

## **Bryant Planning Commission Meeting**

Boswell Municipal Complex - City Hall Court Room

210 SW 3rd Street

YouTube: <a href="https://www.youtube.com/c/bryantarkansas">https://www.youtube.com/c/bryantarkansas</a>

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

### Call to Order

### **Approval of Minutes**

### 1. Planning Commission Meeting Minutes 1/11/2024

• 2024-01-11 Planning Commision Minutes.pdf

### **Announcements**

### **Director's Report**

### **DRC Report**

### 2. 2903 Pikewood Dr - Lot 31A and 31B - Conditional Use Permit

Veer Investment Properties - Requesting Approval of CUPs for a Duplex on each lot - RECOMMENDED APPROVAL, based on completed application.

### 3. 2714 Lavern - Short Term Rental - Conditional Use Permit

Vanessa Guerra - Requesting Approval of CUP for Short Term Rental - RECOMMENDED APPROVAL, Based on completed application. Contingent upon all public hearing requirements being met.

### 4. Lot 31 and 32 Replat - Pikewood Subdivision - 2903 Pikewood Drive

Veer Investment Properties - Requesting Approval for Replat - RECOMMENDED APPROVAL, Contingent upon DRC comments being met.

### 5. AR Storage Center - I-30 Storage - 253000 I-30

Hope Consulting - Requesting Site Plan Approval - RECOMMENDED APPROVAL, Contingent upon remaining comments being addressed.

### 6. Summerwood Sports Complex Gym 3 - Revised Plans - HWY 5 and Brynat Parkway

Phillip Lewis Engineering - Requesting Approval for Revised Site Plan - APPROVED - Contingent upon remaining engineering comments being addressed.

- · 0824-PLN-02.pdf
- <u>0824-LTR-01.pdf</u>
- 0824-ELV-01.pdf
- · 0824-DRN-01.pdf

### 7. Elrod Law Firm - 400 N Reynolds Road - Sign Permit

Ace Sign Company - Requesting Sign Permit Approval - APPROVED

0833-APP-01.pdf

### 8. Sharks - 5309 Hwy 5 - Sign Permit

Aero Signs - Requesting Sign Permit Approval - STAFF APPROVED

• <u>0822-APP-02.jpg</u>

### 9. Sandy's Nails and Spa - 3411 Main Street Ste 4 - Sign Permit

Requesting Sign Permit Approval - STAFF APPROVED

· 0834-APP-01.pdf

### 10. Boutiques and Suites - 107 Progress Way - Sign Permit

L. Graphics - Requesting Sign Permit Approval - STAFF APPROVED

• <u>0835-APP-01.pdf</u>

### **Public Hearing**

### 11. 2714 Lavern - Short Term Rental - Conditional Use Permit

Vanessa Guerra - Requesting Approval of CUP for Short Term Rental

- 0820-HTC-01.pdf
- 0820-LTR-01.pdf
- 0820-APP-01.pdf

### 12. 3903 Pikewood Drive - Lot 31A - Conditional Use Permit

Veer Investment Properties - Requesting Approval of CUP for Duplex

- 0828-PUB-01.pdf
- 0828-APP-01.pdf

### 13. 3903 Pikewood Drive - Lot 31B - Conditional Use Permit

Veer Investment Properties - Requesting Approval of CUP for Duplex

- 0829-PUB-01.pdf
- <u>0829-APP-01.pdf</u>

### **Old Business**

### **New Business**

### 14. Lot 31 & 32 Replat - Pikewood Subdivision - 2903 Pikewood Dr

Veer Investment Properties - Requesting Approval for Replat

- <u>0827-RPLT-02.pdf</u>
- 0827-PLT-01.pdf

### 15. AR Storage Center - I-30 Storage - 253000 I-30

Hope Consulting - Requesting Site Plan Approval

### Adjournments



### **Bryant Planning Commission Meeting Minutes**

Monday, January 11, 2024 Boswell Municipal Complex – City Hall Courtroom 6:00 PM

### **Agenda**

### **CALL TO ORDER**

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

### **ANNOUNCEMENTS**

None

### **APPROVAL OF MINUTES**

1. Planning Commission Meeting Minutes 12/11/2023

Motion to Approve Minutes made by Commissioner Statton, Seconded by Commissioner Edwards. Voice Vote, 8 Yays, 0 nays. 0 Absent.

Vice-Chairman Hooten read the DRC Report.

### **DRC REPORT**

2. Five Star Fireworks - Temporary Business Permit

Mark Bradford - Requesting Approval for Temporary Business Permits for Firework stands at: (1) 23395 I-30, (2) 5407 HWY 5 APPROVED

**3. The Corner Office - 207 Progress Way -** Sign Permit L Graphics - Requesting Approval for Sign Permit - STAFF APPROVED **4. Nail Studio - 5309 Hwy 5, STE 130**- Sign Permit *Aero Signs - Requesting Sign Permit Approval - STAFF APPROVED* 

### **OLD BUSINESS**

### 5. Changes to Floodplain Ordinance 2020-04

Daran Robertson - Requesting Recommendation on Changes to Existing Floodplain Ordinance

Darren Robertson explained the reasoning behind the request to change the ordinance. After discussion, the Commission recommended that some of the changes be revised to allow for a variance in specific situations for the purpose of allowing roadway or access. Roll call vote to recommend the ordinance changes to City Council contingent upon the revisions being added. 8 yays, 0 nays, 0 absent.

### **NEW BUSINESS**

6. Lombard Heights Ph. 2 - Changing of Street Name

Requesting Approval for Changing of Street Name from Midway Dr. to Midway Ave. Letter of map revision requested.

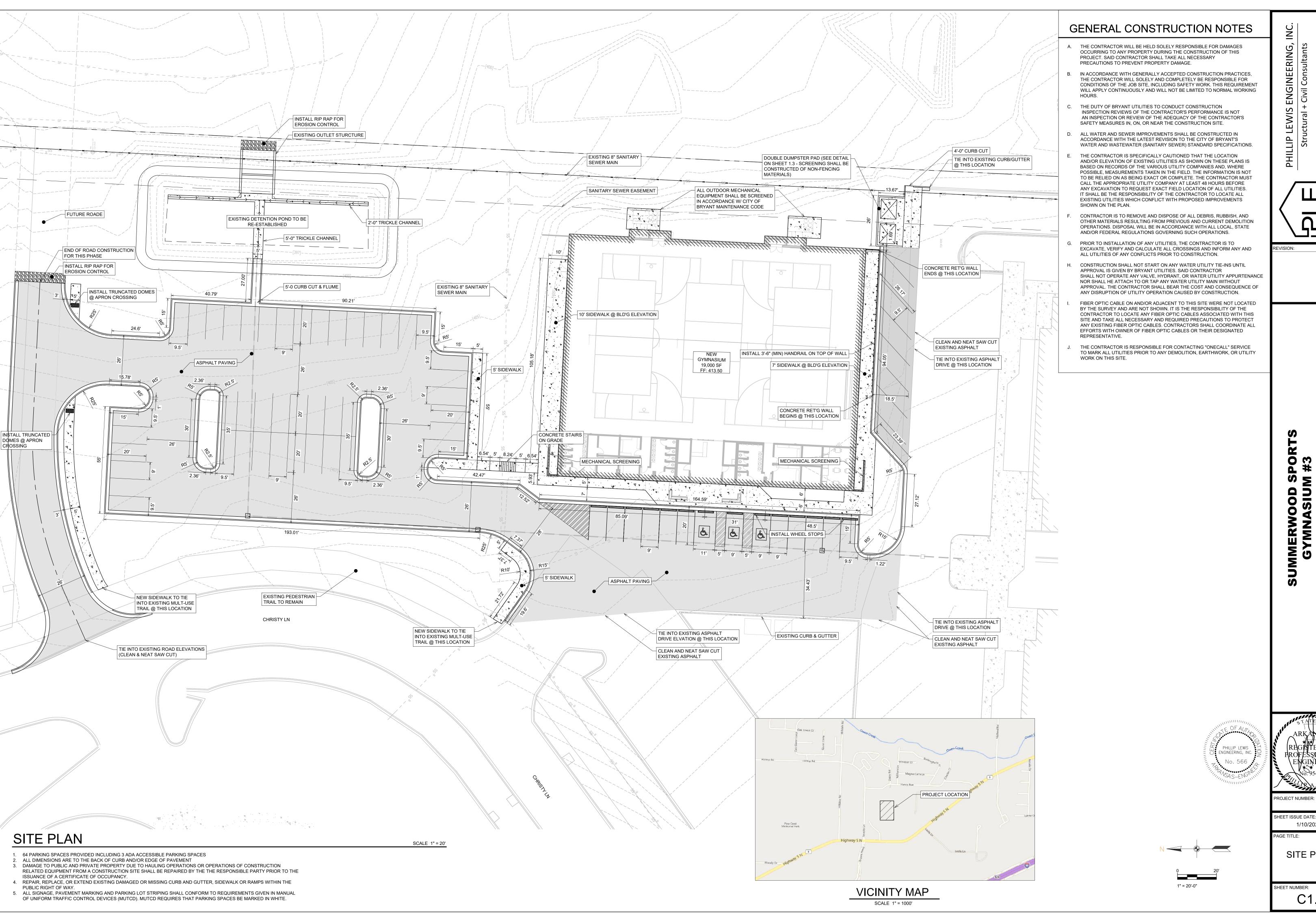
After brief discussion on the item, Chairman Penfield Called for a roll call vote to approve. 8 yays, 0 nays, 0 Absent.

### **DIRECTOR'S REPORT**

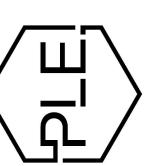
Truett Smith let the Commission know about a google calendar created that lists all of the Planning Commission and DRC meeting dates. He told the commissioners that if they were interested in having it shared with them to let him know.

### **ADJOURNMENT**

| Motion to Adjourn made<br>Burgess. Voice Vote, 8 Ya |          | , Seconded by Commissioner<br>Jeeting was adjourned. |
|---|----------|--|
| Chairman, Lance Penfield                            | . — Date |  |
| Secretary, Tracy Picanco                            | <br>Date |  |



ENGINEERING,

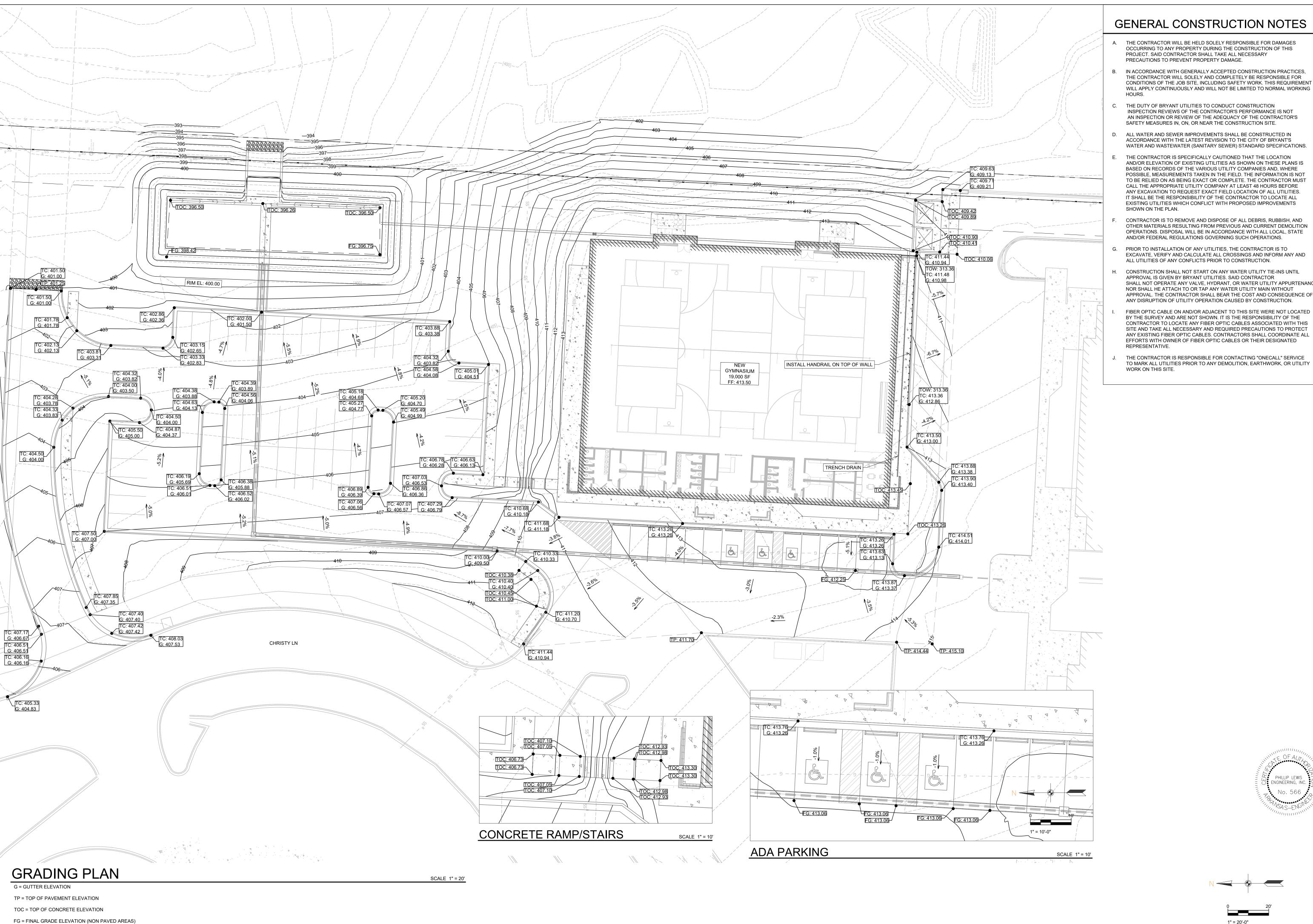


REVISION:

SHEET ISSUE DATE:

1/10/2024

SITE PLAN



TC = TOP OF CURB ELEVATION

TOW = TOP OF WALL

# GENERAL CONSTRUCTION NOTES

- A. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR DAMAGES OCCURRING TO ANY PROPERTY DURING THE CONSTRUCTION OF THIS PROJECT. SAID CONTRACTOR SHALL TAKE ALL NECESSARY
  - IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL SOLELY AND COMPLETELY BE RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING

ENGINEERING,

LEWIS

PHILLIP

REVISION:

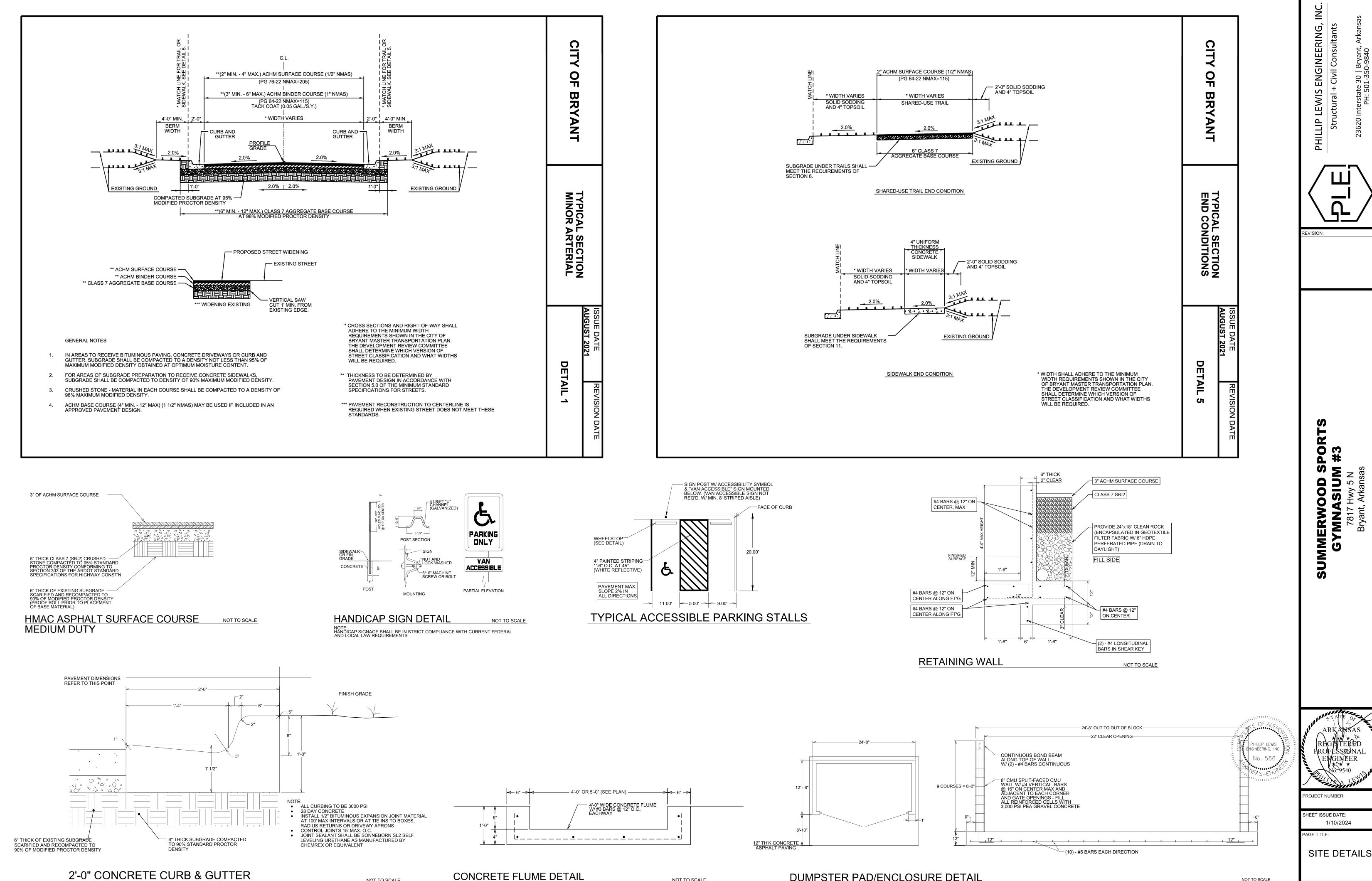
- C. THE DUTY OF BRYANT UTILITIES TO CONDUCT CONSTRUCTION INSPECTION REVIEWS OF THE CONTRACTOR'S PERFORMANCE IS NOT AN INSPECTION OR REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S
- ALL WATER AND SEWER IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION TO THE CITY OF BRYANT'S WATER AND WASTEWATER (SANITARY SEWER) STANDARD SPECIFICATIONS.
- 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 ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS
- CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- PRIOR TO INSTALLATION OF ANY UTILITIES, THE CONTRACTOR IS TO EXCAVATE, VERIFY AND CALCULATE ALL CROSSINGS AND INFORM ANY AND ALL UTILITIES OF ANY CONFLICTS PRIOR TO CONSTRUCTION.
- H. CONSTRUCTION SHALL NOT START ON ANY WATER UTILITY TIE-INS UNTIL APPROVAL IS GIVEN BY BRYANT UTILITIES. SAID CONTRACTOR SHALL NOT OPERATE ANY VALVE, HYDRANT, OR WATER UTILITY APPURTENANCE NOR SHALL HE ATTACH TO OR TAP ANY WATER UTILITY MAIN WITHOUT APPROVAL. THE CONTRACTOR SHALL BEAR THE COST AND CONSEQUENCE OF ANY DISRUPTION OF UTILITY OPERATION CAUSED BY CONSTRUCTION.
- BY THE SURVEY AND ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY FIBER OPTIC CABLES ASSOCIATED WITH THIS SITE AND TAKE ALL NECESSARY AND REQUIRED PRECAUTIONS TO PROTECT ANY EXISTING FIBER OPTIC CABLES. CONTRACTORS SHALL COORDINATE ALL EFFORTS WITH OWNER OF FIBER OPTIC CABLES OR THEIR DESIGNATED
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING "ONECALL" SERVICE TO MARK ALL UTILITIES PRIOR TO ANY DEMOLITION, EARTHWORK, OR UTILITY

1/10/2024

**GRADING PLAN** 

C1.2

SHEET NUMBER:



NOT TO SCALE

NOT TO SCALE

**DUMPSTER PAD/ENCLOSURE DETAIL** 

REVISION:

GYMNASIUM 7817 Hwy 5 N Bryant, Arkansas

PROFESSIONAL

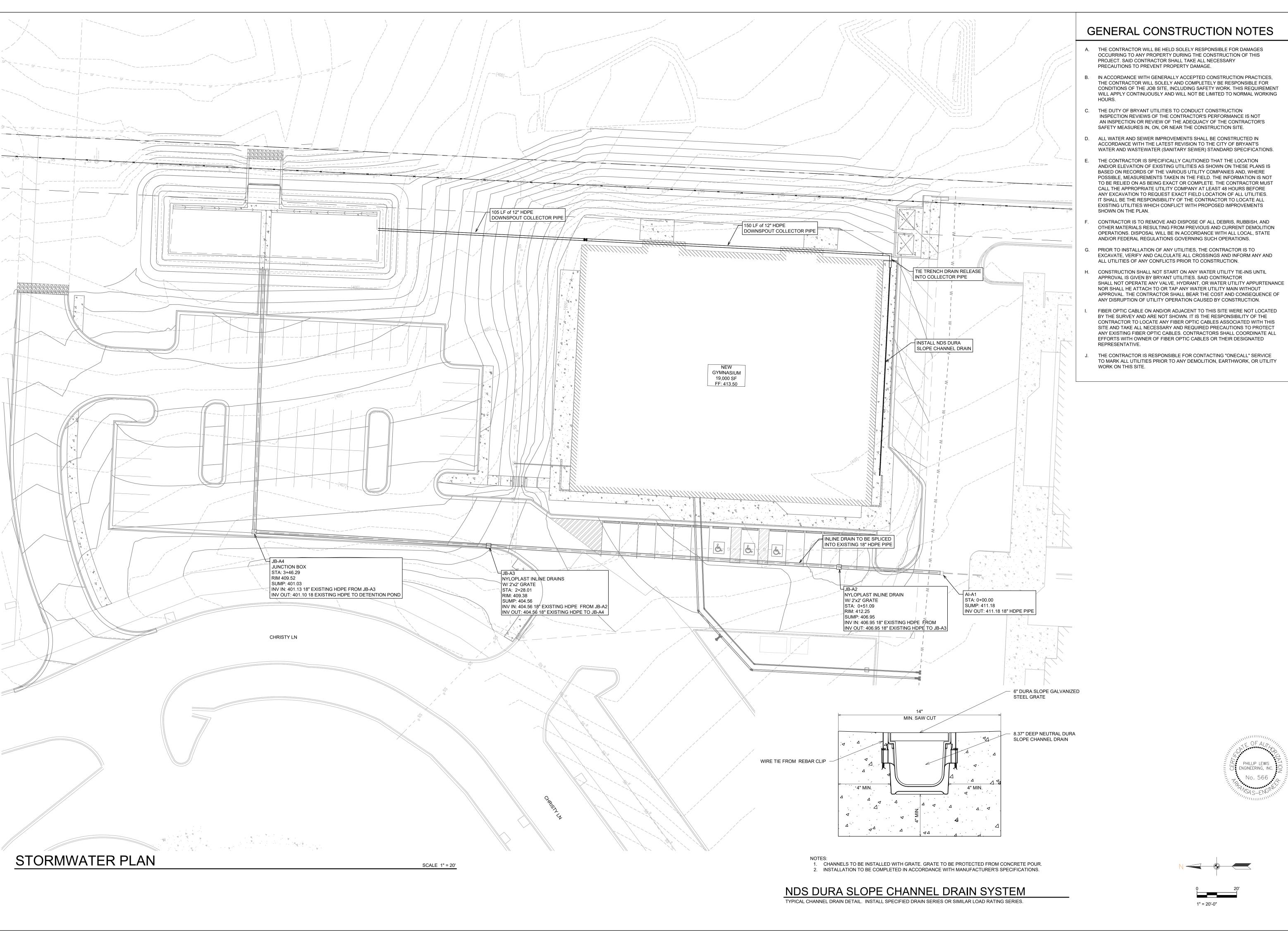
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STORMWATER PLAN

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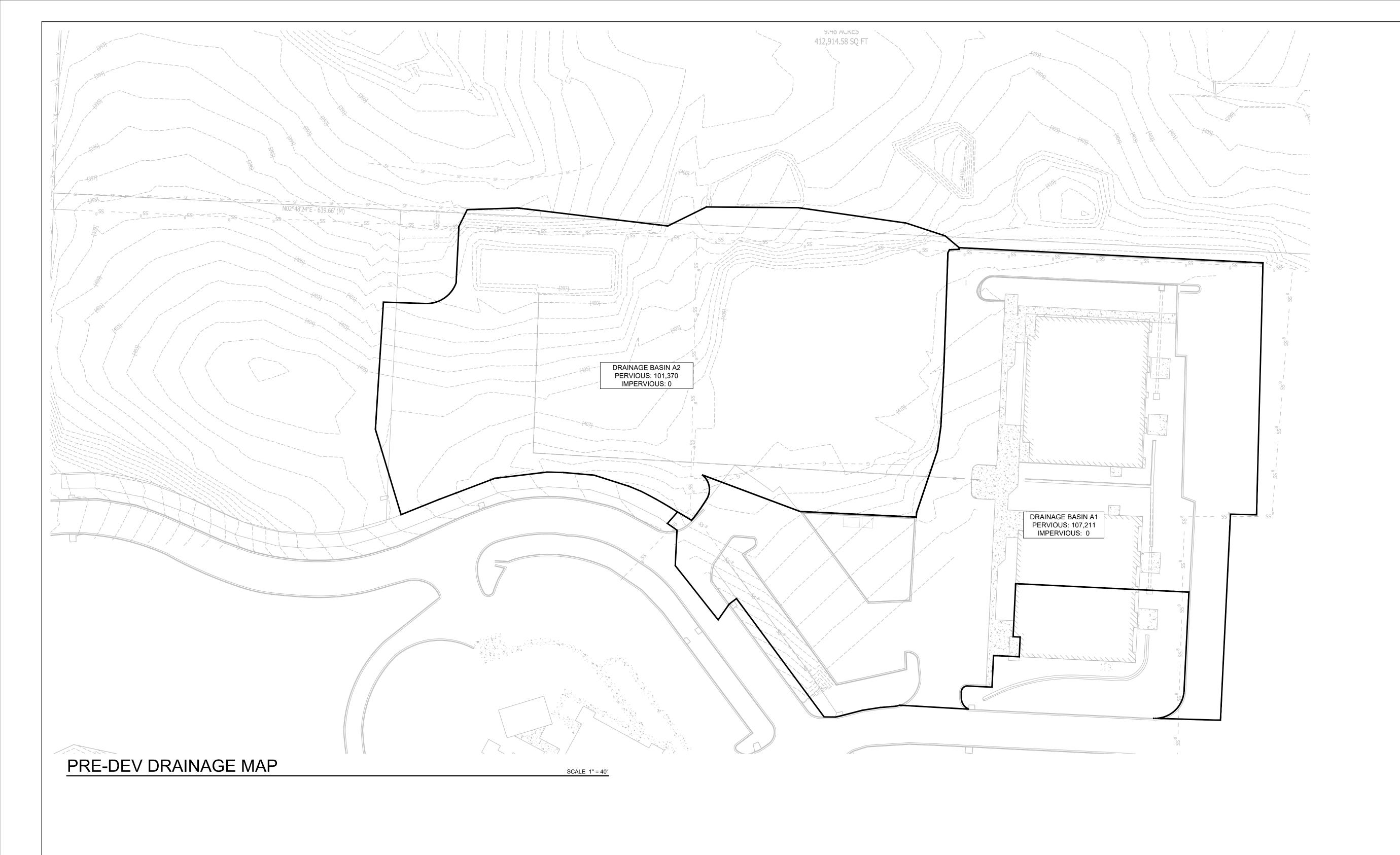
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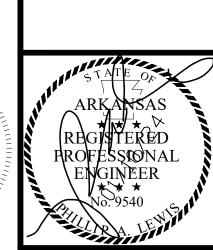
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IASIUM #3 17 Hwy 5 N

**GYMN**7817



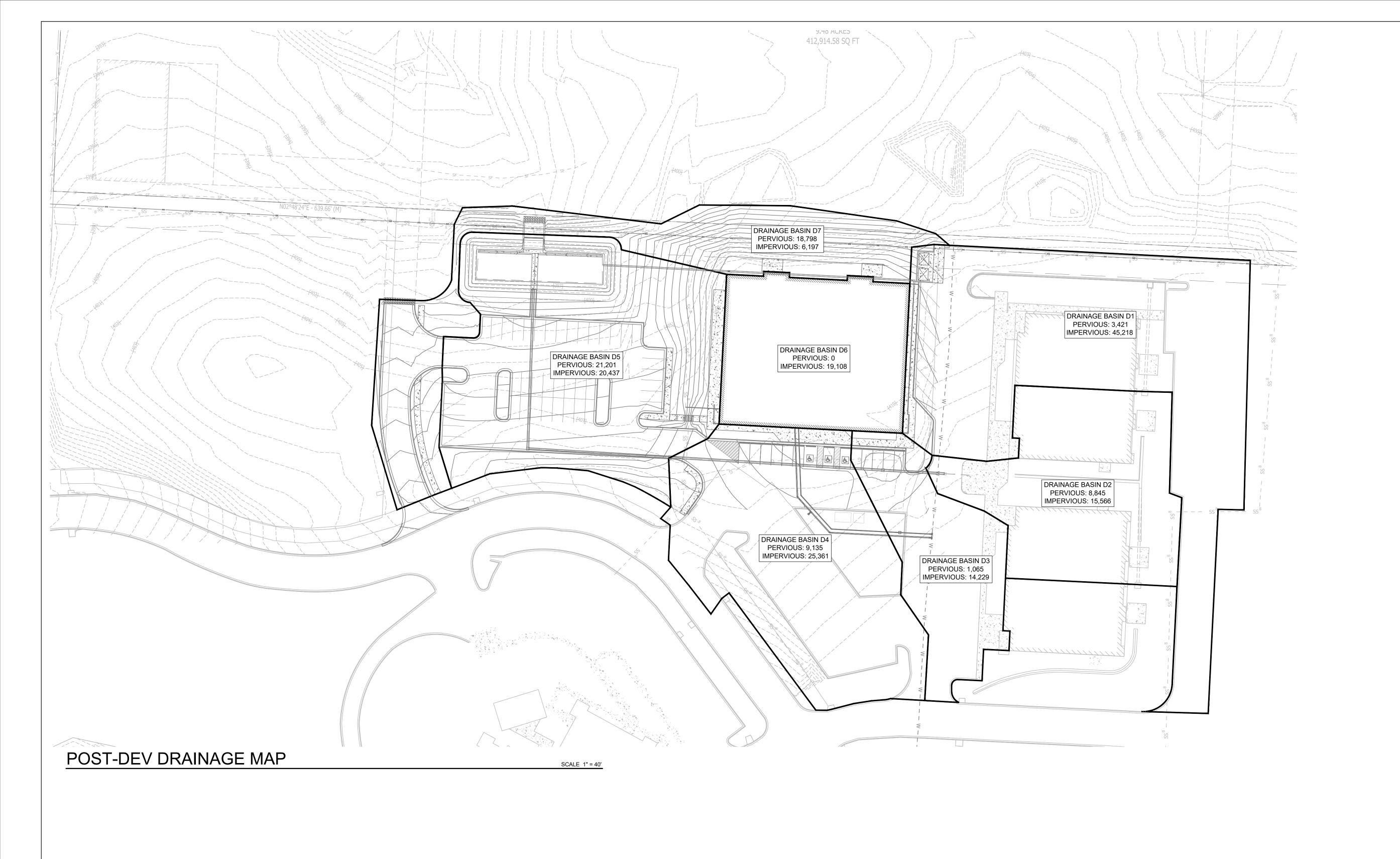


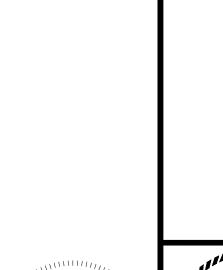


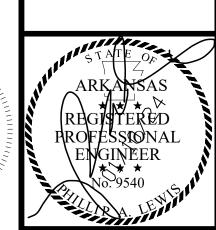
PRE-DEV

DRAINAGE MAP SHEET NUMBER:

C1.5

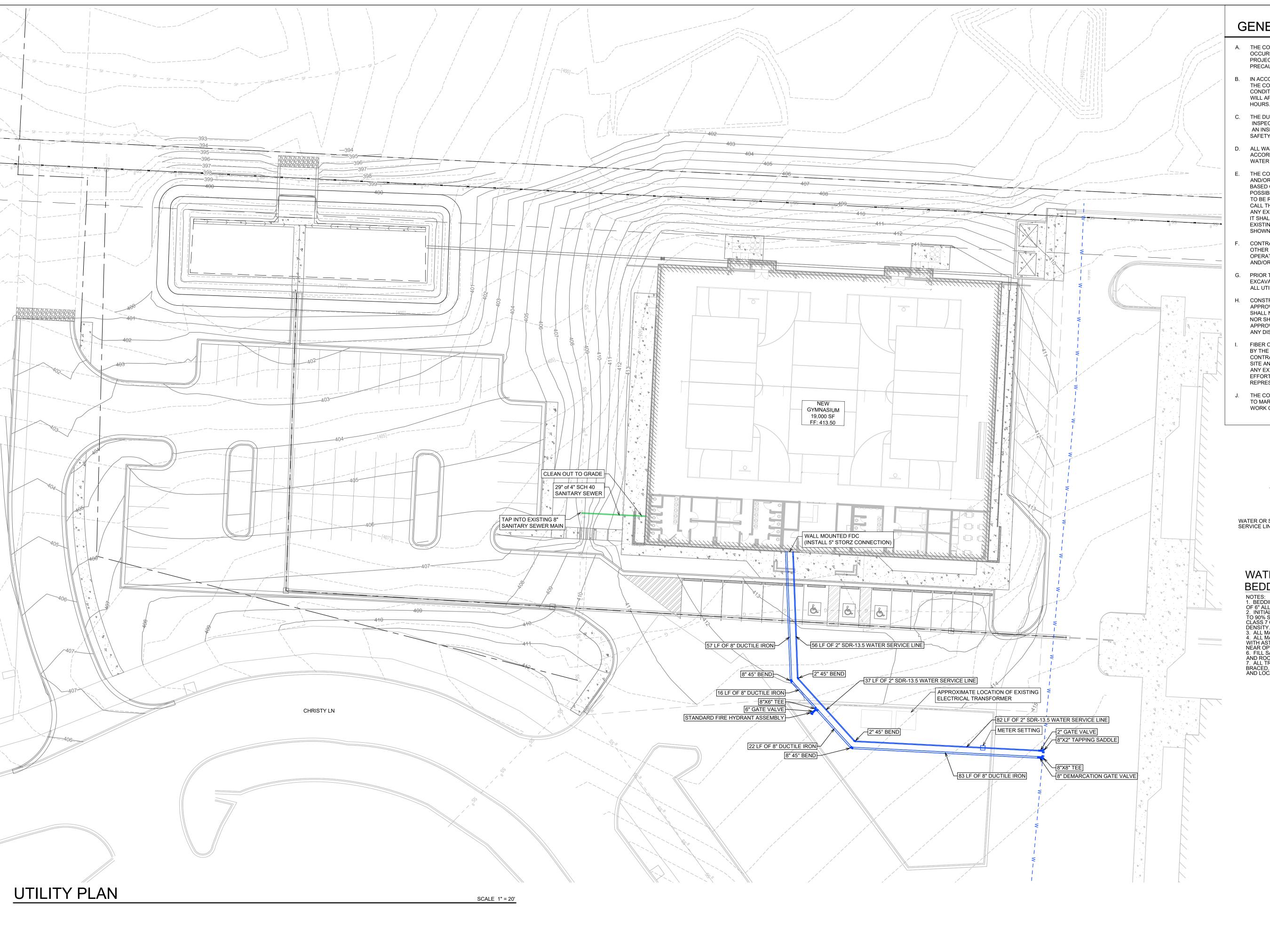






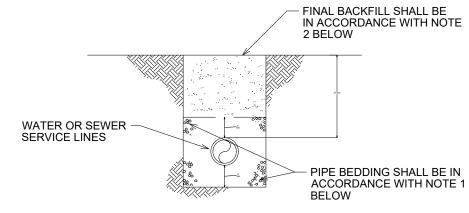
PHILLIP LEWIS ENGINEERING,
Structural + Civil Consultants

POST-DEV DRAINAGE MAP



# GENERAL CONSTRUCTION NOTES

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- B. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL SOLELY AND COMPLETELY BE RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING
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- J. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING "ONECALL" SERVICE TO MARK ALL UTILITIES PRIOR TO ANY DEMOLITION, EARTHWORK, OR UTILITY WORK ON THIS SITE.



# WATER AND SEWER LINES BEDDING DETAIL

NOT TO SCALE

NOTES:

1. BEDDING SHALL BE "GRIT" PER ASTM 2774 OR ASTM D448 SIZE 67 A MINIMUM OF 6" ALL AROUND PIPE.

2. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR. ALL BACKFILL UNDER PAVED AREAS SHALL BE CLASS 7 CRUSHED STONE (SB-2) COMPACTED TO 95% STANDARD PROCTOR

CLASS / CRUSHED STONE (SB-2) COMPACTED TO 95% STANDARD PROCTOR DENSITY.

3. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D2321-89.

4. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LIFTS IN ACCORDANCE WITH ASTM D698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED TO NEAR OPTIMUM MOISTURE CONTENT.

6. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS, AND ROCKS LARGER THAN 3".

7. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.

CYMNASIUM #3
7817 Hwy 5 N
Bryant, Arkansas

ENGINEERING,

PHILLIP

REVISION:

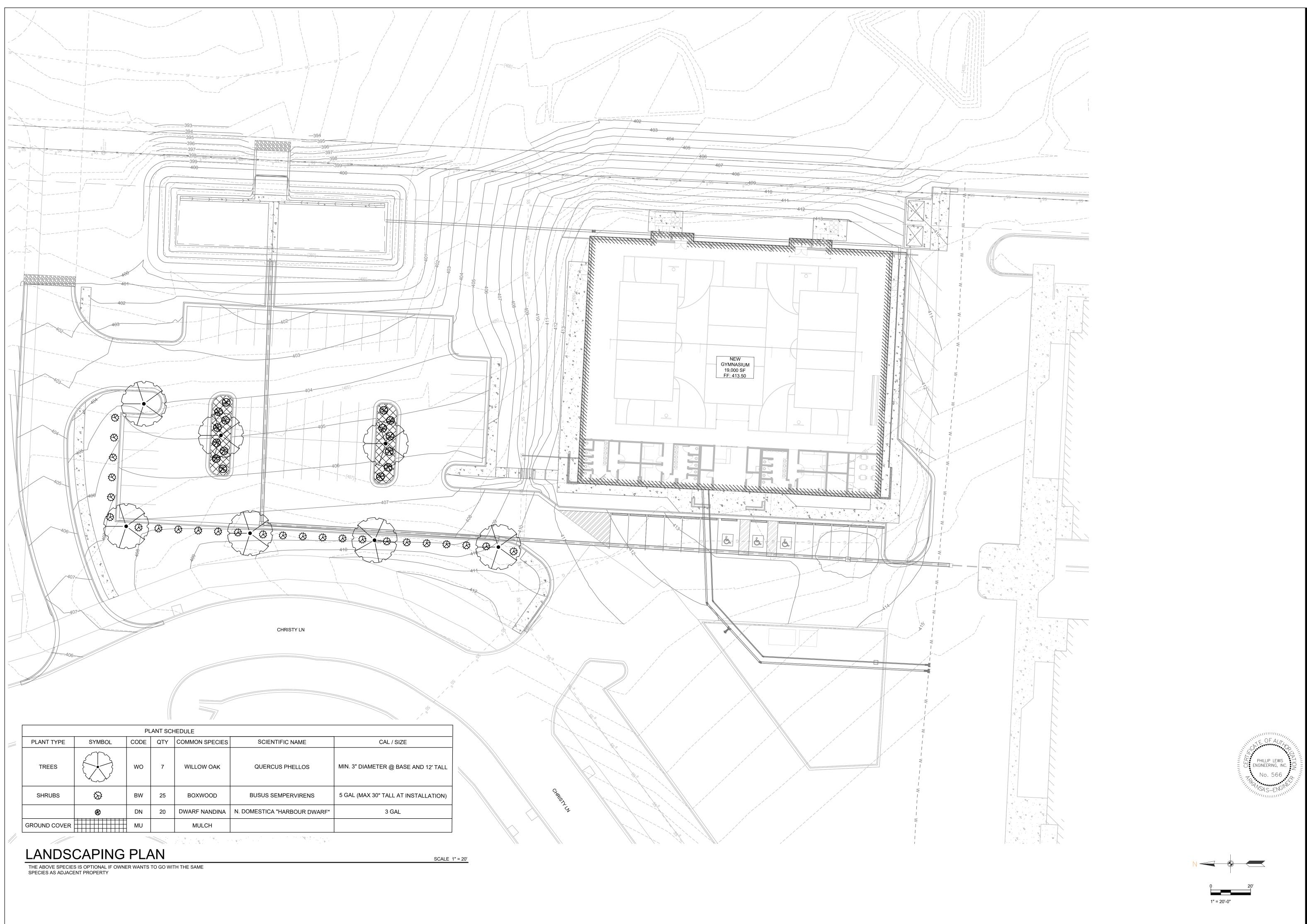
PRELIMINARY DETRUCTION

PROJECT NUMBER:

SHEET ISSUE DATE: 1/10/2024

E TITLE:

UTILITY PLAN



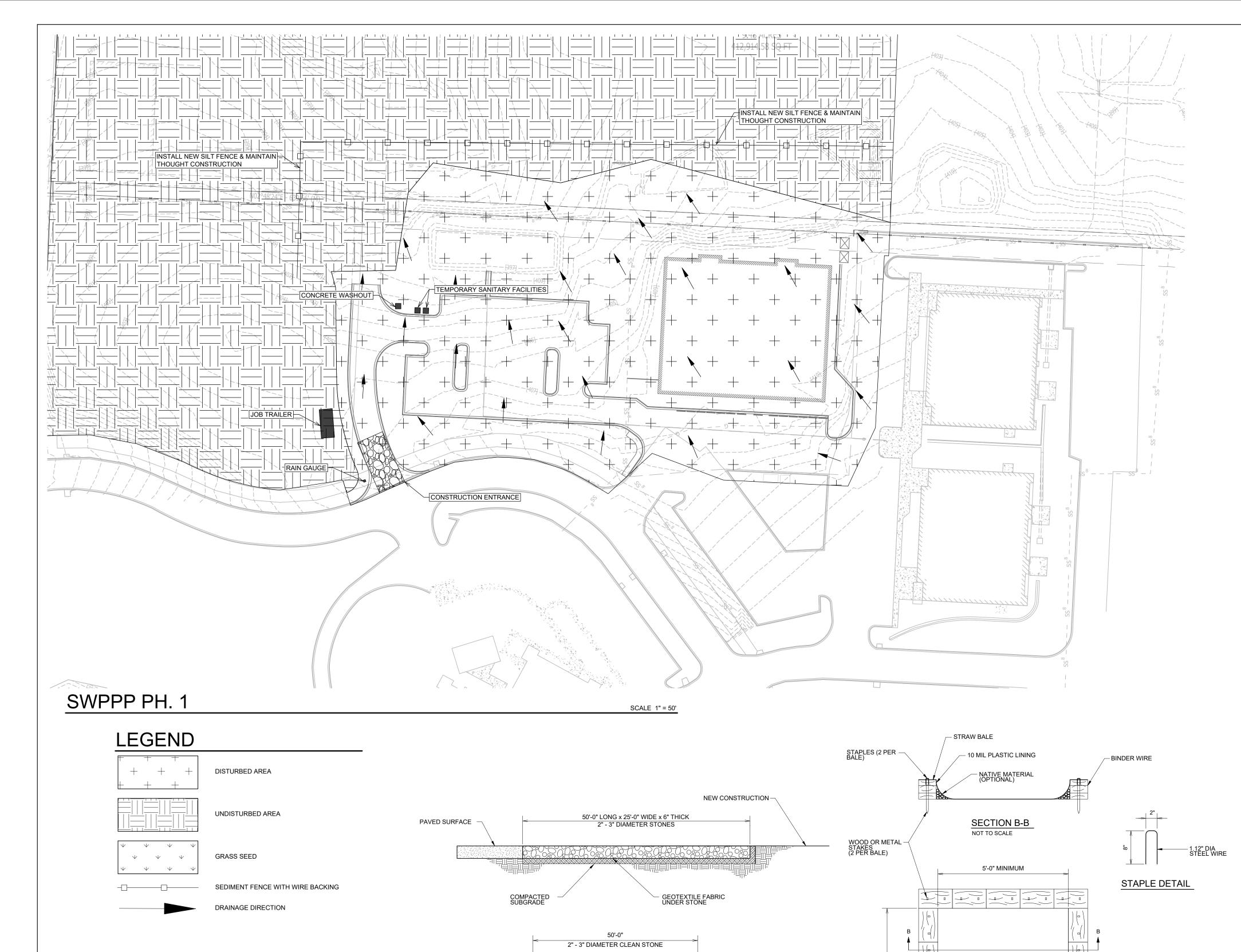
> LEWIS ENGINEERING, I ructural + Civil Consultants

PHILLIP

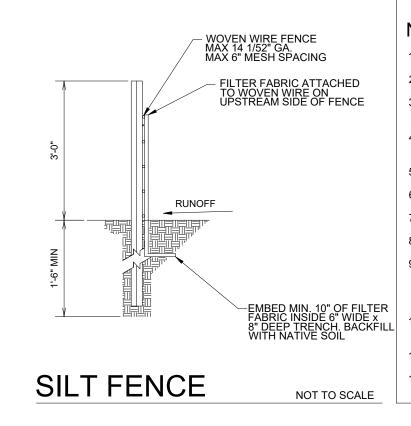
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1/10/2024

LANDSCAPING PLAN



**CONSTRUCTION ENTRANCE** 



NOT TO SCALE

**CONCRETE WASHOUT** 

10 MIL PLASTIC LINING

NOT TO SCALE

# NOTES AND SPECIFICATIONS:

 POSTS SHALL BE A MINIMUM OF 36 INCHES CONSTRUCTED OF EITHER OF
 THE FOLLOWING MATERIALS: STEEL "T" OR "U" TYPE, OR 2" x 2" HARDWOOD.
 WOVEN HOW AND THE ASSOCIATIONAL FENCE SUPPORT SHALL BE MINIMUM 14.5 GA. WITH 6" MAXIMUM SPACING.

3. WOVEN WIRE SHALL BE PLACED ALONG THE UPHILL SIDE OF THE FENCE AND FASTENED WITH WIRE TIES OR 1" STAPLES ALONG THE UPHILL SIDE OF THE 4. FILTER FABRIC SHALL BE FASTENED TO WOVEN WIRE ACCORDING TO MANUFACTURER'S RECOMMENDATION, OR WITH TIES EVERY 24" AT THE TOP AND MID-SECTIONS. 5. WHERE TWO PIECES OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6 INCHES AND FOLDED TOGETHER.
6. WHERE TWO POSTS MEET TO JOIN FENCE SECTIONS, THE TOPS OF THE POSTS SHALL BE SECURED TOGETHER WITH WIRE. 7. THE FENCE SHALL BE CONSTRUCTED ALONG THE CONTOUR AS MUCH AS POSSIBLE. 8. ENDS OF FENCES SHALL BE EXTENDED UP THE SLOPE TO PRVENT RUNOFF FROM MIGRATING AROUND THE END OF THE FENCE. 9. INSPECTION OF THE FENCE SHALL BE PERFORMED WEEKLY, OR IMMEDIATELY AFTER A RAIN EVENT, OR WHEN BULGES APPEAR IN THE FENCE. ACCUMALTED SILT SHALL NOT BE ALLOWED TO EXCEED HALF THE HEIGHT OF THE FABRIC. REPAIR AND OR REPLACMENT OF DAMAGED FENCE SHALL BE COMPLETED PROMPTLY.

10. ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE IN SUCH A MANNER THAT IT WILL NOT CONTRIBUTE TO OFF-SITE 11. ALL FENCING SHALL BE REMOVED WITH THE CONSTRUCTION SITE IS FULLY

PROJECT NUMBER:

GYMNASIUM 7817 Hwy 5 N Bryant, Arkansas

> LEWIS ENGINEERING, I

PHILLIP

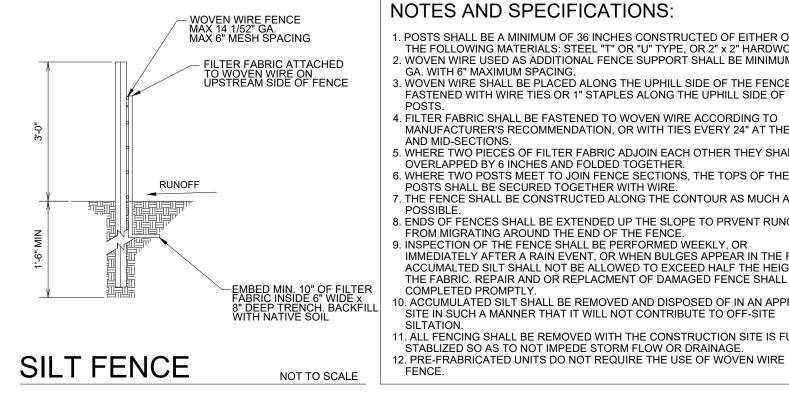
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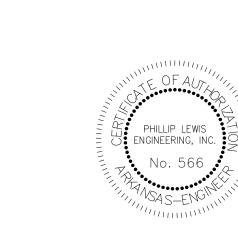
SWPPP PH.

