

Agenda -Notice of Meeting

Polk City | City Council

March 11, 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 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

6. Business Items

- a. Parker Townhomes II
 - i. Resolution 2024-28 approving Transfer of Property to 3100 LLC
 - ii. Resolution 2024-29 approving Parker Townhomes II Plat of Survey/Record of Lot Tie Agreement
- b. Adjust Brush Pile hours effective April 1, 2024
- c. Downtown Revitalization Incentive Support Program
- d. Second Reading of Ordinance 2024-100 approving rezoning 516 N 3RD Street from GF-1 to R-1
- e. 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
- f. Second Reading of Ordinance 2024-300 approving rezoning 106 S. 3rd Street from C-1 to CTS
- g. Second Reading of Ordinance 2024-400 approving rezoning City Parking Lot from C-1 to GF-1
- h. Second Reading of Ordinance 2024-500 approving rezoning 1500 and 1600 W. Broadway from C-2 to GF-1
- i. Snyder & Associates January 2024 Engineering Services Invoice in the amount of \$43,987

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

8. 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

9. (Optional) Take action on closed session item

10. Adjournment -- *next meeting date March 25, 2024*

MEETING MINUTES
The City of Polk City
City Council Meeting
6:00 p.m. February 26, 2024
City Hall – Council Chambers

The Polk City, City Council held a meeting in the City Hall Council Chambers at 6:00 p.m., February 26, 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 (via Zoom), Savage, Walters, Vogel, Otis | In attendance
3. **MOTION:** A motion was made by Walters and seconded by Savage to approve the agenda
MOTION CARRIED UNANIMOUSLY
4. **Public Hearing:**
 - a. Mayor Karsjen opened the Public Hearing to a Proposed Rezoning of 516 N 3rd Street From GF-1 to R-1 at 6:01 pm. City Clerk Coffin said that the notice was published February 16, 2024, and no comments had been received for or against the rezoning. City Engineer, Travis Thornburgh provided a report on the proposed rezoning. No one was present to be heard for or against the rezoning.
MOTION: A motion was made by Walters and seconded by Vogel to close the public hearing at 6:03 pm.
MOTION CARRIED UNANIMOUSLY
 - i. **MOTION:** A motion was made by Otis and seconded by Savage to approve the First Reading of Ordinance 2021-100 approving rezoning of 516 N 3rd Street from GF-1 to R-1
MOTION CARRIED UNANIMOUSLY
 - b. Mayor Karsjen opened the Public Hearing to a Proposed Rezoning of 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 at 6:03 pm. City Clerk Coffin said that the notice was published February 16, 2024, and no comments had been received for or against the rezoning. City Engineer, Travis Thornburgh provided a report on the proposed rezoning. No one was present to be heard for or against the rezoning.
MOTION: A motion was made by Otis and seconded by Vogel to close the public hearing at 6:05 pm.
MOTION CARRIED UNANIMOUSLY
 - i. **MOTION:** A motion was made by Savage and seconded by Vogel to approve the First Reading of Ordinance 2021-200 approving rezoning of 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
 - c. Mayor Karsjen opened the Public Hearing to a Proposed Rezoning of 106 S. 3rd Street from C-1 to C-TS at 6:06 pm. City Clerk Coffin said that the notice was published February 16, 2024, and no comments had been received for or against the rezoning. City Engineer, Travis Thornburgh provided a report on the proposed rezoning. No one was present to be heard for or against the rezoning.
MOTION: A motion was made by Walters and seconded by Otis to close the public hearing at 6:07 pm.
MOTION CARRIED UNANIMOUSLY
 - i. **MOTION:** A motion was made by Vogel and seconded by Savage to approve the First Reading of Ordinance 2021-300 approving rezoning of 106 S. 3rd Street from C-1 to C-TS
MOTION CARRIED UNANIMOUSLY
 - d. Mayor Karsjen opened the Public Hearing to a Proposed Rezoning of City Parking Lot from C-1 to GF-1 at 6:08 pm. City Clerk Coffin said that the notice was published February 16, 2024, and no comments had been received for or against the rezoning. City Engineer, Travis Thornburgh provided a report on the proposed rezoning. No one was present to be heard for or against the rezoning.
MOTION: A motion was made by Otis and seconded by Vogel to close the public hearing at 6:10 pm.
MOTION CARRIED UNANIMOUSLY
 - i. **MOTION:** A motion was made by Walters and seconded by Savage to approve the First Reading of Ordinance 2021-400 approving rezoning of the City Parking Lot from C-1 to GF-1
MOTION CARRIED UNANIMOUSLY
 - e. Mayor Karsjen opened the Public Hearing to a Proposed Rezoning of 1500 & 1600 W. Broadway from C-2 to GF-1 at 6:10 pm. City Clerk Coffin said that the notice was published February 16, 2024, and no comments had been received for or against the rezoning. City Engineer, Travis Thornburgh provided a report on the proposed rezoning. No one was present to be heard for or against the rezoning.

MOTION: A motion was made by Vogel and seconded by Otis to close the public hearing at 6:12 pm.

MOTION CARRIED UNANIMOUSLY

- i. **MOTION:** A motion was made by Savage and seconded by Vogel to approve the First Reading of Ordinance 2021-500 approving rezoning of 1500 & 1600 W. Broadway from C-2 to GF-1

MOTION CARRIED UNANIMOUSLY

5. Public Comments:

Ron Anderson, 710 Tyler Street, shared comments written by Ken Morse, 1308 Westside Dr, regarding his thoughts on the brush pile management and operations.

