSTEM; THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES, AS WELL AS THE ONE-CALL SYSTEM.

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

UTILITY COORDINATION PLAN

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES: 6/30/2027

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C4.00

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C4.00 UTILITY COORDINATION PLAN.dwg

SPRINGHILL CROSSING

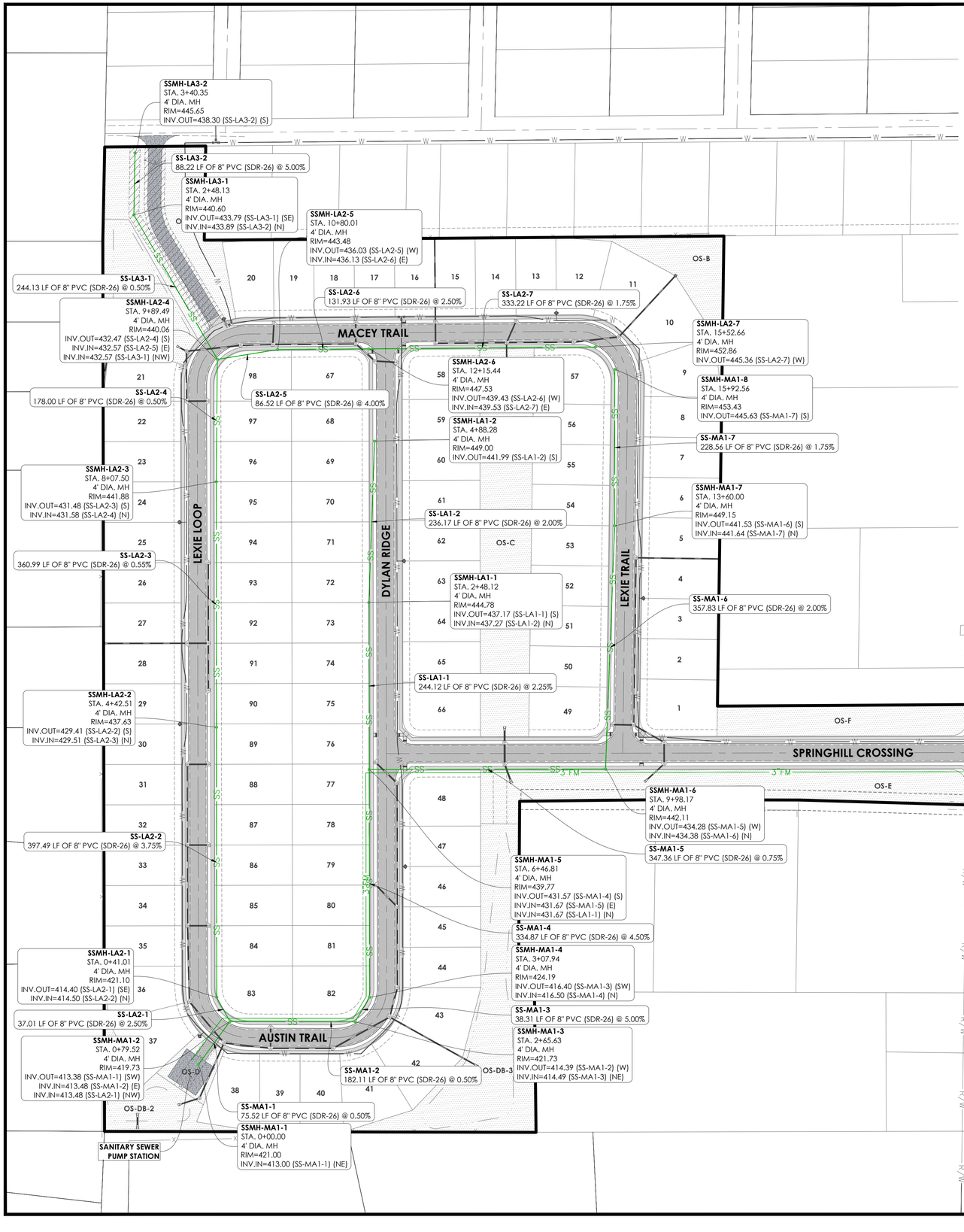
RESIDENTIAL SUBDIVISION

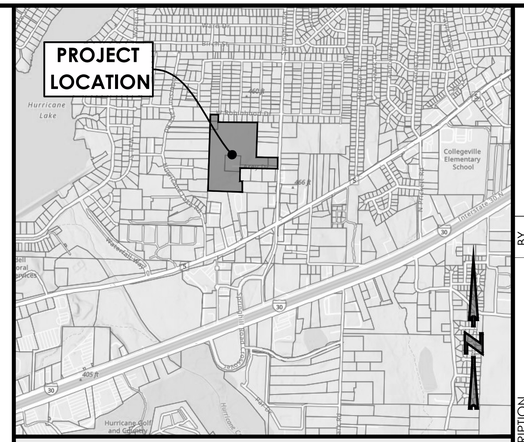
BRYANT, SALINE COUNTY, ARKANSAS

SANITARY SEWER PLANS

October 2026

HOLLOWAY ENGINEERING JOB NO. 2026-071





VICINITY MAP

SANITARY SEWER NOTES:

1. CONTRACTOR TO NOTIFY "ARKANSAS ONE-CALL" AND ALL UTILITY, CABLE COMPANIES, ETC. PRIOR TO COMMENCING ANY EXCAVATION. DIAL 811.
2. SEWER LINE CONSTRUCTION TO BE IN ACCORDANCE WITH ALL AHJ STANDARD SPECIFICATIONS AND STANDARD DETAILS AS SUBMITTED FOR THE PROJECT.
3. ALL SEWER LINE MAIN CONSTRUCTION TO BE PVC (SDR-26) OR AS NOTED ON PLANS.
4. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINES. WATER MAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATER LINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH. A MINIMUM HORIZONTAL DISTANCE OF THREE FEET SHALL BE MAINTAINED BETWEEN WATER LINES AND OTHER UNDERGROUND UTILITIES OF A NON SANITARY NATURE (GAS, ELECTRIC, ETC.). EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH AND HUMAN SERVICES.
5. ALL CONSTRUCTION TO COMPLY WITH CURRENT EDITIONS OF ALL APPLICABLE BUILDING, ELECTRIC & FIRE CODE, IN ADDITION TO ANY LOCAL, REGIONAL OR NATIONAL CODE REQUIREMENTS AND MANUFACTURER'S RECOMMENDED SPECIFICATIONS.
6. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE.
7. SEWER SERVICE LINES TO BE CAST IRON OR SDR-26. IF SDR-26 IS USED FOR THE SERVICE LINES IT SHALL BE INSTALLED IN 6" OF #57 GRAVEL ON ALL SIDES OF THE PIPE. ALL SERVICE ENDS TO BE MARKED WITH T-POST TO EXTEND AT LEAST 4' ABOVE FINISHED GRADE. SEWER STUBS TO HAVE A MAXIMUM 5' DEPTH WHERE TERMINATED.

SANITARY SEWER PIPE TABLE

NAME	SIZE / PIPE MATERIAL	LENGTH	SLOPE %
SS-LA1-1	8" PVC (SDR-26)	244.12'	2.25%
SS-LA1-2	8" PVC (SDR-26)	236.17'	2.00%
SS-LA2-1	8" PVC (SDR-26)	37.01'	2.50%
SS-LA2-2	8" PVC (SDR-26)	397.49'	3.75%
SS-LA2-3	8" PVC (SDR-26)	360.99'	0.55%
SS-LA2-4	8" PVC (SDR-26)	178.00'	0.50%
SS-LA2-5	8" PVC (SDR-26)	86.52'	4.00%
SS-LA2-6	8" PVC (SDR-26)	131.93'	2.50%
SS-LA2-7	8" PVC (SDR-26)	333.22'	1.75%
SS-LA3-1	8" PVC (SDR-26)	244.13'	0.50%
SS-LA3-2	8" PVC (SDR-26)	88.22'	5.00%
SS-MA1-1	8" PVC (SDR-26)	75.52'	0.50%
SS-MA1-2	8" PVC (SDR-26)	182.11'	0.50%
SS-MA1-3	8" PVC (SDR-26)	38.31'	5.00%
SS-MA1-4	8" PVC (SDR-26)	334.87'	4.50%
SS-MA1-5	8" PVC (SDR-26)	347.36'	0.75%
SS-MA1-6	8" PVC (SDR-26)	357.83'	2.00%
SS-MA1-7	8" PVC (SDR-26)	228.56'	1.75%

SANITARY SEWER STRUCTURE TABLE

STRUCTURE NAME	DETAILS	PIPES IN	PIPES OUT	DEPTH
SSMH-LA1-1	RIM ELEV. = 444.78	SS-LA1-2, 8" PVC INV IN =437.27	SS-LA1-1, 8" PVC INV OUT =437.17	7.61
SSMH-LA1-2	RIM ELEV. = 449.00		SS-LA1-2, 8" PVC INV OUT =441.99	7.01
SSMH-LA2-1	RIM ELEV. = 421.10	SS-LA2-2, 8" PVC INV IN =414.50	SS-LA2-1, 8" PVC INV OUT =414.40	6.70
SSMH-LA2-2	RIM ELEV. = 437.63	SS-LA2-3, 8" PVC INV IN =429.51	SS-LA2-2, 8" PVC INV OUT =429.41	8.22
SSMH-LA2-3	RIM ELEV. = 441.88	SS-LA2-4, 8" PVC INV IN =431.58	SS-LA2-3, 8" PVC INV OUT =431.48	10.40
SSMH-LA2-4	RIM ELEV. = 440.06	SS-LA2-5, 8" PVC INV IN =432.57 SS-LA3-1, 8" PVC INV IN =432.57	SS-LA2-4, 8" PVC INV OUT =432.47	7.61
SSMH-LA2-5	RIM ELEV. = 443.48	SS-LA2-6, 8" PVC INV IN =436.13	SS-LA2-5, 8" PVC INV OUT =436.03	7.45
SSMH-LA2-6	RIM ELEV. = 447.53	SS-LA2-7, 8" PVC INV IN =439.53	SS-LA2-6, 8" PVC INV OUT =439.43	8.10
SSMH-LA2-7	RIM ELEV. = 452.86		SS-LA2-7, 8" PVC INV OUT =445.36	7.50
SSMH-LA3-1	RIM ELEV. = 440.60	SS-LA3-2, 8" PVC INV IN =433.89	SS-LA3-1, 8" PVC INV OUT =433.79	6.81
SSMH-LA3-2	RIM ELEV. = 445.65		SS-LA3-2, 8" PVC INV OUT =438.30	7.35
SSMH-MA1-1	RIM ELEV. = 421.00	SS-MA1-1, 8" PVC INV IN =413.00		8.00
SSMH-MA1-2	RIM ELEV. = 419.73	SS-MA1-2, 8" PVC INV IN =413.48 SS-LA2-1, 8" PVC INV IN =413.48	SS-MA1-1, 8" PVC INV OUT =413.38	6.35
SSMH-MA1-3	RIM ELEV. = 421.73	SS-MA1-3, 8" PVC INV IN =414.49	SS-MA1-2, 8" PVC INV OUT =414.39	7.34
SSMH-MA1-4	RIM ELEV. = 424.19	SS-MA1-4, 8" PVC INV IN =416.50	SS-MA1-3, 8" PVC INV OUT =416.40	7.78
SSMH-MA1-5	RIM ELEV. = 439.77	SS-MA1-5, 8" PVC INV IN =431.67 SS-LA1-1, 8" PVC INV IN =431.67	SS-MA1-4, 8" PVC INV OUT =431.57	8.20
SSMH-MA1-6	RIM ELEV. = 442.11	SS-MA1-6, 8" PVC INV IN =434.38	SS-MA1-5, 8" PVC INV OUT =434.28	7.84
SSMH-MA1-7	RIM ELEV. = 449.15	SS-MA1-7, 8" PVC INV IN =441.64	SS-MA1-6, 8" PVC INV OUT =441.53	7.62
SSMH-MA1-8	RIM ELEV. = 453.43		SS-MA1-7, 8" PVC INV OUT =445.63	7.80

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
SANITARY SEWER OVERVIEW

STATE OF ARKANSAS
ERIC HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18898
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
EXPIRES: 12/31/2027

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C5.00

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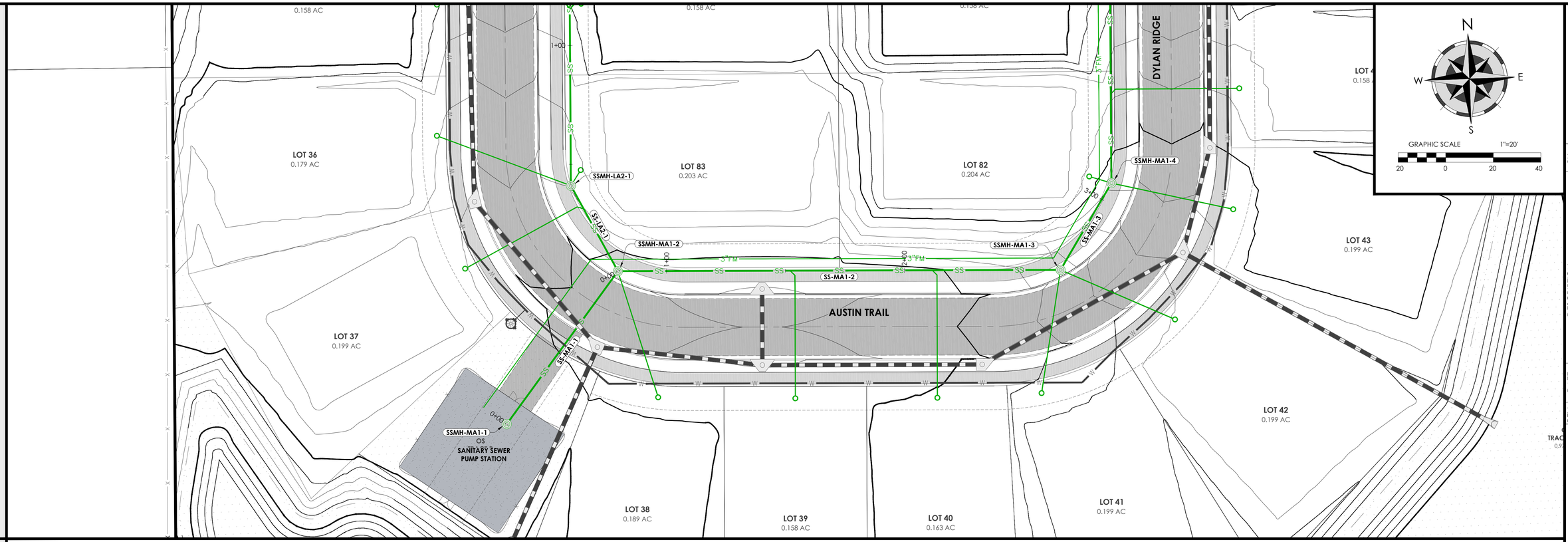

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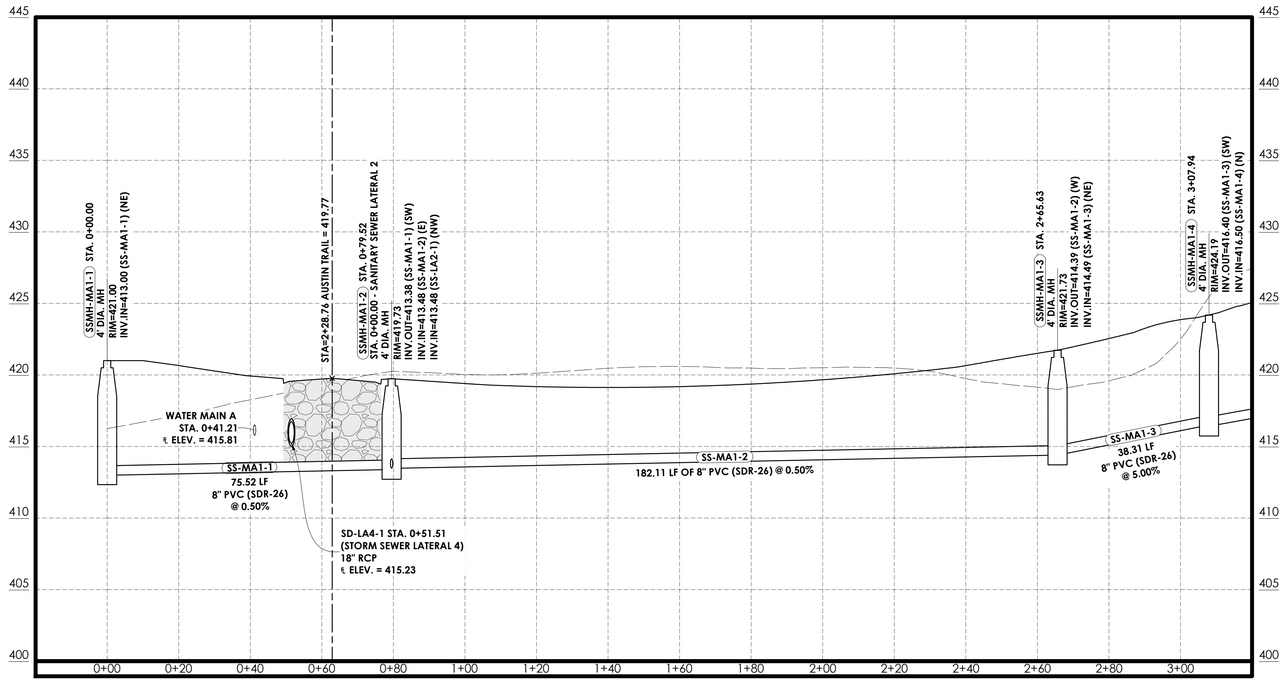

SANITARY SEWER MAIN 1
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VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN. 95% COMPACTION (TYP.)

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SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SANITARY SEWER P&P MAIN 1 (1 OF 5)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
CHRIS HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
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#1879
ARKANSAS ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

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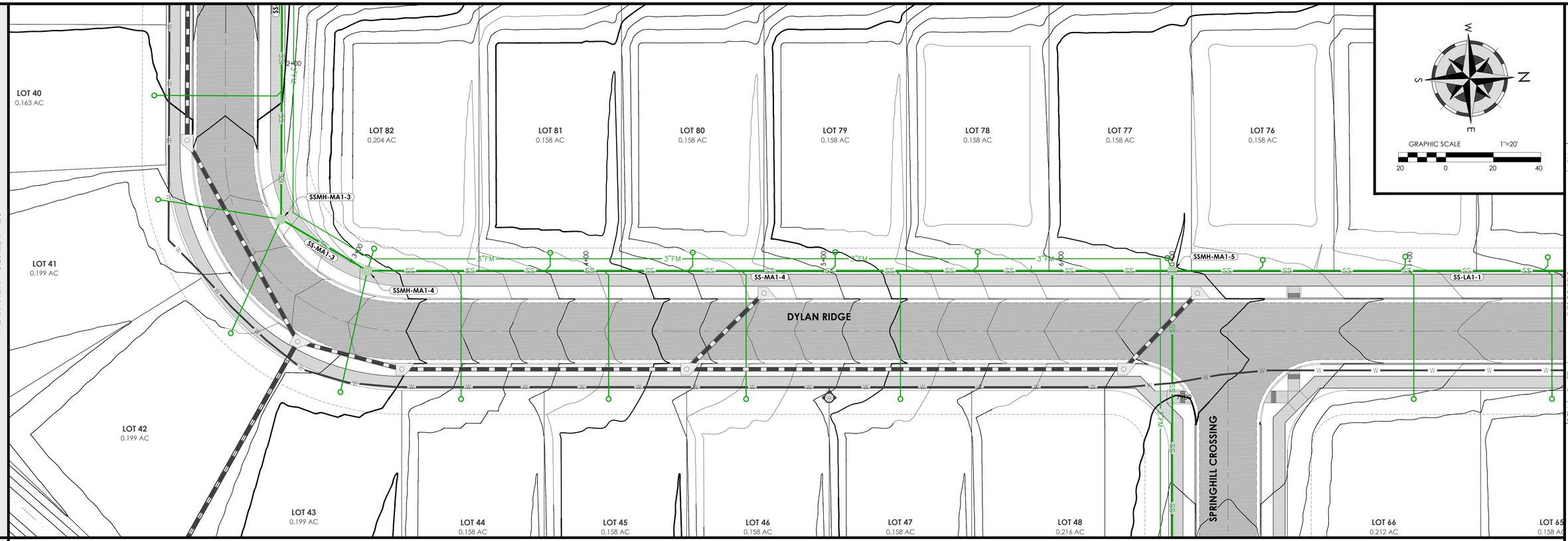

PROFILE VIEW - SCALE 1"=20'

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SANITARY SEWER P&P MAIN 1 (2 OF 5)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
CODY HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
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ARKANSAS ENGINEERING

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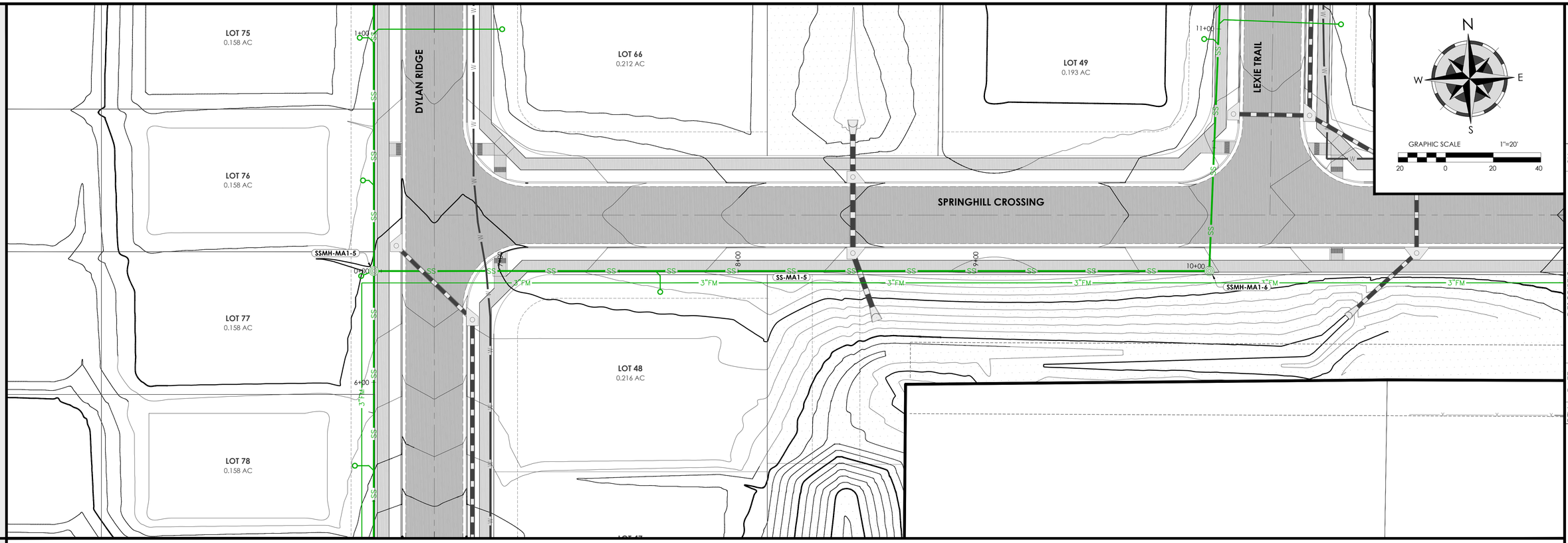

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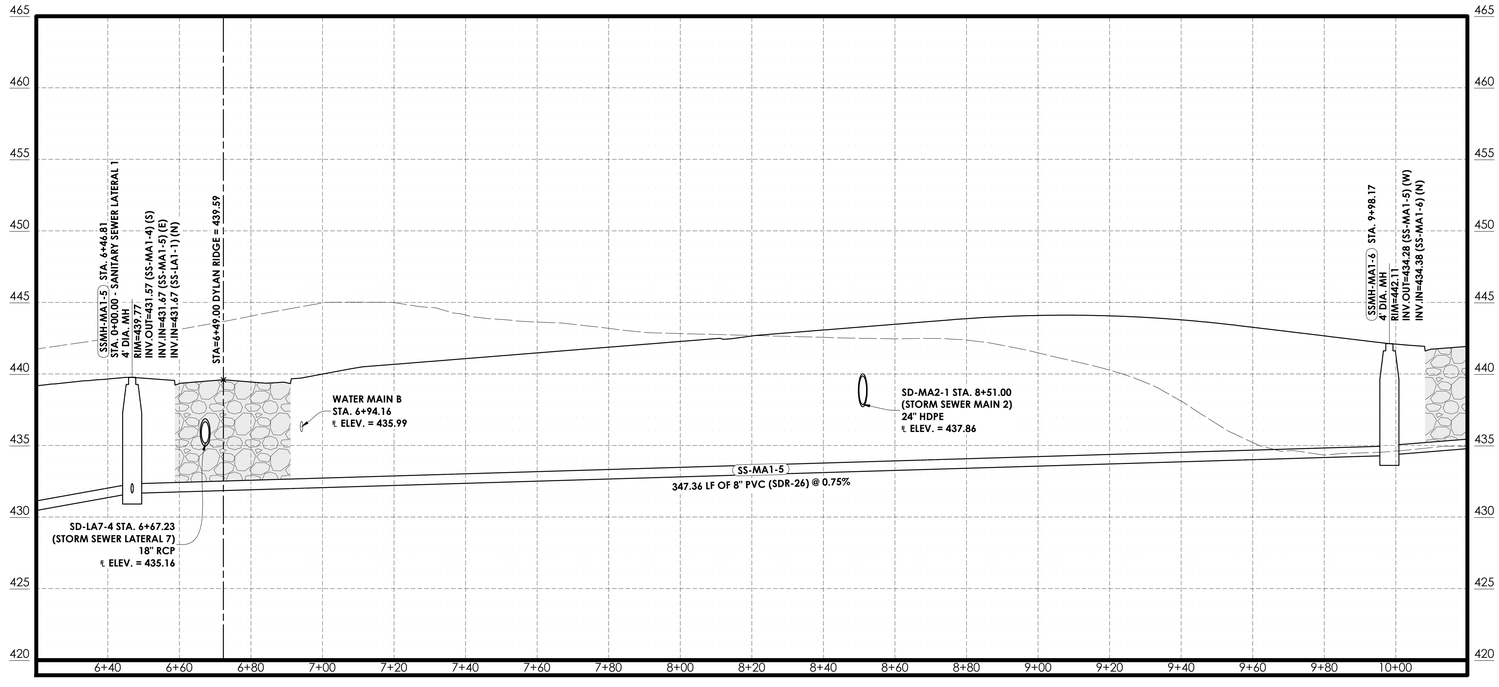

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SANITARY SEWER MAIN 1
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SANITARY SEWER P&P MAIN 1 (3 OF 5)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
TROY HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
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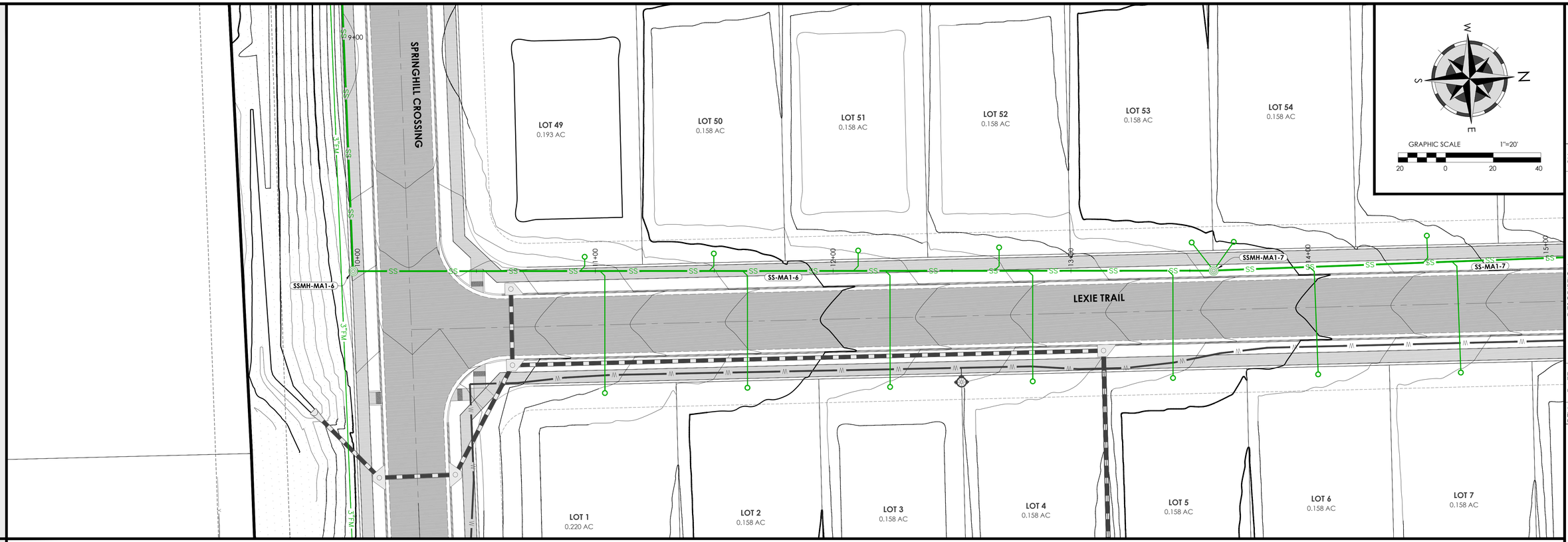

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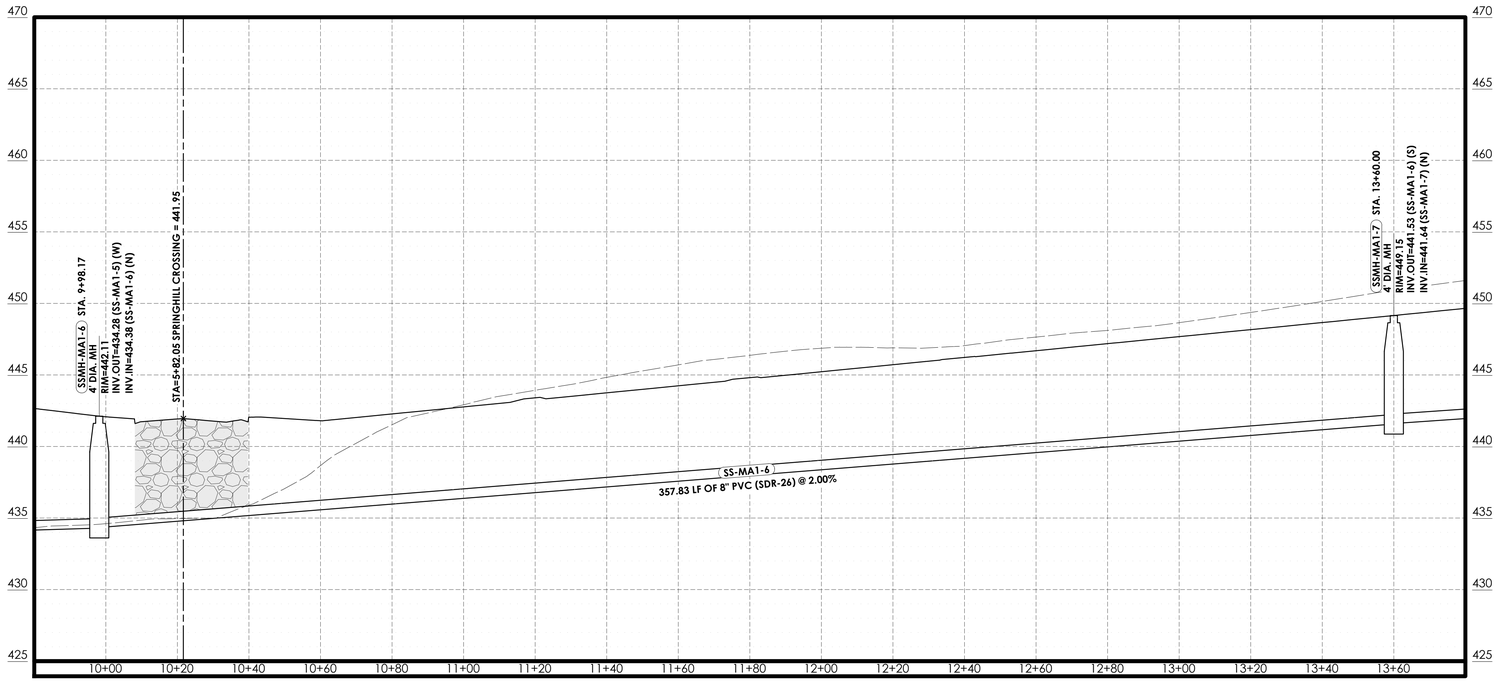

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SANITARY SEWER P&P MAIN 1 (4 OF 5)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
JOE HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
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STATE OF ARKANSAS ENGINEER

JOB NO.: 2026-071
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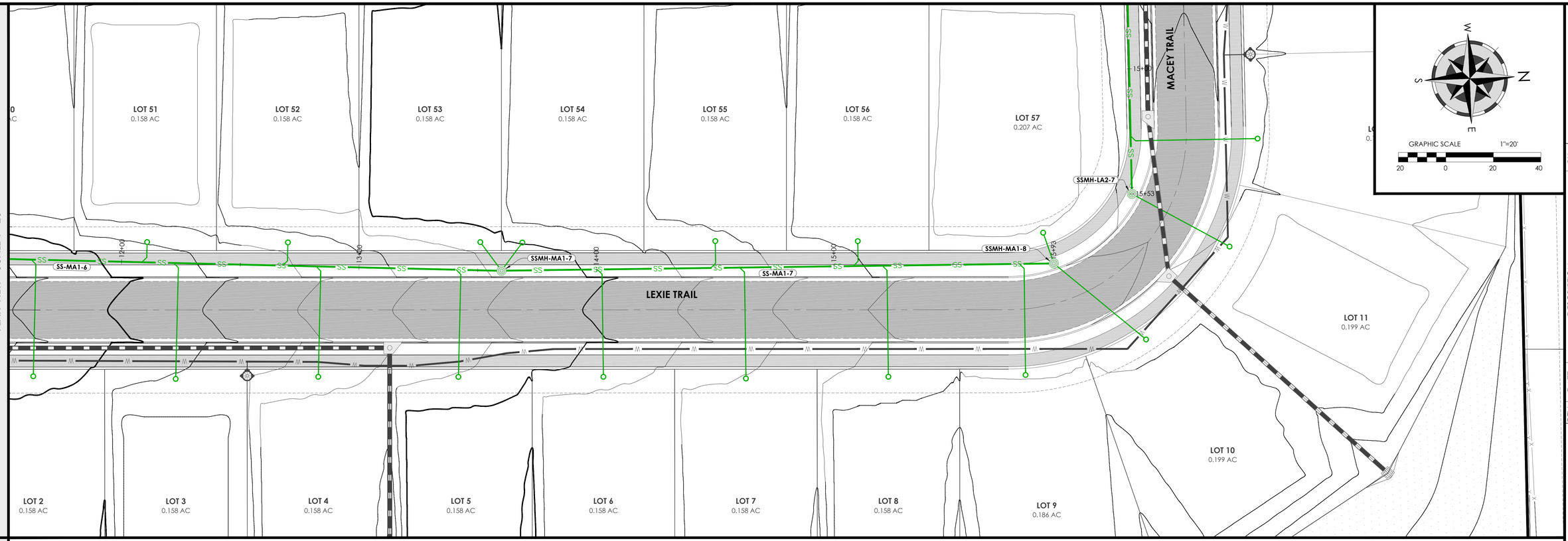

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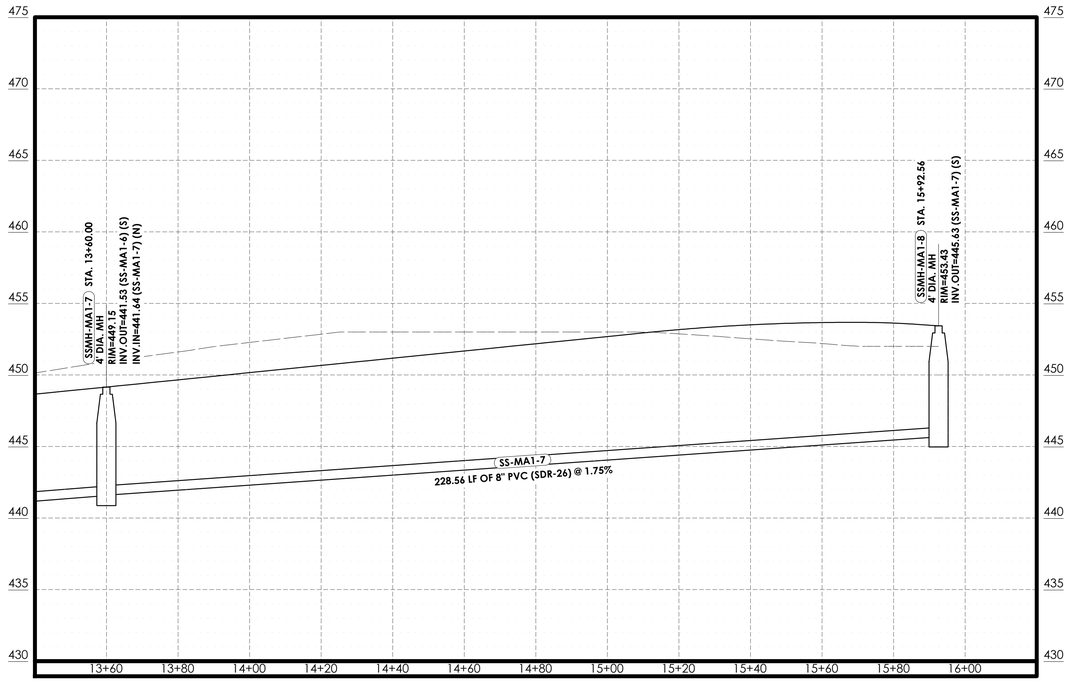

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SANITARY SEWER MAIN 1
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SANITARY SEWER P&P MAIN 1 (5 OF 5)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
CORY HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
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ARKANSAS LICENSED ENGINEER

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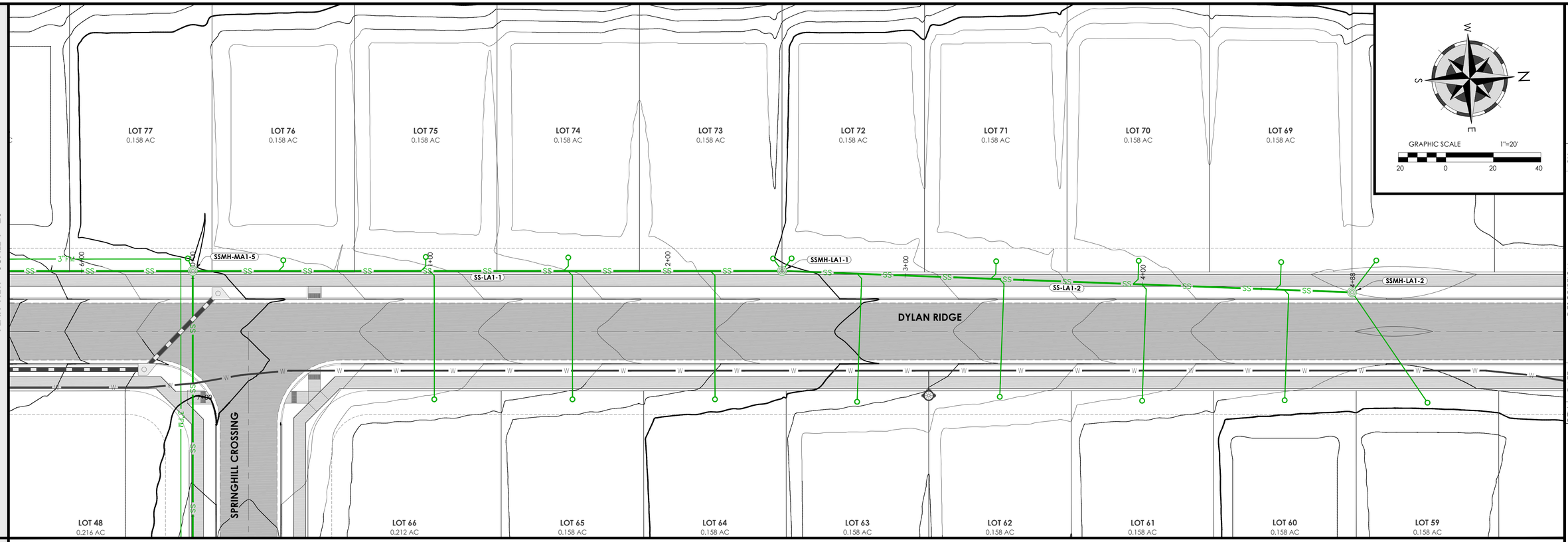

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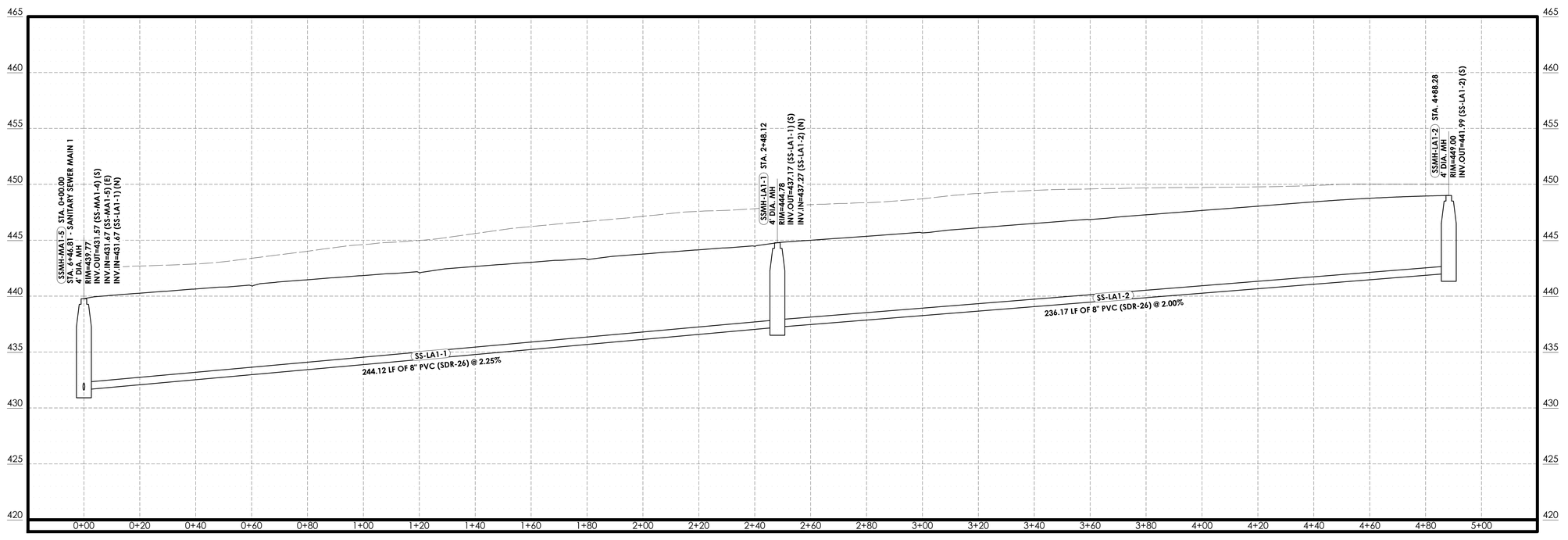

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VERT. SCALE: 1"=5'

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SANITARY SEWER P&P LATERAL 1

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
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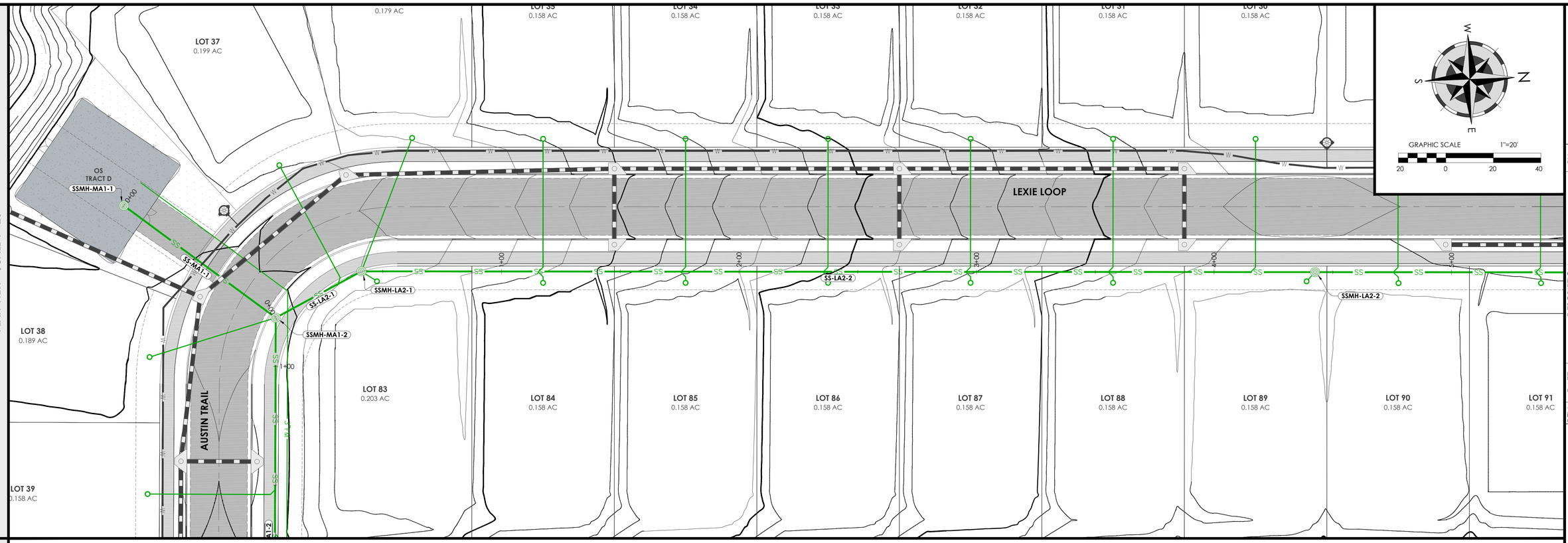

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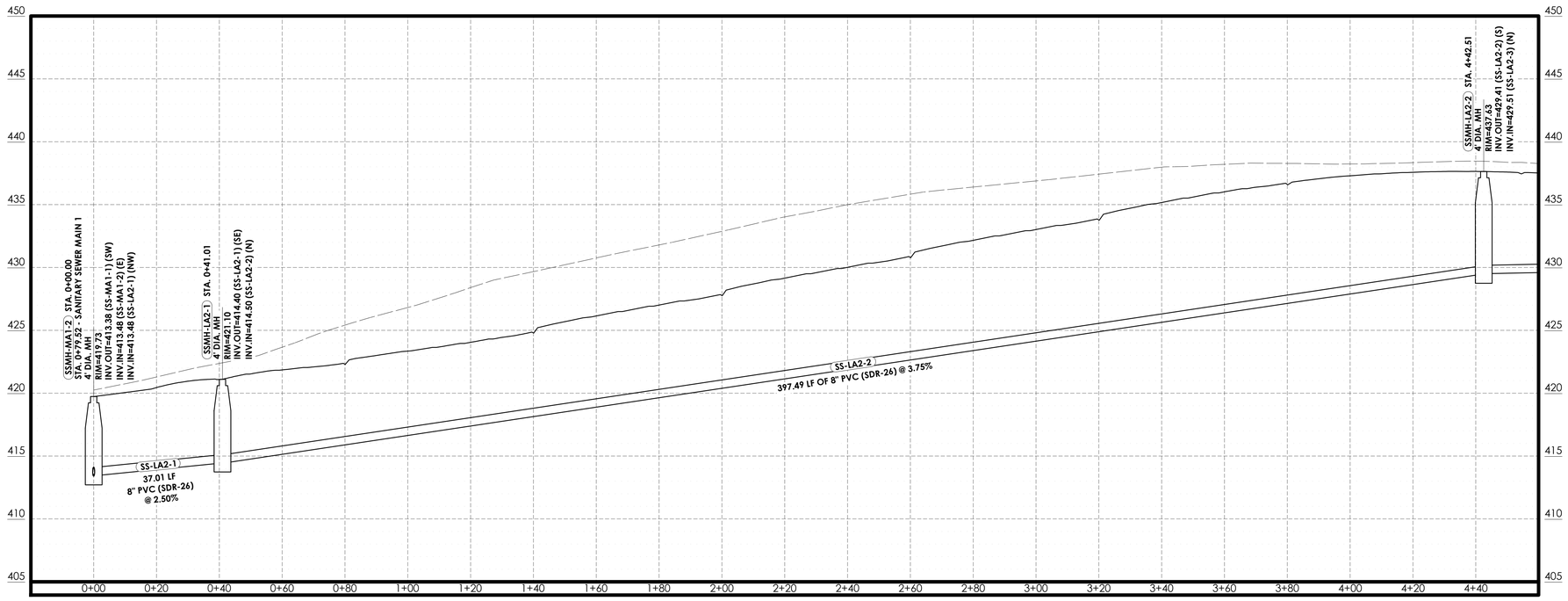

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SANITARY SEWER LATERAL 2
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BRYANT, SALINE COUNTY, ARKANSAS

SANITARY SEWER P&P LATERAL 2 (1 OF 3)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18698
ERIC HOLLOWAY
10/9/26

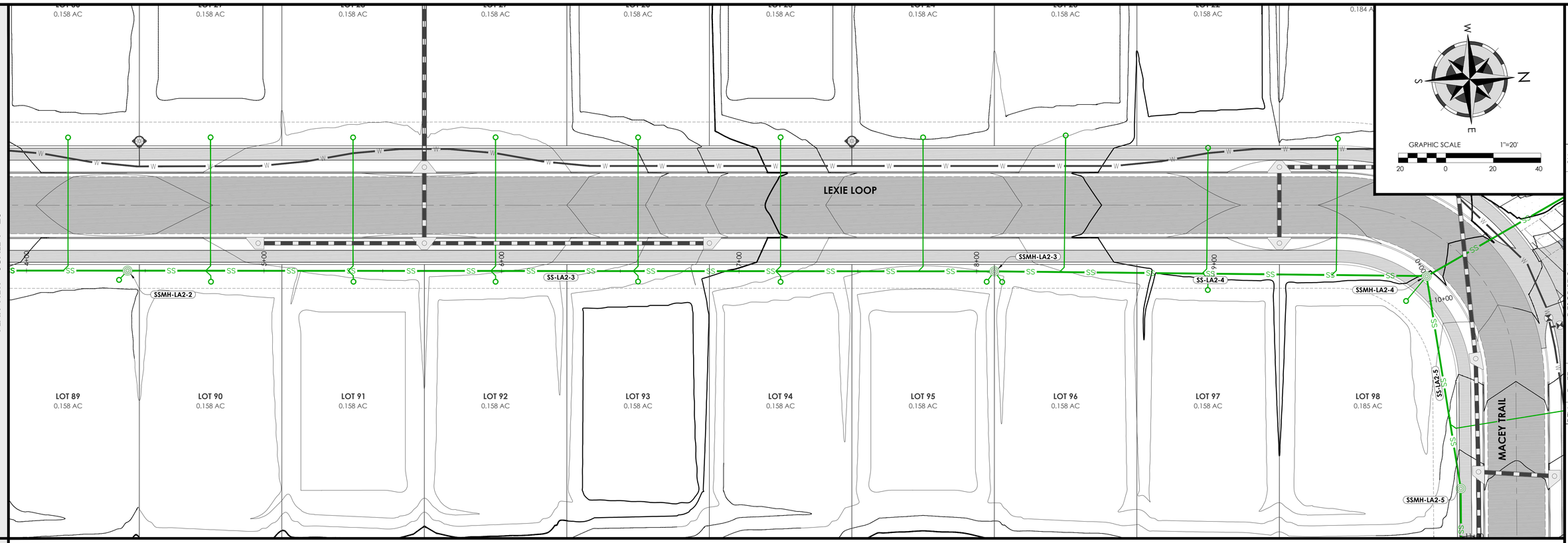
CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

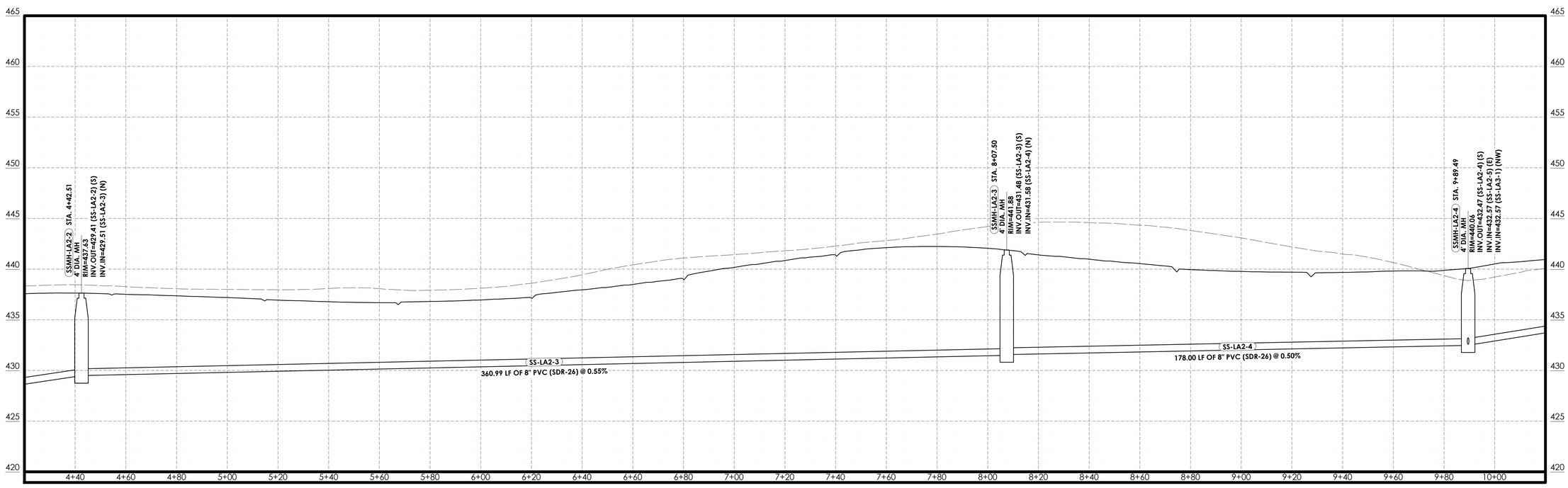
C5.07

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C5.00 SANITARY SEWER OVERVIEW.dwg

PLAN VIEW - SCALE 1"=20'



PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

SANITARY SEWER LATERAL 2
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

Holloway Engineering, Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SANITARY SEWER P&P LATERAL 2 (2 OF 3)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18698
ERIC HOLLOWAY
10/9/26

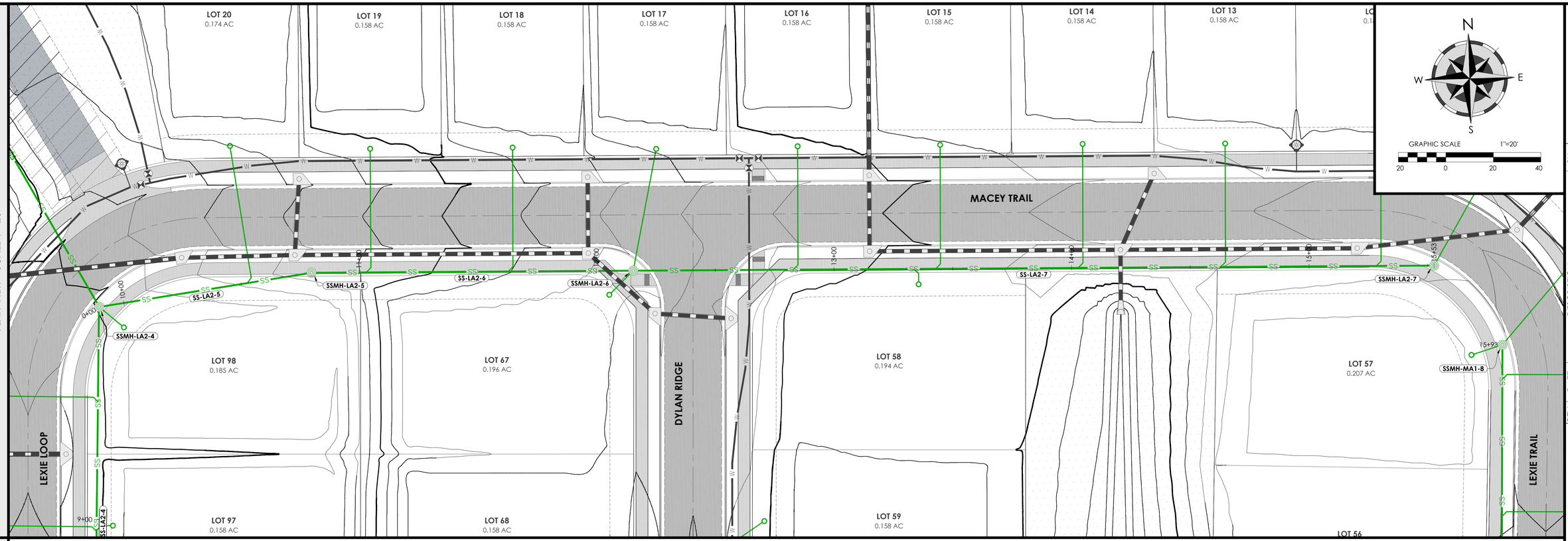
CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

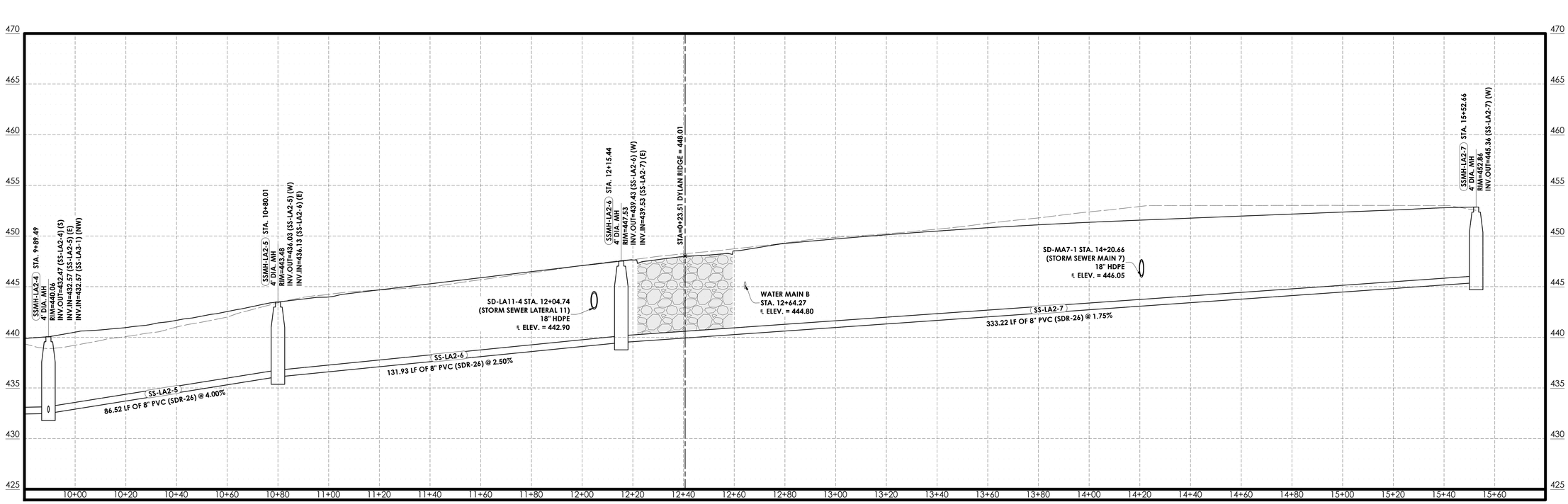
C5.08

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C5.00 SANITARY SEWER OVERVIEW.dwg

PLAN VIEW - SCALE 1"=20'



PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

SANITARY SEWER LATERAL 2
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SANITARY SEWER P&P LATERAL 2 (3 OF 3)

STATE OF ARKANSAS
ERIC HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18698
10/9/26

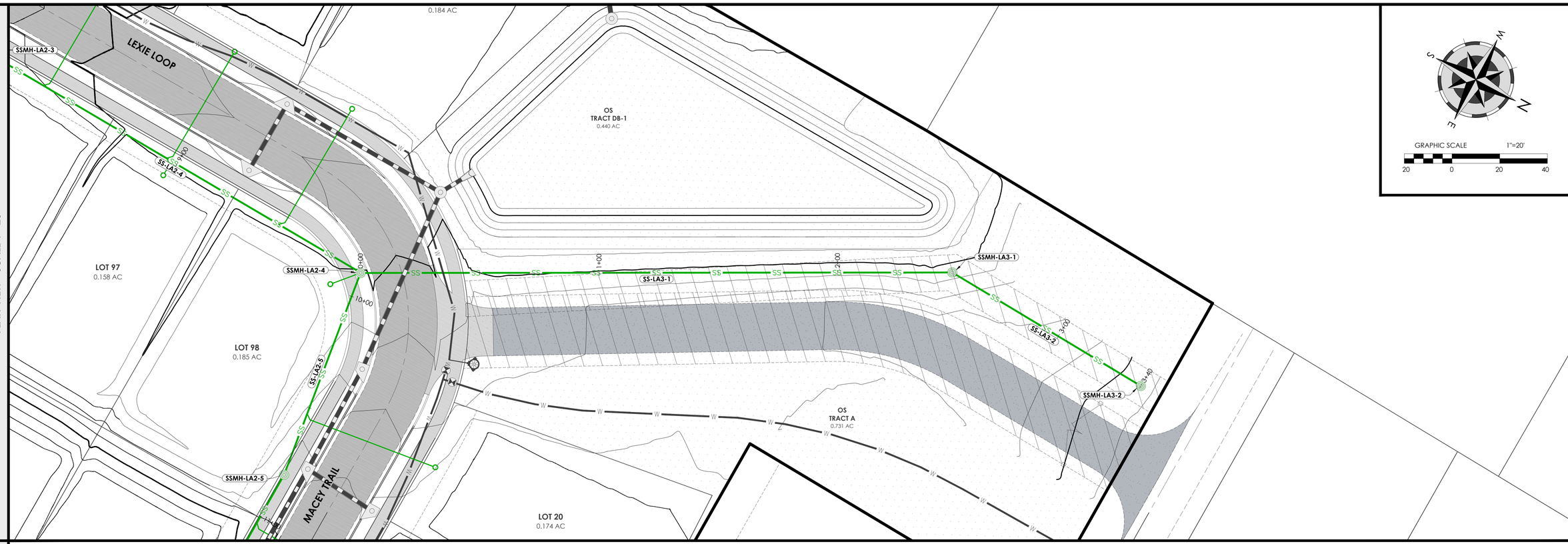
CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

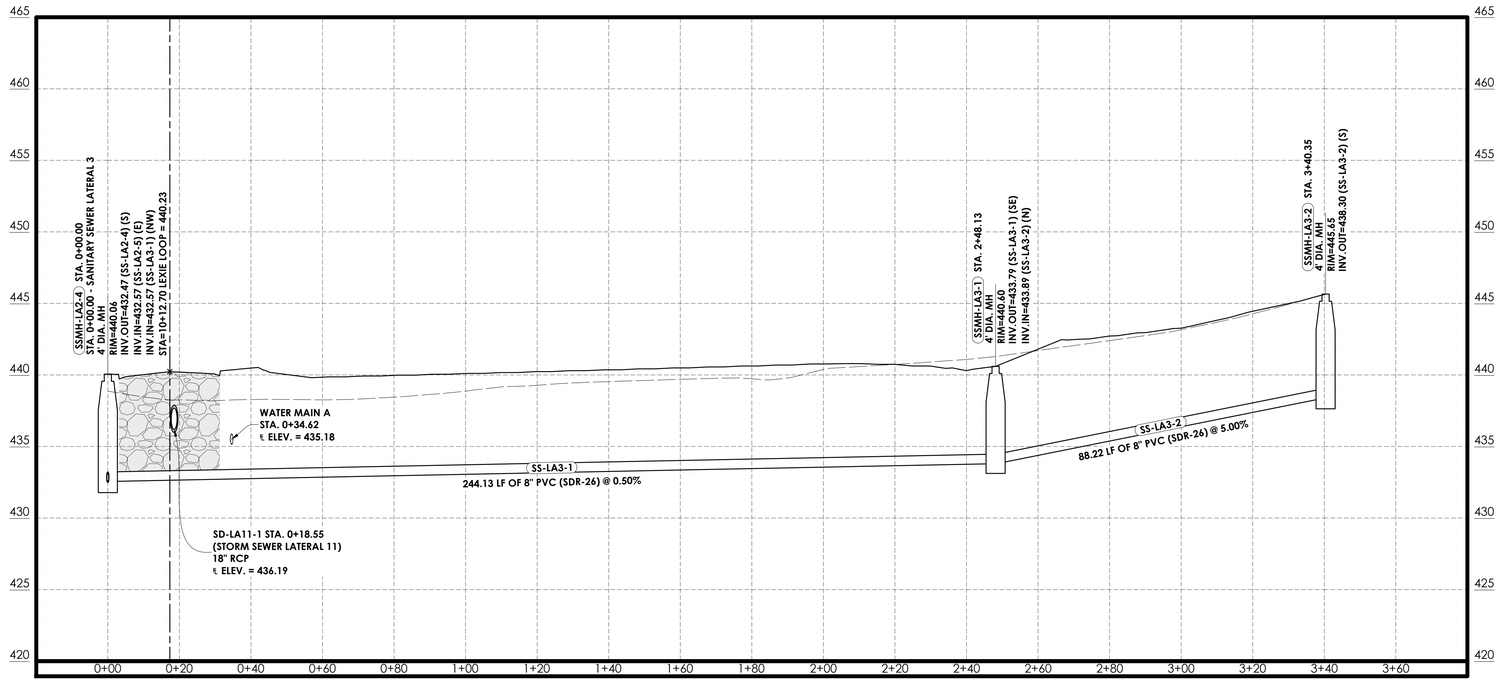
C5.09

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C5.00 SANITARY SEWER OVERVIEW.dwg

PLAN VIEW - SCALE 1"=20'



PROFILE VIEW - SCALE 1"=20'



PROPOSED
EXISTING

SANITARY SEWER LATERAL 3
HOR. SCALE: 1"=20'
VERT. SCALE: 1"=5'

CLASS 7 BACKFILL MIN.
95% COMPACTION (TYP.)

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Surveying & Civil Design

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(501) 851-3366
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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

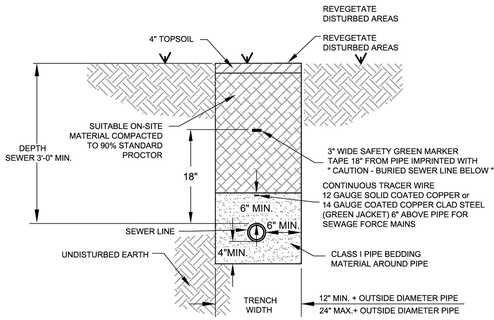
SANITARY SEWER P&P LATERAL 3

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18698
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C5.10



SEWER TRENCH

(NON-PAVED AREA)

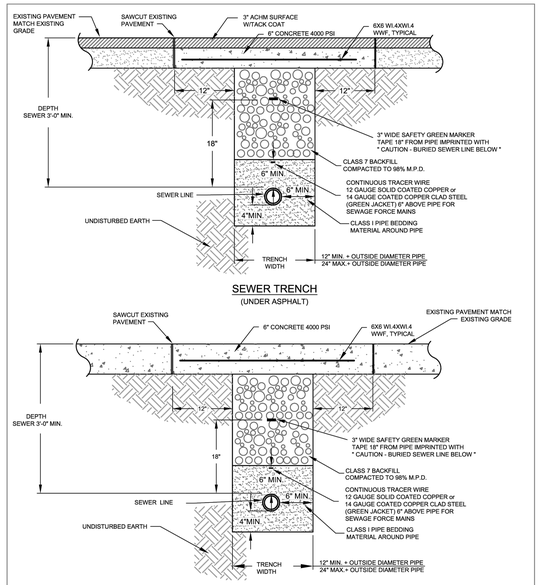
NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

4/8/2015 10:56:09 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **SEWER TRENCH (NON-PAVED AREA)**
DRAWN BY: | CHECKED BY: | FILE: S1--Sewer Trench (Non-Paved Area).dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S1**



SEWER TRENCH

(UNDER ASPHALT)

SEWER TRENCH

(UNDER CONCRETE)

NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

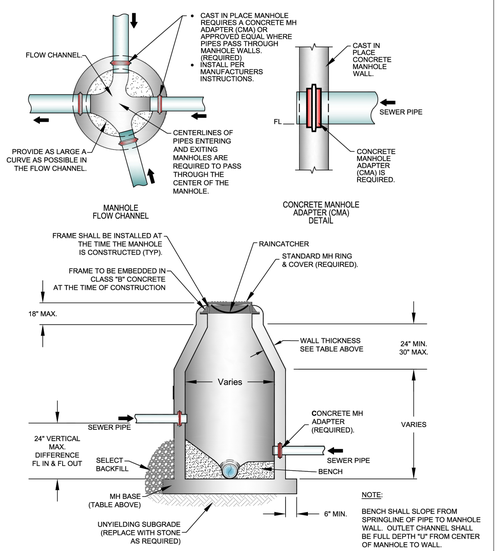
4/8/2015 10:56:01 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **SEWER TRENCH (UNDER PAVEMENT)**
DRAWN BY: | CHECKED BY: | FILE: S2--Sewer Trench (Under Pavement).dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S2**

Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	6"	6"	24" (< or Equal to 24" Pipes)
5' DIA	8"	8"	
6' DIA	8"	12"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE



NOTE:
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

CAST-IN-PLACE MANHOLE

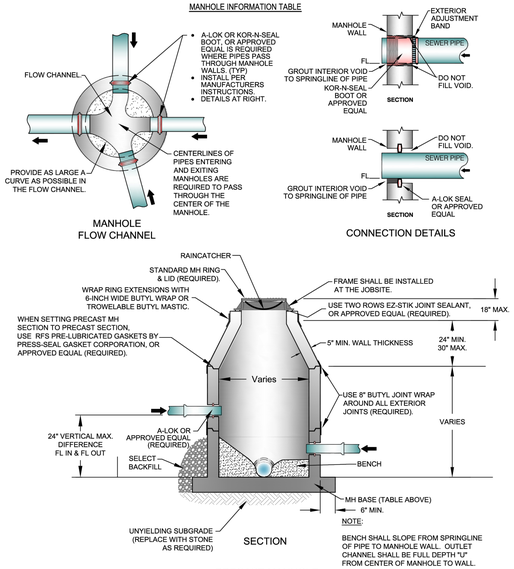
4/8/2015 10:56:22 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **CAST-IN-PLACE MANHOLE**
DRAWN BY: | CHECKED BY: | FILE: S4--Cast In Place Manhole.dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S4**

Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	5"	6"	24" (< or Equal to 24" Pipes)
5' DIA	7"	8"	
6' DIA	7"	8"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE



NOTE:
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

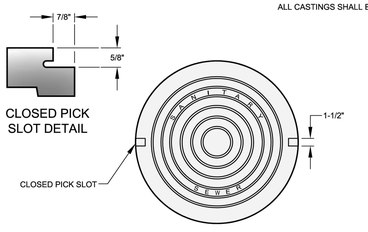
PRECAST MANHOLE

4/8/2015 10:56:07 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **PRECAST MANHOLE**
DRAWN BY: | CHECKED BY: | FILE: S5--Precast Manhole.dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S5**

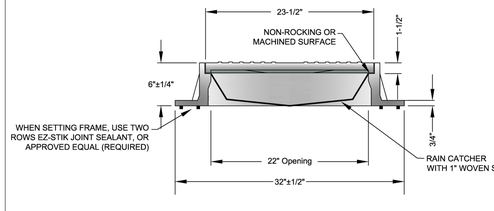
ALL CASTINGS SHALL BE "MADE IN USA"



COVER DETAIL

1. MINIMUM WEIGHT OF RING: 100 POUNDS
2. MINIMUM WEIGHT OF COVER: 110 POUNDS
3. COVERS ARE FURNISHED WITH TWO CLOSED PICK SLOTS.
4. CASTINGS SHALL BE "MADE IN USA"

* DIMENSIONAL TOLERANCES SHALL NOT EXCEED 1/16 INCH PER FOOT



FRAME AND COVER DETAIL

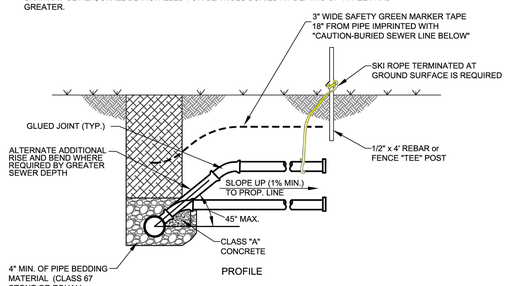
4/8/2015 10:56:43 AM

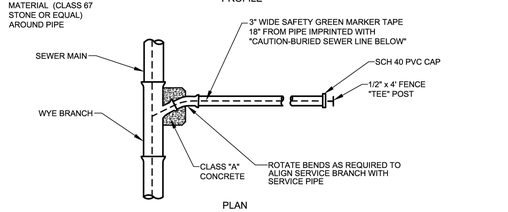
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **MANHOLE FRAME AND COVER**
DRAWN BY: | CHECKED BY: | FILE: S6--Manhole Frame and Cover.dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S6**

NOTES:

1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0"
2. PLACE CLASS "A" CONCRETE UNDER EACH WYE BRANCH TO PREVENT CRACKING OR TWISTING UNDER EARTH LOADS.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB TERMINATE AT A DISTANCE LESS THAN 8 FEET FROM THE SANITARY SEWER MAIN.
4. BURY A 1/2" x 4' STEEL TEE FENCE POST AT END OF SERVICE LATERAL STUB AND BACKFILL TO FINISHED GRADE OF PROPERTY.
5. 4" DUCTILE IRON PIPE, LINED FOR SANITARY SEWER AND 4" DUCTILE IRON M.J. FITTINGS, LINED FOR SANITARY SEWER, SHALL BE INSTALLED FOR SERVICES BURIED AT DEPTHS OF 14 FEET AND GREATER.



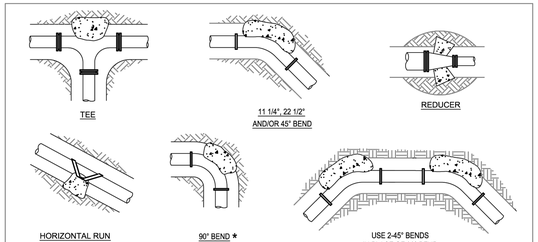


SEWER SERVICE LATERAL

4/8/2015 10:59:06 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **SEWER SERVICE LATERAL**
DRAWN BY: | CHECKED BY: | FILE: S15--Sewer Service Lateral.dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S15**



THRUST BLOCK SCHEDULE
(2000 PSF SOIL, 200 PSI WATER PRESSURE, 150 PSI WATER HAMMER)

	BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)					VOLUME OF THRUST BLOCK IN CU. FEET (VERTICAL BENDS)					
			BEND ANGLE				BEND ANGLE			ROD DIAM.	EMBED MENT
FITTING SIZE	PLUG TEE OR CAP	90° *	45°	22 1/2°	11 1/4°	FITTING SIZE	90° *	45°	22 1/2°	11 1/4°	
2, 3, & 4	1.8	2.7	1.4	0.7	0.4	2, 3, & 4	35.5	19.2	9.8	4.9	.50"	30"
6	5.6	7.9	4.3	2.2	1.1	6	105.8	57.2	29.2	14.7	.75"	30"
8	9.6	13.5	7.4	3.8	1.9	8	181.9	98.5	50.2	25.2	.75"	30"
10	20.5	29.0	15.7	8.0	4.0	10	387.1	209.5	106.8	53.7	1.0"	30"
16	35.7	50.4	27.3	13.9	7.0	16	672.6	364.0	185.8	93.2	1.0"	36"
18	44.8	63.4	34.3	17.5	18.8	18	844.7	457.2	233.1	117.1	1.0"	36"
24	78.4	110.9	60.0	30.6	15.4	24	1478.7	800.3	408.0	205.0	1.2"	36"

* 90 DEGREE BENDS SHALL ONLY BE USED ON A BY-EXCEPTION BASIS, AND MUST EACH BE SPECIFICALLY APPROVED BY CITY.

THRUST BLOCK NOTES:

1. CONCRETE FOR THRUST BLOCKS - CLASS A CONCRETE SHALL DEVELOP NOT LESS THAN 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
3. WRAP PIPE JOINTS IN 8 MIL "POLYETHLENE" BEFORE PLACING CONCRETE.
4. BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 200 psi. PLUS 100 psi. WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY.
5. MJ RESTRAINTS ARE REQUIRED FOR ALL FITTINGS.
6. USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE.
7. ALL BOLTS FOR FITTINGS SHALL BE 316 STAINLESS STEEL.
8. ALL DUCTILE IRON FITTINGS SHALL BE FUSION-BONDED EPOXY COATED INSIDE AND OUTSIDE IN ACCORDANCE WITH ANSI/AWWA C116/A21.16.
9. UNIT WEIGHT OF CONCRETE FOR VERTICAL THRUST BLOCKS IS 150 LBS/CU. FT.

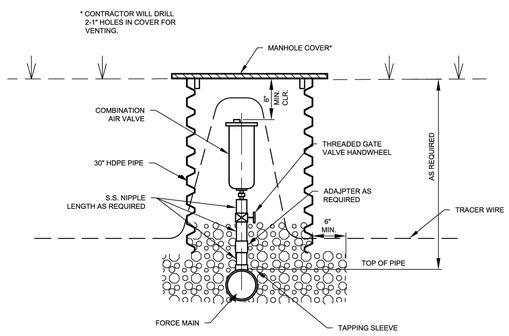
THRUST BLOCKING

4/8/2015 10:59:48 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **FORCE MAIN THRUST BLOCKING**
DRAWN BY: | CHECKED BY: | FILE: S25--Thrust Blocking.dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S25**

* CONTRACTOR WILL DRILL 2-1" HOLES IN COVER FOR VENTING.



AIR RELEASE VALVE

4/8/2015 10:59:50 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **AIR RELEASE VALVE**
DRAWN BY: | CHECKED BY: | FILE: S26--Air Release Valve.dwg
DATE: APRIL 2015 | REVISED: ----- | SHEET: **S26**

Holloway Engineering, Surveying & Civil Design

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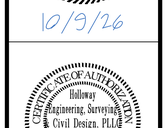
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SANITARY SEWER DETAILS (1 OF 2)





JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C5.50

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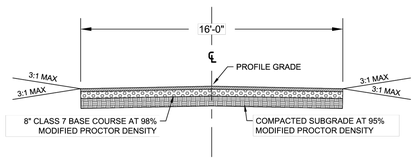


GRAVEL DRIVE FOR SEWAGE PUMP STATION

GENERAL NOTES

1. CRUSHED STONE - MATERIAL IN EACH COURSE SHALL BE COMPACTED TO A DENSITY OF 98% MAXIMUM MODIFIED DENSITY.

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS**
DESCRIPTION: **GRAVEL DRIVE FOR SEWAGE PUMP STATION**
DRAWN BY: | CHECKED BY: | FILE: 532-Gravel Drive For Sewage Pump Station.dwg

DATE:	APRIL 2015
REVISED	

SHEET: **S32**

Holloway Engineering,
Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

SANITARY SEWER DETAILS (2 OF 2)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY

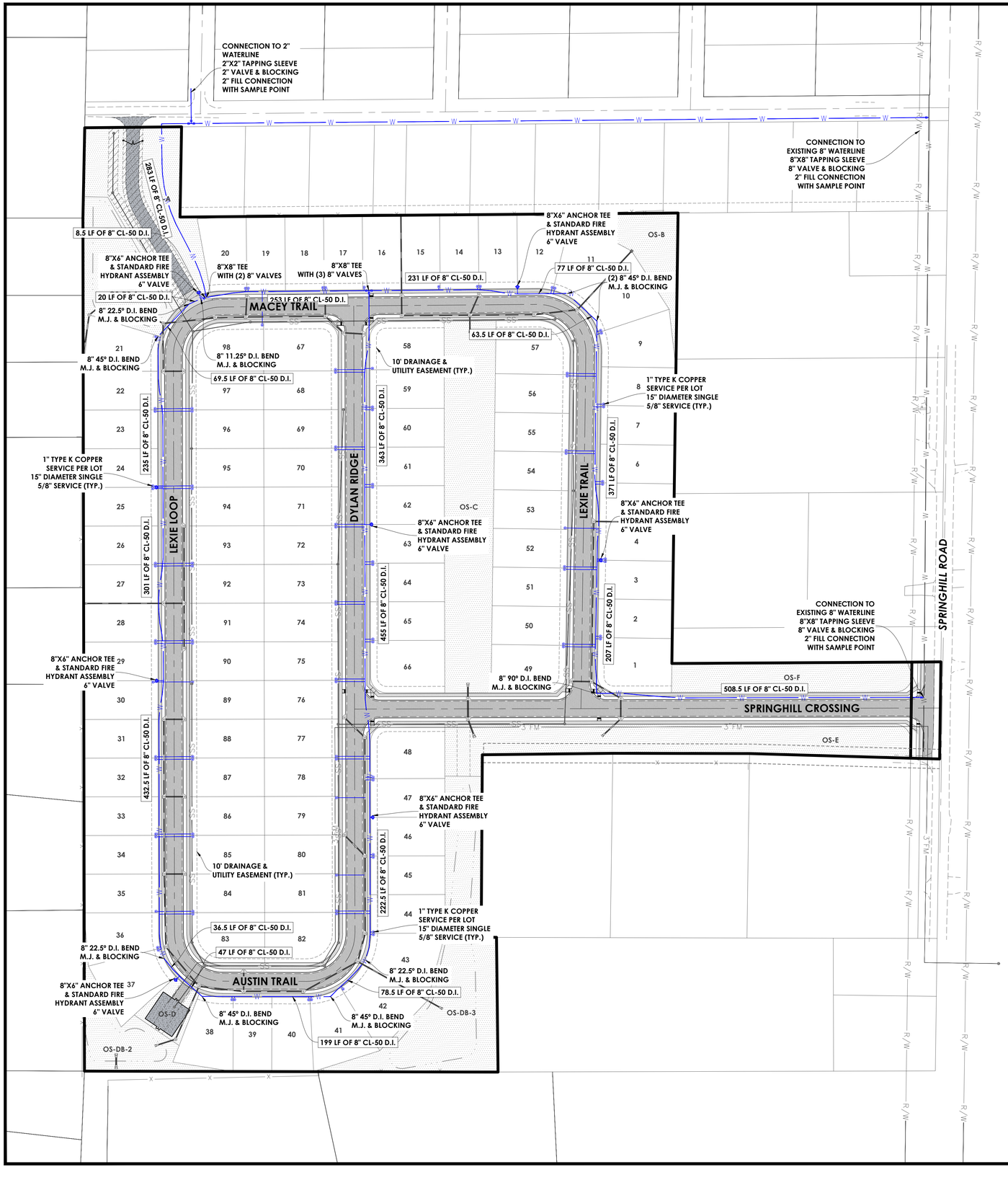
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

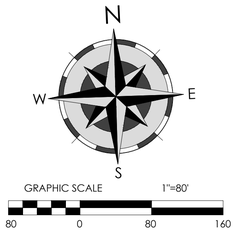
C5.51

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C5.50 SANITARY SEWER DETAILS.dwg



811 Know what's below. Call before you dig.

CAUTION: UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. HOWEVER, ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THE ACTUAL LOCATIONS OF THE UTILITIES MAY VARY FROM THE LOCATIONS SHOWN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES INVOLVED AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITIES ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY. ARKANSAS STATE LAW, THE UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, REQUIRES TWO WORKING DAYS ADVANCE NOTIFICATION THROUGH THE ARKANSAS ONE-CALL SYSTEM CENTER BEFORE EXCAVATING USING MECHANIZED EQUIPMENT OR EXPLOSIVES (EXCEPT IN THE CASE OF AN EMERGENCY). THE ONE-CALL SYSTEM PHONE NUMBER IS 1-800-482-8998. THE CONTRACTOR IS ADVISED THAT THERE IS A SEVERE PENALTY FOR NOT MAKING THIS CALL. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE-CALL SYSTEM; THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES, AS WELL AS THE ONE-CALL SYSTEM.



NOTES:

1. COORDINATE ALL UTILITY WORK WITH PULASKI COUNTY. COORDINATE AND CONSTRUCT ALL WATERLINES TO MEET THE LATEST EDITION OF BRYANT WATER DISTRIBUTION.
2. ALL WATERLINES GREATER THAN 3" SHALL BE CLASS 50 DUCTILE IRON & ALL WATERLINES LESS THAN 3" SHALL BE PVC SDR 17 RATED FOR 250 PSI. ALL WATER SERVICE LINES TO BE TYPE "K" COPPER.
3. SIZE AND LOCATION FOR SERVICES AND FIRE PROTECTION LINES TO BE COORDINATED WITH ARCHITECTURAL PLANS.
4. ALL PVC MAIN SHALL BE BEDDED IN SAND, ASTM C144, OR CRUSHED STONE, ASTM C33 #67. BEDDING SHALL BE A MINIMUM OF 4" BELOW AND 3"-6" ABOVE THE PIPE IN NON-HARD ROCK TRENCH CONDITIONS. IN HARD ROCK TRENCH CONDITIONS, PLACE A MINIMUM OF 6"-9" BELOW THE PIPE. PVC PIPE SHALL NO BE PLACED WITH WORKING PRESSURES EXCEEDING 125 PSI.
5. ALL WATER MAINS ARE TO BE A MINIMUM OF 1' BELOW STORM DRAINS OR AS DIRECTED BY BRYANT WATER DISTRIBUTION. ALL WATERLINES SHALL HAVE 36" OF MIN. COVER.
6. CONTROL POINTS AND PROPERTY PINS EXCAVATED BY CONTRACTOR ARE TO BE REPLACED PRIOR TO FINAL PAYMENT.
7. ALL WATER MAINS, APPURTENANCES, AND SERVICES ARE TO BE TESTED AS STATED IN THE LATEST EDITION OF THE BRYANT WATER DISTRIBUTION'S STANDARDS AND SPECIFICATIONS.
8. HYDRANTS TO BE 2'-7" FROM THE PROPOSED BACK OF CURB.
9. STATIC AND RESIDUAL WATER PRESSURE FOR THE PROJECT WILL BE: STATIC PRESSURE = _____ PSI FIRE FLOW @ _____ GPM OF RESIDUAL PRESSURE = _____ PSI, _____ GPM OF RESIDUAL PRESSURE = _____ PSI. (LOCATION: ADDRESS, CITY, ZIP.
10. NORTH OF THE ARKANSAS RIVER, VALVES WILL OPERATE RIGHT OR LEFT, AS DETERMINED BY EXISTING ZONES (AREAS), SOUTH OF THE ARKANSAS RIVER, VALVES THREE (3)-INCHES AND LARGER WILL OPERATE RIGHT. TWO (2)-INCH VALVES AND ALL VALVES IN THE WYE MOUNTAIN SERVICE AREA AND THE PARON-OWENSVILLE SERVICE AREA WILL OPERATE LEFT.
11. ALL FIRE HYDRANTS TO OPEN RIGHT, EXCEPT IN THE CITY OF MAUMELLE, PARON-OWENSVILLE, AND WYE MOUNTAIN WHICH SHALL OPEN LEFT.
12. REVIEW TRENCH SAFETY, AS DESCRIBED IN THE LATEST EDITION BRYANT WATER DISTRIBUTION'S STANDARDS AND SPECIFICATIONS.
13. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
14. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINES. WATER MAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATER LINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT. EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH. A MINIMUM HORIZONTAL DISTANCE OF THREE FEET SHALL BE MAINTAINED BETWEEN WATER LINES AND OTHER UNDERGROUND UTILITIES OF A NON-SANITARY NATURE (GAS, ELECTRIC, ETC.,). EXCEPTIONS TO THIS MUST BE APPROVED IN WRITING BY THE ARKANSAS DEPARTMENT OF HEALTH AND HUMAN SERVICES.
15. THE WATER MAIN WILL BE PUBLIC. THE FIRE HYDRANTS WILL BE PUBLIC.
16. CAUTION: UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO LOCATE THESE UTILITIES ON THE PLANS. HOWEVER, ALL EXISTING UTILITIES MAY NOT BE SHOWN AND THE ACTUAL LOCATIONS OF THE UTILITIES MAY VARY FROM THE LOCATIONS SHOWN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITIES INVOLVED AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITIES ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.ARKANSAS STATE LAW, THE UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, REQUIRES TWO WORKING DAYS ADVANCE NOTIFICATION THROUGH THE ARKANSAS ONE-CALL SYSTEM CENTER BEFORE EXCAVATING USING MECHANIZED EQUIPMENT OR EXPLOSIVES (EXCEPT IN THE CASE OF AN EMERGENCY). THE ONE-CALL SYSTEM PHONE NUMBER IS 811. THE CONTRACTOR IS ADVISED THAT THERE IS A SEVERE PENALTY FOR NOT MAKING THIS CALL, NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE-CALL SYSTEM; THEREFORE, THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES, AS WELL AS THE ONE-CALL SYSTEM.
17. ALL D.I. WATER MAINS AND APPURTENANCES TO BE POLY WRAPPED. SITE IS TO BE GRADED TO WITHIN 0.1 FT OF FINAL GRADE PRIOR TO WATER MAIN INSTALLATION. ALL VALVES INSTALLED TO BE OPEN LEFT. ALL FITTINGS ON 6" AND GREATER WATER MAINS MUST BE M.J. WITH STANDARD CONCRETE THRUST BLOCKING.
18. ALL SIZE 3" OR GREATER VALVES INSTALLED IN THIS AREA SHALL BE OPEN LEFT.
19. LOCATE METER BOX ASSEMBLY WITHIN 1' OF R.O.W. LINE OR WITHIN EASEMENT.
20. CONTRACTOR IS TO INSTALL METER BOX, LID, SETTER AND 36" COPPER SERVICE LINE AFTER SETTER.
21. 5/8" SINGLE WATER METER SETTER TO BE INSTALLED.

Holloway Engineering, Surveying & Civil Design

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
WATER PLAN

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

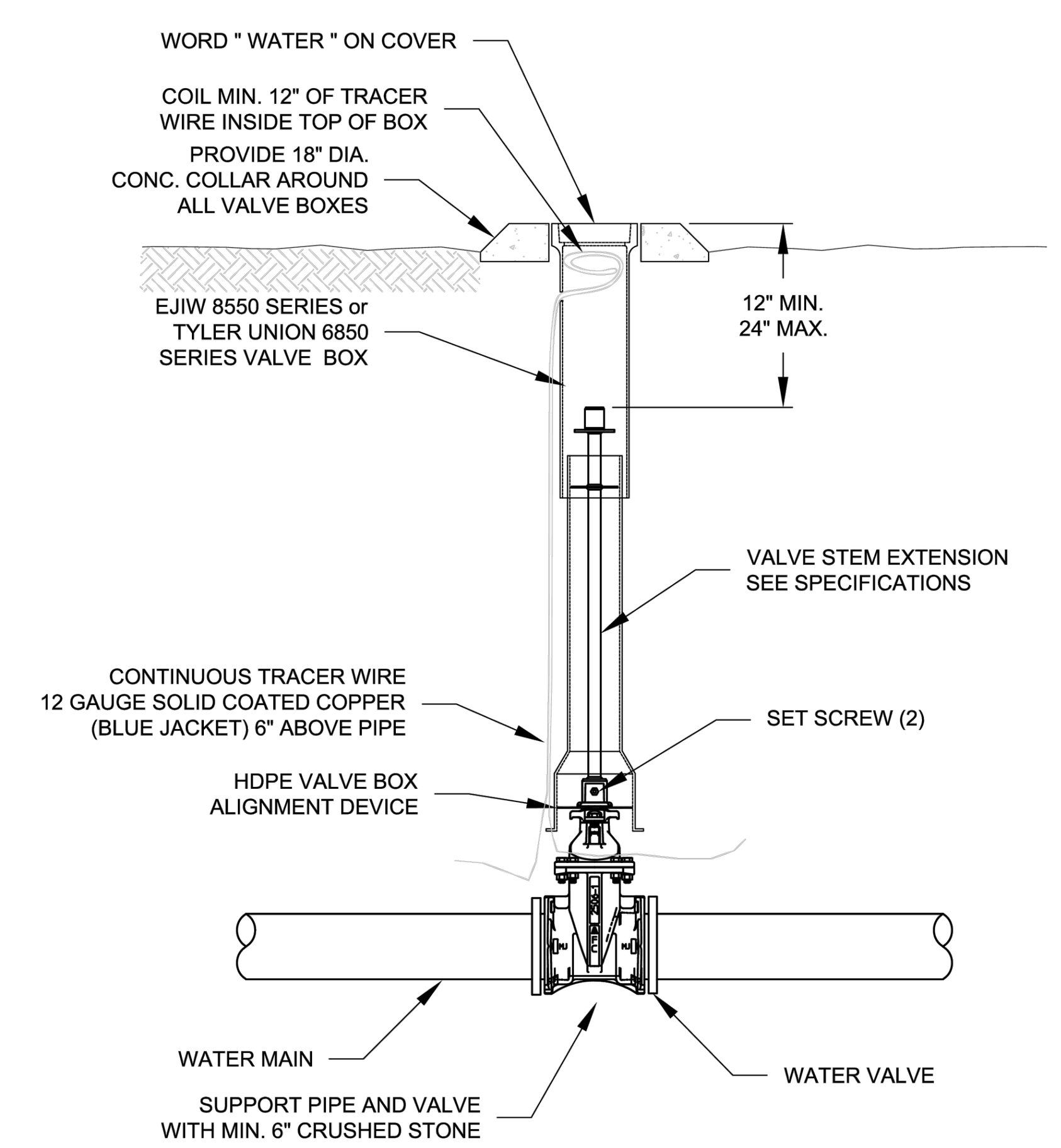
C6.00

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C6.00 WATER PLAN.dwg

W7 – VALVE STEM EXTENSION

NOTES:

1. OPERATING NUT EXTENSIONS SHALL BE USED WHEN THE TOP OF THE OPERATING NUT IS GREATER THAN 4 FEET FROM THE TOP OF FINISHED SURFACE.
2. THE STEM EXTENSION SHALL BE OF ADEQUATE LENGTH TO REACH FROM THE VALVE OPERATING NUT TO A POINT WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.



VALVE WITH STEM EXTENSION

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

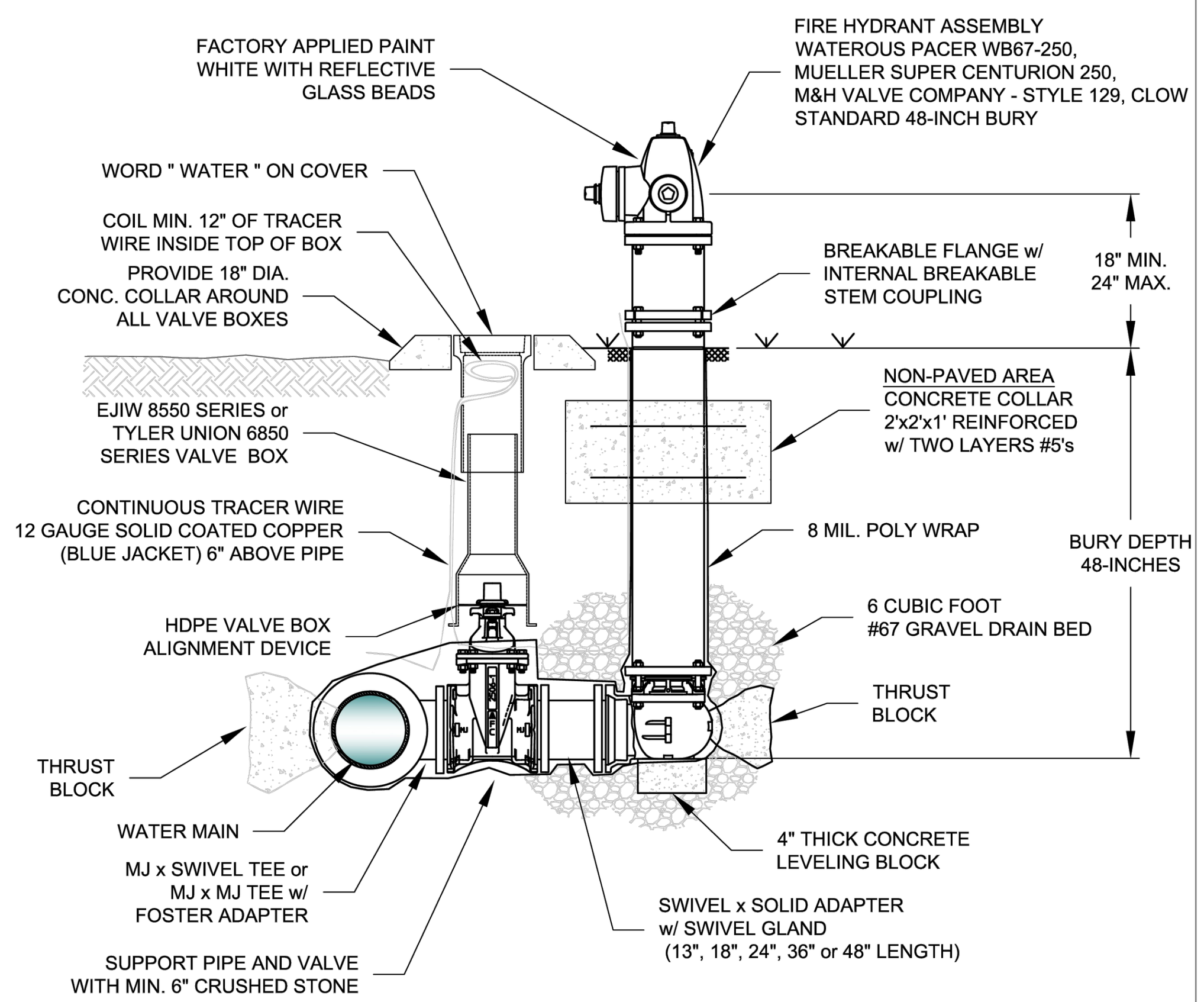
TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W7**
DESCRIPTION: VALVE STEM EXTENSION
DRAWN BY: | CHECKED BY: | FILE: W7-Valve Stem Extension.dwg

4/16/2015 11:45:48 AM

W8 – FIRE HYDRANT AND VALVE CONNECTION

NOTES:

1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. BURY LINE OF HYDRANT SHALL BE NO LESS THAN THE PROPOSED FINISHED ELEVATION OF BACK OF CURB, OR SIDEWALK, WHICHEVER IS GREATER.
4. NO MORE THAN ONE EXTENSION PER HYDRANT.
5. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB.
6. DO NOT COVER UP WEEP HOLE WITH CONCRETE.
7. MJ RETAINER GLANDS ARE REQUIRED FOR ALL FITTINGS.
8. 7. 6" DUCTILE IRON PIPE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 48-INCHES FROM THE MAIN VALVE.
9. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.

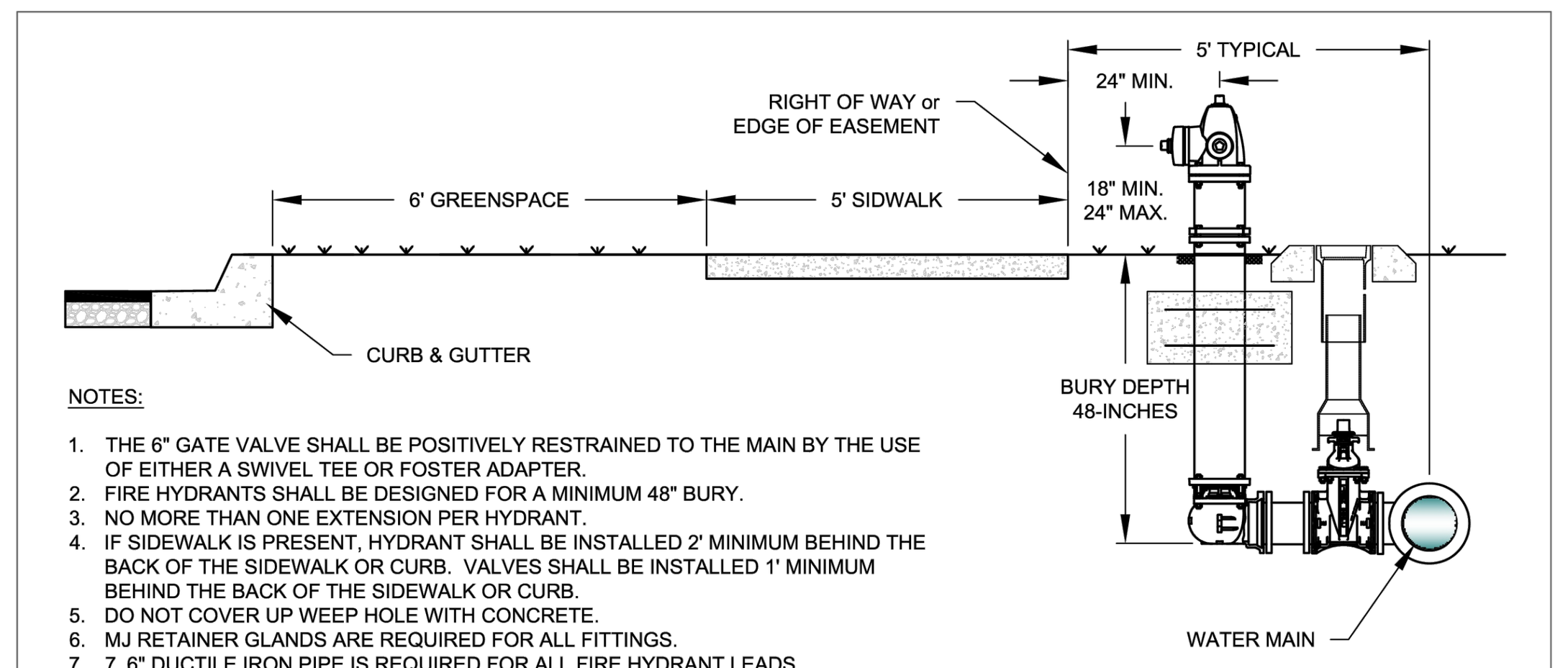


FIRE HYDRANT & VALVE CONNECTION

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

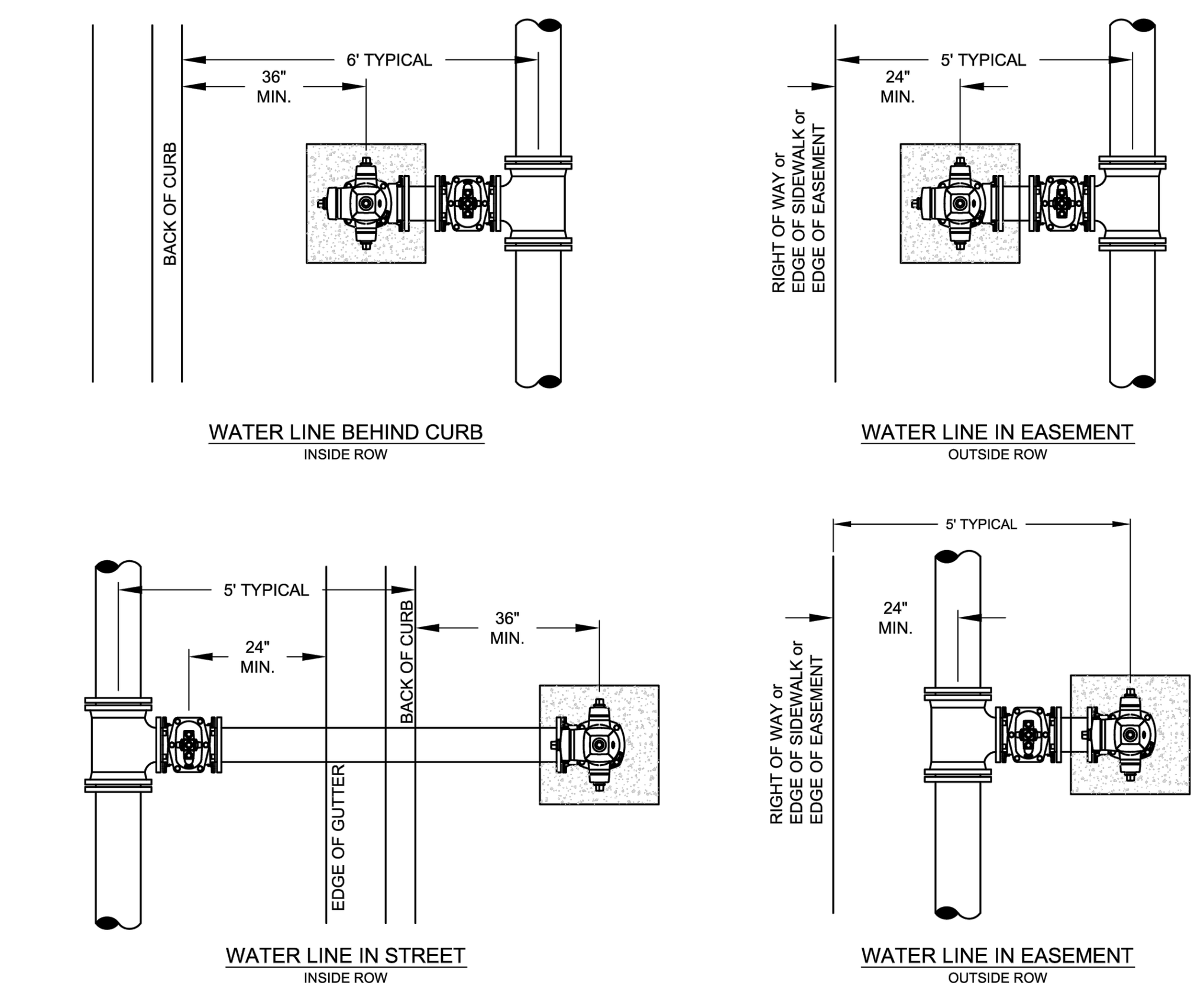
TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W8**
DESCRIPTION: FIRE HYDRANT AND VALVE CONNECTION
DRAWN BY: | CHECKED BY: | FILE: W8-Fire Hydrant and Valve.dwg

W9 – FIRE HYDRANT PLACEMENT



NOTES:

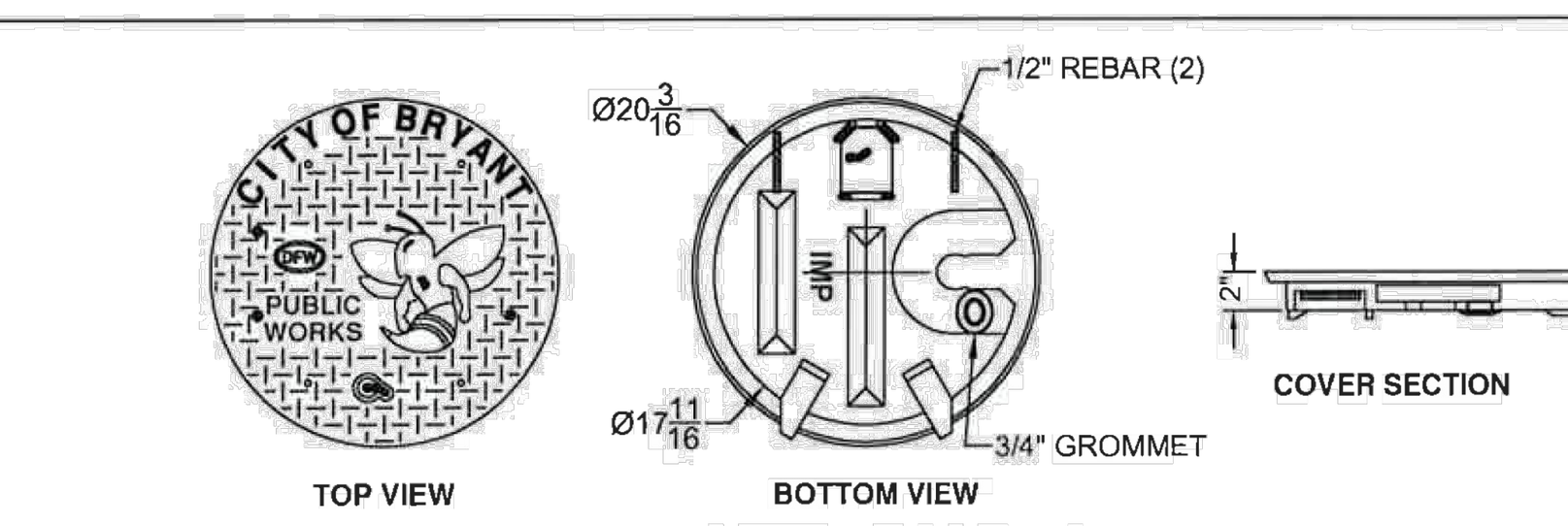
1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. NO MORE THAN ONE EXTENSION PER HYDRANT.
4. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB.
5. DO NOT COVER UP WEEP HOLE WITH CONCRETE.
6. MJ RETAINER GLANDS ARE REQUIRED FOR ALL FITTINGS.
7. 7. 6" DUCTILE IRON PIPE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 48-INCHES FROM THE MAIN VALVE.
8. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.



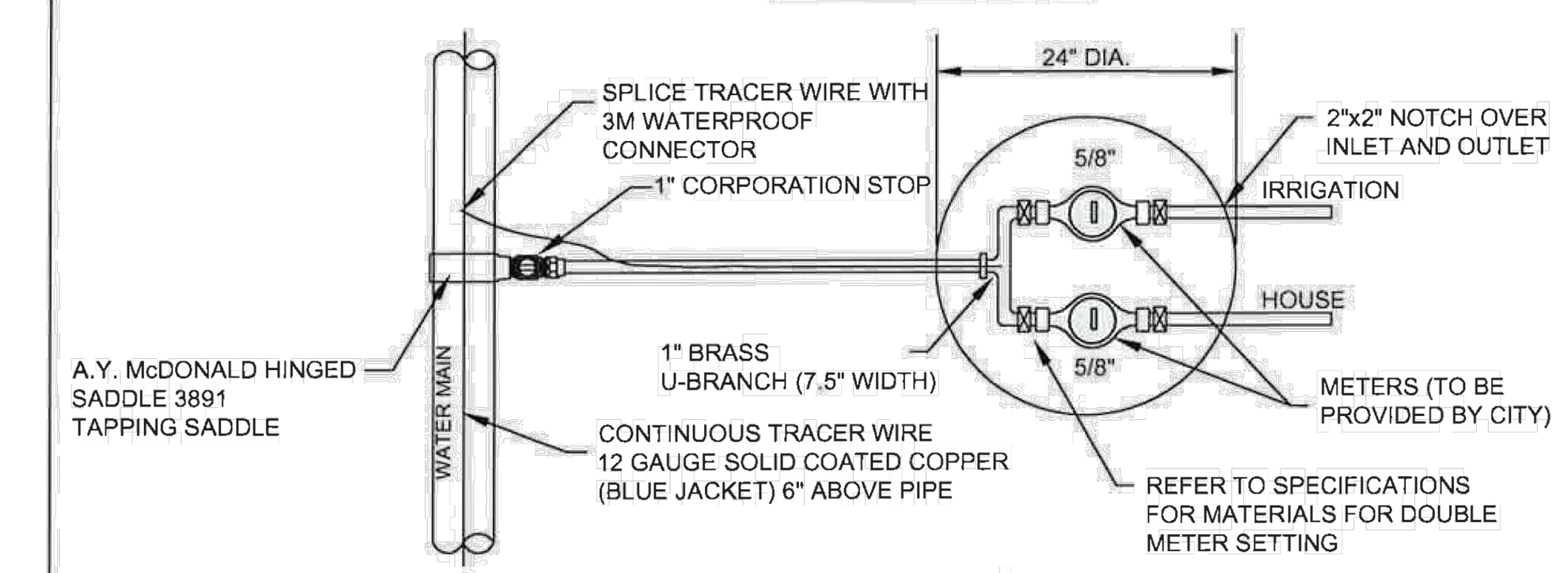
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W9**
DESCRIPTION: FIRE HYDRANT PLACEMENT
DRAWN BY: | CHECKED BY: | FILE: W9-Fire Hydrant Placement.dwg

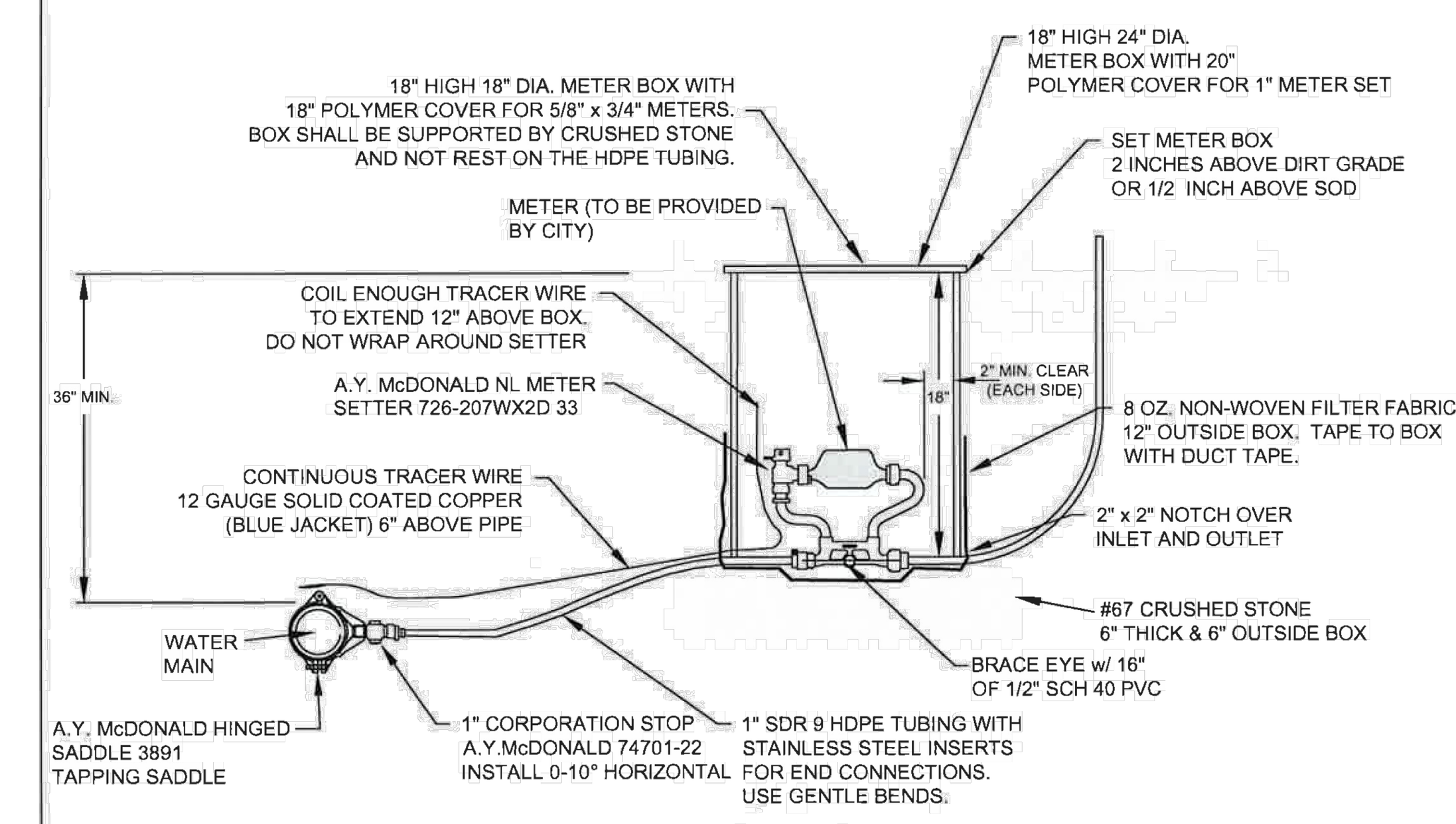
W10 – METER SETTINGS



WATER METER LID



DOUBLE METER SETTING
ONLY FOR 1 LOT



SINGLE METER SETTING

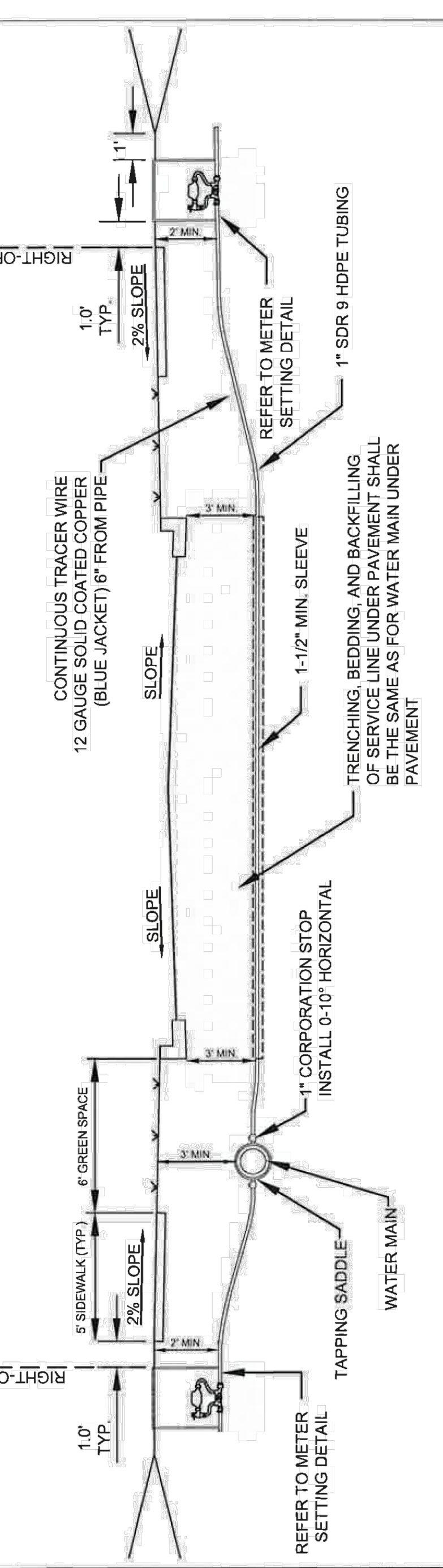
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W10**
DESCRIPTION: METER SETTINGS
DRAWN BY: | CHECKED BY: | FILE: W10-Meter Settings.dwg

W11 – METER SERVICE LINE UNDER PAVEMENT

NOTES:

1. ALL WATER & SANITARY SEWER TRENCHES WHICH ARE UNDER THE PROPOSED STREETS MUST BE BACKFILLED AS SHOWN ON THE TRENCHING, BEDDING, AND BACKFILL STANDARD DETAIL.
2. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM OF HORIZONTAL SEPARATION DISTANCE OF 10 FEET AT ALL TIMES.
3. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18 INCHES WITH THE WATER LINE CROSSING ABOVE THE SEWER LINE.
4. ALL CORP. STOPS SHALL BE INSTALLED AT 0-10° ANGLE FROM HORIZONTAL.
5. A MINIMUM OF 24-INCHES OF SEPARATION IS REQUIRED BETWEEN SERVICE TAPS.
6. ALL METER BOXES SHALL BE INSTALLED ON THE CUSTOMER SIDE OF THE WATER MAIN.
7. ALL METER BOXES SHALL BE INSTALLED IN NON-PAVED AREAS. ANY METER BOX THAT GETS PLACED IN A PAVED AREA SHALL BE RELOCATED AT THE OWNER'S EXPENSE BEFORE A WATER METER WILL BE INSTALLED.



