Bryant Planning Commission Meeting

Boswell Municipal Complex - City Hall Court Room

210 SW 3rd Street

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

Date: December 08, 2025 - **Time:** 6:00 PM

Call to Order

Approval of Minutes

1. **Planning Commission Meeting Minutes 11/13/2025**
   - 2025-11-13 Planning Commission Minutes.pdf

Announcements

DRC Report

2. **Meadowlake Phase 3 - Replat** - Storm Sewer Detention Basin Tract

   Zane Robbins - Requesting Recommendation for Approval of Replat - RECOMMENDED APPROVAL

3. **6128 HWY 5 - Site Plan** - Lot 22R of Marketplace II Subdivision Ph. 3

   Hope Consulting - Requesting Recommendation for Site Plan Approval - RECOMMENDED APPROVAL, Contingent upon reminaing comments being addressed

4. **2525 Birch St** - Conditional Use Permit

   Maco Builders - Requesting Recommendation for Approval of CUP for Duplex in R-M Zoning - NO RECOMMENDATION

5. **6717 Lombard Rd** - Conditional Use Permit

   Paul Kingsolver - Requesting Recommendation for Approval of CUP for Short Term Rental - RECOMMENDED APPROVAL

6. **12 Paisley Park** - Minor Modification from Midtown Code

   HD Homes - Requesting Minor Modifcation from Midtown code on Sidewalk Location - APPROVED, Contingent upon Verification from City Engineer on Design of the Crossing

   - 0999-PLN-02.pdf

7. **Progressive Tractor & Implement Co. - 22576 I-30** - Sign Permit

   Gibko Nursery & Signs - Requesting Approval for Freestanding Sign - APPROVED

   - 94415-SGNAPP-01.pdf

8. **Senor Tequila - 2919 Reynolds Road** - Site Plan Addition

   - Requesting Site Plan Approval for new Accessory Structure - APPROVED, Contingent upon working out details on Commercial Design Standards for Facade of structure.

- 1006-PLN-01.pdf

9. The Local Tavern - 3429 Market Place Ave, STE A - Sign Permit

Jeried Offutt - Requesting Sign Permit Approval - STAFF APPROVED

- The Local Tavern Sign Rendering.pdf

10. Enjoy Shawarma - 5311 Hwy 5, STE 206 - Sign Permit

Greg Decker - Requesting Sign Permit Approval - STAFF APPROVED

- 94412-SGNAPP-01.pdf

11. Gassy's Fuel Station - 6101 Hwy 5 - Sign Permit

James Griffin - Requesting Sign Permit Approval - STAFF APPROVED

- Gassys Sign Permit Rendering 1.pdf

12. Shoppes at Dogwood Springs - Phase 1 - 4707 Bryant Parkway

Richardson Engineering - Requesting Site Plan Approval - APPROVED, Contingent upon remaining comments being addressed

- 0998-LIGHT-01.pdf
- 0998-DRN-03.pdf
- 0998-BLD-01.pdf
- 0998-SLC-01.pdf
- 0998-SWP-01.pdf
- 0998-NOC-01.pdf

13. Honey Baked Ham - 3213 Main St. Ste 2 - Sign Permit

Cuerden Signs - Requesting Sign Permit Approval - STAFF APPROVED

- HBH Sign Permit App2.pdf
- HBH Sign Permit App1.pdf

Public Hearing

14. 2525 Birch St - Conditional Use Permit

Maco Builders - Requesting Approval of CUP for Duplex in R-M Zoning

- 1003-APP-01.pdf

15. 6717 Lombard Rd - Conditional Use Permit

Paul Kingsolver - Requesting Approval of CUP for Short Term Rental

- 1004-APP-01.pdf

Old Business

New Business

16. Meadowlake Phase 3 - Replat - Storm Sewer Detention Basin Tract

Zane Robbins - Requesting Approval for Replat

- 1005-PLN-02.pdf

17. 6128 HWY 5 - Site Plan - Lot 22R of Marketplace II Subdivision Ph. 3

Hope Consulting - Requesting Site Plan Approval

- 0986-PLN-03.pdf

18. 2026 Development Meeting Calendar

Requesting Approval for 2025 Development Meeting Dates

- Proposed Planning Commission Deadlines and Dates 2026.pdf

19. **Nominating Committee Report** - Nominations for 2026 Chair and Vice Chair of Planning Commission

20. **Recognition for Commissioner Jim Erwin**

Adjournments

Bryant Planning Commission Meeting Minutes
Monday, November 13, 2025
Boswell Municipal Complex – City Hall Courtroom
6:00 PM

Agenda

CALL TO ORDER

- Chairman Lance Penfield calls the meeting to order.
- Commissioners Present: Statton, Hooten, Penfield, Johnson, Thompson, Edwards, Erwin, Speed
- Commissioners Absent: None

APPROVAL OF MINUTES

1. **10/13/2025 Planning Commission Meeting Minutes**
2. **10/22/2025 Special Planning Commission Meeting Minutes**

Motion to Approve 10/13/2025 and 10/22/2025 Minutes made by Commissioner Statton, Seconded by Vice-Chairman Hooten. Voice Vote, 8 Yays, 0 Nays, 0 Absent

ANNOUNCEMENTS

Colton Leonard, Interim Director of Planning and Development, reported that work is continuing with Crafton Tull on the Comprehensive Growth Plan. Kick-off meetings are scheduled to take place between December 1–3, 2025.

COMMENTS

Commissioner Statton noted that Ms. Handy spoke with him to mention that her fence work has not yet been completed.

Vice-Chairman Hooten read the DRC Report.

DRC REPORT

3. **1607 Prickett Road -** Conditional Use Permit
   Joel Prickett - Requesting Recommendation for Approval of Conditional Use Permit to build accessory structure on lot prior to a primary structure - RECOMMENDED APPROVAL

4. **3213 Main St, STE 1 -** Site Addition
   Hernan Rangel - Requesting Approval for Site Addition for new patio

5. **Midtown Bryant - 12 Paisley Park and Block 2 -** Minor Modifications from Midtown Code
   HD Homes - Requesting Minor Modifications from Midtown Code for sidewalk location at 12 Paisley Park and change to frontage type at Block 2 for A Street - APPROVED Sidewalk modification to Block 2. Approved modification to sidewalk at 12 Paisley, Contingent upon City Engineer approving the design prior to installation.

6. **Gassy's - Phillips 66 - 6101 HWY 5 -** Sign Permit
   Arkansas Sign and Neon - Requesting Sign Permit Approval - APPROVED

PUBLIC HEARING

7. **1607 Prickett Road -** Conditional Use Permit
   Joel Prickett - Requesting Approval for Conditional Use Permit to build accessory structure on lot prior to a primary structure

   Chairman Penfield called for a roll call vote to approve. 8 Yays, 0 Nays, 0 Absent.

8. **Zoning Code Changes**
   Public Hearing regarding changes to Sections 4 and 10 of the City of Bryant Zoning Code.

   Colton Leonard, Interim Director of Planning and Development, presented changes to the City of Bryant Zoning Code in accordance with new state laws and recommendations from the Bryant City Council. The ordinance will be submitted to the City Council for three readings.

   Chairman Penfield called for a roll call vote to approve with changes from DRC. 8 Yays, 0 Nays, 0 Absent.

Motion to close public comment made by Commissioner Erwin, seconded by Commissioner Speed. Voice Vote, 8 Yays, 0 Nays, 0 Absent.

OLD BUSINESS

None

NEW BUSINESS

None

ADJOURNMENT

Motion to Adjourn made by Commissioner Statton, seconded by Vice-Chairman Hooten. Voice Vote, 8 Yays, 0 Nays, 0 Absent. The meeting was adjourned.

________________________________ ________________

Chairman, Lance Penfield *Date*

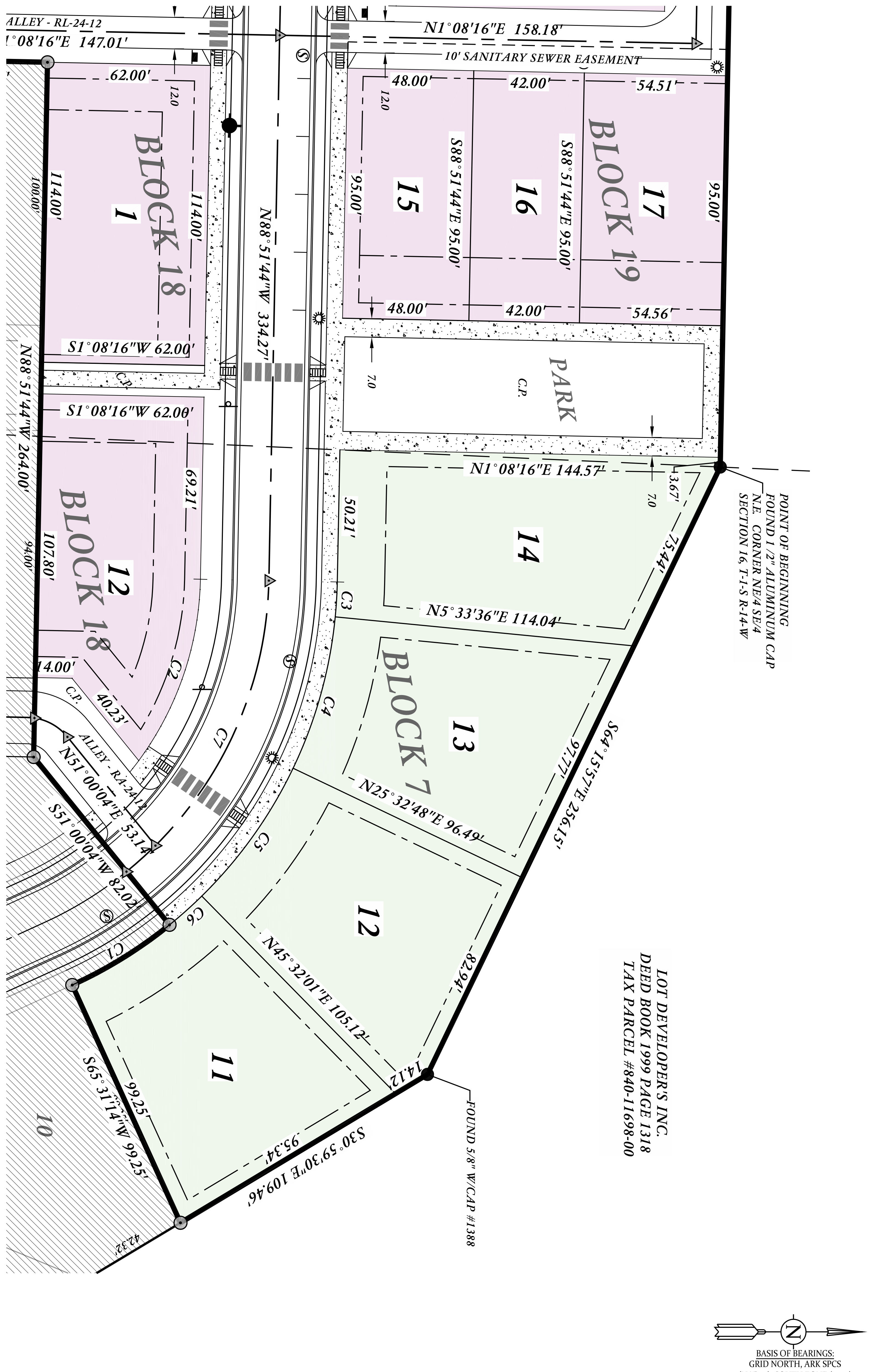
________________________________ ________________

Secretary, Rebecca Kidder *Date*

25-0767
Drawing No.

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

LOT 12, BLOCK 18 SIDEWALK & ADA RAMP PROPOSAL



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

HOPE CONSULTING ENGINEERS - SURVEYORS

129 North Main Street
Benton, Arkansas 72015
office: (501) 315-2626
fax: (501) 315-0024
HopeConsulting.com

GENERAL DISCLAIMER
This survey is for the exclusive use and benefit of parties shown hereon. Use or duplication of this document by any other parties is prohibited and voids said document.
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.

FLOOD STATEMENT
No portion of the property described hereon lies within the 100 year flood plain, according to the Flood Insurance Rate Map, panel # 05125C0240E, 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—	Fence Lines
— —	Centerlines
——	Parcel Lines/Misc Lines

For the Exclusive Use and Benefit of: HD Homes

Address: 12 Pasley Park, Bryant, Arkansas, 72022 Date 11/19/2025

500	01S	14W	0	15	340	62	1664

Drawn By: OV Checked:

City of Bryant, Arkansas
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at www.cityofbryant.com under the Planning and Community Development tab.

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

Date: 11/17/2025

Sign Co. or Sign Owner

Name GIBKO NURSERY & SIGNS, INC.

Address 110 EVERGREEN STREET

City, State, Zip BUNKIE LA 71322

Phone 318-346-2345

Alternate Phone ____________

Property Owner

Name PROGRESSIVE TRACTOR & IMPLEMENT CO

Address 5017 INTERSTATE 49

City, State, Zip OPELOUSAS LA 70570

Phone 318-346-6361

Alternate Phone ____________

GENERAL INFORMATION

Name of Business PROGRESSIVE TRACTOR & IMPLEMENT CO

Address/Location of sign 22576 INTERSTATE 30 FRONTAGE ROAD, 72022

Zoning Classification C-3

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, **a Site Plan showing placement of sign(s) and any existing sign(s) on the property is <u>required</u>** to be submitted. **Renderings of the sign(s) showing the correct dimensions is also <u>required</u>** to be submitted with the application. A thirty-five dollar ($35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars ($100). Additional documentation may be required by Sign Administrator.

READ CAREFULLY BEFORE SIGNING

I ____________, do hereby certify that all information contained within this application is true and correct. I fully understand that the terms of the Sign Ordinance supersede the Sign Administrator's approval and that all signs must fully comply with all terms of the Sign Ordinance regardless of approval. I further certify that the proposed sign is authorized by the owner of the property and that I am authorized by the property owner to make this application. I understand that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering.

SIGN	**Type** (Façade, Pole, Monument, other)	**Dimensions** (Height, Length, Width)	**Sqft** (Measured in whole as rectangle)	**Height of Sign** (Measured from lot surface)		Column for Admin Certifying Approval
				Top of Sign	Bottom of Sign	
A	MONUMENT	15'0" X 10'0" X 2'0"	150	15'0"	GRADE	
B	FACADE	3'0" X 9'3" X2 2'6" X 12'6" X 1	87.25	16'0"	12'0"	
C						
E						
F						
G						

Front Facade = 59 SF

Side Facade = 27.75 SF

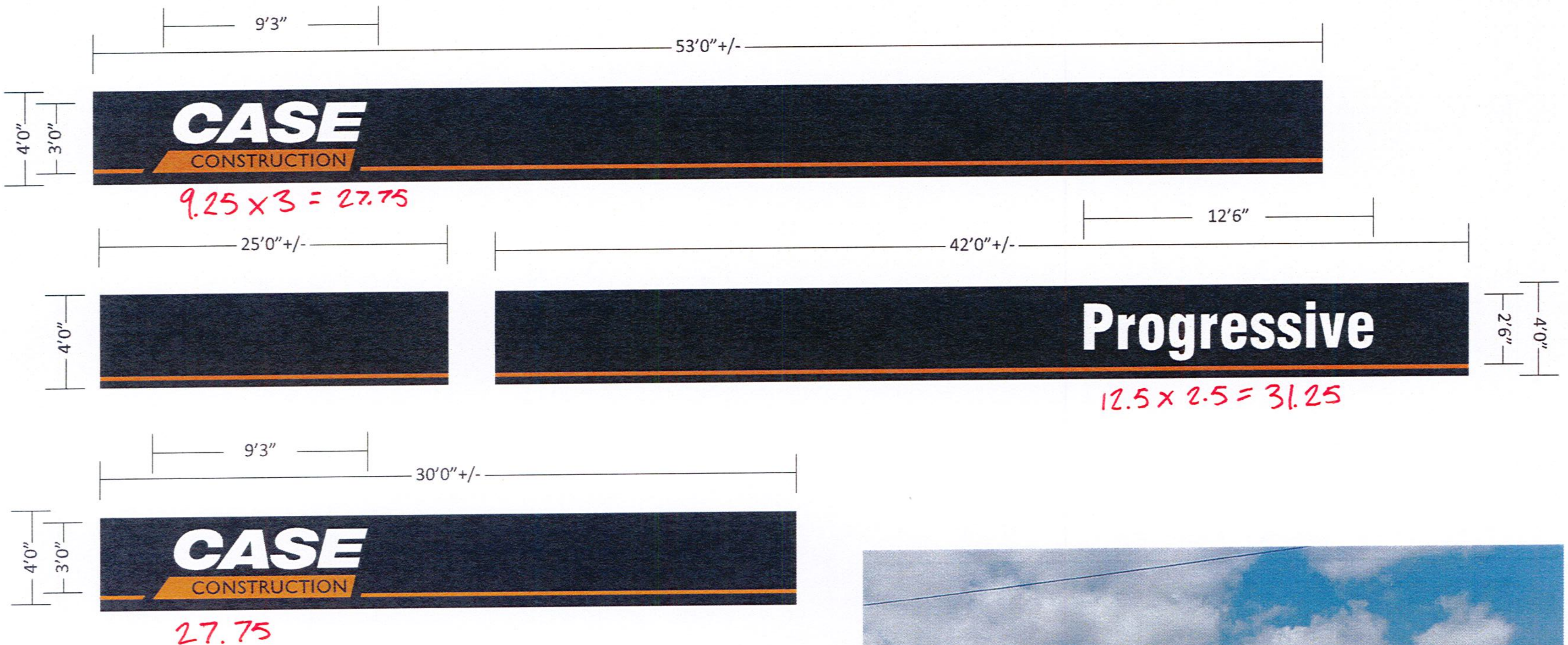
Monument Sign = 150 SF

Height 15 Ft → Within Parameters of Freestanding sign in Interstate Sign Zone.

B

New Aluminum Wall Panel Sign - Qty = 4 panels

Flat aluminum composite face painted Pantone 426C with 1st surface vinyl graphics.
Built in sections.



CONCEPT VIEW

GIBKO SIGNS
"The Custom Manufacturing Sign Company"
471 NW Main St. Bunkie, La. 318-346-2345

PRESENTATION DRAWING

Project ID#
GST-25-101979 - Page 3 of 3

Client: PTI

Location:
PROGRESSIVE TRACTOR
22576 INT 30 FRONTAGE RD.
BRYANT, AR 72022

Project Manager: T. Bordelon

Date: 10/29/25

Revision:

Description:
Provide and install facia panel wall sign set.

COLOR SCHEME

- 7725-105 Harvest Gold
- Pantone 426C
- 7725-20 White

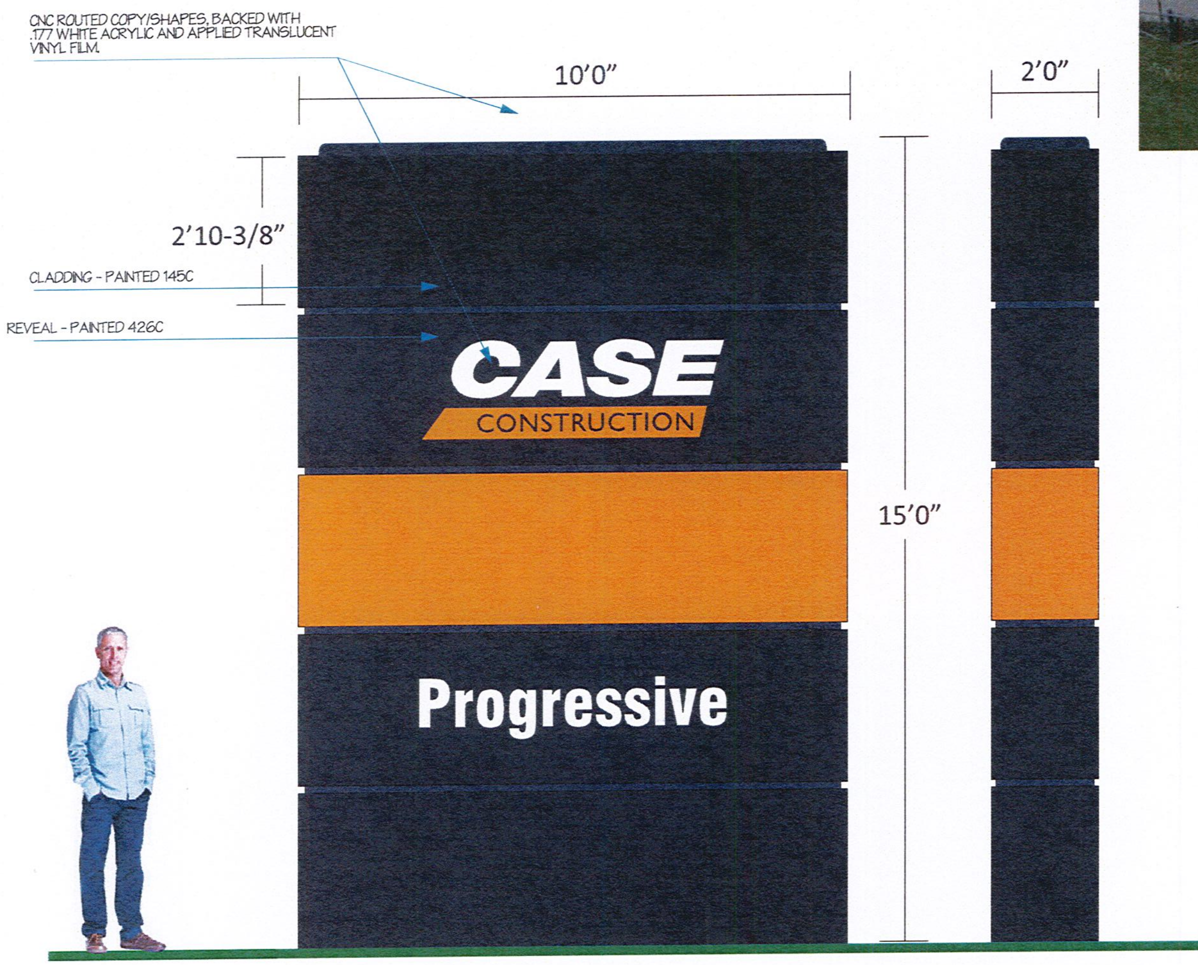
"THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN."

Primary wires provided by customer. Sign voltage based upon 120v.

Customer Approval:

A New Illuminated D/F Monument Sign - Qty = 1

Routed aluminum faces, backed with white acrylic. Aluminum cabinet and cladding, painted. White led internal illumination. Existing Single Pole steel support.



GibKo SIGNS
"The Custom Manufacturing Sign Company"
471 NW Main St · Bunkie, La. 318-346-2346

PRESENTATION DRAWING

Project ID#
GST-25-101979 - Page 2 of 3

Client: PTI

Location:
PROGRESSIVE TRACTOR
22576 INT 30 FRONTAGE RD.
BRYANT, AR 72022

Project Manager: T. Bordelon

Date: 11/10/25

Revision:

Description:
Provide and install one new illum. monument sign.

COLOR SCHEME
- 3630-3572 Power Tan
- Pantone 426C
- White Acrylic

"THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN."

Primary wires provided by customer. Sign voltage based upon 120v.

Customer Approval:

SITE - 22576 INTERSTATE 30 FRONTAGE RD.

SITE - LEGEND

GibKo SIGNS

"The Custom Manufacturing Sign Company"

471 NW Main St. Bunkie, La. 318-346-2345

PRESENTATION DRAWING

Project ID#
GST-25-101979 - Page 1 of 3

Client: PTI

Location:
PROGRESSIVE TRACTOR
22576 INT 30 FRONTAGE RD.
BRYANT, AR 72022

Project Manager: T. Bordelon

Date: 10/29/25

Revision:

Description:
Site - satellite view

"THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN."

Primary wires provided by customer. Sign voltage based upon 120v.

Customer Approval:

2919 N Reynolds Rd

American National
Commercial Real Estate
Due Diligence Management
3465 South Arlington Rd Suite E#183
Akron, OH 44312
866.290.8121
www.amnational.net

ALTA/NSPS Land Title Survey

2919 N Reynolds Rd, Bryant, AR

Surveyor Certification

Pizza Hut

2919 N Reynolds Rd
Bryant, AR 72022
County of Saline

To: Cressler & Bryant Prop., LLC, 2919 Reynolds, LLC, The American National Bank of Texas, Fidelity National Title Insurance Company, Lenders Title Company, and American National, LLC

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 6a, 6b, 7a, 7b1, 7c, 8, 9, 10a, 13, 14, 16, 17, 18, 19, 20 of Table A thereof. The fieldwork was completed on 05 October 2019

Robert Paul Bannerman, PLS

Land Surveyor Number 1512
In state of Arkansas
Date of Plat or Map: 08 October 2019
Date of first revision: 07 November 2019
Date of second revision: 11 December 2019
Date of last revision: 11 January 2020

Network reference #20191374-1

Survey Prepared By
All Terrain Surveying, LLC
7619 Parkmont Drive
Memphis, TN 38125
Survey Updates: surveys@amnational.net

Title Commitment Description

Lot 1, James Addition, as shown on plat of record in Saline County Plat Book 00, Page 14473

Notes

1. The above description being the same Schedule A description in commitment for title insurance File No. 19-008426-180, Commitment Date: November 19, 2019 08:00 am issued by Fidelity National Insurance Company

2. The above description mathematically closes

Legend of Symbols & Abbreviations

-O-	utility pole		sewer manhole
E	electrical pedestal		sewer clean out
— E —	overhead utility line		fire hydrant
	light pole		water valve
T	telephone splice box		water meter
— X —	fence		gas valve
R	recorded		gas meter
S	surveyed		
BH	building height		
	handicap parking space		
	parking space		

Encroachment Statement

ALTA/NSPS Surveyor's Notes

A2. Address 2919 North Reynolds Road, Bryant, Arkansas per Saline County GIS website

A4. Gross land area 33,758 ± square feet, being 0.77 acres

A10. There are no party walls on the subject property

A14. The site is located 175' ± north of the nearest street intersection being Commerce Street and North Reynolds Road

A16. No observable evidence of current earth moving, building construction or building additions

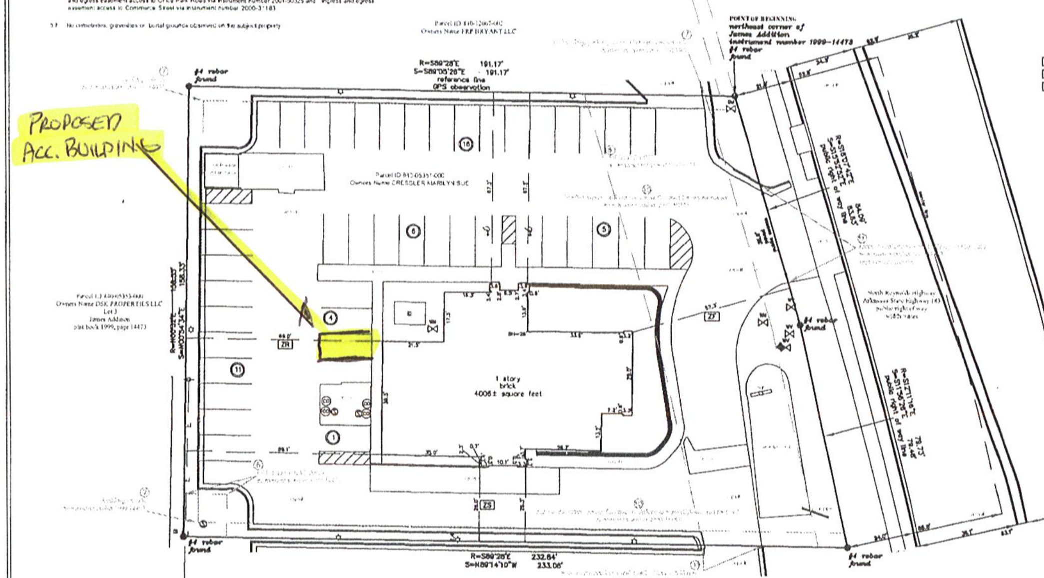
A17. No known proposed changes in street right of way lines. No observable evidence of recent street or sidewalk construction or repairs

A18. No wetlands are located on the subject properties per the U.S. Fish & Wildlife Service National Wetlands Inventory website (http://www.fws.gov/wetlands/Data/Mapper.html). The owner provided no wetlands maps or studies and there were no wetlands flagged or marked at the time of the field survey for this site

Other ALTA/NSPS notes:

5.B.III. The property has direct access to North Reynolds Road a dedicated public right of way. The property has ingress and egress easement access to Office Park Road via instrument number 2001-50325 and ingress and egress easement access to Commerce Street via instrument number 2000-31183

5.F. No cemeteries, gravesites or burial grounds observed on the subject property



FLOOD NOTE:

By graphic plotting only, this property is in Zone X of the Flood Insurance Rate Map 05125C0380D, Community Panel No. 0380, which bears an effective date of June 19, 2012 and is not in a Special Flood Hazard Area

Notes Corresponding to Schedule B

8. Future Assessments of the Saline Watershed Regional Water Distribution District
Not plottable

13. Terms and provisions of a lease agreement dated April 1, 2001 as evidenced by a Memorandum of Lease executed by Cressler and Bryant Properties, LLC ("Landlord") and Heartland Pizza, L.L.C., an Arkansas limited liability company ("Lessee"), dated February 6, 2007 and recorded May 9, 2007 as Instrument No. 2007-41334 records of Saline County Arkansas
Blanket in nature

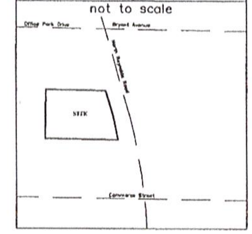
Zoning Information

	STATUS	Zoning Information		STATUS
	ITEM	REQUIRED	OBSERVED	Contact Info:
	PERMITTED USE		resturant	
	MIN. LOT AREA		33758± sq. ft.	
	MIN. FRONTAGE		163.31'	
	MAX. BLDG COVERAGE		12%	
ZF	MIN. SETBACKS FRONT		67.3'	
ZS	MIN. SETBACKS SIDE		26.0'	Notes:
ZR	MIN. SETBACKS REAR		69.0'	Because there may be a need for interpretation of the applicable zoning codes, we refer you to the City of Bryant for zoning laws and applicable codes
	MAX BUILDING HEIGHT		20'	
	PARKING REGULAR		43	
	PARKING HANDICAP		2	
	PARKING TOTAL		45	

Notes: No zoning report provided.

Vicinity Map

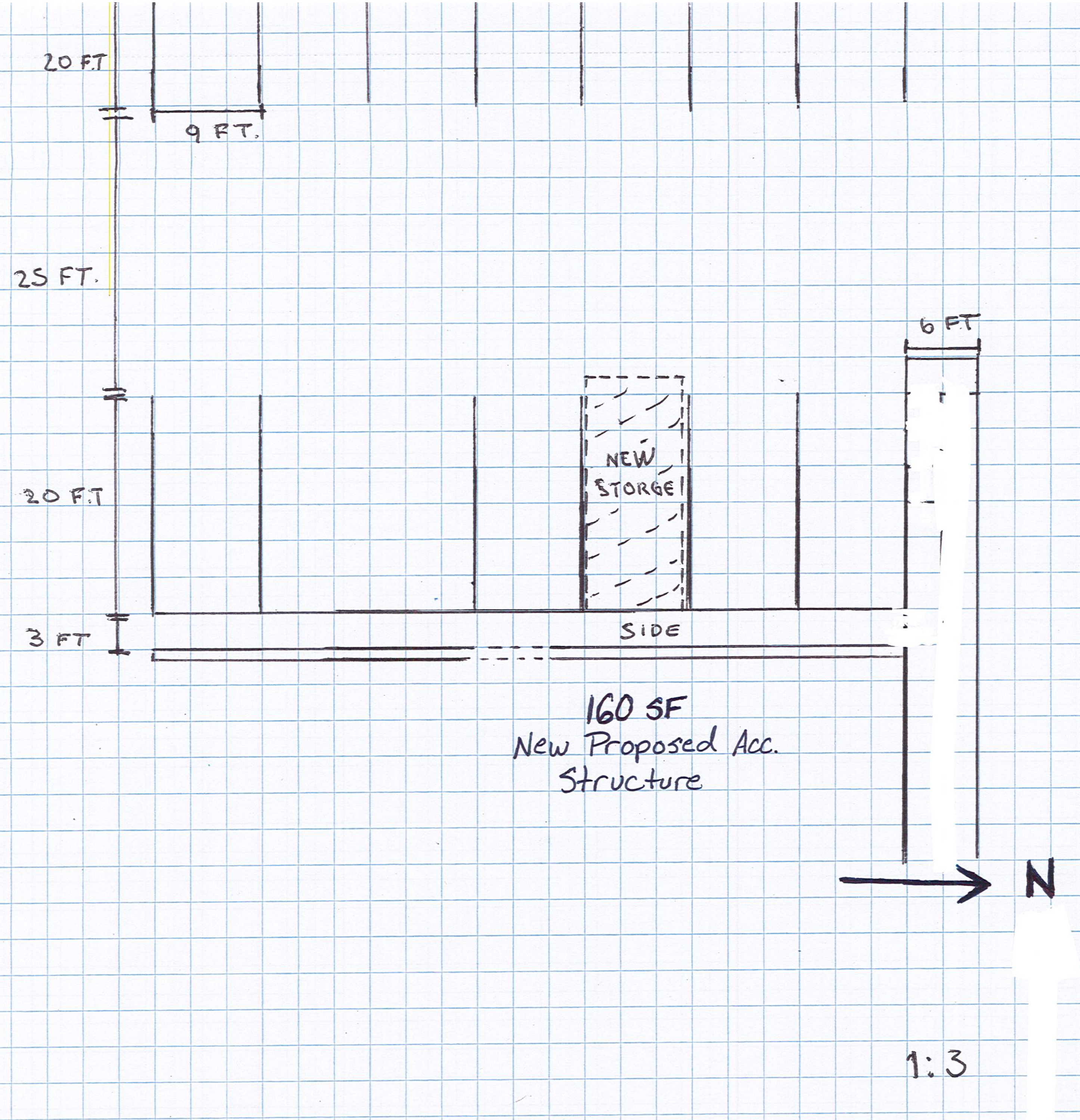
not to scale



grid north

SCALE: 1" = 20'

Sheet 1 of 1


20 FT
9 FT.
25 FT.
6 FT
NEW STORGE
20 FT
3 FT
SIDE
160 SF
New Proposed Acc.
Structure
N
1:3


8'
4'
THE LOCAL
TAVERN
BURGERS · WINGS · FRIES
3429

City of Bryant, Arkansas
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at www.cityofbryant.com under the Community Development tab.

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

Date: 11/13/2025

Sign Co. or Sign Owner

Name Greg Dueker
Address 4318 Maple St
City, State, Zip NLR AR 72118
Phone 501 992-8505
Email psudogreg@yahoo.com

Property Owner

Name Zeyad Abdelhadi
Address ~~5311 Highway 5 N. Ste 200~~ 12021 Pagel Gellis Dr Apt 105
City, State, Zip ~~Bryant AR 72022~~ NLR 72113
Phone ~~501 575 5523~~ 318 207 5312
Email enjoyshawarma25@gmail.com

GENERAL INFORMATION

Name of Business Enjoy Shawarma

Address/Location of sign 5311 Highway 5 N. St 206

Zoning Classification C-2

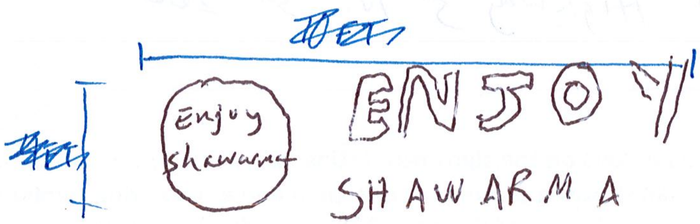
Please use following page to provide details on the signs requesting approval. Along with information provided on this application, **a Site Plan showing placement of sign(s) and any existing sign(s) on the property is required** to be submitted. **Renderings of the sign(s) showing the correct dimensions is also required** to be submitted with the application. A fifty dollar ($50) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for a sign variance or Alternative Signage Plan request shall be two hundred and fifty dollars ($250). Additional documentation may be required by Sign Administrator.

READ CAREFULLY BEFORE SIGNING

I Greg Dueker, do hereby certify that all information contained within this application is true and correct. I fully understand that the terms of the Sign Ordinance supersede the Sign Administrator's approval and that all signs must fully comply with all terms of the Sign Ordinance regardless of approval. I further certify that the proposed sign is authorized by the owner of the property and that I am authorized by the property owner to make this application. I understand that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering in packet.

SIGN	Type (Façade, Pole, Monument, other)	Dimensions (Height, Length, Width)	Sqft (Measurement standards found on Pg.7 of Sign Code)	Façade Width (Linear Ft of building façade where wall sign is being installed)	Height To Top	Height To Bottom
A	Facade	36" round H 4' L 10'	9,40	20FT		
B						
C						
D						
E						
F						



40 SF Overall

PHILLIPS 66

BIG RED ROOSTER FLOW
Marmon Retail Solutions – Berkshire Hathaway

2 Northfield Plaza, Ste 250, Northfield, IL 60093
P: (847) 441-1818 F: (847) 592-9564

SITE - EXISTING

PROJECT LOCATION:

6101 HIGHWAY 5,
BRYANT , AR 72022

PROJECT OVERVIEW:

- A Site Map
- B Canopy Visuals
- C Dispenser Visuals
- D Main ID Visuals

SITE - PROPOSED

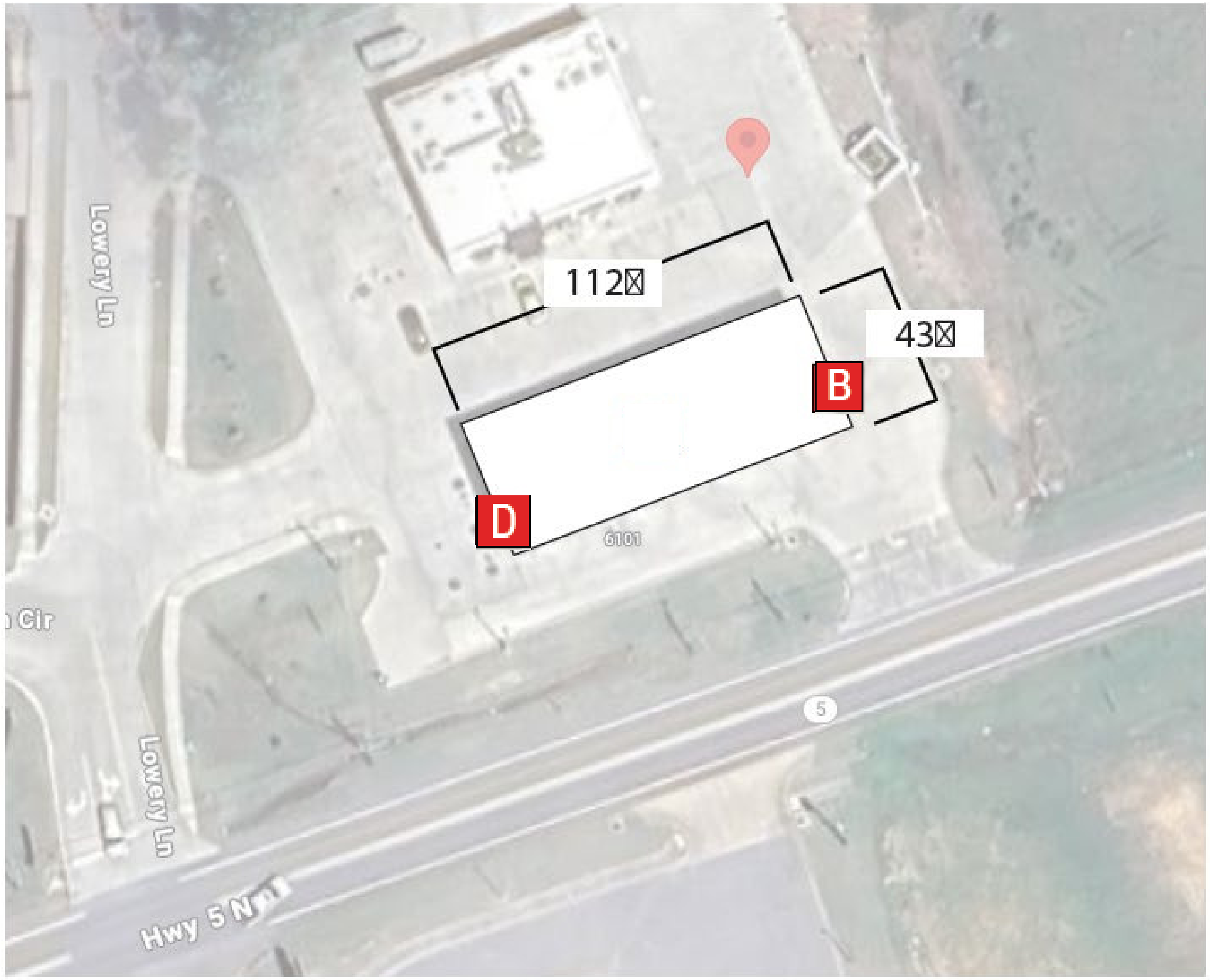
approval signature
I have reviewed the visuals within this document and

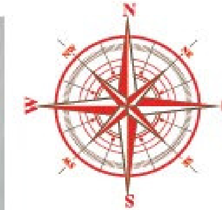
Project Name	SHIP TO #	Customer	Created by
PHILLIPS 66	922842	PHILLIPS 66	B.Dighero
Revision #	Date	Scale	Page #
R1	08_12_2025	NA	1 OF 8

Brand Book
BIG RED ROOSTER FLOW
2 Northfield Plaza, Ste 211
Northfield, IL 60093
P: (847) 441-1818 F: (847) 592-9564

SITE PLAN

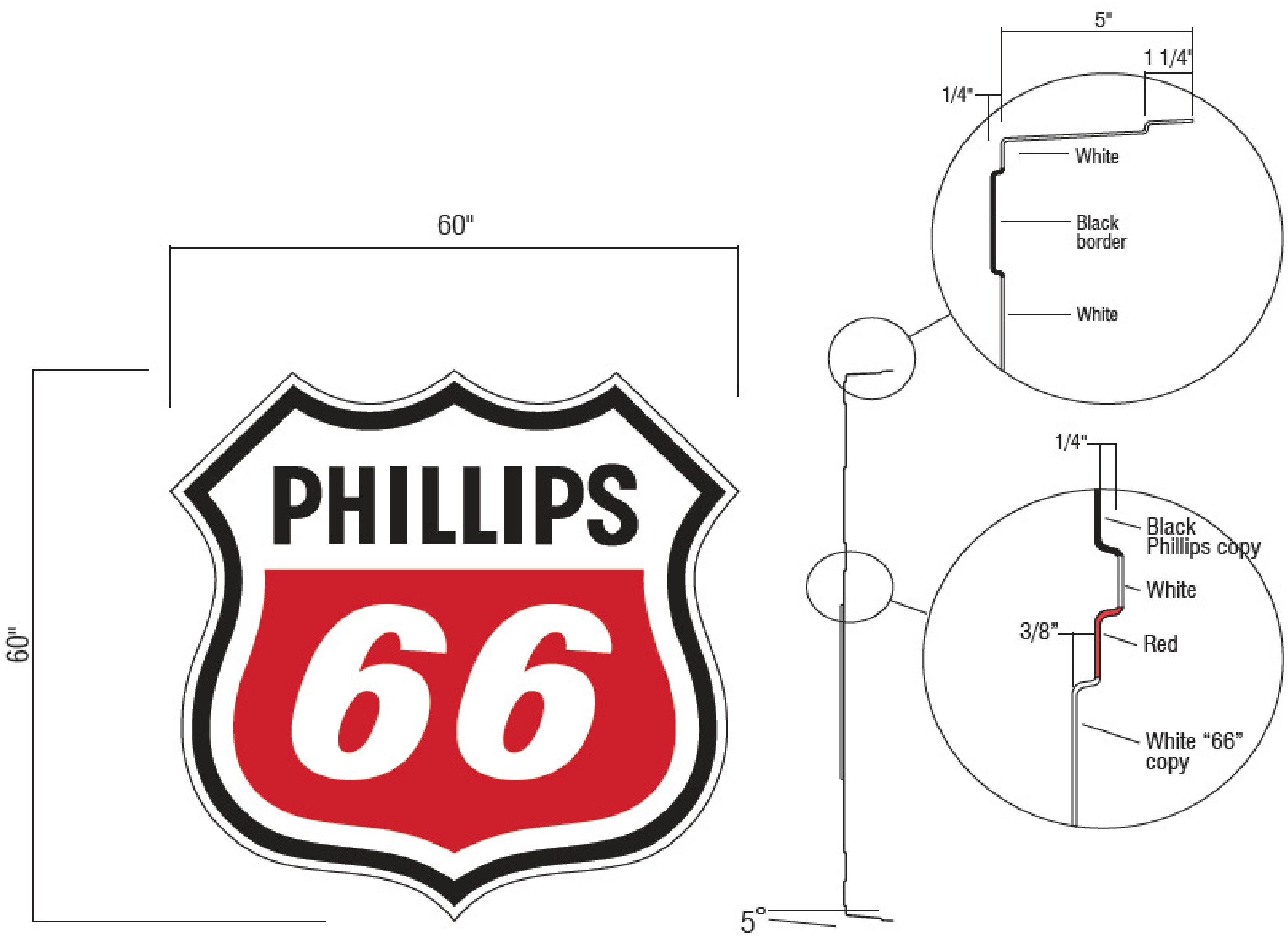
- B Canopy Logos
- D Canopy Logos





Project Name	SHIP TO #	Customer	Created by
PHILLIPS 66	922842	PHILLIPS 66	B.Dighero
Revision #	Date	Scale	Page #
R1	08_12_2025	NA	2 OF 8

Brand Book
BIG RED ROOSTER FLOW
2 Northfield Plaza, Ste 211
Northfield, IL 60093
P: (847) 441-1818 F: (847) 592-9564



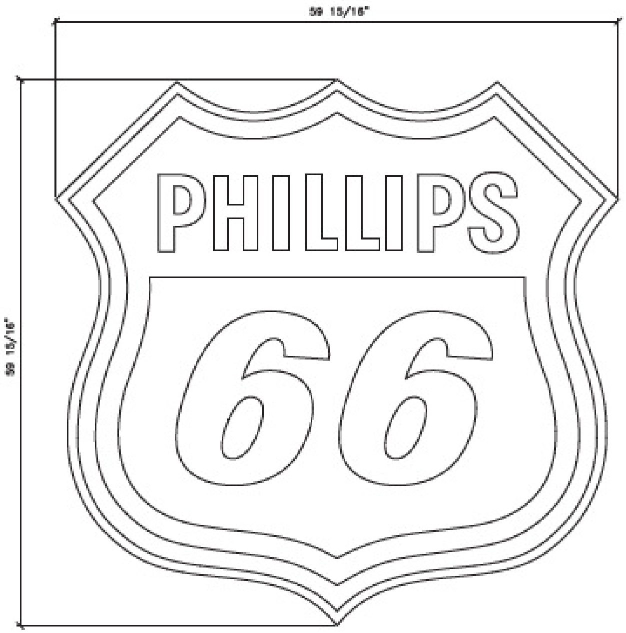
Project Name	SHIP TO #	Customer	Created by
PHILLIPS 66	922842	PHILLIPS 66	B.Dighero
Revision #	Date	Scale	Page #
R1	08_12_2025	NA	3 OF 8

Brand Book

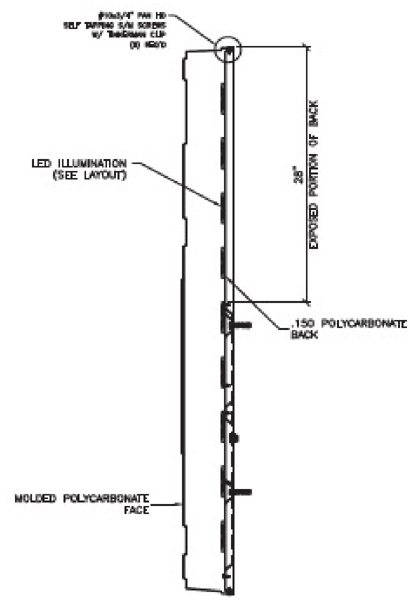
BIG RED ROOSTER FLOW

2 Northfield Plaza, Ste 211
Northfield, IL 60093
P: (847) 441-1818 F: (847) 592-9564

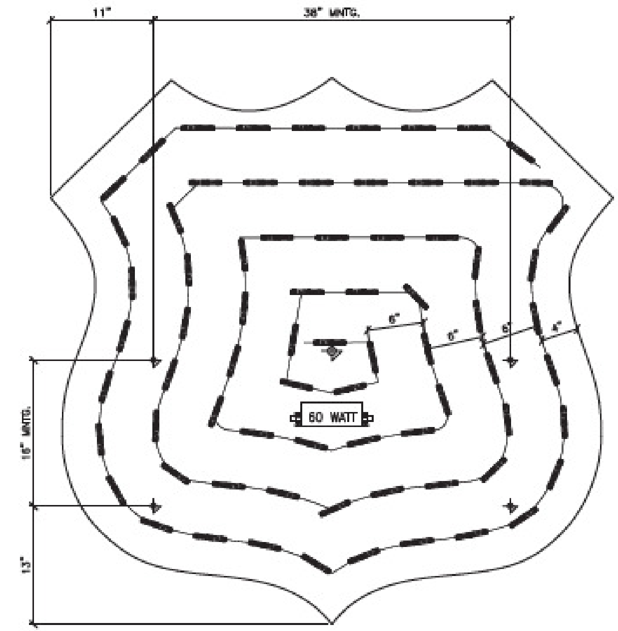
CANOPY LOGO | **Marketer/Dealer:** FROST OIL CO | **Site Name:** GASSY'S FUEL STATION 2



ELEVATION VIEW
SCALE: 1"=1'-0"



SIDE VIEW
SCALE: 1"=1'-0"



74 MOD.

1- VALUE LINE PLUS WHITE LONG LAID OUT (2) MODULES PER FOOT, 6" ON CENTER
2- EACH MODULE 60 POWER SUPPLY CAN RUN UP TO 130 WHITE LONG MODULES
3- LAYOUT BASED ON 6" CAN DEPTH
4- DIMENSIONS ARE IN INCHES UNLESS STATED OTHERWISE

ESTIMATED PRODUCT B.O.M. PER SIGN:
74 VALUE LINE PLUS WHITE LONG MODULES - 37'
1 MOD. 60 POWER SUPPLIES 120VDC (@ 1.0 AMPS 60WATTS ea.)
1 100FT ROLL OF JACKETED CABLE

ELECTRICAL / LED LAYOUT DETAIL VIEW
SCALE: 1"=1'-0"

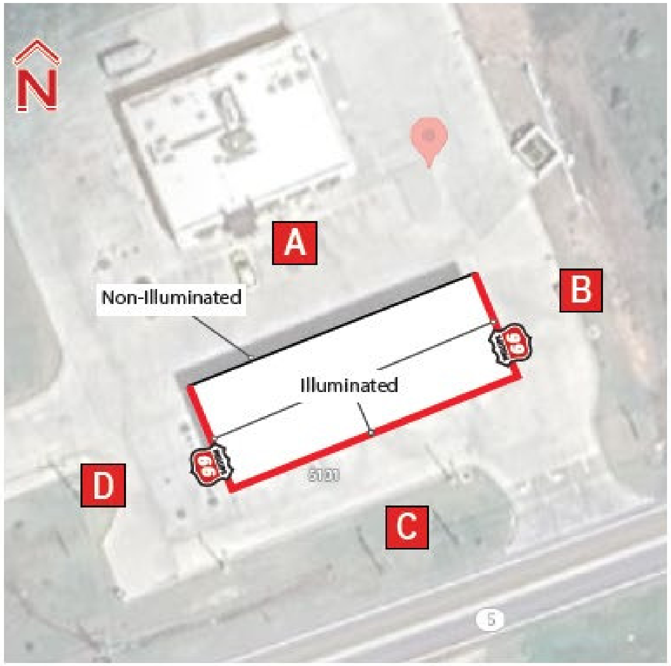
SIGN SPECIFICATIONS:

SIGN SIZE:
ACTUAL SIZE ... 59-15/16" H x 59-15/16" L
BOX AREA ... 24.9475 SQ.FT
APPROXIMATE WEIGHT ... T.B.D. LBS
DESIGNED WINDLOAD ... 110 MPH (3 SEC. GUST EXPOSURE C)
COMPLIENT w/ NATIONAL BUILDING CODES & STANDARDS
(IBC, UBC, BOCA, AISC, ASCE7, ACI, & ALUM. DSGN. MANUAL)

ELECTRICAL:
LED's ... SLOAN VL PLUS WHITE LONG
AMPS ... 1.0 TOTAL AMPS
CIRCUITS ... (1) 20
VOLTS ... 120v

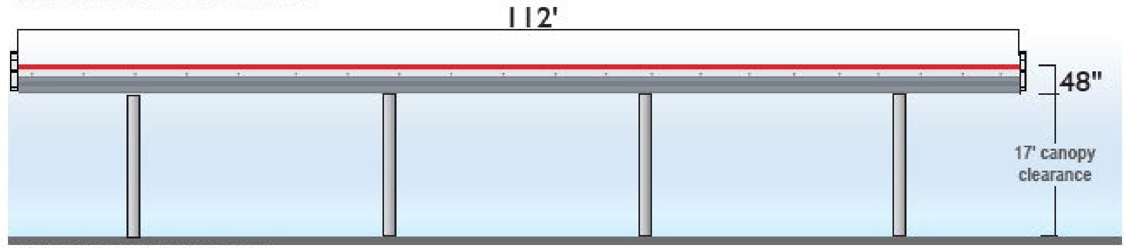
Project Name	SHIP TO #	Customer	Created by
PHILLIPS 66	922842	PHILLIPS 66	B.Dighero
Revision #	Date	Scale	Page #
R1	08_12_2025	NA	4 OF 8

Brand Book
BIG RED ROOSTER FLOW
2 Northfield Plaza, Ste 211
Northfield, IL 60093
P: (847) 441-1818 F: (847) 592-9564

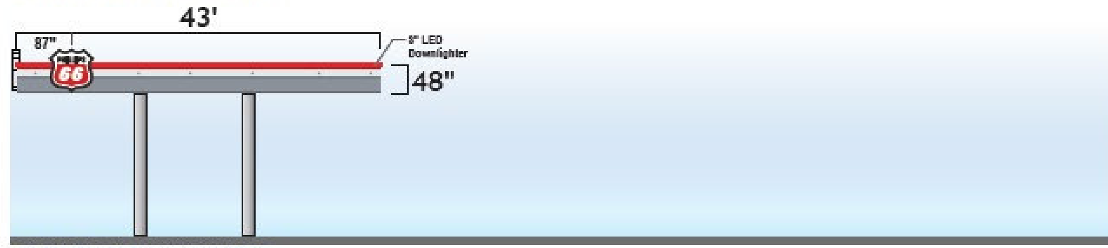


CANOPY PERSPECTIVE

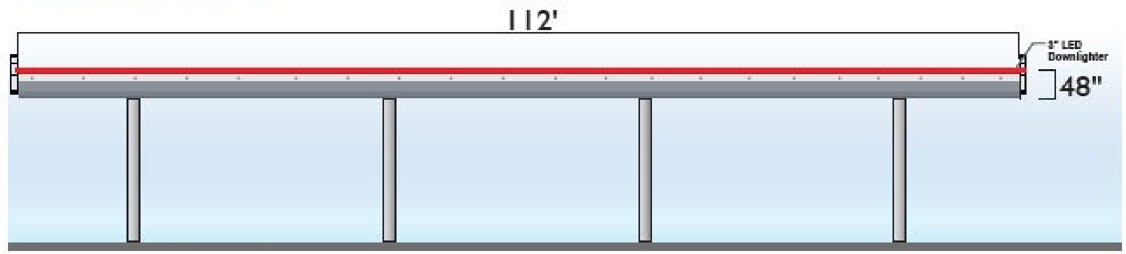
ELEVATION A: NON-ILLUMINATED



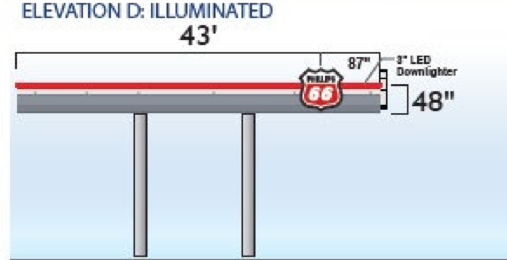
ELEVATION B: ILLUMINATED



ELEVATION C: ILLUMINATED



ELEVATION D: ILLUMINATED



*Note:

LED canopy light bar (or downlighter) is not in the standard Signature image package and is not included in the imaging allowance provided by Phillips 66. Any items outside the standard package will be settled with the customer directly.

Project Name	SHIP TO #	Customer	Created by
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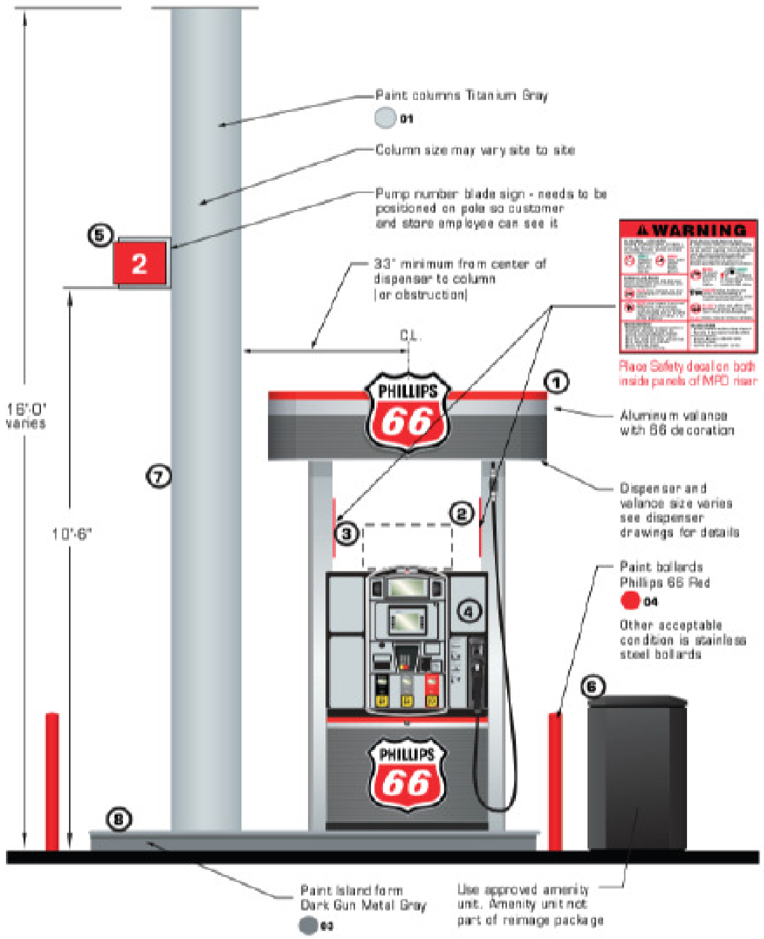

Phillips 66 Rivet brings a bright new appearance to the fueling area that complements the Main ID sign (MID) and canopy image. There are several elements of the fuel islands that are required for Phillips 66 Rivet standard image package as shown below.

All dispensers must comply with the "minimum site requirements" as detailed on BizLink. For example this includes that pumps must have Card Reader in Dispenser (CRINDS) and remain clean and free of unprofessional discretionary signage. These requirements are regularly measured as part of the Mystery Shop program.

1 Valance

Aluminum decorated valance. All valances have rounded corners. No square corners are permitted on the valance. Follow visual graphics as defined in visual standards. Approved Phillips 66 supplier has complete art work for all valance sizes to fit all dispensers.

2 Pump Topper Frame

Pump toppers are horizontally centered in between the pump's uprights.

3 Safety Decal

The Consolidated Safety Decal is a brand requirement. It contains the latest API and NFPA recommended safety notices. Mounted to bothe inside faces of risers.

4 Dispensers

See dispenser detail in the Phillips 66 Rivet Forecourt Image Standards section of this document. Gray polycarb overlays are applied to the bezel area of dispenser. This is part of the new reimage program. Add pump numbers to the pump itself.

5 Pump Number Blade sign

Should be visible for both the consumer and convenience store. Flag signs are mounted on the canopy columns. Decals are installed on dispenser bezels.

6 Amenity Units

Use approved amenity units. Should be located near each dispenser. May be charcoal, gray, or dark gray. There is an approved Column mounted windshield bucket available. New amenity units are not part of the Phillips 66 Rivet reimage package.

7 Canopy columns

Should have a clean and uncluttered appearance. Columns should be cleaned, repaired if needed, primed, and painted with approved color.

May not be used to post prices or advertising.

Columns that are unpainted brick or natural stone will be excused from the Philips 66 Rivet column color and does not need a required exception. All other canopy column materials will be imaged to Titanium Gray or must be approved through the exception process.

Painting instructions:
Paint column Titanium Gray from bottom of column to roof deck of canopy.

8 Curbs, Island Forms & Bollards

All bollards in the fueling area will be painted Phillips 66 Red or leave if stainless steel. Island forms are painted Dark Gun Metal Gray.

Natural concrete and stainless steel are acceptable substitutes to painting.

Horizontal surface of the island must be natural concrete (preferred) or paint Dark Gun Metal Gray or can be tiled (natural stone).

Bollards outside the fueling area should be painted a consistent color. Color may match Philips 66 Rivet fuel image or building image, as desired. No stripes.

For curbs outside the fueling area natural concrete is preferred to paint. If painted, it should be Dark Gun Metal Gray.

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Brand Book
BIG RED ROOSTER FLOW
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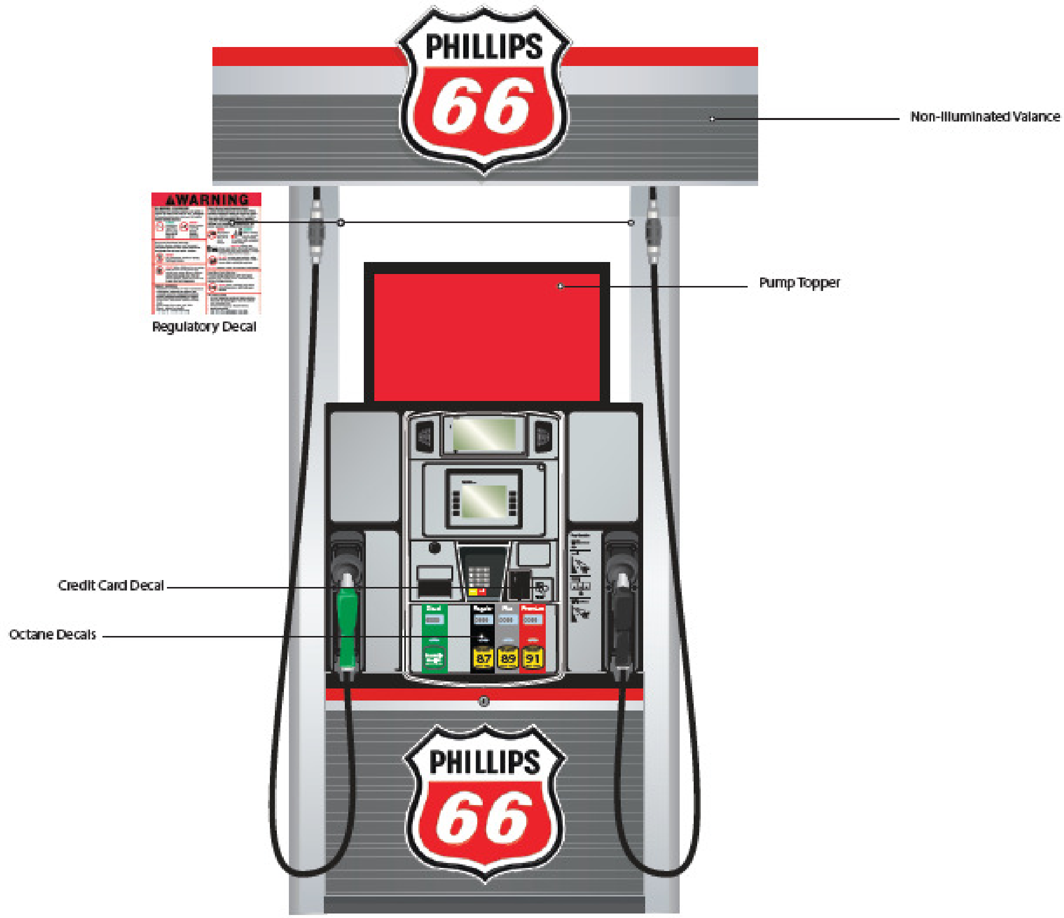
WARNING:The following example is for visual purposes only.



Dispenser Type: Gilbarco Encore 500/700S 3+1

Existing

Project Name	SHIP TO #	Customer	Created by
PHILLIPS 66	922842	PHILLIPS 66	B.Dighero
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Brand Book
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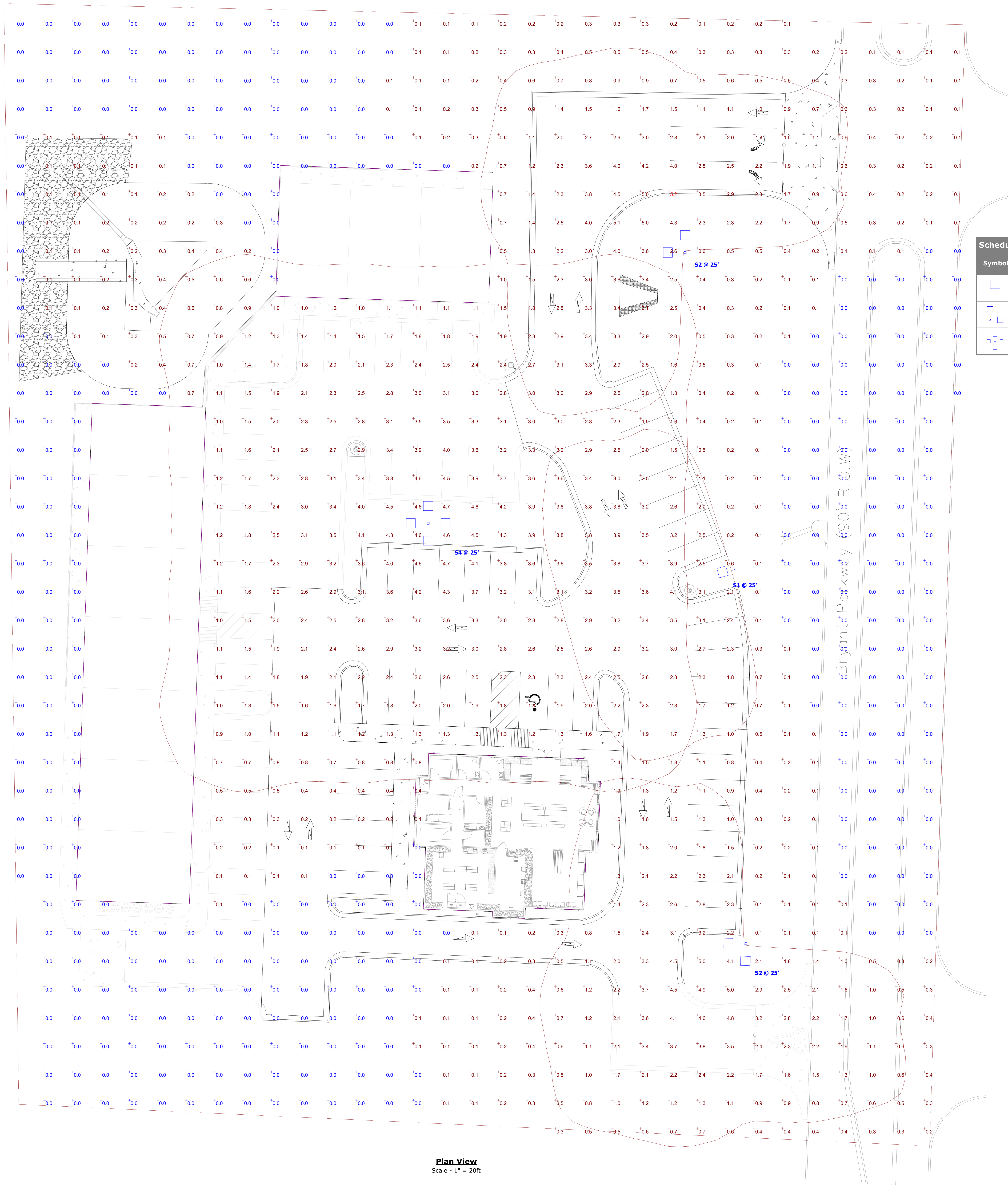


Plan View
Scale - 1" = 20ft

Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens per Lamp	LLF	Wattage
	S1	1	LITHONIA	DSX1 LED P7 40K 80CRI BLC3 (VOLTAGE) SPA (FINISH) / SSS 25 5C DM19AS (FINISH)	SINGLE LED AREA LIGHT - TYPE III BACK LIGHT CUTOFF	LED/40K	DSX1_LED_P7_40K_80CRI_BLC3.ies	14823	0.8	184.43
	S2	2	LITHONIA	DSX1 LED P7 40K 80CRI BLC3 (VOLTAGE) SPA (FINISH) / SSS 25 5C DM29AS (FINISH)	DOUBLE LED AREA LIGHT - TYPE III BACK LIGHT CUTOFF	LED/40K	DSX1_LED_P7_40K_80CRI_BLC3.ies	14823	0.8	368.86
	S4	1	LITHONIA	DSX1 LED P7 40K 80CRI T5W (VOLTAGE) SPA (FINISH) / SSS 25 5C DM49AS (FINISH)	QUAD LED AREA LIGHT - TYPE V WIDE	LED/40K	DSX1_LED_P7_40K_80CRI_T5W.ies	21624	0.8	737.72

PARKWAY DRUG
BRYANT, ARKANSAS

Designer

Date
11/07/2025
Scale
Not to Scale
Drawing No.

Summary

Drainage Report

For

Bryant Pharmacy

Bryant, Saline County, Arkansas

November 13, 2025

Prepared by:

RICHARDSON ENGINEERING, PLLC

325 W. South St.
Benton, AR 72015
501-315-7225

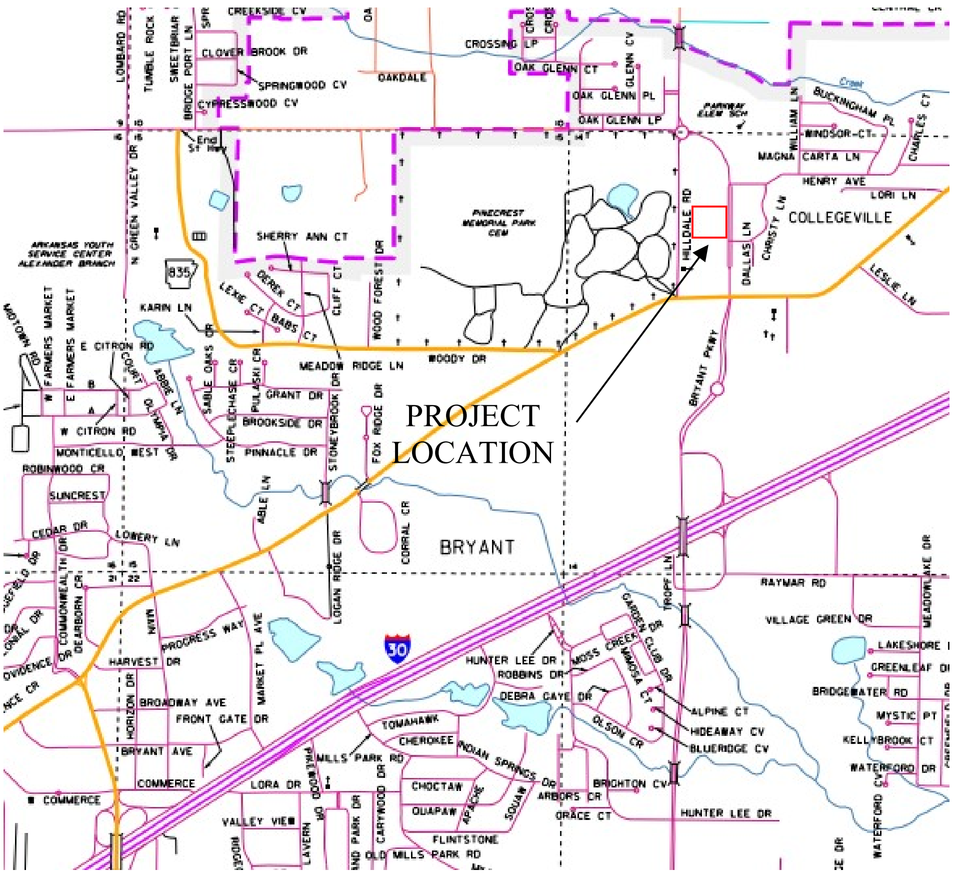
TABLE OF CONTENTS

Project Owner Information

Jon Martin
5501 Lombard Road
Alexander, AR 72002

Project Location and Description

The project is located on West side of the Bryant Parkway, part of the Southeast Quater of the Northwest Quarter, Section 14, Township 1-S, Range 14-W, Saline County, Arkansas.



Vicinity Map – N.T.S

This project is a proposed Commercial Development, located in the City of Bryant, Saline County.

Site Drainage

Pre-Development

The pre-developed runoff for the site flows to the East, West, and South. The on-site drainage basins have been broken down into five separate basins that discharge water off-site. Drainage Basins A and B discharge water to the West, Basin C discharges water to the South, and Basins D and E discharge water to the East. The pre-development drainage basin delineation can be found in the appendix of this report.

The pre-development runoff condition is undeveloped/woods.

Post-Development

The site drainage starts on the South side of the project and flows to the North. The drainage is sheet flows across the proposed parking lot and intercepted by the proposed storm sewer system and is discharged into a proposed detention basin on the Northwest corner of the project. There are also some small areas that discharge to the East and South from the site.

The City of Bryant Drainage Manual utilized different C values for each storm event. The C value for the 100-year design storm was utilized for all storm events for the drainage analysis for this site.

The minimum required volume of the detention basin was found by comparing the pre-development rational method hydrograph for the area that the detention pond is being discharged, to the post-development modified rational method hydrograph for the area that the detention basin is receiving using the Hydrology Studio program. The minimum required volume was found to be 5,157 CF for the 100-year storm event. In order to meet the City of Bryants Stormwater Manual detention requirements, the detention pond has to be sized with at least a 25% factory of safety; therefore, the minimum size of the detention pond is 6,447 CF.

The proposed detention basin will utilize an orifice/riser/culvert discharge structure. Post-Development Basin “A” is the drainage basin that discharges water into the proposed detention basin. Post-development drainage basin “A” consists of all of the individual drainage basins for CB-1, CB-2, CB-3, AD-4, the proposed building areas for phase 2 (i.e. roof drains), and the detention pond area. Post-Development Basin B, C, D, and E consist of the grass tie back slopes from the proposed pavement to existing grade and a small portion of the entrance drives that tie down to the existing grade on the Bryant Parkway. These areas are not routed through the detention basin, so they were calculated by themselves. The detention basin and post-development basin “B” will be discharged to the West, post-development basin “C” and “D” will be discharged to the East, and post-development basin “E” will be discharged to the South. A delineation for the drainage basins that were used in Hydrology Studio (for the overall site drainage basins), as well as a delineation of the basins that were used in Storm and Sanitary Analysis (on-site storm inlets) can be seen in the appendix of this report.

The post-development runoff conditions changed from undeveloped/woods to commercial development.

Runoff Summary's

Pre- Development Drainage Basin Information

Overall Project Site Area: 1.92 Acres

Overall Pre-Development Drainage Basin Study Area: 6.06 Acres

Drainage Basins	Drainage Area (Ac)	C Value	Time of Concentration (min)
Basin A	1.44	0.56	14
Basin B	3.26	0.59	14
Basin C	0.33	0.65	11
Basin D	0.50	0.54	15
Basin E	0.53	0.55	19

Design Storm	Basin A (cfs)	Basin B (cfs)	Basin C (cfs)	Basin D (cfs)	Basin E (cfs)
2-yr	3.11	7.41	0.92	1.01	0.98
10-yr	4.17	9.94	1.24	1.35	1.31
25-yr	4.79	11.43	1.42	1.56	1.51
50-yr	5.24	12.50	1.55	1.70	1.65
100-yr	5.69	13.57	1.69	1.85	1.79

Overall Post-Development Drainage Study Area: 6.02 Acres

Overall Site Post- Development Drainage Basin Information

Drainage Basins	Drainage Area (Ac)	C Value	Time of Concentration (min)
Basin A	1.56	0.85	12
Basin B	3.67	0.60	14
Basin C	0.38	0.72	7
Basin D	0.12	0.75	17
Basin E	0.29	0.63	16

Design Storm	Basin A (cfs)	Basin B (cfs)	Basin C (cfs)	Basin D (cfs)	Basin E (cfs)
2-yr	5.48	8.49	1.44	0.28	0.66
10-yr	7.35	11.38	1.93	0.38	0.89
25-yr	8.44	13.08	2.22	0.44	1.02
50-yr	9.23	14.31	2.42	0.48	1.12
100-yr	10.02	15.53	2.64	0.52	1.21

On-Site Drainage Inlet Basin Information

Drainage Basins	Drainage Area (Ac)	C Value	Time of Concentration (min)
CB-1	0.36	0.85	2.68
CB-2	0.16	0.85	8.50
CB-3	0.30	0.85	10.73
AD-4	0.40	0.85	11.76

Design Storm	CB-1 (cfs)	CB-2 (cfs)	CB-3 (cfs)	AD-4 (cfs)
2-yr	2.32	0.65	1.09	1.40
10-yr	3.03	0.87	1.46	1.86
25-yr	3.48	1.00	1.68	2.14
50-yr	3.83	1.09	1.84	2.34
100-yr	4.16	1.19	1.99	2.54

Site Discharge to the West to Include Detention Basin

Overall Development Area = 1.92 Ac
Pre-Development Drainage Study Area = 4.70
Post-Development Drainage Study Area = 5.23
Existing Condition runoff Coefficient: C = 0.56/0.59
Proposed runoff Coefficient: C = 0.85/0.60
Tc Undeveloped = 14 Minutes (TR55 Method)
Tc Developed = 12/14 Minutes (TR55 Method)
Detention Basin Required Volume: 6,447 CF
Detention Basin Volume: 9,802 CF
Maximum Storage: 4,240 CF
Discharge Structure: Orifice/Riser/Culvert

Design Storm	Pre-Development Flow Rate (cfs)	Post-Development Flow Rate (cfs)	Post-Development w/ Detention Flow Rate (cfs)	Maximum Water Elevation in Pond (ft)
2-yr	10.52	13.42	10.30	421.39
10-yr	14.11	17.99	13.53	422.03
25-yr	16.22	20.68	15.42	422.3
50-yr	17.74	22.62	16.77	422.54
100-yr	19.26	24.56	18.08	422.78

Should both orifices get 100 percent blocked and the water can only be discharged from the pond over the top of the overflow structure, the maximum water elevation in the pond reaches 423.27. The water elevations for the other design storms can be seen in the appendix.

Site Discharge to the East

Pre-Development Drainage Study Area = 0.83
Post-Development Drainage Study Area = 0.50
Existing Condition runoff Coefficient: C = 0.65/0.54
Proposed runoff Coefficient: C = 0.72/0.67
Tc Undeveloped = 11/15 Minutes (TR55 Method)
Tc Developed = 7/17 Minutes (TR55 Method)

Design Storm	Pre-Development Flow Rate (cfs)	Post-Development Flow Rate (cfs)
2-yr	1.73	1.56
10-yr	2.31	2.09
25-yr	2.66	2.40
50-yr	2.91	2.62
100-yr	3.16	2.85

Site Discharge to the South

Pre-Development Drainage Study Area = 0.53
Post-Development Drainage Study Area = 0.29
Existing Condition runoff Coefficient: C = 0.55
Proposed runoff Coefficient: C = 0.63
Tc Undeveloped = 19 Minutes (TR55 Method)
Tc Developed = 16 Minutes (TR55 Method)

Design Storm	Pre-Development Flow Rate (cfs)	Post-Development Flow Rate (cfs)
2-yr	0.98	0.66
10-yr	1.31	0.89
25-yr	1.51	1.02
50-yr	1.65	1.12
100-yr	1.79	1.21

Recommendations/Summary

The proposed drainage improvements include a storm sewer system and a detention basin on the Northwest corner of the project. The proposed detention basin releases the post development runoff at a lower rate than the pre-development condition.

Appendices

Runoff Coefficient Calculations
Time of Concentration Calculation
NRCS Soil Report
Site Drainage Map
Trickle Channel Velocity Calculation
Overflow Wier Blockage Calculation
SSA Design Layout
Storm System Design (SSA)
Pond and Post Development Hydrographs (Hydrology Studio)

Runoff Coefficient Calculations

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PROJECT 025-029 COMPOSITE C CALCULATION DATE 11/13/2025

PRE-DEV * ALL CLAY SOIL

BASIN "A" A= 1.44 AC

50% - 2-7% C= 0.50

50% - >7% C= 0.62

$$C = \frac{(0.50)(0.72) + (0.62)(0.72)}{1.44} = 0.56$$

BASIN "B" A= 3.26 AC (142006 SF)

IMPERVIOUS: 2970 SF C= 0.95

PERVIOUS: 30% - 2-7% 41711 SF C= 0.5

70% - >7% 97325 SF C= 0.62

$$C = \frac{(2970)(0.95) + (41711)(0.5) + (97325)(0.62)}{142006}$$

$= 0.59$

RE
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(2/6)

PROJECT 025-029 C CALCULATION DATE 11/13/2025

BASIN "C" A = 0.33 AC (14375 SF)

IMPERVIOUS : A = 2025 SF C = 0.95

PERVIOUS : 20% - 2-7% A = 2470 SF C = 0.50
80% - > 7% A = 9880 SF C = 0.62

$$C = \frac{(2025)(0.95) + (2470)(0.50) + (9880)(0.62)}{14375}$$

$$= 0.65$$

BASIN "D" A = .50 AC (21780 SF)

PERVIOUS : A = 19820 SF C = 0.50
IMPERVIOUS : A = 1960 SF C = 0.95

$$C = \frac{(19820)(0.5) + (1960)(0.95)}{21780} = 0.54$$

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Benton, AR 72015
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PROJECT 025-029 C CALCULATION DATE 11/13/2025

BASIN "E" A = 0.53 AC (23087 SF)

IMPERVIOUS A = 2613 SF C = 0.95

PERVIOUS A = 20474 SF C = 0.50

$$C = \frac{(2613)(0.95) + (20474)(0.50)}{23087}$$

$= 0.55$

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PROJECT 025-029 C CALCULATION DATE 11/13/2025

POST - DEVELOPED

BASIN "A" A = 1.56 AC

PERVIOUS: 0.36 AC C = 0.50
IMPERVIOUS: 1.20 AC C = 0.95

$$C = \frac{(0.36)(0.50) + (1.20)(0.95)}{1.56} = 0.85$$

BASIN "B" A = 3.67 AC

IMPERVIOUS : A = 0.144 AC C = 0.95

PERVIOUS: 30% - 2-7% 1.06 AC C = 0.50
70% - >7% 2.466 AC C = 0.62

$$C = \frac{(0.144)(0.95) + (1.06)(0.50) + (2.466)(0.62)}{3.67}$$

$= 0.60$

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PROJECT 025-029 C CALCULATION DATE 11/13/2025

BASIN "C" A = 0.38 AC (16553 SF)

IMPERVIOUS: A = 6950 SF C = 0.95

PERVIOUS: 50% - 2-7% 4801.5 SF C = 0.50

50% - >7% 4801.5 SF C = 0.62

$$C = \frac{(6950)(0.95) + (4801.5)(0.50) + (4801.5)(0.62)}{16553}$$

$= 0.72$

BASIN "D" A = 0.12 AC (5227 SF)

PERVIOUS: A = 3267 SF (C = 0.50)

IMPERVIOUS: A = 1960 SF C = 0.95

$$C = \frac{(3267)(0.50) + (1960)(0.95)}{5227} = 0.67$$

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PROJECT 025-029 C CALCULATION DATE 11/13/2025

BASIN "C" A = 0.29 Ac (12632 SF)

PERVIOUS: A = 8982 SF C = 0.50

IMPERVIOUS: A = 3650 SF C = 0.95

$$C = \frac{(8982)(0.50) + (3650)(0.95)}{12632}$$

$$= 0.63$$

Time of Concentration

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(1/1)

PROJECT 025-029 Tc CALCULATION DATE 11/13/2025

POST-DEV BASIN "A" Tc

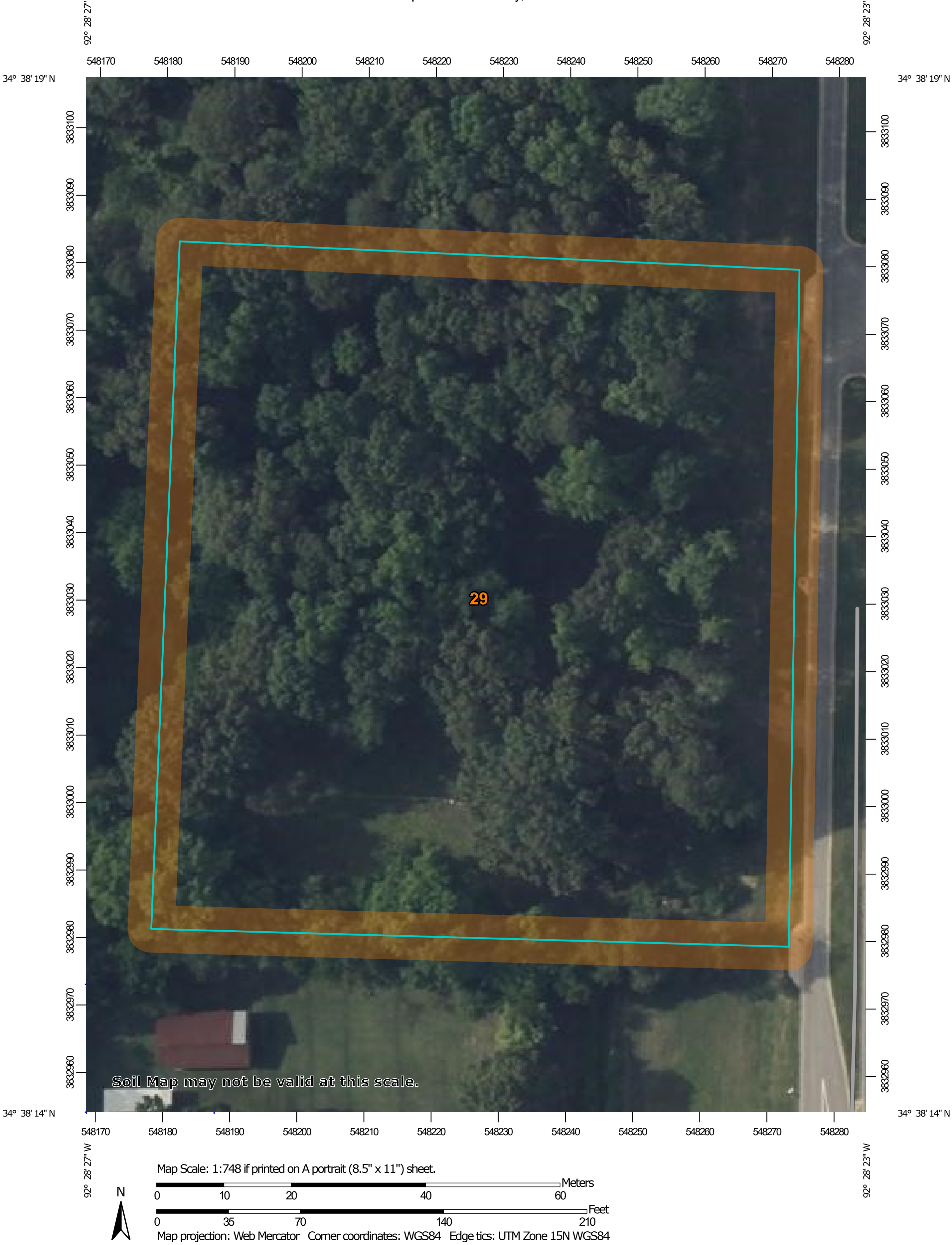
SUB-AD-4 T_c = 11.76 MIN

PIPE 18 $\frac{L}{V * 60} = \frac{128}{(8.12)(60)} = 0.26$ MIN

PIPE 14 => $\frac{85}{(10.09)(60)} = 0.14$ MIN

$\underline{T_c = 12.16 \text{ MIN}}$

NRCS Soil Report


92° 28' 27" W
92° 28' 23" W
34° 38' 19" N
34° 38' 14" N
548170
548180
548190
548200
548210
548220
548230
548240
548250
548260
548270
548280
3833100
3833090
3833080
3833070
3833060
3833050
3833040
3833030
3833020
3833010
3833000
3832990
3832980
3832970
3832960
29
Soil Map may not be valid at this scale.
Map Scale: 1:748 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 10 20 40 60
Feet
0 35 70 140 210
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

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

Special Point Features

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

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Saline County, Arkansas
Survey Area Data: Version 21, Sep 10, 2024

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

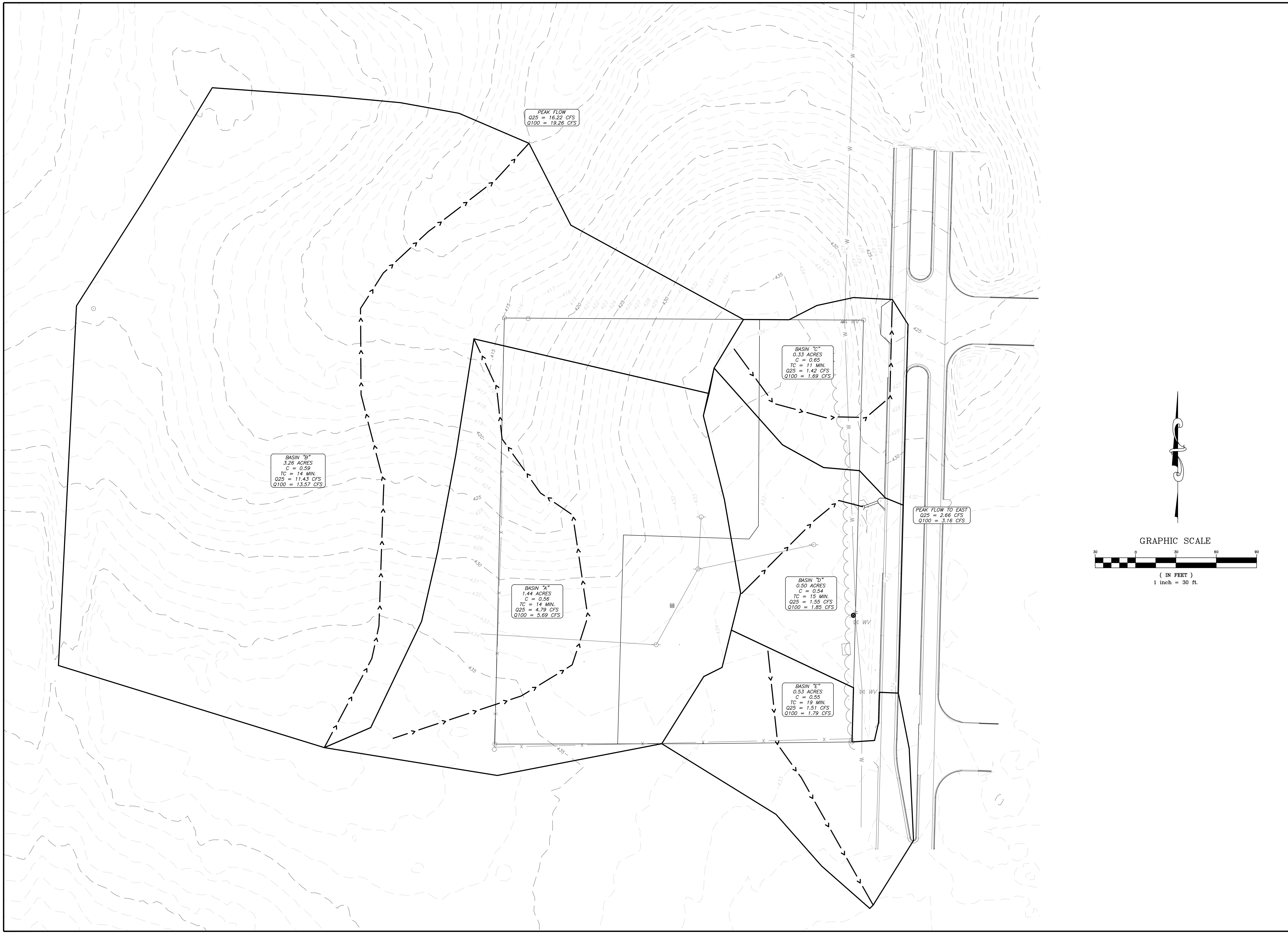
Date(s) aerial images were photographed: May 1, 2022—May 29, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
29	Tiak silt loam, 3 to 8 percent slopes	2.4	100.0%
Totals for Area of Interest		**2.4**	**100.0%**

Site Drainage Basin Maps



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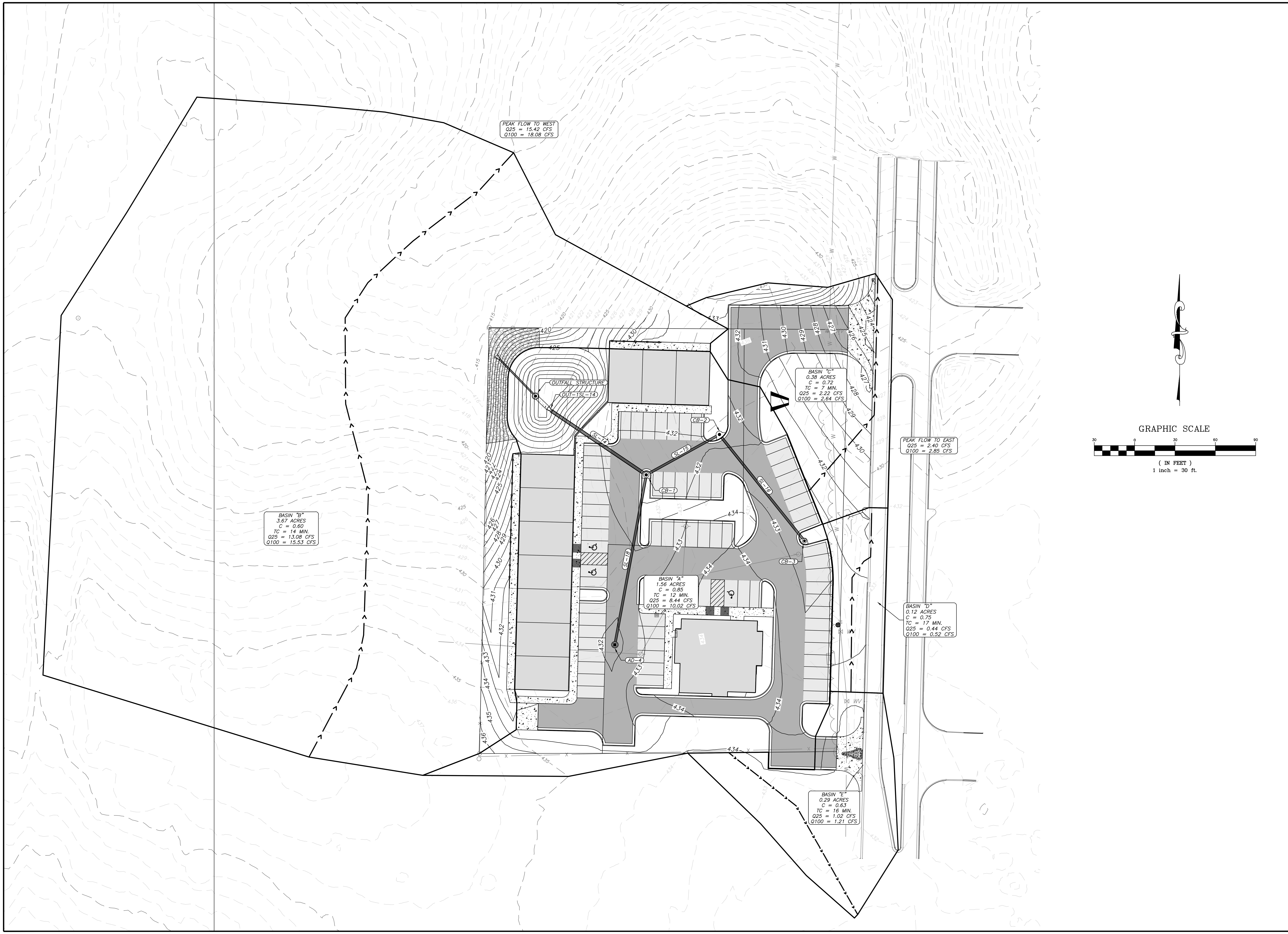
ARKANSAS

PRE-DEVELOPMENT DRAINAGE BASIN MAP
SHOPPES AT DOGWOOD SPRINGS
RETAIL DEVELOPMENT
BRYANT PARKWAY
BRYANT, ARKANSAS

Prepared For:
JON MARTIN
5501 LOMBARD ROAD
ALEXANDER, AR 72002

No.	Revisions	Date

PROJECT #: 025-029
Scale: 1" = 30'
Date: 11/13/2025
Sheet: 1 of 3



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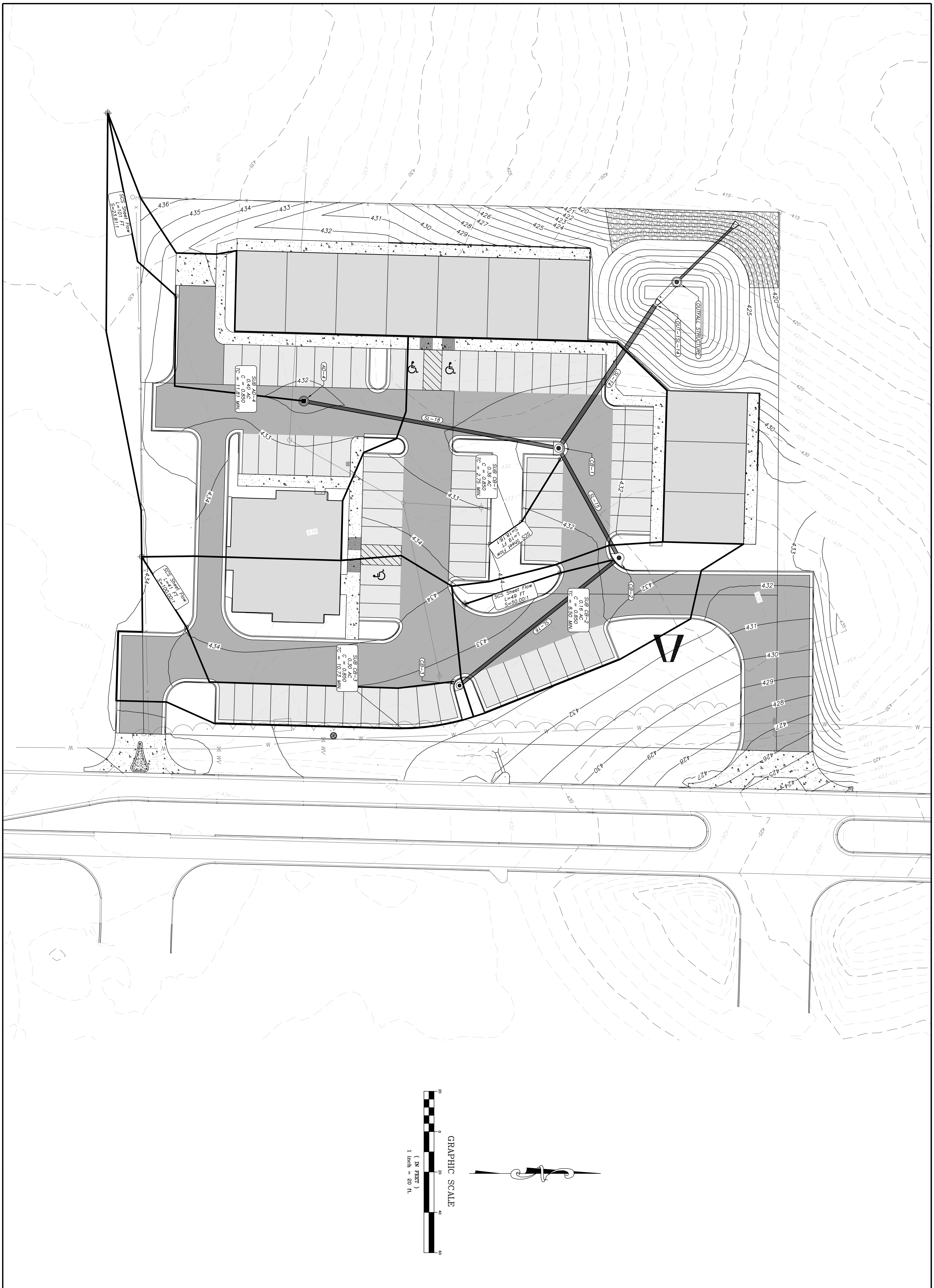
ARKANSAS

POST-DEVELOPMENT DRAINAGE BASIN MAP
SHOPPES AT DOGWOOD SPRINGS
RETAIL DEVELOPMENT
BRYANT PARKWAY
BRYANT, ARKANSAS

Prepared For:
JON MARTIN
5501 LOMBARD ROAD
ALEXANDER, AR 72002

No.	Revisions	Date

PROJECT #: 025-029
Scale: 1" = 30'
Date: 11/13/2025
Sheet: 2 of 3



PROJECT #: 025-029 Scale: 1" = 20' Date: 11/13/2025 Sheet: 3 of 3	No. / Revisions / Date	Prepared For: JON MARTIN 5501 LOMBARD ROAD ALEXANDER, AR 72002	POST-DEVELOPMENT DRAINAGE BASIN MAP SHOPPES AT DOGWOOD SPRINGS RETAIL DEVELOPMENT BRYANT PARKWAY BRYANT, ARKANSAS	CERTIFICATE OF AUTHORIZATION Richardson Engineering, PLLC No. 2519 ARKANSAS

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Trickle Channel Velocity Calculation

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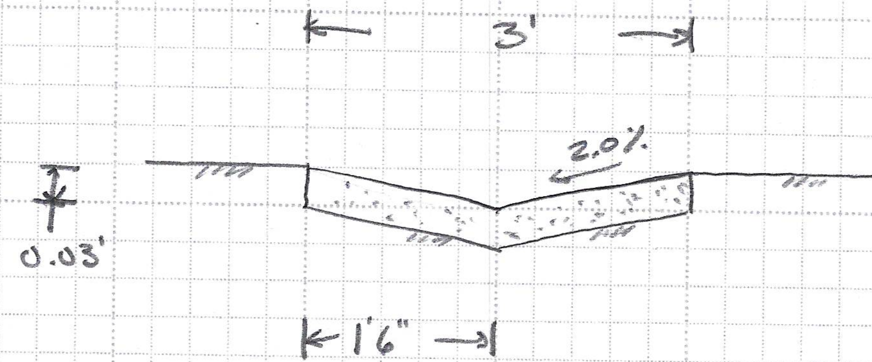
PROJECT 025-029 TRICKLE CHANNEL VELOCITY DATE 11/05/2025



$A = 0.045 \text{ FT}^2$ $S = \frac{0.2}{10} = 0.02$ FT/FT

$W_P = 0.16$ FT

$$Q = \left(\frac{1.49}{0.013}\right)(0.045)\left(\frac{0.045}{0.16}\right)^{2/3}(0.02)^{1/2}$$

$= 0.313$ CFS

$V = \frac{Q}{A} = \frac{0.313}{0.045} = 6.95$ FT/S $>$ 2 FT/S ✓

Overflow Wier Blockage Calculation

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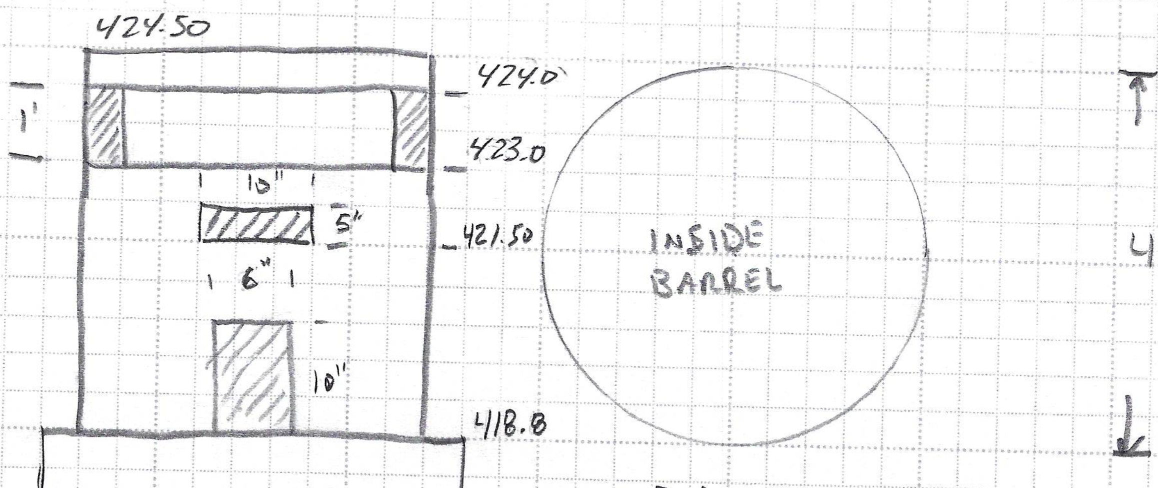
PROJECT 025-029 OVER FLOW RISER WEIR CALCULATION DATE 11/05/2025

RISER IS 4' I.D. ROUND BARREL



TOP VIEW

$Q = C L H^{3/2}$

$C = 2.6$

$L = 2 \pi R = (2)(\pi)(2) = 12.56'$

$H = 1.0'$

$Q = (2.6)(12.56)(1.0)^{3/2} = 32.65$ CFS

∴ ASSUMING THAT 50% OF THE WIER IS BLOCKED

$Q = \frac{32.65}{2} = 16.33$ CFS $>$ Q_{100} INTO POND $= 15.96$ CFS ✓

SSA Design Layout

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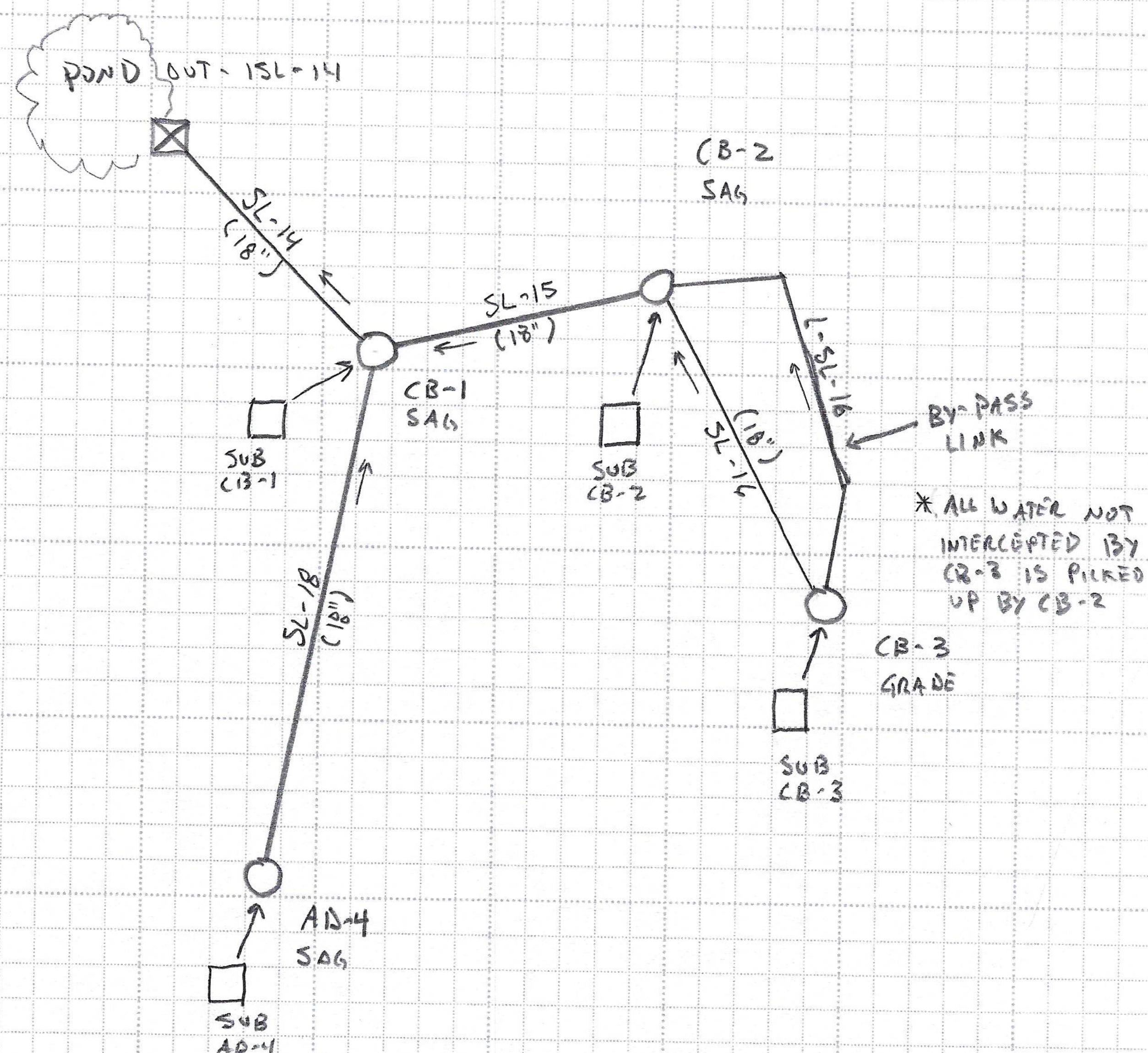
PROJECT 025-029 SSA DESIGN LAYOUT DATE 11/05/2025



Storm System Design (SSA)

2 Year Design Storm

Project Description

File Name .... Bryant Pharmacy Drainage Analysis 11-13-25.SPF

Project Options

Flow Units .... CFS
Elevation Type .... Elevation
Hydrology Method .... Rational
Time of Concentration (TOC) Method .... SCS TR-55
Link Routing Method .... Kinematic Wave
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..	4
Nodes..	5
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	4
Storage Nodes	0
Links..	5
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Return Period 2 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-4	0.40	0.8500	0.81	0.69	0.28	1.40	0 00:11:45
2	Sub-CB-1	0.36	0.8500	0.34	0.29	0.10	2.32	0 00:02:40
3	Sub-CB-2	0.16	0.8500	0.68	0.58	0.09	0.65	0 00:08:30
4	Sub-CB-3	0.30	0.8500	0.76	0.65	0.19	1.09	0 00:10:43

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)
1	Out-1SL - (14)	Outfall	419.00					2.96	419.38		

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (in)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	To Sur
1	L-SL - (16)	Pipe	CB-3	CB-2	112.54	433.11	432.25	0.7600			0.00	0.00	0.00	0.00	0.00	0.00	
2	SL - (14)	Pipe	CB-1	Out-1SL - (14)	85.23	422.00	419.00	3.5200			2.96	21.35	0.14	8.53	0.38	0.25	
3	SL - (15)	Pipe	CB-2	CB-1	62.02	426.00	422.00	6.4500			1.57	28.90	0.05	8.74	0.24	0.16	
4	SL - (16)	Pipe	CB-3	CB-2	101.17	429.00	426.00	2.9700			1.08	19.60	0.06	7.03	0.24	0.16	
5	SL - (18)	Pipe	AD-4	CB-1	128.37	427.50	423.00	3.5100			1.39	21.31	0.07	7.05	0.26	0.17	

Inlet Summary

SN	Element ID	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 Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
1	AD-4	On Sag	1	427.50	431.80	427.50	10.00	1.40	N/A	N/A	N/A	10.00	7.06	432.11
2	CB-1	On Sag	1	422.00	431.61	422.00	10.00	2.32	N/A	N/A	N/A	10.00	5.35	432.02
3	CB-2	On Sag	1	426.00	432.25	426.00	10.00	0.65	N/A	N/A	N/A	10.00	2.29	432.57
4	CB-3	On Grade	1	429.00	433.11	429.00	N/A	1.09	1.09	0.00	100.00	10.00	5.09	433.25

Subbasin Hydrology

Subbasin : SUB-AD-4

Input Data

Area (ac) 0.4
Weighted Runoff Coefficient 0.85

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	100	0	0
Slope (%) :	4.2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.15	0	0
Computed Flow Time (min) :	10.86	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	109	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	0.89	0	0

Total TOC (min) 11.76

Subbasin : Sub-CB-1

Input Data

Area (ac) 0.36
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	18.76	0	0
Slope (%) :	5.5	0	0
2 yr, 24 hr Rainfall (in) :	4.6	0	0
Velocity (ft/sec) :	0.13	0	0
Computed Flow Time (min) :	2.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	36.8	0	0
Slope (%) :	2.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.21	0	0
Computed Flow Time (min) :	0.19	0	0

Total TOC (min) 2.68

Subbasin : Sub-CB-2

Input Data

Area (ac) 0.16
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	49.44	0	0
Slope (%) :	2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	8.32	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	26.44	0	0
Slope (%) :	1.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.49	0	0
Computed Flow Time (min) :	0.18	0	0

Total TOC (min) 8.50

Subbasin : Sub-CB-3

Input Data

Area (ac) 0.3
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	41.23	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	9.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	150.58	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	1.24	0	0

Total TOC (min) 10.73

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entr Lc
1	L-SL - (16)	112.54	433.11	4.11	432.25	6.25	0.86	0.7600	Dummy				
2	SL - (14)	85.23	422.00	0.00	419.00	0.00	3.00	3.5200	CIRCULAR				
3	SL - (15)	62.02	426.00	0.00	422.00	0.00	4.00	6.4500	CIRCULAR				
4	SL - (16)	101.17	429.00	0.00	426.00	0.00	3.00	2.9700	CIRCULAR				
5	SL - (18)	128.37	427.50	0.00	423.00	1.00	4.50	3.5100	CIRCULAR				

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Frou Numb
1	L-SL - (16)	0.00	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00	
2	SL - (14)	2.96	0 00:02	21.35	0.14	8.53	0.17	0.38	0.25	0.00	
3	SL - (15)	1.57	0 00:11	28.90	0.05	8.74	0.12	0.24	0.16	0.00	
4	SL - (16)	1.08	0 00:10	19.60	0.06	7.03	0.24	0.24	0.16	0.00	
5	SL - (18)	1.39	0 00:12	21.31	0.07	7.05	0.30	0.26	0.17	0.00	

Inlet Input

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft^2)	Grate Clogging Factor (%)
1	AD-4	On Sag	1	427.50	431.80	4.30	427.50	0.00	10.00	0.00
2	CB-1	On Sag	1	422.00	431.61	9.61	422.00	0.00	10.00	0.00
3	CB-2	On Sag	1	426.00	432.25	6.25	426.00	0.00	10.00	0.00
4	CB-3	On Grade	1	429.00	433.11	4.11	429.00	0.00	N/A	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	AD-4	N/A	0.0300	0.0150	0.0300	1.50		

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	AD-4	1.40	1.40	N/A	N/A	N/A	7.06	432.11	0.31	0 00:12	0
2	CB-1	2.32	2.32	N/A	N/A	N/A	5.35	432.02	0.41	0 00:12	0
3	CB-2	0.65	0.65	N/A	N/A	N/A	2.29	432.57	0.32	0 00:10	0
4	CB-3	1.09	1.09	1.09	0.00	100.00	5.09	433.25	0.14	0 00:10	0

10 Year Design Storm

Project Description

File Name	Bryant Pharmacy Drainage Analysis 11-13-25.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Rational
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Kinematic Wave
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	4
Nodes	5
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	4
Storage Nodes	0
Links	5
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Return Period	10 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-4	0.40	0.8500	1.08	0.92	0.37	1.86	0 00:11:45
2	Sub-CB-1	0.36	0.8500	0.44	0.37	0.13	3.03	0 00:02:40
3	Sub-CB-2	0.16	0.8500	0.91	0.77	0.12	0.87	0 00:08:30
4	Sub-CB-3	0.30	0.8500	1.02	0.86	0.26	1.46	0 00:10:43

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)
1	Out-1SL - (14)	Outfall	419.00					3.87	419.43		

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (in)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	To Sur
1	L-SL - (16)	Pipe	CB-3	CB-2	112.54	433.11	432.25	0.7600			0.01	0.00	0.00	0.00	0.00	0.00	
2	SL - (14)	Pipe	CB-1	Out-1SL - (14)	85.23	422.00	419.00	3.5200			3.87	21.35	0.18	9.20	0.43	0.29	
3	SL - (15)	Pipe	CB-2	CB-1	62.02	426.00	422.00	6.4500			2.09	28.90	0.07	9.54	0.27	0.18	
4	SL - (16)	Pipe	CB-3	CB-2	101.17	429.00	426.00	2.9700			1.44	19.60	0.07	7.46	0.27	0.18	
5	SL - (18)	Pipe	AD-4	CB-1	128.37	427.50	423.00	3.5100			1.85	21.31	0.09	7.43	0.30	0.20	

Inlet Summary

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Ponded Area (ft^2)	Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
1	AD-4	On Sag	1	427.50	431.80	427.50	10.00	1.86	N/A	N/A	N/A	10.00	8.34	432.15
2	CB-1	On Sag	1	422.00	431.61	422.00	10.00	3.03	N/A	N/A	N/A	10.00	6.40	432.05
3	CB-2	On Sag	1	426.00	432.25	426.00	10.00	0.87	N/A	N/A	N/A	10.00	2.79	432.59
4	CB-3	On Grade	1	429.00	433.11	429.00	N/A	1.46	1.45	0.01	99.52	10.00	5.64	433.26

Subbasin Hydrology

Subbasin : SUB-AD-4

Input Data

Area (ac) 0.4
Weighted Runoff Coefficient 0.85

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	100	0	0
Slope (%) :	4.2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.15	0	0
Computed Flow Time (min) :	10.86	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	109	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	0.89	0	0

Total TOC (min) 11.76

Subbasin : Sub-CB-1

Input Data

Area (ac) 0.36
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	18.76	0	0
Slope (%) :	5.5	0	0
2 yr, 24 hr Rainfall (in) :	4.6	0	0
Velocity (ft/sec) :	0.13	0	0
Computed Flow Time (min) :	2.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	36.8	0	0
Slope (%) :	2.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.21	0	0
Computed Flow Time (min) :	0.19	0	0

Total TOC (min) 2.68

Subbasin : Sub-CB-2

Input Data

Area (ac) 0.16
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	49.44	0	0
Slope (%) :	2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	8.32	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	26.44	0	0
Slope (%) :	1.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.49	0	0
Computed Flow Time (min) :	0.18	0	0

Total TOC (min) 8.50

Subbasin : Sub-CB-3

Input Data

Area (ac) 0.3
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	41.23	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	9.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	150.58	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	1.24	0	0

Total TOC (min) 10.73

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entr Lc
1	L-SL - (16)	112.54	433.11	4.11	432.25	6.25	0.86	0.7600	Dummy				
2	SL - (14)	85.23	422.00	0.00	419.00	0.00	3.00	3.5200	CIRCULAR				
3	SL - (15)	62.02	426.00	0.00	422.00	0.00	4.00	6.4500	CIRCULAR				
4	SL - (16)	101.17	429.00	0.00	426.00	0.00	3.00	2.9700	CIRCULAR				
5	SL - (18)	128.37	427.50	0.00	423.00	1.00	4.50	3.5100	CIRCULAR				

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Frou Numb
1	L-SL - (16)	0.01	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00	
2	SL - (14)	3.87	0 00:02	21.35	0.18	9.20	0.15	0.43	0.29	0.00	
3	SL - (15)	2.09	0 00:10	28.90	0.07	9.54	0.11	0.27	0.18	0.00	
4	SL - (16)	1.44	0 00:10	19.60	0.07	7.46	0.23	0.27	0.18	0.00	
5	SL - (18)	1.85	0 00:12	21.31	0.09	7.43	0.29	0.30	0.20	0.00	

Inlet Input

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft^2)	Grate Clogging Factor (%)
1	AD-4	On Sag	1	427.50	431.80	4.30	427.50	0.00	10.00	0.00
2	CB-1	On Sag	1	422.00	431.61	9.61	422.00	0.00	10.00	0.00
3	CB-2	On Sag	1	426.00	432.25	6.25	426.00	0.00	10.00	0.00
4	CB-3	On Grade	1	429.00	433.11	4.11	429.00	0.00	N/A	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	AD-4	N/A	0.0300	0.0150	0.0300	1.50		

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	AD-4	1.86	1.86	N/A	N/A	N/A	8.34	432.15	0.35	0 00:12	0
2	CB-1	3.03	3.03	N/A	N/A	N/A	6.40	432.05	0.44	0 00:12	0
3	CB-2	0.87	0.87	N/A	N/A	N/A	2.79	432.59	0.33	0 00:10	0
4	CB-3	1.46	1.46	1.45	0.01	99.52	5.64	433.26	0.15	0 00:10	0

25 Year Design Storm

Project Description

File Name	Bryant Pharmacy Drainage Analysis 11-13-25.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Rational
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Kinematic Wave
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	4
Nodes	5
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	4
Storage Nodes	0
Links	5
Channels	0
Pipes	5
Pumps	0
Orifices	0
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

Return Period	25 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-4	0.40	0.8500	1.24	1.06	0.42	2.14	0 00:11:45
2	Sub-CB-1	0.36	0.8500	0.51	0.43	0.15	3.48	0 00:02:40
3	Sub-CB-2	0.16	0.8500	1.04	0.88	0.14	1.00	0 00:08:30
4	Sub-CB-3	0.30	0.8500	1.17	0.99	0.30	1.68	0 00:10:43

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)
1	Out-1SL - (14)	Outfall	419.00					4.46	419.47		

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (in)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	To Sur
1	L-SL - (16)	Pipe	CB-3	CB-2	112.54	433.11	432.25	0.7600			0.05	0.00	0.00	0.00	0.00	0.00	
2	SL - (14)	Pipe	CB-1	Out-1SL - (14)	85.23	422.00	419.00	3.5200			4.46	21.35	0.21	9.59	0.46	0.31	
3	SL - (15)	Pipe	CB-2	CB-1	62.02	426.00	422.00	6.4500			2.41	28.90	0.08	9.93	0.29	0.20	
4	SL - (16)	Pipe	CB-3	CB-2	101.17	429.00	426.00	2.9700			1.62	19.60	0.08	7.68	0.29	0.19	
5	SL - (18)	Pipe	AD-4	CB-1	128.37	427.50	423.00	3.5100			2.13	21.31	0.10	7.74	0.32	0.21	

Inlet Summary

SN	Element ID	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 Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
1	AD-4	On Sag	1	427.50	431.80	427.50	10.00	2.14	N/A	N/A	N/A	10.00	9.05	432.17
2	CB-1	On Sag	1	422.00	431.61	422.00	10.00	3.48	N/A	N/A	N/A	10.00	7.02	432.07
3	CB-2	On Sag	1	426.00	432.25	426.00	10.00	1.01	N/A	N/A	N/A	10.00	3.07	432.59
4	CB-3	On Grade	1	429.00	433.11	429.00	N/A	1.68	1.64	0.04	97.79	10.00	5.91	433.27

Subbasin Hydrology

Subbasin : SUB-AD-4

Input Data

Area (ac) 0.4
Weighted Runoff Coefficient 0.85

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	100	0	0
Slope (%) :	4.2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.15	0	0
Computed Flow Time (min) :	10.86	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	109	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	0.89	0	0

Total TOC (min) 11.76

Subbasin : Sub-CB-1

Input Data

Area (ac) 0.36
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	18.76	0	0
Slope (%) :	5.5	0	0
2 yr, 24 hr Rainfall (in) :	4.6	0	0
Velocity (ft/sec) :	0.13	0	0
Computed Flow Time (min) :	2.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	36.8	0	0
Slope (%) :	2.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.21	0	0
Computed Flow Time (min) :	0.19	0	0

Total TOC (min) 2.68

Subbasin : Sub-CB-2

Input Data

Area (ac) 0.16
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	49.44	0	0
Slope (%) :	2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	8.32	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	26.44	0	0
Slope (%) :	1.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.49	0	0
Computed Flow Time (min) :	0.18	0	0

Total TOC (min) 8.50

Subbasin : Sub-CB-3

Input Data

Area (ac) 0.3
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	41.23	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	9.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	150.58	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	1.24	0	0

