

Agenda -Notice of Meeting

Polk City | City Council

March 25, 2024 | 6:00 pm

City Hall Council Chambers

Public Meeting participation in person or via phone

Call in # 515-726-3598 Participant Code 535355

Public members can also provide comments* directly to support@polkcityia.gov

**any comments received before the time of the meeting will be made a part of the public hearing*

Broadcast live and playback will be available at <https://www.youtube.com/c/polkcityiagovchannel>

Steve Karsjen | Mayor

Jeff Walters | Pro Tem

City Council Members: Rob Sarchet | Jeff Savage | Mandy Vogel | Nick Otis

1. Call to Order

2. Roll Call

3. Approval of Agenda

4. Public Comments:

This is the time and place for comments for any item other than those that are a Public Hearing. If you wish to speak, please contact the City Clerk by 6pm on the date of the meeting by email at jcoffin@polkcityia.gov include your name and address for the record. The Mayor will recognize you for five minutes of comment.

5. Consent Items

- a. City Council Meeting Minutes for March 11, 2024
- b. City Council Budget Work Session Meeting Minutes for March 11, 2024
- c. Claims listing March 25, 2024
- d. Receive and file Go Polk City quarterly report
- e. Resolution 2024-33 approving Pay App No. 9 in the amount of \$555,774.17 for the City Hall/Community Room Project
- f. Resolution 2024-34 setting Public Hearing for the adoption of the FY 24/25 Budget
- g. Twelve Month Class C Retail Alcohol License effective May 28, 2024 for Papa's Pizzeria
- h. Temporary closure of W. Broadway Street between Jester Park Drive and Parker Boulevard on April 6th between 6am and 3pm for Live Fire Department Training Burn at 1600 W. Broadway Street
- i. Resolution 2024-35 approving a Development Agreement with BCR, LLC for certain public improvements in accordance with the development of Big Creek Ridge
- j. Resolution 2024-36 approving Big Creek Ridge Plat 1 Construction Drawings
- k. Receive and file Planning & Zoning Commission Meeting Minutes for March 18, 2024
- l. Receive and file Board of Adjustment Meeting Minutes for March 21, 2024

6. Business Items

- a. Resolution 2024-37 approving Plat of Survey for Parcel 2023-180
- b. Third Reading of Ordinance 2024-100 approving rezoning 516 N 3RD Street from GF-1 to R-1

- c. Third Reading of Ordinance 2024-200 approving rezoning portions of five (5) lots along Hillcrest Drive (405, 409, 413, 417, and 421) and one (1) lot at 1201 W Washington from GF-1 to R-1
- d. Third Reading of Ordinance 2024-300 approving rezoning 106 S. 3rd Street from C-1 to CTS
- e. Third Reading of Ordinance 2024-400 approving rezoning City Parking Lot from C-1 to GF-1
- f. Third Reading of Ordinance 2024-500 approving rezoning 1500 and 1600 W. Broadway from C-2 to GF-1

7. **Mayor Proclamation** | National Library Week April 7-13, 2024

8. **Reports & Particulars** | Mayor, Council, City Manager, Staff, Boards, and/or Commissions

9. **Adjournment** -- *next meeting date April 8, 2024*

MEETING MINUTES
The City of Polk City
City Council Meeting
6:00 p.m. March 11, 2024
City Hall – Council Chambers

The Polk City, City Council held a meeting in the City Hall Council Chambers at 6:00 p.m., March 11, 2024. The agenda was posted at the City Hall office as required by law.

These tentative minutes reflect all action taken at the meeting.

1. **Call to Order** | Mayor Karsjen called the meeting to order at 6:00 p.m.
2. **Roll Call** | Sarchet, Savage, Walters, Otis | In attendance
Vogel | Absent
3. **MOTION:** A motion was made by Walters and seconded by Savage to approve the agenda
MOTION CARRIED UNANIMOUSLY
4. **Public Comments:**
Written comments regarding the brush pile were received and filed from Brian Speicher, 300 Crestmoor

The following residents addressed Mayor and Council regarding the brush pile
Michael Tapper, 609 Davis Street
Ken Morse, 1308 Westside Drive
Dean Drevlow, 304 Juliana Ct

5. **Consent Items**
 - a. City Council Meeting Minutes for February 26, 2024
 - b. City Council Work Session Meeting Minutes for February 26, 2024
 - c. Claims listing March 11, 2024
 - d. February 2024 Finance Report
 - e. Receive and File January 2024 Police Department Report
 - f. Twelve-month Class B Retail Alcohol License including Sunday Sales Privileges for Kwik Star #1089 effective October 11, 2024
 - g. Receive and file February 2024 Water Department Report
 - h. Receive and file February 2024 Library Director Report
 - i. Receive and file March 4, 2024 Library Board Meeting Minutes
 - j. Acknowledge Library Resolution 2024-06L hiring Library Page, Vinson Spittler at \$13 per hour
 - k. Resolution 2024-24 to provide for a notice of hearing on proposed plans, specifications, forms of contract and estimate of cost for the Elevated Storage Tank - Water Main Extension Project, and the taking of bids therefor
 - l. Resolution 2024-32 to provide for a notice of hearing on proposed plans, specifications, forms of contract and estimate of cost for the Elevated Storage Tank – New 1.5 MG Tank Project, and the taking of bids therefor
 - m. Receive and file February 2024 Parks & Recreation Report
 - n. Receive and file February 2024 Fire Department Report
 - o. Resolution 2024-25 approving SAFER Grant Application
 - p. Resolution 2024-26 approving a Development Agreement with North Polk Estates, LLC for certain public improvements in accordance with the development of Monarch Crossing
 - q. Resolution 2024-27 approving off-site Easements for Monarch Crossing Plat 1
 - r. Resolution 2024-30 approving Monarch Crossing Plat 1 Construction Drawings
 - s. Receive and file February 2024 Police Department Report
 - t. Resolution 2024-31 reapproving Creekview Estates Plat 3

MOTION: A motion was made by Otis and seconded by Savage to approve the consent agenda items.

MOTION CARRIED UNANIMOUSLY

6. **Business Items**
 - a. **Parker Townhomes II**
 - i. **MOTION:** A motion was made by Savage and seconded by Walters to approve Resolution 2024-28 approving Transfer of Property to 3100 LLC

MOTION CARRIED UNANIMOUSLY

- ii. ***MOTION:*** A motion was made by Savage and seconded by Otis to approve Resolution 2024-29 approving Parker Townhomes II Plat of Survey and Record of Lot Tie Agreement
MOTION CARRIED UNANIMOUSLY

- b. ***MOTION:*** A motion was made by Walters and seconded by Savage to adjust the Brush Pile hours effective April 1, 2024 through October 31st to only Friday 7:30am- 3:00pm (except holidays) and the First Saturday of the month 8:00am to 12noon (except holidays) A valid driver's license ID showing proof of a City of Polk City residential address will be required at the check-in station. Monthly reports will be given to Mayor and Council on how the new hours are working, with a final report due after October 31st.

YES: Savage, Walters, Otis

NO: Sarchet

MOTION CARRIED

- c. ***MOTION:*** A motion was made by Walters and seconded by Otis to approve the Downtown Revitalization Incentive Support Program

MOTION CARRIED UNANIMOUSLY

- d. ***MOTION:*** A motion was made by Sarchet and seconded by Savage to approve the Second Reading of Ordinance 2024-100 approving rezoning 516 N 3RD Street from GF-1 to R-1

MOTION CARRIED UNANIMOUSLY

- e. ***MOTION:*** A motion was made by Savage and seconded by Otis to approve the Second Reading of Ordinance 2024-200 approving rezoning portions of five (5) lots along Hillcrest Drive (405, 409, 413, 417, and 421) and one (1) lot at 1201 W Washington from GF-1 to R-1

MOTION CARRIED UNANIMOUSLY

- f. ***MOTION:*** A motion was made by Walters and seconded by Sarchet to approve the Second Reading of Ordinance 2024-300 approving rezoning 106 S. 3rd Street from C-1 to CTS

MOTION CARRIED UNANIMOUSLY

- g. ***MOTION:*** A motion was made by Otis and seconded by Savage to approve the Second Reading of Ordinance 2024-400 approving rezoning City Parking Lot from C-1 to GF-1

MOTION CARRIED UNANIMOUSLY

- h. ***MOTION:*** A motion was made by Walters and seconded by Sarchet to approve Second Reading of Ordinance 2024-500 approving rezoning 1500 and 1600 W. Broadway from C-2 to GF-1

MOTION CARRIED UNANIMOUSLY

- i. ***MOTION:*** A motion was made by Savage and seconded by Otis to approve the Snyder & Associates January 2024 Engineering Services Invoice in the amount of \$43,987

YES: Otis, Sarchet, Savage

ABSTAIN: Walters

MOTION CARRIED

7. Reports & Particulars:

- Council Member Sarchet asked Mayor and Council if they would be willing to review the Sign Ordinance regarding temporary signs for nonprofit organizations such as churches and the legion at a future work session. Council was in agreement to review.

8. ***MOTION:*** A motion was made by Walters and Seconded by Otis to go into Closed Session under Code of Iowa; Chapter 21 Official Meetings open to Public; section 5 Closed Session; sub paragraph 1.j To discuss the purchase or sale of particular real estate only where premature disclosure could be reasonably expected to increase the price the governmental body would have to pay for that property or reduce the price the governmental body would receive for that property. The minutes and the audio recording of a session closed under this paragraph shall be available for public examination when the transaction discussed is completed

MOTION CARRIED UNANIMOUSLY

After closed session ended at 7:23 pm

9. No action was taken on closed session item

10. Adjournment

MOTION: A motion was made by Walters and seconded by Otis to adjourn at 7:24 pm.

MOTION CARRIED UNANIMOUSLY

Next Meeting Date – March 11, 2024

Steve Karsjen, Mayor

Attest

Jenny Coffin, City Clerk

MEETING MINUTES
The City of Polk City
Work Session
5:00 p.m., Monday, March 11, 2024
City Hall Council Chambers

A Council Work Session was held on March 11, 2024, at 5:00 p.m. at the City Hall Council Chambers in Polk City, Iowa.

<p><u>Mayor and City Council Members Present:</u> Steve Karsjen Mayor Jeff Walters Pro Tem Rob Sarchet City Council Member Jeff Savage City Council Member Nick Otis City Council Member</p> <p><u>Mayor and City Council Members Absent:</u> Mandy Vogel City Council Member</p>	<p><u>Staff Members Present:</u> Chelsea Huisman City Manager Jenny Coffin City Clerk/Treasurer Mike Schulte Public Works Director Jeremy Siepker Police Chief Jason Thraen Parks & Recreation Director Cody Olson Building Official Jamie Noack Library Director Karla Hogrefe Fire Chief Meri Merritt Deputy City Clerk</p>
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Minutes

City Manager Huisman provided an update on the proposed FY 24/25 Budget. She reviewed valuations increase, explained using more TIF money to buy down Debt Service for trail projects and she reported the average tax levy rate in the Metro is \$12.27 per \$1000 assessed. The council discussed reviewing the percentage Polk City collects on franchise fees and asked staff to provide a metro comparison. Huisman reviewed the next steps in the budget process that will take place on March 25th. The Property Tax Levy Hearing will be held at 5pm, and at 6pm the Council will order notice of Budget Adoption Hearing, which will be held on April 22nd.

Huisman reported she’s been working on the future Capital Improvement Plan and is showing around 40 projects that the Council will need to review and rank at a future meeting. Huisman asked for guidance on what the Council would like to see done with the old City Hall building. Huisman provided a history summary of the property dating back to 1863. She also reviewed the Downtown Assessment report that showed some options for the space to be repurposed if the north lean-to and the south chamber areas were removed and the original structure renovated. Mayor and Council discussed various ideas and directed staff to obtain quotes on removing both the north and the south portions of the buildings, and then bringing that information back for an engaging session on what the space needs to be for the community as a whole.

Motion was made by Walters and seconded by Otis to Adjourn at 5:43 p.m.

Motion carried Unanimously.

Steve Karsjen, Mayor

Attest

Jenny Coffin, City Clerk

CITY OF POLK CITY		3/25/2024
72 DEGREEFS	FURNACE REPAIR	\$ 622.74
ACE HARDWARE OF ANKENY	KEYS	\$ 11.98
Amazon	CODE BOOKS	\$ 559.44
ARDICK EQUIPMENT CO.	SIGNS	\$ 433.60
ASSOC FOR RURAL/SMALL LIBRARY	ANNUAL DUES	\$ 75.00
BAKER & TAYLOR	LIBRARY BOOKS	\$ 679.03
Bobcat Company	BOLD ON BUCKET EDGE	\$ 432.78
Bound Tree Medical	MEDICAL SUPPLIES	\$ 2,172.46
CATCH DES MOINES	OCT-DEC 2023 HM TAX	\$ 1,629.74
CENTURY LINK	PHONE SERVICE	\$ 286.68
CITY OF DES MOINES	MONTHLY CIP	\$ 33,873.30
CITY OF POLK CITY	UB ASSIST 1291001	\$ 967.62
COPY SYSTEMS INC.	COPIER	\$ 52.46
CORE AND MAIN	LAB SUPPLIES	\$ 689.87
RLC ENTERPRISES	PEST MANAGEMENT	\$ 200.00
Deweve Ford	VEHICLE REPAIRS & MAINTENANCE	\$ 350.00
Electrical Eng & Equipment Co	ELECTRICAL SUPPLIES	\$ 583.92
FAREWAY	SUPPLIES	\$ 59.21
GALL'S INC.	STOVER CLASS A CAP	\$ 77.98
Gurnsey Electric Co	WARNING SIREN	\$ 7,107.81
GWORKS	HR HUB	\$ 4,290.00
INSPIRON LOGISTICS	WENS MESSAGING	\$ 2,585.00
JENNY COFFIN	GCMOA MEETING	\$ 36.09
KIMBALL MIDWEST	MISC	\$ 570.32
LOCALIO REGISTER MEDIA	PUBLICATIONS	\$ 187.25
MIDAMERICAN ENERGY	ELECTRIC CHARGES	\$ 10,422.74
MIDLAND POWER CO-OP	STREET LIGHTING	\$ 1,083.83
NELSON AUTOMOTIVE	REPAIR PARTS	\$ 1,594.19
P & M APPAREL	WATER PLANT TOUR	\$ 443.00
PRITCHETT EXTERIOR SOLU	WINDOW CLEANING	\$ 380.00
PUBLIC SAFETY CONSULTANTS LLC	GRANT WRITER FEE	\$ 1,300.00
RANGEMASTERS TRAINING CENTER	STOVER UNIFORMS	\$ 318.17
REHAB SYSTEMS INC	MANHOLE REPAIR	\$ 2,950.00
RHONDA GEORGE	PROGRAMMING	\$ 96.30
SECRETARY OF STATE	NOTARY	\$ 30.00
STEVE KARSJEN	LOCAL LEADERS DAY	\$ 40.87
STEVE WINTER	WINTER NREMT	\$ 25.00
VERIZON WIRELESS	PHONE AND DATA PLAN	\$ 369.70
WASHER SYSTEMS	TRASH PUMPS	\$ 66.00
Accounts Payable Total		\$ 77,654.08
GENERAL		\$ 31,288.81
ROAD USE		\$ 3,283.49
I.M.I		\$ 967.62
WATER		\$ 3,590.57
SEWER		\$ 38,523.59
TOTAL FUNDS		\$ 77,654.08



Go Polk City Q1 Update to City Council

Dear Council Members,

As we enter the second quarter of the year, Go Polk City Chamber and Economic Development is pleased to present an update on our progress and initiatives since January. Our commitment to enhancing the business environment in Polk City, fostering member engagement, and contributing to the economic vitality of our community has driven our efforts.

Q1 Key Achievements

Implementation of Customer Relationship Management (CRM) System

In January, we purchased and are implementing a CRM system to streamline operations and enhance interactions with chamber members as well as the community. This tool allows us to:

- Improve member management and engagement through more personalized communication.
- Efficiently track member needs, feedback, and participation in chamber events.
- Enhance our reporting capabilities, allowing for more data-driven decision-making.
- Allows members to promote events and specials to the community and other visitors through Go Polk City's website & social media.

Organizational Improvements

In January, we opened an opportunity to expand our board of directors and fill two new seats. We received five applications and, after a careful review, selected Susie Sheldahl, Realtor Realty One Group Impact, and Sarah Bacehowski, Public Relations & Marketing Director at On With Life. We also updated our bylaws and changed our Officer term limits so that our board can rotate and allow for change while still maintaining structure and stability.

In-Person Meetings

Understanding the importance of personal connections in business, we continued our monthly luncheons and added a Business After Hours. Some of you have attended these events, and we appreciate it! These meetings have:

- Strengthened our relationships with existing members, providing them with direct support and a better understanding of their needs.
- Helped attract new members by showcasing the tangible benefits of chamber membership.
- Fostered a community of collaboration and mutual support among businesses in Polk City.



Website Update

Recognizing the importance of digital presence, we have updated our website. This update is ongoing.

Event Planning

The 2024 City-Wide Garage Sale, Farmers Market, and Four Seasons Festival are being planned. We are looking forward to offering fantastic events that will draw people to our community.

As we build on our achievements, we remain focused on delivering value to our members and contributing to the economic prosperity of Polk City. Our plans for the coming months include:

- Further enhancing our CRM capabilities to serve our members better.
- Expanding our in-person events to provide more networking and learning opportunities.
- Continuing to drive business and visibility to Polk City through innovative marketing and partnership initiatives.
- Engaging with local government and stakeholders to address key business challenges and opportunities in our community.

I am grateful for the City Council's support and look forward to our continued partnership in making Polk City a thriving place for business and community. I welcome any questions or suggestions you may have and are eager to discuss plans and how we can work together.

Warm regards,

Staci Allen
Executive Director
Go Polk City Chamber & Economic Development

RESOLUTION NO 2024-33

A RESOLUTION APPROVING THE APPLICATION FOR PARTIAL PAYMENT NO. 9 FOR THE CITY HALL/COMMUNITY ROOM PROJECT

WHEREAS, the City of Polk City, City Council, approved Resolution 2023-22 ordering construction for the City Hall/Community Room Project on February 13, 2023; and

WHEREAS, the City Council approved Resolution 2023-37 on March 27, 2023, awarding the construction contract to Henkel Construction Company; and

WHEREAS, on March 27, 2023, the City Council approved Resolution 2023-38 approving the contract in the amount of \$5,740,000 with alternate #2 bid totaling \$4,500 and alternate # 5 totaling \$8,000 for a total contract of \$5,752,500; and

WHEREAS, on June 26, 2023, the City Council approved Resolution 2023-87 approving Pay Application No. 1 in the amount of \$142,783.33; and

WHEREAS, on July 24, 2023 the City Council approved Resolution 2023-94 approving Pay Application No. 2 in the amount of \$43,819.41; and

WHEREAS, on August 14, 2023 the City Council approved Resolution 2023-96 approving Pay Application No. 3 in the amount of \$189,145.00; and

WHEREAS, on August 14, 2023 the City Council approved Resolution 2023-97 approving Change Order No. 1 in the reduced amount of ~~-\$21,489.82~~; and

WHEREAS, on October 9, 2023 the City Council approved Resolution 2023-120 approving Pay Application No. 4 in the amount of \$302,890.95; and

WHEREAS, on November 13, 2023 the City Council approved Resolution 2023-133 approving Pay Application No. 5 in the amount of \$400,225.73; and

WHEREAS, on December 11, 2023 the City Council approved Resolution 2023-153 approving Change Order No. 2 in the amount of \$5,837.49; and

WHEREAS, on December 11, 2023 the City Council approved Resolution 2023-154 approving Pay Application No. 6 in the amount of \$400,225.73; and

WHEREAS, on January 22, 2024 the City Council approved Resolution 2024-06 approving Pay Application No. 7 in the amount of \$280,497.66; and

WHEREAS, on February 26, 2024 the City Council approved Resolution 2024-22 approving Pay Application No. 8 in the amount of \$280,738.30; and

WHEREAS, Henkel Construction Company and the City Architect, FEH Design have submitted the Application for Partial Payment No. 9 giving a detailed estimate of work completed with an application for payment in the amount of \$555,774.17.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa hereby approves the Application for Partial Payment No. 9 for the City Hall/Community Room Project, and the City Clerk/Treasurer is hereby authorized to issue a check to Henkel Construction Company in the amount of \$555,774.17.

PASSED AND APPROVED the 25 day of March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

TO OWNER/CLIENT:

City of Polk City
200 S 4th St.
Polk City, Iowa 50226

PROJECT:

Polk City New City Hall
200 S 4th St.
Polk City, Iowa 50226

APPLICATION NO: 9

INVOICE NO: 2321A.09

PERIOD: 02/01/24 - 02/29/24

PROJECT NO: 2321A

FROM CONTRACTOR:

Henkel Construction Company
208 East State St
Mason City, Iowa 50401

VIA ARCHITECT/ENGINEER:

Cory Sharp (FEH Design)
604 E. Grand Ave.
Des Moines, Iowa 50309

CONTRACT DATE:

CONTRACT FOR: Polk City New City Hall

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet is attached.

1.	Original Contract Sum	\$5,752,500.00
2.	Net change by change orders	\$(15,652.33)
3.	Contract Sum to date (Line 1 ± 2)	\$5,736,847.67
4.	Total completed and stored to date (Column G on detail sheet)	\$2,842,300.13
5.	Retainage:	
	a. 5.00% of completed work	\$135,053.32
	b. 5.00% of stored material	\$7,061.69
	Total retainage (Line 5a + 5b or total in column I of detail sheet)	\$142,115.01
6.	Total earned less retainage (Line 4 less Line 5 Total)	\$2,700,185.12
7.	Less previous certificates for payment (Line 6 from prior certificate)	\$2,144,410.95
8.	Current payment due:	\$555,774.17
9.	Balance to finish, including retainage (Line 3 less Line 6)	\$3,036,662.55

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner/Client:	\$2,960.18	\$(24,450.00)
Total approved this month:	\$5,837.49	\$0.00
Totals:	\$8,797.67	\$(24,450.00)
Net change by change orders:	\$(15,652.33)	

The undersigned certifies that to the best of the Contractor's knowledge, information and belief, the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work which previous Certificates for payment were issued and payments received from the Owner/Client, and that current payments shown herein is now due.

CONTRACTOR: Henkel Construction Company

By: *Mason Harms* Mason Harms, Controller

Date: March 12, 2024

State of: Iowa
County of: Cerro Gordo

Subscribed and sworn to before

me this 12th day of March 2024

Notary Public: *Dori J. Kostka*

My commission expires: 8/31/2024



ARCHITECT'S/ENGINEER'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on the on-site observations and the data comprising this application, the Architect/Engineer certifies to the Owner/Client that to the best of the Architect's/Engineer's knowledge, information and belief that Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED: \$555,774.17

(Attach explanation if amount certified differs from the amount applied for. Initial all figures on this Application and on the Continuation Sheet that are changed to confirm the amount certified.)

ARCHITECT/ENGINEER:

By: *Cory Sharp*

Date: 3-15-2024

This certificate is not negotiable. The amount certified is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to the rights of the Owner/Client or Contractor under this Contract.

Document SUMMARY SHEET, APPLICATION AND CERTIFICATE FOR PAYMENT, containing

APPLICATION NUMBER: 9

Contractor's signed Certification is attached.

APPLICATION DATE: 2/29/2024

Use Column I on Contracts where variable retainage for line items apply.

PERIOD: 02/01/24 - 02/29/24

Contract Lines

ITEM NO.	BUDGET CODE	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D + E + F)		BALANCE TO FINISH (C - G)	RETAINAGE
				FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		% (G / C)			
1	1.C General Conditions.Misc. Credit	General Conditions	\$135,114.00	\$54,045.60	\$12,160.26	\$0.00	\$66,205.86	49.00%	\$68,908.14	\$3,310.30
2	1.C General Conditions.Misc. Credit	Bond/Insurance	\$58,000.00	\$58,000.00	\$0.00	\$0.00	\$58,000.00	100.00%	\$0.00	\$2,900.00
3	1.C General Conditions.Misc. Credit	Supervision	\$98,000.00	\$39,200.00	\$8,820.00	\$0.00	\$48,020.00	49.00%	\$49,980.00	\$2,401.00
4	1.C General Conditions.Misc. Credit	Mobilization	\$15,500.00	\$15,500.00	\$0.00	\$0.00	\$15,500.00	100.00%	\$0.00	\$775.00
5	1.C General Conditions.Misc. Credit	Demobilization	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,000.00	\$0.00
6	1.C General Conditions.Misc. Credit	Shop Drawings/Engineering	\$85,000.00	\$76,500.00	\$4,250.00	\$0.00	\$80,750.00	95.00%	\$4,250.00	\$4,037.50
7	1.C General Conditions.Misc. Credit	Record Documents	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,000.00	\$0.00
8	1.C General Conditions.Misc. Credit	Temp Facilities	\$10,000.00	\$4,000.00	\$900.00	\$0.00	\$4,900.00	49.00%	\$5,100.00	\$245.00
9	3.C Concrete.Misc. Credit	Footing & Foundations - M	\$95,000.00	\$95,000.00	\$0.00	\$0.00	\$95,000.00	100.00%	\$0.00	\$4,750.00
10	3.C Concrete.Misc. Credit	Footings & Foundations - L	\$65,000.00	\$65,000.00	\$0.00	\$0.00	\$65,000.00	100.00%	\$0.00	\$3,250.00
11	3.C Concrete.Misc. Credit	Interior Slabs - M	\$85,000.00	\$83,300.00	\$1,700.00	\$0.00	\$85,000.00	100.00%	\$0.00	\$4,250.00
12	3.C Concrete.Misc. Credit	Interior Slabs - L	\$65,000.00	\$63,700.00	\$1,300.00	\$0.00	\$65,000.00	100.00%	\$0.00	\$3,250.00
13	4.C Masonry.Misc. Credit	Masonry - M	\$95,000.00	\$95,000.00	\$0.00	\$0.00	\$95,000.00	100.00%	\$0.00	\$4,750.00
14	4.C Masonry.Misc. Credit	Masonry - L	\$65,000.00	\$22,750.00	\$39,000.00	\$0.00	\$61,750.00	95.00%	\$3,250.00	\$3,087.50
15	5.C Steel.Misc. Credit	Structural Steel - M	\$150,000.00	\$150,000.00	\$0.00	\$0.00	\$150,000.00	100.00%	\$0.00	\$7,500.00
16	5.C Steel.Misc. Credit	Structural Steel - L	\$115,000.00	\$115,000.00	\$0.00	\$0.00	\$115,000.00	100.00%	\$0.00	\$5,750.00
17	5.C Steel.Misc. Credit	Steel Joists & Decking - M	\$185,000.00	\$185,000.00	\$0.00	\$0.00	\$185,000.00	100.00%	\$0.00	\$9,250.00
18	5.C Steel.Misc. Credit	Steel Joists & Decking - L	\$55,000.00	\$55,000.00	\$0.00	\$0.00	\$55,000.00	100.00%	\$0.00	\$2,750.00

A	B	C	D	E	F	G		H	I									
						ITEM NO.	BUDGET CODE			DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D + E + F)	% (G / C)	BALANCE TO FINISH (C - G)	RETAINAGE
												FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
19	5.C Steel.Misc. Credit	Metal Stairs - M	\$50,000.00	\$50,000.00	\$0.00	\$0.00	\$50,000.00	100.00%	\$0.00	\$2,500.00								
20	5.C Steel.Misc. Credit	Metal Stairs - L	\$20,000.00	\$20,000.00	\$0.00	\$0.00	\$20,000.00	100.00%	\$0.00	\$1,000.00								
21	5.C Steel.Misc. Credit	Cold Formed Framing - M	\$55,000.00	\$55,000.00	\$0.00	\$0.00	\$55,000.00	100.00%	\$0.00	\$2,750.00								
22	5.C Steel.Misc. Credit	Cold Formed Framing - L	\$55,000.00	\$55,000.00	\$0.00	\$0.00	\$55,000.00	100.00%	\$0.00	\$2,750.00								
23	6.C Carpentry.Misc. Credit	Rough Carpentry - M	\$19,000.00	\$18,050.00	\$950.00	\$0.00	\$19,000.00	100.00%	\$0.00	\$950.00								
24	6.C Carpentry.Misc. Credit	Rough Carpentry - L	\$25,000.00	\$23,750.00	\$1,250.00	\$0.00	\$25,000.00	100.00%	\$0.00	\$1,250.00								
25	6.C Carpentry.Misc. Credit	Architectural Wood Casework - M	\$45,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$45,000.00	\$0.00								
26	6.C Carpentry.Misc. Credit	Architectural Wood Casework - L	\$9,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$9,500.00	\$0.00								
27	7.C Thermal-Moist PR.Misc. Credit	Roofing - M	\$100,000.00	\$100,000.00	\$0.00	\$0.00	\$100,000.00	100.00%	\$0.00	\$5,000.00								
28	7.C Thermal-Moist PR.Misc. Credit	Roofing - L	\$35,000.00	\$0.00	\$33,250.00	\$0.00	\$33,250.00	95.00%	\$1,750.00	\$1,662.50								
29	7.C Thermal-Moist PR.Misc. Credit	Sheet Metal and Flashing - M	\$6,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,000.00	\$0.00								
30	7.C Thermal-Moist PR.Misc. Credit	Sheet Metal and Flashing - L	\$12,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$12,000.00	\$0.00								
31	7.C Thermal-Moist PR.Misc. Credit	Joint Sealants - M	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,000.00	\$0.00								
32	7.C Thermal-Moist PR.Misc. Credit	Joint Sealants - L	\$6,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,500.00	\$0.00								
33	7.C Thermal-Moist PR.Misc. Credit	Weather Barriers - M	\$10,000.00	\$5,000.00	\$4,900.00	\$0.00	\$9,900.00	99.00%	\$100.00	\$495.00								
34	7.C Thermal-Moist PR.Misc. Credit	Weather Barriers - L	\$20,000.00	\$10,000.00	\$9,800.00	\$0.00	\$19,800.00	99.00%	\$200.00	\$990.00								
35	7.C Thermal-Moist PR.Misc. Credit	Metal Wall Panels - M	\$250,000.00	\$0.00	\$0.00	\$23,870.00	\$23,870.00	9.55%	\$226,130.00	\$1,193.50								
36	7.C Thermal-Moist PR.Misc. Credit	Metal Wall Panels - L	\$63,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$63,000.00	\$0.00								
37	8.C Doors & Windows.Misc. Credit	HM Doors/Frames - M	\$20,000.00	\$20,000.00	\$0.00	\$0.00	\$20,000.00	100.00%	\$0.00	\$1,000.00								
38	8.C	HM Doors/Frames - L	\$15,000.00	\$14,250.00	\$0.00	\$0.00	\$14,250.00	95.00%	\$750.00	\$712.50								

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				FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		% (G / C)			
	Doors & Windows.Misc. Credit									
39	8.C Doors & Windows.Misc. Credit	Door Hardware - M	\$50,000.00	\$0.00	\$0.00	\$40,664.00	\$40,664.00	81.33%	\$9,336.00	\$2,033.20
40	8.C Doors & Windows.Misc. Credit	Door Hardware - L	\$7,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,500.00	\$0.00
41	8.C Doors & Windows.Misc. Credit	Wood Doors - M	\$16,000.00	\$0.00	\$0.00	\$16,000.00	\$16,000.00	100.00%	\$0.00	\$800.00
42	8.C Doors & Windows.Misc. Credit	Wood Doors - L	\$6,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,500.00	\$0.00
43	8.C Doors & Windows.Misc. Credit	Coiling Counter Doors - M	\$6,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,500.00	\$0.00
44	8.C Doors & Windows.Misc. Credit	Coiling Counter Doors - L	\$1,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,000.00	\$0.00
45	8.C Doors & Windows.Misc. Credit	Storefronts & Entrances - M	\$205,000.00	\$0.00	\$143,021.33	\$31,228.67	\$174,250.00	85.00%	\$30,750.00	\$8,712.50
46	8.C Doors & Windows.Misc. Credit	Storefronts & Entrances - L	\$90,000.00	\$0.00	\$54,000.00	\$0.00	\$54,000.00	60.00%	\$36,000.00	\$2,700.00
47	9.C Finishes.Misc. Credit	Interior Painting - M	\$9,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$9,500.00	\$0.00
48	9.C Finishes.Misc. Credit	Interior Painting - L	\$34,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$34,000.00	\$0.00
49	9.C Finishes.Misc. Credit	Wall Coverings - M	\$15,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$15,000.00	\$0.00
50	9.C Finishes.Misc. Credit	Wall Coverings - L	\$16,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$16,000.00	\$0.00
51	9.C Finishes.Misc. Credit	High Performance Coatings - M	\$9,500.00	\$0.00	\$7,600.00	\$0.00	\$7,600.00	80.00%	\$1,900.00	\$380.00
52	9.C Finishes.Misc. Credit	High Performance Coatings - L	\$22,000.00	\$0.00	\$17,600.00	\$0.00	\$17,600.00	80.00%	\$4,400.00	\$880.00
53	9.C Finishes.Misc. Credit	Metal Framing - M	\$25,000.00	\$23,750.00	\$750.00	\$0.00	\$24,500.00	98.00%	\$500.00	\$1,225.00
54	9.C Finishes.Misc. Credit	Metal Framing - L	\$50,000.00	\$47,500.00	\$1,500.00	\$0.00	\$49,000.00	98.00%	\$1,000.00	\$2,450.00
55	9.C Finishes.Misc. Credit	Thermal Insulation - M	\$8,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,000.00	\$0.00
56	9.C Finishes.Misc. Credit	Thermal Insulation - L	\$8,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,000.00	\$0.00
57	9.C Finishes.Misc. Credit	Firestopping - M	\$8,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,000.00	\$0.00
58	9.C	Firestopping - L	\$8,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,000.00	\$0.00

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				FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		% (G / C)			
					Finishes.Misc. Credit					
59	9.C Finishes.Misc. Credit	Gyp Board Assemblies - M	\$95,000.00	\$0.00	\$42,750.00	\$0.00	\$42,750.00	45.00%	\$52,250.00	\$2,137.50
60	9.C Finishes.Misc. Credit	Gyp Board Assemblies - L	\$175,000.00	\$0.00	\$78,750.00	\$0.00	\$78,750.00	45.00%	\$96,250.00	\$3,937.50
61	9.C Finishes.Misc. Credit	Gyp Sheathing - M	\$16,000.00	\$16,000.00	\$0.00	\$0.00	\$16,000.00	100.00%	\$0.00	\$800.00
62	9.C Finishes.Misc. Credit	Gyp Sheathing - L	\$27,000.00	\$27,000.00	\$0.00	\$0.00	\$27,000.00	100.00%	\$0.00	\$1,350.00
63	9.C Finishes.Misc. Credit	Acoustical Ceilings - M	\$25,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$25,000.00	\$0.00
64	9.C Finishes.Misc. Credit	Acoustical Ceilings - L	\$13,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$13,000.00	\$0.00
65	9.C Finishes.Misc. Credit	Suspended Wood Ceilings - M	\$40,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$40,000.00	\$0.00
66	9.C Finishes.Misc. Credit	Suspended Wood Ceilings - L	\$8,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,000.00	\$0.00
67	9.C Finishes.Misc. Credit	Ceramic Tile - M	\$55,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$55,000.00	\$0.00
68	9.C Finishes.Misc. Credit	Ceramic Tile - L	\$25,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$25,000.00	\$0.00
69	9.C Finishes.Misc. Credit	Resilient Flooring - M	\$15,000.00	\$0.00	\$0.00	\$4,471.24	\$4,471.24	29.81%	\$10,528.76	\$223.56
70	9.C Finishes.Misc. Credit	Resilient Flooring - L	\$3,800.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$3,800.00	\$0.00
71	9.C Finishes.Misc. Credit	Tile Carpeting - M	\$25,000.00	\$0.00	\$0.00	\$25,000.00	\$25,000.00	100.00%	\$0.00	\$1,250.00
72	9.C Finishes.Misc. Credit	Tile Carpeting - L	\$3,700.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$3,700.00	\$0.00
73	10.C Specialty Items.Misc. Credit	Toilet Accessories - M	\$4,250.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,250.00	\$0.00
74	10.C Specialty Items.Misc. Credit	Toilet Accessories - L	\$1,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,500.00	\$0.00
75	10.C Specialty Items.Misc. Credit	Flagpole - M	\$4,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,000.00	\$0.00
76	10.C Specialty Items.Misc. Credit	Flagpole - L	\$1,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,500.00	\$0.00
77	10.C Specialty Items.Misc. Credit	Folding Panel Partition - M	\$30,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$30,000.00	\$0.00
78	10.C Specialty Items.Misc. Credit	Folding Panel Partition - L	\$15,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$15,000.00	\$0.00
79	10.C	Toilet Partitions - M	\$5,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,500.00	\$0.00

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	Specialty Items.Misc. Credit									
80	10.C Specialty Items.Misc. Credit	Toilet Partitions - L	\$1,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,500.00	\$0.00
81	10.C Specialty Items.Misc. Credit	Signage - M	\$15,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$15,000.00	\$0.00
82	10.C Specialty Items.Misc. Credit	Signage - L	\$2,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,500.00	\$0.00
83	12.C Special Equipment.Misc. Credit	Countertops - M	\$20,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$20,000.00	\$0.00
84	12.C Special Equipment.Misc. Credit	Countertops - L	\$17,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$17,000.00	\$0.00
85	12.C Special Equipment.Misc. Credit	Window Shades - M	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$10,000.00	\$0.00
86	12.C Special Equipment.Misc. Credit	Window Shades - L	\$3,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$3,000.00	\$0.00
87	14.C Cranes and Hoists.Misc. Credit	Electric Traction Elevator - M	\$85,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$85,000.00	\$0.00
88	14.C Cranes and Hoists.Misc. Credit	Electric Traction Elevator - L	\$45,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$45,000.00	\$0.00
89	15.C Mechanical.Misc. Credit	Fire Sprinkler - M	\$38,000.00	\$0.00	\$28,500.00	\$0.00	\$28,500.00	75.00%	\$9,500.00	\$1,425.00
90	15.C Mechanical.Misc. Credit	Fire Sprinkler - L	\$23,000.00	\$0.00	\$17,250.00	\$0.00	\$17,250.00	75.00%	\$5,750.00	\$862.50
91	15.C Mechanical.Misc. Credit	Hangers and Supports - M	\$8,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,000.00	\$0.00
92	15.C Mechanical.Misc. Credit	Hangers and Supports - L	\$7,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,500.00	\$0.00
93	15.C Mechanical.Misc. Credit	Plumbing ID - M	\$800.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$800.00	\$0.00
94	15.C Mechanical.Misc. Credit	Plumbing ID - L	\$1,100.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$1,100.00	\$0.00
95	15.C Mechanical.Misc. Credit	Insulation - M	\$6,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,500.00	\$0.00
96	15.C Mechanical.Misc. Credit	Insulation - L	\$4,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,000.00	\$0.00
97	15.C Mechanical.Misc. Credit	Plumbing Piping - M	\$36,000.00	\$10,800.00	\$3,600.00	\$0.00	\$14,400.00	40.00%	\$21,600.00	\$720.00
98	15.C Mechanical.Misc. Credit	Plumbing Piping - L	\$35,000.00	\$10,500.00	\$3,500.00	\$0.00	\$14,000.00	40.00%	\$21,000.00	\$700.00

A	B	C	D	E	F	G		H	I									
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99	15.C Mechanical.Misc. Credit	Gas Piping - M	\$13,800.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$13,800.00	\$0.00								
100	15.C Mechanical.Misc. Credit	Gas Piping - L	\$22,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$22,000.00	\$0.00								
101	15.C Mechanical.Misc. Credit	Plumbing Specialties - M	\$4,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,000.00	\$0.00								
102	15.C Mechanical.Misc. Credit	Plumbing Specialties - L	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,000.00	\$0.00								
103	15.C Mechanical.Misc. Credit	Domestic Water Pumps - M	\$5,300.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,300.00	\$0.00								
104	15.C Mechanical.Misc. Credit	Domestic Water Pumps - L	\$2,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,500.00	\$0.00								
105	15.C Mechanical.Misc. Credit	Sump Pumps - M	\$3,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$3,500.00	\$0.00								
106	15.C Mechanical.Misc. Credit	Sump Pumps - L	\$2,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,000.00	\$0.00								
107	15.C Mechanical.Misc. Credit	Plumbing Equipment - M	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$10,000.00	\$0.00								
108	15.C Mechanical.Misc. Credit	Plumbing Equipment - L	\$6,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,000.00	\$0.00								
109	15.C Mechanical.Misc. Credit	Plumbing Fixtures - M	\$48,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$48,000.00	\$0.00								
110	15.C Mechanical.Misc. Credit	Plumbing Fixtures - L	\$20,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$20,000.00	\$0.00								
111	15.C Mechanical.Misc. Credit	RTU, Cabinet & Duct Heater - M	\$153,400.00	\$7,670.00	\$0.00	\$0.00	\$7,670.00	5.00%	\$145,730.00	\$383.50								
112	15.C Mechanical.Misc. Credit	RTU, Cabinet & Duct Heater - L	\$28,000.00	\$1,400.00	\$0.00	\$0.00	\$1,400.00	5.00%	\$26,600.00	\$70.00								
113	15.C Mechanical.Misc. Credit	Terminal Air Box & System Management - M	\$55,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$55,000.00	\$0.00								
114	15.C Mechanical.Misc. Credit	Terminal Air Box & System Management - L	\$25,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$25,000.00	\$0.00								
115	15.C Mechanical.Misc. Credit	Screen Wall - M	\$44,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$44,000.00	\$0.00								
116	15.C Mechanical.Misc. Credit	Screen Wall - L	\$2,100.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,100.00	\$0.00								
117	15.C Mechanical.Misc. Credit	GRD's FD's - M	\$7,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,500.00	\$0.00								
118	15.C Mechanical.Misc. Credit	GRD's & FD's - L	\$19,400.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$19,400.00	\$0.00								
119	15.C Mechanical.Misc. Credit	Mini Split & Exhaust Fan - M	\$7,900.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,900.00	\$0.00								
120	15.C Mechanical.Misc. Credit	Mini Split & Exhaust Fan - L	\$5,200.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$5,200.00	\$0.00								
121	15.C Mechanical.Misc. Credit	Ductwork - M	\$24,900.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$24,900.00	\$0.00								
122	15.C	Ductwork - L	\$57,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$57,000.00	\$0.00								

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				FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		% (G / C)			
	Mechanical.Misc. Credit									
123	15.C Mechanical.Misc. Credit	Hangers - M	\$3,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$3,500.00	\$0.00
124	15.C Mechanical.Misc. Credit	Hangers - L	\$13,600.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$13,600.00	\$0.00
125	15.C Mechanical.Misc. Credit	TAB - L&M	\$9,400.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$9,400.00	\$0.00
126	16.C Electrical.Misc. Credit	Site-service work - Material	\$15,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$15,000.00	\$0.00
127	16.C Electrical.Misc. Credit	Site-service work - Labor	\$20,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$20,000.00	\$0.00
128	16.C Electrical.Misc. Credit	Temporary Power - Labor	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$10,000.00	\$0.00
129	16.C Electrical.Misc. Credit	Temporary Power - Material	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$10,000.00	\$0.00
130	16.C Electrical.Misc. Credit	Underground Raceway - Material	\$25,000.00	\$22,500.00	\$2,000.00	\$0.00	\$24,500.00	98.00%	\$500.00	\$1,225.00
131	16.C Electrical.Misc. Credit	Underground Raceway - Labor	\$25,000.00	\$22,500.00	\$2,000.00	\$0.00	\$24,500.00	98.00%	\$500.00	\$1,225.00
132	16.C Electrical.Misc. Credit	Raceway - Material	\$62,300.00	\$15,575.00	\$34,265.00	\$0.00	\$49,840.00	80.00%	\$12,460.00	\$2,492.00
133	16.C Electrical.Misc. Credit	Raceway - Labor	\$52,600.00	\$21,040.00	\$21,040.00	\$0.00	\$42,080.00	80.00%	\$10,520.00	\$2,104.00
134	16.C Electrical.Misc. Credit	Generator - Material	\$29,600.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$29,600.00	\$0.00
135	16.C Electrical.Misc. Credit	Generator - Labor	\$18,000.00	\$5,400.00	\$0.00	\$0.00	\$5,400.00	30.00%	\$12,600.00	\$270.00
136	16.C Electrical.Misc. Credit	Distribution - Material	\$55,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$55,000.00	\$0.00
137	16.C Electrical.Misc. Credit	Distribution - Labor	\$55,700.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$55,700.00	\$0.00
138	16.C Electrical.Misc. Credit	Lighting - Material	\$122,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$122,500.00	\$0.00
139	16.C Electrical.Misc. Credit	Lighting - Labor	\$44,600.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$44,600.00	\$0.00
140	16.C Electrical.Misc. Credit	Fire Alarm - Material	\$20,400.00	\$0.00	\$3,060.00	\$0.00	\$3,060.00	15.00%	\$17,340.00	\$153.00
141	16.C Electrical.Misc. Credit	Fire Alarm - Labor	\$9,300.00	\$0.00	\$1,395.00	\$0.00	\$1,395.00	15.00%	\$7,905.00	\$69.75
142	16.C Electrical.Misc. Credit	Device - Material	\$2,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,500.00	\$0.00
143	16.C Electrical.Misc. Credit	Device - Labor	\$2,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,500.00	\$0.00
144	16.C Electrical.Misc. Credit	Communications - Material	\$27,900.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$27,900.00	\$0.00
145	16.C Electrical.Misc. Credit	Communications - Labor	\$24,400.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$24,400.00	\$0.00

A ITEM NO.	B BUDGET CODE	C DESCRIPTION OF WORK	D SCHEDULED VALUE	E WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G TOTAL COMPLETED AND STORED TO DATE (D + E + F)		H BALANCE TO FINISH (C - G)	I RETAINAGE
				FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		% (G / C)			
146	16.C Electrical.Misc. Credit	Audio/Visual - Material	\$109,665.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$109,665.00	\$0.00
147	16.C Electrical.Misc. Credit	Audio/Visual - Labor	\$40,109.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$40,109.00	\$0.00
148	16.C Electrical.Misc. Credit	Security - Material	\$25,603.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$25,603.00	\$0.00
149	16.C Electrical.Misc. Credit	Security - Labor	\$10,459.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$10,459.00	\$0.00
150	2.C Sitework.Misc. Credit	Site Clearing & Earthwork - L&M	\$110,000.00	\$82,500.00	\$0.00	\$0.00	\$82,500.00	75.00%	\$27,500.00	\$4,125.00
151	2.C Sitework.Misc. Credit	Plantings - M	\$15,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$15,000.00	\$0.00
152	2.C Sitework.Misc. Credit	Concrete Paving - M	\$75,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$75,000.00	\$0.00
153	2.C Sitework.Misc. Credit	Concrete Paving - L	\$45,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$45,000.00	\$0.00
154	2.C Sitework.Misc. Credit	Plantings - L	\$2,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,500.00	\$0.00
155	2.C Sitework.Misc. Credit	Seeding & SOD - M	\$6,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$6,500.00	\$0.00
156	2.C Sitework.Misc. Credit	Seeding & SOD - L	\$2,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$2,500.00	\$0.00
157	2.C Sitework.Misc. Credit	Mulch - M	\$7,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$7,500.00	\$0.00
158	2.C Sitework.Misc. Credit	Mulch - L	\$4,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$4,500.00	\$0.00
159	2.C Sitework.Misc. Credit	Retaining Wall - M	\$25,000.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$25,000.00	\$0.00
160	2.C Sitework.Misc. Credit	Retaining Wall - L	\$8,500.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%	\$8,500.00	\$0.00
161	2.C Sitework.Misc. Credit	Storm Sewer - M	\$175,000.00	\$166,250.00	\$0.00	\$0.00	\$166,250.00	95.00%	\$8,750.00	\$8,312.50
162	2.C Sitework.Misc. Credit	Storm Sewer - L	\$55,000.00	\$55,000.00	\$0.00	\$0.00	\$55,000.00	100.00%	\$0.00	\$2,750.00
163	2.C Sitework.Misc. Credit	Water Service - M	\$21,000.00	\$21,000.00	\$0.00	\$0.00	\$21,000.00	100.00%	\$0.00	\$1,050.00
164	2.C Sitework.Misc. Credit	Water Service - L	\$12,000.00	\$12,000.00	\$0.00	\$0.00	\$12,000.00	100.00%	\$0.00	\$600.00
165	2.C Sitework.Misc. Credit	Sanitary Service - M	\$9,100.00	\$9,100.00	\$0.00	\$0.00	\$9,100.00	100.00%	\$0.00	\$455.00
166	2.C Sitework.Misc. Credit	Sanitary Service - L	\$12,000.00	\$12,000.00	\$0.00	\$0.00	\$12,000.00	100.00%	\$0.00	\$600.00
TOTALS:			\$5,752,500.00	\$2,137,530.60	\$580,861.59	\$141,233.91	\$2,859,626.10	49.71%	\$2,892,873.90	\$142,981.31

Change Orders

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D + E + F)	% (G / C)	BALANCE TO FINISH (C - G)	RETAINAGE
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
167	PCCO#001 PR #1 - Elevator Waterproofing	\$2,661.18	\$2,661.18	\$0.00	\$0.00	\$2,661.18	100.00%	\$0.00	\$133.06
168	PCCO#002 PR #2 - VE Items	\$(24,151.00)	\$(24,151.00)	\$0.00	\$0.00	\$(24,151.00)	100.00%	\$0.00	\$(1,207.55)
169	PCCO#003 Drawer Slides & HSS	\$5,837.49	\$0.00	\$4,163.85	\$0.00	\$4,163.85	71.33%	\$1,673.64	\$208.19
TOTALS:		\$(15,652.33)	\$(21,489.82)	\$4,163.85	\$0.00	\$(17,325.97)	110.69%	\$1,673.64	\$(866.30)

Grand Totals

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D + E + F)	% (G / C)	BALANCE TO FINISH (C - G)	RETAINAGE
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
GRAND TOTALS:		\$5,736,847.67	\$2,116,040.78	\$585,025.44	\$141,233.91	\$2,842,300.13	49.54%	\$2,894,547.54	\$142,115.01



City of Polk City, Iowa City Council Agenda Communication

Date: March 25, 2024 City Council Meeting
To: Mayor Steve Karsjen & City Council
From: Chelsea Huisman, City Manager
Subject: Set Public Hearing for the adoption of the FY 24/25 Budget

BACKGROUND: On Monday, the City Council will set a public hearing for the proposed FY2025 budget for April 22, 2024, at 6pm. For the March 25, 2024, City Council packet, I am including the Budget Memo I drafted regarding the budget for all the major highlights. The full City budget can also be found on the City's website www.polkcityia.gov

ALTERNATIVES: Do not set the public hearing

FINANCIAL CONSIDERATIONS: None; the City Council is only setting the public hearing. A full budget document regarding the proposed FY2025 budget is available on the city's website for further details on the budget itself.

RECOMMENDATION: It is my recommendation that the City Council set the public hearing for April 22, 2024, for 6pm.

NOTICE OF PUBLIC HEARING -- PROPOSED BUDGET
Fiscal Year July 1, 2024 - June 30, 2025

City of: **POLK CITY**

The City Council will conduct a public hearing on the proposed Budget at: City Hall, Council Chambers located at 112 S 3rd Street, Polk City, Iowa.
 Meeting Date: 4/22/2024 Meeting Time: 06:00 PM

At the public hearing any resident or taxpayer may present objections to, or arguments in favor of, any part of the proposed budget. This notice represents a summary of the supporting detail of revenues and expenditures on file with the City Clerk and County Auditor.

City budgets are subject to protest. If protest petition requirements are met, the State Appeal Board will hold a local hearing. For more information, consult <https://dom.iowa.gov/local-budget-appeals>.

The Budget Estimate Summary of proposed receipts and expenditures is shown below. Copies of the the detailed proposed Budget may be obtained or viewed at the offices of the Mayor, City Clerk, and at the Library.

The estimated Total tax levy rate per \$1000 valuation on regular property 11.00000

The estimated tax levy rate per \$1000 valuation on Agricultural land is 3.00375

At the public hearing, any resident or taxpayer may present objections to, or arguments in favor of, any part of the proposed budget.

Phone Number
 (515) 984-6233

City Clerk/Finance Officer's NAME
 Jenny Coffin

		Budget FY 2025	Re-estimated FY 2024	Actual FY 2023
Revenues & Other Financing Sources				
Taxes Levied on Property	1	3,951,330	3,654,517	3,461,360
Less: Uncollected Property Taxes-Levy Year	2	0	0	0
Net Current Property Taxes	3	3,951,330	3,654,517	3,461,360
Delinquent Property Taxes	4	0	0	0
TIF Revenues	5	1,447,565	887,632	616,346
Other City Taxes	6	1,146,650	1,025,000	1,222,030
Licenses & Permits	7	207,300	407,300	244,632
Use of Money and Property	8	353,350	323,300	261,086
Intergovernmental	9	2,104,850	3,562,590	1,380,119
Charges for Fees & Service	10	4,851,600	4,737,800	4,365,684
Special Assessments	11	750	7,500	5,751
Miscellaneous	12	114,617	113,217	255,000
Other Financing Sources	13	6,442,217	8,360,000	59,368
Transfers In	14	3,577,518	1,608,087	1,701,554
Total Revenues and Other Sources	15	24,197,747	24,686,943	13,572,930
Expenditures & Other Financing Uses				
Public Safety	16	2,769,540	2,955,850	2,363,319
Public Works	17	882,355	802,650	639,774
Health and Social Services	18	2,500	2,000	0
Culture and Recreation	19	966,140	897,550	796,841
Community and Economic Development	20	1,007,075	602,241	462,828
General Government	21	593,510	1,442,550	690,201
Debt Service	22	1,162,420	1,160,070	924,594
Capital Projects	23	13,076,026	17,046,600	4,120,546
Total Government Activities Expenditures	24	20,459,566	24,909,511	9,998,103
Business Type / Enterprises	25	4,038,288	3,917,443	3,426,199
Total ALL Expenditures	26	24,497,854	28,826,954	13,424,302
Transfers Out	27	3,577,518	1,608,087	1,701,554
Total ALL Expenditures/Transfers Out	28	28,075,372	30,435,041	15,125,856
Excess Revenues & Other Sources Over (Under) Expenditures/Transfers Out	29	-3,877,625	-5,748,098	-1,552,926
Beginning Fund Balance July 1	30	9,690,475	15,438,573	16,991,499
Ending Fund Balance June 30	31	5,812,850	9,690,475	15,438,573



City of Polk City, Iowa City Council FY2025 Budget Memo

Date: February 7, 2024
To: Mayor Steve Karsjen and City Council
From: Chelsea Huisman, City Manager
Subject: FY2025 Budget Memo

General Overview of the FY2025 Budget:

I would like to begin by thanking the elected officials and the city staff for your dedicated work on the FY2025 budget. One of the most important tasks we work on annually is the upcoming fiscal year budget. As our budget continues to grow, and we add capital projects each year, the budget process becomes more complex. Without your engaged commitment to the City of Polk City, this process would not run as smoothly. Again, thank you to all involved and providing valuable input.

I am proud to present to the City Council the proposed FY2024-2025 operating budget for the fiscal year beginning July 1, 2024, and ending June 30, 2025. Each year, the city begins the budgeting process in November prior to the fiscal year. This year was no different, but with some new state requirements, our deadlines have changed for the budget. House File 718 (HF718) extended the deadline to submit the upcoming fiscal year budget from March 31st to April 30th annually. HF718 also included various other provisions which will impact FY2025 budget and future budgets. I will provide some of those new provisions throughout this document.

This memo outlines the main points regarding the budget. I have listed some highlights at the beginning of the memo, and then you will find all major highlights by fund. The City Council members will receive full budget workbooks, and the full city budget will be available on the city's website. There will be two public hearings regarding the proposed budget in the coming months. The first public hearing will be on the City's proposed tax levy, tentatively scheduled for March 25, 2024. The second public hearing on the actual proposed budget is tentatively scheduled at the regular City Council meeting on April 22, 2024. The City Council will consider adoption of the budget immediately after the public hearing.

The proposed budget for FY2025 has a city tax levy of \$11.00 per \$1,000 assessed. For FY2024, the aggregate city tax levy rate was also \$11.00 per \$1,000 assessed, or unchanged from last year's budget.

In 2023, the State Legislature passed legislation known as HF718. This legislation will have multiple impacts on Polk City's budget and needs to be understood as we are preparing this budget. HF718 created a new Combined General Fund Levy (CGFL), which replaces the regular general fund levy from previous budget years. The new CGFL levy has a mechanism where the levy automatically is reduced for cities that experience certain levels of taxable property valuation growth. Several levies previously available to local governments across the State, including voter approved levies, have also been eliminated.

The new CGFL mechanism for automatic reduction in the levy rate may result in reduced revenues for most cities. The mechanism automatically reduces the city's CGFL if the annual non-tax increment financing (TIF) taxable property valuation grows higher than 2.99%. For cities that have growth between 3%-5.99%, the CGFL is reduced by 2%. For cities with taxable growth higher than 6%, the CGFL is reduced by 3%. FY2024 has been set as the base year.

Polk City's growth in the CGFL increased by 8.36%, which automatically reduced the CGFL from \$8.37 per \$1,000 assessed to \$8.12622. At the City Council work session in February, I mentioned to the Council our GCFL reduced by approximately 2%, however, we are in the 3% category for FY2025. The legislation will require all cities to use the GCFL FY2025-2028. For FY2029 the legislation places a firm maximum on the levy at \$8.10 per \$1,000, regardless of taxable valuation growth or decline.

HF718 also expanded the Homestead Tax Credit by establishing a new Homestead exemption for property owners age 65+ and by expansion of the Military Service Exemption. Neither of these exemptions are state funded, and the impact is lower taxable value on these properties. I am estimating this impact alone reduces the city's revenue by \$20,000 for FY2025. The impact will increase in future budget years.

Other parts of the legislation put restrictions on when a city can put forward a referendum to voters for certain types of bonds. Those referendums now can only be held at November elections. The new law also included increases in the limitations to enter into loan agreements payable from the general fund and increases the limitations for general corporate purpose reverse referendum thresholds.

Lastly, HF718 created a new budget adoption and filing process. In previous years, the city has been required to hold a maximum property tax public hearing prior to adoption of the budget. That public hearing is no longer required. Instead, cities are now required to hold a proposed tax rate public hearing, and prior to the public hearing send the proposed tax rate to the County Auditor. The County Auditor is now required to send a direct mailing to all taxpayers with the collective information regarding cities and counties proposed tax rates prior to the proposed tax rate public hearing.

The two public hearings for the city's proposed budget will be held as follows:

- March 25th 5pm Property Tax Levy Hearing
- April 22nd 6pm Budget Adoption Hearing

Polk City's taxable valuations did increase from FY24 to FY25. For the city's operating taxable valuation, we are seeing an 8% increase from the current fiscal year of \$322,643,643 to \$349,602,532 and an 11% increase for debt service valuation from \$373,764,341 to \$415,073,160. Taxable valuation is solely based on what is taxable; therefore, tax increment financing (TIF) and the rollback are factored into those taxable numbers.

Polk City's 100% valuations significantly increased from FY24 to FY25. Although this does not impact our budget, since we work off what is taxable, the increase in valuations increases the city's borrowing authority. In FY24, we had property valuations of \$668,460,544. For FY25, our property valuations were \$868,594,618, an increase of 30%. In Iowa, cities have a statutory general obligation debt limit of 5% of 100% values. In FY24, our constitutional debt limit was \$33 million. In FY25, our constitution debt limit was increased to \$43 million.

Of important note for the proposed budget is the significant decrease in the state-wide residential rollback. In FY2024, the residential rollback was 56.4919%. In FY2025, the residential rollback is 46.3428%. To understand property tax in Iowa, it's important to understand the residential rollback and its impact on local governments. The residential rollback was implemented in 1978. The purpose of the rollback is to limit growth of property values from one year to the next, known as an assessment limitation order. Typically, where we see the residential rollback significantly change is the year after state-wide assessments. To limit the growth, the rollback decreases. Prior to 2012, that assessment limitation order was 4%. Since 2013, the assessment limitation order is 3%. This means property value growth is limited to 3% in any given year from the previous year.

Iowa's rollback is different because in addition to the 3% limitation on residential, the rollback includes a formula that ties residential property to agricultural property. The connection between the two is that one class cannot exceed that of the other, meaning residential and agricultural property values may only increase at the lower rate of the two.

Most of Polk City's taxable growth is due to new construction. In 2023, we did have a down year in single family home permits and other residential permits. We did issue eight commercial permits, which was a high number for Polk City. Other growth can be attributed to property valuation in tax increment financing (TIF) districts, finally hitting the tax rolls, the largest majority of this being the Tournament Club of Iowa development. We have been seeing this development valuation being released in the past several years, and that development is now 100% incorporated into the non-TIF taxable valuations.

The proposed FY2025 budget has total revenue (excluding transfers) of \$20,620,229 and total expenditures (excluding transfers) of \$24,497,854. The city has \$13,076,026 in capital projects and capital equipment purchases planned for FY24-25; therefore, the city's total operating budget is \$11,421,828.

Each fund in the city budget has a positive fund balance, except for the city's capital fund, and the sanitary sewer fund. The City anticipates constructing several capital projects next year, some of which the city already has the funds on hand to construct. It may appear that the city is spending more than we are bringing in for the capital fund, however, the revenue and expenses for the proposed capital projects may just occur in different fiscal years, creating what appears to be a deficit fund balance. The City does balance the capital fund at the end of each fiscal year and will plan to do that prior to June 30, 2024.

The sanitary sewer fund does have a negative balance for next year. The City Council will need to review increasing sanitary sewer fees, and they may offset the negative balance for the fund. If the Council does not increase sanitary sewer rates, we will need to use sewer fund balance to cover the deficit.

General Fund Revenue Highlights:

The City's largest revenue source is property taxes. Of all general fund revenue, property taxes account for nearly 87% of all general fund revenue. For FY2025, all general fund revenue equals \$4,432,067. Other sources of revenue to support the General Fund consist of a portion of hotel/motel tax, ambulance billing, permit fees, franchise fees, donations, rentals, interest, lease agreement revenue, grants, and other miscellaneous revenue. Because our expenses are higher than our general fund revenue, we transfer money into the General Fund from other funds, such as Local Option Sales Tax (LOST), and TIF.

For FY2025, the City's taxable valuations increased approximately 8% for general operating and 11% for debt service. The City's proposed levy for FY2025 is \$11.00 per \$1,000 assessed. Here is the breakdown of the City's overall tax levy rate of \$11.00:

- The 8.10 levy has been replaced by the new **Combined General Fund levy**. The CGFL levy for Polk City has a maximum levy rate of \$8.12622 per \$1,000 assessed. City governments can levy for additional purposes, but the new CGFL is the main levy used in local government. For FY2025, Polk City's CGFL levy will generate **\$2,840,947**.
- Polk City does require additional revenue beyond what is generated with the CGFL levy. One of the city's largest expenses is the cost of employee benefits. For FY2025, the City of Polk City will also levy for **Other Employee Benefits**. The proposed levy amount for other employee benefits is **\$.95722 per \$1,000** assessed. This is an increase from the current year's levy rate. This levy will generate an additional **\$334,648** to pay for a portion of the city employee benefit costs.
- The final levy we utilize is the **Debt Service levy**. This levy is used specifically to pay for general obligation outstanding debts. The City has five outstanding debt obligations that we utilize the debt service levy to pay, and those include: 2018 General Obligation (DMWW Water Improvements &

purchased capacity), 2020 General Obligation (Asphalt overlay street project), 2021 General Obligation (Roundabout project and refunding of Sewer Improvements), 2022 General Obligation (City facilities and trail improvements), and 2023 General Obligation (City Facilities, Street improvements, and trail improvements). The City is not planning to issue any new General Obligation debt in 2024, unless the city holds a special referendum in November. Even then, it is very possible we would not issue debt until 2025.

The proposed levy for debt service is **\$1.91656 per \$1,000** assessed. Total revenue generated by the Debt Service Levy in the proposed budget is **\$795,513**. We use some water, sewer and TIF cash to buy down the city's debt service levy rate. Therefore, you may notice this levy rate does not cover the city's entire debt payments.

Other revenue sources that contribute to the general fund include other various fees. The sources listed below are of most significance.

- For the past several years, we have experienced high building permit and development fee revenue. 2023 was our slowest year in single family home building, with less than 25 single family home permits issued. Because of this, we are estimating \$200,000 in less revenue from the current budget year. We also expect the current budget revenue for building permits to be significantly lower than estimated. Total building permit revenue estimate: \$200,000; total development revenue estimate: \$200,000
- For FY2025, we have an estimated \$50,000 being generated in franchise fee/tax. This tax is generated by the utility companies using the city's ROW and paying a fee to do so. The City Council has approved proceedings for a 1% tax to be collected on electric and gas utilities. In the State of Iowa, cities can approve up to 5% for electric, gas, cable, and telephone. The City Council could consider increasing the franchise fee up to 5%, with each percentage generating an additional \$50,000 in revenue.
- We have estimated \$25,000 for Hotel/Motel tax. Hotel/Motel has declined for our community throughout the past years, as Polk City only has one hotel property. The City of Polk City does have agreements with BRAVO & Greater DSM Partnership, that they each collect 2 cents of a 7-cent local tax. The city then keeps and utilizes the remaining 3 cents and spends it on Parks & Recreation and the Library as approved by the voters.
- Interest rates have been high for over a year now, and the city has taken advantage of this. The city converted some of our money market accounts to Certificates of Deposits (CDs) last year to increase interest on the city's accounts. Those CDs will expire towards the end of this current fiscal year, and we plan to renew those CDs for a term to be determined. We are estimating \$250,000 in interest for FY2025 for all city accounts. For FY2024, we budgeted this same amount, however, we

are on track to collect \$480,000 in interest this current year. The estimate for next year would be a conservative estimate if interest rates decrease.

- The city has agreements with four cell phone companies to lease space on our water tower for equipment. This is a common practice in local government, as water towers are typically the tallest facility, and make good locations for cell phone antennas/equipment. We are estimating \$89,000 in revenue for next year's proposed budget.
- The city is estimating \$44,000 in revenue from the State of Iowa for Commercial/Industrial backfill. In 2013, the State Legislature passed a property tax reform bill, which initiated a rollback for commercial, industrial, and multi-residential property, similar to the residential rollback. The bill states that commercial and industrial properties will be taxed at 90% of their taxable value, instead of 100%. Since the implementation, the State has backfilled the lost 10% in revenues to the local governments. In 2021, the Legislature began to phase out the backfill to local governments. Based on a city's growth in valuations, local governments can expect the backfill to be gone over a period of years. Polk City is on the fast-track plan. The city is estimating that we will receive \$10,000 in backfill money from this State change.

In 2022, the State passed a bill that made tax credits for businesses automatic for those that qualified, instead of the requirement to apply for them. This applies to all commercial and industrial property on the first \$150,000 of taxable value. The first \$150,000 of taxable value are now taxed at the residential rate, instead of the commercial/industrial rate. We are estimating a loss of \$34,000 with this new bill. The legislature has appropriated to backfill this loss to cities; however, the Iowa League of Cities is reporting that the State will not have enough funding available to cover this backfill for FY2025, and cities can expect to receive less.

General Fund Expenses Highlights:

The City's General Fund contains the expenses of Police, Fire, Building/Housing, Library, Parks & Recreation, and City Hall & Administration. These department expenses within the General Fund must be covered by general fund revenue, such as property taxes, and the other revenue sources I have outlined in this memo. For FY2025, all general fund expenses equal \$4,929,340. With transfers into the general fund from LOST and TIF, the general fund will have a surplus of \$93,477.

The largest expense for the city is salary and benefits for all our personnel. The city currently employs 30 full-time employees, and approximately 50 part-time employees. The proposed budget includes adding one new full-time position: Finance Director. This position is not identified in the city's staffing plan; however, this has been a priority position for the Council. The staffing plan included two positions in FY2025, which

are not included in the budget: Police Support Clerk (change from PT to FT) and Building Inspector. The City Council will need to make an amendment to the staffing plan once the budget has been finalized.

Road Use Tax Highlights:

Cities in Iowa receive Road Use Tax (RUT), which is based on per capita. For FY2025, I am estimating the city will receive revenue (\$737,200) and expenses (\$734,705) for the RUT fund. Our RUT estimation is based on a per capita rate of \$133.00. The city's official 2020 census population is 5,543, and this revenue source is a significant reason why we are having a special census in September 2024. Our current population estimate is 6,800, which could generate an additional \$167,000 annually in RUT funds.

All expenses in the RUT fund must be used on streets. The largest expense in the city's RUT fund is employee wages and benefits for the Public Works department. Other expenses include vehicle operations and repairs, snow removal expenses, equipment, and city right-of-way expenses. The city's RUT funds do not cover the full city street costs, and we have to supplement some of the revenue for streets with general fund revenues. In Iowa, you cannot transfer money into the RUT, therefore the remaining expenses for streets (\$247,650) is paid directly out of the general fund.

Local Option Sales Tax Highlights:

The city does collect a 1% LOST, which was approved by the voters of Polk City back in 1985. I am estimating LOST revenue for FY25 in the amount of \$1,050,000. Of that revenue estimate, \$415,750 will be transferred to the city's general fund for general operations, \$433,000 will be spent on capital equipment (\$85,000 new police vehicle, and \$348,000 new ambulance), and the remaining \$181,250 will be spent on the Twelve Oaks Park Phase II project.

Tax Increment Financing Highlights:

For FY2025, I estimate the TIF fund revenue (\$1,372,565) and expenses (\$1,178,593). The revenue we collect from TIF is to pay outstanding economic development agreements we have throughout the community. Of that \$1,372,565 revenue, \$597,075 will be paid for economic development agreements, \$100,000 will be transferred to the general fund for the administrative support program, \$75,000 will be transferred to pay for the City's contribution to GoPolkCity, \$200,000 will pay for the construction of the E. Southside trail project, \$163,428 will be transferred to the city's LMI fund, \$50,000 will be available for the City's newly created Downtown Grant program, and \$43,090 will be transferred to the city's debt service fund to buy down the cost of our 2023 general obligation loan.

Capital Projects & Capital Equipment Highlights:

The proposed projects and capital equipment budget for FY2025 will consist of several large-scale projects, with a total budget amount of \$12,876,026. All the expenses in the capital fund are one-time projects and purchases, which will be paid for through loans, local option sales tax, grant funding, and cash reserves. The city is expecting to complete the following projects with the following estimated expenses:

1. Water Tower project, FY2025 expense \$8,184,000. The Water Tower project will be constructed over the fiscal years 2024 and 2025. Again, it is difficult to know when expenses will be paid out, therefore, I have prepared the budget to assume most construction costs will be paid for in both fiscal years, therefore I have budgeted the full project in both years. With the demanding needs for water storage in Polk City, the city plans to construct a 1.5-million-gallon storage tank on the north side of town located in the future Regional Park.
2. Northside Drive intersection realignment and trail project, FY2025 expense \$2,018,000. This project will reconstruct the intersection of North 3rd Street and Northside Drive and construct a multi-use trail from Kiwanis Park to E. Vista Lake Drive. The city has received grant funding for this project in the amount of \$1,164,650.
3. Trail projects, FY2025 expense \$1,522,776. These projects will consist of Phase 3 of the HTT to NST trail connection (\$320,000), Phase 4 of the HTT to NST connection (\$748,776), Phase 7 of the HTT to NST trail connection (\$190,000), E. Southside Drive trail connection (\$200,000) and the Woodhaven connection (\$64,000)
4. Street Repairs project, FY2025 expense \$200,000. This is an annual project completed, where the city removes and replaces concrete street panels throughout the community.
5. Sump Pump collector project, FY2025 expense \$344,000. This project consists of installing pipe at the edge of the curb for streets Roosevelt, Sunset, Lyndale and Oaklyn Drive. We have identified drainage issues in this vicinity of Polk City, and this project would provide for a main storm sewer line for residents to connect to the city's storm sewer system.
6. Capital Equipment FY2025 expense \$626,000. The city plans to purchase one new police vehicle (\$85,000) an ambulance (\$348,000), a new generator for the Fire Station/Police Station (\$60,000), new public works truck (\$60,000), snow pusher (\$15,000), and cab mower/snowplow (\$58,000).

Water Fund Highlights:

The city is estimating revenue (\$1,843,200) and expenses (\$1,843,085) for FY2025 to fund the water utility. This fund covers all the city's expenses for the water utility. Some of the largest expenses for the water utility include staff wages for the public works and administration departments, our cost to purchase water,

produce water and maintain and repair water main breaks within the system. The city will also use a portion of water revenue to buy down our debt service levy for the 2018 General Obligation loan (\$196,000).

Polk City recently opted into the newly established Central Iowa Water Works (CIWW). In FY2025, CIWW will begin their operations, which will create a new regional water producing entity. Polk City will have some start-up costs to evaluate for buy in to CIWW, however, the Council has not determined how we will fund those start-up costs. The city may use some water fund balance or borrow money. Depending on that future decision, we may need to amend our budget for that function.

Sanitary Sewer Fund Highlights:

The city is estimating revenue (\$1,910,500) and expenses (\$1,941,703) for FY2025 to fund the sanitary sewer utility. This fund covers all the city's expenses for sewer and funds portions of staff wages for the public works and administration staff, our fees to send sewage to the wastewater reclamation authority (WRA) treatment facility, our annual payment to Polk County for the Rock Creek trunk sewer, and repairs and maintenance to the system. We will also use a portion of sanitary sewer revenue to buy down our debt service levy for the 2021 General Obligation Refunding Loan (\$42,000).

For FY2025, I am showing a negative fund balance in the sanitary sewer fund. Our FY2025 WRA budget is based on calendar year 2023 flows, and Polk City's flows have increased 16%. The city will use fund balance to cover the deficit. The City Council will be reviewing sanitary sewer fees in the spring of 2024, and I would expect the Council to consider increasing sanitary sewer fees to offset the 16% increase. A portion of the increase is due to flow increase, and the remaining is due to additional debt the WRA has issued for capital projects.

Solid Waste/Recycling Fund Highlights:

For FY2025 we are estimating revenue and expenses in the solid waste fund to be \$461,500. All expenses for solid waste/recycling are to provide the service directly to the residents. Although the city provides a contract for solid waste and recycling collection to Polk City residents, the city acts as only a pass-through for the collection of revenue, meaning the city does not collect any revenue from this utility. All expenses paid out of this fund are paid directly to the Metro Waste Authority (MWA), who administers the contracts for solid waste and recycling services.

Stormwater Fund Highlights:

For the FY2025 budget, I am estimating revenue (\$150,000) and expenses (\$374,000) for the storm water utility. Some of the expenses (\$30,000) in the stormwater utility fund include street sweeping costs and

stormwater detention maintenance. The City has a fund balance in the stormwater fund, and this is how we will fund the Sump Pump collector project next year. There is the possibility that we use some LMI funds for the project. The City Council could also consider a special assessment for this project.

FY2025 Budget Summary:

Overall, I am very proud of the work we've completed on the upcoming fiscal year budget. The City Council has done a great job of prioritizing capital projects, and additional staffing and that has made the budget process easier for the city staff. For FY2025, we are expecting to keep the city's aggregate tax levy unchanged from the current budget year. We can do this because the city has a healthy fund balance, and the city uses LOST to buy down the city's tax levy and use a portion of that one cent tax for city operations. The remainder of our LOST is spent on capital projects and equipment.

The City Council is not planning to issue any new debt in FY2025, unless a bond referendum is on the November ballot for the Regional Park project. If that project is added to the November ballot, the amount and length would be determined at a later time, as those decisions have not yet been made by the Council. The Council recently hired a firm to determine the feasibility of the Regional Park project, and the final report and recommendation will be available to the City Council in May 2024.

The City Council will be evaluating water and sanitary sewer rates for FY2025 in the coming months. The Council has increased rates consistently over the past 5 years and will continue to review and evaluate rates. Rate increases are necessary to keep up with cost increases to manage the city's water and sanitary sewer systems, as well as the increases that are passed along to us from Des Moines Water Works (DMWW) to purchase water, and the Wastewater Reclamation Authority (WRA) for sanitary sewer waste treatment. Of important note, Central Iowa Water Works (CIWW) will begin operations in FY2025, and that may have some impact on the budget.

The City Council will begin a new Capital Improvement Plan in the coming months, which will help to streamline future budget years FY2026-2030. The city will also work on a new 5-year staffing plan, as evaluating the city's staffing needs remains important in a growing community. Our goal with the staffing plan is to provide adequate services to our residents, and to ensure our departments are appropriately staffed to do that.

Again, I greatly appreciate the effort of the city staff and City Council throughout the budget process. Producing and finalizing a budget takes a lot of work for all those involved. Please reach out if you have any questions regarding the proposed FY2025 budget.

RESOLUTION NO. 2024-34

**A RESOLUTION SETTING A PUBLIC HEARING FOR THE
PROPOSED FISCAL YEAR 24/25 BUDGET**

WHEREAS, the State of Iowa law requires the City Council to set a time and place for a public hearing and publish a summary of the proposed annual budget; and

WHEREAS, the notice of public hearing is required to be published no less than 10 but not more than 20 days prior to the date of the hearing.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa, hereby orders a public hearing and notice thereof to be held on April 22, 2024 at 6:00 p.m. on the proposed FY 24/25 Budget.

PASSED AND APPROVED the 25 day March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk



City of Polk City, Iowa

City Council Agenda Communication

Date: March 25, 2024
To: Mayor, City Council, & City Manager
From: Karla Hogrefe – Fire Chief
Subject: Training Burn - Broadway Temporary Road Closure

BACKGROUND: The Fire Department is doing a live fire training burn at the 1600 W Broadway house on Saturday, April 6, 2024 from 0600-1500. We are currently working on the action plan. There is a national standard that we must follow, NFPA 1403, which requires the use of two water supplies (hydrants). We plan to utilize one hydrant that is located on the corner of Broadway and Jester Park Drive. There is a second hydrant that is located directly across the street from the house that we would like to utilize as well. This would require closing Broadway down during the training due to large diameter hose line going across the roadway. The next closest hydrant is located on the East side of the Library off of Parker. It is 450' away from the driveway where our truck will be located. If we were to utilize that hydrant, we would have to drop an entire truck's large diameter hose lines making that truck completely out of service. We have already sent out notifications to the surrounding homes letting them know about the training burn

ALTERNATIVES: NA

FINANCIAL CONSIDERATIONS: N/A

RECOMMENDATION: I recommend that the council approves the Fire Department to temporarily close Broadway during their training burn on April 6. Vehicles will still be able to get through town using Cherokee Dr as an alternate route. The Police Chief has agreed that this would be okay and we plan to work with Public Works to get barricades set.

March 25, 2024

Honorable Mayor and City Council
City of Polk City
112 3rd Street
Polk City, Iowa 50226

RE: BIG CREEK RIDGE PLAT 1
APPROVAL OF CONSTRUCTION DRAWINGS

Dear Honorable Mayor and City Council:

On behalf of BCR, LLC., Civil Design Advantage has submitted the construction drawings for the above referenced plat. These plans represent the first and only phase of construction for this subdivision and include 23 single-family lots. The plans include the construction of portions of NE 9th Street and Arbor Avenue, which will both be local streets extended as part of future development, along with the associated sanitary sewers, storm sewers, water main and services.

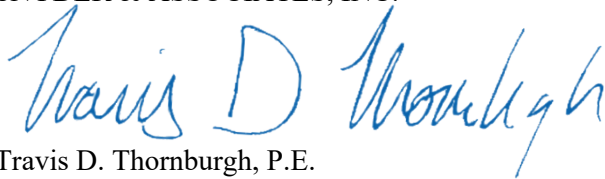
The construction drawings and Storm Water Management Plan appear to be in general conformance with the Subdivision Regulations, SUDAS, and the approved Preliminary Plat. Civil Design Advantage remains solely responsible for their design and ensuring it is fully compliant with all applicable code and permit requirements. Civil Design Advantage is also responsible for construction staking and ensuring all locations, grades and slopes conform to the approved construction drawings.

It shall be the developer's responsibility to obtain approval for all necessary permits prior to the start of construction. These permits include, but are not limited to, the Iowa DNR permits for water main and sanitary sewer construction, and the NPDES Storm Water Discharge permit.

We recommend approval of the construction drawings for Big Creek Ridge Plat 1, subject to the provision and recordation of a Development Agreement outlining the developer's and City's responsibilities for off-site improvements, parkland dedication, sanitary sewer hookup fees, and future improvements to E. Northside Drive. We will be in attendance at the March 25, 2024, City Council meeting should you have questions.

Respectfully submitted,

SNYDER & ASSOCIATES, INC.



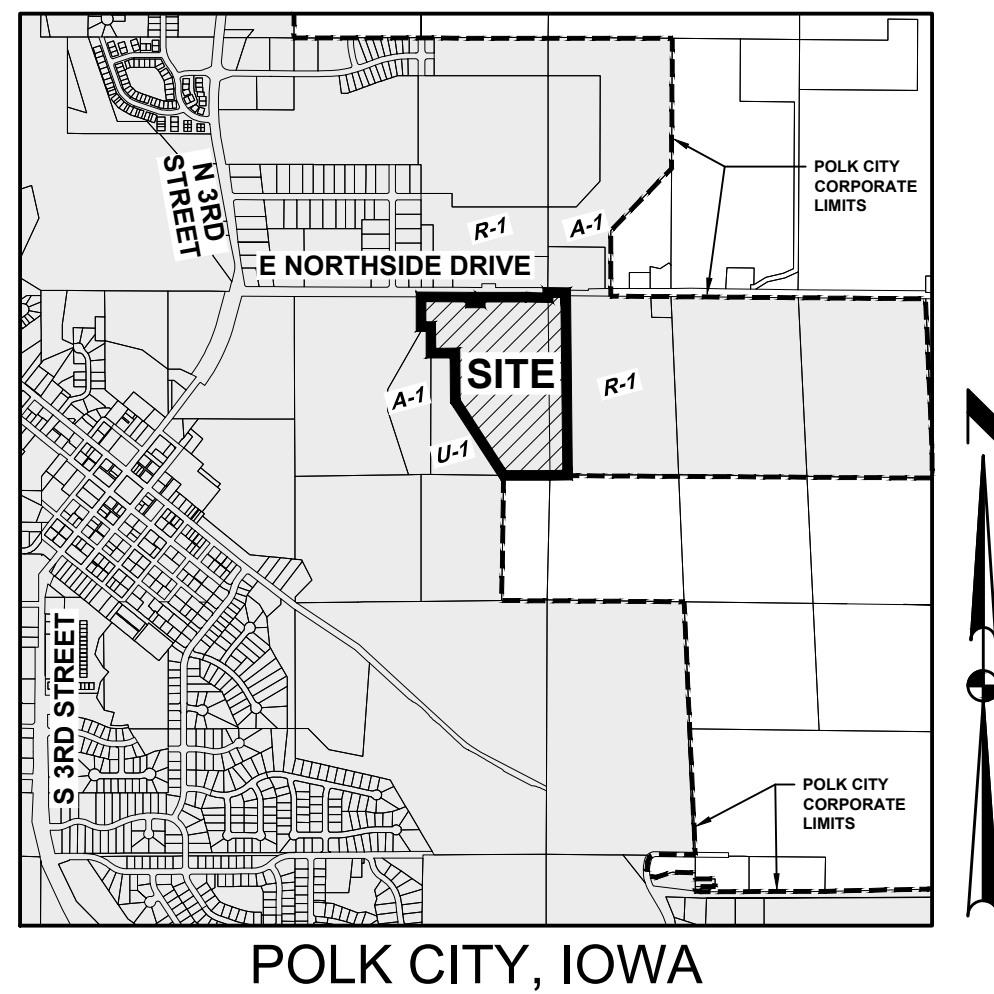
Travis D. Thornburgh, P.E.

CC: Chelsea Huisman, City of Polk City
Mike Schulte, City of Polk City
Eric Grubb, BCR, LLC.
Dean Roghair, Civil Design Advantage

CONSTRUCTION DRAWINGS FOR: BIG CREEK RIDGE PLAT 1

POLK CITY, IOWA

VICINITY MAP



INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	HYDRANT COVERAGE PLAN
3-4	TYPICAL SECTION AND DETAILS
5	QUANTITIES AND REFERENCE NOTES
6	POLK CITY CONSTRUCTION NOTES
7-11	GRADING PLAN
12-15	EROSION AND SEDIMENT CONTROL PLAN
16-26	ROADWAY, STORM AND SANITARY SEWER PLAN AND PROFILE
27-31	WATERMAIN PLAN AND PROFILE
32-33	INTERSECTION DETAILS

GENERAL LEGEND

PROPOSED	EXISTING
PROJECT BOUNDARY	SANITARY MANHOLE
LOT LINE	WATER VALVE BOX
SECTION LINE	FIRE HYDRANT
CENTER LINE	WATER CURB STOP
RIGHT OF WAY	WELL
PERMANENT EASEMENT	STORM SEWER MANHOLE
TEMPORARY EASEMENT	STORM SEWER SINGLE INTAKE
TYPE SW-501 STORM INTAKE	STORM SEWER DOUBLE INTAKE
TYPE SW-503 STORM INTAKE	FLARED END SECTION
TYPE SW-505 STORM INTAKE	ROOF DRAIN/ DOWNSPOUT
TYPE SW-506 STORM INTAKE	DECIDUOUS TREE
TYPE SW-513 STORM INTAKE	CONIFEROUS TREE
TYPE SW-401 STORM MANHOLE	DECIDUOUS SHRUB
TYPE SW-402 STORM MANHOLE	CONIFEROUS SHRUB
TYPE SW-301 SANITARY MANHOLE	ELECTRIC POWER POLE
STORM/SANITARY CLEANOUT	GUY ANCHOR
WATER VALVE	STREET LIGHT
FIRE HYDRANT ASSEMBLY	POWER POLE W/ TRANSFORMER
SIGN	UTILITY POLE W/ LIGHT
DETECTABLE WARNING PANEL	ELECTRIC BOX
STORM SEWER STRUCTURE NO.	ELECTRIC TRANSFORMER
STORM SEWER PIPE NO.	ELECTRIC MANHOLE OR VAULT
SANITARY SEWER STRUCTURE NO.	TRAFFIC SIGN
SANITARY SEWER PIPE NO.	TELEPHONE JUNCTION BOX
SANITARY SEWER WITH SIZE	TELEPHONE MANHOLE/VAULT
SANITARY SERVICE	TELEPHONE POLE
STORM SEWER	GAS VALVE BOX
STORM SERVICE	CABLE TV JUNCTION BOX
WATERMAIN WITH SIZE	CABLE TV MANHOLE/VAULT
WATER SERVICE	MAIL BOX
SAWCUT (FULL DEPTH)	BENCHMARK
SILT FENCE	SOIL BORING
USE AS CONSTRUCTED	UNDERGROUND TV CABLE
FINISH GRADE AT HYDRANT	GAS MAIN
MINIMUM OPENING ELEVATION	FIBER OPTIC
	UNDERGROUND TELEPHONE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	FIELD TILE
	SANITARY SEWER W/ SIZE
	STORM SEWER W/ SIZE
	WATER MAIN W/ SIZE

OWNER / DEVELOPER

BCR, LLC
17389 BERKSHIRE PARKWAY
CLIVE, IOWA 50325
PH: 515-975-7441
CONTACT: ERIC J. GRUBB
EMAIL: ERIC@SOLIDGROUNDIOWA.COM

ENGINEER / SURVEYOR

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
CONTACT: DEAN ROGHAIR
EMAIL: DEANR@CDA-ENG.COM
PH. (515) 369-4400
FX. (515) 369-4410

BENCHMARKS

- BURY BOLT ON HYDRANT @ NW CORNER OF HIGHWAY 415 & S 3RD STREET. ELEVATION=932.84
- FOUND MICRO "MAG" NAIL AT NE CORNER OF SECTION 1-80-25. ELEVATION=884.14

DATE OF SURVEY

MAY 17, 2023

ZONING & BULK REGULATIONS

EXISTING ZONING:
R-1 SINGLE FAMILY DETACHED RESIDENTIAL DISTRICT

BULK REGULATIONS
MINIMUM LOT AREA: 10,000 SF
MINIMUM LOT WIDTH: 80'
FRONT YARD SETBACK: 35'
SIDE YARD SETBACK (MINIMUM ON ONE SIDE): 8'
REAR YARD SETBACK: 35'

NOTE:
A 40' FRONT YARD SETBACK IS BEING PROPOSED FOR THIS DEVELOPMENT.

PARKLAND DEDICATION

REQUIRED
23 SINGLE FAMILY LOTS x 995.95 SF/LOT = 22,907 SF (0.53 AC)
- FEE TO BE PROVIDED IN LIEU OF DEDICATION

UTILITY WARNING

ANY UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY AND RECORDS OBTAINED BY THIS SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL THE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION SHOWN.

FEMA FLOODPLAIN

THERE IS A 'ZONE A' FEMA FLOODPLAIN PRESENT ON THIS PROPERTY. THE FLOODPLAIN WILL BE CONTAINED WITHIN THE PROPOSED OUTLOTS THAT ARE TIED TO THE ADJACENT LOTS. ALL RECORD OF LOT TIE AGREEMENTS WILL BE REQUIRED FOR THESE OUTLOTS PRIOR TO THE FINAL PLAT APPROVAL.

PLAT DESCRIPTION

THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 80 NORTH, RANGE 25 WEST OF THE 5TH P.M., POLK COUNTY, IOWA, EXCEPT THE NORTH 110 FEET OF THE WEST 100 FEET OF THE EAST 803.9 FEET AND EXCEPT LYING WESTERLY OF A LINE BEGINNING 1550 FEET NORTH OF THE SOUTHWEST CORNER ALONG THE WEST LINE OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1, THENCE EAST 100 FEET, THENCE SOUTH 275.7 FEET, THENCE EAST 250 FEET, THENCE SOUTH 500 FEET, THENCE SOUTHEASTERLY TO A POINT ON THE SOUTH LINE OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1 TO A POINT 840 FEET EAST OF THE SOUTHWEST CORNER OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1, ALL EXCEPT FOR PUBLIC HIGHWAY.

AND A PLAT OF SURVEY FOR PARCEL "2023-53" RECORDED APRIL 27, 2023 IN BOOK 19457 PAGE 895 OF THE OFFICE OF THE POLK COUNTY RECORDER, BEING A PART OF THE NORTHWEST FRACTIONAL QUARTER OF THE NORTHWEST QUARTER OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE 5TH P.M., POLK COUNTY, IOWA.

THE PROPERTY CONTAINS 49.17 ACRES (2,141,883 SQUARE FEET).
THE PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

SUBMITTAL DATES

FIRST SUBMITTAL	09/28/2023
SECOND SUBMITTAL	10/30/2023
THIRD SUBMITTAL	01/04/2024
FOURTH SUBMITTAL	02/05/2024



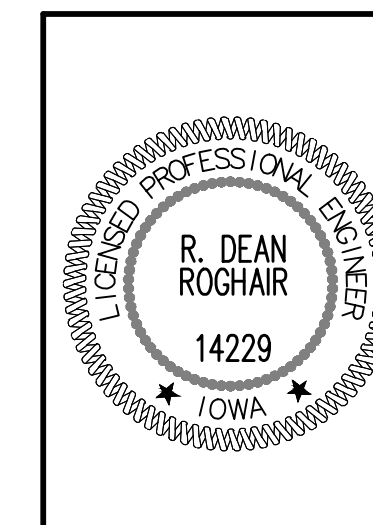
REFER TO C.M.T. GEOTECHNICAL ENGINEERING REPORT NO. 2320410HI FOR DETAILED GEOTECHNICAL SUMMARY.

THE PROJECT REQUIRES AN IOWA NPDES PERMIT #2 AND CITY OF POLK CITY GRADING PERMIT. CIVIL DESIGN ADVANTAGE WILL PROVIDE THE PERMITS AND THE INITIAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE CONTRACTOR'S USE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE SWPPP THROUGHOUT CONSTRUCTION AND MEETING LOCAL, STATE AND FEDERAL REQUIREMENTS.

ALL CONSTRUCTION MATERIALS, DUMPSTERS, DETACHED TRAILERS OR SIMILAR ITEMS ARE PROHIBITED ON PUBLIC STREETS OR WITHIN THE PUBLIC R.O.W.

THE 2023 EDITION OF SUDAS STANDARD SPECIFICATIONS, AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.

THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS.



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

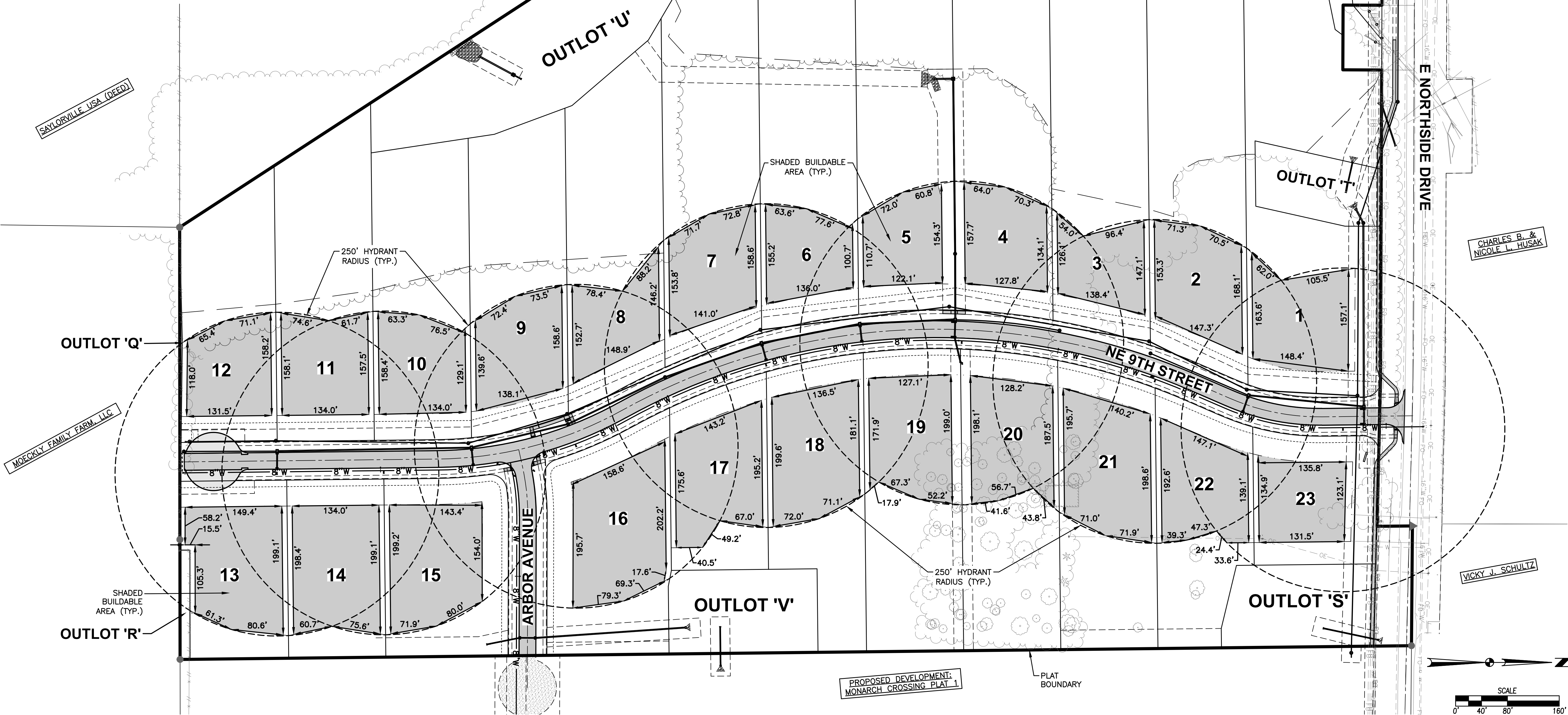
R. DEAN ROGHAIR, P.E. DATE

LICENSE NUMBER 14229
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2025
PAGES OR SHEETS COVERED BY THIS SEAL:

ALL SHEETS

BIG CREEK RIDGE PLAT 1 NOTES:

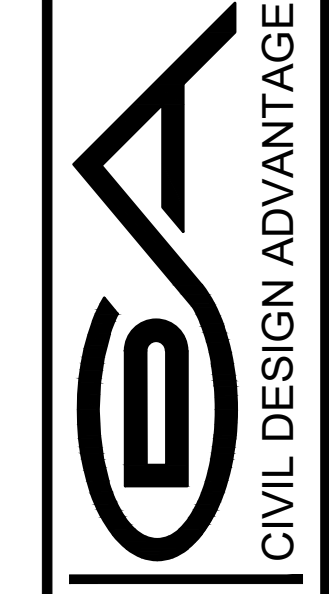
1. OUTLOTS 'S', 'T', 'U' & 'V' TO BE DEDICATED TO THE HOMEOWNER'S ASSOCIATION & SHALL BE USED FOR STORM WATER DETENTION.
2. OUTLOT 'W' WILL BE TIED TO LOT 1, OUTLOT 'X' WILL BE TIED TO LOT 2 & OUTLOT 'Y' WILL BE TIED TO LOT 3 VIA A RECORD OF LOT TIE AGREEMENT AT THE TIME OF FINAL PLATTING.
3. CONTRACT FOR STREET LIGHTING SHALL BE EXECUTED WITH FINAL PLAT.
4. STREET LIGHTS SHALL BE ON THE SAME SIDE OF STREET AS WATER MAIN.
5. CONTRACT FOR ELECTRIC DISTRIBUTION SYSTEM SHALL BE EXECUTED WITH FINAL PLAT.
6. WATER AND SANITARY SEWER SHALL BE PROVIDED BY THE CITY OF POLK CITY.
7. NO LOTS WITHIN THIS PLAT SHALL BE PERMITTED TO HAVE A DRIVEWAY OFF E NORTHSIDE DRIVE.
8. A HOMEOWNER'S ASSOCIATION SHALL BE ESTABLISHED AT THE TIME OF FINAL PLATTING AND SHALL INCLUDE ALL LOTS WITHIN THE PLAT.
9. SUBDRAINS OR STORM SEWER SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS.
10. THE MINIMUM OPENING ELEVATION (M.O.E.) SHALL BE THE ELEVATION OF THE LOWEST OPENING.
11. ALL UTILITY SERVICES SHALL BE UNDERGROUND.
12. A GEOTECHNICAL REPORT WILL BE SUBMITTED WITH THE CONSTRUCTION DRAWINGS.
13. OUTLOT 'Z' IS NOT BUILDABLE UNTIL IT HAS BEEN RE-PLATTED IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS. AT THE TIME OF RE-PLATTING, A SEPARATE OUTLOT WILL BE CREATED FOR THE FLOOD HAZARD AREA CURRENTLY SHOWN ON OUTLOT 'Z'.
14. THE DEVELOPER WILL SATISFY PARKLAND DEDICATION VIA THE PARKLAND DEDICATION FEE. THE FEE WILL BE DETERMINED BASED ON FAIR MARKET VALUE OF PARKLAND AND OTHER CONSIDERATIONS AS DETERMINED BY THE CITY MANAGER AT THE TIME OF FINAL PLATTING.
15. ONLY ONE DRIVEWAY IS PERMITTED PER LOT, WITH THE EXCEPTION OF LOTS 15 & 16, WHICH SHALL BE PERMITTED ONE DRIVEWAY ON EACH STREET FRONTAGE.
16. ALL PROPOSED IMPROVEMENTS WILL BE CONSTRUCTED IN A SINGLE PHASE.
17. A HOMEOWNER'S ASSOCIATION WILL BE ESTABLISHED AT THE TIME OF FINAL PLATTING & WILL BE RESPONSIBLE FOR MANAGEMENT & ANNUAL INSPECTION OF ALL PROPOSED DETENTION BASINS.
18. THE HOMEOWNER'S ASSOCIATION WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SUBDIVISION IDENTIFICATION SIGN.
19. A FULL STORMWATER MANAGEMENT PLAN WILL BE SUBMITTED WITH THE CONSTRUCTION DRAWINGS.
20. 23 SINGLE FAMILY LOTS & 8 OUTLOTS ARE BEING PROPOSED FOR THIS SUBDIVISION. SINGLE FAMILY LOTS RANGE IN SIZE FROM 0.88 AC TO 3.04 AC. OUTLOTS RANGE IN SIZE FROM 0.12 AC TO 3.00 AC.
21. WOODED AREAS ARE INTENDED TO BE PROTECTED AND WILL BE KEPT UNMOWN. LIGHT PRUNING FOR MAINTENANCE IS ALLOWED AS ARE REMOVALS OF DEAD OR DYING TREES, INVASIVE SPECIES AND TREES DAMAGED BY STORMS. REMOVALS ARE ALSO ALLOWED IN THE SHADED BUILDABLE AREA ENVELOPES ILLUSTRATED ON SHEET 2 OF THE PRELIMINARY PLAT.
22. NO LOT LOCATED WITHIN THIS SUBDIVISION SHALL BE SUBDIVIDED WITHOUT PRIOR APPROVAL OF THE CITY COUNCIL.