SERVICE METER WITH WATER MAIN UNDER PAVEMENT

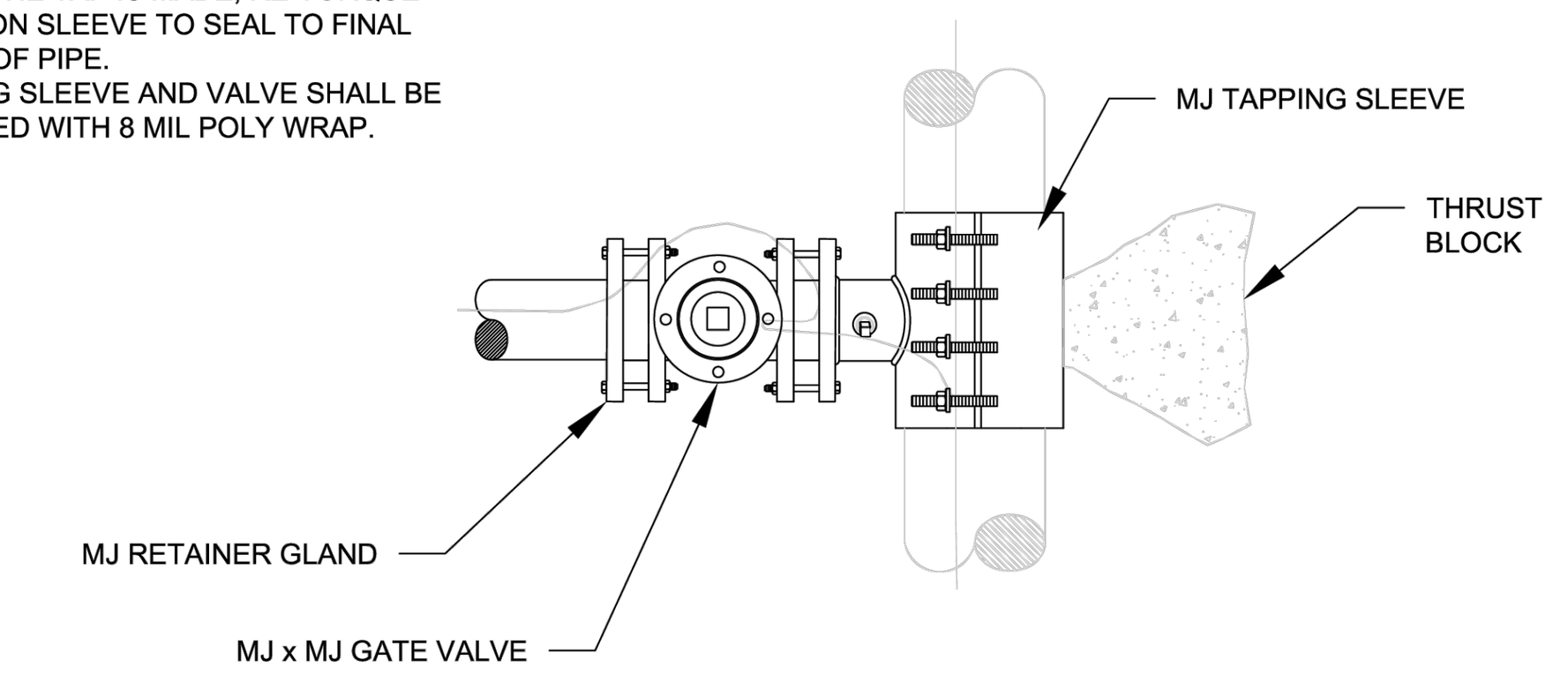
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W11**
DESCRIPTION: METER SERVICE LINE UNDER PAVEMENT
DRAWN BY: | CHECKED BY: | FILE: W11-Meter Service Line Under Pavement.dwg

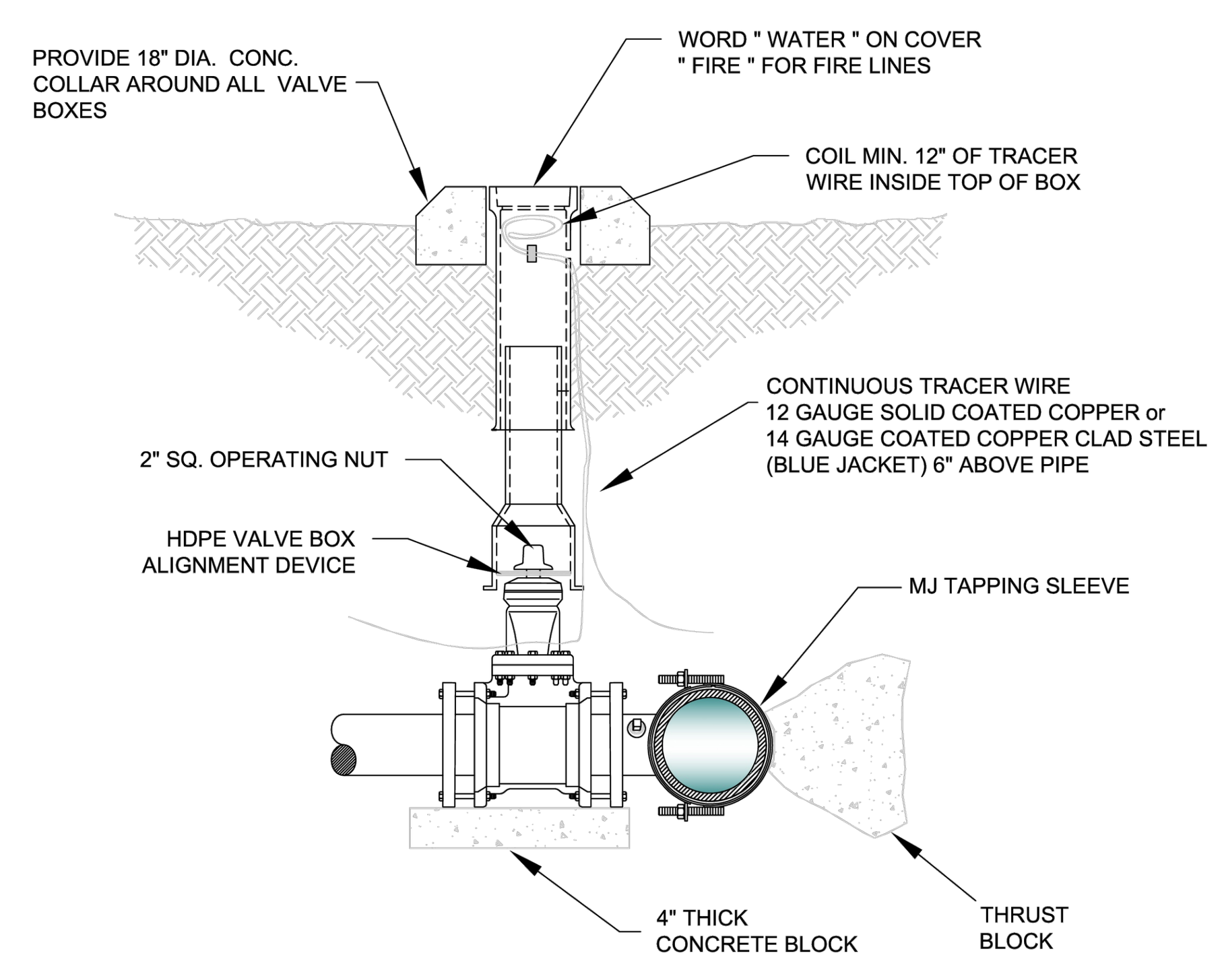
W13 – TAPPING SLEEVE AND VALVE

NOTES:

1. TAPPING SLEEVE SHALL BE SMITH-BLAIR 662 OR FORD FAST.
2. AFTER THE TAP IS MADE, RE-TORQUE BOLTS ON SLEEVE TO SEAL TO FINAL SHAPE OF PIPE.
3. TAPPING SLEEVE AND VALVE SHALL BE WRAPPED WITH 8 MIL POLY WRAP.



PLAN VIEW



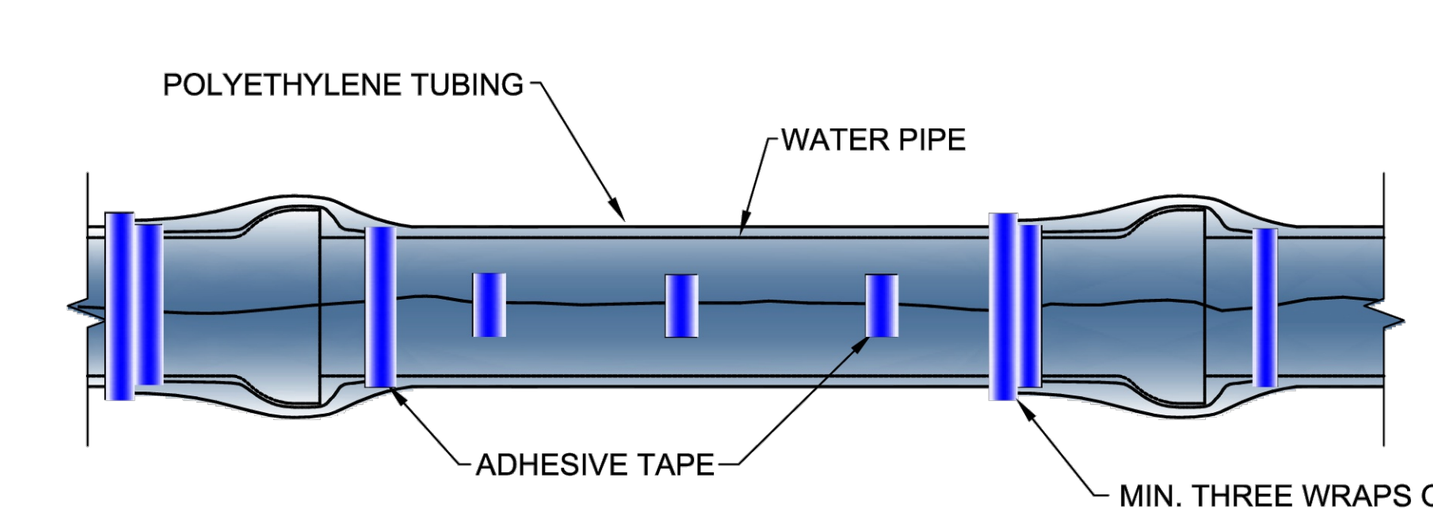
PROFILE VIEW

4/16/2015 11:46:24 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

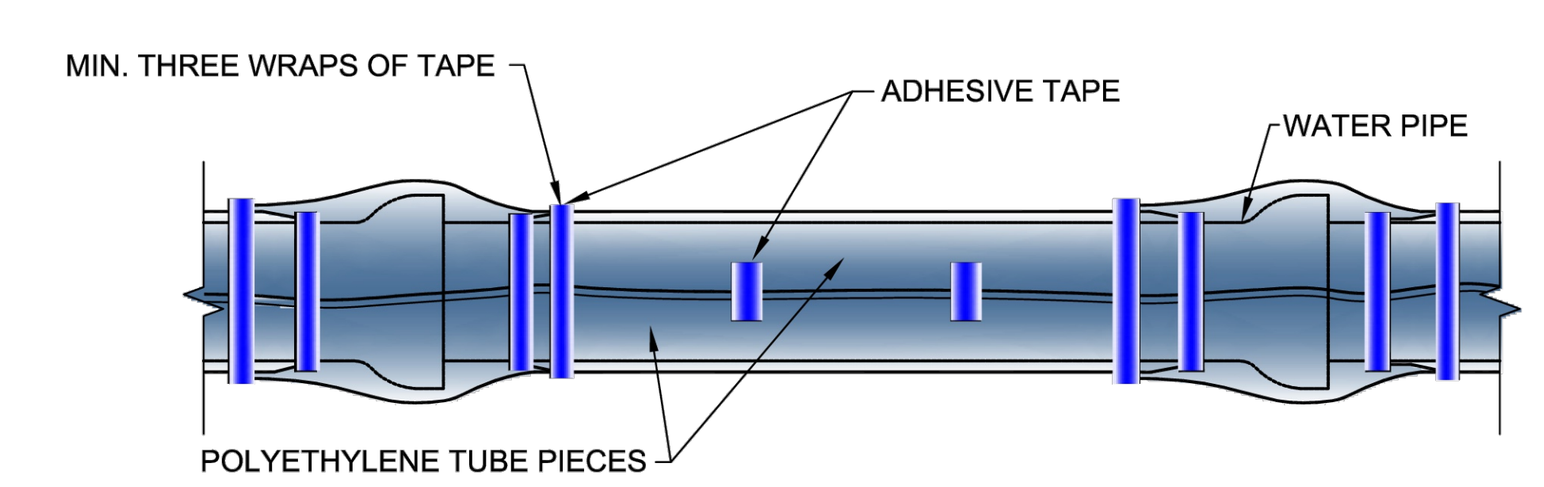
TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W13**
DESCRIPTION: TAPPING SLEEVE AND VALVE
DRAWN BY: | CHECKED BY: | FILE: W13-Tapping Sleeve and Valve.dwg

W14 – POLYETHYLENE PROTECTION MATERIAL



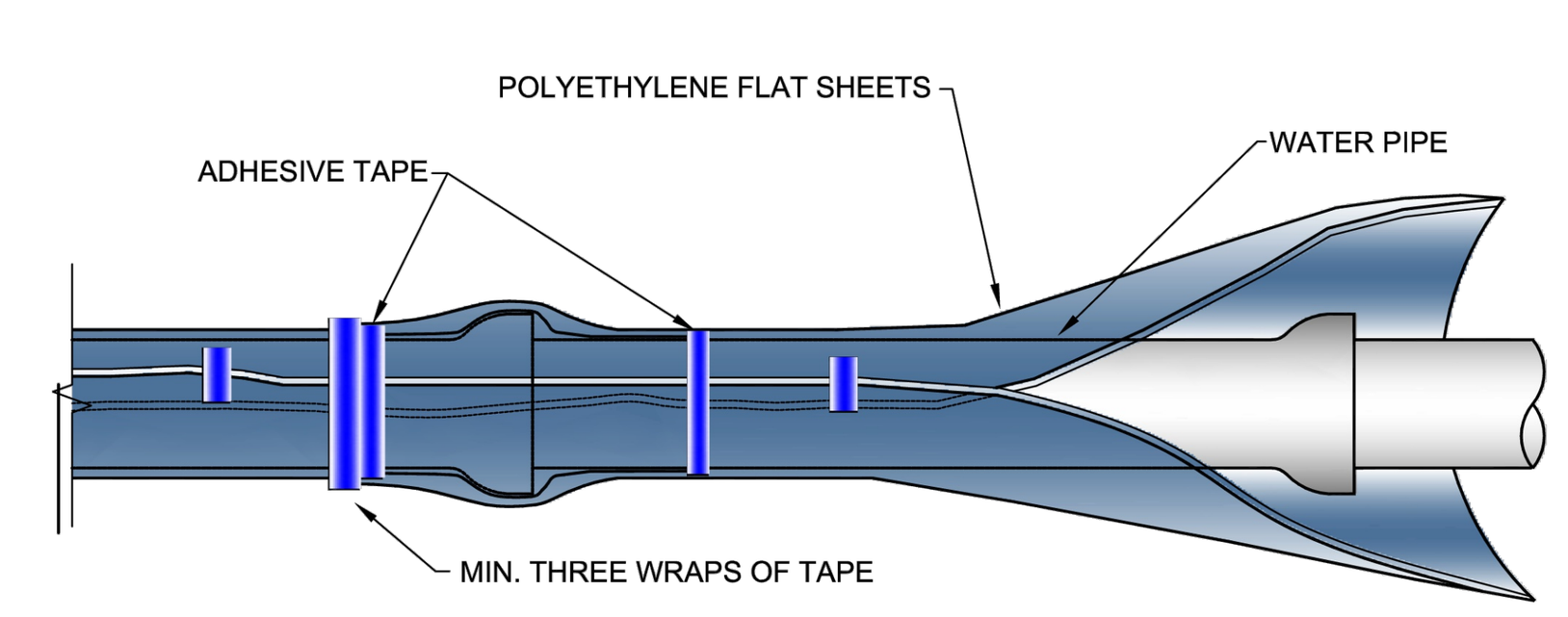
METHOD 'A'

METHOD 'A' USES ONE LENGTH OF POLYETHYLENE TUBE, OVERLAPPED AT THE JOINTS A MINIMUM OF 2 FEET.



METHOD 'B'

METHOD 'B' USES SEPARATE PIECES OF POLYETHYLENE TUBE FOR THE BARREL OF THE PIPE AND THE JOINTS. SHORT PIECES SHALL BE APPROXIMATELY 6' LONG AND OVERLAP BARREL SECTION BY A MINIMUM OF 2 FEET.



METHOD 'C'

METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY WRAPPED.

THE ANSI/AWWA C105/A21.5 STANDARD OUTLINES THREE METHODS OF INSTALLING POLYETHYLENE ENCASEMENT/ SLEEVING.

4/16/2015 11:46:29 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
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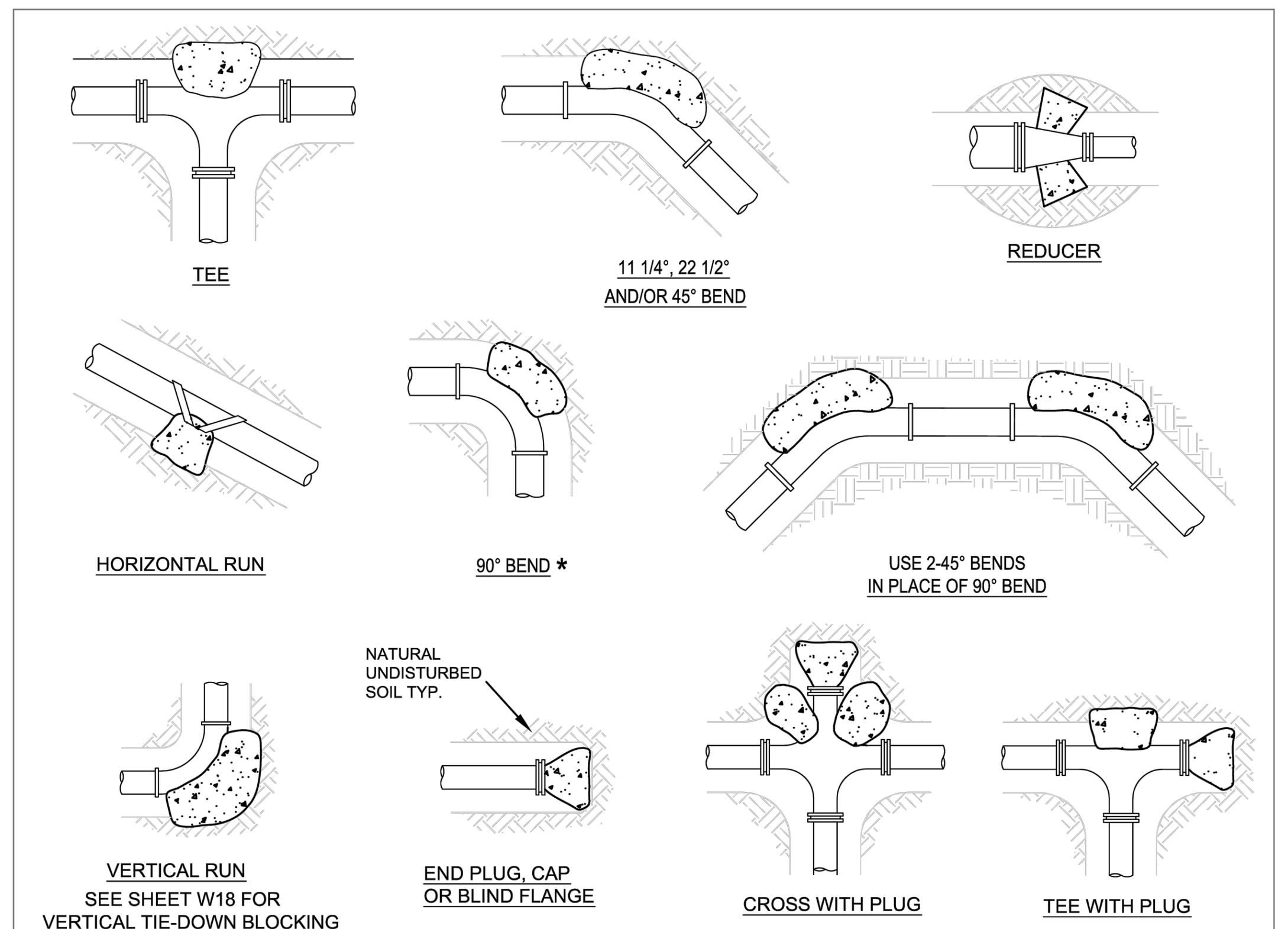
TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W14**
DESCRIPTION: POLYETHYLENE PROTECTION MATERIAL
DRAWN BY: | CHECKED BY: | FILE: W14-Poly Wrap.dwg

W16 – THRUST BLOCKING



THRUST BLOCK SCHEDULE
(2000 PSF SOIL, 200 PSI WATER PRESSURE, 100 PSI WATER HAMMER)

BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)						VOLUME OF THRUST BLOCK IN CU. FEET (VERTICAL BENDS)						
FITTING SIZE	PLUG TEE OR CAP	BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	FITTING SIZE	BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	ROD DIAM.	EMBED-MENT
2, 3, & 4	1.9	2.7	1.4	0.7	0.4	2, 3, & 4	35.5	19.2	9.8	4.9	.50"	30"
6	5.6	7.9	4.3	2.2	1.1	6	105.8	57.2	29.2	14.7	.75"	30"
8	9.6	13.6	7.4	3.8	1.9	8	181.9	98.5	50.2	25.2	.75"	30"
12	20.5	29.0	15.7	8.0	4.0	12	387.1	209.5	106.8	53.7	1.0"	30"
16	35.7	50.4	27.3	13.9	7.0	16	672.6	364.0	185.6	93.2	1.0"	36"
18	44.8	63.4	34.3	17.5	18.8	18	844.7	457.2	233.1	117.1	1.0"	36"
24	78.4	110.9	60.0	30.6	15.4	24	1478.7	800.3	408.0	205.0	1.5"	36"

* 90 DEGREE BENDS SHALL ONLY BE USED ON A BY-EXCEPTION BASIS, AND MUST EACH BE SPECIFICALLY APPROVED BY CITY.

THRUST BLOCK NOTES:

1. CONCRETE FOR THRUST BLOCKS - CLASS A CONCRETE SHALL DEVELOP NOT LESS THAN 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
3. WRAP PIPE JOINTS IN 8 MIL "POLYETHLENE" BEFORE PLACING CONCRETE.
4. BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 200 psi. PLUS 100 psi. WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY.
5. MJ RESTRAINTS ARE REQUIRED FOR ALL FITTINGS.
6. USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE.
7. ALL BOLTS FOR FITTINGS SHALL BE 316 STAINLESS STEEL.
8. ALL DUCTILE IRON FITTINGS SHALL BE FUSION-BONDED EPOXY COATED INSIDE AND OUTSIDE IN ACCORDANCE WITH ANSI/AWWA C116/A21.16.
9. UNIT WEIGHT OF CONCRETE FOR VERTICAL THRUST BLOCKS IS 150 LBS/CU. FT.

THRUST BLOCKING

4/16/2015 11:46:57 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS** | DATE: APRIL 2015 | REVISED | SHEET: **W16**
DESCRIPTION: THRUST BLOCKING
DRAWN BY: | CHECKED BY: | FILE: W16-Thrust Blocking.dwg

Holloway Engineering, Surveying & Civil Design

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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

WATER DETAILS (1 OF 2)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
J. ERIC HOLLOWAY
10/9/26

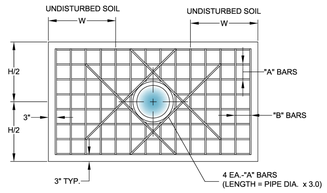
CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS - ENGINEER

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C6.50

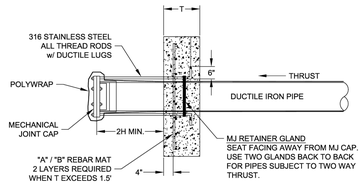
L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C6.50 WATER DETAILS.dwg

ANCHOR COLLAR SCHEDULE					
PIPE SIZE	* MINIMUM DIMENSIONS *			REINFORCING BARS	
	W	H	T	"A" BARS	"B" BARS
6"	1.5'	2.0'	1.0'	#6 @ 6"	#6 @ 6"
8"	2.0'	2.5'	1.0'	#6 @ 6"	#6 @ 6"
12"	2.5'	4.0'	1.5'	#6 @ 6"	#6 @ 6"
16"	3.5'	5.0'	1.5'	#6 @ 6"	#6 @ 6"
20"	5.0'	5.5'	2.0'	#6 @ 6"	#6 @ 6"
24"	6.5'	6.0'	2.0'	#7 @ 6"	#7 @ 10"



NOTES:

1. DESIGN PRESSURE IS 200 PSI PLUS 100 PSI SURGE AND 2,000 PSI SOIL BEARING.
2. ALL DIMENSIONS ARE MINIMUM REQUIREMENTS. ACTUAL FIELD CONDITIONS MAY REQUIRE LARGER DIMENSIONS.
3. ALL RETAINER GLANDS SHALL BE MEGA-LUG BY EBAA IRON.



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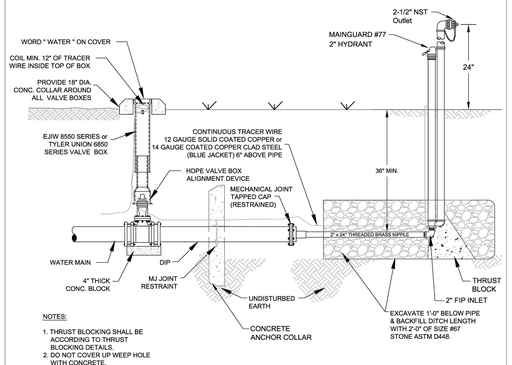
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **WATER DETAILS**
DESCRIPTION: **ANCHOR COLLAR**
DRAWN BY: CHECKED BY: FILE: W18-Anchor Collar.dwg
DATE: APRIL 2015 REVISED ----- ----- ----- -----
SHEET: **W18**



NOTES:

1. THRUST BLOCKING SHALL BE ACCORDING TO THRUST BLOCKING DETAILS.
2. DO NOT COVER UP WEEP HOLE WITH CONCRETE.

BLOW-OFF ASSEMBLY

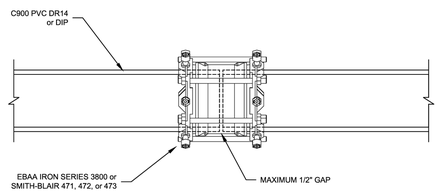
4/6/2026 11:47:58 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **WATER DETAILS**
DESCRIPTION: **BLOW-OFF ASSEMBLY**
DRAWN BY: CHECKED BY: FILE: W19-Blow-off Assembly.dwg
DATE: APRIL 2015 REVISED ----- ----- ----- -----
SHEET: **W19**

NOTE:

RESTRAINED COUPLINGS SHALL BE USED WHEN JOINING TWO CUT PIECES OF PIPE, GENERALLY WHEN CUTTING IN VALVES AND TEES.



RESTRAINED COUPLING

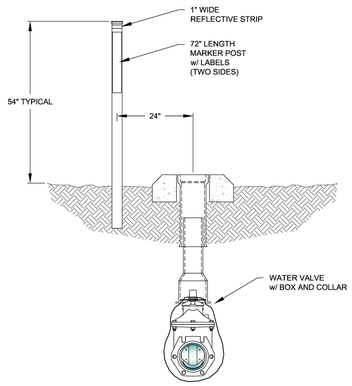
4/6/2026 11:47:33 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **WATER DETAILS**
DESCRIPTION: **RESTRAINED COUPLING**
DRAWN BY: CHECKED BY: FILE: W26-Restrained Coupling.dwg
DATE: APRIL 2015 REVISED ----- ----- ----- -----
SHEET: **W26**

NOTES:

1. WATER LINE MARKERS SHALL BE TRI-VIEW MARKING SYSTEM BY RHINO MARKING AND PROTECTION SYSTEMS OR CARSONITE INTERNATIONAL DUAL-SIDED UTILITY MARKER (CIB-380).
2. THE UPPERMOST PORTION OF THE CARSONITE MARKER SHALL BE MADE OF VISIBILITY ENHANCER (CVE-360).
3. TRI-VIEW MARKERS DO NOT REQUIRE VISIBILITY ENHANCERS.
4. AN ADDITIONAL WHITE 1" WIDE REFLECTIVE TAPE (3M OR EQUAL) SHALL BE PLACED AROUND THE FULL CIRCUMFERENCE OF THE TOP OF THE MARKER.



VALVE MARKER

4/6/2026 11:47:52 AM

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **WATER DETAILS**
DESCRIPTION: **VALVE MARKER**
DRAWN BY: CHECKED BY: FILE: W22-Valve Marker.dwg
DATE: APRIL 2015 REVISED ----- ----- ----- -----
SHEET: **W22**

Holloway Engineering, Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

WATER DETAILS (2 OF 2)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY

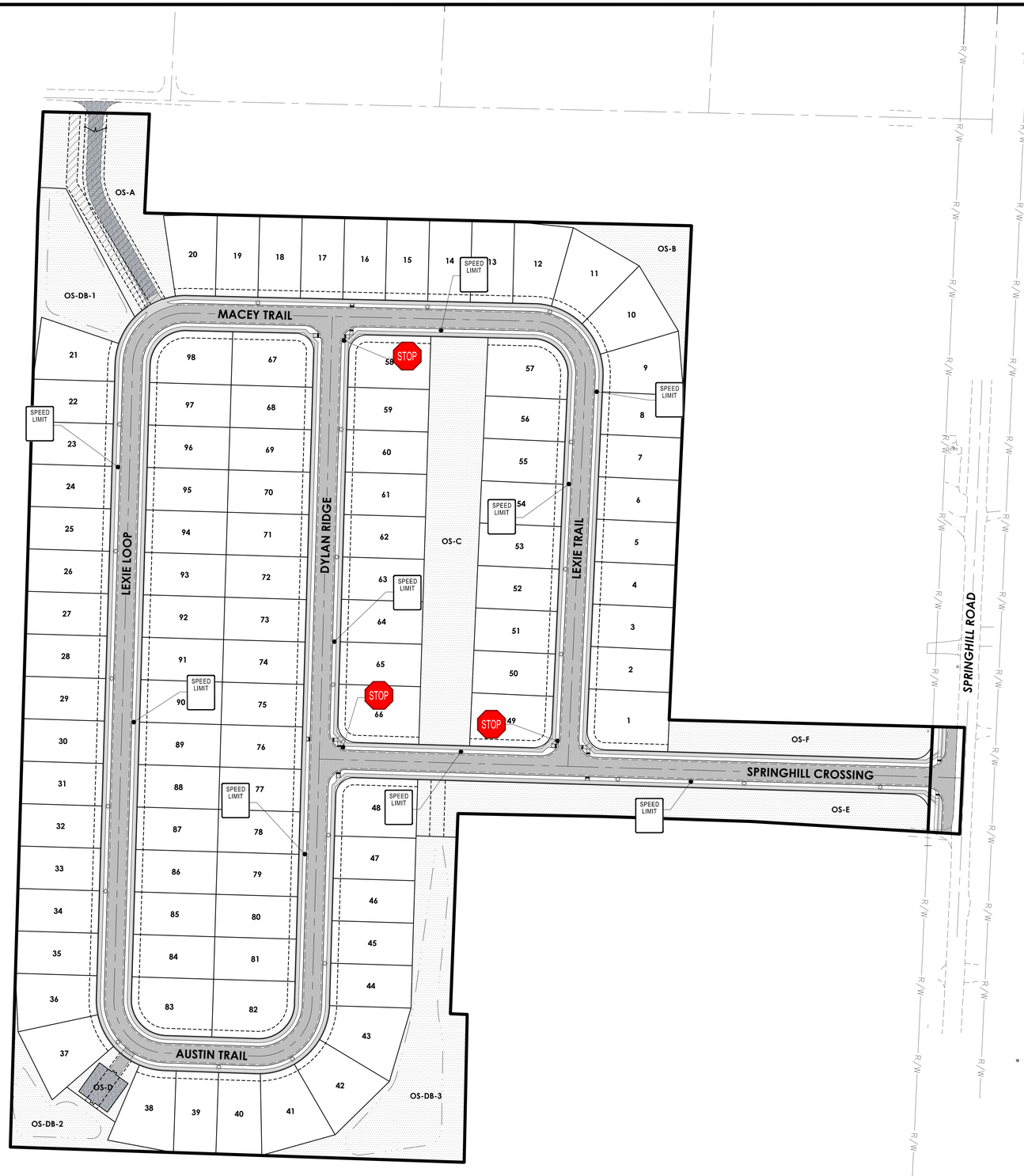
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C6.51

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C6.50 WATER DETAILS.dwg



LEGEND

PROPOSED	DESCRIPTION
☼	LIGHT POLE
□	SPEED LIMIT SIGN
STOP	STOP SIGN

N
W E
S

GRAPHIC SCALE 1"=80'

80 0 80 160

Holloway Engineering,
Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS

LIGHTING & SIGNAGE

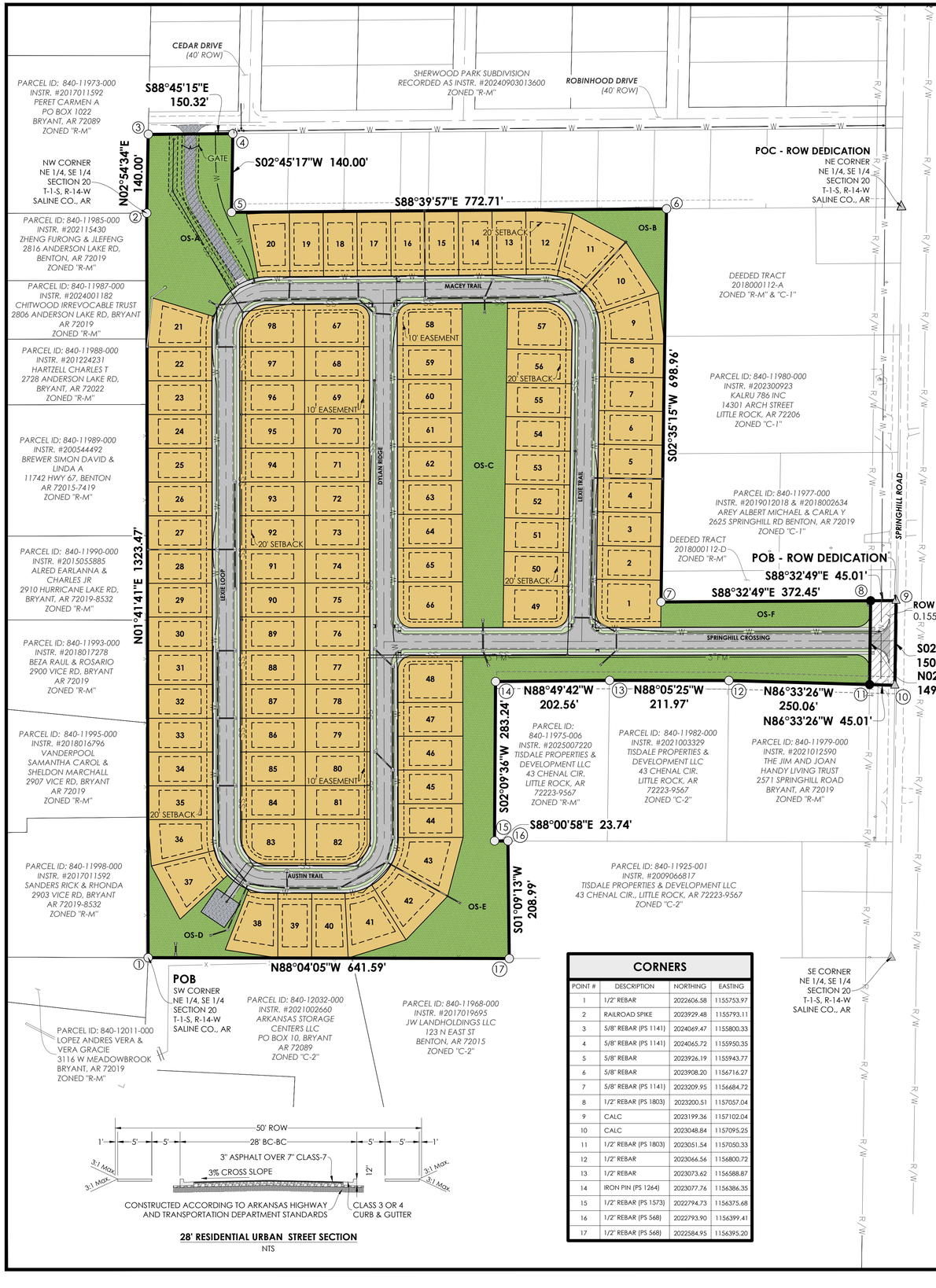
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
JOHN HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C7.00

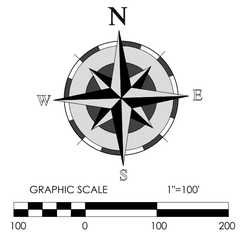
L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C7.00 LIGHTING & SIGNAGE.dwg



28' RESIDENTIAL URBAN STREET SECTION
NTS

CORNERS

POINT #	DESCRIPTION	NORTHING	EASTING
1	1/2" REBAR	2022606.58	1155753.97
2	RAILROAD SPIKE	2023929.48	1155793.11
3	5/8" REBAR (PS 1141)	2024069.47	1155800.33
4	5/8" REBAR (PS 1141)	2024065.72	1155950.35
5	5/8" REBAR	2023926.19	1155943.77
6	5/8" REBAR	2023908.20	1156716.27
7	5/8" REBAR (PS 1141)	2023209.95	1156684.72
8	1/2" REBAR (PS 1803)	2023200.51	1157057.04
9	CALC	2023199.36	1157102.04
10	CALC	2023048.84	1157095.25
11	1/2" REBAR (PS 1803)	2023051.54	1157050.33
12	1/2" REBAR	2023066.56	1156800.72
13	1/2" REBAR	2023073.62	1156588.87
14	IRON PIN (PS 1264)	2023077.76	1156386.35
15	1/2" REBAR (PS 1573)	2022794.73	1156375.68
16	1/2" REBAR (PS 568)	2022793.90	1156399.41
17	1/2" REBAR (PS 568)	2022584.95	1156395.20



BASIS OF BEARING
STATE PLANE COORDINATES
ARKANSAS SOUTH ZONE NAD-83

ACREAGE PER 40

NE 1/4, SE 1/4, SECTION 20	26.053 ACRES
SE 1/4, NE 1/4, SECTION 20	0.484 ACRES
TOTAL	26.537 ACRES

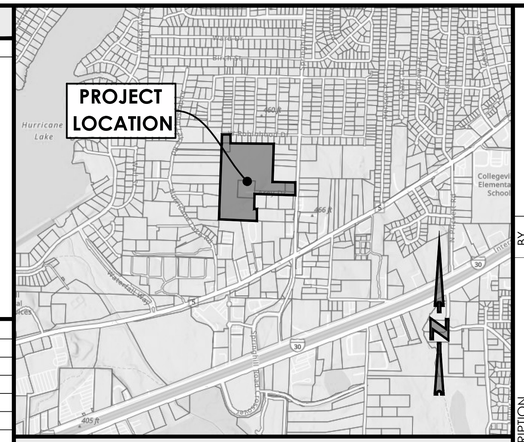
OPEN SPACE:

TRACT A	1.171 AC
TRACT B	0.272 AC
TRACT C	1.009 AC
TRACT D	0.436 AC
TRACT E	1.789 AC
TRACT F	0.387 AC
TOTAL:	5.064 AC

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
	EASEMENT
	BUILDING SETBACK
W	WATER LINE
SS	SANITARY SEWER LINE
	STORM DRAINAGE PIPE
	FD MONUMENT (AS NOTED)
	SET MONUMENT (AS NOTED)
	CALCULATED POINT
	CURB INLET/JUNCTION BOX
M	WATER METER
	WATER VALVE
	FIRE HYDRANT
	SANITARY SEWER MANHOLE

TOTAL PARCEL SIZE	26.537 ACRES
PROPOSED USAGE	RESIDENTIAL "R-M"
COMMON OPEN SPACE	5.484 ACRES (19.08%)
LENGTH OF NEW ROADS	4420 LF
MINIMUM LOT SIZE	0.158 AC
# OF LOTS (RESIDENTIAL)	98 LOTS
LOTS PER GROSS ACRE	3.693 LOTS/ACRE
AVERAGE LOT SIZE	0.167 AC



VICINITY MAP

PRELIMINARY PLAT
OF
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
10/9/26
ZONED "R-M"

TRACT 20180000112-F CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED AND SUBDIVIDED, AND DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — CAROLYN COUNTS, 324 OSMOND LN, BISMARK, AR 71929

INSTRUMENT NO. 2018000112

TRACT 2018004312 CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — CAROLYN R. COUNTS WALLACE, 324 OSMOND LN, BISMARK, AR 71929

INSTRUMENT NO. 2018004312

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY

I, J. ERIC HOLLOWAY, HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS A BOUNDARY SURVEY MADE OR VERIFIED BY ME THAT ALL SURVEYING REQUIREMENTS OF THE STATE OF ARKANSAS AND CITY OF BRYANT SUBDIVISION RULES AND REGULATIONS HAVE BEEN COMPLIED WITH AND FILED FOR RECORD AS REQUIRED.

10/9/26
DATE — J. ERIC HOLLOWAY, PROFESSIONAL SURVEYOR NO. 1803, AR

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY

I, J. ERIC HOLLOWAY HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS A PLAT MADE BY ME, AND THAT ENGINEERING REQUIREMENTS OF THE BRYANT SUBDIVISION RULES AND REGULATIONS HAVE BEEN COMPLIED WITH.

10/9/26
DATE — J. ERIC HOLLOWAY, PROFESSIONAL ENGINEER, AR NO. 18898

FLOOD STATEMENT:

GRAPHIC PLOTTING OF THE INFORMATION SHOWN ON FLOOD INSURANCE RATE MAP NO. 05125C0360E, DATED MAY 5, 2020, INDICATES THAT NO PORTION OF THE PROPERTIES SHOWN HEREON LIE WITHIN A SPECIAL FLOOD HAZARD..

TRACT 2007077496 CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED AND SUBDIVIDED, AND DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — BETTY L. HOPPER & BILLY R. HOPPER, 271 MOCCASIN LANE, BISMARK, AR 71929-6435

INSTRUMENT NO. 2007077496

TRACT 1998014967 CERTIFICATE OF OWNER

WE, THE UNDERSIGNED, OWNERS OF THE REAL ESTATE SHOWN AND DESCRIBED HEREIN, DO HEREBY CERTIFY THAT WE HAVE LAID OFF, PLATTED AND SUBDIVIDED, AND DO HEREBY LAY OFF, PLAT AND SUBDIVIDE SAID REAL ESTATE IN ACCORDANCE WITH THIS PLAT.

DATE — CAROLYN A. COUNTS, ADDRESS, CITY, AR ZIP

INSTRUMENT NO. 1998014967

CERTIFICATE OF PRELIMINARY PLAT APPROVAL

PURSUANT TO THE CITY OF BRYANT SUBDIVISION RULES AND REGULATIONS, AND ALL OF THE CONDITIONS OF APPROVAL HAVING BEEN COMPLETED, THIS DOCUMENT IS HEREBY ACCEPTED. THIS CERTIFICATE IS HEREBY EXECUTED UNDER THE AUTHORITY OF SAID RULES AND REGULATIONS.

DATE — LANCE PENFIELD, CHAIRMAN, BRYANT PLANNING COMMISSION

DEVELOPER

BROCK CUSTOM HOMES
PO BOX 11140
CONWAY, AR 72034

LEGAL DESCRIPTION:

Lands lying in the Northeast Quarter of the Southeast quarter and the Southeast quarter of the Northeast quarter all in Section 20, Township 1 South, Range 14 west, Saline County, Arkansas. Being more particularly described as follows:

Beginning at the Southwest corner of the Northeast Quarter of the Southeast Quarter of Section 20, Township 1 South, Range 14 West, Saline County, Arkansas; thence along the West line of said Northeast Quarter of the Southeast Quarter North 01 degrees 41 minutes 41 seconds East 1323.47 feet to the Northwest corner of said Northeast Quarter of the Southeast Quarter; thence leaving said Northeast corner North 02 degrees 54 minutes 34 seconds East 140.00 feet to the South Right of Way line of W Robinhood Drive; thence along said South Right of Way line South 88 degrees 45 minutes 15 seconds East 150.32 feet; thence leaving said South Right of Way line South 02 degrees 45 minutes 17 seconds West 140.00 feet to a point on the North line of said Northeast Quarter of the Southeast Quarter; thence South 88 degrees 39 minutes 57 seconds East 772.71 feet; thence leaving said North line South 02 degrees 35 minutes 15 seconds West 698.96 feet; thence South 88 degrees 32 minutes 49 seconds East 417.46 feet; thence South 02 degrees 34 minutes 55 seconds West 150.68 feet; thence North 86 degrees 33 minutes 26 seconds West 295.07 feet; thence North 88 degrees 05 minutes 25 seconds West 211.97 feet; thence North 88 degrees 49 minutes 42 seconds West 202.56 feet; thence South 02 degrees 09 minutes 36 seconds West 283.24 feet; thence South 88 degrees 00 minutes 58 seconds East 23.74 feet; thence South 01 degrees 09 minutes 13 seconds West 208.99 feet; thence North 88 degrees 04 minutes 05 seconds West 641.59 feet to the Point of Beginning, containing 26.537 acres more or less.

LEGAL DESCRIPTION - ROW DEDICATION:

Lands lying in the Northeast Quarter of the Southeast quarter and the Southeast quarter of the Northeast quarter all in Section 20, Township 1 South, Range 14 west, Saline County, Arkansas. Being more particularly described as follows:

Commencing at the Northeast corner of the Northeast Quarter of the Southeast Quarter of Section 20, Township 1 South, Range 14 West, Saline County, Arkansas; thence along the East line of said Northeast Quarter of the Southeast Quarter South 02 degrees 34 minutes 55 seconds West 699.88 feet to the Point of Beginning; thence South 02 degrees 34 minutes 55 seconds West 150.68 feet; thence leaving said East line of the Northeast Quarter of the Southeast Quarter North 86 degrees 33 minutes 26 seconds West 45.01 feet; thence North 02 degrees 34 minutes 55 seconds East 149.12 feet; thence South 88 degrees 32 minutes 49 seconds East 45.01 feet to the Point of Beginning, containing 0.155 acres more or less.

GENERAL NOTES:

1. ALL FRONT YARD SETBACKS ARE 20' UNLESS OTHERWISE NOTED.
2. ALL REAR YARD SETBACKS ARE 20' UNLESS OTHERWISE NOTED.
3. ALL INTERIOR SIDE YARD SETBACKS ARE 8' UNLESS OTHERWISE NOTED.
4. ALL EXTERIOR SIDE YARD SETBACKS ARE 15' UNLESS OTHERWISE NOTED.
5. ALL LOTS HAVE A FRONT, REAR AND EXTERIOR SIDE 10' DRAINAGE & UTILITY EASEMENT.
6. ALL LOTS HAVE A INTERIOR SIDE 5' DRAINAGE AND UTILITY EASEMENT.
7. ALL OPEN SPACES ARE ACCESS, DRAINAGE AND UTILITY EASEMENTS.
8. ALL ACCESS EASEMENTS, PARKS, AND OPEN SPACES SHALL BE MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.
9. ALL STREET RADII ARE 25' UNLESS OTHERWISE NOTED.
10. ALL SIDEWALKS ARE 5' WIDE CONCRETE.
11. ALL LOTS ARE SINGLE FAMILY HOUSING.
12. RESIDENTIAL FLOOR ELEVATIONS SHALL BE 3'-0" ABOVE THE 100 YEAR FLOOD ELEVATION.
13. WATER IS SUPPLIED BY BRYANT WATER DISTRIBUTION.
14. WASTEWATER DISPOSAL IS SUPPLIED BY BRYANT WASTEWATER UTILITIES.
15. ALL WATER MAINS ARE 8" CL-50 DUCTILE IRON PIPE.
16. ALL SEWER MAINS ARE 8" SDR-26 PVC PIPE.
17. ALL DETENTION AND DRAINAGE SHALL BE BUILT TO CITY STANDARDS AND APPROVED BY ENGINEER.
18. MINIMUM SQ FT TO BE THE SAME AS CITY OF BRYANT R-M ZONING. (6,000 SQ FT)

Holloway Engineering, Surveying & Civil Design

200 Casey Drive
Maumelle, AR 72113
(501) 851-3366
www.holloway-eng.com

REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
PRELIMINARY PLAT (1 OF 3)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
J. ERIC HOLLOWAY
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879
ARKANSAS ENGINEERING

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C0.01

CORNERS			
POINT #	DESCRIPTION	NORTHING	EASTING
1	1/2" REBAR	2022606.58	1155753.97
2	RAILROAD SPIKE	2023929.48	1155793.11
3	5/8" REBAR (PS 1141)	2024069.47	1155800.33
4	5/8" REBAR (PS 1141)	2024065.72	1155950.35
5	5/8" REBAR	2023926.19	1155943.77
6	5/8" REBAR	2023908.20	1156716.27
7	5/8" REBAR (PS 1141)	2023209.95	1156684.72
8	1/2" REBAR (PS 1803)	2023200.51	1157057.04
9	CALC	2023199.36	1157102.04
10	CALC	2023048.84	1157095.25
11	1/2" REBAR (PS 1803)	2023051.54	1157050.33
12	1/2" REBAR	2023066.56	1156800.72
13	1/2" REBAR	2023073.62	1156588.87
14	IRON PIN (PS 1264)	2023077.76	1156386.35
15	1/2" REBAR (PS 1573)	2022794.73	1156375.68
16	1/2" REBAR (PS 568)	2022793.90	1156399.41
17	1/2" REBAR (PS 568)	2022584.95	1156395.20

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C1	119.45'	75.00'	S43°02'21"E	107.22'
C2	117.34'	75.00'	N46°30'52"E	105.73'
C3	117.50'	75.00'	N43°11'12"W	105.85'
C4	118.12'	75.00'	S46°48'48"W	106.29'

PRELIMINARY PLAT
OF
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
10/9/26

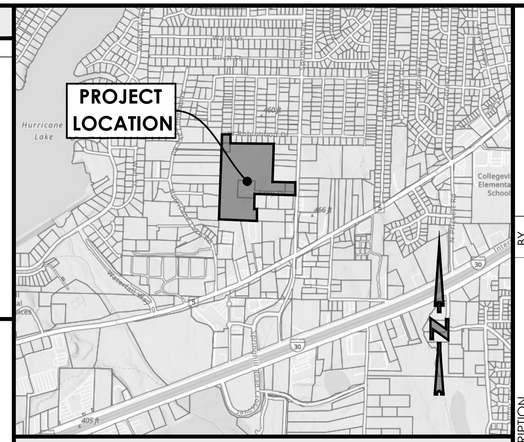
N
W E
S

GRAPHIC SCALE 1"=50'
50 0 50 100

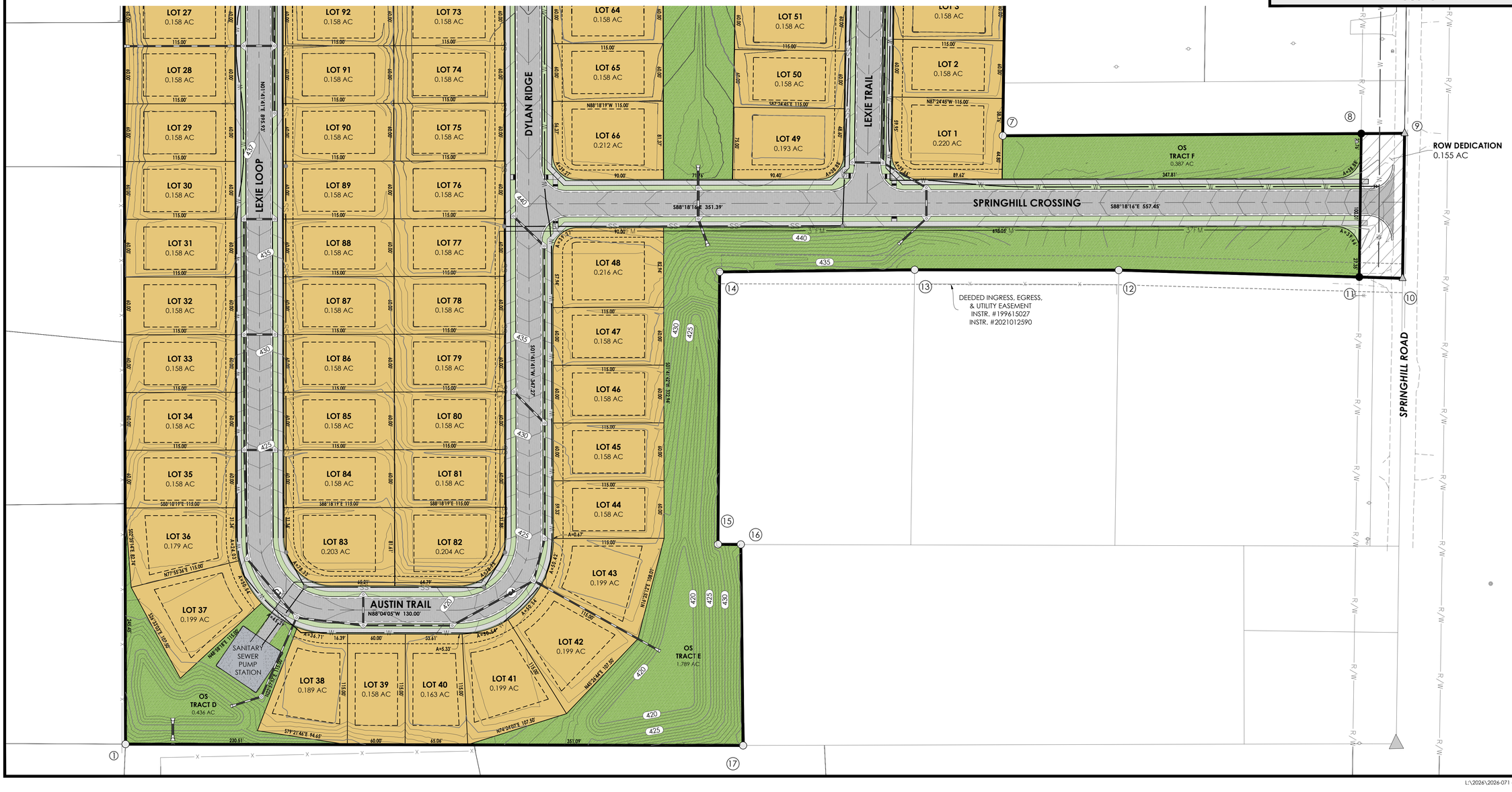
BASIS OF BEARING
STATE PLANE COORDINATES
ARKANSAS SOUTH ZONE NAD-83

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
	EASEMENT
	BUILDING SETBACK
W	WATER LINE
SS	SANITARY SEWER LINE
	STORM DRAINAGE PIPE
	FD MONUMENT (AS NOTED)
	SET MONUMENT (AS NOTED)
	CALCULATED POINT
	CURB INLET/JUNCTION BOX
M	WATER METER
	WATER VALVE
	FIRE HYDRANT
	SANITARY SEWER MANHOLE



VICINITY MAP



REV.	DATE	DESCRIPTION	BY

Holloway Engineering, Surveying & Civil Design

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Maumelle, AR 72113
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www.holloway-eng.com

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
PRELIMINARY PLAT (2 OF 3)

STATE OF ARKANSAS
ERIC HOLLOWAY
LICENSED PROFESSIONAL ENGINEER
No. 18898
10/9/26

CERTIFICATE OF AUTHORIZATION
Holloway Engineering, Surveying & Civil Design, PLLC
#1879

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C0.02

L:\2026\2026-071 - Daryl Bryant 26 Ac project\Drawings\Sheets\C0.01 PRELIMINARY PLAT.dwg

PRELIMINARY PLAT
OF
SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
10/9/26

CORNERS			
POINT #	DESCRIPTION	NORTHING	EASTING
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C3	117.50'	75.00'	N43°11'12"W	105.85'
C4	118.12'	75.00'	S46°48'48"W	106.29'

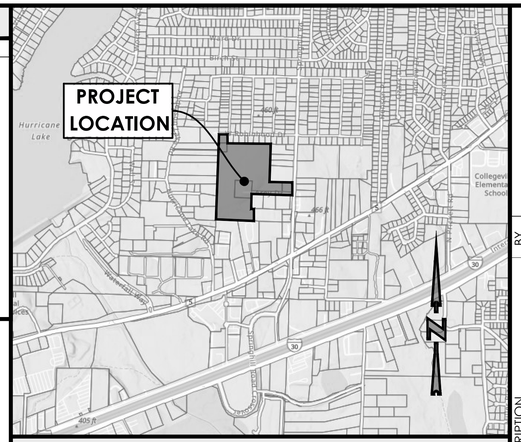
N
W E
S

GRAPHIC SCALE 1"=50'
50 0 50 100

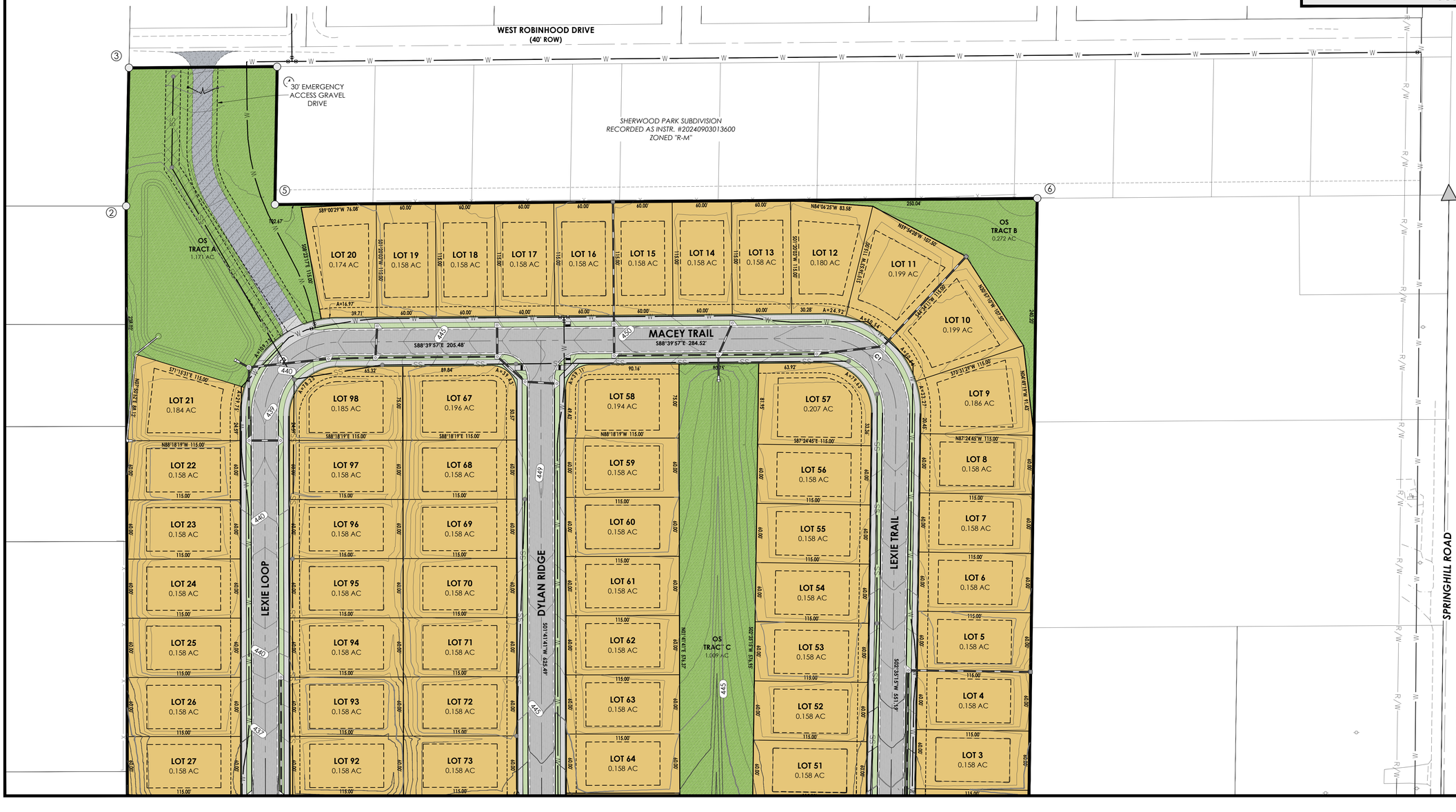
BASIS OF BEARING
STATE PLANE COORDINATES
ARKANSAS SOUTH ZONE NAD-83

LEGEND

PROPOSED	DESCRIPTION
	BOUNDARY FINAL
	BOUNDARY ADJOINER
	EASEMENT
	BUILDING SETBACK
W	WATER LINE
SS	SANITARY SEWER LINE
	STORM DRAINAGE PIPE
	FD MONUMENT (AS NOTED)
	SET MONUMENT (AS NOTED)
	CALCULATED POINT
	CURB INLET/JUNCTION BOX
M	WATER METER
	WATER VALVE
	FIRE HYDRANT
	SANITARY SEWER MANHOLE



VICINITY MAP



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REV.	DATE	DESCRIPTION	BY

SPRINGHILL CROSSING
BRYANT, SALINE COUNTY, ARKANSAS
PRELIMINARY PLAT (3 OF 3)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 18898
ERIC HOLLOWAY
10/9/26

Holloway Engineering, Surveying & Civil Design, PLLC
#1879
CERTIFICATE OF AUTHORIZATION
STATE OF ARKANSAS

JOB NO.: 2026-071
DATE: 10/9/26
SHEET NUMBER:

C0.03

BILL OF ASSURANCE

Zyair Estates

PART A. PREAMBLE

WHEREAS, Eminent Construction, LLC. is the Owner, by virtue of Instruments, _____ of the following land situated in Saline County, Arkansas, to wit:

LEGAL DESCRIPTION –ZYAIR ESTATES ESTATES

See Attached

"Exhibit A" Final Plat Recorded Plat for Legal Description

WHEREAS, Owner has caused said land to be surveyed and a plat thereof made, dividing said land into lots as shown on said plat and showing the dimensions of each lot and the width of the streets as known as Zyair Estates, to the City of Bryant, Saline County, Arkansas.

WHEREAS, the Saline County Real Estate Assessor and Office of Emergency Services have approved said Subdivision and road names.

NOW THEREFORE, Eminent Construction, LLC in consideration of the purposes herein stated, does hereby designate said land and make part hereof to be known as Zyair Estates to the City of Bryant, Saline County, Arkansas, and that hereafter any conveyance by the Owners of said land by lot number shall forever be held to be good and legal description and the streets shown on said plat in said Subdivision are hereby and will become a public road to be accepted by the City of Bryant for maintenance. The property owners will establish Zyair Estates Property Owner's Association for the purpose of maintaining and ownership of common areas , stormwater detention facilities, and appurtenances belonging thereto. The use of the land in said Subdivision being subject to the following Protective and Restrictive Covenants:

PART B. AREA OF APPLICATION

B-1 FULLY PROTECTED RESIDENTIAL AREA. The residential area covenants in Part C in their entirety shall apply to the entire Subdivision.

PART C: RESIDENTIAL AREA COVENANTS:

C-1 LAND USE AND BUILDING TYPE. No lot shall be used except for residential purposes. No business of any nature or kind shall at any time be conducted in any building located on any of the lots. No building shall be erected, altered, placed or allowed to remain on any lot other than one detached, single-family dwelling not to exceed two stories in height, excluding basement area. No lot can be subdivided for any purpose without the prior approval from the City of Bryant Planning Board and the consent of 51% of the voting members of the Property owners' associations.

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C-2 ARCHITECTURAL CONTROL. No dwelling or structure shall be erected, placed or altered on any lot until the construction plans and specifications and a plan showing the location of the structure, including landscaping, have been approved by the architectural control committee as to quality of workmanship and materials, harmony of external design with existing structures, and as to location with respect to topography and finish grade elevation, and intended objectives of the Architectural Control Committee to achieve a subdivision that accomplishes the desired architectural design in the structure and subdivision aesthetics. No fence or wall shall be erected, placed or altered on any lot nearer than the setbacks as shown on the Plat. The term structure is defined to include any and all types of fences, antennas, decks, Permanent basketball goals, swimming pools and television satellite dishes, which in no event shall be placed in front of dwellings. Each property owner requesting approval shall submit to the Architectural Control Committee at least two weeks prior to the time approval is needed, a complete set of house plans and completed material and specifications list. Approval shall be provided in Part D.

C-3. DWELLING COST, QUALITY AND SIZE. No dwelling shall be permitted on any lot unless the dwelling has at least 2,200 square feet, it being the intention and purpose of the covenants to assure that all dwellings shall be of a quality of workmanship and materials substantially the same or better than that for the minimum permitted dwelling size. The ground floor area of the main structure for two-story dwellings shall not be less than 1400 square feet, exclusive of basements, porches, garages, patio and overhangs. Any one-story dwelling will have a minimum of 2,200 square feet, exclusive of basements, porches, garages, patio and overhangs. Each dwelling shall have a minimum of a two-car garage. No open carports are allowed. No manufactured houses are allowed, site-built homes only.

C-4. BUILDING LOCATION. No building shall be located on any lot, nearer to the side street line, than the minimum building set back lines as shown on the recorded plat. No lot shall be subdivided and no more than one dwelling shall be permitted on any one lot.

C-5 BUILDING REQUIRMENTS. All buildings shall have roof pitch of no less than 6/12. All dwellings or structures shall have brick or rock on the front of the structure with the exception of gable and dormer areas where brick, rock, or vertical or shake siding is allowed. Vertical siding is allowed on side and rear elevation of the structure at the approval by the Architectural Control Committee. Perimeter brick skirting is required. All plans shall be approved by the Architectural Control Committee. Unless otherwise approved by the Architectural Control Committee, all fences shall be of a wood type with privacy fence posts inside the fence. All fences shall be approved by the Architectural Control Committee.

C-6 SIDEWALKS. It shall be the responsibility of all owners of lots to construct per the requirements detailed on the recorded Plat per the requirements of the City of Bryant.

C-7. EASEMENTS AND RIGHTS OF WAY. Easements for installation and maintenance of utilities and drainage facilities, and construction, repair and maintenance of adequate walls, roofs and eaves are reserved as shown on recorded plat. There shall be no fencing installed within gas company right of way.

C-8. NUISANCES. No noxious or offensive trade or activities shall be carried on, nor shall anything be done thereon which may be or become a nuisance to the neighborhood.

C-9. TEMPORARY STRUCTURES. No structure of a temporary character, basement, tent, shack, garage, barn or other outbuilding shall be used on any tract at any time as a residence either temporarily or permanently; except that the developer may have a temporary construction, storage facility and/or sales office.

C-10 OUT BUILDINGS. One outbuilding for storage shall be permitted, if approved by the Architectural Control Committee and shall conform to the same architectural design and construction of the dwelling. No prefabricated outbuilding may be installed, placed or located upon any lot. Above-ground swimming pools are prohibited.

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C-11. SIGNS. No sign of any kind shall be displayed to the public view on any lot, except, one professional sign of not more than one square foot; one sign of not more than five square feet advertising the property for sale or rent or any signs used by a builder to advertise the property during the construction and sales period.

C-12. OWNER RESPONSIBILITY. All property owners shall ensure that any contractor performing services for the property owner shall comply with the provisions of this Bill of Assurance.

C-13. CONTRACTOR RESPONSIBILITY. No contractor shall damage in any way the utilities or streets in any manner.

C-14. OIL AND MINING OPERATIONS. No oil drilling, oil development operations, oil refining, quarrying or mining operations of any kind shall be permitted upon or in any lot, nor shall oil wells, tanks, tunnels, mineral excavations or shafts be permitted upon or in any lot. No derrick or structures designated for use in boring for oil or natural gas shall be erected, maintained or permitted upon any lot.

C-15. LIVESTOCK AND POULTRY. No animals, livestock or poultry of any kind may be raised, bred or kept on any tract, except that dogs or cats may be kept, on any lot provided that they are not kept, bred or maintained for any commercial purpose and provided that facilities for maintenance of same are approved by the Architectural Control Committee and that the keeping of same does not constitute a nuisance.

C-16. GARBAGE AND REFUSE DISPOSAL. No lot or easement shall be used or maintained as dumping ground for rubbish. Trash, garbage and other waste shall not be kept except in sanitary containers. There shall be no burning of trash, rubbish, leaves or yard waste.

C-17 SIGHT DISTANCE AT INTERSECTIONS. No fence, wall, hedge or shrub planting which obstructs sight lines at elevations between 2 and 6 feet above the roadways shall be placed or permitted to remain on any lot corner which the triangular area formed by the street

property lines and the line connecting them at points 15 feet from the intersection of street right of way lines, or in the case of a rounded property corner, from the intersection of the street property line extended. The same sight line limitations shall apply on any lot within 10 feet from the intersection of the street property line with the edge of a driveway pavement. No tree shall be permitted to remain within such distances or such intersections unless the foliage line is maintained at sufficient height to prevent obstruction of such sight lines. Lot owners are precluded from constructing, planting, or otherwise maintaining any part of their lot that realistically has the effect of establishing or maintaining a site obstruction that interferes with proper and safe vehicular movement in the public access area.

C-18. LOT, YARD AND HOME MAINTENANCE. All property owners, after acquisition of any lot, shall keep all grounds and yards mowed, trimmed and clean. All houses shall be painted and stained. No deviation from the original plans shall be permitted without approval of the Architectural Control Committee.

C-19 COMMENCEMENT OF CONSTRUCTION. A property owner may start construction of an approved dwelling at any time.

C-20 COMPLETION OF CONSTRUCTION. Any dwelling must be completed in its entirety within a period of one year from date such construction commences.

C-21 MOTOR VEHICLE PARKING. Abandoned or unused motor vehicles shall not be parked or permitted to remain on any lot or within the dedicated street. Boats, recreational vehicles and trailers cannot be parked at the front or side of any dwelling or in the dedicated street and must be parked in back of the dwelling. Owners or permanent residents are prohibited from parking in the street. There shall be no non-functioning vehicles kept on the lot or in view of the public. There shall be no repair work done outside of the garage. Vehicles shall not be parked within fire zones at any time.

C-22. MINIMUM FLOOR LEVEL ELEVATIONS. The Architectural Control Committee reserves the right to prescribe the minimum finished floor elevations for lots. Filed Final Plat shall be referred to ensure homes meet the minimum finished floor elevations.

C-23. GEOTECHNICAL REQUIREMENTS. Lot soil suitability at the time of construction is the responsibility of the lot owner.

PART D. ARCHITECTURAL CONTROL COMMITTEE:

D-1 MEMBERSHIP. The Architectural Control Committee shall be composed of the Developer until 90% of the lots have been conveyed by the Developer. The owners of 51% or more of the lots within the subdivision may vote to expand or reduce the membership of the Architectural Control Committee after 90% of the lots are conveyed by the Developer. A

majority of the committee may designate a representative to act for it. In the event of death or resignation of any member of the committee, the remaining members shall have full authority to designate a successor. Neither the members of the committee nor its designated representative shall be entitled to any compensation for their services performed pursuant to this covenant. Any member of the Architectural Control Committee may be removed by a vote of 51% or more of the owners of lots in the subdivision. In the event of any vacancy in the Architectural Control Committee, the owners of 51% or more of the lots within the subdivision may select additional members.

D-2 PROCEDURE. The committee's approval or disapproval as required in these covenants shall be in writing and should be retained by the owner/builder as proof of the Committee's approval. In the event the committee or its designated representative fails to approve or disapprove within 30 days after plans and specifications have been submitted to it or in the event no suit to enjoin the construction or compliance with these covenants has been commenced within 180 days after the completion thereof will not be required and the related covenants shall be deemed to have been fully complied with.

PART E. PROPERTY OWNERS' ASSOCIATION

E-1 OWNERS EASEMENTS OF ENJOYMENT. Every owner shall have a right and easement of enjoyment in and to the common area which shall be appurtenants to and shall pass with the title to every tract. Subject to the following provision:

(a) The right of the Association to charge reasonable fees for maintenance of the common areas, stormwater detention facilities, and related appurtenances such as sign maintenance.

E-2. MEMBERSHIP AND VOTING RIGHTS

SECTION 1: Every owner of a tract which is subject to assessment shall be a member of the Association. Membership shall be appurtenant to and may not be separated from ownership of any tract which is subject to assessment.

SECTION 2: The Association shall have two classes of voting membership:

Class A: Class A members shall be all owners, with the exception of the Declarant, and shall be entitled to one vote for each tract owned, which may be voted at such time as all tracts are sold by the Declarant. When more than one person holds an interest in any tract, all such persons shall be members. The vote for such tract shall be exercised as they determine, but in no event shall more than one vote be cast with respect to any Tract.

Class B: The Class B member(s) shall be the Declarant and shall be entitled to one vote per tract owned. The Class B membership shall cease on the happening of the following events.

(a) When all tracts are sold by declarant.

E-3. COVENANT FOR MAINTENANCE ASSESSMENTS

SECTION 1: Creation of the Lien and Personal Obligation of Assessments: The Declarant, for each tract owned within the properties, hereby covenants, and each owner of any tract by acceptance of a deed therefore, whether or not it shall be so expressed in such deed, is deemed to covenant and agree to pay to the Association annual assessment or charges, such assessments to be established and collected as hereinafter provided. The annual assessments, together with interest, costs and reasonable attorneys' fees, shall be a charge on the land and shall be a continuing lien upon the property against which each such assessment is made. Each such assessment, together with interest, costs, and reasonable attorneys' fees, shall also be the personal obligation of the person who is the owner of such property at the time when the assessment fell due. The personal obligation for delinquent assessments shall not pass to his successors in title unless expressly assumed by them.

SECTION 2: Purpose of Assessment: The assessments levied by the Association shall be used as follows:

(a) For the maintenance and upkeep of all common areas, stormwater detention facilities, and related appurtenances and neighborhood entrance signage and mailbox area.

(b) For any other purposes deemed in the best interest of the property owners by the Association

(c) A stormwater detention annual maintenance plane (included herein) must be adhered to.

SECTION 3: Annual Assessment: The POA is authorized to initiate annual assessments or levy special assessments for capital improvements, and all maintenance and upkeep of stormwater detention facilities, common areas, and related appurtenances at which time they are deemed necessary by the board.

a) The developer is exempt from paying POA dues.

SECTION 4: Notice and Quorum for Any Action Authorized Under Section 3: Written Notice of any meeting called for the purpose of taking any action authorized under Section 3 shall be sent to all members not less than 10 days in advance of the meeting. At the first such meeting called, the presence of members or proxies entitled to cast 60% of all votes shall constitute a quorum. If the required quorum is not present, another meeting may be called subject to the same notice requirement, and the required quorum at the preceding meeting shall be one-half (1/2) of the required quorum at the preceding meeting. No such subsequent meeting shall be held for more than 60 days following the preceding meeting. Each tract as conveyed by Declarant shall have one vote.

SECTION 5: Uniform Rate of Assessment: Both annual and special assessments must be fixed at a uniform rate and may be collected on a semi-annual or annual basis.

SECTION 6: Date of Commencement of Annual Assessments: The Board of Directors shall fix the amount of the annual assessment against each Lot at least thirty (30) days in advance of each annual assessment period. Written notice of the annual assessment shall be sent to every Owner subject thereto. The due date shall be established by the Board of Directors. The Association shall, upon demand, and for a reasonable charge, furnish a certificate signed by an officer of the Association setting forth whether the assessments on a specified Lot have been paid. A properly executed certificate of the Association as to the status of assessments on a Lot is binding upon the Association as of the date of its issuance.

SECTION 7: Effect of Nonpayment of Assessments: Remedies of the Association: Any assessment not paid within thirty (30) days after the due date shall bear interest from the due date at the rate of ten percent per annum. The Association may bring an action at law against the owner personally obligated to pay the same or foreclose the lien against the property. No owner may waive or otherwise escape liability for the assessments provided for herein by non-use of the common area or abandonment of the property.

SECTION 8: Subordination of the Lien to Mortgages: The lien of the assessments provided for herein shall be subordinate to the lien of any first mortgage. Sale or transfer of any tract shall not affect the assessment lien. However, the sale or transfer of any tract pursuant to mortgage foreclosure or any proceeding in lieu thereof, shall extinguish the lien of such assessments as to payments which became due prior to such sale or transfer. No sale or transfer shall relieve such tract from liability for any assessments thereafter becoming due or from the lien thereon.

SECTION 9: Special Assessments for Capital Improvements: In addition to the annual assessments authorized above, the members may levy, in any assessment year, a special assessment applicable to that year only for the purpose of defraying, in whole or in part, the cost of any construction, reconstruction, repair or replacement of a capital improvement upon the common areas, provided that such assessment shall have the assent of two-thirds (2/3) of the votes of the members who are voting in person or by proxy at a meeting duly called for this purpose.

PART F. GENERAL PROVISIONS:

F-1. TERM These covenants are to run with the land and shall be binding on all parties and all persons claiming under them for a period of twenty-five years from the date these covenants are recorded after which time, said covenants shall be automatically extended for successive period of ten years, subject to the express provision that these covenants may be amended at any time after the date of execution hereby by an instrument signed by the members of the Architectural Control Committee and the Declarant (until 90% of the lots have been conveyed by the Declarant).

F-2 ENFORCEMENT Enforcement shall be by proceedings at law or in equity against any person or persons violating or attempting to violate any covenant either to restrain violations or to recover damages.

F-3 SEVERABILITY Invalidation of any one of these covenants by judgment or court order shall in no way affect any of the other provisions, which shall remain in full force and effect.

F-4 AMENDMENT These covenants may be amended, modified or rescinded, in whole or in part (following the Declarant's conveyance of 90% of the lots) upon the express written consent of at least sixty-six and two thirds' percent (66 2/3%) of the owners of the lots within the subdivision. Any and all amendments, modifications or recessions, if any, shall be recorded in the office of the Circuit Clerk of Saline County, or in any county in which any of the lots might lie and shall not be effective until the date of such recording.

F-5 MULTIPURPOSE IMPREOVEMENT DISTRICT: Not Used.

IN WITNESS WHEREOF, the name of Owner is hereby affixed by its Members this _____ day of _____, 2026.

Eminent Construction, LLC

BY:_____
Sahil Hameerani

ACKNOWLEDGEMENT

STATE OF ARKANSAS)
)ss
COUNTY OF SALINE)

On this day appeared before me, a Notary Public, _____, known to me to be the Member Eminent Construction, LLC and acknowledged that he is authorized to execute the foregoing on its behalf and that they had executed same for the consideration and purpose therein mentions and set forth.

WITNESS my hand and seal this _____ day of _____, 2026.

_____
Notary Public

My commission expires
_____

Exhibit "A"

PHASE 1

A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER AND A PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING A FOUND 2 1/2"ALUMINUM MONUMENT ACCEPTED AS THE SOUTHWEST CORNER OF SAID SW 1/4, SE 1/4 OF SECTION 9; THENCE ALONG THE WEST LINE THEREOF N 01°49'03" E A DISTANCE OF 821.57'; THENCE LEAVING SAID WEST LINE N 89°42'21" E A DISTANCE OF 453.82' TO A FOUND REBAR AND CAP AT THE POINT OF BEGINNING; THENCE N 02°03'46" E A DISTANCE OF 465.74' TO A FOUND REBAR AND CAP ON THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 9; THENCE ALONG SAID NORTH LINE N 89°43'54" E A DISTANCE OF 126.38' TO A FOUND REBAR AND CAP; THENCE LEAVING SAID NORTH LINE S 01°18'39" E A DISTANCE OF 100.00' TO A SET REBAR AND CAP; THENCE S 89°36'13" E A DISTANCE OF 99.92' TO A FOUND 1/2" REBAR ; THENCE N 01°06'02" W A DISTANCE OF 100.17' TO A FOUND REBAR AND CAP ON THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 9; THENCE ALONG SAID NORTH LINE N 89°40'03" E A DISTANCE OF OF 78.56'; THENCE LEAVING SAID NORTH LINE S 00°55'23" W A DISTANCE OF 123.20'; THENCE S 89°04'37" E A DISTANCE OF 11.50'; THENCE S 00°55'23" W A DISTANCE OF 50.00'; THENCE S 01°39'54" W A DISTANCE OF 556.07; THENCE S 88°58'51" E A DISTANCE OF 46.57'; THENCE S 01°01'09" W A DISTANCE OF 171.40' TO A FOUND REBAR AND CAP; THENCE S 02°17'01" W A DISTANCE OF 402.85' TO A FOUND MAG NAIL IN HILLTOP ROAD; THENCE N 88°58'36" W A DISTANCE OF 371.57' TO A FOUND MAG NAIL IN HILLTOP ROAD; THENCE N 02°02'00" E A DISTANCE OF 831.85' TO THE POINT OF BEGINNING CONTAINING 10.00 ACRES MORE OR LESS.

PHASE 2

A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER AND A PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING A FOUND 1 1/2" PIPE ACCEPTED AS THE NORTHWEST CORNER OF SAID SE 1/4, SE 1/4 OF SECTION 9; THENCE ALONG THE NORTH LINE THEREOF S 89°40'03" W A DISTANCE OF 31.49' TO THE POINT OF BEGINNING; THENCE LEAVING SAID NORTH LINE S 00°55'23" W A DISTANCE OF

174.83'; THENCE S 00°00'00" E A DISTANCE OF 446.84'; THENCE N 88°58'51" W A DISTANCE OF 236.33'; THENCE S 01°01'09" W A DISTANCE OF 120.00'; THENCE S 22°37'24" W A DISTANCE OF 53.78'; THENCE S 01°01'09" W A DISTANCE OF 121.43'; THENCE N 88°58'22" W A DISTANCE OF 225.00' TO A FOUND REBAR AND CAP; THENCE N 01°01'09" E A DISTANCE OF 171.40'; THENCE N 88°58'51" W A DISTANCE OF 46.57'; THENCE N 01°39'54" E A DISTANCE OF 556.07'; THENCE N 00°55'23" E A DISTANCE OF 50.00'; THENCE N 89°04'37" W A DISTANCE OF 11.50'; THENCE N 00°55'23" E A DISTANCE OF 123.20' TO POINT ON THE NORTH LINE OF SAID SW 1/4, SE 1/4; THENCE ALONG SAID NORTH LINE N 89°40'03" E A DISTANCE OF 525.13' TO THE POINT OF BEGINNING CONTAINING 9.05 ACRES MORE OR LESS.

PHASE 3

A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER AND A PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A FOUND 1 1/2" PIPE ACCEPTED AS THE NORTHWEST CORNER OF SAID SE 1/4, SE 1/4 OF SECTION 9; THENCE S 00°20'45" W A DISTANCE OF 63.17' TO A FOUND 1/2" REBAR; THENCE S 88°19'47" E A DISTANCE OF 864.30' TO A FOUND REBAR AND CAP; THENCE S 70°31'25" E A DISTANCE OF 55.04' TO A SET REBAR AND CAP; THENCE S 89°33'49" E A DISTANCE OF 120.02'; THENCE S 01°42'20" W A DISTANCE OF 35.01' TO A SET REBAR AND CAP; THENCE N 88°19'33" W A DISTANCE OF 658.66' TO A SET REBAR AND CAP; THENCE S 02°17'06" W A DISTANCE OF 797.39' TO A SET REBAR AND CAP; THENCE N 88°58'22" W A DISTANCE OF 639.94'; THENCE N 01°01'09" E A DISTANCE OF 121.43'; THENCE N 22°37'24" E A DISTANCE OF 53.78'; THENCE N 01°01'09" E A DISTANCE OF 120.00'; THENCE S 88°58'51" E A DISTANCE OF 236.33'; THENCE N 00°00'00" W A DISTANCE OF 446.84'; THENCE N 00°55'23" E A DISTANCE OF 174.83' TO THE NORTH LINE OF SAID SE 1/4, SE 1/4; THENCE ALONG THE NORTH LINE THEREOF N 89°40'03" E A DISTANCE OF 31.49 TO A THE POINT OF BEGINNING CONTAINING 10.10 ACRES MORE OR LESS.

50 Year Design Storm

Project Description

File Name	HILLTOP 9-21-2026.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Rational
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

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	0
Subbasins	33
Nodes	52
Junctions	13
Outfalls	9
Flow Diversions	0
Inlets	30
Storage Nodes	0
Links	67
Channels	22
Pipes	45
Pumps	0
Orifices	0
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Return Period	50 year(s)

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-AD-49	4.59	0.7000	2.14	1.50	6.87	15.65	0 00:26:24
2	Sub-CB-10	0.54	0.7000	1.50	1.05	0.57	2.38	0 00:14:15
3	Sub-CB-11	0.44	0.7000	1.26	0.88	0.39	2.28	0 00:10:06
4	Sub-CB-12	0.70	0.7000	1.60	1.12	0.78	2.94	0 00:15:59
5	Sub-CB-13	0.37	0.7000	1.25	0.88	0.32	1.91	0 00:10:09
6	Sub-CB-14	0.87	0.7000	1.36	0.95	0.83	4.15	0 00:12:04
7	Sub-CB-15	1.24	0.7000	1.56	1.09	1.35	5.29	0 00:15:19
8	Sub-CB-16	0.30	0.7000	1.19	0.84	0.25	1.61	0 00:09:21
9	Sub-CB-17	0.25	0.7000	1.14	0.80	0.20	1.41	0 00:08:26
10	Sub-CB-18	0.76	0.7000	1.52	1.06	0.81	3.30	0 00:14:44
11	Sub-CB-2	0.15	0.7000	1.00	0.70	0.11	0.95	0 00:06:39
12	Sub-CB-20	0.61	0.7000	1.22	0.85	0.52	3.24	0 00:09:37
13	Sub-CB-21	0.81	0.7000	1.64	1.15	0.93	3.32	0 00:16:54
14	Sub-CB-22	1.23	0.7000	1.77	1.24	1.53	4.78	0 00:19:13
15	Sub-CB-23	0.85	0.7000	1.61	1.13	0.96	3.55	0 00:16:07
16	Sub-CB-25	0.66	0.7000	0.98	0.69	0.45	4.29	0 00:06:15
17	Sub-CB-26	0.41	0.7000	0.86	0.60	0.25	2.96	0 00:05:00
18	Sub-CB-28	0.35	0.7000	1.50	1.05	0.37	1.54	0 00:14:16
19	Sub-CB-29	0.32	0.7000	1.64	1.14	0.37	1.32	0 00:16:41
20	Sub-CB-30	0.44	0.7000	1.68	1.17	0.52	1.80	0 00:17:16
21	Sub-CB-31	0.28	0.5000	1.47	0.74	0.21	0.89	0 00:13:48
22	Sub-CB-32	0.24	0.7000	1.58	1.11	0.27	1.03	0 00:15:37
23	Sub-CB-33	0.45	0.7000	1.61	1.13	0.51	1.87	0 00:16:22
24	Sub-CB-37	0.27	0.7000	1.56	1.09	0.30	1.16	0 00:15:16
25	Sub-CB-38	0.38	0.7000	1.39	0.97	0.37	1.78	0 00:12:34
26	Sub-CB-40	0.63	0.7000	1.21	0.84	0.53	3.35	0 00:09:30
27	Sub-CB-43	0.57	0.7000	1.64	1.15	0.66	2.34	0 00:16:54
28	Sub-CB-44	0.48	0.7000	1.67	1.17	0.56	1.96	0 00:17:09
29	Sub-CB-45	0.24	0.7000	1.09	0.76	0.18	1.40	0 00:07:51
30	Sub-CB-51	0.76	0.7000	1.91	1.34	1.02	2.81	0 00:21:40
31	Sub-CB-9	0.54	0.7000	1.73	1.21	0.65	2.14	0 00:18:21
32	Sub-SDPIPE-35	0.16	0.7000	1.29	0.90	0.14	0.81	0 00:10:36
33	Sub-SDPIPE-36	1.73	0.7000	2.09	1.46	2.53	6.00	0 00:25:20

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)	M Freeboa Attain (
1	AD-49	Junction	468.50	472.65	468.50	472.65	10.00	28.58	470.62	0.00	2.
2	CB-47	Junction	471.00	479.32	471.00	479.32	10.00	17.05	474.95	0.00	4.
3	CB-8	Junction	468.50	474.72	468.50	474.72	10.00	3.98	469.14	0.00	5.
4	JB	Junction	462.30	468.30	462.30	468.30	0.00	1.21	462.74	0.00	5.
5	JB-19	Junction	502.00	509.27	502.00	509.27	10.00	17.74	502.60	0.00	6.
6	JB-24	Junction	526.00	535.80	526.00	535.80	10.00	7.75	526.52	0.00	9.
7	JB-27	Junction	534.00	539.80	534.00	539.80	10.00	6.03	534.56	0.00	5.
8	JB-39	Junction	510.00	521.73	510.00	521.73	10.00	3.17	510.35	0.00	11.
9	JB-4	Junction	462.74	473.05	462.74	473.05	10.00	0.00	462.74	0.00	10.
10	JB-SDPIPE35	Junction	462.75	464.00	462.75	0.00	100.00	1.21	463.13	0.00	1.
11	JB-SDPIPE36	Junction	441.30	442.80	441.30	0.00	1000.00	6.00	442.44	0.00	0.
12	8-Jun	Junction	538.50	544.50	538.50	544.50	0.00	1.80	539.14	0.00	5.
13	WIER-6	Junction	468.00	472.50	468.00	472.50	10.00	0.00	468.00	0.00	4.
14	FES-1	Outfall	461.00					2.26	461.38		
15	FES-3	Outfall	538.50					1.70	538.99		
16	FES-36	Outfall	472.00					8.73	472.54		
17	FES-46	Outfall	468.25					28.58	469.69		
18	FES-48	Outfall	468.00					17.05	469.12		
19	FES-7	Outfall	468.00					3.98	468.52		
20	3-Jun	Outfall	0.00					0.00	0.01		
21	OUT-SDPIPE35	Outfall	462.25					1.18	462.48		
22	Out-SDPIPE-36	Outfall	441.00					5.99	441.89		

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 Fl Dep
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	
1	Link-05	Pipe	CB-16	CB-13	406.55	517.00	503.00	3.4400	18.000	0.0150	0.09	15.32	0.01	2.99	0.
2	Link-08	Pipe	JB-SDPIPE35	JB	30.00	462.75	462.25	1.6700	15.000	0.0120	1.21	8.57	0.14	3.49	0.
3	Link-30	Pipe	CB-51	JB-SDPIPE35	30.83	462.08	462.75	-2.1800	18.000	0.0150	1.05	28.73	0.04	4.96	0.
4	Link-33	Pipe	CB-2	FES-1	33.60	461.75	461.00	2.2300	24.000	0.0150	2.26	29.29	0.08	4.97	0.
5	Link-37	Pipe	JB	OUT-SDPIPE35	0.96	462.30	462.25	5.2100	15.000	0.0120	1.18	15.97	0.07	4.47	0.
6	Link-39	Pipe	8-Jun	FES-3	0.36	538.50	538.50	0.0000	18.000	0.0130	1.70	5.54	0.31	2.78	0.
7	L-SDPIPE-8	Pipe	CB-47	FES-48	70.00	471.00	468.00	4.2900	18.000	0.0150	17.05	18.85	0.90	10.42	1.
8	SDPIPE-10	Pipe	CB-13	CB-11	187.03	493.00	486.75	3.3400	18.000	0.0120	13.98	20.80	0.67	11.56	0.
9	SDPIPE-11	Pipe	CB-14	CB-13	66.59	502.00	498.50	5.2600	18.000	0.0130	12.76	24.08	0.53	11.70	0.
10	SDPIPE-12	Pipe	CB-15	CB-14	297.35	513.00	503.00	3.3600	18.000	0.0120	7.33	20.87	0.35	10.36	0.
11	SDPIPE-13	Pipe	CB-16	CB-15	64.00	514.00	513.00	1.5600	18.000	0.0130	4.25	13.13	0.32	5.72	0.
12	SDPIPE-14	Pipe	CB-17	CB-16	322.00	528.00	514.00	4.3500	18.000	0.0130	2.87	21.90	0.13	5.67	0.
13	SDPIPE-15	Pipe	CB-18	CB-17	42.43	529.00	528.00	2.3600	18.000	0.0130	2.28	16.13	0.14	6.03	0.
14	SDPIPE-16	Pipe	CB-20	JB-19	131.65	504.25	502.00	1.7100	24.000	0.0120	17.74	32.04	0.55	11.04	1.
15	SDPIPE-17	Pipe	CB-21	CB-20	32.94	508.50	508.00	1.5200	24.000	0.0120	17.18	30.19	0.57	7.69	1.
16	SDPIPE-18	Pipe	CB-22	CB-21	77.00	510.00	508.50	1.9500	18.000	0.0120	3.54	15.88	0.22	3.63	0.
17	SDPIPE-19	Pipe	CB-23	CB-21	75.59	509.50	508.50	1.3200	18.000	0.0120	3.17	13.09	0.24	2.97	1.
18	SDPIPE-2	Pipe	JB-4	CB-2	99.00	462.74	461.75	1.0000	24.000	0.0130	0.00	22.62	0.00	0.00	0.
19	SDPIPE-20	Pipe	JB-24	CB-21	256.11	526.00	508.50	6.8300	18.000	0.0120	7.75	29.75	0.26	7.42	0.
20	SDPIPE-21	Pipe	CB-25	JB-24	69.87	527.00	526.00	1.4300	18.000	0.0120	7.75	13.61	0.57	8.20	0.
21	SDPIPE-22	Pipe	CB-26	CB-25	33.08	530.50	527.00	10.5800	18.000	0.0130	1.49	34.17	0.04	2.30	0.
22	SDPIPE-23	Pipe	JB-27	CB-25	222.35	534.00	527.00	3.1500	18.000	0.0120	6.02	20.19	0.30	6.83	0.
23	SDPIPE-24	Pipe	CB-28	JB-27	73.59	537.00	534.00	4.0800	18.000	0.0130	6.03	21.21	0.28	9.16	0.
24	SDPIPE-25	Pipe	CB-32	CB-31	74.63	546.00	544.50	2.0100	18.000	0.0130	1.02	14.89	0.07	4.61	0.
25	SDPIPE-25 (1)	Pipe	CB-29	CB-28	44.82	537.50	537.00	1.1200	18.000	0.0130	4.64	11.09	0.42	5.44	0.
26	SDPIPE-25 (12)	Pipe	CB-43	CB-37	42.57	484.50	484.00	1.1700	18.000	0.0130	2.11	11.38	0.19	4.39	0.
27	SDPIPE-25 (13)	Pipe	CB-44	CB-38	33.23	496.00	494.50	4.5100	18.000	0.0130	2.15	22.32	0.10	5.87	0.
28	SDPIPE-25 (14)	Pipe	CB-45	JB-39	46.24	515.00	514.00	2.1600	18.000	0.0130	1.23	15.45	0.08	4.84	0.

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 Fl Dep
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	
46	Link-01	Channel	CB-30	CB-29	151.74	547.90	542.86	3.3200	3.960	0.0320	0.15	5.85	0.03	1.57	0.
47	Link-02	Channel	CB-28	CB-18	253.20	542.65	534.99	3.0300	3.960	0.0320	0.07	5.59	0.01	0.26	0.
48	Link-03	Channel	CB-18	CB-15	303.55	534.99	520.24	4.8600	3.960	0.0320	1.08	7.51	0.14	1.17	0.
49	Link-04	Channel	CB-15	CB-14	302.16	520.24	513.25	2.3100	3.960	0.0320	2.37	4.19	0.57	1.27	0.
50	Link-06	Channel	CB-13	CB-11	192.70	508.19	490.69	9.0800	3.960	0.0320	0.07	9.68	0.01	0.61	0.
51	Link-07	Channel	CB-12	CB-10	295.35	491.89	474.00	6.0600	3.960	0.0320	1.01	7.90	0.13	0.82	0.
52	Link-09	Channel	CB-17	CB-22	172.84	533.32	517.04	9.4200	3.960	0.0320	0.07	9.88	0.01	0.62	0.
53	Link-10	Channel	CB-22	CB-21	156.96	517.04	515.89	0.7300	3.960	0.0320	1.23	2.67	0.46	0.70	0.
54	Link-11	Channel	CB-23	CB-21	80.56	516.98	515.89	1.3500	3.960	0.0320	0.32	3.74	0.09	0.29	0.
55	Link-12	Channel	CB-45	CB-23	172.11	524.64	516.98	4.4500	3.960	0.0320	0.15	6.78	0.02	2.57	0.
56	Link-13	Channel	CB-40	CB-44	228.53	524.80	507.00	7.7900	3.960	0.0320	1.22	8.96	0.14	3.91	0.
57	Link-14	Channel	CB-44	CB-43	236.24	500.50	482.00	7.8300	3.960	0.0320	0.40	8.97	0.04	1.55	0.
58	Link-15	Channel	CB-38	CB-37	208.04	506.87	490.69	7.7800	3.960	0.0320	0.28	8.96	0.03	2.64	0.
59	Link-16	Channel	CB-37	CB-9	218.60	490.69	474.00	7.6400	3.960	0.0320	0.07	8.87	0.01	0.10	0.
60	Link-17	Channel	CB-43	CB-51	291.31	488.57	465.82	7.8100	3.960	0.0320	0.60	8.97	0.07	1.65	0.
61	Link-18	Channel	CB-10	CB-2	126.47	474.00	465.77	6.5100	3.960	0.0320	0.00	8.19	0.00	0.00	0.
62	Link-19	Channel	CB-33	CB-28	176.20	547.88	542.65	2.9700	3.960	0.0320	0.18	5.53	0.03	1.40	0.
63	Link-20	Channel	CB-11	CB-9	282.13	490.69	474.00	5.9200	3.960	0.0320	0.61	7.81	0.08	0.76	0.
64	Link-24	Channel	CB-29	CB-26	316.29	542.86	535.29	2.3900	3.960	0.0320	0.02	4.97	0.00	0.60	0.
65	Link-28	Channel	CB-32	3-Jun	204.60	549.87	0.00	268.7500	3.960	0.0320	0.00	52.65	0.00	0.00	0.
66	Link-38	Channel	CB-2	JB	44.72	465.77	462.30	7.7600	3.960	0.0320	0.03	8.95	0.00	0.06	0.
67	Link-40	Channel	CB-31	8-Jun	97.13	549.37	538.50	11.1900	3.960	0.0320	0.00	10.74	0.00	0.00	0.

