# Bryant Planning Commission Meeting

Boswell Municipal Complex - City Hall Court Room

210 SW 3rd Street

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

**Date:** August 12, 2024 - **Time:** 6:00 PM

## Call to Order

## Approval of Minutes

1. **Planning Commission Meeting Minutes 6/10/2024** - Corrected
2. **Planning Commission Meeting Minutes 7/8/2024**

## Announcements

## DRC Report

3. **19 Tanglewood Drive** - Conditional Use Permit

   *Donald Whitfield - Requesting Recommendation for Approval of Conditional Use Permit to allow for additional Accessory Structure footage that exceeds 25% of the principal structure. - RECOMMEDED APPROVAL Based on Completed Application*

   - 0888-APP-01.pdf

4. **Skye Blue Duplexes - Hurricane Lake Road** - Conditional Use Permit and Subdivison Plat

   *Hope Consulting - Requesting Approval for Four Conditional Use Permits for the use of four duplexes in an R-M Zoning; Requesting Approval of subdivision plat; and Request for a waiver on portion of street specifications. - RECOMMENDED APPROVAL on CUP requests based on completed application and contingent upon Subdivision Plat Approval. RECOMMENDED APPROVAL on Subdivison Plat and Waiver*

5. **Andres Woods - Lot 22 and 23** - Replat

   *Hope Consulting - Requesting Recommendation for Approval of Replat - RECOMMENDED APPROVAL*

6. **Blessing Addition - Hwy 5 and Midland Road** - Commercial Subdivison Plat

   *Zane Robbins - Requesting Recommendation for Final Plat Approval - RECOMMENDED APPROVAL, Contingent upon update plat showing the dedicated extension to the sewer easement.*

7. **Leslie Addition** - One Lot Subdivison Plat

   *Zane Robbins - Requesting Recommendation for Final Plat Approval - RECOMMENDED APPROVAL, Contingent upon complete legal description being added to the plat as one parcel.*

8. **Senior Tequila - 2919 N Reynolds Road** - Patio Roof Addition

   *Requesting Site Plan Approval - APPROVED*

   - 0891-PLN-03.jpg

- 0891-PLN-02.jpg
- 0891-PLN-01.jpg

**9. Little Ceasar's** - N Reynolds Rd and Brown Lane

*Thomas Engineering Requesting Site Plan Approval - APPROVED, Contingent upon Revised Plans with trickle channel shown on plans, and Building elevations.*

- 0886-PLN-02.pdf
- 0886-DRN-01.pdf
- 0886-PLT-02.pdf
- 0886-LTR-01.pdf

**10. Hillfarm Elementary Greenhouse/ Hoophouse** - Saline Co. Master Gardeners

*Requesting Site Plan Approval - APPROVED*

- 0900-PLN-01.pdf

**11. Pathfinder Inc - 2107 Bishop Road** - Sign Permit

*Action Sign - Requesting Sign Permit Approval - APPROVED, Contingent upon utility locates and maintaining required distance from utilities*

- 92605-SGNAPP-02 Pathfinder.jpg
- 92605-SGNAPP-01 Pathfinder.pdf

## Public Hearing

**12. 19 Tanglewood Drive** - Conditional Use Permit

*Donald Whitfield - Requesting Approval for Conditional Use Permit to allow for additional Accessory Structure footage that exceeds 25% of the principal structure.*

- 0888-APP-01.pdf

**13. Skye Blue Duplexes - Hurricane Lake Road** - Conditional Use Permit

*Hope Consulting - Requesting Approval for Four Conditional Use Permits for the use of four duplexes in an R-M Zoning.*

- 0889-CUP-01.pdf
- 0889-PLN-01.pdf

## Old Business

## New Business

**14. Skye Blue Duplexes - Hurricane Lake Road** - Subdivison Plat

*Hope Consulting - Requesting Approval of subdivision plat and Request for a waiver on portion of street specifications.*

- 0889-WVR-01.pdf
- 0889-PLN-01.pdf
- 0889-PLN-02.pdf
- 0889-DRN-01.pdf

**15. Andres Woods - Lot 22 and 23** - Replat

*Hope Consulting - Requesting Approval for Replat*

- 0889-PLN-01.pdf
- 0889-PLN-02.pdf
- 0889-DRN-01.pdf

**16. Blessing Addition - Hwy 5 and Midland Road** - Commercial Subdivison Plat

*Zane Robbins - Requesting Final Plat Approval*

- 0898-PLN-02.pdf

**17. Leslie Addition - One Lot Subdivison Plat**

*Zane Robbins - Requesting Final Plat Approval*

- 0901-PLN-02.pdf

## Adjournments

#0888

**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: 7/11/24

**Applicant or Designee:**

Name Donald Whitfield
Address 19 Tanglewood Dr
Phone 501-993-6869
Email Address: dwcpa@att.net

**Project Location:**

Property Address 19 Tanglewood Dr
Bryant, AR 72022
Parcel Number 840-09527-000
Zoning Classification R-E

**Property Owner (If different from Applicant):**

Name Same
Phone _____
Address _____
Email Address _____

**Additional Information:**

Legal Description (Attach description if necessary)

Pt. Lot 19 Tanglewood Acres Sub.

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

Allow construction of a 26'x24' Building and allow existing storage building of 12'x16' + 12'x12' to Remain. See Attached Letter.

Proposed/Current Use of Property Residential

# 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
- ☐ 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.

## NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, August 12th, 2024 at 6:00 P.M. at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Saline County, for the purpose of public comment on a conditional use request at the site of 19 Tanglewood Drive, Bryant, AR 72022 (address).

A legal description of this property can be obtained by contacting the Bryant Department of Community Development.

Lance Penfield
Chairman of Planning Commission
City of Bryant

*This notice is to be run in the legal notices section of the Saline Courier no less than 15 days prior to the public hearing.*

Donald Whitfield
19 Tanglewood Drive
Bryant, AR 72022

July 11, 2024

City of Bryant, Arkansas
Community Development
210 SW 3rd Street
Bryant, AR 72022

Re: Variance

The purpose of this letter is to ask for a variance to construct a 26' x 24' storage building at 19 Tanglewood Drive in Bryant, Arkansas and to allow the existing storage buildings of 12' x 16' and 12' x 12' to remain.

Based on the total square footage of my home which is 2,542, the maximum building of 25% of the total square footage would be 635. The new building would be 624 square feet. The square footage currently in the two existing buildings combined is 336 square feet. The total square footage after construction would be 960 square feet. The variance I am requesting would be to allow for an additional 325 square feet on my property which is .82 acres.

Le me know if you have any questions or need additional information.

Thank you,

Sincerely,

Donald Whitfield

**City of Bryant, Arkansas**
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0488, Comdev@cityofbryant.com

# General – Permit Application

*Please complete both pages of this application and submit to the City of Bryant Permitting office, located at the address above.*

*Completed applications can also be scanned and emailed to Comdev@cityofbryant.com.*

Date: 7-10-24

**Permit Type:**

| | | |
|---|---|---|
| _____ Electrical Permit | _____ Remodel Permit | _____ Burn Permit |
| _____ Plumbing Permit | _____ Demolition Permit | _____ Site Clearance Permit |
| _____ Mechanical Permit | ✓ Accessory Building Permit | _____ Mobile Home Permit |

Other if not listed above _____

**Contractor Information:**

Contractor/Owner Donald Whitfield

Physical Address of Business 19 Tangle Wood Dr.

City, State, Zip code Bryant, AR.

Mailing Address (If different from Above) Same

City, State, Zip code _____

Email Address dwcpa@att.net

Business Phone _____ Cell Phone 501-993-6869 Fax _____

**Project Information:**

Project Address/Location Same

Project Cost _____ Commercial or Residential? residential

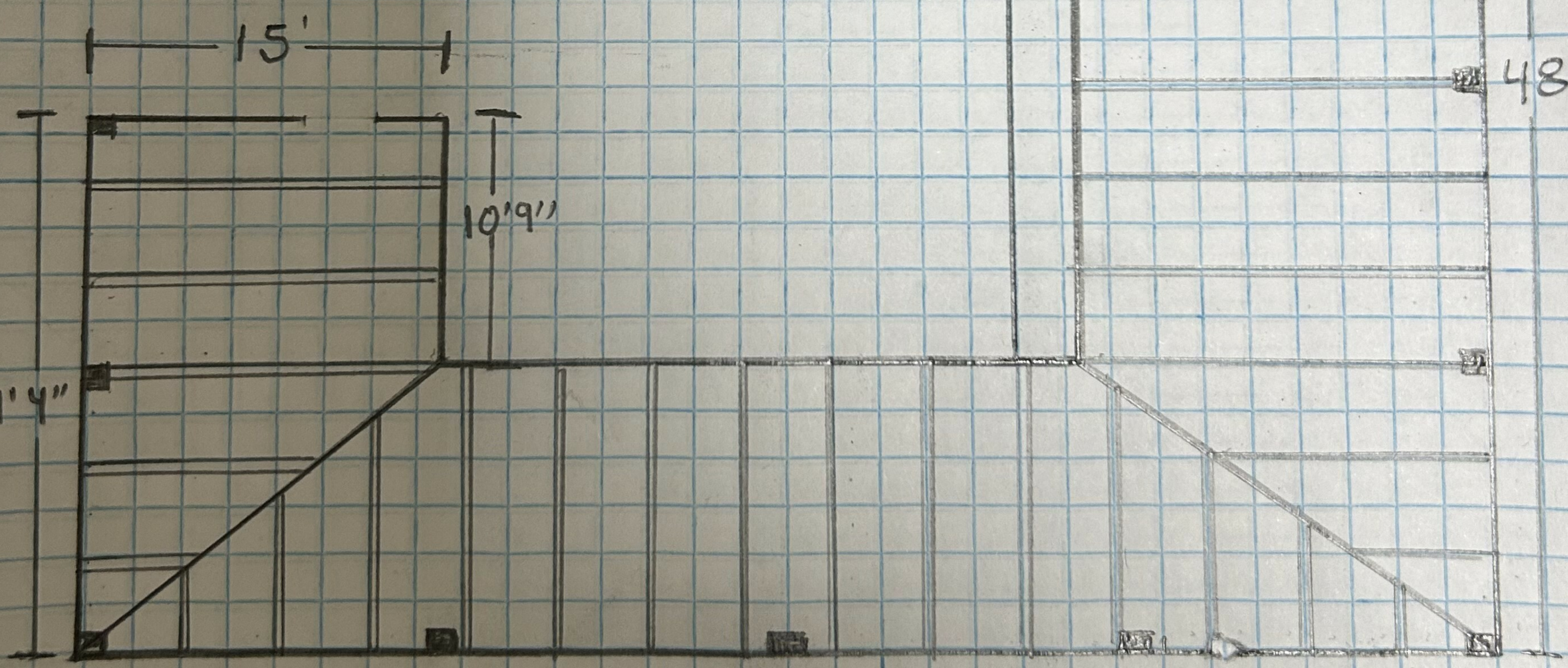
Square footage (If Applicable) _____

If new addition, will foam insulation be used? No ✓ Yes ____ If "Yes", provide technical evaluation report on foam insulation type, and a copy of installer's certification. (Attach to application when submitted)

Additional Project Information 26' wide X 24' deep accessory Building



SEÑOR TEQUILA
BRYANT




Scale 1:2


Don't Get Drunk
FABULOUS

# CONSTRUCTION PLANS FOR
# LITTLE CAESARS
# REYNOLDS ROAD
# BRYANT, ARKANSAS

**UTILITY AND GOVERNING AGENCIES**
**CONTACT LIST**

**WATER COMPANY**
CITY OF BRYANT PUBLIC WORKS
TIM FOURNIER
210 SW 3RD STREET
BRYANT, AR 72022
(501) 943-0469

**SANITARY SEWER COMPANY**
CITY OF BRYANT PUBLIC WORKS
TIM FOURNIER
210 SW 3RD STREET
BRYANT, AR 72022
(501) 943-0469

**FIRE MARSHAL**
CITY OF BRYANT FIRE DEPARTMENT
THOMAS HAMMOND
312 ROYA LANE
BRYANT, AR 72022
(501) 943-0397

**EROSION CONTROL**
CITY OF BRYANT ENGINEERING/CONSTRUCTION
SCOTT CHANDLER
210 SW 3RD STREET
BRYANT, AR
501 943-0469

**POWER COMPANY**
ENTERGY
(501) 368-3749

**CABLE COMPANY**
XFINITY
(800) 934-6489

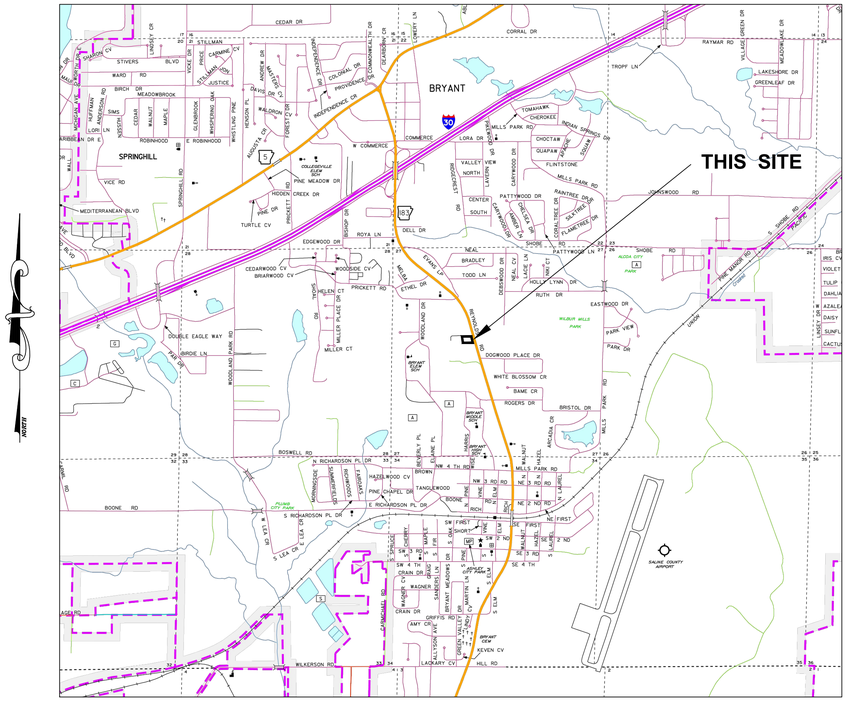
**DEPARTMENT OF TRANSPORTATION**
ARKANSAS DEPARTMENT OF TRANSPORTATION
(501) 569-2000

**PLANNING DEPARTMENT**
CITY OF BRYANT COMMUNITY DEVELOPMENT
COLTON LEONARD
210 SW 3RD STREET
BRYANT, AR 72022
(501) 943-0469

**ZONING DEPARTMENT**
CITY OF BRYANT COMMUNITY DEVELOPMENT
COLTON LEONARD
210 SW 3RD STREET
BRYANT, AR 72022
(501) 943-0469

**PHONE COMPANY**
AT & T
(800) 288-2020

**GAS COMPANY**
CENTERPOINT ENERGY
(800)992-7552




GENERAL SITE CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL CONTROL EROSION ON THE SITE. ALL SLOPES SHALL BE FERTILIZED, SEEDED AND MULCHED (OR LANDSCAPED) AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. THE SITE SHALL BE GRADED TO MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION. THE WATER SHALL NOT BE ALLOWED TO POND.
2. THE CONTRACTOR SHALL COORDINATE WITH EACH UTILITY COMPANY PRIOR TO ANY EXCAVATION. ANY DAMAGE TO UTILITY LINES CAUSED BY THE CONTRACTOR OPERATIONS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL ALIGNMENT OF EXISTING AND PROPOSED STORM SEWER, SANITARY SEWER AND WATER LINES TO ENSURE THAT THEY ARE INSTALLED WITH ADEQUATE COVER AND CLEARANCE.
3. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, CODES AND ORDINANCES GOVERNING WORK AT THIS TYPE.
4. THE CONTRACTORS ATTENTION IS SPECIFICALLY CALLED TO THE LOCATION OF THE EXISTING IMPROVEMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DAMAGING ANY EXISTING IMPROVEMENTS WHICH ARE TO REMAIN PRIOR TO SUBMITTING HIS BID. THE CONTRACTOR SHALL REVIEW THE PLANS AND SPECIFICATIONS. HE SHALL VISIT THE SITE AND INSPECT THE CONDITION OF THE SITE AND THE ADJACENT IMPROVEMENTS.
5. THE CONTRACTOR SHALL CALL "ONE-CALL" FOR LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY EXCAVATION.
6. ANY EXCESS EXCAVATED MATERIAL SHALL BE STOCKPILED OR PLACED IN AREAS AS DIRECTED. ALL FILLS ON SITE IN AREAS OF FUTURE BUILDING CONSTRUCTION SHALL BE MADE IN 8" LIFTS AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

INDEX OF SHEETS


TITLE SHEET . . . . . C1
TOPOGRAPHIC SURVEY . . . . . V1
SITE PLAN . . . . . C2
GRADING PLAN . . . . . C3
UTILITY PLAN . . . . . C4
EROSION CONTROL PLAN . . . . . C5
SITE DETAILS . . . . . C6
WATER AND SEWER LINE DETAILS . . . . . C7


## A DEVELOPMENT OF
## OBWAT HOLDINGS, LLC

OWNER & DEVELOPER:
OBWAT HOLDINGS, LLC
7500 LANDERS ROAD
SHERWOOD, AR. 72117

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4685
JOHN R. POWNALL

CERTIFICATE OF AUTHORIZATION
THOMAS ENGINEERING CO.
No. 94
ARKANSAS

THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

**TITLE SHEET**
**LOT 1**
**LITTLE CAESARS ADDITION**
**BRYANT, ARK.**

| APPROVED | DRAWN BY | DATE | SHEET NO. |
|---|---|---|---|
| | JRP | 6/20/24 | C1 |
| SCALE NTS | | | |

LITTLE CAESARS-BRYANT-23-0165.dwg

PLOTTED: 7/10/2024




## VICINITY MAP

ISSUING AGENT: FIRST NATIONAL TITLE COMPANY
ISSUING OFFICE: 216 W. SEVIER STREET, BENTON, AR 72015
ISSUING OFFICE'S ALTA® REGISTRY ID: 1010363
COMMITMENT NO.: 102-230785-MH-1
ISSUING OFFICE FILE NO.: 102-230785-MH
PROPERTY ADDRESS: REYNOLDS ROAD, BRYANT, AR 72022
COMMITMENT DATE: AUGUST 14, 2023 AT 07:00 AM

SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN. THE POLICY WILL NOT INSURE AGAINST LOSS OR DAMAGE RESULTING FROM THE TERMS AND PROVISIONS OF ANY LEASE OR EASEMENT IDENTIFIED IN SCHEDULE A, AND WILL INCLUDE THE FOLLOWING EXCEPTIONS UNLESS CLEARED TO THE SATISFACTION OF THE COMPANY:

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT.
   NOT SURVEY RELATED.
2. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE SURVEY OF THE LAND.
   SURVEY SHOWS BOUNDARY LINES AND IMPROVEMENTS.
3. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS.
   NOT SURVEY RELATED.
4. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS.
   NONE TO SURVEYOR'S KNOWLEDGE.
5. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW AND NOT SHOWN BY THE PUBLIC RECORDS.
   NOT SURVEY RELATED.
6. TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY PUBLIC RECORDS.
   NOT SURVEY RELATED.
7. ANY PRIOR RESERVATION OR CONVEYANCE, TOGETHER WITH RELEASE OF DAMAGES OF MINERALS, OF EVERY KIND AND CHARACTER, INCLUDING, BUT NOT LIMITED TO, OIL, GAS, SAND AND GRAVEL IN, ON AND UNDER SUBJECT PROPERTY.
   NOT SURVEY RELATED.
8. GENERAL TAXES FOR THE YEAR 2023, WHICH ARE NOT YET DUE AND PAYABLE, AND SUBSEQUENT YEARS, AND FUTURE INSTALMENTS OF THE FOLLOWING SPECIAL IMPROVEMENT DISTRICTS:
   SALINE WATERSHED REGIONAL WATER DISTRIBUTION DISTRICT;
   SALEM FIRE PROTECTION DISTRICT;
   BRYANT WATER & SEWER IMPROVEMENT DISTRICTS;
   NOT SURVEY RELATED.
9. SUBJECT TO THE RIGHT OF CONTROLLED ACCESS TO AND FROM HIGHWAY 183.
   NOT SURVEY RELATED.
10. UTILITY EASEMENTS AND BUILDING SET BACK LINES OVER AND ACROSS THE SUBJECT PROPERTY.
    EASEMENTS AND SETBACK LINES SHOWN ON THE SURVEY.
11. RIGHT OF WAY EASEMENT IN FAVOR OF THE CITY OF BRYANT ARKANSAS FILED MAY 25, 1999 AS SALINE COUNTY DOCUMENT NO. 1999 28587.
    SHOWN ON THE SURVEY.
12. RIGHT OF WAY EASEMENT IN FAVOR OF RELIANT ENERGY ARKANSAS FILED OCTOBER 4, 1999 AS SALINE COUNTY DOCUMENT NO. 1999 52869.
    SHOWN ON THE SURVEY.
13. RIGHT OF WAY EASEMENT IN FAVOR OF BRYANT SEWER IMPROVEMENT DISTRICT NO. 1, FILED JULY 7, 1979 IN SALINE COUNTY MISCELLANEOUS BOOK 53 AT PAGE 754.
    SHOWN ON THE SURVEY.
14. RIGHTS OF THE PUBLIC AND OTHERS ENTITLED THERETO IN AND TO USE OF THAT PORTION OF SUBJECT PROPERTY COMPRISING ANY ROAD, STREET, ALLEY, HIGHWAY, OR OTHER PUBLIC RIGHT OF WAY.
    NOT SURVEY RELATED.
15. ANY INACCURACY IN THE AREA, SQUARE FOOTAGE, OR ACREAGE OF LAND DESCRIBED IN SCHEDULE A OR ATTACHED PLAT, IF ANY. THE COMPANY DOES NOT INSURE THE AREA, SQUARE FOOTAGE, OR ACREAGE OF THE LAND.
    NOT SURVEY RELATED.
16. PLANNING AND/OR ZONING RULES, REGULATIONS AND/OR ORDINANCES ADOPTED BY THE SALINE COUNTY PLANNING BOARD, THE BRYANT PLANNING COMMISSION AND/OR THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS AND/OR VIOLATIONS THEREOF.
    NOT SURVEY RELATED.
17. MODIFIED EASEMENT BY AND BETWEEN ALCOA INC. TO BENTON PROPERTY INVESTMENTS, LLC DATED NOVEMBER 22, 2005 AND FILED NOVEMBER 23, 2005 AS SALINE COUNTY DOCUMENT NO. 2005 131400 AND SUBSEQUENT CONVEYANCES THEREOF.
    DOES NOT AFFECT PROPERTY.
18. EASEMENT BY AND BETWEEN BRYANT SCHOOL DISTRICT NO. 25, ALCOA INC. AND REYNOLDS METALS COMPANY DATED NOVEMBER 2, 2004 AND FILED APRIL 15, 2005 AS SALINE COUNTY DOCUMENT NO. 2005 037378 AND SUBSEQUENT CONVEYANCES THEREOF.
    DOES NOT AFFECT PROPERTY.
19. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION AND EASEMENTS OR CLAIMS OF EASEMENTS NOT SHOWN BY THE PUBLIC RECORDS, BOUNDARY LINE DISPUTES, OVERLAPS, ENCROACHMENTS, AND ANY MATTERS NOT OF RECORD WHICH WOULD BE DISCLOSED BY AN ACCURATE SURVEY AND INSPECTION OF THE LAND.
    EASEMENTS, RIGHT OF WAY LINE AND SETBACK LINES SHOWN ON SURVEY.
20. LOSS ARISING FROM SECURITY INTEREST EVIDENCED BY FINANCING STATEMENTS FILED OF RECORD UNDER THE ARKANSAS UNIFORM COMMERCIAL CODE, JUDGMENT LIENS OR OTHER LIENS OF RECORD IN ANY UNITED STATES DISTRICT COURT OR BANKRUPTCY COURT, IN THE STATE OF ARKANSAS, AS OF THE EFFECTIVE DATE HEREOF.
    NOT SURVEY RELATED.

CERTIFICATE

TO CHICAGO TITLE INSURANCE COMPANY, OBWAT HOLDINGS, LLC, FIRST NATIONAL TITLE COMPANY AN ARKANSAS CORPORATION, AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS:
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. THE FIELDWORK WAS COMPLETED ON SEPTEMBER 12, 2023.

DATE OF PLAT OR MAP: OCTOBER 3, 2023

_____
JOHN R. POWNALL
ARKANSAS REGISTERED LAND SURVEYOR 1215

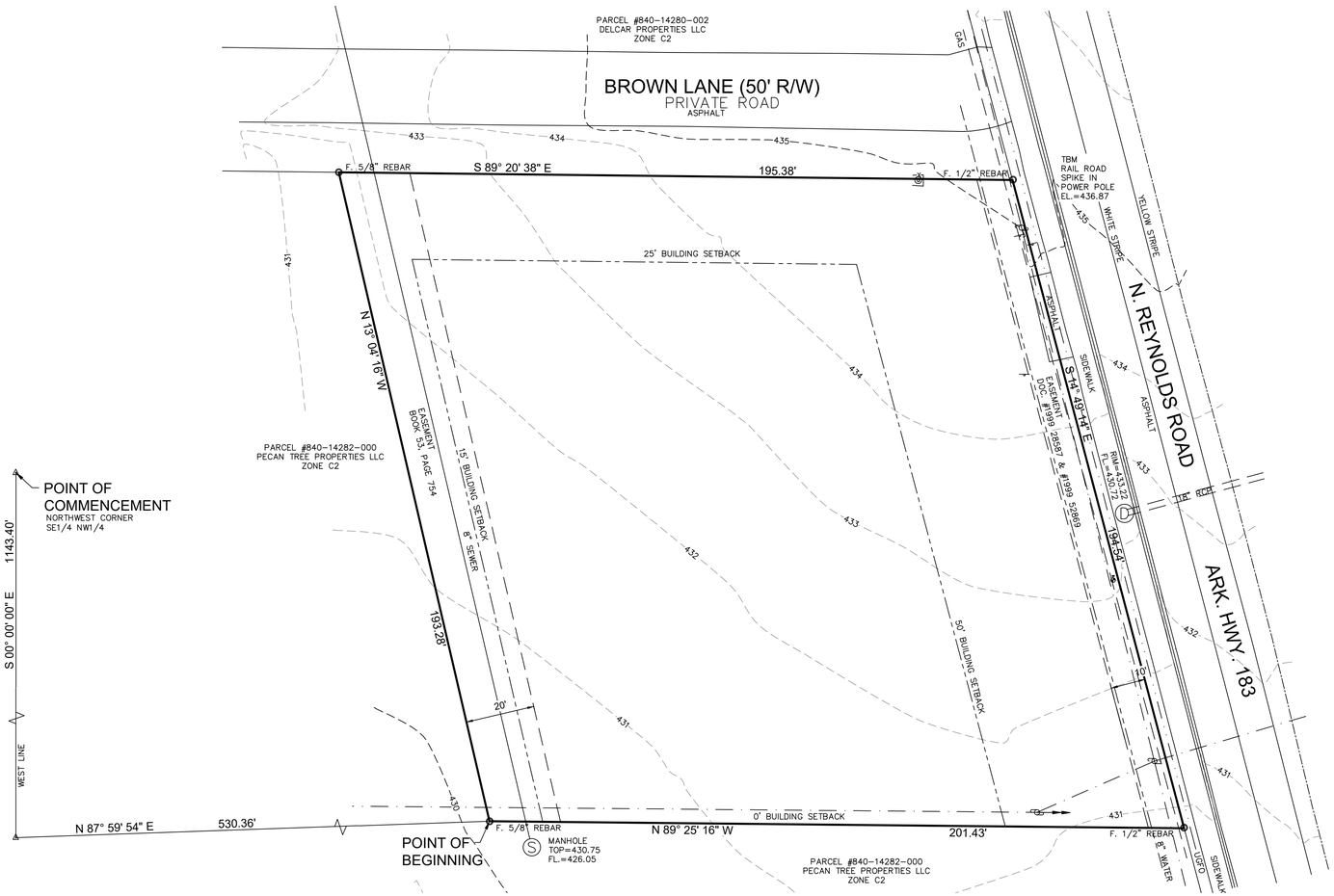
SURVEY LEGAL DESCRIPTION:

PART OF THE SE1/4 NW1/4 OF SECTION 27, TOWNSHIP 1 SOUTH, RANGE 14 WEST, IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SE1/4 NW1/4;
THENCE ALONG THE WEST LINE OF THE SAID SE1/4 NW1/4 S 00° 00' 00" E FOR 1143.40 FEET;
THENCE N 87° 59' 54" E FOR 530.36 FEET LEAVING THE WEST LINE OF SAID SE1/4 NW/4 TO A TO 5/8" REBAR AND THE POINT OF BEGINNING;
THENCE N 13° 04' 16" W FOR 193.28 FEET TO A 5/8" REBAR AND THE SOUTHERLY RIGHT OF WAY LINE OF BROWN LANE;
THENCE ALONG SAID RIGHT OF WAY LINE S 89° 20' 38" E FOR 195.38 FEET TO A 1/2" REBAR AND THE WESTERLY RIGHT OF WAY LINE OF NORTH REYNOLDS ROAD;
THENCE ALONG SAID RIGHT OF WAY LINE S 14° 49' 14" E FOR 194.54 FEET TO A 1/2" REBAR;
THENCE N 89° 25' 16" W FOR 201.43 FEET TO THE POINT OF BEGINNING;

LEGEND

- PROPERTY LINE
- EASEMENT
- SANITARY SEWER LINE
- OVERHEAD ELECTRIC LINE
- STORM DRAIN LINE
- EDGE OF ASPHALT
- CURB & GUTTER
- UTILITY POLE & GUY
- GAS METER
- TELEPHONE PEDESTAL
- SIGN
- CALCULATED POINT
- SHOWS FOUND SURVEY MARKER AS DESCRIBED




SURVEYOR'S NOTES

1. THE INFORMATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THIS SURVEY IS BASED ON RECORDS OF EXISTING UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS WERE TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS IN ADVANCE BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
2. BASIS OF BEARINGS: ARKANSAS STATE PLANE, NORTH ZONE (ARDOT).
3. PART OF THIS PROPERTY IS NOT SHOWN IN THE 100 YEAR FLOOD PLAIN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 050308 0380 E DATED JUNE 5, 2020.
4. THIS PROPERTY IS ZONED: C-2
5. THIS TRACT CONTAINS 37,231 SQ. FT. OR 0.855 ACRES, MORE OR LESS.
6. SETBACKS SHOWN ARE FOR C-2 ZONING.

GRAPHIC SCALE

20 0 10 20 40 80
( IN FEET )
1 inch = 20 ft.

PROFESSIONAL LAND SURVEYOR — STATE OF ARKANSAS NO. 1215 — SIGNATURE — JOHN R. POWNALL — LICENSED

CERTIFICATE OF AUTHORIZATION — THOMAS ENGINEERING CO — No. 94 — ARKANSAS

REVISION: REVISED 1/26/24 UPDATED LEGAL.

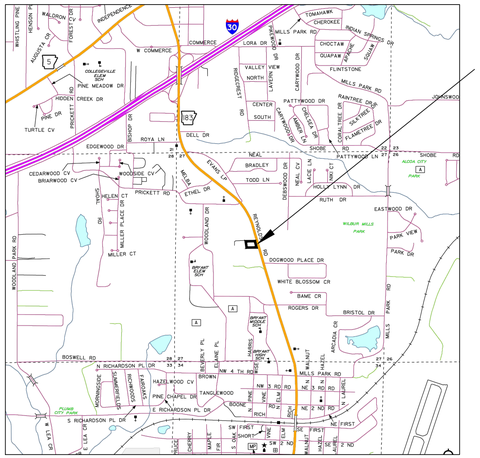
THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

# ALTA/NSPS SURVEY OF PART OF THE SE1/4 NW1/4, OF SECTION 27, T-1-S, R-14-W, SALINE COUNTY, ARKANSAS

| APPROVED | DRAWN BY | DATE | SHEET NO. |
|---|---|---|---|
| | MJC | 10/3/23 | V1 |
| SCALE 1" = 20' | | | |

LITTLE CAESARS-BRYANT-23-0165.dwg

PLOTTED: 6/12/2024




## VICINITY MAP

GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE TO THE BACK OF CURB UNLESS OTHERWISE NOTED. RADII ARE 5 FEET UNLESS OTHERWISE INDICATED.

2. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF PORCHES, RAMPS, SLOPED PAVING, TRUCK DOCKS, BUILDING UTILITY ENTRANCE LOCATIONS AND PRECISE BUILDING DIMENSIONS.

3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

4. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH O.S.H.A. AND ANY OTHER APPLICABLE LOCAL, STATE OR FEDERAL SAFETY REGULATIONS, INCLUDING THE USE OF TRENCH SHORING, ETC.

5. REPAIR, REPLACE OR EXTEND EXISTING DAMAGED OR MISSING CURB AND GUTTER, SIDEWALK, RAMPS OR CONCRETE APRONS ON SITE & WITHIN THE PUBLIC RIGHT-OF-WAY ADJACENT TO THE SITE. REMOVE ABANDONED DRIVEWAYS. ALL WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO CITY STANDARDS AND ADA GUIDELINES.

6. CONTACT BRYANT STREET DEPARTMENT FOR INSPECTIONS OF ANY WORK IN PUBLIC RIGHT-OF-WAY PRIOR TO PLACEMENT OF CONCRETE OR ASPHALT OR FOR CLARIFICATION OF REQUIREMENTS PRIOR TO TO COMMENCING WORK. FAILURE TO DO SO CAN RESULT IN REMOVAL OF ANY IMPROPERLY PLACED CONCRETE OR ASPHALT AT THE EXPENSE OF THE CONTRACTOR.

7. CONTACT BRYANT FIRE DEPARTMENT FOR LOCATION AND REQUIREMENTS FOR FIRE LANE STRIPING ON SITE BEFORE APPLICATION. FIRE LANES WILL BE 4" WHITE LETTERS ON 6" RED TRAFFIC PAINT AT 15' INTERVALS.

SITE PLAN NOTES

1. SITE CONTAINS A PROPOSED DRIVE THRU RESTAURANT.
2. BASIS OF BEARINGS: GPS GRID NORTH.
3. THE PROPERTY IS NOT SHOWN IN THE 100 YEAR FLOOD PLAIN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 050308 0380E, DATED 6/05/20.
4. THIS PROPERTY IS ZONED C-2.
5. ALL ABUTTING PROPERTIES ARE ZONED C-2.
6. THIS TRACT CONTAINS 37,231 S.F. OR 0.855 ACRES, MORE OR LESS.
7. SETBACKS FOR C-2 ZONING ON HWY 183 ARE:
   50' FRONT
   0' SIDE OR 25' ALONG STREET OR RESIDENTIAL
   15' REAR OR 55' ABUTTING RESIDENTIAL
8. BUILDING TO LOT COVERAGE 5.0% (35% MAX.).
   IMPERVIOUS SURFACE AREA TO LOT COVERAGE 65%.

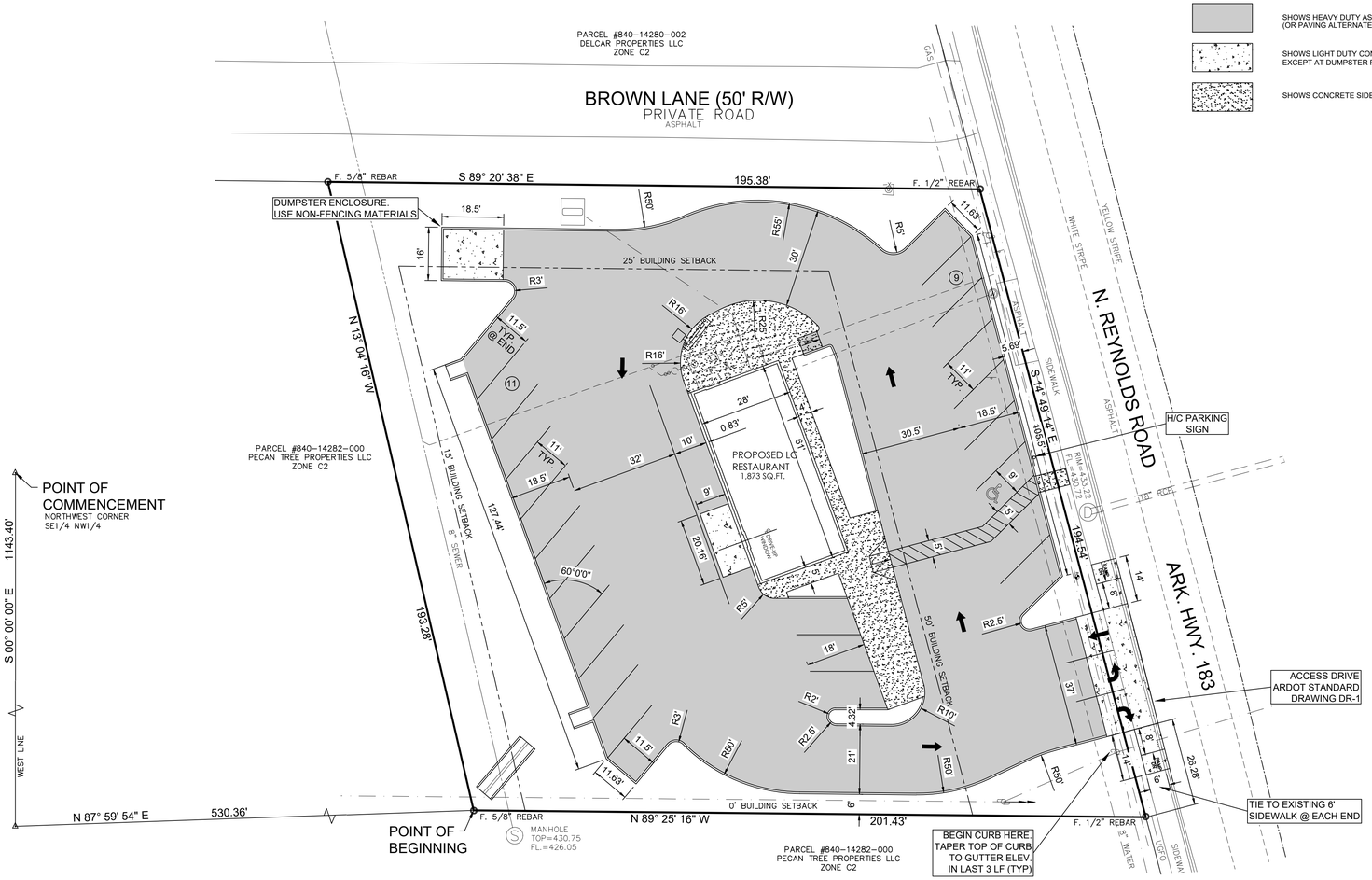
SURVEY LEGAL DESCRIPTION:

PART OF THE SE1/4 NW1/4 OF SECTION 27, TOWNSHIP 1 SOUTH, RANGE 14 WEST, IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SE1/4 NW1/4;
THENCE ALONG THE WEST LINE OF THE SAID SE1/4 NW1/4 S 00° 00' 00" E FOR 1143.40 FEET;
THENCE N 87° 59' 54" E FOR 530.36 FEET LEAVING THE WEST LINE OF SAID SE1/4 NW/4 TO A TO 5/8" REBAR AND THE POINT OF BEGINNING;
THENCE N 13° 04' 16" W FOR 193.28 FEET TO A 5/8" REBAR AND THE SOUTHERLY RIGHT OF WAY LINE OF BROWN LANE;
THENCE ALONG SAID RIGHT OF WAY LINE S 89° 20' 38" E FOR 195.38 FEET TO A 1/2" REBAR AND THE WESTERLY RIGHT OF WAY LINE OF NORTH REYNOLDS ROAD;
THENCE ALONG SAID RIGHT OF WAY LINE S 14° 49' 14" E FOR 194.54 FEET TO A 1/2" REBAR;
THENCE N 89° 25' 16" W FOR 201.43 FEET TO THE POINT OF BEGINNING;

LEGEND

- PROPERTY LINE
- EASEMENT
- SANITARY SEWER LINE
- OVERHEAD ELECTRIC LINE
- STORM DRAIN LINE
- EDGE OF ASPHALT
- CURB & GUTTER
- UTILITY POLE & GUY
- GAS METER
- TELEPHONE PEDESTAL
- SIGN
- CALCULATED POINT
- SHOWS FOUND SURVEY MARKER AS DESCRIBED
- SHOWS HEAVY DUTY ASPHALT PAVEMENT (OR PAVING ALTERNATE - LIGHT DUTY CONC. PAVEMENT)
- SHOWS LIGHT DUTY CONCRETE PAVEMENT EXCEPT AT DUMPSTER PAD
- SHOWS CONCRETE SIDEWALK




PARKING

| | |
|---|---|
| REGULAR | 19 SPACES |
| ACCESSIBLE | 1 SPACES |
| TOTAL | 20 SPACES |
| REQUIRED | 7 SPACES (1 SPACE/300 SF OCCUPIED SPACE) |

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4685
JOHN R. POWELL

CERTIFICATE OF AUTHORIZATION
THOMAS ENGINEERING CO.
No. 94
ARKANSAS

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

GRAPHIC SCALE
20 0 10 20 40 80
( IN FEET )
1 inch = 20 ft.

THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

SITE PLAN
LITTLE CAESARS
BRYANT, ARKANSAS

| APPROVED | DRAWN BY | DATE | SHEET NO. |
|---|---|---|---|
| | JRP | 7/10/24 | C2 |
| SCALE 1" = 20' | | | |

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PLOTTED: 7/10/2024

GRADING PLAN
GENERAL NOTES

1. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

2. WARRANTY/DISCLAIMER. THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED AT THIS TIME. HOWEVER, NEITHER THOMAS ENGINEERING COMPANY, INC., NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THOMAS ENGINEERING COMPANY PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

3. SAFETY NOTICE TO CONTRACTOR. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR OWNER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.

4. ENGINEER'S NOTICE TO CONTRACTOR. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

5. SEE ARCHITECTURAL PLANS FOR DETAILS ON CONCRETE RAMPS AND SIDEWALKS ATTACHED TO BUILDINGS.

6. FINISHED GRADE CONTOURS ARE INDICATED ALONG TOP OF COMPLETED STRUCTURES, TOP OF PAVEMENT AND GUTTER LINE OF CURB, UNLESS OTHERWISE SHOWN. FOR ROUGH GRADING, CONTRACTOR SHALL ALLOW FOR DEPTHS OF TOPSOIL AND CONCRETE STRUCTURES. FOR FINISH GRADING, CONTRACTOR SHALL INSTALL TOPSOIL AND CONCRETE STRUCTURES TO FINISHED GRADE AS INDICATED ON THIS SHEET.

7. THE GENERAL CONTRACTOR SHALL FURNISH "AS-BUILT" DRAWINGS AT END OF PROJECT.

8. ALL STORM DRAIN LINES AND UTILITY LINES UNDER THE PAVEMENT SHALL BE BACK FILLED WITH CRUSHED STONE.

9. PLACE A 4" MINIMUM DEPTH OF TOPSOIL OVER ALL LAWN AND LANDSCAPE AREAS.

10. REFER TO LANDSCAPE PLAN FOR PERMANENT TURF SOD AND SEEDING AREAS.

11. PROVIDE TEMPORARY SEEDING AND EROSION CONTROL PER STATE AND LOCAL CODES.

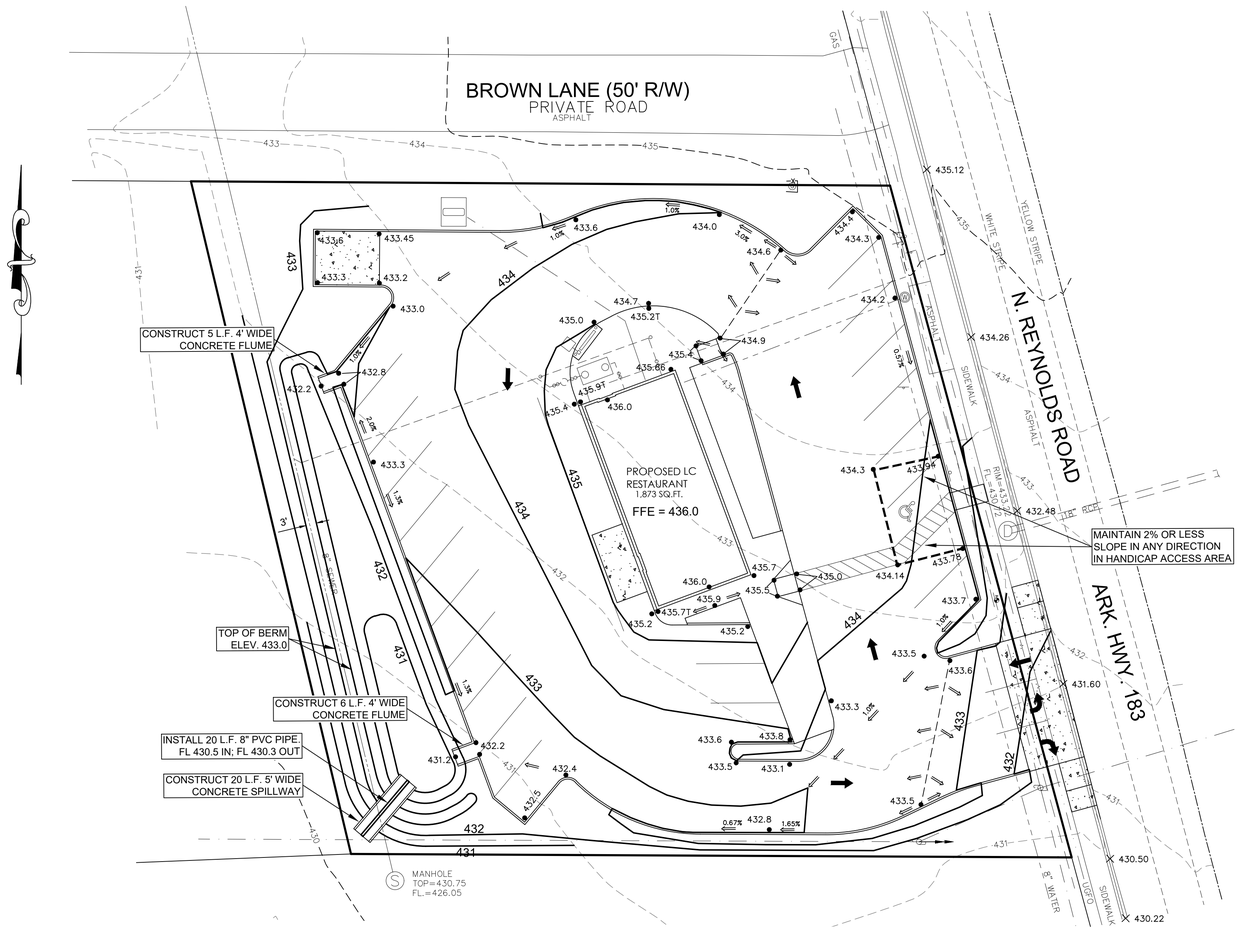
## LEGEND

| | |
|---|---|
| 100 / 101 | EXISTING CONTOURS |
| 101 | PROPOSED CONTOURS |
| 400.0 | PROPOSED SPOT ELEVATION GUTTER |
| 400.0 T | PROPOSED SPOT ELEVATION TOP OF CURB |
| 400.00 | EXISTING SPOT ELEVATION |
| ⟹ | DRAINAGE ARROW |

NOTE: SPOT ELEVATIONS FINISHED GRADE UNLESS OTHERWISE SHOWN.

## LEGEND

| | |
|---|---|
| | PROPERTY LINE |
| | EASEMENT |
| | SANITARY SEWER LINE |
| | OVERHEAD ELECTRIC LINE |
| | STORM DRAIN LINE |
| | EDGE OF ASPHALT |
| | CURB & GUTTER |
| | UTILITY POLE & GUY |
| G | GAS METER |
| T | TELEPHONE PEDESTAL |
| | SIGN |
| | CALCULATED POINT |
| | SHOWS FOUND SURVEY MARKER AS DESCRIBED |




GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

Know what's below. Call before you dig.

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REGISTERED PROFESSIONAL ENGINEER
No. 4685
JOHN R. POWNALL

CERTIFICATE OF AUTHORIZATION
THOMAS ENGINEERING CO
No. 94
ARKANSAS

THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

# GRADING PLAN
# LITTLE CAESARS
# BRYANT, ARKANSAS

| APPROVED | DRAWN BY | DATE | SHEET NO. |
|---|---|---|---|
| | JRP | 7/10/24 | C3 |
| SCALE 1" = 20' | | | |

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PLOTTED: 7/10/2024

UTILITY NOTES:

1. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES IN ACCORDANCE WITH THE ARKANSAS UNDERGROUND FACILITIES DAMAGE PREVENTION ACT. THIS LAW REQUIRES THAT THE CONTRACTOR MAKE A TELEPHONE CALL TO THE ARKANSAS ONE-CALL SYSTEM AT 1-800-482-8998 AT LEAST TWO (2) WORKING DAYS PRIOR TO EXCAVATING TO ENSURE THAT ANY EXISTING UTILITIES CAN BE LOCATED.

2. CONTRACTOR TO UNCOVER AND MARK UTILITY LINES BEFORE CONSTRUCTION.

3. CONTRACTOR SHALL BEAR ALL RESPONSIBILITY AND COST OF REPAIR OR REPLACEMENT OF EXISTING UTILITIES DAMAGED OR INTERRUPTED AS A RESULT OF THIS CONSTRUCTION.

4. CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE OWNER OF ANY DAMAGED OR INTERRUPTED UTILITIES IMMEDIATELY.

5. ALL SEWER MAINS, SERVICES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE TO THE BRYANT WATER WORKS SPECIFICATIONS, THE ARKANSAS DEPARTMENT OF HEALTH AND THE ARKANSAS STATE PLUMBING CODE.

6. ALL WATER LINES SERVICES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE TO THE BRYANT WATER WORKS REQUIREMENTS AND THE ARKANSAS STATE PLUMBING CODE.

7. SEE PLUMBING PLANS FOR EXACT LOCATION OF UTILITY ENTRANCES TO THE BUILDING.

8. IN AREAS WHERE UTILITIES ARE INSTALLED UNDER NEW ASPHALT PAVEMENT, REFER TO DETAIL "PIPE TRENCH & BACKFILL SECTION DETAIL UNDER NEW PAVEMENT."

ELECTRIC UTILITY NOTES:

1. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF TRANSFORMER PAD AND PROVIDE THE MINIMUM SIZED PAD REQUIRED BY ENTERGY.
2. THE CONTRACTOR SHALL PAY ENTERGY FOR ALL SWITCHGEAR, CONNECTIONS, UNDERGROUND 3 PHASE PRIMARY WIRE, 3 PHASE PAD MOUNTED TRANSFORMER AND SECONDARY UNDERGROUND SERVICE WIRE.

SANITARY SEWER
GENERAL NOTES

1. 4" SERVICE LINES AND STUBS SHALL BE LAID ON MINIMUM 1% SLOPE.
2. MAINTAIN 10' MINIMUM CLEARANCE BETWEEN WATER AND SEWER LINES.
3. PVC PIPE SHALL HAVE ASTM C33 #7 STONE BEDDING 6" ON ALL SIDES.
4. SEWER SERVICE PIPE MATERIAL SHALL CONFORM TO ONE OF THE FOLLOWING STANDARDS: ASTM D 2665, SCHEDULE 40 DWV OR ASTM D3034, PVC SEWER PIPE, SDR-26

WATER NOTES:
1. ALL PIPES TO HAVE A MINIMUM OF 3' OF COVER.
2. ALL NON-METALLIC MAINS SHALL HAVE A 12 GA. COPPER TRACING WIRE.
3. ALL P.V.C. PIPE SHALL BE CLASS 250.
4. MAINTAIN 18" VERTICAL SERRATION BETWEEN WATER/SEWER CROSSINGS.
5. MAINTAIN 5' HORIZONTAL SEPARATION BETWEEN PARALLEL UTILITIES.
6. CONTRACTOR TO PAY FOR INSTALLATION OF DOMESTIC AND IRRIGATION METERS.

WATER LINE PIPE MATERIALS:
1. DUCTILE IRON PIPE SHALL CONFORM TO ANSI A21.51 (AWWA C151) AND SHALL HAVE A CEMENT MORTAR LINING AND SEAL COAT CONFORMING TO ANSI A21.4 (AWWA C104) AND NSF 61. JOINTS SHALL CONFORM TO ANSI A21.11 (AWWA C111) AND MAY BE MECHANICAL JOINT OR PUSH-ON JOINT UNLESS OTHERWISE SPECIFIED. GASKETS SHALL BE MANUFACTURED IN THE UNITED STATES AND/OR COSTA RICA. THE MINIMUM CLASS OF D.I. PIPE SHALL BE THICKNESS CLASS 50 UNLESS OTHERWISE SPECIFIED. ALL DUCTILE IRON SHALL BE ENCASED IN POLYETHYLENE (POLYWRAPPED) UPON INSTALLATION (SEE SECTION 21 OF THE CAW CONSTRUCTION SPECIFICATIONS FOR SPECIFICS). ALL DUCTILE IRON MAINS SHALL END WITH A FULL JOINT OF MECHANICAL JOINT PIPE WITH A MECHANICAL JOINT PLUG AND ANCHOR COLLAR.

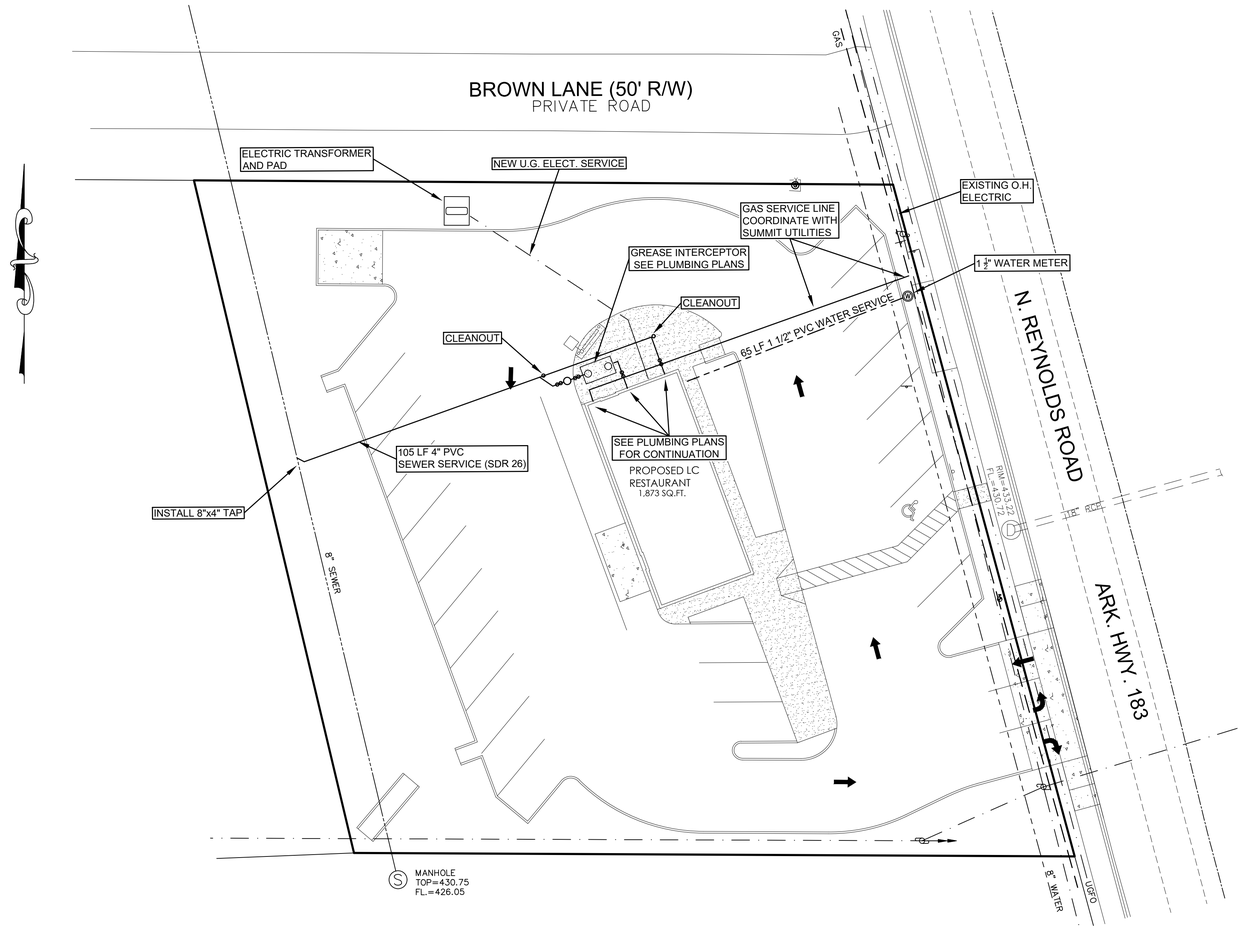
2. PVC WATER MAIN PIPE SHALL CONFORM TO AWWA C900, DR18, PVC PRESSURE PIPE AND FABRICATED FITTINGS 4" THROUGH 12". PVC WATER PIPE SHALL HAVE INTEGRAL BELL JOINTS WITH ELASTOMETRIC GASKETS THAT CONFORM TO ASTM 3212 AND ASTM F477.

3. WATER SERVICE PIPE SHALL CONFORM TO AWWA C904, DR9, CROSS-LINKED POLYETHYLENE (PEX), SDR9, MINIMUM PRESSURE CLASS 160, PRESSURE PIPE AND TUBING, ½ IN. THROUGH 3 IN, FOR WATER SERVICE.

Know what's below. Call before you dig.

## LEGEND

- PROPERTY LINE
- EASEMENT
- SANITARY SEWER LINE
- OVERHEAD ELECTRIC LINE
- STORM DRAIN LINE
- EDGE OF ASPHALT
- CURB & GUTTER
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- GAS METER
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- SIGN
- CALCULATED POINT
- SHOWS FOUND SURVEY MARKER AS DESCRIBED




GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 4685 JOHN R. POWELL

CERTIFICATE OF AUTHORIZATION THOMAS ENGINEERING CO No. 94 ARKANSAS

THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

# UTILITY PLAN
# LITTLE CAESARS
# BRYANT, ARKANSAS

| APPROVED | DRAWN BY | DATE | SHEET NO. |
|---|---|---|---|
| | JRP | 7/10/24 | C4 |
| SCALE 1" = 20' | | | |

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PLOTTED: 7/10/2024

## SEQUENCE OF CONSTRUCTION

1. INSTALL CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE. CONTRACTOR SHALL INSTALL WHATEVER DIVERSIONS/SWALES ARE NECESSARY TO ROUTE ALL SEDIMENT LADEN WATER TO THE PROPOSED SILT FENCE LOCATIONS.

2. CLEAR SITE AND REMOVE ALL DEMOLITION DEBRIS.

3. BEGIN GRADING OPERATION FOR SITE.

4. BEGIN UTILITY CONSTRUCTION. MAINTAIN ANY DIVERSIONS TO ROUTE ALL UPSTREAM WATER AWAY FROM THE EXISTING STREETS THROUGHOUT CONSTRUCTION.

5. INSTALL CURB AND GUTTER AND SIDEWALKS.

6. FINE GRADE ENTIRE SITE, AND COMPLETE PAVING OPERATIONS.

7. INSTALL SEEDING, VEGETATION, AND PROCEED WITH FINAL SITE STABILIZATION. WATER ALL GRASSED AREAS.

8. INSPECT AND RESOD ALL DISTURBED AREAS AS NECESSARY. UPON FINAL SITE STABILIZATION, CLEAN SILT FROM BEHIND ALL SEDIMENT FENCES AND REMOVE ALL TEMPORARY EROSION CONTROL DEVICES.

## EROSION CONTROL NOTES:

1. SEDIMENT CONTROL MEASURES MUST BE INSPECTED AND MAINTAINED REGULARLY IN ORDER TO INSURE THAT THE INTENDED PURPOSES ARE ACCOMPLISHED.

2. ALL DISTURBED AREAS NOT INTENDED FOR PAVING SHALL BE SEEDED OR SODDED AS PER SPECIFICATIONS.

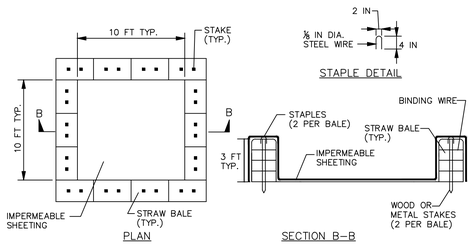
3. STABILIZATION REQUIREMENTS: (NOT NECESSARILY VEGETATION) ALL PERIMETER CONTROLS ARE TO BE STABILIZED WITHIN 7 DAYS OF INSTALLATION. ALL OTHER DISTURBED AREAS ARE TO BE STABILIZED WITHIN 14 DAYS.

4. TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL CONTRIBUTING AREAS ARE GRADED AND STABILIZED.

5. EXCAVATED EARTH SHALL BE PILED ON THE HIGH SIDE OF EXCAVATIONS.

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

7. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.




NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

## WASHOUT STRUCTURE WITH STRAW BALES

### CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.

2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.

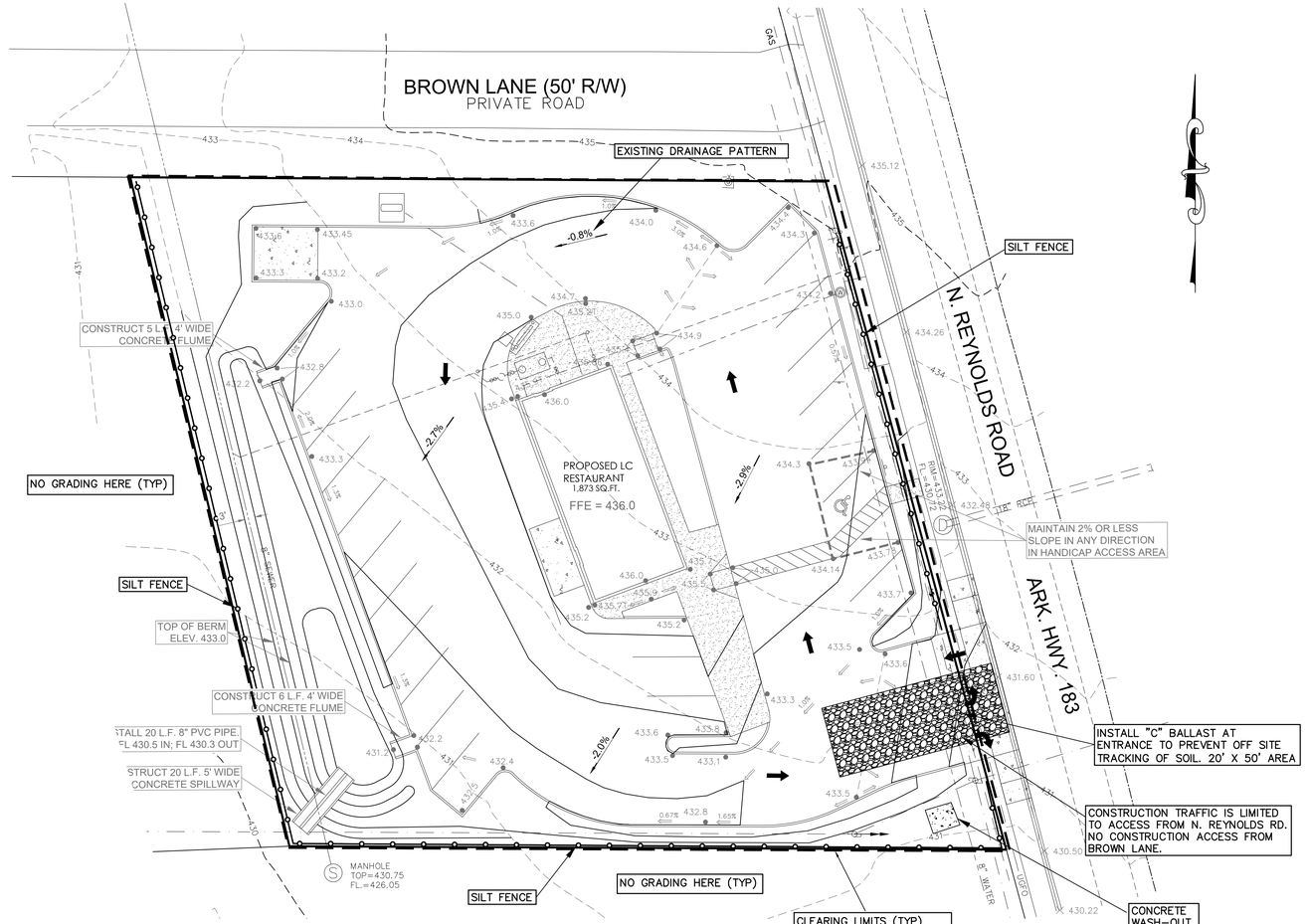
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.

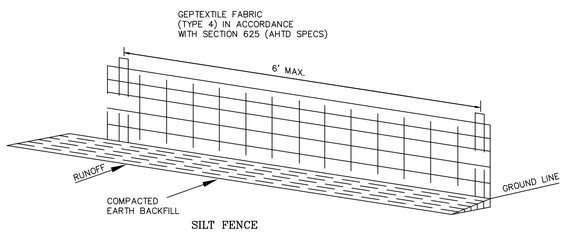
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.

5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

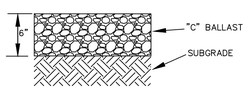
## LEGEND

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SILT FENCE




CROSS SECTION
GRAVEL ENTRANCE DETAIL

## LEGEND

SHOWS SILT FENCE

SHOWS GRAVEL ENTRANCE DRIVE

TOTAL SOIL DISTURBANCE ACREAGE= 0.9 AC.±
TOTAL PROJECT ACREAGE= 0.9 AC.±

GRAPHIC SCALE

20 0 10 20 40 80

( IN FEET )
1 inch = 20 ft.

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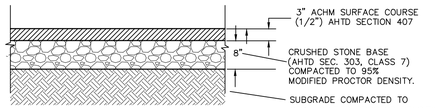
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# EROSION CONTROL PLAN
# LITTLE CAESARS
# BRYANT, ARKANSAS

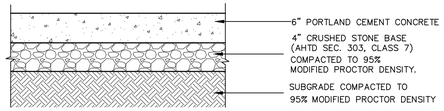
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| | JRP | 7/10/24 | C5 |
| SCALE 1" = 20' | | | |

PLOTTED: 7/10/2024 LITTLE CAESARS-BRYANT-23-0165.dwg

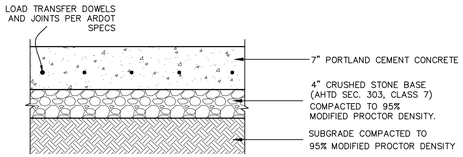



## HEAVY DUTY ASPHALT PAVEMENT

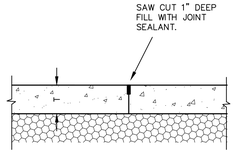
NOTE: ASPHALT PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT SPECIFICATIONS.




## LIGHT DUTY CONCRETE PAVEMENT



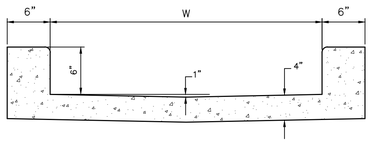

## DUMPSTER PAD CONCRETE PAVEMENT



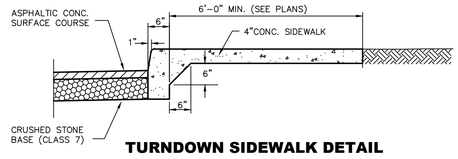

NOTES ON CONCRETE PAVEMENT:

1. CONCRETE SHALL HAVE MINIMUM 4000 PSI COMPRESSIVE STRENGTH.
2. CONCRETE SHALL HAVE 5% AIR ENTRAINED.

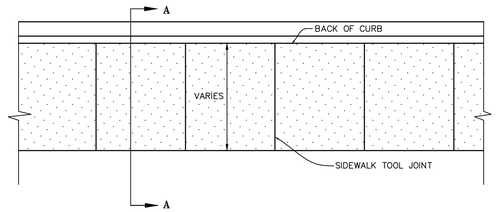
## CONTRACTION JOINT DETAIL



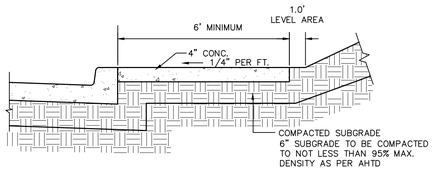

## CONCRETE CURB OPENING FLUME SECTION




## TURNDOWN SIDEWALK DETAIL

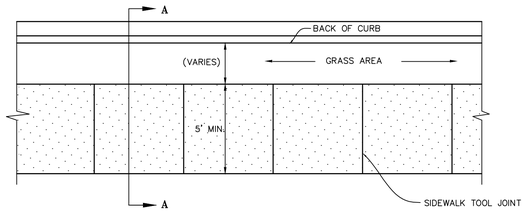



## SIDEWALK DETAIL (ADJACENT TO CURB) PLAN VIEW

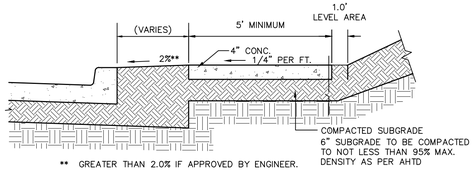



## SIDEWALK SECTION A - A

1. 1/2" EXPANSION JOINT SPACING AT 60' AND AT STRUCTURES, DRIVES AND OTHER WALKS.
2. SIDEWALKS SHALL BE TOOLED AT LEAST 20% OF THE FULL DEPTH OF THE SIDEWALK AT 5' INTERVALS.
3. ALL CONCRETE SHALL HAVE 4000 PSI MINIMUM COMPRESSIVE STRENGTH
4. SIDEWALK AGAINST CURB GRANTED ONLY WITH ENGINEER'S PERMISSION



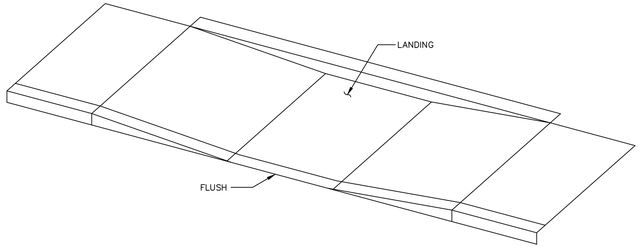

## SIDEWALK DETAIL PLAN VIEW

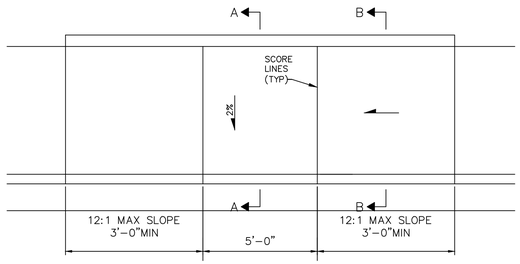



** GREATER THAN 2.0% IF APPROVED BY ENGINEER.

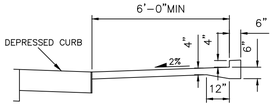
## SIDEWALK SECTION A - A

1. 1/2" EXPANSION JOINT SPACING AT 60' AND AT STRUCTURES, DRIVES AND OTHER WALKS.
2. SIDEWALKS SHALL BE TOOLED AT LEAST 20% OF THE FULL DEPTH OF THE SIDEWALK AT 5' INTERVALS.
3. ALL CONCRETE SHALL HAVE 4000 PSI MINIMUM COMPRESSIVE STRENGTH

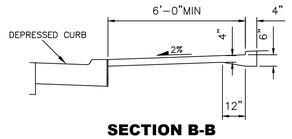


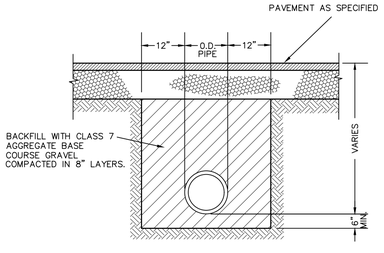

## ACCESSIBLE RAMP DETAIL



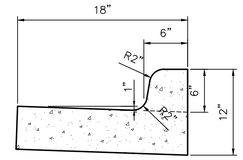

## SECTION A-A




## SECTION B-B



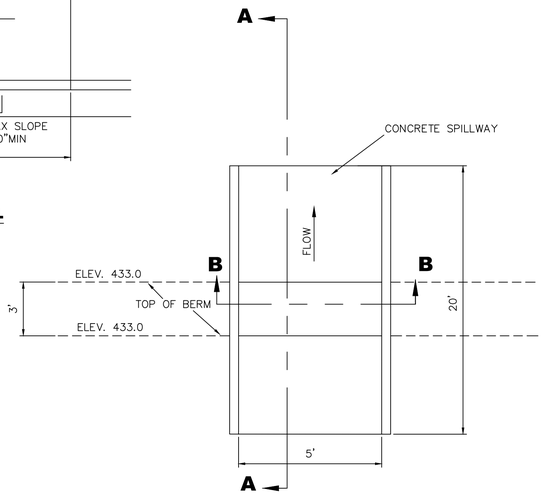

## PIPE TRENCH & BACKFILL SECTION DETAIL UNDER NEW PAVEMENT



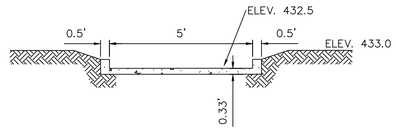

## TYPE "A" CURB 6" VERTICAL CURB

NOTES ON CONCRETE CURB & GUTTER:

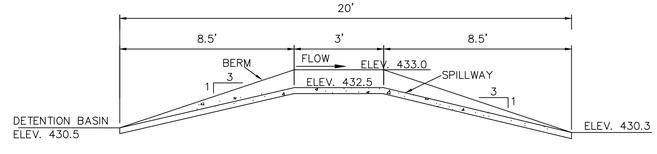
1. CONCRETE SHALL BE AHTD TYPE CLASS A OR CLASS S.
2. CONCRETE SHALL HAVE MINIMUM 4000 PSI COMPRESSIVE STRENGTH.
3. INSTALL 1/2" BITUMINOUS EXPANSION JOINT MATERIAL AT 100' MAXIMUM INTERVALS OR AT TIE INS TO BOXES, RADIUS RETURNS OR DRIVEWAY APRONS.
4. PROVIDE CONTROL JOINTS AT 15' MAXIMUM SPACING.
5. VERTICAL CURB ONLY BE USED WITH ENGINEER'S PERMISSION.
6. TYPE "B" CURB SHALL BE USED EXCEPT WHERE OTHER TYPES OF CURB ARE SPECIFIED ON THE PLANS.




## CONCRETE SPILLWAY PLAN VIEW




## CONCRETE SPILLWAY SECTION B-B




## CONCRETE SPILLWAY SECTION A-A

CERTIFICATE OF AUTHORIZATION THOMAS ENGINEERING CO. No. 94 ARKANSAS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 4685 JOHN R. POWNALL

THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

SITE DETAILS
LITTLE CAESARS
BRYANT, ARKANSAS

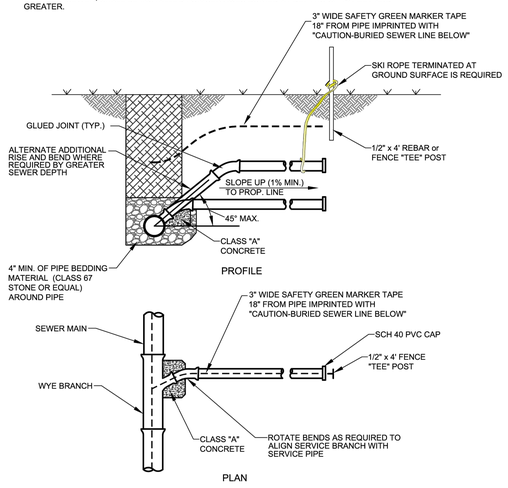
| APPROVED | DRAWN BY | DATE | SHEET NO. |
|---|---|---|---|
| | JRP | 7/10/24 | C6 |
| SCALE NTS | 23-0165 | | |

PLOTTED: 7/10/2024

LITTLE CAESARS DETAILS.dwg

NOTES:

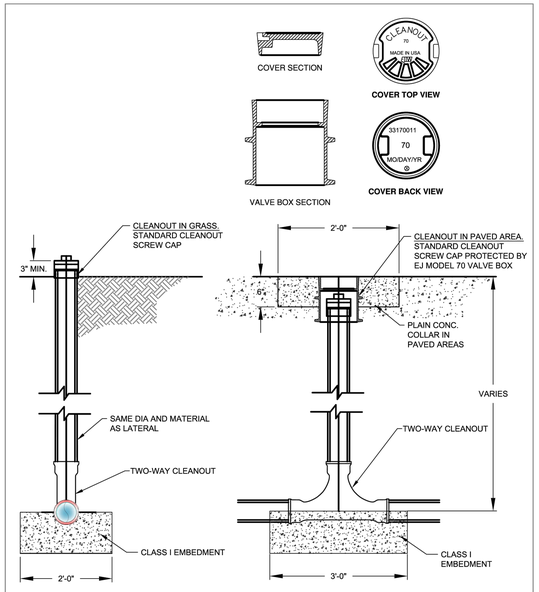
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0"
2. PLACE CLASS "A" CONCRETE UNDER EACH WYE BRANCH TO PREVENT CRACKING OR TWISTING UNDER EARTH LOADS.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB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




SEWER SERVICE LATERAL

| | | | |
|---|---|---|---|
| CITY OF BRYANT, AR<br>WATER UTILITIES<br>210 S.W. 3rd. STREET<br>BRYANT, AR<br>PHONE: (501) 943-0488 | TITLE: SEWER DETAILS | DATE: APRIL 2015<br>REVISED | SHEET: S15 |
| | DESCRIPTION: SEWER SERVICE LATERAL | | |
| | DRAWN BY: CHECKED BY: FILE: S15-Sewer Service Lateral.dwg | | |

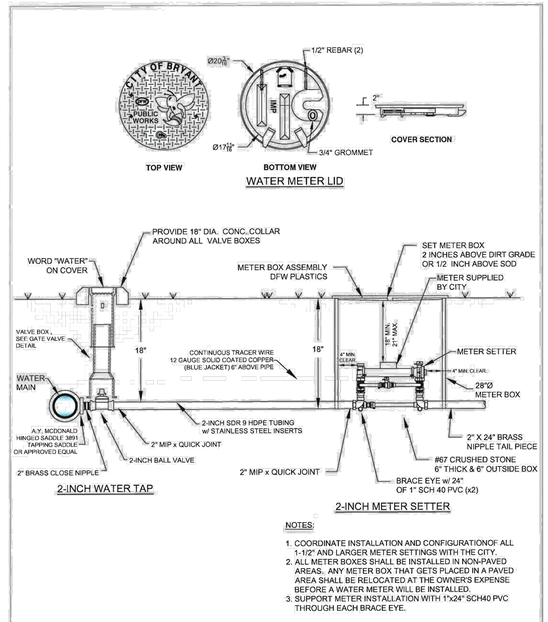
4/15/2015 3:59:56 AM




TYPICAL CLEANOUT

| | | | |
|---|---|---|---|
| CITY OF BRYANT, AR<br>WATER UTILITIES<br>210 S.W. 3rd. STREET<br>BRYANT, AR<br>PHONE: (501) 943-0488 | TITLE: SEWER DETAILS | DATE: APRIL 2015<br>REVISED | SHEET: S16 |
| | DESCRIPTION: SEWER SERVICE CLEANOUT | | |
| | DRAWN BY: CHECKED BY: FILE: S16-Sewer Service Cleanout.dwg | | |

4/15/2015 3:58:13 AM




WATER METER LID




2-INCH WATER TAP

2-INCH METER SETTER

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<br>WATER UTILITIES<br>210 S.W. 3rd. STREET<br>BRYANT, AR<br>PHONE: (501) 943-0488 | TITLE: WATER DETAILS | DATE: APRIL 2015<br>REVISED | SHEET: W12 |
| | DESCRIPTION: 2" WATER METER | | |
| | DRAWN BY: CHECKED BY: FILE: W12-2 Inch Water Meter.dwg | | |

CERTIFICATE OF AUTHORIZATION
THOMAS ENGINEERING CO.
No. 94
ARKANSAS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4685
JOHN R. POWNALL

THOMAS ENGINEERING COMPANY
3810 LOOKOUT ROAD, N. LITTLE ROCK, AR. 72116
TEL: 501-753-4463 FAX: 501-753-6814

WATER AND SEWER LINE DETAILS
LITTLE CAESARS
BRYANT, ARKANSAS

| APPROVED | DRAWN BY | DATE | SHEET NO. |
|---|---|---|---|
| | JRP | 7/10/24 | C7 |
| SCALE NTS | 23-0165 | | |

LITTLE CAESARS DETAILS.dwg

PLOTTED: 7/10/2024

# LITTLE CAESARS
# DRAINAGE REPORT

DATE 7/10/24
REVISED 7/11/24

PREPARED FOR:
**CITY OF BRYANT, AR**

PREPARED BY:

THOMAS ENGINEERING COMPANY
JOHN R POWNALL, P.E.
3810 LOOKOUT ROAD
NORTH LITTLE ROCK, AR 72116

CERTIFICATION

I hereby state that this Final Drainage has been prepared by me or under my supervision and meets the standard of care and expertise which is usual and customary in this community of professional engineers. The analysis has been prepared utilizing procedures and practices by the City of Bryant and within the standard accepted practices.

John R. Pownall, P.E.
President




Date: 07/10/24
REVISED: 07/11/24

# PROJECT DESCRIPTION

The proposed project is for the construction of a Little Caesars Restaurant located at Reynolds Road and Brown Lane. The proposed development is for a 1,873 square foot building.

This drainage analysis is to evaluate the predevelopment & post development drainage for the 2YR, 5YR, 10YR, 25YR and 100YR storms. The existing site is grass covered. The developed condition will be covered in approximately 70% impermeable surfaces.

# PROPOSED DRAINAGE SYSTEM

The developed site will drain by overland flow to a detention basin on the west side of the site. The detention basin will have a 8" diameter outlet pipe and a 5 foot wide overflow wier. The pre-development and post-development flows are summarized below:

| STORM | PRE-DEVELOPMENT | POST-DEVELOPMENT |
|---|---|---|
| 2 | 1.10 | 1.97 |
| 5 | 1.35 | 2.11 |
| 10 | 1.49 | 2.22 |
| 25 | 1.71 | 2.77 |
| 100 | 2.13 | 3.65 |

Due to the 8" minimum size of the outlet pipe, the post-development flows are more than the pre-development.

# APPENDIX

## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT POST DEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 2 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 1 |
| Links | 2 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *Pumps* | 0 |
| *Orifices* | 1 |
| *Weirs* | 1 |
| *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-01 | 0.82 | 0.3400 | 0.48 | 0.16 | 0.13 | 1.62 | 0 00:05:00 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area (ft²) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.30 | | | | | 1.21 | 430.30 | | |
| 2 | Stor-01 | Storage Node | 430.50 | 433.00 | 430.50 | | 0.00 | 1.62 | 431.32 | | |

## Link Summary

| SN | Element ID | Element Type | From (Inlet) Node | To (Outlet) Node | Length | Inlet Invert Elevation | Outlet Invert Elevation | Average Slope | Diameter or Height | Manning's Roughness | Peak Flow | Design Flow Capacity | Peak Flow/ Design Flow Ratio | Peak Flow Velocity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (ft) | (ft) | (ft) | (%) | (in) | | (cfs) | (cfs) | | (ft/sec) |
| 1 | DETENTION-OUTLET | Orifice | Stor-01 | Out-01 | | 430.50 | 430.30 | | 8.000 | | 1.21 | | | |
| 2 | DETENTION-SPILLWAY | Weir | Stor-01 | Out-01 | | 430.50 | 430.30 | | | | 0.00 | | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

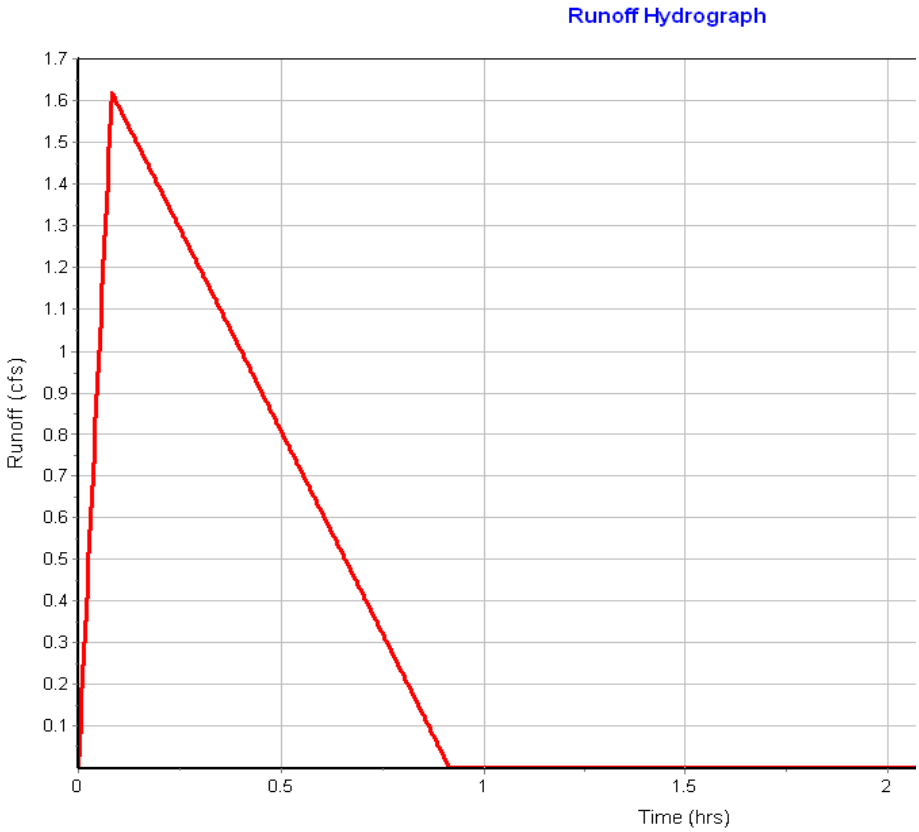
Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

**Subbasin : Sub-01**



# Storage Nodes

## Storage Node : Stor-01

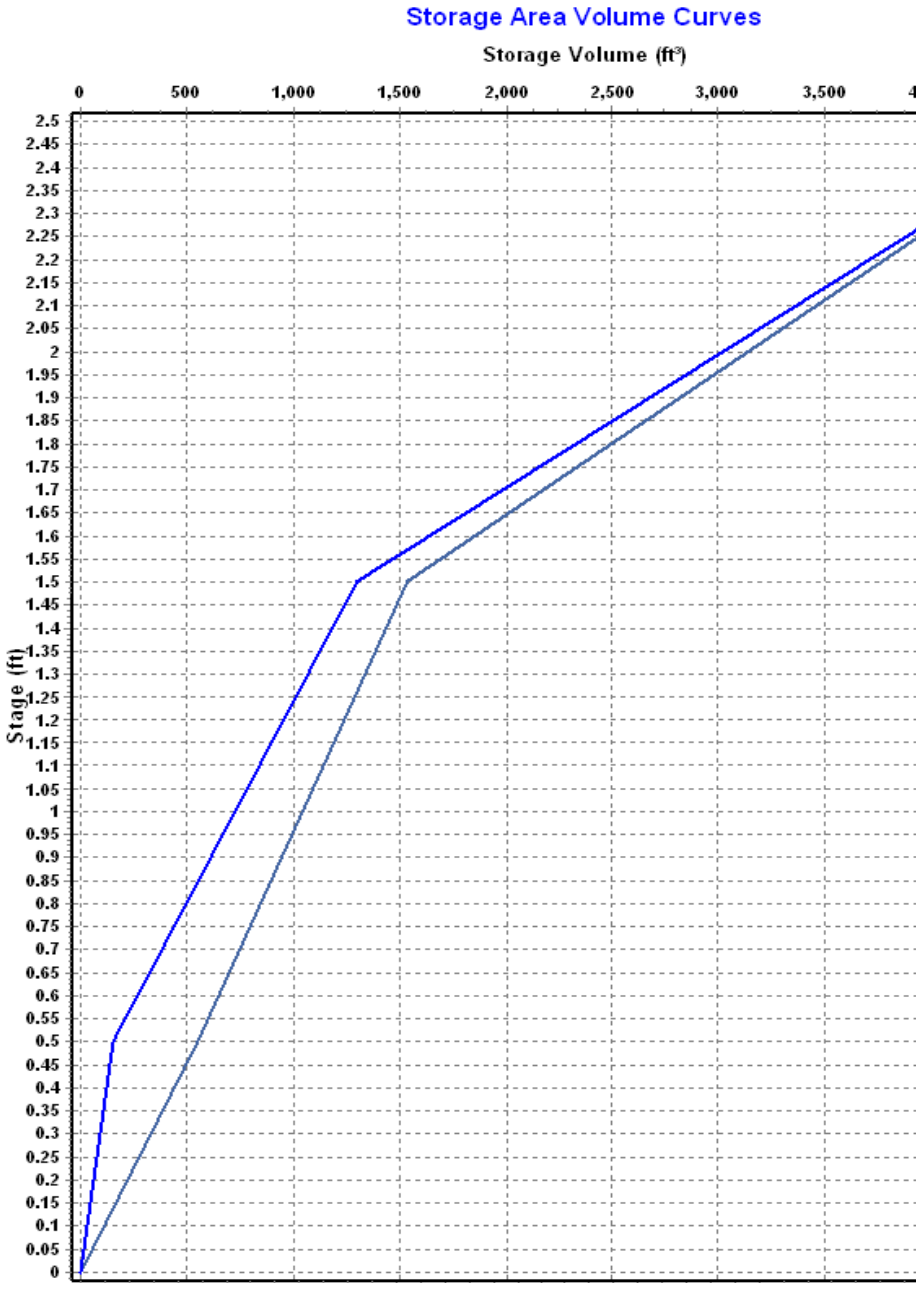
### Input Data

| | |
|---|---|
| Invert Elevation (ft) | 430.50 |
| Max (Rim) Elevation (ft) | 433.00 |
| Max (Rim) Offset (ft) | 2.50 |
| Initial Water Elevation (ft) | 430.50 |
| Initial Water Depth (ft) | 0.00 |
| Ponded Area (ft²) | 0.00 |
| Evaporation Loss | 0.00 |

### Storage Area Volume Curves

Storage Curve : Storage-01

| Stage (ft) | Storage Area (ft²) | Storage Volume (ft³) |
|---|---|---|
| 0 | 1 | 0.000 |
| .5 | 608 | 152.25 |
| 1.5 | 1689 | 1300.75 |
| 2.5 | 5204 | 4747.25 |


Storage Area Volume Curves
Storage Volume (ft³)
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Stage (ft)
2.5
2.45
2.4
2.35
2.3
2.25
2.2
2.15
2.1
2.05
2
1.95
1.9
1.85
1.8
1.75
1.7
1.65
1.6
1.55
1.5
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0

## Storage Node : Stor-01 (continued)

### Outflow Weirs

| SN | Element ID | Weir Type | Flap Gate | Crest Elevation (ft) | Crest Offset (ft) | Length (ft) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-SPILLWAY | Rectangular | No | 432.50 | 2.00 | 5.00 |

### Outflow Orifices

| SN | Element ID | Orifice Type | Orifice Shape | Flap Gate | Circular Orifice Diameter (in) | Rectangular Orifice Height (in) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-OUTLET | Side | CIRCULAR | No | 8.00 | |

### Output Summary Results

| | |
|---|---|
| Peak Inflow (cfs) | 1.62 |
| Peak Lateral Inflow (cfs) | 1.62 |
| Peak Outflow (cfs) | 1.21 |
| Peak Exfiltration Flow Rate (cfm) | 0.00 |
| Max HGL Elevation Attained (ft) | 431.32 |
| Max HGL Depth Attained (ft) | 0.82 |
| Average HGL Elevation Attained (ft) | 430.68 |
| Average HGL Depth Attained (ft) | 0.18 |
| Time of Max HGL Occurrence (days hh:mm) | 0 00:17 |
| Total Exfiltration Volume (1000-ft³) | 0.000 |
| Total Flooded Volume (ac-in) | 0 |
| Total Time Flooded (min) | 0 |
| Total Retention Time (sec) | 0.00 |

## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT POST DEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 2 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 1 |
| Links | 2 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *Pumps* | 0 |
| *Orifices* | 1 |
| *Weirs* | 1 |
| *Outlets* | 0 |
| Pollutants | 0 |
| Land Uses | 0 |

## Rainfall Details

| | |
|---|---|
| Return Period | 5 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-01 | 0.82 | 0.3400 | 0.56 | 0.19 | 0.16 | 1.87 | 0 00:05:00 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area (ft²) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.30 | | | | | 1.34 | 430.30 | | |
| 2 | Stor-01 | Storage Node | 430.50 | 433.00 | 430.50 | | 0.00 | 1.87 | 431.44 | | |

## Link Summary

| SN | Element ID | Element Type | From (Inlet) Node | To (Outlet) Node | Length | Inlet Invert Elevation | Outlet Invert Elevation | Average Slope | Diameter or Height | Manning's Roughness | Peak Flow | Design Flow Capacity | Peak Flow/ Design Flow Ratio | Peak Flow Velocity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (ft) | (ft) | (ft) | (%) | (in) | | (cfs) | (cfs) | | (ft/sec) |
| 1 | DETENTION-OUTLET | Orifice | Stor-01 | Out-01 | | 430.50 | 430.30 | | 8.000 | | 1.34 | | | |
| 2 | DETENTION-SPILLWAY | Weir | Stor-01 | Out-01 | | 430.50 | 430.30 | | | | 0.00 | | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

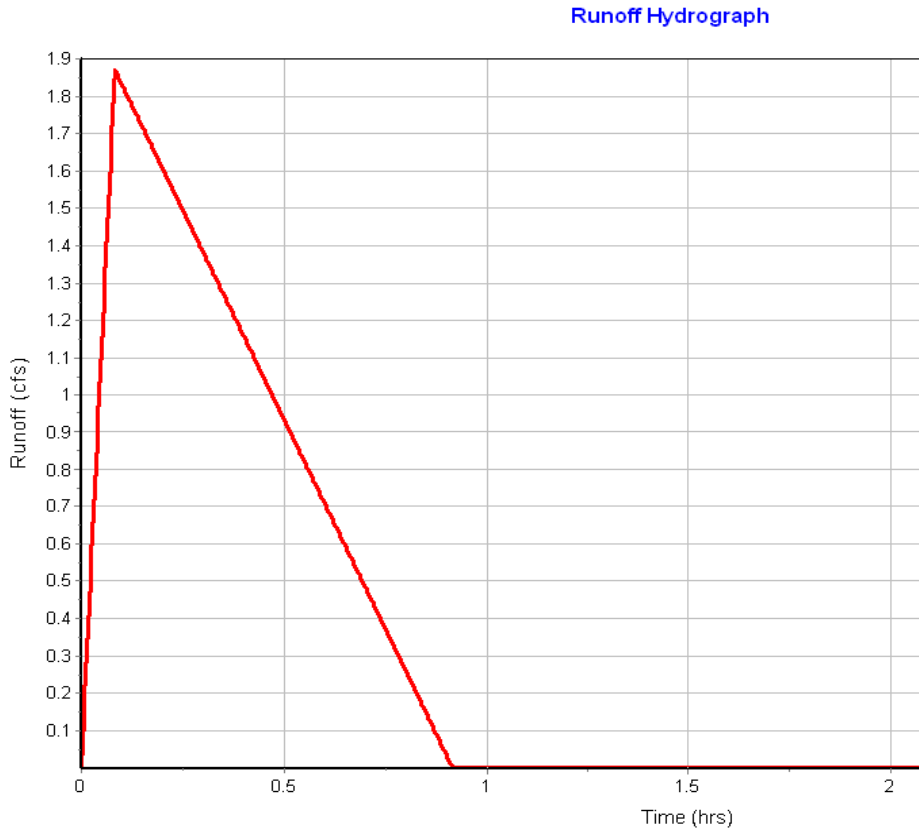
Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

**Subbasin : Sub-01**



# Storage Nodes

## Storage Node : Stor-01

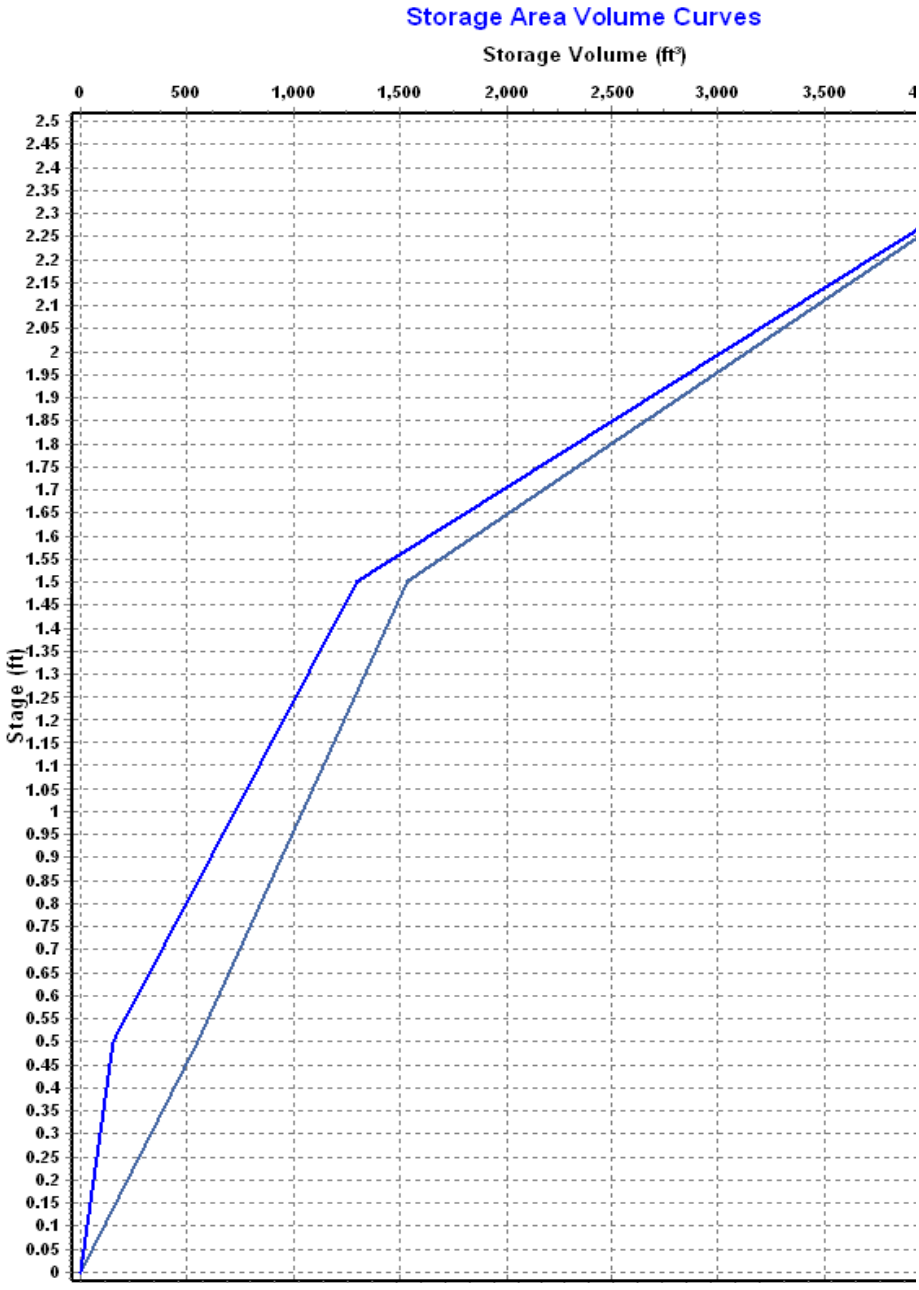
### Input Data

| | |
|---|---|
| Invert Elevation (ft) | 430.50 |
| Max (Rim) Elevation (ft) | 433.00 |
| Max (Rim) Offset (ft) | 2.50 |
| Initial Water Elevation (ft) | 430.50 |
| Initial Water Depth (ft) | 0.00 |
| Ponded Area (ft²) | 0.00 |
| Evaporation Loss | 0.00 |

### Storage Area Volume Curves

Storage Curve : Storage-01

| Stage (ft) | Storage Area (ft²) | Storage Volume (ft³) |
|---|---|---|
| 0 | 1 | 0.000 |
| .5 | 608 | 152.25 |
| 1.5 | 1689 | 1300.75 |
| 2.5 | 5204 | 4747.25 |


Storage Area Volume Curves
Storage Volume (ft³)
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Stage (ft)
2.5
2.45
2.4
2.35
2.3
2.25
2.2
2.15
2.1
2.05
2
1.95
1.9
1.85
1.8
1.75
1.7
1.65
1.6
1.55
1.5
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0

## Storage Node : Stor-01 (continued)

### Outflow Weirs

| SN | Element ID | Weir Type | Flap Gate | Crest Elevation (ft) | Crest Offset (ft) | Length (ft) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-SPILLWAY | Rectangular | No | 432.50 | 2.00 | 5.00 |

### Outflow Orifices

| SN | Element ID | Orifice Type | Orifice Shape | Flap Gate | Circular Orifice Diameter (in) | Rectangular Orifice Height (in) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-OUTLET | Side | CIRCULAR | No | 8.00 | |

### Output Summary Results

| | |
|---|---|
| Peak Inflow (cfs) | 1.87 |
| Peak Lateral Inflow (cfs) | 1.87 |
| Peak Outflow (cfs) | 1.34 |
| Peak Exfiltration Flow Rate (cfm) | 0.00 |
| Max HGL Elevation Attained (ft) | 431.44 |
| Max HGL Depth Attained (ft) | 0.94 |
| Average HGL Elevation Attained (ft) | 430.71 |
| Average HGL Depth Attained (ft) | 0.21 |
| Time of Max HGL Occurrence (days hh:mm) | 0 00:19 |
| Total Exfiltration Volume (1000-ft³) | 0.000 |
| Total Flooded Volume (ac-in) | 0 |
| Total Time Flooded (min) | 0 |
| Total Retention Time (sec) | 0.00 |

## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT POST DEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 2 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 1 |
| Links | 2 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *Pumps* | 0 |
| *Orifices* | 1 |
| *Weirs* | 1 |
| *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-01 | 0.82 | 0.3400 | 0.63 | 0.22 | 0.18 | 2.12 | 0 00:05:00 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area (ft²) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.30 | | | | | 1.46 | 430.30 | | |
| 2 | Stor-01 | Storage Node | 430.50 | 433.00 | 430.50 | | 0.00 | 2.12 | 431.55 | | |

## Link Summary

| SN | Element ID | Element Type | From (Inlet) Node | To (Outlet) Node | Length | Inlet Invert Elevation | Outlet Invert Elevation | Average Slope | Diameter or Height | Manning's Roughness | Peak Flow | Design Flow Capacity | Peak Flow/ Design Flow Ratio | Peak Flow Velocity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (ft) | (ft) | (ft) | (%) | (in) | | (cfs) | (cfs) | | (ft/sec) |
| 1 | DETENTION-OUTLET | Orifice | Stor-01 | Out-01 | | 430.50 | 430.30 | | 8.000 | | 1.46 | | | |
| 2 | DETENTION-SPILLWAY | Weir | Stor-01 | Out-01 | | 430.50 | 430.30 | | | | 0.00 | | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

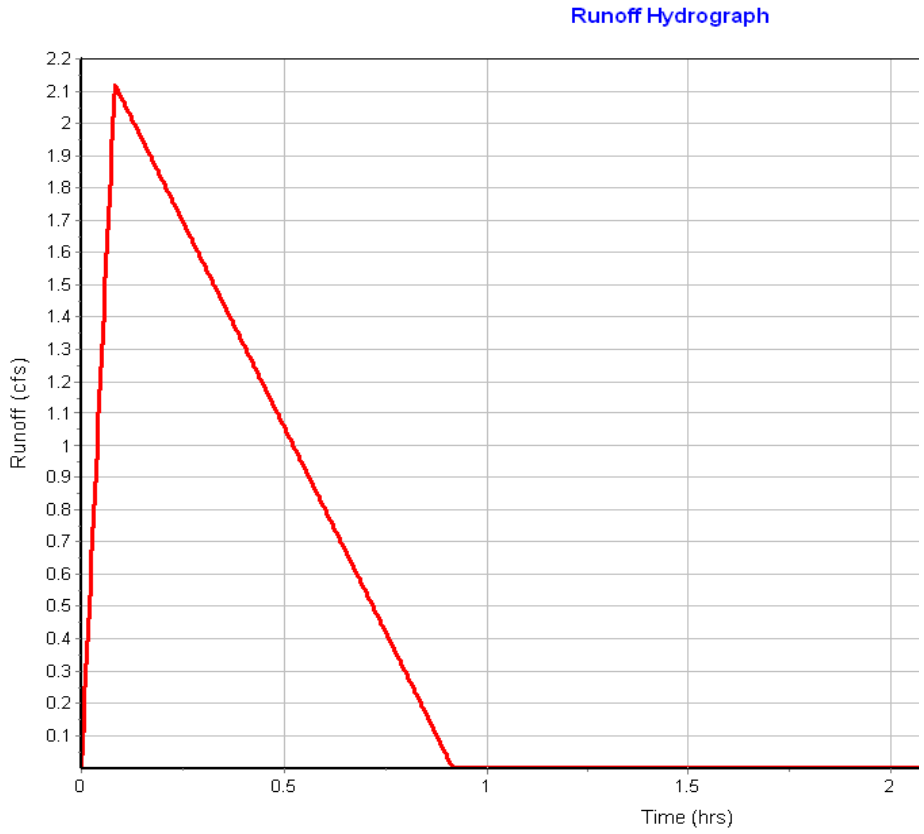
Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

**Subbasin : Sub-01**



# Storage Nodes

## Storage Node : Stor-01

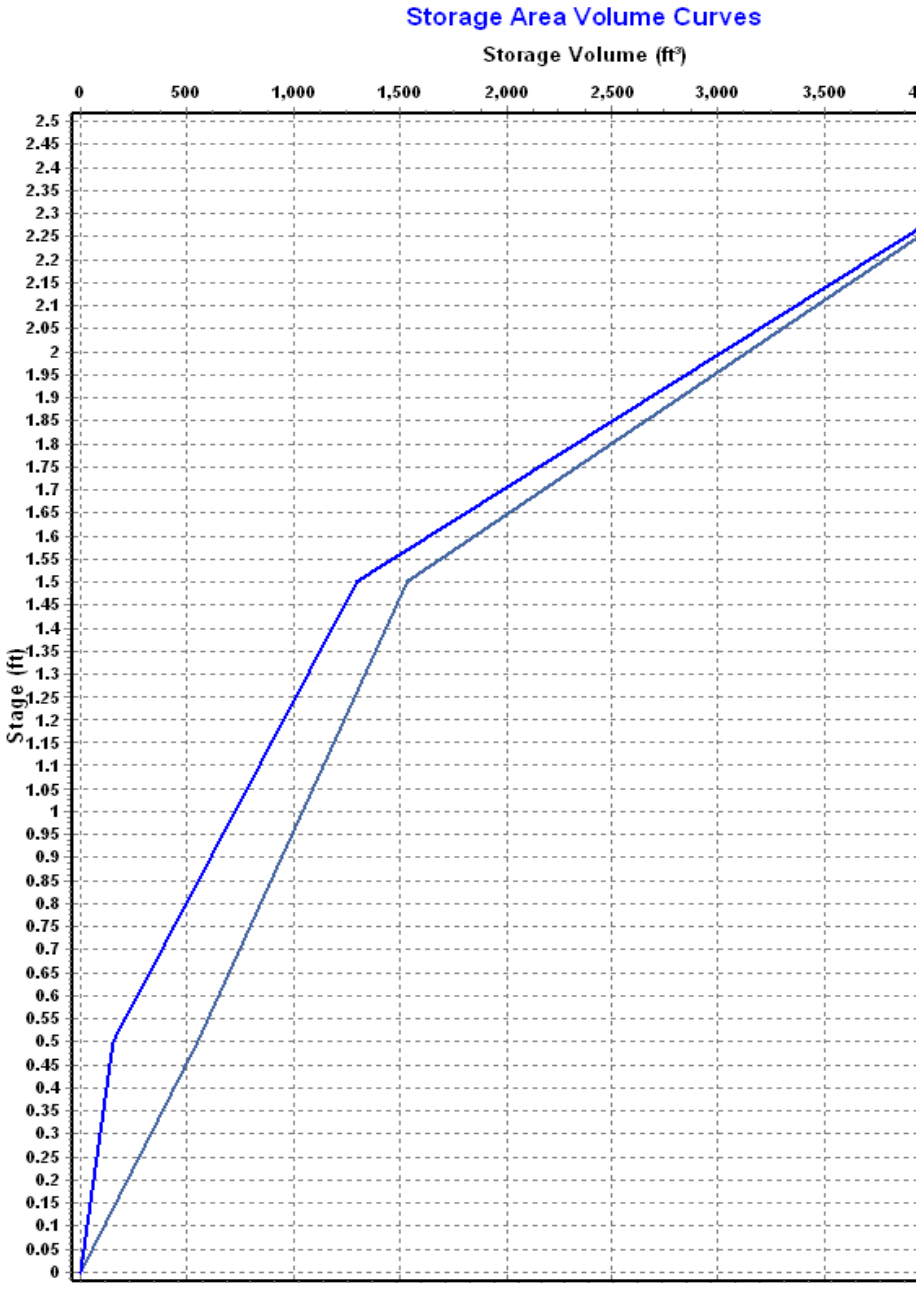
### Input Data

| | |
|---|---|
| Invert Elevation (ft) | 430.50 |
| Max (Rim) Elevation (ft) | 433.00 |
| Max (Rim) Offset (ft) | 2.50 |
| Initial Water Elevation (ft) | 430.50 |
| Initial Water Depth (ft) | 0.00 |
| Ponded Area (ft²) | 0.00 |
| Evaporation Loss | 0.00 |

### Storage Area Volume Curves

Storage Curve : Storage-01

| Stage (ft) | Storage Area (ft²) | Storage Volume (ft³) |
|---|---|---|
| 0 | 1 | 0.000 |
| .5 | 608 | 152.25 |
| 1.5 | 1689 | 1300.75 |
| 2.5 | 5204 | 4747.25 |


Storage Area Volume Curves
Storage Volume (ft³)
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Stage (ft)
2.5
2.45
2.4
2.35
2.3
2.25
2.2
2.15
2.1
2.05
2
1.95
1.9
1.85
1.8
1.75
1.7
1.65
1.6
1.55
1.5
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0

## Storage Node : Stor-01 (continued)

### Outflow Weirs

| SN | Element ID | Weir Type | Flap Gate | Crest Elevation (ft) | Crest Offset (ft) | Length (ft) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-SPILLWAY | Rectangular | No | 432.50 | 2.00 | 5.00 |

### Outflow Orifices

| SN | Element ID | Orifice Type | Orifice Shape | Flap Gate | Circular Orifice Diameter (in) | Rectangular Orifice Height (in) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-OUTLET | Side | CIRCULAR | No | 8.00 | |

### Output Summary Results

| | |
|---|---|
| Peak Inflow (cfs) | 2.12 |
| Peak Lateral Inflow (cfs) | 2.12 |
| Peak Outflow (cfs) | 1.46 |
| Peak Exfiltration Flow Rate (cfm) | 0.00 |
| Max HGL Elevation Attained (ft) | 431.55 |
| Max HGL Depth Attained (ft) | 1.05 |
| Average HGL Elevation Attained (ft) | 430.74 |
| Average HGL Depth Attained (ft) | 0.24 |
| Time of Max HGL Occurrence (days hh:mm) | 0 00:20 |
| Total Exfiltration Volume (1000-ft³) | 0.000 |
| Total Flooded Volume (ac-in) | 0 |
| Total Time Flooded (min) | 0 |
| Total Retention Time (sec) | 0.00 |

## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT POST DEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 2 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 1 |
| Links | 2 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *Pumps* | 0 |
| *Orifices* | 1 |
| *Weirs* | 1 |
| *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-01 | 0.82 | 0.3400 | 0.71 | 0.24 | 0.20 | 2.37 | 0 00:05:00 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area (ft²) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.30 | | | | | 1.57 | 430.30 | | |
| 2 | Stor-01 | Storage Node | 430.50 | 433.00 | 430.50 | | 0.00 | 2.37 | 431.67 | | |

## Link Summary

| SN | Element ID | Element Type | From (Inlet) Node | To (Outlet) Node | Length | Inlet Invert Elevation | Outlet Invert Elevation | Average Slope | Diameter or Height | Manning's Roughness | Peak Flow | Design Flow Capacity | Peak Flow/ Design Flow Ratio | Peak Flow Velocity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (ft) | (ft) | (ft) | (%) | (in) | | (cfs) | (cfs) | | (ft/sec) |
| 1 | DETENTION-OUTLET | Orifice | Stor-01 | Out-01 | | 430.50 | 430.30 | | 8.000 | | 1.57 | | | |
| 2 | DETENTION-SPILLWAY | Weir | Stor-01 | Out-01 | | 430.50 | 430.30 | | | | 0.00 | | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

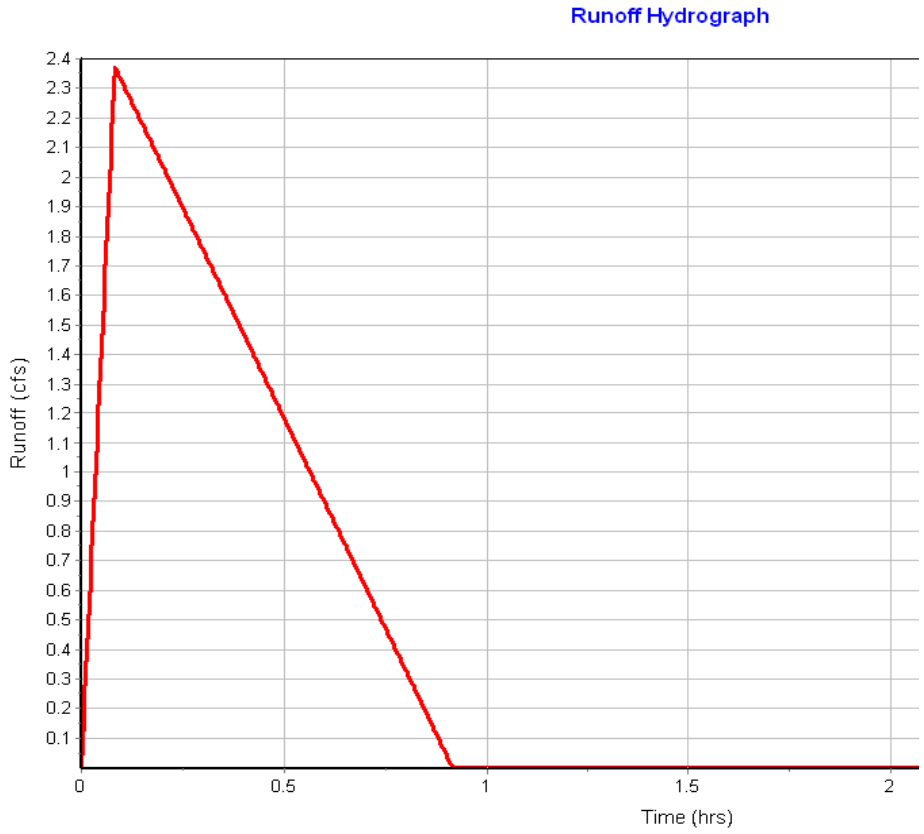
Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

**Subbasin : Sub-01**



# Storage Nodes

## Storage Node : Stor-01

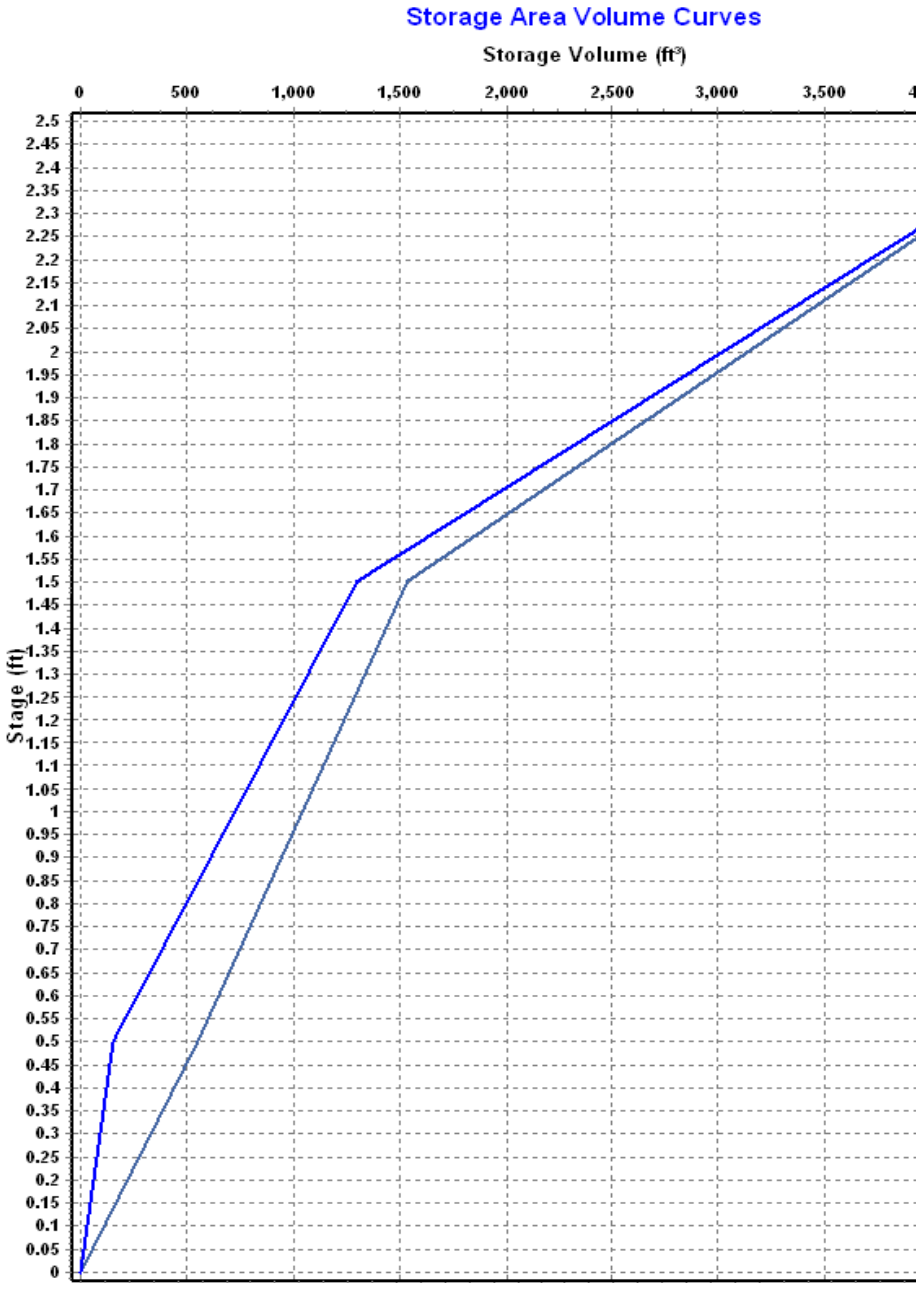
### Input Data

| | |
|---|---|
| Invert Elevation (ft) | 430.50 |
| Max (Rim) Elevation (ft) | 433.00 |
| Max (Rim) Offset (ft) | 2.50 |
| Initial Water Elevation (ft) | 430.50 |
| Initial Water Depth (ft) | 0.00 |
| Ponded Area (ft²) | 0.00 |
| Evaporation Loss | 0.00 |

### Storage Area Volume Curves

Storage Curve : Storage-01

| Stage (ft) | Storage Area (ft²) | Storage Volume (ft³) |
|---|---|---|
| 0 | 1 | 0.000 |
| .5 | 608 | 152.25 |
| 1.5 | 1689 | 1300.75 |
| 2.5 | 5204 | 4747.25 |


Storage Area Volume Curves
Storage Volume (ft³)
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Stage (ft)
2.5
2.45
2.4
2.35
2.3
2.25
2.2
2.15
2.1
2.05
2
1.95
1.9
1.85
1.8
1.75
1.7
1.65
1.6
1.55
1.5
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0

## Storage Node : Stor-01 (continued)

### Outflow Weirs

| SN | Element ID | Weir Type | Flap Gate | Crest Elevation (ft) | Crest Offset (ft) | Length (ft) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-SPILLWAY | Rectangular | No | 432.50 | 2.00 | 5.00 |

### Outflow Orifices

| SN | Element ID | Orifice Type | Orifice Shape | Flap Gate | Circular Orifice Diameter (in) | Rectangular Orifice Height (in) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-OUTLET | Side | CIRCULAR | No | 8.00 | |

### Output Summary Results

| | |
|---|---|
| Peak Inflow (cfs) | 2.37 |
| Peak Lateral Inflow (cfs) | 2.37 |
| Peak Outflow (cfs) | 1.57 |
| Peak Exfiltration Flow Rate (cfm) | 0.00 |
| Max HGL Elevation Attained (ft) | 431.67 |
| Max HGL Depth Attained (ft) | 1.17 |
| Average HGL Elevation Attained (ft) | 430.77 |
| Average HGL Depth Attained (ft) | 0.27 |
| Time of Max HGL Occurrence (days hh:mm) | 0 00:22 |
| Total Exfiltration Volume (1000-ft³) | 0.000 |
| Total Flooded Volume (ac-in) | 0 |
| Total Time Flooded (min) | 0 |
| Total Retention Time (sec) | 0.00 |

## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT POST DEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 2 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 1 |
| Links | 2 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *Pumps* | 0 |
| *Orifices* | 1 |
| *Weirs* | 1 |
| *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-01 | 0.82 | 0.3400 | 0.83 | 0.28 | 0.23 | 2.79 | 0 00:05:00 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area (ft²) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | F |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.30 | | | | | 1.74 | 430.30 | | |
| 2 | Stor-01 | Storage Node | 430.50 | 433.00 | 430.50 | | 0.00 | 2.79 | 431.86 | | |