Total TOC (min) 10.73

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entr Lc
1	L-SL - (16)	112.54	433.11	4.11	432.25	6.25	0.86	0.7600	Dummy				
2	SL - (14)	85.23	422.00	0.00	419.00	0.00	3.00	3.5200	CIRCULAR				
3	SL - (15)	62.02	426.00	0.00	422.00	0.00	4.00	6.4500	CIRCULAR				
4	SL - (16)	101.17	429.00	0.00	426.00	0.00	3.00	2.9700	CIRCULAR				
5	SL - (18)	128.37	427.50	0.00	423.00	1.00	4.50	3.5100	CIRCULAR				

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Frou Numb
1	L-SL - (16)	0.05	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00	
2	SL - (14)	4.46	0 00:02	21.35	0.21	9.59	0.15	0.46	0.31	0.00	
3	SL - (15)	2.41	0 00:10	28.90	0.08	9.93	0.10	0.29	0.20	0.00	
4	SL - (16)	1.62	0 00:10	19.60	0.08	7.68	0.22	0.29	0.19	0.00	
5	SL - (18)	2.13	0 00:12	21.31	0.10	7.74	0.28	0.32	0.21	0.00	

Inlet Input

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft^2)	Grate Clogging Factor (%)
1	AD-4	On Sag	1	427.50	431.80	4.30	427.50	0.00	10.00	0.00
2	CB-1	On Sag	1	422.00	431.61	9.61	422.00	0.00	10.00	0.00
3	CB-2	On Sag	1	426.00	432.25	6.25	426.00	0.00	10.00	0.00
4	CB-3	On Grade	1	429.00	433.11	4.11	429.00	0.00	N/A	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	AD-4	N/A	0.0300	0.0150	0.0300	1.50		

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	AD-4	2.14	2.14	N/A	N/A	N/A	9.05	432.17	0.37	0 00:12	[illegible]
2	CB-1	3.48	3.48	N/A	N/A	N/A	7.02	432.07	0.46	0 00:12	[illegible]
3	CB-2	1.01	1.00	N/A	N/A	N/A	3.07	432.59	0.34	0 00:10	[illegible]
4	CB-3	1.68	1.68	1.64	0.04	97.79	5.91	433.27	0.16	0 00:10	[illegible]

50 Year Design Storm

Project Description

File Name	Bryant Pharmacy Drainage Analysis 11-13-25.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Rational
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Kinematic Wave
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	4
Nodes	5
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	4
Storage Nodes	0
Links	5
Channels	0
Pipes	5
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-4	0.40	0.8500	1.36	1.16	0.46	2.34	0 00:11:45
2	Sub-CB-1	0.36	0.8500	0.56	0.47	0.17	3.83	0 00:02:40
3	Sub-CB-2	0.16	0.8500	1.14	0.97	0.15	1.09	0 00:08:30
4	Sub-CB-3	0.30	0.8500	1.28	1.09	0.33	1.84	0 00:10:43

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)
1	Out-1SL - (14)	Outfall	419.00					4.93	419.49		

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (in)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	To Sur
1	L-SL - (16)	Pipe	CB-3	CB-2	112.54	433.11	432.25	0.7600			0.08	0.00	0.00	0.00	0.00	0.00	
2	SL - (14)	Pipe	CB-1	Out-1SL - (14)	85.23	422.00	419.00	3.5200			4.93	21.35	0.23	9.86	0.49	0.33	
3	SL - (15)	Pipe	CB-2	CB-1	62.02	426.00	422.00	6.4500			2.64	28.90	0.09	10.20	0.31	0.20	
4	SL - (16)	Pipe	CB-3	CB-2	101.17	429.00	426.00	2.9700			1.75	19.60	0.09	7.83	0.30	0.20	
5	SL - (18)	Pipe	AD-4	CB-1	128.37	427.50	423.00	3.5100			2.33	21.31	0.11	7.94	0.33	0.22	

Inlet Summary

SN	Element ID	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 Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
1	AD-4	On Sag	1	427.50	431.80	427.50	10.00	2.34	N/A	N/A	N/A	10.00	9.56	432.19
2	CB-1	On Sag	1	422.00	431.61	422.00	10.00	3.83	N/A	N/A	N/A	10.00	7.48	432.08
3	CB-2	On Sag	1	426.00	432.25	426.00	10.00	1.10	N/A	N/A	N/A	10.00	3.26	432.60
4	CB-3	On Grade	1	429.00	433.11	429.00	N/A	1.84	1.76	0.07	96.13	10.00	6.13	433.28

Subbasin Hydrology

Subbasin : SUB-AD-4

Input Data

Area (ac) 0.4
Weighted Runoff Coefficient 0.85

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	100	0	0
Slope (%) :	4.2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.15	0	0
Computed Flow Time (min) :	10.86	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	109	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	0.89	0	0

Total TOC (min) 11.76

Subbasin : Sub-CB-1

Input Data

Area (ac) 0.36
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	18.76	0	0
Slope (%) :	5.5	0	0
2 yr, 24 hr Rainfall (in) :	4.6	0	0
Velocity (ft/sec) :	0.13	0	0
Computed Flow Time (min) :	2.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	36.8	0	0
Slope (%) :	2.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.21	0	0
Computed Flow Time (min) :	0.19	0	0

Total TOC (min) 2.68

Subbasin : Sub-CB-2

Input Data

Area (ac) 0.16
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	49.44	0	0
Slope (%) :	2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	8.32	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	26.44	0	0
Slope (%) :	1.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.49	0	0
Computed Flow Time (min) :	0.18	0	0

Total TOC (min) 8.50

Subbasin : Sub-CB-3

Input Data

Area (ac) 0.3
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	41.23	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	9.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	150.58	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	1.24	0	0

Total TOC (min) 10.73

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entr Lo
1	L-SL - (16)	112.54	433.11	4.11	432.25	6.25	0.86	0.7600	Dummy				
2	SL - (14)	85.23	422.00	0.00	419.00	0.00	3.00	3.5200	CIRCULAR				
3	SL - (15)	62.02	426.00	0.00	422.00	0.00	4.00	6.4500	CIRCULAR				
4	SL - (16)	101.17	429.00	0.00	426.00	0.00	3.00	2.9700	CIRCULAR				
5	SL - (18)	128.37	427.50	0.00	423.00	1.00	4.50	3.5100	CIRCULAR				

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Frou Numb
1	L-SL - (16)	0.08	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00	
2	SL - (14)	4.93	0 00:02	21.35	0.23	9.86	0.14	0.49	0.33	0.00	
3	SL - (15)	2.64	0 00:10	28.90	0.09	10.20	0.10	0.31	0.20	0.00	
4	SL - (16)	1.75	0 00:10	19.60	0.09	7.83	0.22	0.30	0.20	0.00	
5	SL - (18)	2.33	0 00:12	21.31	0.11	7.94	0.27	0.33	0.22	0.00	

Inlet Input

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)
1	AD-4	On Sag	1	427.50	431.80	4.30	427.50	0.00	10.00	0.00
2	CB-1	On Sag	1	422.00	431.61	9.61	422.00	0.00	10.00	0.00
3	CB-2	On Sag	1	426.00	432.25	6.25	426.00	0.00	10.00	0.00
4	CB-3	On Grade	1	429.00	433.11	4.11	429.00	0.00	N/A	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	AD-4	N/A	0.0300	0.0150	0.0300	1.50		

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	AD-4	2.34	2.34	N/A	N/A	N/A	9.56	432.19	0.39	0 00:12	0
2	CB-1	3.83	3.83	N/A	N/A	N/A	7.48	432.08	0.47	0 00:12	0
3	CB-2	1.10	1.09	N/A	N/A	N/A	3.26	432.60	0.35	0 00:10	0
4	CB-3	1.84	1.84	1.76	0.07	96.13	6.13	433.28	0.17	0 00:10	0

100 Year Design Storm

Project Description

File Name	Bryant Pharmacy Drainage Analysis 11-13-25.SPF

Project Options

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	Rational
Time of Concentration (TOC) Method	SCS TR-55
Link Routing Method	Kinematic Wave
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	4
Nodes	5
Junctions	0
Outfalls	1
Flow Diversions	0
Inlets	4
Storage Nodes	0
Links	5
Channels	0
Pipes	5
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-4	0.40	0.8500	1.48	1.25	0.50	2.54	0 00:11:45
2	Sub-CB-1	0.36	0.8500	0.60	0.51	0.18	4.16	0 00:02:40
3	Sub-CB-2	0.16	0.8500	1.24	1.05	0.17	1.19	0 00:08:30
4	Sub-CB-3	0.30	0.8500	1.39	1.18	0.35	1.99	0 00:10:43

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)
1	Out-1SL - (14)	Outfall	419.00					5.36	419.51		

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (in)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	To Sur
1	L-SL - (16)	Pipe	CB-3	CB-2	112.54	433.11	432.25	0.7600			0.11	0.00	0.00	0.00	0.00	0.00	
2	SL - (14)	Pipe	CB-1	Out-1SL - (14)	85.23	422.00	419.00	3.5200			5.36	21.35	0.25	10.09	0.51	0.34	
3	SL - (15)	Pipe	CB-2	CB-1	62.02	426.00	422.00	6.4500			2.86	28.90	0.10	10.44	0.32	0.21	
4	SL - (16)	Pipe	CB-3	CB-2	101.17	429.00	426.00	2.9700			1.87	19.60	0.10	7.98	0.31	0.21	
5	SL - (18)	Pipe	AD-4	CB-1	128.37	427.50	423.00	3.5100			2.53	21.31	0.12	8.12	0.35	0.23	

Inlet Summary

SN	Element ID	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 Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
1	AD-4	On Sag	1	427.50	431.80	427.50	10.00	2.54	N/A	N/A	N/A	10.00	10.04	432.20
2	CB-1	On Sag	1	422.00	431.61	422.00	10.00	4.16	N/A	N/A	N/A	10.00	7.90	432.09
3	CB-2	On Sag	1	426.00	432.25	426.00	10.00	1.22	N/A	N/A	N/A	10.00	3.48	432.61
4	CB-3	On Grade	1	429.00	433.11	429.00	N/A	1.99	1.88	0.11	94.42	10.00	6.32	433.28

Subbasin Hydrology

Subbasin : SUB-AD-4

Input Data

Area (ac) 0.4
Weighted Runoff Coefficient 0.85

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where :

Tc = Time of Concentration (hr)
n = Manning's roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation :

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation :

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	100	0	0
Slope (%) :	4.2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.15	0	0
Computed Flow Time (min) :	10.86	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	109	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Unpaved	Unpaved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	0.89	0	0

Total TOC (min) 11.76

Subbasin : Sub-CB-1

Input Data

Area (ac) 0.36
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	18.76	0	0
Slope (%) :	5.5	0	0
2 yr, 24 hr Rainfall (in) :	4.6	0	0
Velocity (ft/sec) :	0.13	0	0
Computed Flow Time (min) :	2.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	36.8	0	0
Slope (%) :	2.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	3.21	0	0
Computed Flow Time (min) :	0.19	0	0

Total TOC (min) 2.68

Subbasin : Sub-CB-2

Input Data

Area (ac) 0.16
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	49.44	0	0
Slope (%) :	2	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.1	0	0
Computed Flow Time (min) :	8.32	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	26.44	0	0
Slope (%) :	1.5	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.49	0	0
Computed Flow Time (min) :	0.18	0	0

Total TOC (min) 8.50

Subbasin : Sub-CB-3

Input Data

Area (ac) 0.3
Weighted Runoff Coefficient 0.85

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.3	0	0
Flow Length (ft) :	41.23	0	0
Slope (%) :	1	0	0
2 yr, 24 hr Rainfall (in) :	4.36	0	0
Velocity (ft/sec) :	0.07	0	0
Computed Flow Time (min) :	9.49	0	0

Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	150.58	0	0
Slope (%) :	1	0	0
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.03	0	0
Computed Flow Time (min) :	1.24	0	0

Total TOC (min) 10.73

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entr Lo
1	L-SL - (16)	112.54	433.11	4.11	432.25	6.25	0.86	0.7600	Dummy				
2	SL - (14)	85.23	422.00	0.00	419.00	0.00	3.00	3.5200	CIRCULAR				
3	SL - (15)	62.02	426.00	0.00	422.00	0.00	4.00	6.4500	CIRCULAR				
4	SL - (16)	101.17	429.00	0.00	426.00	0.00	3.00	2.9700	CIRCULAR				
5	SL - (18)	128.37	427.50	0.00	423.00	1.00	4.50	3.5100	CIRCULAR				

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Frou Numb
1	L-SL - (16)	0.11	0 00:10	0.00	0.00	0.00		0.00	0.00	0.00	
2	SL - (14)	5.36	0 00:02	21.35	0.25	10.09	0.14	0.51	0.34	0.00	
3	SL - (15)	2.86	0 00:10	28.90	0.10	10.44	0.10	0.32	0.21	0.00	
4	SL - (16)	1.87	0 00:10	19.60	0.10	7.98	0.21	0.31	0.21	0.00	
5	SL - (18)	2.53	0 00:12	21.31	0.12	8.12	0.26	0.35	0.23	0.00	

Inlet Input

SN	Element ID	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)
1	AD-4	On Sag	1	427.50	431.80	4.30	427.50	0.00	10.00	0.00
2	CB-1	On Sag	1	422.00	431.61	9.61	422.00	0.00	10.00	0.00
3	CB-2	On Sag	1	426.00	432.25	6.25	426.00	0.00	10.00	0.00
4	CB-3	On Grade	1	429.00	433.11	4.11	429.00	0.00	N/A	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	AD-4	N/A	0.0300	0.0150	0.0300	1.50		

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	AD-4	2.54	2.54	N/A	N/A	N/A	10.04	432.20	0.40	0 00:12	0
2	CB-1	4.16	4.16	N/A	N/A	N/A	7.90	432.09	0.49	0 00:12	0
3	CB-2	1.22	1.19	N/A	N/A	N/A	3.48	432.61	0.35	0 00:10	0
4	CB-3	1.99	1.99	1.88	0.11	94.42	6.32	433.28	0.17	0 00:10	0

Pre and Post Development Hydrographs
(Hydrology Studio)

Pond No. 1 : Bryant Pharmacy Detention Pond

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 = 8 - Mod Rational - Post-Dev Basin A

Pre-dev Hyd = 1 - Rational - Pre-Dev Basin "A"

Freq (Yr)	Vol Pre (cuft)	Vol Post (cuft)	Qp Post (cfs)	Q Targ (cfs)	Req Stor (cuft)
1					
2	3,485	7,732	3.14	3.11	2,787
3					
5					
10	4,674	10,404	4.23	4.17	3,773
25	5,372	11,965	4.86	4.79	4,349
50	5,876	13,104	5.33	5.24	4,773
100	6,379	14,204	5.77	5.69	5,157

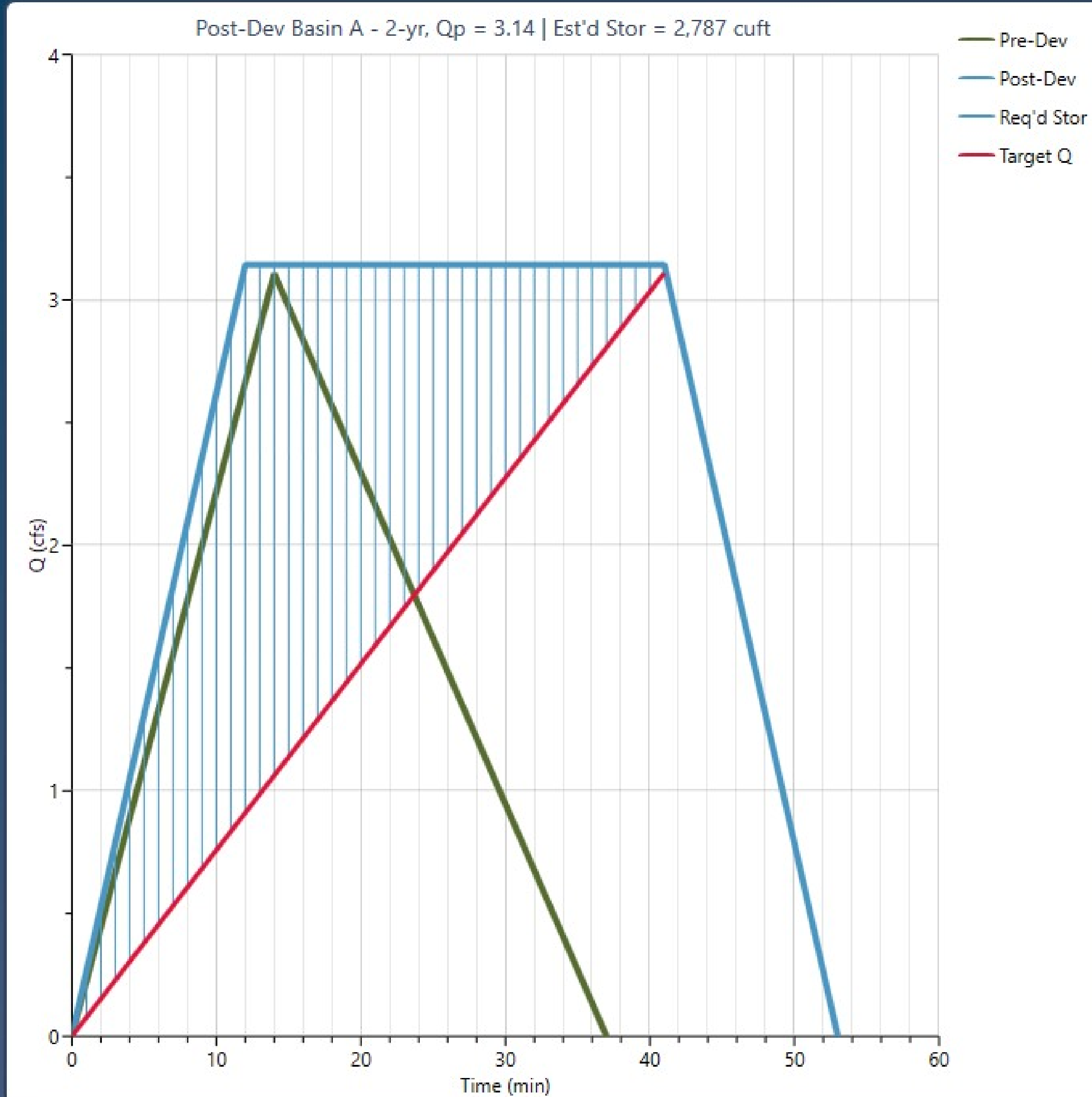
Clear

Estimate Storage

Zone	Extended Detention Storage (optional)	
	Description	Volume (cuft)
1	WQv	
2	CPv	
3	Custom	
4	Custom	

Clear

Apply



Estimate Storage Step is Optional

Always skip this step

Create Pond >

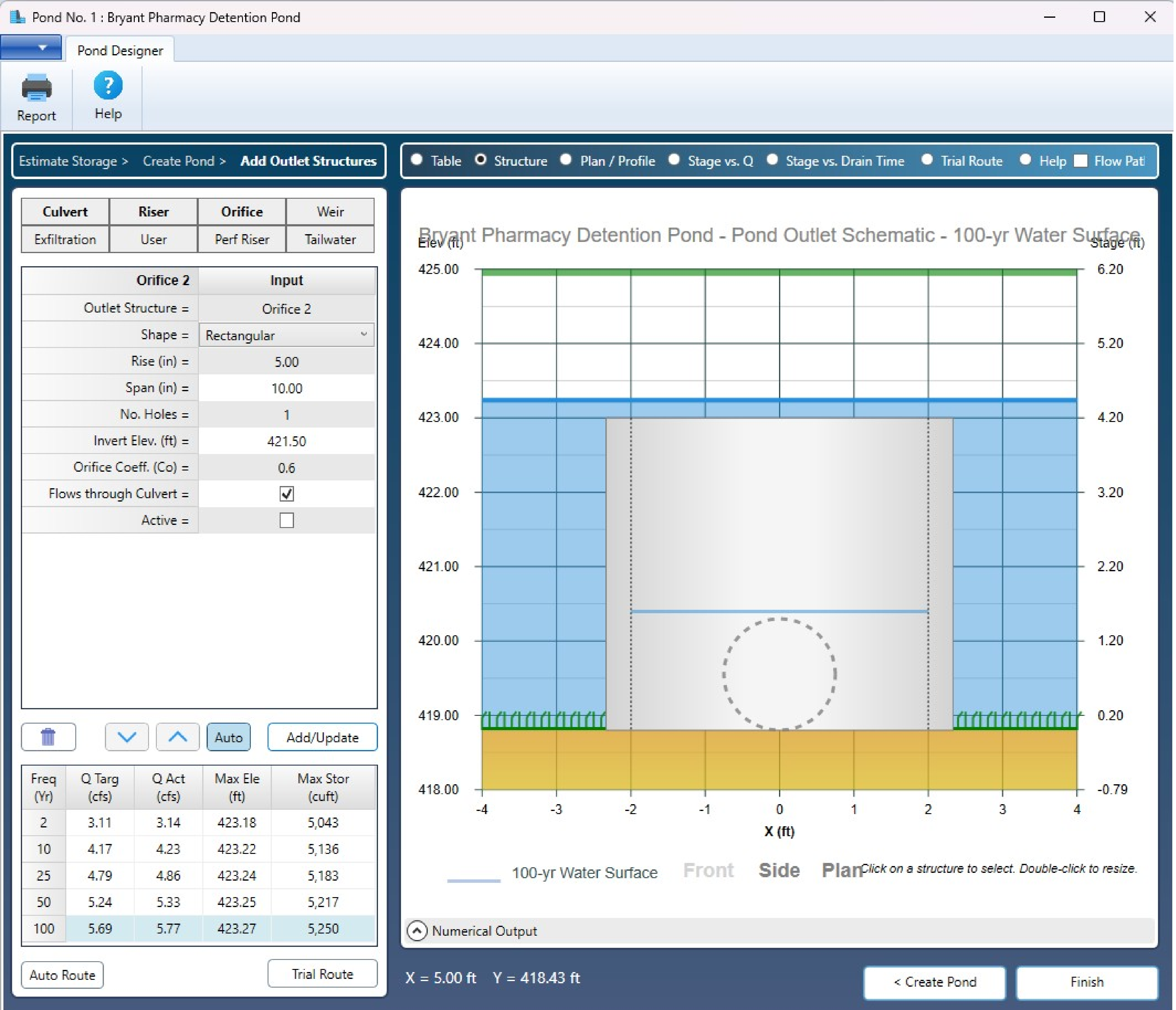

Pond No. 1 : Bryant Pharmacy Detention Pond
Pond Designer
Report
Help
Estimate Storage > Create Pond > Add Outlet Structures
Table
Structure
Plan / Profile
Stage vs. Q
Stage vs. Drain Time
Trial Route
Help
Flow Pat
Culvert
Riser
Orifice
Weir
Exfiltration
User
Perf Riser
Tailwater
Orifice 2
Input
Outlet Structure = Orifice 2
Shape = Rectangular
Rise (in) = 5.00
Span (in) = 10.00
No. Holes = 1
Invert Elev. (ft) = 421.50
Orifice Coeff. (Co) = 0.6
Flows through Culvert =
Active =
Auto
Add/Update
Freq (Yr) | Q Targ (cfs) | Q Act (cfs) | Max Ele (ft) | Max Stor (cuft)
2 | 3.11 | 3.14 | 423.18 | 5,043
10 | 4.17 | 4.23 | 423.22 | 5,136
25 | 4.79 | 4.86 | 423.24 | 5,183
50 | 5.24 | 5.33 | 423.25 | 5,217
100 | 5.69 | 5.77 | 423.27 | 5,250
Auto Route
Trial Route
Bryant Pharmacy Detention Pond - Pond Outlet Schematic - 100-yr Water Surface
Elev (ft)
Stage (ft)
425.00
424.00
423.00
422.00
421.00
420.00
419.00
418.00
6.20
5.20
4.20
3.20
2.20
1.20
0.20
-0.79
-4
-3
-2
-1
0
1
2
3
4
X (ft)
100-yr Water Surface
Front
Side
Plan
Click on a structure to select. Double-click to resize.
Numerical Output
X = 5.00 ft Y = 418.43 ft
< Create Pond
Finish

Table of Contents

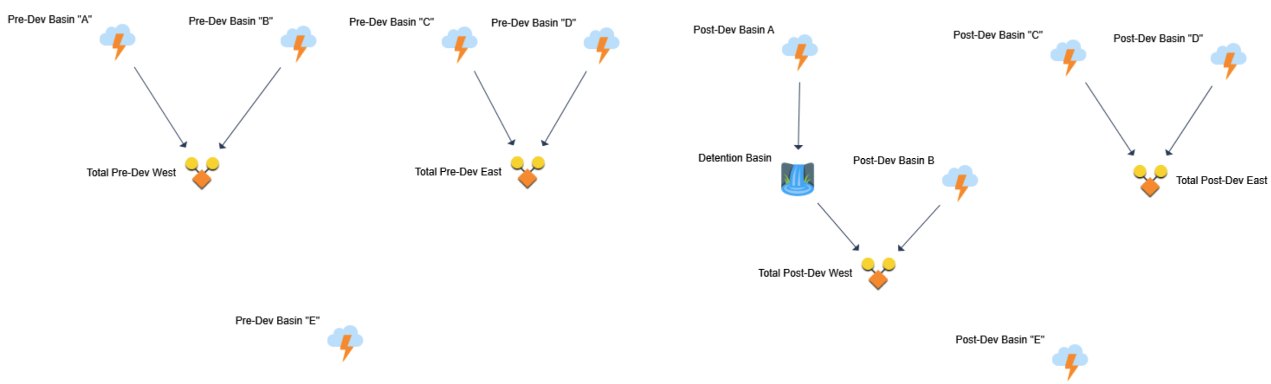
Contents continued...

Contents continued...

Basin Model

Hydrology Studio v 3.0.0.39

Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025



Hydrograph by Return Period

Hydrology Studio v 3.0.0.39

Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025

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"		3.108			4.168	4.791	5.240	5.689
2	Rational	Pre-Dev Basin "B"		7.412			9.942	11.43	12.50	13.57
3	Junction	Total Pre-Dev West		10.52			14.11	16.22	17.74	19.26
4	Rational	Pre-Dev Basin "C"		0.922			1.236	1.420	1.553	1.686
5	Rational	Pre-Dev Basin "D"		1.009			1.353	1.555	1.701	1.847
6	Junction	Total Pre-Dev East		1.726			2.314	2.660	2.909	3.158
7	Rational	Pre-Dev Basin "E"		0.978			1.314	1.510	1.652	1.793
8	Mod Rational	Post-Dev Basin A		3.143			4.229	4.864	5.327	5.774
9	Pond Route	Detention Basin		2.713			3.972	4.449	4.789	5.104
10	Rational	Post-Dev Basin B		8.486			11.38	13.08	14.31	15.53
11	Junction	Total Post-Dev West		10.30			13.53	15.42	16.77	18.08
12	Rational	Post-Dev Basin "C"		1.443			1.931	2.218	2.424	2.635
13	Rational	Post-Dev Basin "D"		0.284			0.381	0.438	0.479	0.520
14	Junction	Total Post-Dev East		1.560			2.088	2.399	2.621	2.849
15	Rational	Post-Dev Basin "E"		0.663			0.889	1.022	1.118	1.214

Hydrograph 2-yr Summary

Hydrology Studio v 3.0.0.39

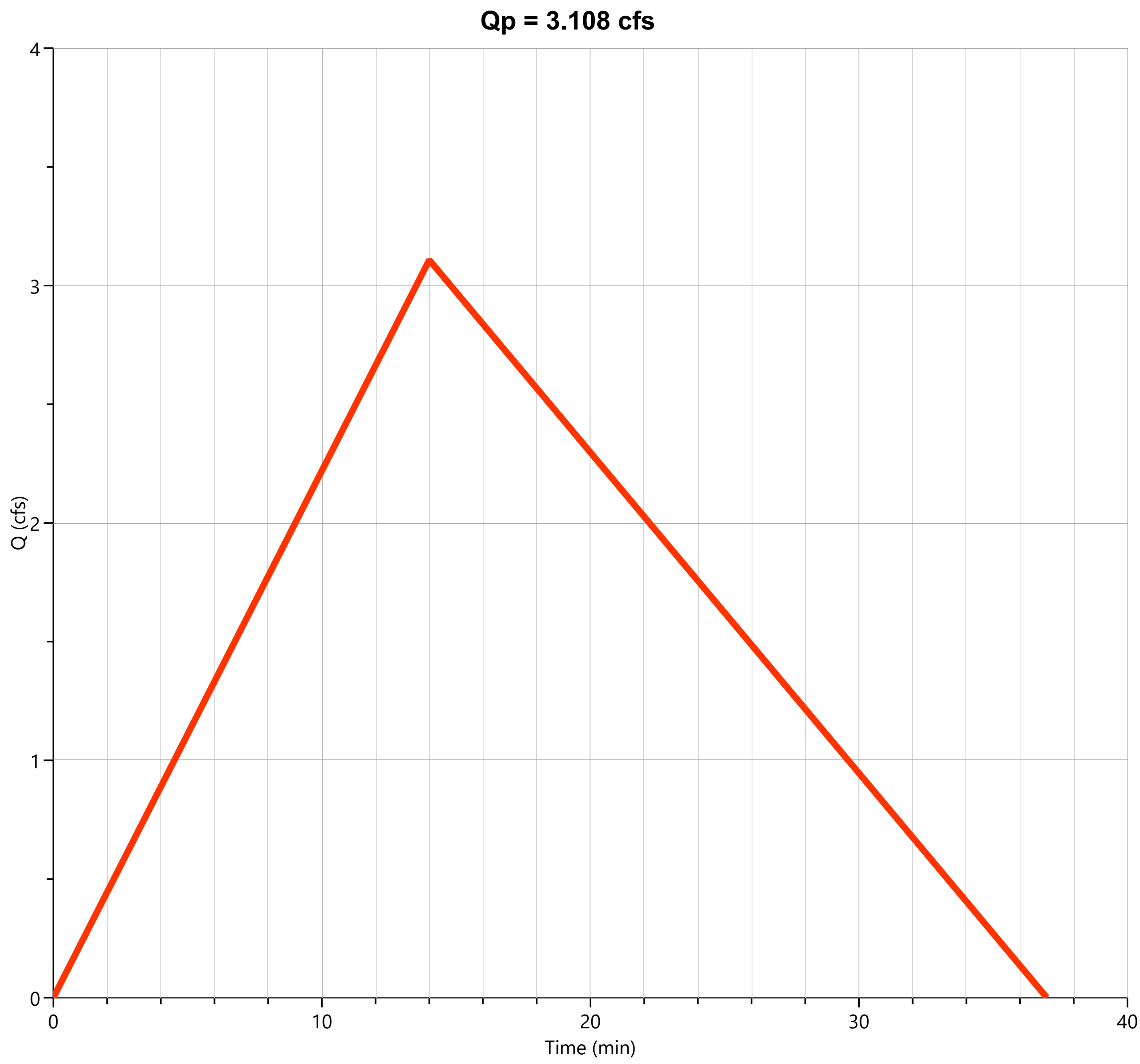
Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025

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"	3.108	0.23	3,485	----		
2	Rational	Pre-Dev Basin "B"	7.412	0.23	8,312	----		
3	Junction	Total Pre-Dev West	10.52	0.23	11,677	1, 2		
4	Rational	Pre-Dev Basin "C"	0.922	0.18	812	----		
5	Rational	Pre-Dev Basin "D"	1.009	0.25	1,212	----		
6	Junction	Total Pre-Dev East	1.726	0.25	2,012	4, 5		
7	Rational	Pre-Dev Basin "E"	0.978	0.32	1,489	----		
8	Mod Rational	Post-Dev Basin A	3.143	0.20	7,732	----		
9	Pond Route	Detention Basin	2.713	0.72	7,730	8	421.39	2,050
10	Rational	Post-Dev Basin B	8.486	0.23	9,516	----		
11	Junction	Total Post-Dev West	10.30	0.23	17,149	9, 10		
12	Rational	Post-Dev Basin "C"	1.443	0.12	809	----		
13	Rational	Post-Dev Basin "D"	0.284	0.28	386	----		
14	Junction	Total Post-Dev East	1.560	0.12	1,162	12, 13		
15	Rational	Post-Dev Basin "E"	0.663	0.27	849	----		

Pre-Dev Basin "A"

Hyd. No. 1

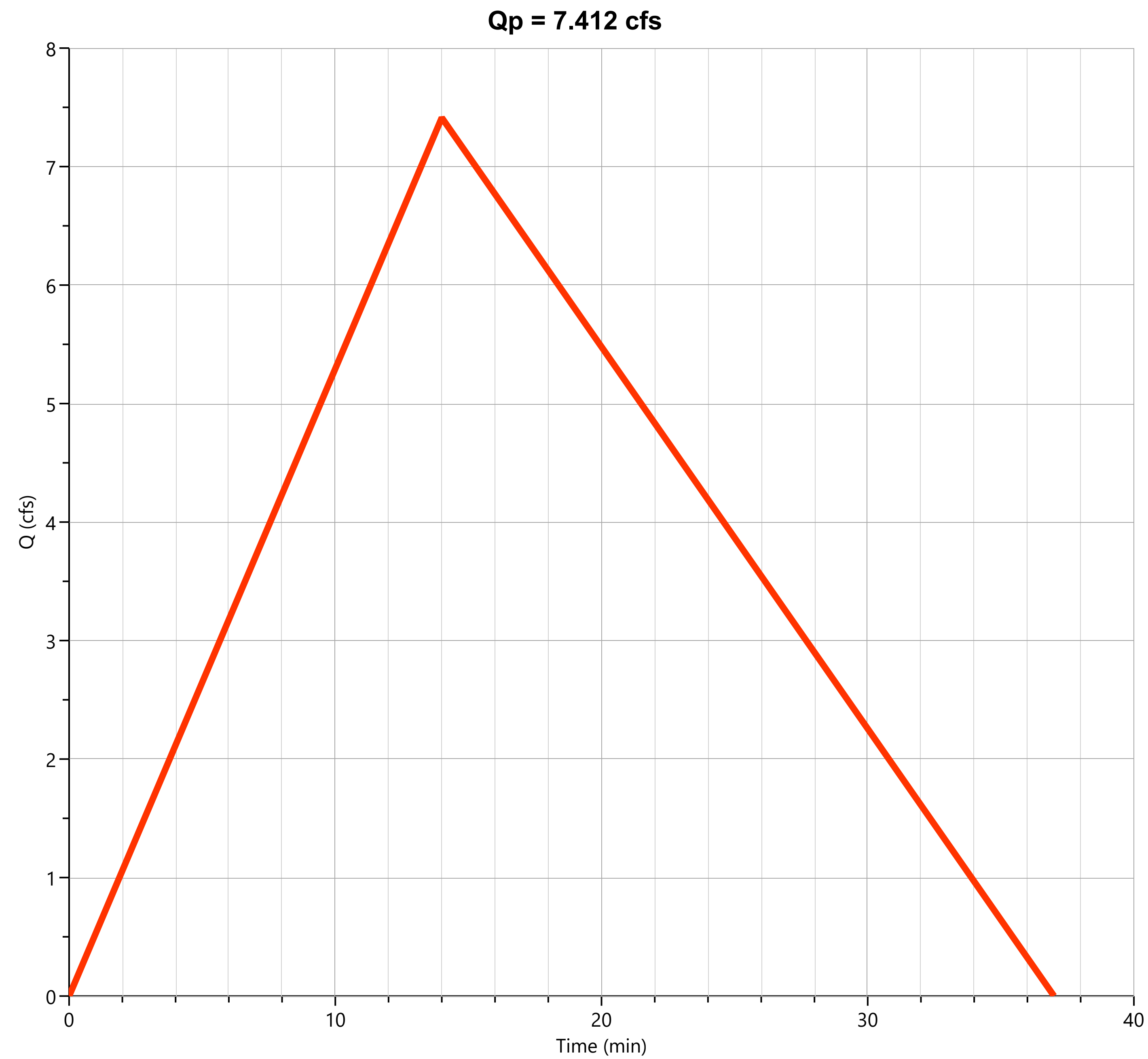
Hydrograph Type	= Rational	Peak Flow	= 3.108 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 3,485 cuft
Drainage Area	= 1.44 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.85 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "B"

Hyd. No. 2

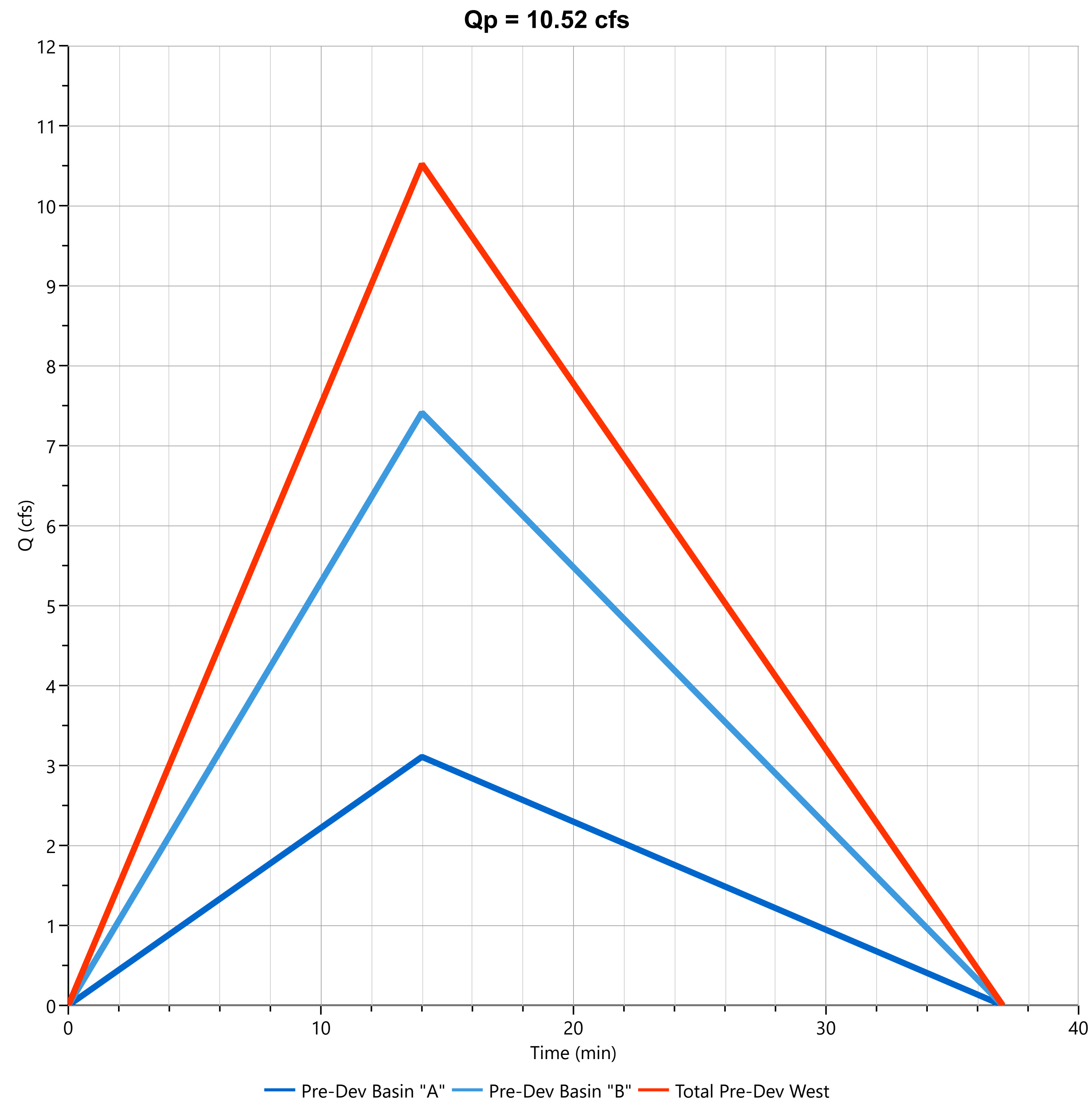
Hydrograph Type	= Rational	Peak Flow	= 7.412 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 8,312 cuft
Drainage Area	= 3.26 ac	Runoff Coeff.	= 0.59
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.85 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev West

Hyd. No. 3

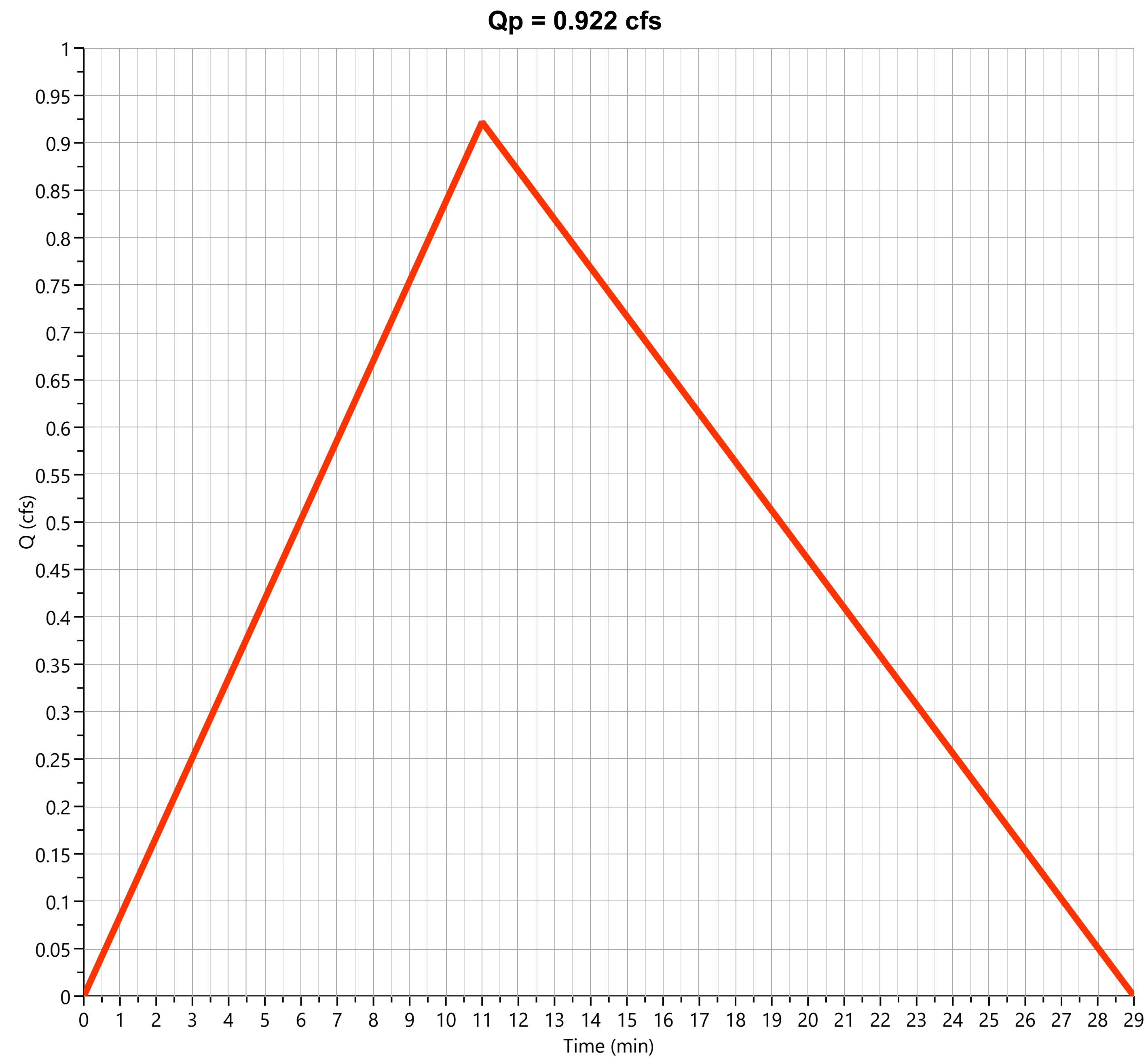
Hydrograph Type	= Junction	Peak Flow	= 10.52 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 11,677 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 4.7 ac



Pre-Dev Basin "C"

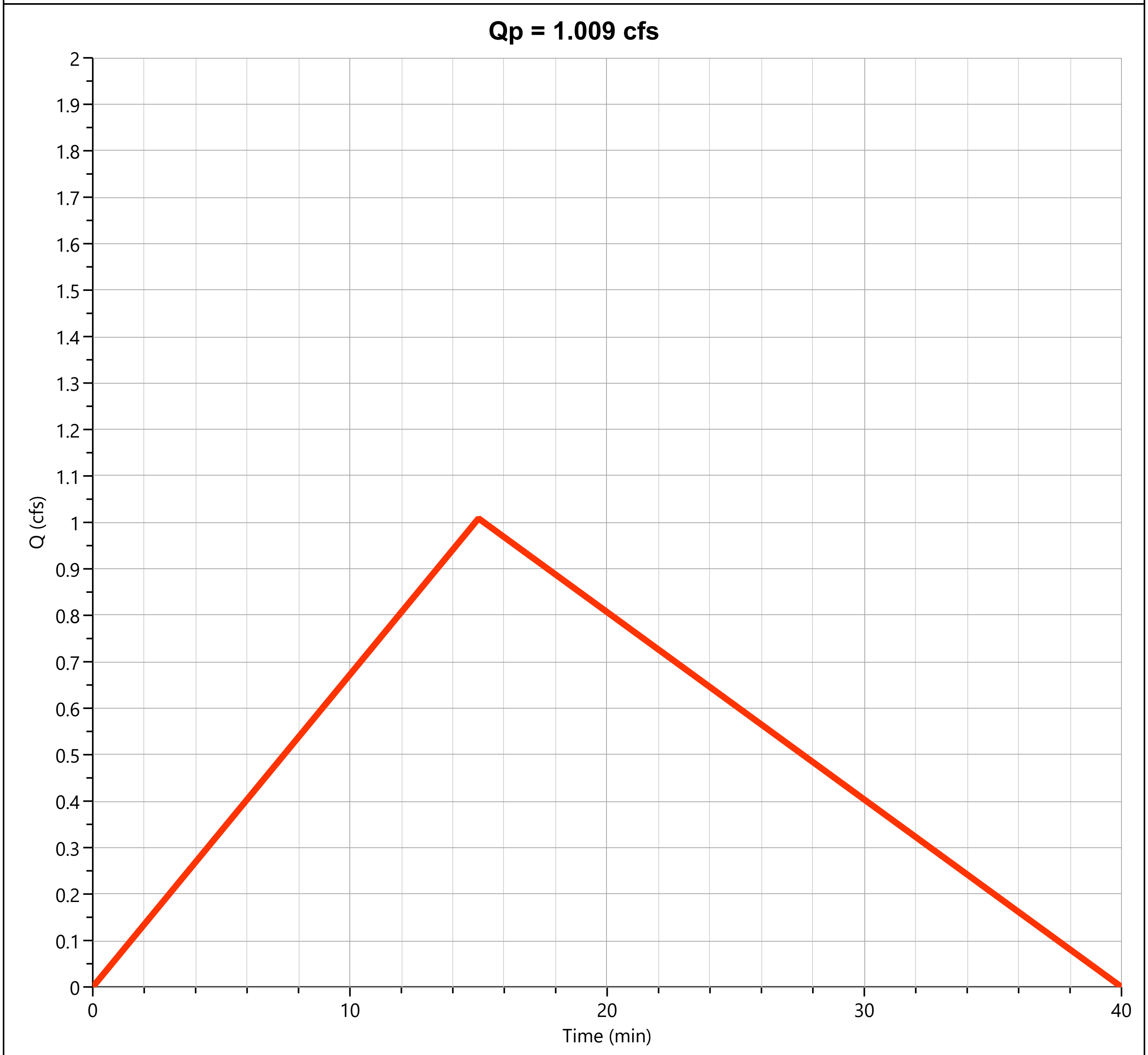
Hyd. No. 4

Hydrograph Type	= Rational	Peak Flow	= 0.922 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 812 cuft
Drainage Area	= 0.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55	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



Pre-Dev Basin "D" Hyd. No. 5

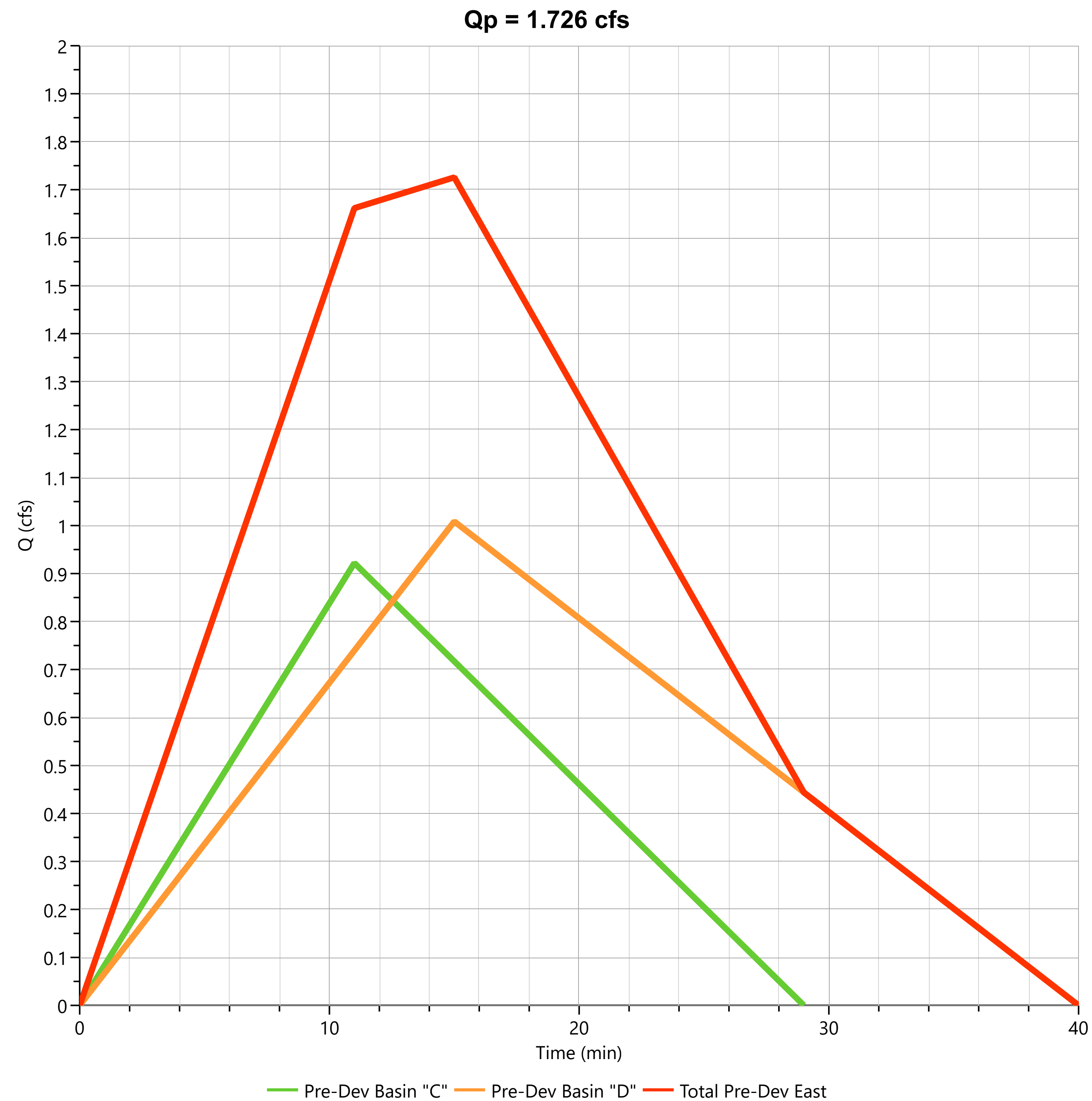
Hydrograph Type	= Rational	Peak Flow	= 1.009 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 1,212 cuft
Drainage Area	= 0.5 ac	Runoff Coeff.	= 0.54
Tc Method	= TR55	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.74 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev East

Hyd. No. 6

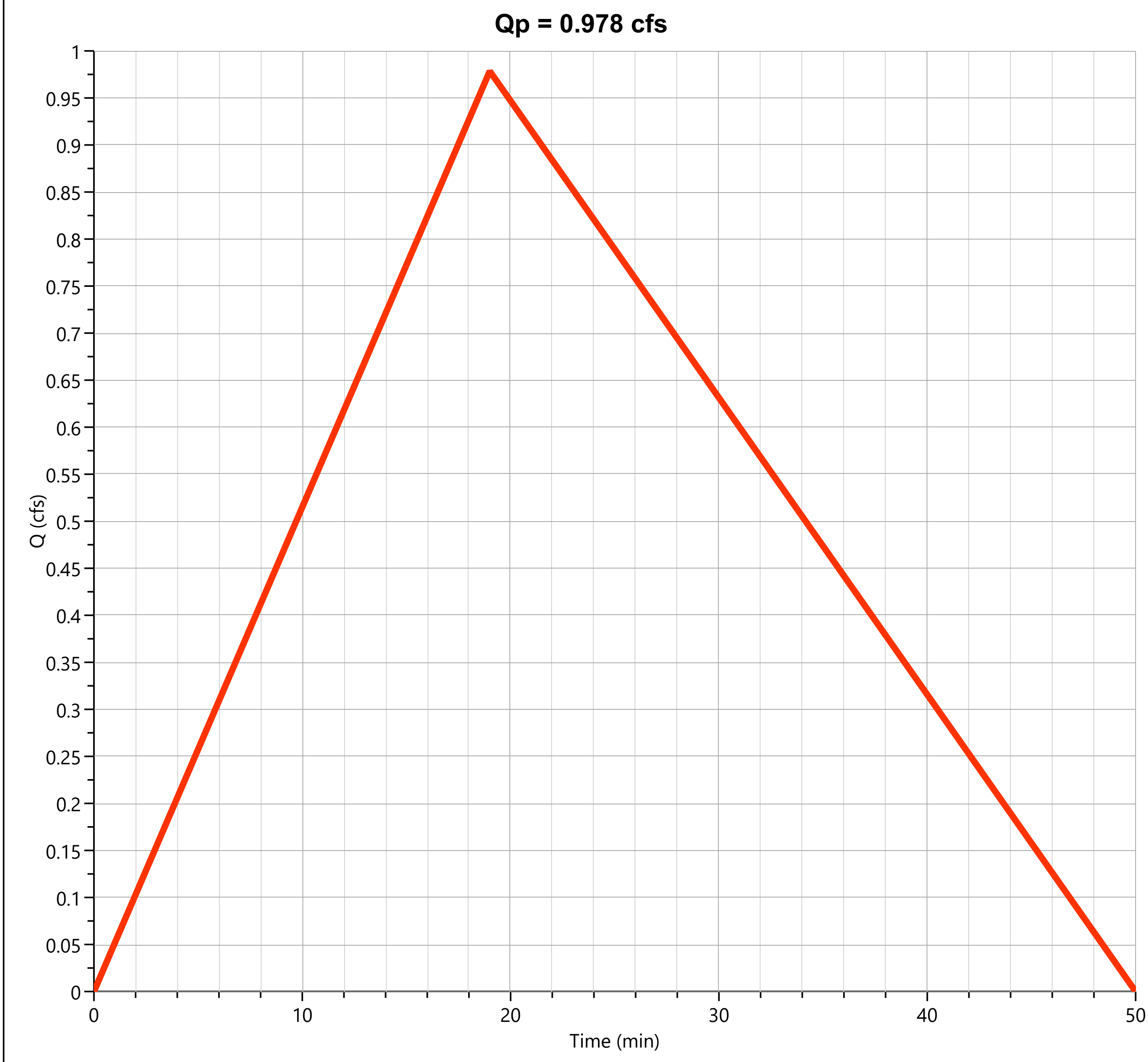
Hydrograph Type	= Junction	Peak Flow	= 1.726 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Hydrograph Volume	= 2,012 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.83 ac



Pre-Dev Basin "E"

Hyd. No. 7

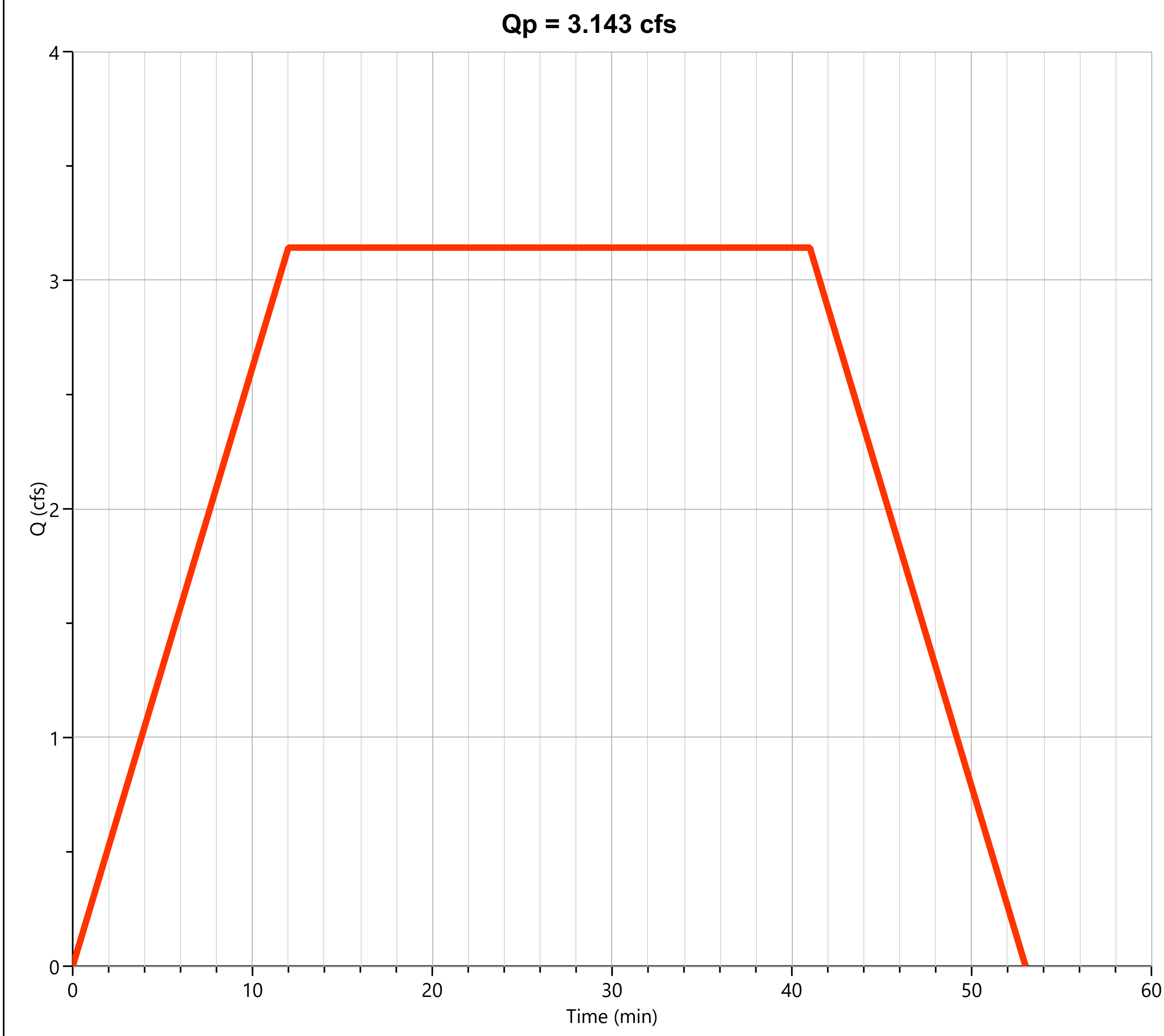
Hydrograph Type	= Rational	Peak Flow	= 0.978 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.32 hrs
Time Interval	= 1 min	Runoff Volume	= 1,489 cuft
Drainage Area	= 0.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55	Time of Conc. (Tc)	= 19.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.36 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin A

Hyd. No. 8

Hydrograph Type	= Mod Rational	Peak Flow	= 3.143 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 7,732 cuft
Drainage Area	= 1.56 ac	Runoff Coeff.	= 0.85
Tc Method	= User	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 2.37 in/hr
Freq. Corr. Factor	= 1.00	Storm Duration	= 3.42 x Tc
Target Q	= 0.000 cfs	Required Storage	= 0.000 cuft



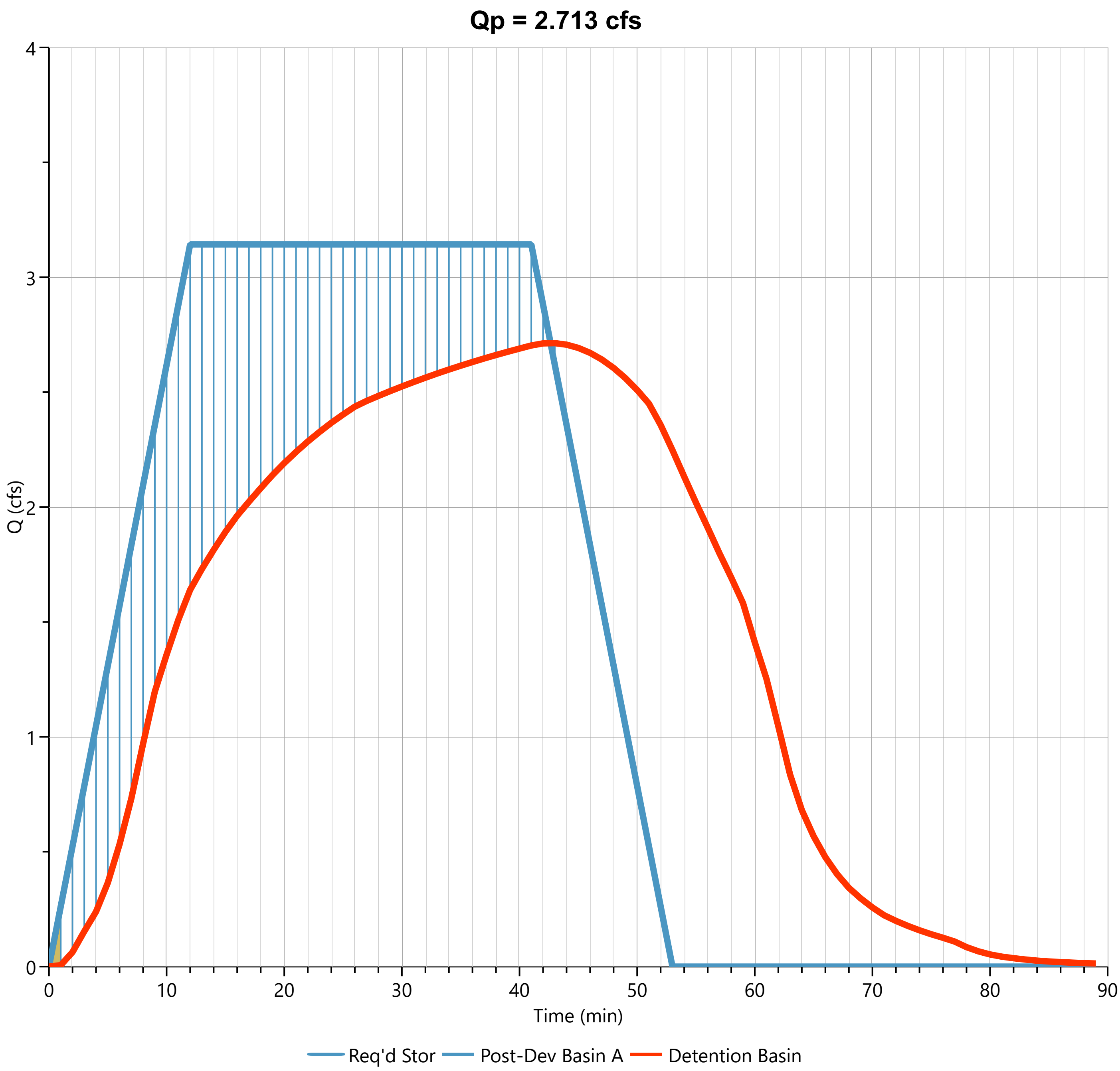
Detention Basin

Hyd. No. 9

Hydrograph Type	= Pond Route	Peak Flow	= 2.713 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.72 hrs
Time Interval	= 1 min	Hydrograph Volume	= 7,730 cuft
Inflow Hydrograph	= 8 - Post-Dev Basin A	Max. Elevation	= 421.39 ft
Pond Name	= Bryant Pharmacy Detention Pond	Max. Storage	= 2,050 cuft

Pond Routing by Storage Indication Method

Center of mass detention time = 10 min



Bryant Pharmacy Detention Pond

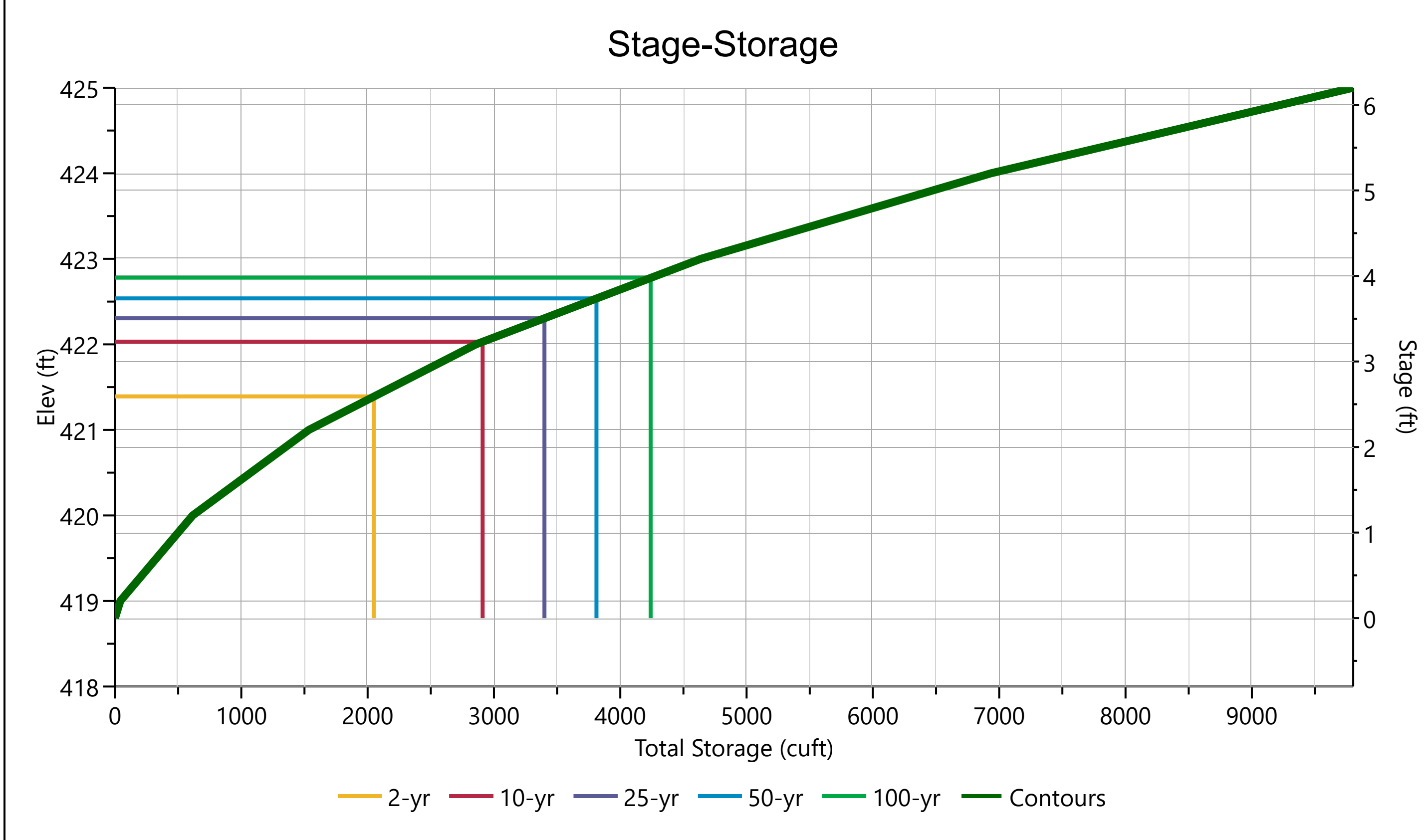
Stage-Storage

User Defined Contours

Description	Input
Bottom Elevation, ft	418.80
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	418.80	4	0.000	0.000
0.20	419.00	414	41.8	41.8
1.20	420.00	732	573	615
2.20	421.00	1,107	920	1,534
3.20	422.00	1,538	1,323	2,857
4.20	423.00	2,025	1,782	4,638
5.20	424.00	2,568	2,297	6,935
6.20	425.00	3,167	2,868	9,802



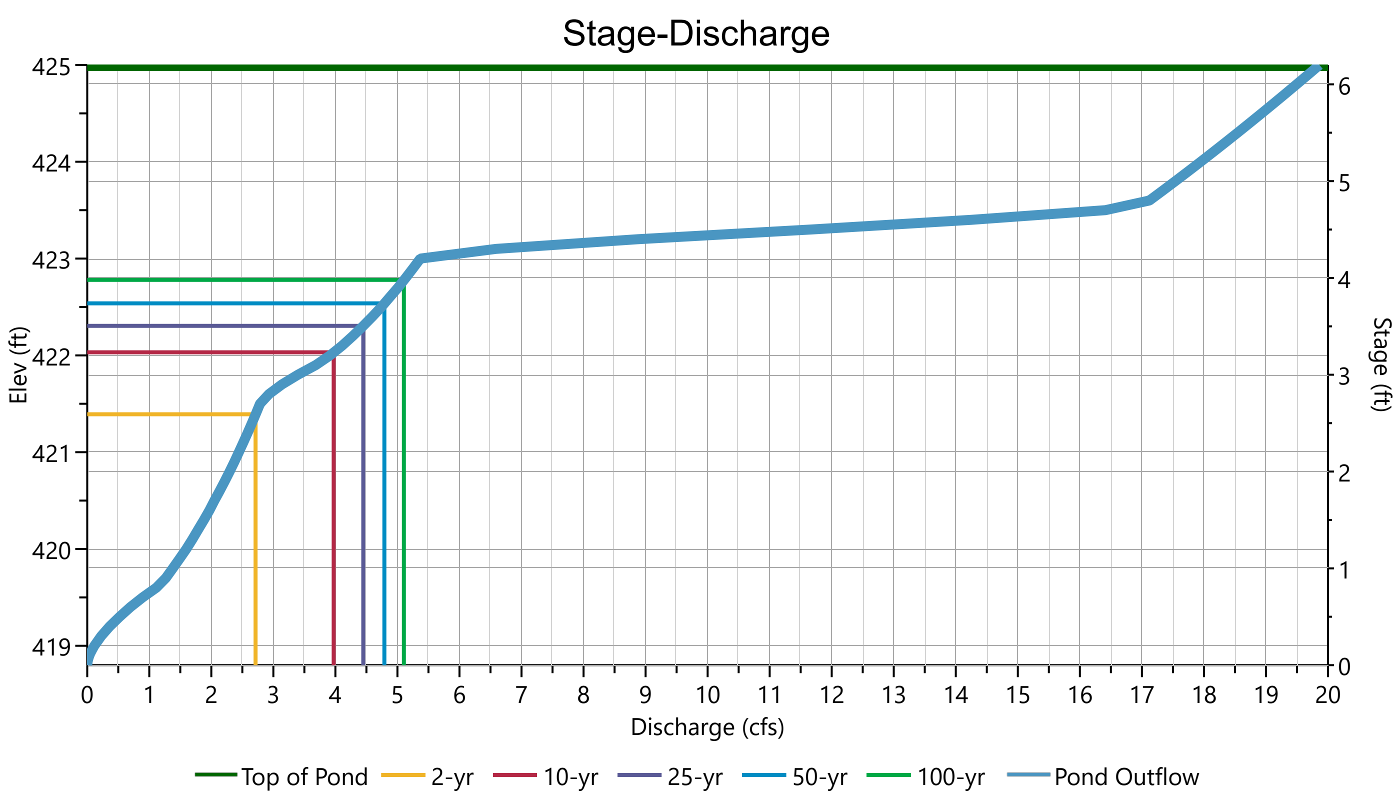
Bryant Pharmacy Detention Pond

Stage-Discharge

Culvert / Orifices	Cir Culvert	Orifice 1 (m)	Orifice 2 (m)	Orifice 3	Orifice Plate	
Rise, in	18	10	5		Orifice Dia, in	
Span, in	18	6	10		No. Orifices	
No. Barrels	1	1	1		Invert Elevation, ft	
Invert Elevation, ft	418.80	418.80	421.50		Height, ft	
Orifice Coefficient, Co	0.60	0.60	0.60		Orifice Coefficient, Co	
Length, ft	39					
Barrel Slope, %	1					
N-Value, n	0.013					

Weirs	Riser	Weir 1	Weir 2	Weir 3	Ancillary	
Shape / Type	Circular				Exfiltration, in/hr	
Crest Elevation, ft	423					
Crest Length, ft	12.56					
Angle, deg						
Weir Coefficient, Cw	3.3					

m = Flows through Culvert, i = Independent



Bryant Pharmacy Detention Pond

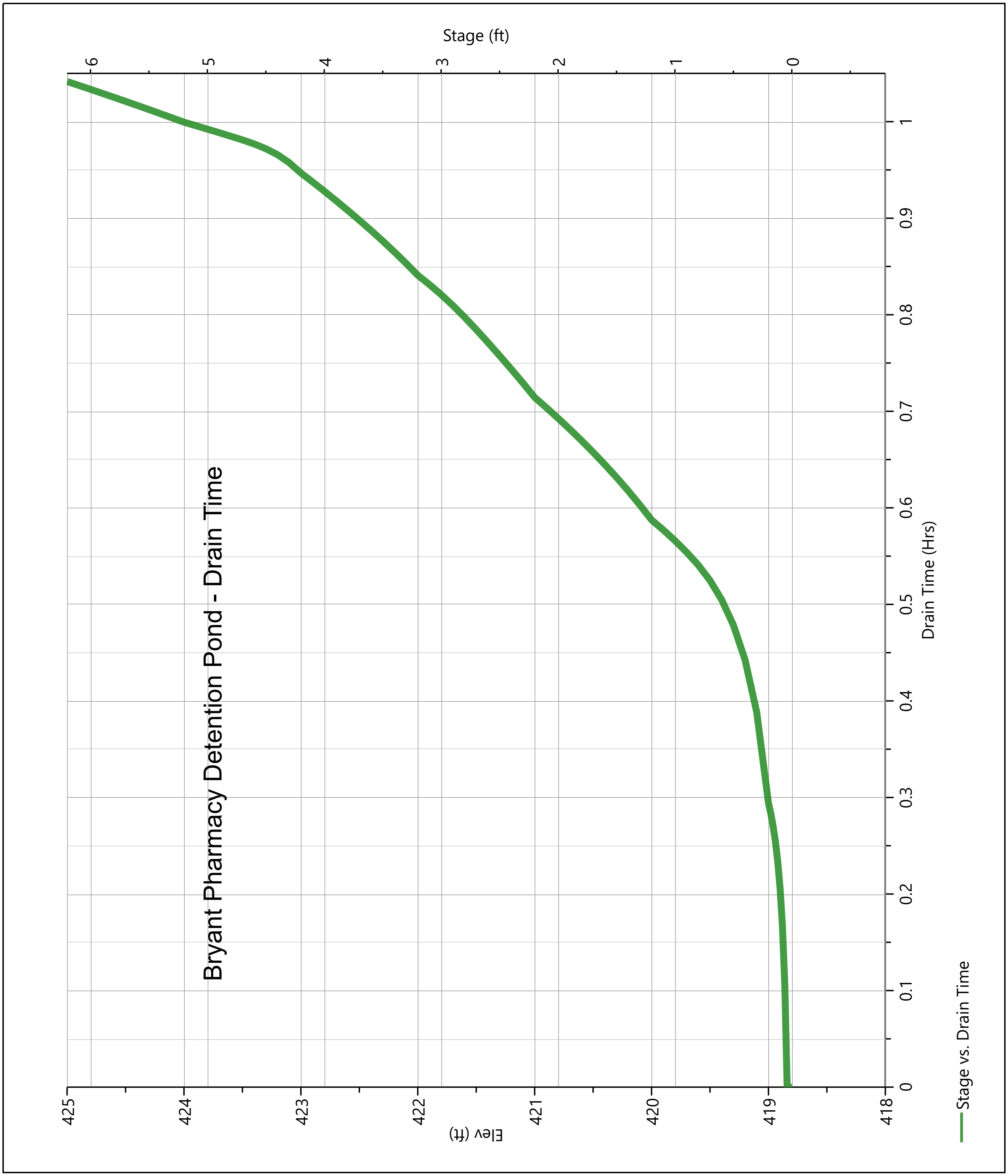
Stage-Storage-Discharge Summary

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	418.80	0.000	0.000	0.000	0.000		0.000							0.000
0.20	419.00	41.8	0.115 ic	0.115	0.000		0.000							0.115
1.20	420.00	615	1.597 ic	1.597	0.000		0.000							1.597
2.20	421.00	1,534	2.444 ic	2.444	0.000		0.000							2.444
3.20	422.00	2,857	3.914 ic	3.011	0.903		0.000							3.914
4.20	423.00	4,638	5.369 oc	3.469	1.900		0.000							5.369
5.20	424.00	6,935	17.95 ic	0.000	0.000		0.000							17.95
6.20	425.00	9,802	19.86 ic	0.000	0.000		0.000							19.86

Suffix key: ic = inlet control, oc = outlet control, s = submerged weir

Bryant Pharmacy Detention Pond

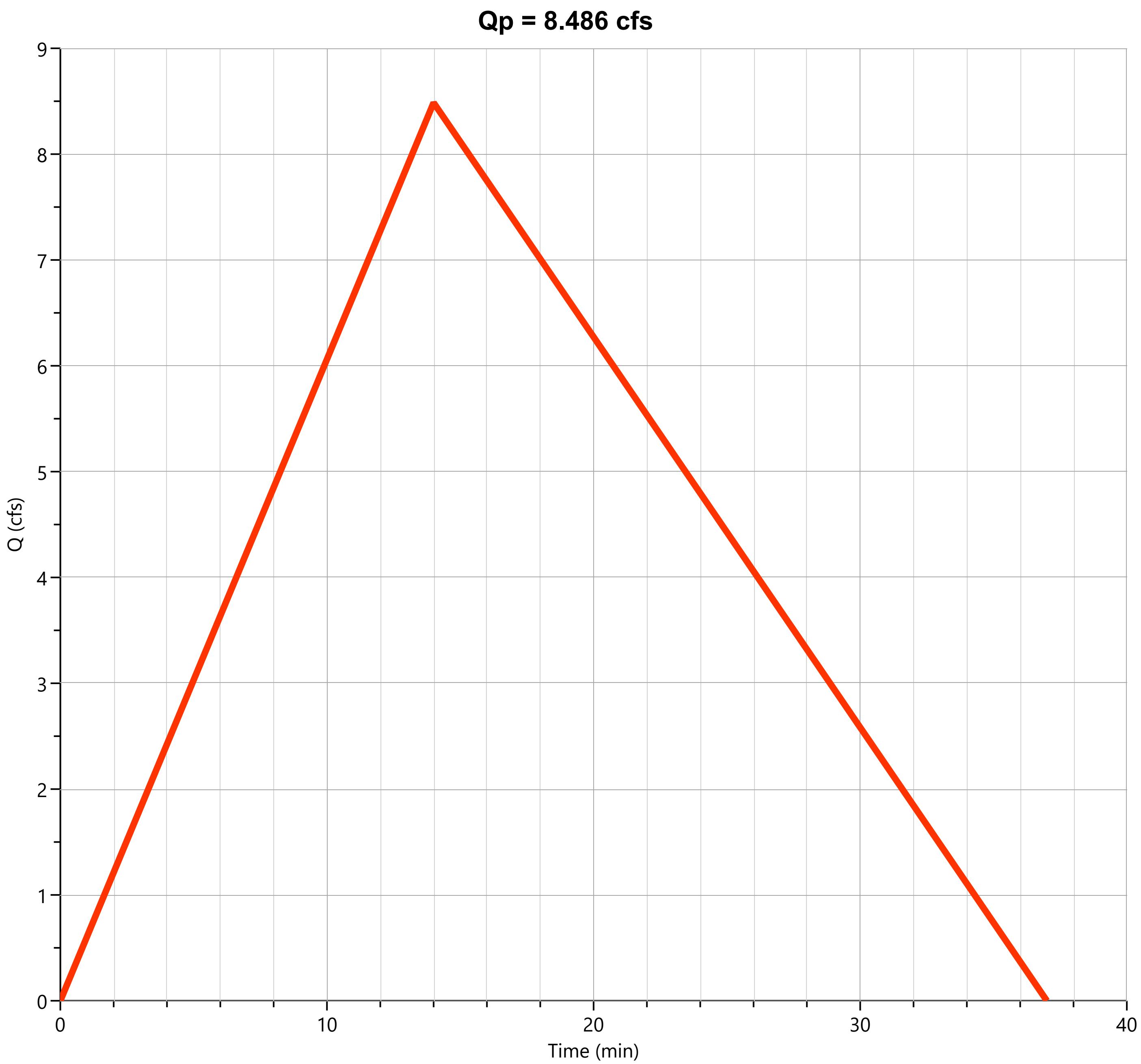
Pond Drawdown



Post-Dev Basin B

Hyd. No. 10

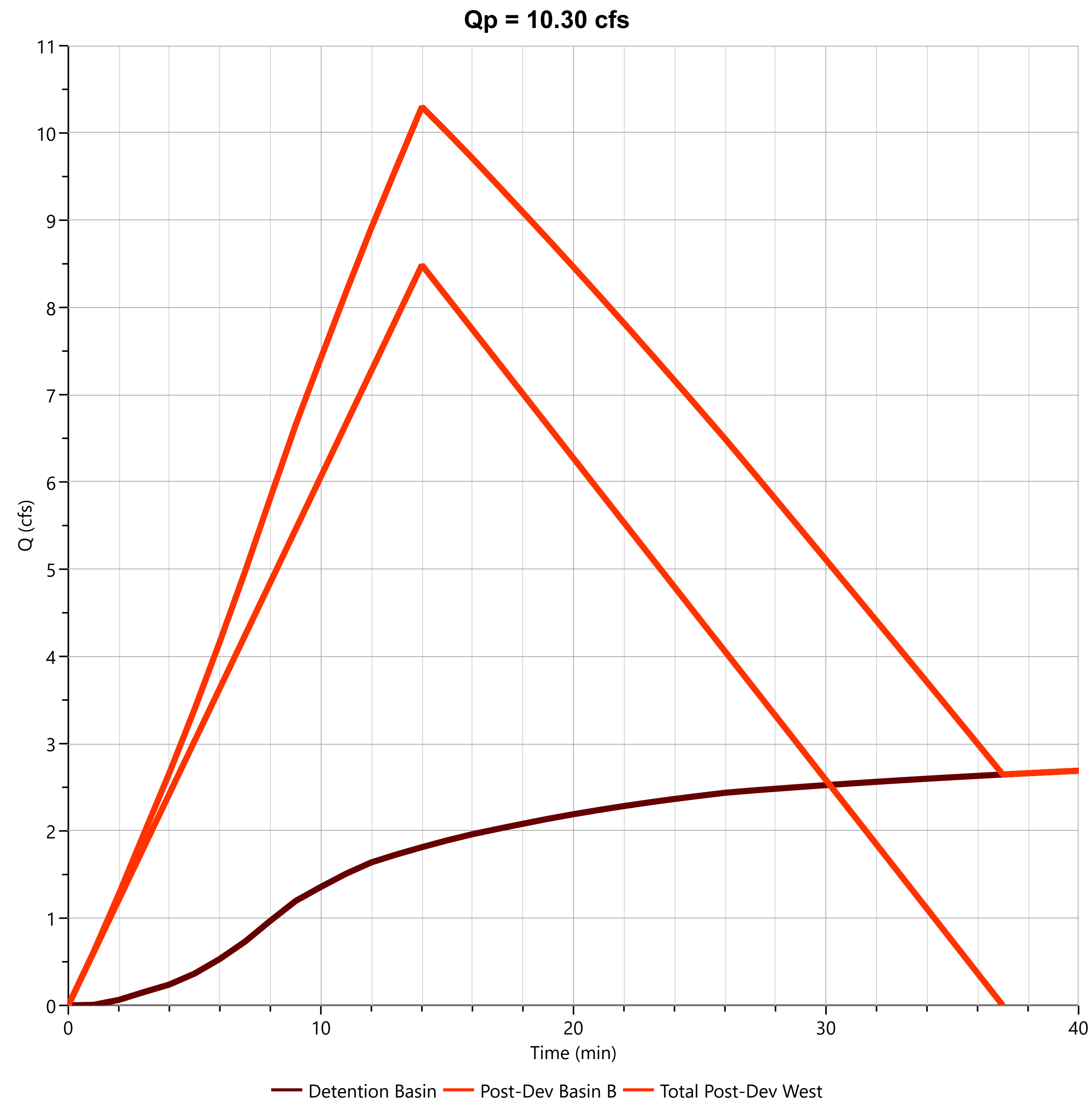
Hydrograph Type	= Rational	Peak Flow	= 8.486 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 9,516 cuft
Drainage Area	= 3.67 ac	Runoff Coeff.	= 0.60
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.85 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev West

Hyd. No. 11

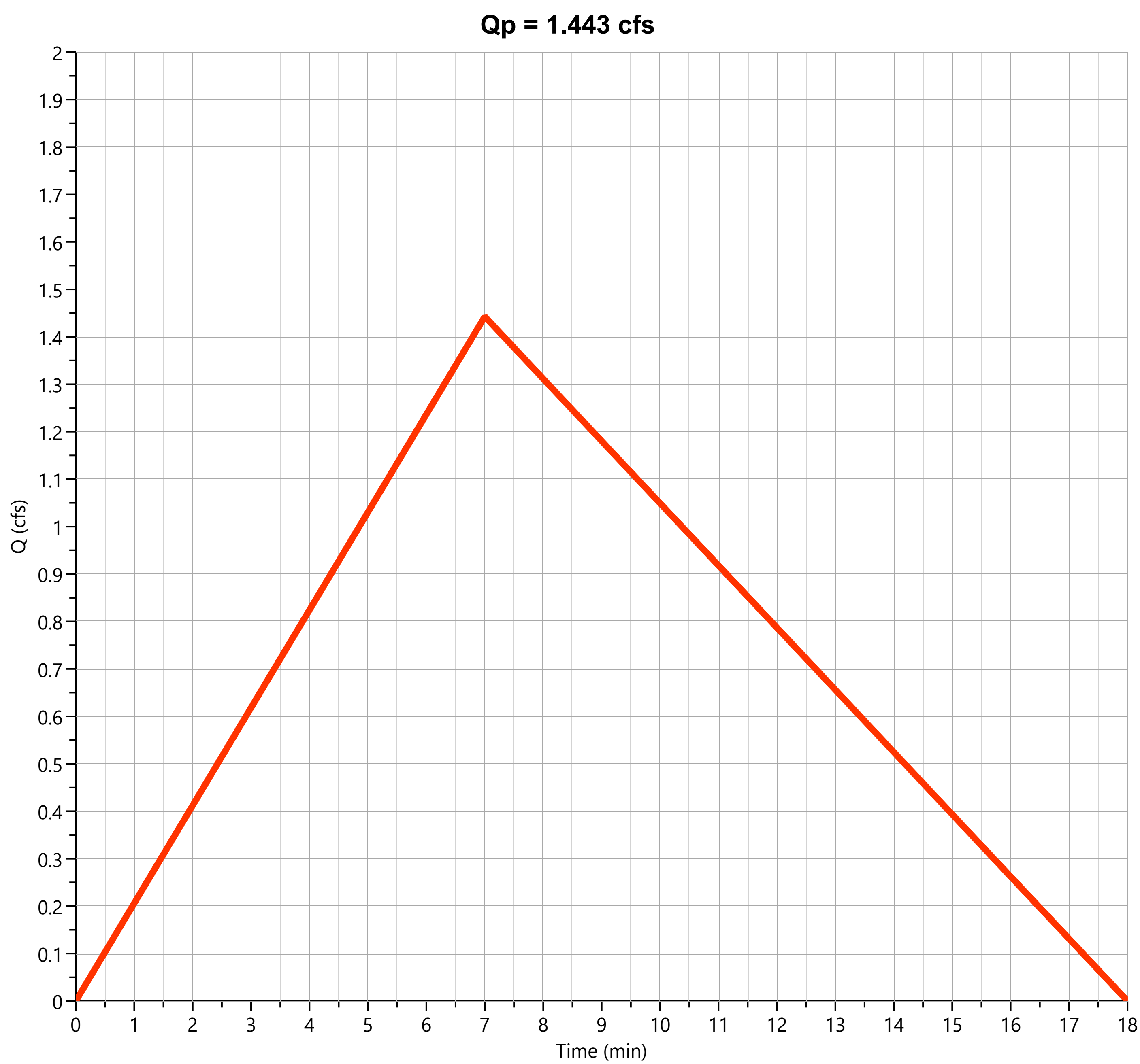
Hydrograph Type	= Junction	Peak Flow	= 10.30 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 17,149 cuft
Inflow Hydrographs	= 10	Total Contrib. Area	= 3.67 ac



Post-Dev Basin "C"

Hyd. No. 12

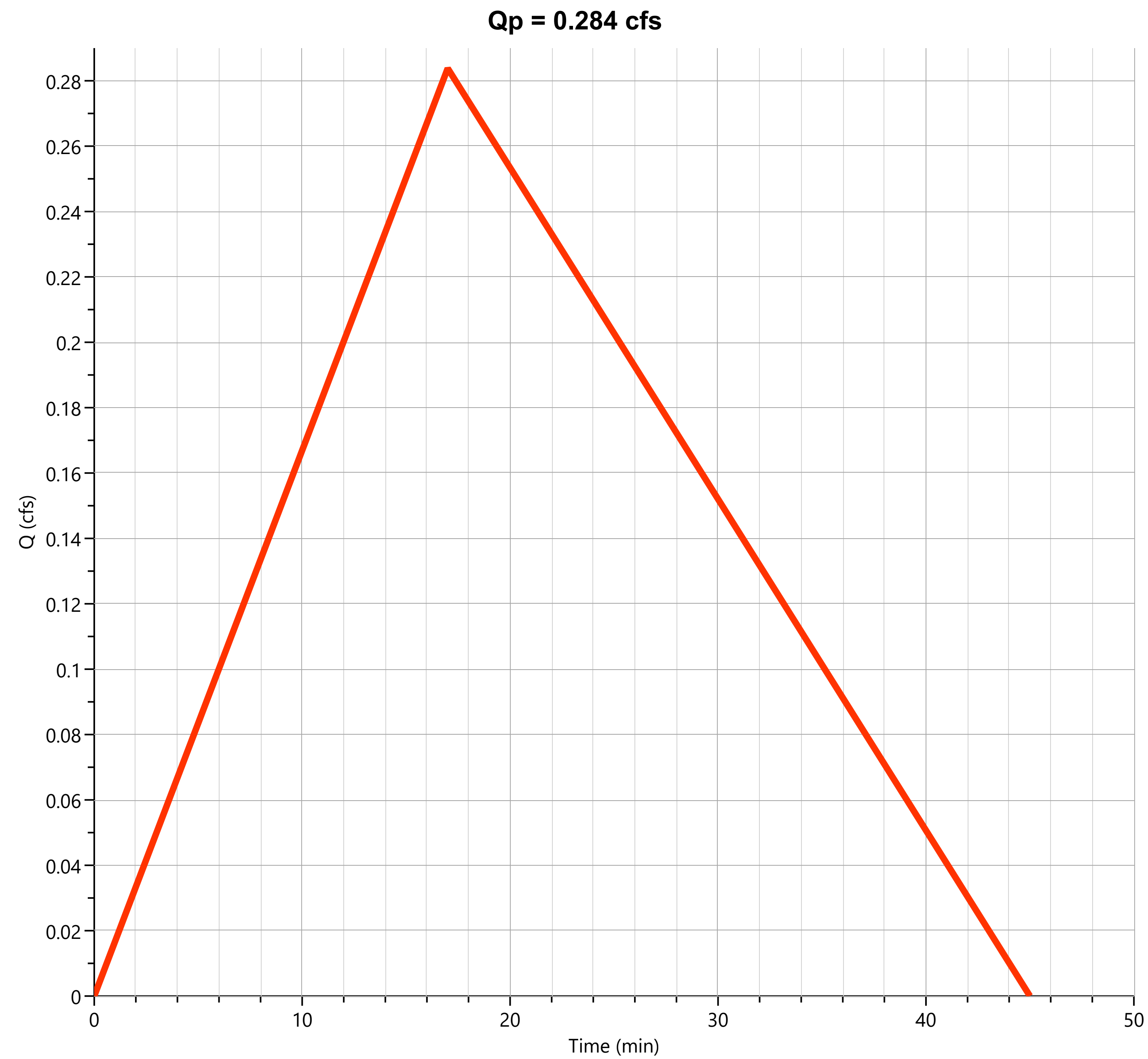
Hydrograph Type	= Rational	Peak Flow	= 1.443 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Runoff Volume	= 809 cuft
Drainage Area	= 0.38 ac	Runoff Coeff.	= 0.72
Tc Method	= TR55	Time of Conc. (Tc)	= 7.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.27 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin "D"

Hyd. No. 13

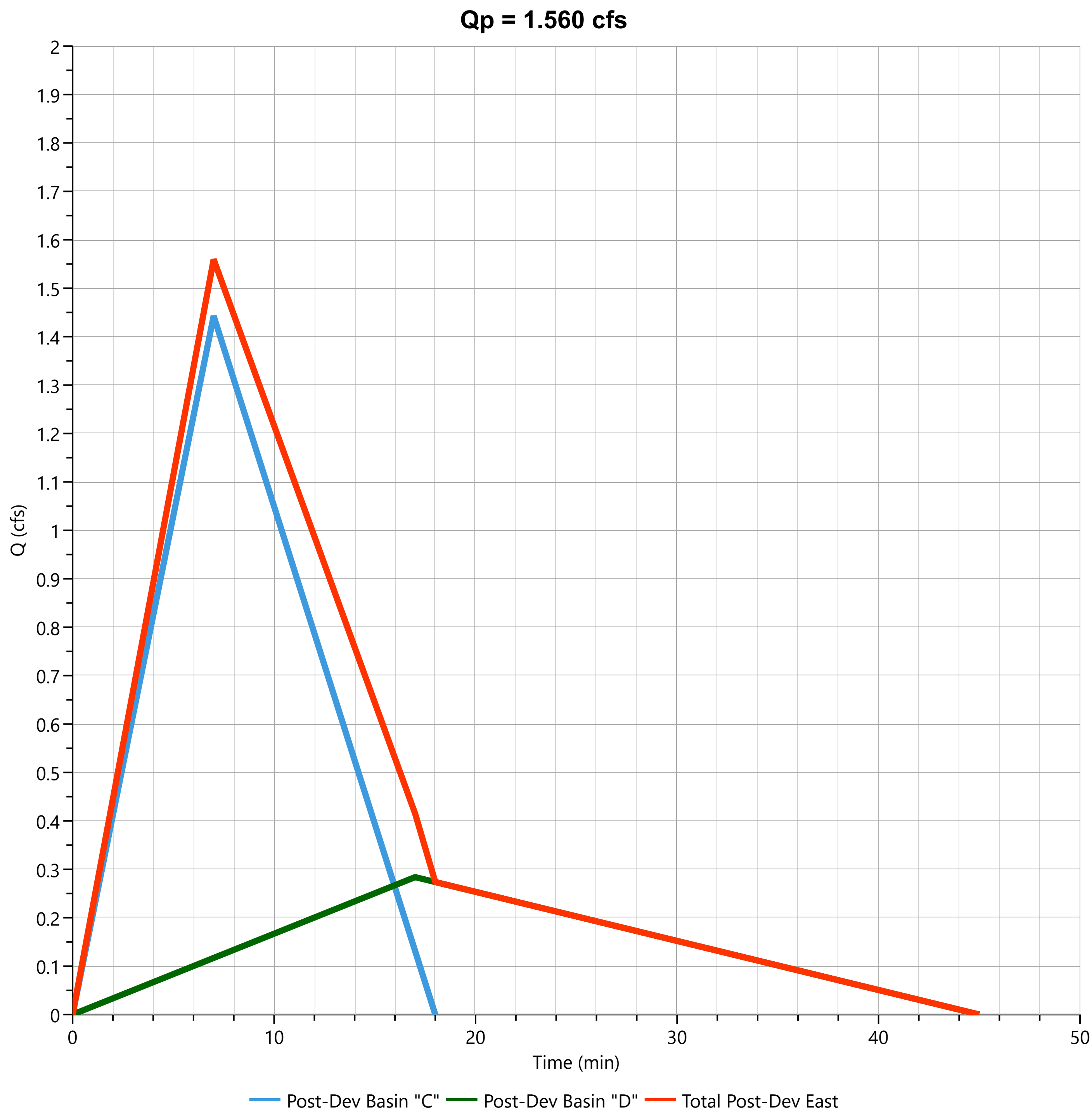
Hydrograph Type	= Rational	Peak Flow	= 0.284 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 386 cuft
Drainage Area	= 0.12 ac	Runoff Coeff.	= 0.67
Tc Method	= TR55	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.53 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev East

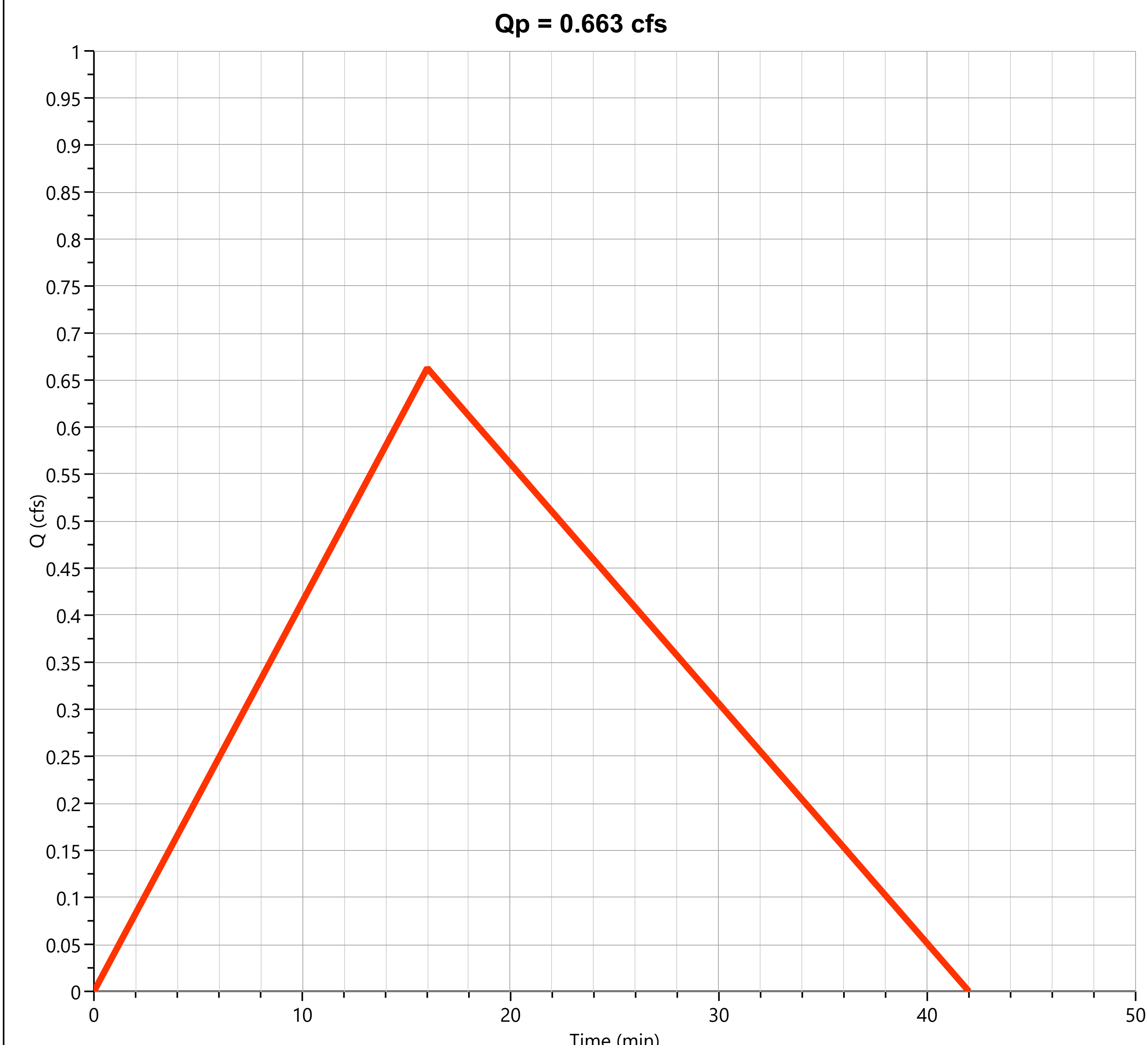
Hyd. No. 14

Hydrograph Type	= Junction	Peak Flow	= 1.560 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,162 cuft
Inflow Hydrographs	= 12, 13	Total Contrib. Area	= 0.5 ac



Post-Dev Basin "E" Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 0.663 cfs
Storm Frequency	= 2-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 849 cuft
Drainage Area	= 0.29 ac	Runoff Coeff.	= 0.63
Tc Method	= TR55	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



Hydrograph 10-yr Summary

Hydrology Studio v 3.0.0.39

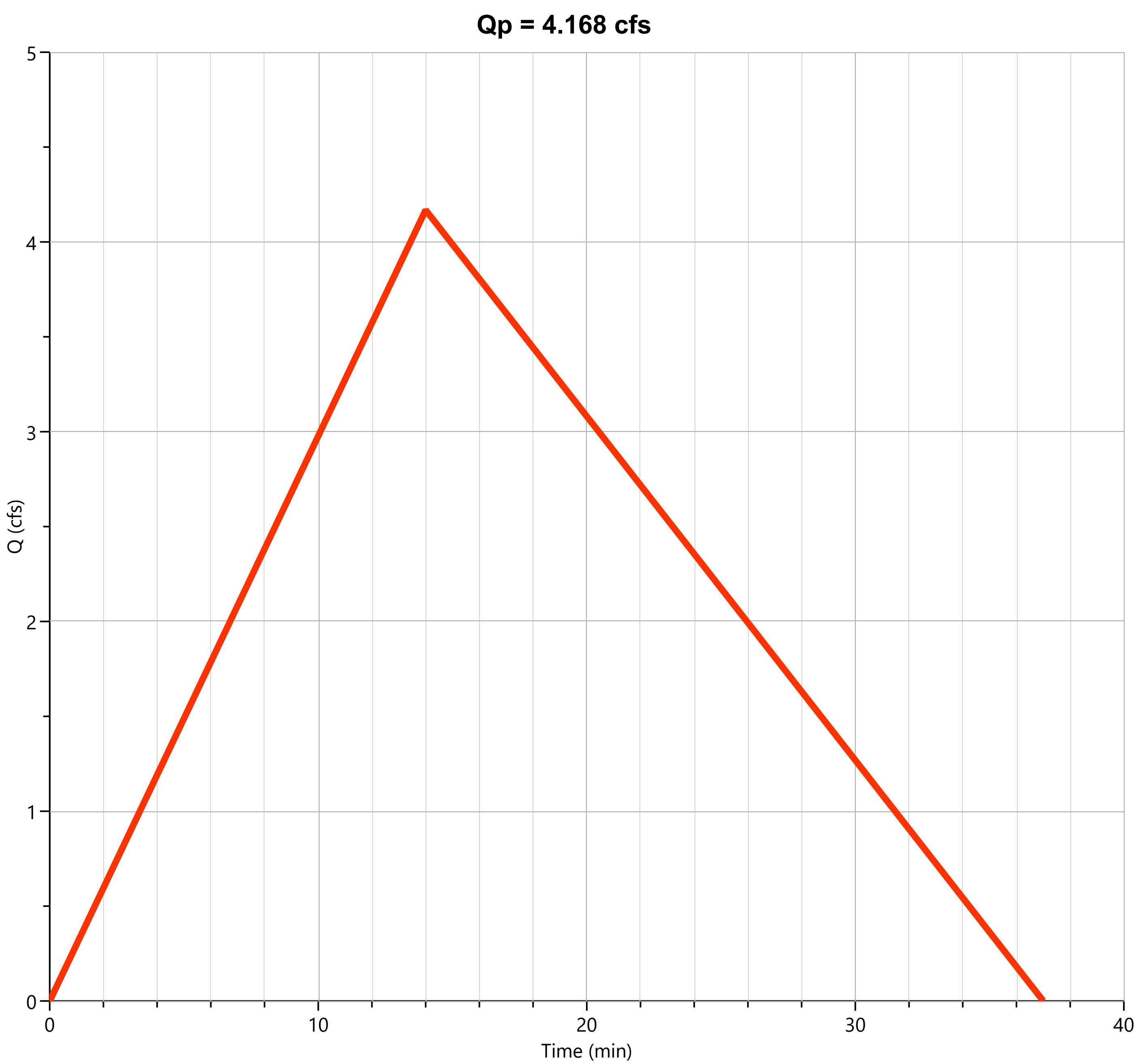
Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025

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"	4.168	0.23	4,674	----		
2	Rational	Pre-Dev Basin "B"	9.942	0.23	11,149	----		
3	Junction	Total Pre-Dev West	14.11	0.23	15,662	1, 2		
4	Rational	Pre-Dev Basin "C"	1.236	0.18	1,089	----		
5	Rational	Pre-Dev Basin "D"	1.353	0.25	1,626	----		
6	Junction	Total Pre-Dev East	2.314	0.25	2,699	4, 5		
7	Rational	Pre-Dev Basin "E"	1.314	0.32	1,999	----		
8	Mod Rational	Post-Dev Basin A	4.229	0.20	10,404	----		
9	Pond Route	Detention Basin	3.972	0.70	10,402	8	422.03	2,910
10	Rational	Post-Dev Basin B	11.38	0.23	12,764	----		
11	Junction	Total Post-Dev West	13.53	0.23	23,036	9, 10		
12	Rational	Post-Dev Basin "C"	1.931	0.12	1,083	----		
13	Rational	Post-Dev Basin "D"	0.381	0.28	519	----		
14	Junction	Total Post-Dev East	2.088	0.12	1,557	12, 13		
15	Rational	Post-Dev Basin "E"	0.889	0.27	1,140	----		

Pre-Dev Basin "A"

Hyd. No. 1

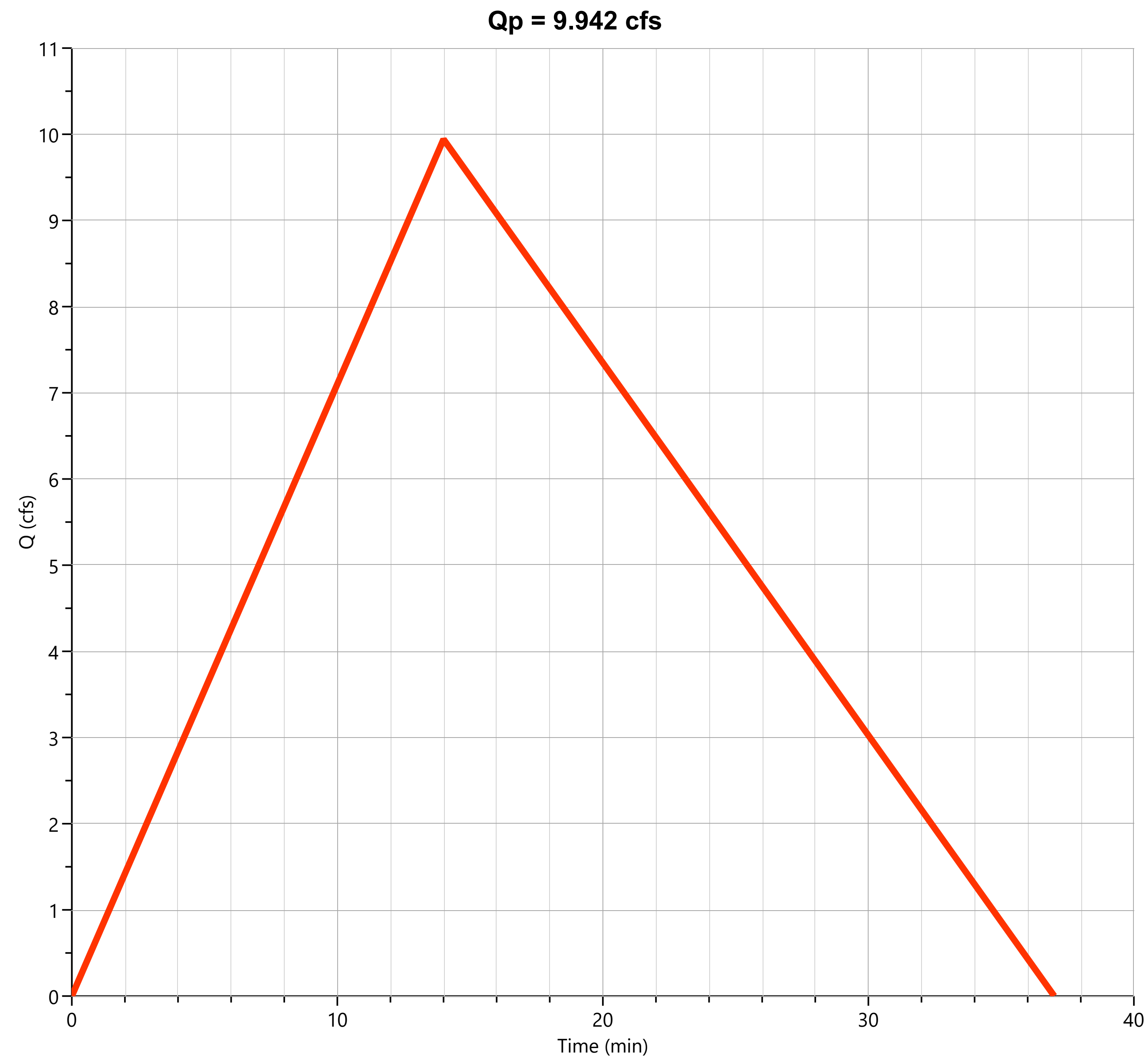
Hydrograph Type	= Rational	Peak Flow	= 4.168 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 4,674 cuft
Drainage Area	= 1.44 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.17 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "B"

Hyd. No. 2

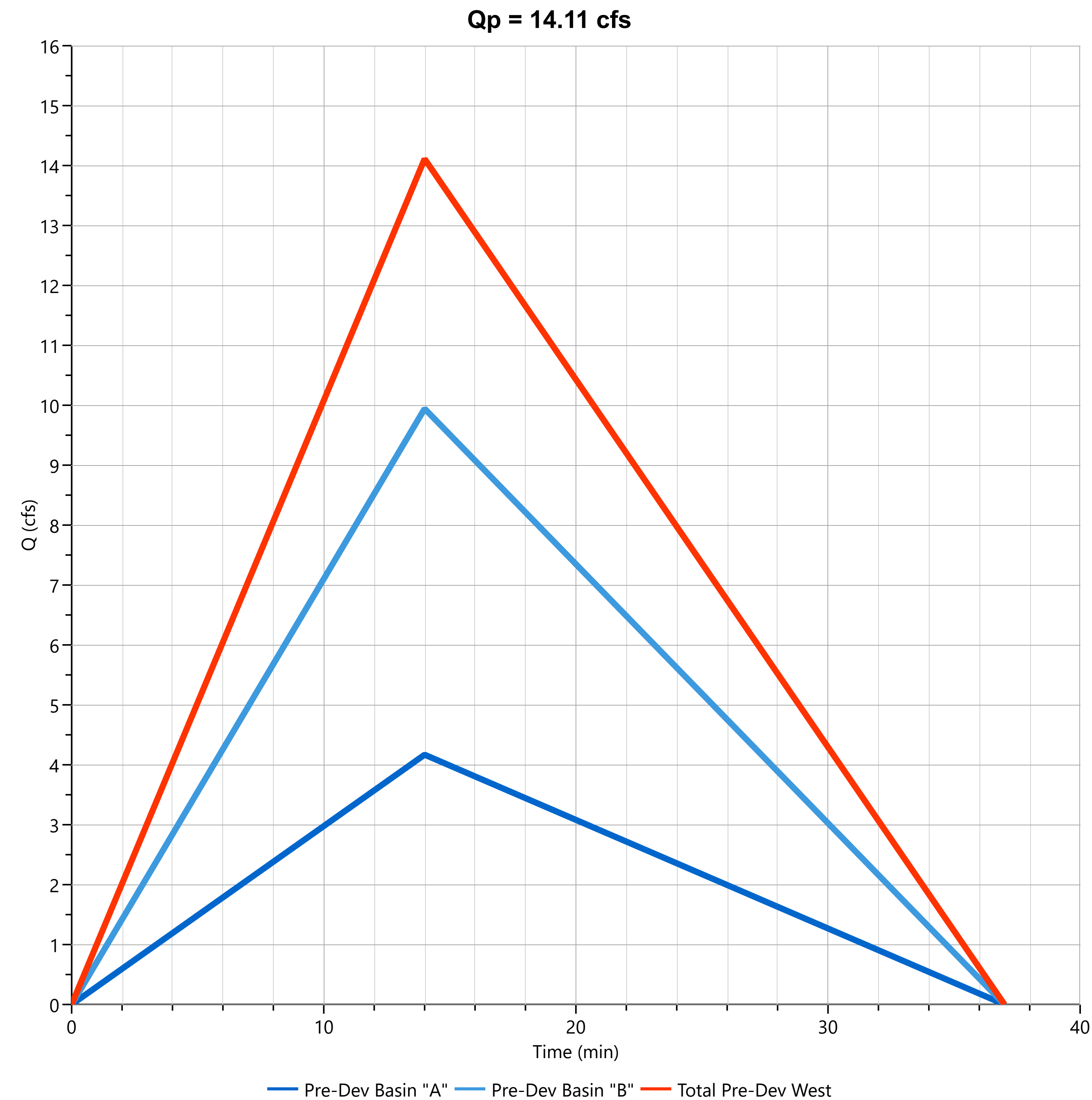
Hydrograph Type	= Rational	Peak Flow	= 9.942 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 11,149 cuft
Drainage Area	= 3.26 ac	Runoff Coeff.	= 0.59
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.17 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev West

Hyd. No. 3

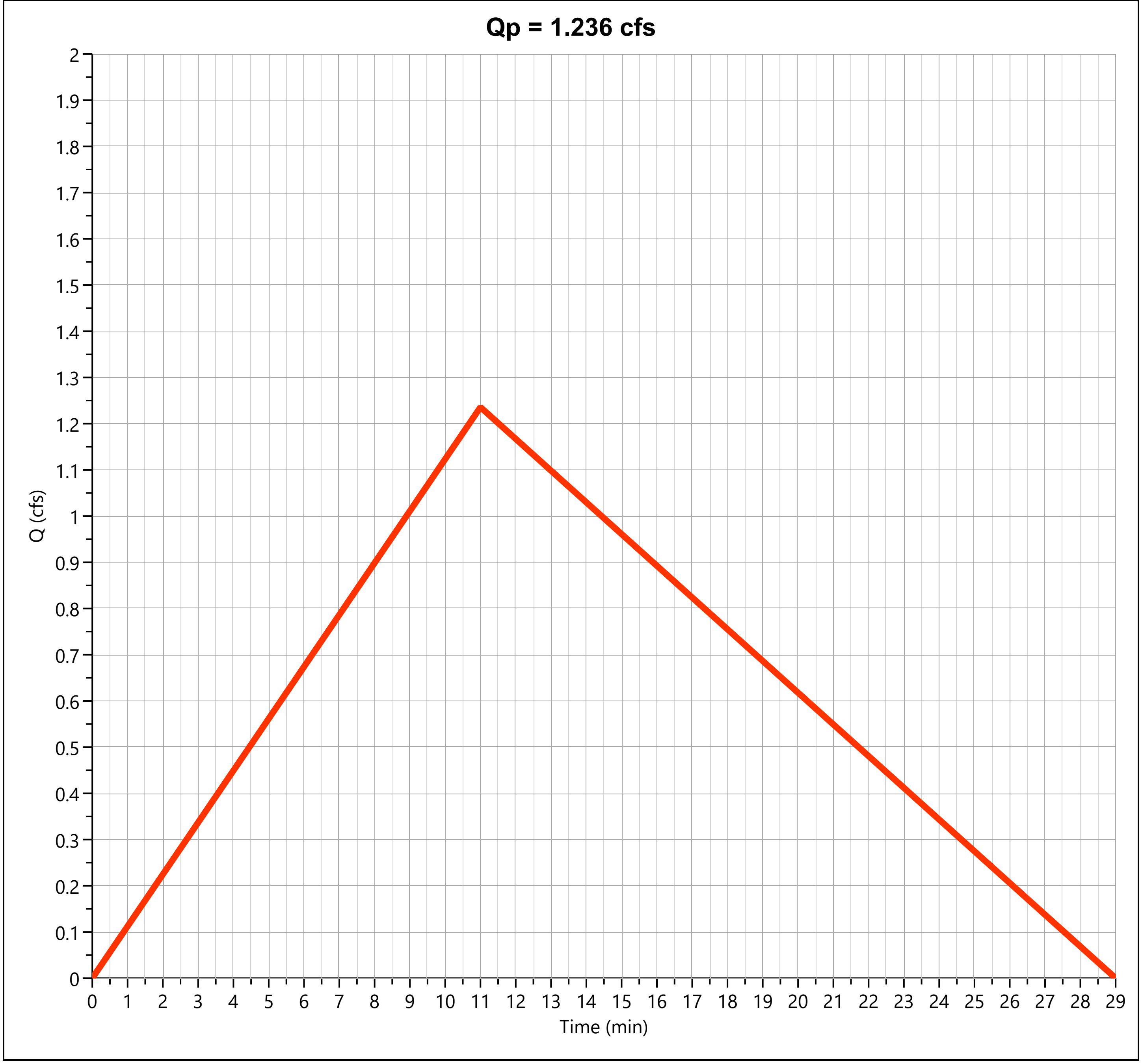
Hydrograph Type	= Junction	Peak Flow	= 14.11 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 15,662 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 4.7 ac



Pre-Dev Basin "C"

Hyd. No. 4

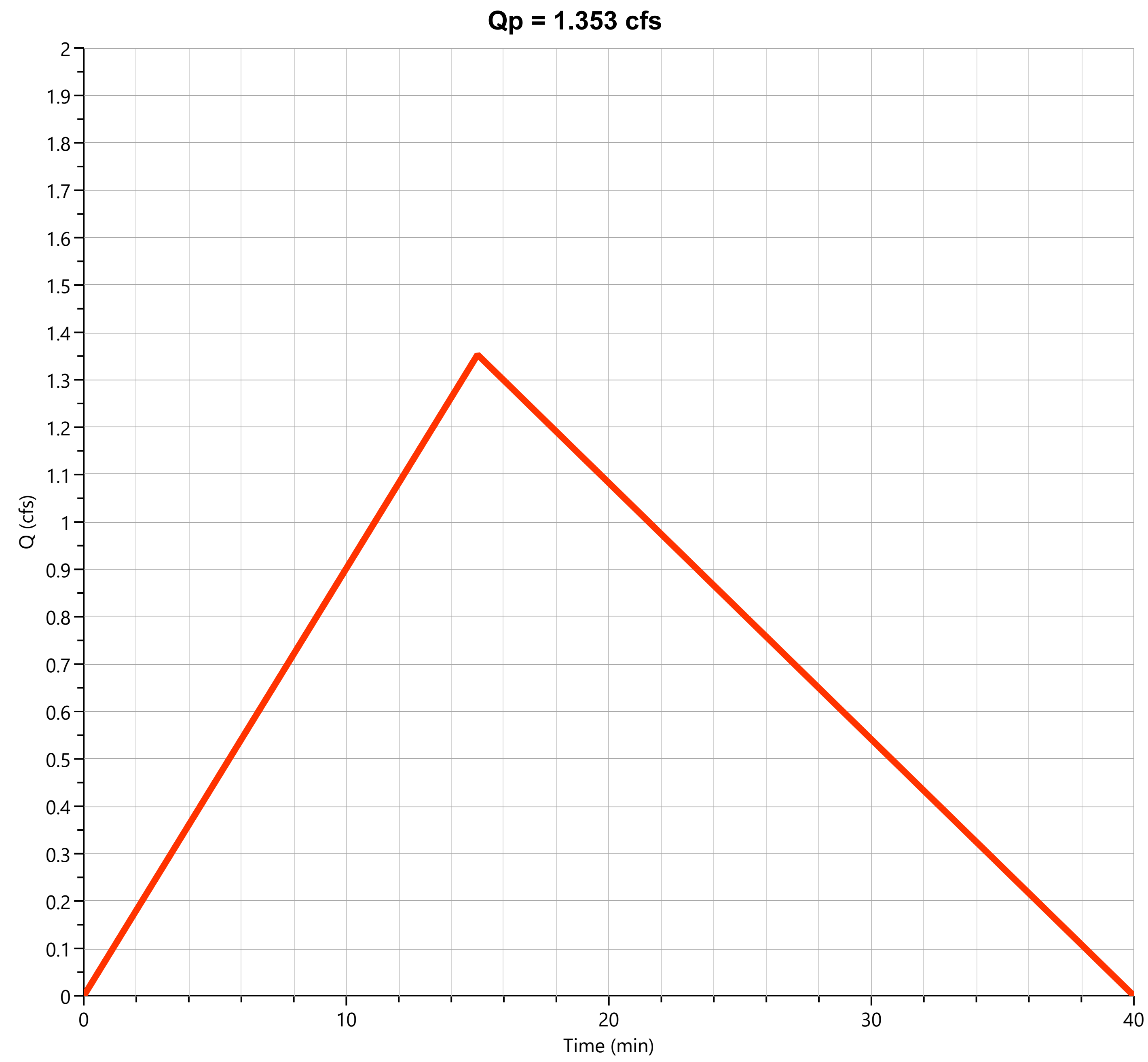
Hydrograph Type	= Rational	Peak Flow	= 1.236 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 1,089 cuft
Drainage Area	= 0.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.76 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "D"

Hyd. No. 5

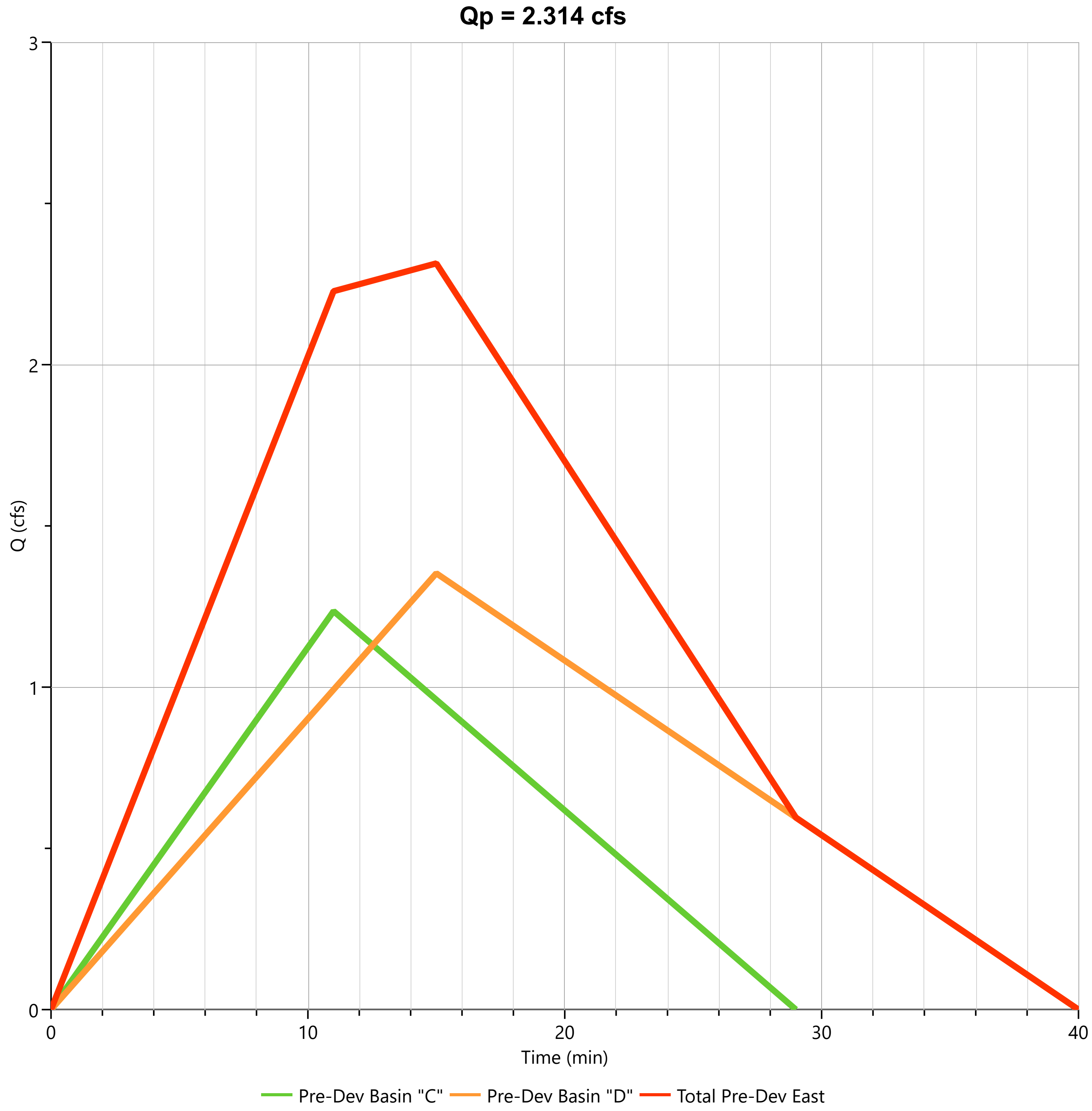
Hydrograph Type	= Rational	Peak Flow	= 1.353 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 1,626 cuft
Drainage Area	= 0.5 ac	Runoff Coeff.	= 0.54
Tc Method	= TR55	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.01 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev East