6. Consent Items

- a. City Council Meeting Minutes for February 12, 2024
- b. City Council Work Session Meeting Minutes for February 12, 2024
- c. Claims listing February 26, 2024
- d. Resolution 2024-20 setting a Public Hearing for the Proposed Property Tax Levy for FY 24/25
- e. Resolution 2024-21 appointment Polk City's Representatives to Iowa Communities' Assurance Pool
- f. Resolution 2024-22 approving Pay App No. 8 in the amount of \$280,738.30 for the City Hall/Community Room Project
- g. Hydraulic Lift Cylinder repair on Public Works Dump Truck in the amount of \$12,247.56
- h. Set pay for new Public Works hire, Joshua Jameson, GIS Specialist at a rate of \$27.13 per hour pending a successful background check and pre-employment drug screen
- i. Receive and file Planning & Zoning Commission Meeting Minutes for February 19, 2024

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

MOTION CARRIED UNANIMOUSLY

7. Business Items

- a. **MOTION:** A motion was made by Otis and seconded by Vogel to approve the First Reading of Ordinance 2024-600 amending the municipal Code of Polk City concerning Dumping at City Facilities
MOTION CARRIED UNANIMOUSLY
- b. **MOTION:** A motion was made by Vogel and seconded by Savage to approve the First Reading of Ordinance 2024-600 amending the municipal Code of Polk City concerning Dumping at City Facilities
MOTION CARRIED UNANIMOUSLY
 - i. **MOTION:** A motion was made by Walters and seconded by Otis to approve waiving the Second and Third Reading of Ordinance 2024-600 amending the municipal Code of Polk City concerning Dumping at City Facilities
MOTION CARRIED UNANIMOUSLY

8. Reports & Particulars | None

9. Adjournment

MOTION: A motion was made by Walters and seconded by Otis to adjourn at 6:28 pm.

MOTION CARRIED UNANIMOUSLY

Next Meeting Date – March 11, 2024

Attest

Jenny Coffin, City Clerk

Steve Karsjen, Mayor

MEETING MINUTES
The City of Polk City
Work Session
5:00 p.m., Monday, February 26, 2024
City Hall Council Chambers

A Council Work Session was held on February 26, 2024, at 5:00 p.m. at the City Hall Council Chambers in Polk City, Iowa.

<u>Mayor and City Council Members Present:</u> Steve Karsjen Mayor Jeff Walters Pro Tem Rob Sarchet (via zoom) City Council Member Jeff Savage City Council Member Mandy Vogel City Council Member Nick Otis City Council Member	<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
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Minutes

Police Chief Siepker provided a proposed Ordinance for enforcement of trespassing and illegal dumping on City Property.

Public Works Director Schulte presented the Mayor and Council with two options to consider regarding the brush pile. Option #1 shut it down. Option #2 reduce hours with an entrance checkpoint. The proposed hours the brush pile would be open would begin April 1st and end October 31st each year on Fridays 730a to 3pm and the first Saturday of each month from 8a to 12noon on a trial basis in 2024. City staff will collect data and report findings in a review in October 2024 to re-evaluate. If unmanageable problems arise sooner, staff will present to Council as needed. The Mayor and City Council discussed Option #2 as the best approach to move forward with a staffed check point as a way to get detailed data to come back and review.

City Manager Huisman provided an update on Metro Waste Authority Recycling facility.