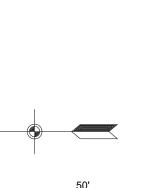
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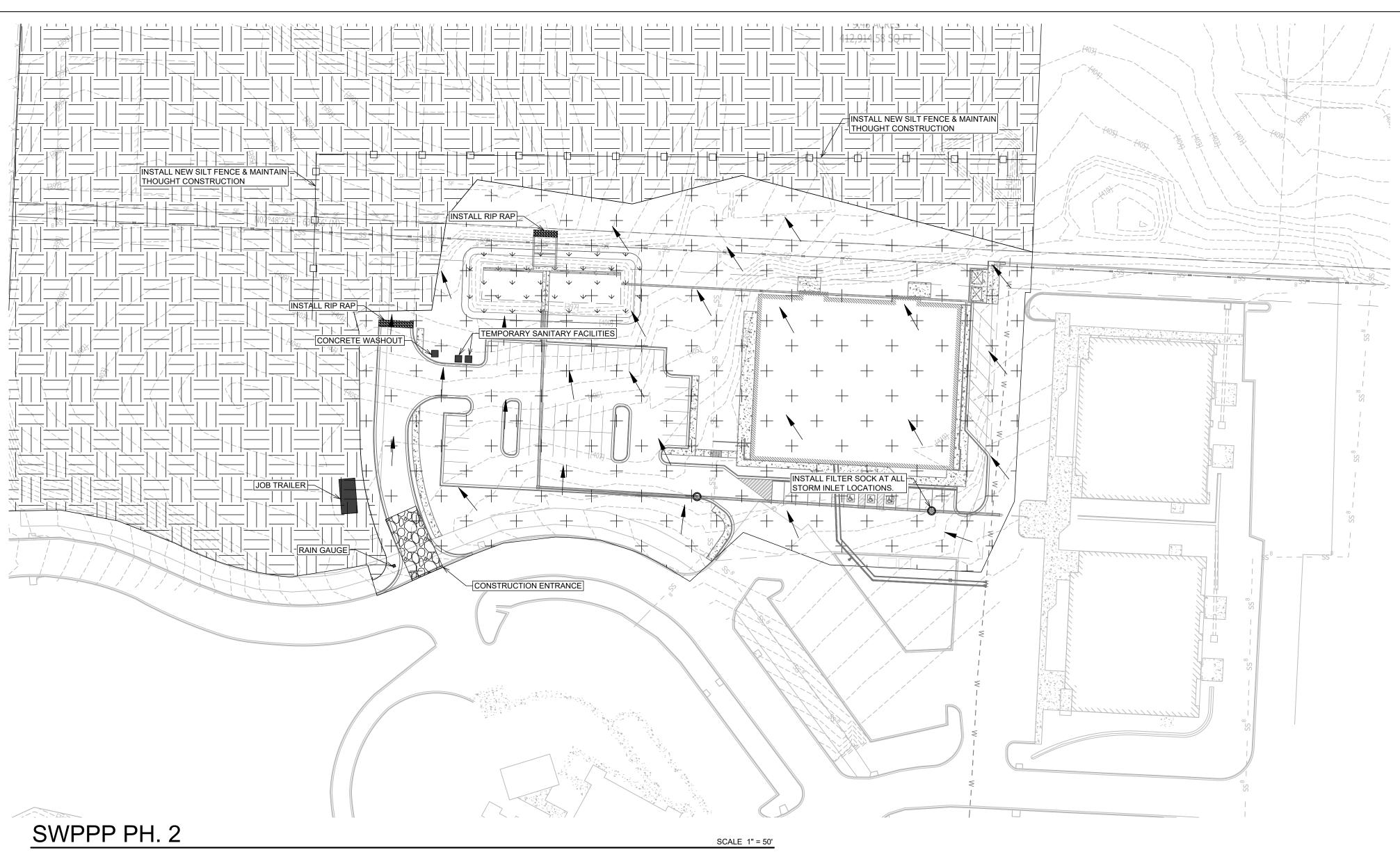
## NOTES (GENERAL): 1. SEE EROSION CONTROL DETAILS IN SWPPP FOR EROSION CONTROL FACILITIES.

- 2. SEE SWPPP FOR INSTALLATION, MAINTENANCE, INSPECTION, AND RECORD KEEPING REQUIREMENTS. CONTRACTOR SHALL SHOW EROSION CONTROL MEASURE ON SITE MAP. 4. EROSION AND SEDIMENT CONTROL STRUCTURES TO MEET SWPPP DETAILS - APPENDIX D 5. INSTALL ROCK DITCH, CHECK, OR SAND BAG CHECKS AS NECESSARY TO PREVENT SCOUR UNTIL
- LANDSCAPING IS ESTABLISHED. 6. CONTRACTOR MUST PLACE SEDIMENT BASIN WITH SEDIMENT FENCE OUTLET FOR ANY SEDIMENT
- CONTAMINATED DEWATERING DISCHARGE.
- 7. FINAL SLOPE WILL BE SAME DIRECTION AS EXISTING SLOPE.



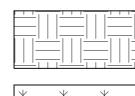




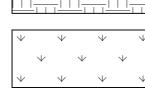


LEGEND

+ DISTURBED AREA



UNDISTURBED AREA



GRASS SEED



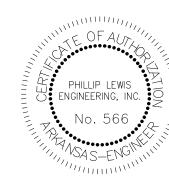
SEDIMENT FENCE WITH WIRE BACKING

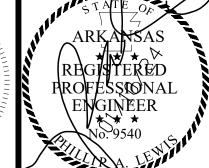
DRAINAGE DIRECTION

# NOTES (GENERAL):

- SEE EROSION CONTROL DETAILS IN SWPPP FOR EROSION CONTROL FACILITIES.
   SEE SWPPP FOR INSTALLATION, MAINTENANCE, INSPECTION, AND RECORD KEEPING REQUIREMENTS.
   CONTRACTOR SHALL SHOW EROSION CONTROL MEASURE ON SITE MAP.
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  7. FINAL SLOPE WILL BE SAME DIRECTION AS EXISTING SLOPE.





SUMMERWOOD S GYMNASIUM 7817 Hwy 5 N Bryant, Arkansas

> LEWIS ENGINEERING, I ructural + Civil Consultants

PHILLIP

REVISION:

PROJECT NUMBER:

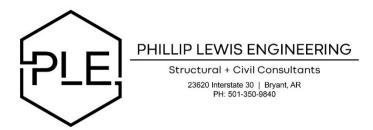
SHEET ISSUE DATE: 1/10/2024

AGE TITLE:

SWPPP PH. 2

SHEET NUMBER:
C1.10

0 50'



January 10, 2023

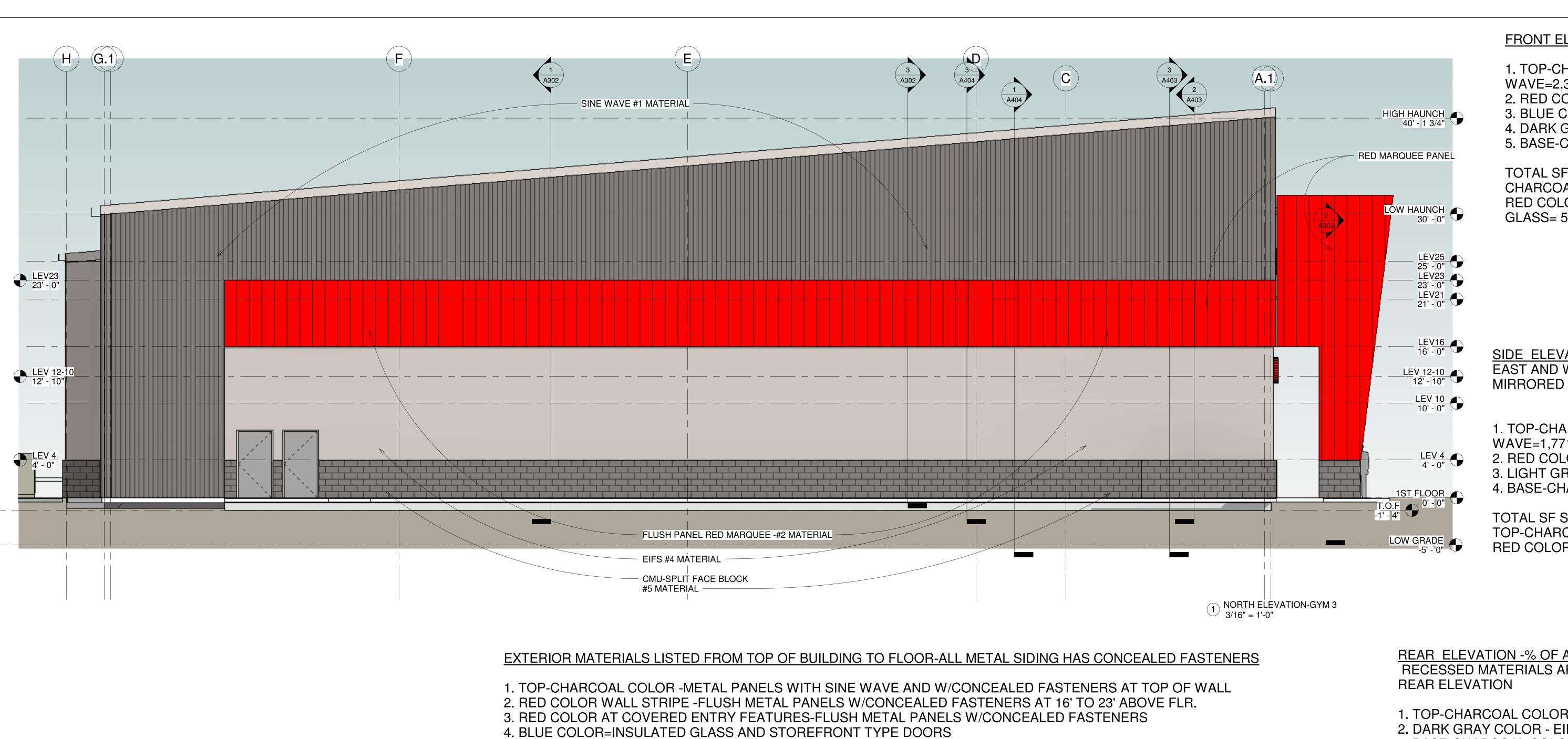
Colton Leonard City Planner City of Bryant 210 SW 3<sup>rd</sup> St. Bryant, AR 72022

To whom it may concern,

This is a formal request to be placed on the upcoming Design Review Committee agenda for a Small Scale Development application pertaining to the Summerwood Sports Gymnasium #3 project. The is the third gym installment of the Summerwood Sports complex located along Hwy 5 and Bryant Parkway. The civil and architectural plans accompany this letter.

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

Sincerely, Phillip Lewis, P.E. 501-350-9840



5. LIGHT GRAY COLOR - EIFS TYPE STUCCO-FROM 4'-0" TO 16' ABOVE FLR.

7. LIGHT GRAY COLOR-PAINTED METAL EXIT DOORS

6. BASE-CHARCOAL COLOR -SPLIT FACE BLOCK AT BASE OF WALL TO 4'-0" ABOVE FLR.

FRONT ELEVATION-% OF AREA MATERIALS LISTED

1. TOP-CHARCOAL COLOR -METAL PANELS WITH SINE WAVE=2,336 SF

2. RED COLOR -FLUSH METAL PANELS =1,394 SF

3. BLUE COLOR- GLASS AND DOORS=308 SF 4. DARK GRAY COLOR - EIFS TYPE STUCCO=1,472 SF 5. BASE-CHARCOAL COLOR -SPLIT FACE BLOCK=544 SF

TOTAL SF FRONT ELEVATION=6,054 SF CHARCOAL COLOR SINE WAVE METAL =38.5% OF AREA RED COLOR FLUSH METAL PANEL= 23% OF AREA GLASS= 5.0% OF AREA

SIDE ELEVATIONS -% OF AREA MATERIALS LISTED EAST AND WEST ELEVATIONS ARE IDENTICAL BUT MIRRORED

1. TOP-CHARCOAL COLOR -METAL PANELS WITH SINE WAVE=1,771 SF

2. RED COLOR -FLUSH METAL PANELS = 1,020 SF 3. LIGHT GRAY COLOR - EIFS TYPE STUCCO= 1,326 SF 4. BASE-CHARCOAL COLOR -SPLIT FACE BLOCK= 452 SF

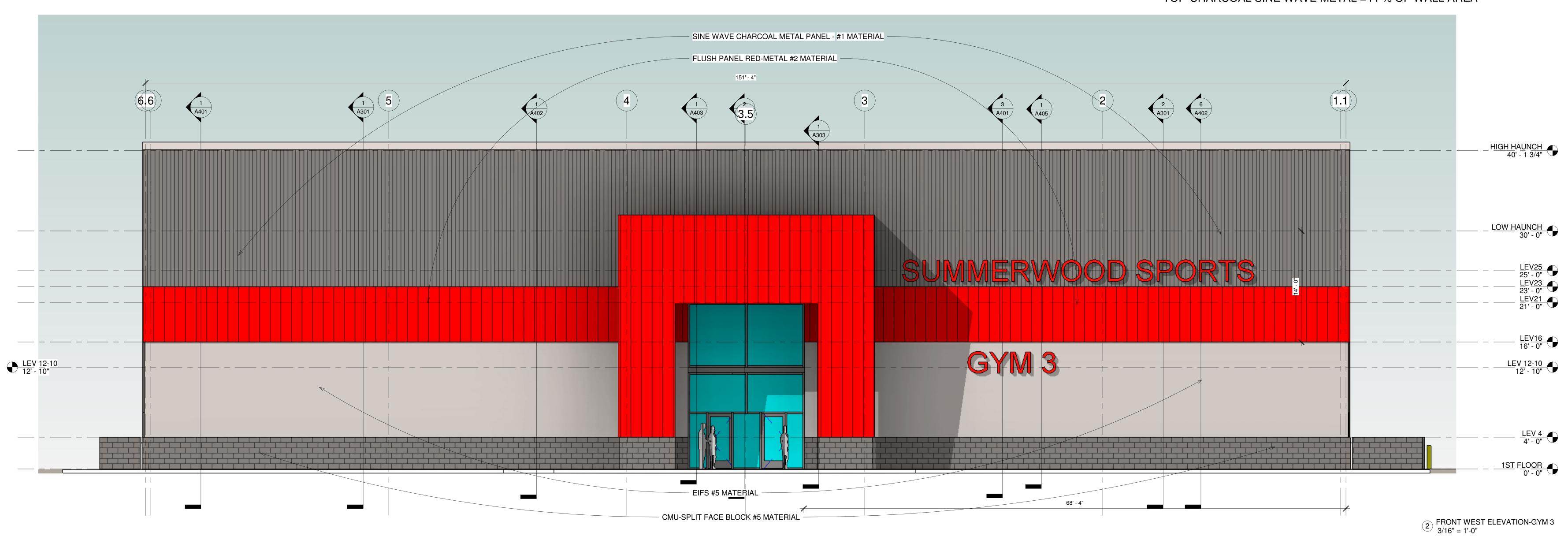
TOTAL SF SIDE ELEVATION=4,569 SF TOP-CHARCOAL SINE WAVE METAL =38% OF AREA RED COLOR FLUSH METAL PANEL = 22.3% OF AREA

REAR ELEVATION -% OF AREA MATERIALS LISTED
RECESSED MATERIALS ARE COUNTED AS SF- SEE OTHER SHEET FOR

1. TOP-CHARCOAL COLOR -METAL PANELS WITH SINE WAVE= 2,013 SF

2. DARK GRAY COLOR - EIFS TYPE STUCCO= 2,098 SF 3. BASE-CHARCOAL COLOR -SPLIT FACE BLOCK= 456 SF

TOTAL SF REAR ELEVATION=4,567 SF
TOP-CHARCOAL SINE WAVE METAL =44 % OF WALL AREA



REGISTEREV ARCHITECT ON NO. C-250

ARCHITECT OF RECORD ANDREW F. HICKS

TINI # 3

DR SUMMERWOOD PARTNERS

RNIA OFFICE PARK, BRYANT PARK

A Mission Blvd.

m- 501-690-0789
o- 479-332-5050

REVISIONS

NO. DATE

NO. DATE

NO.

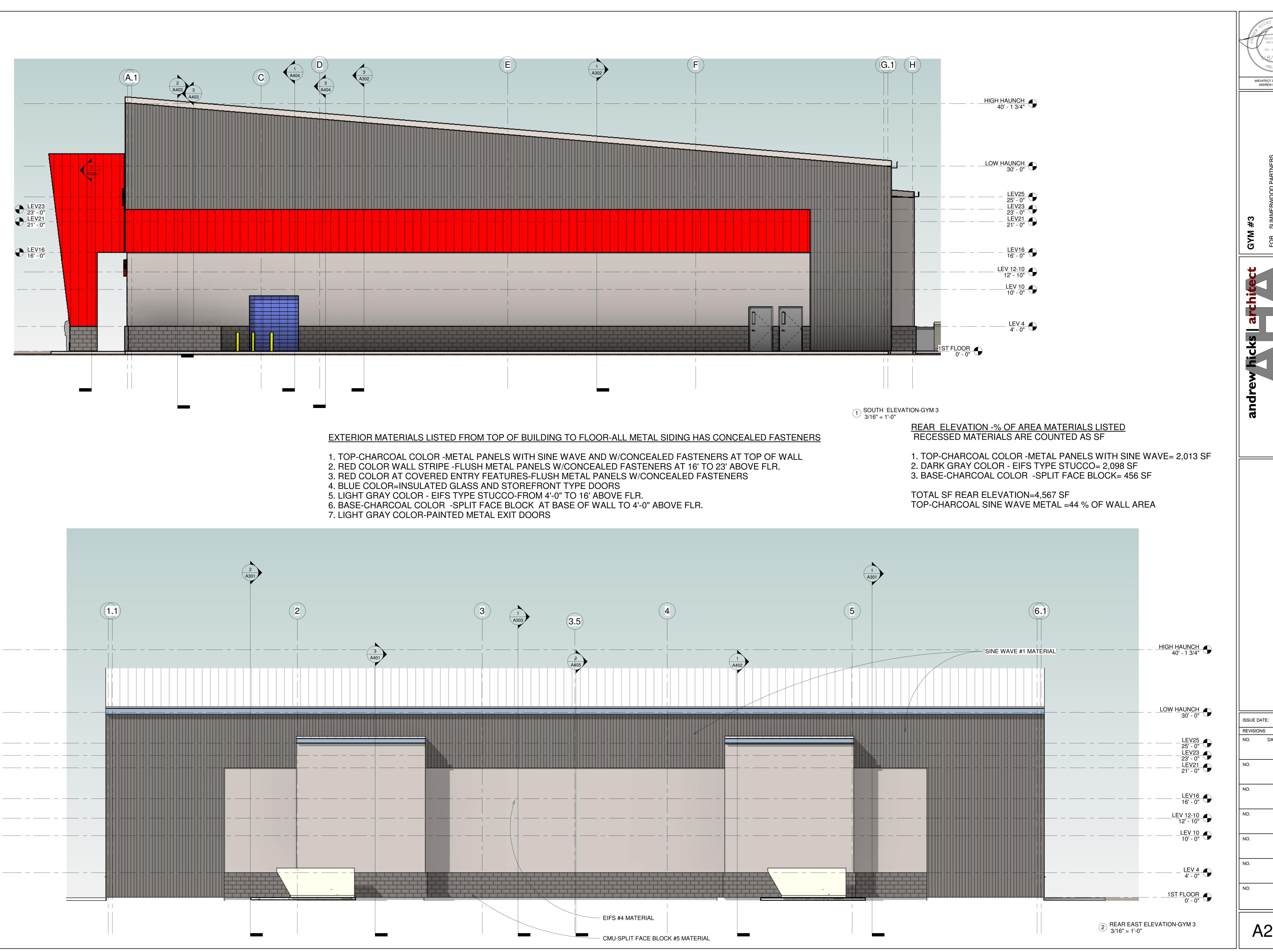
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ARCHITECT OF RECORD ANDREW F. HICKS

A201

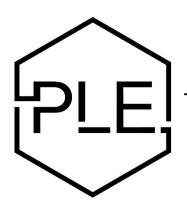
# SUMMERWOOD SPORTS GYM #3 DRAINAGE REPORT

Date: 01-10-2024

Located in: Bryant, Arkansas

**Prepared for:**City of Bryant, Arkansas

### Prepared by:



## PHILLIP LEWIS ENGINEERING

Structural + Civil Consultants

23620 Interstate 30 | Bryant, AR PH: 501-350-9840

# **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.

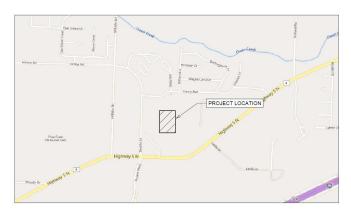
Phillip A. Lewis, PE.



RAGATERAD RAGATERAD RROFESSIONAL ENGINEER

DATE: 01-10-2024

### PROJECT LOCATION MAP



### **DESCRIPTION OF PROPERTY**

The proposed project is for the consruction of the third gymnasium of the Summerwood Sports Complex located along Bryant Parkway and Hwy 5. The proposed development is a 19,000 sq. ft. building and parking lot.

The intent of this drainage analysis is to reevaluate the previous drainage design and ensure that the completetion of this development still meets the design intent and capacity of the previous constructed onsite detention facilities.

The existing ground coverage for the entire development drainage basin consisted of and partially still consists of natural vegetation (3%-8% slope), hydrologic soil group C/D (C = 0.50).

According to FEMA Flood Insurance Rate Map, Panel 05125C0240E, this property lies within Zone X, areas determined to be outside the 0.2% annual chance floodplain. A copy of the map can be found in the appendix.

### **DRAINAGE CRITERIA**

In accordance with the requirements of the City of Bryant, the proposed developments drainage plan and this drainage report were developed with the criteria established in the Bryant Stormwater Management & Drainage Manual provided on cityofbryant.com.

All drainage calculations were performed using HydroCAD software to determine and analyze the changes in stormrunoff volume, flow rates, and design the outlet release structure. Hydraflow Express software was used to appropriately design and size all storm sewer inlets, pipes and channels.

Calculations were performed using the Rational Method, using NOAA rainfall data, and the pond volume and outlet structure was determined by the 100-year storm event while

the outlet structure is designed to match or reduce pre-development flow rates for all storm events: 2-yr, 10-yr, 25-yr, and 100-yr storms.

### **Detention Basin Design Specifications:**

- 3:1 maximum side slopes
- Outlet structures designed to reduce flow rate to match or reduce the predevelopment runoff rates for the 2-yr, 5-yr, 10-yr, 25-yr and 100-yr storms.
- The pond bottom and side is to be solid sod to prevent erosion
- The basins are located and designed to allow access for continued maintenance after construction is completed

### **DESCRIPTION OF PREVIOUS DETENTION FACILITIES**

Phillip Lewis Engineering has evaluated the previously supplied drainage analysis and made site investigations to fully understand the current drainage situation.

The previous drainage analysis studied the pre vs. post scenarios as a single 6 acre node. Post development was studied as one node routing through the detention pond that is now constructed on the site. Due to the nature of how phase one construction evolved, some areas were not routed to this detention pond. Some of these areas ultimately discharge to other detention facilities located elsewhere on the site, and some are freely discharged to the adjacent eastern parcel.

This drainage study is intended to account for these descrepencies and ensure that the detention basin is throttling appropriately to offset the free discharges from the previous phase and this new proposed phase.

### PROPOSED DRAINAGE SYSTEM

This develompent is designed to capture the majority of runoff within the parking lot curb and gutter, collecting stormwater with "Nyloplast" area inlets, and downspout collector pipes. The existing storm sewer network will remain, with the addition of two area grates along the frontage of gym #3. The existing detention basin that was constructed for the first two gymnasiums will remain as planned previously with the development of gym 1 and 2. This drainage analysis will provide supporting evidence to validate the previously constructed detention basin's functionality.

While the pond footprint will remain as constructed, current design plans detail for this pond rim to be reestablished at the intended 400.00' elevation, and for adequate trickle channels to be constructed within the pond bottom (per city of Bryant Requirements).

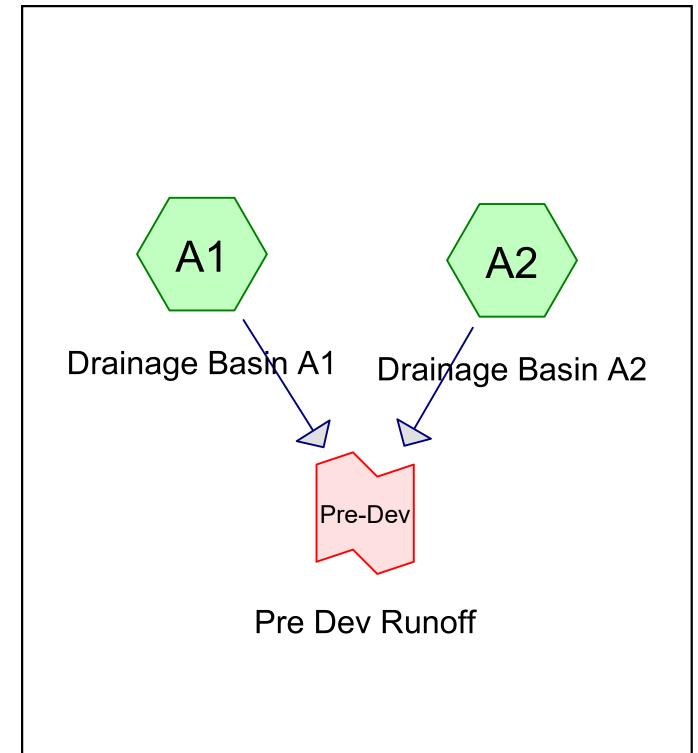
The detention pond was designed to detain stromwater volumes based off the 100-yr storm events with a concrete overflow spillway to release water if a rainfall event were to exceed the 100-yr storm event. The outlet control structures are detailed within this report.

Overall Pre-development and Post-development runoff/discharge rates are compared below:

| Storm Event | Pre-development<br>Discharge (cfs) | Post-development<br>Discharge (cfs) |
|-------------|------------------------------------|-------------------------------------|
| 2-yr        | 10.33                              | <mark>10.14</mark>                  |
| 5-yr        | 12.27                              | <mark>12.27</mark>                  |
| 10-yr       | 13.82                              | <mark>13.74</mark>                  |
| 25-yr       | 15.94                              | <mark>15.69</mark>                  |
| 100-yr      | 18.93                              | <mark>18.25</mark>                  |

Overall pre development and post development discharge rates are displayed in the following hydrographs. A final discharge link has been added to each to show one comparable discharge number. This final discharge will verify that the design detention basin should offset any bypassing watershed within the development.













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### **Summary for Subcatchment A1: Drainage Basin A1**

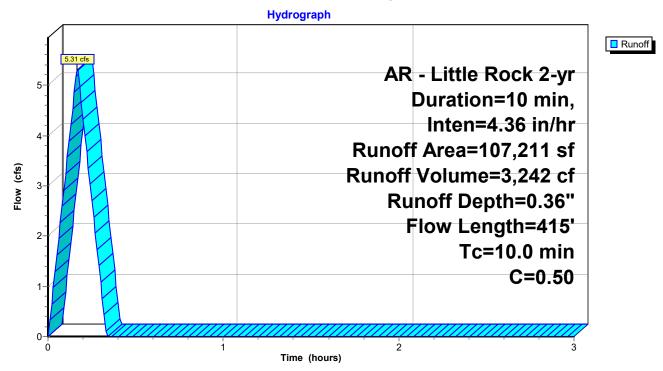
Runoff = 5.31 cfs @ 0.17 hrs, Volume= 3,242 cf, Depth= 0.36"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

| _ | Α                             | rea (sf)         | С                | Description                |                   |  |  |  |  |
|---|-------------------------------|------------------|------------------|----------------------------|-------------------|--|--|--|--|
|   | 1                             | 07,211           | 0.50             | Existing Natural Vegeation |                   |  |  |  |  |
|   | 107,211 100.00% Pervious Area |                  |                  | 100.00% P                  | ervious Are       | ea   |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)       | Capacity<br>(cfs) | Description                                    |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                       |                   | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A1: Drainage Basin A1



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### **Summary for Subcatchment A2: Drainage Basin A2**

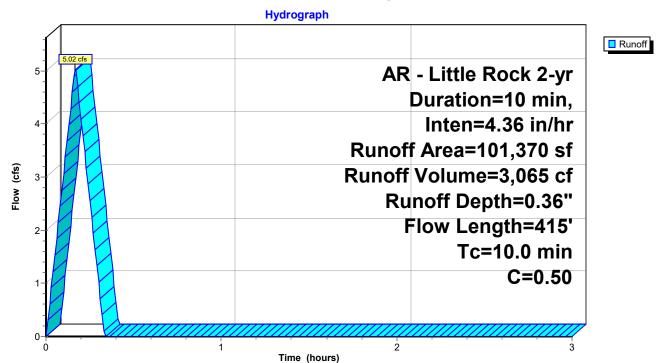
Runoff = 5.02 cfs @ 0.17 hrs, Volume= 3,065 cf, Depth= 0.36"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

| Α                             | rea (sf)         | С                | Description                 |                   |  |  |  |  |
|-------------------------------|------------------|------------------|-----------------------------|-------------------|--|--|--|--|
| 1                             | 01,370           | 0.50             | Existing Natural Vegetation |                   |  |  |  |  |
| 101,370 100.00% Pervious Area |                  |                  | 100.00% P                   | ervious Are       | ea   |  |  |  |
| Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)        | Capacity<br>(cfs) | Description                                    |  |  |  |
| 10.0                          | 415              |                  | 0.69                        |                   | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A2: Drainage Basin A2



### **Summerwood Gym 3**

AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr
Printed 1/11/2024

Prepared by Phillip Lewis Engineering
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### **Summary for Link Pre-Dev: Pre Dev Runoff**

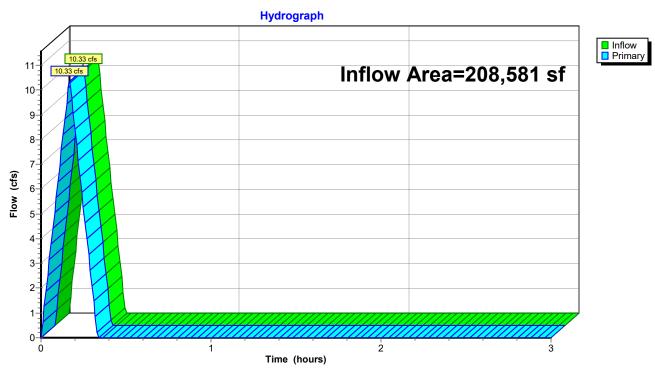
Inflow Area = 208,581 sf, 0.00% Impervious, Inflow Depth = 0.36" for 2-yr event

Inflow = 10.33 cfs @ 0.17 hrs, Volume= 6,307 cf

Primary = 10.33 cfs @ 0.17 hrs, Volume= 6,307 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

### Link Pre-Dev: Pre Dev Runoff



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### **Summary for Subcatchment A1: Drainage Basin A1**

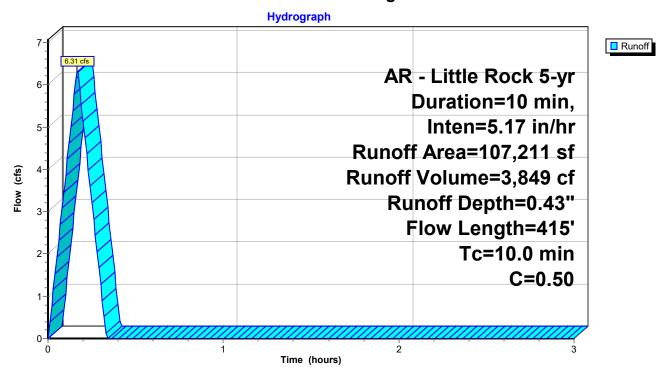
Runoff = 6.31 cfs @ 0.17 hrs, Volume= 3,849 cf, Depth= 0.43"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

| _ | Α                             | rea (sf)         | С                | Description                |                   |  |  |  |  |
|---|-------------------------------|------------------|------------------|----------------------------|-------------------|--|--|--|--|
|   | 1                             | 07,211           | 0.50             | Existing Natural Vegeation |                   |  |  |  |  |
|   | 107,211 100.00% Pervious Area |                  |                  | 100.00% P                  | ervious Are       | ea   |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)       | Capacity<br>(cfs) | Description                                    |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                       | -                 | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A1: Drainage Basin A1



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### Summary for Subcatchment A2: Drainage Basin A2

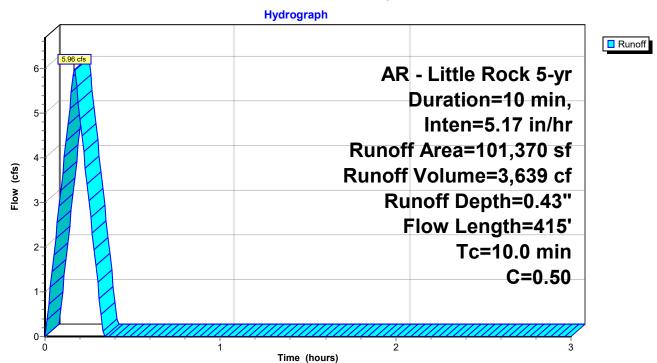
Runoff = 5.96 cfs @ 0.17 hrs, Volume= 3,639 cf, Depth= 0.43"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

| _ | Α                             | rea (sf)         | С                | Description                 |                   |  |  |  |  |
|---|-------------------------------|------------------|------------------|-----------------------------|-------------------|--|--|--|--|
|   | 1                             | 01,370           | 0.50             | Existing Natural Vegetation |                   |  |  |  |  |
| _ | 101,370 100.00% Pervious Area |                  |                  | 100.00% P                   | ervious Are       | ea ea  |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)        | Capacity<br>(cfs) | Description                                    |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                        | -                 | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A2: Drainage Basin A2



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### **Summary for Link Pre-Dev: Pre Dev Runoff**

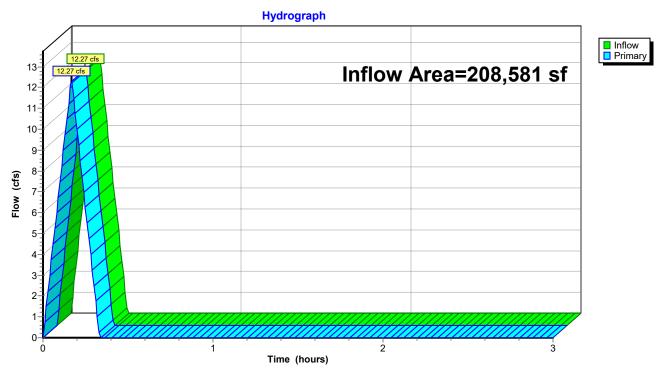
Inflow Area = 208,581 sf, 0.00% Impervious, Inflow Depth = 0.43" for 5-yr event

Inflow = 12.27 cfs @ 0.17 hrs, Volume= 7,489 cf

Primary = 12.27 cfs @ 0.17 hrs, Volume= 7,489 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

### Link Pre-Dev: Pre Dev Runoff



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### **Summary for Subcatchment A1: Drainage Basin A1**

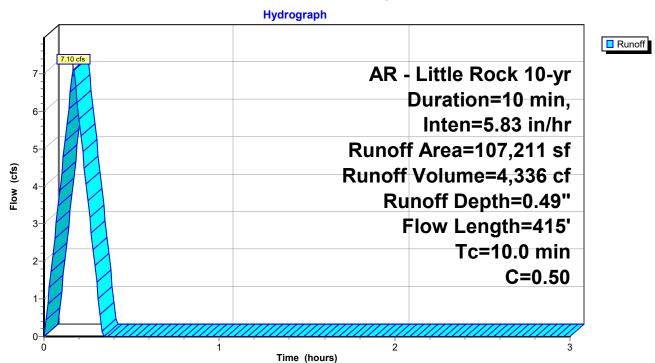
Runoff = 7.10 cfs @ 0.17 hrs, Volume= 4,336 cf, Depth= 0.49"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

| _ | Α                             | rea (sf)         | С                | Description                |                   |  |  |  |  |
|---|-------------------------------|------------------|------------------|----------------------------|-------------------|--|--|--|--|
|   | 1                             | 07,211           | 0.50             | Existing Natural Vegeation |                   |  |  |  |  |
|   | 107,211 100.00% Pervious Area |                  |                  | 100.00% P                  | ervious Are       | ea   |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)       | Capacity<br>(cfs) | Description                                    |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                       |                   | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A1: Drainage Basin A1



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### Summary for Subcatchment A2: Drainage Basin A2

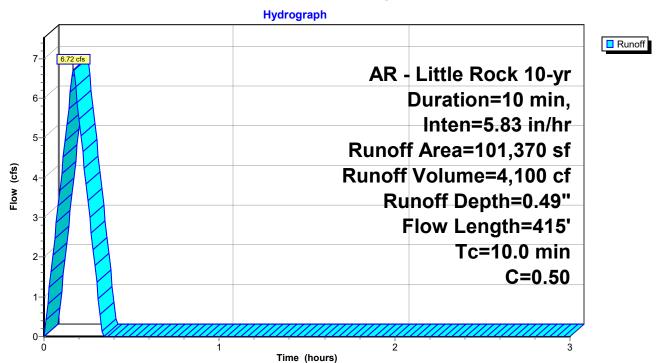
Runoff = 6.72 cfs @ 0.17 hrs, Volume= 4,100 cf, Depth= 0.49"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

| _ | Α                             | rea (sf)         | С                | Description                 |                   |  |  |  |  |
|---|-------------------------------|------------------|------------------|-----------------------------|-------------------|--|--|--|--|
|   | 1                             | 01,370           | 0.50             | Existing Natural Vegetation |                   |  |  |  |  |
| _ | 101,370 100.00% Pervious Area |                  |                  | 100.00% P                   | ervious Are       | ea ea  |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)        | Capacity<br>(cfs) | Description                                    |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                        | -                 | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A2: Drainage Basin A2



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### **Summary for Link Pre-Dev: Pre Dev Runoff**

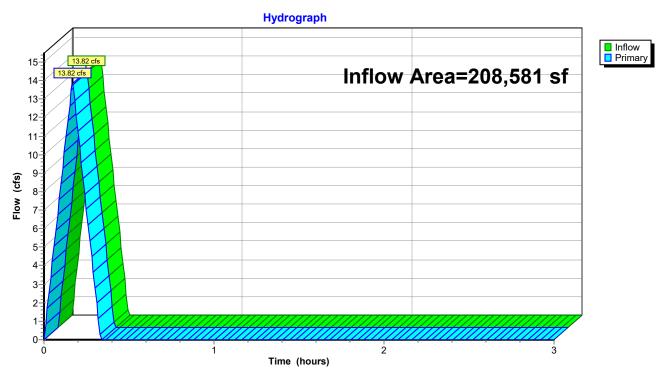
Inflow Area = 208,581 sf, 0.00% Impervious, Inflow Depth = 0.49" for 10-yr event

Inflow = 13.82 cfs @ 0.17 hrs, Volume= 8,435 cf

Primary = 13.82 cfs @ 0.17 hrs, Volume= 8,435 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

### Link Pre-Dev: Pre Dev Runoff



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### **Summary for Subcatchment A1: Drainage Basin A1**

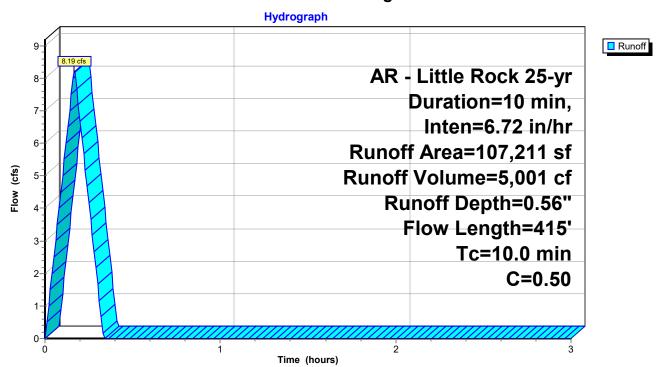
Runoff = 8.19 cfs @ 0.17 hrs, Volume= 5,001 cf, Depth= 0.56"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

| _ | Α                             | rea (sf)         | С                | Description                |                   |  |  |  |  |
|---|-------------------------------|------------------|------------------|----------------------------|-------------------|--|--|--|--|
|   | 1                             | 07,211           | 0.50             | Existing Natural Vegeation |                   |  |  |  |  |
|   | 107,211 100.00% Pervious Area |                  |                  | 100.00% P                  | ervious Are       | ea   |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)       | Capacity<br>(cfs) | Description                                    |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                       |                   | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A1: Drainage Basin A1



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### Summary for Subcatchment A2: Drainage Basin A2

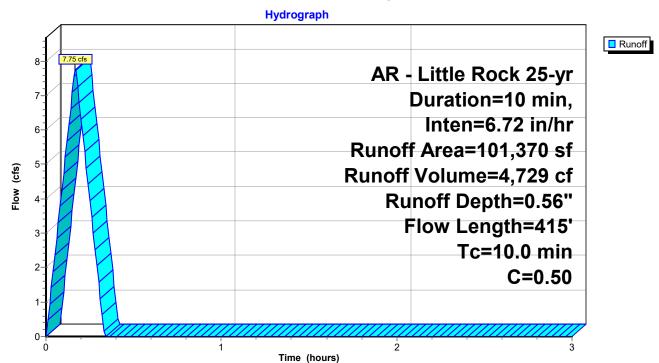
Runoff = 7.75 cfs @ 0.17 hrs, Volume= 4,729 cf, Depth= 0.56"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

| _ | Α           | rea (sf)         | С                | Description                 |                   |  |  |  |  |
|---|-------------|------------------|------------------|-----------------------------|-------------------|--|--|--|--|
|   | 1           | 01,370           | 0.50             | Existing Natural Vegetation |                   |  |  |  |  |
|   | 1           | 01,370           |                  | 100.00% P                   | ervious Are       | ea   |  |  |  |
|   | Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec)        | Capacity<br>(cfs) | Description                                    |  |  |  |
|   | 10.0        | 415              |                  | 0.69                        |                   | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment A2: Drainage Basin A2



### **Summerwood Gym 3**

AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr
Printed 1/11/2024

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### **Summary for Link Pre-Dev: Pre Dev Runoff**

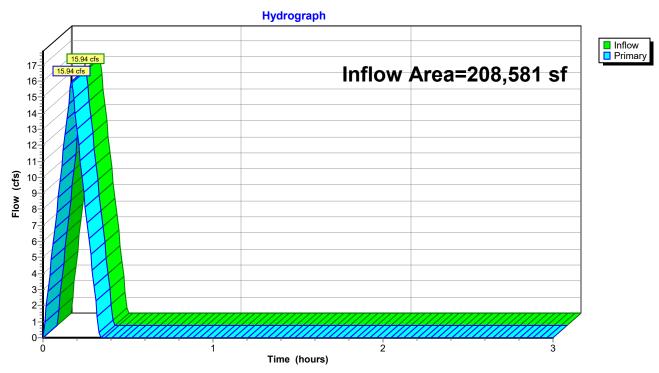
Inflow Area = 208,581 sf, 0.00% Impervious, Inflow Depth = 0.56" for 25-yr event

Inflow = 15.94 cfs @ 0.17 hrs, Volume= 9,730 cf

Primary = 15.94 cfs @ 0.17 hrs, Volume= 9,730 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

### Link Pre-Dev: Pre Dev Runoff



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# **Summary for Subcatchment A1: Drainage Basin A1**

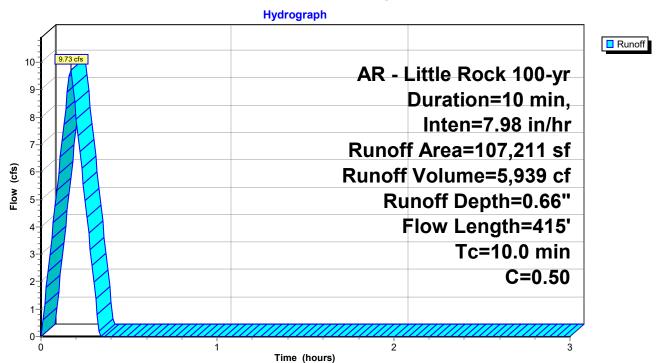
Runoff = 9.73 cfs @ 0.17 hrs, Volume= 5,939 cf, Depth= 0.66"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

| _ | Α                             | rea (sf)         | С                | Description          | 1                          |  |  |  |  |  |  |  |
|---|-------------------------------|------------------|------------------|----------------------|----------------------------|--|--|--|--|--|--|--|
|   | 1                             | 07,211           | 0.50             | Existing Na          | Existing Natural Vegeation |  |  |  |  |  |  |  |
|   | 107,211 100.00% Pervious Area |                  |                  |                      |                            | ea   |  |  |  |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs)          | Description                                    |  |  |  |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                 |                            | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |  |

## Subcatchment A1: Drainage Basin A1



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## Summary for Subcatchment A2: Drainage Basin A2

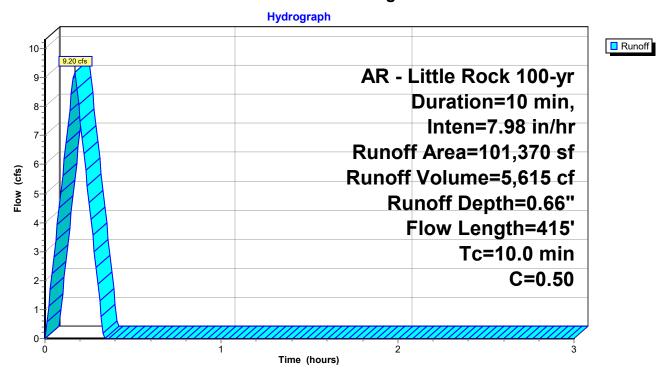
Runoff = 9.20 cfs @ 0.17 hrs, Volume= 5,615 cf, Depth= 0.66"

Routed to Link Pre-Dev: Pre Dev Runoff

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

| _ | Α                             | rea (sf)         | С                | Description          | 1                           |  |  |  |  |  |  |  |
|---|-------------------------------|------------------|------------------|----------------------|-----------------------------|--|--|--|--|--|--|--|
|   | 1                             | 01,370           | 0.50             | Existing Na          | Existing Natural Vegetation |  |  |  |  |  |  |  |
| _ | 101,370 100.00% Pervious Area |                  |                  |                      |                             | ea ea  |  |  |  |  |  |  |
|   | Tc<br>(min)                   | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs)           | Description                                    |  |  |  |  |  |  |
|   | 10.0                          | 415              |                  | 0.69                 | -                           | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |  |

## Subcatchment A2: Drainage Basin A2



## **Summerwood Gym 3**

AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr Printed 1/11/2024

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# **Summary for Link Pre-Dev: Pre Dev Runoff**

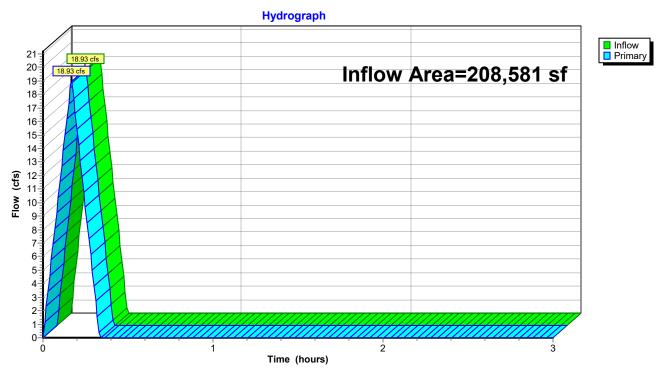
Inflow Area = 208,581 sf, 0.00% Impervious, Inflow Depth = 0.66" for 100-yr event

Inflow = 18.93 cfs @ 0.17 hrs, Volume= 11,554 cf

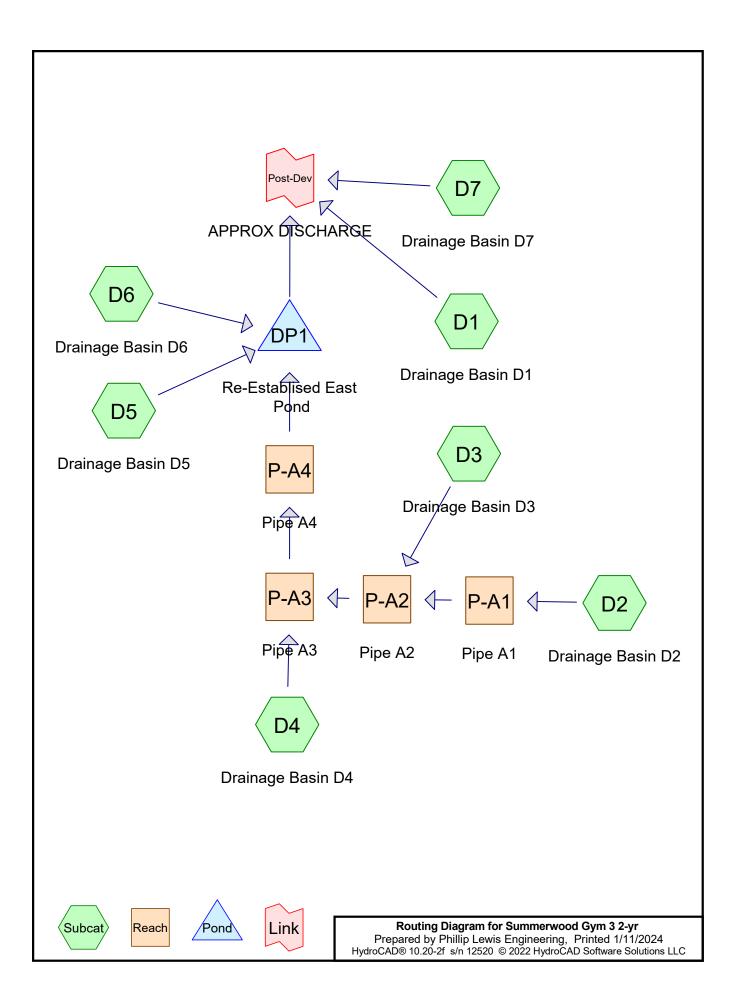
Primary = 18.93 cfs @ 0.17 hrs, Volume= 11,554 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

## Link Pre-Dev: Pre Dev Runoff



| POST DEVELOPMENT HYDROGRAPHS |
|------------------------------|
|                              |
|                              |



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## Summary for Subcatchment D1: Drainage Basin D1

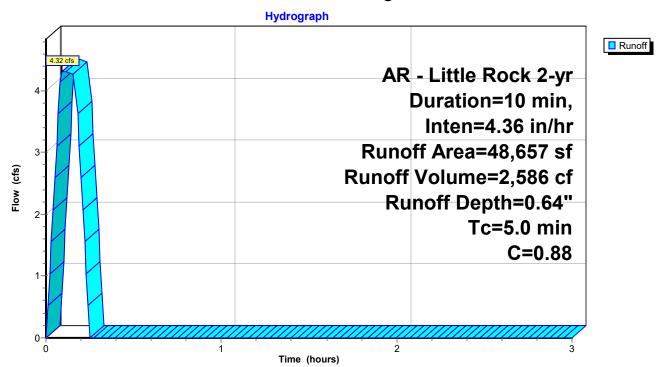
Runoff = 4.32 cfs @ 0.09 hrs, Volume= 2,586 cf, Depth= 0.64" Routed to Link Post-Dev : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

|       | Area (sf) | С       | Description                | 1                      |  |  |  |  |  |  |
|-------|-----------|---------|----------------------------|------------------------|--|--|--|--|--|--|
|       | 3,421     | 0.40    | Sod Yard                   | Sod Yard               |  |  |  |  |  |  |
|       | 45,236    | 0.92    | Rood, Drive                | ood, Drives, Sidewalks |  |  |  |  |  |  |
|       | 48,657    | 0.88    | Weighted A                 | Veighted Average       |  |  |  |  |  |  |
|       | 48,657    |         | 100.00% P                  | ervious Are            | ea   |  |  |  |  |  |
|       |           |         |                            |                        |  |  |  |  |  |  |
| Tc    | Length    | Slope   | <ul><li>Velocity</li></ul> | Capacity               | Description                                    |  |  |  |  |  |
| (min) | (feet)    | (ft/ft) | (ft/sec)                   | (cfs)                  |  |  |  |  |  |  |
| 5.0   |           |         |                            |                        | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

Birect Entry, Overland Concentrated Flow

## Subcatchment D1: Drainage Basin D1



# **Summary for Subcatchment D2: Drainage Basin D2**

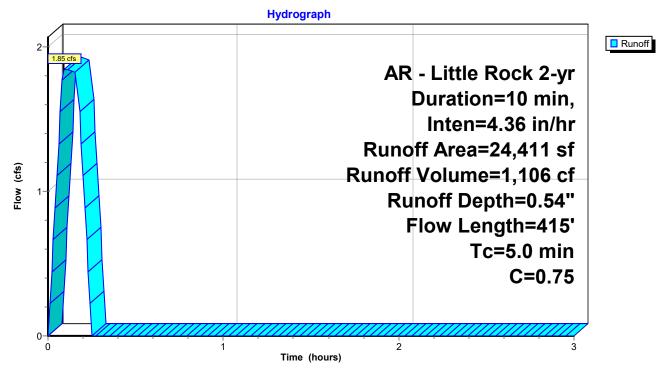
Runoff = 1.85 cfs @ 0.09 hrs, Volume= 1,106 cf, Depth= 0.54"