Hyd. No. 6

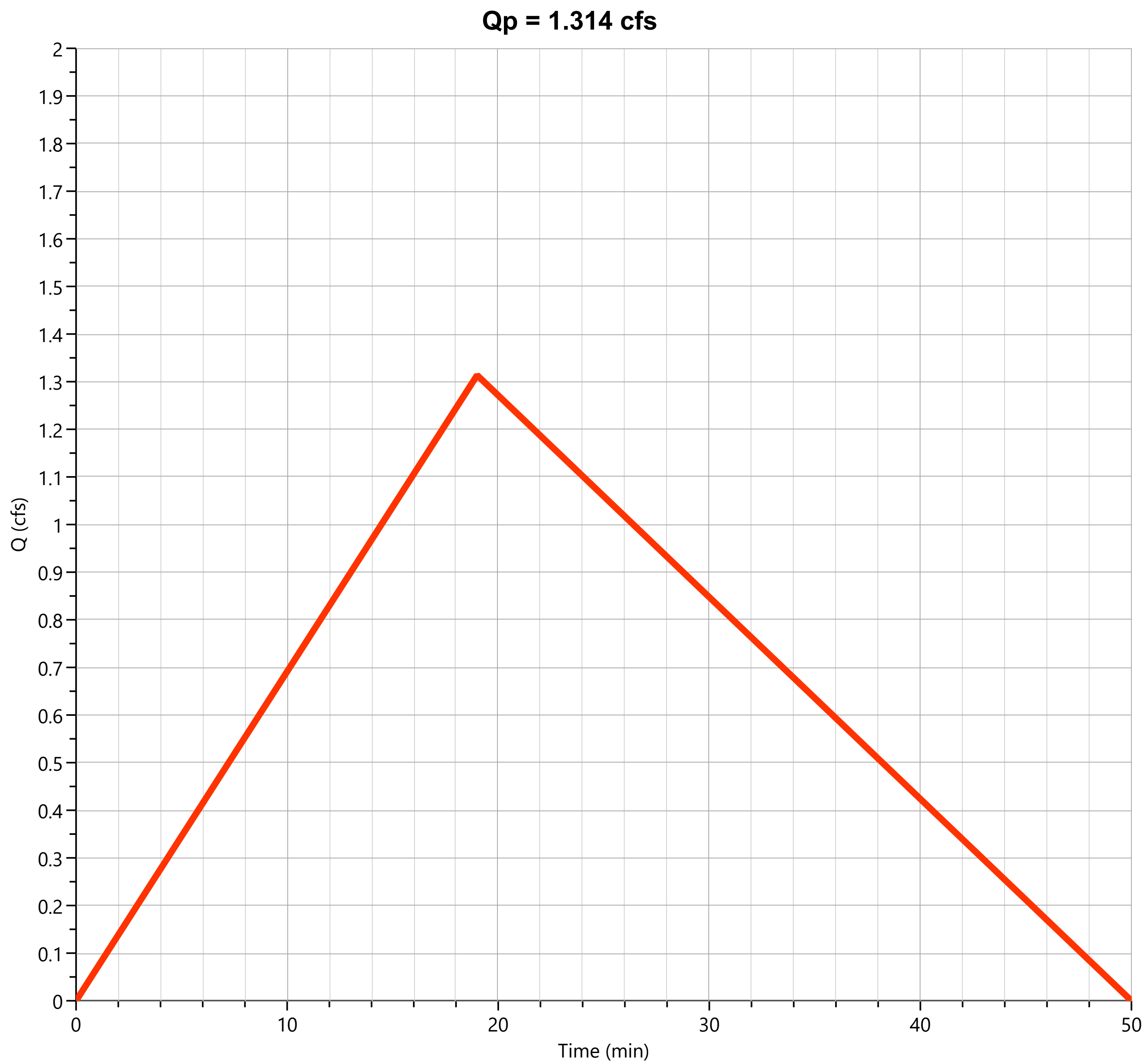
Hydrograph Type	= Junction	Peak Flow	= 2.314 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Hydrograph Volume	= 2,699 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.83 ac



Pre-Dev Basin "E"

Hyd. No. 7

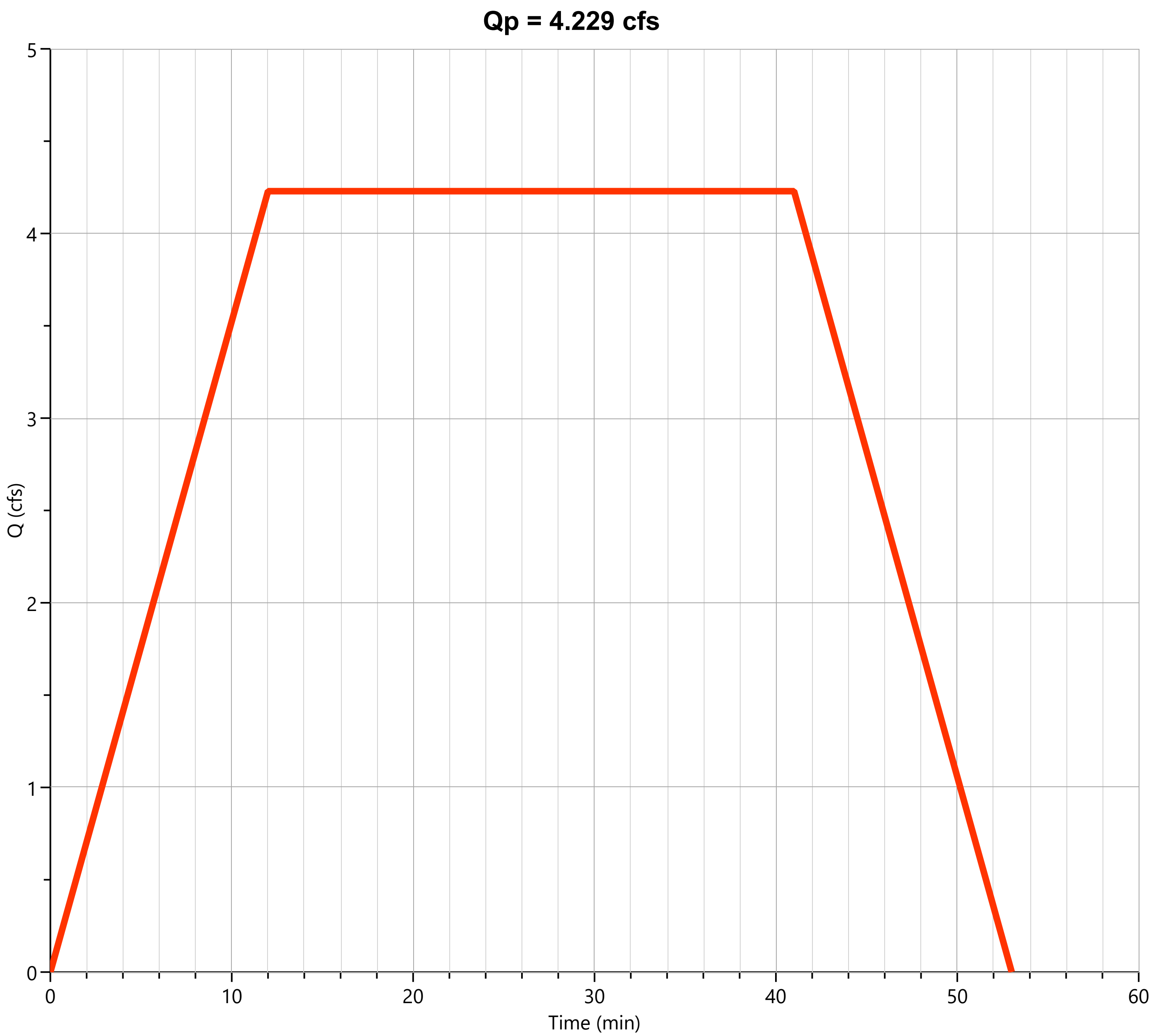
Hydrograph Type	= Rational	Peak Flow	= 1.314 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.32 hrs
Time Interval	= 1 min	Runoff Volume	= 1,999 cuft
Drainage Area	= 0.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55	Time of Conc. (Tc)	= 19.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.51 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin A

Hyd. No. 8

Hydrograph Type	= Mod Rational	Peak Flow	= 4.229 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 10,404 cuft
Drainage Area	= 1.56 ac	Runoff Coeff.	= 0.85
Tc Method	= User	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.19 in/hr
Freq. Corr. Factor	= 1.00	Storm Duration	= 3.42 x Tc
Target Q	= 0.000 cfs	Required Storage	= 0.000 cuft



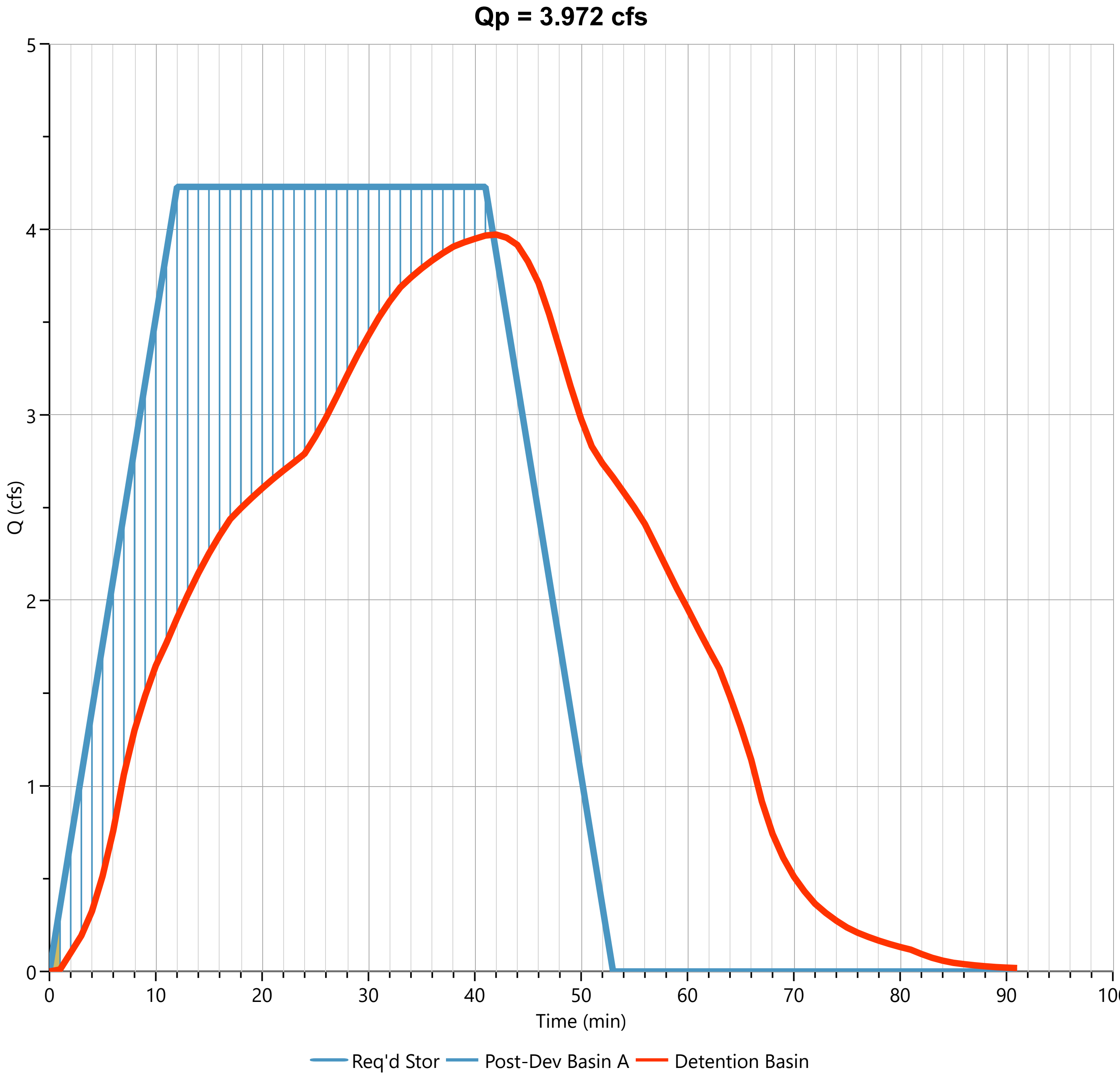
Detention Basin

Hyd. No. 9

Hydrograph Type	= Pond Route	Peak Flow	= 3.972 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.70 hrs
Time Interval	= 1 min	Hydrograph Volume	= 10,402 cuft
Inflow Hydrograph	= 8 - Post-Dev Basin A	Max. Elevation	= 422.03 ft
Pond Name	= Bryant Pharmacy Detention Pond	Max. Storage	= 2,910 cuft

Pond Routing by Storage Indication Method

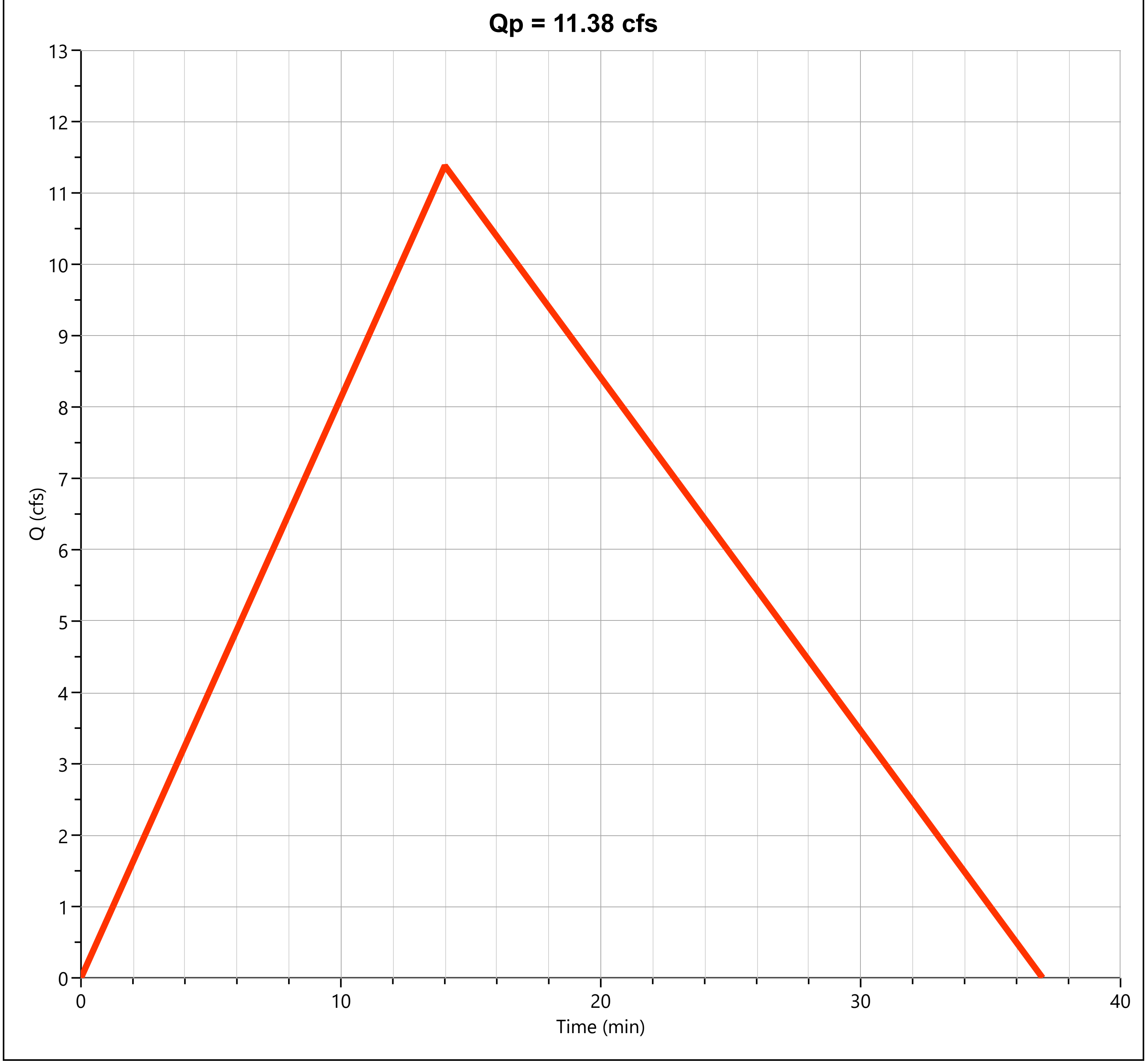
Center of mass detention time = 11 min



Post-Dev Basin B

Hyd. No. 10

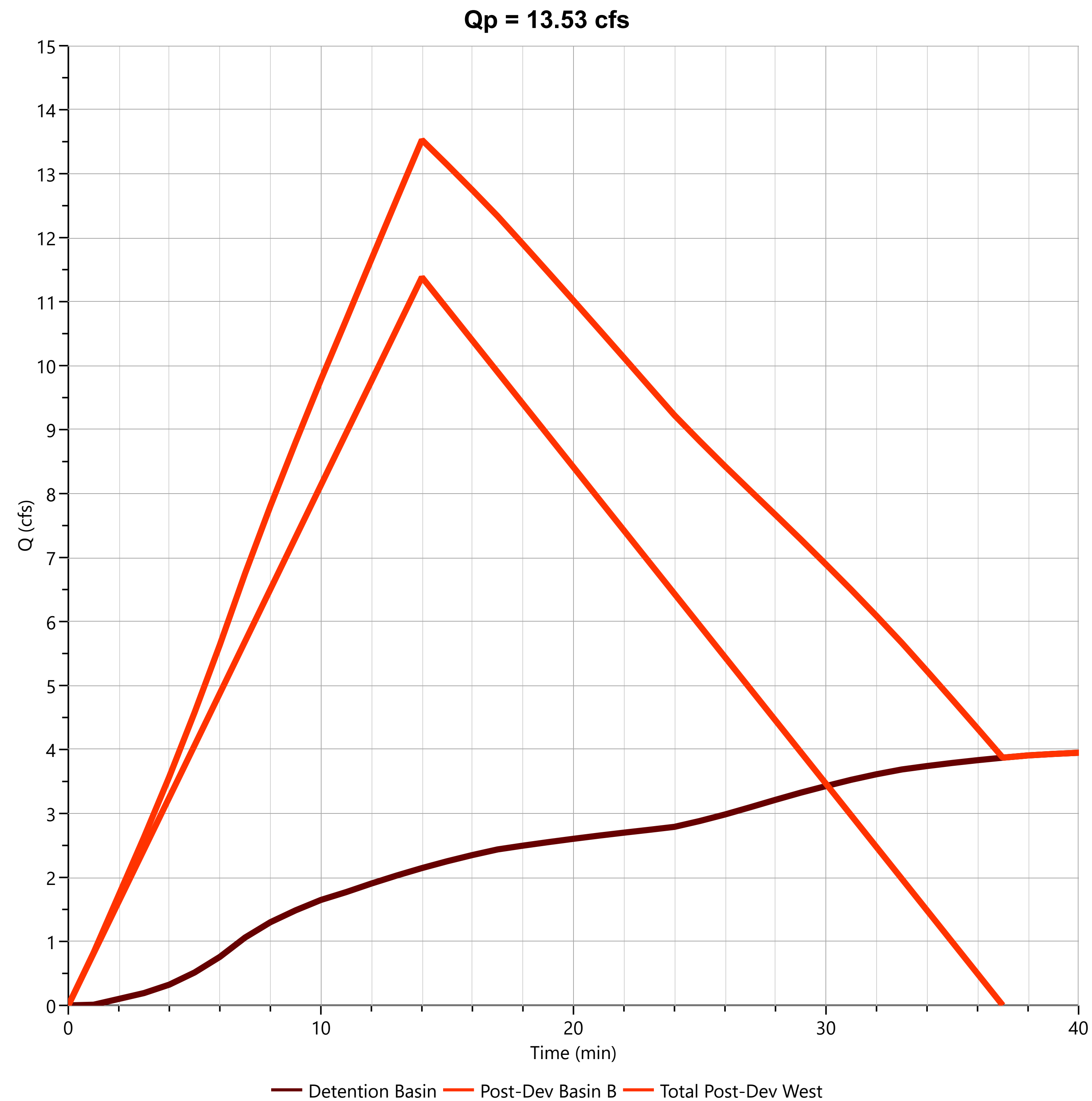
Hydrograph Type	= Rational	Peak Flow	= 11.38 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 12,764 cuft
Drainage Area	= 3.67 ac	Runoff Coeff.	= 0.60
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.17 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev West

Hyd. No. 11

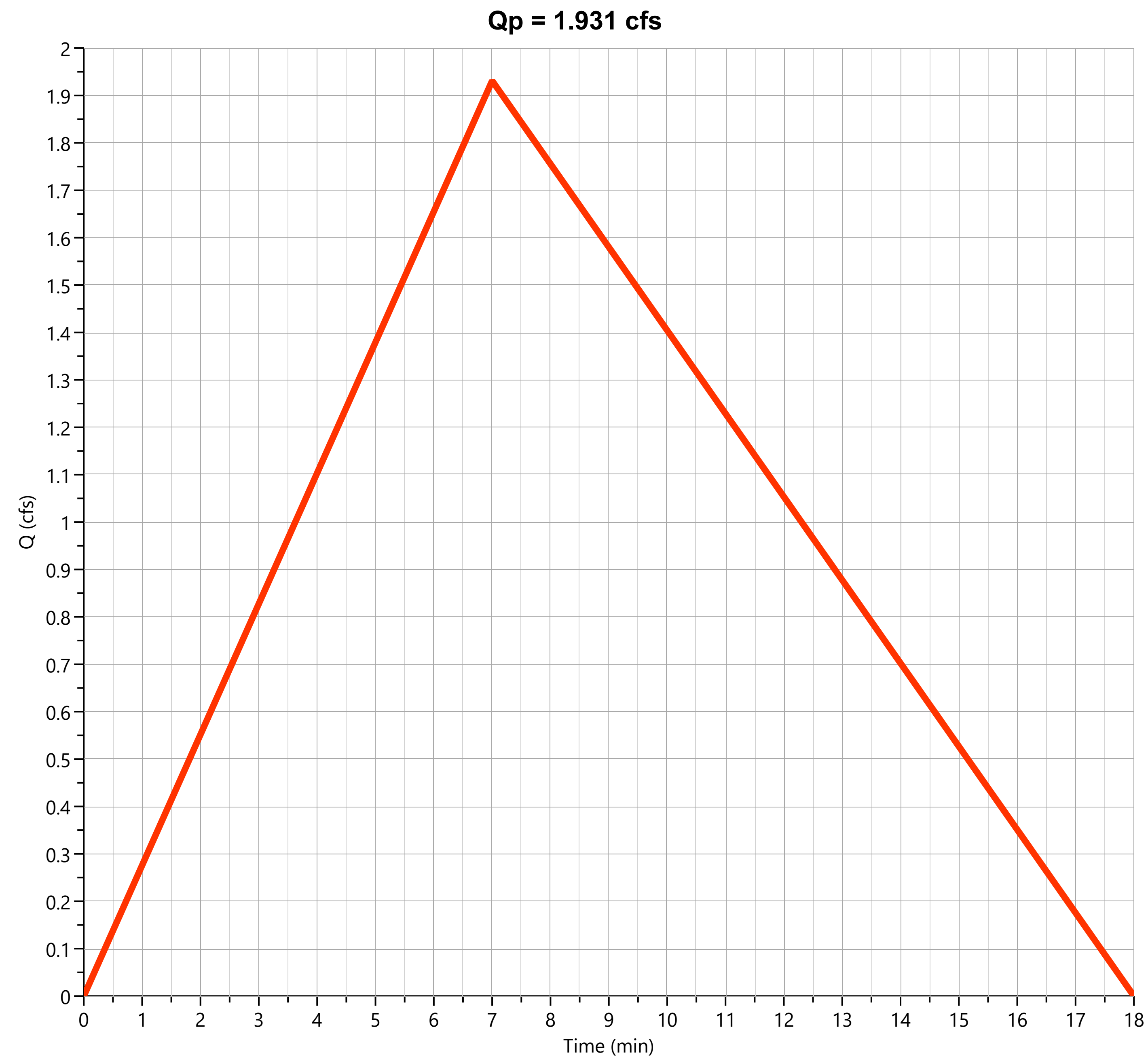
Hydrograph Type	= Junction	Peak Flow	= 13.53 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 23,036 cuft
Inflow Hydrographs	= 10	Total Contrib. Area	= 3.67 ac



Post-Dev Basin "C"

Hyd. No. 12

Hydrograph Type	= Rational	Peak Flow	= 1.931 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Runoff Volume	= 1,083 cuft
Drainage Area	= 0.38 ac	Runoff Coeff.	= 0.72
Tc Method	= TR55	Time of Conc. (Tc)	= 7.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.06 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67

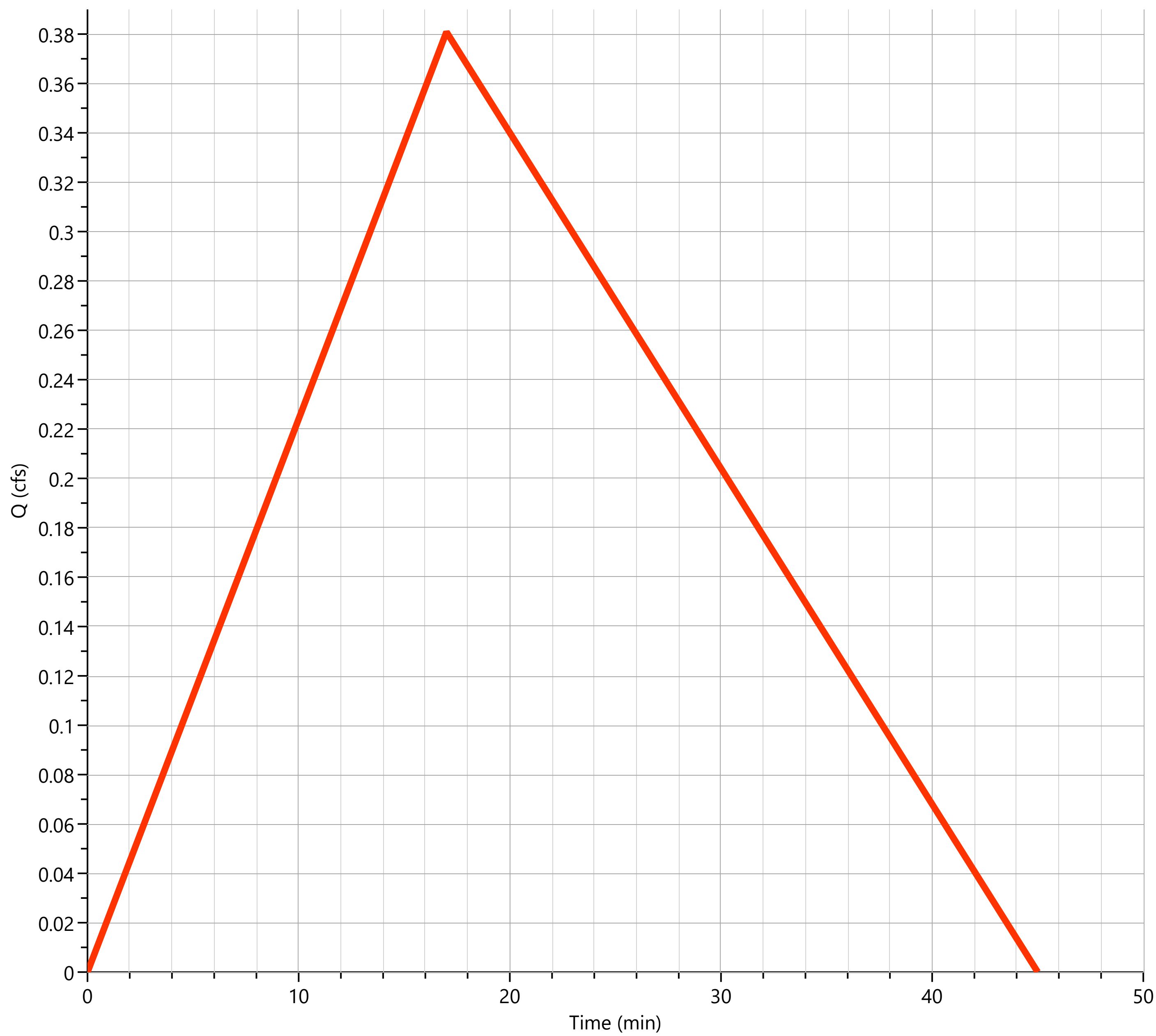


Post-Dev Basin "D"

Hyd. No. 13

Hydrograph Type	= Rational	Peak Flow	= 0.381 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 519 cuft
Drainage Area	= 0.12 ac	Runoff Coeff.	= 0.67
Tc Method	= TR55	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

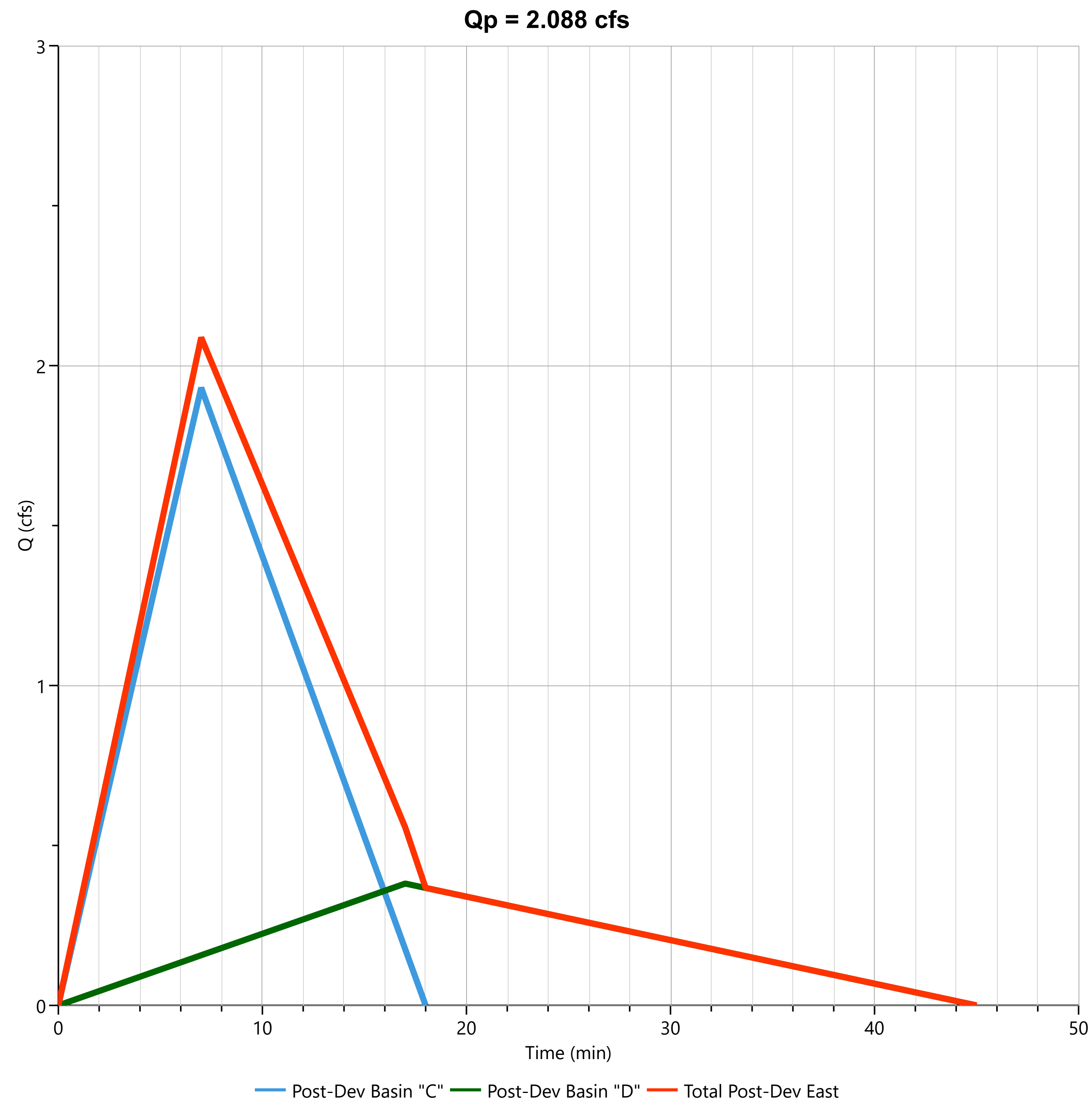
Qp = 0.381 cfs



Total Post-Dev East

Hyd. No. 14

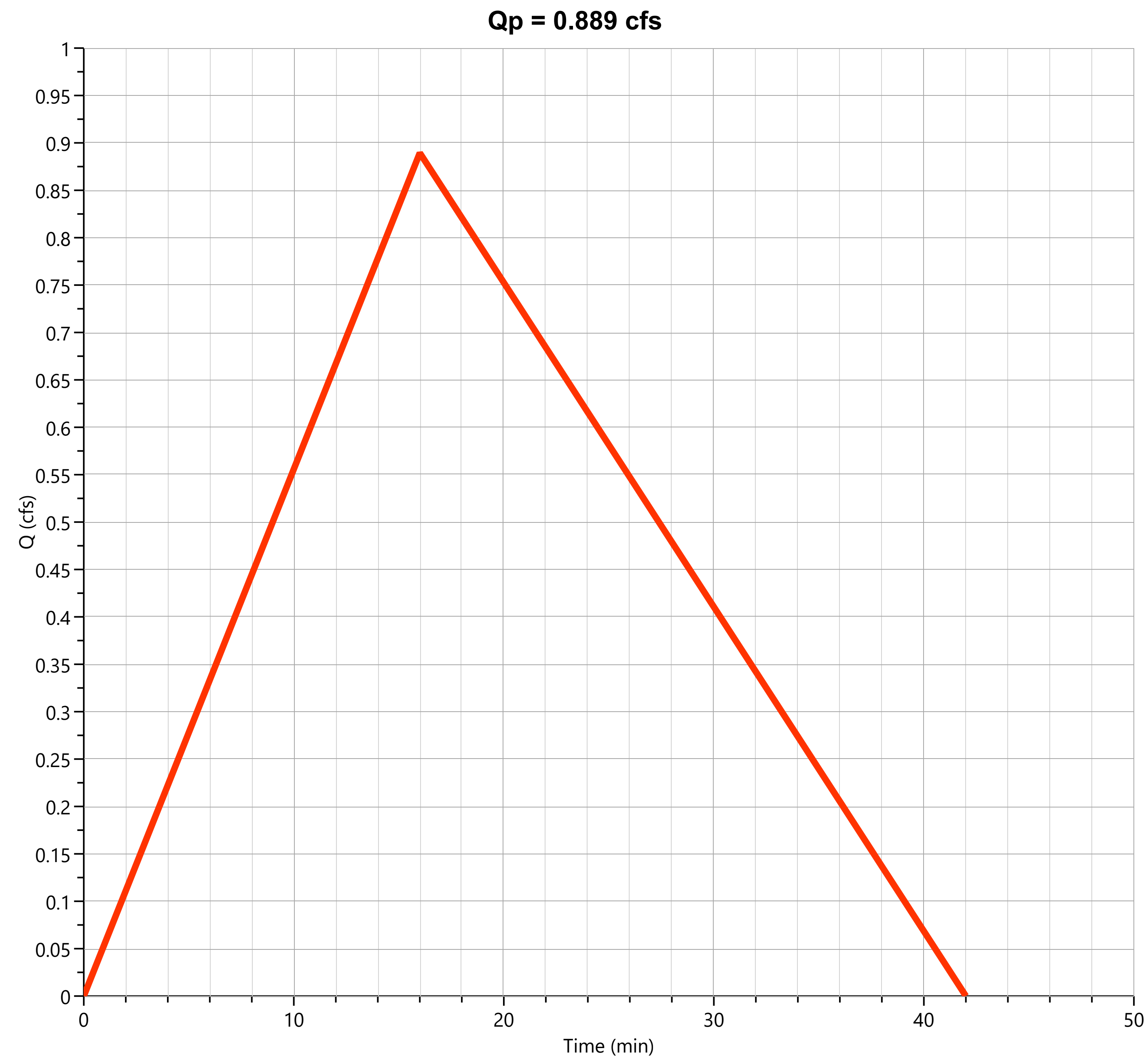
Hydrograph Type	= Junction	Peak Flow	= 2.088 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,557 cuft
Inflow Hydrographs	= 12, 13	Total Contrib. Area	= 0.5 ac



Post-Dev Basin "E"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 0.889 cfs
Storm Frequency	= 10-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 1,140 cuft
Drainage Area	= 0.29 ac	Runoff Coeff.	= 0.63
Tc Method	= TR55	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



Hydrograph 25-yr Summary

Hydrology Studio v 3.0.0.39

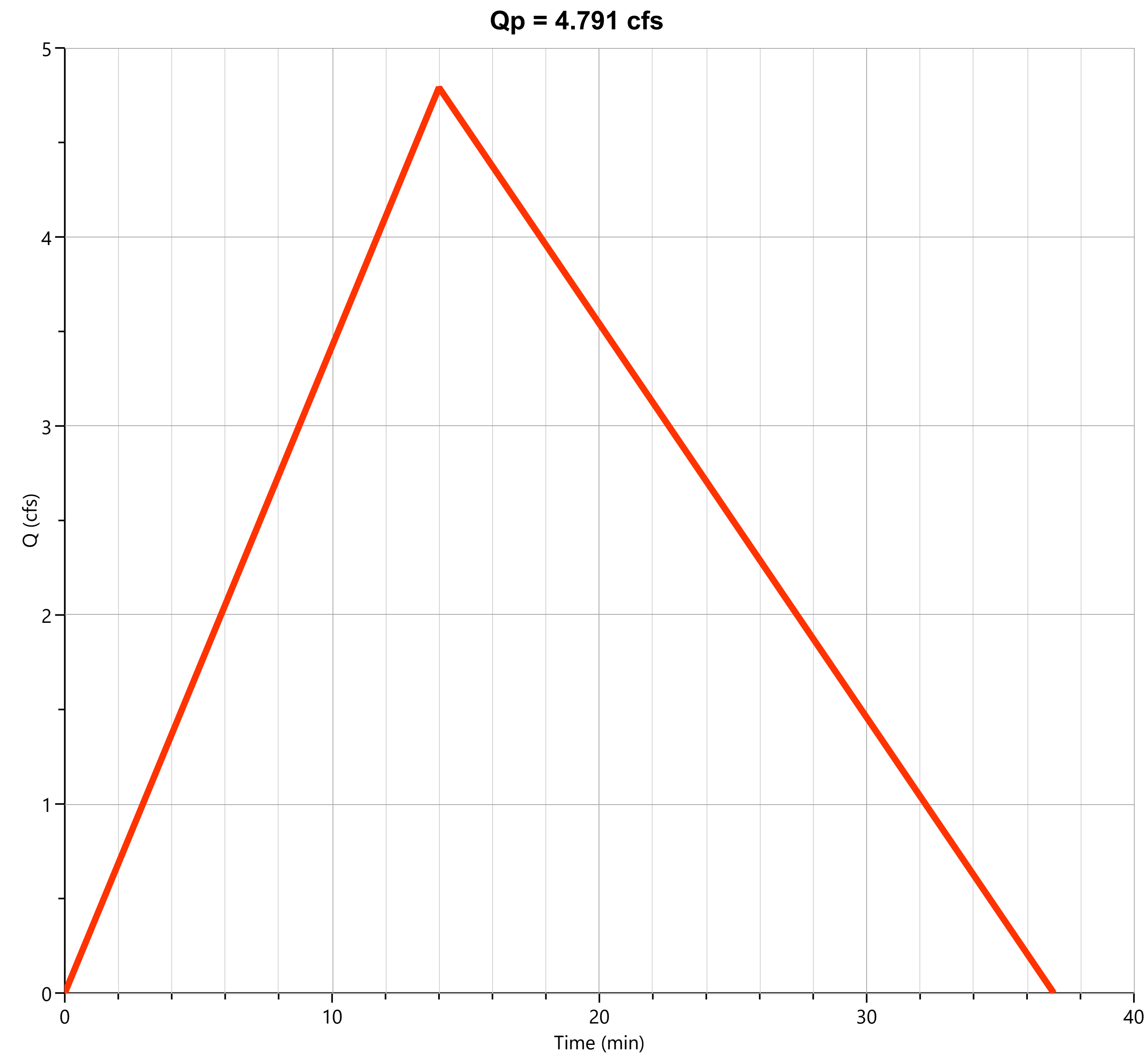
Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025

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"	4.791	0.23	5,372	----		
2	Rational	Pre-Dev Basin "B"	11.43	0.23	12,814	----		
3	Junction	Total Pre-Dev West	16.22	0.23	18,001	1, 2		
4	Rational	Pre-Dev Basin "C"	1.420	0.18	1,251	----		
5	Rational	Pre-Dev Basin "D"	1.555	0.25	1,868	----		
6	Junction	Total Pre-Dev East	2.660	0.25	3,102	4, 5		
7	Rational	Pre-Dev Basin "E"	1.510	0.32	2,298	----		
8	Mod Rational	Post-Dev Basin A	4.864	0.20	11,965	----		
9	Pond Route	Detention Basin	4.449	0.70	11,963	8	422.31	3,400
10	Rational	Post-Dev Basin B	13.08	0.23	14,670	----		
11	Junction	Total Post-Dev West	15.42	0.23	26,484	9, 10		
12	Rational	Post-Dev Basin "C"	2.218	0.12	1,244	----		
13	Rational	Post-Dev Basin "D"	0.438	0.28	596	----		
14	Junction	Total Post-Dev East	2.399	0.12	1,789	12, 13		
15	Rational	Post-Dev Basin "E"	1.022	0.27	1,310	----		

Pre-Dev Basin "A"

Hyd. No. 1

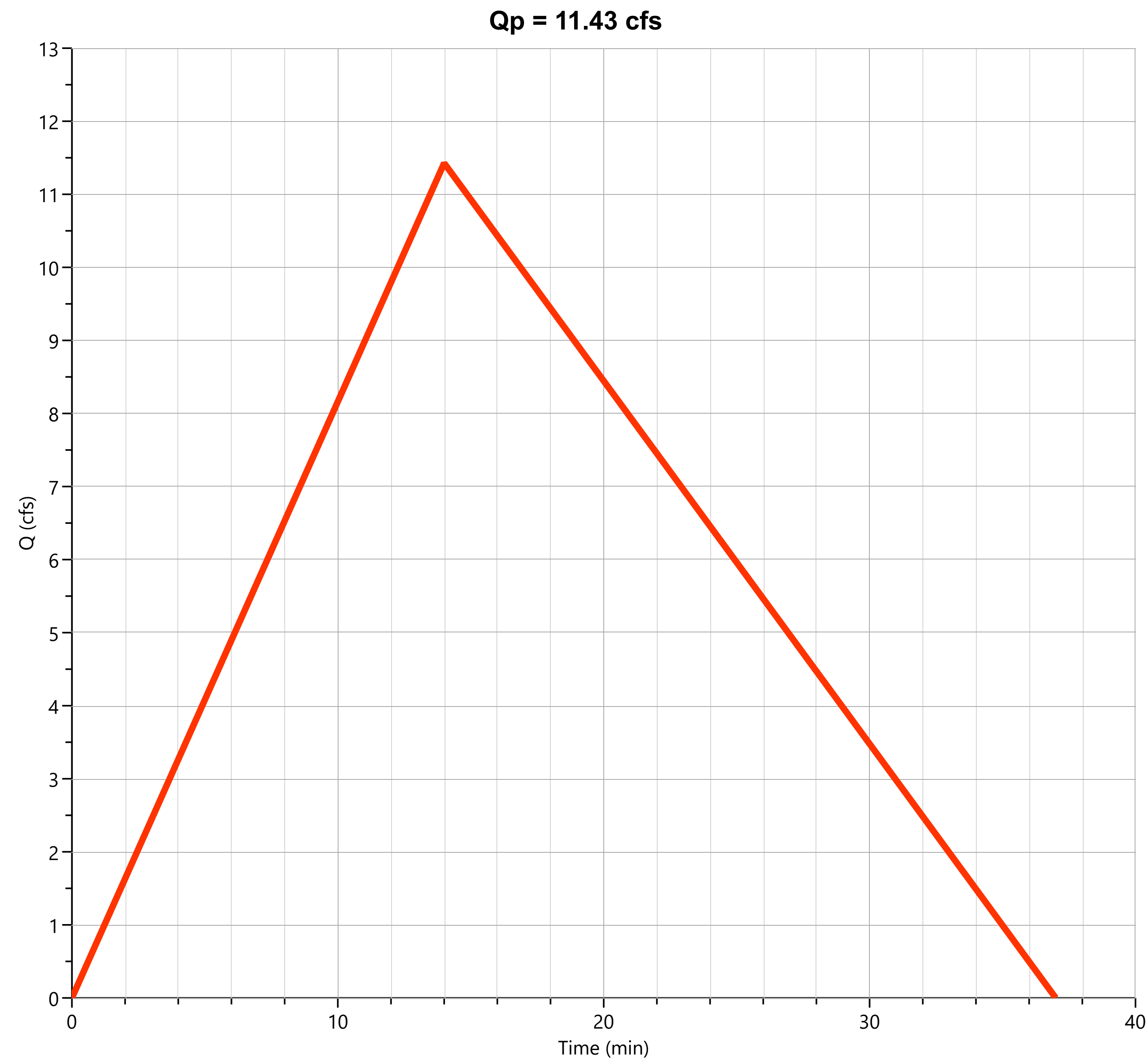
Hydrograph Type	= Rational	Peak Flow	= 4.791 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 5,372 cuft
Drainage Area	= 1.44 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.94 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "B"

Hyd. No. 2

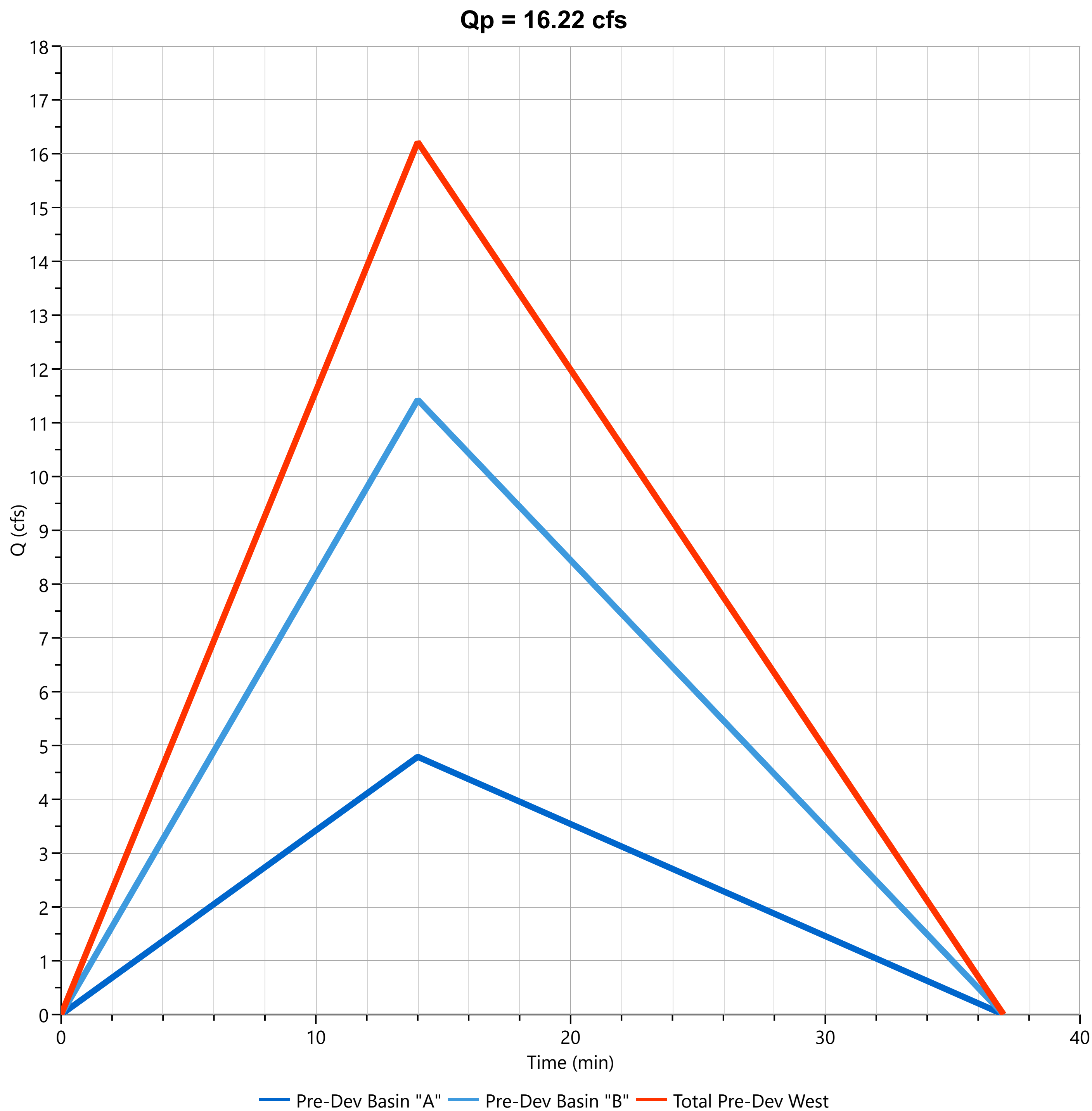
Hydrograph Type	= Rational	Peak Flow	= 11.43 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 12,814 cuft
Drainage Area	= 3.26 ac	Runoff Coeff.	= 0.59
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.94 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev West

Hyd. No. 3

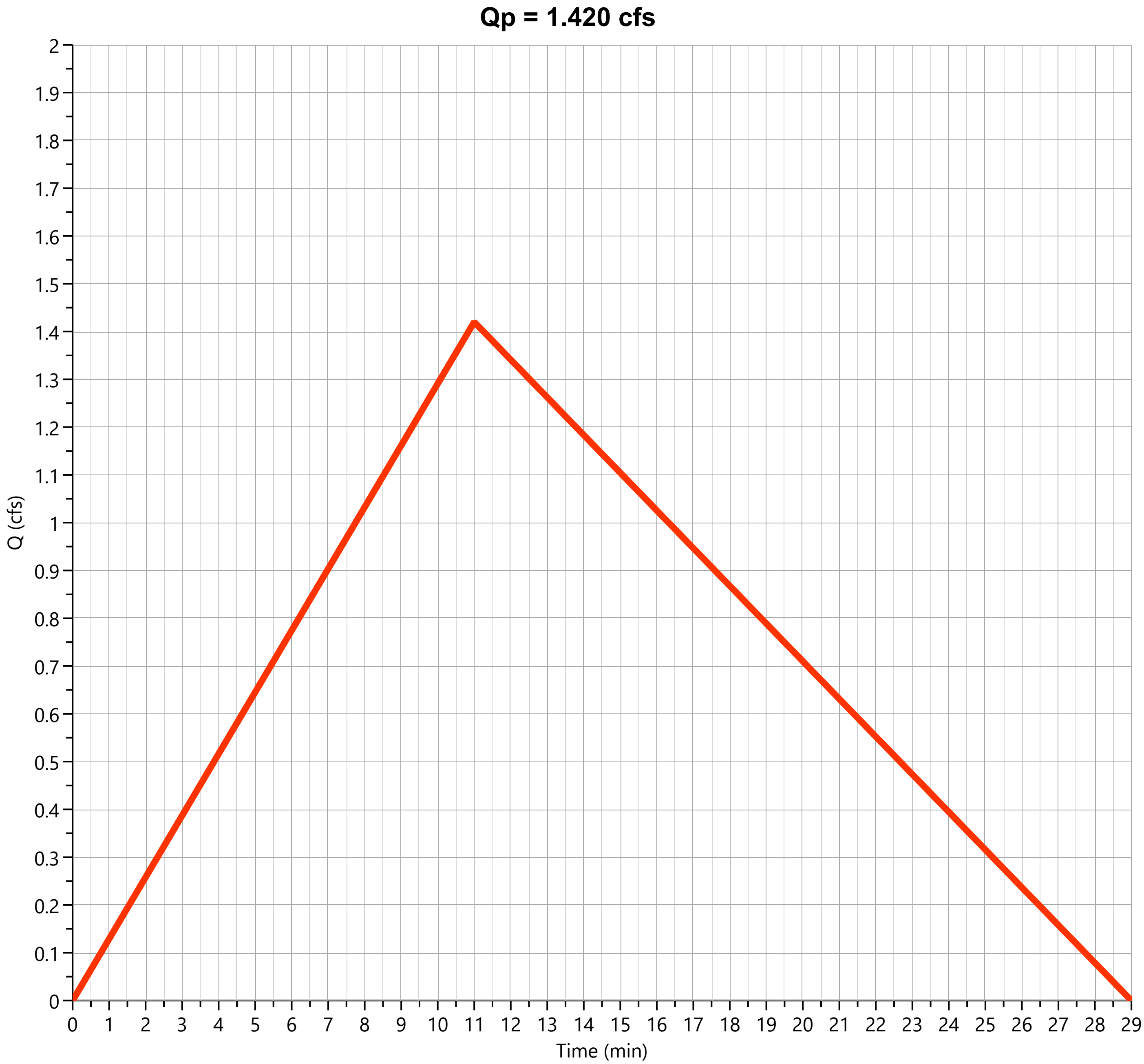
Hydrograph Type	= Junction	Peak Flow	= 16.22 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 18,001 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 4.7 ac



Pre-Dev Basin "C"

Hyd. No. 4

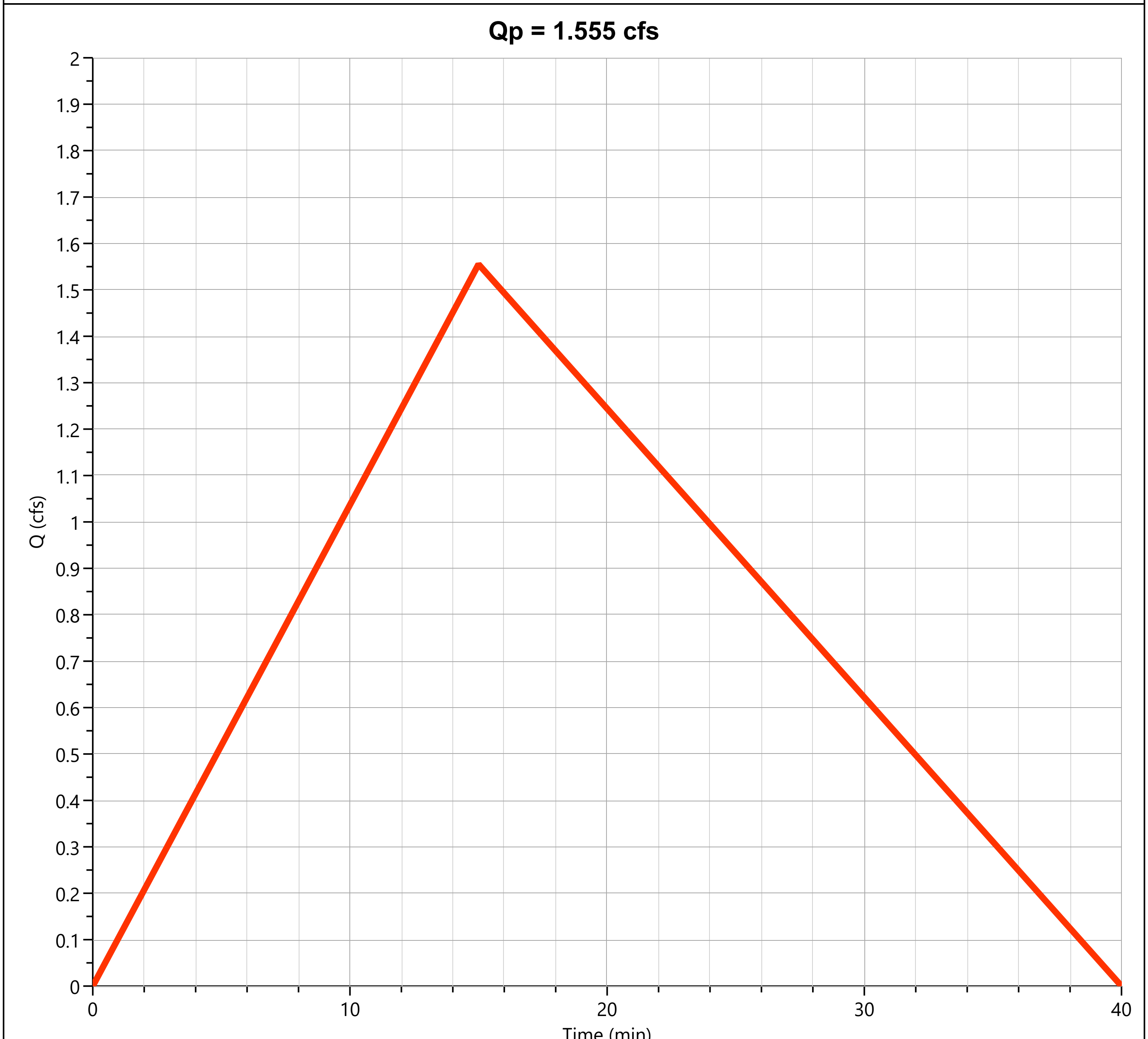
Hydrograph Type	= Rational	Peak Flow	= 1.420 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 1,251 cuft
Drainage Area	= 0.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.62 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "D"

Hyd. No. 5

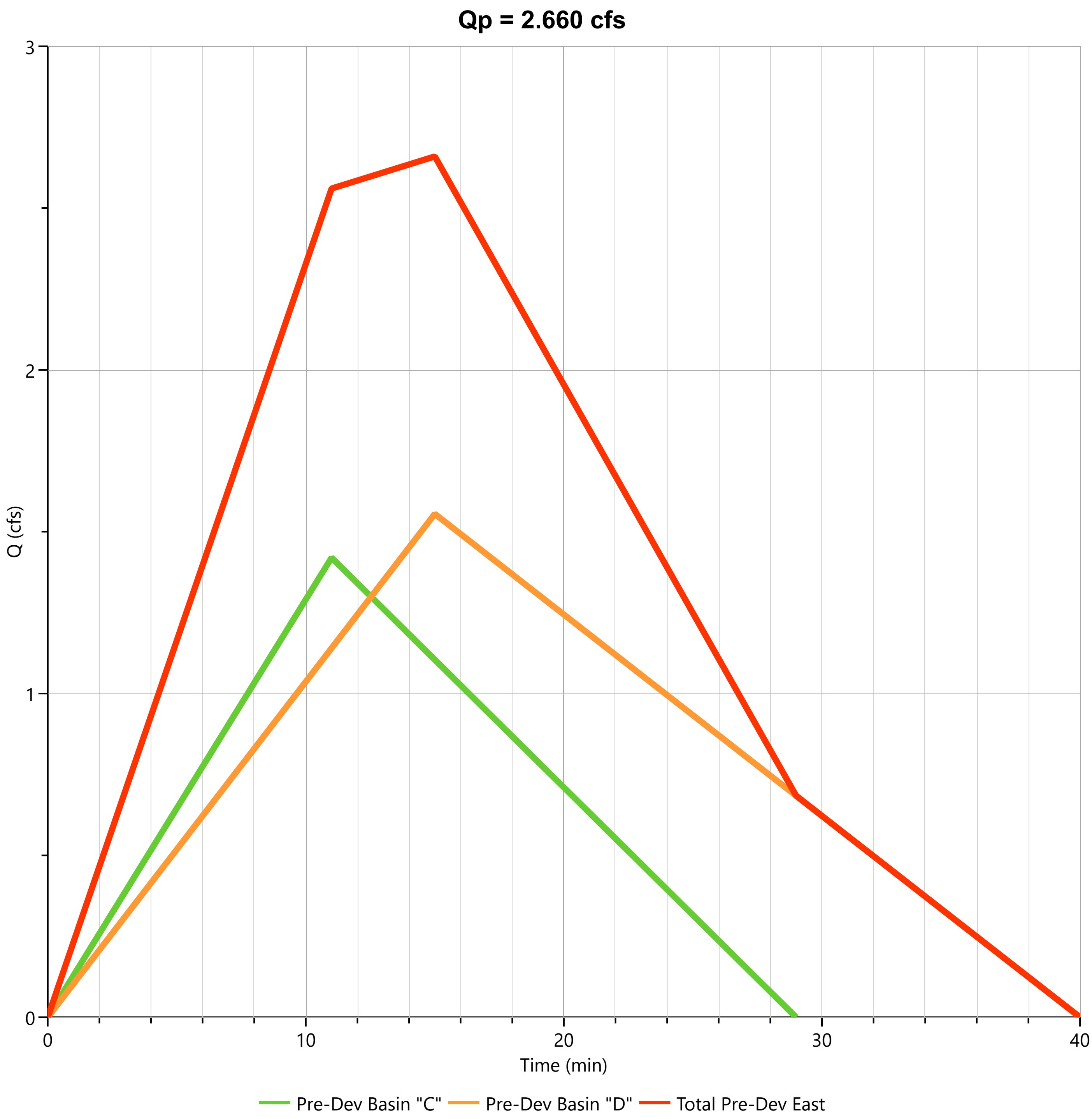
Hydrograph Type	= Rational	Peak Flow	= 1.555 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 1,868 cuft
Drainage Area	= 0.5 ac	Runoff Coeff.	= 0.54
Tc Method	= TR55	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.76 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev East

Hyd. No. 6

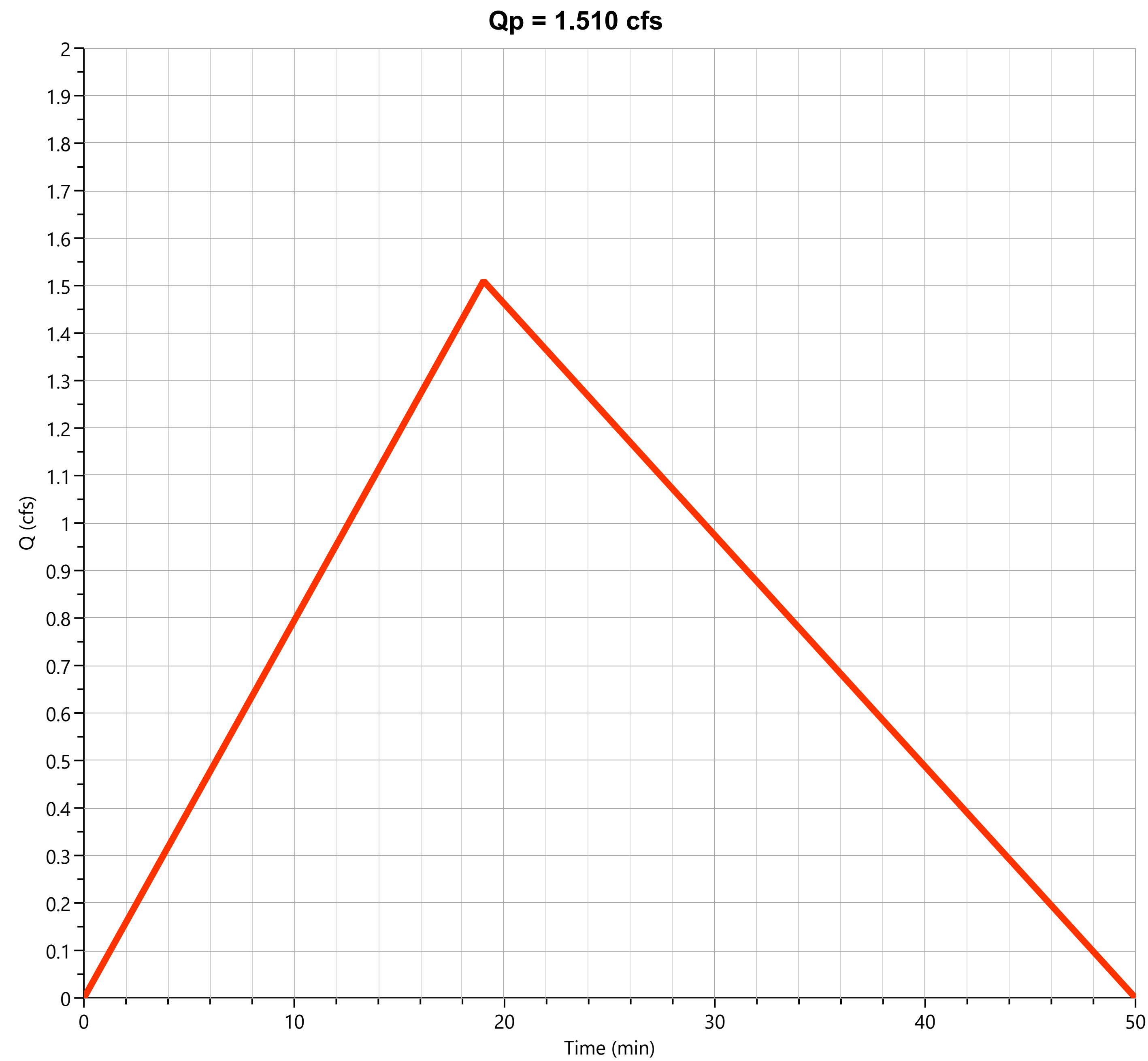
Hydrograph Type	= Junction	Peak Flow	= 2.660 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Hydrograph Volume	= 3,102 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.83 ac



Pre-Dev Basin "E"

Hyd. No. 7

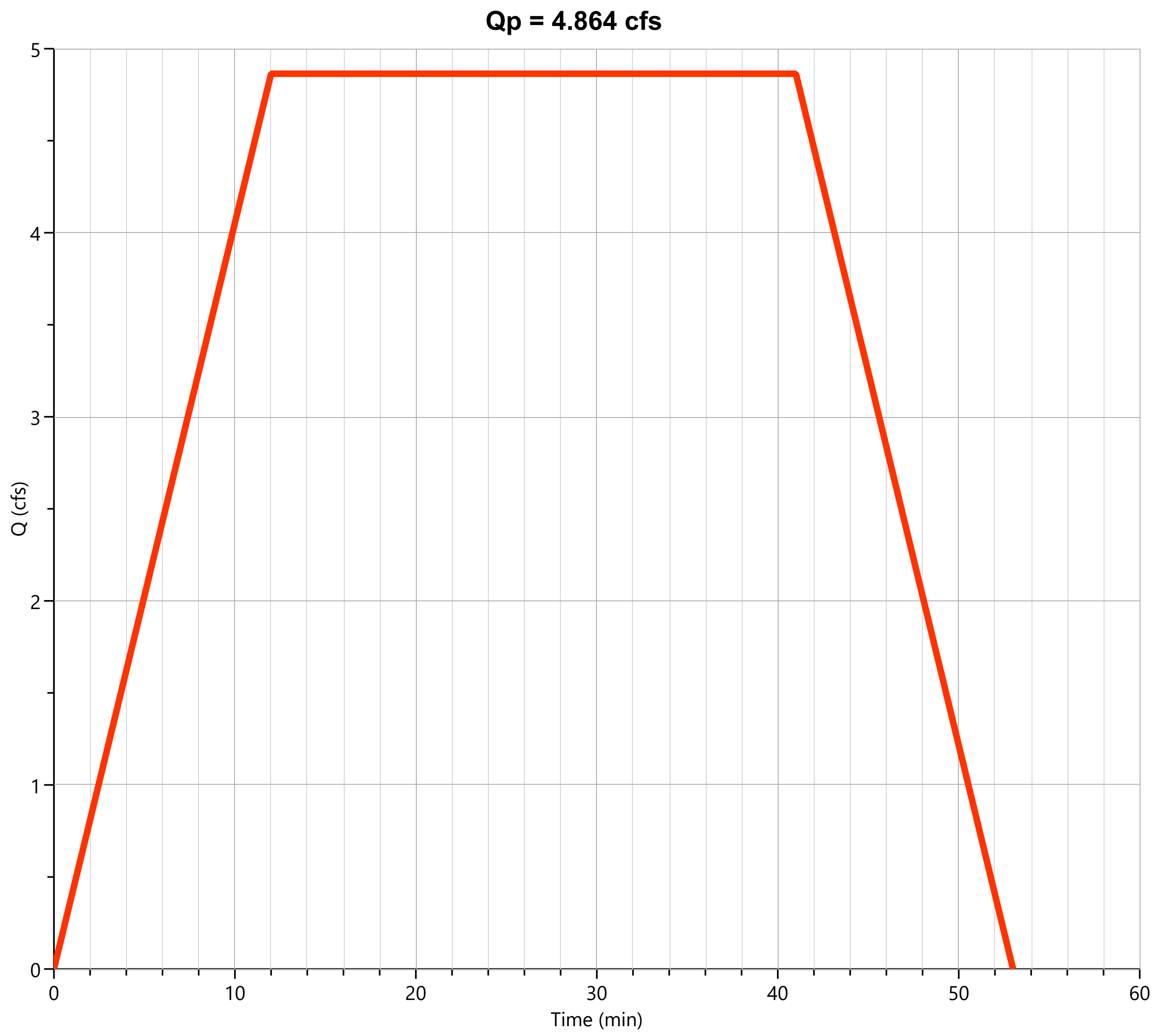
Hydrograph Type	= Rational	Peak Flow	= 1.510 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.32 hrs
Time Interval	= 1 min	Runoff Volume	= 2,298 cuft
Drainage Area	= 0.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55	Time of Conc. (Tc)	= 19.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.18 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin A

Hyd. No. 8

Hydrograph Type	= Mod Rational	Peak Flow	= 4.864 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 11,965 cuft
Drainage Area	= 1.56 ac	Runoff Coeff.	= 0.85
Tc Method	= User	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 3.67 in/hr
Freq. Corr. Factor	= 1.00	Storm Duration	= 3.42 x Tc
Target Q	= 0.000 cfs	Required Storage	= 0.000 cuft



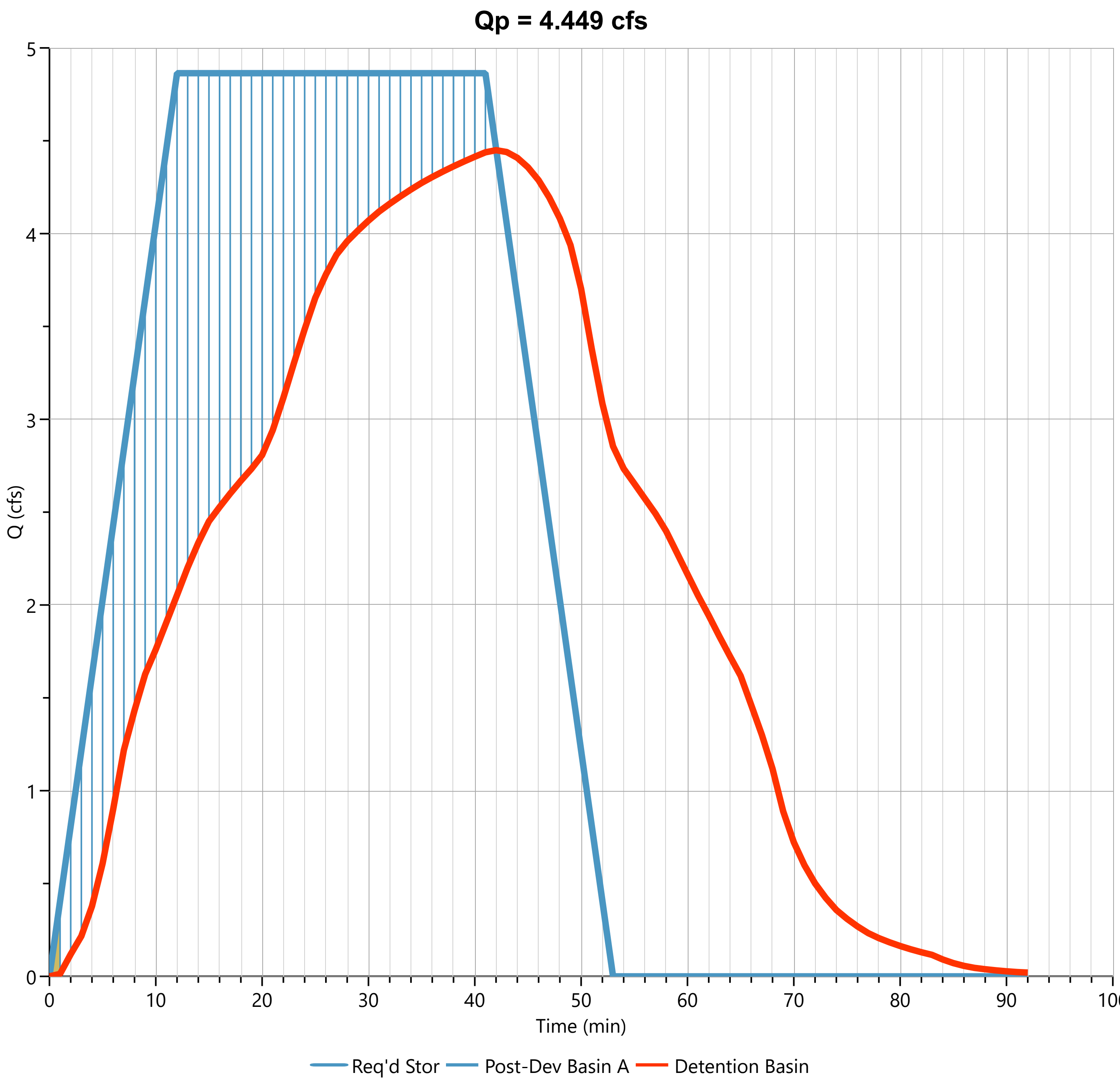
Detention Basin

Hyd. No. 9

Hydrograph Type	= Pond Route	Peak Flow	= 4.449 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.70 hrs
Time Interval	= 1 min	Hydrograph Volume	= 11,963 cuft
Inflow Hydrograph	= 8 - Post-Dev Basin A	Max. Elevation	= 422.31 ft
Pond Name	= Bryant Pharmacy Detention Pond	Max. Storage	= 3,400 cuft

Pond Routing by Storage Indication Method

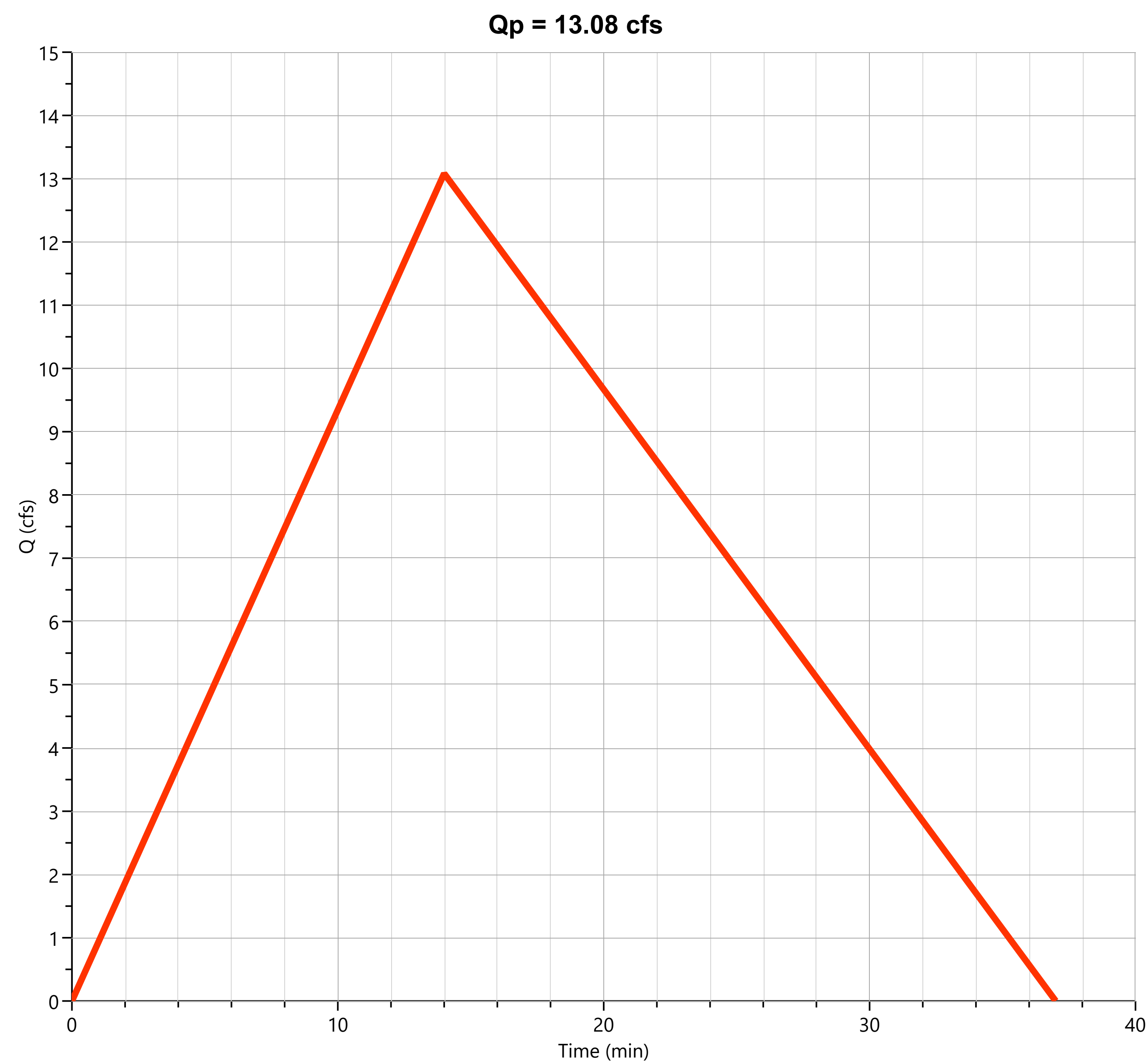
Center of mass detention time = 11 min



Post-Dev Basin B

Hyd. No. 10

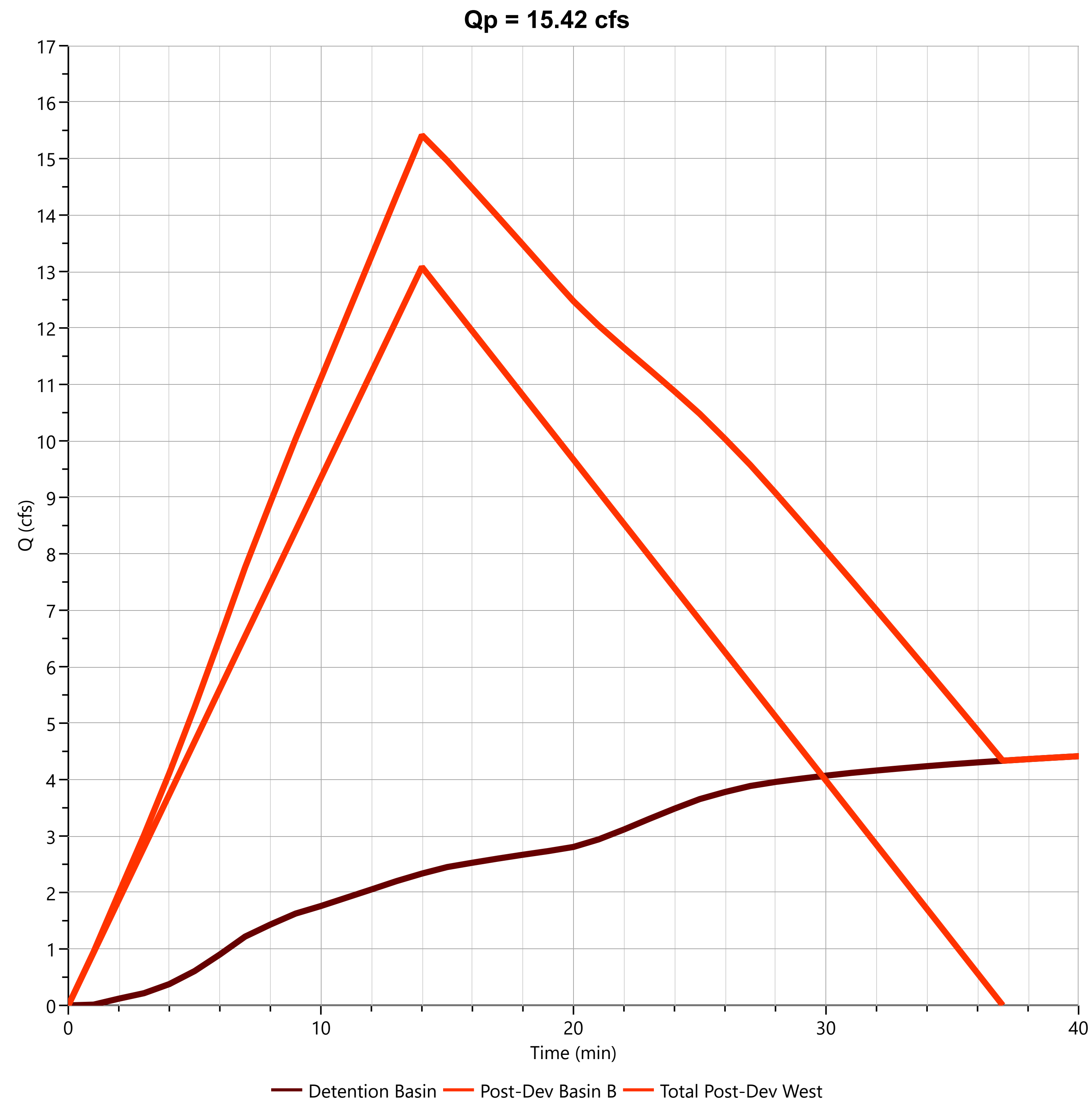
Hydrograph Type	= Rational	Peak Flow	= 13.08 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 14,670 cuft
Drainage Area	= 3.67 ac	Runoff Coeff.	= 0.60
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.94 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev West

Hyd. No. 11

Hydrograph Type	= Junction	Peak Flow	= 15.42 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 26,484 cuft
Inflow Hydrographs	= 10	Total Contrib. Area	= 3.67 ac

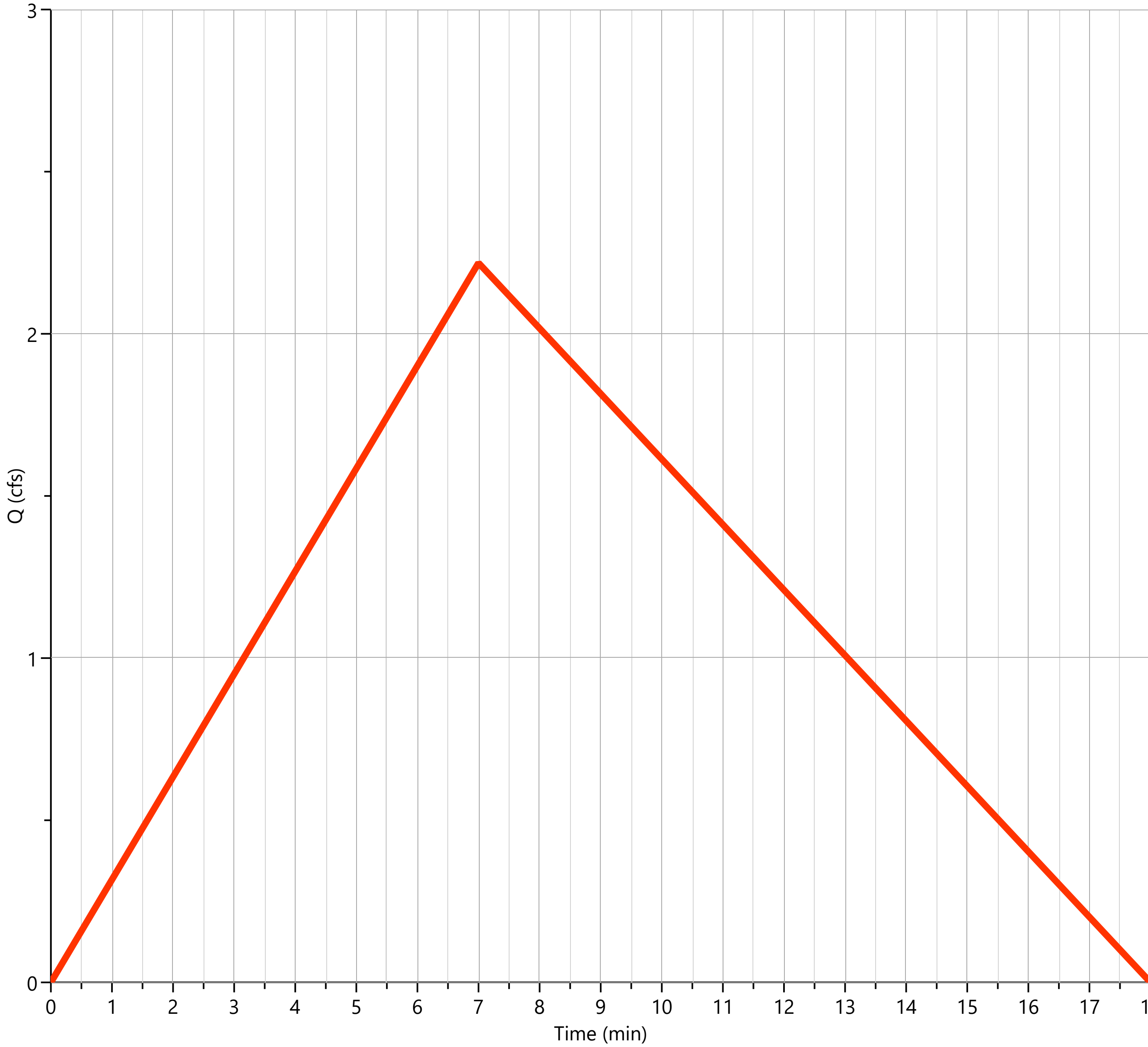


Post-Dev Basin "C"

Hyd. No. 12

Hydrograph Type	= Rational	Peak Flow	= 2.218 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Runoff Volume	= 1,244 cuft
Drainage Area	= 0.38 ac	Runoff Coeff.	= 0.72
Tc Method	= TR55	Time of Conc. (Tc)	= 7.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 8.11 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67

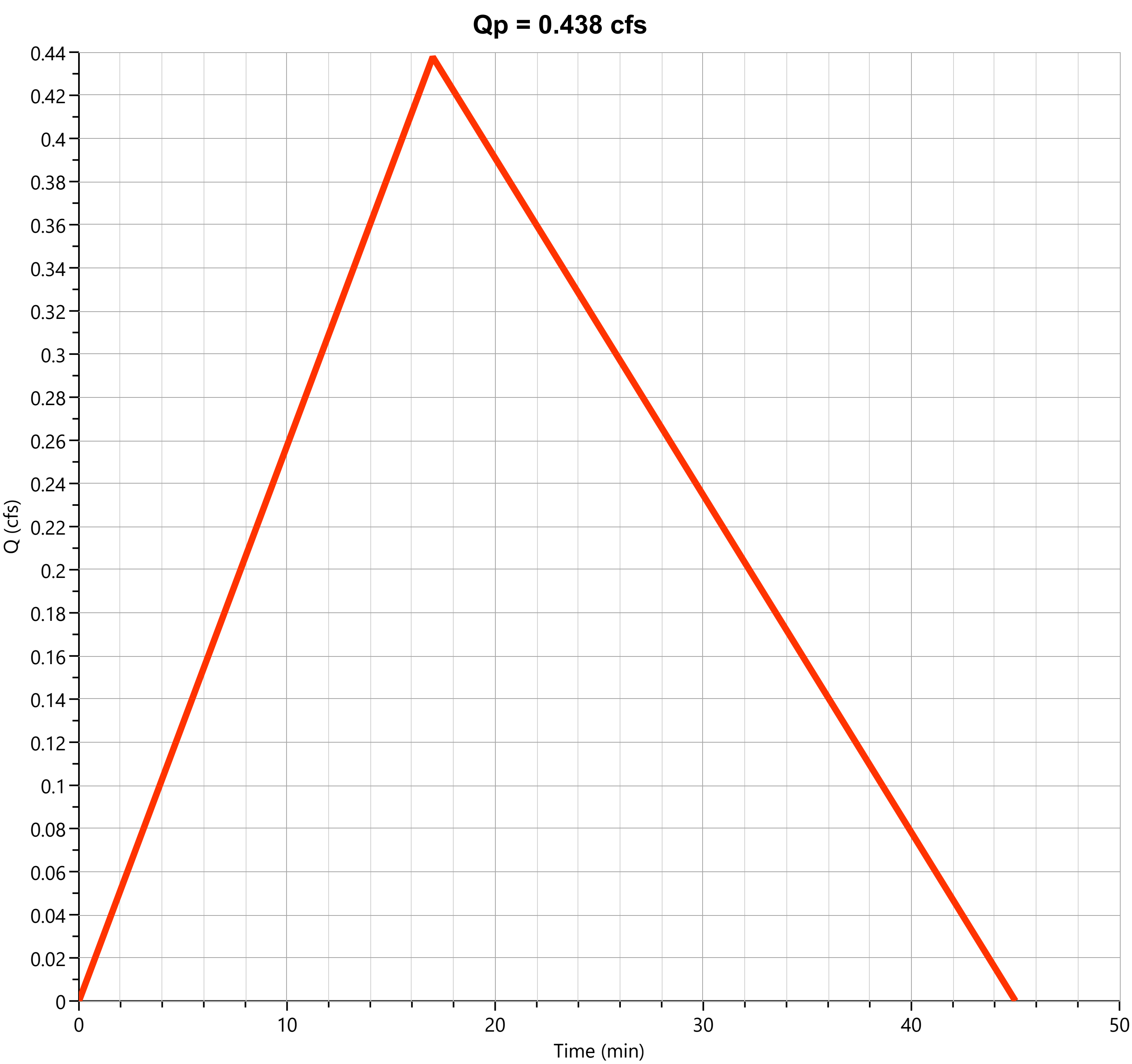
Qp = 2.218 cfs



Post-Dev Basin "D"

Hyd. No. 13

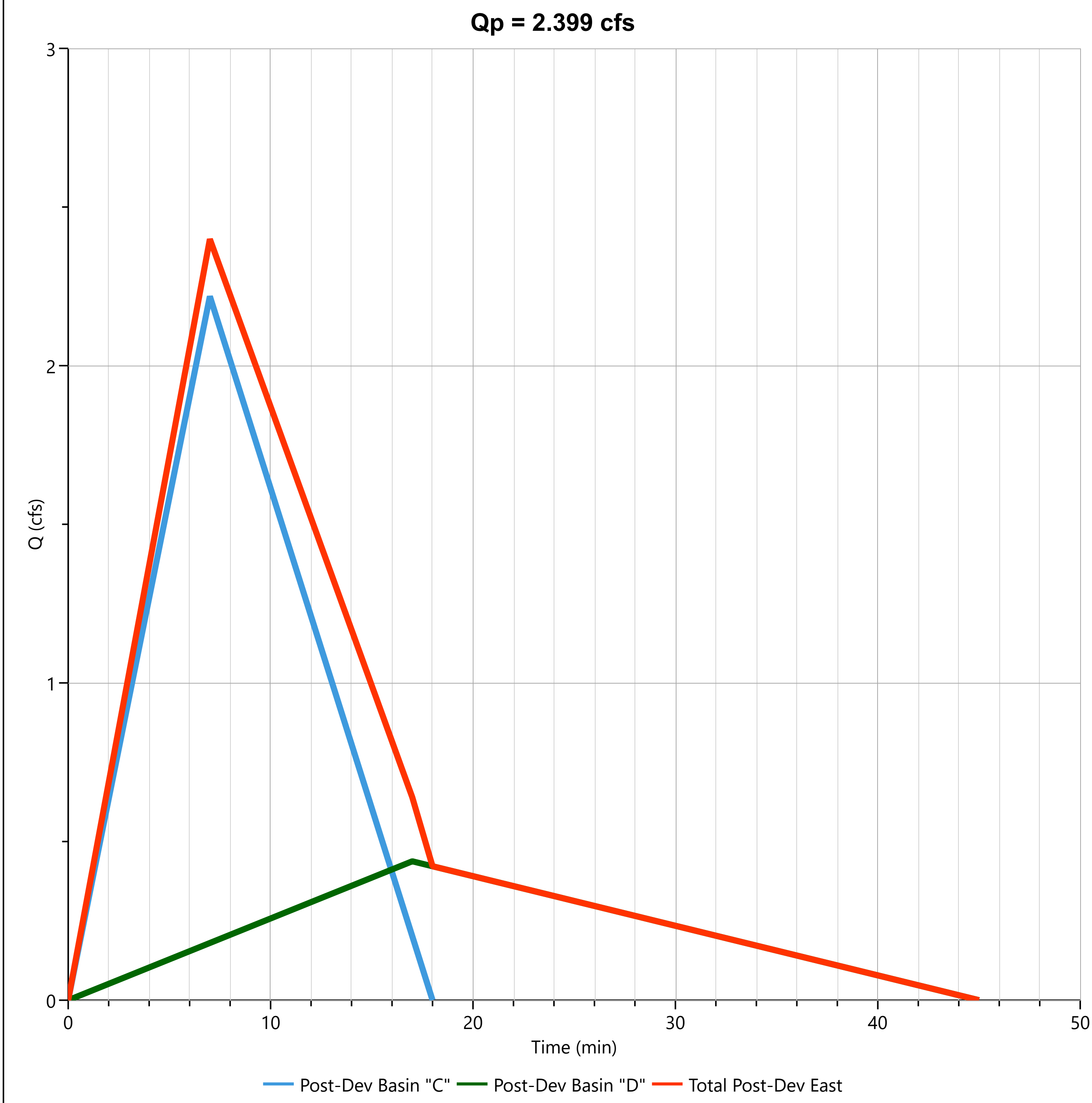
Hydrograph Type	= Rational	Peak Flow	= 0.438 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 596 cuft
Drainage Area	= 0.12 ac	Runoff Coeff.	= 0.67
Tc Method	= TR55	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.45 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev East

Hyd. No. 14

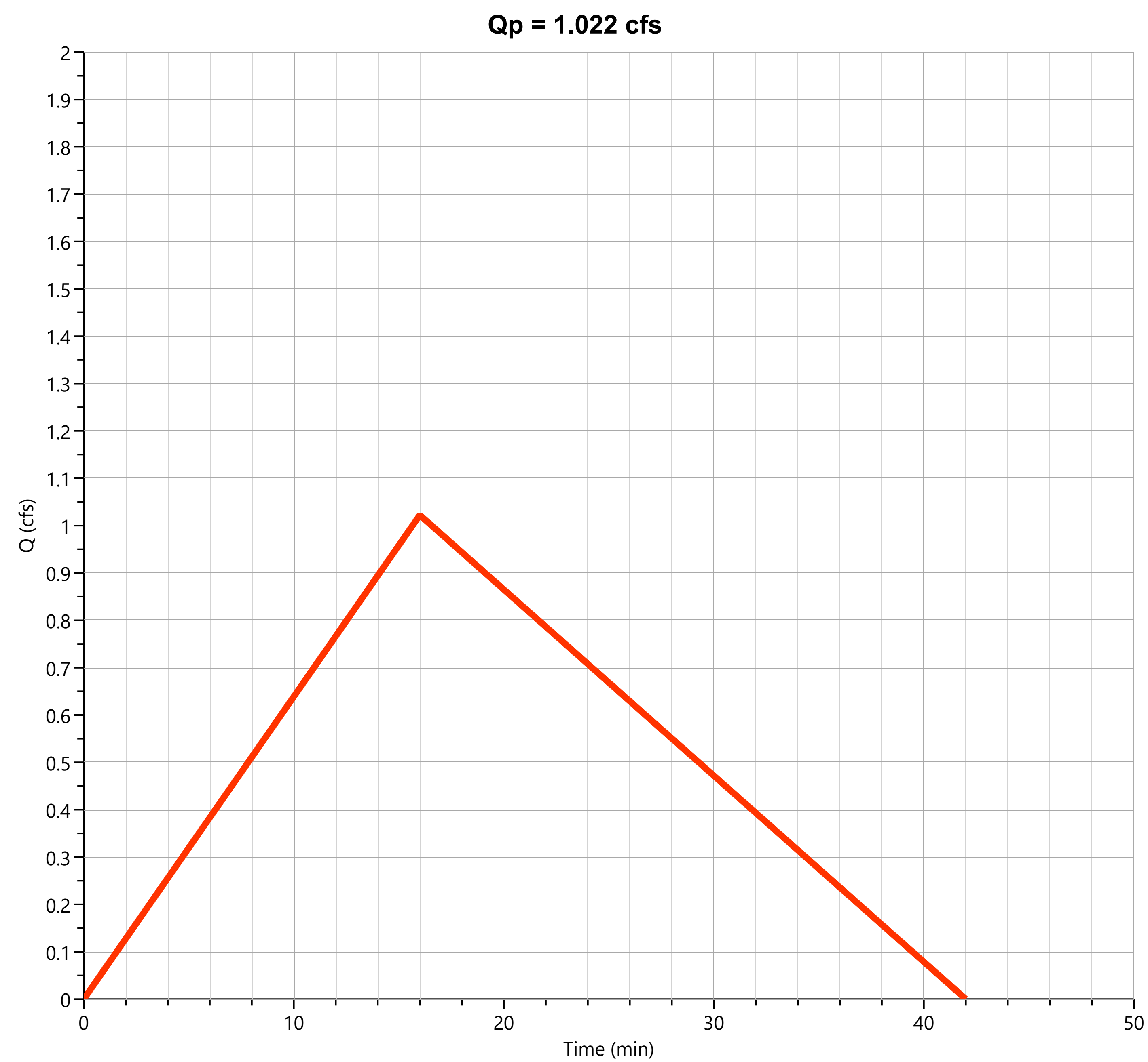
Hydrograph Type	= Junction	Peak Flow	= 2.399 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,789 cuft
Inflow Hydrographs	= 12, 13	Total Contrib. Area	= 0.5 ac



Post-Dev Basin "E"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 1.022 cfs
Storm Frequency	= 25-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 1,310 cuft
Drainage Area	= 0.29 ac	Runoff Coeff.	= 0.63
Tc Method	= TR55	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



Hydrograph 50-yr Summary

Hydrology Studio v 3.0.0.39

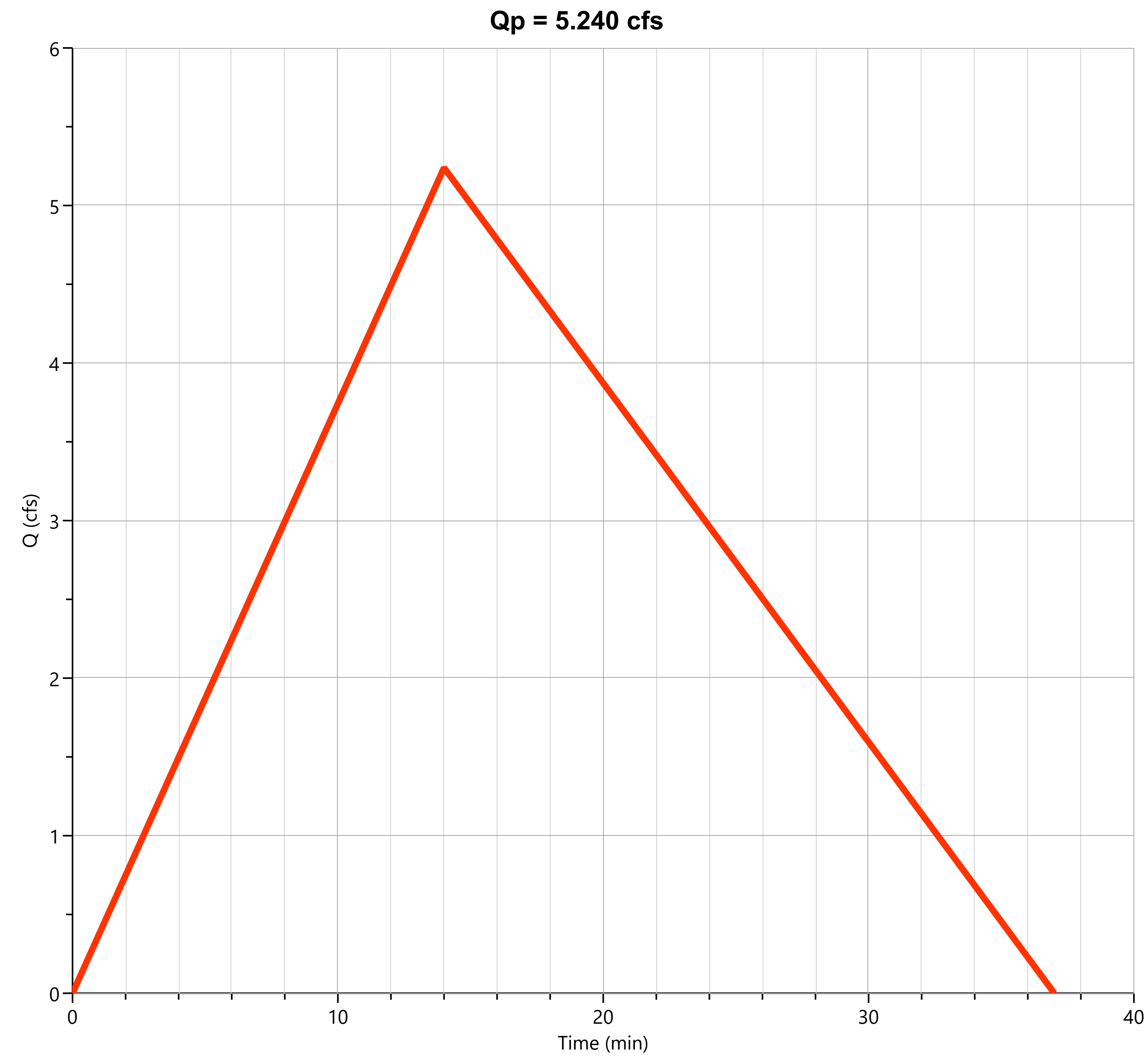
Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025

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"	5.240	0.23	5,876	----		
2	Rational	Pre-Dev Basin "B"	12.50	0.23	14,015	----		
3	Junction	Total Pre-Dev West	17.74	0.23	19,688	1, 2		
4	Rational	Pre-Dev Basin "C"	1.553	0.18	1,368	----		
5	Rational	Pre-Dev Basin "D"	1.701	0.25	2,044	----		
6	Junction	Total Pre-Dev East	2.909	0.25	3,392	4, 5		
7	Rational	Pre-Dev Basin "E"	1.652	0.32	2,514	----		
8	Mod Rational	Post-Dev Basin A	5.327	0.20	13,104	----		
9	Pond Route	Detention Basin	4.789	0.70	13,102	8	422.54	3,812
10	Rational	Post-Dev Basin B	14.31	0.23	16,045	----		
11	Junction	Total Post-Dev West	16.77	0.23	28,984	9, 10		
12	Rational	Post-Dev Basin "C"	2.424	0.12	1,359	----		
13	Rational	Post-Dev Basin "D"	0.479	0.28	652	----		
14	Junction	Total Post-Dev East	2.621	0.12	1,956	12, 13		
15	Rational	Post-Dev Basin "E"	1.118	0.27	1,433	----		

Pre-Dev Basin "A"

Hyd. No. 1

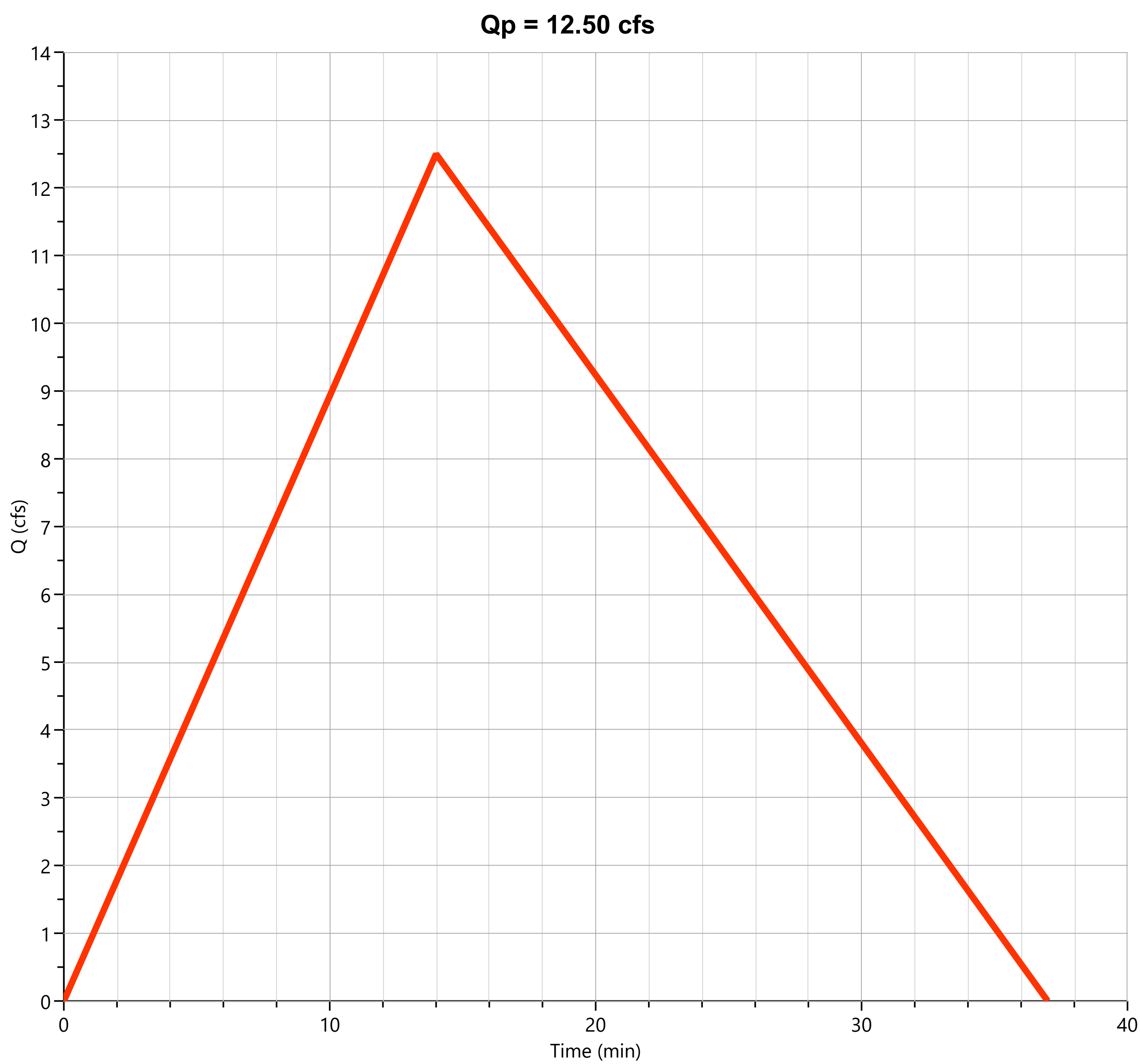
Hydrograph Type	= Rational	Peak Flow	= 5.240 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 5,876 cuft
Drainage Area	= 1.44 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.50 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "B"

Hyd. No. 2

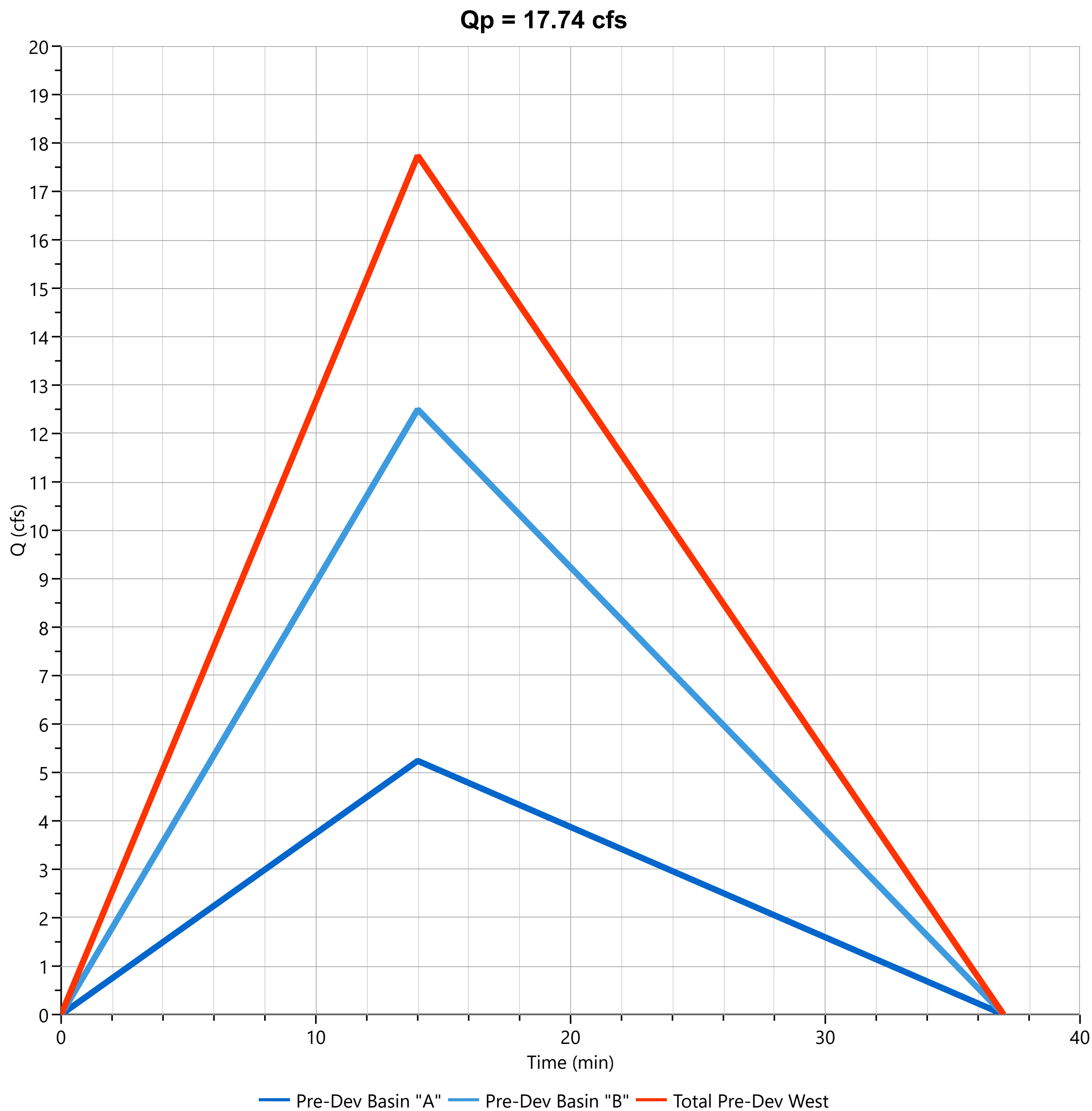
Hydrograph Type	= Rational	Peak Flow	= 12.50 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 14,015 cuft
Drainage Area	= 3.26 ac	Runoff Coeff.	= 0.59
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.50 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev West

Hyd. No. 3

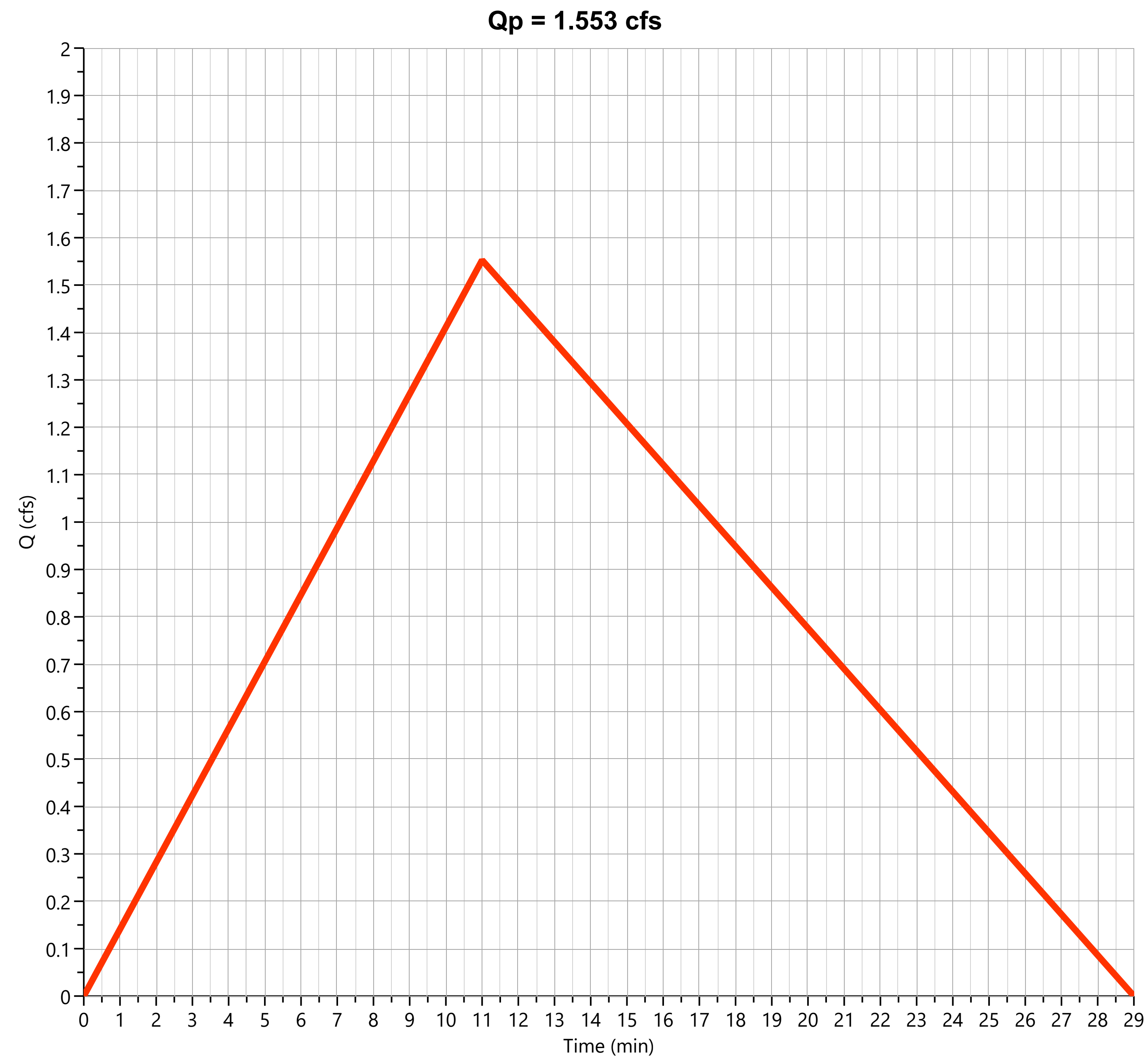
Hydrograph Type	= Junction	Peak Flow	= 17.74 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 19,688 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 4.7 ac



Pre-Dev Basin "C"

Hyd. No. 4

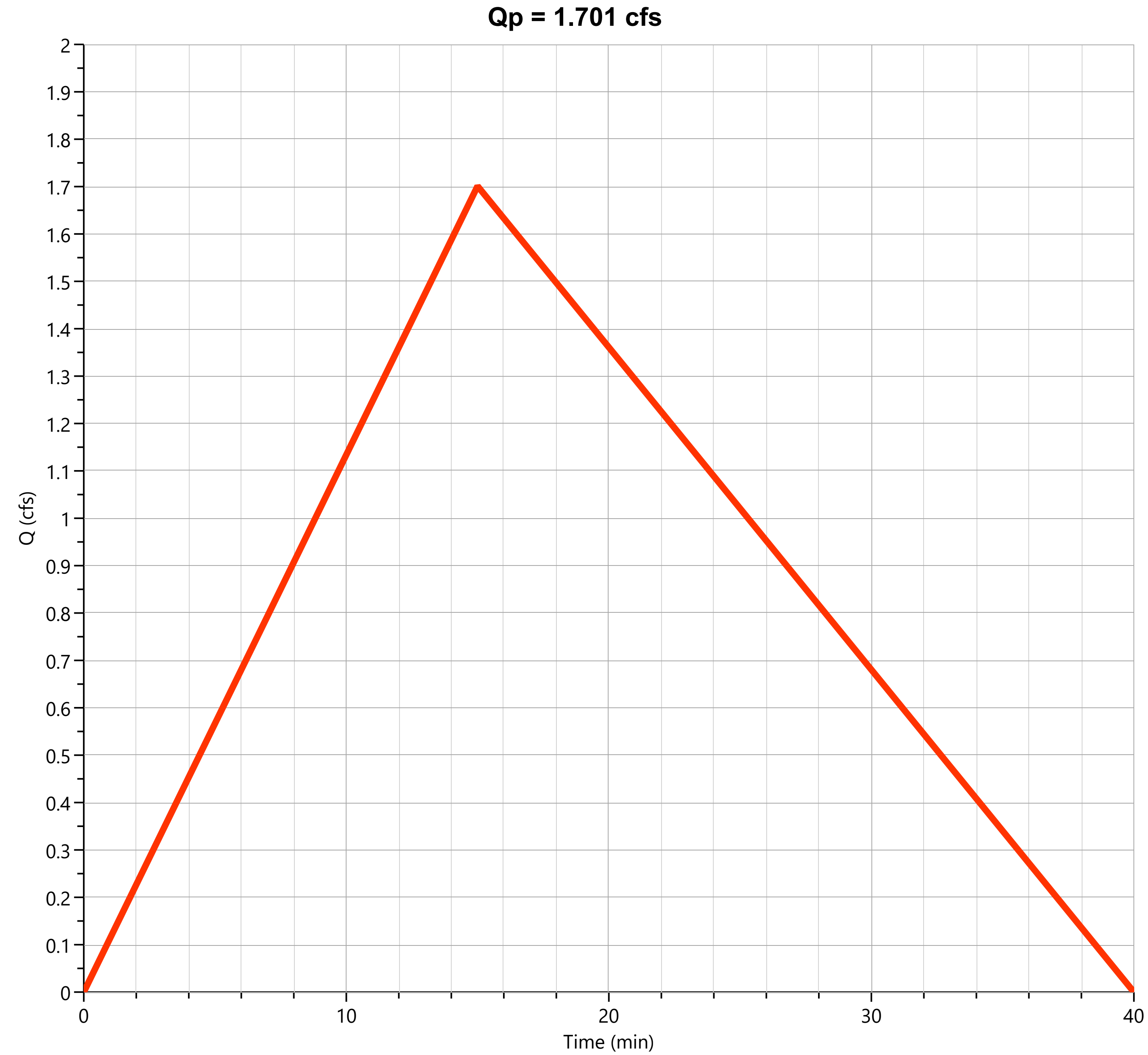
Hydrograph Type	= Rational	Peak Flow	= 1.553 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 1,368 cuft
Drainage Area	= 0.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.24 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "D"

Hyd. No. 5

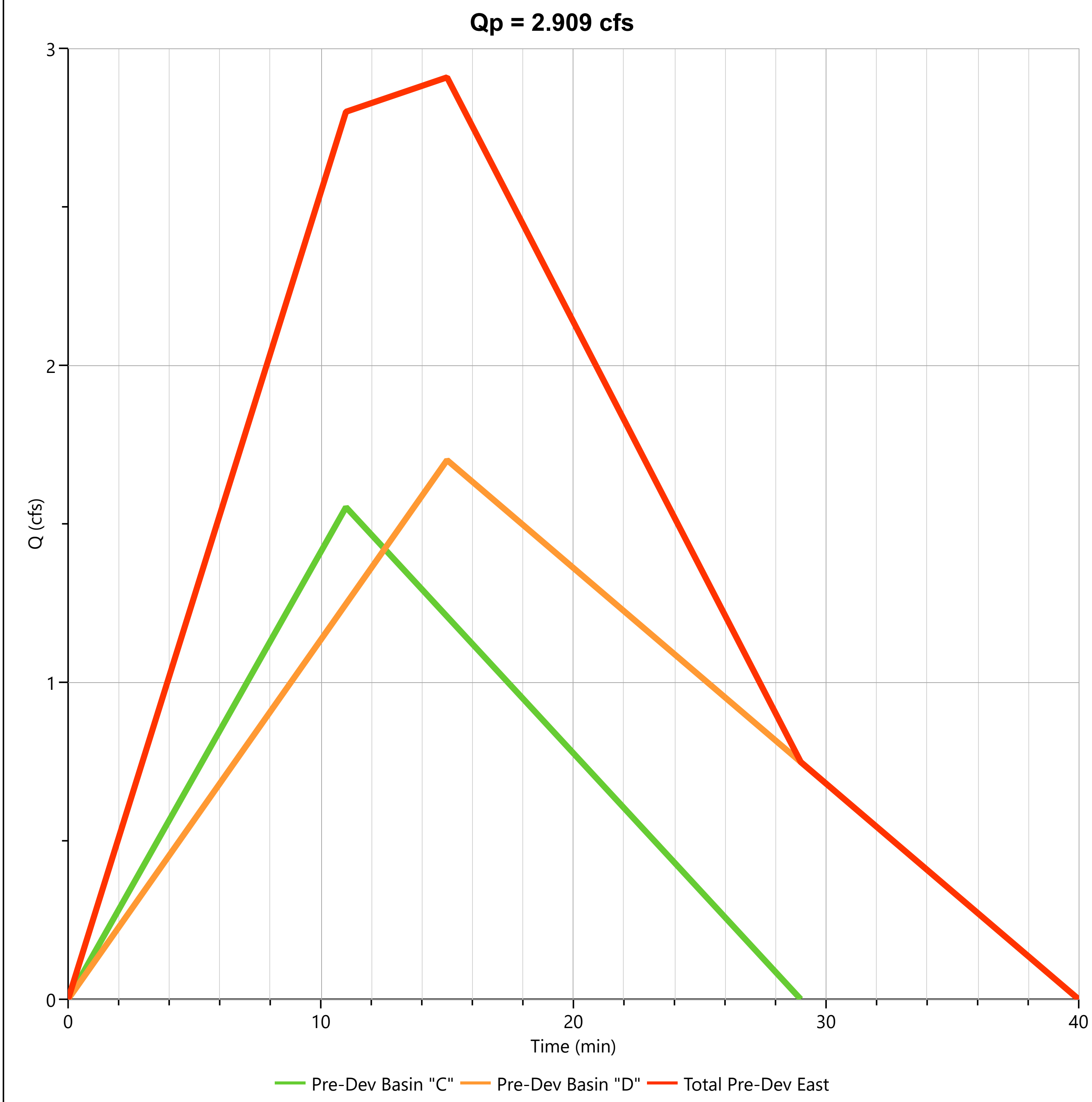
Hydrograph Type	= Rational	Peak Flow	= 1.701 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 2,044 cuft
Drainage Area	= 0.5 ac	Runoff Coeff.	= 0.54
Tc Method	= TR55	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.30 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev East