Inlet Summary

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Ponded Area (ft²)	Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)	Max Gutt Sprea during Pea Flo (
1	CB-10	FHWA HEC-22 GENERIC	N/A	On Sag	1	469.43	474.00	469.43	10.00	3.20	N/A	N/A	N/A	8.50	6.5
2	CB-11	FHWA HEC-22 GENERIC	N/A	On Grade	1	481.00	490.69	481.00	N/A	2.32	1.68	0.64	72.48	8.50	5.5
3	CB-12	FHWA HEC-22 GENERIC	N/A	On Grade	1	485.50	491.89	485.50	N/A	2.94	1.93	1.01	65.53	8.50	6.(
4	CB-13	FHWA HEC-22 GENERIC	N/A	On Grade	1	493.00	508.19	493.00	N/A	1.98	1.84	0.15	92.56	8.50	6.7
5	CB-14	FHWA HEC-22 GENERIC	N/A	On Sag	1	502.00	513.25	502.00	10.00	5.66	N/A	N/A	N/A	8.50	11.4
6	CB-15	FHWA HEC-22 GENERIC	N/A	On Grade	1	513.00	518.39	513.00	N/A	6.28	3.14	3.15	49.92	8.50	8.7
7	CB-16	FHWA HEC-22 GENERIC	N/A	On Grade	1	514.00	519.70	514.00	N/A	1.61	1.43	0.19	88.46	8.50	5.4
8	CB-17	FHWA HEC-22 GENERIC	N/A	On Grade	1	528.00	533.32	528.00	N/A	1.41	1.30	0.11	92.04	8.50	4.9
9	CB-18	FHWA HEC-22 GENERIC	N/A	On Grade	1	529.00	534.99	529.00	N/A	3.36	2.25	1.12	66.74	8.50	6.8
10	CB-2	FHWA HEC-22 GENERIC	N/A	On Grade	1	461.75	465.77	461.75	N/A	0.95	0.93	0.02	98.06	8.50	4.(
11	CB-20	FHWA HEC-22 GENERIC	N/A	On Sag	1	504.25	515.89	504.25	10.00	3.23	N/A	N/A	N/A	8.50	7.8
12	CB-21	FHWA HEC-22 GENERIC	N/A	On Sag	1	508.50	515.89	508.50	10.00	4.53	N/A	N/A	N/A	8.50	9.8
13	CB-22	FHWA HEC-22 GENERIC	N/A	On Grade	1	510.00	516.97	510.00	N/A	4.78	3.54	1.24	74.00	8.50	7.4
14	CB-23	FHWA HEC-22 GENERIC	N/A	On Grade	1	509.50	516.98	509.50	N/A	3.55	3.23	0.33	90.77	8.50	7.(
15	CB-25	FHWA HEC-22 GENERIC	N/A	On Sag	1	527.00	535.29	527.00	10.00	4.29	N/A	N/A	N/A	8.50	9.5
16	CB-26	FHWA HEC-22 GENERIC	N/A	On Sag	1	530.50	535.29	530.50	10.00	2.95	N/A	N/A	N/A	8.50	7.4
17	CB-28	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.00	542.65	537.00	N/A	1.65	1.54	0.11	93.55	8.50	5.8
18	CB-29	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.50	542.86	537.50	N/A	1.44	1.39	0.05	96.58	8.50	5.5
19	CB-30	FHWA HEC-22 GENERIC	N/A	On Grade	1	543.50	547.90	543.50	N/A	1.80	1.65	0.16	91.35	8.50	6.(
20	CB-31	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.50	549.37	544.50	N/A	0.89	0.89	0.00	100.00	8.50	4.(
21	CB-32	FHWA HEC-22 GENERIC	N/A	On Grade	1	546.00	549.87	546.00	N/A	1.03	1.03	0.00	100.00	8.50	4.5
22	CB-33	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.00	547.88	544.00	N/A	1.87	1.69	0.18	90.46	8.50	6.1
23	CB-37	FHWA HEC-22 GENERIC	N/A	On Grade	1	478.50	490.69	478.50	N/A	1.37	1.23	0.14	89.84	8.50	4.(
24	CB-38	FHWA HEC-22 GENERIC	N/A	On Grade	1	494.50	506.87	494.50	N/A	1.78	1.46	0.31	82.38	8.50	5.1
25	CB-40	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.80	515.00	N/A	3.35	2.13	1.22	63.67	8.50	6.5
26	CB-43	FHWA HEC-22 GENERIC	N/A	On Grade	1	484.50	488.57	484.50	N/A	2.72	1.89	0.82	69.69	8.50	6.(
27	CB-44	FHWA HEC-22 GENERIC	N/A	On Grade	1	496.00	507.00	496.00	N/A	2.31	1.72	0.59	74.58	8.50	5.(
28	CB-45	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.64	515.00	N/A	1.40	1.25	0.15	89.20	8.50	4.7

Subbasin Hydrology

Subbasin : Sub-AD-49

Input Data

Area (ac) 4.59
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	4.59	-	0.7
Composite Area & Weighted Runoff Coeff.	4.59		0.7

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)

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.4	0	0
Flow Length (ft) :	299.3	0	0
Slope (%) :	8.53	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	24.81	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	184.58	0	0
Slope (%) :	14.79	0	0
Surface Type :	Woodland	Paved	Paved
Velocity (ft/sec) :	1.92	0	0
Computed Flow Time (min) :	1.6	0	0

Total TOC (min) 26.41

Subbasin : Sub-CB-10

Input Data

Area (ac) 0.54
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.54	-	0.7
Composite Area & Weighted Runoff Coeff.	0.54		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	62.75	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	13.31	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	287	0	0
Slope (%) :	6.16	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.05	0	0
Computed Flow Time (min) :	0.95	0	0

Total TOC (min) 14.26

Subbasin : Sub-CB-11

Input Data

Area (ac) 0.44
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.44	-	0.7
Composite Area & Weighted Runoff Coeff.	0.44		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	87.01933392	0	0
Slope (%) :	4.23334562	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.15	0	0
Computed Flow Time (min) :	9.71	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	144.6117952	0	0
Slope (%) :	9.33800334	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	6.21	0	0
Computed Flow Time (min) :	0.39	0	0

Total TOC (min) 10.10

Subbasin : Sub-CB-12

Input Data

Area (ac) 0.7
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.7	-	0.7
Composite Area & Weighted Runoff Coeff.	0.7		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	72.34441067	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	14.92	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	290.7440621	0	0
Slope (%) :	7.85301046	0	0
Surface Type :	Unpaved	Paved	Paved
Velocity (ft/sec) :	4.52	0	0
Computed Flow Time (min) :	1.07	0	0

Total TOC (min) 15.99

Subbasin : Sub-CB-13

Input Data

Area (ac) 0.37
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.37	-	0.7
Composite Area & Weighted Runoff Coeff.	0.37		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	36.99	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	8.72	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	326.6	0	0
Slope (%) :	3.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.8	0	0
Computed Flow Time (min) :	1.43	0	0

Total TOC (min) 10.16

Subbasin : Sub-CB-14

Input Data

Area (ac) 0.87
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.87	-	0.7
Composite Area & Weighted Runoff Coeff.	0.87		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	133.09	0	0
Slope (%) :	7.48	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	10.86	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	224.63	0	0
Slope (%) :	2.32	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.1	0	0
Computed Flow Time (min) :	1.21	0	0

Total TOC (min) 12.07

Subbasin : Sub-CB-15

Input Data

Area (ac) 1.24
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	1.24	-	0.7
Composite Area & Weighted Runoff Coeff.	1.24		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	129.63	0	0
Slope (%) :	3.84	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.16	0	0
Computed Flow Time (min) :	13.89	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	369.75	0	0
Slope (%) :	4.45	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.29	0	0
Computed Flow Time (min) :	1.44	0	0

Total TOC (min) 15.32

Subbasin : Sub-CB-16

Input Data

Area (ac) 0.3
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.3	-	0.7
Composite Area & Weighted Runoff Coeff.	0.3		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	35.63	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	8.47	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	225.56	0	0
Slope (%) :	4.29	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.21	0	0
Computed Flow Time (min) :	0.89	0	0

Total TOC (min) 9.36

Subbasin : Sub-CB-17

Input Data

Area (ac) 0.25
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.25	-	0.7
Composite Area & Weighted Runoff Coeff.	0.25		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	30.83	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	7.54	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	221.33	0	0
Slope (%) :	4.052	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.09	0	0
Computed Flow Time (min) :	0.9	0	0

Total TOC (min) 8.44

Subbasin : Sub-CB-18

Input Data

Area (ac) 0.76
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.76	-	0.7
Composite Area & Weighted Runoff Coeff.	0.76		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	169.6828048	0	0
Slope (%) :	5.92476783	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	14.48	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	75.81153859	0	0
Slope (%) :	5.8473515	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.92	0	0
Computed Flow Time (min) :	0.26	0	0

Total TOC (min) 14.74

Subbasin : Sub-CB-2

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.15	-	0.7
Composite Area & Weighted Runoff Coeff.	0.15		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	49.14	0	0
Slope (%) :	3.51	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.12	0	0
Computed Flow Time (min) :	6.63	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	7.8	0	0
Slope (%) :	7.9	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.71	0	0
Computed Flow Time (min) :	0.02	0	0

Total TOC (min) 6.65

Subbasin : Sub-CB-20

Input Data

Area (ac) 0.61
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.61	-	0.7
Composite Area & Weighted Runoff Coeff.	0.61		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	36.97	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	8.72	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	228.24	0	0
Slope (%) :	4.33669128	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.23	0	0
Computed Flow Time (min) :	0.9	0	0

Total TOC (min) 9.62

Subbasin : Sub-CB-21

Input Data

Area (ac) 0.81
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.81	-	0.7
Composite Area & Weighted Runoff Coeff.	0.81		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	225.91	0	0
Slope (%) :	7.69	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.23	0	0
Computed Flow Time (min) :	16.41	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	74	0	0
Slope (%) :	1.44	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.44	0	0
Computed Flow Time (min) :	0.51	0	0

Total TOC (min) 16.91

Subbasin : Sub-CB-22

Input Data

Area (ac) 1.23
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	1.23	-	0.7
Composite Area & Weighted Runoff Coeff.	1.23		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	227.07	0	0
Slope (%) :	5.59	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	18.71	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	150.89	0	0
Slope (%) :	5.73	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.87	0	0
Computed Flow Time (min) :	0.52	0	0

Total TOC (min) 19.23

Subbasin : Sub-CB-23

Input Data

Area (ac) 0.85
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.85	-	0.7
Composite Area & Weighted Runoff Coeff.	0.85		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	226.71	0	0
Slope (%) :	8.51	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.24	0	0
Computed Flow Time (min) :	15.8	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	75.07	0	0
Slope (%) :	3.73	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.93	0	0
Computed Flow Time (min) :	0.32	0	0

Total TOC (min) 16.12

Subbasin : Sub-CB-25

Input Data

Area (ac) 0.66
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.66	-	0.7
Composite Area & Weighted Runoff Coeff.	0.66		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	36.69	0	0
Slope (%) :	3.98	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.12	0	0
Computed Flow Time (min) :	4.99	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	218	0	0
Slope (%) :	1.9995265	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.87	0	0
Computed Flow Time (min) :	1.26	0	0

Total TOC (min) 6.25

Subbasin : Sub-CB-26

Input Data

Area (ac) 0.41
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.41	-	0.7
Composite Area & Weighted Runoff Coeff.	0.41		0.7

Time of Concentration

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	391.04	0	0
Slope (%) :	2.05	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.91	0	0
Computed Flow Time (min) :	2.24	0	0

Total TOC (min) 2.24

Subbasin : Sub-CB-28

Input Data

Area (ac) 0.35
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.35	-	0.7
Composite Area & Weighted Runoff Coeff.	0.35		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	82.21	0	0
Slope (%) :	1.57	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	13.8	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	96.33	0	0
Slope (%) :	2.66	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.32	0	0
Computed Flow Time (min) :	0.48	0	0

Total TOC (min) 14.28

Subbasin : Sub-CB-29

Input Data

Area (ac) 0.32
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.32	-	0.7
Composite Area & Weighted Runoff Coeff.	0.32		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	79.19359172	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.04	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	145.6546025	0	0
Slope (%) :	3.30814128	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.7	0	0
Computed Flow Time (min) :	0.66	0	0

Total TOC (min) 16.69

Subbasin : Sub-CB-30

Input Data

Area (ac) 0.44
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.44	-	0.7
Composite Area & Weighted Runoff Coeff.	0.44		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	80.06466793	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.18	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	204.4355599	0	0
Slope (%) :	2.37620836	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.13	0	0
Computed Flow Time (min) :	1.09	0	0

Total TOC (min) 17.27

Subbasin : Sub-CB-31

Input Data

Area (ac) 0.28
Weighted Runoff Coefficient 0.5

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.28	-	0.5
Composite Area & Weighted Runoff Coeff.	0.28		0.5

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	61.18415656	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	13.05	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	147.427748	0	0
Slope (%) :	2.48368186	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.2	0	0
Computed Flow Time (min) :	0.77	0	0

Total TOC (min) 13.81

Subbasin : Sub-CB-32

Input Data

Area (ac) 0.24
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.24	-	0.7
Composite Area & Weighted Runoff Coeff.	0.24		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	72.82652581	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	15	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	123.3068858	0	0
Slope (%) :	2.56696146	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.26	0	0
Computed Flow Time (min) :	0.63	0	0

Total TOC (min) 15.63

Subbasin : Sub-CB-33

Input Data

Area (ac) 0.45
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.45	-	0.7
Composite Area & Weighted Runoff Coeff.	0.45		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	74.8476514	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	15.33	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	205.0538871	0	0
Slope (%) :	2.54735015	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.24	0	0
Computed Flow Time (min) :	1.05	0	0

Total TOC (min) 16.38

Subbasin : Sub-CB-37

Input Data

Area (ac) 0.27
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.27	-	0.7
Composite Area & Weighted Runoff Coeff.	0.27		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	70.96	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	14.69	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	204.13	0	0
Slope (%) :	7.95	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.59	0	0

Total TOC (min) 15.28

Subbasin : Sub-CB-38

Input Data

Area (ac) 0.38
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.38	-	0.7
Composite Area & Weighted Runoff Coeff.	0.38		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	56.31288611	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	12.21	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	122.2285539	0	0
Slope (%) :	7.88883657	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.71	0	0
Computed Flow Time (min) :	0.36	0	0

Total TOC (min) 12.57

Subbasin : Sub-CB-40

Input Data

Area (ac) 0.63
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.63	-	0.7
Composite Area & Weighted Runoff Coeff.	0.63		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	82.47168729	0	0
Slope (%) :	4.83233018	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.16	0	0
Computed Flow Time (min) :	8.82	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	225.6819013	0	0
Slope (%) :	7.22299665	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.46	0	0
Computed Flow Time (min) :	0.69	0	0

Total TOC (min) 9.51

Subbasin : Sub-CB-43

Input Data

Area (ac) 0.57
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.57	-	0.7
Composite Area & Weighted Runoff Coeff.	0.57		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	80.44365706	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.24	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	230.963887	0	0
Slope (%) :	7.93293268	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.67	0	0

Total TOC (min) 16.91

Subbasin : Sub-CB-44

Input Data

Area (ac)	0.48
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.48	-	0.7
Composite Area & Weighted Runoff Coeff.	0.48		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	82.23540495	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.53	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	215.6393568	0	0
Slope (%) :	7.93956492	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.63	0	0

Total TOC (min) 17.16

Subbasin : Sub-CB-45

Input Data

Area (ac)	0.24
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.24	-	0.7
Composite Area & Weighted Runoff Coeff.	0.24		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	26.67	0	0
Slope (%) :	0.84	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.06	0	0
Computed Flow Time (min) :	7.2	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	221	0	0
Slope (%) :	7.58	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.6	0	0
Computed Flow Time (min) :	0.66	0	0

Total TOC (min) 7.86

Subbasin : Sub-CB-51

Input Data

Area (ac)	0.76
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.76	-	0.7
Composite Area & Weighted Runoff Coeff.	0.76		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	109.87	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.09	0	0
Computed Flow Time (min) :	20.84	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	284.96	0	0
Slope (%) :	7.93363114	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.83	0	0

Total TOC (min) 21.67

Subbasin : Sub-CB-9

Input Data

Area (ac)	0.54
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.54	-	0.7
Composite Area & Weighted Runoff Coeff.	0.54		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	94.51887751	0	0
Slope (%) :	1.1562359	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.09	0	0
Computed Flow Time (min) :	17.43	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	272.2215693	0	0
Slope (%) :	5.96622322	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.97	0	0
Computed Flow Time (min) :	0.91	0	0

Total TOC (min) 18.35

Subbasin : Sub-SDPIPE-35

Input Data

Area (ac)	0.16
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.16	-	0.7
Composite Area & Weighted Runoff Coeff.	0.16		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	117.01	0	0
Slope (%) :	6.14	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.18	0	0
Computed Flow Time (min) :	10.61	0	0

Total TOC (min) 10.61

Subbasin : Sub-SDPIPE-36

Input Data

Area (ac)	1.73
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	1.73	-	0.7
Composite Area & Weighted Runoff Coeff.	1.73		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	299.51	0	0
Slope (%) :	6	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.22	0	0
Computed Flow Time (min) :	22.7	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	546	0	0
Slope (%) :	5.3	0	0
Surface Type :	Grassed waterway	Unpaved	Unpaved
Velocity (ft/sec) :	3.45	0	0
Computed Flow Time (min) :	2.64	0	0

Total TOC (min) 25.34

Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Surcharge Elevation (ft)	Surcharge Depth (ft)	Ponded Area (ft^2)	Minimum Pipe Cover (in)
1	AD-49	468.50	472.65	4.15	468.50	0.00	472.65	0.00	10.00	19.85
2	CB-47	471.00	479.32	8.32	471.00	0.00	479.32	0.00	10.00	81.81
3	CB-8	468.50	474.72	6.22	468.50	0.00	474.72	0.00	10.00	50.59
4	JB	462.30	468.30	6.00	462.30	0.00	468.30	0.00	0.00	57.00
5	JB-19	502.00	509.27	7.27	502.00	0.00	509.27	0.00	10.00	63.30
6	JB-24	526.00	535.80	9.80	526.00	0.00	535.80	0.00	10.00	99.54
7	JB-27	534.00	539.80	5.80	534.00	0.00	539.80	0.00	10.00	51.59
8	JB-39	510.00	521.73	11.73	510.00	0.00	521.73	0.00	10.00	74.75
9	JB-4	462.74	473.05	10.31	462.74	0.00	473.05	0.00	10.00	99.76
10	JB-SDPIPE35	462.75	464.00	1.25	462.75	0.00	0.00	-464.00	100.00	0.00
11	JB-SDPIPE36	441.30	442.80	1.50	441.30	0.00	0.00	-442.80	1000.00	0.00
12	8-Jun	538.50	544.50	6.00	538.50	0.00	544.50	0.00	0.00	54.00
13	WIER-6	468.00	472.50	4.50	468.00	0.00	472.50	0.00	10.00	30.00

Junction Results

SN	Element ID	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Max HGL Elevation Attained (ft)	Max HGL Depth Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Max HGL Occurrence (days hh:mm)	Oc (days
1	AD-49	28.58	15.65	470.62	2.12	0.00	2.04	468.58	0.08	0 00:19	
2	CB-47	17.05	0.00	474.95	3.95	0.00	4.37	471.04	0.04	0 00:11	
3	CB-8	3.98	0.00	469.14	0.64	0.00	5.57	468.52	0.02	0 00:19	
4	JB	1.21	0.00	462.74	0.44	0.00	5.56	462.31	0.01	0 00:17	
5	JB-19	17.74	0.00	502.60	0.60	0.00	6.67	502.02	0.02	0 00:17	
6	JB-24	7.75	0.00	526.52	0.52	0.00	9.27	526.02	0.02	0 00:07	
7	JB-27	6.03	0.00	534.56	0.56	0.00	5.24	534.02	0.02	0 00:17	
8	JB-39	3.17	0.00	510.35	0.35	0.00	11.37	510.01	0.01	0 00:09	
9	JB-4	0.00	0.00	462.74	0.00	0.00	10.31	462.74	0.00	0 00:00	
10	JB-SDPIPE35	1.21	0.81	463.13	0.38	0.00	1.12	462.76	0.01	0 00:17	
11	JB-SDPIPE36	6.00	6.00	442.44	1.14	0.00	0.36	441.34	0.04	0 00:25	
12	8-Jun	1.80	0.00	539.14	0.64	0.00	5.36	538.52	0.02	0 00:16	
13	WIER-6	0.00	0.00	468.00	0.00	0.00	4.50	468.00	0.00	0 00:00	

Channel Input

SN	Element ID	Length	Inlet Invert Elevation	Inlet Invert Offset	Outlet Invert Elevation	Outlet Invert Offset	Total Drop	Average Slope	Shape	Height	Width	Manning's Roughness	Er
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(%)		(ft)	(ft)		
1	Link-01	151.74	547.90	4.40	542.86	5.36	5.04	3.3200	User-Defined	0.330	14.000	0.0320	
2	Link-02	253.20	542.65	5.65	534.99	5.99	7.66	3.0300	User-Defined	0.330	14.000	0.0320	
3	Link-03	303.55	534.99	5.99	520.24	7.24	14.75	4.8600	User-Defined	0.330	14.000	0.0320	
4	Link-04	302.16	520.24	7.24	513.25	11.25	6.99	2.3100	User-Defined	0.330	14.000	0.0320	
5	Link-06	192.70	508.19	15.19	490.69	9.69	17.50	9.0800	User-Defined	0.330	14.000	0.0320	
6	Link-07	295.35	491.89	6.39	474.00	4.56	17.89	6.0600	User-Defined	0.330	14.000	0.0320	
7	Link-09	172.84	533.32	5.32	517.04	7.04	16.28	9.4200	User-Defined	0.330	14.000	0.0320	
8	Link-10	156.96	517.04	7.04	515.89	7.39	1.15	0.7300	User-Defined	0.330	14.000	0.0320	
9	Link-11	80.56	516.98	7.48	515.89	7.39	1.09	1.3500	User-Defined	0.330	14.000	0.0320	
10	Link-12	172.11	524.64	9.64	516.98	7.48	7.67	4.4500	User-Defined	0.330	14.000	0.0320	
11	Link-13	228.53	524.80	9.80	507.00	11.00	17.80	7.7900	User-Defined	0.330	14.000	0.0320	
12	Link-14	236.24	500.50	4.50	482.00	-2.50	18.50	7.8300	User-Defined	0.330	14.000	0.0320	
13	Link-15	208.04	506.87	12.37	490.69	12.19	16.18	7.7800	User-Defined	0.330	14.000	0.0320	
14	Link-16	218.60	490.69	12.19	474.00	4.90	16.69	7.6400	User-Defined	0.330	14.000	0.0320	
15	Link-17	291.31	488.57	4.07	465.82	3.74	22.75	7.8100	User-Defined	0.330	14.000	0.0320	
16	Link-18	126.47	474.00	4.56	465.77	4.02	8.23	6.5100	User-Defined	0.330	14.000	0.0320	
17	Link-19	176.20	547.88	3.88	542.65	5.65	5.23	2.9700	User-Defined	0.330	14.000	0.0320	
18	Link-20	282.13	490.69	9.69	474.00	4.90	16.70	5.9200	User-Defined	0.330	14.000	0.0320	
19	Link-24	316.29	542.86	5.36	535.29	4.79	7.57	2.3900	User-Defined	0.330	14.000	0.0320	
20	Link-28	204.60	549.87	3.87	0.00	0.00	549.87	268.7500	User-Defined	0.330	14.000	0.0320	
21	Link-38	44.72	465.77	4.02	462.30	0.00	3.47	7.7600	User-Defined	0.330	14.000	0.0320	
22	Link-40	97.13	549.37	4.87	538.50	0.00	10.87	11.1900	User-Defined	0.330	14.000	0.0320	

Channel 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
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)	
1	Link-01	0.15	0 00:17	5.85	0.03	1.57	1.61	0.06	0.20	0.00	
2	Link-02	0.07	0 00:14	5.59	0.01	0.26	16.23	0.11	0.33	0.00	
3	Link-03	1.08	0 00:14	7.51	0.14	1.17	4.32	0.21	0.63	0.00	
4	Link-04	2.37	0 00:15	4.19	0.57	1.27	3.97	0.30	0.90	0.00	
5	Link-06	0.07	0 00:11	9.68	0.01	0.61	5.27	0.08	0.25	0.00	
6	Link-07	1.01	0 00:16	7.90	0.13	0.82	6.00	0.24	0.73	0.00	
7	Link-09	0.07	0 00:09	9.88	0.01	0.62	4.65	0.13	0.40	0.00	
8	Link-10	1.23	0 00:19	2.67	0.46	0.70	3.74	0.29	0.87	0.00	
9	Link-11	0.32	0 00:16	3.74	0.09	0.29	4.63	0.23	0.69	0.00	
10	Link-12	0.15	0 00:08	6.78	0.02	2.57	1.12	0.07	0.21	0.00	
11	Link-13	1.22	0 00:09	8.96	0.14	3.91	0.97	0.12	0.37	0.00	
12	Link-14	0.40	0 00:17	8.97	0.04	1.55	2.54	0.11	0.33	0.00	
13	Link-15	0.28	0 00:13	8.96	0.03	2.64	1.31	0.07	0.21	0.00	
14	Link-16	0.07	0 00:15	8.87	0.01	0.10	36.43	0.19	0.58	0.00	
15	Link-17	0.60	0 00:17	8.97	0.07	1.65	2.94	0.13	0.40	0.00	
16	Link-18	0.00	0 00:00	8.19	0.00	0.00		0.01	0.04	0.00	
17	Link-19	0.18	0 00:16	5.53	0.03	1.40	2.10	0.08	0.23	0.00	
18	Link-20	0.61	0 00:10	7.81	0.08	0.76	6.19	0.21	0.65	0.00	
19	Link-24	0.02	0 00:18	4.97	0.00	0.60	8.79	0.17	0.50	0.00	
20	Link-28	0.00	0 00:15	52.65	0.00	0.00		0.00	0.01	0.00	
21	Link-38	0.03	0 00:06	8.95	0.00	0.06	12.42	0.18	0.54	0.00	
22	Link-40	0.00	0 00:00	10.74	0.00	0.00		0.17	0.50	0.00	

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)	Mar Roug
1	Link-05	406.55	517.00	3.00	503.00	10.00	14.00	3.4400	CIRCULAR	18.000	18.000	
2	Link-08	30.00	462.75	0.00	462.25	-0.05	0.50	1.6700	CIRCULAR	15.000	15.000	
3	Link-30	30.83	462.08	0.00	462.75	0.00	-0.67	-2.1800	CIRCULAR	18.000	18.000	
4	Link-33	33.60	461.75	0.00	461.00	0.00	0.75	2.2300	CIRCULAR	24.000	24.000	
5	Link-37	0.96	462.30	0.00	462.25	0.00	0.05	5.2100	CIRCULAR	15.000	15.000	
6	Link-39	0.36	538.50	0.00	538.50	0.00	0.00	0.0000	CIRCULAR	18.000	18.000	
7	L-SDPIPE-8	70.00	471.00	0.00	468.00	0.00	3.00	4.2900	CIRCULAR	18.000	18.000	
8	SDPIPE-10	187.03	493.00	0.00	486.75	5.75	6.25	3.3400	CIRCULAR	18.000	18.000	
9	SDPIPE-11	66.59	502.00	0.00	498.50	5.50	3.50	5.2600	CIRCULAR	18.000	18.000	
10	SDPIPE-12	297.35	513.00	0.00	503.00	1.00	10.00	3.3600	CIRCULAR	18.000	18.000	
11	SDPIPE-13	64.00	514.00	0.00	513.00	0.00	1.00	1.5600	CIRCULAR	18.000	18.000	
12	SDPIPE-14	322.00	528.00	0.00	514.00	0.00	14.00	4.3500	CIRCULAR	18.000	18.000	
13	SDPIPE-15	42.43	529.00	0.00	528.00	0.00	1.00	2.3600	CIRCULAR	18.000	18.000	
14	SDPIPE-16	131.65	504.25	0.00	502.00	0.00	2.25	1.7100	CIRCULAR	24.000	24.000	
15	SDPIPE-17	32.94	508.50	0.00	508.00	3.75	0.50	1.5200	CIRCULAR	24.000	24.000	
16	SDPIPE-18	77.00	510.00	0.00	508.50	0.00	1.50	1.9500	CIRCULAR	18.000	18.000	
17	SDPIPE-19	75.59	509.50	0.00	508.50	0.00	1.00	1.3200	CIRCULAR	18.000	18.000	
18	SDPIPE-2	99.00	462.74	0.00	461.75	0.00	0.99	1.0000	CIRCULAR	24.000	24.000	
19	SDPIPE-20	256.11	526.00	0.00	508.50	0.00	17.50	6.8300	CIRCULAR	18.000	18.000	
20	SDPIPE-21	69.87	527.00	0.00	526.00	0.00	1.00	1.4300	CIRCULAR	18.000	18.000	
21	SDPIPE-22	33.08	530.50	0.00	527.00	0.00	3.50	10.5800	CIRCULAR	18.000	18.000	
22	SDPIPE-23	222.35	534.00	0.00	527.00	0.00	7.00	3.1500	CIRCULAR	18.000	18.000	
23	SDPIPE-24	73.59	537.00	0.00	534.00	0.00	3.00	4.0800	CIRCULAR	18.000	18.000	
24	SDPIPE-25	74.63	546.00	0.00	544.50	0.00	1.50	2.0100	CIRCULAR	18.000	18.000	
25	SDPIPE-25 (1)	44.82	537.50	0.00	537.00	0.00	0.50	1.1200	CIRCULAR	18.000	18.000	
26	SDPIPE-25 (12)	42.57	484.50	0.00	484.00	5.50	0.50	1.1700	CIRCULAR	18.000	18.000	
27	SDPIPE-25 (13)	33.23	496.00	0.00	494.50	0.00	1.50	4.5100	CIRCULAR	18.000	18.000	
28	SDPIPE-25 (14)	46.24	515.00	0.00	514.00	4.00	1.00	2.1600	CIRCULAR	18.000	18.000	
29	SDPIPE-25 (15)	248.75	502.00	0.00	468.50	0.00	33.50	13.4700	CIRCULAR	24.000	24.000	
30	SDPIPE-25 (15) (1)	24.21	468.50	0.00	468.25	0.00	0.25	1.0300	CIRCULAR	30.000	30.000	
31	SDPIPE-25 (17)	32.91	462.08	0.00	461.75	0.00	0.33	1.0000	CIRCULAR	18.000	18.000	
32	SDPIPE-25 (2)	150.25	543.50	0.00	537.50	0.00	6.00	3.9900	CIRCULAR	18.000	18.000	
33	SDPIPE-25 (3)	33.25	544.00	0.00	543.50	0.00	0.50	1.5000	CIRCULAR	18.000	18.000	
34	SDPIPE-25 (6)	87.00	478.50	0.00	472.00	0.00	6.50	7.4700	CIRCULAR	18.000	18.000	
35	SDPIPE-25 (7)	201.54	494.50	0.00	485.00	6.50	9.50	4.7100	CIRCULAR	18.000	18.000	
36	SDPIPE-25 (8)	196.25	510.00	0.00	498.00	3.50	12.00	6.1100	CIRCULAR	18.000	18.000	
37	SDPIPE-25 (9)	51.51	515.00	0.00	514.00	4.00	1.00	1.9400	CIRCULAR	18.000	18.000	
38	SDPIPE-32	95.98	544.50	0.00	538.50	0.00	6.00	6.2500	CIRCULAR	18.000	18.000	
39	SDPIPE-36	30.02	441.30	0.00	441.00	0.00	0.30	1.0000	CIRCULAR	18.000	18.000	
40	SDPIPE-4	112.76	468.00	0.00	462.74	0.00	5.26	4.6600	CIRCULAR	24.000	24.000	
41	SDPIPE-5	41.13	468.50	0.00	468.00	0.00	0.50	1.2200	CIRCULAR	24.000	24.000	
42	SDPIPE-6	55.12	469.10	0.00	468.50	0.00	0.60	1.0900	CIRCULAR	24.000	24.000	
43	SDPIPE-7	33.11	469.43	0.00	469.10	0.00	0.33	1.0100	CIRCULAR	24.000	24.000	
44	SDPIPE-8 (1)	127.57	481.00	0.00	471.00	0.00	10.00	7.8400	CIRCULAR	18.000	18.000	
45	SDPIPE-9	35.93	485.50	0.00	483.00	2.00	2.50	6.9600	CIRCULAR	18.000	18.000	

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 Ti Surcharg
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(m
1	Link-05	0.09	0 00:11	15.32	0.01	2.99	2.27	0.07	0.05	0.
2	Link-08	1.21	0 00:17	8.57	0.14	3.49	0.14	0.41	0.33	0.
3	Link-30	1.05	0 00:21	28.73	0.04	4.96	0.10	0.27	0.18	0.
4	Link-33	2.26	0 00:17	29.29	0.08	4.97	0.11	0.41	0.20	0.
5	Link-37	1.18	0 00:17	15.97	0.07	4.47	0.00	0.33	0.27	0.
6	Link-39	1.70	0 00:16	5.54	0.31	2.78	0.00	0.57	0.38	0.
7	L-SDPIPE-8	17.05	0 00:13	18.85	0.90	10.42	0.11	1.31	0.87	0.
8	SDPIPE-10	13.98	0 00:13	20.80	0.67	11.56	0.27	0.97	0.65	0.
9	SDPIPE-11	12.76	0 00:14	24.08	0.53	11.70	0.09	0.89	0.59	0.
10	SDPIPE-12	7.33	0 00:14	20.87	0.35	10.36	0.48	0.63	0.42	0.
11	SDPIPE-13	4.25	0 00:10	13.13	0.32	5.72	0.19	0.66	0.44	0.
12	SDPIPE-14	2.87	0 00:09	21.90	0.13	5.67	0.95	0.53	0.35	0.
13	SDPIPE-15	2.28	0 00:14	16.13	0.14	6.03	0.12	0.40	0.27	0.
14	SDPIPE-16	17.74	0 00:17	32.04	0.55	11.04	0.20	1.02	0.51	0.
15	SDPIPE-17	17.18	0 00:18	30.19	0.57	7.69	0.07	1.34	0.67	0.
16	SDPIPE-18	3.54	0 00:19	15.88	0.22	3.63	0.35	0.99	0.66	0.
17	SDPIPE-19	3.17	0 00:16	13.09	0.24	2.97	0.42	1.07	0.71	0.
18	SDPIPE-2	0.00	0 00:00	22.62	0.00	0.00		0.22	0.11	0.
19	SDPIPE-20	7.75	0 00:07	29.75	0.26	7.42	0.58	0.99	0.66	0.
20	SDPIPE-21	7.75	0 00:07	13.61	0.57	8.20	0.14	0.79	0.53	0.
21	SDPIPE-22	1.49	0 00:07	34.17	0.04	2.30	0.24	0.64	0.42	0.
22	SDPIPE-23	6.02	0 00:17	20.19	0.30	6.83	0.54	0.75	0.50	0.
23	SDPIPE-24	6.03	0 00:17	21.21	0.28	9.16	0.13	0.60	0.40	0.
24	SDPIPE-25	1.02	0 00:15	14.89	0.07	4.61	0.27	0.27	0.18	0.
25	SDPIPE-25 (1)	4.64	0 00:17	11.09	0.42	5.44	0.14	0.73	0.49	0.
26	SDPIPE-25 (12)	2.11	0 00:17	11.38	0.19	4.39	0.16	0.48	0.32	0.
27	SDPIPE-25 (13)	2.15	0 00:09	22.32	0.10	5.87	0.09	0.45	0.30	0.
28	SDPIPE-25 (14)	1.23	0 00:08	15.45	0.08	4.84	0.16	0.30	0.20	0.
29	SDPIPE-25 (15)	17.74	0 00:17	89.94	0.20	8.42	0.49	1.30	0.65	0.
30	SDPIPE-25 (15) (1)	28.58	0 00:19	45.15	0.63	7.64	0.05	1.78	0.71	0.
31	SDPIPE-25 (17)	2.27	0 00:17	10.50	0.22	4.40	0.12	0.50	0.33	0.
32	SDPIPE-25 (2)	3.26	0 00:16	22.74	0.14	4.89	0.51	0.61	0.40	0.
33	SDPIPE-25 (3)	1.68	0 00:16	12.88	0.13	4.33	0.13	0.41	0.27	0.
34	SDPIPE-25 (6)	8.73	0 00:10	31.10	0.28	13.51	0.11	0.59	0.39	0.
35	SDPIPE-25 (7)	6.52	0 00:10	24.71	0.26	11.24	0.30	0.55	0.36	0.
36	SDPIPE-25 (8)	3.17	0 00:09	28.14	0.11	10.22	0.32	0.35	0.23	0.
37	SDPIPE-25 (9)	2.12	0 00:09	14.64	0.14	5.35	0.16	0.41	0.28	0.
38	SDPIPE-32	1.80	0 00:15	26.26	0.07	5.04	0.32	0.45	0.30	0.
39	SDPIPE-36	5.99	0 00:25	9.10	0.66	4.73	0.11	1.01	0.67	0.
40	SDPIPE-4	0.00	0 00:00	48.86	0.00	0.00		0.00	0.00	0.
41	SDPIPE-5	3.98	0 00:19	27.02	0.15	5.24	0.13	0.58	0.29	0.
42	SDPIPE-6	3.98	0 00:19	25.54	0.16	4.53	0.20	0.65	0.32	0.
43	SDPIPE-7	2.90	0 00:17	22.70	0.13	3.48	0.16	0.62	0.31	0.
44	SDPIPE-8 (1)	17.05	0 00:13	31.86	0.54	11.60	0.18	1.18	0.79	0.

Inlet Input

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)
1	CB-10	FHWA HEC-22 GENERIC	N/A	On Sag	1	469.43	474.00	4.56	469.43	0.00
2	CB-11	FHWA HEC-22 GENERIC	N/A	On Grade	1	481.00	490.69	9.69	481.00	0.00
3	CB-12	FHWA HEC-22 GENERIC	N/A	On Grade	1	485.50	491.89	6.39	485.50	0.00
4	CB-13	FHWA HEC-22 GENERIC	N/A	On Grade	1	493.00	508.19	15.19	493.00	0.00
5	CB-14	FHWA HEC-22 GENERIC	N/A	On Sag	1	502.00	513.25	11.25	502.00	0.00
6	CB-15	FHWA HEC-22 GENERIC	N/A	On Grade	1	513.00	518.39	5.39	513.00	0.00
7	CB-16	FHWA HEC-22 GENERIC	N/A	On Grade	1	514.00	519.70	5.70	514.00	0.00
8	CB-17	FHWA HEC-22 GENERIC	N/A	On Grade	1	528.00	533.32	5.32	528.00	0.00
9	CB-18	FHWA HEC-22 GENERIC	N/A	On Grade	1	529.00	534.99	5.99	529.00	0.00
10	CB-2	FHWA HEC-22 GENERIC	N/A	On Grade	1	461.75	465.77	4.02	461.75	0.00
11	CB-20	FHWA HEC-22 GENERIC	N/A	On Sag	1	504.25	515.89	11.64	504.25	0.00
12	CB-21	FHWA HEC-22 GENERIC	N/A	On Sag	1	508.50	515.89	7.39	508.50	0.00
13	CB-22	FHWA HEC-22 GENERIC	N/A	On Grade	1	510.00	516.97	6.97	510.00	0.00
14	CB-23	FHWA HEC-22 GENERIC	N/A	On Grade	1	509.50	516.98	7.48	509.50	0.00
15	CB-25	FHWA HEC-22 GENERIC	N/A	On Sag	1	527.00	535.29	8.29	527.00	0.00
16	CB-26	FHWA HEC-22 GENERIC	N/A	On Sag	1	530.50	535.29	4.79	530.50	0.00
17	CB-28	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.00	542.65	5.65	537.00	0.00
18	CB-29	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.50	542.86	5.36	537.50	0.00
19	CB-30	FHWA HEC-22 GENERIC	N/A	On Grade	1	543.50	547.90	4.40	543.50	0.00
20	CB-31	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.50	549.37	4.87	544.50	0.00
21	CB-32	FHWA HEC-22 GENERIC	N/A	On Grade	1	546.00	549.87	3.87	546.00	0.00
22	CB-33	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.00	547.88	3.88	544.00	0.00
23	CB-37	FHWA HEC-22 GENERIC	N/A	On Grade	1	478.50	490.69	12.19	478.50	0.00
24	CB-38	FHWA HEC-22 GENERIC	N/A	On Grade	1	494.50	506.87	12.37	494.50	0.00
25	CB-40	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.80	9.80	515.00	0.00
26	CB-43	FHWA HEC-22 GENERIC	N/A	On Grade	1	484.50	488.57	4.07	484.50	0.00
27	CB-44	FHWA HEC-22 GENERIC	N/A	On Grade	1	496.00	507.00	11.00	496.00	0.00
28	CB-45	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.64	9.64	515.00	0.00
29	CB-51	FHWA HEC-22 GENERIC	N/A	On Grade	1	462.08	465.82	3.74	462.08	0.00
30	CB-9	FHWA HEC-22 GENERIC	N/A	On Sag	1	469.10	474.00	4.90	469.10	0.00

Roadway & Gutter Input

SN	Element ID	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (in)	Allowable Spread (ft)
1	CB-10	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
2	CB-11	0.0935	0.0254	0.0150	0.0200	1.00	0.1312	8.50
3	CB-12	0.0935	0.0254	0.0150	0.0200	1.00	0.1312	8.50
4	CB-13	0.0232	0.0254	0.0150	0.0200	1.00	0.1312	8.50
5	CB-14	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
6	CB-15	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
7	CB-16	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
8	CB-17	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
9	CB-18	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
10	CB-2	0.0788	0.0254	0.0150	0.0200	1.00	0.1312	8.50
11	CB-20	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
12	CB-21	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
13	CB-22	0.0780	0.0254	0.0150	0.0200	1.00	0.1312	8.50
14	CB-23	0.0381	0.0254	0.0150	0.0200	1.00	0.1312	8.50
15	CB-25	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
16	CB-26	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
17	CB-28	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
18	CB-29	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
19	CB-30	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
20	CB-31	0.0351	0.0254	0.0150	0.0200	1.00	0.1312	8.50
21	CB-32	0.0351	0.0254	0.0150	0.0200	1.00	0.1312	8.50
22	CB-33	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
23	CB-37	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
24	CB-38	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
25	CB-40	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
26	CB-43	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
27	CB-44	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
28	CB-45	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
29	CB-51	0.0788	0.0254	0.0150	0.0200	1.00	0.1312	8.50
30	CB-9	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50

Inlet Results

SN	Element ID	Peak Flow (cfs)	Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Max Depth Occurrence (days hh:mm)	T Floo Volu (ac
1	CB-10	3.20	2.38	N/A	N/A	N/A	6.55	474.33	0.33	0 00:17	0
2	CB-11	2.32	2.28	1.68	0.64	72.48	5.52	490.83	0.13	0 00:13	0
3	CB-12	2.94	2.94	1.93	1.01	65.53	6.01	492.04	0.15	0 00:16	0
4	CB-13	1.98	1.91	1.84	0.15	92.56	6.73	508.36	0.17	0 00:13	0
5	CB-14	5.66	4.15	N/A	N/A	N/A	11.46	513.71	0.46	0 00:14	0
6	CB-15	6.28	5.29	3.14	3.15	49.92	8.71	518.61	0.22	0 00:14	0
7	CB-16	1.61	1.61	1.43	0.19	88.46	5.25	519.83	0.13	0 00:09	0
8	CB-17	1.41	1.41	1.30	0.11	92.04	4.98	533.44	0.12	0 00:09	0
9	CB-18	3.36	3.30	2.25	1.12	66.74	6.89	535.16	0.17	0 00:14	0
10	CB-2	0.95	0.95	0.93	0.02	98.06	4.08	465.87	0.10	0 00:17	0
11	CB-20	3.23	3.23	N/A	N/A	N/A	7.89	516.25	0.37	0 00:17	0
12	CB-21	4.53	3.32	N/A	N/A	N/A	9.87	516.30	0.42	0 00:18	0
13	CB-22	4.78	4.78	3.54	1.24	74.00	7.46	517.15	0.18	0 00:19	0
14	CB-23	3.55	3.55	3.23	0.33	90.77	7.61	517.17	0.19	0 00:18	0
15	CB-25	4.29	4.29	N/A	N/A	N/A	9.52	535.70	0.41	0 00:07	0
16	CB-26	2.95	2.95	N/A	N/A	N/A	7.42	535.64	0.36	0 00:07	0
17	CB-28	1.65	1.54	1.54	0.11	93.55	5.88	542.79	0.14	0 00:17	0
18	CB-29	1.44	1.32	1.39	0.05	96.58	5.58	543.00	0.14	0 00:17	0
19	CB-30	1.80	1.80	1.65	0.16	91.35	6.06	548.05	0.15	0 00:16	0
20	CB-31	0.89	0.89	0.89	0.00	100.00	4.65	549.48	0.11	0 00:15	0
21	CB-32	1.03	1.03	1.03	0.00	100.00	4.91	549.99	0.12	0 00:15	0
22	CB-33	1.87	1.87	1.69	0.18	90.46	6.13	548.03	0.15	0 00:16	0
23	CB-37	1.37	1.16	1.23	0.14	89.84	4.67	490.80	0.11	0 00:10	0
24	CB-38	1.78	1.78	1.46	0.31	82.38	5.14	506.99	0.13	0 00:10	0
25	CB-40	3.35	3.35	2.13	1.22	63.67	6.50	524.96	0.16	0 00:09	0
26	CB-43	2.72	2.34	1.89	0.82	69.69	6.02	488.72	0.15	0 00:17	0
27	CB-44	2.31	1.96	1.72	0.59	74.58	5.66	507.14	0.14	0 00:09	0
28	CB-45	1.40	1.40	1.25	0.15	89.20	4.71	524.76	0.11	0 00:08	0
29	CB-51	3.09	2.81	2.04	1.05	65.99	6.34	465.98	0.16	0 00:17	0
30	CB-9	2.19	2.14	N/A	N/A	N/A	8.31	474.37	0.38	0 00:19	0

100 Year Design Storm

Project Description

File Name	HILLTOP 9-21-2026.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Rational
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

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	0
Subbasins	33
Nodes	52
Junctions	13
Outfalls	9
Flow Diversions	0
Inlets	30
Storage Nodes	0
Links	67
Channels	22
Pipes	45
Pumps	0
Orifices	0
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Return Period	100 year(s)

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Sub-AD-49	4.59	0.7000	2.32	1.62	7.44	16.97	0 00:26:24
2	Sub-CB-10	0.54	0.7000	1.63	1.14	0.62	2.58	0 00:14:15
3	Sub-CB-11	0.44	0.7000	1.36	0.95	0.42	2.48	0 00:10:06
4	Sub-CB-12	0.70	0.7000	1.73	1.21	0.85	3.19	0 00:15:59
5	Sub-CB-13	0.37	0.7000	1.36	0.95	0.35	2.08	0 00:10:09
6	Sub-CB-14	0.87	0.7000	1.48	1.04	0.90	4.50	0 00:12:04
7	Sub-CB-15	1.24	0.7000	1.69	1.18	1.47	5.74	0 00:15:19
8	Sub-CB-16	0.30	0.7000	1.30	0.91	0.27	1.75	0 00:09:21
9	Sub-CB-17	0.25	0.7000	1.24	0.87	0.22	1.53	0 00:08:26
10	Sub-CB-18	0.76	0.7000	1.64	1.15	0.87	3.58	0 00:14:44
11	Sub-CB-2	0.15	0.7000	1.09	0.76	0.11	1.03	0 00:06:39
12	Sub-CB-20	0.61	0.7000	1.33	0.93	0.57	3.51	0 00:09:37
13	Sub-CB-21	0.81	0.7000	1.78	1.25	1.01	3.60	0 00:16:54
14	Sub-CB-22	1.23	0.7000	1.92	1.35	1.66	5.18	0 00:19:13
15	Sub-CB-23	0.85	0.7000	1.75	1.22	1.04	3.85	0 00:16:07
16	Sub-CB-25	0.66	0.7000	1.06	0.75	0.49	4.66	0 00:06:15
17	Sub-CB-26	0.41	0.7000	0.93	0.65	0.27	3.21	0 00:05:00
18	Sub-CB-28	0.35	0.7000	1.63	1.14	0.40	1.67	0 00:14:16
19	Sub-CB-29	0.32	0.7000	1.77	1.24	0.40	1.43	0 00:16:41
20	Sub-CB-30	0.44	0.7000	1.82	1.27	0.57	1.96	0 00:17:16
21	Sub-CB-31	0.28	0.5000	1.60	0.80	0.22	0.97	0 00:13:48
22	Sub-CB-32	0.24	0.7000	1.71	1.20	0.29	1.12	0 00:15:37
23	Sub-CB-33	0.45	0.7000	1.75	1.23	0.55	2.03	0 00:16:22
24	Sub-CB-37	0.27	0.7000	1.69	1.18	0.32	1.26	0 00:15:16
25	Sub-CB-38	0.38	0.7000	1.51	1.06	0.40	1.93	0 00:12:34
26	Sub-CB-40	0.63	0.7000	1.31	0.92	0.58	3.63	0 00:09:30
27	Sub-CB-43	0.57	0.7000	1.78	1.25	0.71	2.53	0 00:16:54
28	Sub-CB-44	0.48	0.7000	1.81	1.26	0.61	2.12	0 00:17:09
29	Sub-CB-45	0.24	0.7000	1.18	0.83	0.20	1.52	0 00:07:51
30	Sub-CB-51	0.76	0.7000	2.07	1.45	1.10	3.05	0 00:21:40
31	Sub-CB-9	0.54	0.7000	1.88	1.31	0.71	2.33	0 00:18:21
32	Sub-SDPIPE-35	0.16	0.7000	1.40	0.98	0.16	0.88	0 00:10:36
33	Sub-SDPIPE-36	1.73	0.7000	2.27	1.59	2.75	6.51	0 00:25:20

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)	M Freeboa Attain (
1	AD-49	Junction	468.50	472.65	468.50	472.65	10.00	30.96	470.75	0.00	1.
2	CB-47	Junction	471.00	479.32	471.00	479.32	10.00	18.44	475.71	0.00	3.
3	CB-8	Junction	468.50	474.72	468.50	474.72	10.00	4.65	469.21	0.00	5.
4	JB	Junction	462.30	468.30	462.30	468.30	0.00	1.42	462.78	0.00	5.
5	JB-19	Junction	502.00	509.27	502.00	509.27	10.00	19.21	502.63	0.00	6.
6	JB-24	Junction	526.00	535.80	526.00	535.80	10.00	8.63	526.55	0.00	9.
7	JB-27	Junction	534.00	539.80	534.00	539.80	10.00	6.53	534.59	0.00	5.
8	JB-39	Junction	510.00	521.73	510.00	521.73	10.00	3.33	510.36	0.00	11.
9	JB-4	Junction	462.74	473.05	462.74	473.05	10.00	0.00	462.74	0.00	10.
10	JB-SDPIPE35	Junction	462.75	464.00	462.75	0.00	100.00	1.42	463.17	0.00	1.
11	JB-SDPIPE36	Junction	441.30	442.80	441.30	0.00	1000.00	6.51	442.52	0.00	0.
12	8-Jun	Junction	538.50	544.50	538.50	544.50	0.00	1.95	539.17	0.00	5.
13	WIER-6	Junction	468.00	472.50	468.00	472.50	10.00	0.00	468.00	0.00	4.
14	FES-1	Outfall	461.00					2.45	461.39		
15	FES-3	Outfall	538.50					1.84	539.01		
16	FES-36	Outfall	472.00					9.43	472.57		
17	FES-46	Outfall	468.25					30.96	469.77		
18	FES-48	Outfall	468.00					18.44	469.20		
19	FES-7	Outfall	468.00					4.65	468.56		
20	3-Jun	Outfall	0.00					0.02	0.02		
21	OUT-SDPIPE35	Outfall	462.25					1.39	462.50		
22	Out-SDPIPE-36	Outfall	441.00					6.50	441.94		

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 Fl Dep
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	
1	Link-05	Pipe	CB-16	CB-13	406.55	517.00	503.00	3.4400	18.000	0.0150	0.13	15.32	0.01	3.41	0.
2	Link-08	Pipe	JB-SDPIPE35	JB	30.00	462.75	462.25	1.6700	15.000	0.0120	1.41	8.57	0.16	3.58	0.
3	Link-30	Pipe	CB-51	JB-SDPIPE35	30.83	462.08	462.75	-2.1800	18.000	0.0150	1.24	28.73	0.04	5.12	0.
4	Link-33	Pipe	CB-2	FES-1	33.60	461.75	461.00	2.2300	24.000	0.0150	2.45	29.29	0.08	5.06	0.
5	Link-37	Pipe	JB	OUT-SDPIPE35	0.96	462.30	462.25	5.2100	15.000	0.0120	1.39	15.97	0.09	4.65	0.
6	Link-39	Pipe	8-Jun	FES-3	0.36	538.50	538.50	0.0000	18.000	0.0130	1.84	5.54	0.33	2.85	0.
7	L-SDPIPE-8	Pipe	CB-47	FES-48	70.00	471.00	468.00	4.2900	18.000	0.0150	18.44	18.85	0.98	11.00	1.
8	SDPIPE-10	Pipe	CB-13	CB-11	187.03	493.00	486.75	3.3400	18.000	0.0120	15.20	20.80	0.73	11.70	1.
9	SDPIPE-11	Pipe	CB-14	CB-13	66.59	502.00	498.50	5.2600	18.000	0.0130	13.85	24.08	0.58	11.84	0.
10	SDPIPE-12	Pipe	CB-15	CB-14	297.35	513.00	503.00	3.3600	18.000	0.0120	7.82	20.87	0.37	10.53	0.
11	SDPIPE-13	Pipe	CB-16	CB-15	64.00	514.00	513.00	1.5600	18.000	0.0130	4.50	13.13	0.34	5.78	0.
12	SDPIPE-14	Pipe	CB-17	CB-16	322.00	528.00	514.00	4.3500	18.000	0.0130	3.04	21.90	0.14	5.74	0.
13	SDPIPE-15	Pipe	CB-18	CB-17	42.43	529.00	528.00	2.3600	18.000	0.0130	2.43	16.13	0.15	6.11	0.
14	SDPIPE-16	Pipe	CB-20	JB-19	131.65	504.25	502.00	1.7100	24.000	0.0120	19.21	32.04	0.60	11.15	1.
15	SDPIPE-17	Pipe	CB-21	CB-20	32.94	508.50	508.00	1.5200	24.000	0.0120	18.60	30.19	0.62	7.82	1.
16	SDPIPE-18	Pipe	CB-22	CB-21	77.00	510.00	508.50	1.9500	18.000	0.0120	3.71	15.88	0.23	3.70	1.
17	SDPIPE-19	Pipe	CB-23	CB-21	75.59	509.50	508.50	1.3200	18.000	0.0120	3.34	13.09	0.26	3.02	1.
18	SDPIPE-2	Pipe	JB-4	CB-2	99.00	462.74	461.75	1.0000	24.000	0.0130	0.00	22.62	0.00	0.00	0.
19	SDPIPE-20	Pipe	JB-24	CB-21	256.11	526.00	508.50	6.8300	18.000	0.0120	8.62	29.75	0.29	7.70	1.
20	SDPIPE-21	Pipe	CB-25	JB-24	69.87	527.00	526.00	1.4300	18.000	0.0120	8.63	13.61	0.63	8.35	0.
21	SDPIPE-22	Pipe	CB-26	CB-25	33.08	530.50	527.00	10.5800	18.000	0.0130	1.77	34.17	0.05	2.29	0.
22	SDPIPE-23	Pipe	JB-27	CB-25	222.35	534.00	527.00	3.1500	18.000	0.0120	6.52	20.19	0.32	6.95	0.
23	SDPIPE-24	Pipe	CB-28	JB-27	73.59	537.00	534.00	4.0800	18.000	0.0130	6.53	21.21	0.31	9.31	0.
24	SDPIPE-25	Pipe	CB-32	CB-31	74.63	546.00	544.50	2.0100	18.000	0.0130	1.10	14.89	0.07	4.69	0.
25	SDPIPE-25 (1)	Pipe	CB-29	CB-28	44.82	537.50	537.00	1.1200	18.000	0.0130	4.99	11.09	0.45	5.50	0.
26	SDPIPE-25 (12)	Pipe	CB-43	CB-37	42.57	484.50	484.00	1.1700	18.000	0.0130	2.28	11.38	0.20	4.48	0.
27	SDPIPE-25 (13)	Pipe	CB-44	CB-38	33.23	496.00	494.50	4.5100	18.000	0.0130	2.34	22.32	0.10	5.96	0.
28	SDPIPE-25 (14)	Pipe	CB-45	JB-39	46.24	515.00	514.00	2.1600	18.000	0.0130	1.31	15.45	0.08	4.91	0.

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 Fl Dep
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	
46	Link-01	Channel	CB-30	CB-29	151.74	547.90	542.86	3.3200	3.960	0.0320	0.20	5.85	0.03	1.57	0.
47	Link-02	Channel	CB-28	CB-18	253.20	542.65	534.99	3.0300	3.960	0.0320	0.11	5.59	0.02	0.35	0.
48	Link-03	Channel	CB-18	CB-15	303.55	534.99	520.24	4.8600	3.960	0.0320	1.25	7.51	0.17	1.22	0.
49	Link-04	Channel	CB-15	CB-14	302.16	520.24	513.25	2.3100	3.960	0.0320	2.74	4.19	0.65	1.39	0.
50	Link-06	Channel	CB-13	CB-11	192.70	508.19	490.69	9.0800	3.960	0.0320	0.12	9.68	0.01	0.64	0.
51	Link-07	Channel	CB-12	CB-10	295.35	491.89	474.00	6.0600	3.960	0.0320	1.17	7.90	0.15	0.92	0.
52	Link-09	Channel	CB-17	CB-22	172.84	533.32	517.04	9.4200	3.960	0.0320	0.10	9.88	0.01	0.67	0.
53	Link-10	Channel	CB-22	CB-21	156.96	517.04	515.89	0.7300	3.960	0.0320	1.46	2.67	0.55	0.79	0.
54	Link-11	Channel	CB-23	CB-21	80.56	516.98	515.89	1.3500	3.960	0.0320	0.44	3.74	0.12	0.36	0.
55	Link-12	Channel	CB-45	CB-23	172.11	524.64	516.98	4.4500	3.960	0.0320	0.19	6.78	0.03	2.75	0.
56	Link-13	Channel	CB-40	CB-44	228.53	524.80	507.00	7.7900	3.960	0.0320	1.40	8.96	0.16	3.91	0.
57	Link-14	Channel	CB-44	CB-43	236.24	500.50	482.00	7.8300	3.960	0.0320	0.49	8.97	0.05	1.76	0.
58	Link-15	Channel	CB-38	CB-37	208.04	506.87	490.69	7.7800	3.960	0.0320	0.36	8.96	0.04	2.78	0.
59	Link-16	Channel	CB-37	CB-9	218.60	490.69	474.00	7.6400	3.960	0.0320	0.11	8.87	0.01	0.13	0.
60	Link-17	Channel	CB-43	CB-51	291.31	488.57	465.82	7.8100	3.960	0.0320	0.71	8.97	0.08	1.68	0.
61	Link-18	Channel	CB-10	CB-2	126.47	474.00	465.77	6.5100	3.960	0.0320	0.00	8.19	0.00	0.00	0.
62	Link-19	Channel	CB-33	CB-28	176.20	547.88	542.65	2.9700	3.960	0.0320	0.24	5.53	0.04	1.49	0.
63	Link-20	Channel	CB-11	CB-9	282.13	490.69	474.00	5.9200	3.960	0.0320	0.72	7.81	0.09	0.80	0.
64	Link-24	Channel	CB-29	CB-26	316.29	542.86	535.29	2.3900	3.960	0.0320	0.04	4.97	0.01	0.62	0.
65	Link-28	Channel	CB-32	3-Jun	204.60	549.87	0.00	268.7500	3.960	0.0320	0.02	52.65	0.00	4.51	0.
66	Link-38	Channel	CB-2	JB	44.72	465.77	462.30	7.7600	3.960	0.0320	0.04	8.95	0.00	0.08	0.
67	Link-40	Channel	CB-31	8-Jun	97.13	549.37	538.50	11.1900	3.960	0.0320	0.00	10.74	0.00	0.00	0.

Inlet Summary

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Ponded Area (ft²)	Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)	Max Gutt Sprea during Pea Flo (
1	CB-10	FHWA HEC-22 GENERIC	N/A	On Sag	1	469.43	474.00	469.43	10.00	3.54	N/A	N/A	N/A	8.50	8.8
2	CB-11	FHWA HEC-22 GENERIC	N/A	On Grade	1	481.00	490.69	481.00	N/A	2.56	1.78	0.78	69.65	8.50	5.7
3	CB-12	FHWA HEC-22 GENERIC	N/A	On Grade	1	485.50	491.89	485.50	N/A	3.19	2.02	1.17	63.20	8.50	6.2
4	CB-13	FHWA HEC-22 GENERIC	N/A	On Grade	1	493.00	508.19	493.00	N/A	2.20	1.98	0.22	89.89	8.50	6.9
5	CB-14	FHWA HEC-22 GENERIC	N/A	On Sag	1	502.00	513.25	502.00	10.00	6.25	N/A	N/A	N/A	8.50	12.2
6	CB-15	FHWA HEC-22 GENERIC	N/A	On Grade	1	513.00	518.39	513.00	N/A	6.90	3.29	3.60	47.77	8.50	8.9
7	CB-16	FHWA HEC-22 GENERIC	N/A	On Grade	1	514.00	519.70	514.00	N/A	1.75	1.51	0.24	86.23	8.50	5.3
8	CB-17	FHWA HEC-22 GENERIC	N/A	On Grade	1	528.00	533.32	528.00	N/A	1.53	1.38	0.15	89.89	8.50	5.1
9	CB-18	FHWA HEC-22 GENERIC	N/A	On Grade	1	529.00	534.99	529.00	N/A	3.69	2.37	1.32	64.19	8.50	7.3
10	CB-2	FHWA HEC-22 GENERIC	N/A	On Grade	1	461.75	465.77	461.75	N/A	1.03	0.99	0.03	96.61	8.50	4.2
11	CB-20	FHWA HEC-22 GENERIC	N/A	On Sag	1	504.25	515.89	504.25	10.00	3.51	N/A	N/A	N/A	8.50	8.3
12	CB-21	FHWA HEC-22 GENERIC	N/A	On Sag	1	508.50	515.89	508.50	10.00	5.10	N/A	N/A	N/A	8.50	10.6
13	CB-22	FHWA HEC-22 GENERIC	N/A	On Grade	1	510.00	516.97	510.00	N/A	5.19	3.72	1.47	71.65	8.50	7.6
14	CB-23	FHWA HEC-22 GENERIC	N/A	On Grade	1	509.50	516.98	509.50	N/A	3.85	3.41	0.44	88.55	8.50	7.8
15	CB-25	FHWA HEC-22 GENERIC	N/A	On Sag	1	527.00	535.29	527.00	10.00	4.66	N/A	N/A	N/A	8.50	10.0
16	CB-26	FHWA HEC-22 GENERIC	N/A	On Sag	1	530.50	535.29	530.50	10.00	3.21	N/A	N/A	N/A	8.50	7.8
17	CB-28	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.00	542.65	537.00	N/A	1.82	1.66	0.16	91.08	8.50	6.0
18	CB-29	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.50	542.86	537.50	N/A	1.60	1.51	0.09	94.26	8.50	5.8
19	CB-30	FHWA HEC-22 GENERIC	N/A	On Grade	1	543.50	547.90	543.50	N/A	1.96	1.74	0.21	89.17	8.50	6.2
20	CB-31	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.50	549.37	544.50	N/A	0.97	0.97	0.00	100.00	8.50	4.1
21	CB-32	FHWA HEC-22 GENERIC	N/A	On Grade	1	546.00	549.87	546.00	N/A	1.12	1.12	0.00	99.80	8.50	5.0
22	CB-33	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.00	547.88	544.00	N/A	2.03	1.79	0.24	88.15	8.50	6.3
23	CB-37	FHWA HEC-22 GENERIC	N/A	On Grade	1	478.50	490.69	478.50	N/A	1.51	1.32	0.19	87.09	8.50	4.8
24	CB-38	FHWA HEC-22 GENERIC	N/A	On Grade	1	494.50	506.87	494.50	N/A	1.93	1.54	0.39	79.95	8.50	5.3
25	CB-40	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.80	515.00	N/A	3.63	2.23	1.40	61.34	8.50	6.1
26	CB-43	FHWA HEC-22 GENERIC	N/A	On Grade	1	484.50	488.57	484.50	N/A	3.00	2.00	0.99	66.83	8.50	6.2
27	CB-44	FHWA HEC-22 GENERIC	N/A	On Grade	1	496.00	507.00	496.00	N/A	2.58	1.84	0.75	71.13	8.50	5.9
28	CB-45	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.64	515.00	N/A	1.52	1.32	0.20	86.92	8.50	4.8

Subbasin Hydrology

Subbasin : Sub-AD-49

Input Data

Area (ac) 4.59
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	4.59	-	0.7
Composite Area & Weighted Runoff Coeff.	4.59		0.7

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)

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.4	0	0
Flow Length (ft) :	299.3	0	0
Slope (%) :	8.53	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	24.81	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	184.58	0	0
Slope (%) :	14.79	0	0
Surface Type :	Woodland	Paved	Paved
Velocity (ft/sec) :	1.92	0	0
Computed Flow Time (min) :	1.6	0	0

Total TOC (min) 26.41

Subbasin : Sub-CB-10

Input Data

Area (ac) 0.54
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.54	-	0.7
Composite Area & Weighted Runoff Coeff.	0.54		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	62.75	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	13.31	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	287	0	0
Slope (%) :	6.16	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.05	0	0
Computed Flow Time (min) :	0.95	0	0

Total TOC (min) 14.26

Subbasin : Sub-CB-11

Input Data

Area (ac) 0.44
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.44	-	0.7
Composite Area & Weighted Runoff Coeff.	0.44		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	87.01933392	0	0
Slope (%) :	4.23334562	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.15	0	0
Computed Flow Time (min) :	9.71	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	144.6117952	0	0
Slope (%) :	9.33800334	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	6.21	0	0
Computed Flow Time (min) :	0.39	0	0

Total TOC (min) 10.10

Subbasin : Sub-CB-12

Input Data

Area (ac) 0.7
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.7	-	0.7
Composite Area & Weighted Runoff Coeff.	0.7		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	72.34441067	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	14.92	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	290.7440621	0	0
Slope (%) :	7.85301046	0	0
Surface Type :	Unpaved	Paved	Paved
Velocity (ft/sec) :	4.52	0	0
Computed Flow Time (min) :	1.07	0	0

Total TOC (min) 15.99

Subbasin : Sub-CB-13

Input Data

Area (ac) 0.37
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.37	-	0.7
Composite Area & Weighted Runoff Coeff.	0.37		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	36.99	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	8.72	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	326.6	0	0
Slope (%) :	3.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.8	0	0
Computed Flow Time (min) :	1.43	0	0

Total TOC (min) 10.16

Subbasin : Sub-CB-14

Input Data

Area (ac) 0.87
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.87	-	0.7
Composite Area & Weighted Runoff Coeff.	0.87		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	133.09	0	0
Slope (%) :	7.48	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	10.86	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	224.63	0	0
Slope (%) :	2.32	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.1	0	0
Computed Flow Time (min) :	1.21	0	0

Total TOC (min) 12.07

Subbasin : Sub-CB-15

Input Data

Area (ac) 1.24
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	1.24	-	0.7
Composite Area & Weighted Runoff Coeff.	1.24		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	129.63	0	0
Slope (%) :	3.84	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.16	0	0
Computed Flow Time (min) :	13.89	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	369.75	0	0
Slope (%) :	4.45	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.29	0	0
Computed Flow Time (min) :	1.44	0	0

Total TOC (min) 15.32

Subbasin : Sub-CB-16

Input Data

Area (ac) 0.3
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.3	-	0.7
Composite Area & Weighted Runoff Coeff.	0.3		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	35.63	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	8.47	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	225.56	0	0
Slope (%) :	4.29	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.21	0	0
Computed Flow Time (min) :	0.89	0	0

Total TOC (min) 9.36

Subbasin : Sub-CB-17

Input Data

Area (ac) 0.25
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.25	-	0.7
Composite Area & Weighted Runoff Coeff.	0.25		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	30.83	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	7.54	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	221.33	0	0
Slope (%) :	4.052	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.09	0	0
Computed Flow Time (min) :	0.9	0	0

Total TOC (min) 8.44

Subbasin : Sub-CB-18

Input Data

Area (ac) 0.76
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.76	-	0.7
Composite Area & Weighted Runoff Coeff.	0.76		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	169.6828048	0	0
Slope (%) :	5.92476783	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	14.48	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	75.81153859	0	0
Slope (%) :	5.8473515	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.92	0	0
Computed Flow Time (min) :	0.26	0	0

Total TOC (min) 14.74

Subbasin : Sub-CB-2

Input Data

Area (ac) 0.15
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.15	-	0.7
Composite Area & Weighted Runoff Coeff.	0.15		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	49.14	0	0
Slope (%) :	3.51	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.12	0	0
Computed Flow Time (min) :	6.63	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	7.8	0	0
Slope (%) :	7.9	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.71	0	0
Computed Flow Time (min) :	0.02	0	0

Total TOC (min) 6.65

Subbasin : Sub-CB-20

Input Data

Area (ac) 0.61
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.61	-	0.7
Composite Area & Weighted Runoff Coeff.	0.61		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	36.97	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	8.72	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	228.24	0	0
Slope (%) :	4.33669128	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.23	0	0
Computed Flow Time (min) :	0.9	0	0

Total TOC (min) 9.62

Subbasin : Sub-CB-21

Input Data

Area (ac) 0.81
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.81	-	0.7
Composite Area & Weighted Runoff Coeff.	0.81		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	225.91	0	0
Slope (%) :	7.69	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.23	0	0
Computed Flow Time (min) :	16.41	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	74	0	0
Slope (%) :	1.44	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.44	0	0
Computed Flow Time (min) :	0.51	0	0

Total TOC (min) 16.91

Subbasin : Sub-CB-22

Input Data

Area (ac) 1.23
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	1.23	-	0.7
Composite Area & Weighted Runoff Coeff.	1.23		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	227.07	0	0
Slope (%) :	5.59	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.2	0	0
Computed Flow Time (min) :	18.71	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	150.89	0	0
Slope (%) :	5.73	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.87	0	0
Computed Flow Time (min) :	0.52	0	0

Total TOC (min) 19.23

Subbasin : Sub-CB-23

Input Data

Area (ac) 0.85
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.85	-	0.7
Composite Area & Weighted Runoff Coeff.	0.85		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	226.71	0	0
Slope (%) :	8.51	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.24	0	0
Computed Flow Time (min) :	15.8	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	75.07	0	0
Slope (%) :	3.73	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.93	0	0
Computed Flow Time (min) :	0.32	0	0

Total TOC (min) 16.12

Subbasin : Sub-CB-25

Input Data

Area (ac) 0.66
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.66	-	0.7
Composite Area & Weighted Runoff Coeff.	0.66		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	36.69	0	0
Slope (%) :	3.98	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.12	0	0
Computed Flow Time (min) :	4.99	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	218	0	0
Slope (%) :	1.9995265	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.87	0	0
Computed Flow Time (min) :	1.26	0	0

Total TOC (min) 6.25

Subbasin : Sub-CB-26

Input Data

Area (ac) 0.41
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.41	-	0.7
Composite Area & Weighted Runoff Coeff.	0.41		0.7

Time of Concentration

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	391.04	0	0
Slope (%) :	2.05	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.91	0	0
Computed Flow Time (min) :	2.24	0	0

Total TOC (min) 2.24

Subbasin : Sub-CB-28

Input Data

Area (ac) 0.35
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.35	-	0.7
Composite Area & Weighted Runoff Coeff.	0.35		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	82.21	0	0
Slope (%) :	1.57	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	13.8	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	96.33	0	0
Slope (%) :	2.66	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.32	0	0
Computed Flow Time (min) :	0.48	0	0

Total TOC (min) 14.28

Subbasin : Sub-CB-29

Input Data

Area (ac) 0.32
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.32	-	0.7
Composite Area & Weighted Runoff Coeff.	0.32		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	79.19359172	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.04	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	145.6546025	0	0
Slope (%) :	3.30814128	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.7	0	0
Computed Flow Time (min) :	0.66	0	0

Total TOC (min) 16.69

Subbasin : Sub-CB-30

Input Data

Area (ac) 0.44
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.44	-	0.7
Composite Area & Weighted Runoff Coeff.	0.44		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	80.06466793	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.18	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	204.4355599	0	0
Slope (%) :	2.37620836	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.13	0	0
Computed Flow Time (min) :	1.09	0	0

Total TOC (min) 17.27

Subbasin : Sub-CB-31

Input Data

Area (ac) 0.28
Weighted Runoff Coefficient 0.5

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.28	-	0.5
Composite Area & Weighted Runoff Coeff.	0.28		0.5

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	61.18415656	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	13.05	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	147.427748	0	0
Slope (%) :	2.48368186	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.2	0	0
Computed Flow Time (min) :	0.77	0	0

Total TOC (min) 13.81

Subbasin : Sub-CB-32

Input Data

Area (ac) 0.24
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.24	-	0.7
Composite Area & Weighted Runoff Coeff.	0.24		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	72.82652581	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	15	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	123.3068858	0	0
Slope (%) :	2.56696146	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.26	0	0
Computed Flow Time (min) :	0.63	0	0

Total TOC (min) 15.63

Subbasin : Sub-CB-33

Input Data

Area (ac) 0.45
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.45	-	0.7
Composite Area & Weighted Runoff Coeff.	0.45		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	74.8476514	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	15.33	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	205.0538871	0	0
Slope (%) :	2.54735015	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.24	0	0
Computed Flow Time (min) :	1.05	0	0

Total TOC (min) 16.38

Subbasin : Sub-CB-37

Input Data

Area (ac) 0.27
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.27	-	0.7
Composite Area & Weighted Runoff Coeff.	0.27		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	70.96	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	14.69	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	204.13	0	0
Slope (%) :	7.95	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.59	0	0

Total TOC (min) 15.28

Subbasin : Sub-CB-38

Input Data

Area (ac) 0.38
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.38	-	0.7
Composite Area & Weighted Runoff Coeff.	0.38		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	56.31288611	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	12.21	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	122.2285539	0	0
Slope (%) :	7.88883657	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.71	0	0
Computed Flow Time (min) :	0.36	0	0

Total TOC (min) 12.57

Subbasin : Sub-CB-40

Input Data

Area (ac) 0.63
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.63	-	0.7
Composite Area & Weighted Runoff Coeff.	0.63		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	82.47168729	0	0
Slope (%) :	4.83233018	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.16	0	0
Computed Flow Time (min) :	8.82	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	225.6819013	0	0
Slope (%) :	7.22299665	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.46	0	0
Computed Flow Time (min) :	0.69	0	0

Total TOC (min) 9.51

Subbasin : Sub-CB-43

Input Data

Area (ac) 0.57
Weighted Runoff Coefficient 0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.57	-	0.7
Composite Area & Weighted Runoff Coeff.	0.57		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	80.44365706	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.24	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	230.963887	0	0
Slope (%) :	7.93293268	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.67	0	0

Total TOC (min) 16.91

Subbasin : Sub-CB-44

Input Data

Area (ac)	0.48
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.48	-	0.7
Composite Area & Weighted Runoff Coeff.	0.48		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	82.23540495	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.08	0	0
Computed Flow Time (min) :	16.53	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	215.6393568	0	0
Slope (%) :	7.93956492	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.63	0	0

Total TOC (min) 17.16

Subbasin : Sub-CB-45

Input Data

Area (ac)	0.24
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.24	-	0.7
Composite Area & Weighted Runoff Coeff.	0.24		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	26.67	0	0
Slope (%) :	0.84	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.06	0	0
Computed Flow Time (min) :	7.2	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	221	0	0
Slope (%) :	7.58	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.6	0	0
Computed Flow Time (min) :	0.66	0	0

Total TOC (min) 7.86

Subbasin : Sub-CB-51

Input Data

Area (ac)	0.76
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.76	-	0.7
Composite Area & Weighted Runoff Coeff.	0.76		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	109.87	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.09	0	0
Computed Flow Time (min) :	20.84	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	284.96	0	0
Slope (%) :	7.93363114	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	5.73	0	0
Computed Flow Time (min) :	0.83	0	0

Total TOC (min) 21.67

Subbasin : Sub-CB-9

Input Data

Area (ac)	0.54
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.54	-	0.7
Composite Area & Weighted Runoff Coeff.	0.54		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	94.51887751	0	0
Slope (%) :	1.1562359	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.09	0	0
Computed Flow Time (min) :	17.43	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	272.2215693	0	0
Slope (%) :	5.96622322	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	4.97	0	0
Computed Flow Time (min) :	0.91	0	0

Total TOC (min) 18.35

Subbasin : Sub-SDPIPE-35

Input Data

Area (ac)	0.16
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	0.16	-	0.7
Composite Area & Weighted Runoff Coeff.	0.16		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	117.01	0	0
Slope (%) :	6.14	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.18	0	0
Computed Flow Time (min) :	10.61	0	0

Total TOC (min) 10.61

Subbasin : Sub-SDPIPE-36

Input Data

Area (ac)	1.73
Weighted Runoff Coefficient	0.7

Runoff Coefficient

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
-	1.73	-	0.7
Composite Area & Weighted Runoff Coeff.	1.73		0.7

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	299.51	0	0
Slope (%) :	6	0	0
2 yr, 24 hr Rainfall (in) :	4.34	0	0
Velocity (ft/sec) :	0.22	0	0
Computed Flow Time (min) :	22.7	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	546	0	0
Slope (%) :	5.3	0	0
Surface Type :	Grassed waterway	Unpaved	Unpaved
Velocity (ft/sec) :	3.45	0	0
Computed Flow Time (min) :	2.64	0	0

Total TOC (min) 25.34

Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Surcharge Elevation (ft)	Surcharge Depth (ft)	Ponded Area (ft^2)	Minimum Pipe Cover (in)
1	AD-49	468.50	472.65	4.15	468.50	0.00	472.65	0.00	10.00	19.85
2	CB-47	471.00	479.32	8.32	471.00	0.00	479.32	0.00	10.00	81.81
3	CB-8	468.50	474.72	6.22	468.50	0.00	474.72	0.00	10.00	50.59
4	JB	462.30	468.30	6.00	462.30	0.00	468.30	0.00	0.00	57.00
5	JB-19	502.00	509.27	7.27	502.00	0.00	509.27	0.00	10.00	63.30
6	JB-24	526.00	535.80	9.80	526.00	0.00	535.80	0.00	10.00	99.54
7	JB-27	534.00	539.80	5.80	534.00	0.00	539.80	0.00	10.00	51.59
8	JB-39	510.00	521.73	11.73	510.00	0.00	521.73	0.00	10.00	74.75
9	JB-4	462.74	473.05	10.31	462.74	0.00	473.05	0.00	10.00	99.76
10	JB-SDPIPE35	462.75	464.00	1.25	462.75	0.00	0.00	-464.00	100.00	0.00
11	JB-SDPIPE36	441.30	442.80	1.50	441.30	0.00	0.00	-442.80	1000.00	0.00
12	8-Jun	538.50	544.50	6.00	538.50	0.00	544.50	0.00	0.00	54.00
13	WIER-6	468.00	472.50	4.50	468.00	0.00	472.50	0.00	10.00	30.00

Junction Results

SN	Element ID	Peak Inflow (cfs)	Peak Lateral Inflow (cfs)	Max HGL Elevation Attained (ft)	Max HGL Depth Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Average HGL Elevation Attained (ft)	Average HGL Depth Attained (ft)	Time of Max HGL Occurrence (days hh:mm)	Oc (days
1	AD-49	30.96	16.97	470.75	2.25	0.00	1.91	468.59	0.09	0 00:19	
2	CB-47	18.44	0.00	475.71	4.71	0.00	3.61	471.05	0.05	0 00:10	
3	CB-8	4.65	0.00	469.21	0.71	0.00	5.51	468.52	0.02	0 00:19	
4	JB	1.42	0.00	462.78	0.48	0.00	5.52	462.32	0.02	0 00:17	
5	JB-19	19.21	0.00	502.63	0.63	0.00	6.65	502.02	0.02	0 00:17	
6	JB-24	8.63	0.00	526.55	0.55	0.00	9.24	526.02	0.02	0 00:07	
7	JB-27	6.53	0.00	534.59	0.59	0.00	5.21	534.02	0.02	0 00:17	
8	JB-39	3.33	0.00	510.36	0.36	0.00	11.37	510.01	0.01	0 00:09	
9	JB-4	0.00	0.00	462.74	0.00	0.00	10.31	462.74	0.00	0 00:00	
10	JB-SDPIPE35	1.42	0.88	463.17	0.42	0.00	1.08	462.76	0.01	0 00:17	
11	JB-SDPIPE36	6.51	6.51	442.52	1.22	0.00	0.28	441.34	0.04	0 00:25	
12	8-Jun	1.95	0.00	539.17	0.67	0.00	5.33	538.52	0.02	0 00:16	
13	WIER-6	0.00	0.00	468.00	0.00	0.00	4.50	468.00	0.00	0 00:00	

Channel Input

SN	Element ID	Length	Inlet Invert Elevation	Inlet Invert Offset	Outlet Invert Elevation	Outlet Invert Offset	Total Drop	Average Slope	Shape	Height	Width	Manning's Roughness	Er
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(%)		(ft)	(ft)		
1	Link-01	151.74	547.90	4.40	542.86	5.36	5.04	3.3200	User-Defined	0.330	14.000	0.0320	
2	Link-02	253.20	542.65	5.65	534.99	5.99	7.66	3.0300	User-Defined	0.330	14.000	0.0320	
3	Link-03	303.55	534.99	5.99	520.24	7.24	14.75	4.8600	User-Defined	0.330	14.000	0.0320	
4	Link-04	302.16	520.24	7.24	513.25	11.25	6.99	2.3100	User-Defined	0.330	14.000	0.0320	
5	Link-06	192.70	508.19	15.19	490.69	9.69	17.50	9.0800	User-Defined	0.330	14.000	0.0320	
6	Link-07	295.35	491.89	6.39	474.00	4.56	17.89	6.0600	User-Defined	0.330	14.000	0.0320	
7	Link-09	172.84	533.32	5.32	517.04	7.04	16.28	9.4200	User-Defined	0.330	14.000	0.0320	
8	Link-10	156.96	517.04	7.04	515.89	7.39	1.15	0.7300	User-Defined	0.330	14.000	0.0320	
9	Link-11	80.56	516.98	7.48	515.89	7.39	1.09	1.3500	User-Defined	0.330	14.000	0.0320	
10	Link-12	172.11	524.64	9.64	516.98	7.48	7.67	4.4500	User-Defined	0.330	14.000	0.0320	
11	Link-13	228.53	524.80	9.80	507.00	11.00	17.80	7.7900	User-Defined	0.330	14.000	0.0320	
12	Link-14	236.24	500.50	4.50	482.00	-2.50	18.50	7.8300	User-Defined	0.330	14.000	0.0320	
13	Link-15	208.04	506.87	12.37	490.69	12.19	16.18	7.7800	User-Defined	0.330	14.000	0.0320	
14	Link-16	218.60	490.69	12.19	474.00	4.90	16.69	7.6400	User-Defined	0.330	14.000	0.0320	
15	Link-17	291.31	488.57	4.07	465.82	3.74	22.75	7.8100	User-Defined	0.330	14.000	0.0320	
16	Link-18	126.47	474.00	4.56	465.77	4.02	8.23	6.5100	User-Defined	0.330	14.000	0.0320	
17	Link-19	176.20	547.88	3.88	542.65	5.65	5.23	2.9700	User-Defined	0.330	14.000	0.0320	
18	Link-20	282.13	490.69	9.69	474.00	4.90	16.70	5.9200	User-Defined	0.330	14.000	0.0320	
19	Link-24	316.29	542.86	5.36	535.29	4.79	7.57	2.3900	User-Defined	0.330	14.000	0.0320	
20	Link-28	204.60	549.87	3.87	0.00	0.00	549.87	268.7500	User-Defined	0.330	14.000	0.0320	
21	Link-38	44.72	465.77	4.02	462.30	0.00	3.47	7.7600	User-Defined	0.330	14.000	0.0320	
22	Link-40	97.13	549.37	4.87	538.50	0.00	10.87	11.1900	User-Defined	0.330	14.000	0.0320	

Channel 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
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)	
1	Link-01	0.20	0 00:17	5.85	0.03	1.57	1.61	0.08	0.23	0.00	
2	Link-02	0.11	0 00:14	5.59	0.02	0.35	12.06	0.12	0.36	0.00	
3	Link-03	1.25	0 00:14	7.51	0.17	1.22	4.15	0.22	0.67	0.00	
4	Link-04	2.74	0 00:15	4.19	0.65	1.39	3.62	0.31	0.93	0.00	
5	Link-06	0.12	0 00:11	9.68	0.01	0.64	5.02	0.09	0.29	0.00	
6	Link-07	1.17	0 00:16	7.90	0.15	0.92	5.35	0.24	0.74	0.00	
7	Link-09	0.10	0 00:09	9.88	0.01	0.67	4.30	0.14	0.42	0.00	
8	Link-10	1.46	0 00:19	2.67	0.55	0.79	3.31	0.30	0.90	0.00	
9	Link-11	0.44	0 00:16	3.74	0.12	0.36	3.73	0.24	0.72	0.00	
10	Link-12	0.19	0 00:08	6.78	0.03	2.75	1.04	0.08	0.24	0.00	
11	Link-13	1.40	0 00:09	8.96	0.16	3.91	0.97	0.13	0.40	0.00	
12	Link-14	0.49	0 00:17	8.97	0.05	1.76	2.24	0.12	0.35	0.00	
13	Link-15	0.36	0 00:13	8.96	0.04	2.78	1.25	0.08	0.23	0.00	
14	Link-16	0.11	0 00:15	8.87	0.01	0.13	28.03	0.19	0.59	0.00	
15	Link-17	0.71	0 00:17	8.97	0.08	1.68	2.89	0.14	0.43	0.00	
16	Link-18	0.00	0 00:00	8.19	0.00	0.00		0.01	0.04	0.00	
17	Link-19	0.24	0 00:16	5.53	0.04	1.49	1.97	0.08	0.25	0.00	
18	Link-20	0.72	0 00:10	7.81	0.09	0.80	5.88	0.22	0.68	0.00	
19	Link-24	0.04	0 00:18	4.97	0.01	0.62	8.50	0.17	0.50	0.00	
20	Link-28	0.02	0 00:15	52.65	0.00	4.51	0.76	0.01	0.04	0.00	
21	Link-38	0.04	0 00:06	8.95	0.00	0.08	9.32	0.18	0.54	0.00	
22	Link-40	0.00	0 00:00	10.74	0.00	0.00		0.17	0.50	0.00	

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)	Mar Roug
1	Link-05	406.55	517.00	3.00	503.00	10.00	14.00	3.4400	CIRCULAR	18.000	18.000	
2	Link-08	30.00	462.75	0.00	462.25	-0.05	0.50	1.6700	CIRCULAR	15.000	15.000	
3	Link-30	30.83	462.08	0.00	462.75	0.00	-0.67	-2.1800	CIRCULAR	18.000	18.000	
4	Link-33	33.60	461.75	0.00	461.00	0.00	0.75	2.2300	CIRCULAR	24.000	24.000	
5	Link-37	0.96	462.30	0.00	462.25	0.00	0.05	5.2100	CIRCULAR	15.000	15.000	
6	Link-39	0.36	538.50	0.00	538.50	0.00	0.00	0.0000	CIRCULAR	18.000	18.000	
7	L-SDPIPE-8	70.00	471.00	0.00	468.00	0.00	3.00	4.2900	CIRCULAR	18.000	18.000	
8	SDPIPE-10	187.03	493.00	0.00	486.75	5.75	6.25	3.3400	CIRCULAR	18.000	18.000	
9	SDPIPE-11	66.59	502.00	0.00	498.50	5.50	3.50	5.2600	CIRCULAR	18.000	18.000	
10	SDPIPE-12	297.35	513.00	0.00	503.00	1.00	10.00	3.3600	CIRCULAR	18.000	18.000	
11	SDPIPE-13	64.00	514.00	0.00	513.00	0.00	1.00	1.5600	CIRCULAR	18.000	18.000	
12	SDPIPE-14	322.00	528.00	0.00	514.00	0.00	14.00	4.3500	CIRCULAR	18.000	18.000	
13	SDPIPE-15	42.43	529.00	0.00	528.00	0.00	1.00	2.3600	CIRCULAR	18.000	18.000	
14	SDPIPE-16	131.65	504.25	0.00	502.00	0.00	2.25	1.7100	CIRCULAR	24.000	24.000	
15	SDPIPE-17	32.94	508.50	0.00	508.00	3.75	0.50	1.5200	CIRCULAR	24.000	24.000	
16	SDPIPE-18	77.00	510.00	0.00	508.50	0.00	1.50	1.9500	CIRCULAR	18.000	18.000	
17	SDPIPE-19	75.59	509.50	0.00	508.50	0.00	1.00	1.3200	CIRCULAR	18.000	18.000	
18	SDPIPE-2	99.00	462.74	0.00	461.75	0.00	0.99	1.0000	CIRCULAR	24.000	24.000	
19	SDPIPE-20	256.11	526.00	0.00	508.50	0.00	17.50	6.8300	CIRCULAR	18.000	18.000	
20	SDPIPE-21	69.87	527.00	0.00	526.00	0.00	1.00	1.4300	CIRCULAR	18.000	18.000	
21	SDPIPE-22	33.08	530.50	0.00	527.00	0.00	3.50	10.5800	CIRCULAR	18.000	18.000	
22	SDPIPE-23	222.35	534.00	0.00	527.00	0.00	7.00	3.1500	CIRCULAR	18.000	18.000	
23	SDPIPE-24	73.59	537.00	0.00	534.00	0.00	3.00	4.0800	CIRCULAR	18.000	18.000	
24	SDPIPE-25	74.63	546.00	0.00	544.50	0.00	1.50	2.0100	CIRCULAR	18.000	18.000	
25	SDPIPE-25 (1)	44.82	537.50	0.00	537.00	0.00	0.50	1.1200	CIRCULAR	18.000	18.000	
26	SDPIPE-25 (12)	42.57	484.50	0.00	484.00	5.50	0.50	1.1700	CIRCULAR	18.000	18.000	
27	SDPIPE-25 (13)	33.23	496.00	0.00	494.50	0.00	1.50	4.5100	CIRCULAR	18.000	18.000	
28	SDPIPE-25 (14)	46.24	515.00	0.00	514.00	4.00	1.00	2.1600	CIRCULAR	18.000	18.000	
29	SDPIPE-25 (15)	248.75	502.00	0.00	468.50	0.00	33.50	13.4700	CIRCULAR	24.000	24.000	
30	SDPIPE-25 (15) (1)	24.21	468.50	0.00	468.25	0.00	0.25	1.0300	CIRCULAR	30.000	30.000	
31	SDPIPE-25 (17)	32.91	462.08	0.00	461.75	0.00	0.33	1.0000	CIRCULAR	18.000	18.000	
32	SDPIPE-25 (2)	150.25	543.50	0.00	537.50	0.00	6.00	3.9900	CIRCULAR	18.000	18.000	
33	SDPIPE-25 (3)	33.25	544.00	0.00	543.50	0.00	0.50	1.5000	CIRCULAR	18.000	18.000	
34	SDPIPE-25 (6)	87.00	478.50	0.00	472.00	0.00	6.50	7.4700	CIRCULAR	18.000	18.000	
35	SDPIPE-25 (7)	201.54	494.50	0.00	485.00	6.50	9.50	4.7100	CIRCULAR	18.000	18.000	
36	SDPIPE-25 (8)	196.25	510.00	0.00	498.00	3.50	12.00	6.1100	CIRCULAR	18.000	18.000	
37	SDPIPE-25 (9)	51.51	515.00	0.00	514.00	4.00	1.00	1.9400	CIRCULAR	18.000	18.000	
38	SDPIPE-32	95.98	544.50	0.00	538.50	0.00	6.00	6.2500	CIRCULAR	18.000	18.000	
39	SDPIPE-36	30.02	441.30	0.00	441.00	0.00	0.30	1.0000	CIRCULAR	18.000	18.000	
40	SDPIPE-4	112.76	468.00	0.00	462.74	0.00	5.26	4.6600	CIRCULAR	24.000	24.000	
41	SDPIPE-5	41.13	468.50	0.00	468.00	0.00	0.50	1.2200	CIRCULAR	24.000	24.000	
42	SDPIPE-6	55.12	469.10	0.00	468.50	0.00	0.60	1.0900	CIRCULAR	24.000	24.000	
43	SDPIPE-7	33.11	469.43	0.00	469.10	0.00	0.33	1.0100	CIRCULAR	24.000	24.000	
44	SDPIPE-8 (1)	127.57	481.00	0.00	471.00	0.00	10.00	7.8400	CIRCULAR	18.000	18.000	
45	SDPIPE-9	35.93	485.50	0.00	483.00	2.00	2.50	6.9600	CIRCULAR	18.000	18.000	

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 Ti Surcharg
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(m
1	Link-05	0.13	0 00:11	15.32	0.01	3.41	1.99	0.08	0.06	0.
2	Link-08	1.41	0 00:17	8.57	0.16	3.58	0.14	0.45	0.36	0.
3	Link-30	1.24	0 00:21	28.73	0.04	5.12	0.10	0.29	0.20	0.
4	Link-33	2.45	0 00:17	29.29	0.08	5.06	0.11	0.42	0.21	0.
5	Link-37	1.39	0 00:17	15.97	0.09	4.65	0.00	0.37	0.29	0.
6	Link-39	1.84	0 00:16	5.54	0.33	2.85	0.00	0.59	0.39	0.
7	L-SDPIPE-8	18.44	0 00:13	18.85	0.98	11.00	0.11	1.35	0.90	0.
8	SDPIPE-10	15.20	0 00:13	20.80	0.73	11.70	0.27	1.03	0.69	0.
9	SDPIPE-11	13.85	0 00:14	24.08	0.58	11.84	0.09	0.94	0.63	0.
10	SDPIPE-12	7.82	0 00:14	20.87	0.37	10.53	0.47	0.66	0.44	0.
11	SDPIPE-13	4.50	0 00:10	13.13	0.34	5.78	0.18	0.68	0.46	0.
12	SDPIPE-14	3.04	0 00:09	21.90	0.14	5.74	0.93	0.55	0.36	0.
13	SDPIPE-15	2.43	0 00:14	16.13	0.15	6.11	0.12	0.42	0.28	0.
14	SDPIPE-16	19.21	0 00:17	32.04	0.60	11.15	0.20	1.08	0.54	0.
15	SDPIPE-17	18.60	0 00:18	30.19	0.62	7.82	0.07	1.42	0.71	0.
16	SDPIPE-18	3.71	0 00:19	15.88	0.23	3.70	0.35	1.00	0.66	0.
17	SDPIPE-19	3.34	0 00:16	13.09	0.26	3.02	0.42	1.13	0.75	0.
18	SDPIPE-2	0.00	0 00:00	22.62	0.00	0.00		0.23	0.11	0.
19	SDPIPE-20	8.62	0 00:07	29.75	0.29	7.70	0.55	1.00	0.67	0.
20	SDPIPE-21	8.63	0 00:07	13.61	0.63	8.35	0.14	0.85	0.57	0.
21	SDPIPE-22	1.77	0 00:07	34.17	0.05	2.29	0.24	0.69	0.46	0.
22	SDPIPE-23	6.52	0 00:17	20.19	0.32	6.95	0.53	0.79	0.52	0.
23	SDPIPE-24	6.53	0 00:17	21.21	0.31	9.31	0.13	0.63	0.42	0.
24	SDPIPE-25	1.10	0 00:15	14.89	0.07	4.69	0.27	0.29	0.19	0.
25	SDPIPE-25 (1)	4.99	0 00:17	11.09	0.45	5.50	0.14	0.77	0.51	0.
26	SDPIPE-25 (12)	2.28	0 00:17	11.38	0.20	4.48	0.16	0.50	0.33	0.
27	SDPIPE-25 (13)	2.34	0 00:09	22.32	0.10	5.96	0.09	0.47	0.32	0.
28	SDPIPE-25 (14)	1.31	0 00:08	15.45	0.08	4.91	0.16	0.31	0.21	0.
29	SDPIPE-25 (15)	19.21	0 00:17	89.94	0.21	8.78	0.47	1.31	0.66	0.
30	SDPIPE-25 (15) (1)	30.96	0 00:19	45.15	0.69	7.80	0.05	1.88	0.75	0.
31	SDPIPE-25 (17)	2.45	0 00:17	10.50	0.23	4.48	0.12	0.52	0.35	0.
32	SDPIPE-25 (2)	3.46	0 00:16	22.74	0.15	4.91	0.51	0.63	0.42	0.
33	SDPIPE-25 (3)	1.78	0 00:16	12.88	0.14	4.39	0.13	0.42	0.28	0.
34	SDPIPE-25 (6)	9.43	0 00:10	31.10	0.30	13.72	0.11	0.62	0.41	0.
35	SDPIPE-25 (7)	6.95	0 00:10	24.71	0.28	11.42	0.29	0.56	0.38	0.
36	SDPIPE-25 (8)	3.33	0 00:09	28.14	0.12	10.35	0.32	0.36	0.24	0.
37	SDPIPE-25 (9)	2.22	0 00:09	14.64	0.15	5.41	0.16	0.42	0.28	0.
38	SDPIPE-32	1.95	0 00:14	26.26	0.07	5.14	0.31	0.47	0.31	0.
39	SDPIPE-36	6.50	0 00:25	9.10	0.71	4.79	0.10	1.08	0.72	0.
40	SDPIPE-4	0.00	0 00:00	48.86	0.00	0.00		0.00	0.00	0.
41	SDPIPE-5	4.65	0 00:19	27.02	0.17	5.43	0.13	0.63	0.32	0.
42	SDPIPE-6	4.65	0 00:19	25.54	0.18	4.66	0.20	0.71	0.35	0.
43	SDPIPE-7	3.24	0 00:16	22.70	0.14	3.55	0.16	0.68	0.34	0.
44	SDPIPE-8 (1)	18.44	0 00:13	31.86	0.58	11.91	0.18	1.23	0.82	0.

Inlet Input

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)
1	CB-10	FHWA HEC-22 GENERIC	N/A	On Sag	1	469.43	474.00	4.56	469.43	0.00
2	CB-11	FHWA HEC-22 GENERIC	N/A	On Grade	1	481.00	490.69	9.69	481.00	0.00
3	CB-12	FHWA HEC-22 GENERIC	N/A	On Grade	1	485.50	491.89	6.39	485.50	0.00
4	CB-13	FHWA HEC-22 GENERIC	N/A	On Grade	1	493.00	508.19	15.19	493.00	0.00
5	CB-14	FHWA HEC-22 GENERIC	N/A	On Sag	1	502.00	513.25	11.25	502.00	0.00
6	CB-15	FHWA HEC-22 GENERIC	N/A	On Grade	1	513.00	518.39	5.39	513.00	0.00
7	CB-16	FHWA HEC-22 GENERIC	N/A	On Grade	1	514.00	519.70	5.70	514.00	0.00
8	CB-17	FHWA HEC-22 GENERIC	N/A	On Grade	1	528.00	533.32	5.32	528.00	0.00
9	CB-18	FHWA HEC-22 GENERIC	N/A	On Grade	1	529.00	534.99	5.99	529.00	0.00
10	CB-2	FHWA HEC-22 GENERIC	N/A	On Grade	1	461.75	465.77	4.02	461.75	0.00
11	CB-20	FHWA HEC-22 GENERIC	N/A	On Sag	1	504.25	515.89	11.64	504.25	0.00
12	CB-21	FHWA HEC-22 GENERIC	N/A	On Sag	1	508.50	515.89	7.39	508.50	0.00
13	CB-22	FHWA HEC-22 GENERIC	N/A	On Grade	1	510.00	516.97	6.97	510.00	0.00
14	CB-23	FHWA HEC-22 GENERIC	N/A	On Grade	1	509.50	516.98	7.48	509.50	0.00
15	CB-25	FHWA HEC-22 GENERIC	N/A	On Sag	1	527.00	535.29	8.29	527.00	0.00
16	CB-26	FHWA HEC-22 GENERIC	N/A	On Sag	1	530.50	535.29	4.79	530.50	0.00
17	CB-28	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.00	542.65	5.65	537.00	0.00
18	CB-29	FHWA HEC-22 GENERIC	N/A	On Grade	1	537.50	542.86	5.36	537.50	0.00
19	CB-30	FHWA HEC-22 GENERIC	N/A	On Grade	1	543.50	547.90	4.40	543.50	0.00
20	CB-31	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.50	549.37	4.87	544.50	0.00
21	CB-32	FHWA HEC-22 GENERIC	N/A	On Grade	1	546.00	549.87	3.87	546.00	0.00
22	CB-33	FHWA HEC-22 GENERIC	N/A	On Grade	1	544.00	547.88	3.88	544.00	0.00
23	CB-37	FHWA HEC-22 GENERIC	N/A	On Grade	1	478.50	490.69	12.19	478.50	0.00
24	CB-38	FHWA HEC-22 GENERIC	N/A	On Grade	1	494.50	506.87	12.37	494.50	0.00
25	CB-40	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.80	9.80	515.00	0.00
26	CB-43	FHWA HEC-22 GENERIC	N/A	On Grade	1	484.50	488.57	4.07	484.50	0.00
27	CB-44	FHWA HEC-22 GENERIC	N/A	On Grade	1	496.00	507.00	11.00	496.00	0.00
28	CB-45	FHWA HEC-22 GENERIC	N/A	On Grade	1	515.00	524.64	9.64	515.00	0.00
29	CB-51	FHWA HEC-22 GENERIC	N/A	On Grade	1	462.08	465.82	3.74	462.08	0.00
30	CB-9	FHWA HEC-22 GENERIC	N/A	On Sag	1	469.10	474.00	4.90	469.10	0.00

Roadway & Gutter Input

SN	Element ID	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (in)	Allowable Spread (ft)
1	CB-10	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
2	CB-11	0.0935	0.0254	0.0150	0.0200	1.00	0.1312	8.50
3	CB-12	0.0935	0.0254	0.0150	0.0200	1.00	0.1312	8.50
4	CB-13	0.0232	0.0254	0.0150	0.0200	1.00	0.1312	8.50
5	CB-14	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
6	CB-15	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
7	CB-16	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
8	CB-17	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
9	CB-18	0.0591	0.0254	0.0150	0.0200	1.00	0.1312	8.50
10	CB-2	0.0788	0.0254	0.0150	0.0200	1.00	0.1312	8.50
11	CB-20	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
12	CB-21	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
13	CB-22	0.0780	0.0254	0.0150	0.0200	1.00	0.1312	8.50
14	CB-23	0.0381	0.0254	0.0150	0.0200	1.00	0.1312	8.50
15	CB-25	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
16	CB-26	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50
17	CB-28	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
18	CB-29	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
19	CB-30	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
20	CB-31	0.0351	0.0254	0.0150	0.0200	1.00	0.1312	8.50
21	CB-32	0.0351	0.0254	0.0150	0.0200	1.00	0.1312	8.50
22	CB-33	0.0336	0.0254	0.0150	0.0200	1.00	0.1312	8.50
23	CB-37	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
24	CB-38	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
25	CB-40	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
26	CB-43	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
27	CB-44	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
28	CB-45	0.0794	0.0254	0.0150	0.0200	1.00	0.1312	8.50
29	CB-51	0.0788	0.0254	0.0150	0.0200	1.00	0.1312	8.50
30	CB-9	N/A	0.0254	0.0150	0.0200	1.00	0.1312	8.50

Inlet Results

SN	Element ID	Peak Flow (cfs)	Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Max Depth Occurrence (days hh:mm)	T Floo Volu (ac
1	CB-10	3.54	2.58	N/A	N/A	N/A	8.84	474.39	0.39	0 00:17	0
2	CB-11	2.56	2.48	1.78	0.78	69.65	5.70	490.83	0.14	0 00:13	0
3	CB-12	3.19	3.19	2.02	1.17	63.20	6.20	492.04	0.15	0 00:16	0
4	CB-13	2.20	2.08	1.98	0.22	89.89	6.99	508.36	0.17	0 00:13	0
5	CB-14	6.25	4.50	N/A	N/A	N/A	12.25	513.73	0.48	0 00:14	0
6	CB-15	6.90	5.74	3.29	3.60	47.77	8.98	518.61	0.22	0 00:14	0
7	CB-16	1.75	1.75	1.51	0.24	86.23	5.38	519.83	0.13	0 00:09	0
8	CB-17	1.53	1.53	1.38	0.15	89.89	5.14	533.44	0.13	0 00:09	0
9	CB-18	3.69	3.58	2.37	1.32	64.19	7.10	535.17	0.17	0 00:14	0
10	CB-2	1.03	1.03	0.99	0.03	96.61	4.21	465.87	0.10	0 00:17	0
11	CB-20	3.51	3.51	N/A	N/A	N/A	8.34	516.26	0.38	0 00:17	0
12	CB-21	5.10	3.60	N/A	N/A	N/A	10.69	516.32	0.44	0 00:18	0
13	CB-22	5.19	5.18	3.72	1.47	71.65	7.66	517.16	0.19	0 00:19	0
14	CB-23	3.85	3.85	3.41	0.44	88.55	7.85	517.17	0.19	0 00:18	0
15	CB-25	4.66	4.66	N/A	N/A	N/A	10.06	535.71	0.42	0 00:07	0
16	CB-26	3.21	3.21	N/A	N/A	N/A	7.86	535.66	0.37	0 00:07	0
17	CB-28	1.82	1.67	1.66	0.16	91.08	6.08	542.80	0.15	0 00:17	0
18	CB-29	1.60	1.43	1.51	0.09	94.26	5.81	543.00	0.14	0 00:17	0
19	CB-30	1.96	1.96	1.74	0.21	89.17	6.25	548.06	0.15	0 00:16	0
20	CB-31	0.97	0.97	0.97	0.00	100.00	4.77	549.48	0.12	0 00:14	0
21	CB-32	1.12	1.12	1.12	0.00	99.80	5.03	549.99	0.12	0 00:15	0
22	CB-33	2.03	2.03	1.79	0.24	88.15	6.35	548.03	0.16	0 00:16	0
23	CB-37	1.51	1.26	1.32	0.19	87.09	4.84	490.81	0.12	0 00:10	0
24	CB-38	1.93	1.93	1.54	0.39	79.95	5.30	507.00	0.13	0 00:10	0
25	CB-40	3.63	3.63	2.23	1.40	61.34	6.70	524.97	0.16	0 00:09	0
26	CB-43	3.00	2.53	2.00	0.99	66.83	6.24	488.72	0.15	0 00:17	0
27	CB-44	2.58	2.12	1.84	0.75	71.13	5.92	507.14	0.15	0 00:09	0
28	CB-45	1.52	1.52	1.32	0.20	86.92	4.85	524.76	0.12	0 00:08	0
29	CB-51	3.39	3.05	2.15	1.24	63.40	6.53	465.98	0.16	0 00:17	0
30	CB-9	2.39	2.32	N/A	N/A	N/A	8.80	474.39	0.39	0 00:19	0

Detention Pond Outlet Schematics

Pond No. 1 : Hilltop Detention Pond

Pond Designer

Report | Help

Estimate Storage > Create Pond > **Add Outlet Structures**

Table | Structure | Plan / Profile | Stage vs. Q | Stage vs. Drain Time | Trial Route | Help

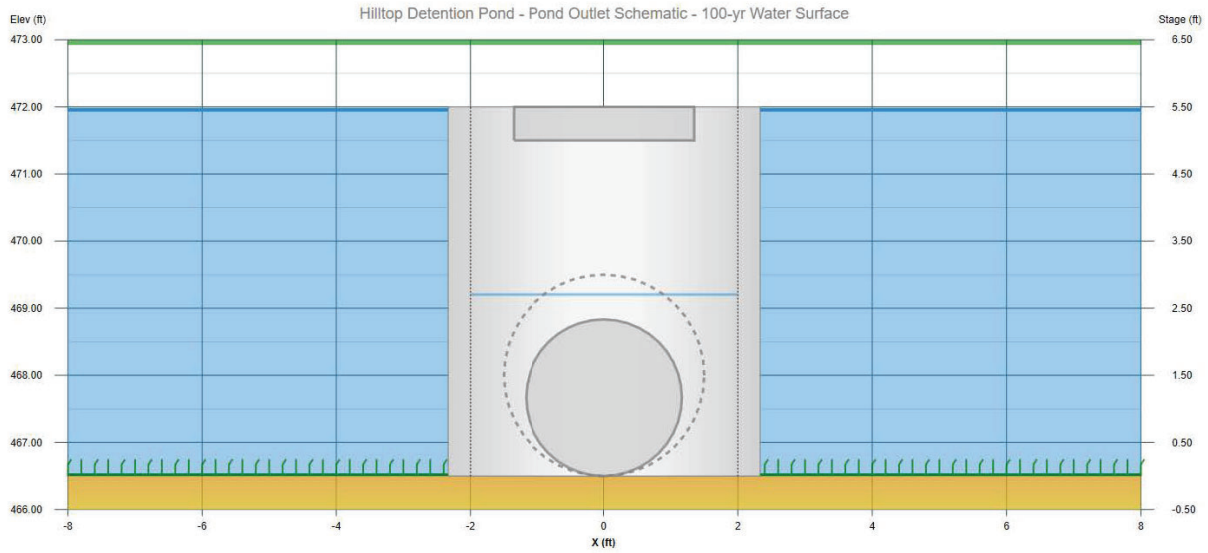
Target Qs | Struct HG | Ext Det | Flow Path

Culvert	Riser	Orifice	Weir
Exfiltration	User	Perf Riser	Tailwater

Primary Culvert	Input
Outlet Structure =	Culvert
Shape =	Circular
Diameter (in) =	36
No. Barrels =	1
Invert Elev. (ft) =	466.50
Orifice Coeff. (Co) =	0.6
Length (ft) =	113.00
Barrel Slope (%) =	4.66
N-Value (n) =	0.013
Restrictor (optional)	None
Active =	☑

Auto | Add/Update

Freq (Yr)	Q Targ (cfs)	Q Act (cfs)	Max Ele (ft)	Max Stor (cuft)
2	23.14	22.88	469.66	34,545
10	31.02	28.55	470.64	48,637
25	35.65	31.55	471.22	57,532
50	38.98	33.90	471.63	64,167
100	42.33	37.69	471.98	69,992



Click on a structure to select. Double-click to resize.

Numerical Output

Detention Pond Storage Estimate

Pond Designer

Report | Help

Estimate Storage* > Create Pond > Add Outlet Structures

1-Yr | 2-Yr | 3-Yr | 5-Yr | 10-Yr | 25-Yr | 50-Yr | 100-Yr

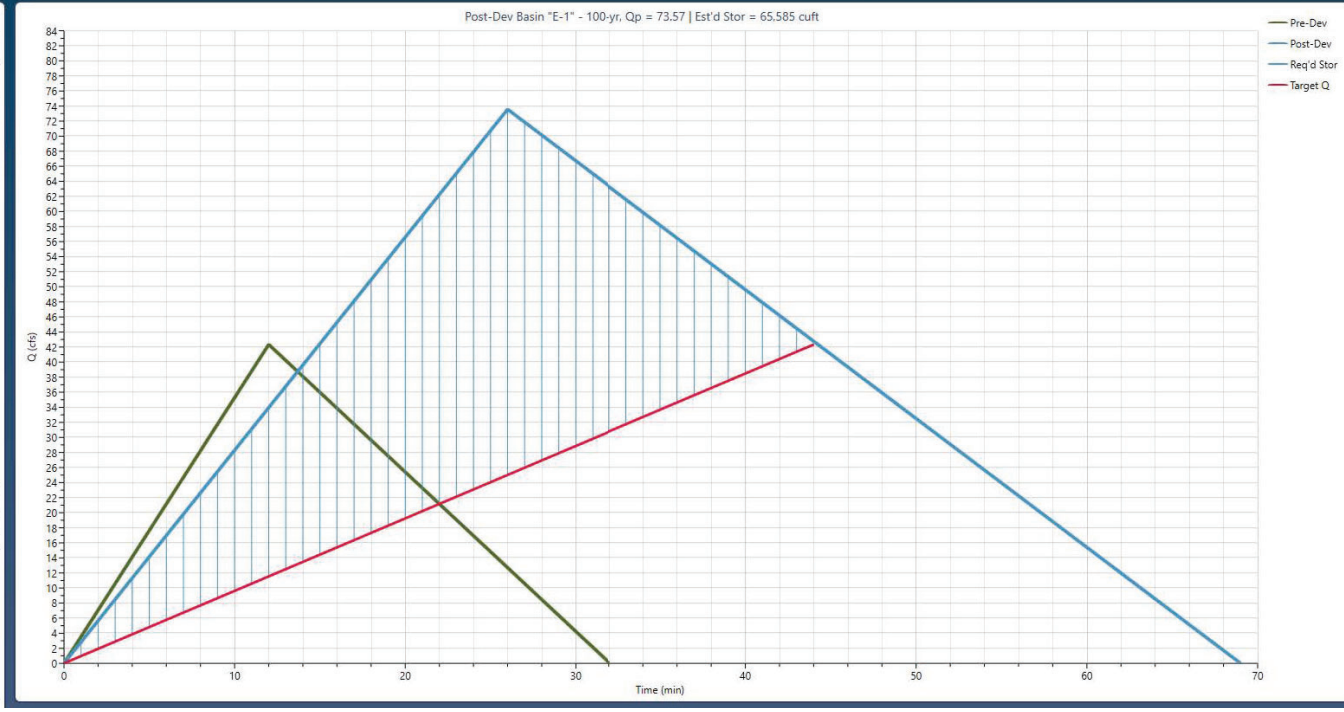
Post-dev Hyd = 13 - Rational - Post-Dev Basin "E-1"

Pre-dev Hyd = 5 - Rational - Pre-Dev Basin "E-1"

Freq (Yr)	Vol Pre (cuft)	Vol Post (cuft)	Qp Post (cfs)	Q Targ (cfs)	Req Stor (cuft)
1					
2	22,242	83,525	40.11	23.14	35,625
3					
5					
10	29,819	112,236	53.89	31.02	48,025
25	34,268	129,045	61.96	35.65	55,250
50	37,472	141,251	67.82	38.98	60,562
100	40,692	153,208	73.57	42.33	65,585

Clear | Estimate Storage

	Extended Detention Storage (optional)	
Zone	Description	Volume (cuft)
1	WQv	
2	CPv	
3	Custom	
4	Custom	

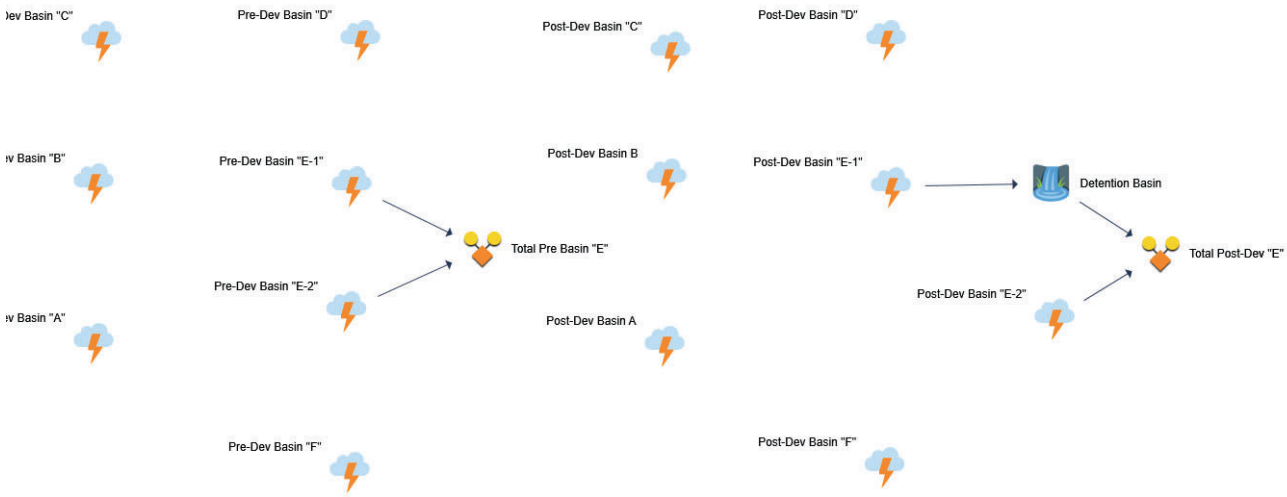


Pre and Post Development Hydrographs (Hydrology Studio)

Basin Model

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026



Hydrograph by Return Period

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	Rational	Pre-Dev Basin "A"		8.527			11.43	13.13	14.36	15.60
2	Rational	Pre-Dev Basin "B"		28.63			38.41	44.15	48.29	52.42
3	Rational	Pre-Dev Basin "C"		16.17			21.67	24.90	27.23	29.57
4	Rational	Pre-Dev Basin "D"		7.322			9.804	11.26	12.31	13.38
5	Rational	Pre-Dev Basin "E-1"		23.14			31.02	35.65	38.98	42.33
6	Rational	Pre-Dev Basin "E-2"		39.29			52.69	60.55	66.22	71.90
7	Junction	Total Pre Basin "E"		61.27			82.16	94.42	103.3	112.1
8	Rational	Pre-Dev Basin "F"		24.68			33.12	38.07	41.64	45.20
9	Rational	Post-Dev Basin A		8.085			10.85	12.47	13.64	14.80
10	Rational	Post-Dev Basin B		22.11			29.69	34.13	37.35	40.52
11	Rational	Post-Dev Basin "C"		16.54			22.16	25.47	27.85	30.24
12	Rational	Post-Dev Basin "D"		7.200			9.641	11.08	12.11	13.15
13	Rational	Post-Dev Basin "E-1"		40.11			53.89	61.96	67.82	73.57
14	Pond Route	Detention Basin		22.88			28.55	31.55	33.90	37.69
15	Rational	Post-Dev Basin "E-2"		35.39			47.46	54.55	59.65	64.77
16	Junction	Total Post-Dev "E"		38.95			52.67	60.76	66.71	72.60
17	Rational	Post-Dev Basin "F"		23.59			31.65	36.38	39.79	43.19

Hydrograph 2-yr Summary

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	Rational	Pre-Dev Basin "A"	8.527	0.18	7,513	----		
2	Rational	Pre-Dev Basin "B"	28.63	0.25	34,400	----		
3	Rational	Pre-Dev Basin "C"	16.17	0.18	14,247	----		
4	Rational	Pre-Dev Basin "D"	7.322	0.13	4,692	----		
5	Rational	Pre-Dev Basin "E-1"	23.14	0.20	22,242	----		
6	Rational	Pre-Dev Basin "E-2"	39.29	0.22	40,914	----		
7	Junction	Total Pre Basin "E"	61.27	0.22	62,291	5, 6		
8	Rational	Pre-Dev Basin "F"	24.68	0.28	33,601	----		
9	Rational	Post-Dev Basin A	8.085	0.25	9,714	----		
10	Rational	Post-Dev Basin B	22.11	0.35	37,188	----		
11	Rational	Post-Dev Basin "C"	16.54	0.18	14,570	----		
12	Rational	Post-Dev Basin "D"	7.200	0.13	4,614	----		
13	Rational	Post-Dev Basin "E-1"	40.11	0.43	83,525	----		
14	Pond Route	Detention Basin	22.88	0.73	82,999	13	469.66	34,545
15	Rational	Post-Dev Basin "E-2"	35.39	0.22	36,857	----		
16	Junction	Total Post-Dev "E"	38.95	0.22	119,102	14, 15		
17	Rational	Post-Dev Basin "F"	23.59	0.27	30,229	----		

Hydrograph Report

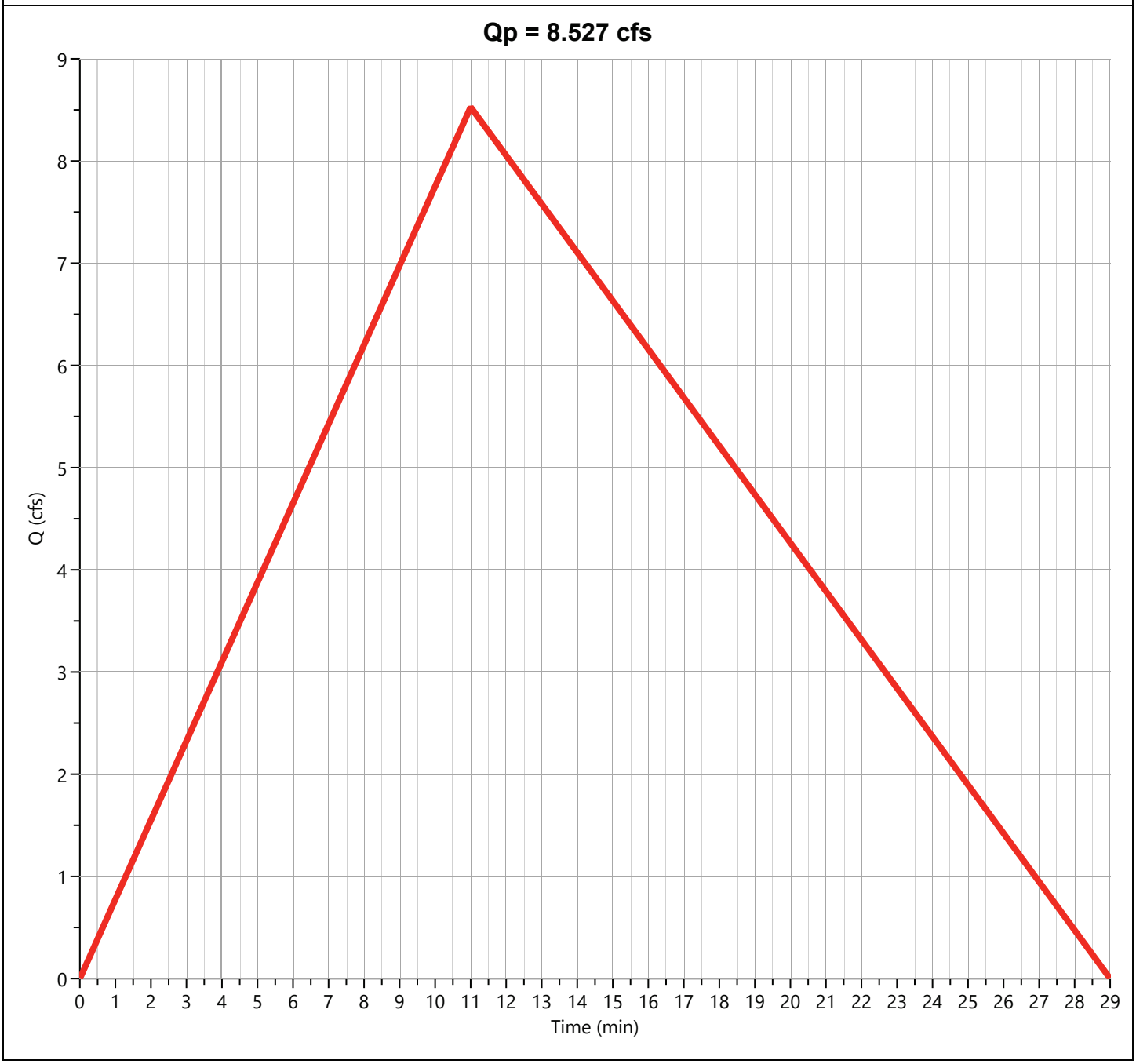
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "A"

Hyd. No. 1

Hydrograph Type	= Rational	Peak Flow	= 8.527 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 7,513 cuft
Drainage Area	= 3.2 ac	Runoff Coeff.	= 0.62
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.30 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Pre-Dev Basin "A"
Rational

Hyd. No. 1

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	6			
Travel Time (min)	**9.43**	**0.00**	**0.00**	**9.43**
Shallow Concentrated Flow				
Flow Length (ft)	509			
Watercourse Slope (%)	8.35	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	4.66			
Travel Time (min)	**1.82**	**0.00**	**0.00**	**1.82**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**11 min**

Hydrograph Report

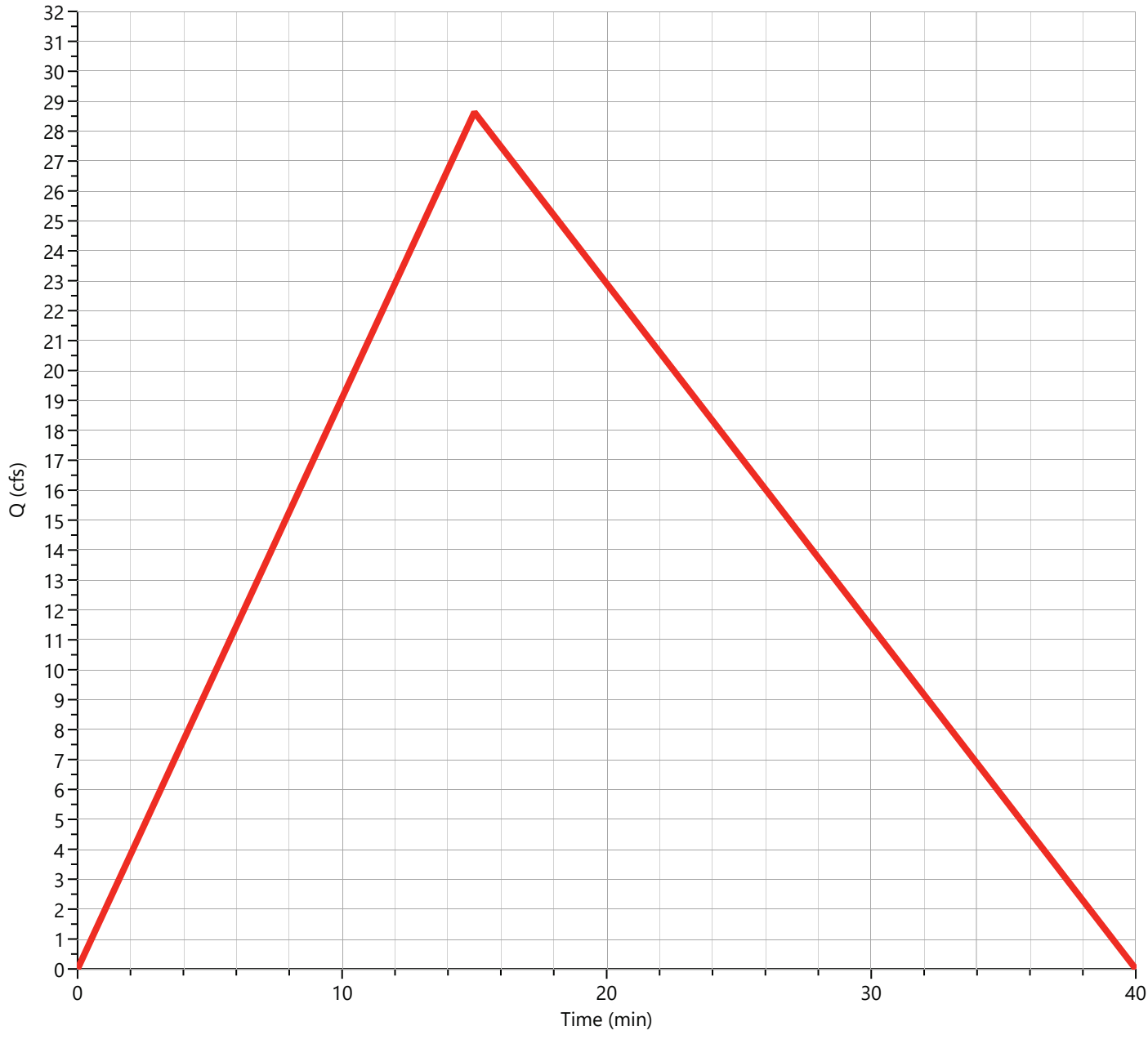
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "B"

Hyd. No. 2

Hydrograph Type	= Rational	Peak Flow	= 28.63 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 34,400 cuft
Drainage Area	= 14.74 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.74 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Pre-Dev Basin "B"
Rational