Routed to Reach P-A1: Pipe A1

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

|       | Area (sf) | С       | Description                | 1                      |  |  |  |  |  |  |
|-------|-----------|---------|----------------------------|------------------------|--|--|--|--|--|--|
|       | 8,845     | 0.45    | Rip Rap Er                 | nbankment              |  |  |  |  |  |  |
|       | 15,566    | 0.92    | Roof, Drive                | oof, Drives, Sidewalks |  |  |  |  |  |  |
|       | 24,411    | 0.75    | Weighted A                 |                        |  |  |  |  |  |  |
|       | 24,411    |         | 100.00% P                  | ervious Are            | ea   |  |  |  |  |  |
|       |           |         |                            |                        |  |  |  |  |  |  |
| To    | Length    | Slope   | <ul><li>Velocity</li></ul> | Capacity               | Description                                    |  |  |  |  |  |
| (min) | ) (feet)  | (ft/ft) | (ft/sec)                   | (cfs)                  |  |  |  |  |  |  |
| 5.0   | 415       |         | 1.38                       |                        | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

# Subcatchment D2: Drainage Basin D2



# **Summary for Subcatchment D3: Drainage Basin D3**

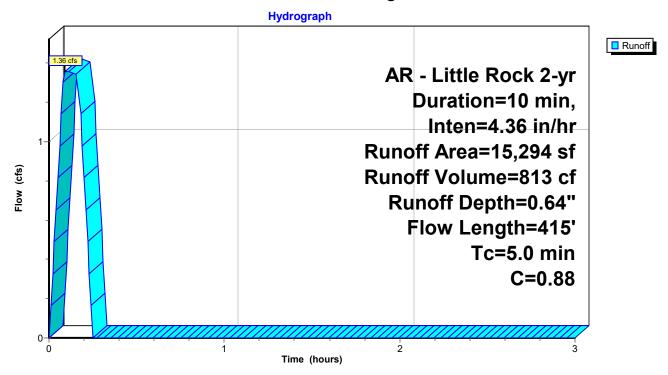
Runoff = 1.36 cfs @ 0.09 hrs, Volume= 813 cf, Depth= 0.64"

Routed to Reach P-A2: Pipe A2

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

|      | Area (sf) | С       | Description | 1                |  |  |  |  |  |  |
|------|-----------|---------|-------------|------------------|--|--|--|--|--|--|
|      | 1,065     | 0.40    | Sod Yard    |                  |  |  |  |  |  |  |
|      | 14,229    | 0.92    | Paving, Sic | aving, Sidewalks |  |  |  |  |  |  |
| ·    | 15,294    | 0.88    | Weighted A  | Veighted Average |  |  |  |  |  |  |
|      | 15,294    |         | 100.00% P   | ervious Are      | ea   |  |  |  |  |  |
| _    |           | 01      |             |                  |  |  |  |  |  |  |
| To   | c Length  | Slope   | Velocity    | Capacity         | Description                                    |  |  |  |  |  |
| (min | ) (feet)  | (ft/ft) | (ft/sec)    | (cfs)            |  |  |  |  |  |  |
| 5.0  | ) 415     |         | 1.38        |                  | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

## **Subcatchment D3: Drainage Basin D3**



# Summary for Subcatchment D4: Drainage Basin D4

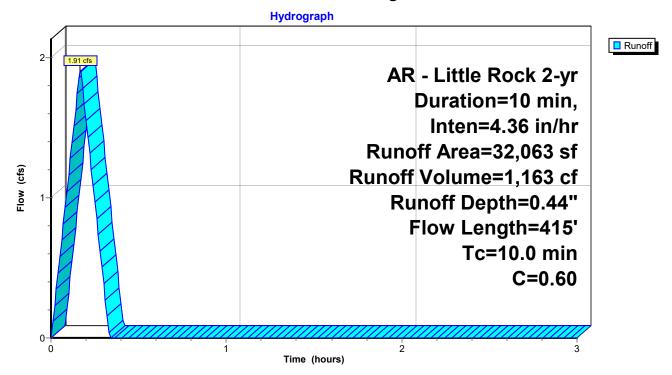
Runoff = 1.91 cfs @ 0.17 hrs, Volume= 1,163 cf, Depth= 0.44"

Routed to Reach P-A3: Pipe A3

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

| <br>Α    | rea (sf) | С       | Description                  | ı           |  |
|----------|----------|---------|------------------------------|-------------|--|
|          | 20,032   | 0.40    |                              |             |  |
|          | 12,031   | 0.92    |                              |             |  |
|          | 32,063   | 0.60    | Weighted A                   | Average     |  |
|          | 32,063   |         | 100.00% P                    | ervious Are | ea   |
| _        |          |         |                              |             |  |
| Тс       | Length   | Slope   | <ul> <li>Velocity</li> </ul> | Capacity    | Description                                    |
| (min)    | (feet)   | (ft/ft) | (ft/sec)                     | (cfs)       |  |
| <br>10.0 | 415      |         | 0.69                         |             | Direct Entry, Overland Concentrated Flow (Min) |

## Subcatchment D4: Drainage Basin D4



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# **Summary for Subcatchment D5: Drainage Basin D5**

1,660 cf, Depth= 0.48" Runoff 2.77 cfs @ 0.09 hrs, Volume=

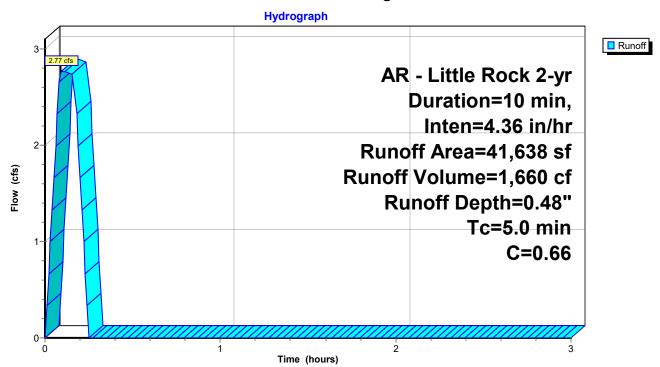
Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

| <br>Α   | rea (sf) | С       | Description | 1                           |  |  |  |  |  |  |
|---------|----------|---------|-------------|-----------------------------|--|--|--|--|--|--|
|         | 21,201   | 0.40    | Sod Yard,   | od Yard, Natural Vegetation |  |  |  |  |  |  |
|         | 20,437   | 0.92    | Paving, Sic | aving, Sidewalks            |  |  |  |  |  |  |
|         | 41,638   | 0.66    | Weighted A  | Veighted Average            |  |  |  |  |  |  |
|         | 41,638   |         | 100.00% P   | ervious Are                 | ea   |  |  |  |  |  |
|         |          |         |             |                             |  |  |  |  |  |  |
| Тс      | Length   | Slope   | Velocity    | Capacity                    | Description                                    |  |  |  |  |  |
| (min)   | (feet)   | (ft/ft) | (ft/sec)    | (cfs)                       |  |  |  |  |  |  |
| <br>5.0 |          |         |             |                             | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

## Subcatchment D5: Drainage Basin D5



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# **Summary for Subcatchment D6: Drainage Basin D6**

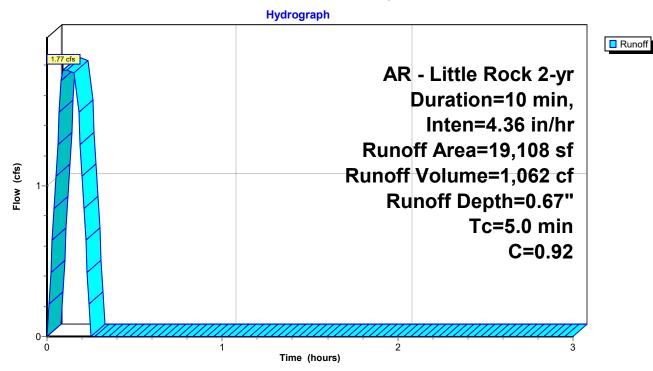
Runoff = 1.77 cfs @ 0.09 hrs, Volume= 1,062 cf, Depth= 0.67"

Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

| A      | rea (sf) | С       | Description | 1           |  |
|--------|----------|---------|-------------|-------------|--|
|        | 19,108   | 0.92    | Roof        |             |  |
|        | 19,108   |         | 100.00% P   | ervious Are | ea   |
| Tc     | Length   | Slope   | ,           |             | Description                                    |
| (min)_ | (feet)   | (ft/ft) | (ft/sec)    | (cfs)       |  |
| 5.0    |          |         |             |             | Direct Entry, Overland Concentrated Flow (Min) |

## Subcatchment D6: Drainage Basin D6



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# **Summary for Subcatchment D7: Drainage Basin D7**

Runoff = 1.34 cfs @ 0.09 hrs, Volume= 800 cf, Depth= 0.38"

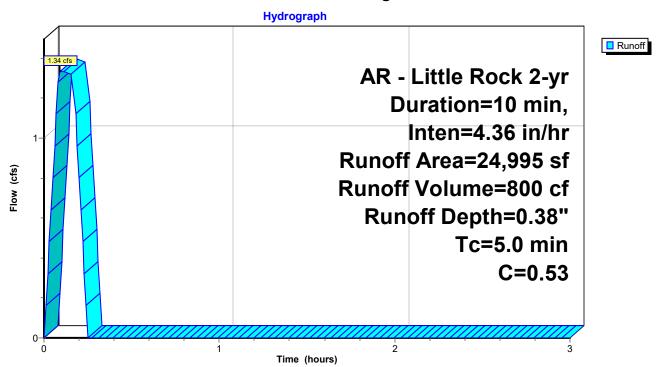
Routed to Link Post-Dev: APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 2-yr Duration=10 min, Inten=4.36 in/hr

|      | Area (sf) | С       | Description                | 1                            |  |  |  |  |  |  |
|------|-----------|---------|----------------------------|------------------------------|--|--|--|--|--|--|
|      | 18,798    | 0.40    | Sod Yard,                  | Sod Yard, Natural Vegetation |  |  |  |  |  |  |
|      | 6,197     | 0.92    | Paving, Sid                | aving, Sidewalks             |  |  |  |  |  |  |
|      | 24,995    | 0.53    | Weighted A                 | Weighted Average             |  |  |  |  |  |  |
|      | 24,995    |         | 100.00% P                  | ervious Are                  | ea   |  |  |  |  |  |
|      |           |         |                            |                              |  |  |  |  |  |  |
| T    | c Length  | Slope   | <ul><li>Velocity</li></ul> | Capacity                     | Description                                    |  |  |  |  |  |
| (mir | n) (feet) | (ft/ft) | (ft/sec)                   | (cfs)                        |  |  |  |  |  |  |
| 5.   | 0         |         |                            |                              | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

Direct Entry, Overland Concentrated Flow (Min)

## Subcatchment D7: Drainage Basin D7



## Summerwood Gym 3 2-yr

Prepared by Phillip Lewis Engineering

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## **Summary for Reach P-A1: Pipe A1**

Inflow Area = 24,411 sf, 0.00% Impervious, Inflow Depth = 0.54" for 2-yr event

Inflow = 1.85 cfs @ 0.09 hrs, Volume= 1,106 cf

Outflow = 1.85 cfs @ 0.11 hrs, Volume= 1,106 cf, Atten= 0%, Lag= 1.2 min

Routed to Reach P-A2: Pipe A2

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 6.38 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 4.53 fps, Avg. Travel Time= 0.2 min

Peak Storage= 15 cf @ 0.09 hrs

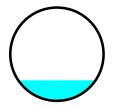
Average Depth at Peak Storage= 0.33', Surface Width= 1.24' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.28 cfs

18.0" Round Pipe

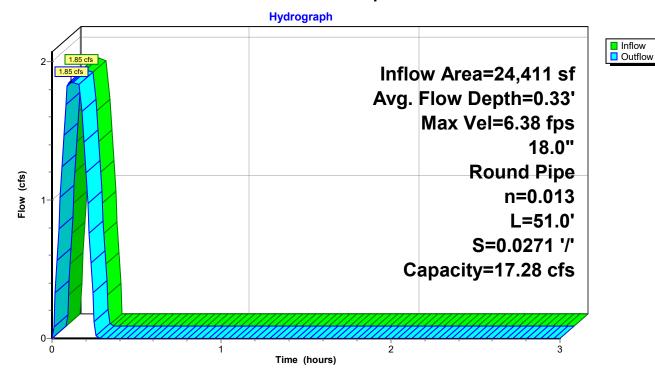
n= 0.013 Corrugated PE, smooth interior

Length= 51.0' Slope= 0.0271 '/'

Inlet Invert= 408.33', Outlet Invert= 406.95'

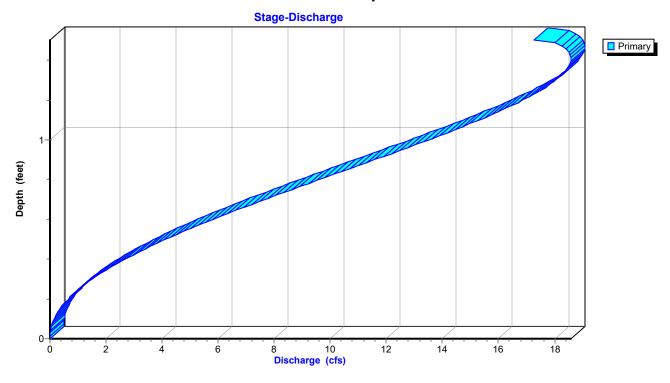


#### Reach P-A1: Pipe A1



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# Reach P-A1: Pipe A1



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# Stage-Area-Storage for Reach P-A1: Pipe A1

|              |             | •            | J      |          | •            |
|--------------|-------------|--------------|--------|----------|--------------|
|              | on End-Area | Storage      |        | End-Area | Storage      |
| (fee         |             | (cubic-feet) | (feet) | (sq-ft)  | (cubic-feet) |
| 408.3        |             | 0            | 409.37 | 1.3      | 67           |
| 408.3        |             | 0            | 409.39 | 1.3      | 68           |
| 408.3        |             | 1            | 409.41 | 1.4      | 69           |
| 408.3        | 39 0.0      | 1            | 409.43 | 1.4      | 71           |
| 408.4        | 11 0.0      | 2            | 409.45 | 1.4      | 72           |
| 408.4        | 13 0.1      | 3            | 409.47 | 1.4      | 73           |
| 408.4        | 15 0.1      | 3            | 409.49 | 1.5      | 75           |
| 408.4        | 17 0.1      | 4            | 409.51 | 1.5      | 76           |
| 408.4        | 19 0.1      | 5            | 409.53 | 1.5      | 77           |
| 408.5        |             | 6            | 409.55 | 1.5      | 78           |
| 408.5        |             | 7            | 409.57 | 1.6      | 80           |
| 408.5        |             | 8            | 409.59 | 1.6      | 81           |
| 408.5        |             | 9            | 409.61 | 1.6      | 82           |
| 408.5        |             | 10           | 409.63 | 1.6      | 83           |
| 408.6        |             | 12           | 409.65 | 1.6      | 84           |
| 408.6        |             | 13           | 409.67 | 1.7      | 85           |
|              |             |              |        |          |              |
| 408.6        |             | 14           | 409.69 | 1.7      | 86           |
| 408.6        |             | 15           | 409.71 | 1.7      | 87           |
| 408.6        |             | 17           | 409.73 | 1.7      | 88           |
| 408.7        |             | 18           | 409.75 | 1.7      | 88           |
| 408.7        |             | 19           | 409.77 | 1.7      | 89           |
| 408.7        |             | 21           | 409.79 | 1.8      | 89           |
| 408.7        |             | 22           | 409.81 | 1.8      | 90           |
| 408.7        |             | 23           | 409.83 | 1.8      | 90           |
| 408.8        | 31 0.5      | 25           |        |          |              |
| 408.8        | 33 0.5      | 26           |        |          |              |
| 408.8        | 35 0.5      | 28           |        |          |              |
| 408.8        | 37 0.6      | 29           |        |          |              |
| 408.8        | 39 0.6      | 31           |        |          |              |
| 408.9        | 0.6         | 32           |        |          |              |
| 408.9        |             | 34           |        |          |              |
| 408.9        |             | 35           |        |          |              |
| 408.9        |             | 37           |        |          |              |
| 408.9        |             | 38           |        |          |              |
| 409.0        |             | 40           |        |          |              |
| 409.0        |             | 41           |        |          |              |
| 409.0        |             | 43           |        |          |              |
| 409.0        |             | 44           |        |          |              |
| 409.0        |             | 46           |        |          |              |
| 409.0        |             | 47           |        |          |              |
| 409.<br>409. |             | 49           |        |          |              |
|              |             |              |        |          |              |
| 409.1        |             | 50<br>50     |        |          |              |
| 409.1        |             | 52<br>53     |        |          |              |
| 409.1        |             | 53<br>55     |        |          |              |
| 409.2        |             | 55           |        |          |              |
| 409.2        |             | 56           |        |          |              |
| 409.2        |             | 58           |        |          |              |
| 409.2        |             | 59           |        |          |              |
| 409.2        |             | 61           |        |          |              |
| 409.3        |             | 62           | 1      |          |              |
| 409.3        |             | 64           |        |          |              |
| 409.3        | 35 1.3      | 65           |        |          |              |
|              |             |              | 1      |          |              |

## Summerwood Gym 3 2-yr

Prepared by Phillip Lewis Engineering

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## Summary for Reach P-A2: Pipe A2

Inflow Area = 39,705 sf, 0.00% Impervious, Inflow Depth = 0.58" for 2-yr event

Inflow = 3.20 cfs @ 0.11 hrs, Volume= 1,919 cf

Outflow = 3.20 cfs @ 0.16 hrs, Volume= 1,919 cf, Atten= 0%, Lag= 3.0 min

Routed to Reach P-A3: Pipe A3

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 5.73 fps, Min. Travel Time= 0.5 min

Avg. Velocity = 2.32 fps, Avg. Travel Time= 1.3 min

Peak Storage= 99 cf @ 0.16 hrs

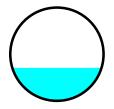
Average Depth at Peak Storage= 0.53', Surface Width= 1.43' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 11.95 cfs

18.0" Round Pipe

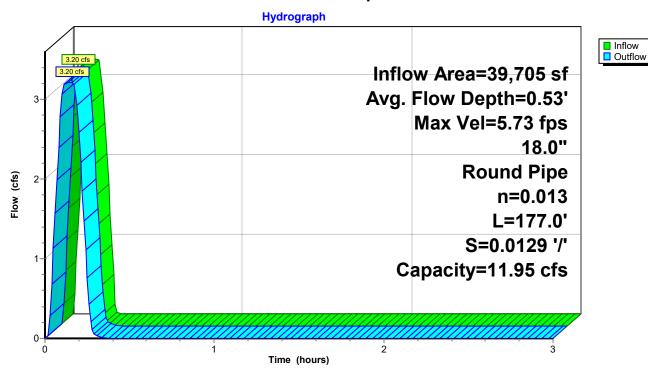
n= 0.013 Corrugated PE, smooth interior

Length= 177.0' Slope= 0.0129 '/'

Inlet Invert= 406.85', Outlet Invert= 404.56'

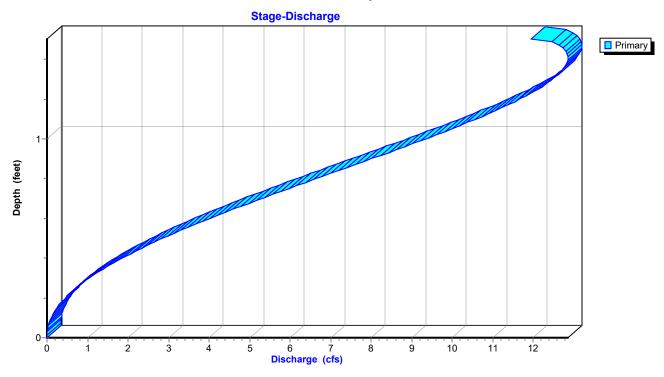


#### Reach P-A2: Pipe A2



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# Reach P-A2: Pipe A2



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# Stage-Area-Storage for Reach P-A2: Pipe A2

|        |          | · ·          | J      |          | •            |
|--------|----------|--------------|--------|----------|--------------|
|        | End-Area | Storage      |        | End-Area | Storage      |
| (feet) | (sq-ft)  | (cubic-feet) | (feet) | (sq-ft)  | (cubic-feet) |
| 406.85 | 0.0      | 0            | 407.89 | 1.3      | 231          |
| 406.87 | 0.0      | 1            | 407.91 | 1.3      | 236          |
| 406.89 | 0.0      | 2            | 407.93 | 1.4      | 241          |
| 406.91 | 0.0      | 4            | 407.95 | 1.4      | 246          |
| 406.93 | 0.0      | 6            | 407.97 | 1.4      | 250          |
| 406.95 | 0.1      | 9            | 407.99 | 1.4      | 255          |
| 406.97 | 0.1      | 12           | 408.01 | 1.5      | 260          |
| 406.99 | 0.1      | 15           | 408.03 | 1.5      | 264          |
| 407.01 | 0.1      | 18           | 408.05 | 1.5      | 268          |
| 407.03 | 0.1      | 21           | 408.07 | 1.5      | 272          |
| 407.05 | 0.1      | 25           | 408.09 | 1.6      | 277          |
| 407.07 | 0.2      | 28           | 408.11 | 1.6      | 280          |
| 407.09 | 0.2      | 32           | 408.13 | 1.6      | 284          |
| 407.11 | 0.2      | 36           | 408.15 | 1.6      | 288          |
| 407.11 | 0.2      | 40           | 408.17 | 1.6      | 292          |
| 407.15 | 0.2      | 45           | 408.17 | 1.7      | 295          |
| 407.13 | 0.3      | 49           | 408.19 | 1.7      | 298          |
|        |          |              | 408.23 |          |              |
| 407.19 | 0.3      | 53           |        | 1.7      | 301          |
| 407.21 | 0.3      | 58           | 408.25 | 1.7      | 304          |
| 407.23 | 0.4      | 62           | 408.27 | 1.7      | 306          |
| 407.25 | 0.4      | 67           | 408.29 | 1.7      | 309          |
| 407.27 | 0.4      | 72           | 408.31 | 1.8      | 310          |
| 407.29 | 0.4      | 76           | 408.33 | 1.8      | 312          |
| 407.31 | 0.5      | 81           | 408.35 | 1.8      | 313          |
| 407.33 | 0.5      | 86           |        |          |              |
| 407.35 | 0.5      | 91           |        |          |              |
| 407.37 | 0.5      | 96           |        |          |              |
| 407.39 | 0.6      | 101          |        |          |              |
| 407.41 | 0.6      | 106          |        |          |              |
| 407.43 | 0.6      | 112          |        |          |              |
| 407.45 | 0.7      | 117          |        |          |              |
| 407.47 | 0.7      | 122          |        |          |              |
| 407.49 | 0.7      | 127          |        |          |              |
| 407.51 | 0.7      | 133          |        |          |              |
| 407.53 | 0.8      | 138          |        |          |              |
| 407.55 | 0.8      | 143          |        |          |              |
| 407.57 | 0.8      | 148          |        |          |              |
| 407.59 | 0.9      | 154          |        |          |              |
| 407.61 | 0.9      | 159          |        |          |              |
| 407.63 | 0.9      | 164          |        |          |              |
|        | 1.0      |              |        |          |              |
| 407.65 |          | 170<br>175   |        |          |              |
| 407.67 | 1.0      | 175          |        |          |              |
| 407.69 | 1.0      | 180          |        |          |              |
| 407.71 | 1.0      | 185          |        |          |              |
| 407.73 | 1.1      | 191          |        |          |              |
| 407.75 | 1.1      | 196          |        |          |              |
| 407.77 | 1.1      | 201          |        |          |              |
| 407.79 | 1.2      | 206          |        |          |              |
| 407.81 | 1.2      | 211          |        |          |              |
| 407.83 | 1.2      | 216          |        |          |              |
| 407.85 | 1.3      | 222          |        |          |              |
| 407.87 | 1.3      | 226          |        |          |              |
|        |          |              | l      |          |              |

## Summerwood Gym 3 2-yr

Prepared by Phillip Lewis Engineering

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## **Summary for Reach P-A3: Pipe A3**

Inflow Area = 71,768 sf, 0.00% Impervious, Inflow Depth = 0.52" for 2-yr event

Inflow = 5.11 cfs @ 0.17 hrs, Volume 3,082 cf

Outflow = 5.07 cfs @ 0.17 hrs, Volume= 3,082 cf, Atten= 1%, Lag= 0.3 min

Routed to Reach P-A4: Pipe A4

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 8.64 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.61 fps, Avg. Travel Time= 0.5 min

Peak Storage= 70 cf @ 0.17 hrs

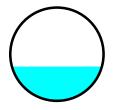
Average Depth at Peak Storage= 0.55', Surface Width= 1.45' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.65 cfs

18.0" Round Pipe

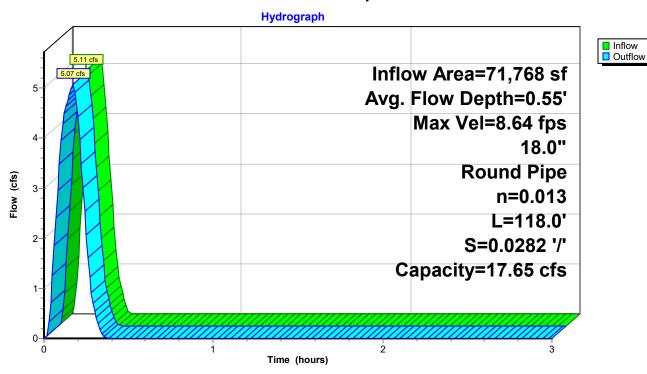
n= 0.013 Corrugated PE, smooth interior

Length= 118.0' Slope= 0.0282 '/'

Inlet Invert= 404.46', Outlet Invert= 401.13'

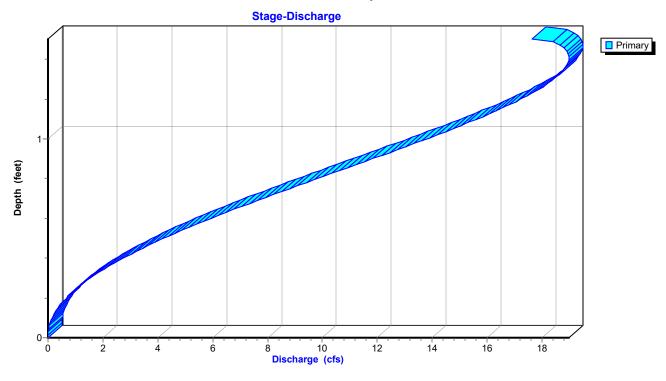


#### Reach P-A3: Pipe A3



Summerwood Gym 3 2-yr AR - Little Rock 2-yr Do Prepared by Phillip Lewis Engineering HydroCAD® 10.20-2f s/n 12520 © 2022 HydroCAD Software Solutions LLC

# Reach P-A3: Pipe A3



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# Stage-Area-Storage for Reach P-A3: Pipe A3

|                  |                     | J                       | •                   |                     | •                       |
|------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation (feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 404.46           | 0.0                 | 0                       | 405.50              | 1.3                 | 154                     |
| 404.48           | 0.0                 | 1                       | 405.52              | 1.3                 | 158                     |
| 404.50           | 0.0                 | 2                       | 405.54              | 1.4                 | 161                     |
| 404.52           | 0.0                 | 3                       | 405.56              | 1.4                 | 164                     |
|                  |                     |                         |                     |                     |                         |
| 404.54           | 0.0                 | 4                       | 405.58              | 1.4                 | 167                     |
| 404.56           | 0.1                 | 6                       | 405.60              | 1.4                 | 170                     |
| 404.58           | 0.1                 | 8                       | 405.62              | 1.5                 | 173                     |
| 404.60           | 0.1                 | 10                      | 405.64              | 1.5                 | 176                     |
| 404.62           | 0.1                 | 12                      | 405.66              | 1.5                 | 179                     |
| 404.64           | 0.1                 | 14                      | 405.68              | 1.5                 | 182                     |
| 404.66           | 0.1                 | 17                      | 405.70              | 1.6                 | 184                     |
| 404.68           | 0.2                 | 19                      | 405.72              | 1.6                 | 187                     |
| 404.70           | 0.2                 | 22                      | 405.74              | 1.6                 | 190                     |
| 404.72           | 0.2                 | 24                      | 405.76              | 1.6                 | 192                     |
| 404.74           | 0.2                 | 27                      | 405.78              | 1.6                 | 194                     |
| 404.76           | 0.3                 | 30                      | 405.80              | 1.7                 | 197                     |
| 404.78           | 0.3                 | 33                      | 405.82              | 1.7                 | 199                     |
| 404.80           | 0.3                 | 35                      | 405.84              | 1.7                 | 201                     |
| 404.82           | 0.3                 | 38                      | 405.86              | 1.7                 | 203                     |
| 404.84           | 0.4                 | 42                      | 405.88              | 1.7                 | 204                     |
| 404.86           | 0.4                 | 45                      | 405.90              | 1.7                 | 206                     |
| 404.88           | 0.4                 | 48                      | 405.92              | 1.8                 | 207                     |
| 404.90           | 0.4                 | 51                      | 405.94              | 1.8                 | 208                     |
| 404.92           | 0.5                 | 54                      | 405.96              | 1.8                 | 209                     |
| 404.94           | 0.5                 | 58                      |                     |                     |                         |
| 404.96           | 0.5                 | 61                      |                     |                     |                         |
| 404.98           | 0.5                 | 64                      |                     |                     |                         |
| 405.00           | 0.6                 | 68                      |                     |                     |                         |
| 405.02           | 0.6                 | 71                      |                     |                     |                         |
| 405.04           | 0.6                 | 74                      |                     |                     |                         |
| 405.06           | 0.7                 | <br>78                  |                     |                     |                         |
| 405.08           | 0.7                 | 81                      |                     |                     |                         |
| 405.10           | 0.7                 | 85                      |                     |                     |                         |
| 405.12           | 0.7                 | 88                      |                     |                     |                         |
| 405.14           | 0.8                 | 92                      |                     |                     |                         |
| 405.16           | 0.8                 | 95                      |                     |                     |                         |
| 405.18           | 0.8                 | 99                      |                     |                     |                         |
| 405.20           | 0.0                 | 102                     |                     |                     |                         |
| 405.22           | 0.9                 | 106                     |                     |                     |                         |
| 405.24           | 0.9                 | 110                     |                     |                     |                         |
| 405.24           | 1.0                 | 113                     |                     |                     |                         |
|                  | 1.0                 | 117                     |                     |                     |                         |
| 405.28           |                     |                         |                     |                     |                         |
| 405.30           | 1.0                 | 120                     |                     |                     |                         |
| 405.32           | 1.0                 | 124                     |                     |                     |                         |
| 405.34           | 1.1                 | 127                     |                     |                     |                         |
| 405.36           | 1.1                 | 131                     |                     |                     |                         |
| 405.38           | 1.1                 | 134                     |                     |                     |                         |
| 405.40           | 1.2                 | 138                     |                     |                     |                         |
| 405.42           | 1.2                 | 141                     |                     |                     |                         |
| 405.44           | 1.2                 | 144                     |                     |                     |                         |
| 405.46           | 1.3                 | 148                     |                     |                     |                         |
| 405.48           | 1.3                 | 151                     |                     |                     |                         |
|                  |                     |                         |                     |                     |                         |

## Summerwood Gym 3 2-yr

Prepared by Phillip Lewis Engineering

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## Summary for Reach P-A4: Pipe A4

Inflow Area = 71,768 sf, 0.00% Impervious, Inflow Depth = 0.52" for 2-yr event

Inflow = 5.07 cfs @ 0.17 hrs, Volume= 3,082 cf

Outflow = 5.05 cfs @ 0.18 hrs, Volume= 3,082 cf, Atten= 0%, Lag= 0.4 min

Routed to Pond DP1: Re-Establised East Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 8.62 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 3.43 fps, Avg. Travel Time= 0.6 min

Peak Storage= 77 cf @ 0.17 hrs

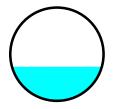
Average Depth at Peak Storage= 0.55', Surface Width= 1.45' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.66 cfs

18.0" Round Pipe

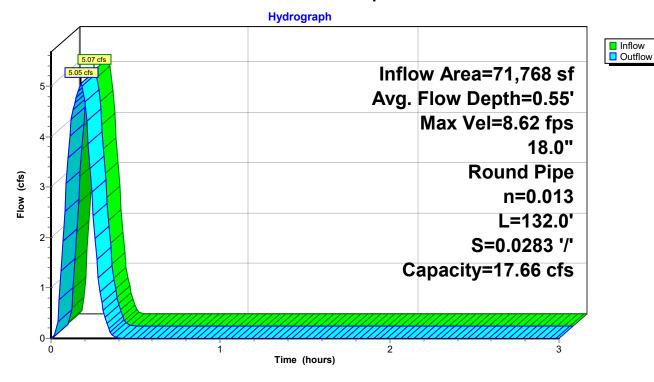
n= 0.013 Corrugated PE, smooth interior

Length= 132.0' Slope= 0.0283 '/'

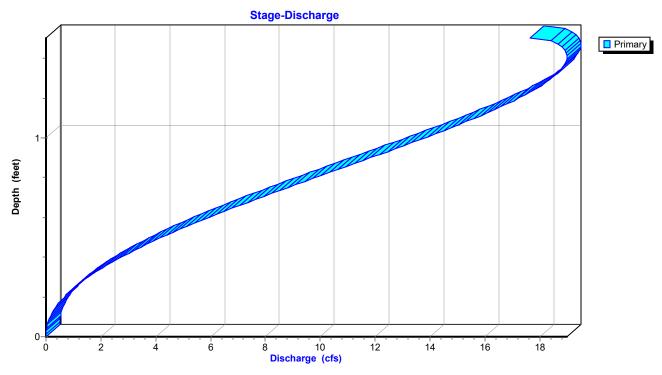
Inlet Invert= 401.03', Outlet Invert= 397.30'



#### Reach P-A4: Pipe A4



# Reach P-A4: Pipe A4



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# Stage-Area-Storage for Reach P-A4: Pipe A4

|                  |                     | J                       | •                   |                     | •                       |
|------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation (feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 401.03           | 0.0                 | 0                       | 402.07              | 1.3                 | 173                     |
| 401.05           | 0.0                 | 1                       | 402.09              | 1.3                 | 176                     |
| 401.07           | 0.0                 | 2                       | 402.11              | 1.4                 | 180                     |
| 401.09           | 0.0                 | 3                       | 402.13              | 1.4                 | 183                     |
| 401.11           | 0.0                 | 5                       | 402.15              | 1.4                 | 187                     |
| 401.13           | 0.1                 | 7                       | 402.17              | 1.4                 | 190                     |
| 401.15           | 0.1                 | 9                       | 402.19              | 1.5                 | 194                     |
| 401.17           | 0.1                 | 11                      | 402.21              | 1.5                 | 197                     |
| 401.19           | 0.1                 | 13                      | 402.23              | 1.5                 | 200                     |
| 401.21           | 0.1                 | 16                      | 402.25              | 1.5                 | 203                     |
| 401.23           | 0.1                 | 18                      | 402.27              | 1.6                 | 206                     |
| 401.25           | 0.2                 | 21                      | 402.29              | 1.6                 | 209                     |
| 401.27           | 0.2                 | 24                      | 402.31              | 1.6                 | 212                     |
| 401.29           | 0.2                 | 27                      | 402.33              | 1.6                 | 215                     |
| 401.31           | 0.2                 | 30                      | 402.35              | 1.6                 | 217                     |
| 401.33           | 0.3                 | 33                      | 402.37              | 1.7                 | 220                     |
| 401.35           | 0.3                 | 36                      | 402.39              | 1.7                 | 222                     |
| 401.37           | 0.3                 | 40                      | 402.41              | 1.7                 | 225                     |
| 401.39           | 0.3                 | 43                      | 402.43              | 1.7                 | 227                     |
| 401.41           | 0.4                 | 46                      | 402.45              | 1.7                 | 228                     |
| 401.43           | 0.4                 | 50                      | 402.47              | 1.7                 | 230                     |
| 401.45           | 0.4                 | 53<br>57                | 402.49              | 1.8                 | 232                     |
| 401.47           | 0.4<br>0.5          | 57<br>61                | 402.51              | 1.8<br><b>1.8</b>   | 233<br><b>233</b>       |
| 401.49<br>401.51 | 0.5                 | 64                      | 402.53              | 1.0                 | 233                     |
| 401.53           | 0.5                 | 68                      |                     |                     |                         |
| 401.55           | 0.5                 | 72                      |                     |                     |                         |
| 401.57           | 0.6                 | 76                      |                     |                     |                         |
| 401.59           | 0.6                 | 79                      |                     |                     |                         |
| 401.61           | 0.6                 | 83                      |                     |                     |                         |
| 401.63           | 0.7                 | 87                      |                     |                     |                         |
| 401.65           | 0.7                 | 91                      |                     |                     |                         |
| 401.67           | 0.7                 | 95                      |                     |                     |                         |
| 401.69           | 0.7                 | 99                      |                     |                     |                         |
| 401.71           | 8.0                 | 103                     |                     |                     |                         |
| 401.73           | 0.8                 | 107                     |                     |                     |                         |
| 401.75           | 0.8                 | 111                     |                     |                     |                         |
| 401.77           | 0.9                 | 115                     |                     |                     |                         |
| 401.79           | 0.9                 | 119                     |                     |                     |                         |
| 401.81           | 0.9<br>1.0          | 123                     |                     |                     |                         |
| 401.83<br>401.85 | 1.0                 | 127<br>130              |                     |                     |                         |
| 401.87           | 1.0                 | 134                     |                     |                     |                         |
| 401.89           | 1.0                 | 138                     |                     |                     |                         |
| 401.91           | 1.1                 | 142                     |                     |                     |                         |
| 401.93           | 1.1                 | 146                     |                     |                     |                         |
| 401.95           | 1.1                 | 150                     |                     |                     |                         |
| 401.97           | 1.2                 | 154                     |                     |                     |                         |
| 401.99           | 1.2                 | 158                     |                     |                     |                         |
| 402.01           | 1.2                 | 161                     |                     |                     |                         |
| 402.03           | 1.3                 | 165                     |                     |                     |                         |
| 402.05           | 1.3                 | 169                     |                     |                     |                         |
|                  |                     |                         |                     |                     |                         |

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# Summary for Pond DP1: Re-Establised East Pond

Inflow Area = 132,514 sf, 0.00% Impervious, Inflow Depth = 0.53" for 2-yr event

Inflow = 9.45 cfs @ 0.16 hrs, Volume= 5,804 cf

Outflow = 5.39 cfs @ 0.22 hrs, Volume= 5,804 cf, Atten= 43%, Lag= 3.6 min

Primary = 5.39 cfs @ 0.22 hrs, Volume= 5,804 cf

Routed to Link Post-Dev: APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Peak Elev= 397.63' @ 0.22 hrs Storage= 2,855 cf

Plug-Flow detention time= 7.8 min calculated for 5,804 cf (100% of inflow)

Center-of-Mass det. time= 7.7 min ( 16.7 - 9.0 )

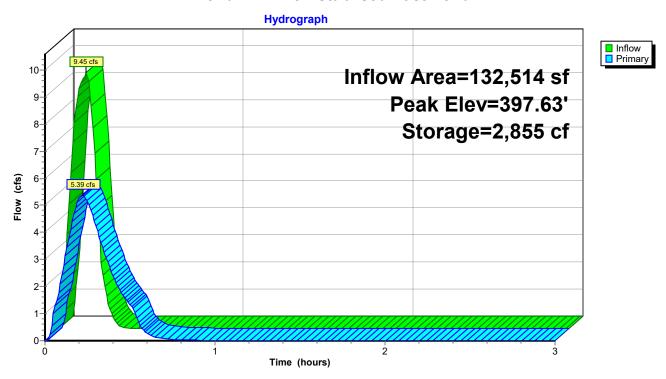
| Volume   | Inve    | rt Avail.S | torage S           | Storage Description  |
|----------|---------|------------|--------------------|--|
| #1       | 396.0   | O' 8,      | 557 cf (           | Custom Stage Data Listed below                                       |
| <b>-</b> |         | . 0.       | 0 6                |  |
| Elevatio |         | Inc.Store  | Cum.S              | otore  |
| (fee     | t) (c   | ubic-feet) | (cubic-            | -feet)   |
| 396.0    | 0       | 0          |                    | 0  |
| 396.5    | 0       | 250        |                    | 250  |
| 397.0    | 0       | 1,092      | 1                  | 1,342  |
| 398.0    | 0       | 2,387      | 3                  | 3,729  |
| 399.0    | 0       | 2,405      | 6                  | 5,134  |
| 400.0    | 0       | 2,423      |                    | 3,557  |
|          |         |            |                    |  |
| Device   | Routing | Inver      | rt Outlet          | t Devices  |
| #1       | Primary | 399.00     | )' <b>5.0' l</b> o | ong Sharp-Crested Rectangular Weir 2 End Contraction(s)              |
| #2       | Primary | 396.00     |                    | ong Sharp-Crested Rectangular Weir 2 End Contraction(s) Crest Height |

**Primary OutFlow** Max=5.38 cfs @ 0.22 hrs HW=397.63' (Free Discharge)

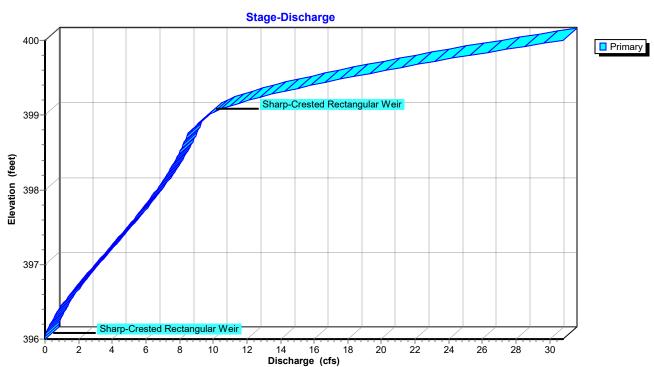
1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

—2=Sharp-Crested Rectangular Weir (Weir Controls 5.38 cfs @ 4.26 fps)

#### Pond DP1: Re-Establised East Pond



#### Pond DP1: Re-Establised East Pond



# Stage-Area-Storage for Pond DP1: Re-Establised East Pond

|                  | ı              | •                |                       |
|------------------|----------------|------------------|-----------------------|
| Elevation        | Storage        | Elevation        | Storage               |
| (feet)           | (cubic-feet)   | (feet)           | (cubic-feet)          |
| 396.00           | 0              | 398.60           | 5,172<br>5,202        |
| 396.05<br>396.10 | 25<br>50       | 398.65           | 5,292<br>5,412        |
| 396.10<br>396.15 | 50<br>75       | 398.70<br>398.75 | 5,412<br>5,533        |
| 396.20           | 100            | 398.80           | 5,653                 |
| 396.25           | 125            | 398.85           | 5,773                 |
| 396.30           | 150            | 398.90           | 5,893                 |
| 396.35           | 175            | 398.95           | 6,014                 |
| 396.40           | 200            | 399.00           | 6,134                 |
| 396.45           | 225            | 399.05           | 6,255                 |
| 396.50           | 250            | 399.10           | 6,376                 |
| 396.55           | 359            | 399.15           | 6,497                 |
| 396.60           | 468            | 399.20           | 6,619                 |
| 396.65           | 578            | 399.25           | 6,740                 |
| 396.70           | 687            | 399.30           | 6,861                 |
| 396.75<br>396.80 | 796<br>905     | 399.35<br>399.40 | 6,982<br>7,103        |
| 396.85           | 1,014          | 399.45           | 7,103<br>7,224        |
| 396.90           | 1,124          | 399.50           | 7,346                 |
| 396.95           | 1,233          | 399.55           | 7,467                 |
| 397.00           | 1,342          | 399.60           | 7,588                 |
| 397.05           | 1,461          | 399.65           | 7,709                 |
| 397.10           | 1,581          | 399.70           | 7,830                 |
| 397.15           | 1,700          | 399.75           | 7,951                 |
| 397.20           | 1,819          | 399.80           | 8,072                 |
| 397.25           | 1,939          | 399.85           | 8,194                 |
| 397.30           | 2,058          | 399.90           | 8,315                 |
| 397.35<br>397.40 | 2,177<br>2,297 | 399.95<br>400.00 | 8,436<br><b>8,557</b> |
| 397.45           | 2,416          | 400.00           | 0,331                 |
| 397.50           | 2,536          |                  |                       |
| 397.55           | 2,655          |                  |                       |
| 397.60           | 2,774          |                  |                       |
| 397.65           | 2,894          |                  |                       |
| 397.70           | 3,013          |                  |                       |
| 397.75           | 3,132          |                  |                       |
| 397.80           | 3,252          |                  |                       |
| 397.85           | 3,371          |                  |                       |
| 397.90           | 3,490          |                  |                       |
| 397.95<br>398.00 | 3,610<br>3,729 |                  |                       |
| 398.05           | 3,849          |                  |                       |
| 398.10           | 3,970          |                  |                       |
| 398.15           | 4,090          |                  |                       |
| 398.20           | 4,210          |                  |                       |
| 398.25           | 4,330          |                  |                       |
| 398.30           | 4,451          |                  |                       |
| 398.35           | 4,571          |                  |                       |
| 398.40           | 4,691          |                  |                       |
| 398.45<br>398.50 | 4,811<br>4,932 |                  |                       |
| 398.55           | 4,932<br>5,052 |                  |                       |
| 090.00           | 3,032          |                  |                       |

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# **Summary for Link Post-Dev: APPROX DISCHARGE**

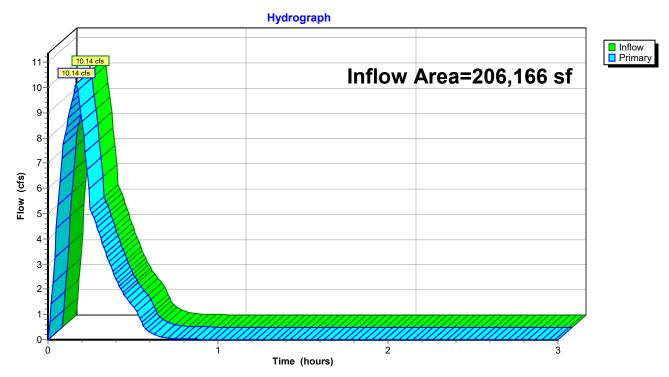
Inflow Area = 206,166 sf, 0.00% Impervious, Inflow Depth = 0.53" for 2-yr event

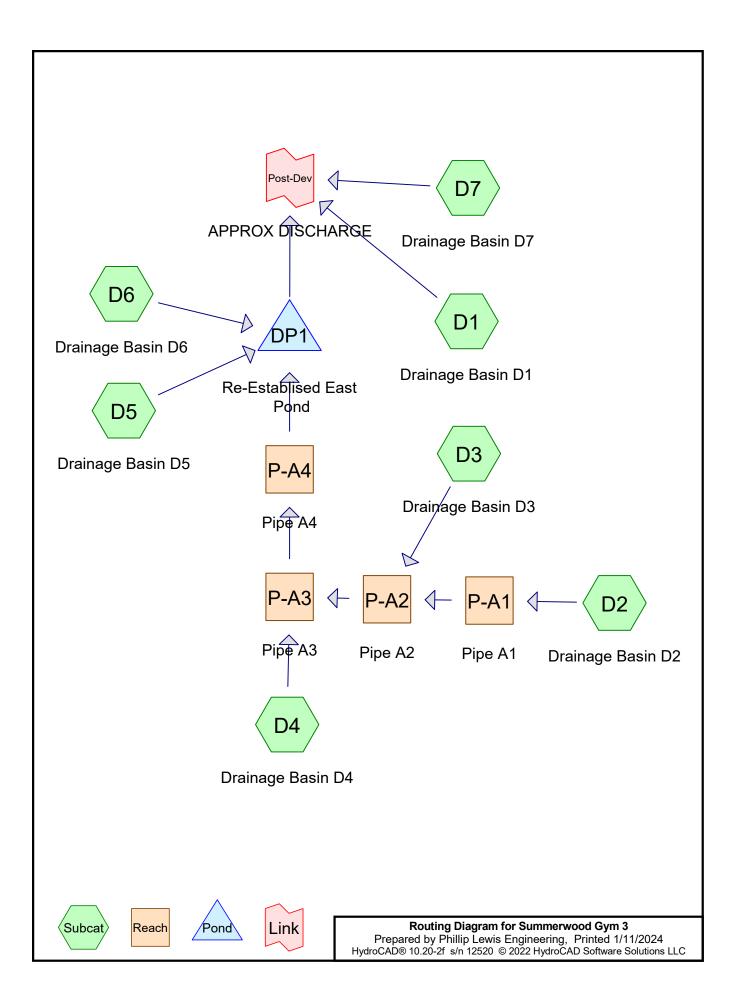
Inflow = 10.14 cfs @ 0.17 hrs, Volume= 9,191 cf

Primary = 10.14 cfs @ 0.17 hrs, Volume= 9,191 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

#### Link Post-Dev: APPROX DISCHARGE





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# Summary for Subcatchment D1: Drainage Basin D1

3,176 cf, Depth= 0.78" Runoff 5.30 cfs @ 0.09 hrs, Volume=

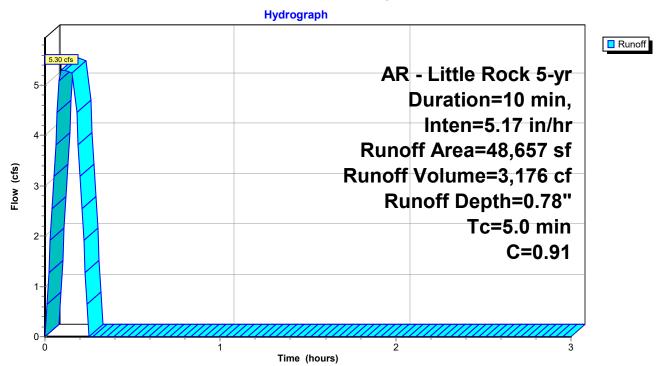
Routed to Link Post-Dev: APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

|       | rea (sf) | С       | Description         | 1                       |  |  |  |  |  |
|-------|----------|---------|---------------------|-------------------------|--|--|--|--|--|
|       | 3,421    | 0.40    | Sod Yard            | Sod Yard                |  |  |  |  |  |
|       | 45,236   | 0.95    | Rood, Drive         | Rood, Drives, Sidewalks |  |  |  |  |  |
|       | 48,657   | 0.91    | Weighted A          | Weighted Average        |  |  |  |  |  |
|       | 3,421    |         | 7.03% Pervious Area |                         |  |  |  |  |  |
|       | 45,236   |         | 92.97% Im           | pervious A              | rea  |  |  |  |  |
| _     |          |         |                     |                         |  |  |  |  |  |
| Tc    | Length   | Slope   | ,                   | Capacity                | Description                                    |  |  |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)            | (cfs)                   |  |  |  |  |  |
| 5.0   |          |         |                     |                         | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D1: Drainage Basin D1



# **Summary for Subcatchment D2: Drainage Basin D2**

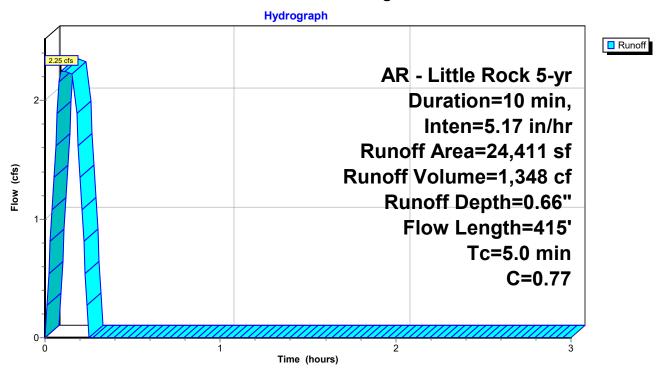
Runoff = 2.25 cfs @ 0.09 hrs, Volume= 1,348 cf, Depth= 0.66"