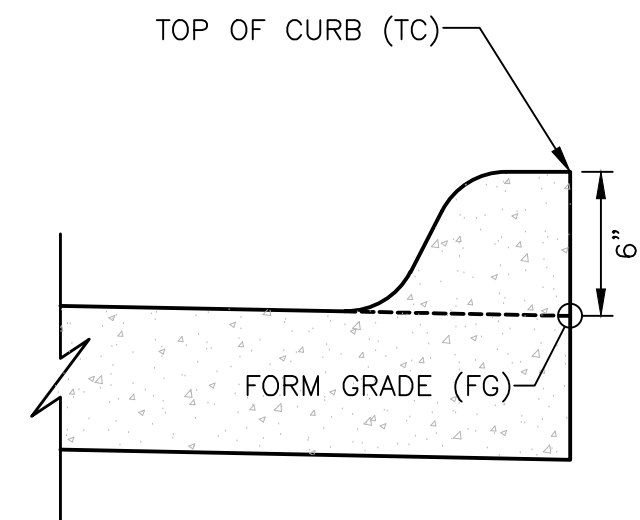
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DATE	REVISIONS
02/05/2024	FOURTH SUBMITTAL
01/04/2024	THIRD SUBMITTAL
10/30/2023	SECOND SUBMITTAL
09/28/2023	FIRST SUBMITTAL

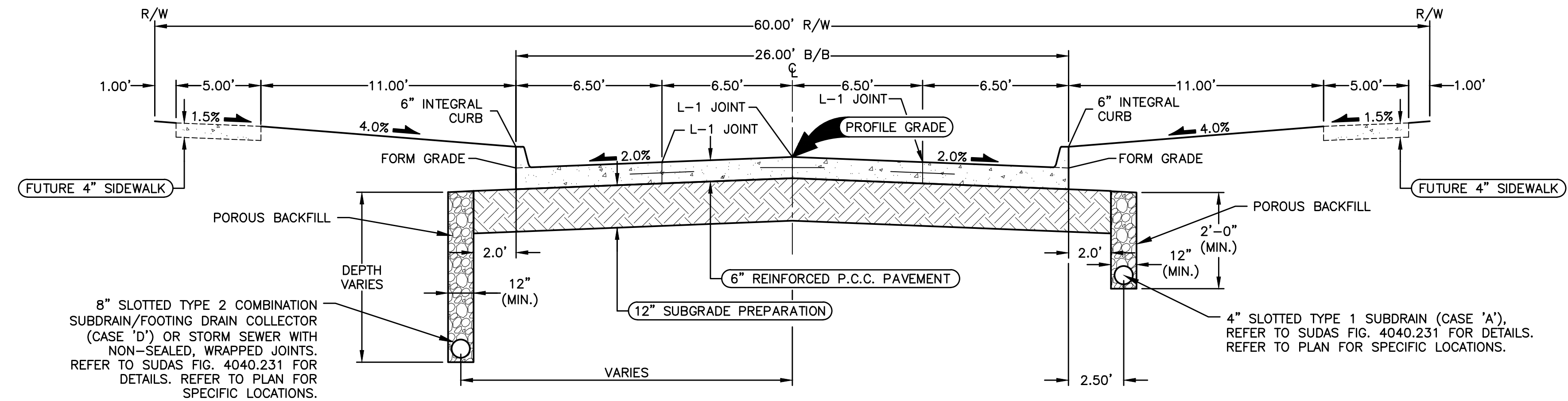
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 URBANDALE, IOWA 50322
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 TECH:



BIG CREEK RIDGE PLAT 1
HYDRANT COVERAGE PLAN
 POLK CITY, IOWA
2 / **33**
 2211.760

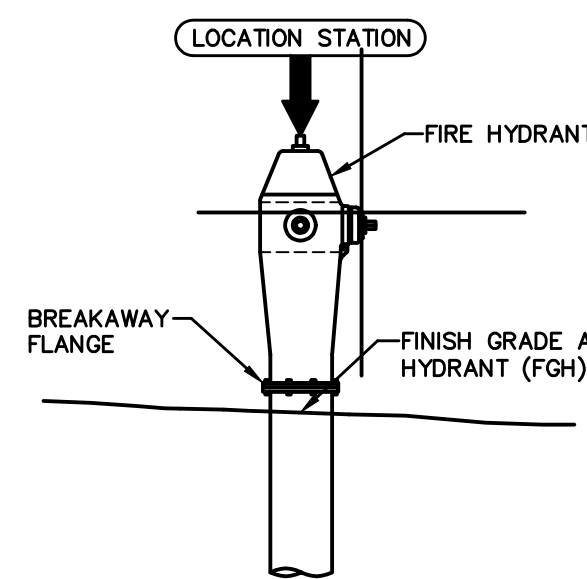


**INTEGRAL 6" STANDARD CURB
SPOT ELEVATION REFERENCE DETAIL**
NOT TO SCALE

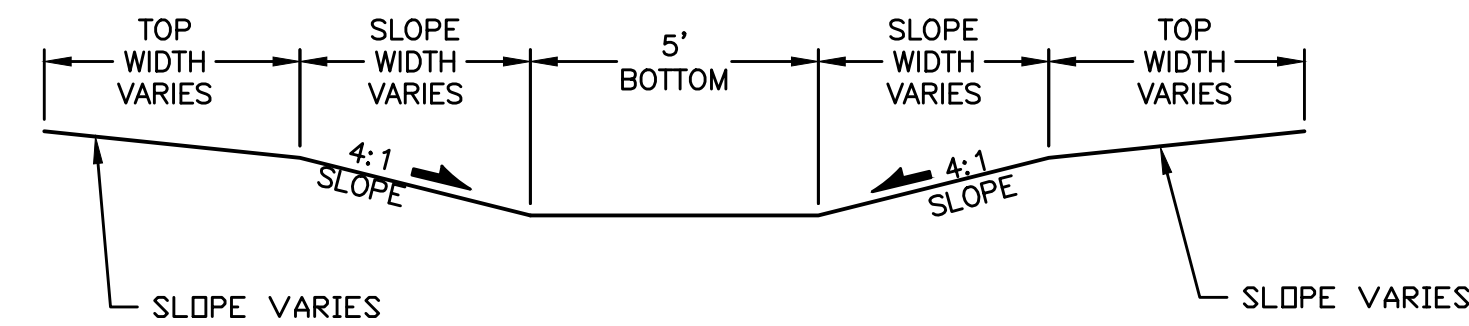


- NOTES:
1. PREPARE SUBGRADE IN 2 - 6" LIFTS.
 2. TYPICAL C JOINT SPACING IS 12'.
 3. CONTRACTOR SHALL TRANSITION EXISTING GUTTERLINE JOINTING TO PROPOSED QUARTER POINT JOINTING WITHIN ONE PANEL.

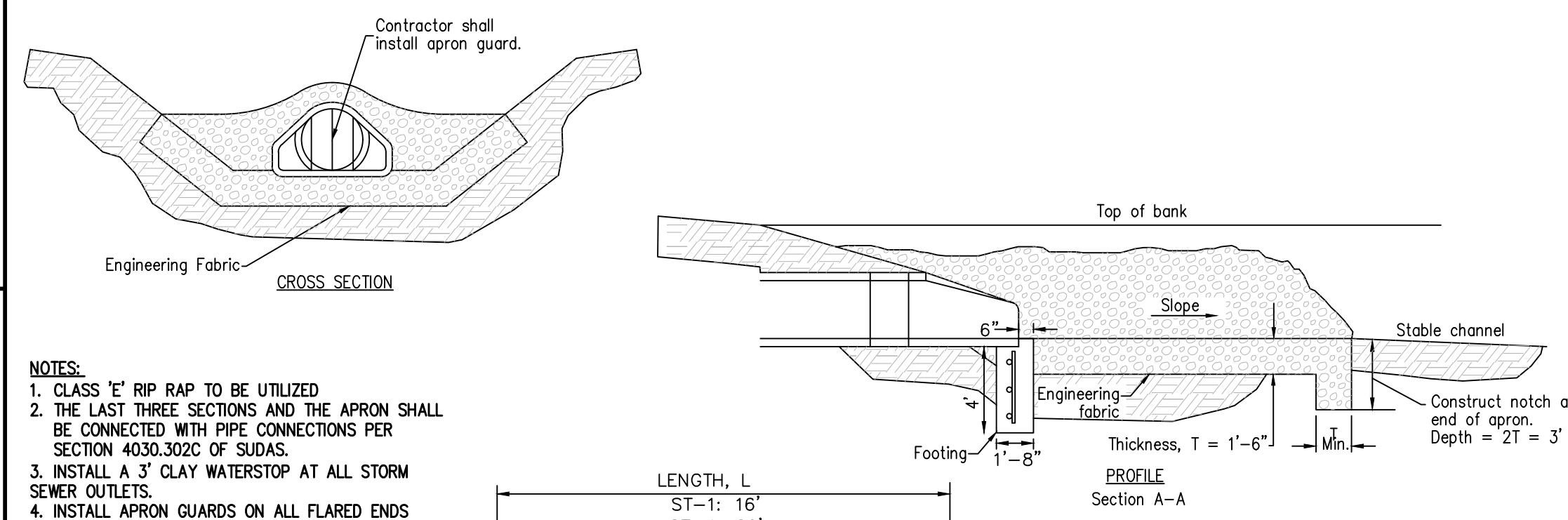
TYPICAL SECTION - 26' B/B P.C.C. ROADWAY WITH 60' R.O.W.
NOT TO SCALE
NE 9TH STREET
ARBOR AVENUE



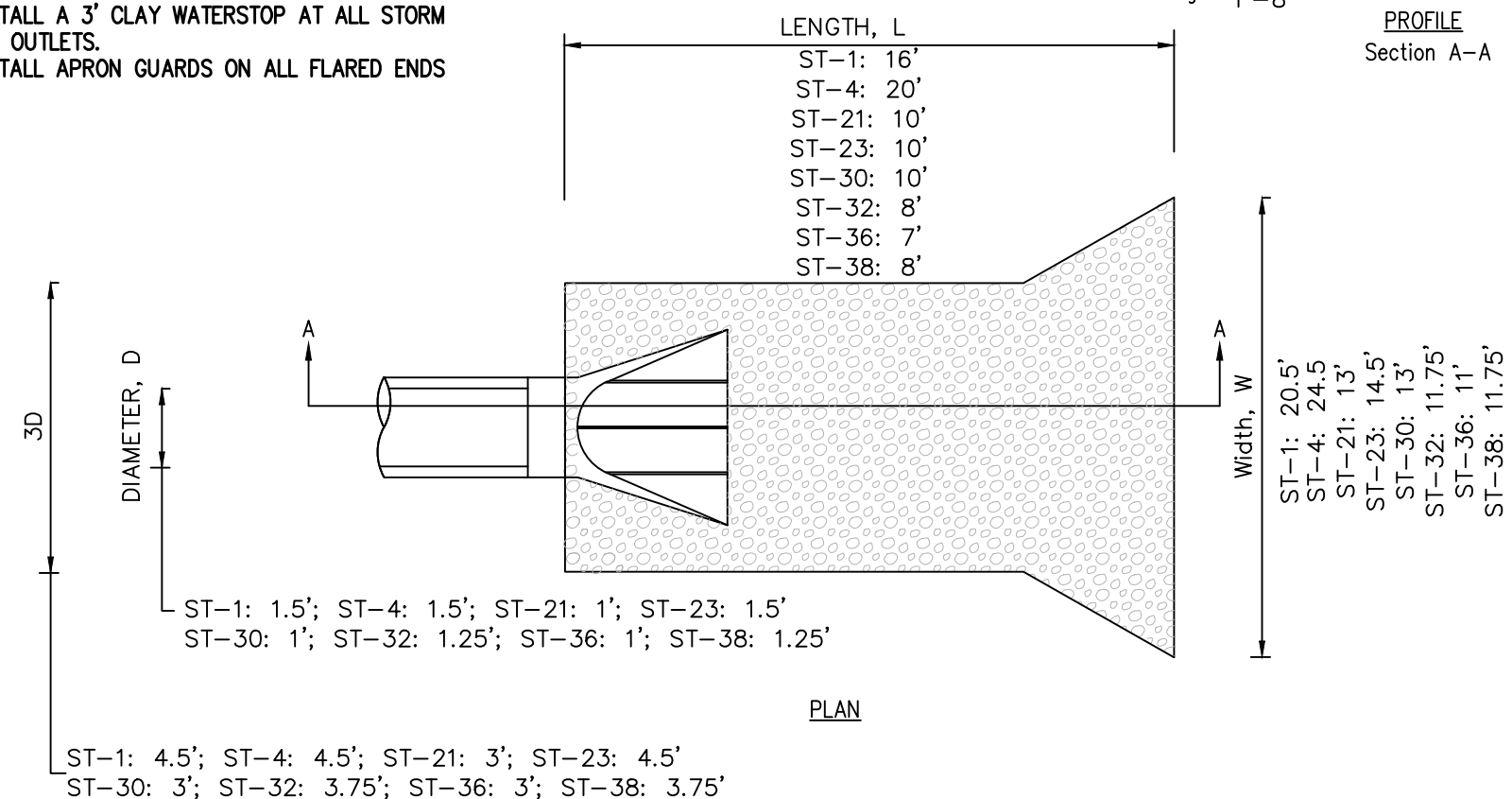
**HYDRANT ASSEMBLY SPOT
ELEVATION REFERENCE DETAIL**
NOT TO SCALE



TYPICAL SECTION - DRAINAGE SWALE
NOT TO SCALE

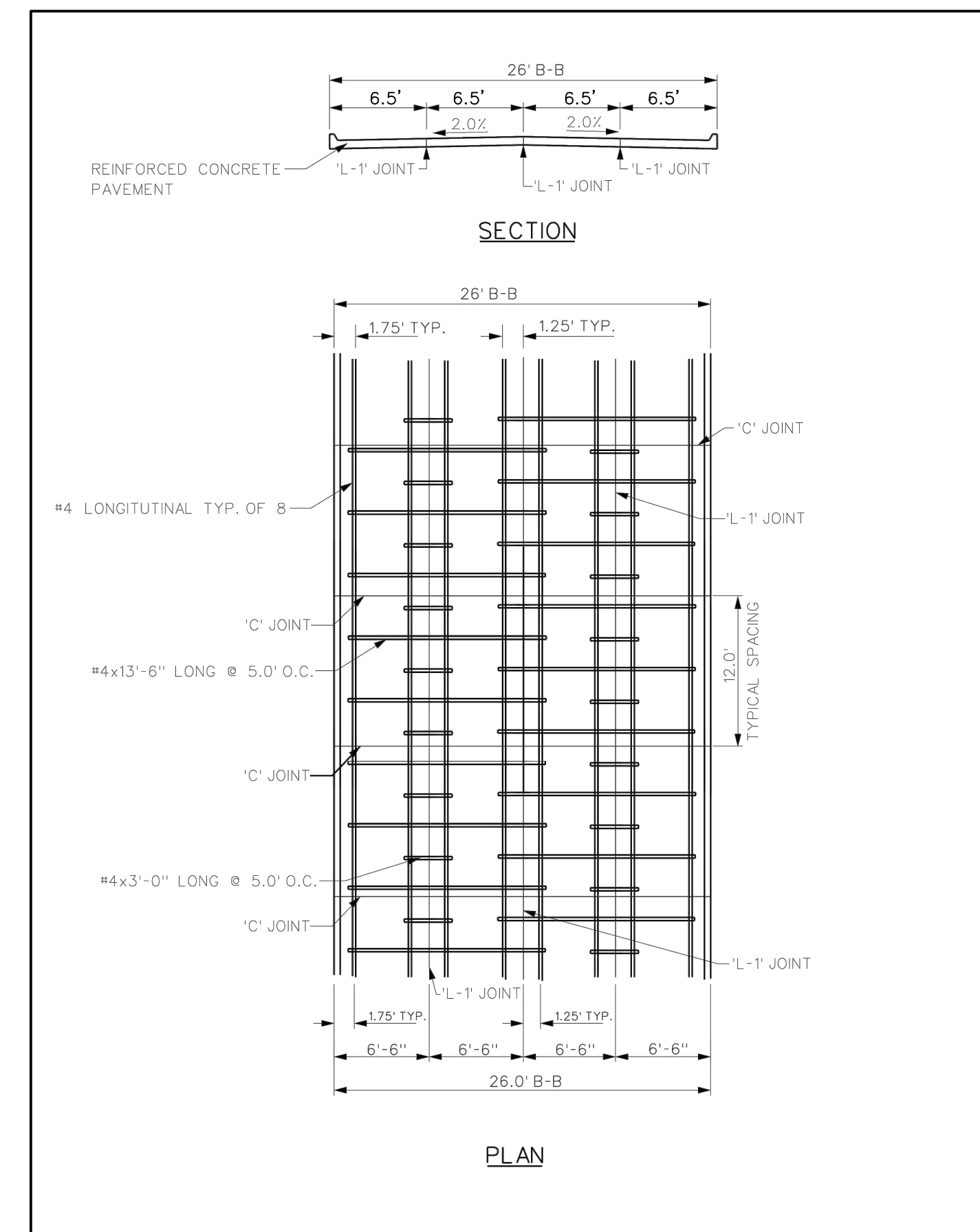


- NOTES:
1. CLASS "E" RIP RAP TO BE UTILIZED
 2. THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTIONS PER SECTION 4030.302C OF SUDAS.
 3. INSTALL A 3" CLAY WATERSTOP AT ALL STORM SEWER OUTLETS.
 4. INSTALL APRON GUARDS ON ALL FLARED ENDS



ST-1: 4.5'; ST-4: 4.5'; ST-21: 3'; ST-23: 4.5'
ST-30: 3'; ST-32: 3.75'; ST-36: 3'; ST-38: 3.75'

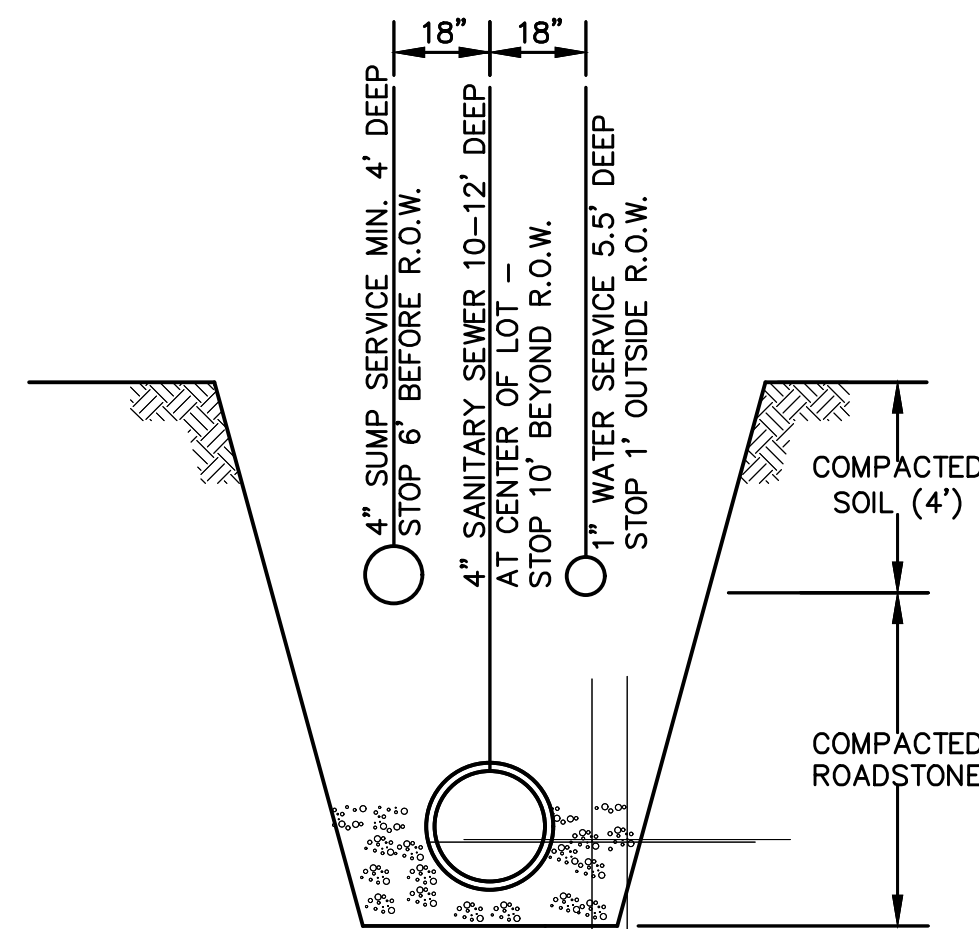
ROCK APRON FOR PIPE OUTLET
NOT TO SCALE



**26' B-B CONTINUOUSLY REINFORCED
JOINTED PCC PAVEMENT**
NOT TO SCALE

NOTES:

1. PAINT CURB GREEN FOR BOTH SANITARY AND SUMP SERVICES.
2. PAINT CURB BLUE FOR WATER SERVICE.
3. PLACE ONE 6" STEEL POST BURIED 3" AT WATER CURB BOX.
4. STOP ROCK BEDDING FOR SANITARY SEWER AT R.O.W.
5. INSTALL 2x4 AT THE END OF EACH UTILITY SERVICE, PAINTED AS FOLLOWS FOR THE SERVICE IT IS MARKING:
WATER - BLUE
STORM - WHITE
SANITARY - GREEN



INTERIM SERVICE LOCATION DETAIL
NOT TO SCALE

DATE	REVISIONS
02/05/2024	FOURTH SUBMITTAL
01/04/2024	THIRD SUBMITTAL
10/30/2023	SECOND SUBMITTAL
09/28/2023	FIRST SUBMITTAL

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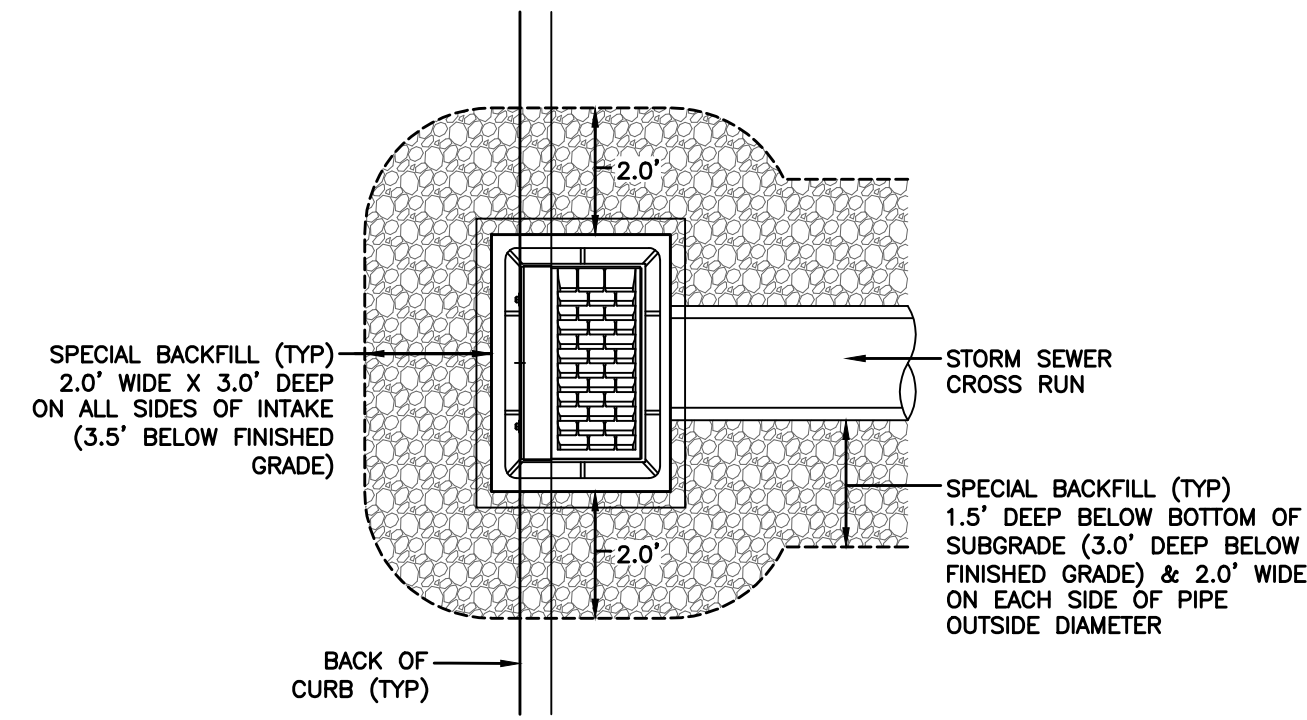
TECH:

ENGINEER: RDR

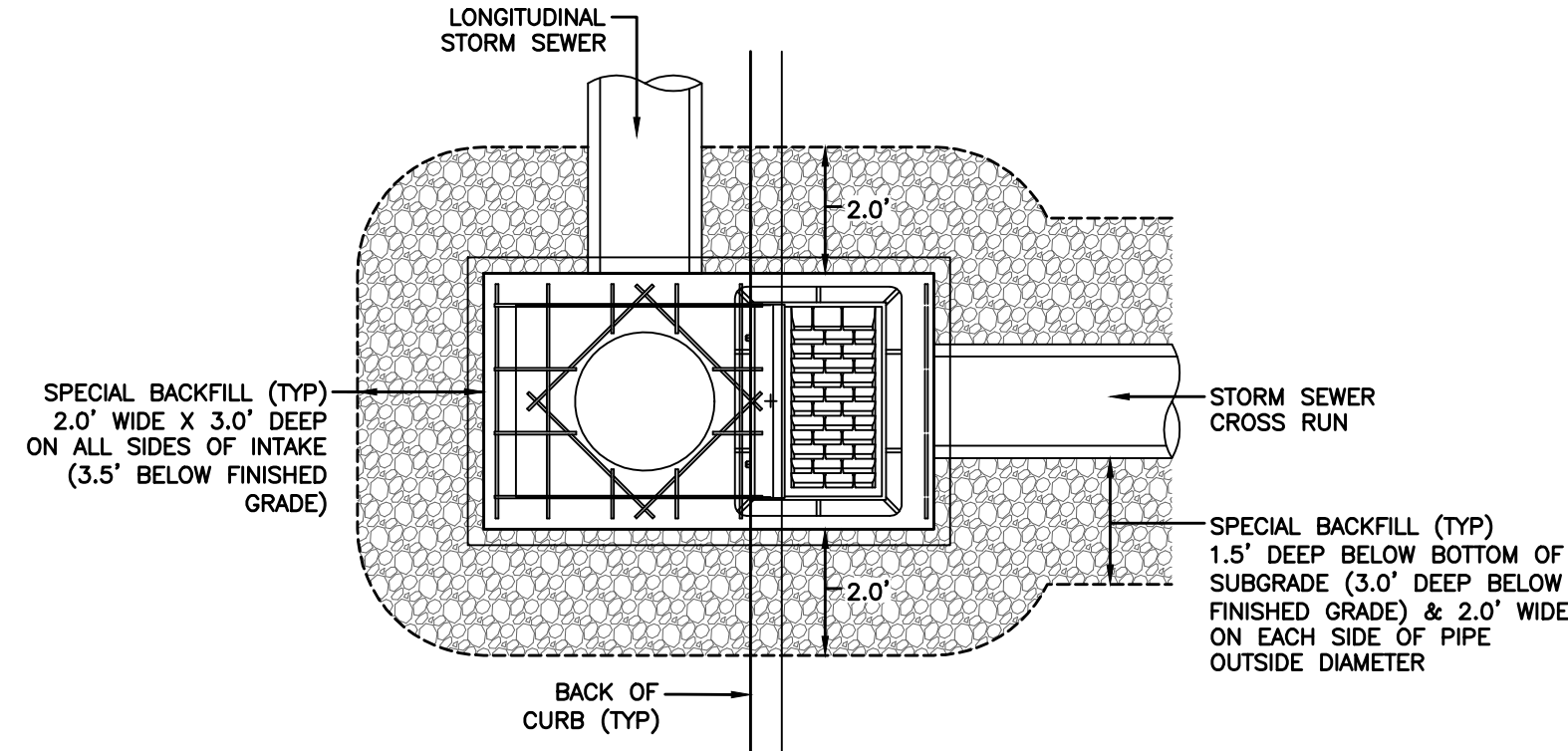


POLK CITY, IOWA

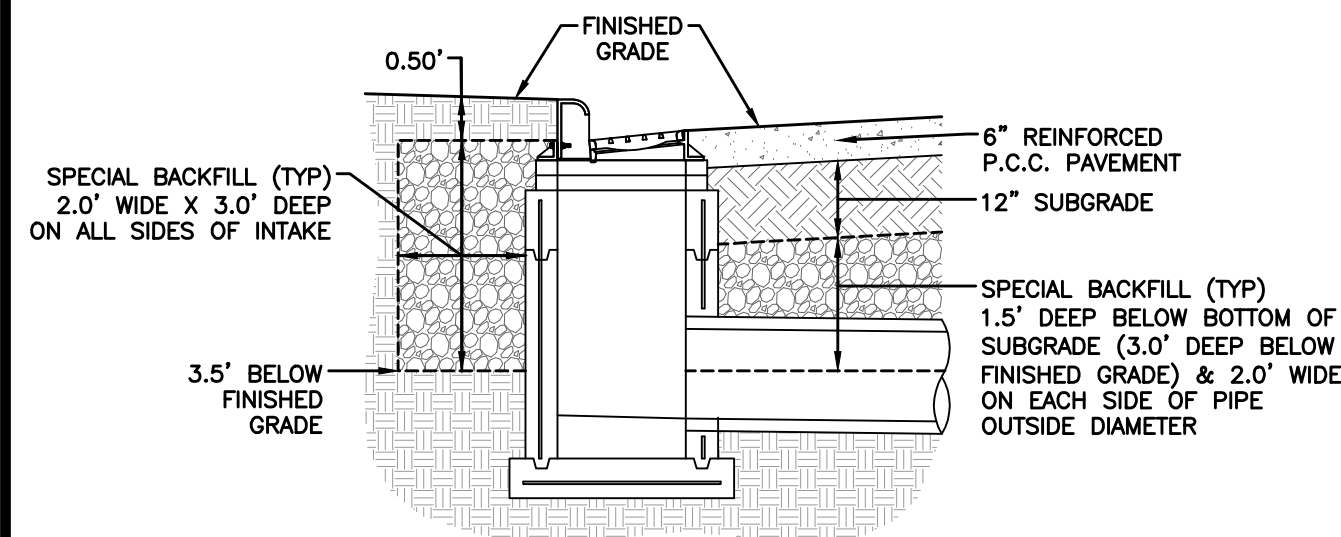
**BIG CREEK RIDGE PLAT 1
TYPICAL SECTIONS AND DETAILS**



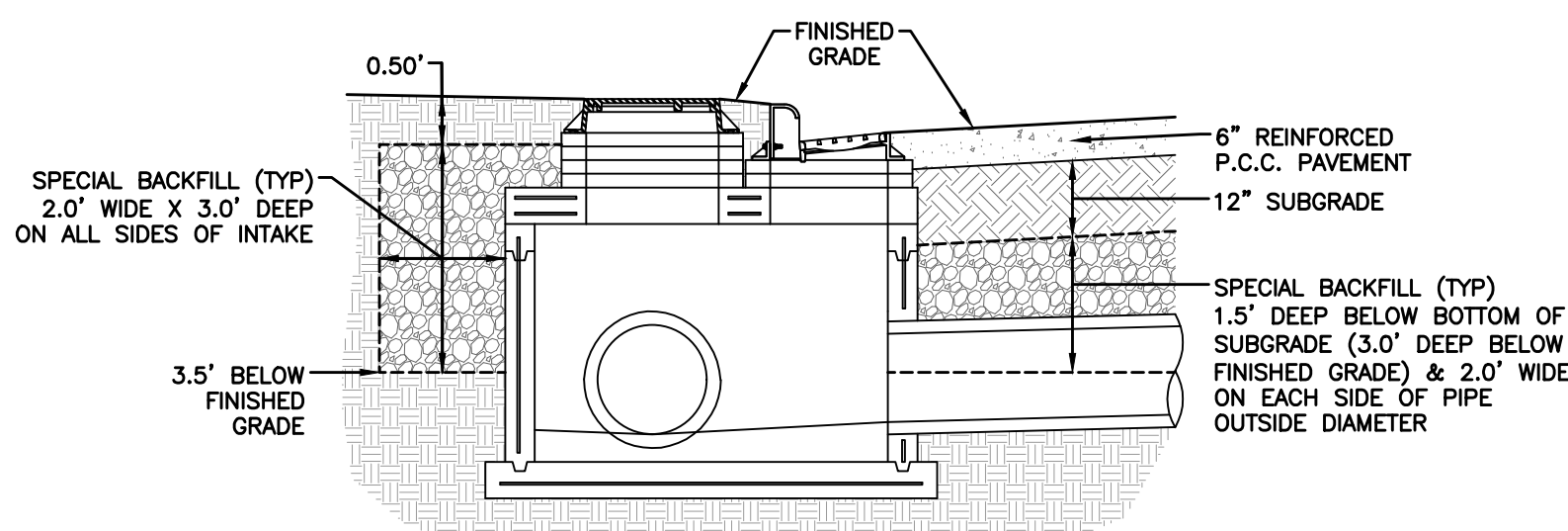
SW-501 PLAN



SW-503 PLAN



SW-501 TYPICAL SECTION

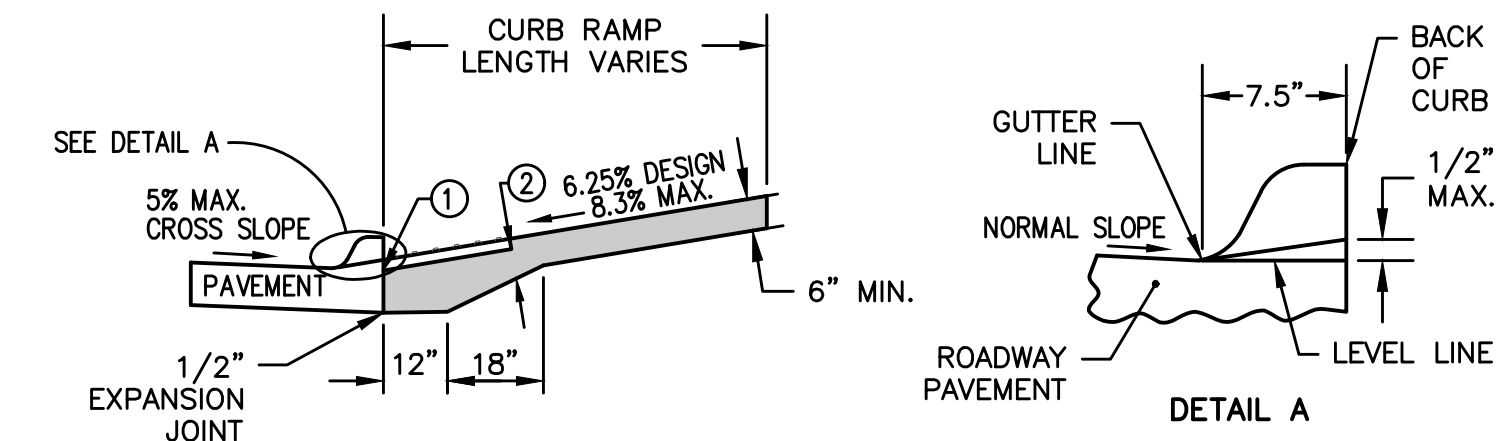
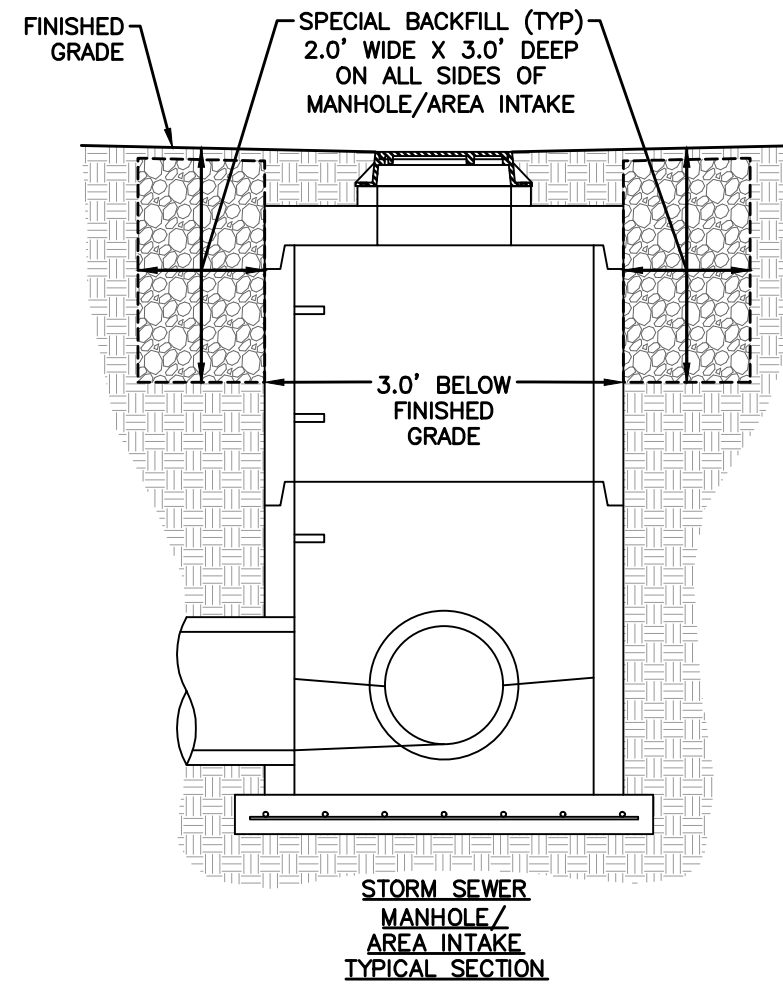


SW-503 TYPICAL SECTION

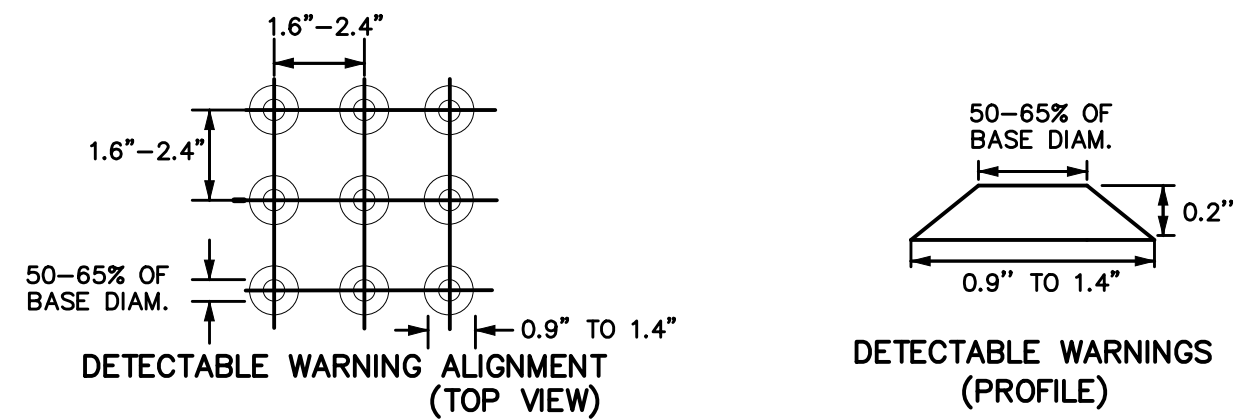
STORM SEWER SPECIAL BACKFILL DETAIL

NOT TO SCALE

NOTE:
ALL CURB INTAKES, STORM SEWER CROSS RUNS, STRUCTURES AND MANHOLES SHALL INCLUDE PLACEMENT AND COMPACTION OF A LAYER OF SPECIAL BACKFILL. FOR CURB INTAKES, THE LAYER OF SPECIAL BACKFILL SHALL BE PLACED FROM ONE-HALF FOOT BELOW THE FINISHED GRADE ELEVATION, MEASURED BEHIND THE CURB, TO A DEPTH OF THREE AND ONE-HALF FEET. THIS LAYER SHALL BE TWO FEET IN WIDTH INSTALLED ON ALL SIDES OF INTAKE OUTSIDE OF PAVEMENT. FOR AREA INTAKES AND MANHOLES, THE LAYER OF SPECIAL BACKFILL SHALL BE PLACED FROM THE FINISHED GRADE ELEVATION TO A DEPTH OF THREE FEET. THIS LAYER SHALL BE TWO FEET IN WIDTH INSTALLED ON ALL SIDES OF THE STRUCTURE. FOR STORM SEWER CROSS RUNS, THE LAYER OF SPECIAL BACKFILL SHALL BE PLACED FROM THE BOTTOM OF SUBGRADE TO A DEPTH OF THREE FEET. THIS LAYER SHALL BE TWO FEET WIDE ON EACH SIDE OF THE PIPE'S OUTSIDE DIAMETER.

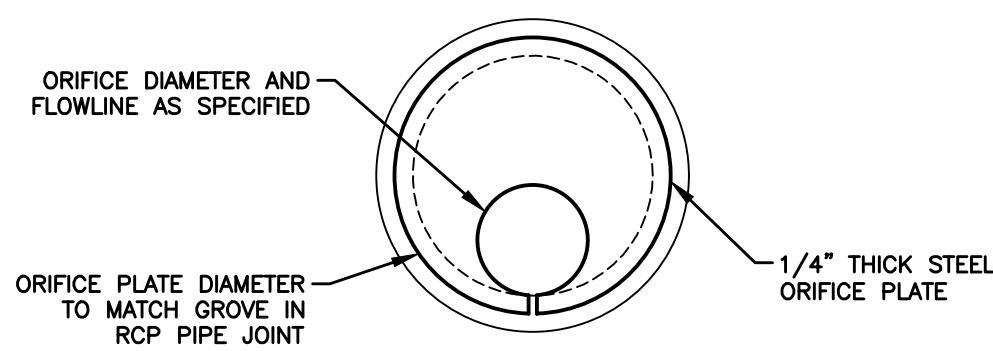
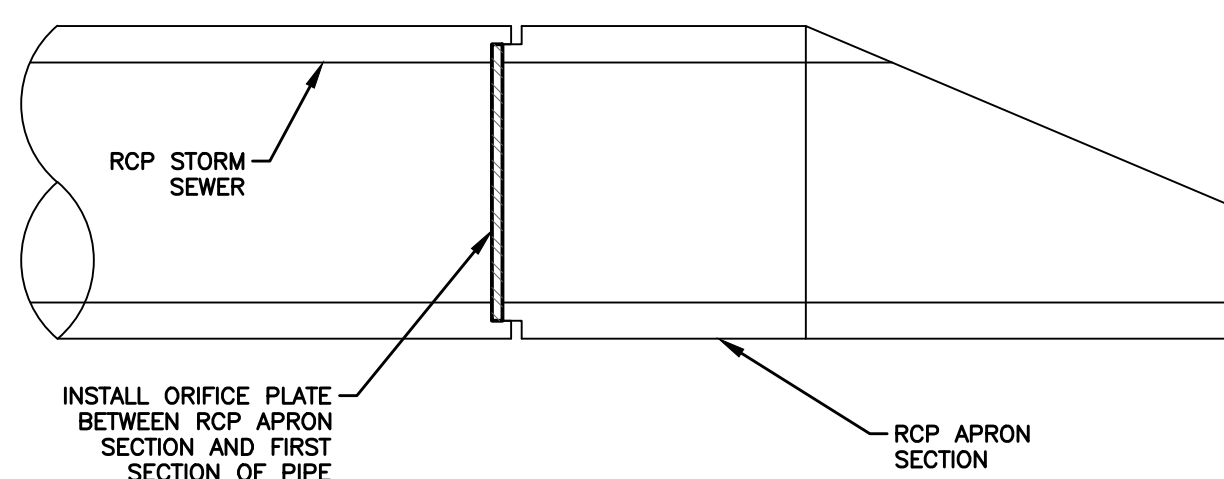


- ① INSTALL A 24 INCH WIDE (MIN.) STRIP OF DETECTABLE WARNINGS AT THE BACK OF CURB. EXTEND THE DETECTABLE WARNINGS ACROSS THE FULL WIDTH OF THE RAMP.
- ② PROVIDE A MINIMUM OF 6 INCHES OF CONCRETE BELOW THE DETECTABLE WARNING PANEL.



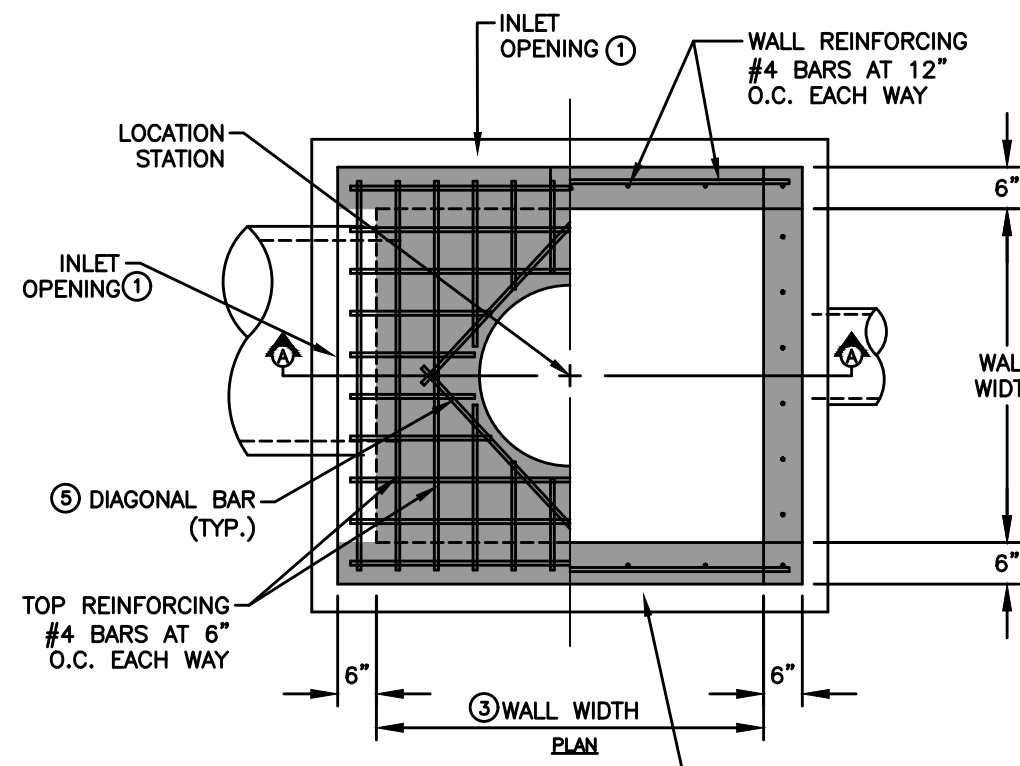
DETECTABLE WARNING STRIP DETAIL

NOT TO SCALE

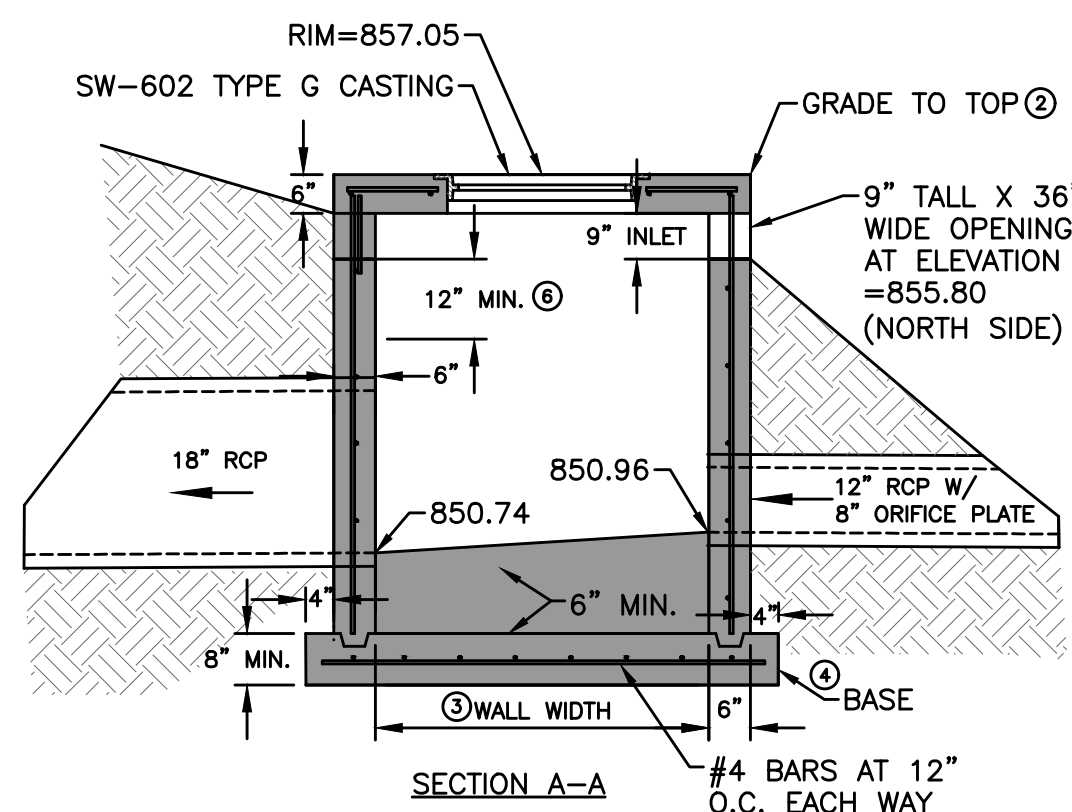


ORIFICE PLATE (ST-3 & ST-37)

NOT TO SCALE

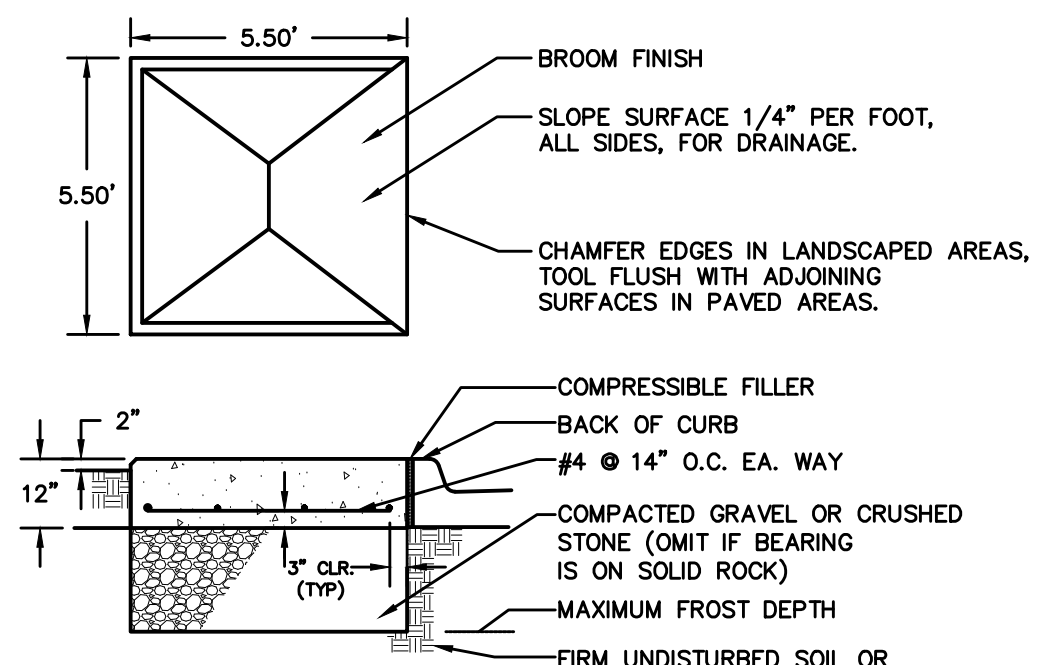


- STRUCTURE MAY BE BUILT WITH OPENINGS ON ANY OR ALL SIDES. PROVIDE OPENINGS AND ORIENTATION AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- ADJACENT WALLS MAY HAVE DIFFERENT WIDTHS BASED UPON PIPE CONFIGURATION, BUT STRUCTURE MUST BE RECTANGULAR.
- ① CONSTRUCT INLET OPENINGS WITH 15-INCH #4 EPOXY-COATED BARS AT 8 INCHES ON CENTER. EMBED BARS A MINIMUM OF 3 INCHES INTO WALLS AND TOP AT ALL OPENINGS. CONSTRUCT 2 INLET OPENING 9" TALL AND 36" WIDE.
 - ② GRADE TO INLET ELEVATION ON OPEN SIDES. GRADE TO TOP ELEVATION ON CLOSED SIDES.
 - ③ WALL WIDTHS VARY WITH PIPE DIA. PROVIDE 6 INCHES OF WALL WIDTH (MINIMUM) EACH SIDE OF PIPE OPENING. MINIMUM WALL WIDTH IS 36 INCHES. MAXIMUM WALL WIDTH IS 72 INCHES.
 - ④ CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST INTERNAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
 - ⑤ INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.
 - ⑥ 12" MINIMUM WALL HEIGHT ABOVE ALL PIPES.
 - ⑦ CORNER PIER REQUIRED BETWEEN OPENINGS OF TWO ADJACENT WALLS. EXTEND WALL REINFORCING VERTICALLY THROUGH PIER. INSTALL ONE ADDITIONAL 15-INCH #4 BAR IN PIER.



OUTLET STRUCTURE - 4' x 4' SW-513 INTAKE DETAIL (ST-2)

NOT TO SCALE



- GENERAL NOTES**
1. CONCRETE: 3000 PSI @ 28 DAYS, 6% AIR ENTRAINMENT 3" SLUMP, PLACE IN ACCORDANCE WITH ACI-301.
 2. REINFORCING STEEL: ASTM A615, GRADE 60.
 3. THIS BASE DETAIL CAN BE USED FOR NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS (NDCBU) CLUSTER BOXES AND PARCEL LOCKERS WITH 4"x10" BOLT PATTERN.
 4. REQUIRED EXPANSION BOLT CAPACITY, BASED ON CALCULATED DESIGN LOAD= 3100 LBS TENSION, 2000 LBS SHEAR.
 5. MAILBOX PADS TO BE INSTALLED AT TIME OF SIDEWALK INSTALLATION.

CLUSTER MAILBOX PAD DETAIL

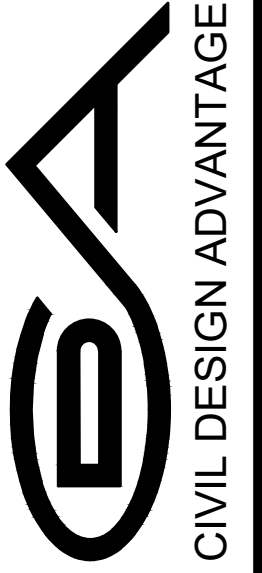
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4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400

TECH: ENGINEER: RDR



BIG CREEK RIDGE PLAT 1
TYPICAL SECTIONS AND DETAILS

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	STRIPPING, SALVAGING AND SPREAD TOPSOIL	LS	1
2	CLASS 10 EXCAVATION	LS	1
3	SUBGRADE PREPARATION	SY	7,976
4	CONNECT TO EXISTING SANITARY SEWER	EA	1
5	SANITARY SEWER GRAVITY MAIN, TRENCHLESS, 8" DIA	LF	52
6	SANITARY SEWER GRAVITY MAIN, TRENCHED, 8" DIA	LF	3,202
7	SANITARY SERVICE STUB, 4" DIA.	EA	23
8	SUBDRAIN, SLOTTED PVC, 4" DIA	LF	2,775
9	STORM SEWER, TRENCHED, HDPE, 8" DIA	LF	465
10	STORM SEWER, TRENCHED, RCP, 12" DIA	LF	283
11	STORM SEWER, TRENCHED, RCP, 15" DIA	LF	1,734
12	STORM SEWER, TRENCHED, RCP, 18" DIA	LF	758
13	STORM SEWER SERVICE STUB, 4" DIA.	EA	23
14	STORM SEWER, 12" RCP APRON W/ FOOTING AND APRON GUARD	EA	8
15	STORM SEWER, 15" RCP APRON W/ FOOTING AND APRON GUARD	EA	3
16	STORM SEWER, 18" RCP APRON W/ FOOTING AND APRON GUARD	EA	3
17	CONNECT TO EXISTING WATERMAIN	EA	1
18	WATER MAIN, TRENCHLESS, 8" DIA	LF	40
19	WATER MAIN, TRENCHED, 8" DIA	LF	2,325
20	WATER SERVICE STUB, 1" DIA	EA	23
21	VALVE, 8" DIA	EA	4
22	TAPPING VALVE ASSEMBLY, 16"x8"	EA	1
23	FIRE HYDRANT ASSEMBLY	EA	7
24	TEMPORARY FIRE BLOWOFF HYDRANT	EA	2
25	MANHOLE, TYPE SW-301, 48" DIA	EA	14
26	MANHOLE, TYPE SW-401, 48" DIA	EA	7
27	MANHOLE, TYPE SW-406, 4'x4'	EA	1
28	INTAKE, TYPE SW-501	EA	7
29	INTAKE, TYPE SW-503	EA	5
30	INTAKE, TYPE SW-505	EA	2
31	INTAKE, TYPE SW-506	EA	2
32	INTAKE, TYPE SW-512, 24" DIA	EA	1
33	INTAKE, TYPE SW-513, 4'x4'	EA	1
34	SUBDRAIN CLEANOUT	EA	6
35	PAVEMENT, 6" REINFORCED P.C.C.	SY	6,549
36	PAVEMENT, 6" P.C.C.	SY	459
37	SIDEWALK, 4" P.C.C.	SY	551
38	SIDEWALK RAMPS, 6" P.C.C.	SY	63
39	MAILBOX PAD, 12" P.C.C.	EA	2
40	DETECTABLE WARNING PANELS	SF	60
41	PERMANENT ROAD CLOSURE SIGN - URBAN, SI-182	EA	10
42	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	30.4
43	EROSION AND SEDIMENT CONTROL	LS	1
44	CLASS 'B' RIP-RAP, STILLING BASIN	TON	90
45	CLASS 'E' RIP-RAP, STORM OUTLET	TON	85
46	SANITARY SEWER AND STORM SEWER TELEVISION	LS	1
47	SANITARY SEWER DROP CONNECTION	EA	1
48	GRANULAR SURFACING	TON	228
49	CHAIN LINK FENCE, 6 FT.	LF	94

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
1	THE 2023 EDITION OF SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTAL SPECIFICATIONS SHALL APPLY TO ALL WORK PERFORMED ON THIS PROJECT EXCEPT AS OTHERWISE NOTED. ALL REFERENCES TO SECTIONS AND FIGURES ARE TO THE SUDAS STANDARD SPECIFICATIONS.
1	STRIP, SALVAGE AND RESPREAD TOPSOIL. RESPREAD SALVAGED TOPSOIL WITHIN THE RIGHT OF WAY, ON BACKSLOPES AND IN DEVELOPED AREAS. TOPSOIL TO BE RESPREAD SHALL BE FREE OF ROCK AND DEBRIS AND BE SUITABLE FOR THE GROWTH OF GRASS. COORDINATE LOCATION OF STOCKPILE WITH OWNER.
2	EXCAVATION INCLUDES ALL WORK NECESSARY TO ACHIEVE PROPER GRADES AS SHOWN IN THE PLANS. NO PAYMENT FOR OVERHAUL SHALL BE ALLOWED.
3	REFER TO SHEET 3 TYPICAL SECTION DETAIL FOR TYPICAL LOCATIONS AND THICKNESS.
4	REFER TO PLAN AND PROFILE SHEETS FOR LOCATION.
5	TRENCHLESS SANITARY SEWER PIPE SHALL BE OF WATERMAIN MATERIAL, WATERTIGHT JOINTS AND BACKFILL SOIL SHALL BE LOW PERMEABILITY SOIL. CONSTRUCTION INCLUDES INSTALLATION OF 20" DIA. STEEL CASING.
6	TRENCHED SANITARY SEWER PIPE SHALL BE SOLID WALL PVC. TRUSS PIPE WILL NOT BE ALLOWED.
5-16	REFER TO FIG. 3010.101 AND 3010.103 FOR PIPE EMBEDMENT AND BACKFILL DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. CONNECTION TO EXISTING SEWER SHALL BE CONSIDERED INCIDENTAL.
7, 13, 20	REFER TO SHEET 3 FOR TYPICAL SANITARY SEWER SERVICE STUB DETAIL AND SERVICE LOCATION DETAIL. REFER TO PLAN AND PROFILE SHEETS FOR LOCATION AND DEPTH.
8	REFER TO FIG. 4040.231 - SUBDRAINS. TYPE 1 (CASE 'A') INSTALLATION
14-16	THE LAST THREE SECTIONS AND APRON SHALL BE CONNECTED WITH PIPE CONNECTORS, PER SECTION 4030, 3.02C. REFER TO FIG. 4030.221 FOR RCP APRON SECTION FOOTING DETAIL FOR APRON INSTALLATION DETAILS. APRON GUARDS REQUIRED ON ALL APRONS. REFER TO FIG. 4030.225 FOR DETAILS.
17-22	REFER TO FIG. 3010.101 AND 3010.104 FOR PIPE EMBEDMENT DETAILS. GRANULAR PIPE BEDDING SHALL BE CONSIDERED INCIDENTAL. REFER TO FIG. 5010.101 FOR THRUST BLOCK DETAILS. PROVIDE POLYETHYLENE ENCASEMENT PER SECTION 5010 3.05. REFER TO FIG. 5010.102 FOR TRACER WIRE DETAILS. ALL FITTINGS, THRUST BLOCKS, POLYETHYLENE ENCASEMENT AND TRACER SYSTEM SHALL BE CONSIDERED INCIDENTAL.
23-24	REFER TO FIG. 5020.201 - FIRE HYDRANT DETAIL FOR FIRE HYDRANT CONSTRUCTION DETAILS. INCLUDES ANCHORING TEE, ANCHORING ELBOW, GATE VALVE, VALVE BOX, ANCHORING PIPE, ANCHORING COUPLING, ELBOWS AND FIRE HYDRANT.
25	REFER TO FIG. 6010.301 - CIRCULAR SANITARY SEWER MANHOLE FOR CONSTRUCTION DETAILS. REFER TO FIG. 6010.601 - CASTINGS FOR SANITARY SEWER MANHOLES FOR CASTING DETAILS. TYPE A CASTINGS WITH TYPE 1/1 TOP HAT BARRIERS ARE REQUIRED FOR ALL MANHOLES. A MAXIMUM OF 12" OF ADJUSTMENT RINGS ARE ALLOWED FOR NEW CONSTRUCTION.
26	REFER TO FIG. 6010.401 - SW-401 CIRCULAR STORM SEWER MANHOLE FOR CONSTRUCTION DETAILS.
27	REFER TO FIG. 6010.406 - SW-406 SHALLOW RECTANGULAR STORM SEWER MANHOLE FOR CONSTRUCTION DETAILS.
28	REFER TO FIG. 6010.501 - SW-501 SINGLE GRATE INTAKE FOR CONSTRUCTION DETAILS.
29	REFER TO FIG. 6010.503 - SW-503 SINGLE GRATE INTAKE WITH MANHOLE FOR CONSTRUCTION DETAILS.
30	REFER TO FIG. 6010.505 - SW-505 DOUBLE GRATE INTAKE FOR CONSTRUCTION DETAILS.
31	REFER TO FIG. 6010.506 - SW-506 DOUBLE GRATE INTAKE WITH MANHOLE FOR CONSTRUCTION DETAILS.
32	REFER TO FIG. 6010.512 - SW-512 CIRCULAR AREA INTAKE FOR CONSTRUCTION DETAILS.
33	REFER TO FIG. 6010.513 - SW-513 OPEN-SIDED AREA INTAKE FOR CONSTRUCTION DETAILS.
34	REFER TO FIG. 4040.232 - SUBDRAIN CLEANOUTS FOR CONSTRUCTION DETAILS. ALL SUBDRAIN CLEANOUTS SHALL BE INSTALLED WITHIN A 24" ROUND CONCRETE PAD.
35-36	REFER TO FIG. 7010.101 - JOINTS (TRANSVERSE CONTRACTION) AND FIG. 7010.4B - JOINTS (LONGTUDINAL CONTRACTION) FOR JOINT DETAILS. INSTALL HANDICAP CURBS AT LOCATIONS OF ALL FUTURE SIDEWALKS. REFER TO INTERSECTION SHEETS FOR JOINTING. TYPICAL C JOINT SPACING IS 12 FEET.
37	REFER TO SHEET 7-10 FOR LOCATIONS.
38	REFER TO FIG. 7030.207 - CURB RAMP FOR CLASS B OR C SIDEWALK FOR CONSTRUCTION DETAILS. SIDEWALK SHALL BE 6 INCHES THICK FOR RAMPS AND TURNING SPACES. MINOR GRADING ADJACENT TO SIDEWALKS SHALL BE CONSIDERED INCIDENTAL.
39	REFER TO SHEET 4 FOR DETAIL. REFER TO SHEET 7 FOR LOCATION.
40	REFER TO FIG. 7030.210 DETECTABLE WARNING PLACEMENT AND DETAIL ON SHEET 4 FOR CONSTRUCTION DETAILS. DETECTABLE WARNING PANELS SHALL BE INSTALLED PER SECTION 7030. DETECTABLE WARNING PANELS ARE TO BE GRAY IN COLOR.
41	REFER TO PLAN AND PROFILE SHEETS FOR LOCATIONS. REFER TO IOWA DEPARTMENT OF TRANSPORTATION STANDARD ROAD PLAN SI-182 FOR CONSTRUCTION DETAILS. EACH ITEM INCLUDES 5 DELINEATOR POSTS WITH SIGN PANELS.

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.

ITEM NO.	DESCRIPTION
42	INCLUDES ALL MATERIALS, EQUIPMENT AND LABOR NEEDED TO PERFORM AND ESTABLISH SEEDING. UNITED SEEDS SUPER TURF II, OR SIMILAR FLOOD RESISTANT MIX, SHALL BE USED FOR DRAINAGE SWALES AND DETENTION BASINS. TYPE 4 (URBAN TEMPORARY EROSION CONTROL MIXTURE) SEEDING SHALL BE USED IN ALL OTHER AREAS. CONTRACTOR SHALL SEED ALL DISTURBED AREAS.
43	REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND THE EROSION AND SEDIMENT CONTROL PLAN FOR CONSTRUCTION DETAILS.
44	REFER TO GRADING PLAN SHEETS FOR LOCATION.
45	REFER TO FIG. 9040.110 - RIP RAP FOR PIPE OUTLET ONTO FLAT GROUND AND FIG. 9040.111 - RIP RAP APRON FOR PIPE OUTLET INTO CHANNEL FOR CONSTRUCTION DETAILS. THICKNESS (T) EQUALS 18 INCHES. INSTALL ENGINEERING FABRIC UNDER ALL RIP RAP. ENGINEERING FABRIC SHALL BE CONSIDERED INCIDENTAL.
46	SANITARY SEWER AND STORM SEWER PIPES SHALL BE TELEVISED AFTER CONSTRUCTION AND PROVIDE THE VIDEO TO SNYDER AND ASSOCIATES FOR REVIEW.
47	REFER TO FIG. 6010.307 - DROP CONNECTION FOR SANITARY SEWER MANHOLE FOR CONSTRUCTION DETAILS.
48	GRANULAR SURFACING, CLASS A CRUSHED STONE SHALL COMPLY WITH IOWA DOT SECTION 2315.
49	REFER TO SECTION 9060 - CHAIN LINK FENCE FOR DETAILS. REFER TO 9060, PART 2.01 THROUGH 2.04 FOR PVC-COATED MATERIALS. COLOR SHALL BE BLACK. CONTRACTOR SHALL SUBMIT CHAIN LINK FENCE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION OF FENCE COMPONENTS.

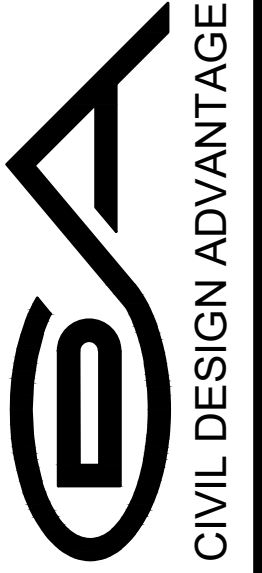
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 PLOTTED BY: BRANDON HUBER
 DATE: 2/25/2024 3:30 PM
 COMMENT: END

TRAFFIC CONTROL NOTES

- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- PERMANENT SIGNING THAT CONVEYS A MESSAGE CONTRARY TO THE MESSAGE OF TEMPORARY SIGNING AND NOT APPLICABLE TO THE WORKING CONDITIONS SHALL BE COVERED BY THE CONTRACTOR WHEN DIRECTED BY THE CITY.
- THE CONTRACTOR SHALL COORDINATE HIS TRAFFIC CONTROL WITH OTHER CONSTRUCTION PROJECTS IN THE AREA.
- SIDEWALK CLOSED SIGNS REQUIRED FOR ALL SIDEWALK CLOSURES. SIGNAGE AND TEMPORARY PEDESTRIAN ACCESS ROUTE THROUGH CONSTRUCTION AREA SHALL MEET THE REQUIREMENTS OF PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG), SECTION R205 AND IOWA DOT DESIGN MANUAL, CHAPTER 12A-4.
- THE CONTRACTOR IS CAUTIONED NEITHER TO OBSTRUCT NOR REMOVE ANY EXISTING PAVEMENT, NOR TO DISTURB THE EXISTING TRAFFIC PATTERNS MORE THAN IS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.

DATE	REVISIONS
02/05/2024	FOURTH SUBMITTAL
01/04/2024	THIRD SUBMITTAL
10/30/2023	SECOND SUBMITTAL
09/28/2023	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400
 ENGINEER: RDR



BIG CREEK RIDGE PLAT 1
QUANTITIES AND REFERENCE NOTES
 POLK CITY, IOWA

GENERAL NOTES - TABULATIONS

- WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THESE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATIONS AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

THE CONTRACTOR IS REQUIRED TO UTILIZE THE UTILITY ONE-CALL SERVICE AT 800-292-8989 AT LEAST 48 HOURS PRIOR TO EXCAVATING ANYWHERE ON THE PROJECT.
- PRIOR TO CONSTRUCTION AND PRIOR TO CULVERT CONSTRUCTION AND BACKFILL, UTILITY CONSTRUCTION, SUBGRADE PREP, MAIN LINE PAVING, AND BOX-OUT PAVING, CONTRACTOR SHALL NOTIFY (48 HRS NOTICE) THE FOLLOWING:
 - CITY OF POLK CITY
 - SNYDER & ASSOCIATES
 - APPROPRIATE UTILITY COMPANIES
 - OWNER
 - CIVIL DESIGN ADVANTAGE
- THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT THAT WILL NOT BE REMOVED THAT IS DAMAGED DUE TO OPERATING HIS EQUIPMENT ON THE PAVEMENT OR SIDEWALK.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK BETWEEN ALL SUPPLIERS AND SUBCONTRACTORS INVOLVED IN THE PROJECT, INCLUDING STAGING OF CONSTRUCTION DETAILS.
- THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST.
- THE CONTRACTOR MAY BE REQUIRED AS DIRECTED BY THE ENGINEER OF THE CITY, TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY.
- SPECIAL CARE SHALL BE TAKEN WHEN FORMING AT INTERSECTIONS SO THE PROFILES SHOWN ON THE PLANS AND THE ELEVATIONS SHOWN ON THE INTERSECTION DETAILS ARE OBTAINED. SHORT LENGTHS OF FORMS OR FLEXIBLE FORMS MAY BE NECESSARY AT THESE LOCATIONS.
- TO OBTAIN THE CORRECT FORM GRADES AT LOW POINTS WHERE INTAKES ARE LOCATED, THE CONTRACTOR MUST EXERCISE ADDITIONAL CARE WHEN PAVING FULL WIDTH PAVEMENTS. THIS MAY REQUIRE POURING ONE HALF OF THE PAVEMENT AT A TIME OR OTHER METHODS APPROVED BY THE ENGINEER.

- THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE PROPOSED AND EXISTING RIGHT OF WAY, CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS.
- PLAN AND PROFILE SHEETS INCLUDED IN THE PROJECT ARE FOR THE PURPOSE OF ALIGNMENT, LOCATION AND SPECIFIC DIRECTIONS FOR WORK TO BE PERFORMED UNDER THIS CONTRACT. IRRELEVANT DATA ON THESE SHEETS IS NOT TO BE CONSIDERED A PART OF THIS CONTRACT.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES REQUIRED ON THE STORM WATER POLLUTION PREVENTION PLAN.
- IN THE EVENT OF A DISCREPANCY BETWEEN DETAILED PLANS AND QUANTITIES, THE DETAILED PLANS SHALL GOVERN.
- ALL TRAFFIC CONTROL SHALL COMPLY WITH MUTCD.
- ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING.
- DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY.
- ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE.
- ALL FIELD TILES ENCOUNTERED SHALL BE REPAIRED AND CONNECTED TO STORM SEWERS WHERE POSSIBLE. LOCATIONS SHALL BE PROVIDED TO ENGINEER FOR NOTATION ON AS-BUILTS.**
- ANY WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
- PRIOR TO ANY WORK AT THE SITE, CONTRACTOR SHALL EXAMINE ANY APPLICABLE DRAWINGS AVAILABLE FROM THE OWNER OR ENGINEER, AND CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANY REPRESENTATIVES. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
- CONTRACTOR SHALL COMPLY WITH ALL P.R.O.W.A.G. AND A.D.A. REQUIREMENTS FOR ACCESSIBLE SIDEWALK RAMPS INCLUDING RAISED TRUNCATED DOME DETECTABLE WARNINGS.
- REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY.
- THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- ALL MATERIAL TESTING SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE AS-BUILT LOCATION FOR ALL UTILITIES, INCLUDING SERVICES.
- ALL FRANCHISE UTILITIES SHALL BE INSTALLED UNDERGROUND. NO NEWLY CONSTRUCTED UTILITIES WILL BE ALLOWED TO BE CONSTRUCTED OVERHEAD.

CITY OF POLK CITY TYPICAL NOTES:

- ONE WEEK PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY:
 - SNYDER & ASSOCIATES
 - CITY OF POLK CITY
 - DEVELOPER
 - ENGINEER
 - IOWA ONE-CALL
- THE CONTRACTOR SHALL NOTIFY THE POLK CITY PUBLIC WORKS DIRECTOR AND SNYDER & ASSOCIATES PRIOR TO COMMENCING CONSTRUCTION AND PRIOR TO UTILITY CONSTRUCTION, SUBGRADE PREPARATION, MAIN LINE PAVING AND BOX-OUT PAVING.
- ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, CURRENT AT THE COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR, DEVELOPER, AND DEVELOPER'S ENGINEER SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL IOWA DNR AND IOWA DOT PERMITS SHALL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING THE NECESSARY NPDES STORM WATER DISCHARGE PERMIT AND FOR MAINTAINING EROSION CONTROL MEASURES IN CONFORMANCE WITH THE SWPPP.
- THE CONTRACTOR SHALL PROVIDE ALL SHOP DRAWINGS AND MATERIALS SUBMITTALS TO THE DEVELOPER'S ENGINEER FOR REVIEW AND APPROVAL. THE DEVELOPER'S ENGINEER THEN SHALL PROVIDE TO SNYDER & ASSOCIATES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE. MATERIAL SUBMITTALS SHALL INCLUDE MANUFACTURER'S CUT SHEETS, OR SIMILAR, OF PIPE MATERIALS FOR ALL UTILITIES AND UTILITY SERVICE LINES: FIRE HYDRANTS, VALVES, CURB STOPS, SUBDRAIN PIPE MATERIALS, CLEAN-OUTS, APRON GUARDS, CONCRETE MIX, MATURETY CURVES OR OTHER ACCEPTABLE TESTING. SHOP DRAWINGS SHALL INCLUDE MANHOLES, INTAKES, BOX CULVERTS, FENCING/GUARD RAILS AND OTHER SPECIALTY CONSTRUCTION ITEMS.
- THE DEVELOPER'S ENGINEER SHALL IMMEDIATELY NOTIFY SNYDER & ASSOCIATES AND THE CONSTRUCTION OBSERVER IF FIELD CONDITIONS DO NOT MATCH THE APPROVED CONSTRUCTION DRAWINGS. THESE CONDITIONS MAY INCLUDE, BUT ARE NOT LIMITED TO, STAKING DISCREPANCIES OF MORE THAN 0.2' VERTICAL OR 1.0' HORIZONTAL, DISCOVERY OF PIPES AND/OR FIELD TILES NOT SHOWN ON PLANS, ELEMENTS SHOWN ON PLANS THAT ARE MISSING IN THE FIELD, OR OTHER DISCREPANCIES BETWEEN THE APPROVED PLANS AND FIELD CONDITIONS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY AND THE OWNER.

SANITARY SEWER NOTES

- ALL 8" SANITARY SEWER SHALL BE PVC PIPE WITH CLASS 'F-3" BEDDING UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- PROVIDE SANITARY SEWER SERVICE RISERS AS REQUIRED.
- THE CONTRACTOR SHALL INSTALL SEWER TAPE AT THE END OF EACH SANITARY SEWER SERVICE.
- ALL INVERTS LOCATED AT AN ELEVATION ABOVE THE CENTERLINE OF THE EXISTING THROUGH PIPE AND LESS THAN 2.0' ABOVE THE MANHOLE FLOOR SHALL HAVE A POURED-IN-PLACE SLOPED INVERT.
- ALL MANHOLES WITHIN PAVEMENT SHALL HAVE TYPE 'B' ADJUSTABLE CASTINGS. ALL MANHOLES NOT WITHIN PAVEMENT SHALL HAVE TYPE 'A' NON-ADJUSTABLE CASTINGS.
- ALL MANHOLES SHALL HAVE 1/1 BARRIERS.
- CORE DRILL ALL CONNECTIONS TO EXISTING MANHOLES AN PROVIDE SLOPE INVERT.
- ALL 4" AND 6" SANITARY SEWER SERVICES SHALL BE SDR 23.5 IN ACCORDANCE WITH URBAN STANDARD SPECIFICATIONS. ALL SERVICE LINES SHALL BE EXTENDED 10' INSIDE LOT LINES UNLESS OTHERWISE NOTED ON PLANS.
- ALL SERVICES AND 8-INCH STUB OUTS SHALL BE CAPPED.
- MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES.
- MANHOLES COVERS SHALL HAVE RAISED DIAMOND ROUGHNESS PATTERN.

GRADING/BACKFILL NOTES

- RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING UTILITY CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES AT THE SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNERS OF UTILITIES OR STRUCTURES CONCERNED BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE PROPER UTILITY IMMEDIATELY UPON DAMAGING ANY UTILITY LINE OR APPURTENANCE, OR IF THERE IS ANY INTERRUPTION OF THEIR SERVICE. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED AND APPROVED BY CITY.
- STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
- STOCKPILE SUFFICIENT TOPSOIL TO RESPREAD A MINIMUM DEPTH OF 4-INCHES ON UNPAVED AREAS, INCLUDING FRONT, REAR, AND SIDE YARDS OF ALL LOTS.
- ALL AREAS TO RECEIVE FILL ARE TO BE BENCHED. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES.
- ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR DENSITY.
- THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL FALL WITHIN A RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE.
- THE CONTRACTOR SHALL PROTECT AND BACKFILL AROUND UNDERGROUND UTILITIES. BACKFILL SHALL BE IN 6-INCH LIFTS, COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
- FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.

- THE CONTRACTOR SHALL JET CLEAN AND VACUUM ANY SECTION OF PIPE, FROM MANHOLE TO MANHOLE, WITH MUD OR DEBRIS MORE THAN 1' DEEP, ALONG WITH ANY DOWNSTREAM SEGMENTS AS REQUIRED DUE TO THIS CONSTRUCTION.
- THE CONTRACTOR SHALL TELEVIEW EVERY SANITARY SEWER LINE AND PROVIDE A COPY OF THE VIDEO TAPE AND FILE IN DIGITAL FORMAT TO SNYDER & ASSOCIATES. USING A 500 GALLON TANK AND GARDEN HOSE, THE CONTRACTOR SHALL GRAVITY FLOW WATER DOWN THE PIPE JUST PRIOR TO TELEVIEWING SO DIPS AND SAGS CAN BE IDENTIFIED. THE CITY SHALL NOTIFY THE CONTRACTOR OF ANY NECESSARY REPAIRS AND/OR CLEANING REQUIRED PRIOR TO COMMENCING PAVING.

THE SEGMENTS SHALL THEN BE RE-TELEVIEWED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVIEWING SHALL BE AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL SWEEP ALL JOINTS TO REMOVE ROCKS AND DEBRIS FROM THE ENDS OF PIPE PRIOR TO MAKING THE JOINT CONNECTION. REPAIRS, IF NECESSARY, DUE TO ROCKS AND/OR DEBRIS IN JOINT(S) SHALL BE AT THE CONTRACTOR'S EXPENSE.
- SAGS IN PIPE SHALL NOT EXCEED TOLERANCES AS SPECIFIED BY SUDAS. REPAIRS, IF NECESSARY, AND RE-TELEVIEWING SHALL BE AT THE CONTRACTOR'S EXPENSE.
- EXISTING MAIN TO BE FLUSHED AFTER SANITARY SEWER SERVICE EXTENSION. IF NEW WYES NEED TO BE CUT IN, SANITARY MAIN WILL NE TO BE RE-TELEVIEWED AND MAY BE SUBJECT TO ADDITIONAL TESTING.
- DEVELOPER SHALL ENTER INTO A DEVELOPMENT AGREEMENT WITH THE CITY TO GET SANITARY SEWER TO THE SITE. CITY IS RESPONSIBLE FOR THE SEWER COST MINUS DEVELOPER SANITARY SEWER HOOKUP FEE AS ESTABLISHED BY THE CITY OF POLK CITY FOR THE NE TRUNK SEWER SERVICE AREA HOOKUP FEE DISTRICT. THIS WILL BE A PER ACRE FEE BASED ON 46.17 ACRES (EXCLUDES OUTLOT '2'). THE DEVELOPER OF OUTLOT '2' SHALL BE RESPONSIBLE FOR THE NE TRUNK SEWER SERVICE AREA HOOKUP FEE.
- CONTRACTOR SHALL ADJUST ALL STRUCTURES, BOTH EXISTING AND PROPOSED, TO GRADE.

WATER MAIN NOTES

- PIPE MATERIALS SHALL BE AWWA C900, CLASS 150 PVC.
- INSTALL NO. 10 THHN STANDARD COPPER TRACER WIRE UNDER PIPE, BRING TRACER WIRE TO SURFACE AT HYDRANTS, TERMINATING IN RECEPTACLE BOX.
- CONNECT NEW TRACER TO EXISTING USING APPROVED SPLICE KIT AND PROVIDE A GROUND ROD AT END OF TRACER WIRE FOR LOCATION AND EXTENSION IN FUTURE. THE CITY WILL TEST THE TRACER WIRE PRIOR TO ACCEPTANCE OF PLAT AND REPAIRS, IF ANY, SHALL BE AT THE CONTRACTOR'S EXPENSE.
- HYDRANTS SHALL BE SET 3.5 FEET FROM THE WATER MAIN.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY THAT FIRE HYDRANTS WILL NOT CONFLICT WITH SIDEWALK CONSTRUCTION.
- HYDRANTS, MANHOLE COVERS AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
- HYDRANTS TO BE WATROUS PRODUCTS, OPEN LEFT, PAINTED YELLOW.
- ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
- SERVICES TO BE 1-INCH COPPER.
- RISER RODS ARE REQUIRED AT ALL CURB STOPS.

- STOP BOXES FOR 1" THROUGH 2" WATER SERVICE LINES SHALL INCLUDE A STAINLESS STEEL SELF-CENTERING ROD WITH STAINLESS STEEL COTTER PIN WITHIN THE A STOP BOX HOUSING. ALL STOP BOX INSTALLATIONS SHALL BE COMPLETED IN SUCH A MANNER THAT THE LID IS ALLOWED TO RAISE WITH THE FROST AND LOWER IF DRIVEN OVER WITH OUT DAMAGE TO CURB VALVE. FINISH GRADE OF THE LID SHALL BE LEVEL WITH THE SURROUNDING SURFACE AND DOES NOT PRESENT A HAZARD TO THE PUBLIC.
- WATER MAIN TO HAVE 5½ FEET BURY, TYPICAL EXCEPT AT CRITICAL CROSSINGS.
- ALL VALVES SHALL HAVE A VALVE BOX ADAPTER INSTALLED TO MAINTAIN ALIGNMENT.
- THE CONTRACTOR SHALL REMOVE CHAINS ON ALL HYDRANTS.
- THE CONTRACTOR SHALL WORK WITH THE CITY OF POLK CITY PUBLIC WORKS AND SNYDER & ASSOCIATES WHEN OPERATING EXISTING VALVES. WATER SHALL NOT BE TURNED ON WITHOUT PRIOR APPROVAL OF THE CITY OF POLK CITY.
- WATER CANNOT BE USED BY THE CONTRACTOR UNLESS IT IS PART OF THE PURIFICATION PROCESS OF THE NEW MAIN. WATER NEEDED FOR ANY REASON AFTER BACTERIA TESTING HAS BEEN COMPLETED AND PASSED WILL NEED PRIOR APPROVAL FROM THE CITY OF POLK CITY.
- PROVIDE 2' BLOW-OFF AT THE TERMINAL END OF THE 8" WATER LINE UNLESS HYDRANT HAS BEEN PROVIDED.
- WATER MAIN SHALL BE PRESSURE TESTED AND CHLORINATED WITH THE CONSTRUCTION OBSERVER PRESENT. RESULTS OF TESTS SHALL BE PROVIDED TO PUBLIC WORKS. IF ANY TESTS DO NOT PASS, THE CONTRACTOR SHALL REIMBURSE THE CITY FOR THE COST OF THE WATER ASSOCIATED WITH RE-TESTING.
- INSTALL CONTINUOUSLY PERFORATED SUBDRAIN IN LOCATIONS SHOWN ON PLANS.
- ALL SUBDRAIN, 6-INCHES OR SMALLER, SHALL HAVE CRITTER GUARDS.
- ALL CLEAN-OUTS SHALL BE SET IN A 24" ROUND CONCRETE PAD.
- FLARED END SECTIONS AND LAST 3 PIPE SECTIONS MUST BE TIED. ALL FLARED END SECTIONS SHALL HAVE 48-INCH FOOTINGS AND APRON GUARD.
- THE CONTRACTOR SHALL JET CLEAN AND VACUUM ANY SECTION OF PIPE, FROM MANHOLE TO MANHOLE, WITH MUD OR DEBRIS MORE THAN 1' DEEP, ALONG WITH ANY DOWNSTREAM SEGMENTS AS REQUIRED DUE TO THIS CONSTRUCTION.
- THE CONTRACTOR SHALL TELEVIEW EVERY STORM SEWER LINE AND PROVIDE A COPY OF THE VIDEO IN DIGITAL FORMAT TO SNYDER & ASSOCIATES. USING A 500 GALLON TANK AND GARDEN HOSE, THE CONTRACTOR SHALL GRAVITY FLOW WATER DOWN THE PIPE JUST PRIOR TO TELEVIEWING SO DIPS AND SAGS CAN BE IDENTIFIED. THE CITY SHALL NOTIFY THE CONTRACTOR OF ANY NECESSARY REPAIRS AND/OR CLEANING REQUIRED PRIOR TO COMMENCING PAVING. THE SEGMENTS SHALL THEN BE RE-TELEVIEWED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVIEWING SHALL BE AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL ADJUST ALL STRUCTURES, BOTH EXISTING AND PROPOSED, TO GRADE.

STORM SEWER NOTES

- ADDITIONAL RIP-RAP MAY BE REQUIRED AT THE FES BASED UPON FIELD REVIEW BY CITY OF POLK CITY.
- PROVIDE SUBDRAIN BEHIND BACK OF CURB ON PUBLIC STREETS AS REQUIRED BASED ON SUBSURFACE MOISTURE CONDITIONS. ANY SUBDRAIN CROSSING UNDER THE PAVEMENT SHALL BE RCP PIPE.
- ALL CURB INTAKES SHALL HAVE TYPE 'R' VANE GRATES.
- ALL INTAKES SHALL BE POURED-IN-PLACE CONCRETE OR PRECAST CONCRETE.
- ALL 12" AND LARGER STORM SEWERS SHALL BE RCP.
- 8-INCH FOOTING DRAINS TO BE PVC, SDR 35.
- FOOTING DRAIN SERVICES TO BE 4-INCH PVC, SDR 35. EXTEND SERVICES 6' BEFORE ROW UNLESS OTHERWISE NOTED.
- ALL INTAKES SHALL BE LOCATED A MINIMUM OF 7.5 FEET FROM END OF RETURNS.
- CORE DRILL ALL CONNECTIONS TO EXISTING STRUCTURES.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3"-6" COVER ON ALL STORM SEWER, INCLUDING SUMP SERVICES.
- CONTRACTOR SHALL OBTAIN A GRADING PERMIT PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL ATTEND A PRE-POUR MEETING WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCING PAVING OPERATIONS. NO PAVING OPERATIONS SHALL BEGIN UNTIL CONTRACTOR HAS RECEIVED AUTHORIZATION FROM SNYDER & ASSOCIATES.
- THE CONTRACTOR WILL NEED TO PROVIDE COPIES OF ALL TEST RESULTS REPORTING, INCLUDING BUT NOT LIMITED TO COMPACTION TEST MAP, STORM SEWER TELEVIEWING, AND SANITARY SEWER TELEVIEWING, TO SNYDER & ASSOCIATES FOR REVIEW PRIOR TO REQUESTING THE PRE-POUR MEETING.
- ALL ELEVATIONS ARE PROPOSED FINISHED GRADE.
- PAVEMENTS SHALL BE 6" CONTINUOUSLY-REINFORCED PCC PAVEMENT UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL STREETS SHALL HAVE 6" INTEGRAL CURBS.
- PROVIDE CURB DROPS FOR SIDEWALKS AT INTERSECTIONS.
- CONSTRUCTION OF HANDICAP ACCESSIBLE RAMPS, WITH DETECTIBLE WARNINGS AND INCLUDING COMMON SQUARE, SHALL BE THE RESPONSIBILITY OF THE HOME BUILDER UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL REINFORCING STEEL SHALL BE EPOXY-COATED REINFORCING STEEL.

PAVING NOTES

COMMENT:
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 PLOTTED: 2/29/2024, 3:39 PM

DATE	02/05/2024	01/04/2024	10/30/2023	09/28/2023
REVISIONS	FOURTH SUBMITTAL	THIRD SUBMITTAL	SECOND SUBMITTAL	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
PHONE: (515) 369-4400

TECH: ENGINEER: RDR



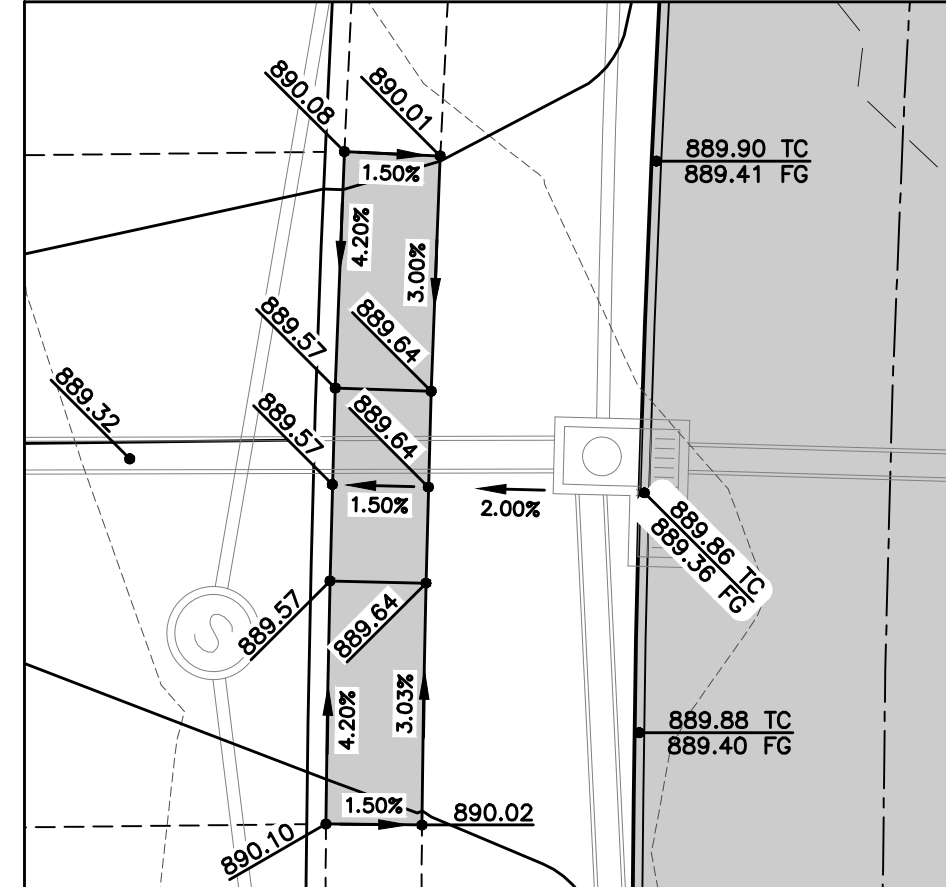
BIG CREEK RIDGE PLAT 1

POLK CITY CONSTRUCTION NOTES

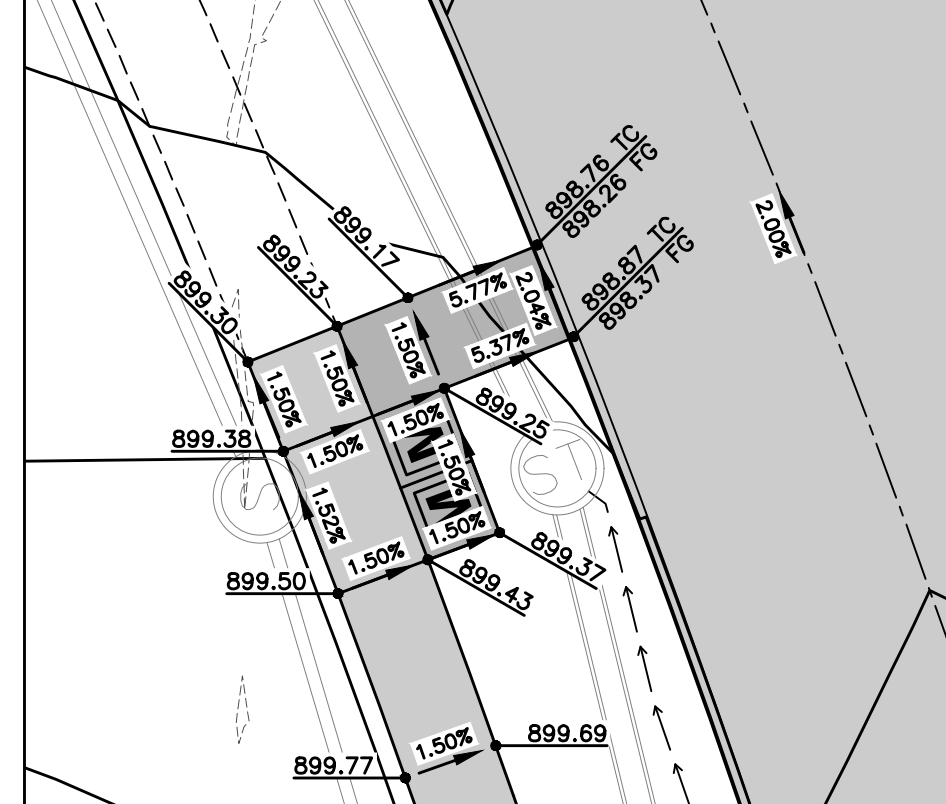


NOTES

1. REFER TO SEPARATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND EROSION AND SEDIMENT CONTROL PLAN FOR EROSION CONTROLS AND POLLUTION PREVENTION REQUIREMENTS.
2. PROTECT ALL TREES OUTSIDE GRADING LIMITS AND NOTIFY OWNER OF LARGE TREES WITHIN GRADING LIMITS. REVIEW ALL TREE CLEARING WITH DEVELOPER ON SITE PRIOR TO CONSTRUCTION.
3. PRIOR TO CONSTRUCTION BEGINNING, THE CONTRACTOR SHALL INSTALL ALL ORANGE CONSTRUCTION FENCE AND PERIMETER SILT FENCE AND SHALL CONTACT POLK CITY'S CONSTRUCTION OBSERVER, NICK FURNESS, 515-423-4976, NFURNESS@POLKCITYIA.GOV TO ALLOW VERIFICATION OF FENCE INSTALLATION PRIOR TO CONSTRUCTION BEGINNING.
4. ALL FINAL GRADING SHALL BE COMPLETED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS.
5. ALL PROPOSED BASINS SHALL BE DRY BOTTOM BASINS.
6. OUTLOTS 'S', 'T', 'U' & 'V' TO BE DEDICATED TO THE HOMEOWNER'S ASSOCIATION & SHALL BE USED FOR STORM WATER DETENTION.