## Link Summary

| SN | Element ID | Element Type | From (Inlet) Node | To (Outlet) Node | Length | Inlet Invert Elevation | Outlet Invert Elevation | Average Slope | Diameter or Height | Manning's Roughness | Peak Flow | Design Flow Capacity | Peak Flow/ Design Flow Ratio | Peak Flow Velocity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | (ft) | (ft) | (ft) | (%) | (in) | | (cfs) | (cfs) | | (ft/sec) |
| 1 | DETENTION-OUTLET | Orifice | Stor-01 | Out-01 | | 430.50 | 430.30 | | 8.000 | | 1.74 | | | |
| 2 | DETENTION-SPILLWAY | Weir | Stor-01 | Out-01 | | 430.50 | 430.30 | | | | 0.00 | | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

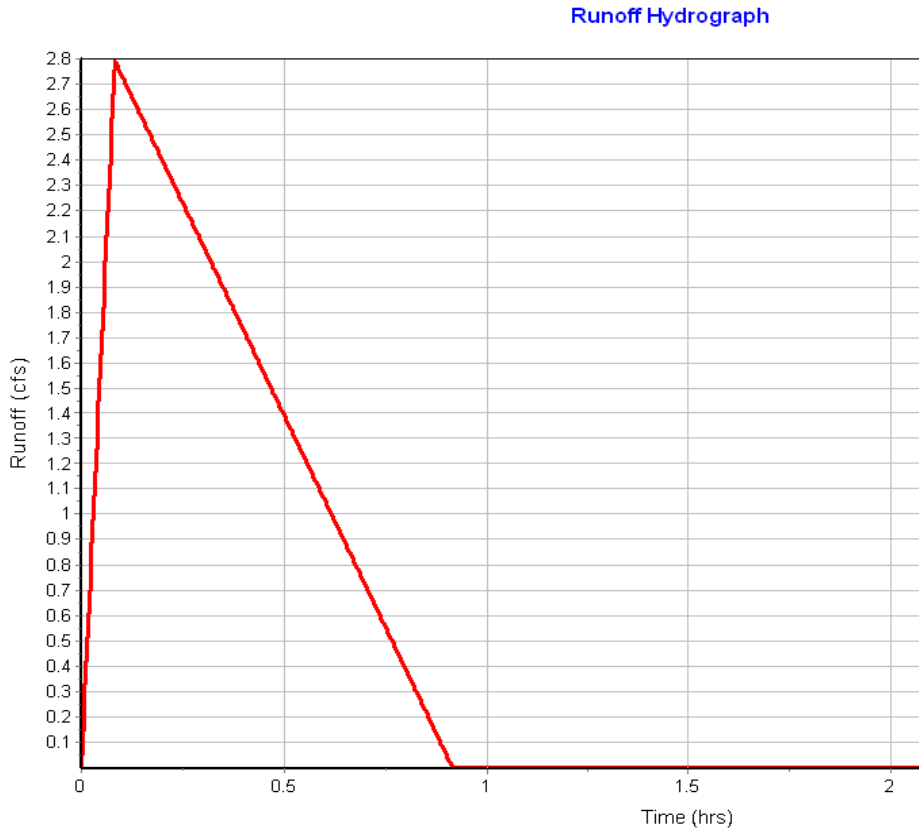
Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

**Subbasin : Sub-01**



# Storage Nodes

## Storage Node : Stor-01

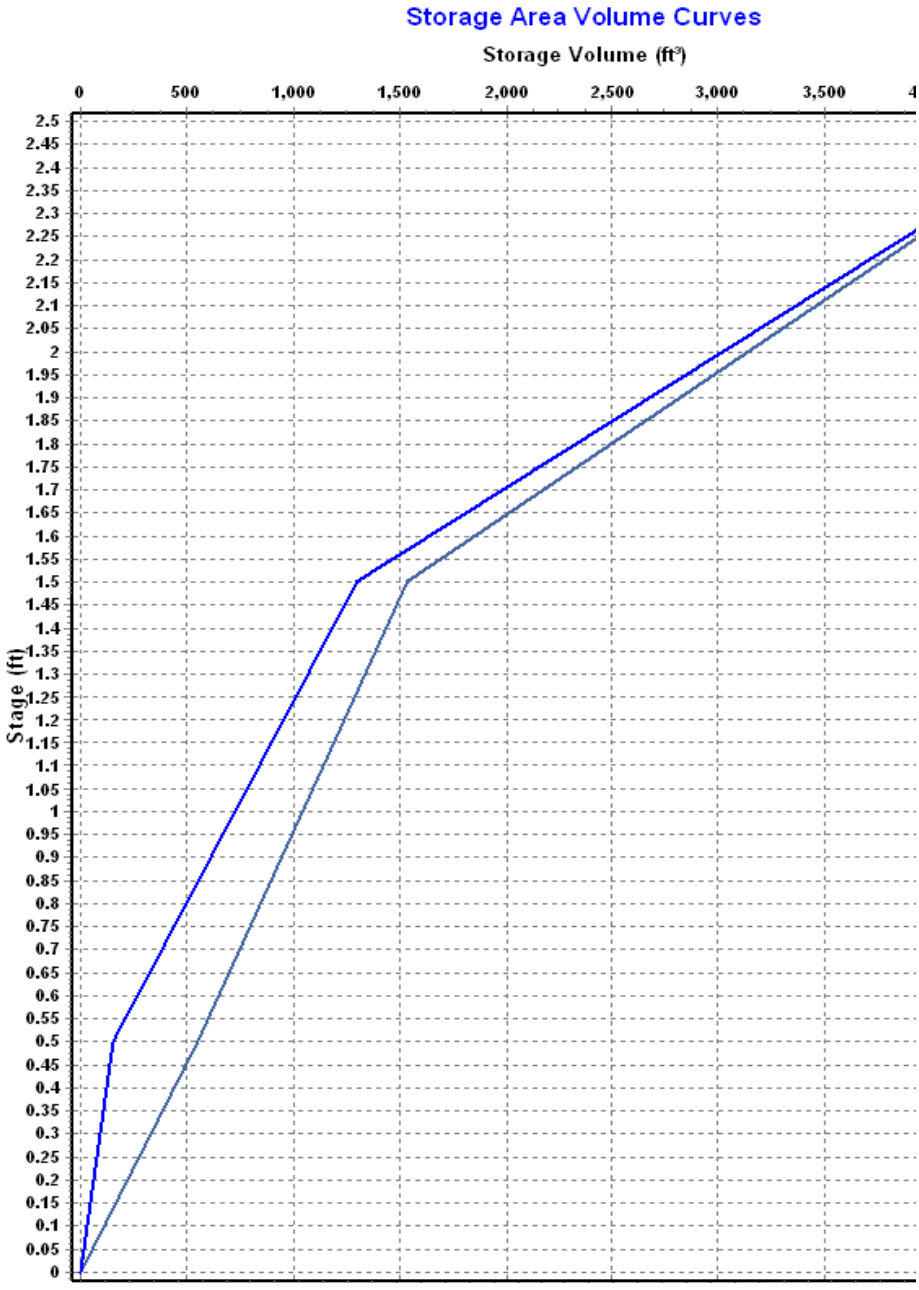
### Input Data

| | |
|---|---|
| Invert Elevation (ft) | 430.50 |
| Max (Rim) Elevation (ft) | 433.00 |
| Max (Rim) Offset (ft) | 2.50 |
| Initial Water Elevation (ft) | 430.50 |
| Initial Water Depth (ft) | 0.00 |
| Ponded Area (ft²) | 0.00 |
| Evaporation Loss | 0.00 |

### Storage Area Volume Curves

Storage Curve : Storage-01

| Stage (ft) | Storage Area (ft²) | Storage Volume (ft³) |
|---|---|---|
| 0 | 1 | 0.000 |
| .5 | 608 | 152.25 |
| 1.5 | 1689 | 1300.75 |
| 2.5 | 5204 | 4747.25 |


Storage Area Volume Curves
Storage Volume (ft³)
0
500
1,000
1,500
2,000
2,500
3,000
3,500
Stage (ft)
2.5
2.45
2.4
2.35
2.3
2.25
2.2
2.15
2.1
2.05
2
1.95
1.9
1.85
1.8
1.75
1.7
1.65
1.6
1.55
1.5
1.45
1.4
1.35
1.3
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0

## Storage Node : Stor-01 (continued)

### Outflow Weirs

| SN | Element ID | Weir Type | Flap Gate | Crest Elevation (ft) | Crest Offset (ft) | Length (ft) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-SPILLWAY | Rectangular | No | 432.50 | 2.00 | 5.00 |

### Outflow Orifices

| SN | Element ID | Orifice Type | Orifice Shape | Flap Gate | Circular Orifice Diameter (in) | Rectangular Orifice Height (in) |
|---|---|---|---|---|---|---|
| 1 | DETENTION-OUTLET | Side | CIRCULAR | No | 8.00 | |

### Output Summary Results

| | |
|---|---|
| Peak Inflow (cfs) | 2.79 |
| Peak Lateral Inflow (cfs) | 2.79 |
| Peak Outflow (cfs) | 1.74 |
| Peak Exfiltration Flow Rate (cfm) | 0.00 |
| Max HGL Elevation Attained (ft) | 431.86 |
| Max HGL Depth Attained (ft) | 1.36 |
| Average HGL Elevation Attained (ft) | 430.82 |
| Average HGL Depth Attained (ft) | 0.32 |
| Time of Max HGL Occurrence (days hh:mm) | 0 00:23 |
| Total Exfiltration Volume (1000-ft³) | 0.000 |
| Total Flooded Volume (ac-in) | 0 |
| Total Time Flooded (min) | 0 |
| Total Retention Time (sec) | 0.00 |

## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT PREDEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 1 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 0 |
| Links | 0 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *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-01 | 0.82 | 0.3400 | 1.01 | 0.34 | 0.28 | 1.10 | 0 00:15:17 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area ($ft^2$) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | Freebo Attai |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.20 | | | | | 0.00 | 0.00 | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

| Sheet Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Manning's Roughness : | .3 | 0.00 | 0.00 |
| Flow Length (ft) : | 100 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| 2 yr, 24 hr Rainfall (in) : | 4.13 | 0.00 | 0.00 |
| Velocity (ft/sec) : | 0.12 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 14.45 | 0.00 | 0.00 |

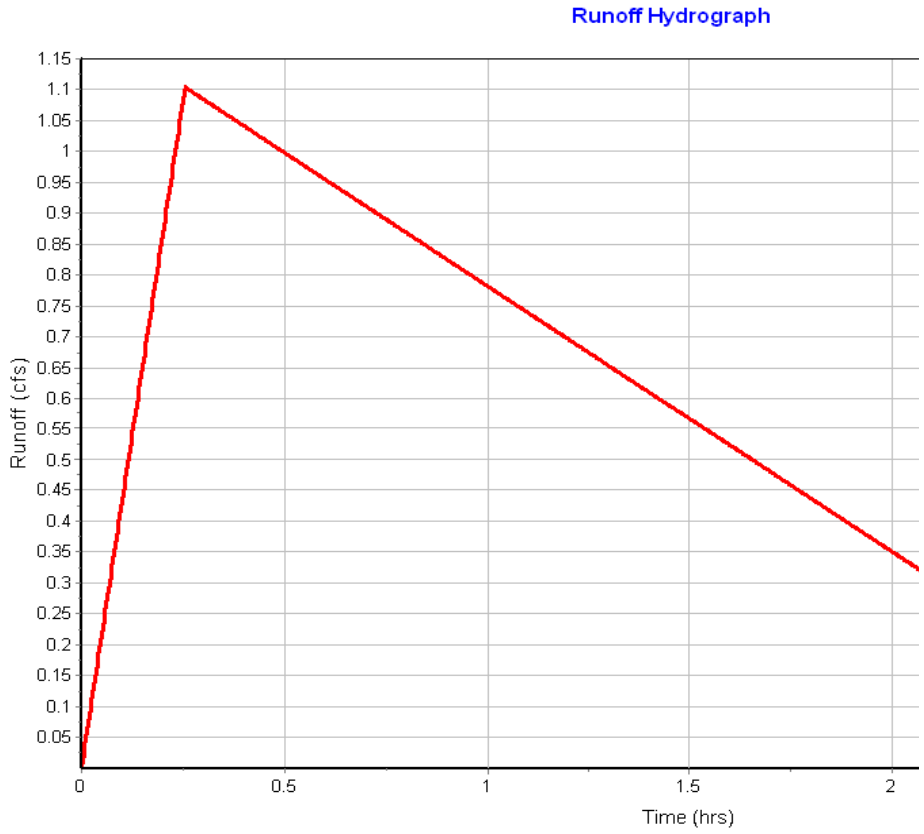
| Shallow Concentrated Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Flow Length (ft) : | 120 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| Surface Type : | Unpaved | Unpaved | Unpaved |
| Velocity (ft/sec) : | 2.39 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 0.84 | 0.00 | 0.00 |

Total TOC (min) .....15.29

### Subbasin Runoff Results

| | |
|---|---|
| Total Rainfall (in) | 1.01 |
| Total Runoff (in) | 0.34 |
| Peak Runoff (cfs) | 1.10 |
| Rainfall Intensity | 3.961 |
| Weighted Runoff Coefficient | 0.3400 |
| Time of Concentration (days hh:mm:ss) | 0 00:15:17 |

**Subbasin : Sub-01**



## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT PREDEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 1 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 0 |
| Links | 0 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *Pumps* | 0 |
| *Orifices* | 0 |
| *Weirs* | 0 |
| *Outlets* | 0 |
| Pollutants | 0 |
| Land Uses | 0 |

## Rainfall Details

| | |
|---|---|
| Return Period | 5 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-01 | 0.82 | 0.3400 | 1.24 | 0.42 | 0.35 | 1.35 | 0 00:15:17 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area ($ft^2$) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | Freebo Attai |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.20 | | | | | 0.00 | 0.00 | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

| Sheet Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Manning's Roughness : | .3 | 0.00 | 0.00 |
| Flow Length (ft) : | 100 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| 2 yr, 24 hr Rainfall (in) : | 4.13 | 0.00 | 0.00 |
| Velocity (ft/sec) : | 0.12 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 14.45 | 0.00 | 0.00 |

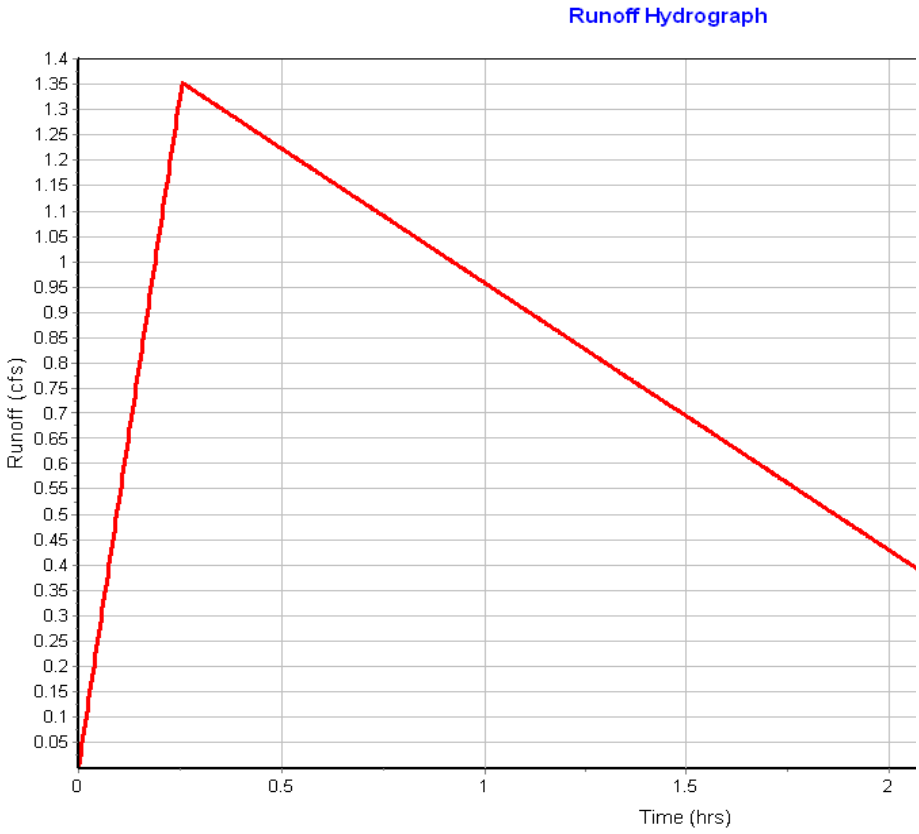
| Shallow Concentrated Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Flow Length (ft) : | 120 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| Surface Type : | Unpaved | Unpaved | Unpaved |
| Velocity (ft/sec) : | 2.39 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 0.84 | 0.00 | 0.00 |

Total TOC (min) .....15.29

**Subbasin Runoff Results**

| | |
|---|---|
| Total Rainfall (in) | 1.24 |
| Total Runoff (in) | 0.42 |
| Peak Runoff (cfs) | 1.35 |
| Rainfall Intensity | 4.855 |
| Weighted Runoff Coefficient | 0.3400 |
| Time of Concentration (days hh:mm:ss) | 0 00:15:17 |

**Subbasin : Sub-01**



## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT PREDEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 1 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 0 |
| Links | 0 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *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-01 | 0.82 | 0.3400 | 1.37 | 0.47 | 0.38 | 1.49 | 0 00:15:17 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area ($ft^2$) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | Freebo Attai |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.20 | | | | | 0.00 | 0.00 | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

| Sheet Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Manning's Roughness : | .3 | 0.00 | 0.00 |
| Flow Length (ft) : | 100 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| 2 yr, 24 hr Rainfall (in) : | 4.13 | 0.00 | 0.00 |
| Velocity (ft/sec) : | 0.12 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 14.45 | 0.00 | 0.00 |

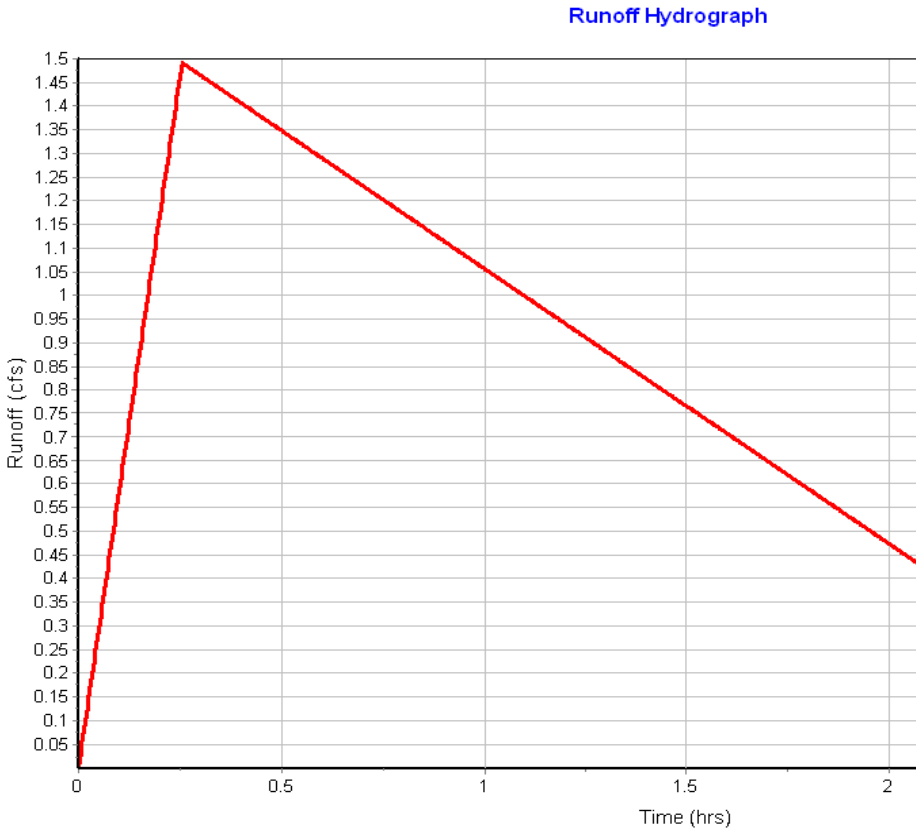
| Shallow Concentrated Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Flow Length (ft) : | 120 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| Surface Type : | Unpaved | Unpaved | Unpaved |
| Velocity (ft/sec) : | 2.39 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 0.84 | 0.00 | 0.00 |

Total TOC (min) .....15.29

**Subbasin Runoff Results**

| | |
|---|---|
| Total Rainfall (in) | 1.37 |
| Total Runoff (in) | 0.47 |
| Peak Runoff (cfs) | 1.49 |
| Rainfall Intensity | 5.352 |
| Weighted Runoff Coefficient | 0.3400 |
| Time of Concentration (days hh:mm:ss) | 0 00:15:17 |

**Subbasin : Sub-01**



## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT PREDEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 1 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 0 |
| Links | 0 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *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-01 | 0.82 | 0.3400 | 1.57 | 0.53 | 0.44 | 1.71 | 0 00:15:17 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area ($ft^2$) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | Freebo Attai |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.20 | | | | | 0.00 | 0.00 | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

| Sheet Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Manning's Roughness : | .3 | 0.00 | 0.00 |
| Flow Length (ft) : | 100 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| 2 yr, 24 hr Rainfall (in) : | 4.13 | 0.00 | 0.00 |
| Velocity (ft/sec) : | 0.12 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 14.45 | 0.00 | 0.00 |

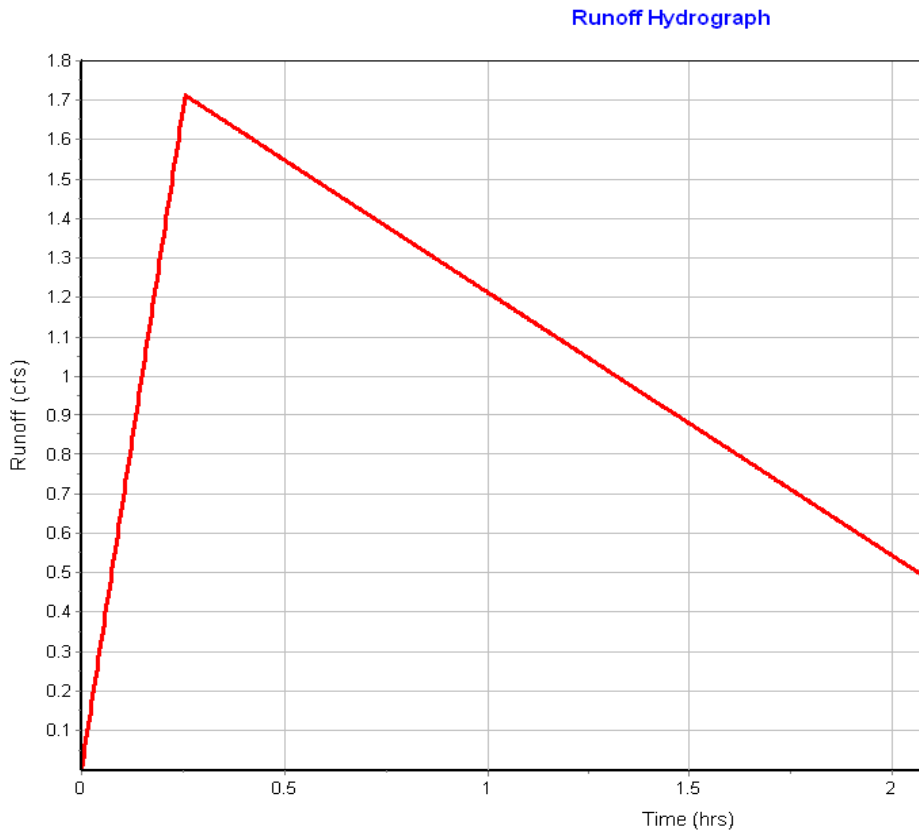
| Shallow Concentrated Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Flow Length (ft) : | 120 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| Surface Type : | Unpaved | Unpaved | Unpaved |
| Velocity (ft/sec) : | 2.39 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 0.84 | 0.00 | 0.00 |

Total TOC (min) .....15.29

**Subbasin Runoff Results**

| | |
|---|---|
| Total Rainfall (in) | 1.57 |
| Total Runoff (in) | 0.53 |
| Peak Runoff (cfs) | 1.71 |
| Rainfall Intensity | 6.145 |
| Weighted Runoff Coefficient | 0.3400 |
| Time of Concentration (days hh:mm:ss) | 0 00:15:17 |

**Subbasin : Sub-01**



## Project Description

| | |
|---|---|
| File Name | LITTLE CAESARS BRYANT PREDEV.SPF |
| Description | |
| | LITTLE CAESARS BRYANT |

## 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 | Jun 28, 2024 | 00:00:00 |
| End Analysis On | Jun 28, 2024 | 03:00:00 |
| Start Reporting On | Jun 28, 2024 | 00:00:00 |
| 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 | 1 |
| Nodes | 1 |
| *Junctions* | 0 |
| *Outfalls* | 1 |
| *Flow Diversions* | 0 |
| *Inlets* | 0 |
| *Storage Nodes* | 0 |
| Links | 0 |
| *Channels* | 0 |
| *Pipes* | 0 |
| *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-01 | 0.82 | 0.3400 | 1.95 | 0.66 | 0.54 | 2.13 | 0 00:15:17 |

## Node Summary

| SN | Element ID | Element Type | Invert Elevation (ft) | Ground/Rim (Max) Elevation (ft) | Initial Water Elevation (ft) | Surcharge Elevation (ft) | Ponded Area ($ft^2$) | Peak Inflow (cfs) | Max HGL Elevation Attained (ft) | Max Surcharge Depth Attained (ft) | Freebo Attai |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Out-01 | Outfall | 430.20 | | | | | 0.00 | 0.00 | | |

# Subbasin Hydrology

## Subbasin : Sub-01

### Input Data

Area (ac) ..... 0.82
Weighted Runoff Coefficient ..... 0.3400

### Runoff Coefficient

| Soil/Surface Description | Area (acres) | Soil Group | Runoff Coeff. |
|---|---|---|---|
| Pasture, less than 25 years | 0.82 | C (2-6%) | 0.34 |
| Composite Area & Weighted Runoff Coeff. | 0.82 | | 0.34 |

### Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

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

Shallow Concentrated Flow Equation :

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

Where:

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

Channel Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)

| Sheet Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Manning's Roughness : | .3 | 0.00 | 0.00 |
| Flow Length (ft) : | 100 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| 2 yr, 24 hr Rainfall (in) : | 4.13 | 0.00 | 0.00 |
| Velocity (ft/sec) : | 0.12 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 14.45 | 0.00 | 0.00 |

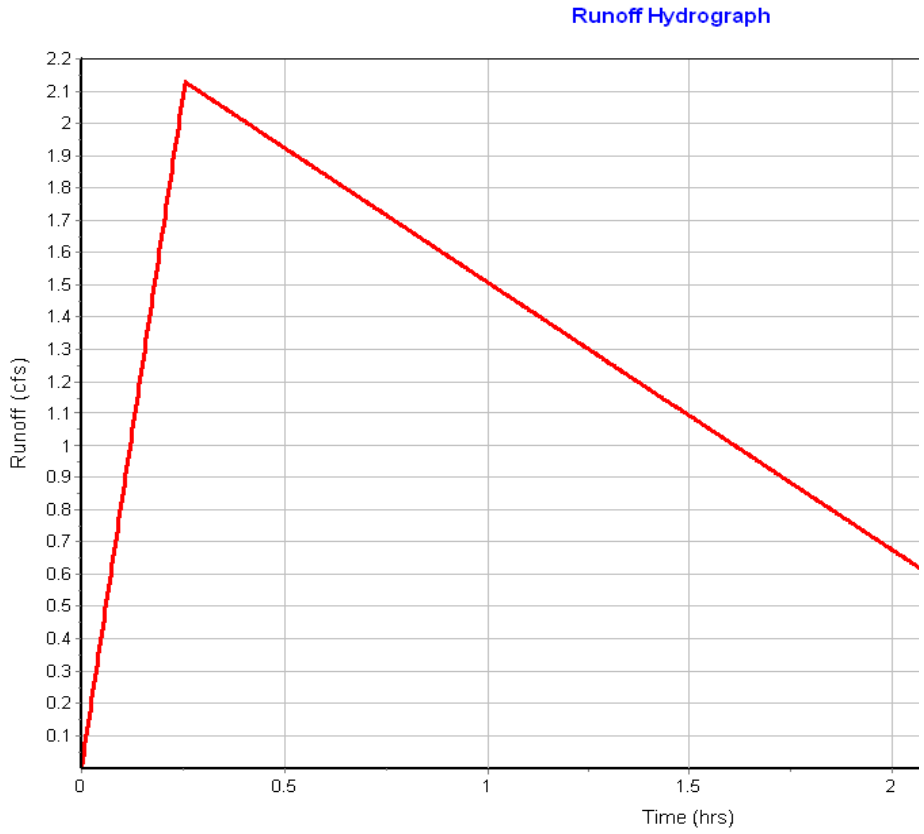
| Shallow Concentrated Flow Computations | Subarea A | Subarea B | Subarea C |
|---|---|---|---|
| Flow Length (ft) : | 120 | 0.00 | 0.00 |
| Slope (%) : | 2.2 | 0.00 | 0.00 |
| Surface Type : | Unpaved | Unpaved | Unpaved |
| Velocity (ft/sec) : | 2.39 | 0.00 | 0.00 |
| Computed Flow Time (min) : | 0.84 | 0.00 | 0.00 |

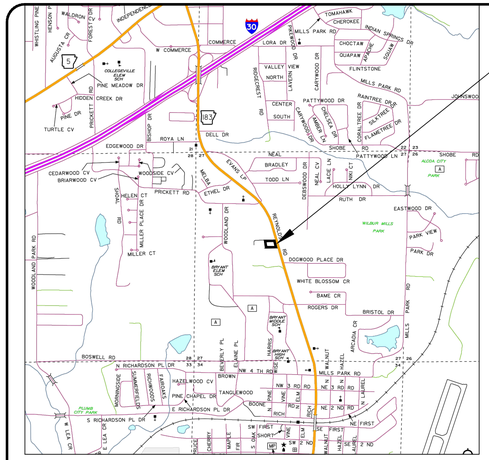
Total TOC (min) .....15.29

**Subbasin Runoff Results**

| | |
|---|---|
| Total Rainfall (in) | 1.95 |
| Total Runoff (in) | 0.66 |
| Peak Runoff (cfs) | 2.13 |
| Rainfall Intensity | 7.636 |
| Weighted Runoff Coefficient | 0.3400 |
| Time of Concentration (days hh:mm:ss) | 0 00:15:17 |

**Subbasin : Sub-01**






## VICINITY MAP

SURVEY LEGAL DESCRIPTION:

PART OF THE SE1/4 NW1/4 OF SECTION 27, TOWNSHIP 1 SOUTH, RANGE 14 WEST, IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SE1/4 NW1/4;
THENCE ALONG THE WEST LINE OF THE SAID SE1/4 NW1/4 S 00° 00' 00" E FOR 1143.40 FEET;
THENCE N 87° 59' 54" E FOR 530.36 FEET LEAVING THE WEST LINE OF SAID SE1/4 NW/4 TO A TO 5/8" REBAR AND THE POINT OF BEGINNING;
THENCE N 13° 04' 16" W FOR 193.28 FEET TO A 5/8" REBAR AND THE SOUTHERLY RIGHT OF WAY LINE OF BROWN LANE;
THENCE ALONG SAID RIGHT OF WAY LINE S 89° 20' 38" E FOR 195.38 FEET TO A 1/2" REBAR AND THE WESTERLY RIGHT OF WAY LINE OF NORTH REYNOLDS ROAD;
THENCE ALONG SAID RIGHT OF WAY LINE S 14° 49' 14" E FOR 194.54 FEET TO A 1/2" REBAR;
THENCE N 89° 25' 16" W FOR 201.43 FEET TO THE POINT OF BEGINNING;

LEGEND

- SHOWS EXISTING STREETS.
- SHOWS SEWER, UTILITY AND DRAINAGE EASEMENT.
- SHOWS BUILDING SETBACK LINE
- SHOWS SURVEY MONUMENT AS DESCRIBED

PARCEL #840-14280-002
DELCAR PROPERTIES LLC
ZONE C2

BROWN LANE (50' R/W)
PRIVATE ROAD

F. 5/8" REBAR — S 89° 20' 38" E — 195.38' — F. 1/2" REBAR

15' BUILDING SETBACK

N 13° 04' 16" W — 193.28'

EASEMENT BOOK 53, PAGE 754

25' BUILDING SETBACK

PARCEL #840-14282-000
PECAN TREE PROPERTIES LLC
ZONE C2

S 14° 49' 14" E — 194.54'

EASEMENT DOC. #1999 2887 & #1999 52869

15' BUILDING SETBACK

N. REYNOLDS ROAD

ARK. HWY. 183

POINT OF COMMENCEMENT
NORTHWEST CORNER
SE1/4 NW1/4

S 00° 00' 00" E — 1143.40'

WEST LINE

N 87° 59' 54" E — 530.36'

POINT OF BEGINNING

F. 5/8" REBAR

N 89° 25' 16" W — 201.43'

F. 1/2" REBAR

20'

10'

15' BUILDING SETBACK

10'

27'

65'

PARCEL #840-14282-000
PECAN TREE PROPERTIES LLC
ZONE C2

OWNER & DEVELOPER:
OBWAT HOLDINGS, LLC
7500 LANDERS ROAD
SHERWOOD, AR. 72117

CERTIFICATE OF SURVEYING ACCURACY

I, JOHN R. POWNALL, HEREBY CERTIFY THAT THIS PLAT REPRESENTS A BOUNDARY SURVEY MADE BY ME AND THAT BOUNDARY MARKERS SHOWN HEREON ACTUALLY EXIST AND THEIR LOCATION, TYPE AND MATERIAL ARE CORRECTLY SHOWN.

DATE _____ JOHN R. POWNALL RLS 1215

CERTIFICATE OF ENGINEERING ACCURACY

I, JOHN R. POWNALL, HEREBY CERTIFY THAT THIS PLAT REPRESENTS A PLAN MADE BY ME, AND THAT IT MEETS ALL THE ENGINEERING REQUIREMENTS OF THE BRYANT

THOMAS ENGINEERING COMPANY
civil engineers land surveyors
3810 LOOKOUT RD NORTH LITTLE ROCK, AR 72116 (501)753-4463
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

June 19, 2024

Mr. Colton Leonard
City of Community Development
210 SW 3rd Street
Bryant, AR 72022

RE: Civil Site Plans and Preliminary Plat
Little Caesars

Dear Mr. Leonard:

Please accept this letter as our application for the above referenced submittal.

The owner is requesting a site plan review and preliminary final plat of Lot 1, Little Caesars Addition to the City of Bryant to allow the construction of a Little Caesars Restaurant and associated parking.

If you have any questions, please give me a call.

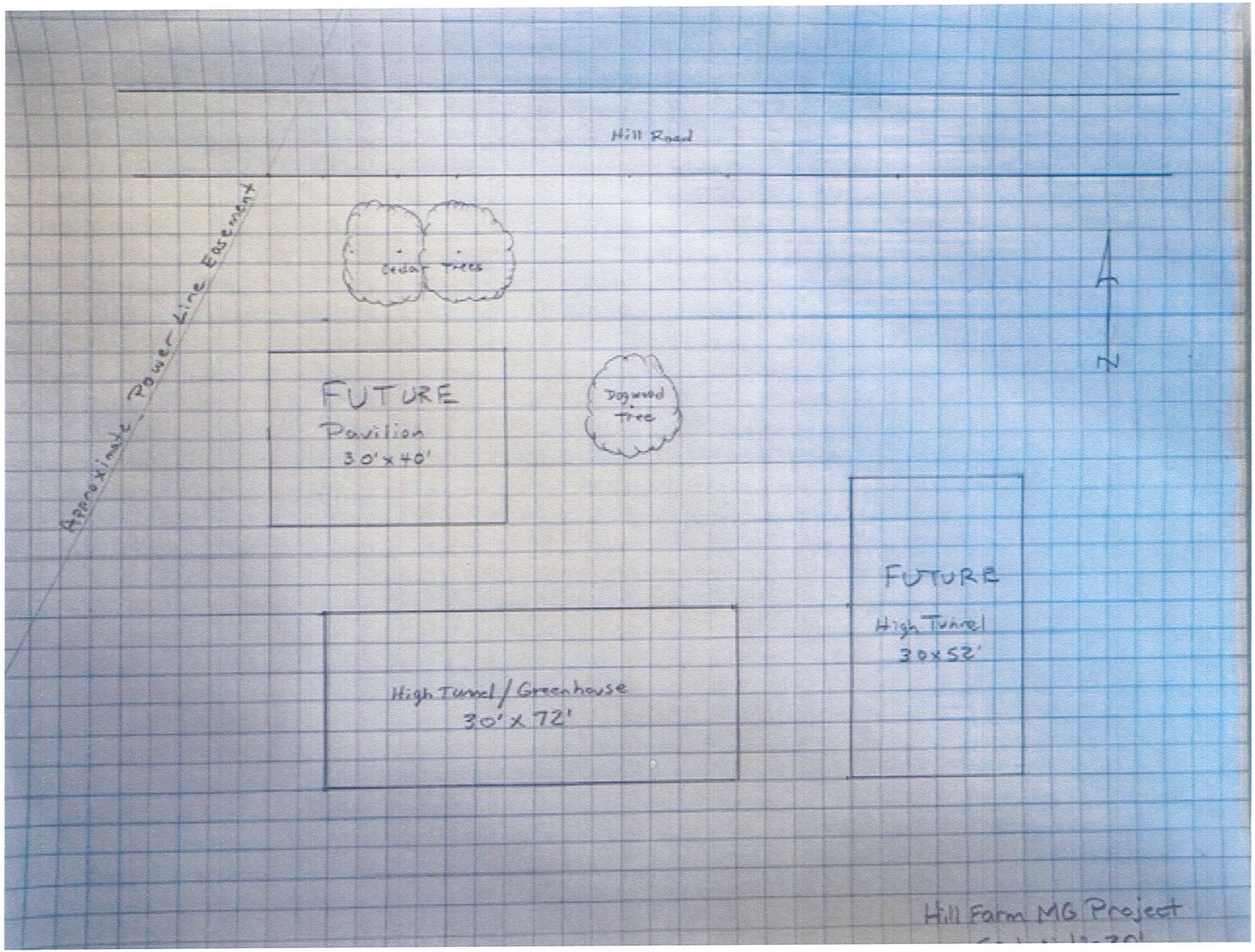
Sincerely,

John R. Pownall, P.E.
President

JRP/ab

cc: Mike Fritz
Chris Smith


Rd
Hill Rd
Hill Rd
Hill Rd
Hill Rd
High Tunnel
Greenhouse


Hill Road
Approximate Power Line Easement
Cedar Trees
FUTURE
Pavilion
30'x40'
Dogwood Tree
N
FUTURE
High Tunnel
30x52'
High Tunnel / Greenhouse
30' x 72'
Hill Farm MG Project




CONLEY'S





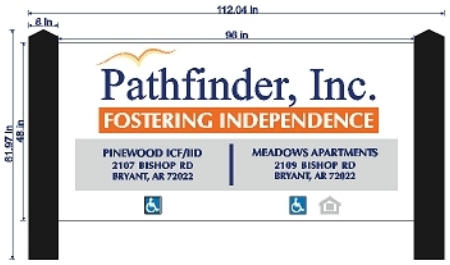
**Folder Name**
K:\Art Department\2024\Pathfinder

**Designer**
Courtney

**File Name**
Pathfinder, Inc..fs

**Job Number**
30734

## QTY: 1 SS Sign w/Acrylic Letters and Brushed Aluminum Mounted between 2 Metal Posts (See Briarwood Photo for Post Reference







**Posts like the below image something that will not rust**




**Description**
QTY: IN FILE

**ARTWORK IS PROPERTY OF ACTION SIGN & NEON AND SHALL NOT BE DUPLICATED OR COPIED IN ANY MANNER.**

ACTION SIGN
SIGNS WITH DIRECTION

P. O. Box 188
Jacksonville, AR 72076
2700 John Harden Dr.
Jacksonville, AR 72076

Ph 501-457-7391
Ph/Text 501-712-0012
Fax 501-457-7393

ARTWORK APPROVAL **MUST** BE MADE IN WRITING.
THIS CAN BE DONE BY A SIMPLE EMAIL, TEXT, OR FAX
WITH THE APPROVED ARTWORK ATTACHED.
**PRODUCTION WILL NOT START OTHERWISE.**

| Customer | Name | Design Time |
|---|---|---|
| Pathfinder, Inc. | Collin | |
| **Phone** | **Email** | **Date** |
| 501.596.2090 | | 7/8/2024 |

**Minutes**

**Design Time Pricing**
**Design time is at a rate of $60 per hour, in 15 minute increments. Your first 15 minutes is *FREE*.**

COLORS SHOWN ARE FOR REFERENCE ONLY. COLORS MAY VARY.

**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: 7.12.24

**Sign Co. or Sign Owner**

Name Action Sign
Address 2700 John Harden Driv
City, State, Zip Jacksonville, AR 7207
Phone 501.457.739
Email Address tim@actionsignandneon.co

**Property Owner**

Name Chris Eubanks
Address 2107 Bishop Roa
City, State, Zip Bryant, AR 7202
Phone 501.412.086
Email Address chris.eubanks@pathfinderinc.o

**GENERAL INFORMATION**

Name of Business Pathfinder, Inc

Address/Location of sign 2107 Bishop Road Bryant, AR 720

Zoning Classification _____

**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 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 | Pole Sigr | 4'x8' | 32 SQ FT | 5' | 10" | |
| B | | | | | | |
| C | | | | | | |
| E | | | | | | |
| F | | | | | | |
| G | | | | | | |

#0888

**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: 7/11/24

**Applicant or Designee:**

Name Donald Whitfield
Address 19 Tanglewood Dr
Phone 501-993-6869
Email Address: dwcpa@att.net

**Project Location:**

Property Address 19 Tanglewood Dr
Bryant, AR 72022
Parcel Number 840-09527-000
Zoning Classification R-E

**Property Owner (If different from Applicant):**

Name Same
Phone _____
Address _____
Email Address _____

**Additional Information:**

Legal Description (Attach description if necessary)

Pt. Lot 19 Tanglewood Acres Sub.

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

Allow construction of a 26'x24' Building and allow existing storage building of 12'x16' + 12'x12' to Remain. See Attached Letter.

Proposed/Current Use of Property Residential

# 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
- ☐ 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.

## NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, August 12th, 2024 at 6:00 P.M. at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Saline County, for the purpose of public comment on a conditional use request at the site of 19 Tanglewood Drive, Bryant, AR 72022 (address).

A legal description of this property can be obtained by contacting the Bryant Department of Community Development.

Lance Penfield
Chairman of Planning Commission
City of Bryant

*This notice is to be run in the legal notices section of the Saline Courier no less than 15 days prior to the public hearing.*

Donald Whitfield
19 Tanglewood Drive
Bryant, AR 72022

July 11, 2024

City of Bryant, Arkansas
Community Development
210 SW 3rd Street
Bryant, AR 72022

Re: Variance

The purpose of this letter is to ask for a variance to construct a 26' x 24' storage building at 19 Tanglewood Drive in Bryant, Arkansas and to allow the existing storage buildings of 12' x 16' and 12' x 12' to remain.

Based on the total square footage of my home which is 2,542, the maximum building of 25% of the total square footage would be 635. The new building would be 624 square feet. The square footage currently in the two existing buildings combined is 336 square feet. The total square footage after construction would be 960 square feet. The variance I am requesting would be to allow for an additional 325 square feet on my property which is .82 acres.

Le me know if you have any questions or need additional information.

Thank you,

Sincerely,

Donald Whitfield

**City of Bryant, Arkansas**
Community Development
210 SW 3rd Street Bryant, AR 72022
501-943-0488, Comdev@cityofbryant.com

# General – Permit Application

*Please complete both pages of this application and submit to the City of Bryant Permitting office, located at the address above.*

*Completed applications can also be scanned and emailed to Comdev@cityofbryant.com.*

Date: 7-10-24

**Permit Type:**

| | | |
|---|---|---|
| _____ Electrical Permit | _____ Remodel Permit | _____ Burn Permit |
| _____ Plumbing Permit | _____ Demolition Permit | _____ Site Clearance Permit |
| _____ Mechanical Permit | ✓ Accessory Building Permit | _____ Mobile Home Permit |

Other if not listed above _____

**Contractor Information:**

Contractor/Owner Donald Whitfield

Physical Address of Business 19 Tangle Wood Dr.

City, State, Zip code Bryant, AR.

Mailing Address (If different from Above) Same

City, State, Zip code _____

Email Address dwcpa@att.net

Business Phone _____ Cell Phone 501-993-6869 Fax _____

**Project Information:**

Project Address/Location Same

Project Cost _____ Commercial or Residential? residential

Square footage (If Applicable) _____

If new addition, will foam insulation be used? No ✓ Yes ____ If "Yes", provide technical evaluation report on foam insulation type, and a copy of installer's certification. (Attach to application when submitted)

Additional Project Information 26' wide X 24' deep accessory Building

**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: 7-24-24

**Applicant or Designee:**

Name Jonathan Hope
Address 129 N. Main St. Benton, AR
Phone 501-860-0467
Email Address: jonathan@hopeconsultings.com

**Project Location:**

Property Address Hurricane Lake Rd.
Parcel Number 840-12022-000
Zoning Classification R-X

**Property Owner (If different from Applicant):**

Name Sky Blue, LLC.
Phone 501-912-2752
Address 3621 Independence Dr. Bryant, AR 72022
Email Address tj bessent@sbcglobal.net

**Additional Information:**

Legal Description (Attach description if necessary)

Attached

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

Requesting approval of construction of Duplexes as allowed in zoning R-X

Proposed/Current Use of Property Duplexes

# 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
- ☐ 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.

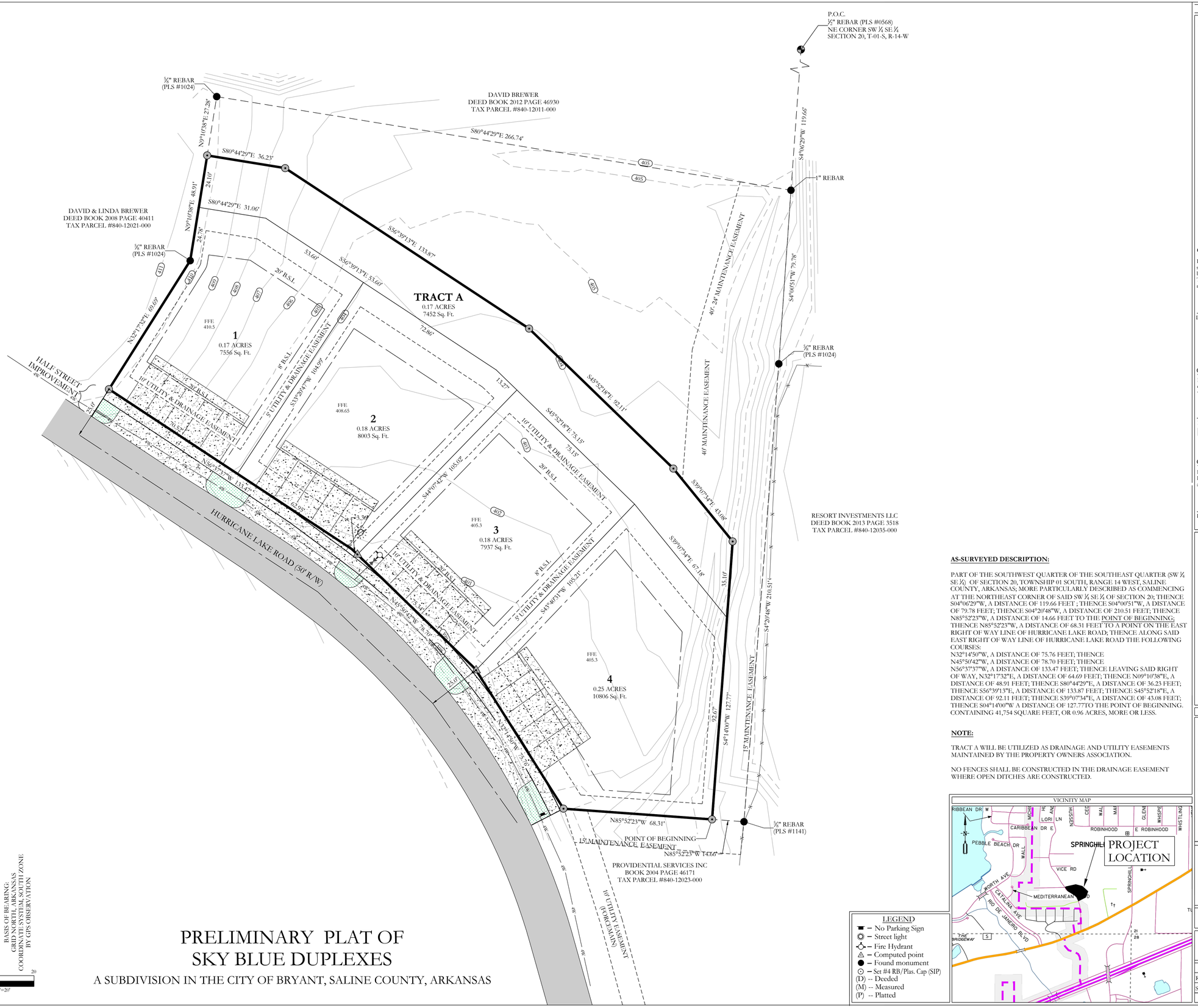
**Once the application is received, the material will be reviewed to make sure all the required information is provided. The applicant will be notified if additional information is required. The application will then go before the Development and Review Committee (DRC) for a recommendation to the Planning 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 Jonathan Hope, do hereby certify that all information contained within this application is true and correct. I further certify that the owner of the property authorizes this proposed application. I understand that I must comply with all City Codes and that it is my responsibility to obtain all necessary permits required.

AS SURVEYED DESCRIPTION FOR PARCEL #840-12022-000
PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW 1/4 SE 1/4) OF SECTION 20, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS; MORE PARTICULARLY DESCRIBED AS COMMENCING AT THE NORTHEAST CORNER OF SAID SW 1/4 SE 1/4 OF SECTION 20; THENCE S04°06'29"W, A DISTANCE OF 119.66 FEET ; THENCE S04°00'51"W, A DISTANCE OF 79.78 FEET; THENCE S04°20'48"W, A DISTANCE OF 210.51 FEET; THENCE N85°52'23"W, A DISTANCE OF 14.66 FEET TO THE POINT OF BEGINNING; THENCE N85°52'23"W, A DISTANCE OF 68.31 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD; THENCE ALONG SAID EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD THE FOLLOWING COURSES:
N32°14'50"W, A DISTANCE OF 75.76 FEET; THENCE
N45°50'42"W, A DISTANCE OF 78.70 FEET; THENCE
N56°37'37"W, A DISTANCE OF 133.47 FEET; THENCE LEAVING SAID RIGHT OF WAY, N32°17'32"E, A DISTANCE OF 64.69 FEET; THENCE N09°10'38"E, A DISTANCE OF 48.91 FEET; THENCE S80°44'29"E, A DISTANCE OF 36.23 FEET;
THENCE S56°39'13"E, A DISTANCE OF 133.87 FEET; THENCE S45°52'18"E, A DISTANCE OF 92.11 FEET; THENCE S39°07'34"E, A DISTANCE OF 43.08 FEET; THENCE S04°14'00"W A DISTANCE OF 127.77TO THE POINT OF BEGINNING. CONTAINING 41,754 SQUARE FEET, OR 0.96 ACRES, MORE OR LESS.




# PRELIMINARY PLAT OF SKY BLUE DUPLEXES

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

**AS-SURVEYED DESCRIPTION:**

PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW ¼ SE ¼) OF SECTION 20, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS; MORE PARTICULARLY DESCRIBED AS COMMENCING AT THE NORTHEAST CORNER OF SAID SW ¼ SE ¼ OF SECTION 20; THENCE S04°06'29"W, A DISTANCE OF 119.66 FEET ; THENCE S04°00'51"W, A DISTANCE OF 79.78 FEET; THENCE S04°20'48"W, A DISTANCE OF 210.51 FEET; THENCE N85°52'23"W, A DISTANCE OF 14.66 FEET TO THE POINT OF BEGINNING; THENCE N85°52'23"W, A DISTANCE OF 68.31 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD; THENCE ALONG SAID EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD THE FOLLOWING COURSES:
N32°14'50"W, A DISTANCE OF 75.76 FEET; THENCE
N45°50'42"W, A DISTANCE OF 78.70 FEET; THENCE
N56°37'37"W, A DISTANCE OF 133.47 FEET; THENCE LEAVING SAID RIGHT OF WAY, N32°17'32"E, A DISTANCE OF 64.69 FEET; THENCE N09°10'38"E, A DISTANCE OF 48.91 FEET; THENCE S80°44'29"E, A DISTANCE OF 36.23 FEET; THENCE S56°39'13"E, A DISTANCE OF 133.87 FEET; THENCE S45°52'18"E, A DISTANCE OF 92.11 FEET; THENCE S39°07'34"E, A DISTANCE OF 43.08 FEET; THENCE S04°14'00"W A DISTANCE OF 127.77TO THE POINT OF BEGINNING. CONTAINING 41,754 SQUARE FEET, OR 0.96 ACRES, MORE OR LESS.

**NOTE:**

TRACT A WILL BE UTILIZED AS DRAINAGE AND UTILITY EASEMENTS MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.

NO FENCES SHALL BE CONSTRUCTED IN THE DRAINAGE EASEMENT WHERE OPEN DITCHES ARE CONSTRUCTED.

LEGEND
- ■ – No Parking Sign
- ☼ – Street light
- ⊕ – Fire Hydrant
- △ – Computed point
- ● – Found monument
- ⊙ – Set #4 RB/Plas. Cap (SIP)
- (D) -- Deeded
- (M) -- Measured
- (P) -- Platted

VICINITY MAP




## CERTIFICATIONS:

**OWNER:**
Name: SKY BLUE, LLC
Address: 3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

**DEVELOPER:**
Name: SKY BLUE, LLC
Address: 3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

**CERTIFICATE OF OWNER:**

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

Date of Execution _____ Name: _____

Source of Tile: D.R. BOOK 2015 PAGE 7766

**CERTIFICATE OF PROPERTY OWNERSHIP:**

I, _____, hereby certify that the deed records in the office of Circuit Clerk and Ex-Officio recorder of Saline County, Arkansas, reflect that _____ is the record title owner of real property more particularly described herein on plat.

Dated: _____ _____
Certified Title Insurance Agent or Abstractor

**CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:**

I, William Corbitt R. Shoffner, hereby certify that this proposed preliminary plat correctly represents a survey completed by me or under my supervision on _____, 20_____; that the boundary lines show hereon correspond with the description in the deeds cited in the above Source of Title; and that all monuments which were found or placed on the property are correctly described and located.

_____ _____
Date of Execution
William Corbitt R. Shoffner
Registered Professional
Land Surveyor No. 1664 Arkansas

**CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:**

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

_____ _____
Date of Execution
Kazi Islam
Registered Professional
Engineer, No. 20876 Arkansas

**CERTIFICATE OF PRELIMINARY PLAT APPROVAL:**

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

_____ _____
Date of Execution
NAME, CHAIRMAN
BRYANT PLANNING COMMISSION

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

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

By affixing my seal and signature, I Kazi Islam PE No, 20876, hereby certify that this drawing correctly depicts a survey compiled under my supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

No portion of the property described hereon lies within the 100 year floodplain, according to the Federal Insurance Rate Map, panel #05125C0360E, Dated: 06/05/2020

**PROPERTY SPECIFICATIONS:**

OWNER: SKY BLUE, LLC
3263 INDEPEDENCE DRIVE
BRYANT, AR 72022

DEVELOPER/ SUBDIVIDER: SKY BLUE, LLC
3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

ENGINEERS: HOPE CONSULTING INC.
117 S. MARKET STREET
BENTON, AR 72015

NAME OF SUBDIVISION: SKY BLUE DUPLEXES

INSTRUMENT # 2015-7766

ZONING: R-X

AVERAGE LOT SIZE: 0.19 ACRES (8,437 SQ. FT.)
MINIMUM LOT SIZE: (7,205SQ. FT)
NUMBER OF LOTS: 4

SOURCE OF WATER: WATER USERS
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: ENTERGY

BUILDING SETBACKS:
FRONT-20' OR AS SHOWN
REAR-20' OR AS SHOWN
SIDE-6' OR AS SHOWN

UTILITY & DRAINAGE EASEMENTS:
FRONT-10' OR AS SHOWN
REAR - 5' OR AS SHOWN
SIDE - 5' OR AS SHOWN


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

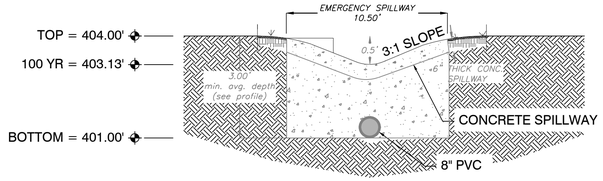

FOR USE AND BENEFIT OF:
SKY BLUE, LLC

PRELIMINARY PLAT
SKY BLUE DUPLEXES
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

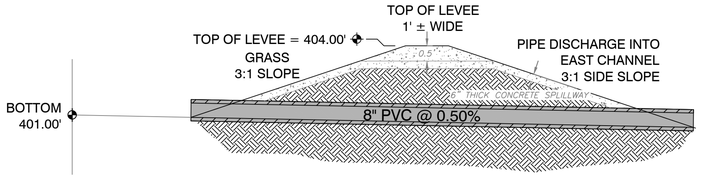
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| REVISED: | 06/26/2024 | CHECKED BY: | |
| SHEET: | C-1.0 | SCALE: 1"=20' | |

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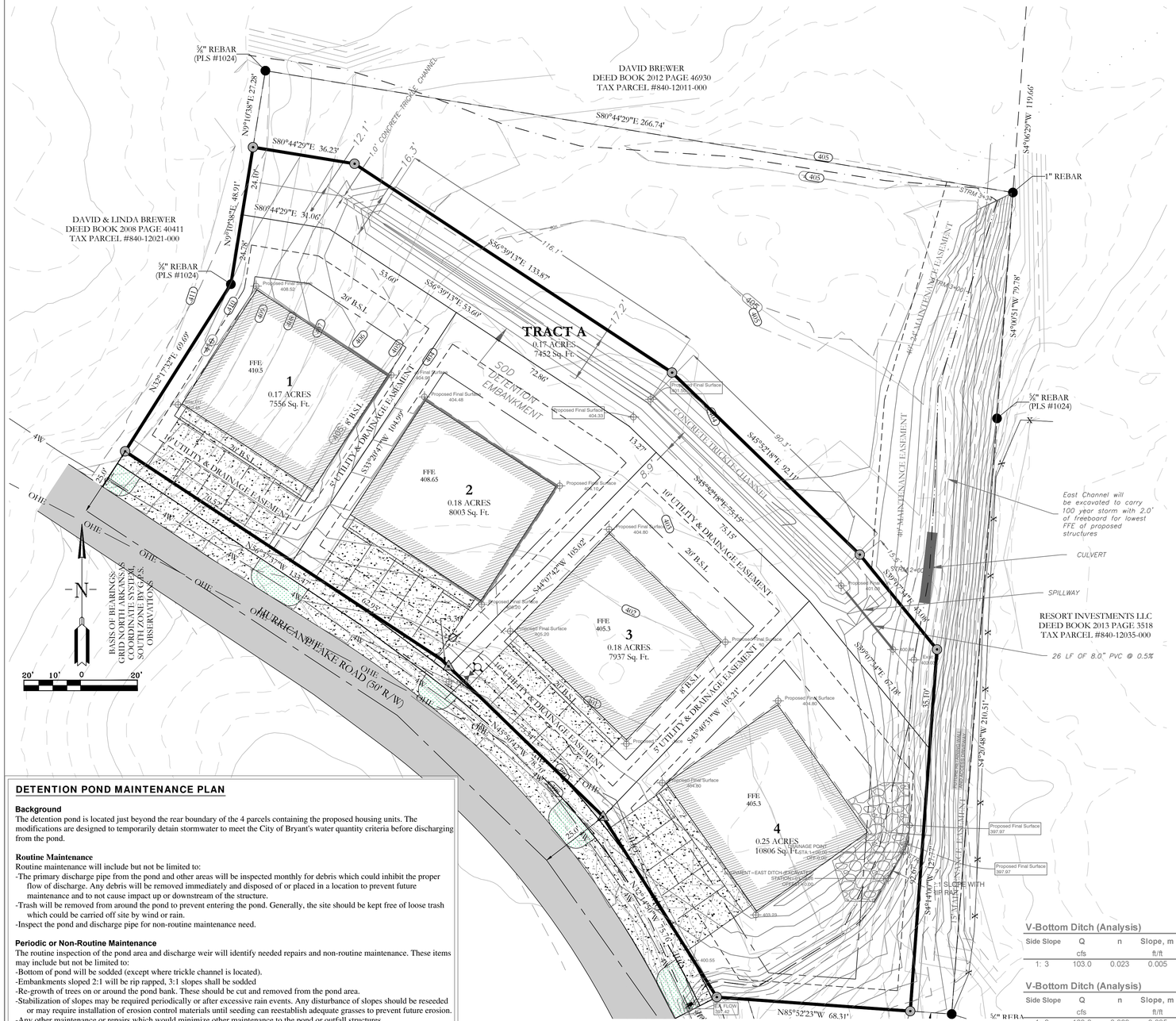

© 2024 HOPE CONSULTING ENGINEERS - SURVEYORS

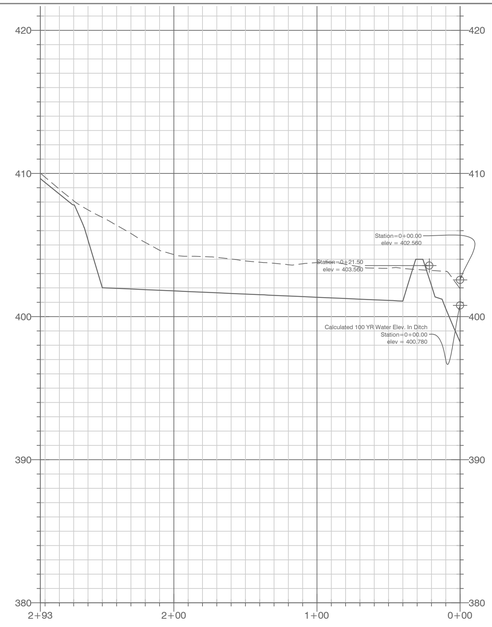



SPILLWAY END VIEW



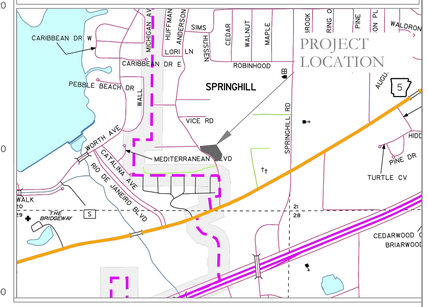

OUTLET SECTION
NTS

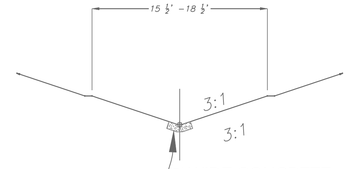


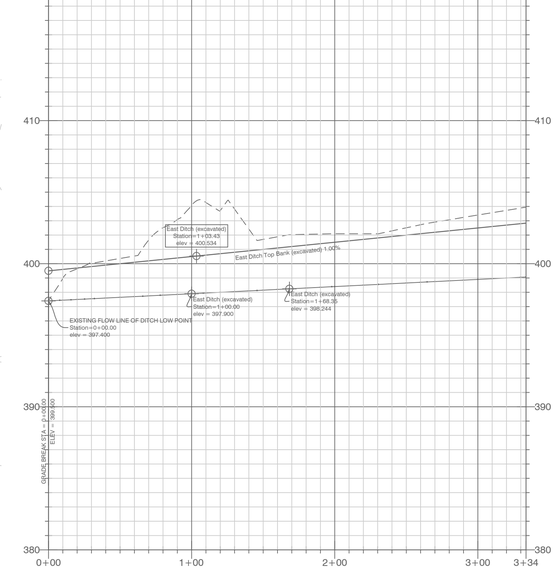

PROFILE
Pond Centerline
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

VICINITY MAP:

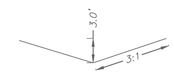



3' WIDE CONCRETE
TRICKLE CHANNEL
DETENTION POND PROPOSED SECTION




PROFILE
East Ditch (excavated)
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'




EAST DITCH PROPOSED TYP
SECTION FOR EXCAVATION

CONTOUR INTERVAL:

EXISTING: 1' AND 5'
PROPOSED: 1' AND 5'

NOTE:
1. ALL ROOF DRAINS WILL BE ROUTED TO DETENTION BY SURFACE GRADING.
2. DETENTION EMBANKMENT AS WELL AS SLOPED EMBANKMENTS ADJACENT TO THE BUILDINGS SHALL BE A MAXIMUM SLOPE OF 3:1 AND BE SODDED FOR ADEQUATE VEGETATION.
3. IN AREAS WHERE STEEP EMBANKMENT SLOPES ARE REQUIRED, A MAXIMUM SLOPE OF 2:1 MAY BE USED IN CONJUNCTION WITH RIP RAP EMBANKMENTS.