Routed to Reach P-A1: Pipe A1

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

|       | Area (sf) | С       | Description      | 1                  |  |  |  |  |  |
|-------|-----------|---------|------------------|--------------------|--|--|--|--|--|
|       | 8,845     | 0.45    | Rip Rap Er       | Rip Rap Embankment |  |  |  |  |  |
|       | 15,566    | 0.95    | Roof, Drive      | es, Sidewal        | ks   |  |  |  |  |
|       | 24,411    | 0.77    | Weighted Average |                    |  |  |  |  |  |
|       | 8,845     |         | 36.23% Pe        | rvious Area        | a  |  |  |  |  |
|       | 15,566    |         | 63.77% Im        | pervious Aı        | rea  |  |  |  |  |
|       |           |         |                  |                    |  |  |  |  |  |
| Tc    | 3         | Slope   | ,                | Capacity           | Description                                    |  |  |  |  |
| (min) | (feet)    | (ft/ft) | (ft/sec)         | (cfs)              |  |  |  |  |  |
| 5.0   | 415       |         | 1.38             |                    | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |

### Subcatchment D2: Drainage Basin D2



# **Summary for Subcatchment D3: Drainage Basin D3**

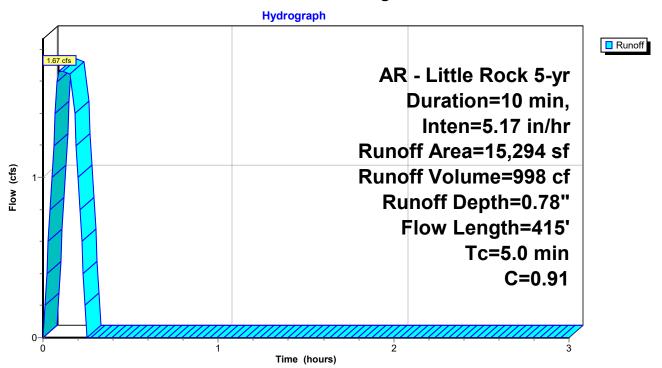
Runoff = 1.67 cfs @ 0.09 hrs, Volume= 998 cf, Depth= 0.78"

Routed to Reach P-A2 : Pipe A2

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

|       | rea (sf) | С       | Description | 1                |  |  |  |  |
|-------|----------|---------|-------------|------------------|--|--|--|--|
|       | 1,065    | 0.40    | Sod Yard    |                  |  |  |  |  |
|       | 14,229   | 0.95    | Paving, Sic | dewalks          |  |  |  |  |
|       | 15,294   | 0.91    | Weighted A  | Weighted Average |  |  |  |  |
|       | 1,065    |         | 6.96% Per   | vious Area       |  |  |  |  |
|       | 14,229   |         | 93.04% Im   | pervious Aı      | rea  |  |  |  |
|       |          |         |             |                  |  |  |  |  |
| Tc    | Length   | Slope   | ,           | Capacity         | Description                                    |  |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)    | (cfs)            |  |  |  |  |
| 5.0   | 415      |         | 1.38        |                  | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

### Subcatchment D3: Drainage Basin D3



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# Summary for Subcatchment D4: Drainage Basin D4

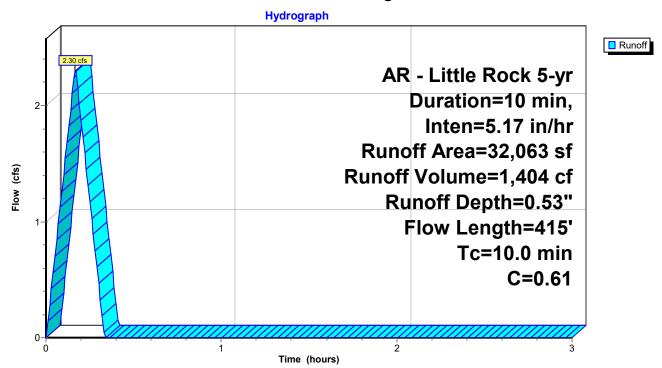
Runoff = 2.30 cfs @ 0.17 hrs, Volume= 1,404 cf, Depth= 0.53"

Routed to Reach P-A3: Pipe A3

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

| A     | rea (sf) | С       | Description          | 1           |  |  |  |
|-------|----------|---------|----------------------|-------------|--|--|--|
|       | 20,032   | 0.40    |                      |             |  |  |  |
|       | 12,031   | 0.95    |                      |             |  |  |  |
|       | 32,063   | 0.61    | Weighted A           | Average     |  |  |  |
|       | 20,032   |         | 62.48% Pervious Area |             |  |  |  |
|       | 12,031   |         | 37.52% Im            | pervious Aı | rea  |  |  |
|       |          |         |                      |             |  |  |  |
| Tc    | Length   | Slope   | ,                    | Capacity    | Description                                    |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)             | (cfs)       |  |  |  |
| 10.0  | 415      |         | 0.69                 |             | Direct Entry, Overland Concentrated Flow (Min) |  |  |

### Subcatchment D4: Drainage Basin D4



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# **Summary for Subcatchment D5: Drainage Basin D5**

2,001 cf, Depth= 0.58" Runoff 3.34 cfs @ 0.09 hrs, Volume=

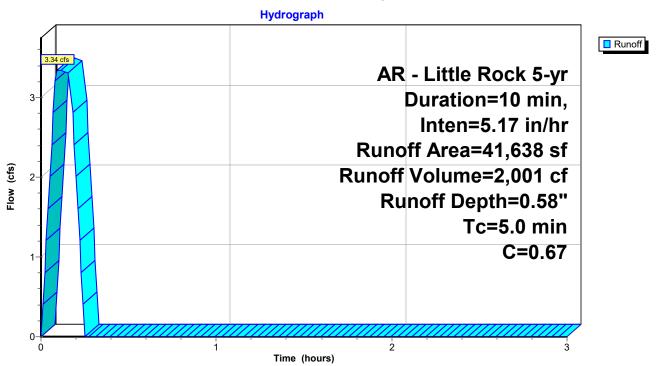
Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

| A     | rea (sf) | С       | Description          | 1                            |  |  |  |  |  |  |
|-------|----------|---------|----------------------|------------------------------|--|--|--|--|--|--|
|       | 21,201   | 0.40    | Sod Yard,            | Sod Yard, Natural Vegetation |  |  |  |  |  |  |
|       | 20,437   | 0.95    | Paving, Sic          | Paving, Sidewalks            |  |  |  |  |  |  |
|       | 41,638   | 0.67    | Weighted A           | Weighted Average             |  |  |  |  |  |  |
|       | 21,201   |         | 50.92% Pervious Area |                              |  |  |  |  |  |  |
|       | 20,437   |         | 49.08% Im            | pervious A                   | rea  |  |  |  |  |  |
| _     |          |         |                      |                              |  |  |  |  |  |  |
| Tc    | Length   | Slope   | ,                    | Capacity                     | Description                                    |  |  |  |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)             | (cfs)                        |  |  |  |  |  |  |
| 5.0   |          |         |                      |                              | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D5: Drainage Basin D5



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# **Summary for Subcatchment D6: Drainage Basin D6**

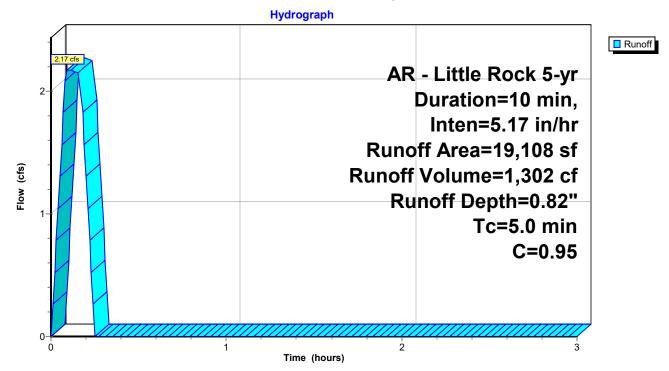
Runoff = 2.17 cfs @ 0.09 hrs, Volume= 1,302 cf, Depth= 0.82"

Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

|   | Α            | rea (sf) | С       | Description             | 1     |  |  |  |  |
|---|--------------|----------|---------|-------------------------|-------|--|--|--|--|
|   |              | 19,108   | 0.95    | Roof                    |       |  |  |  |  |
|   |              | 19,108   |         | 100.00% Impervious Area |       |  |  |  |  |
|   | Tc           | 3        | Slope   | ,                       |       | Description                                    |  |  |  |
| _ | (min)<br>5.0 | (feet)   | (ft/ft) | (ft/sec)                | (cfs) | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

## Subcatchment D6: Drainage Basin D6



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# **Summary for Subcatchment D7: Drainage Basin D7**

Runoff 1.62 cfs @ 0.09 hrs, Volume=

968 cf, Depth= 0.46"

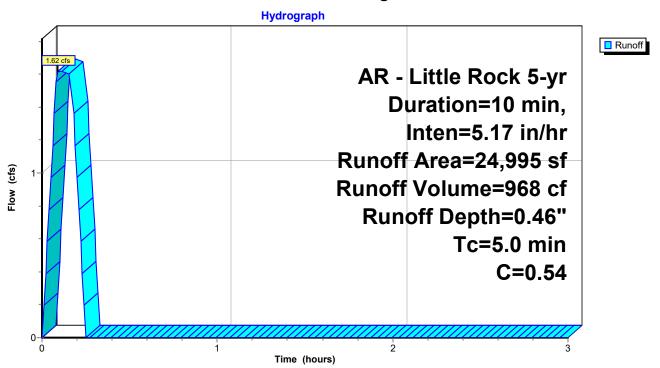
Routed to Link Post-Dev: APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 5-yr Duration=10 min, Inten=5.17 in/hr

| A           | rea (sf)         | С                | Description          |                              |  |  |  |  |  |  |
|-------------|------------------|------------------|----------------------|------------------------------|--|--|--|--|--|--|
|             | 18,798           | 0.40             | Sod Yard,            | Sod Yard, Natural Vegetation |  |  |  |  |  |  |
|             | 6,197            | 0.95             | Paving, Sic          | dewalks                      |  |  |  |  |  |  |
|             | 24,995           | 0.54             | Weighted A           | Weighted Average             |  |  |  |  |  |  |
|             | 18,798           |                  | 75.21% Pervious Area |                              |  |  |  |  |  |  |
|             | 6,197            |                  | 24.79% lm            | pervious A                   | rea  |  |  |  |  |  |
| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | ,                    | Capacity<br>(cfs)            | Description                                    |  |  |  |  |  |
| 5.0         | (1223)           | (14,15)          | (14111)              | (===)                        | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D7: Drainage Basin D7



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## Summary for Reach P-A1: Pipe A1

Inflow Area = 24,411 sf, 63.77% Impervious, Inflow Depth = 0.66" for 5-yr event

Inflow = 2.25 cfs @ 0.09 hrs, Volume= 1,348 cf

Outflow = 2.25 cfs @ 0.11 hrs, Volume= 1,348 cf, Atten= 0%, Lag= 1.2 min

Routed to Reach P-A2: Pipe A2

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 6.75 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 4.79 fps, Avg. Travel Time= 0.2 min

Peak Storage= 17 cf @ 0.09 hrs

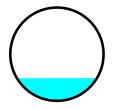
Average Depth at Peak Storage= 0.37', Surface Width= 1.29' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.28 cfs

18.0" Round Pipe

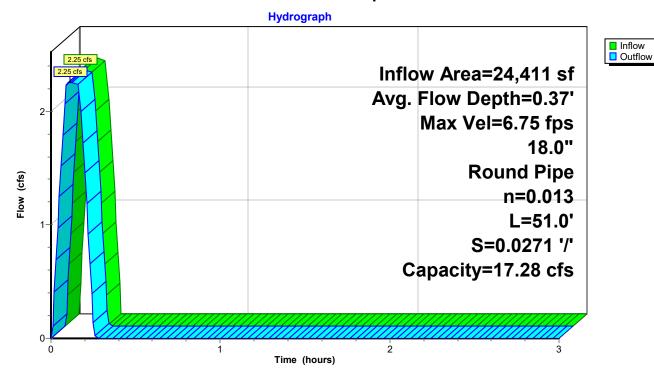
n= 0.013 Corrugated PE, smooth interior

Length= 51.0' Slope= 0.0271 '/'

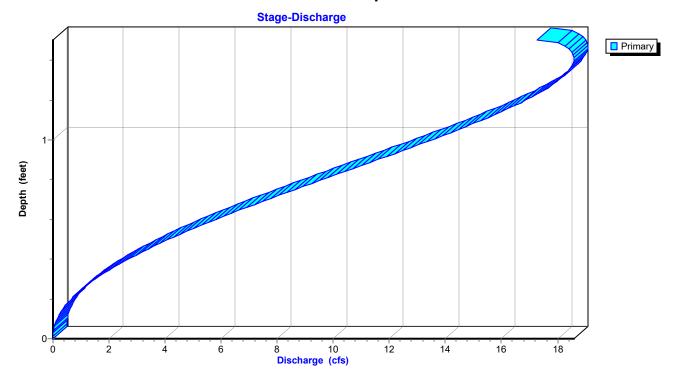
Inlet Invert= 408.33', Outlet Invert= 406.95'



#### Reach P-A1: Pipe A1



# Reach P-A1: Pipe A1



Storage (cubic-feet)

67

68

69

71

72

73

75

76

77

78

80

81

82

83 84

85

86

87

88 88

89 89

90

90

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# Stage-Area-Storage for Reach P-A1: Pipe A1

|                     |                     | · ·                     | J                   |                     |
|---------------------|---------------------|-------------------------|---------------------|---------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) |
| 408.33              | 0.0                 | 0                       | 409.37              | 1.3                 |
| 408.35              | 0.0                 | 0                       | 409.39              | 1.3                 |
| 408.37              | 0.0                 | 1                       | 409.41              | 1.4                 |
| 408.39              | 0.0                 | 1                       | 409.43              | 1.4                 |
| 408.41              | 0.0                 |                         | 409.45              | 1.4                 |
| 408.43              | 0.0                 | 2 3                     | 409.43              | 1.4                 |
|                     | 0.1                 | 3                       |                     | 1.4                 |
| 408.45              |                     | 4                       | 409.49              |                     |
| 408.47              | 0.1                 |                         | 409.51              | 1.5                 |
| 408.49              | 0.1                 | 5                       | 409.53              | 1.5                 |
| 408.51              | 0.1                 | 6                       | 409.55              | 1.5                 |
| 408.53              | 0.1                 | 7                       | 409.57              | 1.6                 |
| 408.55              | 0.2                 | 8                       | 409.59              | 1.6                 |
| 408.57              | 0.2                 | 9                       | 409.61              | 1.6                 |
| 408.59              | 0.2                 | 10                      | 409.63              | 1.6                 |
| 408.61              | 0.2                 | 12                      | 409.65              | 1.6                 |
| 408.63              | 0.3                 | 13                      | 409.67              | 1.7                 |
| 408.65              | 0.3                 | 14                      | 409.69              | 1.7                 |
| 408.67              | 0.3                 | 15                      | 409.71              | 1.7                 |
| 408.69              | 0.3                 | 17                      | 409.73              | 1.7                 |
| 408.71              | 0.4                 | 18                      | 409.75              | 1.7                 |
| 408.73              | 0.4                 | 19                      | 409.77              | 1.7                 |
| 408.75              | 0.4                 | 21                      | 409.79              | 1.8                 |
| 408.77              | 0.4                 | 22                      | 409.81              | 1.8                 |
| 408.79              | 0.5                 | 23                      | 409.83              | 1.8                 |
| 408.81              | 0.5                 | 25                      |                     |                     |
| 408.83              | 0.5                 | 26                      |                     |                     |
| 408.85              | 0.5                 | 28                      |                     |                     |
| 408.87              | 0.6                 | 29                      |                     |                     |
| 408.89              | 0.6                 | 31                      |                     |                     |
| 408.91              | 0.6                 | 32                      |                     |                     |
| 408.93              | 0.0                 | 34                      |                     |                     |
| 408.95              | 0.7                 | 35                      |                     |                     |
| 408.97              | 0.7                 | 37                      |                     |                     |
| 408.99              | 0.7                 | 38                      |                     |                     |
| 409.01              | 0.7                 | 40                      |                     |                     |
| 409.01              | 0.8                 | 41                      |                     |                     |
|                     |                     |                         |                     |                     |
| 409.05              | 0.8                 | 43                      |                     |                     |
| 409.07              | 0.9                 | 44                      |                     |                     |
| 409.09              | 0.9                 | 46                      |                     |                     |
| 409.11              | 0.9                 | 47                      |                     |                     |
| 409.13              | 1.0                 | 49                      |                     |                     |
| 409.15              | 1.0                 | 50<br>53                |                     |                     |
| 409.17              | 1.0                 | 52                      |                     |                     |
| 409.19              | 1.0                 | 53                      |                     |                     |
| 409.21              | 1.1                 | 55                      |                     |                     |
| 409.23              | 1.1                 | 56                      |                     |                     |
| 409.25              | 1.1                 | 58                      |                     |                     |
| 409.27              | 1.2                 | 59                      |                     |                     |
| 409.29              | 1.2                 | 61                      |                     |                     |
| 409.31              | 1.2                 | 62                      |                     |                     |
| 409.33              | 1.3                 | 64                      |                     |                     |
| 409.35              | 1.3                 | 65                      |                     |                     |
|                     |                     |                         | 1                   |                     |

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#### Summary for Reach P-A2: Pipe A2

Inflow Area = 39,705 sf, 75.04% Impervious, Inflow Depth = 0.71" for 5-yr event

Inflow = 3.92 cfs @ 0.11 hrs, Volume= 2,346 cf

Outflow = 3.92 cfs @ 0.15 hrs, Volume= 2,346 cf, Atten= 0%, Lag= 2.4 min

Routed to Reach P-A3: Pipe A3

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 6.05 fps, Min. Travel Time= 0.5 min

Avg. Velocity = 2.43 fps, Avg. Travel Time= 1.2 min

Peak Storage= 114 cf @ 0.14 hrs

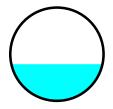
Average Depth at Peak Storage= 0.59', Surface Width= 1.47' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 11.95 cfs

18.0" Round Pipe

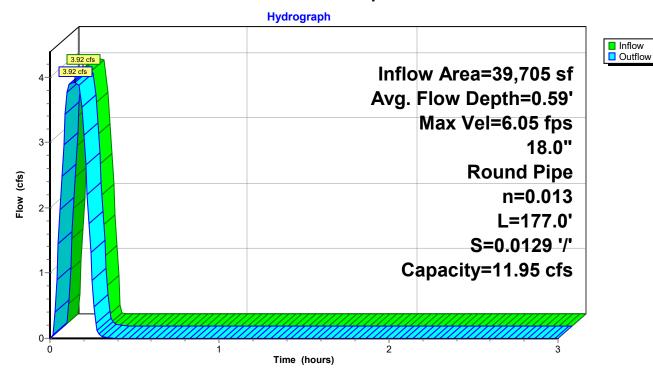
n= 0.013 Corrugated PE, smooth interior

Length= 177.0' Slope= 0.0129 '/'

Inlet Invert= 406.85', Outlet Invert= 404.56'

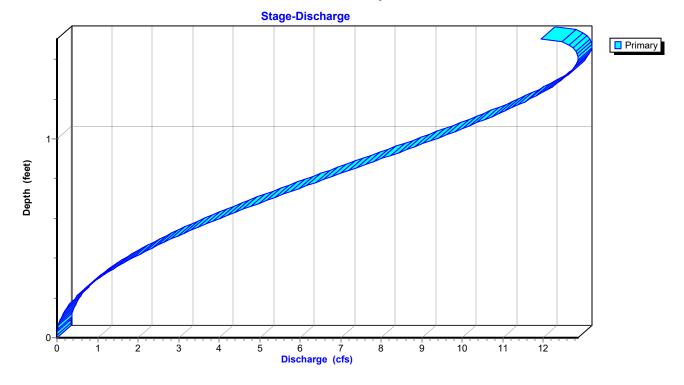


#### Reach P-A2: Pipe A2



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# Reach P-A2: Pipe A2



Storage (cubic-feet)

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# Stage-Area-Storage for Reach P-A2: Pipe A2

|                     |                     | J                       | J                   |                     |
|---------------------|---------------------|-------------------------|---------------------|---------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) |
| 406.85              | 0.0                 | 0                       | 407.89              | 1.3                 |
| 406.87              | 0.0                 | 1                       | 407.91              | 1.3                 |
| 406.89              | 0.0                 | 2                       | 407.93              | 1.4                 |
| 406.91              | 0.0                 | 4                       | 407.95              | 1.4                 |
| 406.93              | 0.0                 | 6                       | 407.97              | 1.4                 |
| 406.95              | 0.0                 | 9                       | 407.99              | 1.4                 |
| 406.97              | 0.1                 | 12                      | 408.01              | 1.5                 |
| 406.99              | 0.1                 | 15                      | 408.03              | 1.5                 |
| 407.01              | 0.1                 | 18                      | 408.05              | 1.5                 |
| 407.03              | 0.1                 | 21                      | 408.07              | 1.5                 |
| 407.05              | 0.1                 | 25                      | 408.09              | 1.6                 |
| 407.03              | 0.1                 | 28                      | 408.03              | 1.6                 |
| 407.07              | 0.2                 | 32                      | 408.11              | 1.6                 |
| 407.09              | 0.2                 | 36                      | 408.15              | 1.6                 |
| 407.11              | 0.2                 | 40                      | 408.13              | 1.6                 |
|                     | 0.2                 | 45<br>45                |                     | 1.7                 |
| 407.15              |                     |                         | 408.19              |                     |
| 407.17              | 0.3                 | 49                      | 408.21              | 1.7                 |
| 407.19              | 0.3                 | 53                      | 408.23              | 1.7                 |
| 407.21              | 0.3                 | 58                      | 408.25              | 1.7                 |
| 407.23              | 0.4                 | 62                      | 408.27              | 1.7                 |
| 407.25              | 0.4                 | 67                      | 408.29              | 1.7                 |
| 407.27              | 0.4                 | 72                      | 408.31              | 1.8                 |
| 407.29              | 0.4                 | 76                      | 408.33              | 1.8                 |
| 407.31              | 0.5                 | 81                      | 408.35              | 1.8                 |
| 407.33              | 0.5                 | 86                      |                     |                     |
| 407.35              | 0.5                 | 91                      |                     |                     |
| 407.37              | 0.5                 | 96                      |                     |                     |
| 407.39              | 0.6                 | 101                     |                     |                     |
| 407.41              | 0.6                 | 106                     |                     |                     |
| 407.43              | 0.6                 | 112                     |                     |                     |
| 407.45              | 0.7                 | 117                     |                     |                     |
| 407.47              | 0.7                 | 122                     |                     |                     |
| 407.49              | 0.7                 | 127                     |                     |                     |
| 407.51              | 0.7                 | 133                     |                     |                     |
| 407.53              | 0.8                 | 138                     |                     |                     |
| 407.55              | 0.8                 | 143                     |                     |                     |
| 407.57              | 8.0                 | 148                     |                     |                     |
| 407.59              | 0.9                 | 154<br>159              |                     |                     |
| 407.61              | 0.9                 |                         |                     |                     |
| 407.63              | 0.9                 | 164                     |                     |                     |
| 407.65              | 1.0<br>1.0          | 170<br>175              |                     |                     |
| 407.67<br>407.69    |                     |                         |                     |                     |
|                     | 1.0                 | 180<br>185              |                     |                     |
| 407.71<br>407.73    | 1.0<br>1.1          | 185<br>191              |                     |                     |
| 407.75              | 1.1                 | 196                     |                     |                     |
| 407.75              | 1.1                 | 201                     |                     |                     |
| 407.77              | 1.1                 | 206                     |                     |                     |
| 407.79              | 1.2                 | 200                     |                     |                     |
| 407.83              | 1.2                 | 216                     |                     |                     |
| 407.85              | 1.2                 | 216<br>222              |                     |                     |
| 407.85              | 1.3                 | 222<br>226              |                     |                     |
| 407.07              | 1.3                 | 220                     |                     |                     |

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#### Summary for Reach P-A3: Pipe A3

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.63" for 5-yr event

Inflow = 6.22 cfs @ 0.17 hrs, Volume= 3,751 cf

Outflow = 6.17 cfs @ 0.17 hrs, Volume= 3,751 cf, Atten= 1%, Lag= 0.3 min

Routed to Reach P-A4: Pipe A4

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 9.11 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.79 fps, Avg. Travel Time= 0.5 min

Peak Storage= 80 cf @ 0.17 hrs

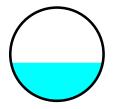
Average Depth at Peak Storage= 0.61', Surface Width= 1.48' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.65 cfs

18.0" Round Pipe

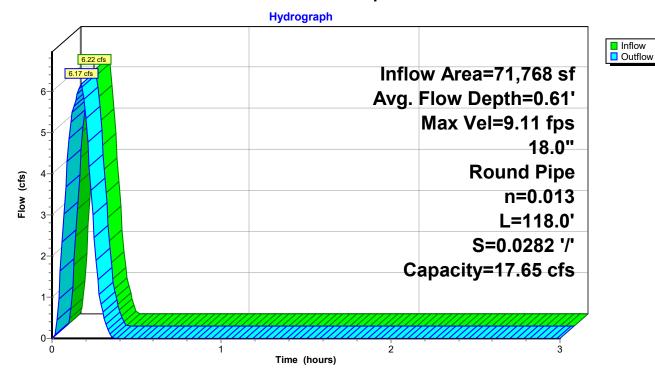
n= 0.013 Corrugated PE, smooth interior

Length= 118.0' Slope= 0.0282 '/'

Inlet Invert= 404.46', Outlet Invert= 401.13'

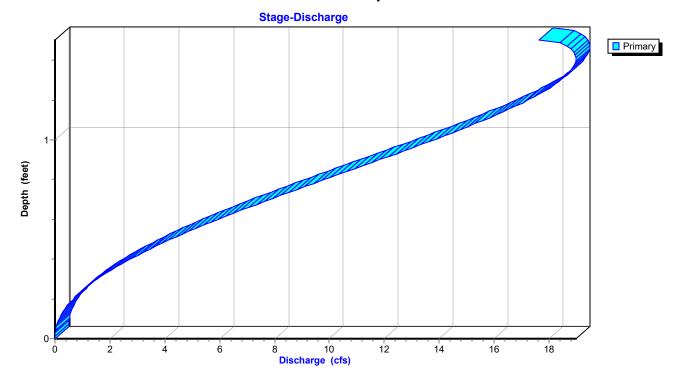


#### Reach P-A3: Pipe A3



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# Reach P-A3: Pipe A3



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# Stage-Area-Storage for Reach P-A3: Pipe A3

|                     |                     | J                       | J                   |                     | •                       |
|---------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 404.46              |                     |                         | 405.50              | 1.3                 | <del></del>             |
| 404.48              | 0.0<br>0.0          | 0<br>1                  | 405.50              | 1.3                 | 154<br>158              |
|                     | 0.0                 |                         |                     | 1.3                 | 161                     |
| 404.50              |                     | 2 3                     | 405.54              |                     |                         |
| 404.52              | 0.0                 |                         | 405.56              | 1.4                 | 164                     |
| 404.54<br>404.56    | 0.0<br>0.1          | 4<br>6                  | 405.58<br>405.60    | 1.4<br>1.4          | 167<br>170              |
| 404.58              | 0.1                 | 8                       | 405.60              | 1.4                 | 170                     |
| 404.56              | 0.1                 | 10                      | 405.62              | 1.5                 | 173                     |
| 404.60              | 0.1                 | 12                      | 405.66              | 1.5                 | 179                     |
| 404.62              | 0.1                 | 14                      | 405.68              | 1.5                 | 182                     |
| 404.66              | 0.1                 | 17                      | 405.00              | 1.6                 | 184                     |
| 404.68              | 0.1                 | 19                      | 405.70              | 1.6                 | 187                     |
| 404.00              | 0.2                 | 22                      | 405.72              | 1.6                 | 190                     |
| 404.70              | 0.2                 | 24                      | 405.74              | 1.6                 | 192                     |
| 404.72              | 0.2                 | 24<br>27                | 405.76              | 1.6                 | 194                     |
| 404.74              | 0.2                 | 30                      | 405.78              | 1.7                 | 197                     |
| 404.78              | 0.3                 | 33                      | 405.80              | 1.7                 | 199                     |
| 404.76              | 0.3                 | 35                      | 405.84              | 1.7                 | 201                     |
| 404.82              | 0.3                 | 38                      | 405.86              | 1.7                 | 203                     |
| 404.84              | 0.3                 | 42                      | 405.88              | 1.7                 | 204                     |
| 404.86              | 0.4                 | 45                      | 405.90              | 1.7                 | 206                     |
| 404.88              | 0.4                 | 48                      | 405.90              | 1.7                 | 207                     |
| 404.90              | 0.4                 | 51                      | 405.94              | 1.8                 | 208                     |
| 404.92              | 0.5                 | 54                      | 405.96              | 1.8                 | <b>209</b>              |
| 404.94              | 0.5                 | 58                      | +00.50              | 1.0                 | 203                     |
| 404.96              | 0.5                 | 61                      |                     |                     |                         |
| 404.98              | 0.5                 | 64                      |                     |                     |                         |
| 405.00              | 0.6                 | 68                      |                     |                     |                         |
| 405.02              | 0.6                 | 71                      |                     |                     |                         |
| 405.04              | 0.6                 | 74                      |                     |                     |                         |
| 405.06              | 0.7                 | 78                      |                     |                     |                         |
| 405.08              | 0.7                 | 81                      |                     |                     |                         |
| 405.10              | 0.7                 | 85                      |                     |                     |                         |
| 405.12              | 0.7                 | 88                      |                     |                     |                         |
| 405.14              | 0.8                 | 92                      |                     |                     |                         |
| 405.16              | 0.8                 | 95                      |                     |                     |                         |
| 405.18              | 0.8                 | 99                      |                     |                     |                         |
| 405.20              | 0.9                 | 102                     |                     |                     |                         |
| 405.22              | 0.9                 | 106                     |                     |                     |                         |
| 405.24              | 0.9                 | 110                     |                     |                     |                         |
| 405.26              | 1.0                 | 113                     |                     |                     |                         |
| 405.28              | 1.0                 | 117                     |                     |                     |                         |
| 405.30              | 1.0                 | 120                     |                     |                     |                         |
| 405.32              | 1.0                 | 124                     |                     |                     |                         |
| 405.34              | 1.1                 | 127                     |                     |                     |                         |
| 405.36              | 1.1                 | 131                     |                     |                     |                         |
| 405.38              | 1.1                 | 134                     |                     |                     |                         |
| 405.40              | 1.2                 | 138                     |                     |                     |                         |
| 405.42              | 1.2                 | 141                     |                     |                     |                         |
| 405.44              | 1.2                 | 144                     |                     |                     |                         |
| 405.46              | 1.3                 | 148                     |                     |                     |                         |
| 405.48              | 1.3                 | 151                     |                     |                     |                         |
|                     |                     |                         |                     |                     |                         |

Prepared by Phillip Lewis Engineering

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#### Summary for Reach P-A4: Pipe A4

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.63" for 5-yr event

Inflow = 6.17 cfs @ 0.17 hrs, Volume 3,751 cf

Outflow = 6.15 cfs @ 0.18 hrs, Volume= 3,751 cf, Atten= 0%, Lag= 0.4 min

Routed to Pond DP1: Re-Establised East Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs Max. Velocity= 9.09 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.60 fps, Avg. Travel Time= 0.6 min

Peak Storage= 89 cf @ 0.17 hrs

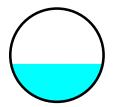
Average Depth at Peak Storage= 0.61', Surface Width= 1.47' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.66 cfs

18.0" Round Pipe

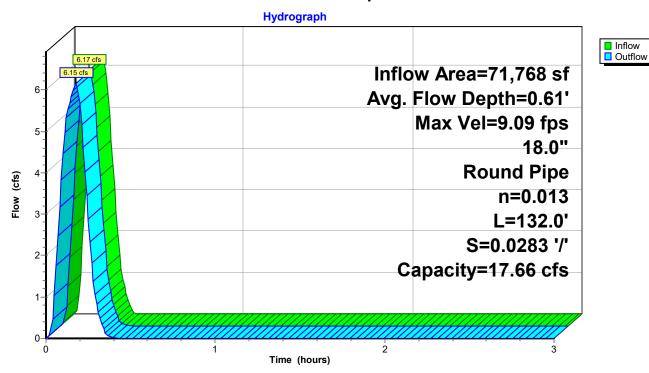
n= 0.013 Corrugated PE, smooth interior

Length= 132.0' Slope= 0.0283 '/'

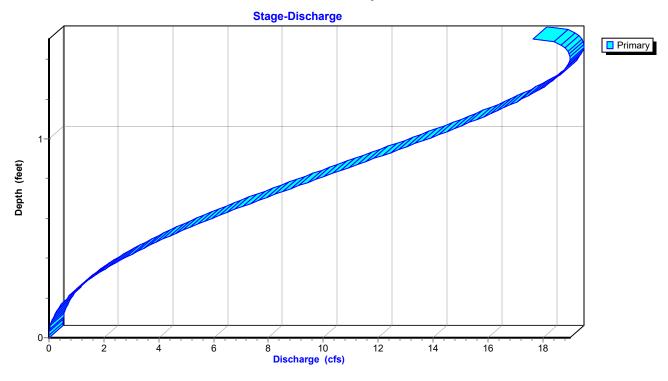
Inlet Invert= 401.03', Outlet Invert= 397.30'



#### Reach P-A4: Pipe A4



# Reach P-A4: Pipe A4



Storage (cubic-feet)

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# Stage-Area-Storage for Reach P-A4: Pipe A4

|                     |                     | J. 307                  |                  |                     |
|---------------------|---------------------|-------------------------|------------------|---------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation (feet) | End-Area<br>(sq-ft) |
| 401.03              | 0.0                 | 0                       | 402.07           | 1.3                 |
| 401.05              |                     | 1                       | 402.09           | 1.3                 |
|                     |                     |                         |                  |                     |
| 401.07              | 0.0                 | 2                       | 402.11           | 1.4                 |
| 401.09              | 0.0                 | 3                       | 402.13           | 1.4                 |
| 401.11              | 0.0                 | 5                       | 402.15           | 1.4                 |
| 401.13              | 0.1                 | 7                       | 402.17           | 1.4                 |
| 401.15              | 0.1                 | 9                       | 402.19           | 1.5                 |
| 401.17              | 0.1                 | 11                      | 402.21           | 1.5                 |
| 401.19              | 0.1                 | 13                      | 402.23           | 1.5                 |
| 401.13              | 0.1                 | 16                      | 402.25           | 1.5                 |
|                     |                     |                         |                  |                     |
| 401.23              | 0.1                 | 18                      | 402.27           | 1.6                 |
| 401.25              | 0.2                 | 21                      | 402.29           | 1.6                 |
| 401.27              | 0.2                 | 24                      | 402.31           | 1.6                 |
| 401.29              | 0.2                 | 27                      | 402.33           | 1.6                 |
| 401.31              | 0.2                 | 30                      | 402.35           | 1.6                 |
| 401.33              | 0.3                 | 33                      | 402.37           | 1.7                 |
| 401.35              | 0.3                 | 36                      | 402.39           | 1.7                 |
| 401.37              | 0.3                 | 40                      | 402.41           | 1.7                 |
|                     | 0.3                 |                         |                  |                     |
| 401.39              |                     | 43                      | 402.43           | 1.7                 |
| 401.41              | 0.4                 | 46                      | 402.45           | 1.7                 |
| 401.43              | 0.4                 | 50                      | 402.47           | 1.7                 |
| 401.45              | 0.4                 | 53                      | 402.49           | 1.8                 |
| 401.47              | 0.4                 | 57                      | 402.51           | 1.8                 |
| 401.49              | 0.5                 | 61                      | 402.53           | 1.8                 |
| 401.51              | 0.5                 | 64                      |                  |                     |
| 401.53              | 0.5                 | 68                      |                  |                     |
| 401.55              | 0.5                 | 72                      |                  |                     |
| 401.57              | 0.6                 | 76                      |                  |                     |
|                     |                     |                         |                  |                     |
| 401.59              | 0.6                 | 79                      |                  |                     |
| 401.61              | 0.6                 | 83                      |                  |                     |
| 401.63              | 0.7                 | 87                      |                  |                     |
| 401.65              | 0.7                 | 91                      |                  |                     |
| 401.67              | 0.7                 | 95                      |                  |                     |
| 401.69              | 0.7                 | 99                      |                  |                     |
| 401.71              | 0.8                 | 103                     |                  |                     |
| 401.73              | 0.8                 | 107                     |                  |                     |
| 401.75              | 0.8                 | 111                     |                  |                     |
| 401.77              | 0.9                 | 115                     |                  |                     |
| 401.77              | 0.9                 | 119                     |                  |                     |
|                     |                     |                         |                  |                     |
| 401.81              | 0.9                 | 123                     |                  |                     |
| 401.83              | 1.0                 | 127                     |                  |                     |
| 401.85              |                     | 130                     |                  |                     |
| 401.87              | 1.0                 | 134                     |                  |                     |
| 401.89              | 1.0                 | 138                     |                  |                     |
| 401.91              | 1.1                 | 142                     |                  |                     |
| 401.93              | 1.1                 | 146                     |                  |                     |
| 401.95              | 1.1                 | 150                     |                  |                     |
| 401.97              | 1.2                 | 154                     |                  |                     |
|                     |                     |                         |                  |                     |
| 401.99              | 1.2                 | 158                     |                  |                     |
| 402.01              | 1.2                 | 161                     |                  |                     |
| 402.03              | 1.3                 | 165                     |                  |                     |
| 402.05              | 1.3                 | 169                     |                  |                     |
|                     |                     |                         | 1                |                     |

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## Summary for Pond DP1: Re-Establised East Pond

Inflow Area = 132,514 sf, 61.41% Impervious, Inflow Depth = 0.64" for 5-yr event

Inflow = 11.49 cfs @ 0.16 hrs, Volume= 7,053 cf

Outflow = 6.40 cfs @ 0.22 hrs, Volume= 7,053 cf, Atten= 44%, Lag= 3.6 min

Primary = 6.40 cfs @ 0.22 hrs, Volume= 7,053 cf

Routed to Link Post-Dev: APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Peak Elev= 397.93' @ 0.22 hrs Storage= 3,558 cf

Plug-Flow detention time= 8.2 min calculated for 7,053 cf (100% of inflow)

Center-of-Mass det. time= 8.1 min ( 17.0 - 8.9 )

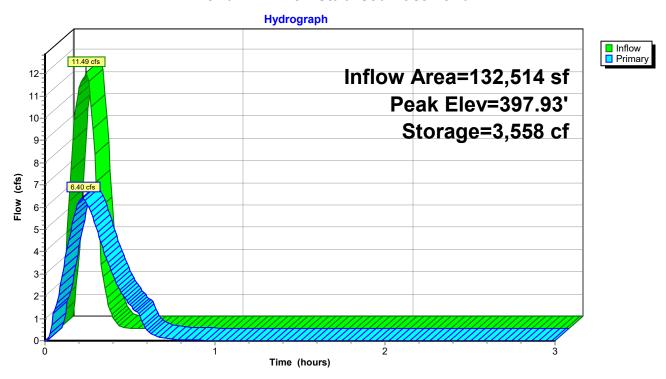
| Volume           | Inve    | ert Avail                | l.Storage        | Storage Description   |
|------------------|---------|--------------------------|------------------|---|
| #1               | 396.0   | 00'                      | 8,557 cf         | Custom Stage Data Listed below  |
| Elevatio<br>(fee |         | Inc.Store<br>cubic-feet) |                  | n.Store<br>ic-feet)   |
| 396.0            | 0       | 0                        |                  | 0   |
| 396.5            | 0       | 250                      |                  | 250   |
| 397.0            | 0       | 1,092                    |                  | 1,342   |
| 398.0            | 0       | 2,387                    |                  | 3,729   |
| 399.0            | 0       | 2,405                    |                  | 6,134   |
| 400.0            | 0       | 2,423                    |                  | 8,557   |
|                  |         |                          |                  |   |
| Device           | Routing | Inv                      | vert Outle       | let Devices   |
| #1               | Primary | 399.                     | .00' <b>5.0'</b> | long Sharp-Crested Rectangular Weir 2 End Contraction(s)                  |
| #2               | Primary | 396.                     | .00' <b>1.1'</b> | long Sharp-Crested Rectangular Weir 2 End Contraction(s)  O' Crest Height |

**Primary OutFlow** Max=6.40 cfs @ 0.22 hrs HW=397.93' (Free Discharge)

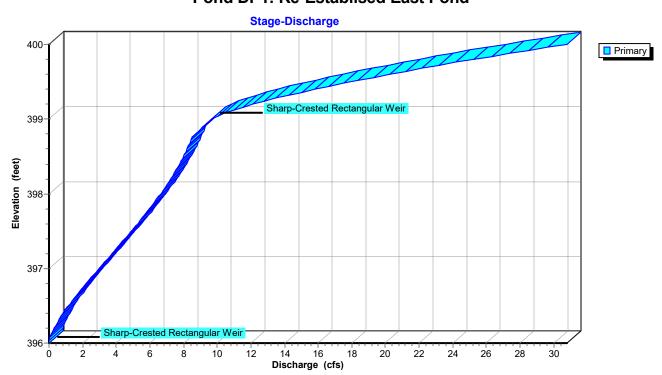
1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

—2=Sharp-Crested Rectangular Weir (Weir Controls 6.40 cfs @ 4.65 fps)

#### Pond DP1: Re-Establised East Pond



#### Pond DP1: Re-Establised East Pond



# Stage-Area-Storage for Pond DP1: Re-Establised East Pond

|                  |                | •         |              |
|------------------|----------------|-----------|--------------|
| Elevation        | Storage        | Elevation | Storage      |
| (feet)           | (cubic-feet)   | (feet)    | (cubic-feet) |
| 396.00           | 0              | 398.60    | 5,172        |
| 396.05           | 25             | 398.65    | 5,292        |
| 396.10           | 50             | 398.70    | 5,412        |
| 396.15           | 75             | 398.75    | 5,533        |
| 396.20           | 100            | 398.80    | 5,653        |
| 396.25           | 125            | 398.85    | 5,773        |
| 396.30           | 150            | 398.90    | 5,893        |
| 396.35           | 175            | 398.95    | 6,014        |
| 396.40           | 200            | 399.00    | 6,134        |
| 396.45           | 225            | 399.05    | 6,255        |
| 396.50           | 250            | 399.10    | 6,376        |
| 396.55           | 359            | 399.15    | 6,497        |
| 396.60           | 468            | 399.20    | 6,619        |
| 396.65           | 578            | 399.25    | 6,740        |
| 396.70           | 687            | 399.30    | 6,861        |
| 396.75           | 796            | 399.35    | 6,982        |
| 396.80           | 905            | 399.40    | 7,103        |
| 396.85           | 1,014          | 399.45    | 7,224        |
| 396.90           | 1,124          | 399.50    | 7,346        |
| 396.95           | 1,233          | 399.55    | 7,467        |
| 397.00           | 1,342          | 399.60    | 7,588        |
| 397.05           | 1,461          | 399.65    | 7,709        |
| 397.10           | 1,581          | 399.70    | 7,830        |
| 397.15           | 1,700          | 399.75    | 7,951        |
| 397.20           | 1,819          | 399.80    | 8,072        |
| 397.25           | 1,939          | 399.85    | 8,194        |
| 397.30           | 2,058          | 399.90    | 8,315        |
| 397.35           | 2,177          | 399.95    | 8,436        |
| 397.40           | 2,297          | 400.00    | 8,557        |
| 397.45           | 2,416          |           |              |
| 397.50           | 2,536          |           |              |
| 397.55           | 2,655          |           |              |
| 397.60           | 2,774          |           |              |
| 397.65           | 2,894          |           |              |
| 397.70           | 3,013          |           |              |
| 397.75           | 3,132          |           |              |
| 397.80           | 3,252          |           |              |
| 397.85           | 3,371          |           |              |
| 397.90<br>397.95 | 3,490          |           |              |
|                  | 3,610          |           |              |
| 398.00<br>398.05 | 3,729<br>3,849 |           |              |
| 398.10           | 3,970          |           |              |
| 398.15           | 4,090          |           |              |
| 398.20           | 4,210          |           |              |
| 398.25           | 4,330          |           |              |
| 398.30           | 4,451          |           |              |
| 398.35           | 4,571          |           |              |
| 398.40           | 4,691          |           |              |
| 398.45           | 4,811          |           |              |
| 398.50           | 4,932          |           |              |
| 398.55           | 5,052          |           |              |
| 000.00           | 0,002          |           |              |

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### **Summary for Link Post-Dev: APPROX DISCHARGE**

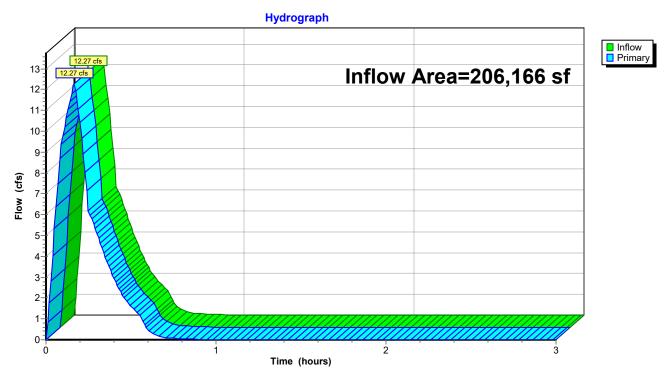
Inflow Area = 206,166 sf, 64.42% Impervious, Inflow Depth = 0.65" for 5-yr event

Inflow = 12.27 cfs @ 0.17 hrs, Volume= 11,197 cf

Primary = 12.27 cfs @ 0.17 hrs, Volume= 11,197 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

#### Link Post-Dev: APPROX DISCHARGE



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## Summary for Subcatchment D1: Drainage Basin D1

Runoff 5.97 cfs @ 0.09 hrs, Volume= 3,577 cf, Depth= 0.88"

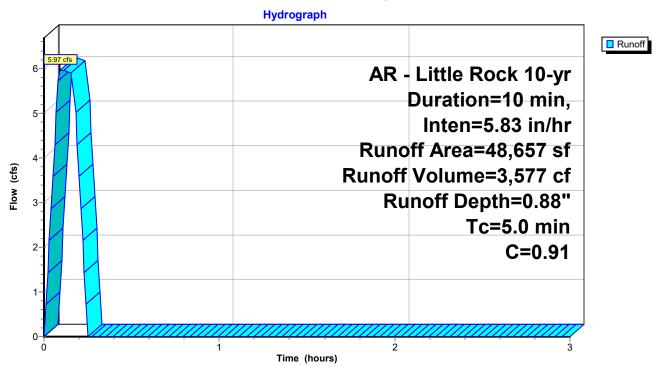
Routed to Link Post-Dev: APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

|       | rea (sf) | С       | Description | 1          |  |
|-------|----------|---------|-------------|------------|--|
|       | 3,421    | 0.40    | Sod Yard    |            |  |
|       | 45,236   | 0.95    | Rood, Drive | es, Sidewa | lks  |
|       | 48,657   | 0.91    | Weighted A  | Average    |  |
|       | 3,421    |         | 7.03% Per   | vious Area |  |
|       | 45,236   |         | 92.97% Im   | pervious A | rea  |
| _     |          |         |             |            |  |
| Tc    | Length   | Slope   | ,           | Capacity   | Description                                    |
| (min) | (feet)   | (ft/ft) | (ft/sec)    | (cfs)      |  |
| 5.0   |          |         |             |            | Direct Entry, Overland Concentrated Flow (Min) |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D1: Drainage Basin D1



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## **Summary for Subcatchment D2: Drainage Basin D2**

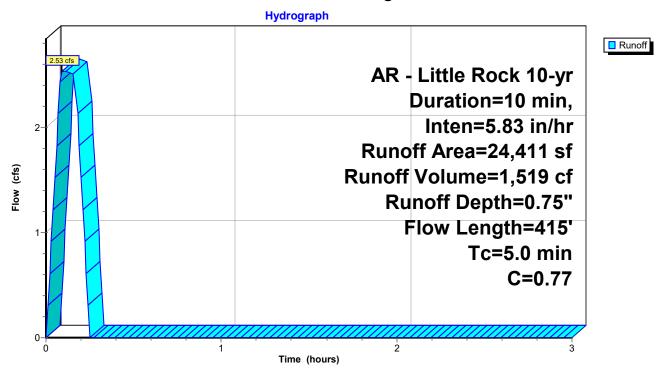
Runoff = 2.53 cfs @ 0.09 hrs, Volume= 1,519 cf, Depth= 0.75"

Routed to Reach P-A1: Pipe A1

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

|       | Area (sf) | С       | Description            | 1                |  |  |  |
|-------|-----------|---------|------------------------|------------------|--|--|--|
|       | 8,845     | 0.45    | Rip Rap Er             | nbankment        |  |  |  |
|       | 15,566    | 0.95    | Roof, Drive            | es, Sidewal      | ks   |  |  |
|       | 24,411    | 0.77    | Weighted A             | Weighted Average |  |  |  |
|       | 8,845     |         | 36.23% Pervious Area   |                  |  |  |  |
|       | 15,566    |         | 63.77% Impervious Area |                  |  |  |  |
|       |           |         |                        |                  |  |  |  |
| Tc    | 3         | Slope   | ,                      | Capacity         | Description                                    |  |  |
| (min) | (feet)    | (ft/ft) | (ft/sec)               | (cfs)            |  |  |  |
| 5.0   | 415       |         | 1.38                   |                  | Direct Entry, Overland Concentrated Flow (Min) |  |  |

#### Subcatchment D2: Drainage Basin D2



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## **Summary for Subcatchment D3: Drainage Basin D3**

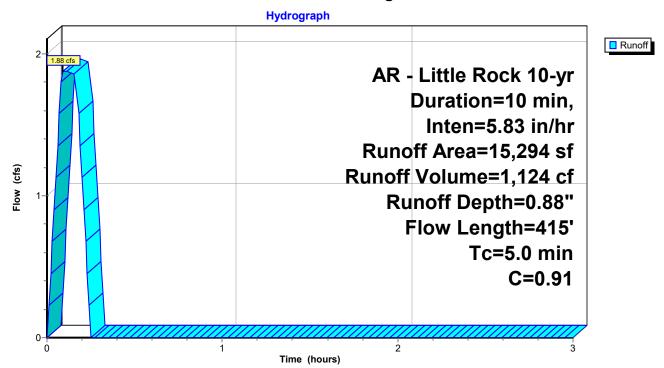
Runoff = 1.88 cfs @ 0.09 hrs, Volume= 1,124 cf, Depth= 0.88"

Routed to Reach P-A2: Pipe A2

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

|     | Area (sf) | С       | Description         | า                |  |  |  |
|-----|-----------|---------|---------------------|------------------|--|--|--|
|     | 1,065     | 0.40    | Sod Yard            |                  |  |  |  |
|     | 14,229    | 0.95    | Paving, Sid         | dewalks          |  |  |  |
|     | 15,294    | 0.91    | Weighted A          | Weighted Average |  |  |  |
|     | 1,065     |         | 6.96% Pervious Area |                  |  |  |  |
|     | 14,229    |         | 93.04% Im           | pervious Ai      | rea  |  |  |
|     |           |         |                     |                  |  |  |  |
| 7   | c Length  |         | ,                   | Capacity         | Description                                    |  |  |
| (mi | n) (feet) | (ft/ft) | (ft/sec)            | (cfs)            |  |  |  |
| 5   | .0 415    |         | 1.38                |                  | Direct Entry, Overland Concentrated Flow (Min) |  |  |