Hyd. No. 6

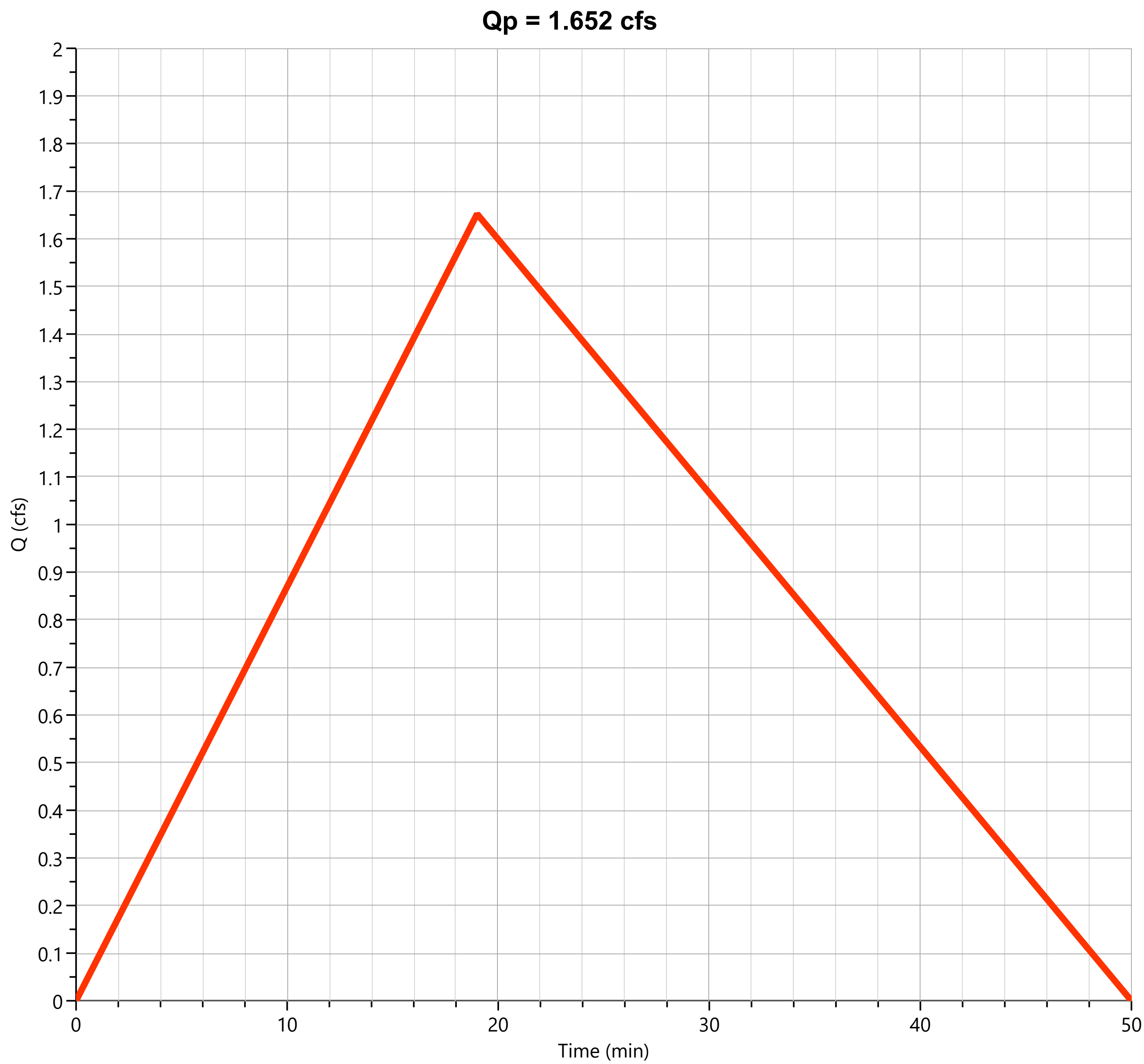
Hydrograph Type	= Junction	Peak Flow	= 2.909 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Hydrograph Volume	= 3,392 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.83 ac



Pre-Dev Basin "E"

Hyd. No. 7

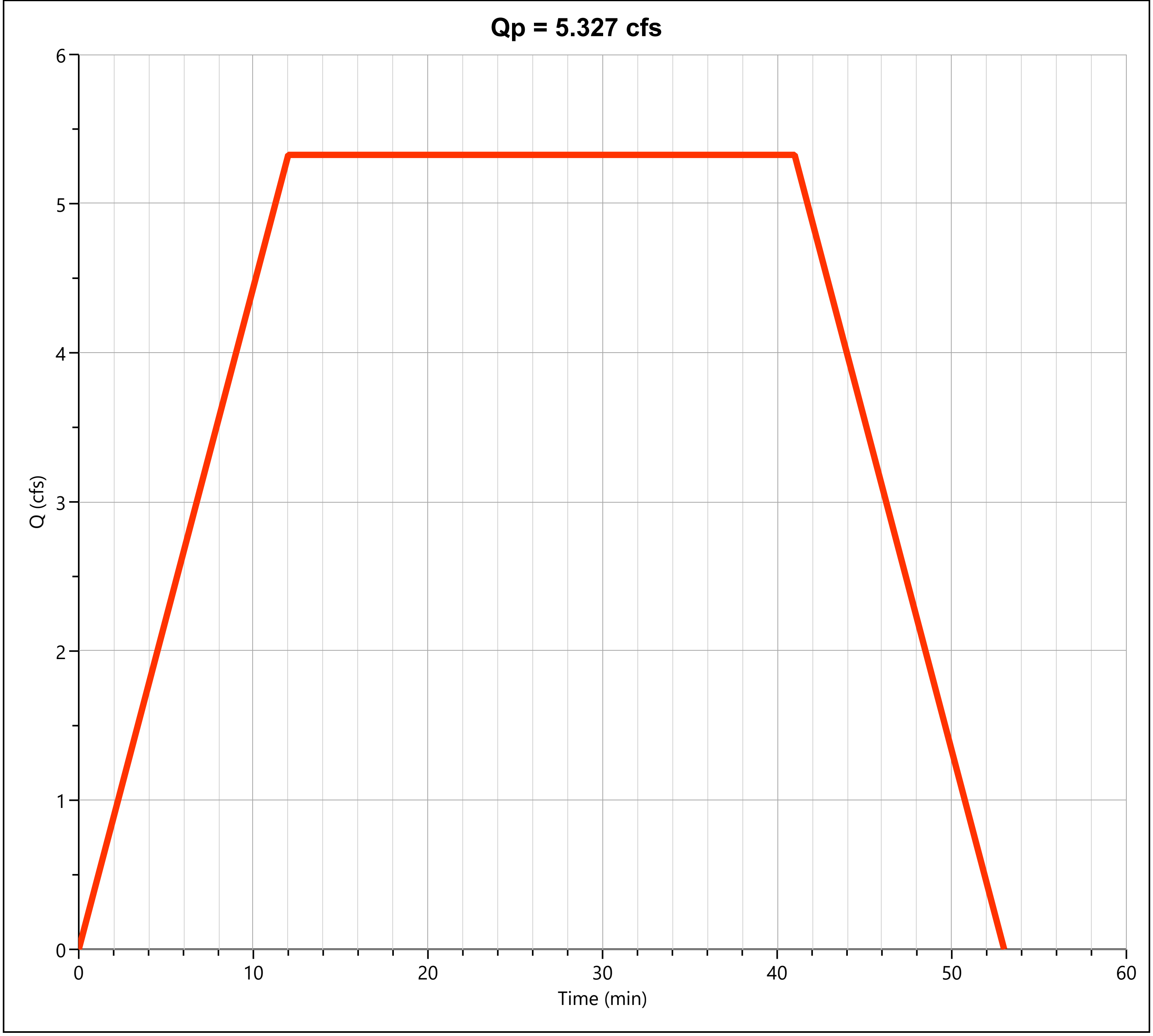
Hydrograph Type	= Rational	Peak Flow	= 1.652 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.32 hrs
Time Interval	= 1 min	Runoff Volume	= 2,514 cuft
Drainage Area	= 0.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55	Time of Conc. (Tc)	= 19.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.67 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin A

Hyd. No. 8

Hydrograph Type	= Mod Rational	Peak Flow	= 5.327 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 13,104 cuft
Drainage Area	= 1.56 ac	Runoff Coeff.	= 0.85
Tc Method	= User	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.02 in/hr
Freq. Corr. Factor	= 1.00	Storm Duration	= 3.42 x Tc
Target Q	= 0.000 cfs	Required Storage	= 0.000 cuft



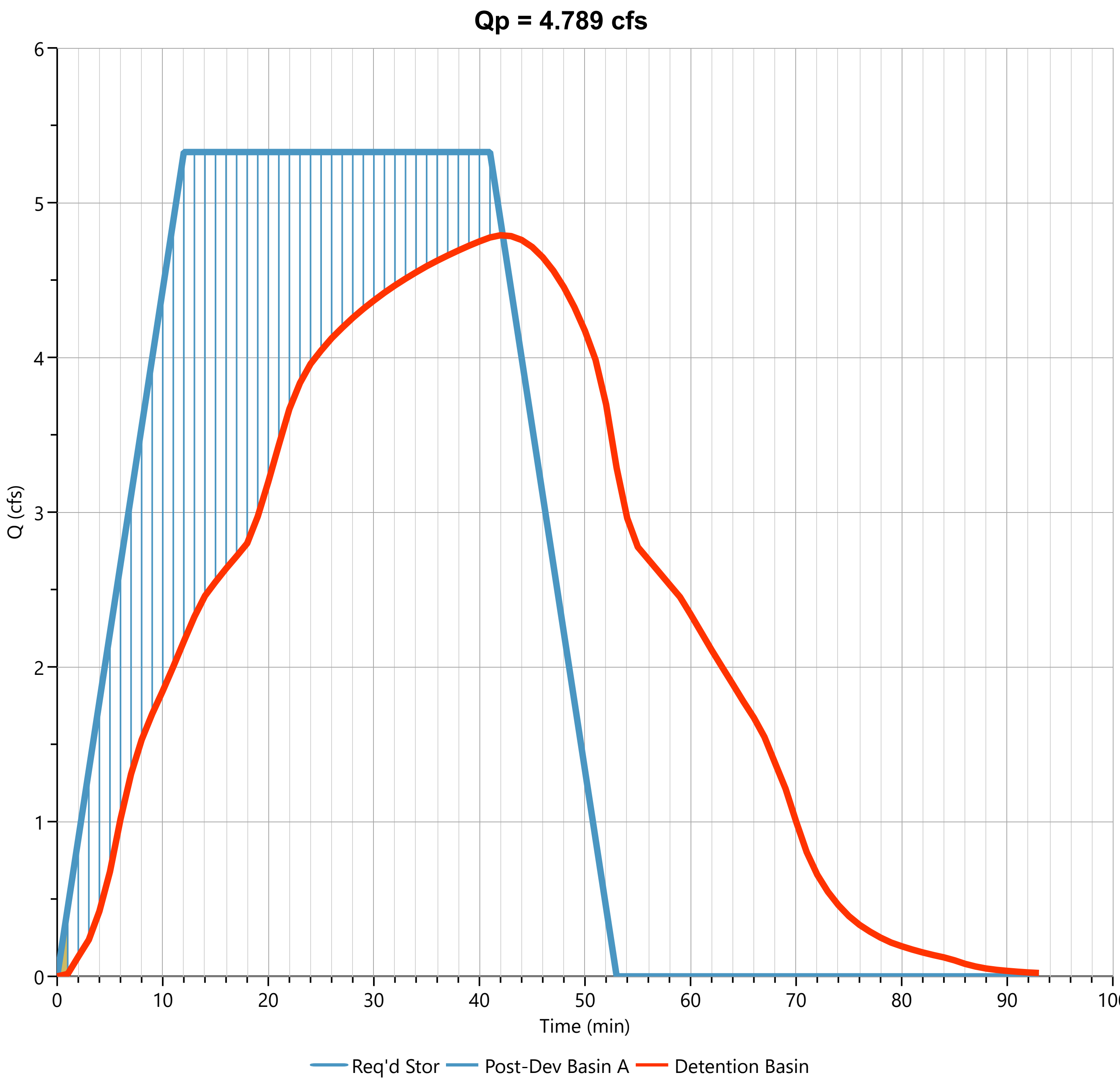
Detention Basin

Hyd. No. 9

Hydrograph Type	= Pond Route	Peak Flow	= 4.789 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.70 hrs
Time Interval	= 1 min	Hydrograph Volume	= 13,102 cuft
Inflow Hydrograph	= 8 - Post-Dev Basin A	Max. Elevation	= 422.54 ft
Pond Name	= Bryant Pharmacy Detention Pond	Max. Storage	= 3,812 cuft

Pond Routing by Storage Indication Method

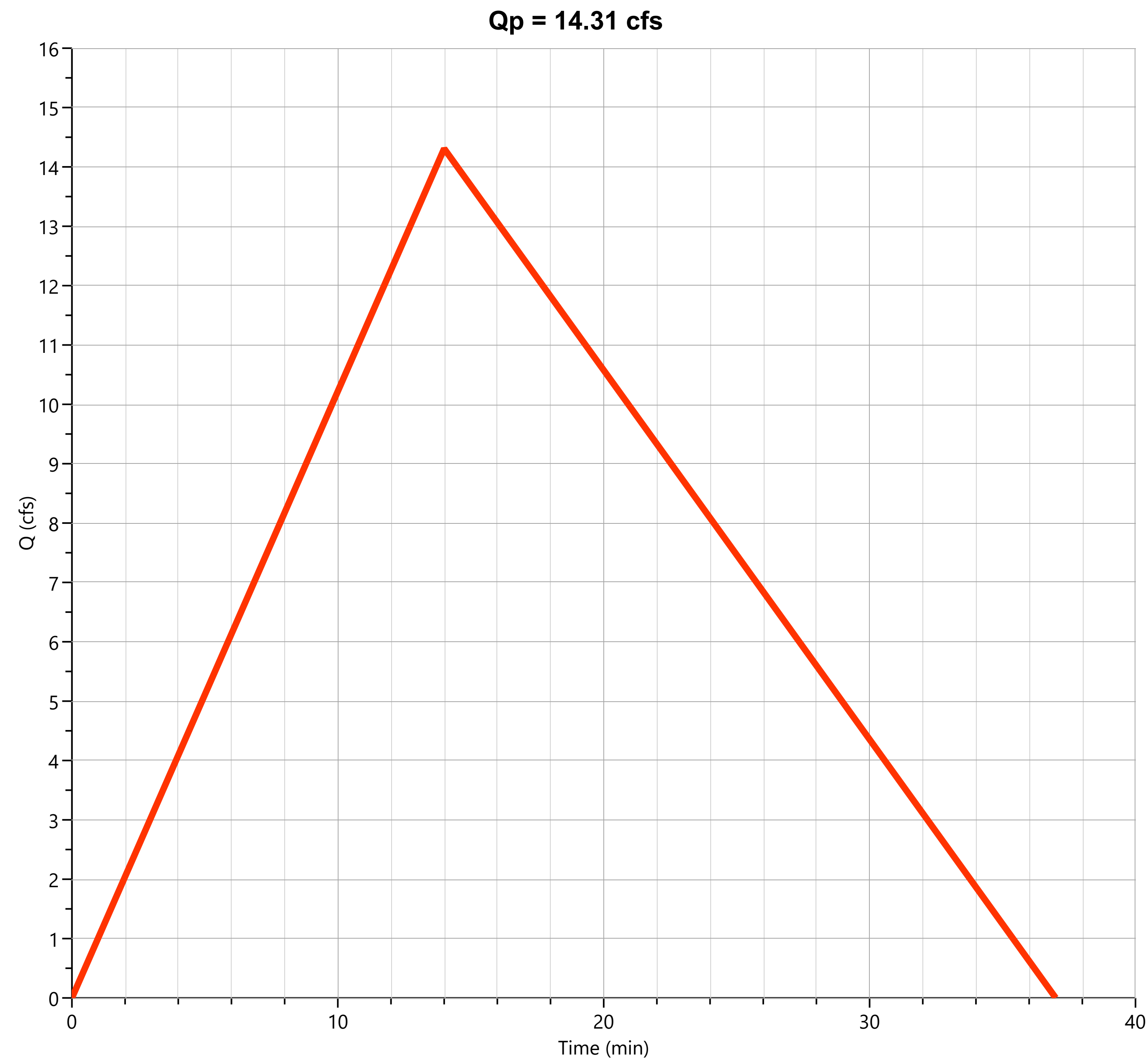
Center of mass detention time = 12 min



Post-Dev Basin B

Hyd. No. 10

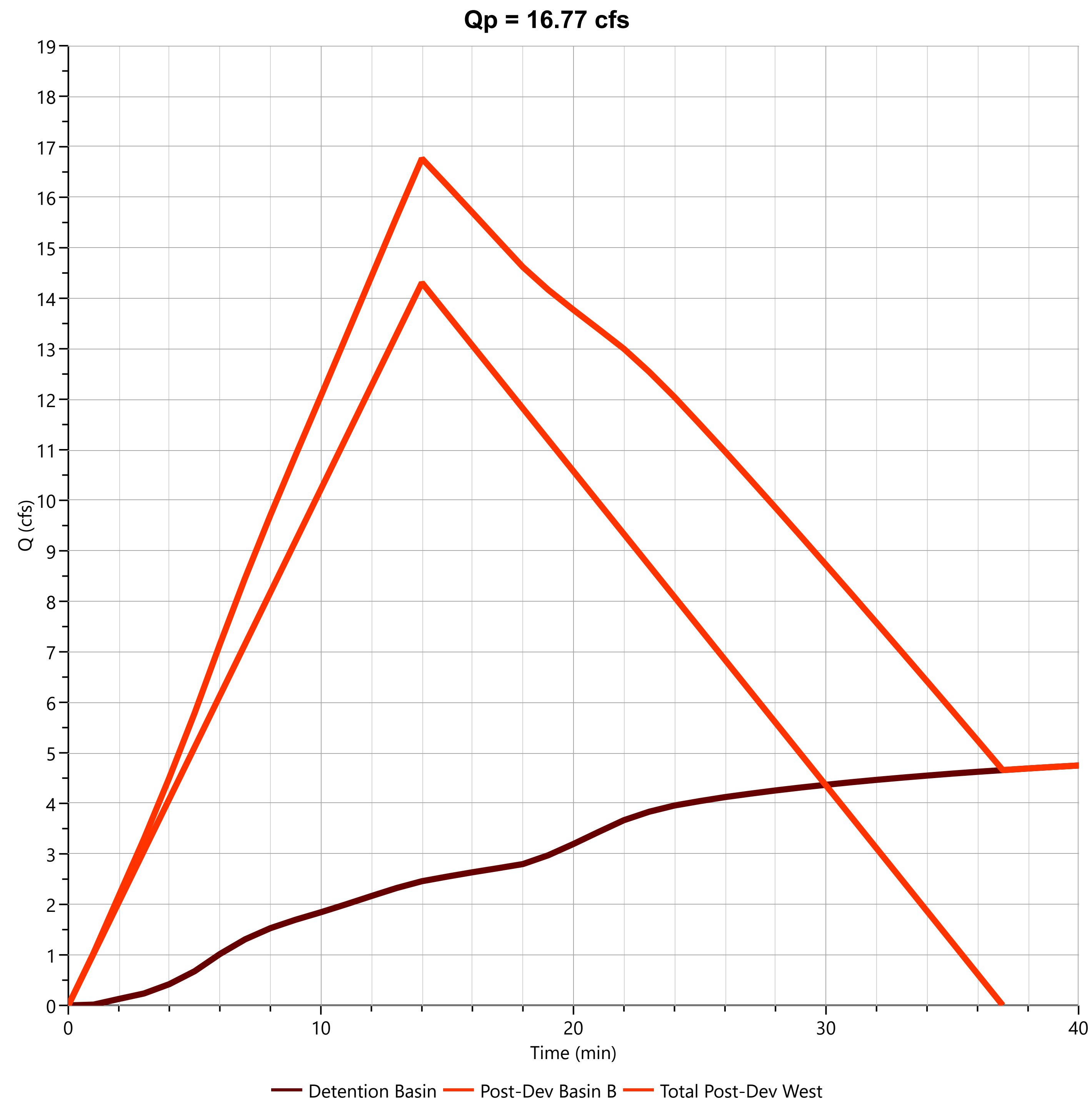
Hydrograph Type	= Rational	Peak Flow	= 14.31 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 16,045 cuft
Drainage Area	= 3.67 ac	Runoff Coeff.	= 0.60
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.50 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev West

Hyd. No. 11

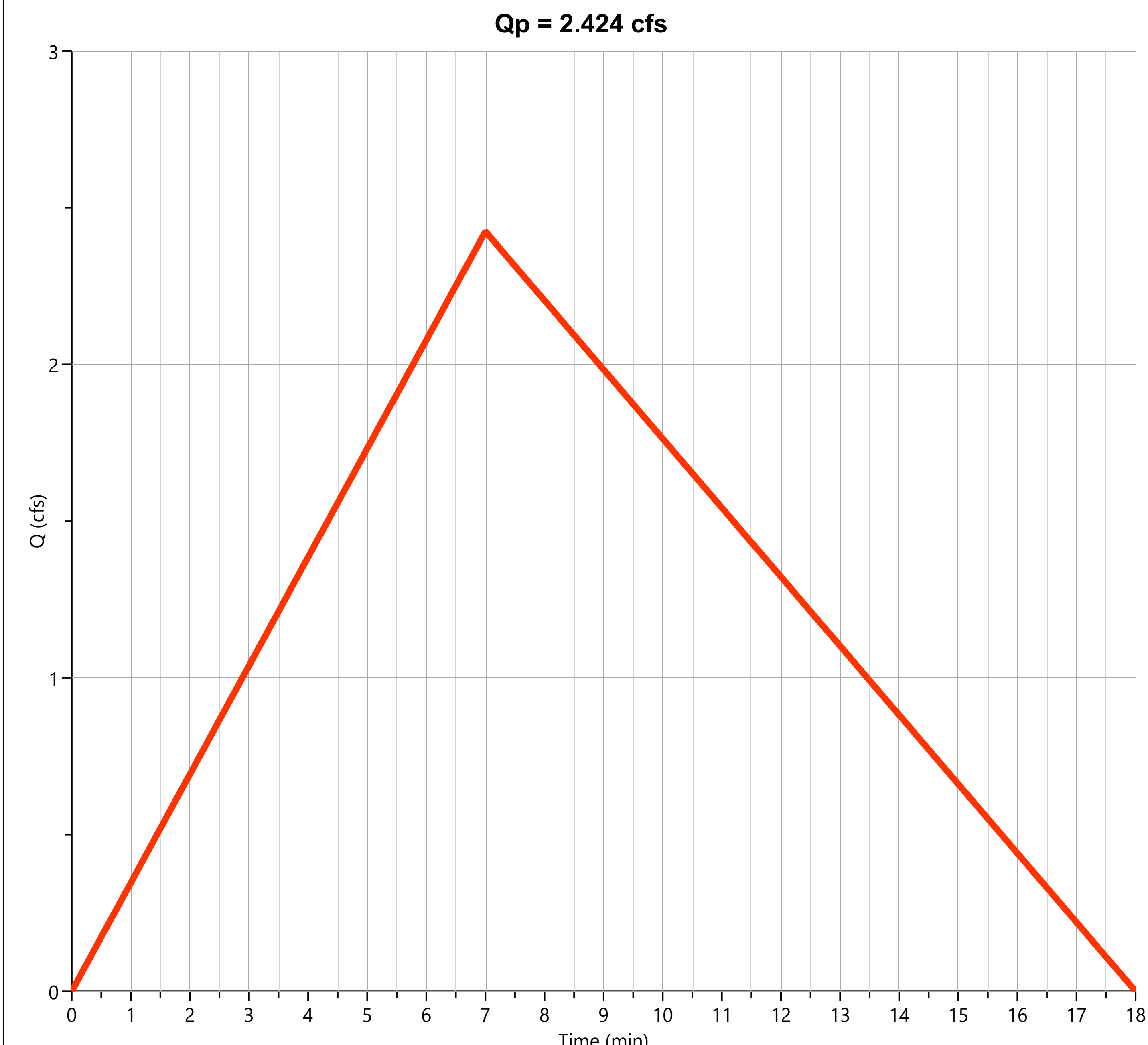
Hydrograph Type	= Junction	Peak Flow	= 16.77 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 28,984 cuft
Inflow Hydrographs	= 10	Total Contrib. Area	= 3.67 ac



Post-Dev Basin "C"

Hyd. No. 12

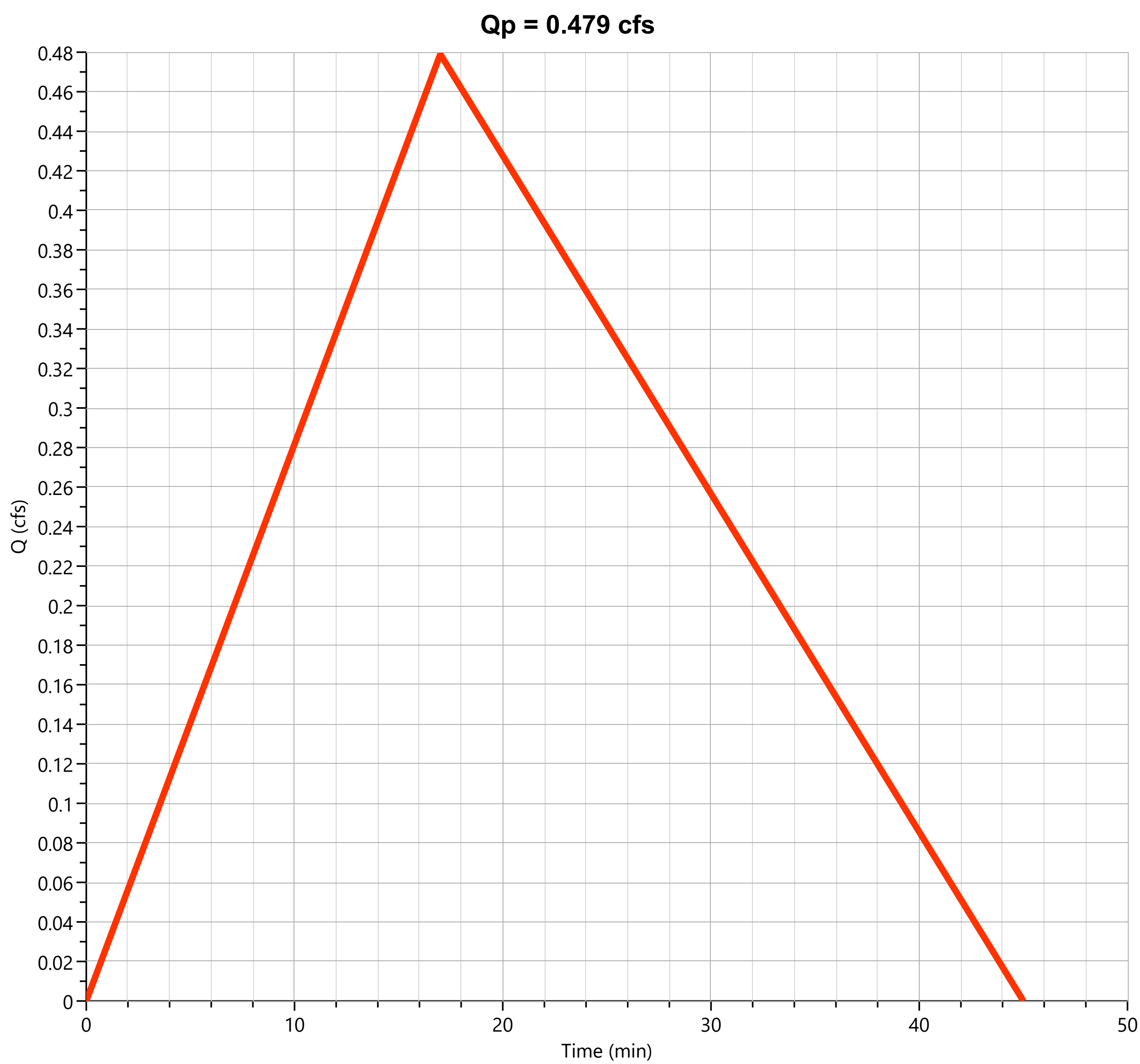
Hydrograph Type	= Rational	Peak Flow	= 2.424 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Runoff Volume	= 1,359 cuft
Drainage Area	= 0.38 ac	Runoff Coeff.	= 0.72
Tc Method	= TR55	Time of Conc. (Tc)	= 7.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 8.86 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin "D"

Hyd. No. 13

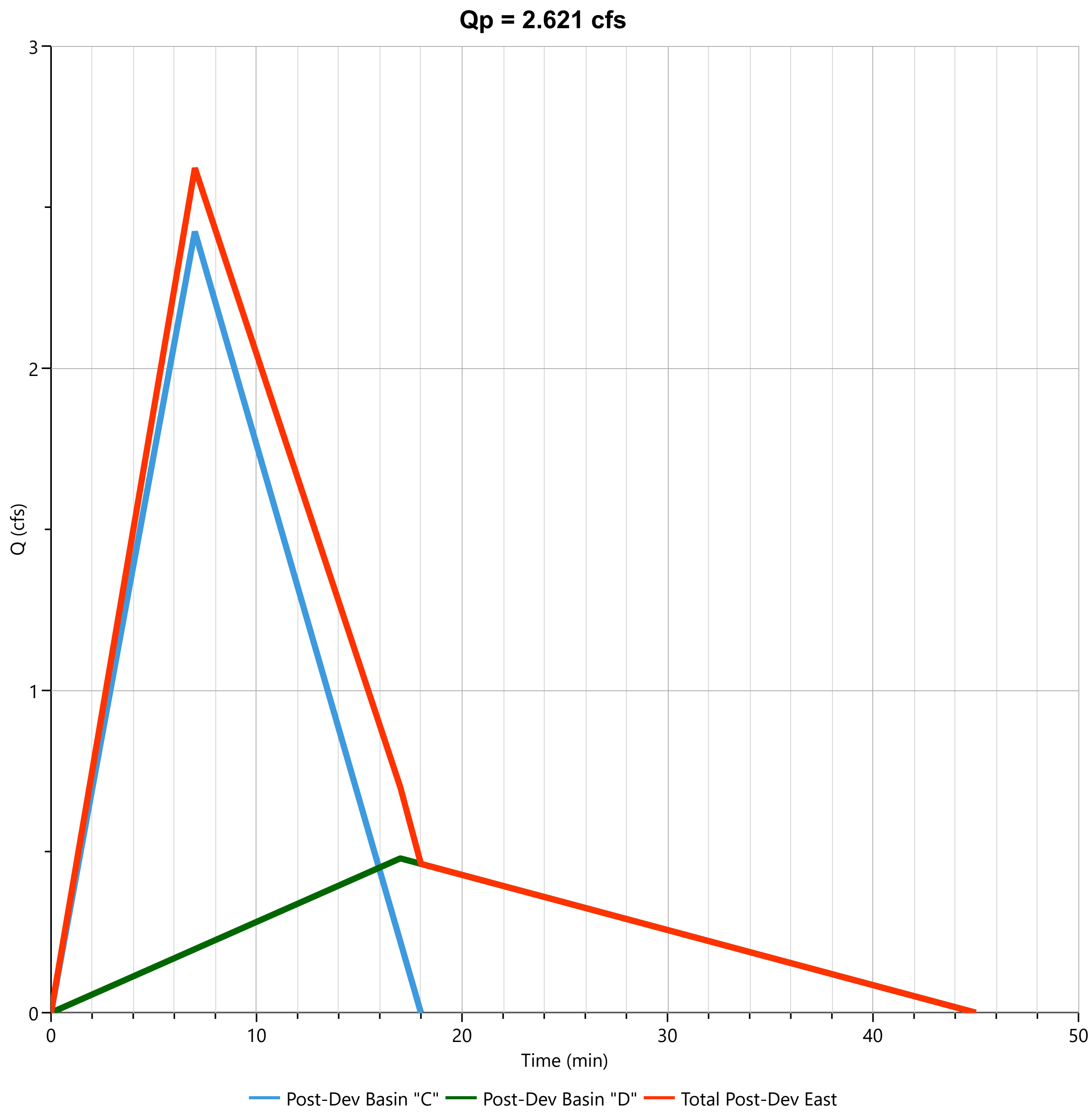
Hydrograph Type	= Rational	Peak Flow	= 0.479 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 652 cuft
Drainage Area	= 0.12 ac	Runoff Coeff.	= 0.67
Tc Method	= TR55	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 5.96 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev East

Hyd. No. 14

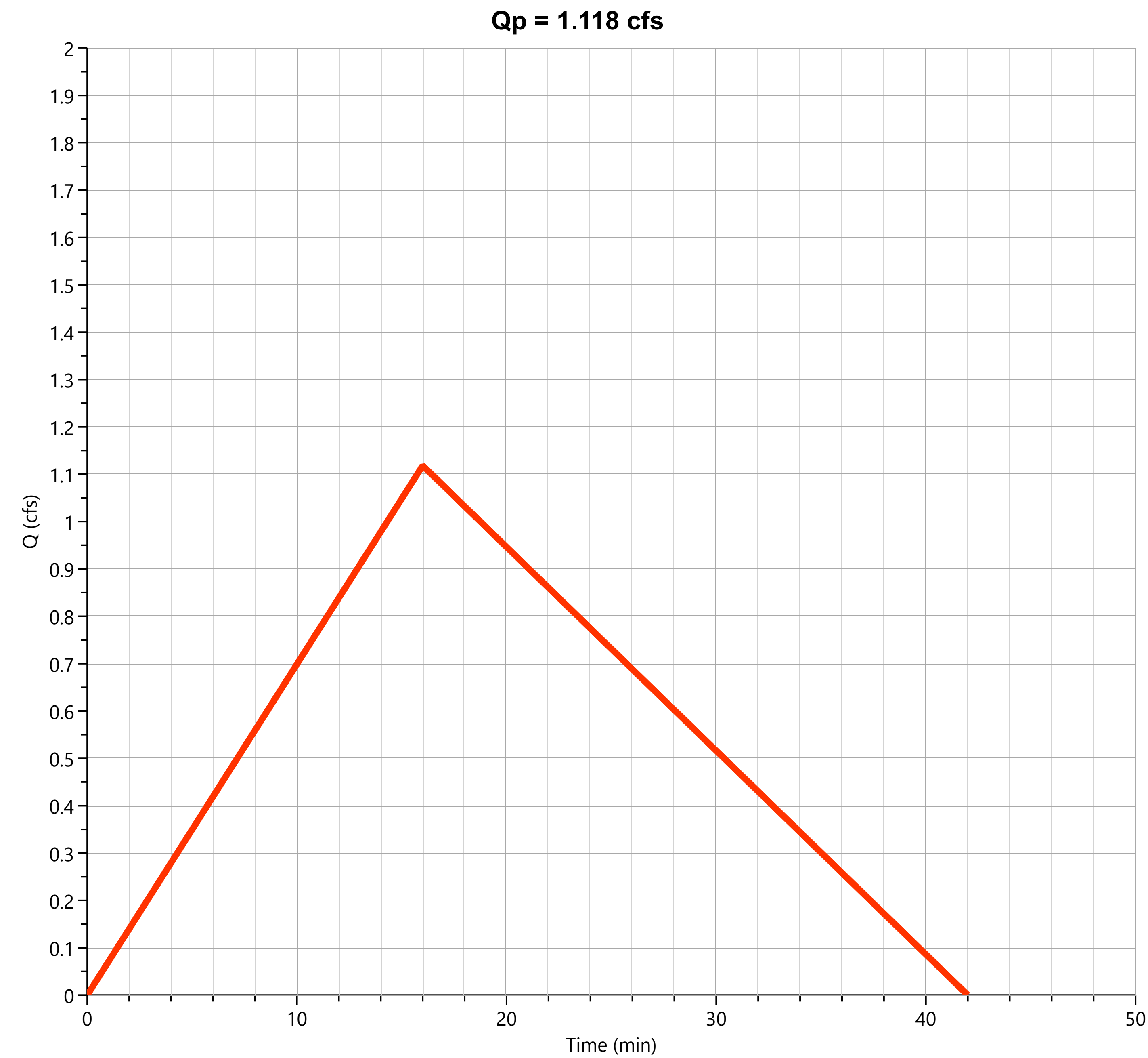
Hydrograph Type	= Junction	Peak Flow	= 2.621 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,956 cuft
Inflow Hydrographs	= 12, 13	Total Contrib. Area	= 0.5 ac



Post-Dev Basin "E"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 1.118 cfs
Storm Frequency	= 50-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 1,433 cuft
Drainage Area	= 0.29 ac	Runoff Coeff.	= 0.63
Tc Method	= TR55	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



Hydrograph 100-yr Summary

Hydrology Studio v 3.0.0.39

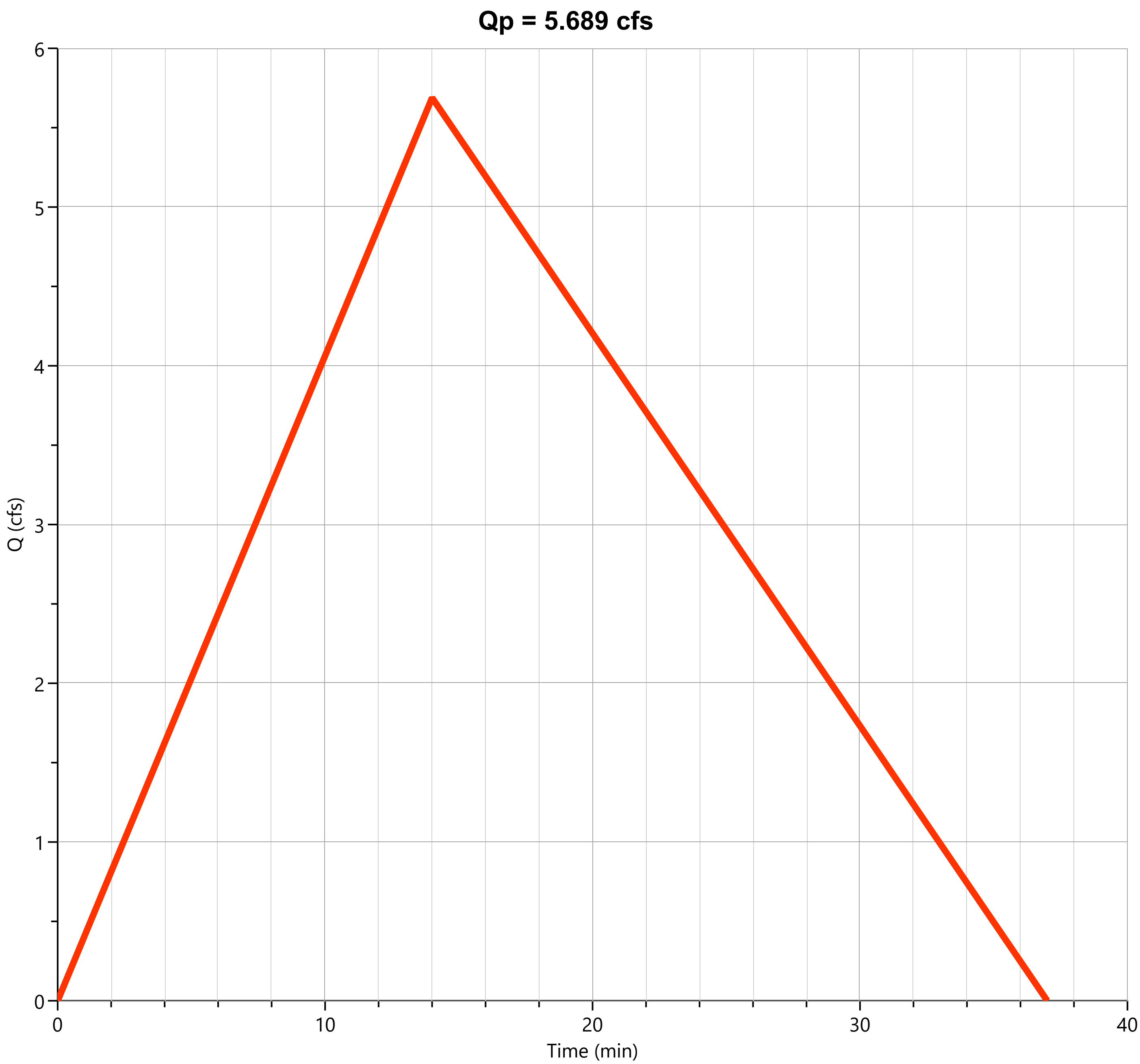
Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025

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"	5.689	0.23	6,379	----		
2	Rational	Pre-Dev Basin "B"	13.57	0.23	15,215	----		
3	Junction	Total Pre-Dev West	19.26	0.23	21,375	1, 2		
4	Rational	Pre-Dev Basin "C"	1.686	0.18	1,486	----		
5	Rational	Pre-Dev Basin "D"	1.847	0.25	2,219	----		
6	Junction	Total Pre-Dev East	3.158	0.25	3,683	4, 5		
7	Rational	Pre-Dev Basin "E"	1.793	0.32	2,729	----		
8	Mod Rational	Post-Dev Basin A	5.774	0.20	14,204	----		
9	Pond Route	Detention Basin	5.104	0.70	14,202	8	422.78	4,240
10	Rational	Post-Dev Basin B	15.53	0.23	17,419	----		
11	Junction	Total Post-Dev West	18.08	0.23	31,444	9, 10		
12	Rational	Post-Dev Basin "C"	2.635	0.12	1,477	----		
13	Rational	Post-Dev Basin "D"	0.520	0.28	708	----		
14	Junction	Total Post-Dev East	2.849	0.12	2,124	12, 13		
15	Rational	Post-Dev Basin "E"	1.214	0.27	1,556	----		

Pre-Dev Basin "A"

Hyd. No. 1

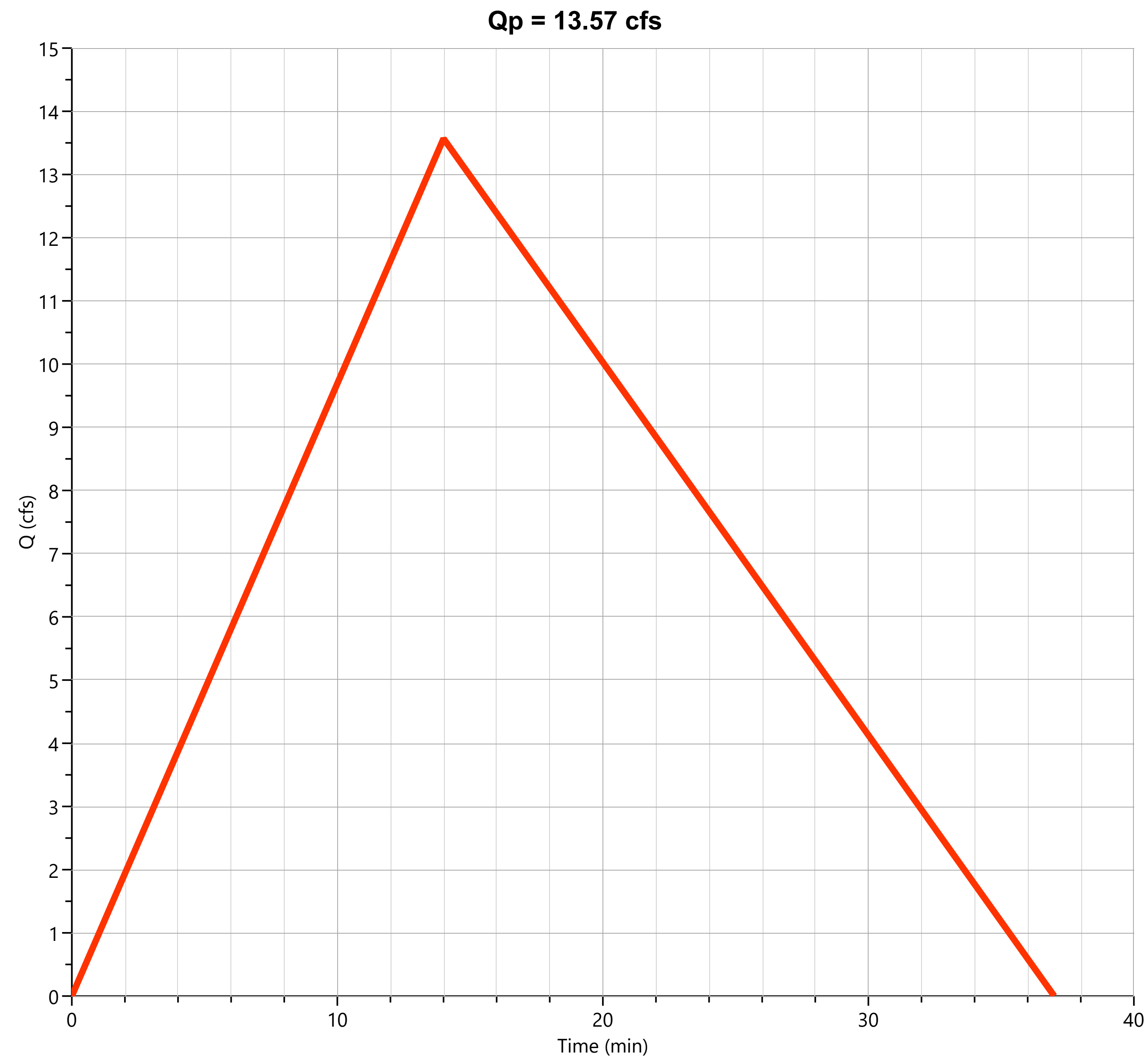
Hydrograph Type	= Rational	Peak Flow	= 5.689 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 6,379 cuft
Drainage Area	= 1.44 ac	Runoff Coeff.	= 0.56
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.05 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "B"

Hyd. No. 2

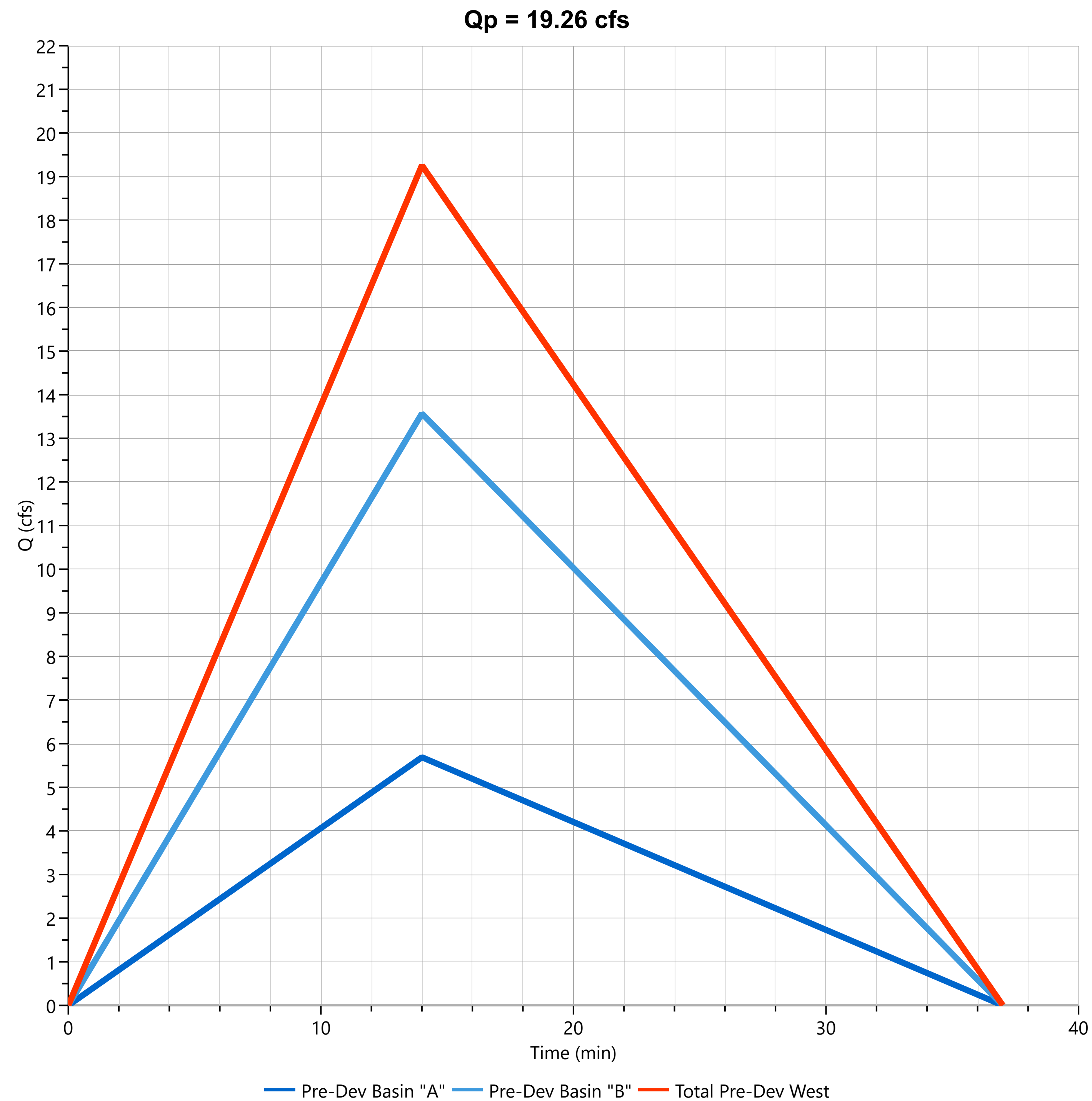
Hydrograph Type	= Rational	Peak Flow	= 13.57 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 15,215 cuft
Drainage Area	= 3.26 ac	Runoff Coeff.	= 0.59
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.05 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev West

Hyd. No. 3

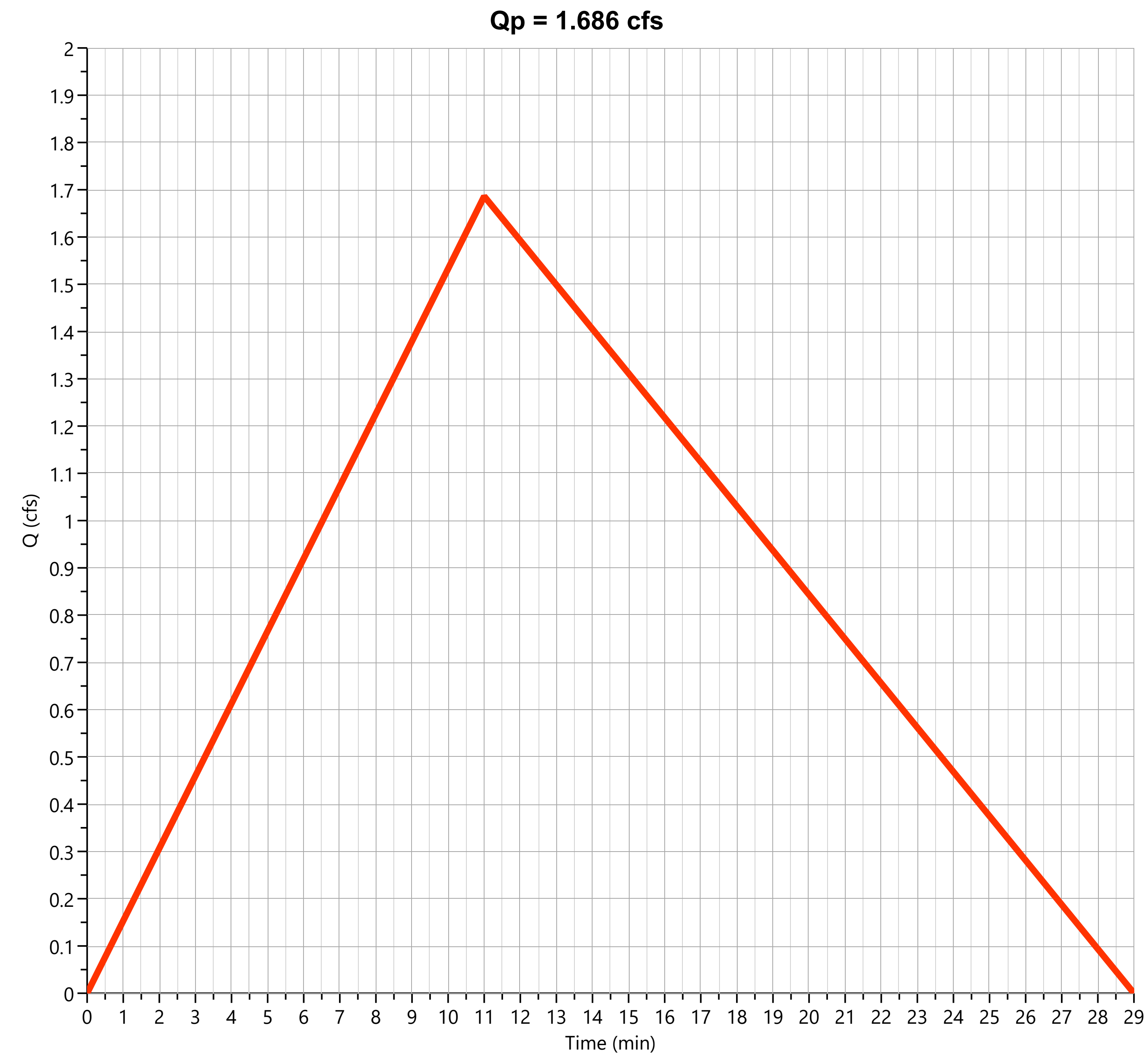
Hydrograph Type	= Junction	Peak Flow	= 19.26 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 21,375 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 4.7 ac



Pre-Dev Basin "C"

Hyd. No. 4

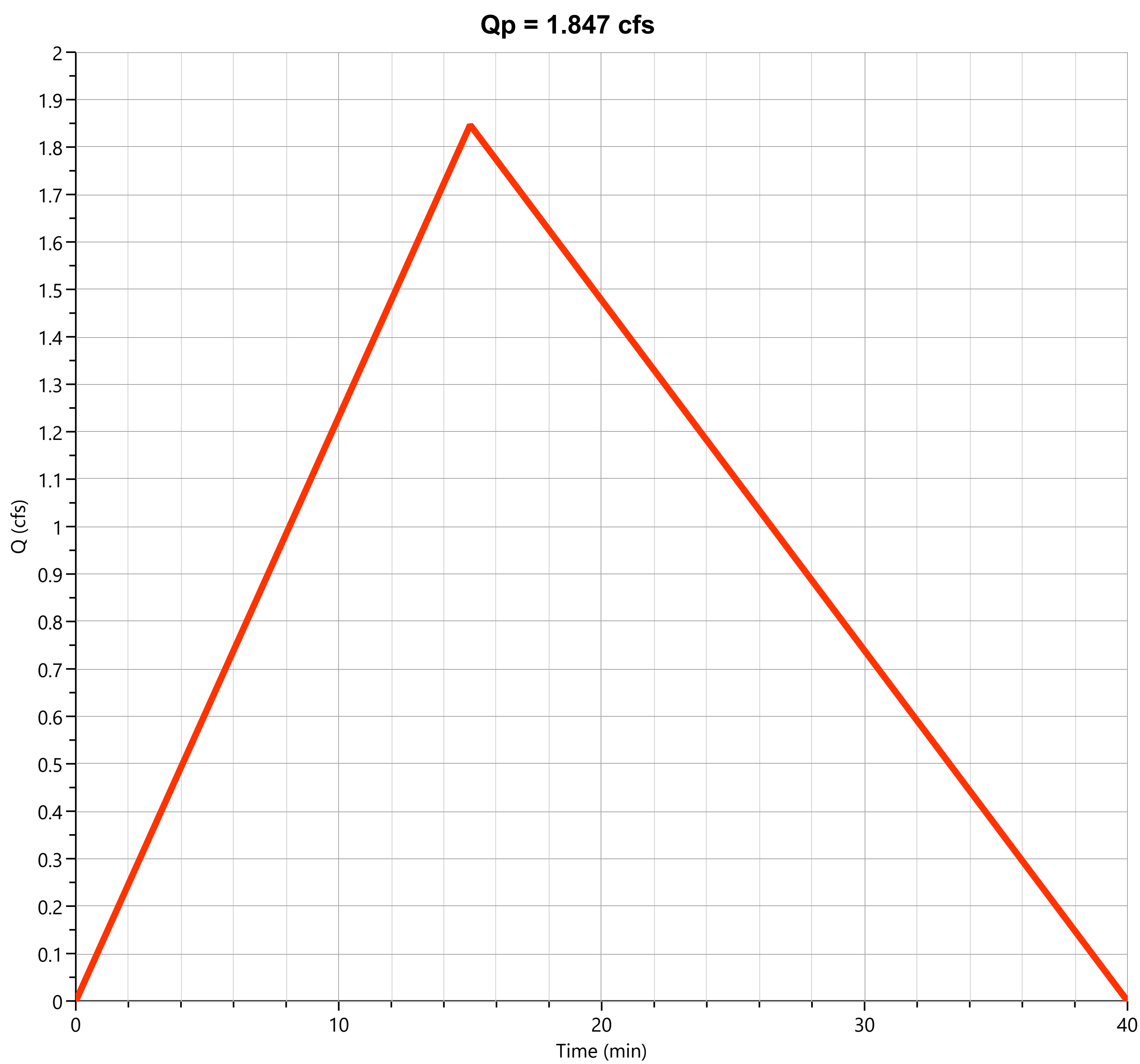
Hydrograph Type	= Rational	Peak Flow	= 1.686 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.18 hrs
Time Interval	= 1 min	Runoff Volume	= 1,486 cuft
Drainage Area	= 0.33 ac	Runoff Coeff.	= 0.65
Tc Method	= TR55	Time of Conc. (Tc)	= 11.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.86 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Pre-Dev Basin "D"

Hyd. No. 5

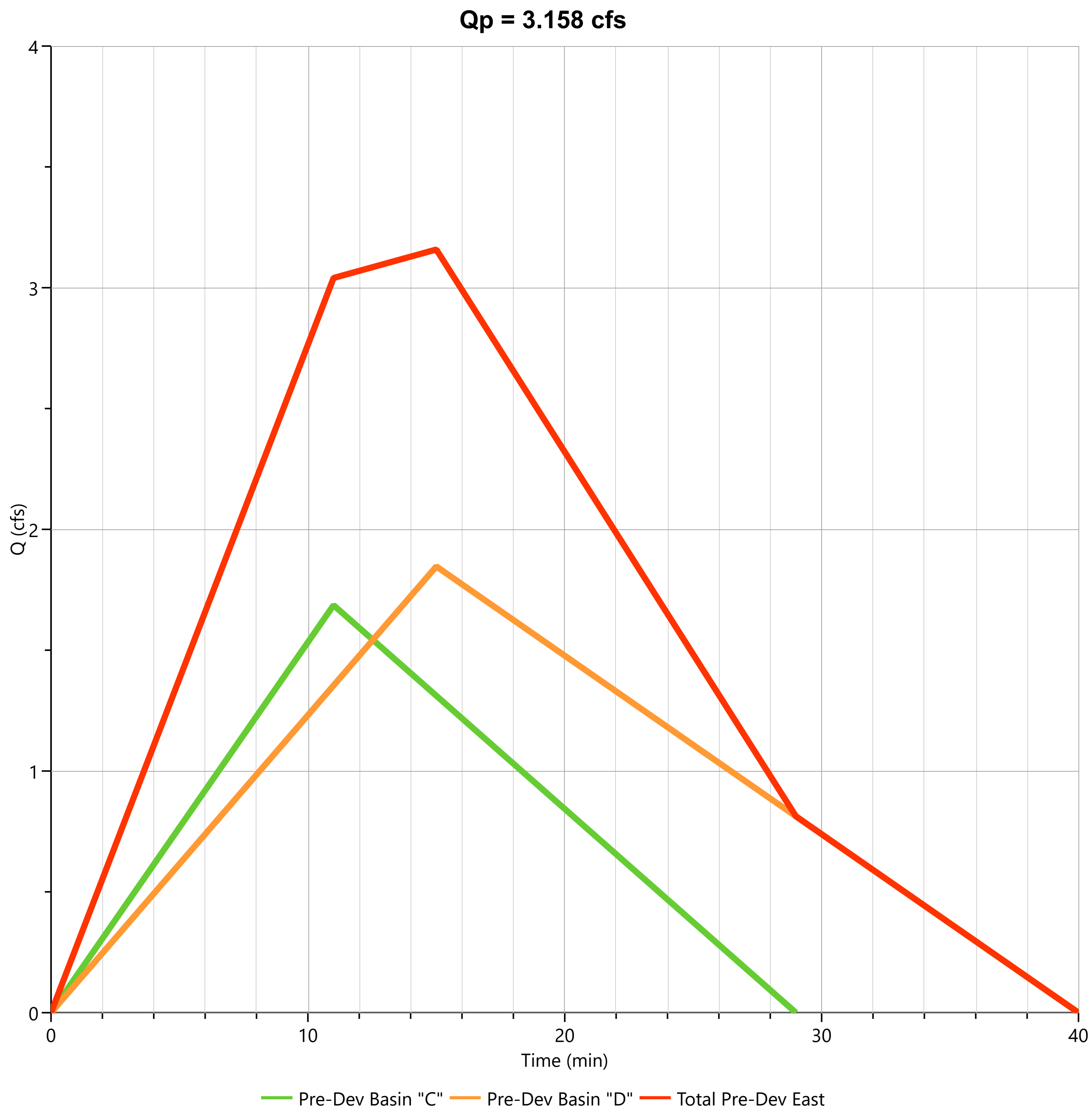
Hydrograph Type	= Rational	Peak Flow	= 1.847 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Runoff Volume	= 2,219 cuft
Drainage Area	= 0.5 ac	Runoff Coeff.	= 0.54
Tc Method	= TR55	Time of Conc. (Tc)	= 15.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.84 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Pre-Dev East

Hyd. No. 6

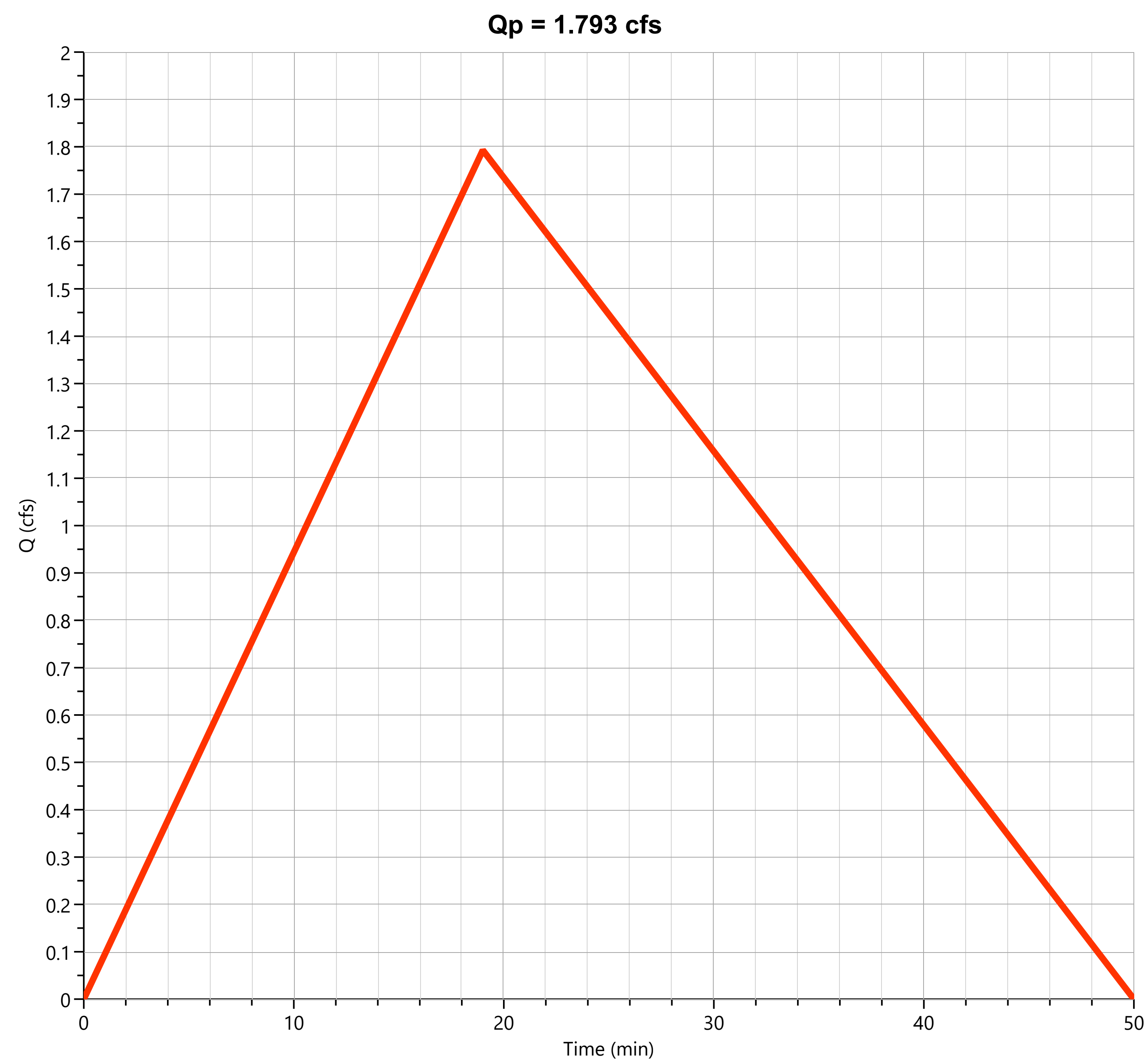
Hydrograph Type	= Junction	Peak Flow	= 3.158 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.25 hrs
Time Interval	= 1 min	Hydrograph Volume	= 3,683 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.83 ac



Pre-Dev Basin "E"

Hyd. No. 7

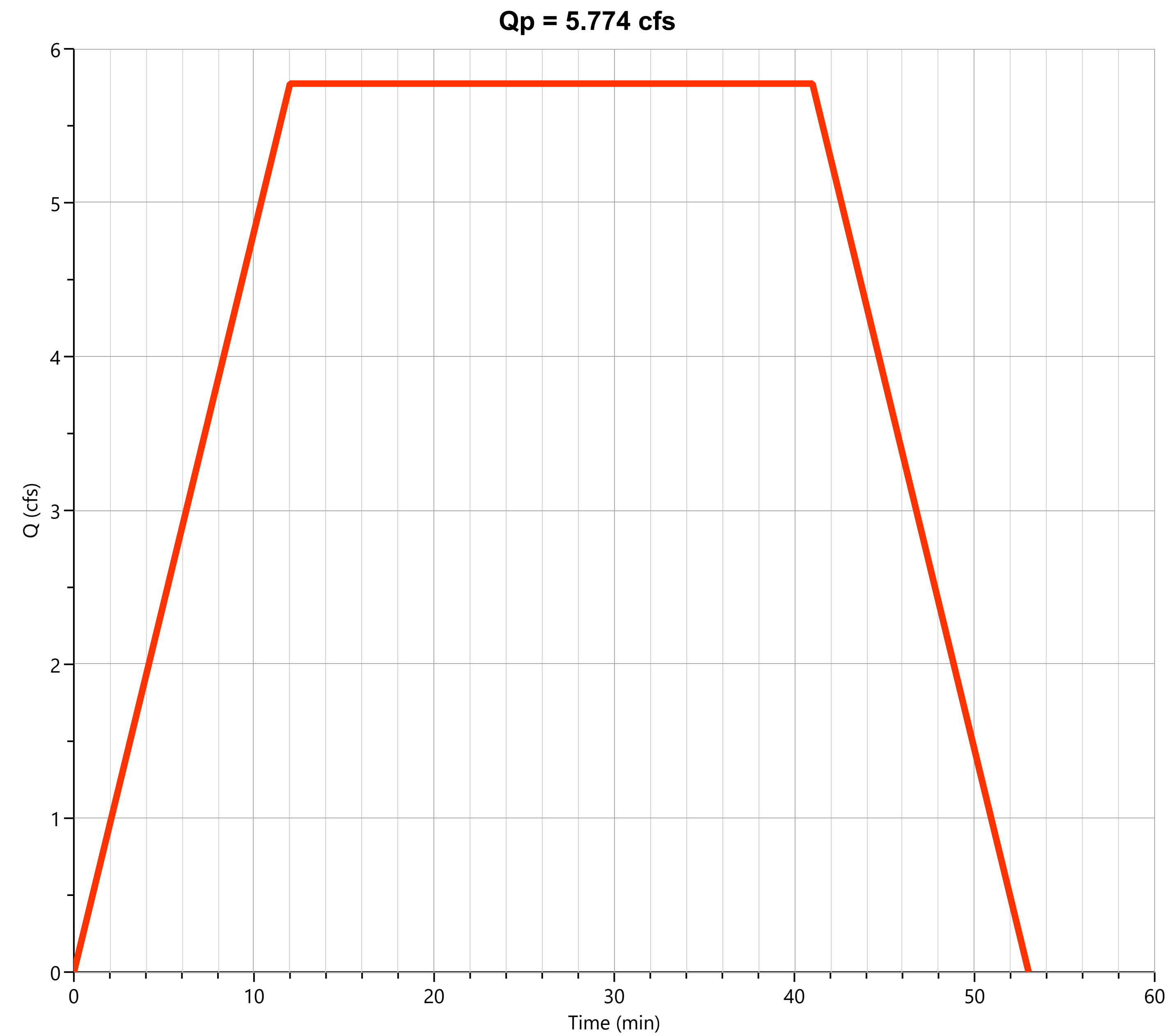
Hydrograph Type	= Rational	Peak Flow	= 1.793 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.32 hrs
Time Interval	= 1 min	Runoff Volume	= 2,729 cuft
Drainage Area	= 0.53 ac	Runoff Coeff.	= 0.55
Tc Method	= TR55	Time of Conc. (Tc)	= 19.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.15 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin A

Hyd. No. 8

Hydrograph Type	= Mod Rational	Peak Flow	= 5.774 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.20 hrs
Time Interval	= 1 min	Runoff Volume	= 14,204 cuft
Drainage Area	= 1.56 ac	Runoff Coeff.	= 0.85
Tc Method	= User	Time of Conc. (Tc)	= 12.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 4.35 in/hr
Freq. Corr. Factor	= 1.00	Storm Duration	= 3.42 x Tc
Target Q	= 0.000 cfs	Required Storage	= 0.000 cuft



Hydrograph Report

Hydrology Studio v 3.0.0.39

Project Name: Bryant Pharmacy
File: Detention Calculation 11-13-25 FINAL.hys
11-13-2025

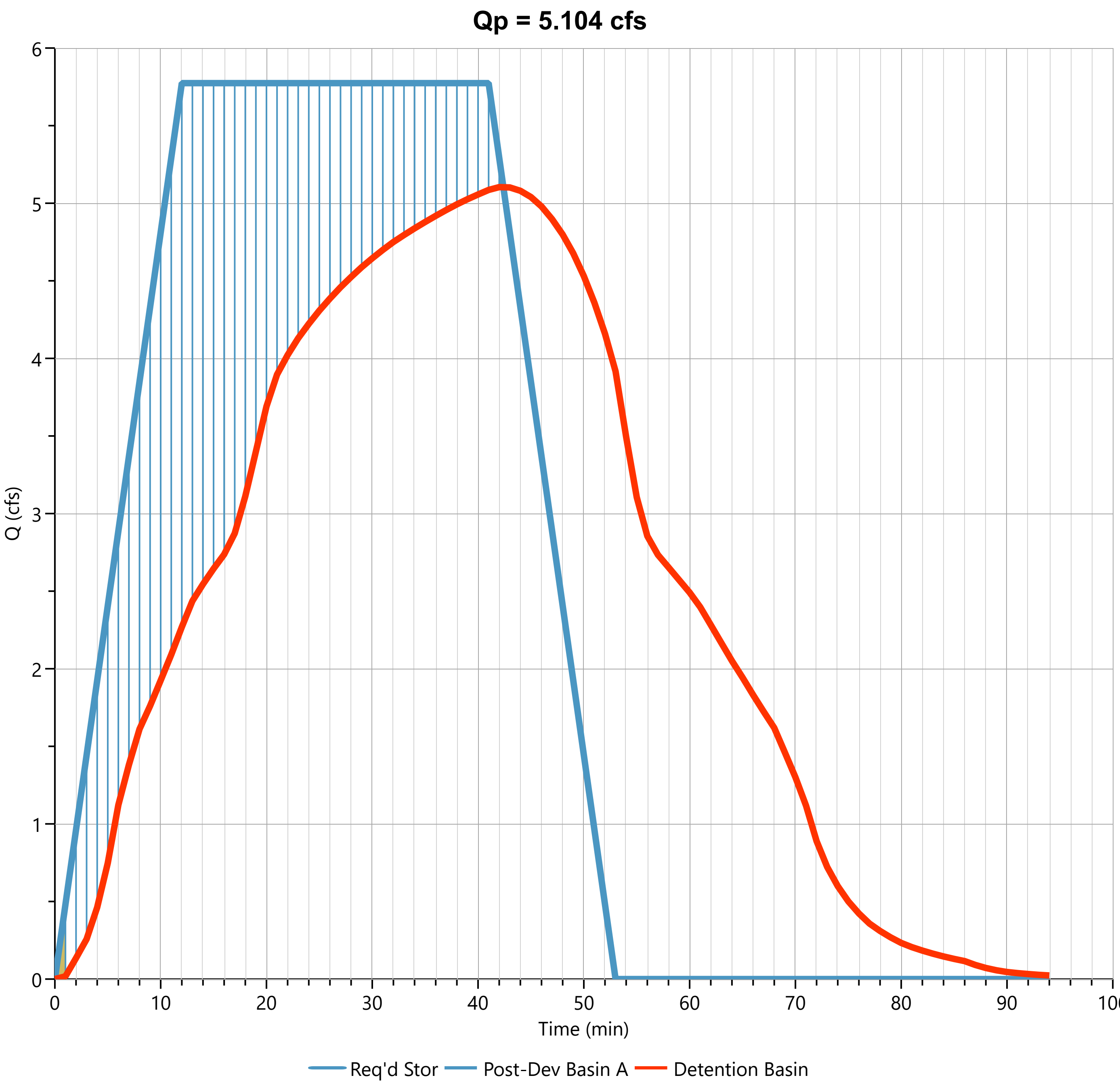
Detention Basin

Hyd. No. 9

Hydrograph Type	= Pond Route	Peak Flow	= 5.104 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.70 hrs
Time Interval	= 1 min	Hydrograph Volume	= 14,202 cuft
Inflow Hydrograph	= 8 - Post-Dev Basin A	Max. Elevation	= 422.78 ft
Pond Name	= Bryant Pharmacy Detention Pond	Max. Storage	= 4,240 cuft

Pond Routing by Storage Indication Method

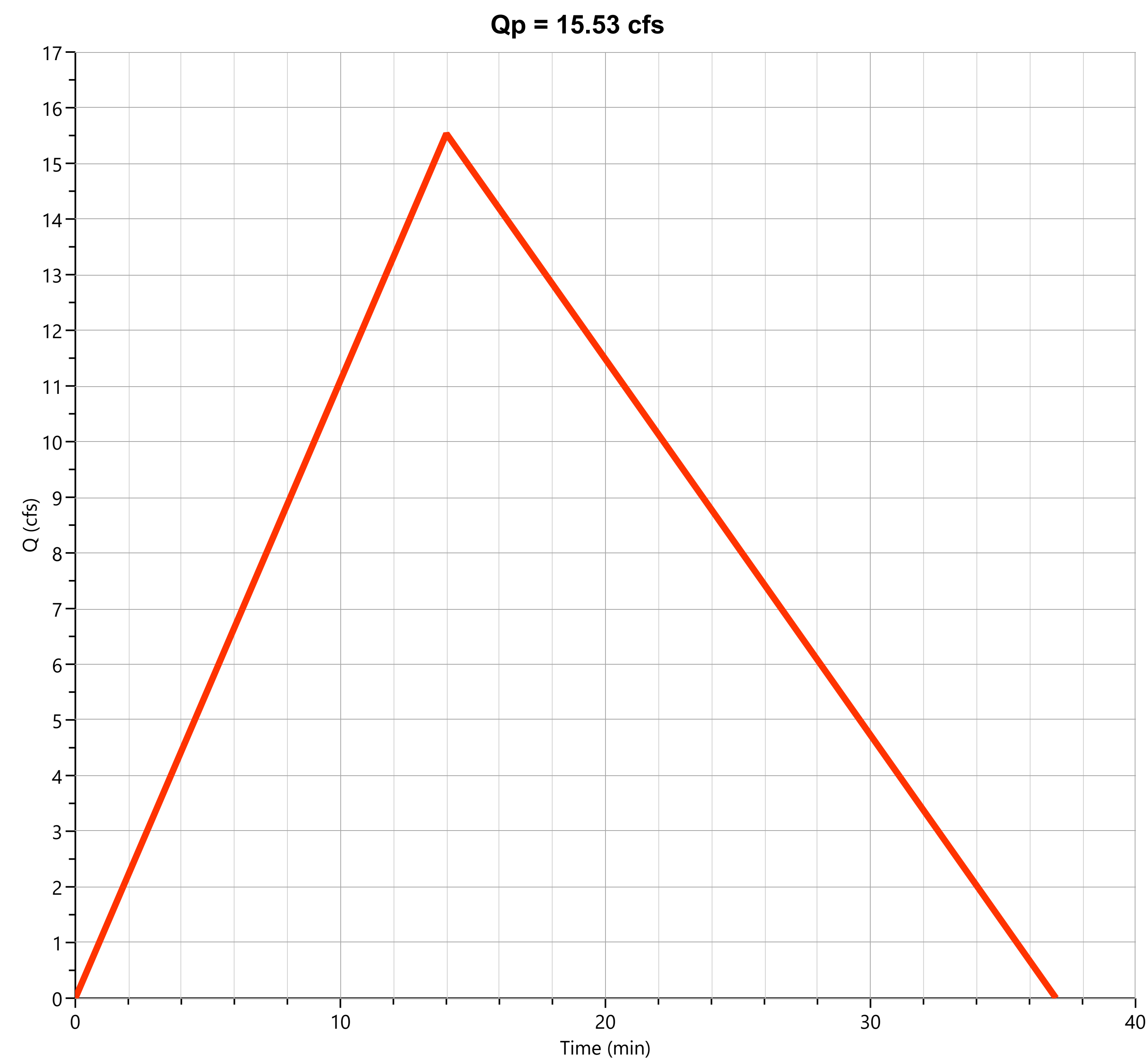
Center of mass detention time = 12 min



Post-Dev Basin B

Hyd. No. 10

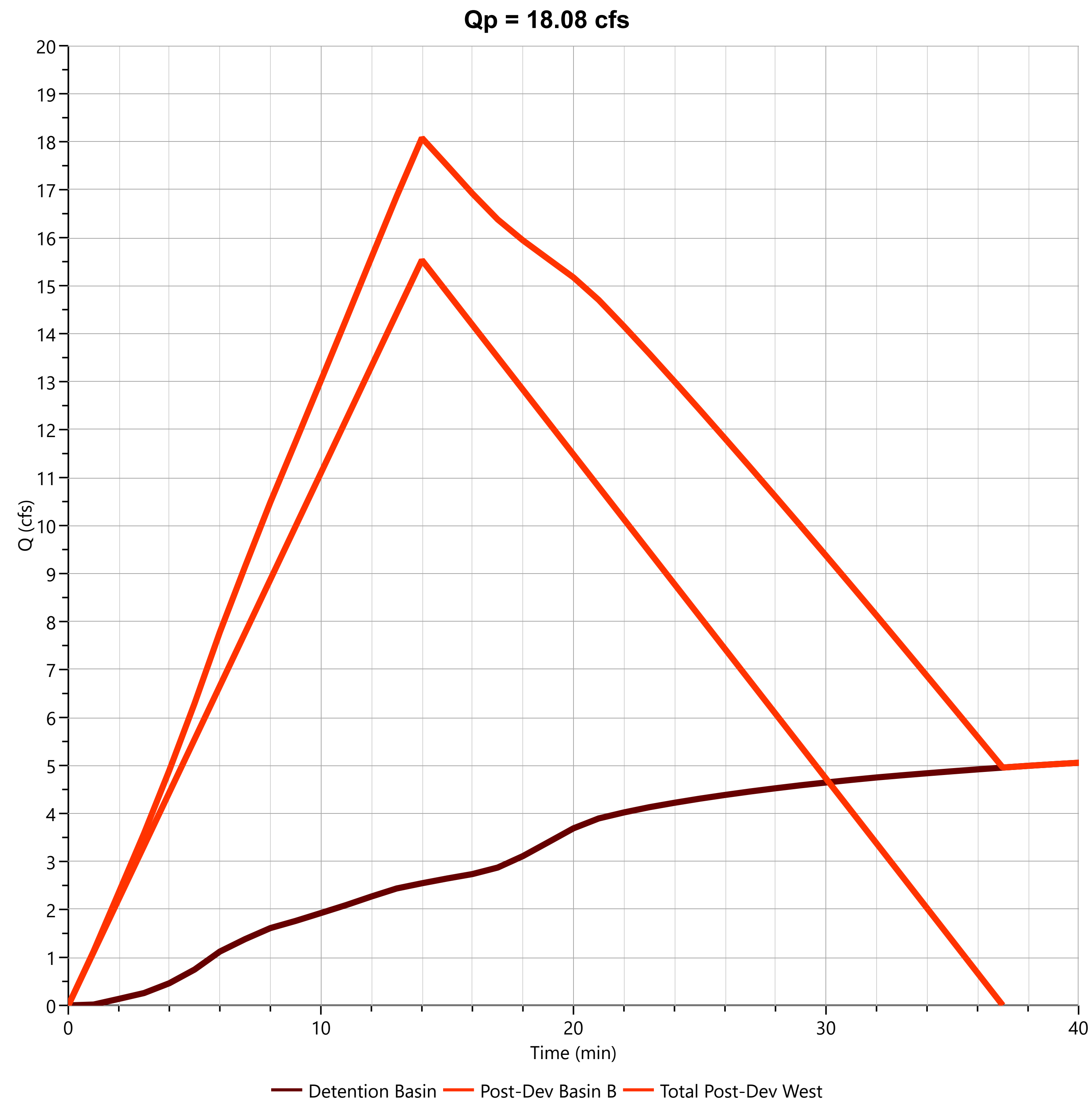
Hydrograph Type	= Rational	Peak Flow	= 15.53 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Runoff Volume	= 17,419 cuft
Drainage Area	= 3.67 ac	Runoff Coeff.	= 0.60
Tc Method	= TR55	Time of Conc. (Tc)	= 14.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 7.05 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev West

Hyd. No. 11

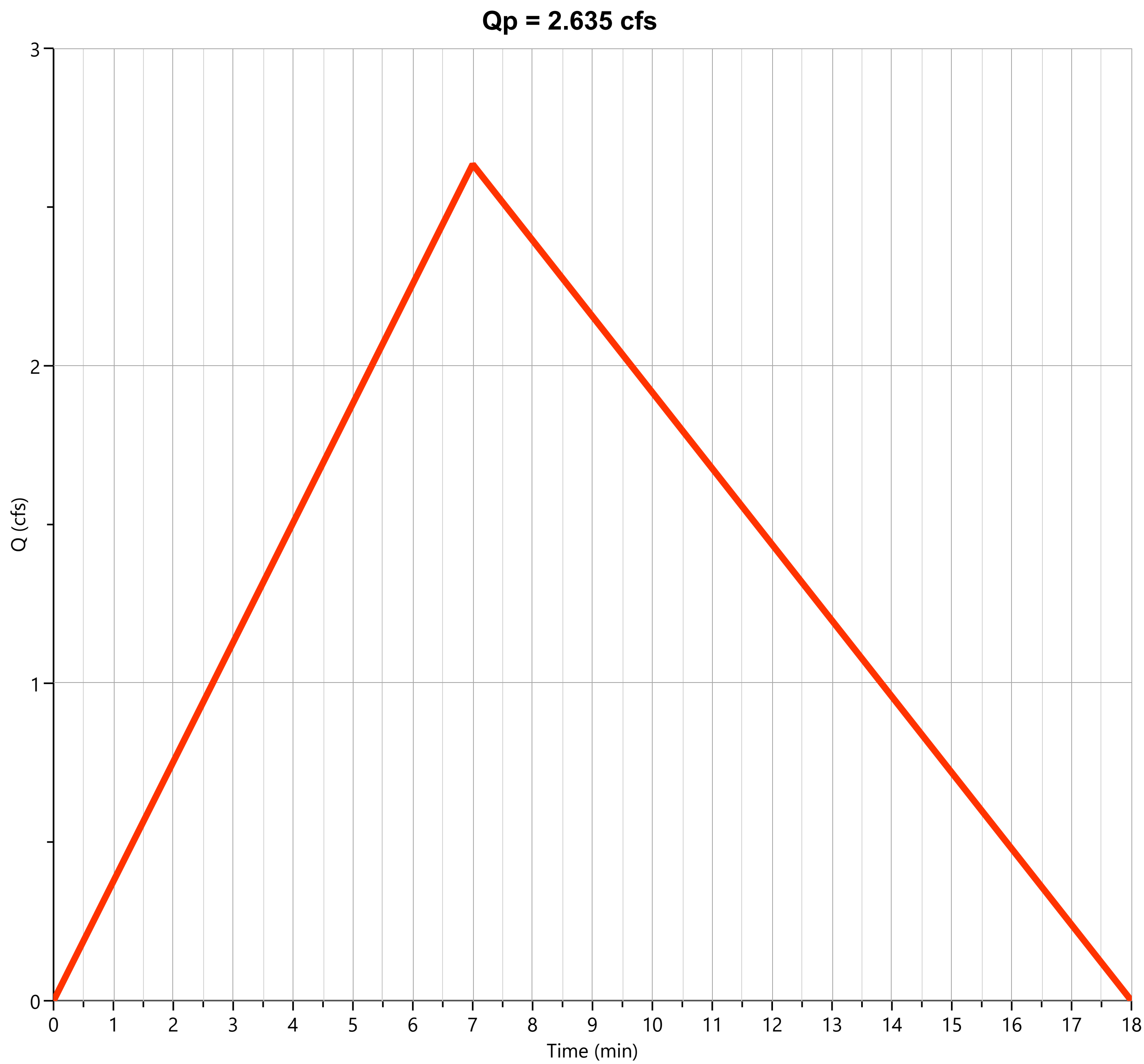
Hydrograph Type	= Junction	Peak Flow	= 18.08 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.23 hrs
Time Interval	= 1 min	Hydrograph Volume	= 31,444 cuft
Inflow Hydrographs	= 10	Total Contrib. Area	= 3.67 ac



Post-Dev Basin "C"

Hyd. No. 12

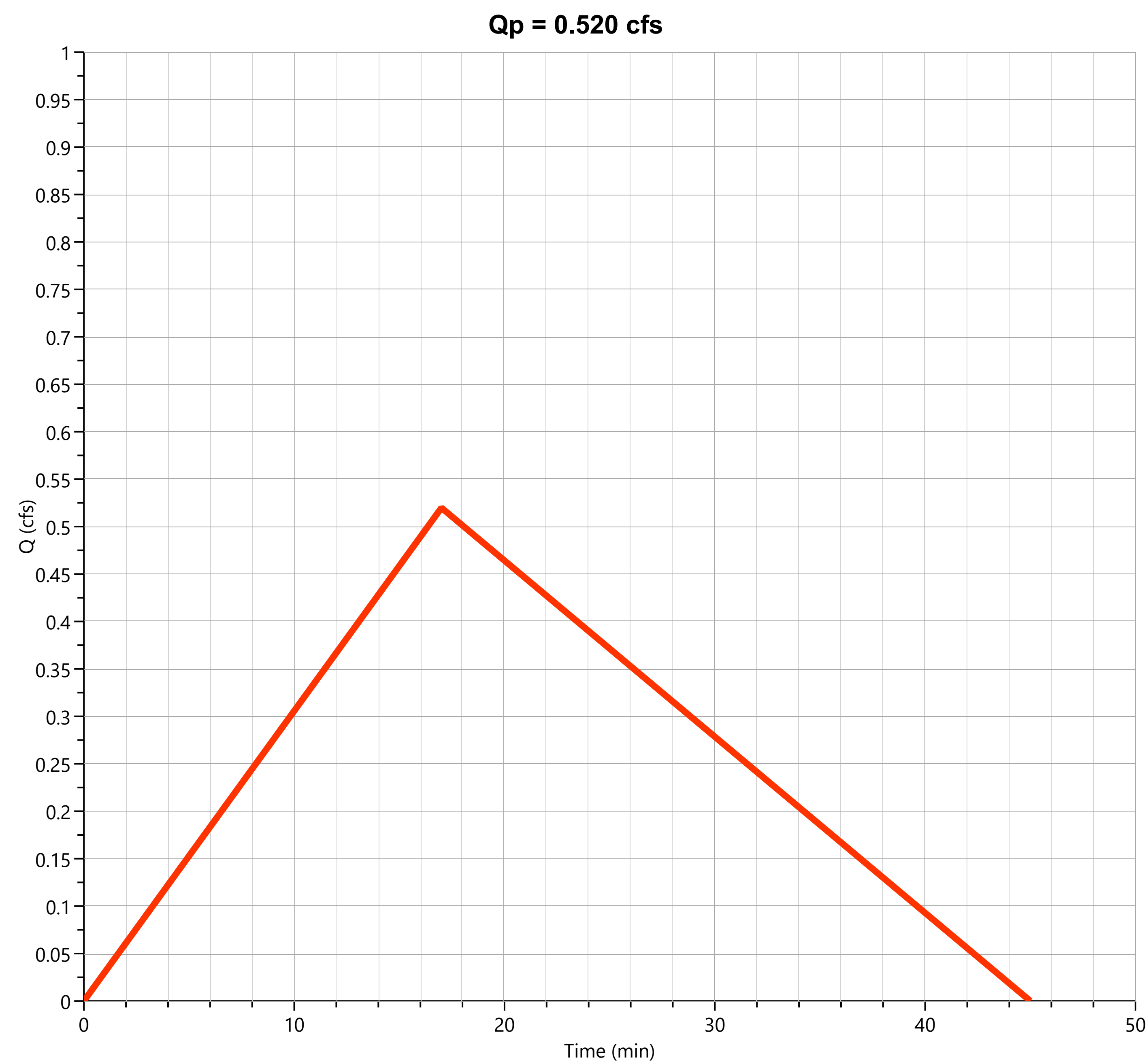
Hydrograph Type	= Rational	Peak Flow	= 2.635 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Runoff Volume	= 1,477 cuft
Drainage Area	= 0.38 ac	Runoff Coeff.	= 0.72
Tc Method	= TR55	Time of Conc. (Tc)	= 7.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 9.63 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Post-Dev Basin "D"

Hyd. No. 13

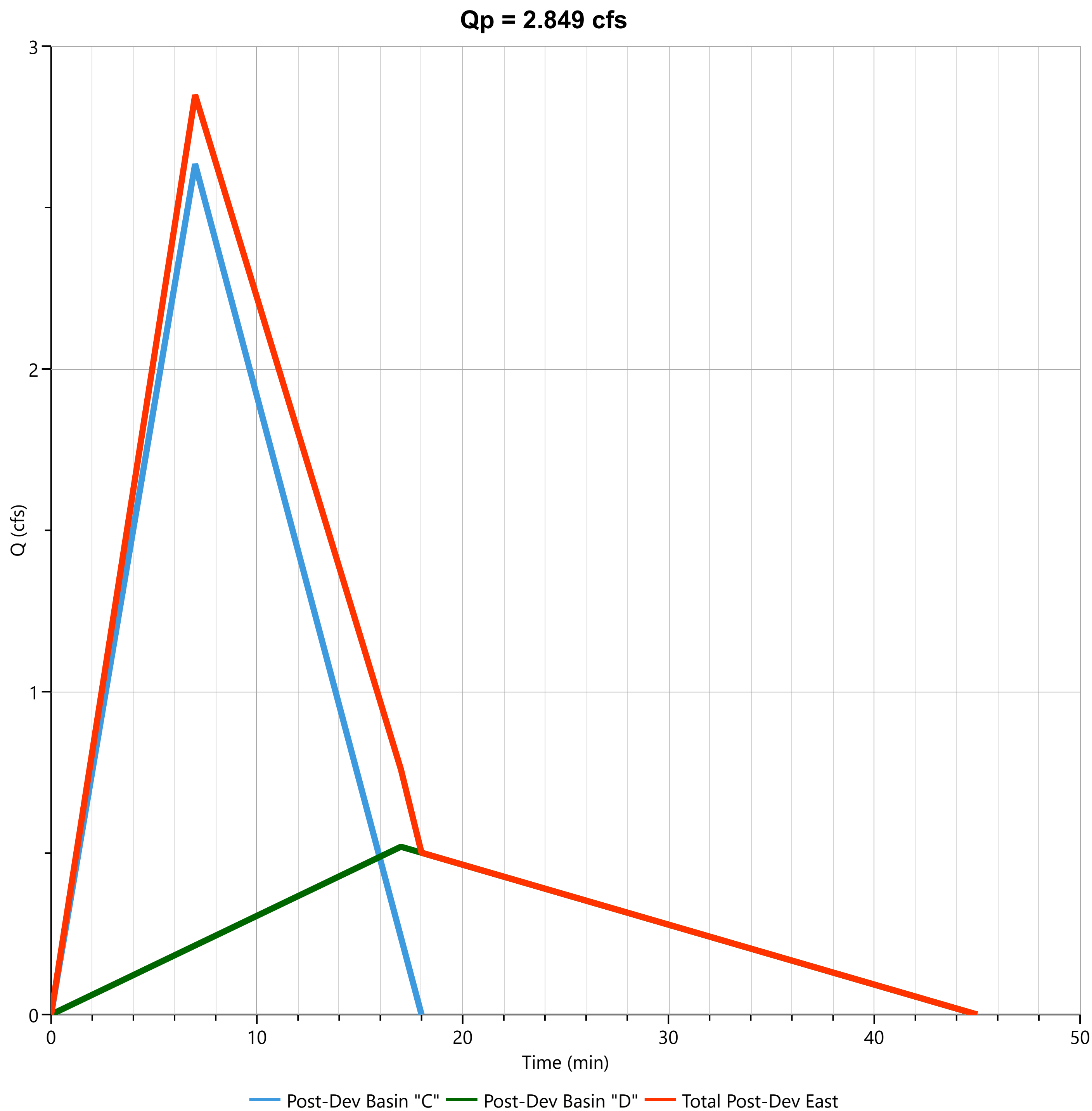
Hydrograph Type	= Rational	Peak Flow	= 0.520 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.28 hrs
Time Interval	= 1 min	Runoff Volume	= 708 cuft
Drainage Area	= 0.12 ac	Runoff Coeff.	= 0.67
Tc Method	= TR55	Time of Conc. (Tc)	= 17.0 min
IDF Curve	= City of Bryant IDF Curve.idf	Intensity	= 6.47 in/hr
Freq. Corr. Factor	= 1.00	Asc/Rec Limb Factors	= 1/1.67



Total Post-Dev East

Hyd. No. 14

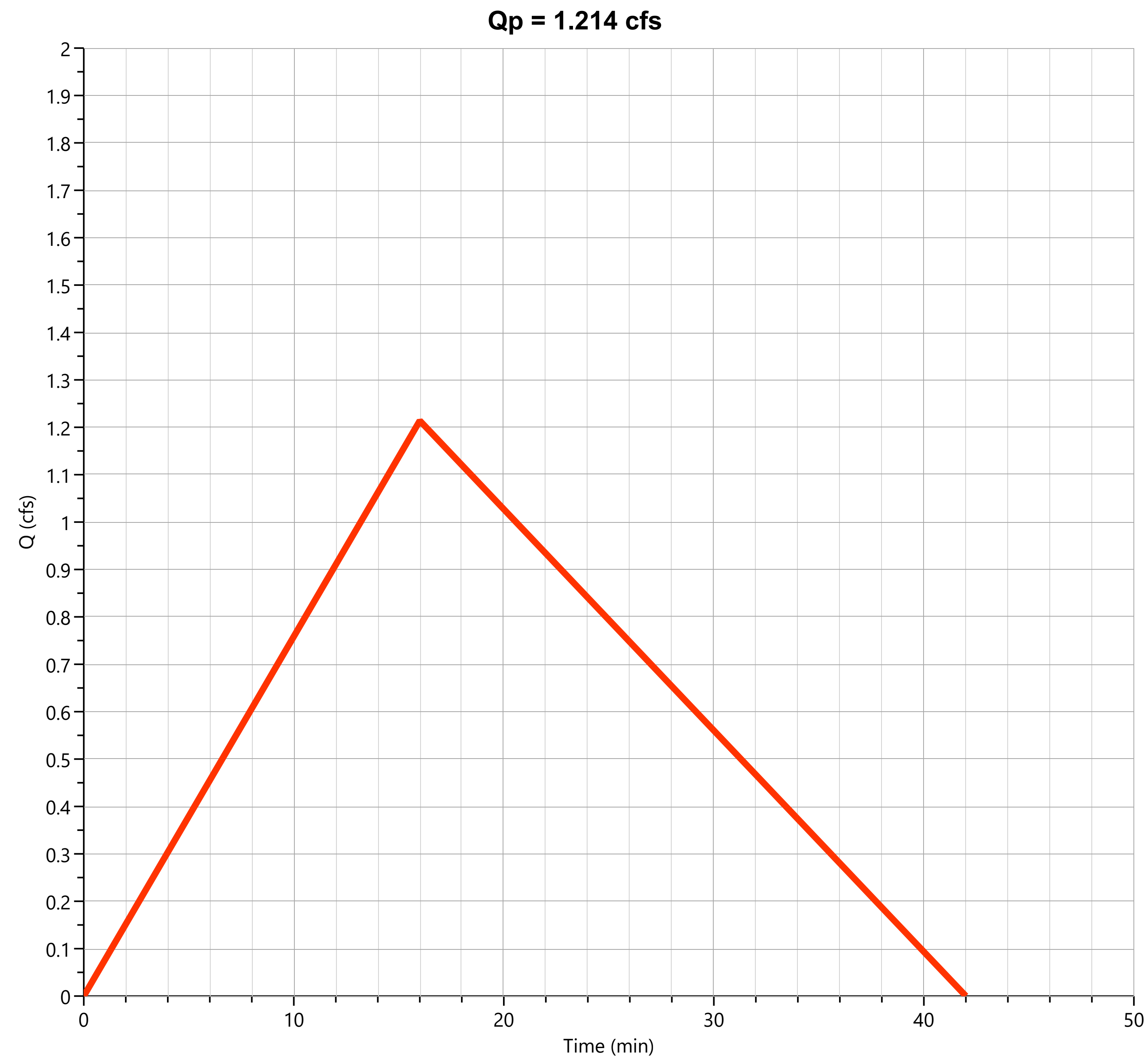
Hydrograph Type	= Junction	Peak Flow	= 2.849 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.12 hrs
Time Interval	= 1 min	Hydrograph Volume	= 2,124 cuft
Inflow Hydrographs	= 12, 13	Total Contrib. Area	= 0.5 ac



Post-Dev Basin "E"

Hyd. No. 15

Hydrograph Type	= Rational	Peak Flow	= 1.214 cfs
Storm Frequency	= 100-yr	Time to Peak	= 0.27 hrs
Time Interval	= 1 min	Runoff Volume	= 1,556 cuft
Drainage Area	= 0.29 ac	Runoff Coeff.	= 0.63
Tc Method	= TR55	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



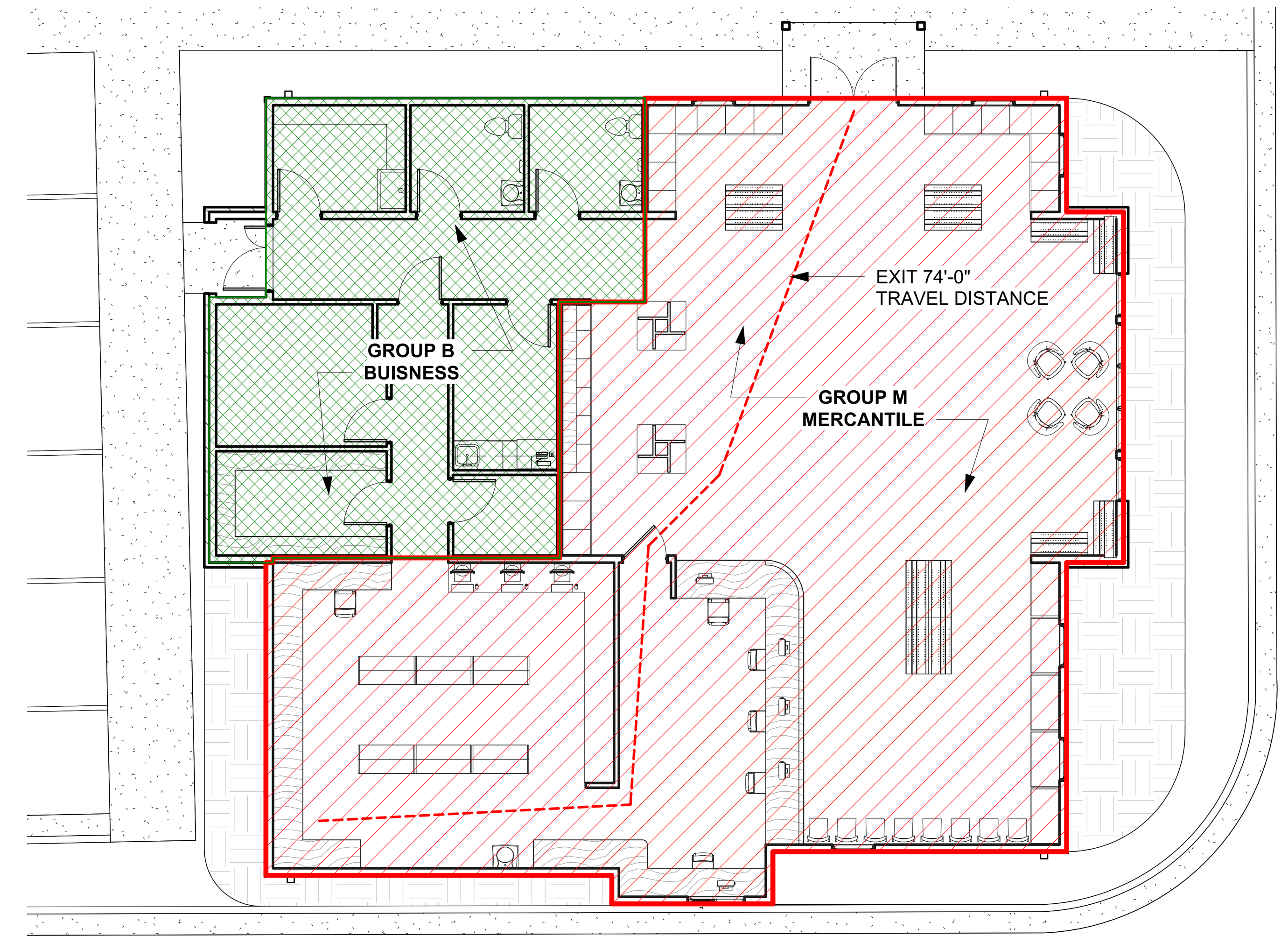
PROPOSED PHARMACY BUILDING

4735 BRYANT PARKWAY
ALEXANDER, AR 72002
DESIGNED BY:

TAYLOR / KEMPKES ARCHITECTS

10/20/2025

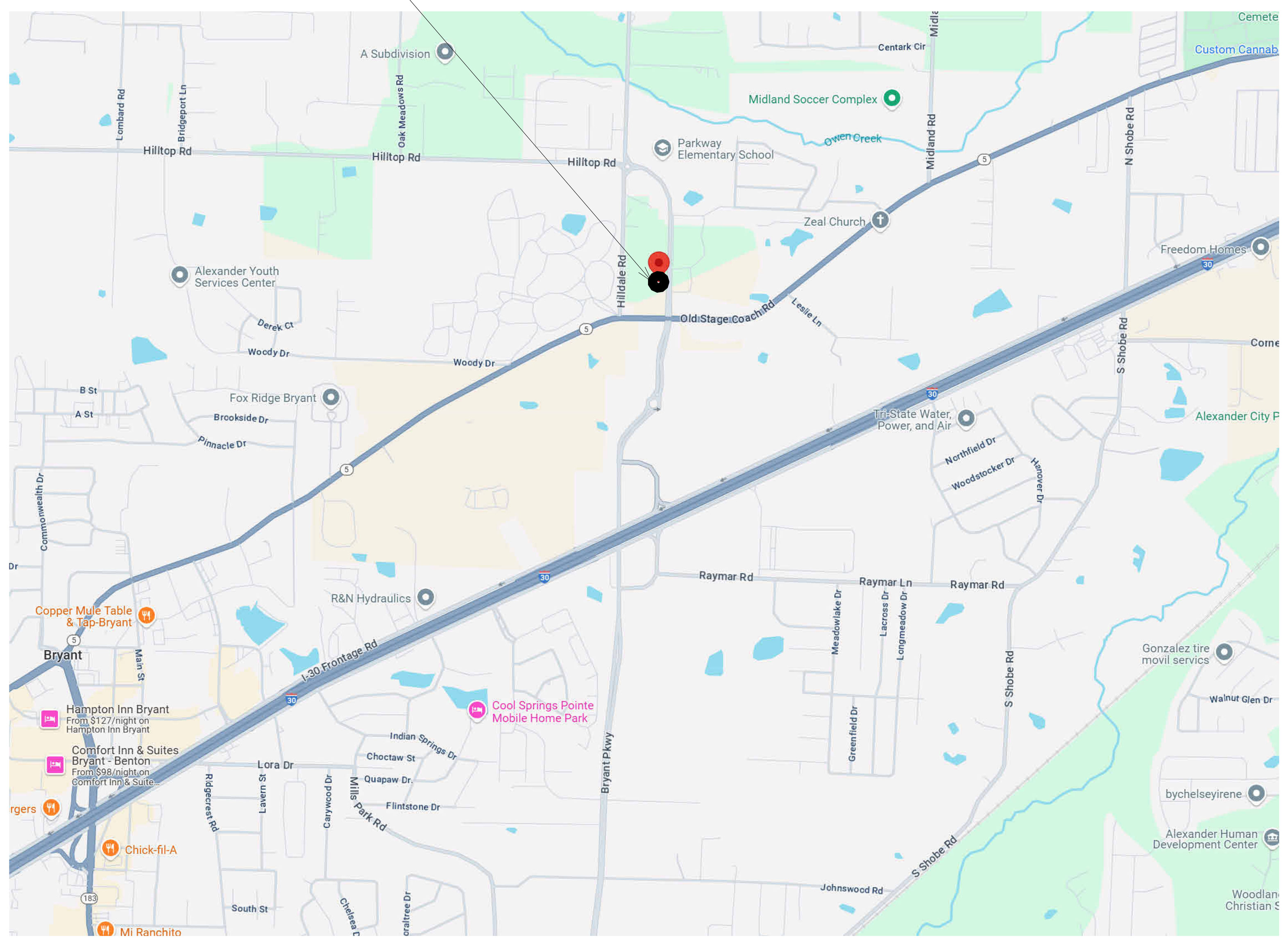
LIST OF DRAWINGS:



1 CODE EGRESS PLAN
1" = 10'-0"

PROJECT LOCATION

VICINITY MAP AND LOCATION:



ARKANSAS FIRE PREVENTION CODE DATA:

BUILDING CODE REQUIREMENTS:

OCCUPANCY CLASSIFICATIONS:	GROUP M - MERCANTILE (DRUG STORE & RETAIL) & GROUP B - BUSINESS (ADMINISTRATION OFFICES)	
OCCUPANT LOAD:	**1ST FLOOR:**	
	MERCANTILE AREAS 2,412 SQFT / 60 GROSS =	41 PERSONS
	BUSINESS AREAS 1ST FLOOR2 829 SQFT / 150 GROSS =	6 PERSONS
	TOTAL OCCUPANTS:	**47 PERSONS**

SPRINKLED OR UNSPRINKLED:	UNSPRINKLERED
OCCUPANCY SEPARATION:	NONE (PER IBC 508.4 TABLE)
BUILDING CONSTRUCTION:	TYPE V-B
EXTERIOR WALL BEARING:	0 HR - (TABLE 601 IBC)
INTERIOR WALL NON BEARING:	0 HR - (TABLE 601 IBC)
CORRIDOR FIRE RATING:	0 HR. DOES NOT NEED A FIRE RATING DUE TO EXEMPTION (IBC 1020.2.2.4)
NUMER OF EXITS:	1 REQUIRED / 2 PROVIDED (TABLE 1006.3.4 IBC OCCUPANT LOAD BELOW 49)
EMERGENCY LIGHTING:	YES
EXIT SIGNS:	YES
PANIC HARDWARE:	NO
CORRIDOR WIDTH:	48" MIN.
EXIT STAIRS AND EGRESS:	CLASS A
CORRIDORS:	CLASS B
ROOMS AND ENCLOSED SPACES:	CLASS C
GROSS BUILDING FOOTPRINT:	3,241 SQ. FT.
BUILDING HEIGHT:	27'-4"
RESTROOMS:	1 REQUIRED / 2 PROVIDED
MOP SINK:	YES (UTILITY SINK)
DRINKING FOUNTAIN:	OWNER TO PROVIDE WATER DISPENSER

BUILDING CODES:

CITY OF BRYANT BUILDING CODES	
BUILDING CODE EDITION:	2012 INTERNATIONAL BUILDING CODE
MECHANICAL CODE EDITION:	2021 ARKANSAS MECHANICAL CODE
ELECTRICAL CODE EDITION:	2020 NATIONAL ELECTRICAL CODE; NFPA 70
PLUMBING CODE EDITION:	2018 ARKANSAS STATE PLUMBING CODE, 9TH EDITION
FIRE PREVENTION CODE:	2021 ARKANSAS FIRE PREVENTION CODE, VOLUME I
ARKANSAS ENERGY CODE:	2014 INTENTIONAL ENERGY CONSERVATION CODE
AMERICANS W/ DISABILITIES ACT	2010 ADA GUIDELINES

FIRE PREVENTION CERTIFICATION:

I HEREBY CERTIFY THAT THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE PLANS AND SPECIFICATIONS ARE AS REQUIRED BY LAW AND IN COMPLIANCE WITH THE **ARKANSAS FIRE PREVENTION CODE** FOR THE STATE OF ARKANSAS.

W. CHRIS SHEPPARD - AIA - AR #8518

ARCHITECTURAL STANDARD SYMBOLS:

EL 601.00'	PROPOSED ELEVATION IN PLAN		CENTER LINE
	PROPOSED ELEVATION IN ELEVATION OR SECTION		HIDDEN LINES/PROJECTION ABOVE
	WALL /BUILDING SECTION		BREAK LINE
Room name 101 150 SF	ROOM NAME / NUMBER	1 / A101 SIM	REFERENCE DETAIL
101A	DOOR NUMBER		
1t	WINDOW TYPE	0	FLOOR PLAN NOTE REFERENCE

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PERMIT DRAWINGS

PROPOSED PHARMACY BUILDING
4735 BRYANT PARKWAY
ALEXANDER, AR 72002

CONTENTS: COVER SHEET

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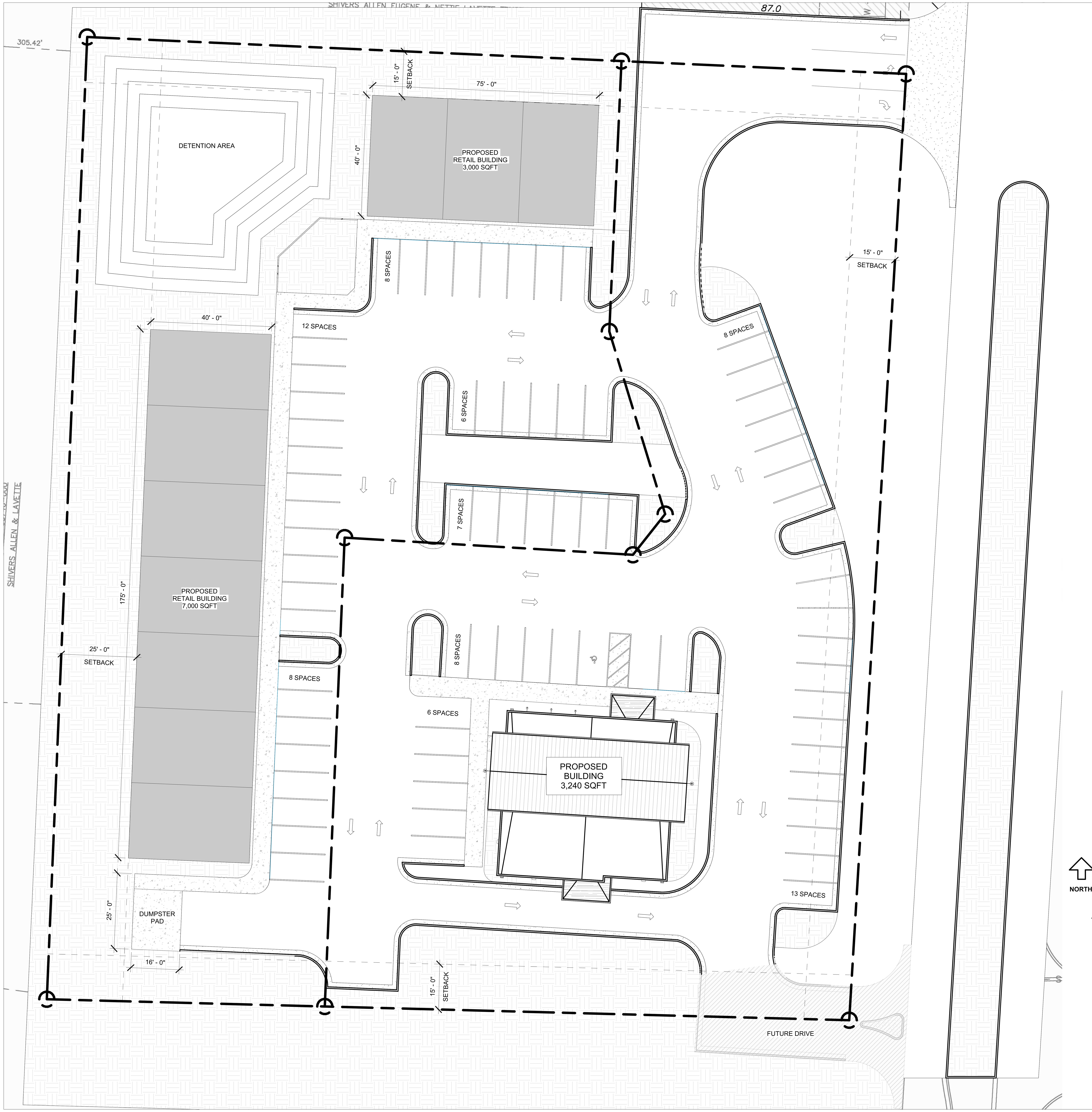

1 ARCH SITE PLAN
1/16" = 1'-0"

CITY OF BRYANT ZONING CODE

SITE PLAN PREPARED FOR:
PARKWAY DRUG

PROPERTY ADDRESS:
4765 BRYANT PARKWAY
ALEXANDER, AR 72002

LOT SIZE:
77,101 SQFT

PROPERTY ZONED:
C-2 HIGHWAY COMMERCIAL

INTENDED USE:
DRUG STORE AND BUSINESS

PERMITTED BY ZONING:
YES, OFFICE & RETAIL ARE
PERMITTED USES

BUILDING FOOTPRINT:
3,240 SQFT PHARMACY
3,000 SQFT RETAIL
7,000 SQFT RETAIL

WATER:
DOMESTIC WATER

SEWER:
CITY SANITARY SEWER?

GAS:
?

ELECTRIC:
YES

TRASH:
DUMPSTER

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WILLIAM C. SHEPPARD
License Number
8518
STATE OF ARKANSAS

08/13/2025

PROPOSED PHARMACY BUILDING

4735 BRYANT PARKWAY
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PERMIT DRAWINGS

CONTENTS: ARCH SITE PLAN

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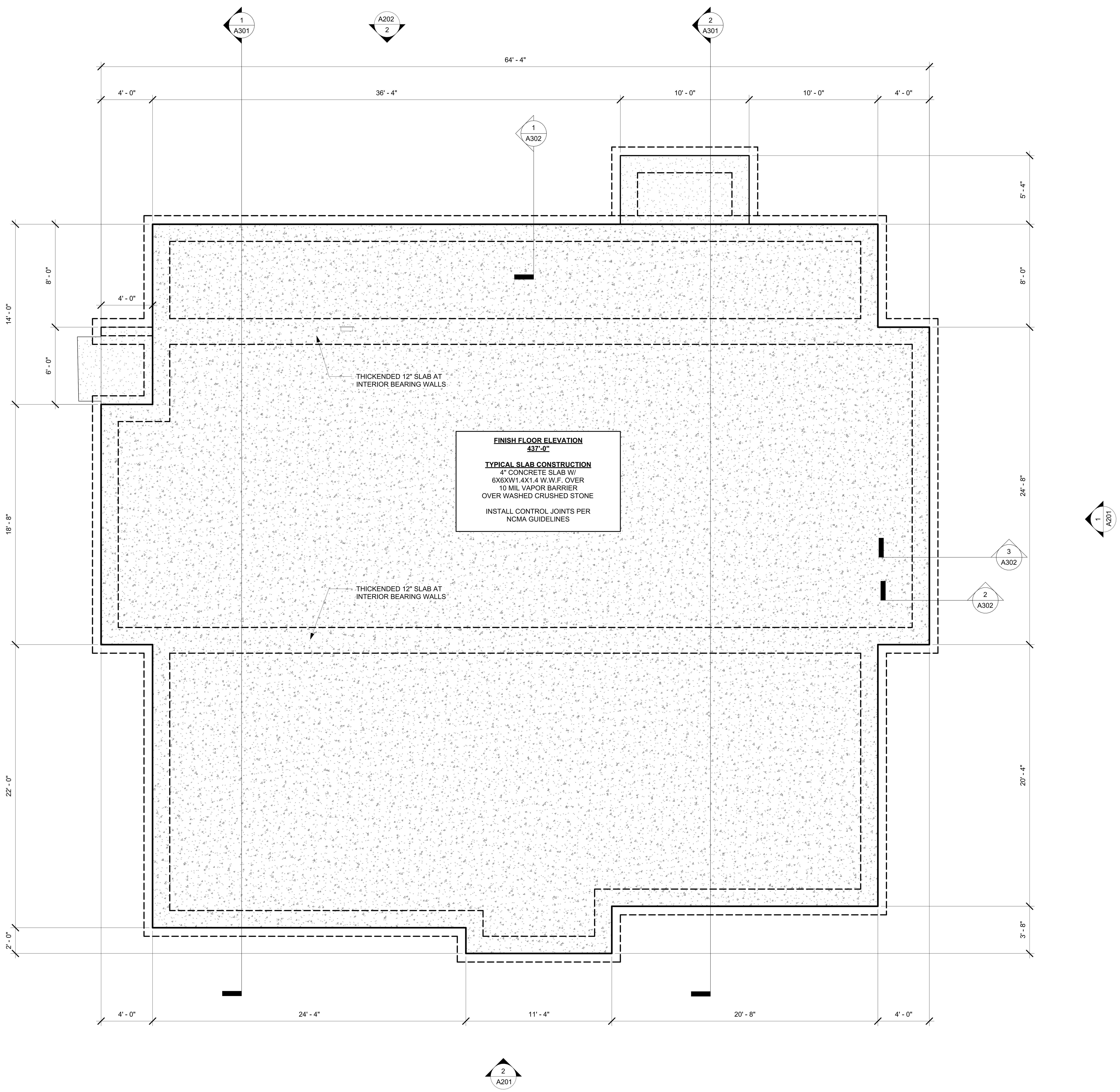
GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE AND VERIFY SOIL BEARING CAPACITY WITH GEO-TECHNICAL ENGINEER; WHOM WILL RECOMMEND APPROPRIATE SPREAD FOOTING AND SLAB DESIGN.

2. RETAINING WALL DESIGNS ARE TO BE BY STRUCTURAL ENGINEER

3. FOOTING DEPTHS ARE BASED ON CITY GIS TOPOGRAPHIC INFORMATION.
FIELD MODIFICATIONS WILL NEED TO BE COORDINATED BY CONTRACTOR ONSITE.



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08/13/2025

PROPOSED PHARMACY BUILDING

PERMIT DRAWINGS

4735 BRYANT PARKWAY
ALEXANDER, AR 72002

CONTENTS: SCHEMATIC FOUNDATION PLAN

REVISIONS:

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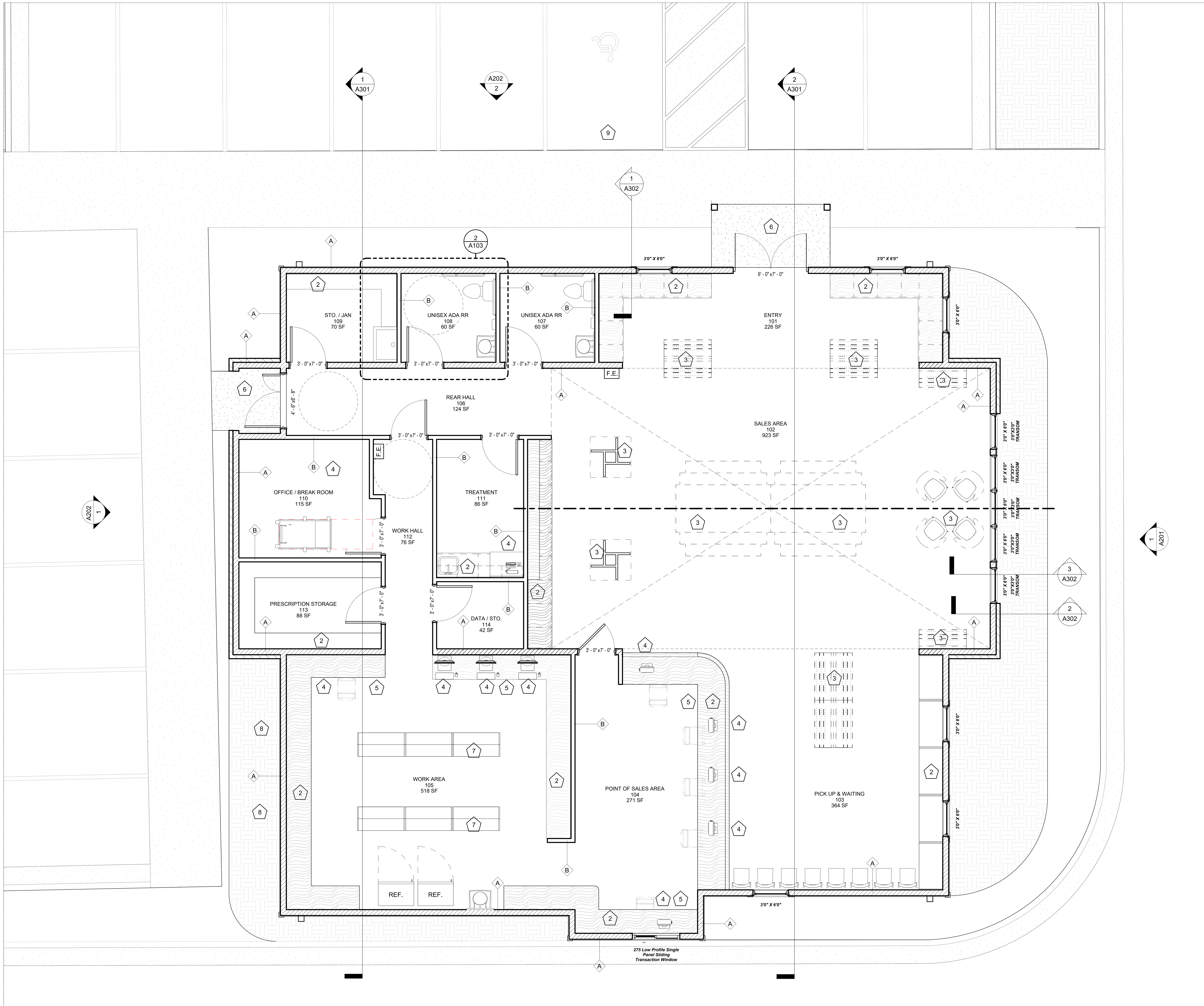

1 1ST LEVEL - FLOOR PLAN
1/4" = 1'-0"

PARTITION LEGEND:

ASSEMBLY A - UL RATING: UL305 - 1HR. - STC 36:

1. 1/2" SHEATHING W/ WEATHER BARRIER AND EXTERIOR FINISH.; REFERENCE ELEVATIONS & DETAILS
2. **2X6 WOOD STUDS @ 16" O.C.** W/ OPEN CELL SPRAY FOAM INSULATION
3. 5/8" TYPE 'X' GYPSUM WALL BOARD ON INTERIOR *WET AREAS TO HAVE MOISTURE-RESISTANT GWB.*

ASSEMBLY B - UL RATING: UL305 - 1HR. - STC 32:

1. 5/8" TYPE 'X' GYPSUM WALL BOARD *WET AREAS TO HAVE MOISTURE-RESISTANT GWB.*
2. **2X4 WOOD STUDS @ 16" O.C.** W/ SOUND BATT INSULATION TO FILL CAVITY
3. 5/8" TYPE 'X' GYPSUM WALL BOARD (ON DOUBLESIDED) *WET AREAS TO HAVE MOISTURE-RESISTANT GWB.*

FLOOR PLAN LEGEND

F.E. SURFACE MOUNTED FIRE EXTINGUISHER CABINET; WITH 10LB. CHEMICAL FIRE EXTINGUISHER.

FLOOR PLAN NOTES:

1. PROVIDE BLOCKING ON ALL WALL & CEILING MOUNTED FIXTURES OF ANY TYPE (i.e. TOILETS, SINKS, COUNTER SUPPORTS, GRAB BARS...)
2. BUILT-IN MILLWORK.
3. FURNITURE TO BE PROVIDED BY OWNER.
4. COMPUTER TO BE PROVIDED BY OWNER.
5. 1-1/2" PLAM COUNTER TOP DESK, WITH WALL BRACKET SUPPORT AT KNEE SPACE. DESK TOP HEIGHT TYP. 32" UNLESS NOTED OTHERWISE IN INTERIOR ELEVATIONS. PROVIDE 2X BLOCKING IN WALL FOR BRACKET ATTACHMENT
6. ENTRANCE STOOP
7. OWNER PROVIDED STORAGE SHELVING; CONTRACTOR INSTALLED
8. CONCRETE SLAB FOR CONDENSER UNITS SLAB ON GRADE TO BE 4" SLAB REINFORCE w/ 6x6-W2.9xW2.9 W.W.F. CENTERED IN SLAB ON SAND CHAIRS.
9. ADA PARKING SIGN MOUNTED ON PIPE BOLLARD AT HEAD ON PARKING SPACES
10.