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		3/11/2024
Amazon	BOOK CLUB	\$ 882.85
AMILIA TECHNOLOGIES USA	DECEMBER FEES	\$ 787.52
ARDICK EQUIPMENT CO.	SIGNS	\$ 399.40
ARNOLD MOTOR SUPPLY	VEHICLE PARTS & SUPPLIES	\$ 907.32
AVESIS	CITY VISION	\$ 375.60
BAKER & TAYLOR	BOOKS	\$ 2,947.86
Boesen The Florist	DE ARLIS KARSJEN	\$ 73.85
BOMGAARS	CREDIT ACCT	\$ 611.04
BRAVO GREATER DES MOINES	28F AGREEMENT FY24 O2	\$ 1,629.74
BRICK LAW FIRM	45323	\$ 5,045.00
BUSINESS PUBLICATIONS CORP	PUBLICATIONS	\$ 243.32
C F I	MAKEUP PAYMENT	\$ 3.22
CAPITAL SANITARY SUPPLY	CLEANING SUPPLIES	\$ 60.71
CIT SEWER SOLUTIONS	ROOT CUTTING	\$ 4,694.50
CITY LAUNDERING	PUBLIC WORKS MATS	\$ 336.76
CITY OF POLK CITY	UBASSIST 146.06	\$ 1,028.09
Contractor Solutions	LIFTING CLEAN UP	\$ 306.15
COPY SYSTEMS INC.	COPIER	\$ 121.68
CORE AND MAIN	WATER TOOLS	\$ 490.00
Crystal Clear Water Co	PURCHASED WATER	\$ 175.33
CYNTOX LLC	SHARPS EXCHANGE	\$ 270.90
DARCY MAULSBY	PRESENTER	\$ 275.00
Delta Dental	CITY DENTAL	\$ 1,736.24
Des Moines Water Works	PURCHASE OF WATER	\$ 27,304.96
FBSCO	LIBRARY AWARE	\$ 1,048.00
Electrical Eng & Equipment Co	ELECTRICAL SUPPLIES	\$ 296.78
ELECTRONIC ENGINEERING CO.	SHARED ALARM	\$ 70.00
ETECH SOLUTIONS LLC	CITY IT	\$ 5,675.88
FEH DESIGN	CITY HALL/COMM ROOM	\$ 4,381.67
Ferguson Waterworks	EQUIPMENT REPAIRS	\$ 2,378.00
G.C.M.O.A.	COFFIN & MERRITT DUES	\$ 50.00
GALL'S INC.	REIS CLASS A	\$ 98.93
GREATAMERICA FINANCIAL	SHARED COPIER LEASE	\$ 547.04
Gurnsev Electric Co	WATER PLANT REPAIR	\$ 336.70
HAWKINS INC	CHLORINE	\$ 1,279.87
I.M.F.O.A.	SPRING 2024 ATHENIAN DIALOGUE	\$ 70.00
IA ASSOC PROF FIRE CHIEFS	IOWA FIRE CHIEFS DUES	\$ 100.00
IOWA BOARD OF PHARMACY	CONTROL SUBSTANCE RENEWAL	\$ 90.00
IOWA SIGNAL INC	REPAIR RREB AT 3RD AND SOUTH S	\$ 7,172.24
IRON MOUNTAIN	SHREDDING SERVICES	\$ 109.17
JENNY COFFIN	MILEAGE	\$ 21.71
KANSAS CITY LIFE INS. CO	LIFE INS	\$ 1,359.04
LINDE GAS & EQUIPMENT INC	OXYGEN	\$ 298.98
MEDIX OCCUPATN HEALTH -ORCA PC	FELLER PHYS	\$ 226.50
MERCYONE NORTH PHARMACY	RX SUPPLIES	\$ 245.28
METRO WASTE AUTHORITY	45323	\$ 35,117.47
MI-FIBER	CITY INTERNET	\$ 9.95
MICROBAC LABORATORIES INC	LAB TESTS	\$ 127.00
NCCA	MEMBERSHIP DUES	\$ 50.00
NELSON AUTOMOTIVE	REPAIR PARTS	\$ 341.70
TRIVISTA IOWA	UNIT 405 REPAIRS	\$ 3,863.63
ONESOURCE	BACKGROUND CHECKS	\$ 86.00
OVERDRIVE INC	AUDIOBOOKS	\$ 746.98
P & M APPAREL	HELMET NAMES	\$ 36.00
PCC AMBULANCE BILLING	AUG AMB BILLING	\$ 581.35
POLK COUNTY TREASURER	PROPERTY TAXES	\$ 5,024.00
POMP'S	REPAIR TIRE	\$ 170.13
PORTABLE PRO. INC.	PARK AMENITY	\$ 450.00
RACOM	FDACS	\$ 862.92
RANGEMASTERS TRAINING CENTER	COATS	\$ 3,407.75
RENAISSANCE GROUP	FEASIBILITY PRODUCTIONS	\$ 3,077.79
Safe Building Comp. & Tech	BUILDING INSPECTIONS	\$ 5,607.44
SBS SERVICES GROUP LLC	WEEKLY JANITORIAL	\$ 1,300.00
Tovne Inc	HOSE TARP	\$ 399.28
UNITY POINT OCC MED	RANDOM DRUG TESTING	\$ 131.50
USPCA	K9 ASSOC MEMBERSHIP	\$ 150.00
VAN-WALL EQUIPMENT	VEHICLE REPAIR PARTS	\$ 784.78
Walsh Door & Hardware Co	CAMERA INSTALL	\$ 2,930.51
Accounts Payable Total		\$ 141,819.01
GENERAL		\$ 51,407.65
ROAD USE		\$ 5,028.49
I.M.I		\$ 1,028.09
CITY FACILITIES TOTAL		\$ 8,663.67
WATER		\$ 33,881.45
SEWER		\$ 6,975.18
SOLID WASTE/RECYCLING		\$ 34,834.48
TOTAL FUNDS		\$ 141,819.01



POLK CITY - A City For All Seasons -

Monthly Finance Report February 2024

Prepared By:

**Jenny Coffin
City Clerk/Treasurer**

CALENDAR 2/2024, FISCAL 8/2024

ACCOUNT TITLE	LAST REPORT END BALANCE	RECEIVED	DISBURSED	CHANGE IN LIABILILTY	ENDING BALANCE
001 GENERAL	2,843,699.70	285,871.90	315,591.81	32.35	2,814,012.14
110 ROAD USE	671,487.06	57,083.71	51,208.62	.00	677,362.15
111 I-JOBS	.00	.00	.00	.00	.00
121 LOCAL OPTION SALES TAX	2,065,170.46	.00	.00	.00	2,065,170.46
125 TIF	445,866.99	10,608.02	.00	.00	456,475.01
135 L.M.I	1,397,706.82	.00	2,213.50	.00	1,395,493.32
167 PC COMM. LIB TRUST	11,789.34	.00	.00	.00	11,789.34
177 ASSET FORFEITURE	14,459.06	.00	.00	.00	14,459.06
200 DEBT SERVICE	161,050.41	11,391.29	.00	.00	172,441.70
301 CITY FACILITIES TOTAL	3,208,596.07	.00	337,712.93	.00	2,870,883.14
302 CAPITAL WATER PROJECT	513,924.90	.00	2,255.00	.00	511,669.90
303 CAPITAL EQUIPMENT/VEHIC	340,531.40-	28,303.86	67,094.71	.00	379,322.25-
304 FOUR SEASONS PUB IMPROV	41,992.00	.00	.00	.00	41,992.00
305 NORTHSIDE DRIVE PROJECT	989,692.75	.00	30,316.75	.00	959,376.00
306 TRAIL PROJECTS	394,800.00	.00	.00	.00	394,800.00
307 STREET PROJECTS	215,375.00	.00	2,400.00	.00	212,975.00
308 STORM WATER PROJECTS	.00	.00	.00	.00	.00
309 PARK PROJECTS	.00	.00	.00	.00	.00
310 REGIONAL PARK	.00	.00	.00	.00	.00
600 WATER	1,843,995.15	92,206.02	90,622.44	.00	1,845,578.73
610 SEWER	1,179,800.94	153,699.72	110,529.74	.00	1,222,970.92
670 SOLID WASTE/RECYCLING	78,610.78	34,672.05	34,491.28	.00	78,791.55
740 STORM WATER UTILITY	224,795.67	8,424.10	.00	.00	233,219.77
920 ESCROW	.00	.00	.00	.00	.00
Report Total	15,962,281.70	682,260.67	1,044,436.78	32.35	15,600,137.94