#### Subcatchment D3: Drainage Basin D3



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#### Summary for Subcatchment D4: Drainage Basin D4

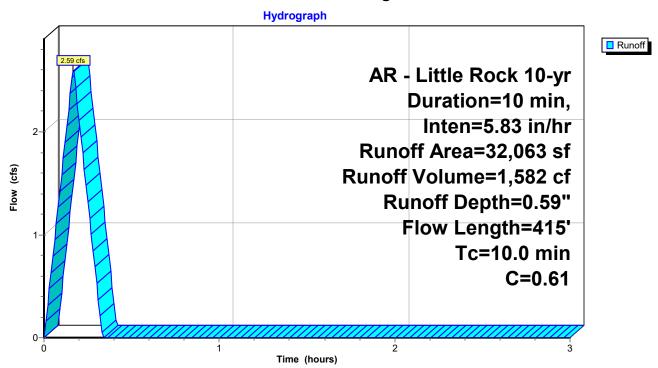
Runoff = 2.59 cfs @ 0.17 hrs, Volume= 1,582 cf, Depth= 0.59"

Routed to Reach P-A3: Pipe A3

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

|    | Α    | rea (sf) | С       | Description | 1           |  |
|----|------|----------|---------|-------------|-------------|--|
|    |      | 20,032   | 0.40    |             |             |  |
|    |      | 12,031   | 0.95    |             |             |  |
|    |      | 32,063   | 0.61    | Weighted A  | Average     |  |
|    |      | 20,032   |         | 62.48% Pe   | rvious Area | a  |
|    |      | 12,031   |         | 37.52% Im   | pervious Aı | rea  |
|    | _    |          |         |             |             |  |
|    | Тс   | Length   | Slope   | ,           | Capacity    | Description                                    |
| (r | min) | (feet)   | (ft/ft) | (ft/sec)    | (cfs)       |  |
| •  | 10.0 | 415      |         | 0.69        |             | Direct Entry, Overland Concentrated Flow (Min) |

#### Subcatchment D4: Drainage Basin D4



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## **Summary for Subcatchment D5: Drainage Basin D5**

2,254 cf, Depth= 0.65" Runoff 3.76 cfs @ 0.09 hrs, Volume=

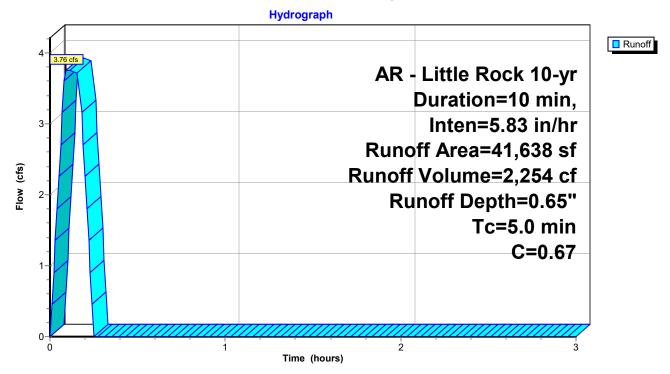
Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

| A     | rea (sf) | С       | Description | 1                    |  |  |  |
|-------|----------|---------|-------------|----------------------|--|--|--|
|       | 21,201   | 0.40    | Sod Yard,   | Natural Ve           | getation                                       |  |  |
|       | 20,437   | 0.95    | Paving, Sic | lewalks              |  |  |  |
|       | 41,638   | 0.67    | Weighted A  | Weighted Average     |  |  |  |
|       | 21,201   |         | 50.92% Pe   | 50.92% Pervious Area |  |  |  |
|       | 20,437   |         | 49.08% Im   | pervious A           | rea  |  |  |
|       |          |         |             |                      |  |  |  |
| Tc    | Length   | Slope   | ,           | Capacity             | Description                                    |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)    | (cfs)                |  |  |  |
| 5.0   |          |         |             |                      | Direct Entry, Overland Concentrated Flow (Min) |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D5: Drainage Basin D5



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## **Summary for Subcatchment D6: Drainage Basin D6**

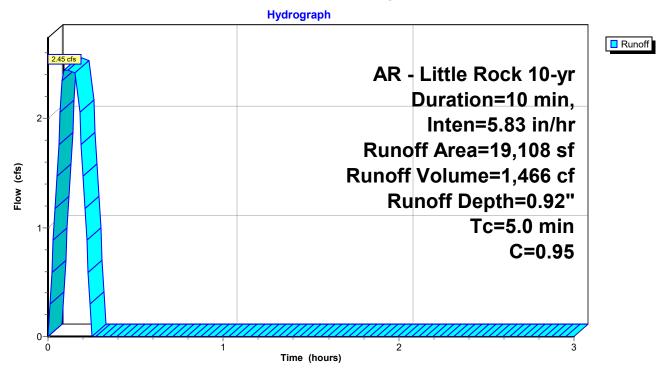
Runoff = 2.45 cfs @ 0.09 hrs, Volume= 1,466 cf, Depth= 0.92"

Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

| A           | rea (sf)         | С                | Description          | 1                 |  |
|-------------|------------------|------------------|----------------------|-------------------|--|
|             | 19,108           | 0.95             | Roof                 |                   |  |
|             | 19,108           |                  | 100.00% Ir           | npervious A       | Area   |
| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                    |
| 5.0         | (leet)           | (IVIL)           | (11/560)             | (CIS)             | Direct Entry, Overland Concentrated Flow (Min) |

#### Subcatchment D6: Drainage Basin D6



Prepared by Phillip Lewis Engineering HydroCAD® 10.20-2f s/n 12520 © 2022 HydroCAD Software Solutions LLC

#### **Summary for Subcatchment D7: Drainage Basin D7**

1,090 cf, Depth= 0.52" Runoff 1.82 cfs @ 0.09 hrs, Volume=

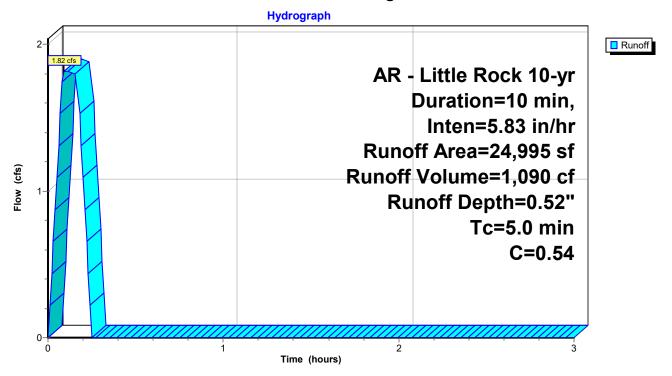
Routed to Link Post-Dev: APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 10-yr Duration=10 min, Inten=5.83 in/hr

| A     | rea (sf) | С       | Description            |                              |  |  |  |  |
|-------|----------|---------|------------------------|------------------------------|--|--|--|--|
|       | 18,798   | 0.40    | Sod Yard,              | Sod Yard, Natural Vegetation |  |  |  |  |
|       | 6,197    | 0.95    | Paving, Sid            | dewalks                      |  |  |  |  |
|       | 24,995   | 0.54    | Weighted Average       |                              |  |  |  |  |
|       | 18,798   |         | 75.21% Pervious Area   |                              |  |  |  |  |
|       | 6,197    |         | 24.79% Impervious Area |                              |  |  |  |  |
| _     |          | 0.1     |                        |                              |  |  |  |  |
| Tc    | -        | Slope   | ,                      | Capacity                     | Description                                    |  |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)               | (cfs)                        |  |  |  |  |
| 5.0   |          |         |                        |                              | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

## Subcatchment D7: Drainage Basin D7



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#### **Summary for Reach P-A1: Pipe A1**

Inflow Area = 24,411 sf, 63.77% Impervious, Inflow Depth = 0.75" for 10-yr event

Inflow = 2.53 cfs @ 0.09 hrs, Volume= 1,519 cf

Outflow = 2.54 cfs @ 0.11 hrs, Volume= 1,519 cf, Atten= 0%, Lag= 1.2 min

Routed to Reach P-A2: Pipe A2

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 6.99 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 5.09 fps, Avg. Travel Time= 0.2 min

Peak Storage= 19 cf @ 0.09 hrs

Average Depth at Peak Storage= 0.39', Surface Width= 1.31' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.28 cfs

18.0" Round Pipe

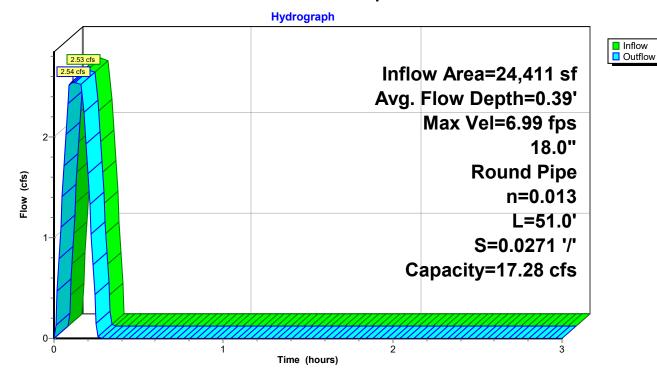
n= 0.013 Corrugated PE, smooth interior

Length= 51.0' Slope= 0.0271 '/'

Inlet Invert= 408.33', Outlet Invert= 406.95'

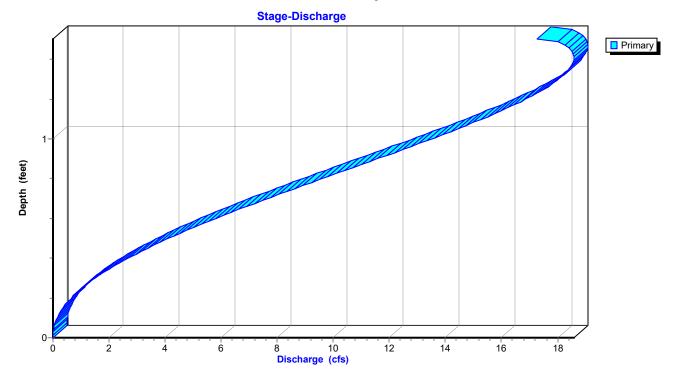


#### Reach P-A1: Pipe A1



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# Reach P-A1: Pipe A1



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# Stage-Area-Storage for Reach P-A1: Pipe A1

|                     |                     | · ·                     | · ·                 |                     | •                       |
|---------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 408.33              | 0.0                 | 0                       | 409.37              | 1.3                 | 67                      |
| 408.35              | 0.0                 | ő                       | 409.39              | 1.3                 | 68                      |
| 408.37              | 0.0                 | 1                       | 409.41              | 1.4                 | 69                      |
| 408.39              | 0.0                 | 1                       | 409.43              | 1.4                 | 71                      |
|                     |                     |                         |                     |                     |                         |
| 408.41              | 0.0                 | 2                       | 409.45              | 1.4                 | 72                      |
| 408.43              | 0.1                 | 3                       | 409.47              | 1.4                 | 73                      |
| 408.45              | 0.1                 | 3                       | 409.49              | 1.5                 | 75                      |
| 408.47              | 0.1                 | 4                       | 409.51              | 1.5                 | 76                      |
| 408.49              | 0.1                 | 5                       | 409.53              | 1.5                 | 77                      |
| 408.51              | 0.1                 | 6                       | 409.55              | 1.5                 | 78                      |
| 408.53              | 0.1                 | 7                       | 409.57              | 1.6                 | 80                      |
| 408.55              | 0.2                 | 8                       | 409.59              | 1.6                 | 81                      |
| 408.57              | 0.2                 | 9                       | 409.61              | 1.6                 | 82                      |
| 408.59              | 0.2                 | 10                      | 409.63              | 1.6                 | 83                      |
| 408.61              | 0.2                 | 12                      | 409.65              | 1.6                 | 84                      |
| 408.63              | 0.3                 | 13                      | 409.67              | 1.7                 | 85                      |
| 408.65              | 0.3                 | 14                      | 409.69              | 1.7                 | 86                      |
| 408.67              | 0.3                 | 15                      | 409.71              | 1.7                 | 87                      |
| 408.69              | 0.3                 | 17                      | 409.73              | 1.7                 | 88                      |
| 408.71              | 0.4                 | 18                      | 409.75              | 1.7                 | 88                      |
| 408.73              | 0.4                 | 19                      | 409.77              | 1.7                 | 89                      |
| 408.75              | 0.4                 | 21                      | 409.79              | 1.8                 | 89                      |
| 408.77              | 0.4                 | 22                      | 409.81              | 1.8                 | 90                      |
| 408.79              | 0.5                 | 23                      | 409.83              | 1.8                 | 90                      |
| 408.81              | 0.5                 | 25                      |                     |                     |                         |
| 408.83              | 0.5                 | 26                      |                     |                     |                         |
| 408.85              | 0.5                 | 28                      |                     |                     |                         |
| 408.87              | 0.6                 | 29                      |                     |                     |                         |
| 408.89              | 0.6                 | 31                      |                     |                     |                         |
| 408.91              | 0.6                 | 32                      |                     |                     |                         |
| 408.93              | 0.7                 | 34                      |                     |                     |                         |
| 408.95              | 0.7                 | 35                      |                     |                     |                         |
| 408.97              | 0.7                 | 37                      |                     |                     |                         |
| 408.99              | 0.7                 | 38                      |                     |                     |                         |
| 409.01              | 0.8                 | 40                      |                     |                     |                         |
| 409.03              | 0.8                 | 41                      |                     |                     |                         |
| 409.05              | 0.8                 | 43                      |                     |                     |                         |
| 409.07              | 0.9                 | 44                      |                     |                     |                         |
| 409.09              | 0.9                 | 46                      |                     |                     |                         |
| 409.11              | 0.9                 | 47                      |                     |                     |                         |
| 409.13              | 1.0                 | 49                      |                     |                     |                         |
| 409.15              | 1.0                 | 50                      |                     |                     |                         |
| 409.17              | 1.0                 | 52                      |                     |                     |                         |
| 409.19              | 1.0                 | 53                      |                     |                     |                         |
| 409.21              | 1.1                 | 55                      |                     |                     |                         |
| 409.23              | 1.1                 | 56                      |                     |                     |                         |
| 409.25              | 1.1                 | 58                      |                     |                     |                         |
| 409.27              | 1.2                 | 59                      |                     |                     |                         |
| 409.29              | 1.2                 | 61                      |                     |                     |                         |
| 409.31              | 1.2                 | 62                      |                     |                     |                         |
| 409.31              | 1.2                 | 64                      |                     |                     |                         |
| 409.35              | 1.3                 | 65                      |                     |                     |                         |
| +09.00              | 1.5                 | 03                      |                     |                     |                         |

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## Summary for Reach P-A2: Pipe A2

Inflow Area = 39,705 sf, 75.04% Impervious, Inflow Depth = 0.80" for 10-yr event

Inflow = 4.41 cfs @ 0.11 hrs, Volume= 2,643 cf

Outflow = 4.41 cfs @ 0.15 hrs, Volume= 2,643 cf, Atten= 0%, Lag= 2.4 min

Routed to Reach P-A3: Pipe A3

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 6.25 fps, Min. Travel Time= 0.5 min

Avg. Velocity = 2.50 fps, Avg. Travel Time= 1.2 min

Peak Storage= 125 cf @ 0.14 hrs

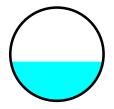
Average Depth at Peak Storage= 0.63', Surface Width= 1.48' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 11.95 cfs

18.0" Round Pipe

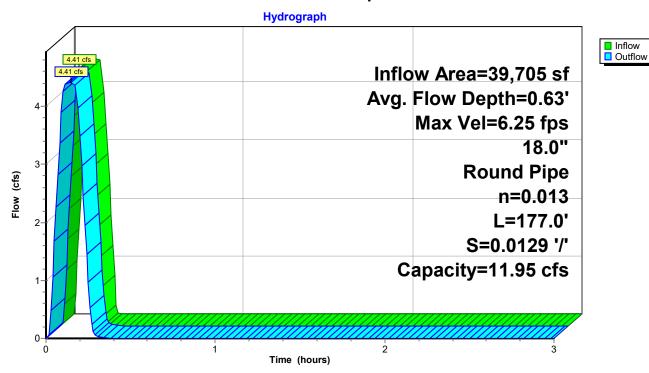
n= 0.013 Corrugated PE, smooth interior

Length= 177.0' Slope= 0.0129 '/'

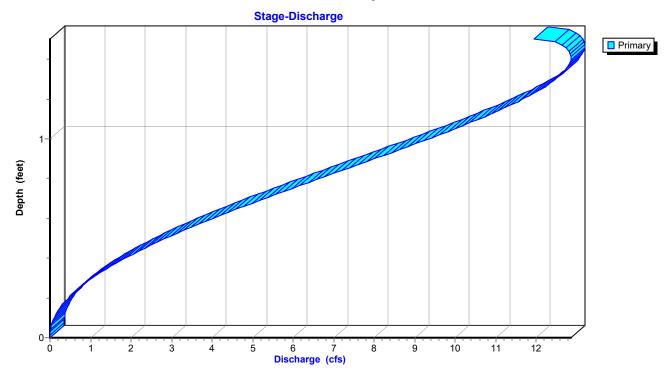
Inlet Invert= 406.85', Outlet Invert= 404.56'



#### Reach P-A2: Pipe A2



# Reach P-A2: Pipe A2



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# Stage-Area-Storage for Reach P-A2: Pipe A2

|        |          | J            | J      |          | •            |
|--------|----------|--------------|--------|----------|--------------|
|        | End-Area | Storage      |        | End-Area | Storage      |
| (feet) | (sq-ft)  | (cubic-feet) | (feet) | (sq-ft)  | (cubic-feet) |
| 406.85 | 0.0      | 0            | 407.89 | 1.3      | 231          |
| 406.87 | 0.0      | 1            | 407.91 | 1.3      | 236          |
| 406.89 | 0.0      | 2            | 407.93 | 1.4      | 241          |
| 406.91 | 0.0      | 4            | 407.95 | 1.4      | 246          |
| 406.93 | 0.0      | 6            | 407.97 | 1.4      | 250          |
| 406.95 | 0.1      | 9            | 407.99 | 1.4      | 255          |
| 406.97 | 0.1      | 12           | 408.01 | 1.5      | 260          |
| 406.99 | 0.1      | 15           | 408.03 | 1.5      | 264          |
| 407.01 | 0.1      | 18           | 408.05 | 1.5      | 268          |
| 407.03 | 0.1      | 21           | 408.07 | 1.5      | 272          |
| 407.05 | 0.1      | 25           | 408.09 | 1.6      | 277          |
| 407.07 | 0.2      | 28           | 408.11 | 1.6      | 280          |
| 407.09 | 0.2      | 32           | 408.13 | 1.6      | 284          |
| 407.11 | 0.2      | 36           | 408.15 | 1.6      | 288          |
| 407.13 | 0.2      | 40           | 408.17 | 1.6      | 292          |
| 407.15 | 0.3      | 45           | 408.19 | 1.7      | 295          |
| 407.17 | 0.3      | 49           | 408.21 | 1.7      | 298          |
| 407.19 | 0.3      | 53           | 408.23 | 1.7      | 301          |
| 407.21 | 0.3      | 58           | 408.25 | 1.7      | 304          |
| 407.23 | 0.4      | 62           | 408.27 | 1.7      | 306          |
| 407.25 | 0.4      | 67           | 408.29 | 1.7      | 309          |
| 407.27 | 0.4      | 72           | 408.31 | 1.8      | 310          |
| 407.29 | 0.4      | 76           | 408.33 | 1.8      | 312          |
| 407.31 | 0.5      | 81           | 408.35 | 1.8      | 313          |
| 407.33 | 0.5      | 86           |        |          |              |
| 407.35 | 0.5      | 91           |        |          |              |
| 407.37 | 0.5      | 96           |        |          |              |
| 407.39 | 0.6      | 101          |        |          |              |
| 407.41 | 0.6      | 106          |        |          |              |
| 407.43 | 0.6      | 112          |        |          |              |
| 407.45 | 0.7      | 117          |        |          |              |
| 407.47 | 0.7      | 122          |        |          |              |
| 407.49 | 0.7      | 127          |        |          |              |
| 407.51 | 0.7      | 133          |        |          |              |
| 407.53 | 8.0      | 138          |        |          |              |
| 407.55 | 8.0      | 143          |        |          |              |
| 407.57 | 8.0      | 148          |        |          |              |
| 407.59 | 0.9      | 154          |        |          |              |
| 407.61 | 0.9      | 159          |        |          |              |
| 407.63 | 0.9      | 164          |        |          |              |
| 407.65 | 1.0      | 170          |        |          |              |
| 407.67 | 1.0      | 175          |        |          |              |
| 407.69 | 1.0      | 180          |        |          |              |
| 407.71 | 1.0      | 185          |        |          |              |
| 407.73 | 1.1      | 191          |        |          |              |
| 407.75 | 1.1      | 196          |        |          |              |
| 407.77 | 1.1      | 201          |        |          |              |
| 407.79 | 1.2      | 206          |        |          |              |
| 407.81 | 1.2      | 211          |        |          |              |
| 407.83 | 1.2      | 216          |        |          |              |
| 407.85 | 1.3      | 222          |        |          |              |
| 407.87 | 1.3      | 226          |        |          |              |
|        |          |              | I      |          |              |

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#### Summary for Reach P-A3: Pipe A3

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.71" for 10-yr event

Inflow = 7.00 cfs @ 0.17 hrs, Volume= 4,225 cf

Outflow = 6.96 cfs @ 0.17 hrs, Volume= 4,225 cf, Atten= 1%, Lag= 0.3 min

Routed to Reach P-A4: Pipe A4

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 9.40 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.90 fps, Avg. Travel Time= 0.5 min

Peak Storage= 88 cf @ 0.17 hrs

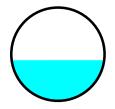
Average Depth at Peak Storage= 0.66', Surface Width= 1.49' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.65 cfs

18.0" Round Pipe

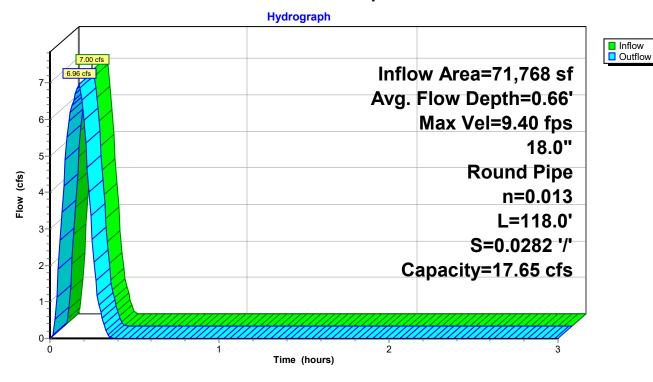
n= 0.013 Corrugated PE, smooth interior

Length= 118.0' Slope= 0.0282 '/'

Inlet Invert= 404.46', Outlet Invert= 401.13'

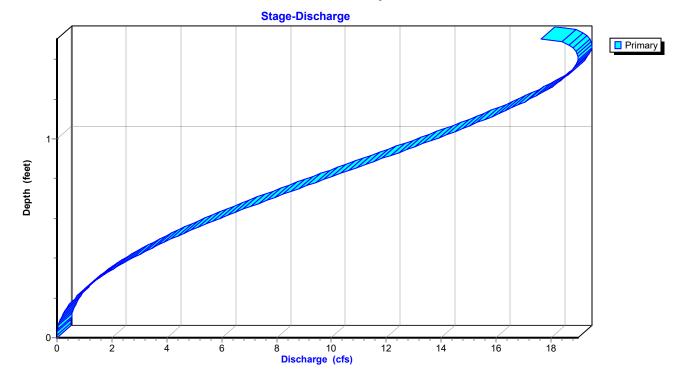


#### Reach P-A3: Pipe A3



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# Reach P-A3: Pipe A3



# Stage-Area-Storage for Reach P-A3: Pipe A3

|                  | End-Area   | Storage      |        | End-Area          | Storage           |
|------------------|------------|--------------|--------|-------------------|-------------------|
| (feet)           | (sq-ft)    | (cubic-feet) | (feet) | (sq-ft)           | (cubic-feet)      |
| 404.46           | 0.0        | 0            | 405.50 | 1.3               | 154               |
| 404.48           | 0.0        | 1            | 405.52 | 1.3               | 158               |
| 404.50           | 0.0        | 2            | 405.54 | 1.4               | 161               |
| 404.52           | 0.0        | 3            | 405.56 | 1.4               | 164               |
| 404.54           | 0.0        | 4            | 405.58 | 1.4               | 167               |
| 404.56           | 0.1        | 6            | 405.60 | 1.4               | 170               |
| 404.58           | 0.1        | 8            | 405.62 | 1.5               | 173               |
| 404.60           | 0.1        | 10           | 405.64 | 1.5               | 176               |
| 404.62           | 0.1        | 12           | 405.66 | 1.5               | 179               |
| 404.64           | 0.1        | 14           | 405.68 | 1.5               | 182               |
| 404.66           | 0.1        | 17           | 405.70 | 1.6               | 184               |
| 404.68           | 0.2        | 19           | 405.72 | 1.6               | 187               |
| 404.70           | 0.2        | 22           | 405.74 | 1.6               | 190               |
| 404.72           | 0.2        | 24           | 405.76 | 1.6               | 192               |
| 404.74           | 0.2        | 27           | 405.78 | 1.6               | 194               |
| 404.76           | 0.3        | 30           | 405.80 | 1.7               | 197               |
| 404.78           | 0.3        | 33           | 405.82 | 1.7               | 199               |
| 404.80           | 0.3        | 35           | 405.84 | 1.7               | 201               |
| 404.82           | 0.3        | 38           | 405.86 | 1.7               | 203               |
| 404.84           | 0.4        | 42           | 405.88 | 1.7               | 204               |
| 404.86           | 0.4        | 45           | 405.80 | 1.7               | 206               |
| 404.88           | 0.4        | 48           | 405.90 | 1.7               | 207               |
|                  |            | 51           |        |                   |                   |
| 404.90<br>404.92 | 0.4<br>0.5 | 54           | 405.94 | 1.8<br><b>1.8</b> | 208<br><b>209</b> |
| 404.94           | 0.5        | 58           | 405.96 | 1.0               | 209               |
| 404.94           | 0.5        | 61           |        |                   |                   |
| 404.98           | 0.5        | 64           |        |                   |                   |
| 405.00           | 0.5        | 68           |        |                   |                   |
|                  |            | 71           |        |                   |                   |
| 405.02<br>405.04 | 0.6<br>0.6 | 74           |        |                   |                   |
| 405.04           | 0.6        | 74<br>78     |        |                   |                   |
|                  |            |              |        |                   |                   |
| 405.08           | 0.7        | 81           |        |                   |                   |
| 405.10           | 0.7        | 85           |        |                   |                   |
| 405.12           | 0.7        | 88           |        |                   |                   |
| 405.14           | 0.8        | 92           |        |                   |                   |
| 405.16           | 0.8        | 95           |        |                   |                   |
| 405.18           | 0.8        | 99           |        |                   |                   |
| 405.20           | 0.9        | 102          |        |                   |                   |
| 405.22           | 0.9        | 106          |        |                   |                   |
| 405.24           | 0.9        | 110          |        |                   |                   |
| 405.26           | 1.0        | 113          |        |                   |                   |
| 405.28           | 1.0        | 117          |        |                   |                   |
| 405.30           | 1.0        | 120          |        |                   |                   |
| 405.32           | 1.0        | 124          |        |                   |                   |
| 405.34           | 1.1        | 127          |        |                   |                   |
| 405.36           | 1.1        | 131          |        |                   |                   |
| 405.38           | 1.1        | 134          |        |                   |                   |
| 405.40           | 1.2        | 138          |        |                   |                   |
| 405.42           | 1.2        | 141          |        |                   |                   |
| 405.44           | 1.2        | 144          |        |                   |                   |
| 405.46           | 1.3        | 148          |        |                   |                   |
| 405.48           | 1.3        | 151          |        |                   |                   |

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## Summary for Reach P-A4: Pipe A4

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.71" for 10-yr event

Inflow = 6.96 cfs @ 0.17 hrs, Volume= 4,225 cf

Outflow = 6.93 cfs @ 0.18 hrs, Volume= 4,225 cf, Atten= 0%, Lag= 0.4 min

Routed to Pond DP1: Re-Establised East Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 9.39 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.71 fps, Avg. Travel Time= 0.6 min

Peak Storage= 98 cf @ 0.17 hrs

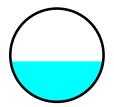
Average Depth at Peak Storage= 0.65', Surface Width= 1.49' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.66 cfs

18.0" Round Pipe

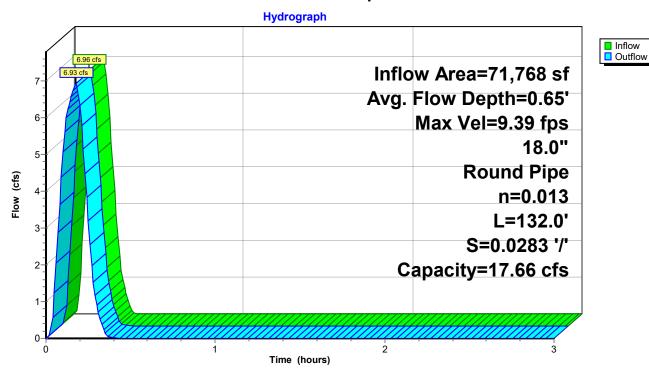
n= 0.013 Corrugated PE, smooth interior

Length= 132.0' Slope= 0.0283 '/'

Inlet Invert= 401.03', Outlet Invert= 397.30'

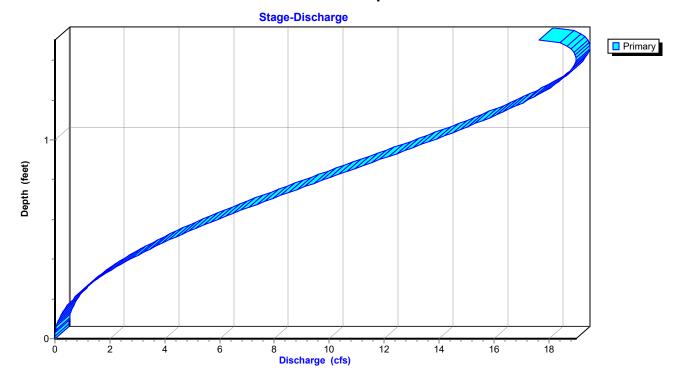


#### Reach P-A4: Pipe A4



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# Reach P-A4: Pipe A4



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# Stage-Area-Storage for Reach P-A4: Pipe A4

|                     |                     | J                       | J                   |                     | •                       |
|---------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 401.03              | 0.0                 | 0                       | 402.07              | 1.3                 | 173                     |
| 401.05              | 0.0                 | 1                       | 402.07              | 1.3                 | 176                     |
| 401.03              | 0.0                 | 2                       | 402.03              | 1.4                 | 180                     |
|                     |                     | 2                       |                     |                     |                         |
| 401.09              | 0.0                 | 3                       | 402.13              | 1.4                 | 183                     |
| 401.11              | 0.0                 | 5                       | 402.15              | 1.4                 | 187                     |
| 401.13              | 0.1                 | 7                       | 402.17              | 1.4                 | 190                     |
| 401.15              | 0.1                 | 9                       | 402.19              | 1.5                 | 194                     |
| 401.17              | 0.1                 | 11                      | 402.21              | 1.5                 | 197                     |
| 401.19              | 0.1                 | 13                      | 402.23              | 1.5                 | 200                     |
| 401.21              | 0.1                 | 16                      | 402.25              | 1.5                 | 203                     |
| 401.23              | 0.1                 | 18                      | 402.27              | 1.6                 | 206                     |
| 401.25              | 0.2                 | 21                      | 402.29              | 1.6                 | 209                     |
| 401.27              | 0.2                 | 24                      | 402.31              | 1.6                 | 212                     |
| 401.29              | 0.2                 | 27                      | 402.33              | 1.6                 | 215                     |
| 401.31              | 0.2                 | 30                      | 402.35              | 1.6                 | 217                     |
| 401.33              | 0.3                 | 33                      | 402.37              | 1.7                 | 220                     |
| 401.35              | 0.3                 | 36                      | 402.39              | 1.7                 | 222                     |
| 401.37              | 0.3                 | 40                      | 402.41              | 1.7                 | 225                     |
| 401.39              | 0.3                 | 43                      | 402.43              | 1.7                 | 227                     |
| 401.41              | 0.4                 | 46                      | 402.45              | 1.7                 | 228                     |
| 401.43              | 0.4                 | 50                      | 402.47              | 1.7                 | 230                     |
| 401.45              | 0.4                 | 53                      | 402.49              | 1.8                 | 232                     |
| 401.47              | 0.4                 | 57                      | 402.51              | 1.8                 | 233                     |
| 401.49              | 0.5                 | 61                      | 402.53              | 1.8                 | 233                     |
| 401.51              | 0.5                 | 64                      |                     |                     |                         |
| 401.53              | 0.5                 | 68                      |                     |                     |                         |
| 401.55              | 0.5                 | 72                      |                     |                     |                         |
| 401.57              | 0.6                 | 76                      |                     |                     |                         |
| 401.59              | 0.6                 | 79                      |                     |                     |                         |
| 401.61              | 0.6                 | 83                      |                     |                     |                         |
| 401.63              | 0.7                 | 87                      |                     |                     |                         |
| 401.65              | 0.7                 | 91                      |                     |                     |                         |
| 401.67              | 0.7                 | 95                      |                     |                     |                         |
| 401.69              | 0.7                 | 99                      |                     |                     |                         |
| 401.71              | 0.8                 | 103                     |                     |                     |                         |
| 401.73              | 8.0                 | 107                     |                     |                     |                         |
| 401.75              | 8.0                 | 111                     |                     |                     |                         |
| 401.77              | 0.9                 | 115                     |                     |                     |                         |
| 401.79              | 0.9                 | 119                     |                     |                     |                         |
| 401.81              | 0.9                 | 123                     |                     |                     |                         |
| 401.83              | 1.0                 | 127                     |                     |                     |                         |
| 401.85              | 1.0                 | 130                     |                     |                     |                         |
| 401.87              | 1.0                 | 134                     |                     |                     |                         |
| 401.89              | 1.0                 | 138                     |                     |                     |                         |
| 401.91              | 1.1                 | 142                     |                     |                     |                         |
| 401.93              | 1.1                 | 146                     |                     |                     |                         |
| 401.95              | 1.1                 | 150                     |                     |                     |                         |
| 401.97              | 1.2                 | 154                     |                     |                     |                         |
| 401.99              | 1.2                 | 158                     |                     |                     |                         |
| 402.01              | 1.2                 | 161                     |                     |                     |                         |
| 402.03              | 1.3                 | 165                     |                     |                     |                         |
| 402.05              | 1.3                 | 169                     |                     |                     |                         |
|                     |                     |                         | 1                   |                     |                         |

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## Summary for Pond DP1: Re-Establised East Pond

Inflow Area = 132,514 sf, 61.41% Impervious, Inflow Depth = 0.72" for 10-yr event

Inflow = 12.95 cfs @ 0.16 hrs, Volume= 7,945 cf

Outflow = 7.07 cfs @ 0.22 hrs, Volume= 7,945 cf, Atten= 45%, Lag= 3.7 min

Primary = 7.07 cfs @ 0.22 hrs, Volume= 7,945 cf

Routed to Link Post-Dev: APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Peak Elev= 398.14' @ 0.22 hrs Storage= 4,074 cf

Plug-Flow detention time= 8.2 min calculated for 7,919 cf (100% of inflow)

Center-of-Mass det. time= 8.3 min ( 17.2 - 8.9 )

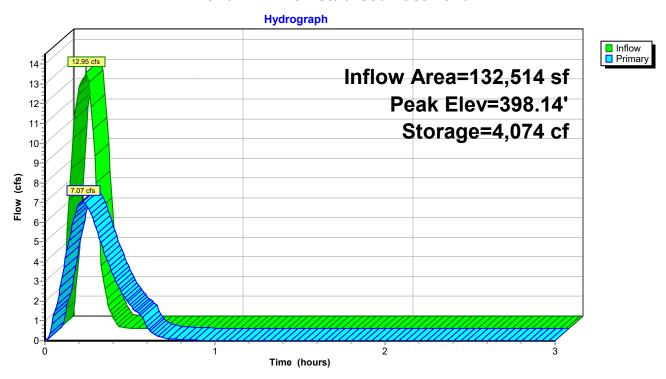
| Volume   | Inve    | rt Avail.S | Storage                                 | Storage Description  |
|----------|---------|------------|---|--|
| #1       | 396.0   | 0' 8       | ,557 cf                                 | Custom Stage Data Listed below                                       |
| <b>-</b> |         | . 0.       | 0                                       |  |
| Elevatio |         | Inc.Store  | • | .Store   |
| (fee     | t) (c   | ubic-feet) | (cubic                                  | c-feet)  |
| 396.0    | 0       | 0          |   | 0  |
| 396.5    | 0       | 250        |   | 250  |
| 397.0    | 0       | 1,092      |   | 1,342  |
| 398.0    | 0       | 2,387      | ,                                       | 3,729  |
| 399.0    | 0       | 2,405      |   | 6,134  |
| 400.0    | 0       | 2,423      |   | 8,557  |
|          |         |            |   |  |
| Device   | Routing | Inve       | rt Outle                                | et Devices   |
| #1       | Primary | 399.00     | 0' <b>5.0' l</b>                        | ong Sharp-Crested Rectangular Weir 2 End Contraction(s)              |
| #2       | Primary | 396.00     |   | ong Sharp-Crested Rectangular Weir 2 End Contraction(s) Crest Height |

Primary OutFlow Max=7.06 cfs @ 0.22 hrs HW=398.14' (Free Discharge)

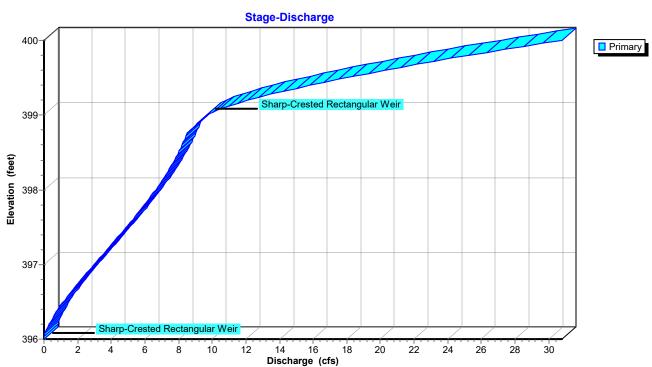
—1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

—2=Sharp-Crested Rectangular Weir (Weir Controls 7.06 cfs @ 4.91 fps)

#### Pond DP1: Re-Establised East Pond



#### Pond DP1: Re-Establised East Pond



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# Stage-Area-Storage for Pond DP1: Re-Establised East Pond

| El               | 04                      | l =1#               | 04                      |
|------------------|-------------------------|---------------------|-------------------------|
| Elevation        | Storage<br>(cubic-feet) | Elevation<br>(fact) | Storage<br>(cubic-feet) |
| (feet)<br>396.00 | 0                       | (feet)<br>398.60    | 5,172                   |
| 396.05           | 25                      | 398.65              | 5,292                   |
| 396.10           | 50                      | 398.70              | 5,412                   |
| 396.15           | 75                      | 398.75              | 5,533                   |
| 396.20           | 100                     | 398.80              | 5,653                   |
| 396.25           | 125                     | 398.85              | 5,773                   |
| 396.30           | 150                     | 398.90              | 5,893                   |
| 396.35           | 175                     | 398.95              | 6,014                   |
| 396.40           | 200                     | 399.00              | 6,134                   |
| 396.45           | 225                     | 399.05              | 6,255                   |
| 396.50           | 250                     | 399.10              | 6,376                   |
| 396.55           | 359                     | 399.15              | 6,497                   |
| 396.60           | 468                     | 399.20              | 6,619                   |
| 396.65           | 578                     | 399.25              | 6,740                   |
| 396.70<br>396.75 | 687<br>796              | 399.30              | 6,861                   |
| 396.80           | 905                     | 399.35<br>399.40    | 6,982<br>7,103          |
| 396.85           | 1,014                   | 399.45              | 7,103<br>7,224          |
| 396.90           | 1,124                   | 399.50              | 7,346                   |
| 396.95           | 1,233                   | 399.55              | 7,467                   |
| 397.00           | 1,342                   | 399.60              | 7,588                   |
| 397.05           | 1,461                   | 399.65              | 7,709                   |
| 397.10           | 1,581                   | 399.70              | 7,830                   |
| 397.15           | 1,700                   | 399.75              | 7,951                   |
| 397.20           | 1,819                   | 399.80              | 8,072                   |
| 397.25           | 1,939                   | 399.85              | 8,194                   |
| 397.30           | 2,058                   | 399.90              | 8,315                   |
| 397.35           | 2,177                   | 399.95              | 8,436                   |
| 397.40           | 2,297                   | 400.00              | 8,557                   |
| 397.45<br>397.50 | 2,416<br>2,536          |                     |                         |
| 397.55           | 2,655                   |                     |                         |
| 397.60           | 2,774                   |                     |                         |
| 397.65           | 2,894                   |                     |                         |
| 397.70           | 3,013                   |                     |                         |
| 397.75           | 3,132                   |                     |                         |
| 397.80           | 3,252                   |                     |                         |
| 397.85           | 3,371                   |                     |                         |
| 397.90           | 3,490                   |                     |                         |
| 397.95           | 3,610                   |                     |                         |
| 398.00           | 3,729                   |                     |                         |
| 398.05<br>398.10 | 3,849<br>3,970          |                     |                         |
| 398.15           | 4,090                   |                     |                         |
| 398.20           | 4,090<br>4,210          |                     |                         |
| 398.25           | 4,330                   |                     |                         |
| 398.30           | 4,451                   |                     |                         |
| 398.35           | 4,571                   |                     |                         |
| 398.40           | 4,691                   |                     |                         |
| 398.45           | 4,811                   |                     |                         |
| 398.50           | 4,932                   |                     |                         |
| 398.55           | 5,052                   |                     |                         |

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# **Summary for Link Post-Dev: APPROX DISCHARGE**

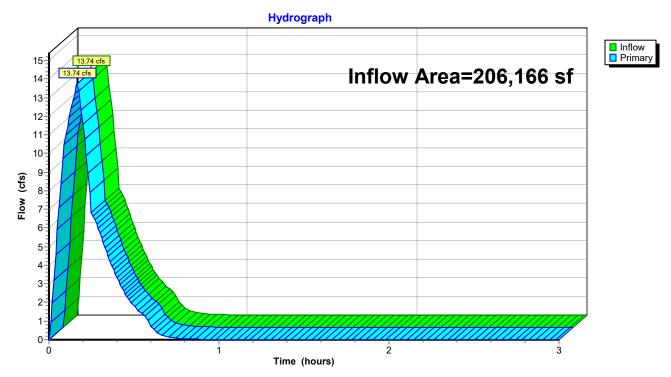
Inflow Area = 206,166 sf, 64.42% Impervious, Inflow Depth = 0.73" for 10-yr event

Inflow = 13.74 cfs @ 0.17 hrs, Volume= 12,613 cf

Primary = 13.74 cfs @ 0.17 hrs, Volume= 12,613 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

#### Link Post-Dev: APPROX DISCHARGE



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## Summary for Subcatchment D1: Drainage Basin D1

Runoff 6.89 cfs @ 0.09 hrs, Volume= Routed to Link Post-Dev: APPROX DISCHARGE

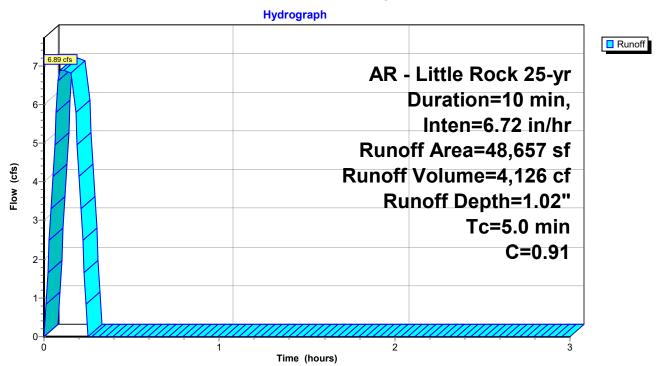
4,126 cf, Depth= 1.02"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

|       | rea (sf) | С       | Description             | 1          |  |  |  |  |
|-------|----------|---------|-------------------------|------------|--|--|--|--|
|       | 3,421    | 0.40    | Sod Yard                |            |  |  |  |  |
|       | 45,236   | 0.95    | Rood, Drives, Sidewalks |            |  |  |  |  |
|       | 48,657   | 0.91    | Weighted A              | Average    |  |  |  |  |
|       | 3,421    |         | 7.03% Per               | vious Area |  |  |  |  |
|       | 45,236   |         | 92.97% Im               | pervious A | rea  |  |  |  |
| _     |          |         |                         |            |  |  |  |  |
| Tc    | 9        | Slope   | ,                       | Capacity   | Description                                    |  |  |  |
| (min) | (feet)   | (ft/ft) | ) (ft/sec)              | (cfs)      |  |  |  |  |
| 5.0   |          |         |                         |            | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D1: Drainage Basin D1



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## **Summary for Subcatchment D2: Drainage Basin D2**

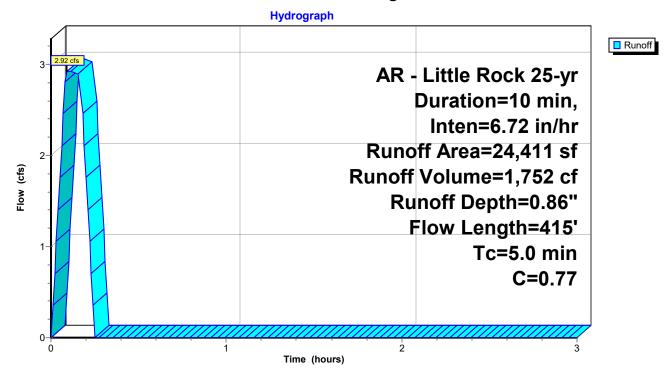
Runoff = 2.92 cfs @ 0.09 hrs, Volume= 1,752 cf, Depth= 0.86"

Routed to Reach P-A1: Pipe A1

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

|       | Area (sf) | С       | Description             | 1           |  |  |  |  |
|-------|-----------|---------|-------------------------|-------------|--|--|--|--|
|       | 8,845     | 0.45    | Rip Rap Er              | nbankment   |  |  |  |  |
|       | 15,566    | 0.95    | Roof, Drives, Sidewalks |             |  |  |  |  |
|       | 24,411    | 0.77    | Weighted A              | Average     |  |  |  |  |
|       | 8,845     |         | 36.23% Pe               | rvious Area | a  |  |  |  |
|       | 15,566    |         | 63.77% Im               | pervious Aı | rea  |  |  |  |
|       |           |         |                         |             |  |  |  |  |
| Tc    | 3         | Slope   | ,                       | Capacity    | Description                                    |  |  |  |
| (min) | (feet)    | (ft/ft) | (ft/sec)                | (cfs)       |  |  |  |  |
| 5.0   | 415       |         | 1.38                    |             | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |

#### Subcatchment D2: Drainage Basin D2



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## Summary for Subcatchment D3: Drainage Basin D3

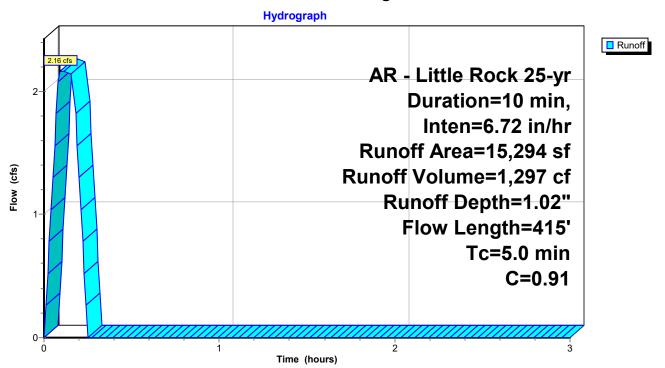
Runoff = 2.16 cfs @ 0.09 hrs, Volume= 1,297 cf, Depth= 1.02"

Routed to Reach P-A2: Pipe A2

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

|       | rea (sf) | С                   | Description | 1           |  |
|-------|----------|---------------------|-------------|-------------|--|
|       | 1,065    | 0.40                | Sod Yard    |             |  |
|       | 14,229   | 0.95                | Paving, Sid |             |  |
|       | 15,294   | 0.91                | Weighted A  | Average     |  |
|       | 1,065    | 6.96% Pervious Area |             |             |  |
|       | 14,229   |                     | 93.04% Im   | pervious Aı | rea  |
|       |          |                     |             |             |  |
| Tc    | 9        | Slope               | ,           | Capacity    | Description                                    |
| (min) | (feet)   | (ft/ft)             | (ft/sec)    | (cfs)       |  |
| 5.0   | 415      |                     | 1.38        |             | Direct Entry, Overland Concentrated Flow (Min) |

#### Subcatchment D3: Drainage Basin D3



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## Summary for Subcatchment D4: Drainage Basin D4

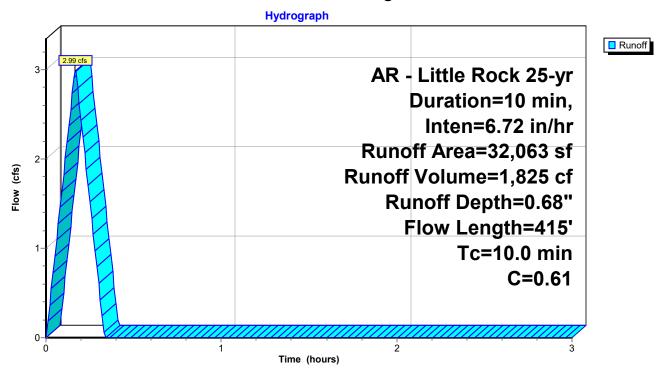
Runoff = 2.99 cfs @ 0.17 hrs, Volume= 1,825 cf, Depth= 0.68"

Routed to Reach P-A3: Pipe A3

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

|              | Area (sf) | С       | Description | 1           |  |
|--------------|-----------|---------|-------------|-------------|--|
|              | 20,032    | 0.40    |             |             |  |
|              | 12,031    | 0.95    |             |             |  |
|              | 32,063    | 0.61    | Weighted A  | Average     |  |
|              | 20,032    |         | 62.48% Pe   | rvious Area | a  |
|              | 12,031    |         | 37.52% Im   | pervious Aı | rea  |
| _            |           |         |             |             |  |
| Tc           | Length    | Slope   | ,           | Capacity    | Description                                    |
| <u>(min)</u> | (feet)    | (ft/ft) | (ft/sec)    | (cfs)       |  |
| 10.0         | 415       |         | 0.69        |             | Direct Entry, Overland Concentrated Flow (Min) |

#### Subcatchment D4: Drainage Basin D4



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# **Summary for Subcatchment D5: Drainage Basin D5**