DETAIL 'A' (1"=10' FULL-SIZE)



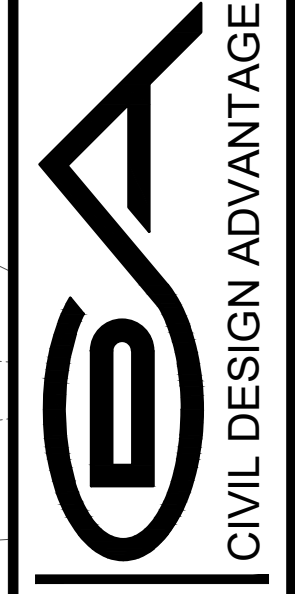
DETAIL 'B' (1"=10' FULL-SIZE)

**** NOTE ****
REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR ALL EROSION CONTROL MEASURES INCLUDING SILT FENCE W/POSTS PAINTED ORANGE DELINEATING TREE PROTECTION LIMITS

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 PLOTTED: 2/5/2024 3:53 PM

DATE	02/05/2024
FOURTH SUBMITTAL	01/04/2024
THIRD SUBMITTAL	10/30/2023
FIRST SUBMITTAL	09/28/2023

4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400
 ENGINEER: RDR



POLK CITY, IOWA

**BIG CREEK RIDGE PLAT 1
GRADING PLAN**



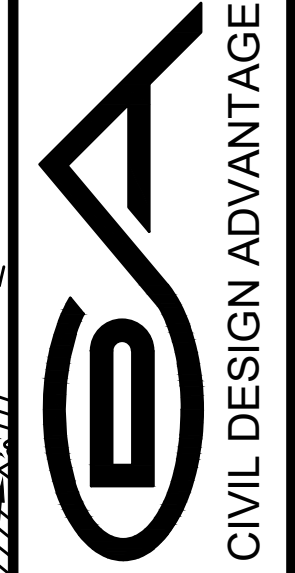
**** NOTE ****
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DRY-BOTTOM DETENTION POND 1A
 100-YEAR ELEV. = 857.81

DRY-BOTTOM DETENTION POND 2
 100-YEAR ELEV. = 891.67

DATE	REVISIONS
02/05/2024	FOURTH SUBMITTAL
01/04/2024	THIRD SUBMITTAL
10/30/2023	SECOND SUBMITTAL
09/28/2023	FIRST SUBMITTAL

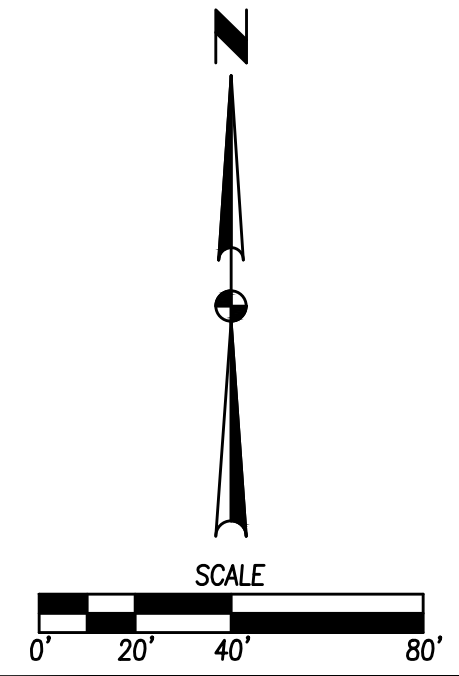
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 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400

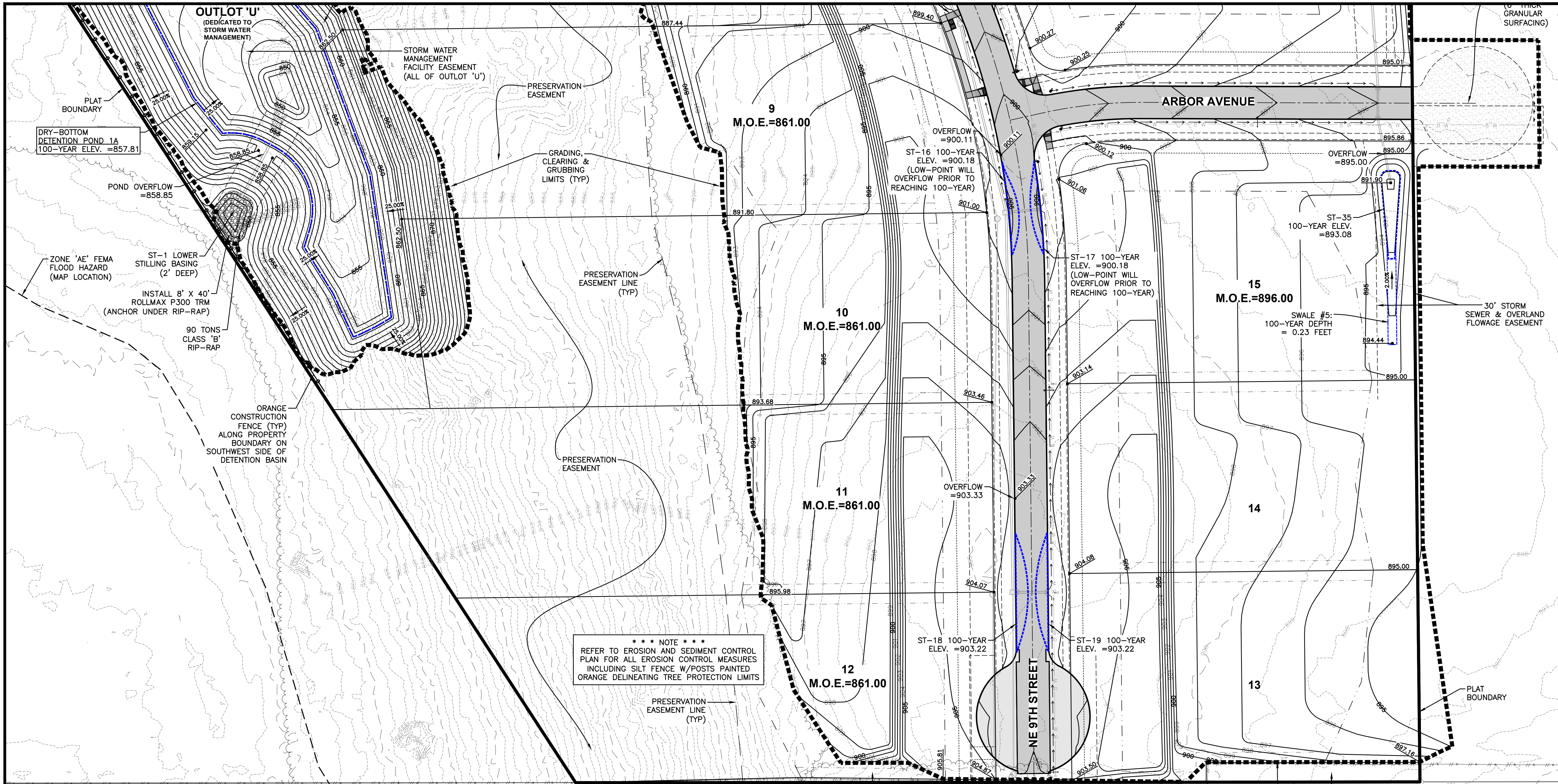


POLK CITY, IOWA
 ENGINEER: RDR

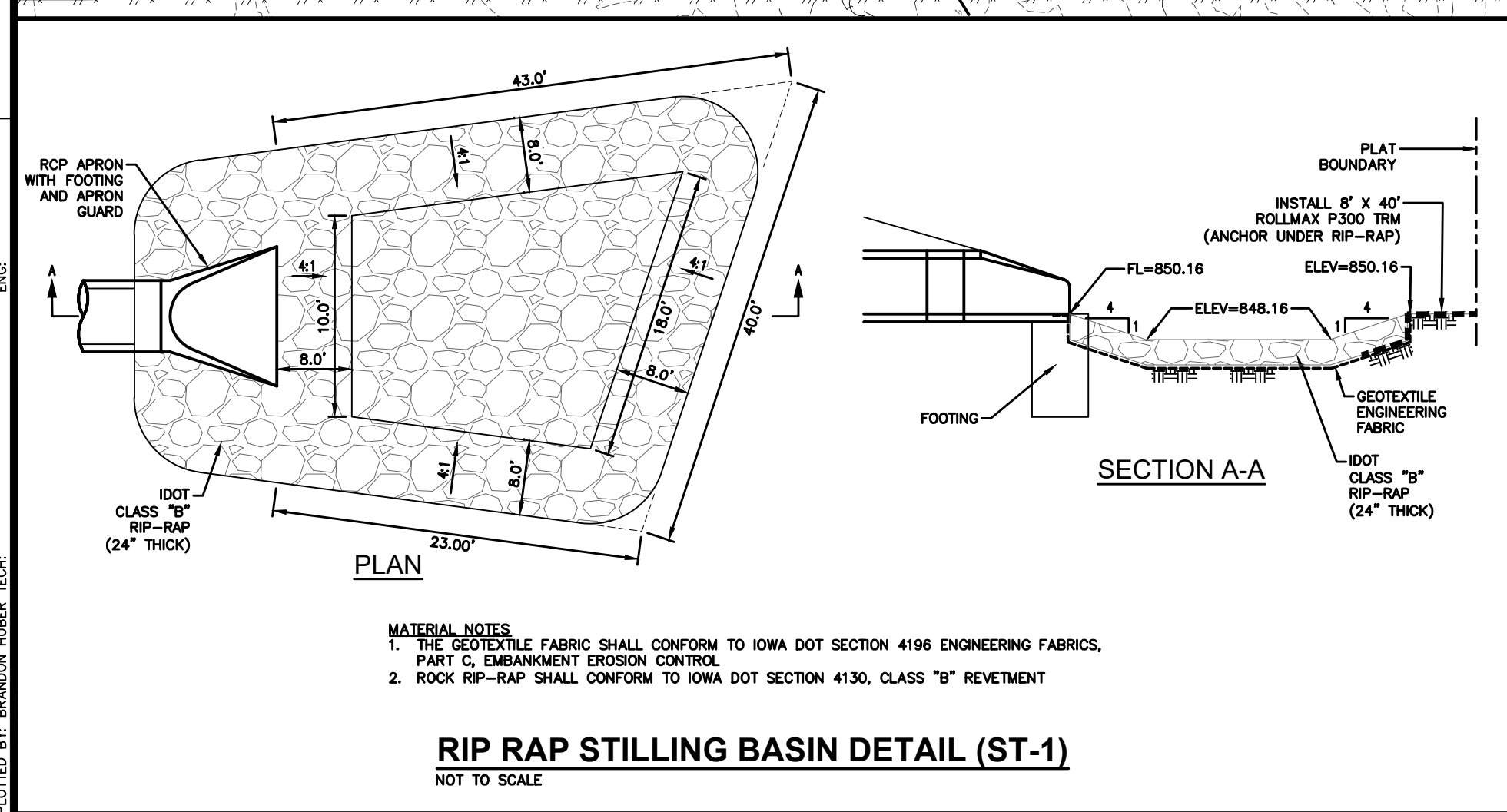
BIG CREEK RIDGE PLAT 1
GRADING PLAN

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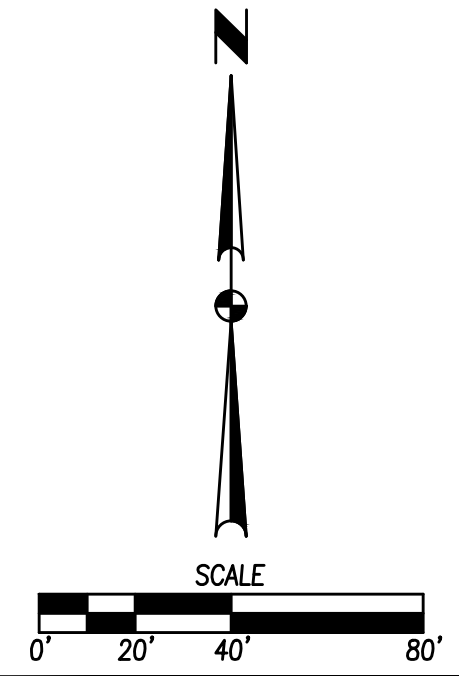




*** NOTE ***
 REFER TO EROSION AND SEDIMENT CONTROL
 PLAN FOR ALL EROSION CONTROL MEASURES
 INCLUDING SILT FENCE W/POSTS PAINTED
 ORANGE DELINEATING TREE PROTECTION LIMITS



- MATERIAL NOTES**
1. THE GEOTEXTILE FABRIC SHALL CONFORM TO IOWA DOT SECTION 4196 ENGINEERING FABRICS, PART C, EMBANKMENT EROSION CONTROL.
 2. ROCK RIP-RAP SHALL CONFORM TO IOWA DOT SECTION 4130, CLASS "B" REVETMENT



DATE	REVISIONS
02/05/2024	FOURTH SUBMITTAL
01/04/2024	THIRD SUBMITTAL
10/30/2023	SECOND SUBMITTAL
09/28/2023	FIRST SUBMITTAL

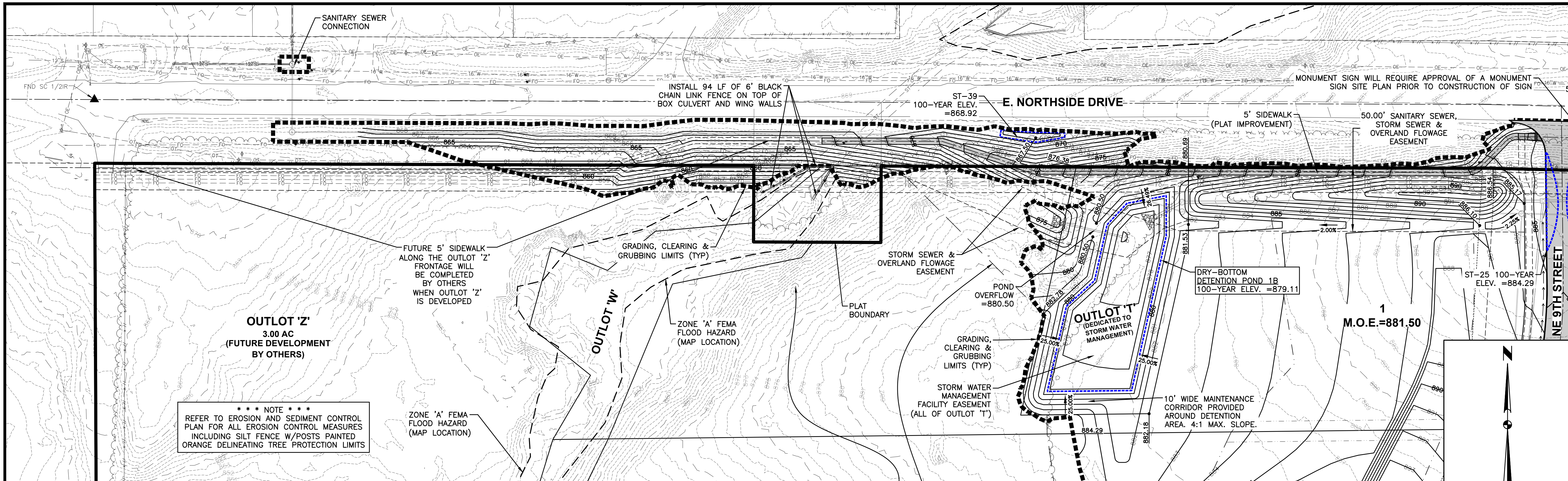
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400

TECH: RDR
 ENGINEER: RDR

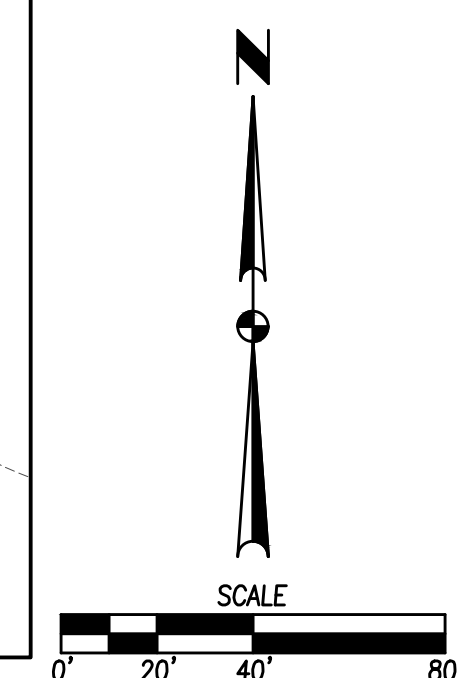
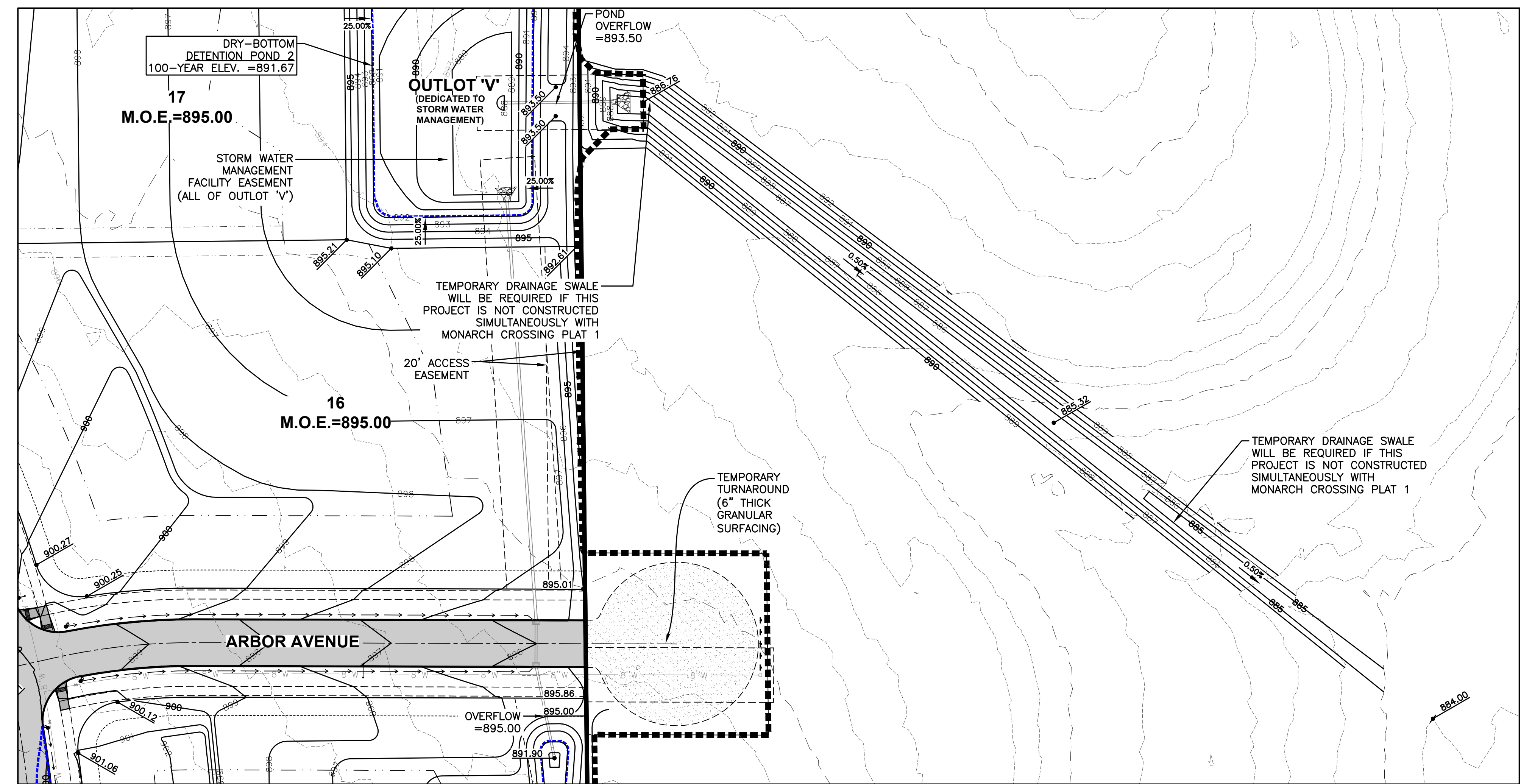
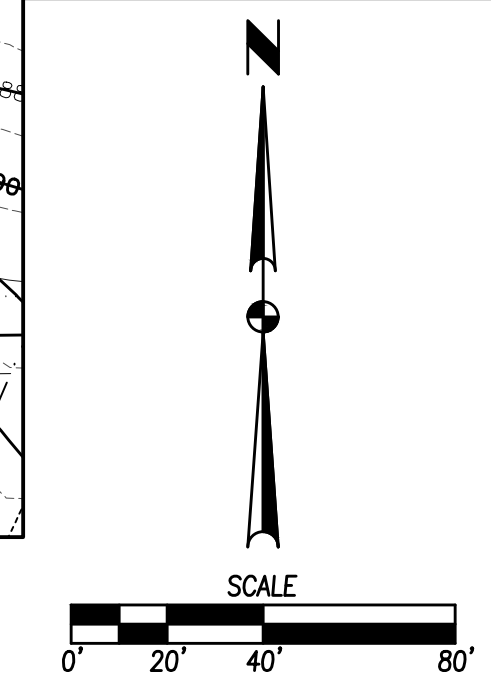


POLK CITY, IOWA

BIG CREEK RIDGE PLAT 1
GRADING PLAN

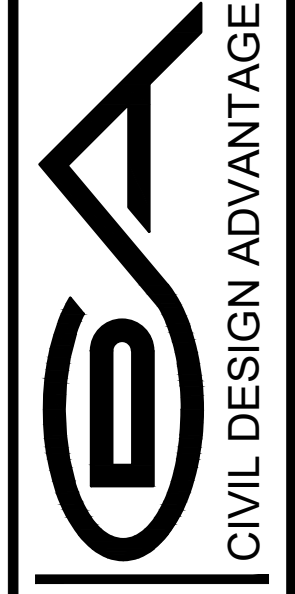


**** NOTE ****
 REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR ALL EROSION CONTROL MEASURES INCLUDING SILT FENCE W/POSTS PAINTED ORANGE DELINEATING TREE PROTECTION LIMITS



DATE	REVISIONS
02/05/2024	FOURTH SUBMITTAL
01/04/2024	THIRD SUBMITTAL
10/30/2023	SECOND SUBMITTAL
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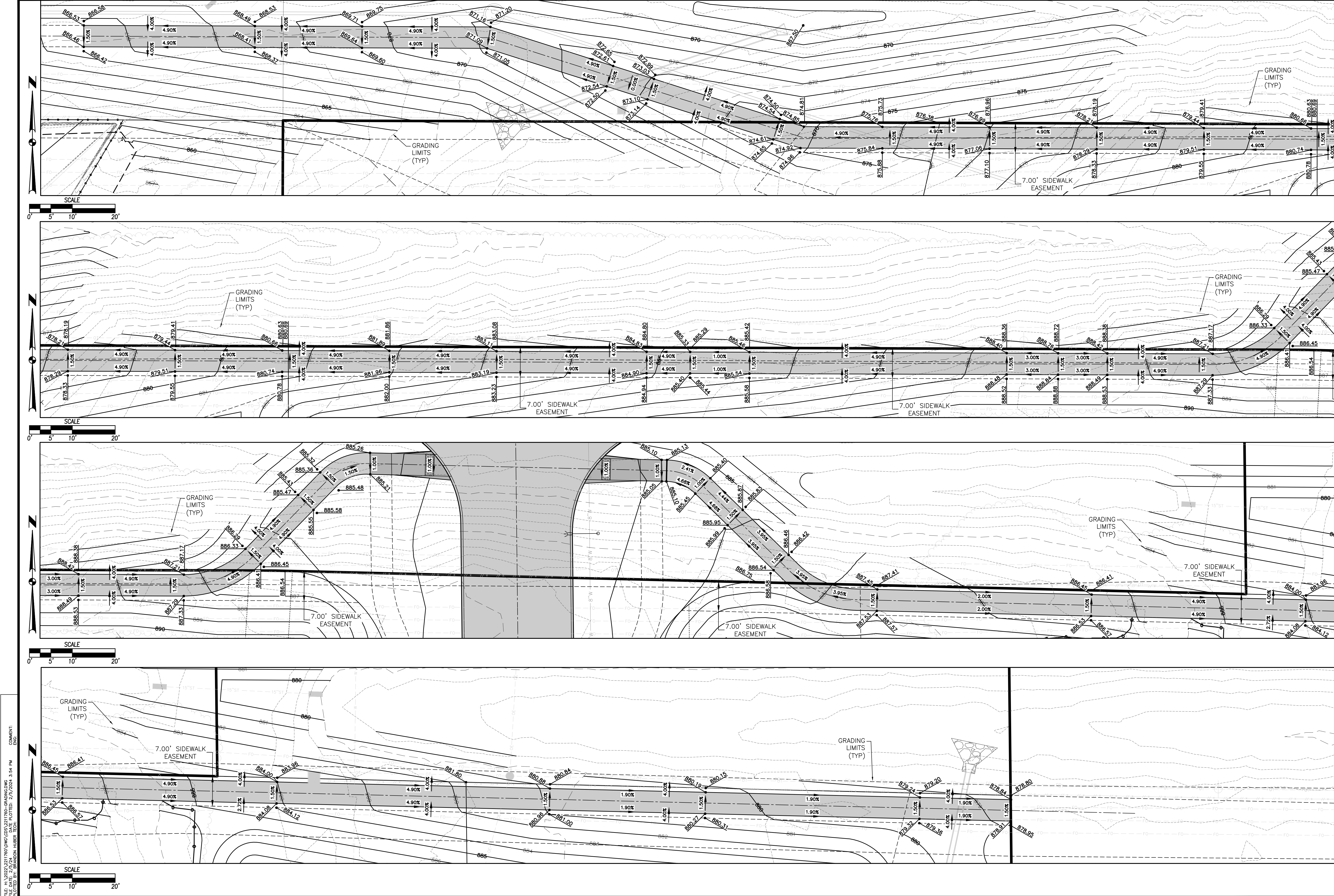
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400
 ENGINEER: RDR



POLK CITY, IOWA

BIG CREEK RIDGE PLAT 1 GRADING PLAN

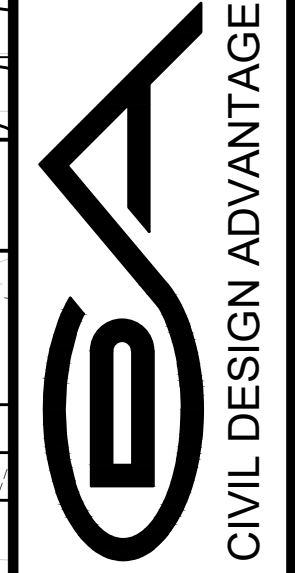
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 PLOTTED: 2/5/2024 3:53 PM



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 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400



BIG CREEK RIDGE PLAT 1
 GRADING PLAN - E. NORTHSIDE DR SIDEWALK
 POLK CITY, IOWA

ENGINEER: RDR

TECH:

NOTES:

- IF DEWATERING IS NEEDED FOR ANY REASON, DISCHARGE OF WATER OFFSITE IS TO CONFORM WITH THE GENERAL PERMIT #2 REQUIREMENT.
- DISTURBED AREAS SHALL BE TEMPORARILY SEEDED OR MULCHED IMMEDIATELY WHENEVER CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
- STORM SEWERS AND DRAINAGE WAYS SHALL BE PROTECTED FROM CONCRETE SLURRY PRODUCED BY SAWCUTTING AND CONCRETE GRINDING.
- EXISTING TOPSOIL SHALL BE STRIPPED, STOCKPILED, AND RESPREAD. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE RESPREAD PRIOR TO FINAL SEEDING.
- CUT TREES, TIMBER, DEBRIS, CONTAMINATED SOIL, WASTE CONCRETE, JUNK, RUBBISH, GARBAGE, OR FOOD WASTE SHALL BE PROPERLY DISPOSED OF AND WILL NOT BE ALLOWED TO BE BURNED, BURIED, OR ABANDONED ON-SITE.
- SEEDING
 - UNITED SEEDS SUPER TURF II, OR SIMILAR FLOOD RESISTANT MIX, SHALL BE USED FOR DRAINAGE SWALES AND DETENTION BASINS
 - TYPE 4 (URBAN TEMPORARY EROSION CONTROL MIXTURE) SEEDING SHALL BE USED IN ALL OTHER AREAS.
- ADDITIONAL POND CLEARING AND AS-BUILT SURVEY MAY BE REQUIRED FOR THE EXISTING POND SHOULD EROSION OCCUR PRIOR TO FINAL STABILIZATION OF THE SITE.

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	9,128
2	SEEDING, FERTILIZING, AND MULCHING	AC	30.41
3	INLET PROTECTION DEVICES	EA	16
4	CONCRETE WASHOUT PIT	EA	1
5	6" PVC TEMPORARY STANDPIPE	EA	1
6	8" PVC TEMPORARY STANDPIPE	EA	1
7	10" PVC TEMPORARY STANDPIPE	EA	2

DISCHARGE POINT SUMMARY

DISCHARGE POINT #	TO A TRIBUTARY OF BIG CREEK ±	ACRES	CU FT
DISCHARGE POINT #1	TO A TRIBUTARY OF BIG CREEK ±1040 FT	15.99 ACRES	57,564 CU FT
TOTAL AREA DISTURBED TO DISCHARGE POINT			
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)			
VOLUME PROVIDED IN SILT FENCE (4,451 LF @ 4.5 CU FT/LF OF FENCE)		20,030 CU FT	
VOLUME PROVIDED IN TSB #1 (OVER EXCAVATE @ 3:1)		47,486 CU FT	
TOTAL VOLUME PROVIDED		67,516 CU FT	
DISCHARGE POINT #2	TO A TRIBUTARY OF BIG CREEK ±2400 FT	4.65 ACRES	16,740 CU FT
TOTAL AREA DISTURBED TO DISCHARGE POINT			
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)			
VOLUME PROVIDED IN SILT FENCE (1,740 LF @ 4.5 CU FT/LF OF FENCE)		7,830 CU FT	
VOLUME PROVIDED IN TSB #2 (OVER EXCAVATE @ 3:1)		22,007 CU FT	
TOTAL VOLUME PROVIDED		29,837 CU FT	
DISCHARGE POINT #3	TO A TRIBUTARY OF BIG CREEK ±3100 FT	6.46 ACRES	23,256 CU FT
TOTAL AREA DISTURBED TO DISCHARGE POINT			
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)			
VOLUME PROVIDED IN SILT FENCE (2,047 LF @ 4.5 CU FT/LF OF FENCE)		9,212 CU FT	
VOLUME PROVIDED IN TSB #3 (OVER EXCAVATE @ 3:1)		22,516 CU FT	
TOTAL VOLUME PROVIDED		31,728 CU FT	
DISCHARGE POINT #4	TO A TRIBUTARY OF BIG CREEK ±4800 FT	3.31 ACRES	11,916 CU FT
TOTAL AREA DISTURBED TO DISCHARGE POINT			
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)			
VOLUME PROVIDED IN SILT FENCE (890 LF @ 4.5 CU FT/LF OF FENCE)		4,005 CU FT	
VOLUME PROVIDED IN TSB #4 (OVER EXCAVATE @ 3:1)		14,661 CU FT	
TOTAL VOLUME PROVIDED		18,666 CU FT	

SWPPP LEGEND

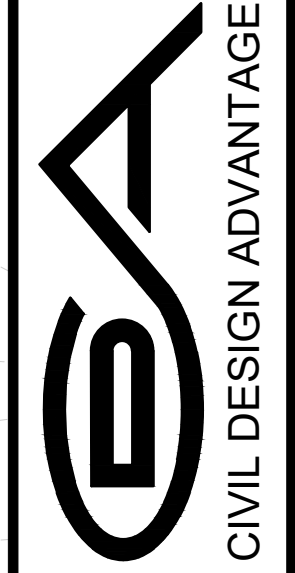
DRAINAGE ARROW	X.XX %	UNITED SEEDS SUPER TURF II, OR SIMILAR FLOOD RESISTANT MIX	
GRADING LIMITS		TYPE 4 SEEDING	
FILTER SOCK		UNDISTURBED AREA	
SILT FENCE		RIP-RAP	
INLET PROTECTION		GRAVEL ENTRANCE	
PORTABLE RESTROOM		STAGING AREA	
TEMPORARY STANDPIPE		TEMPORARY SEDIMENT BASIN	
CONCRETE WASHOUT PIT			



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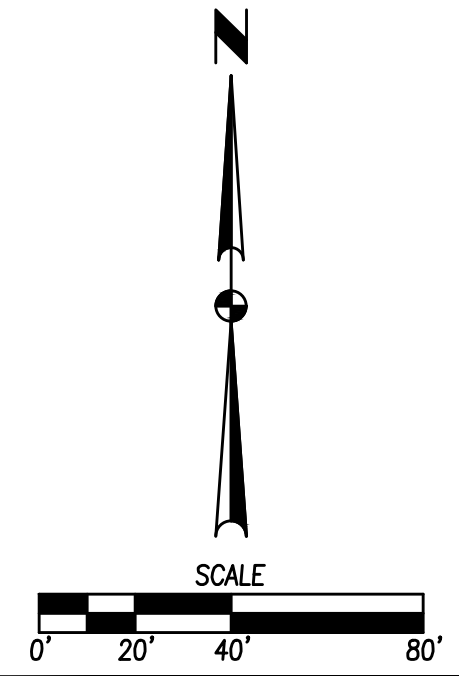
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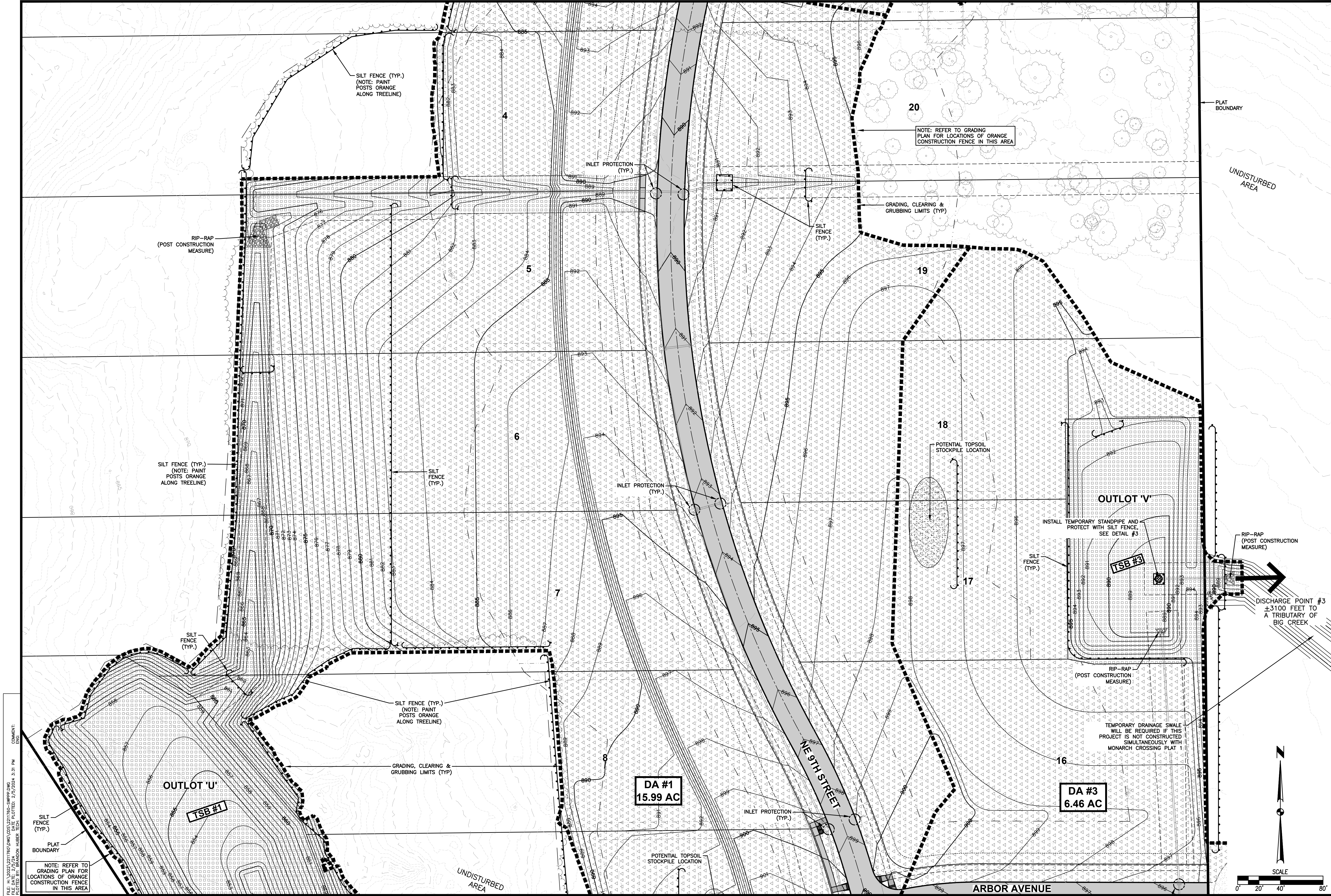
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400
 ENGINEER: RDR



POLK CITY, IOWA
 CIVIL DESIGN ADVANTAGE

BIG CREEK RIDGE PLAT 1
EROSION AND SEDIMENT CONTROL PLAN





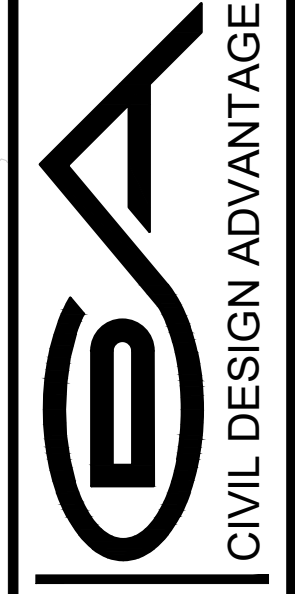
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NOTE: REFER TO GRADING PLAN FOR LOCATIONS OF ORANGE CONSTRUCTION FENCE IN THIS AREA

NOTE: REFER TO GRADING ORANGE PLAN FOR LOCATIONS OF CONSTRUCTION FENCE IN THIS AREA

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POLK CITY, IOWA

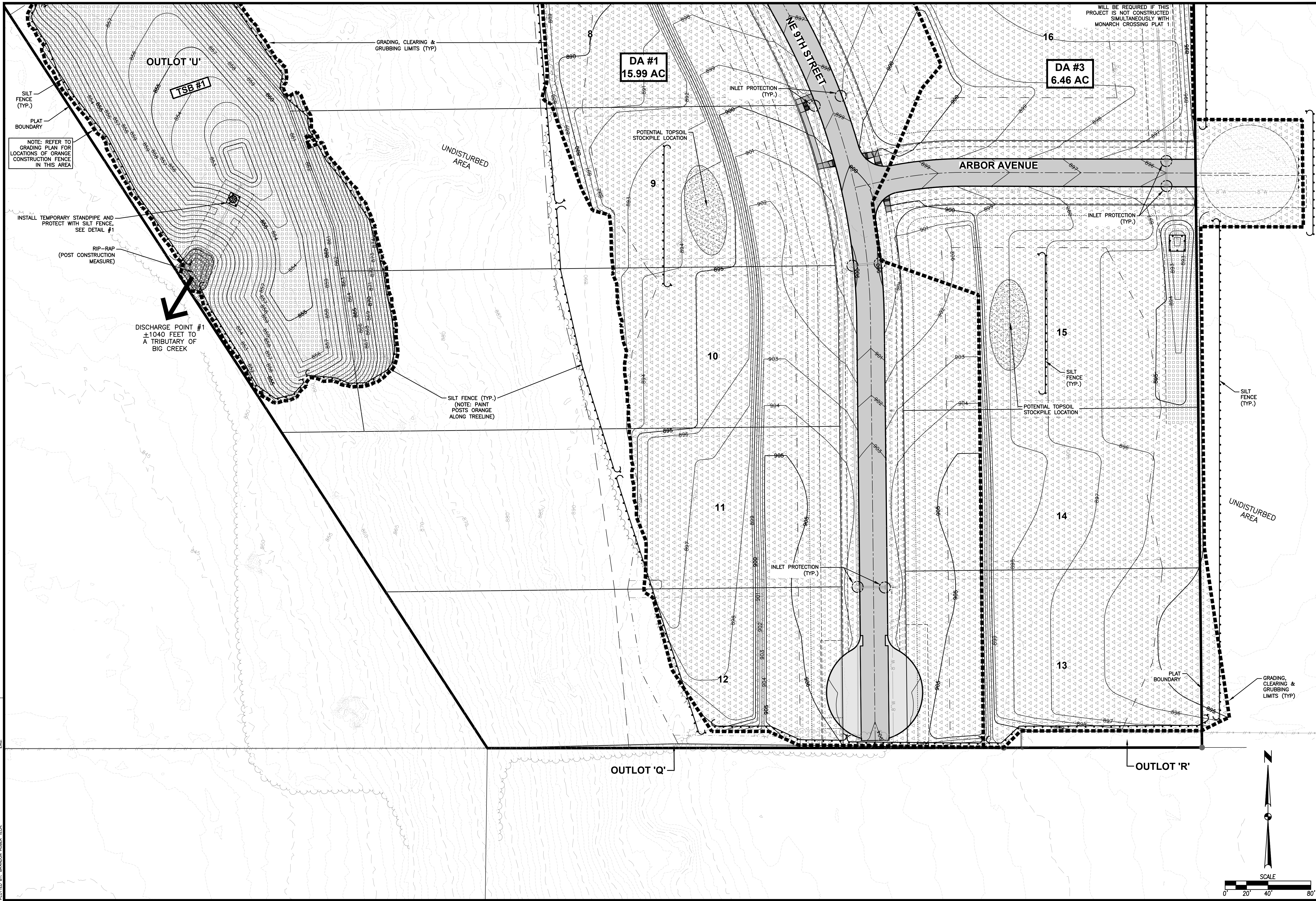
BIG CREEK RIDGE PLAT 1

EROSION AND SEDIMENT CONTROL PLAN

ENGINEER: RDR

TECH:

FILE: H:\2024\2211760\DWG\CDS\2211760-SWPPP.DWG
 COMMENT: SWPPP
 PLOTTED BY: BRANDON HUBER TECH
 DATE: 2/25/2024 3:31 PM



WILL BE REQUIRED IF THIS PROJECT IS NOT CONSTRUCTED SIMULTANEOUSLY WITH MONARCH CROSSING PLAT 1

NOTE: REFER TO GRADING PLAN FOR LOCATIONS OF ORANGE CONSTRUCTION FENCE IN THIS AREA

INSTALL TEMPORARY STANDPIPE AND PROTECT WITH SILT FENCE, SEE DETAIL #1

RIP-RAP (POST CONSTRUCTION MEASURE)

DISCHARGE POINT #1 ±1040 FEET TO A TRIBUTARY OF BIG CREEK

SILT FENCE (TYP.) (NOTE: PAINT POSTS ORANGE ALONG TREELINE)

INLET PROTECTION (TYP.)

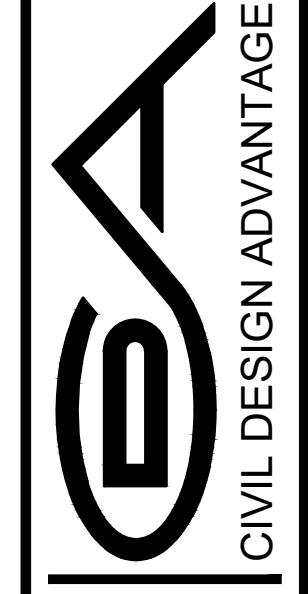
SILT FENCE (TYP.)

SILT FENCE (TYP.)

GRADING, CLEARING & GRUBBING LIMITS (TYP.)

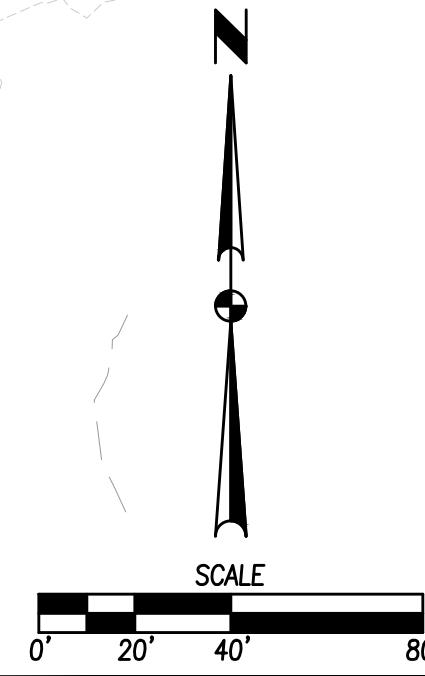
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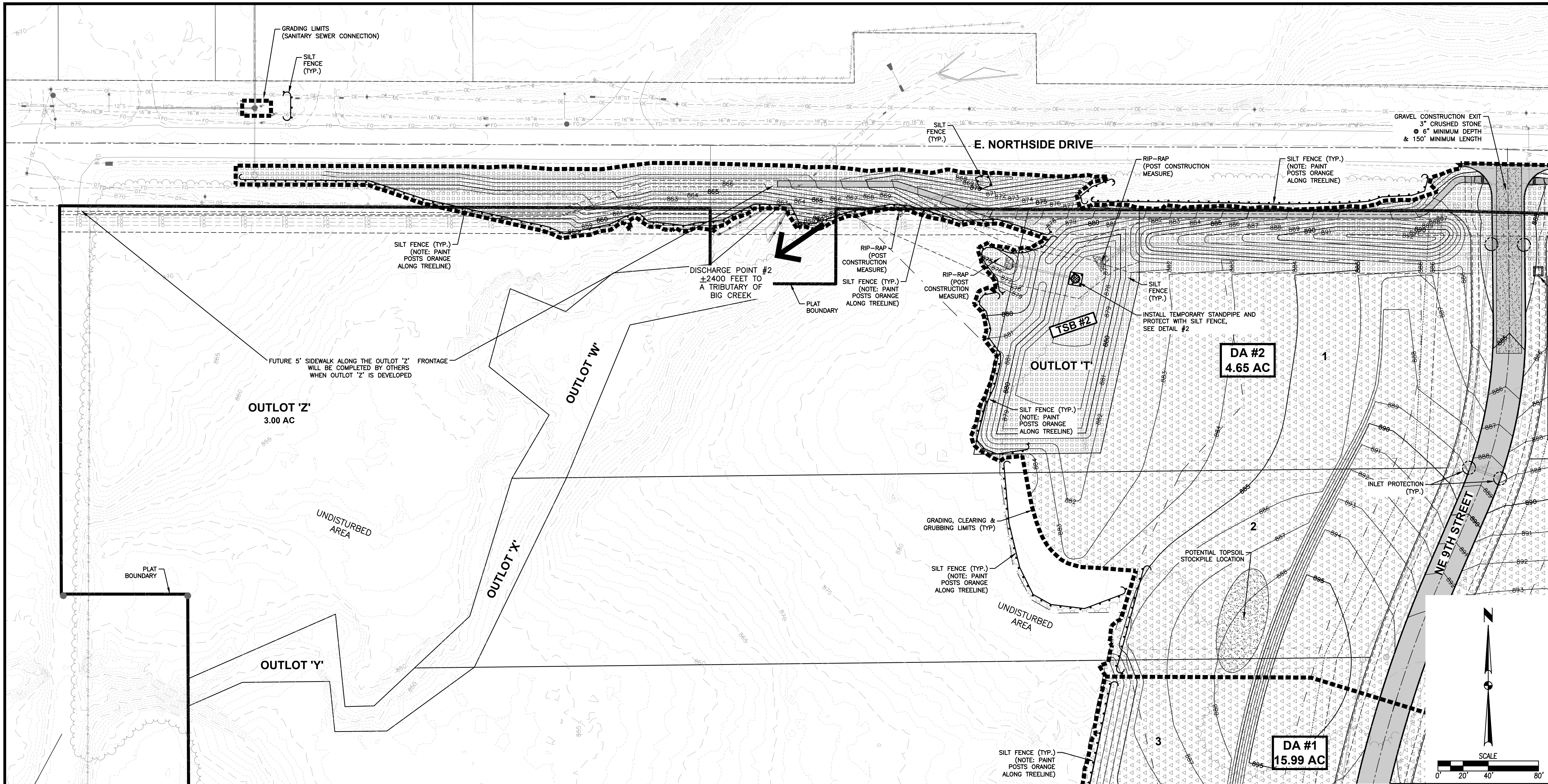


CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

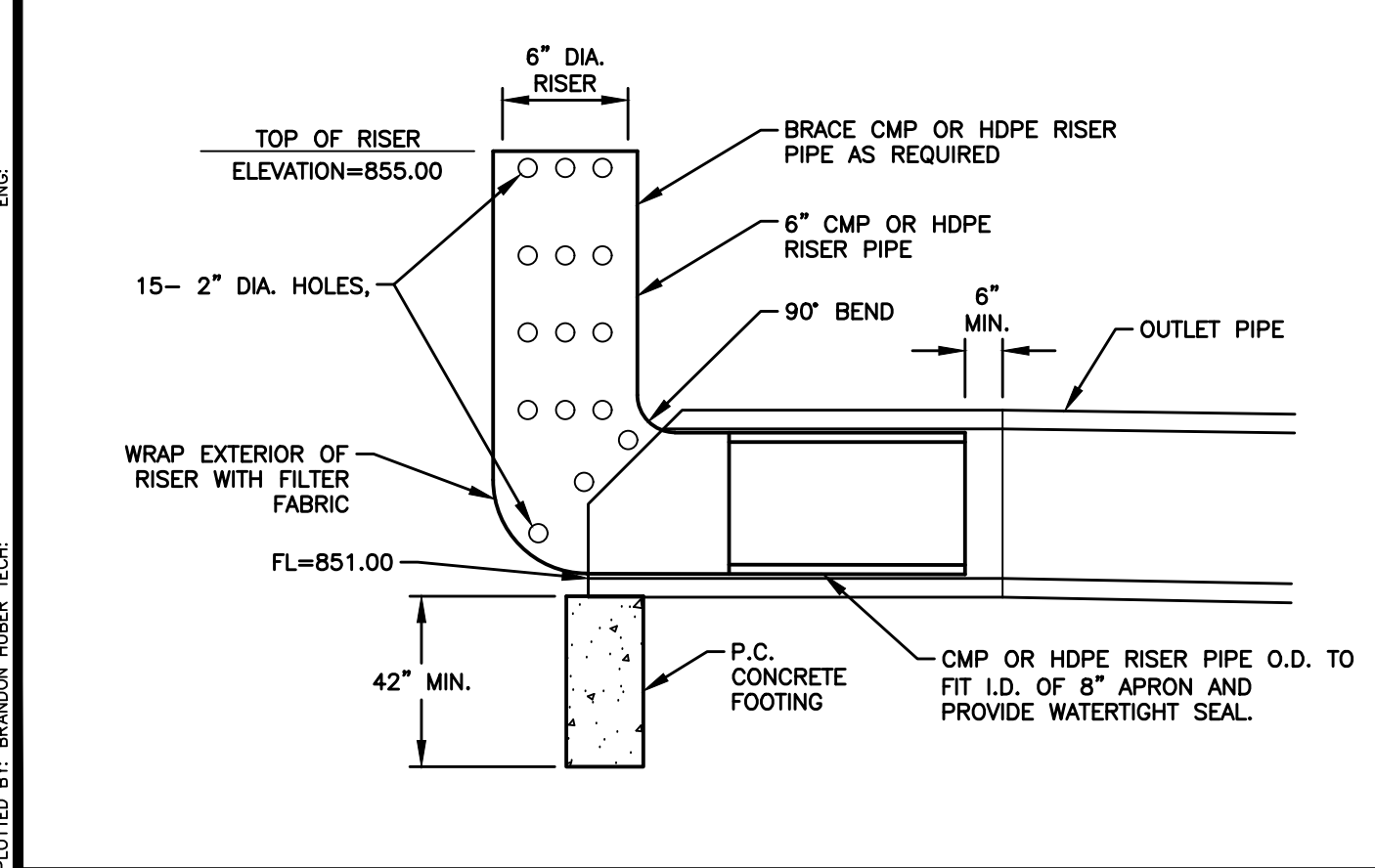
BIG CREEK RIDGE PLAT 1
 EROSION AND SEDIMENT CONTROL PLAN



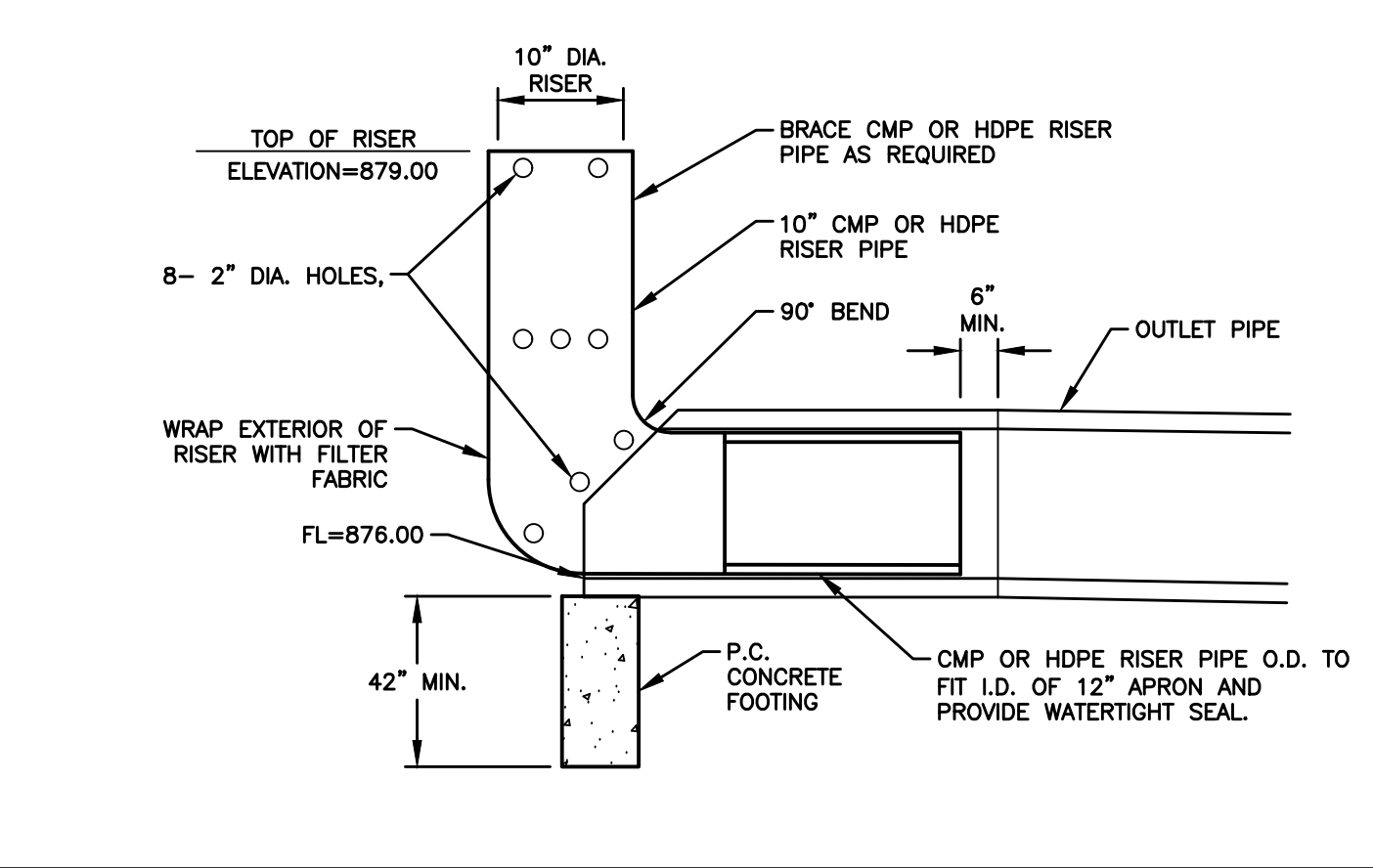
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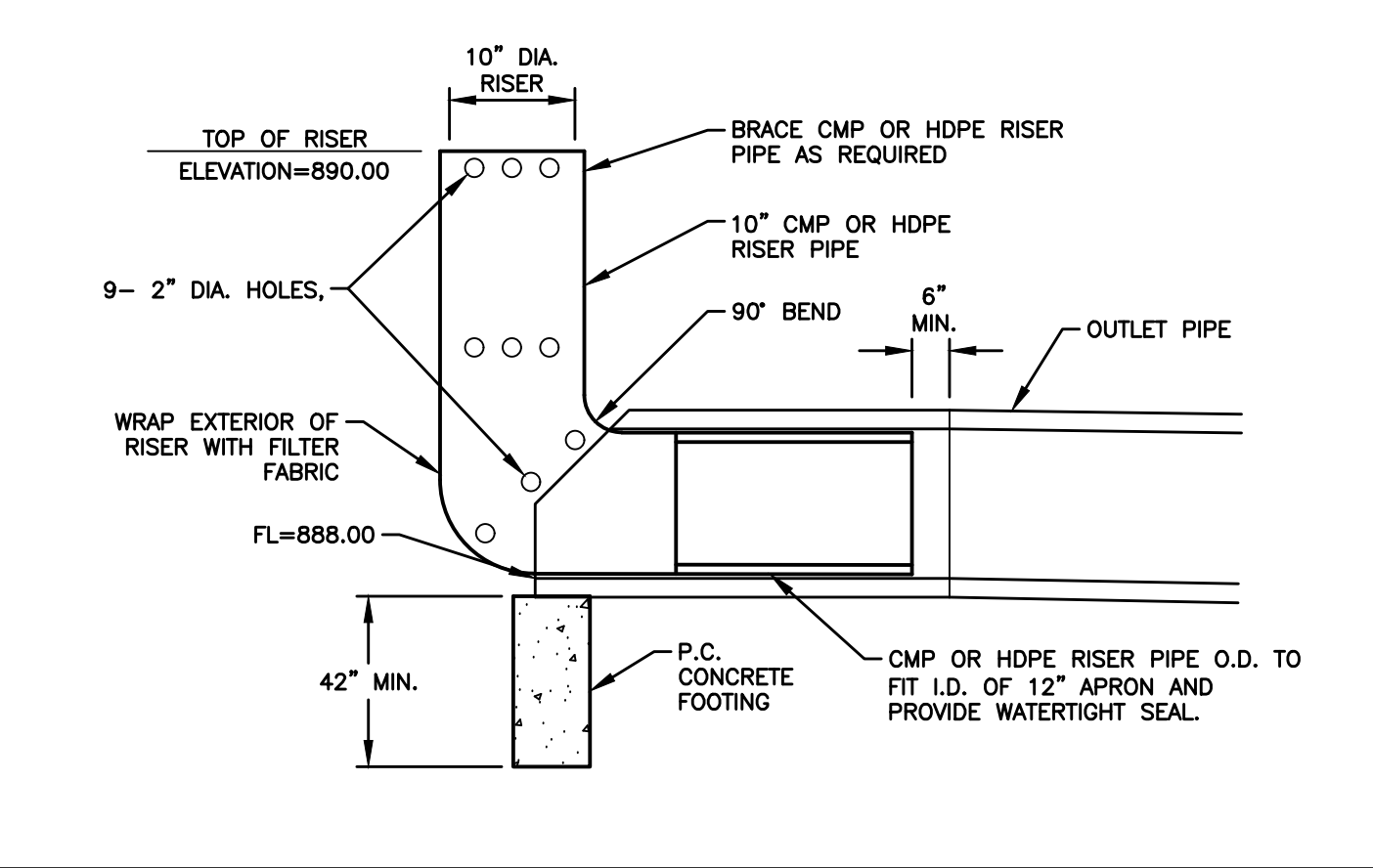
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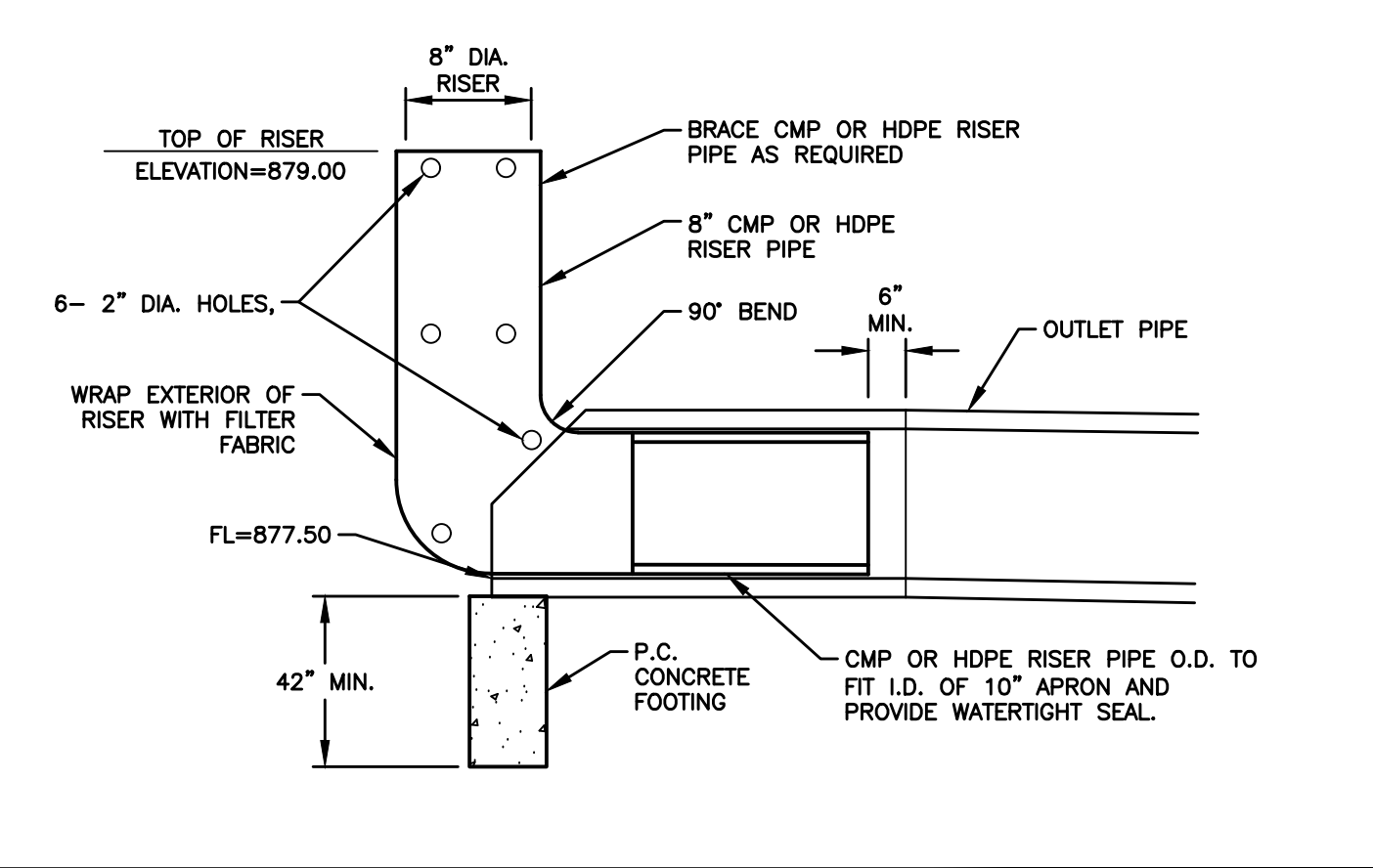
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TEMPORARY STAND PIPE DETAIL #3
NOT TO SCALE



TEMPORARY STAND PIPE DETAIL #4
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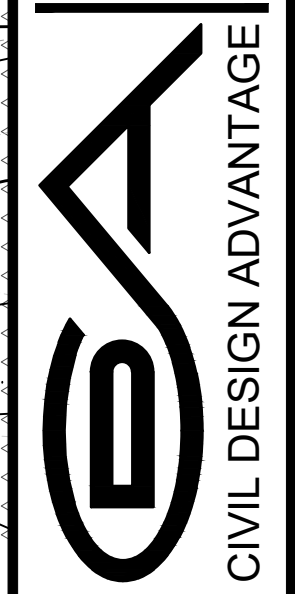


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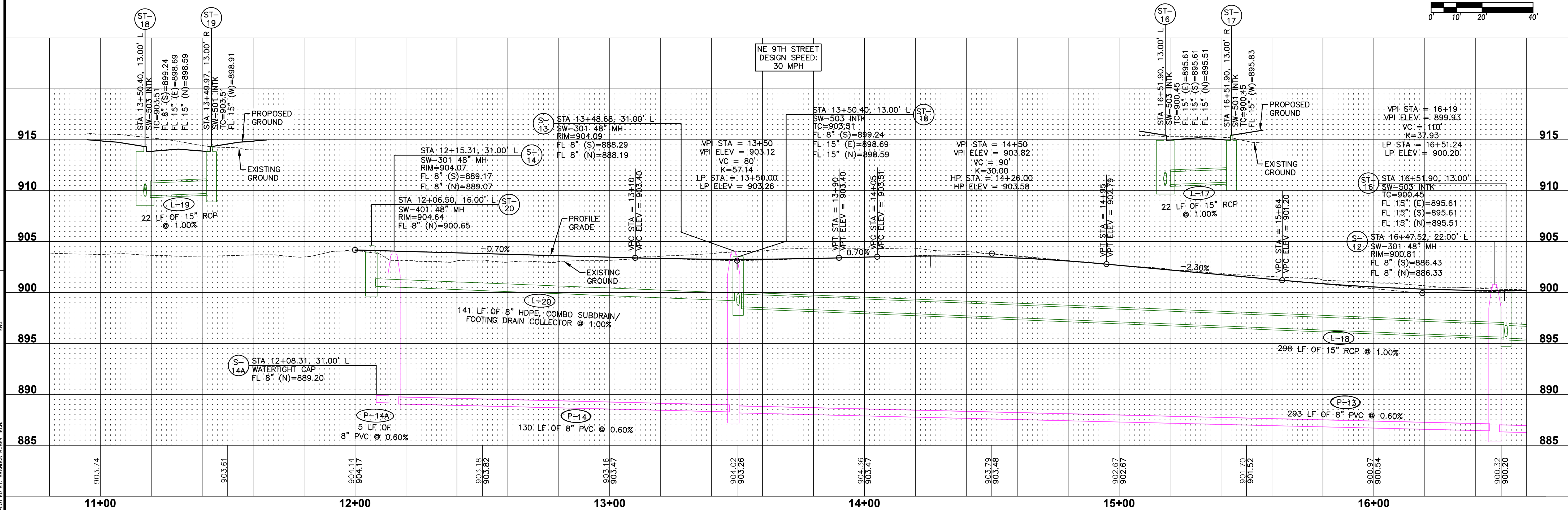
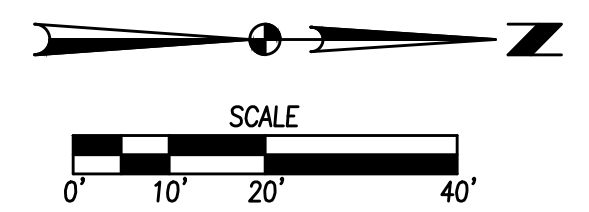
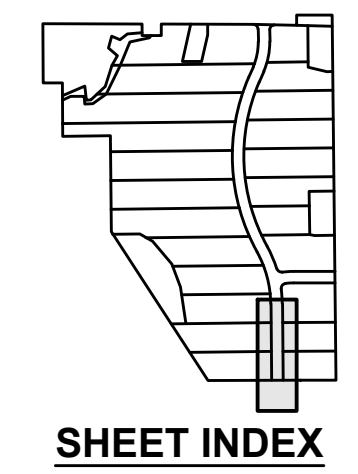
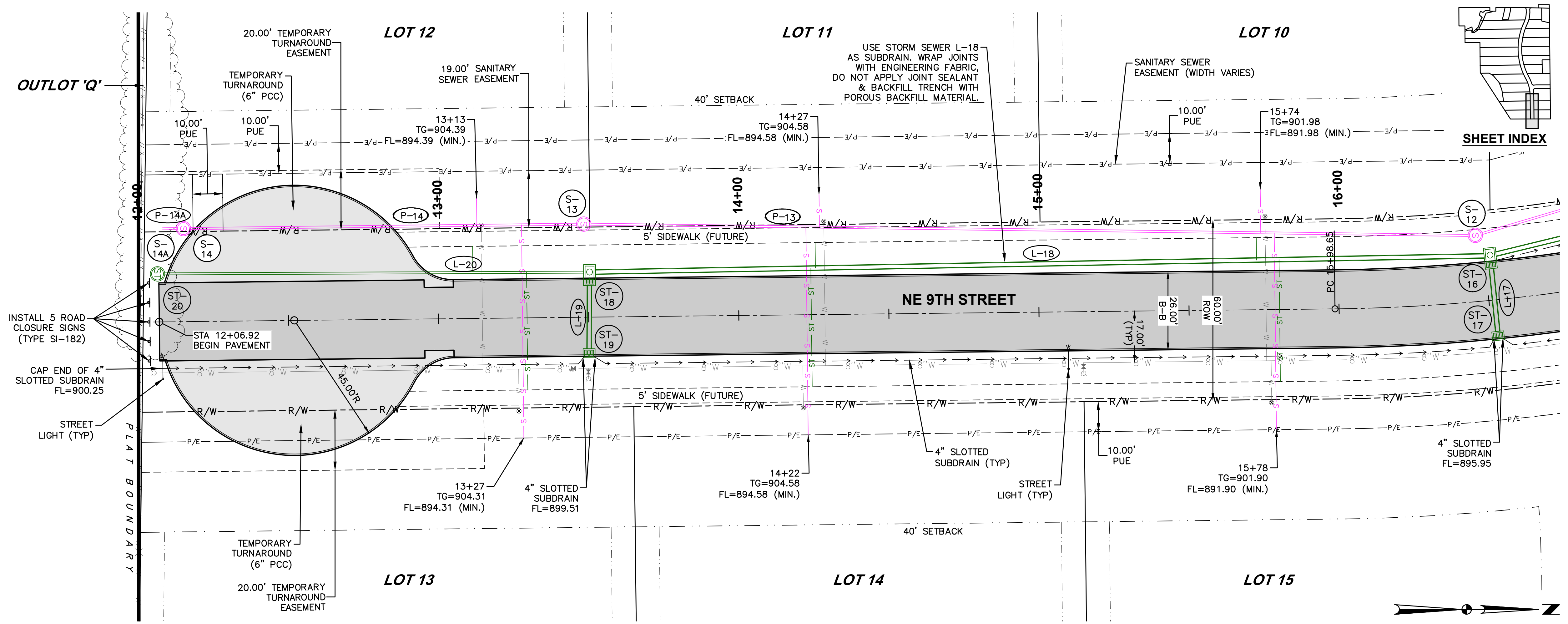
POLK CITY, IOWA

BIG CREEK RIDGE PLAT 1
 EROSION AND SEDIMENT CONTROL PLAN

15
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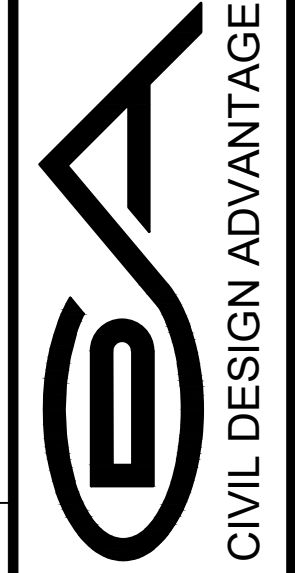
ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



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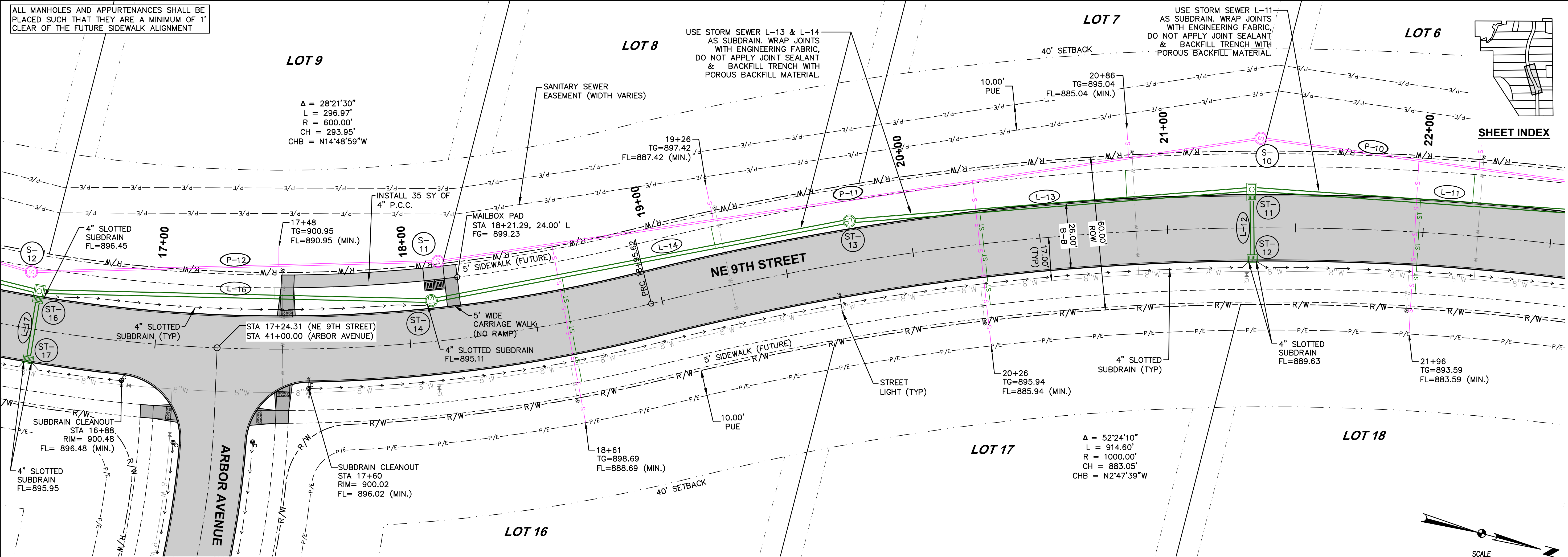
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BIG CREEK RIDGE PLAT 1
 ROADWAY, STORM & SANITARY PLAN AND PROFILE
 POLK CITY, IOWA

ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

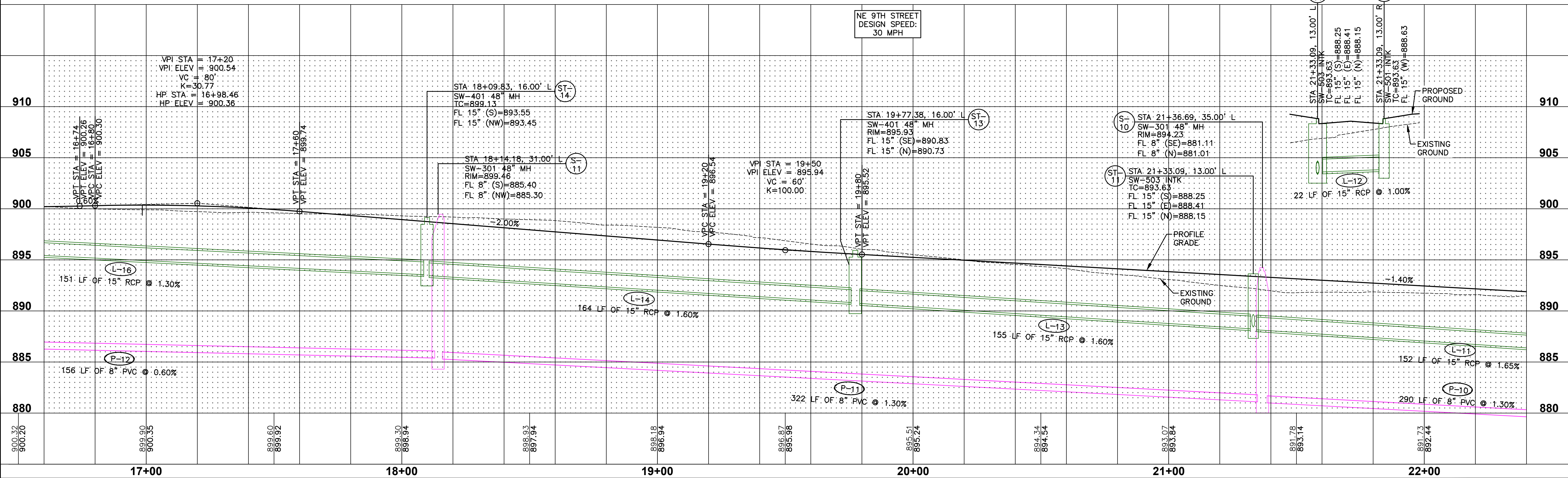
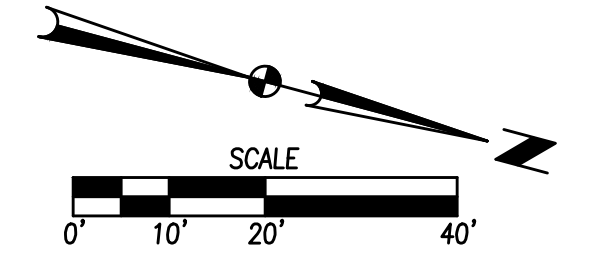


LOT 9
 $\Delta = 28^{\circ}21'30''$
 $L = 296.97'$
 $R = 600.00'$
 $CH = 293.95'$
 $CHB = N14^{\circ}48'59''W$

LOT 8
 USE STORM SEWER L-13 & L-14 AS SUBDRAIN. WRAP JOINTS WITH ENGINEERING FABRIC, DO NOT APPLY JOINT SEALANT & BACKFILL TRENCH WITH POROUS BACKFILL MATERIAL.

LOT 7
 USE STORM SEWER L-11 AS SUBDRAIN. WRAP JOINTS WITH ENGINEERING FABRIC, DO NOT APPLY JOINT SEALANT & BACKFILL TRENCH WITH POROUS BACKFILL MATERIAL.

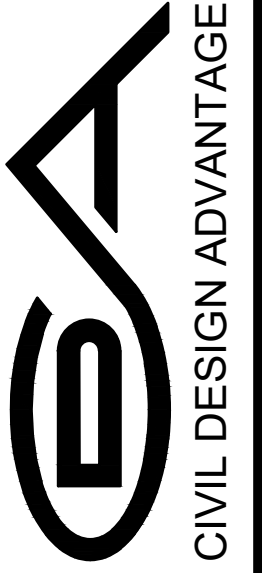
LOT 17
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 $R = 1000.00'$
 $CH = 883.05'$
 $CHB = N2^{\circ}47'39''W$



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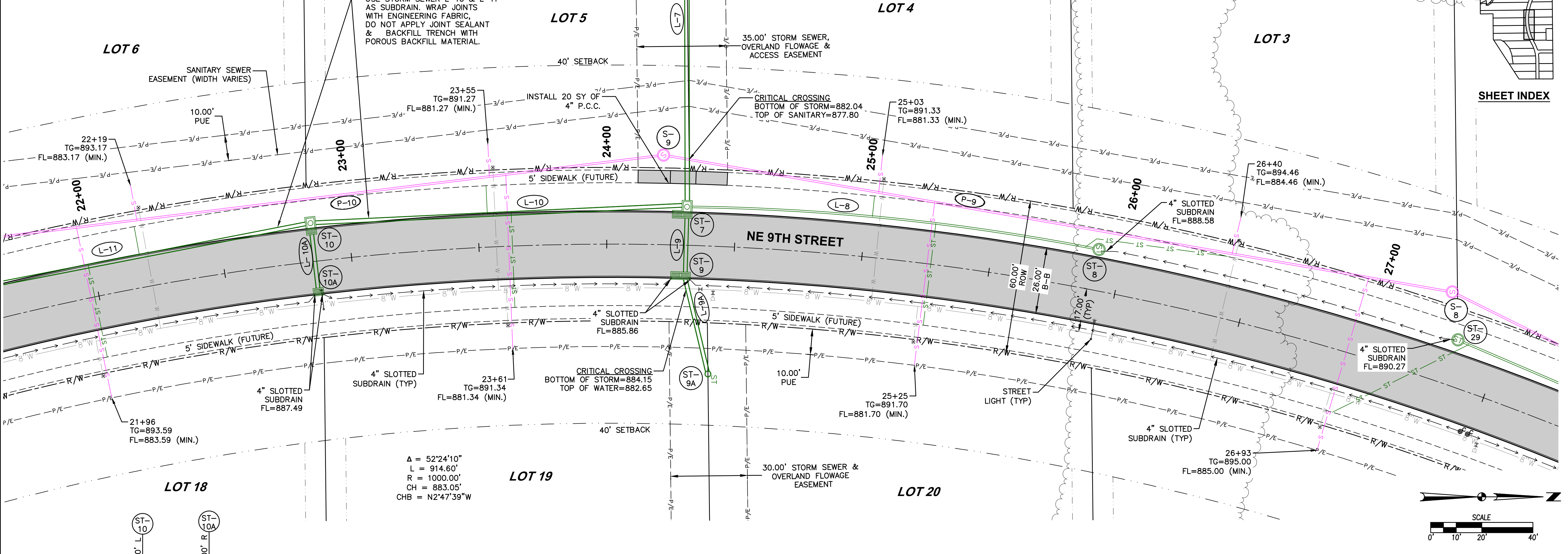
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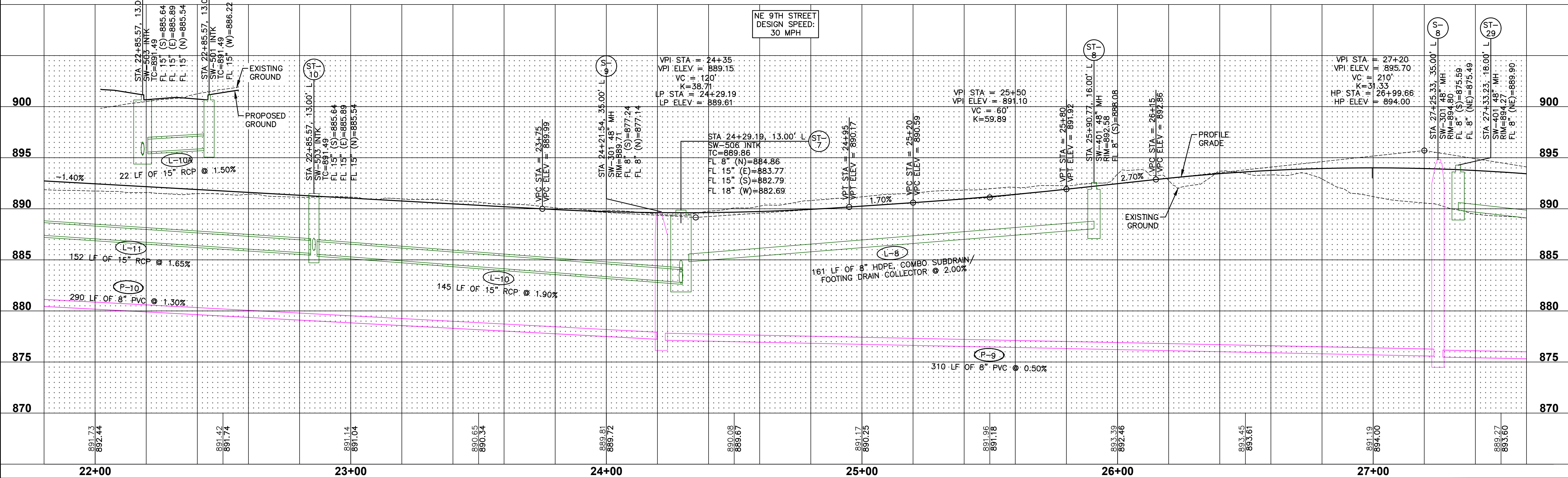
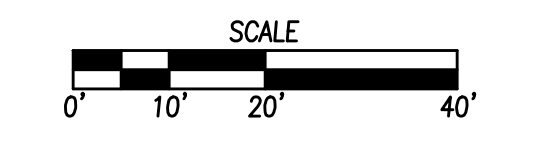


BIG CREEK RIDGE PLAT 1
 ROADWAY, STORM & SANITARY PLAN AND PROFILE
 POLK CITY, IOWA

ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



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 $R = 1000.00'$
 $CH = 883.05'$
 $CHB = N2^{\circ}47'39"W$

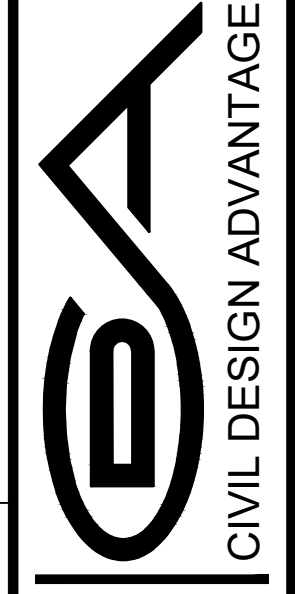


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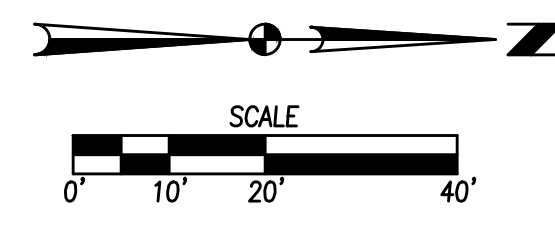
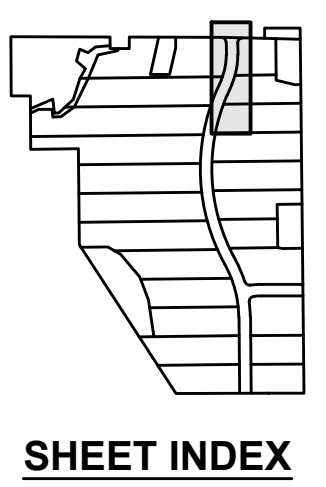
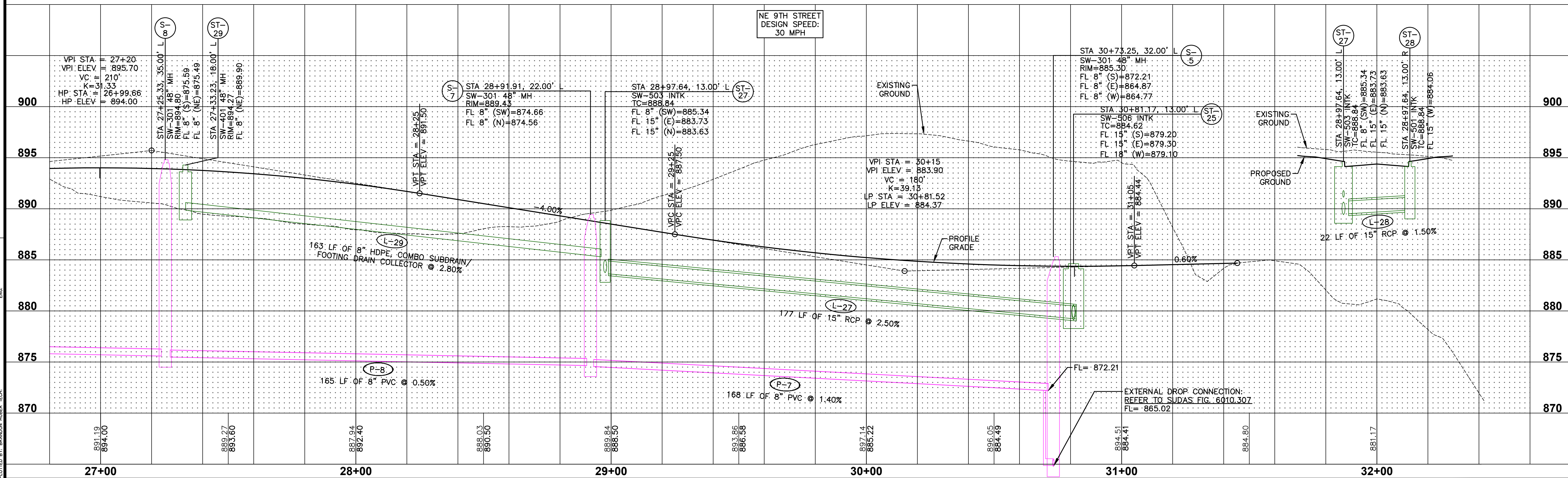
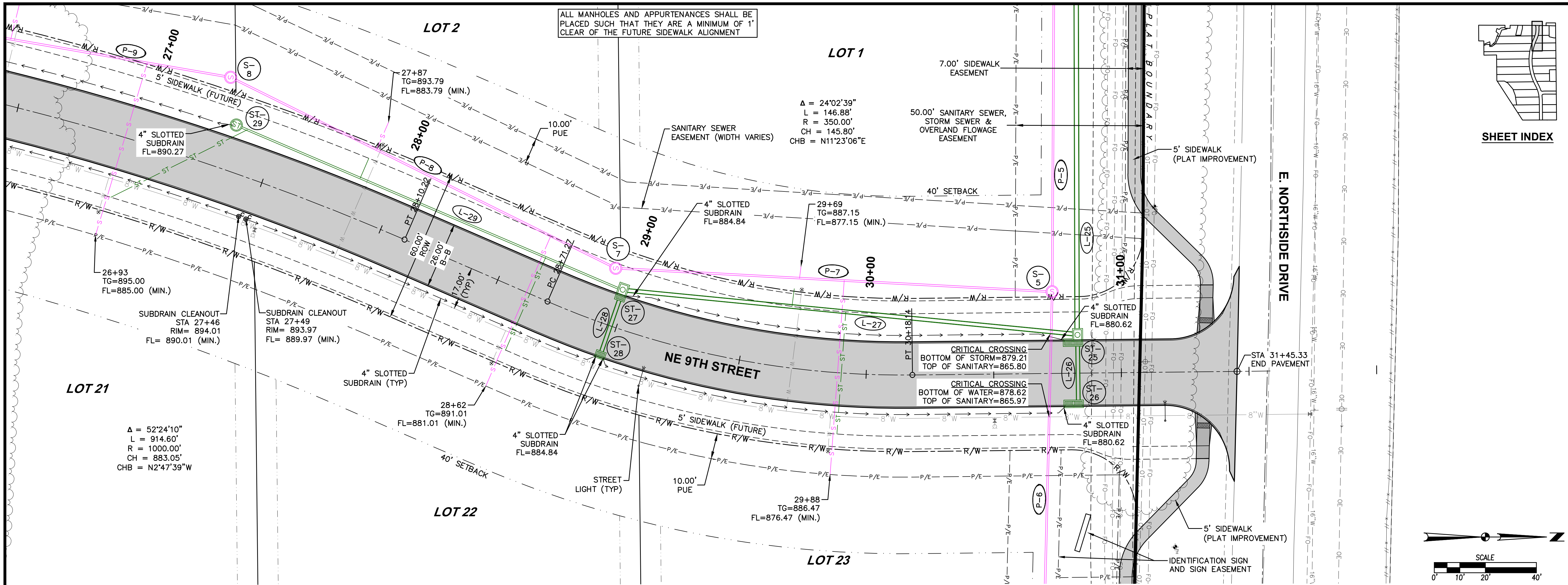
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 ENGINEER: RDR



BIG CREEK RIDGE PLAT 1
 ROADWAY, STORM & SANITARY PLAN AND PROFILE
 POLK COUNTY, IOWA

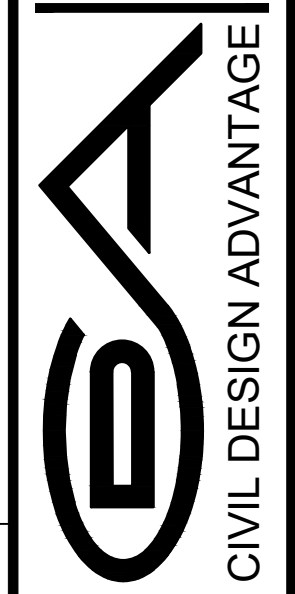
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SHEET INDEX

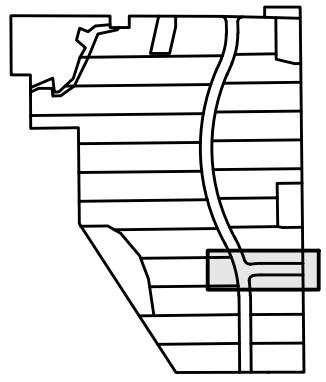
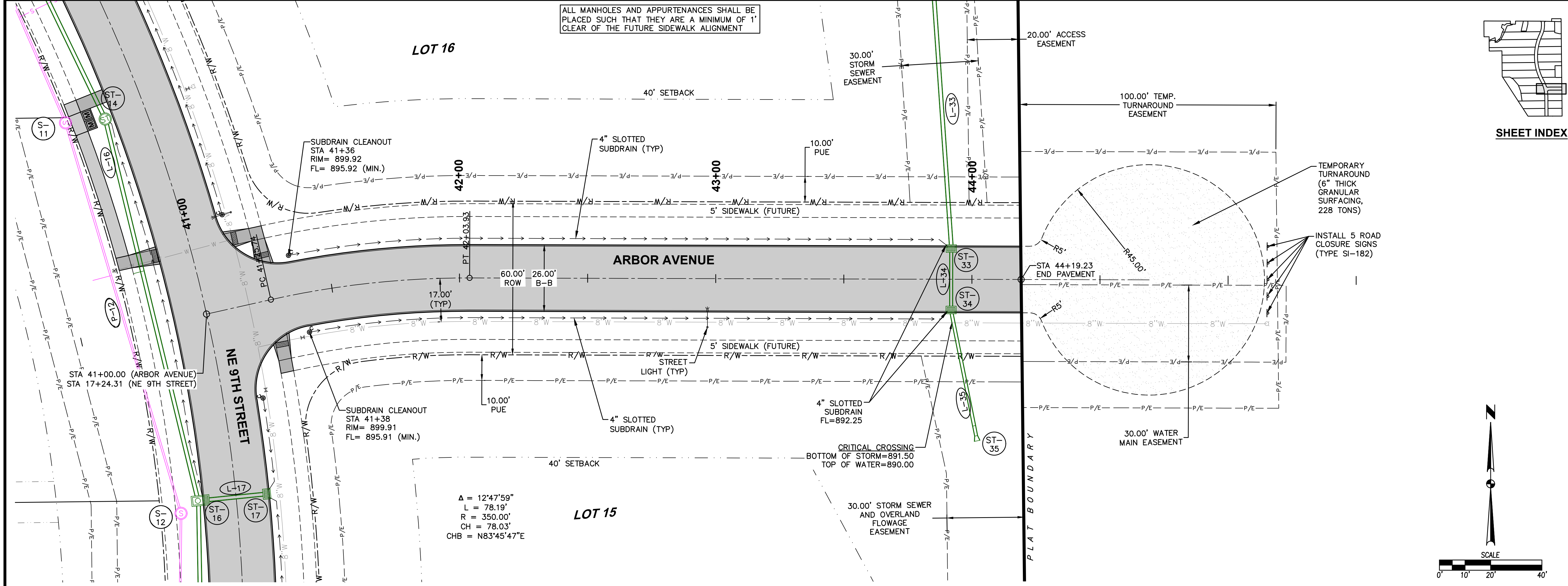


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 POLK CITY, IOWA

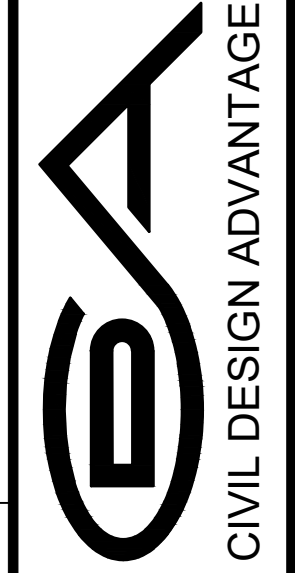


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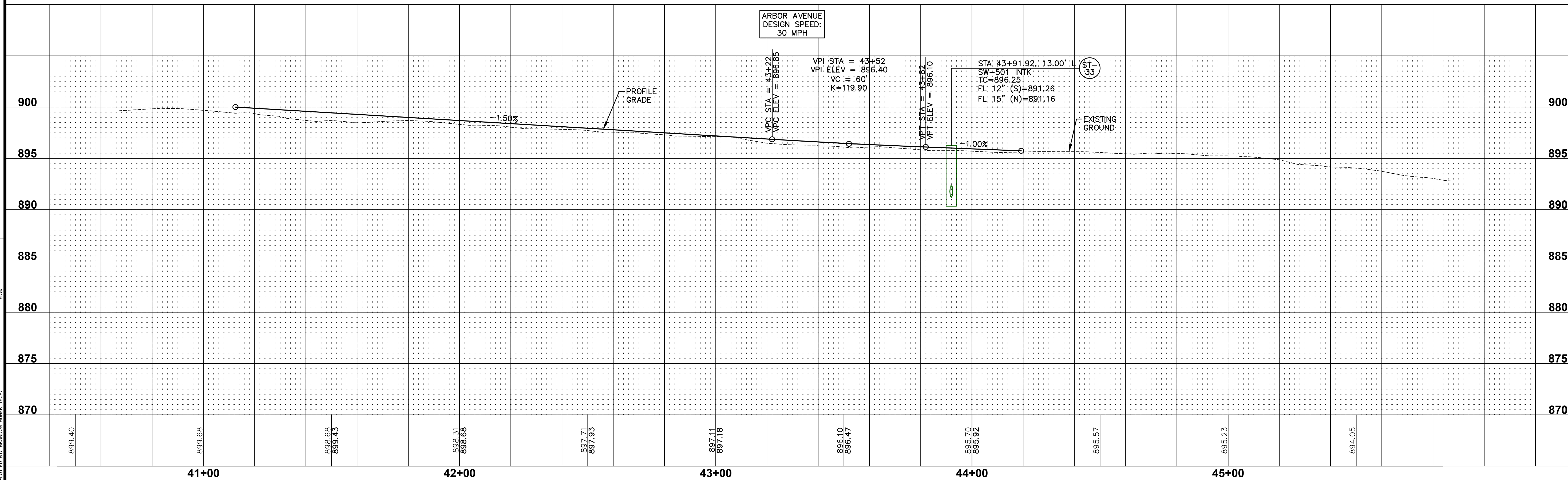
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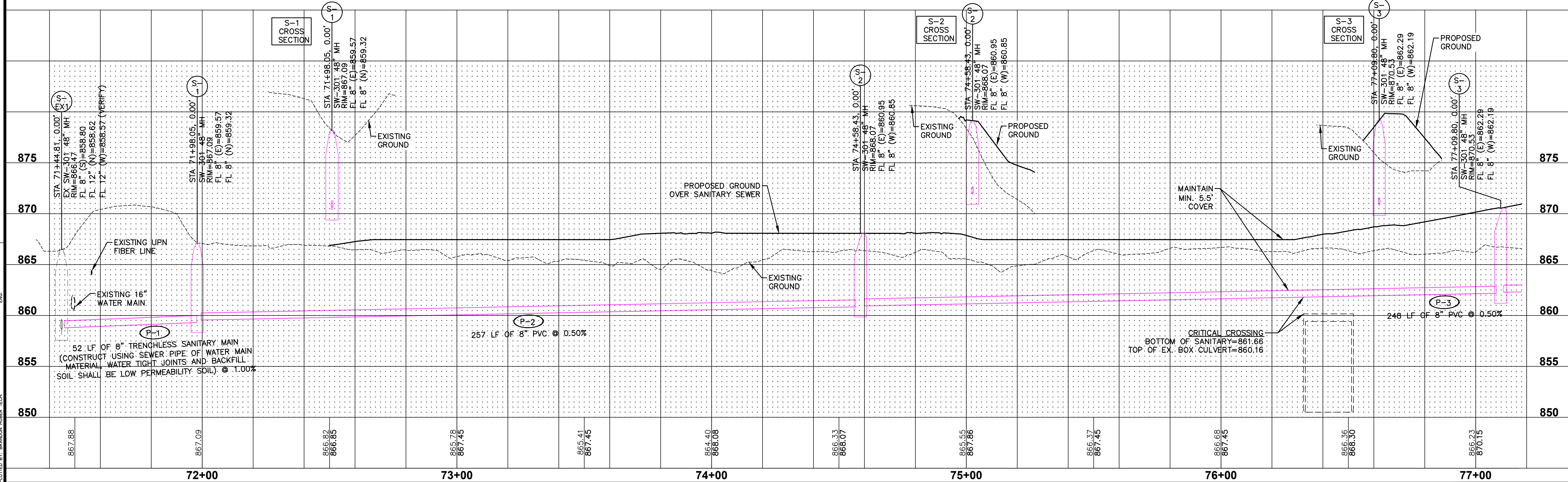
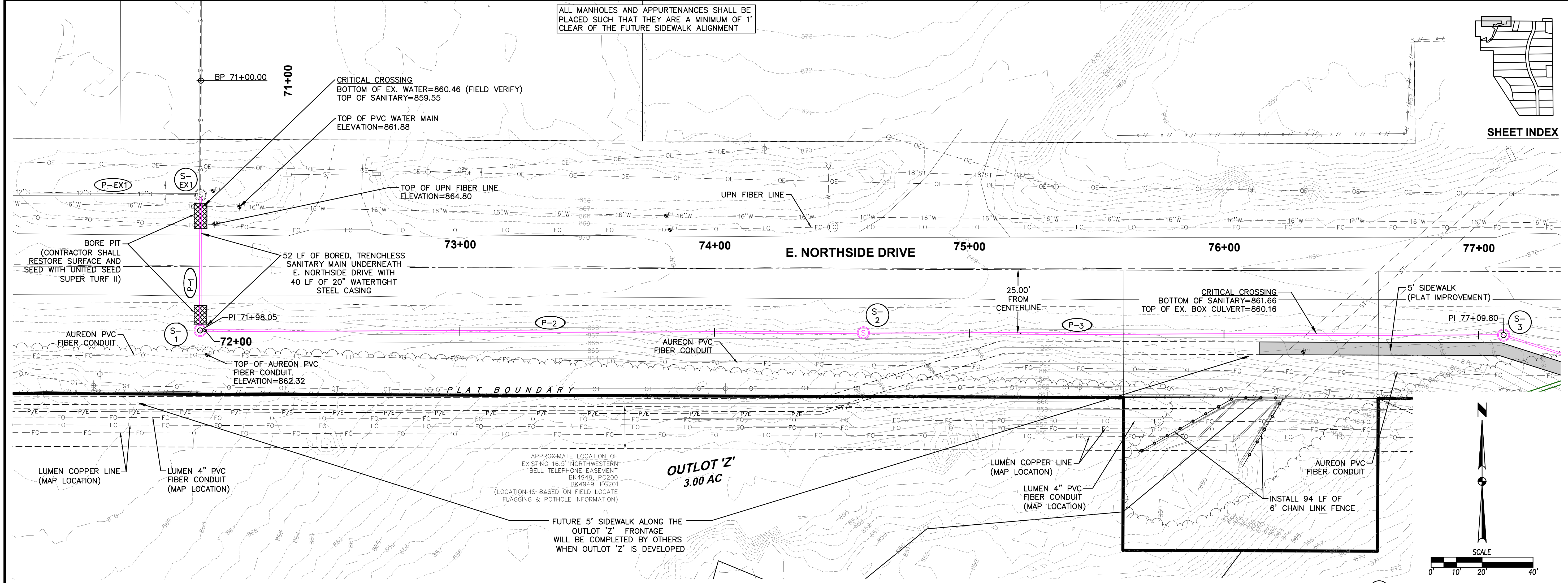
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BIG CREEK RIDGE PLAT 1
ROADWAY, STORM & SANITARY PLAN AND PROFILE
POLK CITY, IOWA



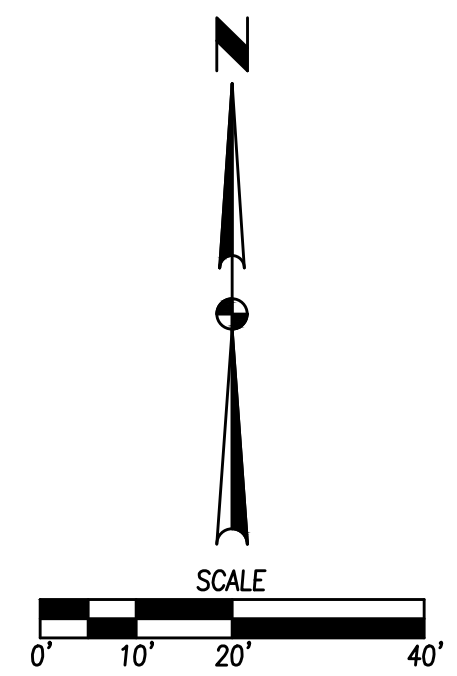
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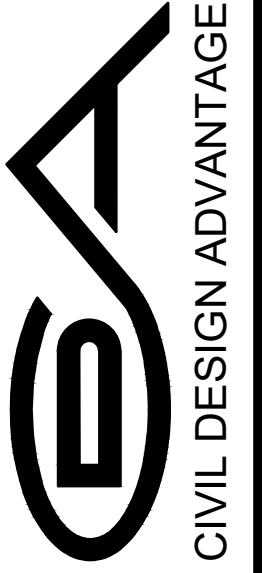
ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

SHEET INDEX



DATE	REVISIONS
02/05/2024	FOURTH SUBMITTAL
01/04/2024	THIRD SUBMITTAL
10/30/2023	SECOND SUBMITTAL
09/28/2023	FIRST SUBMITTAL

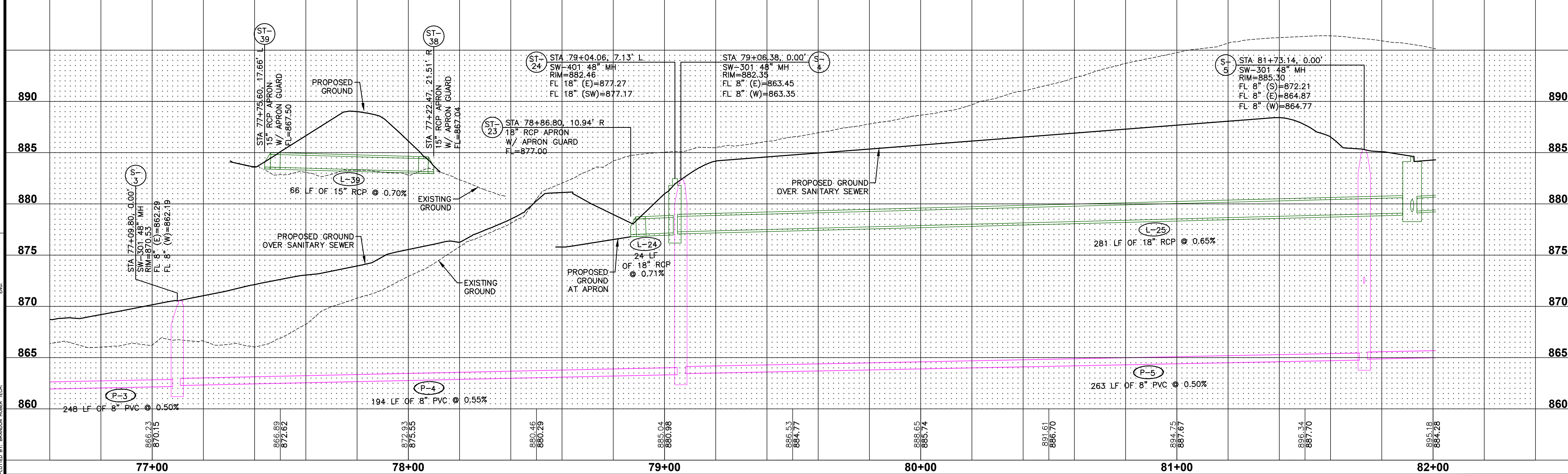
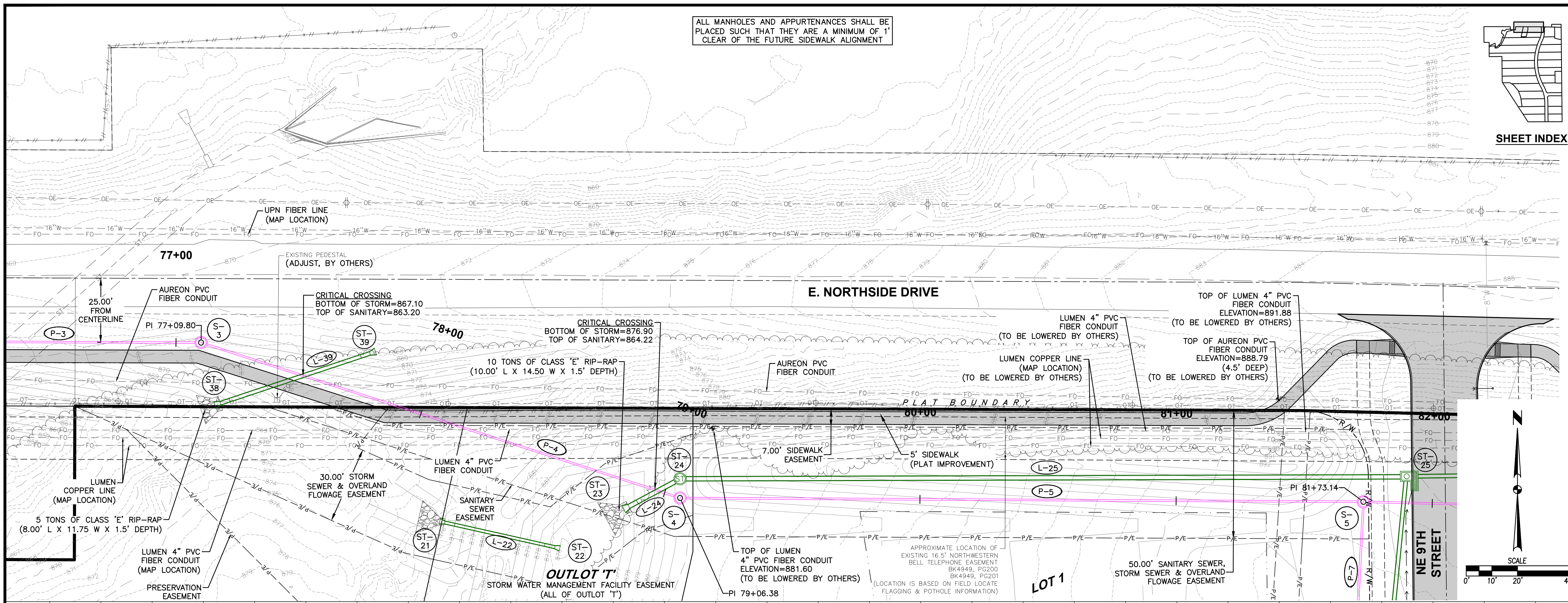
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400
 ENGINEER: RDR



BIG CREEK RIDGE PLAT 1
 ROADWAY, STORM & SANITARY PLAN AND PROFILE
 POLK CITY, IOWA

ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

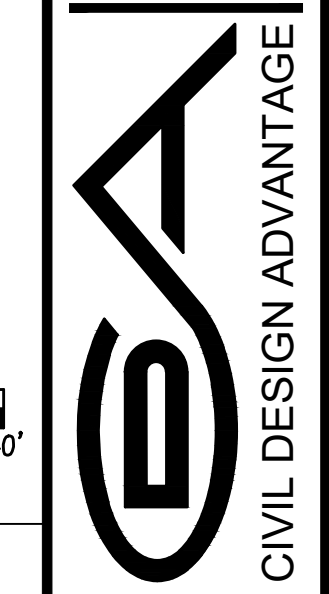
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REVISIONS	DATE	DESCRIPTION
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SECOND SUBMITTAL	10/30/2023	
FIRST SUBMITTAL	09/28/2023	