BANK CASH REPORT 2024

BANK NAME FUND GL NAME	JANUARY CASH BALANCE	FEBRUARY RECEIPTS	FEBRUARY DISBURSMENTS	FEBRUARY CASH BALANCE	OUTSTANDING TRANSACTIONS	FEB BANK BALANCE
Grinnell State Bank BK#1						

BANK Grinnell State Bank BK#1						10,775,259.24
001 CHECKING - GENERAL	1,462,799.13-	207,674.62	315,517.27	1,570,641.78-	77,997.03	
110 CHECKING - ROAD USE	671,487.06	57,083.71	51,208.62	677,362.15	16,954.85	
111 CHECKING - I-JOBS	0.00	0.00	0.00	0.00		
112 CHECKING - EMPLOYEE BENEFIT	0.00	0.00	0.00	0.00		
121 CHECKING - LOCAL OPTION	2,065,170.46	0.00	0.00	2,065,170.46		
125 CHECKING - TIF	445,866.99	10,608.02	0.00	456,475.01		
135 CHECKING - L.M.I.	678,663.96	0.00	2,213.50	676,450.46		
167 CHECKING - PC COMM. LIB TRUST	11,789.34	0.00	0.00	11,789.34		
177 CHECKING - FORFEITURE	14,459.06	0.00	0.00	14,459.06		
200 CHECKING - DEBT SERVICE	161,050.41	11,391.29	0.00	172,441.70		
301 CHECKING - CAPITAL PROJECT	3,208,596.07	0.00	337,712.93	2,870,883.14	286,655.82	
302 CHECKING - CAPITAL WATER PROJ	513,924.90	0.00	2,255.00	511,669.90		
303 CHECKING - CAP EQUIP/VEHICLE	340,531.40-	28,303.86	67,094.71	379,322.25-	50,828.71	
304 CHECKING	41,992.00	0.00	0.00	41,992.00		
305 CHECKING	989,692.75	0.00	30,316.75	959,376.00		
306 CHECKING	394,800.00	0.00	0.00	394,800.00		
307 CHECKING	215,375.00	0.00	2,400.00	212,975.00		
308 CHECKING	0.00	0.00	0.00	0.00		
309 CHECKING	0.00	0.00	0.00	0.00		
310 CHECKING	0.00	0.00	0.00	0.00		
600 CHECKING - WATER UTILITY	1,843,994.15	100,536.60	98,953.02	1,845,577.73	26,479.12	
610 CHECKING - SEWER UTILITY	1,179,799.94	154,339.91	111,169.93	1,222,969.92	58,673.16	
670 CHECKING-SOLID WASTE/RECYCLING	78,610.78	34,838.75	34,657.98	78,791.55		
740 CHECKING	224,795.67	8,463.87	39.77	233,219.77	1,789.87	
920 CHECKING - ESCROW BANK ACCOUNT	0.00	0.00	0.00	0.00		
PENDING CREDIT-CARD DEPOSITS					220,786.82	
DEPOSITS					13,652.80	
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Grinnell State Bank TOTALS	10,936,738.01	613,240.63	1,053,539.48	10,496,439.16	284,938.94	10,781,378.10
LUANA SAV. BK MM BK#2						

BANK LUANA SAV. BK MM BK#2						236,148.51
001 Luana Savings Bank - M.M. Acco	561,036.50-	78,143.15	0.00	482,893.35-		
135 Luana Money Market Account	719,041.86	0.00	0.00	719,041.86		
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LUANA SAV. BK MM TOTALS	158,005.36	78,143.15	0.00	236,148.51	0.00	236,148.51
GRINNELL STATE BK- C.D. BK#3						

BANK GRINNELL STATE BK- C.D. BK#3						1,606,733.23
001 GRINNELL STATE BANK CD	1,606,733.23	0.00	0.00	1,606,733.23		

BANK CASH REPORT 2024

BANK NAME FUND GL NAME	JANUARY CASH BALANCE	FEBRUARY RECEIPTS	FEBRUARY DISBURSMENTS	FEBRUARY CASH BALANCE	OUTSTANDING TRANSACTIONS	FEB BANK BALANCE
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GRINNELL STATE BK- C.D. TOTALS	1,606,733.23	0.00	0.00	1,606,733.23	0.00	1,606,733.23
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9/2024 Transaction cleared on statement was entered in a future period.						19,227.97
3/01/2024 Calculated Statement Balance						1,625,961.20
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GRINNELL STATE BK-MM						
BK#4						
<hr/>						
BANK GRINNELL STATE BK-MM						
001 SUPER MONEY MKT II	10,366.10	11.94	0.00	10,378.04		10,378.04
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GRINNELL STATE BK-MM TOTALS	10,366.10	11.94	0.00	10,378.04	0.00	10,378.04
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LUANA SAVINGS BANK CD						
BK#6						
<hr/>						
BANK LUANA SAVINGS BANK CD						
001 LUANA BANK C.D.-1.85%	3,250,000.00	0.00	0.00	3,250,000.00		3,250,000.00
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LUANA SAVINGS BANK CD TOTALS	3,250,000.00	0.00	0.00	3,250,000.00	0.00	3,250,000.00
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TOTAL OF ALL BANKS	15,961,842.70	691,395.72	1,053,539.48	15,599,698.94	284,938.94	15,884,637.88
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BUDGET REPORT
CALENDAR 2/2024, FISCAL 8/2024