2,600 cf, Depth= 0.75" Runoff 4.34 cfs @ 0.09 hrs, Volume=

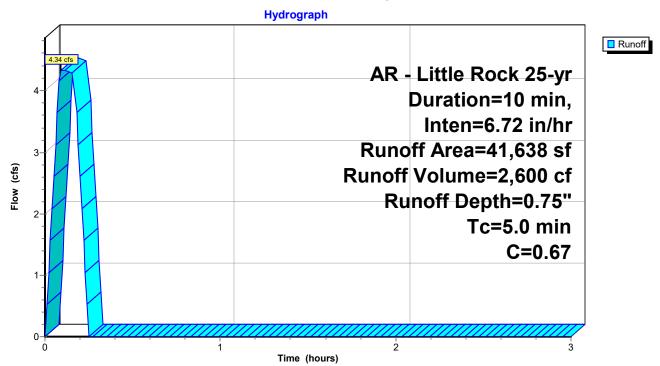
Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

| A     | rea (sf) | С                           | Description       | 1                            |  |  |  |  |  |
|-------|----------|-----------------------------|-------------------|------------------------------|--|--|--|--|--|
|       | 21,201   | 0.40                        | Sod Yard,         | Sod Yard, Natural Vegetation |  |  |  |  |  |
|       | 20,437   | 0.95                        | Paving, Sidewalks |                              |  |  |  |  |  |
|       | 41,638   | 1,638 0.67 Weighted Average |                   |                              |  |  |  |  |  |
|       | 21,201   |                             | 50.92% Pe         | rvious Area                  | a  |  |  |  |  |
|       | 20,437   |                             | 49.08% Im         | pervious A                   | rea  |  |  |  |  |
| _     |          | ٠.                          |                   |                              |  |  |  |  |  |
| Tc    | Length   | Slope                       | ,                 | Capacity                     | Description                                    |  |  |  |  |
| (min) | (feet)   | (ft/ft)                     | (ft/sec)          | (cfs)                        |  |  |  |  |  |
| 5.0   |          |                             |                   |                              | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D5: Drainage Basin D5



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## Summary for Subcatchment D6: Drainage Basin D6

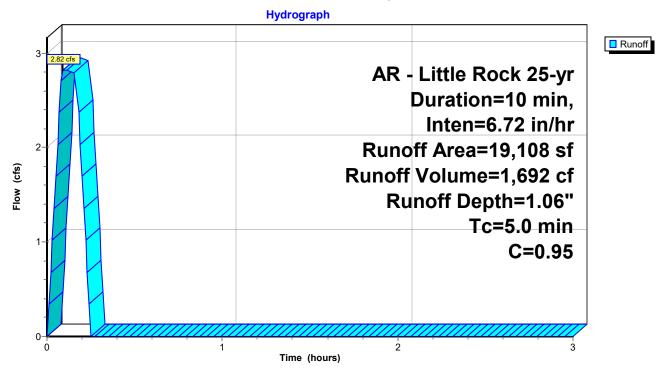
Runoff = 2.82 cfs @ 0.09 hrs, Volume= 1,692 cf, Depth= 1.06"

Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

|    | Α   | rea (sf)         | С                | Description          | 1                 |  |
|----|-----|------------------|------------------|----------------------|-------------------|--|
|    |     | 19,108           | 0.95             | Roof                 |                   |  |
|    |     | 19,108           |                  | 100.00% Ir           | npervious A       | Area   |
| (m |     | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                    |
|    | 5.0 |                  |                  |                      |                   | Direct Entry, Overland Concentrated Flow (Min) |

#### Subcatchment D6: Drainage Basin D6



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#### **Summary for Subcatchment D7: Drainage Basin D7**

1,258 cf, Depth= 0.60" Runoff 2.10 cfs @ 0.09 hrs, Volume=

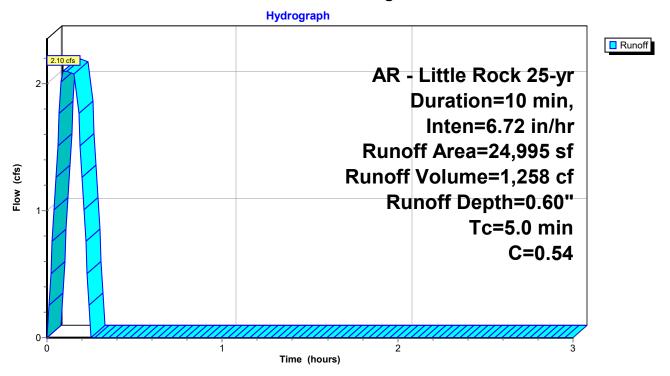
Routed to Link Post-Dev: APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 25-yr Duration=10 min, Inten=6.72 in/hr

|      | Area (sf) | С       | Description                  | 1           |  |  |  |  |  |
|------|-----------|---------|------------------------------|-------------|--|--|--|--|--|
|      | 18,798    | 0.40    | Sod Yard, Natural Vegetation |             |  |  |  |  |  |
|      | 6,197     | 0.95    | Paving, Sidewalks            |             |  |  |  |  |  |
|      | 24,995    | 0.54    | Weighted Average             |             |  |  |  |  |  |
|      | 18,798    |         | 75.21% Pe                    | rvious Area | a e e e e e e e e e e e e e e e e e e e        |  |  |  |  |
|      | 6,197     |         | 24.79% Im                    | pervious Ai | rea  |  |  |  |  |
| _    |           |         |                              |             |  |  |  |  |  |
| To   | -         | Slope   | ,                            | Capacity    | Description                                    |  |  |  |  |
| (min | ) (feet)  | (ft/ft) | (ft/sec)                     | (cfs)       |  |  |  |  |  |
| 5.0  | )         |         |                              |             | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

## Subcatchment D7: Drainage Basin D7



## **Summerwood Gym 3**

Prepared by Phillip Lewis Engineering

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#### Summary for Reach P-A1: Pipe A1

Inflow Area = 24,411 sf, 63.77% Impervious, Inflow Depth = 0.86" for 25-yr event

Inflow = 2.92 cfs @ 0.09 hrs, Volume= 1,752 cf

Outflow = 2.92 cfs @ 0.11 hrs, Volume= 1,752 cf, Atten= 0%, Lag= 1.2 min

Routed to Reach P-A2: Pipe A2

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 7.28 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 5.29 fps, Avg. Travel Time= 0.2 min

Peak Storage= 20 cf @ 0.09 hrs

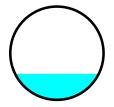
Average Depth at Peak Storage= 0.42', Surface Width= 1.34' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.28 cfs

18.0" Round Pipe

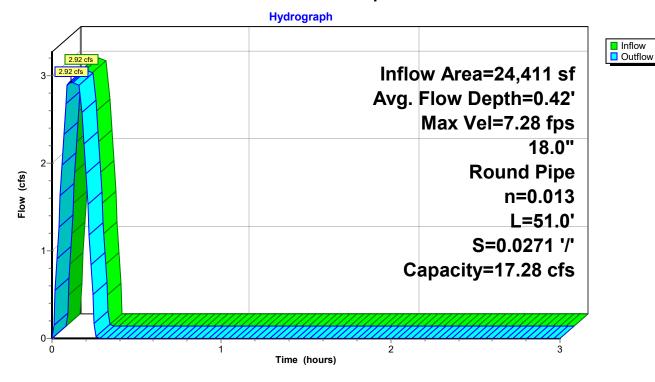
n= 0.013 Corrugated PE, smooth interior

Length= 51.0' Slope= 0.0271 '/'

Inlet Invert= 408.33', Outlet Invert= 406.95'

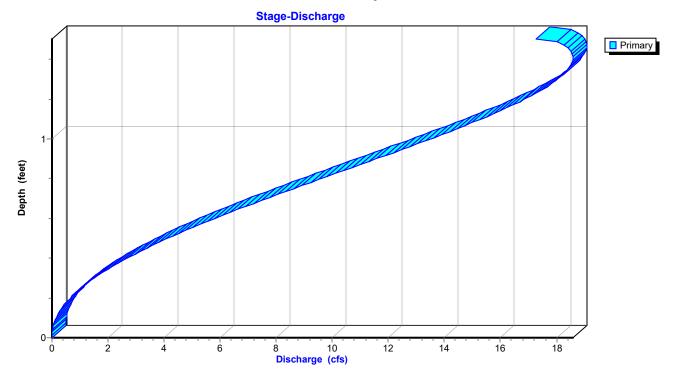


#### Reach P-A1: Pipe A1



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# Reach P-A1: Pipe A1



# **Summerwood Gym 3**

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# Stage-Area-Storage for Reach P-A1: Pipe A1

|                    |                     | ou.go r                 |                  |                     |                         |
|--------------------|---------------------|-------------------------|------------------|---------------------|-------------------------|
| Elevation (feet)   | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation (feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 408.33             | 0.0                 | 0                       | 409.37           | 1.3                 | 67                      |
| 408.35             | 0.0                 | Ö                       | 409.39           | 1.3                 | 68                      |
| 408.37             | 0.0                 | 1                       | 409.41           | 1.4                 | 69                      |
| 408.39             | 0.0                 | 1                       | 409.43           | 1.4                 | 71                      |
|                    | 0.0                 |                         |                  | 1.4                 | 72                      |
| 408.41             |                     | 2 3                     | 409.45           |                     |                         |
| 408.43             | 0.1                 |                         | 409.47           | 1.4                 | 73                      |
| 408.45             | 0.1                 | 3                       | 409.49           | 1.5                 | 75<br>70                |
| 408.47             | 0.1                 | 4                       | 409.51           | 1.5                 | 76                      |
| 408.49             | 0.1                 | 5                       | 409.53           | 1.5                 | 77                      |
| 408.51             | 0.1                 | 6                       | 409.55           | 1.5                 | 78                      |
| 408.53             | 0.1                 | 7                       | 409.57           | 1.6                 | 80                      |
| 408.55             | 0.2                 | 8                       | 409.59           | 1.6                 | 81                      |
| 408.57             | 0.2                 | 9                       | 409.61           | 1.6                 | 82                      |
| 408.59             | 0.2                 | 10                      | 409.63           | 1.6                 | 83                      |
| 408.61             | 0.2                 | 12                      | 409.65           | 1.6                 | 84                      |
| 408.63             | 0.3                 | 13                      | 409.67           | 1.7                 | 85                      |
| 408.65             | 0.3                 | 14                      | 409.69           | 1.7                 | 86                      |
| 408.67             | 0.3                 | 15                      | 409.71           | 1.7                 | 87                      |
| 408.69             | 0.3                 | 17                      | 409.73           | 1.7                 | 88                      |
| 408.71             | 0.4                 | 18                      | 409.75           | 1.7                 | 88                      |
| 408.73             | 0.4                 | 19                      | 409.77           | 1.7                 | 89                      |
| 408.75             | 0.4                 | 21                      | 409.79           | 1.8                 | 89                      |
| 408.77             | 0.4                 | 22                      | 409.81           | 1.8                 | 90                      |
| 408.79             | 0.5                 | 23                      | 409.83           | 1.8                 | 90                      |
| 408.81             | 0.5                 | 25                      | +05.05           | 1.0                 | 30                      |
| 408.83             | 0.5                 | 26                      |                  |                     |                         |
| 408.85             | 0.5                 | 28                      |                  |                     |                         |
| 408.87             | 0.6                 | 29                      |                  |                     |                         |
| 408.89             | 0.6                 | 31                      |                  |                     |                         |
|                    | 0.6                 | 32                      |                  |                     |                         |
| 408.91             |                     |                         |                  |                     |                         |
| 408.93             | 0.7                 | 34                      |                  |                     |                         |
| 408.95             | 0.7                 | 35                      |                  |                     |                         |
| 408.97             | 0.7                 | 37                      |                  |                     |                         |
| 408.99             | 0.7                 | 38                      |                  |                     |                         |
| 409.01             | 0.8                 | 40                      |                  |                     |                         |
| 409.03             | 0.8                 | 41                      |                  |                     |                         |
| 409.05             | 0.8                 | 43                      |                  |                     |                         |
| 409.07             | 0.9                 | 44                      |                  |                     |                         |
| 409.09             | 0.9                 | 46                      |                  |                     |                         |
| 409.11             | 0.9                 | 47                      |                  |                     |                         |
| 409.13             | 1.0                 | 49                      |                  |                     |                         |
| 409.15             | 1.0                 | 50                      |                  |                     |                         |
| 409.17             | 1.0                 | 52                      |                  |                     |                         |
| 409.19             | 1.0                 | 53                      |                  |                     |                         |
| 409.21             | 1.1                 | 55                      |                  |                     |                         |
| 409.23             | 1.1                 | 56                      |                  |                     |                         |
| 409.25             | 1.1                 | 58                      |                  |                     |                         |
| 409.27             | 1.2                 | 59                      |                  |                     |                         |
| 409.29             | 1.2                 | 61                      |                  |                     |                         |
| 409.31             | 1.2                 | 62                      |                  |                     |                         |
| 409.33             | 1.3                 | 64                      |                  |                     |                         |
| 409.35             | 1.3                 | 65                      |                  |                     |                         |
| <del>-</del> 00.00 | 1.0                 | 00                      |                  |                     |                         |

## **Summerwood Gym 3**

Prepared by Phillip Lewis Engineering

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#### Summary for Reach P-A2: Pipe A2

Inflow Area = 39,705 sf, 75.04% Impervious, Inflow Depth = 0.92" for 25-yr event

Inflow = 5.09 cfs @ 0.11 hrs, Volume= 3,048 cf

Outflow = 5.09 cfs @ 0.15 hrs, Volume= 3,048 cf, Atten= 0%, Lag= 2.4 min

Routed to Reach P-A3: Pipe A3

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 6.49 fps, Min. Travel Time= 0.5 min

Avg. Velocity = 2.58 fps, Avg. Travel Time= 1.1 min

Peak Storage= 139 cf @ 0.14 hrs

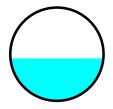
Average Depth at Peak Storage= 0.68', Surface Width= 1.49' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 11.95 cfs

18.0" Round Pipe

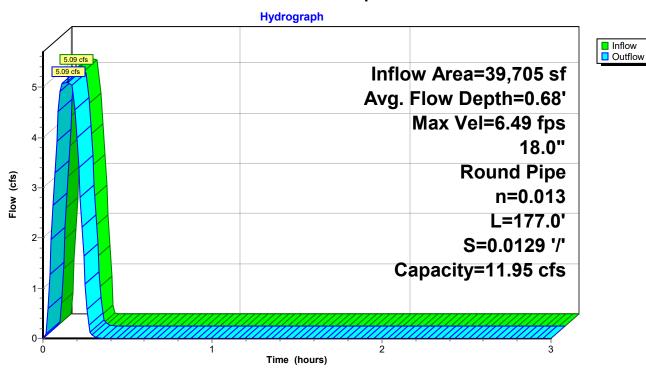
n= 0.013 Corrugated PE, smooth interior

Length= 177.0' Slope= 0.0129 '/'

Inlet Invert= 406.85', Outlet Invert= 404.56'

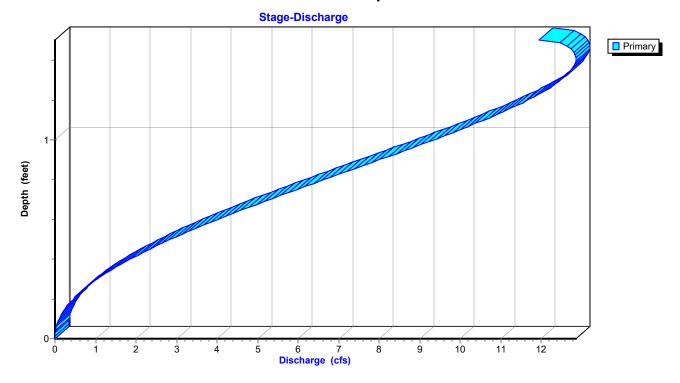


#### Reach P-A2: Pipe A2



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# Reach P-A2: Pipe A2



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# Stage-Area-Storage for Reach P-A2: Pipe A2

| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage (cubic-feet) |
|---------------------|---------------------|-------------------------|---------------------|---------------------|----------------------|
| 406.85              | 0.0                 | 0                       | 407.89              | 1.3                 | 231                  |
| 406.87              | 0.0                 | 1                       | 407.91              | 1.3                 | 236                  |
| 406.89              | 0.0                 | 2                       | 407.93              | 1.4                 | 241                  |
| 406.89              | 0.0                 | 4                       | 407.95              | 1.4                 | 246                  |
|                     |                     |                         |                     |                     |                      |
| 406.93              | 0.0                 | 6                       | 407.97              | 1.4                 | 250                  |
| 406.95              | 0.1                 | 9                       | 407.99              | 1.4                 | 255                  |
| 406.97              | 0.1                 | 12                      | 408.01              | 1.5                 | 260                  |
| 406.99              | 0.1                 | 15                      | 408.03              | 1.5                 | 264                  |
| 407.01              | 0.1                 | 18                      | 408.05              | 1.5                 | 268                  |
| 407.03              | 0.1                 | 21                      | 408.07              | 1.5                 | 272                  |
| 407.05              | 0.1                 | 25                      | 408.09              | 1.6                 | 277                  |
| 407.07              | 0.2                 | 28                      | 408.11              | 1.6                 | 280                  |
| 407.09              | 0.2                 | 32                      | 408.13              | 1.6                 | 284                  |
| 407.11              | 0.2                 | 36                      | 408.15              | 1.6                 | 288                  |
| 407.13              | 0.2                 | 40                      | 408.17              | 1.6                 | 292                  |
| 407.15              | 0.3                 | 45                      | 408.19              | 1.7                 | 295                  |
| 407.17              | 0.3                 | 49                      | 408.21              | 1.7                 | 298                  |
| 407.19              | 0.3                 | 53                      | 408.23              | 1.7                 | 301                  |
| 407.21              | 0.3                 | 58                      | 408.25              | 1.7                 | 304                  |
| 407.23              | 0.4                 | 62                      | 408.27              | 1.7                 | 306                  |
| 407.25              | 0.4                 | 67                      | 408.29              | 1.7                 | 309                  |
| 407.27              | 0.4                 | 72                      | 408.31              | 1.8                 | 310                  |
| 407.29              | 0.4                 | 76                      | 408.33              | 1.8                 | 312                  |
| 407.31              | 0.5                 | 81                      | 408.35              | 1.8                 | 313                  |
| 407.33              | 0.5                 | 86                      | +00.00              | 1.0                 | 0.10                 |
| 407.35              | 0.5                 | 91                      |                     |                     |                      |
| 407.37              | 0.5                 | 96                      |                     |                     |                      |
| 407.39              | 0.6                 | 101                     |                     |                     |                      |
| 407.41              | 0.6                 | 106                     |                     |                     |                      |
| 407.43              | 0.6                 | 112                     |                     |                     |                      |
| 407.45              | 0.7                 | 117                     |                     |                     |                      |
|                     |                     |                         |                     |                     |                      |
| 407.47              | 0.7                 | 122                     |                     |                     |                      |
| 407.49              | 0.7                 | 127                     |                     |                     |                      |
| 407.51              | 0.7                 | 133                     |                     |                     |                      |
| 407.53              | 0.8                 | 138                     |                     |                     |                      |
| 407.55              | 0.8                 | 143                     |                     |                     |                      |
| 407.57              | 0.8                 | 148                     |                     |                     |                      |
| 407.59              | 0.9                 | 154                     |                     |                     |                      |
| 407.61              | 0.9                 | 159                     |                     |                     |                      |
| 407.63              | 0.9                 | 164                     |                     |                     |                      |
| 407.65              | 1.0                 | 170                     |                     |                     |                      |
| 407.67              | 1.0                 | 175                     |                     |                     |                      |
| 407.69              | 1.0                 | 180                     |                     |                     |                      |
| 407.71              | 1.0                 | 185                     |                     |                     |                      |
| 407.73              | 1.1                 | 191                     |                     |                     |                      |
| 407.75              | 1.1                 | 196                     |                     |                     |                      |
| 407.77              | 1.1                 | 201                     |                     |                     |                      |
| 407.79              | 1.2                 | 206                     |                     |                     |                      |
| 407.81              | 1.2                 | 211                     |                     |                     |                      |
| 407.83              | 1.2                 | 216                     |                     |                     |                      |
| 407.85              | 1.3                 | 222                     |                     |                     |                      |
| 407.87              | 1.3                 | 226                     |                     |                     |                      |
|                     |                     |                         | I                   |                     |                      |

## **Summerwood Gym 3**

Prepared by Phillip Lewis Engineering

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## Summary for Reach P-A3: Pipe A3

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.81" for 25-yr event

Inflow = 8.08 cfs @ 0.17 hrs, Volume= 4,873 cf

Outflow = 8.02 cfs @ 0.17 hrs, Volume= 4,873 cf, Atten= 1%, Lag= 0.2 min

Routed to Reach P-A4: Pipe A4

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 9.76 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 4.04 fps, Avg. Travel Time= 0.5 min

Peak Storage= 97 cf @ 0.17 hrs

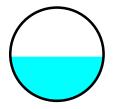
Average Depth at Peak Storage= 0.71', Surface Width= 1.50' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.65 cfs

18.0" Round Pipe

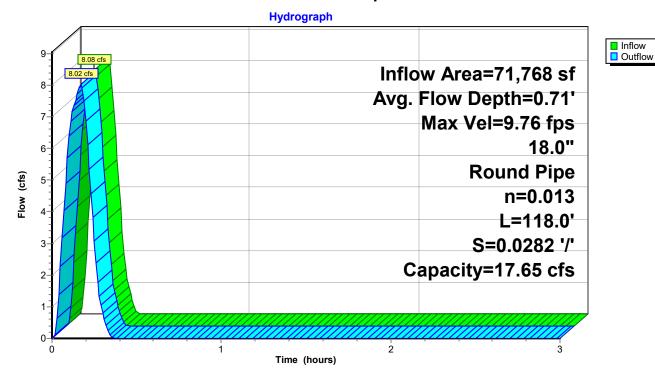
n= 0.013 Corrugated PE, smooth interior

Length= 118.0' Slope= 0.0282 '/'

Inlet Invert= 404.46', Outlet Invert= 401.13'

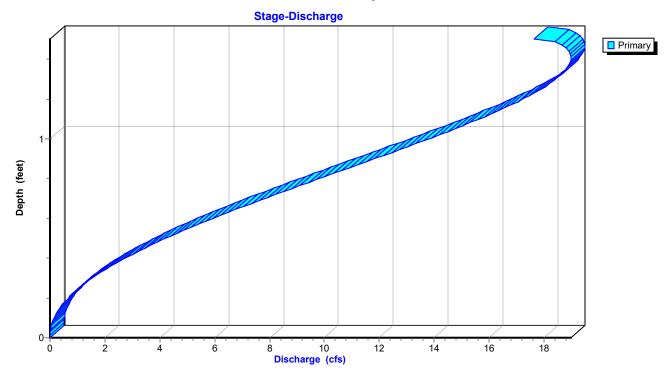


#### Reach P-A3: Pipe A3



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# Reach P-A3: Pipe A3



# **Summerwood Gym 3**

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# Stage-Area-Storage for Reach P-A3: Pipe A3

|                     |                     | 20.907                  |                     |                     |                         |
|---------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 404.46              | 0.0                 | 0                       | 405.50              | 1.3                 | 154                     |
| 404.48              | 0.0                 | 1                       | 405.52              | 1.3                 | 158                     |
| 404.50              | 0.0                 | 2                       | 405.54              | 1.4                 | 161                     |
| 404.52              | 0.0                 | 3                       | 405.56              | 1.4                 | 164                     |
| 404.54              | 0.0                 | 4                       | 405.58              | 1.4                 | 167                     |
| 404.56              | 0.0                 | 6                       | 405.60              | 1.4                 | 170                     |
| 404.58              | 0.1                 | 8                       | 405.62              | 1.5                 | 173                     |
| 404.56              | 0.1                 | 10                      | 405.64              | 1.5                 | 173                     |
| 404.62              | 0.1                 | 12                      | 405.66              | 1.5                 | 179                     |
| 404.62              | 0.1                 | 14                      | 405.68              | 1.5                 | 182                     |
| 404.66              | 0.1                 | 17                      | 405.00              | 1.6                 | 184                     |
|                     |                     | 17                      |                     |                     | 187                     |
| 404.68              | 0.2                 |                         | 405.72              | 1.6                 |                         |
| 404.70              | 0.2                 | 22                      | 405.74              | 1.6                 | 190                     |
| 404.72              | 0.2                 | 24                      | 405.76              | 1.6                 | 192                     |
| 404.74              | 0.2                 | 27                      | 405.78              | 1.6                 | 194                     |
| 404.76              | 0.3                 | 30<br>33                | 405.80              | 1.7                 | 197                     |
| 404.78<br>404.80    | 0.3<br>0.3          | 35<br>35                | 405.82<br>405.84    | 1.7<br>1.7          | 199<br>201              |
|                     |                     | 38                      |                     |                     | 203                     |
| 404.82              | 0.3<br>0.4          | 36<br>42                | 405.86              | 1.7<br>1.7          | 203<br>204              |
| 404.84              |                     | 42<br>45                | 405.88              | 1.7                 | 206                     |
| 404.86<br>404.88    | 0.4<br>0.4          | 45<br>48                | 405.90<br>405.92    | 1.7                 | 207                     |
|                     |                     |                         |                     |                     |                         |
| 404.90              | 0.4                 | 51<br>54                | 405.94              | 1.8                 | 208                     |
| 404.92              | 0.5<br>0.5          | 54<br>58                | 405.96              | 1.8                 | 209                     |
| 404.94              | 0.5                 | 61                      |                     |                     |                         |
| 404.96<br>404.98    | 0.5                 | 64                      |                     |                     |                         |
| 404.90              | 0.6                 | 68                      |                     |                     |                         |
| 405.00              | 0.6                 | 71                      |                     |                     |                         |
| 405.02              | 0.6                 | 74                      |                     |                     |                         |
| 405.04              | 0.0                 | 78                      |                     |                     |                         |
| 405.08              | 0.7                 | 81                      |                     |                     |                         |
| 405.00              | 0.7                 | 85                      |                     |                     |                         |
| 405.10              | 0.7                 | 88                      |                     |                     |                         |
| 405.12              | 0.8                 | 92                      |                     |                     |                         |
| 405.14              | 0.8                 | 95                      |                     |                     |                         |
| 405.18              | 0.8                 | 99                      |                     |                     |                         |
| 405.20              | 0.9                 | 102                     |                     |                     |                         |
| 405.22              | 0.9                 | 106                     |                     |                     |                         |
| 405.24              | 0.9                 | 110                     |                     |                     |                         |
| 405.26              | 1.0                 | 113                     |                     |                     |                         |
| 405.28              | 1.0                 | 117                     |                     |                     |                         |
| 405.30              | 1.0                 | 120                     |                     |                     |                         |
| 405.32              | 1.0                 | 124                     |                     |                     |                         |
| 405.34              | 1.1                 | 127                     |                     |                     |                         |
| 405.36              | 1.1                 | 131                     |                     |                     |                         |
| 405.38              | 1.1                 | 134                     |                     |                     |                         |
| 405.40              | 1.2                 | 138                     |                     |                     |                         |
| 405.42              | 1.2                 | 141                     |                     |                     |                         |
| 405.44              | 1.2                 | 144                     |                     |                     |                         |
| 405.46              | 1.3                 | 148                     |                     |                     |                         |
| 405.48              | 1.3                 | 151                     |                     |                     |                         |
|                     |                     |                         | I                   |                     |                         |

## **Summerwood Gym 3**

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#### Summary for Reach P-A4: Pipe A4

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.81" for 25-yr event

Inflow = 8.02 cfs @ 0.17 hrs, Volume= 4,873 cf

Outflow = 7.99 cfs @ 0.18 hrs, Volume= 4,873 cf, Atten= 0%, Lag= 0.4 min

Routed to Pond DP1: Re-Establised East Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs Max. Velocity= 9.74 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 3.84 fps, Avg. Travel Time= 0.2 min

Peak Storage= 108 cf @ 0.17 hrs

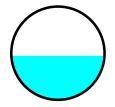
Average Depth at Peak Storage= 0.71', Surface Width= 1.50' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.66 cfs

18.0" Round Pipe

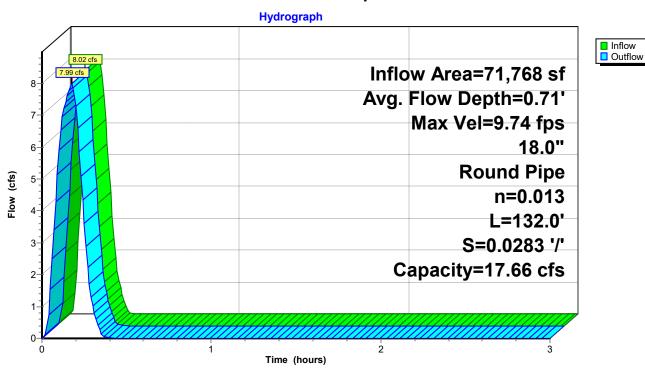
n= 0.013 Corrugated PE, smooth interior

Length= 132.0' Slope= 0.0283 '/'

Inlet Invert= 401.03', Outlet Invert= 397.30'

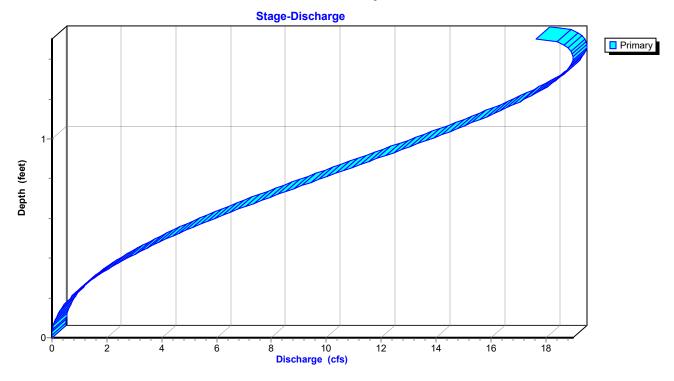


#### Reach P-A4: Pipe A4



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# Reach P-A4: Pipe A4



## **Summerwood Gym 3**

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# Stage-Area-Storage for Reach P-A4: Pipe A4

|                  |                     | J                       | •                   |                     | •                       |
|------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation (feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 401.03           | 0.0                 | 0                       | 402.07              | 1.3                 | 173                     |
| 401.05           | 0.0                 | 1                       | 402.09              | 1.3                 | 176                     |
| 401.07           | 0.0                 | 2                       | 402.11              | 1.4                 | 180                     |
| 401.09           | 0.0                 | 3                       | 402.13              | 1.4                 | 183                     |
| 401.11           | 0.0                 | 5                       | 402.15              | 1.4                 | 187                     |
| 401.13           | 0.1                 | 7                       | 402.17              | 1.4                 | 190                     |
| 401.15           | 0.1                 | 9                       | 402.19              | 1.5                 | 194                     |
| 401.17           | 0.1                 | 11                      | 402.21              | 1.5                 | 197                     |
| 401.19           | 0.1                 | 13                      | 402.23              | 1.5                 | 200                     |
| 401.21           | 0.1                 | 16                      | 402.25              | 1.5                 | 203                     |
| 401.23           | 0.1                 | 18                      | 402.27              | 1.6                 | 206                     |
| 401.25           | 0.2                 | 21                      | 402.29              | 1.6                 | 209                     |
| 401.27           | 0.2                 | 24                      | 402.31              | 1.6                 | 212                     |
| 401.29           | 0.2                 | 27                      | 402.33              | 1.6                 | 215                     |
| 401.31           | 0.2                 | 30                      | 402.35              | 1.6                 | 217                     |
| 401.33           | 0.3                 | 33                      | 402.37              | 1.7                 | 220                     |
| 401.35           | 0.3                 | 36                      | 402.39              | 1.7                 | 222                     |
| 401.37           | 0.3                 | 40                      | 402.41              | 1.7                 | 225                     |
| 401.39           | 0.3                 | 43                      | 402.43              | 1.7                 | 227                     |
| 401.41           | 0.4                 | 46                      | 402.45              | 1.7                 | 228                     |
| 401.43           | 0.4                 | 50                      | 402.47              | 1.7                 | 230                     |
| 401.45           | 0.4                 | 53<br>57                | 402.49<br>402.51    | 1.8                 | 232                     |
| 401.47           | 0.4<br>0.5          | 57<br>61                |                     | 1.8<br><b>1.8</b>   | 233<br><b>233</b>       |
| 401.49<br>401.51 | 0.5                 | 64                      | 402.53              | 1.0                 | 233                     |
| 401.53           | 0.5                 | 68                      |                     |                     |                         |
| 401.55           | 0.5                 | 72                      |                     |                     |                         |
| 401.57           | 0.6                 | 76                      |                     |                     |                         |
| 401.59           | 0.6                 | 79                      |                     |                     |                         |
| 401.61           | 0.6                 | 83                      |                     |                     |                         |
| 401.63           | 0.7                 | 87                      |                     |                     |                         |
| 401.65           | 0.7                 | 91                      |                     |                     |                         |
| 401.67           | 0.7                 | 95                      |                     |                     |                         |
| 401.69           | 0.7                 | 99                      |                     |                     |                         |
| 401.71           | 8.0                 | 103                     |                     |                     |                         |
| 401.73           | 0.8                 | 107                     |                     |                     |                         |
| 401.75           | 0.8                 | 111                     |                     |                     |                         |
| 401.77           | 0.9                 | 115                     |                     |                     |                         |
| 401.79           | 0.9                 | 119                     |                     |                     |                         |
| 401.81           | 0.9                 | 123                     |                     |                     |                         |
| 401.83<br>401.85 | 1.0<br>1.0          | 127<br>130              |                     |                     |                         |
| 401.87           | 1.0                 | 134                     |                     |                     |                         |
| 401.89           | 1.0                 | 138                     |                     |                     |                         |
| 401.91           | 1.1                 | 142                     |                     |                     |                         |
| 401.93           | 1.1                 | 146                     |                     |                     |                         |
| 401.95           | 1.1                 | 150                     |                     |                     |                         |
| 401.97           | 1.2                 | 154                     |                     |                     |                         |
| 401.99           | 1.2                 | 158                     |                     |                     |                         |
| 402.01           | 1.2                 | 161                     |                     |                     |                         |
| 402.03           | 1.3                 | 165                     |                     |                     |                         |
| 402.05           | 1.3                 | 169                     |                     |                     |                         |
|                  |                     |                         | •                   |                     |                         |

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## Summary for Pond DP1: Re-Establised East Pond

Inflow Area = 132,514 sf, 61.41% Impervious, Inflow Depth = 0.83" for 25-yr event

Inflow = 14.95 cfs @ 0.16 hrs, Volume= 9,164 cf

Outflow = 7.87 cfs @ 0.22 hrs, Volume= 9,164 cf, Atten= 47%, Lag= 3.8 min

Primary = 7.87 cfs @ 0.22 hrs, Volume= 9,164 cf

Routed to Link Post-Dev: APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Peak Elev= 398.45' @ 0.22 hrs Storage= 4,803 cf

Plug-Flow detention time= 8.8 min calculated for 9,164 cf (100% of inflow)

Center-of-Mass det. time= 8.7 min ( 17.5 - 8.8 )

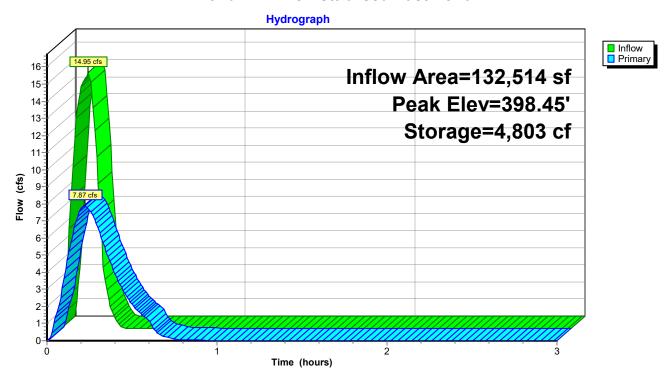
| Volume    | Inver   | t Avail.Sto | rage Stor        | age Description                |                      |
|-----------|---------|-------------|------------------|--------------------------------|----------------------|
| #1        | 396.00  | ' 8,5       | 57 cf <b>Cus</b> | tom Stage Data Listed below    |                      |
|           |         |             |                  |                                |                      |
| Elevatior |         | nc.Store    | Cum.Store        |                                |                      |
| (feet     | ) (cu   | bic-feet)   | (cubic-feet      |                                |                      |
| 396.00    | )       | 0           | (                | )                              |                      |
| 396.50    | )       | 250         | 250              | )                              |                      |
| 397.00    | )       | 1,092       | 1,342            | 2                              |                      |
| 398.00    | )       | 2,387       | 3,729            | )                              |                      |
| 399.00    | )       | 2,405       | 6,134            | l .                            |                      |
| 400.00    | )       | 2,423       | 8,557            | 7                              |                      |
|           |         |             |                  |                                |                      |
| Device    | Routing | Invert      | Outlet De        | vices                          |                      |
| #1        | Primary | 399.00'     | 5.0' long        | Sharp-Crested Rectangular Weir | 2 End Contraction(s) |
| #2        | Primary | 396.00'     | _                | Sharp-Crested Rectangular Weir | ` ,                  |

Primary OutFlow Max=7.86 cfs @ 0.22 hrs HW=398.44' (Free Discharge)

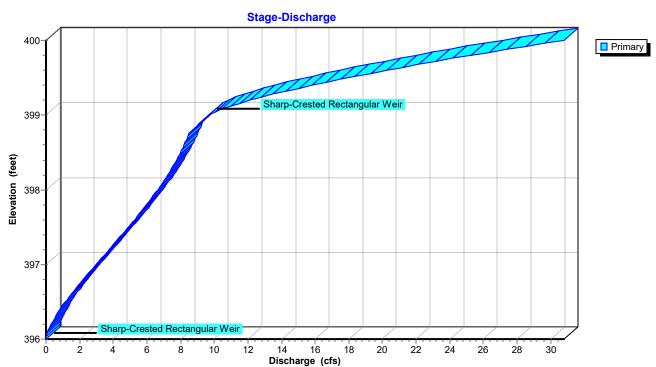
1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

**2=Sharp-Crested Rectangular Weir** (Weir Controls 7.86 cfs @ 5.26 fps)

#### Pond DP1: Re-Establised East Pond



#### Pond DP1: Re-Establised East Pond



Summerwood Gym 3 AR - Little Rock 25-yr Du Prepared by Phillip Lewis Engineering HydroCAD® 10.20-2f s/n 12520 © 2022 HydroCAD Software Solutions LLC

# Stage-Area-Storage for Pond DP1: Re-Establised East Pond

| Elevation        | Storage        | Elevation        | Storage        |
|------------------|----------------|------------------|----------------|
| (feet)           | (cubic-feet)   | (feet)           | (cubic-feet)   |
| 396.00           | 0              | 398.60           | 5,172          |
| 396.05           | 25             | 398.65           | 5,292          |
| 396.10           | 50             | 398.70           | 5,412          |
| 396.15           | 75             | 398.75           | 5,533          |
| 396.20           | 100            | 398.80           | 5,653          |
| 396.25           | 125            | 398.85           | 5,773          |
| 396.30           | 150            | 398.90           | 5,893          |
| 396.35           | 175            | 398.95           | 6,014          |
| 396.40           | 200            | 399.00           | 6,134          |
| 396.45           | 225            | 399.05           | 6,255          |
| 396.50           | 250            | 399.10           | 6,376          |
| 396.55           | 359            | 399.15           | 6,497          |
| 396.60           | 468            | 399.20           | 6,619          |
| 396.65           | 578<br>697     | 399.25           | 6,740          |
| 396.70<br>396.75 | 687<br>796     | 399.30<br>399.35 | 6,861<br>6,982 |
| 396.80           | 905            | 399.40           | 7,103          |
| 396.85           | 1,014          | 399.45           | 7,103<br>7,224 |
| 396.90           | 1,124          | 399.50           | 7,346          |
| 396.95           | 1,233          | 399.55           | 7,467          |
| 397.00           | 1,342          | 399.60           | 7,588          |
| 397.05           | 1,461          | 399.65           | 7,709          |
| 397.10           | 1,581          | 399.70           | 7,830          |
| 397.15           | 1,700          | 399.75           | 7,951          |
| 397.20           | 1,819          | 399.80           | 8,072          |
| 397.25           | 1,939          | 399.85           | 8,194          |
| 397.30           | 2,058          | 399.90           | 8,315          |
| 397.35           | 2,177          | 399.95           | 8,436          |
| 397.40           | 2,297          | 400.00           | 8,557          |
| 397.45           | 2,416          |                  |                |
| 397.50           | 2,536          |                  |                |
| 397.55<br>397.60 | 2,655<br>2,774 |                  |                |
| 397.65           | 2,774<br>2,894 |                  |                |
| 397.70           | 3,013          |                  |                |
| 397.75           | 3,132          |                  |                |
| 397.80           | 3,252          |                  |                |
| 397.85           | 3,371          |                  |                |
| 397.90           | 3,490          |                  |                |
| 397.95           | 3,610          |                  |                |
| 398.00           | 3,729          |                  |                |
| 398.05           | 3,849          |                  |                |
| 398.10           | 3,970          |                  |                |
| 398.15           | 4,090          |                  |                |
| 398.20           | 4,210          |                  |                |
| 398.25           | 4,330          |                  |                |
| 398.30<br>398.35 | 4,451<br>4,571 |                  |                |
| 398.35<br>398.40 | 4,571<br>4,691 |                  |                |
| 398.45           | 4,811          |                  |                |
| 398.50           | 4,932          |                  |                |
| 398.55           | 5,052          |                  |                |
| 555.50           | 3,002          |                  |                |

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#### **Summary for Link Post-Dev: APPROX DISCHARGE**

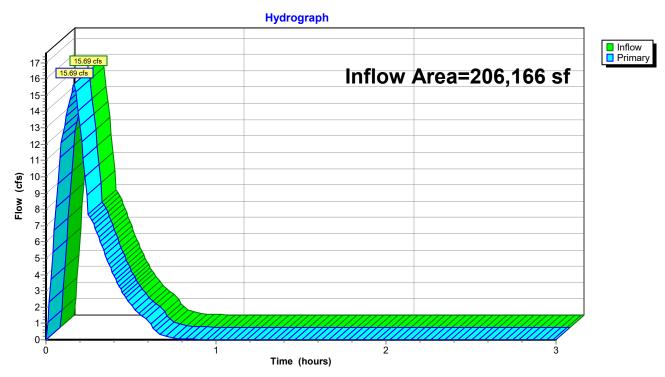
Inflow Area = 206,166 sf, 64.42% Impervious, Inflow Depth = 0.85" for 25-yr event

Inflow = 15.69 cfs @ 0.17 hrs, Volume= 14,548 cf

Primary = 15.69 cfs @ 0.17 hrs, Volume= 14,548 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

#### Link Post-Dev: APPROX DISCHARGE



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## Summary for Subcatchment D1: Drainage Basin D1

Runoff 8.18 cfs @ 0.09 hrs, Volume= 4,900 cf, Depth= 1.21"

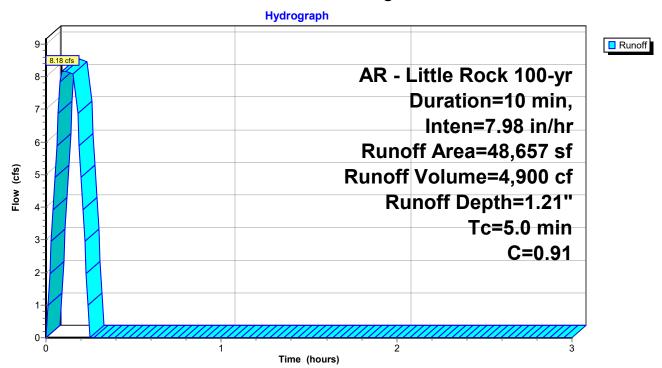
Routed to Link Post-Dev: APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

|       | rea (sf) | С       | Description |                  |  |  |  |  |  |
|-------|----------|---------|-------------|------------------|--|--|--|--|--|
|       | 3,421    | 0.40    | Sod Yard    |                  |  |  |  |  |  |
|       | 45,236   | 0.95    | Rood, Drive | es, Sidewa       | lks  |  |  |  |  |
|       | 48,657   | 0.91    | Weighted A  | Weighted Average |  |  |  |  |  |
|       | 3,421    |         | 7.03% Per   | vious Area       |  |  |  |  |  |
|       | 45,236   |         | 92.97% Im   | pervious A       | rea  |  |  |  |  |
| _     |          |         |             |                  |  |  |  |  |  |
| Tc    | Length   | Slope   | ,           | Capacity         | Description                                    |  |  |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)    | (cfs)            |  |  |  |  |  |
| 5.0   |          |         |             |                  | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

## Subcatchment D1: Drainage Basin D1



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## **Summary for Subcatchment D2: Drainage Basin D2**

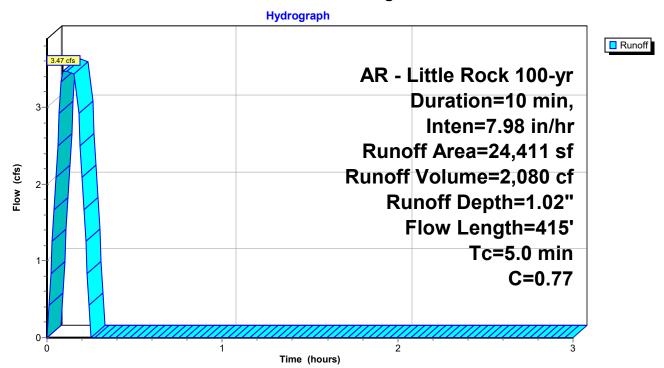
Runoff = 3.47 cfs @ 0.09 hrs, Volume= 2,080 cf, Depth= 1.02"

Routed to Reach P-A1: Pipe A1

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

|       | Area (sf) | С       | Description |                         |  |  |  |  |  |
|-------|-----------|---------|-------------|-------------------------|--|--|--|--|--|
|       | 8,845     | 0.45    | Rip Rap Er  | tip Rap Embankment      |  |  |  |  |  |
|       | 15,566    | 0.95    | Roof, Drive | Roof, Drives, Sidewalks |  |  |  |  |  |
|       | 24,411    | 0.77    | Weighted A  | Average                 |  |  |  |  |  |
|       | 8,845     |         | 36.23% Pe   | rvious Area             | a  |  |  |  |  |
|       | 15,566    |         | 63.77% Im   | pervious Aı             | rea  |  |  |  |  |
|       |           |         |             |                         |  |  |  |  |  |
| Tc    | 3         | Slope   | ,           | Capacity                | Description                                    |  |  |  |  |
| (min) | (feet)    | (ft/ft) | (ft/sec)    | (cfs)                   |  |  |  |  |  |
| 5.0   | 415       |         | 1.38        |                         | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |

#### Subcatchment D2: Drainage Basin D2



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## Summary for Subcatchment D3: Drainage Basin D3

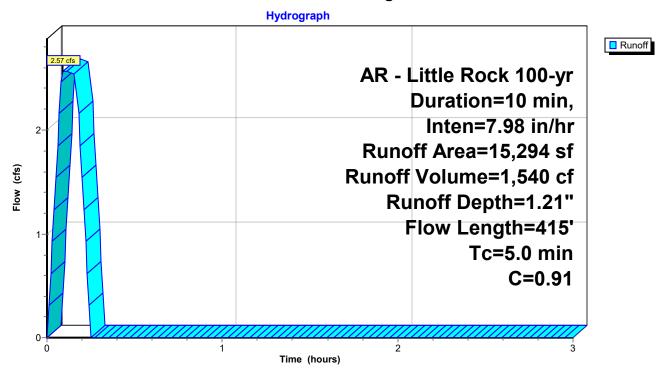
Runoff = 2.57 cfs @ 0.09 hrs, Volume= 1,540 cf, Depth= 1.21"

Routed to Reach P-A2: Pipe A2

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

|       | rea (sf) | С       | Description |                   |  |  |  |  |  |
|-------|----------|---------|-------------|-------------------|--|--|--|--|--|
|       | 1,065    | 0.40    | Sod Yard    | od Yard           |  |  |  |  |  |
|       | 14,229   | 0.95    | Paving, Sic | Paving, Sidewalks |  |  |  |  |  |
|       | 15,294   | 0.91    | Weighted A  | Average           |  |  |  |  |  |
|       | 1,065    |         | 6.96% Per   | vious Area        |  |  |  |  |  |
|       | 14,229   |         | 93.04% Im   | pervious Aı       | rea  |  |  |  |  |
|       |          |         |             |                   |  |  |  |  |  |
| Tc    | Length   | Slope   | ,           | Capacity          | Description                                    |  |  |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)    | (cfs)             |  |  |  |  |  |
| 5.0   | 415      |         | 1.38        |                   | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |

#### Subcatchment D3: Drainage Basin D3



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## Summary for Subcatchment D4: Drainage Basin D4

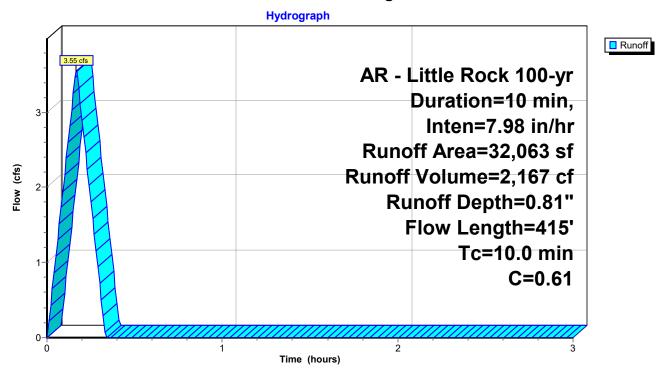
Runoff = 3.55 cfs @ 0.17 hrs, Volume= 2,167 cf, Depth= 0.81"

Routed to Reach P-A3: Pipe A3

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

|       | rea (sf) | С       | Description | 1           |  |
|-------|----------|---------|-------------|-------------|--|
| ,     | 20,032   | 0.40    |             |             |  |
|       | 12,031   | 0.95    |             |             |  |
|       | 32,063   | 0.61    | Weighted A  | Average     |  |
|       | 20,032   |         | 62.48% Pe   | rvious Area | a e e e e e e e e e e e e e e e e e e e        |
|       | 12,031   |         | 37.52% Im   | pervious Aı | rea  |
|       |          |         |             |             |  |
| Tc    | Length   | Slope   | ,           | Capacity    | Description                                    |
| (min) | (feet)   | (ft/ft) | (ft/sec)    | (cfs)       |  |
| 10.0  | 415      |         | 0.69        |             | Direct Entry, Overland Concentrated Flow (Min) |

#### Subcatchment D4: Drainage Basin D4



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#### **Summary for Subcatchment D5: Drainage Basin D5**

3,087 cf, Depth= 0.89" Runoff 5.15 cfs @ 0.09 hrs, Volume=

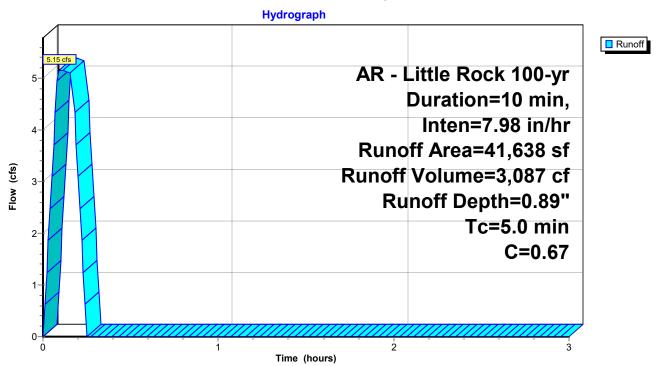
Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

|       | rea (sf) | С       | Description      | 1           |  |  |  |
|-------|----------|---------|------------------|-------------|--|--|--|
|       | 21,201   | 0.40    | Sod Yard,        | Natural Ve  | getation                                       |  |  |
|       | 20,437   | 0.95    | Paving, Sid      | dewalks     |  |  |  |
|       | 41,638   | 0.67    | Weighted Average |             |  |  |  |
|       | 21,201   |         | 50.92% Pe        | rvious Area | a e e e e e e e e e e e e e e e e e e e        |  |  |
|       | 20,437   |         | 49.08% Im        | pervious Ai | rea  |  |  |
|       |          |         |                  |             |  |  |  |
| Tc    | Length   | Slope   | ,                | Capacity    | Description                                    |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)         | (cfs)       |  |  |  |
| 5.0   |          |         |                  |             | Direct Entry, Overland Concentrated Flow (Min) |  |  |