Hyd. No. 2

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	4			
Travel Time (min)	**11.09**	**0.00**	**0.00**	**11.09**
Shallow Concentrated Flow				
Flow Length (ft)	926			
Watercourse Slope (%)	5.90	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	3.92			
Travel Time (min)	**3.94**	**0.00**	**0.00**	**3.94**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**15 min**

Hydrograph Report

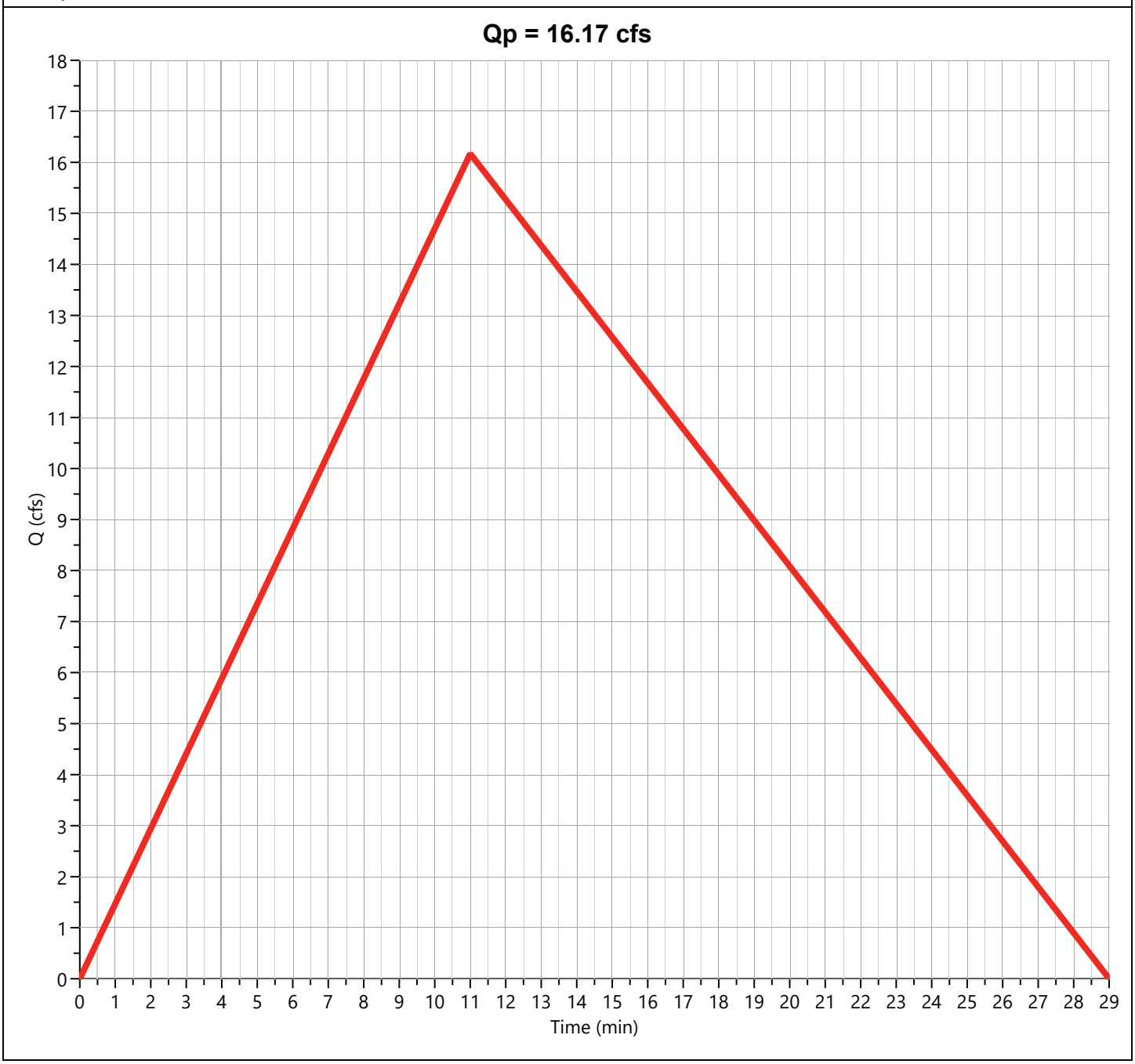
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "C"

Hyd. No. 3

Hydrograph Type	= Rational	Peak Flow	= 16.17 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 14,247 cuft
Drainage Area	= 6.84 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.30 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Pre-Dev Basin "C"
Rational

Hyd. No. 3

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	8			
Travel Time (min)	**8.40**	**0.00**	**0.00**	**8.40**
Shallow Concentrated Flow				
Flow Length (ft)	654	71		
Watercourse Slope (%)	5.68	6.20	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	3.85	5.06		
Travel Time (min)	**2.83**	**0.23**	**0.00**	**3.07**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**11 min**

Hydrograph Report

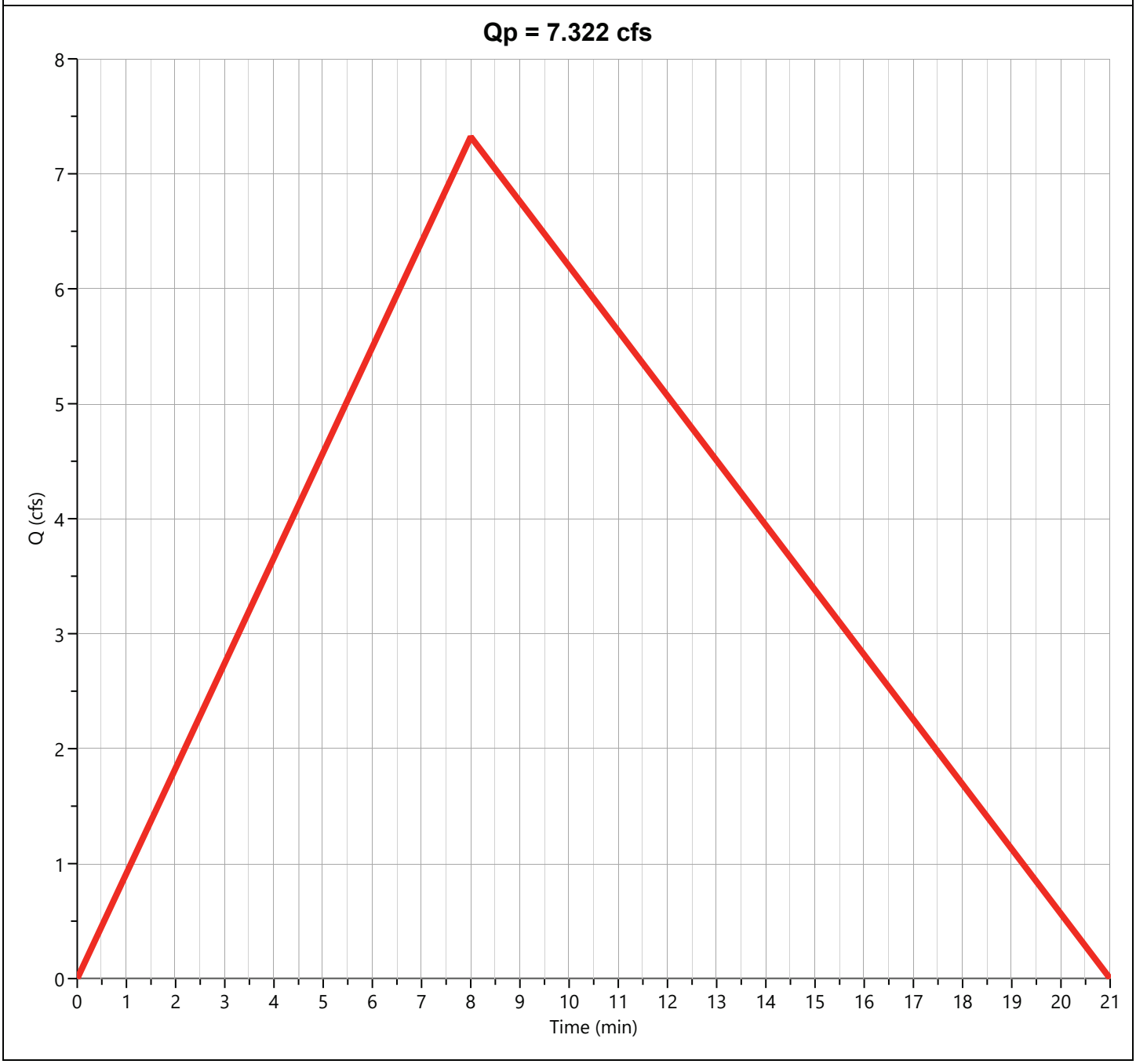
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "D"

Hyd. No. 4

Hydrograph Type	= Rational	Peak Flow	= 7.322 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 4,692 cuft
Drainage Area	= 2.95 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.96 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Pre-Dev Basin "D"
Rational

Hyd. No. 4

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	14			
Travel Time (min)	**6.72**	**0.00**	**0.00**	**6.72**
Shallow Concentrated Flow				
Flow Length (ft)	554			
Watercourse Slope (%)	11.00	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	5.35			
Travel Time (min)	**1.73**	**0.00**	**0.00**	**1.73**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**8 min**

Hydrograph Report

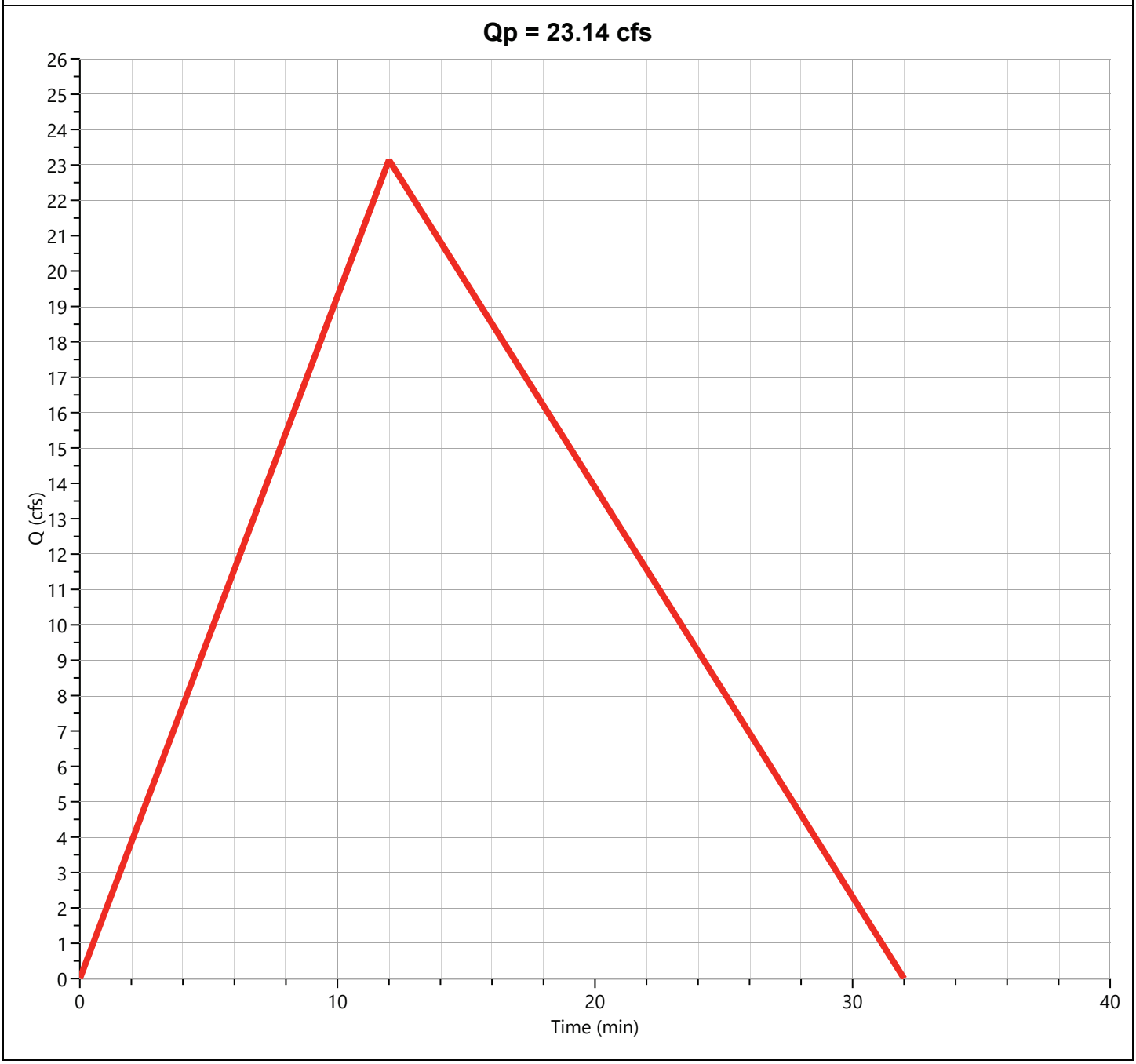
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-1"

Hyd. No. 5

Hydrograph Type	= Rational	Peak Flow	= 23.14 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 22,242 cuft
Drainage Area	= 11.2 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.13 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Pre-Dev Basin "E-1"
Rational

Hyd. No. 5

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	5			
Travel Time (min)	**10.14**	**0.00**	**0.00**	**10.14**
Shallow Concentrated Flow				
Flow Length (ft)	565			
Watercourse Slope (%)	13.00	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	5.82			
Travel Time (min)	**1.62**	**0.00**	**0.00**	**1.62**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**12 min**

Hydrograph Report

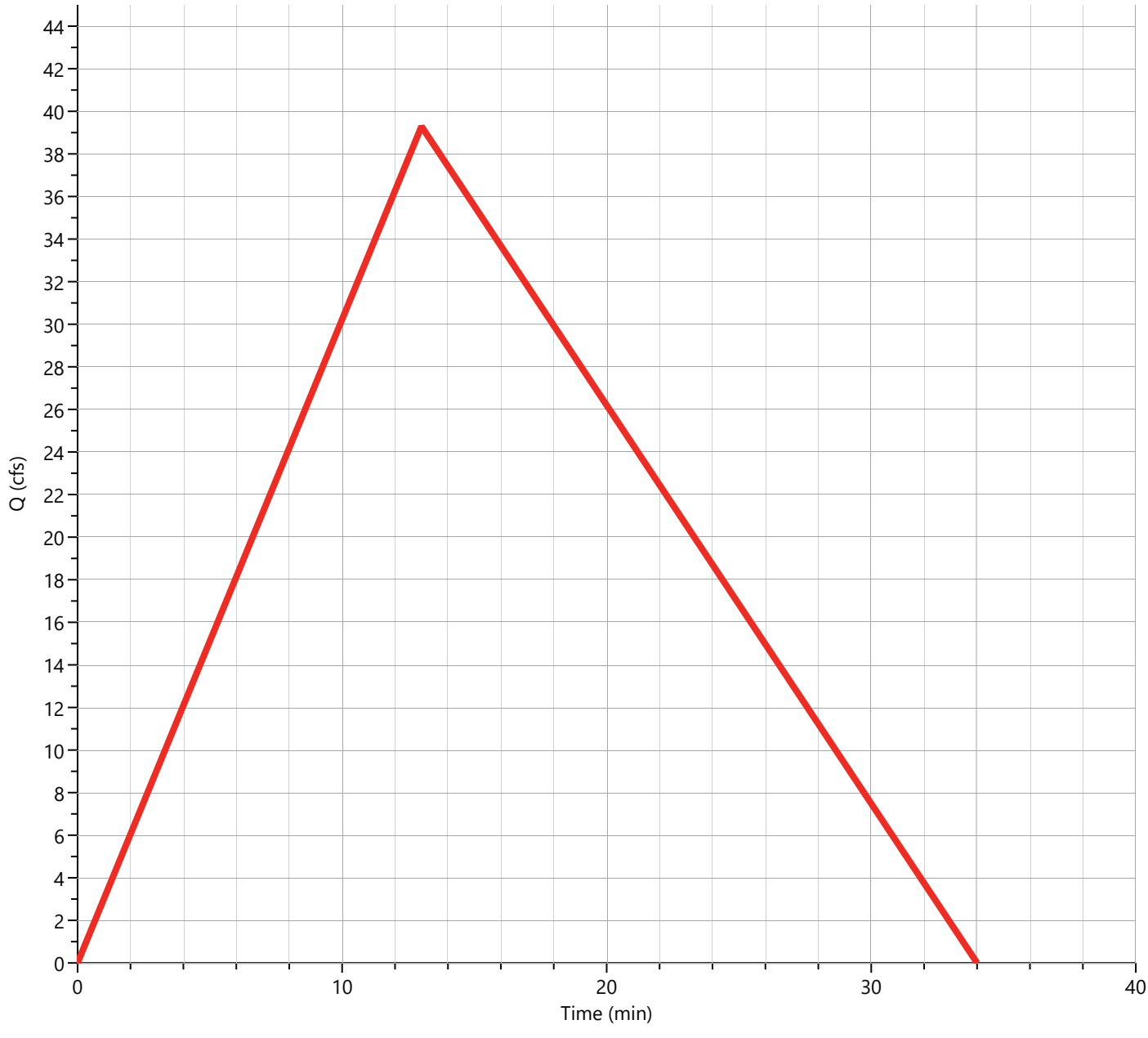
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-2"

Hyd. No. 6

Hydrograph Type	= Rational	Peak Flow	= 39.29 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 40,914 cuft
Drainage Area	= 18.96 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.99 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Pre-Dev Basin "E-2"
Rational

Hyd. No. 6

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	7.25			
Travel Time (min)	**8.74**	**0.00**	**0.00**	**8.74**
Shallow Concentrated Flow				
Flow Length (ft)	1070			
Watercourse Slope (%)	6.23	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	4.03			
Travel Time (min)	**4.43**	**0.00**	**0.00**	**4.43**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**13 min**

Hydrograph Report

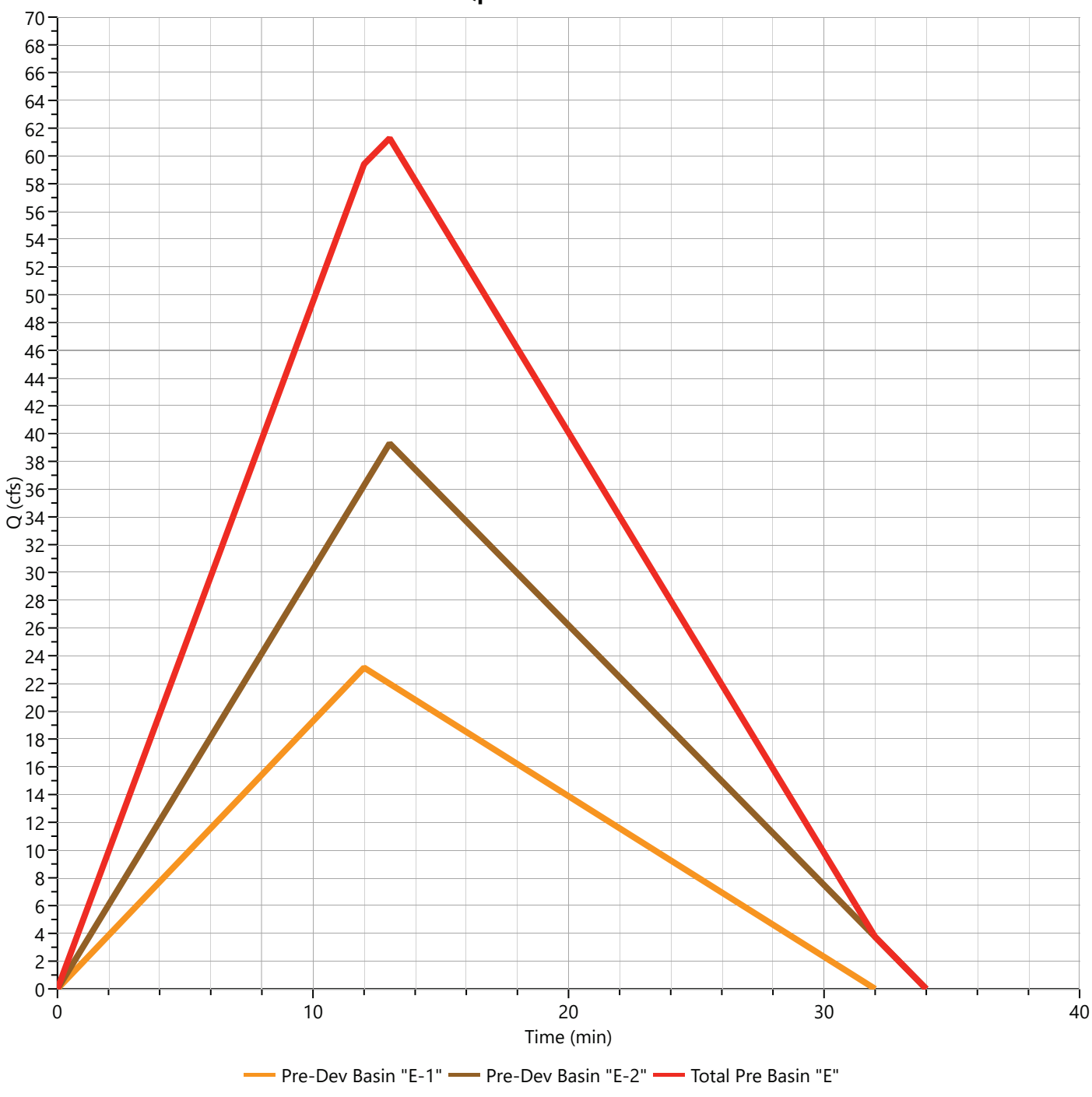
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Pre Basin "E"

Hyd. No. 7

Hydrograph Type	= Junction	Peak Flow	= 61.27 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 62,291 cuft
Inflow Hydrographs	= 5, 6	Total Contrib. Area	= 30.16 ac



Hydrograph Report

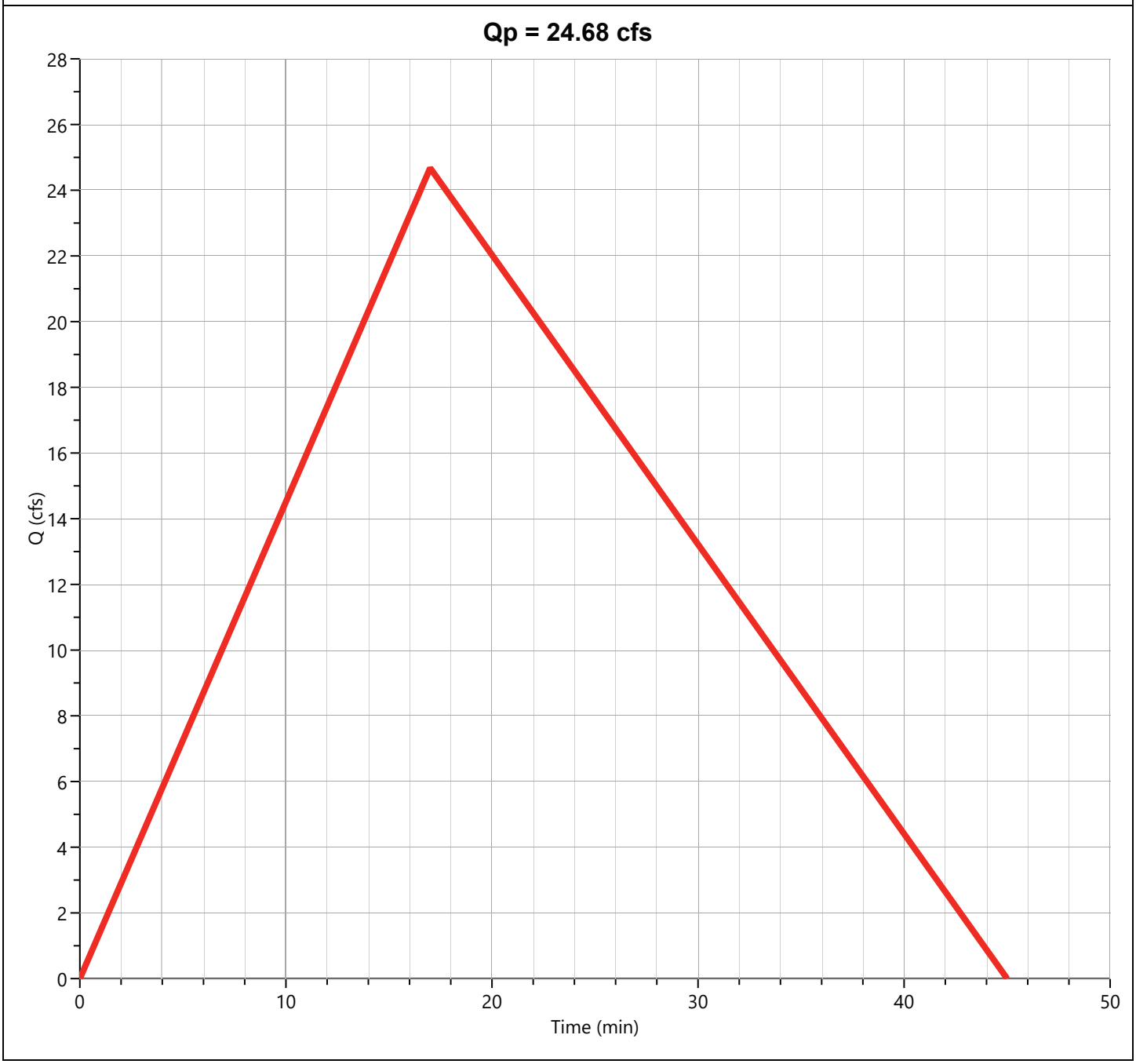
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "F"

Hyd. No. 8

Hydrograph Type	= Rational	Peak Flow	= 24.68 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 33,601 cuft
Drainage Area	= 13.19 ac	Runoff Coeff.	= 0.53
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.53 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Pre-Dev Basin "F"
Rational

Hyd. No. 8

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	5			
Travel Time (min)	**10.14**	**0.00**	**0.00**	**10.14**
Shallow Concentrated Flow				
Flow Length (ft)	1477			
Watercourse Slope (%)	4.90	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	3.57			
Travel Time (min)	**6.89**	**0.00**	**0.00**	**6.89**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**17 min**

Hydrograph Report

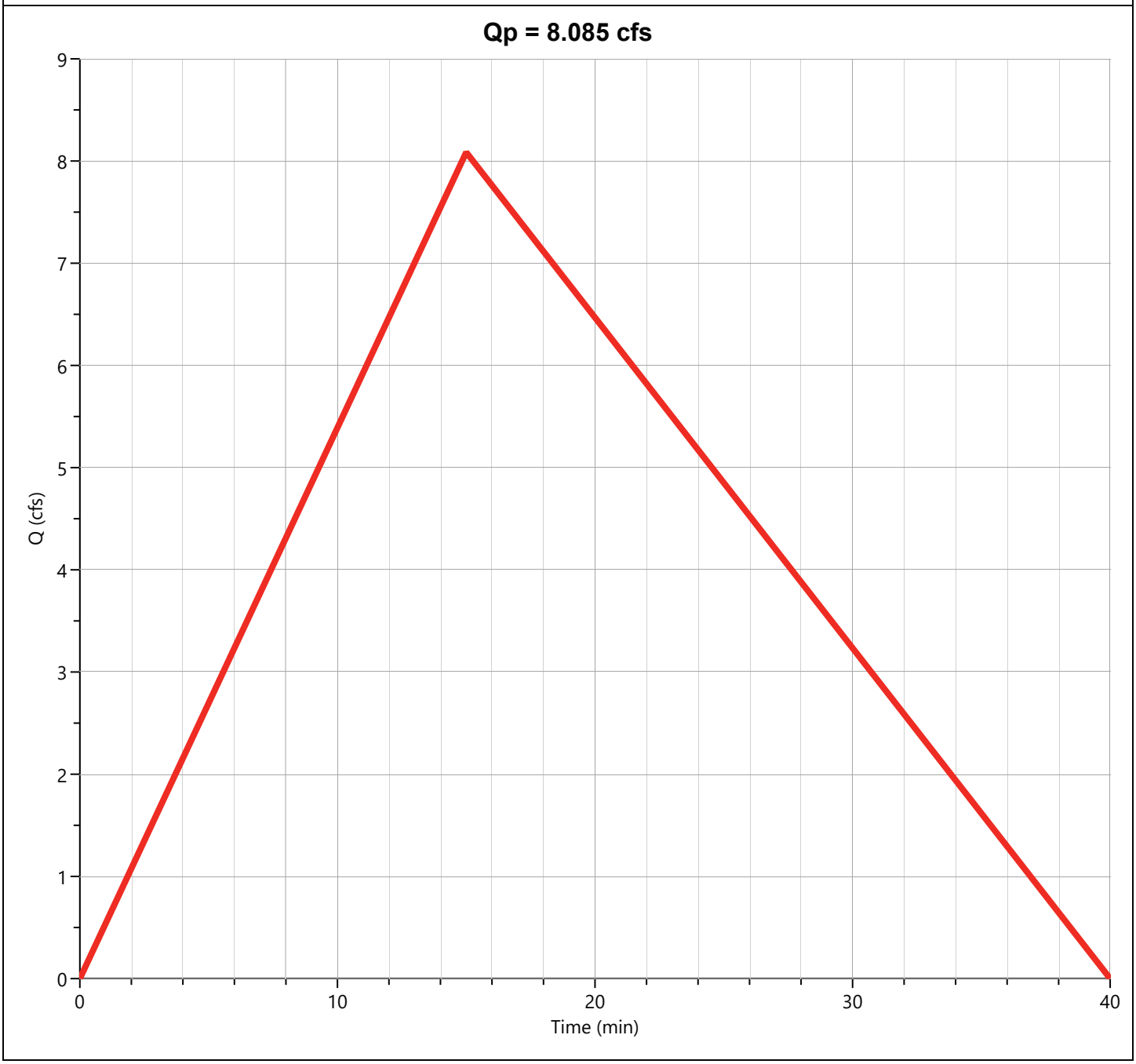
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin A

Hyd. No. 9

Hydrograph Type	= Rational	Peak Flow	= 8.085 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 9,714 cuft
Drainage Area	= 3.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.74 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Post-Dev Basin A
Rational

Hyd. No. 9

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	2.5			
Travel Time (min)	**13.38**	**0.00**	**0.00**	**13.38**
Shallow Concentrated Flow				
Flow Length (ft)	519			
Watercourse Slope (%)	7.80	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	4.51			
Travel Time (min)	**1.92**	**0.00**	**0.00**	**1.92**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**15 min**

Hydrograph Report

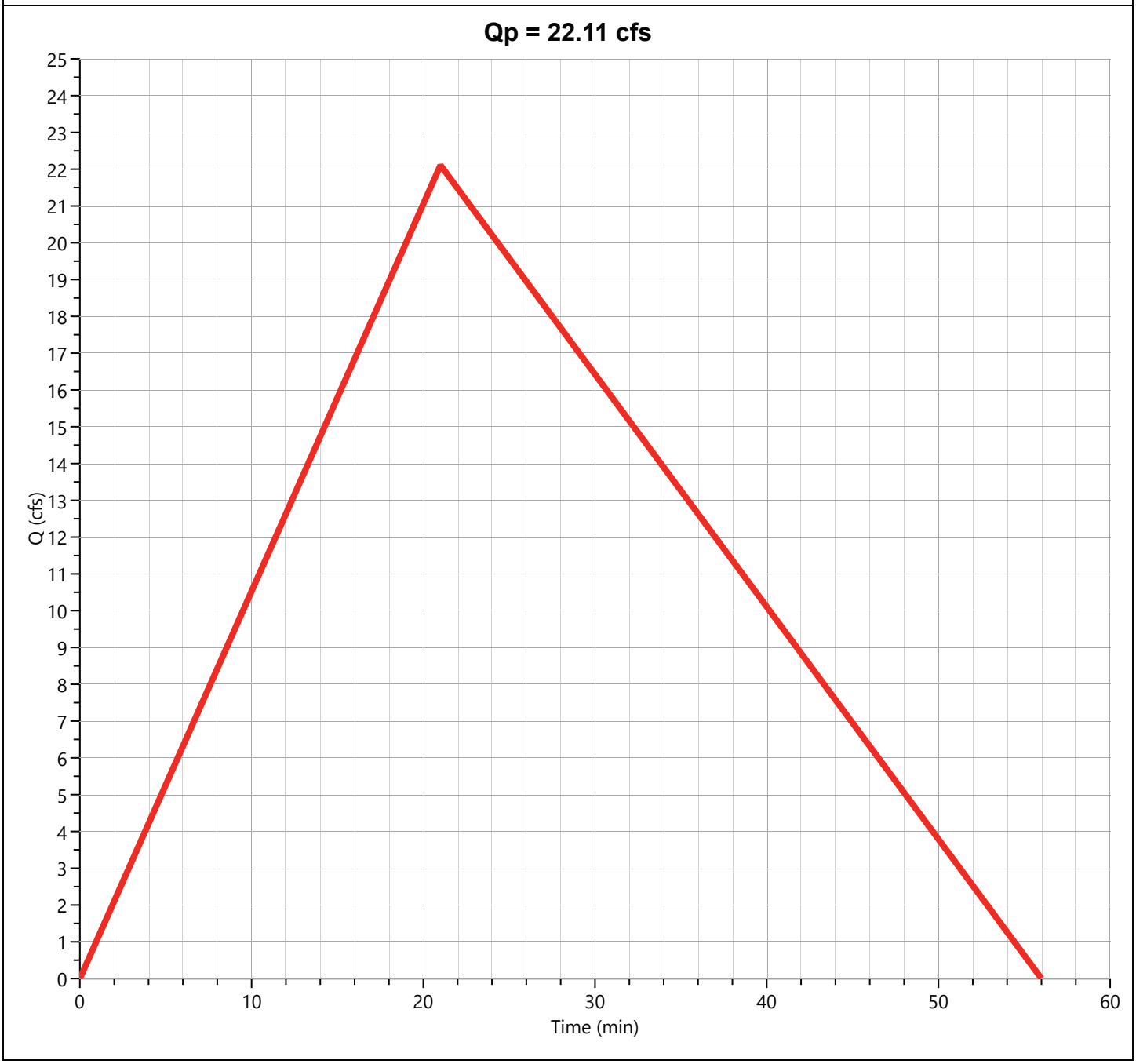
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin B

Hyd. No. 10

Hydrograph Type	= Rational	Peak Flow	= 22.11 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.35 hrs
Time Interval	= 1 min	Runoff Volume	= 37,188 cuft
Drainage Area	= 12.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 21.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.21 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Post-Dev Basin B
Rational

Hyd. No. 10

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	1.5			
Travel Time (min)	**16.42**	**0.00**	**0.00**	**16.42**
Shallow Concentrated Flow				
Flow Length (ft)	1025			
Watercourse Slope (%)	5.00	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	3.61			
Travel Time (min)	**4.73**	**0.00**	**0.00**	**4.73**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**21 min**

Hydrograph Report

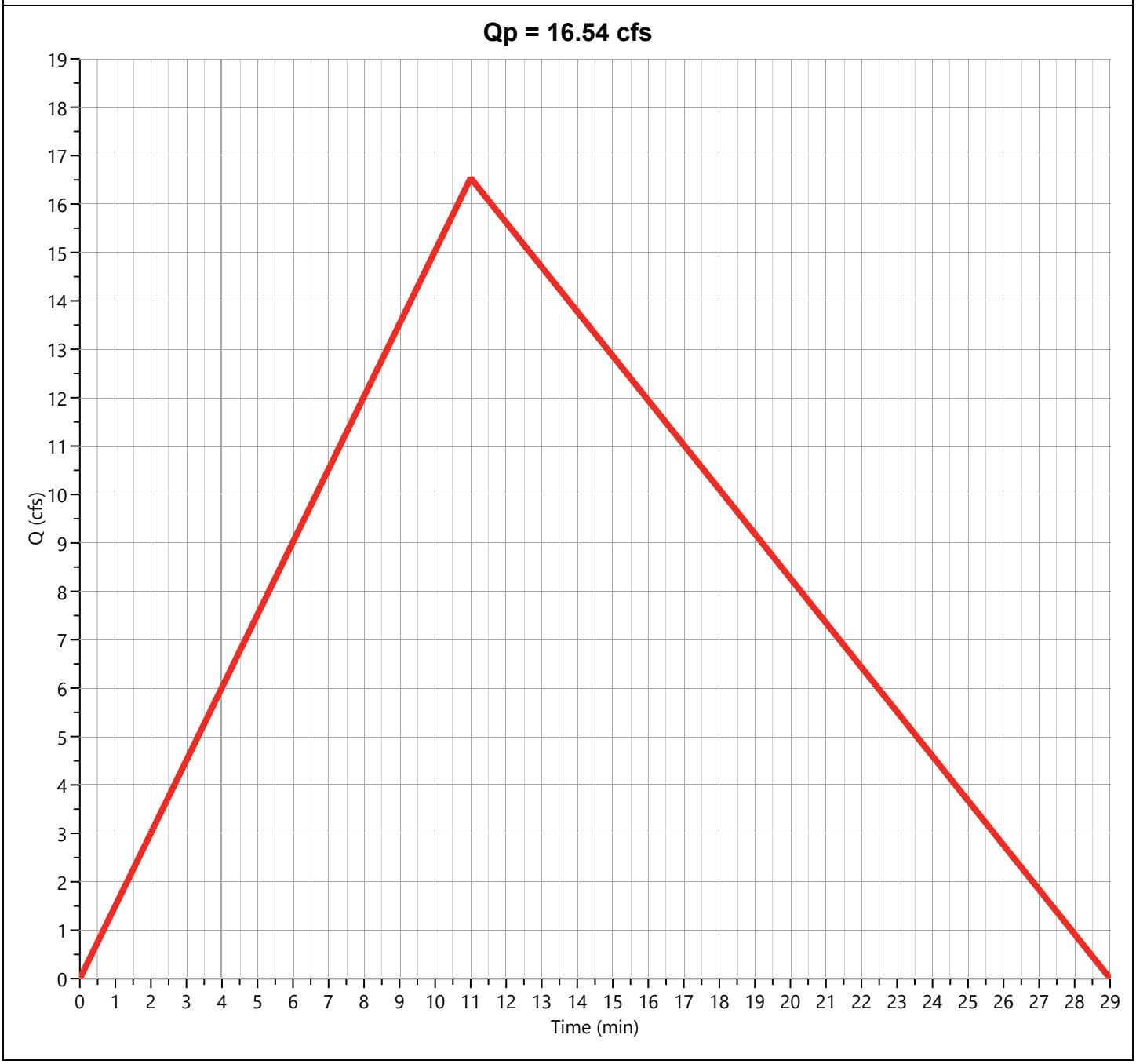
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "C"

Hyd. No. 11

Hydrograph Type	= Rational	Peak Flow	= 16.54 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 14,570 cuft
Drainage Area	= 6.75 ac	Runoff Coeff.	= 0.57
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.30 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Post-Dev Basin "C"
Rational

Hyd. No. 11

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	8			
Travel Time (min)	**8.40**	**0.00**	**0.00**	**8.40**
Shallow Concentrated Flow				
Flow Length (ft)	654			
Watercourse Slope (%)	5.68	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	3.85			
Travel Time (min)	**2.83**	**0.00**	**0.00**	**2.83**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**11 min**

Hydrograph Report

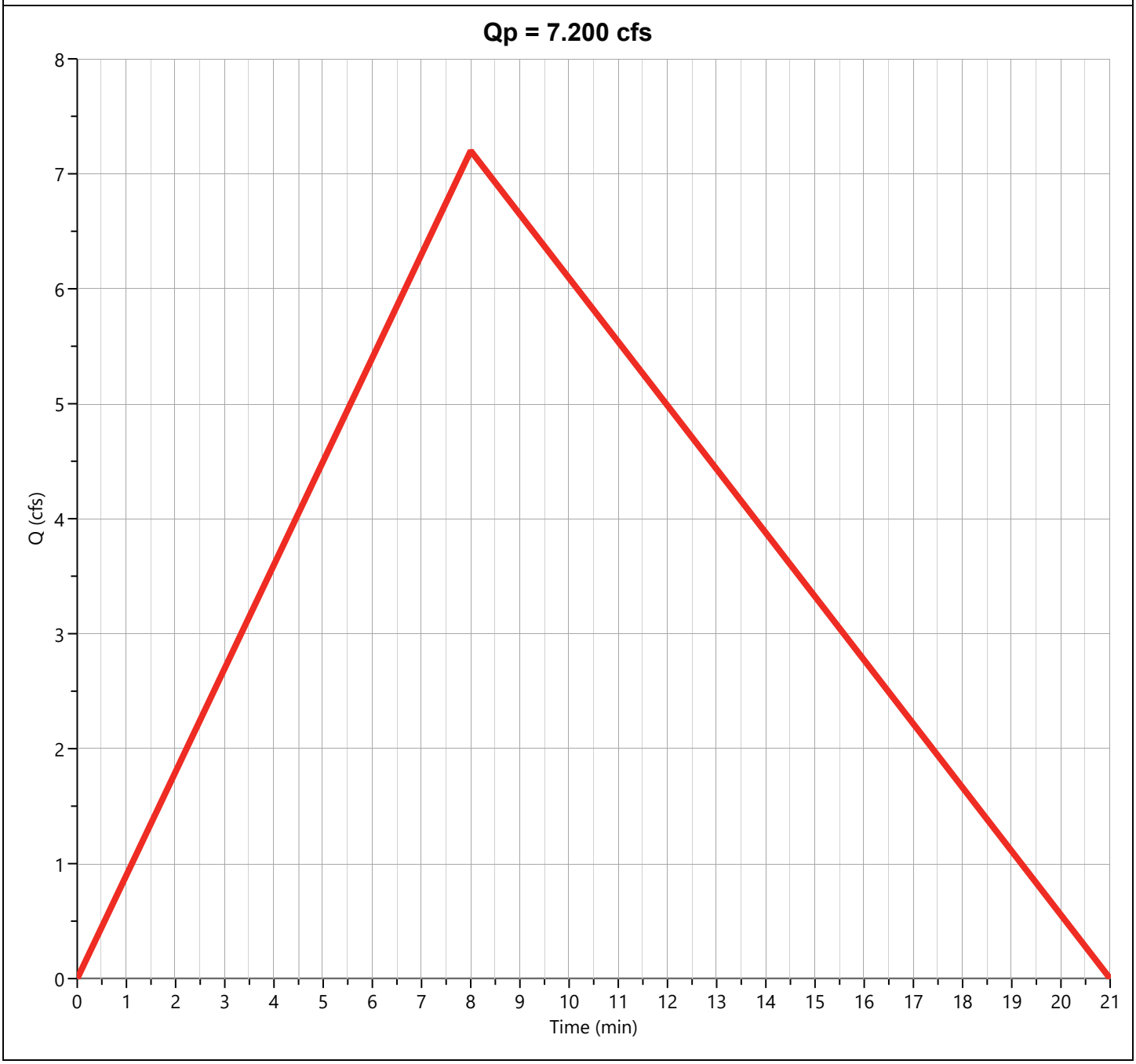
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "D"

Hyd. No. 12

Hydrograph Type	= Rational	Peak Flow	= 7.200 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 4,614 cuft
Drainage Area	= 2.59 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.96 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Post-Dev Basin "D"
Rational

Hyd. No. 12

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	14.2			
Travel Time (min)	**6.68**	**0.00**	**0.00**	**6.68**
Shallow Concentrated Flow				
Flow Length (ft)	554			
Watercourse Slope (%)	11.00	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	5.35			
Travel Time (min)	**1.73**	**0.00**	**0.00**	**1.73**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**8 min**

Hydrograph Report

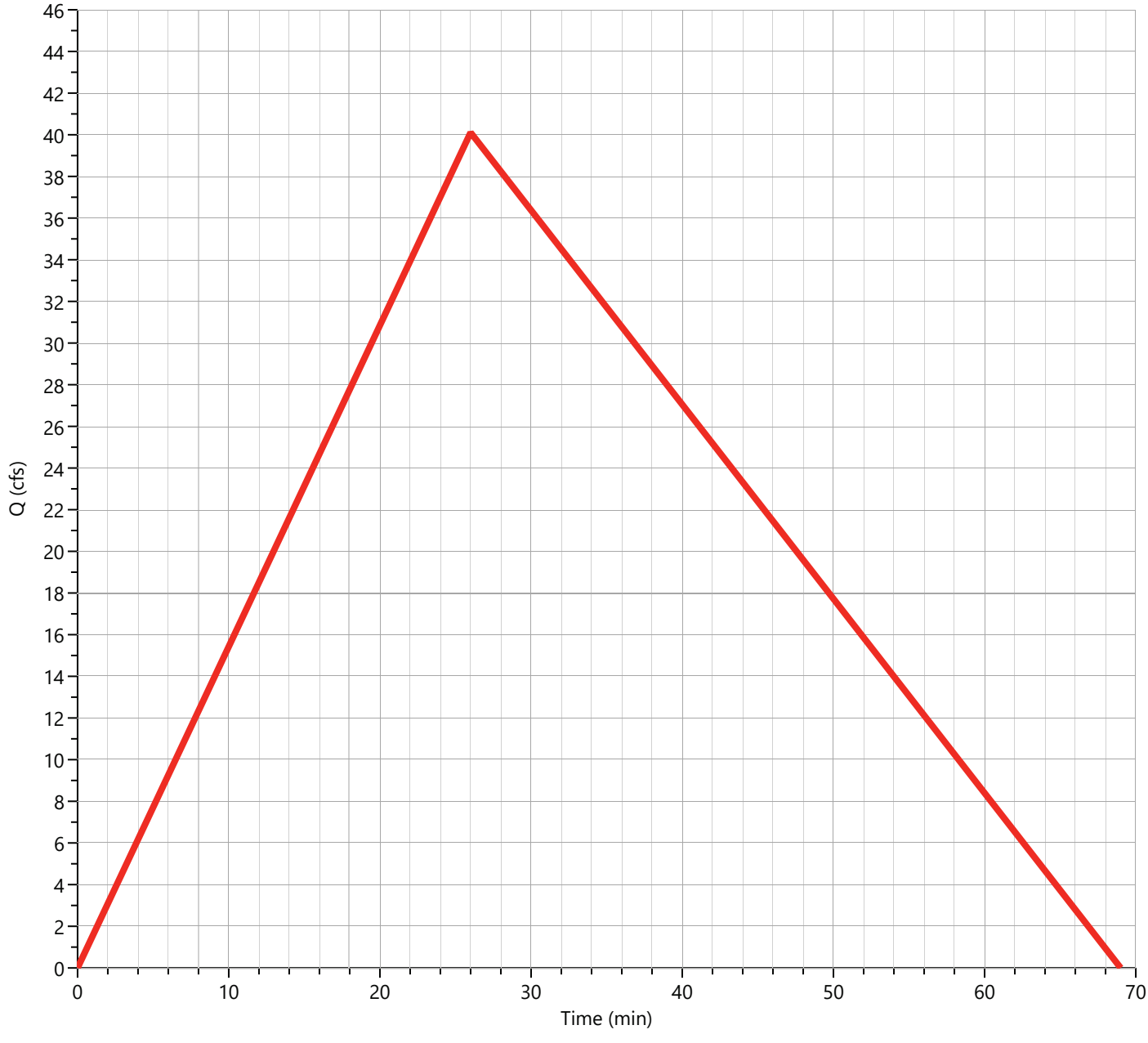
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-1"

Hyd. No. 13

Hydrograph Type	= Rational	Peak Flow	= 40.11 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.43 hrs
Time Interval	= 1 min	Runoff Volume	= 83,525 cuft
Drainage Area	= 18.36 ac	Runoff Coeff.	= 0.75
Tc Method	= User	Time of Conc. (Tc)	= 26.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 2.91 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

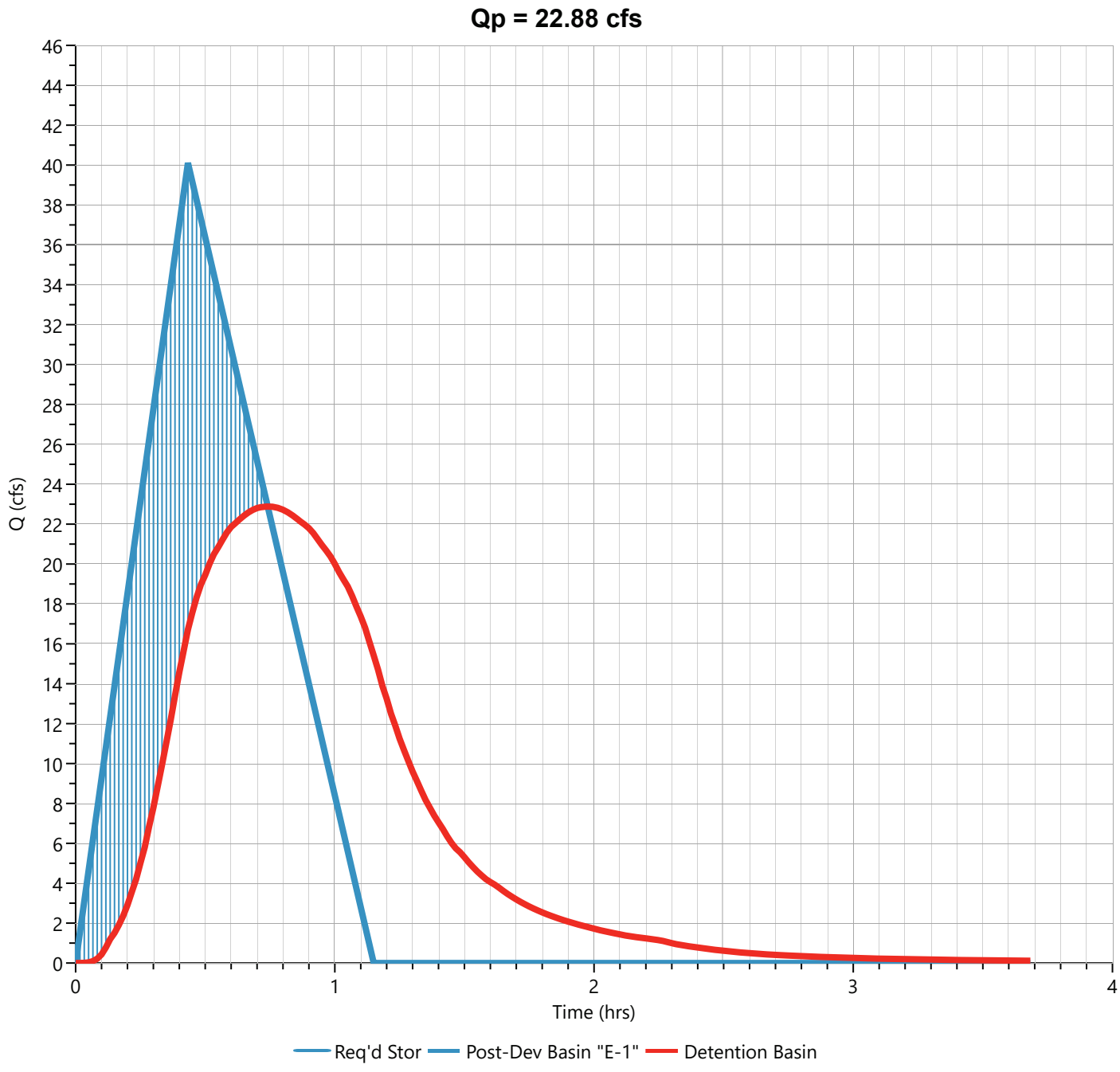
Detention Basin

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 22.88 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.73 hrs
Time Interval	= 1 min	Hydrograph Volume	= 82,999 cuft
Inflow Hydrograph	= 13 - Post-Dev Basin "E-1"	Max. Elevation	= 469.66 ft
Pond Name	= Hilltop Detention Pond	Max. Storage	= 34,545 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 24 min



Pond Report

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

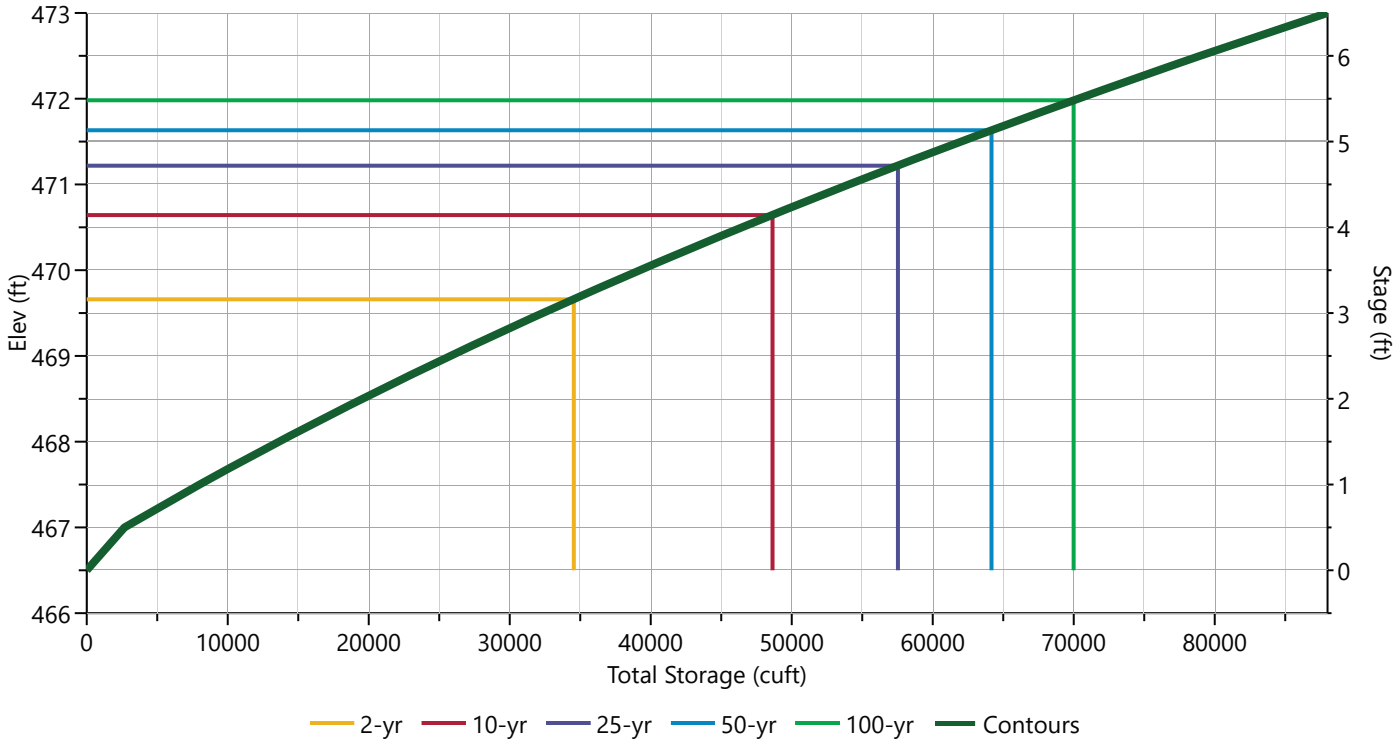
Hilltop Detention Pond

Stage-Storage

User Defined Contours	
Description	**Input**
Bottom Elevation, ft	466.50
Voids (%)	100.00
Volume Calc	Ave End Area

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour Area (sqft)	Incr. Storage (cuft)	Total Storage (cuft)
0.00	466.50	347	0.000	0.000
0.50	467.00	10,363	2,678	2,678
1.00	467.50	10,941	5,326	8,004
1.50	468.00	11,528	5,617	13,621
2.00	468.50	12,158	5,922	19,542
2.50	469.00	12,801	6,240	25,782
3.00	469.50	13,459	6,565	32,347
3.50	470.00	14,131	6,898	39,245
4.00	470.50	14,816	7,237	46,481
4.50	471.00	15,516	7,583	54,064
5.00	471.50	16,230	7,937	62,001
5.50	472.00	16,958	8,297	70,298
6.00	472.50	17,699	8,664	78,962
6.50	473.00	18,455	9,039	88,001



Pond Report

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

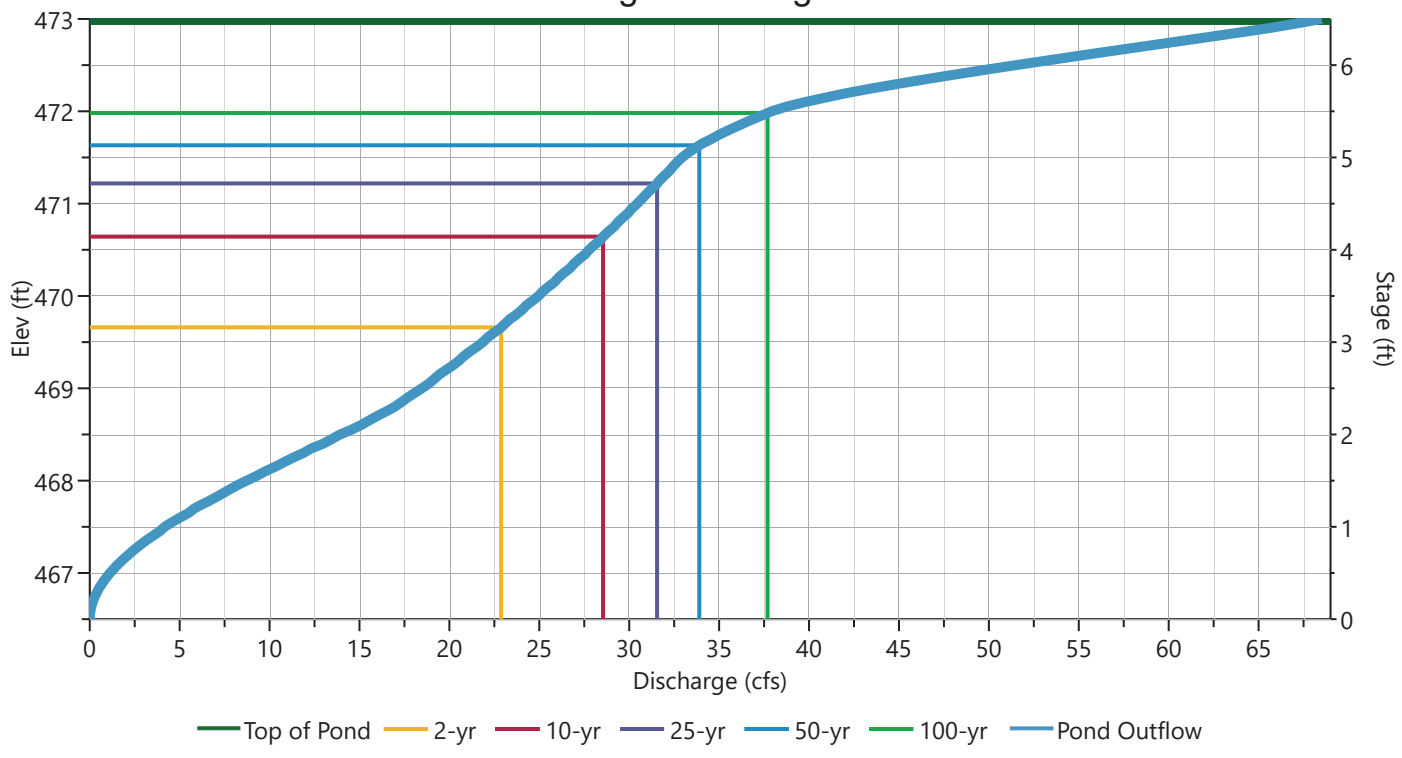
09-29-2026

Hilltop Detention Pond

Stage-Discharge

Culvert / Orifices	Cir Culvert	Orifice			Orifice Plate	
		1 (m)	2 (m)	3		
Rise, in	36	28	6		Orifice Dia, in	
Span, in	36	28	36		No. Orifices	
No. Barrels	1	1	1	1	Invert Elevation, ft	
Invert Elevation, ft	466.50	466.50	471.50	468.01	Height, ft	
Orifice Coefficient, Co	0.60	0.60	0.60	0.60	Orifice Coefficient, Co	
Length, ft	113					
Barrel Slope, %	4.66					
N-Value, n	0.013					
Weirs	**Riser**	**Weir**			**Ancillary**	
		1	2	3		
Shape / Type	Circular				Exfiltration, in/hr	
Crest Elevation, ft	472	479.5				
Crest Length, ft	12.56	14				
Angle, deg		45 (1:1)				
Weir Coefficient, Cw	3.3	3.3				

m = Flows through Culvert, i = Independent



Pond Report

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Hilltop Detention Pond

Stage-Storage-Discharge Summary

Stage (ft)	Elev. (ft)	Storage (cuft)	Culvert (cfs)	Orifices, cfs			Riser (cfs)	Weirs, cfs			Pf Riser (cfs)	Exfil (cfs)	User (cfs)	Total (cfs)
				1	2	3		1	2	3				
0.00	466.50	0.000	0.000	0.000	0.000		0.000	0.000						0.000
0.50	467.00	2,678	1.140 ic	1.140	0.000		0.000	0.000						1.140
1.00	467.50	8,004	4.169 ic	4.169	0.000		0.000	0.000						4.169
1.50	468.00	13,621	8.729 ic	8.729	0.000		0.000	0.000						8.729
2.00	468.50	19,542	13.92 ic	13.92	0.000		0.000	0.000						13.92
2.50	469.00	25,782	18.47 ic	18.47	0.000		0.000	0.000						18.47
3.00	469.50	32,347	21.85 ic	21.85	0.000		0.000	0.000						21.85
3.50	470.00	39,245	24.96 ic	24.96	0.000		0.000	0.000						24.96
4.00	470.50	46,481	27.76 ic	27.76	0.000		0.000	0.000						27.76
4.50	471.00	54,064	30.43 ic	30.43	0.000		0.000	0.000						30.43
5.00	471.50	62,001	32.94 ic	32.94	0.000		0.000	0.000						32.94
5.50	472.00	70,298	37.92 ic	34.31	3.611		0.000	0.000						37.92
6.00	472.50	78,962	51.51 ic	30.60	6.255		14.65	0.000						51.51
6.50	473.00	88,001	68.51 ic	20.03	7.029		41.45	0.000						68.51

Suffix key: ic = inlet control, oc = outlet control, s = submerged weir

Pond Report

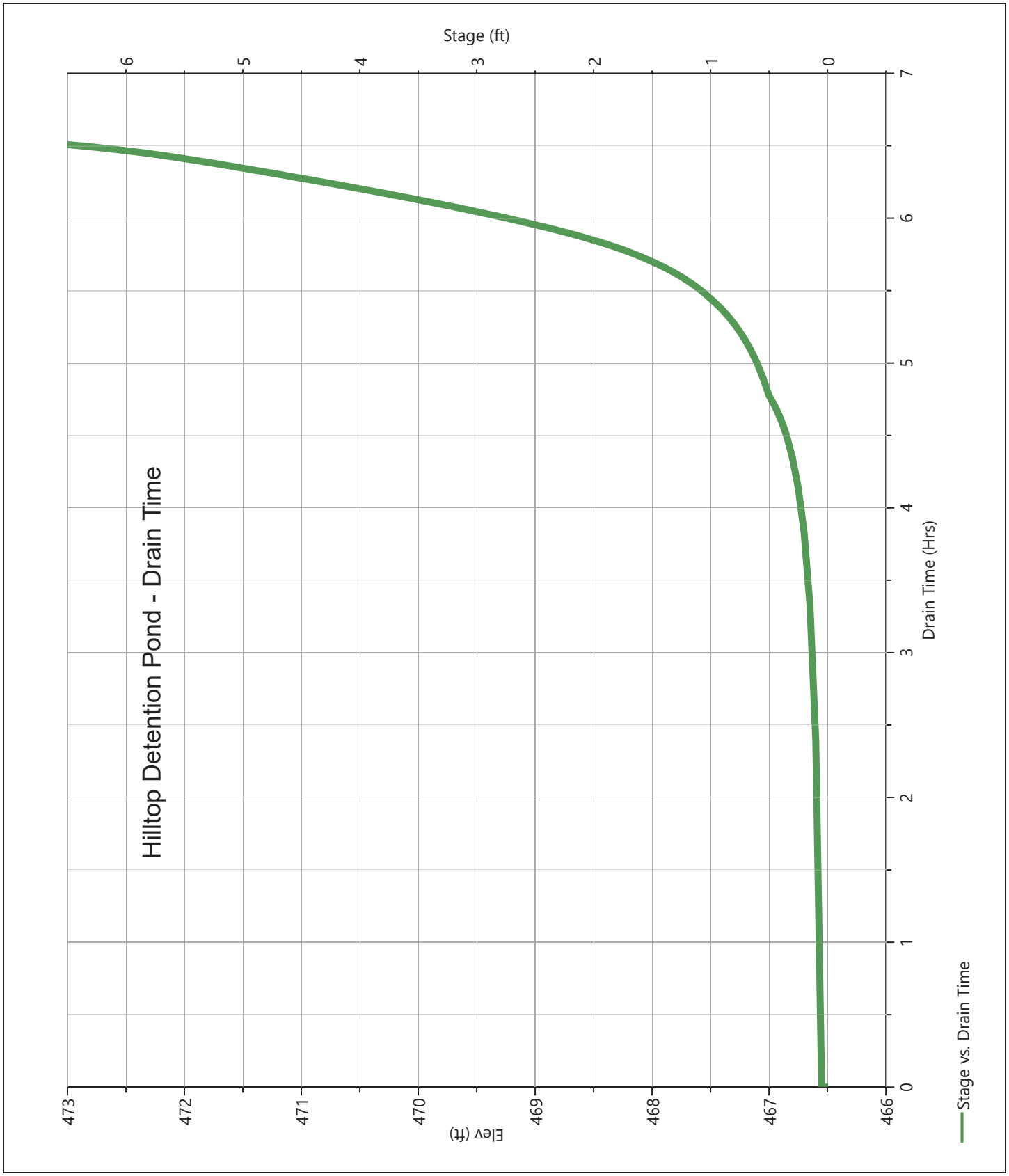
Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Hilltop Detention Pond

Pond Drawdown



Hydrograph Report

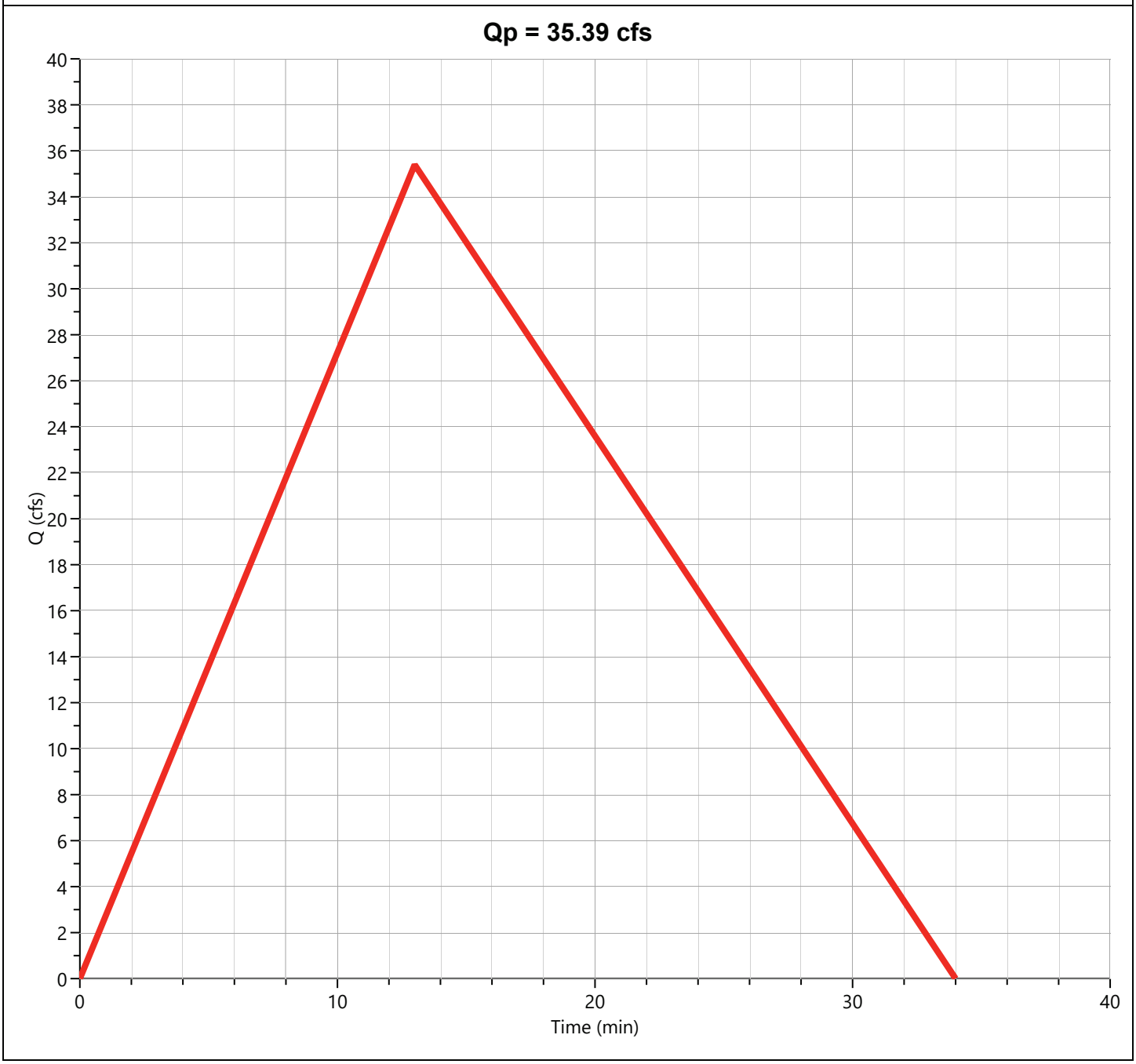
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-2"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 35.39 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 36,857 cuft
Drainage Area	= 15.86 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.99 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Post-Dev Basin "E-2"
Rational

Hyd. No. 15

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	7.25			
Travel Time (min)	**8.74**	**0.00**	**0.00**	**8.74**
Shallow Concentrated Flow				
Flow Length (ft)	1070			
Watercourse Slope (%)	6.23	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	4.03			
Travel Time (min)	**4.43**	**0.00**	**0.00**	**4.43**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**13 min**

Hydrograph Report

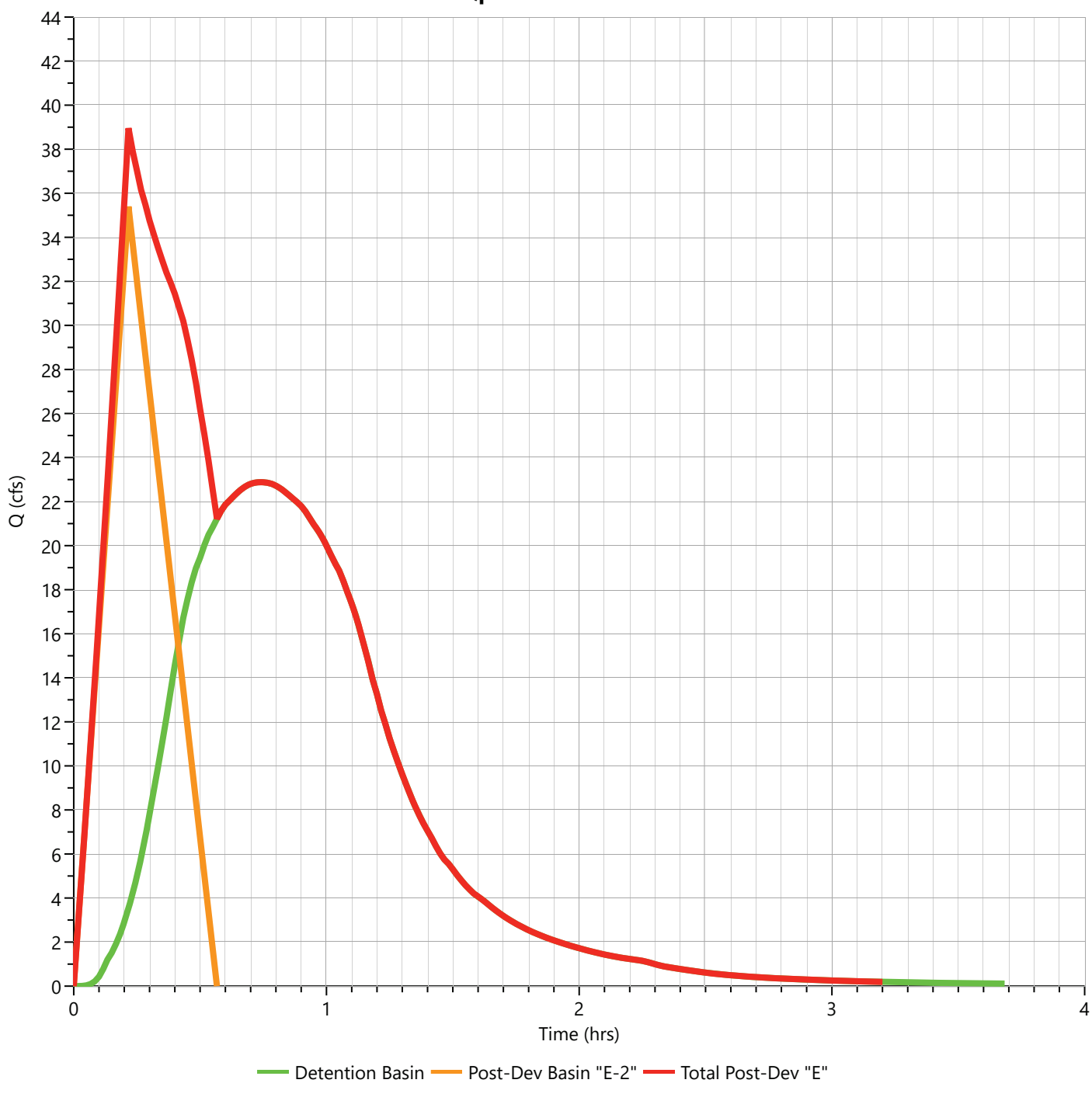
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Post-Dev "E"

Hyd. No. 16

Hydrograph Type	= Junction	Peak Flow	= 38.95 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 119,102 cuft
Inflow Hydrographs	= 15	Total Contrib. Area	= 15.86 ac



Hydrograph Report

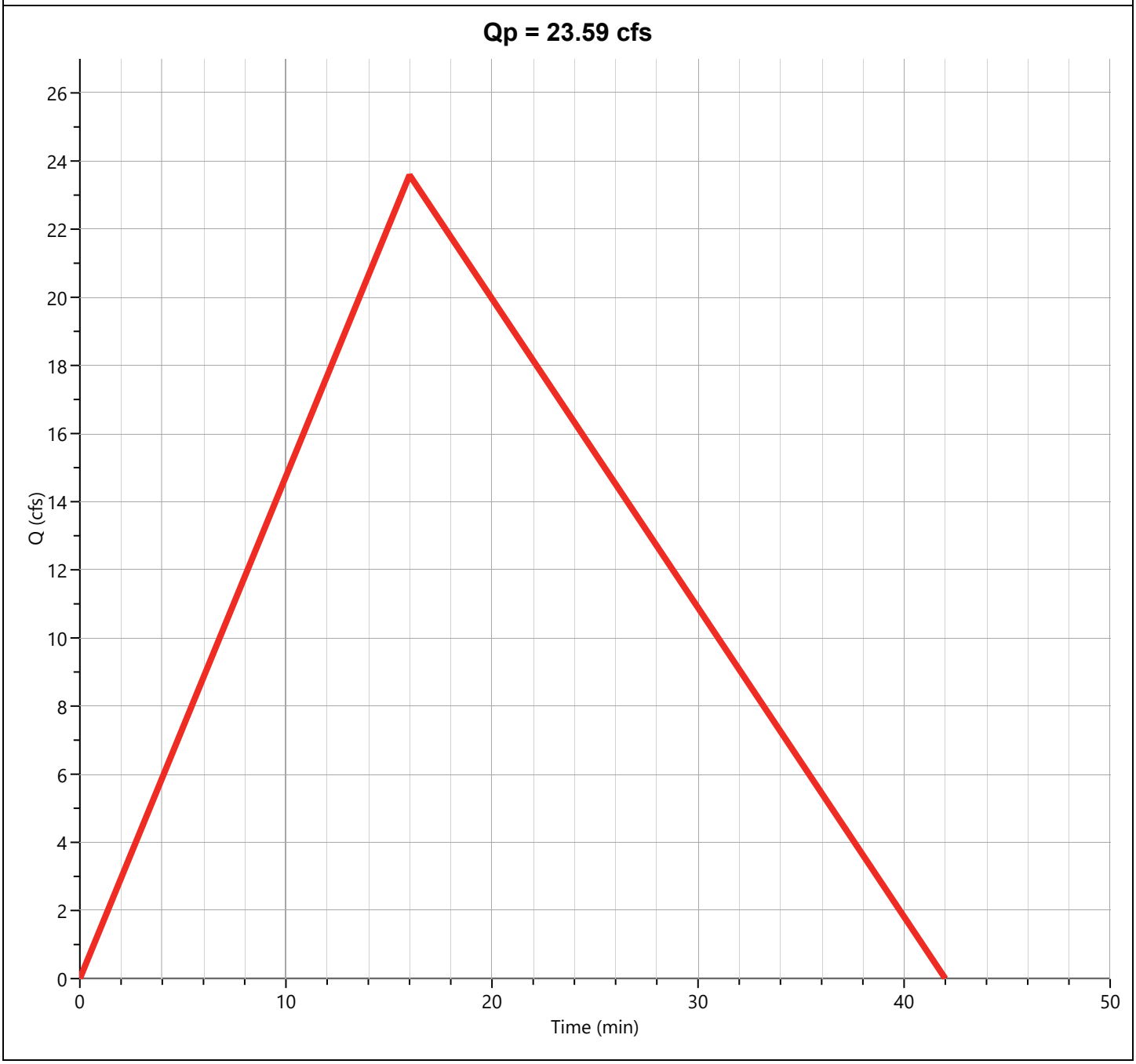
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "F"

Hyd. No. 17

Hydrograph Type	= Rational	Peak Flow	= 23.59 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 30,229 cuft
Drainage Area	= 11.61 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 16.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.63 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Tc by TR55 Worksheet

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys

Hydrology Studio v 3.0.0.44

09-29-2026

Post-Dev Basin "F"
Rational

Hyd. No. 17

Description	Segments			
	A	B	C	Tc (min)
Sheet Flow				
Description				
Manning's n	0.300	0.013	0.013	
Flow Length (ft)	100			
2-yr, 24-hr Precip. (in)	4.35	2.28	2.28	
Land Slope (%)	6			
Travel Time (min)	**9.43**	**0.00**	**0.00**	**9.43**
Shallow Concentrated Flow				
Flow Length (ft)	1362			
Watercourse Slope (%)	4.65	0.00	0.00	
Surface Description	Unpaved	Paved	Paved	
Average Velocity (ft/s)	3.48			
Travel Time (min)	**6.52**	**0.00**	**0.00**	**6.52**
Channel Flow				
X-sectional Flow Area (sqft)				
Wetted Perimeter (ft)				
Channel Slope (%)				
Manning's n	0.013	0.013	0.013	
Velocity (ft/s)				
Flow Length (ft)				
Travel Time (min)	**0.00**	**0.00**	**0.00**	**0.00**
Total Travel Time				**16 min**

Design Storm Report

Custom Storm filename:

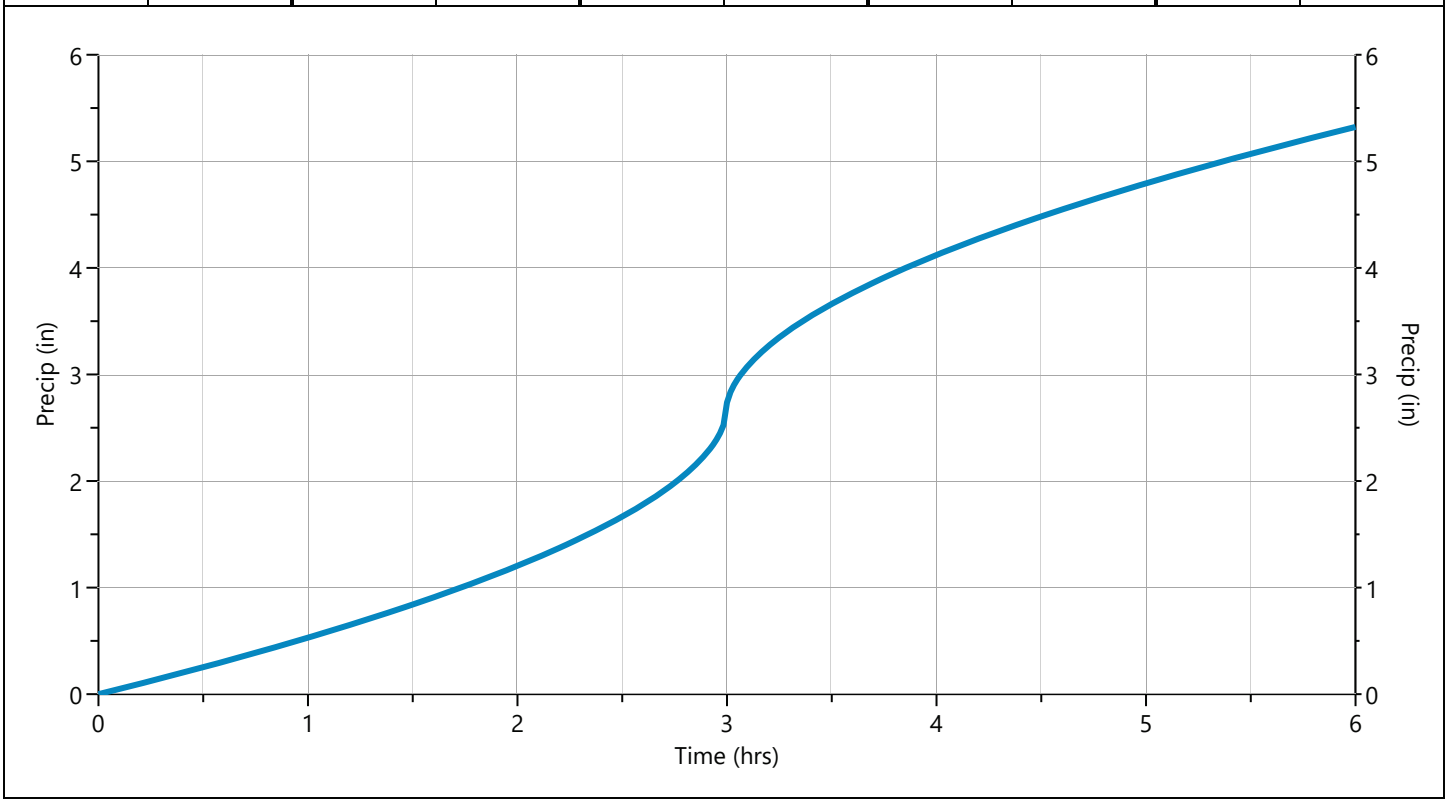
Hydrology Studio v 3.0.0.44

09-29-2026

Storm Distribution: IDF Based - Synthetic, 6-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	✔ 2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
6 hrs	0	5.32	0	6.37	7.21	8.30	9.12	9.85	

Incremental Rainfall Distribution, 2-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
2.50	0.018143	2.68	0.022259	2.87	0.032659	3.05	0.053726	3.23	0.025919
2.52	0.018421	2.70	0.022803	2.88	0.034626	3.07	0.046673	3.25	0.025108
2.53	0.018713	2.72	0.023391	2.90	0.037032	3.08	0.041932	3.27	0.024374
2.55	0.019021	2.73	0.024032	2.92	0.040074	3.10	0.038457	3.28	0.023705
2.57	0.019345	2.75	0.024733	2.93	0.044099	3.12	0.035764	3.30	0.023091
2.58	0.019688	2.77	0.025503	2.95	0.049802	3.13	0.033596	3.32	0.022526
2.60	0.020051	2.78	0.026357	2.97	0.058857	3.15	0.031801	3.33	0.022002
2.62	0.020437	2.80	0.027310	2.98	0.077022	3.17	0.030281	3.35	0.021516
2.63	0.020847	2.82	0.028382	**3.00**	**0.211936**	3.18	0.028972	3.37	0.021063
2.65	0.021286	2.83	0.029603	3.02	0.097849	3.20	0.027829	3.38	0.020639
2.67	0.021755	2.85	0.031011	3.03	0.066003	3.22	0.026819	3.40	0.020241



Hydrograph 10-yr Summary

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	Rational	Pre-Dev Basin "A"	11.43	0.18	10,070	----		
2	Rational	Pre-Dev Basin "B"	38.41	0.25	46,149	----		
3	Rational	Pre-Dev Basin "C"	21.67	0.18	19,095	----		
4	Rational	Pre-Dev Basin "D"	9.804	0.13	6,283	----		
5	Rational	Pre-Dev Basin "E-1"	31.02	0.20	29,819	----		
6	Rational	Pre-Dev Basin "E-2"	52.69	0.22	54,864	----		
7	Junction	Total Pre Basin "E"	82.16	0.22	83,523	5, 6		
8	Rational	Pre-Dev Basin "F"	33.12	0.28	45,094	----		
9	Rational	Post-Dev Basin A	10.85	0.25	13,032	----		
10	Rational	Post-Dev Basin B	29.69	0.35	49,939	----		
11	Rational	Post-Dev Basin "C"	22.16	0.18	19,529	----		
12	Rational	Post-Dev Basin "D"	9.641	0.13	6,178	----		
13	Rational	Post-Dev Basin "E-1"	53.89	0.43	112,236	----		
14	Pond Route	Detention Basin	28.55	0.77	111,536	13	470.64	48,637
15	Rational	Post-Dev Basin "E-2"	47.46	0.22	49,424	----		
16	Junction	Total Post-Dev "E"	52.67	0.22	159,949	14, 15		
17	Rational	Post-Dev Basin "F"	31.65	0.27	40,562	----		

Hydrograph Report

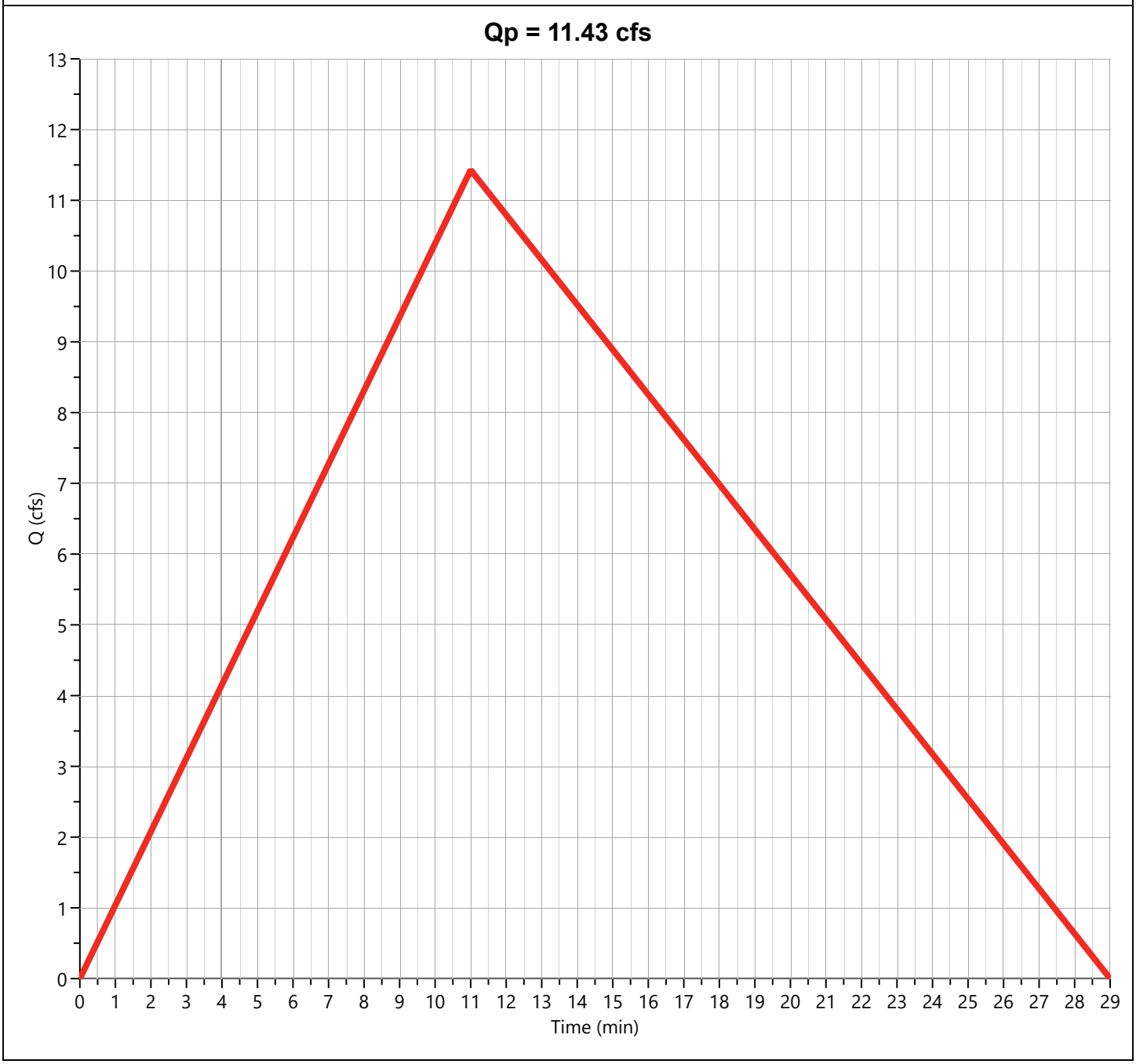
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "A"

Hyd. No. 1

Hydrograph Type	= Rational	Peak Flow	= 11.43 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 10,070 cuft
Drainage Area	= 3.2 ac	Runoff Coeff.	= 0.62
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.76 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

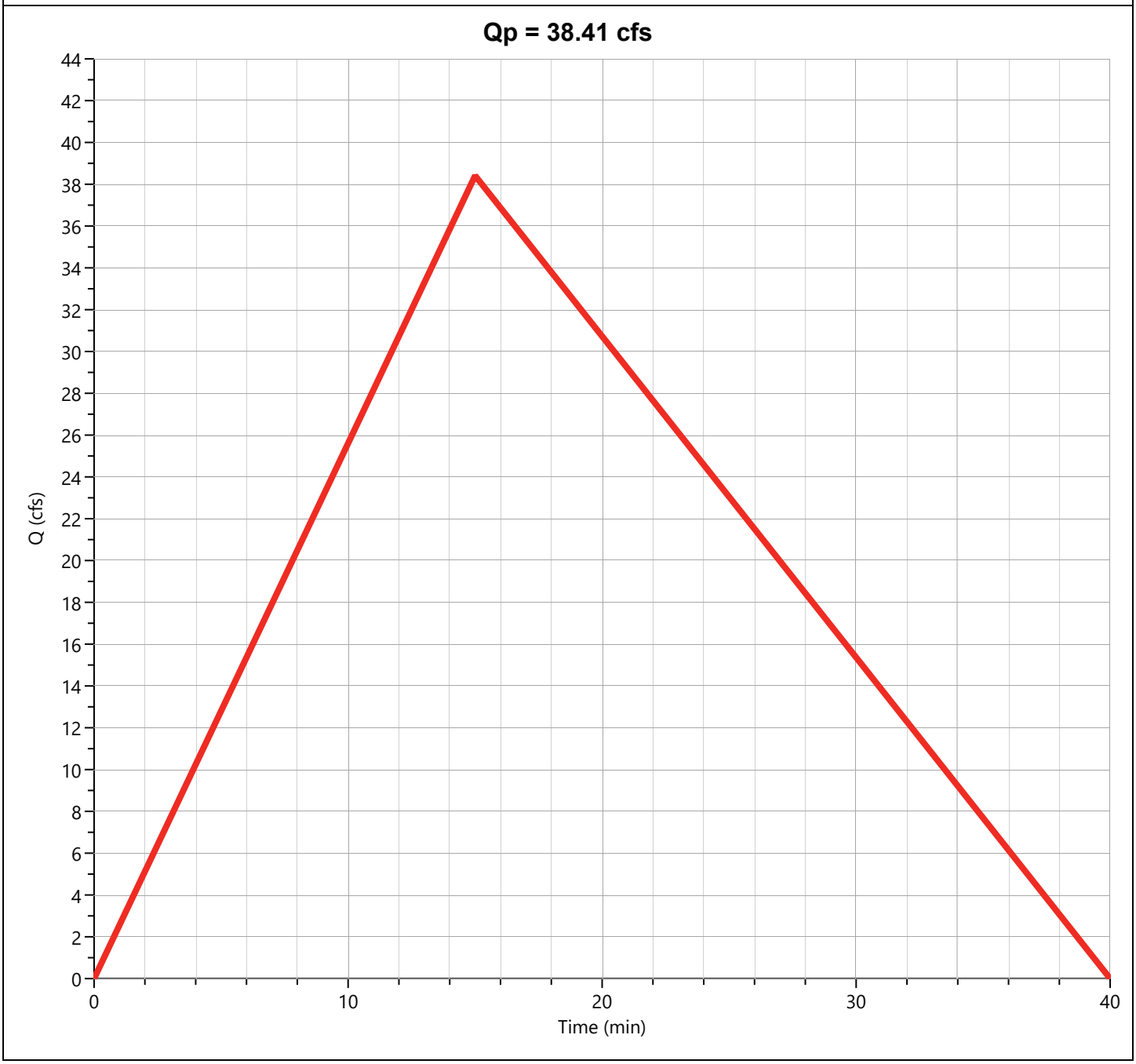
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "B"

Hyd. No. 2

Hydrograph Type	= Rational	Peak Flow	= 38.41 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 46,149 cuft
Drainage Area	= 14.74 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.01 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

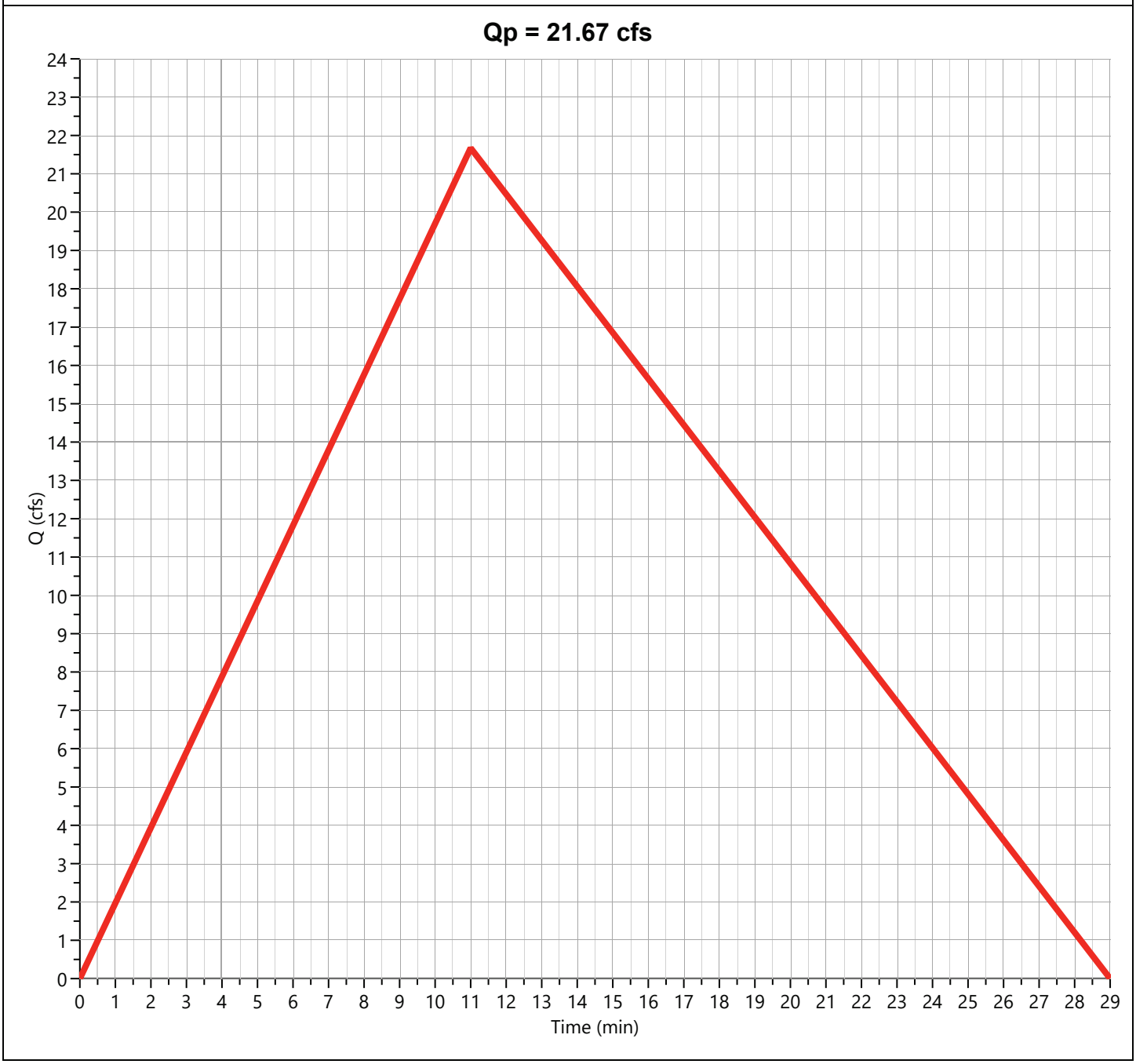
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "C"

Hyd. No. 3

Hydrograph Type	= Rational	Peak Flow	= 21.67 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 19,095 cuft
Drainage Area	= 6.84 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.76 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

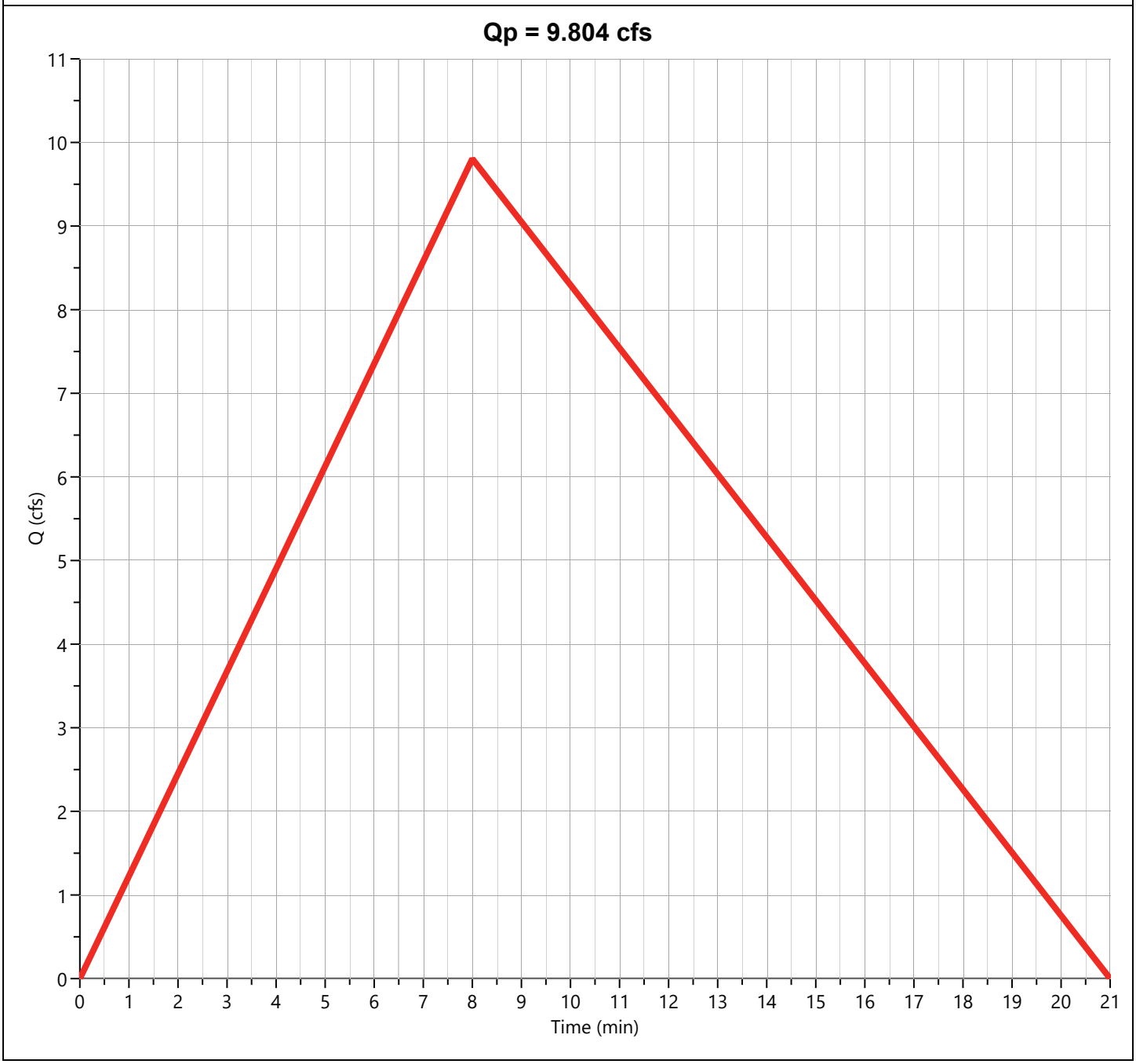
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "D"

Hyd. No. 4

Hydrograph Type	= Rational	Peak Flow	= 9.804 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 6,283 cuft
Drainage Area	= 2.95 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.65 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

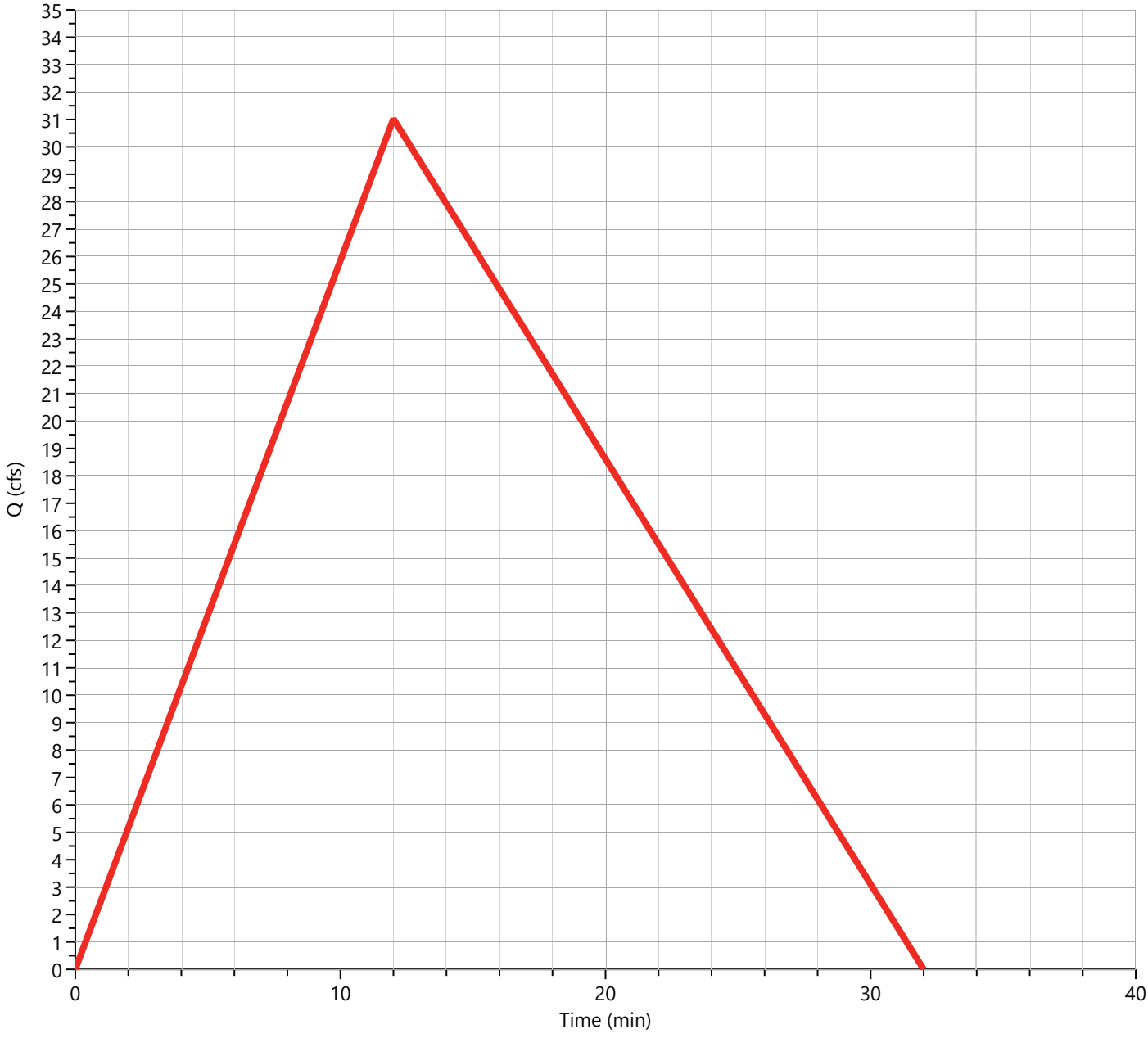
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-1"

Hyd. No. 5

Hydrograph Type	= Rational	Peak Flow	= 31.02 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 29,819 cuft
Drainage Area	= 11.2 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.54 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

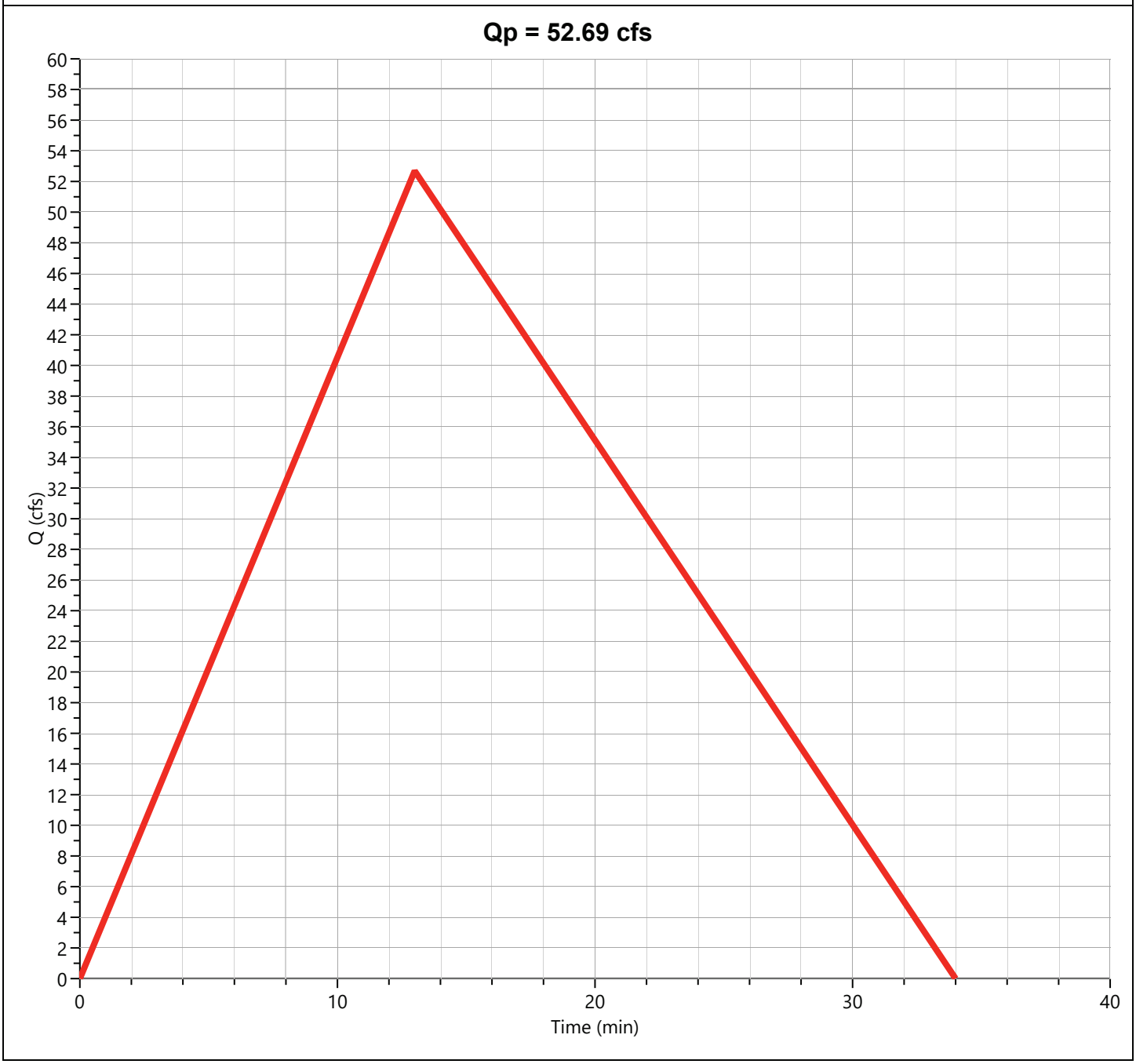
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-2"

Hyd. No. 6

Hydrograph Type	= Rational	Peak Flow	= 52.69 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 54,864 cuft
Drainage Area	= 18.96 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.34 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

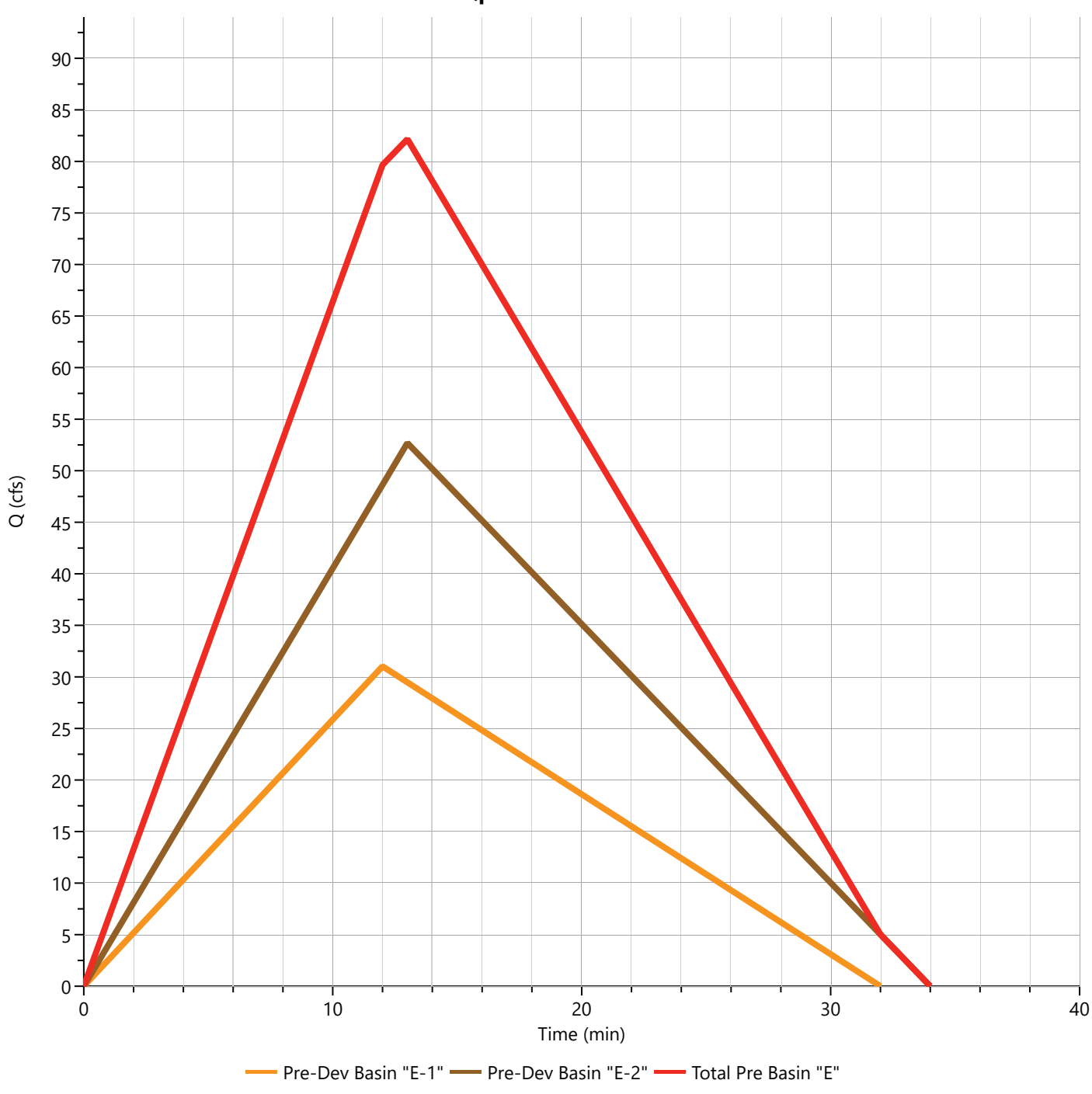
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Pre Basin "E"

Hyd. No. 7

Hydrograph Type	= Junction	Peak Flow	= 82.16 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 83,523 cuft
Inflow Hydrographs	= 5, 6	Total Contrib. Area	= 30.16 ac



Hydrograph Report

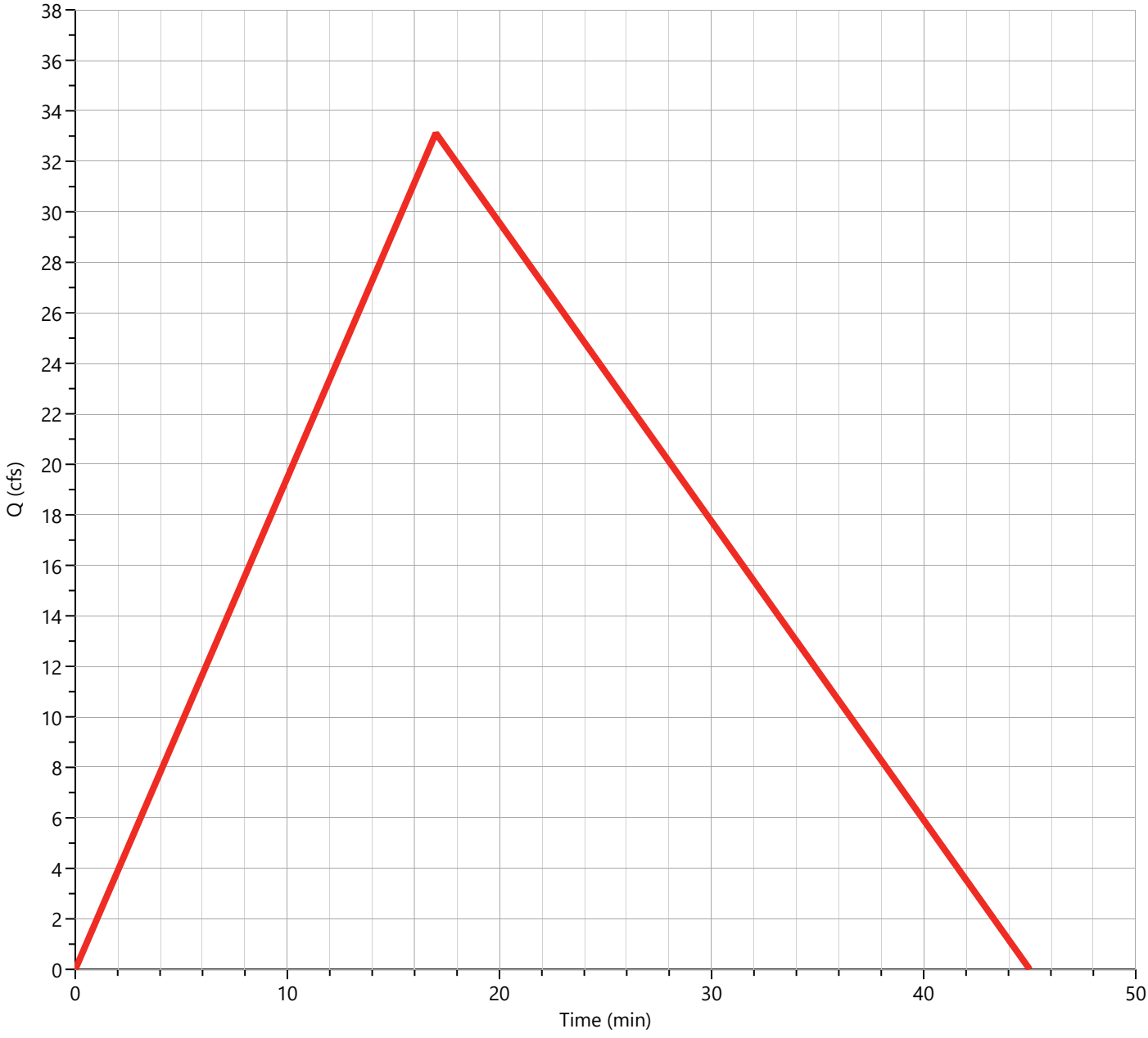
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "F"