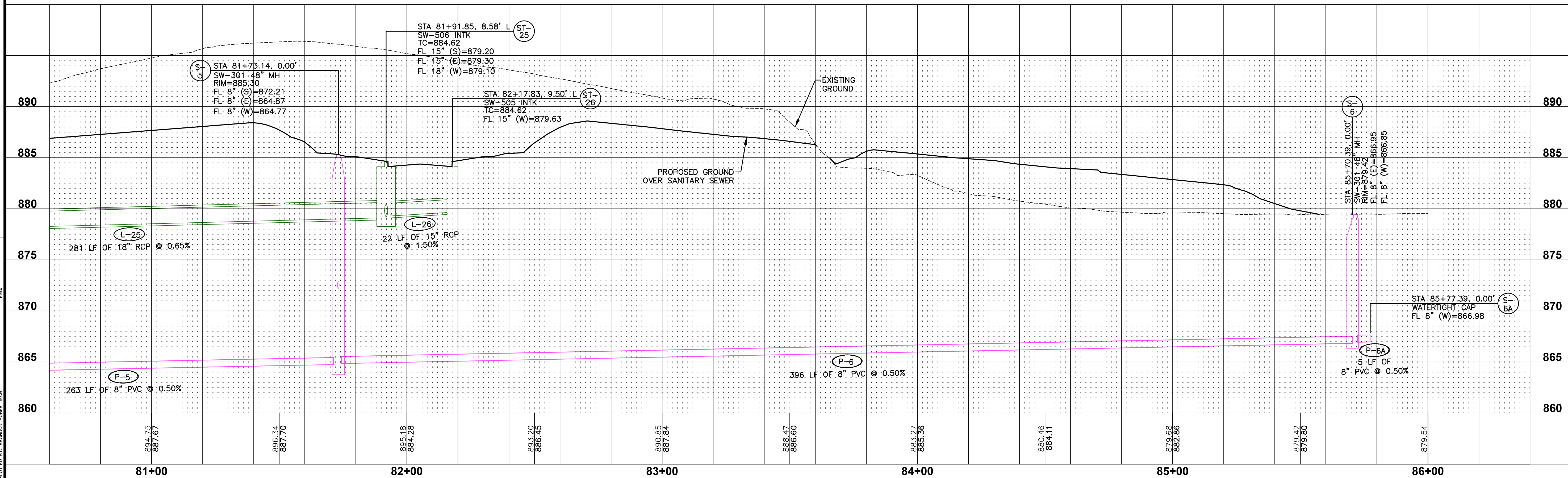
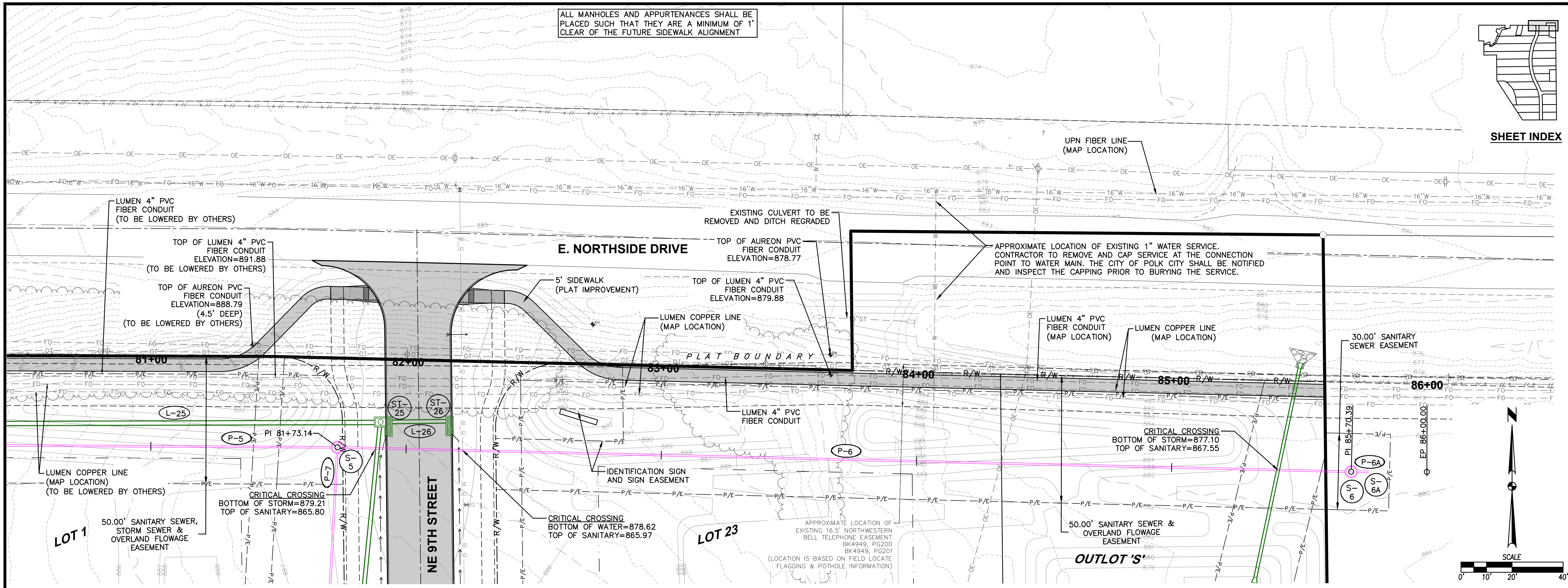
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400



BIG CREEK RIDGE PLAT 1
 ROADWAY, STORM & SANITARY PLAN AND PROFILE
 POLK COUNTY, IOWA

22
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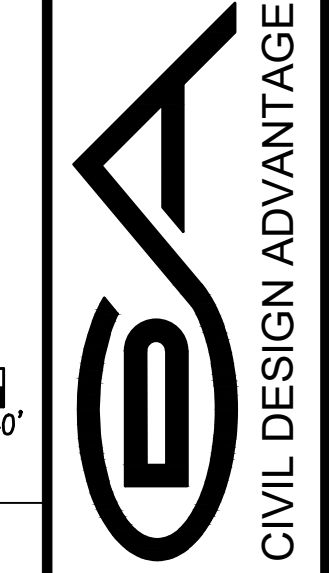
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ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

SHEET INDEX

REVISIONS	DATE	DESCRIPTION
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THIRD SUBMITTAL	01/04/2024	
SECOND SUBMITTAL	10/30/2023	
FIRST SUBMITTAL	09/28/2023	

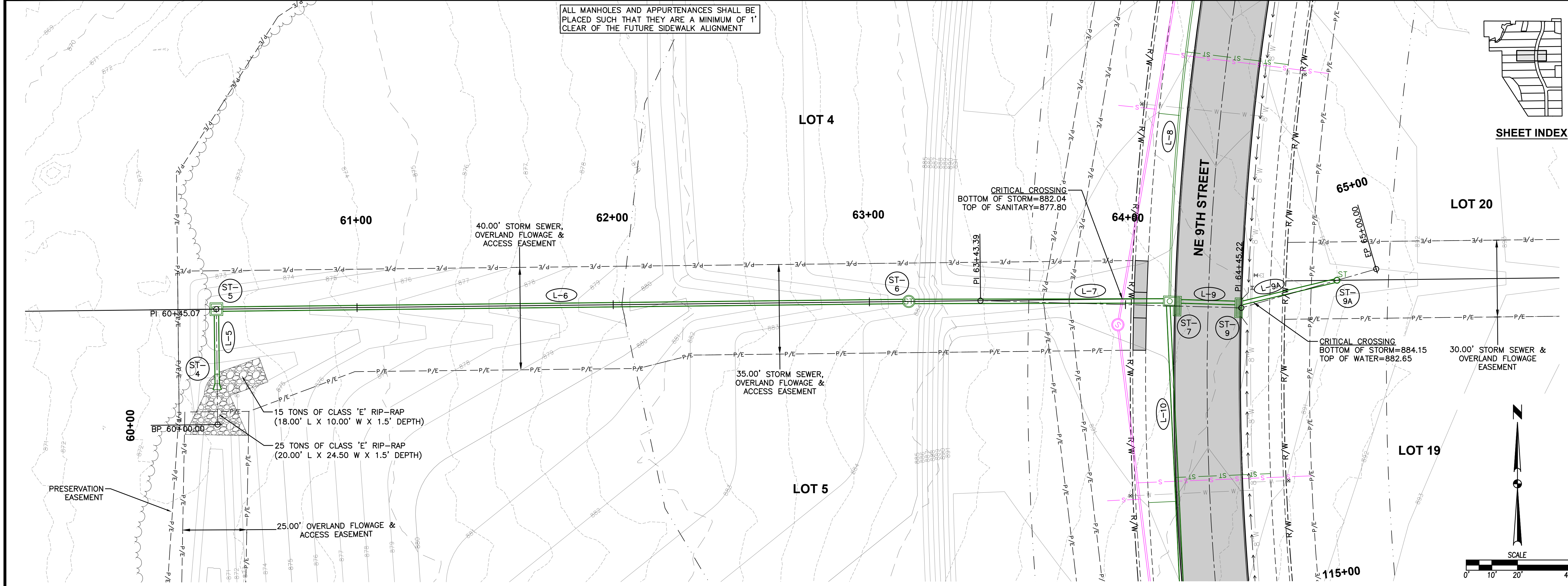
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400



BIG CREEK RIDGE PLAT 1
 ROADWAY, STORM & SANITARY PLAN AND PROFILE
 POLK CITY, IOWA

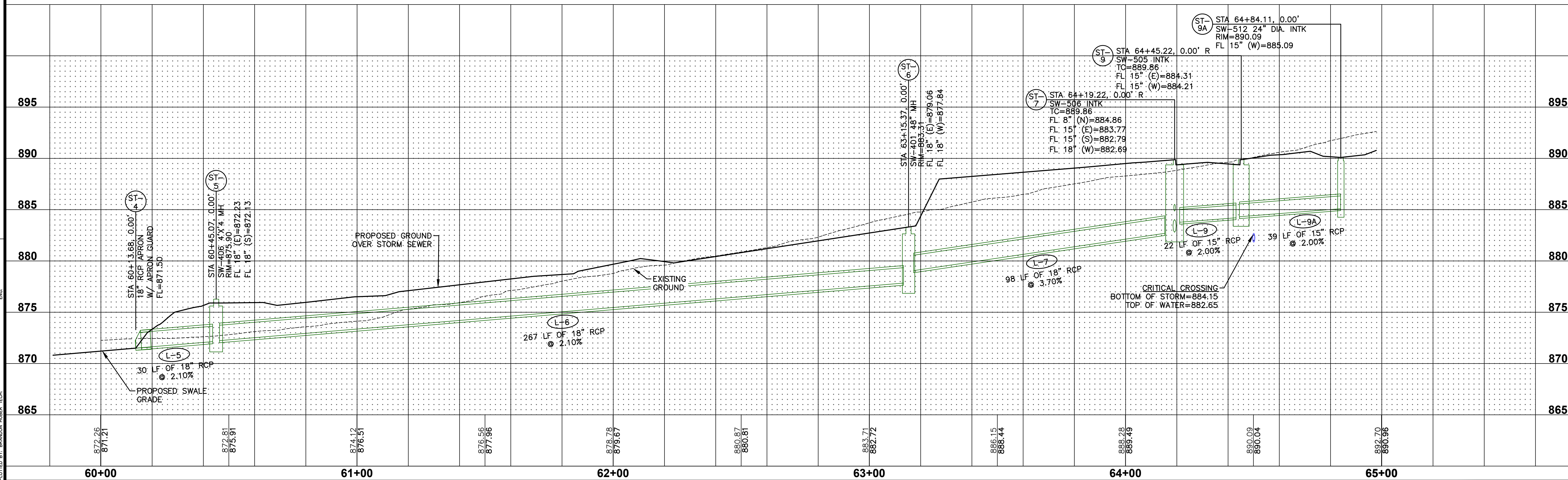
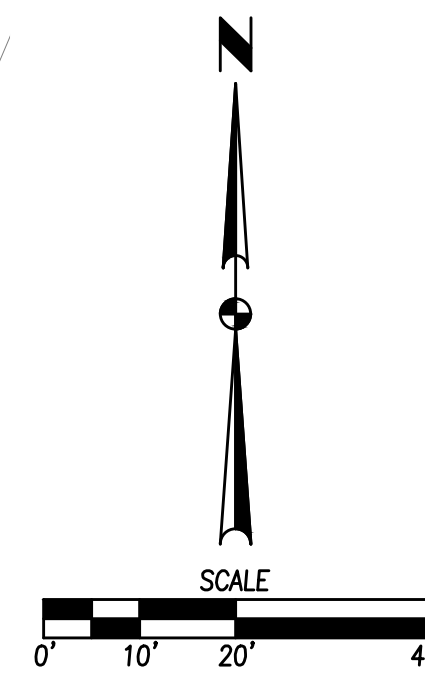
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TECH: RDR
 ENGINEER: RDR



ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

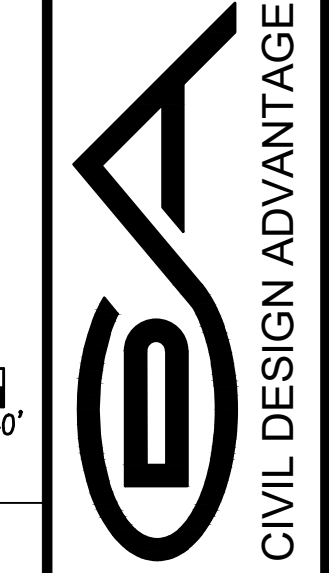
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DATE	REVISIONS
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4121 NW URBANDALE DRIVE
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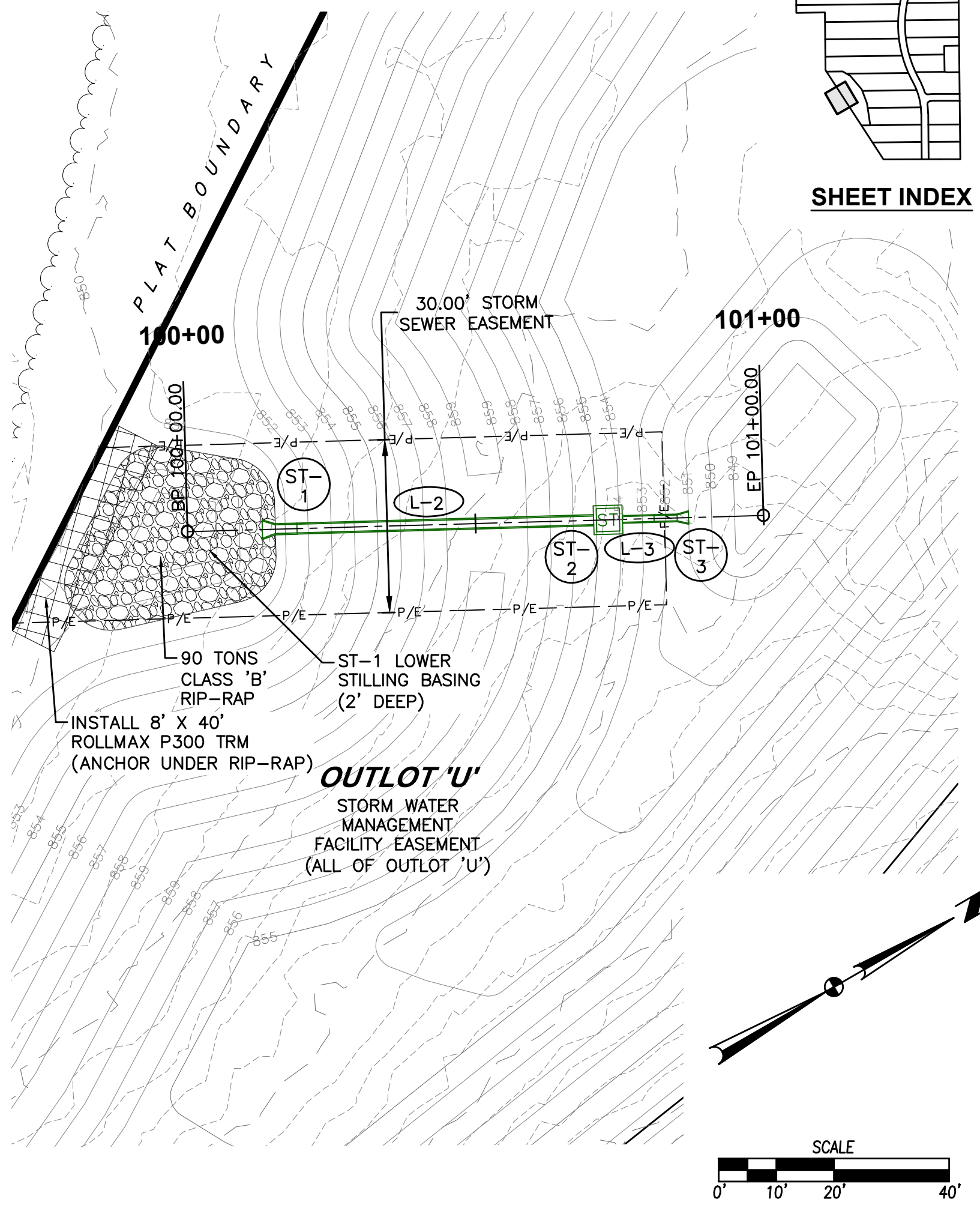


BIG CREEK RIDGE PLAT 1
 ROADWAY, STORM & SANITARY PLAN AND PROFILE
 POLK CITY, IOWA

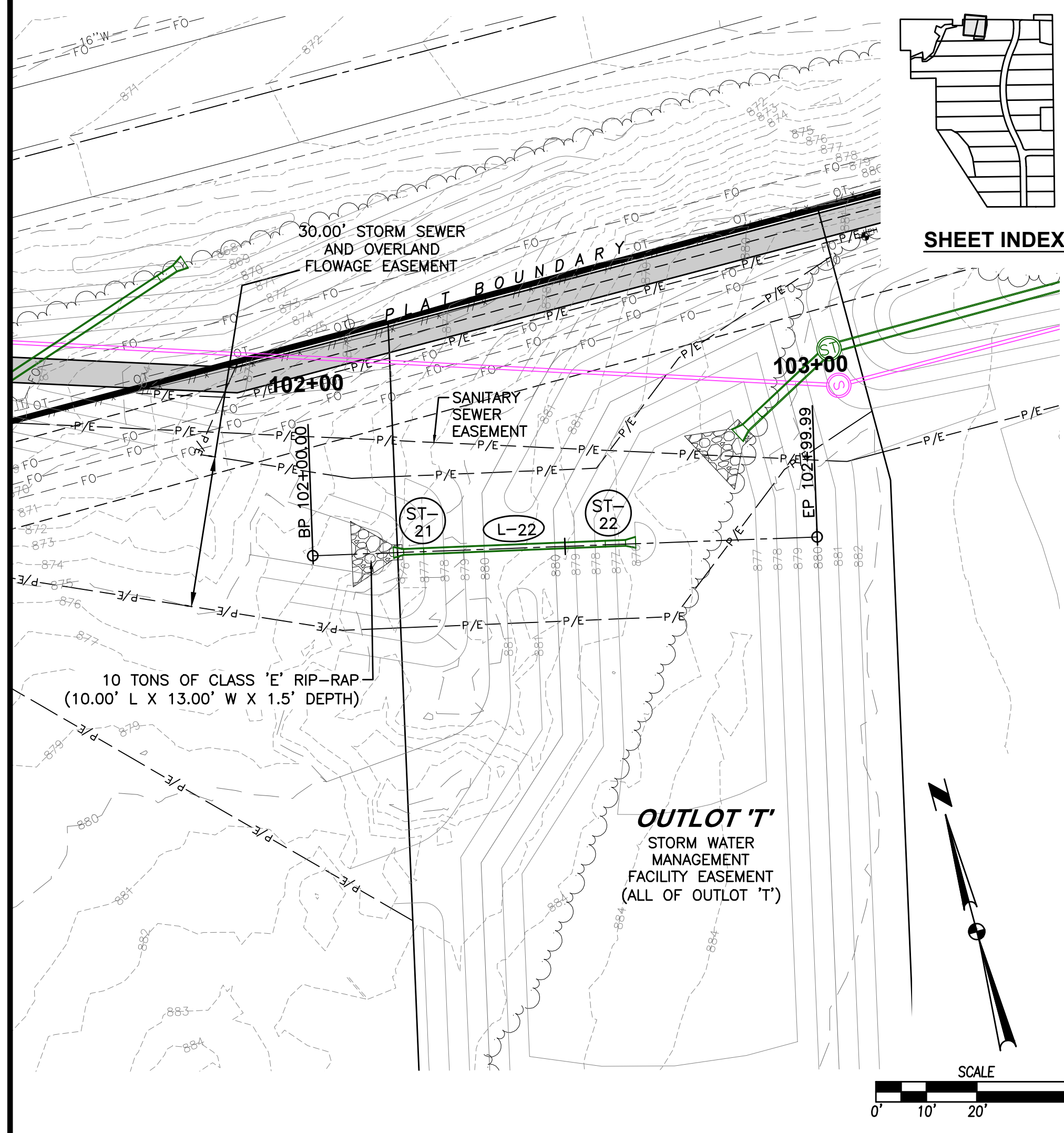
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 TECH:

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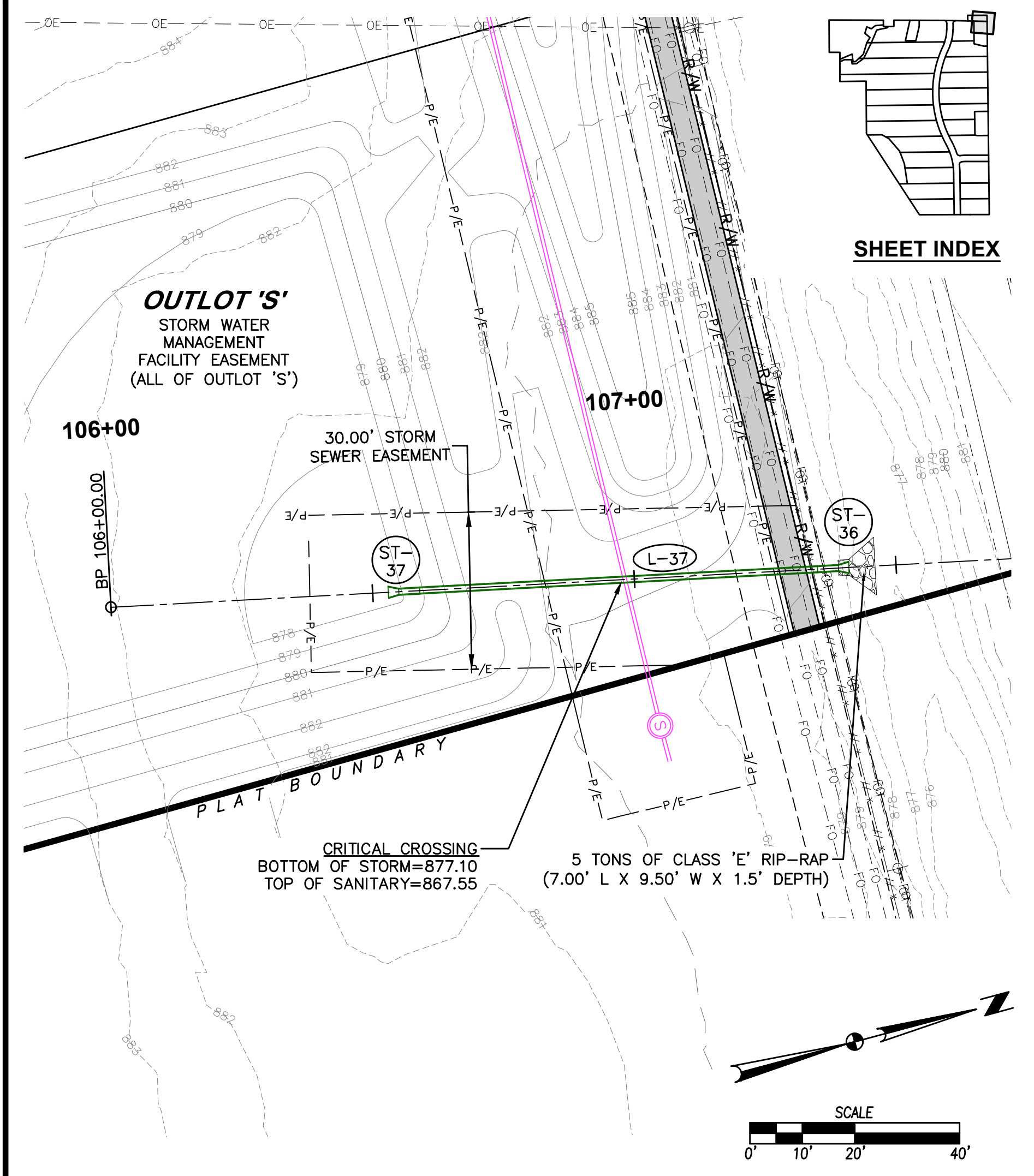
ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



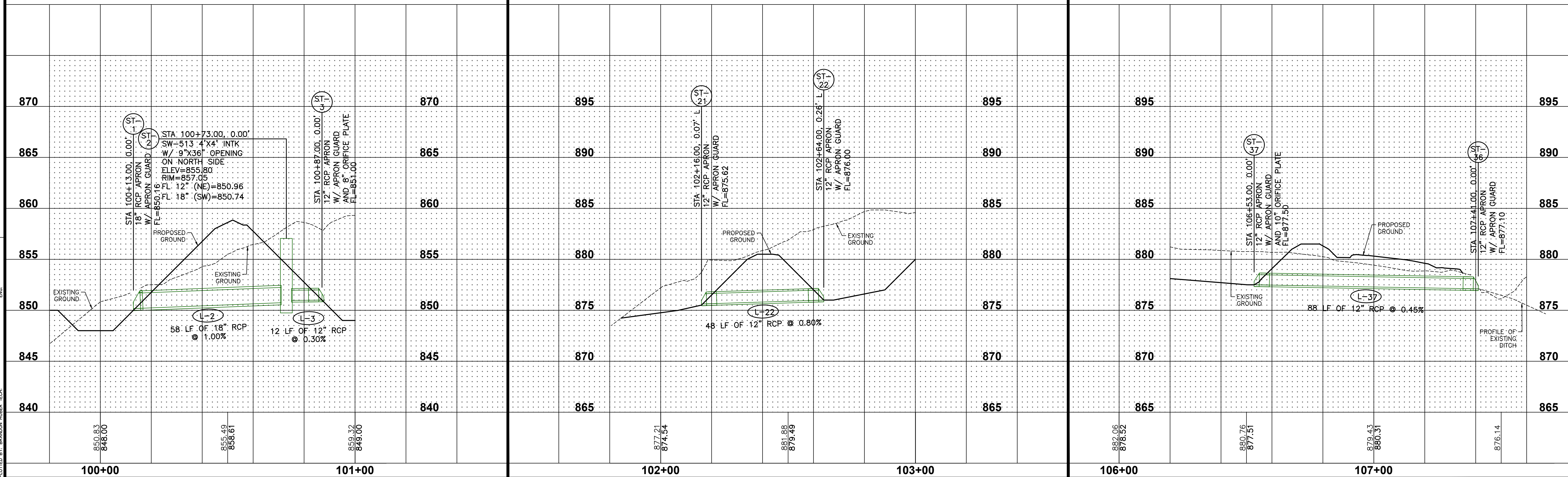
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SHEET INDEX



SHEET INDEX



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BIG CREEK RIDGE PLAT 1
ROADWAY, STORM & SANITARY PLAN AND PROFILE

POLK CITY, IOWA

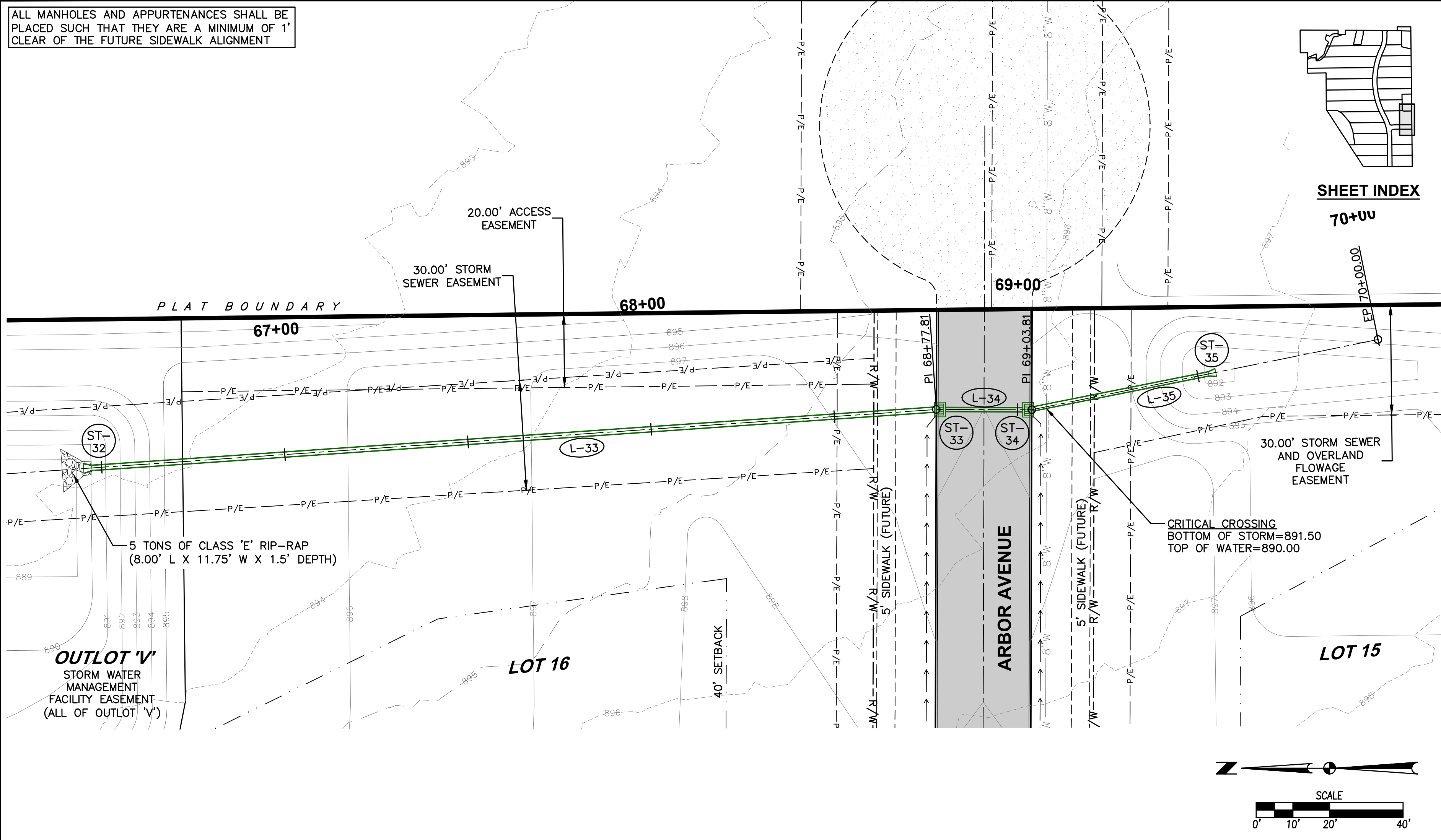
ES&A
CIVIL DESIGN ADVANTAGE

4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
PHONE: (515) 369-4400

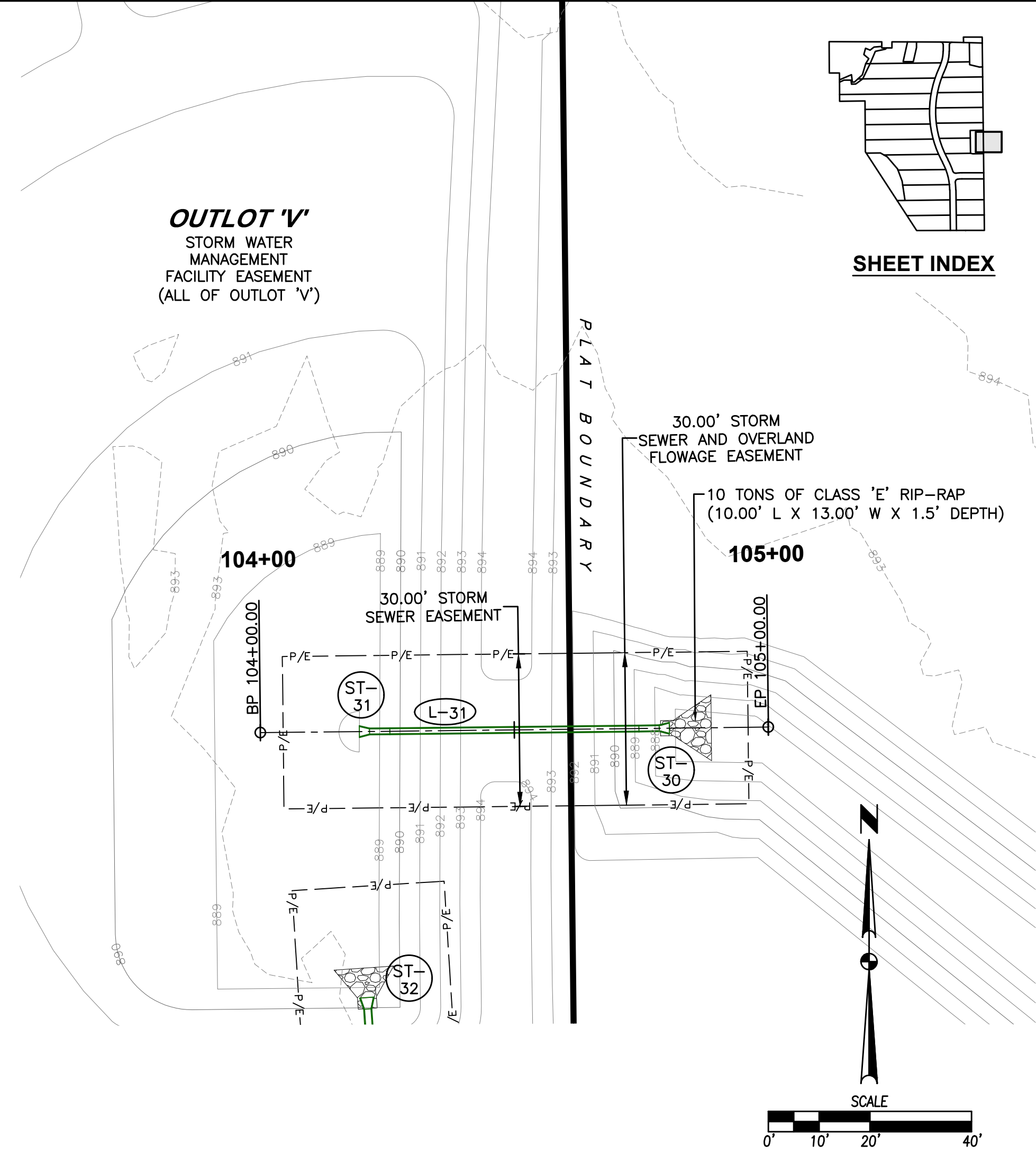
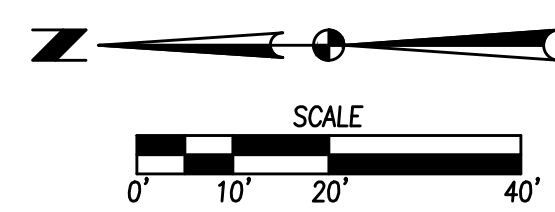
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ENGINEER: RDR

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10/30/2023	SECOND SUBMITTAL
09/28/2023	FIRST SUBMITTAL

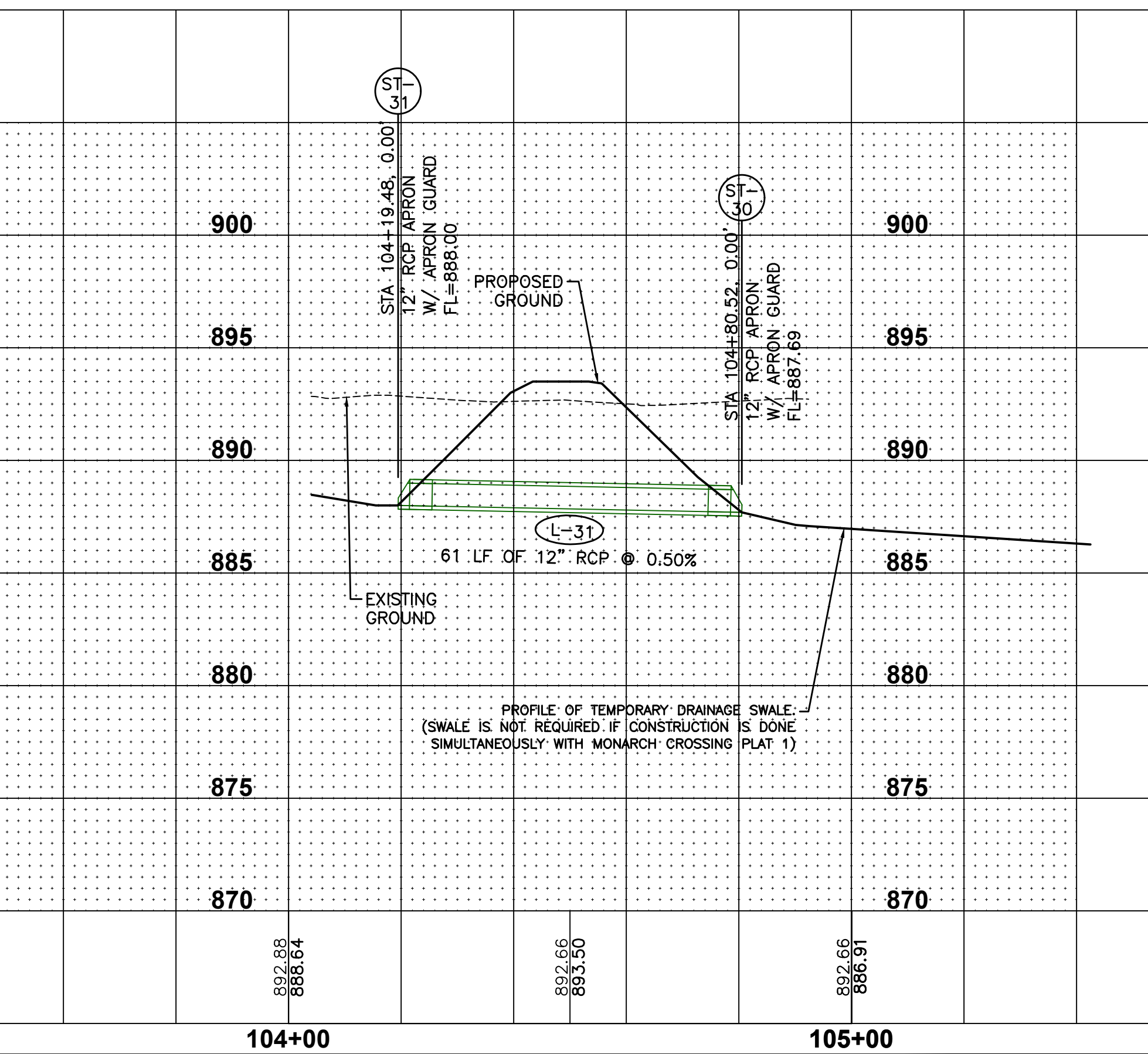
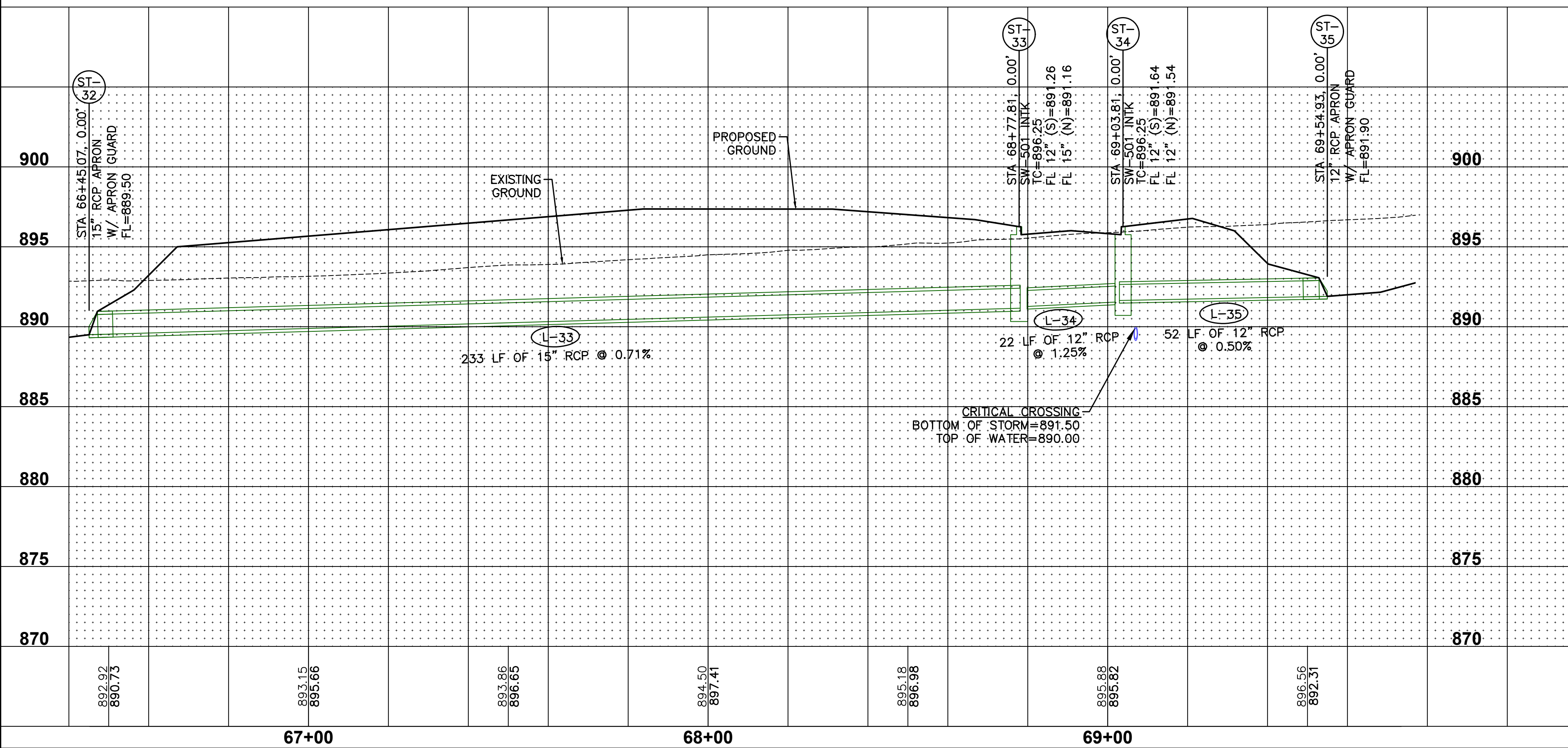
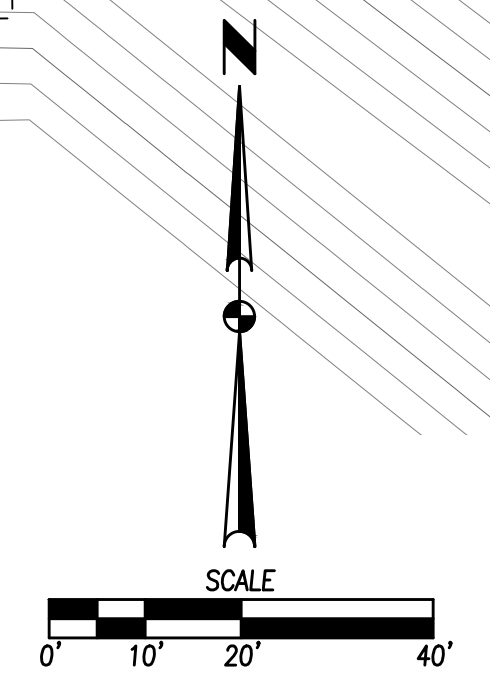
ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



SHEET INDEX
70+00



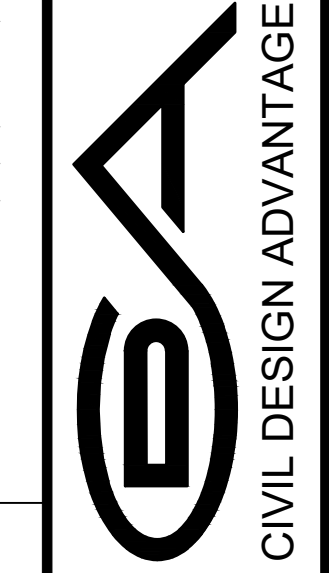
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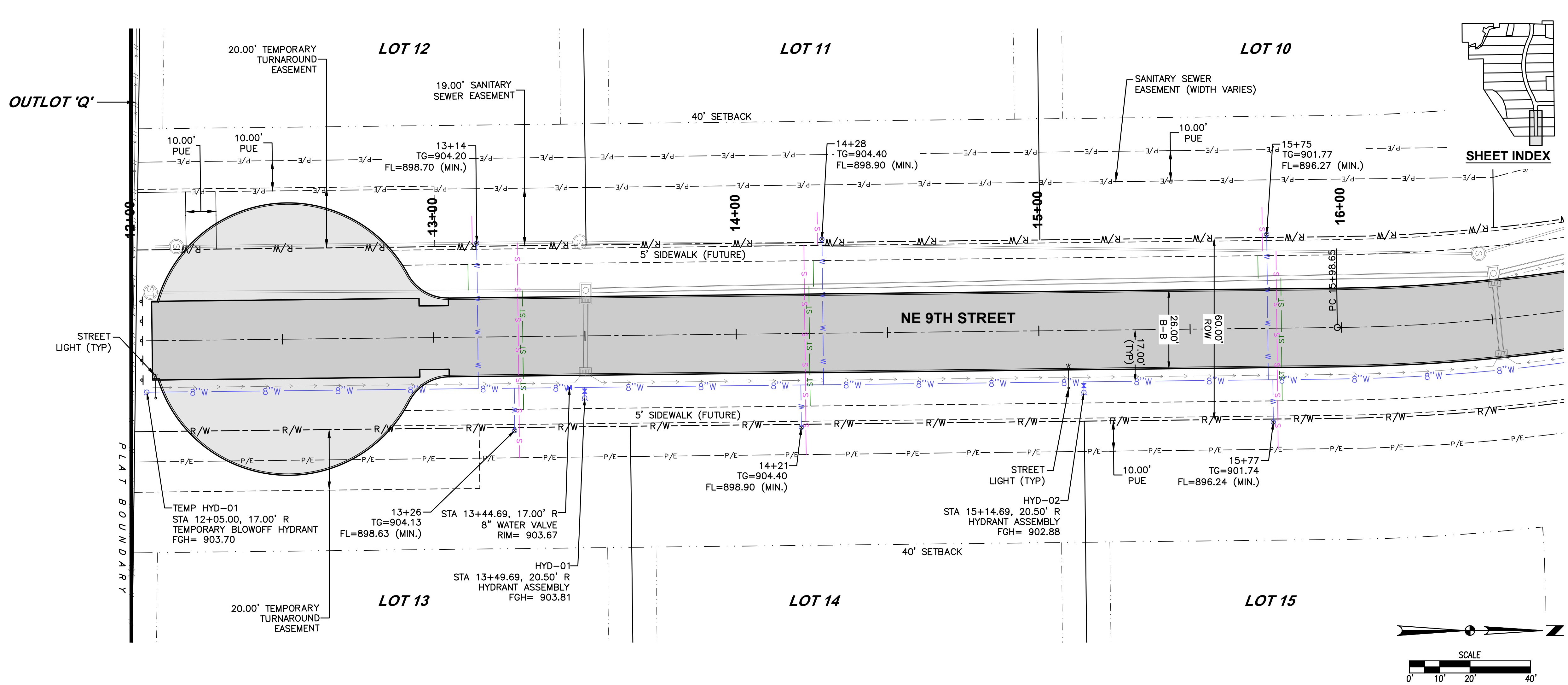
REVISIONS	DATE
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FIRST SUBMITTAL	09/28/2023

4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
PHONE: (515) 369-4400
ENGINEER: RDR

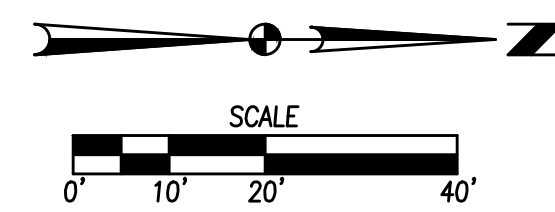


BIG CREEK RIDGE PLAT 1
ROADWAY, STORM & SANITARY PLAN AND PROFILE
POLK CITY, IOWA

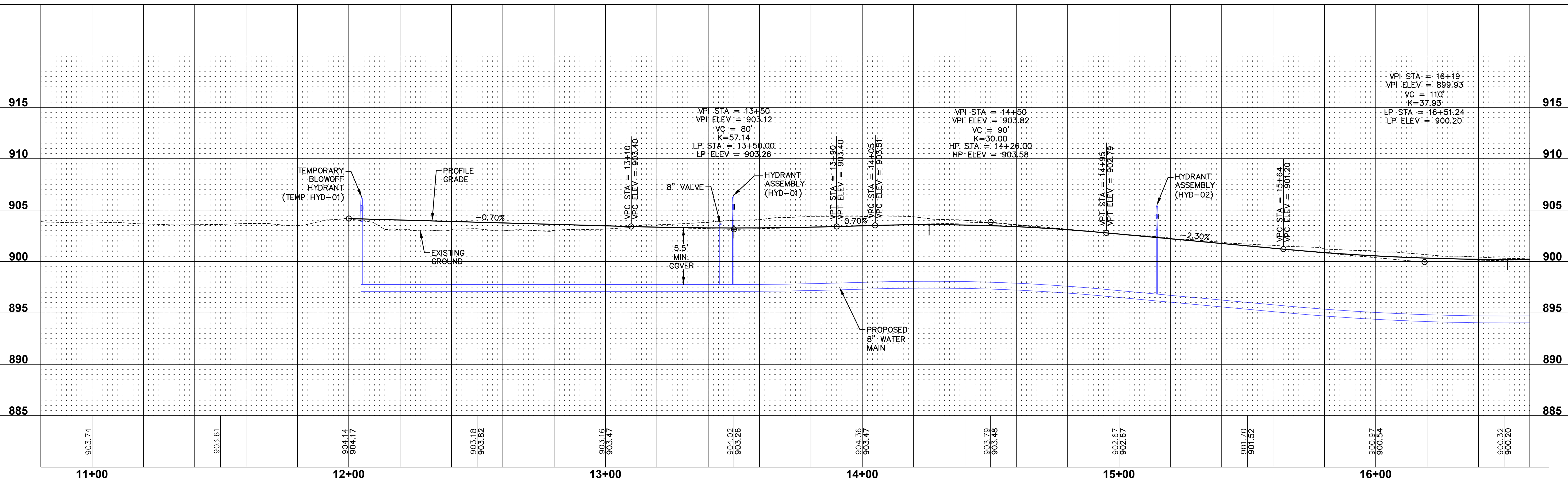
ALL HYDRANTS AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 2' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



SHEET INDEX



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 PLOTTED: 2/27/2024 3:33 PM



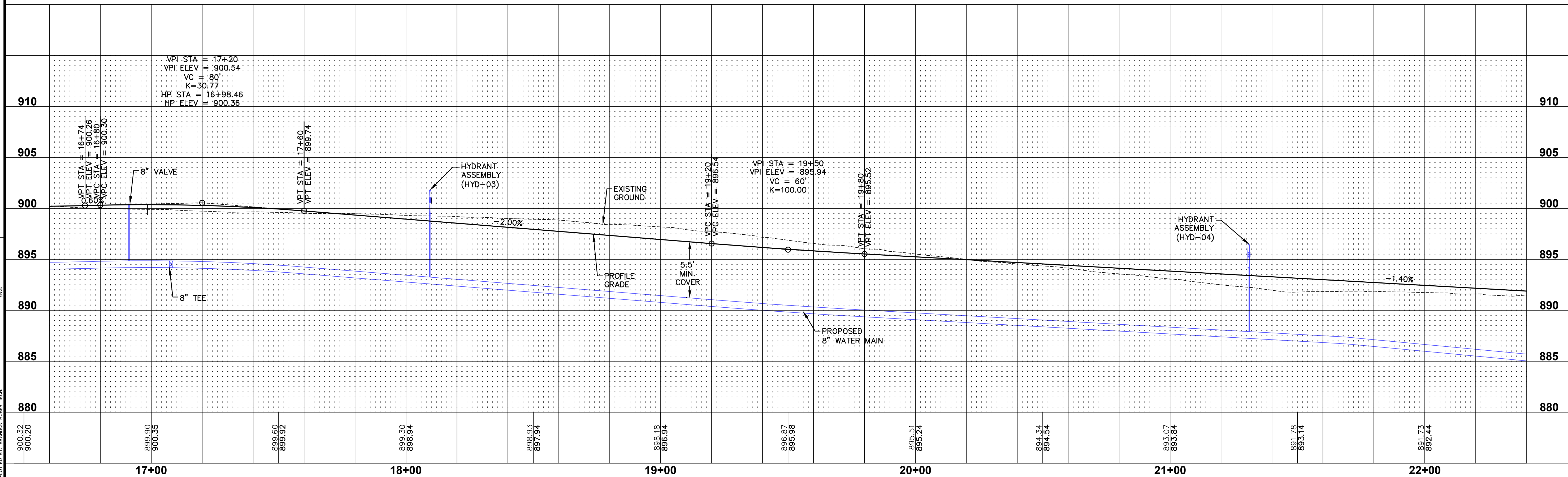
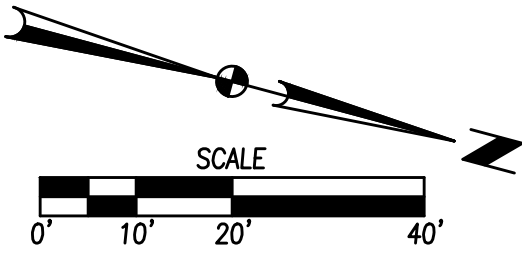
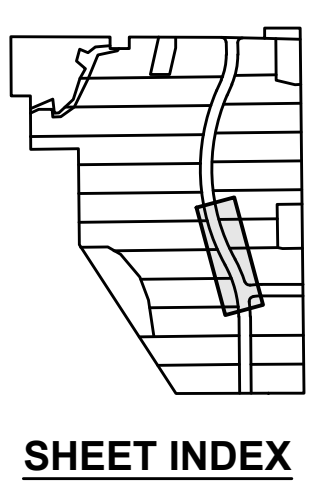
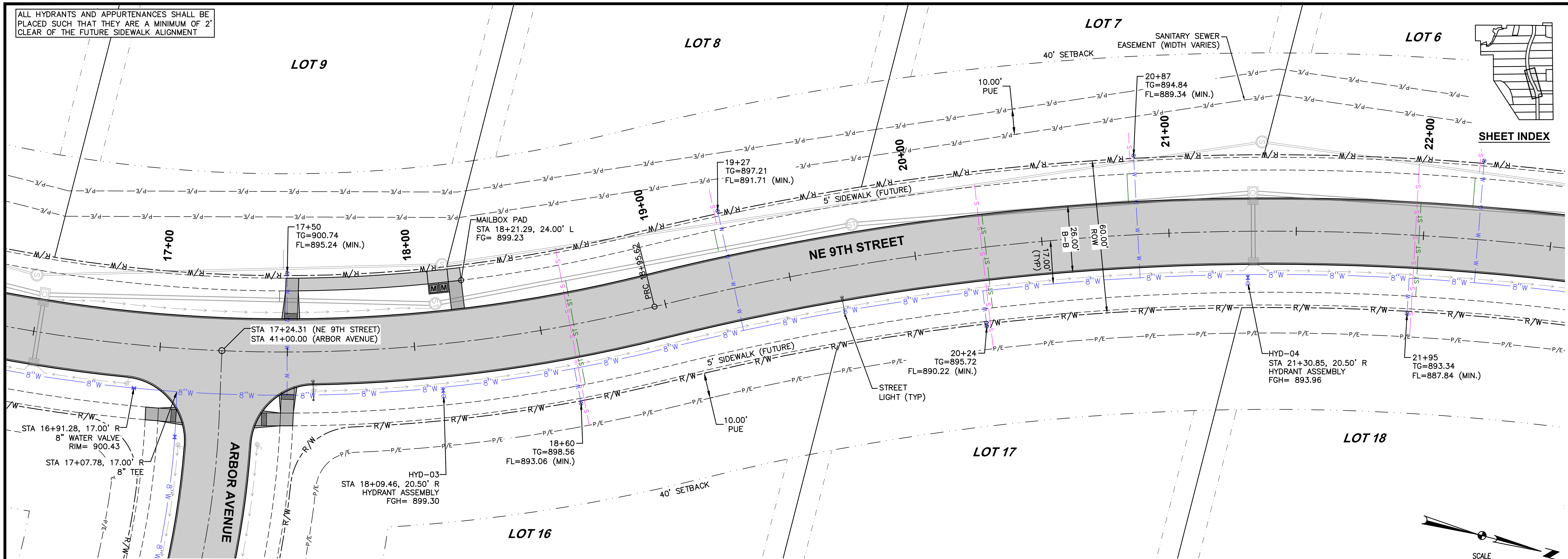
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FOURTH SUBMITTAL	01/04/2024			
THIRD SUBMITTAL	10/30/2023			
SECOND SUBMITTAL	10/30/2023			
FIRST SUBMITTAL	09/28/2023			

BIG CREEK RIDGE PLAT 1
WATERMAIN PLAN AND PROFILE

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 2211.760

4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400

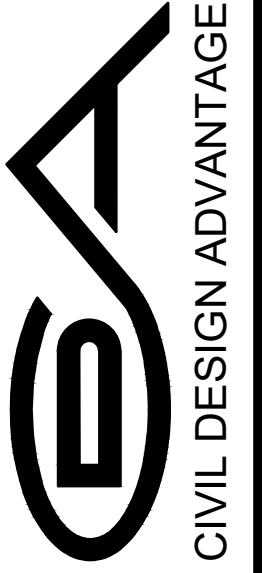
ALL HYDRANTS AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 2' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



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4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400

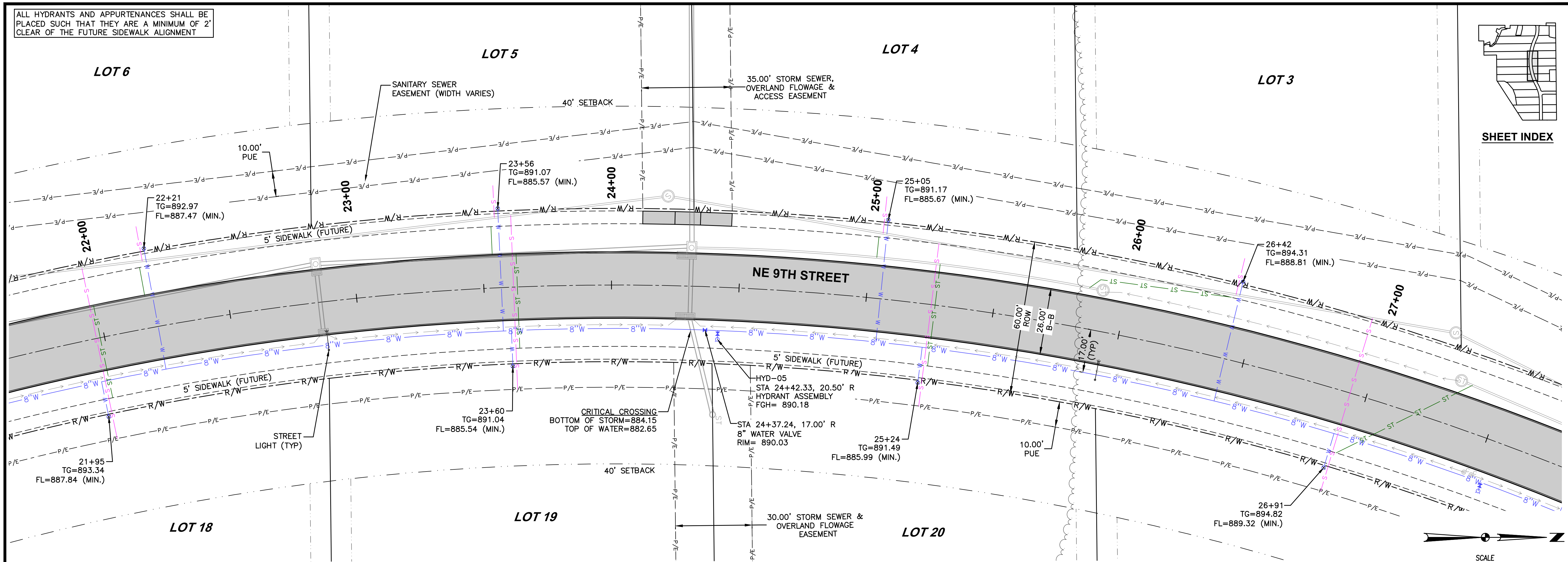


POLK CITY, IOWA

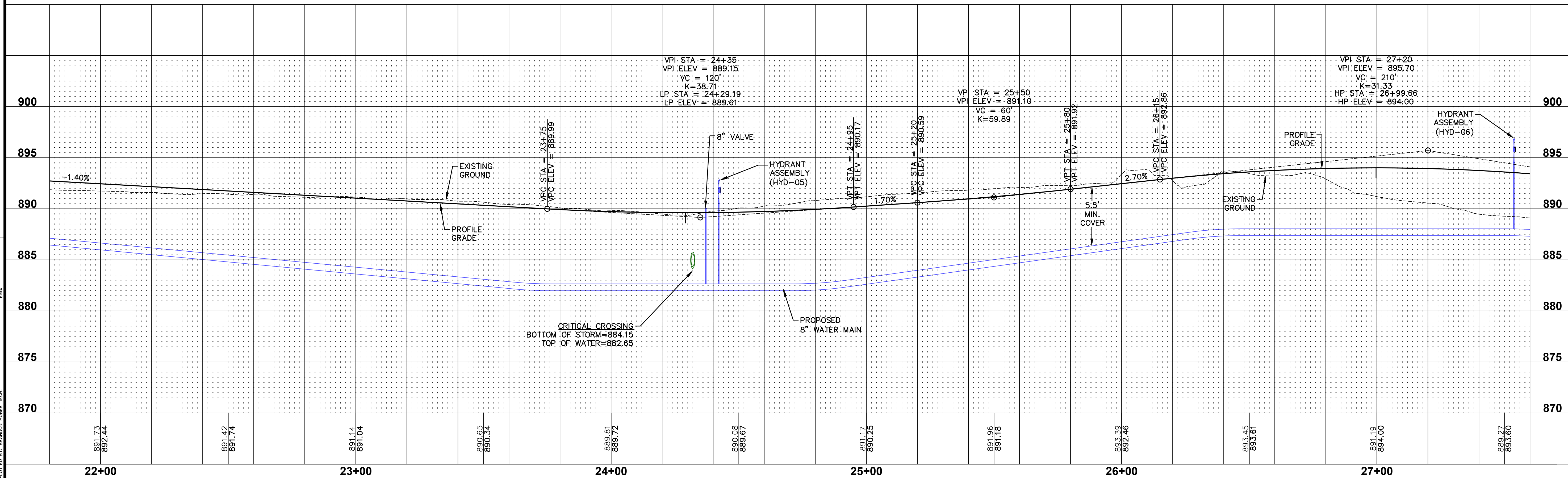
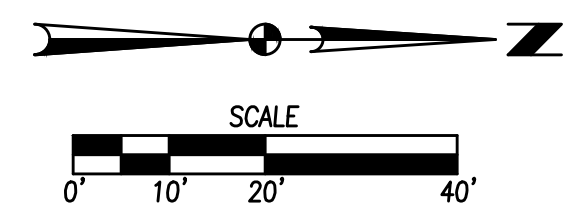
BIG CREEK RIDGE PLAT 1

WATERMAIN PLAN AND PROFILE

ALL HYDRANTS AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 2' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



SHEET INDEX

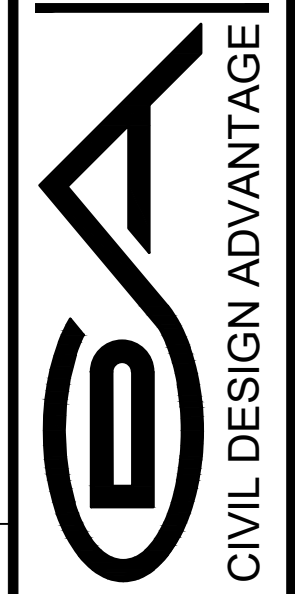


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10/30/2023	FIRST SUBMITTAL
09/28/2023	

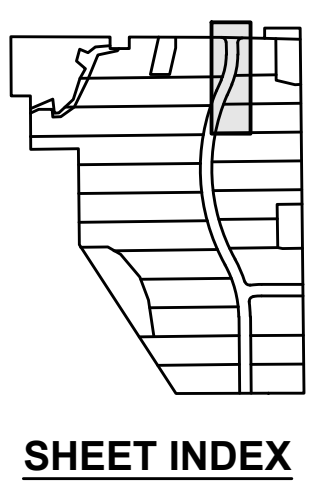
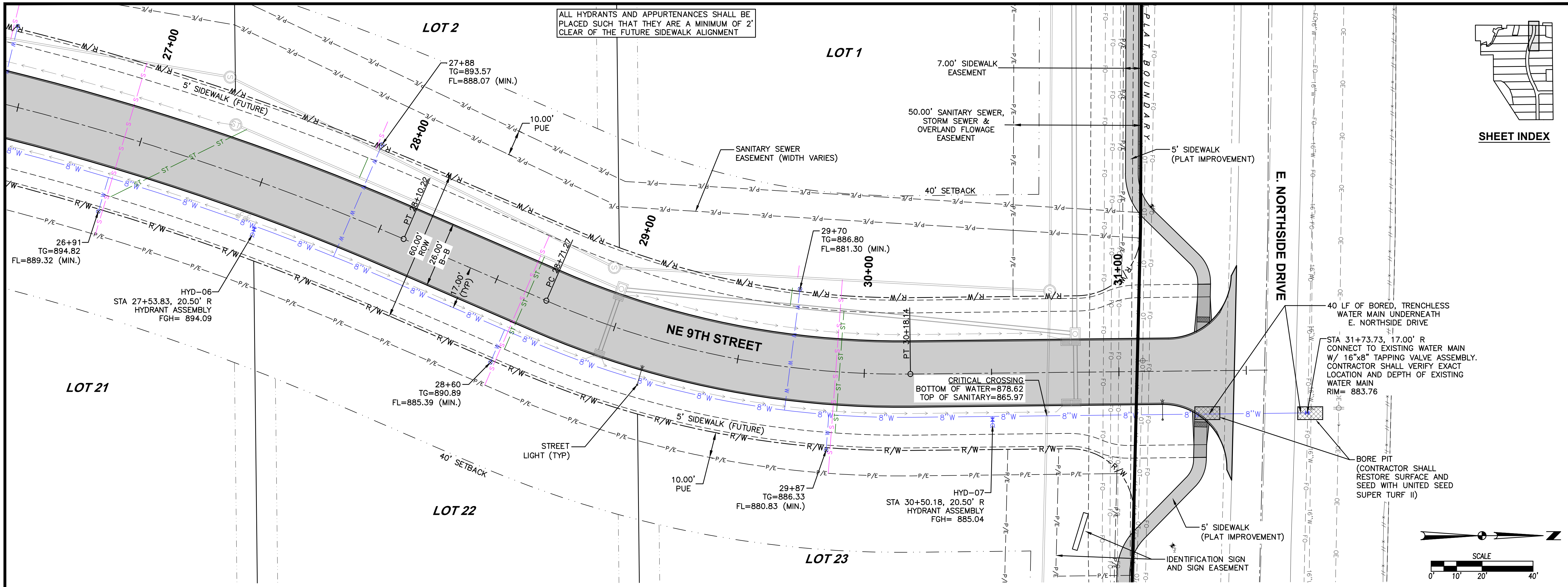
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400

TECH: ENGINEER: RDR



POLK CITY, IOWA

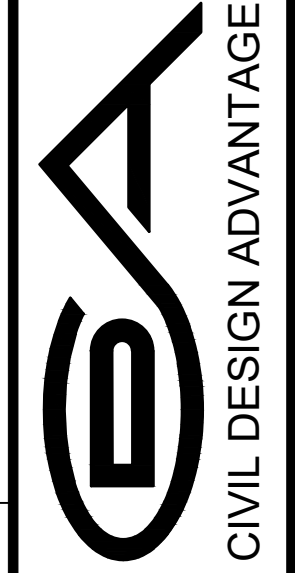
BIG CREEK RIDGE PLAT 1
 WATERMAIN PLAN AND PROFILE



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4121 NW URBANDALE DRIVE
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PHONE: (515) 369-4400

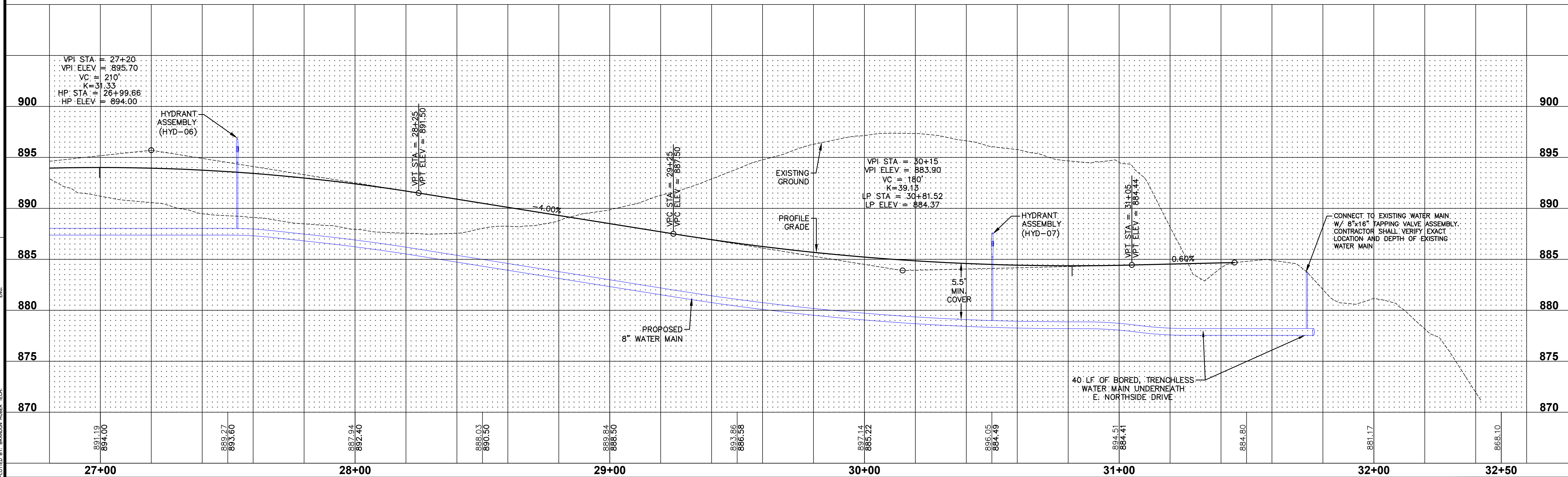
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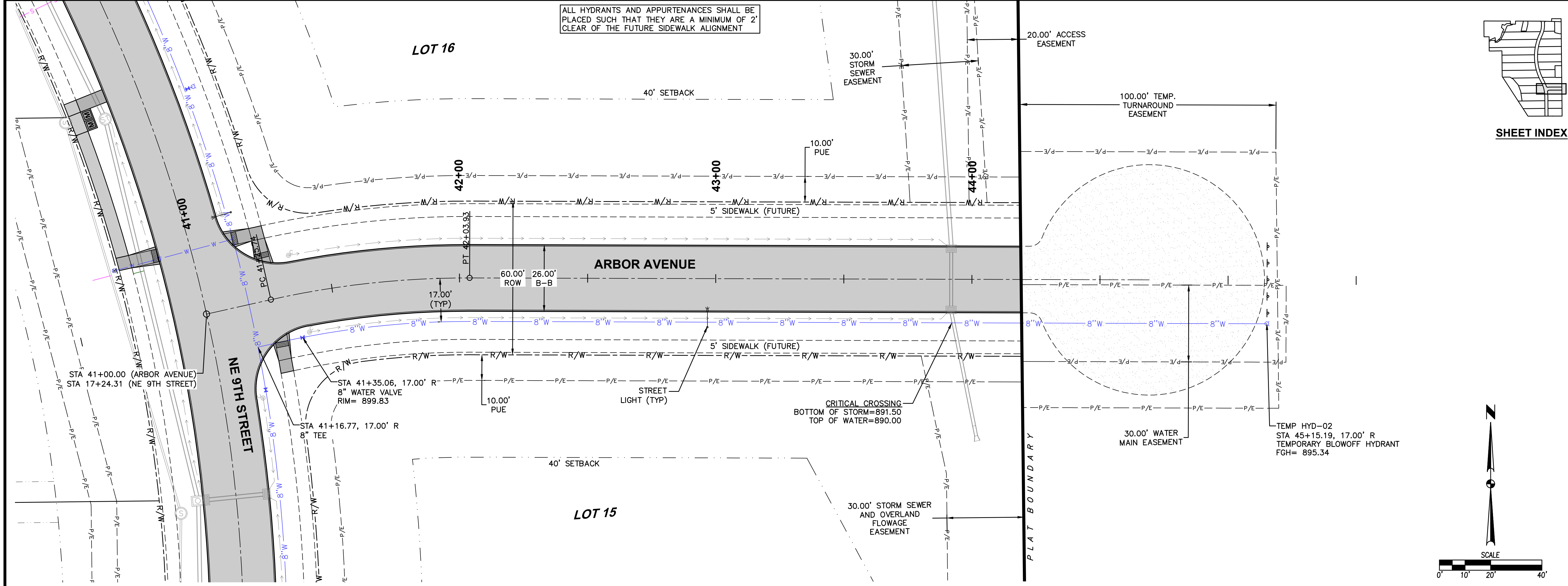
POLK CITY, IOWA

BIG CREEK RIDGE PLAT 1

WATERMAIN PLAN AND PROFILE



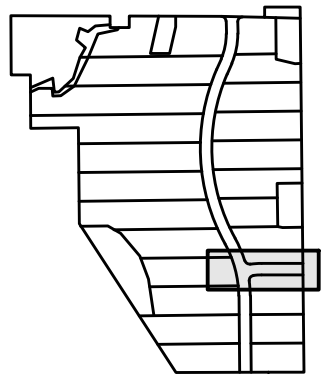
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PLOT BY: BRANDON HUBER TECH



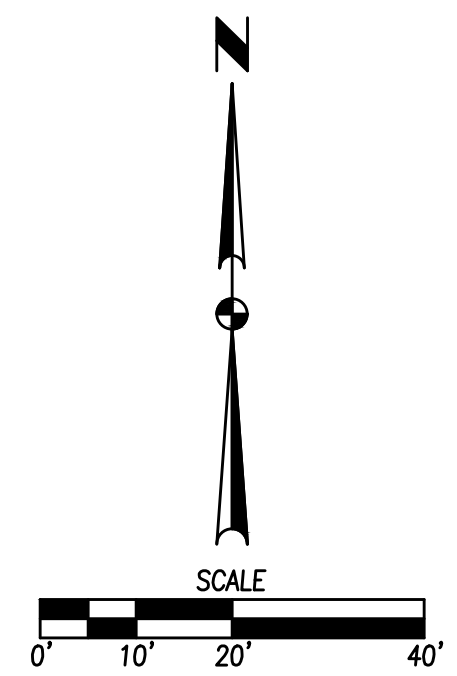
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ALL HYDRANTS AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 2' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT



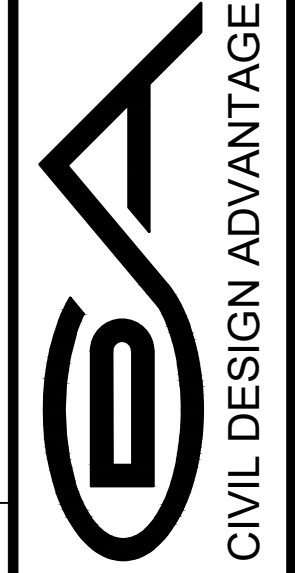
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4121 NW URBANDALE DRIVE
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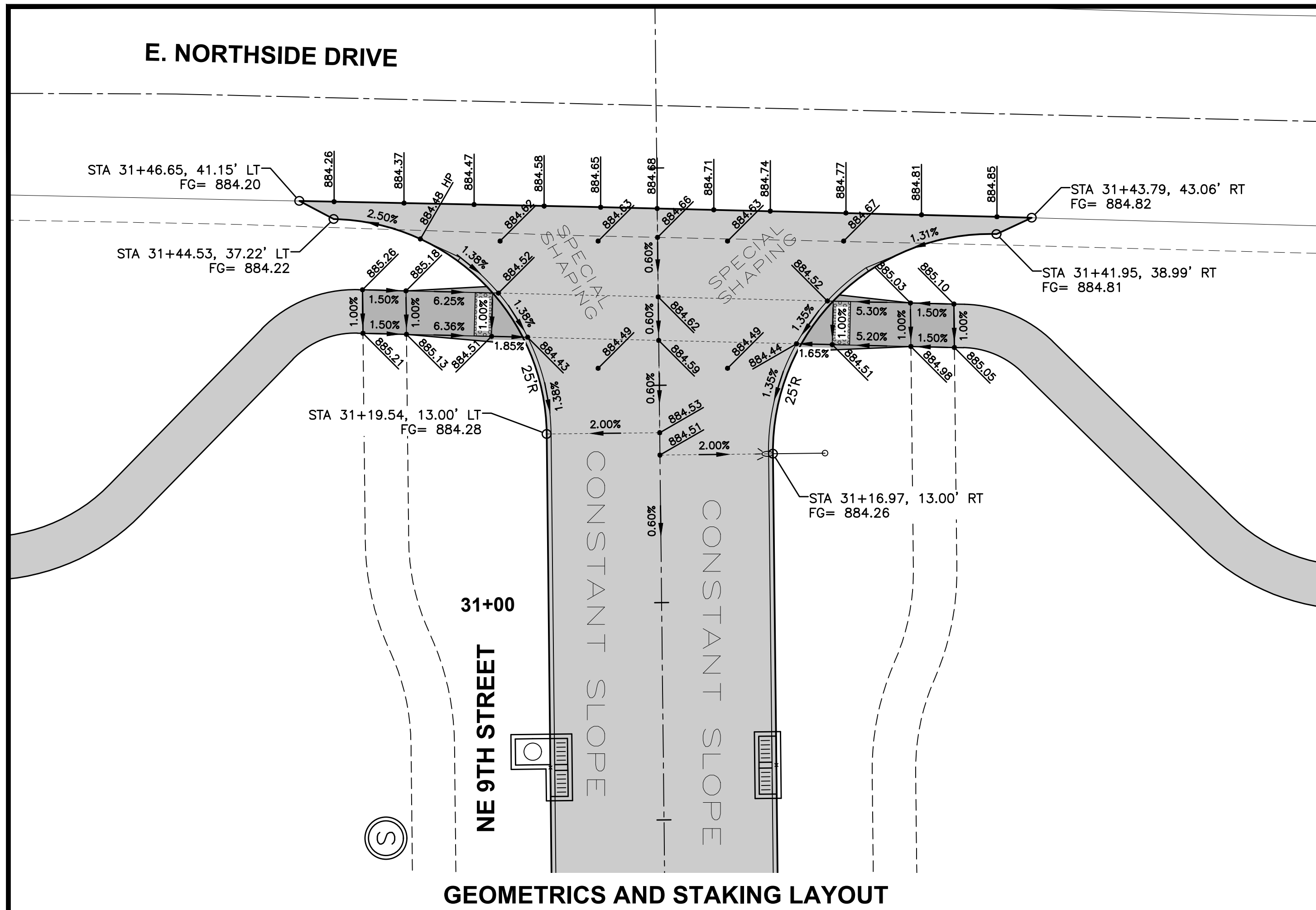
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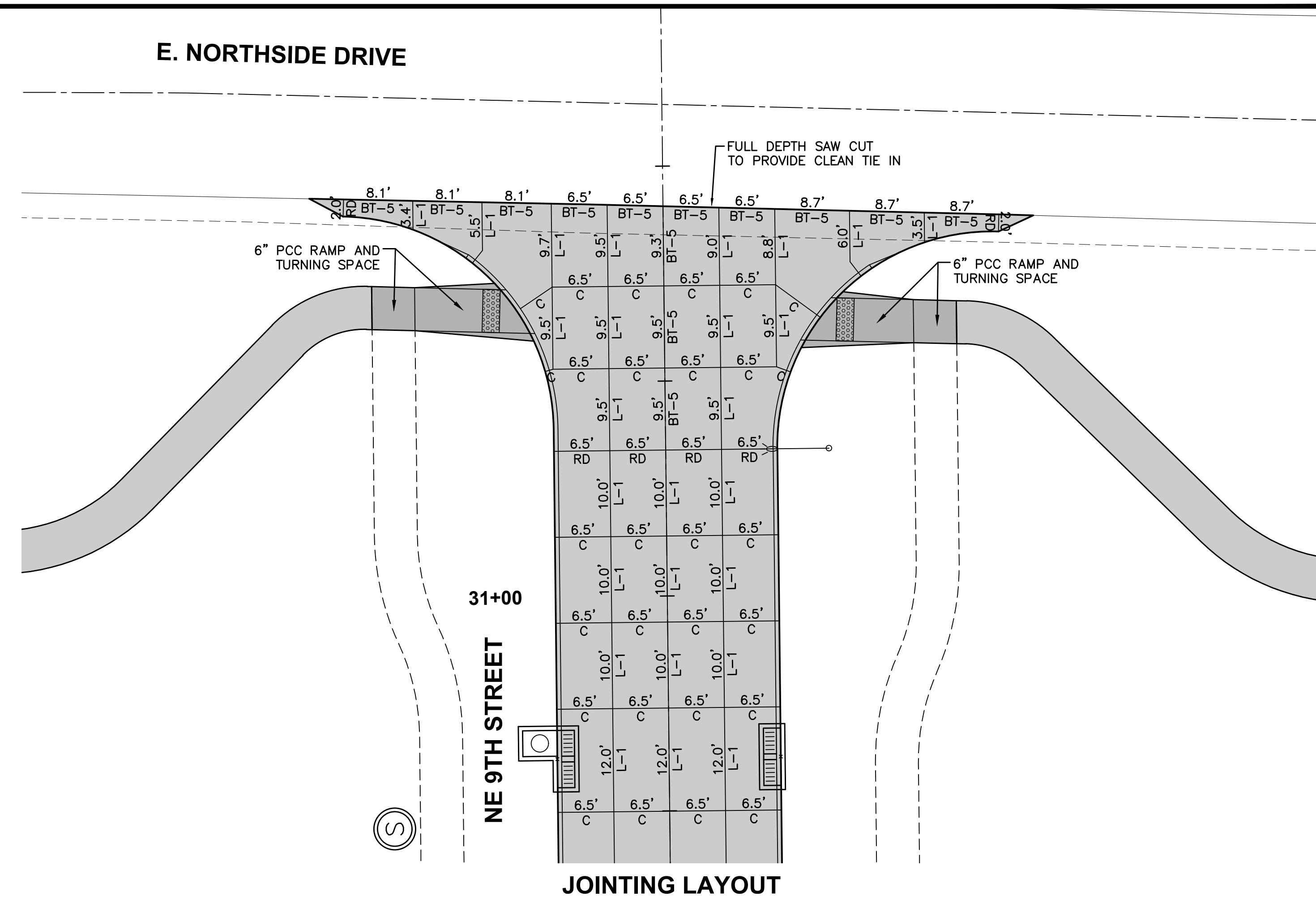
POLK CITY, IOWA

BIG CREEK RIDGE PLAT 1

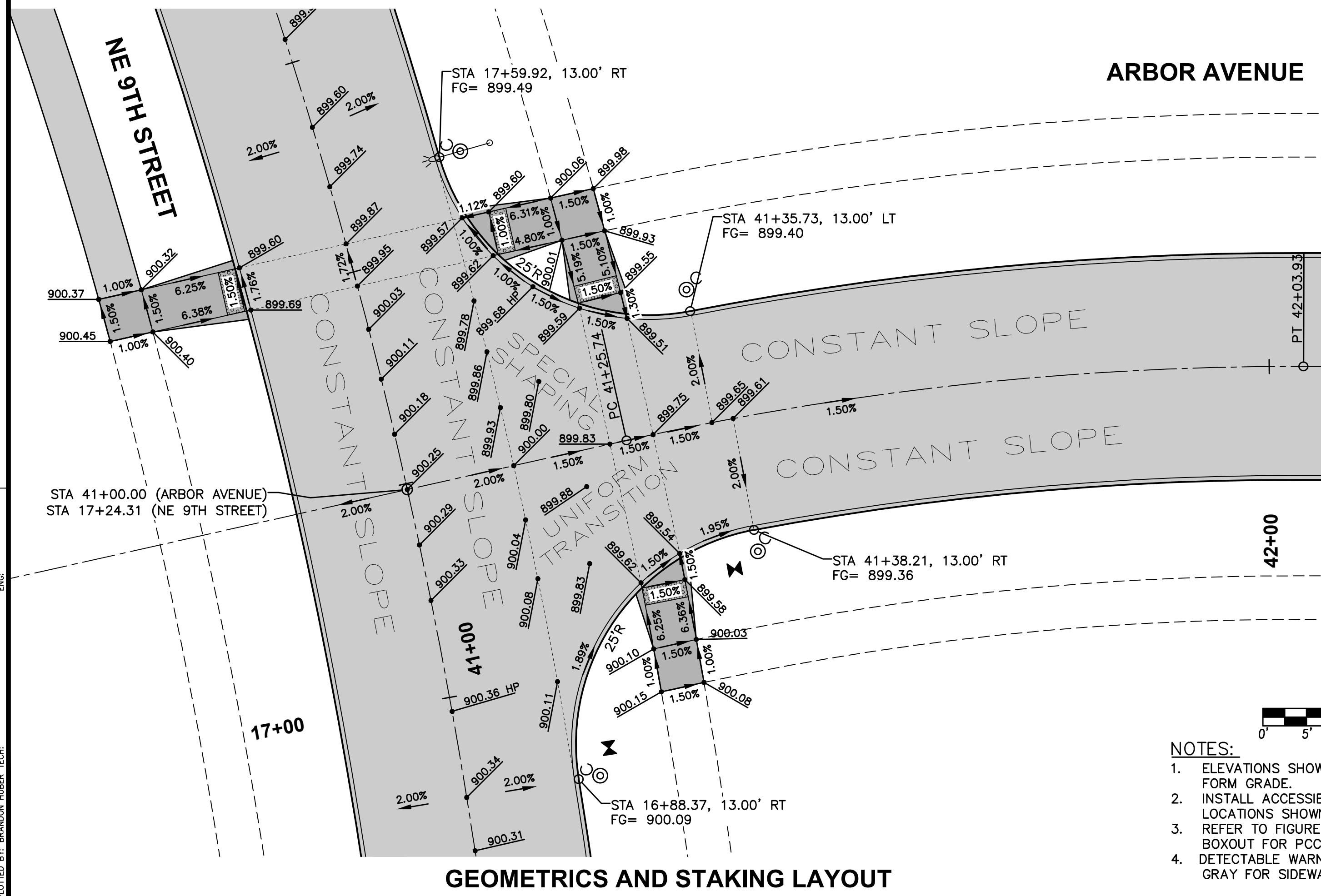
WATERMAIN PLAN AND PROFILE



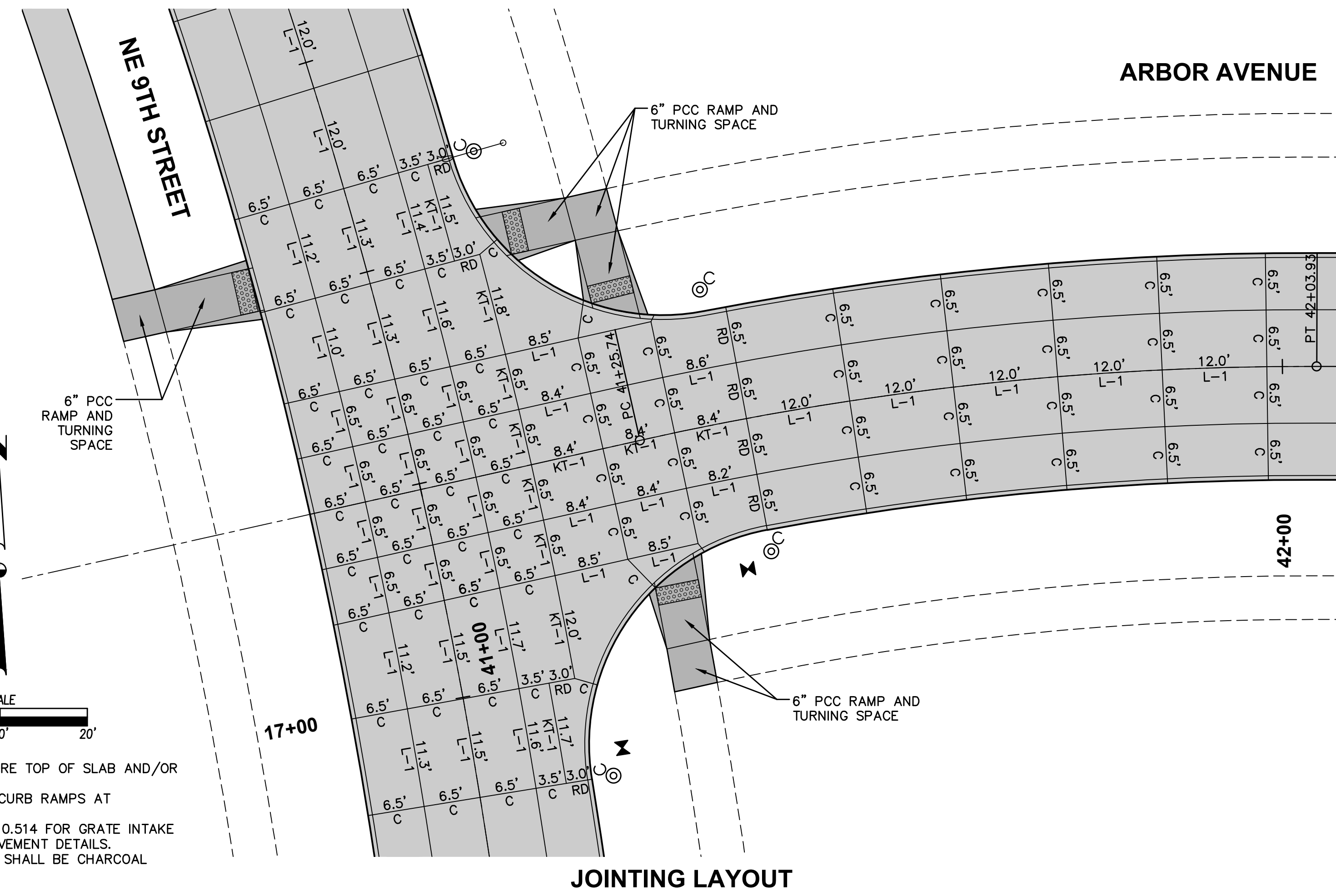
GEOMETRICS AND STAKING LAYOUT



JOINTING LAYOUT



GEOMETRICS AND STAKING LAYOUT



JOINTING LAYOUT

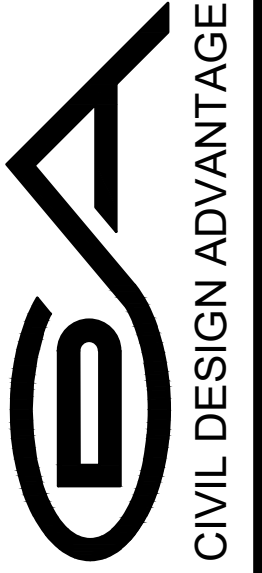
NOTES:

1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
2. INSTALL ACCESSIBLE CURB RAMPS AT LOCATIONS SHOWN.
3. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
4. DETECTABLE WARNING SHALL BE CHARCOAL GRAY FOR SIDEWALKS

FILE: H:\2022\211760\DWG\CAD\211760-INTERSECTION.DWG
 PLOTTED BY: RANDON HUBER, TECH
 DATE: 2/5/2024 3:33 PM

DATE	REVISIONS
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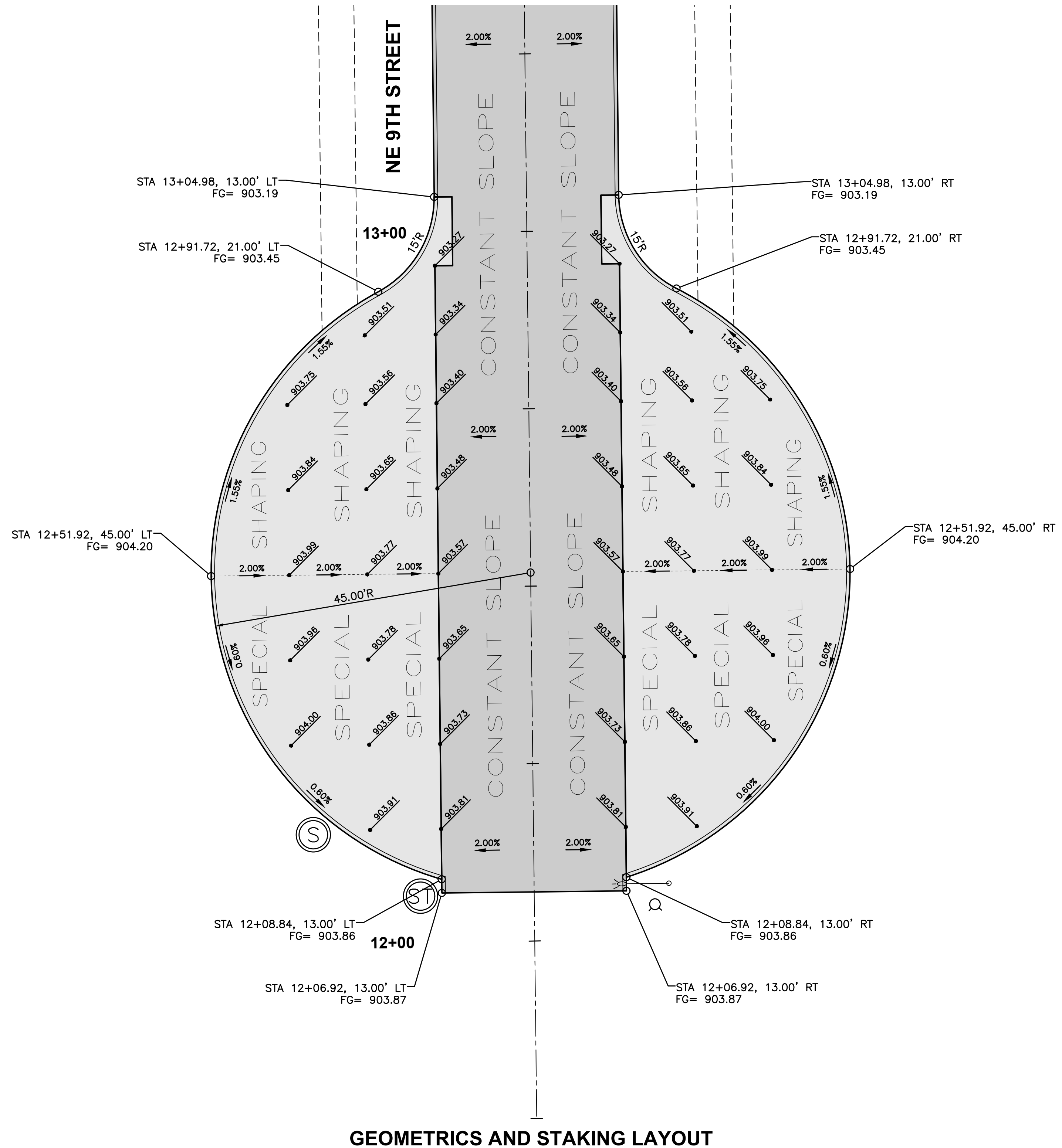
4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400



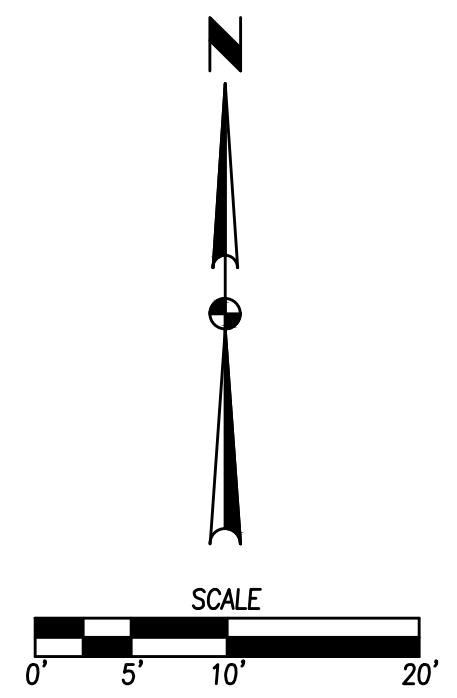
CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

BIG CREEK RIDGE PLAT 1
INTERSECTION DETAILS

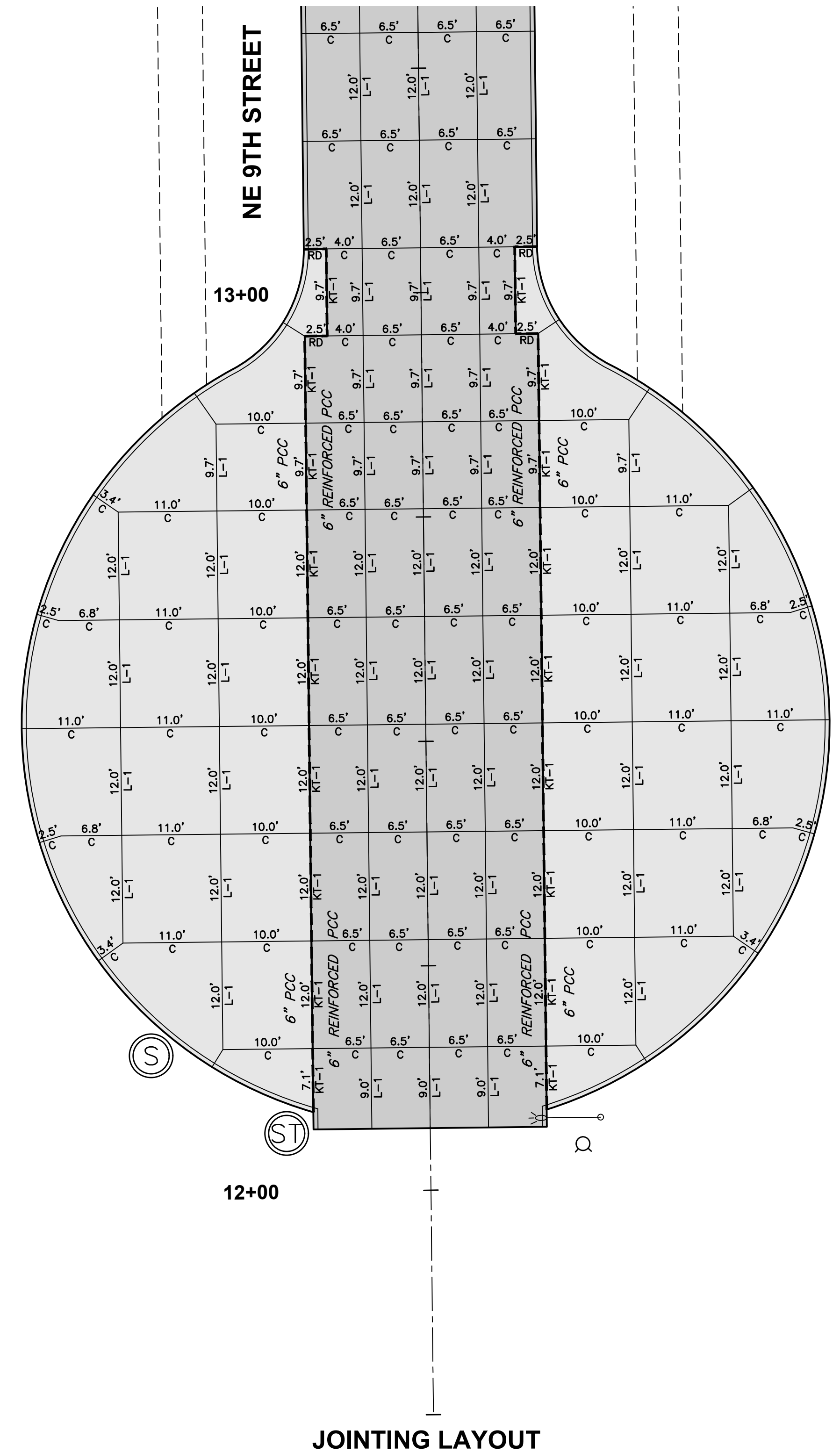
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GEOMETRICS AND STAKING LAYOUT



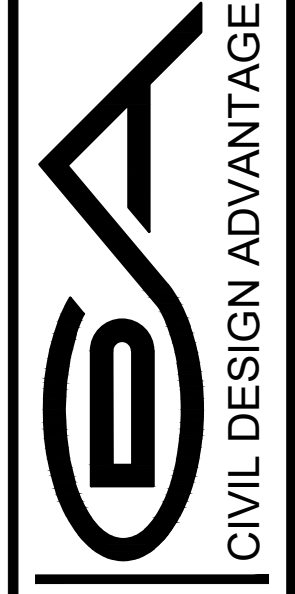
- NOTES:**
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JOINTING LAYOUT

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POLK CITY, IOWA
 ENGINEER: RDR
 TECH:


BIG CREEK RIDGE PLAT 1
INTERSECTION DETAILS

BIG CREEK RIDGE PLAT 1

STORM WATER MANAGEMENT PLAN POLK CITY, IOWA

CDA PROJECT NO. 2211.760



	<p>I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.</p>
	<p>R. DEAN ROGSHAW, P.E. _____ DATE _____ LICENSE NUMBER 14229 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2025 PAGES OR SHEETS COVERED BY THIS SEAL: ALL SHEETS _____</p>

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE,
URBANDALE, IA 50322
(515) 369-4400

PREPARED BY: CIVIL DESIGN ADVANTAGE, LLC
PREPARED ON: JUNE 12, 2023
REVISED ON: SEPTEMBER 27, 2023
OCTOBER 30, 2023
JANUARY 4, 2024

BIG CREEK RIDGE

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SECTION 1



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive, Urbandale, IA 50322

PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 12/06/23 COMP. BY: BDH

Project Description:

Existing Site Conditions

The existing site is located south of E. Northside Drive and directly east of the Polk City Cemetery. The majority of the site consists of land that was previously utilized for row crop agriculture. No storm water detention is currently provided for the site.

Proposed Site Conditions

The proposed site improvements include the development of single family residential lots, outlots and utilities. Four dry bottom detention basins are proposed to provide storm water detention for the site. Refer to the Post-Development Runoff Analysis section of the report for the Post-Development Drainage Area Map and a detailed analysis of each drainage basin. There are two Undisturbed Drainage Areas within the site boundary that result in no change of existing drainage, but have been included in the report.

Storm Water Analysis:

For storm water detention purposes the site has been analyzed with 3 discharge points. DB 1 EX contains 22.45 acres and drains via overland flow to the west. DB 2 EX contains 9.37 acres and drains via overland flow to the east. DB 3 EX contains 3.17 acres and drains via overland flow to the north. There are also two Undisturbed Drainage Areas within the site that will result in no change of existing drainage, but have been included in the report. Hydraflow Hydrographs was used to analyze the Existing and Post-Development conditions and to design the proposed detention basins. Hydraflow utilizes the SCS Unit Hydrograph Method for computation of hydrographs. For this analysis Hydrologic Soil Group B was assumed. Refer to the attached Hydrologic Soil Map report for soils information. Detention is proposed in four dry bottom detention basins. Refer to the attached drainage area maps and Hydraflow Hydrographs reports for a detailed analysis of each drainage basin.

The storm sewer pipes were designed to convey the 10-year storm event and the 100-year storm event at critical locations. The Rational Method was used to determine the flow rate for each drainage area and the Manning's equation was used to size the pipes.

Soil Management Plan:

A SWPPP will be prepared indicating the contractor is to strip topsoil. The topsoil is to be stockpiled where indicated on the SWPPP. Refer to the erosion and sediment control plan for topsoil stockpile locations. Topsoil will be respread when necessary. There is no soil quality restoration being proposed as part of these improvements.



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive, Urbandale, IA 50322

PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 01/04/24 COMP. BY: BDH

Detention Summary:

The detention basins were analyzed for 5-year and 100-year rainfall events. Runoff curve numbers used to determine peak flow rates are listed in the assumptions. The detention basins have been designed to limit the 100-year post-developed runoff to the 5-year existing peak runoff rate. Refer the attached Hydraflow Hydrographs reports for detailed analysis of each drainage basin. Refer to Page 22 of the SWMP for the Hydraflow Model Output and how Pre-Developed, Allowable Release Rates were determined.

Drainage Basin 1 (DB 1 EX) Summary:

Storm Event Return Period	Pre Developed, cfs	Allowable Release, cfs	Post-Developed Runoff, cfs (DB 1)	Post-Developed Runoff, cfs (DB 1 UND.)	Post-Developed Release, cfs
5-Year (20%)	32.45	32.45	27.86	3.28	8.69
100-Year (1%)	93.04	32.45	95.81	11.27	28.82***

Pond Summary Table (Pond 1A)

Rainfall Return Frequency (Yrs)	Detention Basin Peak Release, cfs	Detention Volume Provided, ft ³	Detention Elevation	Detention Freeboard
5	3.15	24,427	855.08	3.77
100	16.52	87,665	857.81	1.04

*Detention Basin Overflow Elevation = 858.85

*** Refer to Page 40 of the SWMP for the Hydraflow Model Output and how the Total Post-Developed Release was determined

Note; The 100-year Total Post-Developed Release Rate has been reduced below the 5-year Pre-Developed, Allowable Release Rate

Pond Summary Table (Pond 1B)

Rainfall Return Frequency (Yrs)	Detention Basin Peak Release, cfs	Detention Volume Provided, ft ³	Detention Elevation	Detention Freeboard
5	2.97	2,071	877.28	3.22
100	5.76	12,203	879.11	1.39

*Detention Basin Overflow Elevation = 880.50



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive, Urbandale, IA 50322

PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 01/04/24 COMP. BY: BDH

Detention Summary:

The detention basins were analyzed for 5-year and 100-year rainfall events. Runoff curve numbers used to determine peak flow rates are listed in the assumptions. The detention basins have been designed to limit the 100-year post-developed runoff to the 5-year existing peak runoff rate. Refer the attached Hydraflow Hydrographs reports for detailed analysis of each drainage basin. Refer to Page 22 of the SWMP for the Hydroflow Model Output and how Pre-Developed, Allowable Release Rates were determined.