PCT OF FISCAL YTD 66.6%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT EXPENDED	UNEXPENDED
	GENERAL TOTAL	5,463,150.00	315,591.81	3,852,628.86	70.52	1,610,521.14
	ROAD USE TOTAL	710,450.00	51,208.62	333,671.23	46.97	376,778.77
	LOCAL OPTION SALES TAX TOTAL	950,000.00	.00	.00	.00	950,000.00
	TIF TOTAL	790,583.00	.00	212,097.55	26.83	578,485.45
	L.M.I TOTAL	60,000.00	2,213.50	33,730.37	56.22	26,269.63
	ASSET FORFEITURE TOTAL	17,000.00	.00	4,257.75	25.05	12,742.25
	DEBT SERVICE TOTAL	1,160,070.00	.00	234,596.13	20.22	925,473.87
	CITY FACILITIES TOTAL TOTAL	5,950,500.00	337,712.93	3,432,324.99	57.68	2,518,175.01
	CAPITAL WATER PROJECT TOTAL	8,184,000.00	2,255.00	200,297.70	2.45	7,983,702.30
	CAPITAL EQUIPMENT/VEHICLE TOTA	369,100.00	67,094.71	543,564.70	147.27	174,464.70-
	NORTHSIDE DRIVE PROJECT TOTAL	2,018,000.00	30,316.75	165,624.00	8.21	1,852,376.00
	TRAIL PROJECTS TOTAL	275,000.00	.00	30,200.00	10.98	244,800.00
	STREET PROJECTS TOTAL	250,000.00	2,400.00	37,025.00	14.81	212,975.00
	WATER TOTAL	1,733,695.00	90,622.44	999,497.53	57.65	734,197.47
	SEWER TOTAL	1,857,493.00	110,529.74	1,537,664.66	82.78	319,828.34
	SOLID WASTE/RECYCLING TOTAL	416,000.00	34,491.28	254,295.92	61.13	161,704.08
	STORM WATER UTILITY TOTAL	230,000.00	.00	118,293.39	51.43	111,706.61

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BUDGET REPORT
CALENDAR 2/2024, FISCAL 8/2024

PCT OF FISCAL YTD 66.6%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT EXPENDED	UNEXPENDED
TOTAL EXPENSES BY FUND		30,435,041.00	1,044,436.78	11,989,769.78	39.39	18,445,271.22
		=====	=====	=====	=====	=====

BUDGET REPORT
CALENDAR 2/2024, FISCAL 8/2024

PCT OF FISCAL YTD 66.6%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT EXPENDED	UNEXPENDED
	POLICE TOTAL	1,326,400.00	101,420.97	871,468.92	65.70	454,931.08
	CIVIL DEFENSE TOTAL	11,500.00	88.93	1,731.78	15.06	9,768.22
	FIRE TOTAL	978,350.00	73,399.86	714,549.81	73.04	263,800.19
	BUILDING/HOUSING TOTAL	634,500.00	14,973.66	355,014.64	55.95	279,485.36
	DOG CONTROL TOTAL	5,100.00	.00	3,269.55	64.11	1,830.45
	PUBLIC SAFETY TOTAL	2,955,850.00	189,883.42	1,946,034.70	65.84	1,009,815.30
	ROAD USE TOTAL	737,650.00	57,986.57	407,232.80	55.21	330,417.20
	STREET LIGHTING TOTAL	65,000.00	9,600.59	38,545.88	59.30	26,454.12
	PUBLIC WORKS TOTAL	802,650.00	67,587.16	445,778.68	55.54	356,871.32
	ENV.HEALTH SERVICES TOTAL	2,000.00	.00	.00	.00	2,000.00
	HEALTH & SOCIAL SERVICES TOTA	2,000.00	.00	.00	.00	2,000.00
	LIBRARY TOTAL	467,550.00	35,940.14	266,672.28	57.04	200,877.72
	PARKS TOTAL	430,000.00	23,998.40	283,676.74	65.97	146,323.26
	COMMUNITY CENTER TOTAL	.00	.00	869.75	.00	869.75-
	CULTURE & RECREATION TOTAL	897,550.00	59,938.54	551,218.77	61.41	346,331.23
	TIF/ECON DEV TOTAL	602,241.00	2,213.50	245,827.92	40.82	356,413.08
	COMMUNITY & ECONOMIC DEV TOTA	602,241.00	2,213.50	245,827.92	40.82	356,413.08
	BUILDING/HOUSING TOTAL	.00	.00	1,387.09	.00	1,387.09-
	MAYOR COUNCIL TOTAL	127,000.00	7,302.96	78,974.57	62.18	48,025.43
	POLICY ADMINISTRATION TOTAL	175,350.00	18,381.69	119,101.86	67.92	56,248.14
	ELECTIONS TOTAL	1,000.00	1,680.58	1,680.58	168.06	680.58-
	CITY ATTORNEY TOTAL	65,500.00	3,247.50	35,200.55	53.74	30,299.45
	CITY HALL TOTAL	87,700.00	2,877.58	58,455.07	66.65	29,244.93
	OTHER CITY GOVERNMENT TOTAL	986,000.00	15,901.00	952,725.97	96.63	33,274.03
	GENERAL GOVERNMENT TOTAL	1,442,550.00	49,391.31	1,247,525.69	86.48	195,024.31
	DEBT SERVICE TOTAL	1,160,070.00	.00	234,596.13	20.22	925,473.87
	DEBT SERVICE TOTAL	1,160,070.00	.00	234,596.13	20.22	925,473.87
	POLICE TOTAL	219,100.00	50,828.71	189,510.13	86.49	29,589.87
	FIRE TOTAL	.00	2,255.00	7,520.45	.00	7,520.45-
	OTHER PUBLIC WORKS TOTAL	150,000.00	14,011.00	346,534.12	231.02	196,534.12-