Hyd. No. 8

Hydrograph Type	= Rational	Peak Flow	= 33.12 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 45,094 cuft
Drainage Area	= 13.19 ac	Runoff Coeff.	= 0.53
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.74 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

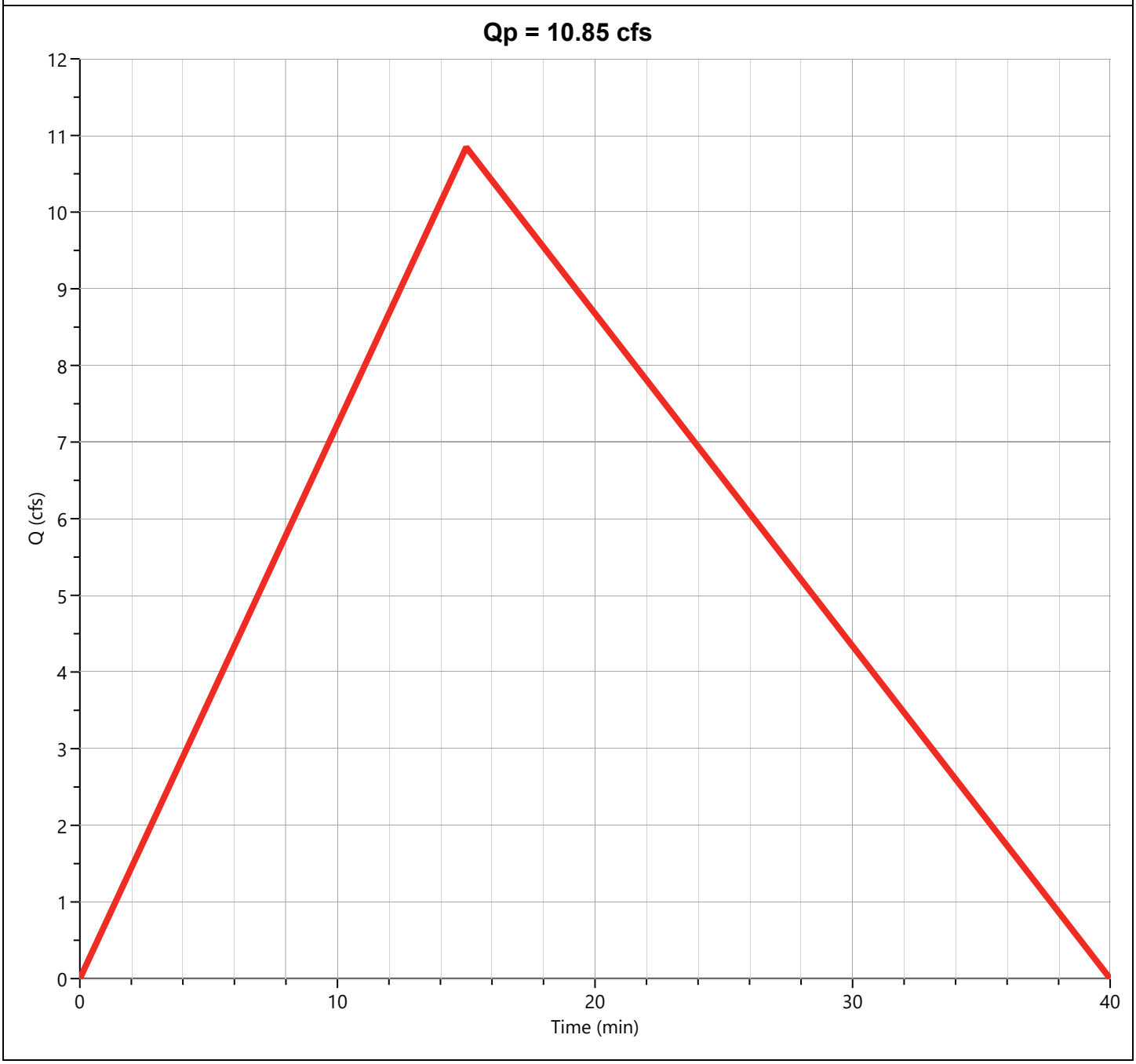
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin A

Hyd. No. 9

Hydrograph Type	= Rational	Peak Flow	= 10.85 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 13,032 cuft
Drainage Area	= 3.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.01 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

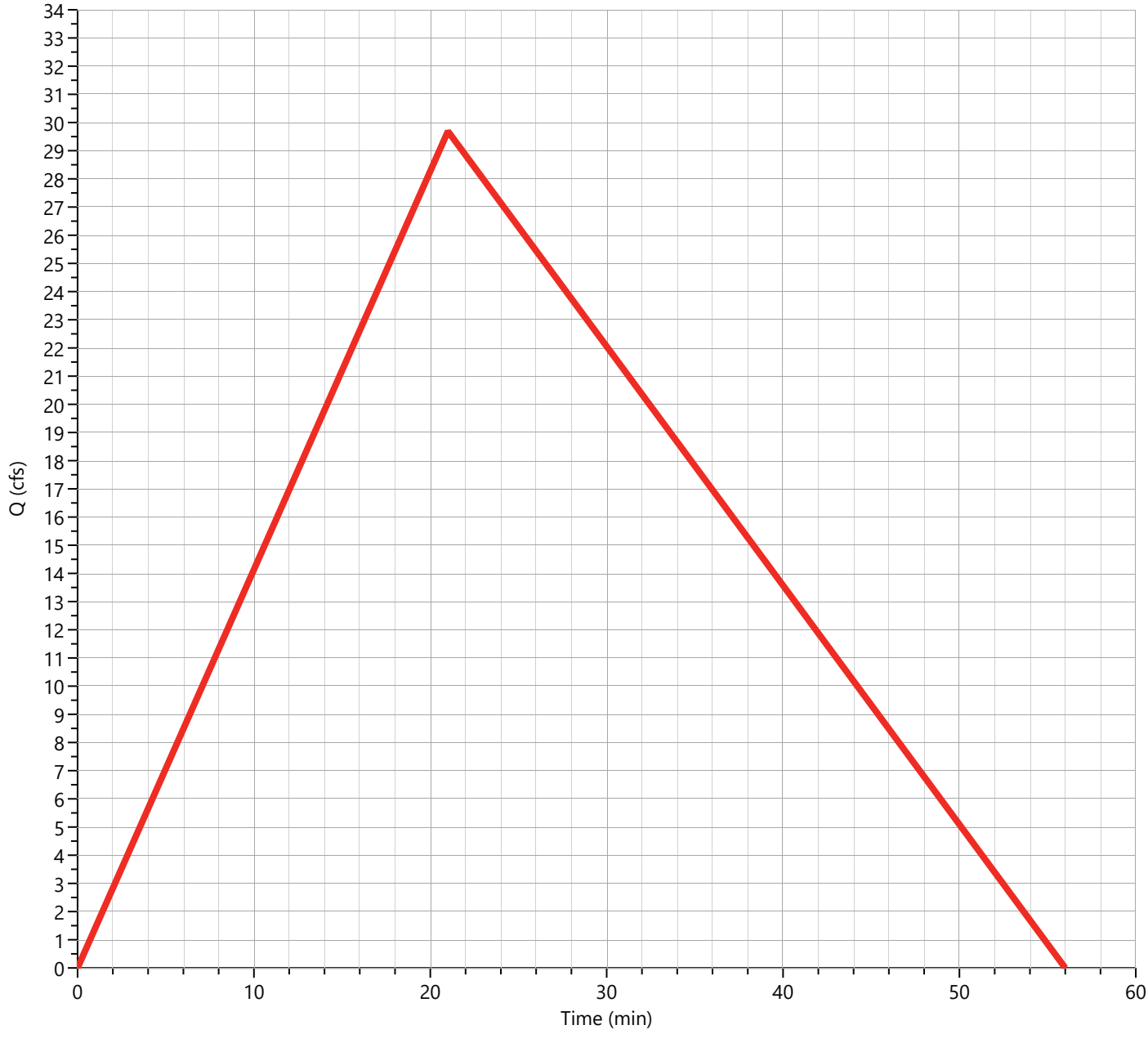
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin B

Hyd. No. 10

Hydrograph Type	= Rational	Peak Flow	= 29.69 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.35 hrs
Time Interval	= 1 min	Runoff Volume	= 49,939 cuft
Drainage Area	= 12.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 21.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.31 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

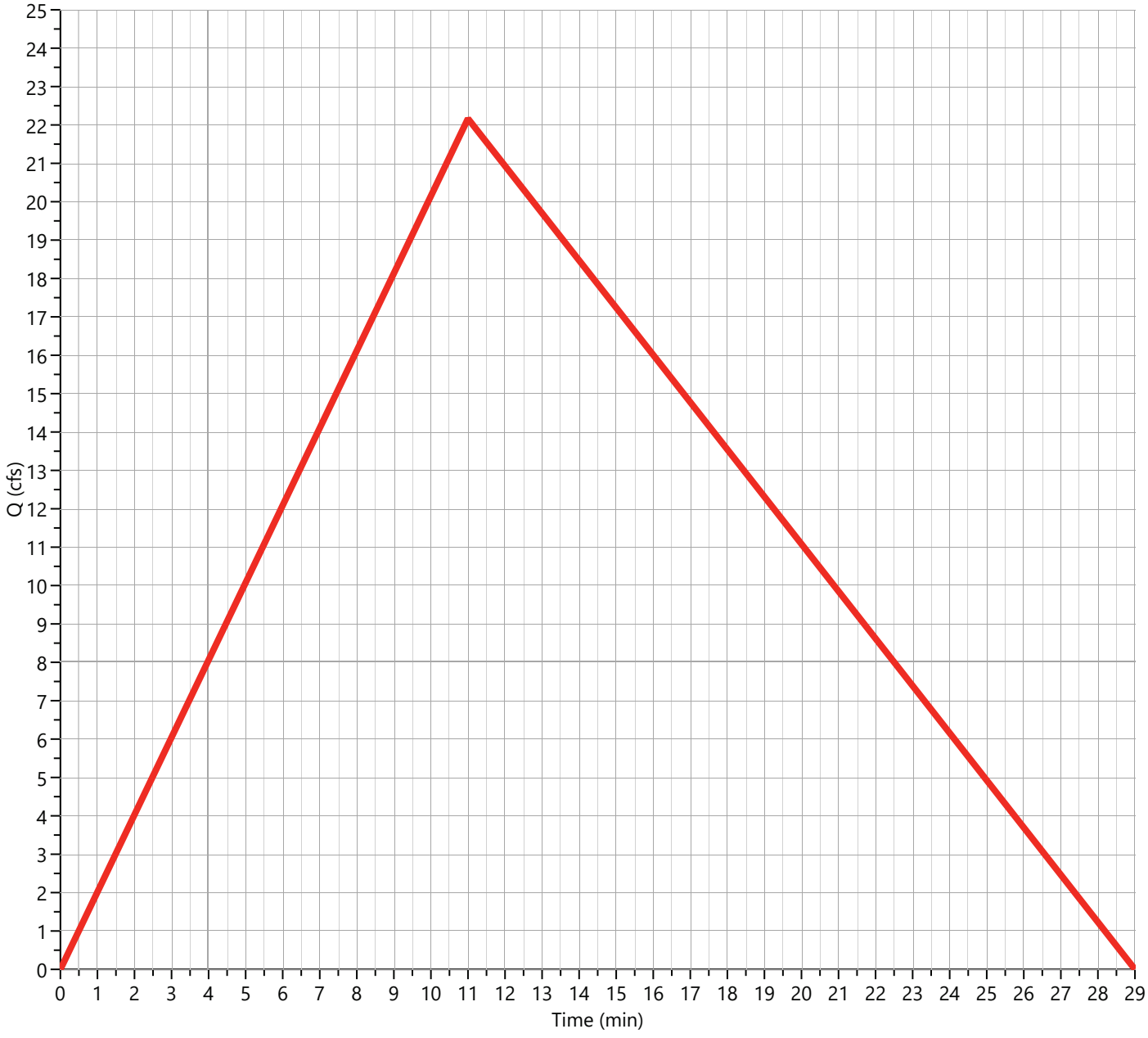
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "C"

Hyd. No. 11

Hydrograph Type	= Rational	Peak Flow	= 22.16 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 19,529 cuft
Drainage Area	= 6.75 ac	Runoff Coeff.	= 0.57
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.76 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

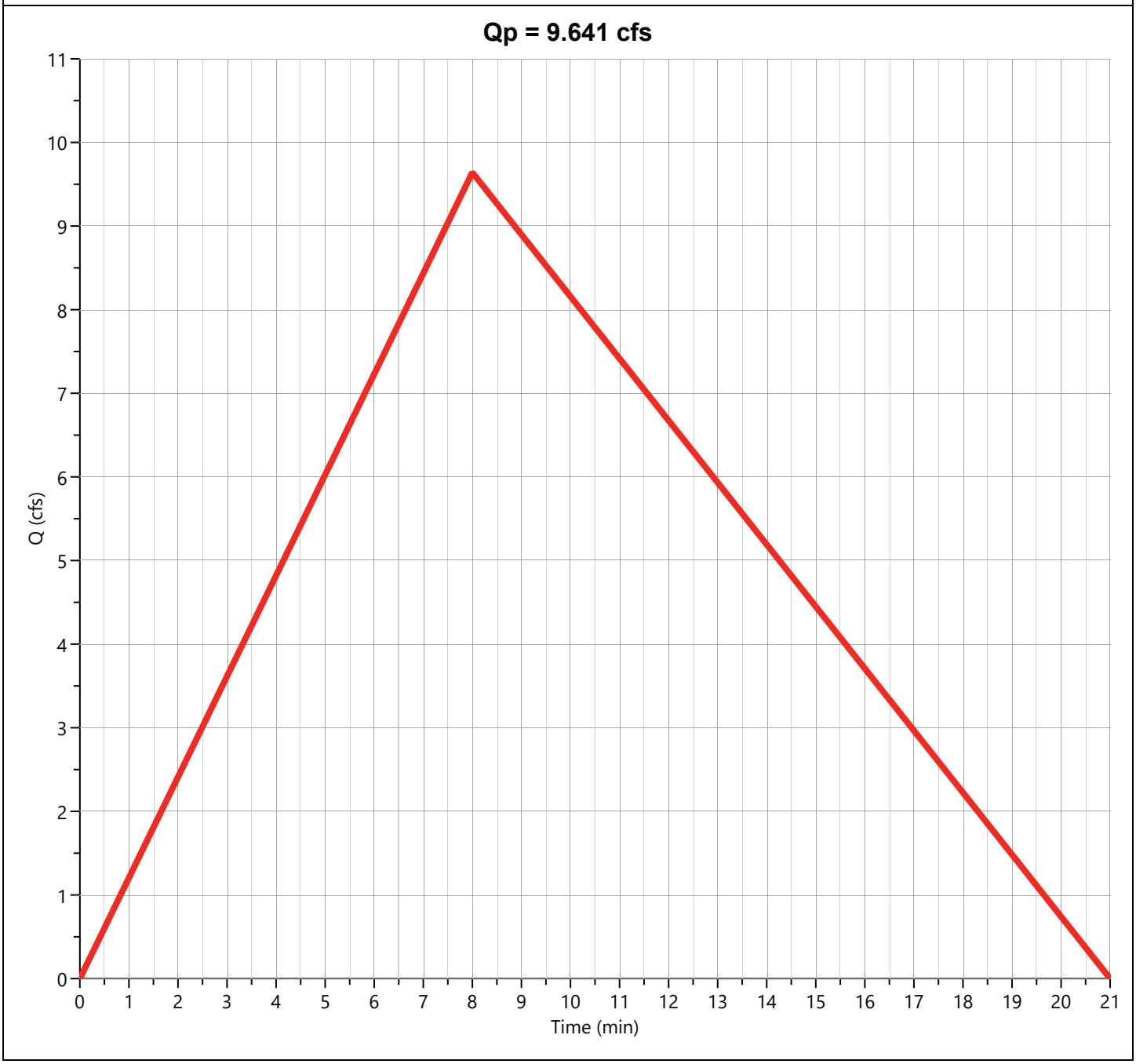
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "D"

Hyd. No. 12

Hydrograph Type	= Rational	Peak Flow	= 9.641 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 6,178 cuft
Drainage Area	= 2.59 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.65 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

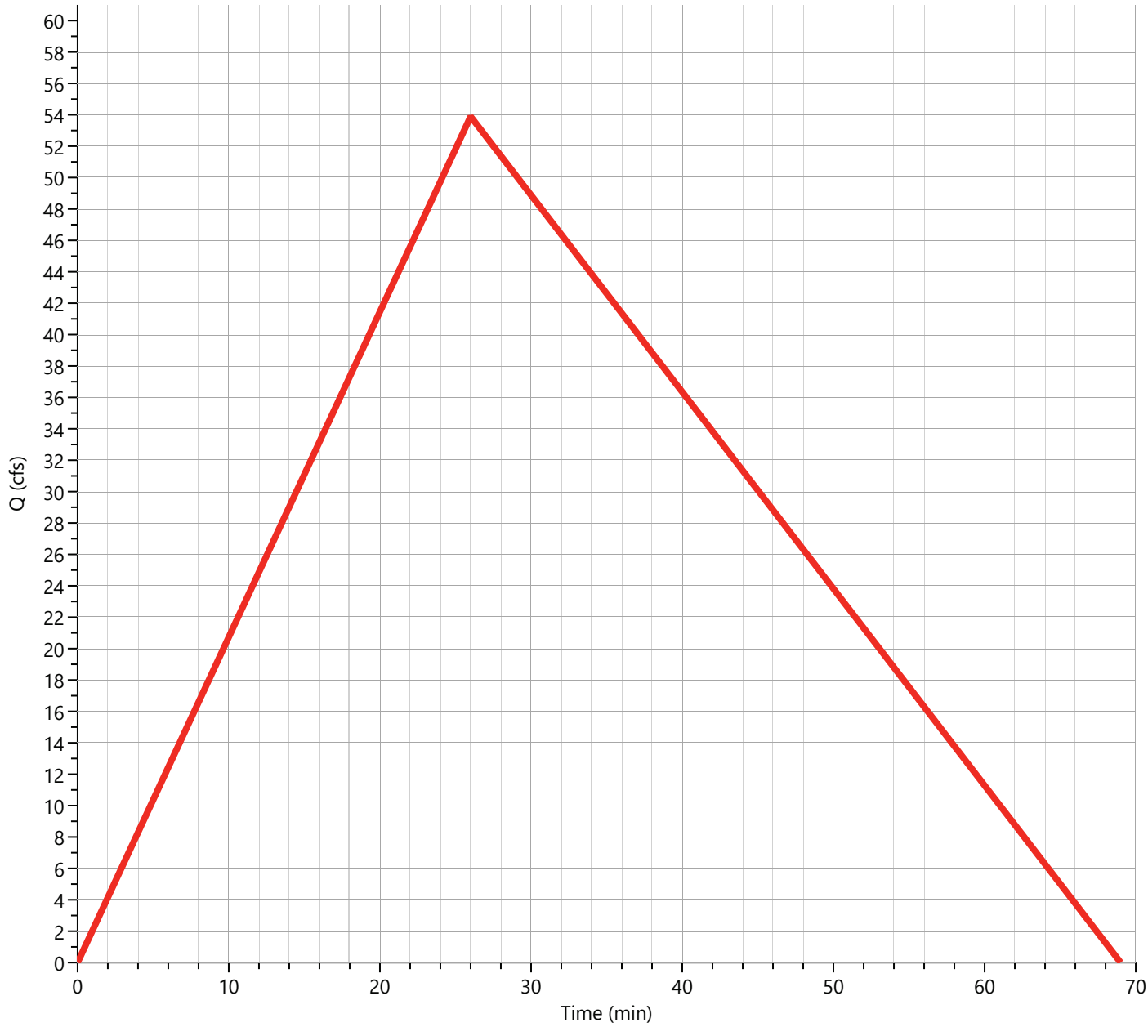
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-1"

Hyd. No. 13

Hydrograph Type	= Rational	Peak Flow	= 53.89 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.43 hrs
Time Interval	= 1 min	Runoff Volume	= 112,236 cuft
Drainage Area	= 18.36 ac	Runoff Coeff.	= 0.75
Tc Method	= User	Time of Conc. (Tc)	= 26.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.91 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

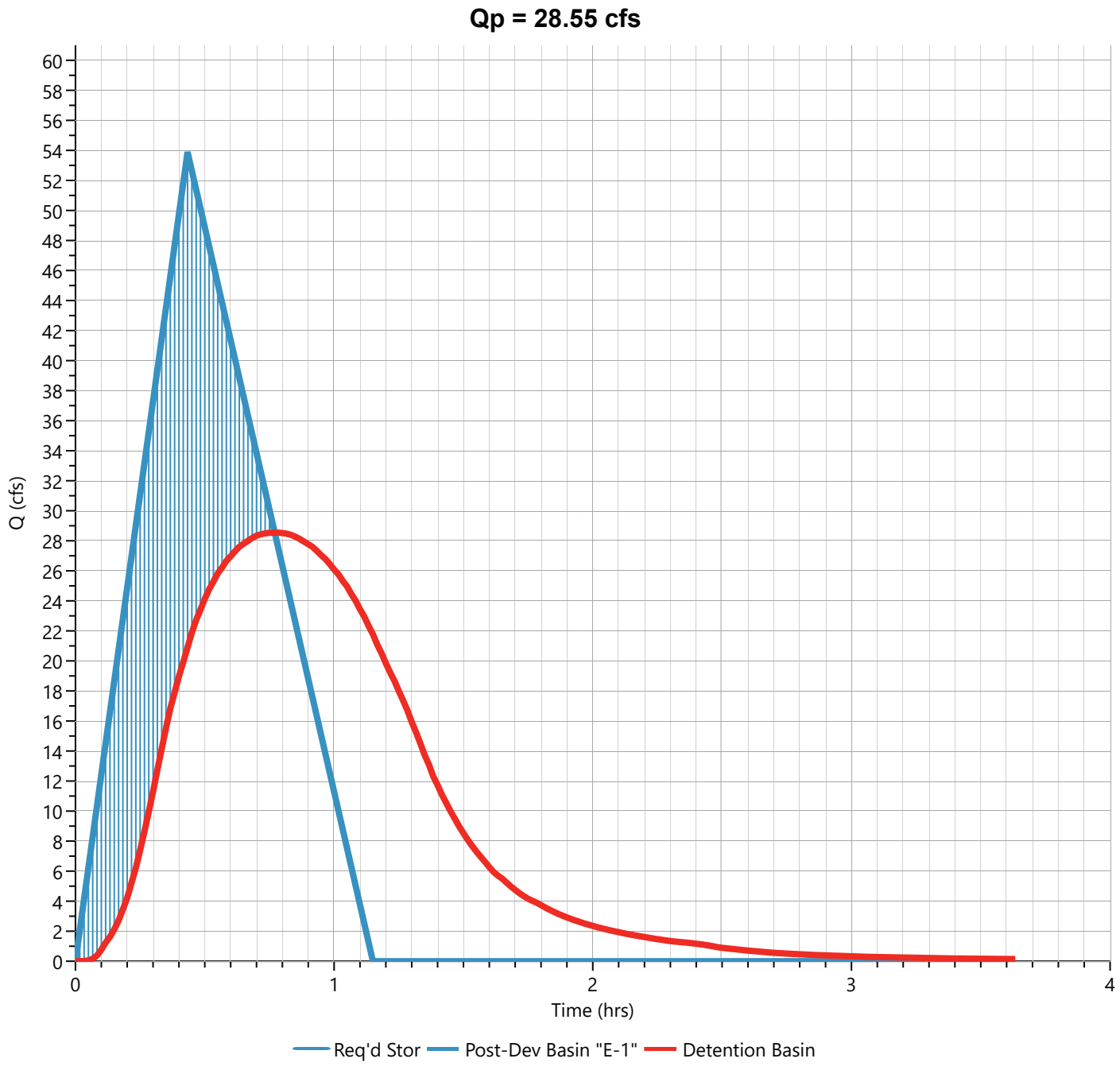
Detention Basin

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 28.55 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.77 hrs
Time Interval	= 1 min	Hydrograph Volume	= 111,536 cuft
Inflow Hydrograph	= 13 - Post-Dev Basin "E-1"	Max. Elevation	= 470.64 ft
Pond Name	= Hilltop Detention Pond	Max. Storage	= 48,637 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 25 min



Hydrograph Report

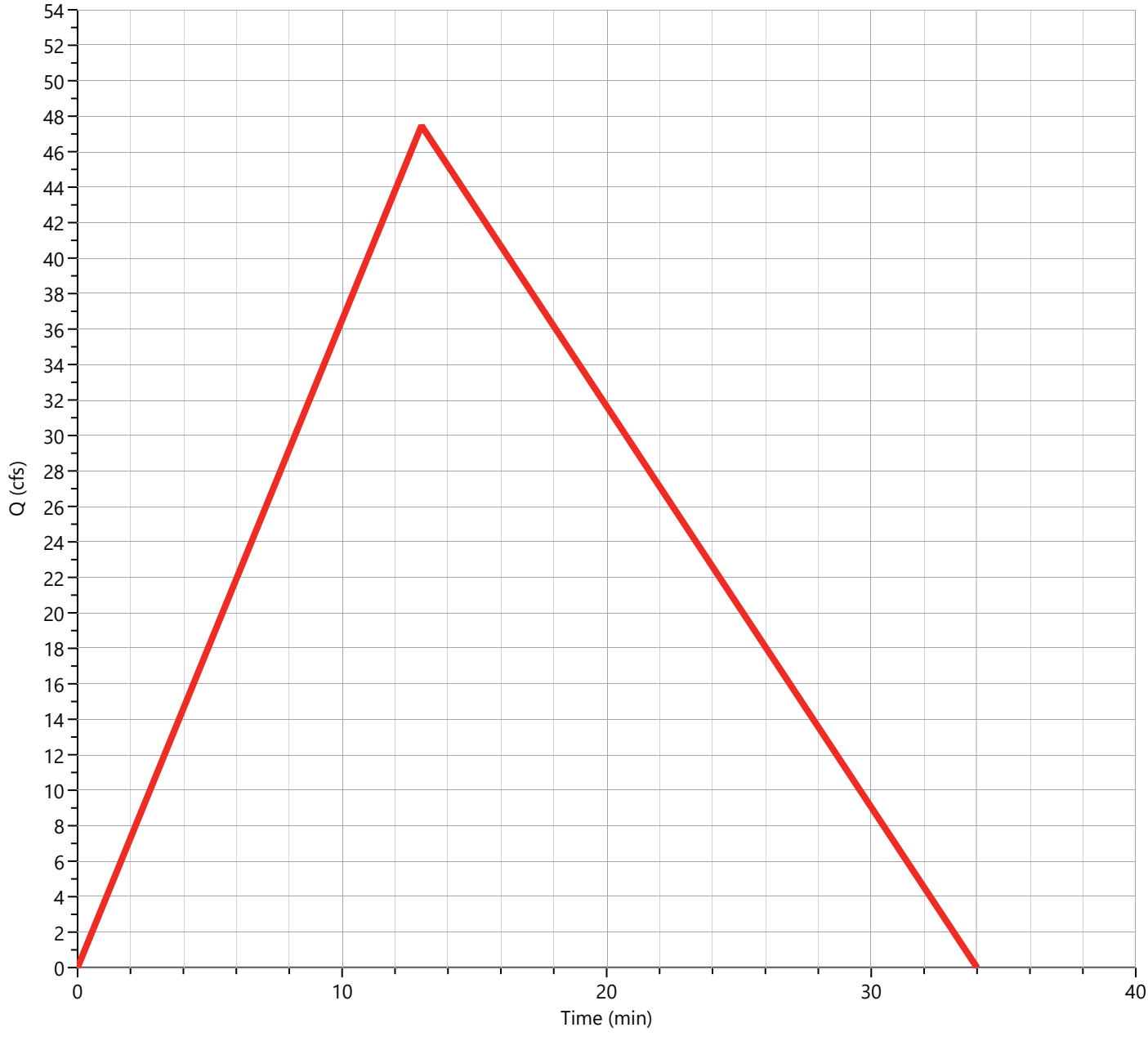
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-2"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 47.46 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 49,424 cuft
Drainage Area	= 15.86 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.34 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

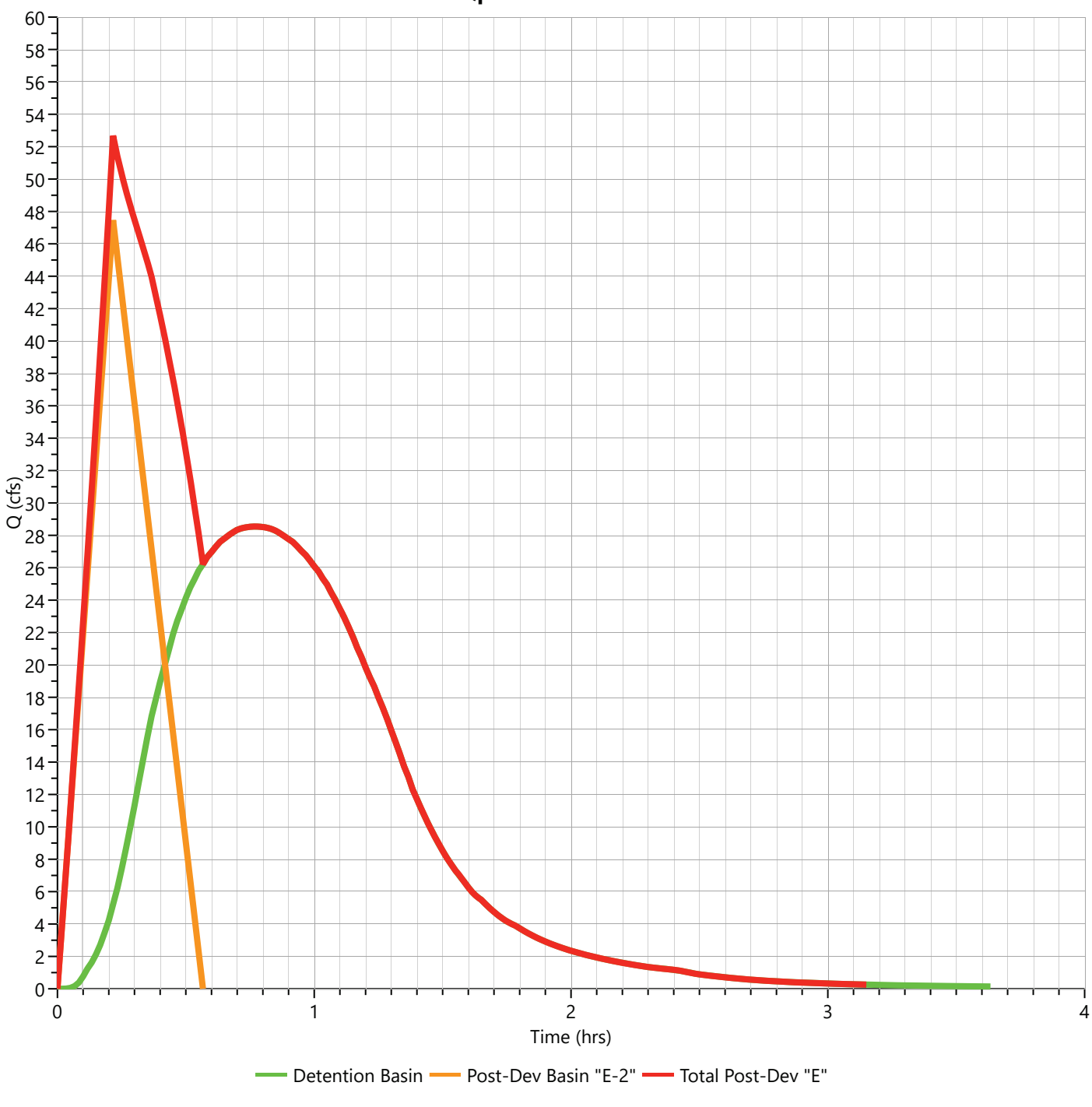
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Post-Dev "E"

Hyd. No. 16

Hydrograph Type	= Junction	Peak Flow	= 52.67 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 159,949 cuft
Inflow Hydrographs	= 15	Total Contrib. Area	= 15.86 ac



Hydrograph Report

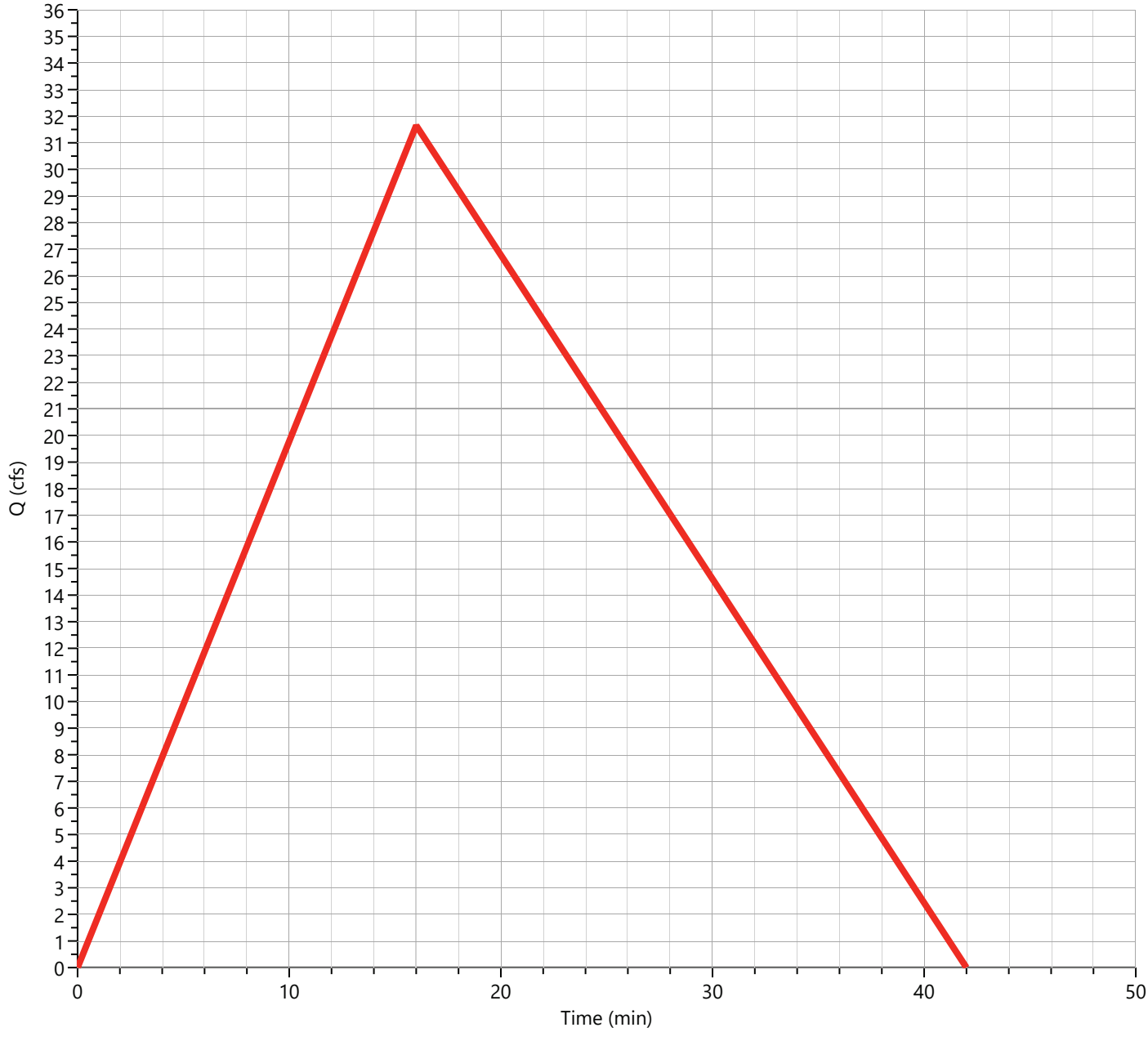
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "F"

Hyd. No. 17

Hydrograph Type	= Rational	Peak Flow	= 31.65 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 40,562 cuft
Drainage Area	= 11.61 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 16.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.87 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Design Storm Report

Custom Storm filename:

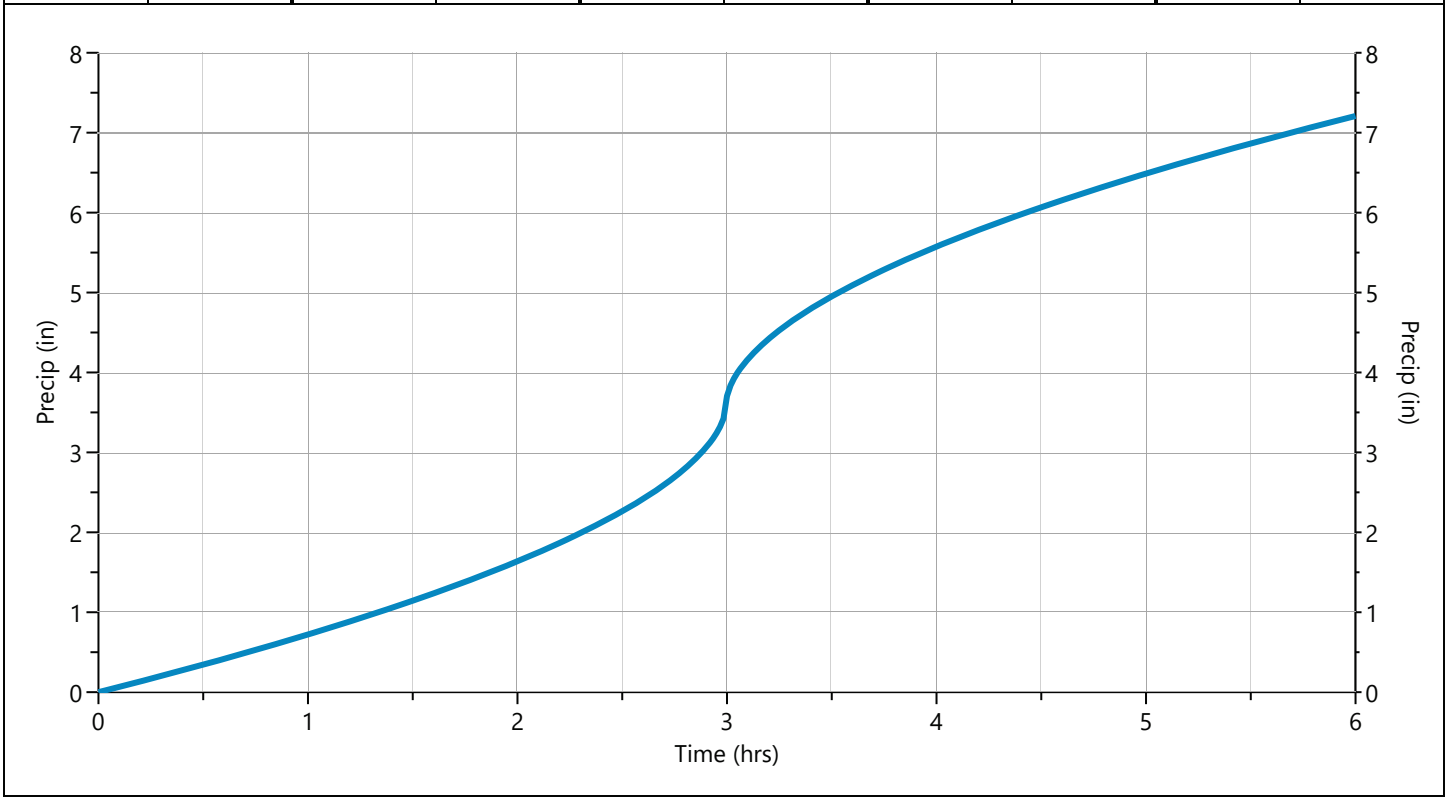
Hydrology Studio v 3.0.0.44

09-29-2026

Storm Distribution: IDF Based - Synthetic, 6-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	✔ 10-yr	25-yr	50-yr	100-yr	
6 hrs	0	5.32	0	6.37	7.21	8.30	9.12	9.85	

Incremental Rainfall Distribution, 10-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
2.50	0.024575	2.68	0.030109	2.87	0.044065	3.05	0.072251	3.23	0.035025
2.52	0.024949	2.70	0.030840	2.88	0.046700	3.07	0.062825	3.25	0.033937
2.53	0.025342	2.72	0.031631	2.90	0.049924	3.08	0.056483	3.27	0.032951
2.55	0.025755	2.73	0.032491	2.92	0.053996	3.10	0.051831	3.28	0.032052
2.57	0.026192	2.75	0.033432	2.93	0.059383	3.12	0.048225	3.30	0.031227
2.58	0.026653	2.77	0.034467	2.95	0.067008	3.13	0.045321	3.32	0.030468
2.60	0.027142	2.78	0.035612	2.97	0.079104	3.15	0.042915	3.33	0.029764
2.62	0.027660	2.80	0.036891	2.98	0.103333	3.17	0.040877	3.35	0.029111
2.63	0.028212	2.82	0.038330	**3.00**	**0.282025**	3.18	0.039122	3.37	0.028502
2.65	0.028801	2.83	0.039968	3.02	0.131064	3.20	0.037588	3.38	0.027932
2.67	0.029432	2.85	0.041856	3.03	0.088640	3.22	0.036234	3.40	0.027397



Hydrograph 25-yr Summary

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	Rational	Pre-Dev Basin "A"	13.13	0.18	11,572	----		
2	Rational	Pre-Dev Basin "B"	44.15	0.25	53,043	----		
3	Rational	Pre-Dev Basin "C"	24.90	0.18	21,943	----		
4	Rational	Pre-Dev Basin "D"	11.26	0.13	7,218	----		
5	Rational	Pre-Dev Basin "E-1"	35.65	0.20	34,268	----		
6	Rational	Pre-Dev Basin "E-2"	60.55	0.22	63,053	----		
7	Junction	Total Pre Basin "E"	94.42	0.22	95,989	5, 6		
8	Rational	Pre-Dev Basin "F"	38.07	0.28	51,833	----		
9	Rational	Post-Dev Basin A	12.47	0.25	14,979	----		
10	Rational	Post-Dev Basin B	34.13	0.35	57,410	----		
11	Rational	Post-Dev Basin "C"	25.47	0.18	22,441	----		
12	Rational	Post-Dev Basin "D"	11.08	0.13	7,098	----		
13	Rational	Post-Dev Basin "E-1"	61.96	0.43	129,045	----		
14	Pond Route	Detention Basin	31.55	0.78	128,243	13	471.22	57,532
15	Rational	Post-Dev Basin "E-2"	54.55	0.22	56,801	----		
16	Junction	Total Post-Dev "E"	60.76	0.22	183,883	14, 15		
17	Rational	Post-Dev Basin "F"	36.38	0.27	46,623	----		

Hydrograph Report

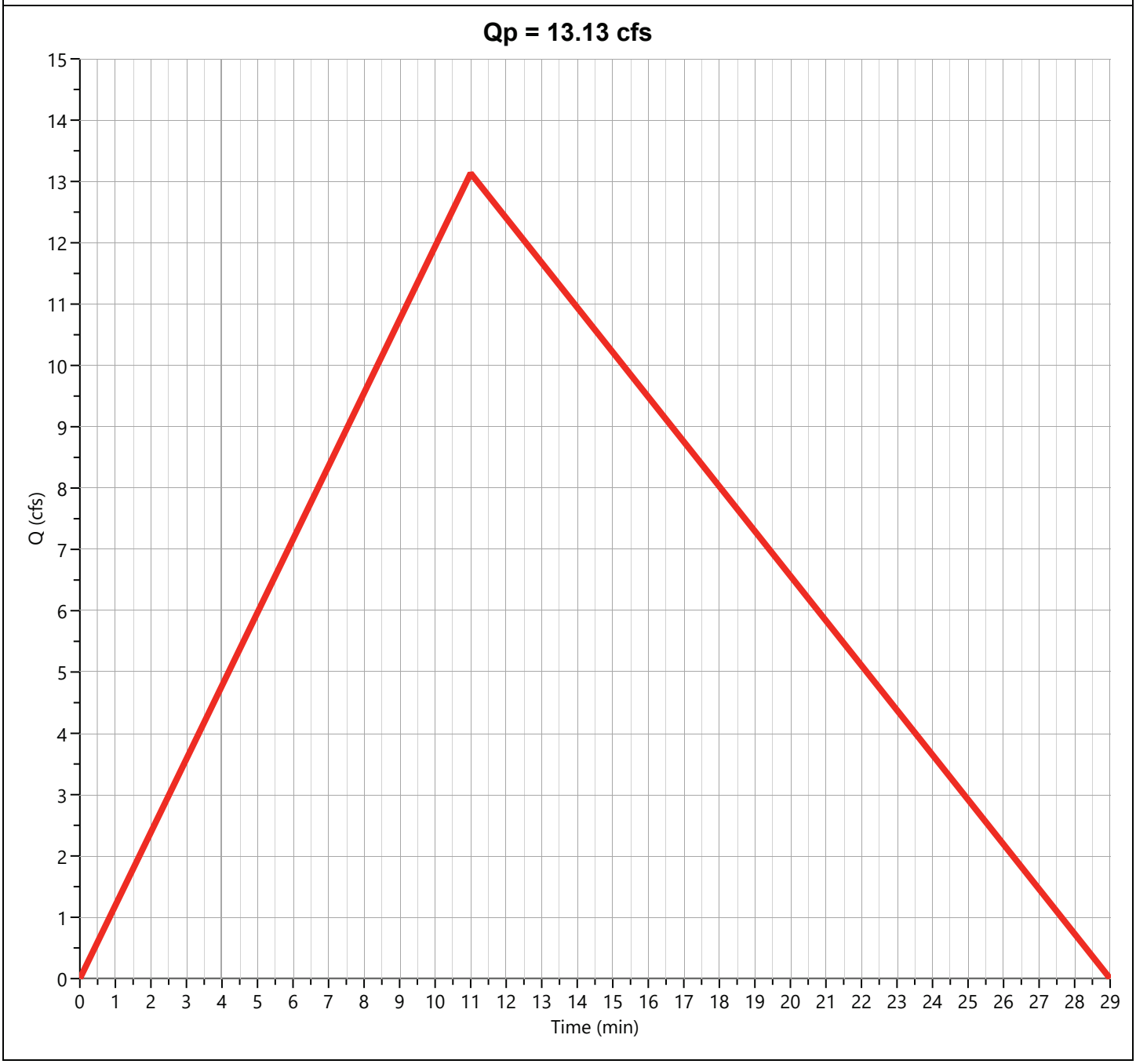
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "A"

Hyd. No. 1

Hydrograph Type	= Rational	Peak Flow	= 13.13 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 11,572 cuft
Drainage Area	= 3.2 ac	Runoff Coeff.	= 0.62
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.62 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

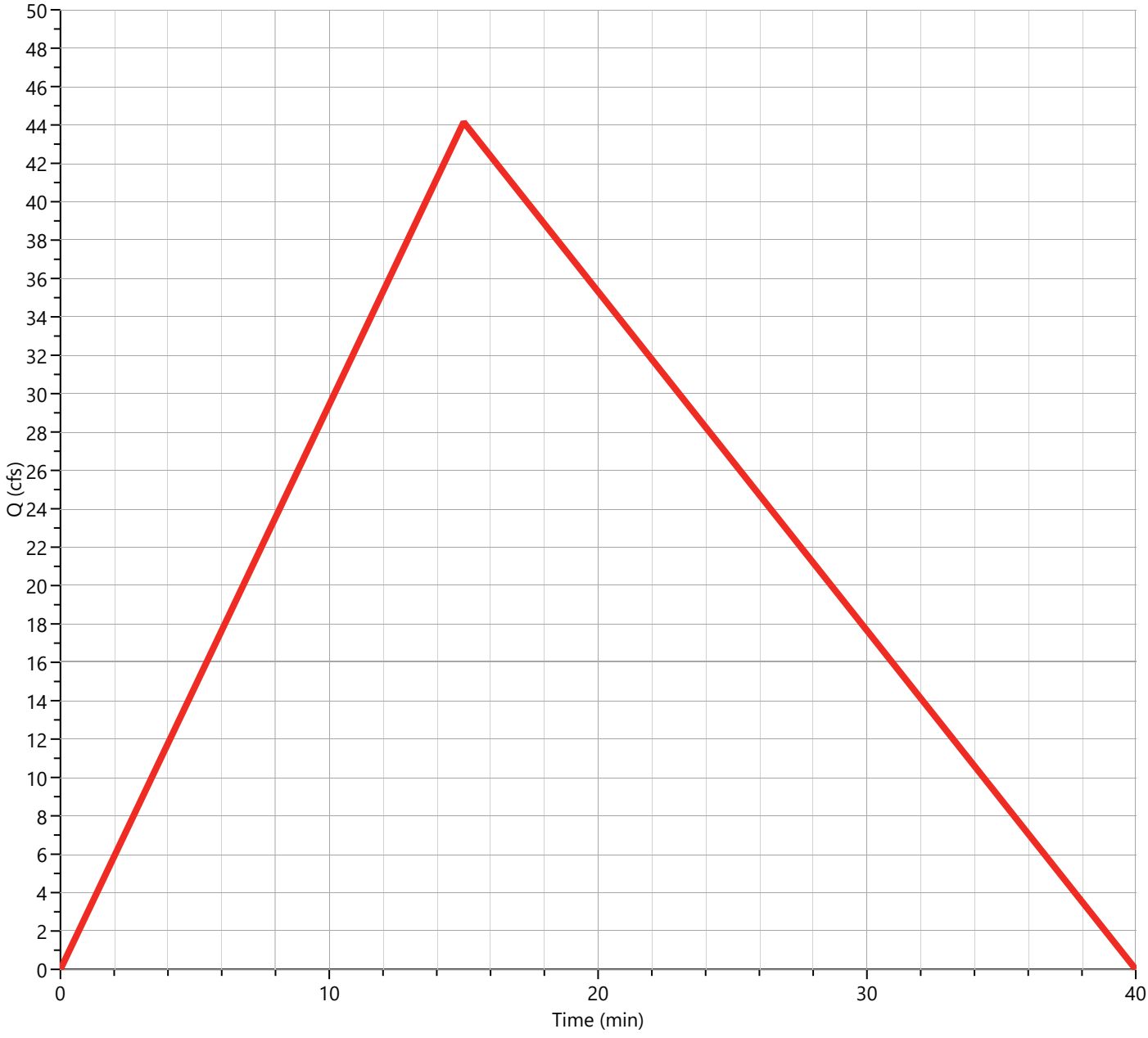
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "B"

Hyd. No. 2

Hydrograph Type	= Rational	Peak Flow	= 44.15 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 53,043 cuft
Drainage Area	= 14.74 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.76 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

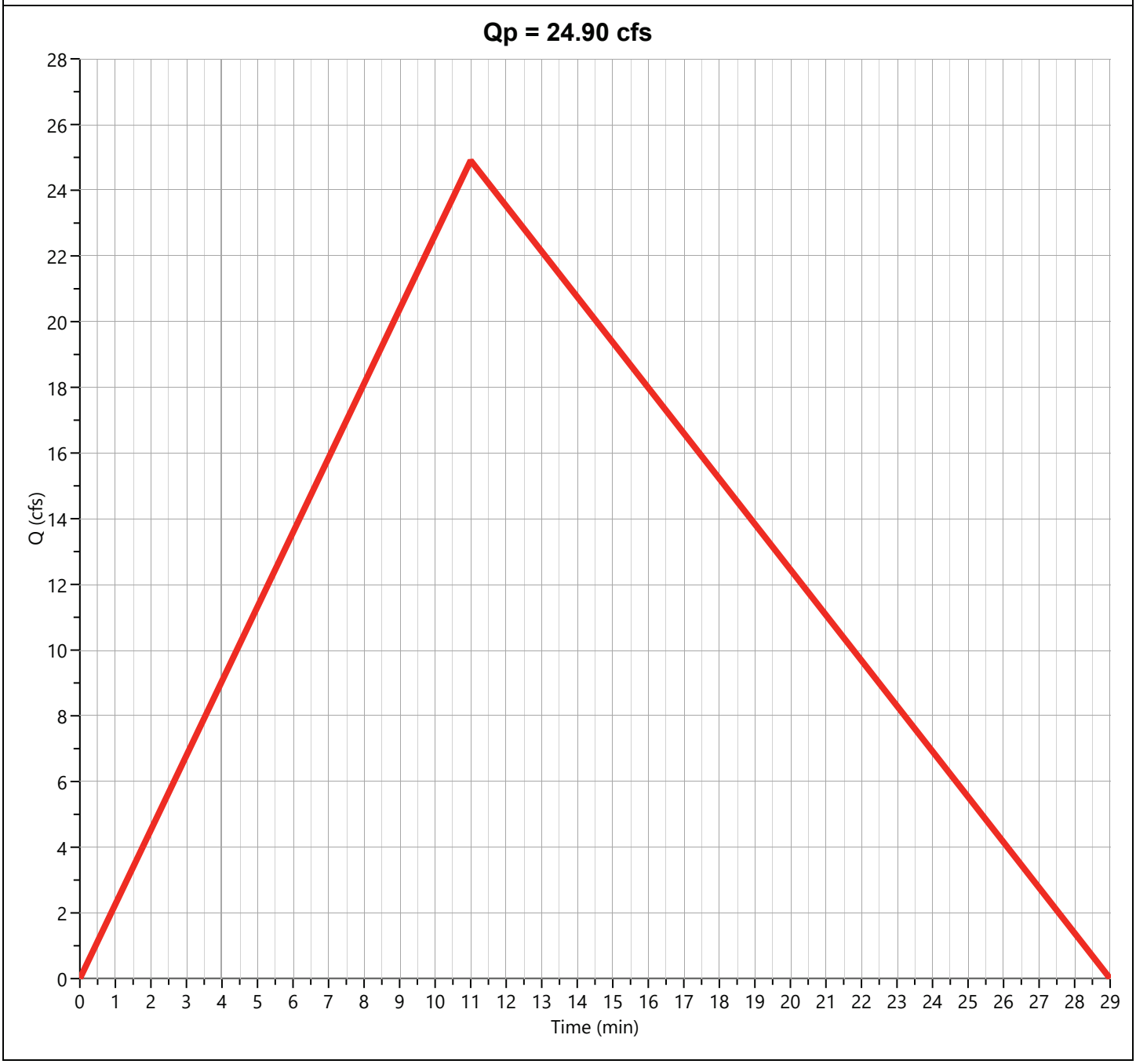
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "C"

Hyd. No. 3

Hydrograph Type	= Rational	Peak Flow	= 24.90 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 21,943 cuft
Drainage Area	= 6.84 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.62 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

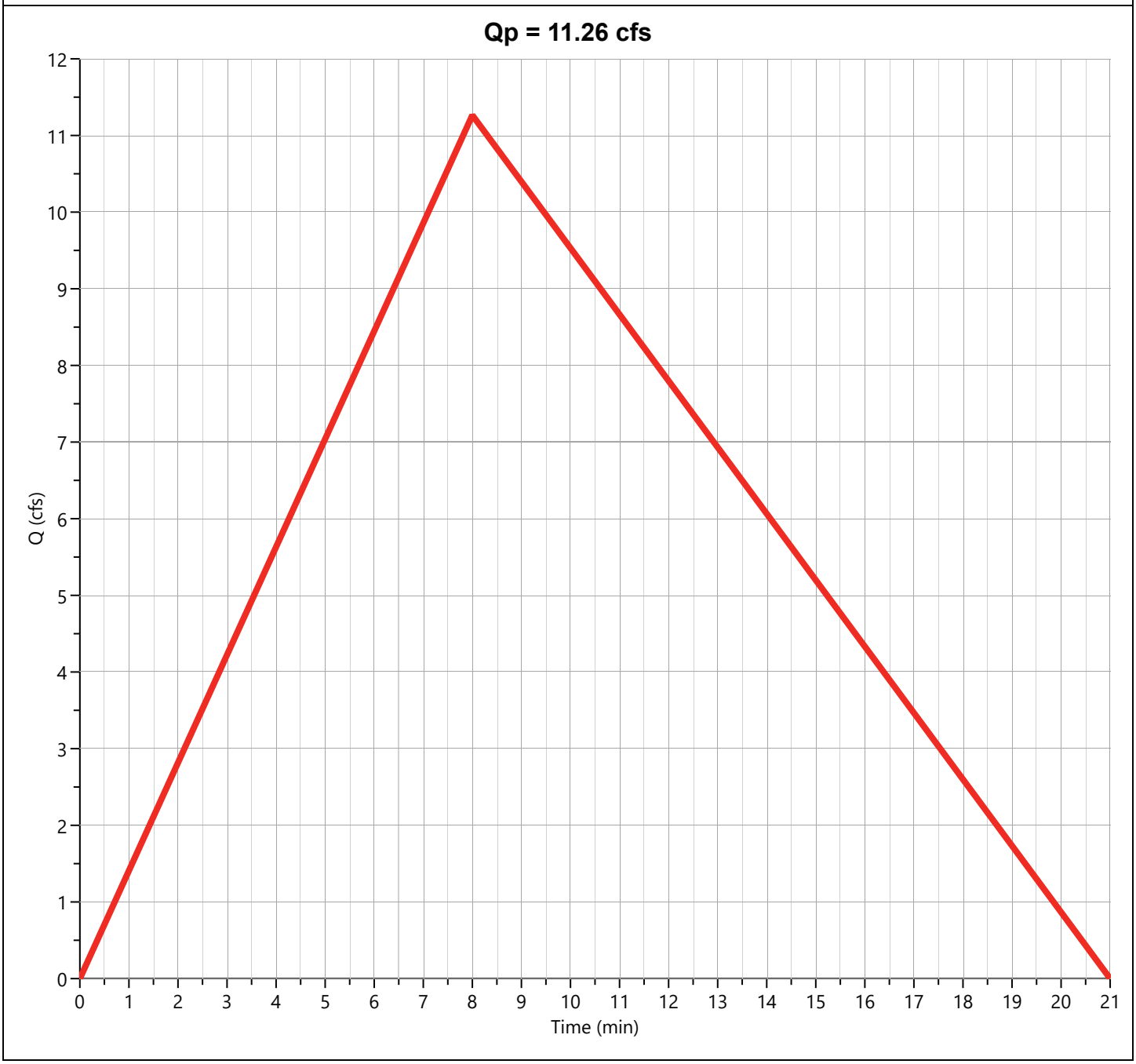
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "D"

Hyd. No. 4

Hydrograph Type	= Rational	Peak Flow	= 11.26 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 7,218 cuft
Drainage Area	= 2.95 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.64 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

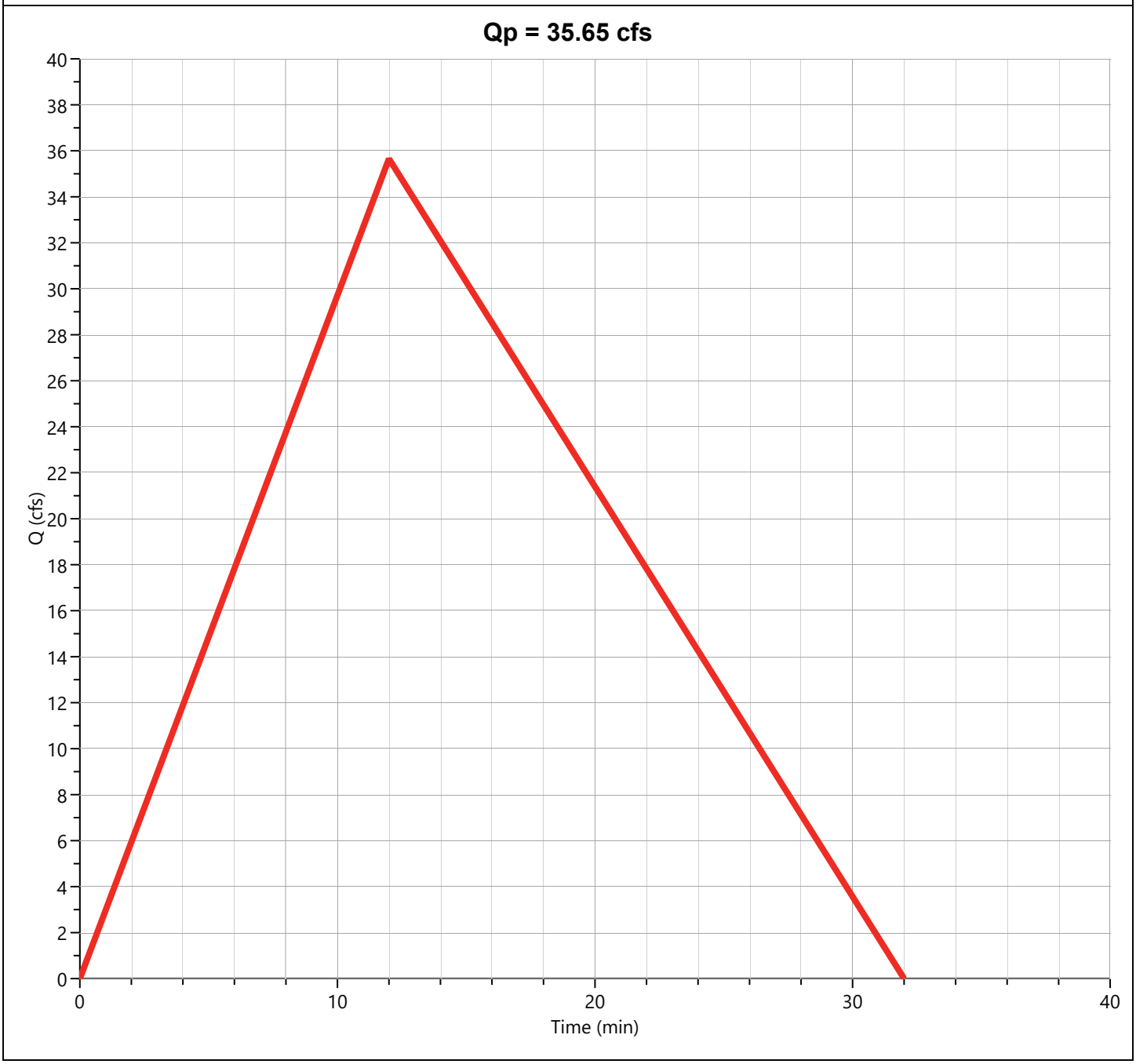
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-1"

Hyd. No. 5

Hydrograph Type	= Rational	Peak Flow	= 35.65 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 34,268 cuft
Drainage Area	= 11.2 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.37 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

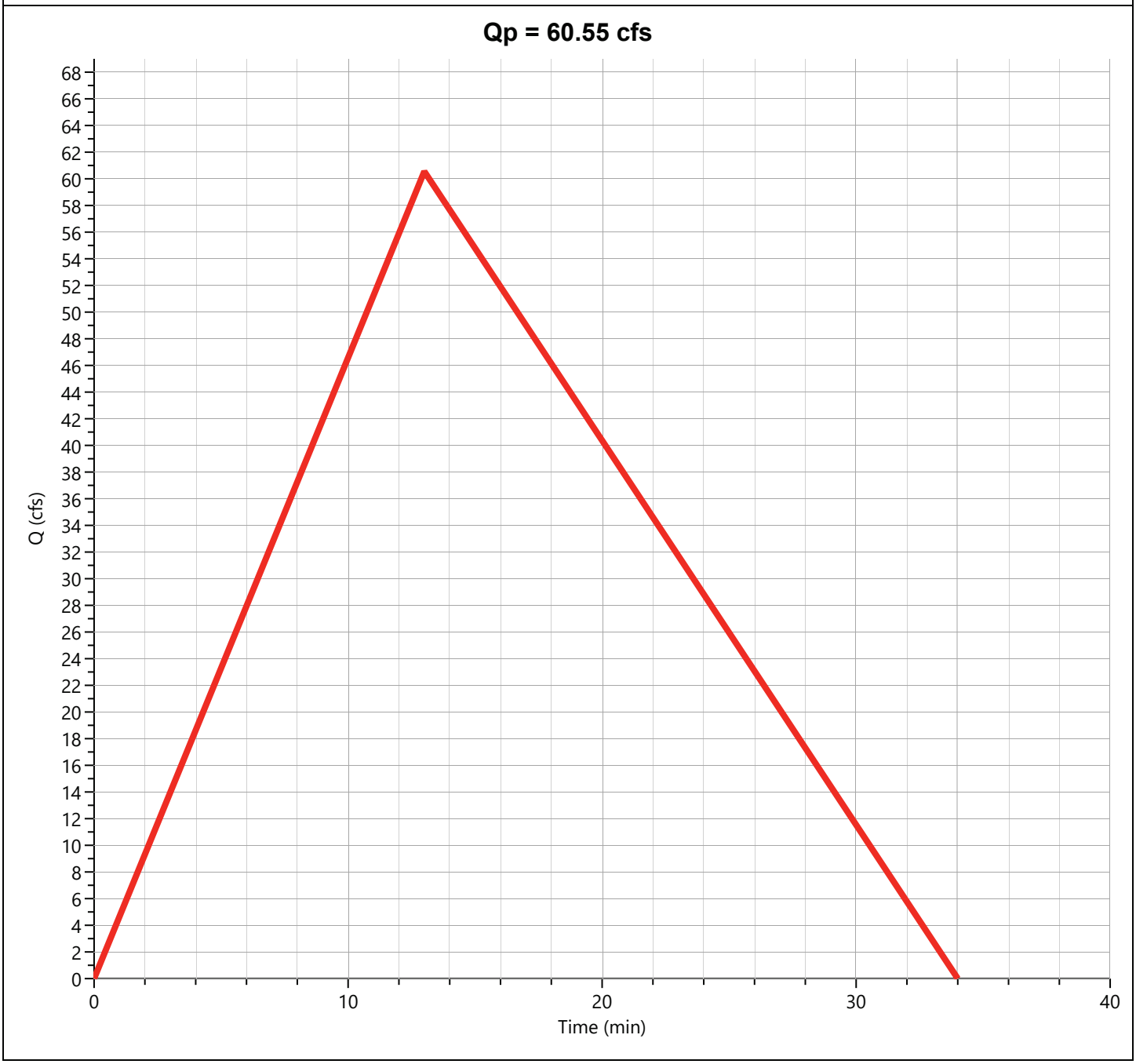
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-2"

Hyd. No. 6

Hydrograph Type	= Rational	Peak Flow	= 60.55 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 63,053 cuft
Drainage Area	= 18.96 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.14 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

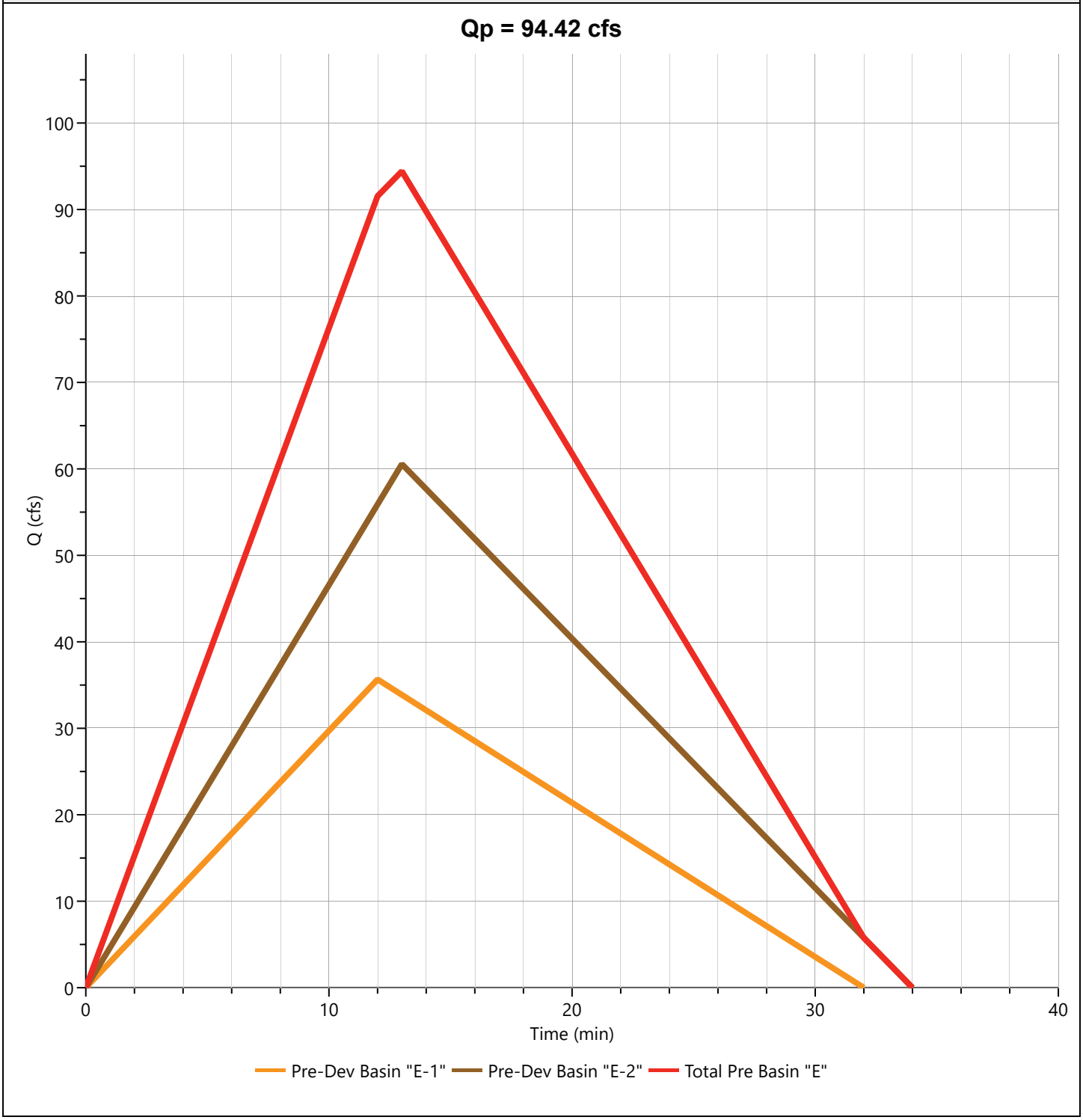
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Pre Basin "E"

Hyd. No. 7

Hydrograph Type	= Junction	Peak Flow	= 94.42 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 95,989 cuft
Inflow Hydrographs	= 5, 6	Total Contrib. Area	= 30.16 ac



Hydrograph Report

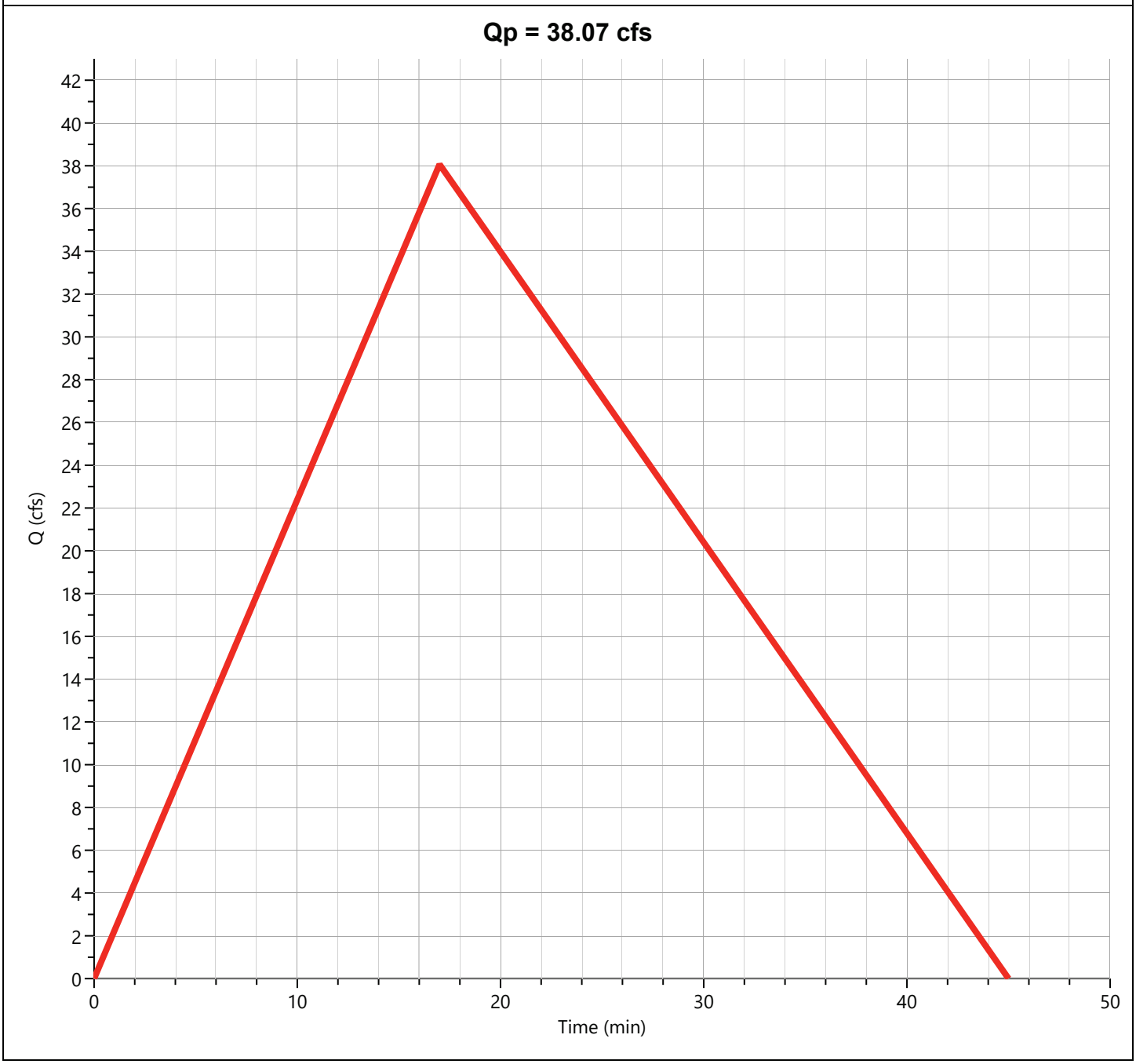
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "F"

Hyd. No. 8

Hydrograph Type	= Rational	Peak Flow	= 38.07 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 51,833 cuft
Drainage Area	= 13.19 ac	Runoff Coeff.	= 0.53
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.45 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

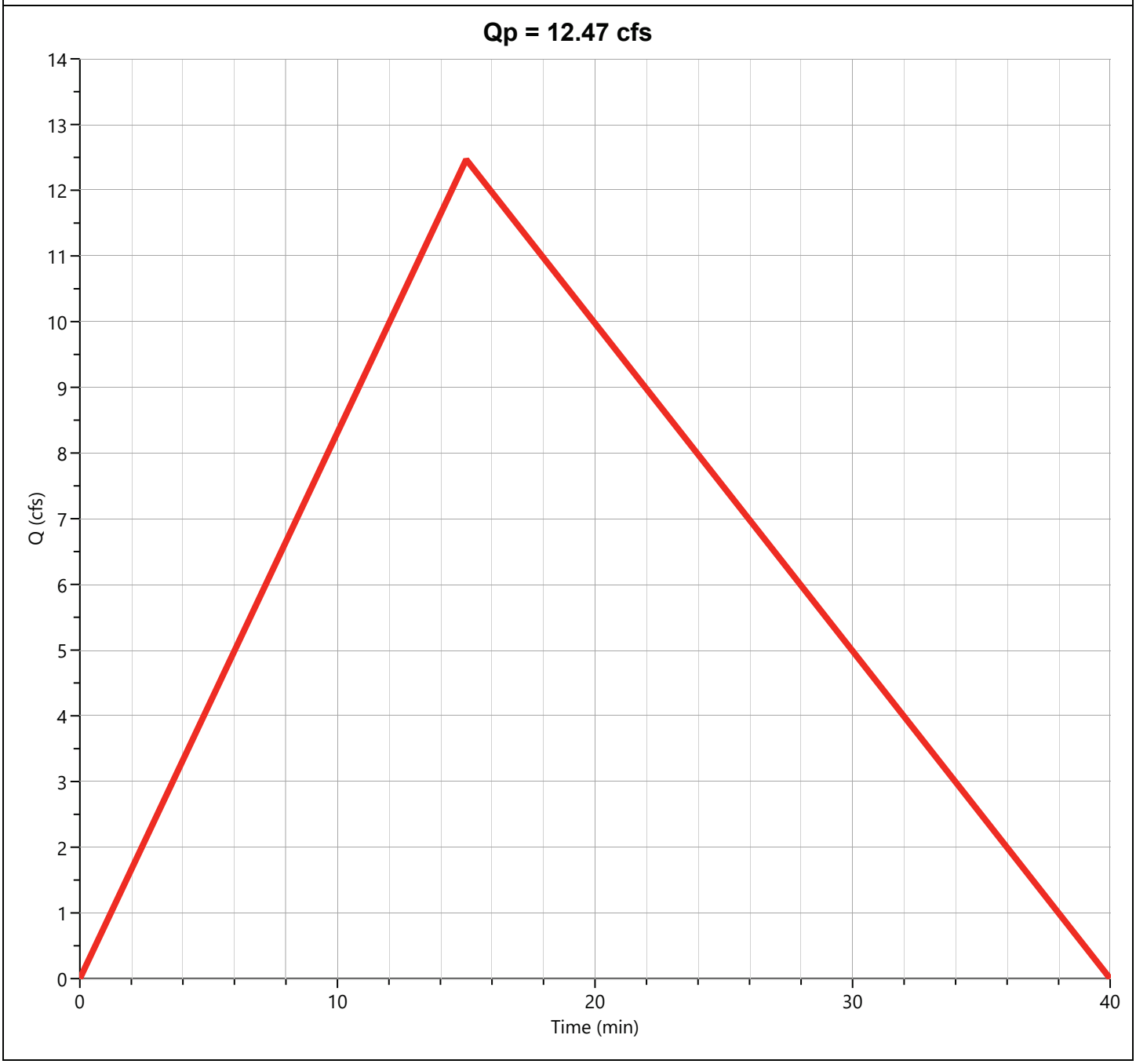
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin A

Hyd. No. 9

Hydrograph Type	= Rational	Peak Flow	= 12.47 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 14,979 cuft
Drainage Area	= 3.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.76 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin B

Hyd. No. 10

Hydrograph Type	= Rational	Peak Flow	= 34.13 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.35 hrs
Time Interval	= 1 min	Runoff Volume	= 57,410 cuft
Drainage Area	= 12.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 21.0 min
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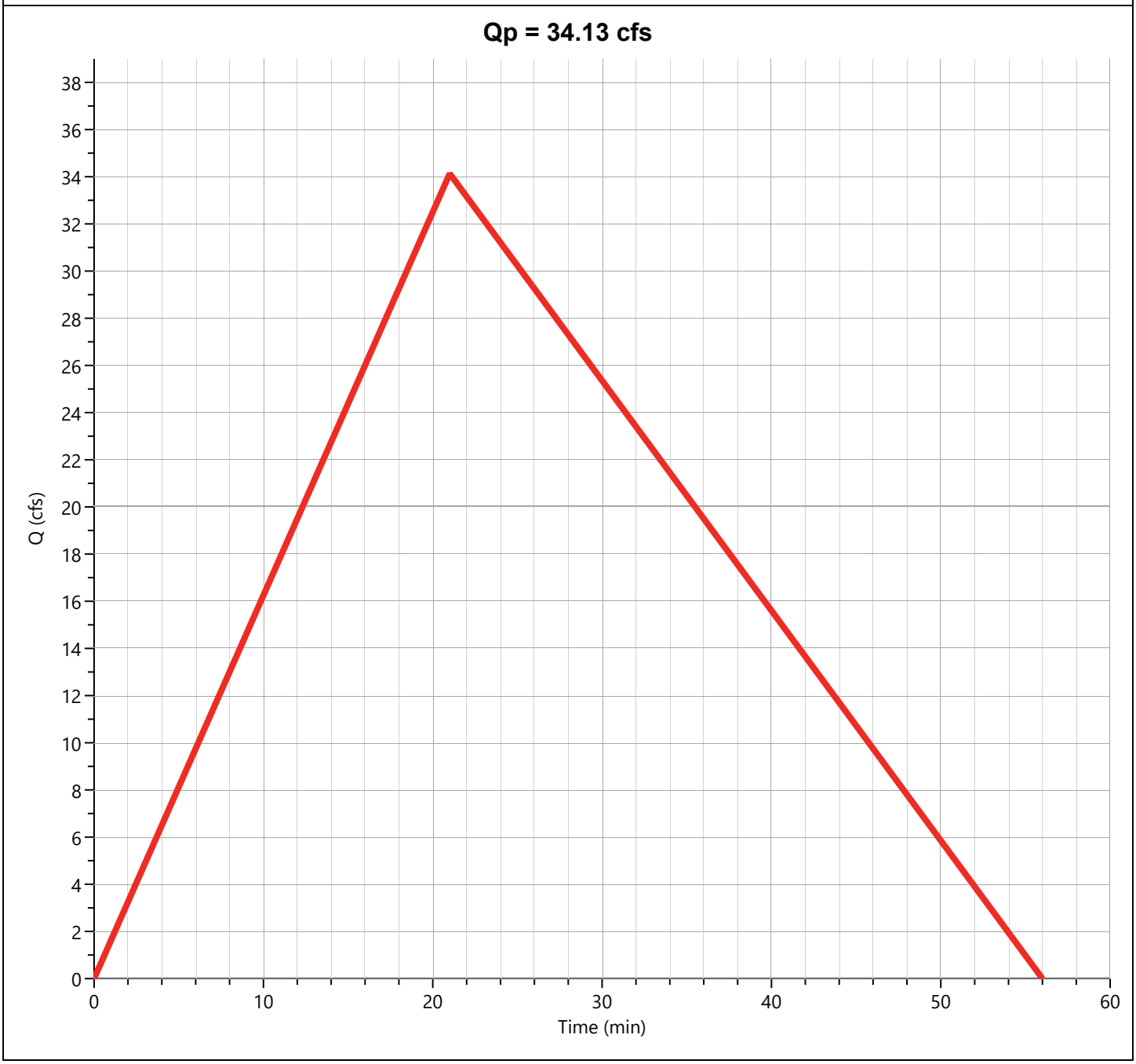
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

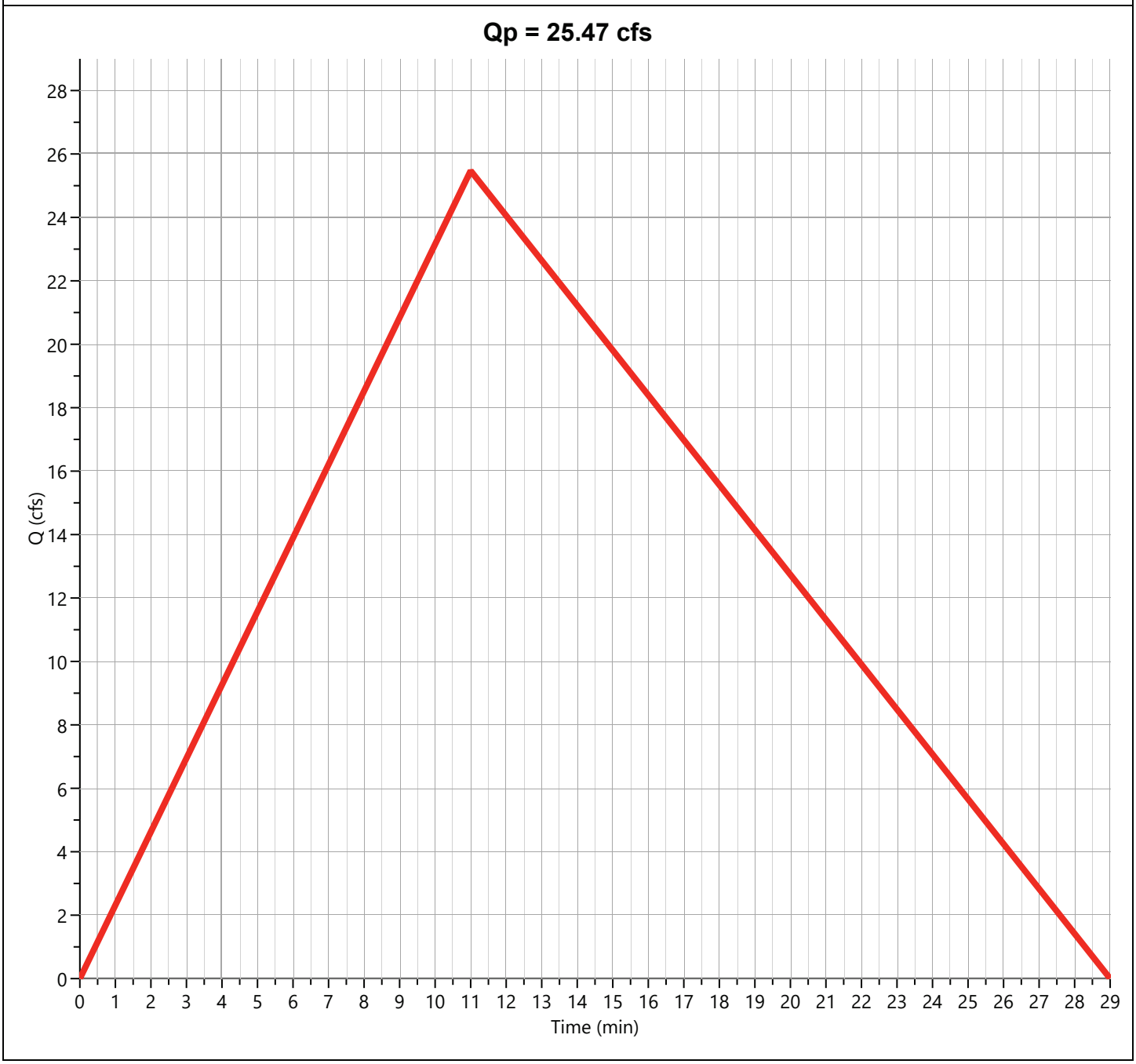
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "C"

Hyd. No. 11

Hydrograph Type	= Rational	Peak Flow	= 25.47 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 22,441 cuft
Drainage Area	= 6.75 ac	Runoff Coeff.	= 0.57
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.62 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

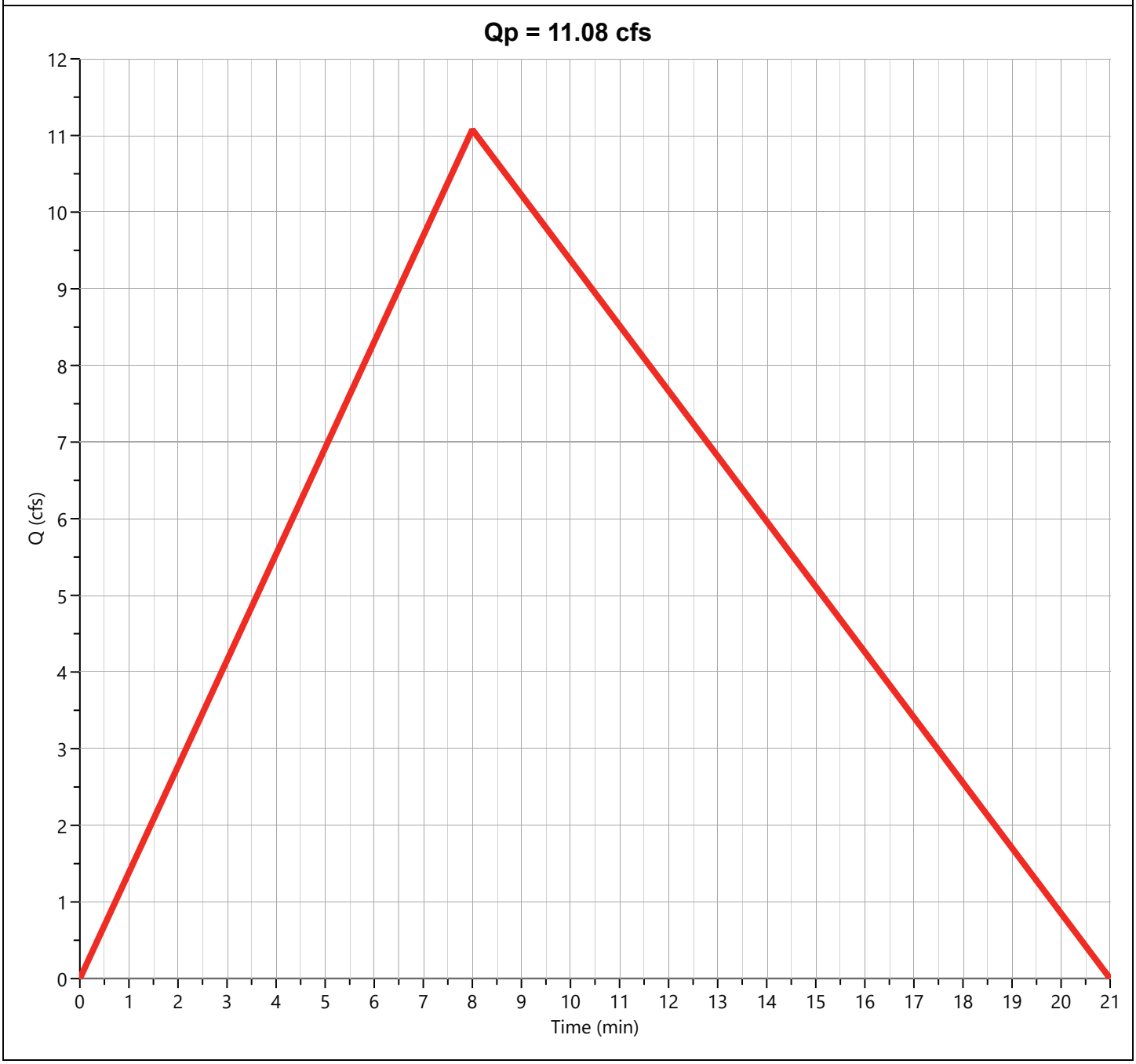
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "D"

Hyd. No. 12

Hydrograph Type	= Rational	Peak Flow	= 11.08 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 7,098 cuft
Drainage Area	= 2.59 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.64 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

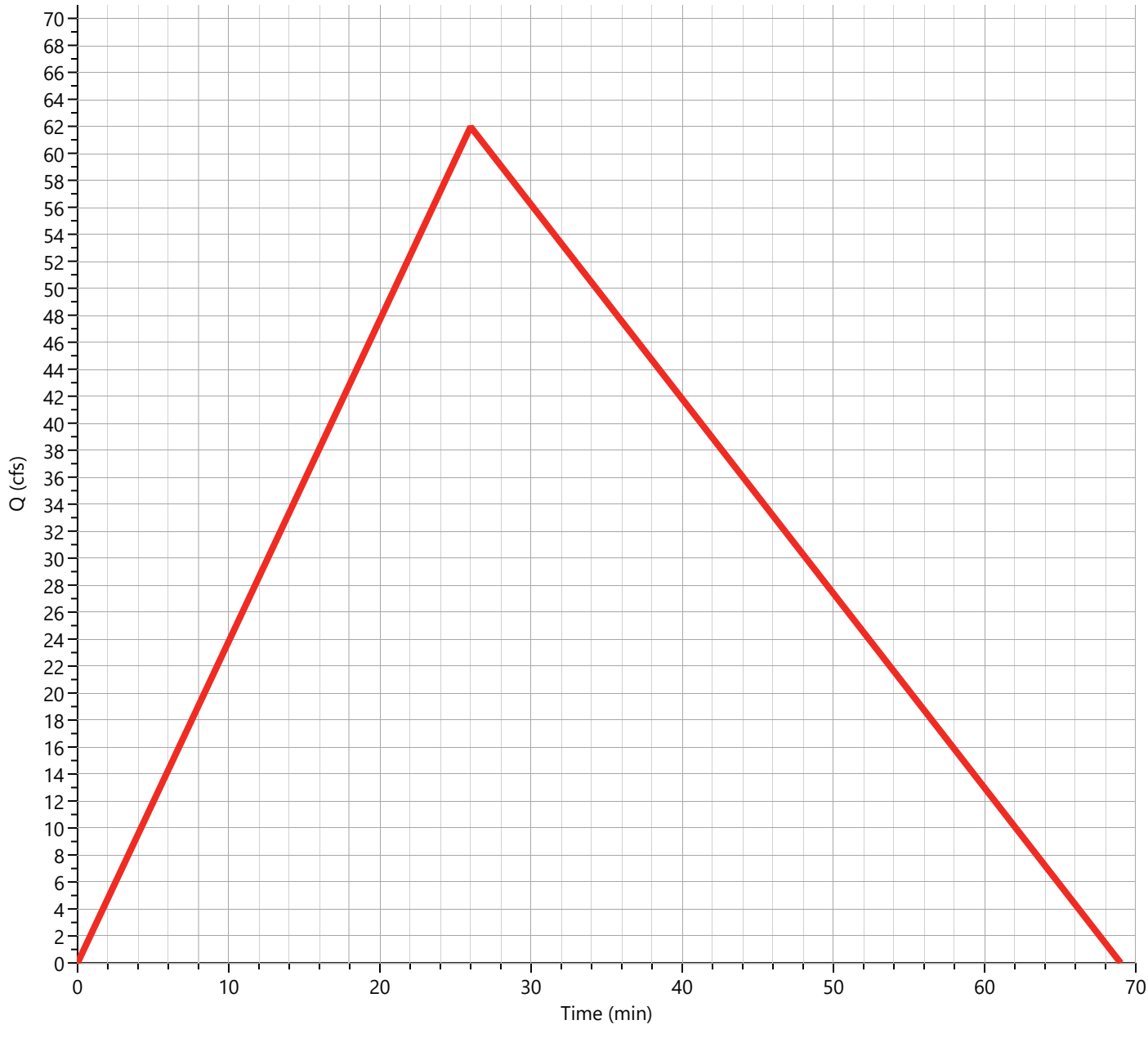
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-1"

Hyd. No. 13

Hydrograph Type	= Rational	Peak Flow	= 61.96 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.43 hrs
Time Interval	= 1 min	Runoff Volume	= 129,045 cuft
Drainage Area	= 18.36 ac	Runoff Coeff.	= 0.75
Tc Method	= User	Time of Conc. (Tc)	= 26.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.50 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

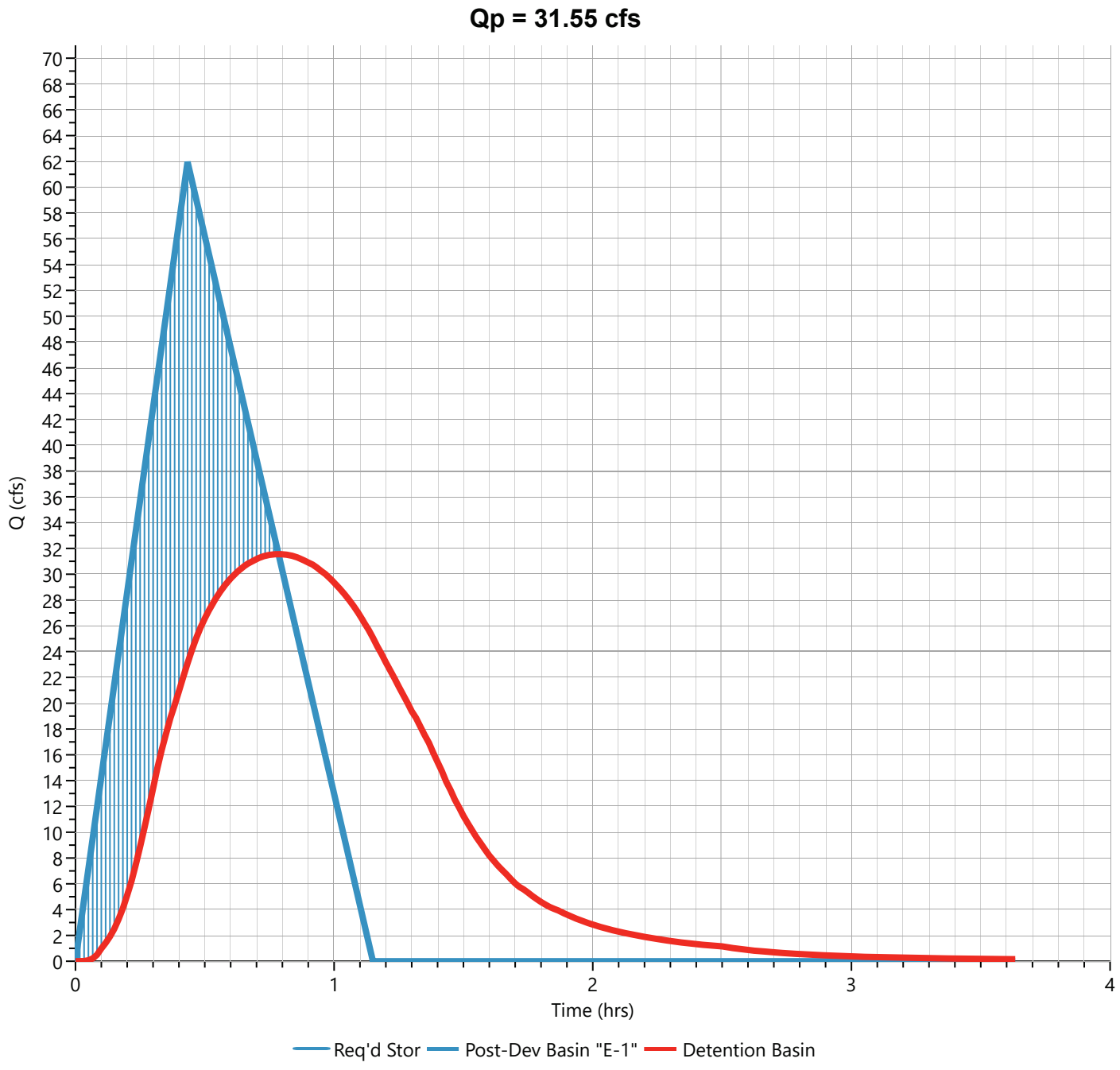
Detention Basin

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 31.55 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.78 hrs
Time Interval	= 1 min	Hydrograph Volume	= 128,243 cuft
Inflow Hydrograph	= 13 - Post-Dev Basin "E-1"	Max. Elevation	= 471.22 ft
Pond Name	= Hilltop Detention Pond	Max. Storage	= 57,532 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 26 min



Hydrograph Report

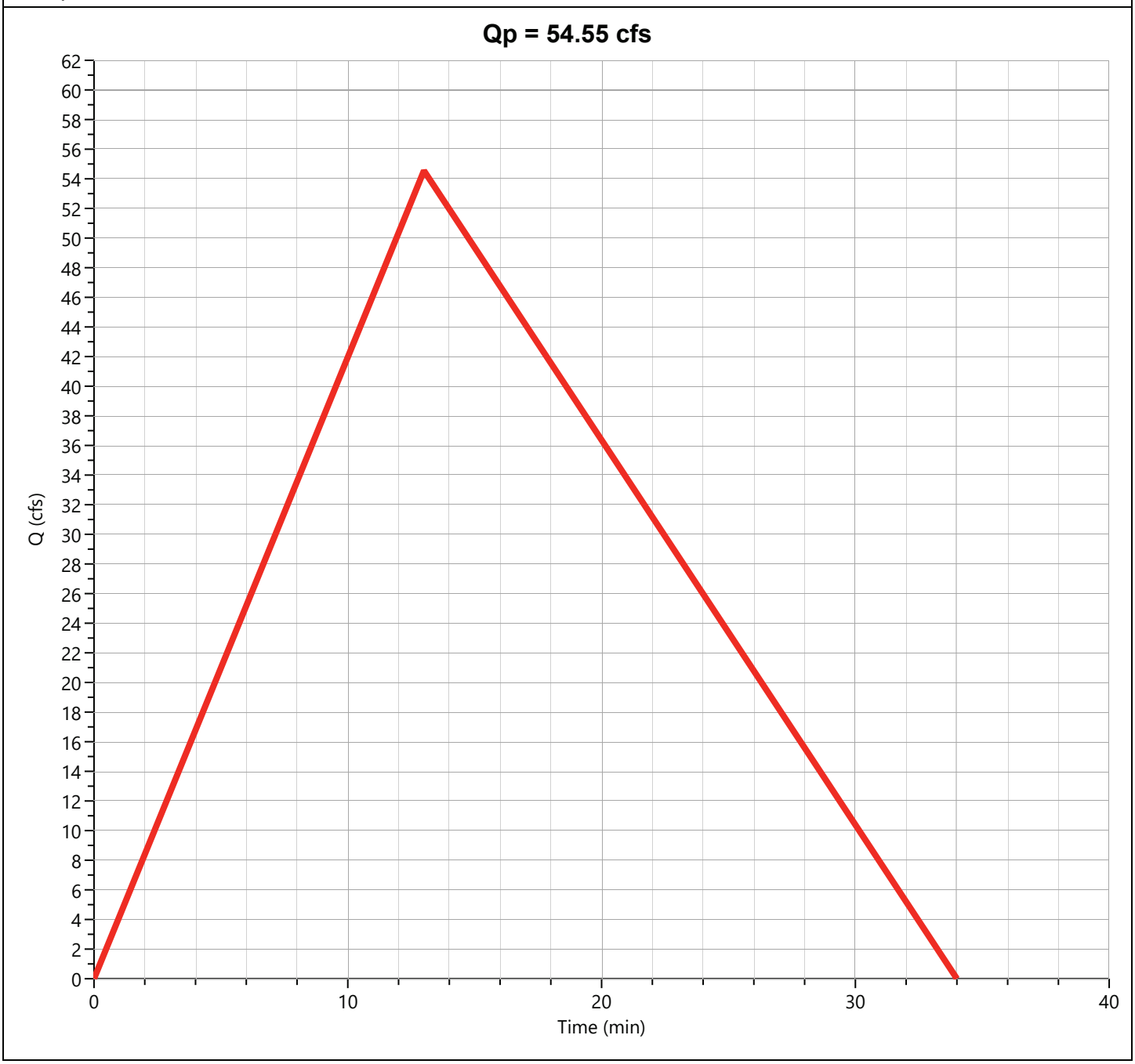
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-2"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 54.55 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 56,801 cuft
Drainage Area	= 15.86 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.14 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

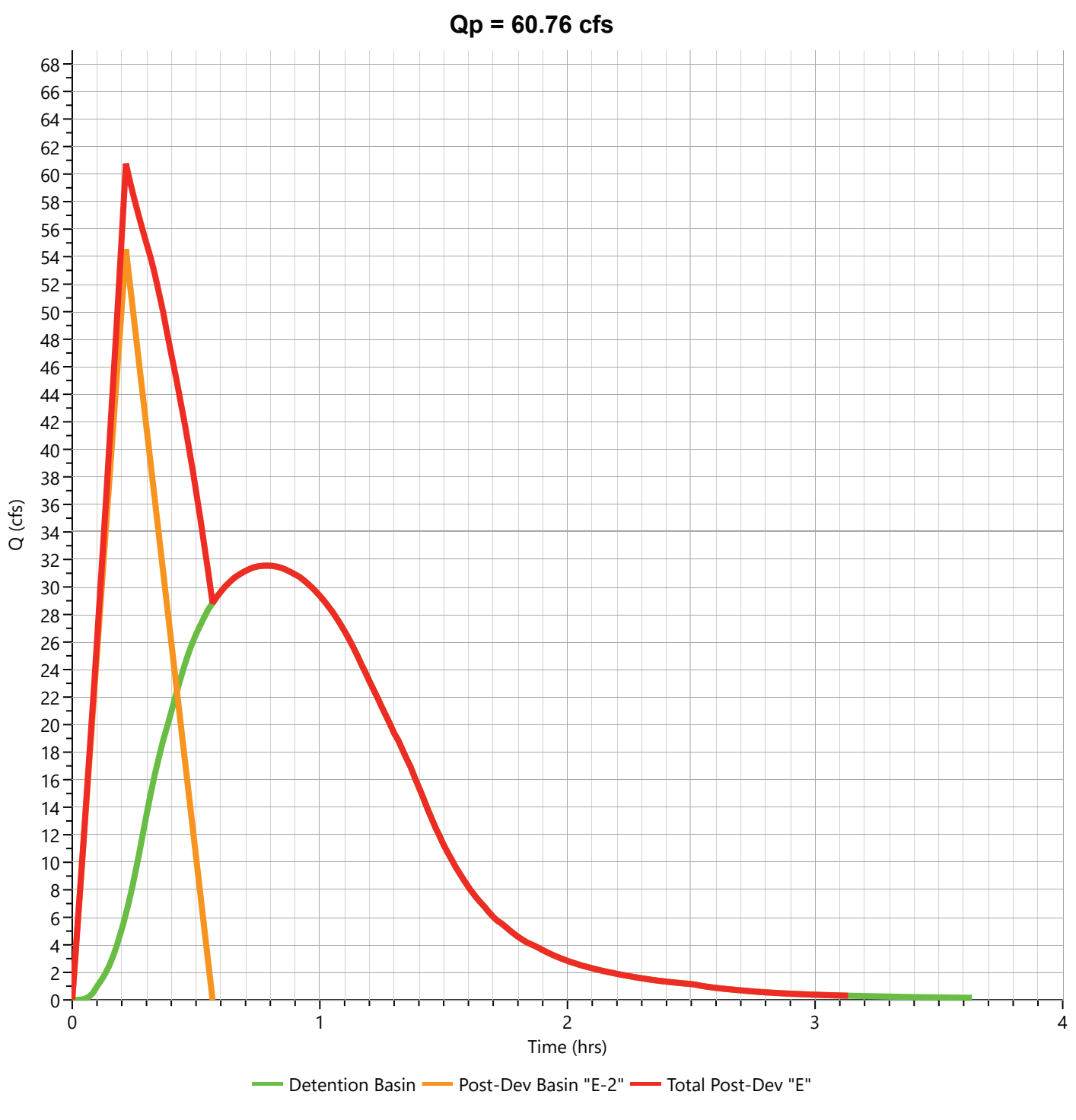
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Post-Dev "E"

Hyd. No. 16

Hydrograph Type	= Junction	Peak Flow	= 60.76 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 183,883 cuft
Inflow Hydrographs	= 15	Total Contrib. Area	= 15.86 ac



Hydrograph Report

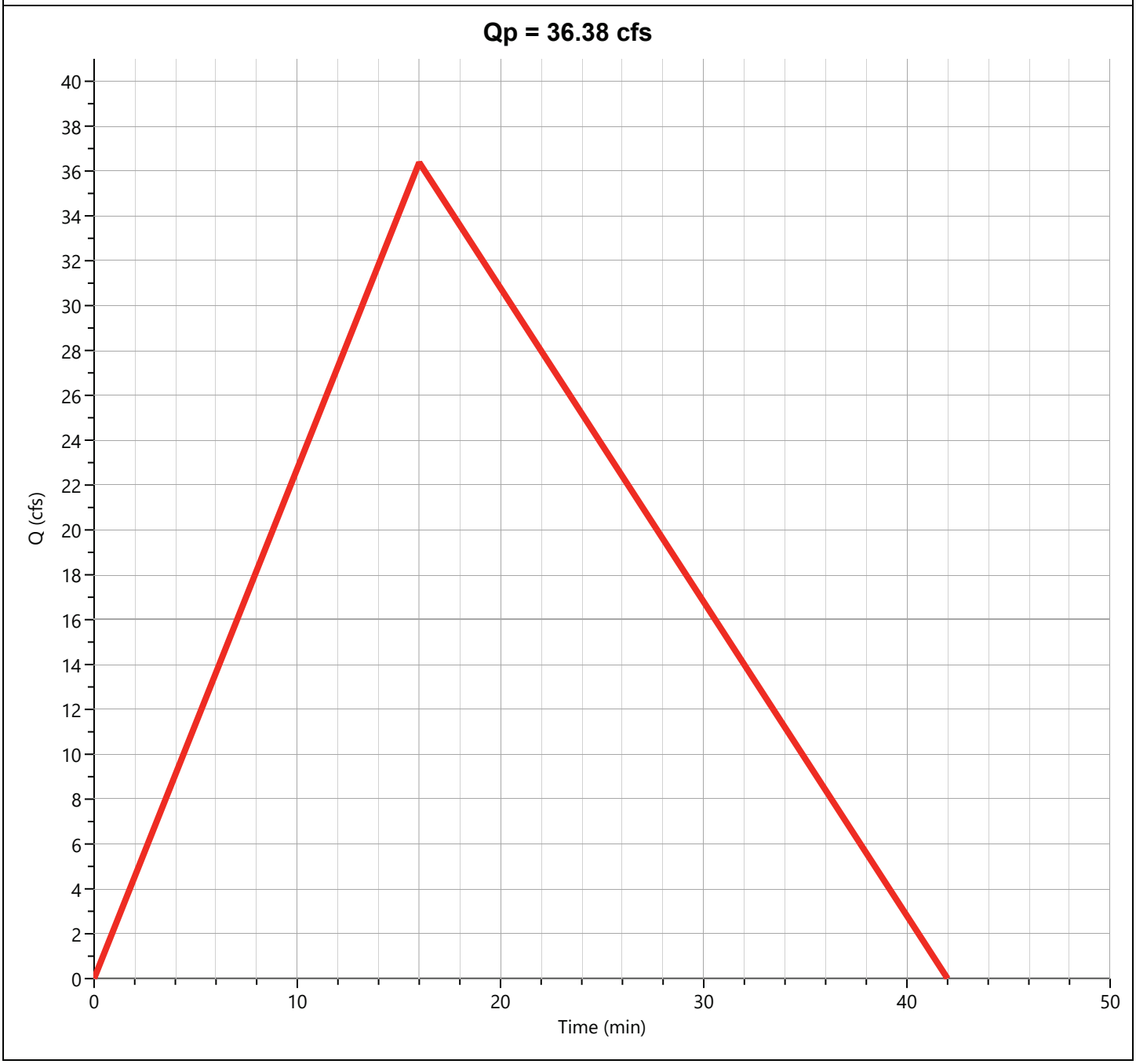
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "F"

Hyd. No. 17

Hydrograph Type	= Rational	Peak Flow	= 36.38 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 46,623 cuft
Drainage Area	= 11.61 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 16.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.60 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Design Storm Report

Custom Storm filename:

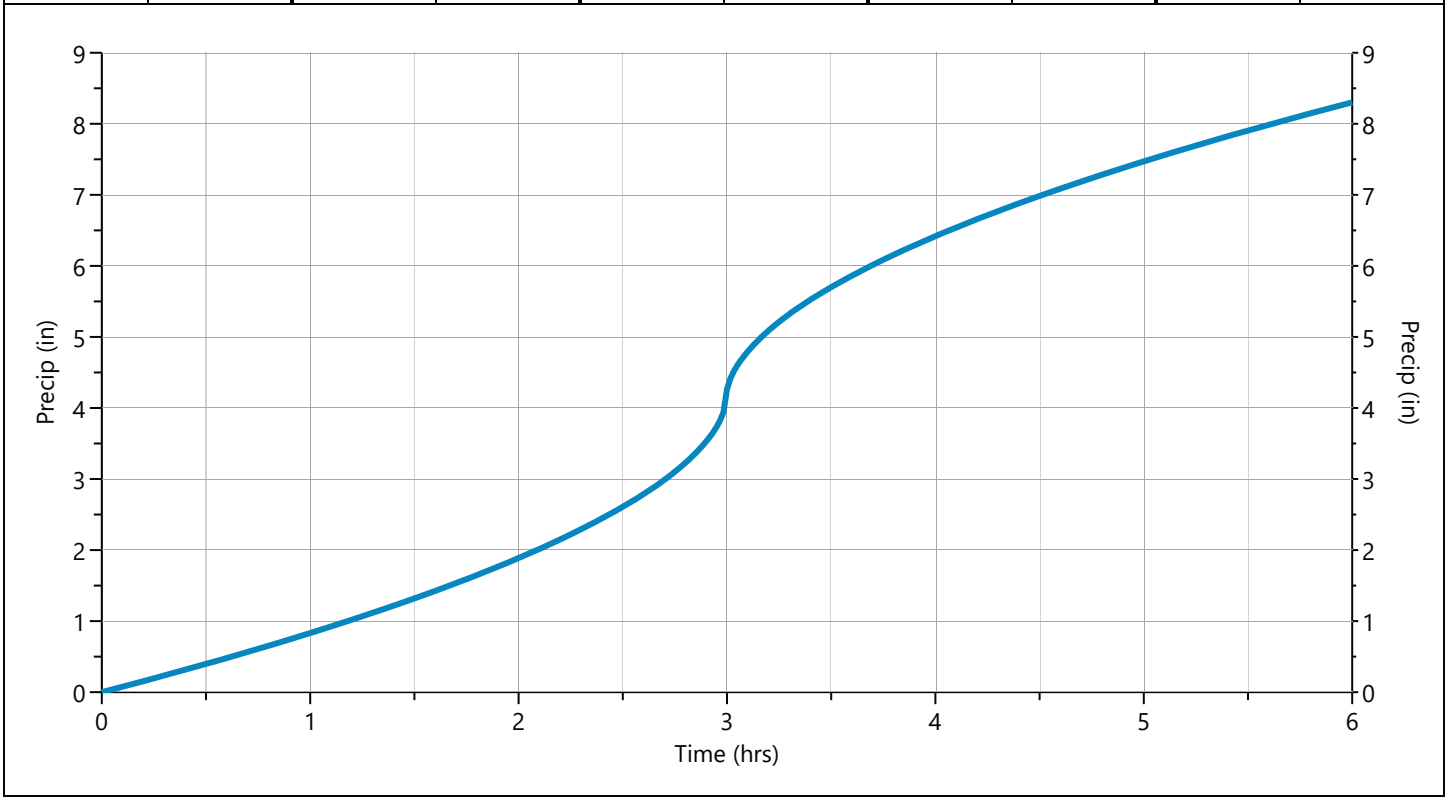
Hydrology Studio v 3.0.0.44

09-29-2026

Storm Distribution: IDF Based - Synthetic, 6-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	10-yr	✔ 25-yr	50-yr	100-yr	
6 hrs	0	5.32	0	6.37	7.21	8.30	9.12	9.85	