EXTERIOR WINDOW ASSEMBLY (STOREFRONT & ENTRANCE SYSTEM)

GLAZING REQ'S: U VALUE = 038 U VALUE "DOOR"= 0.77 SHGC = 0.40

MFR: TUBELITE (SEE PROJECT MANUAL FOR ADDITIONAL VENDORS) PRODUCT 14000 FLUSH SERIES. PRODUCT NO. T14000 I/O Front Set

1. EXTRA DARK BRONZE ANODIZED ALUMINUM FRAME, THERMALLY BROKEN WITH HEAD RECEIVER CHANNEL.
2. 1" TEMPERED INSULATED GLAZING
3. PROVIDE FLASHING AT HEAD & SILL - CONTINUOUS SEALANT.
4. PROVIDE METAL CAP @ EXTERIOR TRIM SILL
5. 5/8" GYP. BOARD RETURN AT HEAD, JAMB & SILL @ INTERIOR

EXTERIOR WINDOW ASSEMBLY

ANDERSON 100 SERIES WINDOW FLANGED WINDOW

MASONRY VENEER SYSTEM

MASONRY VENEER SYSTEM ON EXTERIOR
INSTALL PER LOCAL CODES AND MANUFACTURERS SPECIFICATIONS ON TERMINATION AND INSTALLATION DETAILS.

COLOR: TBD

FIBER CEMENT LAP SIDING

FIBER CEMENT HARDIE LAP SIDING WITH 6" EXPOSURE BY JAMES HARDIE (OR EQUAL), 7/16" THICK, 47.5" WIDE, OVER 3/4" TREATED WOOD FURRING, OVER WATER RESISTIVE BARRIER. INSTALL PER LOCAL CODES AND MANUFACTURERS SPECIFICATIONS ON TERMINATION AND INSTALLATION DETAILS.

COLOR: TBD

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08/13/2025

PROPOSED PHARMACY BUILDING

4735 BRYANT PARKWAY
ALEXANDER, AR 72002

PERMIT DRAWINGS

CONTENTS: 1ST LEVEL - FLOOR PLAN

REVISIONS:

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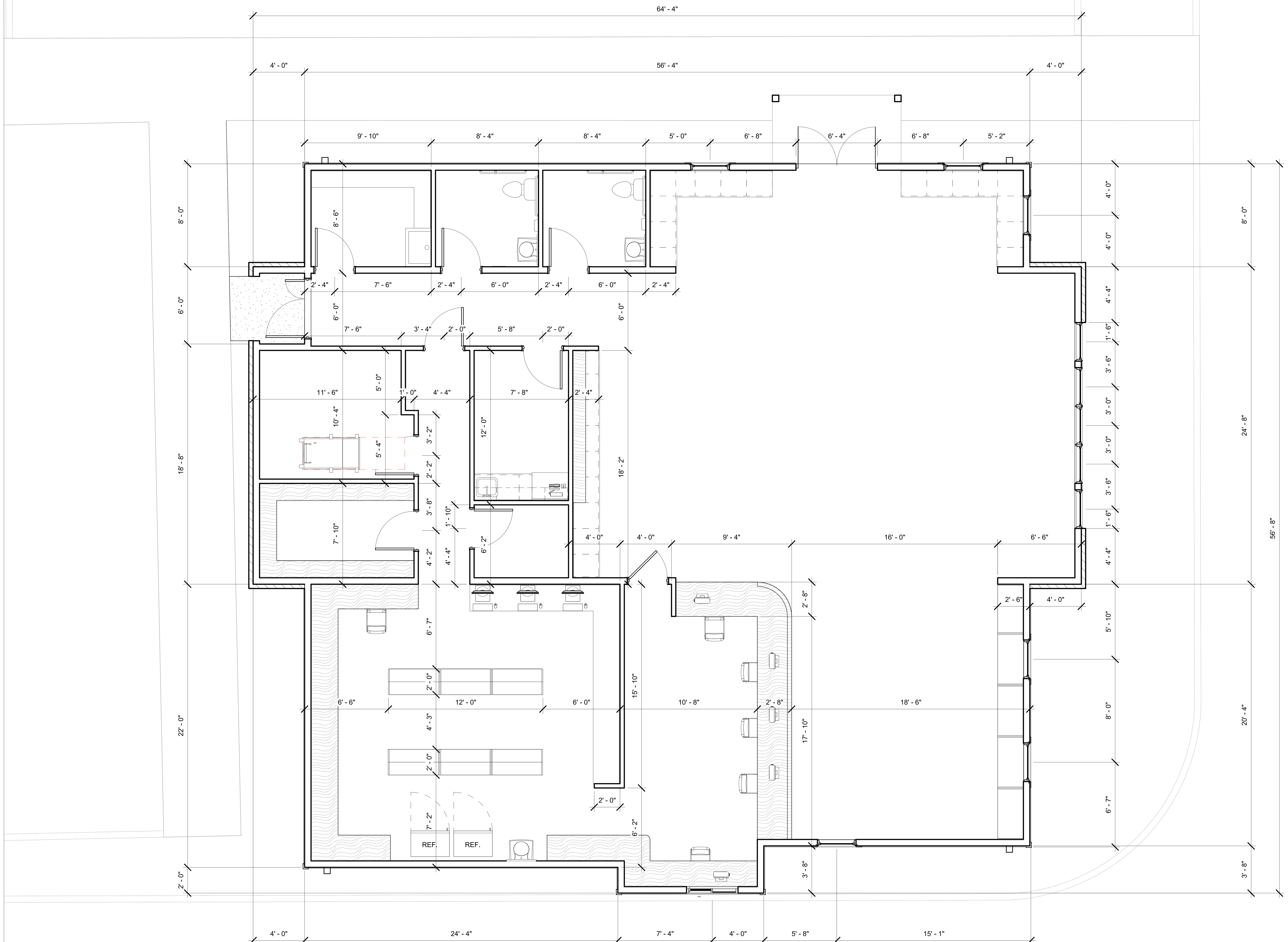
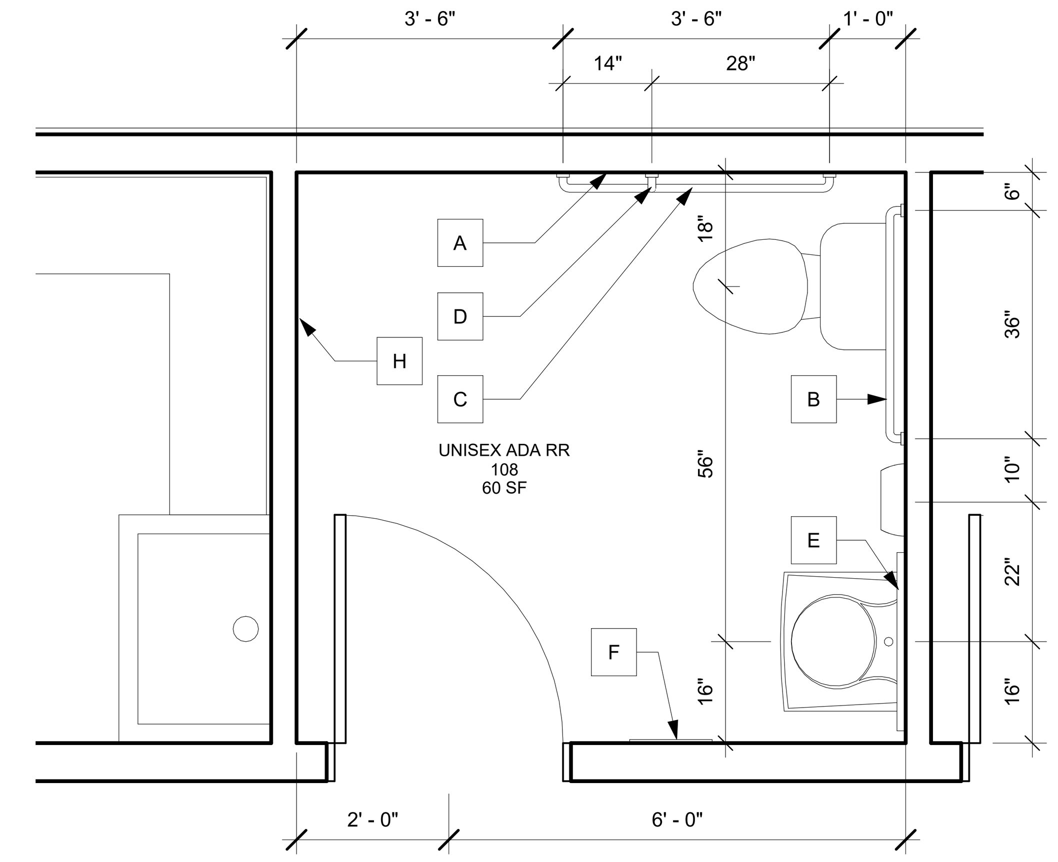
A102



1 | 1ST LEVEL - DIMENSION PLAN
1/4" = 1'-0"



2 | ENLARGED ADA RESTROOM
1/2" = 1'-0"

RESTROOM ACCESSORIES SCHEDULE:

KEY	DESCRIPTION	SIZE	COMPANY	MODEL NO.	COMMENTS
A	RECESSED DOUBLE-ROLL TOILET TISSUE DISPENSER	12-1/2" X 4-7/8"	BOBRICK	B-35883.MBLK	MOUNT AT 30" A.F.F. OC; verify with architect prior to mounting
B	GRAB BAR	42"	BOBRICK	B-6806.99 X 42	MOUNT AT MAX 34" A.F.F. AND MAX 12" FROM CORNER
C	GRAB BAR	36"	BOBRICK	B6806.99 X 36	MOUNT AT MAX 34" A.F.F. AND MAX 6" FROM CORNER
D	GRAB BAR	18"	BOBRICK	B6806.99 X 18	MOUNT AT MAX 40" A.F.F. AND MAX 36" FROM CORNER
E	VANITY MIRROR	24" X 36"	BOBRICK	B-167.MBLK	MOUNT AT 38" A.F.F. TO BOTTOM OF REFLECTIVE SURFACE, **U.N.O.**; SEE ELEVATIONS.
F	RECESSED PAPER TOWEL / WASTE DISPENSER	11-1/2" X 53-5/8"	BOBRICK	B-38034.MBLK	MOUNT AT 48" A.F.F. TO TOP OF OF UNIT; REFER TO SPEC SHEET.
G	SURFACE MOUNTED DOUBLE-ROLL TOILET TISSUE	1-5/16" X 5-9/10"	BOBRICK	B-95543.MBLK	MOUNT AT 30" A.F.F. OC; verify with architect prior to mounting.
H	SURFACE MOUNTED HAT / COAT HOOK	2-3/4" D X7-1/16" T	GAMCO	76827	QTY ONE (1) PER TOILET U.N.O. AND AS SHOWN IN ENLARGED PLAN; verify with architect mounting heights.
I	SANITARY NAPKIN DISPOSAL	11-1/2" X 17-1/4" H X 3-3/4" D	BOBRICK	B-35303.MBLK	QTY ONE (1) PER WOMEN'S STALL; typical

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PROPOSED PHARMACY BUILDING

4735 BRYANT PARKWAY
ALEXANDER, AR 72002

PERMIT DRAWINGS

CONTENTS: 1ST LEVEL - DIMENSION PLAN

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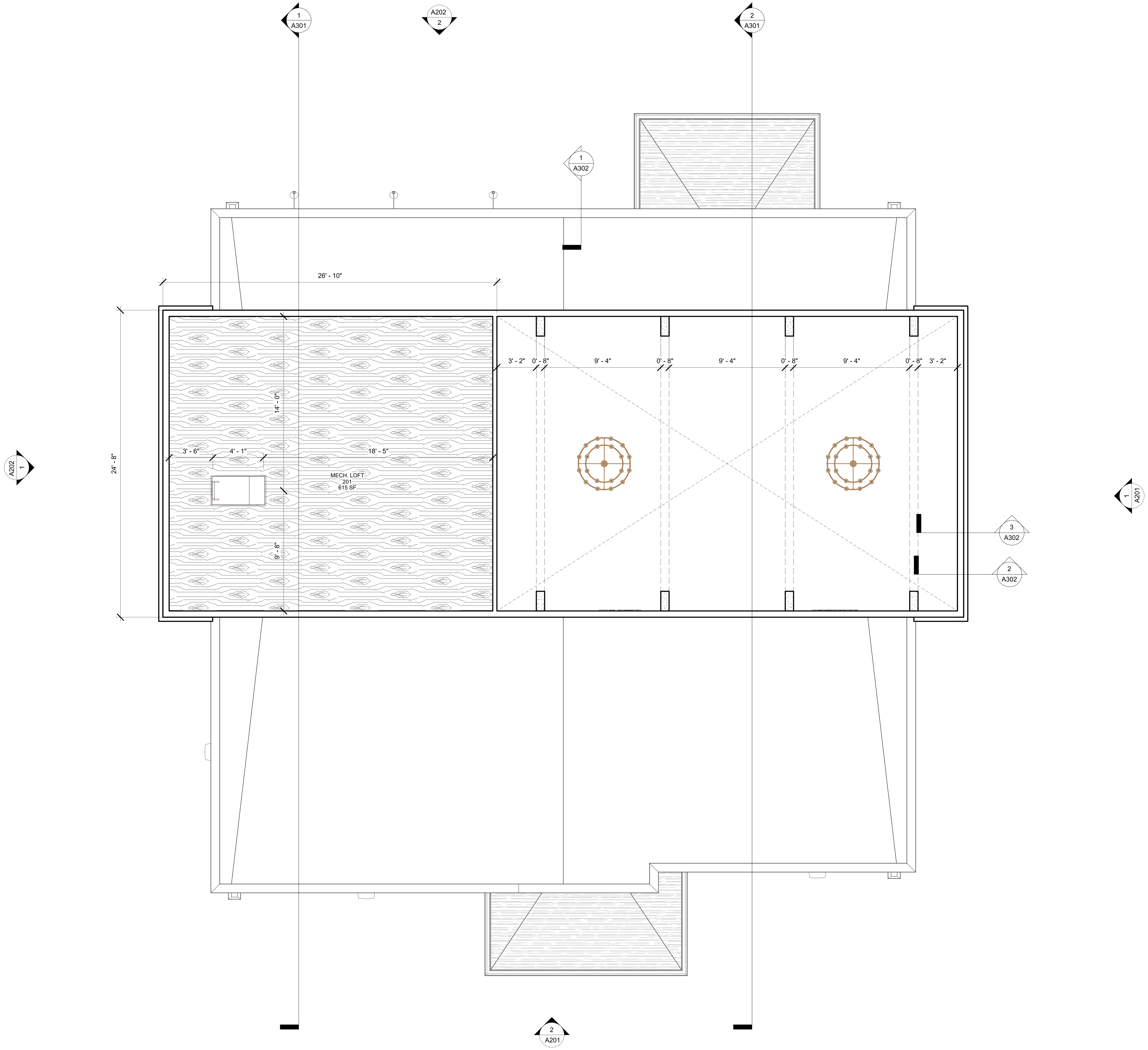

1 MECH. LOFT
1/4" = 1'-0"

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PROPOSED PHARMACY BUILDING

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PERMIT DRAWINGS

CONTENTS: 2ND LEVEL - MECHANICAL LOFT PLAN

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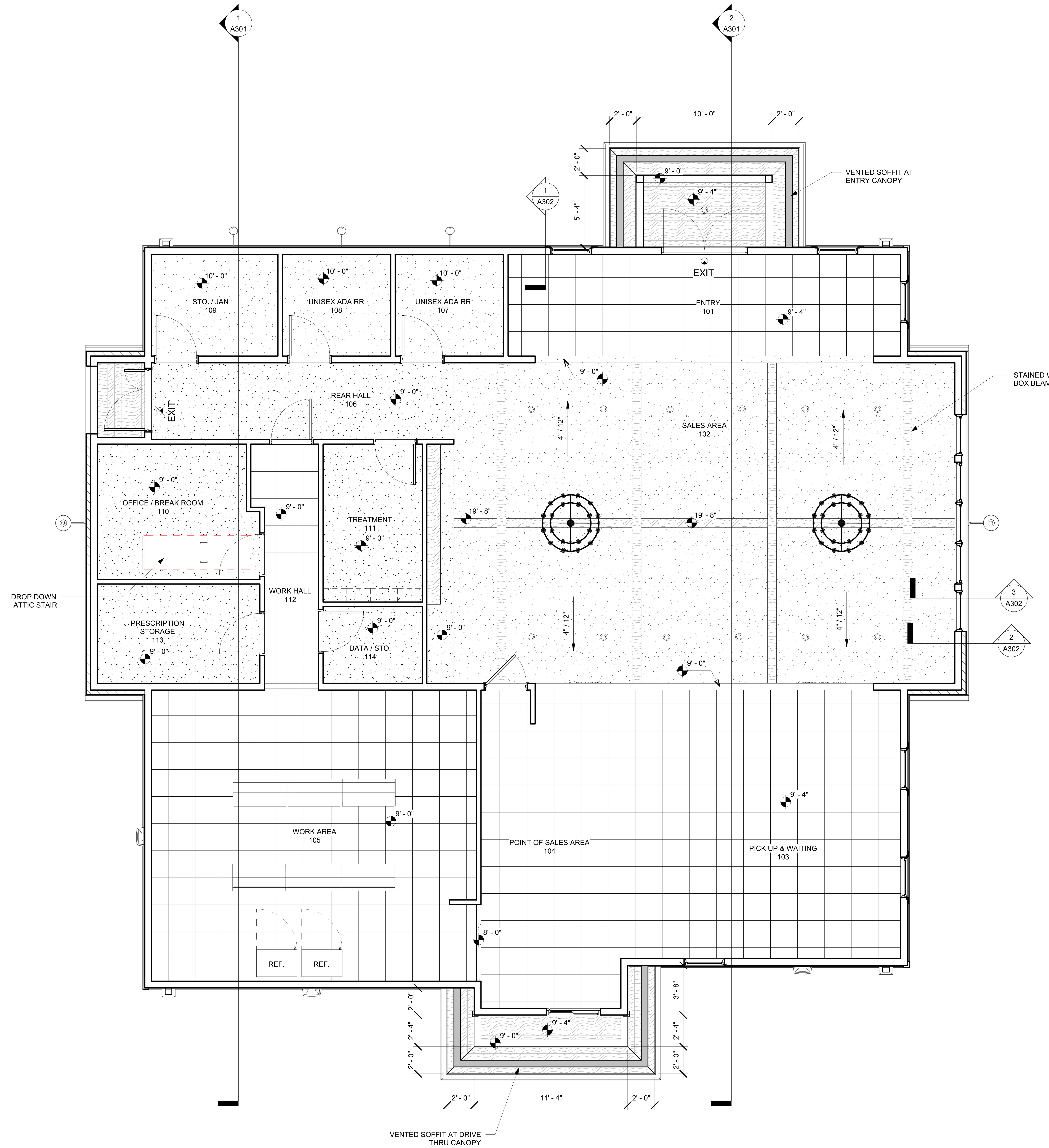

NEW 2' X 2' CEILING TILE AND GRID

ACOUSTICAL CEILING TILE: VINYL FACED USG 24"X24"
CLEAN ROOM CLIMA-PLUS.
UNPERFORATED. SMOOTH TEXTURE
COLOR: WHITE

GRID: USG 15/16" DX/DXL COLOR: WHITE

STAINED 1"X6" TOUNGE AND GROOVE
DOUGLAS FIR C & BTR VG

5/8" GYP BOARD;
SMOOTH FINISH AND PAINTED

RESTROOM AND EXAM ROOMS TO RECEIVE
ACOUSTICAL BATT INSULATION ON TOP OF CEILING

4" & 6" RECESSED CAN LIGHTS

DECORATIVE SUSPENDED CEILING MOUNTED FIXTURE

NEW LED SUSPENDED STRIP FIXTURES

EXIT SURFACE MOUNTED EXIT LIGHT

1 REFLECTED CEILING PLAN
1/4" = 1'-0"

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08/13/2025

PROPOSED PHARMACY BUILDING
4735 BRYANT PARKWAY
ALEXANDER, AR 72002

PERMIT DRAWINGS

CONTENTS: 1ST LEVEL - REFLECTED CEILING PLAN

REVISIONS:

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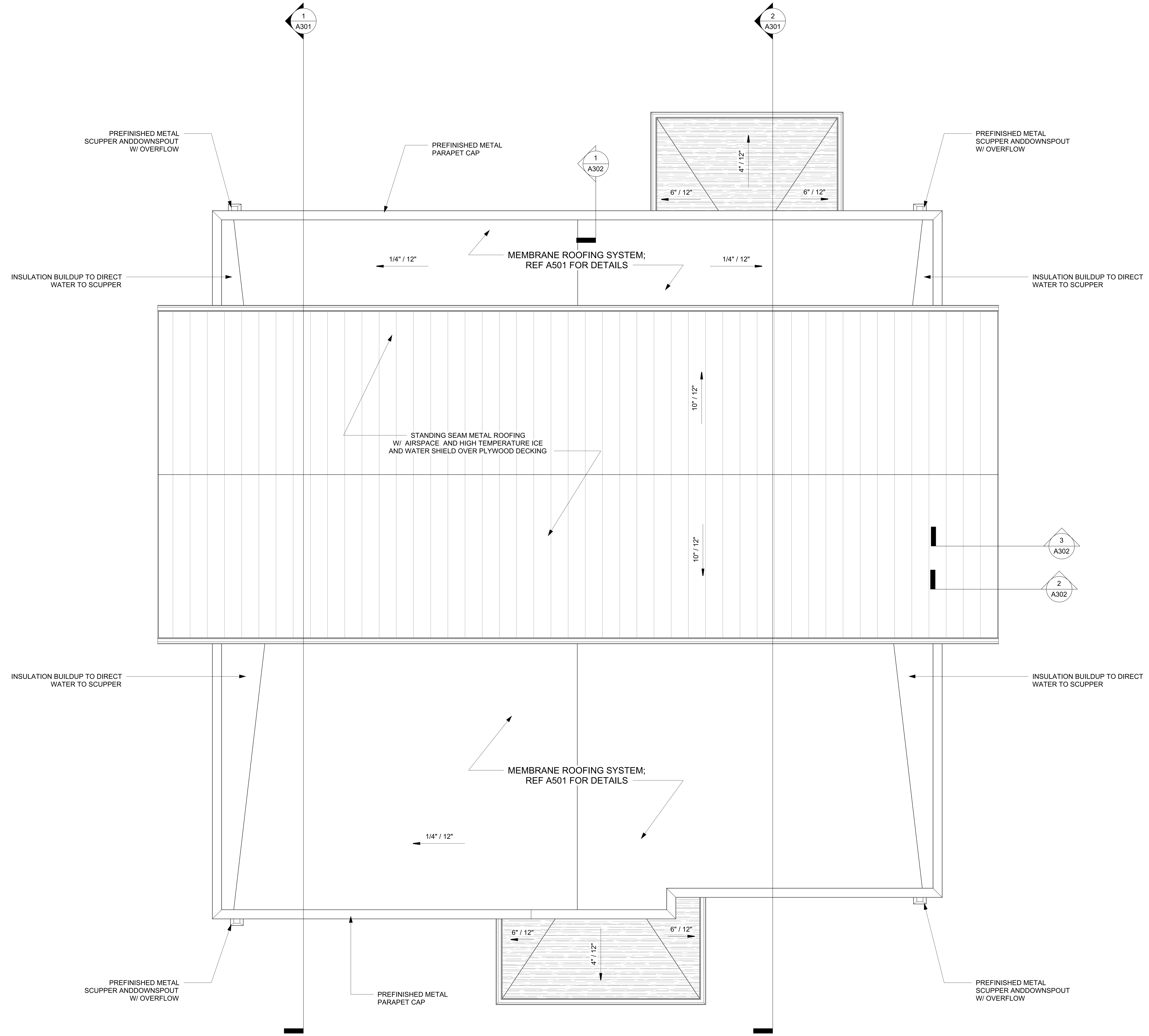

1 ROOF PLAN
1/4" = 1'-0"

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PROPOSED PHARMACY BUILDING
4735 BRYANT PARKWAY
ALEXANDER, AR 72002

PERMIT DRAWINGS

CONTENTS: ROOF PLAN

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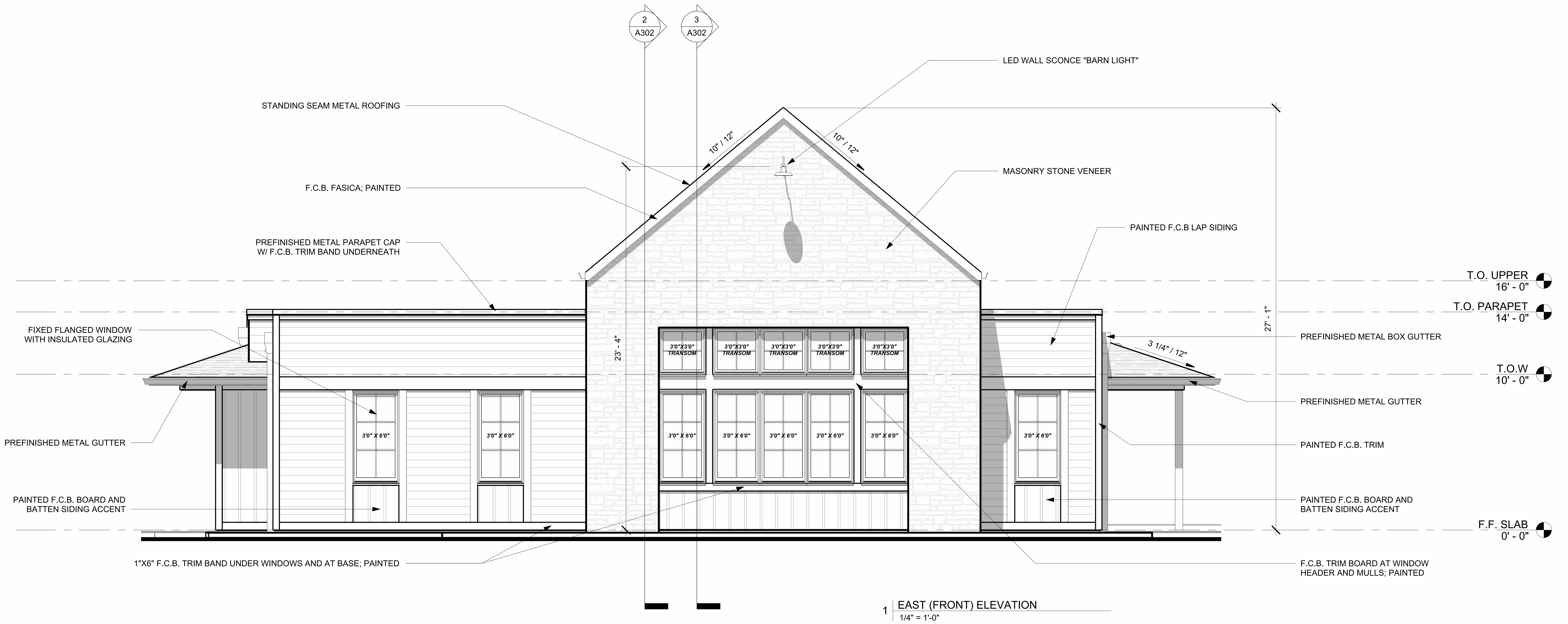
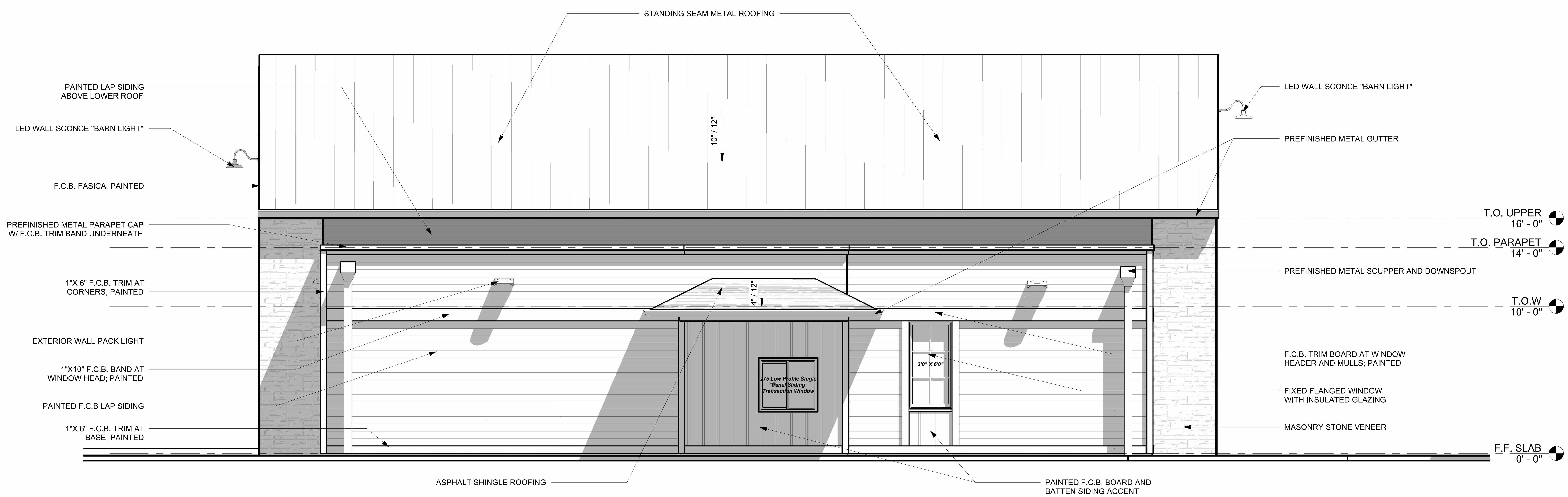


1 EAST (FRONT) ELEVATION
1/4" = 1'-0"



2 SOUTH ELEVATION
1/4" = 1'-0"

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PROPOSED PHARMACY BUILDING

PERMIT DRAWINGS

4735 BRYANT PARKWAY
ALEXANDER, AR 72002

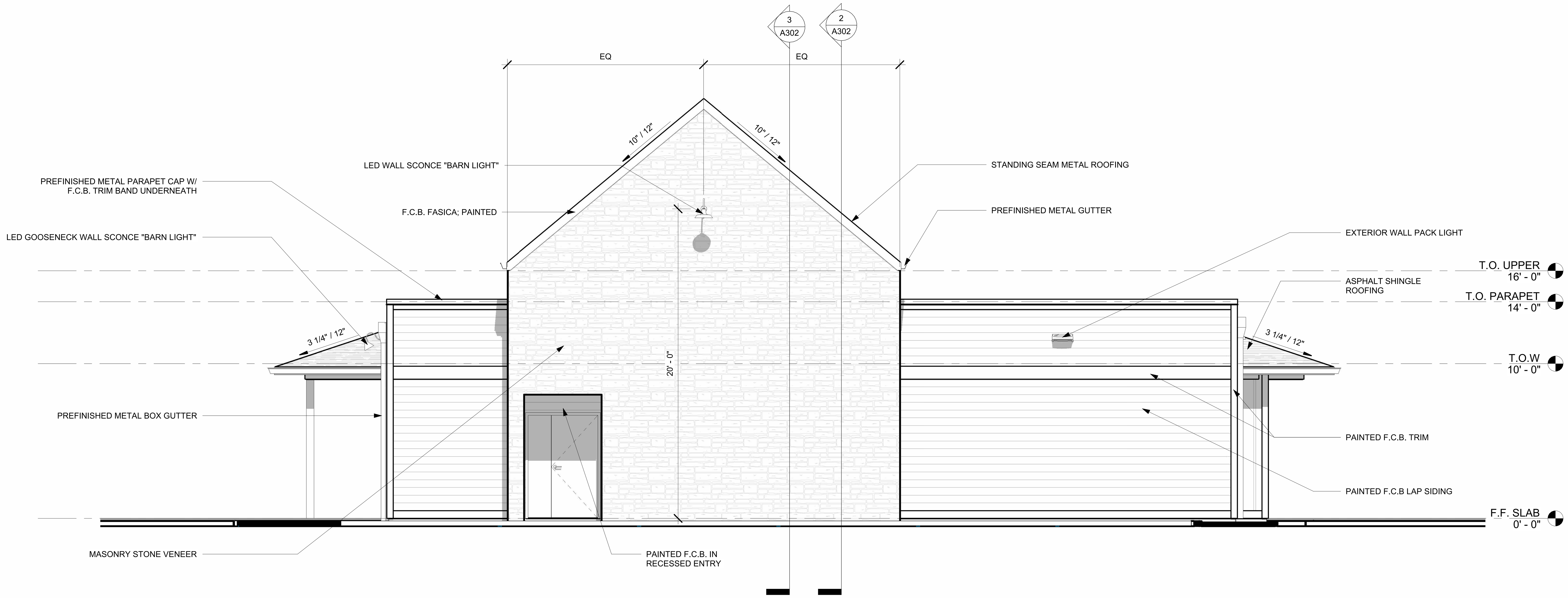
CONTENTS: ELEVATIONS

REVISIONS:

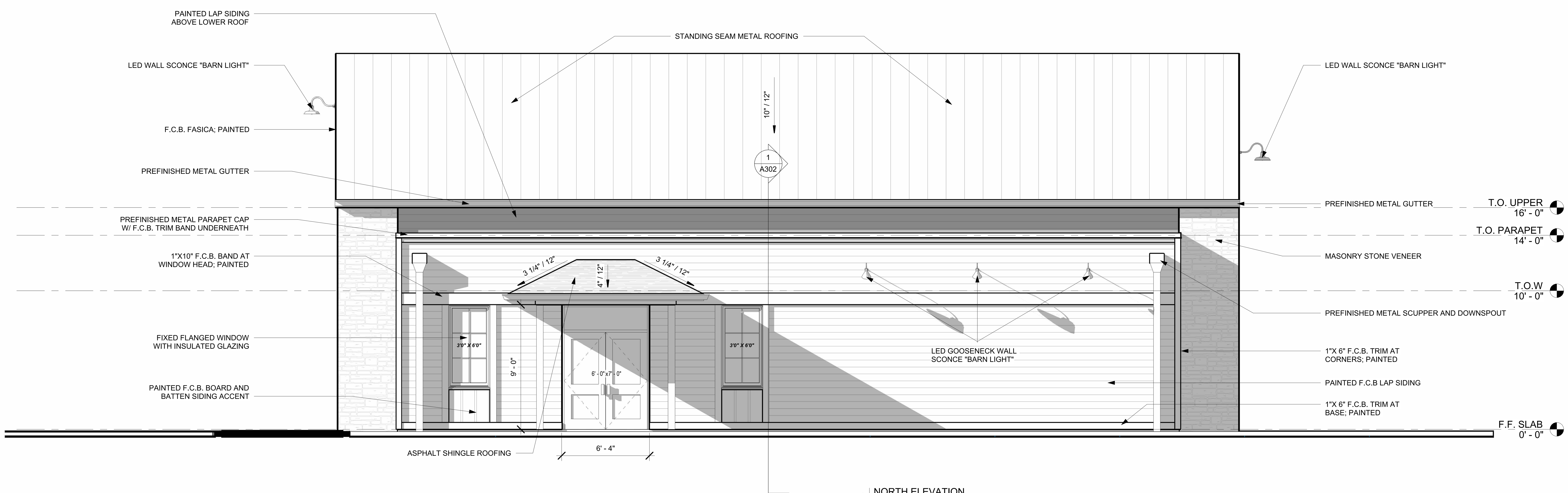
ISSUE	DATE

10/20/2025

A201



1 WEST (REAR) ELEVATION
1/4" = 1'-0"



2 NORTH ELEVATION
1/4" = 1'-0"

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210 CENTRAL AVE, SUITE 3A
HOT SPRINGS, AR 71901
P 501-624-5679
F 501-623-3166
www.taylorkempkes.com

TAYLOR KEMPKES ARCHITECTS P.A.
REGISTERED ARCHITECTS
NO C-69
ARKANSAS

REGISTERED ARCHITECT
WILLIAM C. SHEPPARD
License Number
8518
STATE OF ARKANSAS

08/13/2025

PERMIT DRAWINGS

PROPOSED PHARMACY BUILDING

4735 BRYANT PARKWAY
ALEXANDER, AR 72002

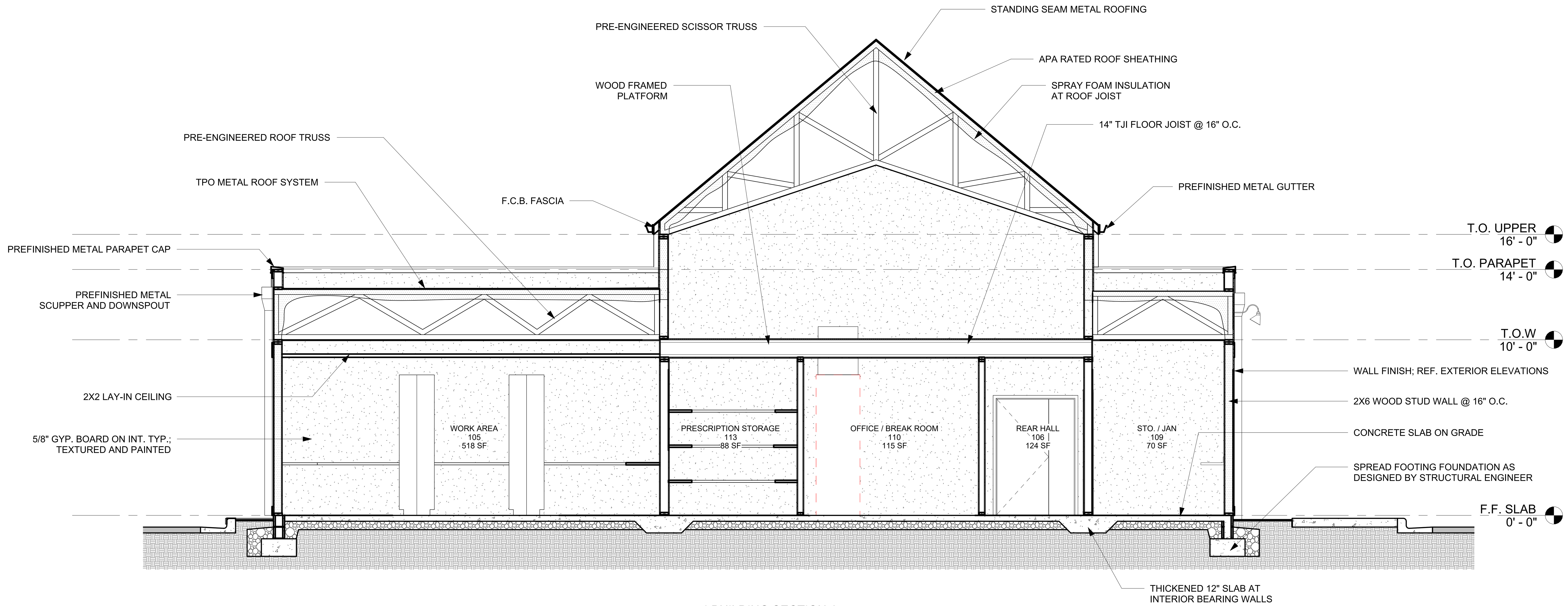
CONTENTS: ELEVATIONS

REVISIONS:

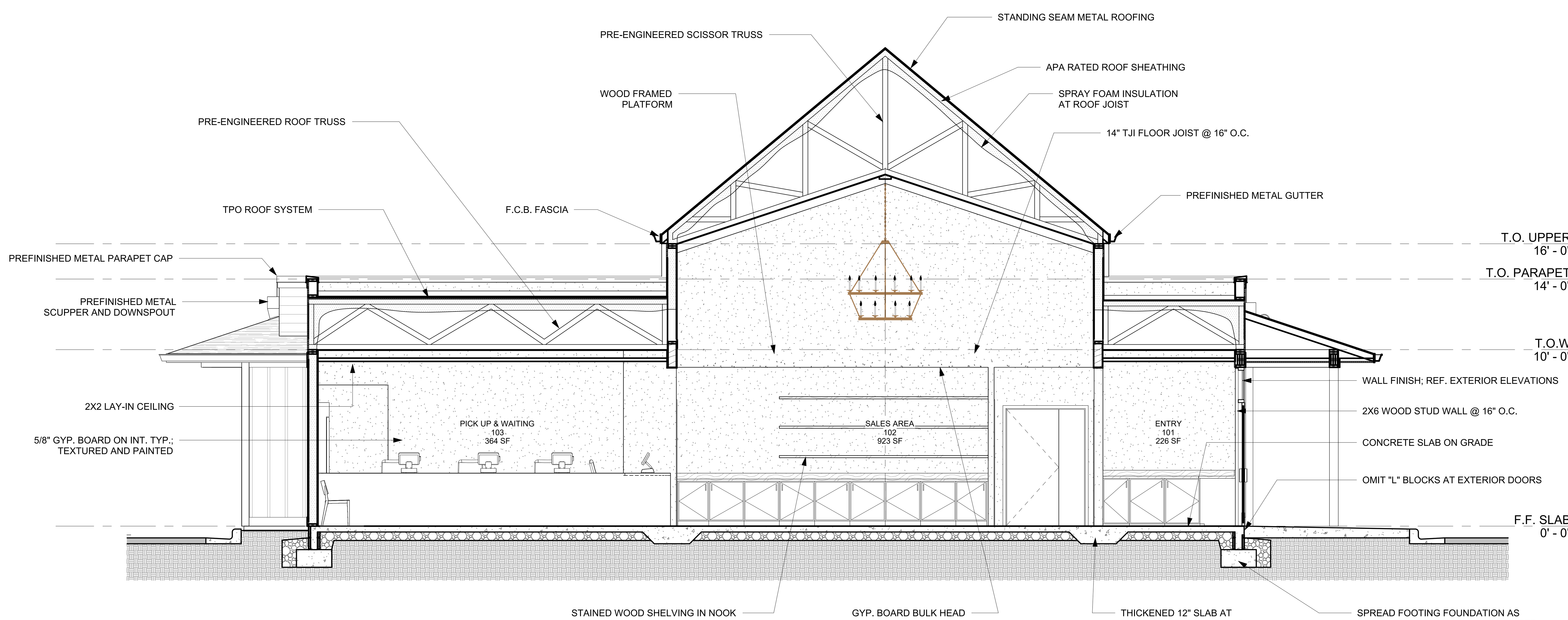
ISSUE	DATE

10/20/2025

A202



1 BUILDING SECTION 1
1/4" = 1'-0"



2 BUILDING SECTION 2
1/4" = 1'-0"

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08/13/2025

PROPOSED PHARMACY BUILDING
4735 BRYANT PARKWAY
ALEXANDER, AR 72002

PERMIT DRAWINGS

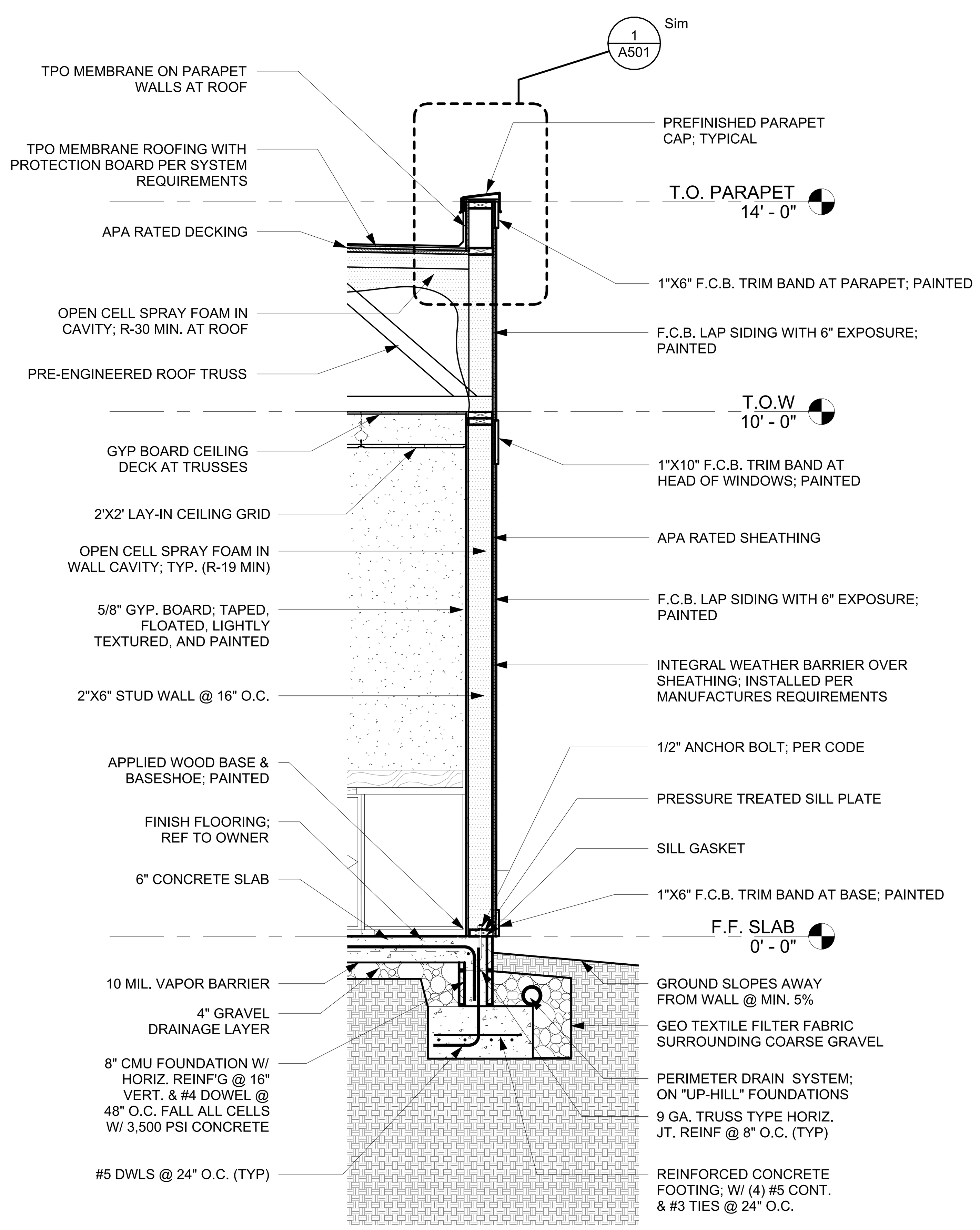
CONTENTS: BUILDING SECTIONS

REVISIONS:

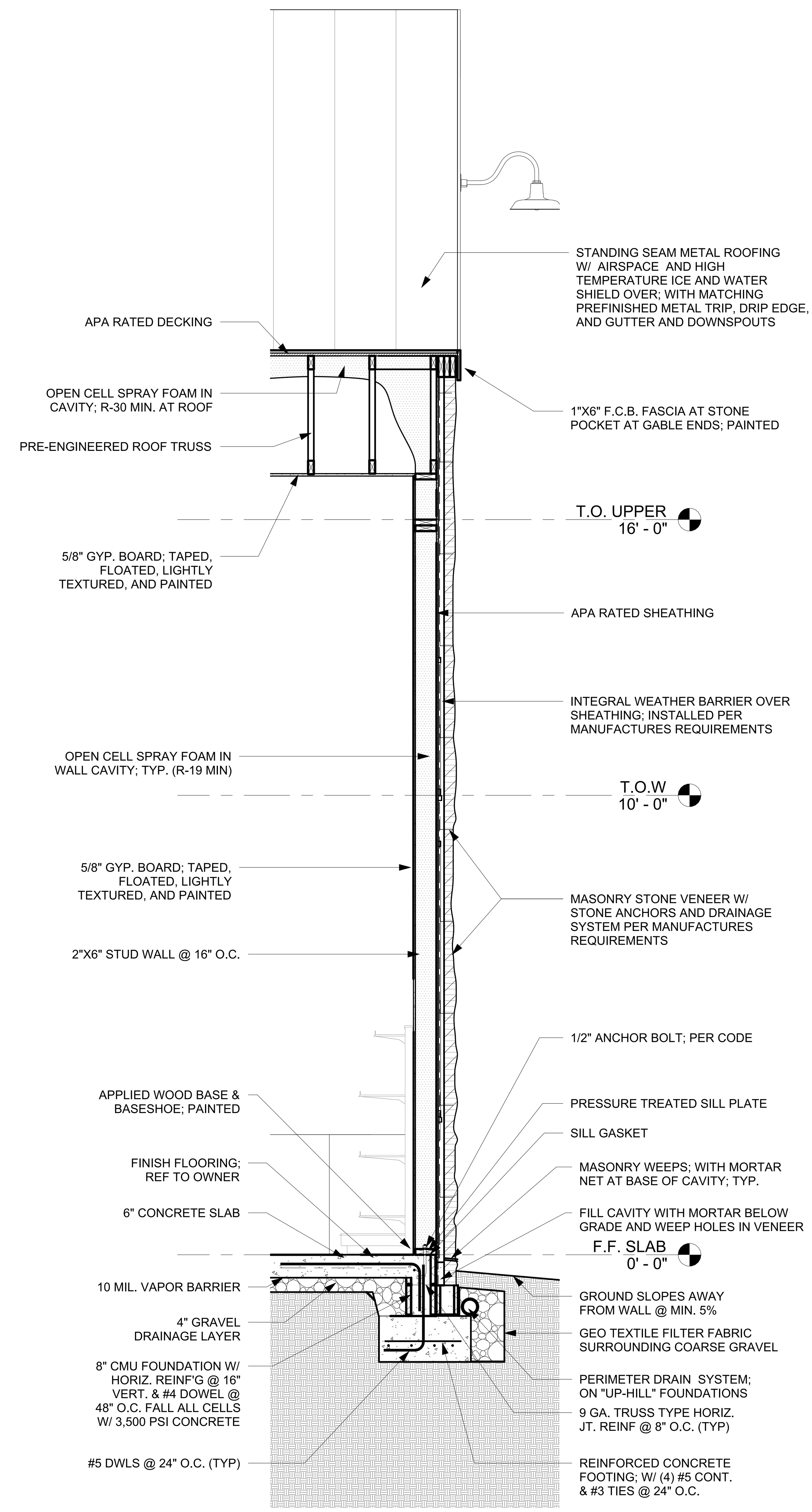
ISSUE	DATE

10/20/2025

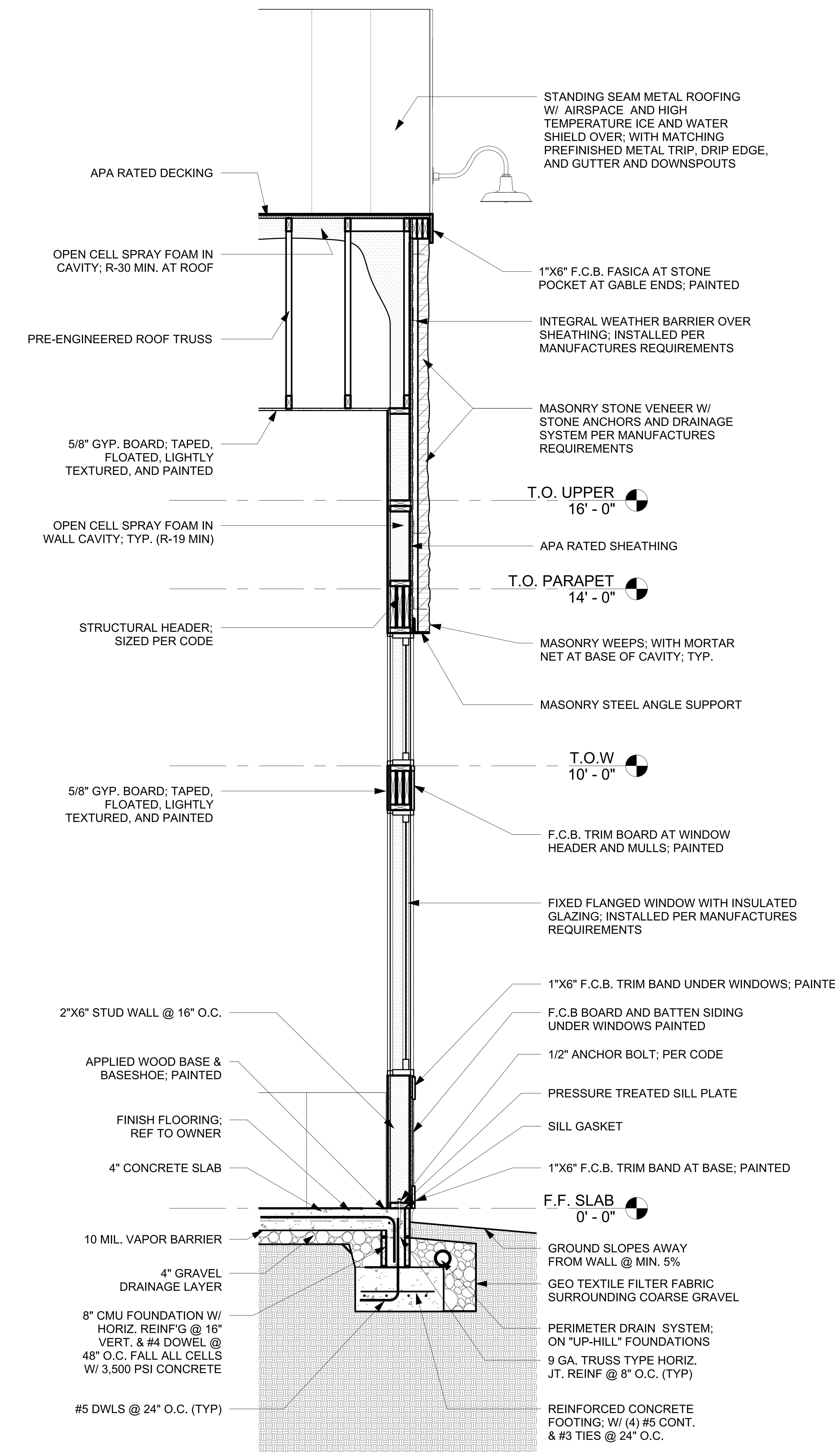
A301



1 TYP. WALL SECTION
1/2" = 1'-0"



2 GABLE END WALL SECTION
1/2" = 1'-0"



3 GABLE END WALL SECTION AT WINDOWS
1/2" = 1'-0"

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08/13/2025

PROPOSED PHARMACY BUILDING

4735 BRYANT PARKWAY
ALEXANDER, AR 72002

PERMIT DRAWINGS

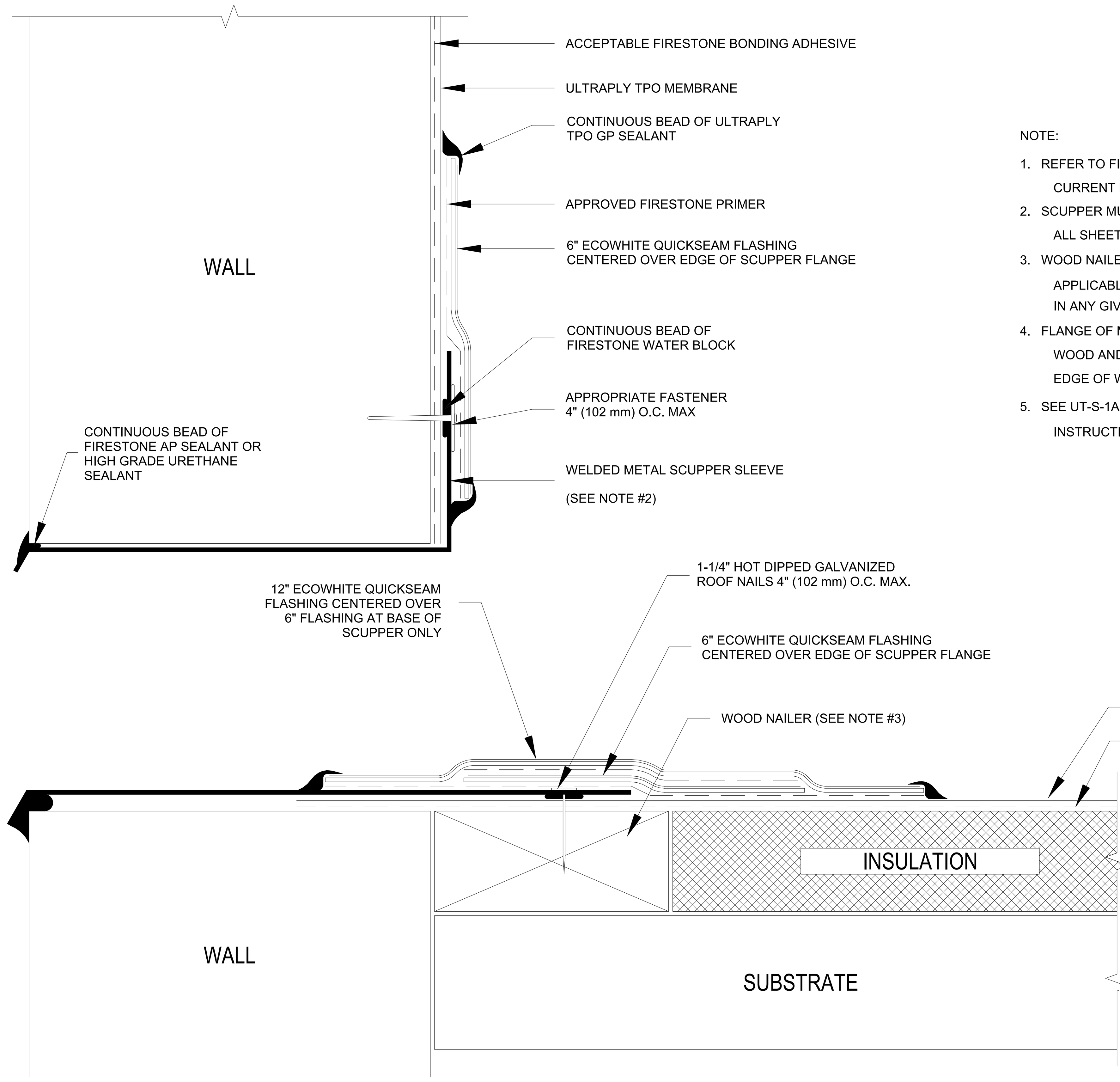
CONTENTS: WALL SECTIONS

REVISIONS:

ISSUE	DATE

10/20/2025

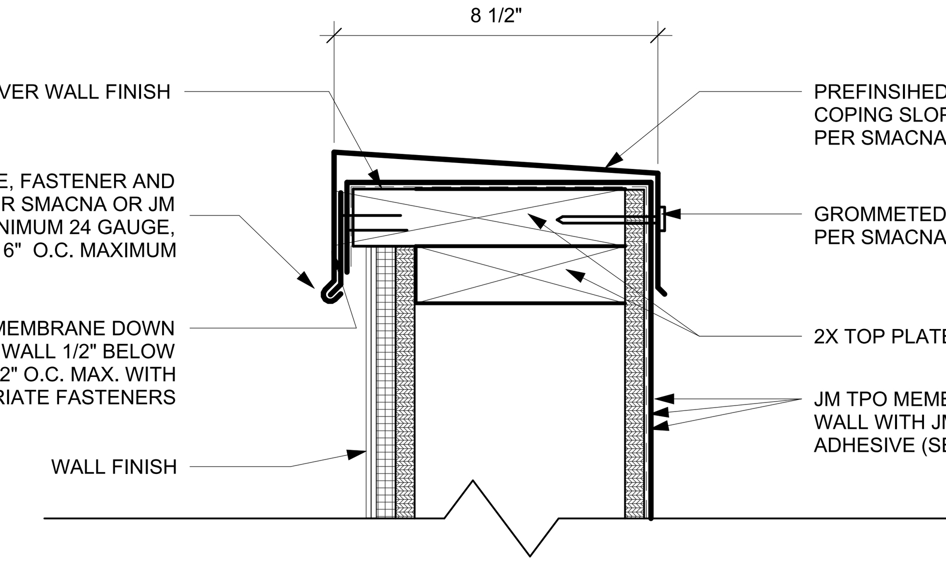
A302



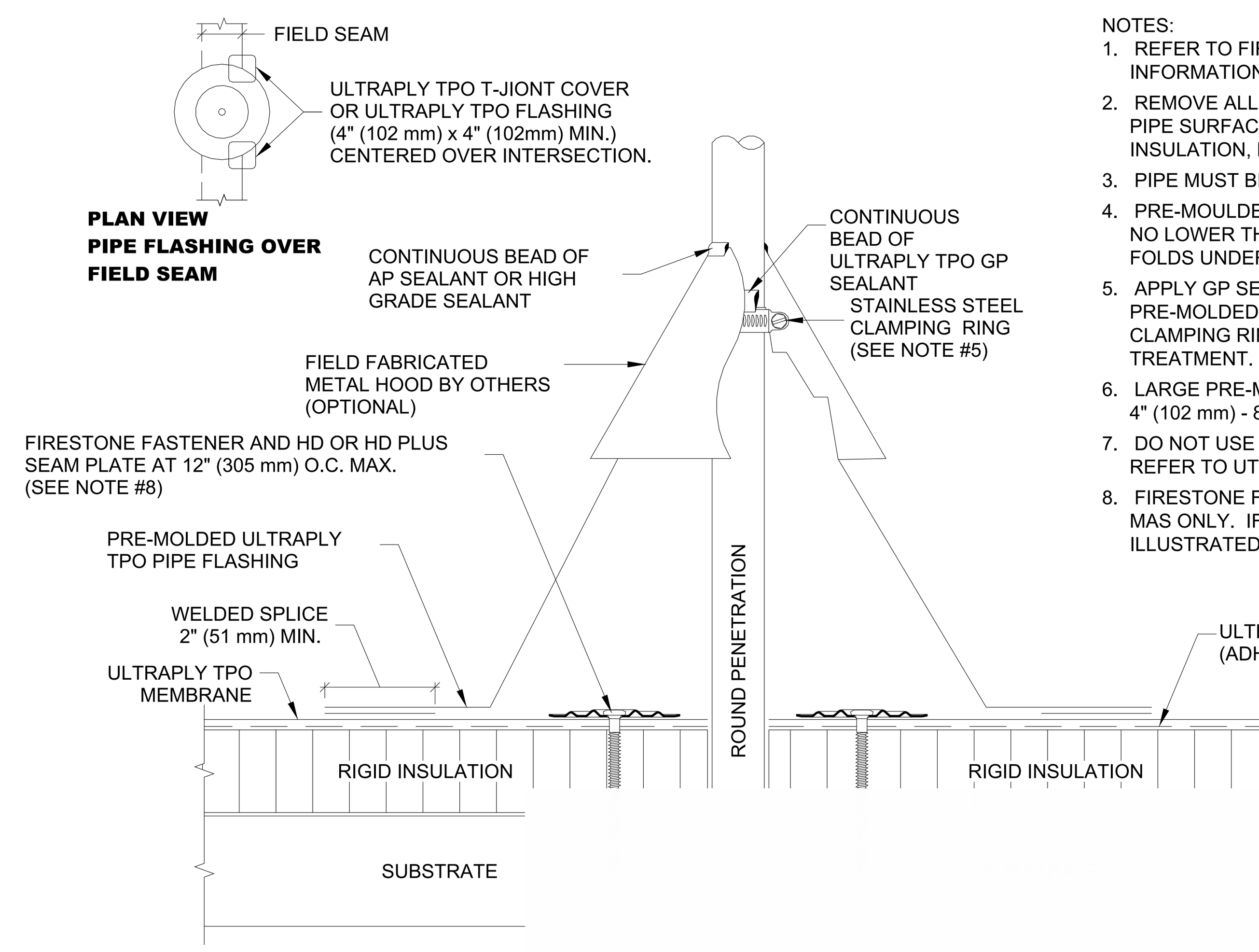
NOTE:

1. REFER TO FIRESTONE WEBSITE FOR THE MOST CURRENT INFORMATION.
2. SCUPPER MUST BE WELDED METAL SLEEVE ROUND ALL SHEET METAL FLANGE CORNERS.
3. WOOD NAILER MUST BE INSTALLED TO MEET APPLICABLE BUILDING CODES OR 200 LINEAR 200 LB IN ANY GIVEN DIRECTION.
4. FLANGE OF METAL MUST BE FULLY SUPPORTED BY WOOD AND TERMINATED AT LEAST 1/2" (13 mm) FROM EDGE OF WOOD.
5. SEE UT-S-1A & UT-S-1B FOR DETAILED INSTALLATION INSTRUCTIONS.

3 ROOF SCUPPER DETAIL
12" = 1'-0"



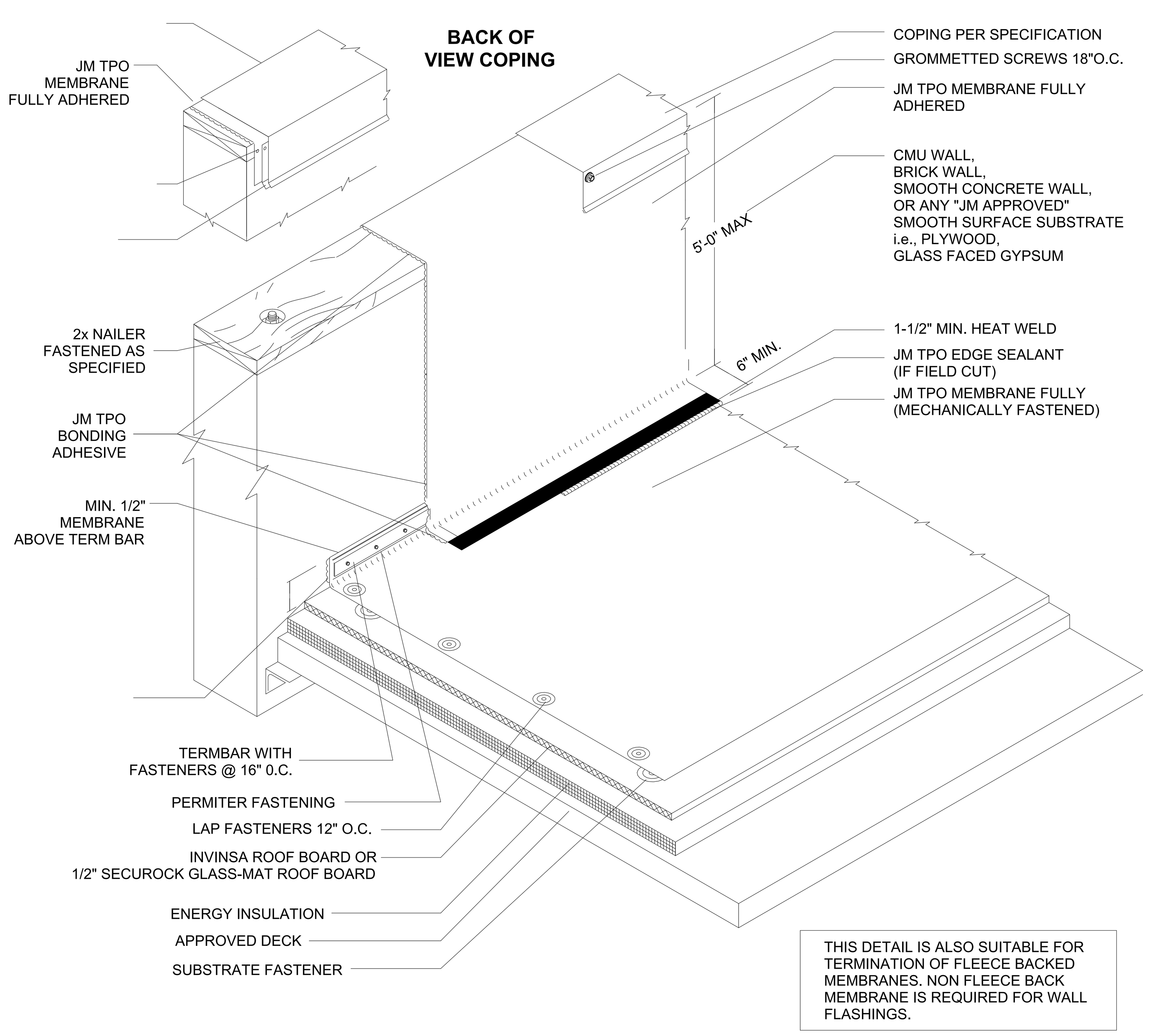
1 PARAPET DETAIL
3" = 1'-0"



NOTES:

1. REFER TO FIRESTONE WEBSITE FOR THE MOST CURRENT INFORMATION.
2. REMOVE ALL EXISTING FLASHING, LEAD, ETC. PIPE SURFACE MUST BE FREE OF ALL RUST, GREASE, INSULATION, ETC.
3. PIPE MUST BE ANCHORED TO ENSURE STABILITY.
4. PRE-MOULDED PIPE FLASHING MAY BE CUT TO HEIGHT, BUT NO LOWER THAN REINFORCING RING (NO WRINKLES OR FOLDS UNDER CLAMPING RING).
5. APPLY GP SEALANT BETWEEN PENETRATION AND PRE-MOLDED PIPE FLASHING PRIOR TO INSTALLATION OF CLAMPING RING. REFER TO LS-9 FOR SEAM EDGE TREATMENT.
6. LARGE PRE-MOLDED PIPE FLASHING FITS 4" (102 mm) - 8" (203 mm) PENETRATIONS SIZES.
7. DO NOT USE WHEN SERVICE LINE TEMP. EXCEEDS 160°F. REFER TO UT-P-6 & UT-P-7.
8. FIRESTONE FASTENER AND HD SEAM PLATE REQUIRE FOR MAS ONLY. IF FASTENER CANNOT BE INSTALLED AS ILLUSTRATED, REFER TO DETAILS UT-P-15 & UT-P-16

4 ROOF PENTRATION DETAIL
6" = 1'-0"

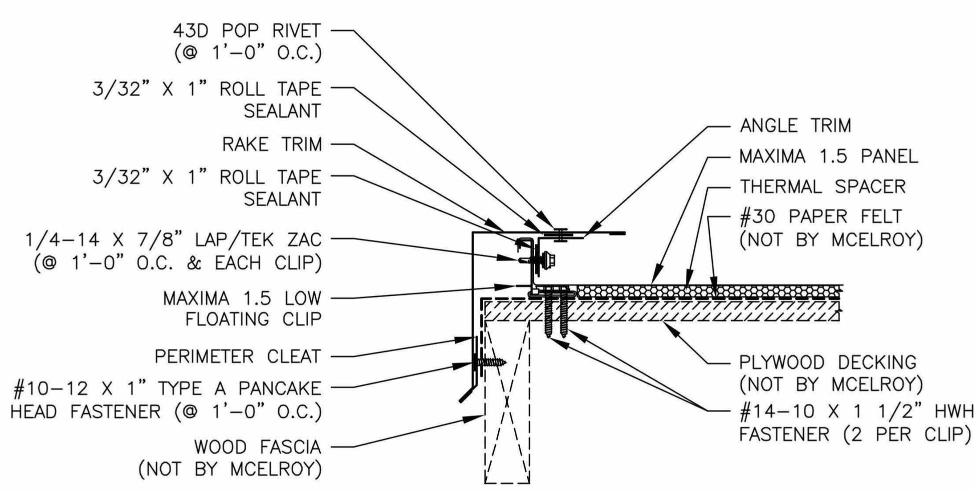


THIS DETAIL IS ALSO SUITABLE FOR TERMINATION OF FLEECE BACKED MEMBRANES. NON FLEECE BACK MEMBRANE IS REQUIRED FOR WALL FLASHINGS.

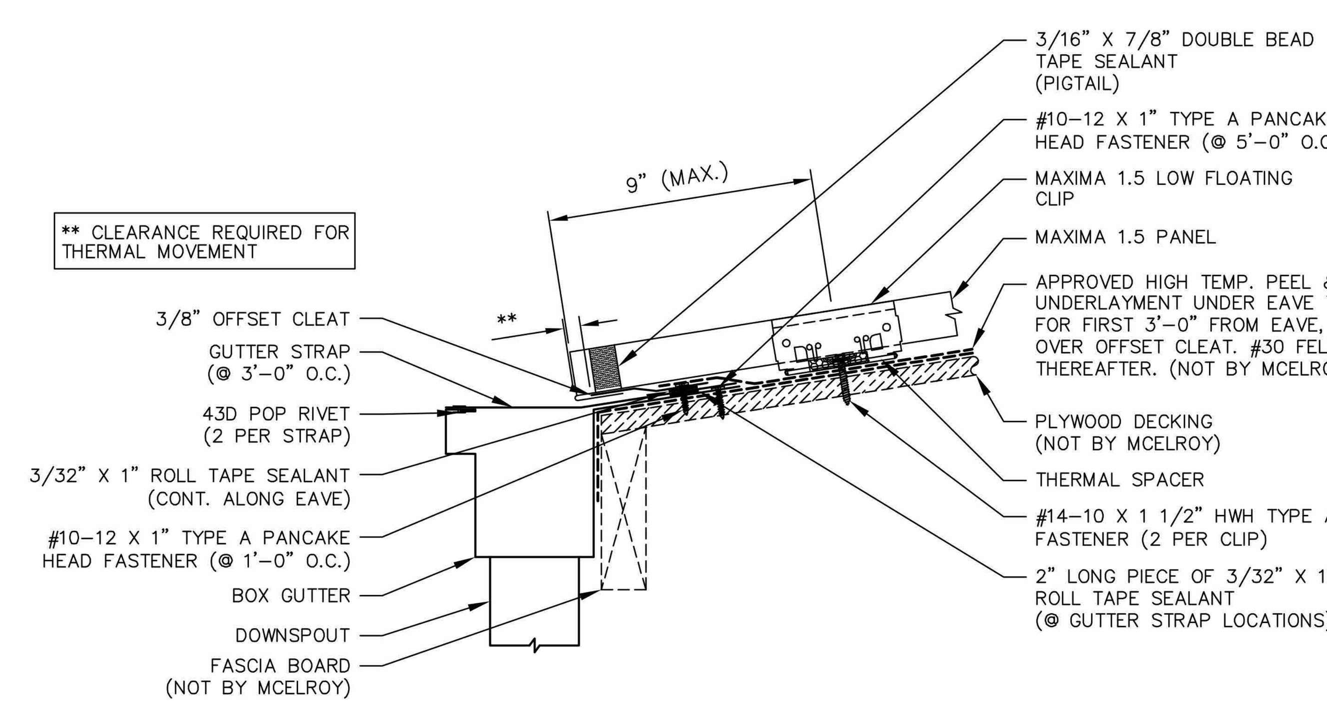
ROOFING SYSTEM

1. MANUFACTURERS AND PRODUCTS:
   A. FIRESTONE, JOHNSMANFIELD, OR APPROVED EQUAL W/ 20-YEAR WARRANTY
2. SPECIFIED ROOFING SYSTEMS (AS SHOWN):
   HEAT-WELDABLE SINGLE-PLY 60 MIL TPO ROOFING SYSTEM, INSTALLED OVER RIGID INSULATION ON WOOD ROOF DECK HAVING A SLOPE OF 3/8"/FT. MATERIALS SHALL BE AS FOLLOWS:
   A. TPO ROOFING SYSTEM AS MANUFACTURED BY MANUFACTOR LISTED ABOVE TO COMPLY WITH ASTM E 108 OR UL 790, ASTM D-6878, AND FMG I-90 FOR WIND UPLIFT.
   B. FASTENERS: METAL FASTENERS AND PLATES AS PER MANUFACTURER.
   C. ACCESSORIES: PRE-FABRICATED CURBS, FLASHING, CORNERS, TERMINATION BARS, PIPE FLASHING, VENT FLASHING ETC. AS PER MANUFACTURER.
   D. PLEASE SEE SINGLE PLY FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.
   E. ANY CARPENTRY OR METAL WORK SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL. CONTACT JM TECHNICAL FOR METAL OPTIONS TO BE INCLUDED WITHIN THE JM NDL GUARANTEE.
   F. JM TPO EDGE SEALANT IS REQUIRED ON ALL CUT OR NON-ENCAPSULATED EDGES OF REINFORCED MEMBRANE. THIS INCLUDES FACTORY CUT MEMBRANE (SEE DETAIL T-MS-01).
3. RIGID INSULATION:
   PROVIDE REQUIRED LAYERS OF POLYISOCYANURATE INSULATION W/ 1/2" "DENSDECK" COVER BOARD TO MEET A MINIMUM CONTINUOUS R-30 VALUE - THICKNESS AS REQUIRED. PROVIDE POSITIVE SLOPE TO ALL ROOF DRAINS. SEE ROOF PLAN. PROVIDE TOP LAYER PROTECTION MATERIAL AS PER MANUFACTURERS RECOMMENDATIONS. BOTTOM LAYER OF INSULATION TO HAVE INTEGRAL THERMAL BARRIER OR APPROVED ROOFING MANUFACTURER'S THERMAL UNDERLAYMENT SHEET. ASSEMBLY SHALL COMPLY WITH UL 1256 OR FMG 4450 AND ASTM C 1289, TYPE I OR II.
4. TAPERED INSULATION:
   PROVIDE TAPERED INSULATION AS REQUIRED FOR POSITIVE DRAINAGE TO ROOF DRAINS AS INDICATED PER ROOF PLAN ABOVE. 1/4" PER FOOT MINIMUM REQUIRED
5. EXHAUST FANS:
   PROVIDE ADDITIONAL LAYER OF ROOF MEMBRANE AROUND EXHAUST FANS.

2 ROOF SYSTEM
12" = 1'-0"



RAKE DETAIL



***NOTE: SLIDING SNOW AND ICE COULD CAUSE DAMAGE TO GUTTER SYSTEM.**

EAVE w/ GUTTER DETAIL

5 METAL ROOF DETAILS
1 1/2" = 1'-0"

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08/13/2025

PROPOSED PHARMACY BUILDING
PERMIT DRAWINGS
4735 BRYANT PARKWAY
ALEXANDER, AR 72002

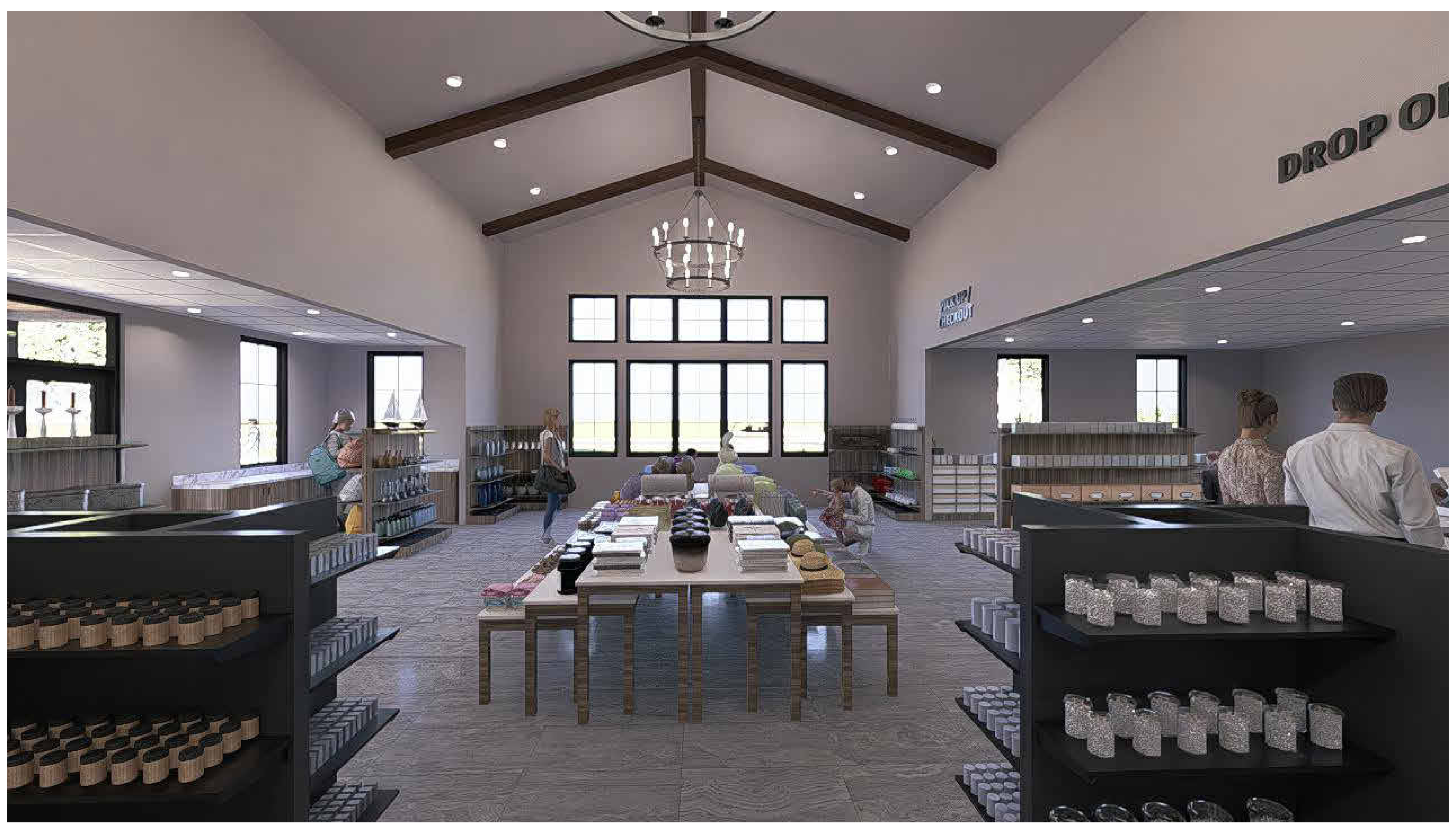
CONTENTS: DETAILS

REVISIONS:

ISSUE	DATE

10/20/2025

A501



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PROPOSED PHARMACY BUILDING

4735 BRYANT PARKWAY
ALEXANDER, AR 72002

PERMIT DRAWINGS

CONTENTS: 3D VIEWS

REVISIONS:

ISSUE	DATE

10/20/2025

A900

RICHARDSON ENGINEERING
Planning ▪ Engineering ▪ Development Consulting

325 West South Street
Benton, AR 72015
(501) 315-7225
(1/1)

PROJECT 025-029 BRYANT PHARMACY SOIL LOSS DATE 11/07/2025

TOTAL AREA = 1.97 AC

A = R * K * L * S * C * P

∴ R = 300

K => SOIL IS TIAK SILT LOAM (3 - 8%)

TABLE 10-1 ∴ K = 0.32

L => USE SLOPE OF 8% AND SLOPE LENGTH OF 100'

∴ LS = 0.992

C = 0.12 FOR LOOSE HAY OR STRAW FOR 1-10%

@ 2.0 TONS / ACRE

P = 0.5 FOR 3-8%

A = (300)(0.32)(0.992)(0.12)(0.5) = 5.71 < 5 K

EXCEEDS ALLOWABLE SOIL LOSS

USE A RAPID GROWING GRASS TO PROVIDE PERMANENT COVER (60% COVERAGE)

∴ C = 0.042 & P = 1 (NO CONTROLS)

A = (300)(0.32)(0.992)(0.042)(1)

= 4.0 > 5.0 ✓

Stormwater Pollution Prevention Plan (SWPPP) for Construction Activity
for Small Construction Sites

National Pollutant Discharge Elimination System (NPDES)
General Permit # ARR150000

Prepared for:

Shoppes at Dogwood Springs Phase 1

Date:

October 2025

Prepared by:

Richardson Engineering, PLLC
325 W South Street
Benton, AR 72015

Project Name and Location: Shoppes at Dogwood Springs Phase 1, 4707 Bryant Parkway, Alexander, AR 72002
Property Parcel Number (*Optional*):_______________________________________
Operator Name and Address: Jon Martin, 5501 Lombard, Alexander, AR 72002

A. Site Description
   a. Project description, intended use after NOI is filed: Proposed Pharmacy Building and Parking Lot.
   b. Sequence of major activities which disturb soils: Install silt fencing, establish subgrade elevations, parking facilities, curb/gutter, and landscaping. Monitor disturbed areas while vegetation and stabilization is taking place.
   c. Total Area: 1.90 acres Disturbed Area: 1.90 acres

B. Responsible Parties

Be sure to assign all SWPPP related activities to an individual or position; even if the specific individual is not yet known (i.e. contractor has not been chosen).

Individual/Company	Phone Number	Service Provided for SWPPP (i.e., Inspector, SWPPP revisions, Stabilization Activities, BMP Maintenance, etc.)
Richardson Engineering - Tristin Phillips	501-315-7225	Engineer
Richardson Engineering	501-315-7225	Engineer/SWPPP
Bascon General Contractors LLC	501-317-0446	Contractor/Install Maintain Erosion Control Measures
TBD	N/A	Inspector/SWPPP

C. Receiving Waters
   a. The following waterbody (or waterbodies) receives stormwater from this construction site: Drains Northeast to unnamed tributary of Owen Creek, thence into Owen Creek, thence into Fourche Creek, thence into Arkansas River
   b. Is the project located within the jurisdiction of an MS4? ☒ Yes ☐ No
      i. If yes, Name of MS4: City of Bryant
   c. Ultimate Receiving Water:
      ☐ Red River ☐ White River
      ☐ Ouachita River ☐ St. Francis River
      ☒ Arkansas River ☐ Mississippi River

D. Site Map Requirements (Attach Site Map):
   a. Pre-construction topographic view;

b. Direction of stormwater flow (i.e., use arrows to show which direction stormwater will flow) and approximate slopes anticipated after grading activities;
c. Delineate on the site map areas of soil disturbance and areas that will not be disturbed under the coverage of this permit;
d. Location of major structural and nonstructural controls identified in the plan;
e. Location of main construction entrance and exit;
f. Location where stabilization practices are expected to occur;
g. Locations of off-site materials, waste, borrow area, or equipment storage area;
h. Location of areas used for concrete wash-out;
i. Location of all surface water bodies (including wetlands) with associated natural buffer boundary lines. Identify floodplain and floodway boundaries, if available;
j. Locations where stormwater is discharged to a surface water and/or municipal separate storm sewer system if applicable,
k. Locations where stormwater is discharged off-site (should be continuously updated);
l. Areas where final stabilization has been accomplished and no further construction phase permit requirements apply;
m. A legend that identifies any erosion and sediment control measure symbols/labels used in the site map and/or detail sheet; and
n. Locations of any storm drain inlets on the site and in the immediate vicinity of the site.

E. Stormwater Controls

a. Initial Site Stabilization, Erosion and Sediment Controls, and Best Management Practices:
    i. Initial Site Stabilization: Subgrade to be established. Silt fence to be installed to prevent sedimentation and runoff. Drainage to be installed. Utilities to be trenched and covered immediately. Vegetation to be established and soil stabilization closely monitored. After vegetation is established and site is stabilized, NOT to be submitted for approval.
    ii. Erosion and Sediment Controls: Construction Entrance/Exit, Silt Fence, seeding, additional efforts to stabilize disturbed areas where needed, i.e. filter socks, straw wattles, erosion control matting.
    iii. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the operator will replace or modify the control for site situations: ☒ Yes ☐ No
    If No, explain: ____
    ____
    iv. Off-site accumulations of sediment will be removed at a frequency sufficient to minimize off-site impacts: ☒ Yes ☐ No

If No, explain: ____________________

v. Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%: ☒Yes ☐No

If No, explain: ____________________

____

vi. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges: ☒Yes ☐No

If No, explain: ____________________

vii. Off-site material storage areas used solely by the permitted project are being covered by this SWPPP: ☐Yes ☒No

If Yes, explain additional BMPs implemented at off-site material storage area: ____________________

____

b. Stabilization Practices

i. Description and Schedule: Silt fence and construction entrance to be installed prior to clearing and grubbing of site. Subgrade to be established and additional BMPs to be installed as needed. Proposed construction to be completed and stabilization to be initiated. Stabilization to be monitored until complete. Submit NOT for approval.

ii. Are buffer areas required? ☐Yes ☒No

If Yes, are buffer areas being used? ☐Yes ☐No

If No, explain why not: Due to the small size of the site, no buffer areas will be needed.

If Yes, describe natural buffer areas: ____________________

iii. A record of the dates when grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included with the plan. ☒Yes ☐No

If No, explain: ____________________

____

iv. Deadlines for stabilization:

1. Stabilization procedures will be initiated 14 days after construction activity temporarily ceases on a portion of the site.
2. Stabilization procedures will be initiated immediately in portions of the site where construction activities have permanently ceased.

c. Structural Practices

i. Describe any structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site: N/A

ii. Describe Velocity Dissipation Devices: Silt fence and rock check dams.

iii. Sediment Basins:

Are 10 or more acres draining to a common point? ☐Yes ☒No

Is a sediment basin included in the project? ☐Yes ☒No

If Yes, what is the designed capacity for the storage?

☐3600 cubic feet per acre = : ______________________________

or

☐10 year, 24 hour storm = :______________________________

☐ Other criteria were used to design basin: ________________

____

If No, explain why no sedimentation basin was included and describe required natural buffer areas and other controls implemented instead: Due to the small size of the site, it was determined that silt fence in combination with other BMPs will be sufficient to retain any sediment on site.

F. Other Controls

a. Solid materials, including building materials, shall be prevented from being discharged to Waters of the State: ☒Yes ☐No

b. Off-site vehicle tracking of sediments and the generation of dust shall be minimized through the use of:

☒A stabilized construction entrance and exit

☐Vehicle tire washing

☐Other controls, describe: ______________________________________

c. Temporary Sanitary Facilities: On-site, portable facility.

d. Concrete Waste Area Provided:

☒Yes

☐No. Concrete is used on the site, but no concrete washout is provided.

Explain why: ____

☐N/A, no concrete will be used with this project

e. Fuel Storage Areas, Hazardous Waste Storage, and Truck Wash Areas: N/A

G. Non-Stormwater Discharges

a. The following allowable non-stormwater discharges comingled with stormwater are present or anticipated at the site:

☐Fire-fighting activities;

☐Fire hydrant flushings;

☐Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II.A.4.H.2;

☐Potable water sources including uncontaminated waterline flushings;

☐

☐

Landscape Irrigation;

Routine external building wash down which does not use detergents or other chemicals;

☐Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents or other chemicals are not used;

☐Uncontaminated air conditioning, compressor condensate (See Part I.B.12.C of the permit);,

☐Uncontaminated springs, excavation dewatering and groundwater (See Part I.B.13.C of the permit);

☐Foundation or footing drains where flows are not contaminated with process materials such as solvents (See Part I.B.13.C of the permit);

b. Describe any controls associated with non-stormwater discharges present at the site: N/A

H. Applicable State or Local Programs: The SWPPP will be updated as necessary to reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site. ☒Yes ☐No

I. Inspections

a. Inspection frequency:

☒Every 7 calendar days

or

☐At least once every 14 calendar days and within 24 hours of the end of a storm even 0.25 inches or greater (a rain gauge must be maintained on-site)

b. Inspections:

Completed inspection forms will be kept with the SWPPP.

☒ADEQ's inspection form will be used (See Appendix B)

or

☐A form other than ADEQ's inspection form will be used and is attached (See inspection form requirements Part II.A.4.L.2)

c. Inspection records will be retained as part of the SWPPP for at least 3 years from the date of termination.

d. It is understood that the following sections describe waivers of site inspection requirements. All applicable documentation requirements will be followed in accordance with the referenced sections.

i. Winter Conditions (Part II.A.4.L.4)

ii. Adverse Weather Conditions (Part II.A.4.L.5)

J. Maintenance:

The following procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good, effective operating condition will be followed: The SWPPP to be followed, control measures inspected and repaired as required.

Any necessary repairs will be completed, when practicable, before the next storm event, but not to exceed a period of 3 business days of discovery, or as otherwise directed by state or local officials.

K. Employee Training:

The following is a description of the training plan for personnel (including contractors and subcontractors) on this project: Contractors and Subcontractors for this project to be informed of the SWPPP, as well as procedures for the installation and inspection of erosion control measures and performing inspections thereof.
**Note, Formal training classes given by Universities or other third-party organizations are not required, but recommended for qualified trainers; the permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.

Certification

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: ______________________________________

Title: _________________________ Date: ____________________

ARR150000 Inspection Form

Appendix A

Inspector Name: ____ Date of Inspection: __________________

Inspector Title: ____

Date of Rainfall:__________________________________ Duration of Rainfall: ______________________________

Days Since Last Rain Event: __________________days Rainfall Since Last Rain Event: _________inches

Description of any Discharges During Inspection: ____

Location of Discharges of Sediment/Other Pollutant (specify pollutant & location): _________________________________

____

Locations in Need of Additional BMPs: ____

Information on Location of Construction Activities

Location	Activity Begin Date	Activity Occuring Now (y/n)?	Activity Ceased Date	Stabilization Initiated Date	Stabilization Complete Date

Information on BMPs in Need of Maintenance

Location	In Working Order?	Maintenance Scheduled Date	Maintenance Completed Date	Maintenance to be Performed By

Changes required to the SWPPP: ____________________ Reasons for changes: ______________________________

____ ____

____ ____

SWPPP changes completed (date): ___________________

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accura te, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: ____ Date:_______________

Title: ____

SITE WITH AUTOMATIC COVERAGE (LESS THAN 5 ACRES) CONSTRUCTION SITE NOTICE

FOR THE
Arkansas Department of Environmental Quality (ADEQ)
Storm Water Program

NPDES GENERAL PERMIT NO. ARR150000

The following information is posted in compliance with **Part I.B.8.A** of the ADEQ General Permit Number **ARR150000** for discharges of stormwater runoff from sites with automatic coverage. Additional information regarding the ADEQ stormwater program may be found on the internet at:

www.adeq.state.ar.us/water/branch_npdes/stormwater

Permit Number	ARR150000
Contact Name: Phone Number:	*Jon Martin* *501-847-3038*
Project Description (Name, Location, etc.): Start Date: End Date: Total Acres:	*Bryant Parkway Pharmacy, 4707 Bryant Parkway, Alexander, AR 72002* *12/01/2025* *06/01/2026* *1.90*
Location of Stormwater Pollution Prevention Plan:	*Mailbox on Site*

For Construction Sites Authorized under **Part I.B.6.A** (Automatic Coverage) the following certification must be completed:

I ____ (Typed or Printed Name of Person Completing this Certification) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part I.B.2. of the ADEQ General Permit Number ARR150000. A stormwater pollution prevention plan has been developed and implemented according to the requirements contained in Part II.A.2.B & D of the permit. I am aware there are significant penalties for providing false information or for conducted unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

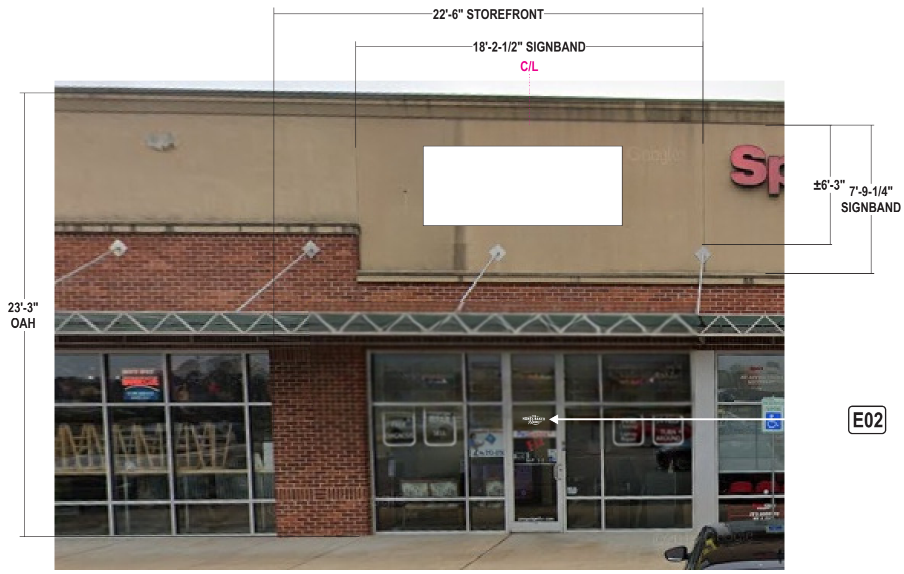
____ ______________________________

Signature and Title Date

PROPOSED FRONT ELEVATION

Scale: 1/4"=1'-0"

EXISTING SIGN SF:	32.3
PROPOSED SIGN SF:	57.4



Stratus

onestratus.com

8959 Tyler Boulevard
Mentor, Ohio 44060

888.503.1569

CLIENT:

ADDRESS:
3213 MAIN STREET STE 2
BROADWAY CROSSING
BRYANT, AR 72022

PAGE NO.: 3

ORDER NUMBER: 1245621

PROJECT NUMBER: 79782

SITE NUMBER: 1218

PROJECT MANAGER: ROBYN PHILLIPS

ELECTRONIC FILE NAME: G:\ACCOUNTS\H\HONEYBAKED HAM\2025\AR\1218_Bryant R2

Rev #	Req #	Date/Artist	Description	Rev #	Req #	Date/Artist	Description
Original	554434	09/23 /25 Z-SA					
Rev 1	556180	10/03/25 Z-MH	Removed option A				
Rev 2	558358	10/15/25 Z-SA	Updated sign				

City of Bryant, Arkansas
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0943

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.cityofbryant.com under the Planning and Community Development tab.

Date: 10/23/2025

Applicant or Designee:

Name MaCo Builders of Arkansas, LLC.

Address 309 Abrielle Ln Benton, AR 72109

Phone 501-993-6295

Email Address: macobuildersar@gmail.com

Project Location:

Property Address 2525 Birch St Bryant, AR 72019

Parcel Number 840-08802-000

Zoning Classification R-M

Property Owner (If different from Applicant):

Name ______

Phone ______

Address ______

Email Address ______

Additional Information:

Legal Description (Attach description if necessary)

2022-006476 Sherwood Forest Subdivision Lot 3, Block 001

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

Removal of existing condemned (total loss - fire) home and construct one single duplex structure. Each unit will have 3 bedrooms and 2 full bathrooms.

Proposed/Current Use of Property Multi Family Dwelling

Application Checklist

Requirements for Submission

- [x] Letter stating request of Conditional Use and reasoning for request
- [x] Completed Conditional Use Permit Application
- [x] Submit Conditional Use Permit Application Fee ($125)
- [x] Submit Copy of completed Public Notice
- [ ] Publication: Public Notice shall be published at least one (1) time fifteen (15) days prior to the public hearing at which the variance will be heard. Once published please provide a proof of publication to the Community 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 Public hearing. One (1) sign is required for every two hundred (200) feet of street frontage.
- [ ] Submit eight (8) Copies 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.

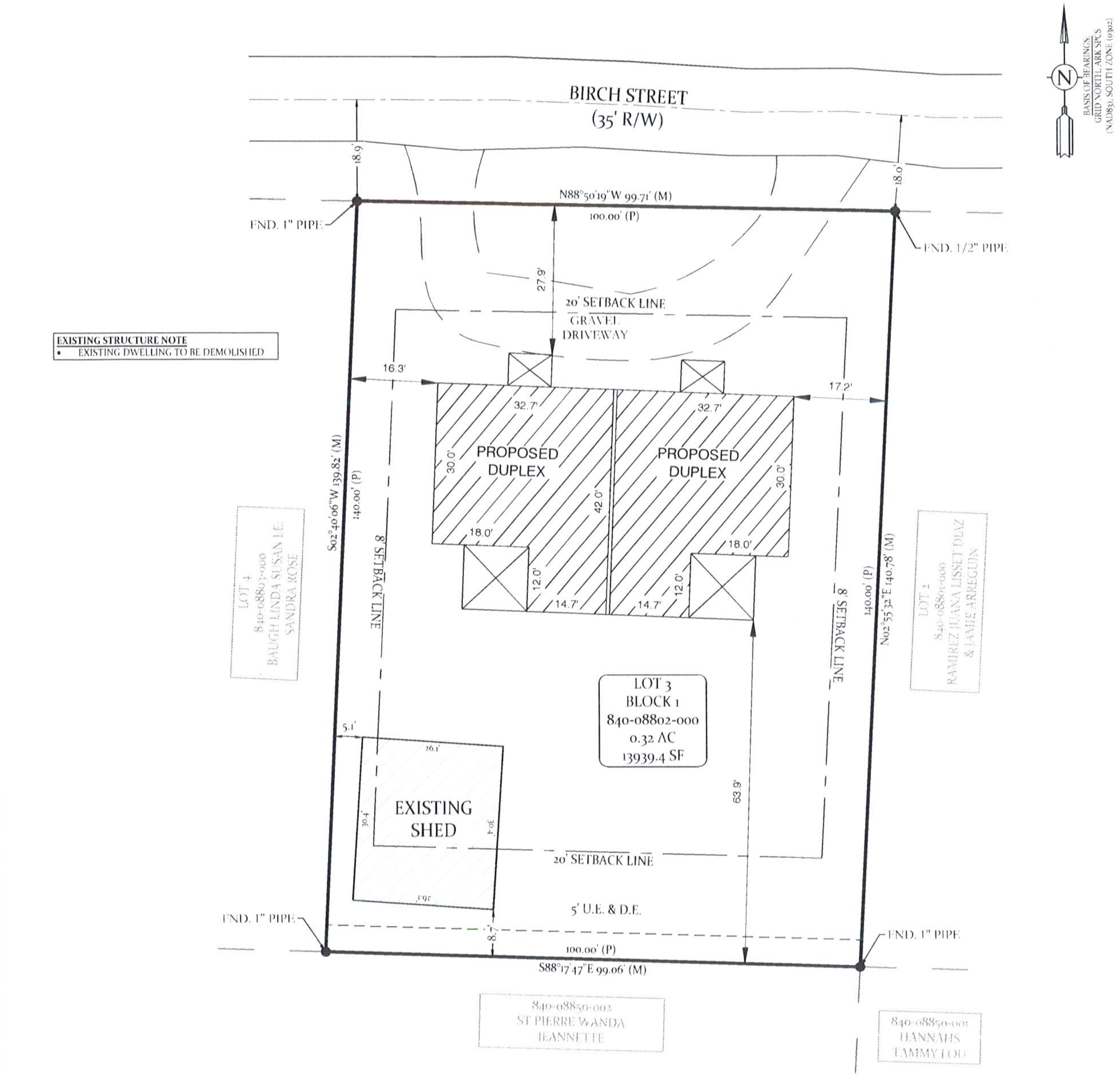
Once the application is received, the material will be reviewed to make sure all the required information is provided. The applicant will be notified if additional information is required. The application will then go before the Development and Review Committee (DRC) for a recommendation to the Planning 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.

Note: that this is not an exhaustive guideline regarding the Conditional Use Permit Process. Additional information is available in the Bryant Zoning Ordinance.

READ CAREFULLY BEFORE SIGNING

I ______________________, 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.

25-1261
Drawing No.



RECORD PROPERTY DESCRIPTION
SALINE COUNTY INSTRUMENT 2022-006476

LOT 3, BLOCK 1, SHERWOOD FOREST SUBDIVISION, NOW IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS.

SURVEY DETAILS AND NOTES

OWNER OF RECORD: DRYSDALE JUSTIN
PHYSICAL ADDRESS: 2525 BIRCH STREET, BRYANT, AR 72019.
COUNTY PARCEL TAX ID: 840-08802-000.

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 PROFESSIONAL LAND SURVEYOR
STATE OF ARKANSAS
No. 1664
SIGNATURE
10/29/25
WILLIAM CORBITT R. SHOFFNER

HOPE CONSULTING
ENGINEERS • SURVEYORS

129 North Main Street
Benton, Arkansas 72015
office: (501) 315-2626
fax: (501) 315-0024
HopeConsulting.com

For the Exclusive Use and Benefit of:
MaCo Builders, LLC

Address 2525 Birch Street
Bryant, Arkansas, 72022
Date 10/29/25

500	01S	14W	0	20	110	62	1664

GENERAL DISCLAIMER

This survey is for the exclusive use and benefit of parties shown hereon. Use or duplication of this document by any other parties is prohibited and voids said document.

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.

FLOOD STATEMENT

No portion of the property described hereon lies within the 100 year flood plain, according to the Flood Insurance Rate Map. panel # 05125C0360F, dated: 06/05/2020

20' 10' 0' 20'

LEGEND

Symbol	Meaning
●	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
	Fence Lines
	Centerlines
	Parcel Lines/Misc Lines

Drawn By: NCD/OV Checked: ______

MACO
BUILDERS

309 Abrielle Ln Benton, AR 72019

Letter of Intent – Site Plan and Conditional Use Permit Applications for

MaCo Builders of Arkansas, LLC.

Located at 2525 Birch St. Bryant, AR 72019

Dated November 18, 2025

Preface

The purpose for this letter is to describe, in detail, the intentions of this project including demolition of the existing structures, site clearing, construction and use, for consideration by the City of Bryant, Arkansas Planning Commission.

Project Purpose

The intent of this project is to demolish an existing 1,152 sq ft (approx) home that had previously been a total loss claim (fire) by the previous owner(s). The remnants from the previous dwelling, and detached shop, will be hauled off to the local Saline Country Landfill, and all utilities will be removed prior to this process.

After the site has been cleaned of all existing materials, one large oak tree, and one dead tree, and part of another oak tree will be removed and hauled off-site. After this, and upon approval by the City of Bryant, a new, 2,340 sq ft heated and cooled (2,724 sq ft outside of structure) will be constructed, which will consist of a duplex that will mirror each other with 3 bedrooms and 2 bathrooms. The structure will be built on a monolithic foundation, a 2' brick skirt around the entire perimeter, and vinyl lap siding to the roof line. Vinyl soffit will also be installed around the perimeter. The roof will be constructed of architectural shingles with a 12:6 pitch.

Due to the fact that there is no City of Bryant Sewer or Water services available at this site, a new septic system will be installed, per a licensed installer and approved by the Arkansas Health Department. The septic system will be installed in the rear of the structure and throughout the back yard area (permit and drawings will be provided, as needed, as they become available). The main water feed will be renewed via 2 separate water meters, one for each tenant space, through Salem Water Users.

Tenants will each have their own separate concrete driveway and pad for parking. The pad will be approx 20' wide, will butt up to the structure, and will tie into Birch St with appropriate culvert(s). There will be a requirement of a maximum of 2 vehicles per unit, with a variance on non-residents to 1 vehicle. It will also be advised that no parking is allowed on Birch St.

There is an existing fence that runs along the east side of the property to the south and along the south to the west corner. This fence will remain, but the existing fence on the west side will be removed and a new fence constructed and will connect to the structure with an 8' double gate; on the east side the fence will connect to the structure as well with an 8' gate. At this time, it has not been determined if a divider fence will be installed on the rear of the property to separate the tenant yard space.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely;

Steve Lucas, Jr.

MaCo Builders of Arkansas, LLC.

Owner

City of Bryant, Arkansas
Planning and Development
210 SW 3rd Street Bryant, AR 72022
501-943-0943

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.cityofbryant.com under the Planning and Development tab.

Date: 11/20/25

Applicant or Designee:

Name: PAUL KINGSOLVER

Address: 6712 LOMBARD RD

Phone: 702 371 2341

Email: pkingsolver@gmail.com

Project Location:

Property Address: Same

Parcel Number

Zoning Classification

Property Owner (If different from Applicant):

Name

Phone

Address

Email Address

Additional Information:

Subdivision Lot and Block Number or Legal Description (Attach Legal Description to Application)

Current Use of Property: Airbnb

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

Short Term Rental

Application Checklist

Requirements for Submission

- ☐ Letter stating request of Conditional Use and reasoning for request
- ☐ Completed Conditional Use Permit Application
- ☐ 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 ______________________, 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.

CERTIFICATE OF SURVEY ACCURACY

I, ZANE ROBBINS, 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.

_________ DATE OF EXECUTION

Zane Robbins
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 1853 ARKANSAS

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 OF EXECUTION __________ SIGNED ______________________

NAME CALAIS COURT INC

ADDRESS 422 N MAIN ST,
BENTON AR 72015

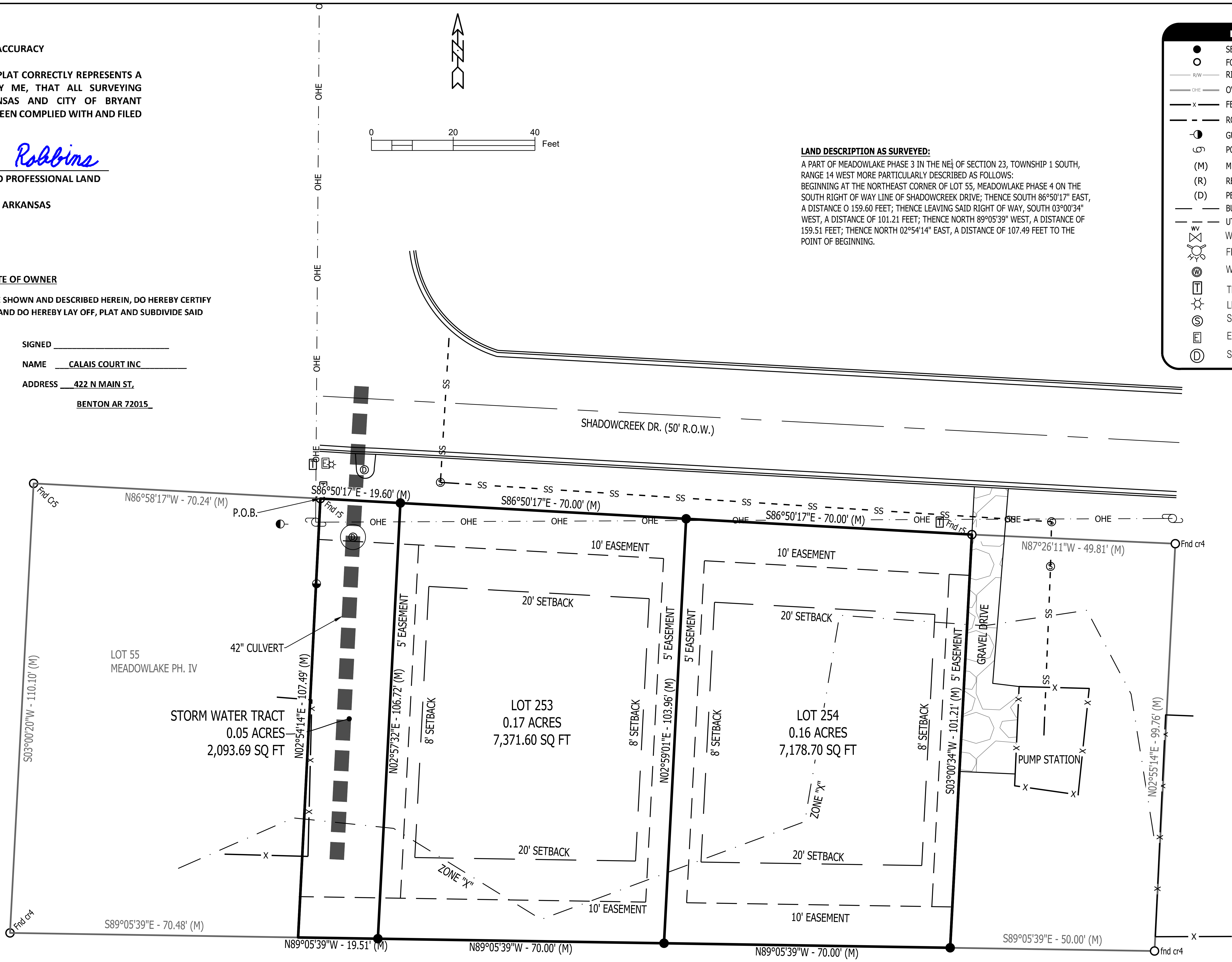
SOURCE OF TITLE:

LAND DESCRIPTION AS SURVEYED:

A PART OF MEADOWLAKE PHASE 3 IN THE NE¼ OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 14 WEST MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHEAST CORNER OF LOT 55, MEADOWLAKE PHASE 4 ON THE SOUTH RIGHT OF WAY LINE OF SHADOWCREEK DRIVE; THENCE SOUTH 86°50'17" EAST, A DISTANCE O 159.60 FEET; THENCE LEAVING SAID RIGHT OF WAY, SOUTH 03°00'34" WEST, A DISTANCE OF 101.21 FEET; THENCE NORTH 89°05'39" WEST, A DISTANCE OF 159.51 FEET; THENCE NORTH 02°54'14" EAST, A DISTANCE OF 107.49 FEET TO THE POINT OF BEGINNING.

LEGEND

SET 1/2" REBAR W/ CAP
FOUND MONUMENT
RIGHT-OF-WAY
OVERHEAD UTILITIES
FENCE
ROADWAY CENTERLINE
GUY WIRE
POWER/LIGHT POLE
(M) MEASURED
(R) RECORDED DISTANCE
(D) PER DEED
BUILDING SETBACK LINE
UTILITY EASEMENT
WATER VALVE
FIRE HYDRANT
WATER METER
TELEPHONE PEDESTAL
LIGHT POLE
SANITARY SEWER MANHOLE
ELECTRIC BOX
STORM SEWER MANHOLE



CERTIFICATE OF AUTHORIZATION
ROBBINS PROFESSIONAL LAND SERVICES
#4151
ARKANSAS - SURVEYOR

REGISTERED
STATE OF ARKANSAS
NO. 1853
Zane Robbins
SIGNATURE
9/25/2024
ZANE ROBBINS
PROFESSIONAL LAND SURVEYOR

GENERAL NOTES

1. BASIS OF BEARING FOR THIS SURVEY IS ARKANSAS GRID SOUTH. DISTANCES SHOWN ARE GROUND DISTANCES.
2. REFERENCES:
   A. PHASES 3, 4, AND 5 MEADOWLAKE SUBDIVISION.
3. ZONING CLASSIFCATION: R-1S

CURRENT OWNER OF RECORD
CALAIS COURT INC
422 N MAIN ST
BENTON AR 72015

PROPERTY ADDRESS
SHADOW CREEK DR
BRYANT, AR 72002

CERTIFICATION

I HEREBY CERTIFY THAT THE ABOVE PLAT REPRESENTS A SURVEY MADE BY ME OR UNDER MY SUPERVISION ON THIS DAY AND THAT ALL CORNERS ARE SET AS SHOWN. NO INDEPENDENT SEARCH FOR EASEMENTS, COVENANTS, ENCUMBRANCES, OR ANY OTHER FACTS WHICH AN ACCURATE TITLE SEARCH MAY DISCLOSE WAS PERFORMED.

Zane Robbins
ZANE ROBBINS, AR PLS #1853

FLOOD STATEMENT

BY GRAPHIC PLOTTING ALONE, ACCORDING TO FEMA FIRM #05125C0380E, DATED JUNE 5, 2020, THIS PROPERTY LIES IN ZONE "X", 0.2% ANNUAL CHANCE FLOOD HAZARD

UTILITIES DISCLAIMER

UTILITIES SHOWN ARE NOTED BY VISIBLE OBSERVATION ONLY. UNDERGROUND UTILITIES ARE TAKEN FROM UTILITY MAPS; EXACT LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AS NO EXCAVATION HAS TAKEN PLACE AS OF THIS DATE TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THIS DRAWING.

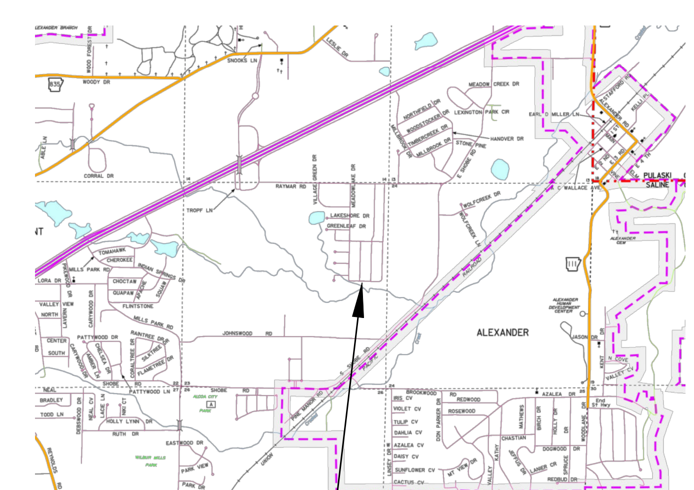
CERTIFICATE OF FINAL PLAT APPROVAL

ALL REQUIREMENTS OF THE BRYANT SUBDIVISION RULES AND REGULATIONS RELATIVE TO THE PREPARATION AND SUBMITTAL TO A FINAL PLAT HAVE BEEN FULFILLED, APPROVAL OF THIS PLAT IS HEREBY GRANTED, SUBJECT TO FURTHER PROVISIONS OF SAID RULES AND REGULATIONS.