BUDGET REPORT
CALENDAR 2/2024, FISCAL 8/2024

PCT OF FISCAL YTD 66.6%

ACCOUNT NUMBER	ACCOUNT TITLE	TOTAL BUDGET	MTD BALANCE	YTD BALANCE	PERCENT EXPENDED	UNEXPENDED
	CAPITAL IMPROVEMENT TOTAL	8,493,500.00	370,429.68	3,665,173.99	43.15	4,828,326.01
	WATER UTILITY TOTAL	8,184,000.00	2,255.00	200,297.70	2.45	7,983,702.30
	CAPITAL PROJECTS TOTAL	17,046,600.00	439,779.39	4,409,036.39	25.86	12,637,563.61
	WATER UTILITY TOTAL	1,528,950.00	90,622.44	999,497.53	65.37	529,452.47
	SEWER UTILITY TOTAL	1,742,493.00	110,529.74	1,537,664.66	88.25	204,828.34
	RECYCLING TOTAL	416,000.00	34,491.28	254,295.92	61.13	161,704.08
	STORM WATER TOTAL	230,000.00	.00	118,293.39	51.43	111,706.61
	ENTERPRISE FUNDS TOTAL	3,917,443.00	235,643.46	2,909,751.50	74.28	1,007,691.50
	TRANSFER TOTAL	1,608,087.00	.00	.00	.00	1,608,087.00
	TRANSFER OUT TOTAL	1,608,087.00	.00	.00	.00	1,608,087.00
	TOTAL EXPENSES	30,435,041.00	1,044,436.78	11,989,769.78	39.39	18,445,271.22

REVENUE REPORT
CALENDAR 2/2024, FISCAL 8/2024

PCT OF FISCAL YTD 66.6%

ACCOUNT NUMBER	ACCOUNT TITLE	BUDGET	MTD BALANCE	YTD BALANCE	PERCENT RECVD	UNCOLLECTED
	GENERAL TOTAL	4,615,109.00	285,871.90	2,729,934.73	59.15	1,885,174.27
	ROAD USE TOTAL	720,590.00	57,083.71	522,855.02	72.56	197,734.98
	LOCAL OPTION SALES TAX TOTAL	950,000.00	.00	656,074.45	69.06	293,925.55
	TIF TOTAL	787,632.00	10,608.02	415,988.58	52.82	371,643.42
	L.M.I TOTAL	223,342.00	.00	163,974.77	73.42	59,367.23
	ASSET FORFEITURE TOTAL	17,000.00	.00	.00	.00	17,000.00
	DEBT SERVICE TOTAL	1,160,070.00	11,391.29	430,047.89	37.07	730,022.11
	CITY FACILITIES TOTAL TOTAL	2,460,900.00	.00	2,210,439.75	89.82	250,460.25
	CAPITAL WATER PROJECT TOTAL	6,510,000.00	.00	.00	.00	6,510,000.00
	CAPITAL EQUIPMENT/VEHICLE TOTA	329,100.00	28,303.86	39,878.64	12.12	289,221.36
	FOUR SEASONS PUB IMPROVEM TOTA	.00	.00	9,000.00	.00	9,000.00-
	NORTHSIDE DRIVE PROJECT TOTAL	2,018,000.00	.00	1,125,000.00	55.75	893,000.00
	TRAIL PROJECTS TOTAL	275,000.00	.00	425,000.00	154.55	150,000.00-

REVENUE REPORT
CALENDAR 2/2024, FISCAL 8/2024

PCT OF FISCAL YTD 66.6%

ACCOUNT NUMBER	ACCOUNT TITLE	BUDGET	MTD BALANCE	YTD BALANCE	PERCENT RECVD	UNCOLLECTED
	STREET PROJECTS TOTAL	250,000.00	.00	250,000.00	100.00	.00
	WATER TOTAL	1,770,900.00	92,206.02	1,388,380.85	78.40	382,519.15
	SEWER TOTAL	1,888,300.00	153,699.72	1,336,685.01	70.79	551,614.99
	SOLID WASTE/RECYCLING TOTAL	416,000.00	34,672.05	277,897.01	66.80	138,102.99
	STORM WATER UTILITY TOTAL	295,000.00	8,424.10	167,764.14	56.87	127,235.86
	TOTAL REVENUE BY FUND	24,686,943.00	682,260.67	12,148,920.84	49.21	12,538,022.16