Drainage Basin 2 (DB 2 EX) Summary:

Storm Event Return Period	Pre Developed, cfs	Allowable Release, cfs	Post-Developed Runoff, cfs (DB 2)	Post-Developed Runoff, cfs (DB 2 UND.)	Post-Developed Release, cfs
5-Year (20%)	14.92	14.92	7.07	1.89	4.78
100-Year (1%)	42.67	14.92	24.32	6.50	11.68***

Pond Summary Table (Pond 2)

Rainfall Return Frequency (Yrs)	Detention Basin Peak Release, cfs	Detention Volume Provided, ft ³	Detention Elevation	Detention Freeboard
5	3.38	4,304	889.67	3.83
100	5.90	22,191	891.67	1.83

*Detention Basin Overflow Elevation = 893.50

*** Refer to Page 40 of the SWMP for the Hydroflow Model Output and how the Total Post-Developed Release was determined

Note; The 100-year Total Post-Developed Release Rate has been reduced below the 5-year Pre-Developed, Allowable Release Rate



PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 01/04/24 COMP. BY: BDH

Detention Summary:

The detention basins were analyzed for 5-year and 100-year rainfall events. Runoff curve numbers used to determine peak flow rates are listed in the assumptions. The detention basins have been designed to limit the 100-year post-developed runoff to the 5-year existing peak runoff rate. Refer the attached Hydraflow Hydrographs reports for detailed analysis of each drainage basin. Refer to Page 22 of the SWMP for the Hydroflow Model Output and how Pre-Developed, Allowable Release Rates were determined.

Drainage Basin 3 (DB 3 EX) Summary:

Storm Event Return Period	Pre Developed, cfs	Allowable Release, cfs	Post-Developed Runoff, cfs (DB 3)	Post-Developed Runoff, cfs (DB 3 UND.)	Post-Developed Release, cfs
5-Year (20%)	5.48	5.48	4.15	0.73	2.22
100-Year (1%)	15.65	5.48	14.28	2.52	5.00 ***

Pond Summary Table (Pond 3)

Rainfall Return Frequency (Yrs)	Detention Basin Peak Release, cfs	Detention Volume Provided, ft ³	Detention Elevation	Detention Freeboard
5	1.74	2,548	878.73	2.77
100	2.89	13,678	880.10	1.40

*Detention Basin Overflow Elevation = 881.50

*** Refer to Page 40 of the SWMP for the Hydroflow Model Output and how the Total Post-Developed Release was determined

Note; The 100-year Total Post-Developed Release Rate has been reduced below the 5-year Pre-Developed, Allowable Release Rate

Drainage Basin 4, Undisturbed (DB 4 Undisturbed) Summary:

Storm Event Return Period	Pre Developed, cfs	Post-Developed Release, cfs
5-Year (20%)	24.13	24.13
100-Year (1%)	68.35	68.35

Drainage Basin 5, Undisturbed (DB 5 Undisturbed) Summary:

Storm Event Return Period	Pre Developed, cfs	Post-Developed Release, cfs
5-Year (20%)	3.10	3.10
100-Year (1%)	8.79	8.79

NOTE; No changes will occur in the Undisturbed drainage areas, DB 4 or DB 5



PROJECT: Big Creek Ridge JOB NO. 2211.760

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Ultimate Outlet Checks:

For storm water detention purposes the site has been analyzed with 3 Ultimate Outlet points. DB 1 EX contains 22.45 acres and drains via overland flow to the west. DB 2 EX contains 9.37 acres and drains via overland flow to the east. DB 3 EX contains 3.17 acres and drains via overland flow to the north. There are also two Undisturbed Drainage Areas within the site that will result in no change of existing drainage.

West Ultimate Outlet Point : DB 1 EX

$$\begin{aligned}
 \text{Q5 Existing} &= \text{DB 1 EX} + \text{DB 4 Undisturbed} + \text{DB 5 Undisturbed} \\
 &= 32.45 + 24.13 + 3.10 = 59.68 \text{ cfs} \\
 \text{Q5 Proposed} &= \text{Pond 1A} + \text{Pond 1B} + \text{DB 1 Undetained} + \text{DB 4 Undisturbed} + \text{DB 5 Undisturbed} \\
 &= 3.15 + 2.97 + 3.28 + 24.13 + 3.10 = 36.63 \text{ cfs}
 \end{aligned}$$

59.68 > 36.63 : CHECK

$$\begin{aligned}
 \text{Q100 Existing} &= \text{DB 1 EX} + \text{DB 4 Undisturbed} + \text{DB 5 Undisturbed} \\
 &= 93.04 + 68.35 + 8.79 = 170.18 \text{ cfs} \\
 \text{Q100 Proposed} &= \text{Pond 1A} + \text{Pond 1B} + \text{DB 1 Undetained} + \text{DB 4 Undisturbed} + \text{DB 5 Undisturbed} \\
 &= 16.52 + 5.76 + 11.27 + 68.35 + 8.79 = 110.69 \text{ cfs}
 \end{aligned}$$

170.18 > 110.69 : CHECK

East Ultimate Outlet Point : DB 2 EX

$$\begin{aligned}
 \text{Q5 Existing} &= \text{DB 2 EX} \\
 &= 14.92 \text{ cfs} \\
 \text{Q5 Proposed} &= \text{Pond 2} + \text{DB 2 Undetained} \\
 &= 3.38 + 1.89 = 5.27 \text{ cfs}
 \end{aligned}$$

14.92 > 5.27 : CHECK

$$\begin{aligned}
 \text{Q100 Existing} &= \text{DB 2 EX} \\
 &= 42.67 \text{ cfs} \\
 \text{Q100 Proposed} &= \text{Pond 2} + \text{DB 2 Undetained} \\
 &= 5.90 + 6.50 = 12.40 \text{ cfs}
 \end{aligned}$$

42.67 > 12.40 : CHECK

North Ultimate Outlet Point : DB 3 EX

$$\begin{aligned}
 \text{Q5 Existing} &= \text{DB 3 EX} \\
 &= 5.48 \text{ cfs} \\
 \text{Q5 Proposed} &= \text{Pond 3} + \text{DB 3 Undetained} \\
 &= 1.74 + 0.73 = 2.47 \text{ cfs}
 \end{aligned}$$

5.48 > 2.47 : CHECK

$$\begin{aligned}
 \text{Q100 Existing} &= \text{DB 3 EX} \\
 &= 15.65 \text{ cfs} \\
 \text{Q100 Proposed} &= \text{Pond 3} + \text{DB 3 Undetained} \\
 &= 2.89 + 2.52 = 5.41 \text{ cfs}
 \end{aligned}$$

15.65 > 5.41 : CHECK

SECTION 2



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive, Urbandale, IA 50322

PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 01/04/24 COMP. BY: BDH

Assumptions:

- * A USDA Hydrologic Soil Map was prepared for the site. Hydrologic Soil Group B was assumed for storm water runoff calculations. Refer to the attached Hydrologic Soil Map report for soils information.
- * Existing time of concentrations were calculated. Refer to the attached time of concentration calculation sheet.
- * Post-Development time of concentrations were assumed to be 15 minutes.
- * The runoff curve numbers used to determine flow rates for the site were taken from SUDAS Section 2B-4 and are listed in the following table.

Land Use or Surface Characteristics	Curve Number
Pre Developed: B Soils, Contoured Row Crop	75
Post Developed: B Soils, 1-acre Lots	68

- * The runoff coefficients used to determine flow rates for the site were taken from SUDAS Section 2B-4 and are listed in the following table.
- * Assumed a 15 minute time of concentration for all storm sewer design

Land Use or Surface Characteristics	Runoff Coefficient	
	10-year	100-year
Residential District - 1 Acre Lot *	0.35	0.48
Open Space, Good Conditon, B soils	0.20	0.35
Impervious Area	0.95	0.98

* 1 acre lots on average are 11% impervious per SUDAS.



PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 07/18/23 COMP. BY: BDH

Pre-Developed Time of Concentration:

Drainage Area: DB 1 EX

Sheet Flow:

Flow length, $L_1 =$ 100 feet
Land slope, $s_1 =$ 3.5 %
Manning's $n =$ 0.4
2-Year 24-hr $p_2 =$ 3.08
Travel time, $t_1 =$ 17.5 minutes

Design Equation:
$$t_1 = \frac{0.007[(n)(L_1)]^{0.8}}{\sqrt{p_2(s)}^{0.4}}$$

Shallow Concentrated Flow:

Flow length, $L_2 =$ 730 feet
Land slope, $s_2 =$ 3.67 %
Ground Cover No. = 4 Table 1

Flow velocity, $v_2 =$ 1.67 ft/sec
Travel time, $t_2 =$ 7.3 minutes

Table 1:

Ground Cover:	No.	Equation
Forest w/ heavy ground litter & meadow	1	$v_2 = s_2^{1/2} \times 2.516$
Minimum tillage cultivation and woodlands	2	$v_2 = s_2^{1/2} \times 5.032$
Short grass pasture & lawns	3	$v_2 = s_2^{1/2} \times 6.962$
Cultivated straight row crops	4	$v_2 = s_2^{1/2} \times 8.726$
Nearly bare ground	5	$v_2 = s_2^{1/2} \times 9.965$
Grassed waterway	6	$v_2 = s_2^{1/2} \times 16.135$
Paved area & shallow gutter flow	7	$v_2 = s_2^{1/2} \times 20.238$

Channel Flow:

Flow length, $L_3 =$ 0 feet
Land slope, $s_3 =$ 6.5 %
Manning's $n =$ 0.035
Left Slope = 6 :1
Bottom Width = 5 feet
Right Slope = 3 :1
Flow depth = 2 feet
Flow area, $a =$ 28 ft²
Wetted perim., $P_w =$ 23.49 ft
Flow velocity, $v_3 =$ 12.17 ft/sec
Travel time, $t_3 =$ 0.0 minutes

Design Equation:
$$v_3 = \frac{1.486(a/P_w)^{2/3} s_3^{1/2}}{n}$$

Time of Concentration, $t_c =$ 24.8 minutes $t_c = t_1 + t_2 + t_3$



CIVIL DESIGN ADVANTAGE

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PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 07/18/23 COMP. BY: BDH

Pre-Developed Time of Concentration:

Drainage Area: DB 2 EX

Sheet Flow:

Flow length, $L_1 =$ 100 feet
 Land slope, $s_1 =$ 1.79 %
 Manning's $n =$ 0.17
 2-Year 24-hr $p_2 =$ 3.08
 Travel time, $t_1 =$ 11.5 minutes

Design Equation:

$$t_1 = \frac{0.007[(n)(L_1)]^{0.8}}{\sqrt{p_2(s)}^{0.4}}$$

Shallow Concentrated Flow:

Flow length, $L_2 =$ 710 feet
 Land slope, $s_2 =$ 1.5 %
 Ground Cover No. = 4 Table 1
 Flow velocity, $v_2 =$ 1.07 ft/sec
 Travel time, $t_2 =$ 11.1 minutes

Table 1:

Ground Cover:	No.	Equation
Forest w/ heavy ground litter & meadow	1	$v_2 = s_2^{1/2} \times 2.516$
Minimum tillage cultivation and woodlands	2	$v_2 = s_2^{1/2} \times 5.032$
Short grass pasture & lawns	3	$v_2 = s_2^{1/2} \times 6.962$
Cultivated straight row crops	4	$v_2 = s_2^{1/2} \times 8.726$
Nearly bare ground	5	$v_2 = s_2^{1/2} \times 9.965$
Grassed waterway	6	$v_2 = s_2^{1/2} \times 16.135$
Paved area & shallow gutter flow	7	$v_2 = s_2^{1/2} \times 20.238$

Channel Flow:

Flow length, $L_3 =$ 0 feet
 Land slope, $s_3 =$ 6.5 %
 Manning's $n =$ 0.035
 Left Slope = 6 :1
 Bottom Width = 5 feet
 Right Slope = 3 :1
 Flow depth = 2 feet
 Flow area, $a =$ 28 ft²
 Wetted perim., $P_w =$ 23.49 ft
 Flow velocity, $v_3 =$ 12.17 ft/sec
 Travel time, $t_3 =$ 0.0 minutes

Design Equation:

$$v_3 = \frac{1.486(a/P_w)^{2/3} s_3^{1/2}}{n}$$

Time of Concentration, $t_c =$ 22.6 minutes $t_c = t_1 + t_2 + t_3$



PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: Storm Water Calculations DATE: 07/18/23 COMP. BY: BDH

Pre-Developed Time of Concentration:

Drainage Area: DB 3 EX

Sheet Flow:

Flow length, $L_1 =$ 100 feet
Land slope, $s_1 =$ 7.01 %
Manning's $n =$ 0.4
2-Year 24-hr $p_2 =$ 3.08
Travel time, $t_1 =$ 13.3 minutes

Design Equation:
$$t_1 = \frac{0.007[(n)(L_1)]^{0.8}}{\sqrt{p_2(s)}^{0.4}}$$

Shallow Concentrated Flow:

Flow length, $L_2 =$ 510 feet
Land slope, $s_2 =$ 3.49 %
Ground Cover No. = 4 Table 1

Flow velocity, $v_2 =$ 1.63 ft/sec
Travel time, $t_2 =$ 5.2 minutes

Table 1:

Ground Cover:	No.	Equation
Forest w/ heavy ground litter & meadow	1	$v_2 = s_2^{1/2} \times 2.516$
Minimum tillage cultivation and woodlands	2	$v_2 = s_2^{1/2} \times 5.032$
Short grass pasture & lawns	3	$v_2 = s_2^{1/2} \times 6.962$
Cultivated straight row crops	4	$v_2 = s_2^{1/2} \times 8.726$
Nearly bare ground	5	$v_2 = s_2^{1/2} \times 9.965$
Grassed waterway	6	$v_2 = s_2^{1/2} \times 16.135$
Paved area & shallow gutter flow	7	$v_2 = s_2^{1/2} \times 20.238$

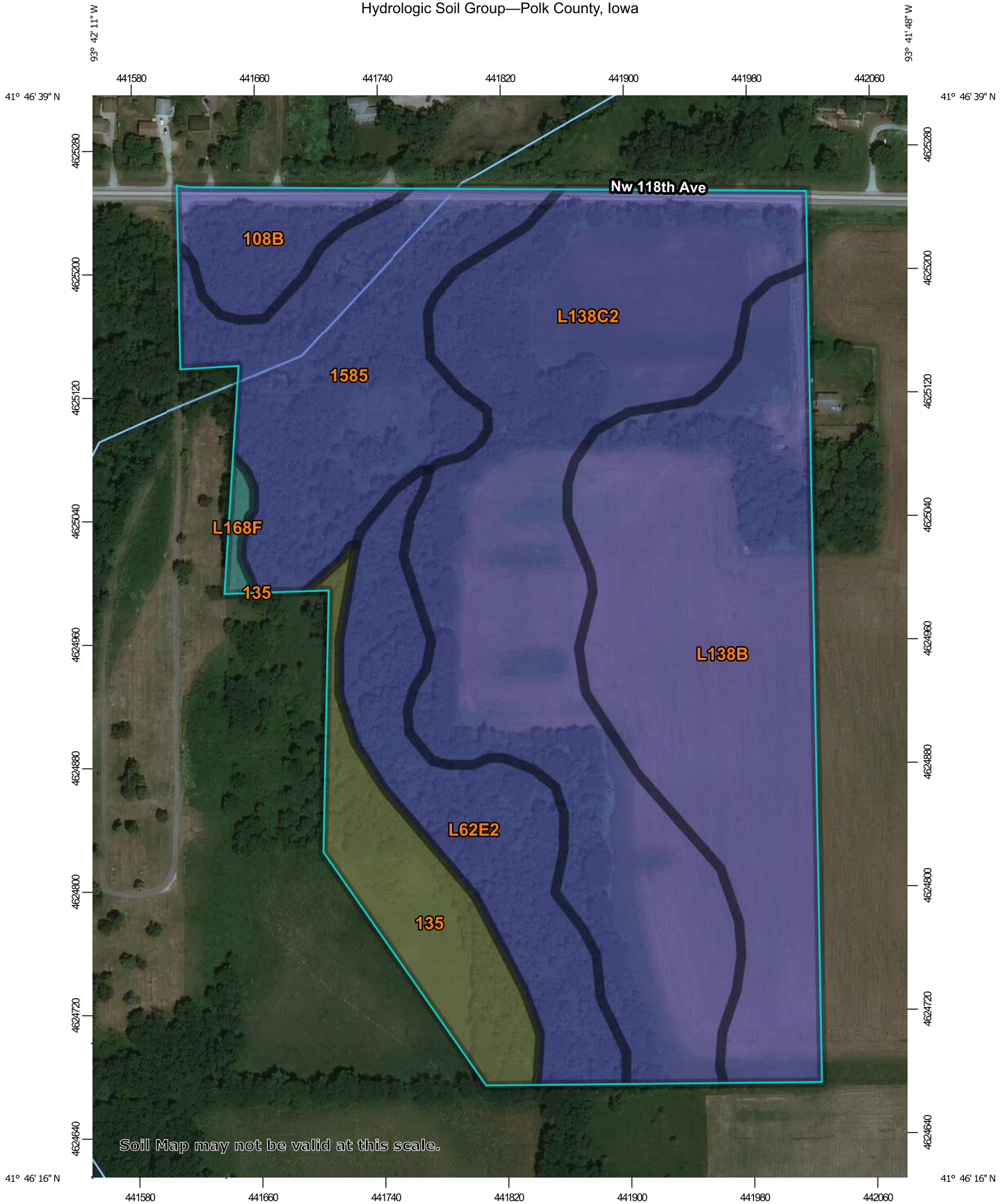
Channel Flow:

Flow length, $L_3 =$ 0 feet
Land slope, $s_3 =$ 6.5 %
Manning's $n =$ 0.035
Left Slope = 6 :1
Bottom Width = 5 feet
Right Slope = 3 :1
Flow depth = 2 feet
Flow area, $a =$ 28 ft²
Wetted perim., $P_w =$ 23.49 ft
Flow velocity, $v_3 =$ 12.17 ft/sec
Travel time, $t_3 =$ 0.0 minutes

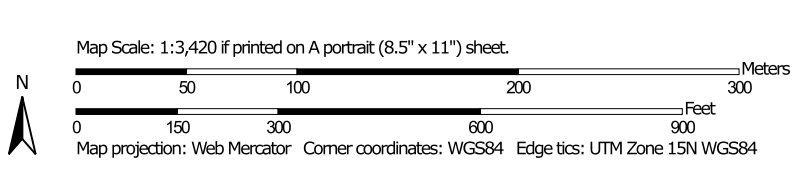
Design Equation:
$$v_3 = \frac{1.486(a/P_w)^{2/3} s_3^{1/2}}{n}$$

Time of Concentration, $t_c =$ 18.5 minutes $t_c = t_1 + t_2 + t_3$

Hydrologic Soil Group—Polk County, Iowa




Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points


 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: Polk County, Iowa
 Survey Area Data: Version 25, Oct 11, 2022

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

Date(s) aerial images were photographed: Jul 26, 2012—Sep 28, 2017

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
108B	Wadena loam, 2 to 6 percent slopes	B	1.9	3.8%
135	Coland clay loam, 0 to 2 percent slopes, occasionally flooded	C/D	3.6	7.4%
1585	Spillville-Coland complex, channeled, 0 to 2 percent slopes	B	7.6	15.6%
L62E2	Storden loam, Bemis moraine, 10 to 22 percent slopes, moderately eroded	B	5.4	11.2%
L138B	Clarion loam, Bemis moraine, 2 to 6 percent slopes	B	12.9	26.6%
L138C2	Clarion loam, Bemis moraine, 6 to 10 percent slopes, moderately eroded	B	17.0	34.9%
L168F	Hayden loam, Bemis moraine, 22 to 40 percent slopes	C	0.3	0.6%
Totals for Area of Interest			48.7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

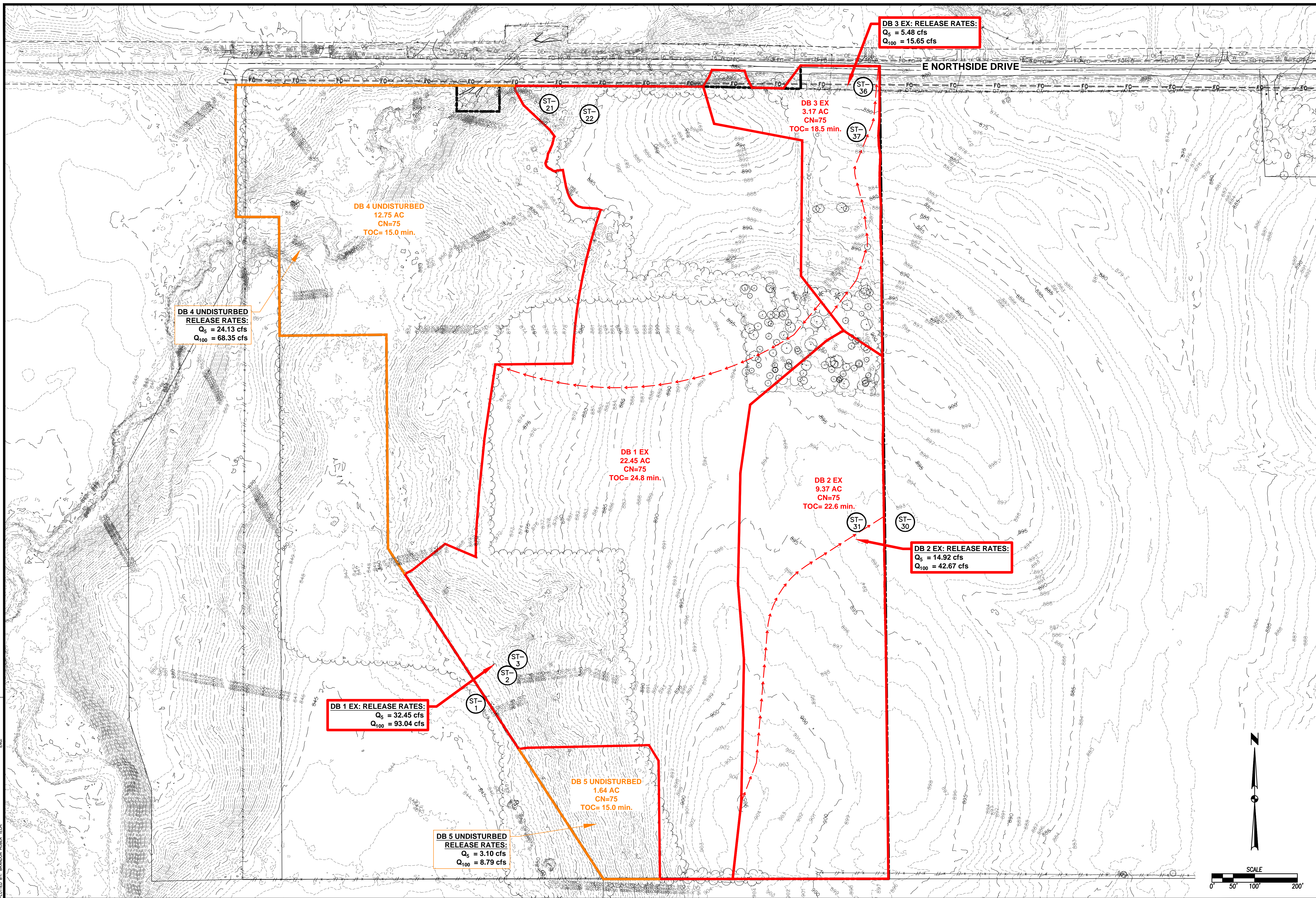
Aggregation Method: Dominant Condition

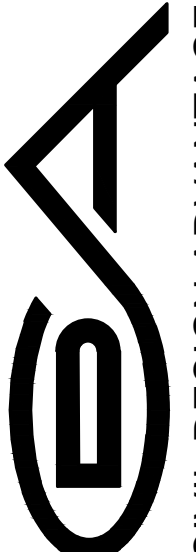
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

SECTION 3

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COMMENT: SWMP
PLOTTED BY: BRADSON HUBER, TECH
7/19/2023 4:31 PM

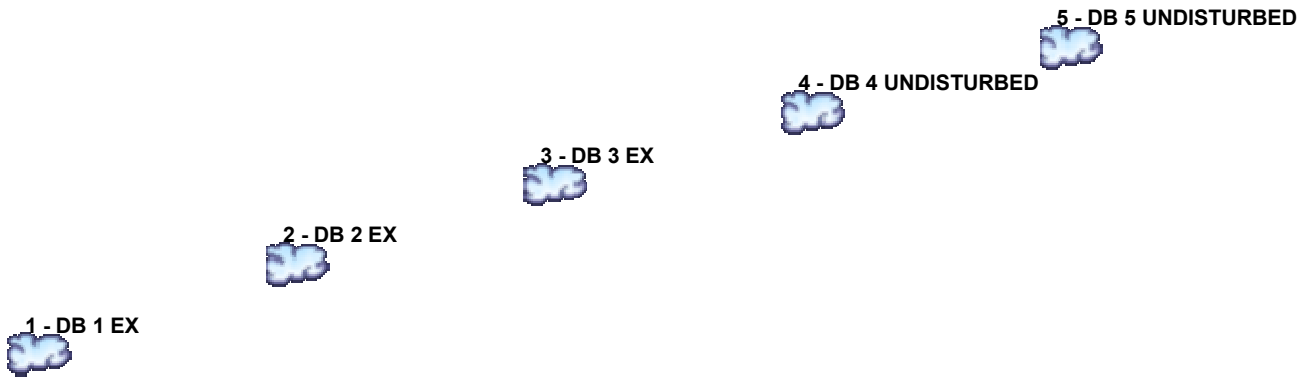


DATE	
REVISIONS	
4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400	TECH:
 CIVIL DESIGN ADVANTAGE	ENGINEER:
POLK CITY, IOWA	
BIG CREEK RIDGE PRE - DEVELOPED MAP	
1/1	2211.760

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Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022



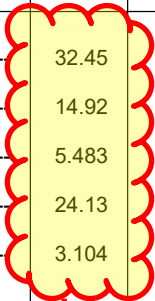
Legend

<u>Hyd.</u>	<u>Origin</u>	<u>Description</u>
1	SCS Runoff	DB 1 EX
2	SCS Runoff	DB 2 EX
3	SCS Runoff	DB 3 EX
4	SCS Runoff	DB 4 UNDISTURBED
5	SCS Runoff	DB 5 UNDISTURBED

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	----	----	----	----	32.45	----	----	----	93.04	DB 1 EX
2	SCS Runoff	----	----	----	----	14.92	----	----	----	42.67	DB 2 EX
3	SCS Runoff	----	----	----	----	5.483	----	----	----	15.65	DB 3 EX
4	SCS Runoff	----	----	----	----	24.13	----	----	----	68.35	DB 4 UNDISTURBED
5	SCS Runoff	----	----	----	----	3.104	----	----	----	8.791	DB 5 UNDISTURBED



**PRE-DEVELOPED
ALLOWABLE
RELEASE RATES**

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	32.45	2	730	122,381	-----	-----	-----	DB 1 EX	
2	SCS Runoff	14.92	2	728	52,816	-----	-----	-----	DB 2 EX	
3	SCS Runoff	5.483	2	726	17,555	-----	-----	-----	DB 3 EX	
4	SCS Runoff	24.13	2	722	68,842	-----	-----	-----	DB 4 UNDISTURBED	
5	SCS Runoff	3.104	2	722	8,855	-----	-----	-----	DB 5 UNDISTURBED	
Pre-Developed Hydraflow.gpw					Return Period: 5 Year			Tuesday, 07 / 18 / 2023		

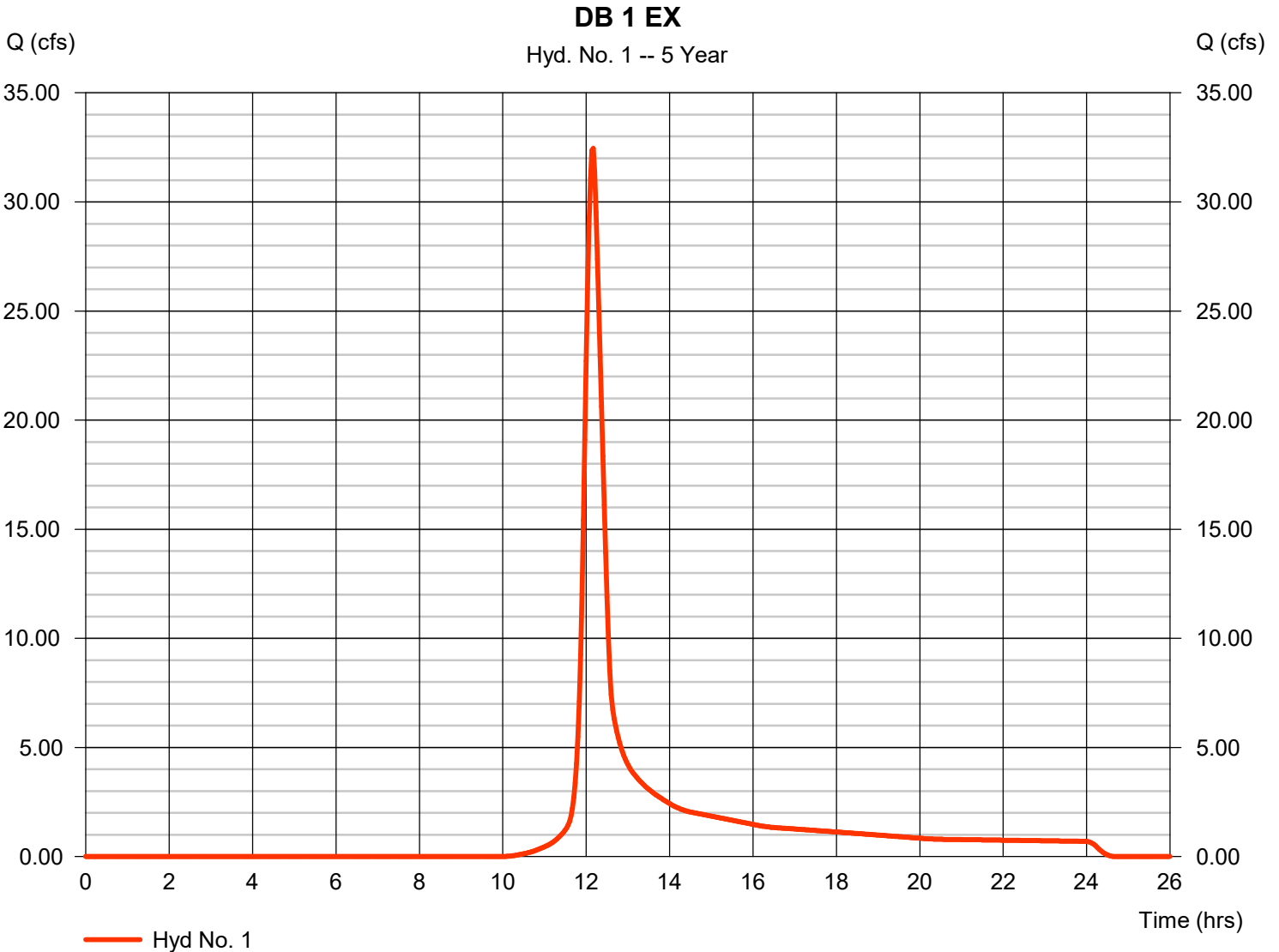
Hydrograph Report

Hyd. No. 1

DB 1 EX

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Time interval = 2 min
Drainage area = 22.450 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 3.81 in
Storm duration = 24 hrs

Peak discharge = 32.45 cfs
Time to peak = 12.17 hrs
Hyd. volume = 122,381 cuft
Curve number = 75
Hydraulic length = 0 ft
Time of conc. (Tc) = 24.80 min
Distribution = Type II
Shape factor = 484

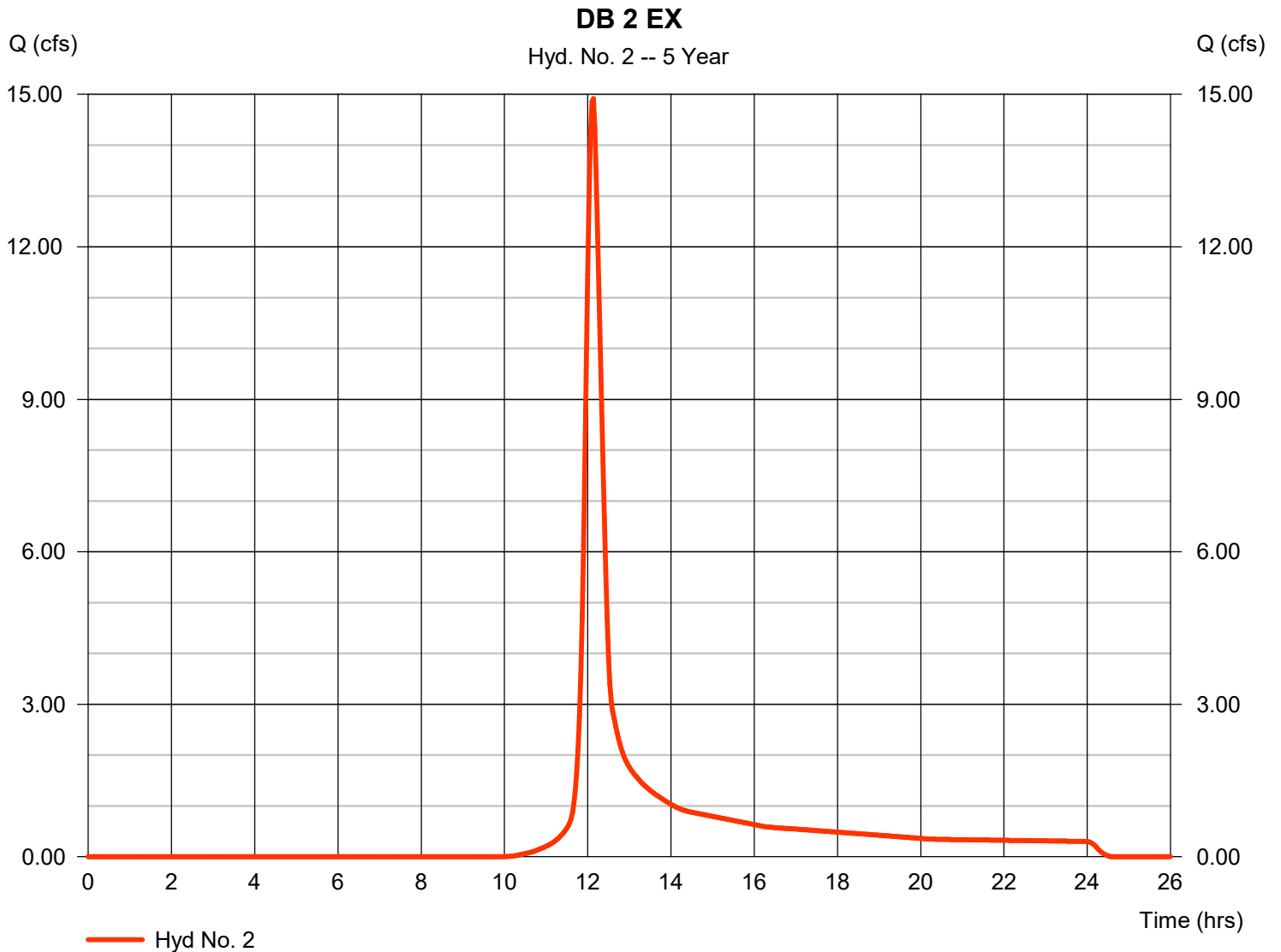


Hydrograph Report

Hyd. No. 2

DB 2 EX

Hydrograph type	= SCS Runoff	Peak discharge	= 14.92 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 52,816 cuft
Drainage area	= 9.370 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 22.60 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

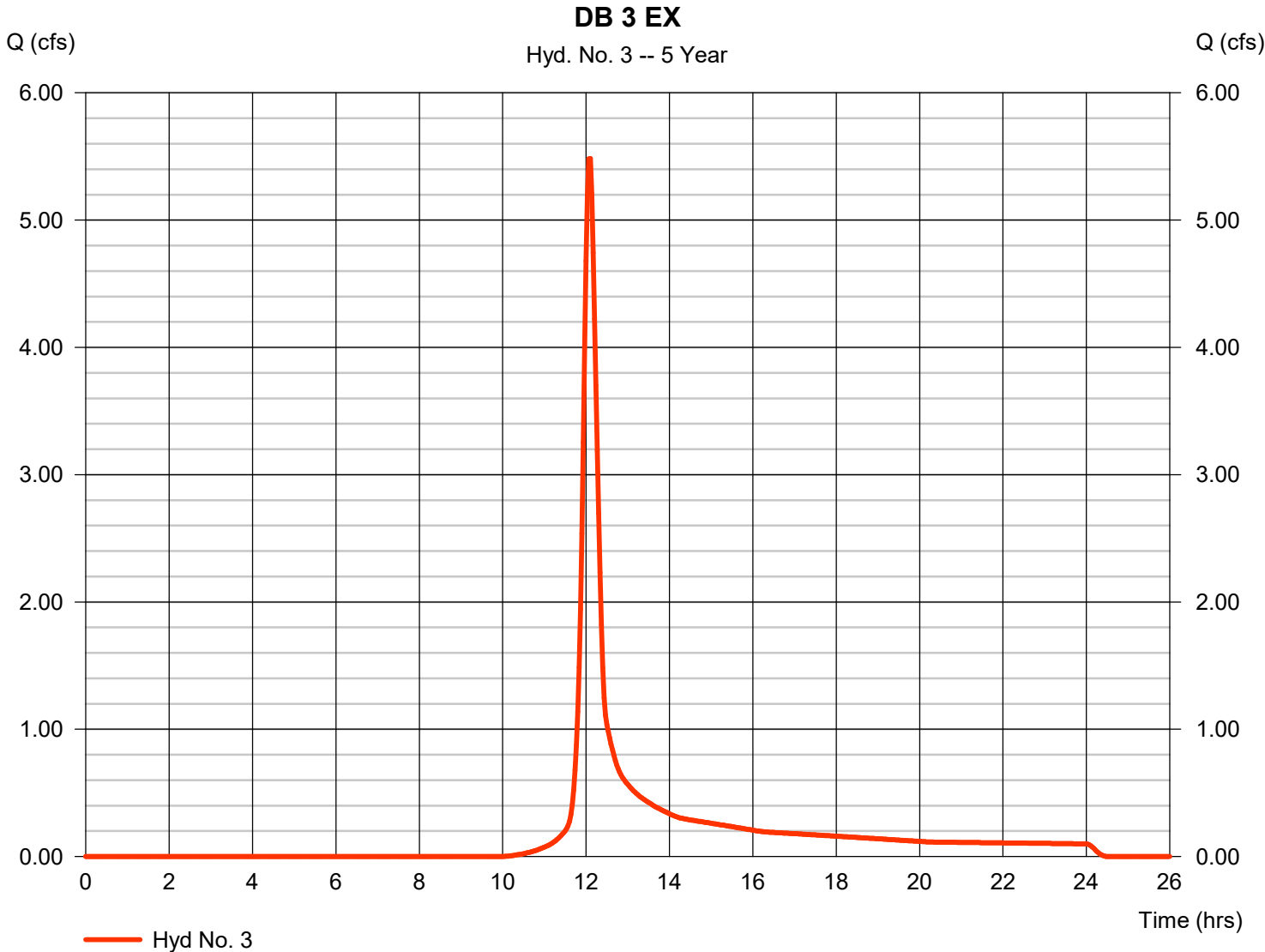


Hydrograph Report

Hyd. No. 3

DB 3 EX

Hydrograph type	= SCS Runoff	Peak discharge	= 5.483 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 17,555 cuft
Drainage area	= 3.170 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.50 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

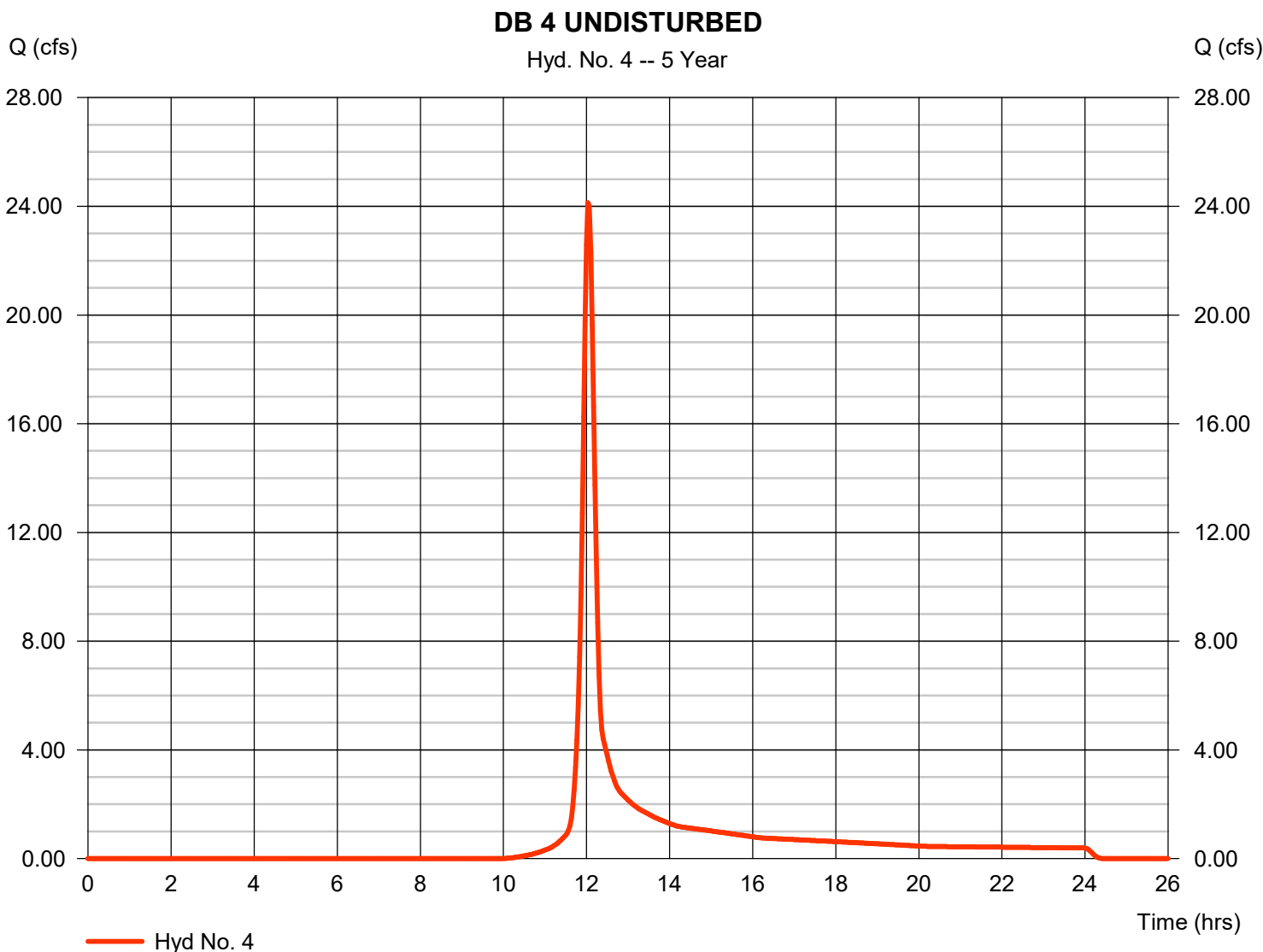
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 07 / 18 / 2023

Hyd. No. 4

DB 4 UNDISTURBED

Hydrograph type	= SCS Runoff	Peak discharge	= 24.13 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 68,842 cuft
Drainage area	= 12.750 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

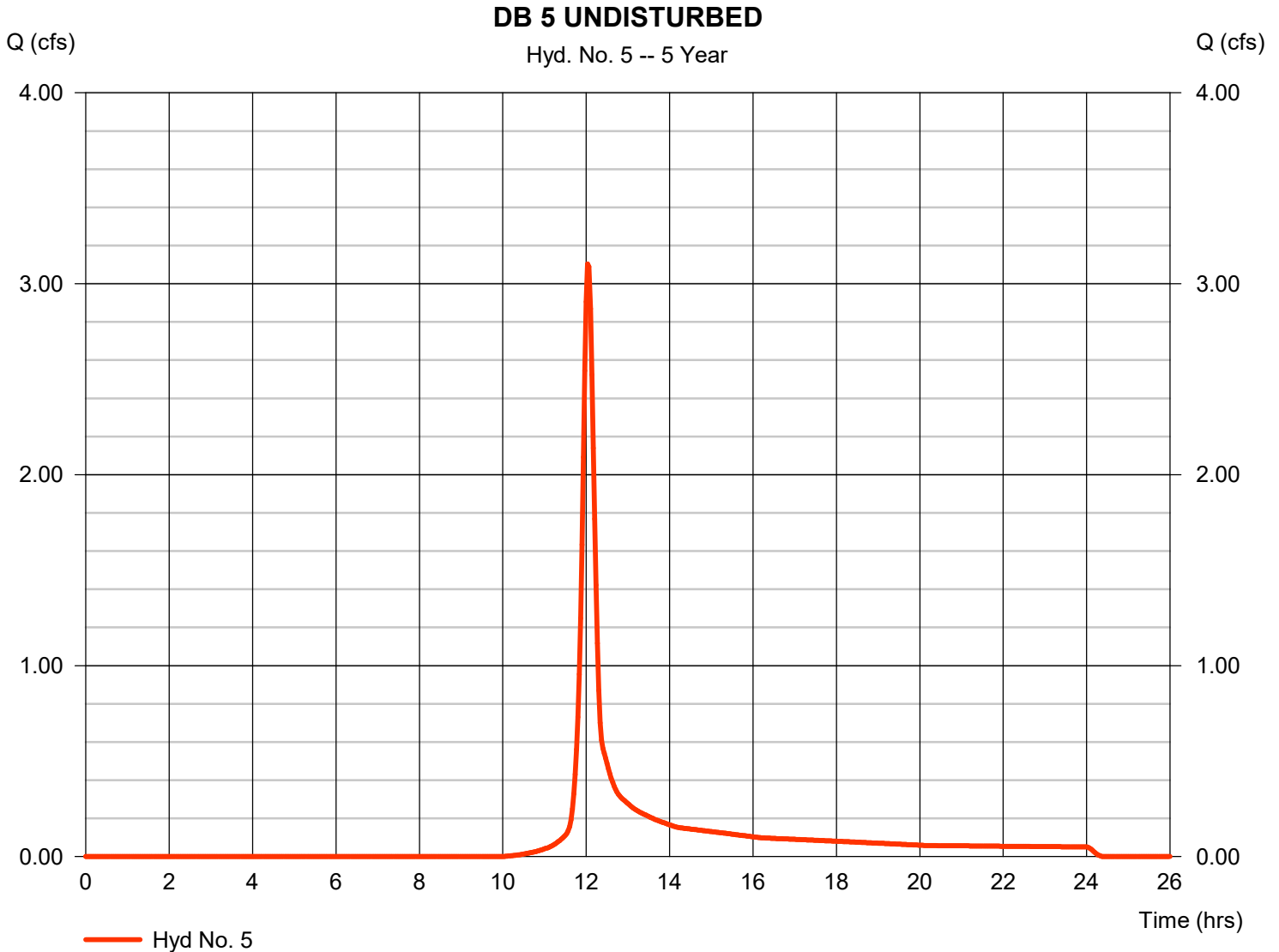


Hydrograph Report

Hyd. No. 5

DB 5 UNDISTURBED

Hydrograph type	= SCS Runoff	Peak discharge	= 3.104 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 8,855 cuft
Drainage area	= 1.640 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	93.04	2	728	341,364	-----	-----	-----	DB 1 EX
2	SCS Runoff	42.67	2	726	147,322	-----	-----	-----	DB 2 EX
3	SCS Runoff	15.65	2	724	48,967	-----	-----	-----	DB 3 EX
4	SCS Runoff	68.35	2	722	192,024	-----	-----	-----	DB 4 UNDISTURBED
5	SCS Runoff	8.791	2	722	24,700	-----	-----	-----	DB 5 UNDISTURBED
Pre-Developed Hydraflow.gpw					Return Period: 100 Year			Tuesday, 07 / 18 / 2023	

Hydrograph Report

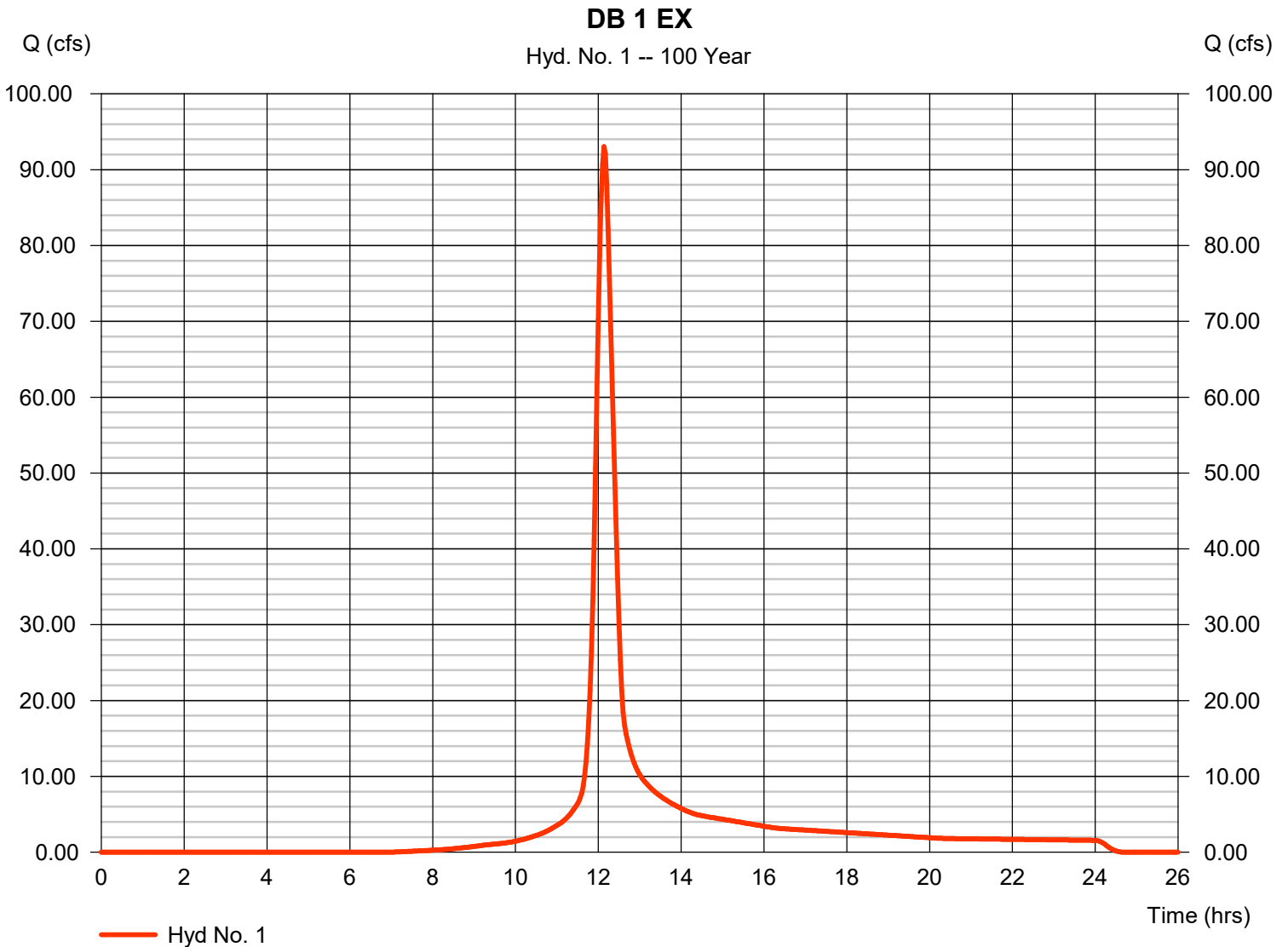
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 07 / 18 / 2023

Hyd. No. 1

DB 1 EX

Hydrograph type	= SCS Runoff	Peak discharge	= 93.04 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 341,364 cuft
Drainage area	= 22.450 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 24.80 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



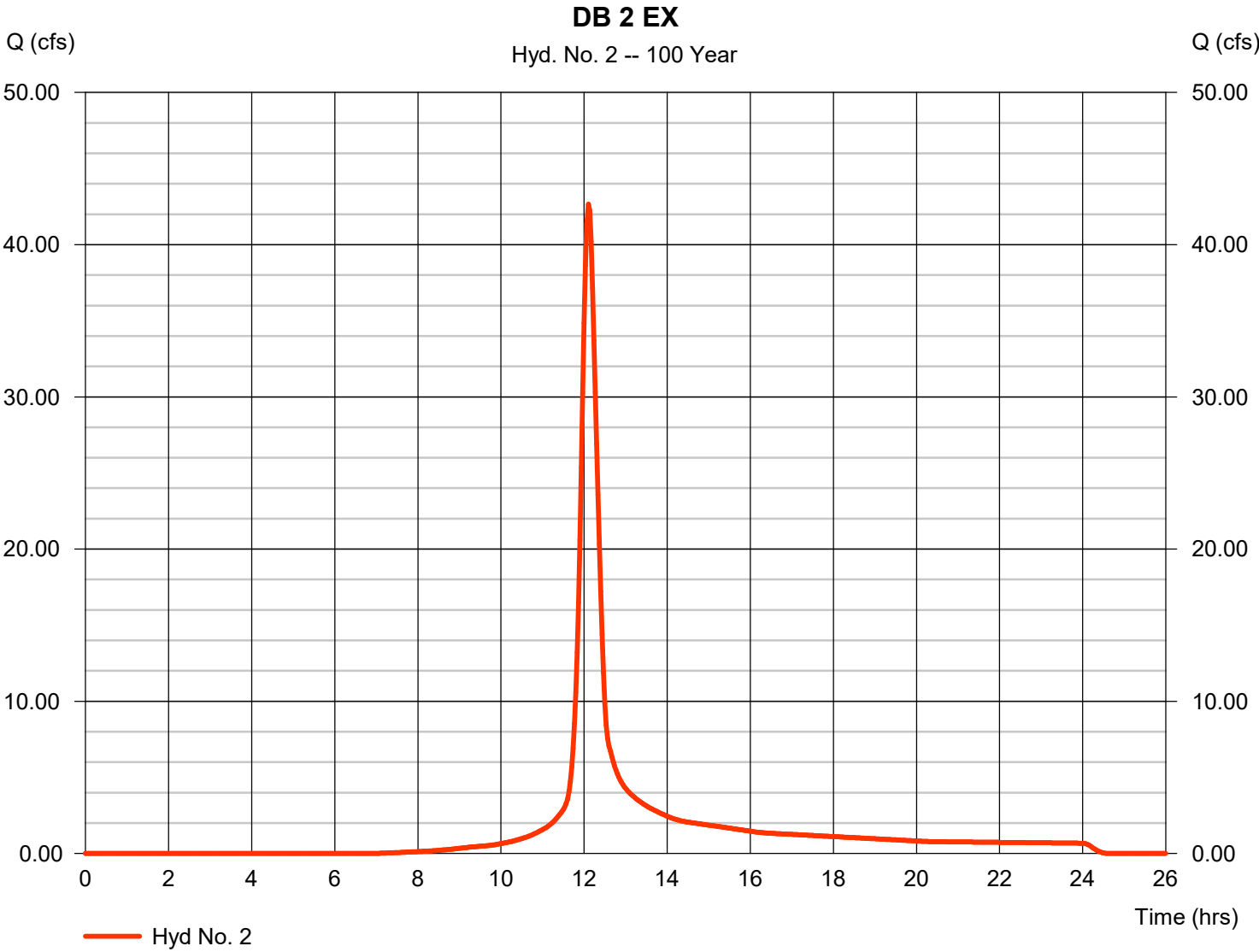
Hydrograph Report

Hyd. No. 2

DB 2 EX

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Time interval = 2 min
Drainage area = 9.370 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 7.12 in
Storm duration = 24 hrs

Peak discharge = 42.67 cfs
Time to peak = 12.10 hrs
Hyd. volume = 147,322 cuft
Curve number = 75
Hydraulic length = 0 ft
Time of conc. (Tc) = 22.60 min
Distribution = Type II
Shape factor = 484



Hydrograph Report

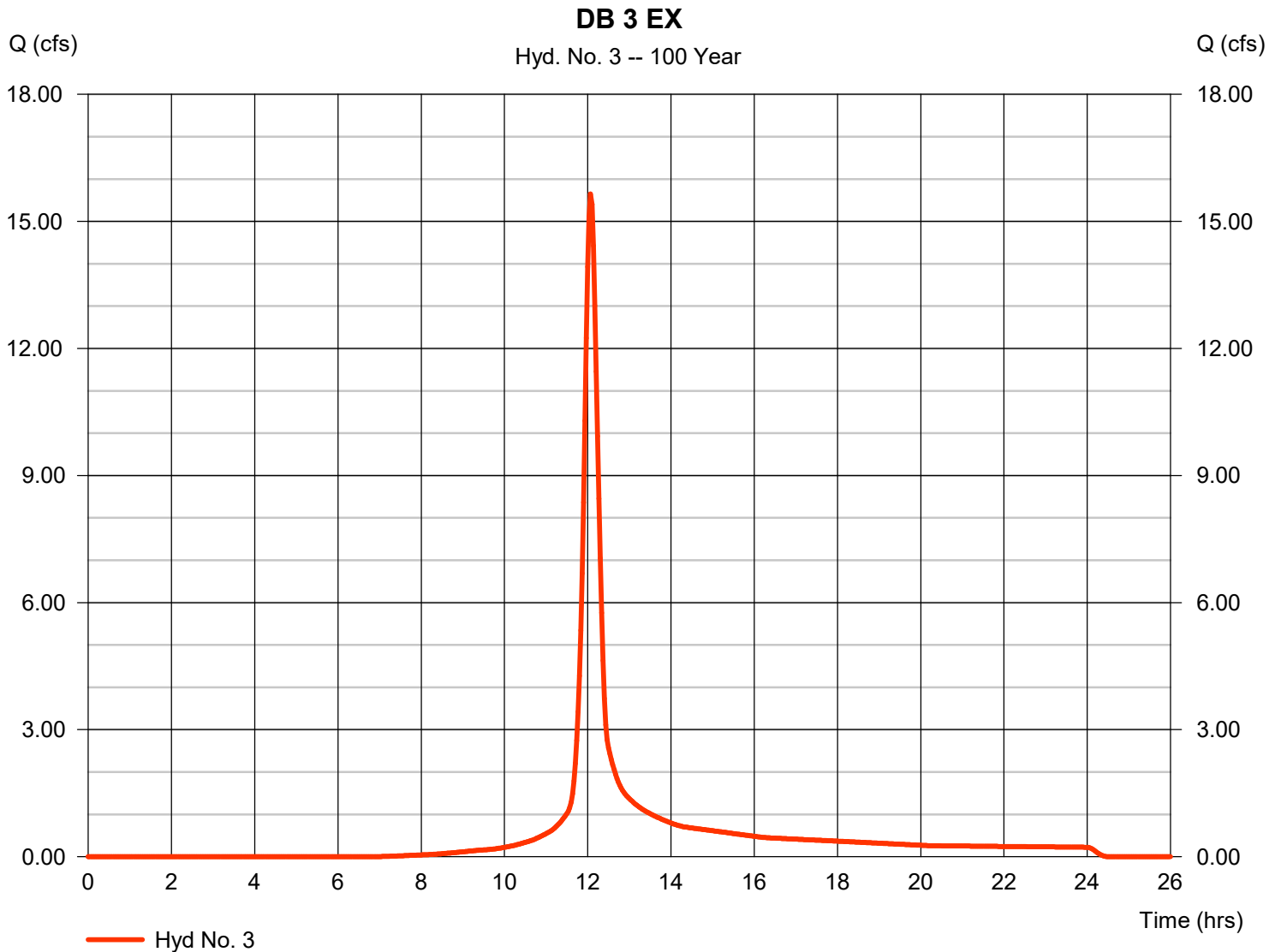
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 07 / 18 / 2023

Hyd. No. 3

DB 3 EX

Hydrograph type	= SCS Runoff	Peak discharge	= 15.65 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 48,967 cuft
Drainage area	= 3.170 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.50 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

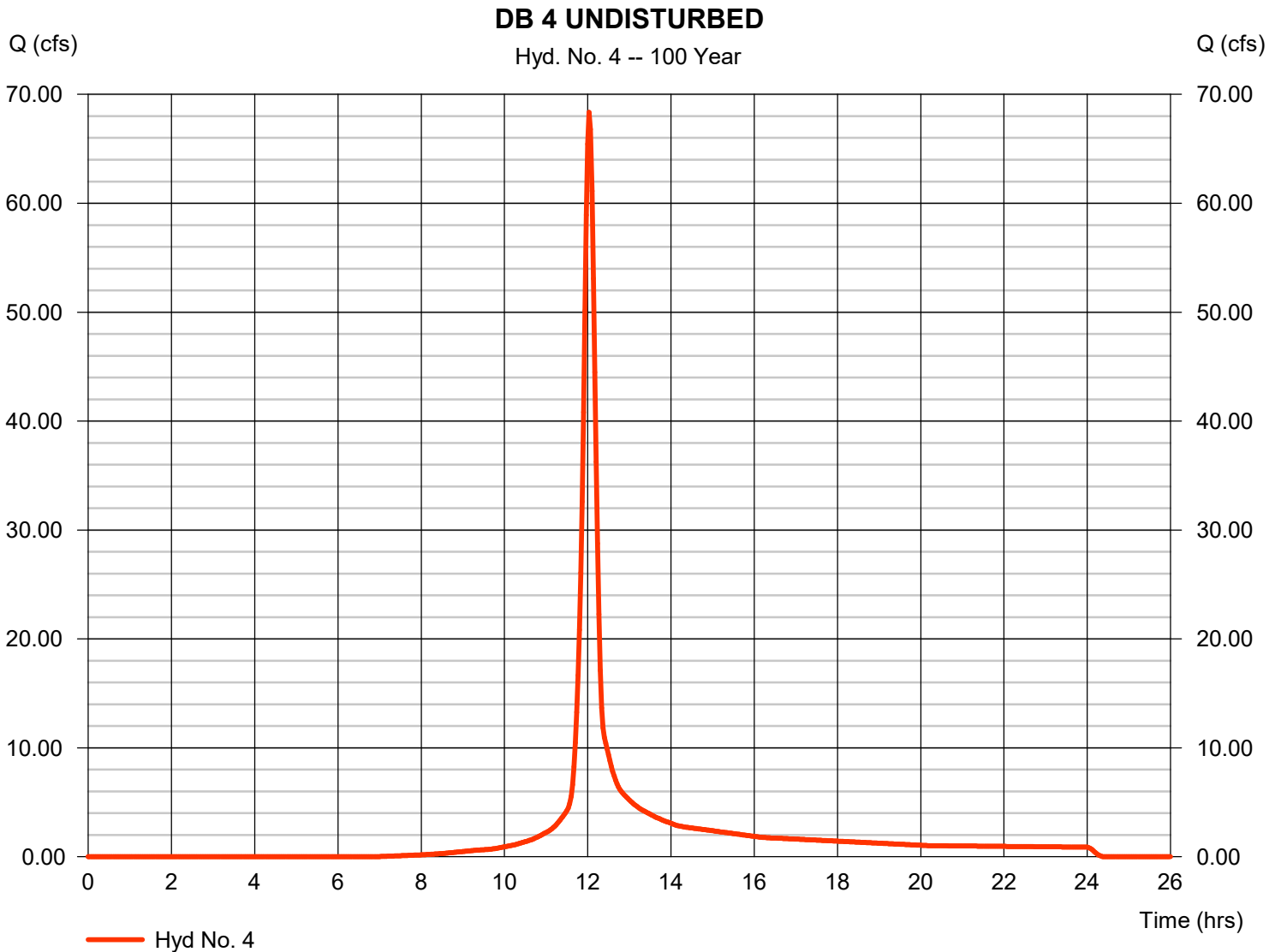
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 07 / 18 / 2023

Hyd. No. 4

DB 4 UNDISTURBED

Hydrograph type	= SCS Runoff	Peak discharge	= 68.35 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 192,024 cuft
Drainage area	= 12.750 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

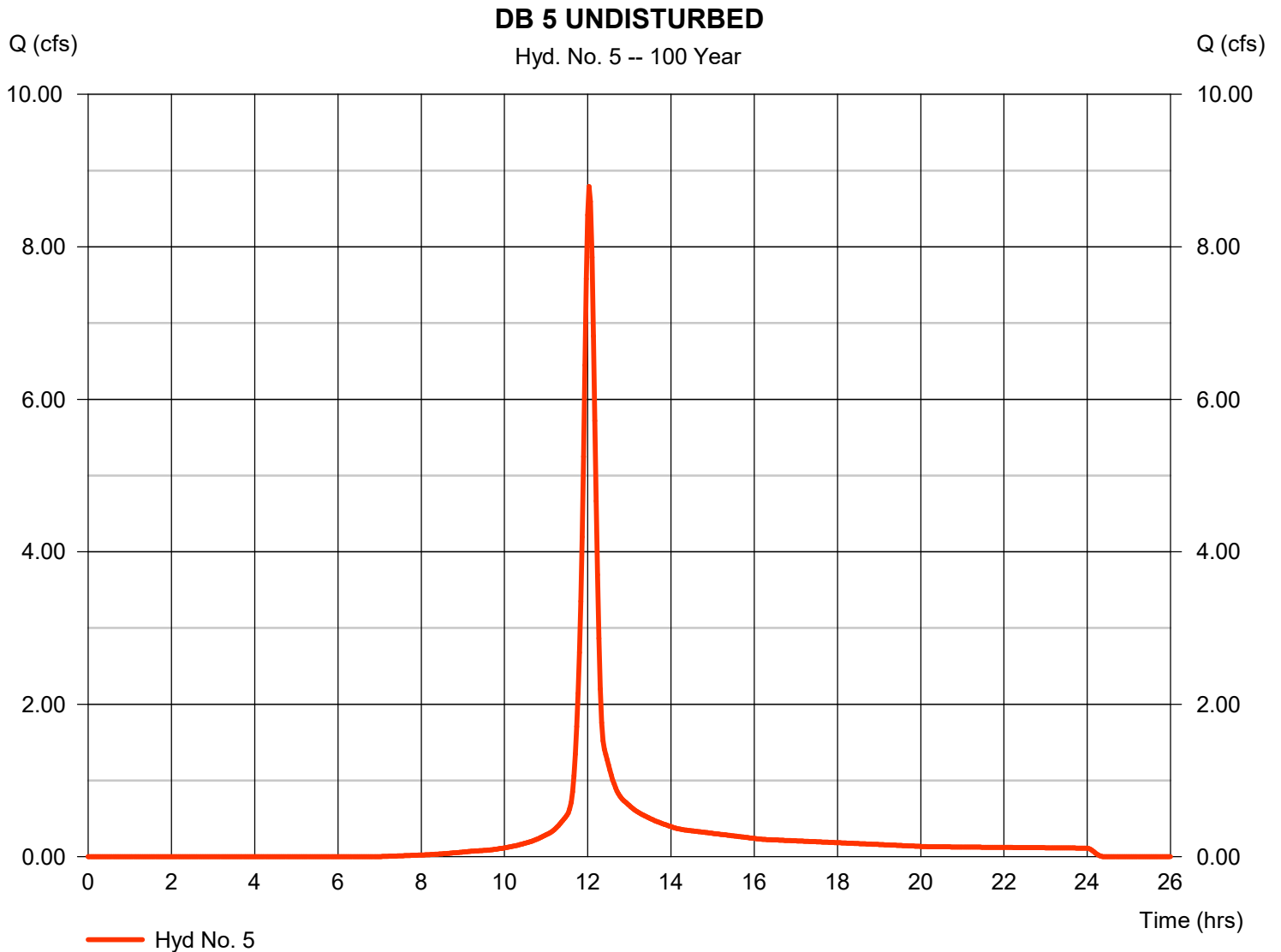
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 07 / 18 / 2023

Hyd. No. 5

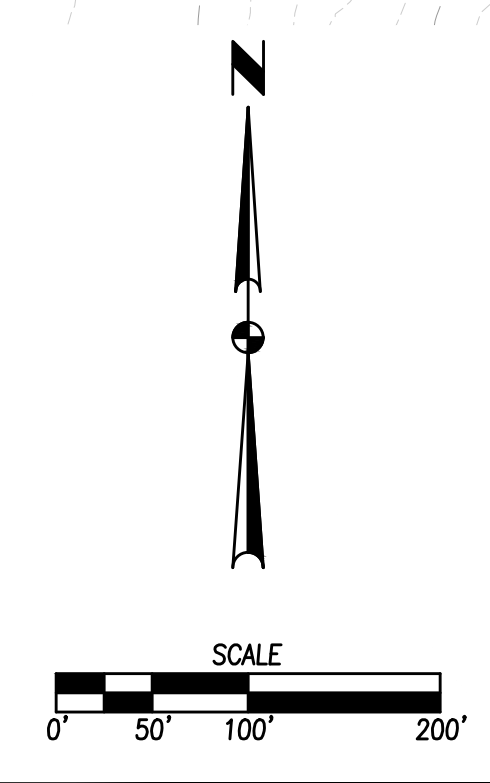
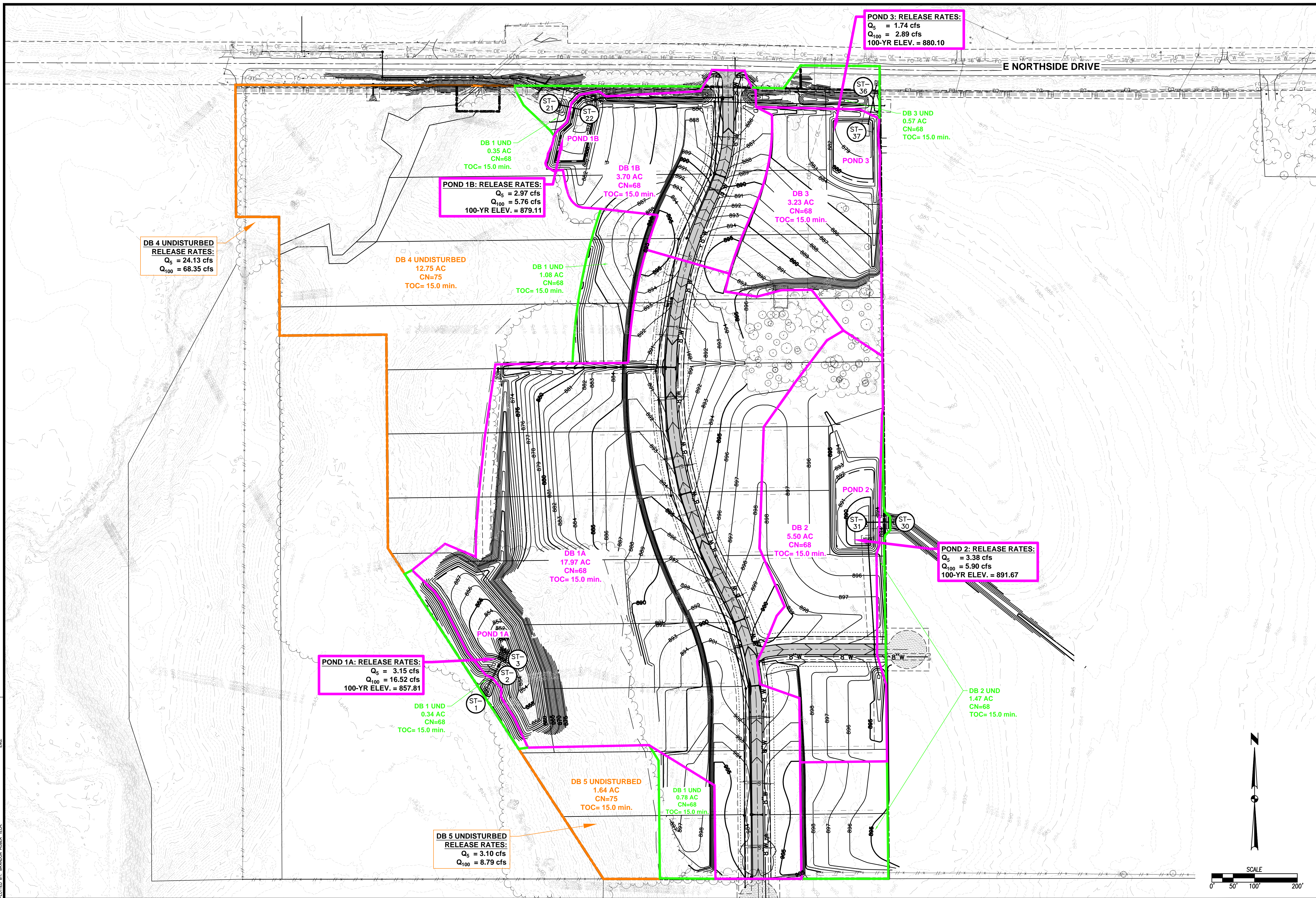
DB 5 UNDISTURBED

Hydrograph type	= SCS Runoff	Peak discharge	= 8.791 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 24,700 cuft
Drainage area	= 1.640 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



SECTION 4

FILE: H:\2022\2211760\DWG\2211760-SWAP.DWG
COMMENT: SWAP
PLOTTED BY: RANDON HUBER TECH
1/1/2024 11:24 AM



DATE: _____

REVISIONS: _____

4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PHONE: (515) 369-4400

TECH: _____

ENGINEER: _____

ESA
CIVIL DESIGN ADVANTAGE

POLK CITY, IOWA

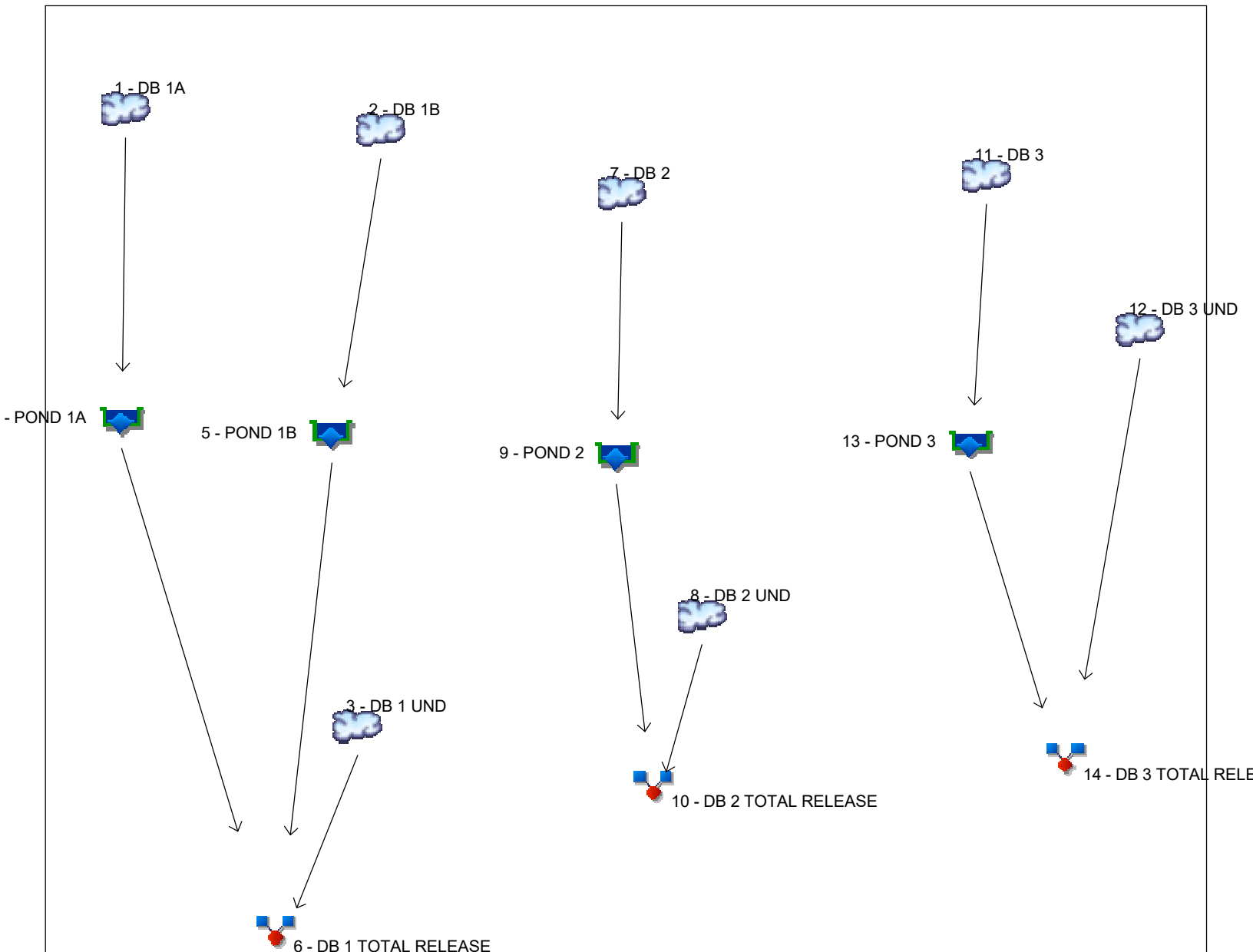
BIG CREEK RIDGE
POST - DEVELOPED MAP

1/1
2211.760

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Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022



Legend

Hyd. Origin	Description
1	SCS Runoff DB 1A
2	SCS Runoff DB 1B
3	SCS Runoff DB 1 UND
4	Reservoir POND 1A
5	Reservoir POND 1B
6	Combine DB 1 TOTAL RELEASE
7	SCS Runoff DB 2
8	SCS Runoff DB 2 UND
9	Reservoir POND 2
10	Combine DB 2 TOTAL RELEASE
11	SCS Runoff DB 3
12	SCS Runoff DB 3 UND
13	Reservoir POND 3
14	Combine DB 3 TOTAL RELEASE
15	SCS Runoff DB 4 UNDISTURBED
16	SCS Runoff DB 5 UNDISTURBED

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	----	----	----	----	23.10	----	----	----	79.45	DB 1A
2	SCS Runoff	----	----	----	----	4.757	----	----	----	16.36	DB 1B
3	SCS Runoff	----	----	----	----	3.279	----	----	----	11.27	DB 1 UND
4	Reservoir	1	----	----	----	3.149	----	----	----	16.52	POND 1A
5	Reservoir	2	----	----	----	2.970	----	----	----	5.759	POND 1B
6	Combine	3, 4, 5	----	----	----	8.689	----	----	----	28.82	DB 1 TOTAL RELEASE
7	SCS Runoff	----	----	----	----	7.071	----	----	----	24.32	DB 2
8	SCS Runoff	----	----	----	----	1.890	----	----	----	6.499	DB 2 UND
9	Reservoir	7	----	----	----	3.383	----	----	----	5.903	POND 2
10	Combine	8, 9	----	----	----	4.783	----	----	----	11.68	DB 2 TOTAL RELEASE
11	SCS Runoff	----	----	----	----	4.153	----	----	----	14.28	DB 3
12	SCS Runoff	----	----	----	----	0.733	----	----	----	2.520	DB 3 UND
13	Reservoir	11	----	----	----	1.744	----	----	----	2.887	POND 3
14	Combine	12, 13	----	----	----	2.219	----	----	----	4.996	DB 3 TOTAL RELEASE
15	SCS Runoff	----	----	----	----	24.13	----	----	----	68.35	DB 4 UNDISTURBED
16	SCS Runoff	----	----	----	----	3.104	----	----	----	8.791	DB 5 UNDISTURBED

POST-DEVELOPED RELEASE RATES.

NOTE, ALL 100-YEAR TOTAL RELEASE RATES HAVE BEEN REDUCED BELOW THE 5-YEAR EXISTING RELEASE RATES

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	23.10	2	724	69,103	----	----	----	DB 1A
2	SCS Runoff	4.757	2	724	14,228	----	----	----	DB 1B
3	SCS Runoff	3.279	2	724	9,806	----	----	----	DB 1 UND
4	Reservoir	3.149	2	760	69,098	1	855.08	24,427	POND 1A
5	Reservoir	2.970	2	732	14,226	2	877.28	2,071	POND 1B
6	Combine	8.689	2	726	93,130	3, 4, 5	----	----	DB 1 TOTAL RELEASE
7	SCS Runoff	7.071	2	724	21,150	----	----	----	DB 2
8	SCS Runoff	1.890	2	724	5,653	----	----	----	DB 2 UND
9	Reservoir	3.383	2	734	21,147	7	889.67	4,304	POND 2
10	Combine	4.783	2	726	26,800	8, 9	----	----	DB 2 TOTAL RELEASE
11	SCS Runoff	4.153	2	724	12,421	----	----	----	DB 3
12	SCS Runoff	0.733	2	724	2,192	----	----	----	DB 3 UND
13	Reservoir	1.744	2	736	12,419	11	878.73	2,548	POND 3
14	Combine	2.219	2	728	14,611	12, 13	----	----	DB 3 TOTAL RELEASE
15	SCS Runoff	24.13	2	722	68,842	----	----	----	DB 4 UNDISTURBED
16	SCS Runoff	3.104	2	722	8,855	----	----	----	DB 5 UNDISTURBED

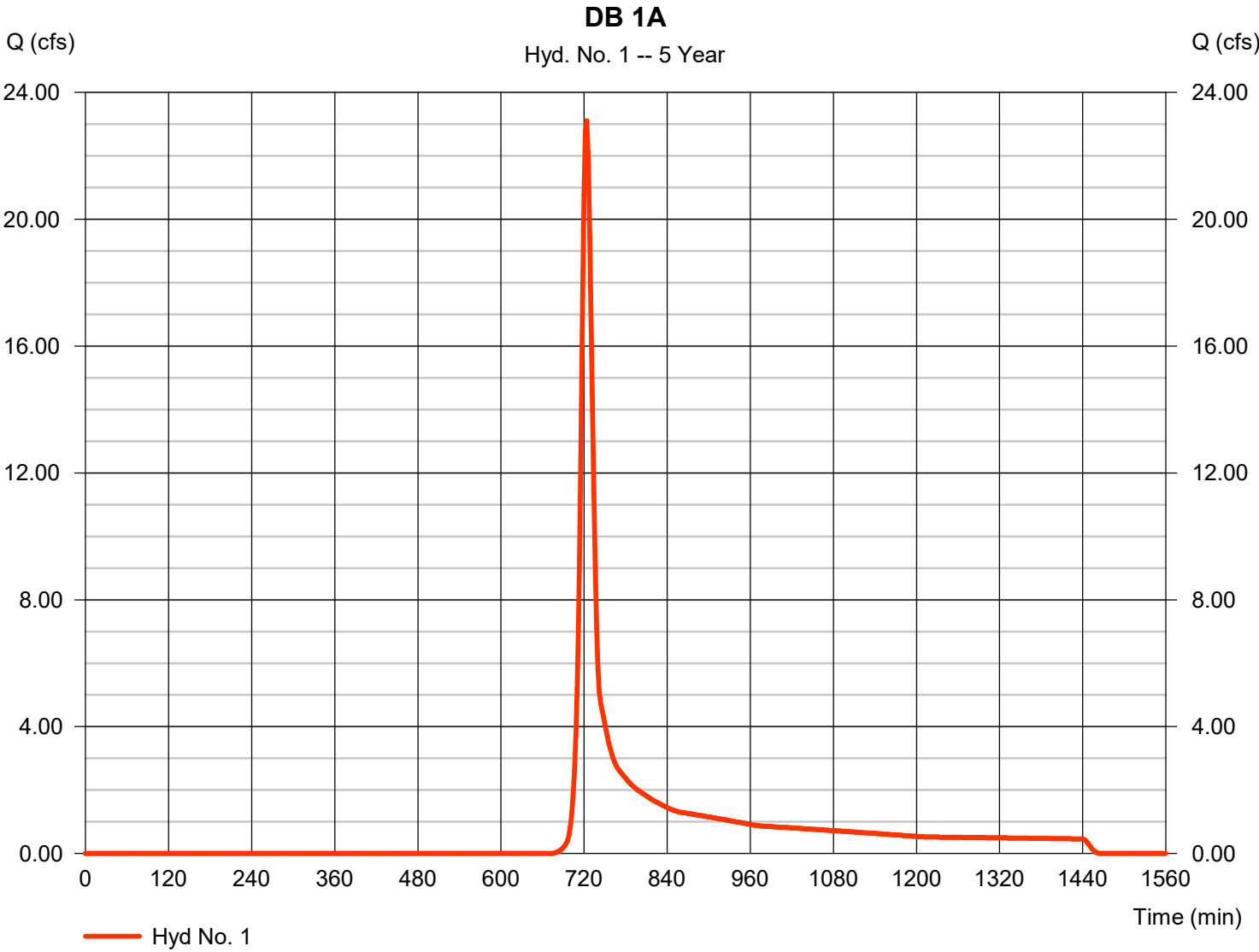
**5-YEAR STORM EVENT;
DETENTION POND
SUMMARIES**

Hydrograph Report

Hyd. No. 1

DB 1A

Hydrograph type	= SCS Runoff	Peak discharge	= 23.10 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 69,103 cuft
Drainage area	= 17.970 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

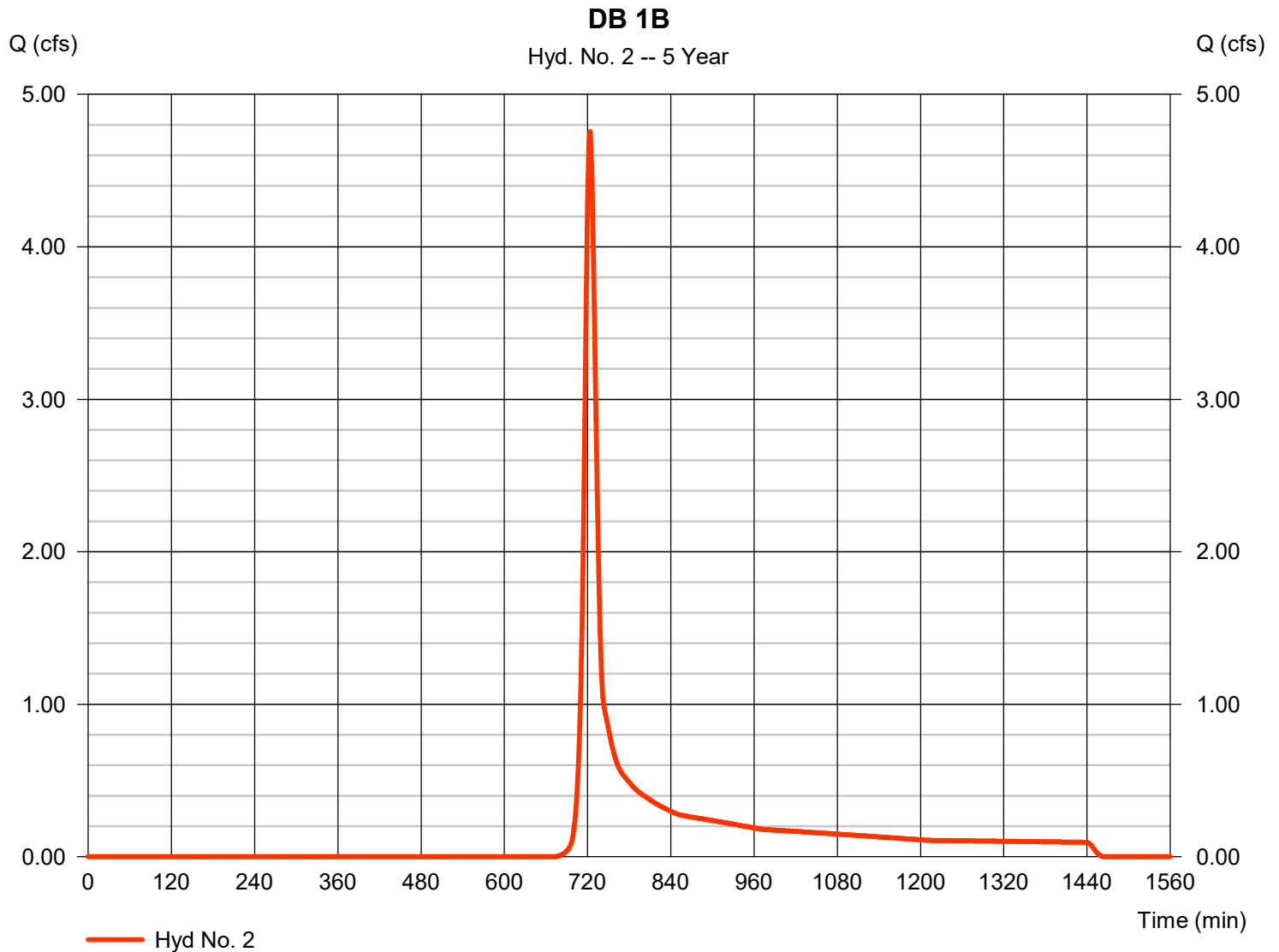


Hydrograph Report

Hyd. No. 2

DB 1B

Hydrograph type	= SCS Runoff	Peak discharge	= 4.757 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 14,228 cuft
Drainage area	= 3.700 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

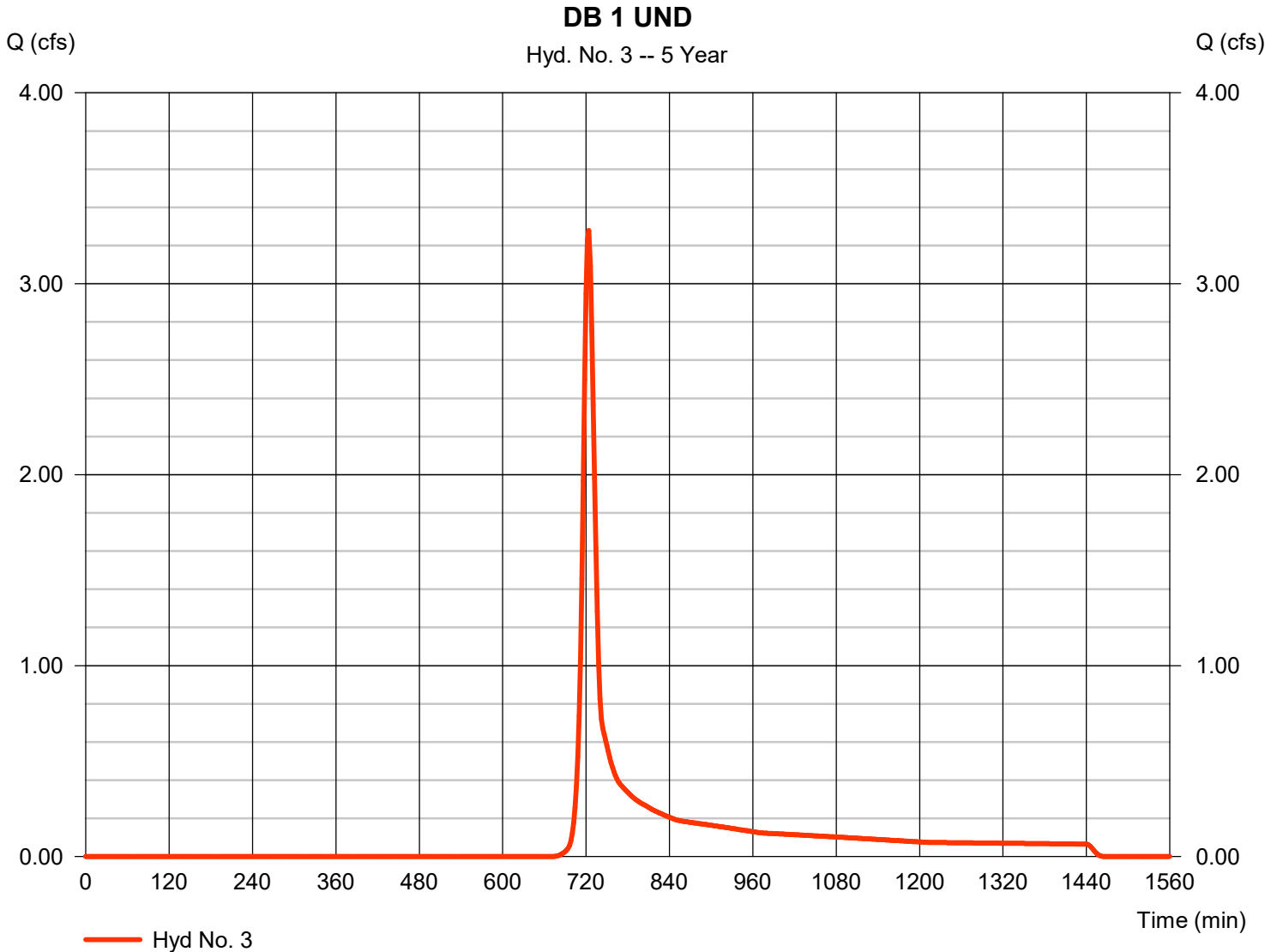


Hydrograph Report

Hyd. No. 3

DB 1 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 3.279 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 9,806 cuft
Drainage area	= 2.550 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

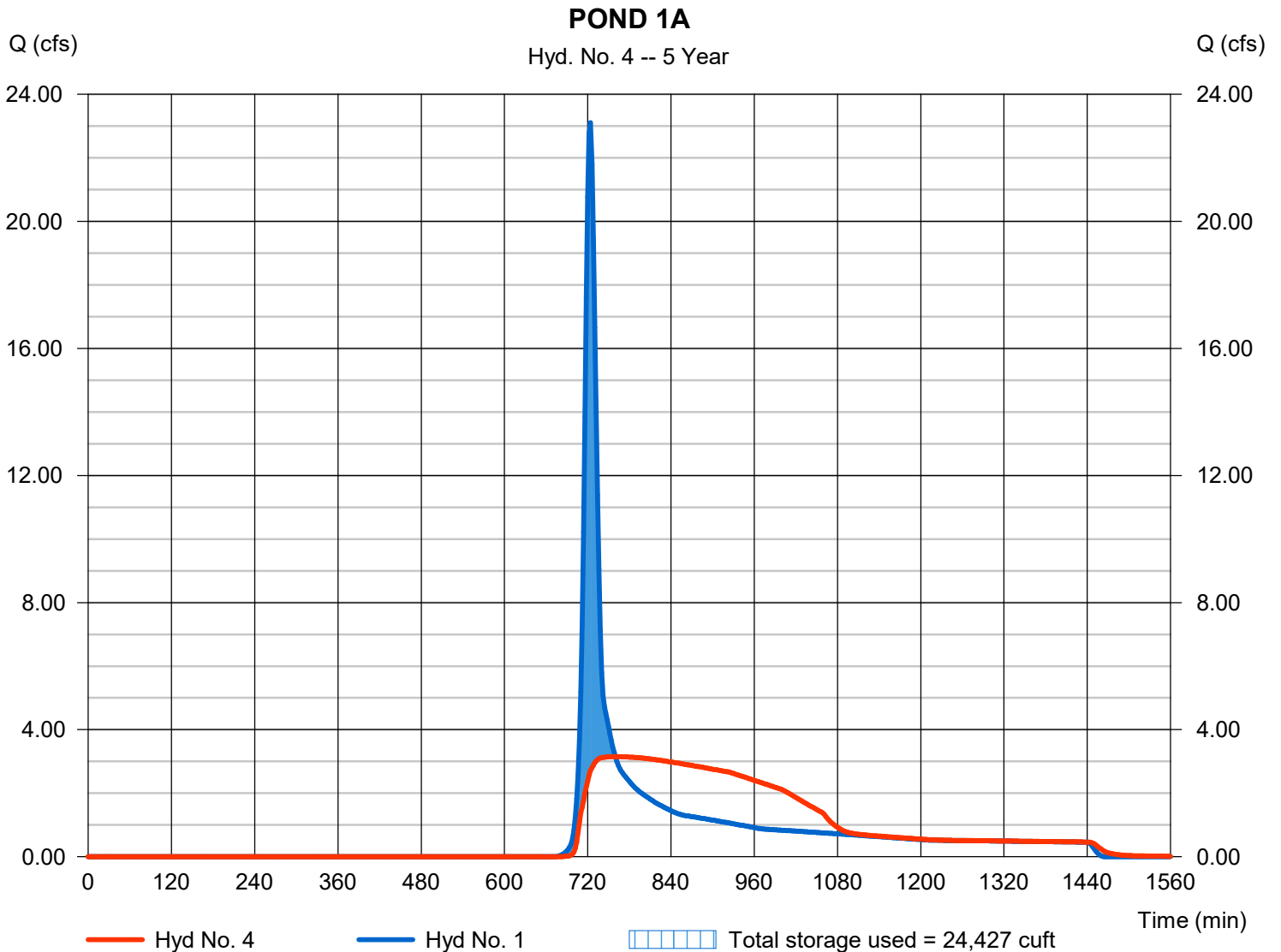
Wednesday, 01 / 3 / 2024

Hyd. No. 4

POND 1A

Hydrograph type	= Reservoir	Peak discharge	= 3.149 cfs
Storm frequency	= 5 yrs	Time to peak	= 760 min
Time interval	= 2 min	Hyd. volume	= 69,098 cuft
Inflow hyd. No.	= 1 - DB 1A	Max. Elevation	= 855.08 ft
Reservoir name	= POND 1A	Max. Storage	= 24,427 cuft

Storage Indication method used.



Pond No. 1 - POND 1A

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 850.94 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	850.94	25	0	0
0.05	850.99	25	1	1
0.06	851.00	25	0	1
1.06	852.00	2,536	1,281	1,282
2.08	853.00	4,234	3,453	4,735
3.08	854.00	8,904	6,569	11,304
4.08	855.00	14,434	11,669	22,973
5.08	856.00	20,685	17,560	40,532
6.08	857.00	26,416	23,551	64,083
7.08	858.00	32,116	29,266	93,349
8.08	859.00	36,184	34,150	127,499

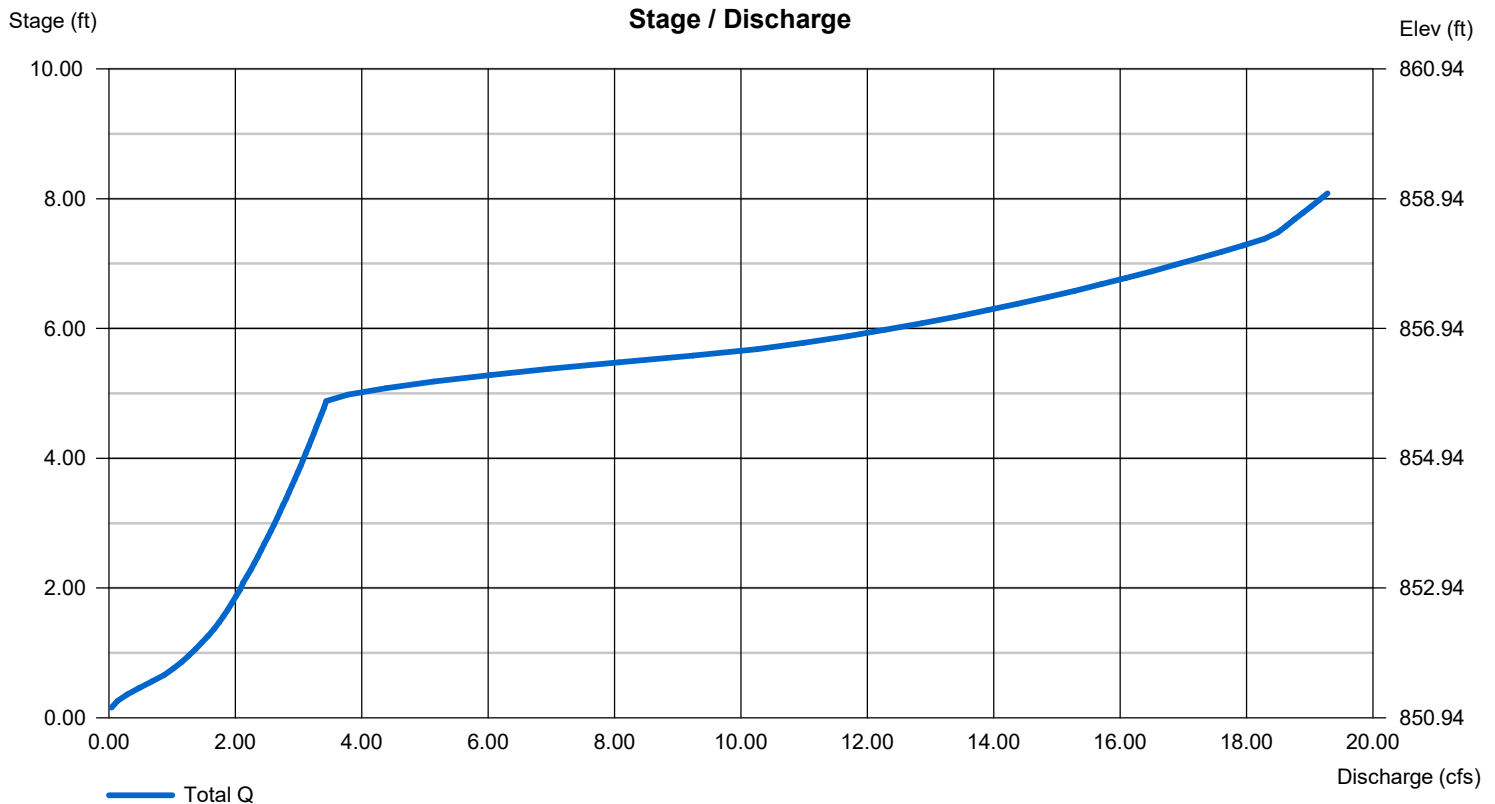
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	8.00	9.00	0.00
Span (in)	= 18.00	8.00	36.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 850.74	851.00	855.80	0.00
Length (ft)	= 58.00	12.00	0.50	0.00
Slope (%)	= 1.00	0.30	1.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

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



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

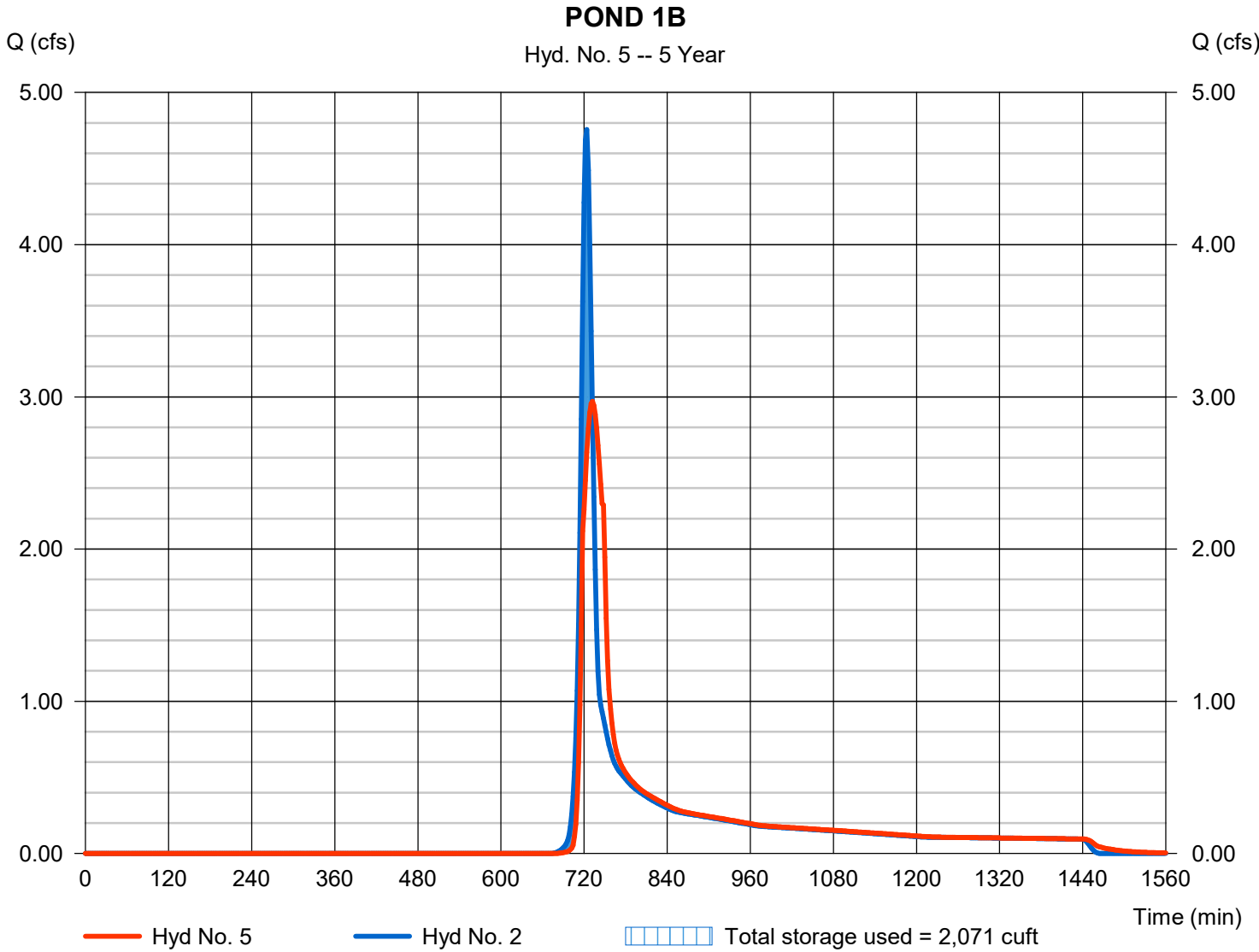
Wednesday, 01 / 3 / 2024

Hyd. No. 5

POND 1B

Hydrograph type	= Reservoir	Peak discharge	= 2.970 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 14,226 cuft
Inflow hyd. No.	= 2 - DB 1B	Max. Elevation	= 877.28 ft
Reservoir name	= POND 1B	Max. Storage	= 2,071 cuft

Storage Indication method used.