SIGNED,

DATE OF EXECUTION

BRYANT PLANNING COMMISSION



VICINITY MAP (NTS)

BRYANT, AR

SITE LOCATION

DATE	REVISIONS

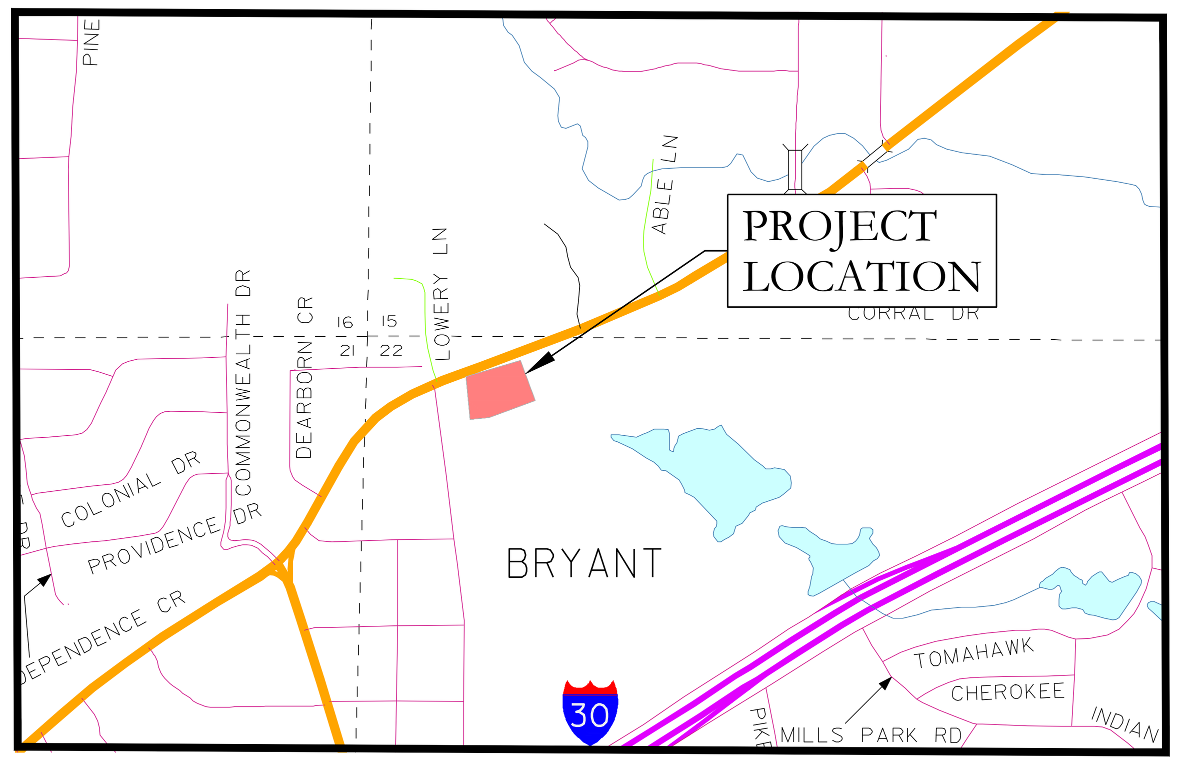
LOTS 253 AND 254, A REPLAT OF STORM SEWER DETENTION BASIN, MEADOWLAKE, PHASE 3, CITY OF BRYANT SALINE COUNTY, ARKANSAS

REPLAT

ROBBINS PROFESSIONAL LAND SERVICES
INCORPORATED
SURVEYING | GIS | CONSTRUCTION STAKING
P.O. BOX 939 | BRYANT, ARKANSAS 72089
OFFICE: 501.425.6380 | EMAIL: ZANEROBBINS3@GMAIL.COM

DRAWN BY	ZR
CHECKED BY	ZR
DATE	09/25/2025
SCALE	1"=20'
PROJECT No.	2025745
PAGE	1 of 1

CONSTRUCTION PLANS
MARKET PLACE II
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, AR



VICINITY MAP

N

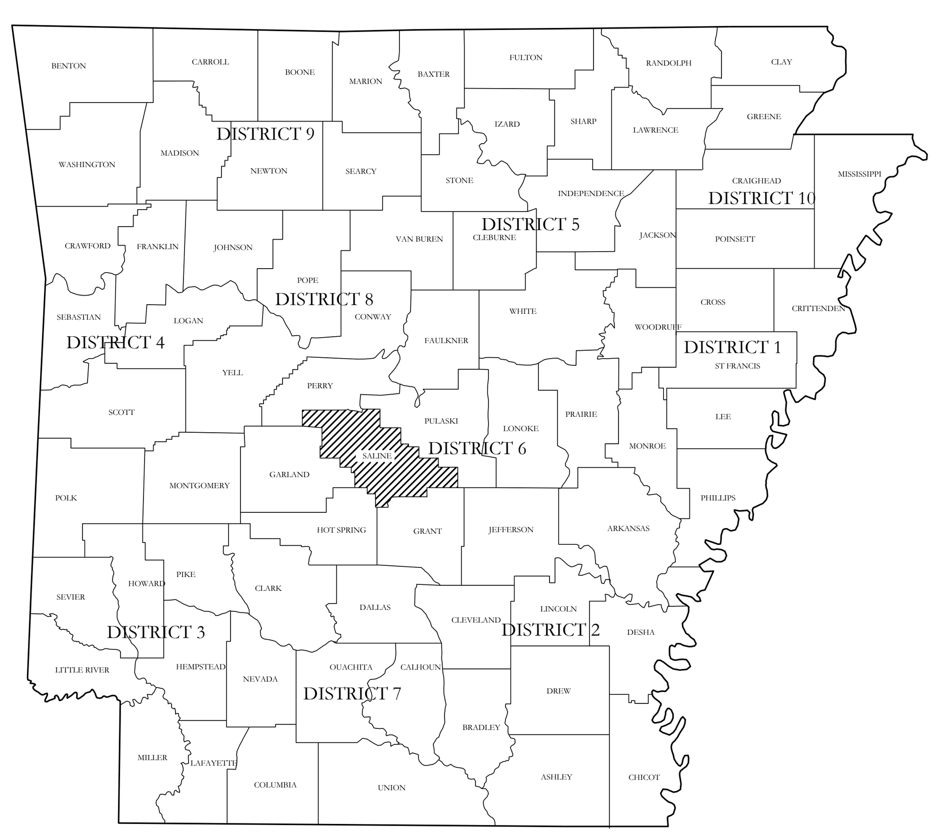
PREPARED BY:

HOPE CONSULTING
ENGINEERS - SURVEYORS

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

DRAWING INDEX

SHEET NO.	TITLE
C-1.0	SITE PLAN
C-2.0	GRADING PLAN
C-3.0	UTILITY PLAN
C-3.1-3.6	SEWER DETAILS
C-3.7-3.11	WATER DETAILS
C-4.1-4.2	PRE & POST DEV. CALCULATION
C-4.3-4.4	DRAINAGE CALCULATION
C-4.5	DRAINAGE PATH
C-5.1-5.3	EROSION CONTROL PLAN
C-6.0	LANDSCAPE PLAN



CIVIL ENGINEER
HOPE CONSULTING INC
129 N. MAIN STREET
BENTON, AR 72015

ARCHITECH
N/A

STRUCTURAL ENGINEER
N/A

GEOTECHNICAL ENGINEER
N/A

REVISION	SUBMISSION DATE
1. AS PER CITY COMMENT ON 09/18/25	11/19/2025
1. AS PER CITY COMMENT ON 11/20/25	11/25/2025

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20878
11-25-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1951
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS

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

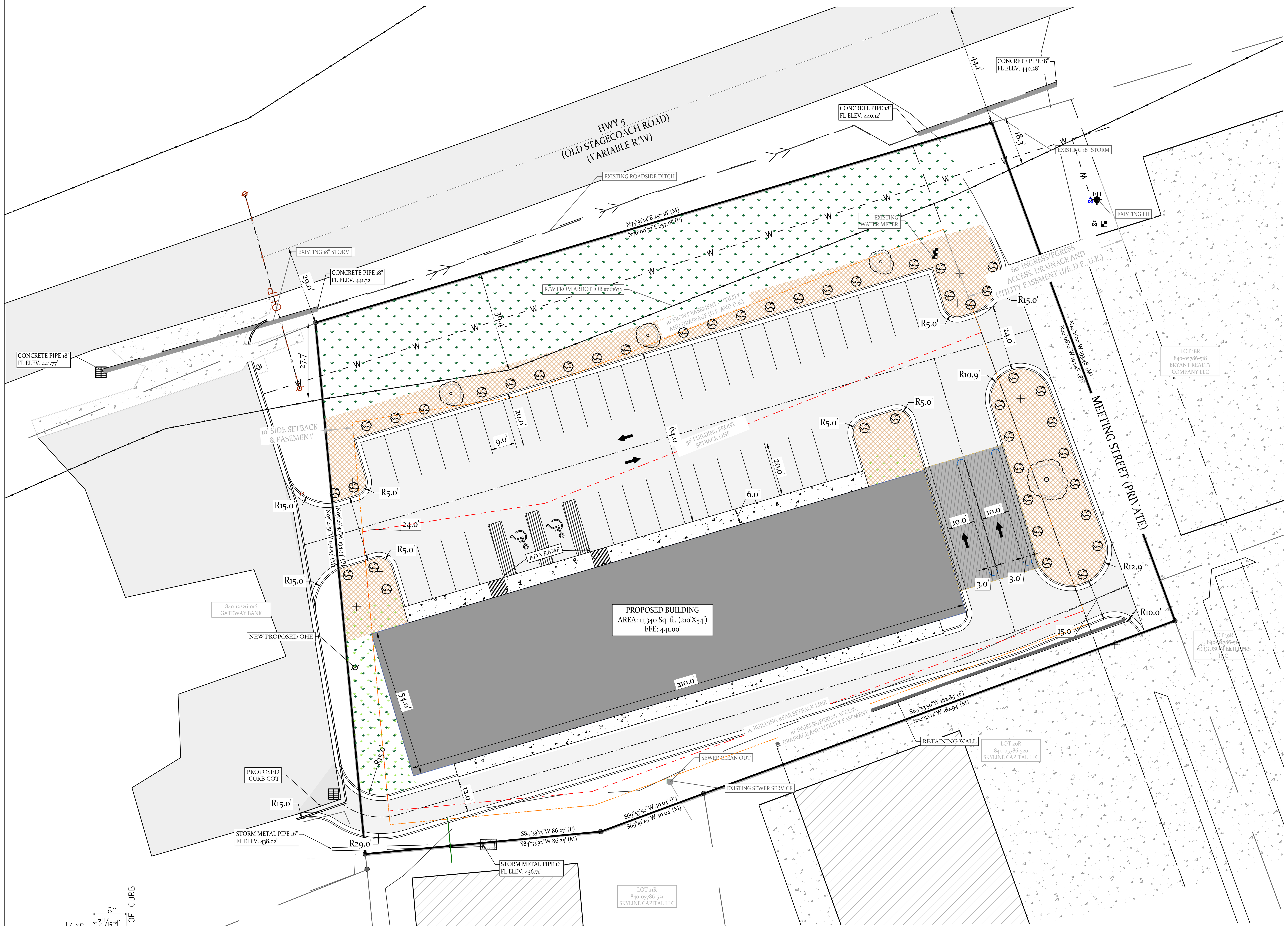
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
COVER SHEET

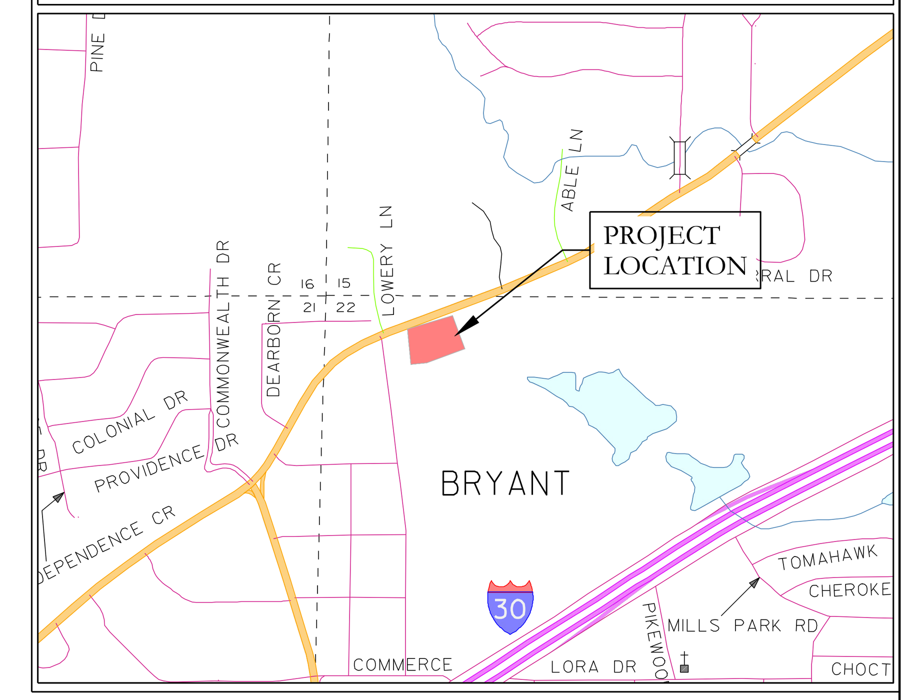
DATE:	11/25/2025	C.A.D. BY:		DRAWING NUMBER:
REVISED:	date	CHECKED BY:		25-0608
SHEET:	C-0.0	SCALE:		

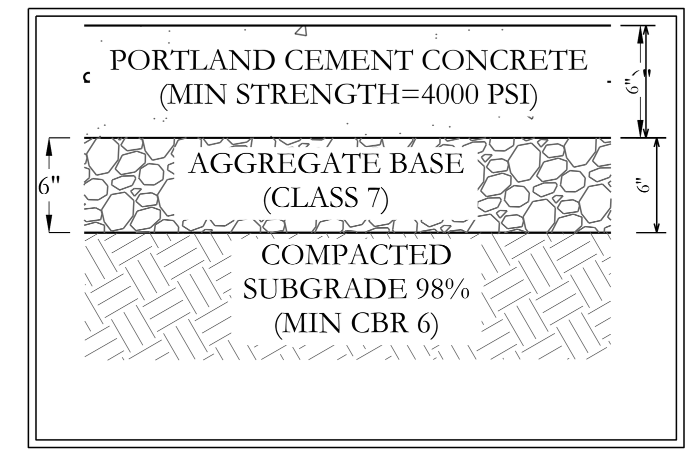
500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11.20.25.DWG

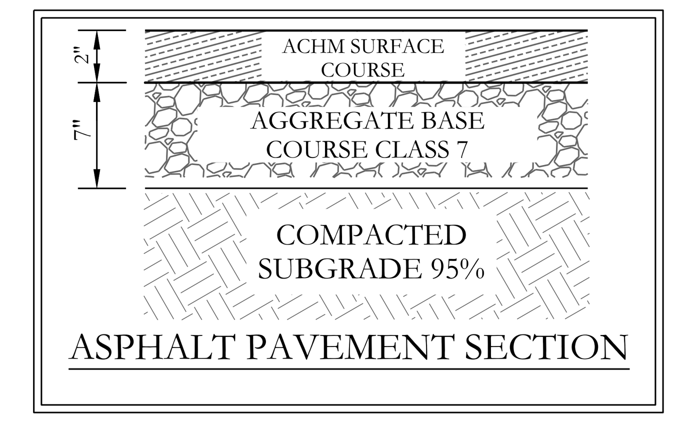


VICINITY MAP:

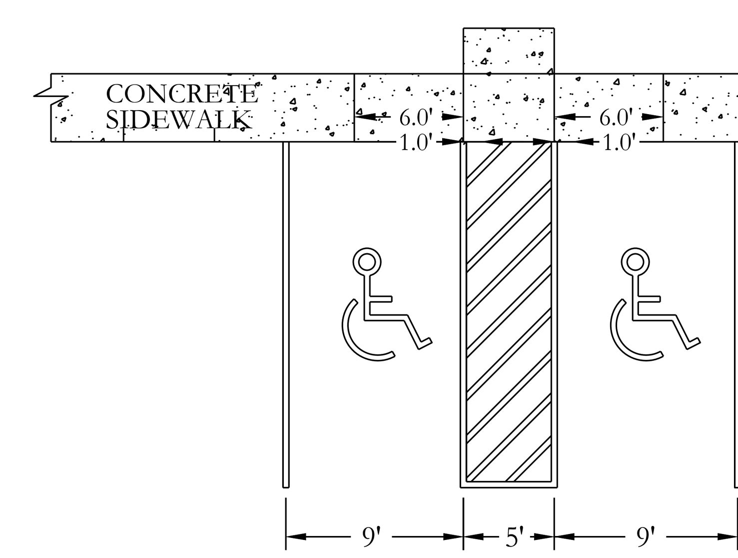


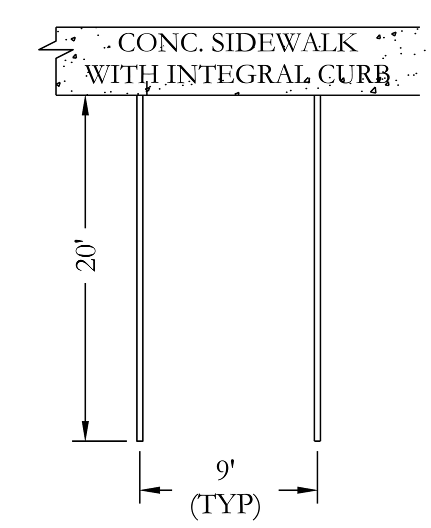


HEAVY DUTY CONCRETE PAVEMENT SECTION



ASPHALT PAVEMENT SECTION



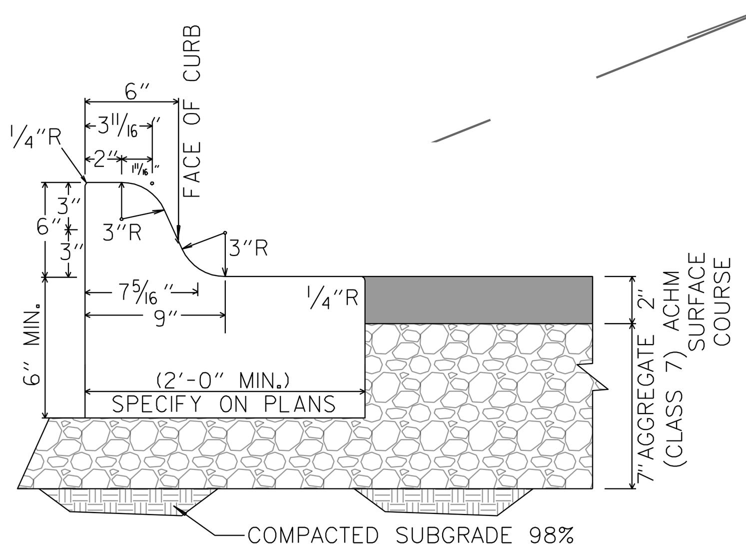


10' FOR END STALLS

USE DIMENSIONS ABOVE UNLESS OTHERWISE NOTED

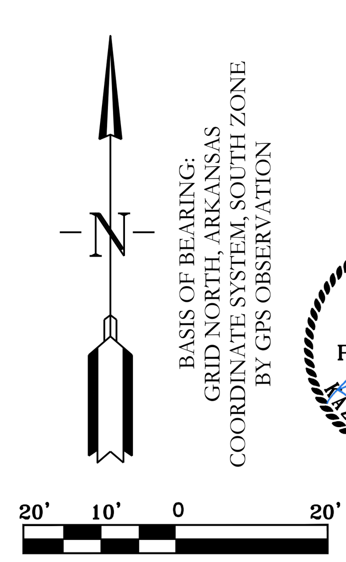
PARKING STALL & SIDEWALK DETAIL

NOT TO SCALE

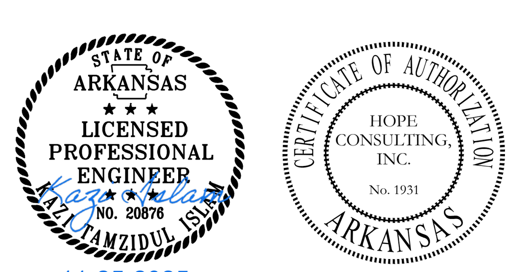


CURB DETAILS

OWNER:		DEVELOPER:	
Name:	PHILLIP RYE	Name:	RYE GENERAL CONTRACTORS
Address:	7416 PALM BEACH, BENTON AR 72019	Address:	6128 HIGHWAY 5 NORTH AR 72022
Phone:	501-317-9883	Phone:	
Email:	philliprye@philliprye.com	Email:	



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



SITE DATA	
TOTAL SITE AREA	1.30 ACRES
TOTAL DEVELOPMENT AREA	1.30 ACRES
GROSS BUILDING AREA	BUILDING 111340 SQ. FT.
BUILDING SETBACKS	FRONT SETBACK LINE: 50' RIGHT SIDE SETBACK LINE: AS SHOWN REAR SETBACK LINE: 15' LEFT SIDE SETBACK LINE: 10'
BUILDING HEIGHTS	1 STORY
BUSINESS TYPE	RETAIL
PARKING CALCULATION (PROVIDED)	PROVIDED PARKING SPACES 41 (2 ADA SPACES)

ZONING INFORMATION	
CURRENT ZONING	C 2 HIGHWAY COMMERCIAL

LEGEND

- PLSS Aliquot Corner
- Fnd. Corner Monument
- Set 1/2" Rebar/Cap (1664)
- Computed Point
(M)- As Measured
(P)- Per Deed or Plat Records
ESMT - Easement
B.S.L. - Building Setback Lines
- Clean Out
- Water Meter
- Power Pole
- Sewer Manhole
- Light Pole
- Telephone Pedestal
- Drainage Manhole
- Gas Meter
- Fence
- Overhead Power
- Sewer Line
- Water Line
- Telephone Line
- Electric Line
- Gas Line
- Existing Access Agreement
- Public Right-of-Way Dedication

HOPE CONSULTING
ENGINEERS - SURVEYORS

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

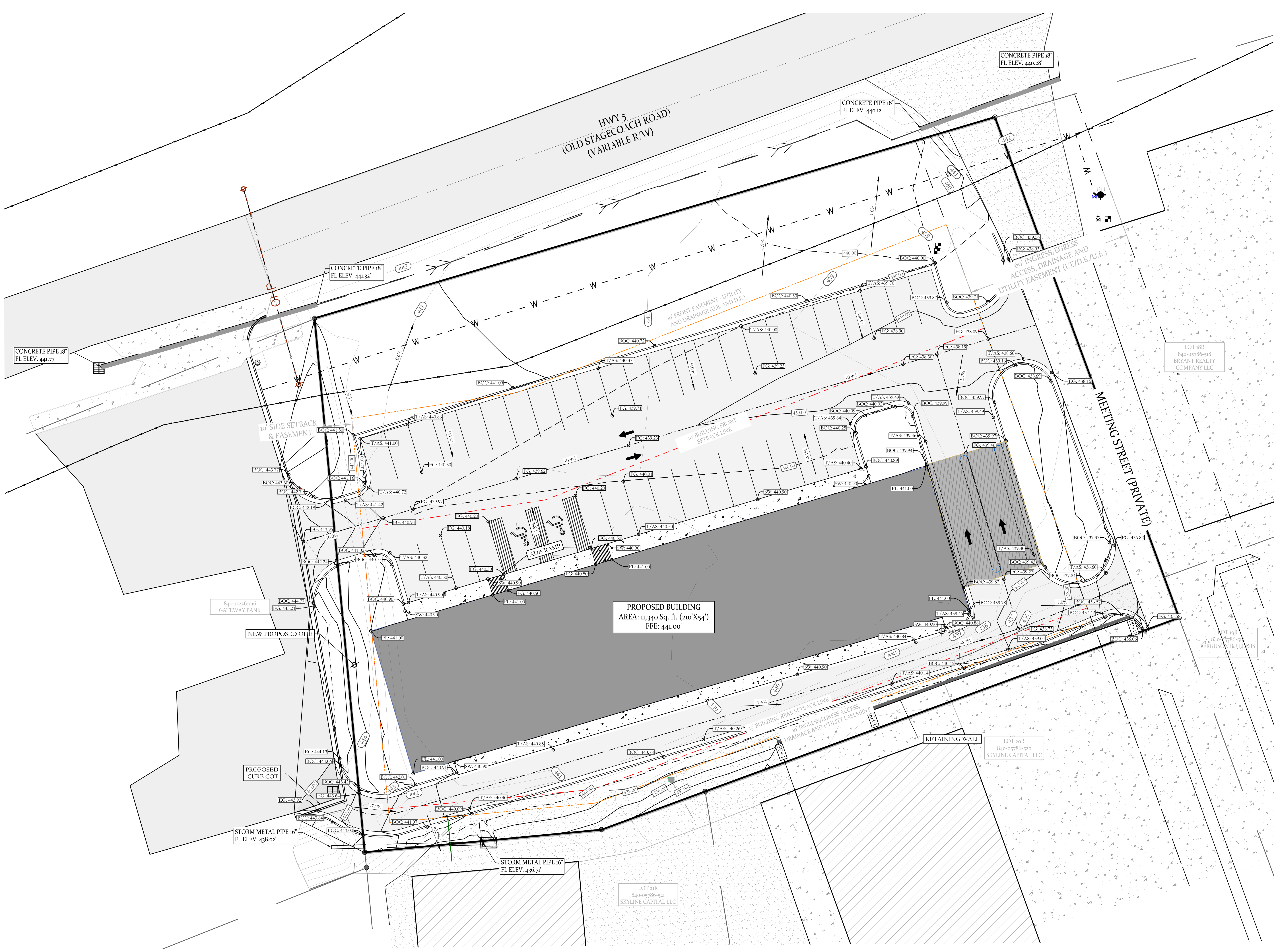
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
PRELIMINARY SITE PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		25-0608
SHEET:	C-1.0	SCALE:		

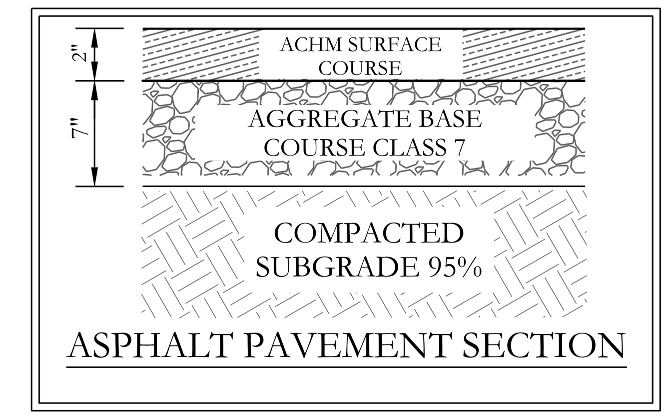
500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH1\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH1 11.20.25.DWG

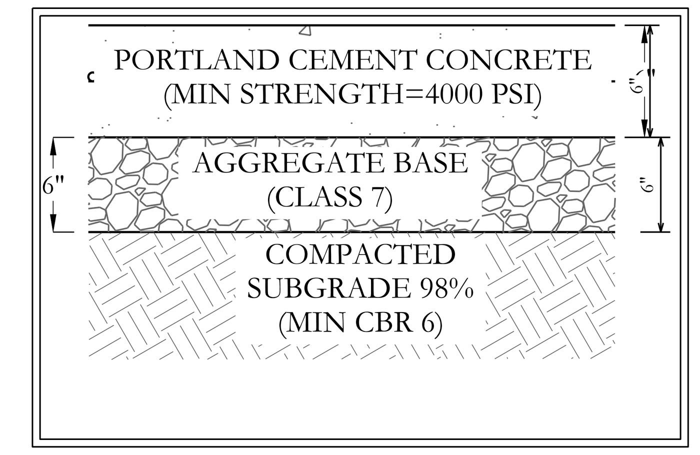


MARKET PLACE-II PHASE 3

PRELIMINARY SITE PLAN

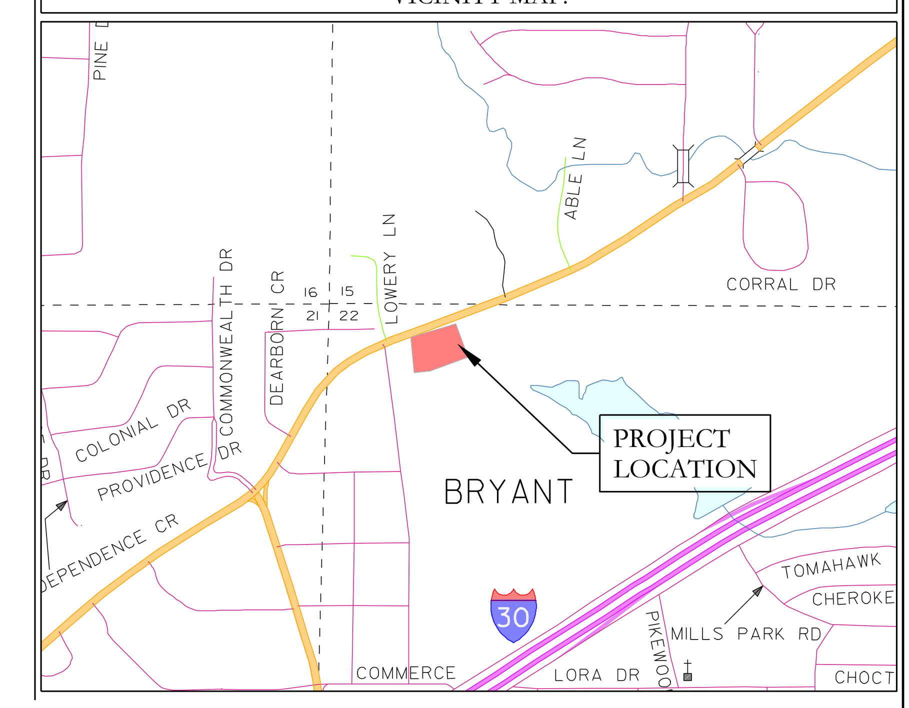


ASPHALT PAVEMENT SECTION

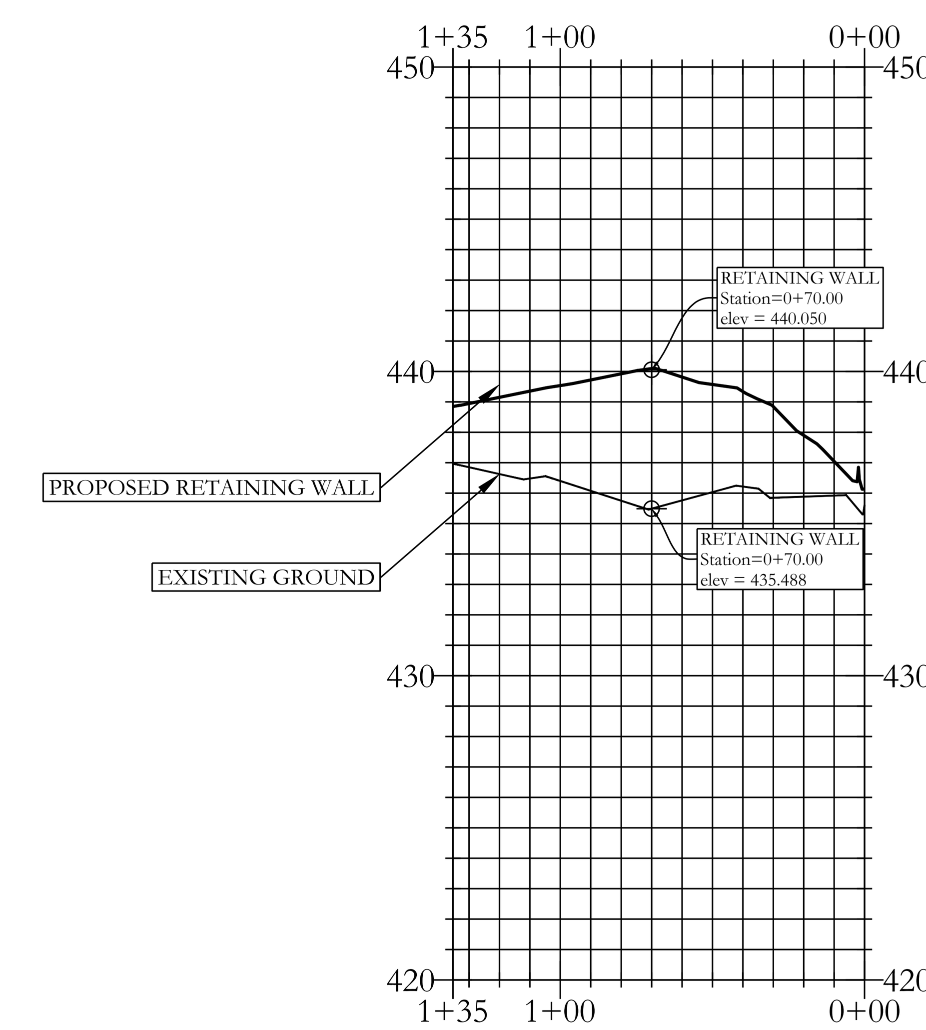


HEAVY DUTY CONCRETE PAVEMENT SECTION

VICINITY MAP:

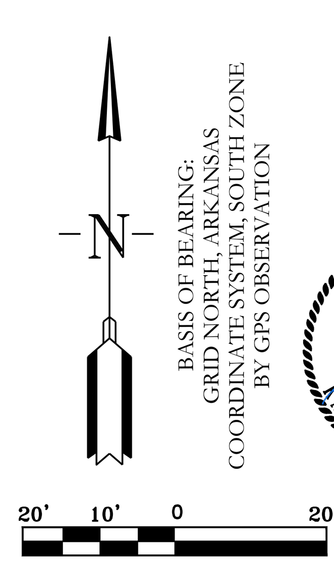


RETAINING WALL PROFILE

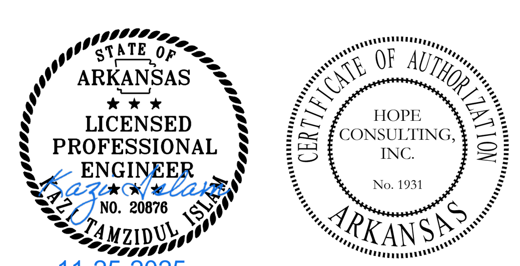


GRADING PLAN NOTES

1. DESIGN CONTOURS SHOWN ARE FINISHED GRADE.
2. SPOT ELEVATIONS SHOWN ARE FINISHED ASPHALT, GROUND OR CONCRETE ELEVATIONS.
3. CLEAR AND GRUB AREAS OF THE SITE WHERE CUT OR FILL IS TO OCCUR.
4. FILL SHALL BE COMPACTED AT LEAST 98% OF THE MATERIALS MAXIMUM STANDARD PROCTOR DRY DENSITY.
5. THE MOISTURE CONTENT OF 1% BELOW TO 3% ABOVE THE OPTIMUM MOISTURE CONTENT.
6. 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.
7. ALL UNUSABLE SOILS SHALL BE USED ON SITE FOR FILL PURPOSES OUTSIDE THE AREAS OF BUILDING AND PAVEMENT CONSTRUCTION.
8. 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



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

SITE DATA	
TOTAL SITE AREA	1.30 ACRES
TOTAL DEVELOPMENT AREA	1.30 ACRES
GROSS BUILDING AREA	BUILDING 10476 SQ. FT.
BUILDING SETBACKS	FRONT SETBACK LINE: 50' RIGHT SIDE SETBACK LINE: AS SHOWN REAR SETBACK LINE: 15' LEFT SIDE SETBACK LINE: 15'
BUILDING HEIGHTS	1 STORY
BUSINESS TYPE	RETAIL
PARKING CALCULATION (PROVIDED)	PROVIDED PARKING SPACES 51 (3 ADA SPACES)

OWNER:
Name: PHILLIP RYE
Address: 7416 PALM BEACH, BENTON
AR 72019
Phone: 501-317-9883
Email: phillprye@phillprye.com

DEVELOPER:
Name: RYE GENERAL CONTRACTORS
Address: 6128 HIGHWAY 5 NORTH
AR 72022
Phone:
Email:

LEGEND
- PLSS Aliquot Corner
- Fnd. Corner Monument
- Set 1/2" Rebar/Cap (#664)
- Computed Point
(M)- As Measured
(P)- Per Deed or Plat Records
ESMT - Easement
B.S.L. - Building Setback Lines
- Clean Out
- Water Meter
- Power Pole
- Sewer Manhole
- Light Pole
- Telephone Pedestal
- Drainage Manhole
- Gas Meter
- Fence
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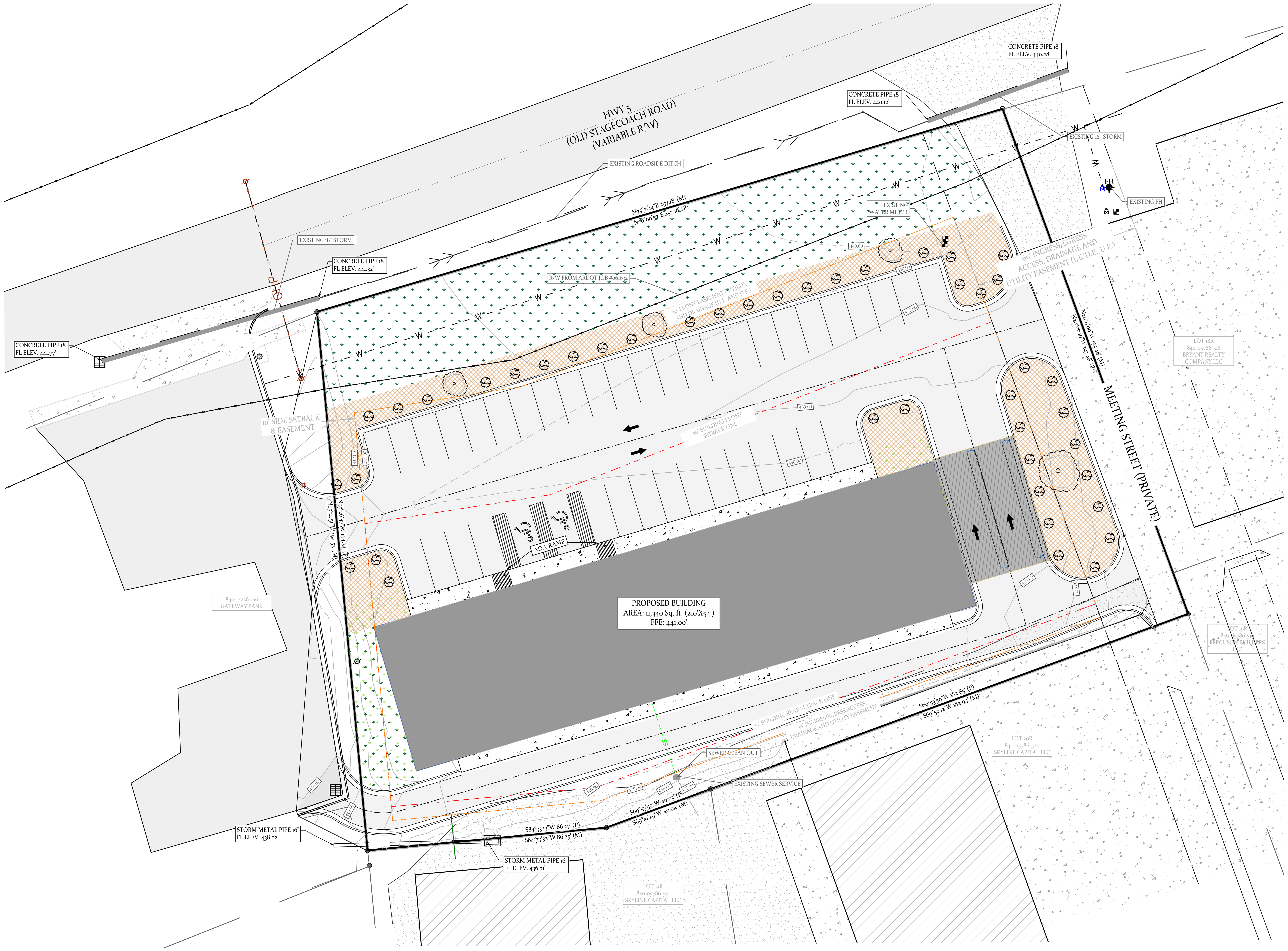
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
GRADING PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-2.0	SCALE:	

500	01S	14W	0	22	440	62	1762

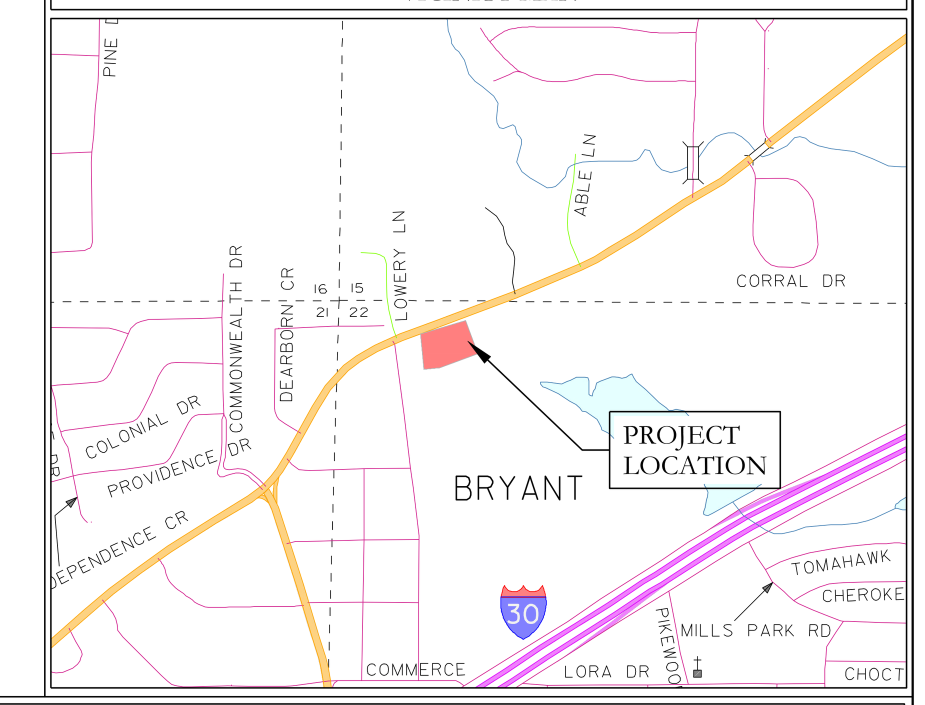
E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11.20.25.DWG



MARKET PLACE-II PHASE 3

UTILITY PLAN

VICINITY MAP:



SEWER CONSTRUCTION NOTES:

1. ALL SEWER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH CITY OF BRYANT "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION FOR WATER LINES AND SEWER LINES" 2015 EDITION.

WATER CONSTRUCTION NOTES:

1. ALL WATER INSTALLATION SHALL BE DONE IN ACCORDANCE WITH CITY OF BRYANT "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION FOR WATER LINES AND SEWER LINES" 2015 EDITION.

ADH NOTES:

ADH RULES PERTAINING TO PUBLIC WATER SYSTEMS, SECTION XIV . DISTRIBUTION SYSTEM, PART A SANITARY AND SAFETY HAZARDS. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINES OR OTHER SOURCES OF CONTAMINATION. WATER LINES AND SEWERS SHALL NOT BE LAID IN THE 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 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.

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.).

SEWER LEGEND:

SEWER SERVICE

SEWER MAIN — S — S — SEWER MANHOLE

NOTE:
USE SDR-26 PVC SEWER PIPE EXCEPT WHERE DUCTILE IRON PIPE REQUIRED FOR COVER. USE DUCTILE IRON PIPE WHERE 3' MINIMUM COVE CANNOT BE MAINTAINED.

CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL BURIED UTILITIES PRIOR TO CONSTRUCTION.

WATER LEGEND:

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

N

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

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

11-25-2025

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

20' 10' 0 20'

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
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www.hopeconsulting.com

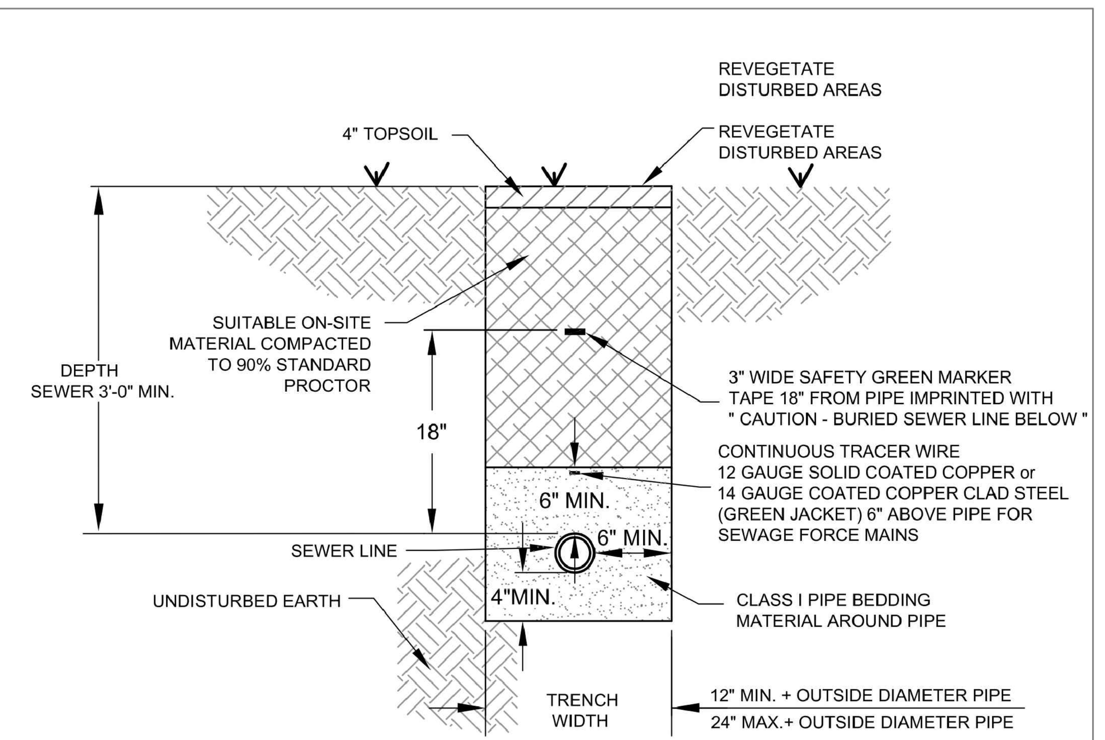
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
UTILITY PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE: 11.25.25		C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-3.0	SCALE:	

500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11.20.25.DWG

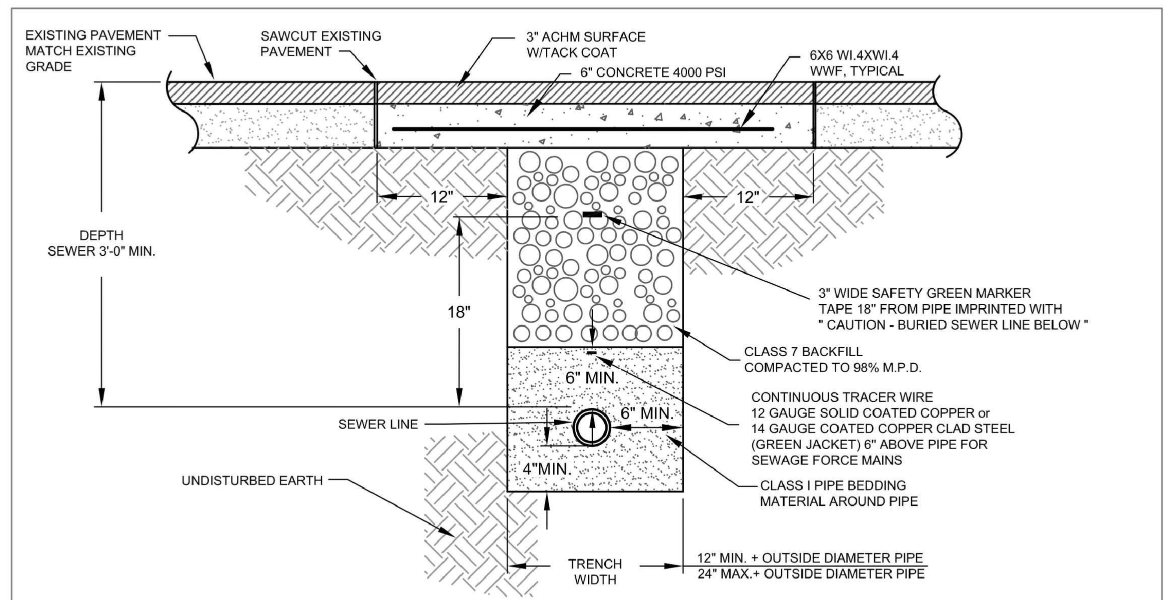


NOTES:

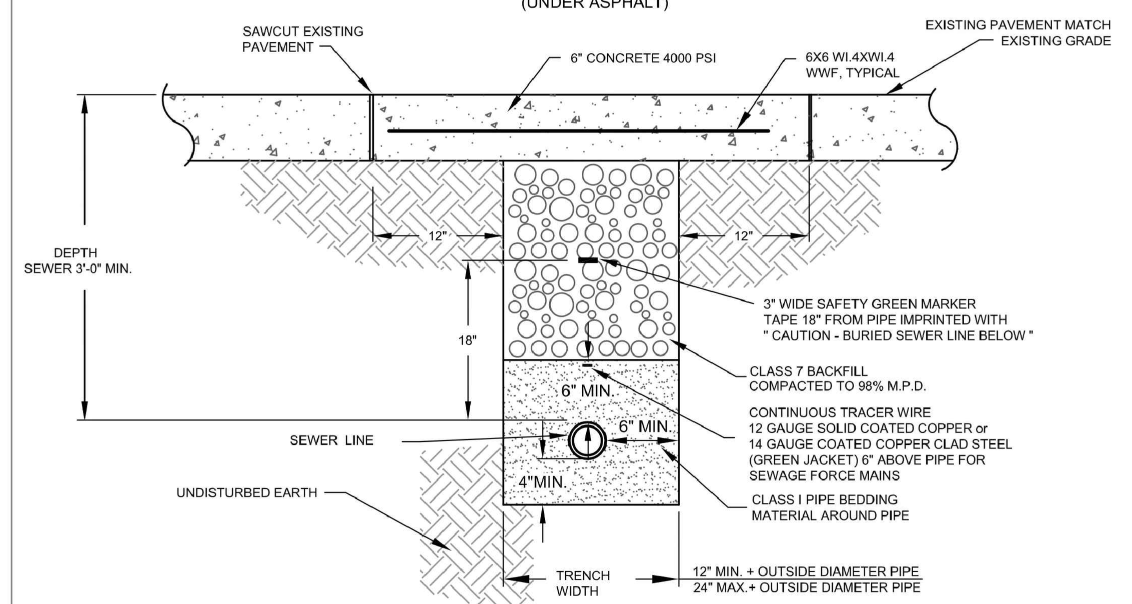
1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART 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) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: SEWER TRENCH (NON-PAVED AREA) — DATE: APRIL 2015 — SHEET: S1



SEWER TRENCH
(UNDER ASPHALT)

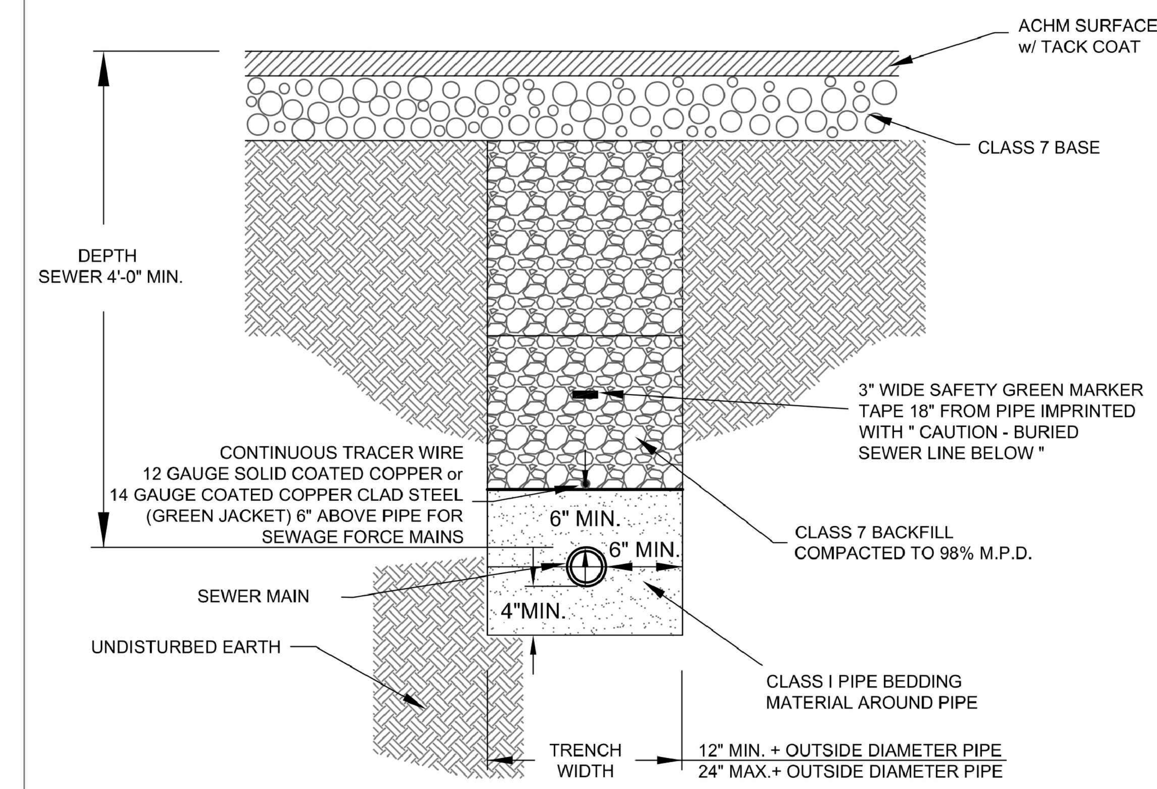


SEWER TRENCH
(UNDER CONCRETE)

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) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: SEWER TRENCH (UNDER PAVEMENT) — DATE: APRIL 2015 — SHEET: S2



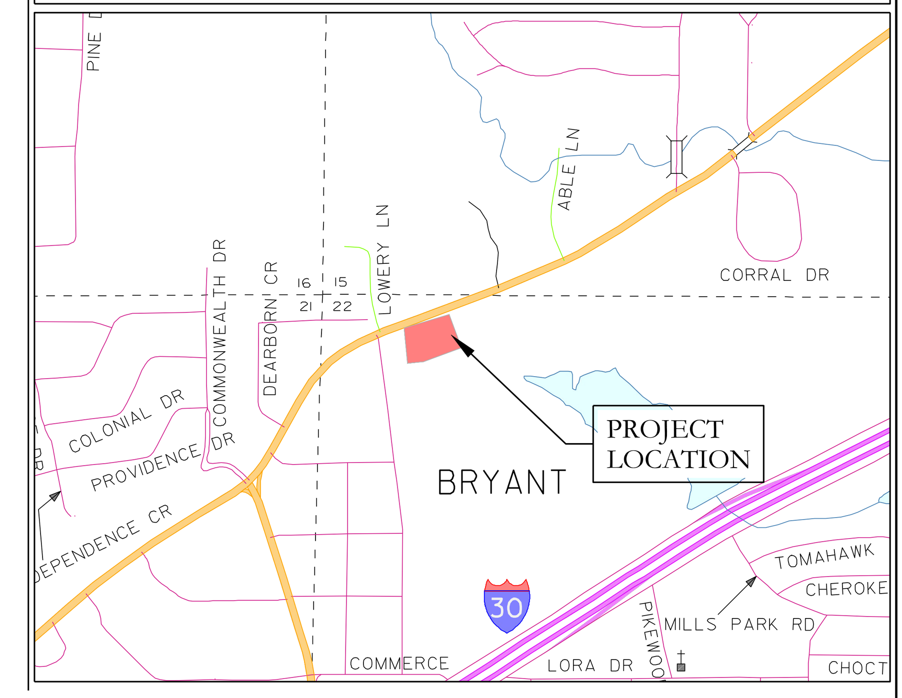
SEWER MAIN INSTALLATION
PRIOR TO ROADWAY CONSTRUCTION

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.

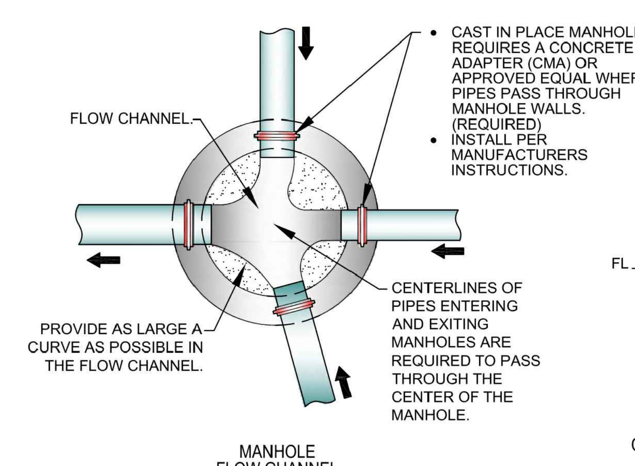
CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: SEWER MAIN INSTALLATION PRIOR TO ROADWAY CONSTRUCTION — DATE: APRIL 2015 — SHEET: S3

VICINITY MAP:

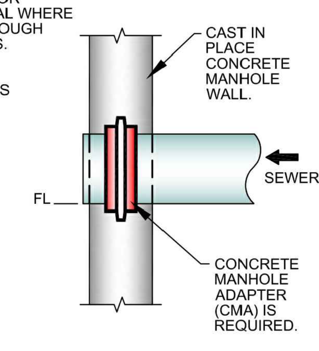


Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	6"	6"	24" (< or Equal to 24" Pipes)
5' DIA	8"	8"	
6' DIA	8"	12"	36" (> 24" Pipes)

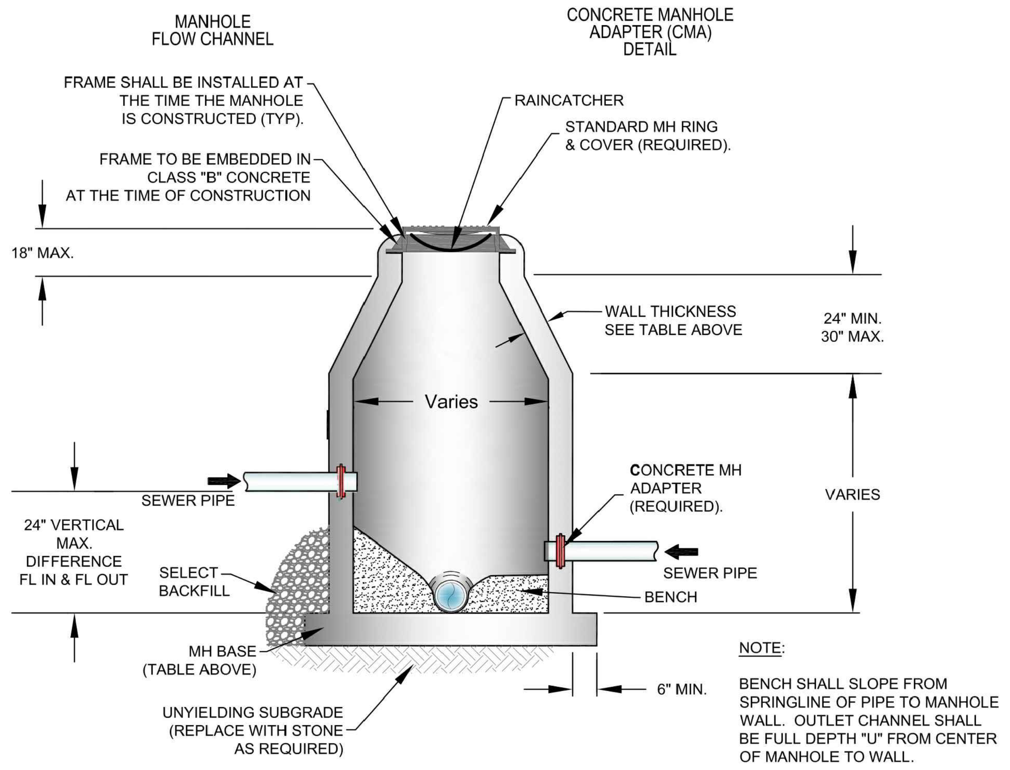
MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL



CONCRETE MANHOLE ADAPTER (CMA) DETAIL



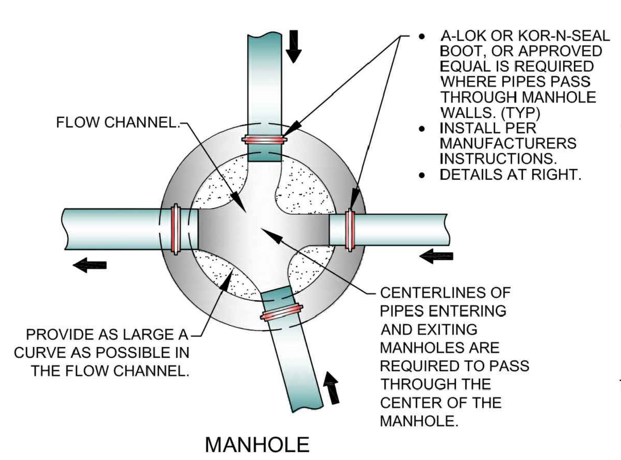
NOTE:
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

CAST-IN-PLACE MANHOLE

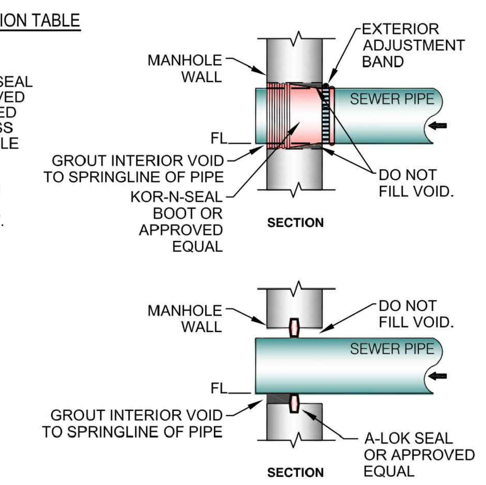
CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: CAST-IN-PLACE MANHOLE — DATE: APRIL 2015 — SHEET: S4

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)

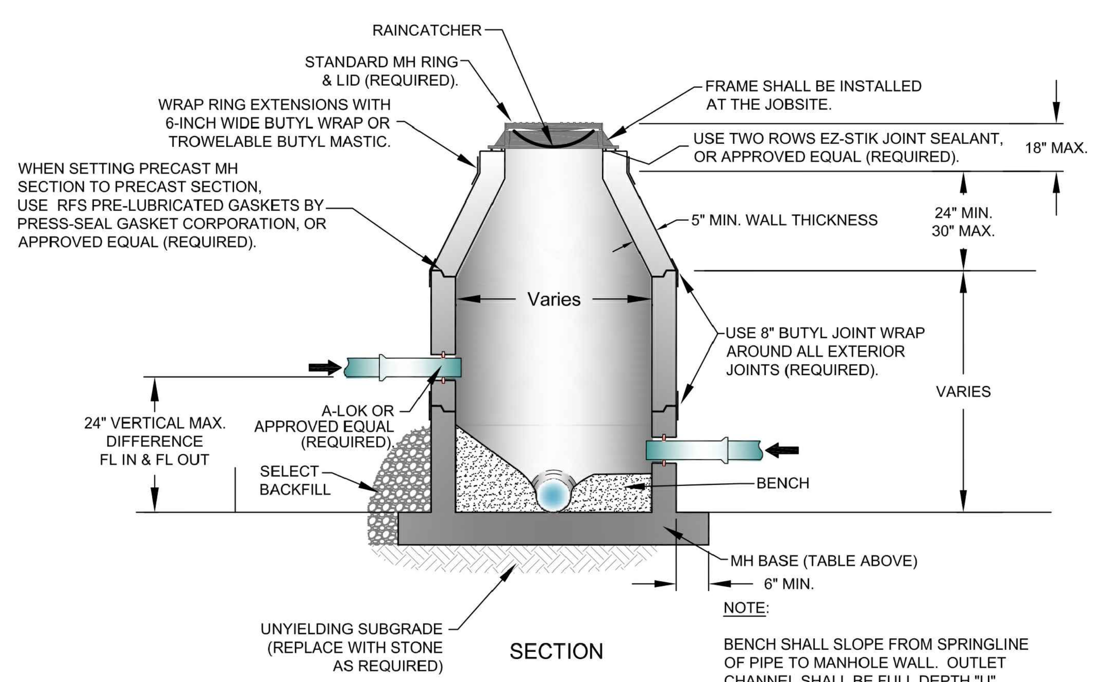
MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL



CONNECTION DETAILS

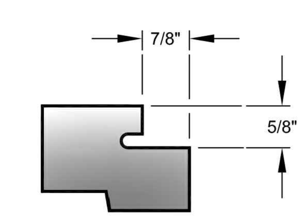


NOTE:
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

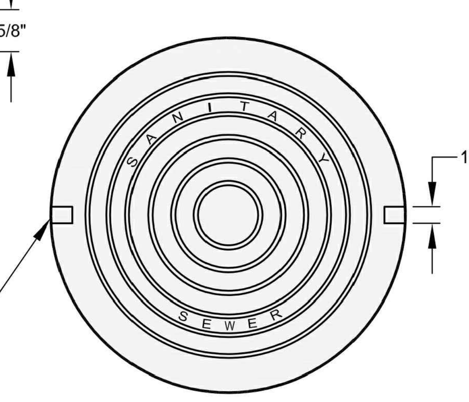
PRECAST MANHOLE

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: PRECAST MANHOLE — DATE: APRIL 2015 — SHEET: S5

ALL CASTINGS SHALL BE "MADE IN USA"



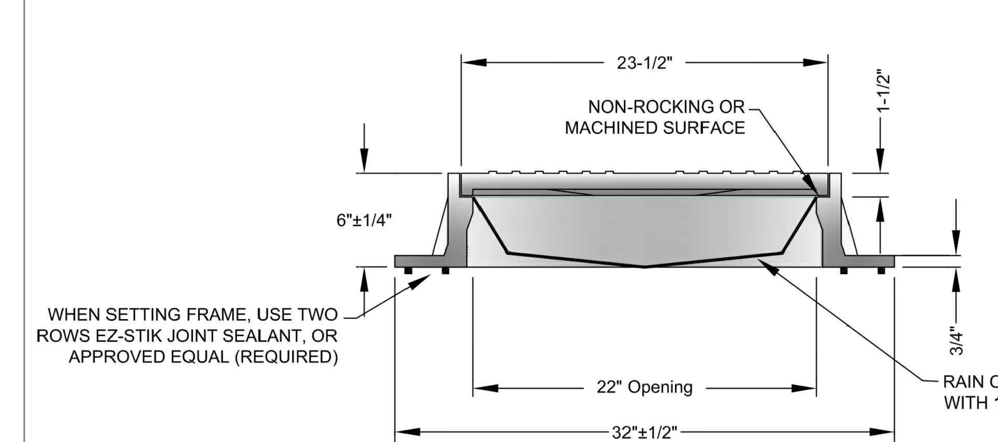
CLOSED PICK SLOT DETAIL



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

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: MANHOLE FRAME AND COVER — DATE: APRIL 2015 — SHEET: S6

STATE OF ARKANSAS — LICENSED PROFESSIONAL ENGINEER — No. 20876 — TAMZIDUL ISLAM — 11-25-2025

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

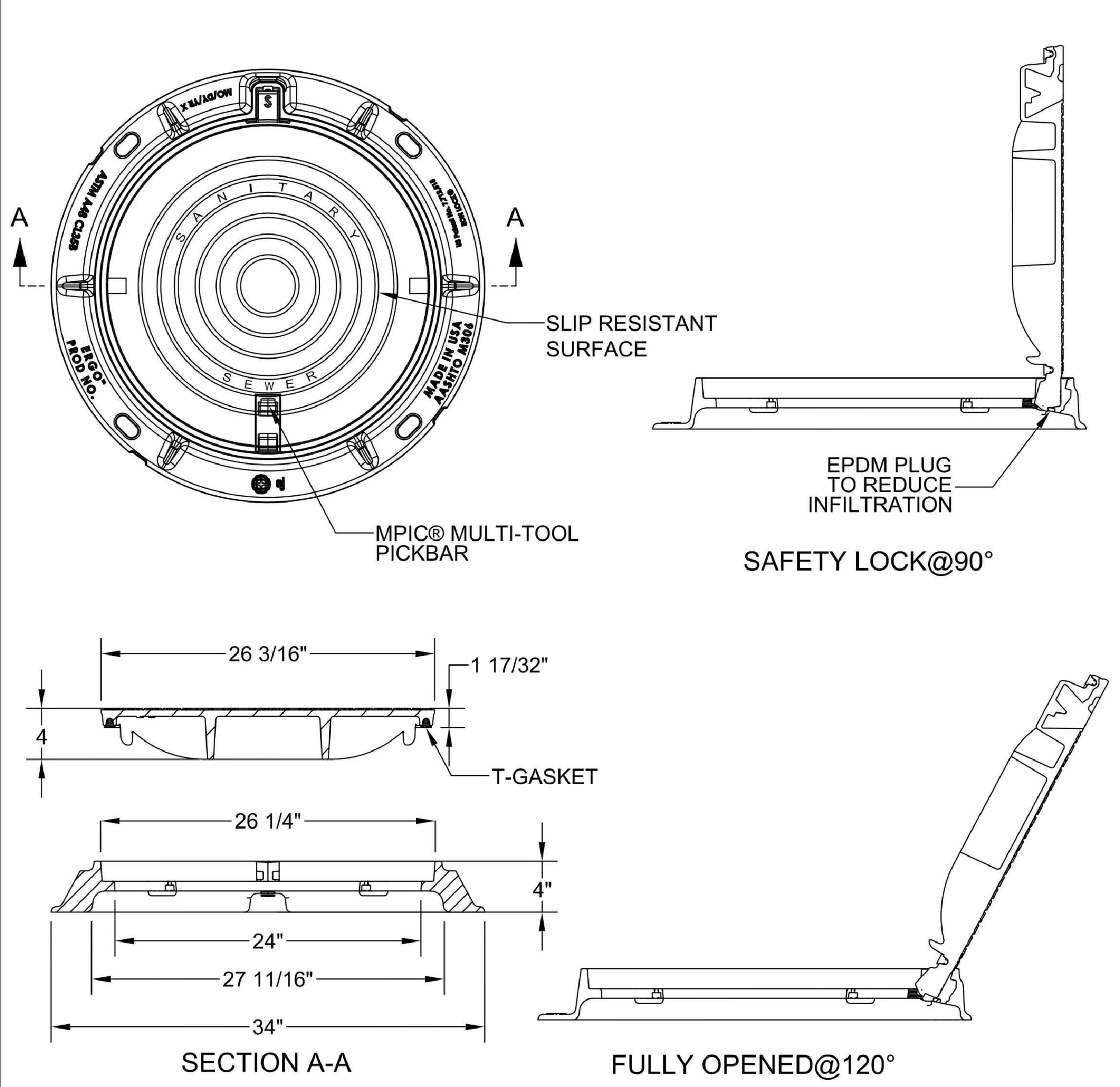
HOPE CONSULTING — ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 1
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

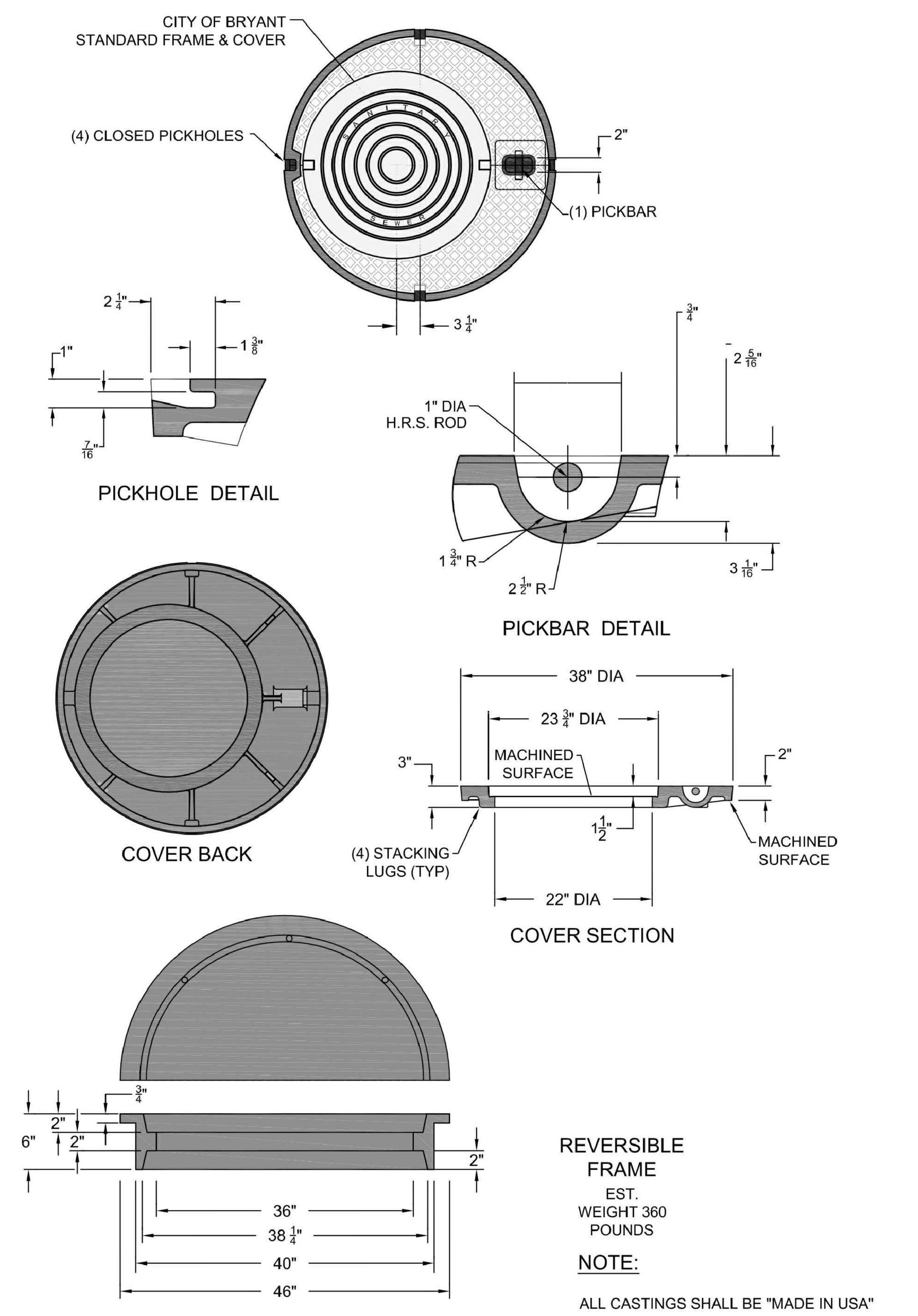
DATE:	11.25.25	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		25-0608
SHEET:	C-3.1	SCALE:		

500	01S	14W	0	22	440	62	1762



HINGED FRAME AND COVER DETAIL

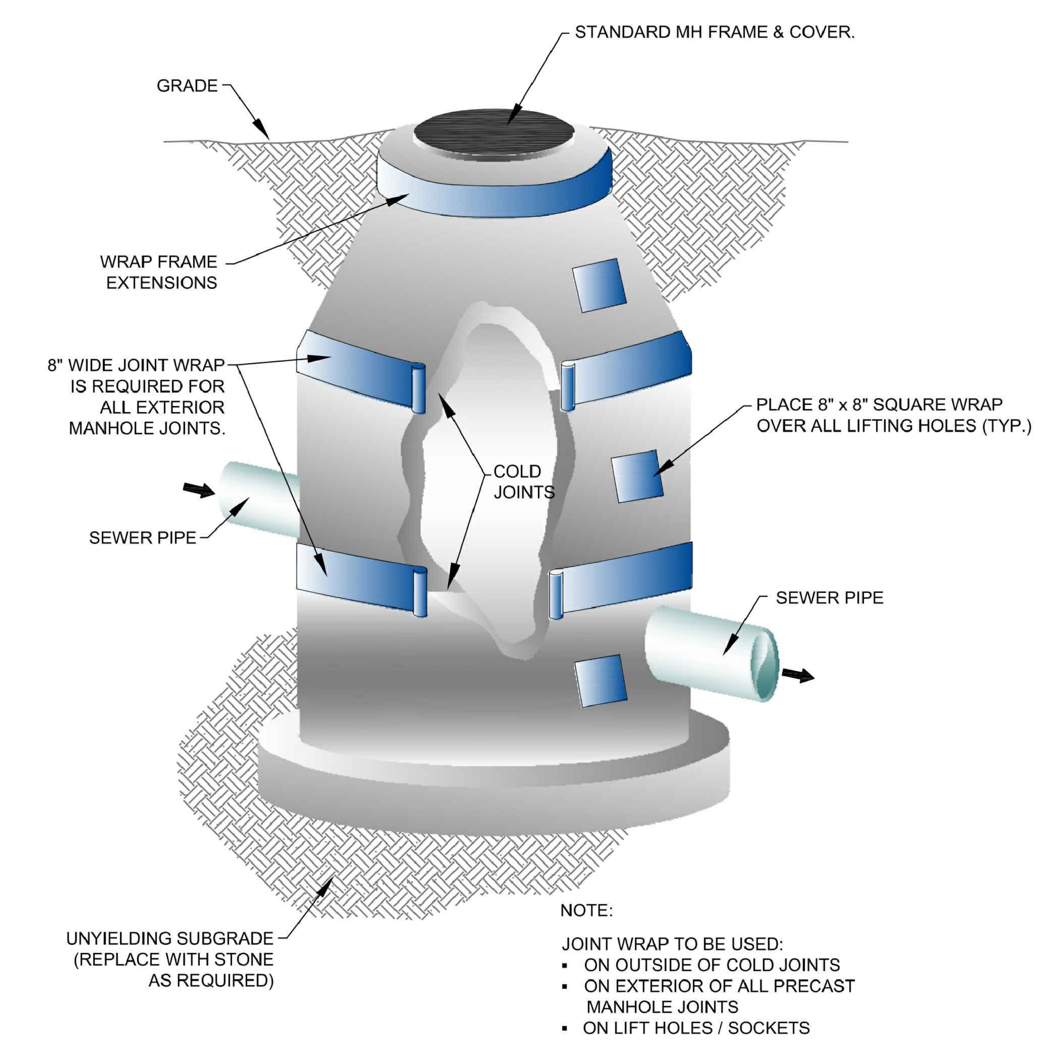
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: DESCRIPTION: HINGED MANHOLE FRAME AND COVER	DATE: APRIL 2015 REVISED	SHEET: S7
	DRAWN BY: CHECKED BY: FILE: S7-Hinged Manhole Frame and Cover-OLD.dwg		



NOTE:

ALL CASTINGS SHALL BE "MADE IN USA"

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS DESCRIPTION: 36-INCH MANHOLE FRAME AND COVER	DATE: APRIL 2015 REVISED	SHEET: S8
	DRAWN BY: CHECKED BY: FILE: S8-36 Inch Manhole Frame and Cover.dwg		



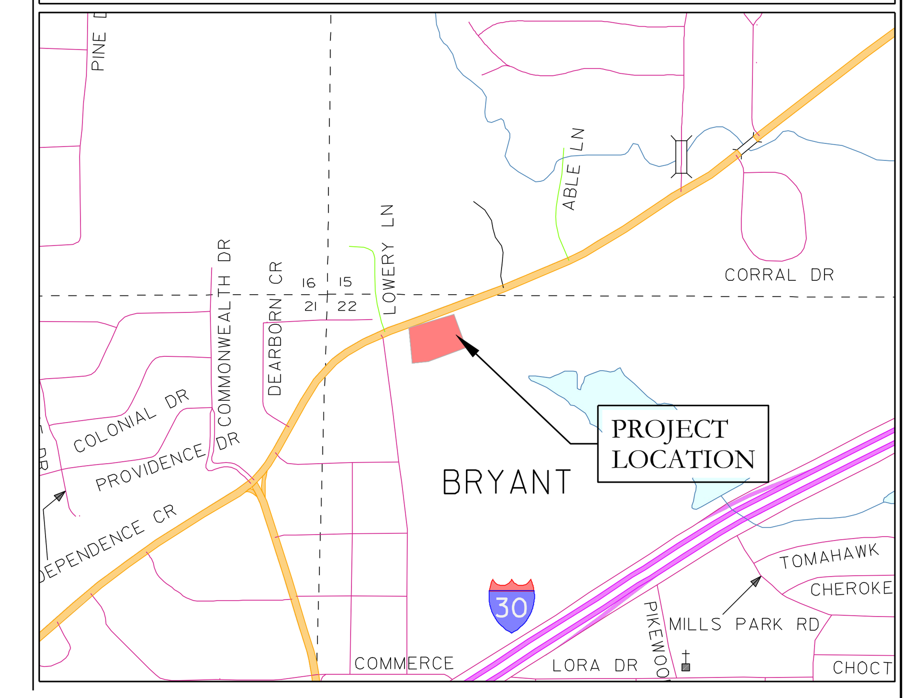
NOTE:

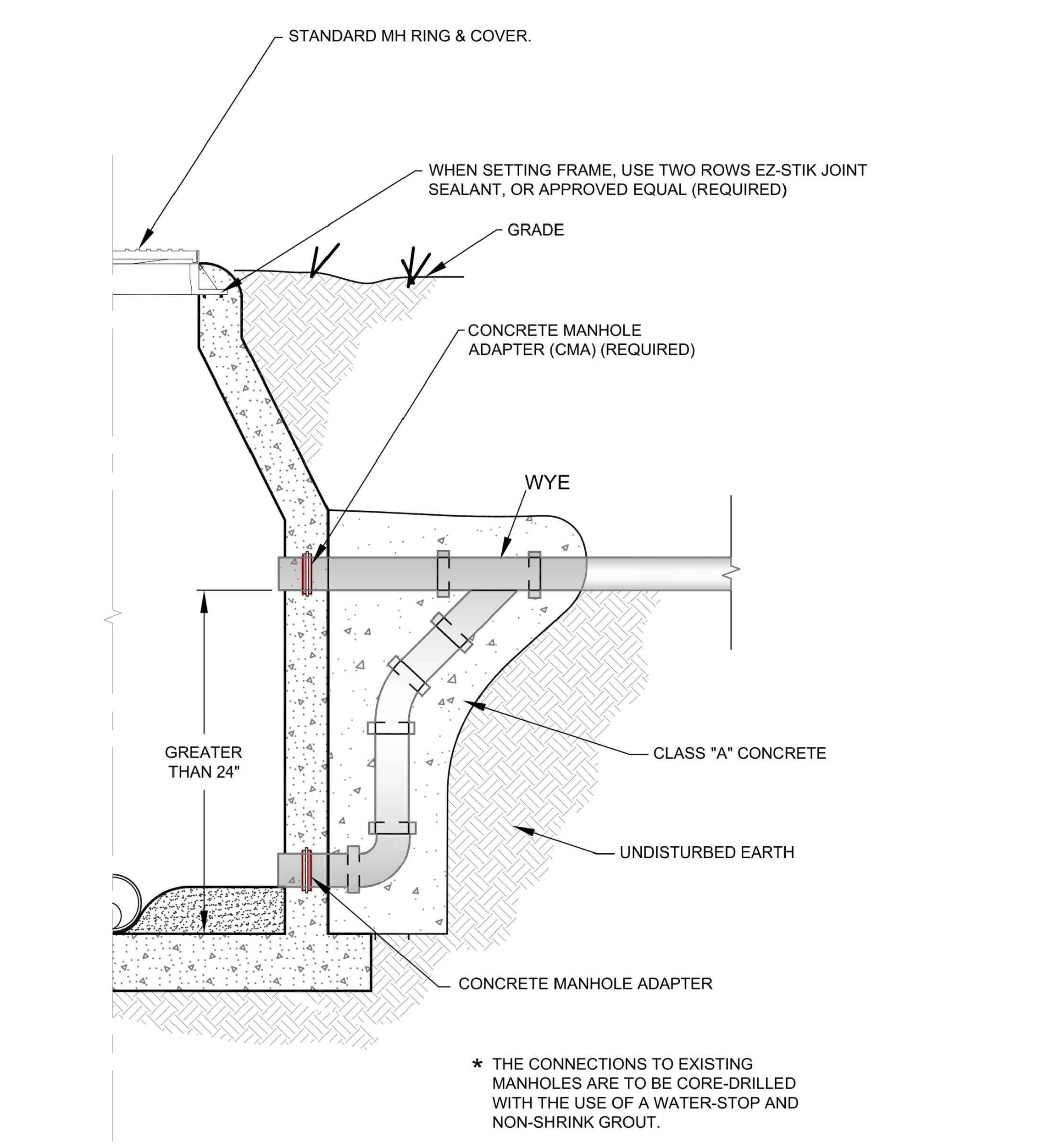
JOINT WRAP TO BE USED:
- ON OUTSIDE OF COLD JOINTS
- ON EXTERIOR OF ALL PRECAST MANHOLE JOINTS
- ON LIFT HOLES / SOCKETS

MANHOLE JOINT WRAP

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS DESCRIPTION: MANHOLE JOINT WRAP	DATE: APRIL 2015 REVISED	SHEET: S9
	DRAWN BY: CHECKED BY: FILE: S9-Manhole Joint Wrap.dwg		

VICINITY MAP:



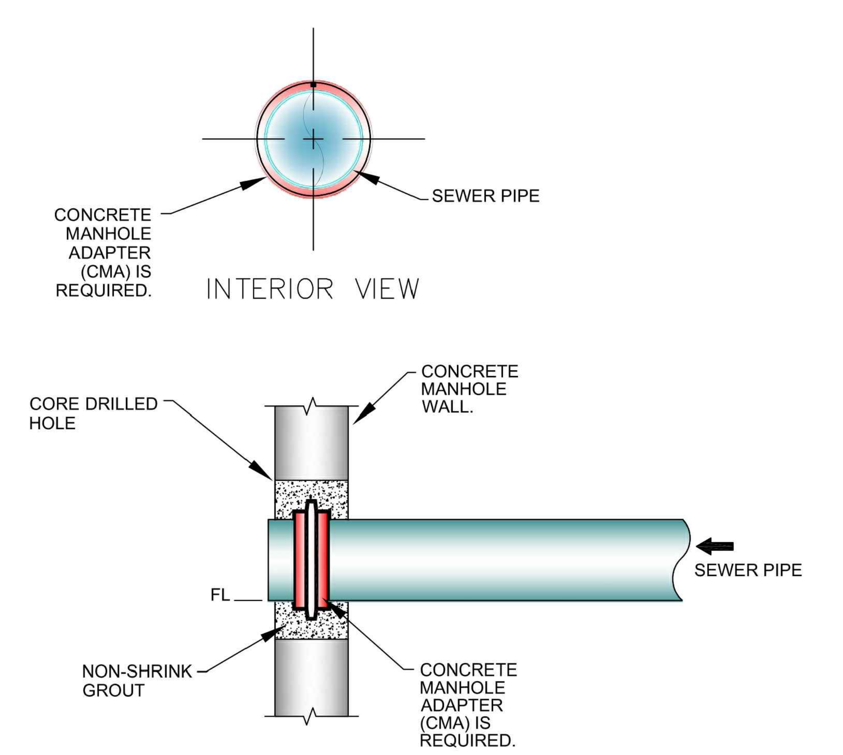


★ THE CONNECTIONS TO EXISTING MANHOLES ARE TO BE CORE-DRILLED WITH THE USE OF A WATER-STOP AND NON-SHRINK GROUT.

DROP MANHOLE

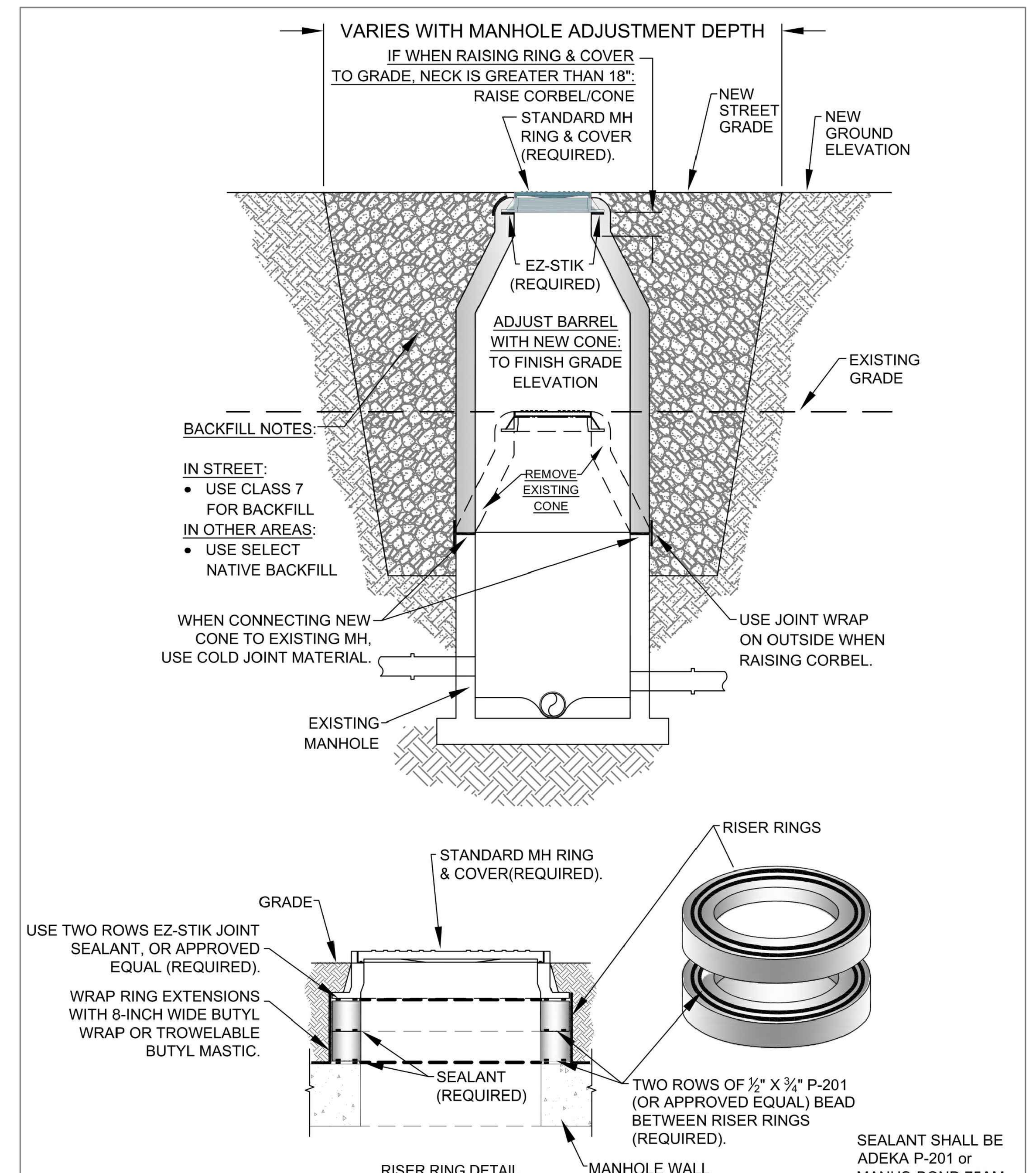
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS DESCRIPTION: DROP MANHOLE	DATE: APRIL 2015 REVISED	SHEET: S10
	DRAWN BY: CHECKED BY: FILE: S10-Drop Manhole.dwg		

THE INSTALLATION SHALL BE DYE TESTED FOR ACCEPTANCE.



MANHOLE CORING DETAILS

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS DESCRIPTION: MANHOLE CORING	DATE: APRIL 2015 REVISED	SHEET: S11
	DRAWN BY: CHECKED BY: FILE: S11-Manhole Coring.dwg		



TYPICAL MANHOLE ADJUST TO GRADE DETAIL

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS DESCRIPTION: MANHOLE ADJUST TO GRADE	DATE: APRIL 2015 REVISED	SHEET: S12
	DRAWN BY: CHECKED BY: FILE: S12-Manhole Adjust to Grade.dwg		

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

Kazi Islam

11-25-2025

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

HOPE CONSULTING
ENGINEERS - SURVEYORS

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

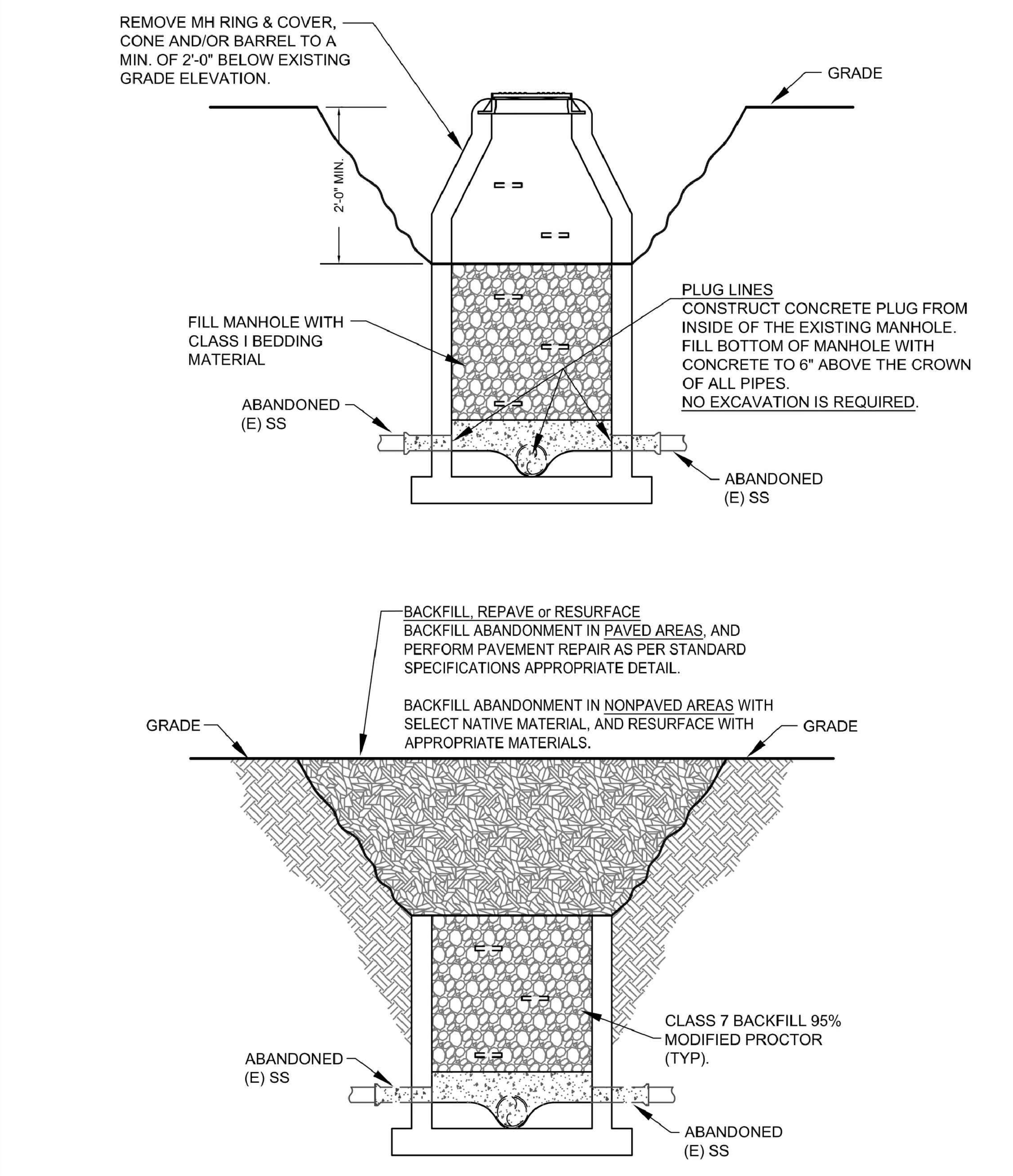
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 2
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
SHEET:	C-3.2	SCALE:	

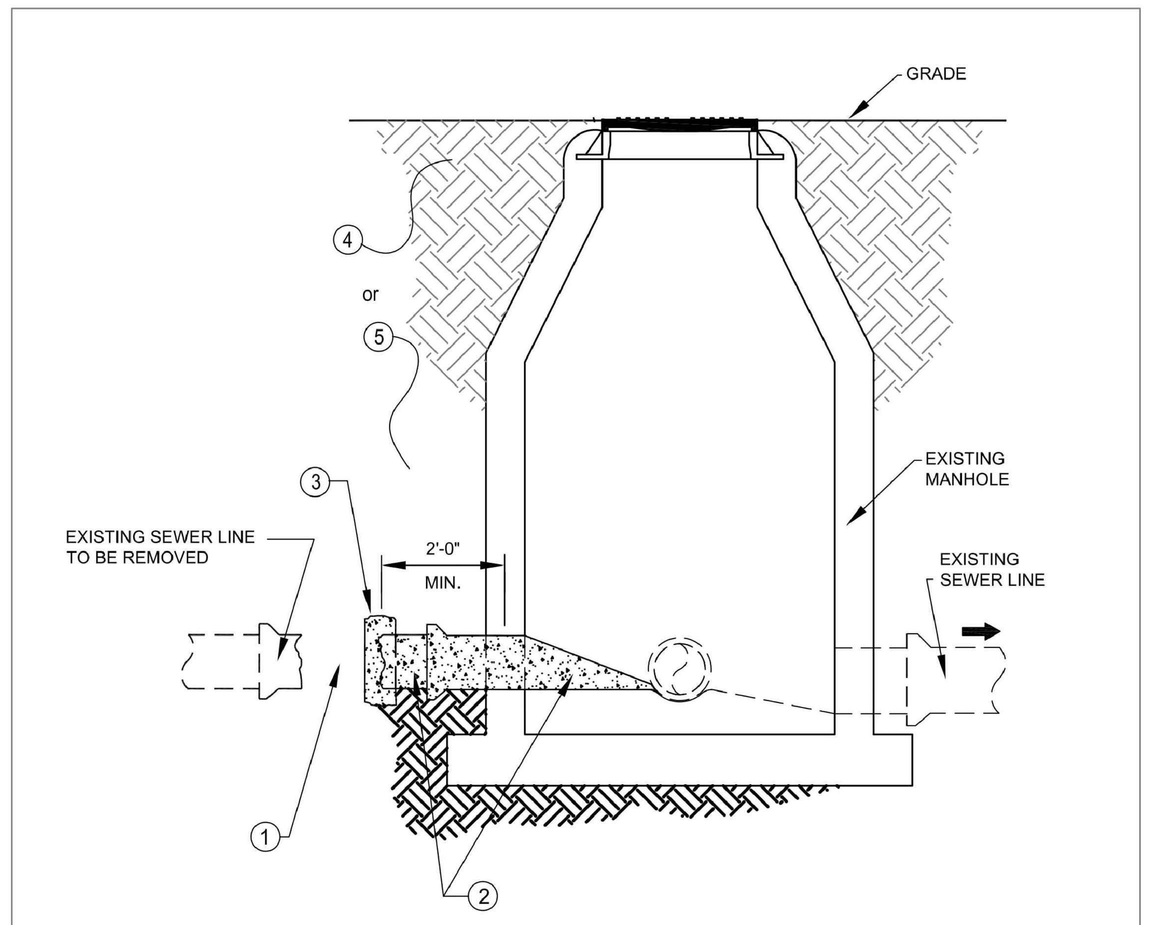
500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11-20-25.DWG



EXISTING MANHOLE
ABANDONMENT DETAIL

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: MANHOLE ABANDONMENT — DATE: APRIL 2015 — SHEET: S13



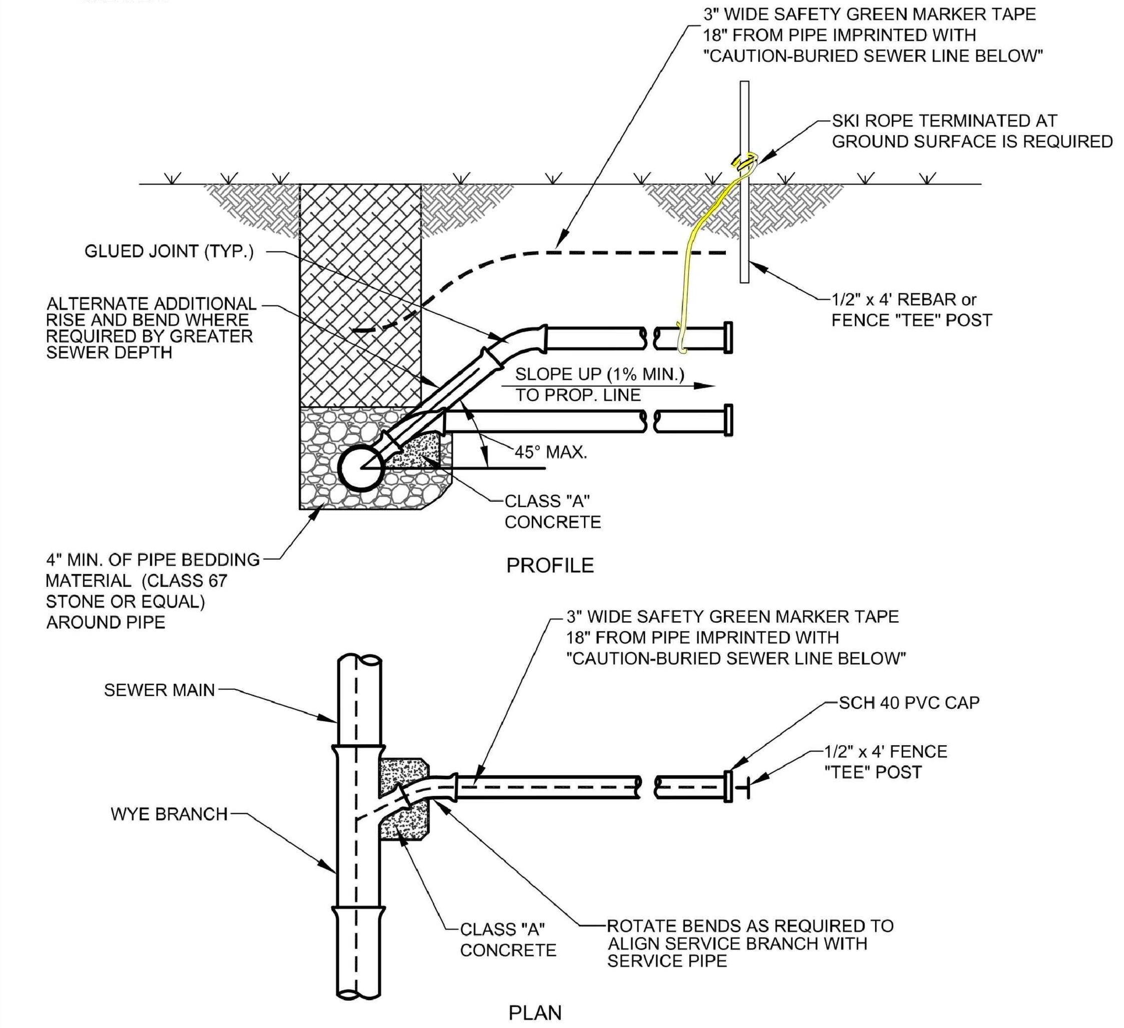
1. EXPOSE EXISTING LINE AND PHYSICALLY DISCONNECT THE LINE SEGMENT TO BE REMOVED. (REQUIRED)
2. FILL REMAINING SEWER PIPE TO BE SEALED WITH CONCRETE AND REINFORCEMENT. (REQUIRED)
3. CONSTRUCT A CONCRETE CAP AROUND PIPE CONNECTED TO EXISTING MANHOLE. (REQUIRED)
4. IF THE MANHOLE IS LOCATED IN A PAVED AREA, BACKFILL THE EXCAVATED AREA AND PERFORM PAVEMENT REPAIR. (REQUIRED)
5. IF THE MANHOLE IS LOCATED IN A NON-PAVED AREA, BACKFILL THE EXCAVATED AREA WITH SELECT NATIVE MATERIAL, AND RESURFACE WITH THE APPROPRIATE MATERIALS. (REQUIRED)

SEWER LINE
DISCONNECT & SEAL DETAIL

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: SEWER LINE DISCONNECT AND SEAL — DATE: APRIL 2015 — SHEET: S14

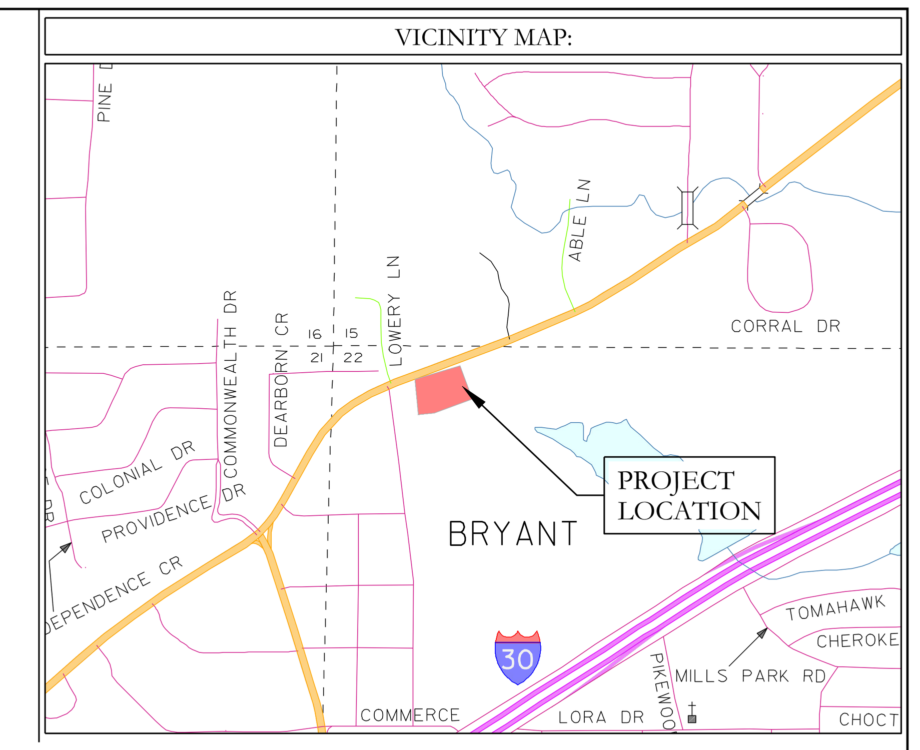
NOTES:

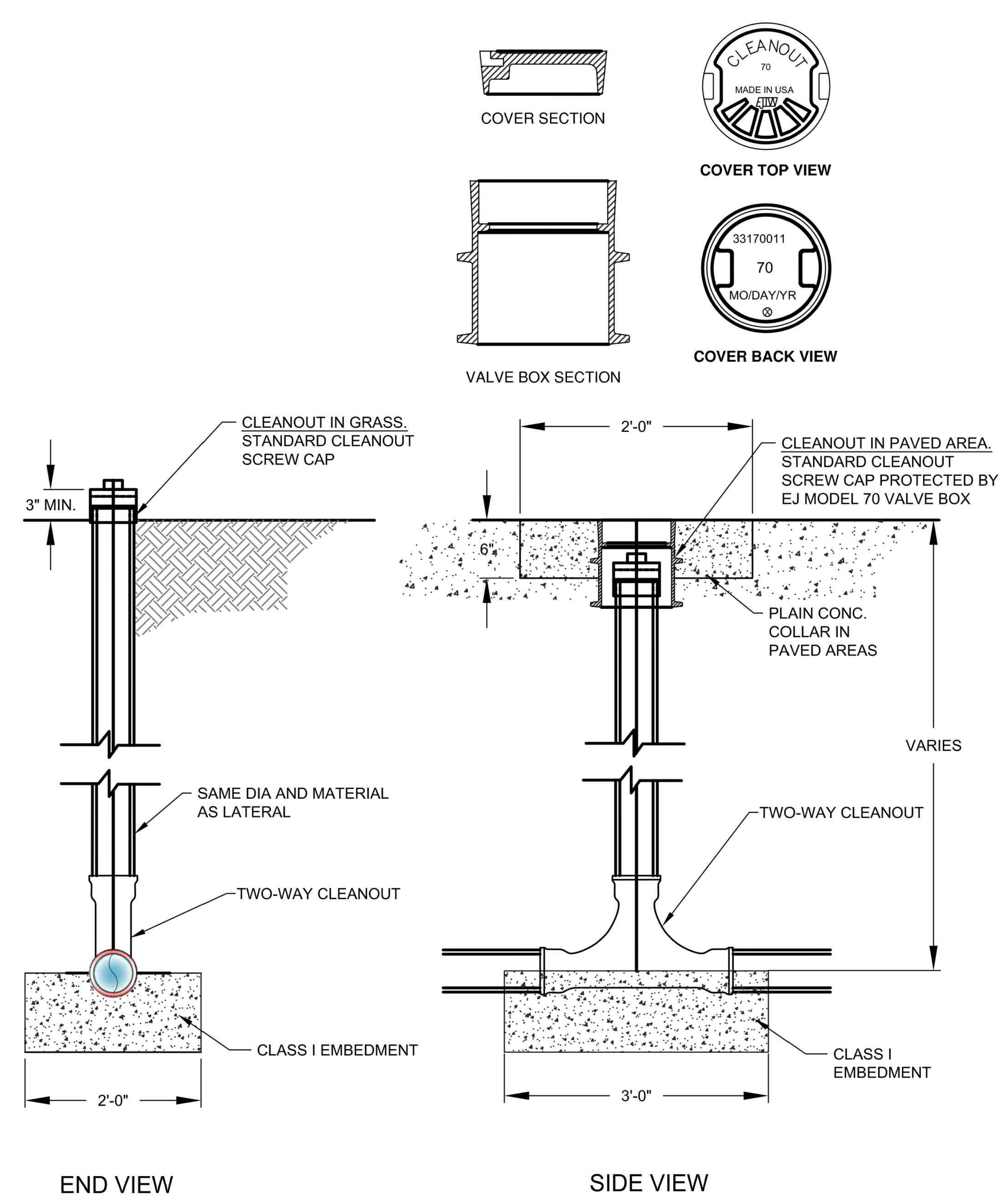
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0"
2. PLACE CLASS "A" CONCRETE UNDER EACH WYE BRANCH TO PREVENT CRACKING OR TWISTING UNDER EARTH LOADS.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB 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

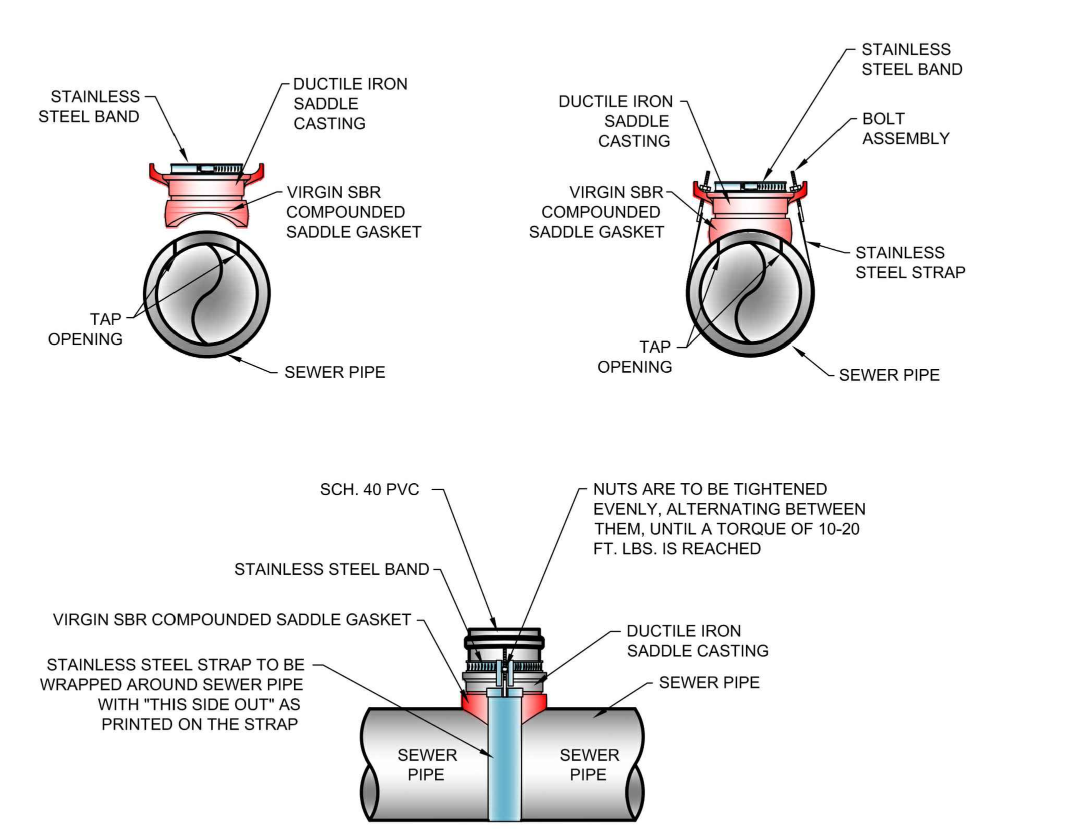
CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: SEWER SERVICE LATERAL — DATE: APRIL 2015 — SHEET: S15





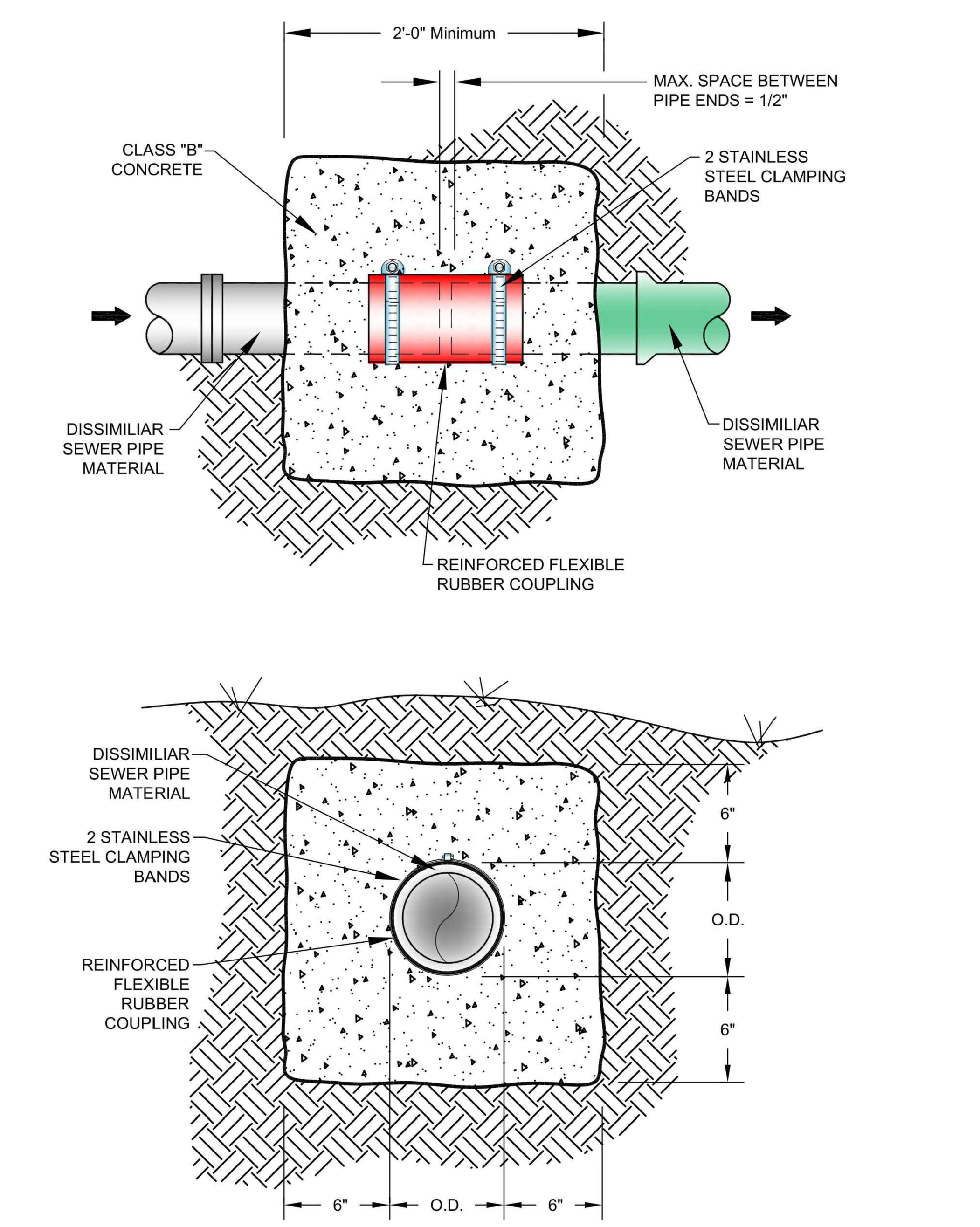
TYPICAL CLEANOUT

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: SEWER SERVICE CLEANOUT — DATE: APRIL 2015 — SHEET: S16



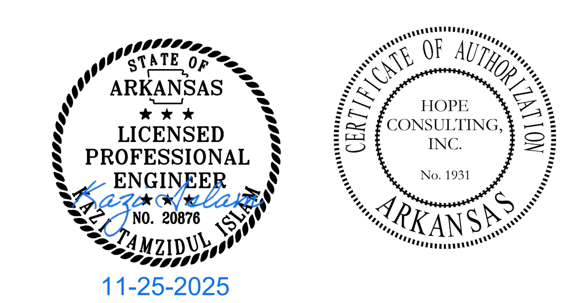
SEWER SERVICE SADDLE

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: SEWER SERVICE SADDLE — DATE: APRIL 2015 — SHEET: S17



REINFORCE FLEXIBLE COUPLING

CITY OF BRYANT, AR — WATER UTILITIES, 210 S.W. 3rd. STREET, BRYANT, AR, PHONE: (501) 943-0468
TITLE: SEWER DETAILS — DESCRIPTION: REINFORCED FLEXIBLE COUPLING — DATE: APRIL 2015 — SHEET: S18



HOPE CONSULTING — ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
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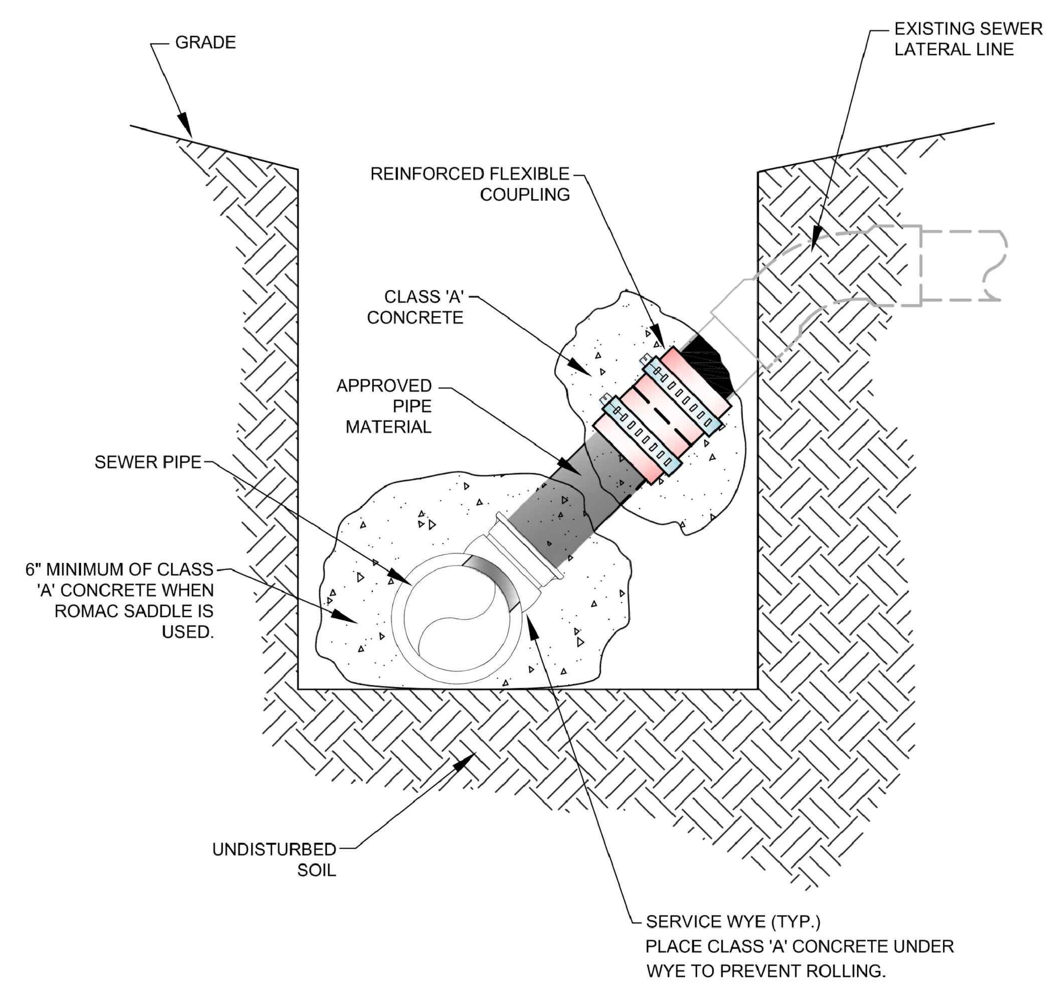
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 3
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

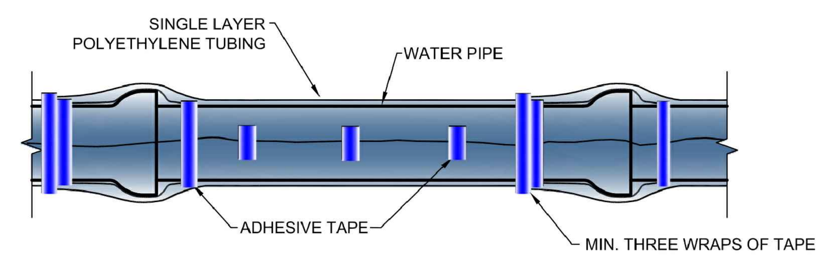
DATE: 11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608	
REVISED:	CHECKED BY:		
SHEET: C-3.3	SCALE:		

500	01S	14W	0	22	440	62	1762



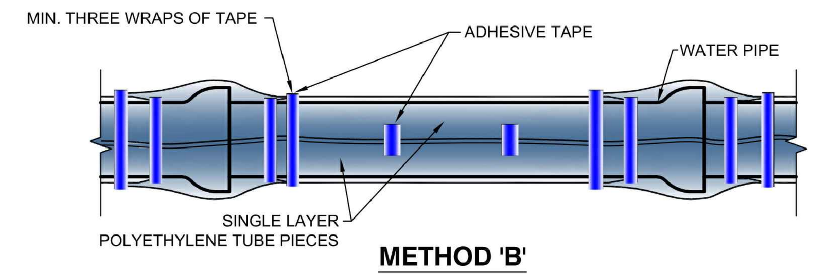
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: SEWER DETAILS
DESCRIPTION: CONNECT TO EXISTING SEWER SERVICE
DATE: APRIL 2015
SHEET: S19



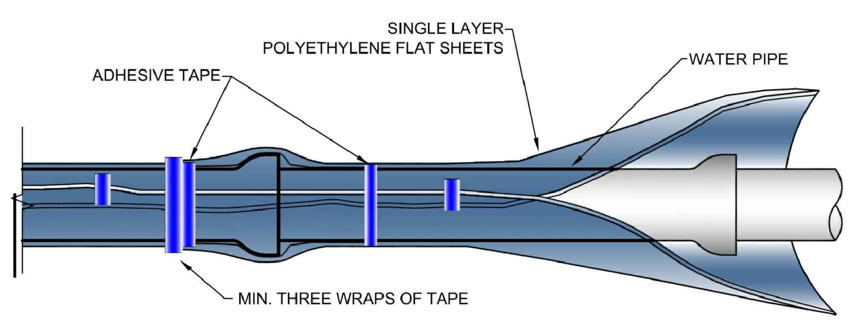
METHOD 'A'

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'

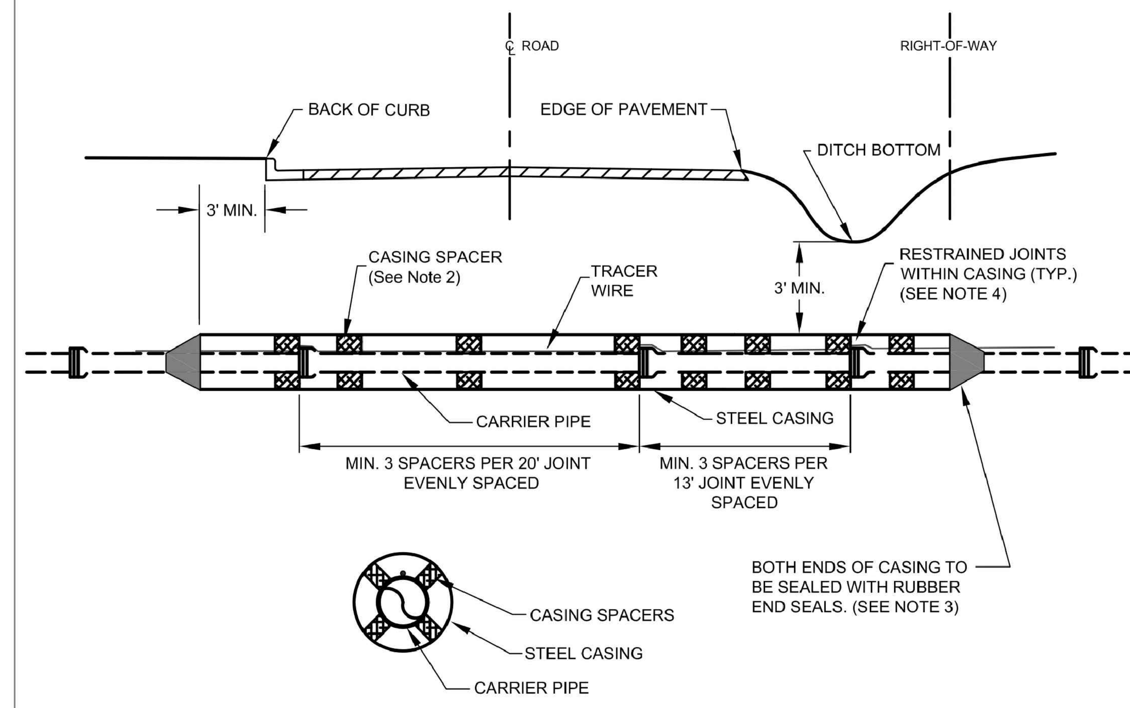
METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

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
DESCRIPTION: POLYETHYLENE PROTECTION MATERIAL
DATE: APRIL 2015
SHEET: S20



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 12-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

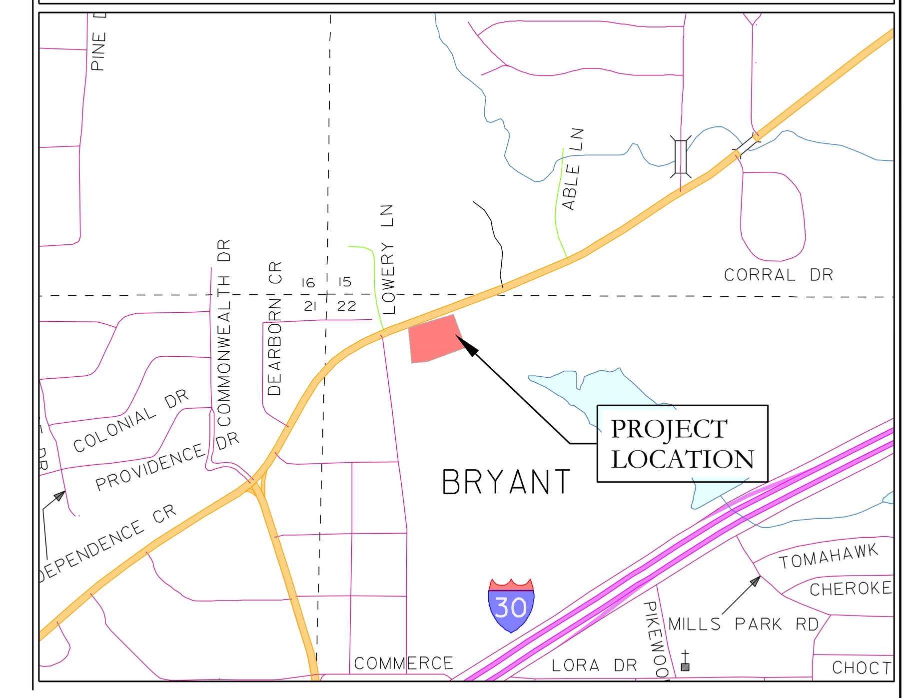
CARRIER (ID)	2"	3"	4"	6"	8	10"	12"
CASING (ID)	5"	6"	8"	12"	16"	20"	24"
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"
CASING (ID)	30"	36"	42"	48"	54"	60"	72"
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750

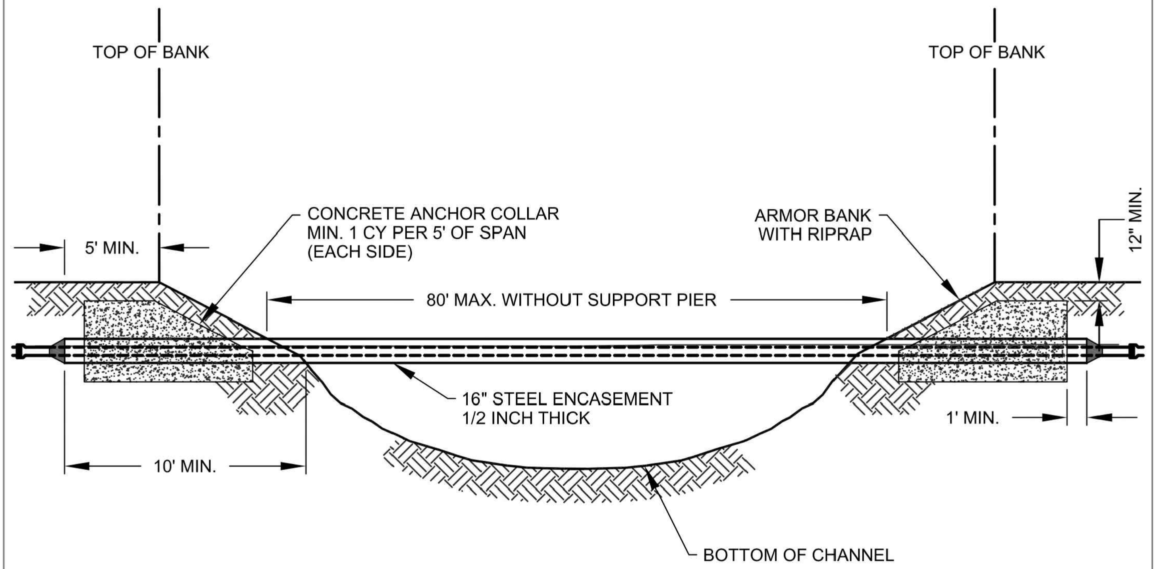
STEEL ENCASEMENT

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

TITLE: SEWER DETAILS
DESCRIPTION: STEEL ENCASEMENT
DATE: APRIL 2015
SHEET: S21

VICINITY MAP:



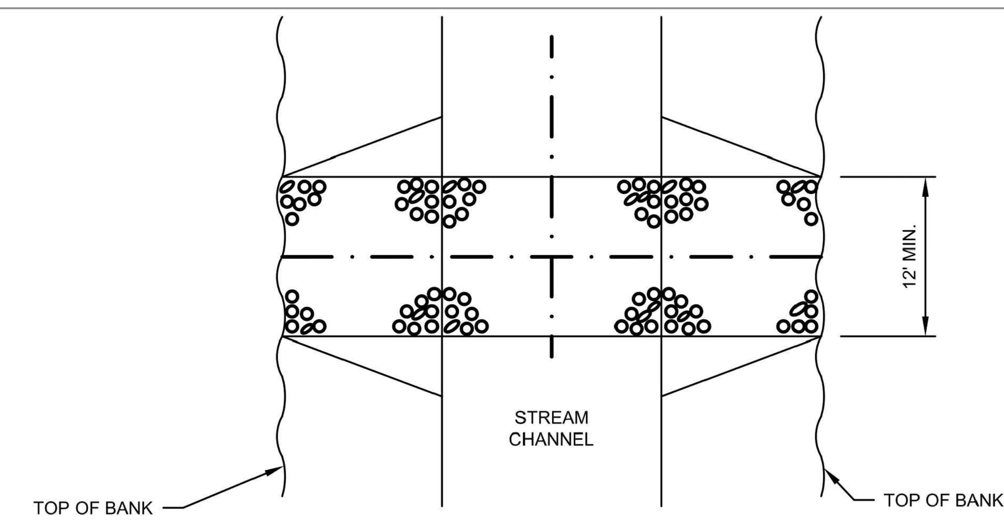


NOTES:

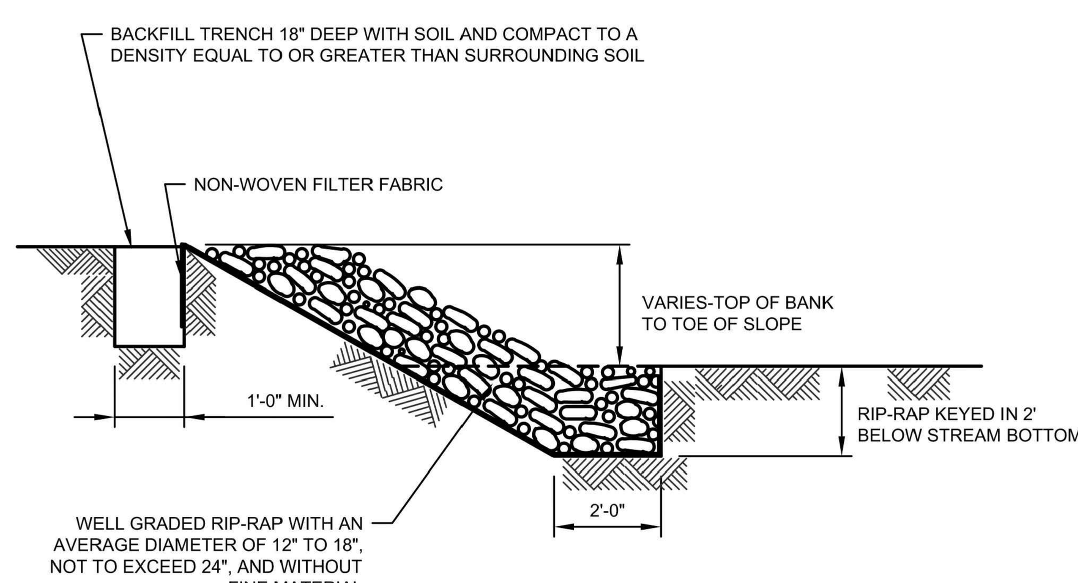
1. DETAIL SHOWN IS FOR 16" ENCASEMENT WITH 8" SEWER PIPE AT 0.50% GRADE. OTHER SIZES WILL REQUIRE A DETAILED DESIGN WITH A MAXIMUM DEFLECTION OF L/360.
2. REFER TO STEEL ENCASEMENT DETAIL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL.
4. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL, MINIMUM 12-INCHES WIDE.
5. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
6. ONE CASING SPACER SHALL BE PLACED AT THE INSERTION STOP LINE TO RESIST OVER INSERTION.
7. 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.
8. 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.
9. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.