BALANCE SHEET
CALENDAR 2/2024, FISCAL 8/2024

ACCOUNT NUMBER	ACCOUNT TITLE	MTD BALANCE	YTD BALANCE
001-000-1110	CHECKING - GENERAL	107,842.65-	1,570,641.78-
001-000-1725	ACCUM.DEPR. - LIBRARY BLDG	.00	.00
001-000-1745	ACCUM.DEPR. - PWD EQUIPMENT	.00	.00
001-000-1755	ACCUM.DEPR. - POLICE	.00	.00
001-000-1756	ACCUM.DEPR. - FIRE DEPT.	.00	.00
001-000-1805	ACCUM.DEPR. - SIDEWALKS	.00	.00
001-000-1806	ACCUM.DEPR.- PARKER BLVD	.00	.00
110-000-1110	CHECKING - ROAD USE	5,875.09	677,362.15
111-000-1110	CHECKING - I-JOBS	.00	.00
121-000-1110	CHECKING - LOCAL OPTION	.00	2,065,170.46
125-000-1110	CHECKING - TIF	10,608.02	456,475.01
135-000-1110	CHECKING - L.M.I.	2,213.50-	676,450.46
167-000-1110	CHECKING - PC COMM. LIB TRUST	.00	11,789.34
177-000-1110	CHECKING - FORFEITURE	.00	14,459.06
200-000-1110	CHECKING - DEBT SERVICE	11,391.29	172,441.70
301-000-1110	CHECKING - CAPITAL PROJECT	337,712.93-	2,870,883.14
302-000-1110	CHECKING - CAPITAL WATER PROJ	2,255.00-	511,669.90
303-000-1110	CHECKING - CAP EQUIP/VEHICLE	38,790.85-	379,322.25-
304-000-1110	CHECKING	.00	41,992.00
305-000-1110	CHECKING	30,316.75-	959,376.00
306-000-1110	CHECKING	.00	394,800.00
307-000-1110	CHECKING	2,400.00-	212,975.00
308-000-1110	CHECKING	.00	.00
309-000-1110	CHECKING	.00	.00
310-000-1110	CHECKING	.00	.00
600-000-1110	CHECKING - WATER UTILITY	1,583.58	1,845,577.73
600-000-1805	ACCUM. DEPR. - WATER	.00	.00
610-000-1110	CHECKING - SEWER UTILITY	43,169.98	1,222,969.92
610-000-1805	ACCUM. DEPR. - SEWER	.00	.00
670-000-1110	CHECKING-SOLID WASTE/RECYCLING	180.77	78,791.55
740-000-1110	CHECKING	8,424.10	233,219.77
920-000-1110	CHECKING - ESCROW BANK ACCOUNT	.00	.00
	CHECKING TOTAL	440,298.85-	10,496,439.16
600-000-1111	WAT.SINKING/CKG	.00	.00
610-000-1111	SEWER SINKING FUND	.00	.00
	WATER SINKING TOTAL	.00	.00
600-000-1112	WATER TRUST CHECKING	.00	.00
610-000-1112	SEW.IMPR.CHECKING	.00	.00
	CHECKING TOTAL	.00	.00
600-000-1113	WAT.IMPR/CHECKING	.00	.00
610-000-1113	79 SANITARY SEWER DISTRICT	.00	.00

BALANCE SHEET
CALENDAR 2/2024, FISCAL 8/2024

ACCOUNT NUMBER	ACCOUNT TITLE	MTD BALANCE	YTD BALANCE
	CHECKING TOTAL	.00	.00
600-000-1115	Water Holding Account	.00	.00
	TOTAL	----- .00	----- .00
001-000-1120	LIBR.PETTY CASH	.00	35.00
600-000-1120	WATER PETTY CASH	.00	.00
	PETTY CASH TOTAL	----- .00	----- 35.00
001-000-1121	GENERAL PETTY CASH	.00	100.00
	PETTY CASH TOTAL	----- .00	----- 100.00
001-000-1122	PETTY CASH-POLICE	.00	300.00
	PETTY CASH-POLICE TOTAL	----- .00	----- 300.00
001-000-1150	GENERAL RESERVE IPAIT A/C	.00	1.00
125-000-1150	TIF RESERVE IPAIT A/C	.00	.00
135-000-1150	LMI - IPAIT Account	.00	1.00
200-000-1150	DEBT/TIF/CHECKING	.00	.00
301-000-1150	TIF SPECIAL REVENUES	.00	.00
600-000-1150	WATER FUND IPAIT A/C	.00	1.00
610-000-1150	SEWER FUND IPAIT A/C	.00	1.00
	CHECKING TOTAL	----- .00	----- 4.00
001-000-1151	GENERAL INVESTMENT	.00	.00
600-000-1151	WATER RESERVE INVESTMENT	.00	.00
610-000-1151	Sewer Fund CD	.00	.00
	SAVINGS TOTAL	----- .00	----- .00
600-000-1152	WATER TRUST INVESTMT.	.00	.00
	WATER TRUST INVESTMENT TOTAL	----- .00	----- .00
001-000-1160	SUPER MONEY MKT II	11.94	10,378.04
110-000-1160	SAVINGS	.00	.00
125-000-1160	SAVINGS	.00	.00
		-----	-----

BALANCE SHEET
CALENDAR 2/2024, FISCAL 8/2024

ACCOUNT NUMBER	ACCOUNT TITLE	MTD BALANCE	YTD BALANCE
	SUPER MONEY MKT II TOTAL	11.94	10,378.04
001-000-1161	GRINNELL STATE BANK CD	.00	1,606,733.23
610-000-1161	Polk County Bank CD	.00	.00
	GRINNELL STATE BANK CD TOTAL	.00	1,606,733.23
001-000-1162	LUANA BANK C.D.-1.85%	.00	3,250,000.00
	TOTAL	.00	3,250,000.00
001-000-1163	Luana Savings Bank - M.M. Acco	78,143.15	482,893.35-
135-000-1163	Luana Money Market Account	.00	719,041.86
600-000-1163	Luana Money Market Account	.00	.00
610-000-1163	Luana Money Market Account	.00	.00
	LUANA MONEY MARKET TOTAL	78,143.15	236,148.51
600-000-1220	ACCOUNTS RECEIVABLE	.00	.00
610-000-1220	ACCOUNTS RECEIVABLE	.00	.00
	TOTAL	.00	.00
	TOTAL CASH	362,143.76-	15,600,137.94