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

## DETENTION POND MAINTENANCE PLAN

**Background**
The detention pond is located just beyond the rear boundary of the 4 parcels containing the proposed housing units. The modifications are designed to temporarily detain stormwater to meet the City of Bryant's water quantity criteria before discharging from the pond.

**Routine Maintenance**
Routine maintenance will include but not be limited to:
-The primary discharge pipe from the pond and other areas will be inspected monthly for debris which could inhibit the proper flow of discharge. Any debris will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up or downstream of the structure.
-Trash will be removed from around the pond to prevent entering the pond. Generally, the site should be kept free of loose trash which could be carried off site by wind or rain.
-Inspect the pond and discharge pipe for non-routine maintenance need.

**Periodic or Non-Routine Maintenance**
The routine inspection of the pond area and discharge weir will identify needed repairs and non-routine maintenance. These items may include but not be limited to:
-Bottom of pond will be sodded (except where trickle channel is located).
-Embankments sloped 2:1 will be rip rapped, 3:1 slopes shall be sodded
-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond area.
-Stabilization of slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.
-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.

For questions or concerns about the pond, contact ___ at 501-315-2626.

**V-Bottom Ditch (Analysis)**

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width | Elev. + 2.0' | Y + depth | Dist to outlet | El. @ Outlet | Low Point |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | ft² | ft/sec | ft | freeboard | | x | y=mx+b | b |
| 1: 3 | 103.0 | 0.023 | 0.005 | 2.53 | 30.4 | 19.26 | 5.35 | 15.20 | 403.31 | 400.78 | 168.4 | 398.242 | 397.4 |

**V-Bottom Ditch (Analysis)**

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width | El. + 2.0 | Y + depth Re-grade Dist | | El. @ x | Low Point |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | ft² | ft/sec | ft | freeboard | | x | y=mx+b | b |
| 1: 2 | 103.0 | 0.023 | 0.005 | 2.95 | 35.4 | 17.40 | 5.92 | 11.80 | 403.80 | 400.85 | 100 | 397.9 | 397.4 |

DEPTH CALCULATION BASED ON DITCH SECTION, NEEDED CAPACITY, & RE-GRADING OF EXISTING EAST DITCH (3:1 AND 2:1 V-SECTION)

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

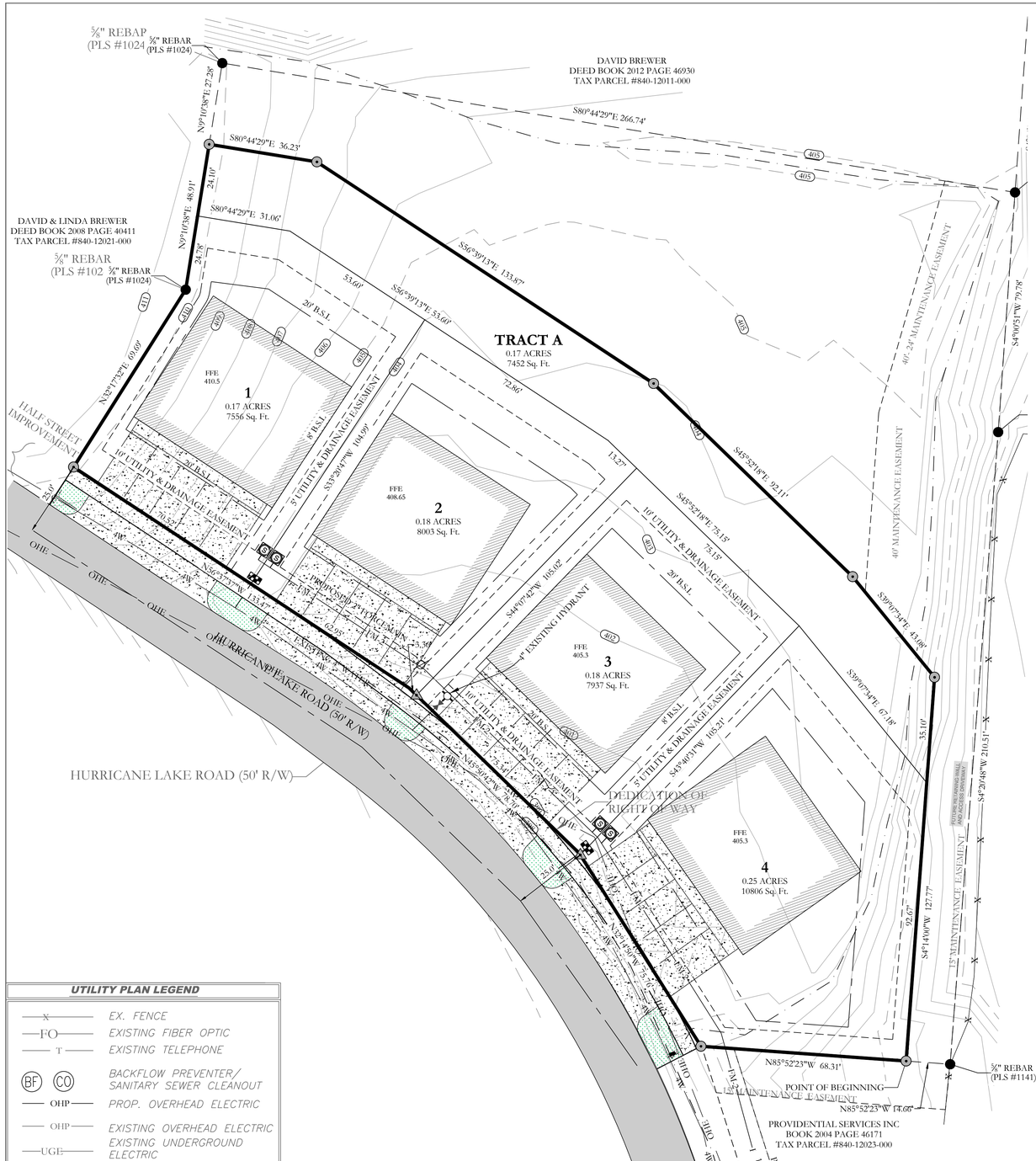
FOR USE AND BENEFIT OF:
SKY BLUE, LLC.

GRADING AND DETENTION PLAN
SKY BLUE DUPLEXES
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

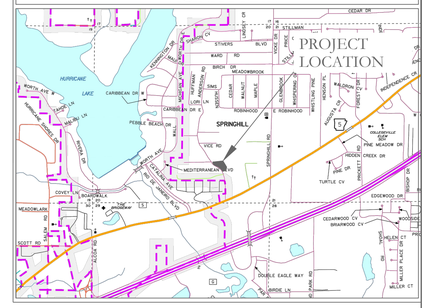
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K:\LAND PROJECTS 2\0SUBDIVISIONS\2019\19-0066 DESIGN\DUPLEXES\19-0066 - SKY BLUE DUPLEXES BS_BASE DRAWING_06-24-2024.DWG




## VICINITY MAP:




## UTILITY PLAN LEGEND

| | |
|---|---|
| X | EX. FENCE |
| FO | EXISTING FIBER OPTIC |
| T | EXISTING TELEPHONE |
| BF CO | BACKFLOW PREVENTER/ SANITARY SEWER CLEANOUT |
| OHP | PROP. OVERHEAD ELECTRIC |
| OHP | EXISTING OVERHEAD ELECTRIC |
| UGE | EXISTING UNDERGROUND ELECTRIC |
| GAS | EXISTING GAS LINE |
| GAS | PROPOSED GAS LINE |
| 8W | EXISTING WATERLINE |
| | PROPOSED 6" WATERLINE |
| S | SANITARY SEWER MANHOLE |
| | FIRE HYDRANT |
| | WATER VALVE |
| | WATER METER |

## PROPERTY UTILITY SPECIFICATION

| | |
|---|---|
| WATER: | CITY OF BRYANT |
| SEWER: | CITY OF BRYANT |
| ELECTRIC: | ENTERGY |
| GAS: | CENTERPOINTE |
| TELEPHONE: | AT&T |

NOTE:

1. ALL WATER AND SEWER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"
2. INSTALL SEWER ID TAPE PER CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"

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:
SKY BLUE, LLC.

# UTILITY PLAN
SKY BLUE DUPLEXES
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

| | | | | | |
|---|---|---|---|---|---|
| DATE: | 01/06/2020 | C.A.D. BY: | | DRAWING NUMBER: | 19-0066 |
| REVISED: | 06/26/2024 | CHECKED BY: | | | |
| SHEET: | C-3.0 | SCALE: | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 500 | 01S | 14W | 0 | 27 | 430 | 62 | 1807 |

K:\LAND PROJECTS\ 2004\SUBDIVISIONS\ 2019\19-0066 BUSSENT DUPLEXES\19-0066 - SKY BLUE DUPLEXES RS_(BASE DRAWING)_06-24-2024.DWG

HOPE
CONSULTING
ENGINEERS • SURVEYORS

July 26, 2024

Colton Leonard
City of Bryant
210 Southwest Third St.,
Bryant, AR 72022

RE: Request for Modification from Code and Request for CUP (Parcel #:840-12022-000)

Dear Mr. Leonard,

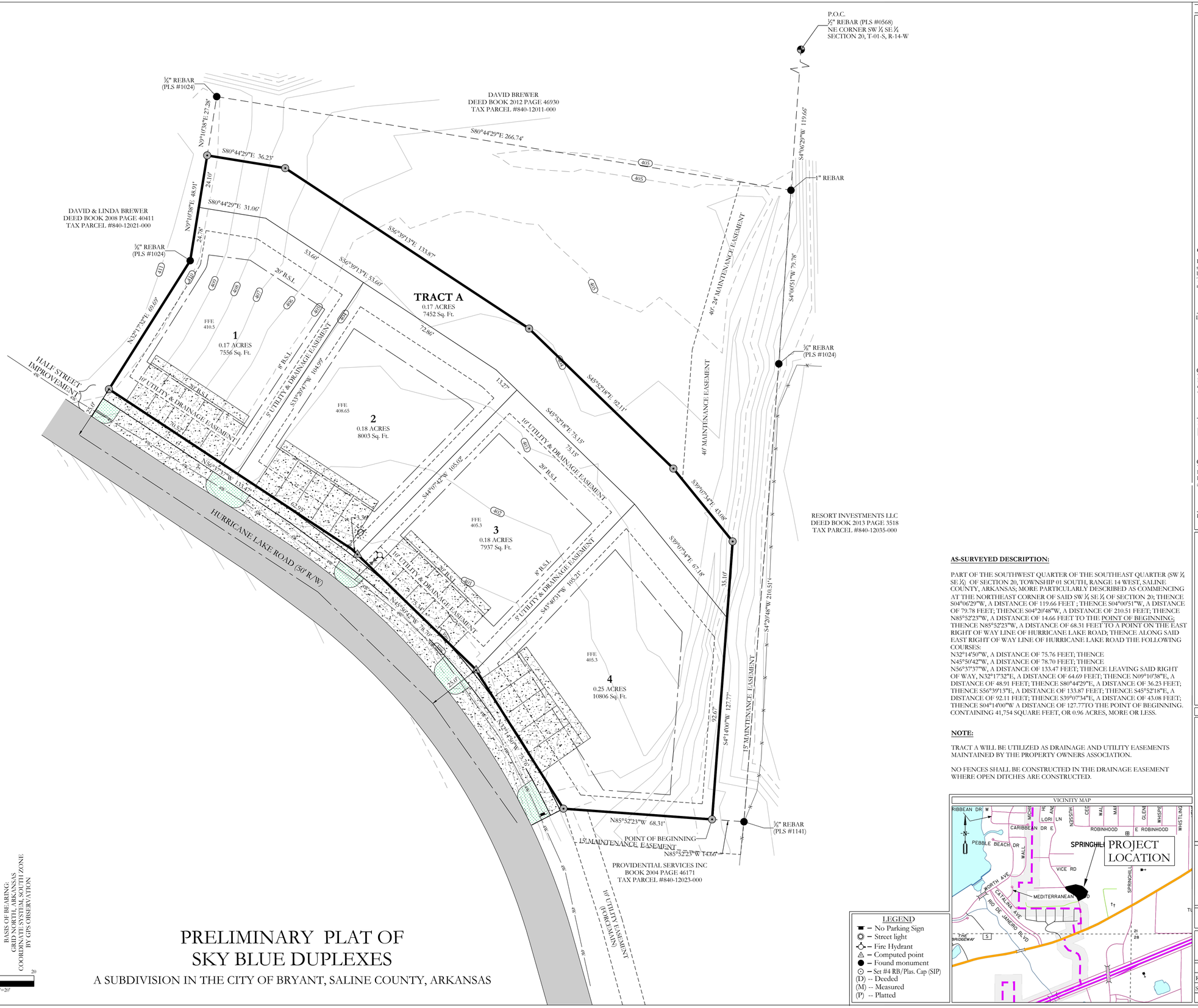
I am requesting a modification from the Walk Bike Drive Code for no curb improvements on this proposed development. We are proposing duplexes on this property and the majority of the property will be driveways. Adding curb to this development would be only in between driveways which would be minimal on this project.

It is our goal to be included on the August 12, 2024 Planning Commission agenda.

Please feel free to contact me with any questions or concerns or if I can be of any further assistance.
Sincerely,

Jonathan Hope
Hope Consulting, Inc.

**129 N. Main St. Benton, Arkansas 72015**
**501-315-2626**
**www.hopeconsulting.com**




# PRELIMINARY PLAT OF SKY BLUE DUPLEXES

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

**AS-SURVEYED DESCRIPTION:**

PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW ¼ SE ¼) OF SECTION 20, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS; MORE PARTICULARLY DESCRIBED AS COMMENCING AT THE NORTHEAST CORNER OF SAID SW ¼ SE ¼ OF SECTION 20; THENCE S04°06'29"W, A DISTANCE OF 119.66 FEET ; THENCE S04°00'51"W, A DISTANCE OF 79.78 FEET; THENCE S04°20'48"W, A DISTANCE OF 210.51 FEET; THENCE N85°52'23"W, A DISTANCE OF 14.66 FEET TO THE POINT OF BEGINNING; THENCE N85°52'23"W, A DISTANCE OF 68.31 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD; THENCE ALONG SAID EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD THE FOLLOWING COURSES:
N32°14'50"W, A DISTANCE OF 75.76 FEET; THENCE
N45°50'42"W, A DISTANCE OF 78.70 FEET; THENCE
N56°37'37"W, A DISTANCE OF 133.47 FEET; THENCE LEAVING SAID RIGHT OF WAY, N32°17'32"E, A DISTANCE OF 64.69 FEET; THENCE N09°10'38"E, A DISTANCE OF 48.91 FEET; THENCE S80°44'29"E, A DISTANCE OF 36.23 FEET; THENCE S56°39'13"E, A DISTANCE OF 133.87 FEET; THENCE S45°52'18"E, A DISTANCE OF 92.11 FEET; THENCE S39°07'34"E, A DISTANCE OF 43.08 FEET; THENCE S04°14'00"W A DISTANCE OF 127.77TO THE POINT OF BEGINNING. CONTAINING 41,754 SQUARE FEET, OR 0.96 ACRES, MORE OR LESS.

**NOTE:**

TRACT A WILL BE UTILIZED AS DRAINAGE AND UTILITY EASEMENTS MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.

NO FENCES SHALL BE CONSTRUCTED IN THE DRAINAGE EASEMENT WHERE OPEN DITCHES ARE CONSTRUCTED.

LEGEND
- ■ – No Parking Sign
- ☼ – Street light
- ⊕ – Fire Hydrant
- △ – Computed point
- ● – Found monument
- ⊙ – Set #4 RB/Plas. Cap (SIP)
- (D) -- Deeded
- (M) -- Measured
- (P) -- Platted

VICINITY MAP




## CERTIFICATIONS:

**OWNER:**
Name: SKY BLUE, LLC
Address: 3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

**DEVELOPER:**
Name: SKY BLUE, LLC
Address: 3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

**CERTIFICATE OF OWNER:**

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

Date of Execution _____ Name: _____

Source of Tile: D.R. BOOK 2015 PAGE 7766

**CERTIFICATE OF PROPERTY OWNERSHIP:**

I, _____, hereby certify that the deed records in the office of Circuit Clerk and Ex-Officio recorder of Saline County, Arkansas, reflect that _____ is the record title owner of real property more particularly described herein on plat.

Dated: _____ _____
Certified Title Insurance Agent or Abstractor

**CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:**

I, William Corbitt R. Shoffner, hereby certify that this proposed preliminary plat correctly represents a survey completed by me or under my supervision on _____, 20_____; that the boundary lines show hereon correspond with the description in the deeds cited in the above Source of Title; and that all monuments which were found or placed on the property are correctly described and located.

_____ _____
Date of Execution
William Corbitt R. Shoffner
Registered Professional
Land Surveyor No. 1664 Arkansas

**CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:**

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

_____ _____
Date of Execution
Kazi Islam
Registered Professional
Engineer, No. 20876 Arkansas

**CERTIFICATE OF PRELIMINARY PLAT APPROVAL:**

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

_____ _____
Date of Execution
NAME, CHAIRMAN
BRYANT PLANNING COMMISSION

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

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

By affixing my seal and signature, I Kazi Islam PE No, 20876, hereby certify that this drawing correctly depicts a survey compiled under my supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

No portion of the property described hereon lies within the 100 year floodplain, according to the Federal Insurance Rate Map, panel #05125C0360E, Dated: 06/05/2020

**PROPERTY SPECIFICATIONS:**

OWNER: SKY BLUE, LLC
3263 INDEPEDENCE DRIVE
BRYANT, AR 72022

DEVELOPER/ SUBDIVIDER: SKY BLUE, LLC
3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

ENGINEERS: HOPE CONSULTING INC.
117 S. MARKET STREET
BENTON, AR 72015

NAME OF SUBDIVISION: SKY BLUE DUPLEXES

INSTRUMENT # 2015-7766

ZONING: R-X

AVERAGE LOT SIZE: 0.19 ACRES (8,437 SQ. FT.)
MINIMUM LOT SIZE: (7,205SQ. FT)
NUMBER OF LOTS: 4

SOURCE OF WATER: WATER USERS
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: ENTERGY

BUILDING SETBACKS:
FRONT-20' OR AS SHOWN
REAR-20' OR AS SHOWN
SIDE-6' OR AS SHOWN

UTILITY & DRAINAGE EASEMENTS:
FRONT-10' OR AS SHOWN
REAR - 5' OR AS SHOWN
SIDE - 5' OR AS SHOWN


HOPE CONSULTING
ENGINEERS - SURVEYORS
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www.hopeconsulting.com

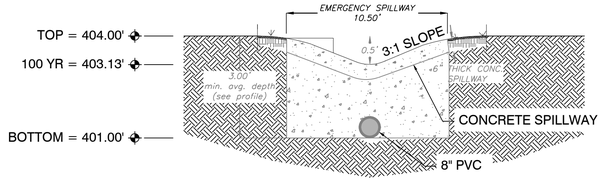

FOR USE AND BENEFIT OF:
SKY BLUE, LLC

PRELIMINARY PLAT
SKY BLUE DUPLEXES
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

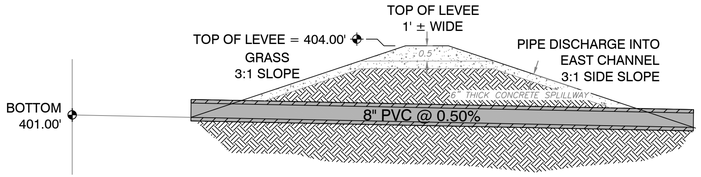
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| DATE: | 03/18/2019 | C.A.D. BY: B.JOHNSON | DRAWING NUMBER: 19-0066 |
| REVISED: | 06/26/2024 | CHECKED BY: | |
| SHEET: | C-1.0 | SCALE: 1"=20' | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 500 | 01S | 14W | 0 | 20 | 230 | 62 | 1807 |

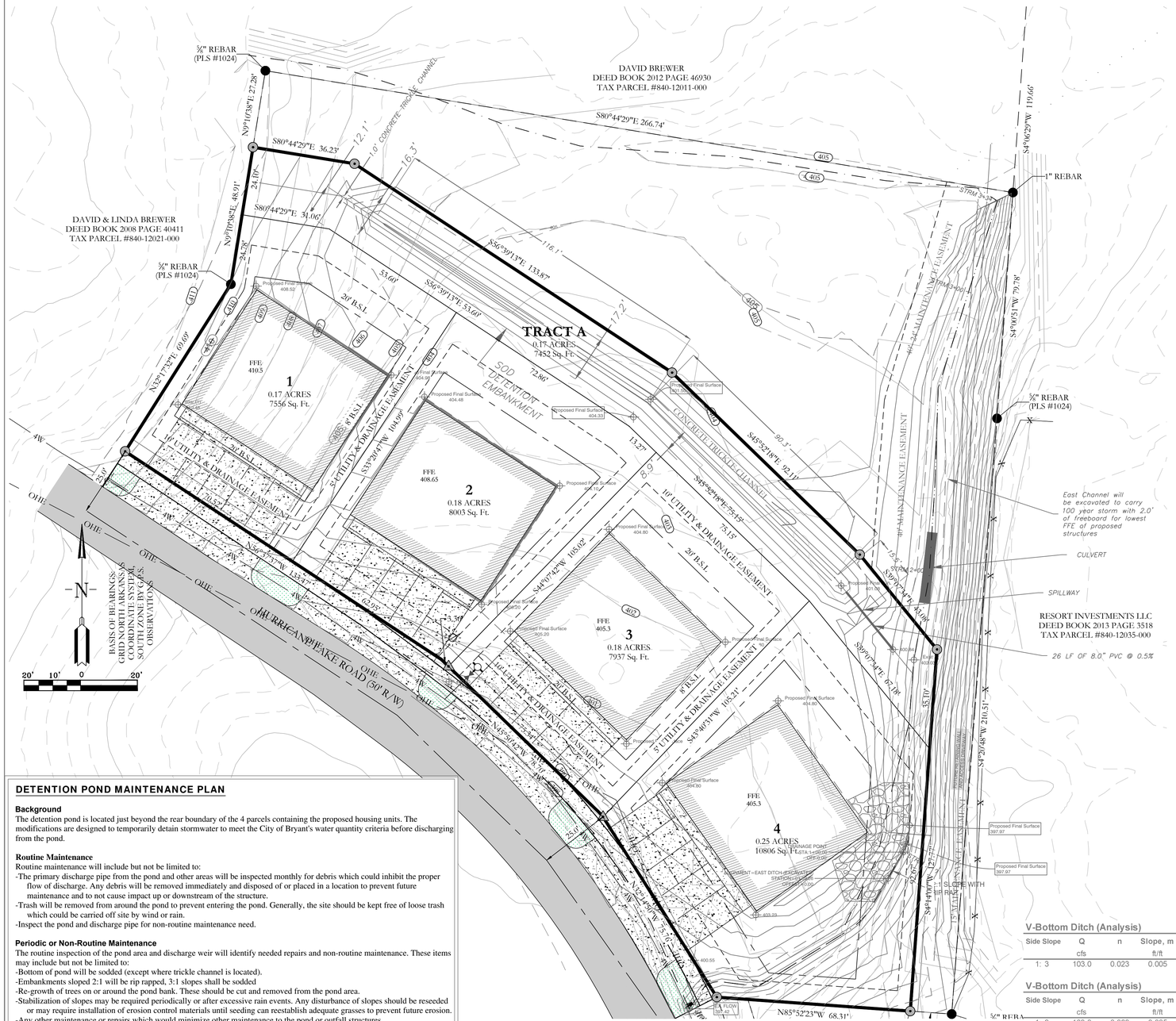

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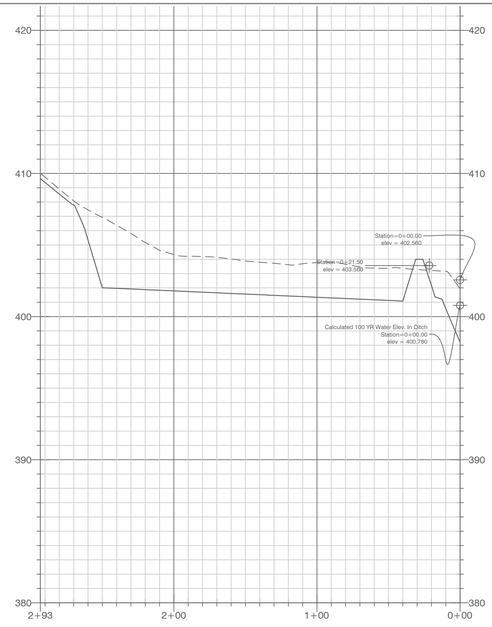



SPILLWAY END VIEW



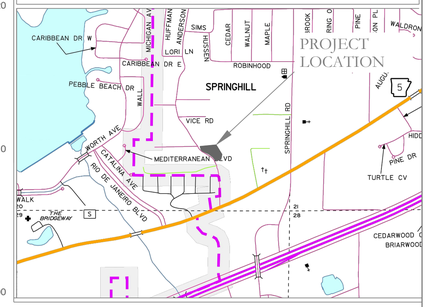

OUTLET SECTION
NTS

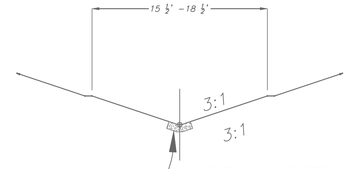


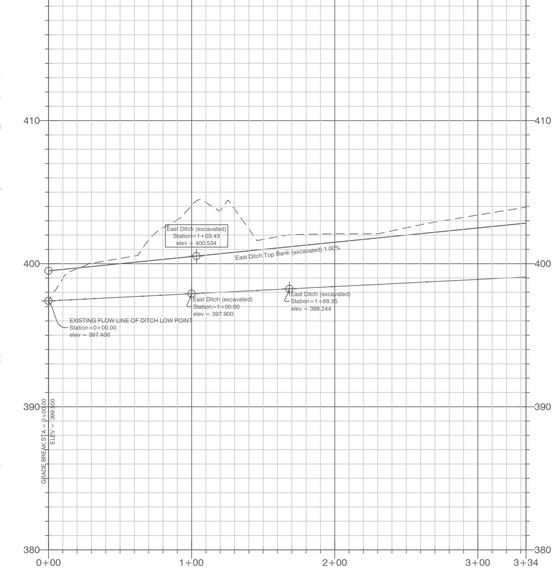

PROFILE
Pond Centerline
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

VICINITY MAP:

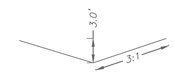



3' WIDE CONCRETE
TRICKLE CHANNEL
DETENTION POND PROPOSED SECTION




PROFILE
East Ditch (excavated)
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'




EAST DITCH PROPOSED TYP
SECTION FOR EXCAVATION

CONTOUR INTERVAL:

EXISTING: 1' AND 5'
PROPOSED: 1' AND 5'

NOTE:
1. ALL ROOF DRAINS WILL BE ROUTED TO DETENTION BY SURFACE GRADING.
2. DETENTION EMBANKMENT AS WELL AS SLOPED EMBANKMENTS ADJACENT TO THE BUILDINGS SHALL BE A MAXIMUM SLOPE OF 3:1 AND BE SODDED FOR ADEQUATE VEGETATION.
3. IN AREAS WHERE STEEP EMBANKMENT SLOPES ARE REQUIRED, A MAXIMUM SLOPE OF 2:1 MAY BE USED IN CONJUNCTION WITH RIP RAP EMBANKMENTS.

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

## DETENTION POND MAINTENANCE PLAN

**Background**
The detention pond is located just beyond the rear boundary of the 4 parcels containing the proposed housing units. The modifications are designed to temporarily detain stormwater to meet the City of Bryant's water quantity criteria before discharging from the pond.

**Routine Maintenance**
Routine maintenance will include but not be limited to:
-The primary discharge pipe from the pond and other areas will be inspected monthly for debris which could inhibit the proper flow of discharge. Any debris will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up or downstream of the structure.
-Trash will be removed from around the pond to prevent entering the pond. Generally, the site should be kept free of loose trash which could be carried off site by wind or rain.
-Inspect the pond and discharge pipe for non-routine maintenance need.

**Periodic or Non-Routine Maintenance**
The routine inspection of the pond area and discharge weir will identify needed repairs and non-routine maintenance. These items may include but not be limited to:
-Bottom of pond will be sodded (except where trickle channel is located).
-Embankments sloped 2:1 will be rip rapped, 3:1 slopes shall be sodded
-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond area.
-Stabilization of slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.
-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.

For questions or concerns about the pond, contact ___ at 501-315-2626.

**V-Bottom Ditch (Analysis)**

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width | Elev. + 2.0' | Y + depth | Dist to outlet | El. @ Outlet | Low Point |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | ft² | ft/sec | ft | freeboard | | x | y=mx+b | b |
| 1: 3 | 103.0 | 0.023 | 0.005 | 2.53 | 30.4 | 19.26 | 5.35 | 15.20 | 403.31 | 400.78 | 168.4 | 398.242 | 397.4 |

**V-Bottom Ditch (Analysis)**

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width | El. + 2.0 | Y + depth Re-grade Dist | | El. @ x | Low Point |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | ft² | ft/sec | ft | freeboard | | x | y=mx+b | b |
| 1: 2 | 103.0 | 0.023 | 0.005 | 2.95 | 35.4 | 17.40 | 5.92 | 11.80 | 403.80 | 400.85 | 100 | 397.9 | 397.4 |

DEPTH CALCULATION BASED ON DITCH SECTION, NEEDED CAPACITY, & RE-GRADING OF EXISTING EAST DITCH (3:1 AND 2:1 V-SECTION)

HOPE CONSULTING
ENGINEERS - SURVEYORS
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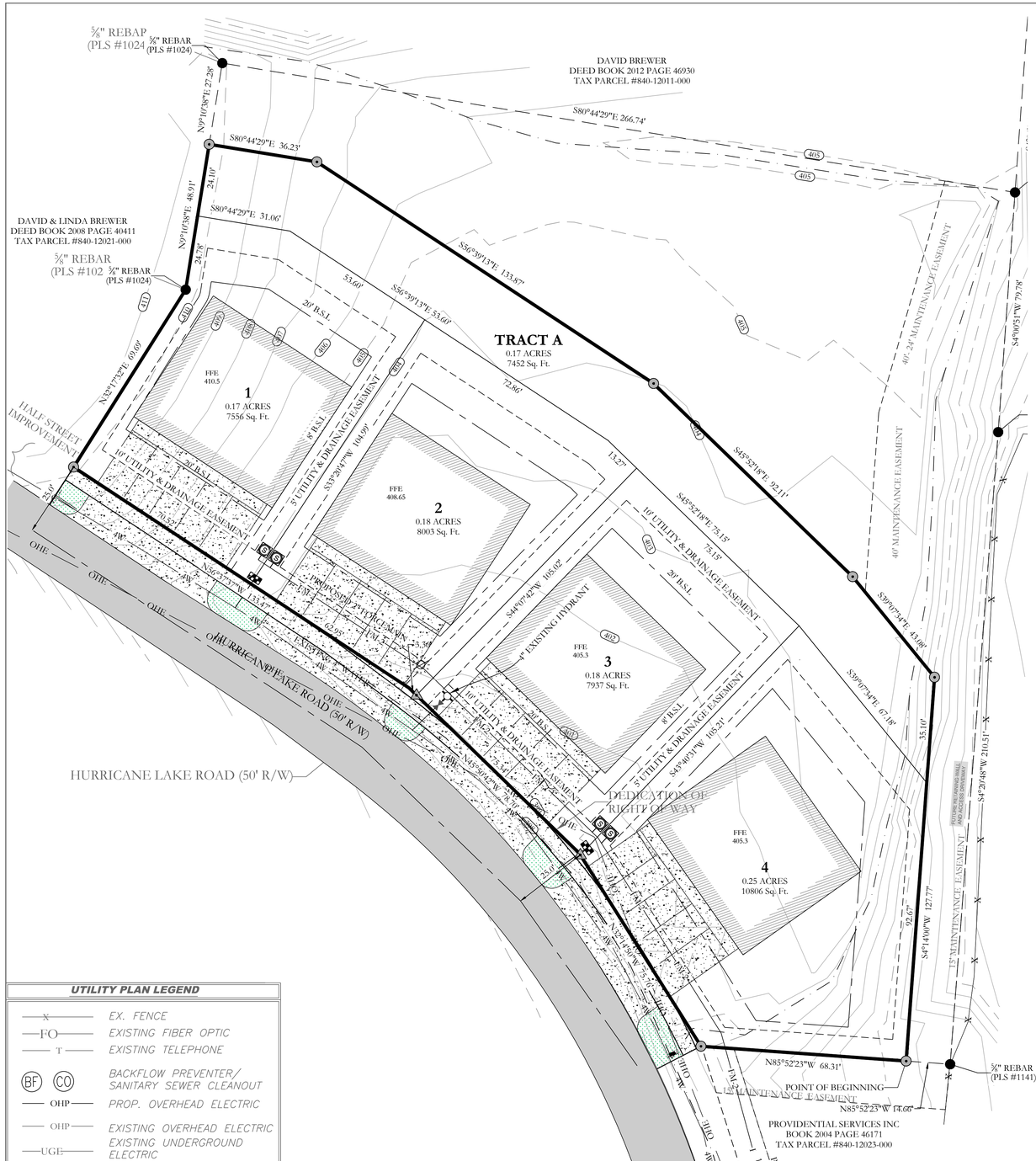
FOR USE AND BENEFIT OF:
SKY BLUE, LLC.

GRADING AND DETENTION PLAN
SKY BLUE DUPLEXES
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

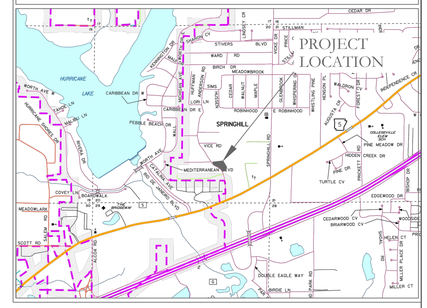
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| REVISED: | 06/26/2024 | CHECKED BY: | 19-0066 |
| SHEET: | C-2.0 | SCALE: | |

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| 500 | 01S | 14W | 0 | 19 | 440 | 62 | 1802 |

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## VICINITY MAP:




## UTILITY PLAN LEGEND

| | |
|---|---|
| X | EX. FENCE |
| FO | EXISTING FIBER OPTIC |
| T | EXISTING TELEPHONE |
| BF CO | BACKFLOW PREVENTER/ SANITARY SEWER CLEANOUT |
| OHP | PROP. OVERHEAD ELECTRIC |
| OHP | EXISTING OVERHEAD ELECTRIC |
| UGE | EXISTING UNDERGROUND ELECTRIC |
| GAS | EXISTING GAS LINE |
| GAS | PROPOSED GAS LINE |
| 8W | EXISTING WATERLINE |
| | PROPOSED 6" WATERLINE |
| S | SANITARY SEWER MANHOLE |
| | FIRE HYDRANT |
| | WATER VALVE |
| | WATER METER |

## PROPERTY UTILITY SPECIFICATION

| | |
|---|---|
| WATER: | CITY OF BRYANT |
| SEWER: | CITY OF BRYANT |
| ELECTRIC: | ENTERGY |
| GAS: | CENTERPOINTE |
| TELEPHONE: | AT&T |

NOTE:

1. ALL WATER AND SEWER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"
2. INSTALL SEWER ID TAPE PER CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"

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

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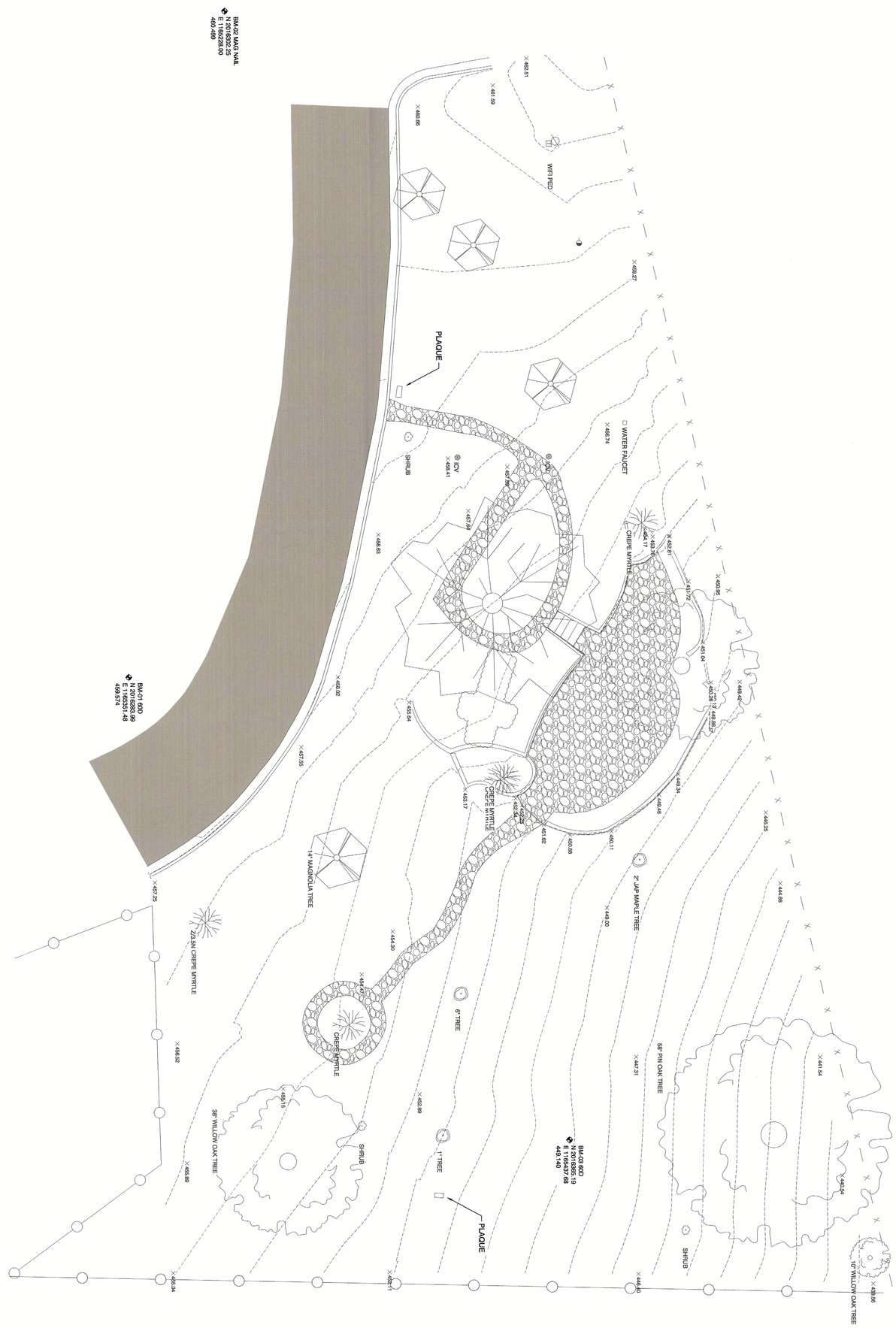
FOR USE AND BENEFIT OF:
SKY BLUE, LLC.

# UTILITY PLAN
SKY BLUE DUPLEXES
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

| | | | | | |
|---|---|---|---|---|---|
| DATE: | 01/06/2020 | C.A.D. BY: | | DRAWING NUMBER: | 19-0066 |
| REVISED: | 06/26/2024 | CHECKED BY: | | | |
| SHEET: | C-3.0 | SCALE: | | | |

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| 500 | 01S | 14W | 0 | 27 | 430 | 62 | 1807 |

K:\LAND PROJECTS\ 2004\SUBDIVISIONS\ 2019\19-0066 BUSSENT DUPLEXES\19-0066 - SKY BLUE DUPLEXES RS_(BASE DRAWING)_06-24-2024.DWG




10' 5' 0 10'

N

**BRYANT FIRST UNITED METHODIST CHURCH**
**COLUMBARIUM**
**CITY OF BRYANT, ARKANSAS**

**GNE** Designing our client's success


**GarNat Engineering, LLC**
P.O. Box 116
Benton, AR 72018
Ph (501) 408-4650
3825 Mt Carmel Rd
Bryant, AR 72022
garnatengineering@gmail.com


| DATE | REVISION | BY |
|---|---|---|
| | | |

CONTENTS: TOPOGRAPHICAL SURVEY

PROJECT NO: 23108

DATE: AUGUST 2023

SHEET NO: C1.0

J:\Projects\2023 Projects\23108 Bryant First United Methodist Church Topo\Drawings\MSA\Survey\23108 – Bryant First United Methodist Church Topo – 072823.dwg

# *SKY BLUE DUPLEXES*

*PROPOSED MULTI-FAMILY UNITS*

# *DRAINAGE REPORT*

*FOR*

*City of Bryant, AR*

*DATE*

Hurricane Lake Road, Saline County, AR

By:

HOPE
CONSULTING
ENGINEERS • SURVEYORS

**APPENDIX**

Project Description/Summary

Detention Discharge Summary, Composite C Values, & time of concentration

Street Drainage Calculation

East Ditch Calculations

Time of Concentration Calculation

Pond Report

Hydrographs

East Ditch Exhibit

**Summary**

The following calculations pertain to the detention design for the proposed multi family development Located off Hurricane Lake Road in Bryant, AR.

Proposed Development area = 0.92 Acres

| | *C* | *tc (min)* |
|---|---|---|
| Pre-development: | 0.49 | 23 |
| Post-development: | 0.69 | 23 |

*Detention Pre & Post Development Comparisons*

*Prior to detention routing:*

| Event (yrs) | Pre-developed Flow Q (cfs) | Post-developed Flow (no pond) Q (cfs) |
|---|---|---|
| 2 | 1.40 | 1.98 |
| 10 | 1.95 | 2.75 |
| 25 | 2.26 | 3.18 |
| 50 | 2.57 | 3.61 |
| 100 | 2.75 | 3.87 |

*After routing to detention:*

| Event (yrs) | Pre-developed Q (cfs) | Post-developed (with pond) Q (cfs) | Water El. (ft) |
|---|---|---|---|
| 2 | 1.40 | 1.39 | 402.25 |
| 10 | 1.95 | 1.72 | 402.62 |
| 25 | 2.26 | 1.89 | 402.85 |
| 50 | 2.57 | 2.03 | 403.05 |
| 100 | 2.75 | 2.16 | 403.13 |

Therefore the development will not create any additional flow in the downstream area.

*East Channel*

The following calculations pertain to the existing east ditch, and are based on proposed re-design and excavation of the existing channel in order to have the needed vertical room necessary for detention and 2.0 feet of freeboard for the finished floor elevations of proposed structures.

| **time of concentration, tc (min)**<br>Pre | REGION 3 IDF | | | |
|---|---|---|---|---|
| **Channel Dimensions and Time of Concentration, tc** | | | | |
| Area (ft2) | 1998592.29 | | | |
| Area (Acre) | 46 | | | |
| Length, L (ft) | 2217.0 | | | |
| Change in Elevation (ft) | 60.27 | | | |
| Slope, S (ft/ft) | 0.027 | | | |
| N (asphalt,grass,etc) | 0.400 | | **h (ft)** | **S** |
| L( overland, ft) | 200 | | 4 | 0.020 |
| L( channel 1, ft) | 2017 | | 56.27 | 0.028 |
| L( channel 2, ft) | 0.0 | | 0 | 0.000 |
| $t_i$ | 45.4 | **v** | | |
| $t_{t1}$ | 5.6 | 6.007023 | | |
| $t_{t2}$ | 0.0 | 0 | | |
| time of concentration, tc (min) | 51.0 | *use 50 min* | | |

| | **Design Peak Runoff Rates, Qp (cfs)** | | |
|---|---|---|---|
| | Intensity, I (in/hr) | Runoff Coeff | Flow (cfs) |
| | I | C | Q |
| 100year | 4.19 | 0.53 | 101.89 |
| | Qp,max (max flow) cfs | | 102 |

## V-Bottom Ditch (Analysis)

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width |
|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | $ft^2$ | ft/sec | ft |
| 1: 3 | 103.0 | 0.023 | 0.005 | 2.53 | 30.4 | 19.26 | 5.35 | 15.20 |

## STATION 1+68

| Elev. + 2.0' freeboard | Y + depth | Dist to outlet | El. @ Outlet | Low Point |
|---|---|---|---|---|
| | | x | y=mx+b | b |
| 403.31 | 400.78 | 168.4 | 398.242 | 397.4 |

## V-Bottom Ditch (Analysis)

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width |
|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | $ft^2$ | ft/sec | ft |
| 1: 2 | 103.0 | 0.023 | 0.005 | 2.95 | 35.4 | 17.40 | 5.92 | 11.80 |

## STATION 1+00

| El. + 2.0 freeboard | Y + depth | Re-grade Dist | El. @ x | Low Point |
|---|---|---|---|---|
| | | x | y=mx+b | b |
| 403.80 | 400.85 | 100 | 397.9 | 397.4 |

**PRE DEVELOPMENT TOC:**

| **Time of Concentration, tc (min)** | Bryant IDF | | | |
|---|---|---|---|---|
| **Channel Dimensions and Time of Concentration, tc** | | | | |
| Area (ft2) | 40262.9 | | | |
| Area (Acre) | 0.92 | | | |
| Length, L (ft) | 837.0 | | | |
| Change in Elevation (ft) | 32 | | | |
| Slope, S (ft/ft) | 0.038 | | | |
| N (Coeff. Of roughness, Table 400-3) | 0.100 | | **h (ft)** | **S** |
| L( overland/sheet flow, ft) | 75 | | 1 | 0.013 |
| L( channel 1, ft) | 601 | | 25.00 | 0.04 |
| L( channel 2, ft) | 161.0 | | 1 | 0.006 |
| $t_i$ | 18.4 | **v** | | |
| $t_{t1}$ | 3.3 | 3.0241 | | |
| $t_{t2}$ | 0.9 | 2.909438 | | |
| time of concentration, tc (min) | **22.7** | | | **use 23** |

**POST DEVELOPMENT TOC:**

| time of concentration, tc (min) | Bryant IDF | | | |
|---|---|---|---|---|
| | | | | |
| **Channel Dimensions and Time of Concentration, tc** | | | | |
| Area (ft2) | 40262.9 | | | |
| Area (Acre) | 0.92 | | | |
| Length, L (ft) | 888.0 | | | |
| Change in Elevation (ft) | 32 | | | |
| Slope, S (ft/ft) | 0.036 | | | |
| N (Coeff. Of roughness, Table 400-3) | 0.100 | | **h (ft)** | **S** |
| L( overland/sheet flow, ft) | 75 | | 1 | 0.013 |
| L( channel 1, ft) | 659 | | 25.00 | 0.04 |
| L( channel 2, ft) | 154.0 | | 3 | 0.017 |
| $t_i$ | 18.4 | **v** | | |
| $t_{t1}$ | 3.8 | 2.887956 | | |
| $t_{t2}$ | 0.5 | 4.77828 | | |
| time of concentration, tc (min) | **22.8** | | | **use 23** |

# Watershed Model Schematic



## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | Rational | PRE DEV FLOW |
| 2 | Rational | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | POST DEV. FLOW |

# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 1.404 | 1 | 23 | 1,938 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 1.977 | 1 | 23 | 2,729 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 1.391 | 1 | 30 | 2,728 | 2 | 402.25 | 649 | POST DEV. FLOW |

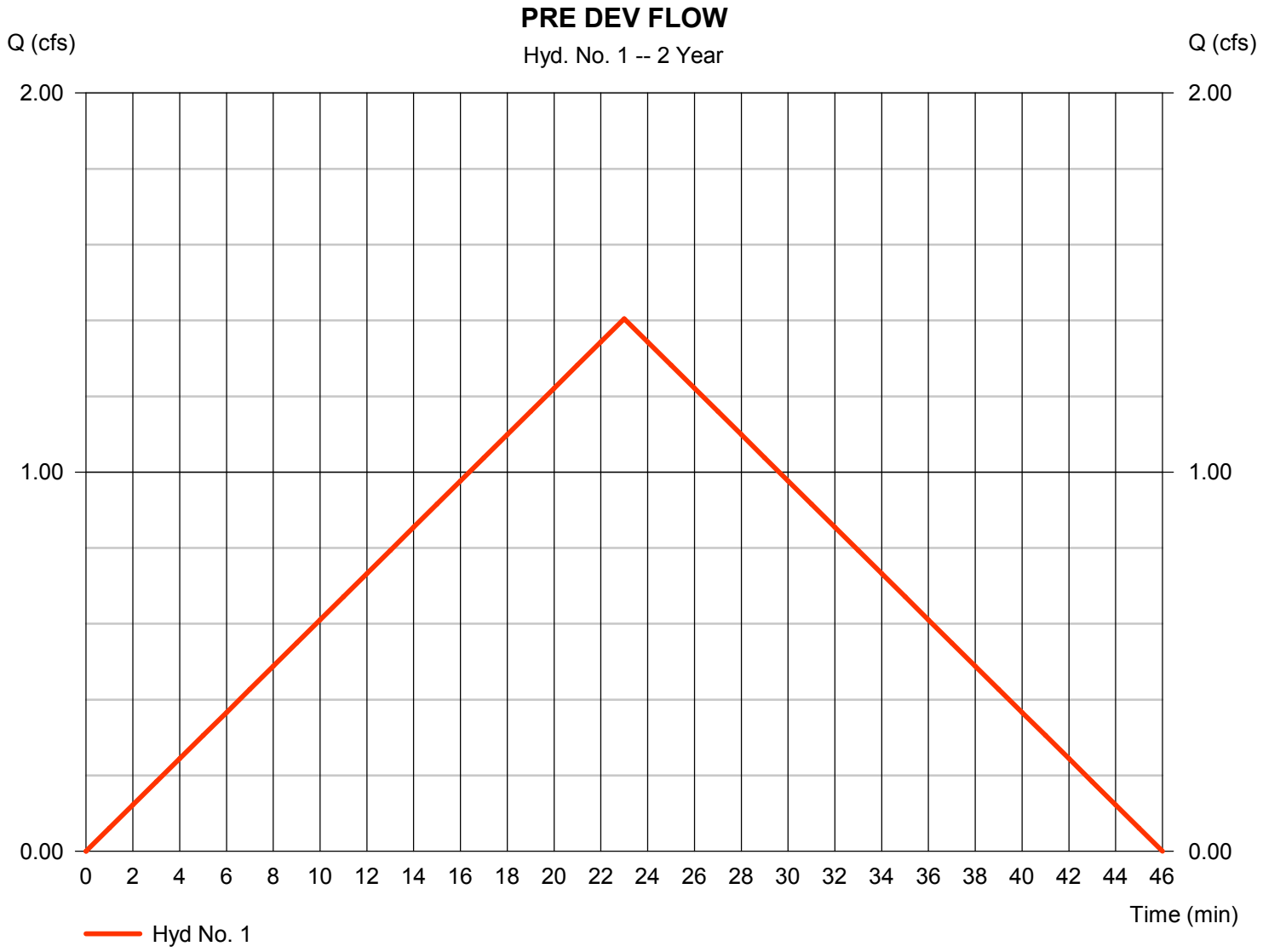
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 1.404 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 1,938 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 3.115 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



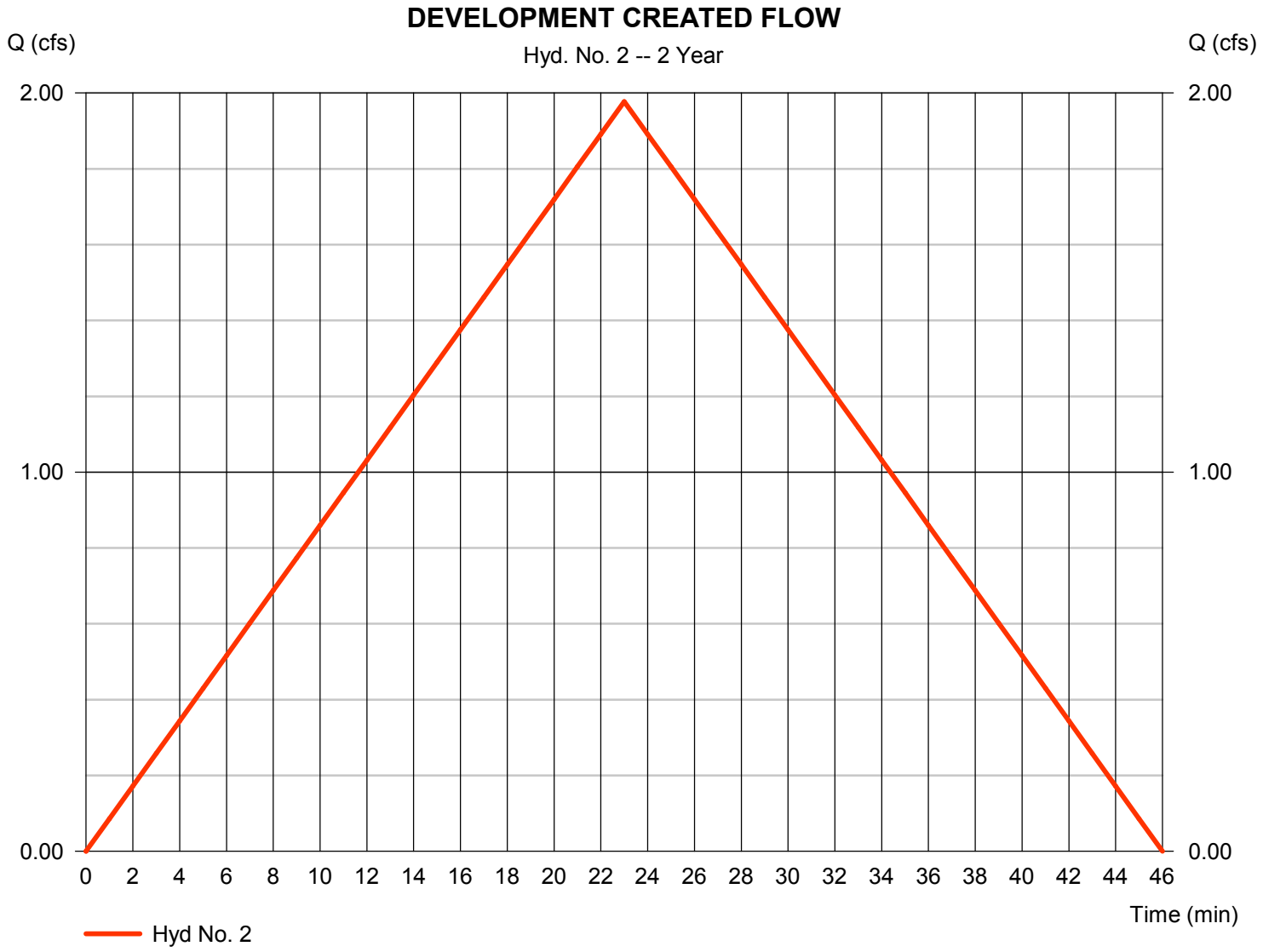
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 1.977 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 2,729 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 3.115 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

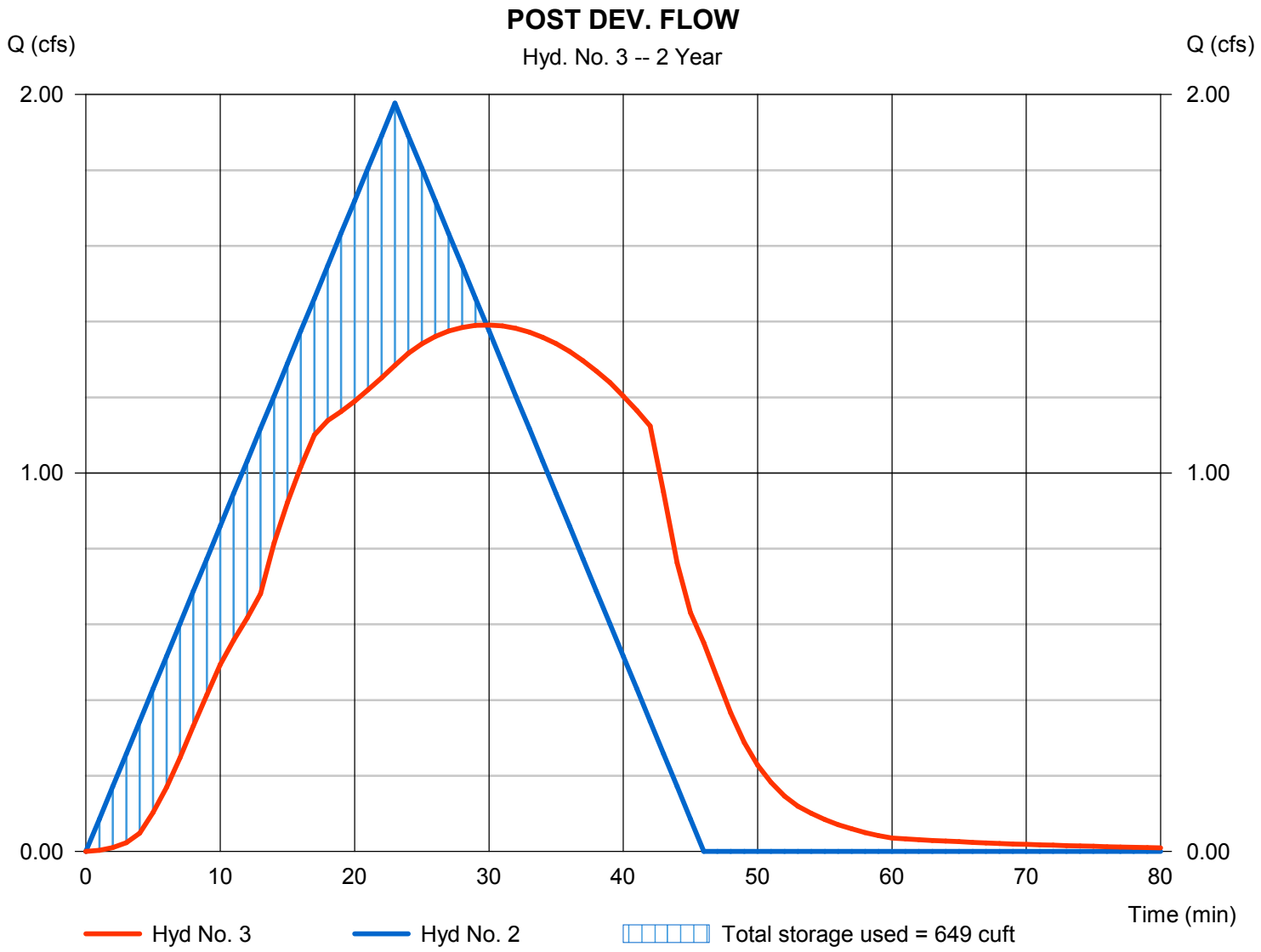


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.391 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 30 min |
| Time interval | = | 1 min | Hyd. volume | = | 2,728 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 402.25 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 649 cuft |

Storage Indication method used.