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

TITLE: SEWER DETAILS
DESCRIPTION: STEEL ENCASEMENT AERIAL CROSSING
DATE: APRIL 2015
SHEET: S22



PLAN VIEW



SECTION

NOTE:

1. ALL DISTURBED STREAMBANKS SHALL BE STABILIZED AS SHOWN AND RESTORED TO PRE-CONSTRUCTION GRADES.
2. MINIMUM WIDTH OF RESTORATION SHALL BE 12 FEET.

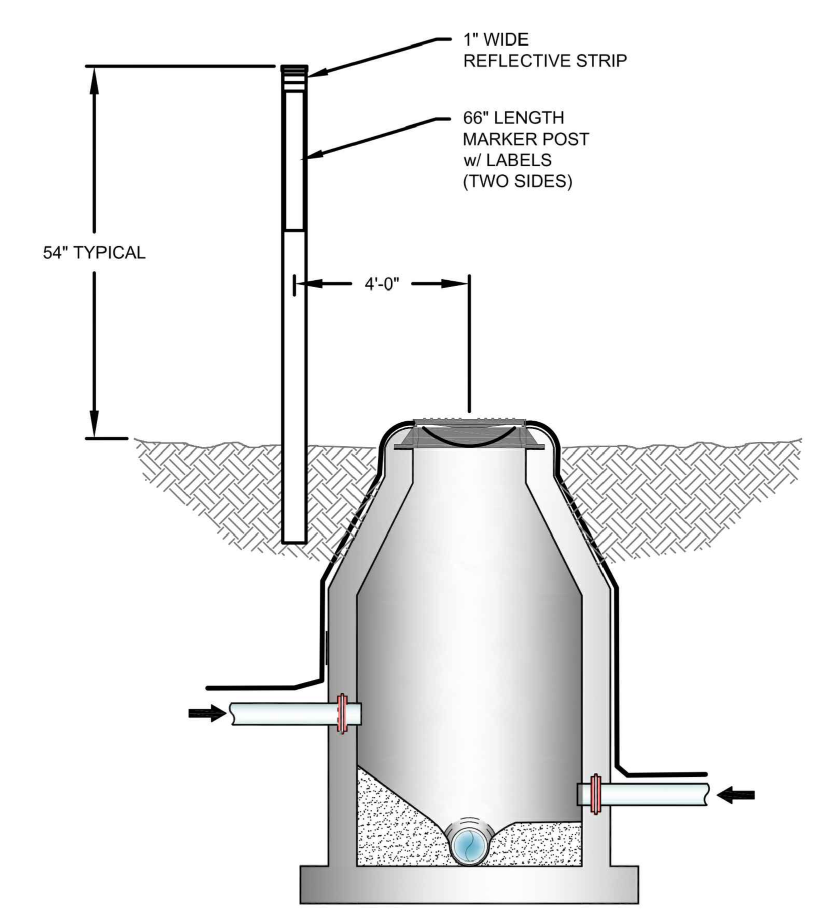
BANK STABILIZATION

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

TITLE: SEWER DETAILS
DESCRIPTION: BANK STABILIZATION
DATE: APRIL 2015
SHEET: S23

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

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

TITLE: SEWER DETAILS
DESCRIPTION: SEWER MARKER
DATE: APRIL 2015
SHEET: S24

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
TAMZIDUL ISLAM
11-25-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1551
ARKANSAS

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

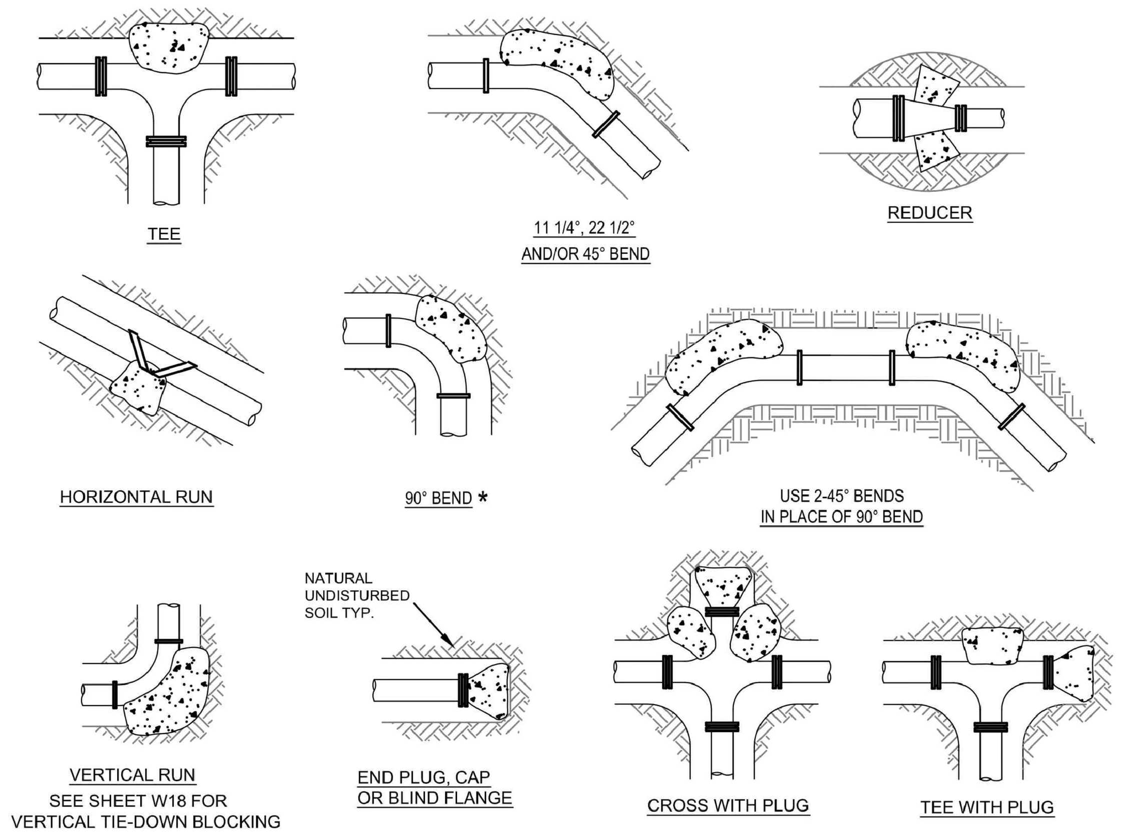
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 4
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE: 11.25.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:	CHECKED BY:	25-0608
SHEET: C-3.4	SCALE:	

500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH1\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH1 11-20-25.DWG



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:

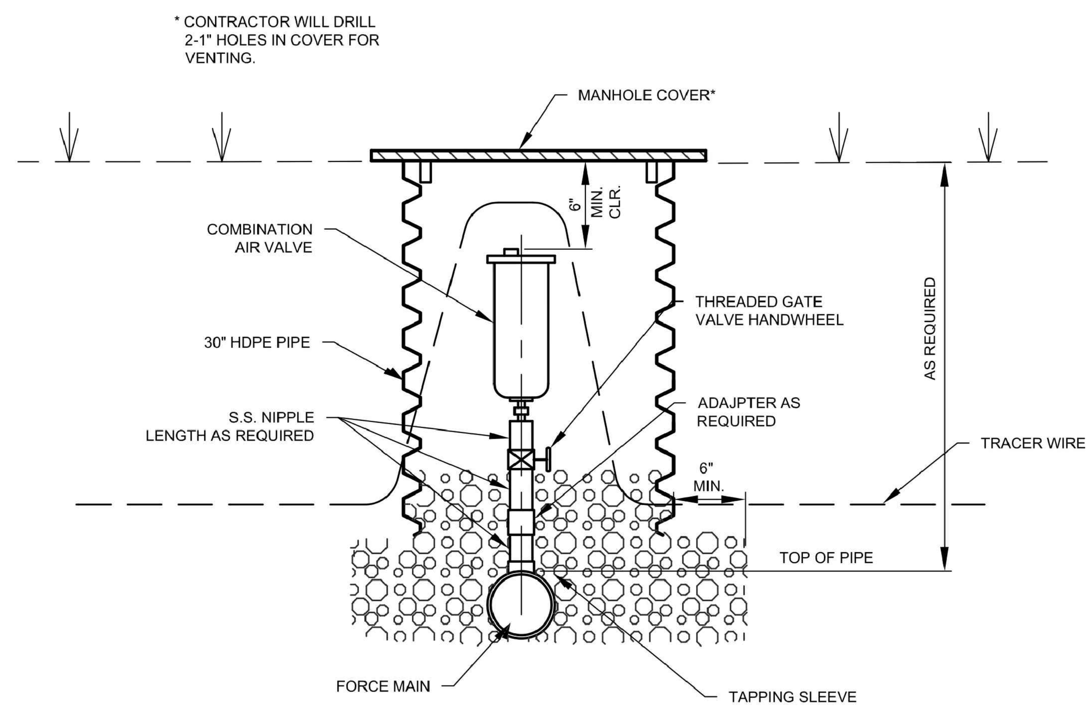
1. CONCRETE FOR THRUST BLOCKS - CLASS A CONCRETE SHALL DEVELOP NOT LESS THAN 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN 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

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

TITLE: SEWER DETAILS
DESCRIPTION: FORCE MAIN THRUST BLOCKING
DATE: APRIL 2015 — REVISED ---- ---- ---- ---- ----
DRAWN BY: CHECKED BY: FILE: S25–Thrust Blocking.dwg
SHEET: S25

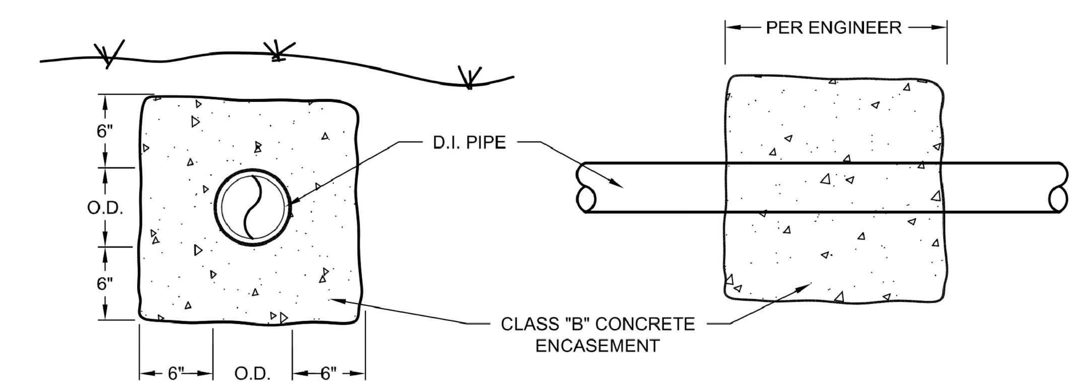
4/16/2015 10:59:46 AM



AIR RELEASE VALVE

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

TITLE: SEWER DETAILS
DESCRIPTION: AIR RELEASE VALVE
DATE: APRIL 2015 — REVISED ---- ---- ---- ---- ----
DRAWN BY: CHECKED BY: FILE: S26–Air Release Valve.dwg
SHEET: S26

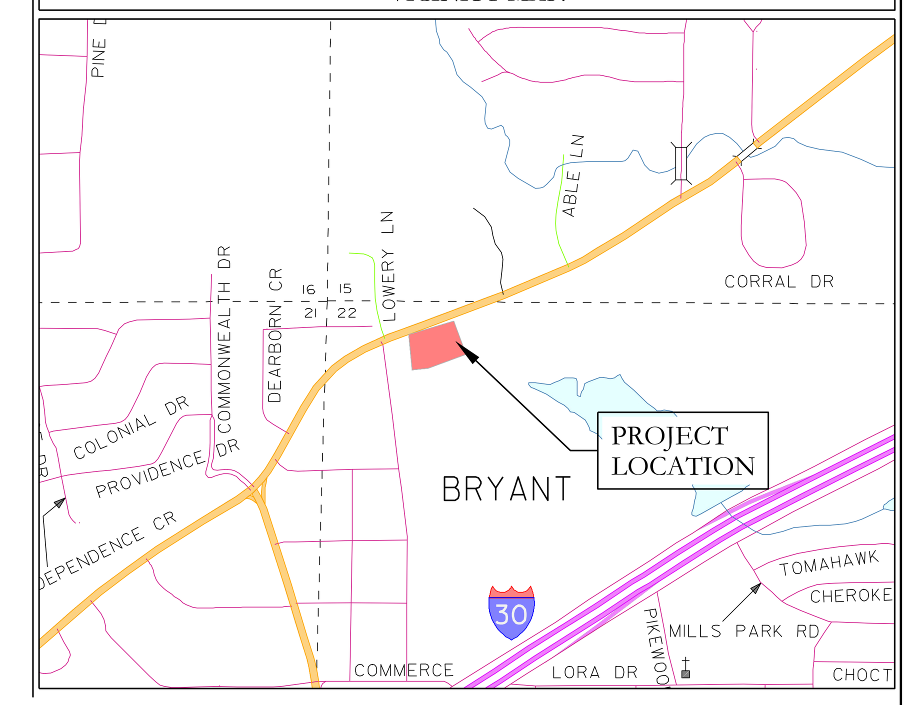


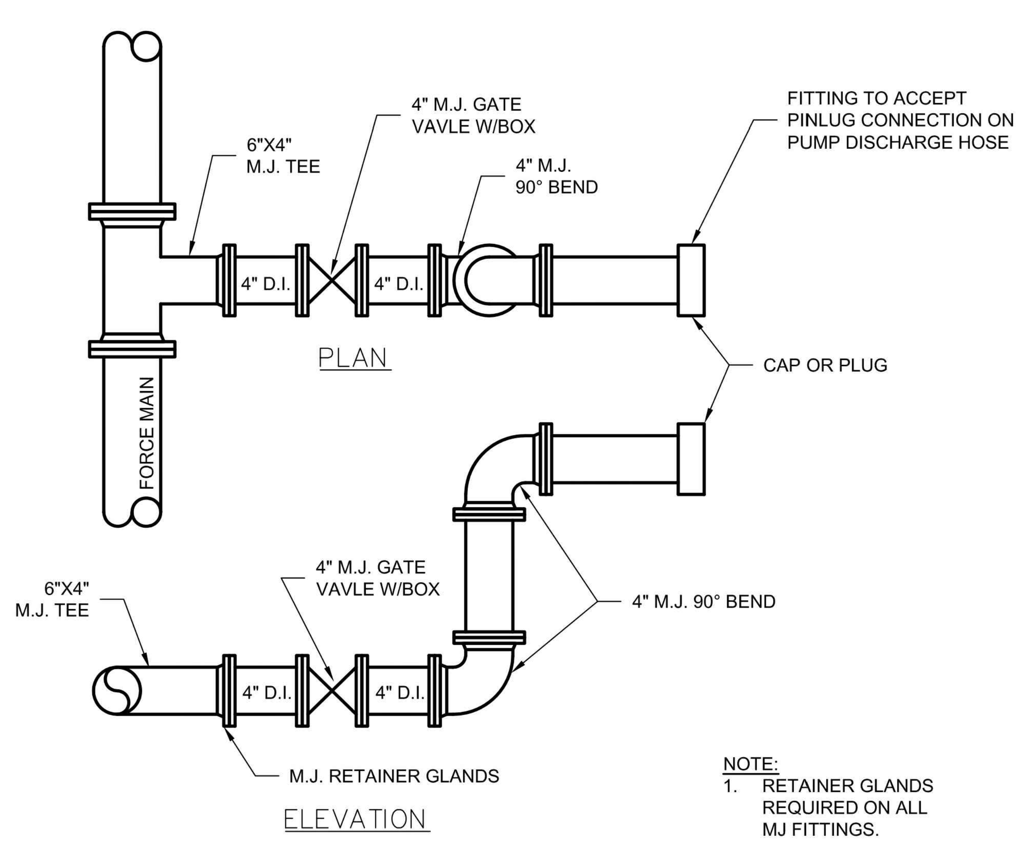
CONCRETE ENCASEMENT

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

TITLE: SEWER DETAILS
DESCRIPTION: CONCRETE ENCASEMENT DETAIL
DATE: APRIL 2015 — REVISED ---- ---- ---- ---- ----
DRAWN BY: CHECKED BY: FILE: S27–Concrete Encasement.dwg
SHEET: S27

VICINITY MAP:





NOTE:
1. RETAINER GLANDS REQUIRED ON ALL MJ FITTINGS.

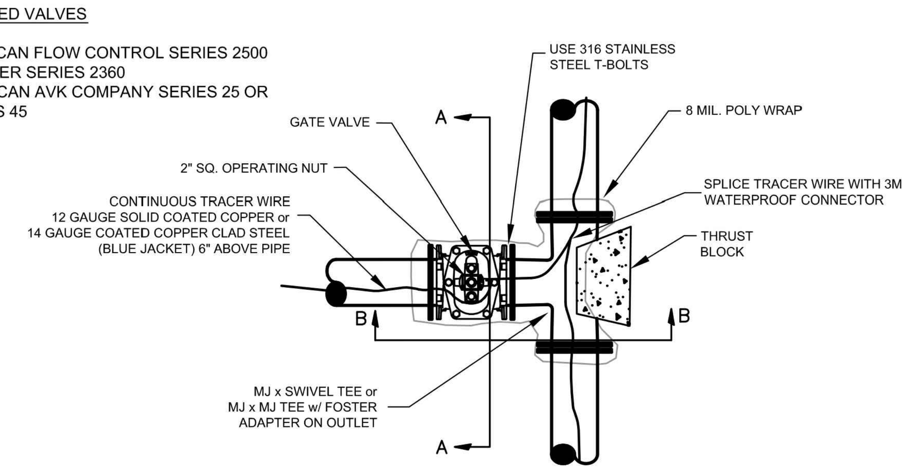
EMERGENCY PUMP CONNECTION DETAILS

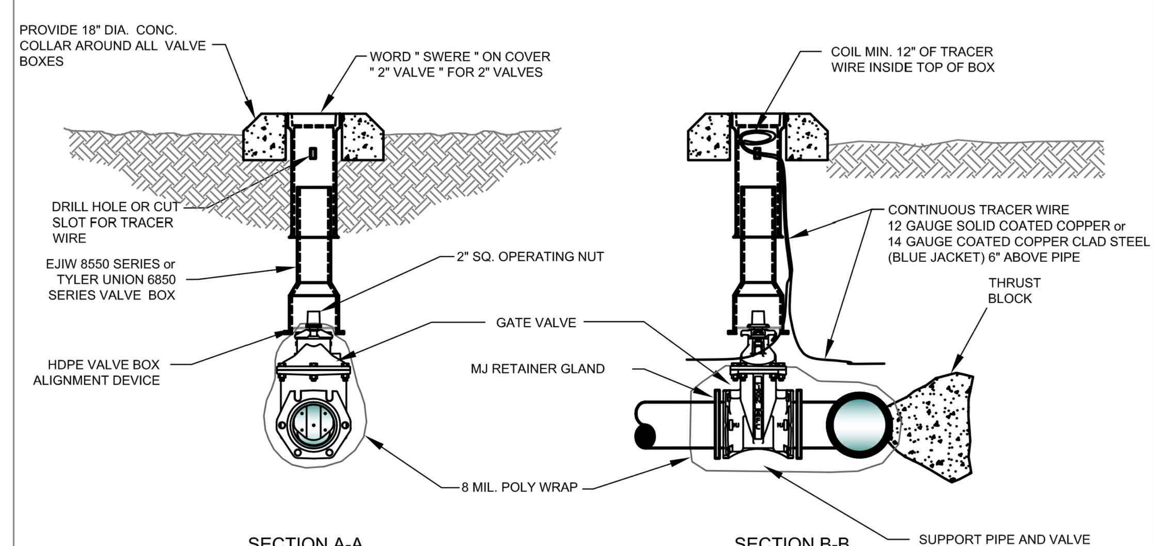
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: SEWER DETAILS
DESCRIPTION: EMERGENCY PUMP CONNECTION
DATE: APRIL 2015 — REVISED ---- ---- ---- ---- ----
DRAWN BY: CHECKED BY: FILE: S28–EMERGENCY PUMP CONNECTION.dwg
SHEET: S28

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.

GATE VALVE DETAIL
2" - 12"

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

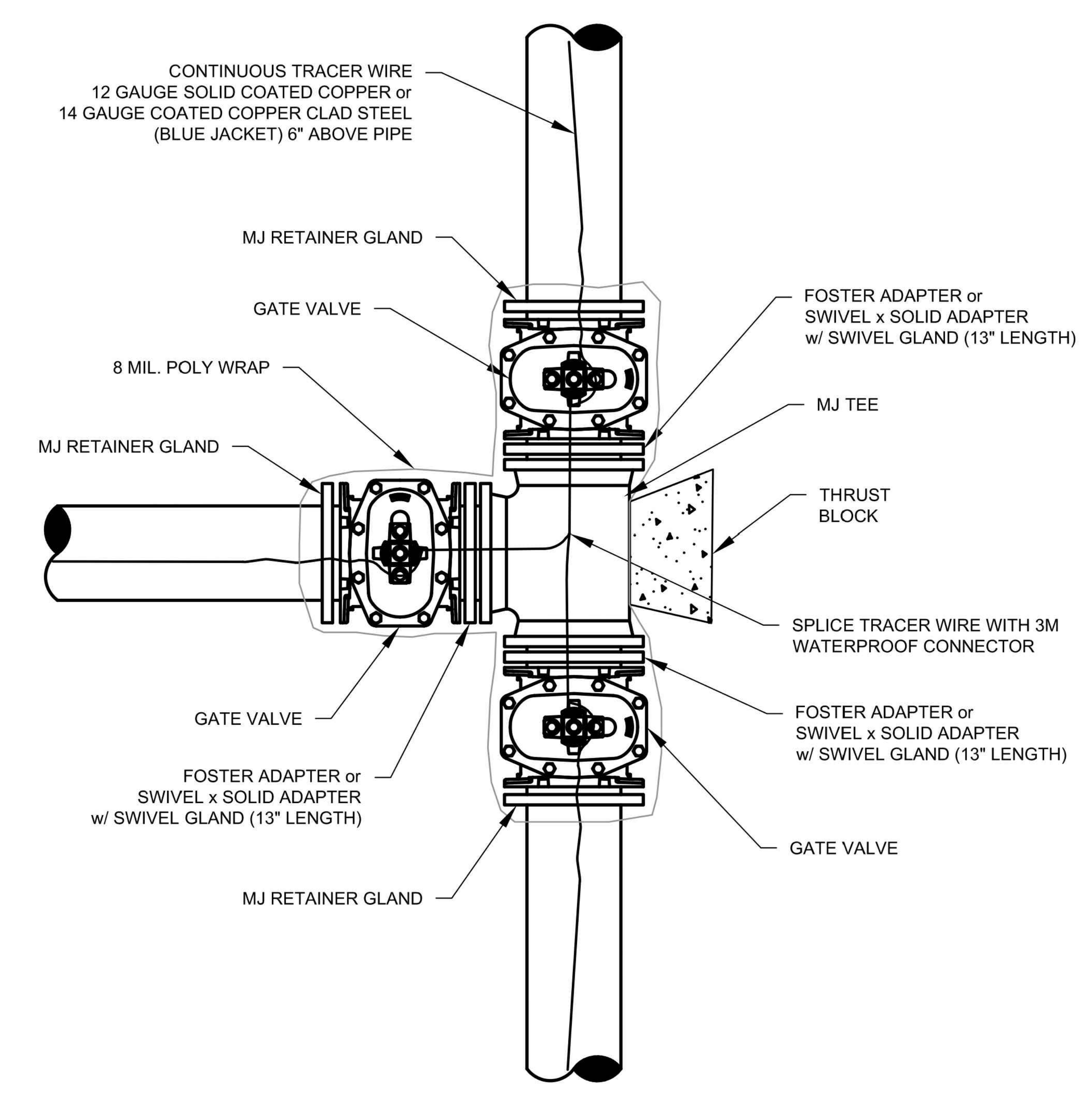
TITLE: SEWER DETAILS
DESCRIPTION: GATE VALVE
DATE: APRIL 2015 — REVISED ---- ---- ---- ---- ----
DRAWN BY: CHECKED BY: FILE: S29–Gate Valve.dwg
SHEET: S29

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.
4. A FLEX T-3 AS MANUFACTURED BY INFACT CORPORATION MAY BE USED IN LIEU OF MJ TEE W/ FOSTER ADAPTERS.



3-WAY GATE VALVE DETAIL

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

TITLE: SEWER DETAILS
DESCRIPTION: 3-WAY GATE VALVES
DATE: APRIL 2015 — REVISED ---- ---- ---- ---- ----
DRAWN BY: CHECKED BY: FILE: S30–3-Way Gate Valves.dwg
SHEET: S30

STATE OF ARKANSAS — LICENSED PROFESSIONAL ENGINEER — NO. 20876
11-25-2025

CERTIFICATE OF AUTHORIZATION — HOPE CONSULTING, INC. — No. 1551 — ARKANSAS

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:
RYE GENERAL CONTRACTORS

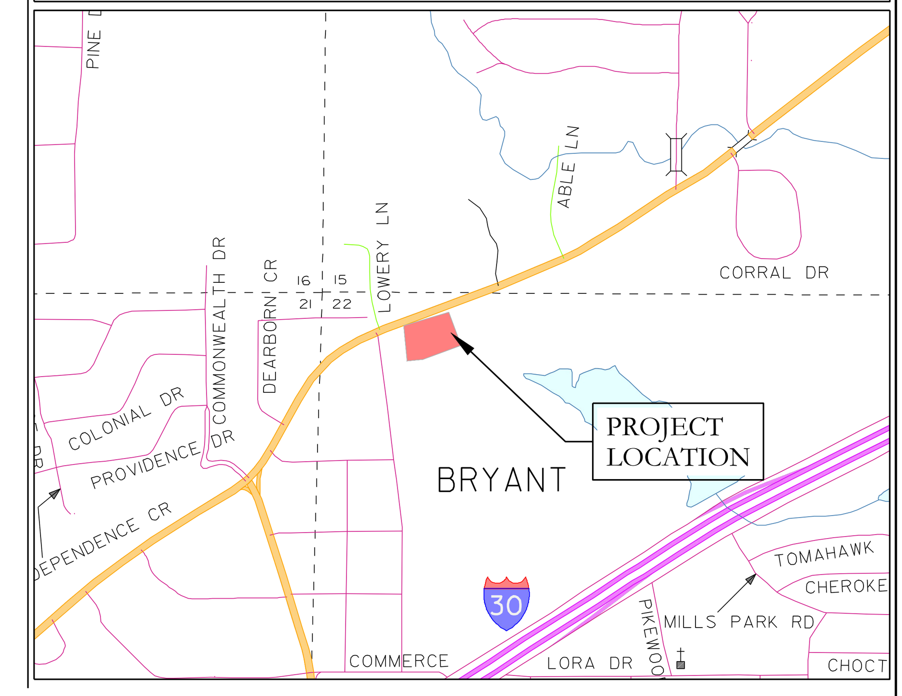
MARKET PLACE II
SEWER DETAILS 5
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

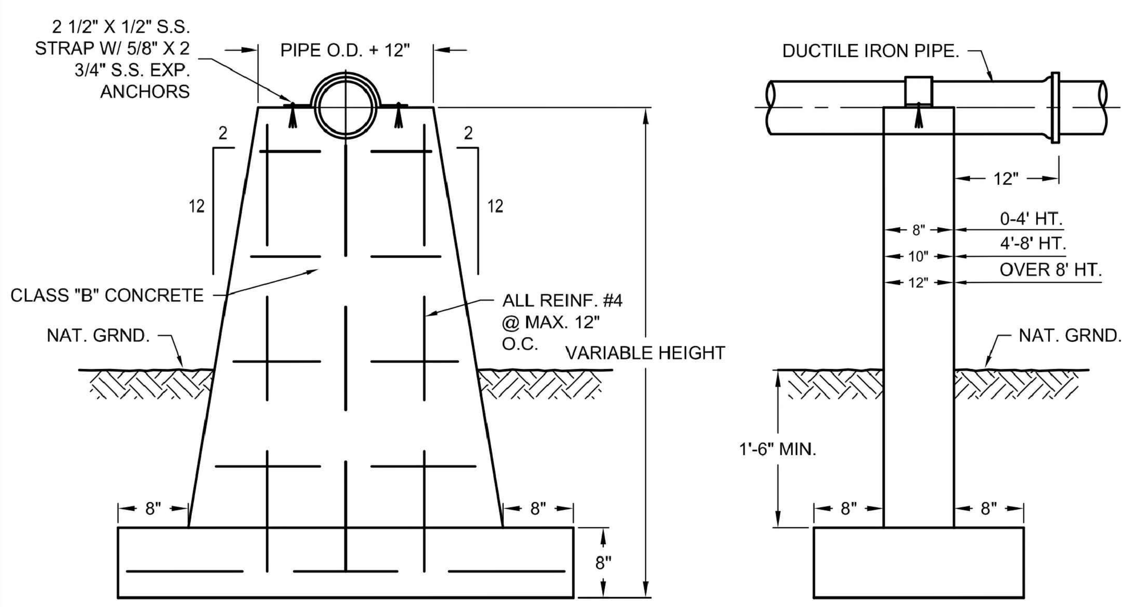
DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-3.5	SCALE:	

500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II

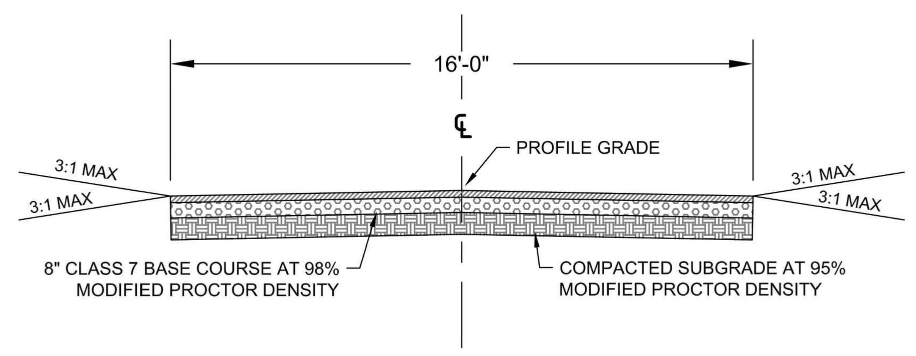
VICINITY MAP:





CONCRETE PIER

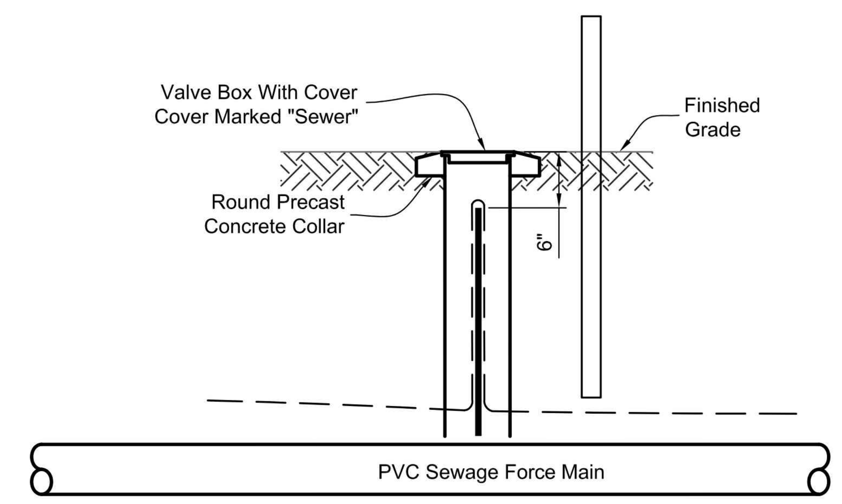
CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	DESCRIPTION: CONCRETE PIER	REVISED:	S31
	DRAWN BY: CHECKED BY: FILE: S31-Concrete Pier.dwg		



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.

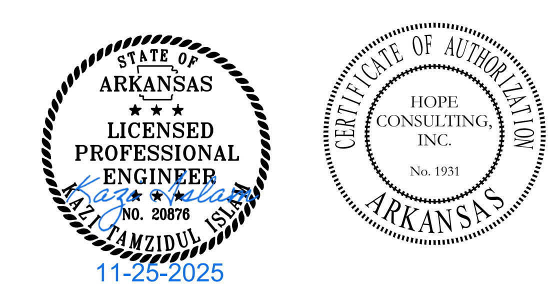
CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	DESCRIPTION: GRAVEL DRIVE FOR SEWAGE PUMP STATION	REVISED:	S32
	DRAWN BY: CHECKED BY: FILE: S32-Gravel Drive For Sewage Pump Station.dwg		



Notes:
1. Tracer Wire Test Station Shall Be Installed Every 1,000 Ft. Minimum And At Every Fiberglass Post Utility Marker.
2. Do Not Install Test Stations At Posts Located At Valves, Clean-out Stations Or Air Release Valves That Have Ground Rod Inside Access Vault

TRACER WIRE TEST STATION

CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	DESCRIPTION: TRACER WIRE TEST STATION	REVISED:	S33
	DRAWN BY: CHECKED BY: FILE: S33-Tracer Wire Test Station.dwg		



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

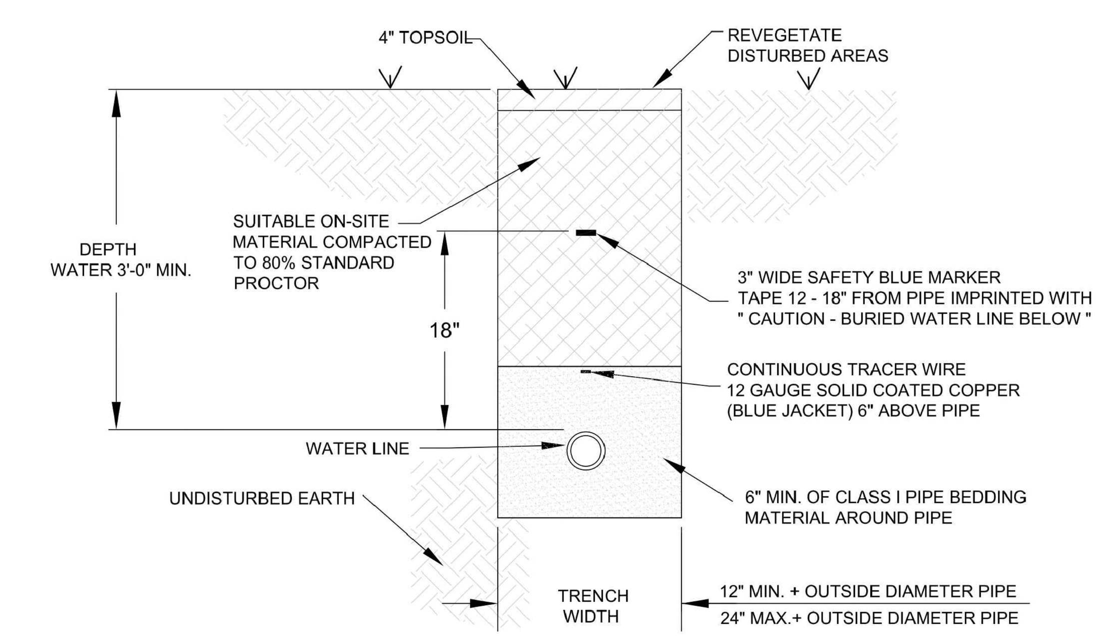
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 6
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
SHEET:	C-3.6	SCALE:	

500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\3. 25-0608 LOT 22R MARKET PLACE II PH1\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE II PH1 11-20-25.DWG



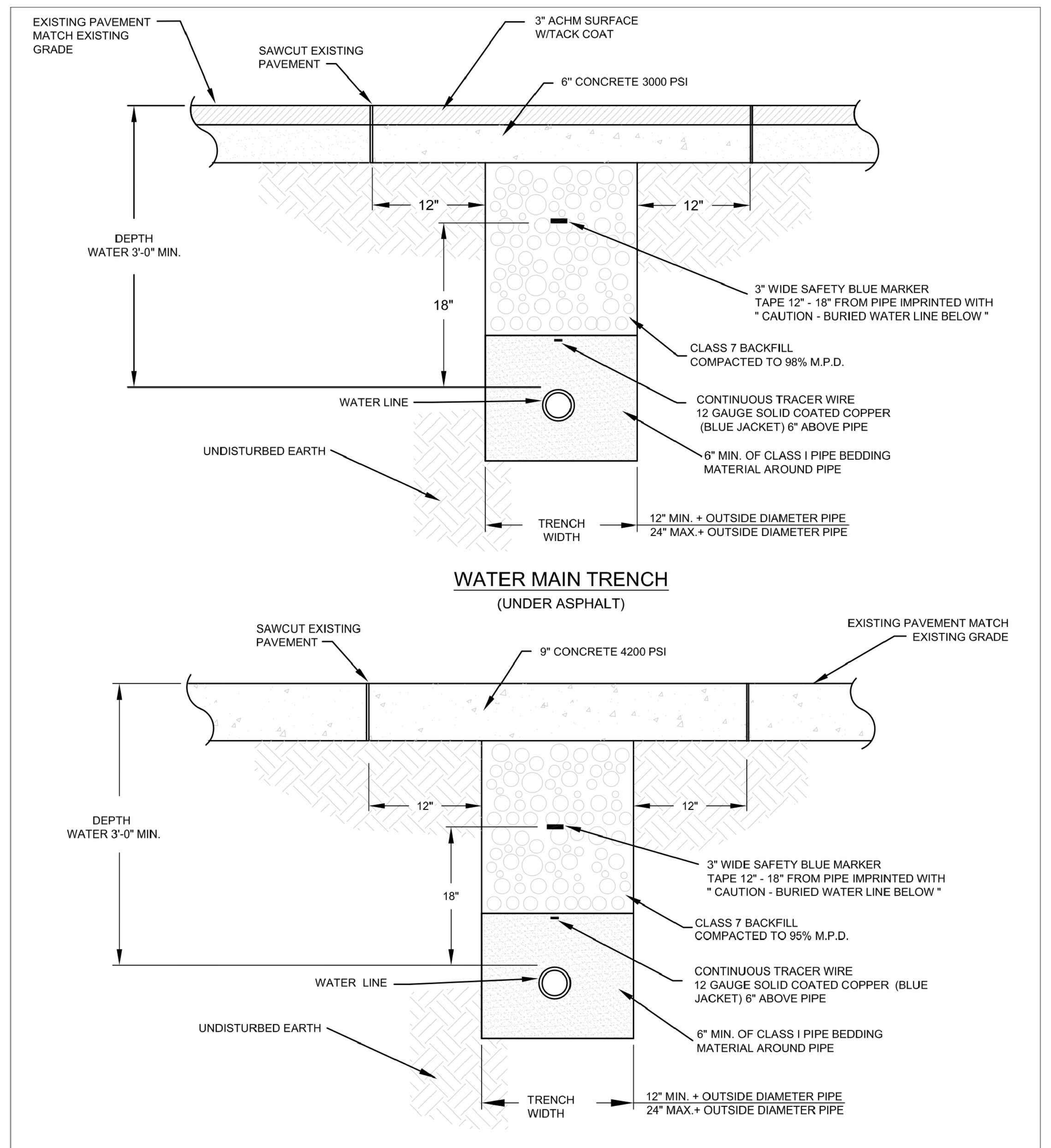
NOTES:

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) 943-0488

TITLE: WATER DETAILS
DESCRIPTION: WATER MAIN TRENCH (NON-PAVED AREA)
DATE: APRIL 2015
SHEET: W1



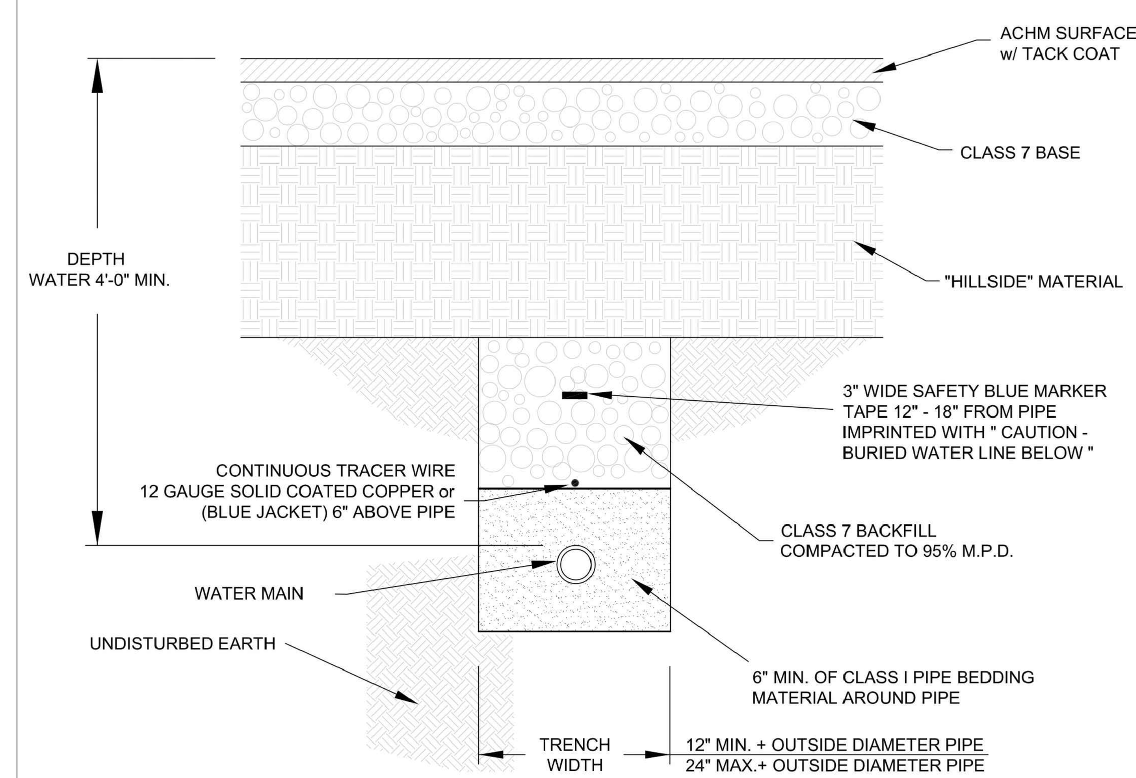
WATER MAIN TRENCH
(UNDER CONCRETE)

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) 943-0488

TITLE: WATER DETAILS
DESCRIPTION: WATER MAIN TRENCH (UNDER PAVEMENT)
DATE: APRIL 2015
SHEET: W2



WATER MAIN INSTALLATION PRIOR TO ROADWAY CONSTRUCTION

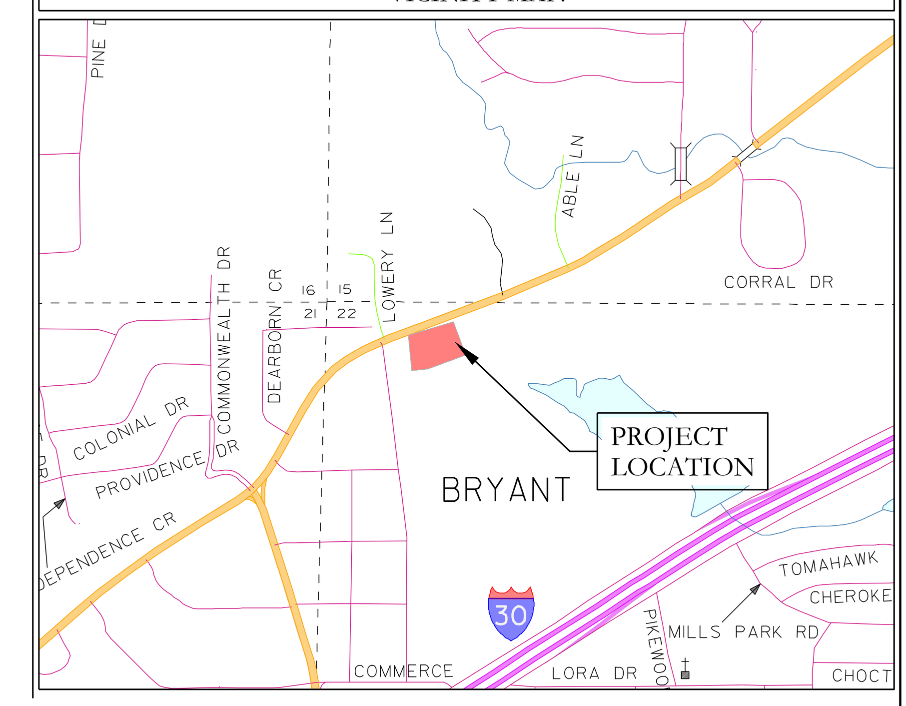
NOTES:

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.
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) 943-0488

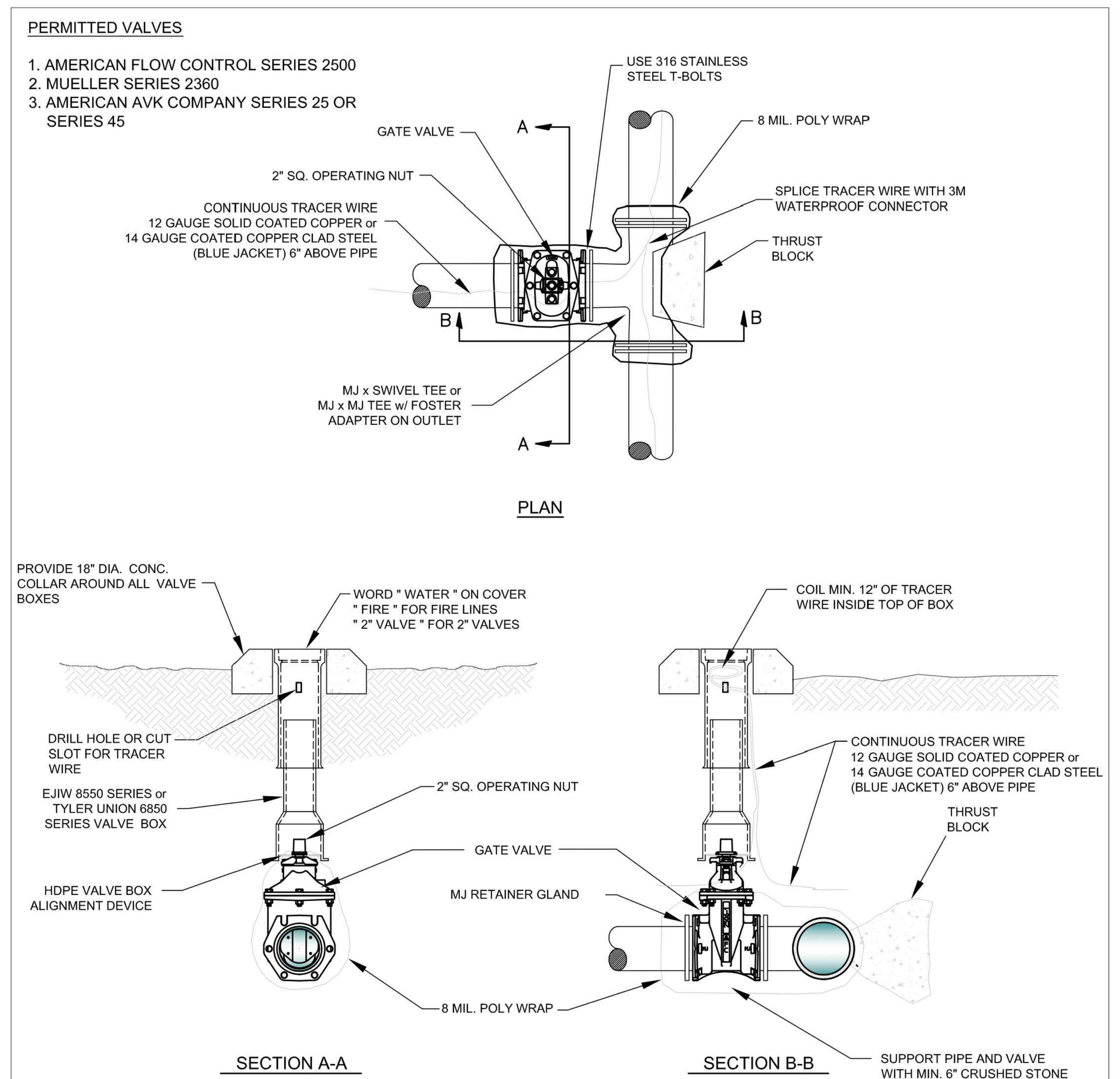
TITLE: WATER DETAILS
DESCRIPTION: WATER MAIN INSTALLATION PRIOR TO ROADWAY CONSTRUCTION
DATE: APRIL 2015
SHEET: W3

VICINITY MAP:



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.

GATE VALVE DETAIL
2" - 12"

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

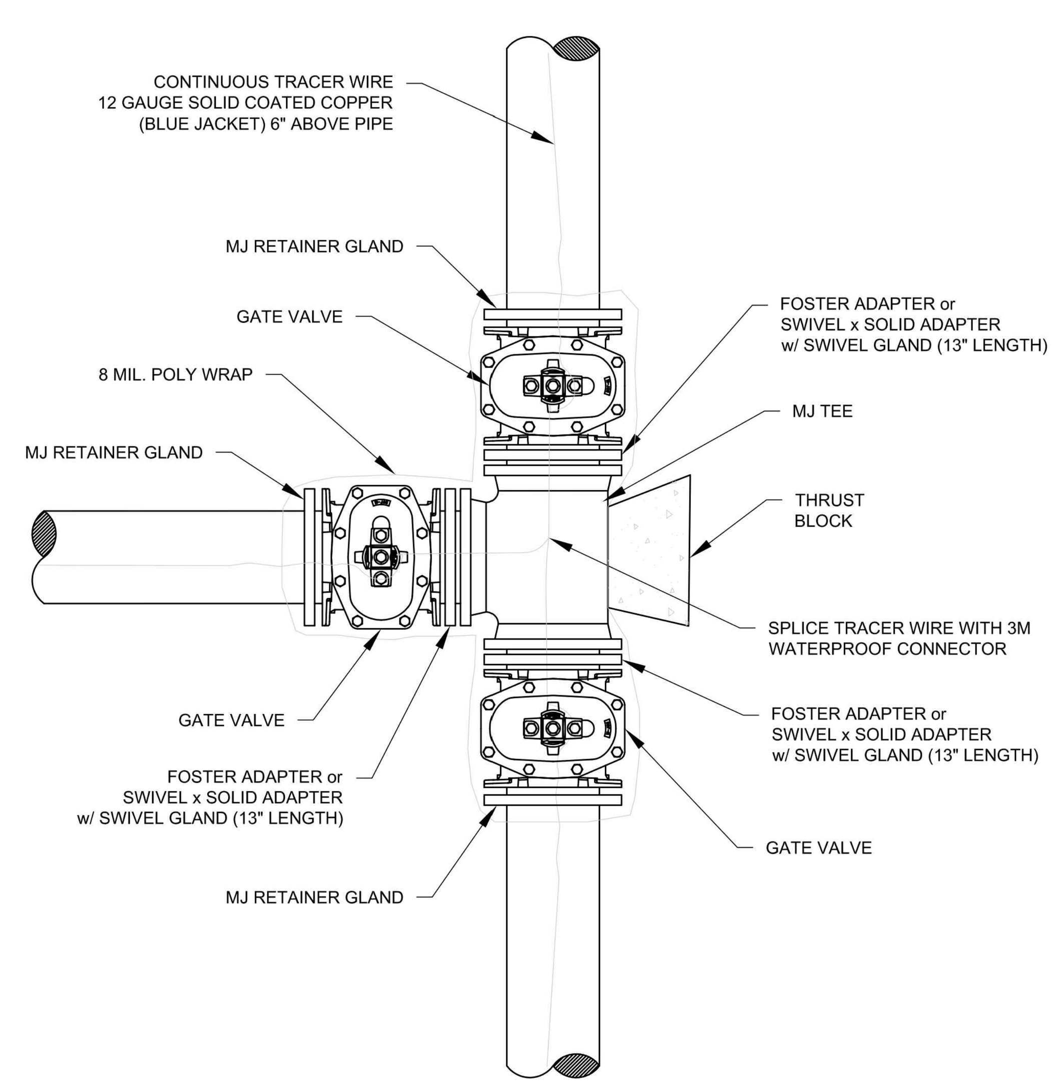
TITLE: WATER DETAILS
DESCRIPTION: GATE VALVE
DATE: APRIL 2015
SHEET: W4

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.



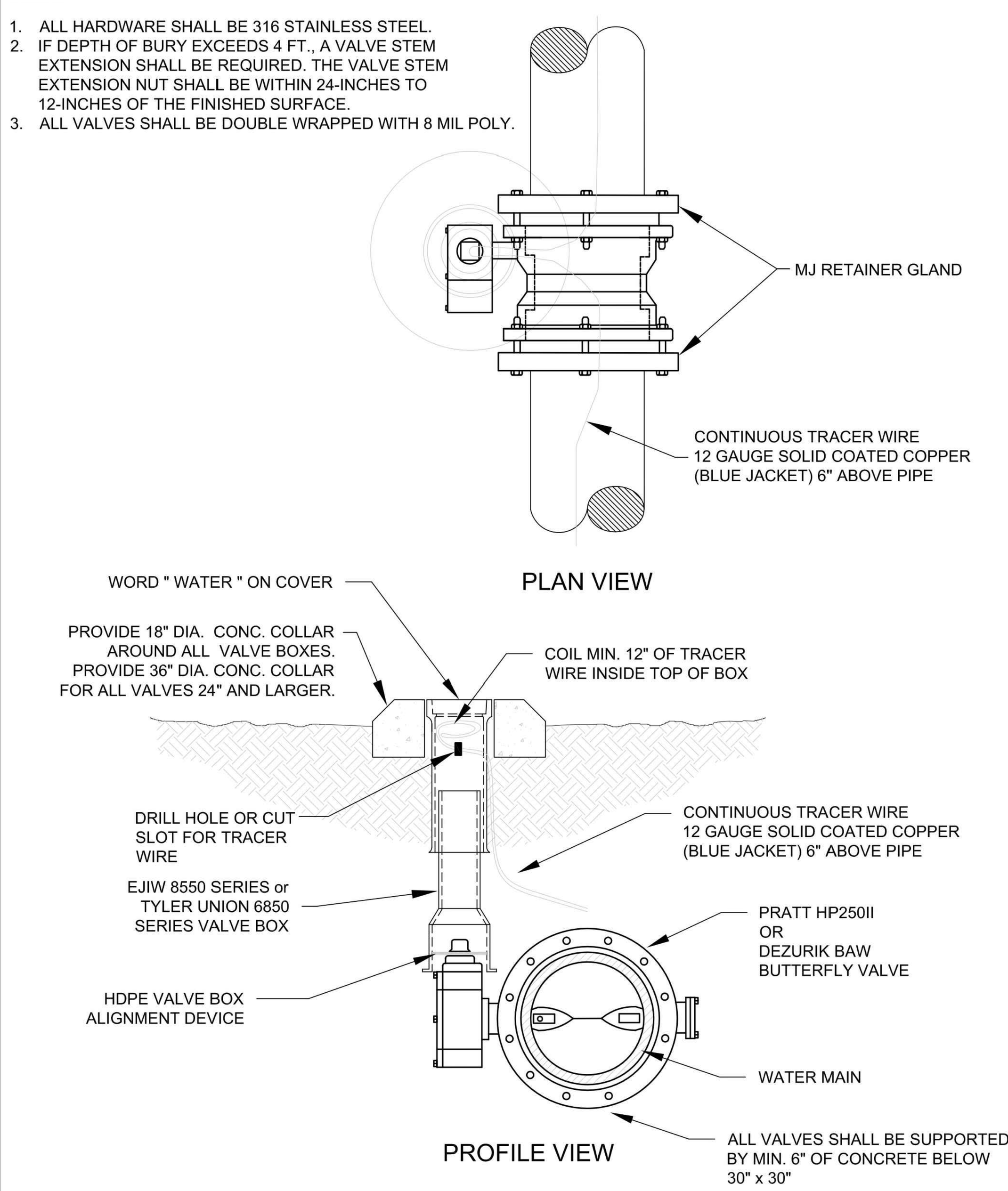
3-WAY GATE VALVE DETAIL

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

TITLE: WATER DETAILS
DESCRIPTION: 3-WAY GATE VALVES
DATE: APRIL 2015
SHEET: W5

NOTES:

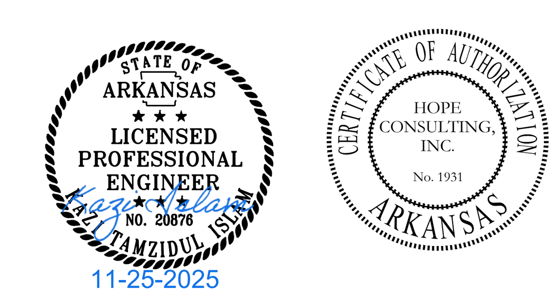
1. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
2. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.
3. ALL VALVES SHALL BE DOUBLE WRAPPED WITH 8 MIL POLY.



BUTTERFLY VALVE DETAIL
14-INCH WATER MAINS AND LARGER

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

TITLE: WATER DETAILS
DESCRIPTION: BUTTERFLY VALVE
DATE: APRIL 2015
SHEET: W6



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ENGINEERS - SURVEYORS

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Benton, Arkansas 72015
PH. (501)315-2626
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FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

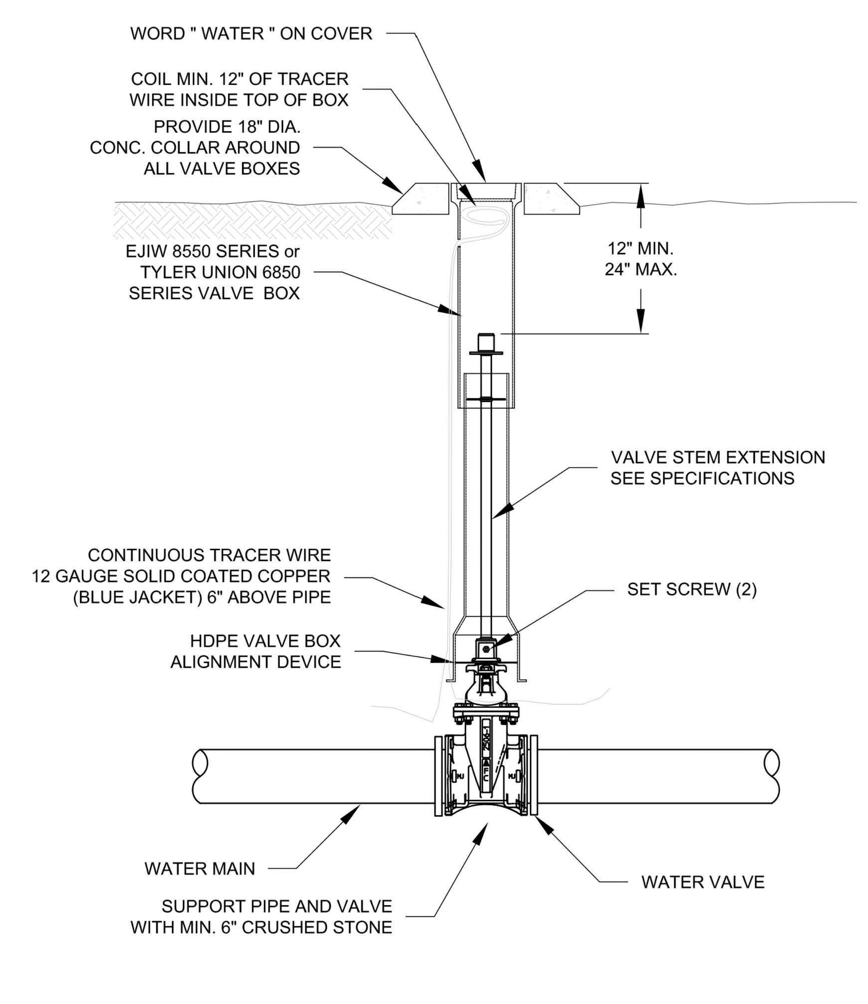
MARKET PLACE II
WATER DETAILS 1
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-3.7	SCALE:	

500	01S	14W	0	22	440	62	1762

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.



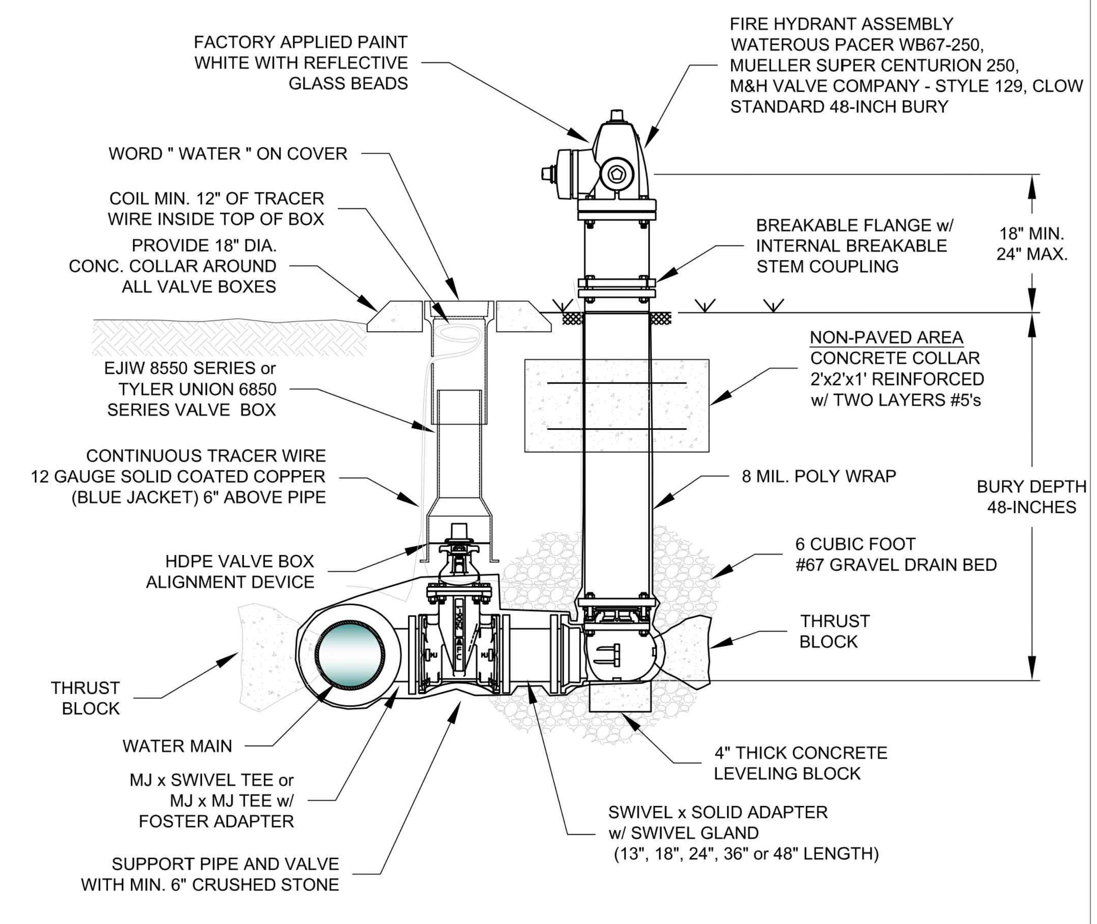
VALVE WITH STEM EXTENSION

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR

TITLE: WATER DETAILS
DESCRIPTION: VALVE STEM EXTENSION
DATE: APRIL 2015
SHEET: W7

NOTES:

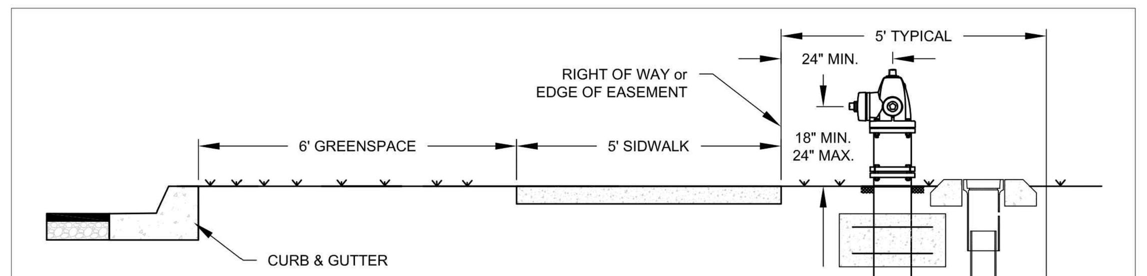
1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. BURY LINE OF HYDRANT SHALL BE NO LESS THAN THE PROPOSED FINISHED ELEVATION OF BACK OF CURB, OR SIDEWALK, WHICHEVER IS GREATER.
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

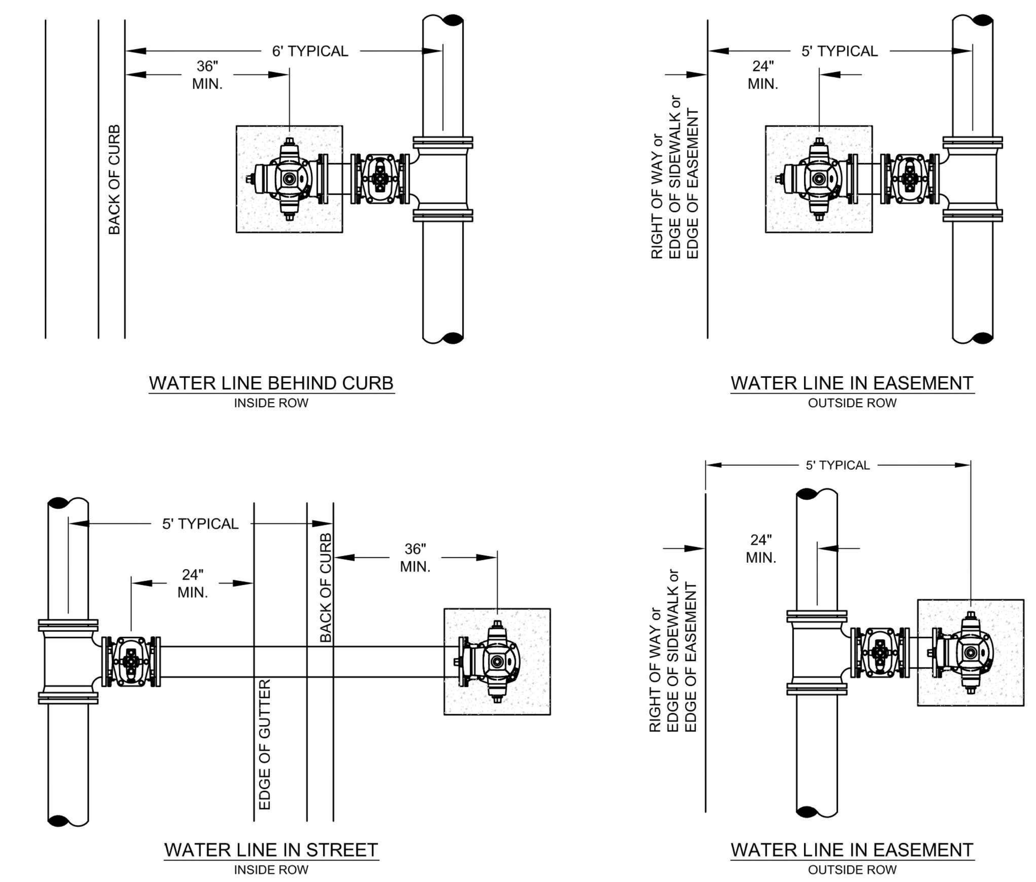
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR

TITLE: WATER DETAILS
DESCRIPTION: FIRE HYDRANT AND VALVE CONNECTION
DATE: APRIL 2015
SHEET: W8



NOTES:

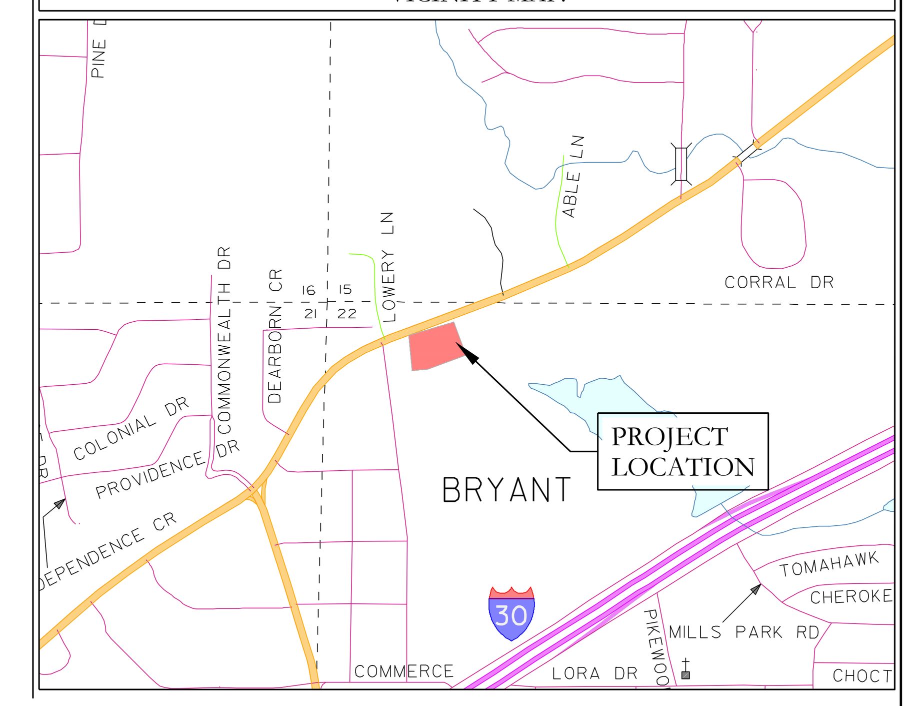
1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. NO MORE THAN ONE EXTENSION PER HYDRANT.
4. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF 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.

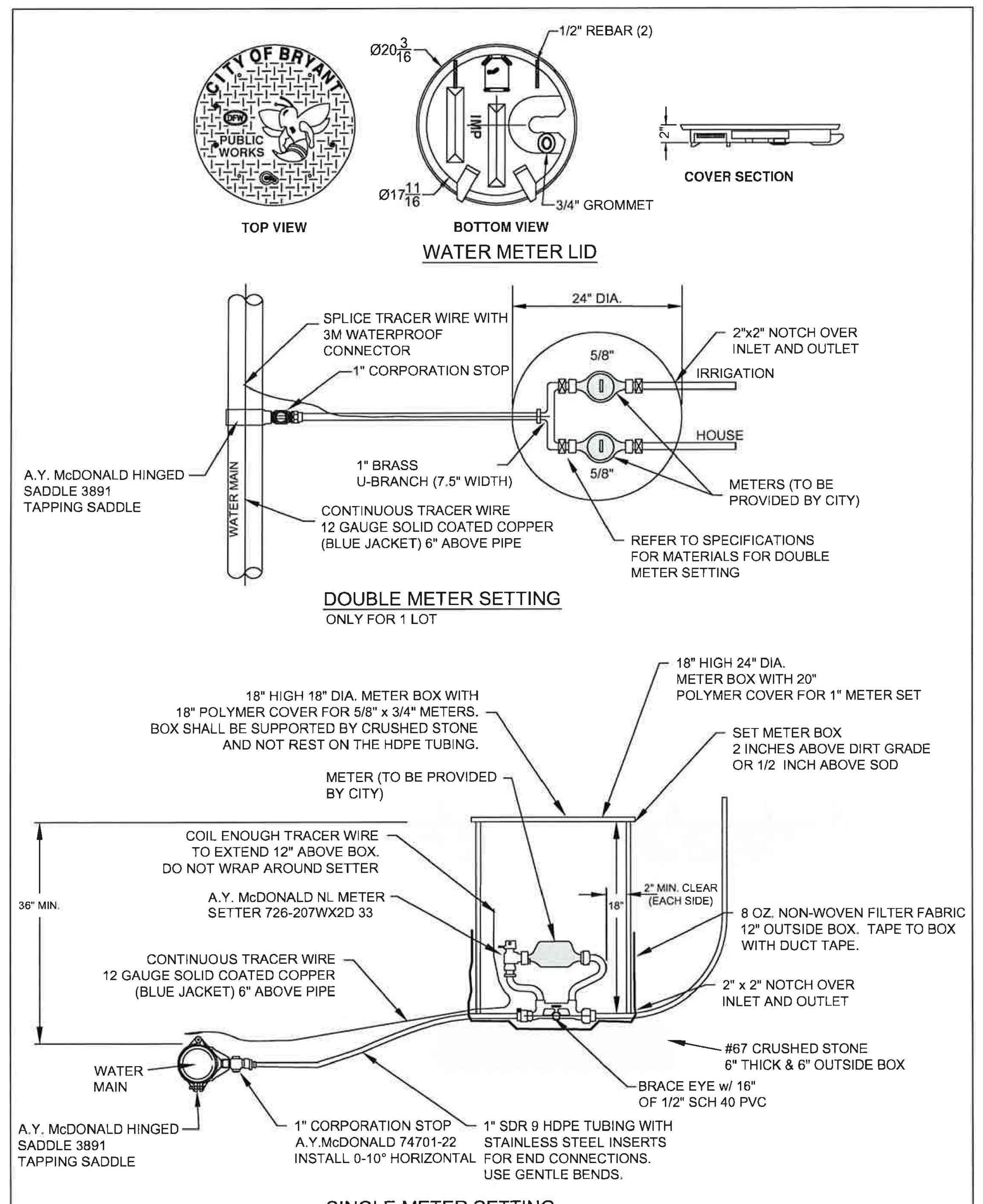


CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR

TITLE: WATER DETAILS
DESCRIPTION: FIRE HYDRANT PLACEMENT
DATE: APRIL 2015
SHEET: W9

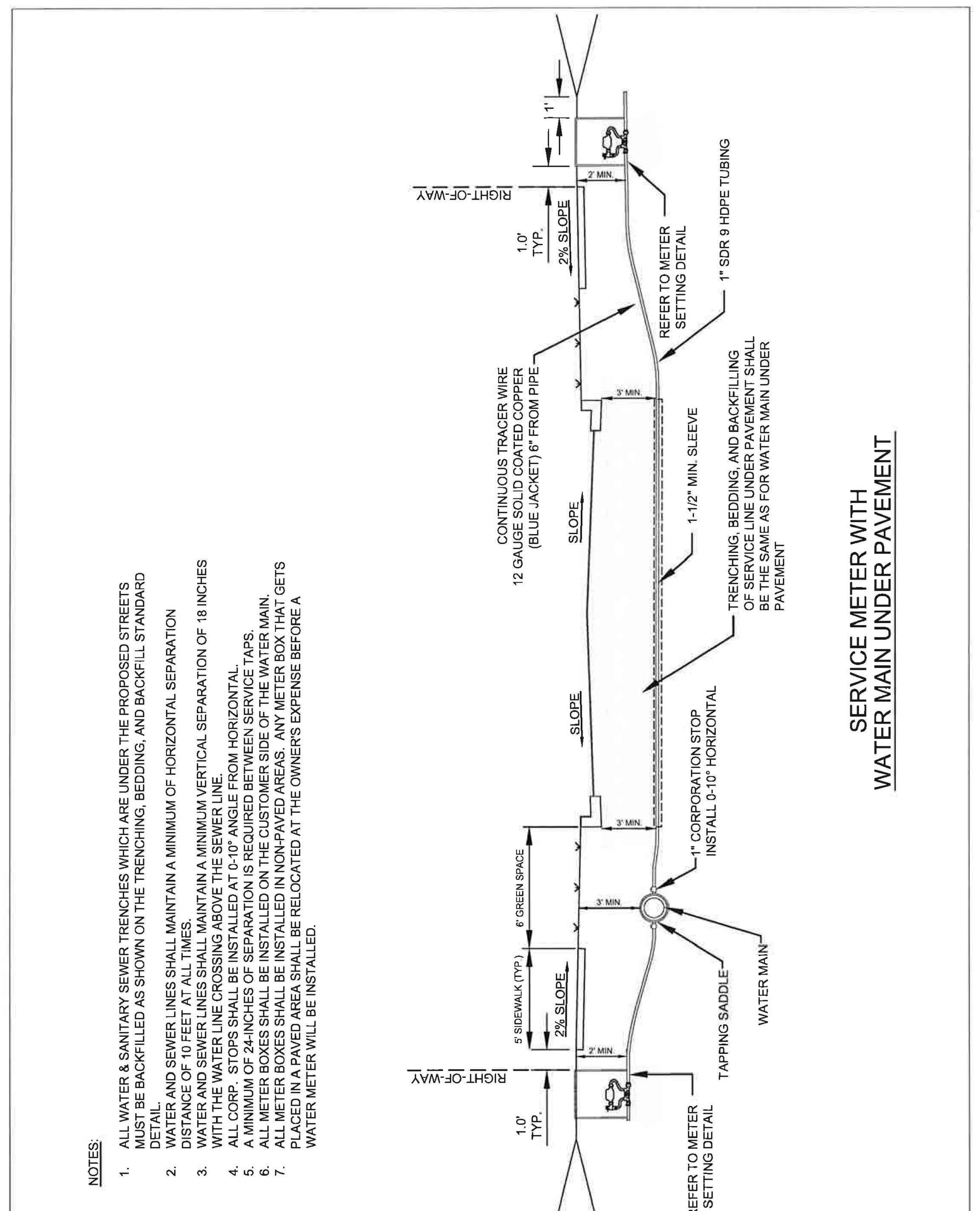
VICINITY MAP:





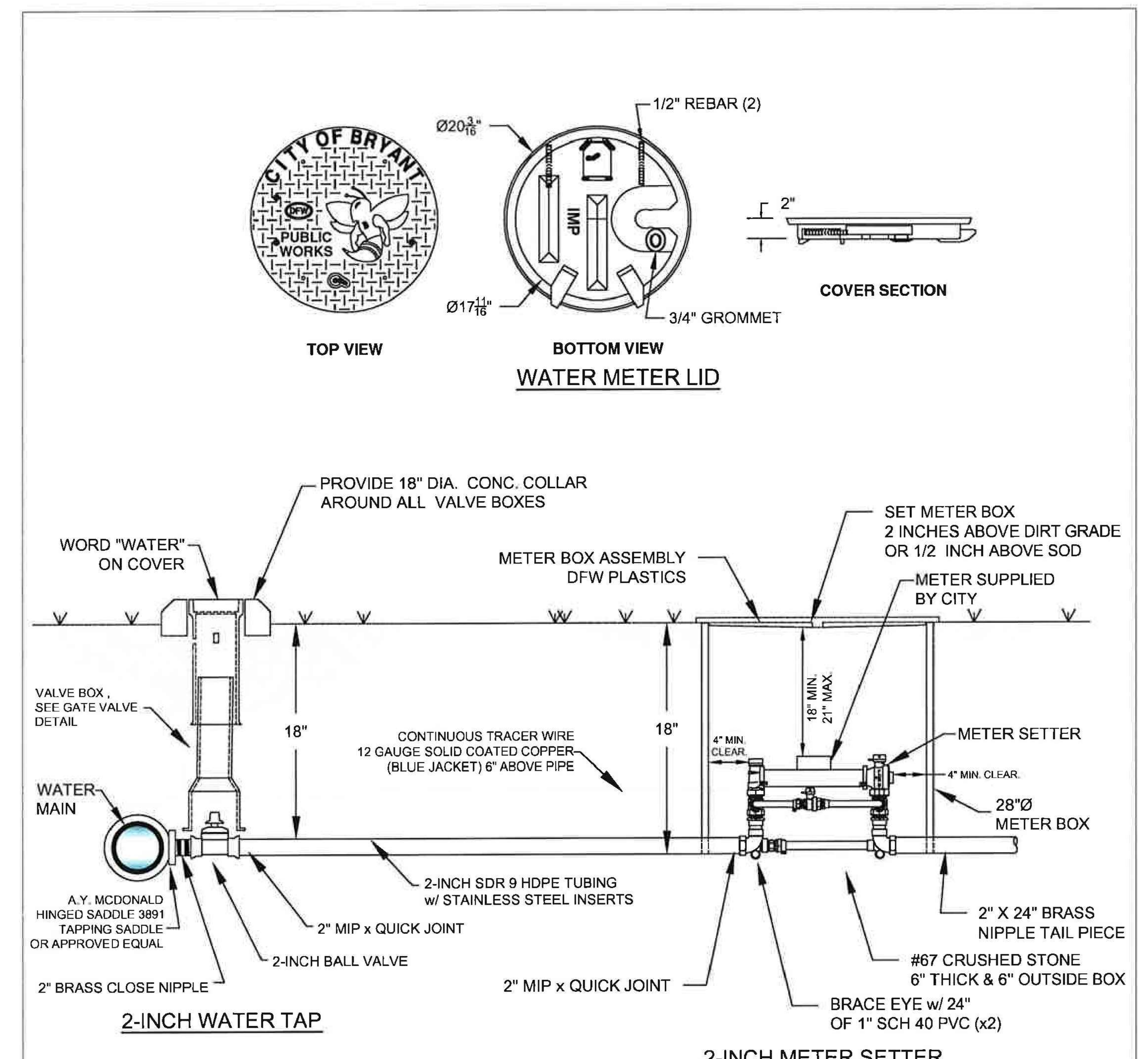
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR

TITLE: WATER DETAILS
DESCRIPTION: METER SETTINGS
DATE: APRIL 2015
SHEET: W10



CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR

TITLE: WATER DETAILS
DESCRIPTION: METER SERVICE LINE UNDER PAVEMENT
DATE: APRIL 2015
SHEET: W11



NOTES:

1. COORDINATE INSTALLATION AND CONFIGURATIONOF ALL 1-1/2" AND LARGER METER SETTINGS WITH THE CITY.
2. 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.
3. SUPPORT METER INSTALLATION WITH 1"x24" SCH40 PVC THROUGH EACH BRACE EYE.

2" WATER SERVICE AND WATER METER

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR

TITLE: WATER DETAILS
DESCRIPTION: 2" WATER METER
DATE: APRIL 2015
SHEET: W12

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER KAZI TAMZIDUL ISLAM NO. 20876
11-25-2025

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

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:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 2
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

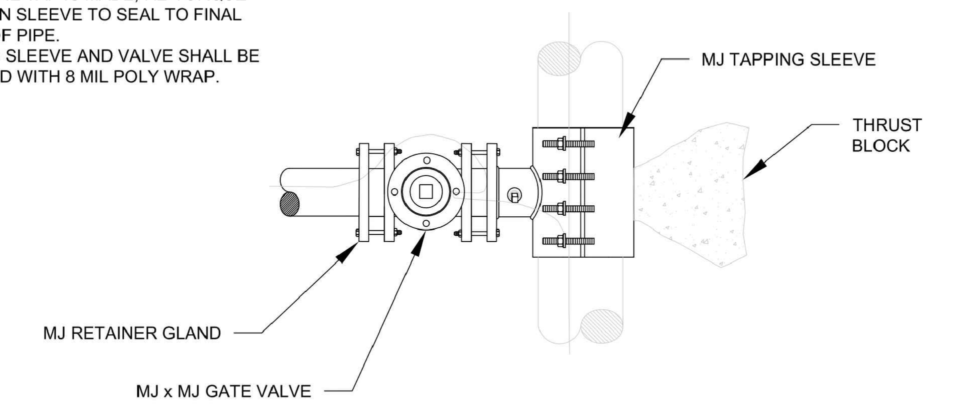
DATE: 11.25.25		C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-3.8	SCALE:	

500	01S	14W	0	22	440	62	1762

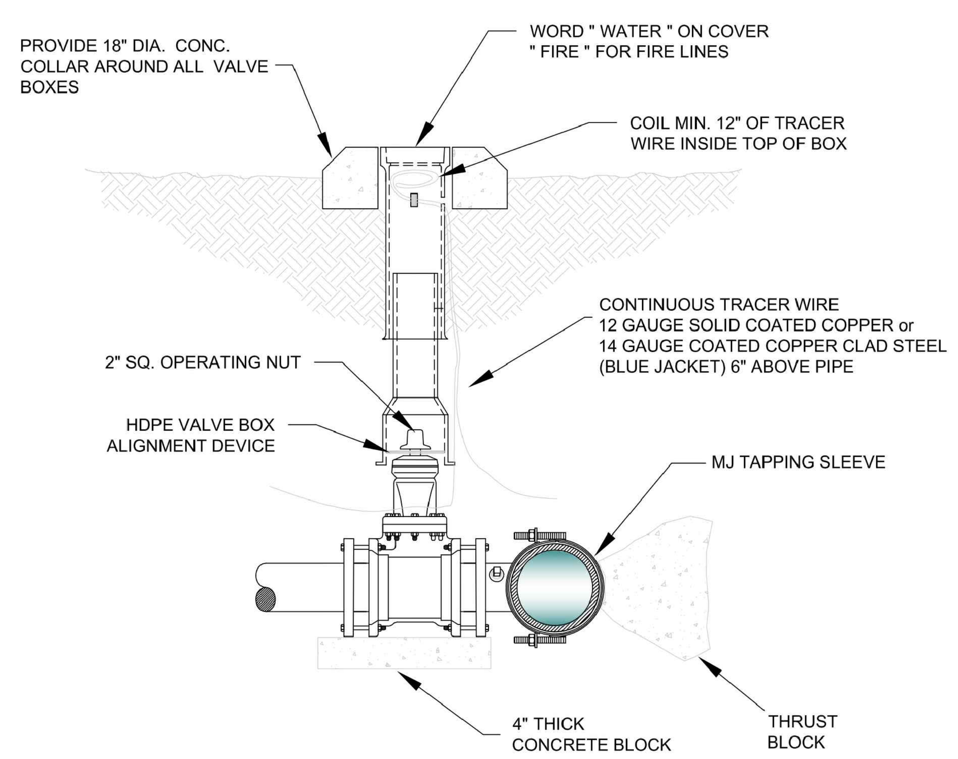
E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG

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.



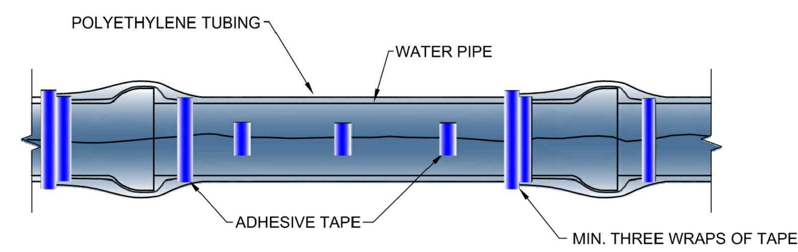
PLAN VIEW



PROFILE VIEW

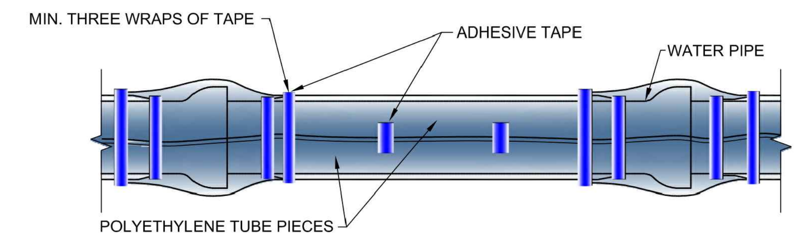
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: WATER DETAILS
DESCRIPTION: TAPPING SLEEVE AND VALVE
DATE: APRIL 2015
REVISED
DRAWN BY: CHECKED BY: FILE: W13-Tapping Sleeve and Valve.dwg
SHEET: W13



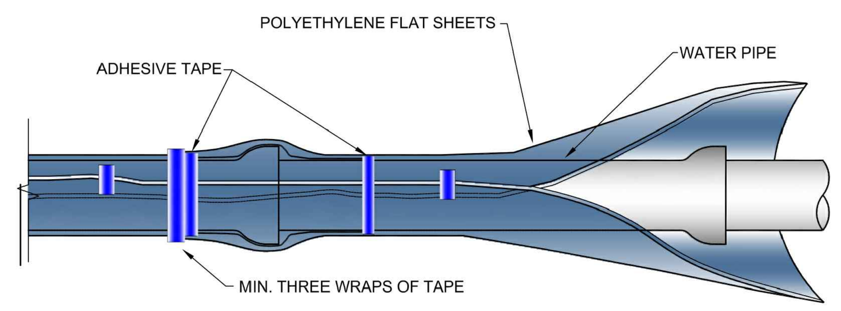
METHOD 'A'

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'

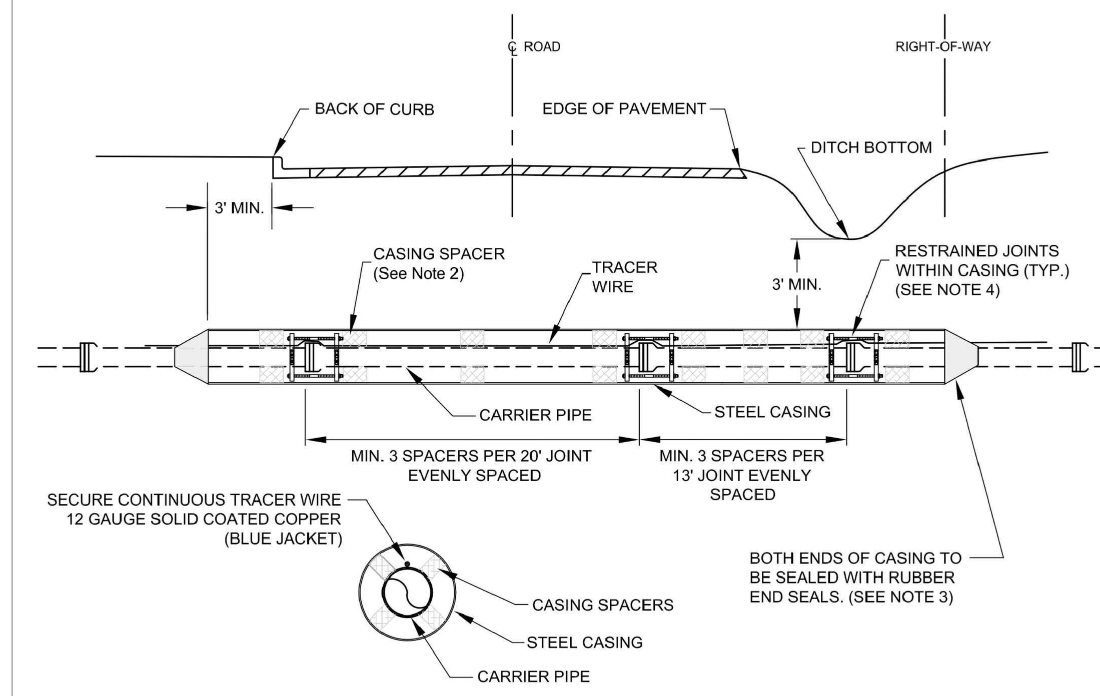
METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

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: WATER DETAILS
DESCRIPTION: POLYETHYLENE PROTECTION MATERIAL
DATE: APRIL 2015
REVISED
DRAWN BY: CHECKED BY: FILE: W14-Poly Wrap.dwg
SHEET: W14



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 17# HP MAGNESIUM ANODES CAD WELDED TO THE END OF THE ENCASEMENT PIPE.

CARRIER AND CASING SIZES

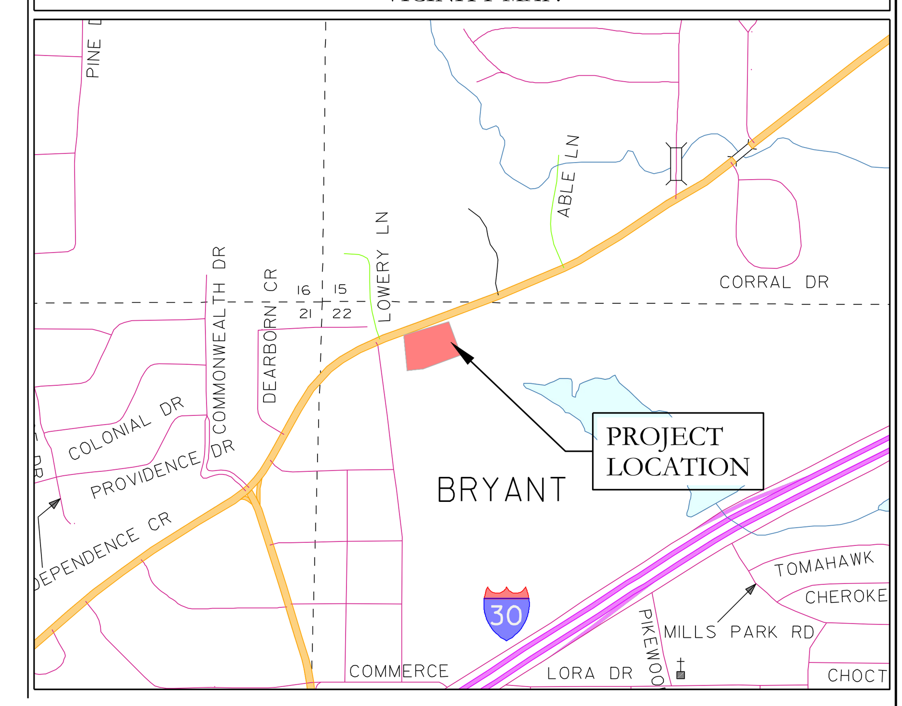
CARRIER (ID)	2"	3"	4"	6"	8	10"	12"
CASING (ID)	5"	6"	8"	12"	16"	20"	24"
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"
CASING (ID)	30"	36"	42"	48"	54"	60"	72"
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750

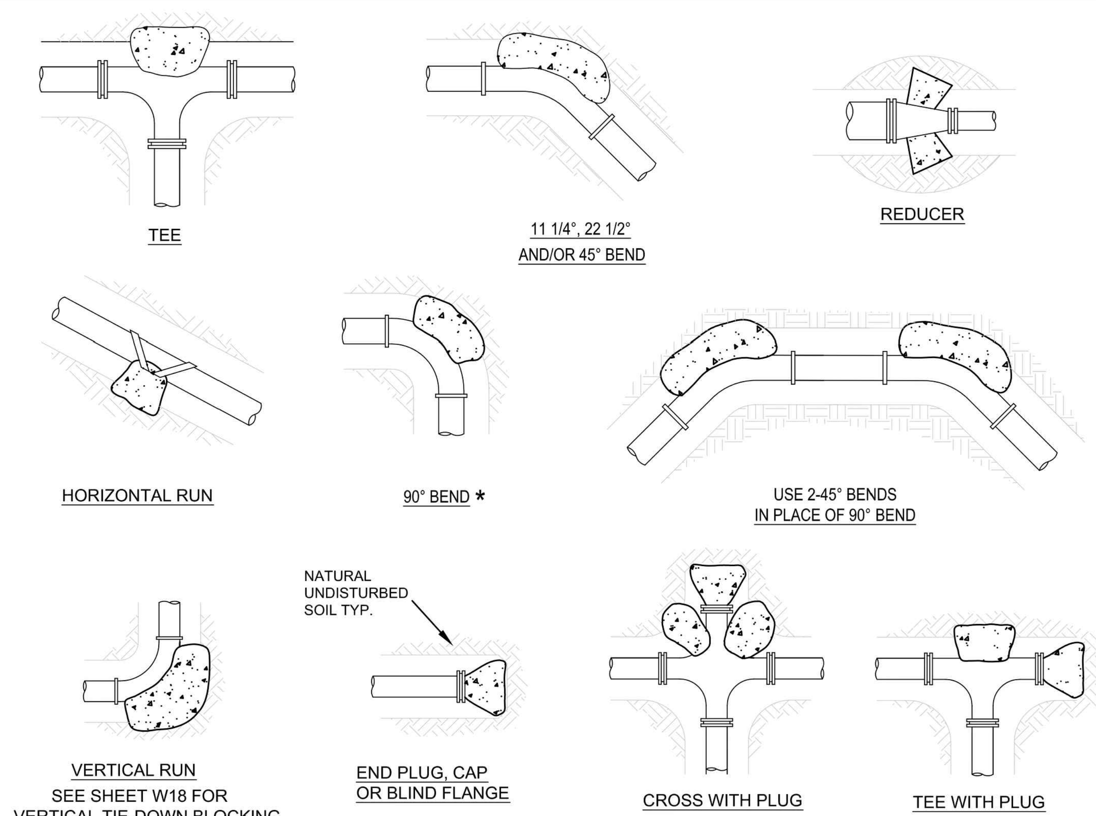
STEEL ENCASEMENT

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

TITLE: WATER DETAILS
DESCRIPTION: STEEL ENCASEMENT
DATE: APRIL 2015
REVISED
DRAWN BY: CHECKED BY: FILE: W15-Steel Encasement.dwg
SHEET: W15

VICINITY MAP:





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				FITTING SIZE	BEND ANGLE				ROD DIAM.	EMBED-MENT
		90° *	45°	22 1/2°	11 1/4°		90° *	45°	22 1/2°	11 1/4°		
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

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

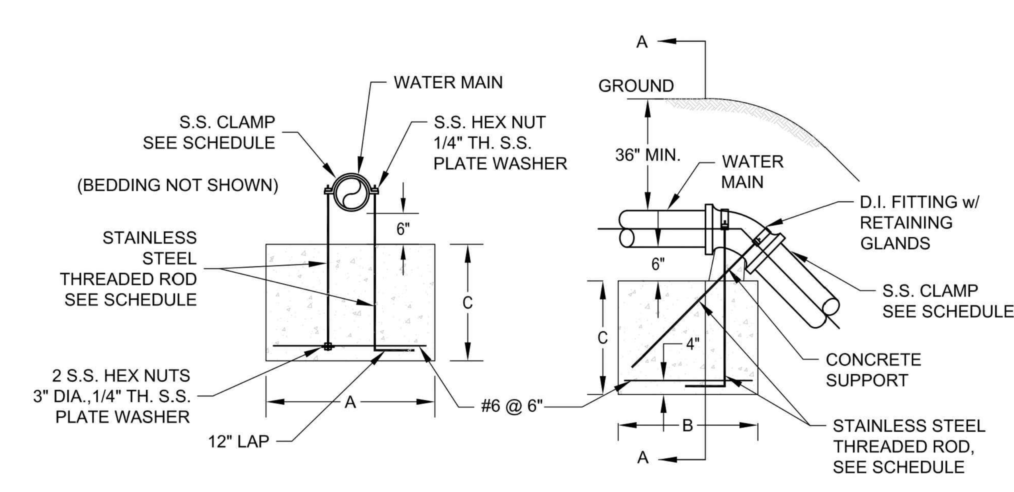
TITLE: WATER DETAILS
DESCRIPTION: THRUST BLOCKING
DATE: APRIL 2015
REVISED
DRAWN BY: CHECKED BY: FILE: W16-Thrust Blocking.dwg
SHEET: W16

BLOCKING SCHEDULE

PIPE SIZE		BENDS 45°	22 1/2°	11 1/4°	ROD DIA.
	VOLUME REQ'D (CU. FT.)	98.5	50.2	25.2	3/4 IN.
8"	A (FT.)	5.00'	4.00'	3.00'	
	B (FT.)	4.00'	3.20'	2.80'	
	C (FT.)	5.00'	4.00'	3.00'	
	MIN. CLAMP (2 EA.)	3/8 IN. x 2 IN.			
	VOLUME REQ'D (CU. FT.)	209.5	106.8	53.7	3/4 IN.
12"	A (FT.)	6.00'	5.00'	4.00'	
	B (FT.)	6.00'	4.25'	3.50'	
	C (FT.)	6.00'	5.00'	4.00'	
	MIN. CLAMP (2 EA.)	1/2 IN. x 2 IN.			
	VOLUME REQ'D (CU. FT.)	457.2	233.1	117.1	1 IN.
18"	A (FT.)	8.00'	6.50'	5.00'	
	B (FT.)	7.25'	5.50'	4.75'	
	C (FT.)	8.00'	6.50'	5.00'	
	MIN. CLAMP (2 EA.)	5/8 IN. x 3 IN.			
	VOLUME REQ'D (CU. FT.)	800.3	408.0	205.0	1 1/4 IN.
24"	A (FT.)	9.50'	7.50'	6.00'	
	B (FT.)	9.00'	7.25'	5.75'	
	C (FT.)	9.50'	7.50'	6.00'	
	MIN. CLAMP (2 EA.)	5/8 IN. x 3 IN.			

VOLUME CALCULATED ON THE BASIS OF CONCRETE REACTING THRUST ON THE RESPECTIVE BENDS UNDER AN INTERNAL PRESSURE OF 250 PSI, 50 PSI SURGE AND THE WEIGHT OF CONCRETE IS 150 POUNDS PER CU. FT.

ALL FITTINGS SHALL BE MECHANICAL JOINTS WITH RETAINING GLANDS. BEDDING NOT SHOWN



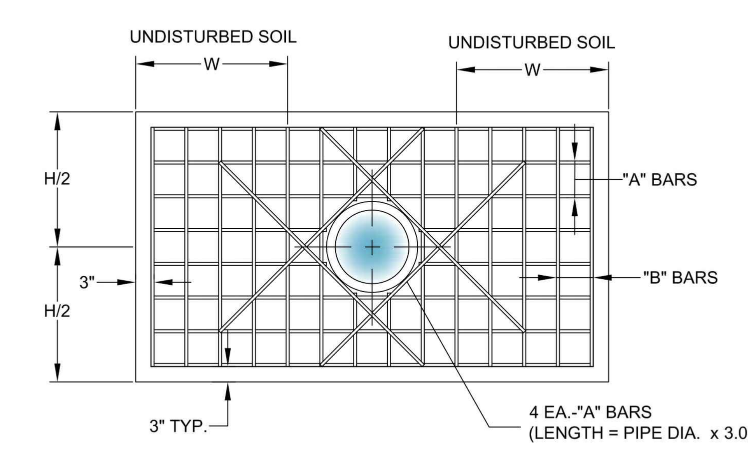
VERTICAL TIE-DOWN BLOCKING

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

TITLE: WATER DETAILS
DESCRIPTION: VERTICAL TIE-DOWN BLOCKING
DATE: APRIL 2015
REVISED
DRAWN BY: CHECKED BY: FILE: W17-Vertical Tie-Down Blocking.dwg
SHEET: W17

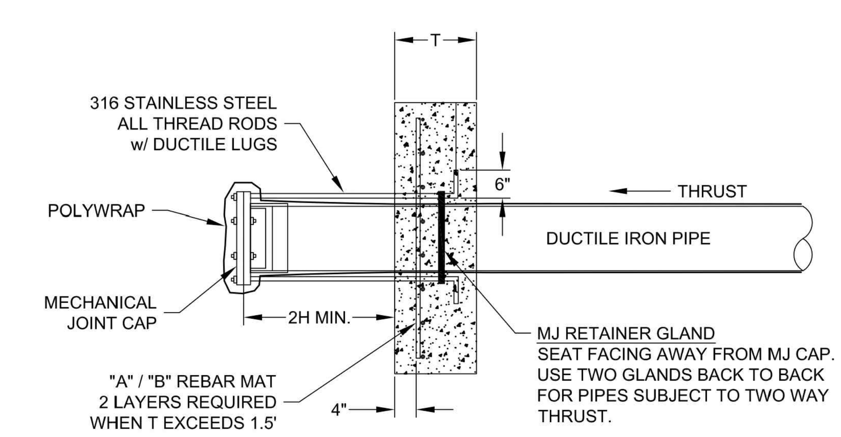
ANCHOR COLLAR SCHEDULE

PIPE SIZE	* MINIMUM DIMENSIONS * W	H	T	REINFORCING BARS "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.



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

TITLE: WATER DETAILS
DESCRIPTION: ANCHOR COLLAR
DATE: APRIL 2015
REVISED
DRAWN BY: CHECKED BY: FILE: W18-Anchor Collar.dwg
SHEET: W18

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
TAMZIDUL ISLAM
11-25-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1551
ARKANSAS

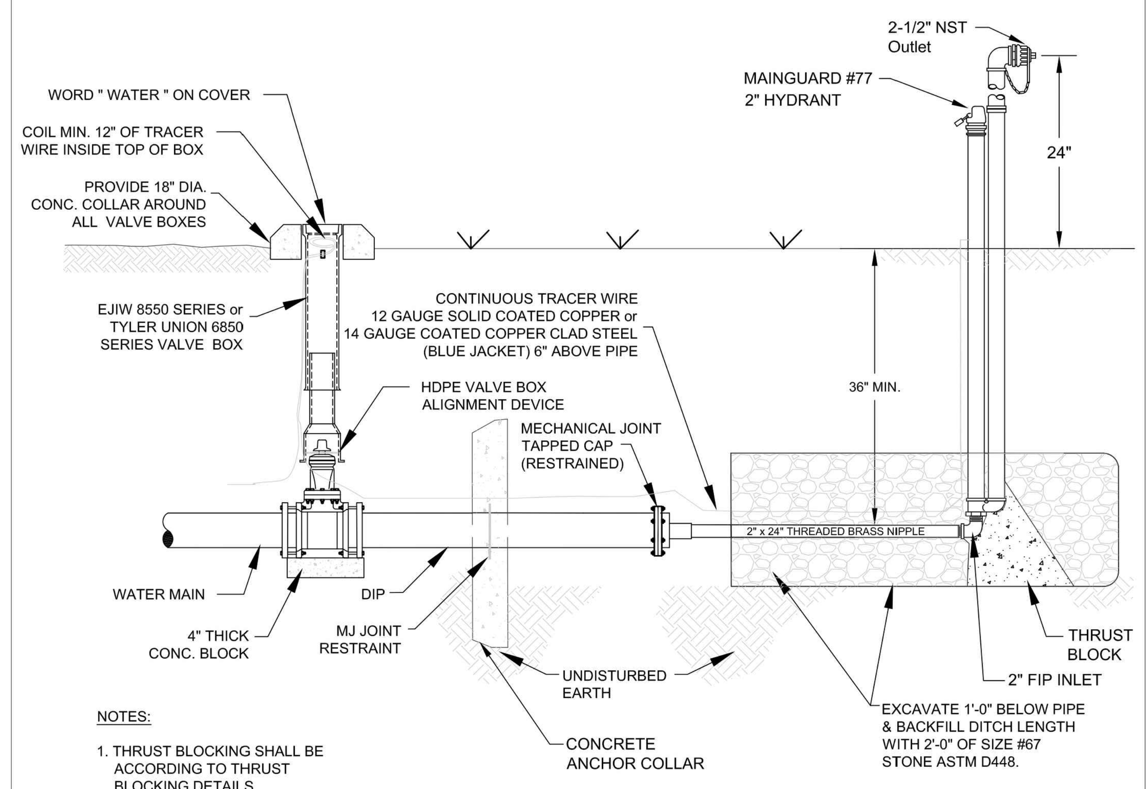
HOPE CONSULTING
ENGINEERS - SURVEYORS

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

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 3
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:				DRAWING NUMBER:		
REVISED:		CHECKED BY:				25-0608		
SHEET:	C-3.9	SCALE:						
500	01S	14W	0	22	440	62	1762	



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

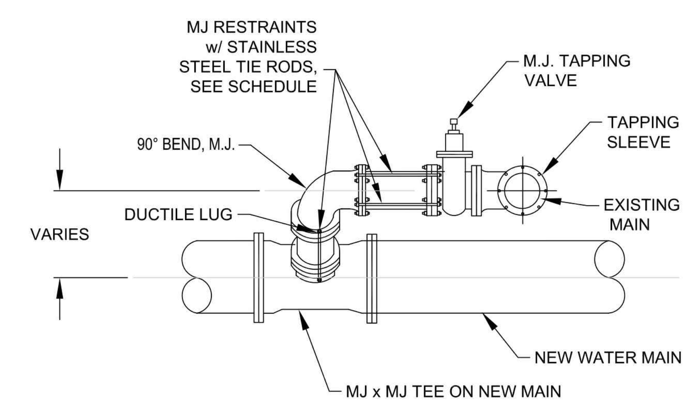
TITLE: WATER DETAILS
DESCRIPTION: BLOW-OFF ASSEMBLY
DATE: APRIL 2015
SHEET: W19

NOTES:

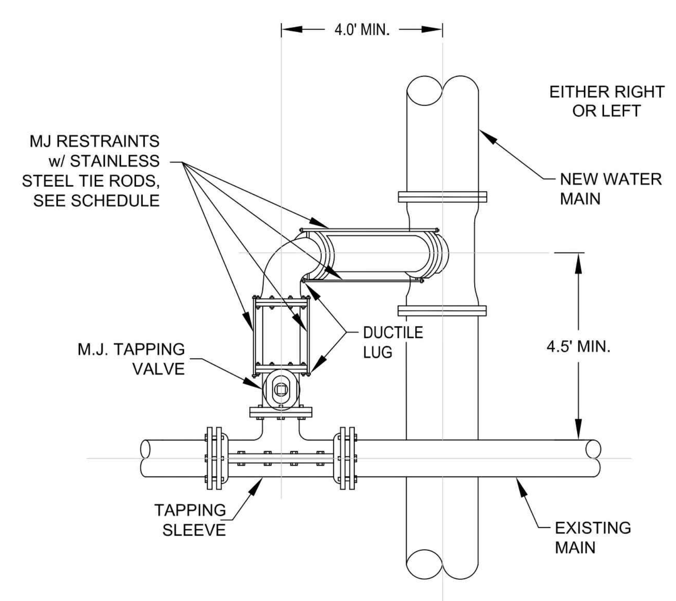
1. SWING CONNECTIONS USING 90° BENDS SHALL BE PERMITTED BY THE CITY ON A CASE BY CASE BASIS.
2. CONTRACTOR SHALL LOCATE EXISTING MAIN IN ADVANCE OF LAYING NEW LINE IN ORDER TO ASSURE ADEQUATE LENGTH TO ADJUST DEPTH OF NEW MAIN.
3. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS TO PROVIDE ADEQUATE ROOM FOR 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



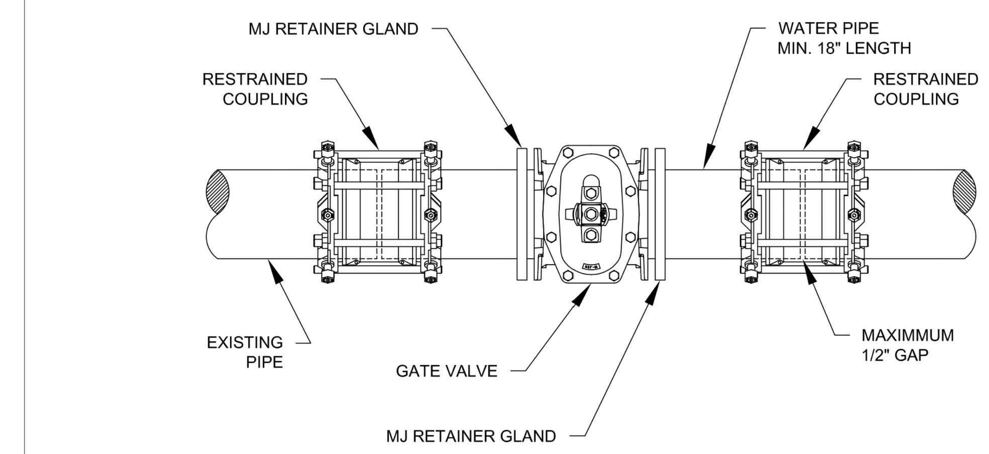
PLAN VIEW

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

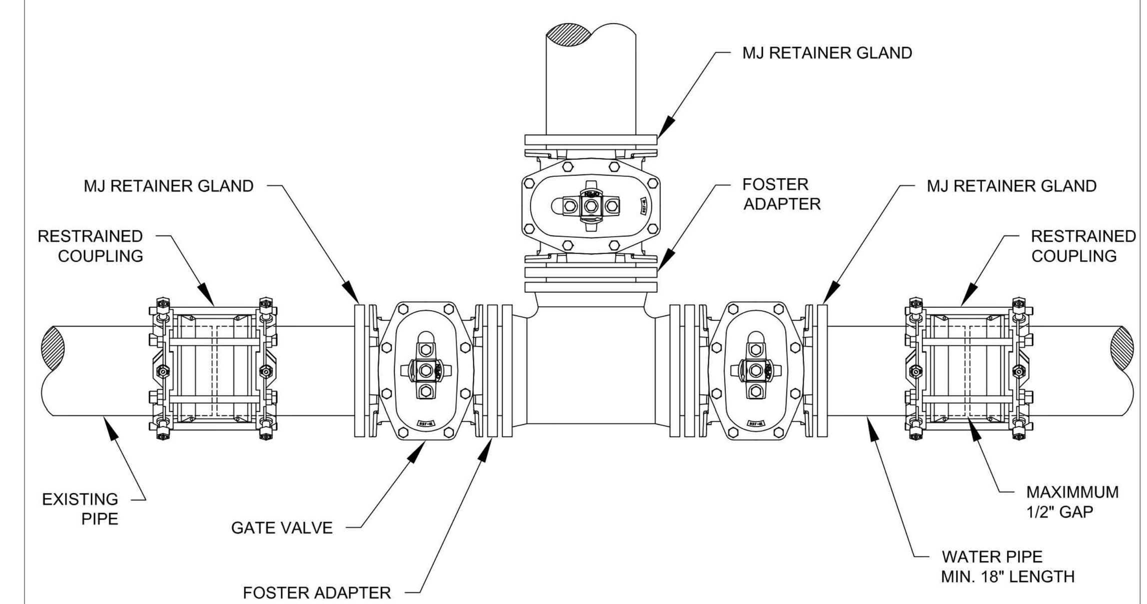
TITLE: WATER DETAILS
DESCRIPTION: SWING CONNECTION - NEW MAIN TO EXISTING MAIN
DATE: APRIL 2015
SHEET: W20

NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED.
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.



VALVE CUT-IN



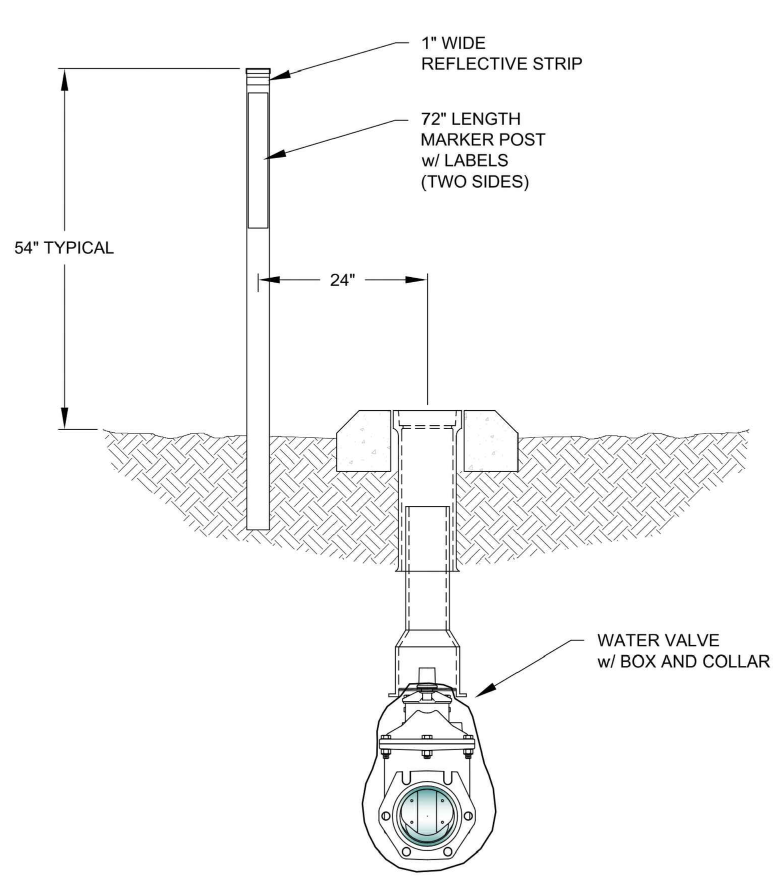
TEE AND VALVES CUT-IN

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

TITLE: WATER DETAILS
DESCRIPTION: VALVE CUT-IN
DATE: APRIL 2015
SHEET: W21

NOTES:

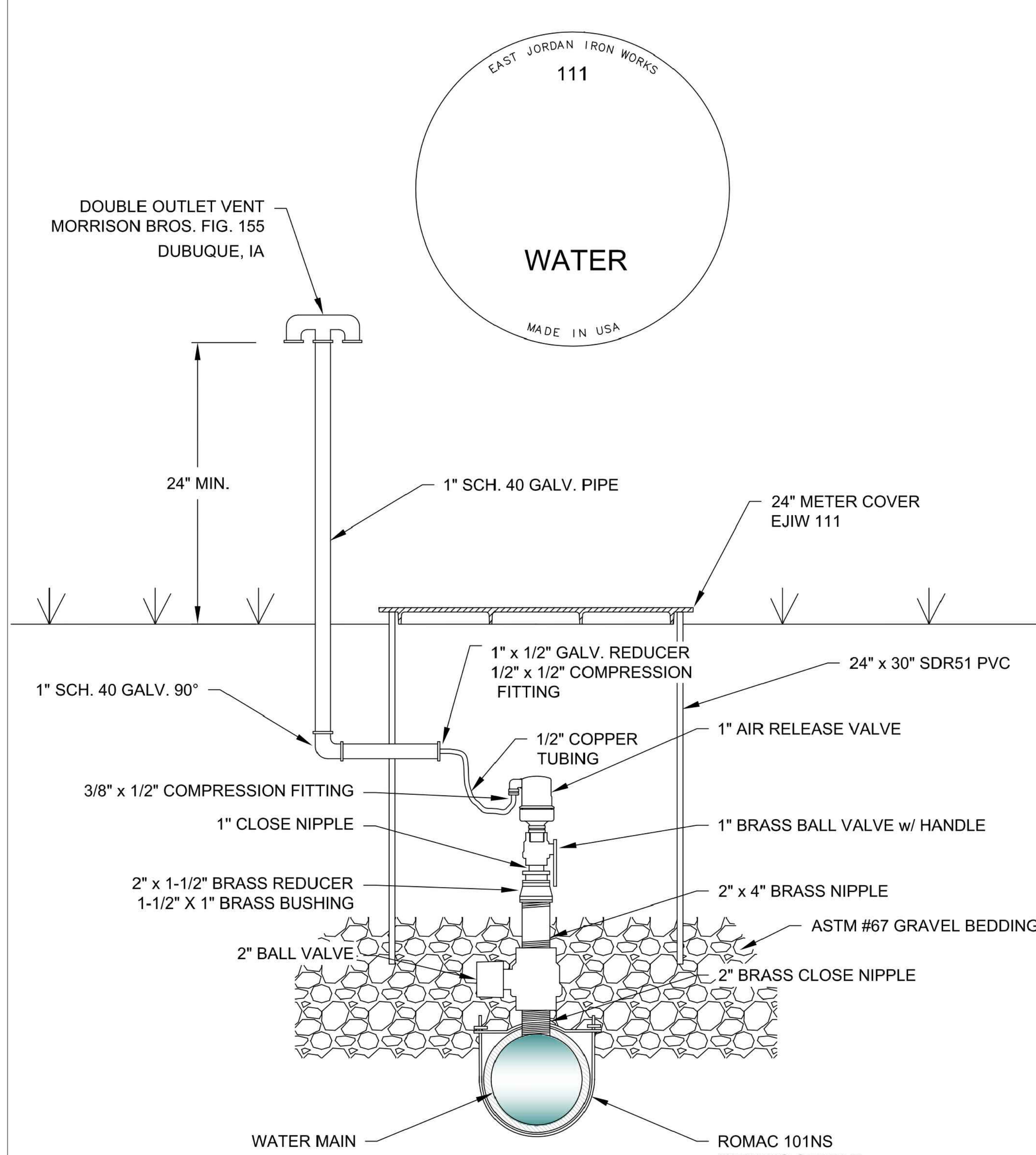
1. WATER LINE MARKERS SHALL BE TRI-VIEW MARKING SYSTEM BY RHINO MARKING AND PROTECTION SYSTEMS OR CARSONITE INTERNATIONAL DUAL-SIDED UTILITY MARKER (CIB-380).
2. THE UPPERMOST PORTION OF THE CARSONITE MARKER SHALL BE MADE OF VISIBILITY ENHANCER (CVE-360).
3. TRI-VIEW MARKERS DO NOT REQUIRE VISIBILITY 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

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

TITLE: WATER DETAILS
DESCRIPTION: VALVE MARKER
DATE: APRIL 2015
SHEET: W22

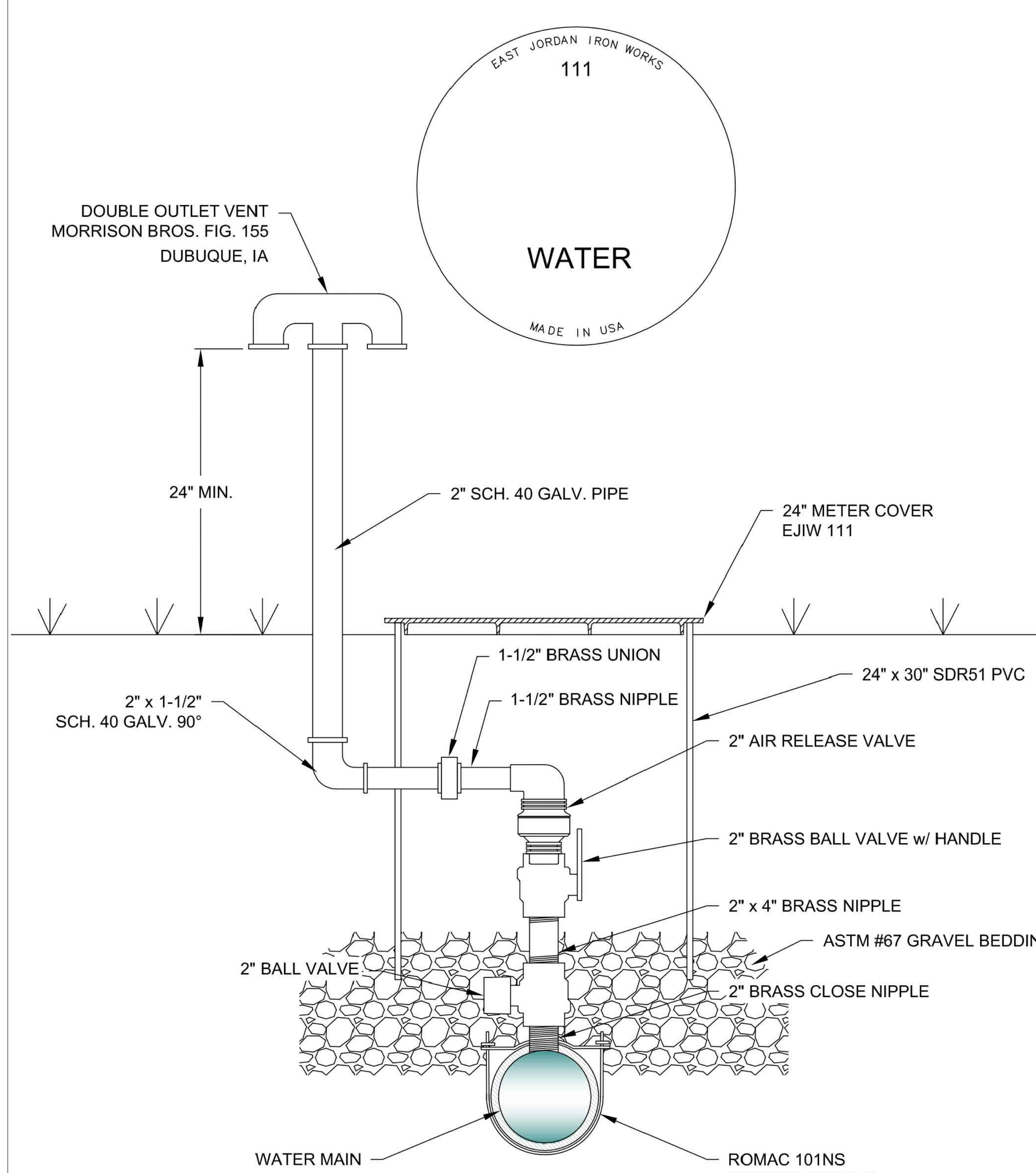


NOTES:

1. AIR VALVES SHALL HAVE NPT INLET AND OUTLETS.
2. TOP OF AIR VALVE SHALL BE MIN. 12" BELOW GROUND.
3. SEAL WALL PENETRATIONS WITH BUTYL SEALANT.