Pond No. 2 - POND 1B

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 876.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	876.00	25	0	0
1.04	877.00	1,981	1,043	1,043
2.04	878.00	5,351	3,666	4,709
3.04	879.00	7,732	6,542	11,251
4.04	880.00	9,422	8,577	19,828
5.04	881.00	11,236	10,329	30,157

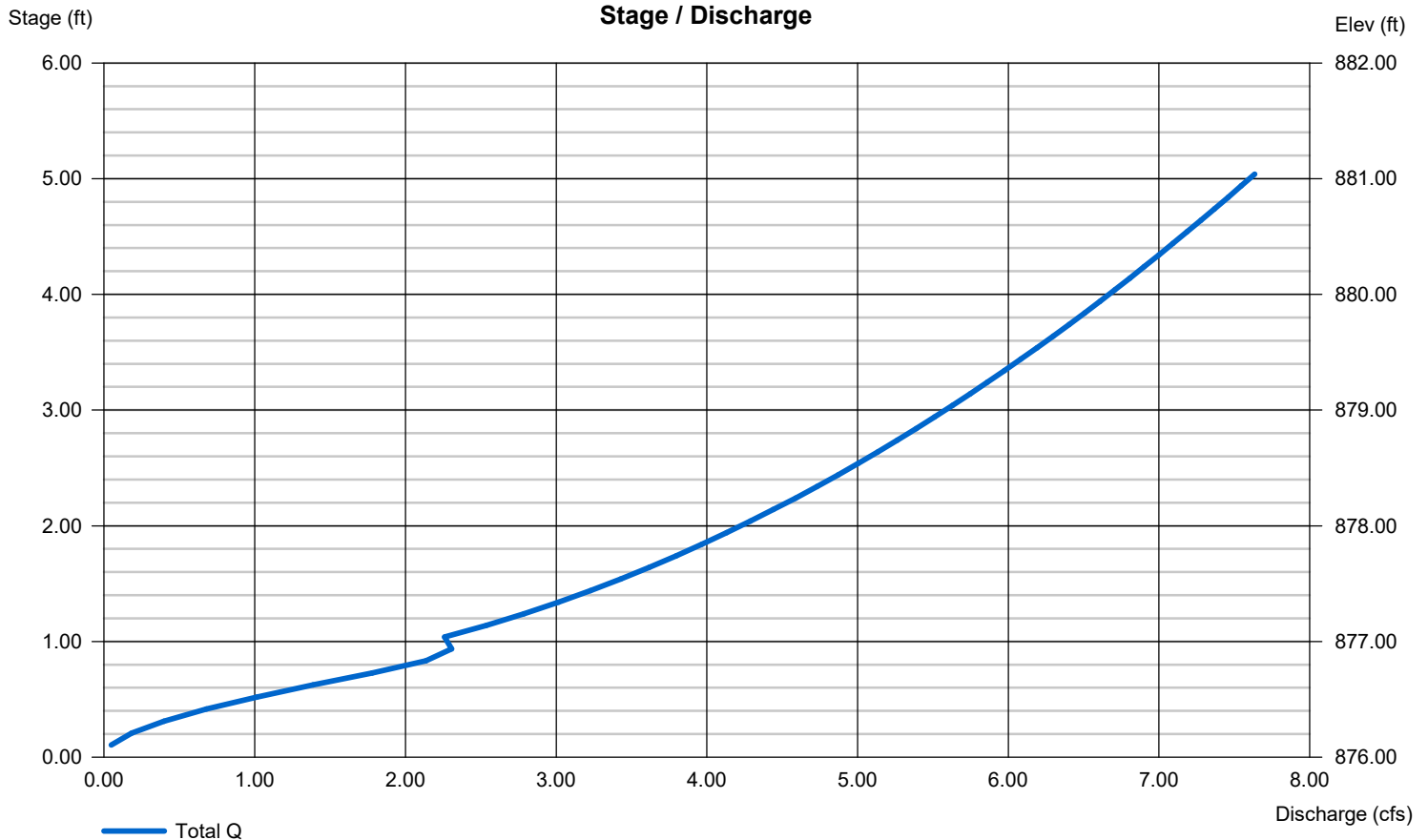
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	Inactive	Inactive	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 876.00	0.00	0.00	0.00
Length (ft)	= 48.00	0.00	0.00	0.00
Slope (%)	= 0.80	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

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



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

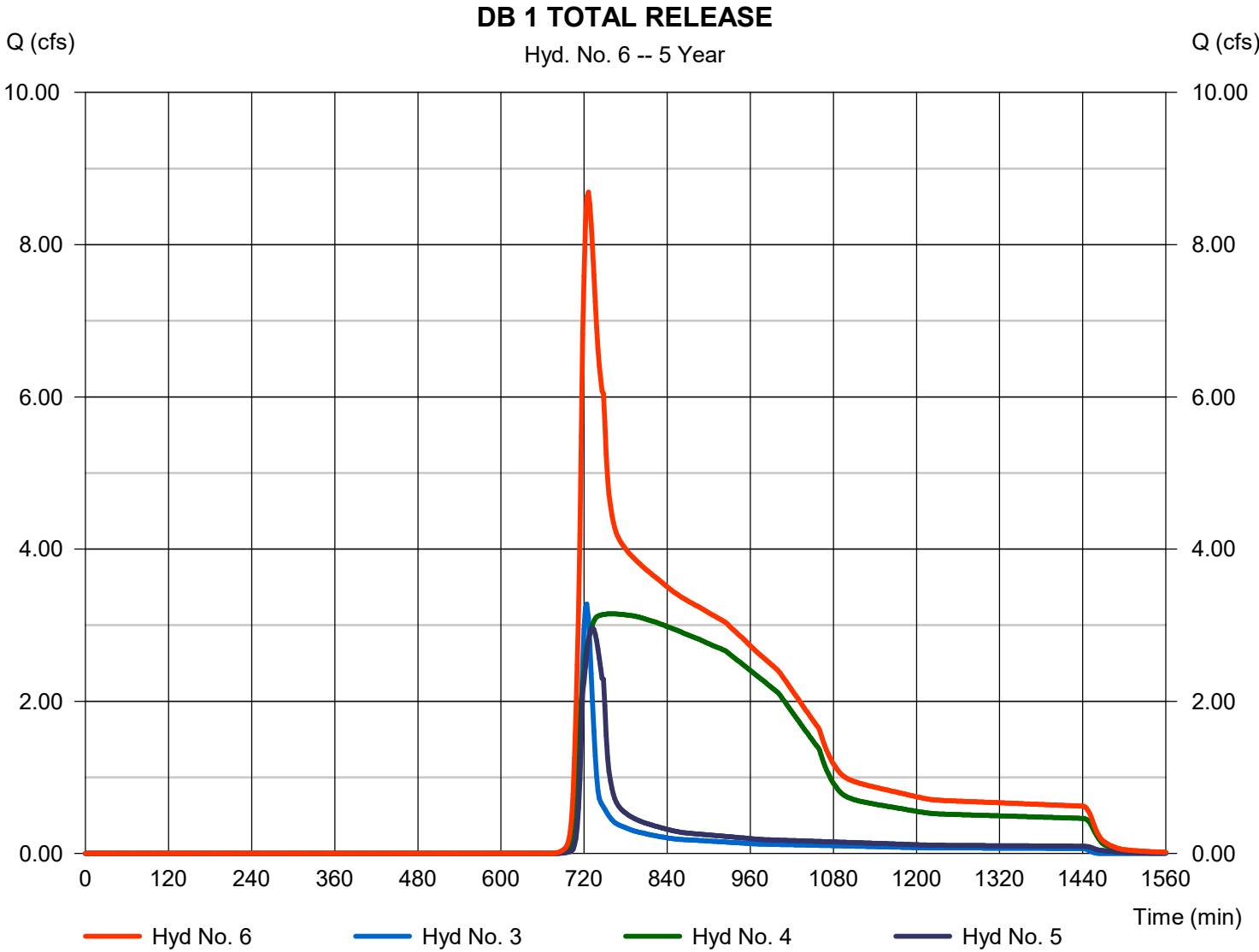
Wednesday, 01 / 3 / 2024

Hyd. No. 6

DB 1 TOTAL RELEASE

Hydrograph type = Combine
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyds. = 3, 4, 5

Peak discharge = 8.689 cfs
Time to peak = 726 min
Hyd. volume = 93,130 cuft
Contrib. drain. area = 2.550 ac

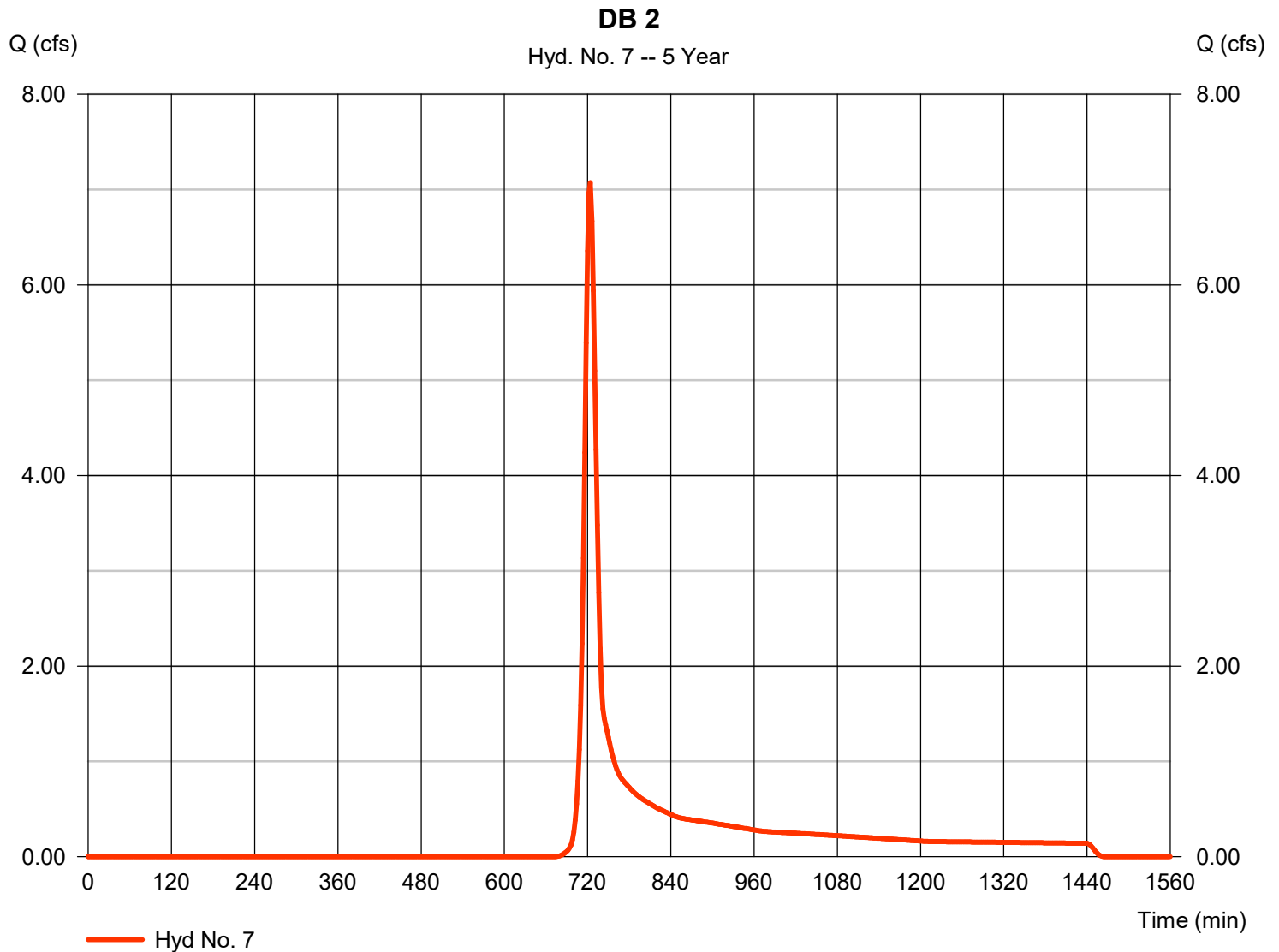


Hydrograph Report

Hyd. No. 7

DB 2

Hydrograph type	= SCS Runoff	Peak discharge	= 7.071 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 21,150 cuft
Drainage area	= 5.500 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

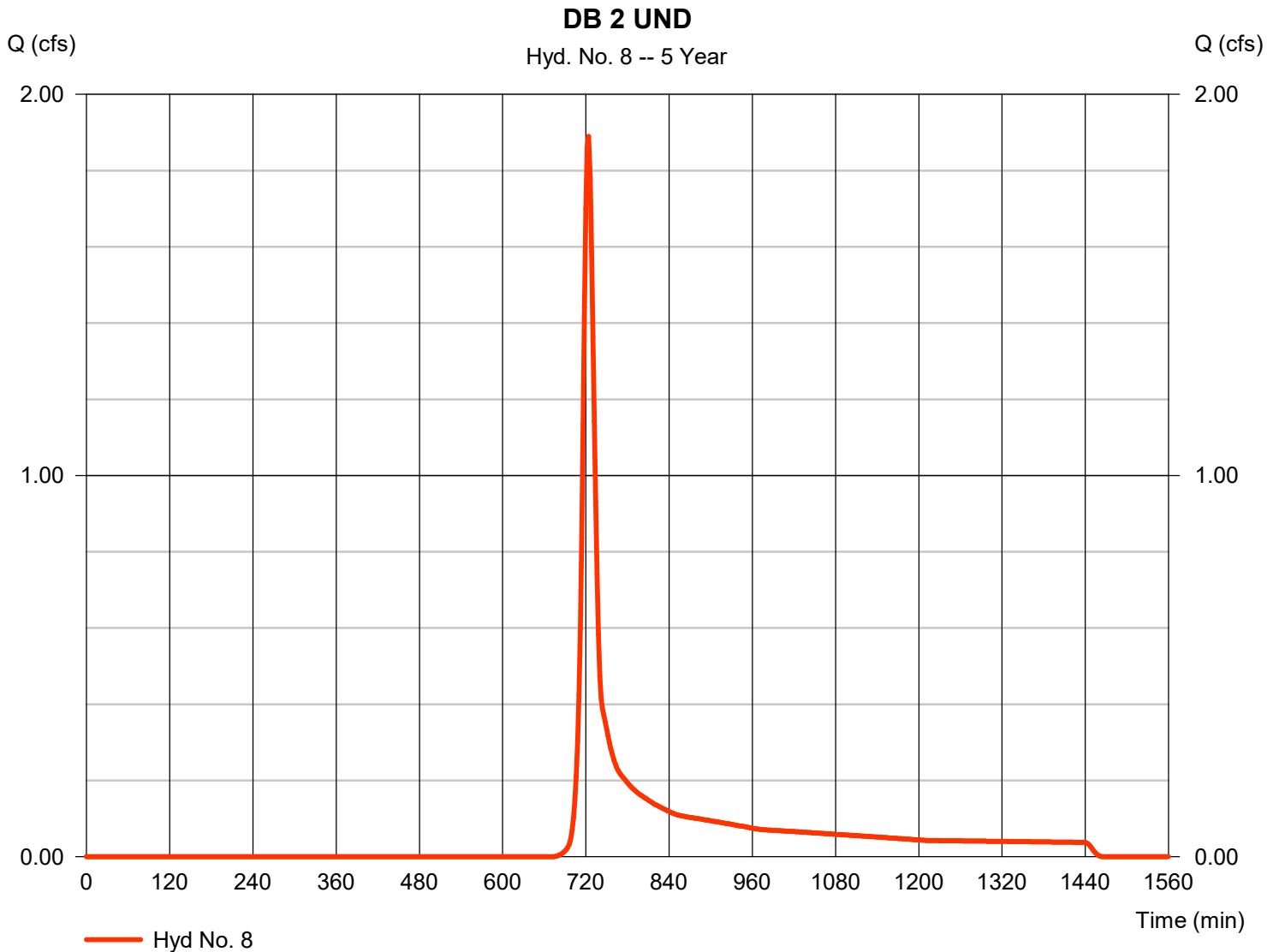
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 8

DB 2 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 1.890 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 5,653 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

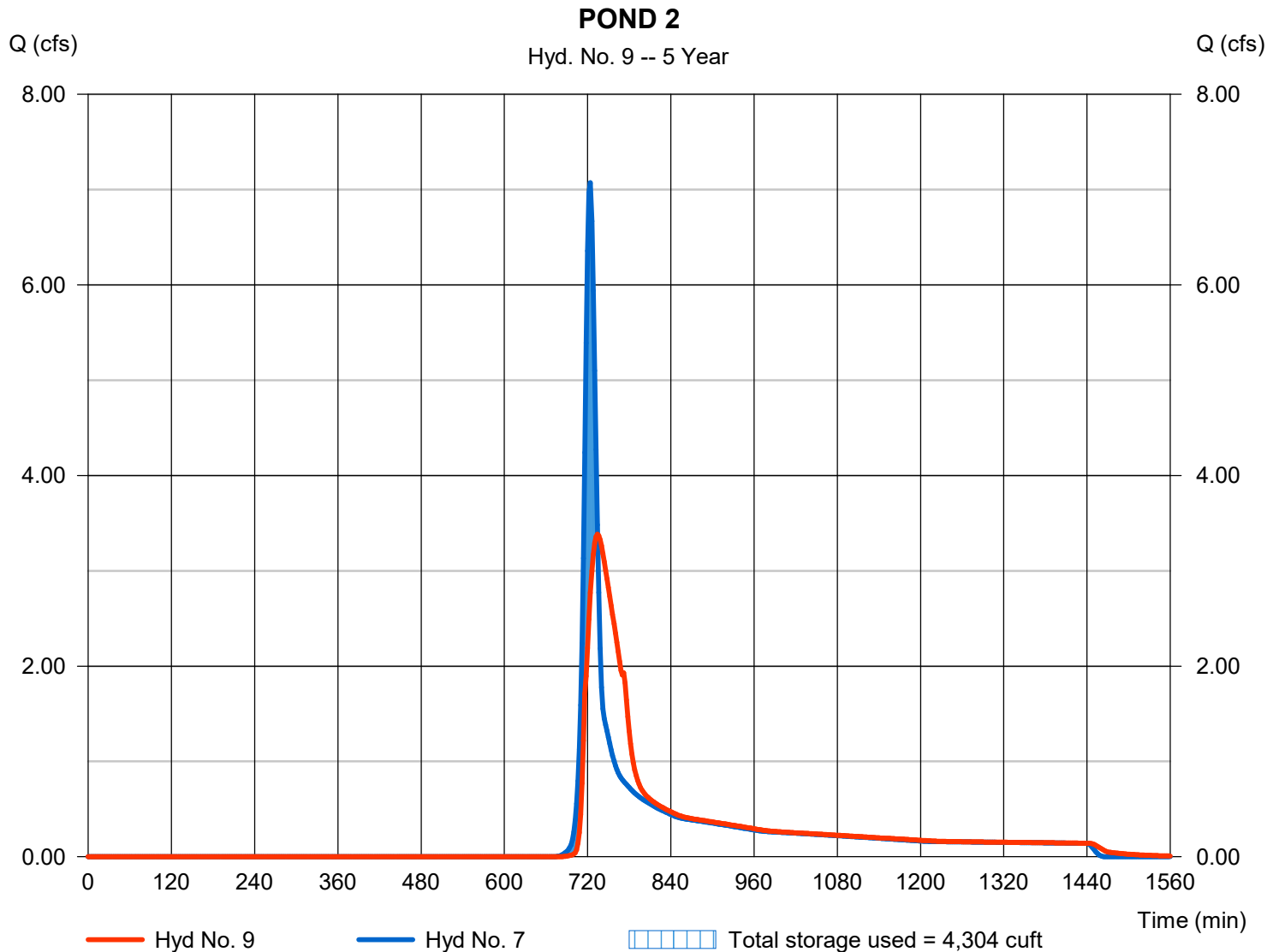
Wednesday, 01 / 3 / 2024

Hyd. No. 9

POND 2

Hydrograph type	= Reservoir	Peak discharge	= 3.383 cfs
Storm frequency	= 5 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 21,147 cuft
Inflow hyd. No.	= 7 - DB 2	Max. Elevation	= 889.67 ft
Reservoir name	= POND 2	Max. Storage	= 4,304 cuft

Storage Indication method used.



Pond No. 3 - POND 2

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 888.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	888.00	25	0	0
1.07	889.00	2,685	1,450	1,450
2.07	890.00	5,802	4,244	5,693
3.07	891.00	9,715	7,759	13,452
4.07	892.00	16,389	13,052	26,504
5.07	893.00	20,428	18,409	44,912
6.07	894.00	24,091	22,260	67,172

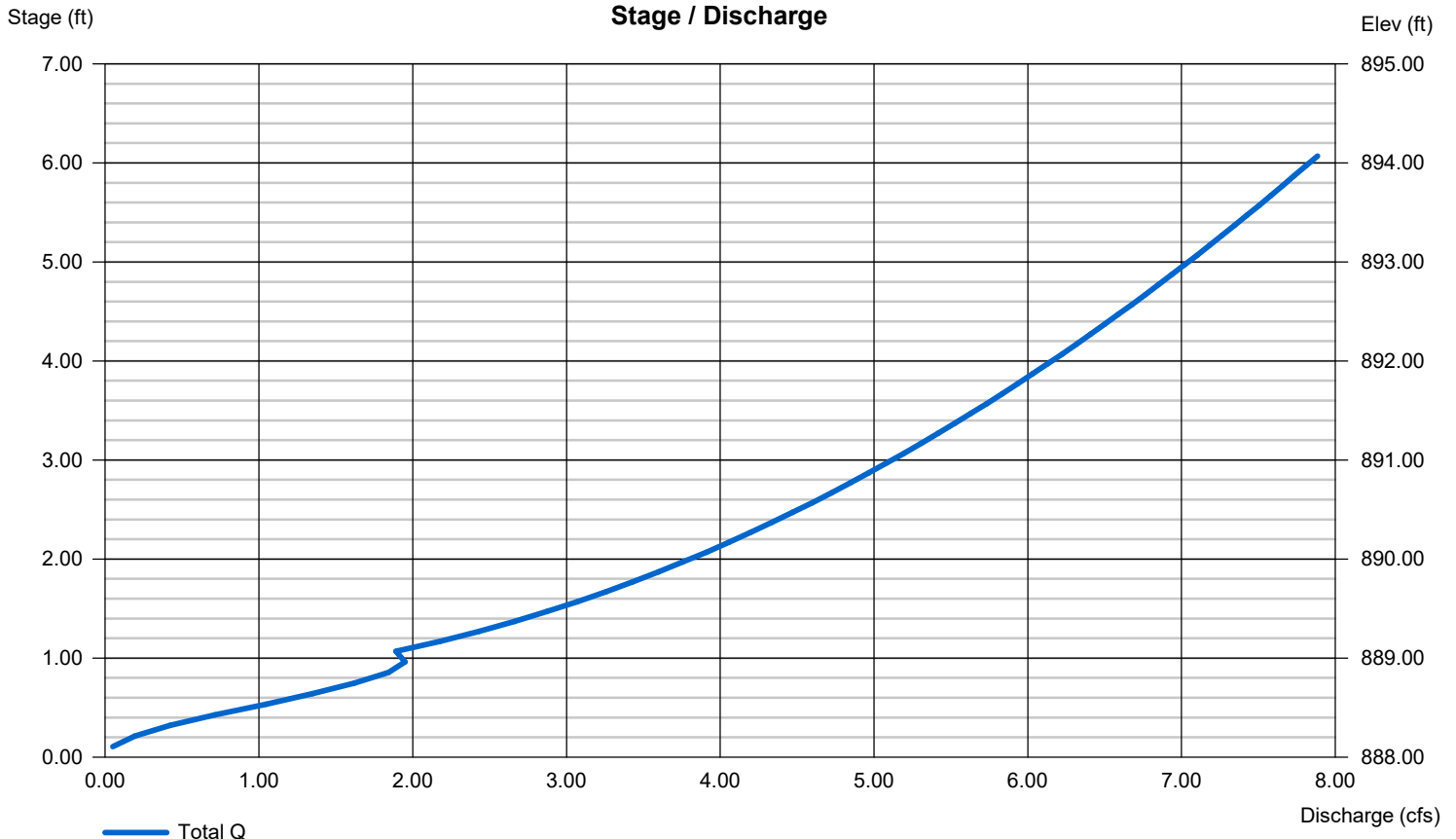
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	Inactive	Inactive	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 888.00	0.00	0.00	0.00
Length (ft)	= 61.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

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



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

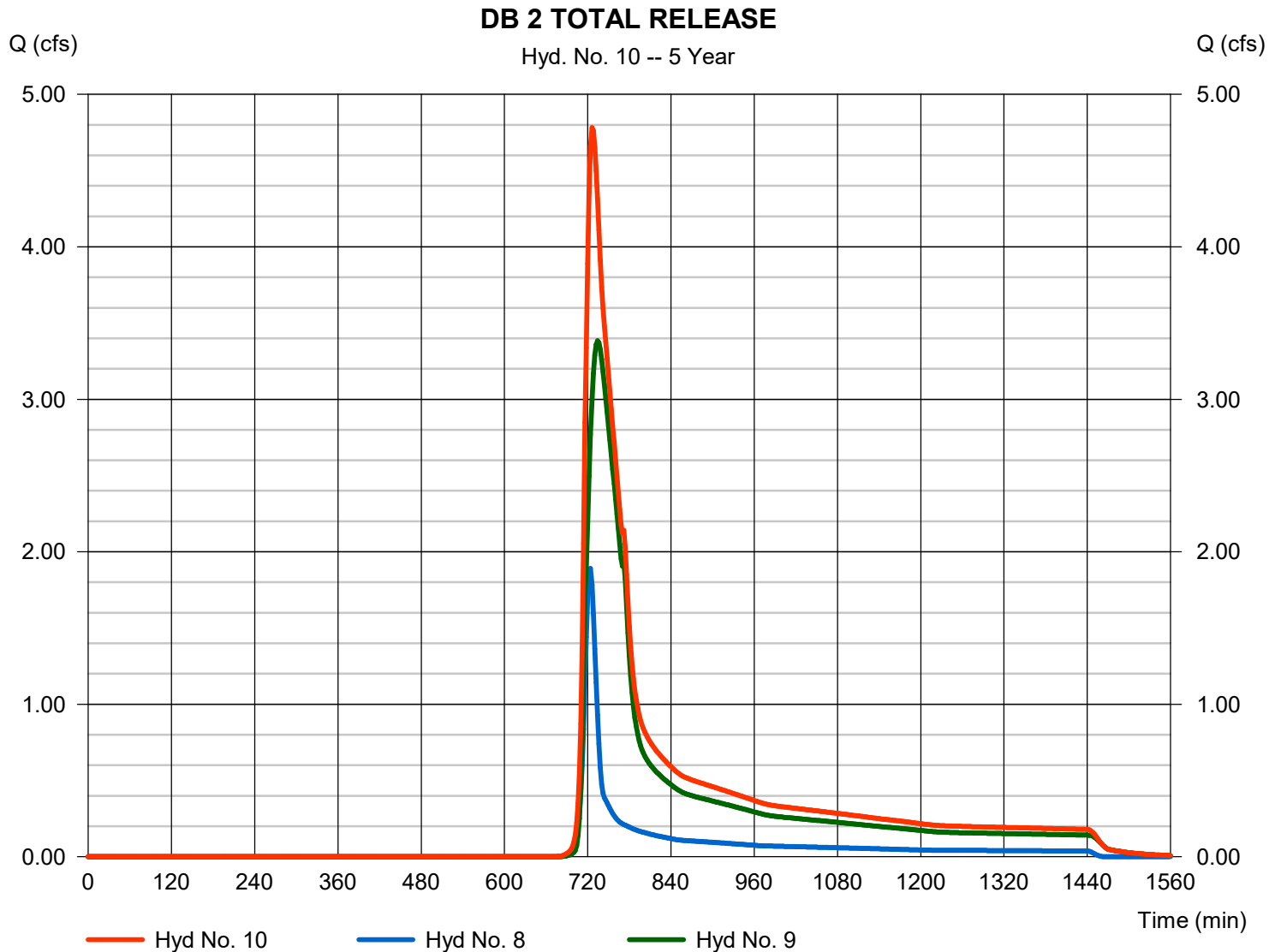
Wednesday, 01 / 3 / 2024

Hyd. No. 10

DB 2 TOTAL RELEASE

Hydrograph type = Combine
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyds. = 8, 9

Peak discharge = 4.783 cfs
Time to peak = 726 min
Hyd. volume = 26,800 cuft
Contrib. drain. area = 1.470 ac

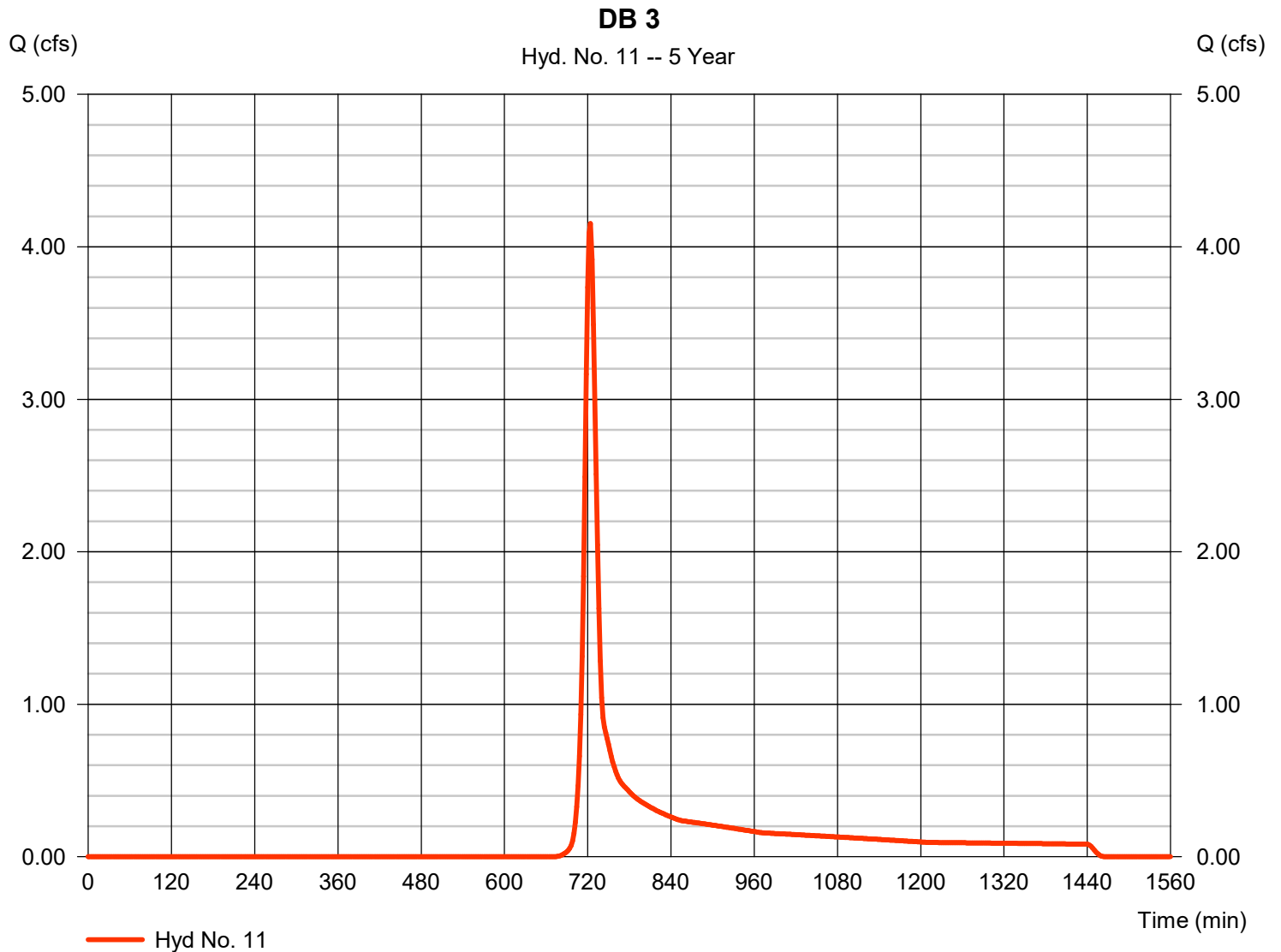


Hydrograph Report

Hyd. No. 11

DB 3

Hydrograph type	= SCS Runoff	Peak discharge	= 4.153 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 12,421 cuft
Drainage area	= 3.230 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

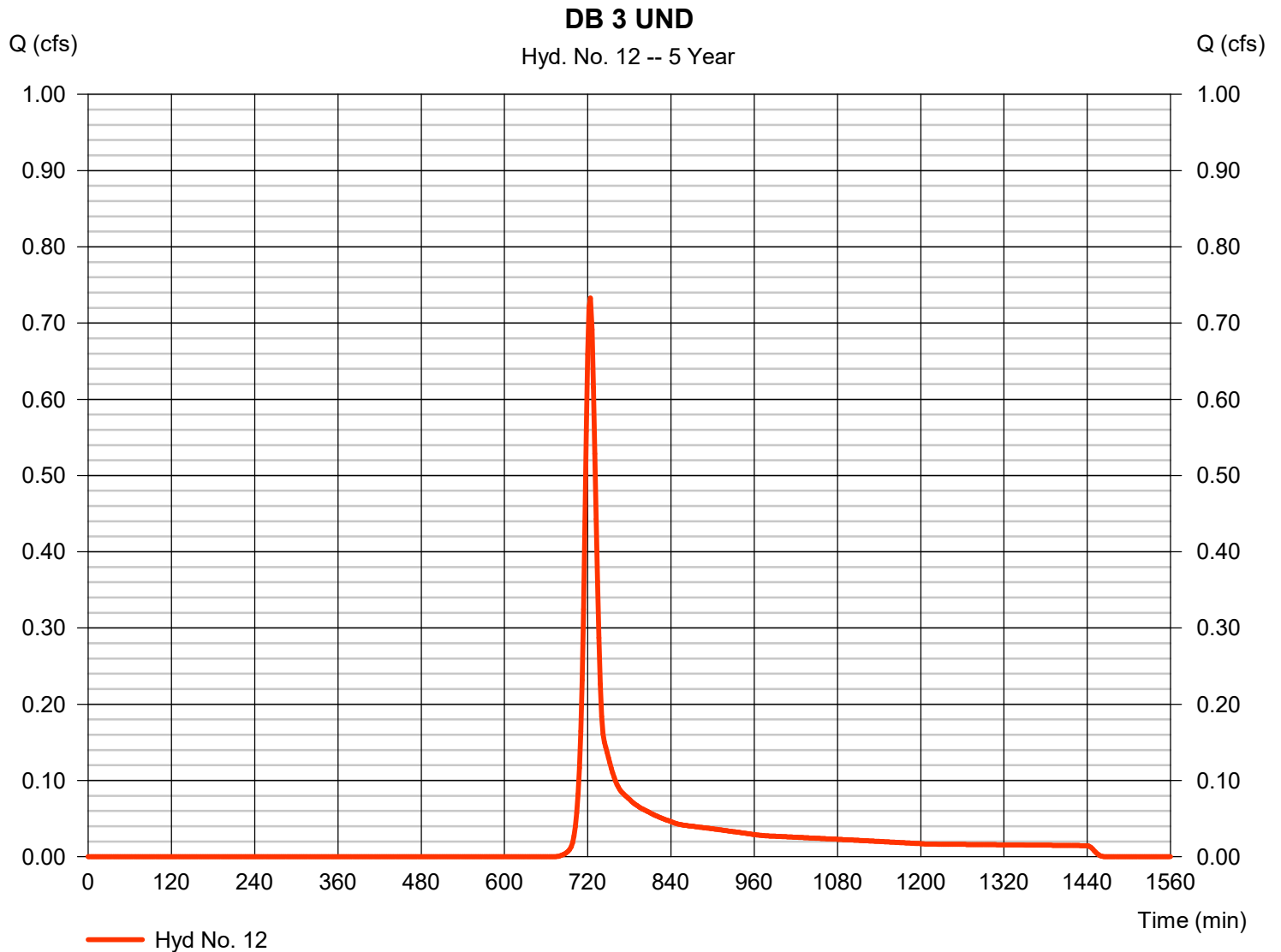
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 12

DB 3 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 0.733 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 2,192 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

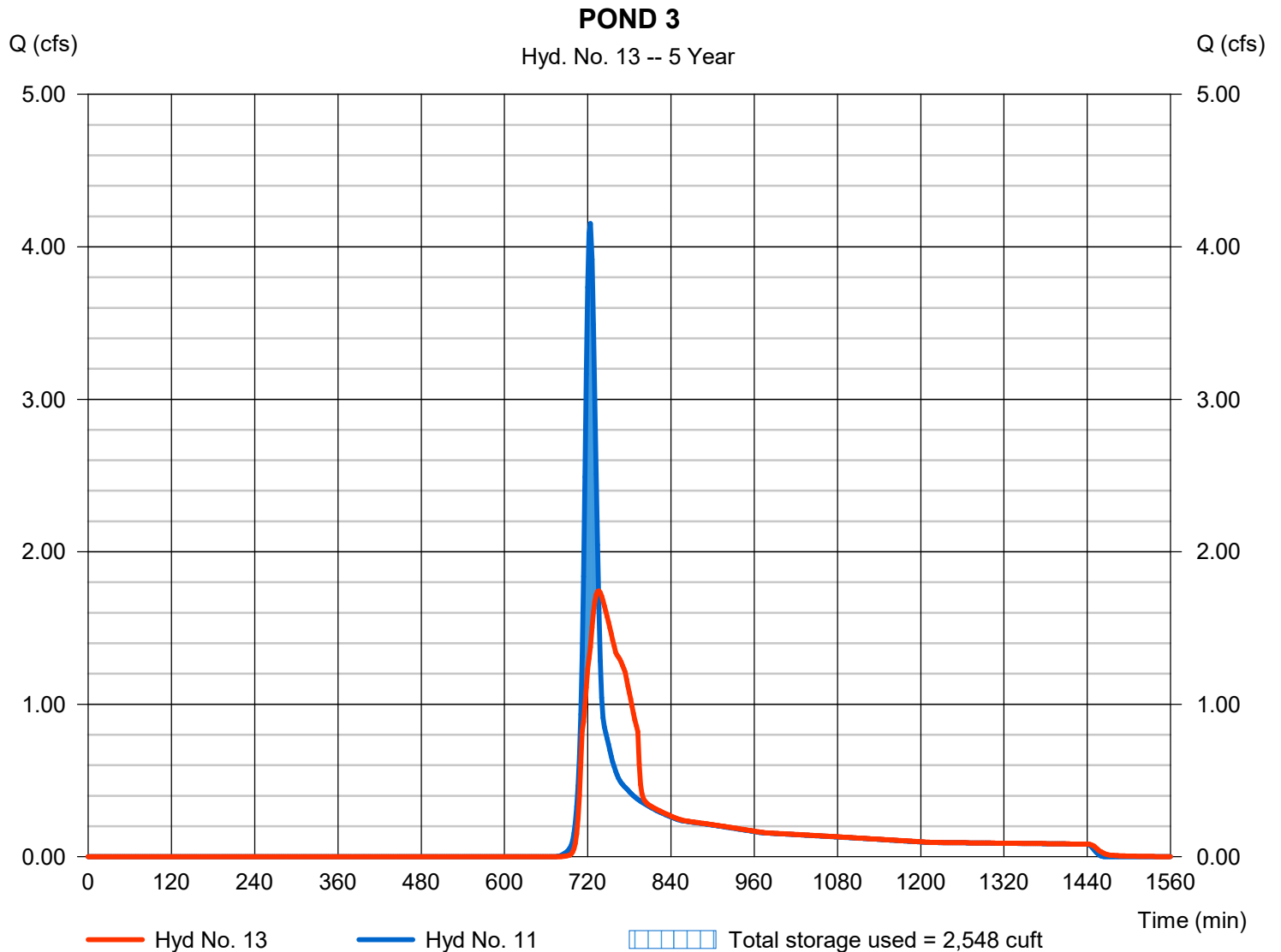
Wednesday, 01 / 3 / 2024

Hyd. No. 13

POND 3

Hydrograph type	= Reservoir	Peak discharge	= 1.744 cfs
Storm frequency	= 5 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 12,419 cuft
Inflow hyd. No.	= 11 - DB 3	Max. Elevation	= 878.73 ft
Reservoir name	= POND 3	Max. Storage	= 2,548 cuft

Storage Indication method used.



Pond No. 4 - POND 3

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 877.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	877.50	25	0	0
0.50	878.00	736	190	190
1.50	879.00	5,742	3,239	3,429
2.50	880.00	11,972	8,857	12,286
3.50	881.00	15,193	13,583	25,869

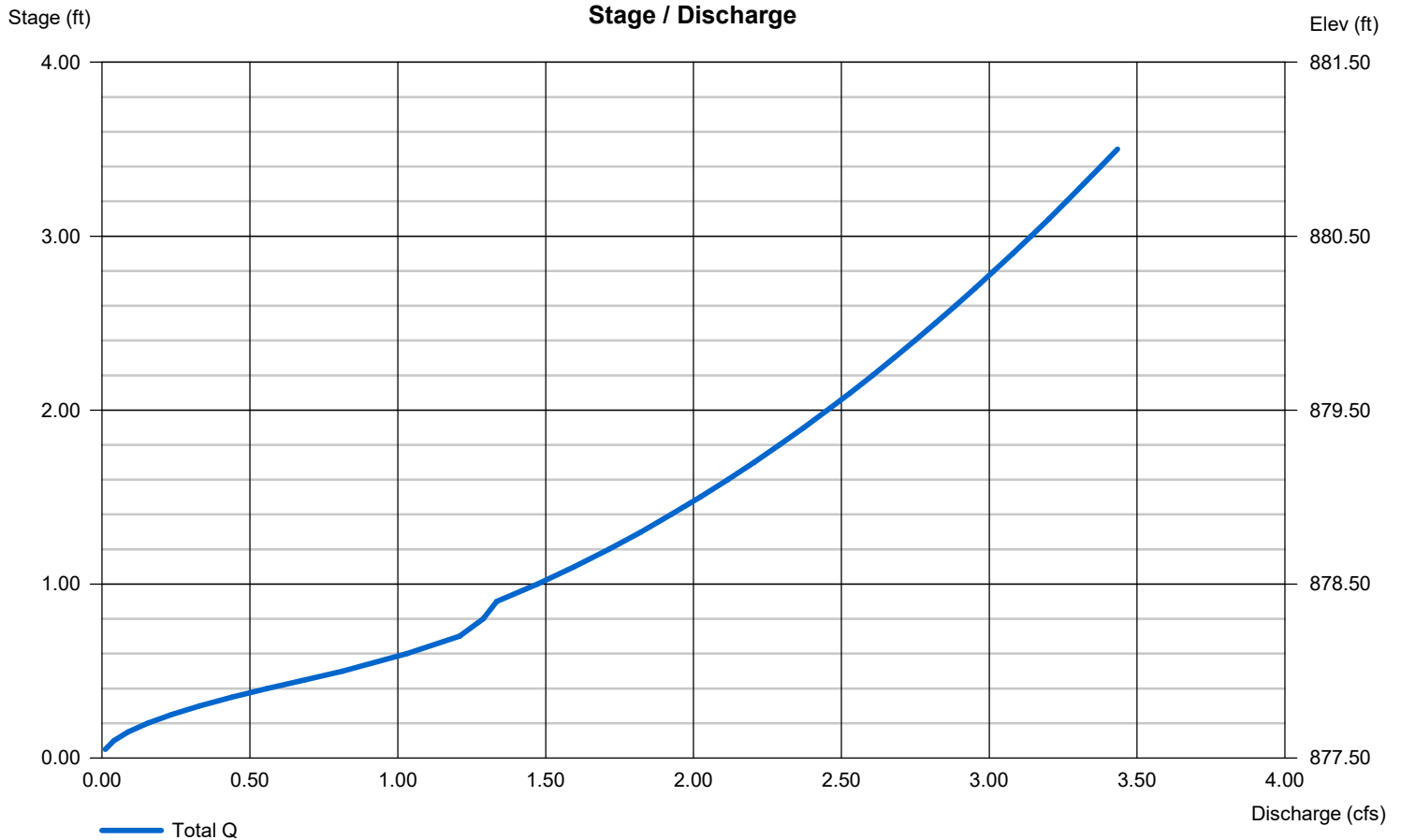
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 10.00	Inactive	Inactive	0.00
Span (in)	= 10.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 877.50	0.00	0.00	0.00
Length (ft)	= 88.00	0.00	0.00	0.00
Slope (%)	= 0.45	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil. (in/hr)	= 0.000	(by Wet area)		
TW Elev. (ft)	= 0.00			

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



Hydrograph Report

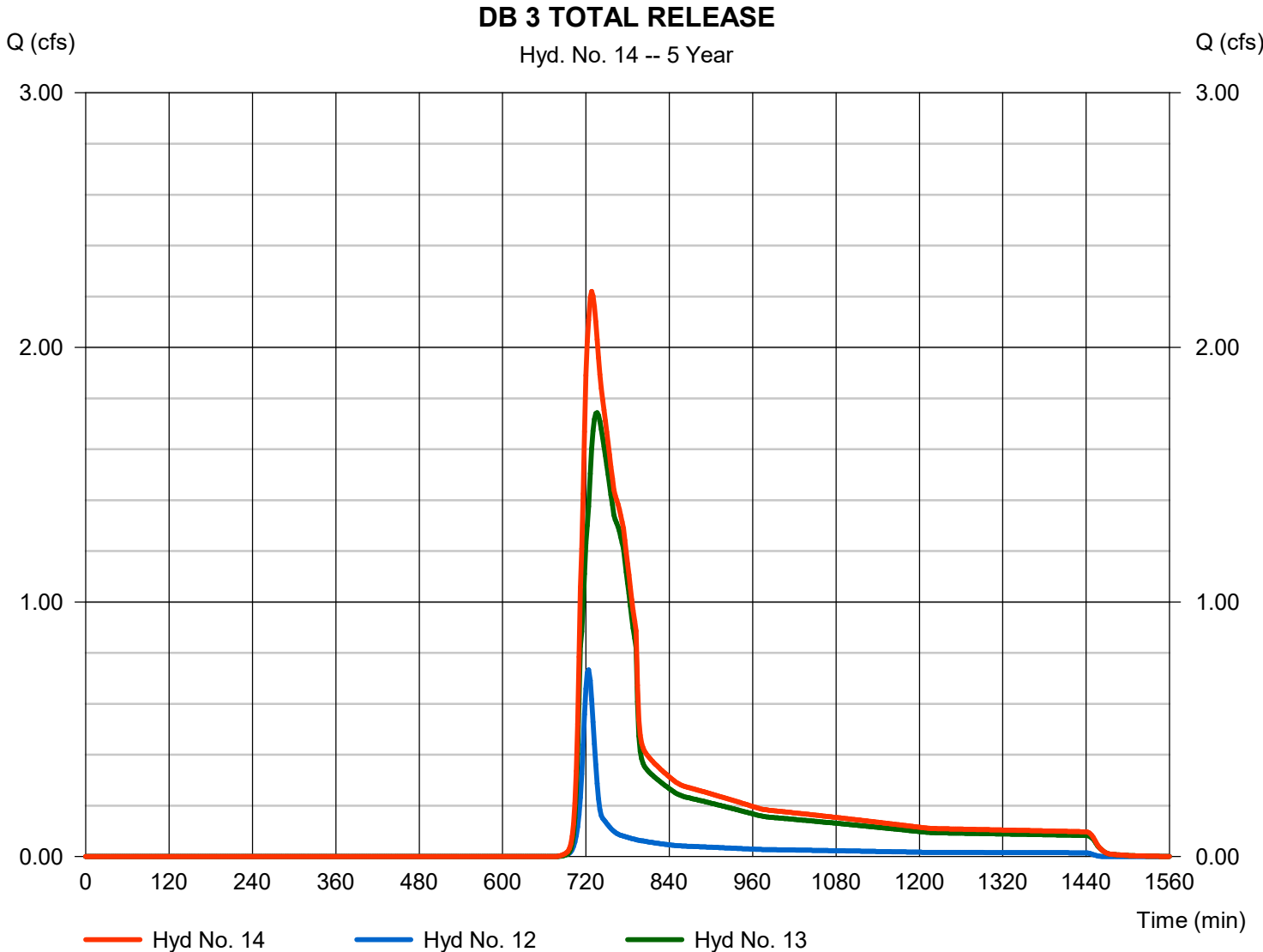
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 14

DB 3 TOTAL RELEASE

Hydrograph type	= Combine	Peak discharge	= 2.219 cfs
Storm frequency	= 5 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 14,611 cuft
Inflow hyds.	= 12, 13	Contrib. drain. area	= 0.570 ac



Hydrograph Report

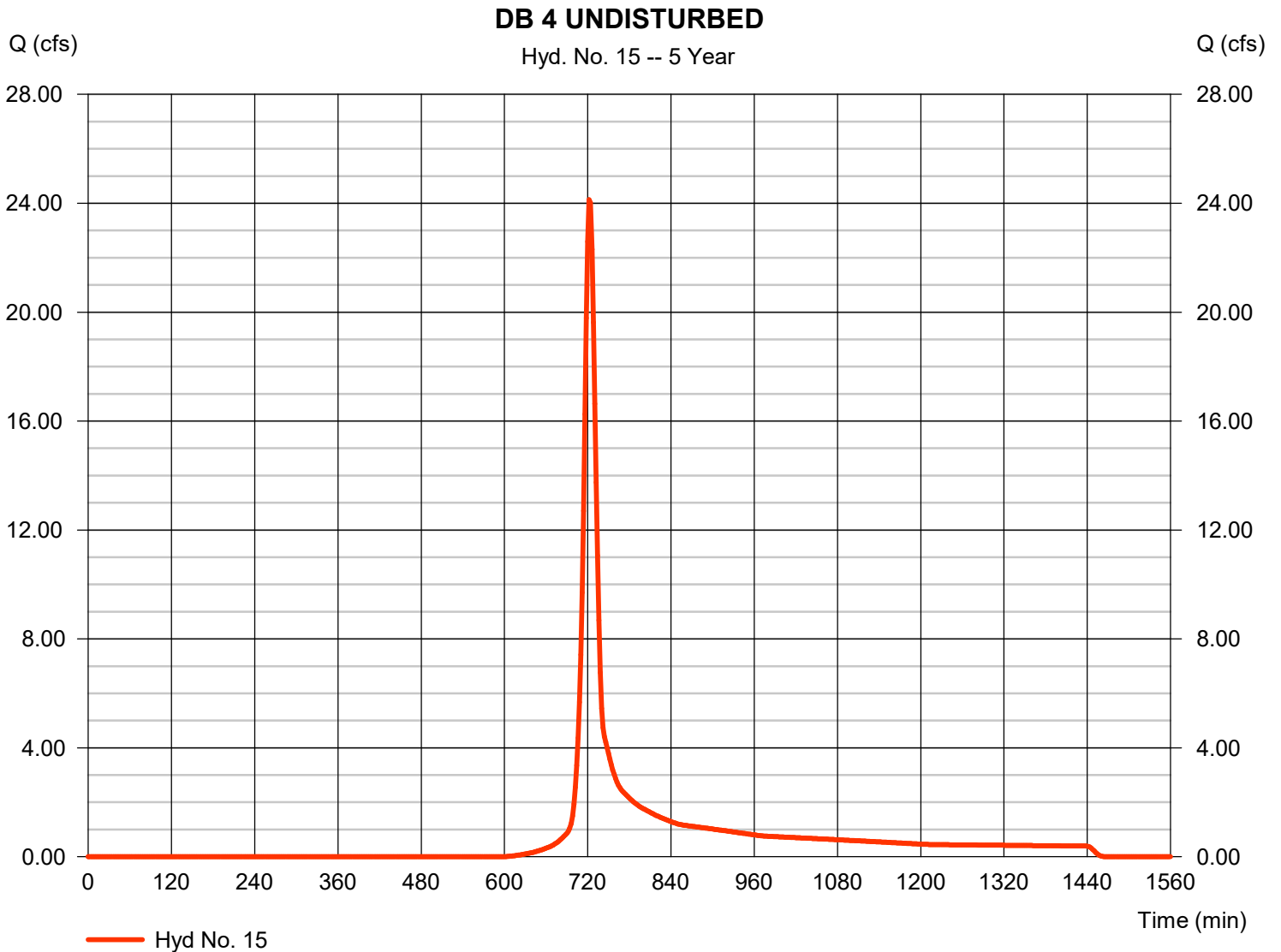
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 15

DB 4 UNDISTURBED

Hydrograph type	= SCS Runoff	Peak discharge	= 24.13 cfs
Storm frequency	= 5 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 68,842 cuft
Drainage area	= 12.750 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

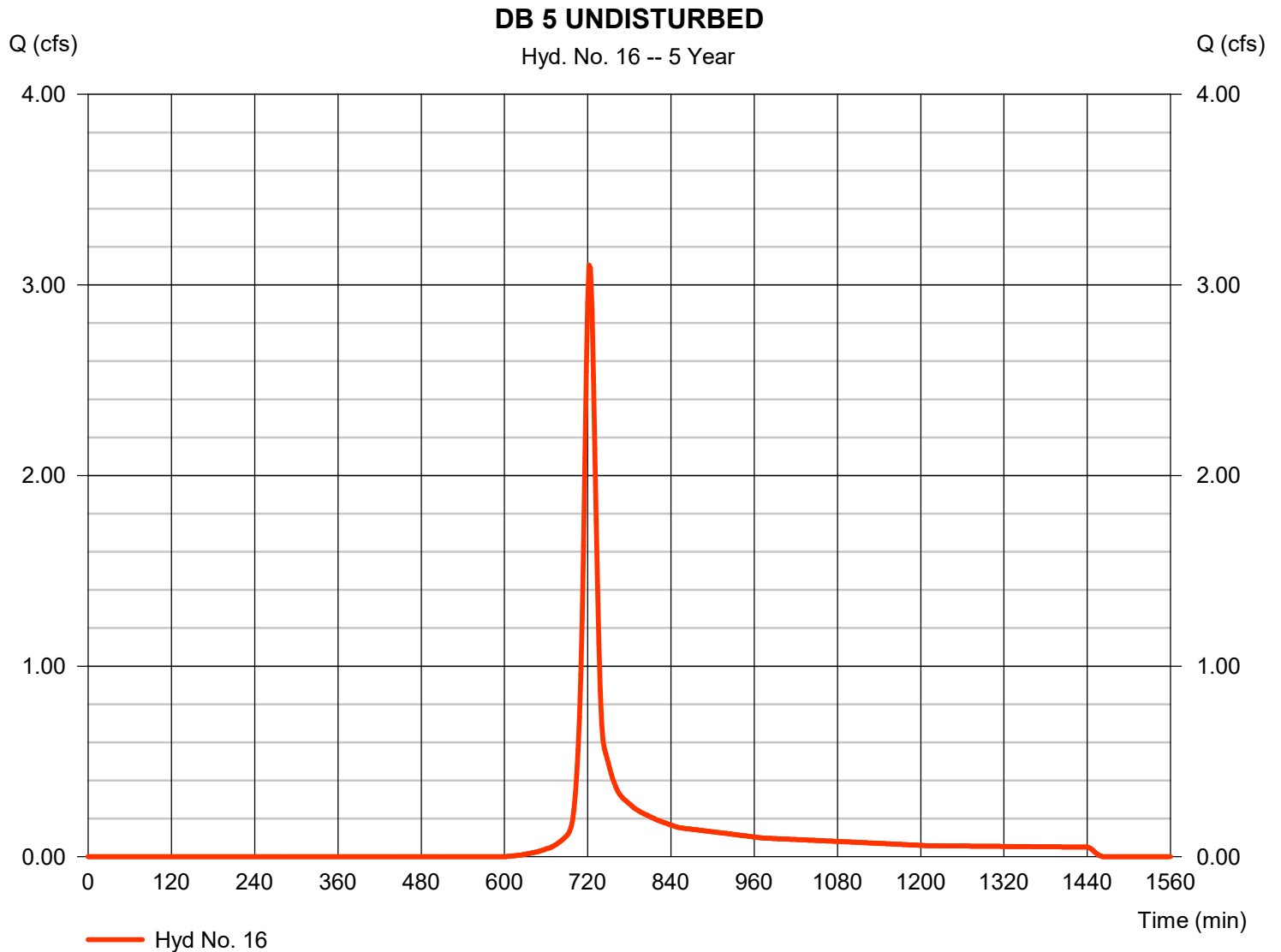
Wednesday, 01 / 3 / 2024

Hyd. No. 16

DB 5 UNDISTURBED

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Time interval = 2 min
Drainage area = 1.640 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 3.81 in
Storm duration = 24 hrs

Peak discharge = 3.104 cfs
Time to peak = 722 min
Hyd. volume = 8,855 cuft
Curve number = 75
Hydraulic length = 0 ft
Time of conc. (Tc) = 15.00 min
Distribution = Type II
Shape factor = 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	79.45	2	722	223,077	----	----	----	DB 1A
2	SCS Runoff	16.36	2	722	45,931	----	----	----	DB 1B
3	SCS Runoff	11.27	2	722	31,655	----	----	----	DB 1 UND
4	Reservoir	16.52	2	740	223,072	1	857.81	87,665	POND 1A
5	Reservoir	5.759	2	736	45,929	2	879.11	12,203	POND 1B
6	Combine	28.82	2	726	300,656	3, 4, 5	----	----	DB 1 TOTAL RELEASE
7	SCS Runoff	24.32	2	722	68,276	----	----	----	DB 2
8	SCS Runoff	6.499	2	722	18,248	----	----	----	DB 2 UND
9	Reservoir	5.903	2	738	68,273	7	891.67	22,191	POND 2
10	Combine	11.68	2	724	86,522	8, 9	----	----	DB 2 TOTAL RELEASE
11	SCS Runoff	14.28	2	722	40,097	----	----	----	DB 3
12	SCS Runoff	2.520	2	722	7,076	----	----	----	DB 3 UND
13	Reservoir	2.887	2	740	40,095	11	880.10	13,678	POND 3
14	Combine	4.996	2	724	47,171	12, 13	----	----	DB 3 TOTAL RELEASE
15	SCS Runoff	68.35	2	722	192,024	----	----	----	DB 4 UNDISTURBED
16	SCS Runoff	8.791	2	722	24,700	----	----	----	DB 5 UNDISTURBED

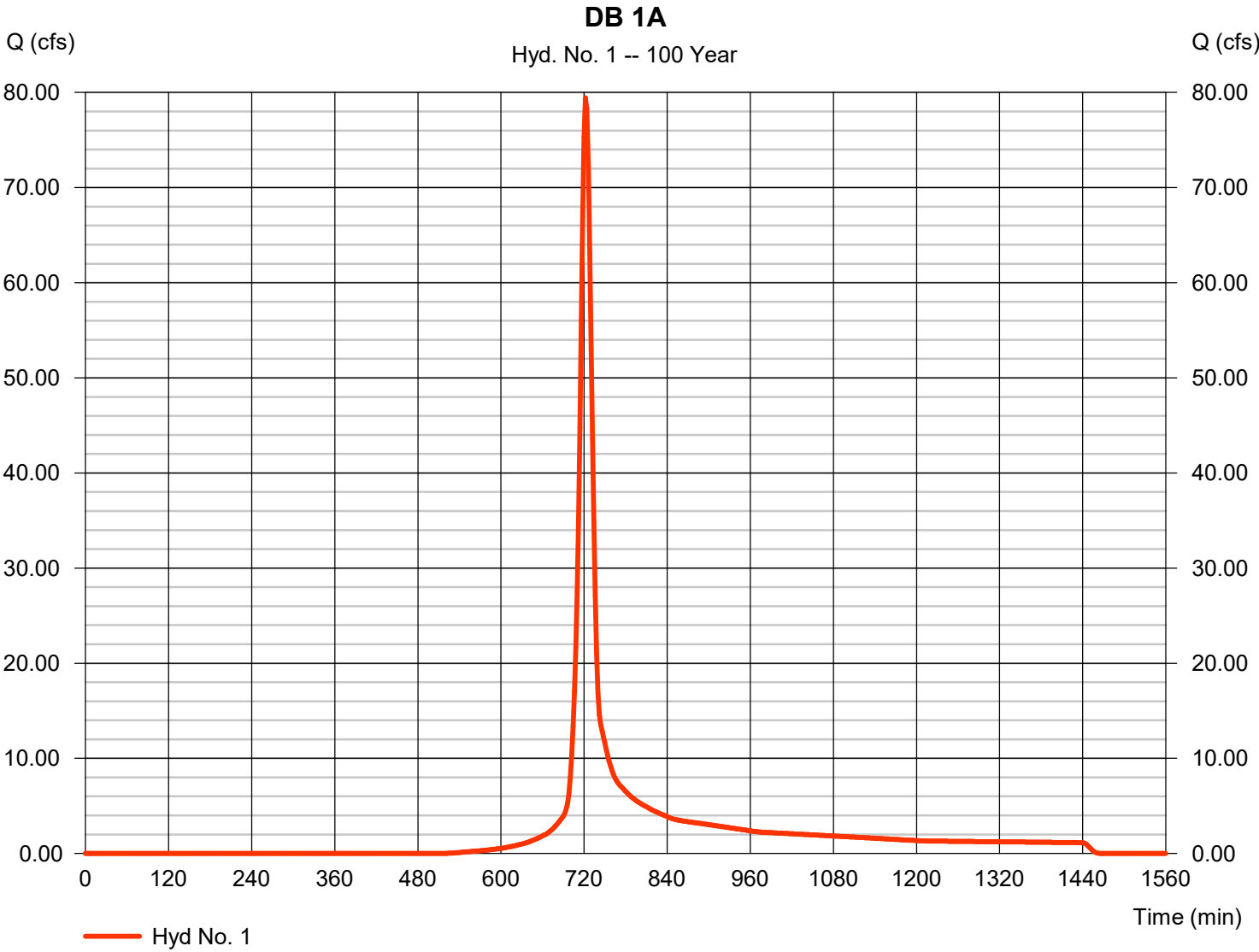
100-YEAR STORM EVENT;
DETENTION POND
SUMMARIES

Hydrograph Report

Hyd. No. 1

DB 1A

Hydrograph type	= SCS Runoff	Peak discharge	= 79.45 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 223,077 cuft
Drainage area	= 17.970 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

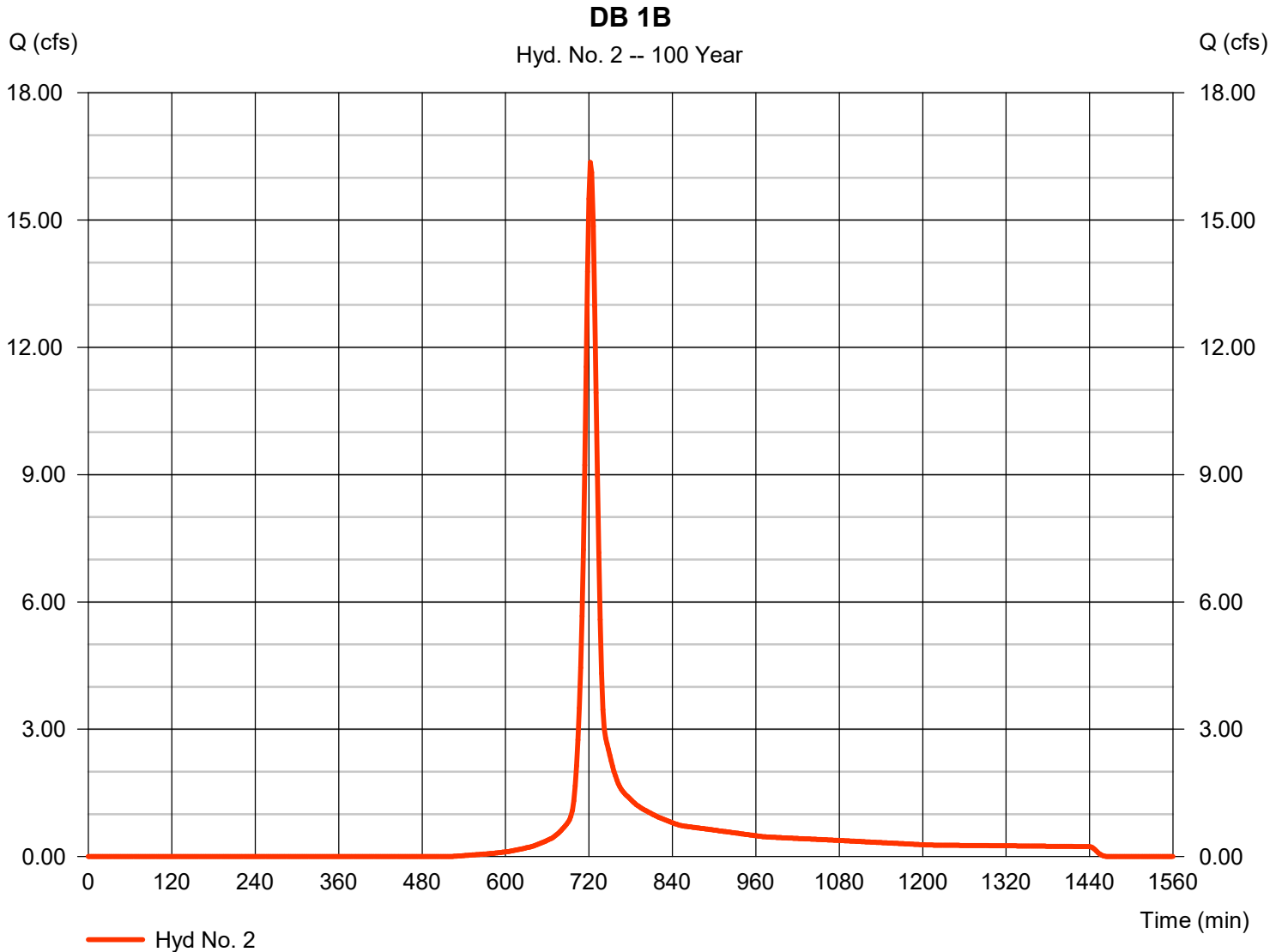
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 2

DB 1B

Hydrograph type	= SCS Runoff	Peak discharge	= 16.36 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 45,931 cuft
Drainage area	= 3.700 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

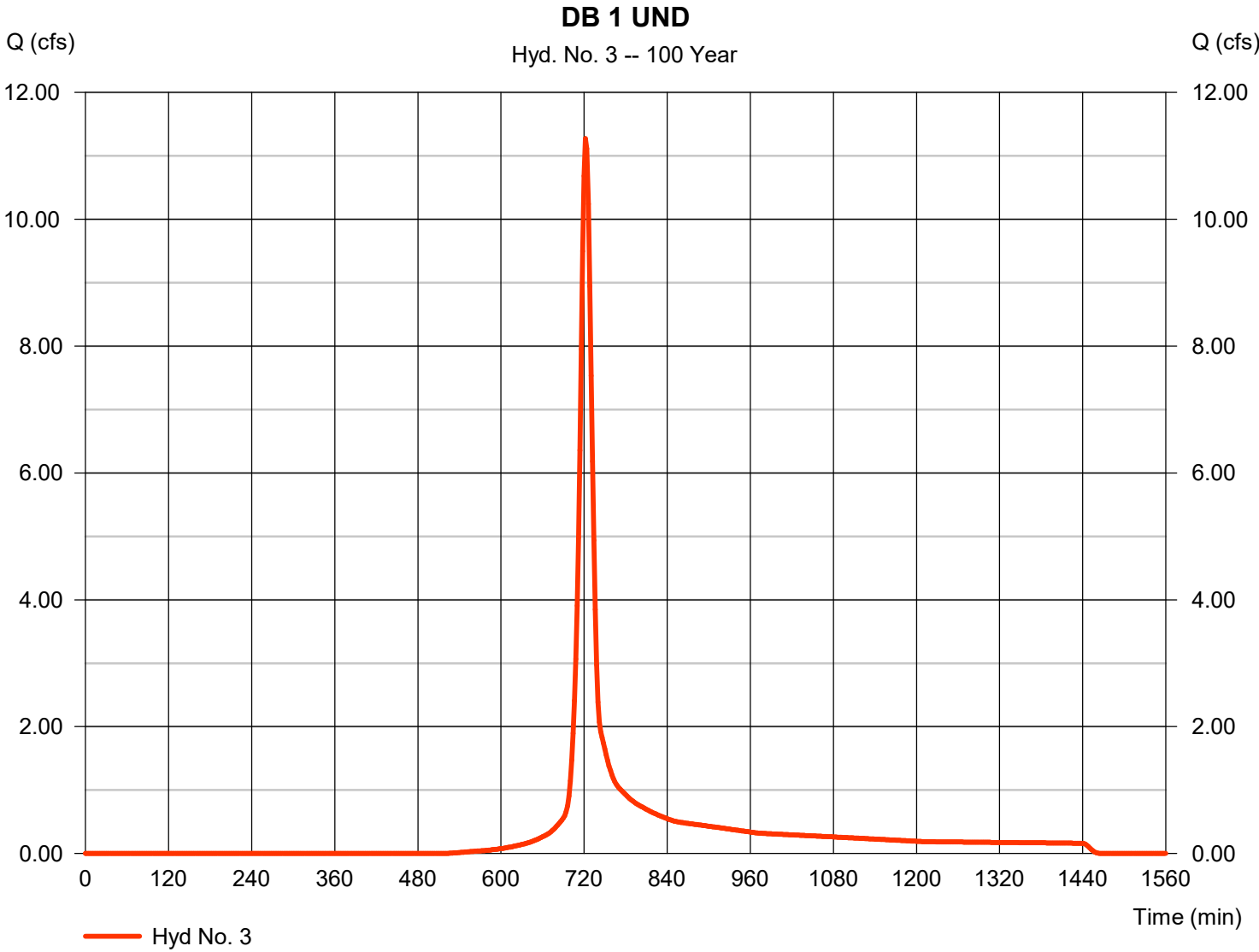


Hydrograph Report

Hyd. No. 3

DB 1 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 11.27 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 31,655 cuft
Drainage area	= 2.550 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

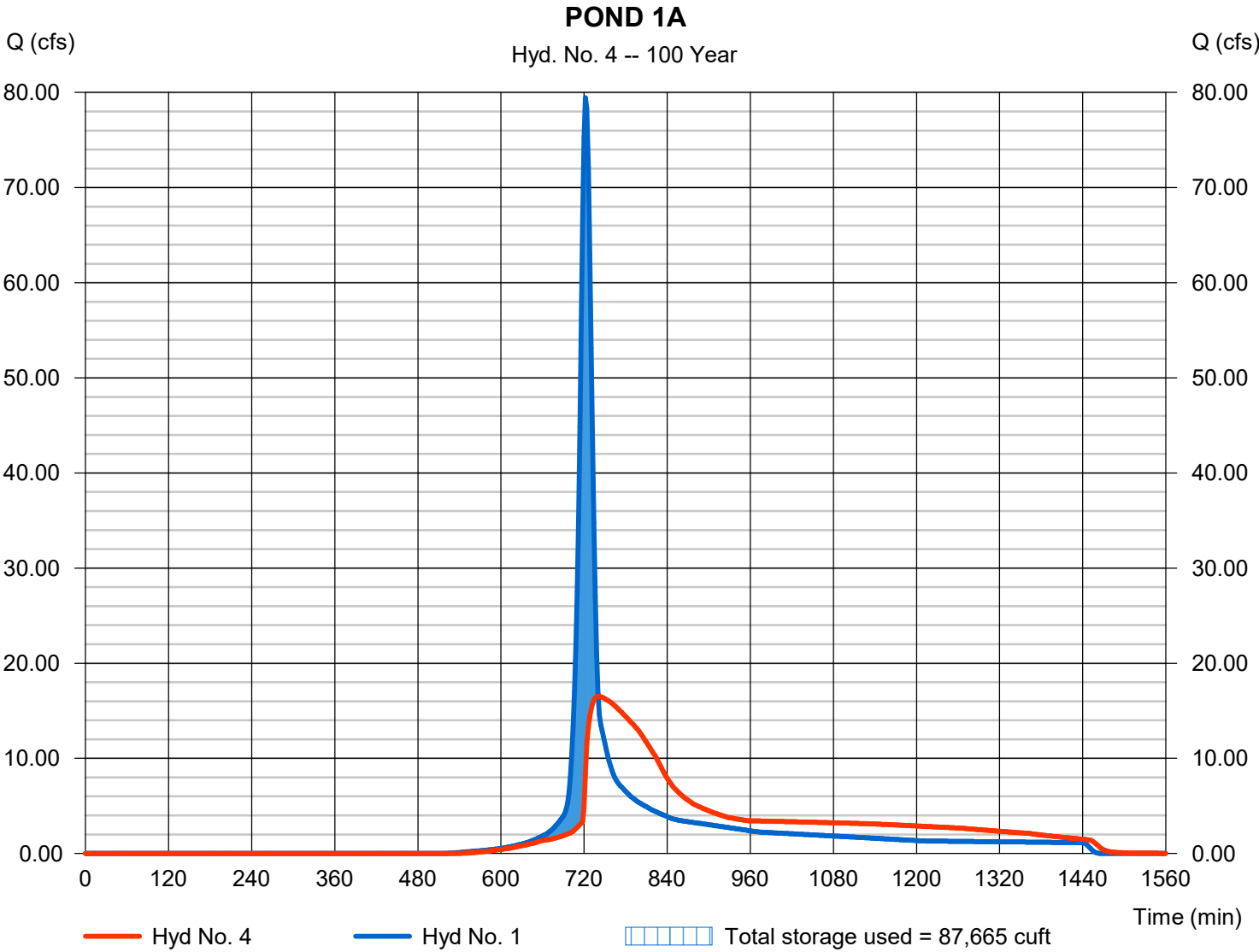
Wednesday, 01 / 3 / 2024

Hyd. No. 4

POND 1A

Hydrograph type	= Reservoir	Peak discharge	= 16.52 cfs
Storm frequency	= 100 yrs	Time to peak	= 740 min
Time interval	= 2 min	Hyd. volume	= 223,072 cuft
Inflow hyd. No.	= 1 - DB 1A	Max. Elevation	= 857.81 ft
Reservoir name	= POND 1A	Max. Storage	= 87,665 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

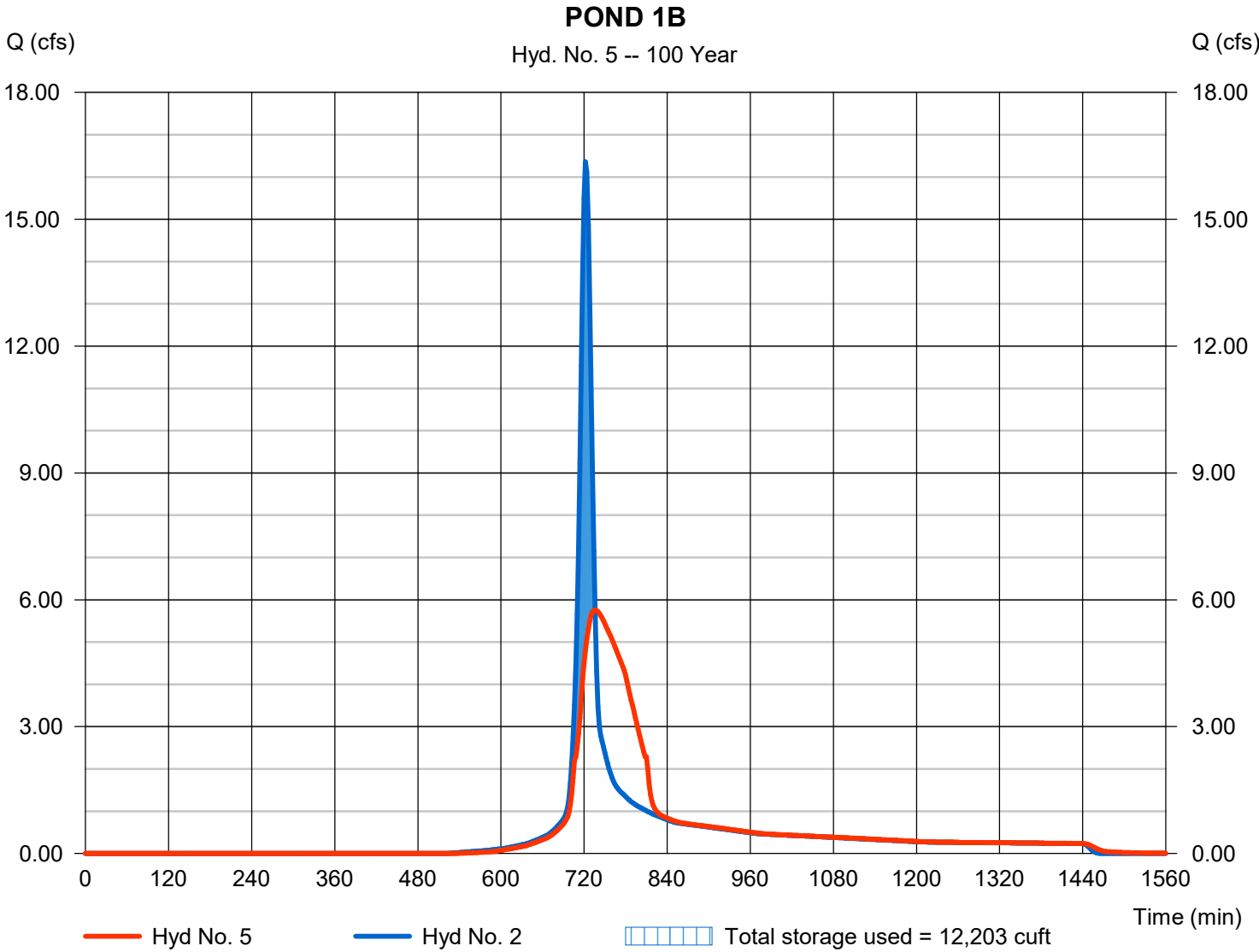
Wednesday, 01 / 3 / 2024

Hyd. No. 5

POND 1B

Hydrograph type	= Reservoir	Peak discharge	= 5.759 cfs
Storm frequency	= 100 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 45,929 cuft
Inflow hyd. No.	= 2 - DB 1B	Max. Elevation	= 879.11 ft
Reservoir name	= POND 1B	Max. Storage	= 12,203 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

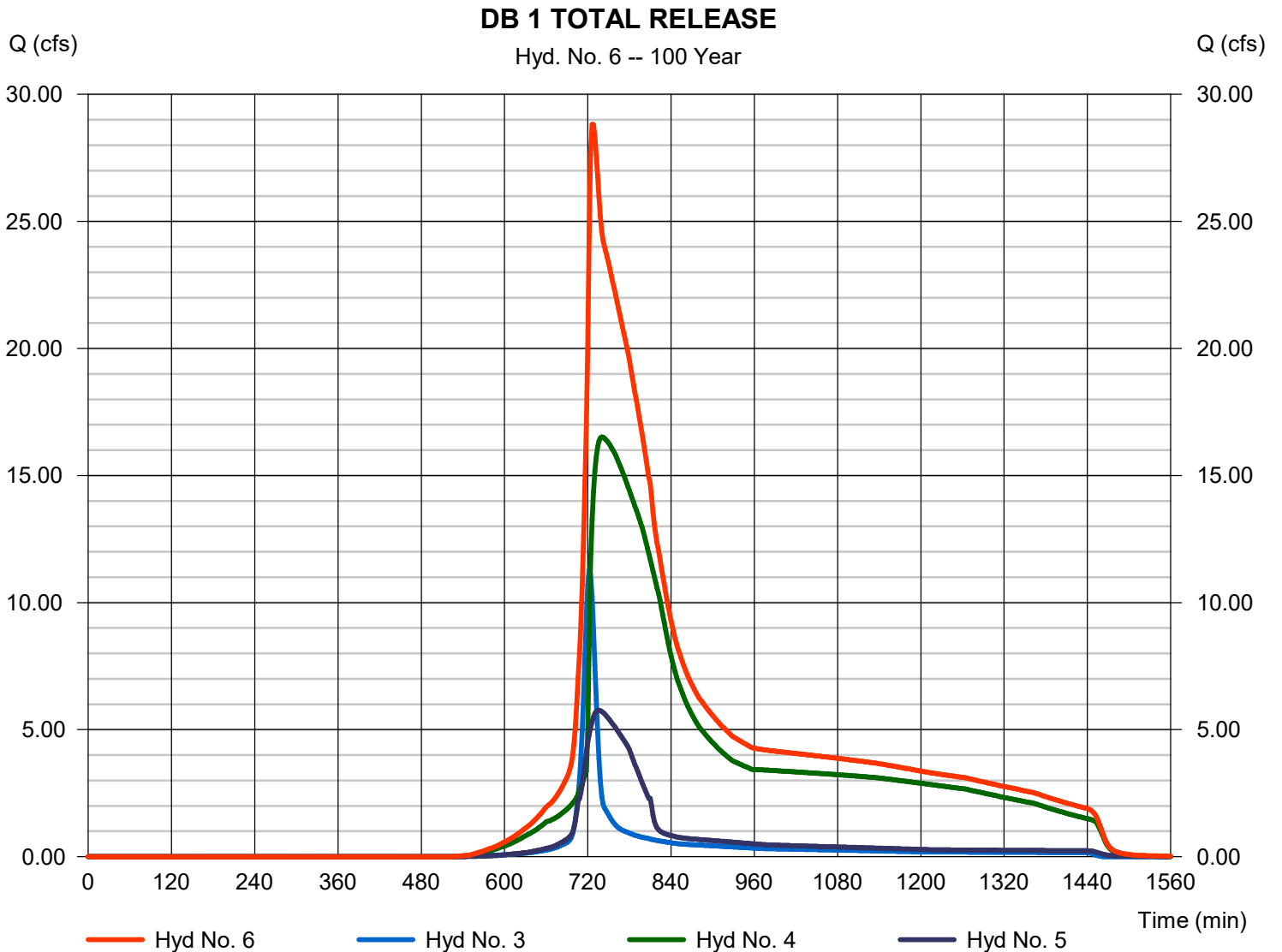
Wednesday, 01 / 3 / 2024

Hyd. No. 6

DB 1 TOTAL RELEASE

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 3, 4, 5

Peak discharge = 28.82 cfs
Time to peak = 726 min
Hyd. volume = 300,656 cuft
Contrib. drain. area = 2.550 ac



Hydrograph Report

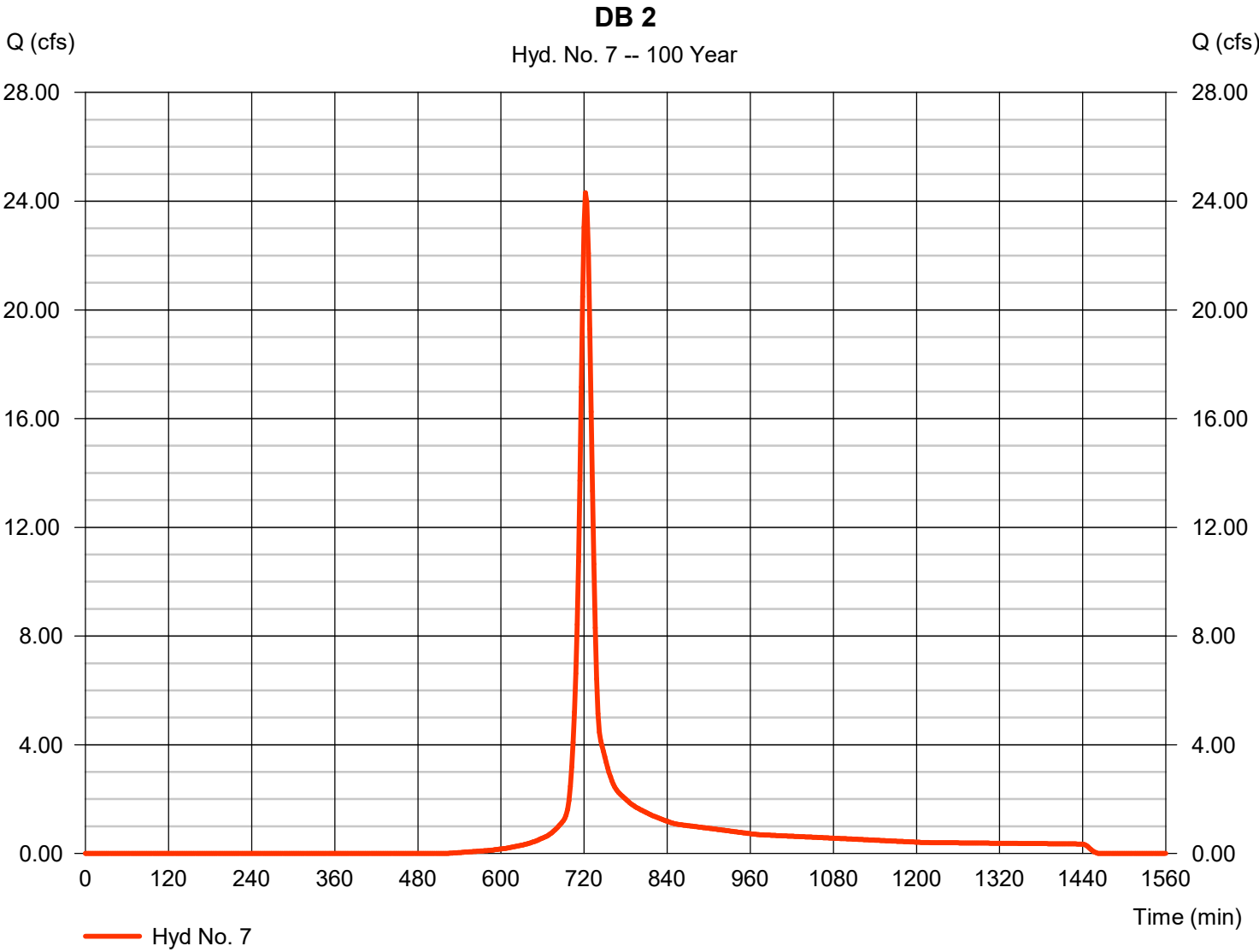
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 7

DB 2

Hydrograph type	= SCS Runoff	Peak discharge	= 24.32 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 68,276 cuft
Drainage area	= 5.500 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

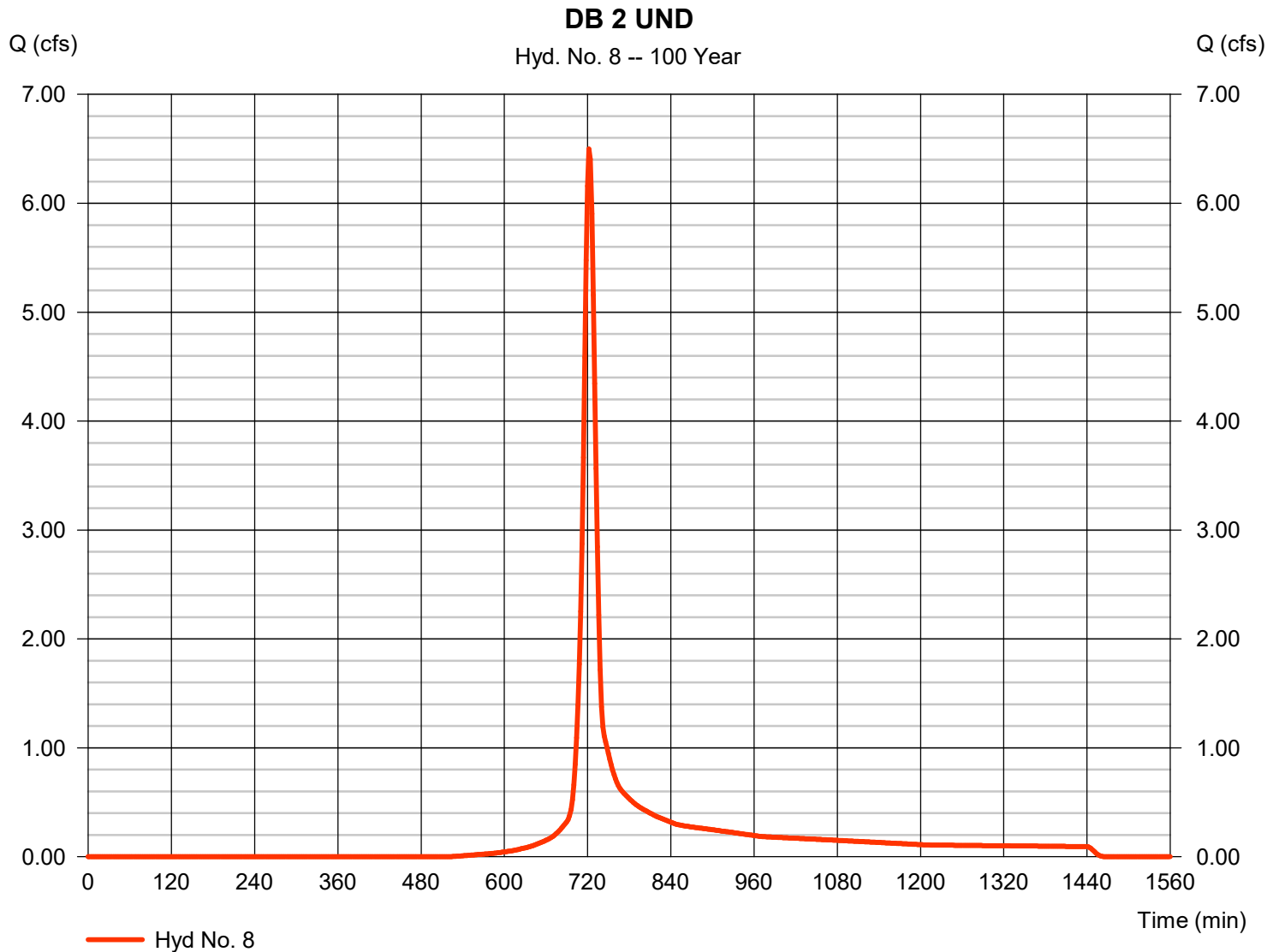
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 8

DB 2 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 6.499 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 18,248 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

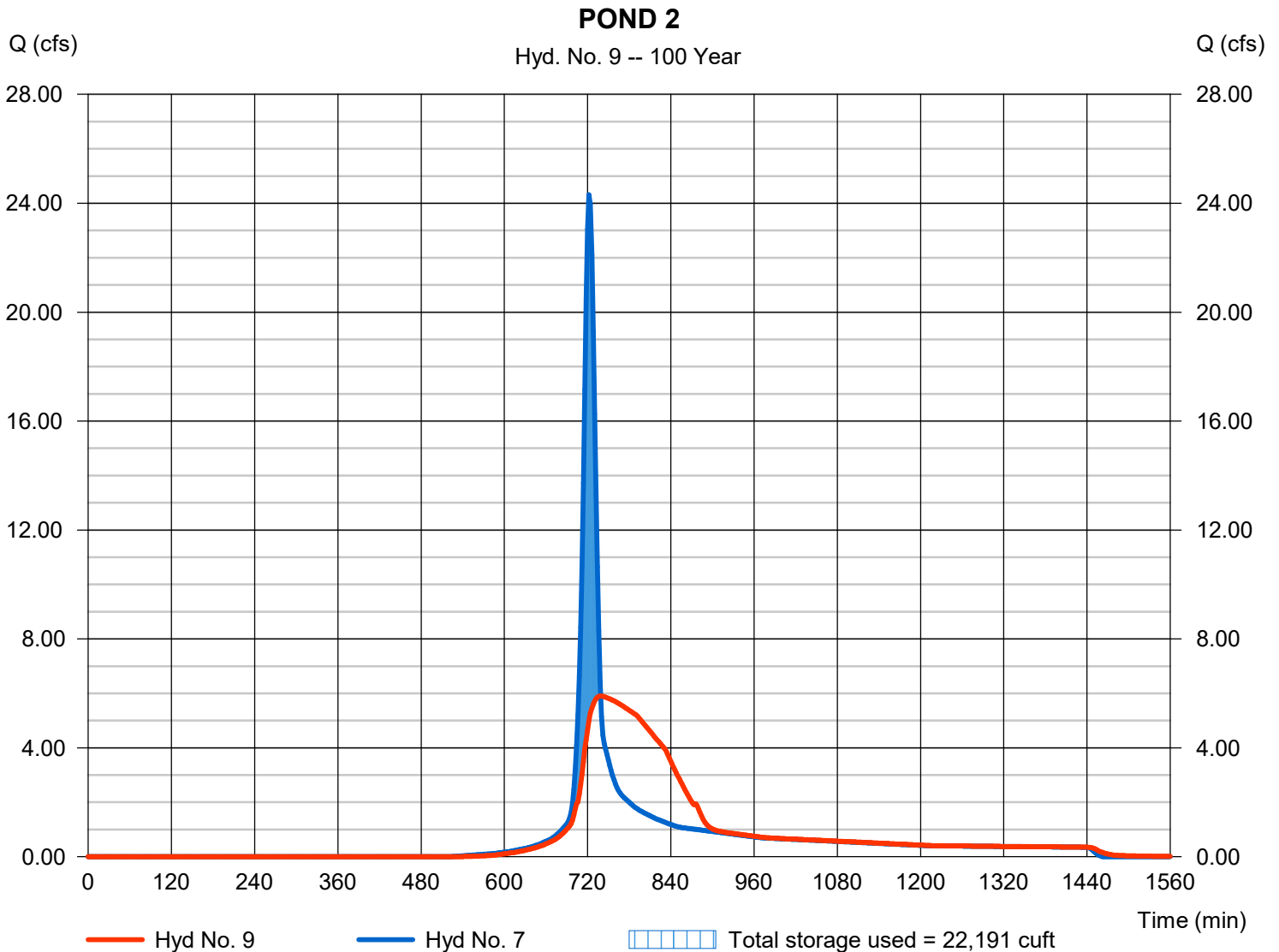
Wednesday, 01 / 3 / 2024

Hyd. No. 9

POND 2

Hydrograph type	= Reservoir	Peak discharge	= 5.903 cfs
Storm frequency	= 100 yrs	Time to peak	= 738 min
Time interval	= 2 min	Hyd. volume	= 68,273 cuft
Inflow hyd. No.	= 7 - DB 2	Max. Elevation	= 891.67 ft
Reservoir name	= POND 2	Max. Storage	= 22,191 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

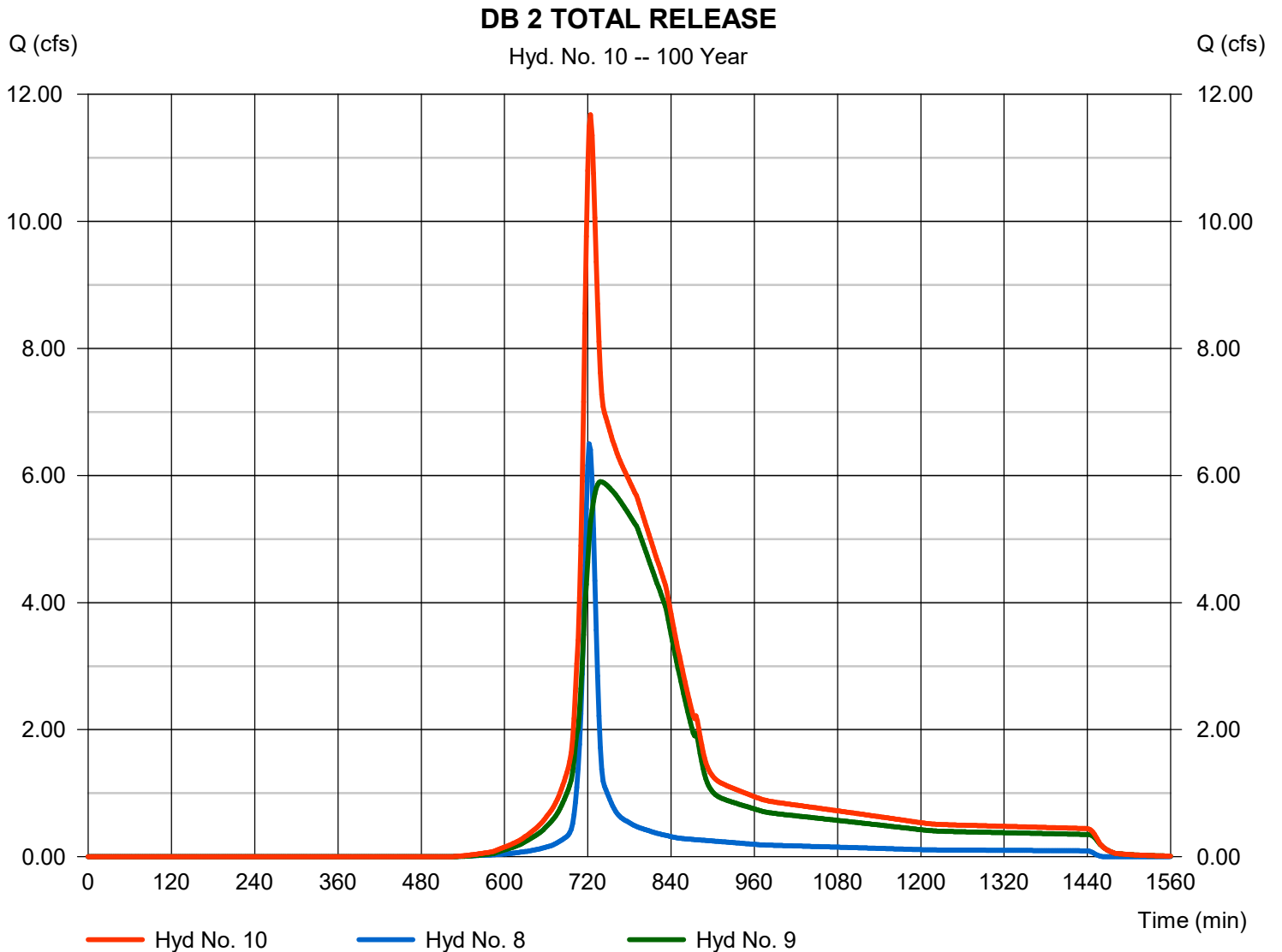
Wednesday, 01 / 3 / 2024

Hyd. No. 10

DB 2 TOTAL RELEASE

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 8, 9

Peak discharge = 11.68 cfs
Time to peak = 724 min
Hyd. volume = 86,522 cuft
Contrib. drain. area = 1.470 ac

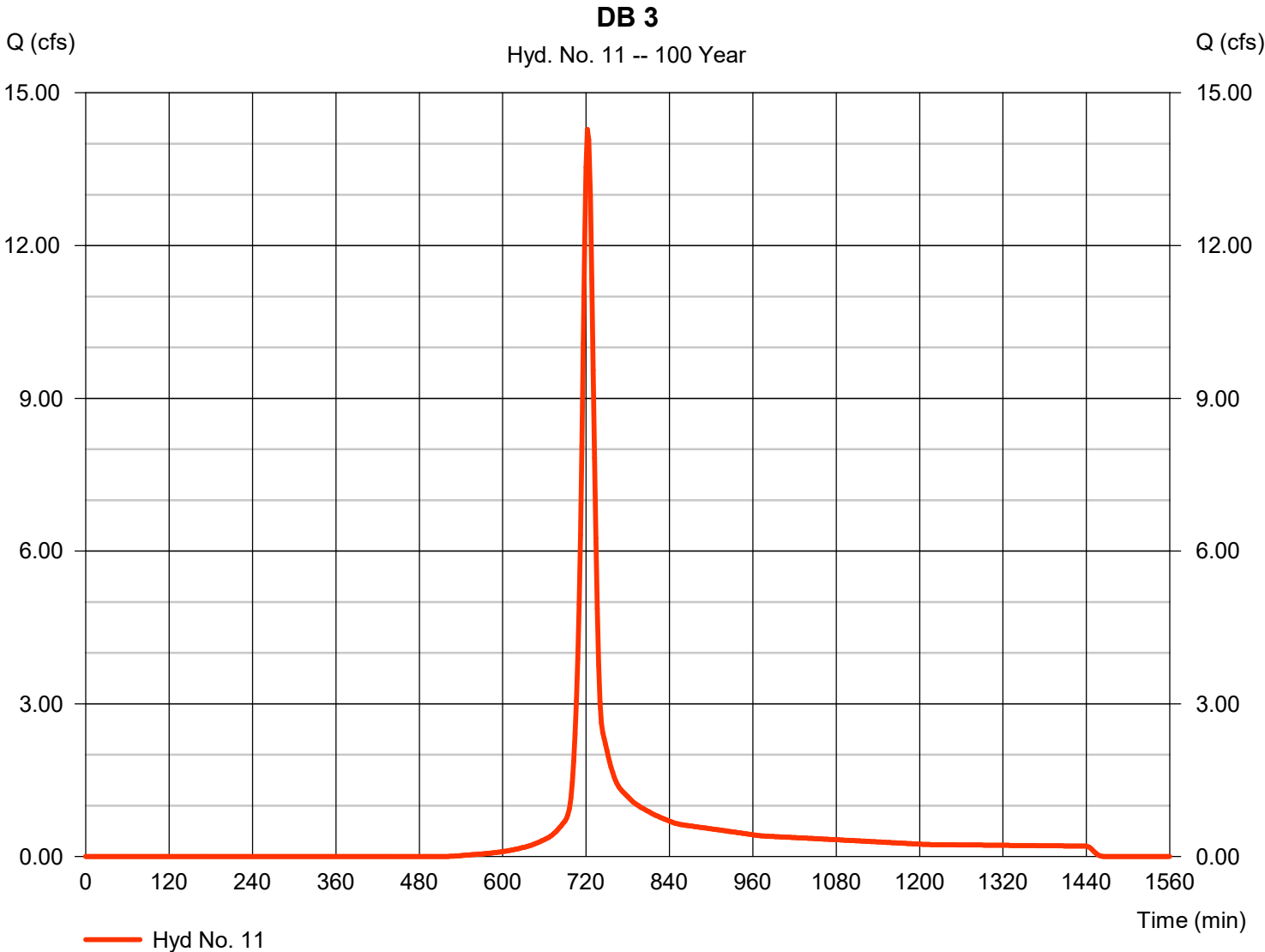


Hydrograph Report

Hyd. No. 11

DB 3

Hydrograph type	= SCS Runoff	Peak discharge	= 14.28 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 40,097 cuft
Drainage area	= 3.230 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