# Pond Report



## Pond No. 1 - DETENTION

### Pond Data

**Contours -**User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 401.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 401.00 | 80 | 0 | 0 |
| 1.00 | 402.00 | 680 | 331 | 331 |
| 2.00 | 403.00 | 1,994 | 1,279 | 1,610 |
| 3.00 | 404.00 | 3,353 | 2,644 | 4,254 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 8.00 | Inactive | Inactive | 0.00 |
| **Span (in)** | = 8.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 1 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 401.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 26.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.50 | 0.00 | 0.00 | n/a |
| **N-Value** | = .013 | .013 | .013 | n/a |
| **Orifice Coeff.** | = 0.60 | 0.60 | 0.60 | 0.60 |
| **Multi-Stage** | = n/a | No | No | No |

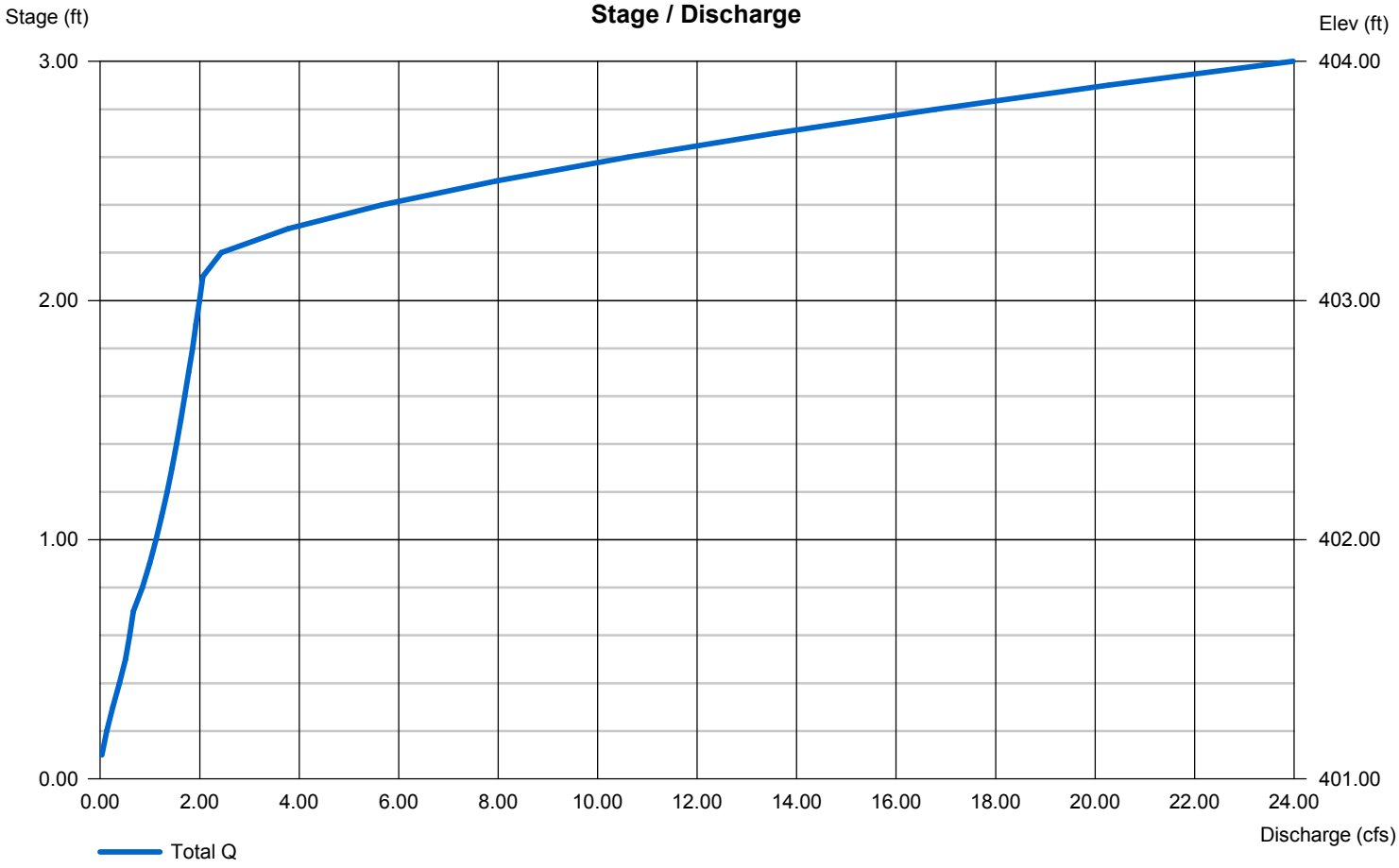
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 10.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 403.15 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 2.60 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Broad | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**TW Elev. (ft)** = 0.00

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



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 1.952 | 1 | 23 | 2,693 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 2.748 | 1 | 23 | 3,793 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 1.719 | 1 | 32 | 3,792 | 2 | 402.62 | 1,127 | POST DEV. FLOW |

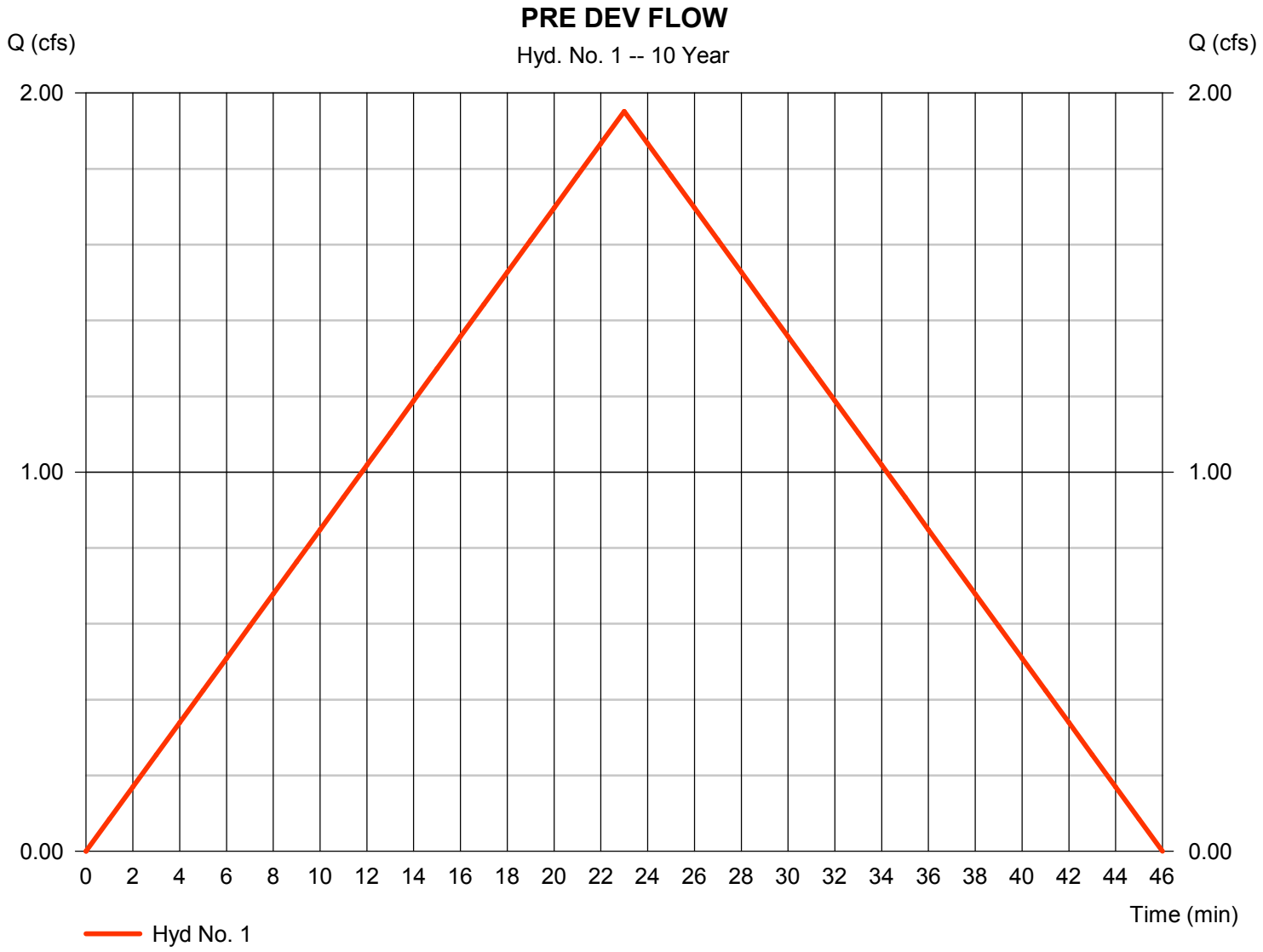
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 1.952 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 2,693 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 4.330 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



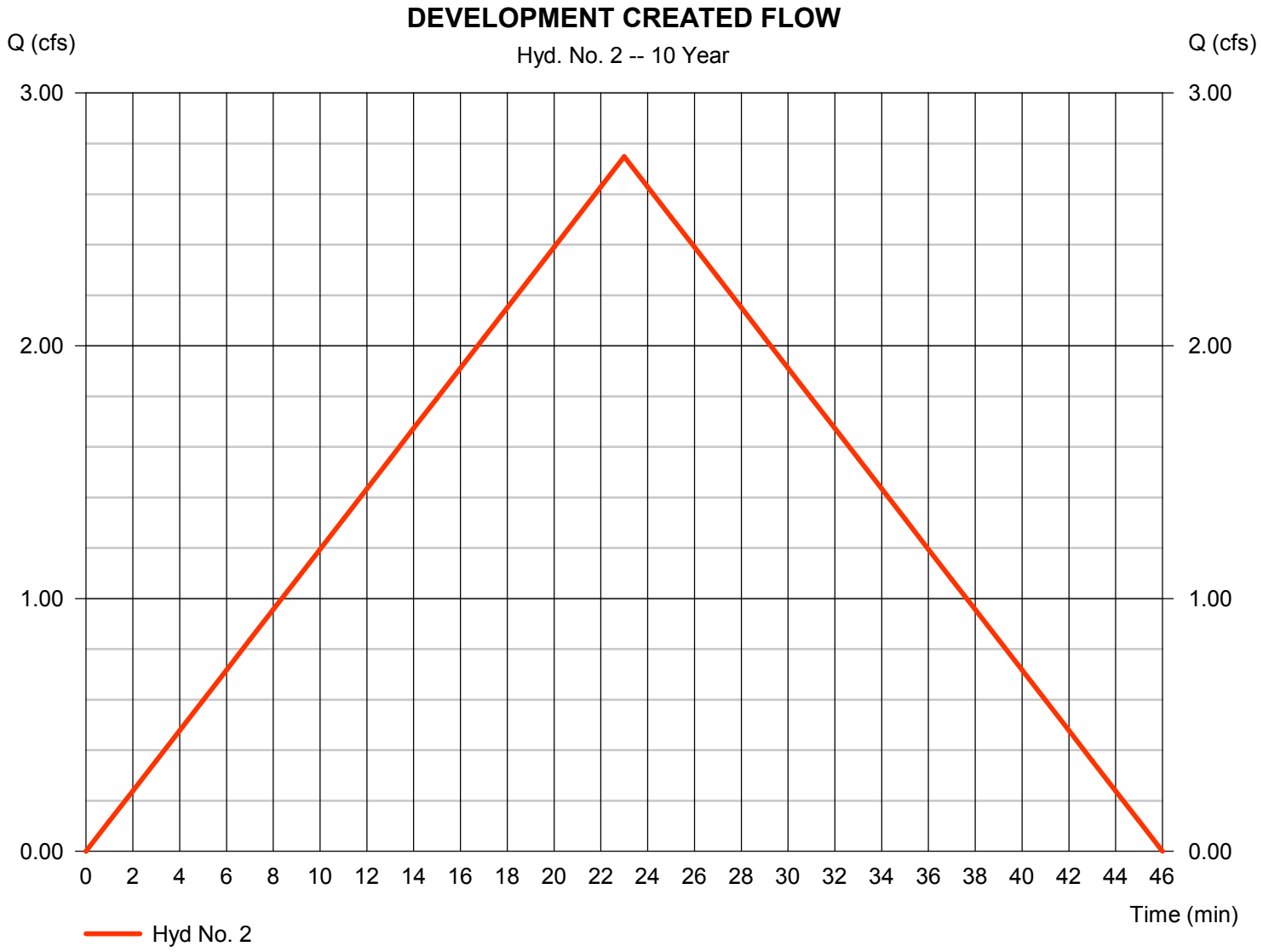
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.748 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,793 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 4.330 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

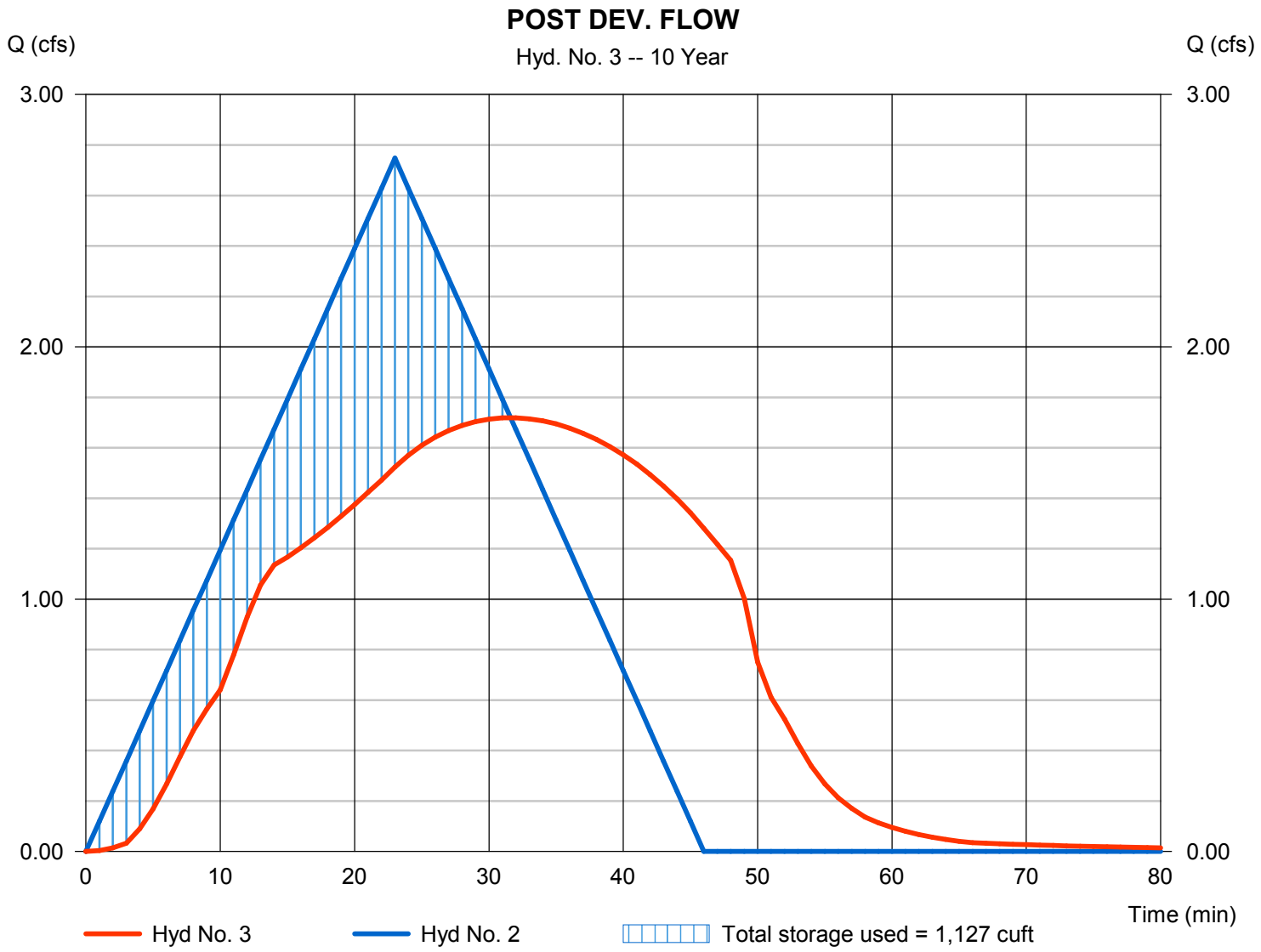


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.719 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 32 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,792 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 402.62 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,127 cuft |

Storage Indication method used.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 2.258 | 1 | 23 | 3,116 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 3.180 | 1 | 23 | 4,389 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 1.894 | 1 | 32 | 4,388 | 2 | 402.85 | 1,424 | POST DEV. FLOW |

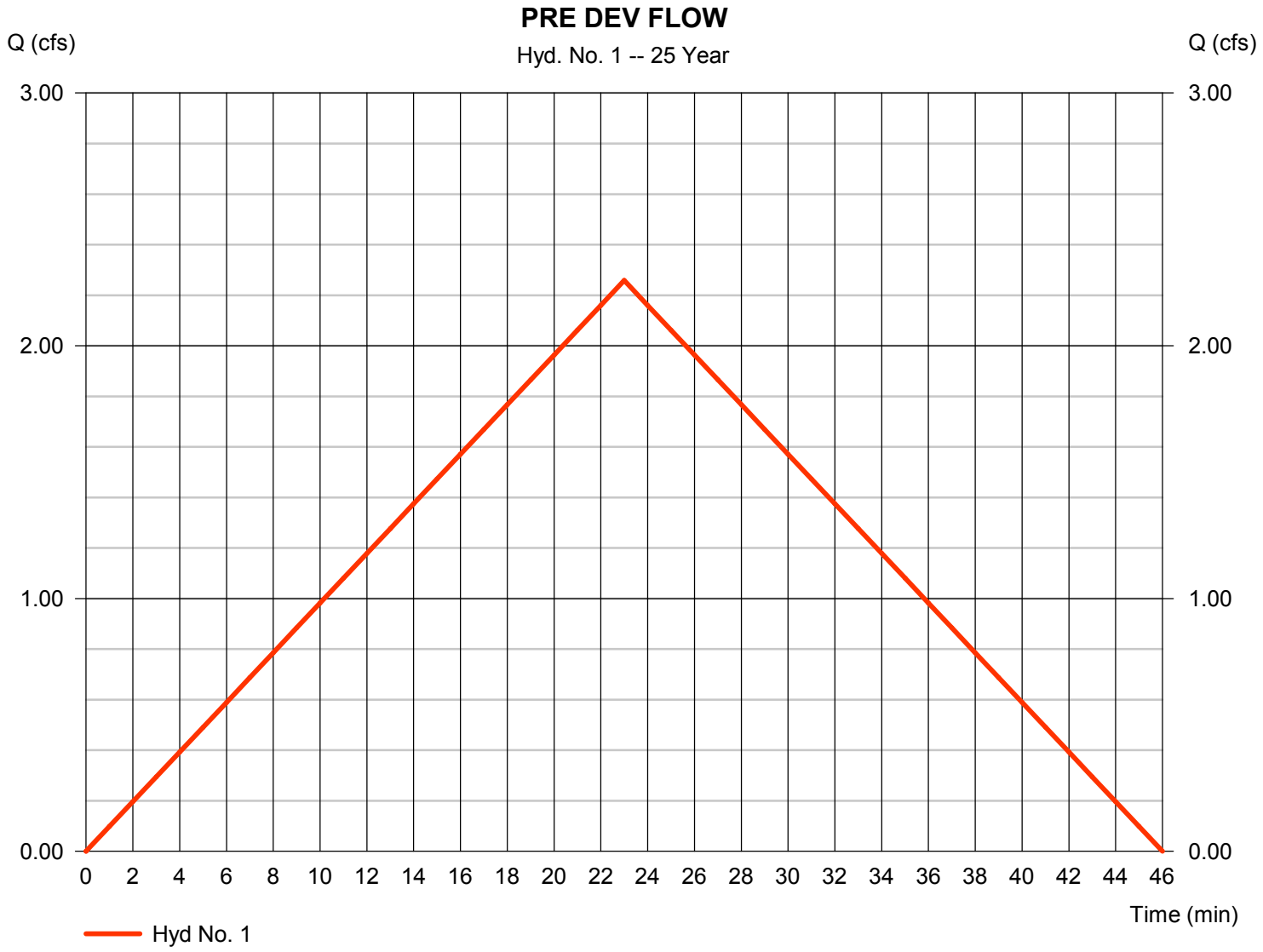
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.258 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,116 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 5.010 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



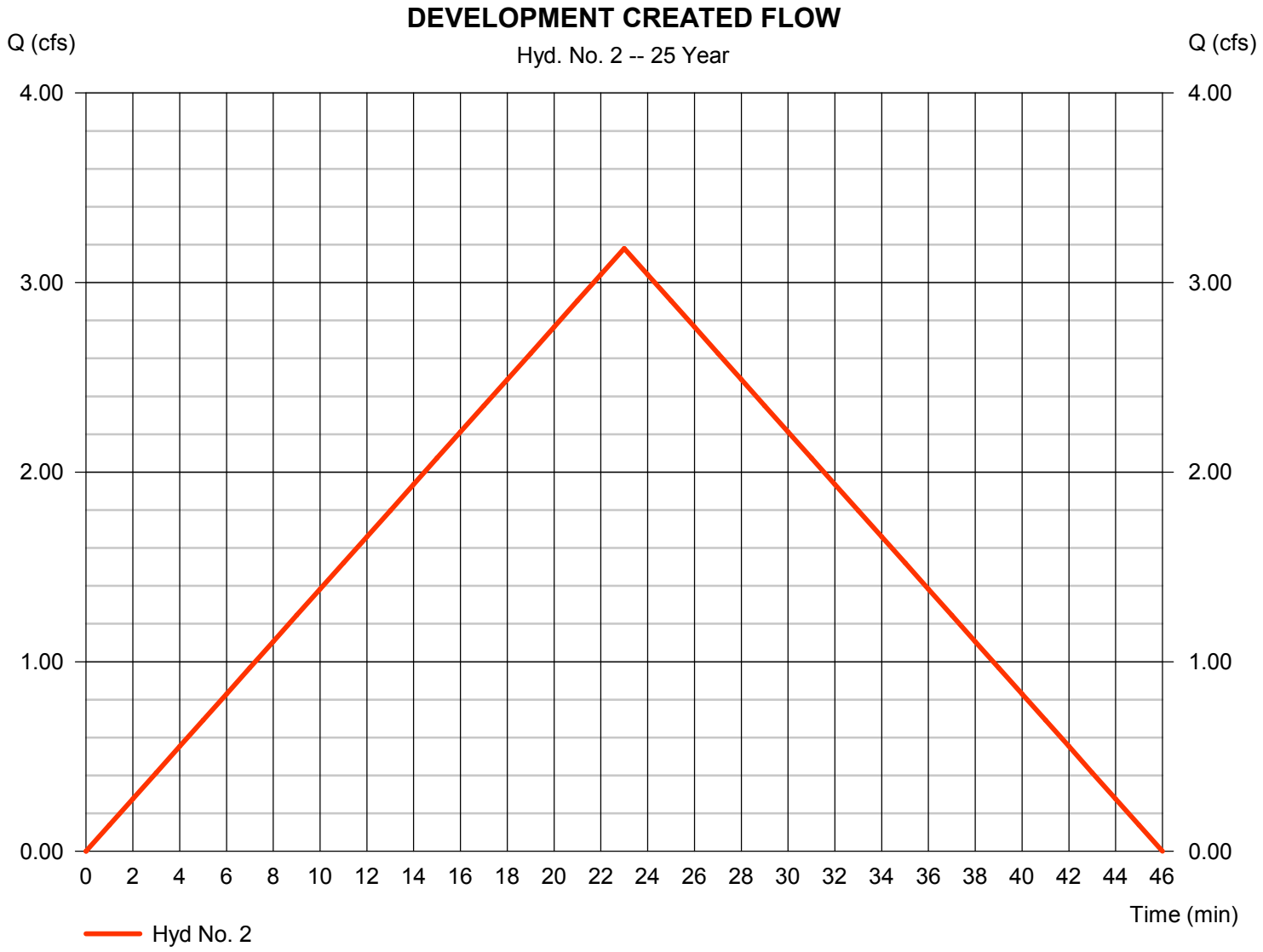
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 3.180 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,389 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 5.010 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

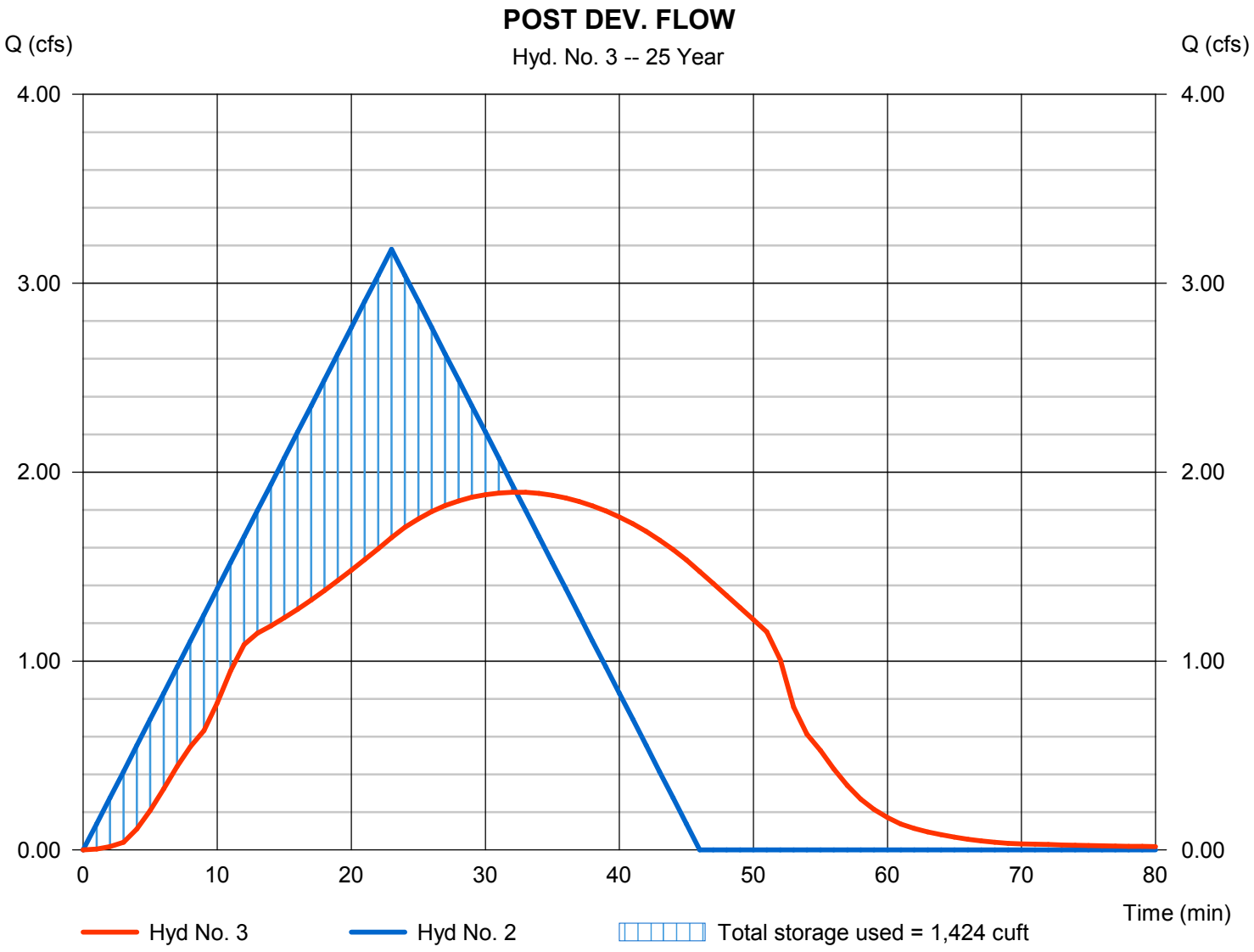


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.894 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 32 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,388 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 402.85 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,424 cuft |

Storage Indication method used.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 2.565 | 1 | 23 | 3,539 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 3.612 | 1 | 23 | 4,984 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 2.030 | 1 | 33 | 4,983 | 2 | 403.05 | 1,743 | POST DEV. FLOW |

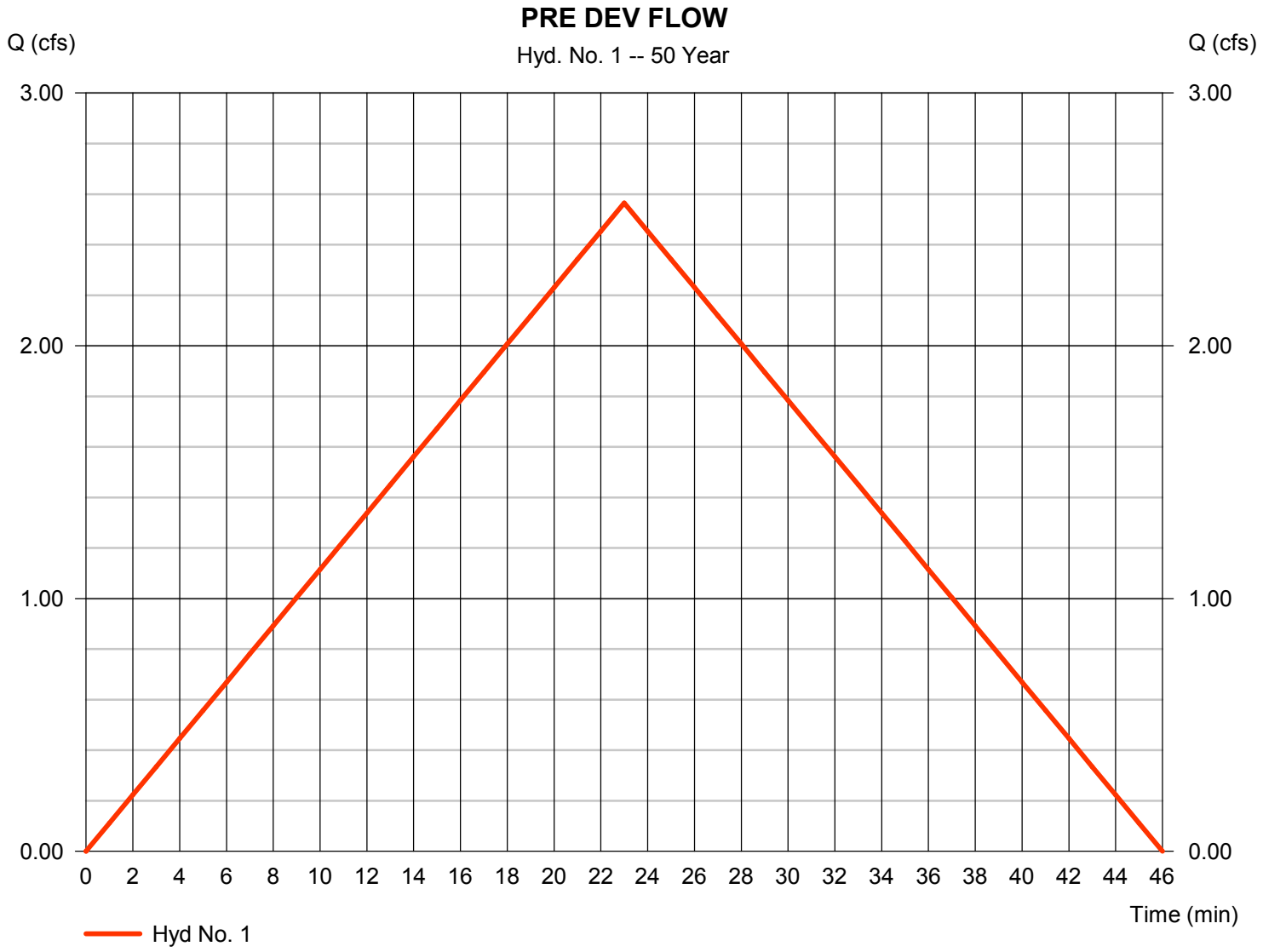
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.565 cfs |
| Storm frequency | = | 50 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,539 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 5.690 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



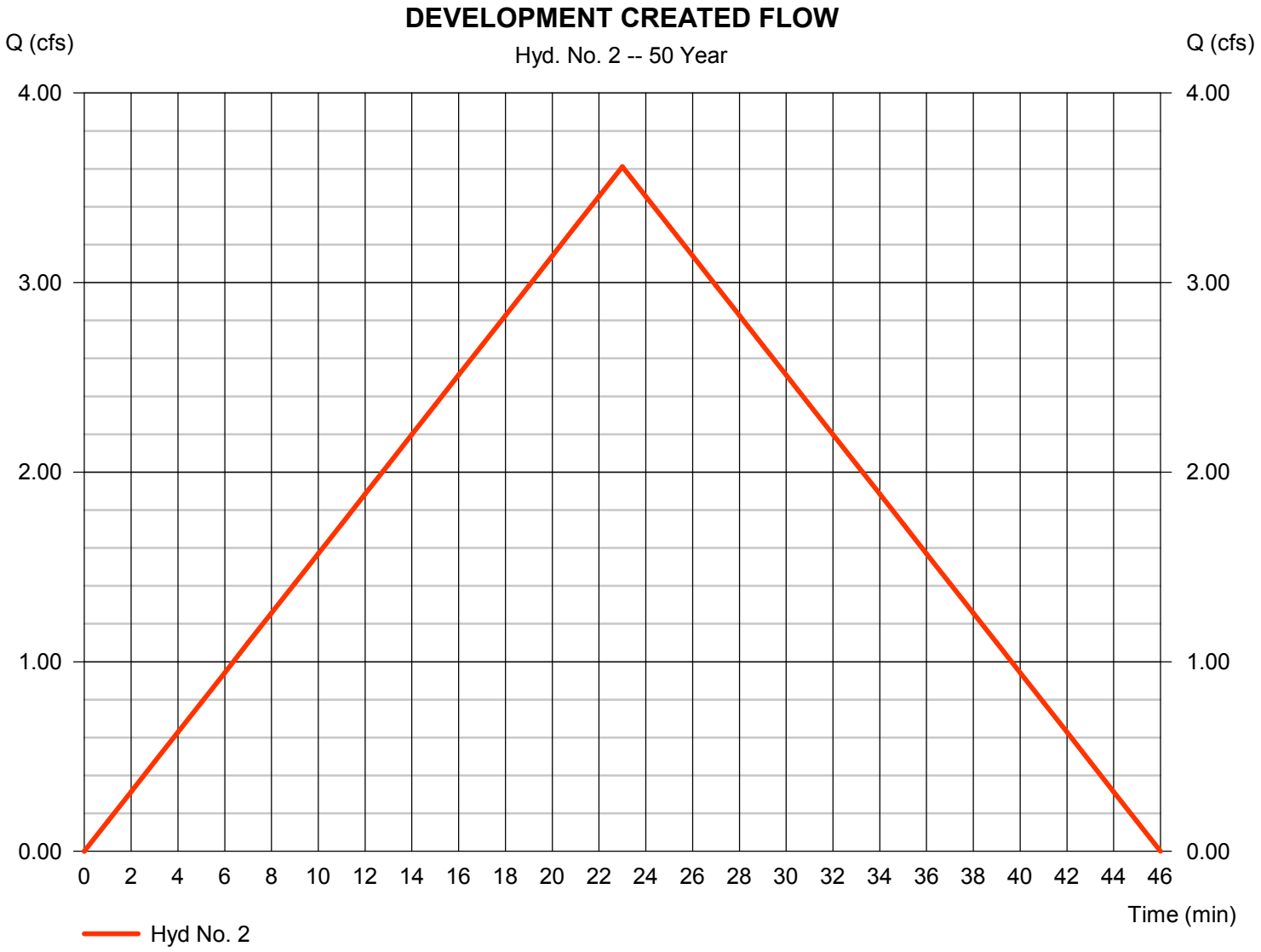
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 3.612 cfs |
| Storm frequency | = | 50 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,984 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 5.690 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

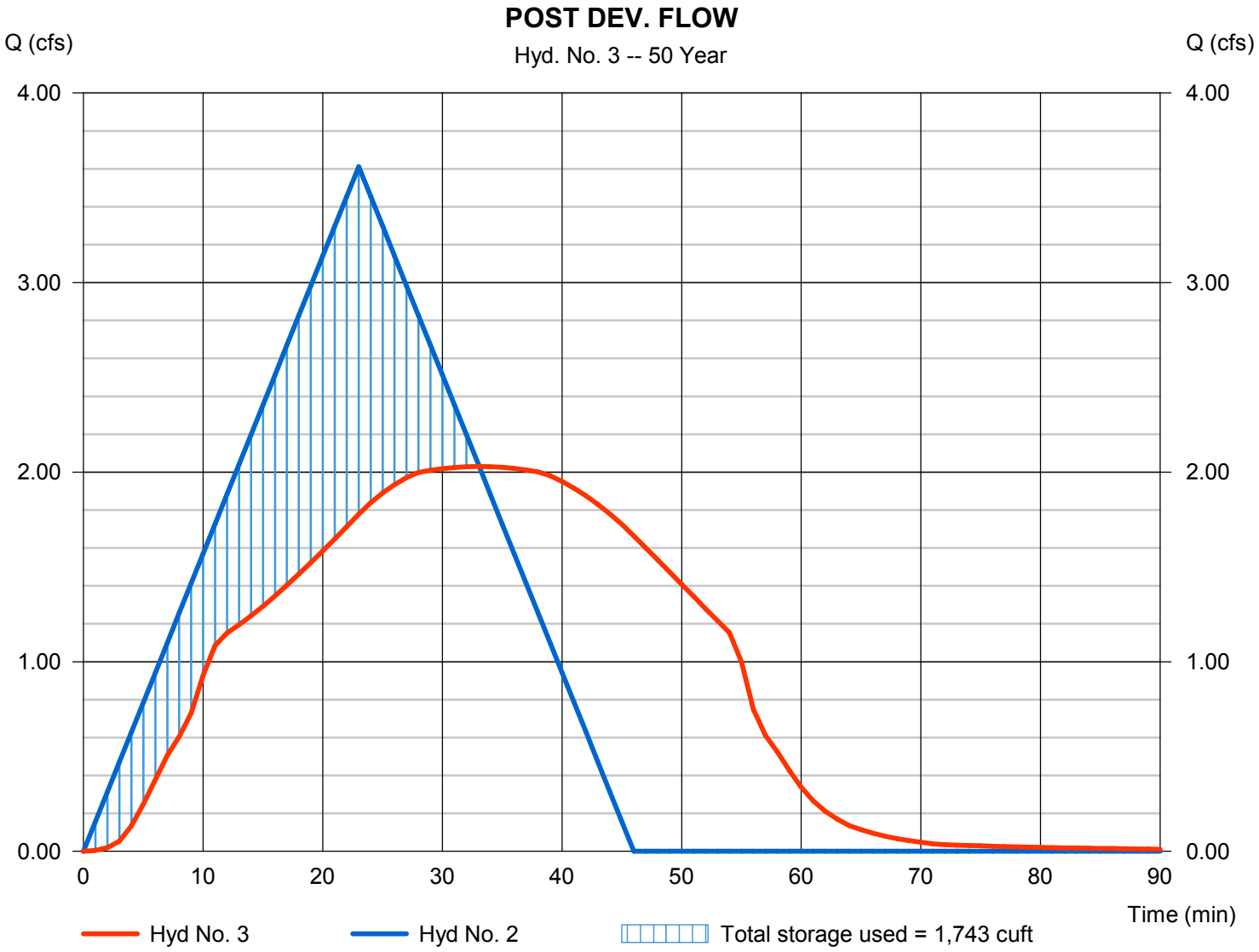


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 2.030 cfs |
| Storm frequency | = | 50 yrs | Time to peak | = | 33 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,983 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 403.05 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,743 cuft |

Storage Indication method used.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 2.747 | 1 | 23 | 3,791 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 3.868 | 1 | 23 | 5,338 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 2.156 | 1 | 33 | 5,337 | 2 | 403.13 | 1,941 | POST DEV. FLOW |

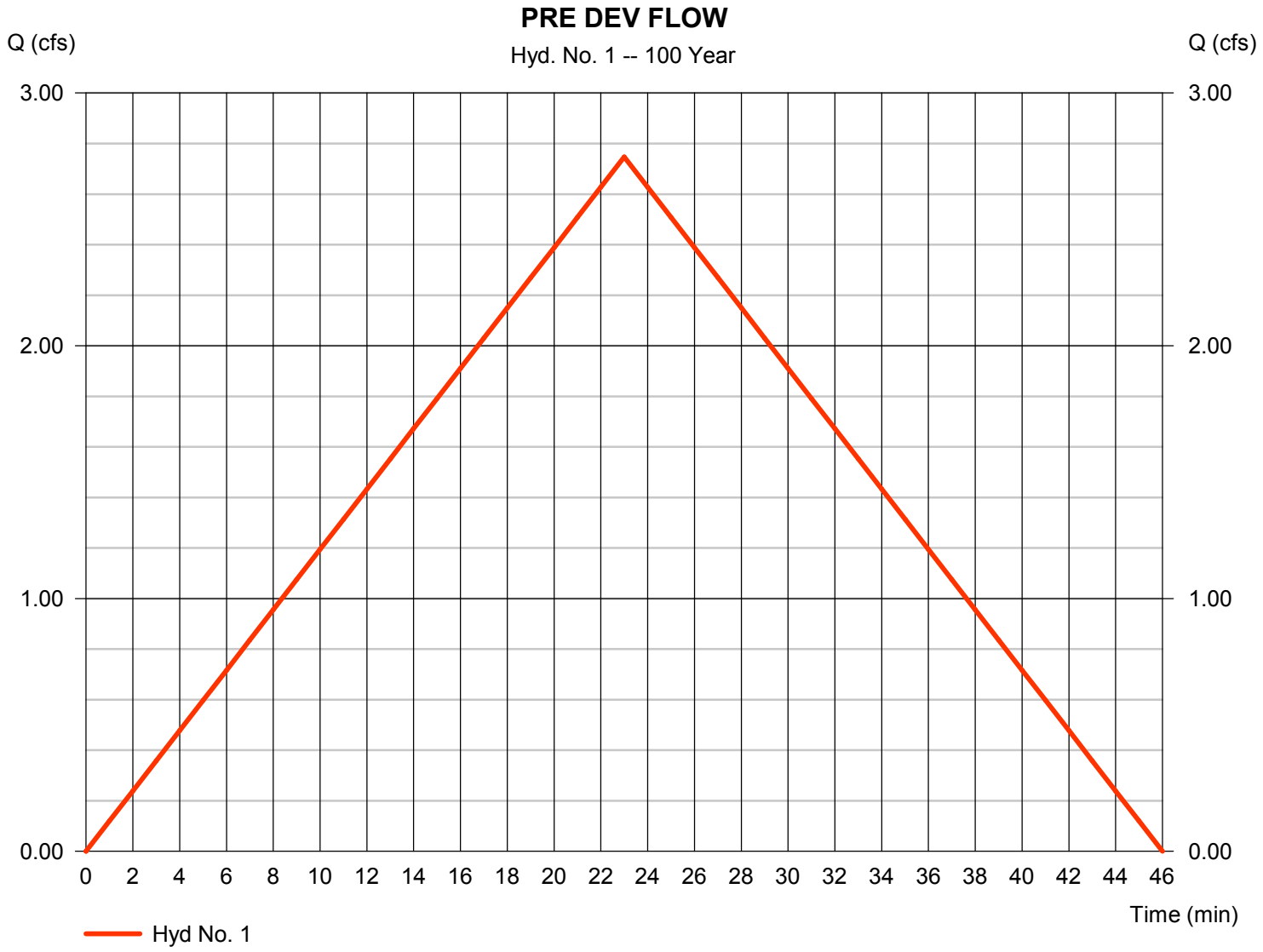
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.747 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,791 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 6.093 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



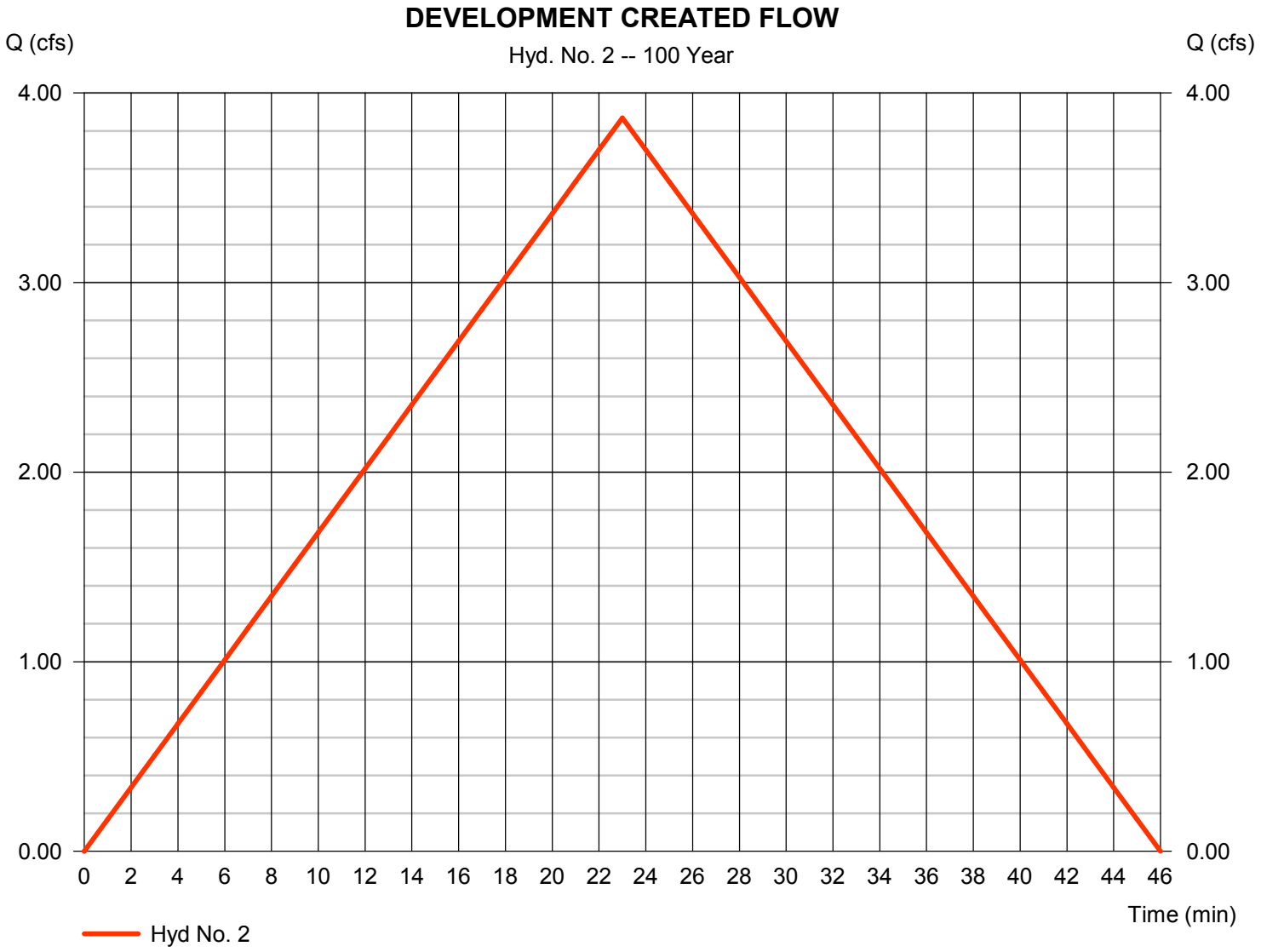
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 3.868 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 5,338 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 6.093 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

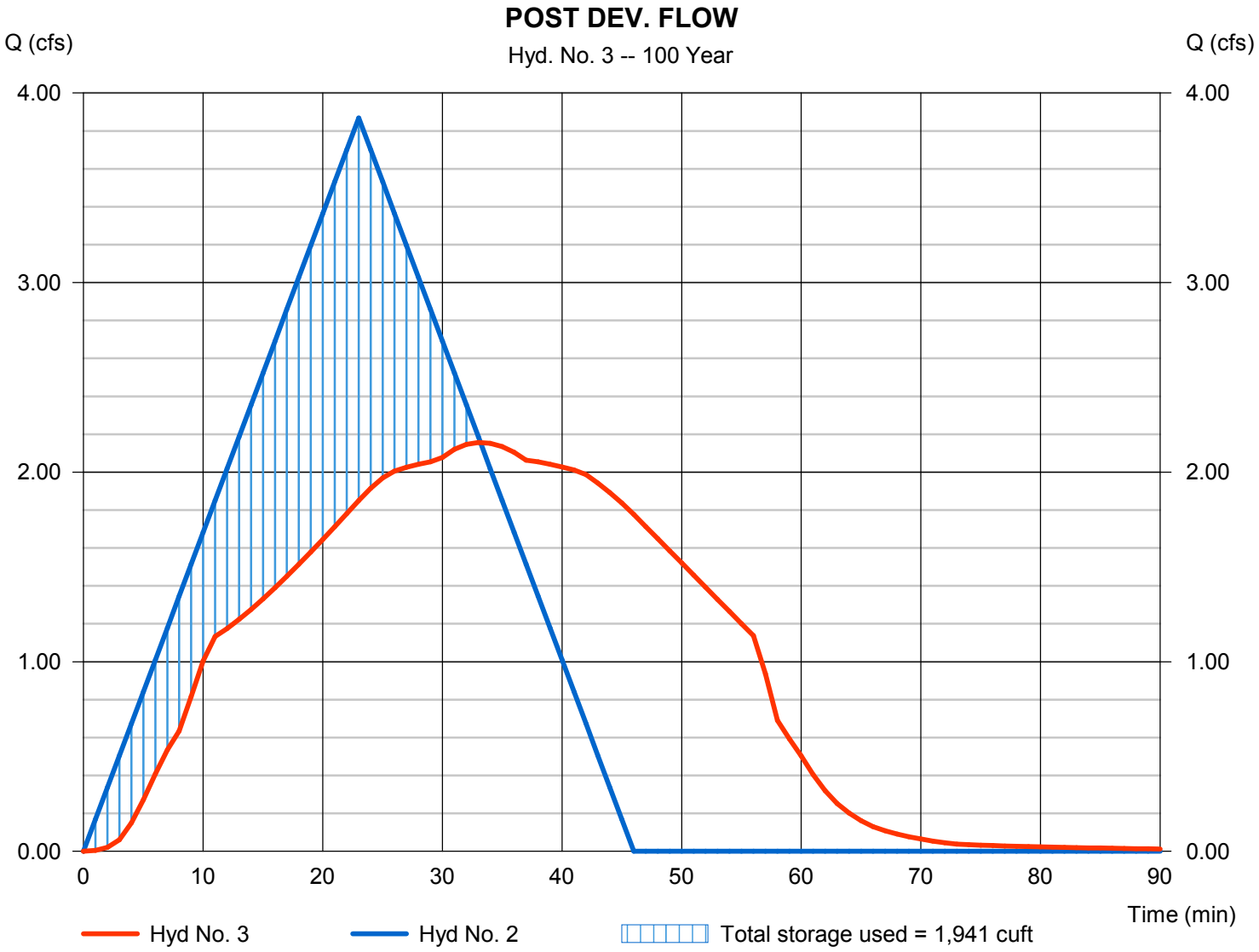


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 2.156 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 33 min |
| Time interval | = | 1 min | Hyd. volume | = | 5,337 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 403.13 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,941 cuft |

Storage Indication method used.