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

TITLE: WATER DETAILS
DESCRIPTION: 1" COMBINATION AIR VALVE
DATE: APRIL 2015
SHEET: W23



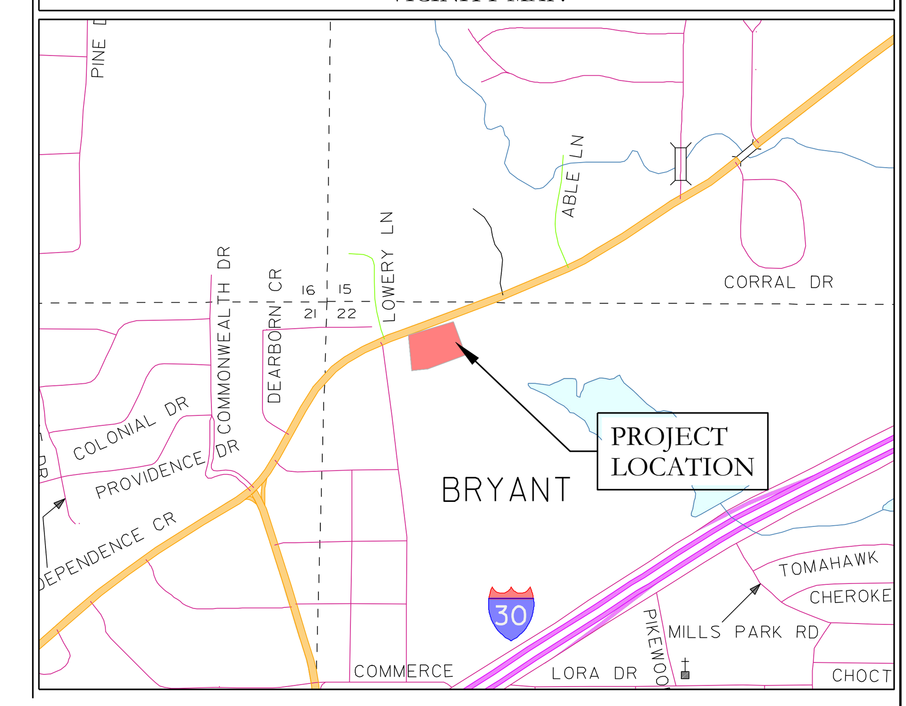
NOTES:

1. AIR VALVES SHALL HAVE NPT INLET AND OUTLETS.
2. TOP OF AIR VALVE SHALL BE MIN. 12" BELOW GROUND.
3. SEAL WALL PENETRATIONS WITH BUTYL SEALANT.

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

TITLE: WATER DETAILS
DESCRIPTION: 2" COMBINATION AIR VALVE
DATE: APRIL 2015
SHEET: W24

VICINITY MAP:



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
TAMZIDUL ISLAM
11-25-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1938
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
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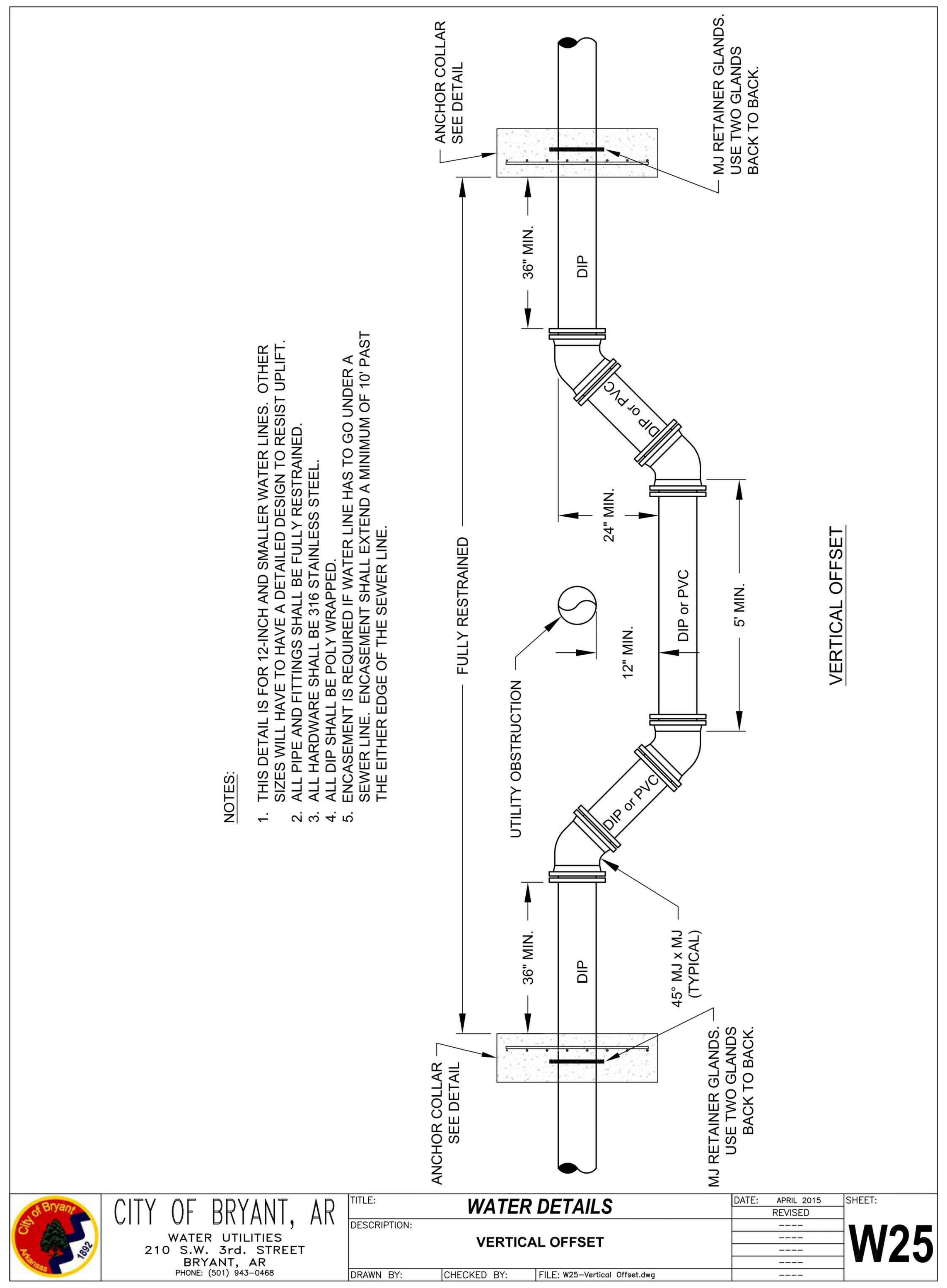
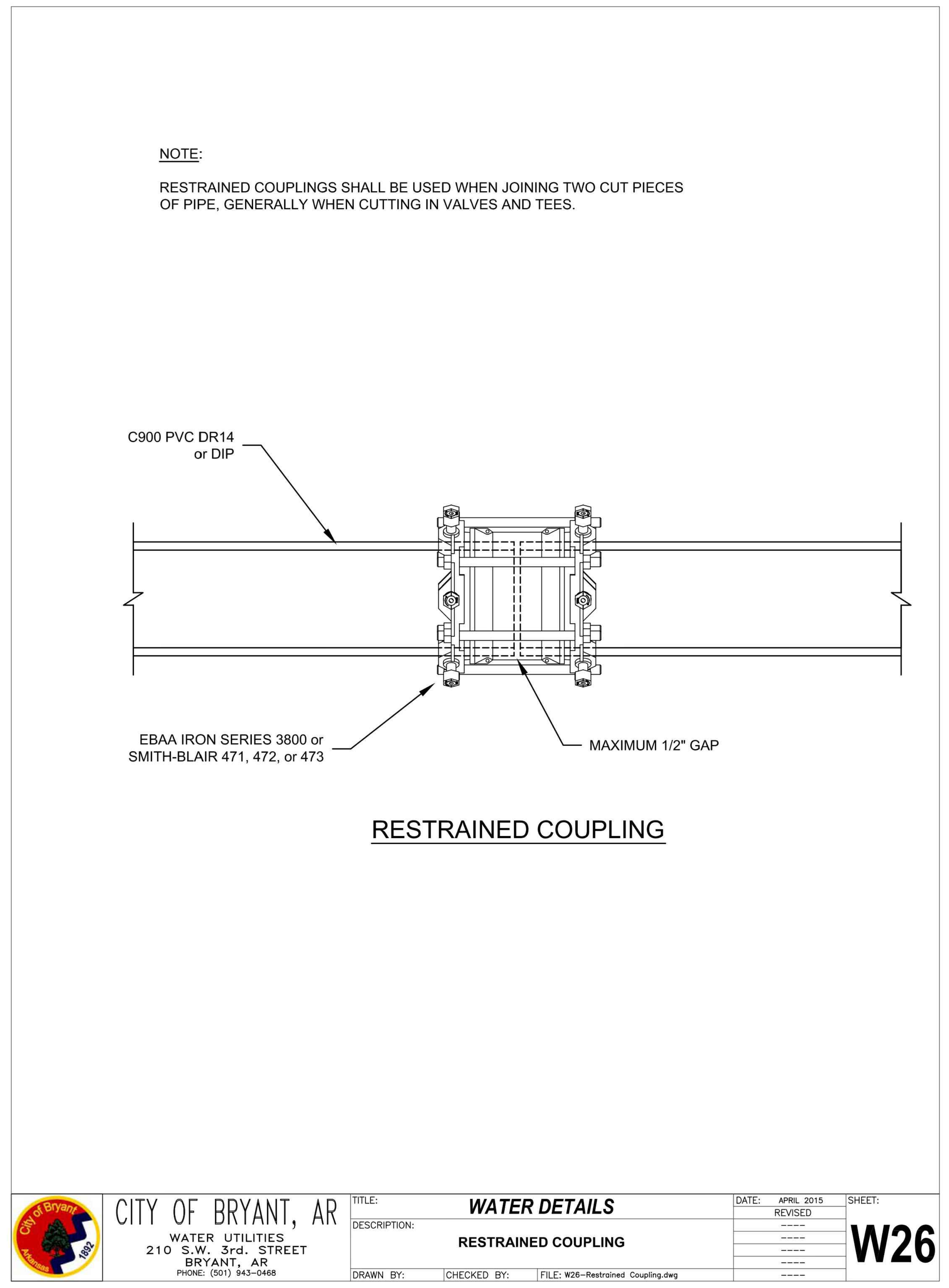
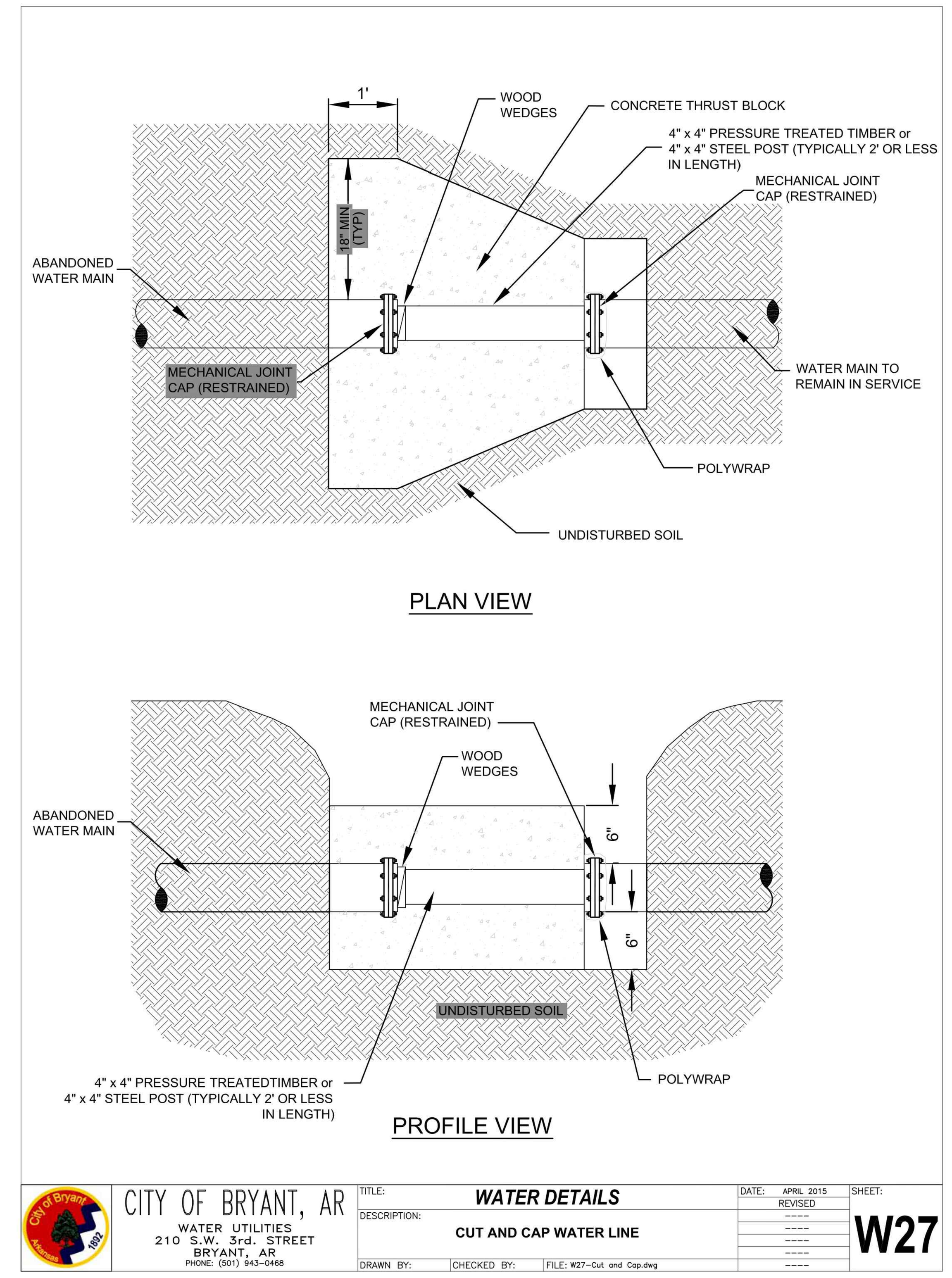
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 4
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

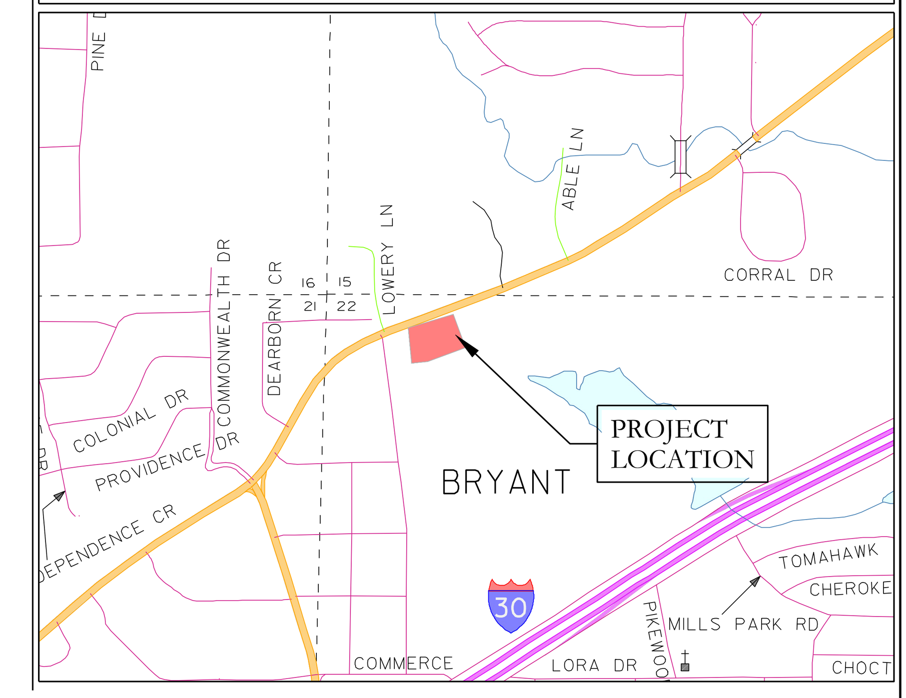
DATE:	11.25.25	C.A.D. BY:		DRAWING NUMBER:		
REVISED:		CHECKED BY:		25-0608		
SHEET:	C.3.10	SCALE:				
500	01S	14W	0	22	440	62	1762

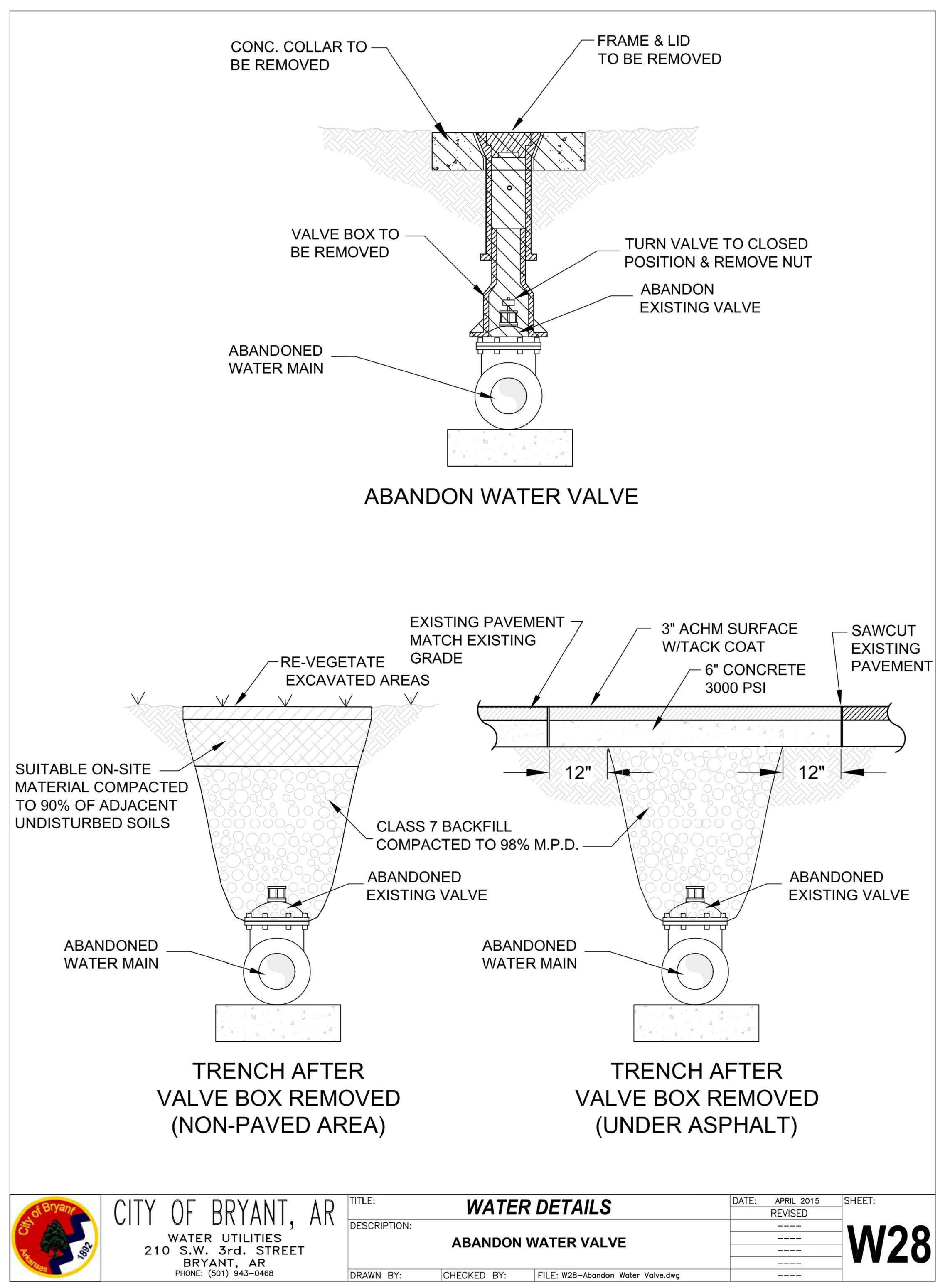


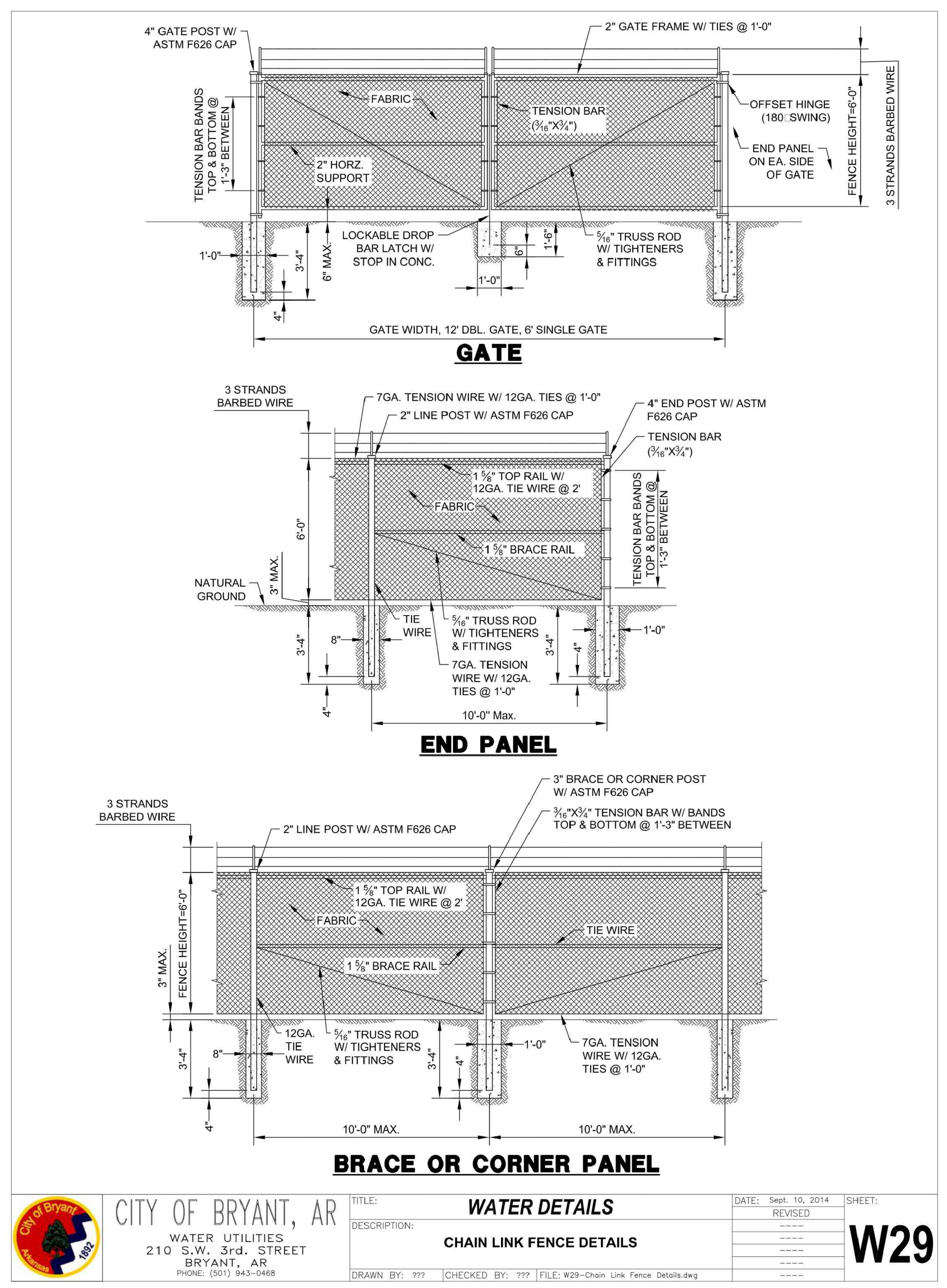


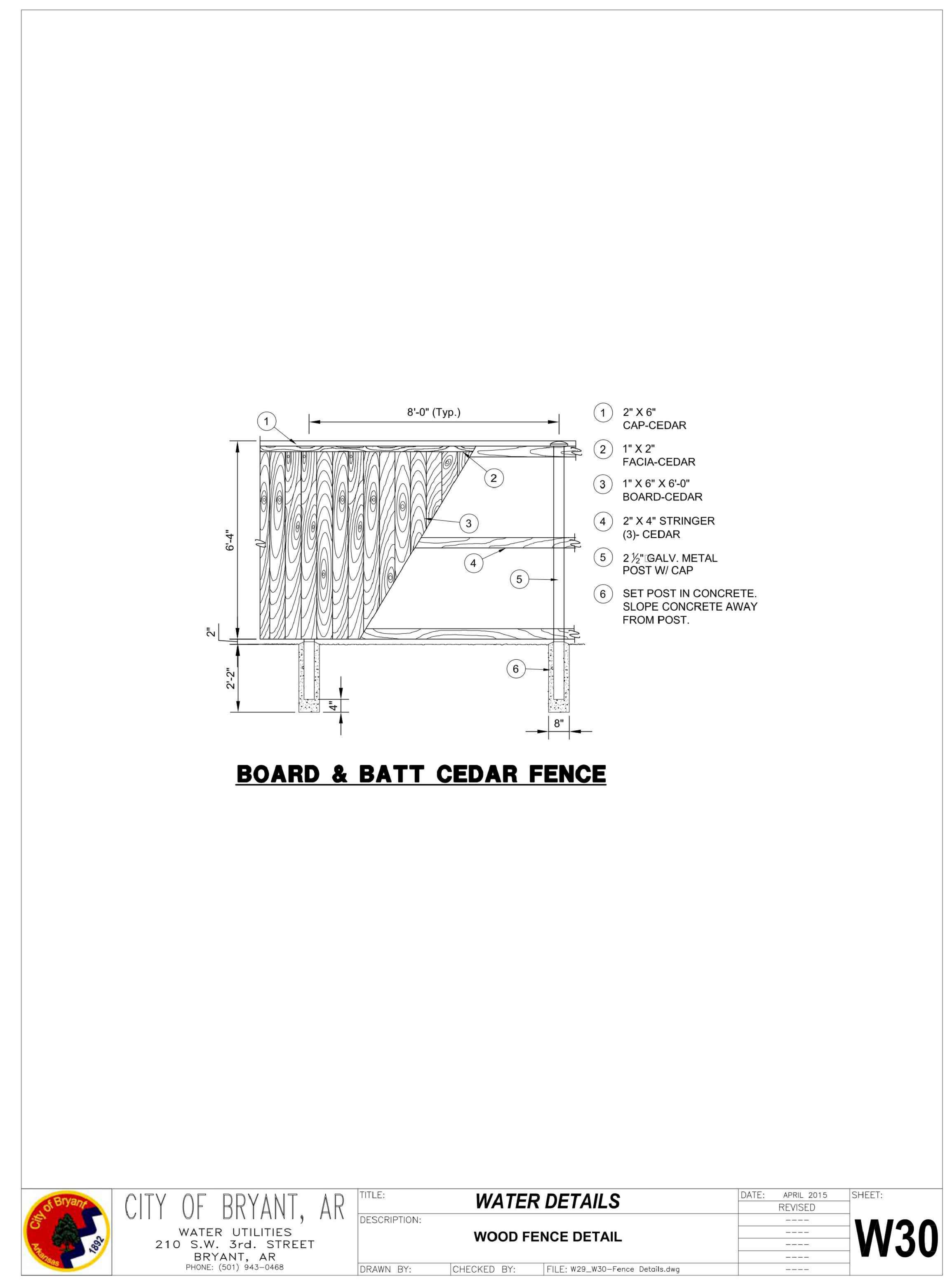


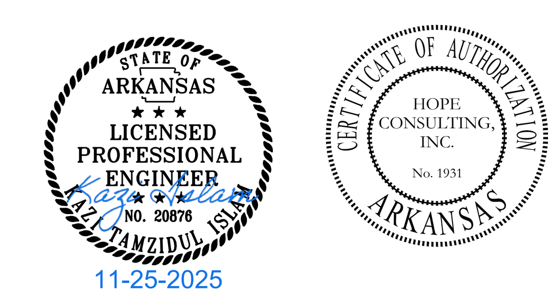
VICINITY MAP:











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129 N. Main Street,
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PH. (501)315-2626
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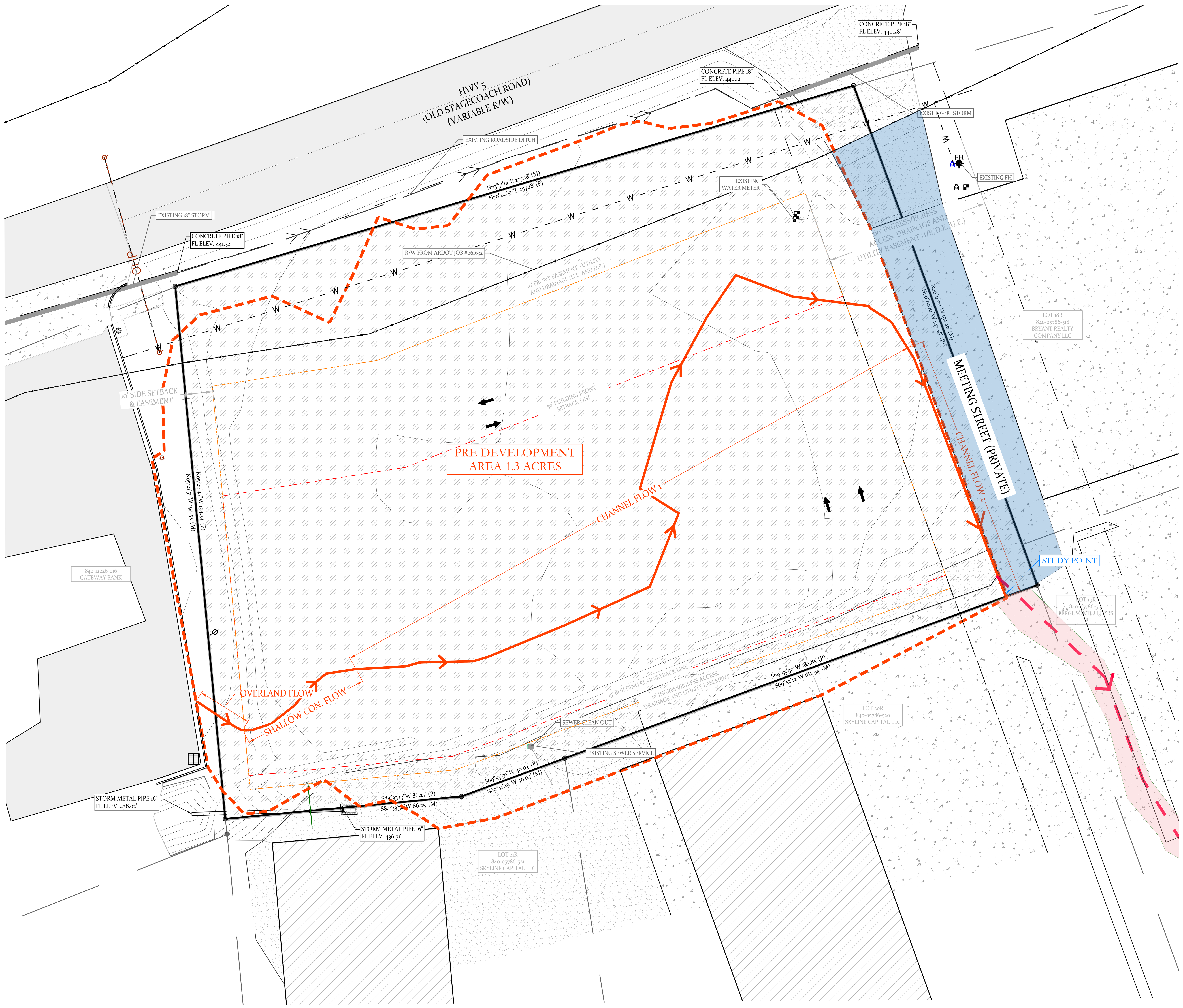
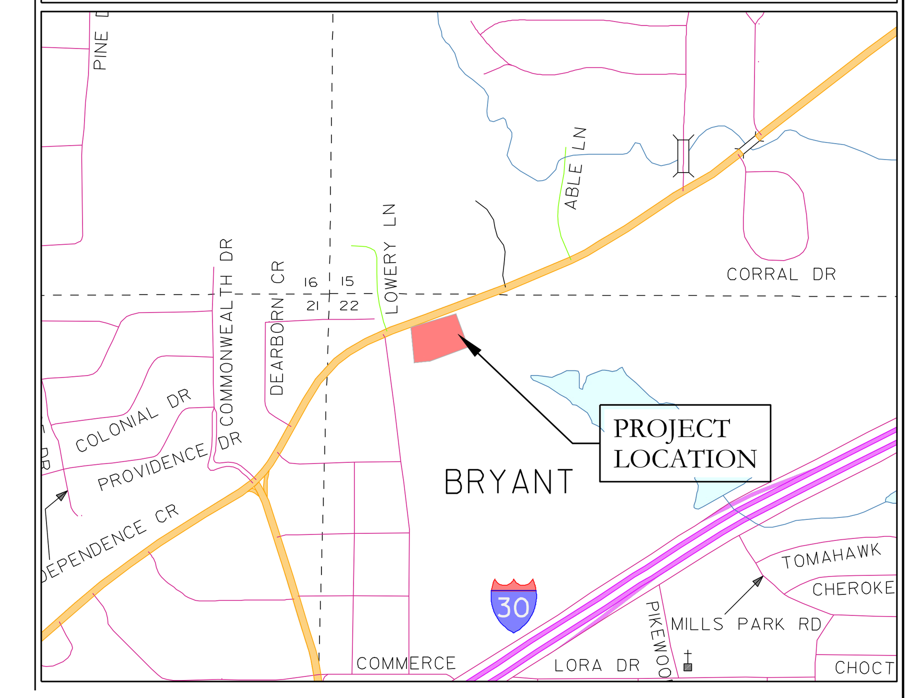
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 5
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE: 11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608	
REVISED:	CHECKED BY:		
SHEET: C-3.11	SCALE:		

500	01S	14W	0	22	440	62	1762





PRE DEVELOPMENT AREA TOC:

Area A

Time of Concentration, tc (min)		Velocity, V (ft/sec)	Length, L (ft)	Height, h (ft)	Slope, S (ft/ft)	Mannings, n	Hydraulic Radius, R
Area (ft2)	56814.3						
Area (Acre)	*1.30*						
Total Length, L (ft)	***480.0***						
Change in Elevation (ft)	9.2						
Slope, S (ft/ft)	*0.019*						
N (Coeff. Of roughness, Table 400-3)	0.100						
L_i (overland/sheet flow, ft)	10.0						
L_{scs} (shallow concentrated, ft)	60.0						
L_{cs} (channel , ft)	310.0						
$t_i = 0.83\frac{(N\,L_i)^{0.467}}{S^{0.5}}$, (min)	*2.93*		10.0	0.8	*0.080*		
$t_{scs} = \frac{L_{scs}}{60\,V}$, (min) , unpaved							
V=16.1345(S^0.5)	*0.29*	*3.42*	60.0	2.7	*0.045*		
$t_{cs} = \frac{L_{cs}}{60\,V}$, (min)							
$V = \frac{1.49}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$ Ch1	*4.49*	*1.15*	310.0	2.0	*0.006*	0.050	*0.333*
$V = \frac{1.49}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$ Ch2	*0.16*	*10.66*	100.0	3.7	*0.037*	0.011	*0.262*
Total time of concentration, tc (min)	**7.87**						
USE	**7.50**	**min**					

MARKET PLACE-II PHASE 3

PRE DEVELOPMENT DRAINAGE AREA

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

N

20' 10' 0 20'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
11-25-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1551
ARKANSAS

OWNER:		DEVELOPER:	
Name:	PHILLIP RYE	Name:	RYE GENERAL CONTRACTORS
Address:	7416 PALM BEACH, BENTON AR 72019	Address:	6128 HIGHWAY 5 NORTH AR 72022
Phone:	501-317-9883	Phone:	
Email:	phillipRye@phillipRye.com	Email:	

SITE DATA	
TOTAL SITE AREA	1.30 ACRES
TOTAL DEVELOPMENT AREA	1.30 ACRES
GROSS BUILDING AREA	BUILDING 111340 SQ. FT.
BUILDING SETBACKS	FRONT SETBACK LINE: 50' RIGHT SIDE SETBACK LINE: AS SHOWN REAR SETBACK LINE: 15' LEFT SIDE SETBACK LINE: 10'
BUILDING HEIGHTS	1 STORY
BUSINESS TYPE	RETAIL
PARKING CALCULATION (PROVIDED)	PROVIDED PARKING SPACES 41 (2 ADA SPACES)

LEGEND

- PLSS Aliquot Corner
- Fnd. Corner Monument
- Set 1/2" Rebar/Cap (1664)
- Computed Point
(M)- As Measured
(P)- Per Deed or Plat Records
ESMT - Easement
B.S.L. - Building Setback Lines
- Clean Out
- Water Meter
- Power Pole
- Sewer Manhole
- Light Pole
- Telephone Pedestal
- Drainage Manhole
- Gas Meter
- Fence
- Overhead Power
- Sewer Line
- Water Line
- Telephone Line
- Electric Line
- Gas Line
- Existing Access Agreement
- Public Right-of-Way Dedication

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FAX (501) 315-0024
www.hopeconsulting.com

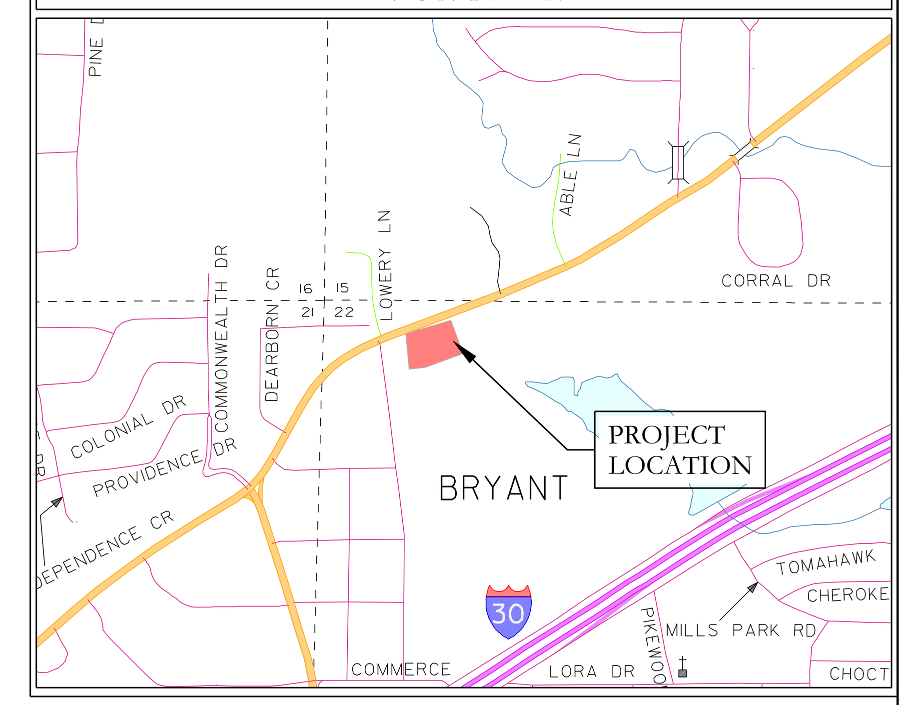
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
PRE DEVELOPMENT AREA TOC CALULATION
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
SHEET:	C-4.1	SCALE:	

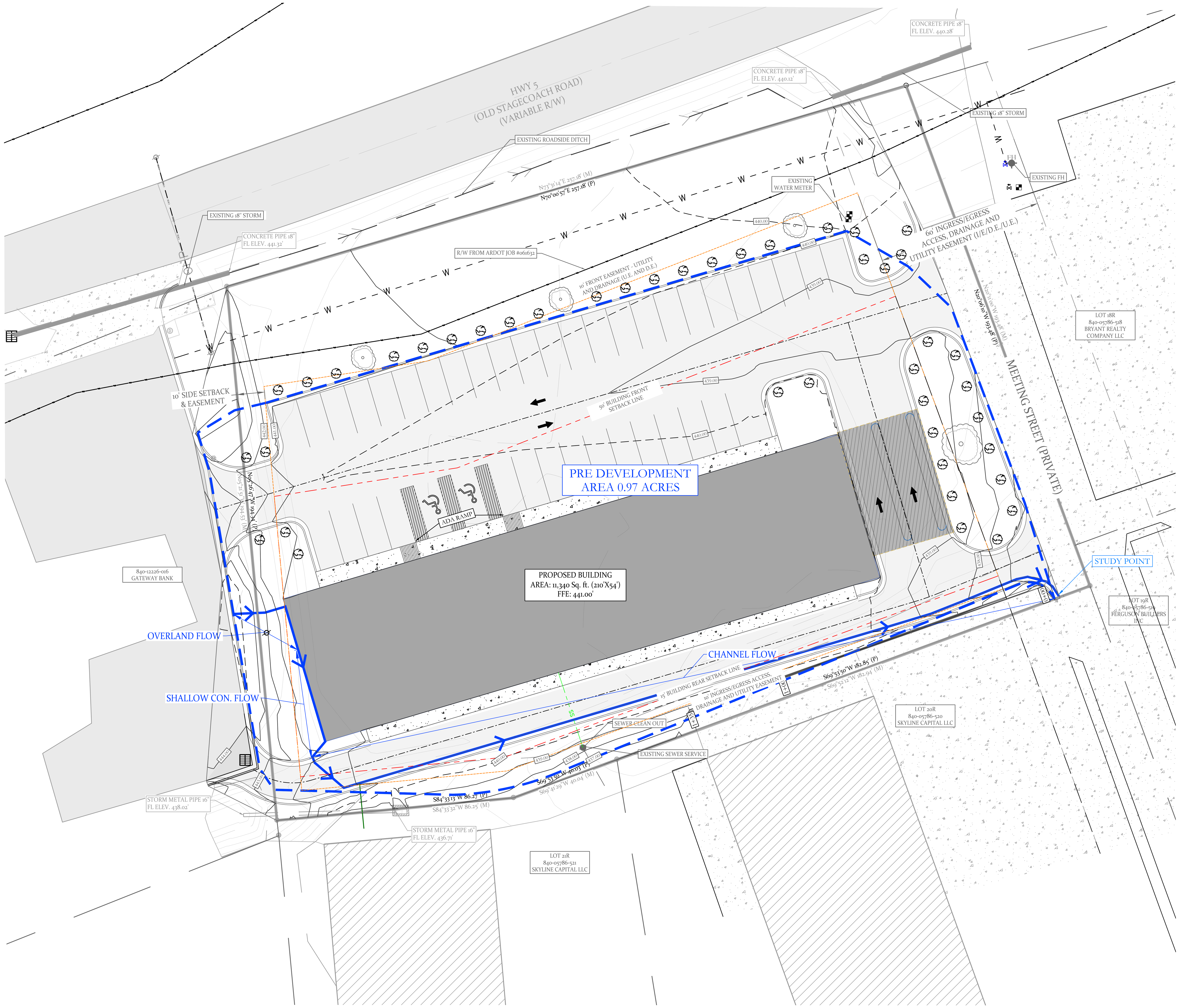
500	01S	14W	0	22	440	62	1762

VICINITY MAP:



POST DEVELOPMENT AREA TOC:

Time of Concentration, tc (min)							
Area (ft2)	42090.7						
Area (Acre)	*0.97*						
Total Length, L (ft)	***370.0***						
Change in Elevation (ft)	10.8						
Slope, S (ft/ft)	*0.029*						
N (Coeff. Of roughness, Table 400-3)	0.400						
L_i (overland/sheet flow, ft)	*30.0*						
L_{scs}(shallow concentrated, ft)	*40.0*	Velocity, V (ft/sec)	Length, L (ft)	Height, h (ft)	Slope, S (ft/ft)	Mannings, n	Hydraulic Radius, R
L_{cs} (channel , ft)	300.0						
$t_i = 0.42 \frac{(N\,L_i)^{0.8}}{P^{0.5} \cdot S^{0.4}}$, (min)	*3.72*		30.0	3.6	*0.120*		
$t_{scs} = \frac{L_{scs}}{60\,V}$, (min) , unpaved; *V=16.1345(S^0.5)*	*0.83*	*0.81*	40.0	0.1	*0.003*		
$t_{cs} = \frac{L_{cs}}{60\,V}$, (min); $V = \frac{1.49}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$ Ch1	*0.54*	*9.35*	300.0	7.1	*0.024*	0.011	*0.300*
Total time of concentration, tc (min)	**5.08**						
USE	**5.00**	min					



MARKET PLACE-II PHASE 3

POST DEVELOPMENT AREA

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

N

20' 10' 0 20'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20676
TAMZIDUL ISLAM
11-25-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1551
ARKANSAS

OWNER:		DEVELOPER:	
Name:	PHILLIP RYE	Name:	RYE GENERAL CONTRACTORS
Address:	7416 PALM BEACH, BENTON AR 72019	Address:	6128 HIGHWAY 5 NORTH AR 72022
Phone:	501-317-9883	Phone:	
Email:	phillipye@phillipye.com	Email:	

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ESMT - Easement
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FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
POST DEVELOPMET AREA TOC CALCULATION
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-4.2	SCALE:	

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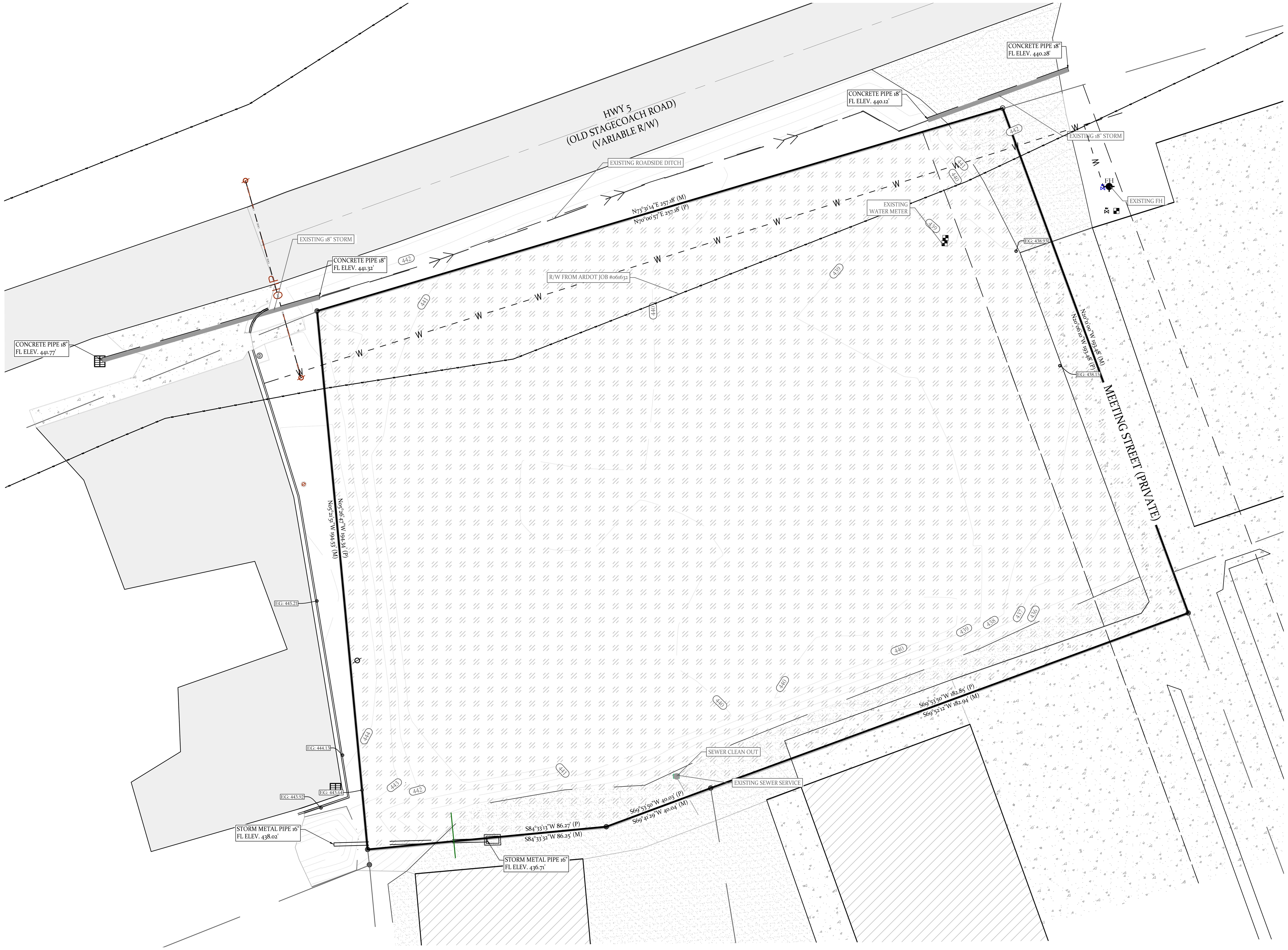
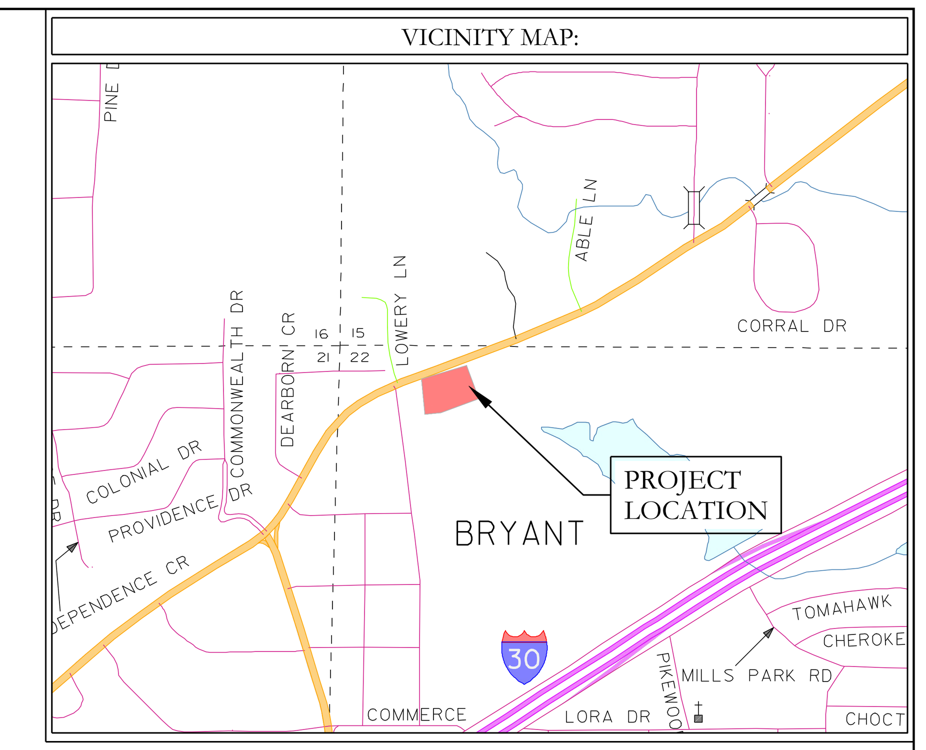


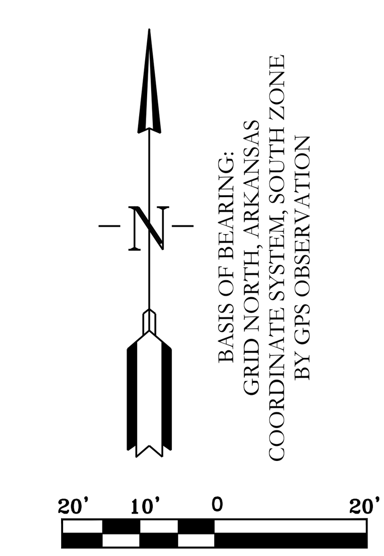
MARKET PLACE-II PHASE 3

PRE DEVELOPMENT



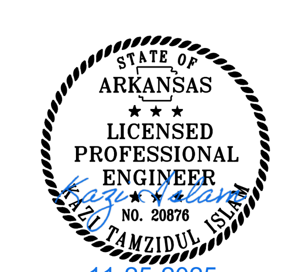
RUNOFF CO-EFFICIENT FOR SURFACE TYPE

HATCH TYPE	SURFACE TYPE	RUNOFF CO-EFFICIENT (100- yr)
	POOR CONDITION, AVERAGE SLOPE	0.53



DRAINAGE CALCULATION(PRE DEVELOPMENT)

SURFACE TYPE	RUNOFF CO-EFFICIENT (100-yr.)	AREA (ha)	TOTAL AREA (ha), A	RAINFALL INTENSITY (inches/hr) (5 min Duration Rain) 5 YEAR	10 YEAR	25 YEAR	100 YEAR
POOR CONDITION, AVERAGE SLOPE	0.53	1.3	1.3	7.28	8.21	9.43	11.2
	PEAK DISCHARGE,Q = CIA			5.02 cfs	5.66 cfs	6.50 cfs	7.72 cfs



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FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
DRAINAGE CALCULATION (PRE DEVELOPMENT)
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		25-0608
SHEET:	C-4.3	SCALE:		

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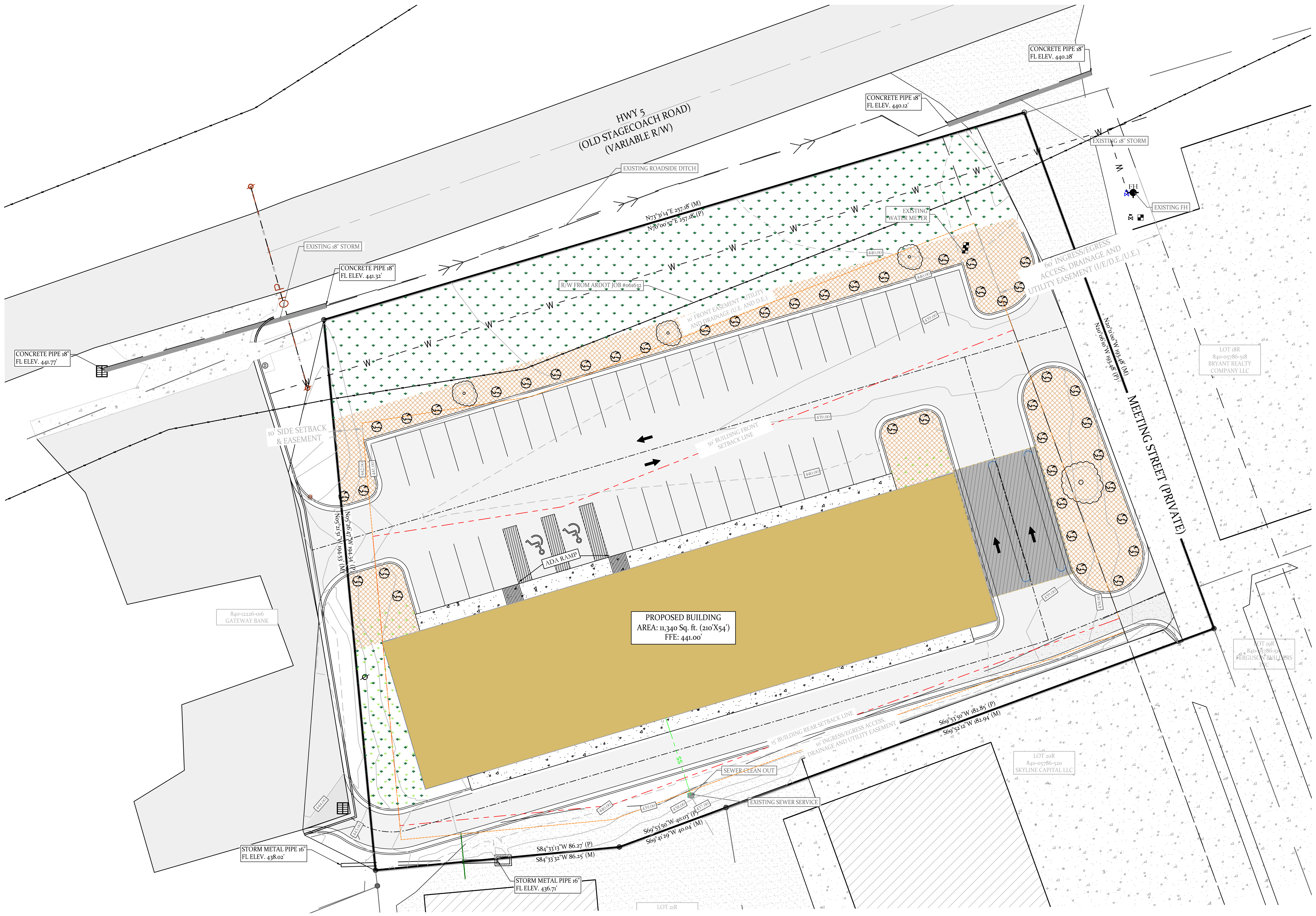
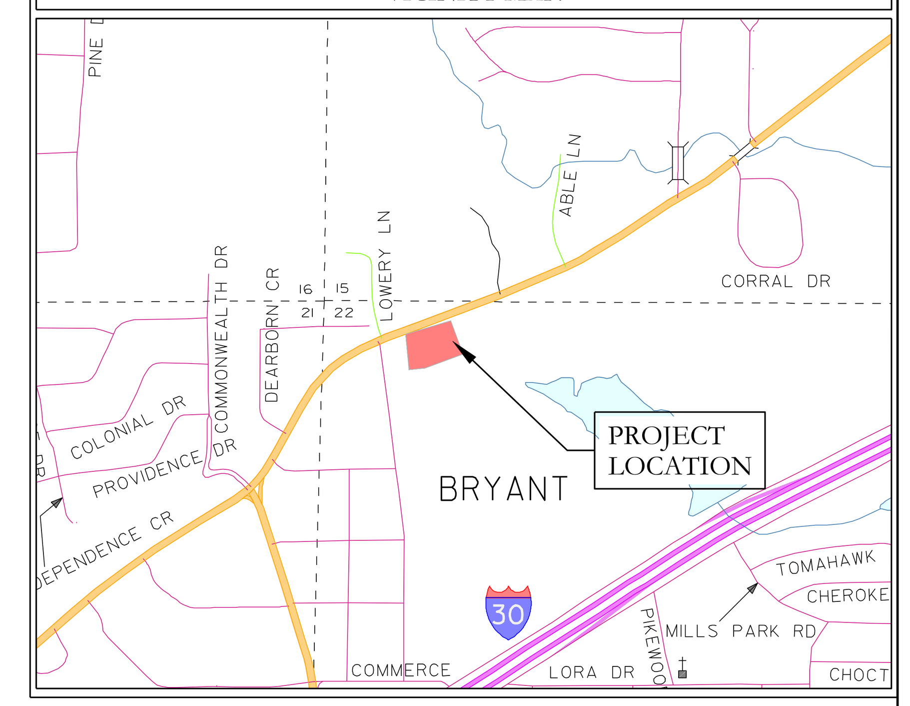


MARKET PLACE-II PHASE 3
POST DEVELOPMENT

VICINITY MAP:

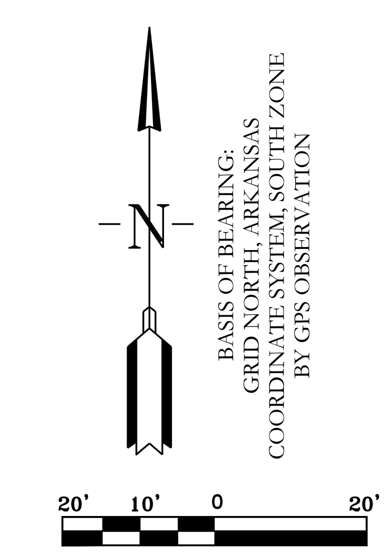


RUNOFF CO-EFFICIENT FOR SURFACE TYPE		
HATCH TYPE	SURFACE TYPE	RUNOFF CO-EFFICIENTS
	ASPHALTIC	0.95
	GREEN AREA	0.33
	MULCH BED	0.13
	ROOF	0.97
	CONCRETE	0.97

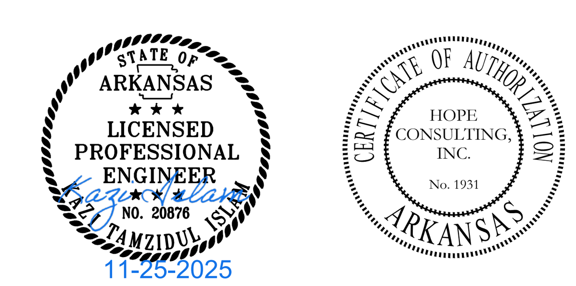
DRAINAGE CALCULATION (POST DEVELOPMENT)

SURFACE TYPE	RUNOFF CO-EFFICIENT (100-yr.)	AREA (ha)	TOTAL AREA (ha), A	AVG. RUNOFF CO-EFFICIENT, C	RAINFALL INTENSITY (inches/hr) (5 min Duration Rain) 5 YEAR	10 YEAR	25 YEAR	100 YEAR
ASPHALTIC	0.95	0.6	0.99	0.88	7.28	8.21	9.43	11.2
MULCH BED	0.46	0.13						
GREEN AREA*	0.46	0.02						
ROOF	0.97	0.2						
CONCRETE	0.97	0.04						
				PEAK DISCHARGE,Q = CIA	6.35 cfs	7.16 cfs	8.22 cfs	9.76 cfs

NOTE: **THE NORTHERN PORTION OF THE GREEN AREA WILL NOT BE INCLUDED IN THE DRAINAGE CALCULATION, AS IT DOES NOT CONTRIBUTE TO THE PROJECT'S SURFACE RUNOFF.*



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



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FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
DRAINAGE CALCULATION (POST DEVELOPMENT)
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE: 11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608	
REVISED:	CHECKED BY:		
SHEET: C-4.4	SCALE:		

500	01S	14W	0	22	440	62	1762

Meeting Street Drainage Capacity			
Path length	$L_{(path)}$	175.00	ft
Elevation	E	3.00	ft
Slope	S	0.017	ft/ft
Path width	W	6.00	ft
Avg depth	D	0.50	ft
Flow Area	A	3.00	ft^2
Wetted Perimeter	P	12.04	ft
Hydraulic Radious	R	0.249	ft
Manning's Coefficient	n	0.01	

Peak Discharge, $Q = \frac{1.49}{n} * A * R^{2/3} * S^{1/2} =$ **20.97 cfs**

Alley Path Drainage Capacity			
Path length	$L_{(path)}$	630.00	ft
Elevation	E	8.50	ft
Slope	S	0.013	ft/ft
Path width (Avg.)	W	11.00	ft
Avg depth	D	0.42	ft
Flow Area	A	4.58	ft^2
Wetted Perimeter	P	22.02	ft
Hydraulic Radious	R	0.208	ft
Manning's Coefficient	n	0.01	

Peak Discharge, $Q = \frac{1.49}{n} * A * R^{2/3} * S^{1/2} =$ **25.20 cfs**

MARKET PLACE-II PHASE 3

DRAINAGE FLOW PATH

MEETING STREET

ALLEY PATH

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

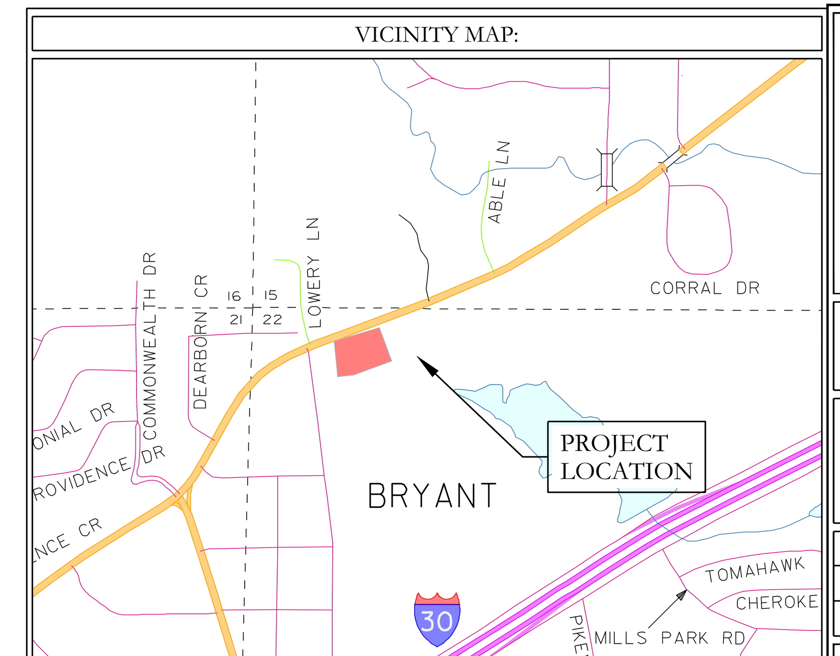
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
KAZI TAMZIDUL ISLAM
11-25-2025

N

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

50' 25' 0 50'

VICINITY MAP:



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FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
DRAINAGE FLOW PATH
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-4.5	SCALE:	

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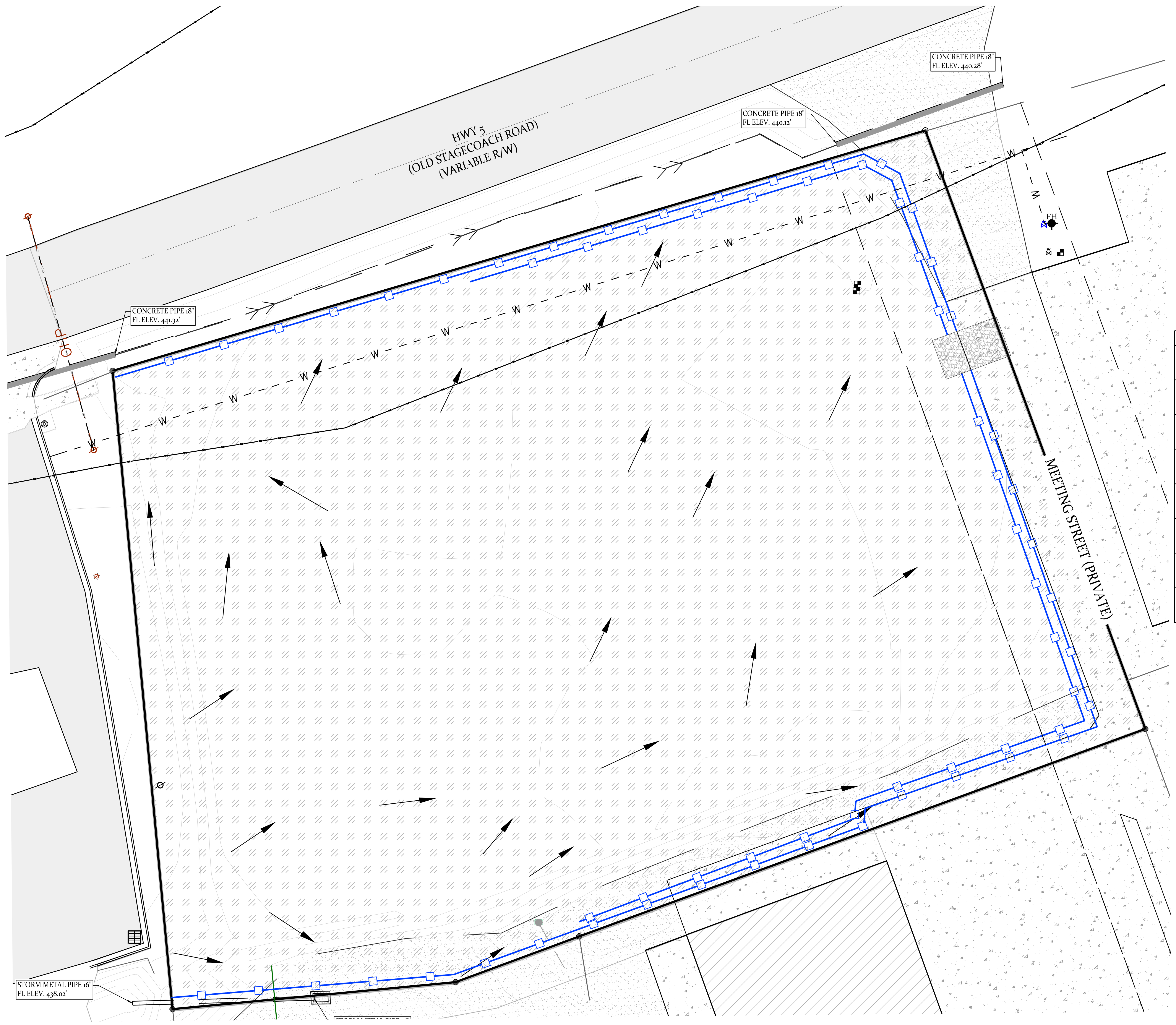


MARKET PLACE-II PHASE 3

PRE-CONSTRUCTION PHASE OR
INITIAL PHASE

ERC LEGEND

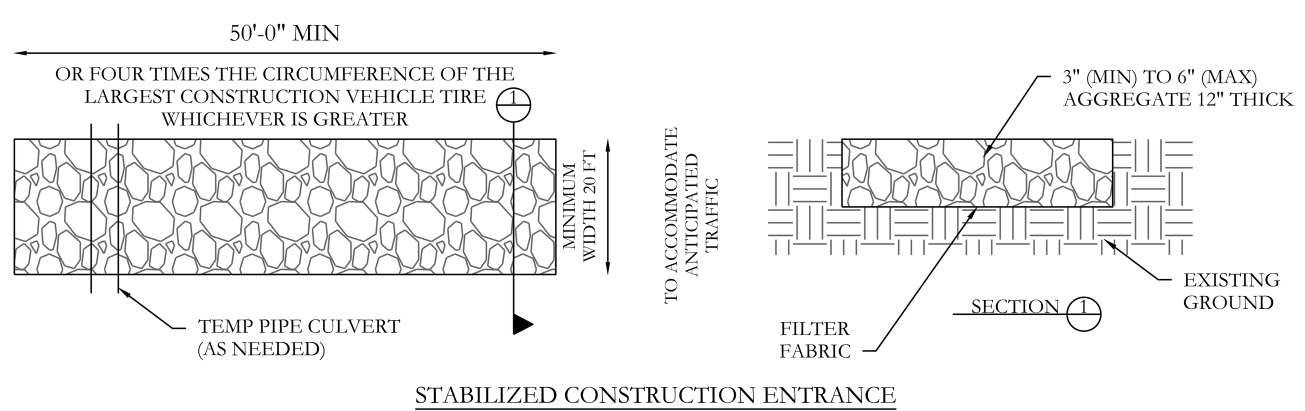
SITE POSTING

CONC. WASHOUT

SILT FENCE

RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE



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.

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.

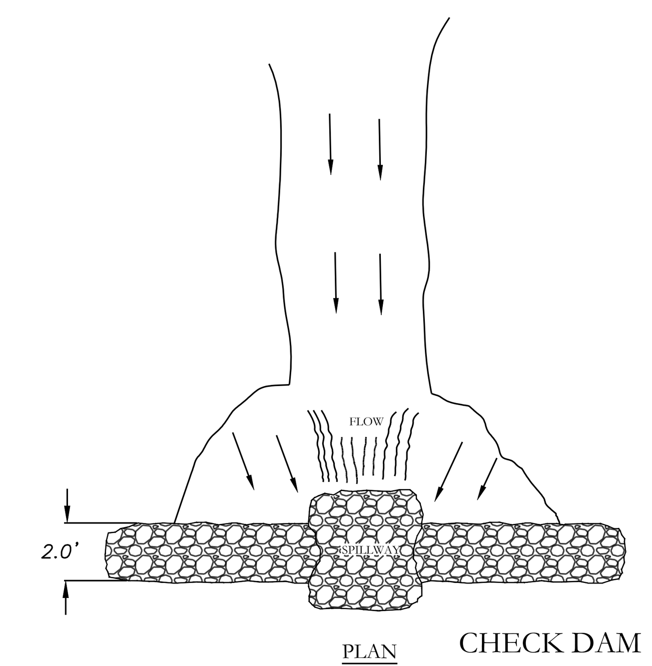
DESCRIBE PROCEDURES TO KEEP THE FOLLOWING IN GOOD AND EFFECTIVE OPERATING CONDITION:

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

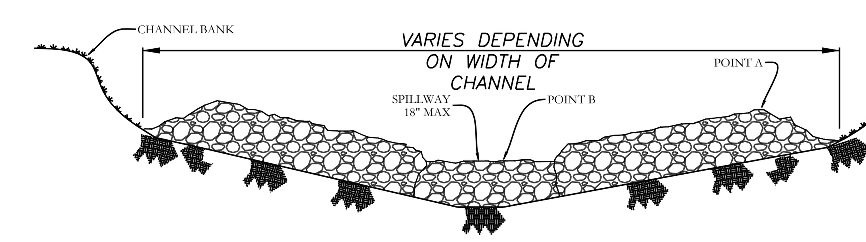
SEQUENCE OF CONSTRUCTION PLAN

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)



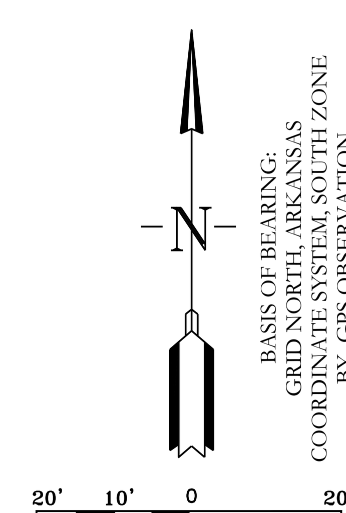
CHECK DAM

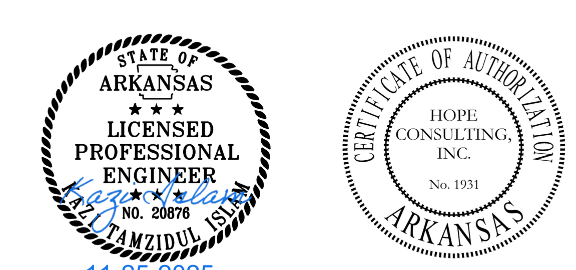


VIEW LOOKING UPSTREAM

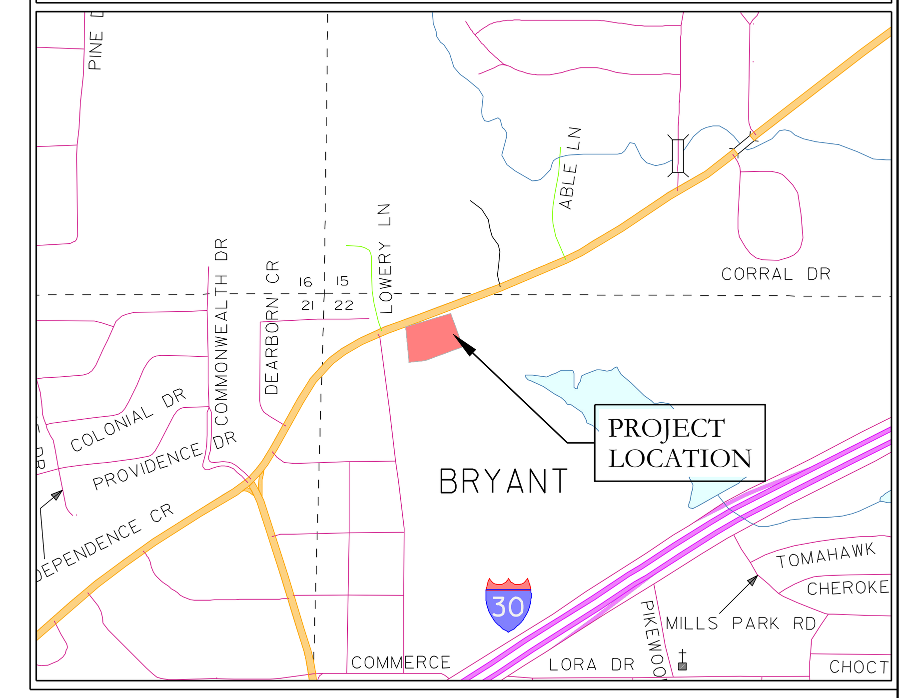
NOTES:

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.





VICINITY MAP:



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.

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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.

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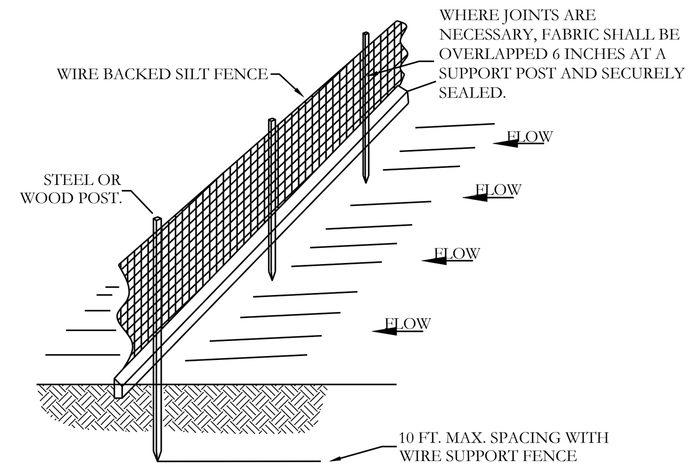

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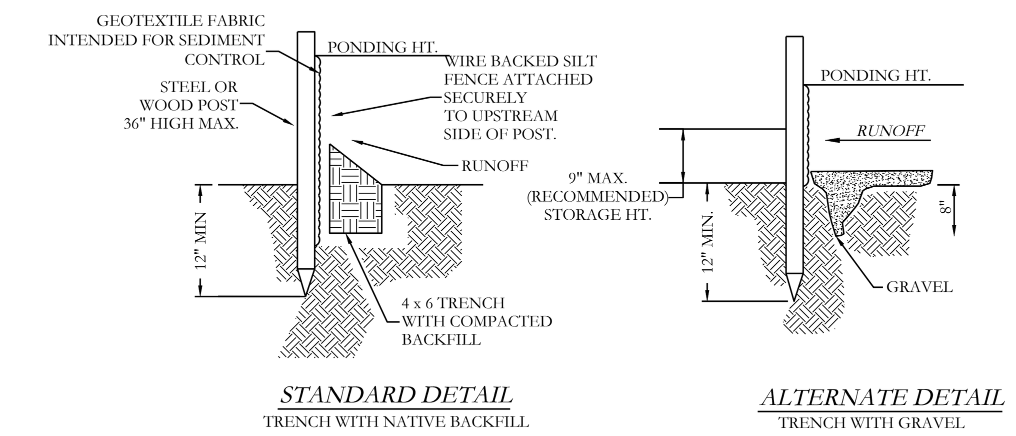

STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

ALTERNATE DETAIL
TRENCH WITH GRAVEL

EROSION CONTROL NOTES

SOD DETENTION AREA POST-CONSTRUCTION (IF APPLICABLE) MAXIMUM SLOPE OF 3H:1V ON DETENTION POND LEVEES CONTRACTOR MUST HAVE INLET PROTECTION MEASURES INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF DRAINAGE INLETS/STRUCTURES IS COMPLETE. SEDIMENT BARRIERS SHALL BE MAINTAINED THROUGHOUT AND INSPECTED THROUGHOUT CONSTRUCTION PROCESS UNTIL PROJECT IS COMPLETE

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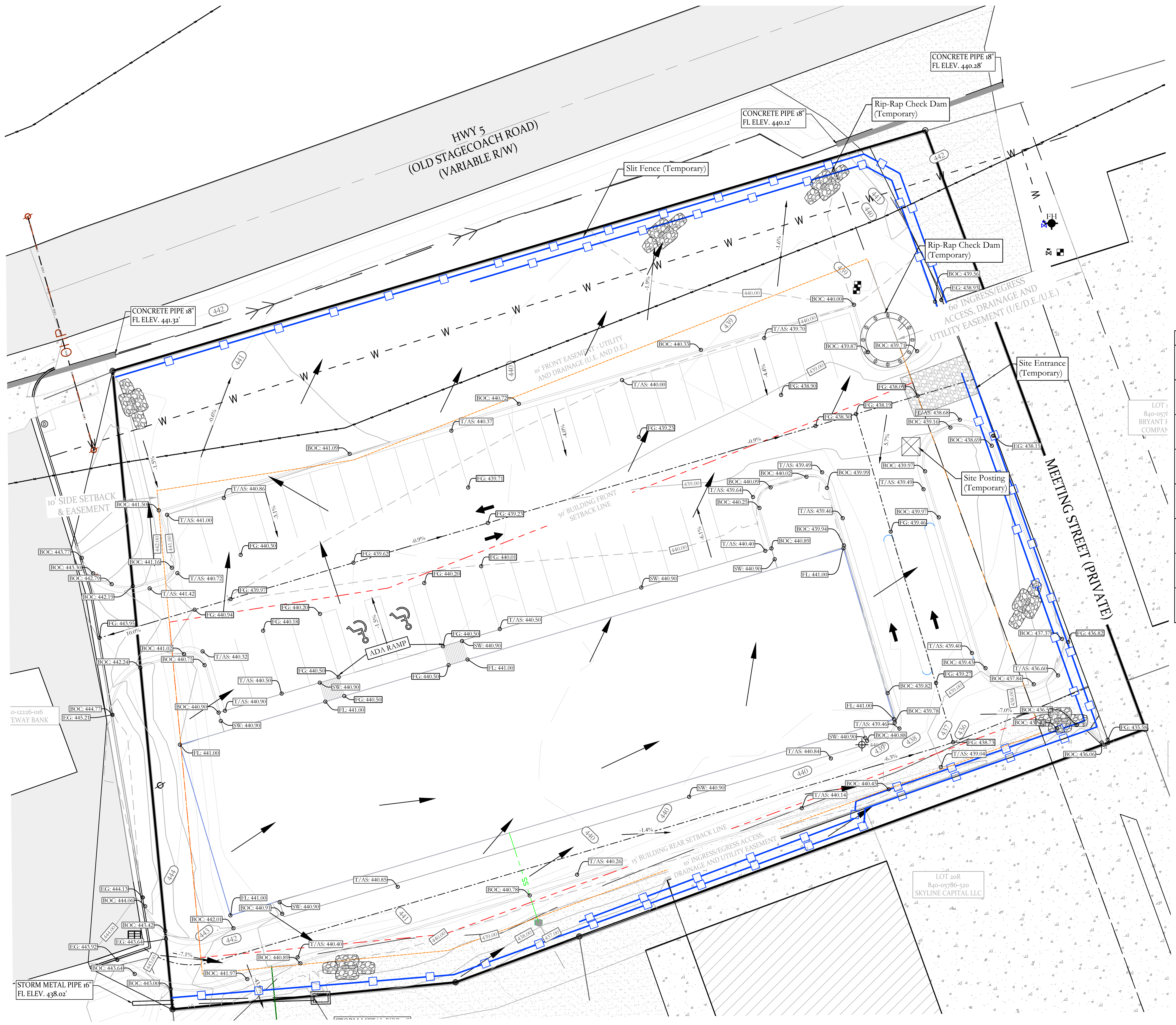
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
ECP_PRE CONSTRUCTION PHASE
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-5.1	SCALE:	

500	01S	14W	0	22	440	62	1762



MARKET PLACE-II PHASE 3

CONSTRUCTION PHASE

ERC LEGEND

SITE POSTING

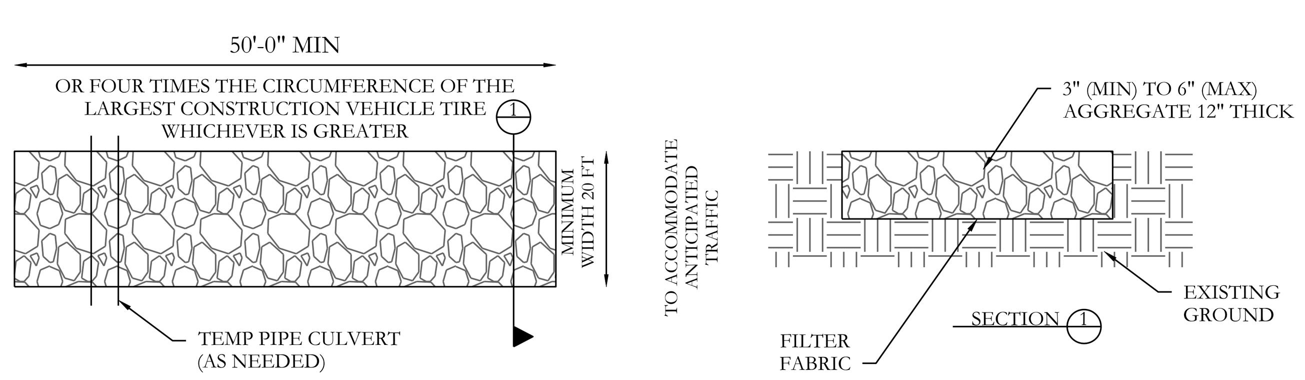
CONC. WASHOUT

SILT FENCE

RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE

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.

CONSTRUCTION:

1. INSTALL CONCRETE WASHOUT AREAS.
2. CONSTRUCT RIP-RAP CHECK DAMS FOR EROSION CONTROL.
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POST-CONSTRUCTION:

1. SEED OR SOD AND MULCH DISTURBED AREAS TO STABILIZE SOIL.
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3. REPAIR OR REPLACE DAMAGED BMPS WITHIN 3 BUSINESS DAYS OR BEFORE THE NEXT RAIN EVENT.

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

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

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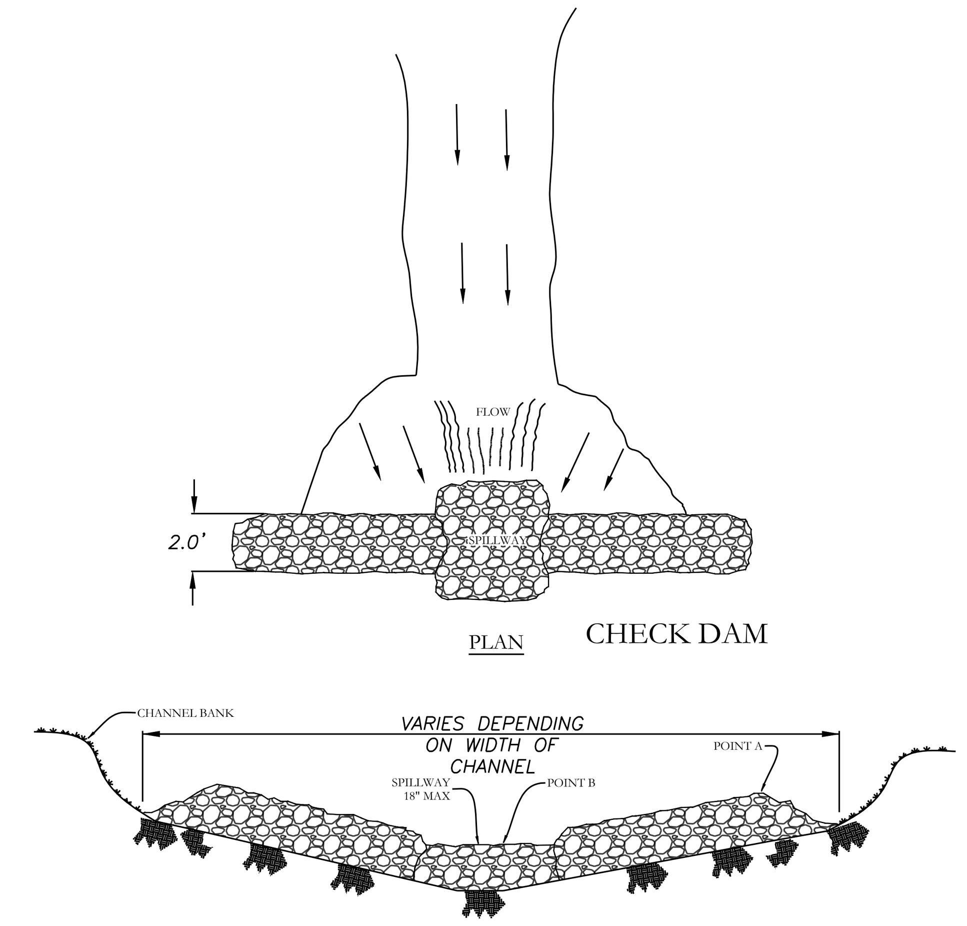
(Reference: Bryant Stormwater Management Manual, Sections 1104.4.1-1104.4.7)



CHECK DAM

VIEW LOOKING UPSTREAM

NOTES:

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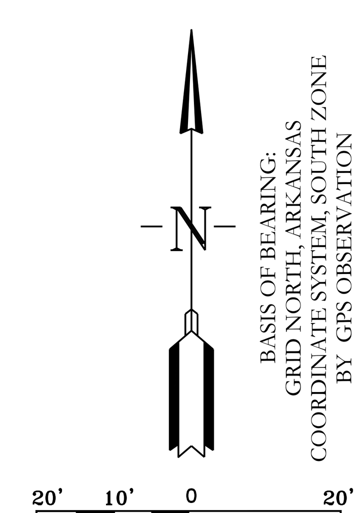

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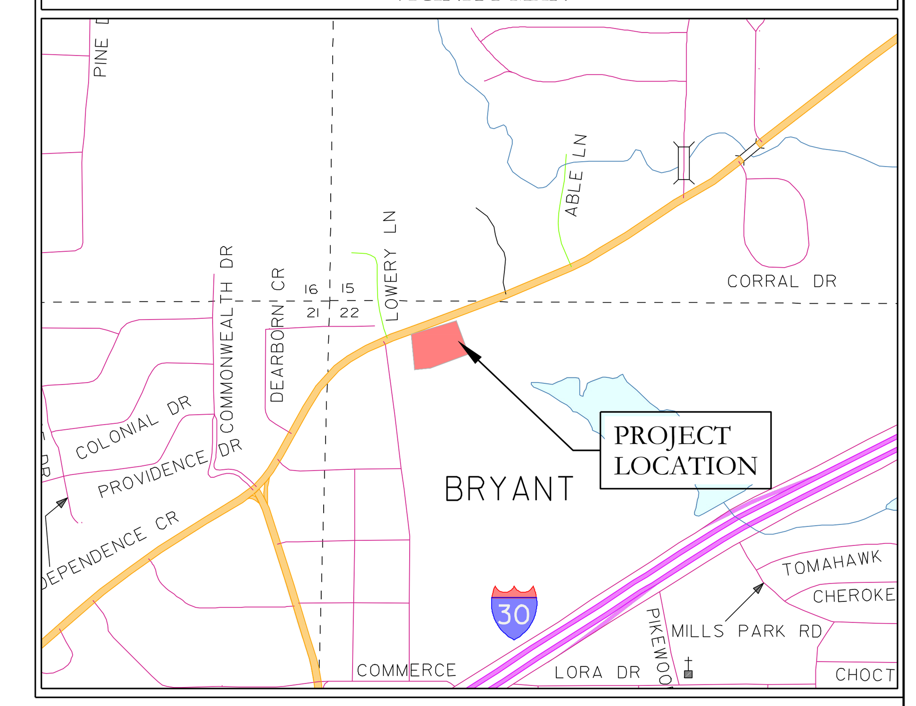

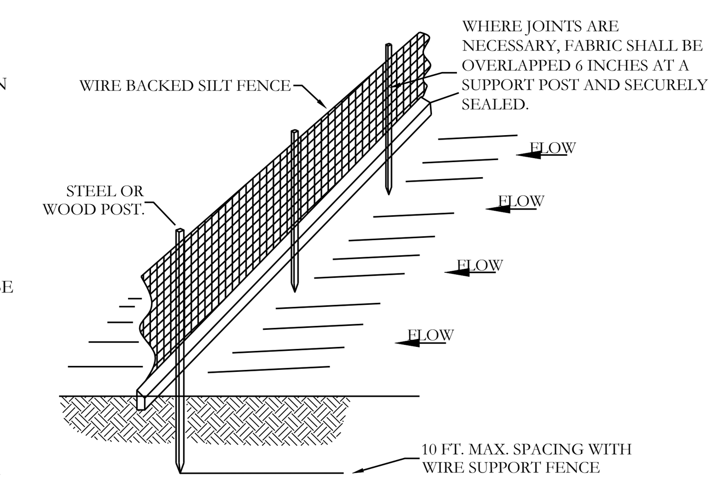

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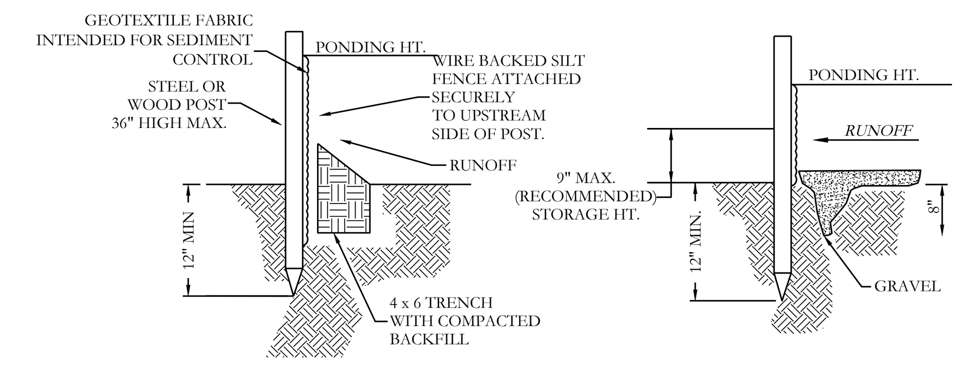

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TRENCH WITH NATIVE BACKFILL

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STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
11-25-2025

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

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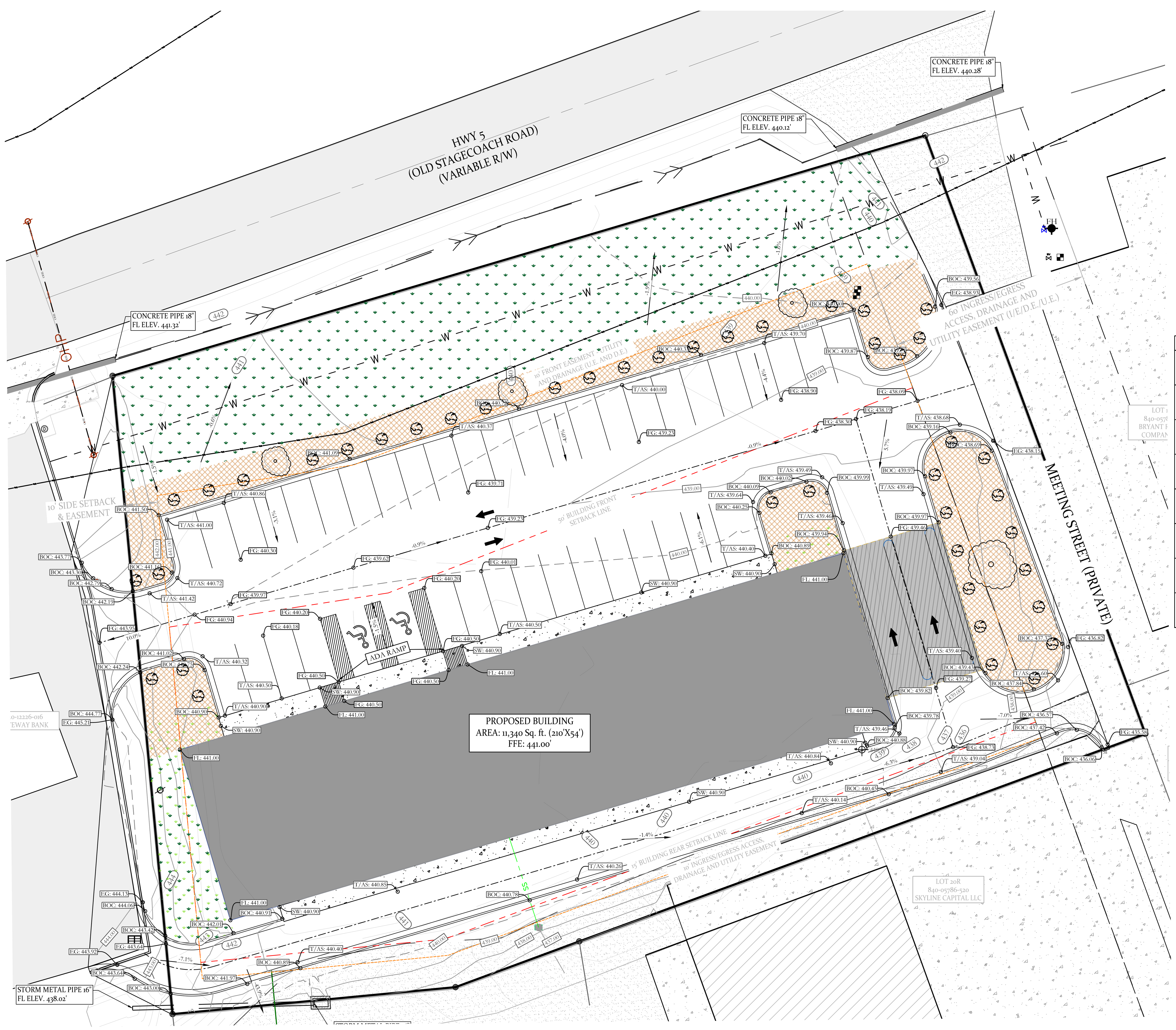
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
ECP CONSTRUCTION PHASE
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE: 11.25.25		C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-5.2	SCALE:	

500	01S	14W	0	22	440	62	1762



MARKET PLACE-II PHASE 3

POST-CONSTRUCTION PHASE

EROSION CONTROL CONSTRUCTION PHASES

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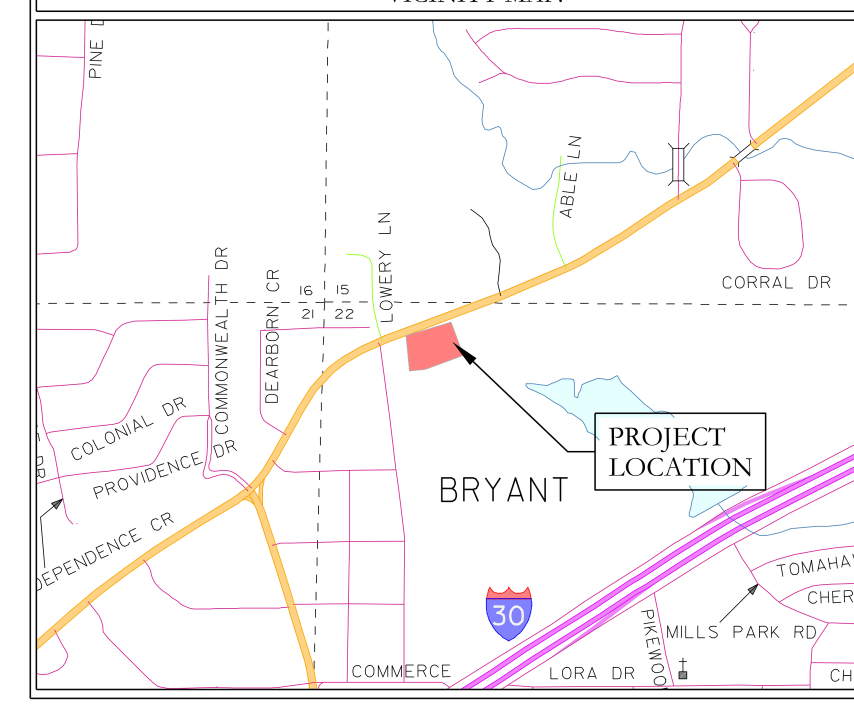

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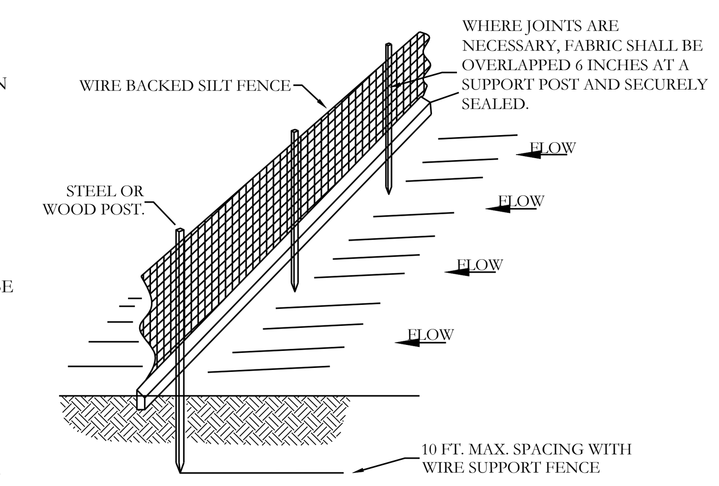

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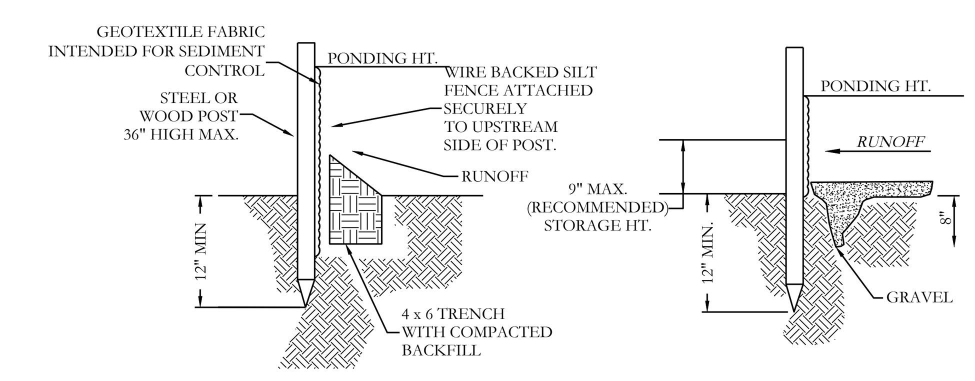

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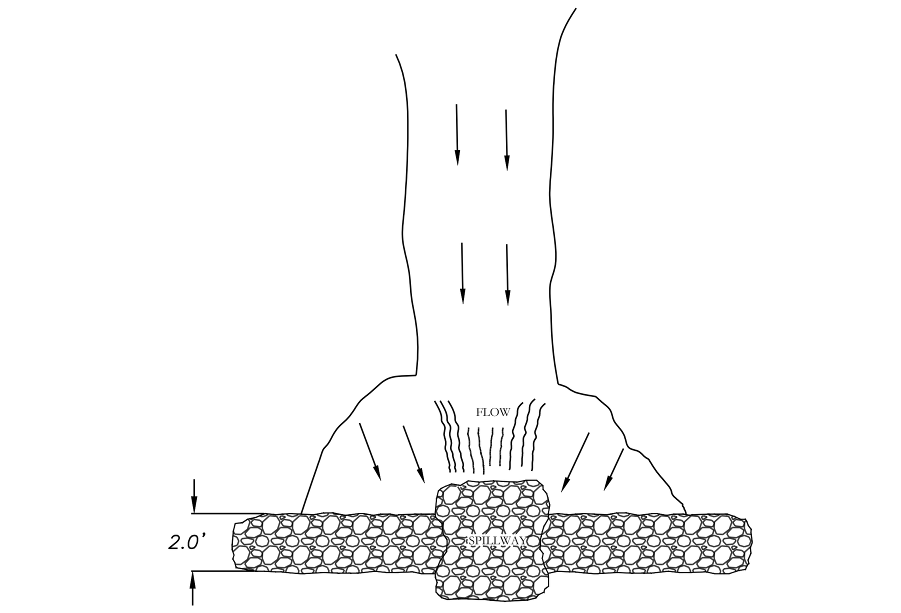
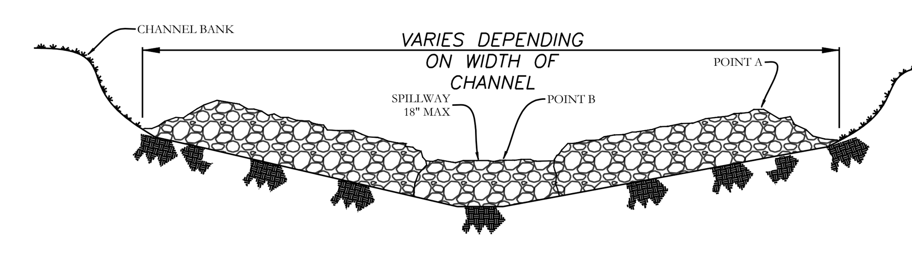


PLAN

CHECK DAM



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ERC LEGEND

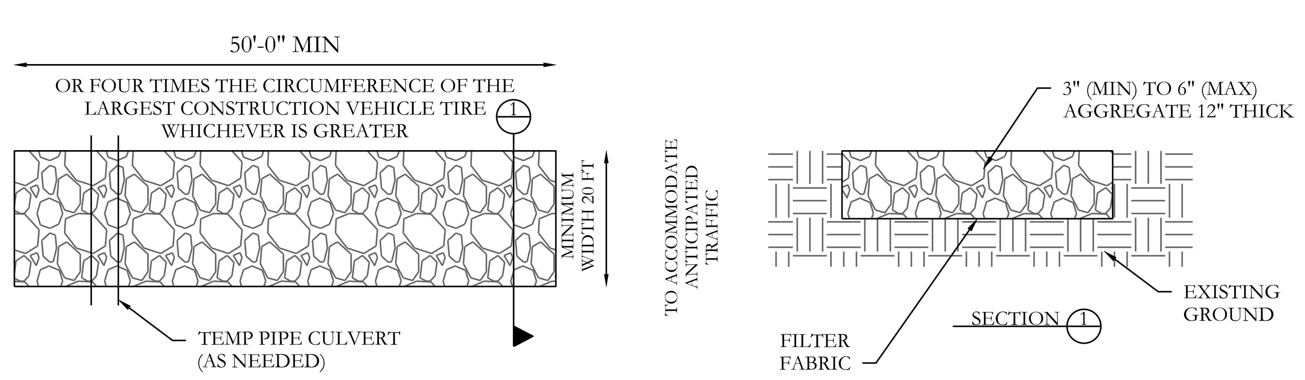
SITE POSTING

CONC. WASHOUT

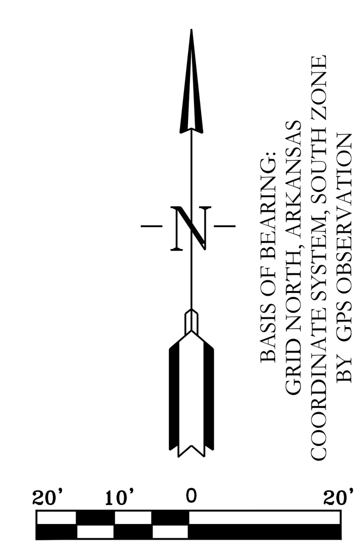
SILT FENCE

RIP RAP CHECK DAM

CONSTRUCTION ENTRANCE



STABILIZED CONSTRUCTION ENTRANCE
N.T.S



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

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20876
11-25-2025

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

HOPE CONSULTING
ENGINEERS - SURVEYORS

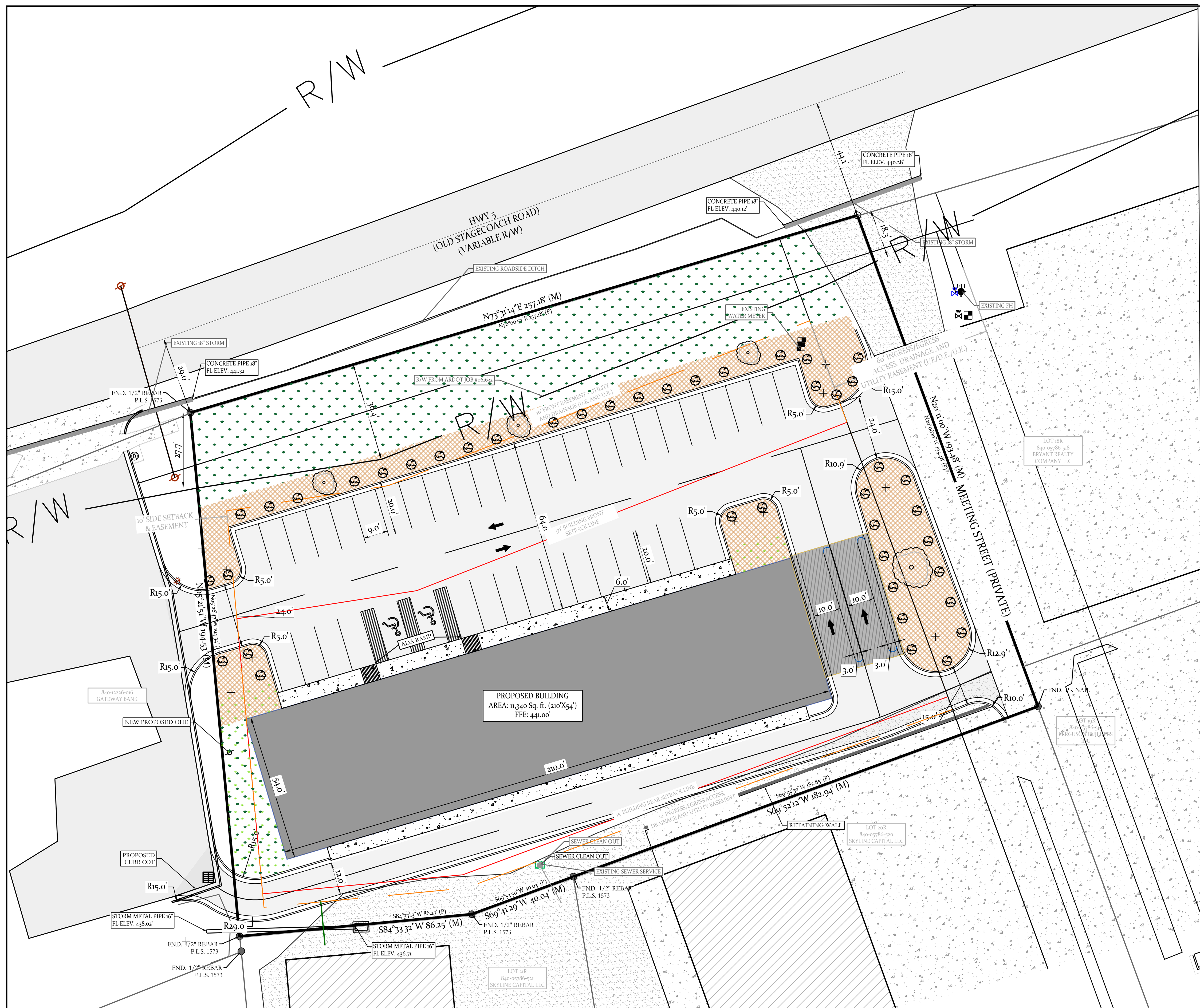
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

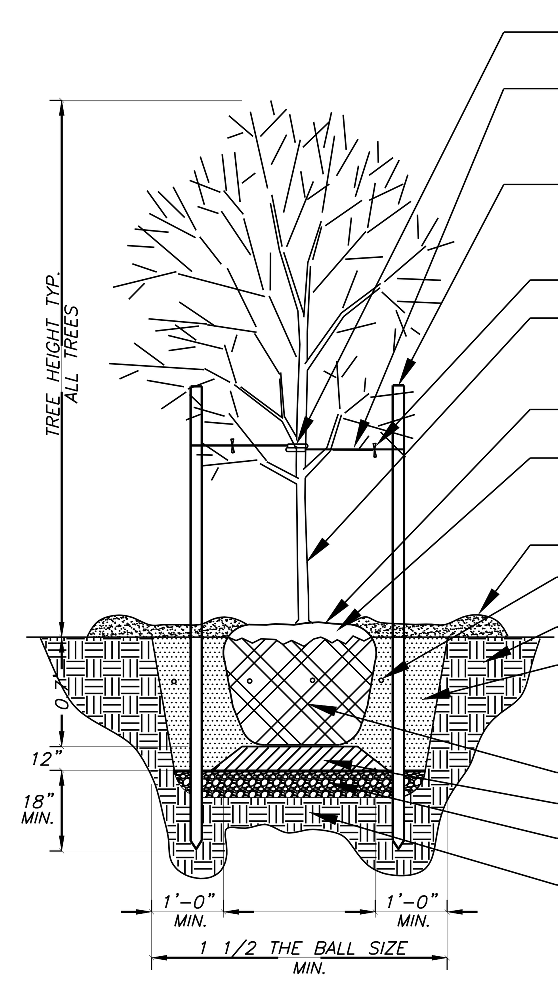
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
ECP_POST CONSTRUCTIONSTAGE
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-5.3	SCALE:	

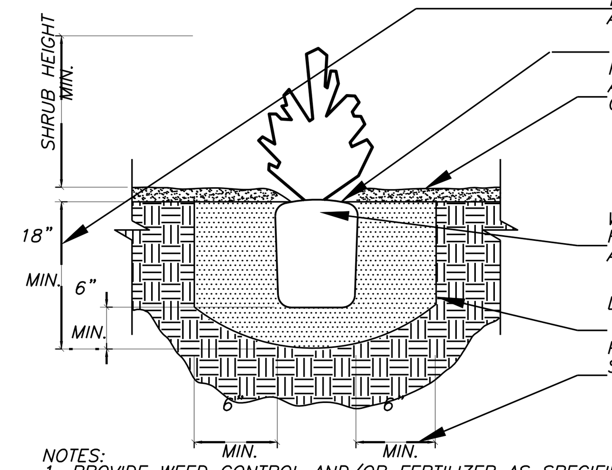
500	01S	14W	0	22	440	62	1762





1 TREE PLANTING DETAIL

No Scale

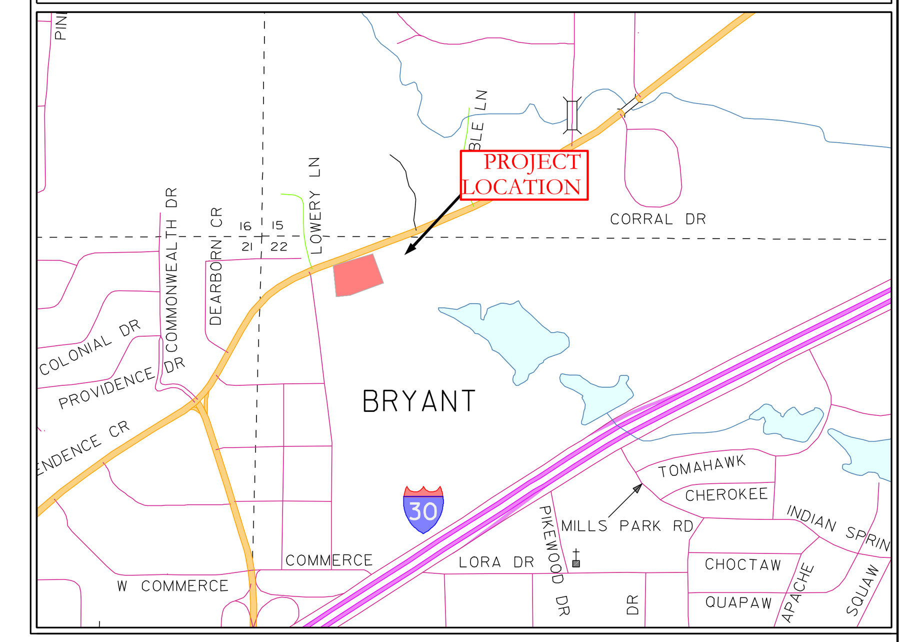


NOTES:
1. PROVIDE WEED CONTROL AND/OR FERTILIZER AS SPECIFIED BELOW.
2. WEED CONTROL AND FERTILIZER MAY BE APPLIED AT A LATER DATE TO COMPLY WITH SEASONAL CONDITIONS AND THE GROWING PERIOD.
3. PROVIDE AGRIFORM TABLETS AS PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE HOMOGENOUS BACKFILL PLANTING MIXTURE OF 3:1 RATIO TOPSOIL TO PEATMOSS AND/OR OTHER APPROVED SOIL ADMENDMENTS.
5. PROVIDE FERTILOME ROOT STIMULATOR OR APPROVED EQUAL IN PITS.
6. APPLY BALAN PREEMERGENT WEED CONTROL OR APPROVED EQUAL TREATMENT ON ALL SHRUB AND GROUNDCOVER BEDS.

2 SHRUB PLANTING DETAIL

NTS

VICINITY MAP:



LANDSCAPE CALCULATION:

GREEN SPACE	TOTAL DEVELOPMENT AREA: 56621.2 SF OR 1.3 AC GREEN SPACE: 15995.3 SF (15995.3 / 56621.2 = 0.282=28.2%)
LANDSCAPE (REQUIRED)	TREE REQUIRED FOR EACH ½ ACRE (56621.2 SF OR 1.3 AC/0.5 = 2.6=3 NOS OF TREES) SHRUB REQUIRED FOR EACH 2,000 SF OF TOTAL LAND AREA FOR DEVELOPMENT (56621.2 SF /2000 SF =48.64 =28)
LANDSCAPE (PROVIDED)	TREE PROVIDED = 5 TREES. SHRUB PROVIDED = 34

GENERAL NOTES:

NO PLANTING WITHIN 5 FEET OF A FIRE HYDRANT.

SPACING WILL BE 40' BETWEEN TREES.

TREE MUST BE A MINIMUM 3" IN DIAMETER @ THE BASE AND 12'+ TALL.

EXISTING TREES MEETING THE MINIMUM SIZE CAN BE COUNTED TO MEET THE CRITERIA.

NO TREES CAN BE PLANTED WITHIN THIRTY-FOOT (30') OF A PROPERTY COMER OR DRIVEWAY.

SHRUBS ALONG STREET FIGHT-OF-WAY LINES CANNOT EXCEED THIRTY INCHES (30") IN HEIGHT.

SEPARATIONS NOTED IN THE ZONING REGULATIONS MUST BE BERMED OR SCREENED WITH LANDSCAPING AND GROUND COVER OR GRASS.

MAINTENANCE:

THE DEVELOPER, HIS SUCCESSOR AND THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR REGULAR WEEDING, IRRIGATING, FERTILIZING, PRUNING AND OTHER MAINTENANCE OF ALL PLANTING ON PRIVATE PROPERTY OF A DEVELOPMENT. PLANT MATERIALS WHICH ARE INSTALLED FOR COMPLIANCE WITH THIS ORDINANCE, BOTH ON PRIVATE PROPERTY AND THE PUBLIC RIGHT-OF-WAY, WHICH EXHIBIT EVIDENCE OF INSECT PESTS, DISEASE AND/OR DAMAGE, SHALL BE APPROPRIATELY TREATED AND DEAD PLANT MATERIALS SHALL BEREPLACED.

THE OWNER OF LAND ABUTTING A CONSTRUCTED PUBLIC RIGHT-OF-WAY SHALL BE RESPONSIBLE FOR THE TREE PLANTING STRIP LYING BETWEEN THE PRIVATE PROPERTY LINE AND THE CURBLINE OR BACKSLOPE LINE AND SHALL BE REQUIRED TO REGULARLY
WEED, MOW, PRUNE AND MAINTAIN PLANTINGS IN COMPLIANCE WITH GOOD HORTICULTURAL PRACTICES.

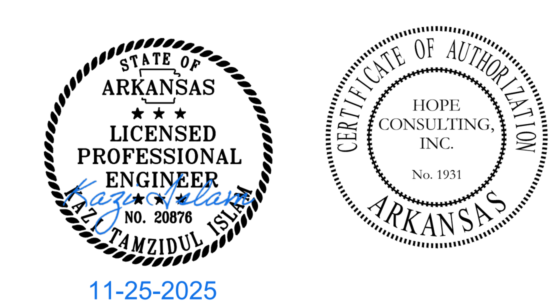
IF THE OWNER OF LAND THUS SITUATED AS IN ABOVE, NEGLECTS OR REFUSES TO MAINTAIN THE AREAS AS PROSCRIBED, AFTER HAVING BEEN GIVEN TEN (10) DAYS NOTICE IN WRITING TO MAINTAIN BY THE CITY, THE OWNER SHALL BE GUILTY OF A MISDEMEANOR.

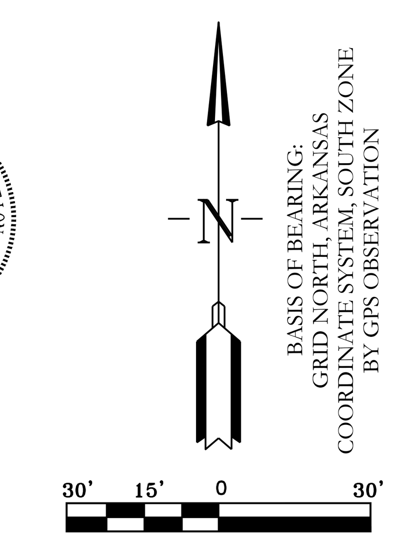
THE CITY OF BRYANT PLANNING COMMISSION WILL REVIEW AND ACT ON ALL LANDSCAPING PROPOSALS AT THE TIME BUILDING PLANS ARE SUBMITTED AND IN THE CASE OF SUBDIVISION AT THE PRELIMINARY PLAT SUBMITTAL.

A CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED FOR A COMMERCIAL ESTABLISHMENT NOR WILL THE FINAL SUBDIVISION PLAT BE APPROVED UNTIL LANDSCAPING REQUIREMENTS ARE SATISFIED.

TREE LEGENDS

	COMMON NAME:	BOTANICAL NAME:	HEIGHT OF PLANTING	QTY.:
	SHURBS GLOSSY ABELIA	ABELIA GRANIFLORA		38
	TREE AMERICAN HOLLY	ILEX OPACA	12'-0"	4
	SOD (INCLUDES MULCH BEDS)	BERMUDA		
	MULCH BEDS (OPTIONAL) PLANTER/FLOWER BED			





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MARKET PLACE II
LANDSCAPE PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE: 11.25.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:	CHECKED BY:	
SHEET: C-6.0	SCALE: 1' = 30"	

500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11.25.25.DWG

City of Bryant

2026 Development Calendar

Application Deadlines and Meeting Dates

First Submittal Deadline 5:00 PM	DRC Meeting 9:00 AM	DRC Deadline 5:00 PM	DRC Meeting 9:00 AM	Final Revisions Deadline 5:00 PM	Planning Commission Meeting 6:00 PM
December 10	December 18	December 23	December 31	January 5	January 12
January 7	January 15	January 21	January 29	February 2	February 9
February 4	February 12	February 18	February 26	March 2	March 9
March 11	March 19	March 25	April 2	April 6	April 13
April 8	April 16	April 22	April 30	May 4	May 11
May 6	May 14	May 20	May 28	June 1	June 8
June 10	June 18	June 24	July 2	July 6	July 13
July 8	July 16	July 22	July 30	August 3	August 10
August 12	August 20	August 26	September 3	September 7	September 14
September 9	September 17	September 24	October 1	October 5	October 12
October 7	October 15	October 21	October 29	November 9	November 16
November 11	November 19	November 25	December 3	December 7	December 14
December 9	December 17	December 23	December 31	January 4	January 11

The DRC (Development and Review Committee) meets in person in the Main Conference Room at City Hall (210 SW 3rd Street).

On Thursday's without a DRC meeting scheduled, the committee is available for a workshop or pre-application meeting.

The deadline for a workshop, pre-application meeting, or item for discussion only is the Monday before the Thursday meeting by 5:00 PM.