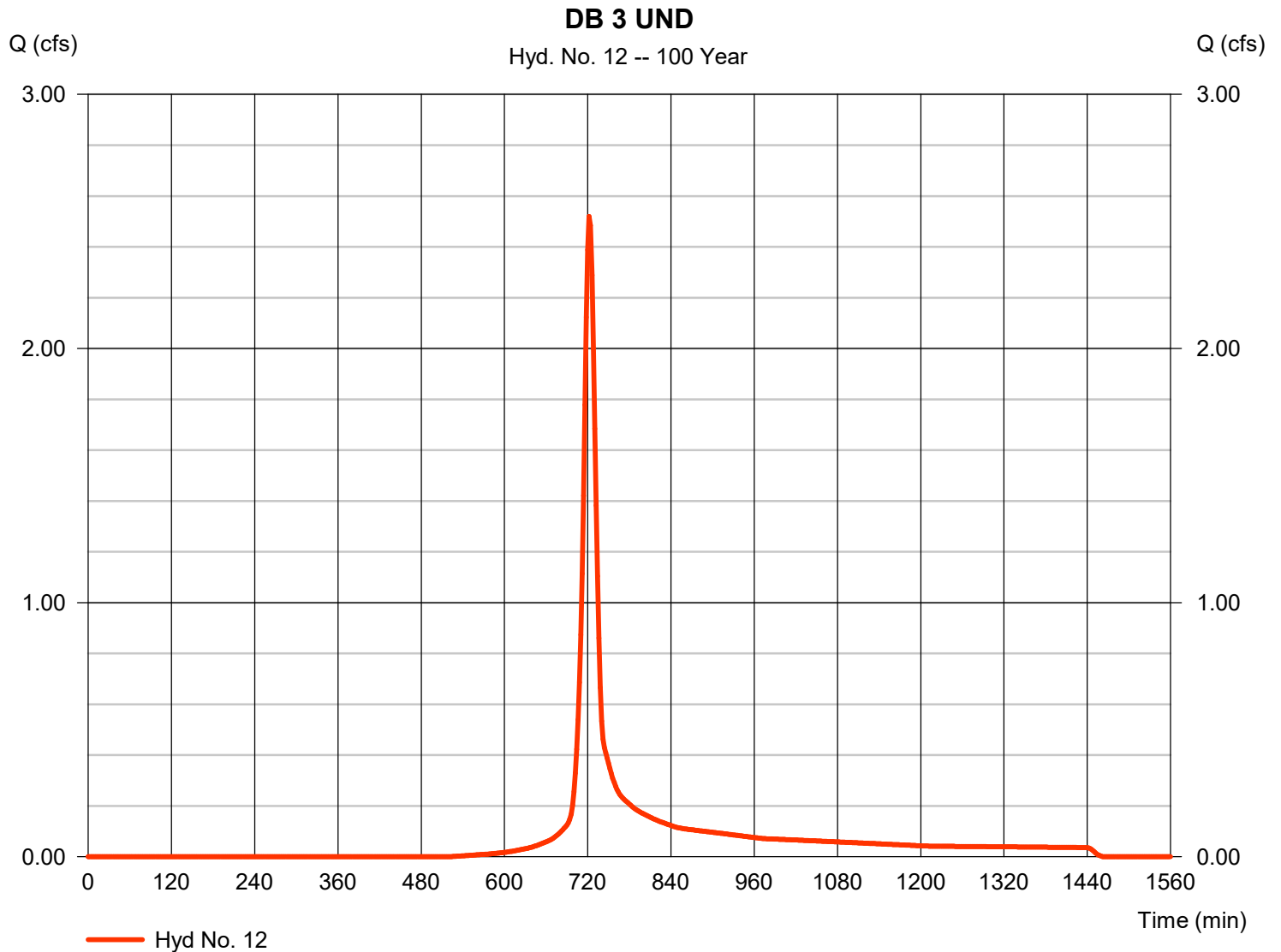
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 12

DB 3 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 2.520 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 7,076 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

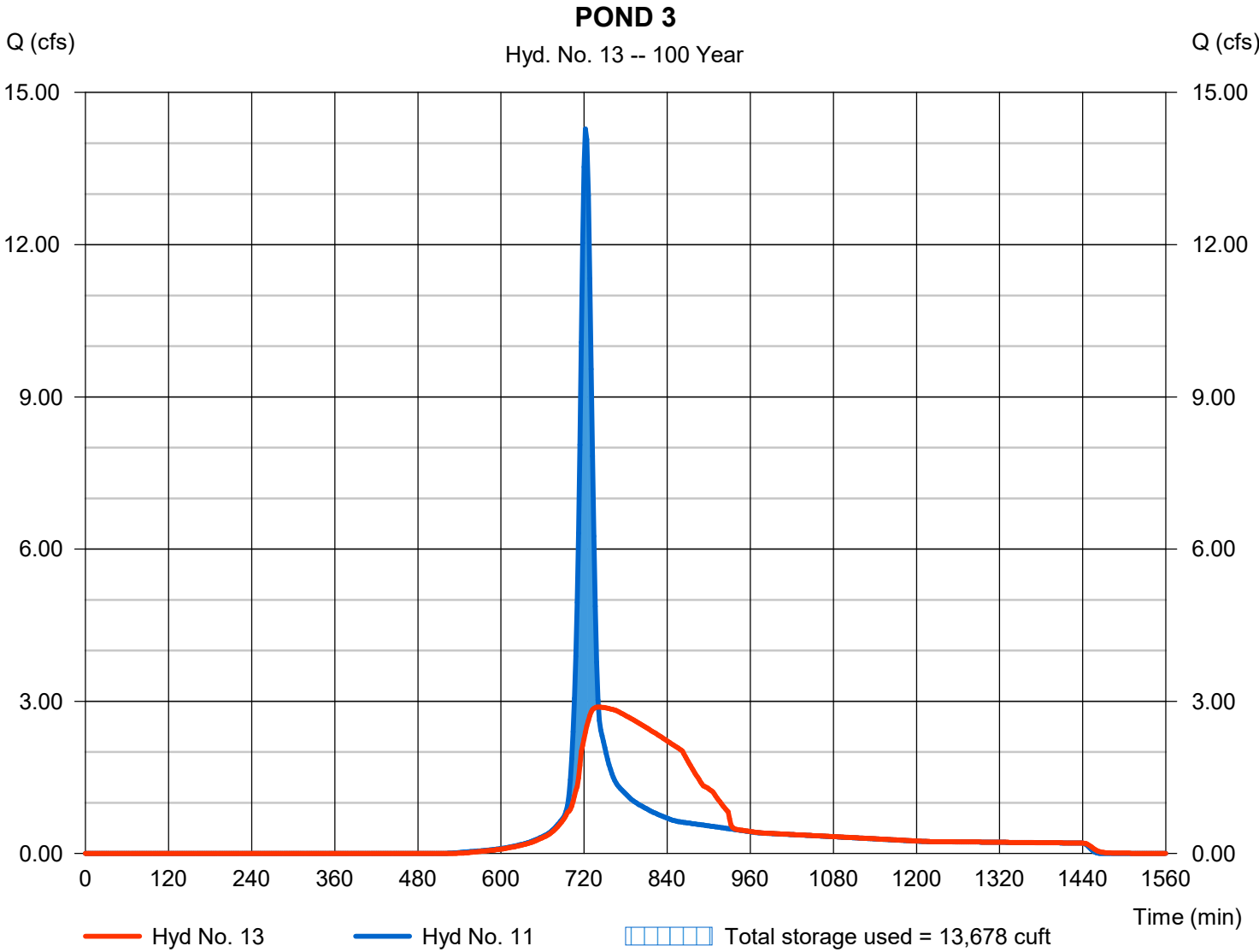
Wednesday, 01 / 3 / 2024

Hyd. No. 13

POND 3

Hydrograph type	= Reservoir	Peak discharge	= 2.887 cfs
Storm frequency	= 100 yrs	Time to peak	= 740 min
Time interval	= 2 min	Hyd. volume	= 40,095 cuft
Inflow hyd. No.	= 11 - DB 3	Max. Elevation	= 880.10 ft
Reservoir name	= POND 3	Max. Storage	= 13,678 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

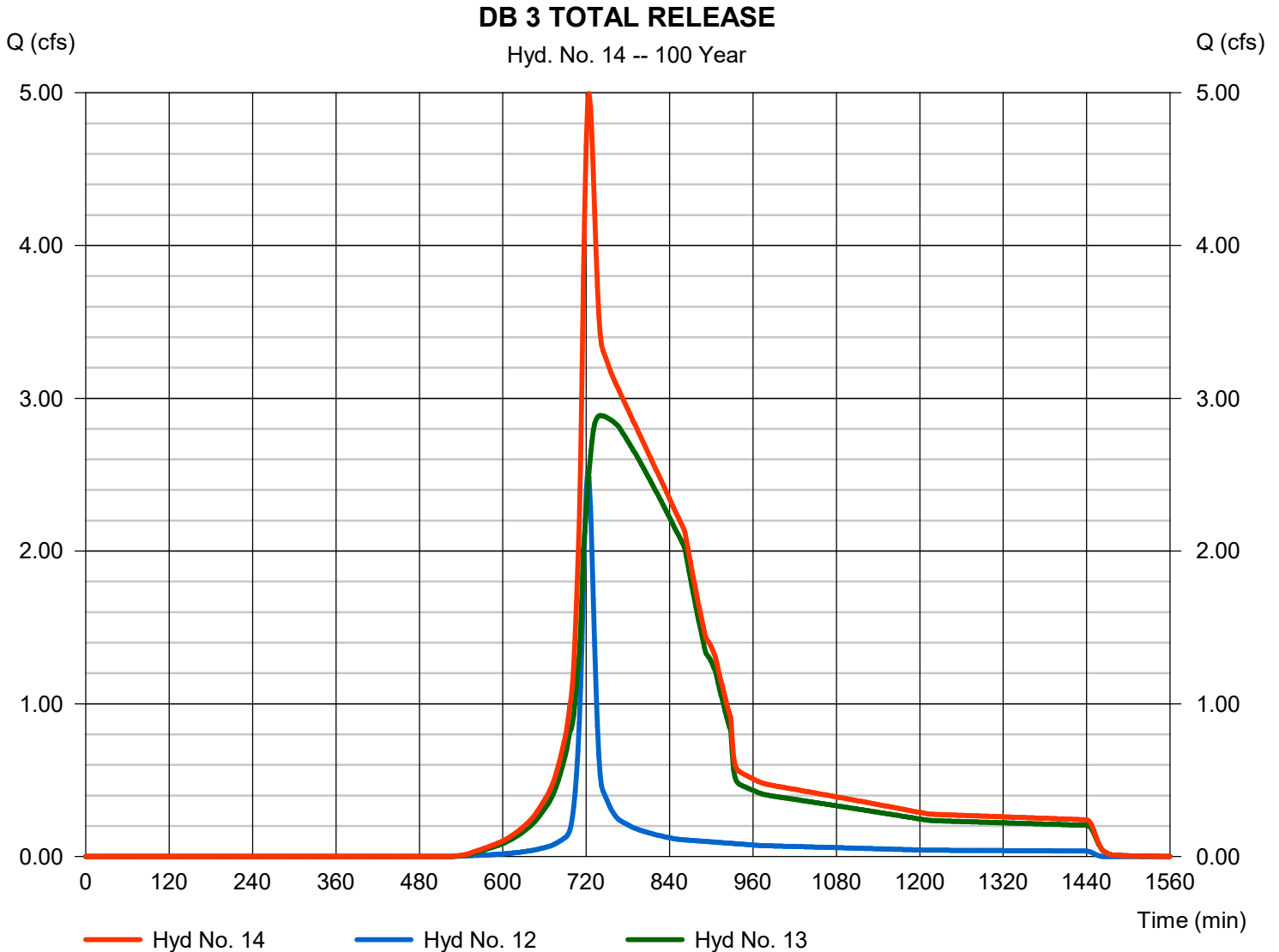
Wednesday, 01 / 3 / 2024

Hyd. No. 14

DB 3 TOTAL RELEASE

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 12, 13

Peak discharge = 4.996 cfs
Time to peak = 724 min
Hyd. volume = 47,171 cuft
Contrib. drain. area = 0.570 ac



Hydrograph Report

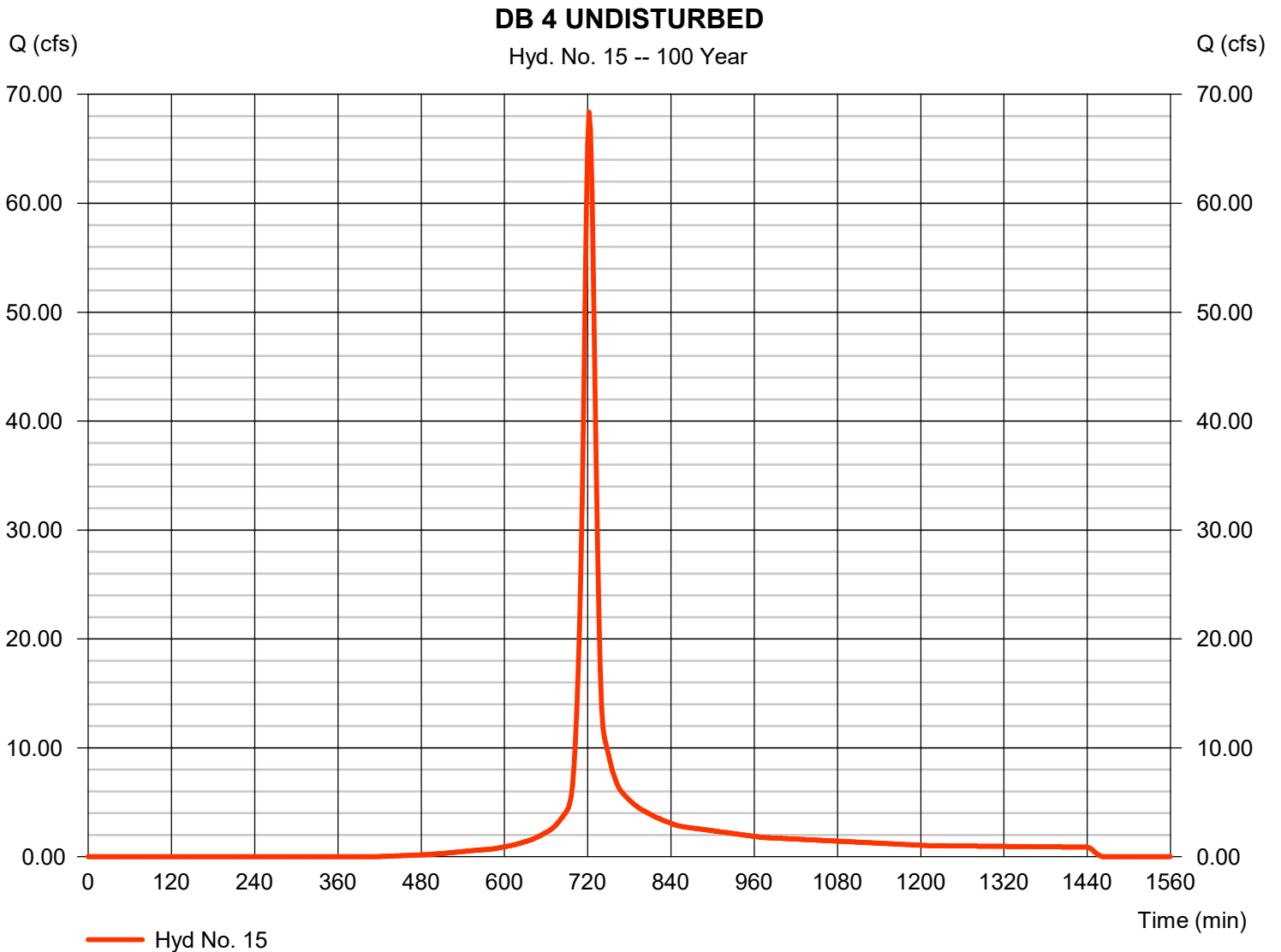
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 01 / 3 / 2024

Hyd. No. 15

DB 4 UNDISTURBED

Hydrograph type	= SCS Runoff	Peak discharge	= 68.35 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 192,024 cuft
Drainage area	= 12.750 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

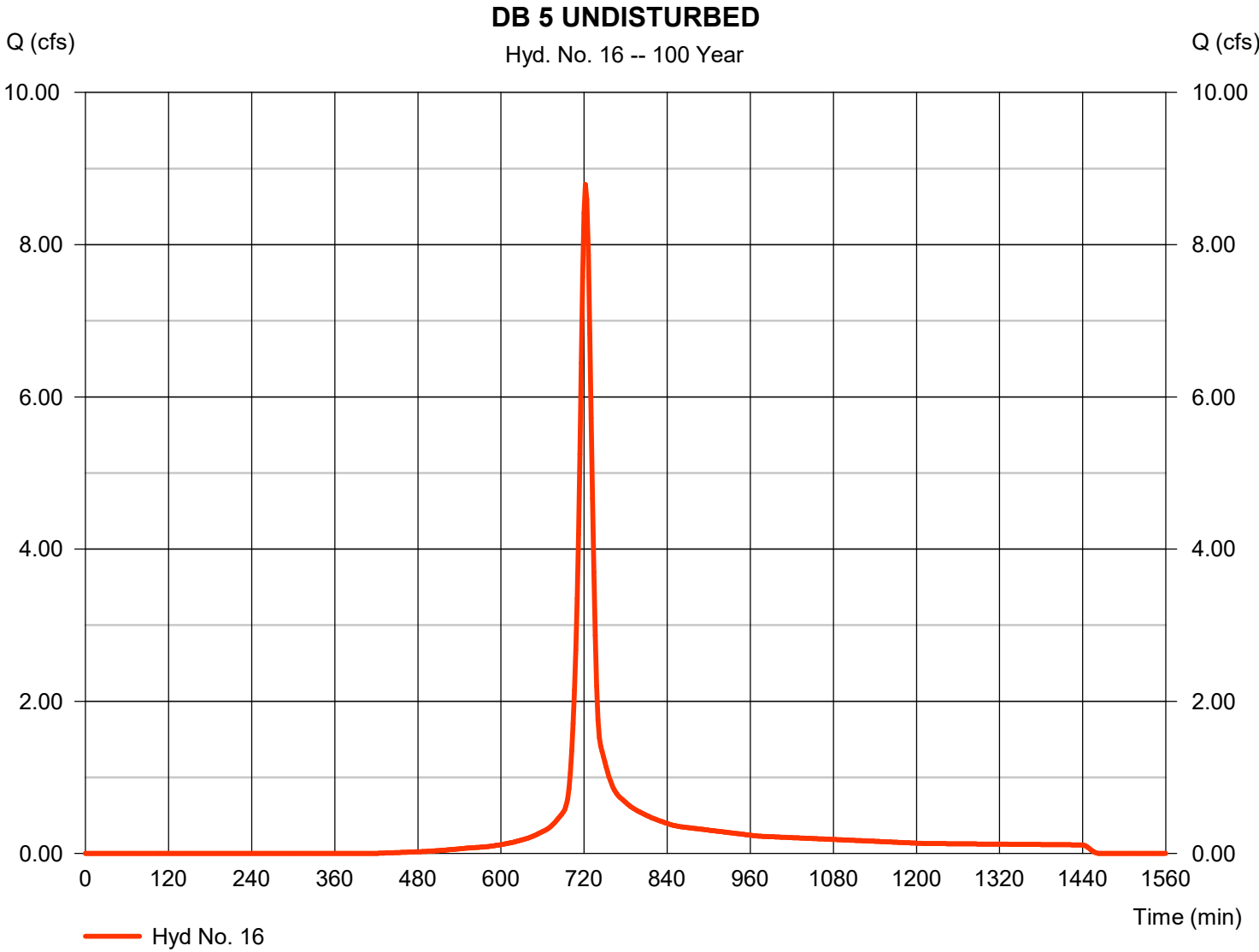


Hydrograph Report

Hyd. No. 16

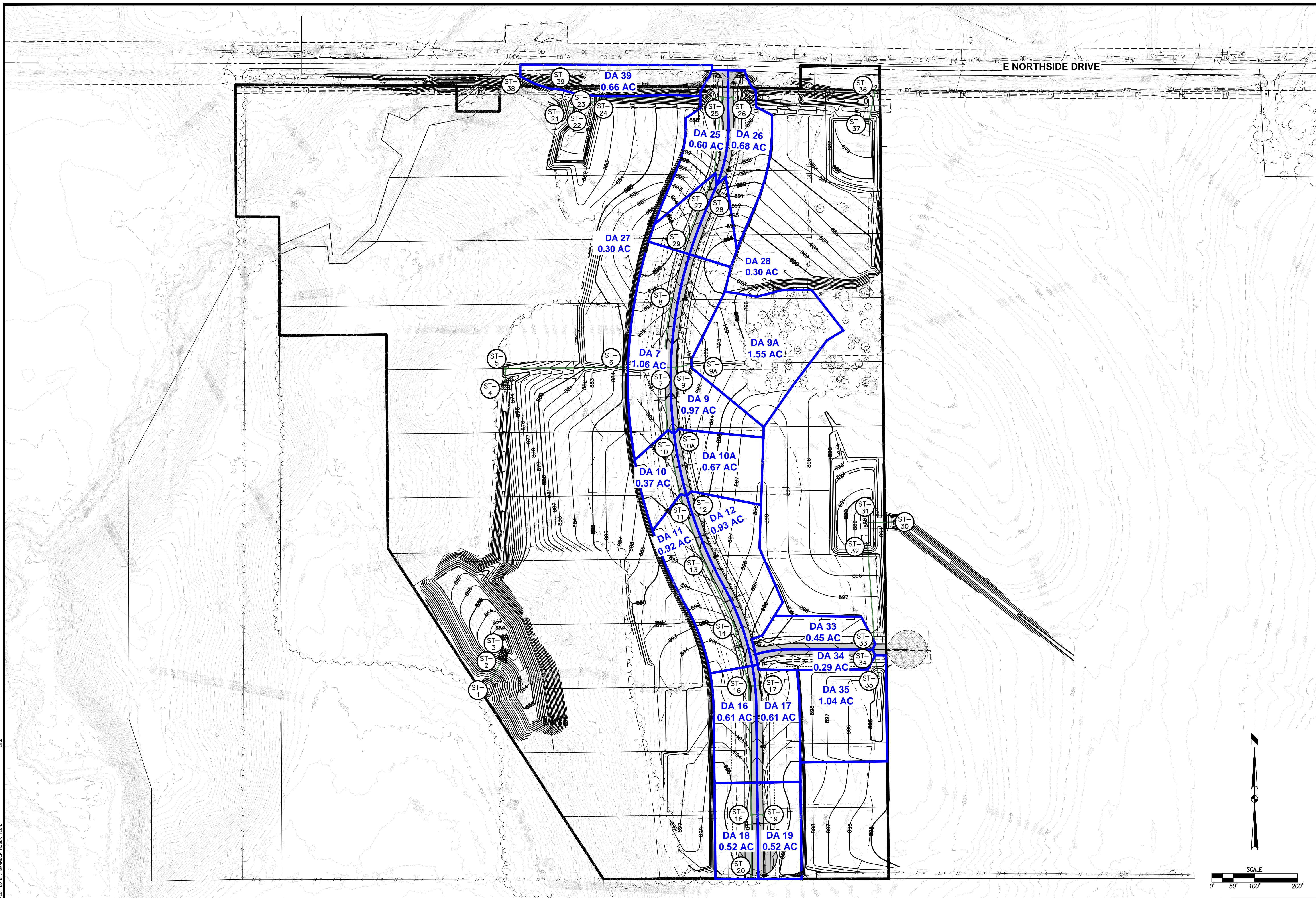
DB 5 UNDISTURBED

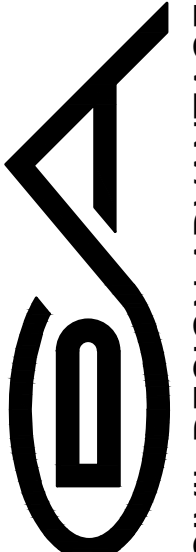
Hydrograph type	= SCS Runoff	Peak discharge	= 8.791 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 24,700 cuft
Drainage area	= 1.640 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



SECTION 5

FILE: H:\2022\2211760\DWG\2211760-SWMP.DWG
COMMENT: SWMP
PLOTTED BY: RANDON HUBER TECH
DATE: 1/2/2024 2:50 PM



DATE	
REVISIONS	
4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400	TECH:
 CIVIL DESIGN ADVANTAGE	ENGINEER:
BIG CREEK RIDGE STORM SEWER MAP	
1/1	
2211.760	

POLK CITY, IOWA

Project: Big Creek Ridge
 Proj. No.: 2211.76
 Designed: BDH
 Date: 1/4/2024

List of Intakes and Utility Accesses				
Structure Number ST-#	Location	Type or Standard Road Plan	FL / TC / RIM Elevation	Note
ST- 1		RCP APRON	FL 850.16	
ST- 2		SW-513	RIM 857.05	
ST- 3		RCP APRON	FL 851.00	
ST- 4		RCP APRON	FL 871.50	
ST- 5		SW-406	RIM 875.90	
ST- 6		SW-401, 48" DIA.	RIM 883.36	
ST- 7		SW-506	TC 889.86	
ST- 8		SW-401, 48" DIA.	RIM 892.58	
ST- 9		SW-505	TC 889.86	
ST- 9A		SW-512, 24" DIA.	RIM 890.09	
ST- 10		SW-503	TC 891.49	
ST- 10A		SW-501	TC 891.49	
ST- 11		SW-503	TC 893.63	
ST- 12		SW-501	TC 893.63	
ST- 13		SW-401, 48" DIA.	RIM 895.93	
ST- 14		SW-401, 48" DIA.	RIM 899.11	
ST- 16		SW-503	TC 900.45	
ST- 17		SW-501	TC 900.45	
ST- 18		SW-503	TC 903.51	
ST- 19		SW-501	TC 903.51	
ST- 20		SW-401, 48" DIA.	RIM 904.68	
ST- 21		RCP APRON	FL 875.62	
ST- 22		RCP APRON	FL 876.00	
ST- 23		RCP APRON	FL 877.00	
ST- 24		SW-401, 48" DIA.	RIM 882.46	
ST- 25		SW-506	TC 884.62	
ST- 26		SW-505	TC 884.62	
ST- 27		SW-503	TC 888.84	
ST- 28		SW-501	TC 888.84	
ST- 29		SW-401, 48" DIA.	RIM 894.27	
ST- 30		RCP APRON	FL 887.69	
ST- 31		RCP APRON	FL 888.00	
ST- 32		RCP APRON	FL 889.50	
ST- 33		SW-501	TC 896.25	
ST- 34		SW-501	TC 896.25	
ST- 35		RCP APRON	FL 891.90	
ST- 36		RCP APRON	FL 877.10	
ST- 37		RCP APRON	FL 877.50	
ST- 38		RCP APRON	FL 867.50	
ST- 39		RCP APRON	FL 868.00	

Notes:

List of Storm Sewer Pipe									
Pipe Number L-#	Structure		Storm Sewer				FL(out)	FI(in)	Note
	To ST-#	From ST-#	Material	Diameter inches	Length feet	Slope %			
L- 2	ST- 1	ST- 2	RCP	18	58	1.00	850.16	850.74	
L- 3	ST- 2	ST- 3	RCP	12	12	0.30	850.96	851.00	8" ORIFICE PLATE
L- 5	ST- 4	ST- 5	RCP	18	30	2.10	871.50	872.13	
L- 6	ST- 5	ST- 6	RCP	18	267	2.10	872.23	877.84	
L- 7	ST- 6	ST- 7	RCP	18	98	3.70	879.06	882.69	
L- 8	ST- 7	ST- 8	HDPE	8	161	2.00	884.86	888.08	
L- 9	ST- 7	ST- 9	RCP	15	22	2.00	883.77	884.21	
L- 9A	ST- 9	ST- 9A	RCP	15	39	2.00	884.31	885.09	
L- 10	ST- 7	ST- 10	RCP	15	145	1.90	882.79	885.54	
L- 10A	ST- 10	ST- 10A	RCP	15	22	1.50	885.89	886.22	
L- 11	ST- 10	ST- 11	RCP	15	152	1.65	885.64	888.15	
L- 12	ST- 11	ST- 12	RCP	15	22	1.00	888.41	888.63	
L- 13	ST- 11	ST- 13	RCP	15	155	1.60	888.25	890.73	
L- 14	ST- 13	ST- 14	RCP	15	164	1.60	890.83	893.45	
L- 16	ST- 14	ST- 16	RCP	15	151	1.30	893.55	895.51	
L- 17	ST- 16	ST- 17	RCP	15	22	1.00	895.61	895.83	
L- 18	ST- 16	ST- 18	RCP	15	298	1.00	895.61	898.59	
L- 19	ST- 18	ST- 19	RCP	15	22	1.00	898.69	898.91	
L- 20	ST- 18	ST- 20	HDPE	8	144	1.00	899.24	900.68	
L- 22	ST- 21	ST- 22	RCP	12	48	0.80	875.62	876.00	
L- 24	ST- 23	ST- 24	RCP	18	24	0.71	877.00	877.17	
L- 25	ST- 24	ST- 25	RCP	18	281	0.65	877.27	879.10	
L- 26	ST- 25	ST- 26	RCP	15	22	1.50	879.30	879.63	
L- 27	ST- 25	ST- 27	RCP	15	177	2.50	879.20	883.63	
L- 28	ST- 27	ST- 28	RCP	15	22	1.50	883.73	884.06	
L- 29	ST- 27	ST- 29	HDPE	8	163	2.80	885.34	889.90	
L- 31	ST- 30	ST- 31	RCP	12	61	0.50	887.69	888.00	
L- 33	ST- 32	ST- 33	RCP	15	233	0.71	889.50	891.16	
L- 34	ST- 33	ST- 34	RCP	12	22	1.25	891.27	891.54	
L- 35	ST- 34	ST- 35	RCP	12	52	0.50	891.64	891.90	
L- 37	ST- 36	ST- 37	RCP	12	88	0.45	877.10	877.50	10" ORIFICE PLATE
L- 39	ST- 38	ST- 39	RCP	15	66	0.70	867.04	867.50	

Notes:

Storm Sewer Pipe Design Information														
Manning's n -		RCP = 0.013			HDPE = 0.011			Design Storm = 10 year						
Drainage Area A, acres	C	Equiv. Area CA	Accumulated Equiv. Area ΣCA	Time of Conc. min.	Rainfall Intensity in/hr	Storm Runoff cfs	Sump Lines units	Sump Flow cfs	Pipe Capacity		Flow Velocity		Travel Time min.	Note
									Design cfs	Full Flow cfs	Design ft/sec	Full Flow ft/sec		
0.00	0.00	0.000	0.000	15	4.82	0.00			0.00	10.50	1.83	5.94	0.53	1
0.00	0.00	0.000	0.000	15	4.82	0.00			0.00	1.95	0.77	2.48	0.26	1
0.00	0.00	0.000	3.056	15	4.82	14.73	18	0.20	14.93	15.22	9.85	8.61	0.05	
0.00	0.00	0.000	3.056	15	4.82	14.73	18	0.20	14.93	15.22	9.85	8.61	0.45	
1.06	0.35	0.371	3.056	15	4.82	14.73	18	0.20	14.93	20.22	12.50	11.44	0.13	
0.00	0.00	0.000	0.000	15	4.82	0.00	2	0.02	0.02	2.02	2.08	5.79	1.29	
0.97	0.35	0.340	0.882	15	4.82	4.25	0	0.00	4.25	9.14	7.30	7.44	0.05	
1.55	0.35	0.543	0.543	15	4.82	2.61	0	0.00	2.61	9.14	6.42	7.44	0.10	
0.37	0.35	0.130	1.803	15	4.82	8.69	16	0.18	8.87	8.90	8.29	7.25	0.29	
0.67	0.35	0.235	0.235	15	4.82	1.13	0	0.00	1.13	7.91	4.61	6.45	0.08	
0.92	0.35	0.322	1.439	15	4.82	6.93	14	0.16	7.09	8.30	7.58	6.76	0.33	
0.93	0.35	0.326	0.326	15	4.82	1.57	0	0.00	1.57	6.46	4.35	5.26	0.08	
0.00	0.00	0.000	0.791	15	4.82	3.81	10	0.11	3.92	8.17	6.59	6.66	0.39	
0.00	0.00	0.000	0.791	15	4.82	3.81	9	0.10	3.91	8.17	6.58	6.66	0.42	
0.61	0.35	0.214	0.791	15	4.82	3.81	7	0.08	3.89	7.37	6.10	6.00	0.41	
0.61	0.35	0.214	0.214	15	4.82	1.03	0	0.00	1.03	6.46	3.89	5.26	0.09	
0.52	0.35	0.182	0.364	15	4.82	1.75	6	0.07	1.82	6.46	4.52	5.26	1.10	
0.52	0.35	0.182	0.182	15	4.82	0.88	0	0.00	0.88	6.46	3.70	5.26	0.10	
0.00	0.00	0.000	0.000	15	4.82	0.00	2	0.02	0.02	1.43	1.55	4.09	1.54	
0.00	0.00	0.000	0.000	15	4.82	0.00			0.00	3.19	1.25	4.06	0.64	1
0.00	0.00	0.000	0.658	15	4.82	3.17	5	0.06	3.23	8.84	4.59	5.00	0.09	
0.60	0.35	0.210	0.658	15	4.82	3.17	5	0.06	3.23	8.47	4.45	4.79	1.05	
0.68	0.35	0.238	0.238	15	4.82	1.15	0	0.00	1.15	7.91	4.63	6.45	0.08	
0.30	0.35	0.105	0.210	15	4.82	1.01	5	0.06	1.07	10.21	5.39	8.32	0.55	
0.30	0.35	0.105	0.105	15	4.82	0.51	0	0.00	0.51	7.91	3.54	6.45	0.10	
0.00	0.00	0.000	0.000	15	4.82	0.00	3	0.03	0.03	2.39	2.55	6.84	1.06	
0.00	0.00	0.000	0.000	15	4.82	0.00			0.00	2.52	0.99	3.21	1.03	1
0.45	0.35	0.158	0.623	15	4.82	3.00			3.00	5.45	4.56	4.44	0.85	
0.29	0.35	0.102	0.466	15	4.82	2.24			2.24	3.98	5.24	5.07	0.07	
1.04	0.35	0.364	0.364	15	4.82	1.75			1.75	2.52	3.47	3.21	0.25	
0.00	0.00	0.000	0.000	15	4.82	0.00			0.00	2.40	0.94	3.06	1.55	1
0.66	0.35	0.231	0.231	15	4.82	1.11			1.11	5.40	3.49	4.40	0.32	

Notes:

1.) Pipe sized based on hydraflow detention calculations

List of Intakes and Utility Accesses				
Structure Number ST-#	Location	Type or Standard Road Plan	FL / TC / RIM Elevation	Note
ST- 1		RCP APRON	FL 850.16	
ST- 2		SW-513	RIM 857.05	
ST- 3		RCP APRON	FL 851.00	
ST- 4		RCP APRON	FL 871.50	
ST- 5		SW-406	RIM 875.90	
ST- 6		SW-401, 48" DIA.	RIM 883.36	
ST- 7		SW-506	TC 889.86	
ST- 8		SW-401, 48" DIA.	RIM 892.58	
ST- 9		SW-505	TC 889.86	
ST- 9A		SW-512, 24" DIA.	RIM 890.09	
ST- 10		SW-503	TC 891.49	
ST- 10A		SW-501	TC 891.49	
ST- 11		SW-503	TC 893.63	
ST- 12		SW-501	TC 893.63	
ST- 13		SW-401, 48" DIA.	RIM 895.93	
ST- 14		SW-401, 48" DIA.	RIM 899.11	
ST- 16		SW-503	TC 900.45	
ST- 17		SW-501	TC 900.45	
ST- 18		SW-503	TC 903.51	
ST- 19		SW-501	TC 903.51	
ST- 20		SW-401, 48" DIA.	RIM 904.68	
ST- 21		RCP APRON	FL 875.62	
ST- 22		RCP APRON	FL 876.00	
ST- 23		RCP APRON	FL 877.00	
ST- 24		SW-401, 48" DIA.	RIM 882.46	
ST- 25		SW-506	TC 884.62	
ST- 26		SW-505	TC 884.62	
ST- 27		SW-503	TC 888.84	
ST- 28		SW-501	TC 888.84	
ST- 29		SW-401, 48" DIA.	RIM 894.27	
ST- 30		RCP APRON	FL 887.69	
ST- 31		RCP APRON	FL 888.00	
ST- 32		RCP APRON	FL 889.50	
ST- 33		SW-501	TC 896.25	
ST- 34		SW-501	TC 896.25	
ST- 35		RCP APRON	FL 891.90	
ST- 36		RCP APRON	FL 877.10	
ST- 37		RCP APRON	FL 877.50	
ST- 38		RCP APRON	FL 867.50	
ST- 39		RCP APRON	FL 868.00	

Notes:

List of Storm Sewer Pipe									
Pipe Number L-#	Structure		Storm Sewer				FL(out)	FI(in)	Note
	To ST-#	From ST-#	Material	Diameter inches	Length feet	Slope %			
L- 2	ST- 1	ST- 2	RCP	18	58	1.00	850.16	850.74	
L- 3	ST- 2	ST- 3	RCP	12	12	0.30	850.96	851.00	8" ORIFICE PLATE
L- 5	ST- 4	ST- 5	RCP	18	30	2.10	871.50	872.13	
L- 6	ST- 5	ST- 6	RCP	18	267	2.10	872.23	877.84	
L- 7	ST- 6	ST- 7	RCP	18	98	3.70	879.06	882.69	
L- 8	ST- 7	ST- 8	HDPE	8	161	2.00	884.86	888.08	
L- 9	ST- 7	ST- 9	RCP	15	22	2.00	883.77	884.21	
L- 9A	ST- 9	ST- 9A	RCP	15	39	2.00	884.31	885.09	
L- 10	ST- 7	ST- 10	RCP	15	145	1.90	882.79	885.54	
L- 10A	ST- 10	ST- 10A	RCP	15	22	1.50	885.89	886.22	
L- 11	ST- 10	ST- 11	RCP	15	152	1.65	885.64	888.15	
L- 12	ST- 11	ST- 12	RCP	15	22	1.00	888.41	888.63	
L- 13	ST- 11	ST- 13	RCP	15	155	1.60	888.25	890.73	
L- 14	ST- 13	ST- 14	RCP	15	164	1.60	890.83	893.45	
L- 16	ST- 14	ST- 16	RCP	15	151	1.30	893.55	895.51	
L- 17	ST- 16	ST- 17	RCP	15	22	1.00	895.61	895.83	
L- 18	ST- 16	ST- 18	RCP	15	298	1.00	895.61	898.59	
L- 19	ST- 18	ST- 19	RCP	15	22	1.00	898.69	898.91	
L- 20	ST- 18	ST- 20	HDPE	8	144	1.00	899.24	900.68	
L- 22	ST- 21	ST- 22	RCP	12	48	0.80	875.62	876.00	
L- 24	ST- 23	ST- 24	RCP	18	24	0.71	877.00	877.17	
L- 25	ST- 24	ST- 25	RCP	18	281	0.65	877.27	879.10	
L- 26	ST- 25	ST- 26	RCP	15	22	1.50	879.30	879.63	
L- 27	ST- 25	ST- 27	RCP	15	177	2.50	879.20	883.63	
L- 28	ST- 27	ST- 28	RCP	15	22	1.50	883.73	884.06	
L- 29	ST- 27	ST- 29	HDPE	8	163	2.80	885.34	889.90	
L- 31	ST- 30	ST- 31	RCP	12	61	0.50	887.69	888.00	
L- 33	ST- 32	ST- 33	RCP	15	233	0.71	889.50	891.16	
L- 34	ST- 33	ST- 34	RCP	12	22	1.25	891.27	891.54	
L- 35	ST- 34	ST- 35	RCP	12	52	0.50	891.64	891.90	
L- 37	ST- 36	ST- 37	RCP	12	88	0.45	877.10	877.50	10" ORIFICE PLATE
L- 39	ST- 38	ST- 39	RCP	15	66	0.70	867.04	867.50	

Notes:

Storm Sewer Pipe Design Information														
Manning's n -		RCP = 0.013			HDPE = 0.011			Design Storm = 100 year						
Drainage Area A, acres	C	Equiv. Area CA	Accumulated Equiv. Area ΣCA	Time of Conc. min.	Rainfall Intensity in/hr	Storm Runoff cfs	Sump Lines units	Sump Flow cfs	Pipe Capacity		Flow Velocity		Travel Time min.	Note
									Design cfs	Full Flow cfs	Design ft/sec	Full Flow ft/sec		
0.00	0.00	0.000	0.000	15	7.44	0.00			0.00	10.50	1.83	5.94	0.53	1
0.00	0.00	0.000	0.000	15	7.44	0.00			0.00	1.95	0.77	2.48	0.26	1
0.00	0.00	0.000	4.190	15	7.44	31.18	18	0.20	31.38	15.22	-1078.39	8.61	(0.00)	2
0.00	0.00	0.000	4.190	15	7.44	31.18	18	0.20	31.38	15.22	-1078.39	8.61	(0.00)	2
1.06	0.48	0.509	4.190	15	7.44	31.18	18	0.20	31.38	20.22	-81.43	11.44	(0.02)	2
0.00	0.00	0.000	0.000	15	7.44	0.00	2	0.02	0.02	2.02	2.08	5.79	1.29	
0.97	0.48	0.466	1.210	15	7.44	9.00	0	0.00	9.00	9.14	8.51	7.44	0.04	
1.55	0.48	0.744	0.744	15	7.44	5.54	0	0.00	5.54	9.14	7.82	7.44	0.08	
0.37	0.48	0.178	2.472	15	7.44	18.39	16	0.18	18.57	8.90	-1008.41	7.25	(0.00)	2
0.67	0.48	0.322	0.322	15	7.44	2.39	0	0.00	2.39	7.91	5.63	6.45	0.07	
0.92	0.48	0.442	1.973	15	7.44	14.68	14	0.16	14.83	8.30	-224.98	6.76	(0.01)	2
0.93	0.48	0.446	0.446	15	7.44	3.32	0	0.00	3.32	6.46	5.31	5.26	0.07	
0.00	0.00	0.000	1.085	15	7.44	8.07	10	0.11	8.18	8.17	7.61	6.66	0.34	
0.00	0.00	0.000	1.085	15	7.44	8.07	9	0.10	8.17	8.17	7.61	6.66	0.36	
0.61	0.48	0.293	1.085	15	7.44	8.07	7	0.08	8.15	7.37	6.50	6.00	0.39	
0.61	0.48	0.293	0.293	15	7.44	2.18	0	0.00	2.18	6.46	4.73	5.26	0.08	
0.52	0.48	0.250	0.499	15	7.44	3.71	6	0.07	3.78	6.46	5.49	5.26	0.91	
0.52	0.48	0.250	0.250	15	7.44	1.86	0	0.00	1.86	6.46	4.54	5.26	0.08	
0.00	0.00	0.000	0.000	15	7.44	0.00	2	0.02	0.02	1.43	1.55	4.09	1.54	
0.00	0.00	0.000	0.000	15	7.44	0.00			0.00	3.19	1.25	4.06	0.64	1
0.00	0.00	0.000	0.902	15	7.44	6.71	5	0.06	6.77	8.84	5.50	5.00	0.07	
0.60	0.48	0.288	0.902	15	7.44	6.71	5	0.06	6.77	8.47	5.31	4.79	0.88	
0.68	0.48	0.326	0.326	15	7.44	2.43	0	0.00	2.43	7.91	5.66	6.45	0.06	
0.30	0.48	0.144	0.288	15	7.44	2.14	5	0.06	2.20	10.21	6.67	8.32	0.44	
0.30	0.48	0.144	0.144	15	7.44	1.07	0	0.00	1.07	7.91	4.53	6.45	0.08	
0.00	0.00	0.000	0.000	15	7.44	0.00	3	0.03	0.03	2.39	2.55	6.84	1.06	
0.00	0.00	0.000	0.000	15	7.44	0.00			0.00	2.52	0.99	3.21	1.03	1
0.45	0.48	0.216	0.854	15	7.44	6.36			6.36	5.45	4.29	4.44	0.91	
0.29	0.48	0.139	0.638	15	7.44	4.75			4.75	3.98	4.45	5.07	0.08	
1.04	0.48	0.499	0.499	15	7.44	3.71			3.71	2.52	-11.36	3.21	(0.08)	2
0.00	0.00	0.000	0.000	15	7.44	0.00			0.00	2.40	0.94	3.06	1.55	1
0.66	0.48	0.317	0.317	15	7.44	2.36			2.36	5.40	4.24	4.40	0.26	

Notes:

- 1.) Pipe sized based on hydraflow detention calculations
- 2.) Pipe has been analyzed with HGL Profile and neccessary overflows are being proposed at these locations. Negative pipe velocites do not refelct errors with spreadsheet calculations.

Intake Capacity

Project: Big Creek Ridge
 Project No.: 2211.760
 Designed: BDH
 Date: 1/4/2024

Design Storm: 10 Year
 Manning's n = 0.016

Note: Check spread for intakes at low points for by entering SL = 0.25%, then enter "Sump" to determine ponding depth at intake. All grate intakes apply 90% Reduction Factor and all open-throat intakes apply 80% Reduction Factor for On-Grade occurrences. All intakes are designed to intercept a minimum of 50% of the design flow, unless otherwise noted.

Intake			Hydrology					Intake Capacity and Spread											Note
Structure Number ST-#	Location	Type	Time of Conc. t _c , min	Area A, acres	Runoff Coefficient C	Rainfall Intensity I, in/hr	Runoff Q=CIA cfs	Bypass Flow to Intake Q _b , cfs	Total Flow Q _t , cfs	Longitudinal Slope S _L , %	Transverse Slope S _x , %	Flow Depth d, feet	Spread T, feet	Intake Efficiency E = Q _a /Q _t	Intercepted Flow Q _i , cfs	Allowable Capacity (Q _i * Reduction Factor) Q _a , cfs	Bypass Flow to Next Intake Q _b , cfs	Bypass Intake Number	
ST- 7		SW-506	15	1.06	0.35	4.82	1.79	0.55	2.34	SUMP	2.00	0.16	N/A	0.80	2.34	1.87	0.47		
ST- 7N		SW-506	15	0.65	0.35	4.82	1.10		1.10	0.25	2.00	0.19	9.72	0.80	1.10	0.88	0.22		
ST- 7S		SW-506	15	0.41	0.35	4.82	0.69	0.55	1.24	0.25	2.00	0.20	10.19	0.80	1.24	0.99	0.25		
ST- 9		SW-505	15	0.97	0.35	4.82	1.64	0.85	2.49	SUMP	2.00	0.17	N/A	0.80	2.49	1.99	0.50		
ST- 9N		SW-505	15	0.49	0.35	4.82	0.83		0.83	0.25	2.00	0.17	8.75	0.80	0.83	0.66	0.17		
ST- 9S		SW-505	15	0.48	0.35	4.82	0.81	0.85	1.66	0.25	2.00	0.23	11.36	0.80	1.66	1.33	0.33		
ST- 10		SW-503	15	0.37	0.35	4.82	0.62	0.61	1.24	1.40	2.00	0.15	7.36	0.55	0.76	0.68	0.55	ST- 7S	
ST- 10A		SW-501	15	0.67	0.35	4.82	1.13	0.62	1.75	1.40	2.00	0.17	8.39	0.51	1.00	0.90	0.85	ST- 9S	
ST- 11		SW-503	15	0.92	0.35	4.82	1.55		1.55	1.40	2.00	0.16	8.02	0.61	1.04	0.94	0.61	ST- 10	
ST- 12		SW-501	15	0.93	0.35	4.82	1.57		1.57	1.40	2.00	0.16	8.05	0.60	1.05	0.95	0.62	ST- 10A	
ST- 16		SW-503	15	0.61	0.35	4.82	1.03		1.03	SUMP	2.00	0.15	N/A	0.80	1.03	0.82	0.21		
ST- 16N		SW-503	15	0.10	0.35	4.82	0.17		0.17	0.25	2.00	0.10	4.82	0.80	0.17	0.13	0.03		
ST- 16S		SW-503	15	0.51	0.35	4.82	0.86		0.86	0.25	2.00	0.18	8.88	0.80	0.86	0.69	0.17		
ST- 17		SW-501	15	0.61	0.35	4.82	1.03		1.03	SUMP	2.00	0.15	N/A	0.80	1.03	0.82	0.21		
ST- 17N		SW-501	15	0.10	0.35	4.82	0.17		0.17	0.25	2.00	0.10	4.82	0.80	0.17	0.13	0.03		
ST- 17S		SW-501	15	0.51	0.35	4.82	0.86		0.86	0.25	2.00	0.18	8.88	0.80	0.86	0.69	0.17		
ST- 18		SW-503	15	0.52	0.35	4.82	0.88		0.88	SUMP	2.00	0.14	N/A	0.80	0.88	0.70	0.18		
ST- 18N		SW-503	15	0.22	0.35	4.82	0.37		0.37	0.25	2.00	0.13	6.48	0.80	0.37	0.30	0.07		
ST- 18S		SW-503	15	0.30	0.35	4.82	0.51		0.51	0.25	2.00	0.15	7.28	0.80	0.51	0.40	0.10		
ST- 19		SW-501	15	0.52	0.35	4.82	0.88		0.88	SUMP	2.00	0.14	N/A	0.80	0.88	0.70	0.18		
ST- 19N		SW-501	15	0.22	0.35	4.82	0.37		0.37	0.25	2.00	0.13	6.48	0.80	0.37	0.30	0.07		
ST- 19S		SW-501	15	0.30	0.35	4.82	0.51		0.51	0.25	2.00	0.15	7.28	0.80	0.51	0.40	0.10		
ST- 25		SW-506	15	0.60	0.35	4.82	1.01	0.14	1.16	SUMP	2.00	0.10	N/A	0.80	1.16	0.92	0.23		
ST- 25N		SW-506	15	0.15	0.35	4.82	0.25		0.25	0.25	2.00	0.11	5.61	0.80	0.25	0.20	0.05		
ST- 25S		SW-506	15	0.45	0.35	4.82	0.76	0.14	0.90	0.25	2.00	0.18	9.04	0.80	0.90	0.72	0.18		
ST- 26		SW-505	15	0.68	0.35	4.82	1.15	0.14	1.29	SUMP	2.00	0.11	N/A	0.80	1.29	1.03	0.26		
ST- 26N		SW-505	15	0.15	0.35	4.82	0.25		0.25	0.25	2.00	0.11	5.61	0.80	0.25	0.20	0.05		
ST- 26S		SW-505	15	0.53	0.35	4.82	0.89	0.14	1.04	0.25	2.00	0.19	9.52	0.80	1.04	0.83	0.21		
ST- 27		SW-503	15	0.30	0.35	4.82	0.51		0.51	4.00	2.00	0.09	4.33	0.72	0.40	0.36	0.14	ST- 25S	
ST- 28		SW-501	15	0.30	0.35	4.82	0.51		0.51	4.00	2.00	0.09	4.33	0.72	0.40	0.36	0.14	ST- 26S	
ST- 33		SW-501	15	0.45	0.35	4.82	0.76		0.76	1.25	2.00	0.13	6.26	0.70	0.59	0.53	0.23		
ST- 34		SW-501	15	0.29	0.35	4.82	0.49		0.49	1.25	2.00	0.11	5.31	0.74	0.40	0.36	0.13		

Notes:

Intake Capacity

Project: Big Creek Ridge
 Project No.: 2211.760
 Designed: BDH
 Date: 1/4/2024

Design Storm: 100 Year
 Manning's n = 0.016

Note: Check spread for intakes at low points for by entering SL = 0.25%, then enter "Sump" to determine ponding depth at intake. All grate intakes apply 90% Reduction Factor and all open-throat intakes apply 80% Reduction Factor for On-Grade occurrences. All intakes are designed to intercept a minimum of 50% of the design flow, unless otherwise noted.

Intake			Hydrology					Intake Capacity and Spread											Note
Structure Number ST-#	Location	Type	Time of Conc. t _c , min	Area A, acres	Runoff Coefficient C	Rainfall Intensity I, in/hr	Runoff Q=CIA cfs	Bypass Flow to Intake Q _b , cfs	Total Flow Q _t , cfs	Longitudinal Slope S _L , %	Transverse Slope S _x , %	Flow Depth d, feet	Spread T, feet	Intake Efficiency E = Q _a /Q _t	Intercepted Flow Q _i , cfs	Allowable Capacity (Q _i * Reduction Factor) Q _a , cfs	Bypass Flow to Next Intake Q _b , cfs	Bypass Intake Number	
ST- 7		SW-506	15	1.06	0.48	7.44	3.79	1.64	5.43	SUMP	2.00	0.29	N/A	0.80	5.43	4.34	1.09		
ST- 7N		SW-506	15	0.65	0.48	7.44	2.32		2.32	0.25	2.00	0.26	12.88	0.80	2.32	1.86	0.46		
ST- 7S		SW-506	15	0.41	0.48	7.44	1.46	1.64	3.10	0.25	2.00	0.29	14.36	0.80	3.10	2.48	0.62		
ST- 9		SW-505	15	0.97	0.48	7.44	3.46	2.38	5.85	SUMP	2.00	0.30	N/A	0.80	5.85	4.68	1.17		
ST- 9N		SW-505	15	0.49	0.48	7.44	1.75		1.75	0.25	2.00	0.23	11.59	0.80	1.75	1.40	0.35		
ST- 9S		SW-505	15	0.48	0.48	7.44	1.71	2.38	4.10	0.25	2.00	0.32	15.94	0.80	4.10	3.28	0.82		
ST- 10		SW-503	15	0.37	0.48	7.44	1.32	1.60	2.92	1.40	2.00	0.20	10.17	0.44	1.43	1.29	1.64	ST- 7S	
ST- 10A		SW-501	15	0.67	0.48	7.44	2.39	1.63	4.02	1.40	2.00	0.23	11.46	0.41	1.82	1.64	2.38	ST- 9S	
ST- 11		SW-503	15	0.92	0.48	7.44	3.29		3.29	1.40	2.00	0.21	10.62	0.51	1.87	1.68	1.60	ST- 10	
ST- 12		SW-501	15	0.93	0.48	7.44	3.32		3.32	1.40	2.00	0.21	10.67	0.51	1.88	1.70	1.63	ST- 10A	
ST- 16		SW-503	15	0.61	0.48	7.44	2.18		2.18	SUMP	2.00	0.25	N/A	0.80	2.18	1.74	0.44		
ST- 16N		SW-503	15	0.10	0.48	7.44	0.36		0.36	0.25	2.00	0.13	6.38	0.80	0.36	0.29	0.07		
ST- 16S		SW-503	15	0.51	0.48	7.44	1.82		1.82	0.25	2.00	0.24	11.76	0.80	1.82	1.46	0.36		
ST- 17		SW-501	15	0.61	0.48	7.44	2.18		2.18	SUMP	2.00	0.25	N/A	0.80	2.18	1.74	0.44		
ST- 17N		SW-501	15	0.10	0.48	7.44	0.36		0.36	0.25	2.00	0.13	6.38	0.80	0.36	0.29	0.07		
ST- 17S		SW-501	15	0.51	0.48	7.44	1.82		1.82	0.25	2.00	0.24	11.76	0.80	1.82	1.46	0.36		
ST- 18		SW-503	15	0.52	0.48	7.44	1.86		1.86	SUMP	2.00	0.22	N/A	0.80	1.86	1.49	0.37		
ST- 18N		SW-503	15	0.22	0.48	7.44	0.79		0.79	0.25	2.00	0.17	8.58	0.80	0.79	0.63	0.16		
ST- 18S		SW-503	15	0.30	0.48	7.44	1.07		1.07	0.25	2.00	0.19	9.64	0.80	1.07	0.86	0.21		
ST- 19		SW-501	15	0.52	0.48	7.44	1.86		1.86	SUMP	2.00	0.22	N/A	0.80	1.86	1.49	0.37		
ST- 19N		SW-501	15	0.22	0.48	7.44	0.79		0.79	0.25	2.00	0.17	8.58	0.80	0.79	0.63	0.16		
ST- 19S		SW-501	15	0.30	0.48	7.44	1.07		1.07	0.25	2.00	0.19	9.64	0.80	1.07	0.86	0.21		
ST- 25		SW-506	15	0.60	0.48	7.44	2.14	0.41	2.55	SUMP	2.00	0.17	N/A	0.80	2.55	2.04	0.51		
ST- 25N		SW-506	15	0.15	0.48	7.44	0.54		0.54	0.25	2.00	0.15	7.43	0.80	0.54	0.43	0.11		
ST- 25S		SW-506	15	0.45	0.48	7.44	1.61	0.41	2.02	0.25	2.00	0.24	12.22	0.80	2.02	1.61	0.40		
ST- 26		SW-505	15	0.68	0.48	7.44	2.43	0.41	2.84	SUMP	2.00	0.19	N/A	0.80	2.84	2.27	0.57		
ST- 26N		SW-505	15	0.15	0.48	7.44	0.54		0.54	0.25	2.00	0.15	7.43	0.80	0.54	0.43	0.11		
ST- 26S		SW-505	15	0.53	0.48	7.44	1.89	0.41	2.30	0.25	2.00	0.26	12.84	0.80	2.30	1.84	0.46		
ST- 27		SW-503	15	0.30	0.48	7.44	1.07		1.07	4.00	2.00	0.11	5.73	0.62	0.74	0.66	0.41	ST- 25S	
ST- 28		SW-501	15	0.30	0.48	7.44	1.07		1.07	4.00	2.00	0.11	5.73	0.62	0.74	0.66	0.41	ST- 26S	
ST- 33		SW-501	15	0.45	0.48	7.44	1.61		1.61	1.25	2.00	0.17	8.30	0.61	1.09	0.98	0.63		
ST- 34		SW-501	15	0.29	0.48	7.44	1.04		1.04	1.25	2.00	0.14	7.04	0.66	0.76	0.68	0.35		

Notes:



PROJECT: Big Creek Ridge Plat 1 JOB NO. 2211.760 Page of Pages

SUBJECT: Storm Water Calculations DATE: 01/05/24 DESIGNED: BDH CHECKED:

Lots 4-5, Overflow Spread Capacity

$Q_{100} = 10.96$ cfs (Q_{100} of L-7 minus Capacity of L-7. 31.18cfs minus 20.22cfs)

Overflow Capacity:

Overflow Elevation: 889.86 feet

Overflow Width Width, $W = 35.00$ feet

Capacity of a Broad Crested Weir:

$$Q = 2.6 * W * H^{3/2}$$

For $Q = 10.96$ cfs, $H = 0.24$ ft

Overflow Ponding Elevation = 890.10 feet

Pavement Crown Elevation = 889.61 feet

6" above = 890.11 feet

Therefore, OK



PROJECT: Big Creek Ridge JOB NO. 2211.760

SUBJECT: 100-Year Area Intake Calcs DATE: 08/30/23 DESIGNED: BDH

INTAKE CAPACITY CALCULATIONS

EQUATIONS

DA 9A Runoff

$Q = C * I * A$
C = 0.35
I = 7.44
A = 1.55
Q = 4.04

1. ORIFICE: $Q = 0.67 A_g (2gd)^{0.5}$ (SUDAS Equation 2C-3.12)

WHERE - Q = flow, cfs
 A_g = Clear opening of the grate, ft²
g = gravitational constant (32.16 ft/s²)
d = average depth across the grate, ft

2. WEIR: $Q = 3.0 P d^{1.5}$ (SUDAS Equation 2C-3.11)

WHERE - Q = flow, cfs
P = Perimeter of the grate disregarding the side against the curb, ft
d = average depth across the grate, ft

CALCULATIONS

1. Solve for required head given flow and open area for casting using Orifice Equation:

LOCATION: **ST - 9A**

INPUT: $Q_{100} = 4.04$ cfs (From Rational Equation)
 $A_g = 1.64$ sq. ft. (Open Area of Casting)

Required Depth at Grate: d = 0.210 ft.

2. Solve for required head given flow and open perimeter of casting using Weir Equation:

LOCATION: **ST - 9A**

INPUT: $Q_{100} = 4.04$ cfs (From Rational Equation)
P = 6.77 ft. (Open Perimeter of Casting)

Required Depth at Grate: d = 0.341 ft.

GOVERNING EQUATION: **Weir Equation**

Depth = **0.341** ft = **4.09** inches

The 100-year elevation is 890.09 + 0.341 = **890.43**



PROJECT: Big Creek Ridge JOB NO. 2211.760
 SUBJECT: Storm Water Calculations DATE: 08/30/23 COMP. BY: BDH

ST-35 Culvert Summary

☐ Crossing Data - ST-35

Crossing Properties

Name:

Parameter	Value	Units
DISCHARGE DATA		
Discharge Method	Minimum, Design, and Maximum	
Minimum Flow	0.000	cfs
Design Flow	2.710	cfs
Maximum Flow	3.000	cfs
TAILWATER DATA		
Channel Type	Enter Constant Tailwater Elevation	
Channel Invert Elevation	891.640	ft
Constant Tailwater Elevation	891.650	ft
Rating Curve	View...	
ROADWAY DATA		
Roadway Profile Shape	Constant Roadway Elevation	
First Roadway Station	0.000	ft
Crest Length	10.000	ft
Crest Elevation	895.100	ft
Roadway Surface	Paved	
Top Width	26.000	ft

Culvert Properties

ST-35

[Add Culvert](#)
[Duplicate Culvert](#)
[Delete Culvert](#)

Parameter	Value	Units
CULVERT DATA		
Name	ST-35	
Shape	Circular	
Material	Smooth HDPE	
Diameter	1.000	ft
Embedment Depth	0.000	in
Manning's n	0.012	
Culvert Type	Straight	
Inlet Configuration	Square Edge with Headwall	
Inlet Depression?	No	
SITE DATA		
Site Data Input Option	Culvert Invert Data	
Inlet Station	0.000	ft
Inlet Elevation	891.900	ft
Outlet Station	52.000	ft
Outlet Elevation	891.640	ft

Help Click on any icon for help on a specific topic Low Flow AOP Energy Dissipation Analyze Crossing **OK** Cancel

☐ Summary of Flows at Crossing - ST-35

Headwater Elevation (ft)	Total Discharge (cfs)	ST-35 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
891.90	0.00	0.00	0.00	1
892.21	0.30	0.30	0.00	1
892.34	0.60	0.60	0.00	1
892.46	0.90	0.90	0.00	1
892.57	1.20	1.20	0.00	1
892.67	1.50	1.50	0.00	1
892.81	1.80	1.80	0.00	1
892.90	2.10	2.10	0.00	1
892.99	2.40	2.40	0.00	1
893.07	2.70	2.70	0.00	1
893.08	2.71	2.71	0.00	1
895.10	5.84	5.84	0.00	Overtopping

Display

Crossing Summary Table

Culvert Summary Table

Water Surface Profiles

Tapered Inlet Table

Customized Table

Geometry

Inlet Elevation: 891.90 ft

Outlet Elevation: 891.64 ft

Culvert Length: 52.00 ft

Culvert Slope: 0.0050

Inlet Crest: 0.00 ft

Inlet Throat: 0.00 ft

Outlet Control: Profiles

Plot

Help Flow Types... Edit Input Data... Energy Dissipation... AOP... Low Flow... Export Report Adobe PDF (*.pdf) **Close**



PROJECT: Big Creek Ridge JOB NO. 2211.760
 SUBJECT: Storm Water Calculations DATE: 08/30/23 COMP. BY: BDH

ST-39 Culvert Summary

Crossing Data - ST-39

Crossing Properties

Name:

Parameter	Value	Units
DISCHARGE DATA		
Discharge Method	Minimum, Design, and Maximum	
Minimum Flow	0.000	cfs
Design Flow	2.460	cfs
Maximum Flow	3.000	cfs
TAILWATER DATA		
Channel Type	Enter Constant Tailwater Elevation	
Channel Invert Elevation	867.500	ft
Constant Tailwater Elevation	867.510	ft
Rating Curve	View...	
ROADWAY DATA		
Roadway Profile Shape	Constant Roadway Elevation	
First Roadway Station	0.000	ft
Crest Length	10.000	ft
Crest Elevation	873.000	ft
Roadway Surface	Paved	
Top Width	29.000	ft

Culvert Properties

ST-39

Add Culvert
Duplicate Culvert
Delete Culvert

Parameter	Value	Units
CULVERT DATA		
Name	ST-39	
Shape	Circular	
Material	Concrete	
Diameter	1.250	ft
Embedment Depth	0.000	in
Manning's n	0.013	
Culvert Type	Straight	
Inlet Configuration	Square Edge with Headwall	
Inlet Depression?	No	
SITE DATA		
Site Data Input Option	Culvert Invert Data	
Inlet Station	0.000	ft
Inlet Elevation	868.000	ft
Outlet Station	50.000	ft
Outlet Elevation	867.500	ft

Help Click on any icon for help on a specific topic Low Flow AOP Energy Dissipation Analyze Crossing **OK** Cancel

Summary of Flows at Crossing - ST-39

Headwater Elevation (ft)	Total Discharge (cfs)	ST-39 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
868.00	0.00	0.00	0.00	1
868.29	0.30	0.30	0.00	1
868.41	0.60	0.60	0.00	1
868.51	0.90	0.90	0.00	1
868.59	1.20	1.20	0.00	1
868.68	1.50	1.50	0.00	1
868.76	1.80	1.80	0.00	1
868.84	2.10	2.10	0.00	1
868.91	2.40	2.40	0.00	1
868.92	2.46	2.46	0.00	1
869.04	3.00	3.00	0.00	1
873.00	12.45	12.45	0.00	Overtopping

Display

Crossing Summary Table

Culvert Summary Table

Water Surface Profiles

Tapered Inlet Table

Customized Table

Geometry

Inlet Elevation: 868.00 ft

Outlet Elevation: 867.50 ft

Culvert Length: 50.00 ft

Culvert Slope: 0.0100

Inlet Crest: 0.00 ft

Inlet Throat: 0.00 ft

Outlet Control: Profiles

Plot

Help Flow Types... Edit Input Data... Energy Dissipation... AOP... Low Flow... Export Report Adobe PDF (*.pdf) **Close**

ST-1 : 18" APRON

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.

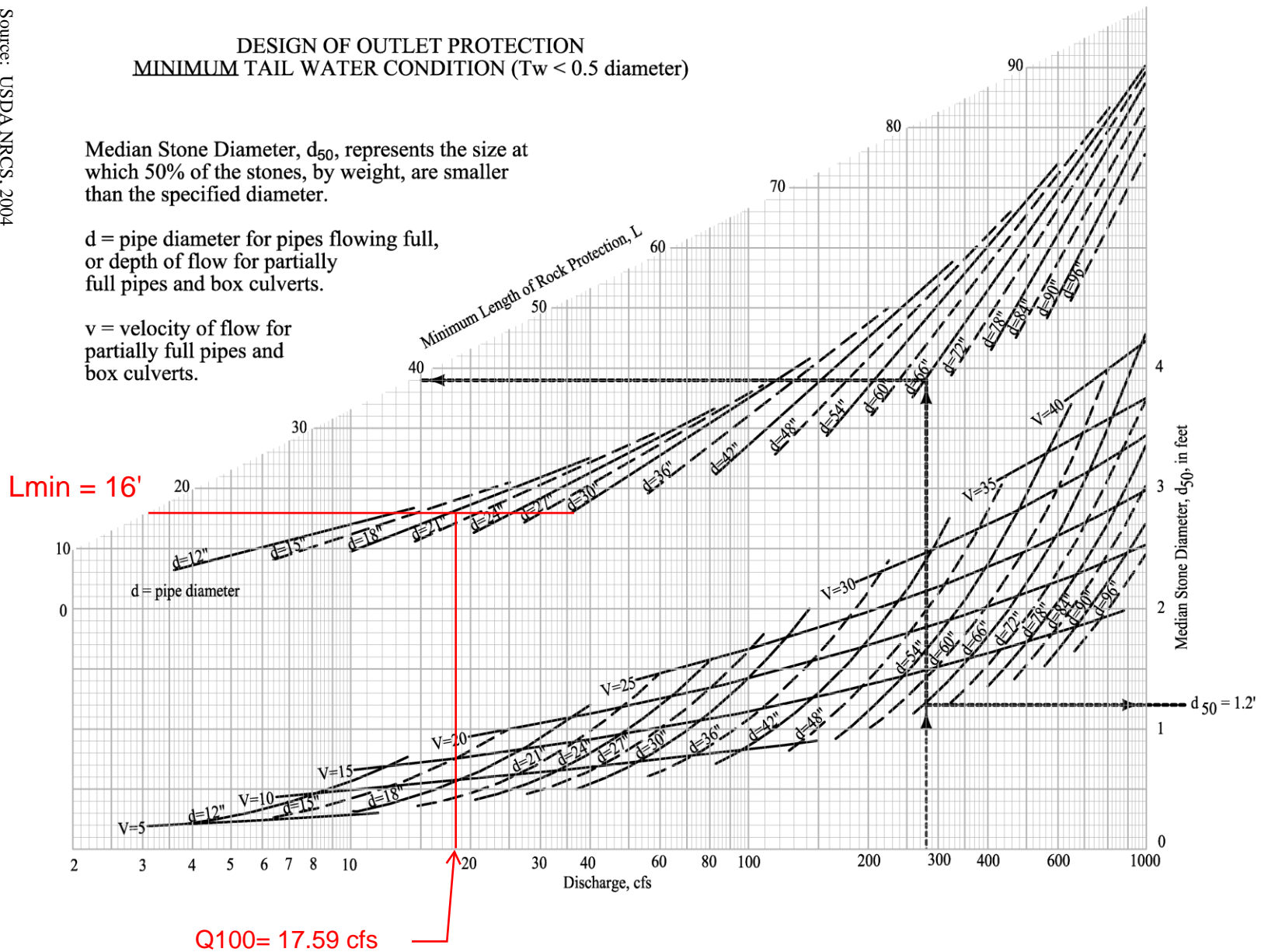


Figure 7E-10.03: Design of Outlet Protection, Minimum Tail water Condition

ST-4 : 18" APRON

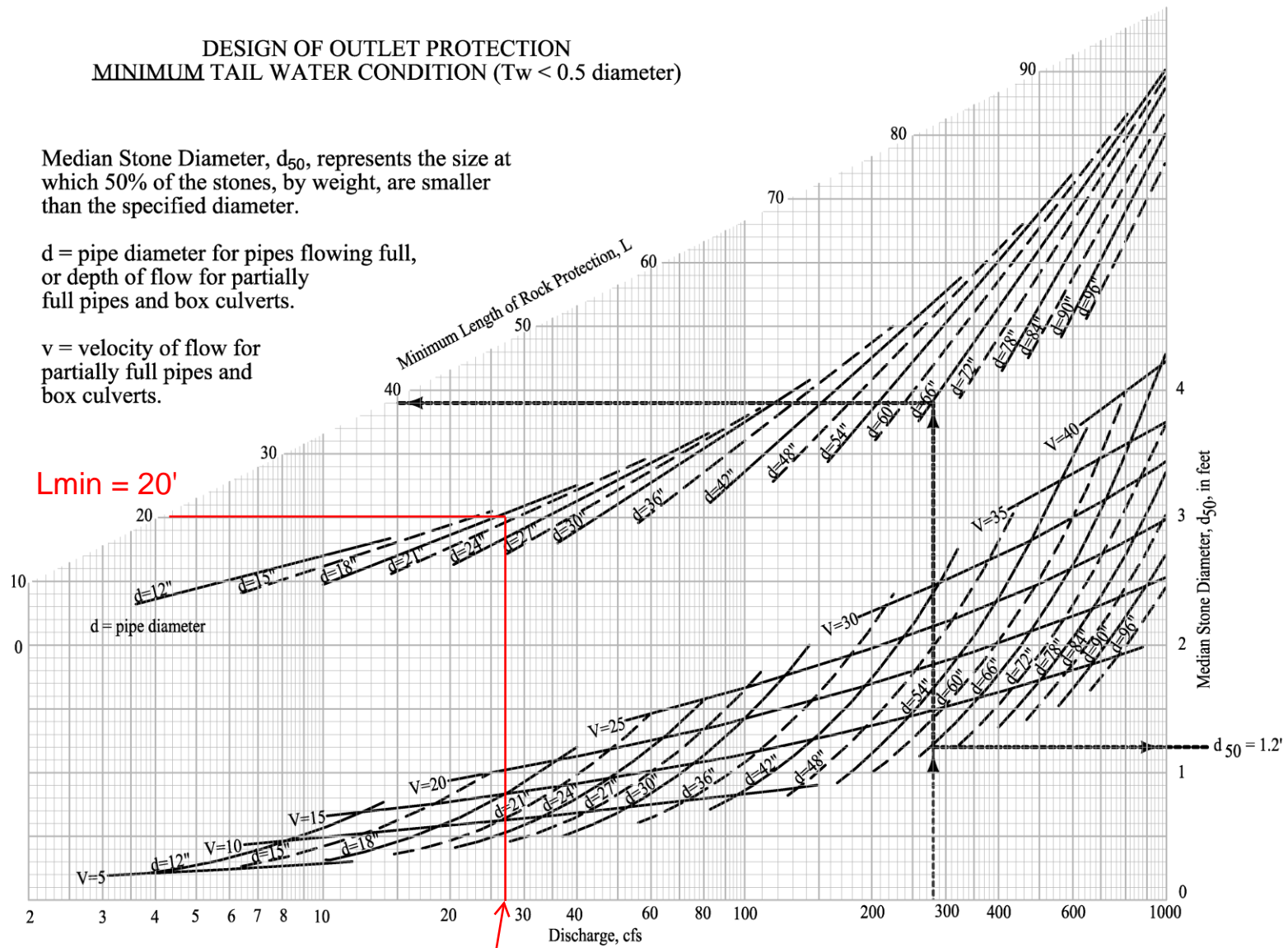
Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.



$Q_{100} = 27.13$ cfs

$L_{min} = 20'$

d = pipe diameter

Discharge, cfs

Median Stone Diameter, d_{50} , in feet

Minimum Length of Rock Protection, L

Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition

ST-21 : 12" APRON

Source: USDA NRCS, 2004

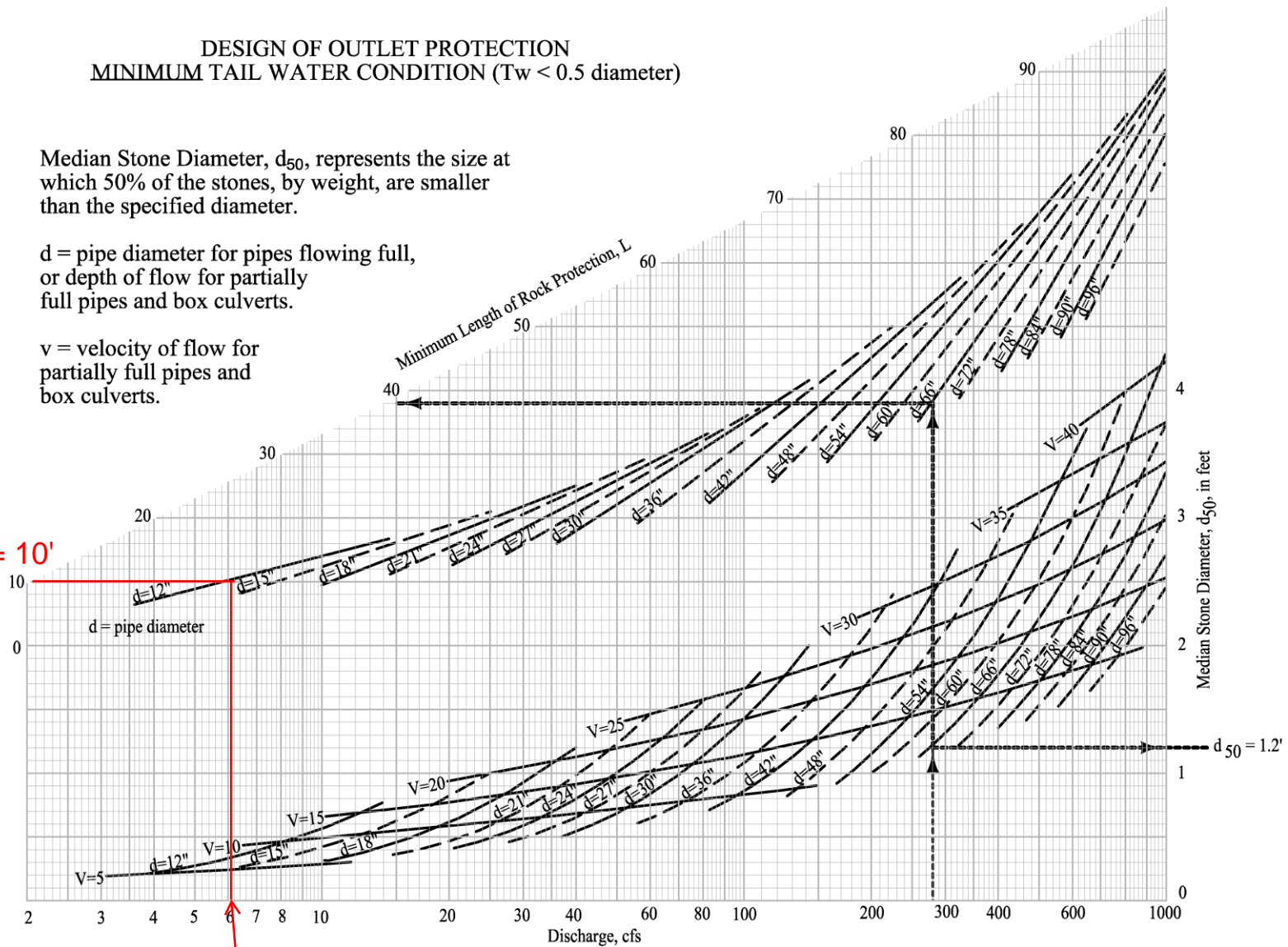
DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.

$L_{min} = 10'$



$Q_{100} = 6.07$ cfs

ST-23 : 18" APRON

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.

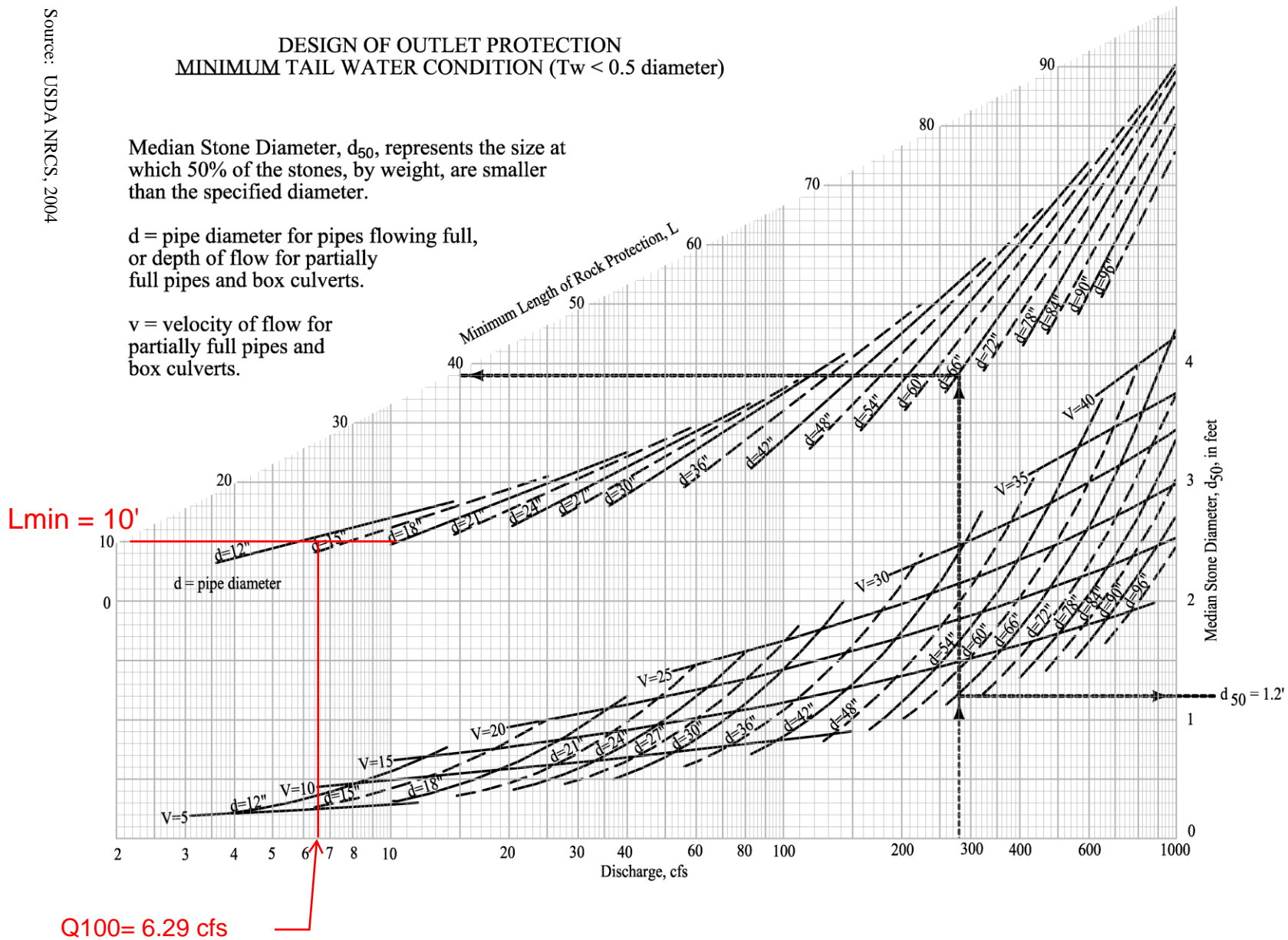


Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition

ST-30 : 12" APRON

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.

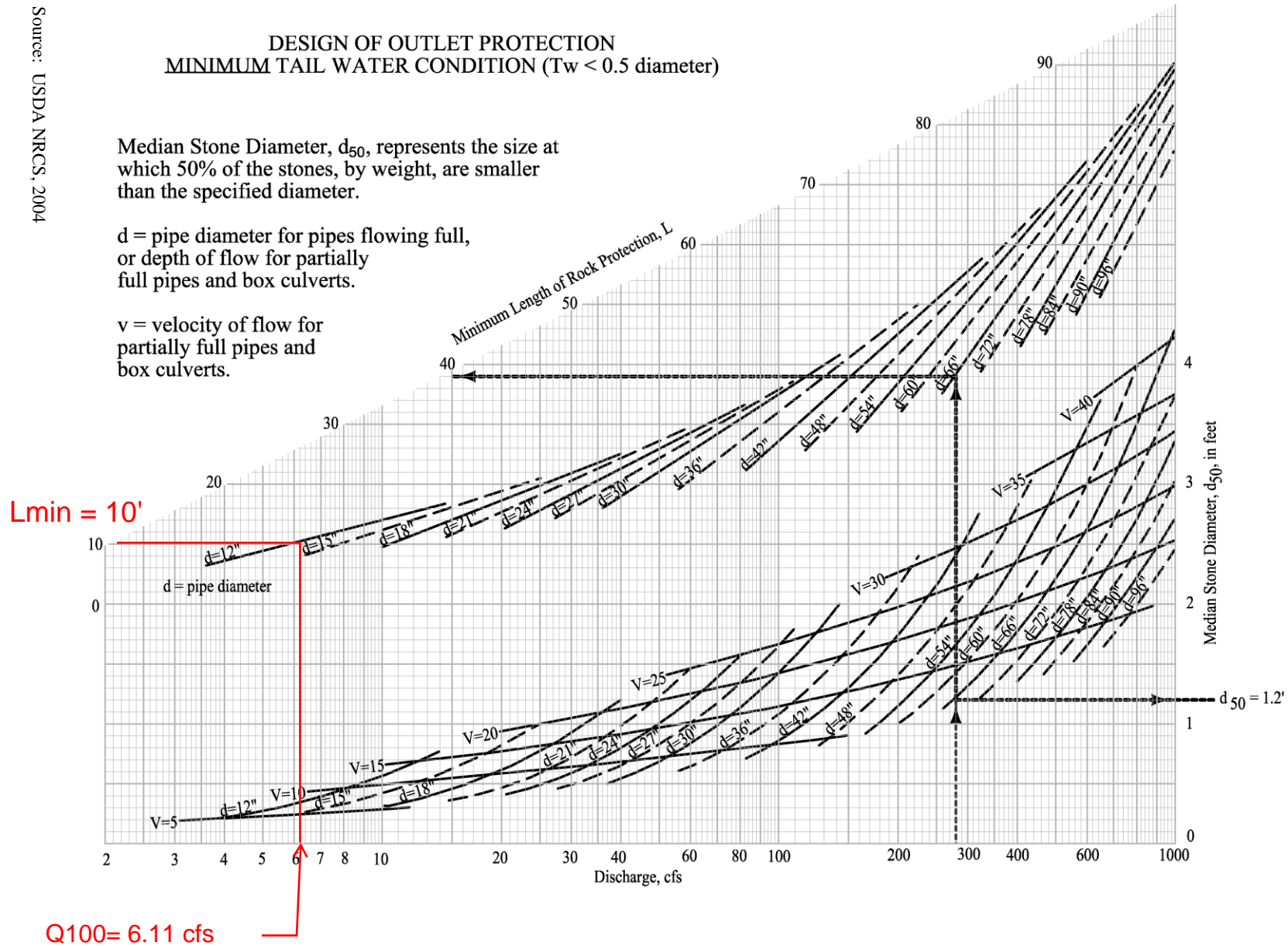


Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition

ST-32 : 15" APRON

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.

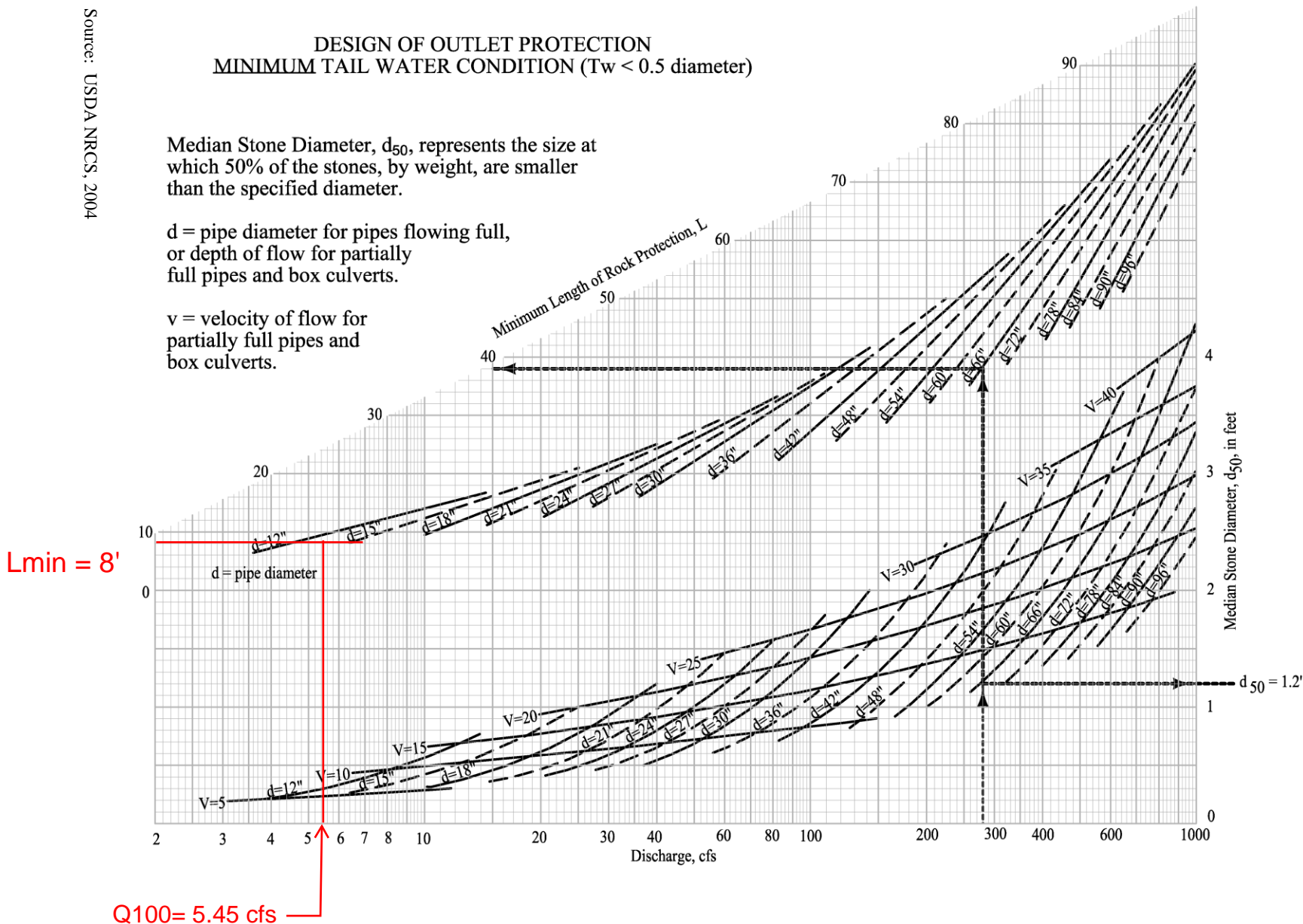


Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition

ST-36 : 12" APRON

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.

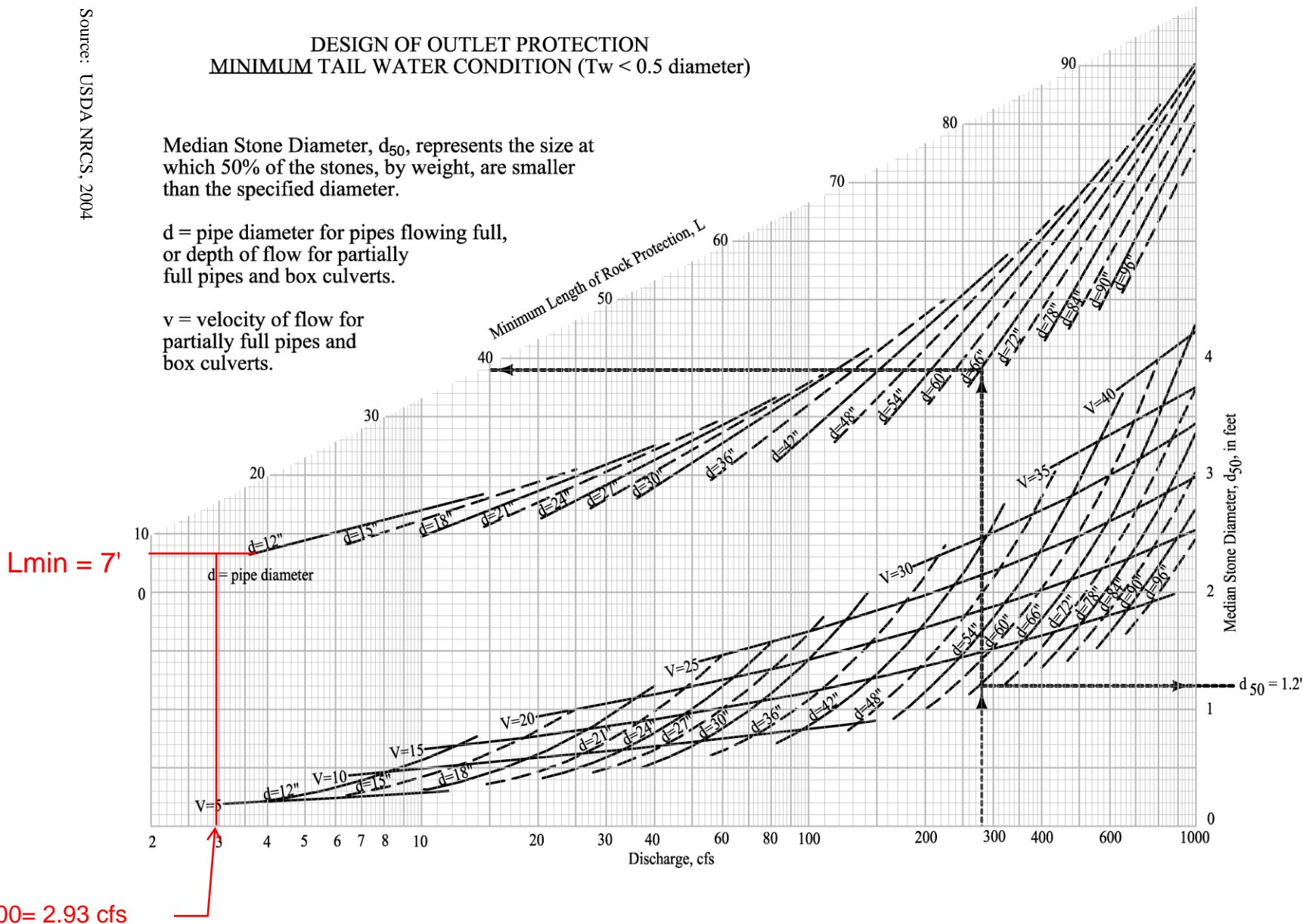


Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition

$Q_{100} = 2.93$ cfs

ST-38 : 15" APRON

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MINIMUM TAIL WATER CONDITION ($T_w < 0.5$ diameter)

Median Stone Diameter, d_{50} , represents the size at which 50% of the stones, by weight, are smaller than the specified diameter.

d = pipe diameter for pipes flowing full, or depth of flow for partially full pipes and box culverts.

v = velocity of flow for partially full pipes and box culverts.

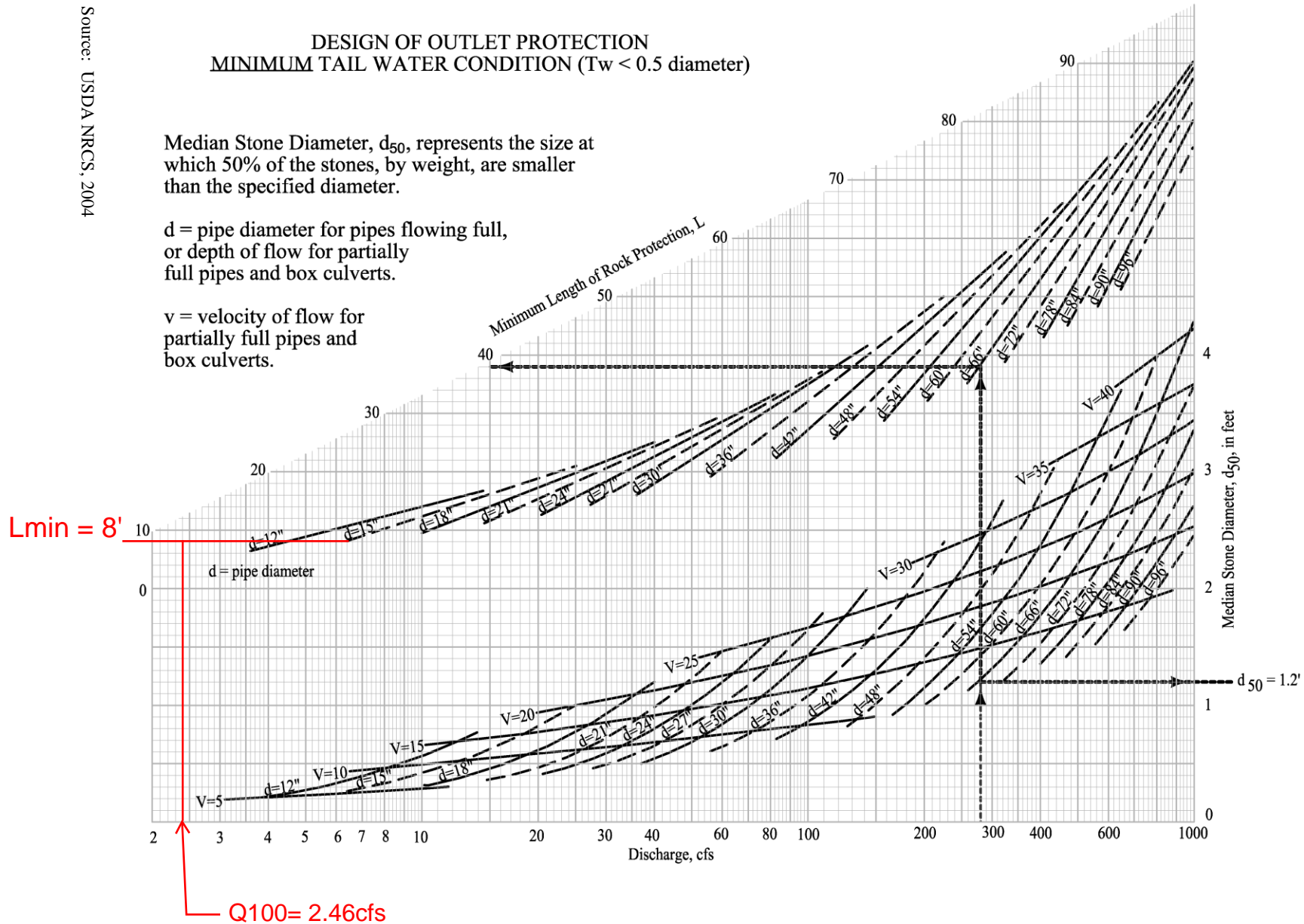
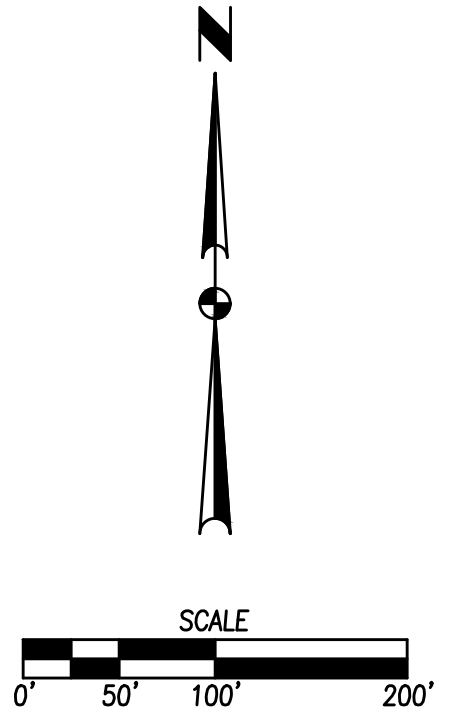
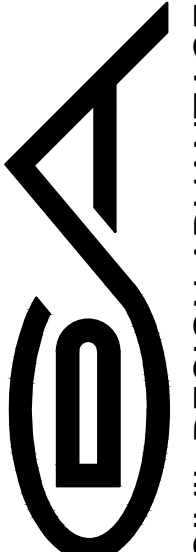


Figure 7E-10.03: Design of Outlet Protection, Minimum Tailwater Condition

FILE: H:\2022\2211760\DWG\2211760-SWAP.DWG
COMMENT: SWAP.DWG
PLOT: 1/4/2024 5:03 PM
PLOT BY: RANDON HUBER TECH



DATE	
REVISIONS	
4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400	
ENGINEER:	TECH:
 CIVIL DESIGN ADVANTAGE	
POLK CITY, IOWA	
BIG CREEK RIDGE SWALE CAPACITY	
1	1
2211.760	



PROJECT: Big Creek Ridge Plat 1 JOB NO. 2211.760 Page of Pages

SUBJECT: Swale Capacity DATE: 01/04/24 COMP. BY: BDH OK'D BY:

Swale #1 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.03 - Channel with grass, some weeds
 Left Slope, R = 4 :1
 Bottom Width, w = 5 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.1 feet
 Depth Increment = 0.01 feet

Depth d, feet	Wetted Perimeter P _w , feet	Flow Area a, feet ²	Hydraulic Radius R, feet	Channel Capacity Q, cfs	Flow Velocity v, ft/sec
0.1	5.82	0.54	0.09	0.77	1.43
0.11	5.91	0.60	0.10	0.91	1.52
0.12	5.99	0.66	0.11	1.06	1.61
0.13	6.07	0.72	0.12	1.21	1.69
0.14	6.15	0.78	0.13	1.37	1.77
0.15	6.24	0.84	0.13	1.55	1.84
0.16	6.32	0.90	0.14	1.73	1.91
0.17	6.40	0.97	0.15	1.92	1.98
0.18	6.48	1.03	0.16	2.11	2.05
0.19	6.57	1.09	0.17	2.32	2.12
0.2	6.65	1.16	0.17	2.54	2.19
0.21	6.73	1.23	0.18	2.76	2.25
0.22	6.81	1.29	0.19	2.99	2.31

<----- Q100=2.98 cfs

Design Equations:

$$P_w = w + [d^2 + (dR)^2]^{1/2} + [d^2 + (dL)^2]^{1/2}$$

$$a = wd + d^2(R+L)/2$$

$$R = a/P_w$$

$$Q = \frac{1.486aR^{2/3}s^{1/2}}{n}$$

$$v = Q/a$$



PROJECT: Big Creek Ridge Plat 1 JOB NO. 2211.760 Page of Pages

SUBJECT: Swale Capacity DATE: 01/04/24 COMP. BY: BDH OK'D BY:

Swale #2 Channel Capacity:

Channel Slope, s = 2.90 %
 Manning's n = 0.03 - Channel with grass, some weeds
 Left Slope, R = 4 :1
 Bottom Width, w = 5 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.2 feet
 Depth Increment = 0.01 feet

Depth d, feet	Wetted Perimeter P _w , feet	Flow Area a, feet ²	Hydraulic Radius R, feet	Channel Capacity Q, cfs	Flow Velocity v, ft/sec
0.2	6.65	1.16	0.17	3.06	2.63
0.21	6.73	1.23	0.18	3.32	2.71
0.22	6.81	1.29	0.19	3.60	2.79
0.23	6.90	1.36	0.20	3.89	2.86
0.24	6.98	1.43	0.20	4.19	2.93
0.25	7.06	1.50	0.21	4.50	3.00
0.26	7.14	1.57	0.22	4.82	3.07
0.27	7.23	1.64	0.23	5.16	3.14
0.28	7.31	1.71	0.23	5.50	3.21
0.29	7.39	1.79	0.24	5.85	3.27
0.3	7.47	1.86	0.25	6.21	3.34
0.31	7.56	1.93	0.26	6.58	3.40
0.32	7.64	2.01	0.26	6.96	3.46

-----> Q100=4.61 cfs

Design Equations:

$$P_w = w + [d^2 + (dR)^2]^{1/2} + [d^2 + (dL)^2]^{1/2}$$

$$a = wd + d^2(R+L)/2$$

$$R = a/P_w$$

$$Q = \frac{1.486aR^{2/3}s^{1/2}}{n}$$

$$v = Q/a$$



PROJECT: Big Creek Ridge Plat 1 JOB NO. 2211.760 Page of Pages

SUBJECT: Swale Capacity DATE: 01/04/24 COMP. BY: BDH OK'D BY:

Swale #3 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.03 - Channel with grass, some weeds
 Left Slope, R = 4 :1
 Bottom Width, w = 5 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.2 feet
 Depth Increment = 0.01 feet

Depth d, feet	Wetted Perimeter P _w , feet	Flow Area a, feet ²	Hydraulic Radius R, feet	Channel Capacity Q, cfs	Flow Velocity v, ft/sec
0.2	6.65	1.16	0.17	2.54	2.19
0.21	6.73	1.23	0.18	2.76	2.25
0.22	6.81	1.29	0.19	2.99	2.31
0.23	6.90	1.36	0.20	3.23	2.38
0.24	6.98	1.43	0.20	3.48	2.44
0.25	7.06	1.50	0.21	3.74	2.49
0.26	7.14	1.57	0.22	4.01	2.55
0.27	7.23	1.64	0.23	4.28	2.61
0.28	7.31	1.71	0.23	4.56	2.66
0.29	7.39	1.79	0.24	4.86	2.72
0.3	7.47	1.86	0.25	5.16	2.77
0.31	7.56	1.93	0.26	5.46	2.82
0.32	7.64	2.01	0.26	5.78	2.88

←----- Q100=4.23 cfs

Design Equations:

$$P_w = w + [d^2 + (dR)^2]^{1/2} + [d^2 + (dL)^2]^{1/2}$$

$$a = wd + d^2(R+L)/2$$

$$R = a/P_w$$

$$Q = \frac{1.486aR^{2/3}s^{1/2}}{n}$$

$$v = Q/a$$



PROJECT: Big Creek Ridge Plat 1 JOB NO. 2211.760 Page of Pages

SUBJECT: Swale Capacity DATE: 01/04/24 COMP. BY: BDH OK'D BY:

Swale #4 Channel Capacity:

Channel Slope, s = 2.15 %
 Manning's n = 0.03 - Channel with grass, some weeds
 Left Slope, R = 4 :1
 Bottom Width, w = 5 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.4 feet
 Depth Increment = 0.01 feet

Depth d, feet	Wetted Perimeter P _w , feet	Flow Area a, feet ²	Hydraulic Radius R, feet	Channel Capacity Q, cfs	Flow Velocity v, ft/sec
0.4	8.30	2.64	0.32	8.94	3.38
0.41	8.38	2.72	0.32	9.34	3.43
0.42	8.46	2.81	0.33	9.76	3.48
0.43	8.55	2.89	0.34	10.19	3.53
0.44	8.63	2.97	0.34	10.62	3.57
0.45	8.71	3.06	0.35	11.06	3.62
0.46	8.79	3.15	0.36	11.52	3.66
0.47	8.88	3.23	0.36	11.98	3.70
0.48	8.96	3.32	0.37	12.45	3.75
0.49	9.04	3.41	0.38	12.93	3.79
0.5	9.12	3.50	0.38	13.42	3.83
0.51	9.21	3.59	0.39	13.92	3.88
0.52	9.29	3.68	0.40	14.43	3.92

←----- Q100=9.67 cfs

Design Equations:

$$P_w = w + [d^2 + (dR)^2]^{1/2} + [d^2 + (dL)^2]^{1/2}$$

$$a = wd + d^2(R+L)/2$$

$$R = a/P_w$$

$$Q = \frac{1.486aR^{2/3}s^{1/2}}{n}$$

$$v = Q/a$$



PROJECT: Big Creek Ridge Plat 1 JOB NO. 2211.760 Page of Pages

SUBJECT: Swale Capacity DATE: 01/04/24 COMP. BY: BDH OK'D BY:

Swale #5 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.03 - Channel with grass, some weeds
 Left Slope, R = 4 :1
 Bottom Width, w = 5 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.2 feet
 Depth Increment = 0.01 feet

Depth d, feet	Wetted Perimeter P _w , feet	Flow Area a, feet ²	Hydraulic Radius R, feet	Channel Capacity Q, cfs	Flow Velocity v, ft/sec
0.2	6.65	1.16	0.17	2.54	2.19
0.21	6.73	1.23	0.18	2.76	2.25
0.22	6.81	1.29	0.19	2.99	2.31
0.23	6.90	1.36	0.20	3.23	2.38
0.24	6.98	1.43	0.20	3.48	2.44
0.25	7.06	1.50	0.21	3.74	2.49
0.26	7.14	1.57	0.22	4.01	2.55
0.27	7.23	1.64	0.23	4.28	2.61
0.28	7.31	1.71	0.23	4.56	2.66
0.29	7.39	1.79	0.24	4.86	2.72
0.3	7.47	1.86	0.25	5.16	2.77
0.31	7.56	1.93	0.26	5.46	2.82
0.32	7.64	2.01	0.26	5.78	2.88

<----- Q100=3.10 cfs

Design Equations:

$$P_w = w + [d^2 + (dR)^2]^{1/2} + [d^2 + (dL)^2]^{1/2}$$

$$a = wd + d^2(R+L)/2$$

$$R = a/P_w$$

$$Q = \frac{1.486aR^{2/3}s^{1/2}}{n}$$

$$v = Q/a$$



PROJECT: Big Creek Ridge Plat 1 JOB NO. 2211.760 Page of Pages

SUBJECT: Swale Capacity DATE: 01/04/24 COMP. BY: BDH OK'D BY:

Swale #6 Channel Capacity:

Channel Slope, s = 2.03 %
 Manning's n = 0.03 - Channel with grass, some weeds
 Left Slope, R = 4 :1
 Bottom Width, w = 5 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.5 feet
 Depth Increment = 0.01 feet

Depth d, feet	Wetted Perimeter P _w , feet	Flow Area a, feet ²	Hydraulic Radius R, feet	Channel Capacity Q, cfs	Flow Velocity v, ft/sec
0.5	9.12	3.50	0.38	13.04	3.73
0.51	9.21	3.59	0.39	13.53	3.77
0.52	9.29	3.68	0.40	14.02	3.81
0.53	9.37	3.77	0.40	14.52	3.85
0.54	9.45	3.87	0.41	15.04	3.89
0.55	9.54	3.96	0.42	15.56	3.93
0.56	9.62	4.05	0.42	16.09	3.97
0.57	9.70	4.15	0.43	16.63	4.01
0.58	9.78	4.25	0.43	17.18	4.05
0.59	9.87	4.34	0.44	17.73	4.08
0.6	9.95	4.44	0.45	18.30	4.12
0.61	10.03	4.54	0.45	18.88	4.16
0.62	10.11	4.64	0.46	19.46	4.20

----- Q100=16.45 cfs

Design Equations:

$$P_w = w + [d^2 + (dR)^2]^{1/2} + [d^2 + (dL)^2]^{1/2}$$

$$a = wd + d^2(R+L)/2$$

$$R = a/P_w$$

$$Q = \frac{1.486aR^{2/3}s^{1/2}}{n}$$

$$v = Q/a$$

Minnesota TR-3. Culvert OUTLET Protection for Outlets at Grade			
			v.2-2014
Project:	Big Creek Ridge	Designed By: BDH	Date: 12/11/2023
Location:	Polk City, IA	Checked By:	Date:

INPUTS

Is this a cantilevered outlet (y/n) **n** proceed with this spreadsheet

Q	17.59	cfs	(culvert capacity/design discharge)
Tw	0.25	ft	(from waterway calculations, see definition below)
d _o	2.5	ft	(diameter of circular culvert)
Alternative <u>or</u> depth for C factor	2.00	FT	(depth of scour hole - alternative 2)
C	0.0099		(constant for alternative 1, 2, or 3 of MN TR-3)

OUTPUTS

D ₅₀	6.42	in	(Riprap)
Riprap Thickness	16	in	(min. 12 inches)
L1 OR 2	N/A	ft	for ALT. 1 Length of protection
W1 OR 2	N/A	ft	for ALT. 1 Width of protection
Depth	2.0	ft	for ALT. 2 Depth of scour hole selected
L	N/A	ft	for ALT. 3 Length of protection

Rock Gradation				
Size of Stone, inches			Percent of total weight smaller than the given size	
10	to	13	100	
8	to	12	85	
6	to	10	50	
2	to	3	15	

Alternatives: Refer to Figures 3-1, 3-2, and 3-3 for the geometry for Alternatives 1, 2, and 3.