**Direct Entry, Overland Concentrated Flow (Min)** 

# Subcatchment D5: Drainage Basin D5



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## Summary for Subcatchment D6: Drainage Basin D6

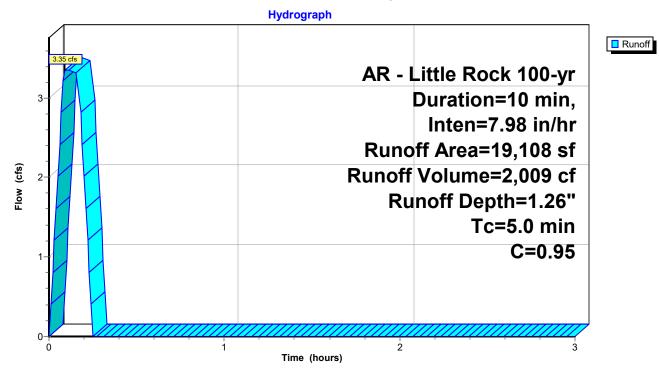
Runoff = 3.35 cfs @ 0.09 hrs, Volume= 2,009 cf, Depth= 1.26"

Routed to Pond DP1: Re-Establised East Pond

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

| A           | rea (sf)         | С                | Description          | 1                 |  |
|-------------|------------------|------------------|----------------------|-------------------|--|
|             | 19,108           | 0.95             | Roof                 |                   |  |
|             | 19,108           |                  | 100.00% Ir           | npervious A       | Area   |
| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                                    |
| 5.0         | (leet)           | (IVIL)           | (11/560)             | (CIS)             | Direct Entry, Overland Concentrated Flow (Min) |

#### Subcatchment D6: Drainage Basin D6



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## **Summary for Subcatchment D7: Drainage Basin D7**

Runoff = 2.49 cfs @ 0.09 hrs, Volume= 1

1,494 cf, Depth= 0.72"

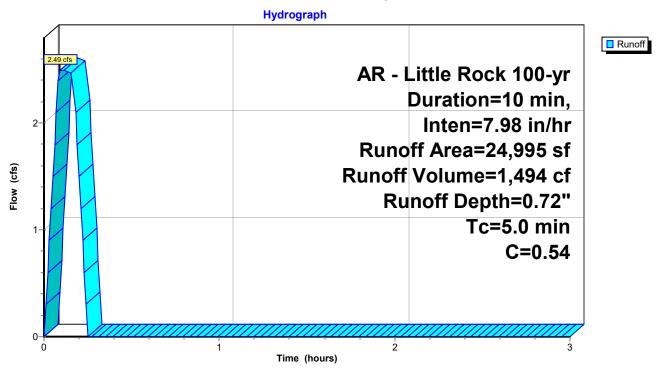
Routed to Link Post-Dev : APPROX DISCHARGE

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr

| A     | rea (sf) | С       | Description          | 1                            |  |  |  |  |  |  |
|-------|----------|---------|----------------------|------------------------------|--|--|--|--|--|--|
|       | 18,798   | 0.40    | Sod Yard,            | Sod Yard, Natural Vegetation |  |  |  |  |  |  |
|       | 6,197    | 0.95    | Paving, Sic          | dewalks                      |  |  |  |  |  |  |
|       | 24,995   | 0.54    | Weighted Average     |                              |  |  |  |  |  |  |
|       | 18,798   |         | 75.21% Pervious Area |                              |  |  |  |  |  |  |
|       | 6,197    |         | 24.79% lm            | pervious Aı                  | rea  |  |  |  |  |  |
| _     |          | O.      | <b>V</b> 1 ''        | 0 ''                         | D : (  |  |  |  |  |  |
| Тс    | 3        | Slope   | ,                    | Capacity                     | Description                                    |  |  |  |  |  |
| (min) | (feet)   | (ft/ft) | (ft/sec)             | (cfs)                        |  |  |  |  |  |  |
| 5.0   | •        |         |                      |                              | Direct Entry, Overland Concentrated Flow (Min) |  |  |  |  |  |

•

# Subcatchment D7: Drainage Basin D7



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#### **Summary for Reach P-A1: Pipe A1**

Inflow Area = 24,411 sf, 63.77% Impervious, Inflow Depth = 1.02" for 100-yr event

Inflow = 3.47 cfs @ 0.09 hrs, Volume= 2,080 cf

Outflow = 3.47 cfs @ 0.11 hrs, Volume= 2,080 cf, Atten= 0%, Lag= 1.2 min

Routed to Reach P-A2: Pipe A2

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 7.65 fps, Min. Travel Time= 0.1 min

Avg. Velocity = 6.08 fps, Avg. Travel Time= 0.1 min

Peak Storage= 23 cf @ 0.09 hrs

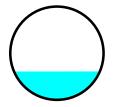
Average Depth at Peak Storage= 0.46', Surface Width= 1.38' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.28 cfs

18.0" Round Pipe

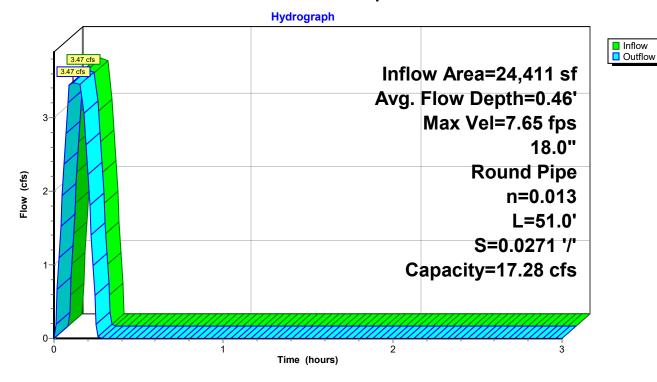
n= 0.013 Corrugated PE, smooth interior

Length= 51.0' Slope= 0.0271 '/'

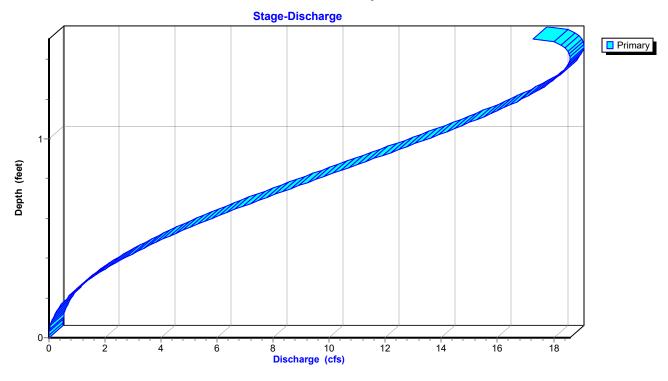
Inlet Invert= 408.33', Outlet Invert= 406.95'



#### Reach P-A1: Pipe A1



# Reach P-A1: Pipe A1



# Stage-Area-Storage for Reach P-A1: Pipe A1

|                     |                     | 0.0.90                  |                     |                     |                         |
|---------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 408.33              | 0.0                 | 0                       | 409.37              | 1.3                 | 67                      |
| 408.35              | 0.0                 | 0                       | 409.39              | 1.3                 | 68                      |
|                     |                     |                         |                     |                     |                         |
| 408.37              | 0.0                 | 1                       | 409.41              | 1.4                 | 69                      |
| 408.39              | 0.0                 | 1                       | 409.43              | 1.4                 | 71                      |
| 408.41              | 0.0                 | 2                       | 409.45              | 1.4                 | 72                      |
| 408.43              | 0.1                 | 3                       | 409.47              | 1.4                 | 73                      |
| 408.45              | 0.1                 | 3                       | 409.49              | 1.5                 | 75                      |
| 408.47              | 0.1                 | 4                       | 409.51              | 1.5                 | 76                      |
| 408.49              | 0.1                 | 5                       | 409.53              | 1.5                 | 77                      |
| 408.51              | 0.1                 | 6                       | 409.55              | 1.5                 | 78                      |
| 408.53              | 0.1                 | 7                       | 409.57              | 1.6                 | 80                      |
|                     |                     |                         |                     |                     |                         |
| 408.55              | 0.2                 | 8                       | 409.59              | 1.6                 | 81                      |
| 408.57              | 0.2                 | 9                       | 409.61              | 1.6                 | 82                      |
| 408.59              | 0.2                 | 10                      | 409.63              | 1.6                 | 83                      |
| 408.61              | 0.2                 | 12                      | 409.65              | 1.6                 | 84                      |
| 408.63              | 0.3                 | 13                      | 409.67              | 1.7                 | 85                      |
| 408.65              | 0.3                 | 14                      | 409.69              | 1.7                 | 86                      |
| 408.67              | 0.3                 | 15                      | 409.71              | 1.7                 | 87                      |
| 408.69              | 0.3                 | 17                      | 409.73              | 1.7                 | 88                      |
| 408.71              | 0.4                 | 18                      | 409.75              | 1.7                 | 88                      |
|                     |                     |                         |                     |                     |                         |
| 408.73              | 0.4                 | 19                      | 409.77              | 1.7                 | 89                      |
| 408.75              | 0.4                 | 21                      | 409.79              | 1.8                 | 89                      |
| 408.77              | 0.4                 | 22                      | 409.81              | 1.8                 | 90                      |
| 408.79              | 0.5                 | 23                      | 409.83              | 1.8                 | 90                      |
| 408.81              | 0.5                 | 25                      |                     |                     |                         |
| 408.83              | 0.5                 | 26                      |                     |                     |                         |
| 408.85              | 0.5                 | 28                      |                     |                     |                         |
| 408.87              | 0.6                 | 29                      |                     |                     |                         |
| 408.89              | 0.6                 | 31                      |                     |                     |                         |
| 408.91              | 0.6                 | 32                      |                     |                     |                         |
| 408.93              | 0.7                 | 34                      |                     |                     |                         |
|                     |                     |                         |                     |                     |                         |
| 408.95              | 0.7                 | 35                      |                     |                     |                         |
| 408.97              | 0.7                 | 37                      |                     |                     |                         |
| 408.99              | 0.7                 | 38                      |                     |                     |                         |
| 409.01              | 8.0                 | 40                      |                     |                     |                         |
| 409.03              | 8.0                 | 41                      |                     |                     |                         |
| 409.05              | 0.8                 | 43                      |                     |                     |                         |
| 409.07              | 0.9                 | 44                      |                     |                     |                         |
| 409.09              | 0.9                 | 46                      |                     |                     |                         |
| 409.11              | 0.9                 | 47                      |                     |                     |                         |
| 409.13              | 1.0                 | 49                      |                     |                     |                         |
| 409.15              | 1.0                 | 50                      |                     |                     |                         |
| 409.13              | 1.0                 | 52                      |                     |                     |                         |
|                     |                     |                         |                     |                     |                         |
| 409.19              | 1.0                 | 53                      |                     |                     |                         |
| 409.21              | 1.1                 | 55                      |                     |                     |                         |
| 409.23              | 1.1                 | 56                      |                     |                     |                         |
| 409.25              | 1.1                 | 58                      |                     |                     |                         |
| 409.27              | 1.2                 | 59                      |                     |                     |                         |
| 409.29              | 1.2                 | 61                      |                     |                     |                         |
| 409.31              | 1.2                 | 62                      |                     |                     |                         |
| 409.33              | 1.3                 | 64                      |                     |                     |                         |
| 409.35              | 1.3                 | 65                      |                     |                     |                         |
| <del>-</del> 03.00  | 1.5                 | 00                      |                     |                     |                         |

Prepared by Phillip Lewis Engineering

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## Summary for Reach P-A2: Pipe A2

Inflow Area = 39,705 sf, 75.04% Impervious, Inflow Depth = 1.09" for 100-yr event

Inflow = 6.04 cfs @ 0.11 hrs, Volume= 3,620 cf

Outflow = 6.04 cfs @ 0.15 hrs, Volume= 3,620 cf, Atten= 0%, Lag= 2.4 min

Routed to Reach P-A3: Pipe A3

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 6.78 fps, Min. Travel Time= 0.4 min

Avg. Velocity = 2.68 fps, Avg. Travel Time= 1.1 min

Peak Storage= 158 cf @ 0.12 hrs

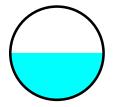
Average Depth at Peak Storage= 0.76', Surface Width= 1.50' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 11.95 cfs

18.0" Round Pipe

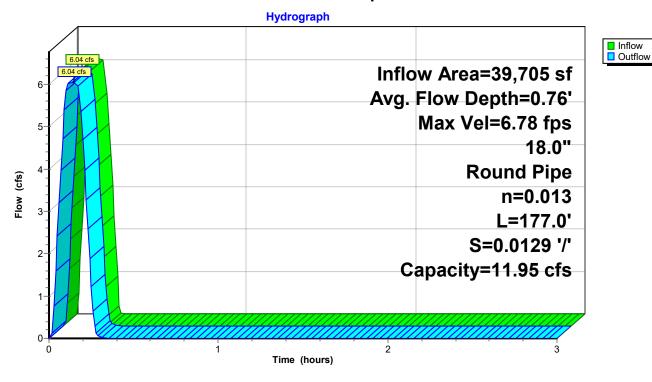
n= 0.013 Corrugated PE, smooth interior

Length= 177.0' Slope= 0.0129 '/'

Inlet Invert= 406.85', Outlet Invert= 404.56'

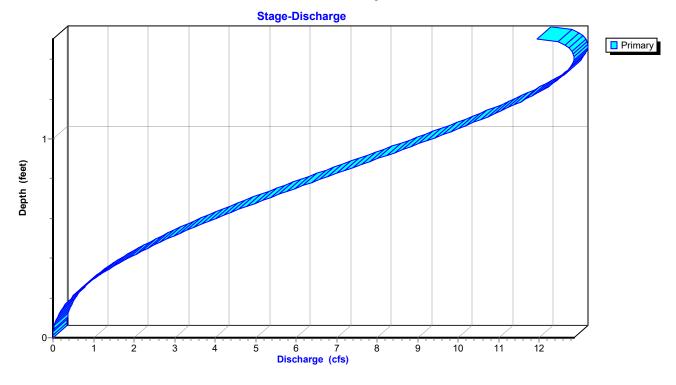


## Reach P-A2: Pipe A2



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## Reach P-A2: Pipe A2



Storage (cubic-feet)

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## Stage-Area-Storage for Reach P-A2: Pipe A2

| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) |
|---------------------|---------------------|-------------------------|---------------------|---------------------|
| 406.85              | 0.0                 | 0                       | 407.89              | 1.3                 |
| 406.87              | 0.0                 | 1                       | 407.91              | 1.3                 |
|                     |                     |                         |                     |                     |
| 406.89              | 0.0                 | 2                       | 407.93              | 1.4                 |
| 406.91              | 0.0                 | 4                       | 407.95              | 1.4                 |
| 406.93              | 0.0                 | 6                       | 407.97              | 1.4                 |
| 406.95              | 0.1                 | 9                       | 407.99              | 1.4                 |
| 406.97              | 0.1                 | 12                      | 408.01              | 1.5                 |
| 406.99              | 0.1                 | 15                      | 408.03              | 1.5                 |
| 407.01              | 0.1                 | 18                      | 408.05              | 1.5                 |
| 407.03              | 0.1                 | 21                      | 408.07              | 1.5                 |
| 407.05              | 0.1                 | 25                      | 408.09              | 1.6                 |
| 407.07              | 0.2                 | 28                      | 408.11              | 1.6                 |
| 407.09              | 0.2                 | 32                      | 408.13              | 1.6                 |
|                     |                     |                         |                     |                     |
| 407.11              | 0.2                 | 36                      | 408.15              | 1.6                 |
| 407.13              | 0.2                 | 40                      | 408.17              | 1.6                 |
| 407.15              | 0.3                 | 45                      | 408.19              | 1.7                 |
| 407.17              | 0.3                 | 49                      | 408.21              | 1.7                 |
| 407.19              | 0.3                 | 53                      | 408.23              | 1.7                 |
| 407.21              | 0.3                 | 58                      | 408.25              | 1.7                 |
| 407.23              | 0.4                 | 62                      | 408.27              | 1.7                 |
| 407.25              | 0.4                 | 67                      | 408.29              | 1.7                 |
| 407.27              | 0.4                 | 72                      | 408.31              | 1.8                 |
| 407.29              | 0.4                 | 76                      | 408.33              | 1.8                 |
| 407.31              | 0.5                 | 81                      | 408.35              | 1.8                 |
| 407.33              | 0.5                 | 86                      |                     |                     |
| 407.35              | 0.5                 | 91                      |                     |                     |
| 407.37              | 0.5                 | 96                      |                     |                     |
| 407.39              | 0.6                 | 101                     |                     |                     |
| 407.41              | 0.6                 | 106                     |                     |                     |
| 407.43              | 0.6                 | 112                     |                     |                     |
| 407.45              | 0.7                 | 117                     |                     |                     |
| 407.43              | 0.7                 | 122                     |                     |                     |
|                     |                     |                         |                     |                     |
| 407.49              | 0.7                 | 127                     |                     |                     |
| 407.51              | 0.7                 | 133                     |                     |                     |
| 407.53              | 0.8                 | 138                     |                     |                     |
| 407.55              | 0.8                 | 143                     |                     |                     |
| 407.57              | 0.8                 | 148                     |                     |                     |
| 407.59              | 0.9                 | 154                     |                     |                     |
| 407.61              | 0.9                 | 159                     |                     |                     |
| 407.63              | 0.9                 | 164                     |                     |                     |
| 407.65              | 1.0                 | 170                     |                     |                     |
| 407.67              | 1.0                 | 175                     |                     |                     |
| 407.69              | 1.0                 | 180                     |                     |                     |
| 407.71              | 1.0                 | 185                     |                     |                     |
| 407.73              | 1.1                 | 191                     |                     |                     |
| 407.75              | 1.1                 | 196                     |                     |                     |
| 407.77              | 1.1                 | 201                     |                     |                     |
| 407.79              | 1.2                 | 206                     |                     |                     |
| 407.81              | 1.2                 | 211                     |                     |                     |
| 407.83              | 1.2                 | 216                     |                     |                     |
| 407.85              | 1.3                 | 222                     |                     |                     |
| 407.83              | 1.3                 | 226                     |                     |                     |
| 407.07              | 1.3                 | 220                     |                     |                     |

InflowOutflow

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## Summary for Reach P-A3: Pipe A3

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.97" for 100-yr event

Inflow = 9.59 cfs @ 0.17 hrs, Volume= 5,787 cf

Outflow = 9.53 cfs @ 0.17 hrs, Volume= 5,787 cf, Atten= 1%, Lag= 0.2 min

Routed to Reach P-A4: Pipe A4

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 10.19 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 4.21 fps, Avg. Travel Time= 0.5 min

Peak Storage= 111 cf @ 0.17 hrs

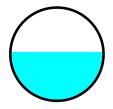
Average Depth at Peak Storage= 0.79', Surface Width= 1.50' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.65 cfs

18.0" Round Pipe

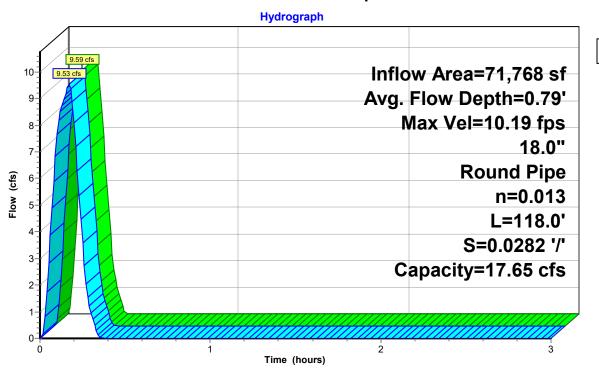
n= 0.013 Corrugated PE, smooth interior

Length= 118.0' Slope= 0.0282 '/'

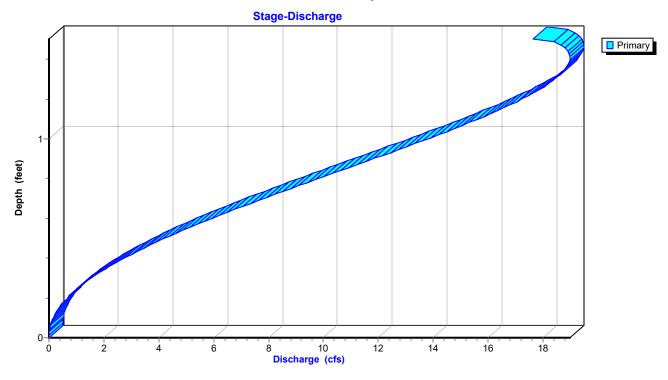
Inlet Invert= 404.46', Outlet Invert= 401.13'



### Reach P-A3: Pipe A3



## Reach P-A3: Pipe A3



Storage

(cubic-feet)

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## Stage-Area-Storage for Reach P-A3: Pipe A3

|        |          | - Cu.go / L  |           |          |
|--------|----------|--------------|-----------|----------|
|        | Ind-Area | Storage      | Elevation | End-Area |
| (feet) | (sq-ft)  | (cubic-feet) | (feet)    | (sq-ft)  |
| 404.46 | 0.0      | 0            | 405.50    | 1.3      |
| 404.48 | 0.0      | 1            | 405.52    | 1.3      |
| 404.50 | 0.0      | 2            | 405.54    | 1.4      |
| 404.52 | 0.0      | 3            | 405.56    | 1.4      |
| 404.54 | 0.0      | 4            | 405.58    | 1.4      |
| 404.56 | 0.1      | 6            | 405.60    | 1.4      |
| 404.58 | 0.1      | 8            | 405.62    | 1.5      |
| 404.60 | 0.1      | 10           | 405.64    | 1.5      |
| 404.62 | 0.1      | 12           | 405.66    | 1.5      |
| 404.64 | 0.1      | 14           | 405.68    | 1.5      |
| 404.66 | 0.1      | 17           | 405.70    | 1.6      |
| 404.68 | 0.2      | 19           | 405.72    | 1.6      |
| 404.70 | 0.2      | 22           | 405.74    | 1.6      |
| 404.72 | 0.2      | 24           | 405.76    | 1.6      |
| 404.74 | 0.2      | 27           | 405.78    | 1.6      |
| 404.76 | 0.3      | 30           | 405.80    | 1.7      |
| 404.78 | 0.3      | 33           | 405.82    | 1.7      |
| 404.80 | 0.3      | 35<br>35     | 405.84    | 1.7      |
|        |          | 38           | 405.86    |          |
| 404.82 | 0.3      |              |           | 1.7      |
| 404.84 | 0.4      | 42           | 405.88    | 1.7      |
| 404.86 | 0.4      | 45<br>48     | 405.90    | 1.7      |
| 404.88 | 0.4      | -            | 405.92    | 1.8      |
| 404.90 | 0.4      | 51<br>54     | 405.94    | 1.8      |
| 404.92 | 0.5      | 54<br>50     | 405.96    | 1.8      |
| 404.94 | 0.5      | 58           |           |          |
| 404.96 | 0.5      | 61           |           |          |
| 404.98 | 0.5      | 64           |           |          |
| 405.00 | 0.6      | 68           |           |          |
| 405.02 | 0.6      | 71           |           |          |
| 405.04 | 0.6      | 74           |           |          |
| 405.06 | 0.7      | 78           |           |          |
| 405.08 | 0.7      | 81           |           |          |
| 405.10 | 0.7      | 85           |           |          |
| 405.12 | 0.7      | 88           |           |          |
| 405.14 | 0.8      | 92           |           |          |
| 405.16 | 0.8      | 95           |           |          |
| 405.18 | 0.8      | 99           |           |          |
| 405.20 | 0.9      | 102          |           |          |
| 405.22 | 0.9      | 106          |           |          |
| 405.24 | 0.9      | 110          |           |          |
| 405.26 | 1.0      | 113          |           |          |
| 405.28 | 1.0      | 117          |           |          |
| 405.30 | 1.0      | 120          |           |          |
| 405.32 | 1.0      | 124          |           |          |
| 405.34 | 1.1      | 127          |           |          |
| 405.36 | 1.1      | 131          |           |          |
| 405.38 | 1.1      | 134          |           |          |
| 405.40 | 1.2      | 138          |           |          |
| 405.42 | 1.2      | 141          |           |          |
| 405.44 | 1.2      | 144          |           |          |
| 405.46 | 1.3      | 148          |           |          |
| 405.48 | 1.3      | 151          |           |          |
|        |          |              | I         |          |

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## Summary for Reach P-A4: Pipe A4

Inflow Area = 71,768 sf, 58.28% Impervious, Inflow Depth = 0.97" for 100-yr event

Inflow = 9.53 cfs @ 0.17 hrs, Volume= 5,787 cf

Outflow = 9.49 cfs @ 0.18 hrs, Volume= 5,787 cf, Atten= 0%, Lag= 0.4 min

Routed to Pond DP1: Re-Establised East Pond

Routing by Stor-Ind+Trans method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Max. Velocity= 10.17 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 4.00 fps, Avg. Travel Time= 0.6 min

Peak Storage= 123 cf @ 0.17 hrs

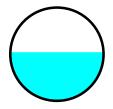
Average Depth at Peak Storage= 0.78', Surface Width= 1.50' Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 17.66 cfs

18.0" Round Pipe

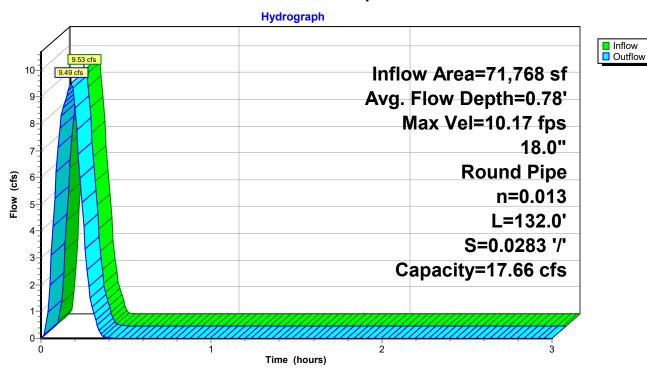
n= 0.013 Corrugated PE, smooth interior

Length= 132.0' Slope= 0.0283 '/'

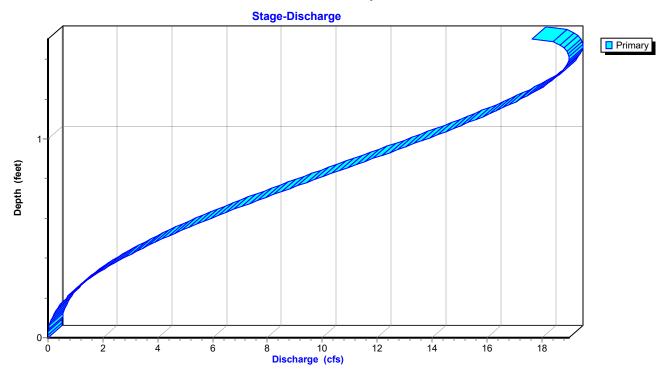
Inlet Invert= 401.03', Outlet Invert= 397.30'



## Reach P-A4: Pipe A4



## Reach P-A4: Pipe A4



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## Stage-Area-Storage for Reach P-A4: Pipe A4

|                     |                     | · ·                     | J                   |                     | •                       |
|---------------------|---------------------|-------------------------|---------------------|---------------------|-------------------------|
| Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) | Elevation<br>(feet) | End-Area<br>(sq-ft) | Storage<br>(cubic-feet) |
| 401.03              | 0.0                 | 0                       | 402.07              | 1.3                 | 173                     |
| 401.05              | 0.0                 | 1                       | 402.07              | 1.3                 | 176                     |
| 401.03              | 0.0                 | 2                       | 402.03              | 1.4                 | 180                     |
| 401.07              | 0.0                 | 3                       | 402.11              | 1.4                 | 183                     |
| 401.09              | 0.0                 | 5                       | 402.13              | 1.4                 | 187                     |
| 401.11              | 0.0                 | 7                       | 402.13              | 1.4                 | 190                     |
| 401.15              | 0.1                 | 9                       | 402.17              | 1.4                 | 194                     |
| 401.13              | 0.1                 | 11                      | 402.13              | 1.5                 | 197                     |
| 401.17              | 0.1                 | 13                      | 402.21              | 1.5                 | 200                     |
| 401.13              | 0.1                 | 16                      | 402.25              | 1.5                 | 203                     |
| 401.23              | 0.1                 | 18                      | 402.27              | 1.6                 | 206                     |
| 401.25              | 0.1                 | 21                      | 402.27              | 1.6                 | 209                     |
| 401.27              | 0.2                 | 24                      | 402.23              | 1.6                 | 212                     |
| 401.29              | 0.2                 | 27                      | 402.33              | 1.6                 | 215                     |
| 401.23              | 0.2                 | 30                      | 402.35              | 1.6                 | 217                     |
| 401.33              | 0.3                 | 33                      | 402.37              | 1.7                 | 220                     |
| 401.35              | 0.3                 | 36                      | 402.39              | 1.7                 | 222                     |
| 401.37              | 0.3                 | 40                      | 402.33              | 1.7                 | 225                     |
| 401.39              | 0.3                 | 43                      | 402.43              | 1.7                 | 227                     |
| 401.41              | 0.4                 | 46                      | 402.45              | 1.7                 | 228                     |
| 401.43              | 0.4                 | 50                      | 402.47              | 1.7                 | 230                     |
| 401.45              | 0.4                 | 53                      | 402.49              | 1.8                 | 232                     |
| 401.47              | 0.4                 | 57                      | 402.51              | 1.8                 | 233                     |
| 401.49              | 0.5                 | 61                      | 402.53              | 1.8                 | 233                     |
| 401.51              | 0.5                 | 64                      | 402.00              | 1.0                 | 200                     |
| 401.53              | 0.5                 | 68                      |                     |                     |                         |
| 401.55              | 0.5                 | 72                      |                     |                     |                         |
| 401.57              | 0.6                 | 76                      |                     |                     |                         |
| 401.59              | 0.6                 | 79                      |                     |                     |                         |
| 401.61              | 0.6                 | 83                      |                     |                     |                         |
| 401.63              | 0.7                 | 87                      |                     |                     |                         |
| 401.65              | 0.7                 | 91                      |                     |                     |                         |
| 401.67              | 0.7                 | 95                      |                     |                     |                         |
| 401.69              | 0.7                 | 99                      |                     |                     |                         |
| 401.71              | 0.8                 | 103                     |                     |                     |                         |
| 401.73              | 8.0                 | 107                     |                     |                     |                         |
| 401.75              | 0.8                 | 111                     |                     |                     |                         |
| 401.77              | 0.9                 | 115                     |                     |                     |                         |
| 401.79              | 0.9                 | 119                     |                     |                     |                         |
| 401.81              | 0.9                 | 123                     |                     |                     |                         |
| 401.83              | 1.0                 | 127                     |                     |                     |                         |
| 401.85              | 1.0                 | 130                     |                     |                     |                         |
| 401.87              | 1.0                 | 134                     |                     |                     |                         |
| 401.89              | 1.0                 | 138                     |                     |                     |                         |
| 401.91              | 1.1                 | 142                     |                     |                     |                         |
| 401.93              | 1.1                 | 146                     |                     |                     |                         |
| 401.95              | 1.1                 | 150                     |                     |                     |                         |
| 401.97              | 1.2                 | 154                     |                     |                     |                         |
| 401.99              | 1.2                 | 158                     |                     |                     |                         |
| 402.01              | 1.2                 | 161                     |                     |                     |                         |
| 402.03              | 1.3                 | 165                     |                     |                     |                         |
| 402.05              | 1.3                 | 169                     |                     |                     |                         |

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## Summary for Pond DP1: Re-Establised East Pond

Inflow Area = 132,514 sf, 61.41% Impervious, Inflow Depth = 0.99" for 100-yr event

Inflow = 17.76 cfs @ 0.16 hrs, Volume= 10,883 cf

Outflow = 9.14 cfs @ 0.22 hrs, Volume= 10,883 cf, Atten= 49%, Lag= 3.8 min

Primary = 9.14 cfs @ 0.22 hrs, Volume= 10,883 cf

Routed to Link Post-Dev: APPROX DISCHARGE

Routing by Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

Peak Elev= 398.89' @ 0.22 hrs Storage= 5,867 cf

Plug-Flow detention time= 9.3 min calculated for 10,883 cf (100% of inflow)

Center-of-Mass det. time= 9.1 min ( 18.0 - 8.8 )

| Volume   | Inve    | rt Avail.S | Storage                                 | Storage Description                                     |
|----------|---------|------------|---|---|
| #1       | 396.0   | 0' 8       | ,557 cf                                 | Custom Stage Data Listed below                          |
| <b>-</b> |         | . 0        | 0                                       |   |
| Elevatio |         | Inc.Store  | • | .Store  |
| (fee     | t) (c   | ubic-feet) | (cubic                                  | c-feet)   |
| 396.0    | 0       | 0          |   | 0   |
| 396.5    | 0       | 250        |   | 250   |
| 397.0    | 0       | 1,092      |   | 1,342   |
| 398.0    | 0       | 2,387      | ,                                       | 3,729   |
| 399.0    | 0       | 2,405      |   | 6,134   |
| 400.0    | 0       | 2,423      |   | 8,557   |
|          |         |            |   |   |
| Device   | Routing | Inve       | rt Outle                                | et Devices  |
| #1       | Primary | 399.00     | 0' <b>5.0' l</b>                        | ong Sharp-Crested Rectangular Weir 2 End Contraction(s) |
| #2       | Primary | 396.00     | 0' <b>1.1'</b> l                        | ong Sharp-Crested Rectangular Weir 2 End Contraction(s) |

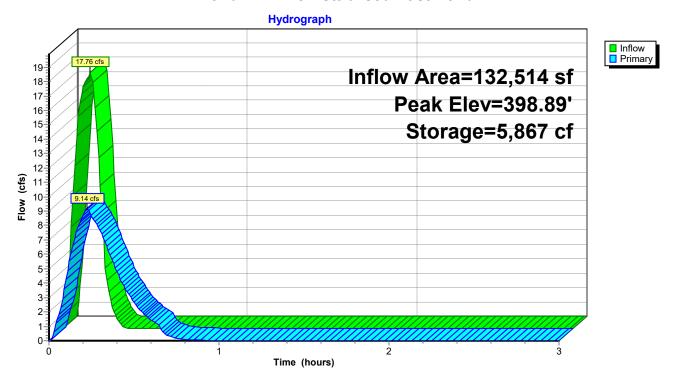
**Primary OutFlow** Max=9.13 cfs @ 0.22 hrs HW=398.89' (Free Discharge)

1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

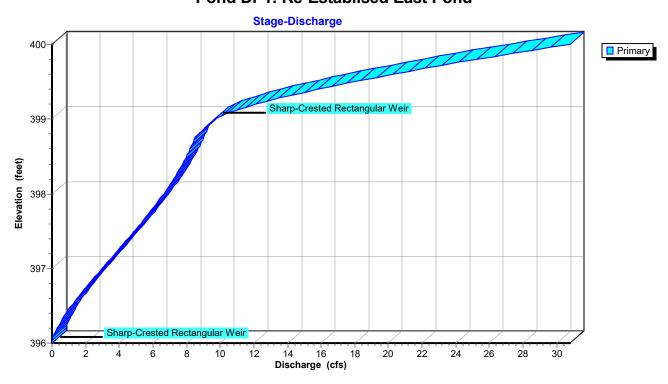
—2=Sharp-Crested Rectangular Weir (Weir Controls 9.13 cfs @ 5.75 fps)

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#### Pond DP1: Re-Establised East Pond



## Pond DP1: Re-Establised East Pond



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## Stage-Area-Storage for Pond DP1: Re-Establised East Pond

| Elevation        | Ctorogo                 | Elevation        | Storage        |
|------------------|-------------------------|------------------|----------------|
| (feet)           | Storage<br>(cubic-feet) | (feet)           | (cubic-feet)   |
| 396.00           | 0                       | 398.60           | 5,172          |
| 396.05           | 25                      | 398.65           | 5,292          |
| 396.10           | 50                      | 398.70           | 5,412          |
| 396.15           | 75                      | 398.75           | 5,533          |
| 396.20           | 100                     | 398.80           | 5,653          |
| 396.25           | 125                     | 398.85           | 5,773          |
| 396.30           | 150                     | 398.90           | 5,893          |
| 396.35           | 175                     | 398.95           | 6,014          |
| 396.40           | 200                     | 399.00           | 6,134          |
| 396.45           | 225                     | 399.05           | 6,255          |
| 396.50           | 250                     | 399.10           | 6,376          |
| 396.55           | 359                     | 399.15           | 6,497          |
| 396.60           | 468                     | 399.20           | 6,619          |
| 396.65           | 578                     | 399.25           | 6,740          |
| 396.70           | 687                     | 399.30           | 6,861          |
| 396.75<br>396.80 | 796<br>905              | 399.35           | 6,982          |
| 396.85           | 1,014                   | 399.40<br>399.45 | 7,103<br>7,224 |
| 396.90           | 1,124                   | 399.50           | 7,346          |
| 396.95           | 1,233                   | 399.55           | 7,467          |
| 397.00           | 1,342                   | 399.60           | 7,588          |
| 397.05           | 1,461                   | 399.65           | 7,709          |
| 397.10           | 1,581                   | 399.70           | 7,830          |
| 397.15           | 1,700                   | 399.75           | 7,951          |
| 397.20           | 1,819                   | 399.80           | 8,072          |
| 397.25           | 1,939                   | 399.85           | 8,194          |
| 397.30           | 2,058                   | 399.90           | 8,315          |
| 397.35           | 2,177                   | 399.95           | 8,436          |
| 397.40           | 2,297                   | 400.00           | 8,557          |
| 397.45           | 2,416                   |                  |                |
| 397.50<br>397.55 | 2,536<br>2,655          |                  |                |
| 397.60           | 2,035<br>2,774          |                  |                |
| 397.65           | 2,894                   |                  |                |
| 397.70           | 3,013                   |                  |                |
| 397.75           | 3,132                   |                  |                |
| 397.80           | 3,252                   |                  |                |
| 397.85           | 3,371                   |                  |                |
| 397.90           | 3,490                   |                  |                |
| 397.95           | 3,610                   |                  |                |
| 398.00           | 3,729                   |                  |                |
| 398.05           | 3,849                   |                  |                |
| 398.10           | 3,970                   |                  |                |
| 398.15           | 4,090<br>4,210          |                  |                |
| 398.20           | 4,210<br>4,330          |                  |                |
| 398.25<br>398.30 | 4,330<br>4,451          |                  |                |
| 398.35           | 4,571                   |                  |                |
| 398.40           | 4,691                   |                  |                |
| 398.45           | 4,811                   |                  |                |
| 398.50           | 4,932                   |                  |                |
| 398.55           | 5,052                   |                  |                |
|                  |                         |                  |                |
|                  |                         |                  |                |

## **Summerwood Gym 3**

AR - Little Rock 100-yr Duration=10 min, Inten=7.98 in/hr Printed 1/11/2024

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## **Summary for Link Post-Dev: APPROX DISCHARGE**

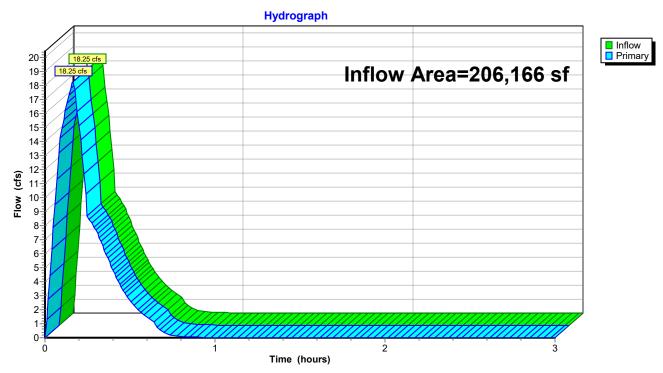
Inflow Area = 206,166 sf, 64.42% Impervious, Inflow Depth = 1.01" for 100-yr event

Inflow = 18.25 cfs @ 0.16 hrs, Volume= 17,276 cf

Primary = 18.25 cfs @ 0.16 hrs, Volume= 17,276 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs

## Link Post-Dev: APPROX DISCHARGE





# **Inlet Report**

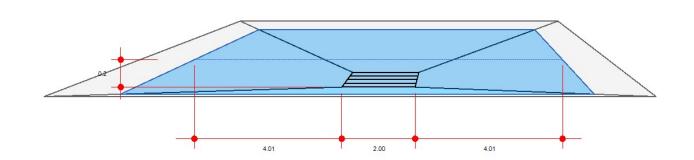
Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Wednesday, Jan 10 2024

## AI-A2

| Drop Grate Inlet Location               | = Sag          | Calculations Compute by: | Known Q |
|---|----------------|--------------------------|---------|
| Curb Length (ft)                        | = -0-<br>= -0- | Q (cfs)                  | = 2.16  |
| Throat Height (in)<br>Grate Area (sqft) | = 2.00         | Highlighted              |         |
| \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \   |                | <b>5 5</b>               | 0.40    |
| Grate Width (ft)                        | = 2.00         | Q Total (cfs)            | = 2.16  |
| Grate Length (ft)                       | = 2.00         | Q Capt (cfs)             | = 2.16  |
|   |                | Q Bypass (cfs)           | = -0-   |
| Gutter                                  |                | Depth at Inlet (in)      | = 2.41  |
| Slope, Sw (ft/ft)                       | = 0.050        | Efficiency (%)           | = 100   |
| Slope, Sx (ft/ft)                       | = 0.050        | Gutter Spread (ft)       | = 10.03 |
| Local Depr (in)                         | = -0-          | Gutter Vel (ft/s)        | = -0-   |
| Gutter Width (ft)                       | = 2.00         | Bypass Spread (ft)       | = -0-   |
| Gutter Slope (%)                        | = -0-          | Bypass Depth (in)        | = -0-   |
| Gutter n-value                          | = -0-          |                          |         |

All dimensions in feet



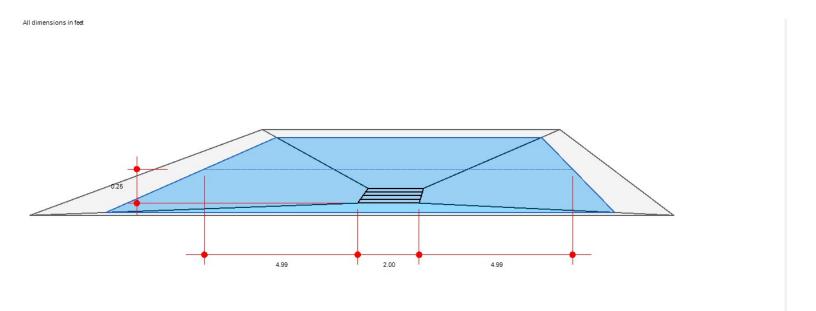
# **Inlet Report**

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

Wednesday, Jan 10 2024

## AI-A3

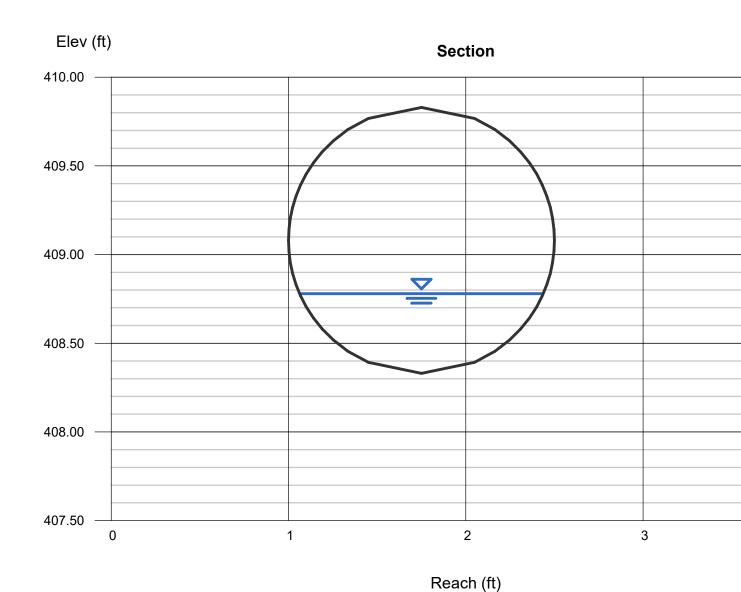
| Drop Grate Inlet Location Curb Length (ft) Throat Height (in) | = Sag<br>= -0-<br>= -0- | Calculations<br>Compute by:<br>Q (cfs) | Known Q<br>= 2.99 |
|---|-------------------------|--|-------------------|
| Grate Area (sqft)   | = 2.00                  | Highlighted                            |                   |
| Grate Width (ft)  | = 2.00                  | Q Total (cfs)                          | = 2.99            |
| Grate Length (ft)   | = 2.00                  | Q Capt (cfs)                           | = 2.99            |
|   |                         | Q Bypass (cfs)                         | = -0-             |
| Gutter  |                         | Depth at Inlet (in)                    | = 2.99            |
| Slope, Sw (ft/ft)   | = 0.050                 | Efficiency (%)                         | = 100             |
| Slope, Sx (ft/ft)   | = 0.050                 | Gutter Spread (ft)                     | = 11.97           |
| Local Depr (in)   | = -0-                   | Gutter Vel (ft/s)                      | = -0-             |
| Gutter Width (ft)   | = 2.00                  | Bypass Spread (ft)                     | = -0-             |
| Gutter Slope (%)  | = -0-                   | Bypass Depth (in)                      | = -0-             |
| Gutter n-value  | = -0-                   |  |                   |



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

Thursday, Jan 11 2024

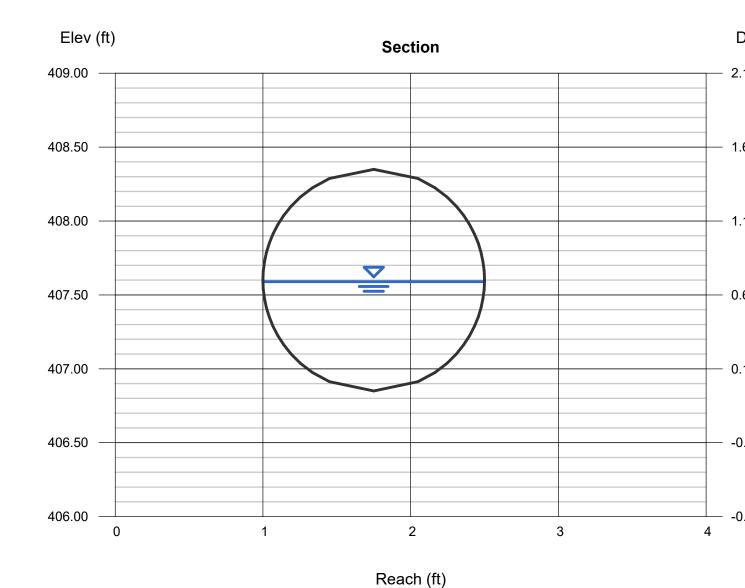
| Circular         |          | Highlighted         |         |
|------------------|----------|---------------------|---------|
| Diameter (ft)    | = 1.50   | Depth (ft)          | = 0.45  |
|                  |          | Q (cfs)             | = 2.920 |
|                  |          | Area (sqft)         | = 0.45  |
| Invert Elev (ft) | = 408.33 | Velocity (ft/s)     | = 6.54  |
| Slope (%)        | = 2.70   | Wetted Perim (ft)   | = 1.74  |
| N-Value          | = 0.015  | Crit Depth, Yc (ft) | = 0.65  |
|                  |          | Top Width (ft)      | = 1.38  |
| Calculations     |          | EGL (ft)            | = 1.11  |
| Compute by:      | Known Q  |                     |         |
| Known Q (cfs)    | = 2.92   |                     |         |
|                  |          |                     |         |



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

Thursday, Jan 11 2024

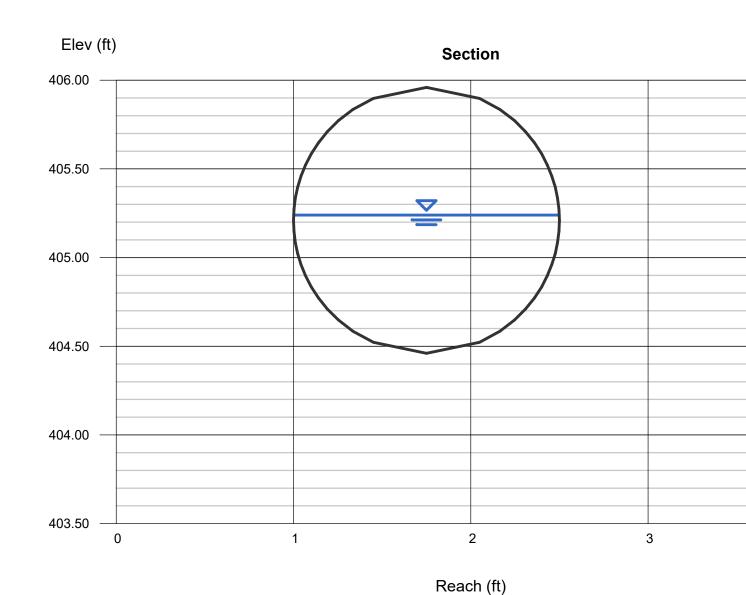
| Circular         |          | Highlighted         |         |
|------------------|----------|---------------------|---------|
| Diameter (ft)    | = 1.50   | Depth (ft)          | = 0.74  |
|                  |          | Q (cfs)             | = 5.090 |
|                  |          | Area (sqft)         | = 0.87  |
| Invert Elev (ft) | = 406.85 | Velocity (ft/s)     | = 5.84  |
| Slope (%)        | = 1.30   | Wetted Perim (ft)   | = 2.34  |
| N-Value          | = 0.015  | Crit Depth, Yc (ft) | = 0.87  |
|                  |          | Top Width (ft)      | = 1.50  |
| Calculations     |          | EGL (ft)            | = 1.27  |
| Compute by:      | Known Q  |                     |         |
| Known Q (cfs)    | = 5.09   |                     |         |
|                  |          |                     |         |



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

Thursday, Jan 11 2024

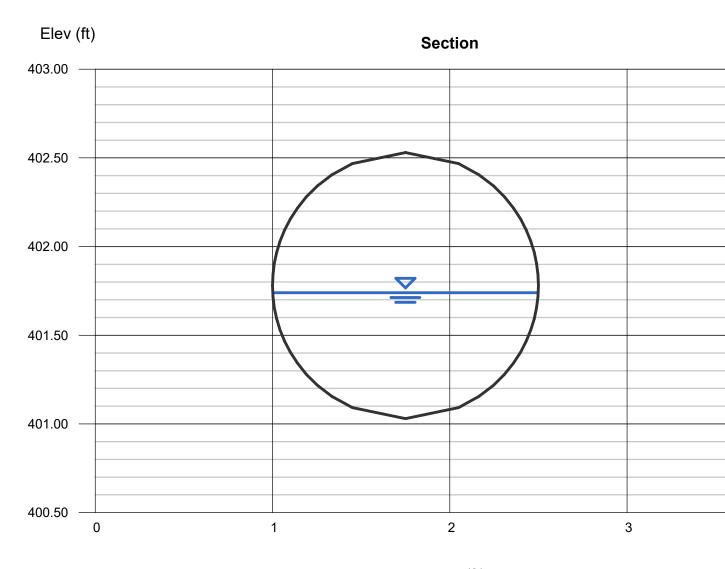
| Circular         |          | Highlighted         |         |
|------------------|----------|---------------------|---------|
| Diameter (ft)    | = 1.50   | Depth (ft)          | = 0.78  |
|                  |          | Q (cfs)             | = 8.020 |
|                  |          | Area (sqft)         | = 0.93  |
| Invert Elev (ft) | = 404.46 | Velocity (ft/s)     | = 8.59  |
| Slope (%)        | = 2.80   | Wetted Perim (ft)   | = 2.42  |
| N-Value          | = 0.015  | Crit Depth, Yc (ft) | = 1.10  |
|                  |          | Top Width (ft)      | = 1.50  |
| Calculations     |          | EGL (ft)            | = 1.93  |
| Compute by:      | Known Q  |                     |         |
| Known Q (cfs)    | = 8.02   |                     |         |