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 2 | 32.2253 | 7.2000 | 0.6856 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 46.3641 | 10.0000 | 0.6781 | -------- |
| 25 | 61.8249 | 11.8000 | 0.7079 | -------- |
| 50 | 79.0516 | 13.3000 | 0.7326 | -------- |
| 100 | 54.7483 | 10.0000 | 0.6279 | -------- |

File name: Bryant 50.IDF

**Intensity = B / (Tc + D)^E**

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 5.80 | 4.58 | 3.85 | 3.35 | 2.98 | 2.70 | 2.48 | 2.29 | 2.14 | 2.01 | 1.90 | 1.80 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 7.39 | 6.08 | 5.23 | 4.62 | 4.16 | 3.80 | 3.51 | 3.27 | 3.06 | 2.89 | 2.73 | 2.60 |
| 25 | 8.39 | 6.98 | 6.03 | 5.34 | 4.82 | 4.40 | 4.06 | 3.78 | 3.54 | 3.34 | 3.16 | 3.00 |
| 50 | 9.40 | 7.87 | 6.83 | 6.06 | 5.47 | 5.00 | 4.62 | 4.29 | 4.02 | 3.79 | 3.58 | 3.40 |
| 100 | 10.00 | 8.34 | 7.25 | 6.47 | 5.87 | 5.40 | 5.02 | 4.69 | 4.42 | 4.19 | 3.98 | 3.80 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: C:\Documents and Settings\Will\Desktop\Fleming\fleming.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCS 6-Hr | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# Multi-Hydrograph Plot



## Hyd. No. 1

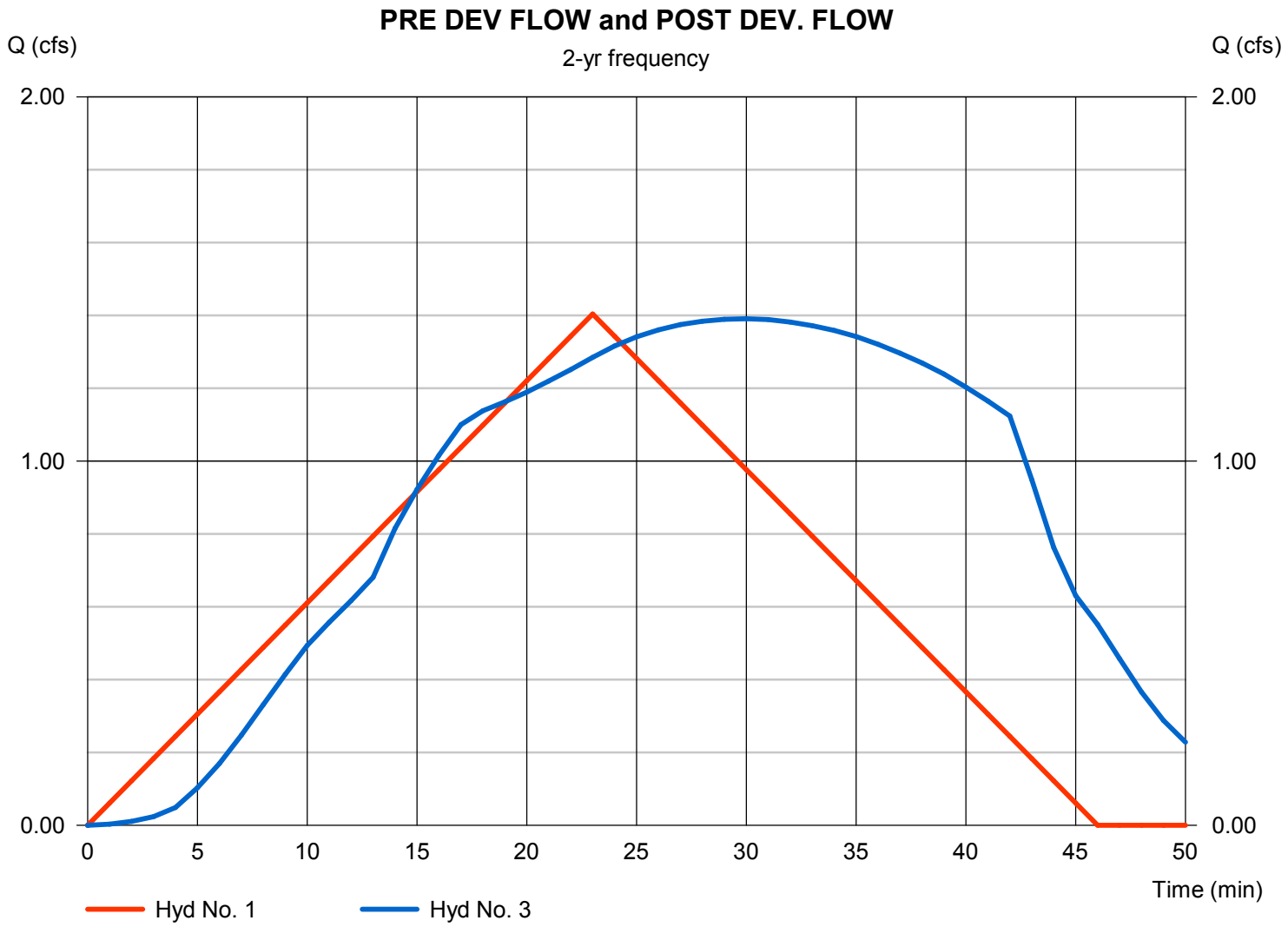
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 1.404 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 1,938 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 1.39 cfs |
| Time to peak | = | 30 min |
| Hyd. Volume | = | 2,728 cuft |



# Multi-Hydrograph Plot



## Hyd. No. 1

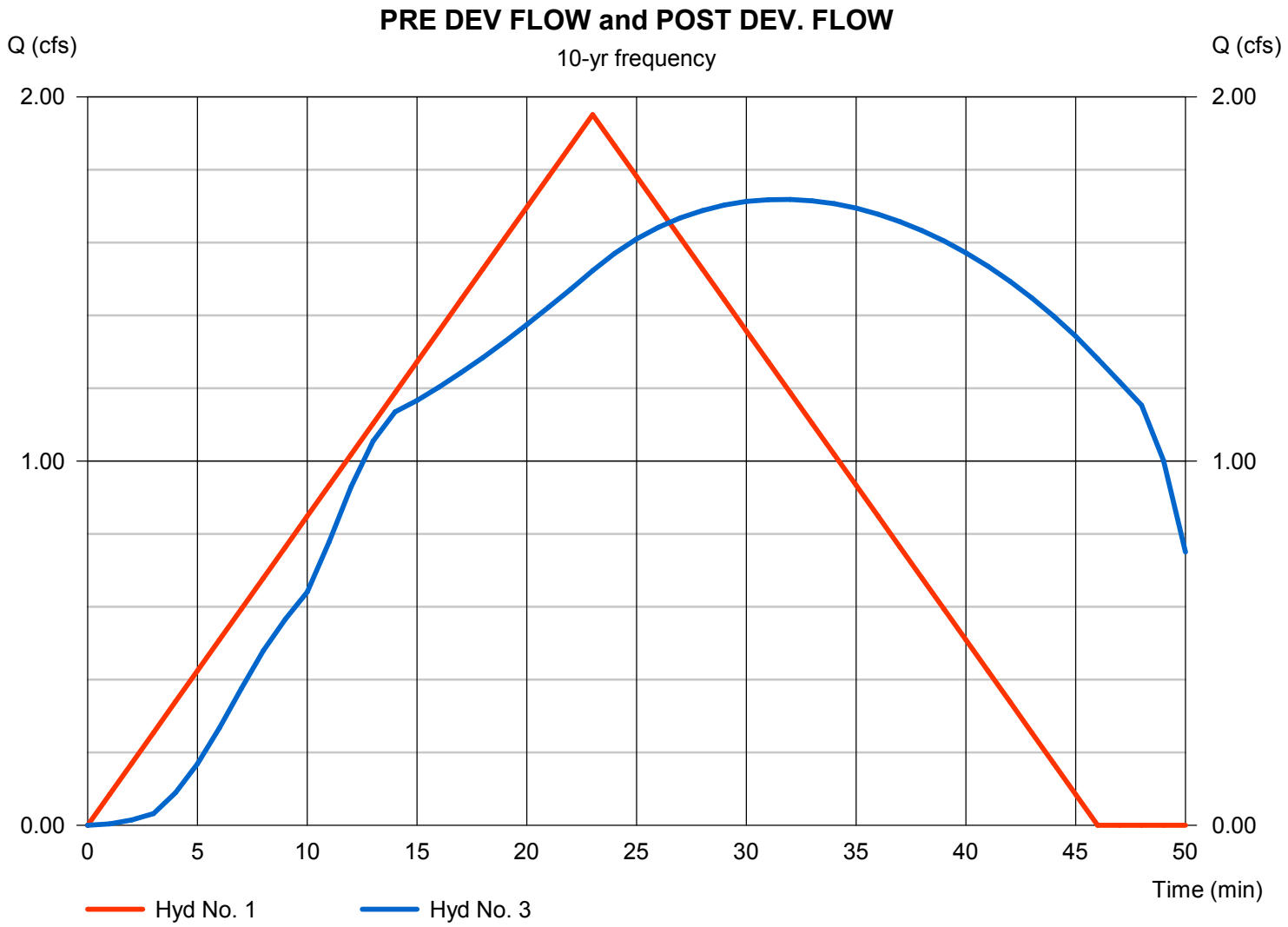
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 1.952 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 2,693 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 1.72 cfs |
| Time to peak | = | 32 min |
| Hyd. Volume | = | 3,792 cuft |



# Multi-Hydrograph Plot



## Hyd. No. 1

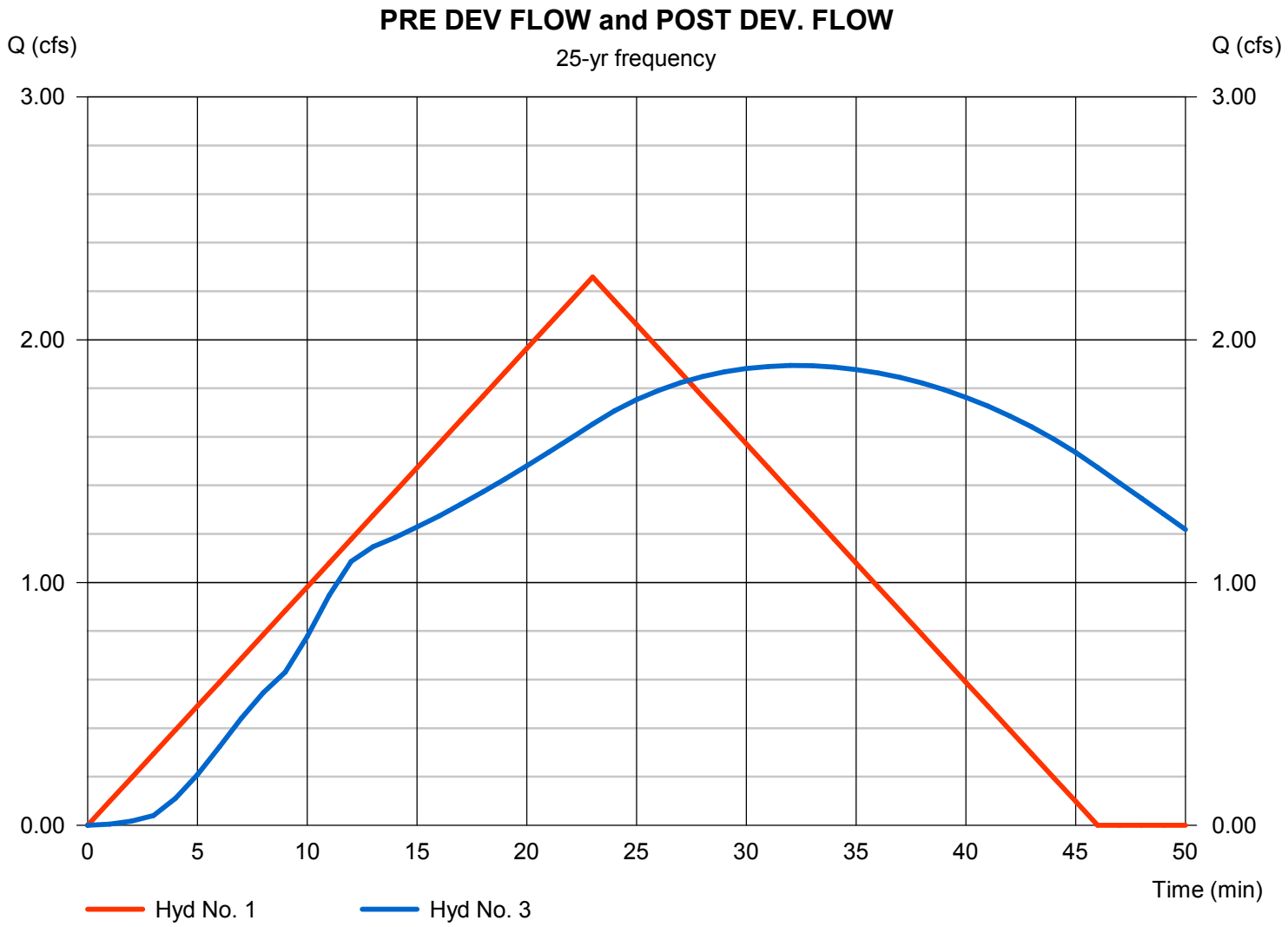
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 2.258 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 3,116 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 1.89 cfs |
| Time to peak | = | 32 min |
| Hyd. Volume | = | 4,388 cuft |



# Multi-Hydrograph Plot

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

## Hyd. No. 1

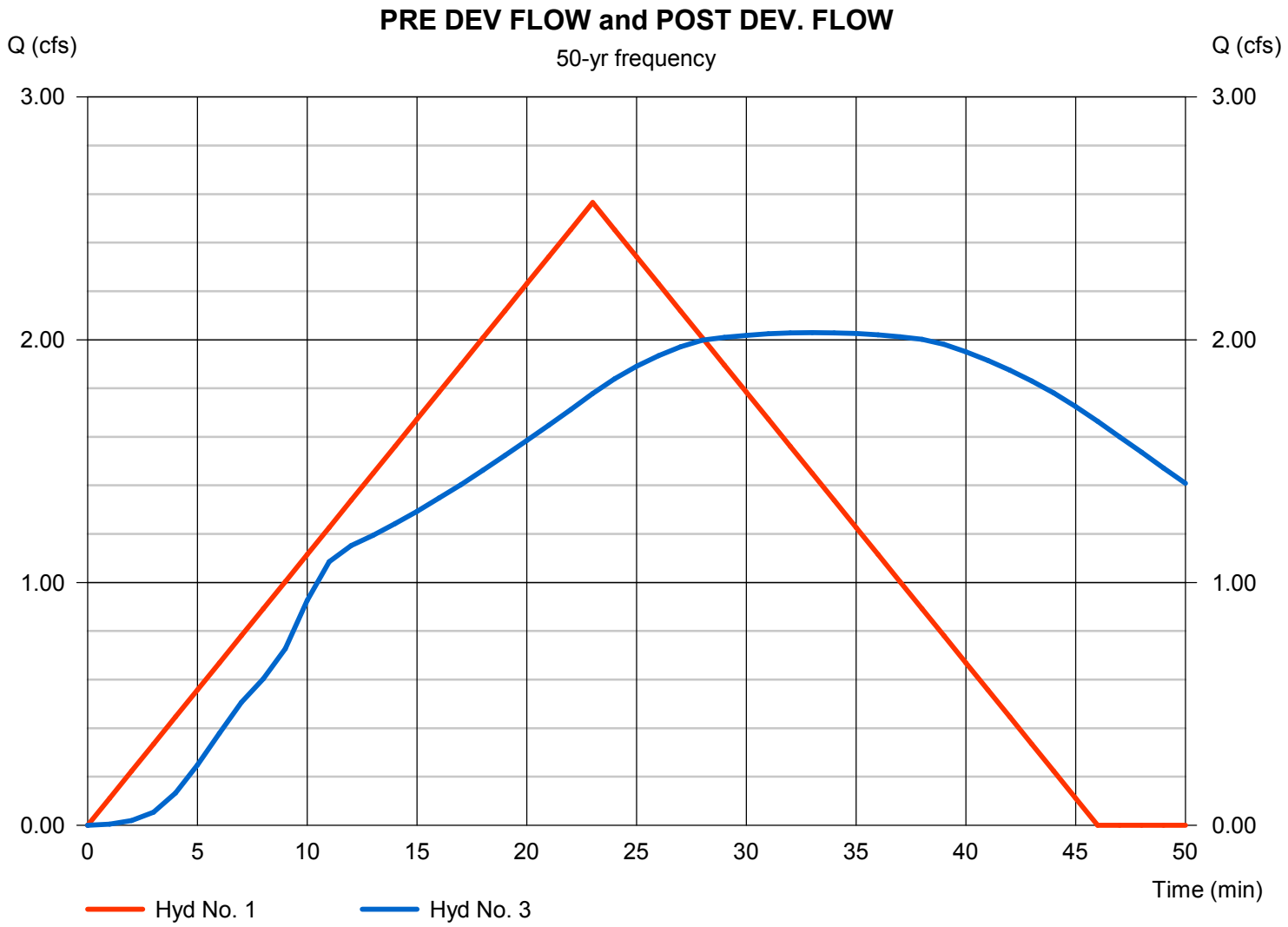
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 2.565 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 3,539 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 2.03 cfs |
| Time to peak | = | 33 min |
| Hyd. Volume | = | 4,983 cuft |



# Multi-Hydrograph Plot



## Hyd. No. 1

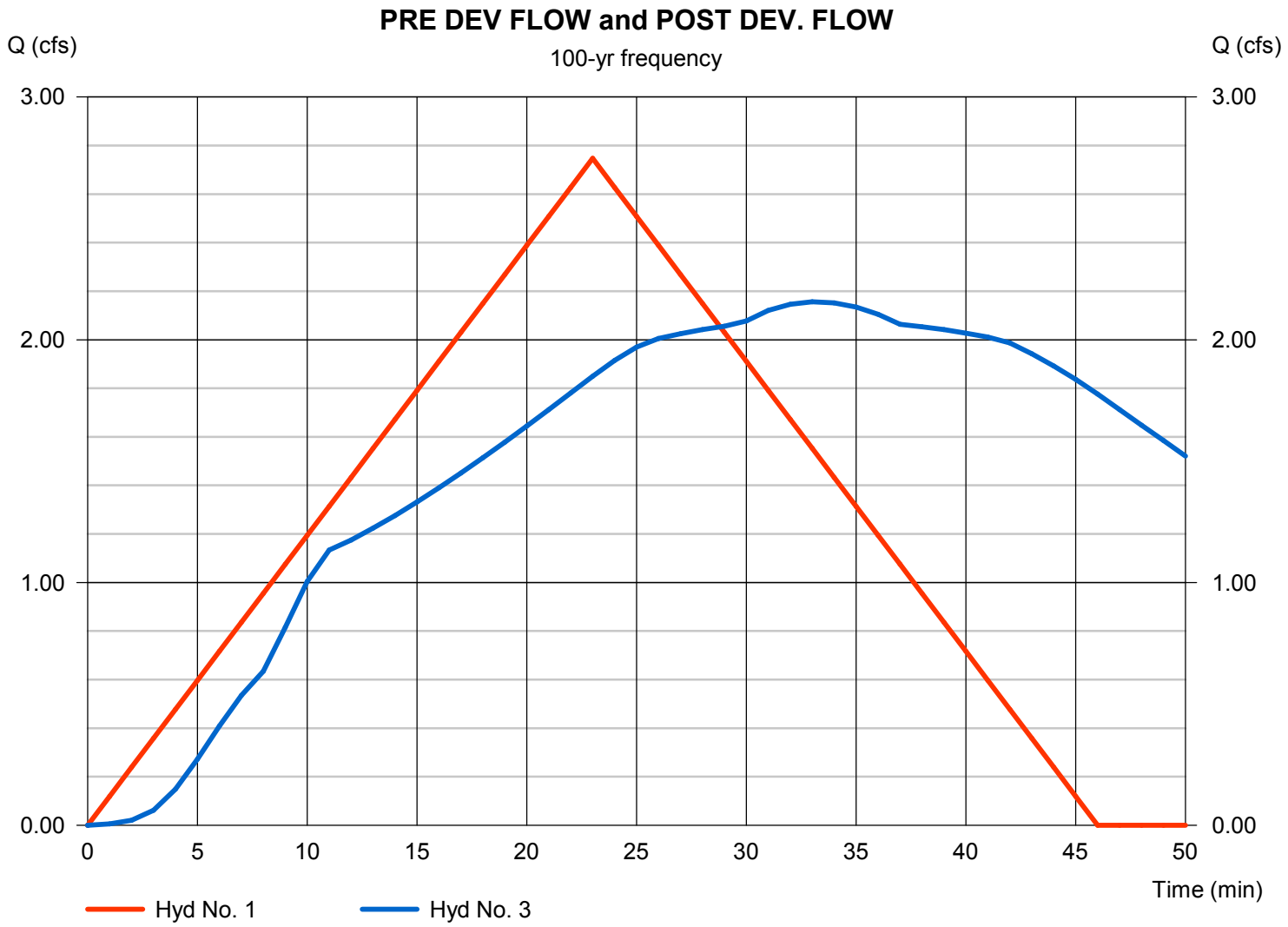
PRE DEV FLOW

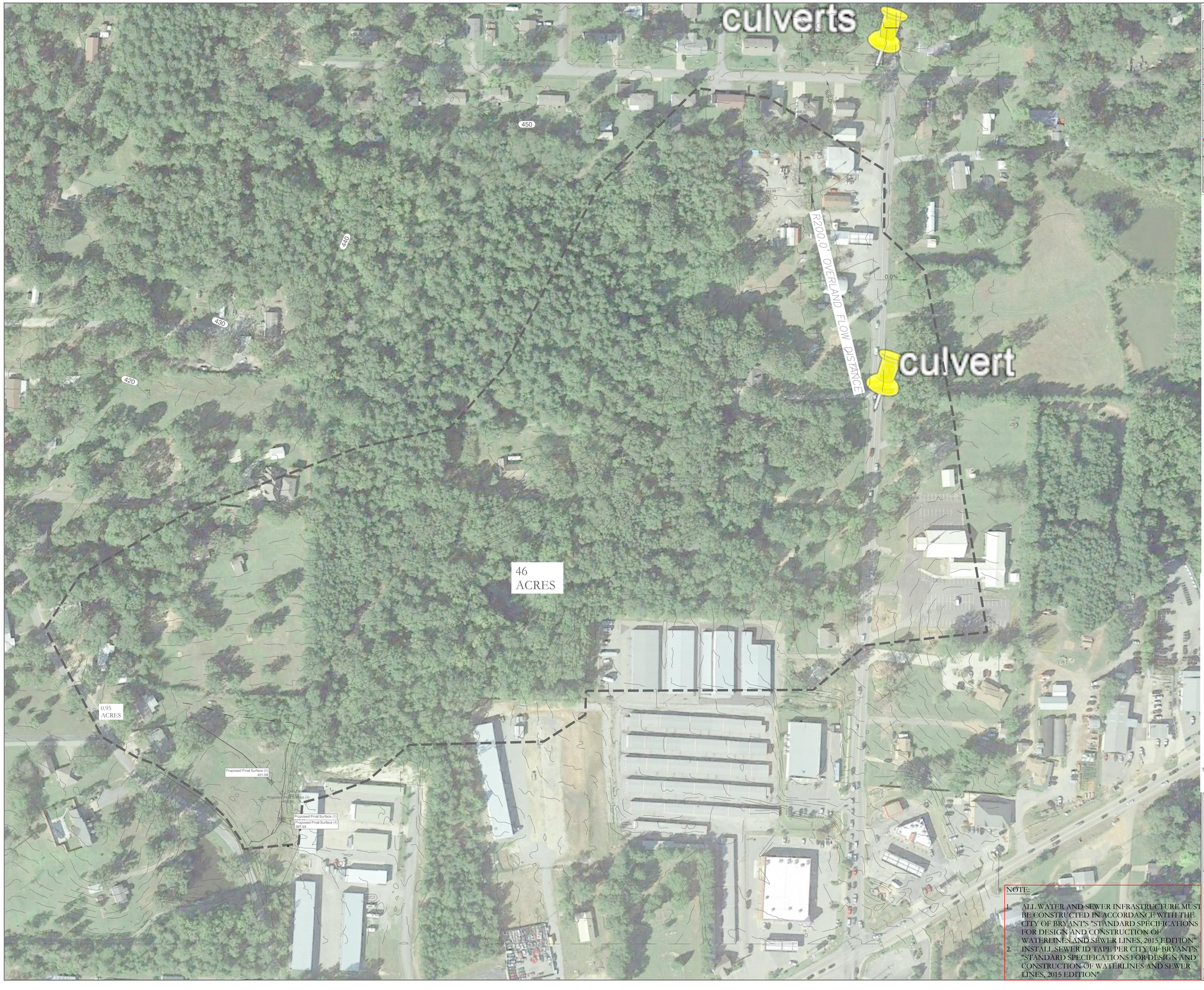
| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 2.747 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 3,791 cuft |

## Hyd. No. 3

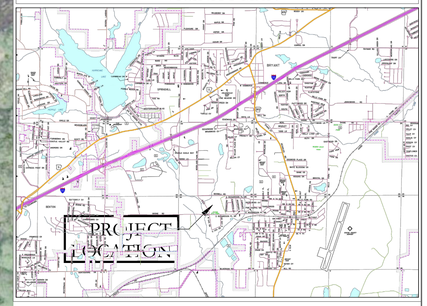
POST DEV. FLOW

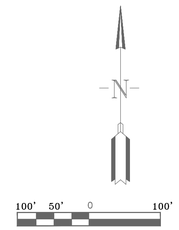
| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 2.16 cfs |
| Time to peak | = | 33 min |
| Hyd. Volume | = | 5,337 cuft |






VICINITY MAP:




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

| time of concentration, tc (min) | REGION 3 IDF | | |
|---|---|---|---|
| Pre | | | |
| **Channel Dimensions and Time of Concentration, tc** | | | |
| Area (ft2) | 1998592.29 | | |
| Area (Acre) | 46 | | |
| Length, L (ft) | 2217.0 | | |
| Change in Elevation (ft) | 60.27 | | |
| Slope, S (ft/ft) | 0.027 | | |
| N (asphalt,grass,etc) | 0.400 | h (ft) | S |
| L( overland, ft) | 200 | 4 | 0.020 |
| L( channel 1, ft) | 2017 | 56.27 | 0.028 |
| L( channel 2, ft) | 0.0 | 0 | 0.000 |
| $t_c$ | 45.4 | v | |
| $t_{c1}$ | 5.6 | 6.007023 | |
| $t_{c2}$ | 0.0 | 0 | |
| time of concentration, tc (min) | 51.0 | *use 50 min* | |

| **Design Peak Runoff Rates, Qp (cfs)** | | | |
|---|---|---|---|
| | Intensity, I (in/hr) | Runoff Coeff | Flow (cfs) |
| | I | C | Q |
| 100year | 4.19 | 0.53 | 101.89 |
| | Qp,max (max flow) cfs | | 102 |
| | Qp,min (min flow) | | 102 |

NOTE:

1. ALL WATER AND SEWER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"
2. INSTALL SEWER ID TAPE PER CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"

HOPE CONSULTING
ENGINEERS - SURVEYORS
117 S. Market Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
SKY BLUE, LLC

# SEWER EXTENSION PLAN PROFILE

SKY BLUE DUPLEXES

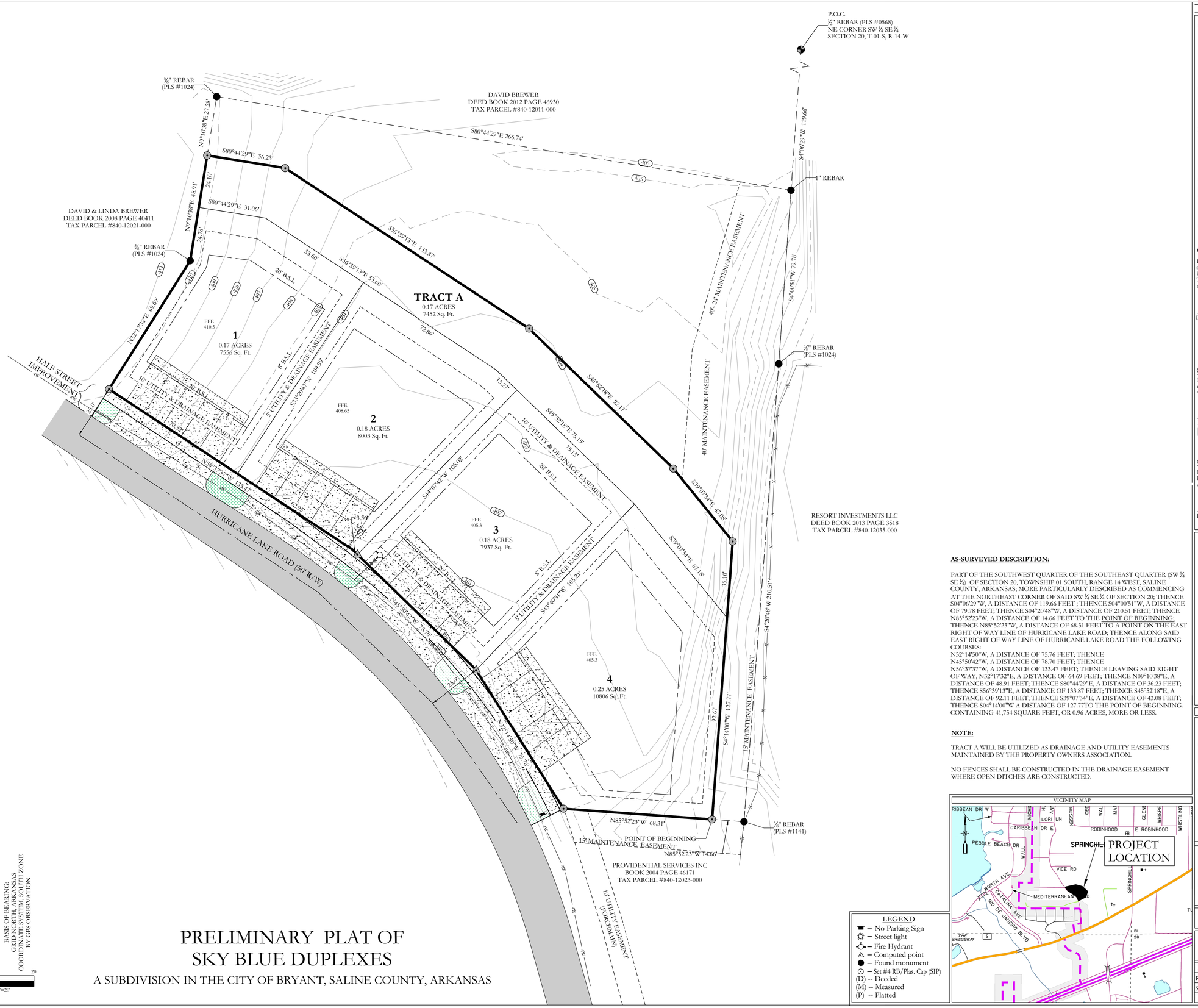
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

| DATE: | 4-1-19 | C.A.D. BY: | | DRAWING NUMBER: |
|---|---|---|---|---|
| REVISED: | | CHECKED BY: | | 17-0532 |
| SHEET: | C-3.0 | SCALE: | | |

| 500 | 01S | 14W | 0 | 27 | 430 | 62 | 1807 |
|---|---|---|---|---|---|---|---|

K:\LAND PROJECTS 2000\SUBDIVISIONS\2019\19-0006 BISSENT DUPLEXES\DELINEATION & EXTRA LIDAR.DWG


overland flow
Channel Flow-1
PRE DEVELOPMENT TOC
0.47 ACRES
7556 Sq. Ft.
TRACT A
1.47 ACRES
64,256 SQ. FT.
2
0.18 ACRES
8003 Sq.Ft.
DEVELOPMENT DRAINAGE AREA= 0.92 ACRES
7937 Sq. Ft.
POST DEVELOPMENT TOC
4
DRAINAGE POINT
0.25 ACRES
11806 SQ. FT.
STUDY POINT
POINT OF BEGINNING
HURRICANE LAKE ROAD (50' R/W)
S80°44'29"E 266.74'
S80°44'29"E 36.23'
S54°39'13"E 133.87'
S45°52'18"E 92.14'
S44°07'42"W 105.02'
S45°52'18"E 33.15'
S44°07'42"W 105.21'
N85°52'23"W 68.21'
N85°52'23"W 74.06'
S8°04'50"W 119.69'
S8°04'50"W 88.74'
S8°04'50"W 15.00'
S8°04'50"W 15.00'
N12°10'38"E 27.28'
N9°10'38"E 88.30'
N9°10'38"E 24.10'
N12°10'38"E 24.78'
N12°10'38"E 31.06'
N12°10'38"E 70.00'
N12°10'38"E 73.58'
N12°10'38"E 73.58'
N12°10'38"E 73.58




# PRELIMINARY PLAT OF SKY BLUE DUPLEXES

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

**AS-SURVEYED DESCRIPTION:**

PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW ¼ SE ¼) OF SECTION 20, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS; MORE PARTICULARLY DESCRIBED AS COMMENCING AT THE NORTHEAST CORNER OF SAID SW ¼ SE ¼ OF SECTION 20; THENCE S04°06'29"W, A DISTANCE OF 119.66 FEET ; THENCE S04°00'51"W, A DISTANCE OF 79.78 FEET; THENCE S04°20'48"W, A DISTANCE OF 210.51 FEET; THENCE N85°52'23"W, A DISTANCE OF 14.66 FEET TO THE POINT OF BEGINNING; THENCE N85°52'23"W, A DISTANCE OF 68.31 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD; THENCE ALONG SAID EAST RIGHT OF WAY LINE OF HURRICANE LAKE ROAD THE FOLLOWING COURSES:
N32°14'50"W, A DISTANCE OF 75.76 FEET; THENCE
N45°50'42"W, A DISTANCE OF 78.70 FEET; THENCE
N56°37'37"W, A DISTANCE OF 133.47 FEET; THENCE LEAVING SAID RIGHT OF WAY, N32°17'32"E, A DISTANCE OF 64.69 FEET; THENCE N09°10'38"E, A DISTANCE OF 48.91 FEET; THENCE S80°44'29"E, A DISTANCE OF 36.23 FEET; THENCE S56°39'13"E, A DISTANCE OF 133.87 FEET; THENCE S45°52'18"E, A DISTANCE OF 92.11 FEET; THENCE S39°07'34"E, A DISTANCE OF 43.08 FEET; THENCE S04°14'00"W A DISTANCE OF 127.77TO THE POINT OF BEGINNING. CONTAINING 41,754 SQUARE FEET, OR 0.96 ACRES, MORE OR LESS.

**NOTE:**

TRACT A WILL BE UTILIZED AS DRAINAGE AND UTILITY EASEMENTS MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION.

NO FENCES SHALL BE CONSTRUCTED IN THE DRAINAGE EASEMENT WHERE OPEN DITCHES ARE CONSTRUCTED.

LEGEND
- ■ – No Parking Sign
- ☼ – Street light
- ⊕ – Fire Hydrant
- △ – Computed point
- ● – Found monument
- ⊙ – Set #4 RB/Plas. Cap (SIP)
- (D) -- Deeded
- (M) -- Measured
- (P) -- Platted

VICINITY MAP




## CERTIFICATIONS:

**OWNER:**
Name: SKY BLUE, LLC
Address: 3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

**DEVELOPER:**
Name: SKY BLUE, LLC
Address: 3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

**CERTIFICATE OF OWNER:**

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

Date of Execution _____ Name: _____

Source of Tile: D.R. BOOK 2015 PAGE 7766

**CERTIFICATE OF PROPERTY OWNERSHIP:**

I, _____, hereby certify that the deed records in the office of Circuit Clerk and Ex-Officio recorder of Saline County, Arkansas, reflect that _____ is the record title owner of real property more particularly described herein on plat.

Dated: _____ _____
Certified Title Insurance Agent or Abstractor

**CERTIFICATE OF PRELIMINARY SURVEYING ACCURACY:**

I, William Corbitt R. Shoffner, hereby certify that this proposed preliminary plat correctly represents a survey completed by me or under my supervision on _____, 20_____; that the boundary lines show hereon correspond with the description in the deeds cited in the above Source of Title; and that all monuments which were found or placed on the property are correctly described and located.

_____ _____
Date of Execution
William Corbitt R. Shoffner
Registered Professional
Land Surveyor No. 1664 Arkansas

**CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY:**

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

_____ _____
Date of Execution
Kazi Islam
Registered Professional
Engineer, No. 20876 Arkansas

**CERTIFICATE OF PRELIMINARY PLAT APPROVAL:**

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

_____ _____
Date of Execution
NAME, CHAIRMAN
BRYANT PLANNING COMMISSION

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

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

By affixing my seal and signature, I Kazi Islam PE No, 20876, hereby certify that this drawing correctly depicts a survey compiled under my supervision.

NOTE: This survey was based on legal descriptions and title work furnished by others and does not represent a title search.

No portion of the property described hereon lies within the 100 year floodplain, according to the Federal Insurance Rate Map, panel #05125C0360E, Dated: 06/05/2020

**PROPERTY SPECIFICATIONS:**

OWNER: SKY BLUE, LLC
3263 INDEPEDENCE DRIVE
BRYANT, AR 72022

DEVELOPER/ SUBDIVIDER: SKY BLUE, LLC
3621 INDEPEDENCE DRIVE
BRYANT, AR 72022

ENGINEERS: HOPE CONSULTING INC.
117 S. MARKET STREET
BENTON, AR 72015

NAME OF SUBDIVISION: SKY BLUE DUPLEXES

INSTRUMENT # 2015-7766

ZONING: R-X

AVERAGE LOT SIZE: 0.19 ACRES (8,437 SQ. FT.)
MINIMUM LOT SIZE: (7,205SQ. FT)
NUMBER OF LOTS: 4

SOURCE OF WATER: WATER USERS
SOURCE OF SEWER: CITY OF BRYANT
SOURCE OF ELECTRIC: ENTERGY

BUILDING SETBACKS:
FRONT-20' OR AS SHOWN
REAR-20' OR AS SHOWN
SIDE-6' OR AS SHOWN

UTILITY & DRAINAGE EASEMENTS:
FRONT-10' OR AS SHOWN
REAR - 5' OR AS SHOWN
SIDE - 5' OR AS SHOWN


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

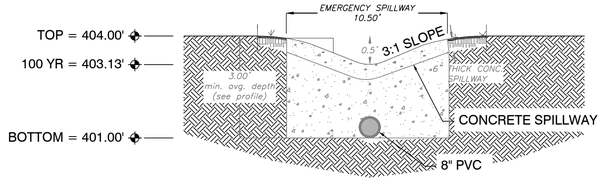

FOR USE AND BENEFIT OF:
SKY BLUE, LLC

PRELIMINARY PLAT
SKY BLUE DUPLEXES
A SUBDIVISION IN THE CITY OF BRYANT, SALINE COUNTY, ARKANSAS

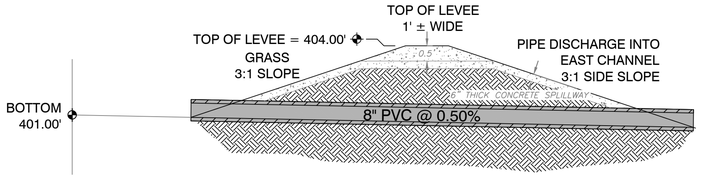
| | | | |
|---|---|---|---|
| DATE: | 03/18/2019 | C.A.D. BY: B.JOHNSON | DRAWING NUMBER: 19-0066 |
| REVISED: | 06/26/2024 | CHECKED BY: | |
| SHEET: | C-1.0 | SCALE: 1"=20' | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 500 | 01S | 14W | 0 | 20 | 230 | 62 | 1807 |

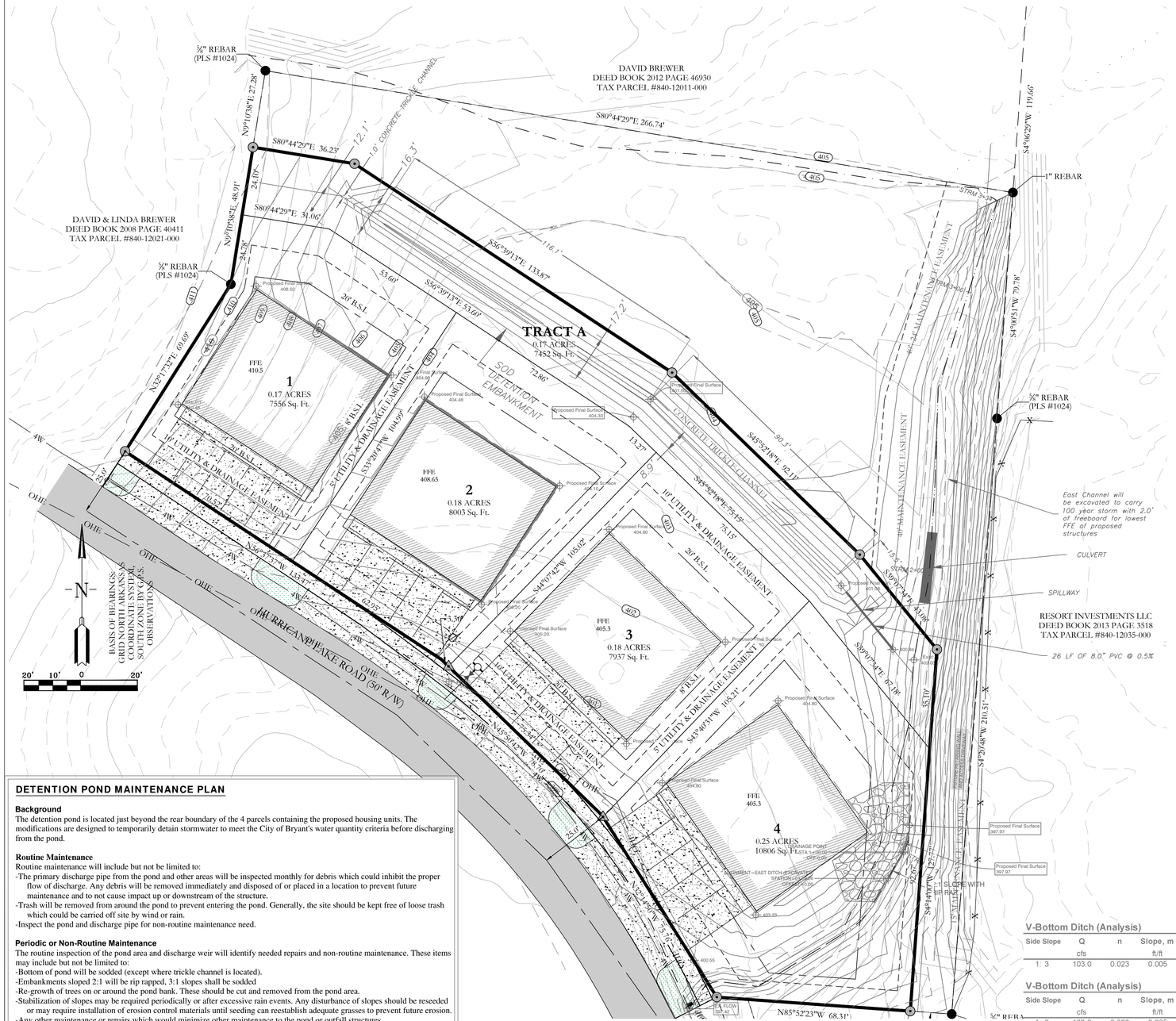

© 2024 HOPE CONSULTING ENGINEERS - SURVEYORS

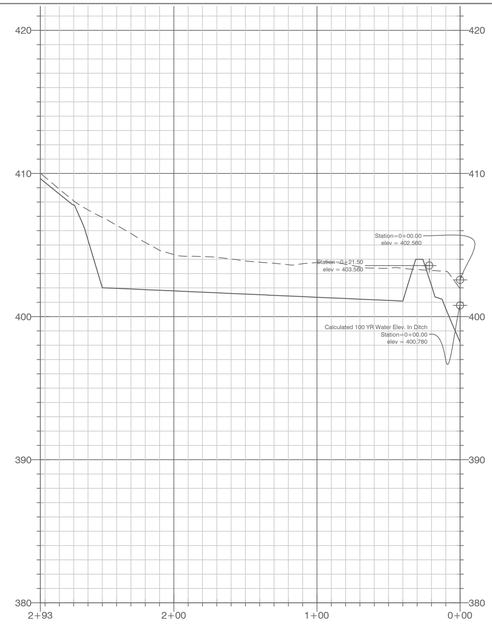



SPILLWAY END VIEW



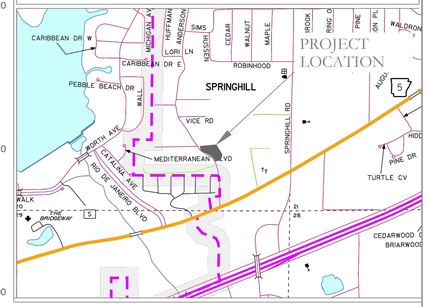

OUTLET SECTION
NTS

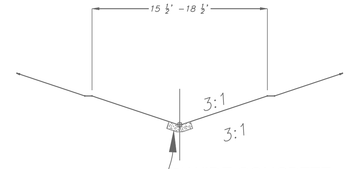


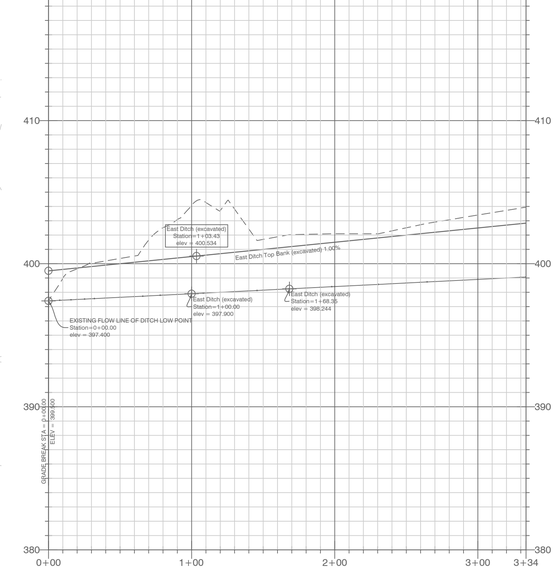

PROFILE
Pond Centerline
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'

VICINITY MAP:

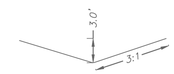



3' WIDE CONCRETE
TRICKLE CHANNEL
DETENTION POND PROPOSED SECTION




PROFILE
East Ditch (excavated)
HORIZONTAL SCALE 1" = 50'
VERTICAL SCALE 1" = 5'




EAST DITCH PROPOSED TYP
SECTION FOR EXCAVATION

CONTOUR INTERVAL:

EXISTING: 1' AND 5'
PROPOSED: 1' AND 5'

NOTE:
1. ALL ROOF DRAINS WILL BE ROUTED TO DETENTION BY SURFACE GRADING.
2. DETENTION EMBANKMENT AS WELL AS SLOPED EMBANKMENTS ADJACENT TO THE BUILDINGS SHALL BE A MAXIMUM SLOPE OF 3:1 AND BE SODDED FOR ADEQUATE VEGETATION.
3. IN AREAS WHERE STEEP EMBANKMENT SLOPES ARE REQUIRED, A MAXIMUM SLOPE OF 2:1 MAY BE USED IN CONJUNCTION WITH RIP RAP EMBANKMENTS.

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

## DETENTION POND MAINTENANCE PLAN

**Background**
The detention pond is located just beyond the rear boundary of the 4 parcels containing the proposed housing units. The modifications are designed to temporarily detain stormwater to meet the City of Bryant's water quantity criteria before discharging from the pond.

**Routine Maintenance**
Routine maintenance will include but not be limited to:
-The primary discharge pipe from the pond and other areas will be inspected monthly for debris which could inhibit the proper flow of discharge. Any debris will be removed immediately and disposed of or placed in a location to prevent future maintenance and to not cause impact up or downstream of the structure.
-Trash will be removed from around the pond to prevent entering the pond. Generally, the site should be kept free of loose trash which could be carried off site by wind or rain.
-Inspect the pond and discharge pipe for non-routine maintenance need.

**Periodic or Non-Routine Maintenance**
The routine inspection of the pond area and discharge weir will identify needed repairs and non-routine maintenance. These items may include but not be limited to:
-Bottom of pond will be sodded (except where trickle channel is located).
-Embankments sloped 2:1 will be rip rapped, 3:1 slopes shall be sodded
-Re-growth of trees on or around the pond bank. These should be cut and removed from the pond area.
-Stabilization of slopes may be required periodically or after excessive rain events. Any disturbance of slopes should be reseeded or may require installation of erosion control materials until seeding can reestablish adequate grasses to prevent future erosion.
-Any other maintenance or repairs which would minimize other maintenance to the pond or outfall structures.

For questions or concerns about the pond, contact ___ at 501-315-2626.

**V-Bottom Ditch (Analysis)**

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width | Elev. + 2.0' | Y + depth | Dist to outlet | El. @ Outlet | Low Point |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | ft² | ft/sec | ft | freeboard | | x | y=mx+b | b |
| 1: 3 | 103.0 | 0.023 | 0.005 | 2.53 | 30.4 | 19.26 | 5.35 | 15.20 | 403.31 | 400.78 | 168.4 | 398.242 | 397.4 |

**V-Bottom Ditch (Analysis)**

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width | El. + 2.0 | Y + depth Re-grade Dist | | El. @ x | Low Point |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | ft² | ft/sec | ft | freeboard | | x | y=mx+b | b |
| 1: 2 | 103.0 | 0.023 | 0.005 | 2.95 | 35.4 | 17.40 | 5.92 | 11.80 | 403.80 | 400.85 | 100 | 397.9 | 397.4 |

DEPTH CALCULATION BASED ON DITCH SECTION, NEEDED CAPACITY, & RE-GRADING OF EXISTING EAST DITCH (3:1 AND 2:1 V-SECTION)

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

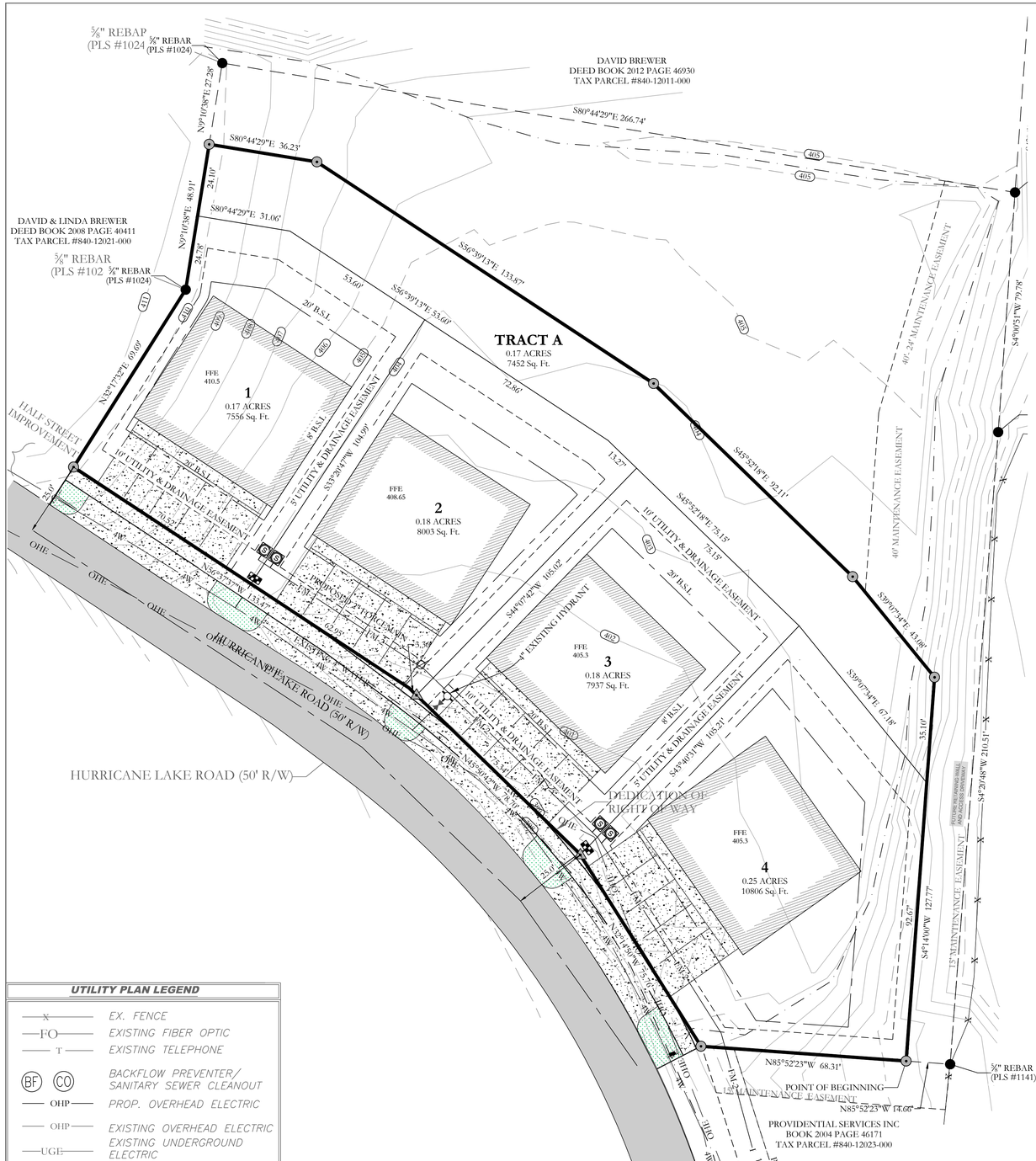
FOR USE AND BENEFIT OF:
SKY BLUE, LLC.

GRADING AND DETENTION PLAN
SKY BLUE DUPLEXES
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

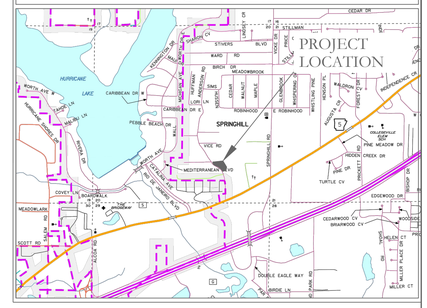
| | | | |
|---|---|---|---|
| DATE: | 4/4/2019 | C.A.D. BY: | DRAWING NUMBER: |
| REVISED: | 06/26/2024 | CHECKED BY: | 19-0066 |
| SHEET: | C-2.0 | SCALE: | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 500 | 01S | 14W | 0 | 19 | 440 | 62 | 1802 |

K:\LAND PROJECTS 2\0SUBDIVISIONS\2019\19-0066 DESIGN\DUPLEXES\19-0066 - SKY BLUE DUPLEXES BS_BASE DRAWING_06-24-2024.DWG




## VICINITY MAP:




## UTILITY PLAN LEGEND

| | |
|---|---|
| X | EX. FENCE |
| FO | EXISTING FIBER OPTIC |
| T | EXISTING TELEPHONE |
| BF CO | BACKFLOW PREVENTER/ SANITARY SEWER CLEANOUT |
| OHP | PROP. OVERHEAD ELECTRIC |
| OHP | EXISTING OVERHEAD ELECTRIC |
| UGE | EXISTING UNDERGROUND ELECTRIC |
| GAS | EXISTING GAS LINE |
| GAS | PROPOSED GAS LINE |
| 8W | EXISTING WATERLINE |
| | PROPOSED 6" WATERLINE |
| S | SANITARY SEWER MANHOLE |
| | FIRE HYDRANT |
| | WATER VALVE |
| | WATER METER |

## PROPERTY UTILITY SPECIFICATION

| | |
|---|---|
| WATER: | CITY OF BRYANT |
| SEWER: | CITY OF BRYANT |
| ELECTRIC: | ENTERGY |
| GAS: | CENTERPOINTE |
| TELEPHONE: | AT&T |

NOTE:

1. ALL WATER AND SEWER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"
2. INSTALL SEWER ID TAPE PER CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"

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

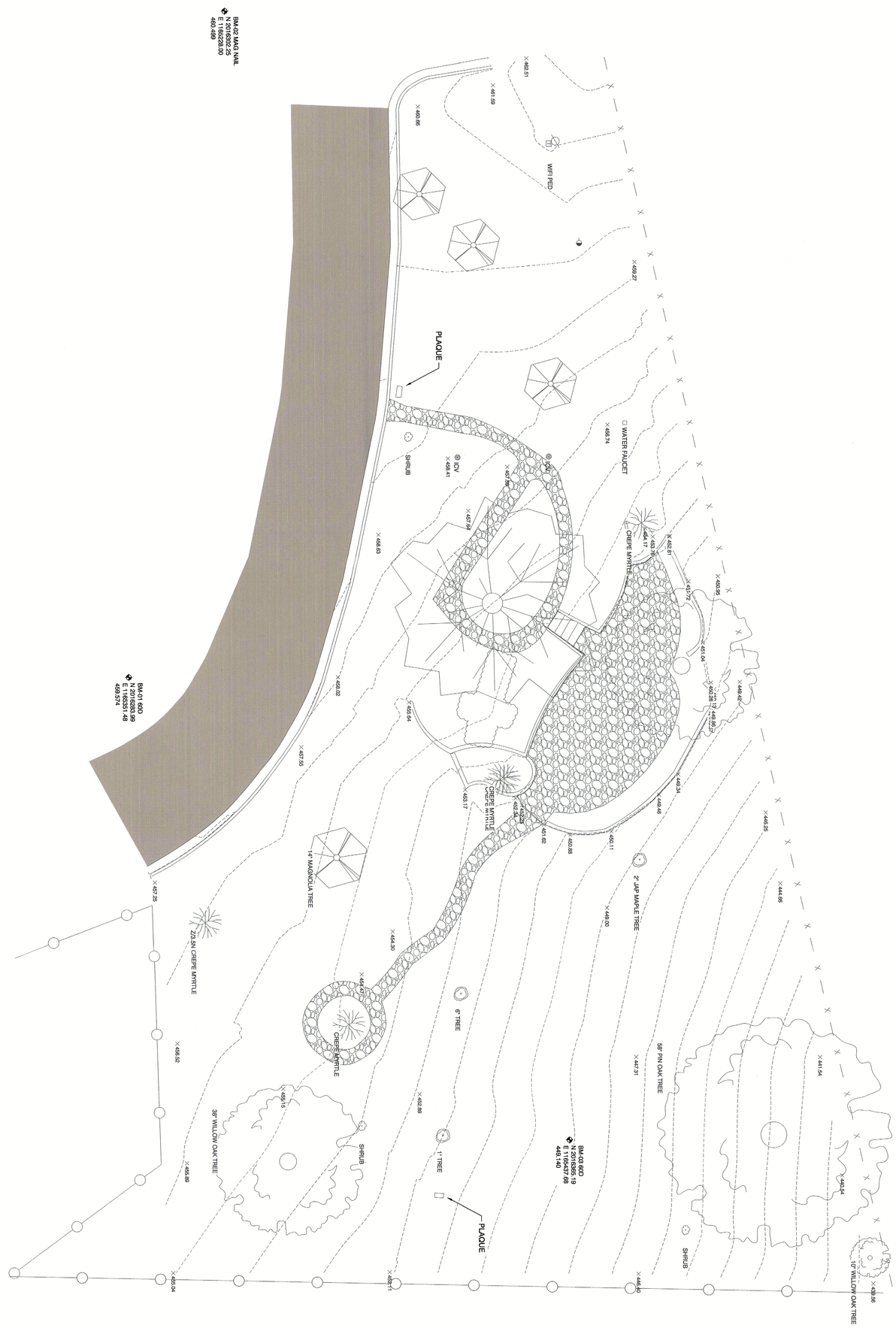
FOR USE AND BENEFIT OF:
SKY BLUE, LLC.

# UTILITY PLAN
SKY BLUE DUPLEXES
CITY OF BRYANT, SALINE COUNTY, ARKANSAS

| | | | | | |
|---|---|---|---|---|---|
| DATE: | 01/06/2020 | C.A.D. BY: | | DRAWING NUMBER: | 19-0066 |
| REVISED: | 06/26/2024 | CHECKED BY: | | | |
| SHEET: | C-3.0 | SCALE: | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 500 | 01S | 14W | 0 | 27 | 430 | 62 | 1807 |

K:\LAND PROJECTS\ 2004\SUBDIVISIONS\ 2019\19-0066 BUSSENT DUPLEXES\19-0066 - SKY BLUE DUPLEXES RS_(BASE DRAWING)_06-24-2024.DWG




10' 5' 0 10'

N

**BRYANT FIRST UNITED METHODIST CHURCH**
**COLUMBARIUM**
**CITY OF BRYANT, ARKANSAS**

**GNE** Designing our client's success


**GarNat Engineering, LLC**
P.O. Box 116
Benton, AR 72018
Ph (501) 408-4650
3825 Mt Carmel Rd
Bryant, AR 72022
garnatengineering@gmail.com


| DATE | REVISION | BY |
|---|---|---|
| | | |

CONTENTS: TOPOGRAPHICAL SURVEY

PROJECT NO: 23108

DATE: AUGUST 2023

SHEET NO: C1.0

J:\Projects\2023 Projects\23108 Bryant First United Methodist Church Topo\Drawings\MSA\Survey\23108 – Bryant First United Methodist Church Topo – 072823.dwg

# *SKY BLUE DUPLEXES*

*PROPOSED MULTI-FAMILY UNITS*

# *DRAINAGE REPORT*

*FOR*

*City of Bryant, AR*

*DATE*

Hurricane Lake Road, Saline County, AR

By:

HOPE
CONSULTING
ENGINEERS • SURVEYORS

**APPENDIX**

Project Description/Summary

Detention Discharge Summary, Composite C Values, & time of concentration

Street Drainage Calculation

East Ditch Calculations

Time of Concentration Calculation

Pond Report

Hydrographs

East Ditch Exhibit

**Summary**

The following calculations pertain to the detention design for the proposed multi family development Located off Hurricane Lake Road in Bryant, AR.

Proposed Development area = 0.92 Acres

| | *C* | *tc (min)* |
|---|---|---|
| Pre-development: | 0.49 | 23 |
| Post-development: | 0.69 | 23 |

*Detention Pre & Post Development Comparisons*

*Prior to detention routing:*

| Event (yrs) | Pre-developed Flow Q (cfs) | Post-developed Flow (no pond) Q (cfs) |
|---|---|---|
| 2 | 1.40 | 1.98 |
| 10 | 1.95 | 2.75 |
| 25 | 2.26 | 3.18 |
| 50 | 2.57 | 3.61 |
| 100 | 2.75 | 3.87 |

*After routing to detention:*

| Event (yrs) | Pre-developed Q (cfs) | Post-developed (with pond) Q (cfs) | Water El. (ft) |
|---|---|---|---|
| 2 | 1.40 | 1.39 | 402.25 |
| 10 | 1.95 | 1.72 | 402.62 |
| 25 | 2.26 | 1.89 | 402.85 |
| 50 | 2.57 | 2.03 | 403.05 |
| 100 | 2.75 | 2.16 | 403.13 |

Therefore the development will not create any additional flow in the downstream area.