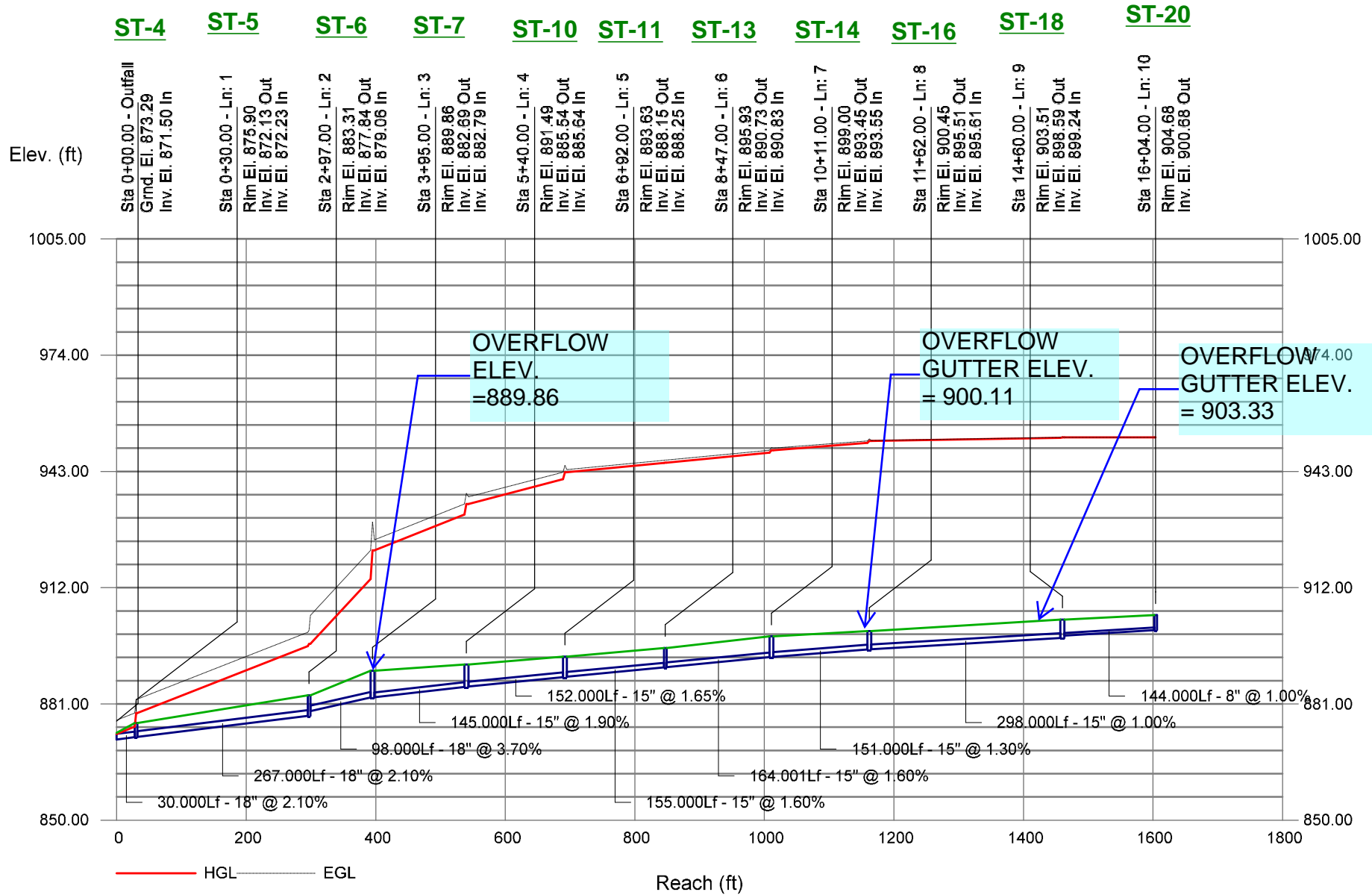
1 - Horizontal blanket for no defined channel below outlet, Fig 3-1
 2 - Preformed scour hole, Fig 3-2
 3 - Lined channel expansion for defined downstream channel, Fig 3-3

Equations

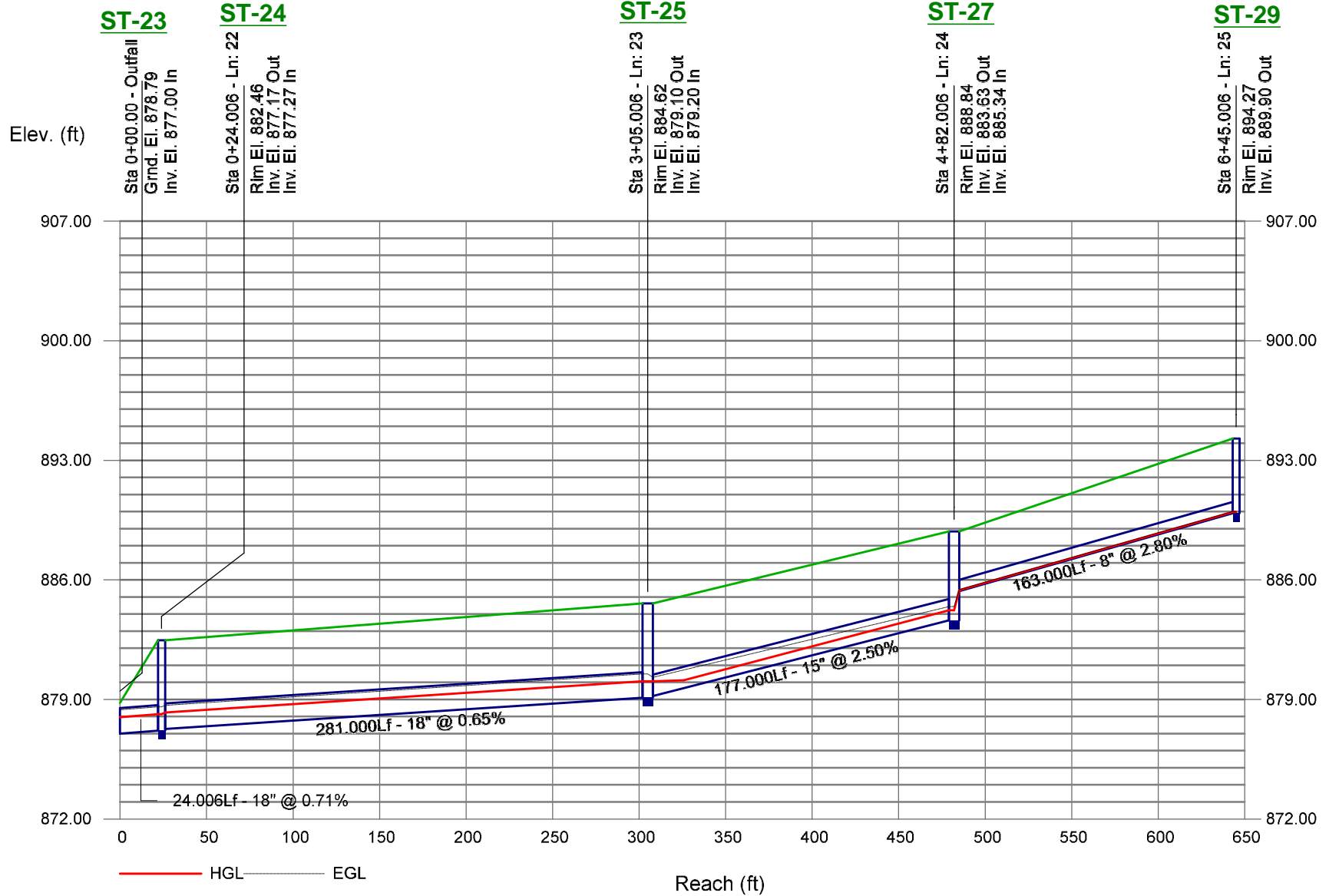
$$D_{50} = \frac{C}{Tw} \left[\frac{Q}{d_o} \right]^{4/3}$$

D ₅₀	median stone size (ft)
C	constant used for alternatives
Q	design discharge (cfs)
d _o	pipe diameter (ft)
S	depth of scour hole (ft) (0.5*d _o - 1.0*d _o)
D50s	mean particle diameter of the soil (ft)
Tw	tailwater depth above the invert of the culvert (ft)

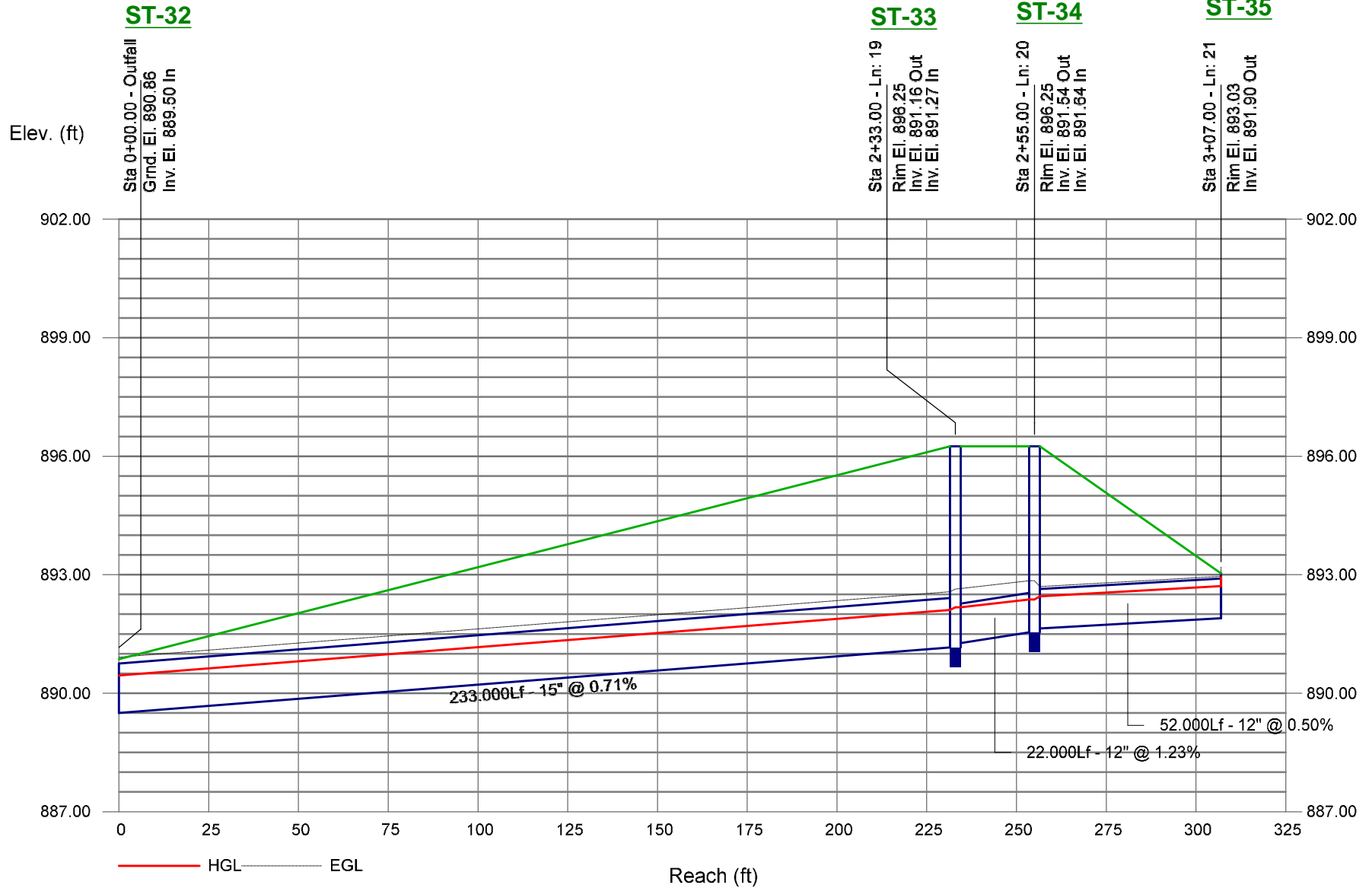
**100-YEAR STORM EVENT HGL PROFILE
ST-4 THROUGH ST-20**



100-YEAR STORM EVENT HGL PROFILE ST-23 THROUGH ST-29



100-YEAR STORM EVENT HGL PROFILE
ST-32 THROUGH ST-35



DEVELOPMENT AGREEMENT

This Development Agreement, including Exhibits, each of which is attached hereto and by this reference made a part hereof (the Development Agreement and Exhibits are together hereinafter called the “Agreement”), is made on or as of the ____ day of _____, 2024, by and between the City of Polk City, Iowa (hereinafter called “City”), a municipal corporation, 112 3rd Street, Polk City, Iowa 50226, and BCR, LLC (hereinafter called “Developer”), an Iowa limited liability company, 17389 Berkshire Parkway, Clive, Iowa 50325.

Whereas, Developer owns certain real property located within the corporate limits of the City and legally described on Exhibit “A” (attached hereto the “Property”) which it desires to develop; and

Whereas, Developer acknowledges that certain public improvements need to be constructed to benefit the Property; and

Whereas, the City and Developer desire to set forth their mutual agreement and understanding concerning the terms and conditions of the development of the Property.

Now, therefore, in consideration of the premises and the mutual obligations of the parties hereto, each of them does hereby agree as follows:

Article I.

1.1 Developer shall be responsible for the cost of installing the future 3.5 feet Curb and Gutter Section along the entire frontage of the Property. Developer shall be responsible for 935 linear feet of said improvements. The Property Owner of the unbuildable Outlot ‘Z’ as shown on the approved Preliminary Plat for Big Creek Ridge Plat 1 shall be responsible for 571 linear feet of said improvements. Estimated cost is \$60.50 per linear foot, with a total for Big Creek Plat 1 of \$56,567.50 from the Developer and \$34,545.50 deferred until Outlot ‘Z’ is replatted as a buildable lot.

1.2 Developer shall pay a sanitary sewer hookup fee of \$2,820 per acre. Sanitary Sewer hookup fee for Outlot ‘Z’ shall be deferred until Outlot Z is redeveloped and shall be subject to same hookup fee. (\$130,199.40, \$8,460.00 deferred).

1.3 Developer requests to pay a fee in lieu of land dedication to meet the required parkland dedication fee for 23 single-family residential lots, based on the approved Preliminary plat for Big Creek Ridge. Based on approved Preliminary Plat, Developer is obligated to provide 0.53 acres of parkland in accordance with Polk City Municipal Code, with a fair market value of \$55,000/acre, which is equal to \$29,150.00. Parkland dedication fees, if any, for Outlot ‘Z’ shall be the responsibility of the property owner at the time said parcel is replatted as a buildable lot and

shall not be subject of the three-lot minimum since this outlot is part of the Big Creek Ridge subdivision.

1.4 The City shall reimburse the Developer for a portion of the construction costs of the installation of sanitary sewer between the connection point to existing sanitary sewer and the installation of the trenched sewer with the proposed subdivision. Reimbursement amount shall be \$160,000.00 and will be provided in the form of credit against other required developer fees.

1.5 All fees attributable to Developer, less applicable credits pursuant to Section 1.4 of this Agreement, shall be paid in full prior to approval of the Final Plat for Big Creek Ridge Plat 1. Payment for all fees attributable to Outlot 'Z', shall be paid in full by the property owner of said Outlot at the time of replatting said parcel into a buildable lot.

Article II.

Section 2.01. Grant of Easements. Developer agrees to grant and convey to the City, without additional compensation, all permanent and temporary easements that are reasonably necessary and in a form approved by the City.

Article III.

Section 3.01. Petition and Waiver. In the event that Developer does not comply with the terms of Article I, the City shall cause any required improvements to be constructed in accordance with the Preliminary Plat (as it may be modified by the Final Plat).

For purpose of this Agreement, the City may elect to contract for the construction of said improvements as part of any contract for a public improvement project entered into prior to the receipt of this instrument as authorized by law.

In consideration of the execution by the City of this Agreement and the construction of the improvements, the undersigned hereby expressly waives each and every question of jurisdiction, benefit and need, the intention of the property owner being to authorize and direct said City to construct the improvements for the benefit of the Property. Provided, however, that except for the 25% rule, the property owner shall otherwise have and retain all the rights to notice and hearing of any other owner to be benefited by the improvements and to all other legal formalities as required by the laws of Iowa to be observed by the City prior to the adoption of a final resolution of necessity for assessing the expense of the improvements against private property.

It is further agreed that when said improvements have been constructed in accordance with the Preliminary Plat (as it may be modified by the Final Plat) and if the City assesses the cost of the improvements by special assessment, that the City shall make assessments against the property proportionately, and that said assessments so made shall be a lien upon the Property, and the undersigned hereby agrees to pay the amount that is assessed against said Property, and said assessment shall have the same legal force and effect as if all the legal formalities provided by law in such cases had been fully and faithfully performed and observed, subject only to the rights of the property owner reserved herein. The undersigned property owner hereby expressly waives

every objection to said final assessment, any limitation of the amount thereof as a percentage of valuation and any right to defer or postpone payment of the assessment. Said assessment shall be paid by the undersigned within the time provided by statute for the payment of such special assessments for such improvements. The undersigned, if entitled to agricultural deferment under the Code of Iowa, hereby waives its right to such deferral.

The undersigned hereby authorizes the City Council to pass any resolution requisite or necessary to order or secure said improvements, to provide for the construction of the same and to make the assessments herein provided for, subject only to the right of the property owner reserved herein, and any such resolution may contain recitals that said improvements are ordered or made by the Council without petition of the property owner; without in any way qualifying this petition or releasing the property owner from obligations to pay the assessments levied against its Property for the cost of said improvements and to issue improvement bonds payable out of said assessment as herein provided.

The undersigned warrants that the Property is free and clear of all liens and encumbrances other than for ordinary taxes, except for such liens as are by lienholders hereinafter listed and designated as signers of this petition and waiver, who by execution of this Agreement consent to the subordination of their lien to the special assessment liens herein described. The property owner further agrees to subordinate the Property to the terms of this petition and waiver, and upon failure to do so, to pay the full amount of the assessment on demand. Each lienholder, designated below, by execution of this petition and waiver, agrees and consents that its lien shall be subordinated to the lien of the assessments levied pursuant hereto.

The undersigned agrees that this petition and waiver shall be effective and binding from and after the approval hereof by resolution of the City Council and shall be binding on any and all transferees and assignees.

Article IV.

Section 4.01. Binding Upon Successors. It is intended that this Agreement shall run with the land and that it shall, in any event and without regard to technical classifications or designations, legal or otherwise, be binding for the benefit and in favor of, and enforceable by the City against Developer, its successors and assigns, and every successor-in-interest to any of the Property or any part thereof, or any interest thereof, and any party in possession or occupancy of any of the Property or any part thereof.

Section 4.02. Warranty of Title. The undersigned hereby covenants and warrants to the City that it is the sole owner of the Property.

Section 4.03. Interpretation of Contract. This Agreement shall be construed in accordance with the laws of the State of Iowa.

Section 4.04. Counterparts. This Agreement is executed in two counterparts, each of which shall constitute one and the same instrument. A copy of this Agreement, including all Exhibits, shall be maintained in the office of the City Clerk of the City.

In Witness Whereof, the parties have caused this Agreement to be duly executed on or as of the date first above written.

ATTEST:

City of Polk City, Iowa

By: _____
Steve Karsjen, Mayor

By: _____
Jenny Coffin, City Clerk

STATE OF IOWA, POLK COUNTY, ss:

On this ____ day of _____, 2024, before me the undersigned, a Notary Public in and for the State of Iowa, personally appeared Steve Karsjen and Jenny Coffin, to me personally known, who, being by me duly sworn, did say that they are the Mayor and City Clerk, respectively, of the City of Polk City, Iowa; that the seal affixed to the foregoing instrument to which this is attached is the corporate seal of the City; that the instrument was signed and sealed on behalf of the City by authority of its City Council, as contained in Ordinance Resolution No. _____ passed by resolution of the City Council under Roll Call No. _____ of the City Council on the ____ day of _____, 2024; and that Steve Karsjen and Jenny Coffin, as such officers, acknowledged the execution of the instrument to be the voluntary act and deed of the City, by it and by them voluntarily executed.

Notary Public in and for the State of Iowa

BCR, LLC

By: _____
Name: _____
Title: _____

STATE OF IOWA, COUNTY OF POLK, ss:

On this ____ day of _____, 2024, before me, the undersigned, a Notary Public in and for the said State, personally appeared _____, to me personally known, who being by me duly sworn, did say that he is the _____ of the limited liability company executing the within and foregoing instrument to which this is attached; that the instrument was signed on behalf of the limited liability company; and that _____ acknowledged the execution of the foregoing instrument to be the voluntary act and deed, by it and by them voluntarily executed.

Notary Public in and for the State of Iowa

LENDER:

By: _____ By: _____

STATE OF IOWA, COUNTY OF POLK, ss:

On this ____ day of _____, 2024, before me, the undersigned, a Notary Public in and for the said State, personally appeared _____, to me personally known, who being by me duly sworn, did say that he is the _____ of the corporation executing the within and foregoing instrument to which this is attached; that no seal has been procured by the corporation; that the instrument was signed on behalf of the corporation by authority of its Board of Directors; and that _____, as said officer, acknowledged the execution of the foregoing instrument to be the voluntary act and deed of the corporation, by it and by him/her voluntarily executed.

Notary Public in and for the State of Iowa

Exhibit "A"
Property

THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 80 NORTH, RANGE 25 WEST OF THE 5TH P.M., POLK COUNTY, IOWA, EXCEPT THE NORTH 110 FEET OF THE WEST 100 FEET OF THE EAST 803.9 FEET AND EXCEPT LYING WESTERLY OF A LINE BEGINNING 1550 FEET NORTH OF THE SOUTHWEST CORNER ALONG THE WEST LINE OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1, THENCE EAST 100 FEET, THENCE SOUTH 275.7 FEET, THENCE EAST 250 FEET, THENCE SOUTH 500 FEET, THENCE SOUTHEASTERLY TO A POINT ON THE SOUTH LINE OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1 TO A POINT 840 FEET EAST OF THE SOUTHWEST CORNER OF THE SOUTHWEST CORNER OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1, ALL EXCEPT FOR PUBLIC HIGHWAY.

AND

A PLAT OF SURVEY FOR PARCEL 2023-53 RECORDED APRIL 27, 2023 IN BOOK 19457 PAGE 595 OF THE OFFICE OF THE POLK COUNTY RECORDER, BEING A PART OF THE NORTHWEST FRACTIONAL QUARTER OF THE NORTHWEST QUARTER OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE 5TH P.M., POLK COUNTY, IOWA.

Type of Document: DEVELOPMENT AGREEMENT

RETURN TO: Amy S. Beattie, Brick Gentry Law Firm, 6701 Westown Parkway,
Suite 100, West Des Moines, Iowa 50266, Telephone: 515-274-
1450

PREPARED BY: Amy S. Beattie, Brick Gentry Law Firm, 6701 Westown Parkway,
Suite 100, West Des Moines, Iowa 50266, Telephone: 515-274-
1450

TAXPAYER INFORMATON: BCR, LLC, 17389 Berkshire Parkway, Clive, Iowa 50324

Grantor(s):

Grantee(s):

Legal Description: See Exhibit "A" attached.

Book and Page Reference Numbers: Book _____, Page _____

RESOLUTION NO. 2024-35

A RESOLUTION APPROVING A DEVELOPMENT AGREEMENT BY AND BETWEEN THE CITY OF POLK CITY, IOWA AND BCR, LLC

WHEREAS, BCR, LLC (“Developer”) owns certain real property located within the corporate limits of the City and legally described as follows:

THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 80 NORTH, RANGE 25 WEST OF THE 5TH P.M., POLK COUNTY, IOWA, EXCEPT THE NORTH 110 FEET OF THE WEST 100 FEET OF THE EAST 803.9 FEET AND EXCEPT LYING WESTERLY OF A LINE BEGINNING 1550 FEET NORTH OF THE SOUTHWEST CORNER ALONG THE WEST LINE OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1, THENCE EAST 100 FEET, THENCE SOUTH 275.7 FEET, THENCE EAST 250 FEET, THENCE SOUTH 500 FEET, THENCE SOUTHEASTERLY TO A POINT ON THE SOUTH LINE OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1 TO A POINT 840 FEET EAST OF THE SOUTHWEST CORNER OF THE SOUTHWEST CORNER OF THE NORTHEAST FRACTIONAL QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 1, ALL EXCEPT FOR PUBLIC HIGHWAY.

AND

A PLAT OF SURVEY FOR PARCEL 2023-53 RECORDED APRIL 27, 2023 IN BOOK 19457 PAGE 595 OF THE OFFICE OF THE POLK COUNTY RECORDER, BEING A PART OF THE NORTHWEST FRACTIONAL QUARTER OF THE NORTHWEST QUARTER OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE 5TH P.M., POLK COUNTY, IOWA.

WHEREAS, the Developer is required to complete certain public improvements in accordance with the development of the Developer property; and

WHEREAS, the City of Polk City and BCR, LLC desire to outline their mutual agreement and understanding concerning the Developer’s obligations associated with the future platting of the Developer property as outlined in the Development Agreement attached hereto.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Polk City, Iowa, that the Development Agreement between the City of Polk City and BCR, LLC is hereby approved.

BE IT FURTHER RESOLVED that the execution of the Development Agreement by the Mayor and City Clerk is hereby authorized, and the Developer shall be responsible for recording the Development Agreement and returning the original to the City Clerk along with proof of recordation.

PASSED AND APPROVED the 25 day March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

RESOLUTION NO. 2024-36

A RESOLUTION APPROVING THE CONSTRUCTION DRAWINGS FOR BIG CREEK RIDGE PLAT 1

WHEREAS, Civil Design Advantage, LLC, on behalf of BCR, LLC, has submitted the Construction Drawings for Big Creek Ridge Plat 1; and

WHEREAS, said Construction Drawings appear to be in general conformance with Polk City's Subdivision Regulations and SUDAS; and

WHEREAS, it shall be the Developer's responsibility to obtain approval for all necessary permits prior to the start of construction, including the Iowa DNR permits for the NPDES Storm Water Discharge permit, Water Main Construction, and Sanitary Sewer Construction; and

WHEREAS, the Developer's Engineer remains solely responsible for their design and ensuring it is fully compliant with all applicable code requirements and permits; and

WHEREAS, the Developer's Engineer is also responsible for construction staking and ensuring all locations, grades and slopes are in conformance with said standards; and

WHEREAS, the City Engineer has reviewed said Construction Drawings for Public Improvements and recommended approval of same, subject to the provision and recordation of subject to the provision and recordation of a Development Agreement outlining the developer's and City's responsibilities for off-site improvements, parkland dedication, sanitary sewer hookup fees, and future improvements to E. Northside Drive.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa hereby accepts the recommendations of the City Engineer and deems it appropriate to approve the Construction Drawings for Big Creek Ridge Plat 1 subject to the provision and recordation of subject to the provision and recordation of a Development Agreement outlining the developer's and City's responsibilities for off-site improvements, parkland dedication, sanitary sewer hookup fees, and future improvements to E. Northside Drive.

PASSED AND APPROVED the 25 day March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

MEETING MINUTES
The City of Polk City
Planning and Zoning Commission
6:00 p.m., Monday, March 18, 2024

Polk City, Planning and Zoning Commission (P&Z) held a meeting at 6:00 p.m., on March 18, 2024 in City Hall Council Chambers.

The agenda was posted at the City Hall office as required by law.

These tentative minutes reflect all action taken at the meeting.

1. **Call to Order** | Vice Chair Vogel called the meeting to order at 6:00 p.m.
2. **Roll Call** | Hankins, Bowersox, Vogel, Triplet (via Zoom), Ohlfest, Pringnitz (via Zoom), Sires | In attendance
3. **Approval of Agenda**
MOTION: A motion was made by Bowersox and seconded by Ohlfest to approve the agenda.
MOTION CARRIED UNANIMOUSLY
4. **Approval of Meeting Minutes**
MOTION: A motion was made by Ohlfest and seconded by Sires to approve the P&Z Commission Meeting Minutes for February 19, 2024.
MOTION CARRIED UNANIMOUSLY
5. **Moeckly Rural Plat of Survey**
 - a) Connor Carleton, McClure Engineering provided an overview of the plat of survey
 - b) Travis Thornburgh, City Engineer provided a report
 - c) No public comments
 - d) **MOTION:** A motion was made by Hankins and seconded by Bowersox to recommend City Council approve the Plat of Survey subject to staff and engineering comments dated March 14, 2024
MOTION CARRIED UNANIMOUSLY
6. Engineering, Staff and Commission Members discussed in detail modifications of the R-2A zoning district to ensure inclusion of patio/garden homes. Engineering will bring final recommendations to the Commission in April for formal action.
7. **Reports & Particulars**
 - Council Member Vogel provided an update on the Budget process, and she reviewed the reduction of hours the Council made regarding the brush pile.
5. **Adjournment**
MOTION: A motion was made by Bowersox and seconded by Ohlfest to adjourn at 6:55 p.m.
MOTION CARRIED UNANIMOUSLY
Next Meeting Date – Monday April 15, 2024

Attest:

Jenny Coffin - City Clerk

MEETING MINUTES
The City of Polk City
Board of Adjustment
4:00 p.m., Thursday, March 21, 2024
City Hall

Polk City, Board of Adjustment (BOA) held a meeting at 4:00 p.m., on March 21, 2024. **In addition to these published tentative minutes, there also may be additional meeting notes on file with the Polk City staff that are public records and available upon request as provided by law. These tentative minutes reflect all action taken at the meeting.**

1. **Call to Order** | *BOA Member Bequeaith called the meeting to order at 4:00 p.m.*
2. **Roll Call** | Wilkins, Morse, Bequeaith | In attendance
McCann, Deason | Absent
3. **Variance Request for Reid Petersen 905 W Aspen Ridge Circle**
Reid Petersen addressed the Board with his request for a variance for the location of his fence.

City Building Official, Cody Olson provided the Board with zoning review notes

The Board discussed the request.

MOTION: A motion was made by Wilkins and seconded by Morse to grant the variance.
MOTION CARRIED UNANIMOUSLY

4. **Adjournment**
MOTION: A motion was made by Bequeaith and seconded by Morse to adjourn at 4:20 p.m.
MOTION CARRIED UNANIMOUSLY

Attest:

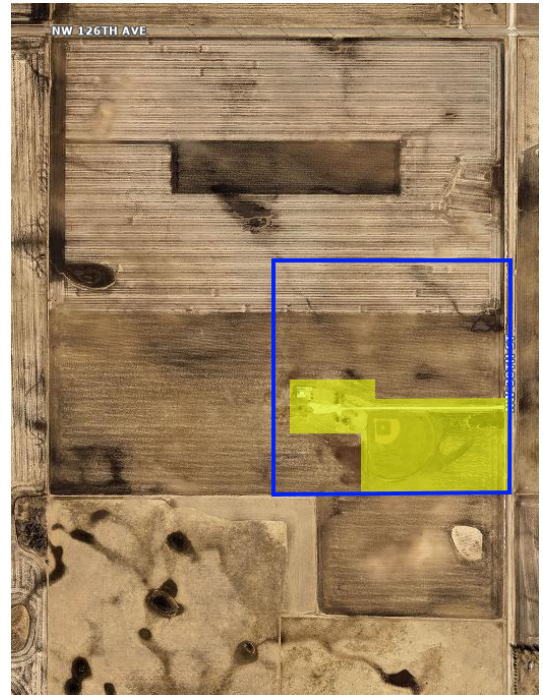
Jenny Coffin –City Clerk

PLAT OF SURVEY IN 2-MILE EXTRA-TERRITORIAL AREA

Date: March 22, 2024 Prepared by: Kathleen Connor
Travis D. Thornburgh, P.E.
Project: Moeckly Plat of Survey Project No.: 124.0264.01

GENERAL INFORMATION:

Applicant: Moeckly Family Farm, LLC
Owner: Moeckly Family Farm, LLC
Requested Action: Approval of P.O.S. for Parcel 2023-180
Location: 12292 NW 30th Street
Polk City, Iowa
Located South of NW 126th Avenue
On West Side of NW 30th Street
Parcel Size: 12.80 acres, net with 0.39 acres of Right of Way
Residual Parcel Size: 145.45, net
Current Zoning: Polk County – AG



PROJECT DESCRIPTION:

On behalf of the applicant, McClure has prepared a Rural Survey for the Moeckly Family Farm, LLC. property highlighted in blue on the aerial photo above. The property owners plan to split off a lot, defined in yellow above, on the east side of this parcel to separate the existing buildings and baseball field from the surrounding farm fields.

Polk County’s zoning for this approximately 158-acre property is AG – Agricultural, 145.51 acres of which will be defined as permanent as open space based on current zoning. Since the proposed 12.74-acre parcel exceeds the 10-acre minimum size in Polk City’s A-1 zoning district, the City’s equivalent zoning becomes A-1 Agricultural for review purposes. The setbacks shall need to meet or exceed Polk City’s A-1 requirements for lot size and width, including 200’ minimum width.

Polk City's amended Future Land Use Plan includes these parcels as light industrial (shown to the right). The Comprehensive Plan does not currently require dedication or construction of a trail on these parcels. Restrictions and redevelopment use will need to be considered should this lot be redeveloped.

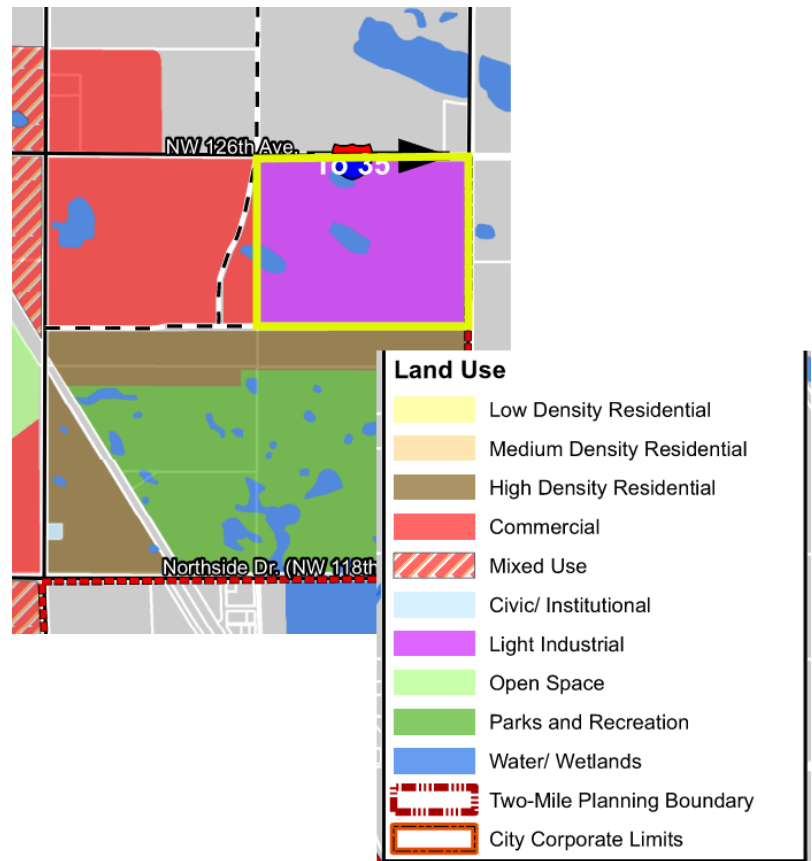
The property owner is aware that neither this parcel nor the residual parcel can be split the future without approval of a Plat of Subdivision.

The Major Streets Plan in Polk City's 2016 Comprehensive Plan identifies NW 126th Street as a minor arterial and identifies NW 30th Street as a local street. The Plat of Survey shows a future 33' half Right of Way along NW 30th Street, which will be dedicated to Polk City at no cost at such time as this parcel is annexed into the City.

The resulting parcel has one (1) existing gravel driveway access onto NW 30th Street. Parcel 2023-180 will not be permitted to construct additional accesses.

The Subdivision regulations require installation of a 5' wide public sidewalk along NW 30th Street. Staff recommends this sidewalk construction be deferred, provided the property owner signs the Petition and Waiver prepared by the City Attorney prior to Council approval of the plat.

Polk City Code requires any parcel of land being divided into two or more parcels to be a subdivision. However, since there are no public improvements associated with this land division, we recommend this requirement be waived, provided all review comments are addressed. The applicant should be aware that neither the subject parcel nor the remnant parcel can be split again via a Plat of Survey; a Plat of Subdivision will be required.



REVIEW COMMENTS:

The Plat of Survey (Rural Survey) has been revised to address all review comments.

RECOMMENDATION:

Staff and the Planning & Zoning Commission recommend approval of the Plat of Survey for Parcel 2023-180 on the Moeckly Family Farm, LLC. property, including waiving the City's requirements for a Minor Plat of Subdivision, and waiver of Polk City's fire hydrant coverage requirement subject to the following:

1. The property owner shall sign a Petition & Waiver for a 5' public sidewalk along NW 30th Street. The applicant shall be responsible for reimbursing the City of Polk City for recording fees and the City Clerk shall be responsible for recording the Petition & Waiver.
2. Payment to the City Clerk for the Application Fee and Engineering Review Fees.
3. Provision to the City Clerk of a signed copy of the Plat of Survey following approval by Polk County and recordation.

RURAL SURVEY POLK COUNTY, IOWA

INDEX LEGEND

CITY: N/A
COUNTY: POLK
STR: SECTION 32, T81N, R24W
ALIQ. PART: NE 1/4
PROPRIETOR: MOECKLY FAMILY FARM LLC
REQUESTED BY: MOECKLY FAMILY FARM LLC
SURVEYOR: PATRICK SHELQUIST
COMPANY: MCCLURE
RETURN TO: PATRICK SHELQUIST 1360 NW 121ST STREET, STE A CLIVE, IOWA 50325 / 515-964-1229

PROPRIETOR/APPLICANT:

MOECKLY FAMILY FARM LLC
4121 NW 110TH AVE
POLK CITY, IA 50226
ATTN: TYLER MOECKLY
PH: 515-681-5436
E: tmoeckly@hotmail.com

BASIS OF BEARING:

IARCS - ZONE 8

AREA SUMMARY PARCEL 2022-???:

12.80 ACRES TOTAL

-0.39 ROAD EASE

12.41 ACRES NET

LEGAL DESCRIPTION:

PARCEL 2023-180 BEING LOCATED IN THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 81 NORTH, RANGE 24 WEST OF THE 5TH P.M., POLK COUNTY, IOWA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE EAST QUARTER CORNER OF SAID SECTION 32; THENCE N00°18'27"E, ALONG THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32, A DISTANCE OF 517.22 FEET; THENCE S89°55'43"W, 772.41 FEET; THENCE N00°18'27"E, 117.05 FEET; THENCE S89°58'35"W, 474.93; THENCE S00°18'27"W, 290.94 FEET; THENCE N89°58'35"E, 416.41 FEET; THENCE S00°18'27"W, 348.95 FEET, TO A POINT ON THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 32; THENCE N89°58'35"E, ALONG SAID SOUTH LINE, 830.93 FEET, TO THE POINT OF BEGINNING.

DESCRIBED PARCEL CONTAINS 12.80 ACRES, WHICH INCLUDES 0.39 ACRES OF EXISTING PUBLIC ROAD EASEMENT.

SURVEY NOTES:

- 1) ALL SEPTIC SYSTEMS SHALL CONFORM TO POLK COUNTY REQUIREMENTS.
- 2) RESIDENCE SHALL CONNECT TO POLK CITY WATER SYSTEM, IF APPLICABLE.
- 3) NO MORE THAN ONE DRIVEWAY PERMITTED FOR PARCEL 2023-180.
- 4) ACCESS TO PARCEL 2023-180 SHALL BE LOCATED ±25' FROM THE NORTHEAST LOT CORNER.
- 5) NO ADDITIONAL DRIVEWAYS FOR EXISTING RESIDENCE ON PARCEL 2023-180, WHETHER OR NOT IT WOULD SERVE THE EXISTING RESIDENCE
- 6) ALL NEW DRIVEWAYS SHALL BE PAVED. (IF PARCEL IS INSIDE POLK CITY.)
- 7) MAILBOXES WITHIN PUBLIC ROW SHALL BE OF BREAKAWAY DESIGN.
- 8) ALL SERVICES LOCATED ON OPPOSITE SITE OF ROAD MUST BE BORED UNDER ROADWAY AT OWNER'S EXPENSE. (PAVED ROADS ONLY)
- 9) MAINTENANCE OF ALL DRAINAGE EASEMENTS, INCLUDING EMBANKMENTS, SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS.
- 10) ANY SUBSURFACE DRAINAGE FACILITIES THAT ARE DISTURBED SHALL BE RESTORED OR REROUTED BY THE PROPERTY OWNER.
- 11) THE PROPERTY OWNER ACKNOWLEDGES THIS PARCEL IS LOCATED IN AN AREA THAT HAS BEEN DESIGNATED FOR LIGHT INDUSTRIAL USE IN POLK CITY'S AMENDED COMPREHENSIVE PLAN.
- 12) PARCEL 2023-180 AND/OR THE RESIDUAL PARCEL CANNOT BE FURTHER SUBDIVIDED WITHOUT POLK CITY'S APPROVAL OF A PLAT OF SUBDIVISION.
- 13) THE P.U.E. SHALL BE AVAILABLE FOR USE BY ALL MUNICIPAL AND FRANCHISE UTILITIES PROVIDED THE FRANCHISE UTILITY COMPANY HAS OBTAINED A PERMIT FROM POLK COUNTY OR, FOLLOWING ANNEXATION, FROM POLK CITY."

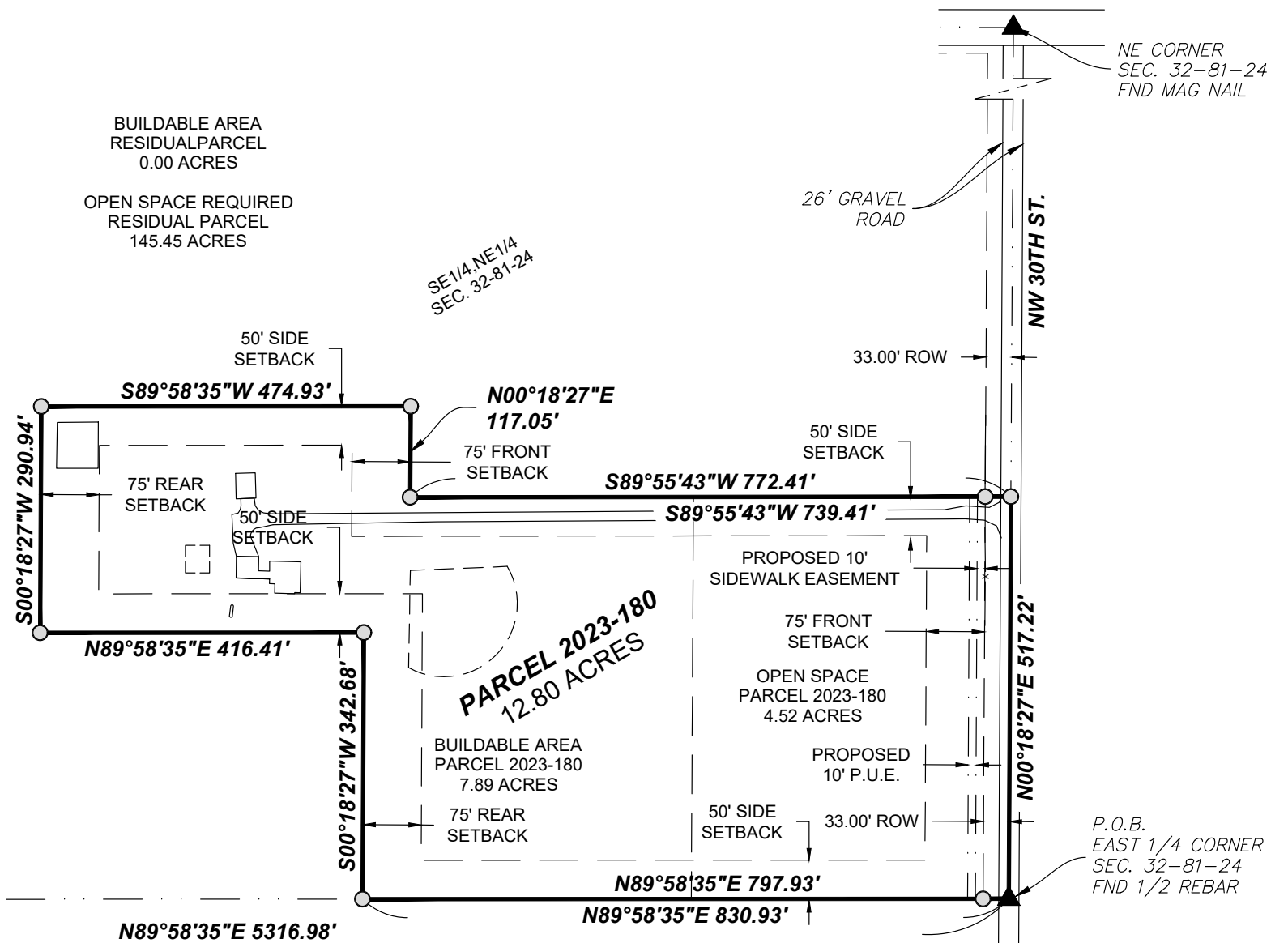
SITE ADDRESS:

12292 NW 30TH STREET
POLK CITY, IOWA 50226

WEST 1/4 CORNER
SEC. 32-81-24
SET MAG NAIL

SW 1/4, NE 1/4
SEC. 32-81-24

SE 1/4, NE 1/4
SEC. 32-81-24



SETBACKS:

(POLK CITY A-1 REGULATIONS)
FRONT: 75 FEET
SIDE: 50 FEET
REAR: 75 FEET

SUBMITTAL TABLE:

POLK CITY:
1ST: 2/16/2024
2ND: 3/7/2024
3RD: 3/13/2024

POLK COUNTY:

1ST: 11/15/2023
2ND: 11/27/2023
3RD: 1/4/2024
4TH: 1/29/2024 (APPROVED)

ANKENY:

1ST: TO BE DETERMINED

GENERAL LEGEND

—	SURVEY BOUNDARY
- - - -	PROPOSED LOT
· · · · ·	EXIST PROPERTY LINE
- - - -	SECTION LINE
- - - -	EXIST EASEMENT
MONUMENTS FOUND:	
▲	TYPE AS NOTED
●	1/2" REBAR (UNLESS NOTED OTHERWISE)
MONUMENTS SET:	
△	1/2" REBAR W/RPC #24477
○	1/2" REBAR W/RPC #24477
FND	FOUND
PC	PLASTIC CAP
BK, PG	BOOK AND PAGE
(M), (R)	MEASURED, RECORDED
R.O.W.	RIGHT-OF-WAY
P.U.E.	PUBLIC UTILITY EASEMENT
P.O.B.	POINT OF BEGINNING
P.O.C. (XXX)	POINT OF COMMENCEMENT STREET ADDRESS

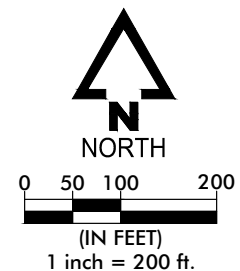
- 1) THIS SURVEY WAS PERFORMED TO SPLIT THE EXISTING BUILDINGS AND BASEBALL FIELD FROM THE SURROUNDING PARCEL.
 - 2) RESIDUAL PARCEL IS BUILDABLE FOR 1 SINGLE FAMILY HOME. A SUBDIVISION PLAT WOULD BE REQUIRED TO FURTHER DIVIDE THE RESIDUAL PARCEL TO CREATE A SMALLER LOT.
 - 3) ZONING CLASSIFICATION: AG - AGRICULTURAL
 - 4) FLOOD INFO: MAP NO: 19153C0045F / EFFECTIVE DATE 2/1/2019 / ZONE: ZONE X - AREA OF MINIMAL FLOOD HAZARD
- BASE AREA: 161.85 ACRES (GROSS) - 4.00 ACRES (ROW) = 157.85 ACRES (NET)
- MIN. OPEN SPACE: 157.85 ACRES X 0.95 = 149.96 ACRES
- NET BUILDABLE AREA: 157.85 ACRES - 149.96 ACRES = 7.89 ACRES
- MAX NET DENSITY: 7.89 ACES X 0.93 = 7 LOTS
- MAX GROSS DENSITY: 157.85 ACRES X 0.029 = 4 LOTS
- RESIDUAL PARCEL: 145.45 ACRES (NET)
- BUILDABLE AREA (RESIDUAL PARCEL): 7.89 ACRES - 7.89 ACRES (PARCEL 2023-180) = 0.00 ACRES
- OPEN SPACE REQUIRED (RESIDUAL PARCEL): 145.45 ACRES



I HEREBY CERTIFY THAT THIS LAND SURVEYING DOCUMENT WAS PREPARED AND THE RELATED WORK WAS PERFORMED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

PRELIMINARY

PATRICK SHELQUIST
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023
DATE
PAGES OR SHEETS COVERED BY THIS SEAL: SHEETS 1/2 & 2/2
DATE SURVEYED: 10/05/2023



ENGINEER	DRAWN BY	REVISIONS	RURAL SURVEY
N/A	P.SHELQUIST		PARCEL 2023-180
			SEC. 32-81-24
SURVEYOR	CREW CHIEF		POLK CITY, IOWA
P.SHELQUIST	P.SHELQUIST		POLK COUNTY
			2023001456
			11/27/2023
DRAWING NO.	SHEET NO.		
POS-01	01/02		

RURAL OF SURVEY POLK COUNTY, IOWA

NORTH 1/4 CORNER
SEC. 32-81-24
FND MAG NAIL

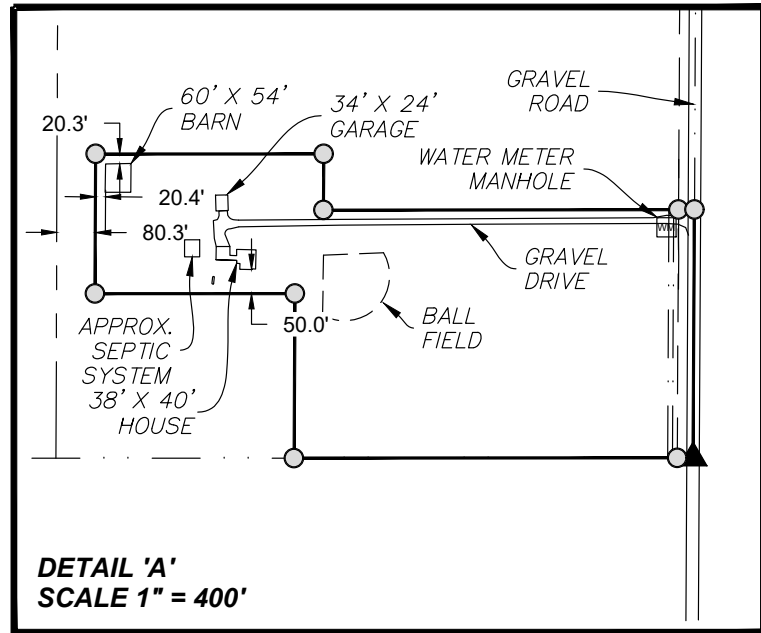
NE CORNER
SEC. 32-81-24
FND MAG NAIL

NW 126TH AVE

1) THE REMAINING DEVELOPMENT ON THE RESIDUAL PARCEL MAY CONSIST OF 3 MORE DWELLING UNITS. 145.51 ACRES OF THE 149.96 ACRES OF PERMANENT OPEN SPACE IS CONTAINED ON THE RESIDUAL PARCEL AS DESIGNATED. PARCEL 2023-180 CONTAINS AN ADDITIONAL 4.45 ACRES OF PERMANENT OPEN SPACE WITHIN ITS BOUNDARIES.

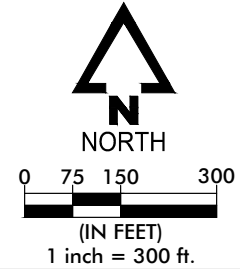
2) AS OWNER OF ALL LAND IN THIS SURVEY. WE HEREBY AGREE TO A RESTRICTION OF DEVELOPMENT POTENTIAL ON THE RESIDUAL PARCEL, AS INDICATED AND AGREE TO THE RESTRICTION OF BUILDABLE AREA AS DESIGNATED ON THE RESIDUAL PARCEL AND PARCEL 2023-180.

SIGNED: _____ DATE: _____

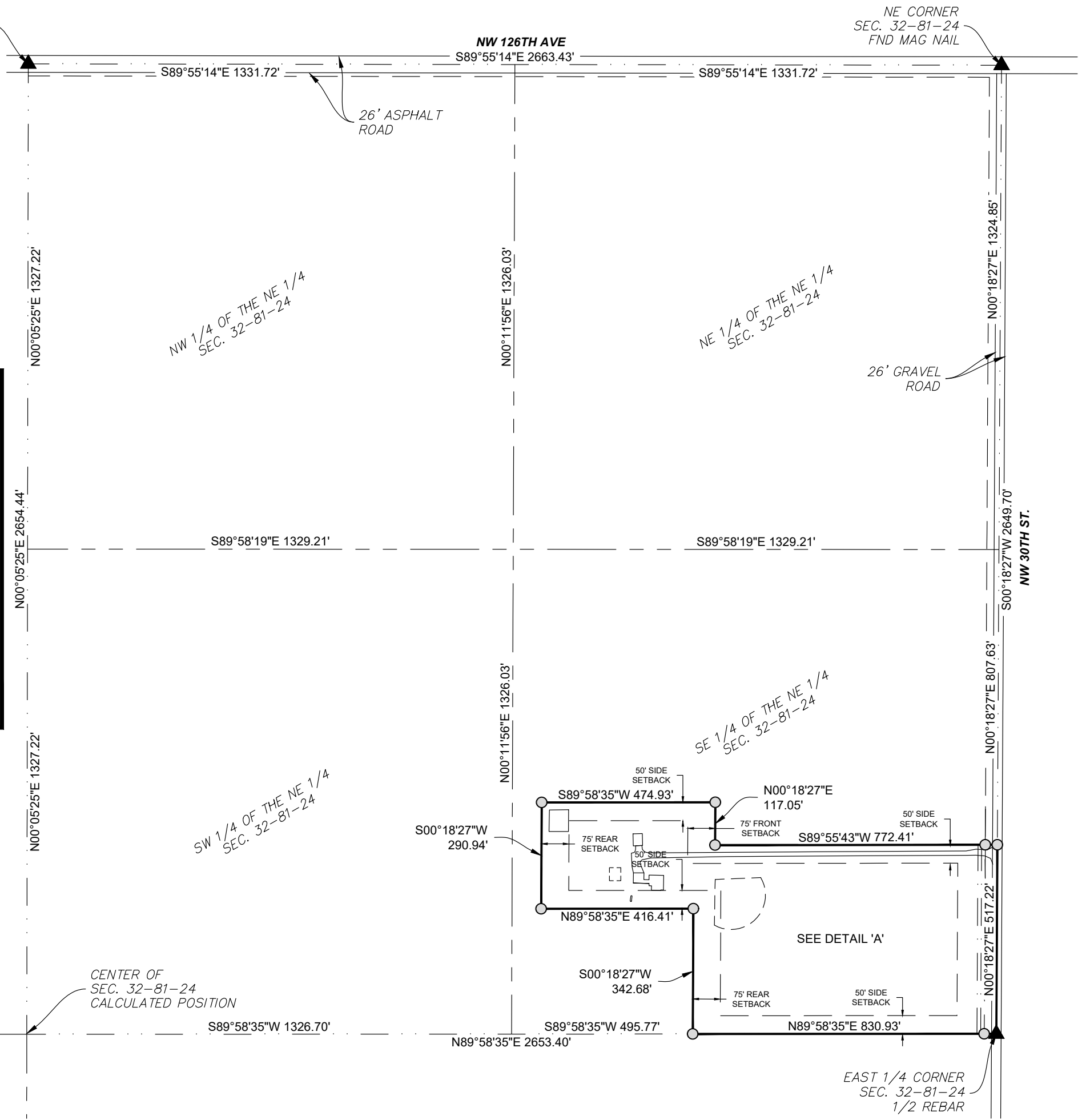


GENERAL LEGEND	
	SURVEY BOUNDARY
	PROPOSED LOT
	EXIST PROPERTY LINE
	SECTION LINE
	EXIST EASEMENT
MONUMENTS FOUND:	
	TYPE AS NOTED
	1/2" REBAR (UNLESS NOTED OTHERWISE)
MONUMENTS SET:	
	1/2" REBAR W/RPC #24477
	1/2" REBAR W/RPC #24477
FND	FOUND
PC	PLASTIC CAP
BK, PG	BOOK AND PAGE
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R.O.W.	RIGHT-OF-WAY
P.U.E.	PUBLIC UTILITY EASEMENT
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
(XXX)	STREET ADDRESS

McCLURE™
making lives better.
1360 NW 121st Street, STE A
Clive, Iowa 50325
515-964-1229
fax 515-964-2370



RURAL SURVEY PARCEL 2023-?? SEC. 32-81-24 POLK CITY, IOWA POLK COUNTY 2023001456 11/27/2023	
ENGINEER N/A	DRAWN BY P.SHELQUIST
SURVEYOR P.SHELQUIST	CREW CHIEF P.SHELQUIST
DRAWING NO. POS-01	SHEET NO. 02/02



RESOLUTION NO. 2024-37

**A RESOLUTION APPROVING A PLAT OF SURVEY FOR
PARCEL NO. 2023-180**

WHEREAS, McClure Engineering on behalf of Moeckly Family Farm, LLC has submitted a Plat of Survey for an area of land to be known as Parcel No. 2023-180, located within 2 miles of the corporate limits of Polk City, Iowa; and

WHEREAS, the intent of this Survey is to separate the existing buildings and baseball field from the surrounding farm fields.; and

WHEREAS, the Polk City Planning and Zoning Commission reviewed this Plat of Survey and recommended its approval at their meeting on March 18, 2024; and

WHEREAS, the City Attorney and City Engineer have reviewed the Plat of Survey and legal documents and recommend approval of same subject to the following:

- Signed Agreement to Install Sidewalk with the City deferring paving of the required 5' foot wide public sidewalk in front of the parcel until such time as the city deems necessary

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa, hereby approves the Plat of Survey for Parcel No. 2023-180 and approves the requested sidewalk deferral agreement subject to the applicant's payment of all professional fees and fees related to recordation of said agreements.

PASSED AND APPROVED the 25 day of March 2024.

Steve Karsjen Mayor

ATTEST:

Jenny Coffin, City Clerk

PROPOSED AMENDMENTS TO ZONING DISTRICTS

Date: February 21, 2024

Prepared by: Kathleen Connor, Planner
 Travis D. Thornburgh, P.E.

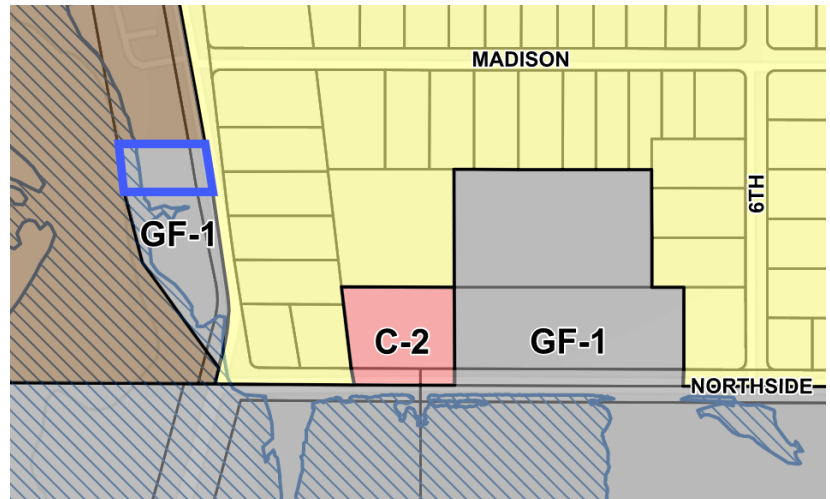
Project: Zoning Districts Update

Project No.: 124.0001.01

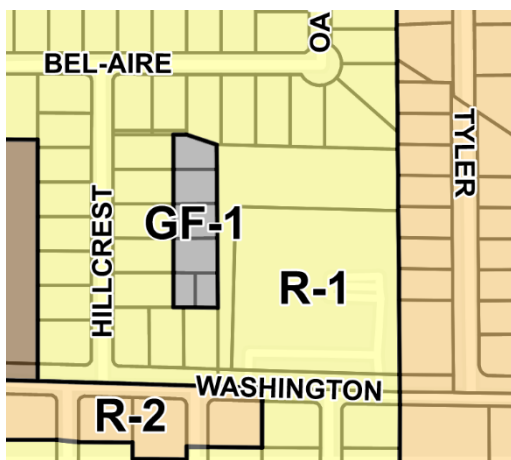
At its November 2023 meeting, the Planning & Zoning Commission discussed and reviewed several “cleanup rezonings” located in and around Polk City related to the GF-1 zoning district. At this meeting, the Planning & Zoning Commission recommended City Council initiate the following rezonings, as the subject properties currently bear a zoning district that do not match their current or intended uses:

Area #1: 516 N. 3rd Street (Property is Currently Zoned GF-1)

Immediately north of a vacant, City owned parcel on N. 3rd Street, and south of the Tournament Club of Iowa Maintenance Facility, lies a single-family home that is zoned GF-1. We have been unable to ascertain why it is zoned in this manner. The Future Land Use Plan designates this parcel as low density residential, with commercial to the north and civic to the south. Rezoning this property to R-1 would help bring this home into compliance.



Area #2: Portions of 6 Lots Along Hillcrest Drive (Currently Zoned GF-1)

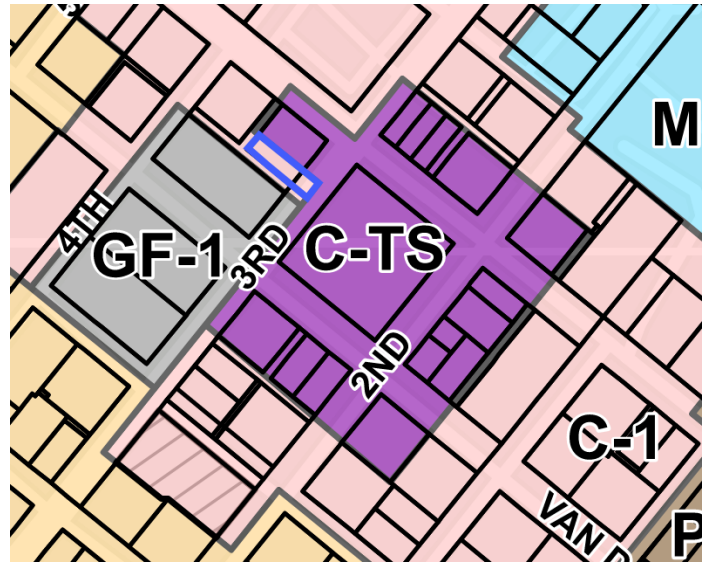


A GF-1 zoning district is located in the rear yards of privately-owned residences on the east side of Hillcrest Drive (405-421) and on the north side of 1201 W. Washington Avenue. We do not have any knowledge as to why this area is zoned GF-1 but, since it abuts the old nursing home property, it is possible this GF-1 zoning was also used as a buffer to the more intense use. However, since the GF-1 “buffer” is located on the properties that are to receive the benefit of said buffer, there does not appear to be any benefit to the homeowners. In addition, GF-1 zoning may limit the use and enjoyment of these rear yards by restricting certain structures. For example, accessory structures are not permitted unless they are incidental to permitted principal uses.

GF-1 zoning districts do not allow residential uses, so accessory structures incidental to residential uses would not be allowed. As a result, garden sheds should not be permitted in this GF-1 district, even though there appears to be at least one such structure. In this case, rezoning to R-1 would help bring these lots into compliance and reflect the current use of these parcels.

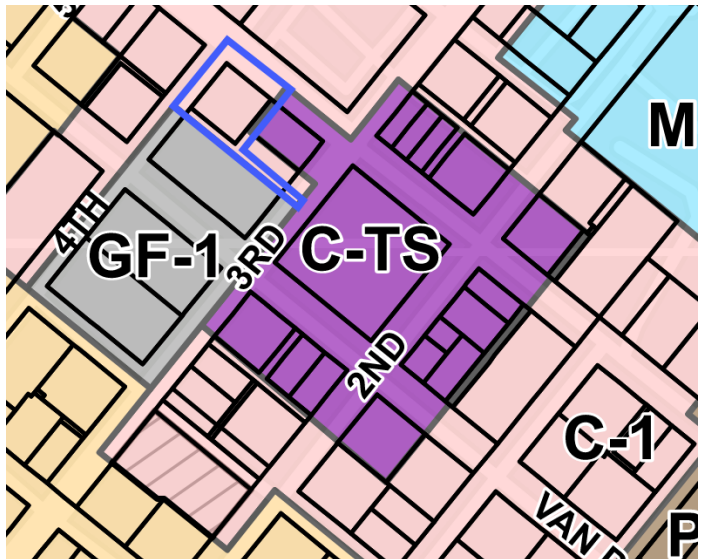
Area #3: 106 S. 3rd Street (Property is Currently Zoned C-1)

Immediately northeast of the existing City Hall along S. 3rd Street lies the Masonic Lodge that currently bears a C-1 zoning district. This building is located directly adjacent to the Polk City Square, and as such does not have a dedicated parking facility on-site. Rezoning this property to C-TS would help bring this area into compliance, applying a zoning designation that matches the current use of this parcel, and would rezone the last remaining C-1 district that exists with Square frontage.

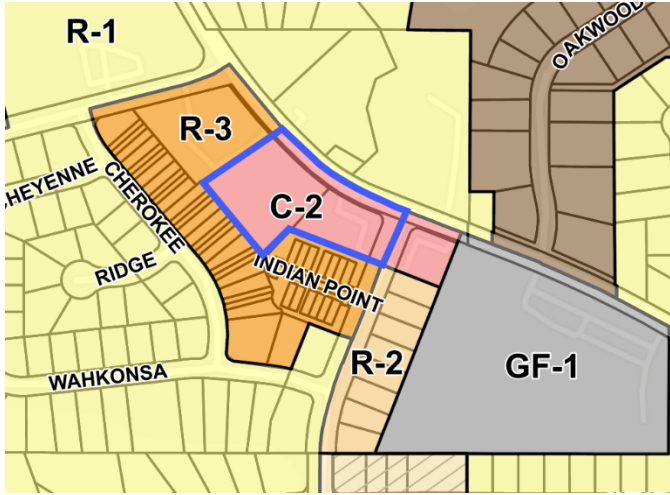


Area #4: City Hall Parking Lot on W. Broadway Street (Property is Current Zoned C-1)

Located at the intersection of W. Broadway Street and S. 4th Street, the existing paved parking lot is owned by the City of Polk City and currently bears a C-1 (Commercial) Designation. This parking lot functions as an overflow parking facility for the Polk City Fire Department, current Polk City City Hall, and the Polk City Square and is maintained by the City of Polk City. As such, this parking lot functions as a municipal facility and it is our belief that the GF-1 designation is more applicable than its current C-1 zoning. This rezoning also includes the alley parcels adjacent to the parking lot.



Area #5: 1500 & 1600 W. Broadway Street (Property is Currently Zoned C-2)

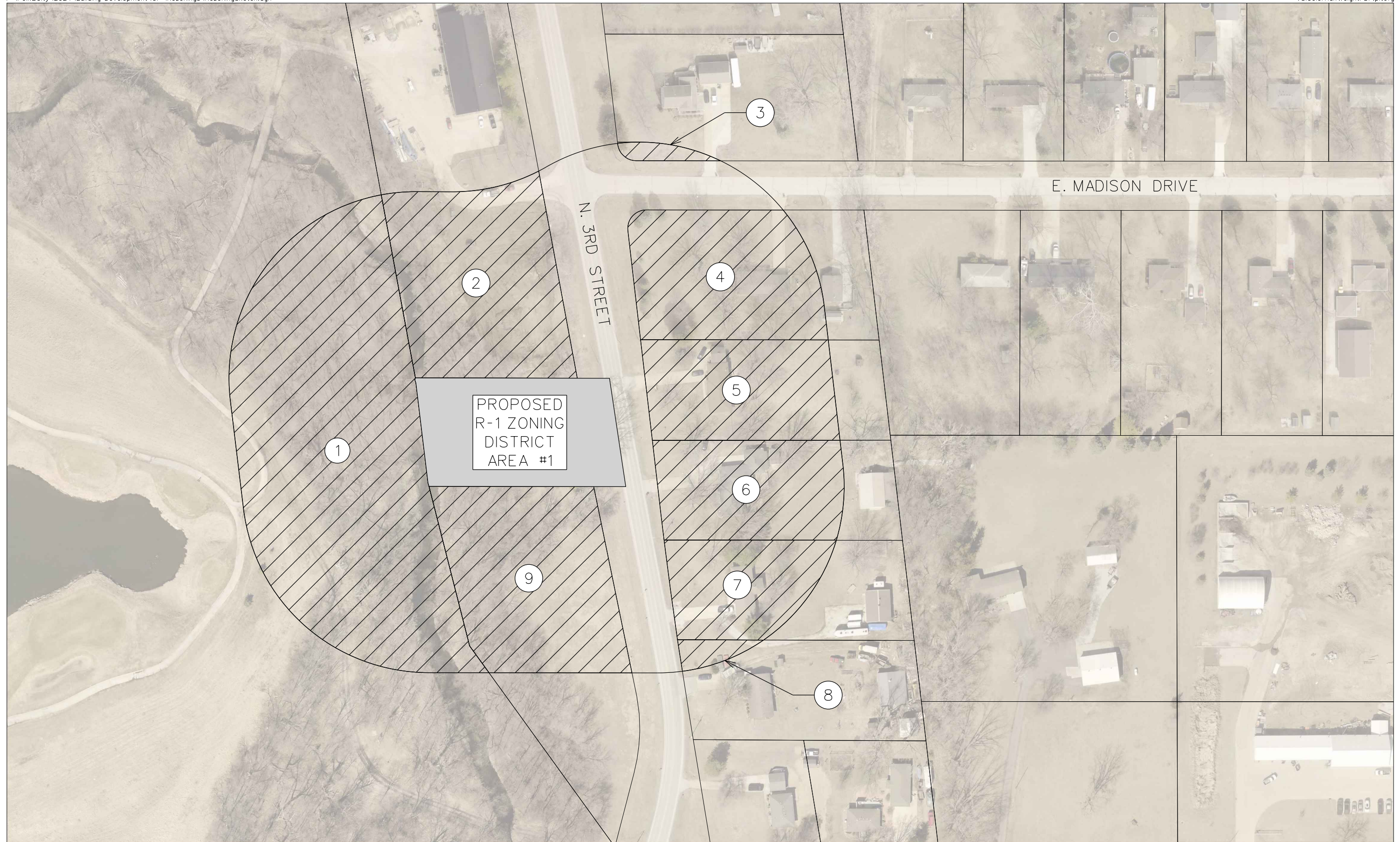


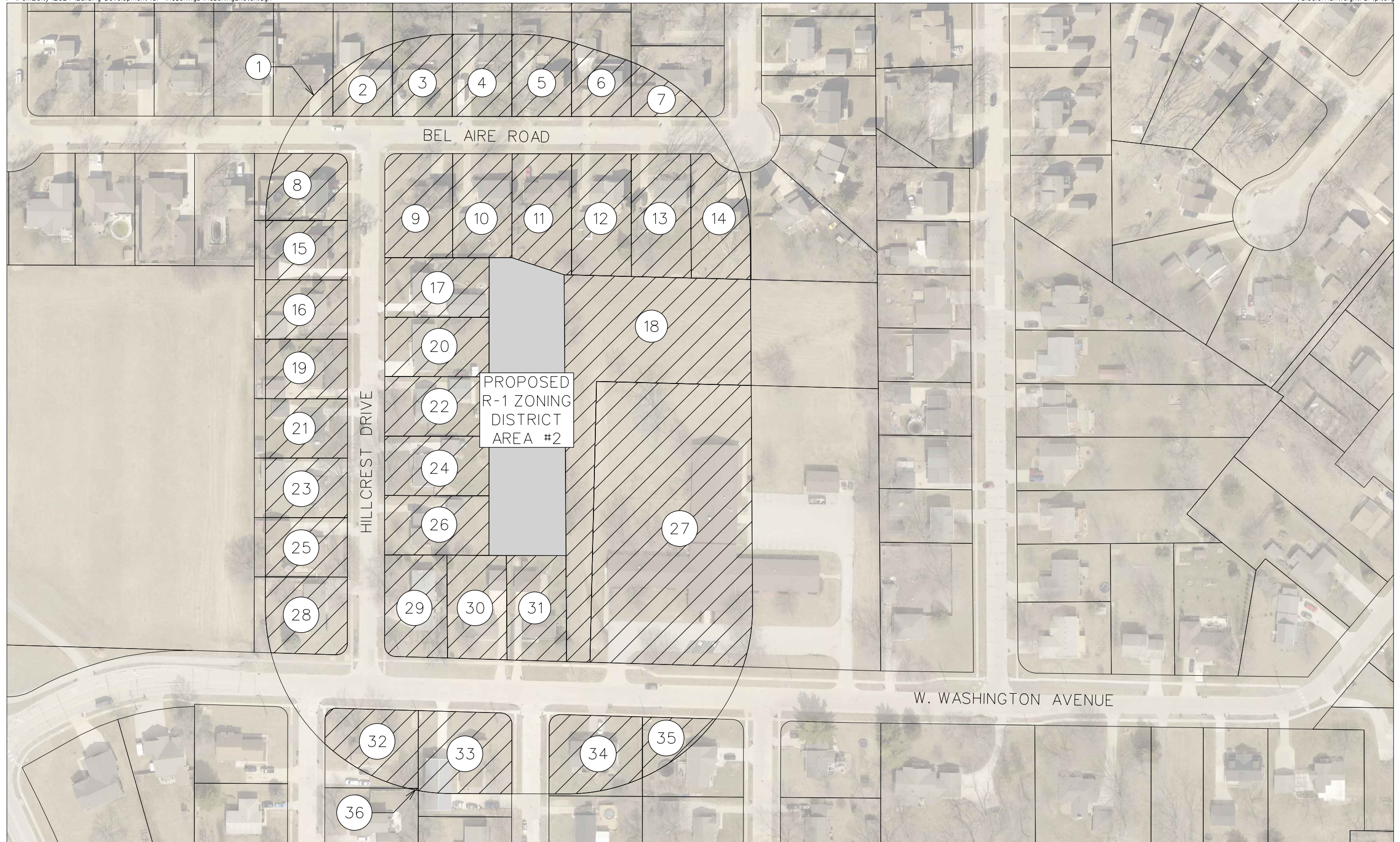
The Polk City Public Library, located at 1500 W. Broadway Street, and the lot at 1600 W. Broadway Street located directly adjacent to the library that the City recently purchased are both currently zoned with the C-2 (Commercial) designation (outlined in blue to the left). It is our understanding that the intended use for the lot at 1600 W. Broadway Street is an expansion of municipal facilities. Rezoning of these parcels to the GF-1 designation would bring the current use of 1500 W. Broadway Street (Public Library) and the intended use of 1600 W. Broadway Street (Future Municipal Facility) into compliance.

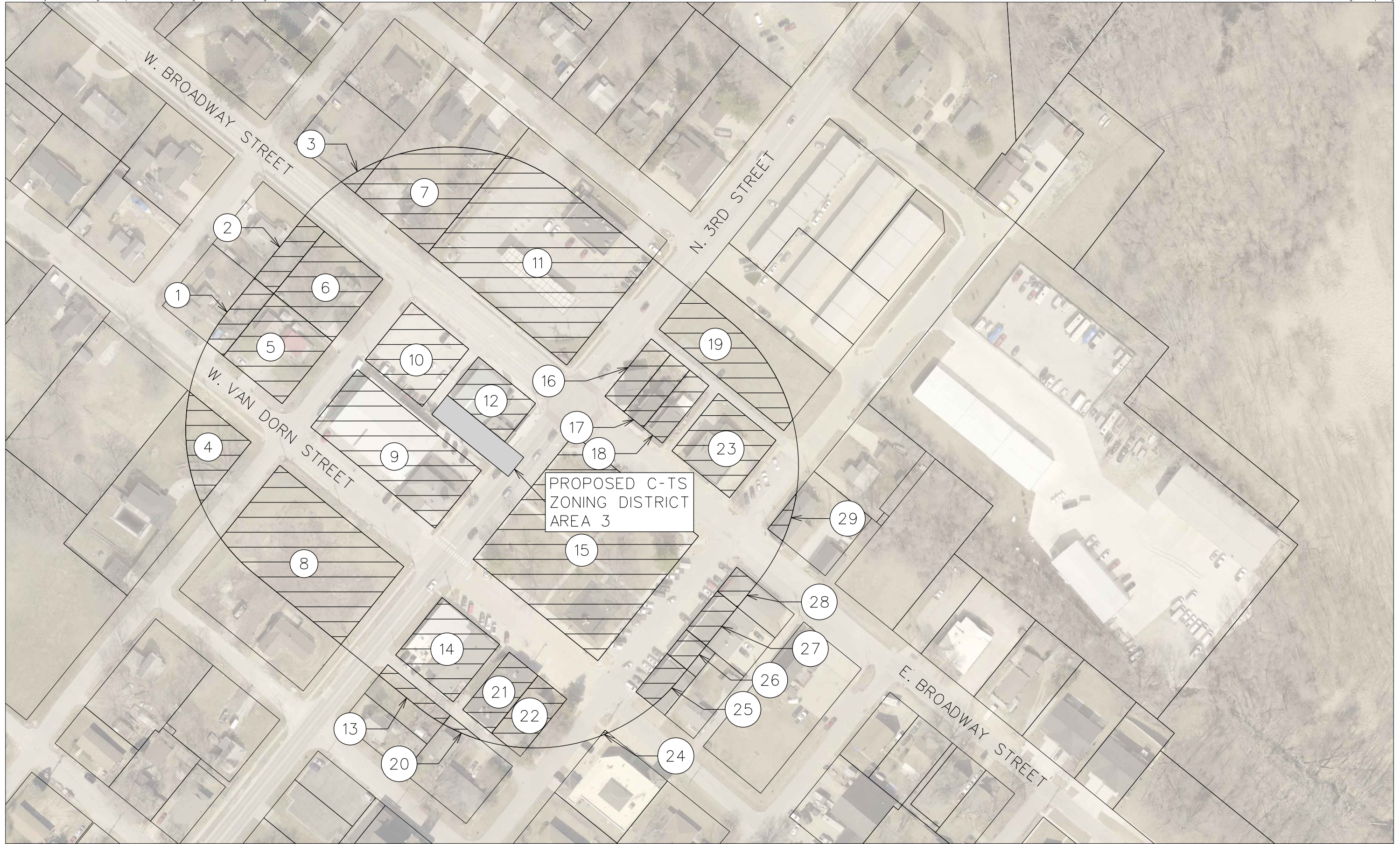
RECOMMENDATION:

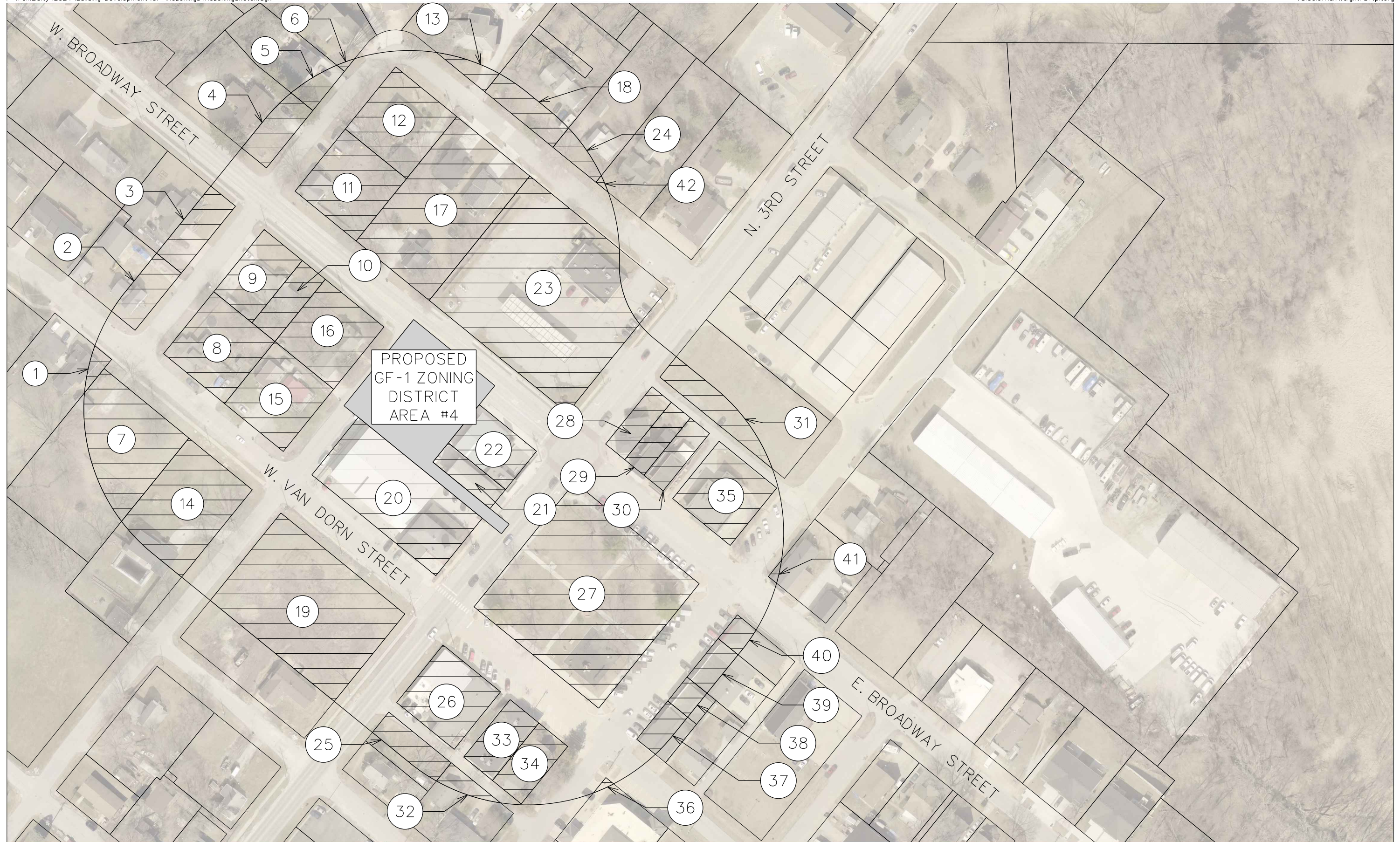
The Planning & Zoning Commission and City Staff recommend the City Council approve the rezonings as described above.

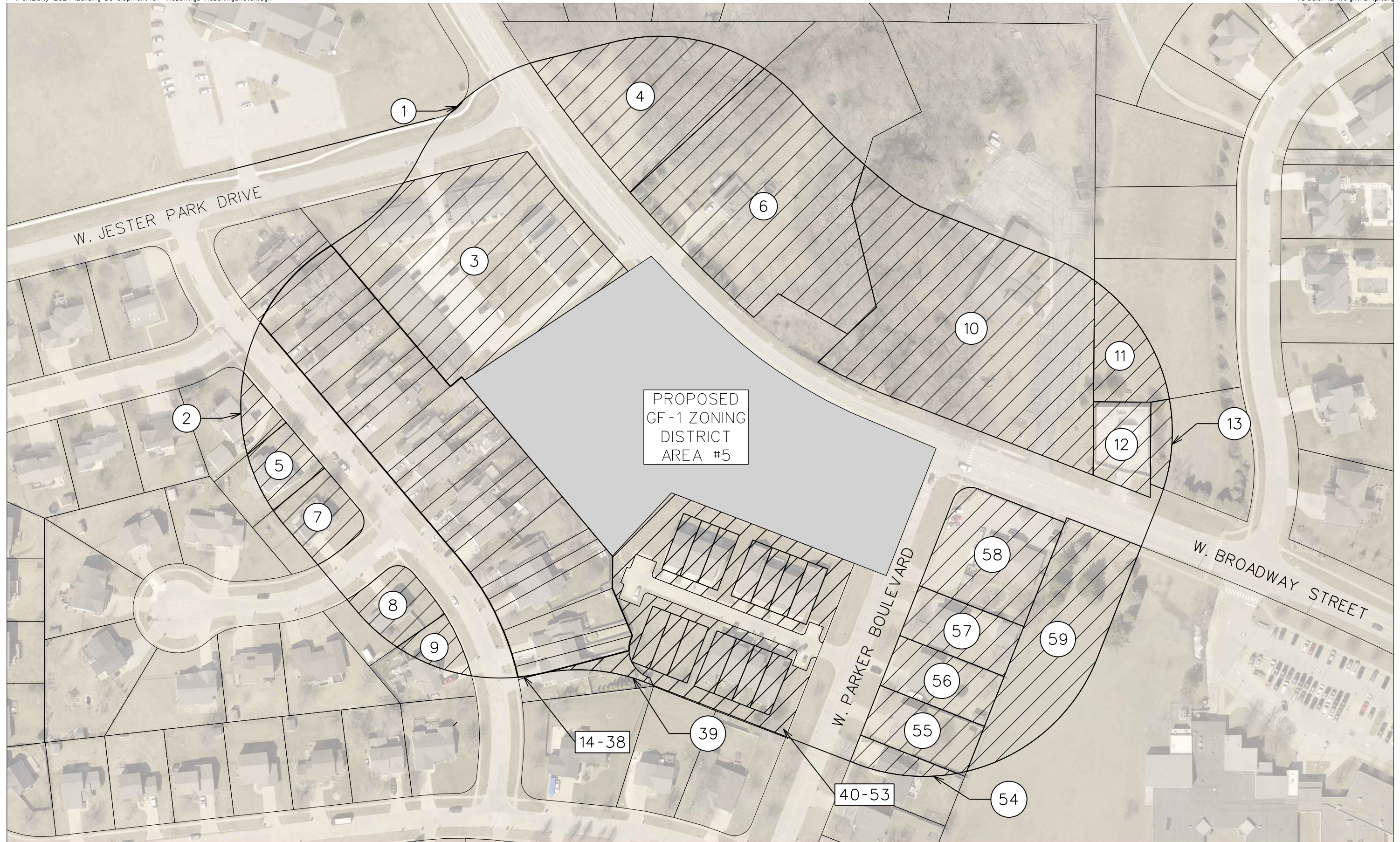
The owners of all properties proposed to be rezoned have been notified of the rezoning proceedings. The property owners within 250' of the rezoning areas have been notified of the February 26 Public Hearing and City Council meeting and were previously notified of the February Planning & Zoning meeting to allow the surrounding property owners the opportunity to provide their input on the proposed rezonings.











ORDINANCE NO. 2024-100

AN ORDINANCE AMENDING THE MUNICIPAL CODE OF THE CITY OF POLK CITY, IOWA, BY REZONING PROPERTY LOCATED AT 516 N. 3RD STREET FROM GF-1, GOVERNMENT FACILITY DISTRICT TO R-1, SINGLE FAMILY DETACHED

WHEREAS, on the 19 day of February 2024, the Planning and Zoning Commission of the City of Polk City, Iowa, recommended to the City Council that the property legally described as:

That part of the Southeast ¼ of the Southwest ¼ of Section 36, Township 81 North, Range 25 West of the 5th P.M., described as follows: Commencing at the Northeast corner of the Southeast ¼ of the Southwest ¼ of said Section 36; thence 89°55'02" W 680.6 feet to a point on the West line of the abandoned Chicago and Northwester Railroad Right of Way; thence S07°03'42" E along said right of way line, 602.22 feet to the point of beginning; thence continuing S07°03'42" E along said right of way line 141.56 feet; thence S89°55'02" W, 310.00 feet; thence N07°03'42" W, 141.56 feet; thence N 89°55'02" E, 310.00 feet to the point of beginning, all now included in and form a part of the City of Polk City, Polk County, Iowa, subject to Road right-of-way of N. 3rd Street along the East side measuring 96.47 feet on the North line and 87.75 feet on the South line.

be considered for rezoning from zoning classification GF-1, Government Facility District to R-1, Single Family Detached; and

WHEREAS, after due notice and hearing as provided by law, the City Council now deems it reasonable and appropriate to rezone said property.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF POLK CITY, IOWA:

Section 1: That the Municipal Code of the City of Polk City, Iowa, be and is hereby amended by rezoning property located at 516 N. 3rd Street from GF-1, Government Facility District to R-1, Single Family Detached.

Section 2: All Zoning Regulations, as applicable, shall apply.

Section 3: All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4: This ordinance shall be in full force and effect after its passage, approval and publication as provided by law.

PASSED AND APPROVED this _____ of _____ 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

First Reading:
Second Reading:
Third Reading:
Date of Publication by posting

ORDINANCE NO. 2024-200

AN ORDINANCE AMENDING THE MUNICIPAL CODE OF THE CITY OF POLK CITY, IOWA, BY REZONING A PORTION OF SIX (6) PROPERTIES LOCATED AT 405, 409, 413, 417, AND 421 HILLCREST DRIVE AND 1201 W WASHINGTON FROM GF-1, GOVERNMENT FACILITY DISTRICT TO R-1, SINGLE FAMILY DETACHED

WHEREAS, on the 19 day of February 2024, the Planning and Zoning Commission of the City of Polk City, Iowa, recommended to the City Council that the property legally described as:

Lots 1, 2, 3, 4, 5, and 6 of Forest Heights Plat 6, an official plat in the City of Polk City, Polk County, Iowa.

be considered for rezoning from zoning classification GF-1, Government Facility District to R-1, Single Family Detached; and

WHEREAS, after due notice and hearing as provided by law, the City Council now deems it reasonable and appropriate to rezone said property.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF POLK CITY, IOWA:

Section 1: That the Municipal Code of the City of Polk City, Iowa, be and is hereby amended by rezoning property located at 405 Hillcrest Drive, 409 Hillcrest Drive, 413 Hillcrest Drive, 417 Hillcrest Drive, 421 Hillcrest Drive, 1201 W Washington Avenue from GF-1, Government Facility District to R-1, Single Family Detached.

Section 2: All Zoning Regulations, as applicable, shall apply.

Section 3: All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4: This ordinance shall be in full force and effect after its passage, approval and publication as provided by law.

PASSED AND APPROVED this _____ of _____ 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

First Reading:
Second Reading:
Third Reading:
Date of Publication by posting

ORDINANCE NO. 2024-300

AN ORDINANCE AMENDING THE MUNICIPAL CODE OF THE CITY OF POLK CITY, IOWA, BY REZONING OF PROPERTY LOCATED AT 106 S. 3rd STREET FROM C-1, CENTRAL BUSINESS DISTRICT TO C-TS, TOWN SQUARE BUSINESS DISTRICT

WHEREAS, on the 19 day of February 2024, the Planning and Zoning Commission of the City of Polk City, Iowa, recommended to the City Council that the property legally described as:

Southwest 1/3 of Lot 4 and All of Lot 3, Block 10, Town of Polk City, an official plat in the City of Polk City, Polk County, Iowa, and the abutting northwest one half right-of-way of S 3rd Street.

be considered for rezoning from zoning classification C-1, Central Business District to C-TS, Town Square Business District; and

WHEREAS, after due notice and hearing as provided by law, the City Council now deems it reasonable and appropriate to rezone said property.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF POLK CITY, IOWA:

Section 1: That the Municipal Code of the City of Polk City, Iowa, be and is hereby amended by rezoning property located at 106 S. 3rd Street from C-1, Central Business District to C-TS, Town Square Business District.

Section 2: All Zoning Regulations, as applicable, shall apply.

Section 3: All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4: This ordinance shall be in full force and effect after its passage, approval and publication as provided by law.

PASSED AND APPROVED this _____ of _____ 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

First Reading:
Second Reading:
Third Reading:
Date of Publication by posting

ORDINANCE NO. 2024-400

AN ORDINANCE AMENDING THE MUNICIPAL CODE OF THE CITY OF POLK CITY, IOWA, BY REZONING OF PROPERTY OWNED BY THE CITY OF POLK CITY, IOWA AND LOCATED BEHIND THE FIRE STATION ALONG W. BROADWAY FROM C-1, CENTRAL BUSINESS DISTRICT TO GF-1, GOVERNMENT FACILITY DISTRICT

WHEREAS, on the 19 day of February 2024, the Planning and Zoning Commission of the City of Polk City, Iowa, recommended to the City Council that the property legally described as:

Lot 9, Block 10, Town of Polk City, an official plat in the City of Polk City, Polk County, Iowa, and the abutting southwest one-half right-of-way of W. Broadway Street, the abutting northwest half right-of-way of S. 4th Street, and the abutting southeast half right-of-way of S. 3rd Street and adjoining alleys within Block 10, Town of Polk City.

be considered for rezoning from zoning classification C-1, Central Business District to GF-1, Government Facility District; and

WHEREAS, after due notice and hearing as provided by law, the City Council now deems it reasonable and appropriate to rezone said property.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF POLK CITY, IOWA:

Section 1: That the Municipal Code of the City of Polk City, Iowa, be and is hereby amended by rezoning property owned by the City of Polk City and located behind the Fire Station along W. Broadway from C-1, Central Business District to GF-1, Government District.

Section 2: All Zoning Regulations, as applicable, shall apply.

Section 3: All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4: This ordinance shall be in full force and effect after its passage, approval and publication as provided by law.

PASSED AND APPROVED this _____ of _____ 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

First Reading:
Second Reading:
Third Reading:
Date of Publication by posting

ORDINANCE NO. 2024-500

AN ORDINANCE AMENDING THE MUNICIPAL CODE OF THE CITY OF POLK CITY, IOWA, BY REZONING OF PROPERTY OWNED BY THE CITY OF POLK CITY, IOWA AND LOCATED AT 1500 & 1600 W. BROADWAY FROM C-2, COMMERCIAL DISTRICT TO GF-1, GOVERNMENT FACILITY DISTRICT

WHEREAS, on the 19 day of February 2024, the Planning and Zoning Commission of the City of Polk City, Iowa, recommended to the City Council that the property legally described as:

Lot 13 of Arrow Ridge Point Plat 1 & Lot 39 of Arrow Ridge Point Plat 2, an official plat in the City of Polk City, Polk County, Iowa, and the abutting southwest half right-of-way of W. Broadway Street and the abutting northwest half right-of-way of W. Parker Boulevard.

be considered for rezoning from zoning classification C-2, Commercial District to GF-1, Government Facility District; and

WHEREAS, after due notice and hearing as provided by law, the City Council now deems it reasonable and appropriate to rezone said property.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF POLK CITY, IOWA:

Section 1: That the Municipal Code of the City of Polk City, Iowa, be and is hereby amended by rezoning property owned by the City of Polk City and located at 1500 & 1600 W. Broadway from C-2, Commercial District to GF-1, Government District.

Section 2: All Zoning Regulations, as applicable, shall apply.

Section 3: All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4: This ordinance shall be in full force and effect after its passage, approval and publication as provided by law.

PASSED AND APPROVED this _____ of _____ 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

First Reading:
Second Reading:
Third Reading:
Date of Publication by posting

Proclamation

WHEREAS, libraries offer the opportunity for everyone to connect with others, learn new skills, and pursue their passions, no matter where they are on life's journey; and

WHEREAS, libraries have long served as trusted institutions, striving to ensure equitable access to information and services for all members of the community regardless of race, ethnicity, creed, ability, sexual orientation, gender identity, or socio-economic status; and

WHEREAS, libraries adapt to the ever-changing needs of their communities, developing and expanding collections, programs, and services that are as diverse as the populations they serve; and

WHEREAS, libraries are accessible and inclusive places that promote a sense of local connection, advancing understanding, civic engagement, and shared community goals; and

WHEREAS, libraries play a pivotal role in economic development by providing resources and support for job seekers, entrepreneurs, and small businesses, thus contributing to local prosperity and growth; and

WHEREAS, libraries make choices that are good for the environment and make sense economically, creating thriving communities for a better tomorrow; and

WHEREAS, libraries are treasured institutions that preserve our collective heritage and knowledge, safeguarding both physical and digital resources for present and future generations; and

WHEREAS, libraries are an essential public good and fundamental institutions in democratic societies, working to improve society, protect the right to education and literacy, and promote the free exchange of information and ideas for all; and

WHEREAS, libraries, librarians, and library workers are joining library supporters and advocates across the nation to celebrate National Library Week; and

NOW, THEREFORE, be it resolved that I, Mayor Steve Karsjen, proclaim National Library Week, April 7-13, 2024. During this week, I encourage all residents to visit their library and celebrate the adventures and opportunities they unlock for us every day. Ready, Set, Library!

Dated this 25 day of March 2024

Steve Karsjen, Mayor