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

Wednesday, Jan 10 2024

| Circular         |          | Highlighted         |         |
|------------------|----------|---------------------|---------|
| Diameter (ft)    | = 1.50   | Depth (ft)          | = 0.71  |
|                  |          | Q (cfs)             | = 8.020 |
|                  |          | Area (sqft)         | = 0.83  |
| Invert Elev (ft) | = 401.03 | Velocity (ft/s)     | = 9.70  |
| Slope (%)        | = 2.83   | Wetted Perim (ft)   | = 2.28  |
| N-Value          | = 0.013  | Crit Depth, Yc (ft) | = 1.10  |
|                  |          | Top Width (ft)      | = 1.50  |
| Calculations     |          | EGL (ft)            | = 2.17  |
| Compute by:      | Known Q  |                     |         |
| Known Q (cfs)    | = 8.02   |                     |         |
|                  |          |                     |         |



Reach (ft)

Known Q (cfs)

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

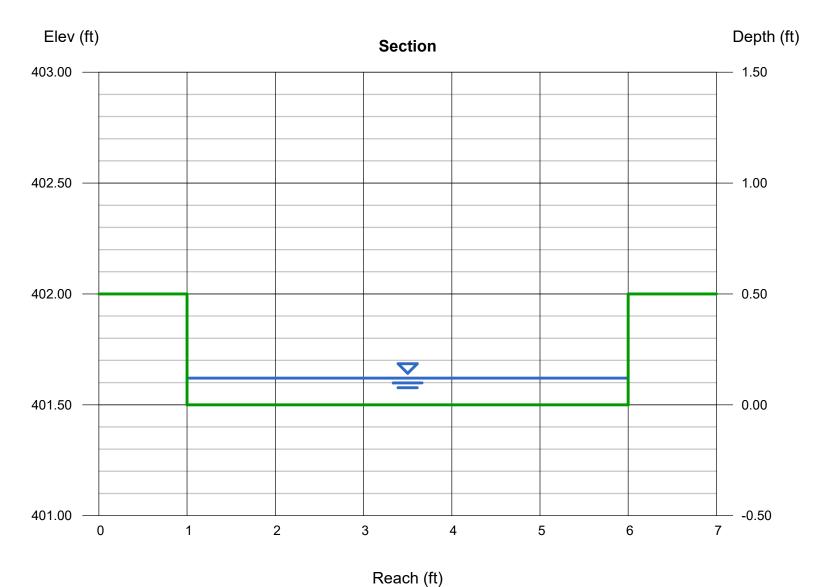
Wednesday, Jan 10 2024

## 5' Curb Cut & Flume to Pond

| Rectangular<br>Bottom Width (ft)<br>Total Depth (ft) | = 5.00<br>= 0.50               |
|--|--------------------------------|
| Invert Elev (ft)<br>Slope (%)<br>N-Value             | = 401.50<br>= 15.00<br>= 0.015 |
| Calculations Compute by:                             | Known Q                        |

= 5.15

| Highlighted         |         |
|---------------------|---------|
| Depth (ft)          | = 0.12  |
| Q (cfs)             | = 5.150 |
| Area (sqft)         | = 0.60  |
| Velocity (ft/s)     | = 8.58  |
| Wetted Perim (ft)   | = 5.24  |
| Crit Depth, Yc (ft) | = 0.33  |
| Top Width (ft)      | = 5.00  |
| EGL (ft)            | = 1.27  |



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

Wednesday, Jan 10 2024

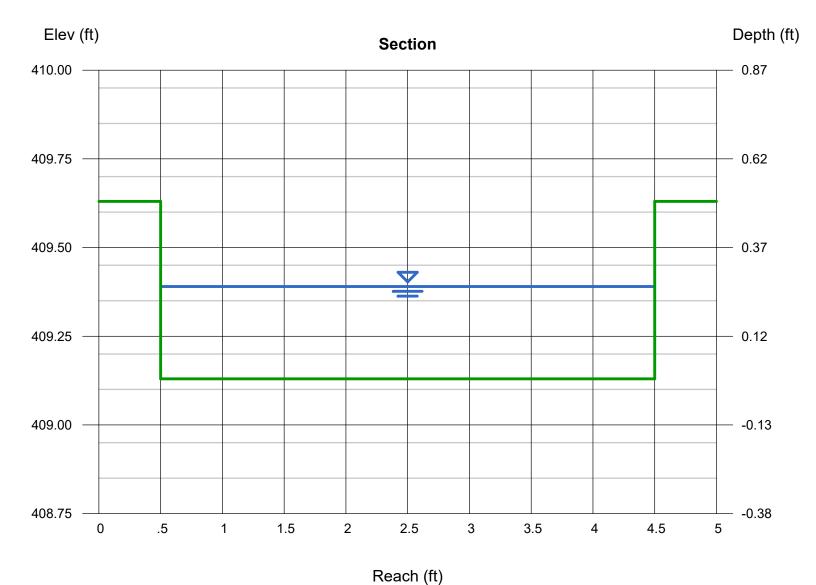
# **Curb Cut by Dumpster Pad**

| Rectangular Bottom Width (ft) Total Depth (ft) | = 4.00<br>= 0.50 |
|--|------------------|
| Invert Elev (ft)                               | = 409.13         |
| Slope (%)                                      | = 5.00           |
| N-Value  | = 0.015          |

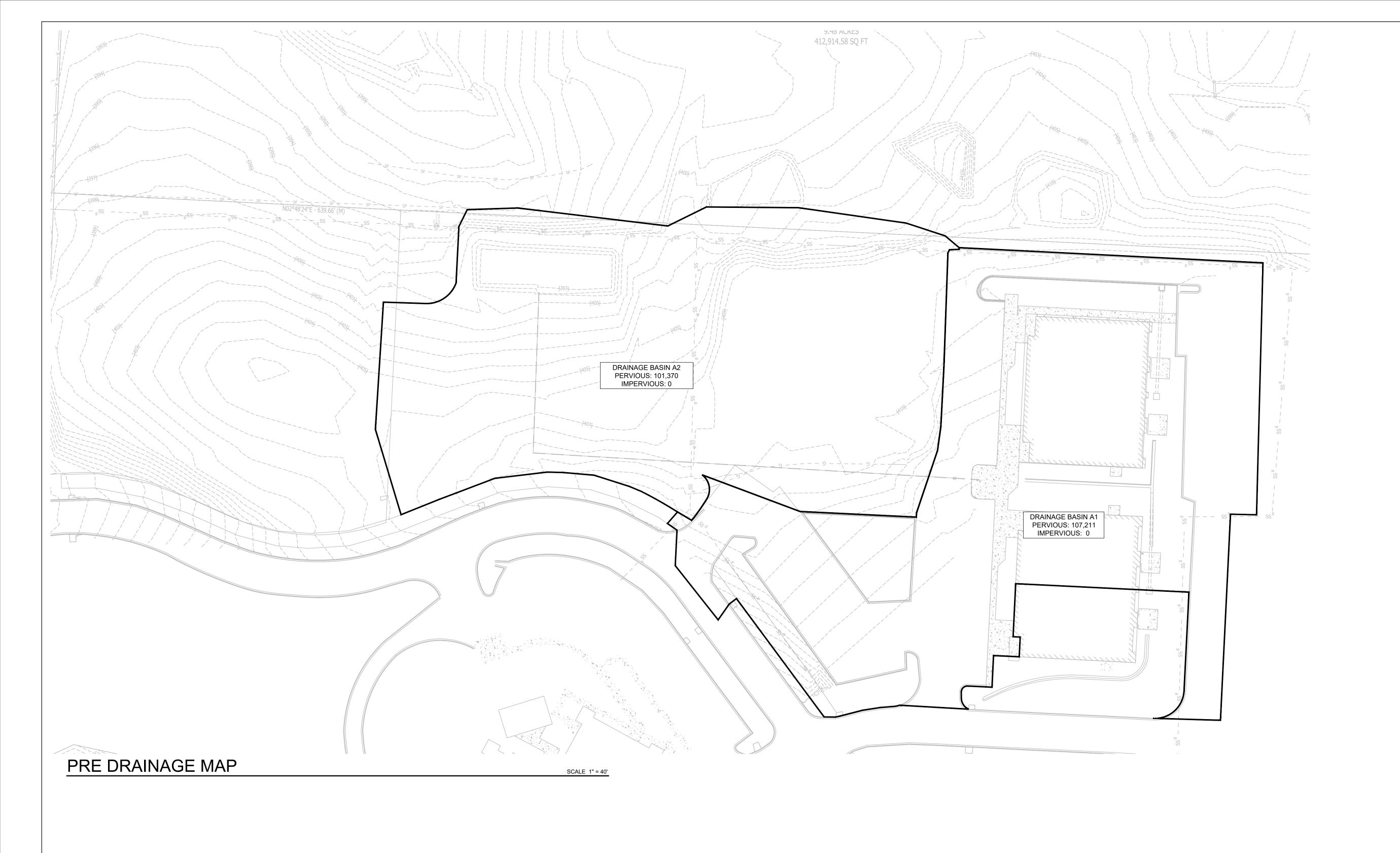
## Calculations

Compute by: Known Q Known Q (cfs) = 8.18

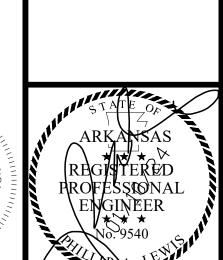
| Highlighted         |         |
|---------------------|---------|
| Depth (ft)          | = 0.26  |
| Q (cfs)             | = 8.180 |
| Area (sqft)         | = 1.04  |
| Velocity (ft/s)     | = 7.87  |
| Wetted Perim (ft)   | = 4.52  |
| Crit Depth, Yc (ft) | = 0.50  |
| Top Width (ft)      | = 4.00  |
| EGL (ft)            | = 1.22  |











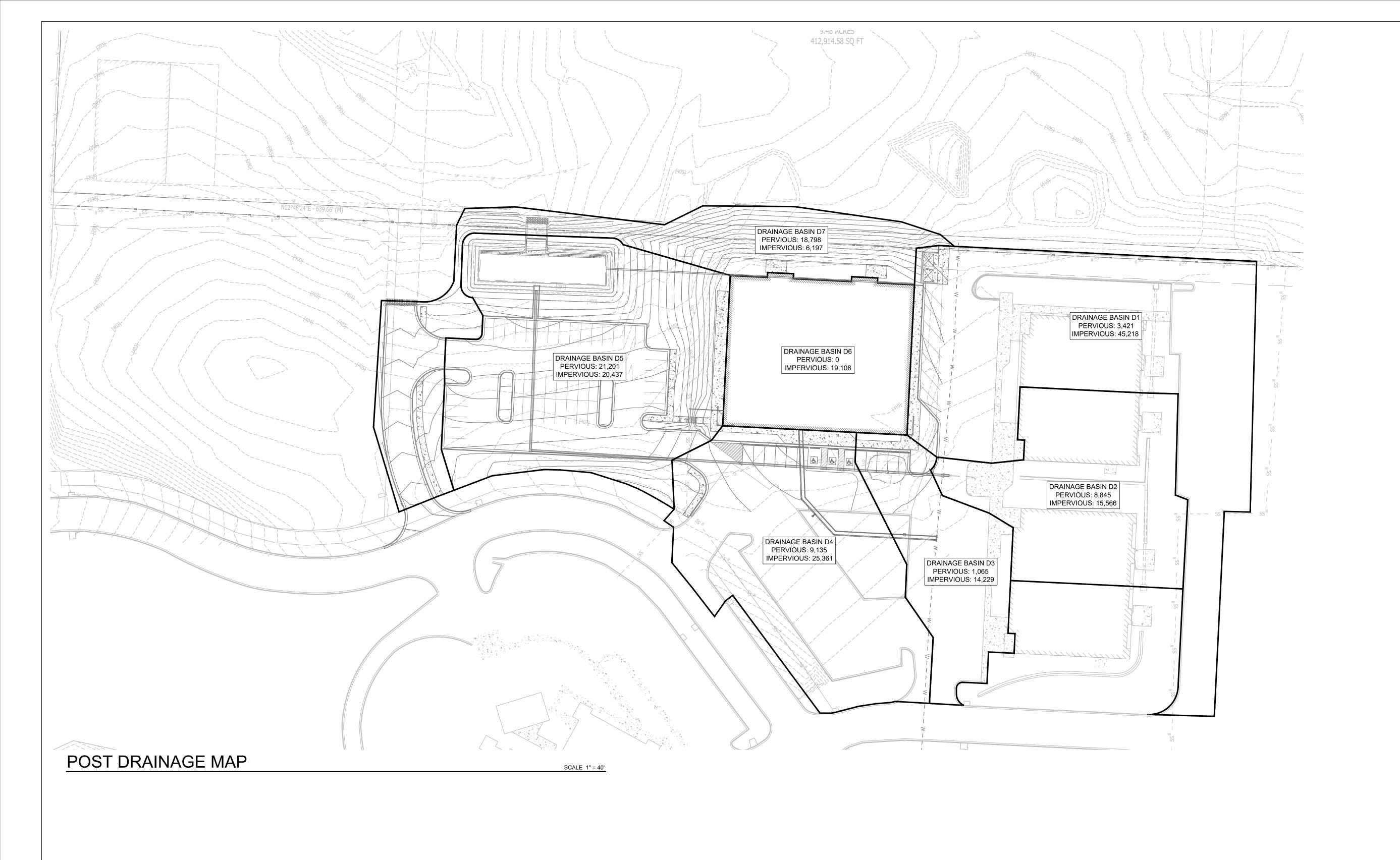


SHEET ISSUE DATE: 1/10/2024

PRE DRAINAGE

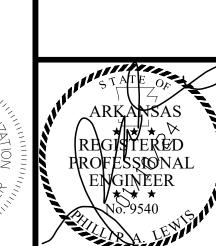
C1.5

0 40' 1" = 40'-0"



SUMMERWOOD SPORTS GYMNASIUM #3

PHILLIP LEWIS ENGINEERING,
Structural + Civil Consultants



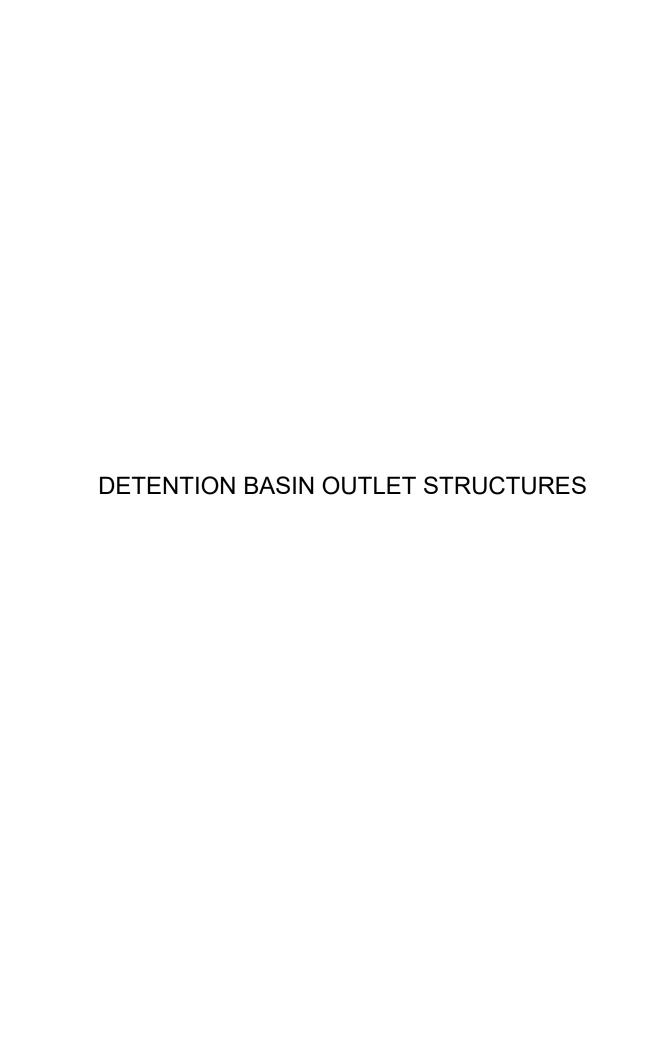
PRO JECT NI IMBER

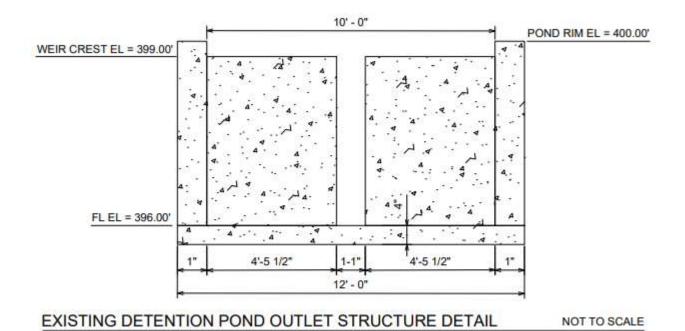
SHEET ISSUE DATE:

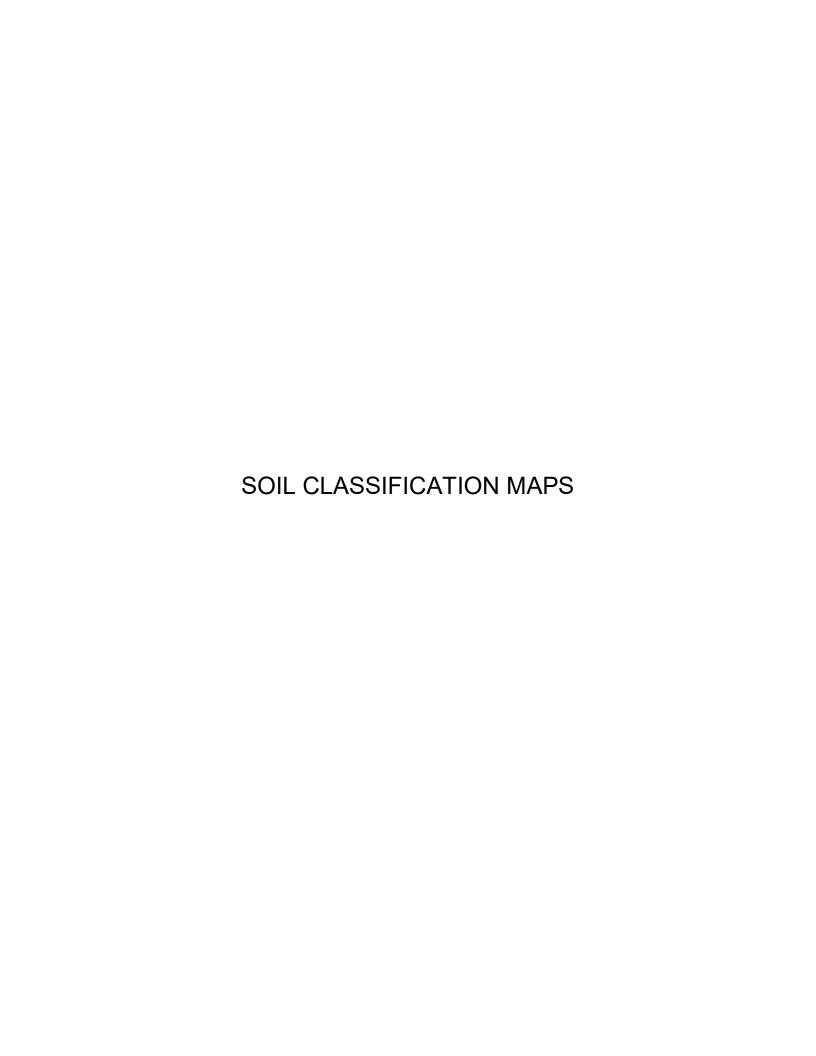
1/10/20 PAGE TITLE:

POST DRAINAGE

SHEET NUMBER:
C1.6









## Saline County, Arkansas

## 29—Tiak silt loam, 3 to 8 percent slopes

#### **Map Unit Setting**

National map unit symbol: m06q

Elevation: 70 to 570 feet

Mean annual precipitation: 44 to 61 inches
Mean annual air temperature: 49 to 74 degrees F

Frost-free period: 185 to 230 days

Farmland classification: Not prime farmland

#### **Map Unit Composition**

Tiak and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Tiak**

#### Setting

Landform: Interfluves
Down-slope shape: Convex
Across-slope shape: Linear

Parent material: Loamy and clayey marine deposits

## **Typical profile**

A - 0 to 7 inches: silt loam E - 7 to 9 inches: loam Bt1 - 9 to 32 inches: clay Bt2 - 32 to 72 inches: clay

#### Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to

moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 9.3 inches)

### Interpretive groups

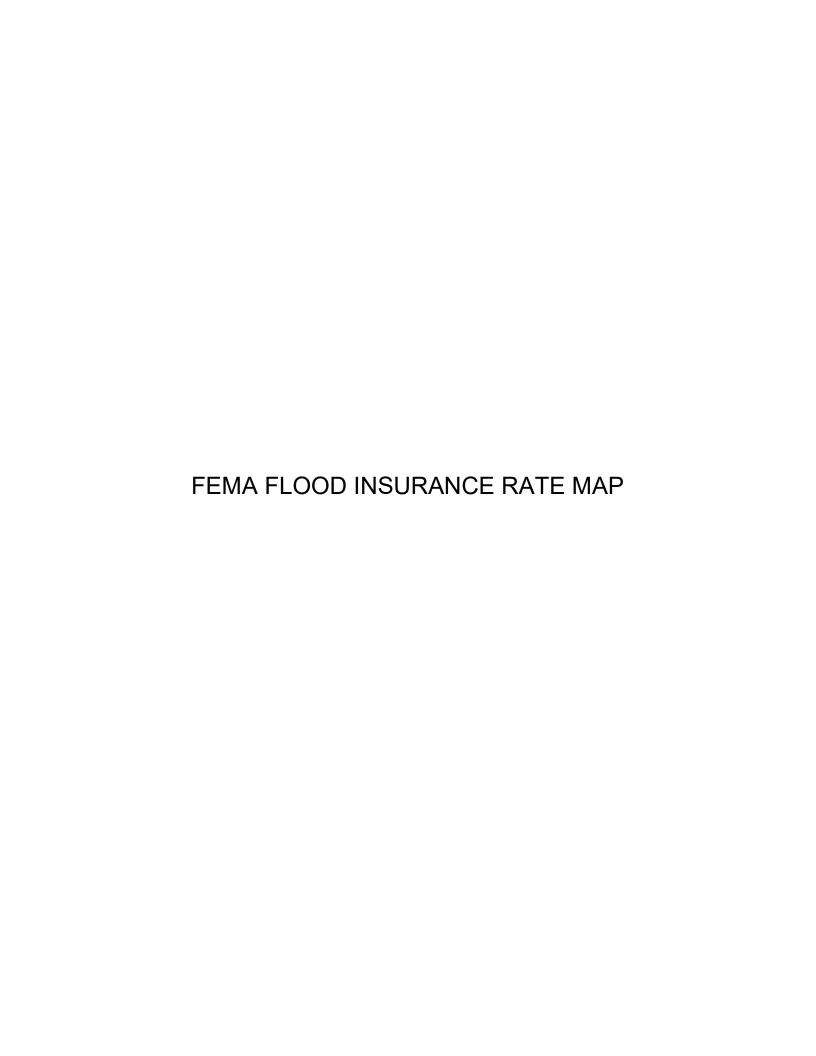
Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Ecological site: F133BY002TX - Seasonally Wet Upland

Hydric soil rating: No



# National Flood Hazard Layer FIRMette

250

500

1,000

1,500



Legend



1:6,000

2,000

regulatory purposes.

Basemap Imagery Source: USGS National Map 2023

reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or

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

unmapped and unmodernized areas cannot be used for

become superseded by new data over time.



# ELROD FIRM



PROPERTY BRAND/EXTENSION: The Elrod Firm PROPERTY LOCATION: 400 Reynolds Road Bryant, AR 72022 PROPERTY CODE: TBD

**DATE:** 11/09/2023

**SALES REP:** Dale Fisher

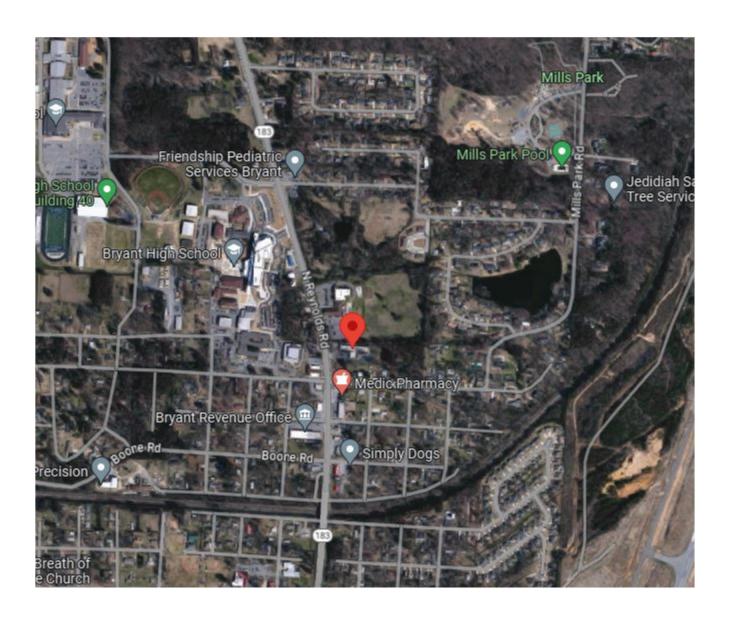
PREPARED BY:

Victoria Phan

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INITIALS: \_\_\_

# **LOCATION MAP**





PROPERTY BRAND/EXTENSION: The Elrod Firm

DATE:

11/09/2023

PROPERTY LOCATION: 400 Reynolds Road Bryant, AR 72022 PROPERTY CODE: TBD

ou i iiii

SALES REP: Dale Fisher PREPARED BY: Victoria Phan

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INITIALS: \_\_

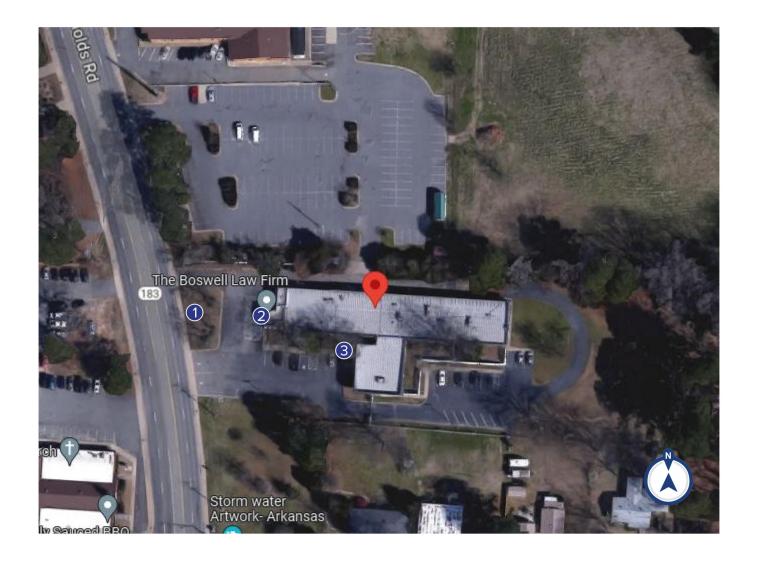
# SITE PLAN

#### **PROPOSED SIGNS:**

- MONUMENT
- 2 WALL CABINET
- OST AND PANEL

#### **EXISTING SIGNS:**

- 1 NO SIGN
- 2 WALL CABINET
- 3 NO SIGN





**PROPERTY BRAND/EXTENSION:** The Elrod Firm

PROPERTY LOCATION: 400 Reynolds Road Bryant, AR 72022

DDED4.DED DV

**DATE:** 11/09/2023

**SALES REP:** Dale Fisher

PREPARED BY:

Victoria Phan

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INITIALS: \_\_

TBD

PROPERTY CODE:

#### **EXISTING**



#### **PROPOSED**



RENDERINGS NOT TO SCALE



H10' x W8' custom monument

HEX #122940

TO BE DETERMINED



| ywyy y |   |
|--------|---|
| ACE    |   |
| SIGNS  |   |
| 111111 | ı |

PROPERTY BRAND/EXTENSION: The Elrod Firm

**PROPERTY LOCATION:** 400 Reynolds Road Bryant, AR 72022

DATE: 11/09/2023 **SALES REP:** Dale Fisher

PREPARED BY:

Kayla Haydar

INITIALS: \_

PROPERTY CODE:

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**EXISTING** 



**PROPOSED** 



RENDERINGS NOT TO SCALE

# THE ELROD BUILDING

H2'-11" x W11' non-lit cabinet H7 1/2" x W10' dimensional letters Retainer: 4"

**1** 

TO BE DETERMINED



METALLIC GOLD (TO BE DETERMINED)



PROPERTY BRAND/EXTENSION: The Elrod Firm

PROPERTY LOCATION: 400 Reynolds Road Bryant, AR 72022 PROPERTY CODE: TBD

**DATE:** 11/20/2023

SALES REP: Dale Fisher PREPARED BY:

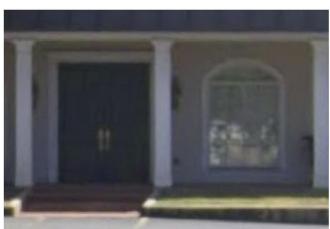
Victoria Phan

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INITIALS: \_\_\_

## **POST AND PANEL**

#### **EXISTING**



#### **PROPOSED**



RENDERINGS NOT TO SCALE



H1'-3" x W5' panel with applied graphics (2) H4' posts



BRONZE (TO BE DETERMINED)



| ACE   | (-) |
|-------|-----|
| SIGNS | 1   |

**PROPERTY BRAND/EXTENSION:** The Elrod Firm

PROPERTY LOCATION: 400 Reynolds Road Bryant, AR 72022

DATE: 11/20/2023 **SALES REP:** Dale Fisher

PREPARED BY:

Victoria Phan

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INITIALS: \_

PROPERTY CODE:

PROJECT INFO: sharks

RENDERING: channel letters

**AERO SIGNS** 

PROJECT MANAGER Mike V

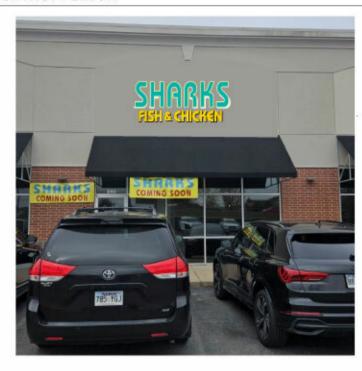
SITE ADDRESS 5309-5313 Highway 5 N bryant AR

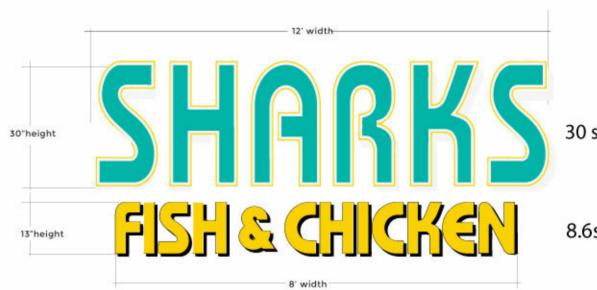
CONTACT PERSON

DESIGNER M, Vazquez

DATE: 12 / 14 / 2023

3308 pike ave N. Little Rock, AR 72118 501.246.4952





30 sq ft

8.6sq ft

#### SPECIFICATION & MATERIALS

ahannel letters led lit:

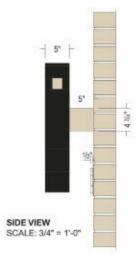
- Color Painted First Surface
- .040" Alum. Returns And
- .060" acyrlic Faces

#### **DETAIL DESCRIPTION**

38.6 SQ ft

- white L.E.D. Illumination
- 120v Mod-60 Power Supplies
- Aluinmuin Frame

#### Side view





#### SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form.

The Sign Ordinance is available at <a href="https://www.cityofbryant.com">www.cityofbryant.com</a> under the Planning and Community

Development tab.

| Date: 1/22/24   |   | Note: Electrical Permits may be<br>Required, Please contact the<br>Community Development Office<br>for more information. |
|---|---|--|
| Sign Co. or Sign Owner  | Property Owner  |  |
| Name JOE The SIGN 6 WY Address EXISTING SIGN 6 WY City, State, Zip Photo Affachod Phone 501 653-4444 Email Address NA   | Name Michell Address City, State, Zip Phone Sol 500 Email Address N | e Finney<br>Box 435<br>Jamt, ATR 72089<br>9-3282<br>A  |
| Seneral Information  Name of Business Sandy Name  Address/Location of sign 3411 Moun Security Coning Classification C   | s and Sp.   | Bryant, Al 7208  |
| Please use following page to provide details on the provided on this application, a Site Plan showing pla property is required to be submitted. Renderings of | cement of sign(s) and the sign(s) showing th                        | any existing sign(s) on the<br>le correct dimensions is also   |

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 | <b>Type</b><br>(Façade, Pole,<br>Monument, other) | <b>Dimensions</b><br>(Height, Length, Width) | Sqft<br>(Measured in<br>whole as<br>rectangle) | Height of Sign<br>(Measured from lot surface) |           | Column for<br>Admin<br>Certifying<br>Approval |
|------|---|--|--|---|-----------|---|
|      | £ !   | 1,6" × 6'8" + 12"×<br>+ 1'6" × 13'3"         | 20 FEE   | Top of Sign                                   | Bottom of | 5.0   |
|      | LXISTING  | + 6" X 13"3"                                 | 27.231   |   | Sign      |   |
| Α    | Facade  |  | g.   |   |           |   |
| В    |   |  |  |   |           |   |
| С    |   |  |  |   |           |   |
| · E  |   |  |  |   |           |   |
| F    |   |  |  |   |           |   |
| G    |   |  |  |   |           |   |

Photo OF Sign Attached, Reguesting Repairson to move From Suite 8 to Suite 4 on the Same Building.





### SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form.

The Sign Ordinance is available at <a href="https://www.cityofbryant.com">www.cityofbryant.com</a> under the Planning and Community

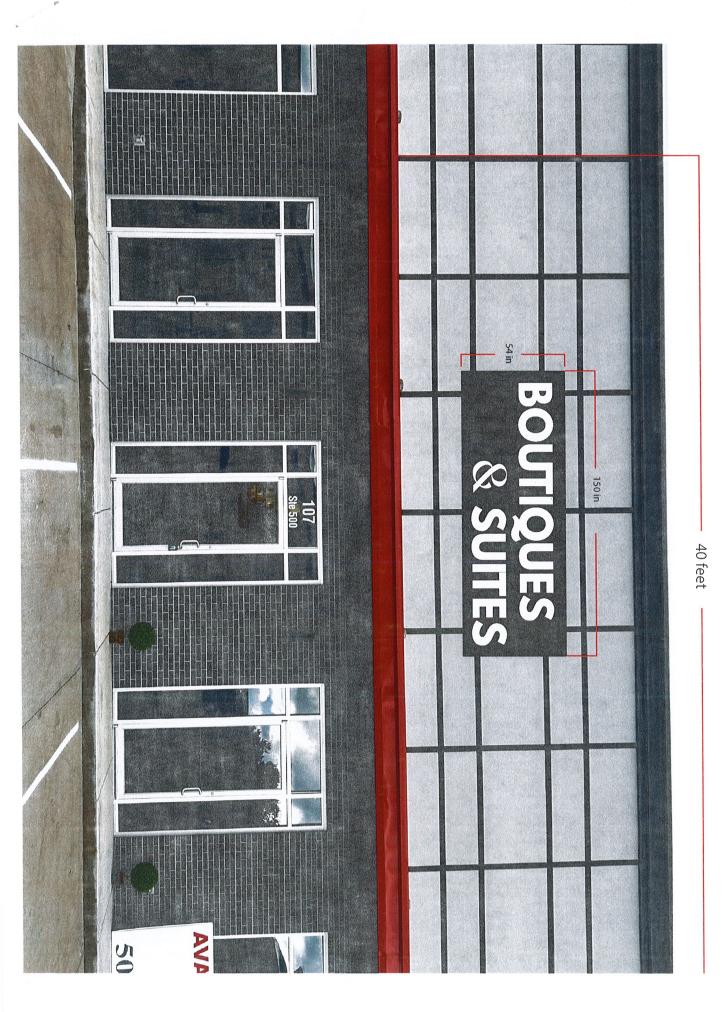
Development tab.

| Developin   | nent tap.   |
|---|---|
| Date: 1/24/2024   | Note: Electrical Permits may be "Required, Please contact the Community Development Office for more information.  |
| Sign Co. or Sign Owner  | Property Owner  |
| Name L. Graphics  | Name Bart Furguson  |
| Address 70/N. Rynolds Rd<br>City, State, Zip Bryand, MR 72022   | Address 107 progress wy Ste Soc<br>City, State, Zip Bryand, AR 72022  |
| City, State, Zip Bryand, MR 72022   | City, State, Zip Bryan, AC 7202 2   |
| Phone (501) 653-4444  | Phone (501) 840 - 2282  |
| Alternate Phone <u>50</u> (-773-0344)   | Alternate Phone   |
| GENERAL INFORMATION   |   |
| Name of Business BOUTIQUES  | > & SUITES  |
| Address/Location of sign 107 Progress v   | my ste sou  |
| Zoning Classification   |   |
| Please use following page to provide details on the provided on this application, a Site Plan showing please property is required to be submitted. Renderings of required to be submitted with the application. A the collected at the time of permit issuance. According special sign permit request shall be one hundred do required by Sign Administrator. | acement of sign(s) and any existing sign(s) on the if the sign(s) showing the correct dimensions is also nirty-five dollar (\$35) per sign payment will be to the Sign Ordinance a fee for and sign variance or |
| READ CAREFULLY BEFORE SIGNING   |   |
| and correct. I fully understand that the terms of the Sign Ordinar  |   |
| signs must fully comply with all terms of the Sign Ordinance rega<br>authorized by the owner of the property and that I am authorize  | irdless of approval. I further certify that the proposed sign is<br>ed 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<br>(Façade, Pole, | Dimensions<br>(Height, Length, Width)  | Sqft<br>(Measured in | Height of Sign<br>(Measured from lot surface) |                              | Column for<br>Admin    |
|------|------------------------|--|----------------------|---|------------------------------|------------------------|
|      | Monument, other)       |  | whole as rectangle)  |   | i digitali kana<br>Kananaran | Certifying<br>Approval |
|      |                        |  |                      | Top of  | Bottom of                    |                        |
|      |                        |  |                      | Sign  | Sign                         |                        |
| Α    | Channel letter         | 54" × 150"   | 56                   | 13  | 17.66"                       |                        |
| В    |                        |  |                      |   |                              |                        |
| С    |                        |  |                      |   |                              |                        |
| E    |                        | And the second s |                      |   |                              |                        |
| F    |                        |  |                      |   |                              |                        |
| G    |                        |  |                      |   |                              |                        |



## **GUERRA-OCHOA DELIA VANESSA**

2714 LAVERN DR BRYANT, AR 72022

| <u>Basic Land Sales Valuation</u> | <u>n Taxes Receipts Improvements Parcel Boundary</u> <b>♀</b>               |
|-----------------------------------|---|
| Basic Info                        |   |
| Parcel Number:                    | 840-07238-000   |
| County Name:                      | Saline County   |
| Property Address:                 | GUERRA-OCHOA DELIA VANESSA 2714 LAVERN DR BRYANT, AR 72022 Map This Address |
| Mailing Address:                  | GUERRA-OCHOA DELIA VANESSA<br>2714 LAVERN DR<br>BRYANT AR 72022             |
| Collector's Mailing Address 🕜:    | CORELOGIC *MTG* ATTN: REFUNDS DEPT - CL 3001 HACKBERRY RD IRVING, TX 75063  |
| Total Acres:                      | 0.00  |
| Timber Acres:                     | 0.00  |
| Sec-Twp-Rng:                      | 22-01S-14W  |
| Lot/Block:                        | 55,56/  |
| Subdivision:                      | PIKEWOOD I  |
| Legal Description:                | 2019-008836   |
| School District:                  | 253 BRYANT/BRYANT   |
| Homestead Parcel?:                | Yes   |
| Tax Status:                       | Taxable   |
| Over 65?:                         | No  |



### **Conditional Use Permit for Short Term Rental**

Vanessa <deliaguerrar@gmail.com>
To: Colton Leonard <cleonard@cityofbryant.com>

Fri, Dec 15, 2023 at 10:14 AM

Good morning!!

I would like to request a conditional use permit for the property on 2714 Lavern St, Bryant, AR 72022; this is my home, me and my son live here.

In order to support my family i decided to separate the living room from the rest of the house creating some type of "studio" that i would like to use as short term rental.

I appreciate your time on this matter.

Kind regards,

Delia Vanessa Guerra Ochoa [Quoted text hidden]



### 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 <a href="www.cityofbryant.com">www.cityofbryant.com</a> under the Planning and Community Development tab.

Date: 12/06/2023 Applicant or Designee: **Project Location:** Name Oela Vagessa Guera Caberoperty Address 2714 Lavern Address 2714 Lavern St, Bryant AR 72022 Brown + AR 72022 Property Owner (If different from Applicant): Name Delia Vanessa Gierra - Ocho a Address 27/4 Lavern, St, Bryant, AM, 72022 Email Address deliaquerrare mal-con. Additional Information: Legal Description (Attach description if necessary) Pikewood s.h. 2 1 Description of Conditional Use Request (Attach any necessary drawings or images) Short term rental Proposed/Current Use of Property Residential a Short term rental

### **Application Checklist**

### **Requirements for Submission**

| Letter stating request of Conditional Use and reasoning for request  |
|--|
| Completed Conditional Use Permit Application   |
| □ Submit Conditional Use Permit Application Fee (\$125)  |
| □ Submit Copy of completed Public Notice   |
| 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.  |
| <ul> <li>Submit eight (8) Copies of the Development Plan (Site Plan) showing:         <ul> <li>Location, size, and use of buildings/signs/land or improvements</li> <li>Location, size, and arrangement of driveways and parking. Ingress/Egress</li> <li>Existing topography and proposed grading</li> <li>Proposed and existing lighting</li> <li>Proposed landscaping and screening</li> <li>Use of adjacent properties</li> <li>Scale, North Arrow, Vicinity Map</li> </ul> </li> <li>Additional information that may be requested by the administrative official due to unique conditions of the site.</li> </ul> |
| 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, <u>January 8th, 2024</u> at 6:00 P.M.                  |
|---|
| at the Bryant City Office Complex, 210 Southwest 3 <sup>rd</sup> Street, City of Bryant, Saline |
| County, for the purpose of public comment on a conditional use request at the site of           |
| 2714 Lavern St, Bryant, AR 72022 (address).   |
| A legal description of this property can be obtained by contacting the Bryant Department        |
| of Community Development.   |
|   |
| Rick Johnson<br>Chairman Board of Zoning Adjustment   |

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.

City of Bryant

### AFFP NOTICE OF PUBLIC HEARING A pub

### **Affidavit of Publication**

STATE OF ARKANSAS }
COUNTY OF SALINE }

SS

, being duly sworn, says:

That she is Lisa McElrath of the The Saline Courier, a daily newspaper of general circulation, printed and published in Benton, Saline County, Arkansas; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

January 18, 2024

That said newspaper was regularly issued and circulated on those dates.

SIGNED<sub>2</sub>

Usa McFlrath

Subscribed to and sworn to me this 18th day of January 2024.

Rhonda Overbey, Notary, Saline County, Arkansas

My commission expires: January 29, 2033

01121617 00169754

Maunish Shah (28) 12 Longwell Loop Little Rock, AR 72211 RHÓNDA OVERBEY Notary Public - Arkansas Saline County Commission # 12721758 My Commission Expires Jan 29, 2033

NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, February 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 2903 Pikewood Drive, Tract 31A & 31B, Bryant, AR 72211. A legal description of this property can be obtained by contacting the Bryant Department of Community Development.

Rick Johnson Chairman Board of Zoning Adjustment City of Bryant

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left in the year,
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Danny Kaye was born David Daniel Kaminsky

in New York City. In 1943, during World War II, Jewish insurgents in the Warsaw Ghetto launched their initial armed resistance

against Nazi troops, who eventually succeeded in crushing the rebellion. In 1975, the situ-In 1975, the situ-ation comedy "The Jeffersons," a spin-off from "All in the Family,' premiered on CBSTV. In 1990, a jury in Los Angeles acquitted for

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# JOURIER CLASSIFIEDS

PLACE AN AD

To get your ad in the Courier, rall \$01-315-8228 Monday through Friday 8 a.m. -- 5 p.m. come by the office at 321 N. Market St. in Benton or mail to: PO Box 207, Benton, AR 72018. YVo acceptVisa, MasterCard, Discover, and American Express.

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4 lines - 3 days - \$18.68\* 4 lines - 7 days - \$29.28\* 4 lines - 14 days - \$45.44\* COSTS | Extre lines ovallable

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) SALES

4 lines – 2 days – \$15,64\* 4 lines - 3 days - \$18.48\* Extro lines ovailable

\*Price doesn't include charge for graphic, TMC gate, or internet. Price is subject to charge.

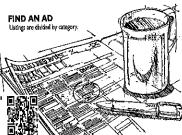


Tuesday Mon Noon Wednesda Wed Noon Thurs. Noor Friday Thurs Noor Frl. 10 a.m. Sunday

You can place your ad on our website.... bentoncourier.com ust go to website and lovy the steps.

> Fmail us at: class@bentoncourier.com

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Rent, Check them out
daily. Call to subscribe at 315-8228.

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section in today's classifieds, You will find unconditional love there FREE! Fury & Free!!

Ready to graduate from particle board? 1000's of Courier Classifieds will read your ad daily. Call place your ad today!

Time to get your own place? Check out the place? Check out the Rental Section in today's Classifieds...

#### Auction

#### Auction

NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, February 12th, 2024 at 6:00

P.M. at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Solito County, for the purpose of public comment on a conditional uso request at the site of 2003 Pikewood Drive, Tract 31A & Street, ARI Paryant, AR 27211. A legal description of this property can be obtained by contacting the Bryant Department of Community Development.

Rick Johnson Chairasan Board of Zoning Adjustment City of Bryant

Auction

Auc

479-518-3737 Looking for a good deal? Search the Courier Classifieds! 179-970-4567 AR LIC

SEEK AND YOU SHALL FIND
Great deals in the Courter Classifieds. Yard Sales, Jobs, Homes for Sele or Rent. Check them out daily. Call to subsenibe at 315-8228.

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Course completed /Se . In one day. All work provided. Tim Bragg, Instnuc #95-055 501-776-7419

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Today 501-315-8228 to place your business or service ad Call



### 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 <a href="https://www.cityofbryant.com">www.cityofbryant.com</a> under the Planning and Community Development tab.

| Date: 1/8/2024  |
|---|
| Applicant or Designee: Project Location:  |
| Applicant or Designee: Properties LC Project Location:  Name VEER Investment Property Address 2903 Pikewood Dr. Lot 31A   |
| Name VEER Investment Property Address 2903 Pikewood Dr. Lot 31A<br>Address 12 Longwell Loop, LR, AR72211 Bryant, AR 72022 |
| Phone Parcel Number   |
| Email Address: Veey Suite @ gmail. Con Zoning Classification R-M  |
| Property Owner (If different from Applicant):   |
| Name  |
| Phone   |
| Address   |
| Email Address   |
| Additional Information:   |
| Legal Description (Attach description if necessary)   |
| Pikewood Subdivision Lots 31+32   |
| <u> </u>  |
| Description of Conditional Use Request (Attach any necessary drawings or images)  |
| Proposed/Current Use of Property Duplexes, Current Use Single Family Home   |

### **Application Checklist**

#### **Requirements for Submission**

|                       | Letter stating request of Conditional Use and reasoning for request  Completed Conditional Use Permit Application  |
|-----------------------|--|
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|--|--------------|
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| County, for the purpose of public comment on a conditional use request at the              | e site of    |
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| of Community Development.  |              |
|  |              |
|  |              |

-Rick Johnson -Chairman Board of Zoning Adjustment City of Bryant

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SIGNED<sub>2</sub>

Usa McFlrath

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Rhonda Overbey, Notary, Saline County, Arkansas

My commission expires: January 29, 2033

01121617 00169754

Maunish Shah (28) 12 Longwell Loop Little Rock, AR 72211 RHÓNDA OVERBEY Notary Public - Arkansas Saline County Commission # 12721758 My Commission Expires Jan 29, 2033

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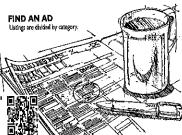


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> Fmail us at: class@bentoncourier.com

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NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, February 12th, 2024 at 6:00

P.M. at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Solito County, for the purpose of public comment on a conditional uso request at the site of 2003 Pikewood Drive, Tract 31A & Street, ARI Paryant, AR 27211. A legal description of this property can be obtained by contacting the Bryant Department of Community Development.

Rick Johnson Chairasan Board of Zoning Adjustment City of Bryant

Time to get your own place? Check out the place? Check out the Rental Section in today's Classifieds...

#### Auction

#### Auction

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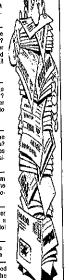
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### Conditional Use Permit Application

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 <a href="https://www.cityofbryant.com">www.cityofbryant.com</a> under the Planning and Community Development tab.

| Date: 1/8/2024   |
|--|
| Applicant or Designee: Project Location:   |
| Name VEER investment Properties Property Address 2903 Pikewood, Lot 31B          |
| Address 12 Longwell Loop, LRAR72211 Bryant, AR 72022                             |
| Phone 5017669090 Parcel Number   |
| Email Address: Veeysuite Ognail an Zoning Classification R-M                     |
| Property Owner (If different from Applicant):                                    |
| Name   |
| Phone  |
| Address  |
| Email Address  |
| Additional Information:  |
| Legal Description (Attach description if necessary)                              |
| tikewood Subdivision Lots 31+32  |
|  |
| Description of Conditional Use Request (Attach any necessary drawings or images) |
| Proposed/Current Use of Property Duplexes, Current use Single Family Home        |

### **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 at least one (1) time fifteen (15) days prior to the public hearing at which the variance will be heard. 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

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email publication to colum 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.

Additional information that may be requested by the administrative official due

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

Use of adjacent properties Scale, North Arrow, Vicinity Map

to unique conditions of the site.

| Ĭ_  | do hereby certify that all information contained within this application is   |
|-----|---|
| tri | ue and correct. I further certify that the owner of the property authorizes this proposed application. I understand that I must |
| СО  | imply 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, February 12th, 2024 at                                 | 6:00 P.M.   |  |  |  |  |  |  |
|---|-------------|--|--|--|--|--|--|
| at the Bryant City Office Complex, 210 Southwest 3 <sup>rd</sup> Street, City of Bryant, Saline |             |  |  |  |  |  |  |
| County, for the purpose of public comment on a conditional use request at the site of           |             |  |  |  |  |  |  |
| 2903 Pikewood Dr. Lot 31A+ Lot 31B  | _(address). |  |  |  |  |  |  |
| A legal description of this property can be obtained by contacting the Bryant Department        |             |  |  |  |  |  |  |
| of Community Development.   |             |  |  |  |  |  |  |
|   |             |  |  |  |  |  |  |

-Rick Johnson-Chairman Board of Zoning AdjustmentCity 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.