Incremental Rainfall Distribution, 25-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
2.50	0.028301	2.68	0.034665	2.87	0.050706	3.05	0.083084	3.23	0.040316
2.52	0.028731	2.70	0.035505	2.88	0.053735	3.07	0.072259	3.25	0.039066
2.53	0.029183	2.72	0.036415	2.90	0.057438	3.08	0.064975	3.27	0.037932
2.55	0.029659	2.73	0.037404	2.92	0.062117	3.10	0.059630	3.28	0.036899
2.57	0.030161	2.75	0.038486	2.93	0.068305	3.12	0.055487	3.30	0.035951
2.58	0.030691	2.77	0.039675	2.95	0.077064	3.13	0.052150	3.32	0.035077
2.60	0.031253	2.78	0.040992	2.97	0.090954	3.15	0.049384	3.33	0.034269
2.62	0.031849	2.80	0.042462	2.98	0.118769	3.17	0.047043	3.35	0.033518
2.63	0.032484	2.82	0.044116	**3.00**	**0.323614**	3.18	0.045025	3.37	0.032817
2.65	0.033161	2.83	0.045998	3.02	0.150593	3.20	0.043263	3.38	0.032161
2.67	0.033886	2.85	0.048168	3.03	0.101903	3.22	0.041706	3.40	0.031547



Hydrograph 50-yr Summary

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	Rational	Pre-Dev Basin "A"	14.36	0.18	12,653	----		
2	Rational	Pre-Dev Basin "B"	48.29	0.25	58,019	----		
3	Rational	Pre-Dev Basin "C"	27.23	0.18	23,992	----		
4	Rational	Pre-Dev Basin "D"	12.31	0.13	7,889	----		
5	Rational	Pre-Dev Basin "E-1"	38.98	0.20	37,472	----		
6	Rational	Pre-Dev Basin "E-2"	66.22	0.22	68,955	----		
7	Junction	Total Pre Basin "E"	103.3	0.22	104,970	5, 6		
8	Rational	Pre-Dev Basin "F"	41.64	0.28	56,705	----		
9	Rational	Post-Dev Basin A	13.64	0.25	16,384	----		
10	Rational	Post-Dev Basin B	37.35	0.35	62,823	----		
11	Rational	Post-Dev Basin "C"	27.85	0.18	24,537	----		
12	Rational	Post-Dev Basin "D"	12.11	0.13	7,757	----		
13	Rational	Post-Dev Basin "E-1"	67.82	0.43	141,251	----		
14	Pond Route	Detention Basin	33.90	0.80	140,375	13	471.63	64,167
15	Rational	Post-Dev Basin "E-2"	59.65	0.22	62,118	----		
16	Junction	Total Post-Dev "E"	66.71	0.22	201,222	14, 15		
17	Rational	Post-Dev Basin "F"	39.79	0.27	51,000	----		

Hydrograph Report

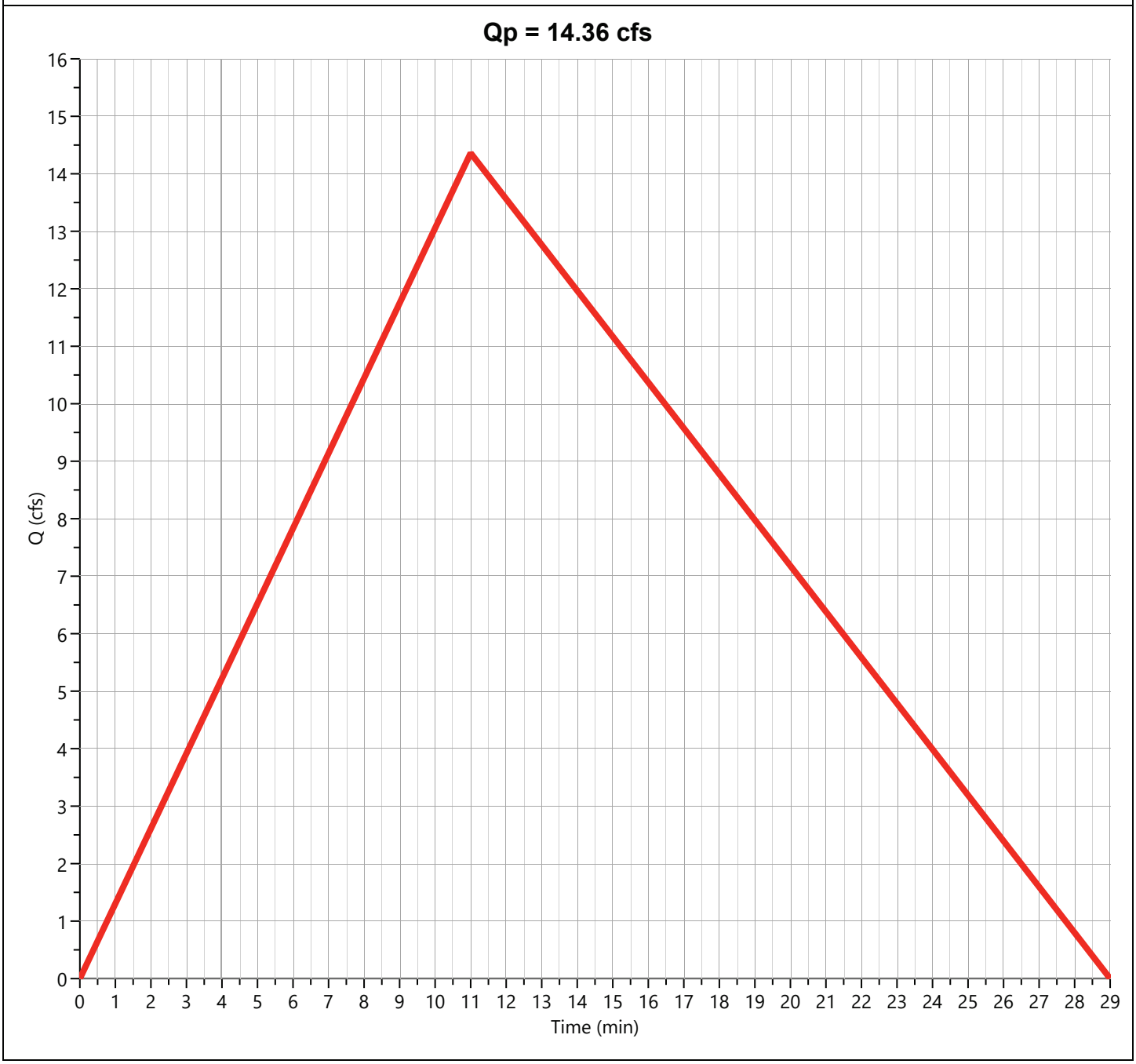
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "A"

Hyd. No. 1

Hydrograph Type	= Rational	Peak Flow	= 14.36 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 12,653 cuft
Drainage Area	= 3.2 ac	Runoff Coeff.	= 0.62
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.24 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

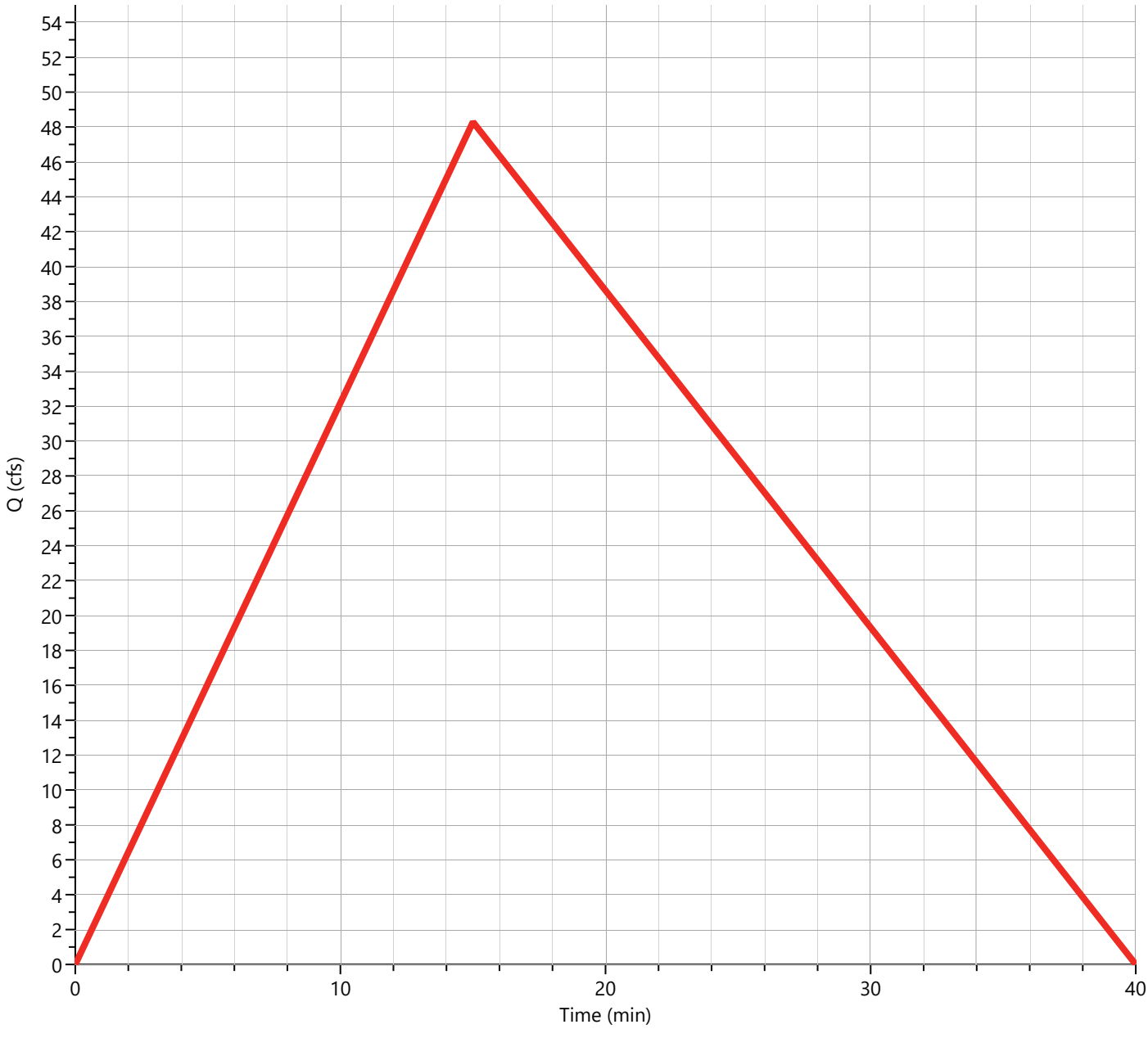
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "B"

Hyd. No. 2

Hydrograph Type	= Rational	Peak Flow	= 48.29 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 58,019 cuft
Drainage Area	= 14.74 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.30 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

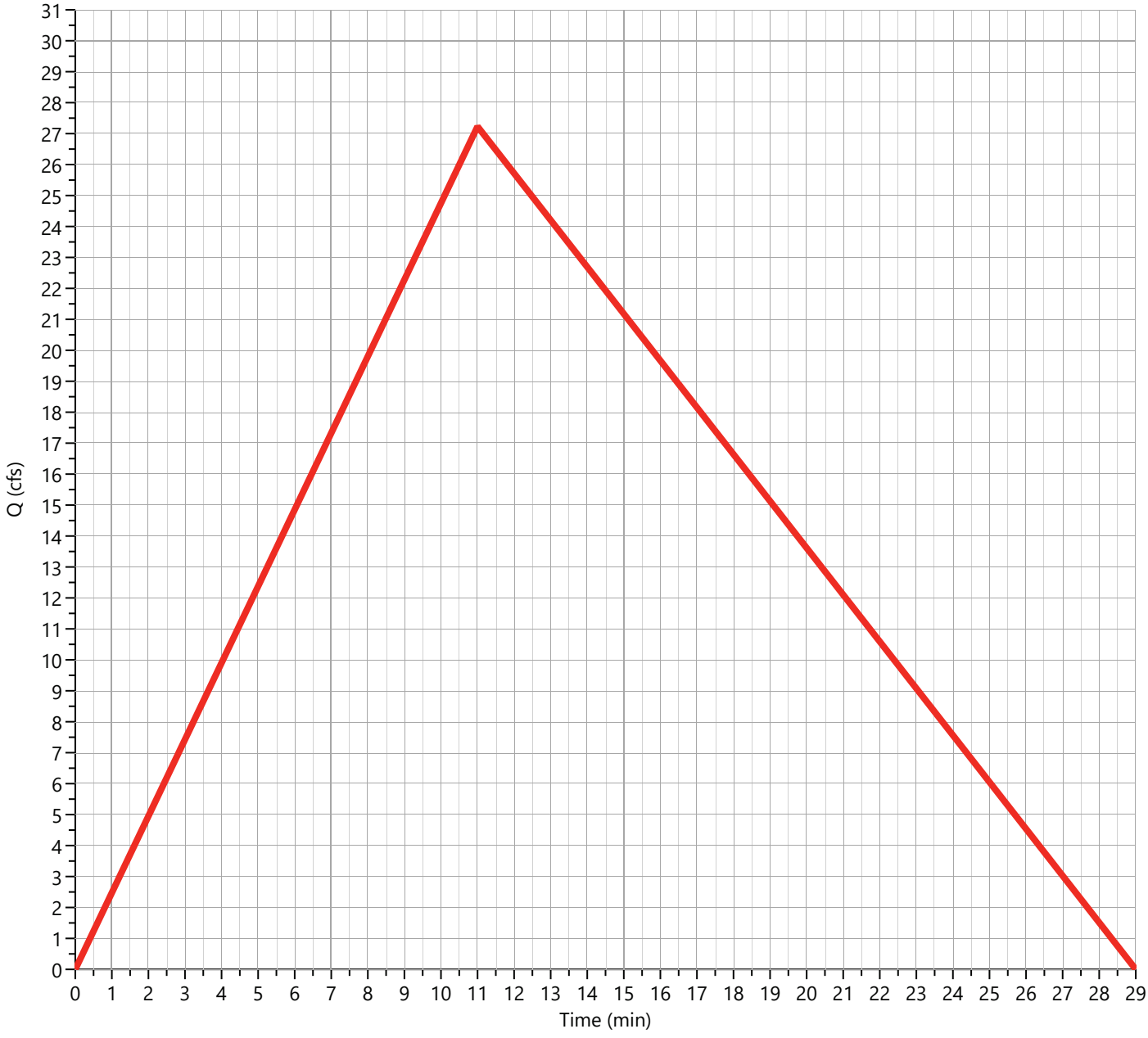
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "C"

Hyd. No. 3

Hydrograph Type	= Rational	Peak Flow	= 27.23 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 23,992 cuft
Drainage Area	= 6.84 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.24 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

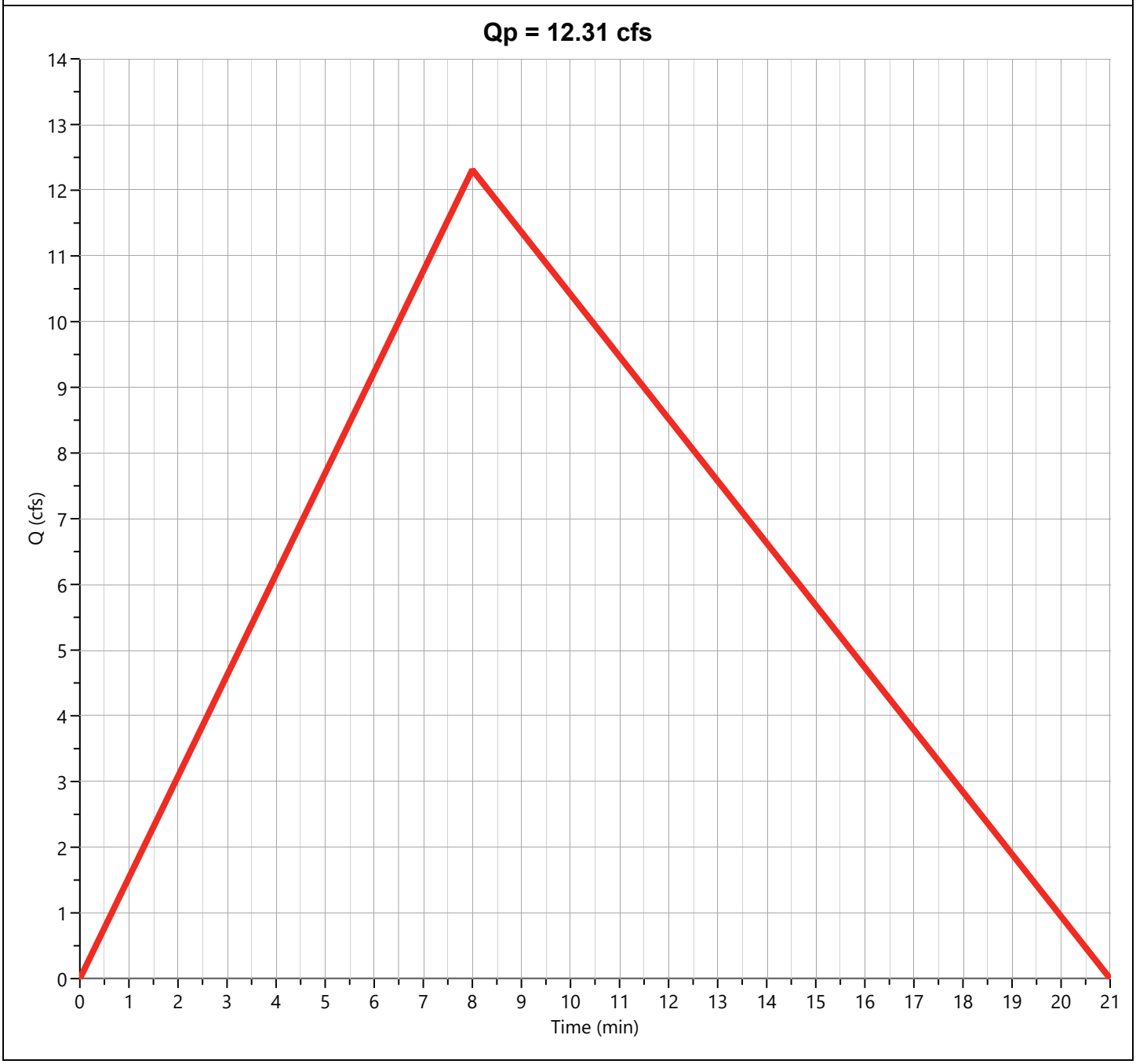
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "D"

Hyd. No. 4

Hydrograph Type	= Rational	Peak Flow	= 12.31 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 7,889 cuft
Drainage Area	= 2.95 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 8.35 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

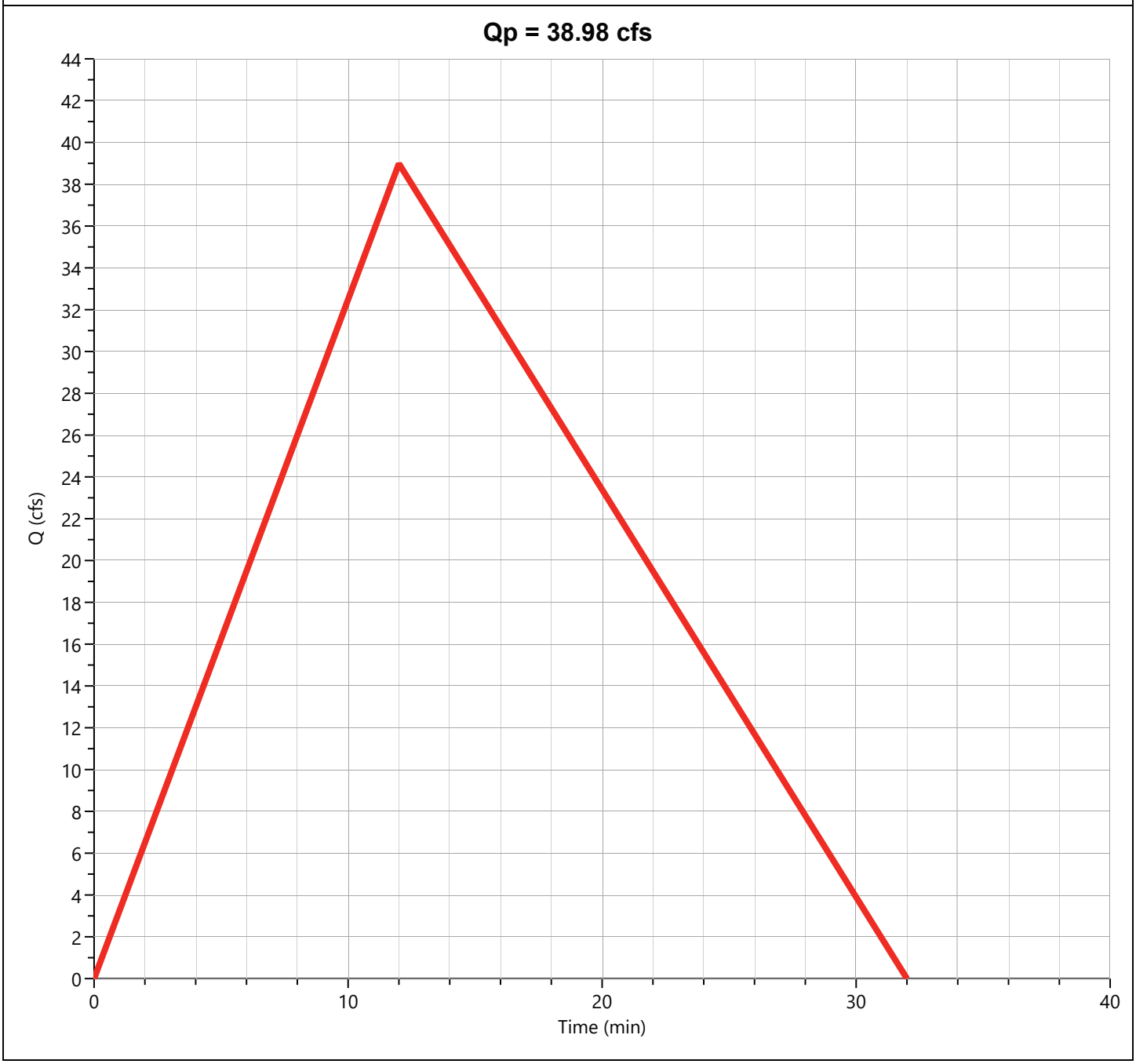
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-1"

Hyd. No. 5

Hydrograph Type	= Rational	Peak Flow	= 38.98 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 37,472 cuft
Drainage Area	= 11.2 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.96 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

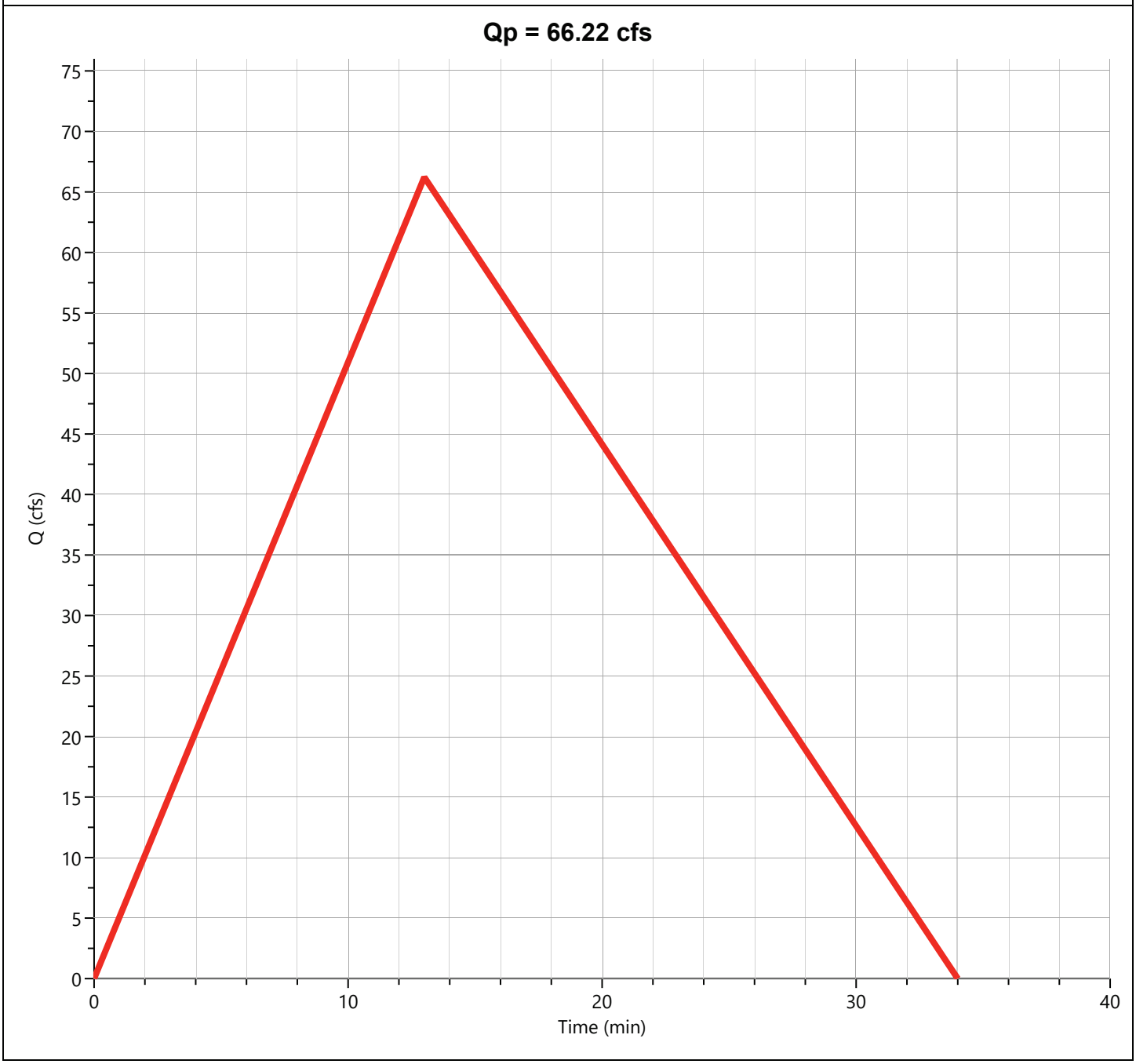
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-2"

Hyd. No. 6

Hydrograph Type	= Rational	Peak Flow	= 66.22 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 68,955 cuft
Drainage Area	= 18.96 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.72 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

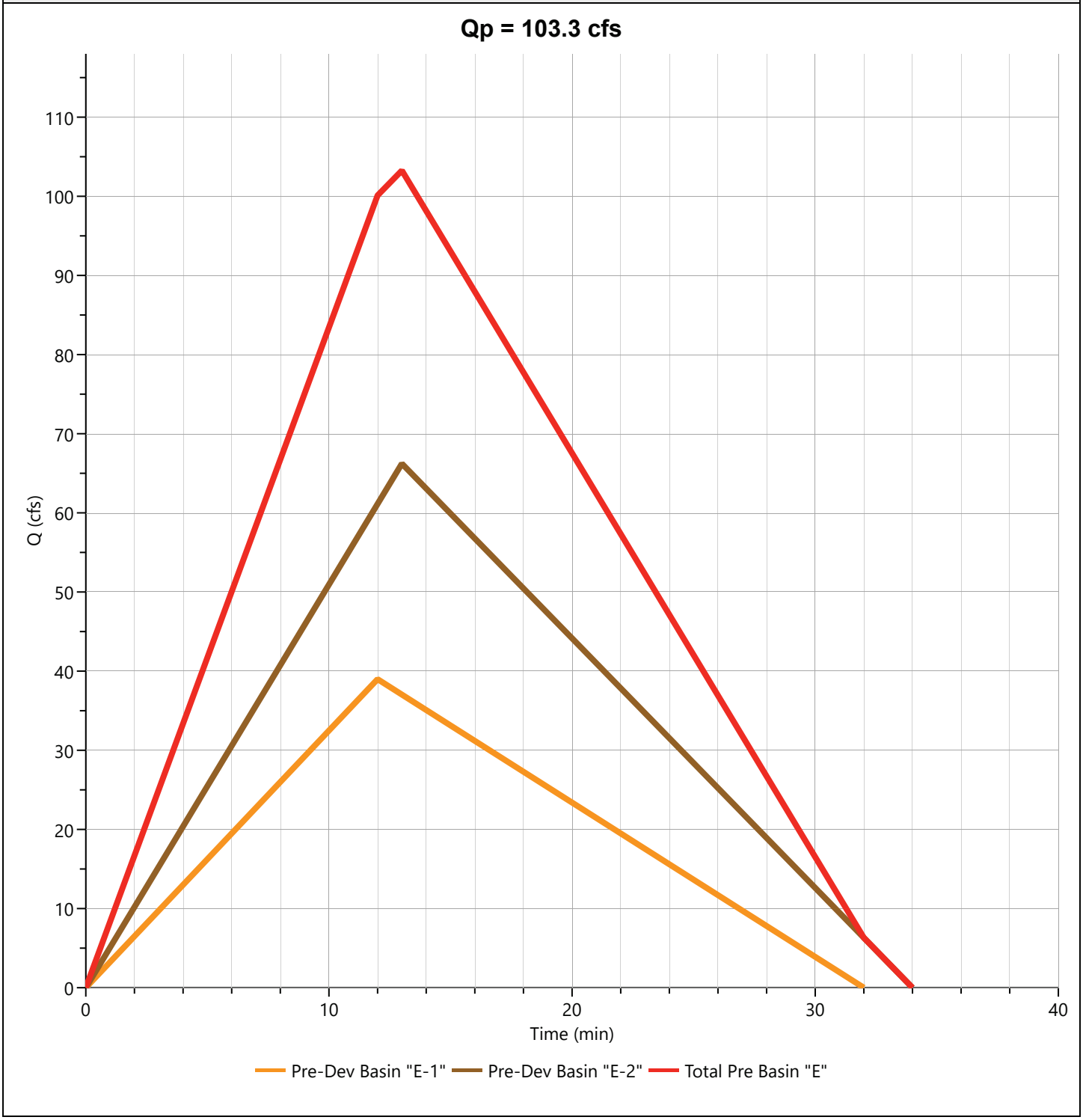
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Pre Basin "E"

Hyd. No. 7

Hydrograph Type	= Junction	Peak Flow	= 103.3 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 104,970 cuft
Inflow Hydrographs	= 5, 6	Total Contrib. Area	= 30.16 ac



Hydrograph Report

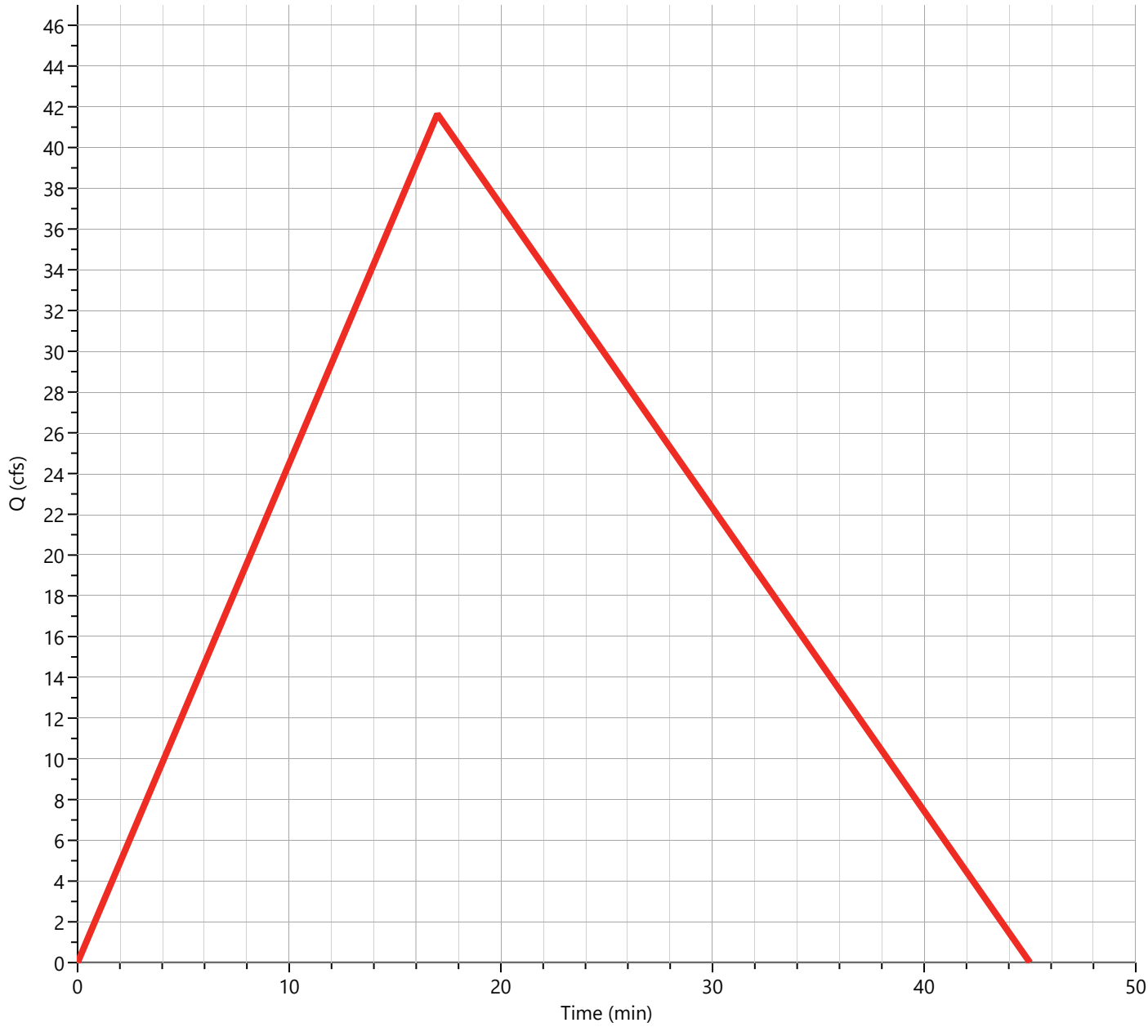
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "F"

Hyd. No. 8

Hydrograph Type	= Rational	Peak Flow	= 41.64 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 56,705 cuft
Drainage Area	= 13.19 ac	Runoff Coeff.	= 0.53
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.96 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin A

Hyd. No. 9

Hydrograph Type	= Rational	Peak Flow	= 13.64 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 16,384 cuft
Drainage Area	= 3.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
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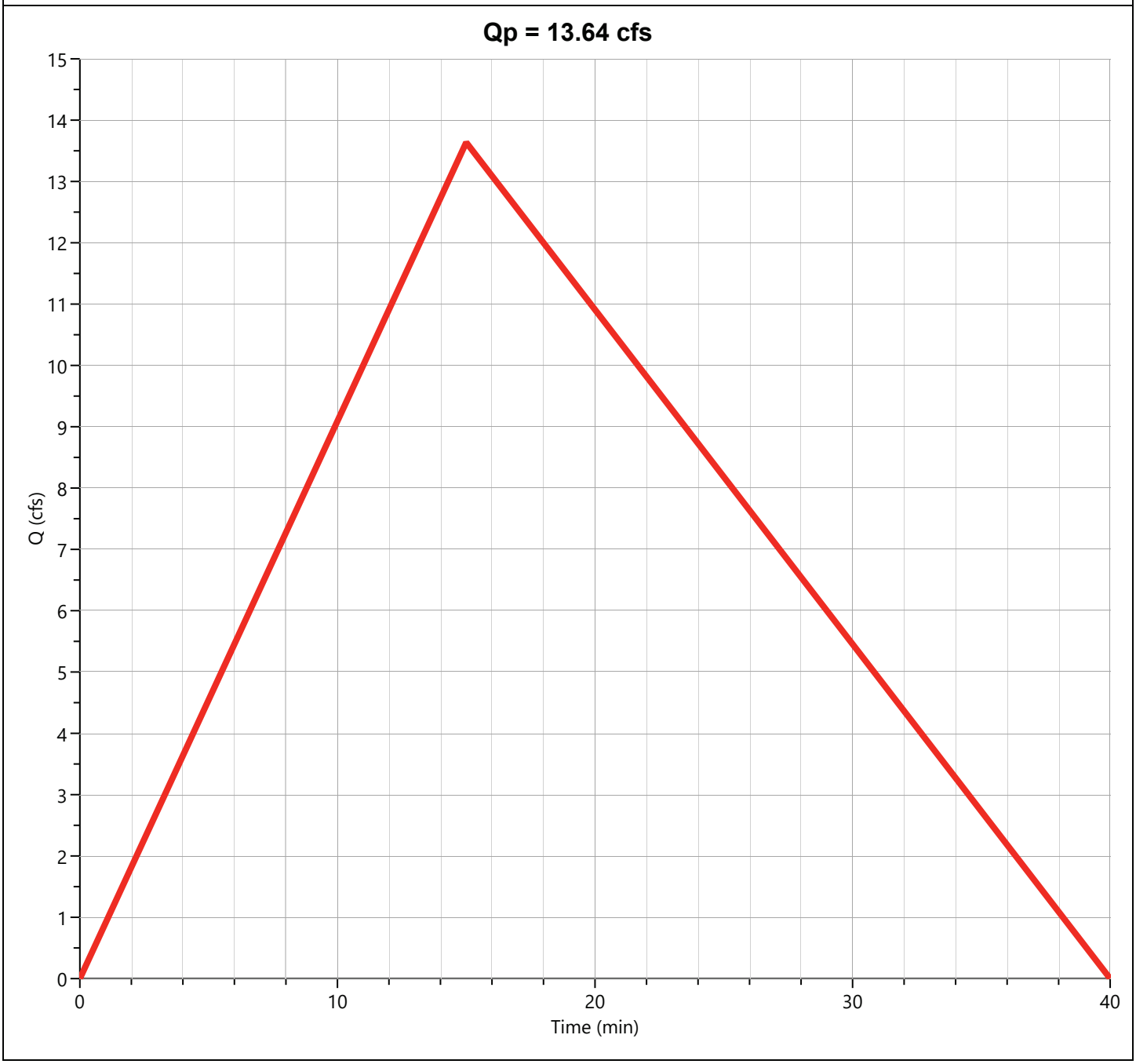
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin B

Hyd. No. 10

Hydrograph Type	= Rational	Peak Flow	= 37.35 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.35 hrs
Time Interval	= 1 min	Runoff Volume	= 62,823 cuft
Drainage Area	= 12.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 21.0 min
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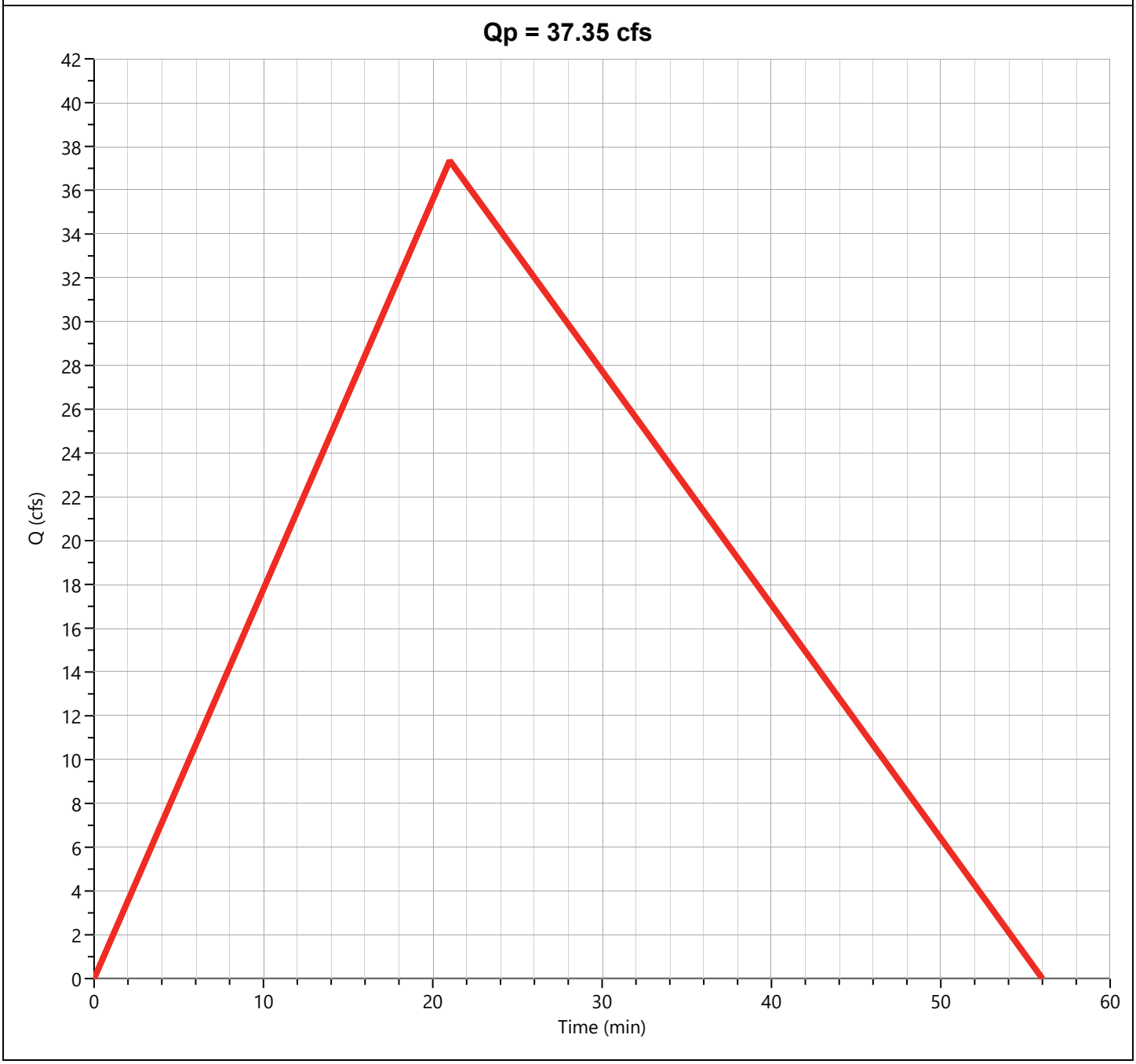
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "C"

Hyd. No. 11

Hydrograph Type	= Rational	Peak Flow	= 27.85 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 24,537 cuft
Drainage Area	= 6.75 ac	Runoff Coeff.	= 0.57
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.24 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

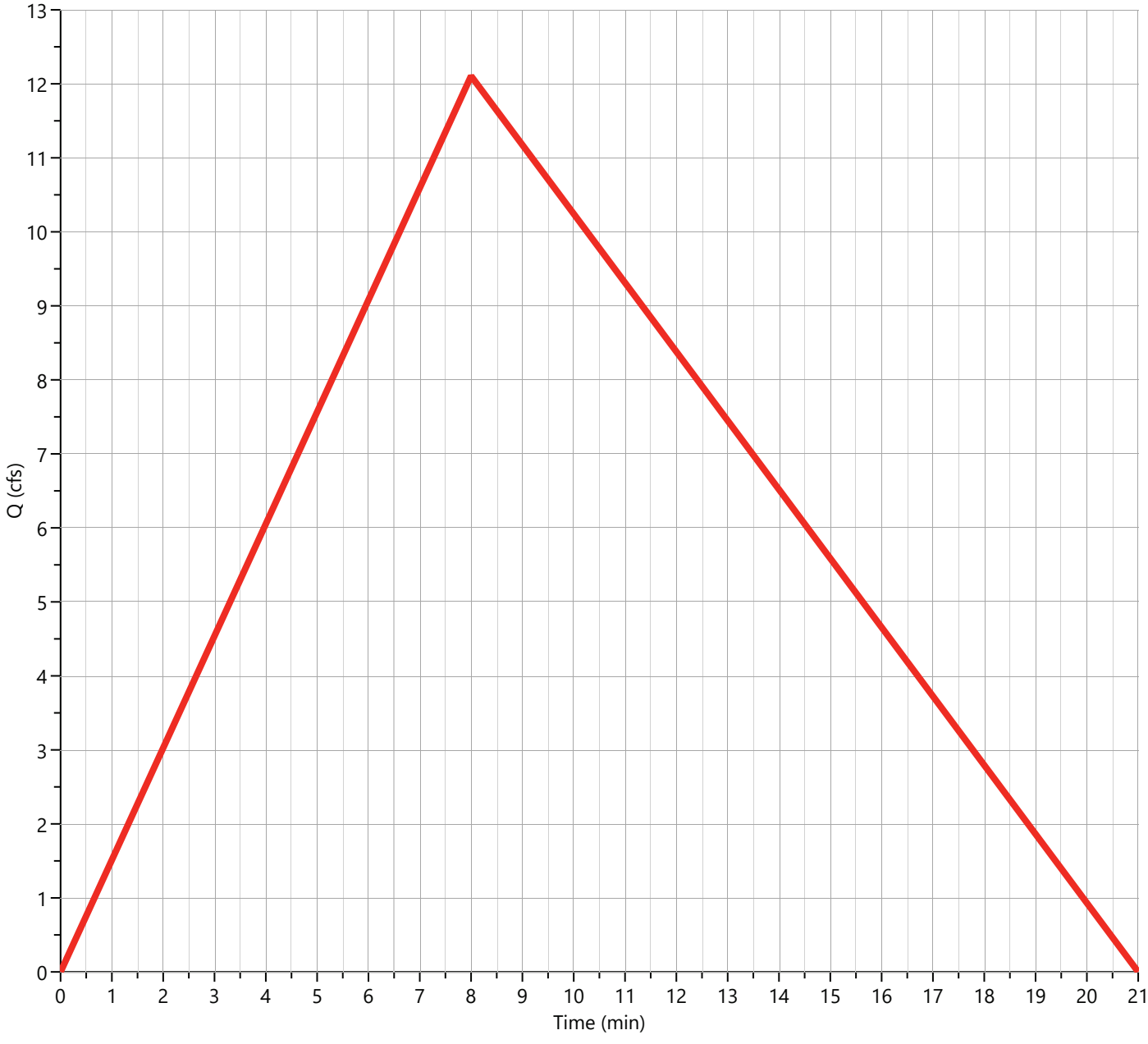
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "D"

Hyd. No. 12

Hydrograph Type	= Rational	Peak Flow	= 12.11 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 7,757 cuft
Drainage Area	= 2.59 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 8.35 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

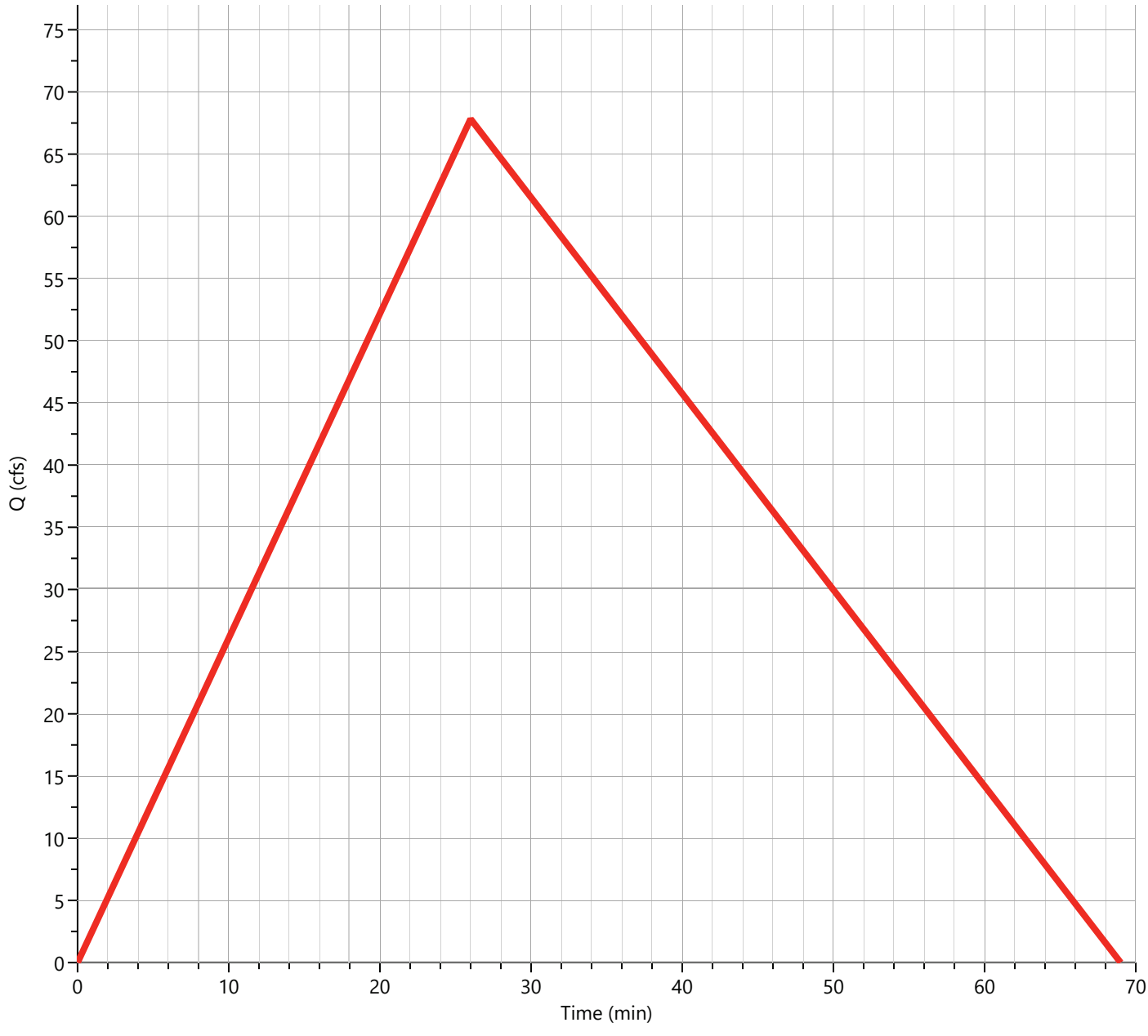
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-1"

Hyd. No. 13

Hydrograph Type	= Rational	Peak Flow	= 67.82 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.43 hrs
Time Interval	= 1 min	Runoff Volume	= 141,251 cuft
Drainage Area	= 18.36 ac	Runoff Coeff.	= 0.75
Tc Method	= User	Time of Conc. (Tc)	= 26.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.93 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

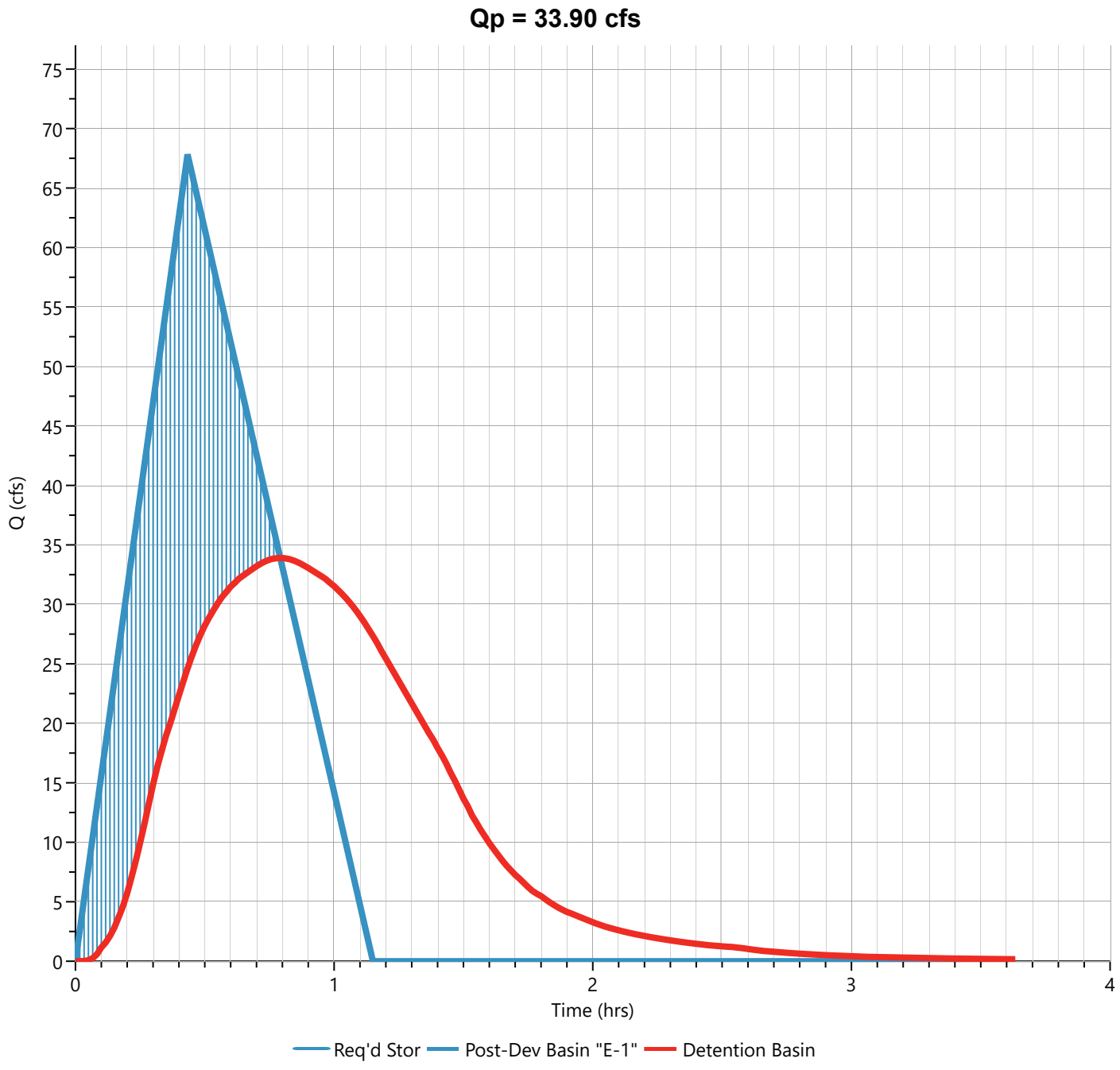
Detention Basin

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 33.90 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.80 hrs
Time Interval	= 1 min	Hydrograph Volume	= 140,375 cuft
Inflow Hydrograph	= 13 - Post-Dev Basin "E-1"	Max. Elevation	= 471.63 ft
Pond Name	= Hilltop Detention Pond	Max. Storage	= 64,167 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 27 min



Hydrograph Report

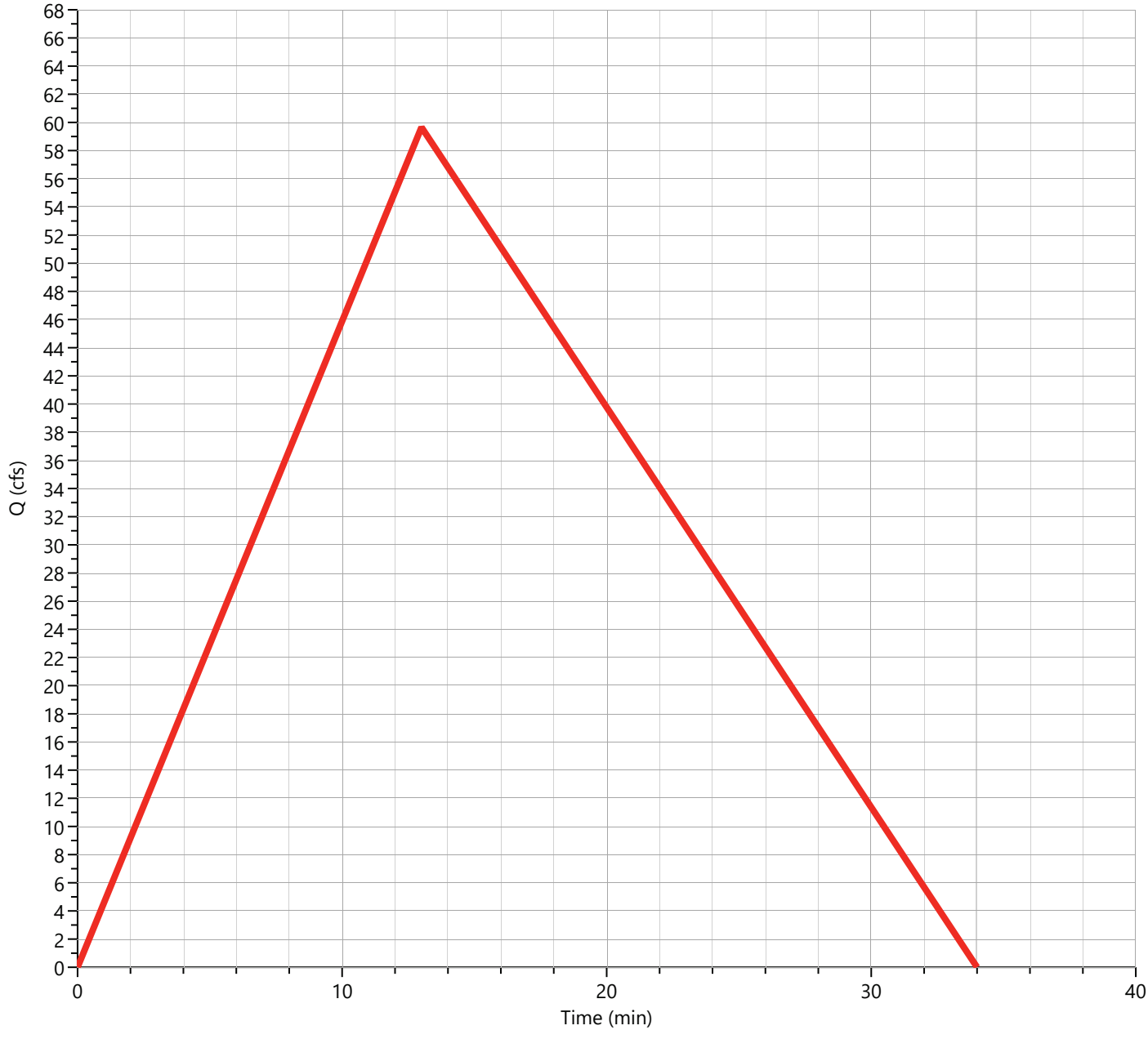
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-2"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 59.65 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 62,118 cuft
Drainage Area	= 15.86 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.72 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

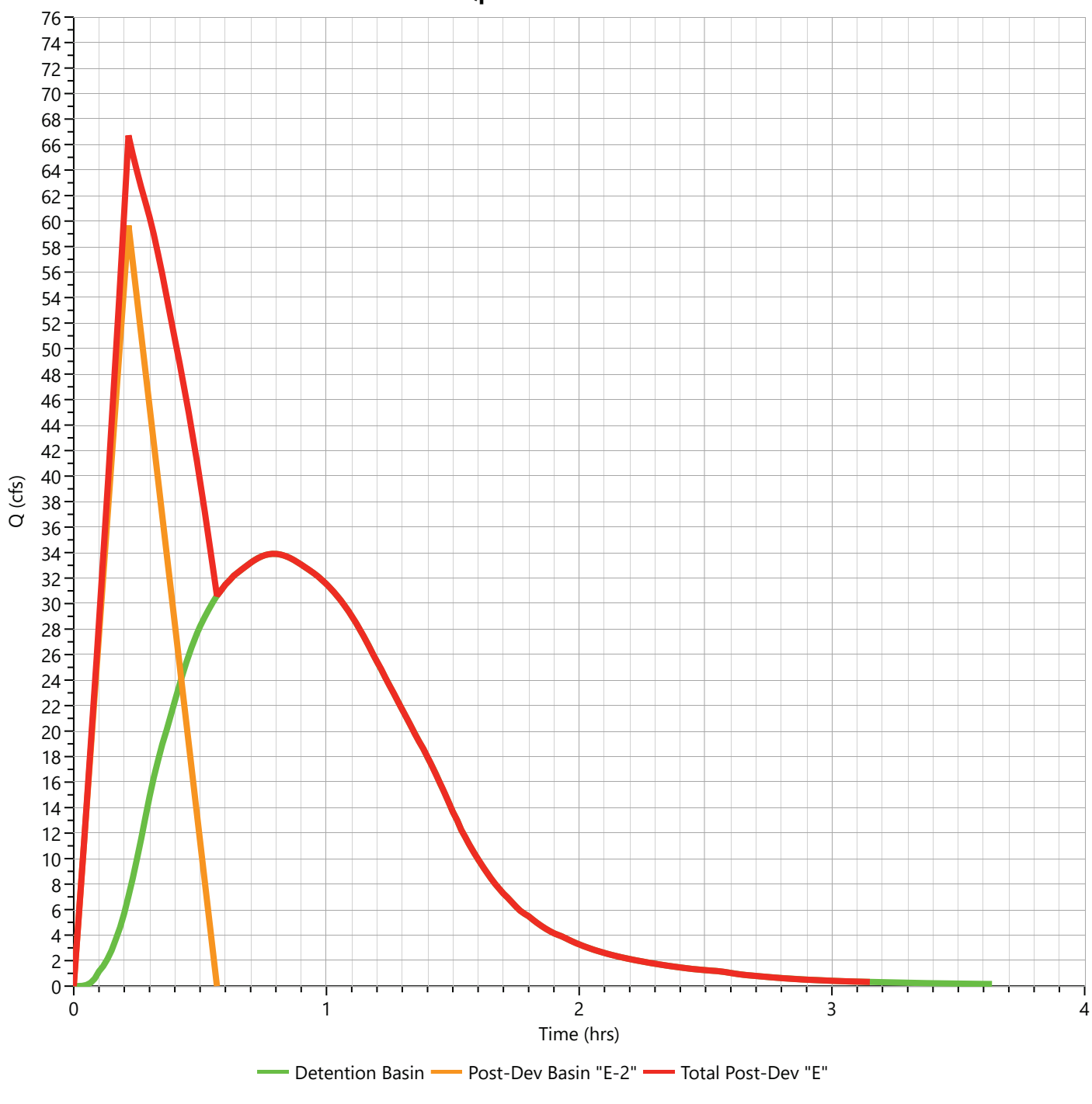
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Post-Dev "E"

Hyd. No. 16

Hydrograph Type	= Junction	Peak Flow	= 66.71 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 201,222 cuft
Inflow Hydrographs	= 15	Total Contrib. Area	= 15.86 ac



Hydrograph Report

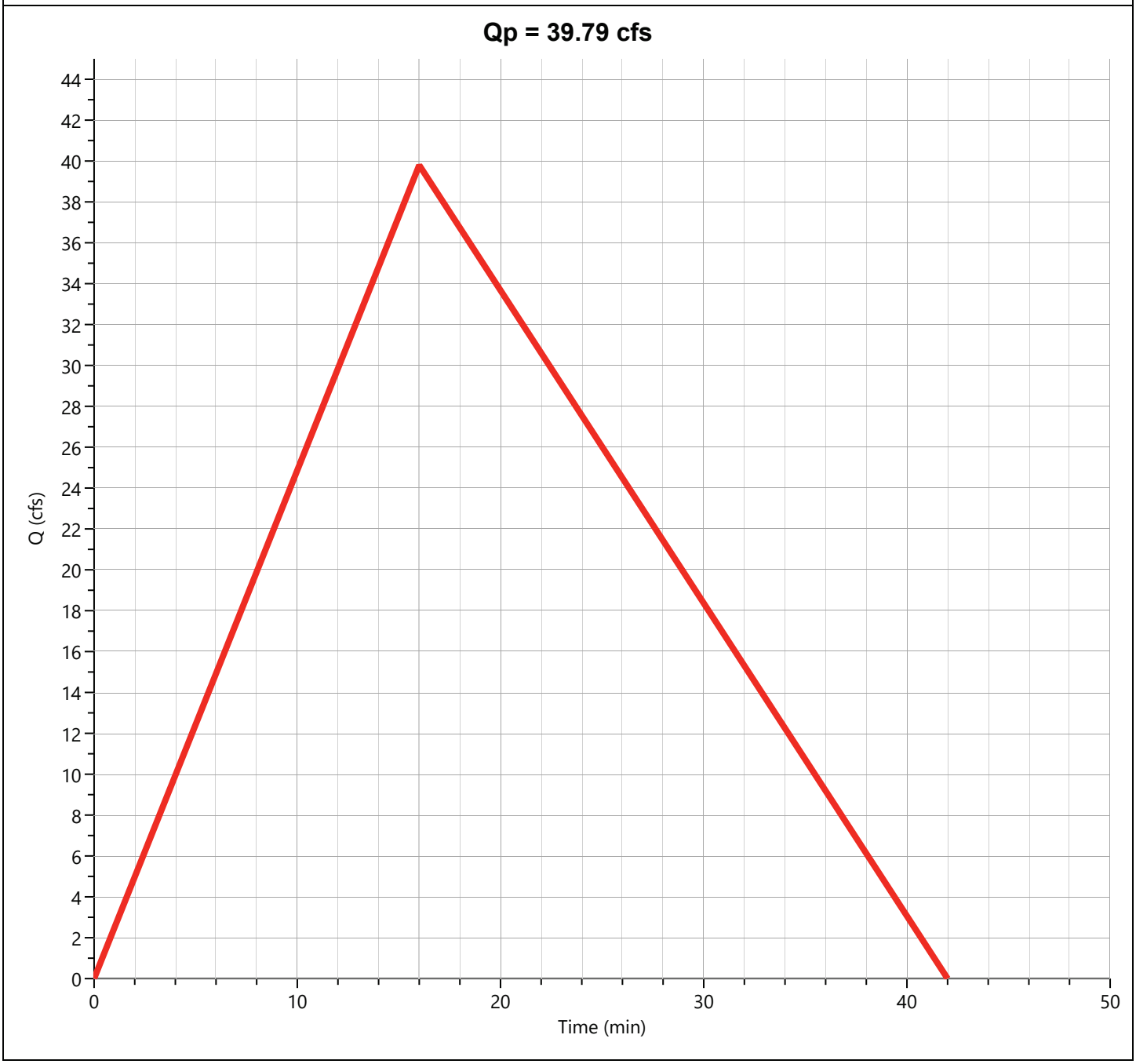
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "F"

Hyd. No. 17

Hydrograph Type	= Rational	Peak Flow	= 39.79 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 51,000 cuft
Drainage Area	= 11.61 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 16.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.12 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Design Storm Report

Custom Storm filename:

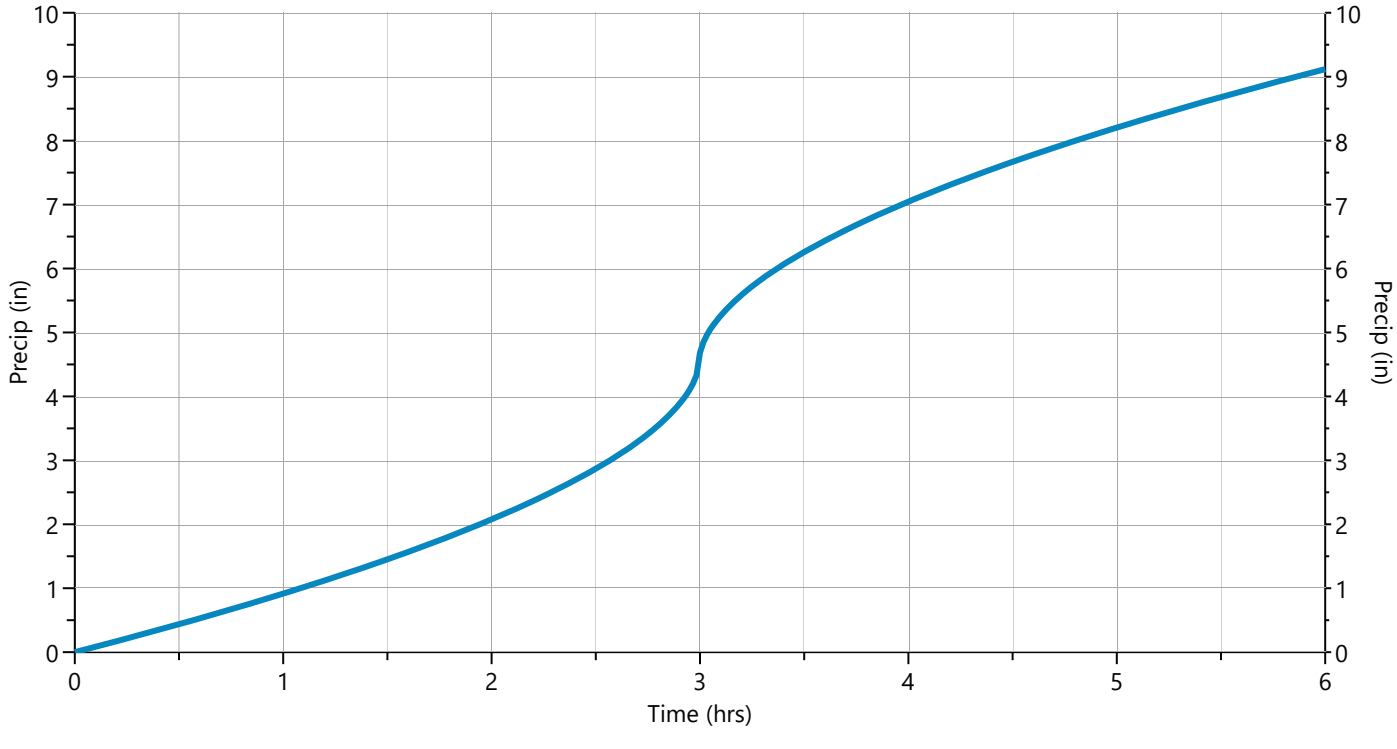
Hydrology Studio v 3.0.0.44

09-29-2026

Storm Distribution: IDF Based - Synthetic, 6-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	✔ 50-yr	100-yr	
6 hrs	0	5.32	0	6.37	7.21	8.30	9.12	9.85	

Incremental Rainfall Distribution, 50-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
2.50	0.031084	2.68	0.038052	2.87	0.055600	3.05	0.090973	3.23	0.044236
2.52	0.031555	2.70	0.038971	2.88	0.058911	3.07	0.079152	3.25	0.042868
2.53	0.032050	2.72	0.039967	2.90	0.062959	3.08	0.071194	3.27	0.041628
2.55	0.032572	2.73	0.041049	2.92	0.068072	3.10	0.065354	3.28	0.040496
2.57	0.033121	2.75	0.042233	2.93	0.074833	3.12	0.060826	3.30	0.039459
2.58	0.033702	2.77	0.043534	2.95	0.084399	3.13	0.057178	3.32	0.038503
2.60	0.034317	2.78	0.044976	2.97	0.099564	3.15	0.054154	3.33	0.037618
2.62	0.034970	2.80	0.046583	2.98	0.129912	3.17	0.051594	3.35	0.036796
2.63	0.035664	2.82	0.048393	**3.00**	**0.352737**	3.18	0.049387	3.37	0.036029
2.65	0.036406	2.83	0.050452	3.02	0.164608	3.20	0.047460	3.38	0.035311
2.67	0.037200	2.85	0.052824	3.03	0.111512	3.22	0.045756	3.40	0.034638



Hydrograph 100-yr Summary

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	Rational	Pre-Dev Basin "A"	15.60	0.18	13,742	----		
2	Rational	Pre-Dev Basin "B"	52.42	0.25	62,983	----		
3	Rational	Pre-Dev Basin "C"	29.57	0.18	26,057	----		
4	Rational	Pre-Dev Basin "D"	13.38	0.13	8,572	----		
5	Rational	Pre-Dev Basin "E-1"	42.33	0.20	40,692	----		
6	Rational	Pre-Dev Basin "E-2"	71.90	0.22	74,872	----		
7	Junction	Total Pre Basin "E"	112.1	0.22	113,981	5, 6		
8	Rational	Pre-Dev Basin "F"	45.20	0.28	61,545	----		
9	Rational	Post-Dev Basin A	14.80	0.25	17,786	----		
10	Rational	Post-Dev Basin B	40.52	0.35	68,164	----		
11	Rational	Post-Dev Basin "C"	30.24	0.18	26,649	----		
12	Rational	Post-Dev Basin "D"	13.15	0.13	8,429	----		
13	Rational	Post-Dev Basin "E-1"	73.57	0.43	153,208	----		
14	Pond Route	Detention Basin	37.69	0.78	152,260	13	471.98	69,992
15	Rational	Post-Dev Basin "E-2"	64.77	0.22	67,448	----		
16	Junction	Total Post-Dev "E"	72.60	0.22	218,328	14, 15		
17	Rational	Post-Dev Basin "F"	43.19	0.27	55,359	----		

Hydrograph Report

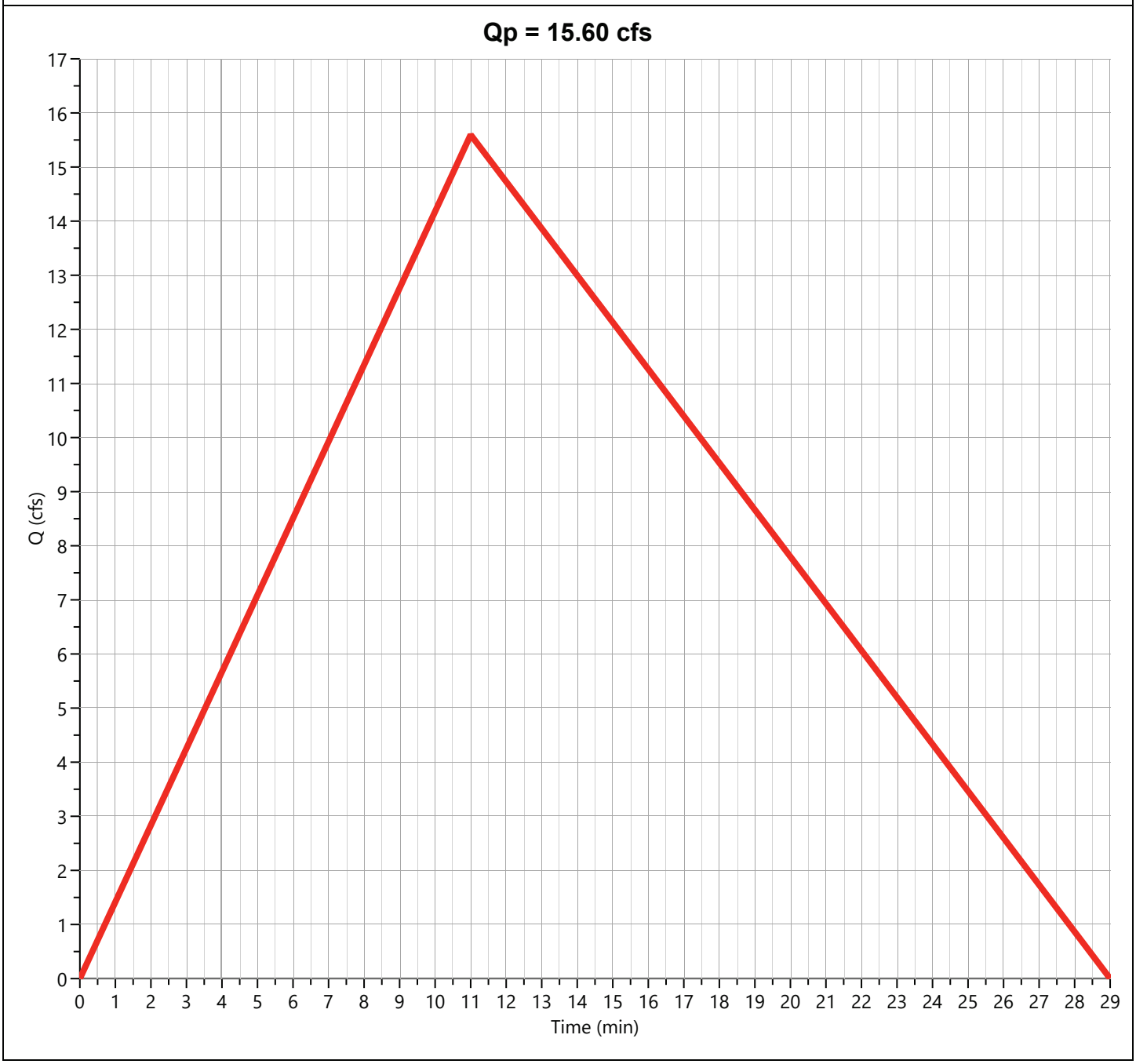
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "A"

Hyd. No. 1

Hydrograph Type	= Rational	Peak Flow	= 15.60 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 13,742 cuft
Drainage Area	= 3.2 ac	Runoff Coeff.	= 0.62
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.86 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

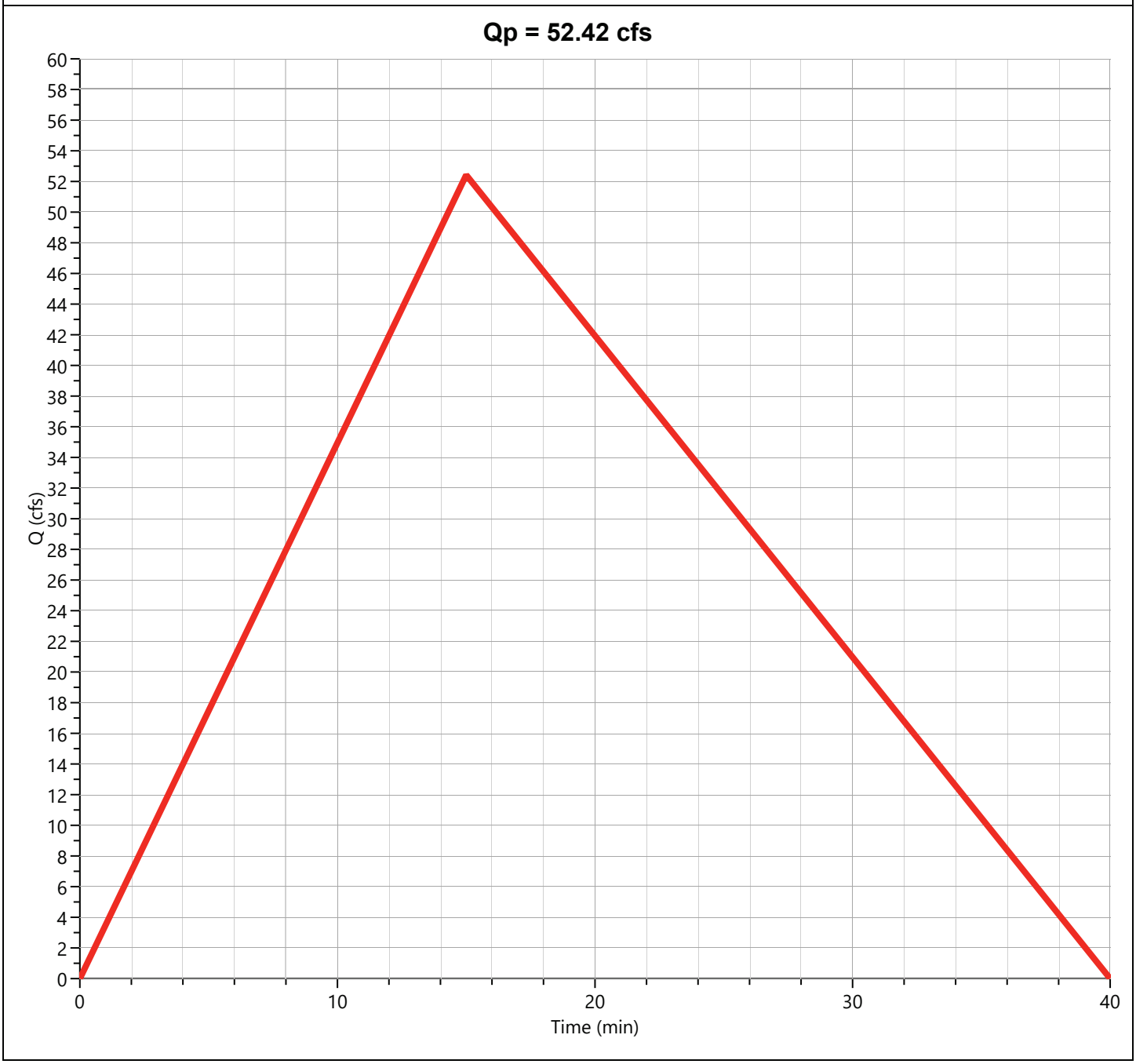
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "B"

Hyd. No. 2

Hydrograph Type	= Rational	Peak Flow	= 52.42 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 62,983 cuft
Drainage Area	= 14.74 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.84 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "C"

Hyd. No. 3

Hydrograph Type	= Rational	Peak Flow	= 29.57 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 26,057 cuft
Drainage Area	= 6.84 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.86 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

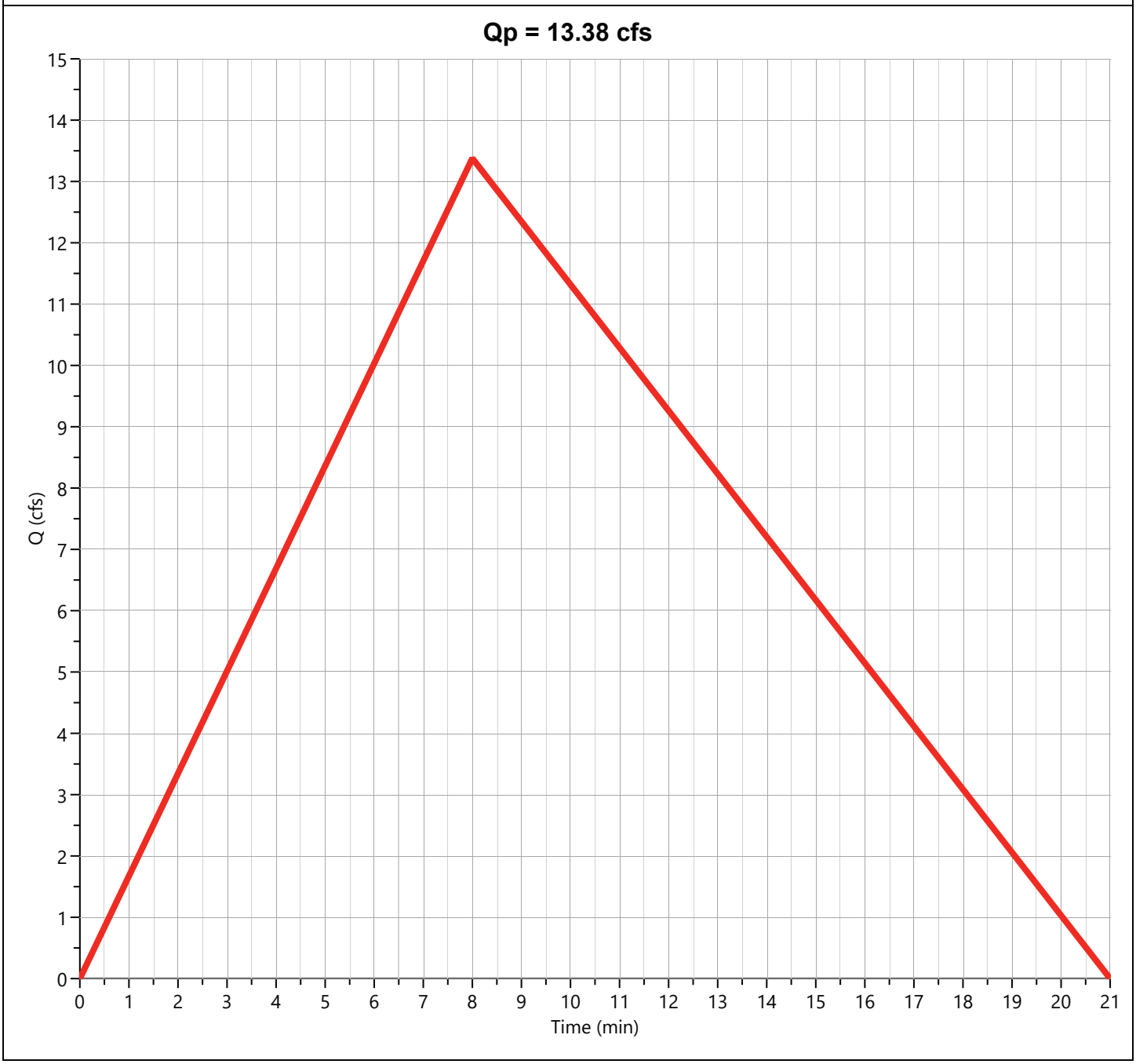
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "D"

Hyd. No. 4

Hydrograph Type	= Rational	Peak Flow	= 13.38 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 8,572 cuft
Drainage Area	= 2.95 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 9.07 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

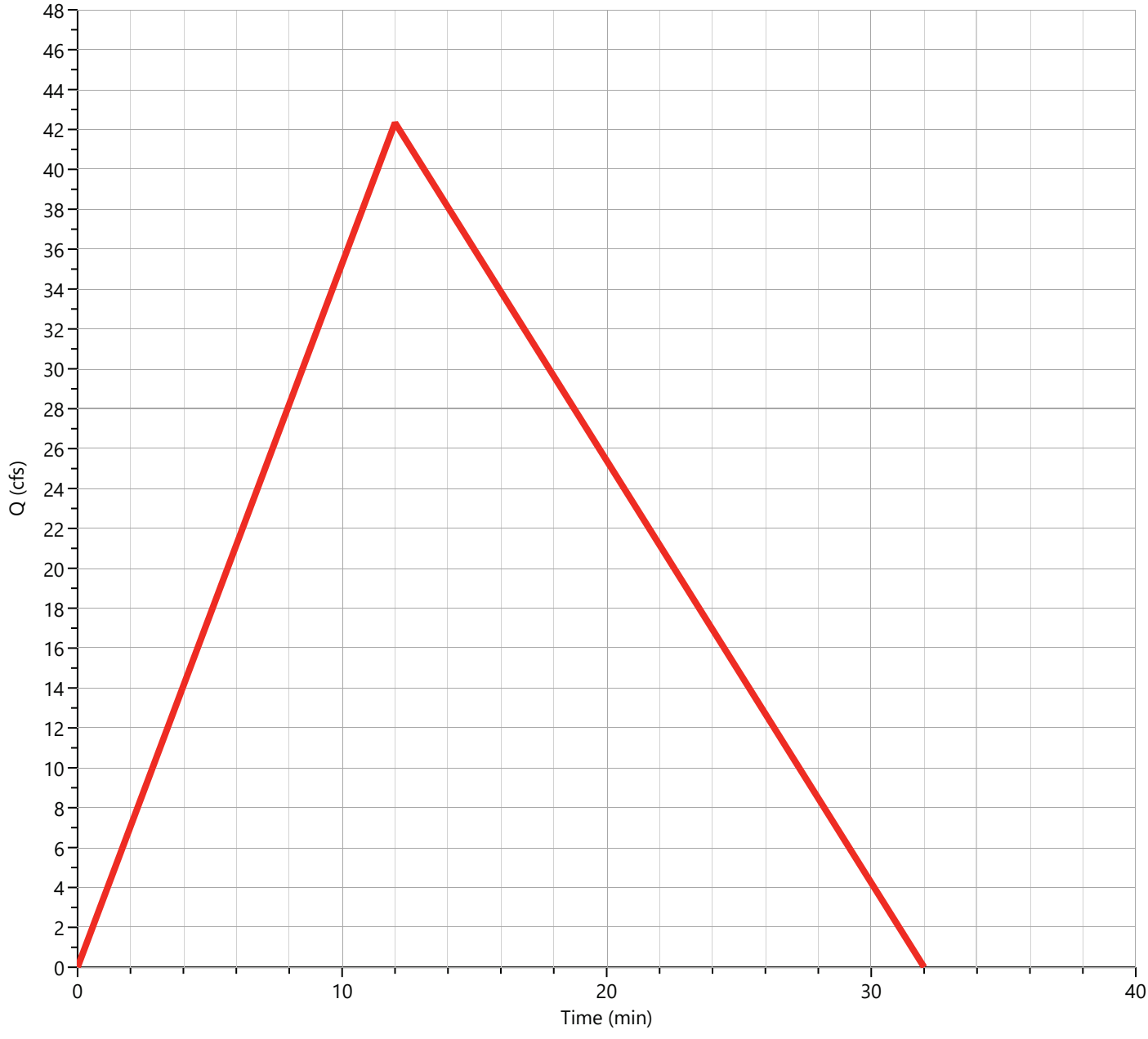
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-1"

Hyd. No. 5

Hydrograph Type	= Rational	Peak Flow	= 42.33 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 40,692 cuft
Drainage Area	= 11.2 ac	Runoff Coeff.	= 0.50
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.56 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

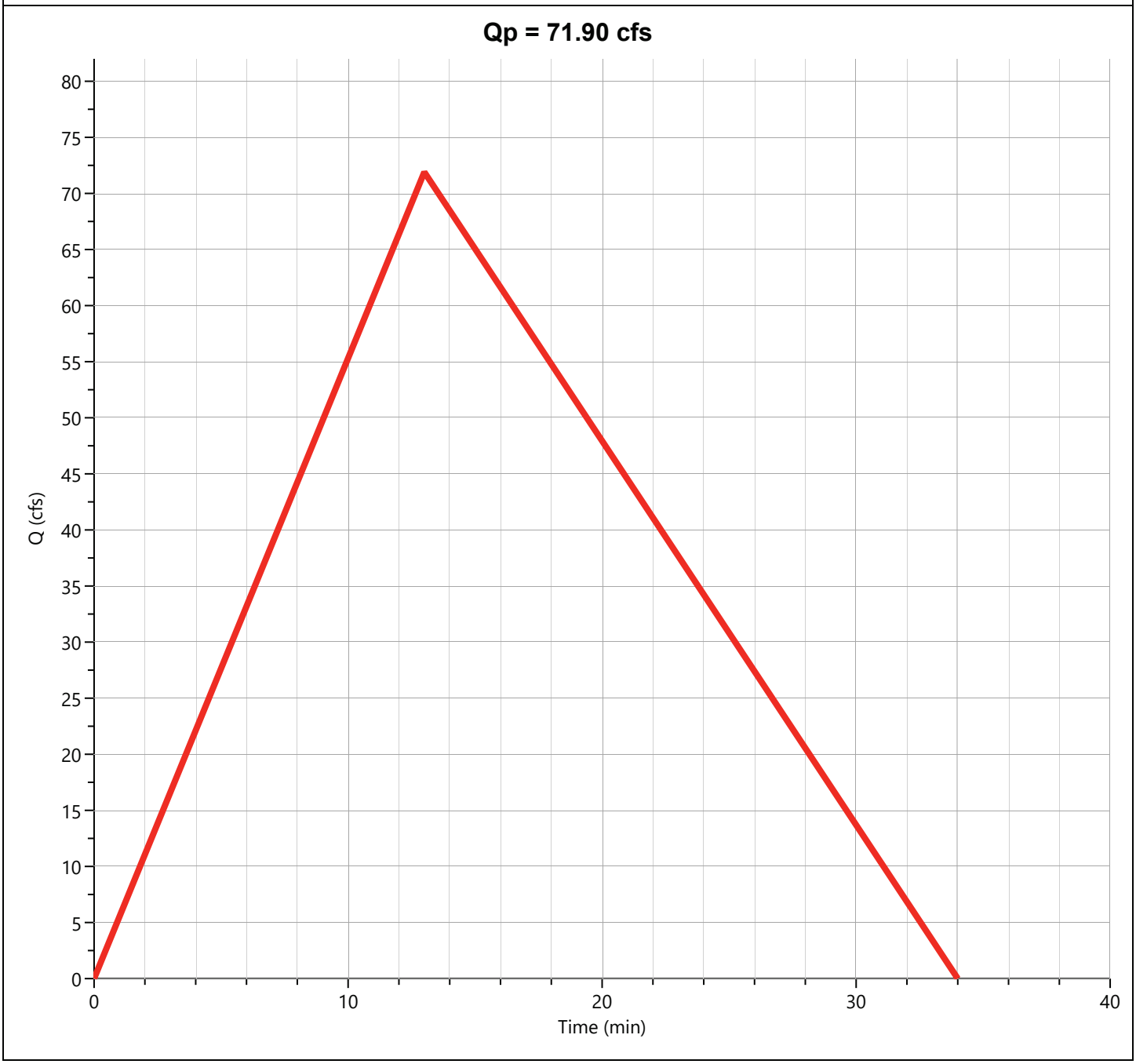
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "E-2"

Hyd. No. 6

Hydrograph Type	= Rational	Peak Flow	= 71.90 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 74,872 cuft
Drainage Area	= 18.96 ac	Runoff Coeff.	= 0.52
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.29 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

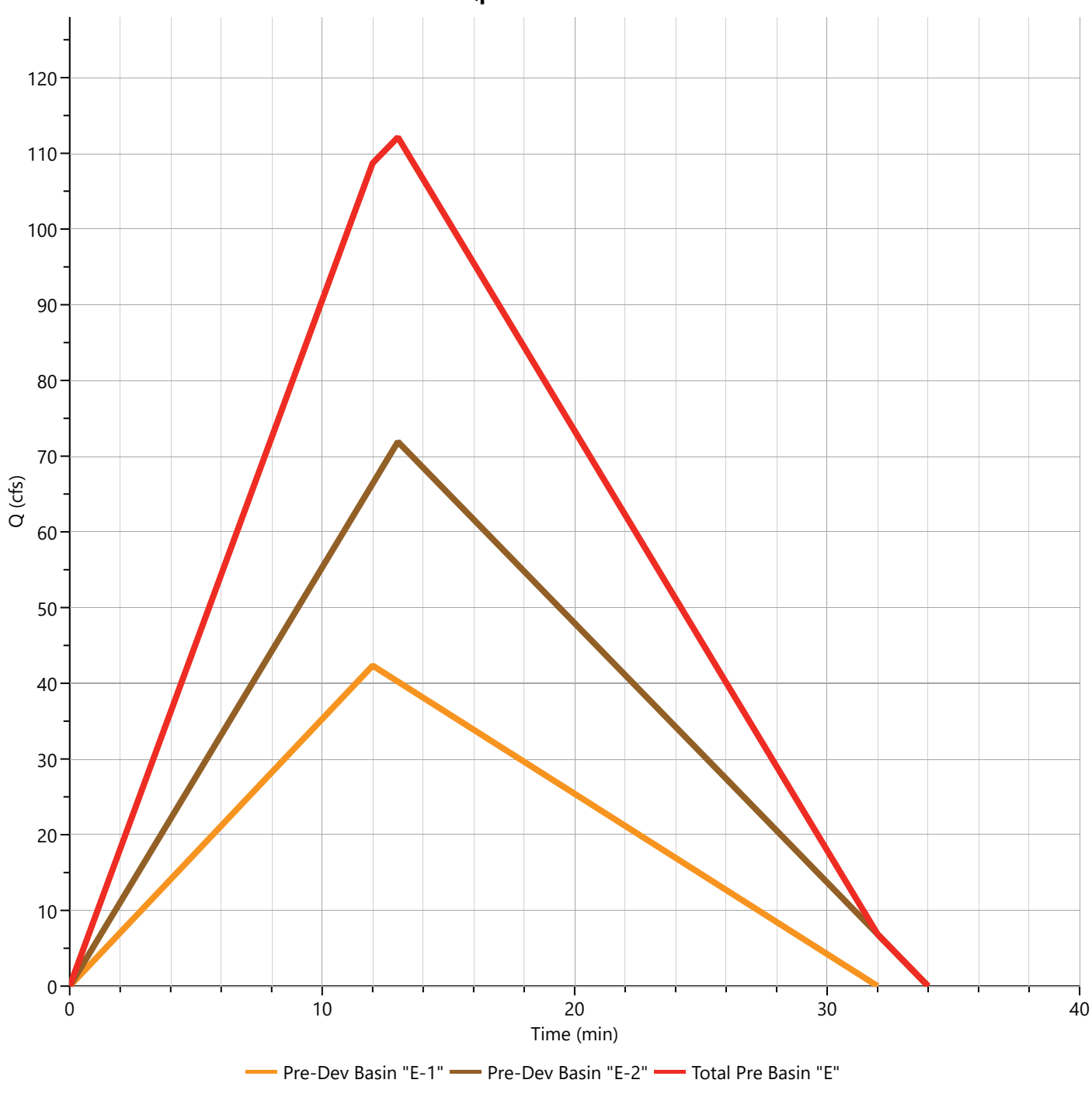
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Pre Basin "E"

Hyd. No. 7

Hydrograph Type	= Junction	Peak Flow	= 112.1 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 113,981 cuft
Inflow Hydrographs	= 5, 6	Total Contrib. Area	= 30.16 ac



Hydrograph Report

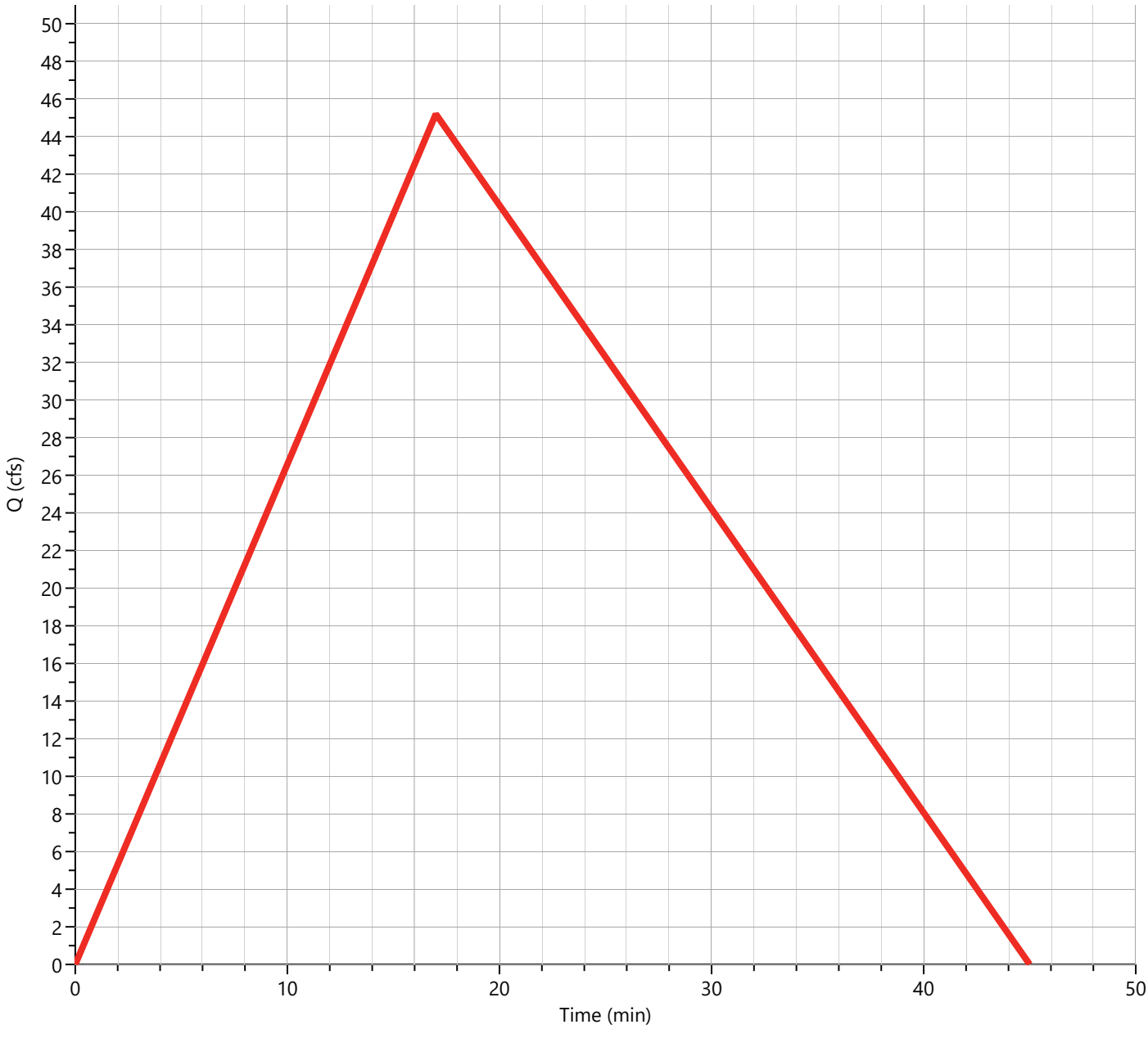
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Pre-Dev Basin "F"

Hyd. No. 8

Hydrograph Type	= Rational	Peak Flow	= 45.20 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 61,545 cuft
Drainage Area	= 13.19 ac	Runoff Coeff.	= 0.53
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.47 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

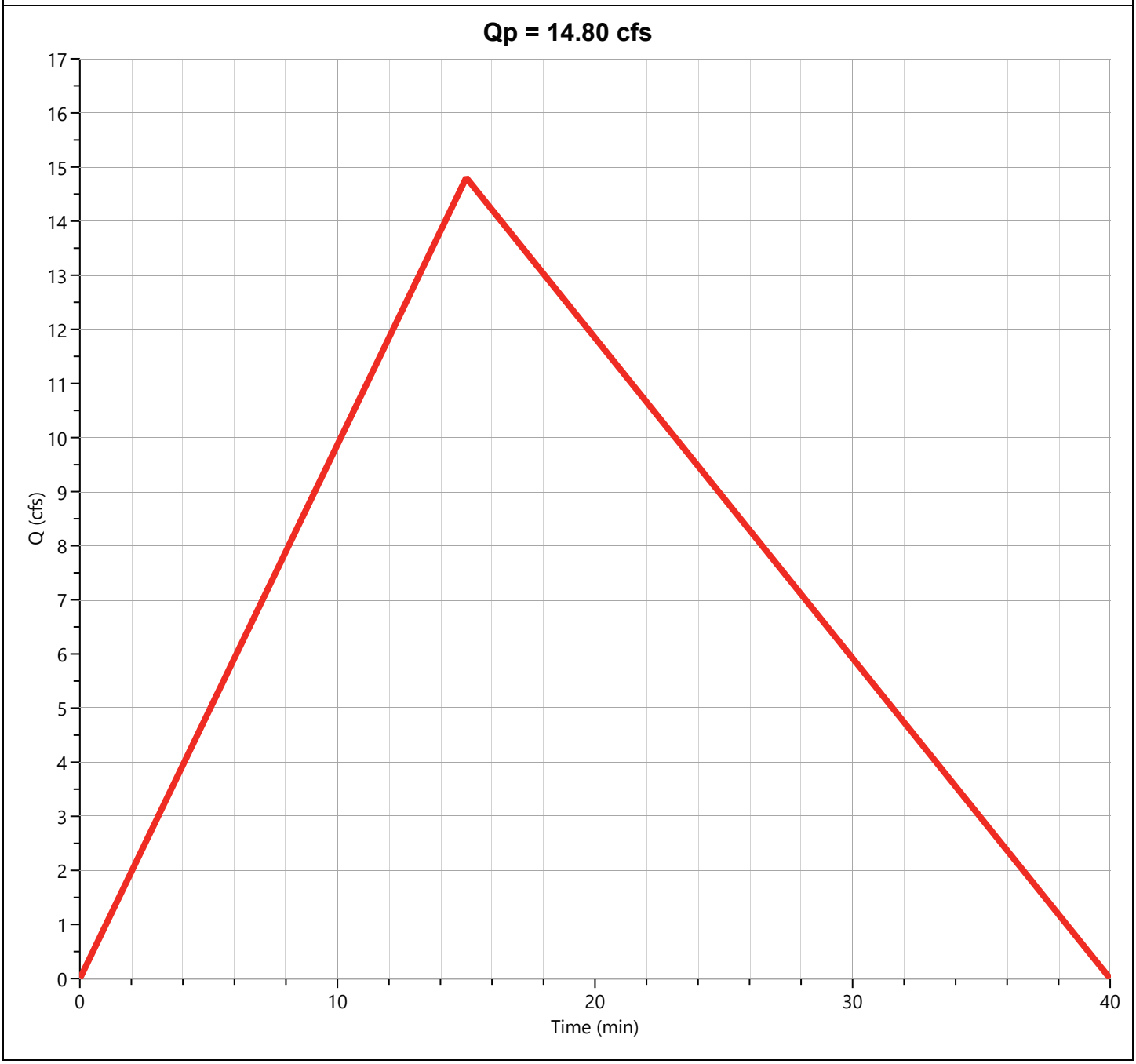
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin A

Hyd. No. 9

Hydrograph Type	= Rational	Peak Flow	= 14.80 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 17,786 cuft
Drainage Area	= 3.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.84 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

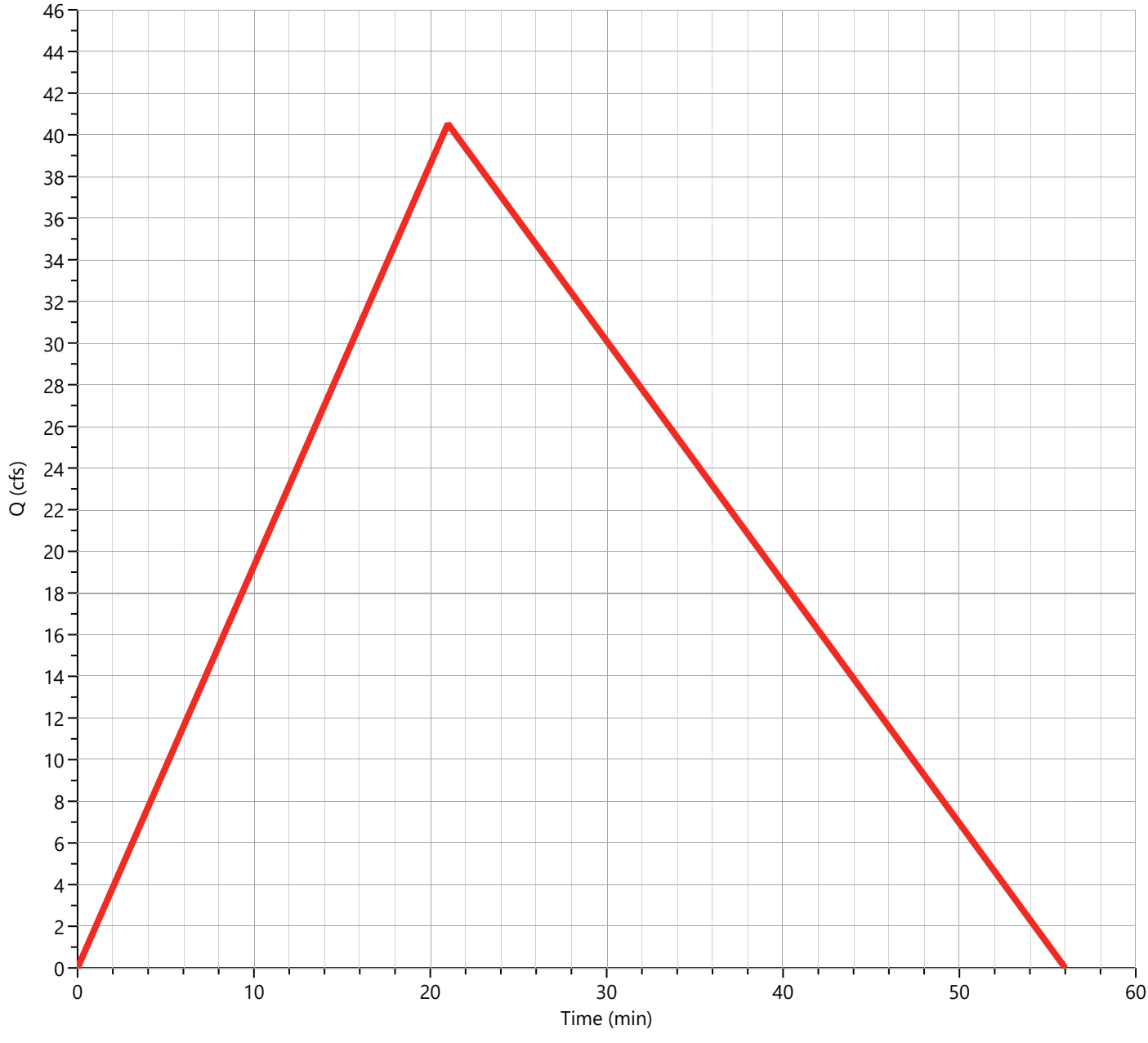
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin B

Hyd. No. 10

Hydrograph Type	= Rational	Peak Flow	= 40.52 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.35 hrs
Time Interval	= 1 min	Runoff Volume	= 68,164 cuft
Drainage Area	= 12.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 21.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.88 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "C"

Hyd. No. 11

Hydrograph Type	= Rational	Peak Flow	= 30.24 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 26,649 cuft
Drainage Area	= 6.75 ac	Runoff Coeff.	= 0.57
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.86 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

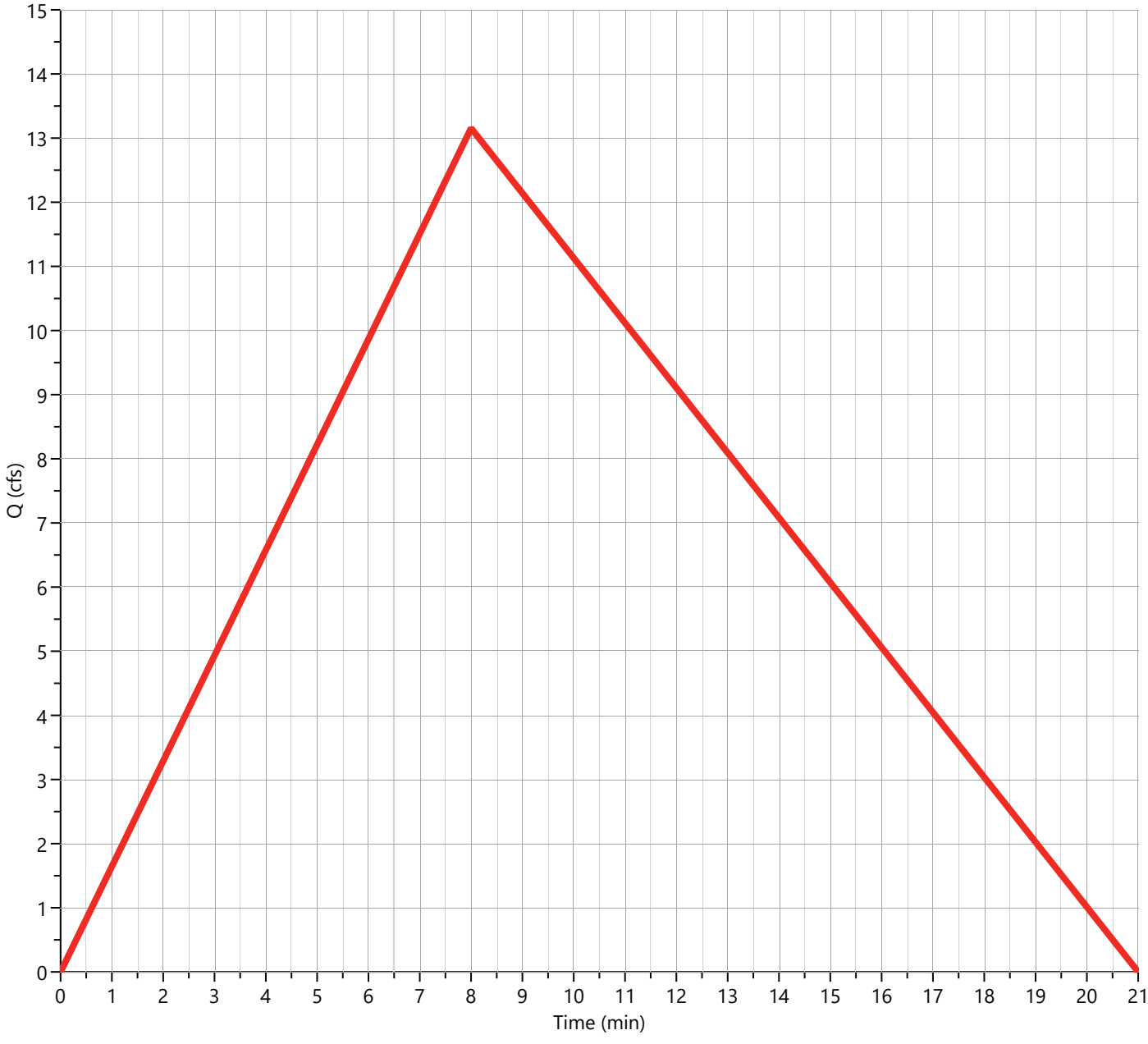
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "D"

Hyd. No. 12

Hydrograph Type	= Rational	Peak Flow	= 13.15 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.13 hrs
Time Interval	= 1 min	Runoff Volume	= 8,429 cuft
Drainage Area	= 2.59 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 8.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 9.07 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

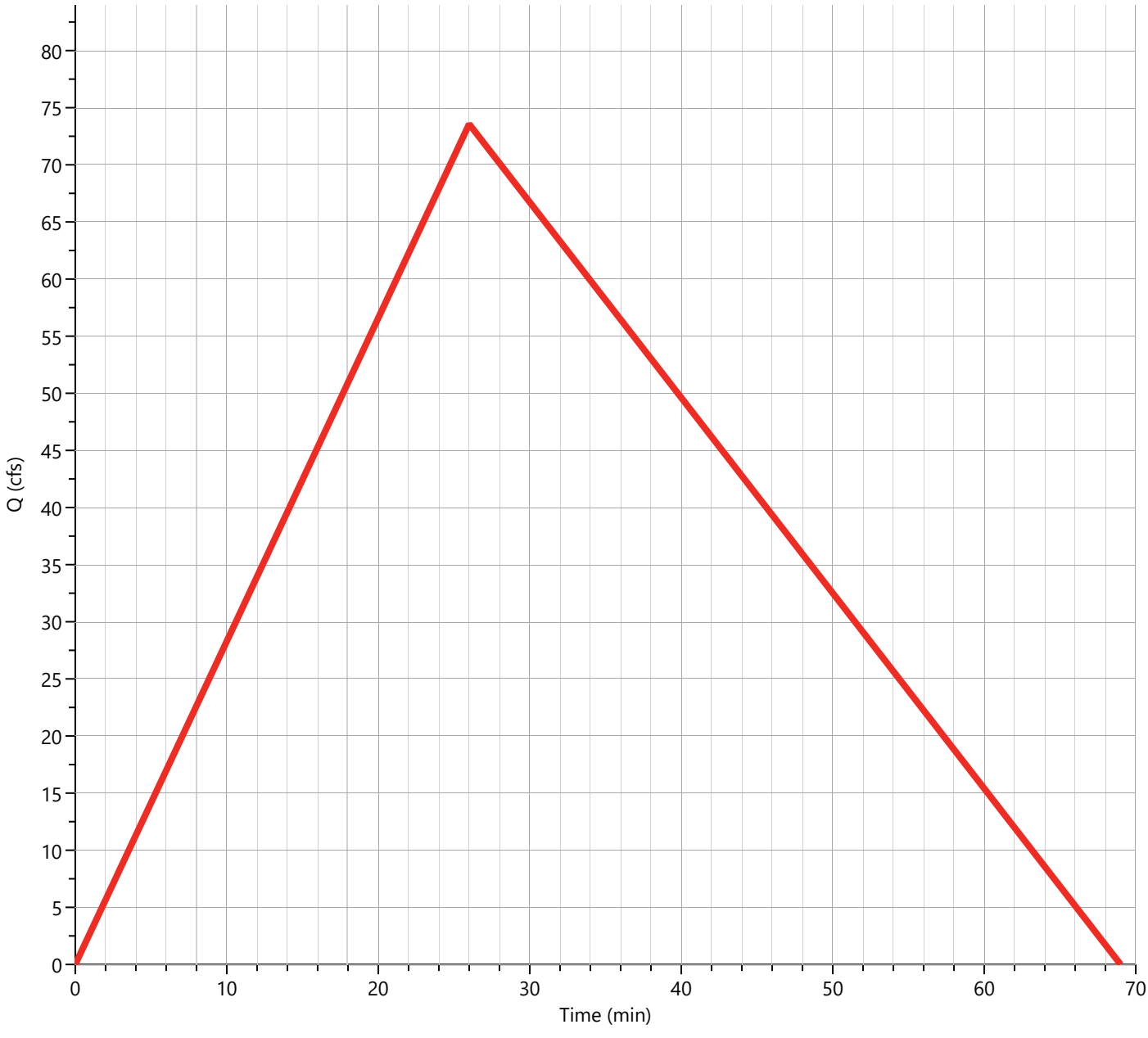
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-1"