*East Channel*

The following calculations pertain to the existing east ditch, and are based on proposed re-design and excavation of the existing channel in order to have the needed vertical room necessary for detention and 2.0 feet of freeboard for the finished floor elevations of proposed structures.

| **time of concentration, tc (min)**<br>Pre | REGION 3 IDF | | | |
|---|---|---|---|---|
| **Channel Dimensions and Time of Concentration, tc** | | | | |
| Area (ft2) | 1998592.29 | | | |
| Area (Acre) | 46 | | | |
| Length, L (ft) | 2217.0 | | | |
| Change in Elevation (ft) | 60.27 | | | |
| Slope, S (ft/ft) | 0.027 | | | |
| N (asphalt,grass,etc) | 0.400 | | **h (ft)** | **S** |
| L( overland, ft) | 200 | | 4 | 0.020 |
| L( channel 1, ft) | 2017 | | 56.27 | 0.028 |
| L( channel 2, ft) | 0.0 | | 0 | 0.000 |
| $t_i$ | 45.4 | **v** | | |
| $t_{t1}$ | 5.6 | 6.007023 | | |
| $t_{t2}$ | 0.0 | 0 | | |
| time of concentration, tc (min) | 51.0 | *use 50 min* | | |

| | **Design Peak Runoff Rates, Qp (cfs)** | | |
|---|---|---|---|
| | Intensity, I (in/hr) | Runoff Coeff | Flow (cfs) |
| | I | C | Q |
| 100year | 4.19 | 0.53 | 101.89 |
| | Qp,max (max flow) cfs | | 102 |

## V-Bottom Ditch (Analysis)

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width |
|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | $ft^2$ | ft/sec | ft |
| 1: 3 | 103.0 | 0.023 | 0.005 | 2.53 | 30.4 | 19.26 | 5.35 | 15.20 |

## STATION 1+68

| Elev. + 2.0' freeboard | Y + depth | Dist to outlet | El. @ Outlet | Low Point |
|---|---|---|---|---|
| | | x | y=mx+b | b |
| 403.31 | 400.78 | 168.4 | 398.242 | 397.4 |

## V-Bottom Ditch (Analysis)

| Side Slope | Q | n | Slope, m | Depth | Depth | Area | Velocity | Width |
|---|---|---|---|---|---|---|---|---|
| | cfs | | ft/ft | ft | in | $ft^2$ | ft/sec | ft |
| 1: 2 | 103.0 | 0.023 | 0.005 | 2.95 | 35.4 | 17.40 | 5.92 | 11.80 |

## STATION 1+00

| El. + 2.0 freeboard | Y + depth | Re-grade Dist | El. @ x | Low Point |
|---|---|---|---|---|
| | | x | y=mx+b | b |
| 403.80 | 400.85 | 100 | 397.9 | 397.4 |

**PRE DEVELOPMENT TOC:**

| **Time of Concentration, tc (min)** | Bryant IDF | | | |
|---|---|---|---|---|
| **Channel Dimensions and Time of Concentration, tc** | | | | |
| Area (ft2) | 40262.9 | | | |
| Area (Acre) | 0.92 | | | |
| Length, L (ft) | 837.0 | | | |
| Change in Elevation (ft) | 32 | | | |
| Slope, S (ft/ft) | 0.038 | | | |
| N (Coeff. Of roughness, Table 400-3) | 0.100 | | **h (ft)** | **S** |
| L( overland/sheet flow, ft) | 75 | | 1 | 0.013 |
| L( channel 1, ft) | 601 | | 25.00 | 0.04 |
| L( channel 2, ft) | 161.0 | | 1 | 0.006 |
| $t_i$ | 18.4 | **v** | | |
| $t_{t1}$ | 3.3 | 3.0241 | | |
| $t_{t2}$ | 0.9 | 2.909438 | | |
| time of concentration, tc (min) | **22.7** | | | **use 23** |

**POST DEVELOPMENT TOC:**

| time of concentration, tc (min) | Bryant IDF | | | |
|---|---|---|---|---|
| | | | | |
| **Channel Dimensions and Time of Concentration, tc** | | | | |
| Area (ft2) | 40262.9 | | | |
| Area (Acre) | 0.92 | | | |
| Length, L (ft) | 888.0 | | | |
| Change in Elevation (ft) | 32 | | | |
| Slope, S (ft/ft) | 0.036 | | | |
| N (Coeff. Of roughness, Table 400-3) | 0.100 | | **h (ft)** | **S** |
| L( overland/sheet flow, ft) | 75 | | 1 | 0.013 |
| L( channel 1, ft) | 659 | | 25.00 | 0.04 |
| L( channel 2, ft) | 154.0 | | 3 | 0.017 |
| $t_i$ | 18.4 | **v** | | |
| $t_{t1}$ | 3.8 | 2.887956 | | |
| $t_{t2}$ | 0.5 | 4.77828 | | |
| time of concentration, tc (min) | **22.8** | | | **use 23** |

# Watershed Model Schematic



## Legend

| Hyd. | Origin | Description |
|---|---|---|
| 1 | Rational | PRE DEV FLOW |
| 2 | Rational | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | POST DEV. FLOW |

# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 1.404 | 1 | 23 | 1,938 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 1.977 | 1 | 23 | 2,729 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 1.391 | 1 | 30 | 2,728 | 2 | 402.25 | 649 | POST DEV. FLOW |

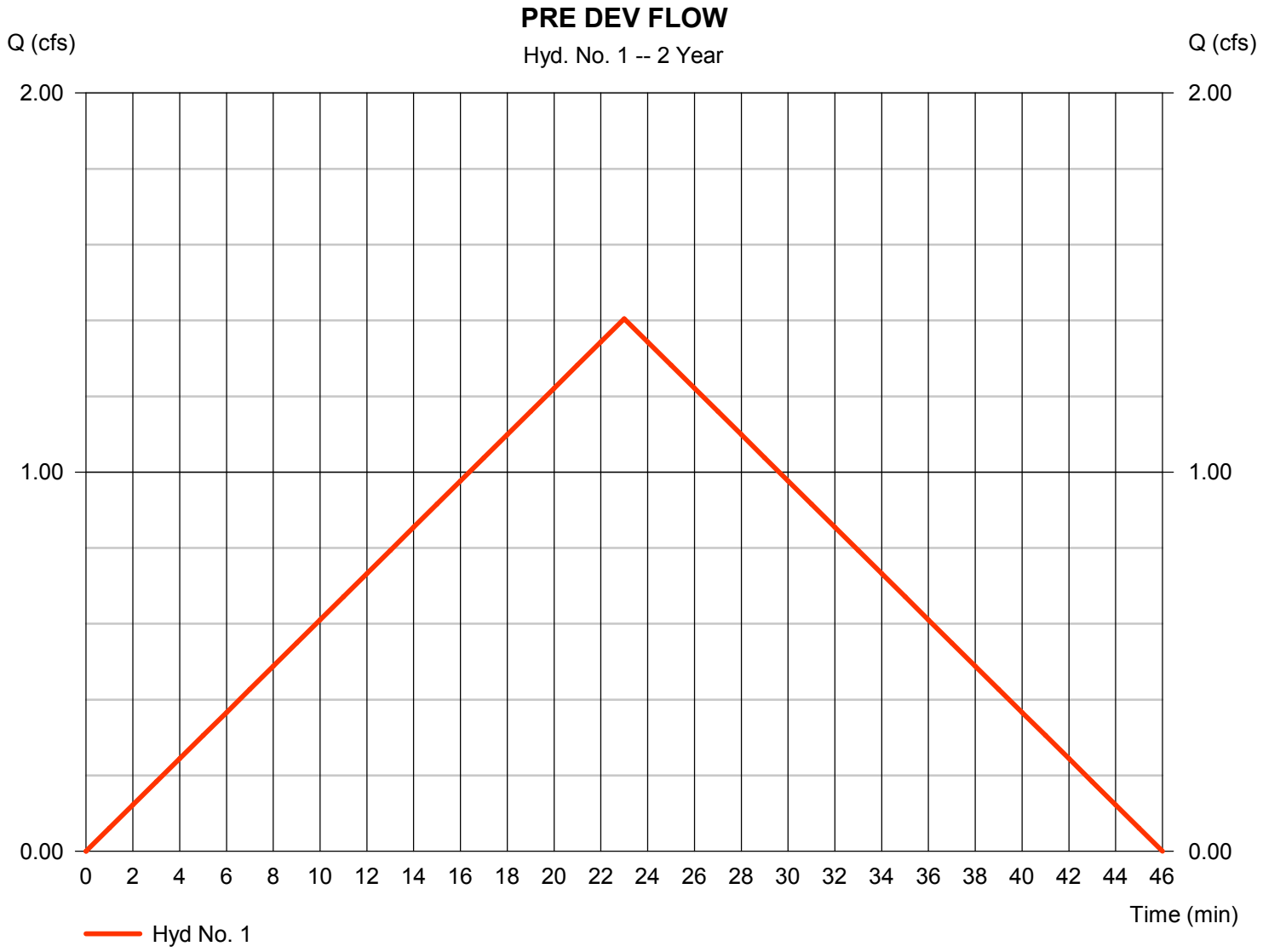
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 1.404 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 1,938 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 3.115 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



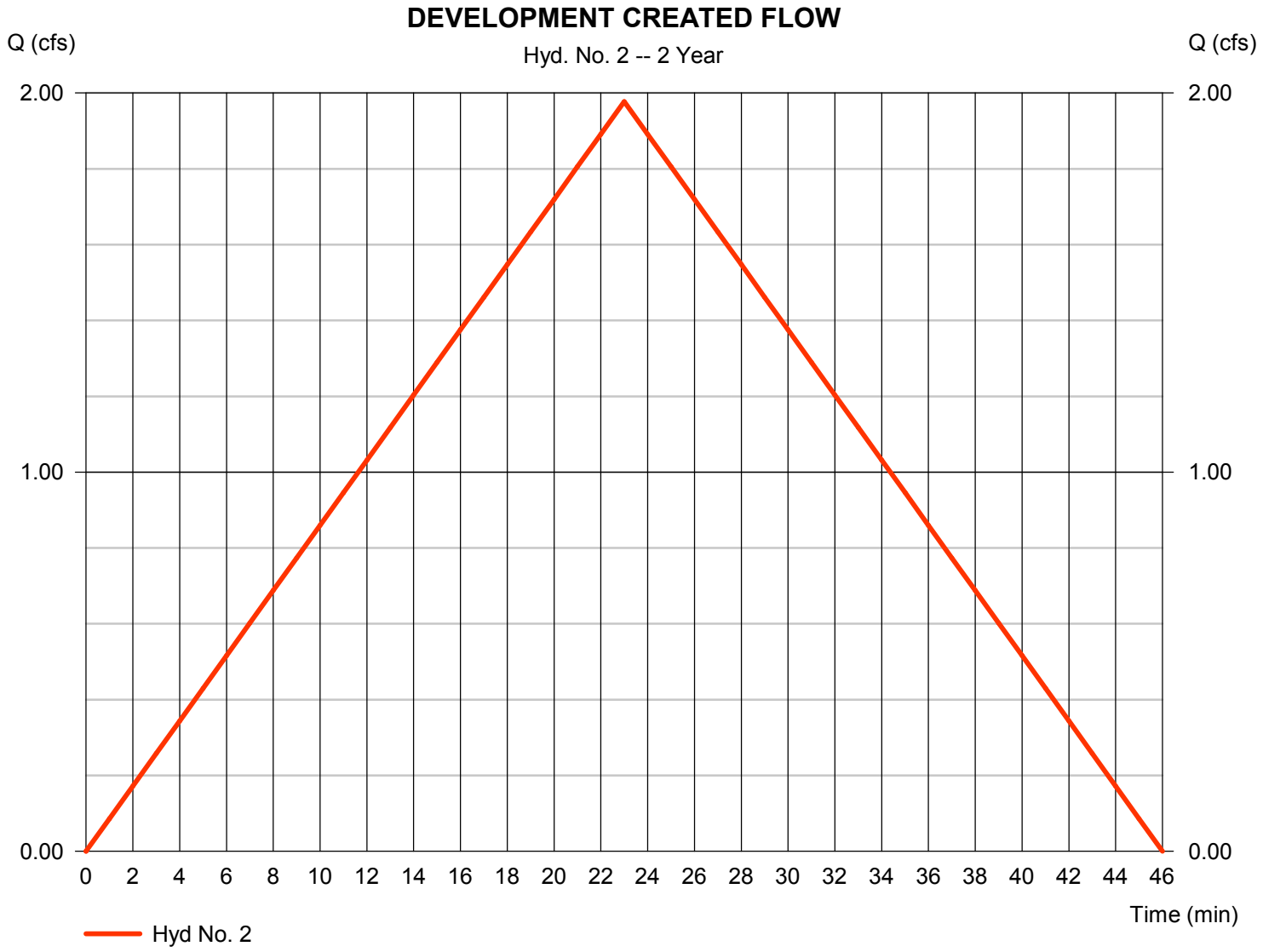
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 1.977 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 2,729 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 3.115 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

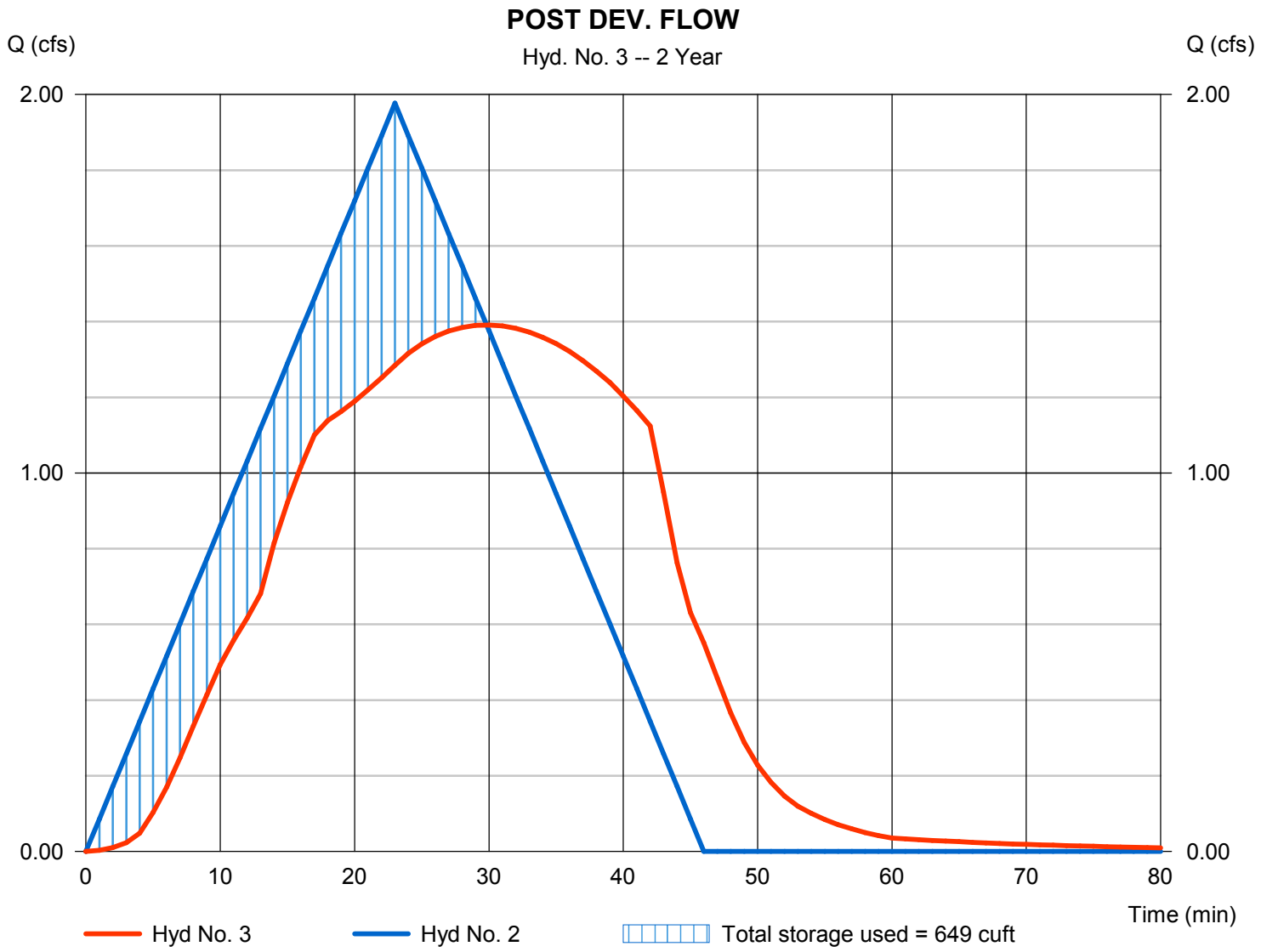


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.391 cfs |
| Storm frequency | = | 2 yrs | Time to peak | = | 30 min |
| Time interval | = | 1 min | Hyd. volume | = | 2,728 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 402.25 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 649 cuft |

Storage Indication method used.



# Pond Report



## Pond No. 1 - DETENTION

### Pond Data

**Contours -**User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 401.00 ft

### Stage / Storage Table

| Stage (ft) | Elevation (ft) | Contour area (sqft) | Incr. Storage (cuft) | Total storage (cuft) |
|---|---|---|---|---|
| 0.00 | 401.00 | 80 | 0 | 0 |
| 1.00 | 402.00 | 680 | 331 | 331 |
| 2.00 | 403.00 | 1,994 | 1,279 | 1,610 |
| 3.00 | 404.00 | 3,353 | 2,644 | 4,254 |

### Culvert / Orifice Structures

| | [A] | [B] | [C] | [PrfRsr] |
|---|---|---|---|---|
| **Rise (in)** | = 8.00 | Inactive | Inactive | 0.00 |
| **Span (in)** | = 8.00 | 0.00 | 0.00 | 0.00 |
| **No. Barrels** | = 1 | 0 | 0 | 0 |
| **Invert El. (ft)** | = 401.00 | 0.00 | 0.00 | 0.00 |
| **Length (ft)** | = 26.00 | 0.00 | 0.00 | 0.00 |
| **Slope (%)** | = 0.50 | 0.00 | 0.00 | n/a |
| **N-Value** | = .013 | .013 | .013 | n/a |
| **Orifice Coeff.** | = 0.60 | 0.60 | 0.60 | 0.60 |
| **Multi-Stage** | = n/a | No | No | No |

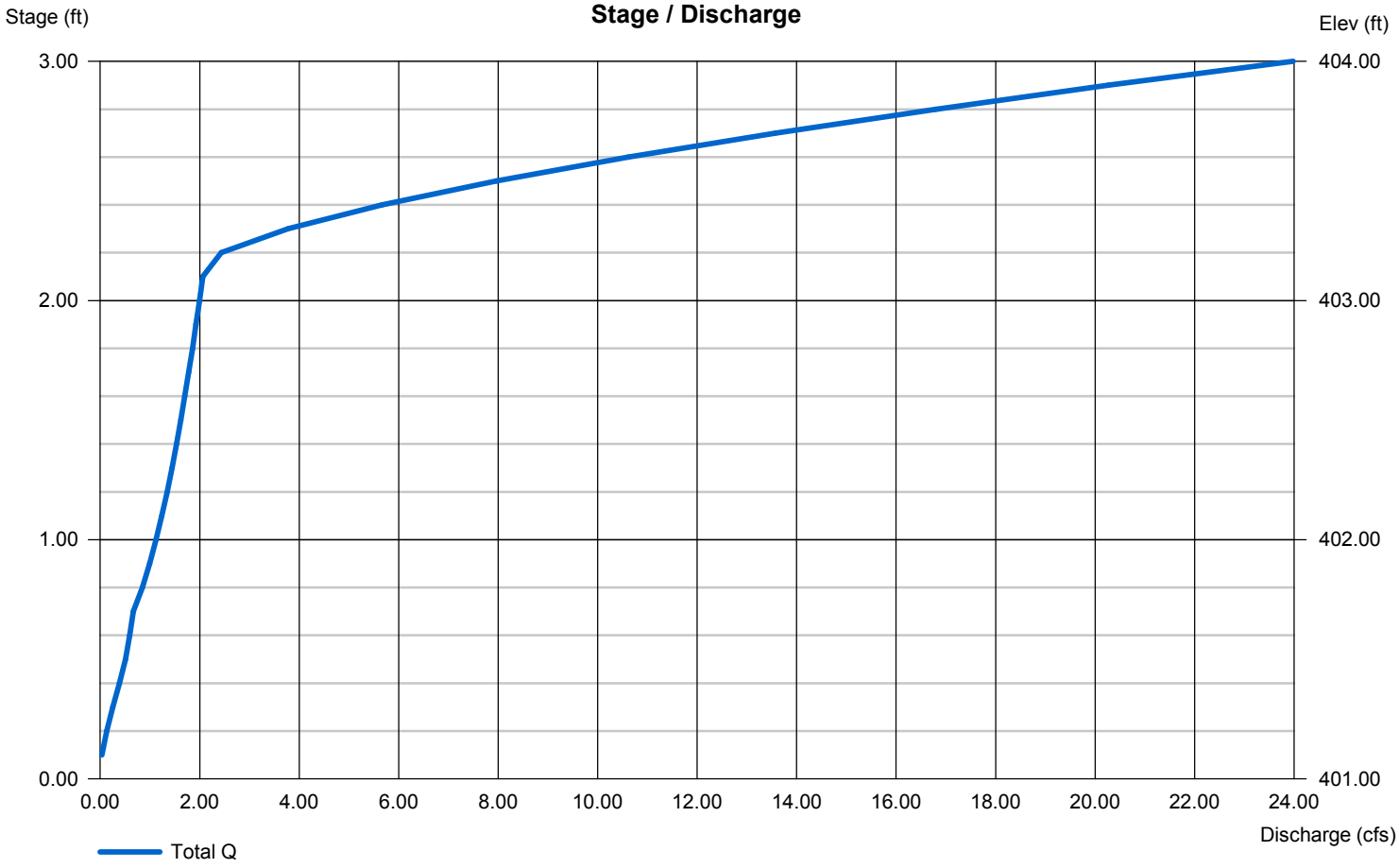
### Weir Structures

| | [A] | [B] | [C] | [D] |
|---|---|---|---|---|
| **Crest Len (ft)** | = 10.50 | 0.00 | 0.00 | 0.00 |
| **Crest El. (ft)** | = 403.15 | 0.00 | 0.00 | 0.00 |
| **Weir Coeff.** | = 2.60 | 3.33 | 3.33 | 3.33 |
| **Weir Type** | = Broad | --- | --- | --- |
| **Multi-Stage** | = No | No | No | No |

**Exfil.(in/hr)** = 0.000 (by Wet area)

**TW Elev. (ft)** = 0.00

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



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 1.952 | 1 | 23 | 2,693 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 2.748 | 1 | 23 | 3,793 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 1.719 | 1 | 32 | 3,792 | 2 | 402.62 | 1,127 | POST DEV. FLOW |

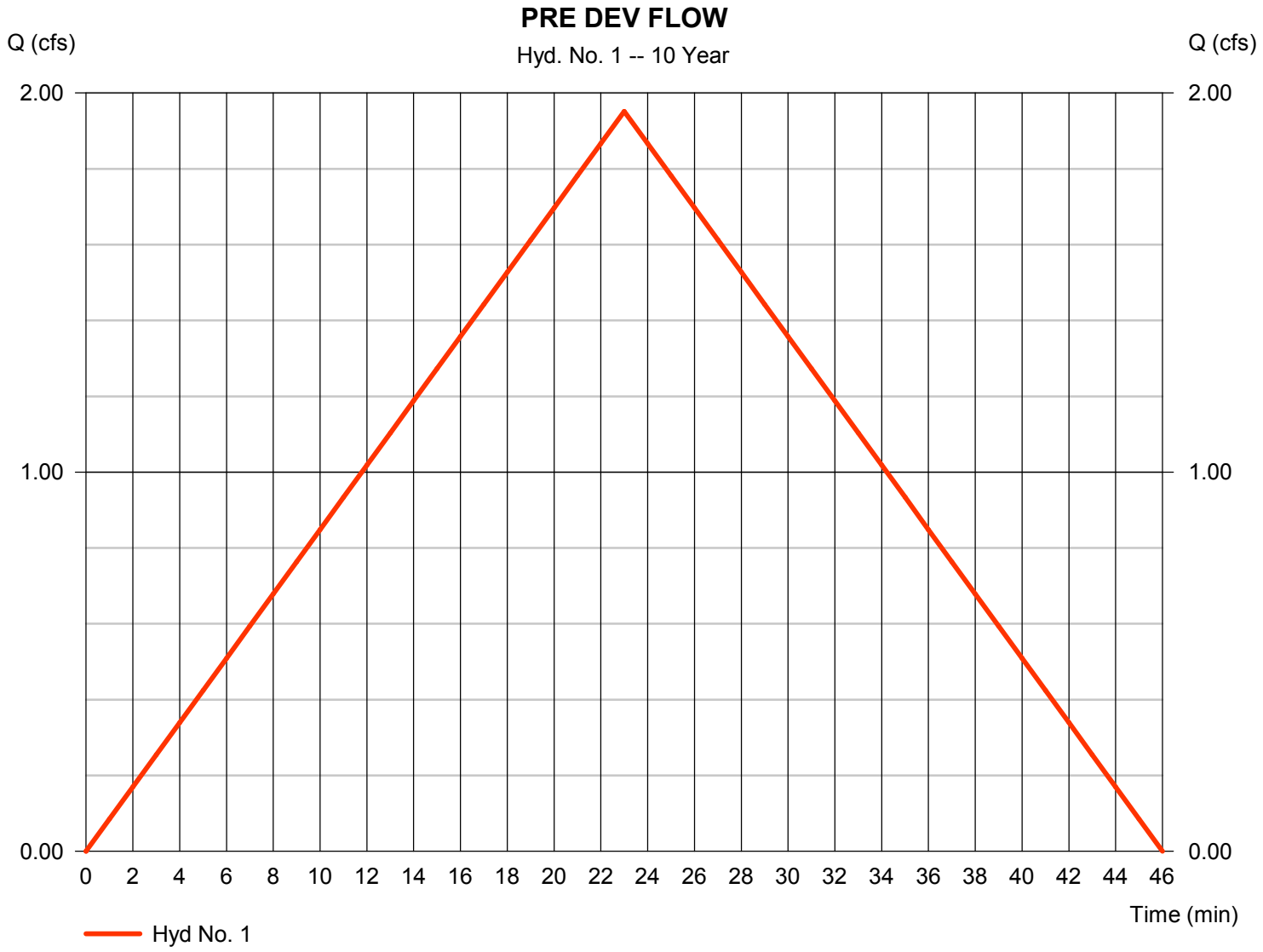
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 1.952 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 2,693 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 4.330 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



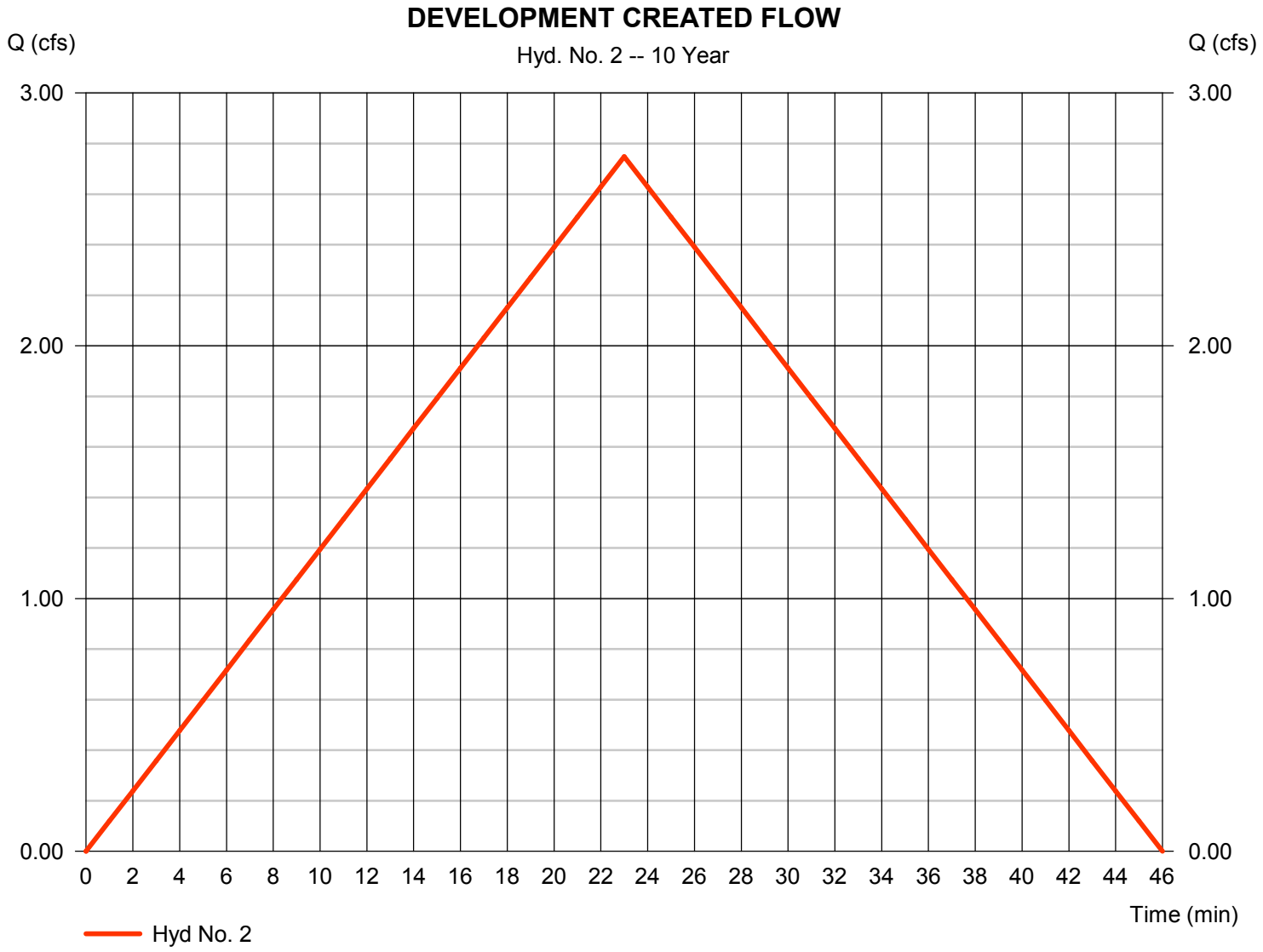
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.748 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,793 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 4.330 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

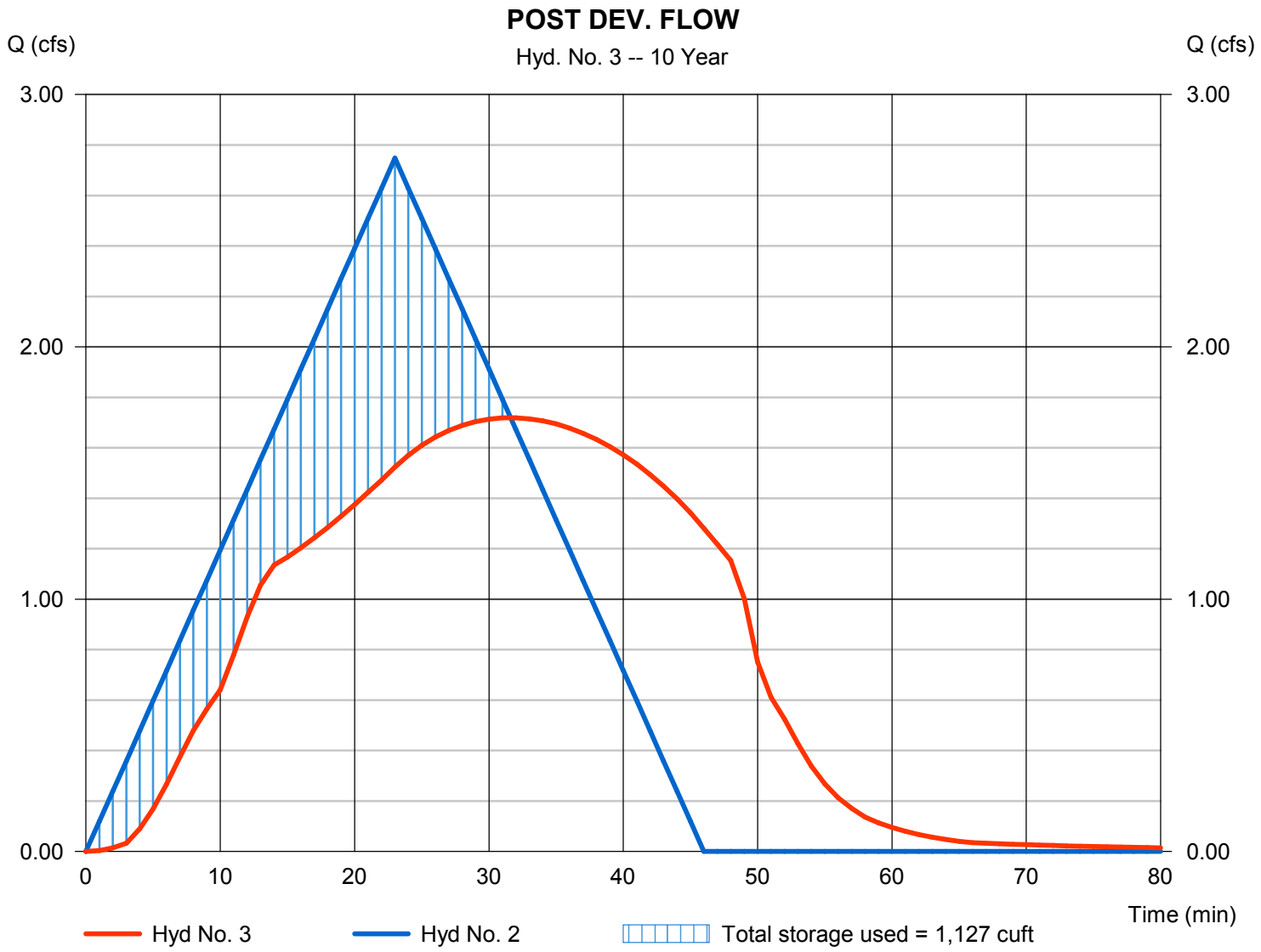


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.719 cfs |
| Storm frequency | = | 10 yrs | Time to peak | = | 32 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,792 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 402.62 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,127 cuft |

Storage Indication method used.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 2.258 | 1 | 23 | 3,116 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 3.180 | 1 | 23 | 4,389 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 1.894 | 1 | 32 | 4,388 | 2 | 402.85 | 1,424 | POST DEV. FLOW |

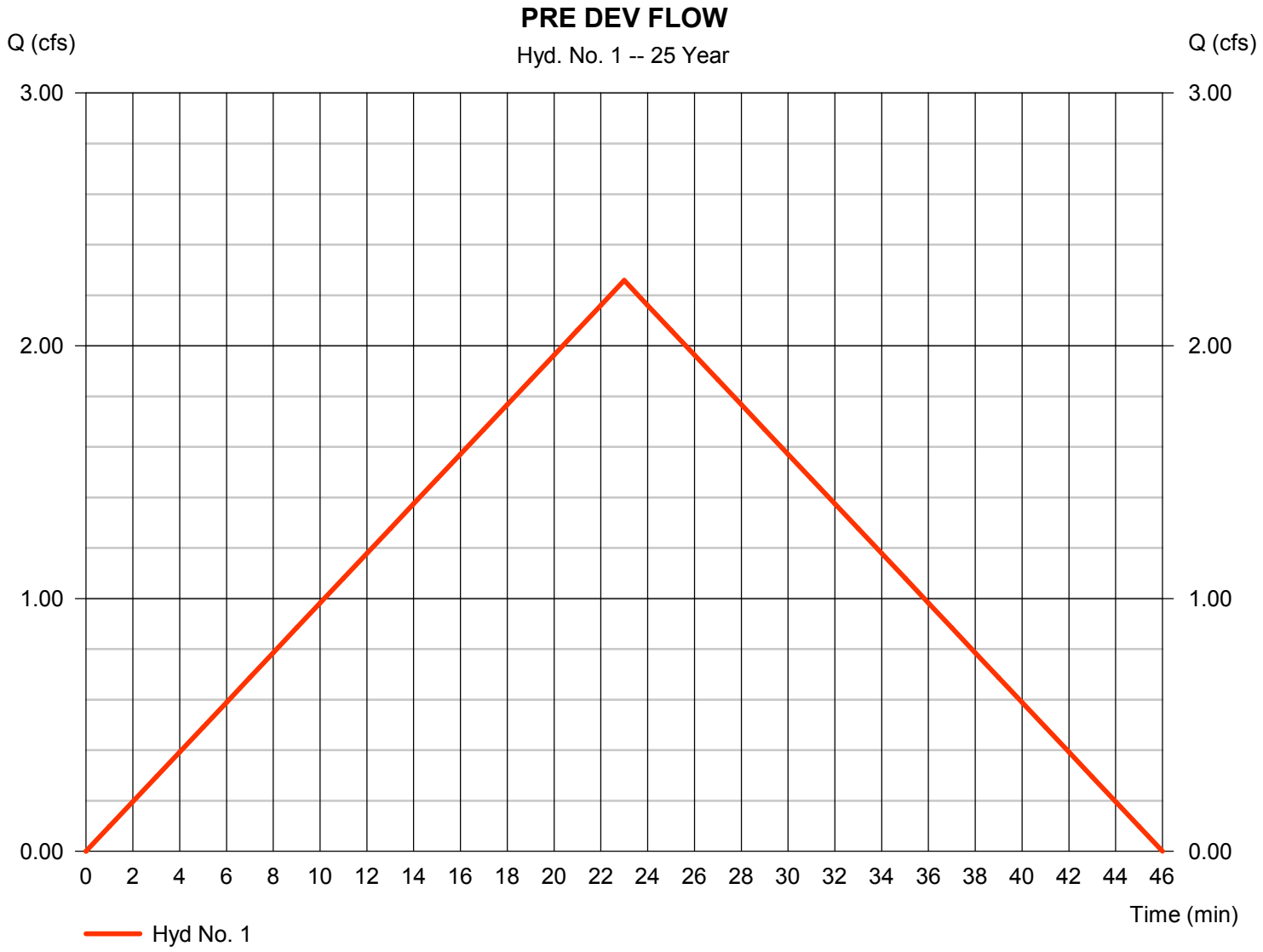
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.258 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,116 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 5.010 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



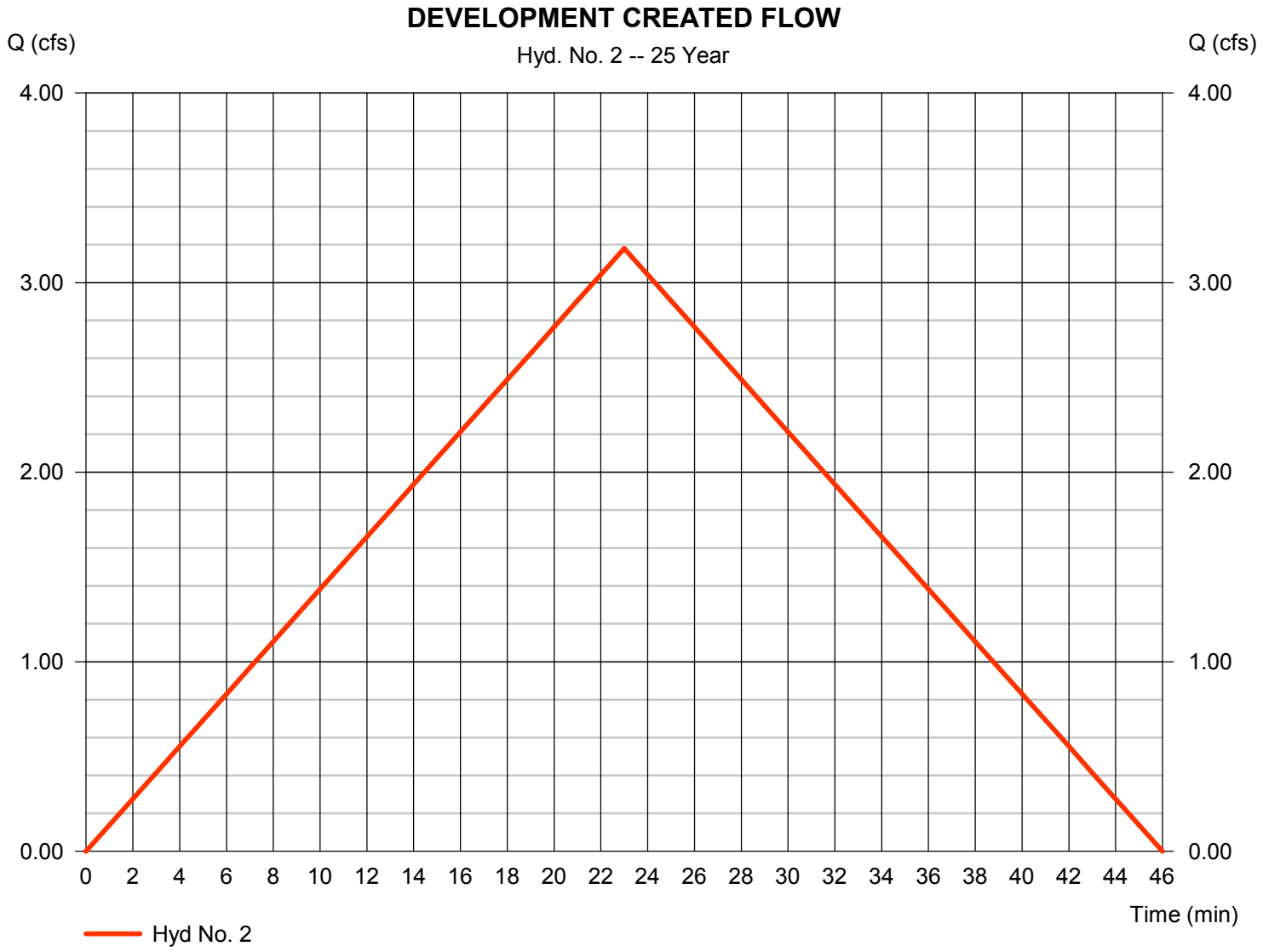
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 3.180 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,389 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 5.010 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

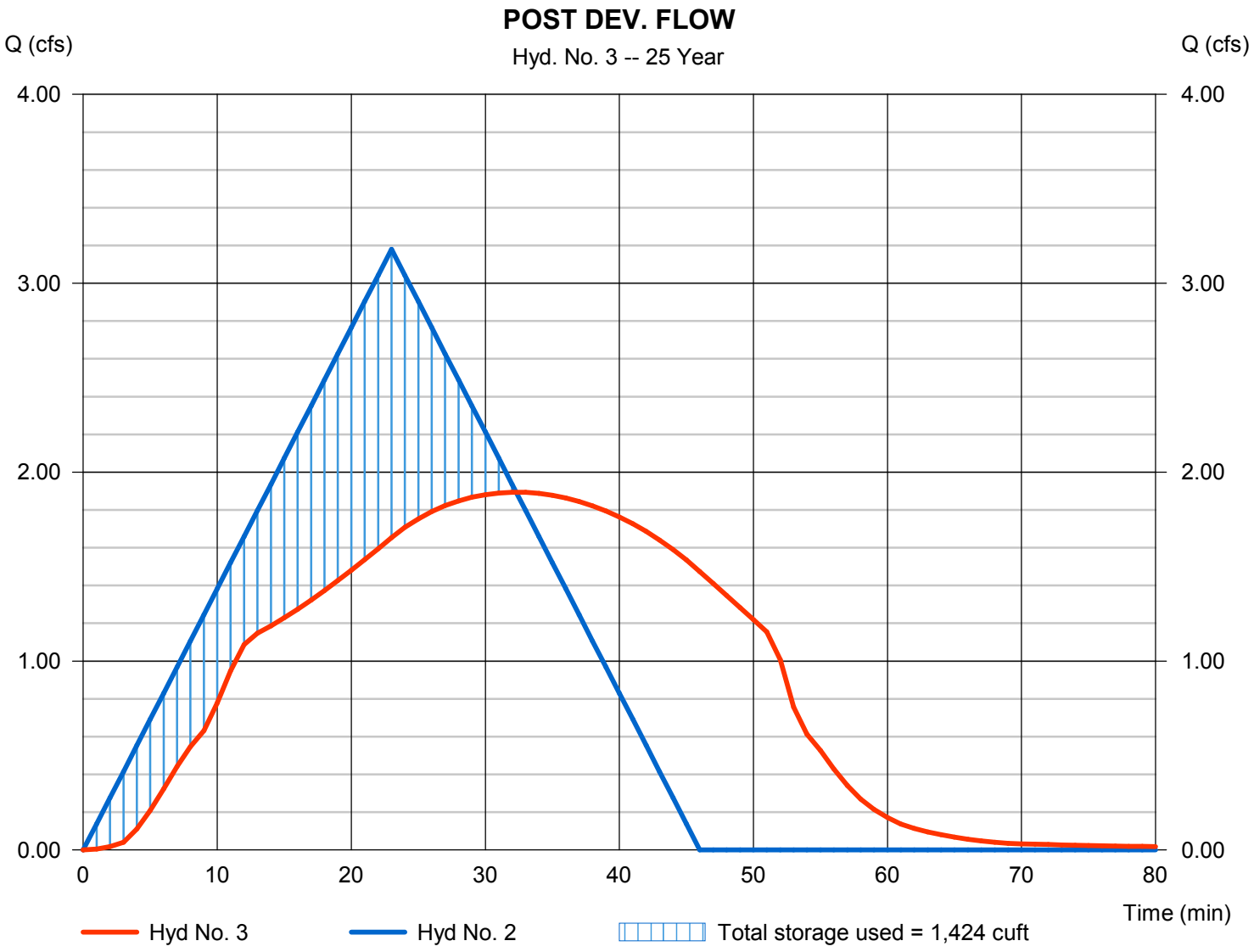


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 1.894 cfs |
| Storm frequency | = | 25 yrs | Time to peak | = | 32 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,388 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 402.85 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,424 cuft |

Storage Indication method used.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 2.565 | 1 | 23 | 3,539 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 3.612 | 1 | 23 | 4,984 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 2.030 | 1 | 33 | 4,983 | 2 | 403.05 | 1,743 | POST DEV. FLOW |

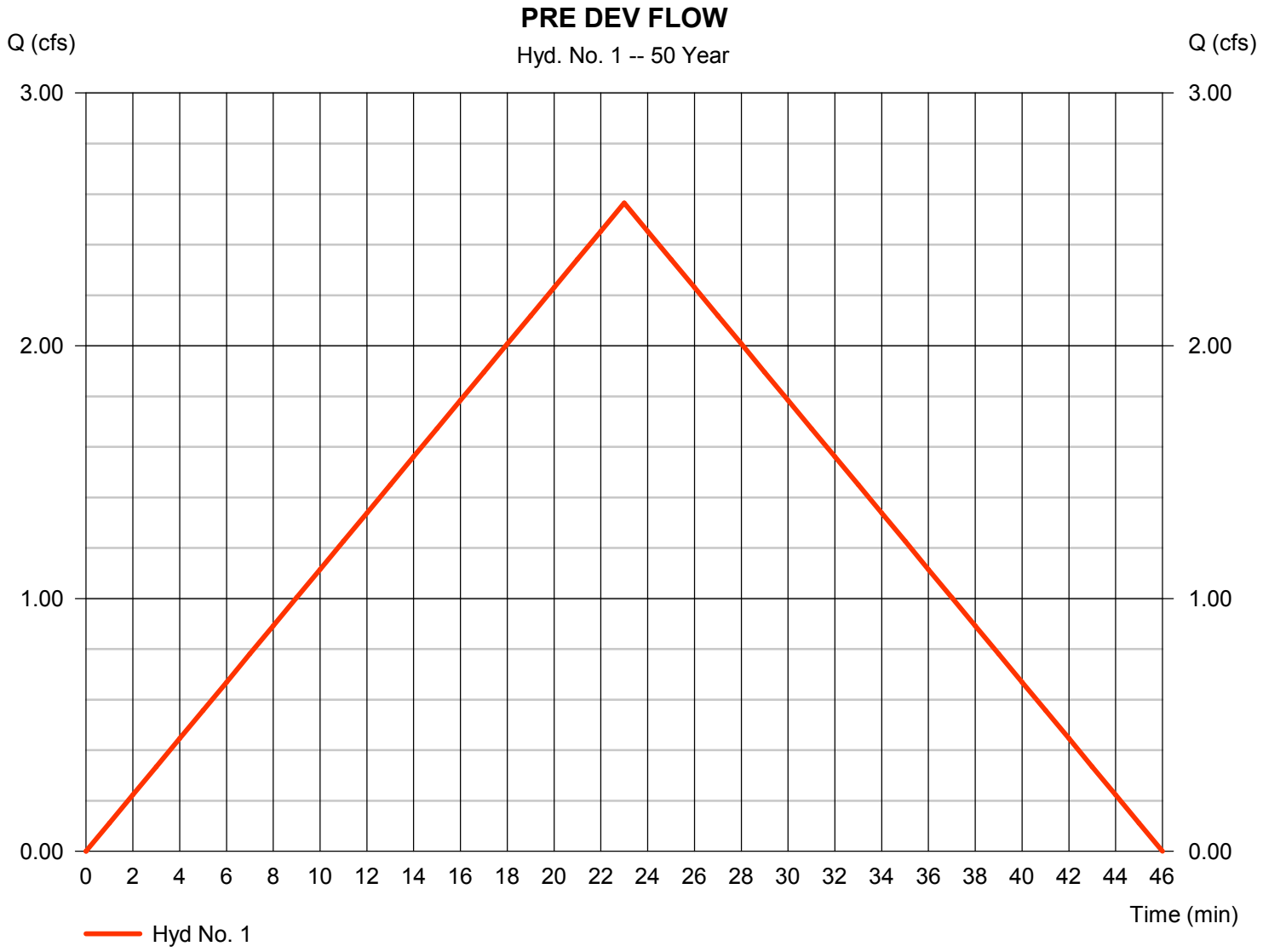
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.565 cfs |
| Storm frequency | = | 50 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,539 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 5.690 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



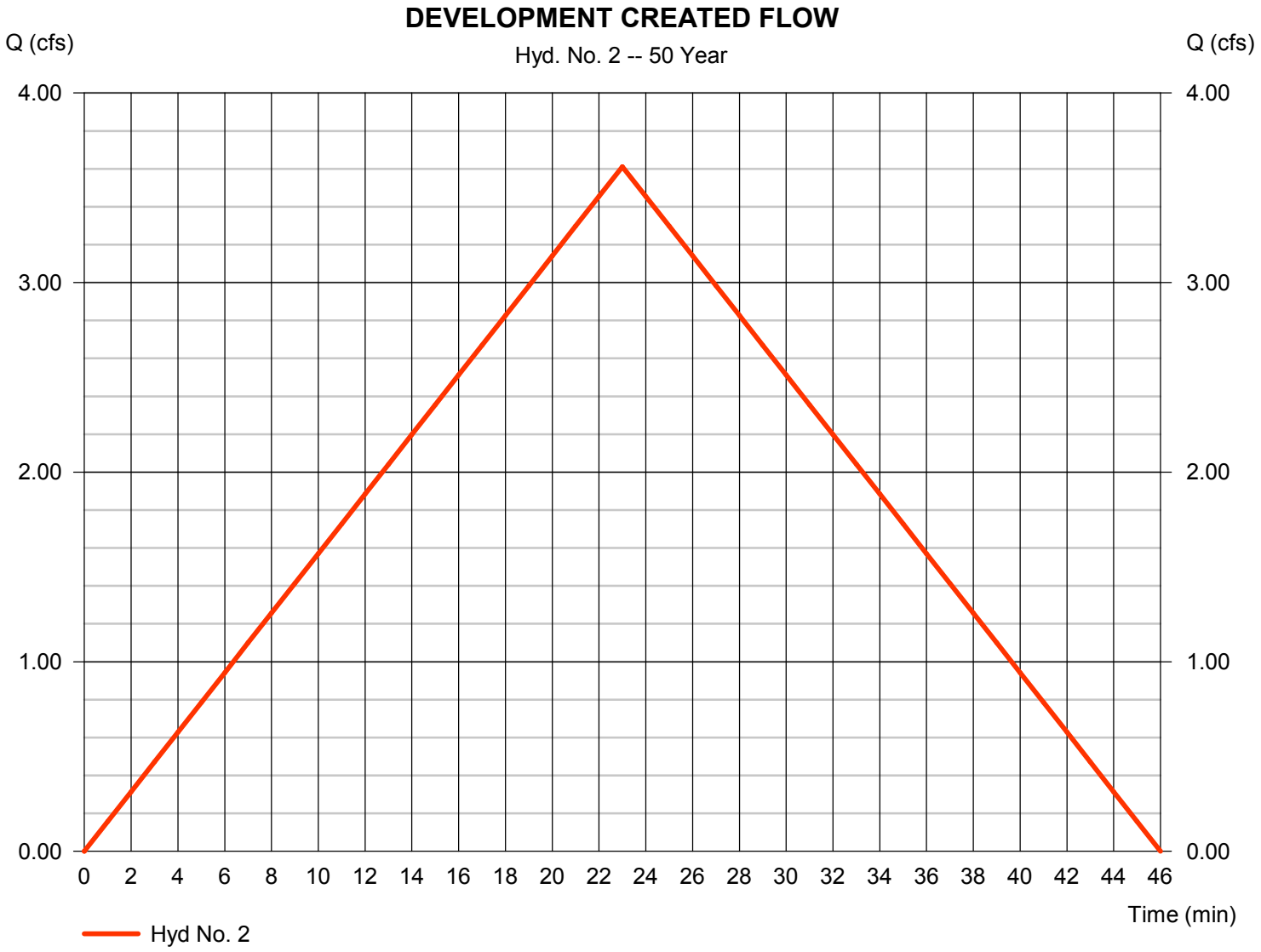
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 3.612 cfs |
| Storm frequency | = | 50 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,984 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 5.690 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

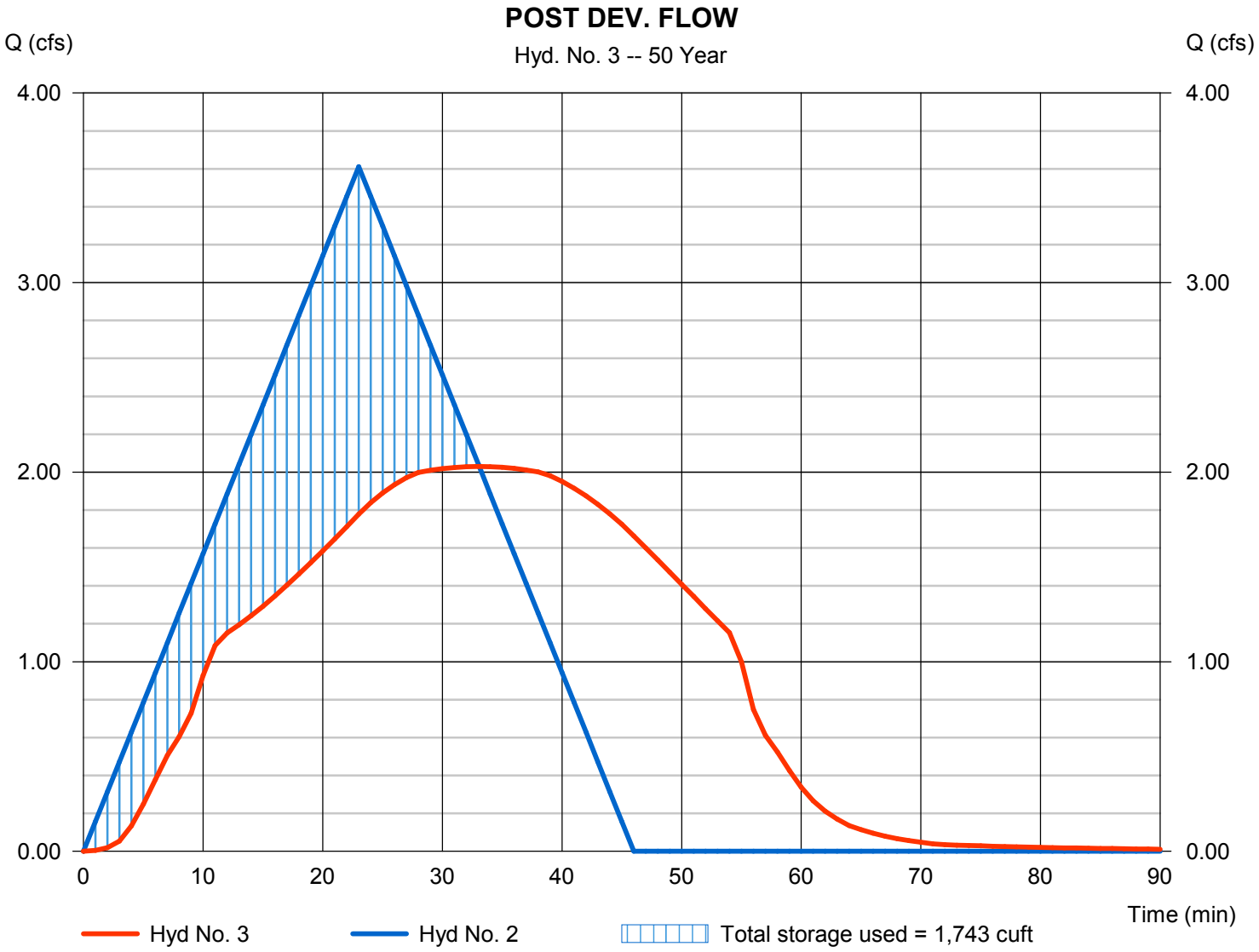


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 2.030 cfs |
| Storm frequency | = | 50 yrs | Time to peak | = | 33 min |
| Time interval | = | 1 min | Hyd. volume | = | 4,983 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 403.05 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,743 cuft |

Storage Indication method used.



# Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (cuft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (cuft) | Hydrograph Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Rational | 2.747 | 1 | 23 | 3,791 | ------ | ------ | ------ | PRE DEV FLOW |
| 2 | Rational | 3.868 | 1 | 23 | 5,338 | ------ | ------ | ------ | DEVELOPMENT CREATED FLOW |
| 3 | Reservoir | 2.156 | 1 | 33 | 5,337 | 2 | 403.13 | 1,941 | POST DEV. FLOW |

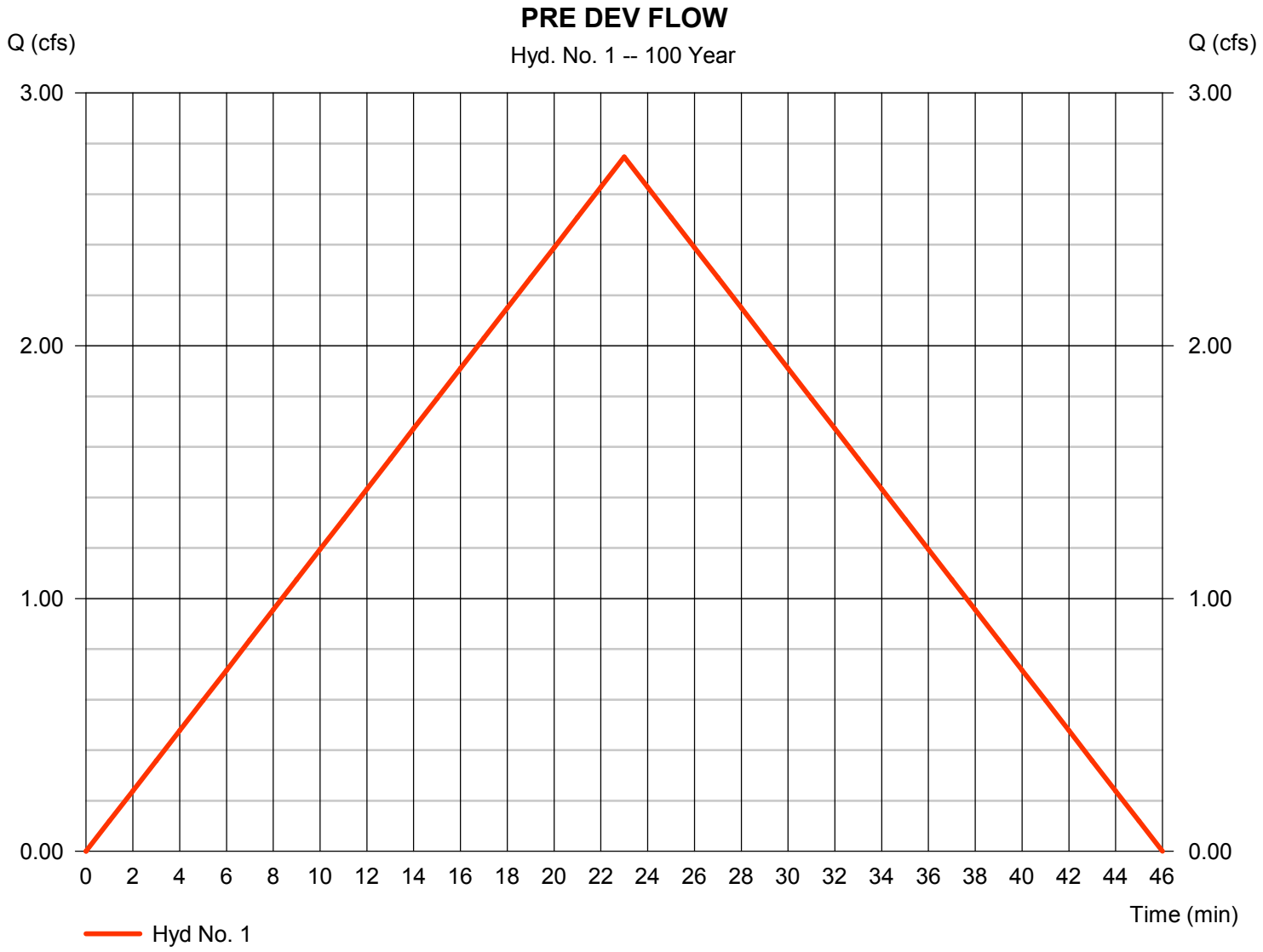
# Hydrograph Report



## Hyd. No. 1

PRE DEV FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 2.747 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 3,791 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.49 |
| Intensity | = | 6.093 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



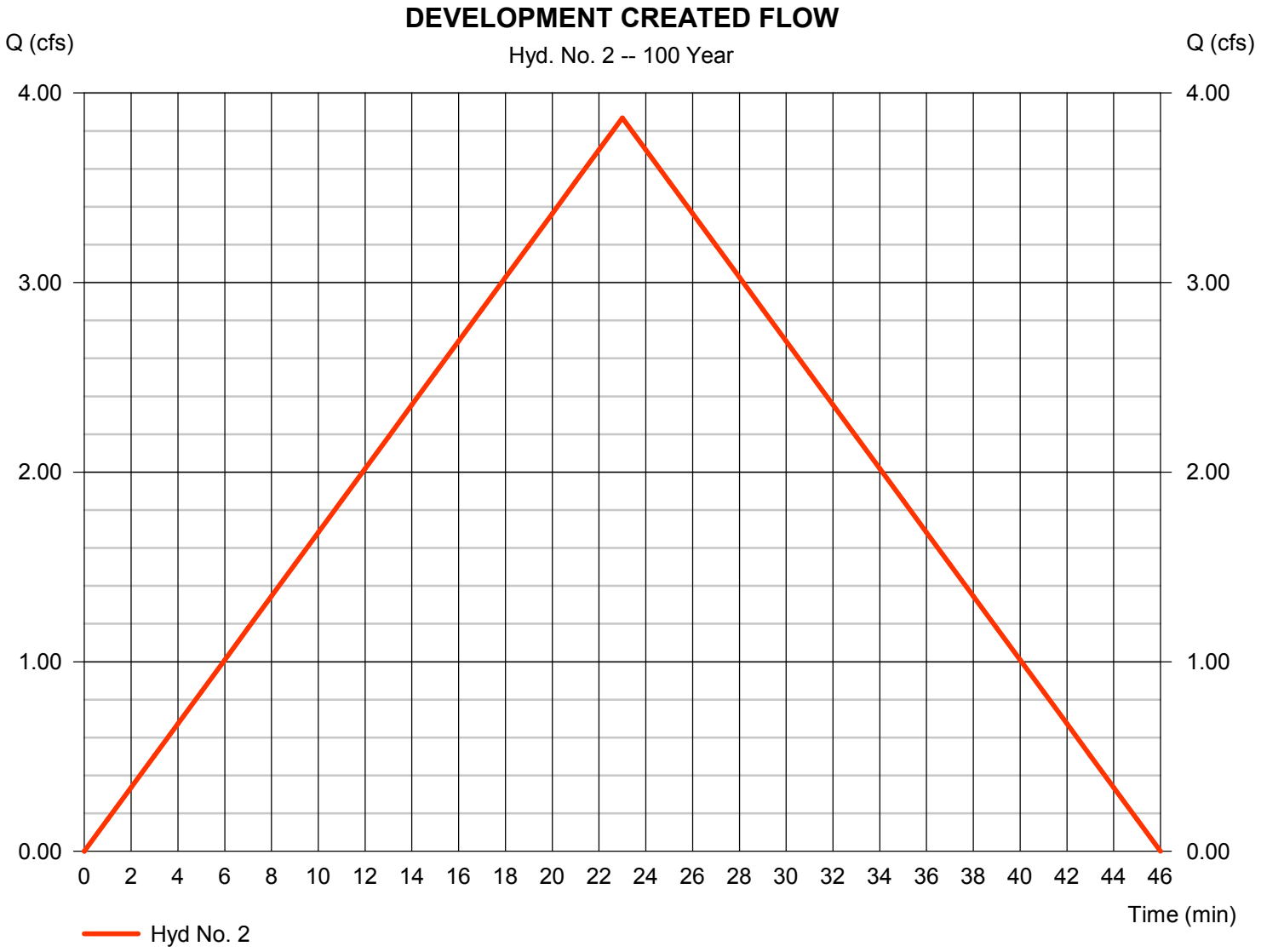
# Hydrograph Report



## Hyd. No. 2

DEVELOPMENT CREATED FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Rational | Peak discharge | = | 3.868 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 23 min |
| Time interval | = | 1 min | Hyd. volume | = | 5,338 cuft |
| Drainage area | = | 0.920 ac | Runoff coeff. | = | 0.69 |
| Intensity | = | 6.093 in/hr | Tc by User | = | 23.00 min |
| IDF Curve | = | Bryant 50.IDF | Asc/Rec limb fact | = | 1/1 |



# Hydrograph Report

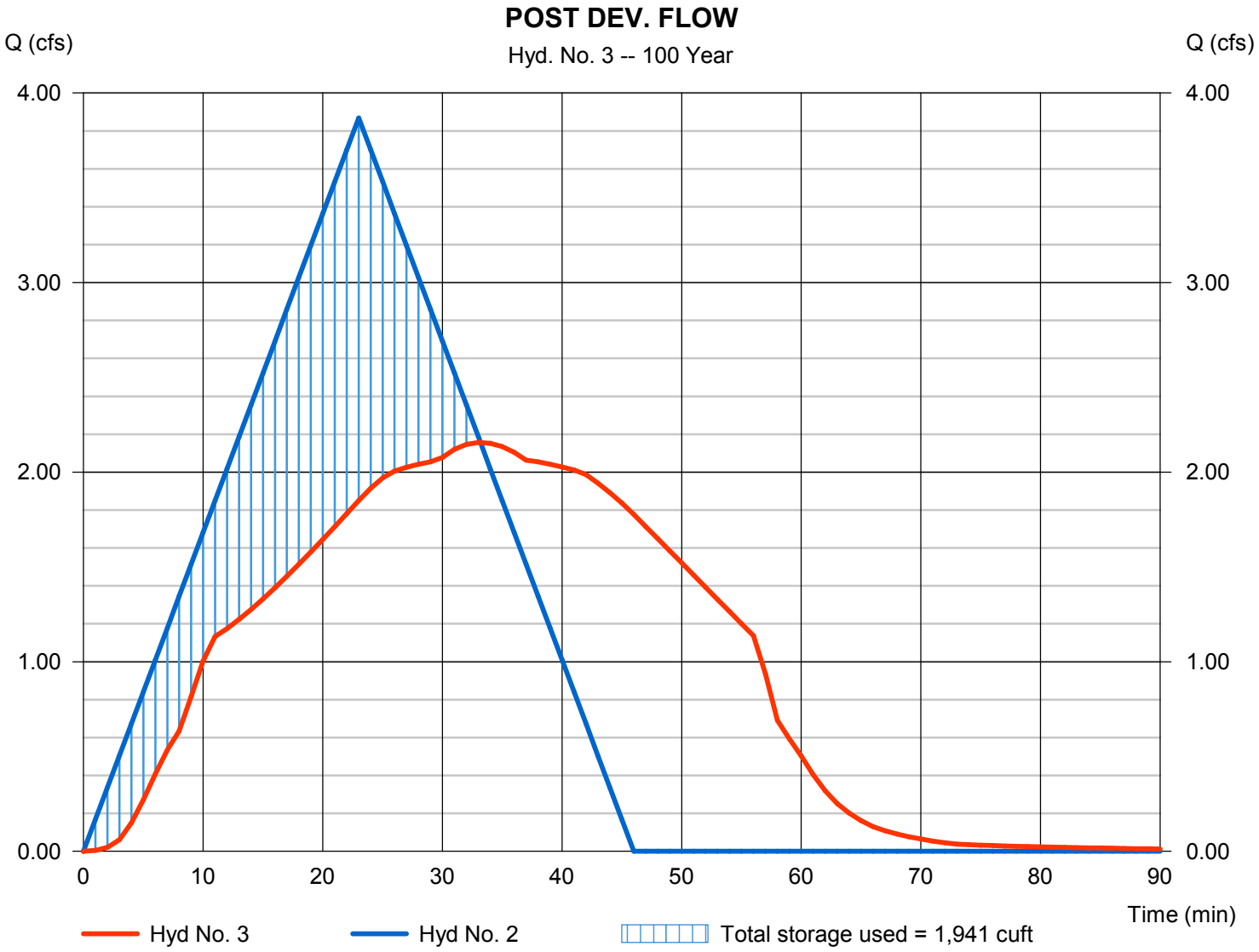


## Hyd. No. 3

POST DEV. FLOW

| | | | | | |
|---|---|---|---|---|---|
| Hydrograph type | = | Reservoir | Peak discharge | = | 2.156 cfs |
| Storm frequency | = | 100 yrs | Time to peak | = | 33 min |
| Time interval | = | 1 min | Hyd. volume | = | 5,337 cuft |
| Inflow hyd. No. | = | 2 - DEVELOPMENT CREATED FLOW | Max. Elevation | = | 403.13 ft |
| Reservoir name | = | DETENTION | Max. Storage | = | 1,941 cuft |

Storage Indication method used.