Hyd. No. 13

Hydrograph Type	= Rational	Peak Flow	= 73.57 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.43 hrs
Time Interval	= 1 min	Runoff Volume	= 153,208 cuft
Drainage Area	= 18.36 ac	Runoff Coeff.	= 0.75
Tc Method	= User	Time of Conc. (Tc)	= 26.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.34 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

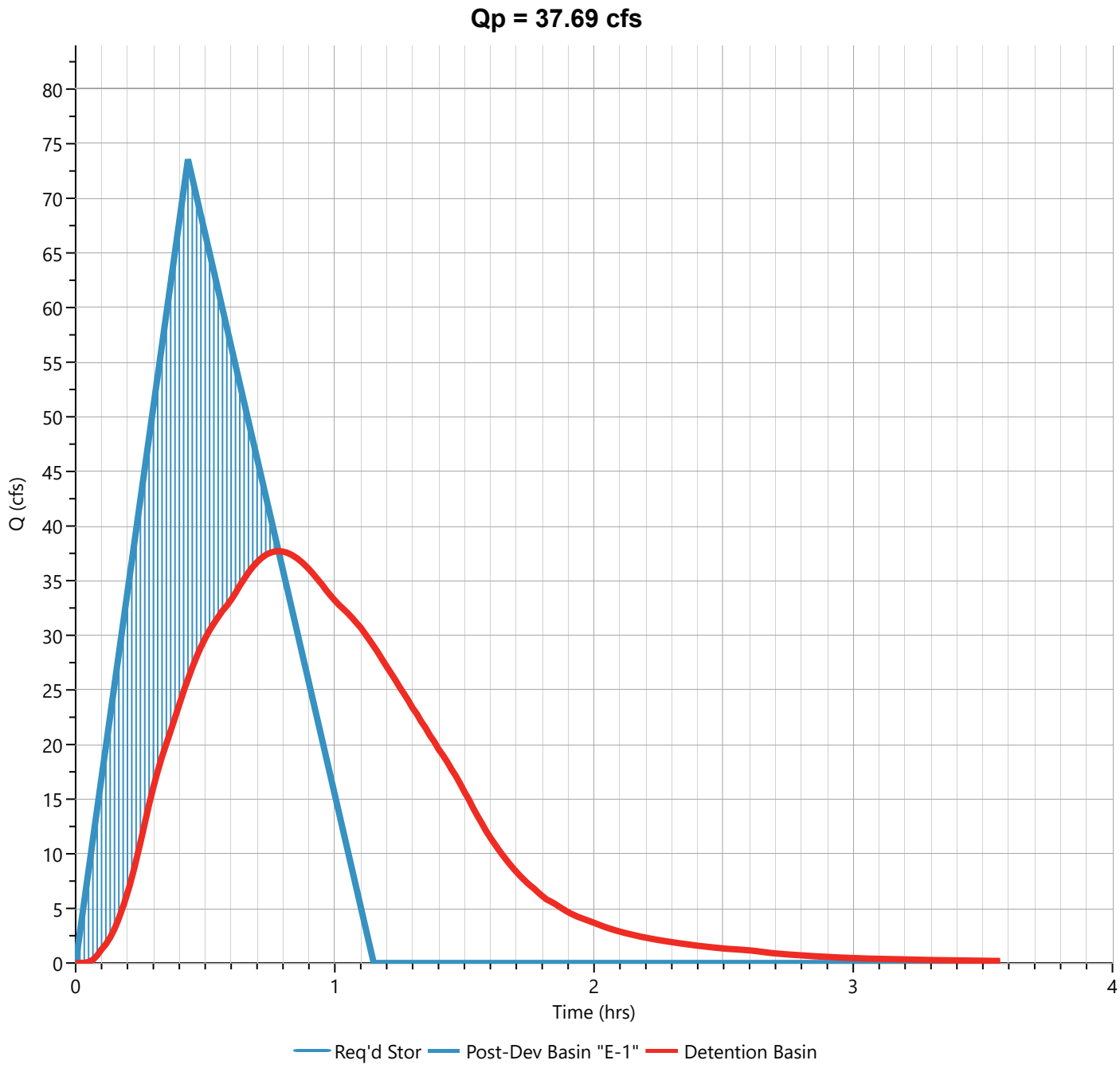
Detention Basin

Hyd. No. 14

Hydrograph Type	= Pond Route	Peak Flow	= 37.69 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.78 hrs
Time Interval	= 1 min	Hydrograph Volume	= 152,260 cuft
Inflow Hydrograph	= 13 - Post-Dev Basin "E-1"	Max. Elevation	= 471.98 ft
Pond Name	= Hilltop Detention Pond	Max. Storage	= 69,992 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 28 min



Hydrograph Report

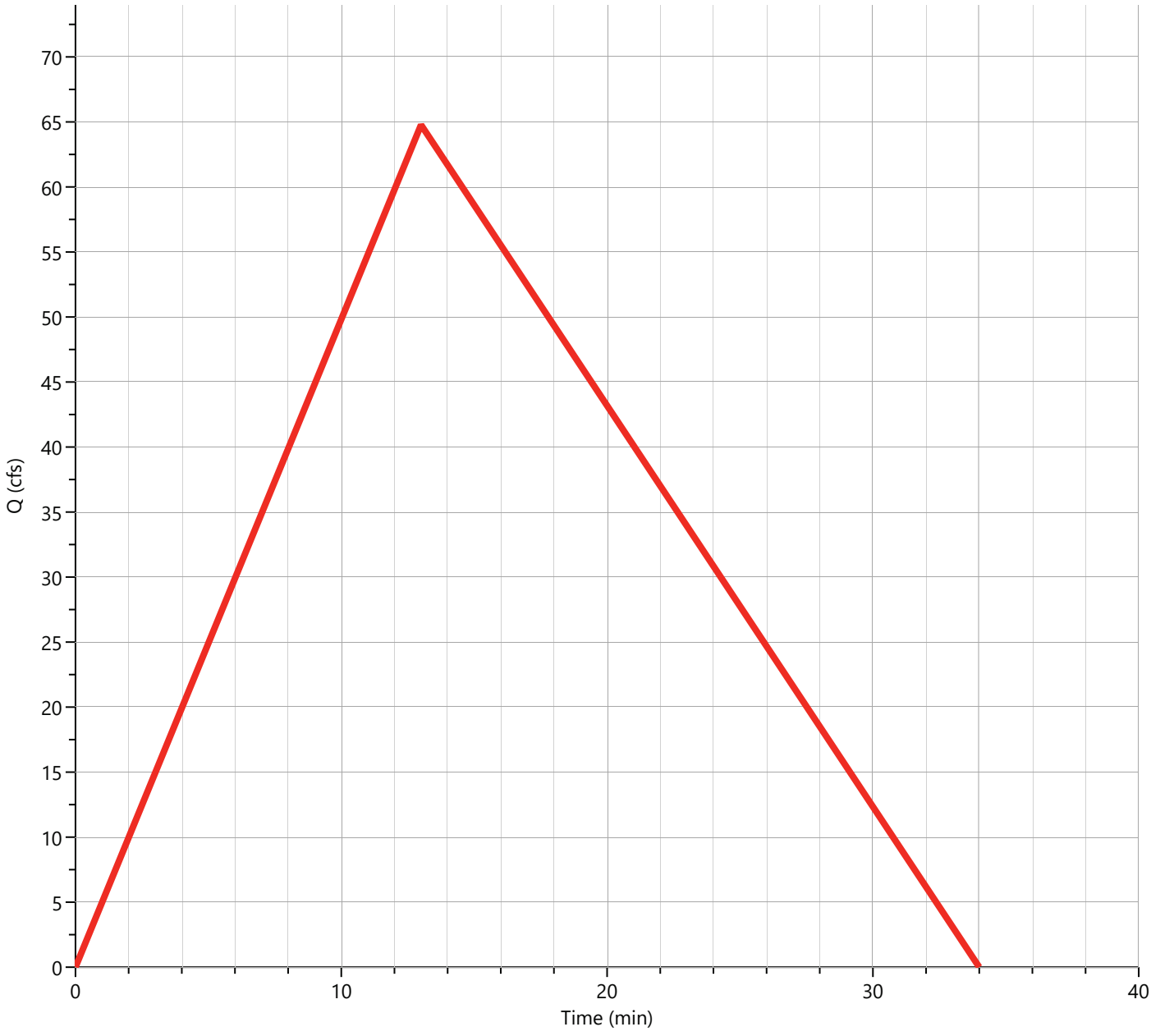
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "E-2"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 64.77 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Runoff Volume	= 67,448 cuft
Drainage Area	= 15.86 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 13.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.29 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Hydrograph Report

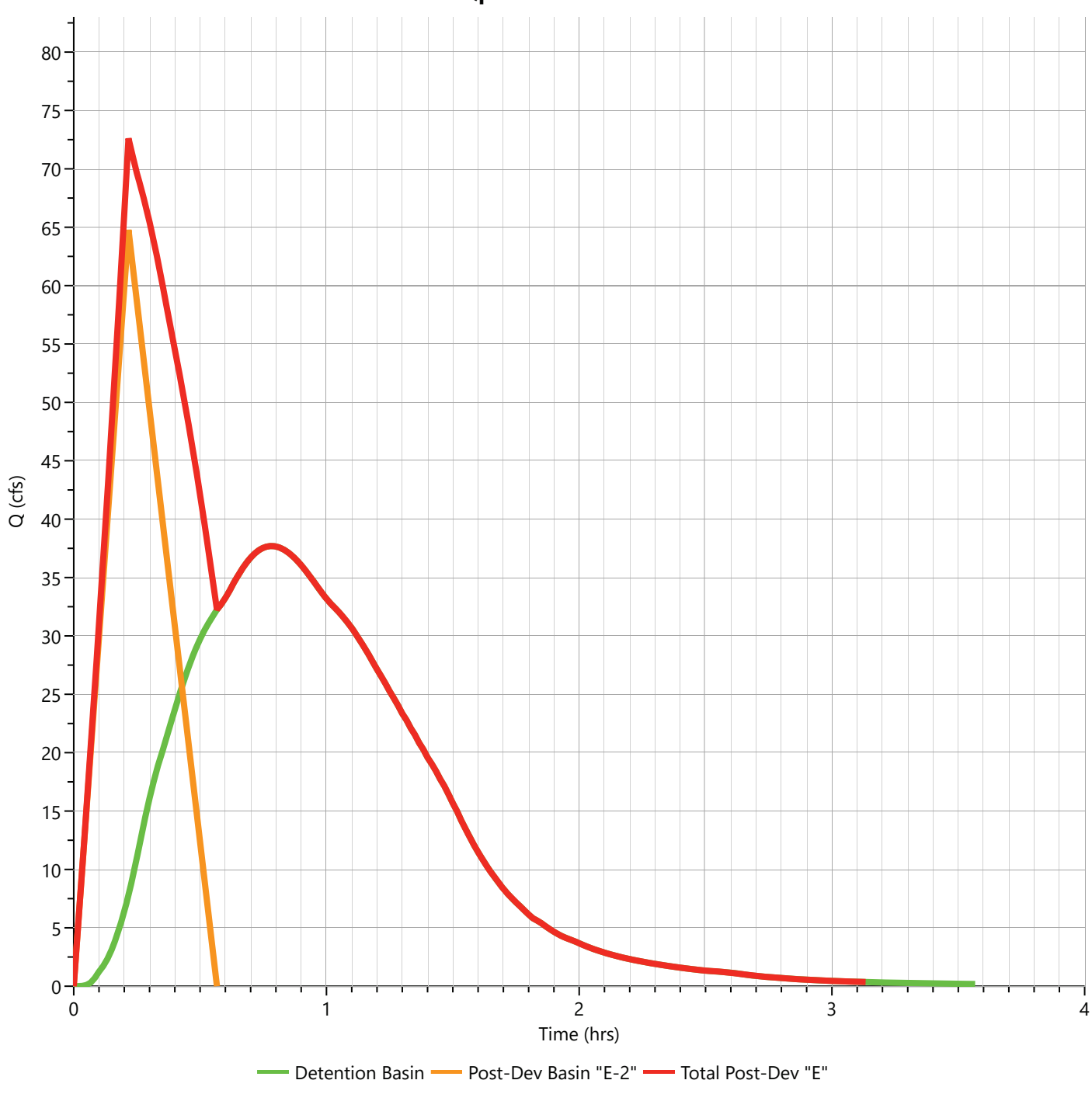
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Total Post-Dev "E"

Hyd. No. 16

Hydrograph Type	= Junction	Peak Flow	= 72.60 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.22 hrs
Time Interval	= 1 min	Hydrograph Volume	= 218,328 cuft
Inflow Hydrographs	= 15	Total Contrib. Area	= 15.86 ac



Hydrograph Report

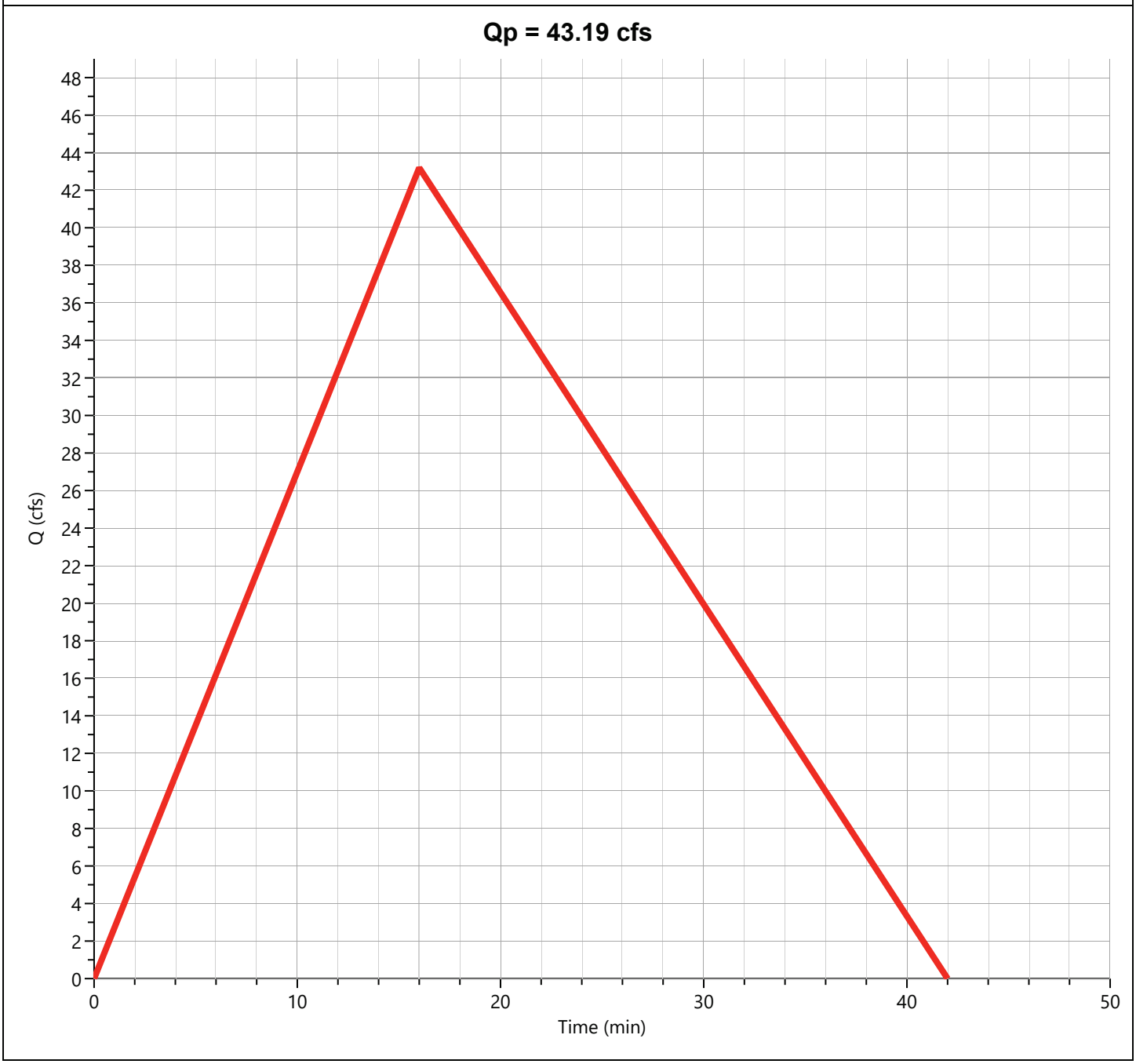
Hydrology Studio v 3.0.0.44

Project Name: Hilltop Subdivision
File: Detention Calculation 9-28-26.hys
09-29-2026

Post-Dev Basin "F"

Hyd. No. 17

Hydrograph Type	= Rational	Peak Flow	= 43.19 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 55,359 cuft
Drainage Area	= 11.61 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55 (See Worksheet)	Time of Conc. (Tc)	= 16.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.64 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Design Storm Report

Custom Storm filename:

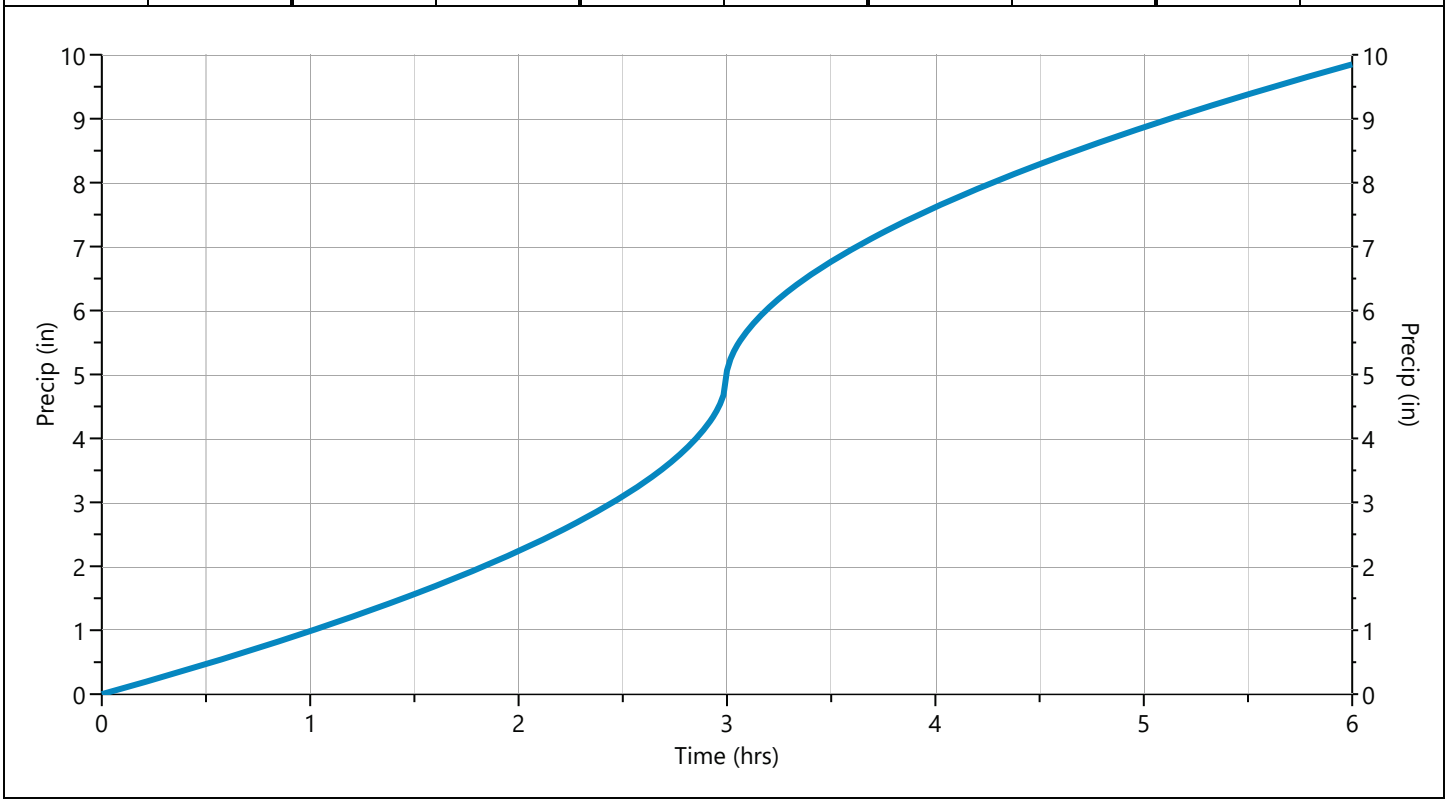
Hydrology Studio v 3.0.0.44

09-29-2026

Storm Distribution: IDF Based - Synthetic, 6-hr

Storm Duration	Total Rainfall Volume (in)								
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	✔ 100-yr	
6 hrs	0	5.32	0	6.37	7.21	8.30	9.12	9.85	

Incremental Rainfall Distribution, 100-yr									
Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)	Time (hrs)	Precip (in)
2.50	0.033580	2.68	0.041135	2.87	0.060182	3.05	0.098636	3.23	0.047844
2.52	0.034090	2.70	0.042132	2.88	0.063778	3.07	0.085778	3.25	0.046360
2.53	0.034627	2.72	0.043212	2.90	0.068176	3.08	0.077126	3.27	0.045014
2.55	0.035192	2.73	0.044387	2.92	0.073733	3.10	0.070779	3.28	0.043787
2.57	0.035787	2.75	0.045671	2.93	0.081082	3.12	0.065859	3.30	0.042661
2.58	0.036417	2.77	0.047083	2.95	0.091485	3.13	0.061896	3.32	0.041624
2.60	0.037084	2.78	0.048647	2.97	0.107983	3.15	0.058612	3.33	0.040664
2.62	0.037792	2.80	0.050391	2.98	0.141026	3.17	0.055832	3.35	0.039772
2.63	0.038545	2.82	0.052356	**3.00**	**0.384499**	3.18	0.053436	3.37	0.038940
2.65	0.039349	2.83	0.054591	3.02	0.178836	3.20	0.051344	3.38	0.038162
2.67	0.040210	2.85	0.057167	3.03	0.120989	3.22	0.049495	3.40	0.037432



MTA ENGINEERS

- Geotechnical Engineering
- Materials Testing • Special Inspections
- Design

mtaengineers.com

GEOTECHNICAL ENGINEERING EXPLORATION

Proposed 50 Acres Subdivision along Hilltop Road Bryant, Arkansas

PREPARED FOR:

Jonathan Hope
Hope Consulting
117 South Market Street
Benton, AR 72015

PREPARED BY:

MTA ENGINEERS
8001 National Drive
Little Rock, AR 72209

June 27th, 2023

MTA ENGINEERS

Jonathan Hope
Hope Consulting
117 South Market Street
Benton, AR 72015

June 27th, 2023

Subject: Report of Geotechnical Engineering Exploration
Proposed 50 Acres Subdivision along Hilltop Road
Bryant, Arkansas

Mr. Hope:

MTA Engineers has completed the authorized Geotechnical Engineering Exploration for the above referred project. This work was conducted in accordance with the agreement between MTA Engineers and Hope Consulting, detailed in MTA Engineers Proposal dated June 25th, 2023.

The purpose of our work was to review general surface and subsurface conditions within the project site area, and to gather and present data relative to the design and construction of the proposed 50 Acres Subdivision located in Bryant, Arkansas. This report outlines the exploration procedures used, exhibits the data obtained, and presents our recommendations.

MTA Engineers appreciates this opportunity to provide these services and looks forward to working with you on future projects. Please contact us if you have any questions or require additional information.

Sincerely,

MTA ENGINEERS

Kelton Price, P.E.
Project Engineer
Office +1 501-753-2626
keltonp@mtaengineers.com

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 10650
KELTON W. PRICE

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EXECUTIVE SUMMARY

The geotechnical exploration was conducted near Hilltop Road located in Bryant, Arkansas. The general topography of the site was varying elevations. In general, the soil will consist of clayey sand with gravel and lean clay. Subsurface conditions were consistent throughout the entirety of the proposed development. The potential to find buried stumps or other organic material is low.

Major soil types encountered at each boring may be summarized as follow:

Table 1. Soil Types Encountered

SOIL TYPE	DESCRIPTION
SC	Clayey Sand w/ Surface Organics
CL	Lean Clay

See Table 2 General Strata Classification of Soil Logs or the individual soil logs found in Appendix B for a more detailed overview of the soils encountered on site.

Based on the nature of the existing strata encountered at the time of exploration, it is assumed that proposed improvements will be at/or above existing grades. The surface soil contains organic and loose clayey sand. In grass covered areas, the soil of Stratum I is loose and will contain 6-in of topsoil. The stability of these soils will depend on soil moisture conditions at the time of construction, area of improvements may require over-excavation of 2-ft to remove loose isolated surface soils (deeper during wetter seasons). Additional over-excavation may be required in the footing trenches, depending upon weather conditions.

Based on the anticipated bearing load, it is recommended that the store's structures be supported on traditional shallow footings founded a minimum of 24-in below final grade, within Structural fill. Footings founded as recommended may be designed using a net allowable bearing capacity of 2,000-psf for continuous and 2,500-psf for individual spread footings.

The net allowable end bearing pressures are based on a factor of safety in excess of 3.0 with respect to the anticipated shear strength of the structural fill. Total and differential settlement is anticipated in the order of ½ -in.

SUMMARY

- **Rock/Hard Dig:**
  - No rock was encountered.
  - Medium to heavy duty equipment will be required for deep utilities.

- **Soils:**
  - Soils generally consist of medium dense clayey sand and lean clay.
  - Structural fill should be placed according to the "Structural Fill" section of this report.
  - Stripping in the order of 6-in to remove organics.
  - Subgrade soil must meet requirements of City of Bryant.

- **Foundations/Slabs:**
  - Shallow footings founded a minimum of 24-in beneath final grade may be sized using a bearing pressure of 2,000-psf for continuous and 2,500-psf for individual spread footings.

- **Un-compacted Fill:**
  - No un-compacted fill was encountered on the property during the exploration.

- **Stump/Organic Findings:**
  - The potential to find stumps or other organic material beneath the surface is low.

- **Pavement:**
  - Recommended pavement sections are presented within this report.
  - Pavement must meet the requirement of City of Bryant

- **Miscellaneous:**
  - The building is anticipated to be at/or above existing grade.

INTRODUCTION

This exploration was requested in order to evaluate existing subsurface conditions and provide geotechnical design recommendations. The results of this exploration and the geotechnical design recommendations for site construction are presented in this report.

Exploration was accomplished by:

1. Boring 5 locations up to 10-ft or refusal explore subsurface soil, and groundwater conditions.
2. Obtaining samples from each stratum, within the accessible areas, using standard geotechnical sampling technique or standard penetration test.
3. Performing laboratory tests on various samples to determine pertinent engineering properties of the subsurface strata.
4. Analyzing field and laboratory test data to develop design recommendations.

The scope of this geotechnical exploration did not include an environmental assessment to determine the presence of wetlands and/ or hazardous or toxic materials in the soil or groundwater on or near this site. If there is concern of wetlands or a hazardous/ toxic material presence, a qualified environmental assessment consultant should be contacted to perform a site investigation before construction begins.

FIELD EXPLORATION

Subsurface conditions at the site were explored by using dry auger methods and a split spoon sampler to a depth of up to 10-ft at 5 boring locations. The approximate boring locations are shown on the Plan of Borings, Appendix A. Boring logs presenting descriptions of the soil strata encountered are included in Appendix B. Laboratory testing results of the different soil types are located in Appendix D.

Samples were obtained throughout the entirety of most locations in general accordance with Standard Penetration Sampling (SPT). The recorded N-Values (Blows per foot) are indicated on the Boring Logs in the Blows per foot column. All soil samples encountered were removed from the field in moisture

tight containers and transported to our laboratory for further examination. At the lab, a visual classification was performed for each sample.

All various soil types were then analyzed for specific engineering properties. The dry auger drilling procedures facilitated observation of shallow groundwater conditions.

GENERAL SITE AND SUBSURFACE CONDITIONS

The exploration for the proposed Subdivision located along Hilltop Road in Bryant, Arkansas. It is anticipated that proposed roads will be constructed near the existing grade. Soil as explored consisted of lean clays, and clayey sands. Borings were advanced to a depth of 10-ft or refusal within the building and pavement areas using dry auger procedures.

For a more detailed description of soils encountered while testing see the boring log sheets found in the attached report.

Table2. General Strata Classification of Boring Logs

STRATA	DEPTH (ft)	SOIL CLASSIFICATION	SOIL DESCRIPTION	SIGNIFICANT PROPERTIES
STRATUM I	0 to Completion	SC *Except B-3*	Clayey Sand Surface Organics	Loose to Medium Dense Low Shrink Swell Potential Moderate bearing capacity
STRATUM II	0 to completion	CL *Only in B-3 & 5*	Lean Clay	Firm to Stiff Moderate Bearing

The significant properties and characteristics of the subsurface strata pertinent to design and constructions are as follows:

A. The topography of the site and planned building location.
B. The anticipated bearing loads.
C. The anticipated pavement Loading.
D. The anticipated pavement loading.

LABORATORY TESTING

Description of the soils encountered in the borings was prepared in general accordance with applicable ASTM standards. The soil stratification shown on the boring logs represents soil conditions at the specific boring locations. There may be some variations that occur between or beyond the boring locations. The stratification lines on the boring logs represent the approximate boundaries between soil types, but the actual transitions between soil layers in the subsurface of the proposed site may be gradual.

Laboratory soil testing was performed to verify/evaluate classification, volumetric stability, and to determine water content. The laboratory testing for soil properties was limited in this report. The results of the gradations, plasticity and moisture testing is attached as Appendix D. The results are also presented on the Boring Logs in Appendix B.

ANALYSIS AND RECOMMENDATIONS

SITE PREPARATION

Prior to the addition of any fill or the construction of any improvements, areas of the proposed building and parking should be grubbed approximately 6-in to remove organics. Existing soils do not meet the requirements for subgrade within the top 24-in, per City of Bryant. A minimum of 24-in of suitable fill shall be placed. To maintain grades over-excavation may be required. If grades allow fill can be placed above the in-situ soils. All fill/ backfill shall meet City of Bryant requirements for material as well as compaction. Once fill is placed, the area should be proof rolled using a loaded dump truck, or 62,000-lbs equivalent load, to locate any areas of instability. Isolated area of unstable soils should be evaluated at that time**.** Due to the nature of the in-situ soils, instability will increase significantly with increased soil moisture. Fill should be placed as described in the Structural Fill section of this report. Soils near surface are loose (Stratum I), Stability of these soils is dependent on moisture condition at the time of construction. As stated previously unstable areas will require over-excavation and backfill.

Excavation should be performed under dry conditions, using equipment adequate to perform the work. Depending upon the weather conditions, isolated undercuts of saturated soft clay may be necessary. Structural fill, where needed, should be placed as recommended in the “Structural Fill” section of the

report. Positive drainage should be maintained throughout this process. The addition of excessive moisture could cause a significant loss of soil stability.

STRUCTURAL FILL

Structural Fill within roadways must conform to City of Bryant requirements. Fill should consist of approved materials, which are free of organic matter and debris. For approval, samples of the proposed fill material should be submitted to MTA Engineers for classification testing. Select fill consisting of low plasticity soil such as lean clay or clayey gravel classifying as SC, CL, or GC according to the Unified Soils Classification System are generally considered suitable. High plasticity clay soils (soils with a Liquid Limit above 50) should not be used as fill.

Placement of approved fill should be achieved in multiple thin lifts. Each lift should not exceed 8-in in loose thickness. Compaction of these lifts should be performed with suitable equipment to achieve the compaction requirements noted in Table 3. Care should be taken that all compaction recommendations are performed.

If cohesive soils are to be used, compaction should be performed using a kneading-type vibratory compactor, such as a vibratory sheepsfoot. The material should be broken down sufficiently to provide a dense matrix of particles. All fill within the roadway must comply with City of Bryant Specifications.

Table 3: Compaction Requirements

Material Type and Location	Minimum Compaction (percent of ASTM D1557)	Allowable variance in moisture from optimum
Structural Fill Beneath Pavement Sections	95%	Optimum to +3 (Clay Shale) -3 to +3 (Other Approved Select Fill)
Structural Fill Beneath Buildings	95%	Optimum to +3 (Clay Shale) -3 to +3 (Other Approved Select Fill)
Utility Backfill in Building Area and Pavement	95%	-3 to +3
Miscellaneous and Green Areas	90%	-3 to +3
Aggregate Base Course	95%	-3 to +3 at time of compaction

BUILDING FOUNDATIONS

All foundations must satisfy two basic and independent design criteria. First, foundations must have an acceptable factor of safety against bearing failure under maximum design loads. Secondly, movement of the foundation due to consolidation, shrinkage, and/or swelling of the supporting strata should not exceed tolerable limits for the structure.

Construction factors such as installation of foundations units, excavation procedures, and surface and groundwater conditions should also be considered. These factors and the aforementioned subsurface conditions were influential in the development of the following statement.

In view of the anticipated foundation loading and subsurface conditions encountered, it is suggested that the proposed structures be supported on a foundation system designed in accordance with the following recommendations.

FOUNDATIONS/ SLABS

Shallow Foundations

Based on the nature of existing soils encountered at the time of exploration and the anticipated loading, it is recommended that all structures be supported on traditional shallow footings founded a minimum of 24-in beneath final exterior grade, within Structural fill. In addition, to minimize the potential for localized shear failure within the soils, a minimum footing width of 24-in is recommended. Shallow foundations founded as accounted may be designed using a net allowable bearing pressure of 2,000-psf for continuous and 2,500-psf for individual spread footings. The net allowable end bearing pressures will be based on a factor or safety in excess of 3.0. Total and differential settlement is anticipated to be less than ½-in.

Slab-on-grade type construction is considered appropriate for the floor slab. We recommend that the slab be supported on 4-in of clean crushed stone or gravel (ASTM C-33 #57 or equivalent) on prepared subgrade. A Class A impervious moisture barrier with a minimum thickness of 10-mils, specified according to ASTM E-1745, should be provided between slab and the granular fill due to the potential for perched water to develop during the wetter seasons.

PAVEMENT DESIGN

Paved parking and drives will be constructed as part of the project. Design traffic volumes and loadings have not been determined. However, we anticipate that the drives will be subject to light vehicles and weekly service trucks. We anticipate that the drives will be placed at/or above the existing elevation. The following design criteria were used to develop the recommended pavement sections in conjunction with the AASHTO Design Guide 1996:

Table 3. Pavement Design Assumption Values

PAVEMENT DESIGN ASSUMPTION VALUES	
CBR	5
R-VALUE	15
SOIL SUPPORT VALUE (S)	5

Based on information obtained during this study, subgrade soils in the paved areas should generally consist of proof-rolled properly compacted Structural fill. Structural fill should be placed as recommended in the Structural fill section of the report. It is recommended that positive site drainage should be provided during construction and be incorporated during the final design.

All pavement sections must comply with the City of Bryant minimum requirements. It should be recognized that some periodic maintenance of pavement will be required. As a minimum, this should include periodic sealing of all joints and cracks to prevent surface water infiltration.

UN-COMPACTED FILL

No uncompacted fill was encountered on the property during our exploration.

STUMP/ ORGANIC FINDINGS

potential to find stumps or other organic material below the surface is low.

SEISMIC CONSIDERATION

Based on IBC-2015, a site soil **Class D** may be used for design purposes. Liquefaction potential of the soils in Stratum I & II is negligible. Additional design information on Seismic Consideration is attached as Appendix E.

CONSTRUCTION PROCEDURES

The potential exists for increased perched water to develop during wetter seasons. Therefore, foundation excavation and any other site grading should be performed during drier periods to reduce the possibility of changes in conditions.

Subsurface conditions significantly at variance with those encountered within the borings should be brought to the attention of the engineer, and work delayed pending evaluation and/or preparation of additional recommendations, if warranted.

♦ ♦ ♦ ♦

The following illustrations are attached and complete this report:

Appendix A: Excavation Location Plan
Appendix B: Test Pit Logs
Appendix C: Key to terms and Symbols
Appendix D: Laboratory Test Summary
Appendix E: Seismic Design Criteria

♦ ♦ ♦ ♦

Appendix A :
Boring Location Plan


50 Acres
Subdivision
Little Rock, AR
Legend
length of each boundary
Miller Rd & Hilltop Rd
od Dog Behavior Academy Inc
Furry Feet Retreat And Training Center
1725 ft
465 ft
568 ft
435 ft
660 ft
Not To Scale
734 ft
623 ft
Miller Rd & Hilltop Rd
Google Earth
800 ft
N

Appendix B: Boring Logs

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Boring Log Report

BORING NO. B-1
PAGE 1 OF 1

JOB NO. GEO23-097
JOB NAME: 50 ACRES SUBDIVISION
COORDINATES: NORTH: _____ EAST: _____
STATION: _____
LOCATION: BRYANT, AR

DATE: 6-13-2023
TYPE OF DRILLING: DRY AUGER
EQUIPMENT: GEOPROB 7822
LOGGED BY: CORY. S
DRILLED BY: P. KING

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	N-Value
			LOOSE, RED-BROWN, CLAYEY SAND W/ SANDSTONE FRAGMENTS & SURFACE ORGANICS		22	9.7	38	16	36.6	5 4-4	8
										4 5-7	12
5			MEDIUM DENSE, RED-TAN, SANDY CLAY W/ SANDSTONE FRAGMENTS	SC						5 4-4	8
										4 5-4	9
10			LOOSE, TANNISH RED TO GRAY, SANDY CLAY							4 5-6	11
			Boring Terminated								
15											
20											
25											
30											

COMPLETION DEPTH: 10 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Ph. 479.756.0061 • Fax 479.756.9254

101 S. Church St. • Jonesboro, AR 72401
Ph. 870.530.8380 • Fax 870.972.0237

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Boring Log Report

BORING NO. B-2
PAGE 1 OF 1

JOB NO. GEO23-097
JOB NAME: 50 ACRES SUBDIVISION
COORDINATES: NORTH: _____ EAST: _____
STATION: _____
LOCATION: BRYANT, AR

DATE: 6-13-2023
TYPE OF DRILLING: DRY AUGER
EQUIPMENT: GEOPROB 7822
LOGGED BY: CORY. S
DRILLED BY: P. KING

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	N-Value
5			LOOSE TO MEDIUM DENSE, TANNISH GRAY TO RED, SANDY CLAY W/ SANDSTONE FRAGMENTS & SURFACE ORGANICS	SC	22	18.2	38	16	38.0	5 6-5 3 2-5 5 5-6	11 7 11
10			MEDIUM DENSE, TANNISH RED TO GRAY, CLAYEY SAND							5 5-8 5 7-8	13 15
15			Boring Terminated								
20											
25											
30											

COMPLETION DEPTH: 10 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Boring Log Report

BORING NO. B-3
PAGE 1 OF 1

JOB NO. GEO23-097
JOB NAME: 50 ACRES SUBDIVISION
COORDINATES: NORTH: _____ EAST: _____
STATION: _____
LOCATION: BRYANT, AR

DATE: 6-13-2023
TYPE OF DRILLING: DRY AUGER
EQUIPMENT: GEOPROB 7822
LOGGED BY: CORY. S
DRILLED BY: P. KING

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	N-Value
			STIFF, TAN-RED, SANDY CLAY W/ SURFACE ORGANICS							5 7-6	13
										7 9-10	19
5				CL						6 7-5	12
			FIRM TO STIFF, TAN-RED, SANDY CLAY							6 7-15	22
10										8 9-11	20
			Boring Terminated								
15											
20											
25											
30											

COMPLETION DEPTH: 10 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Boring Log Report

BORING NO. B-4
PAGE 1 OF 1

JOB NO.	GEO23-097	DATE:	6-13-2023
JOB NAME:	50 ACRES SUBDIVISION	TYPE OF DRILLING:	DRY AUGER
COORDINATES: NORTH:		EAST:	EQUIPMENT: GEOPROB 7822
STATION:		LOGGED BY:	CORY. S
LOCATION:	BRYANT, AR	DRILLED BY:	P. KING

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	N-Value
			LOOSE, TAN-RED, CLAYEY SAND W/ SURFACE ORGANICS & SANDSTONE FRAGMENTS		14	10.7	24	10	39.2	4 5-4 6 5-5	9 10
5			MEDIUM DENSE, TAN-RED, CLAYEY SAND	SC						7 7-10 4 5-8	17 13
10										4 6-8	14
			Boring Terminated								
15											
20											
25											
30											

COMPLETION DEPTH: 10 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Boring Log Report

BORING NO. B-5
PAGE 1 OF 1

JOB NO. GEO23-097
JOB NAME: 50 ACRES SUBDIVISION
COORDINATES: NORTH: _____ EAST: _____
STATION: _____
LOCATION: BRYANT, AR

DATE: 6-13-2023
TYPE OF DRILLING: DRY AUGER
EQUIPMENT: GEOPROB 7822
LOGGED BY: CORY. S
DRILLED BY: P. KING

DEPTH FT.	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL SURFACE ELEVATION: EXISTING GRADE	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	PLASTICITY INDEX	PERCENT PASSING #200	NO. OF BLOWS PER 6-IN.	N-Value
			LOOSE, TAN-RED, CLAYEY SAND W/ SURFACE ORGANICS	SC	14	14.6	27	13	37.6	4 3-3	6
										3 2-3	5
5			FIRM TO STIFF, TANNISH RED TO GRAY, SANDY CLAY	CL	18	36.1	35	17	87.2	2 2-4	6
										3 6-8	14
10										5 6-8	14
			Boring Terminated								
15											
20											
25											
30											

COMPLETION DEPTH: 10 WATER DEPTH> INITIAL: AFTER 24 HOURS:

REMARKS:

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Appendix C: Key to Terms

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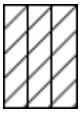
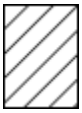
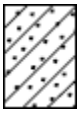
TERMS AND SYMBOLS USED ON BORING LOGS

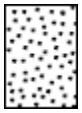
SOIL TYPES

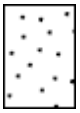

CLAY (CH)

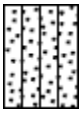

SILTY CLAY (CL)


CLAY (CL)

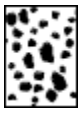

SANDY CLAY (CL)

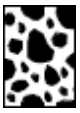

WELL-GRADED SAND (SW)

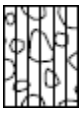

POORLY-GRADED SAND (SP)


SILTY SAND (SM)


CLAYEY SAND (SC)

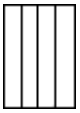

WELL-GRADED GRAVEL (GW)

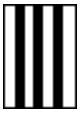

POORLY-GRADED GRAVEL (GP)

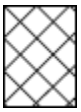

SILTY GRAVEL (GM)


SANDY SILT (ML)

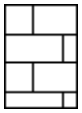

CLAYEY GRAVEL (GC)


SILT (ML)

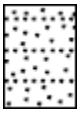

SILT (MH)

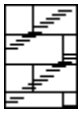

FILL MATERIAL

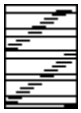
ROCK TYPES

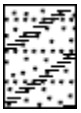

LIMESTONE


SHALE


SANDSTONE

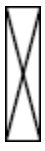

WEATHERED LIMESTONE


WEATHERED SHALE


WEATHERED SANDSTONE

SAMPLER TYPE


SHELBY TUBE SAMPLE


SPLIT SPOON SAMPLE


AUGER SAMPLE


NO RECOVERY

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SOIL GRAIN SIZE

U.S. STANDARD SIEVE								
12"	3"	3/4"	4	10	40	200		
BOULDERS	**COBBLES**	**GRAVEL**		**SAND**			**SILT**	**CLAY**
		COARSE	**FINE**	**COARSE**	**MEDIUM**	**FINE**		
304	76.2	19.1	4.75	2	0.42	0.074	0.002	
SOIL GRAIN SIZE IN MILIMETERS								

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on No 200 sieve): Includes (1) clean gravels and sands, and (2) silty clayey gravels and sands condition is rated according to relative density, as determined by laboratory tests.

DESCRIPTIVE TERMS	N VALUE	RELATIVE DENSITY
VERY LOOSE	0-4	0 – 15 %
LOOSE	4-10	15 – 35 %
MEDIUM DENSE	10-30	35 – 65 %
DENSE	30-50	65 – 85 %
VERY DENSE	50 and above	85 – 100 %

FINE GRAINED SOILS (major portion passing No 200 sieve): include (1) inorganic and organic silt and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer reading or by unconfined compression tests.

DESCRIPTIVE TERMS	N VALUE	UNCONFINED COMPRESSIVE STRENGTH TON / SQ. FT.
VERY SOFT	0-3	less than 0.25
SOFT	3-6	0.25 - 0.50
FIRM	6-12	0.50 - 1.00
STIFF	13-20	1.00 - 2.00
VERY STIFF	20-50	2.00- 4.00
HARD	50 and above	4.00 and higher

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above because of planes of weakness or cracks in the soil. The consistency rating of such soils are based on penetrometer readings

TERMS CHARACTERIZING MOISTURE CONTENT

DRY: No water evident in sample; fines less than plastic limit.
MOIST: Sample feels damp; fines near the plastic limit.
VERY MOIST: Water visible on sample; fines greater than plastic limit and less than liquid limit.
WET: Sample bears free water; fines greater than liquid limit.

TERMS CHARACTERIZING SOIL STRUCTURE

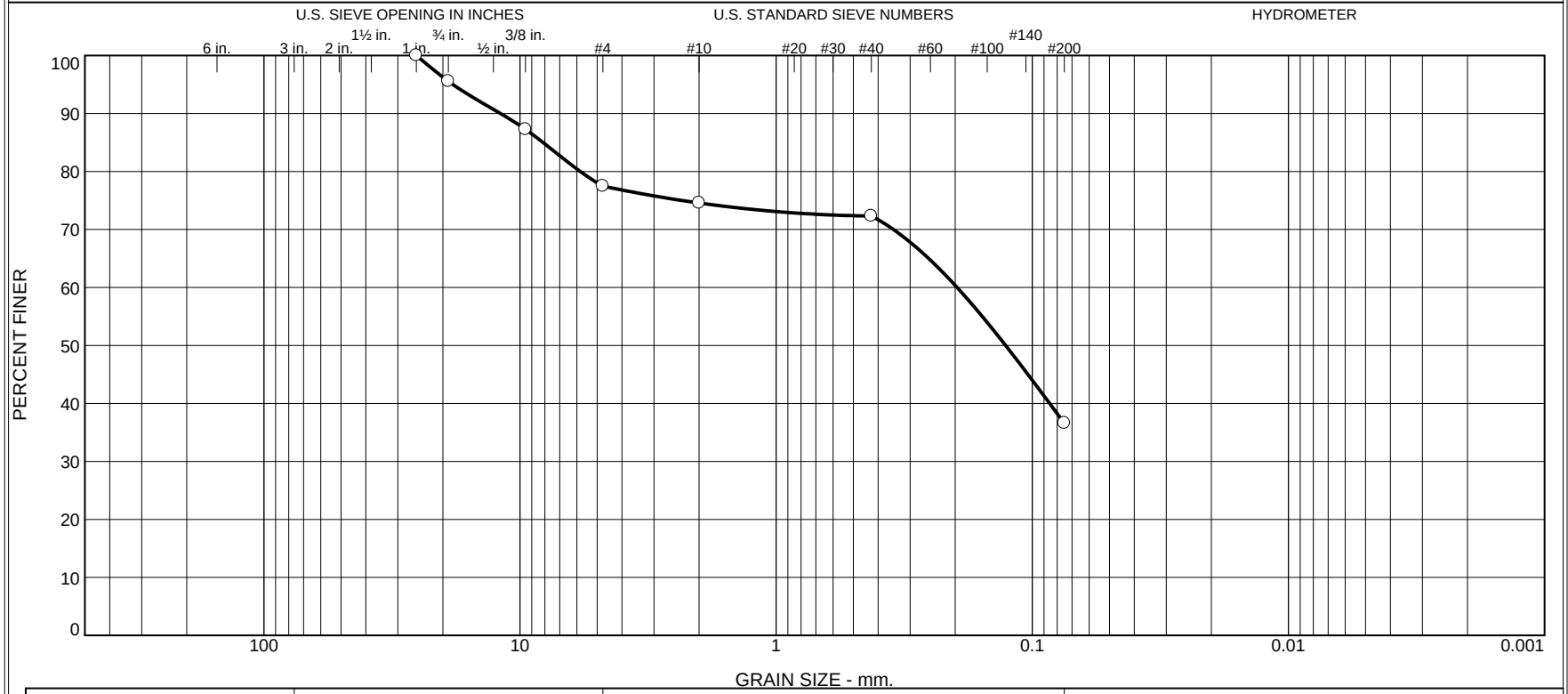
SLICKENSIDED: Having inclined planes of weakness that are slick and glassy in appearance.
FISSURED: Containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
LAMINATED: Composed of thin layer of varying color and texture.
INTERBEDDED: Composed of alternate layers of different soil types
CALCAREOUS: Containing appreciable quantities of calcium carbonate.
WELL GRADED: Having wide range in grain sizes and substantial amounts of all intermediate particle size.
POORLY GRADED: Predominantly of one grain size, or having a range of sizes with some intermediate size missing

---

Terms used in this report for describing soils according to their texture or grain size distribution are in accordance with UNIFIED SOIL CLASSIFICATION SYSTEM as described in technical Memorandum No 3-357, Waterways Experiment Station, March 1953

Appendix D: Laboratory Test Summary

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.4	18.1	2.9	2.3	35.7	36.6	

Source	Sample #	Depth/Elev.	Date Sampled	AASHTO	Material Description	NM %	LL	PL
B-1	S-1	0	6-15-2023	A-6(2)	RED-BROWN, CLAYEY SAND W/ GRAVEL	9.7	38	22

Client HOPE CONSULTING

Project 50 ACRES SUBDIVISION

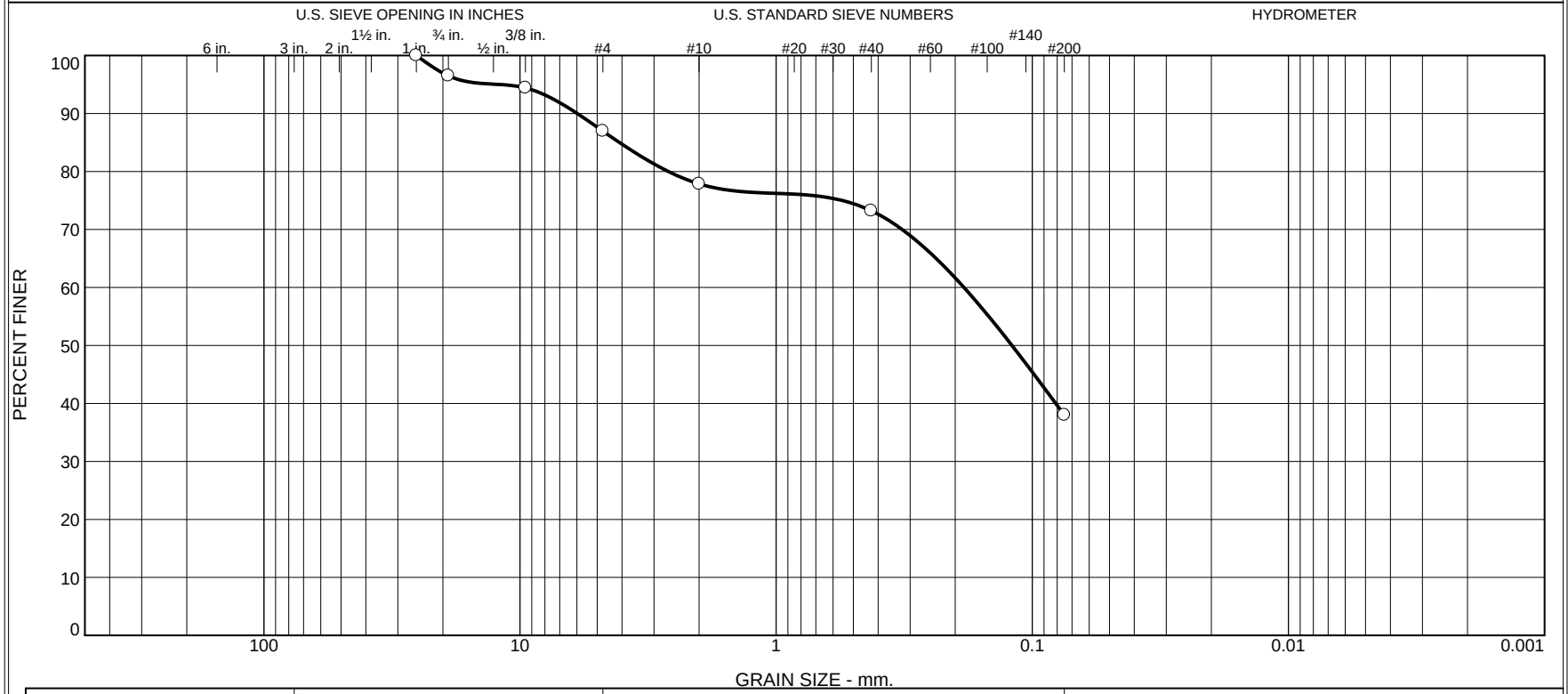
Project No. GEO23-097 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

Particle Size Distribution Repor



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.5	9.5	9.1	4.7	35.2	38.0	

Source	Sample #	Depth/Elev.	Date Sampled	AASHTO	Material Description	NM %	LL	PL
B-2	S-2	2	6-15-2023	A-6(2)	TANNISH GRAY TO RED, CLAYEY SAND	18.2	38	22

Client HOPE CONSULTING

Project 50 ACRES SUBDIVISION

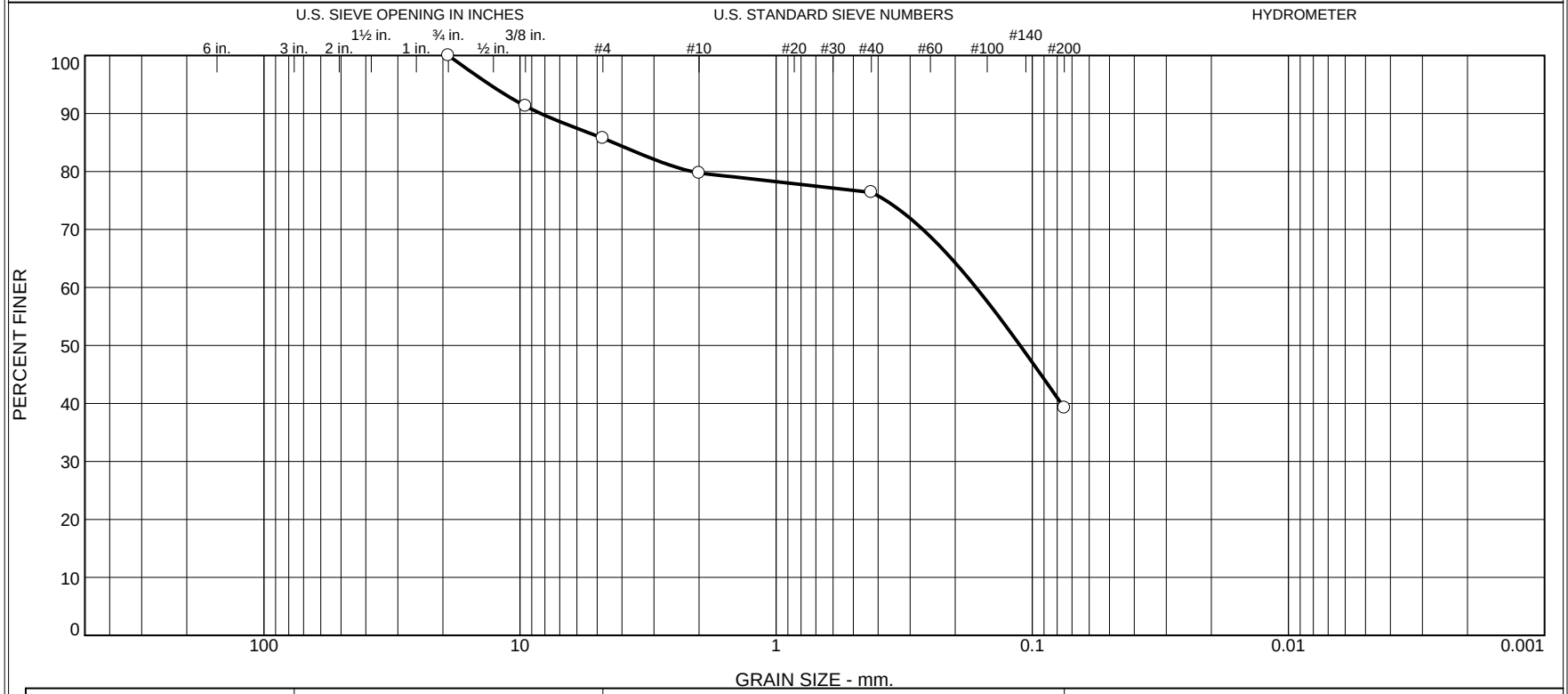
Project No. GEO23-097 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	14.3	6.0	3.3	37.2	39.2	

Source	Sample #	Depth/Elev.	Date Sampled	AASHTO	Material Description	NM %	LL	PL
B-4	S-1	0	6-15-2023	A-4(0)	TAN-RED, CLAYEY SAND	10.7	24	14

Client HOPE CONSULTING

Project 50 ACRES SUBDIVISION

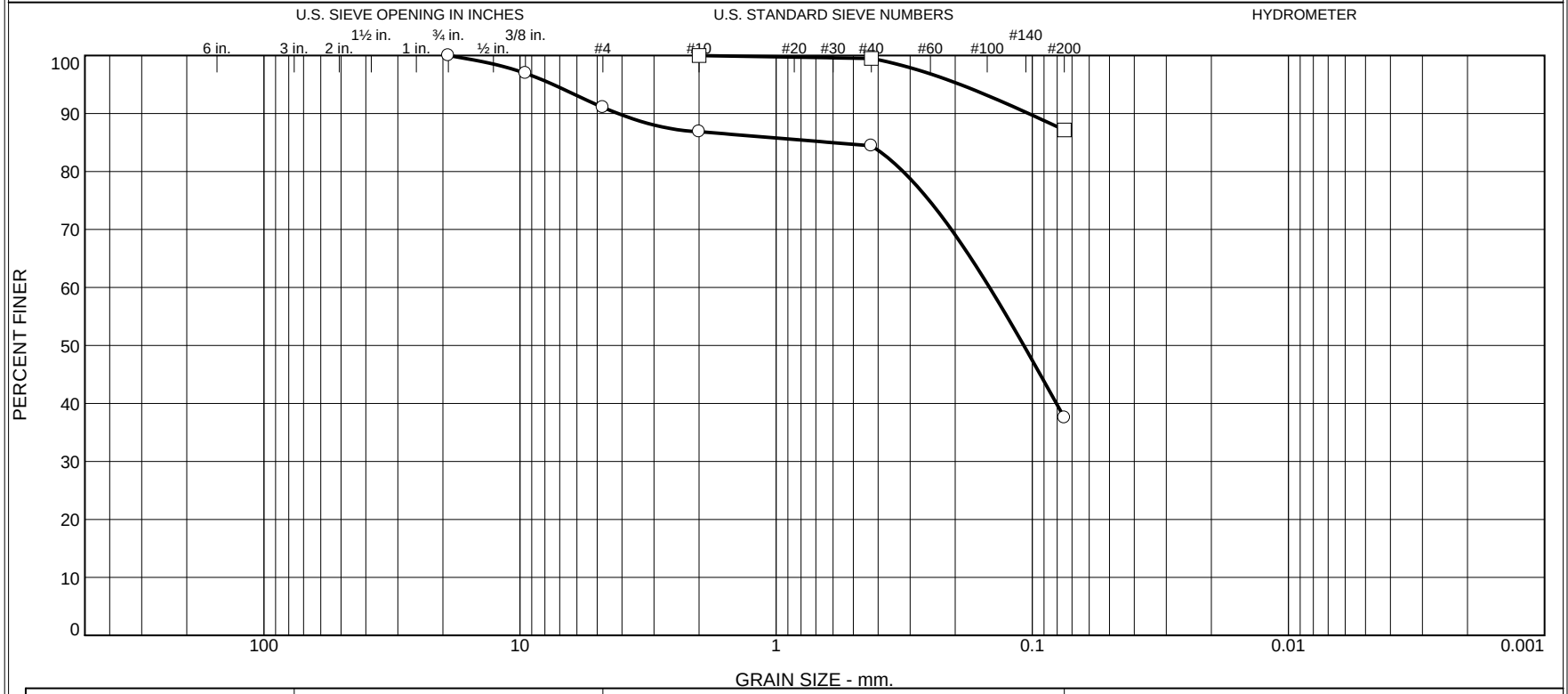
Project No. GEO23-097 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	8.9	4.2	2.5	46.8	37.6	
□	0.0	0.0	0.0	0.0	0.5	12.3	87.2	

	Source	Sample #	Depth/Elev.	Date Sampled	AASHTO	Material Description	NM %	LL	PL
○	B-5	S-1	0	6-15-2023	A-6(1)	TAN-RED, CLAYEY SAND	14.6	27	14
□	B-5	S-3	4	6-15-2023	A-6(14)	TANNISH RED TO GRAY, SANDY CLAY	36.1	35	18

Client HOPE CONSULTING

Project 50 ACRES SUBDIVISION

Project No. GEO23-097 Figure

Materials Testing of Arkansas

Little Rock, AR

Tested By: S. PENNINGTON **Checked By:** F. MONDUN

Appendix E:
Seismic Design Criteria

This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Hazards by Location

Search Information

Coordinates: 34.643606998951, -92.50461665805817

Elevation: 542 ft

Timestamp: 2023-06-27T19:08:20.123Z

Hazard Type: Seismic

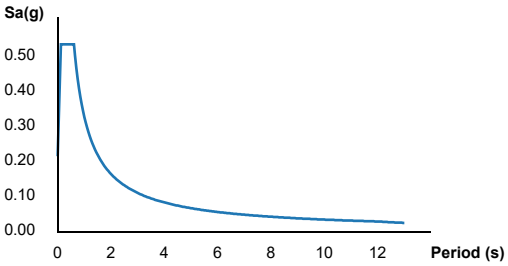
Reference Document: IBC-2015

Risk Category: II

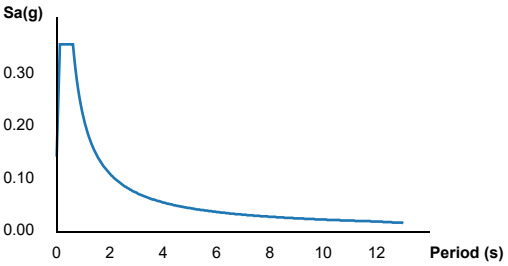
Site Class: D



MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Basic Parameters

Name	Value	Description
S_S	0.352	MCE_R ground motion (period=0.2s)
S_1	0.148	MCE_R ground motion (period=1.0s)
S_{MS}	0.534	Site-modified spectral acceleration value
S_{M1}	0.326	Site-modified spectral acceleration value
S_{DS}	0.356	Numeric seismic design value at 0.2s SA
S_{D1}	0.218	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	D	Seismic design category
F_a	1.519	Site amplification factor at 0.2s
F_v	2.209	Site amplification factor at 1.0s
CR_S	0.839	Coefficient of risk (0.2s)
CR_1	0.817	Coefficient of risk (1.0s)
PGA	0.18	MCE_G peak ground acceleration
F_{PGA}	1.439	Site amplification factor at PGA
PGA_M	0.26	Site modified peak ground acceleration
T_L	12	Long-period transition period (s)
SsRT	0.352	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.419	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.148	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.181	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)

PGAd	0.6	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

RICHARDSON ENGINEERING
Planning ▪ Engineering ▪ Development Consulting

September 23, 2026

City of Bryant
Development & Review Committee
Attn: Mr. Colton Leonard
Planning and Development Director
RE: Request for Preliminary Plat Approval – Zyair Estates Subdivision, Bryant, Arkansas

Dear Mr. Leonard:

On behalf of Eminent Constructions, LLC please accept this correspondence as a formal request for Preliminary Plat approval for the proposed Zyair Estates Subdivision located on Hilltop Road in Bryant, Arkansas.

We respectfully request that this item be placed on the October 12th, 2026, City of Bryant Planning Commission agenda for consideration.

Please find below the relevant contact information for the developer and project engineer:

Developer Information:
Sahil Hameerani
Eminent Constructions, LLC
15600 Hartford St
Little Rock, AR 72223
shameerani@gmail.com
(501) 786-0684

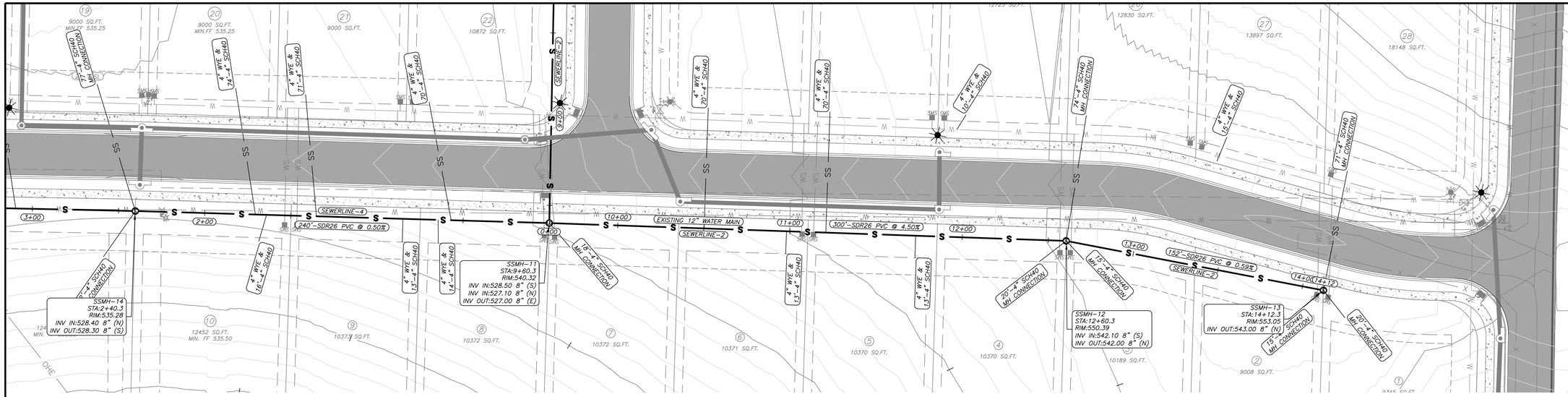
Engineer Information:
Eric Richardson, P.E.
Richardson Engineering, PLLC
P.O. Box 192
Benton, AR 72018
Eric@Richardson-Engrs.com
(501) 315-7225

Should you require any additional documentation or information, please do not hesitate to contact our office at your convenience. We appreciate your time and consideration of this request.

Sincerely,



Eric Richardson, P.E.



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GRAPHIC SCALE

30 0 30 60 90

(IN FEET)
1 inch = 30 ft.

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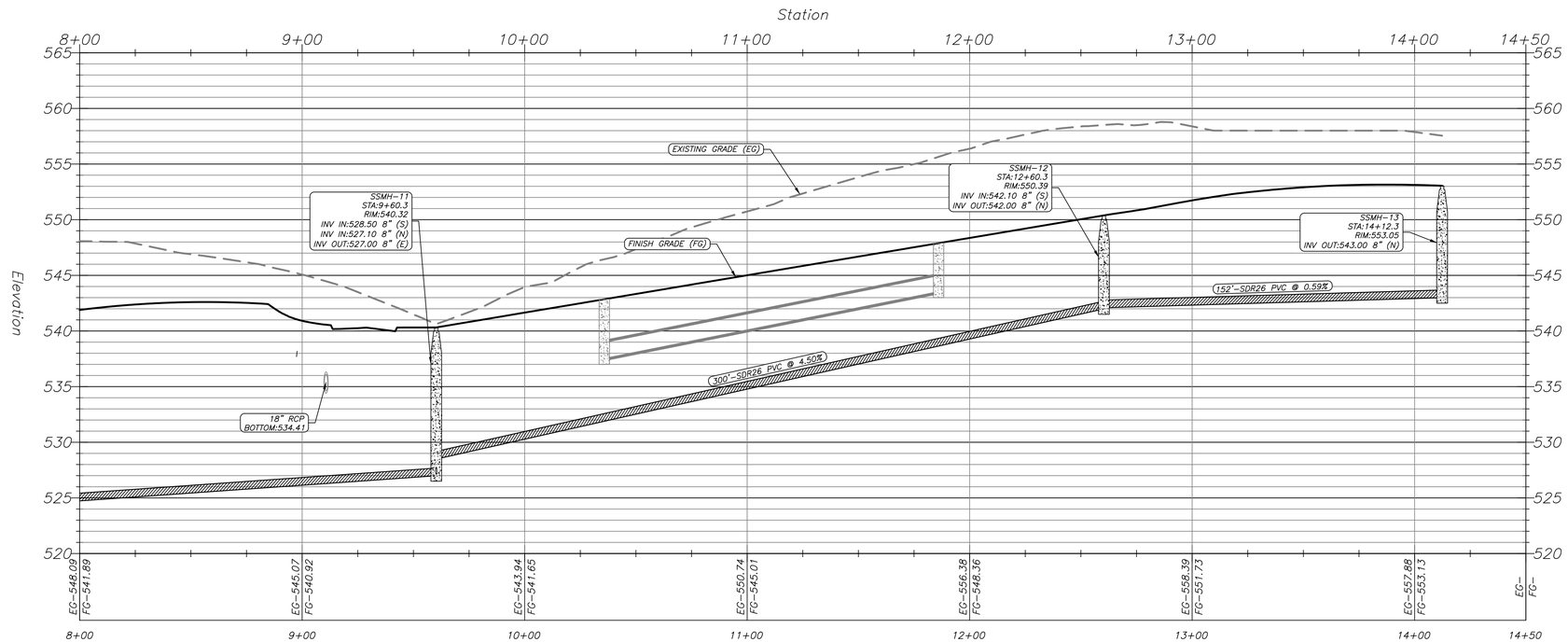
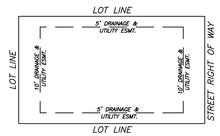
ENGINEER
RICHARDSON ENGINEERING, PLLC
ADDRESS: 325 W.SOUTH ST.
BENTON, AR. 72015
PHONE NO. (501) 315-7225
PROJECT REPRESENTATIVE:
ERIC RICHARDSON, P.E.

SURVEYOR
SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

SEWERLINE-2 PROFILE





TYPICAL LOT EASEMENTS

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Planning • Engineering • Development Consulting
325 W. SOUTH STREET, BENTON, AR 72015 (501)315-7225

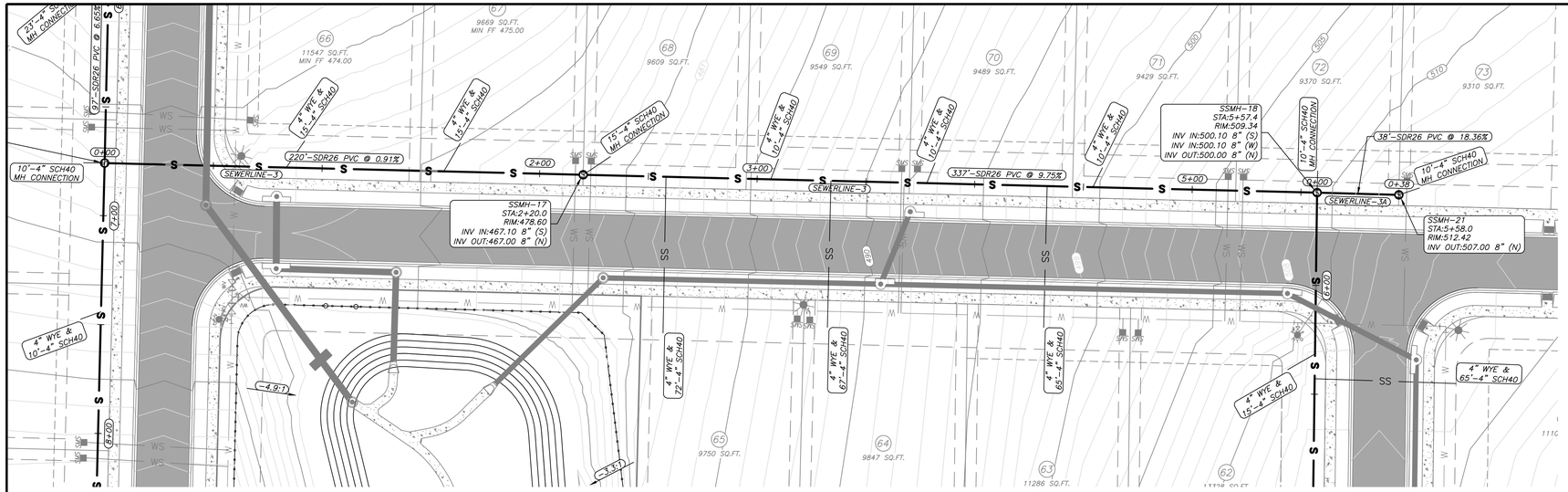
CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

SEWER 2 P/P 8+00-END
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

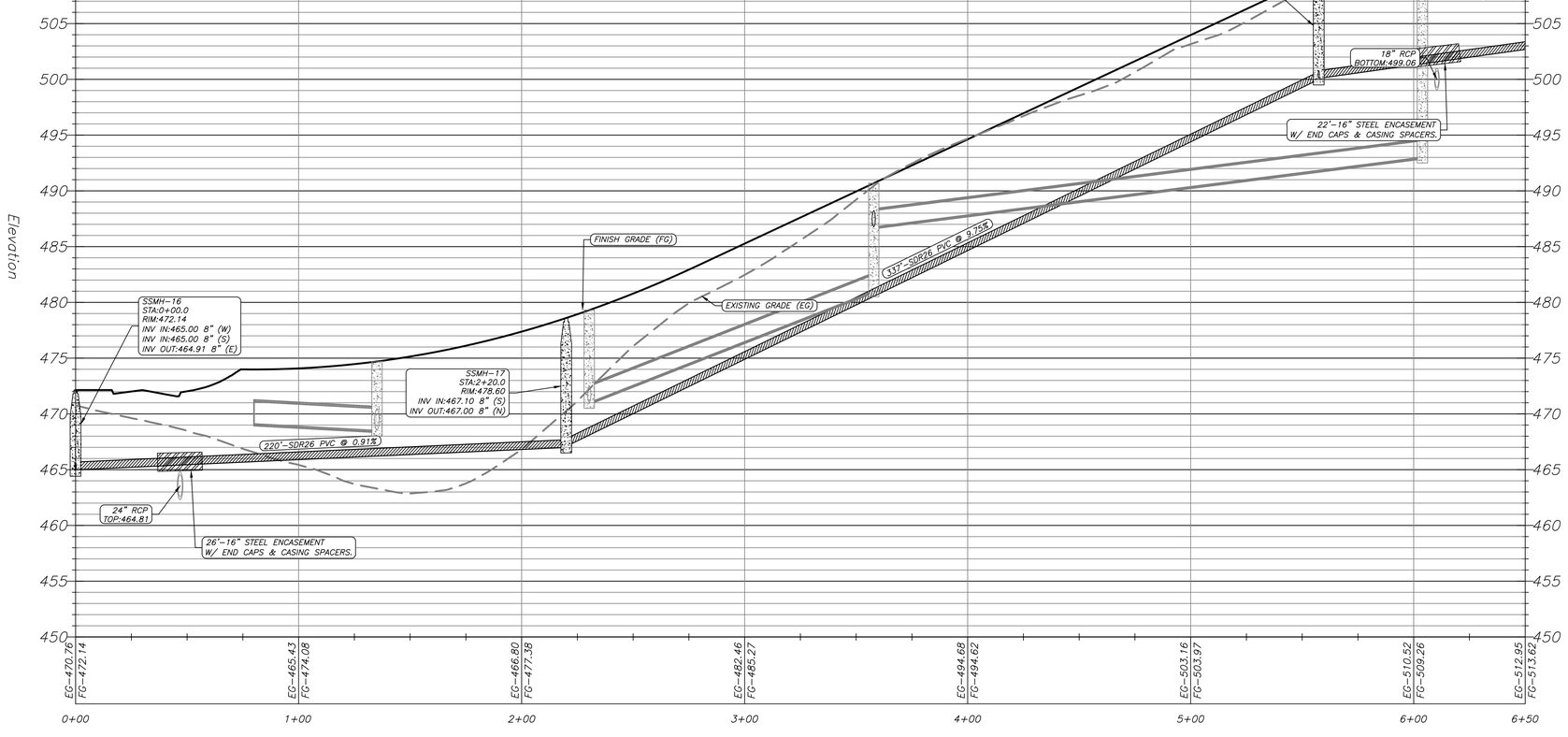
Prepared For:
EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026
2	CITY COMMENTS 4/15/26	4/20/2026
3	REDESIGN ROAD PROFILES	9/30/2026

PROJECT NO.: 024-034
Date: 3/3/2026
REVISED 9/30/2026
Scale: 1" = 30'
Sheet: 15 of 26



SEWERLINE-3 PROFILE



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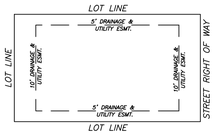

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SEWER 3 P/P 0+00-6+50
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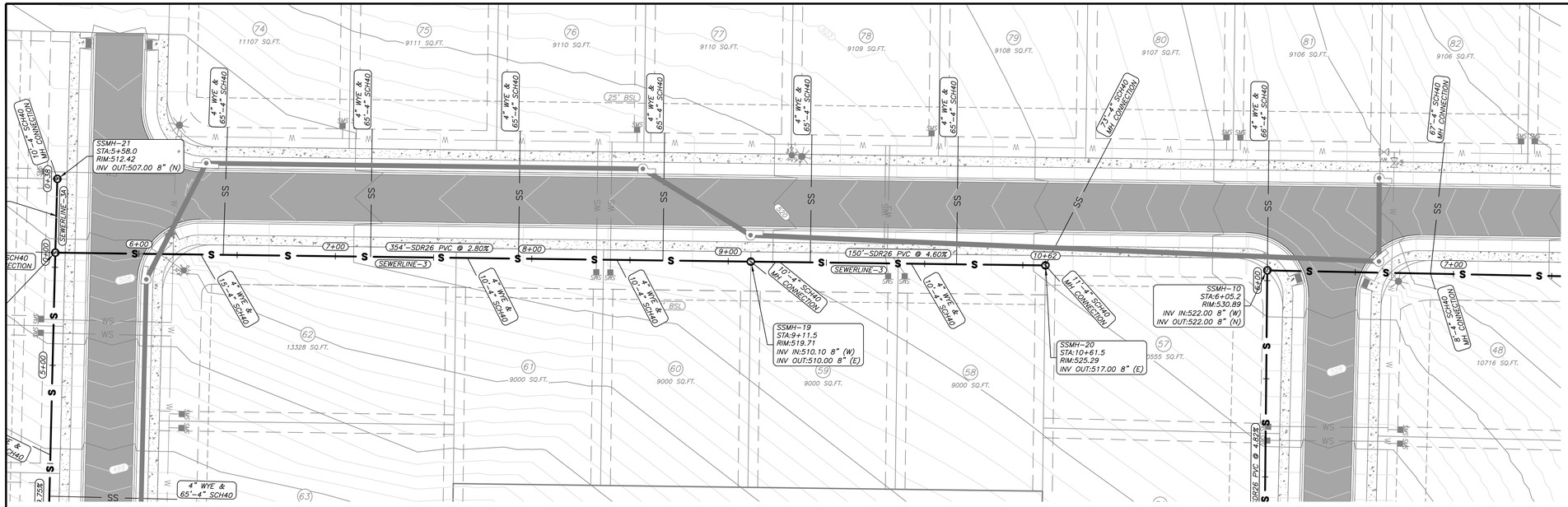

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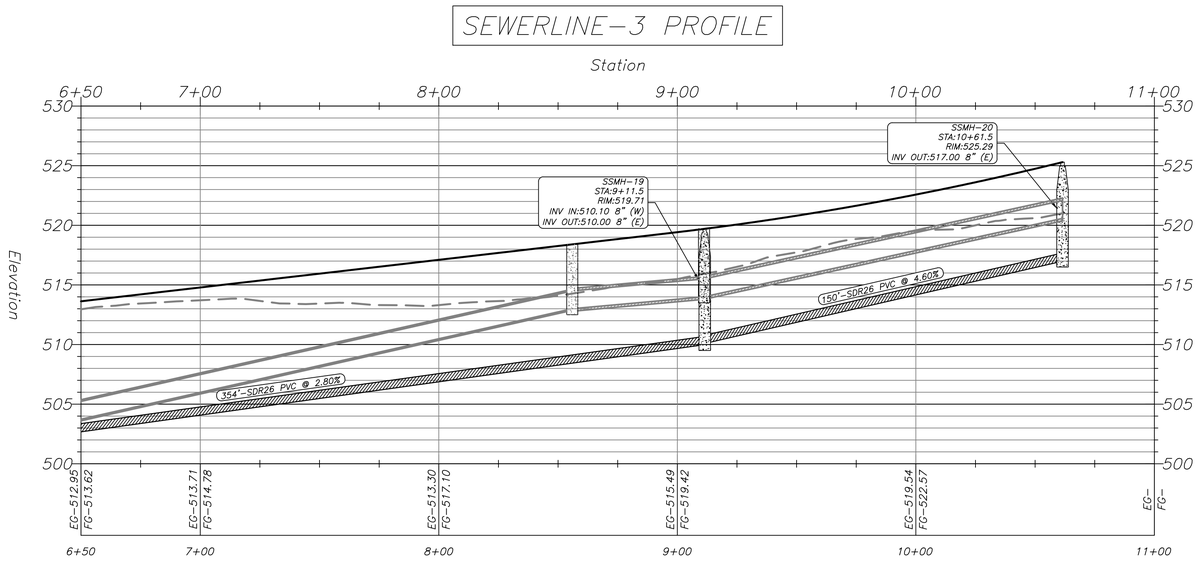

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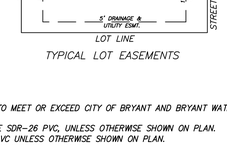

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8.) MINIMUM VERTICAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 18" (WATER ON TOP). IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED EITHER THE WATER OR SEWER LINE MUST BE ENCASED 10' EITHER SIDE OF THE CROSSING AS PER ARKANSAS RULES PERTAINING TO PUBLIC WATER SYSTEMS SECTION XIV PART A. IF THE WATER LINE MUST PASS BENEATH THE SEWER LINE, IT MUST BE ENCASED AND MAINTAIN 18" OF VERTICAL SEPARATION.
9.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
10.) BACKFILL FOR ALL DISTURBED (EXCAVATED) AREAS TO BE COMPACTED TO 95% MP.
11.) DUCTILE IRON (PER CITY OF BRYANT SPECS.) TO BE USED IF COVER OVER SEWERLINE IS LESS THAN 36".
12.) ALL STREET CROSSINGS TO MEET CITY OF BRYANT STREET DEPARTMENT SPECIFICATIONS.
13.) TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM OF 36" PIPE COVER.
14.) NO MANHOLES SHALL BE CONSTRUCTED IN SIDEWALKS. SEWER STUB-OUTS SHALL EXTEND AT LEAST 5' OUTSIDE OF THE UTILITY EASEMENT. MANHOLE RIMS TO BE AT LEAST 2" ABOVE FINISH GRADE.
15.) 12ga GREEN COATED COPPER TRACING WIRE TO BE INSTALLED WITH ALL FORCE MAINS.

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No. 2519
ARKANSAS

SEWER 3 P/P 6+50-END
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For:
EMINENT CONSTRUCTIONS

No.	Revisions	Date
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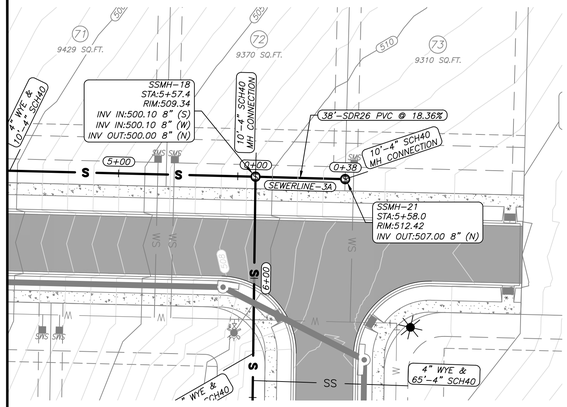
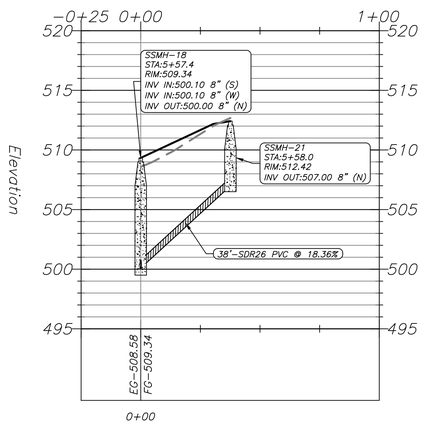
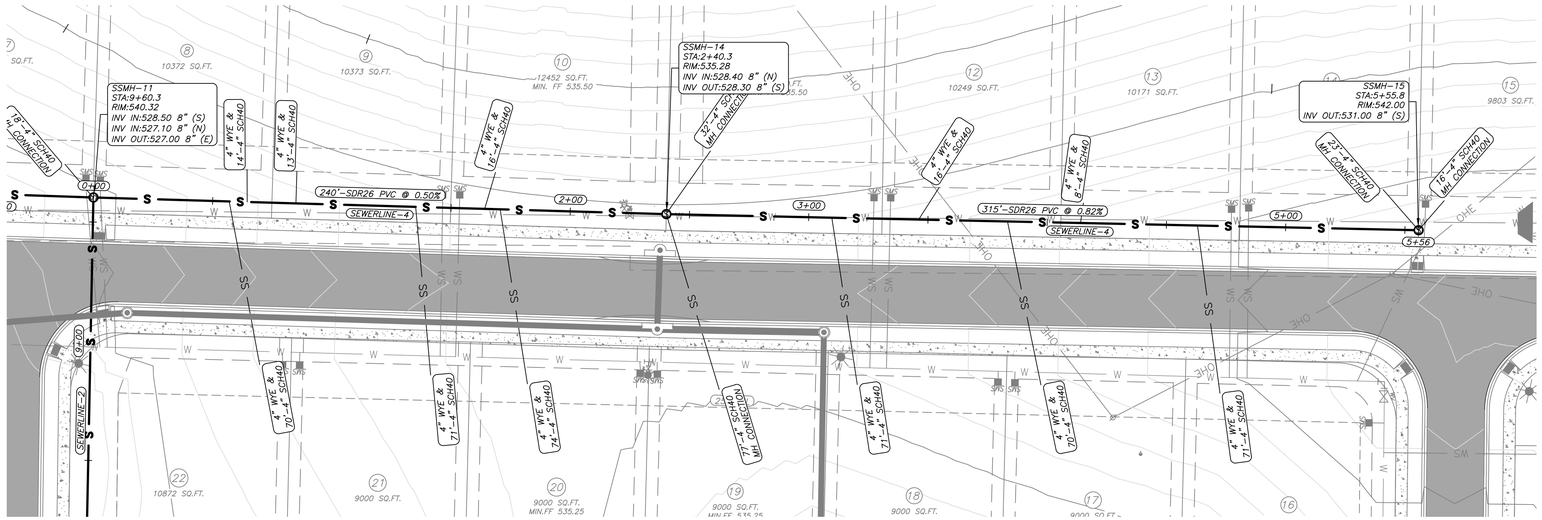
2	CITY COMMENTS 4/15/26	4/22/2026
3	REDESIGN ROAD PROFILES	9/22/2026

PROJECT NO.: 024-034
Date: 3/3/2026
REV:9/22/2026
Scale: 1" = 30'
Sheet: 17 of 26



SEWERLINE-3A PROFILE





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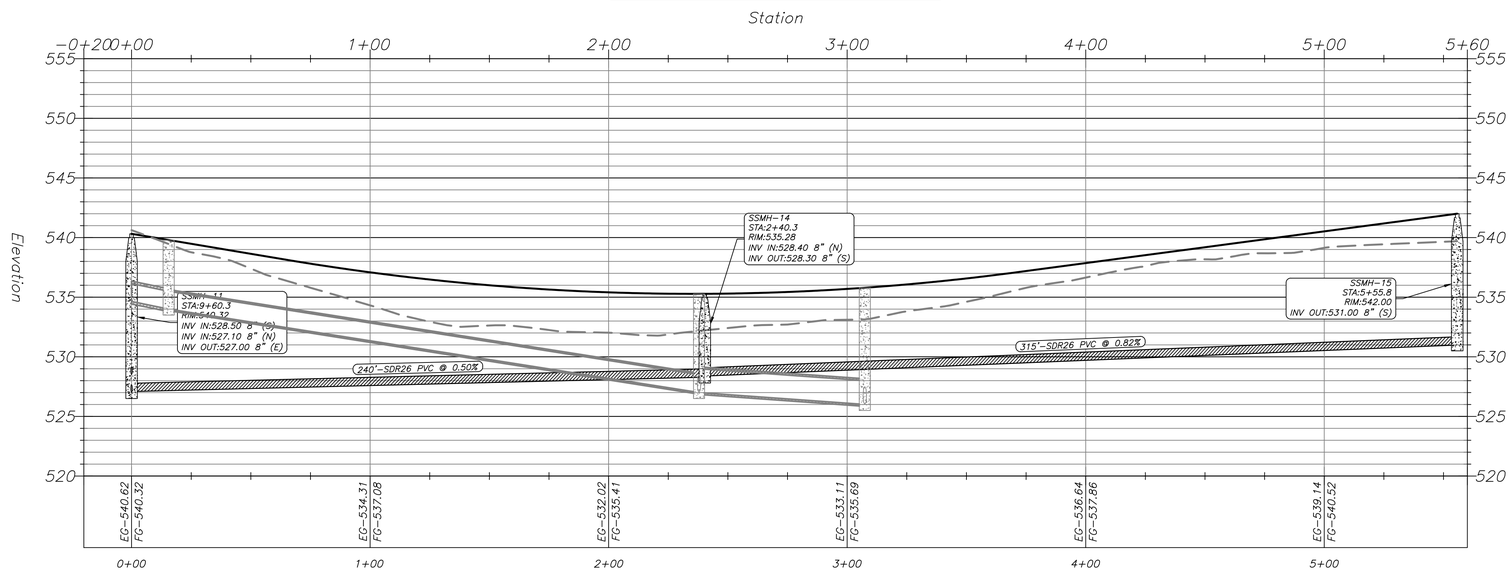

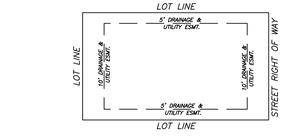

TYPICAL LOT EASEMENTS

LEGEND

- G — GAS LINE
- T — TELEPHONE LINE
- S — SANITARY SEWER
- X — FENCE
- W — WATER LINE
- STORM DRAIN
- > > — DITCH OR SWALE
- OHE — POWER LINE (OVERHEAD)
- SWS — PROPOSED WATER METER BOX
- EXISTING MANHOLE
- PROPOSED MANHOLE
- LIGHT POLE
- GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
- CURB INLET
- FES
- POWER POLE

GENERAL NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED CITY OF BRYANT AND BRYANT WATER STANDARD SPECIFICATIONS.
2.) ALL SEWER GRAVITY MAINS SHALL BE SDR-26 PVC, UNLESS OTHERWISE SHOWN ON PLAN.
3.) ALL WATER MAINS SHALL BE C900 PVC UNLESS OTHERWISE SHOWN ON PLAN.
4.) ALL STORM DRAINAGE SHALL BE AS SHOWN ON THE PLAN.
5.) ATTENTION IS CALLED TO WATER, SEWER, AND STREET LAYOUT FOR ADDITIONAL INFORMATION.
6.) ATTENTION IS CALLED TO CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
7.) ALL UTILITIES TO BE LOCATED PRIOR TO CONSTRUCTION (ONE CALL, CITY, ETC.)
8.) MINIMUM HORIZONTAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 10'.
9.) MINIMUM VERTICAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 18" (WATER ON TOP). IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED EITHER THE WATER OR SEWER LINE MUST BE ENCASED 10' EITHER SIDE OF THE CROSSING AS PER ARKANSAS RULES PERTAINING TO PUBLIC WATER SYSTEMS SECTION XIV PART A. IF THE WATER LINE MUST PASS BENEATH THE SEWER LINE, IT MUST BE ENCASED AND MAINTAIN 18" OF VERTICAL SEPARATION.
10.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
11.) BACKFILL MATERIAL FOR STREET CROSSINGS SHALL BE ACCORDING TO CITY OF BRYANT STREET DEPT SPECS AND COMPACTED TO 98% M.P. UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND UTILITY OWNER.
12.) THIS SHEET IS PART OF A COMPLETE DESIGN SET. CONTRACTOR SHALL REFER TO ADDITIONAL DRAWINGS INCLUDED HEREIN, FOR MORE DETAIL REGARDING UTILITIES, DRAINAGE, AND OTHER INFRASTRUCTURE.
13.) THE APPROXIMATE LOCATION OF KNOWN SURFACE AND SUBSURFACE STRUCTURES, PIPES, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE DESIGN DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN.
14.) ALL UTILITIES SHALL BE CONSTRUCTED AT A MINIMUM OF 36" BELOW TOP BACK OF CURB GRADE.
15.) CONTRACTOR TO COORDINATE MAINTENANCE OF TRAFFIC ON PUBLIC RIGHT OF WAY WITH PROPER AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.

SEWER NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED CITY OF BRYANT STANDARD SPECIFICATIONS.
2.) ALL SEWER GRAVITY MAINS SHALL BE SDR-26 PVC, UNLESS OTHERWISE SHOWN.
3.) ALL SERVICE LINES SHALL BE 4" SDR-21 PVC OR SCH40 PVC.
4.) CONTRACTOR TO VERIFY METHOD OF MAIN CONNECTION WITH THE CITY OF BRYANT PRIOR TO CONSTRUCTION.
5.) ATTENTION IS CALLED TO CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
6.) ALL UTILITIES TO BE LOCATED PRIOR TO CONSTRUCTION (ONE CALL, CITY, ETC.)
7.) MINIMUM HORIZONTAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 10'.
8.) MINIMUM VERTICAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 18" (WATER ON TOP). IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED EITHER THE WATER OR SEWER LINE MUST BE ENCASED 10' EITHER SIDE OF THE CROSSING AS PER ARKANSAS RULES PERTAINING TO PUBLIC WATER SYSTEMS SECTION XIV PART A. IF THE WATER LINE MUST PASS BENEATH THE SEWER LINE, IT MUST BE ENCASED AND MAINTAIN 18" OF VERTICAL SEPARATION.
9.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
10.) BACKFILL FOR ALL DISTURBED (EXCAVATED) AREAS TO BE COMPACTED TO 95% MP.
11.) DUCTILE IRON (PER CITY OF BRYANT SPECS.) TO BE USED IF COVER OVER SEWERLINE IS LESS THAN 36".
12.) ALL STREET CROSSINGS TO MEET CITY OF BRYANT STREET DEPARTMENT SPECIFICATIONS.
13.) TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM OF 36" PIPE COVER.
14.) NO MANHOLES SHALL BE CONSTRUCTED IN SIDEWALKS. SEWER STUB-OUTS SHALL EXTEND AT LEAST 5' OUTSIDE OF THE UTILITY EASEMENT. MANHOLE RIMS TO BE AT LEAST 2" ABOVE FINISH GRADE.
15.) 12ga GREEN COATED COPPER TRACING WIRE TO BE INSTALLED WITH ALL FORCE MAINS.

ENGINEER
RICHARDSON ENGINEERING, PLLC
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PROJECT REPRESENTATIVE:
ERIC RICHARDSON, P.E.

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

SURVEYOR
SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501-837-2342

GRAPHIC SCALE

30 0 30 60 90
(IN FEET)
1 inch = 30 ft.

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SEWER 3A & 4 P/P
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PHASE 1 PLAN
•INSTALL SILT FENCE AROUND PROJECT
•INSTALL CONSTRUCTION ENTRANCE
•MAINTAIN EXISTING DRAINAGE DURING INITIAL PHASE OF CONSTRUCTION
PHASE 2 PLAN
•INSTALL CONCRETE WASHOUT LOCATION
•INSTALL SILT FENCE AROUND CATCH BASINS
•INSTALL ROCK CHECK DAM AT PIPE OUTFALL
•MAINTAIN SILT FENCE AROUND PROJECT
PHASE 3 PLAN
•INSTALL SILT BARRIERS AROUND CATCH BASINS ON SITE.
•SEED AND HAY DISTURBED AREAS ON THE PROJECT
•MAINTAIN SILT FENCE AROUND PROJECT UNTIL VEGETATION IS COMPLETELY ESTABLISHED.
•ANY DAMAGED BMP MEASURES SHALL BE REPLACED OR REPAIRED BEFORE THE NEXT RAIN EVENT, BUT NO LONGER THAN 3 BUSINESS DAYS FROM DATE OF DAMAGE.

PROPOSED INLET BARRIER (TYP) PHASES 2–3
PROPOSED SILT FENCE (TYP) PHASES 2–3
PROPOSED SILT FENCE (TYP) PHASES 1–3
PROPOSED CHECK DAM (TYP) PHASE 2–3
PORTABLE SANITATION FACILITY PHASE 1
CONCRETE WASHOUT PHASE 1–2
SWPPP MAILBOX PHASE 1
CONSTRUCTION ENTRANCE PHASE 1

GRAPHIC SCALE
60 0 60 120 180
(IN FEET)
1 inch = 60 ft.

STAPLE DETAIL
2"
8"
1.12" DIA STEEL WIRE

6" Minimum
Geotextiles
NOTE: Sediment Trap is to be cleaned out when volume becomes half full.

6' Minimum
Flow
3 – 5lb. stone
Geotextiles

STEEL OR WOOD POST.
FLOW
10 FT. MAX. SPACING WITH WIRE SUPPORT FENCE. 6 FT. MAX. SPACING WITHOUT WIRE SUPPORT FENCE.

STEEL OR WOOD POST– 36" HIGH MAX.
PONDING HT.
FILTER FABRIC ATTACH SECURELY TO UPSTREAM SIDE OF POST.
RUNOFF
MIN 12"
4 x 6 TRENCH WITH COMPACTED BACKFILL
STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

PONDING HT.
RUNOFF
9" MAX. (RECOMMENDED) STORAGE HT.
MIN 12"
GRAVEL
ALTERNATE DETAIL
TRENCH WITH GRAVEL

NOTES:
1. FOR USE IN SMALL CHANNELS WITH DRAINAGE AREAS OF 50 ACRES OR LESS.
2. MUST BE USED IN CONJUNCTION WITH OTHER APPROPRIATE SEDIMENT CONTROL MEASURES.
3. USE BELOW CULVERT INSTALLATIONS, DAM CONSTRUCTION, OR ANY PROJECT THAT MAY INVOLVE GRADING ACTIVITY DIRECTLY IN A STREAM.
4. NOT INTENDED TO SUBSTANTIALLY IMPOUND WATER.
5. USE AT THE UPSTREAM END OF PONDS OR LAKES.
6. EDGES SHOULD NOT BE HIGHER THAN THE CHANNEL BANKS.
7. CENTER SHOULD BE AT LEAST 6 INCHES LOWER THAN THE OUTER EDGES OF THE DAM AT THE CHANNEL BANKS.
8. HEIGHT SHOULD NOT EXCEED ELEVATION OF UPSTREAM PROPERTY LINE.
9. SIDE SLOPES SHOULD BE 2:1 OR FLATTER.
10. TOP WIDTH SHOULD BE GREATER THAN 6 FEET.
11. EXTEND COMPLETELY ACROSS THE CHANNEL AND SECURELY TIE INTO BOTH CHANNEL BANKS
12. REQUIRES PERIODIC INSPECTION AND MAINTENANCE.
13. SEDIMENT REMOVED WHEN IT REACHES ONE–HALF OF THE ORIGINAL DAM HEIGHT

ROCK DAM
NOT TO SCALE

NOTE:
1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2.) REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.
3.) SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE
* **ALL SILT FENCE SHALL BE WIRE MESH REINFORCED. AS PER CITY OF BRYANT SPECS.**

STRAW BALE
BINDER WIRE
STAPLES (2 PER BALE)
10 MIL PLASTIC LINING
NATIVE MATERIAL (OPTIONAL)
SECTION B–B
NOT TO SCALE

WOOD OR METAL STAKES (2 PER BALE)
5'–0" MINIMUM
VARIES
10 MIL PLASTIC LINING
CONCRETE WASHOUT
NOT TO SCALE

3/4" GRAVEL DRAIN
PONDING HEIGHT
OVERFLOW
CURB INLET
BACK OF SIDEWALK
CATCH BASIN
WIRE SCREEN OR FILTER FABRIC
2 x 4 WOOD STUD
CONCRETE BLOCK
BACK OF CURB
CURB INLET
WIRE SCREEN OR FILTER FABRIC
CONCRETE BLOCK
PLAN VIEW

NOTES:
1.) USE BLOCK AND GRAVEL TYPE SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET SEGMENT, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2.) BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
3.) INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET
SEDIMENT BARRIER

GENERAL EROSION CONTROL NOTES

1. THE LOCATION OF KNOWN SURFACE & SUBSURFACE STRUCTURES, PIPE, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING THEMSELVES AS TO THE LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
2. ALL STREETS, DRIVES, WALKS, DRAINAGE STRUCTURES, FENCES, ETC. THAT ARE DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION USING LIKE MATERIALS. COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR UNLESS PROVISION FOR PAYMENT IS MADE IN THE PROPOSAL.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED AS THE PROJECT PROGRESSES AND AREAS ARE DISTURBED.
4. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ONE CALL CENTER AT 1–800–482–8998 48 HOURS PRIOR TO DIGGING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED.
5. ALL INLETS ON AND ADJACENT TO THE SITE SHALL BE PROTECTED FROM SEDIMENT.
6. STORM WATER CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY 7 DAYS.
7. ALL EROSION CONTROL DEVICES ARE TO BE MAINTAINED IN GOOD WORKING CONDITION THROUGHOUT THE DURATION OF THIS PROJECT AND UNTIL PERMANENT VEGETATION IS ESTABLISHED. ALL SEDIMENT TRAPS ARE TO BE CLEANED AS REQUIRED.
8. ALL DISTURBED AREAS LEFT IDLE FOR A PERIOD OF 14 DAYS OR LONGER ARE TO RECEIVE TEMPORARY VEGETATION AND MULCHED.
9. REMOVE EROSION CONTROL DEVICES AFTER PERMANENT VEGETATION IS ESTABLISHED.
10. DEVELOPMENT SHALL ADHERE TO CITY OF BRYANT AND ADEQ STORM WATER REQUIREMENTS.
11. ADDITIONAL EROSION CONTROL MEASURES TO BE EMPLOYED WHERE NECESSARY BY SITE CONDITIONS.
12. CONTRACTOR TO COMPLY WITH ALL OSHA SAFETY REQUIREMENTS.
13. CONTRACTOR TO COORDINATE MAINTENANCE OF TRAFFIC ON PUBLIC RIGHT OF WAY WITH PROPER AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
14. THIS PLAN IS SUBJECT TO CHANGE BASED ON CURRENT SITE CONDITIONS. ADDITIONAL MEASURES MAY BE NEEDED TO MITIGATE ILLICIT DISCHARGES OF SEDIMENT AND/OR DEBRIS FROM THE SITE. SEE SECTION 1100 OF THE BRYANT STORMWATER MANAGEMENT MANUAL TO SEE WHAT OTHER DEVICES ARE RECOMMENDED.

SWPPP NOTES:

1.) DEVELOPMENT SHALL ADHERE TO CITY OF BRYANT AND ADEQ STORMWATER REQUIREMENTS.
2.) SEDIMENT BARRIERS SHALL BE CONSTRUCTED AT EACH INLET UNTIL GRADING IS COMPLETE AND TOP SOIL IS STABILIZED.
3.) A SILT FENCE AND STRAW BALE DIKE SHALL BE PLACED AT POTENTIAL LOCATIONS OF HEAVY EROSION.
4.) TEMPORARY STRAW BALE DIKES ARE TO BE CONSTRUCTED NOT TO POND WATER ON ADJACENT PROPERTY.
5.) ROCK DIKE CHECK DAMS TO BE CONSTRUCTED TO MEET ADEQ REQUIREMENTS WHEN USED IN LIEU OF STRAW BALE DIKES.
6.) ALL TEMPORARY EROSION CONTROLS SHALL BE MAINTAINED UNTIL ALL CONSTRUCTION IS COMPLETE AND PERMANENT GROUND COVER HAS BEEN ESTABLISHED.
7.) ONE OF THE FOLLOWING GROUND COVER METHODS SHALL BE USED AT AREAS OF CLEARING OTHER THAN FUTURE PAVEMENT SURFACES.
STRAW OR HAY–LOOSE 2.0 TONS/ACRE
STRAW OR HAY–TIED, ANCHORED, OR TACKED 1.5 TONS/ACRE
8.) SOIL EXPOSED FOR MORE THAN 14 DAYS WITH NO CONSTRUCTION ACTIVITY SHALL BE SEEDED OR REEMITTED.
9.) CONSTRUCTION ENTRANCES/EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF MUD ON TO PUBLIC RIGHT–OF–WAY.
10.) ADDITIONAL EROSION CONTROL MEASURES TO BE EMPLOYED WHERE NECESSARY BY SITE CONDITIONS.
11.) CONTRACTOR SHALL USE "BEST MANAGEMENT PRACTICES" (BMP'S) WHEN IMPLEMENTING AND MAINTAINING SEDIMENT AND RUN–OFF CONTROLS.

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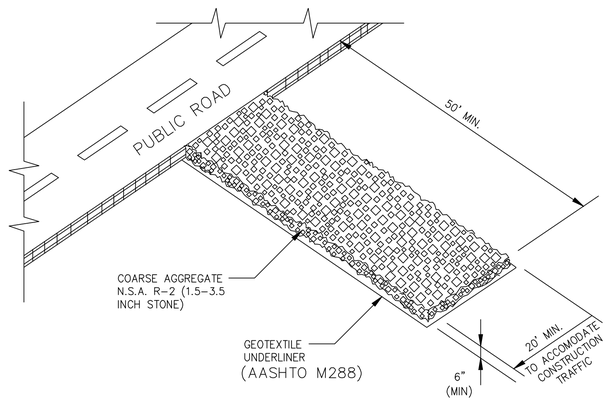
CONCRETE WASHOUT PHASE 1–2
SWPPP MAILBOX PHASE 1
CONSTRUCTION ENTRANCE PHASE 1

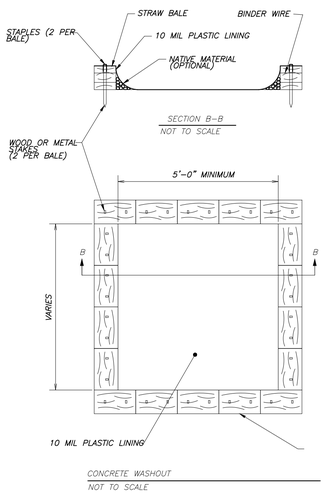
GRAPHIC SCALE
60 0 60 120 180
(IN FEET)
1 inch = 60 ft.

1. LOCATE STONE STABILIZED PAD AT ANY POINT WHERE VEHICULAR TRAFFIC WILL BE LEAVING THE CONSTRUCTION SITE ONTO A PUBLIC RIGHT–OF–WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA OR ANY OTHER AREA WHERE THERE IS A TRANSITION FROM BARE SOIL TO A PAVED AREA.
2. WIDTH – 20'–0 MINIMUM BUT NOT LESS THAN FULL WIDTH OF ALL POINTS OF VEHICULAR EGRESS. LENGTH – 50'–0 MINUMUM
3. MAINTAIN THE EXIT TO PRENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS– OF–WAY. PROVIDE PERIODIC TOP DRESSING WITH 1.5 – 3.5" STONE, AS CONDITIONS DEMAND. IMMEDIATELY REMOVE ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE OR SITE ONTO ROADWAY OR INTO STORM DRAINS. CLEAN TIRES AND WHEELS TO REMOVE MUD PRIOR TO ENTRANCE ON TO PUBLIC RIGHTS–OF–WAY.
4. WHEN WASHING IS REQUIRED, DO SO ON AREAS STABILIZED WITH CRUSHED STONE DRAINING INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.



CONSTRUCTION EXIT

NOT TO SCALE



EROSION CONTROL MAINTENANCE & INSPECTION NOTES

1. THE LOCATION OF KNOWN SURFACE & SUBSURFACE STRUCTURES, PIPE, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING THEMSELVES AS TO THE LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.

2. ALL STREETS, DRIVES, WALKS, DRAINAGE STRUCTURES, FENCES, ETC. THAT ARE DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION USING LIKE MATERIALS. COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR UNLESS PROVISION FOR PAYMENT IS MADE IN THE PROPOSAL.

3. EROSION CONTROL DEVICES SHALL BE INSTALLED AS THE PROJECT PROGRESSES AND AREAS ARE DISTURBED.

4. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ONE CALL CENTER AT 1–800–482–8998 48 HOURS PRIOR TO DIGGING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED.

5. ALL INLETS ON AND ADJACENT TO THE SITE SHALL BE PROTECTED FROM SEDIMENT.

6. STORM WATER CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY 7 DAYS.

7. ALL EROSION CONTROL DEVICES ARE TO BE MAINTAINED IN GOOD WORKING CONDITION THROUGHOUT THE DURATION OF THIS PROJECT AND UNTIL PERMANENT VEGETATION IS ESTABLISHED. ALL SEDIMENT TRAPS ARE TO BE CLEANED AS REQUIRED.

8. ALL DISTURBED AREAS LEFT IDLE FOR A PERIOD OF 14 DAYS OR LONGER ARE TO RECEIVE TEMPORARY VEGETATION AND MULCHED.

9. REMOVE EROSION CONTROL DEVICES AFTER PERMANENT VEGETATION IS ESTABLISHED.

10. DEVELOPMENT SHALL ADHERE TO CITY OF BRYANT AND ADEQ STORM WATER REQUIREMENTS.

11. ADDITIONAL EROSION CONTROL MEASURES TO BE EMPLOYED WHERE NECESSARY BY SITE CONDITIONS.

12. CONTRACTOR TO COMPLY WITH ALL OSHA SAFETY REQUIREMENTS.

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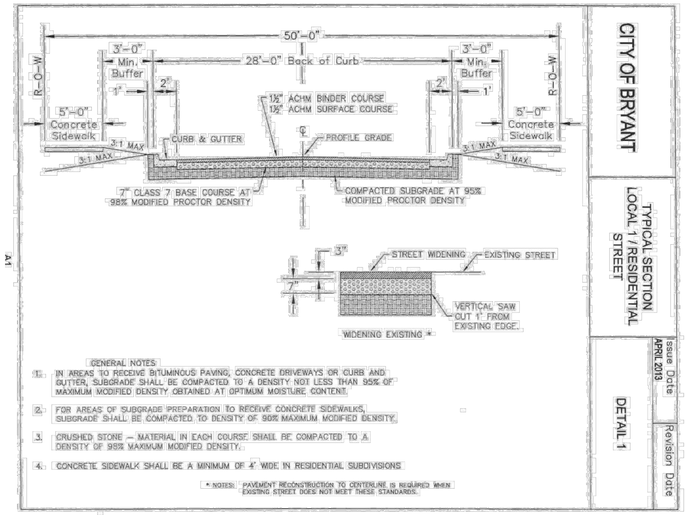
EMINENT CONSTRUCTIONS

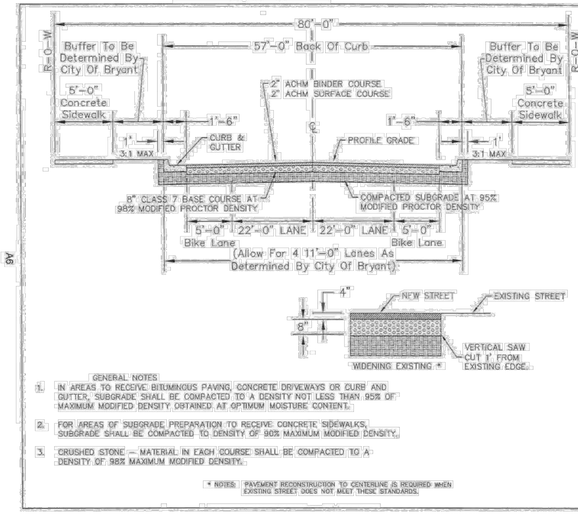
No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026
2	CITY COMMENTS 4/15/26	4/22/2026
3	REDESIGN ROAD PROFILES	9/22/2026

PROJECT NO.: 024-034
Date: 3/3/2026 9/22/2026
Scale: 1" = 60'
Sheet: 198 of 26



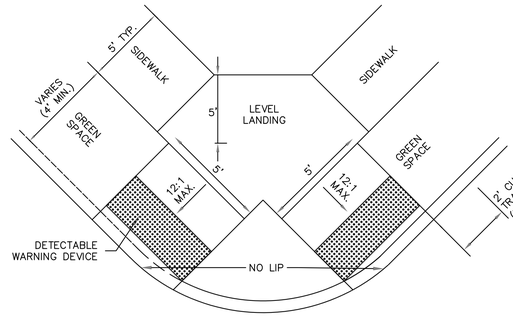
CITY OF BRYANT | TYPICAL SECTION LOCAL / RESIDENTIAL STREET | Issue Date APRIL 2013 | Revision Date | DETAIL 1

A1

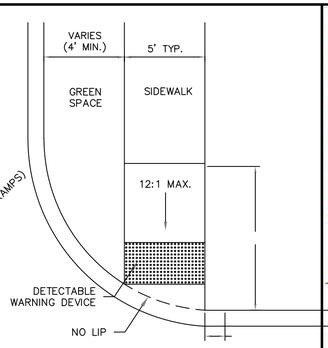


CITY OF BRYANT | TYPICAL SECTION MINOR ARTERIAL | Issue Date APRIL 2013 | Revision Date | DETAIL 6

A6



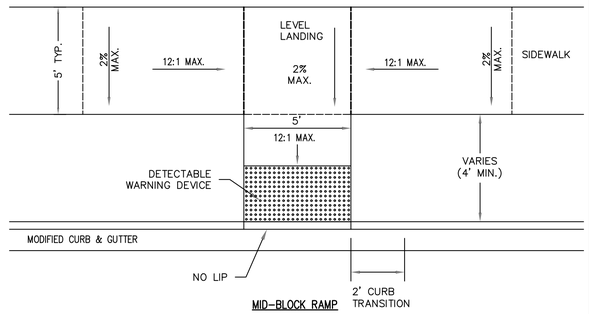
TYPE 1 RAMP



TYPE 2 RAMP

NOTES:

1) THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1.
2) THE NORMAL GUTTER SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
3) THE MINIMUM THICKNESS FOR THE RAMP, WALK, & LANDING SHALL BE 4".
4) DETECTABLE WARNING DEVICES SHALL BE PLACED AT THE LOCATIONS WHERE RAMPS CROSS A CURB.