# Hydraflow Rainfall Report



| Return Period (Yrs) | Intensity-Duration-Frequency Equation Coefficients (FHA) | | | |
|---|---|---|---|---|
| | B | D | E | (N/A) |
| 1 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 2 | 32.2253 | 7.2000 | 0.6856 | -------- |
| 3 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 5 | 0.0000 | 0.0000 | 0.0000 | -------- |
| 10 | 46.3641 | 10.0000 | 0.6781 | -------- |
| 25 | 61.8249 | 11.8000 | 0.7079 | -------- |
| 50 | 79.0516 | 13.3000 | 0.7326 | -------- |
| 100 | 54.7483 | 10.0000 | 0.6279 | -------- |

File name: Bryant 50.IDF

**Intensity = B / (Tc + D)^E**

| Return Period (Yrs) | Intensity Values (in/hr) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 min | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 5.80 | 4.58 | 3.85 | 3.35 | 2.98 | 2.70 | 2.48 | 2.29 | 2.14 | 2.01 | 1.90 | 1.80 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 7.39 | 6.08 | 5.23 | 4.62 | 4.16 | 3.80 | 3.51 | 3.27 | 3.06 | 2.89 | 2.73 | 2.60 |
| 25 | 8.39 | 6.98 | 6.03 | 5.34 | 4.82 | 4.40 | 4.06 | 3.78 | 3.54 | 3.34 | 3.16 | 3.00 |
| 50 | 9.40 | 7.87 | 6.83 | 6.06 | 5.47 | 5.00 | 4.62 | 4.29 | 4.02 | 3.79 | 3.58 | 3.40 |
| 100 | 10.00 | 8.34 | 7.25 | 6.47 | 5.87 | 5.40 | 5.02 | 4.69 | 4.42 | 4.19 | 3.98 | 3.80 |

Tc = time in minutes. Values may exceed 60.

Precip. file name: C:\Documents and Settings\Will\Desktop\Fleming\fleming.pcp

| Storm Distribution | Rainfall Precipitation Table (in) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1-yr | 2-yr | 3-yr | 5-yr | 10-yr | 25-yr | 50-yr | 100-yr |
| SCS 24-hour | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SCS 6-Hr | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-1st | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-2nd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-3rd | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-4th | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Huff-Indy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Custom | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# Multi-Hydrograph Plot



## Hyd. No. 1

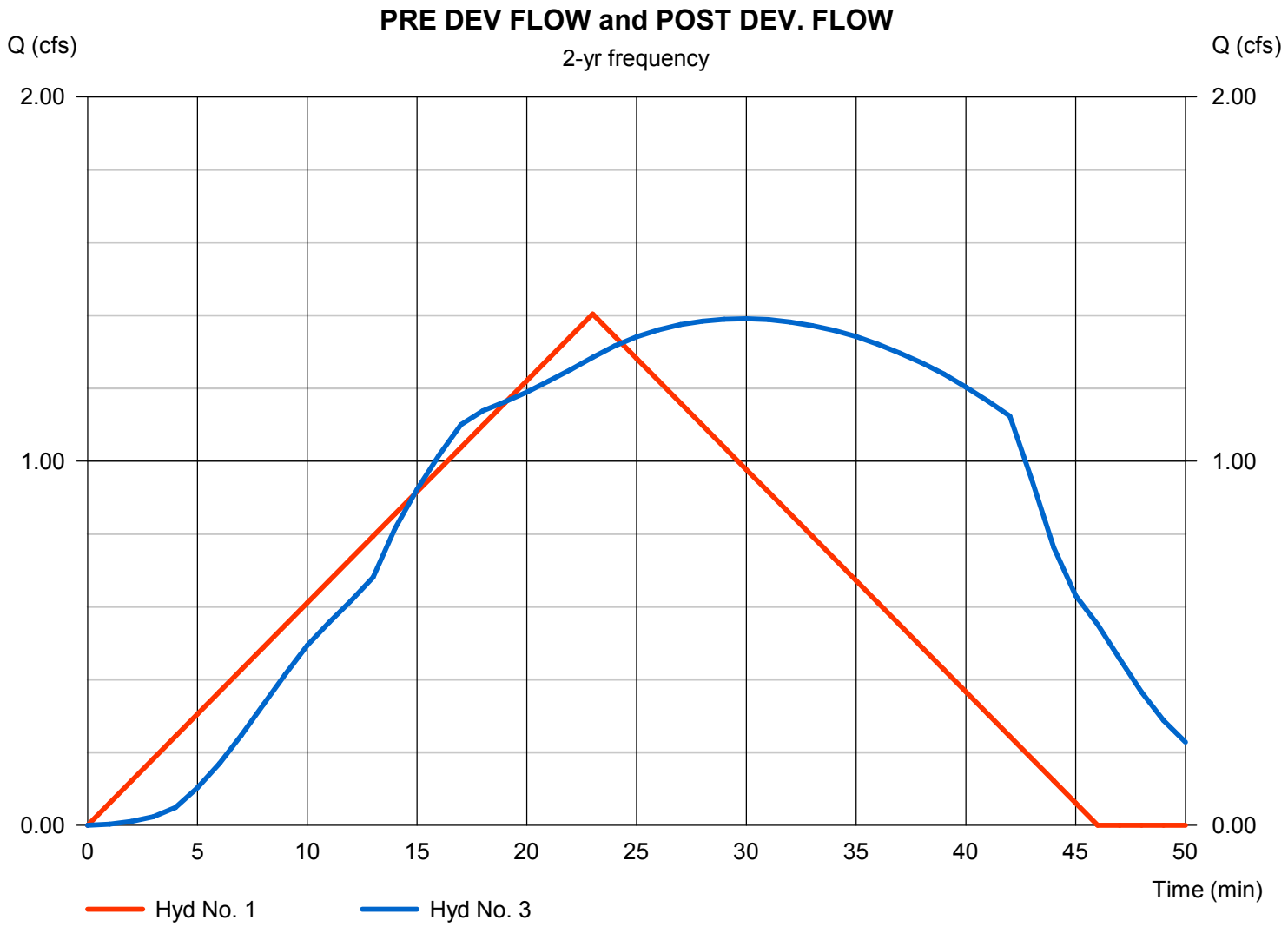
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 1.404 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 1,938 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 1.39 cfs |
| Time to peak | = | 30 min |
| Hyd. Volume | = | 2,728 cuft |



# Multi-Hydrograph Plot



## Hyd. No. 1

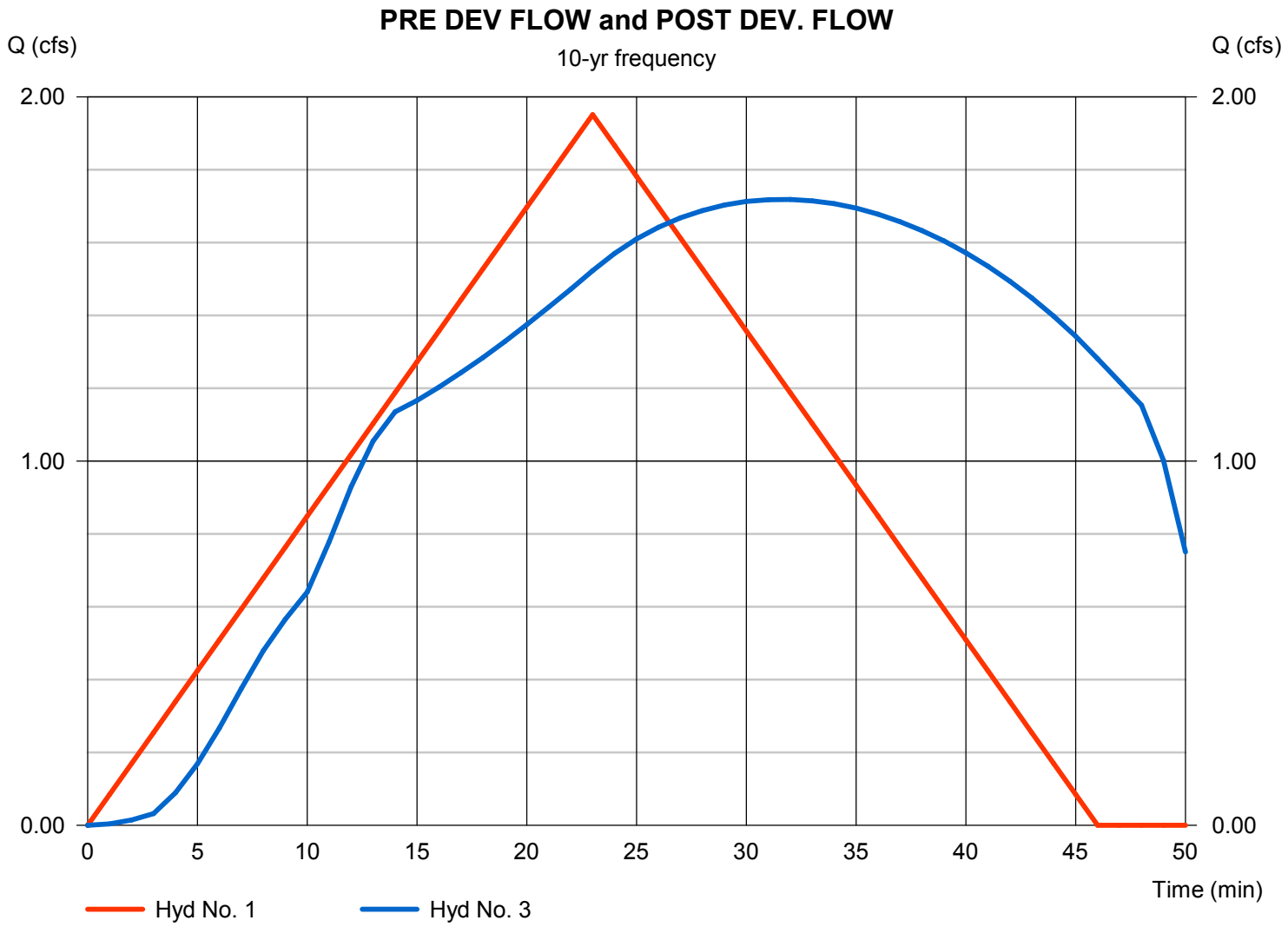
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 1.952 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 2,693 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 1.72 cfs |
| Time to peak | = | 32 min |
| Hyd. Volume | = | 3,792 cuft |



# Multi-Hydrograph Plot



## Hyd. No. 1

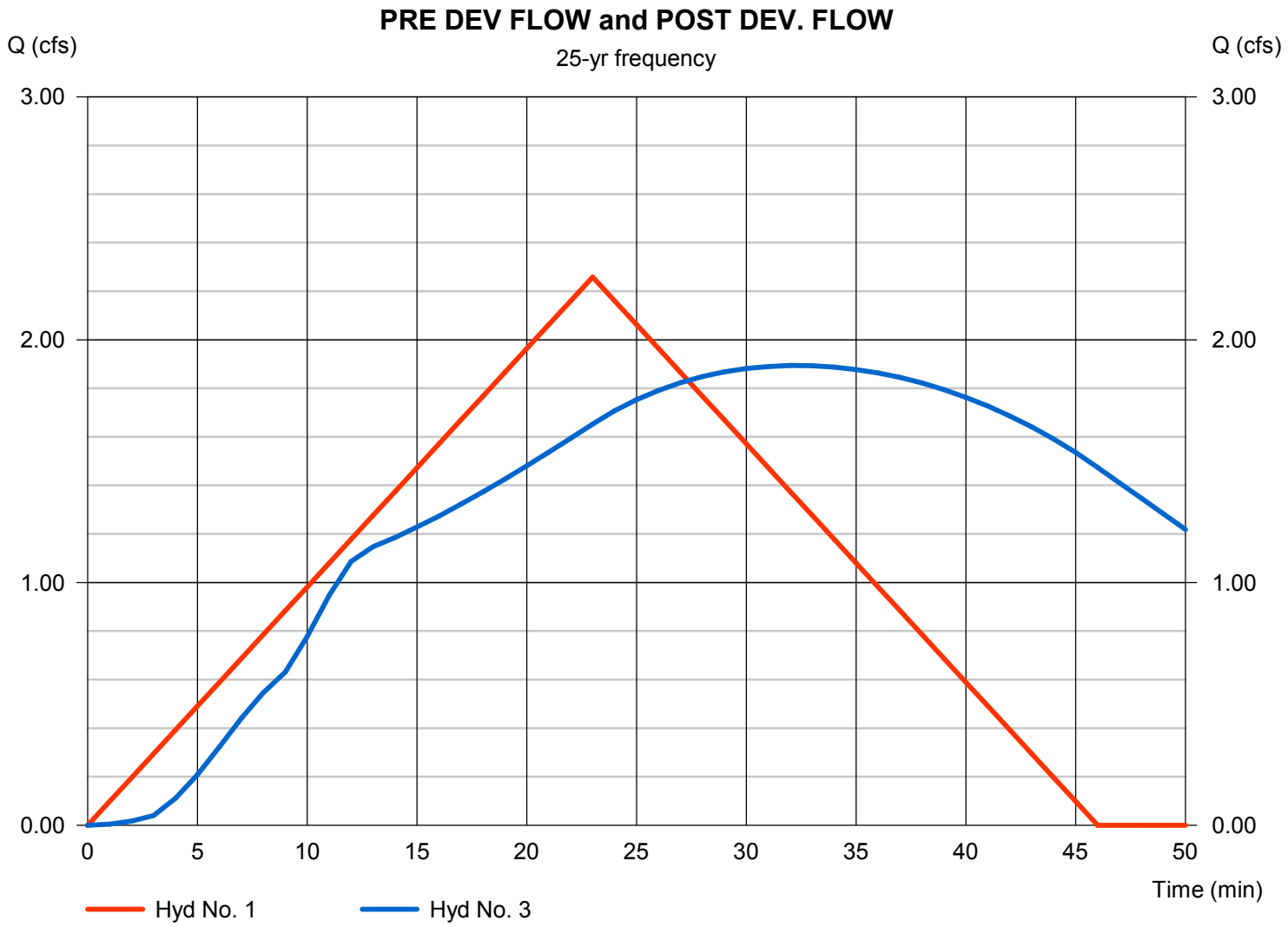
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 2.258 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 3,116 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 1.89 cfs |
| Time to peak | = | 32 min |
| Hyd. Volume | = | 4,388 cuft |



# Multi-Hydrograph Plot

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2021

## Hyd. No. 1

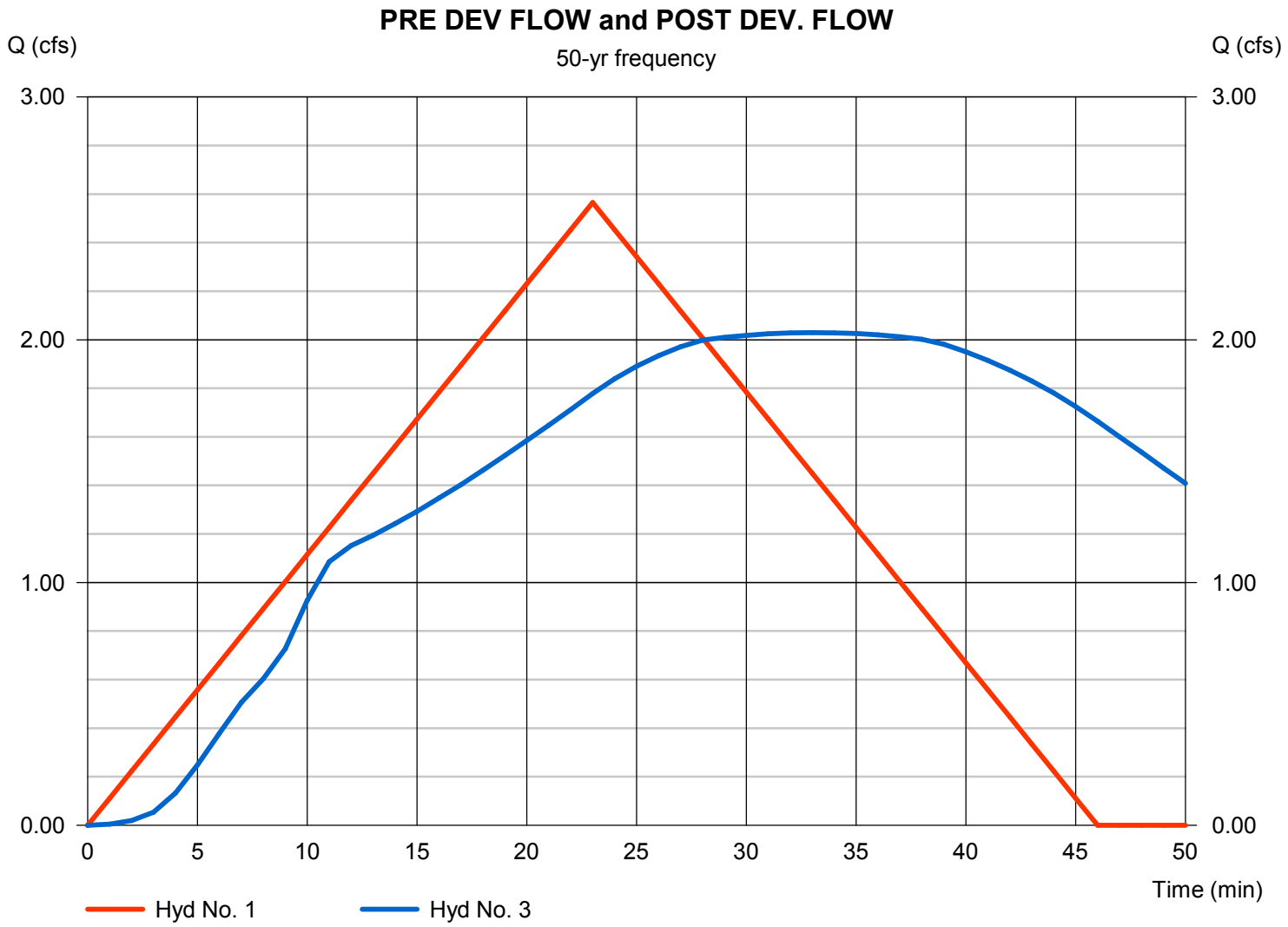
PRE DEV FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 2.565 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 3,539 cuft |

## Hyd. No. 3

POST DEV. FLOW

| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 2.03 cfs |
| Time to peak | = | 33 min |
| Hyd. Volume | = | 4,983 cuft |



# Multi-Hydrograph Plot



## Hyd. No. 1

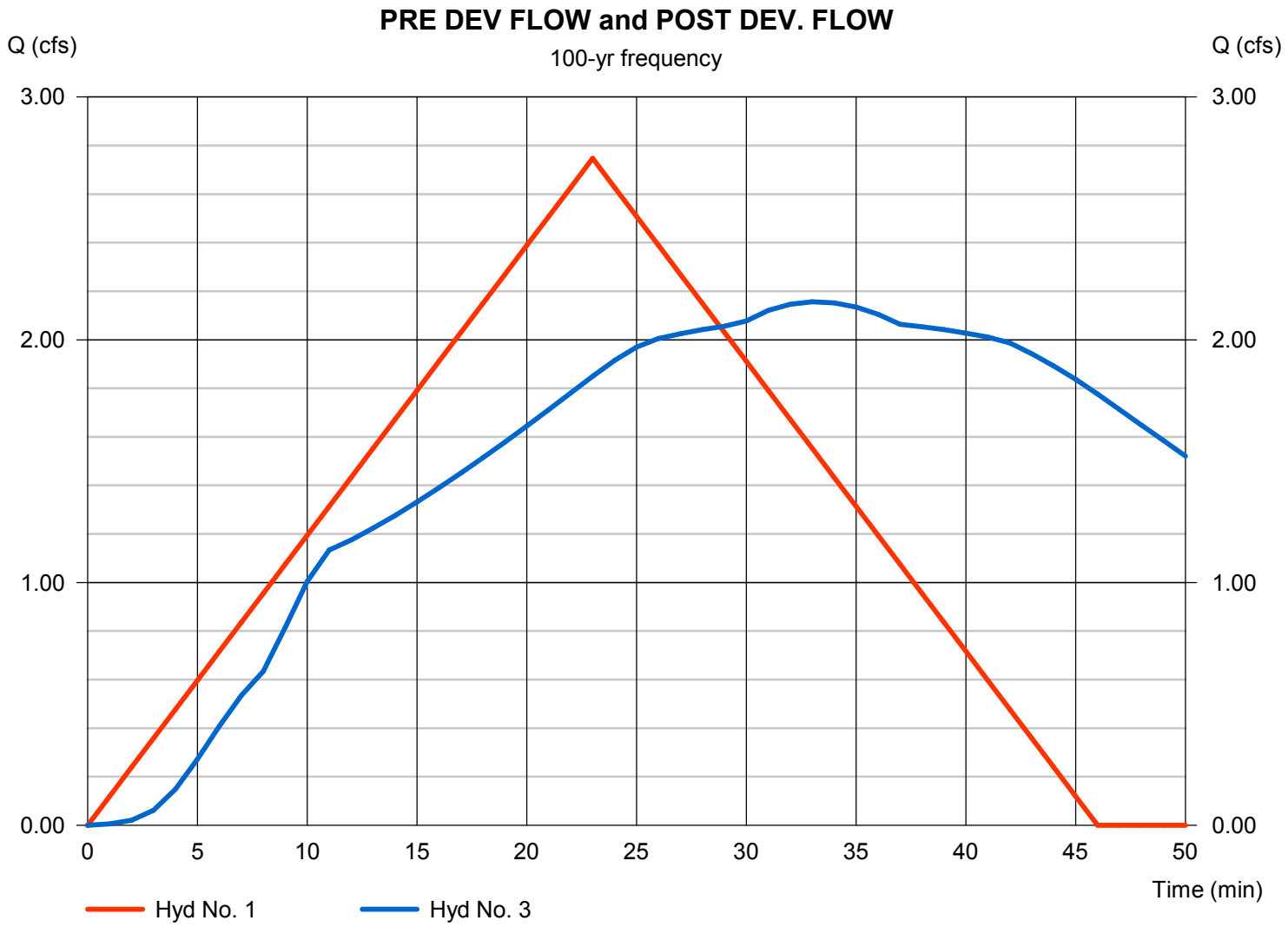
PRE DEV FLOW

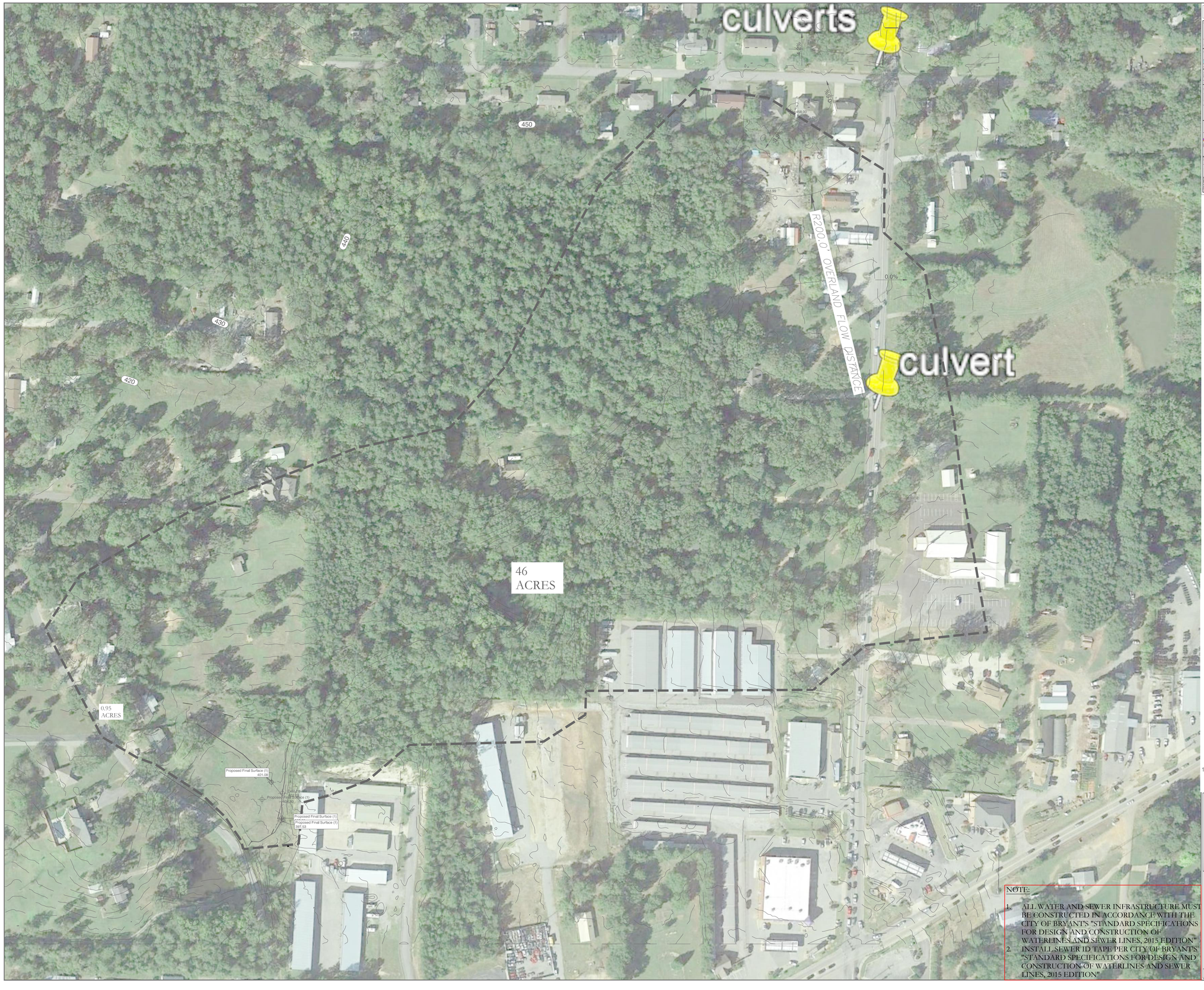
| | | |
|---|---|---|
| Hydrograph type | = | Rational |
| Peak discharge | = | 2.747 cfs |
| Time to peak | = | 23 min |
| Hyd. Volume | = | 3,791 cuft |

## Hyd. No. 3

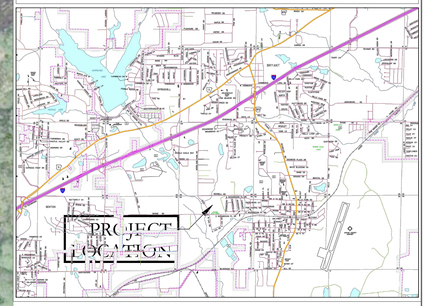
POST DEV. FLOW

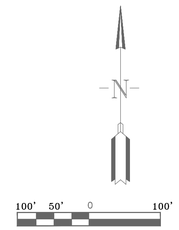
| | | |
|---|---|---|
| Hydrograph type | = | Reservoir |
| Peak discharge | = | 2.16 cfs |
| Time to peak | = | 33 min |
| Hyd. Volume | = | 5,337 cuft |






VICINITY MAP:




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

| time of concentration, tc (min) | REGION 3 IDF | | |
|---|---|---|---|
| Pre | | | |
| **Channel Dimensions and Time of Concentration, tc** | | | |
| Area (ft2) | 1998592.29 | | |
| Area (Acre) | 46 | | |
| Length, L (ft) | 2217.0 | | |
| Change in Elevation (ft) | 60.27 | | |
| Slope, S (ft/ft) | 0.027 | | |
| N (asphalt,grass,etc) | 0.400 | h (ft) | S |
| L( overland, ft) | 200 | 4 | 0.020 |
| L( channel 1, ft) | 2017 | 56.27 | 0.028 |
| L( channel 2, ft) | 0.0 | 0 | 0.000 |
| $t_c$ | 45.4 | v | |
| $t_{c1}$ | 5.6 | 6.007023 | |
| $t_{c2}$ | 0.0 | 0 | |
| time of concentration, tc (min) | 51.0 | *use 50 min* | |

| **Design Peak Runoff Rates, Qp (cfs)** | | | |
|---|---|---|---|
| | Intensity, I (in/hr) | Runoff Coeff | Flow (cfs) |
| | I | C | Q |
| 100year | 4.19 | 0.53 | 101.89 |
| | Qp,max (max flow) cfs | | 102 |
| | Qp,min (min flow) | | 102 |

NOTE:

1. ALL WATER AND SEWER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"
2. INSTALL SEWER ID TAPE PER CITY OF BRYANT'S "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF WATERLINES AND SEWER LINES, 2015 EDITION"

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Benton, Arkansas 72015
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FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
SKY BLUE, LLC

# SEWER EXTENSION PLAN PROFILE

SKY BLUE DUPLEXES

CITY OF BRYANT, SALINE COUNTY, ARKANSAS

| DATE: | 4-1-19 | C.A.D. BY: | | DRAWING NUMBER: |
|---|---|---|---|---|
| REVISED: | | CHECKED BY: | | 17-0532 |
| SHEET: | C-3.0 | SCALE: | | |

| 500 | 01S | 14W | 0 | 27 | 430 | 62 | 1807 |
|---|---|---|---|---|---|---|---|

K:\LAND PROJECTS 2000\SUBDIVISIONS\2019\19-0006 BISSENT DUPLEXES\DELINEATION & EXTRA LIDAR.DWG


overland flow
Channel Flow-1
PRE DEVELOPMENT TOC
0.47 ACRES
7556 Sq. Ft.
TRACT A
1.47 ACRES
64,256 SQ. FT.
2
0.18 ACRES
8003 Sq.Ft.
DEVELOPMENT DRAINAGE AREA= 0.92 ACRES
7937 Sq. Ft.
POST DEVELOPMENT TOC
4
DRAINAGE POINT
0.25 ACRES
11806 SQ. FT.
STUDY POINT
POINT OF BEGINNING
HURRICANE LAKE ROAD (50' R/W)
S80°44'29"E 266.74'
S80°44'29"E 36.23'
S54°39'13"E 133.87'
S45°52'18"E 92.14'
S44°07'42"W 105.02'
S45°52'18"E 33.15'
S44°07'42"W 105.21'
N85°52'23"W 68.21'
N85°52'23"W 74.06'
S8°04'50"W 119.69'
S8°04'50"W 88.74'
S8°04'50"W 15.00'
S8°04'50"W 15.00'
N12°10'38"E 27.28'
N9°10'38"E 88.30'
N9°10'38"E 24.10'
N12°10'38"E 24.78'
N12°10'38"E 31.06'
N12°10'38"E 70.00'
N12°10'38"E 73.58'
N12°10'38"E 73.58'
N12°10'38"E 73.58

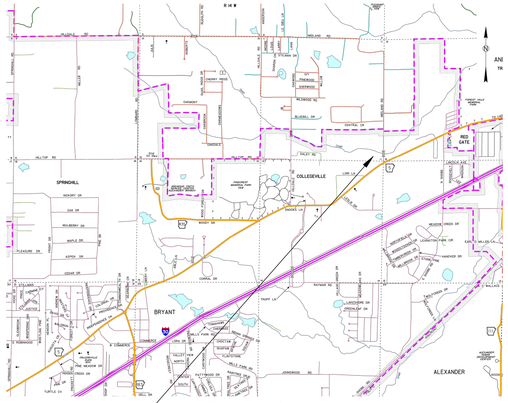
## LEGEND OF SYMBOLS & ABBREVIATIONS

| | | | |
|---|---|---|---|
| GAS METER | STORM DRAIN MANHOLE | | ASPHALT |
| WATER METER | SEWER CLEANOUT | | CONCRETE |
| GUY WIRE | N NORTH | | |
| POWER/UTILITY POLE | S SOUTH | | |
| TELEPHONE PEDESTAL | E EAST | | |
| SEWER MANHOLE | W WEST | | |
| WATER VALVE | (M) AS MEASURED | | SET 1/2" REBAR w/ CAP #1853 |
| FIRE HYDRANT | (D) PER DEED | | SET COTTON-PICKER SPINDLE |
| SIGNS | (R) RECORDED | | FOUND MONUMENT (DESC. NOTED) |
| LIGHT POLE | R/W RIGHT-OF-WAY | | COMPUTED CORNER (NOT SET) |
| TELEPHONE MANHOLE | L.A. LANDSCAPED AREA | | |
| GAS VALVE | CR4 CAPPED 1/2" REBAR | | |
| SS SANITARY SEWER LINE | CONC. CONCRETE | | |
| W WATER LINE | P.O.C. POINT OF COMMENCEMENT | | |
| STORM SEWER PIPE | P.O.B. POINT OF BEGINNING | | |
| ROADWAY CENTERLINE | CMP CORRUGATED METAL PIPE | | |
| UTILITY EASEMENT | RCP REINFORCED CONCRETE PIPE | | |
| BUILDING SETBACK LINE | ESMT EASEMENT | | |
| R/W ROADWAY RIGHT-OF-WAY | HDPE HIGH DENSITY POLYETHYLENE | | |
| OHE OVERHEAD ELECTRIC LINES | SUBD SUBDIVISION | | |
| UGT UNDERGROUND TELEPHONE | FDC FIRE DEPARTMENT CONNECTION | | |
| G UNDERGROUND GAS | CPS COTTON PICKER SPINDLE | | |
| F.O. UNDERGROUND FIBER OPTIC | PS 5/8" PIPE | | |
| X FENCE X | R5 5/8" REBAR | | |
| STEEL GUARD RAIL | R4 1/2" REBAR | | |
| [100] SURFACE CONTOUR LINE & ELEVATION | PK SURVEY NAIL | | |
| | PB TELEPHONE PULL BOX | | |

GRID NORTH

0 30' 60' 120'

SCALE: 1" = 60'




SITE LOCATION

**VICINITY MAP (NTS)**

**BRYANT, AR**

## LAND DESCRIPTION PROVIDED

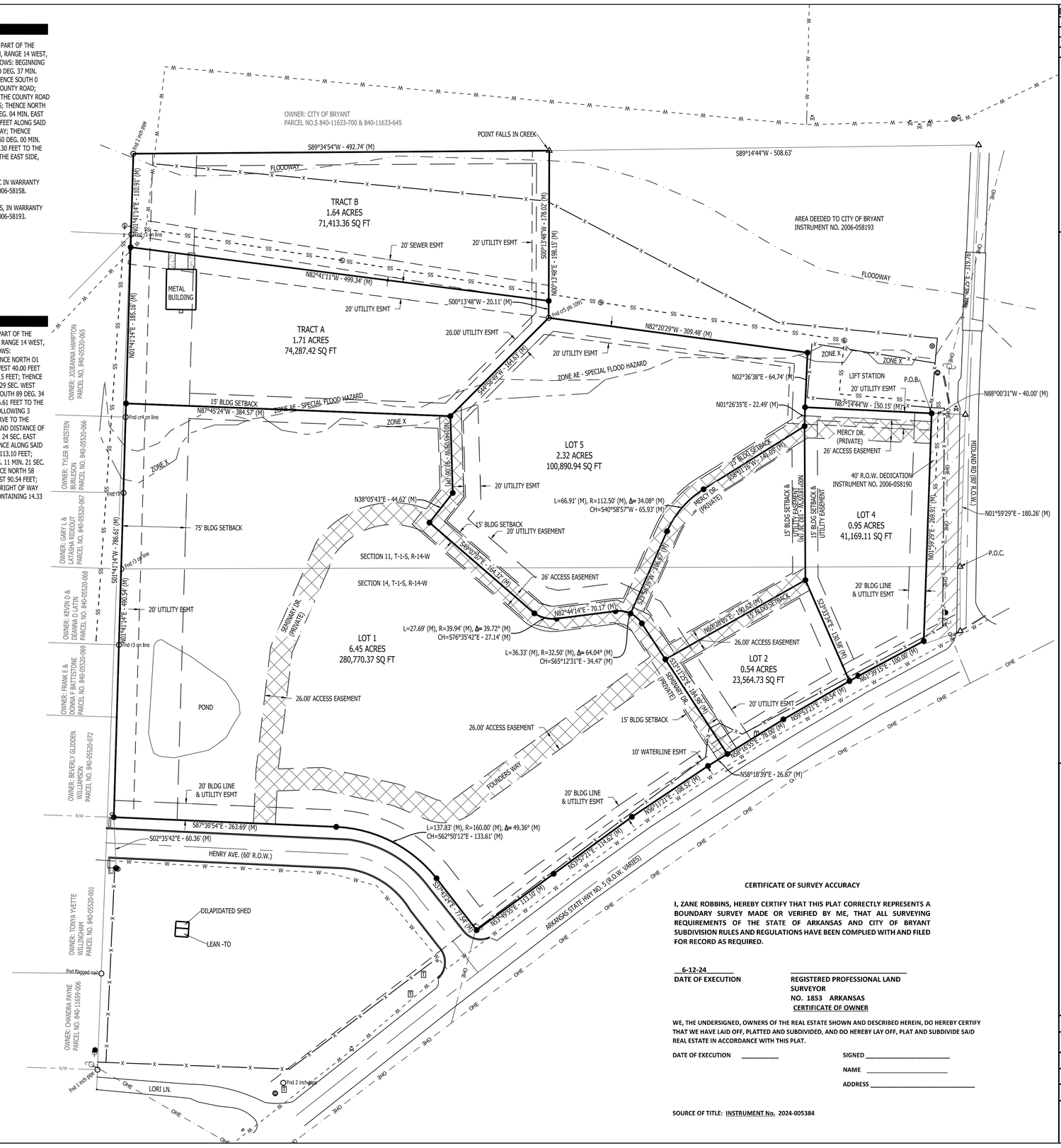
PART OF THE SOUTHEAST QUARTER OF SOUTHEAST QUARTER, SECTION 11, AND A PART OF THE NORTHEAST QUARTER OF NORTHEAST QUARTER, SECTION 14, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF SAID SE 1/4 SE 1/4 SECTION 11; THENCE NORTH O DEG. 37 MIN. EAST 496.97 FEET; THENCE SOUTH 87 DEG. 49 MIN. 40 SEC. WEST 999.96 FEET; THENCE SOUTH 0 DEG. 29 MIN. 35 SEC. WEST 1089.06 FEET TO THE NORTH RIGHT OF WAY OF THE COUNTY ROAD; THENCE SOUTH 87 DEG. 50 MIN. EAST 220.42 FEET ALONG SAID RIGHT OF WAY OF THE COUNTY ROAD TO A POINT ON THE NORTHERLY RIGHT OF WAY OF ARKANSAS STATE HIGHWAY #5; THENCE NORTH 50 DEG. 24 MIN. EAST 404.9 FEET ALONG SAID HIGHWAY #5; THENCE NORTH 52 DEG. 04 MIN. EAST 114.62 FEET ALONG SAID HIGHWAY; THENCE NORTH 54 DEG. 18 MIN. EAST 108.52 FEET ALONG SAID HIGHWAY; THENCE NORTH 56 DEG. 24 MIN. EAST 104.87 FEET ALONG SAID HIGHWAY; THENCE NORTH 58 DEG. 00 MIN. EAST 102.6 FEET ALONG SAID HIGHWAY; THENCE NORTH 60 DEG. 00 MIN. EAST 135.60 FEET ALONG SAID HIGHWAY; THENCE NORTH 0 DEG. 37 MIN. EAST 66.30 FEET TO THE POINT OF BEGINNING. SUBJECT TO A 30 FOOT WIDE ROAD RIGHT OF WAY ALONG THE EAST SIDE, THEREOF.

LESS AND EXCEPT THAT PART CONVEYED TO CENTRAL ARKANSAS DEVELOPERS, LLC IN WARRANTY DEED FILED FOR RECORD MAY 26, 2006 AS SALINE COUNTY DOCUMENT NUMBER 2006-58158.

ALSO LESS AND EXCEPT THAT PART CONVEYED TO THE CITY OF BRYANT, ARKANSAS, IN WARRANTY DEED FILED FOR RECORD MAY 26, 2006 AS SALINE COUNTY DOCUMENT NUMBER 2006-58193.

## LAND DESCRIPTION AS SURVEYED

PART OF THE SOUTHEAST QUARTER OF SOUTHEAST QUARTER, SECTION 11, AND A PART OF THE NORTHEAST QUARTER OF NORTHEAST QUARTER, SECTION 14, TOWNSHIP 1 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SE 1/4 SE 1/4 SECTION 11; THENCE NORTH O1 DEG. 59 MIN. 29 SEC. EAST 180.26 FEET; THENCE NORTH 88 DEG. 00 MIN. 31 SEC. WEST 40.00 FEET TO THE POINT OF BEGINNING; THENCE NORTH 87 DEG. 14 MIN. 28 SEC. WEST 150.15 FEET; THENCE NORTH 02 DEG. 36 MIN. 38 SEC. EAST 64.74 FEET; THENCE NORTH 82 DEG. 20 MIN. 29 SEC. WEST 309.48 FEET; THENCE NORTH 00 DEG. 13 MIN. 48 SEC. EAST 198.15 FEET; THENCE SOUTH 89 DEG. 34 MIN. 54 SEC. WEST 492.74 FEET; THENCE SOUTH 01 DEG. 41 MIN. 14 SEC. WEST 786.61 FEET TO THE NORTH RIGHT OF WAY OF HENRY AVE.; THENCE ALONG SAID RIGHT OF WAY THE FOLLOWING 3 COURSES: SOUTH 87 DEG. 30 MIN. 54 SEC. EAST 263.69 FEET; THENCE ALONG A CURVE TO THE RIGHT WITH A LENGTH OF 137.83 FEET, RADIUS OF 160.00 FEET; CHORD BEARING AND DISTANCE OF SOUTH 62 DEG. 50 MIN. 12 SEC. EAST 133.61 FEET; THENCE SOUTH 37 DEG. 43 MIN. 24 SEC. EAST 77.54 FEET TO THE NORTH RIGHT OF WAY OF ARKANSAS STATE HIGHWAY #5; THENCE ALONG SAID RIGHT OF WAY THE FOLLOWING 6 COURSES; NORTH 53 DEG. 49 MIN. 55 SEC. EAST 113.10 FEET; THENCE NORTH 53 DEG. 57 MIN. 21 SEC. EAST 114.62 FEET; THENCE NORTH 56 DEG. 11 MIN. 21 SEC. EAST 108.52 FEET; THENCE NORTH 58 DEG. 18 MIN. 39 SEC. EAST 26.87 FEET; THENCE NORTH 58 DEG. 16 MIN. 55 SEC. EAST 78.00 FEET; THENCE NORTH 59 DEG. 53 MIN. 21 SEC. EAST 90.54 FEET; THENCE NORTH 61 DEG. 39 MIN. 15 SEC. EAST 100.00 FEET; THENCE LEAVING SAID RIGHT OF WAY NORTH 01 DEG. 59 MIN. 29 SEC. EAST 269.91 FEET TO THE POINT OF BEGINNING CONTAINING 14.33 ACRES (624,101.15 S.F.) MORE OR LESS.




## PLAT NOTES

**S1.** BASIS OF BEARING FOR THIS SURVEY IS BASED ON ARKANSAS STATE PLANE GRID NORTH COORDINATES (NAD83 DATUM). MEASURED DISTANCES ARE GROUND DISTANCES.

**S2.** SURVEY & DOCUMENT REFERENCES:
- a. WARRANTY DEED TO DANA-PAGA IN DEED BOOK 344, PAGE 456.
- b. DEED TO CENTRAL ARKANSAS DEVELOPERS, LLC. INSTRUMENT NO. 2006-058158.
- c. DEED TO CITY OF BRYANT. INSTRUMENT NO. 2006-058193.
- d. RIGHT OF WAY DEDICATION TO CITY OF BRYANT. INSTRUMENT NO. 2006-058190.
- e. RIGHT OF WAY PERMIT TO THE CITY OF BRYANT. INSTRUMENT NO. 2006-058188.
- f. PLAT OF KING'S CROSSING PHASE 1.

**S3.** ZONING CLASSIFICATION: C2
SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT

**S4.** EACH LOT SHALL HAVE SITE PLAN APPROVAL FROM THE CITY OF BRYANT PRIOR TO ANY CONSTRUCTION.

**S5.** SETBACKS
FRONT - 20' (UNLESS NOTED)
SIDE - 15' (UNLESS NOTED)
REAR - 15' (UNLESS NOTED)

## CURRENT OWNERSHIP INFORMATION

OWNER:
EAST NORTH REAL ESTATE XI LLC
1500 CHRISTY LN
ALEXANDER AR 72002
PARCEL #840-11659-001

SOURCE:
SALINE COUNTY ASSESSOR

REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF ARKANSAS
NO. 1853
SIGNATURE
07/24/2024
ZANE ROBBINS
ARKANSAS

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

## UTILITY NOTES

**U1.** UTILITIES SHOWN ON THIS SURVEY ARE NOTED BY VISIBLE OBSERVATION COMBINED WITH INFORMATION OBTAINED FROM AVAILABLE SURVEYS AND UTILITY MAPS. LOCATION OF UNDERGROUND UTILITIES SHOWN ON THIS SURVEY MUST BE CONSIDERED TO BE APPROXIMATE AS NO EXCAVATION HAS TAKEN PLACE AS OF THIS DATE TO DETERMINE THEIR EXACT LOCATION. OTHER UTILITIES, TO WHICH THE EXISTENCE AND LOCATION ARE UNKNOWN, MAY BE LOCATED ON OR NEAR THE SUBJECT PROPERTY.

**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**

**FLOOD STATEMENT**

BY GRAPHIC PLOTTING ALONE, ACCORDING TO FEMA FIRM #05125C0240E, DATED JUNE 5, 2020, PORTIONS OF THIS PROPERTY LIES IN ZONE "X", AREAS DETERMINED TO BE IN THE 0.2% ANNUAL CHANCE FLOOD HAZARD AND ZONE "AE" AREAS IN THE SPECIAL FLOOD HAZARD.

**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.**

**6-12-24**
**DATE OF EXECUTION**

**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** _____
**ADDRESS** _____

**SOURCE OF TITLE: INSTRUMENT No. 2024-005384**

| DATE | REVISIONS |
|---|---|
| | |
| | |
| | |
| | |
| | |

**PROPERTY ADDRESS:**

AR. STATE HWY NO. 5
BRYANT, AR. 72022

# LOTS 1-5, BLESSINGS ADDITION CITY OF BRYANT SALINE COUNTY, ARKANSAS

# FINAL PLAT


ROBBINS PROFESSIONAL LAND SERVICES
INCORPORATED
SURVEYING | GIS | CONSTRUCTION STAKING
P.O. BOX 339 | BRYANT, ARKANSAS 72089
OFFICE: 501.425.8300 | EMAIL: ZANE@ROBBINSSURVEY.COM


| | |
|---|---|
| DRAWN BY | ZR |
| CHECKED BY | ZR |
| DATE | 7-24-24 |
| SCALE | 1"=60' |
| PROJECT No. | 2024105 |
| SHEET | -- |
| PAGE | 1 of 1 |


C:\DRAWINGS\R-P PAPERS (BRYANT)\2024\2105 FINAL PLAT.dwg | ACTIVE R+P_SAVE_PLOT STYLE: ROBBINS PROFESSIONAL LAND SERVICES (INCORPORATED).ctb | 7/24/2024 8:36:48 AM | ©2024 ROBBINS PROFESSIONAL LAND SERVICES INCORPORATED

## 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.**

7-24-24
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** STEVE LITTLETON

**ADDRESS** 2620 LESLIE LANE,
ALEXANDER, AR 72002

**SOURCE OF TITLE:** INSTRUMENT No. 2024-004102

TRACT 1:
All that part of the Northeast Quarter, Section 14, Township 1 South, Range 14 West, Saline County, Arkansas, more particularly described as follows: Commencing at the Southeast corner of said NE 1/4, Section 14, thence North along the East line thereof 536.86 feet, thence North 86 deg. 36 min. West 365.0 feet; thence South 89 deg. 29 min. 58 sec. West 63.0 feet to a rebar; thence South 89 deg. 29 min. 58 sec. West along the North right-of-way line of Leslie Drive 191.913 feet to a rebar and the point of beginning; thence continue South 89 deg. 29 min. 58 sec. West along said Road right-of-way line 191.913 feet to a rebar; thence North 01 deg. 20 min. 00 sec. West leaving said Road 293.43 feet to a 3/4 inch iron pin; thence North 00 deg. 20 min. 00 sec. West along a line common with the land of Central Arkansas Church of Christ 158.416 feet to a rebar; thence North 88 deg. 40 min. 00 sec. East 189.129 feet to a rebar; thence South 01 deg. 20 min. 00 sec. East 454.611 feet to the point of beginning, containing 1.9915 acres of land, more or less.

AND

TRACT 2:
All that part of the Northeast Quarter, Section 14, Township 1 South, Range 14 West, Saline County, Arkansas, more particularly described as follows: Commencing at the Southeast corner of said NE 1/4, Section 14, thence North along the East line thereof 536.86 feet; thence North 86 deg. 36 min. West 365.0 feet; thence South 89 deg. 29 min. 58 sec. West 63.0 feet to a rebar and the point of beginning; thence continue, South 89 deg. 29 min. 58 sec. West along the North right-of-way line of Leslie Drive 191.913 feet to a rebar; thence North 01 deg. 20 min. 00 sec. West leaving said Road 454.611 feet to a rebar; thence North 88 deg. 40 min. 00 sec. East 191.892 feet to a rebar; thence South 01 deg. 20 min. 00 sec. East 457.40 feet to the point of beginning, containing 2.0088 acres of land, more or Less.

## GENERAL NOTES

1. BASIS OF BEARING FOR THIS SURVEY IS ARKANSAS GRID SOUTH. DISTANCES SHOWN ARE GROUND DISTANCES.
2. REFERENCES:
   A. DEED IN SALINE COUNTY DEED BOOK 368, PAGE 519.
   B. SURVEY BY HOPE CONSULTING FOR LANCE PENFIELD DATED 7-3-2018.
   C. SURVEY BY KERRY LANE FOR WILLIAM AND SHIRLEY HARTWICK DATED 9-29-10.
   D. SURVEY BY BEN KITTLER JR. FOR LENDERS TITLE COMPANY DATED 2-3-94.
3. ZONING CLASSIFCATION: R-E

**CURRENT OWNER OF RECORD**
STEVEN G & KAREN A LITTLETON
2620 LESLIE LANE
ALEXANDER AR 72002

**PROPERTY ADDRESS**
2620 LESLIE LANE
BRYANT, AR 72022

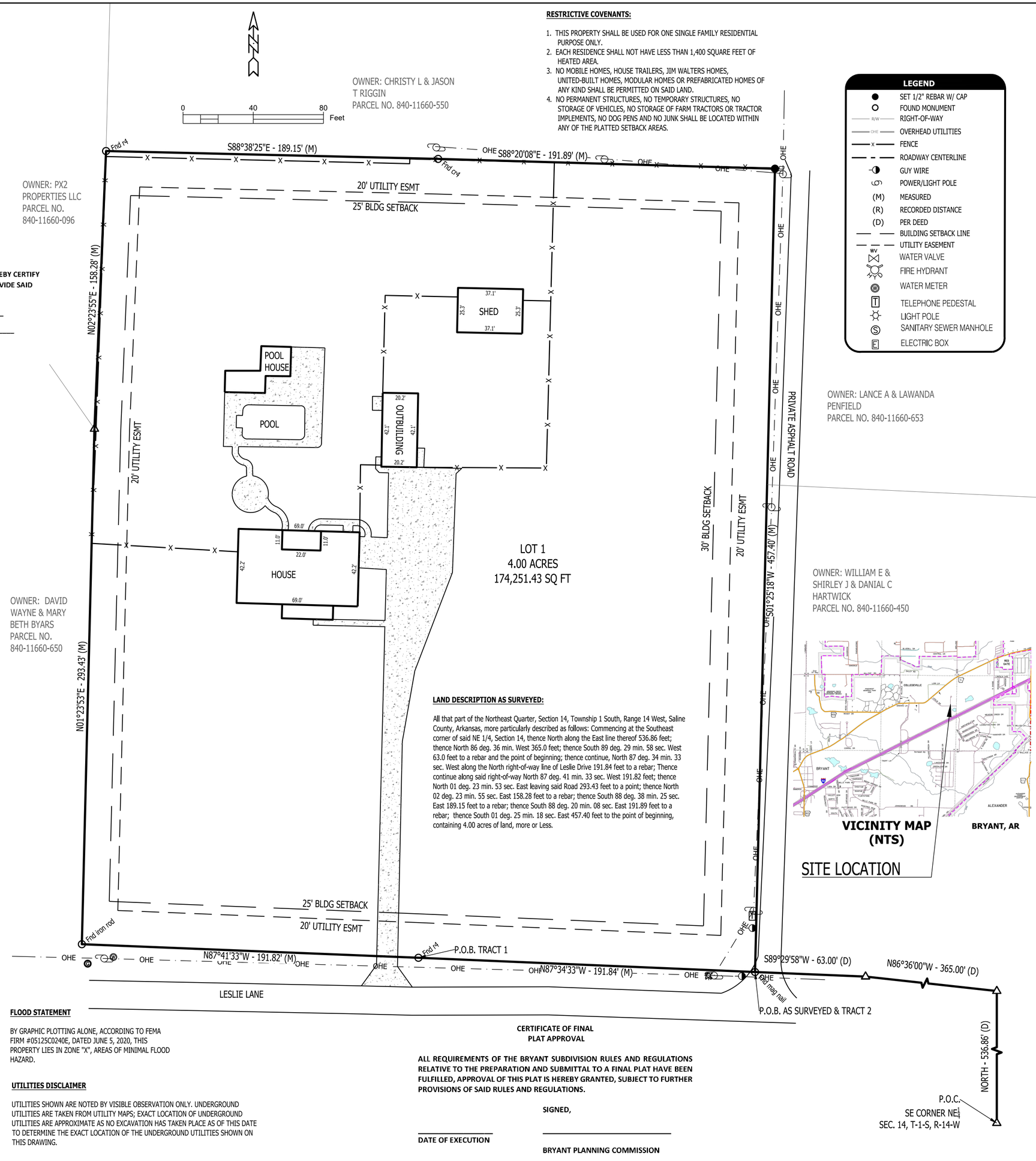
CERTIFICATE OF AUTHORIZATION
ROBBINS PROFESSIONAL LAND SERVICES
#4151
ARKANSAS - SURVEYOR

REGISTERED
STATE OF ARKANSAS
NO. 1853
SIGNATURE
7/24/2024
PROFESSIONAL LAND SURVEYOR
ZANE ROBBINS

## 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




**RESTRICTIVE COVENANTS:**

1. THIS PROPERTY SHALL BE USED FOR ONE SINGLE FAMILY RESIDENTIAL PURPOSE ONLY.
2. EACH RESIDENCE SHALL NOT HAVE LESS THAN 1,400 SQUARE FEET OF HEATED AREA.
3. NO MOBILE HOMES, HOUSE TRAILERS, JIM WALTERS HOMES, UNITED-BUILT HOMES, MODULAR HOMES OR PREFABRICATED HOMES OF ANY KIND SHALL BE PERMITTED ON SAID LAND.
4. NO PERMANENT STRUCTURES, NO TEMPORARY STRUCTURES, NO STORAGE OF VEHICLES, NO STORAGE OF FARM TRACTORS OR TRACTOR IMPLEMENTS, NO DOG PENS AND NO JUNK SHALL BE LOCATED WITHIN ANY OF THE PLATTED SETBACK AREAS.

**LEGEND**

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

**LAND DESCRIPTION AS SURVEYED:**

All that part of the Northeast Quarter, Section 14, Township 1 South, Range 14 West, Saline County, Arkansas, more particularly described as follows: Commencing at the Southeast corner of said NE 1/4, Section 14, thence North along the East line thereof 536.86 feet; thence North 86 deg. 36 min. West 365.0 feet; thence South 89 deg. 29 min. 58 sec. West 63.0 feet to a rebar and the point of beginning; thence continue, North 87 deg. 34 min. 33 sec. West along the North right-of-way line of Leslie Drive 191.84 feet to a rebar; Thence continue along said right-of-way North 87 deg. 41 min. 33 sec. West 191.82 feet; thence North 01 deg. 23 min. 53 sec. East leaving said Road 293.43 feet to a point; thence North 02 deg. 23 min. 55 sec. East 158.28 feet to a rebar; thence South 88 deg. 38 min. 25 sec. East 189.15 feet to a rebar; thence South 88 deg. 20 min. 08 sec. East 191.89 feet to a rebar; thence South 01 deg. 25 min. 18 sec. East 457.40 feet to the point of beginning, containing 4.00 acres of land, more or Less.




**VICINITY MAP (NTS)** BRYANT, AR

SITE LOCATION

**FLOOD STATEMENT**

BY GRAPHIC PLOTTING ALONE, ACCORDING TO FEMA FIRM #05125C0240E, DATED JUNE 5, 2020, THIS PROPERTY LIES IN ZONE "X", AREAS OF MINIMAL 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**

| DATE | REVISIONS |
|---|---|
| | |
| | |
| | |

# LOT 1, LESLIE ADDITION
# CITY OF BRYANT
# SALINE COUNTY, ARKANSAS

# FINAL PLAT


ROBBINS PROFESSIONAL LAND SERVICES
INCORPORATED
SURVEYING | GIS | CONSTRUCTION STAKING
P.O. BOX 939 | BRYANT, ARKANSAS 72089
OFFICE: 501.425.6380 | EMAIL: ZANEROBBINS6@GMAIL.COM


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| DRAWN BY | ZR |
| CHECKED BY | ZR |
| DATE | 07/24/2024 |
| SCALE | 1"=40' |
| PROJECT No. | 2024400 |
| PAGE | 1 of 1 |


Y:\2024\2024400 PENFIELD NEIGHBOR\2024400 FINAL PLAT.dwg | PLOTTED BY: Ray | PLOT DATE: 8/5/2024 9:50:22 AM | ©2024 ROBBINS PROFESSIONAL LAND SERVICES INCORPORATED