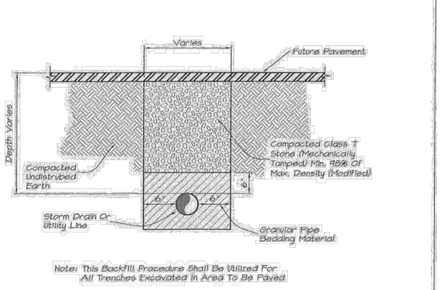


MID-BLOCK RAMP

HANDICAP RAMP DETAILS

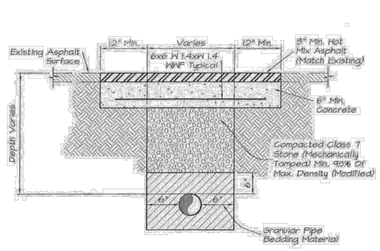
NOT TO SCALE

CITY OF BRYANT | TYPICAL SECTION DRAINAGE AND UTILITY CUT BACKFILL ON STREET UNDER CONSTRUCTION | Issue Date APRIL 2013 | Revision Date | DETAIL 8



A8

CITY OF BRYANT | TYPICAL SECTION ASPHALT PAVEMENT REPAIR ON EXISTING STREET | Issue Date APRIL 2013 | Revision Date | DETAIL 9

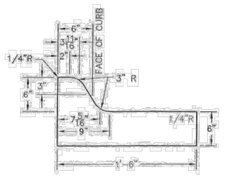


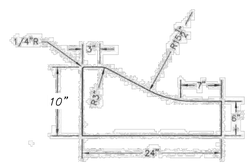
CONC. WALK/CONCRETE SWALE CONTROL JOINT DETAILS

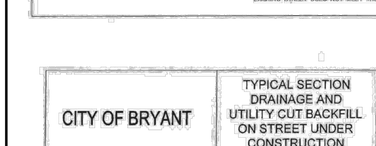
NTS

A9

CITY OF BRYANT | CURB & GUTTER SECTIONS | Issue Date APRIL 2013 | Revision Date | DETAIL 7

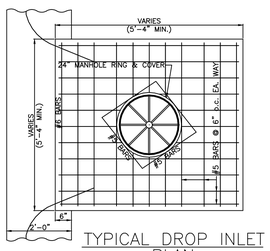




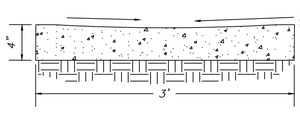


DRAINAGE SWALE

N.T.S.

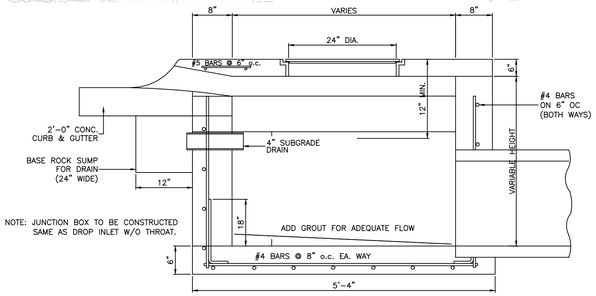


TYPICAL DROP INLET PLAN

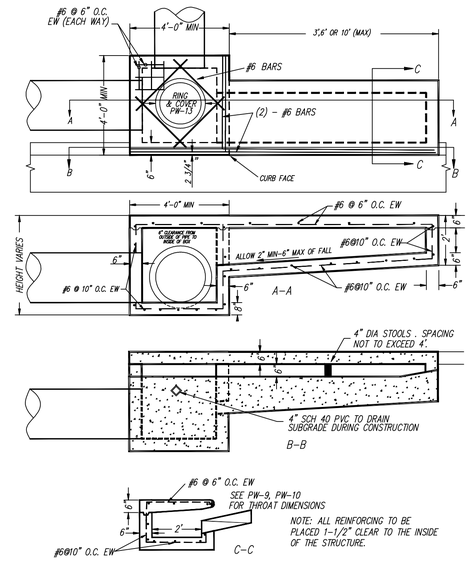


TYPICAL TRICKLE CHANNEL

* NOTES:
1. PORTLAND CEMENT CONCRETE 3000 PSI. MIN.
2. USE W1.4 X W1.4 (6" X 6") WWF SHEET REINFORCEMENT. CUT ½ THE WIRES AT CONTROL JOINTS.
3. CONCRETE TO CONTAIN 3-5% AIR ENTRAINMENT.



TYPICAL DROP INLET – POURED IN PLACE ELEVATION



NOTE: ALL REINFORCING TO BE PLACED 1-1/2" CLEAR TO THE INSIDE OF THE STRUCTURE.

CURB INLET W/ THROAT EXTENSIONS

NOT TO SCALE

RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
325 W. SOUTH STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION — Richardson Engineering, PLLC — No. 2519 — ARKANSAS

MISC. DETAILS
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For: EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS 4/15/26	4/17/2026
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Scale: NTS
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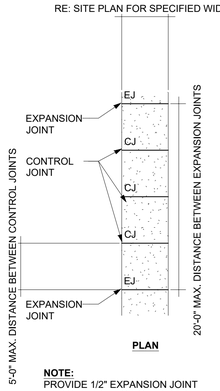
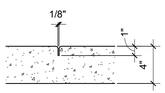
CONC. WALK/CONCRETE SWALE CONTROL JOINT DETAILS

NTS

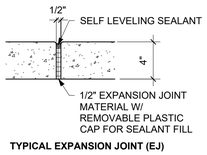


PLAN

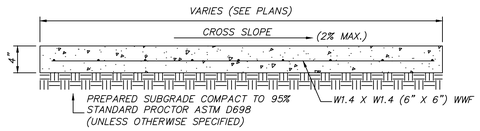
NOTE:
PROVIDE 1/2" EXPANSION JOINT AND SEALANT AS NOTED AND WHERE SIDEWALK ABUTS STRUCTURES OR OTHER SIDEWALKS.



TYPICAL CONTROL JOINT (CJ)



TYPICAL EXPANSION JOINT (EJ)



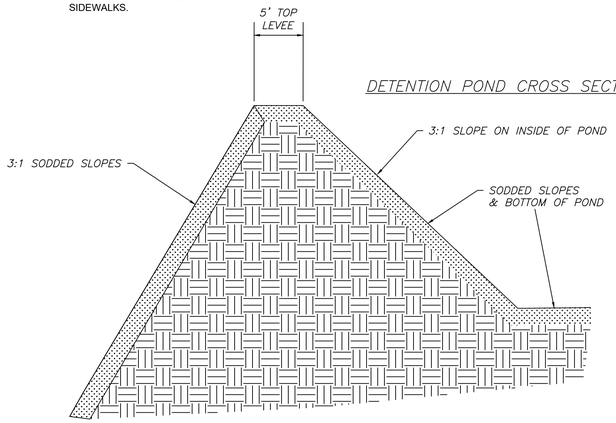
CONCRETE SIDEWALK SPECIFICATIONS

NTS

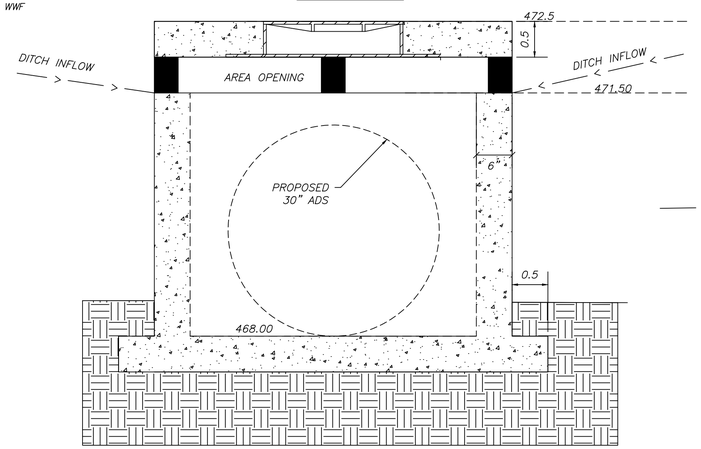
* NOTES:

1. PORTLAND CEMENT CONCRETE 3000 PSI. MIN.
2. USE W1.4 X W1.4 (6" X 6") WWF SHEET REINFORCEMENT. CUT ½ THE WIRES AT CONTROL JOINTS.
3. CONCRETE TO CONTAIN 3–5% AIR ENTRAINMENT.
4. FINISH TO BE BROOM FINISH.
5. DETECTABLE WARNING DEVICES TO BE INSTALLED AT RAMPS PER ADA REQUIREMENTS.
6. MAX CROSS SLOPE 2%. MAX LONGITUDINAL SLOPE 1:12.
7. CONTROL JOINTS PER CONC. WALK CONTROL JOINT DETAIL.

DETENTION POND CROSS SECTION

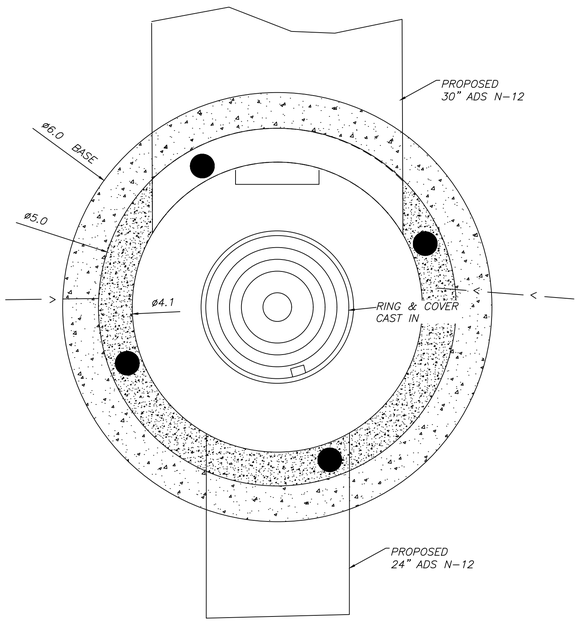


FRONT VIEW

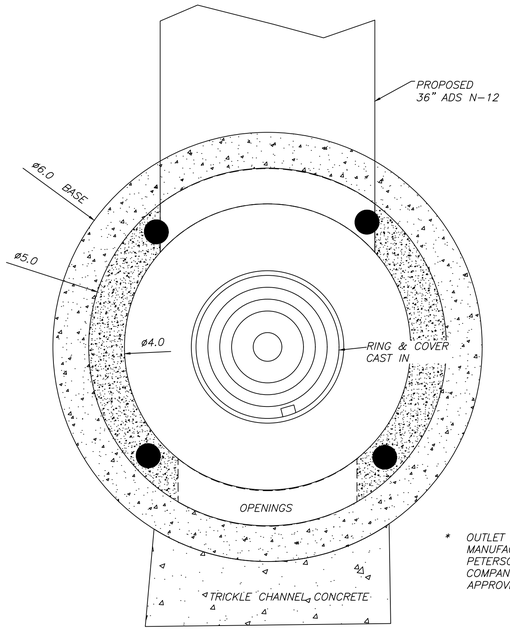


AREA JUNCTION BOX WEST OF POND

TOP VIEW

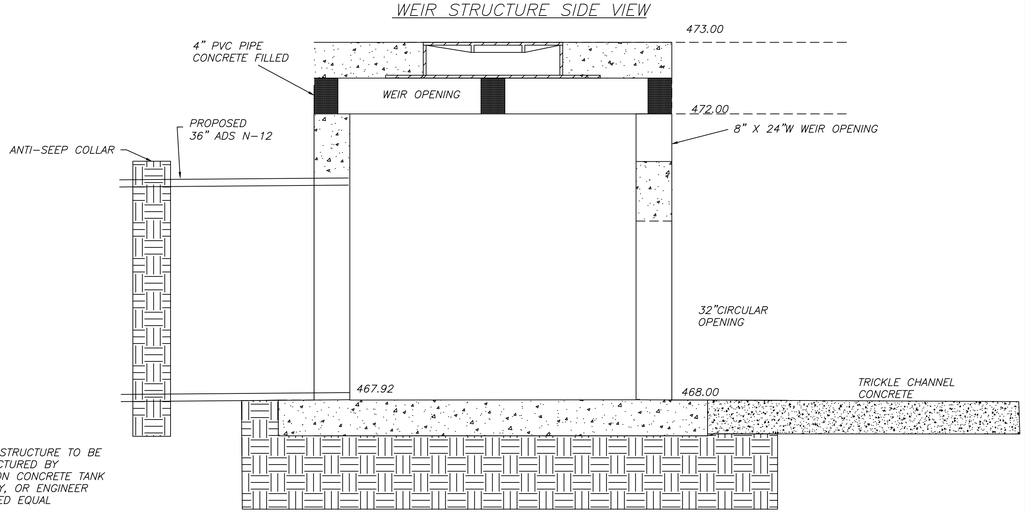


DETENTION POND WEIR STRUCTURE TOP VIEW

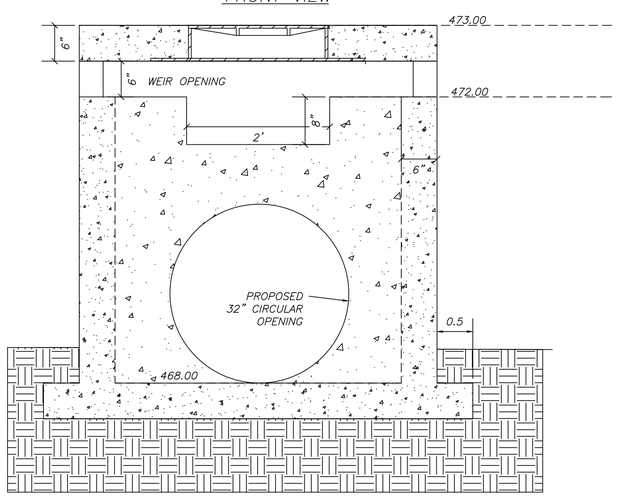


* OUTLET STRUCTURE TO BE MANUFACTURED BY PETERSON CONCRETE TANK COMPANY, OR ENGINEER APPROVED EQUAL

DETENTION POND WEIR STRUCTURE SIDE VIEW



FRONT VIEW



DETENTION POND OUTLET STRUCTURE

REFER TO CITY OF BRYANT, ARKANSAS PUBLIC WORKS STREET AND DRAINAGE STANDARD DETAILS FOR ADDITIONAL DETAILS AND INFORMATION.

RICHARDSON ENGINEERING
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CERTIFICATE OF AUTHORIZATION — Richardson Engineering, PLLC — No. 2519 — ARKANSAS

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BRYANT, ARKANSAS

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Date: 3/3/2026
9/22/2026
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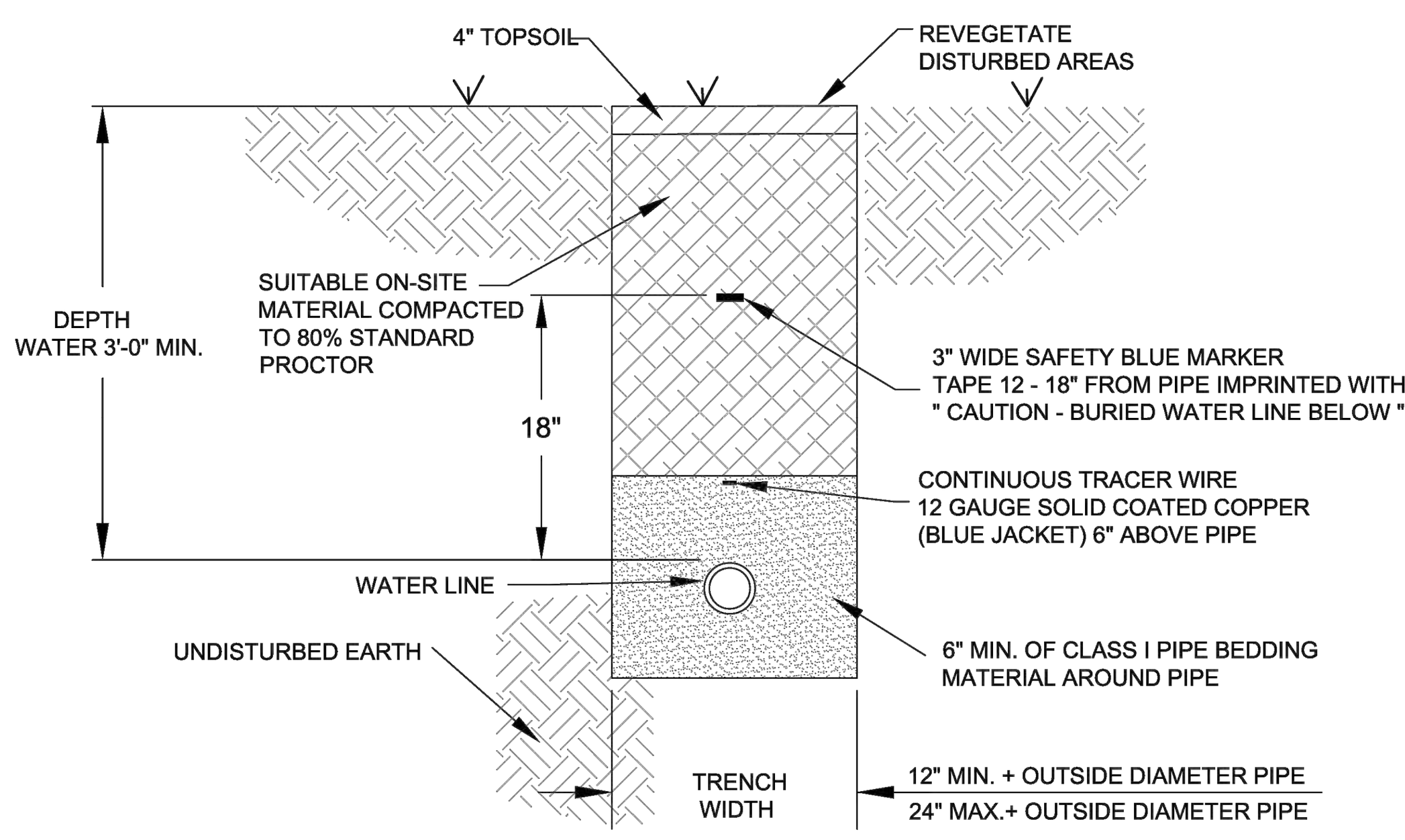
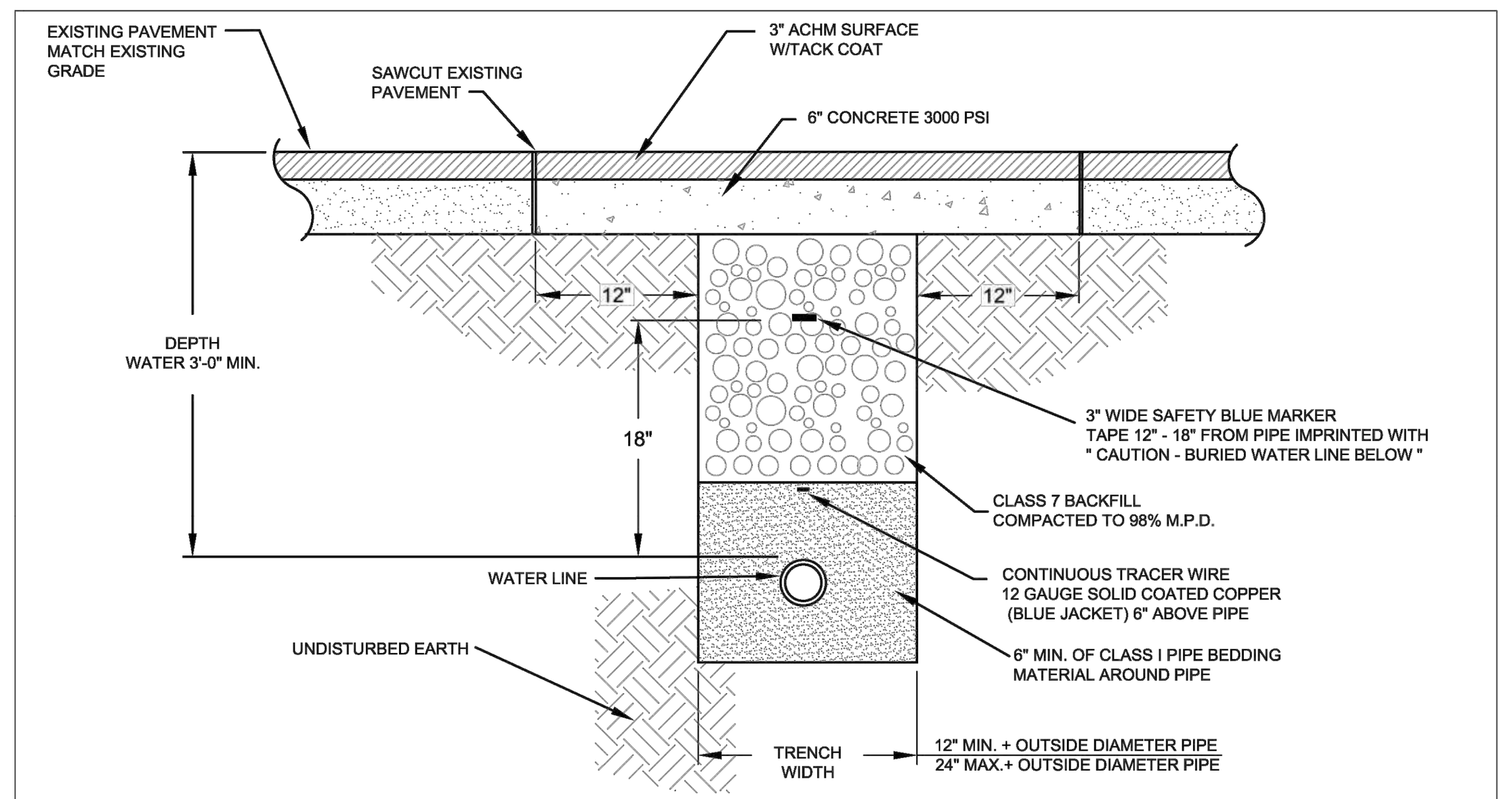


NOTES:

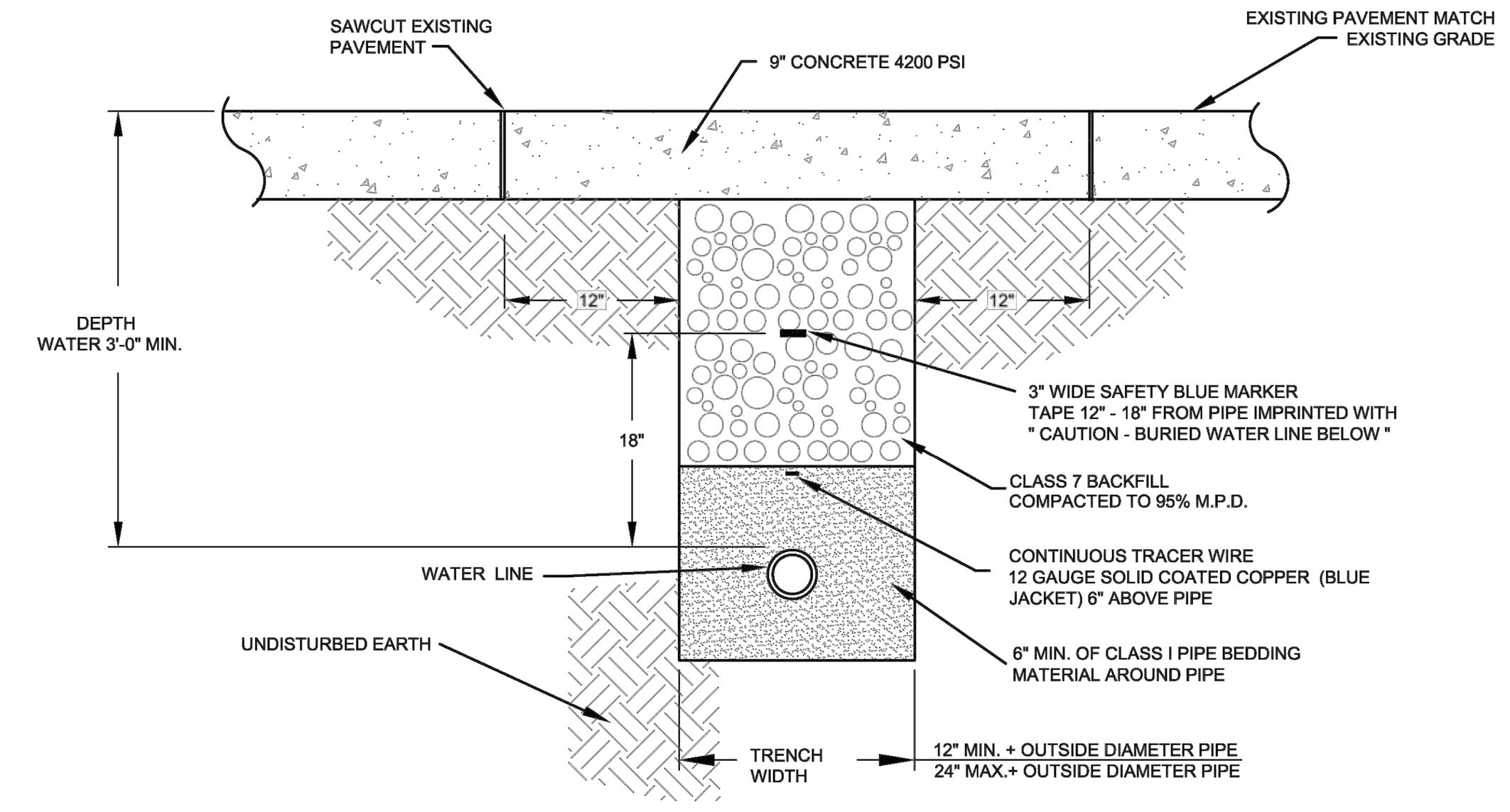
1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
3. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
4. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.
5. MAXIMUM PIPE COVER SHALL BE 60" UNDER NORMAL CONDITIONS. COVER GREATER THAN 60" MAY BE ALLOWED FOR SHORT DISTANCES WHERE REQUIRED BY FIELD CONDITIONS. NO HYDRANT SHALL BE ALLOWED WHERE LINES ARE GREATER THAN 60" DEEP.

WATER MAIN TRENCH
(NON-PAVED AREA)

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: WATER MAIN TRENCH (NON-PAVED AREA) | DATE: APRIL 2015 | REVISED ---- | SHEET: W1
DRAWN BY: | CHECKED BY: | FILE: W1-Water Trench (Non-Paved Area).dwg



WATER MAIN TRENCH
(UNDER ASPHALT)



WATER MAIN TRENCH
(UNDER CONCRETE)

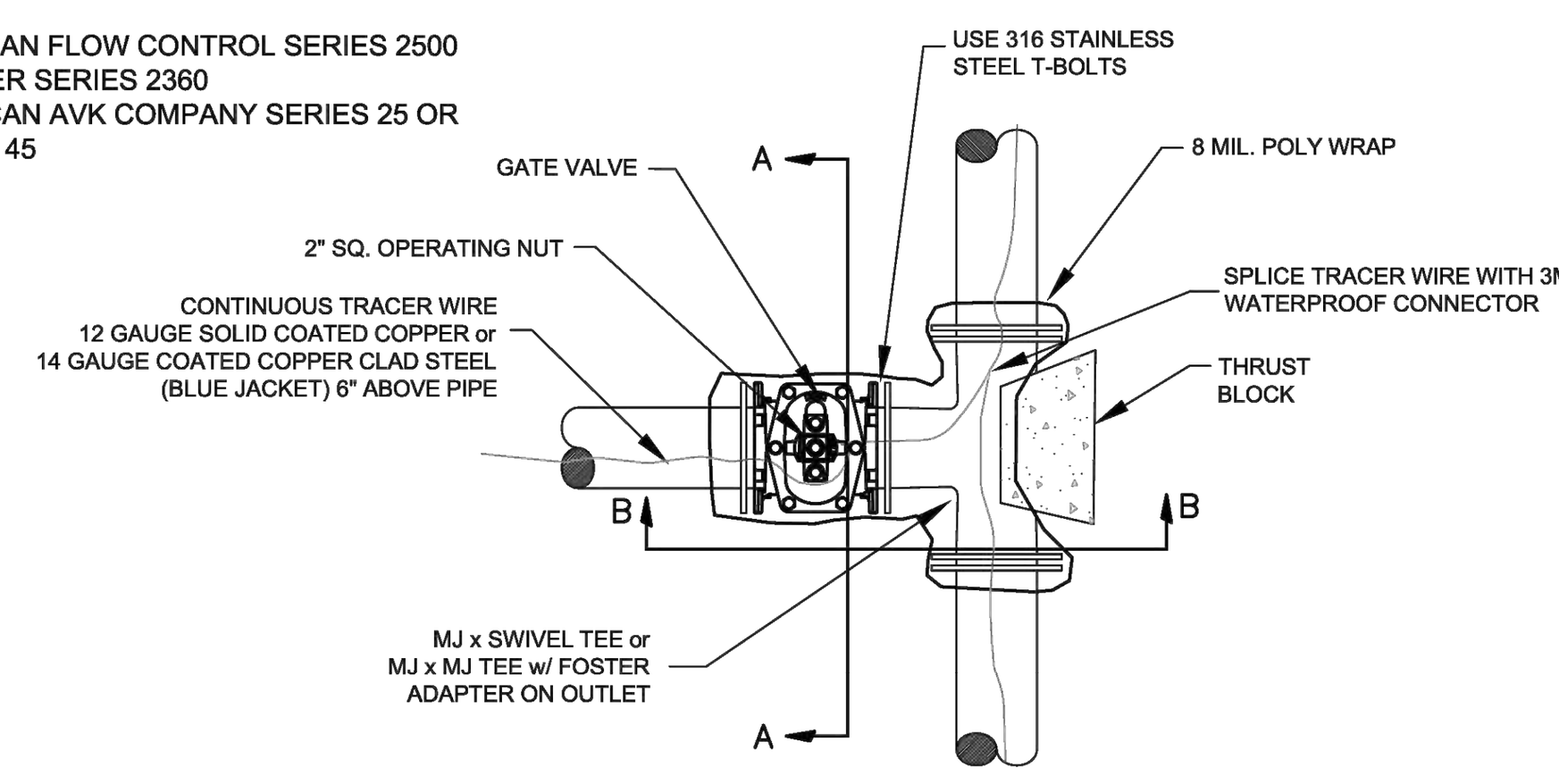
NOTES:

1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
3. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
4. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.
5. MAXIMUM PIPE COVER SHALL BE 60" UNDER NORMAL CONDITIONS. COVER GREATER THAN 60" MAY BE ALLOWED FOR SHORT DISTANCES WHERE REQUIRED BY FIELD CONDITIONS. NO HYDRANT SHALL BE ALLOWED WHERE LINES ARE GREATER THAN 60" DEEP.

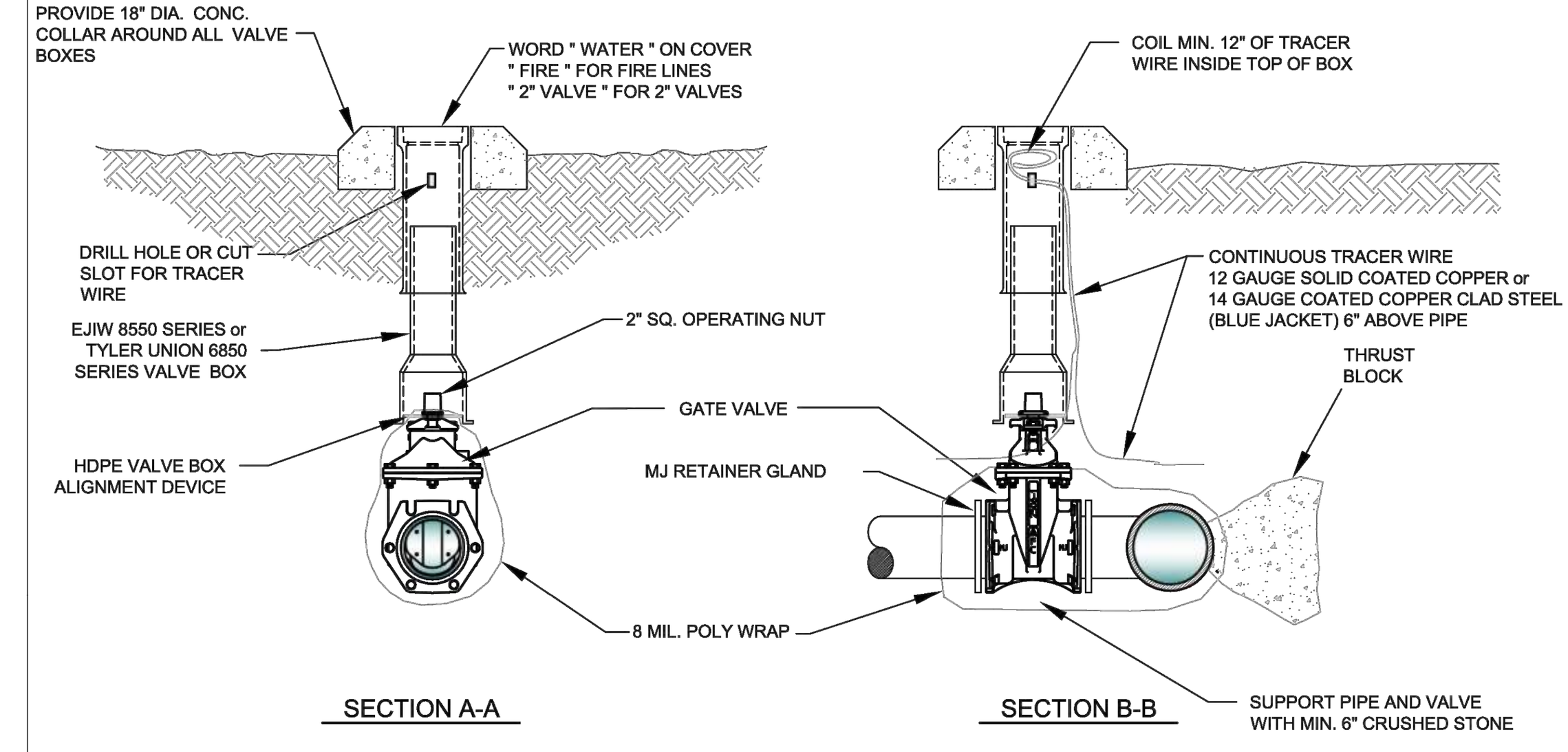
CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: WATER MAIN TRENCH (UNDER PAVEMENT) | DATE: APRIL 2015 | REVISED ---- | SHEET: W2
DRAWN BY: | CHECKED BY: | FILE: W2-Water Trench (Under Pavement).dwg

PERMITTED VALVES

1. AMERICAN FLOW CONTROL SERIES 2500
2. MUELLER SERIES 2360
3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45



PLAN



SECTION A-A

SECTION B-B

NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.

GATE VALVE DETAIL
2" - 12"

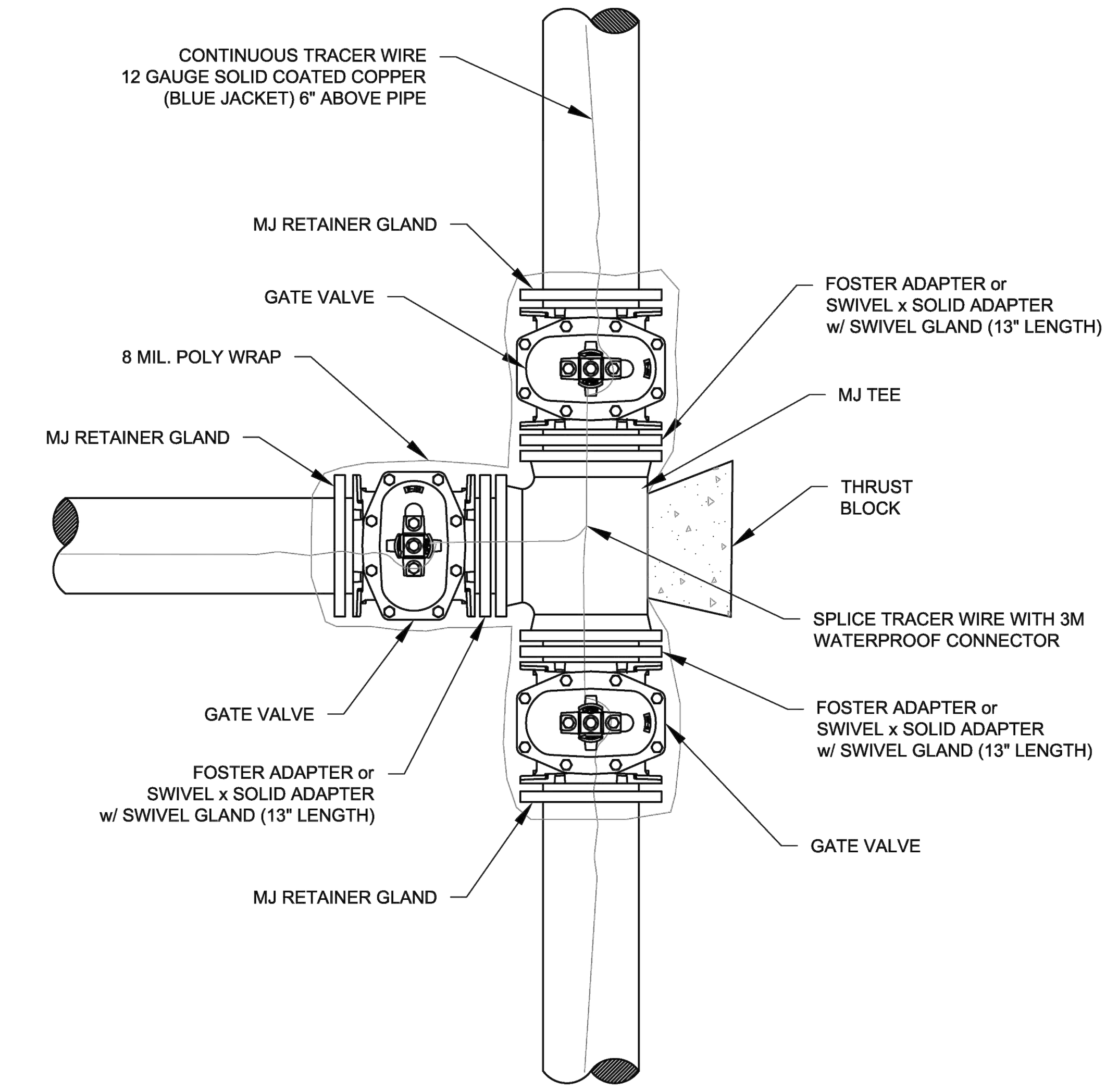
CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: GATE VALVE | DATE: APRIL 2015 | REVISED ---- | SHEET: W4
DRAWN BY: | CHECKED BY: | FILE: W4-Gate Valve.dwg

PERMITTED VALVES

1. AMERICAN FLOW CONTROL SERIES 2500
2. MUELLER SERIES 2360
3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45

NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.

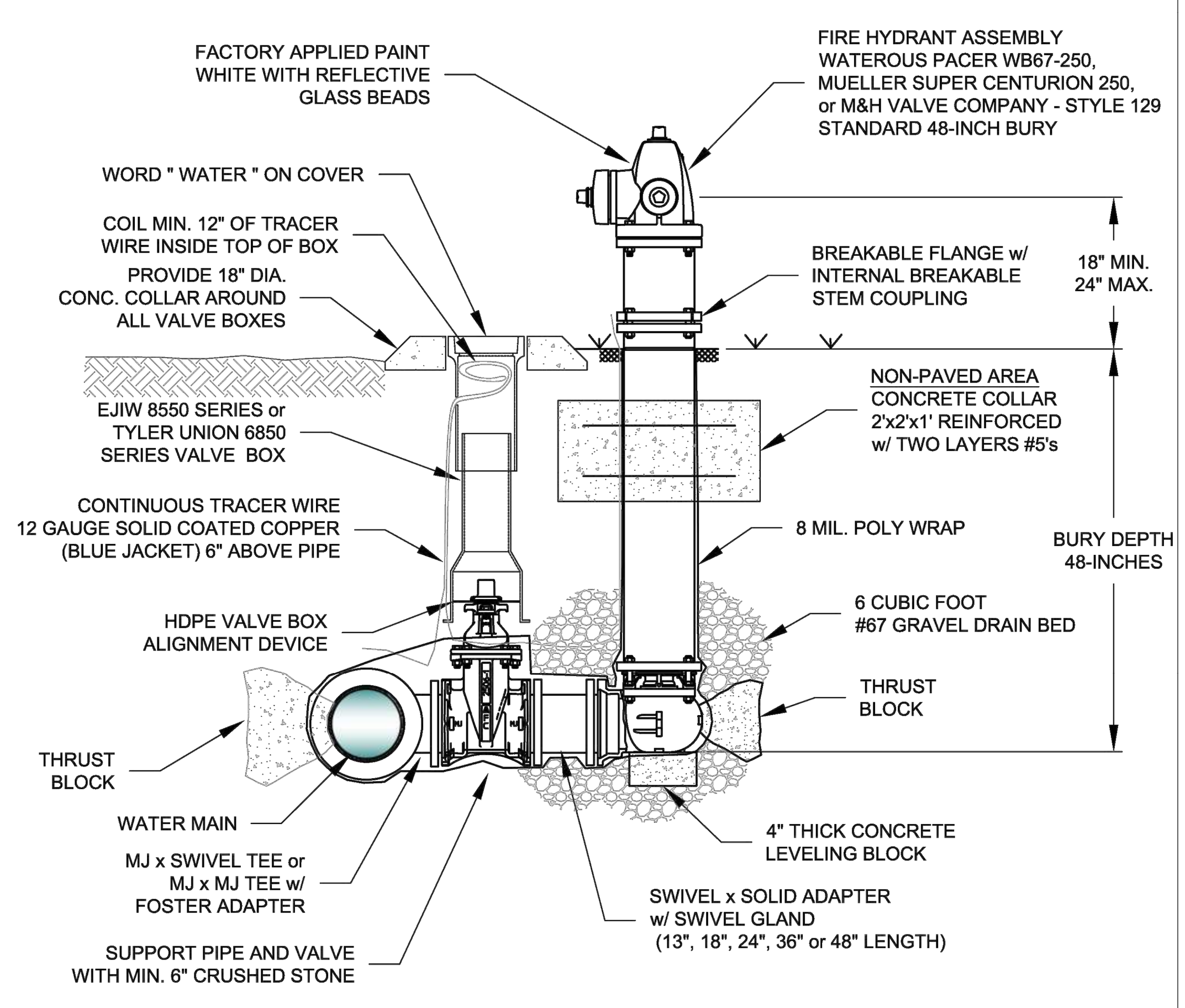


3-WAY GATE VALVE DETAIL

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: 3-WAY GATE VALVES | DATE: APRIL 2015 | REVISED ---- | SHEET: W5
DRAWN BY: | CHECKED BY: | FILE: W5-3-Way Gate Valves.dwg

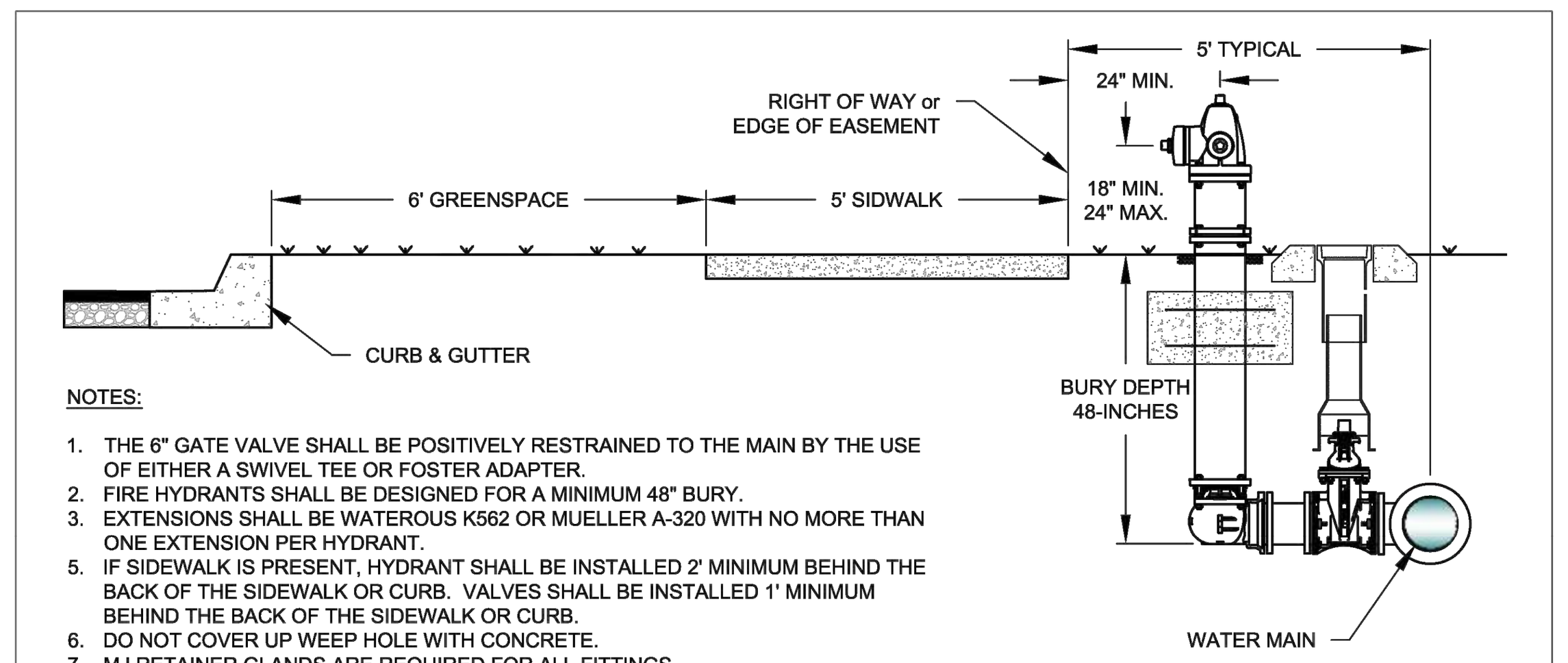
NOTES:

1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. BURY LINE OF HYDRANT SHALL BE NO LESS THAN THE PROPOSED FINISHED ELEVATION OF BACK OF CURB, OR SIDEWALK, WHICHEVER IS GREATER.
4. EXTENSIONS SHALL BE WATEROUS K562 OR MUELLER A-320 WITH NO MORE THAN ONE EXTENSION PER HYDRANT.
5. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB.
6. DO NOT COVER UP WEEP HOLE WITH CONCRETE.
7. MJ RETAINER GLANDS ARE REQUIRED FOR ALL FITTINGS.
7. 6" DUCTILE IRON PIPE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 48-INCHES FROM THE MAIN VALVE.
8. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.



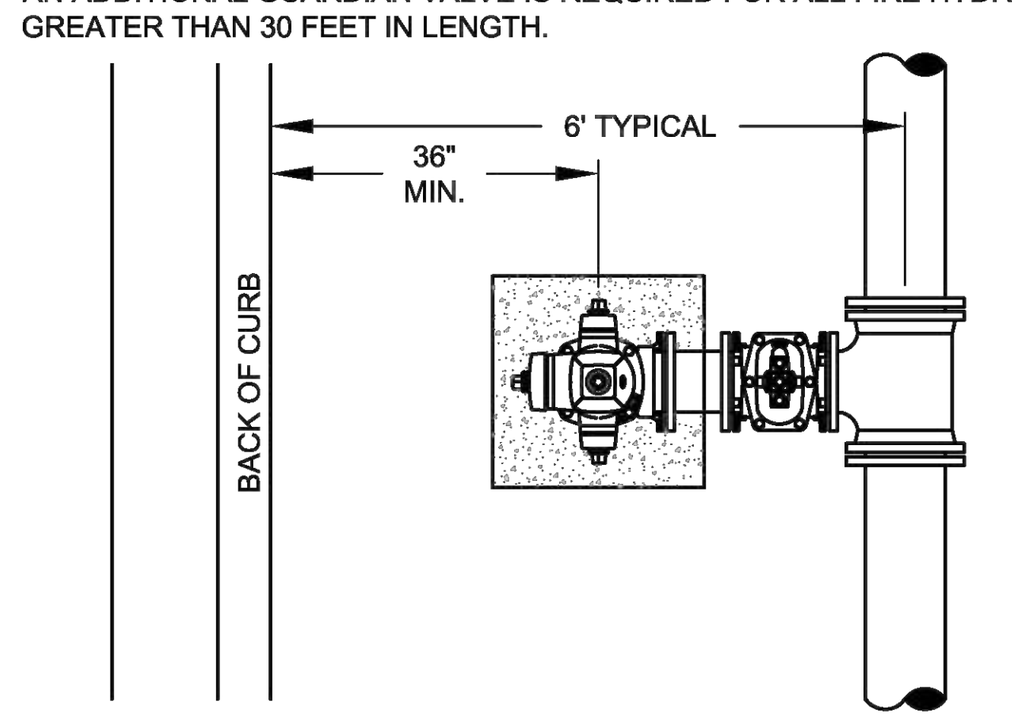
FIRE HYDRANT & VALVE CONNECTION

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: FIRE HYDRANT AND VALVE CONNECTION | DATE: APRIL 2015 | REVISED ---- | SHEET: W8
DRAWN BY: | CHECKED BY: | FILE: W8-Fire Hydrant and Valve.dwg

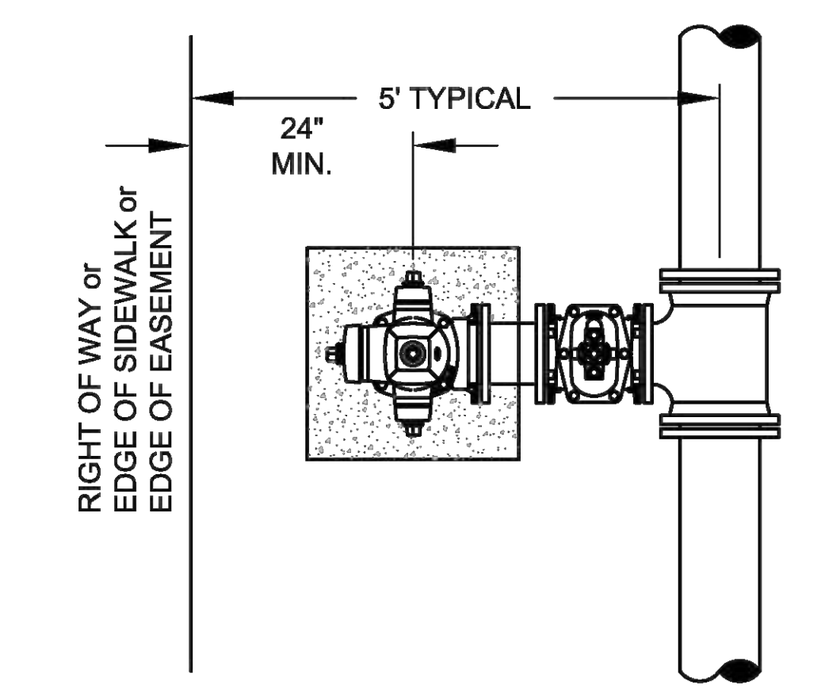


NOTES:

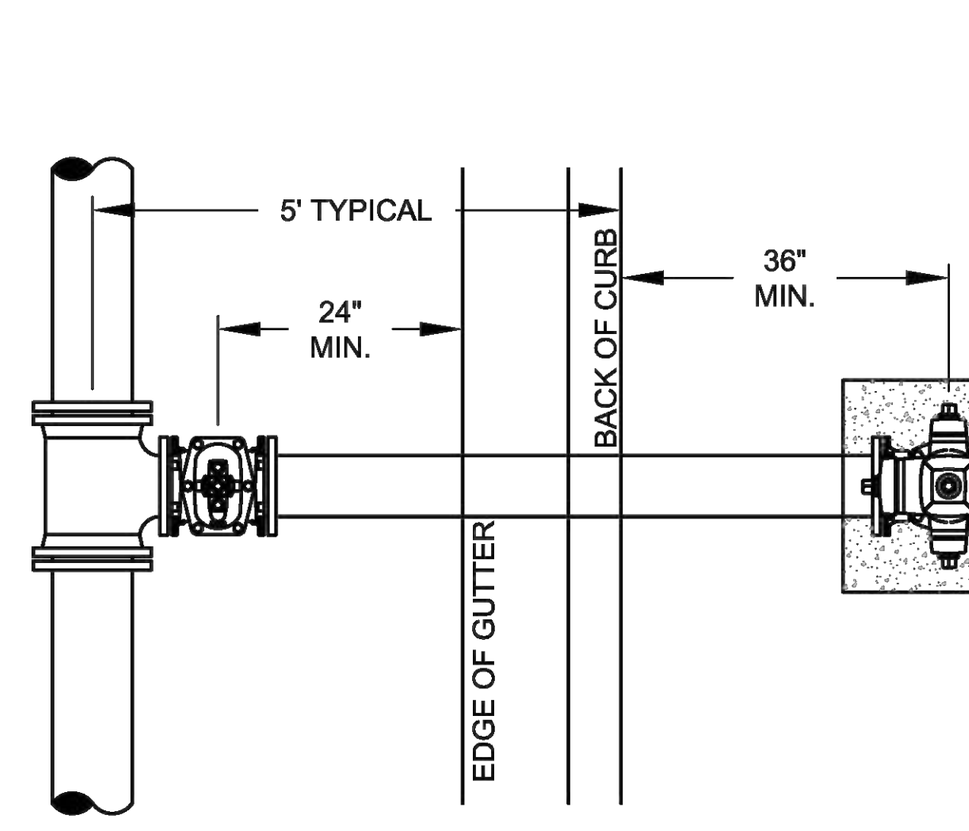
1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. EXTENSIONS SHALL BE WATEROUS K562 OR MUELLER A-320 WITH NO MORE THAN ONE EXTENSION PER HYDRANT.
5. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB.
6. DO NOT COVER UP WEEP HOLE WITH CONCRETE.
7. MJ RETAINER GLANDS ARE REQUIRED FOR ALL FITTINGS.
7. 6" DUCTILE IRON PIPE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 48-INCHES FROM THE MAIN VALVE.
8. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.



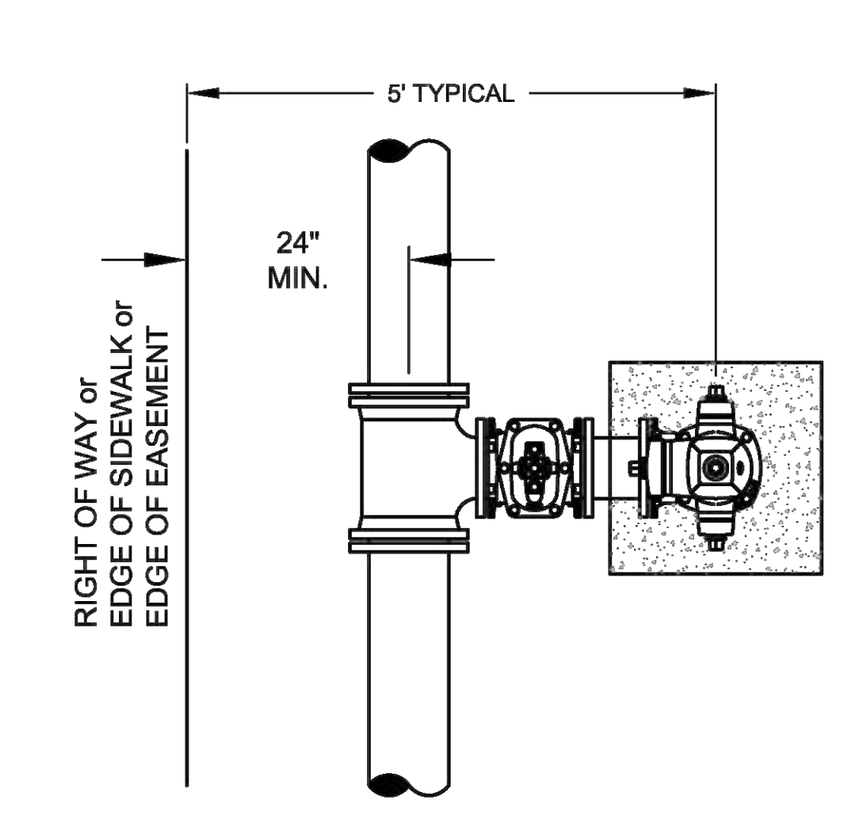
WATER LINE BEHIND CURB
INSIDE ROW



WATER LINE IN EASEMENT
OUTSIDE ROW

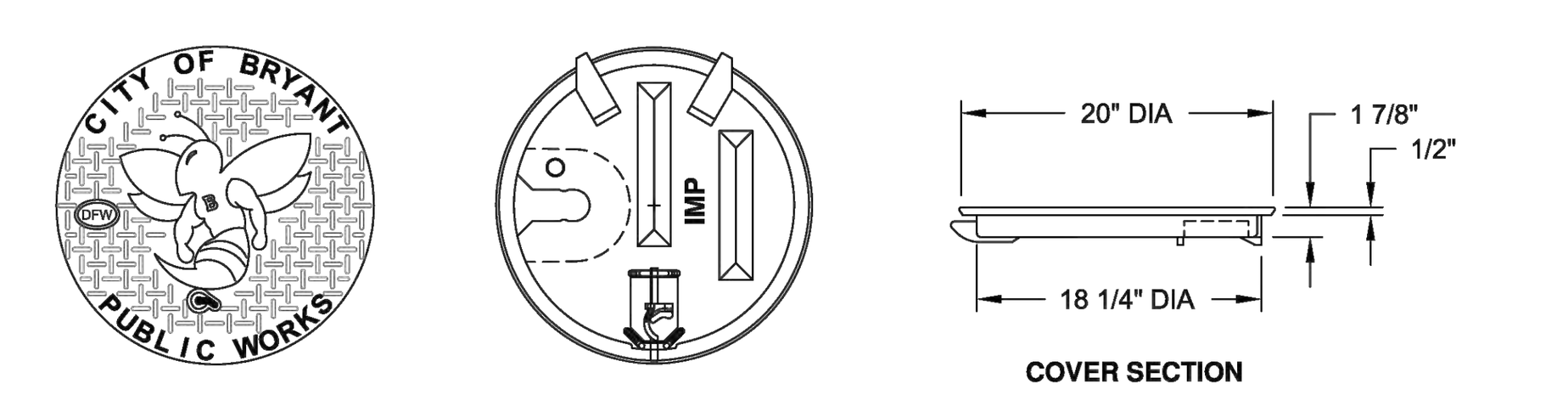


WATER LINE IN STREET
INSIDE ROW

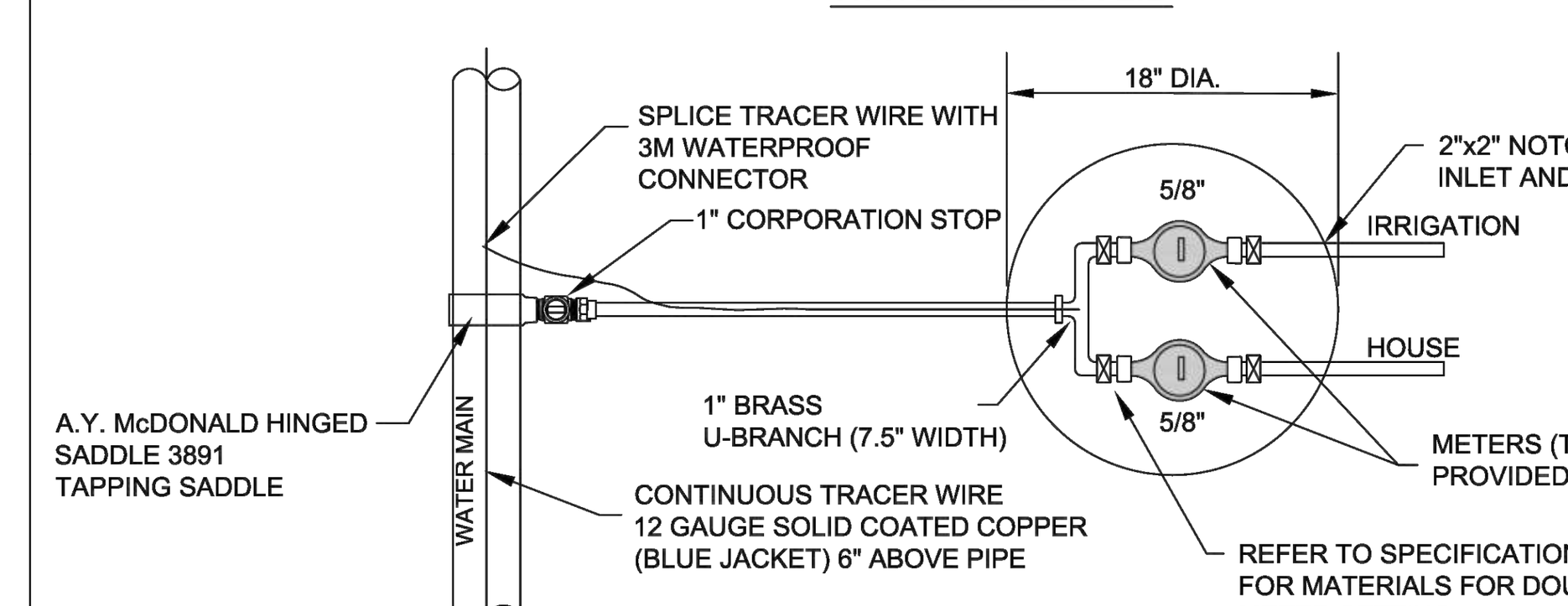


WATER LINE IN EASEMENT
OUTSIDE ROW

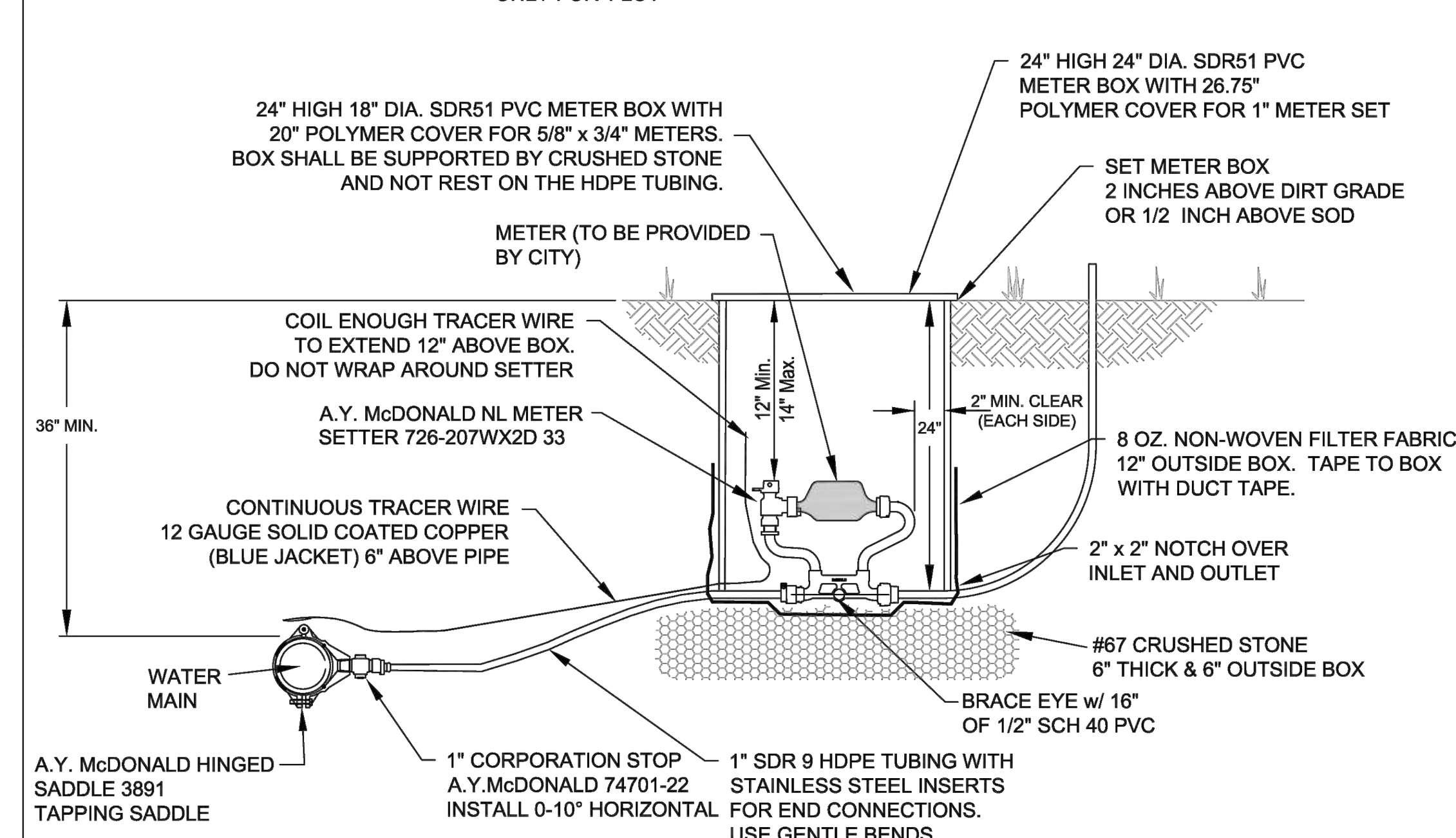
CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: FIRE HYDRANT PLACEMENT | DATE: APRIL 2015 | REVISED ---- | SHEET: W9
DRAWN BY: | CHECKED BY: | FILE: W9-Fire Hydrant Placement.dwg



WATER METER LID



DOUBLE METER SETTING
ONLY FOR 1 LOT

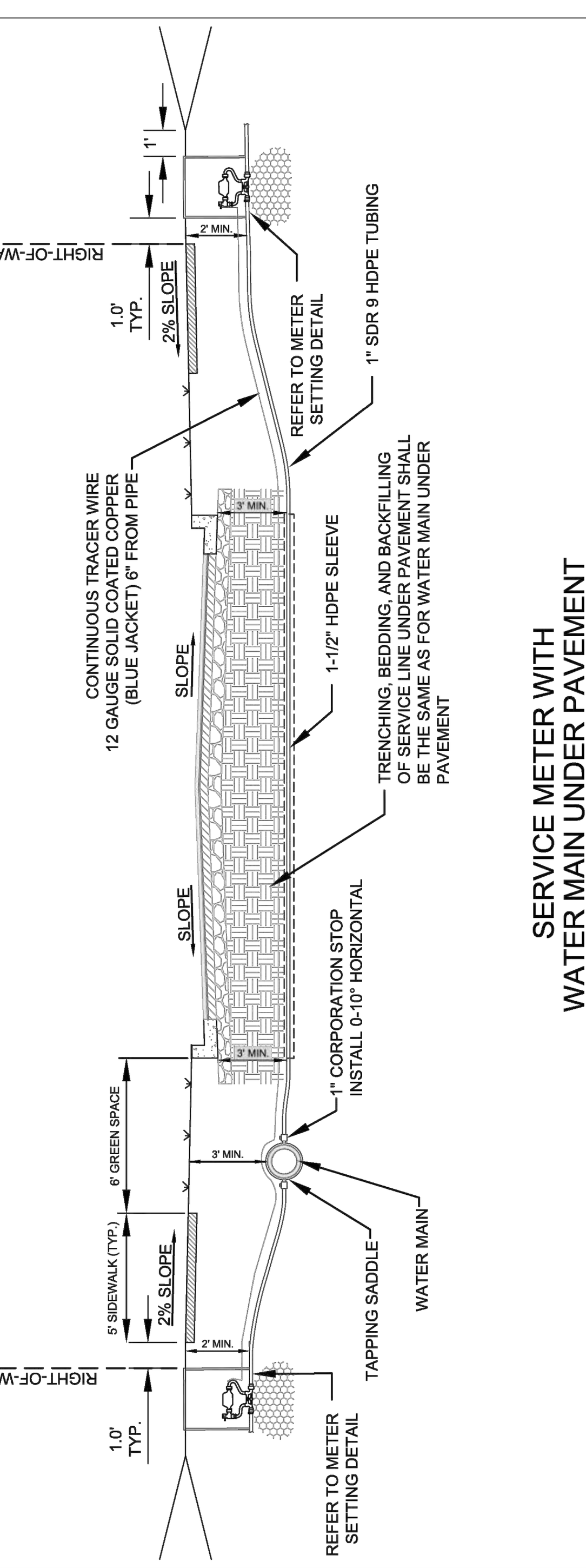


SINGLE METER SETTING

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: METER SETTINGS | DATE: APRIL 2015 | REVISED ---- | SHEET: W10
DRAWN BY: | CHECKED BY: | FILE: W10-Meter Settings.dwg

NOTES:

1. ALL WATER & SANITARY SEWER TRENCHES WHICH ARE UNDER THE PROPOSED STREETS MUST BE BACKFILLED AS SHOWN ON THE TRENCHING, BEDDING, AND BACKFILL STANDARD DETAIL.
2. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM OF HORIZONTAL SEPARATION DISTANCE OF 10 FEET AT ALL TIMES.
3. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18 INCHES WITH THE WATER LINE CROSSING ABOVE THE SEWER LINE.
4. ALL CORP. STOPS SHALL BE INSTALLED AT 0-10° ANGLE FROM HORIZONTAL.
5. A MINIMUM OF 24-INCHES OF SEPARATION IS REQUIRED BETWEEN SERVICE TAPS.
6. ALL METER BOXES SHALL BE INSTALLED ON THE CUSTOMER SIDE OF THE WATER MAIN.
7. ALL METER BOXES SHALL BE INSTALLED IN NON-PAVED AREAS. ANY METER BOX THAT GETS PLACED IN A PAVED AREA SHALL BE RELOCATED AT THE OWNER'S EXPENSE BEFORE A WATER METER WILL BE INSTALLED.



SERVICE METER WITH
WATER MAIN UNDER PAVEMENT

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: WATER DETAILS | DESCRIPTION: METER SERVICE LINE UNDER PAVEMENT | DATE: APRIL 2015 | REVISED ---- | SHEET: W11
DRAWN BY: | CHECKED BY: | FILE: W11-Meter Service Line Under Pavement.dwg

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CERTIFICATE OF AUTHORIZATION — Richardson Engineering, PLLC — No. 2519 — ARKANSAS

MISC. DETAILS
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

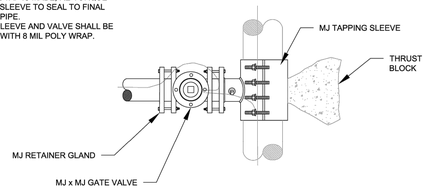
Prepared For: EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026
2	CITY COMMENTS 4/15/26	4/22/2026
3	REDESIGN ROAD PROFILES	9/22/2026

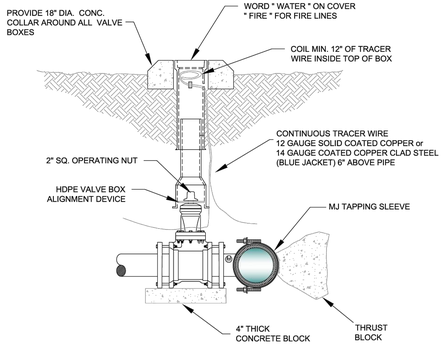
PROJECT NO.: 024-034
Date: 3/3/2026 9/22/2026
Scale: NTS
Sheet: 22 of 26

NOTES:

1. TAPPING SLEEVE SHALL BE SMITH-BLAIR 662 OR FORD FAST.
2. AFTER THE TAP IS MADE, RE-TORQUE BOLTS ON SLEEVE TO SEAL TO FINAL SHAPE OF PIPE.
3. TAPPING SLEEVE AND VALVE SHALL BE WRAPPED WITH 8 MIL POLY WRAP.

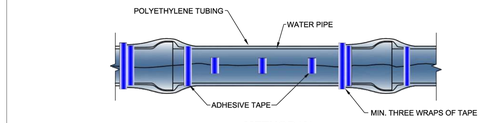


PLAN VIEW



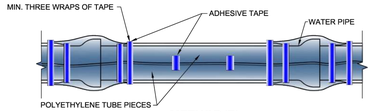
PROFILE VIEW

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES	DESCRIPTION: TAPPING SLEEVE AND VALVE	REVISED	W13
210 S.W. 3rd. STREET		-----	
BRYANT, AR		-----	
PHONE: (501) 943-0468	DRAWN BY: CHECKED BY: FILE: W13-Tapping Sleeve and Valve.dwg	-----	



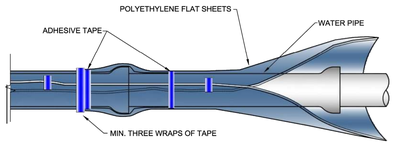
METHOD 'A'

METHOD 'A' USES ONE LENGTH OF POLYETHYLENE TUBE, OVERLAPPED AT THE JOINTS A MINIMUM OF 2 FEET.



METHOD 'B'

METHOD 'B' USES SEPARATE PIECES OF POLYETHYLENE TUBE FOR THE BARREL OF THE PIPE AND THE JOINTS. SHORT PIECES SHALL BE APPROXIMATELY 6' LONG AND OVERLAP BARREL SECTION BY A MINIMUM OF 2 FEET.



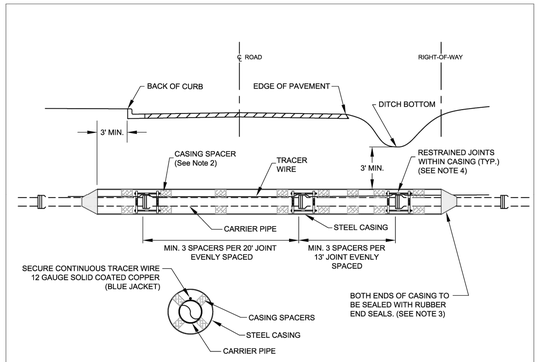
METHOD 'C'

METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY WRAPPED.

THE ANSI/AWWA C105/A21.5 STANDARD OUTLINES THREE METHODS OF INSTALLING POLYETHYLENE ENCASEMENT/ SLEEVING.

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES	DESCRIPTION: POLYETHYLENE PROTECTION MATERIAL	REVISED	W14
210 S.W. 3rd. STREET		-----	
BRYANT, AR		-----	
PHONE: (501) 943-0468	DRAWN BY: CHECKED BY: FILE: W14-Poly Wrap.dwg	-----	



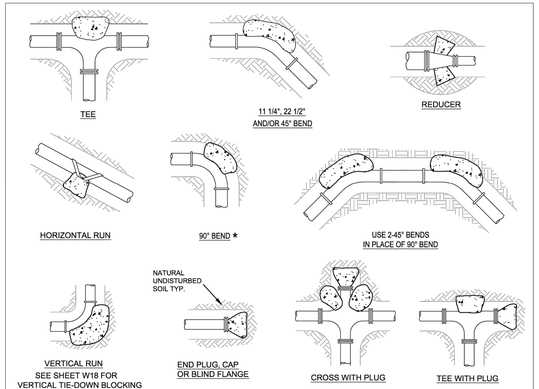
NOTES:

1. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL WITH A MINIMUM DIAMETER AND THICKNESS AS SHOWN BELOW (SEE TABLE).
2. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
3. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
4. WHERE ENCASEMENTS ARE GREATER THAN 25 FEET IN LENGTH, SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASEMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASEMENT PIPE.
5. BELL RESTRAINTS FOR PVC SHALL BE SERIES1900 RESTRAINT HARNESS AND BELL RESTRAINTS FOR DIP SHALL BE SERIES 1700 RESTRAINT HARNESS BY EBAA IRON INC., OR APPROVED EQUAL.
6. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.
7. JACK AND BORE STEEL ENCASEMENT SHALL HAVE 178 HP MAGNESIUM ANODES CAD WELDED TO THE END OF THE ENCASEMENT PIPE.

CARRIER AND CASING SIZES							
CARRIER (ID)	2"	3"	4"	6"	8	10"	12"
CASING (OD)	5"	6"	8"	12"	16"	20"	24"
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"
CASING (ID)	30"	36"	42"	48"	54"	60"	72"
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750

STEEL ENCASEMENT

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES	DESCRIPTION: STEEL ENCASEMENT	REVISED	W15
210 S.W. 3rd. STREET		-----	
BRYANT, AR		-----	
PHONE: (501) 943-0468	DRAWN BY: CHECKED BY: FILE: W15-Steel Encasement.dwg	-----	



THRUST BLOCK SCHEDULE

(2000 PSF SOIL, 200 PSI WATER PRESSURE, 100 PSI WATER HAMMER)

FITTING SIZE	PLUG TEE OR CAP	BEARING AREA OF THRUST BLOCKS IN SQ. FT (HORIZONTAL BENDS) BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	FITTING SIZE	VOLUME OF THRUST BLOCK IN CU. FEET (VERTICAL BENDS) BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	W/O DIAM.	EMBED-MENT
2, 3, & 4	1.9	2.7	1.4	0.7	0.4	2, 3, & 4	19.2	9.8	4.9	2.5	50"	35"
6	5.6	7.9	4.3	2.2	1.1	6	105.8	57.2	29.2	14.7	70"	35"
8	9.6	13.8	7.4	3.8	1.9	8	181.9	98.5	50.2	25.2	75"	35"
12	20.5	29.0	15.7	8.0	4.0	12	387.1	209.5	106.8	53.7	1.0"	35"
16	35.7	50.4	27.3	13.9	7.0	16	672.8	364.0	185.6	93.2	1.0"	35"
18	44.8	63.4	34.3	17.5	18.8	18	844.7	457.2	233.1	117.1	1.0"	35"
24	78.4	110.9	60.0	30.6	15.4	24	1478.7	800.3	408.0	205.0	1.5"	35"

* 90 DEGREE BENDS SHALL ONLY BE USED ON A BY-EXCEPTION BASIS, AND MUST EACH BE SPECIFICALLY APPROVED BY CITY.

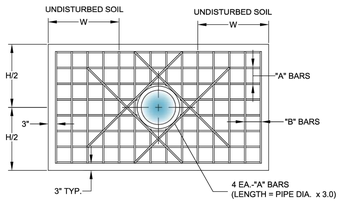
THRUST BLOCK NOTES:

1. CONCRETE FOR THRUST BLOCKS - CLASS A CONCRETE SHALL DEVELOP NOT LESS THAN 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
3. WRAP PIPE JOINTS IN 8 MIL "POLYETHLENE" BEFORE PLACING CONCRETE.
4. BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 200 psi. PLUS 100 psi. WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY.
5. MJ RESTRAINTS ARE REQUIRED FOR ALL FITTINGS.
6. USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE.
7. ALL BOLTS FOR FITTINGS SHALL BE 316 STAINLESS STEEL.
8. ALL DUCTILE IRON FITTINGS SHALL BE FUSION-BONDED EPOXY COATED INSIDE AND OUTSIDE IN ACCORDANCE WITH ANSI/AWWA C116/A21.16.
9. UNIT WEIGHT OF CONCRETE FOR VERTICAL THRUST BLOCKS IS 150 LBS/CU. FT.

THRUST BLOCKING

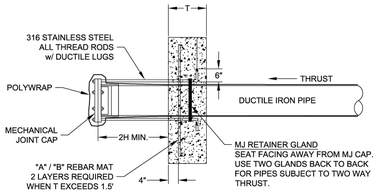
CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES	DESCRIPTION: THRUST BLOCKING	REVISED	W16
210 S.W. 3rd. STREET		-----	
BRYANT, AR		-----	
PHONE: (501) 943-0468	DRAWN BY: CHECKED BY: FILE: W16-Thrust Blocking.dwg	-----	

ANCHOR COLLAR SCHEDULE					
PIPE SIZE	* MINIMUM DIMENSIONS * W	H	T	REINFORCING BARS "A" BARS	"B" BARS
6"	1.5'	2.0'	1.0'	#5 @ 6"	#6 @ 6"
8"	2.0'	2.5'	1.0'	#5 @ 6"	#6 @ 6"
12"	2.5'	4.0'	1.5'	#6 @ 6"	#6 @ 6"
16"	3.5'	5.0'	1.5'	#6 @ 6"	#6 @ 6"
20"	5.0'	5.5'	2.0'	#6 @ 6"	#6 @ 6"
24"	6.5'	6.0'	2.0'	#7 @ 6"	#7 @ 10"

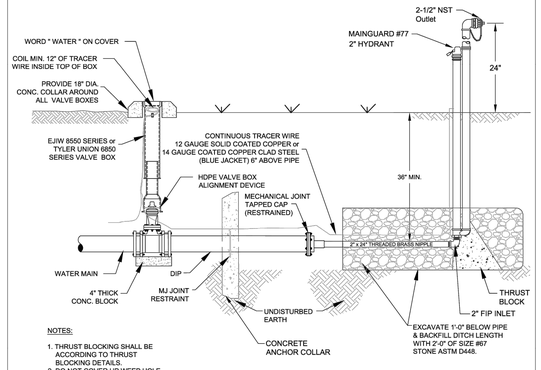


NOTES:

1. DESIGN PRESSURE IS 200 PSI PLUS 100 PSI SURGE AND 2,000 PSI SOIL BEARING.
2. ALL DIMENSIONS ARE MINIMUM REQUIREMENTS. ACTUAL FIELD CONDITIONS MAY REQUIRE LARGER DIMENSIONS.
3. ALL RETAINER GLANDS SHALL BE MEGA-LUG BY EBAA IRON.



CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES	DESCRIPTION: ANCHOR COLLAR	REVISED	W18
210 S.W. 3rd. STREET		-----	
BRYANT, AR		-----	
PHONE: (501) 943-0468	DRAWN BY: CHECKED BY: FILE: W18-Anchor Collar.dwg	-----	

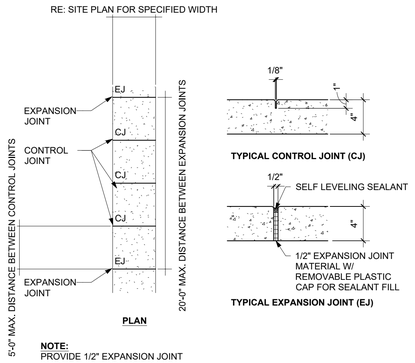


NOTES:

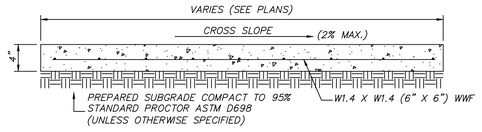
1. THRUST BLOCKING SHALL BE ACCORDING TO THRUST BLOCKING DETAILS.
2. DO NOT COVER UP WEEP HOLE WITH CONCRETE.

BLOW-OFF ASSEMBLY

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES	DESCRIPTION: BLOW-OFF ASSEMBLY	REVISED	W19
210 S.W. 3rd. STREET		-----	
BRYANT, AR		-----	
PHONE: (501) 943-0468	DRAWN BY: CHECKED BY: FILE: W19-Blow-off Assembly.dwg	-----	



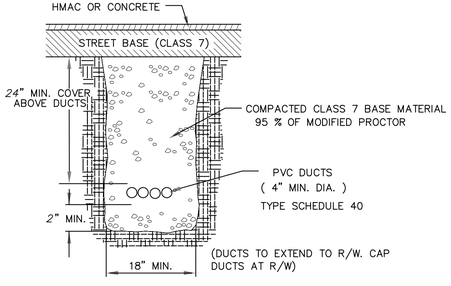
NOTE:
PROVIDE 1/2" EXPANSION JOINT AND SEALANT AS NOTED AND WHERE SIDEWALK ABUTS STRUCTURES OR OTHER SIDEWALKS.



CONCRETE SIDEWALK SPECIFICATIONS

NTS

* NOTES:
1. PORTLAND CEMENT CONCRETE 3000 PSI. MIN.
2. USE W1.4 X W1.4 (6" X 6") WWF SHEET REINFORCEMENT. CUT ½ THE WIRES AT CONTROL JOINTS.
3. CONCRETE TO CONTAIN 3-5% AIR ENTRAINMENT.
4. FINISH TO BE LIGHT BROOM FINISH.
5. DETECTABLE WARNING DEVICES TO BE INSTALLED AT RAMPS PER ADA REQUIREMENTS.
6. MAX CROSS SLOPE 2%. MAX LONGITUDINAL SLOPE 1:12.
7. CONTROL JOINTS PER CONC. WALK CONTROL JOINT DETAIL.



TYPICAL SECTION
4" UTILITY DUCTS

NOT TO SCALE

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CERTIFICATE OF AUTHORIZATION — Richardson Engineering, PLLC — No. 2519 — STATE OF ARKANSAS

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PROJECT NO.: 024-034
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9/22/2026
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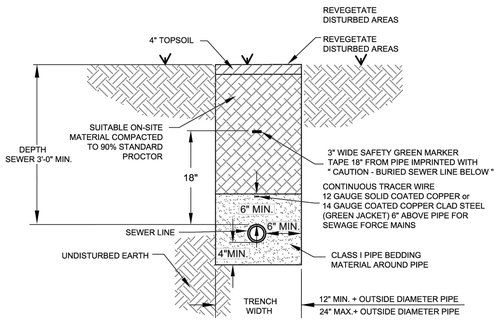
Sheet: 23 of 26



NOTES:

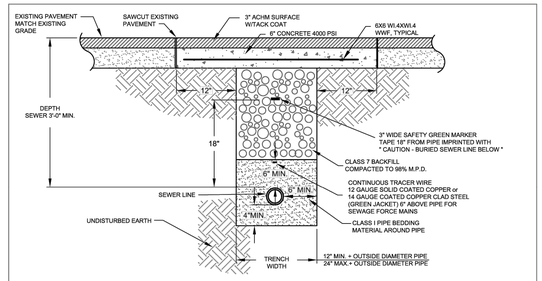
1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

SEWER TRENCH

(NON-PAVED AREA)

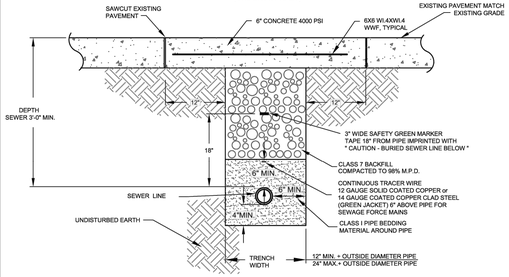
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DESCRIPTION: **SEWER TRENCH (NON-PAVED AREA)** | DRAWN BY: | CHECKED BY: | FILE: S1-Sewer Trench (Non-Paved Area).dwg | DATE: APRIL 2015 | REVISED | SHEET: **S1**



SEWER TRENCH

(UNDER ASPHALT)



SEWER TRENCH

(UNDER CONCRETE)

NOTES:

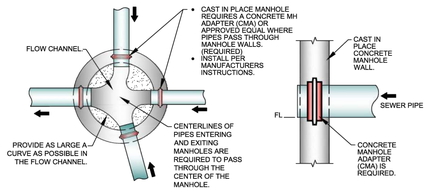
1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DESCRIPTION: **SEWER TRENCH (UNDER PAVEMENT)** | DRAWN BY: | CHECKED BY: | FILE: S2-Sewer Trench (Under Pavement).dwg | DATE: APRIL 2015 | REVISED | SHEET: **S2**

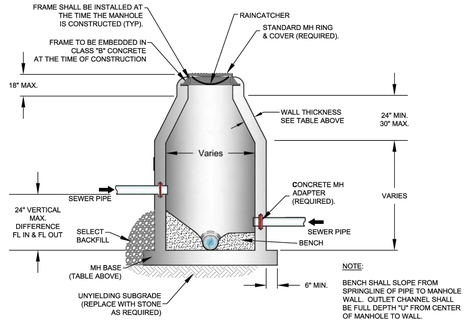
Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	6"	6"	24" (< or Equal to 24" Pipes)
5' DIA	8"	8"	
6' DIA	8"	12"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL

CONCRETE MANHOLE ADAPTER (CMA) DETAIL



NOTE:

BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

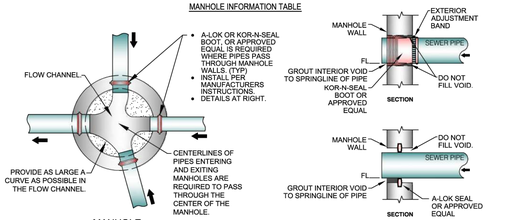
CAST-IN-PLACE MANHOLE

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DESCRIPTION: **CAST-IN-PLACE MANHOLE** | DRAWN BY: | CHECKED BY: | FILE: S4-Cast in Place Manhole.dwg | DATE: APRIL 2015 | REVISED | SHEET: **S4**

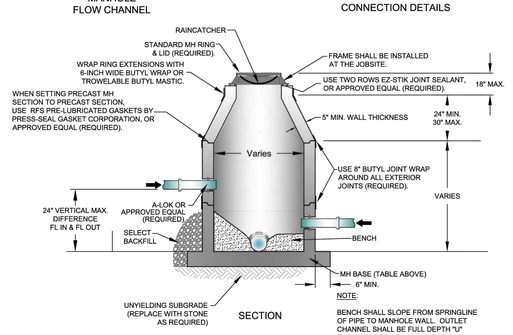
Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	5"	6"	24" (< or Equal to 24" Pipes)
5' DIA	7"	8"	
6' DIA	7"	8"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL

CONNECTION DETAILS



NOTE:

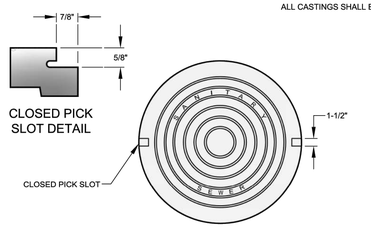
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

PRECAST MANHOLE

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

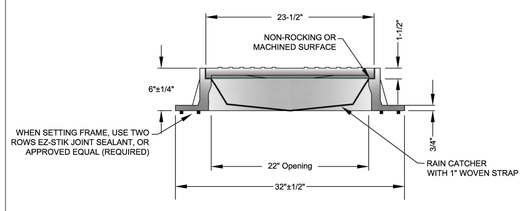
TITLE: **SEWER DETAILS** | DESCRIPTION: **PRECAST MANHOLE** | DRAWN BY: | CHECKED BY: | FILE: S5-Precast Manhole.dwg | DATE: APRIL 2015 | REVISED | SHEET: **S5**

ALL CASTINGS SHALL BE "MADE IN USA"



1. MINIMUM WEIGHT OF RING: 100 POUNDS
2. MINIMUM WEIGHT OF COVER: 110 POUNDS
3. COVERS ARE FURNISHED WITH TWO CLOSED PICK SLOTS.
4. CASTINGS SHALL BE "MADE IN USA"

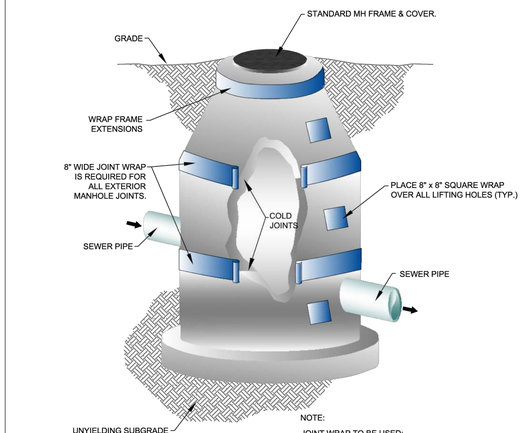
* DIMENSIONAL TOLERANCES SHALL NOT EXCEED 1/16 INCH PER FOOT



FRAME AND COVER DETAIL

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DESCRIPTION: **MANHOLE FRAME AND COVER** | DRAWN BY: | CHECKED BY: | FILE: S6-Manhole Frame and Cover.dwg | DATE: APRIL 2015 | REVISED | SHEET: **S6**



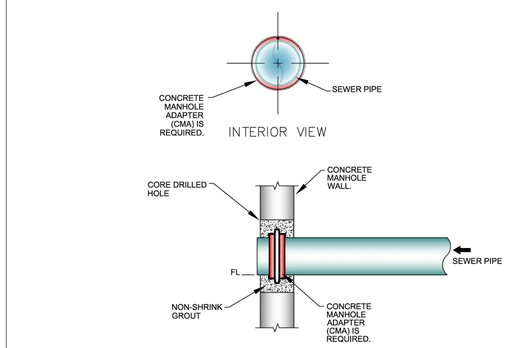
NOTE:

JOINT WRAP TO BE USED:
- ON OUTSIDE OF COLD JOINTS
- ON EXTERIOR OF ALL PRECAST MANHOLE JOINTS
- ON LIFT HOLES / SOCKETS

MANHOLE JOINT WRAP

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DESCRIPTION: **MANHOLE JOINT WRAP** | DRAWN BY: | CHECKED BY: | FILE: S9-Manhole Joint Wrap.dwg | DATE: APRIL 2015 | REVISED | SHEET: **S9**



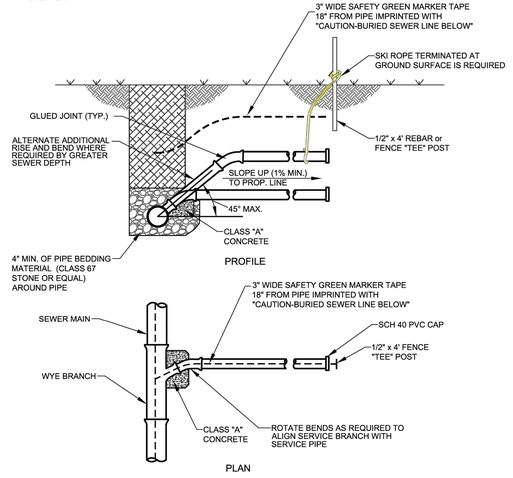
MANHOLE CORING DETAILS

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DESCRIPTION: **MANHOLE CORING** | DRAWN BY: | CHECKED BY: | FILE: S11-Manhole Coring.dwg | DATE: APRIL 2015 | REVISED | SHEET: **S11**

NOTES:

1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0"
2. PLACE CLASS "A" CONCRETE UNDER EACH WYE BRANCH TO PREVENT CRACKING OR TWISTING UNDER EARTH LOADS.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB TERMINATE AT A DISTANCE LESS THAN 8 FEET FROM THE SANITARY SEWER MAIN.
4. BURY A 1/2" x 4' STEEL TEE FENCE POST AT END OF SERVICE LATERAL STUB AND BACKFILL TO FINISHED GRADE OF PROPERTY.
5. 4" DUCTILE IRON PIPE, LINED FOR SANITARY SEWER AND 4" DUCTILE IRON M.J. FITTINGS, LINED FOR SANITARY SEWER, SHALL BE INSTALLED FOR SERVICES BURIED AT DEPTHS OF 14 FEET AND GREATER.



SEWER SERVICE LATERAL

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DESCRIPTION: **SEWER SERVICE LATERAL** | DRAWN BY: | CHECKED BY: | FILE: S15-Sewer Service Lateral.dwg | DATE: APRIL 2015 | REVISED | SHEET: **S15**

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MISC. DETAILS
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For: EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026
2	CITY COMMENTS 4/15/26	4/22/2026
3	REDESIGN ROAD PROFILES	9/22/2026

PROJECT NO.: 024-034
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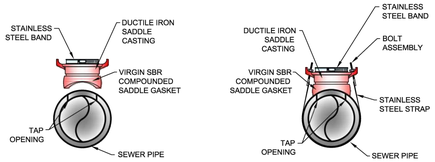
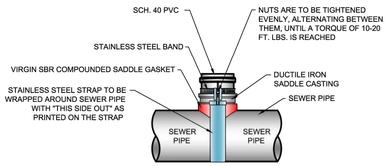
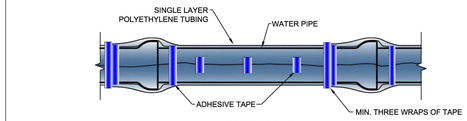




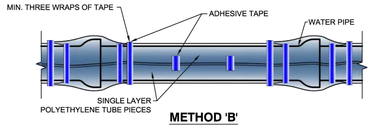
SEWER SERVICE SADDLE

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- ----- -----	SHEET: **S17**
	DESCRIPTION: **SEWER SERVICE SADDLE**		
	DRAWN BY: CHECKED BY: FILE: S17-Sewer Service Saddle.dwg		



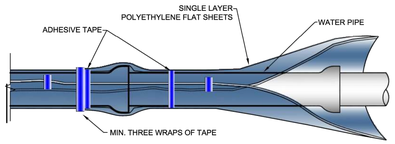
METHOD 'A'

METHOD 'A' USES ONE LENGTH OF POLYETHYLENE TUBE, OVERLAPPED AT THE JOINTS A MINIMUM OF 2 FEET.



METHOD 'B'

METHOD 'B' USES SEPARATE PIECES OF POLYETHYLENE TUBE FOR THE BARREL OF THE PIPE AND THE JOINTS. SHORT PIECES SHALL BE APPROXIMATELY 6' LONG AND OVERLAP BARREL SECTION BY A MINIMUM OF 2 FEET.



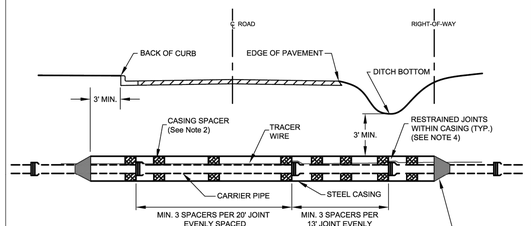
METHOD 'C'

METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY WRAPPED.

THE ANSI/AWWA C105/A21.5 STANDARD OUTLINES THREE METHODS OF INSTALLING POLYETHYLENE ENCASEMENT/ SLEEVING.

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- ----- -----	SHEET: **S20**
	DESCRIPTION: **POLYETHYLENE PROTECTION MATERIAL**		
	DRAWN BY: CHECKED BY: FILE: S20-Poly Wrap.dwg		



NOTES:

1. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL WITH A MINIMUM DIAMETER AND THICKNESS AS SHOWN BELOW (SEE TABLE).
2. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL, MINIMUM 13-INCHES WIDE.
3. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
4. ONE CASING SPACER SHALL BE PLACED AT THE INSERTION STOP LINE TO RESIST OVER INSERTION.
5. ALL FORCE MAINS SHALL BE FULLY RESTRAINED WHERE ENCASEMENTS ARE GREATER THAN 25 FEET IN LENGTH, SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASEMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASEMENT PIPE.
6. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.

CARRIER AND CASING SIZES

CARRIER (ID)	2"	3"	4"	6"	8	10"	12"
CASING (ID)	5"	6"	8"	12"	16"	20"	24"
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"
CASING (ID)	30"	36"	42"	48"	54"	60"	72"
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750

STEEL ENCASEMENT

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- ----- -----	SHEET: **S21**
	DESCRIPTION: **STEEL ENCASEMENT**		
	DRAWN BY: CHECKED BY: FILE: S21-Steel Encasement.dwg		

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No. 2519
ARKANSAS

MISC. DETAILS
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Prepared For:
EMINENT CONSTRUCTIONS

PROJECT NO.: 024-034
Date: 3/3/2026
Date: 9/22/2026
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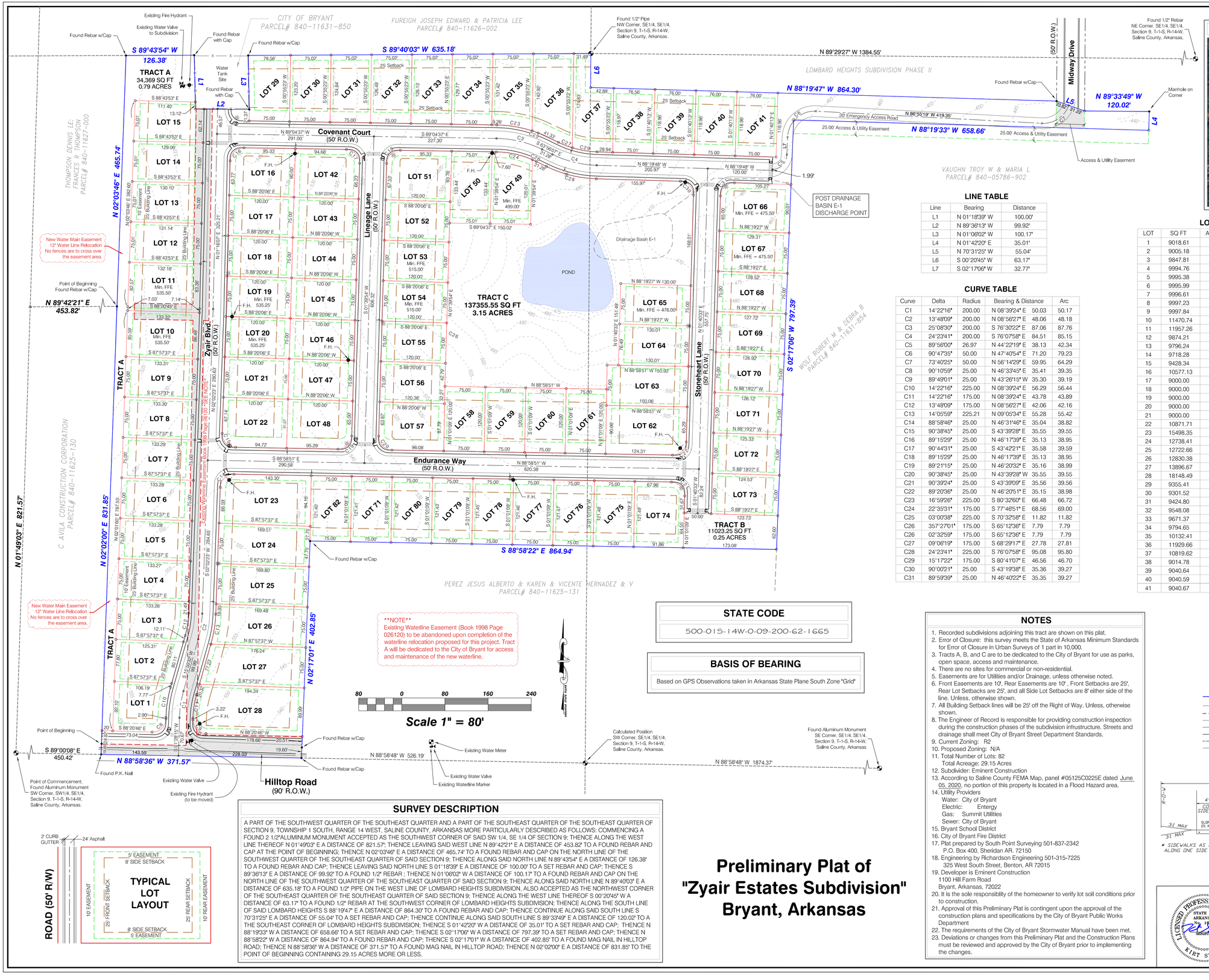
TRACT 2
28519 SQ. FT.
0.65 ACRES

TRACT 1
OPEN SPACE / RECREATION AREA
137356 SQ. FT.
3.15 ACRES

TRACT 3
RECREATION AREA
11023 SQ. FT.
0.25 ACRES

| | | |



LINE TABLE

Line	Bearing	Distance
L1	N 01°18'39" W	100.00'
L2	N 89°36'13" W	99.92'
L3	N 01°06'02" W	100.17'
L4	N 01°42'20" E	35.01'
L5	N 70°31'25" W	55.04'
L6	S 00°20'45" W	63.17'
L7	S 02°17'06" W	32.77'

CURVE TABLE

Curve	Delta	Radius	Bearing & Distance		Arc
C1	14°22'16"	200.00	N 08°39'24" E	50.03	50.17
C2	13°48'09"	200.00	N 08°56'27" E	48.06	48.18
C3	25°08'30"	200.00	S 76°30'22" E	87.06	87.76
C4	24°23'41"	200.00	S 76°07'58" E	84.51	85.15
C5	89°56'00"	26.97	N 44°22'19" E	38.13	42.34
C6	90°47'35"	50.00	N 47°40'54" E	71.20	79.23
C7	73°40'25"	50.00	N 56°14'29" E	59.95	64.29
C8	90°10'59"	25.00	N 46°33'45" E	35.41	39.35
C9	89°49'01"	25.00	N 43°26'15" W	35.30	39.19
C10	14°22'16"	225.00	N 08°39'24" E	56.29	56.44
C11	14°22'16"	175.00	N 08°39'24" E	43.78	43.89
C12	13°48'09"	175.00	N 08°56'27" E	42.06	42.16
C13	14°05'59"	225.21	N 09°05'34" E	55.28	55.42
C14	88°58'46"	25.00	N 46°31'46" E	35.04	38.82
C15	90°38'45"	25.00	S 43°39'28" E	35.55	39.55
C16	89°15'29"	25.00	N 46°17'39" E	35.13	38.95
C17	90°44'31"	25.00	S 43°42'21" E	35.58	39.59
C18	89°15'29"	25.00	N 46°17'39" E	35.13	38.95
C19	89°21'15"	25.00	N 46°20'32" E	35.16	38.99
C20	90°38'45"	25.00	N 43°39'28" W	35.55	39.55
C21	90°39'24"	25.00	S 43°39'09" E	35.56	39.56
C22	89°20'36"	25.00	N 46°20'51" E	35.15	38.98
C23	16°59'26"	225.00	S 80°32'60" E	66.48	66.72
C24	22°35'31"	175.00	S 77°46'51" E	68.56	69.00
C25	03°00'38"	225.00	S 70°32'58" E	11.82	11.82
C26	357°27'01"	175.00	S 65°12'36" E	7.79	7.79
C26	02°32'59"	175.00	S 65°12'36" E	7.79	7.79
C27	09°06'19"	175.00	S 68°29'17" E	27.78	27.81
C28	24°23'41"	225.00	S 76°07'58" E	95.08	95.80
C29	15°17'22"	175.00	S 80°41'07" E	46.56	46.70
C30	90°00'21"	25.00	S 43°19'38" E	35.36	39.27
C31	89°59'39"	25.00	N 46°40'22" E	35.35	39.27

LOT AREA TABLE

LOT	SQ FT	ACRES	LOT	SQ FT	ACRES
1	9018.61	0.21	42	10755.52	0.25
2	9005.18	0.21	43	9000.00	0.21
3	9847.81	0.23	44	9000.00	0.21
4	9994.76	0.23	45	9000.00	0.21
5	9995.38	0.23	46	9000.00	0.21
6	9995.99	0.23	47	9000.00	0.21
7	9996.61	0.23	48	10716.41	0.25
8	9997.23	0.23	49	9710.67	0.22
9	9997.84	0.23	50	10008.00	0.23
10	11470.74	0.26	51	11027.79	0.25
11	11957.26	0.27	52	9000.00	0.21
12	9874.21	0.23	53	9000.00	0.21
13	9796.24	0.22	54	9000.00	0.21
14	9718.28	0.22	55	9000.00	0.21
15	9428.34	0.22	56	9005.85	0.21
16	10577.13	0.24	57	10554.69	0.24
17	9000.00	0.21	58	9000.00	0.21
18	9000.00	0.21	59	9000.00	0.21
19	9000.00	0.21	60	9000.00	0.21
20	9000.00	0.21	61	9000.00	0.21
21	9000.00	0.21	62	13328.05	0.31
22	10871.71	0.25	63	11286.45	0.26
23	15498.35	0.36	64	9847.49	0.23
24	12738.41	0.29	65	9750.00	0.22
25	12722.66	0.29	66	11547.23	0.27
26	12830.38	0.29	67	9668.68	0.22
27	13896.67	0.32	68	9608.87	0.22
28	18148.49	0.42	69	9549.06	0.22
29	9355.41	0.21	70	9489.25	0.22
30	9301.52	0.21	71	9429.45	0.22
31	9424.80	0.22	72	9369.64	0.22
32	9548.08	0.22	73	9309.83	0.21
33	9671.37	0.22	74	11107.27	0.25
34	9794.65	0.22	75	9111.19	0.21
35	10132.41	0.23	76	9110.40	0.21
36	11929.66	0.27	77	9109.61	0.21
37	10819.62	0.25	78	9108.81	0.21
38	9014.78	0.21	79	9108.02	0.21
39	9040.64	0.21	80	9107.22	0.21
40	9040.59	0.21	71	9106.43	0.21
41	9040.67	0.21	82	9105.64	0.21

STATE CODE

500-015-14W-0-09-200-62-1665

BASIS OF BEARING

Based on GPS Observations taken in Arkansas State Plane South Zone "Grid"

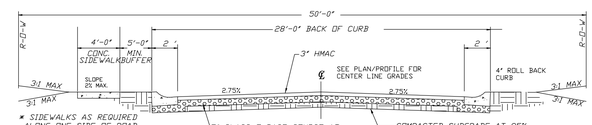
SURVEY DESCRIPTION

A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER AND A PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING A FOUND 2 1/2"ALUMINUM MONUMENT ACCEPTED AS THE SOUTHWEST CORNER OF SAID SW 1/4, SE 1/4 OF SECTION 9; THENCE ALONG THE WEST LINE THEREOF N 01°49'03" E A DISTANCE OF 821.57'; THENCE LEAVING SAID WEST LINE N 89°42'21" E A DISTANCE OF 453.82' TO A FOUND REBAR AND CAP AT THE POINT OF BEGINNING; THENCE N 02°03'46" E A DISTANCE OF 465.74' TO A FOUND REBAR AND CAP ON THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 9; THENCE ALONG SAID NORTH LINE N 89°43'54" E A DISTANCE OF 126.38' TO A FOUND REBAR AND CAP; THENCE LEAVING SAID NORTH LINE S 01°18'39" E A DISTANCE OF 100.00' TO A SET REBAR AND CAP; THENCE S 89°36'13" E A DISTANCE OF 99.92' TO A FOUND 1/2" REBAR ; THENCE N 01°06'02" W A DISTANCE OF 100.17' TO A FOUND REBAR AND CAP ON THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 9; THENCE ALONG SAID NORTH LINE N 89°40'03" E A DISTANCE OF 635.18' TO A FOUND 1/2" PIPE ON THE WEST LINE OF LOMBARD HEIGHTS SUBDIVISION, ALSO ACCEPTED AS THE NORTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 9; THENCE ALONG THE WEST LINE THEREOF S 00°20'45" W A DISTANCE OF 63.17' TO A FOUND 1/2" REBAR AT THE SOUTHWEST CORNER OF LOMBARD HEIGHTS SUBDIVISION; THENCE ALONG THE SOUTH LINE OF SAID LOMBARD HEIGHTS S 88°19'47" E A DISTANCE OF 864.30' TO A FOUND REBAR AND CAP; THENCE CONTINUE ALONG SAID SOUTH LINE S 70°31'25" E A DISTANCE OF 55.04' TO A SET REBAR AND CAP; THENCE CONTINUE ALONG SAID SOUTH LINE S 89°33'49" E A DISTANCE OF 120.02' TO A THE SOUTHEAST CORNER OF LOMBARD HEIGHTS SUBDIVISION; THENCE S 01°42'20" W A DISTANCE OF 35.01' TO A SET REBAR AND CAP; THENCE N 88°19'33" W A DISTANCE OF 658.66' TO A SET REBAR AND CAP; THENCE S 02°17'06" W A DISTANCE OF 797.39' TO A SET REBAR AND CAP; THENCE N 88°58'22" W A DISTANCE OF 864.94' TO A FOUND REBAR AND CAP; THENCE S 02°17'01" W A DISTANCE OF 402.85' TO A FOUND MAG NAIL IN HILLTOP ROAD; THENCE N 88°58'36" W A DISTANCE OF 371.57' TO A FOUND MAG NAIL IN HILLTOP ROAD; THENCE N 02°02'00" E A DISTANCE OF 831.85' TO THE POINT OF BEGINNING CONTAINING 29.15 ACRES MORE OR LESS.

NOTES

1. Recorded subdivisions adjoining this tract are shown on this plat.
2. Error of Closure: this survey meets the State of Arkansas Minimum Standards for Error of Closure in Urban Surveys of 1 part in 10,000.
3. Tracts A, B, and C are to be dedicated to the City of Bryant for use as parks, open space, access and maintenance.
4. There are no sites for commercial or non-residential.
5. Easements are for Utilities and/or Drainage, unless otherwise noted.
6. Front Easements are 10', Rear Easements are 10' , Front Setbacks are 25', Rear Lot Setbacks are 25', and all Side Lot Setbacks are 8' either side of the line. Unless, otherwise shown.
7. All Building Setback lines will be 25' off the Right of Way. Unless, otherwise shown.
8. The Engineer of Record is responsible for providing construction inspection during the construction phases of the subdivision infrastructure. Streets and drainage shall meet City of Bryant Street Department Standards.
9. Current Zoning: R2
10. Proposed Zoning: N/A
11. Total Number of Lots: 82
    Total Acreage: 29.15 Acres
12. Subdivider: Eminent Construction
13. According to Saline County FEMA Map, panel #05125C0225E dated June 05, 2020, no portion of this property is located in a Flood Hazard area.
14. Utility Providers
    Water: City of Bryant
    Electric:: Entergy
    Gas: Summit Utilities
    Sewer: City of Bryant
15. Bryant School District
16. City of Bryant Fire District
17. Plat prepared by South Point Surveying 501-837-2342
    P.O. Box 400, Sheridan AR, 72150
18. Engineering by Richardson Engineering 501-315-7225
    325 West South Street, Benton, AR 72015
19. Developer is Eminent Construction
    1100 Hill Farm Road
    Bryant, Arkansas, 72022
20. It is the sole responsiblity of the homeowner to verify lot soil conditions prior to construction.
21. Approval of this Preliminary Plat is contingent upon the approval of the construction plans and specifications by the City of Bryant Public Works Department
22. The requirements of the City of Bryant Stormwater Manual have been met.
23. Deviations or changes from this Preliminary Plat and the Construction Plans must be reviewed and approved by the City of Bryant prior to implementing the changes.

FIRE HYDRANT
STREET SIGN
STOP SIGN
STREET LIGHT
SET 1/2" REBAR & CAP
FOUND MONUMENT
CONTROLLING CORNER
BOUNDARY
BUILDING LINE
EASEMENT
FENCE LINE
ROAD
RIGHT-OF-WAY
SECTION LINE
OVERHEAD ELECTRIC



TYPICAL ROAD CROSS SECTION (RESIDENTIAL)
N.T.S.

Preliminary Plat of "Zyair Estates Subdivision" Bryant, Arkansas

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY

I, Eric Richardson, hereby certify that I am the engineer of record for this subdivision, and that I or those made by me under my supervision will design and cause to be constructed the improvements required in accord with the City Bryant Subdivision of Land Regulations.

Date of Execution
Registered Professional Engineer
No. 14266, Arkansas

CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY

I, Kirt Sledge, hereby certify that this proposed preliminary plat correctly represents a survey completed by me, or under my supervision on February 8, 2026, that all monuments shown hereon actually exist and their location, size, type and material are correctly shown; and that all interior lot lines are accurately described in terms of length and direction of the property sides.

03-11-2026
Date of Execution

Kirt Sledge
Registered Professional Surveyor
No. 1665, Arkansas

CERTIFICATE OF PROPERTY OWNERSHIP

I, _____, hereby certify that the deed records in the office of the Circuit Clerk and Ex-Officio Recorder of Saline County Arkansas reflect that NXT GEN Homes is the record title owner of real property more particularly described herein on plat, dated this ___ day of _____, 2026

Signed_____

Licensed Abstractor No_____
or Attorney Bar No_____

CERTIFICATE OF PRELIMINARY PLAT APPROVAL

All requirements of the City of Bryant Subdivision of Land Regulations relative to the preparation and submittal of a Preliminary Plat having been fulfilled, approval of this plat is hereby granted, subject to further provisions of said regulations.

This Certificate shall expire Date_____

Signed_____
Date of Execution Name, Chairman
Bryant Planning Commission

LICENSED PROFESSIONAL SURVEYOR — STATE OF ARKANSAS — No. 1665 — REGISTERED — KIRT SLEDGE

CERTIFICATE OF AUTHORIZATION — SOUTH POINT SURVEYING — No. 2408 — ARKANSAS

SOUTH POINT SURVEYING, PLLC
P.O. Box 400 Sheridan, AR 72150
southpointsurveying@yahoo.com
501-285-5958 501-837-2342

Drawing:	Date:	Page:	Drawn by:
ZYAIR ESTATES SUBDIVISION	11/2/26	1 OF 1	LMR

ZYAIR ESTATES SUBDIVISION PRELIMINARY PLAT
BRYANT, ARKANSAS