Polk City Police Department

309 W Van Dorn St. P.O.Box 381

Polk City, Iowa 50226

Phone: 515-984-6565 Fax 515-984-6819 email: police@polkcityia.gov

Service Integrity Respect Quality

To: Honorable Mayor and Council Members

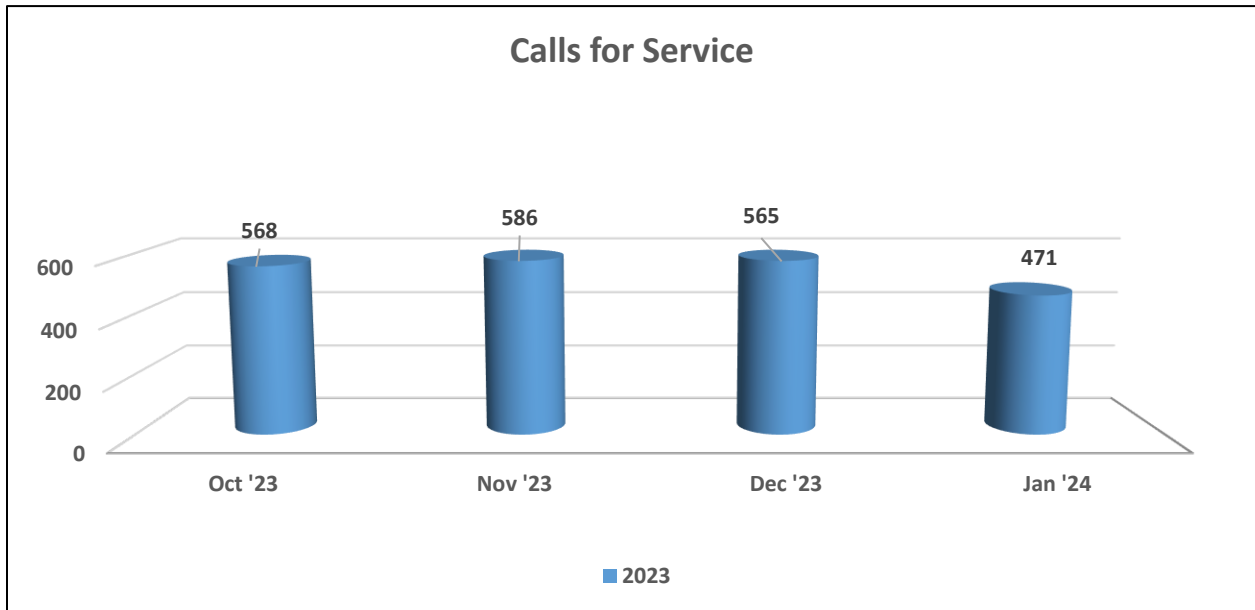
From: Lieutenant Aswegan

Date: February 8, 2024

Re: January 2024 Monthly Report

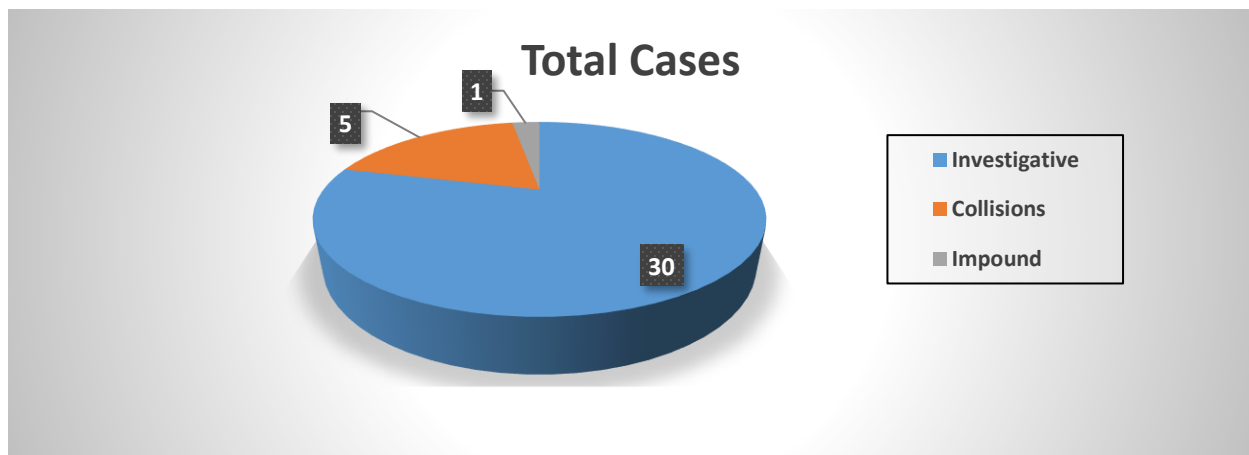
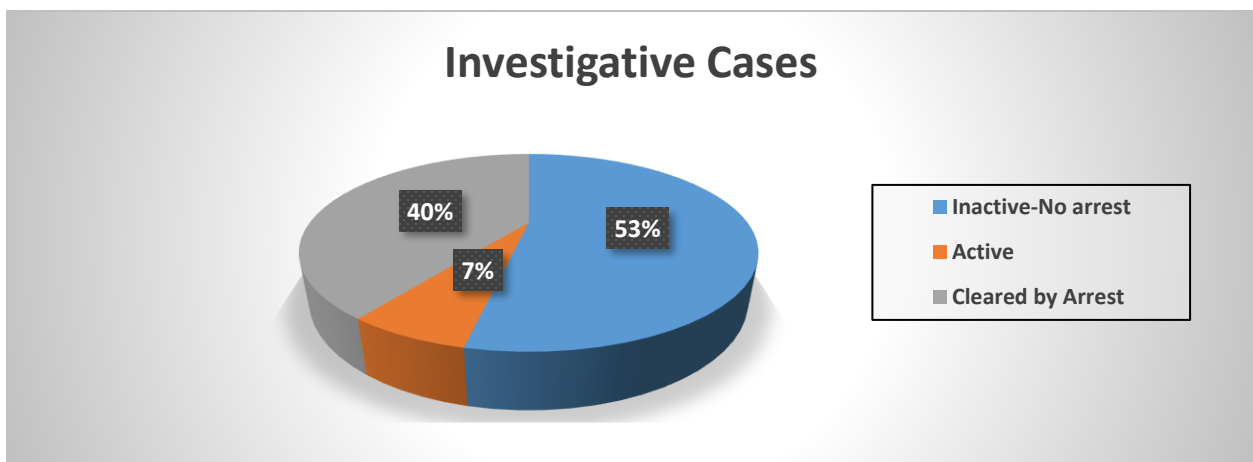
Calls for Service

The total calls for service for the month of January were **471**. This includes response to citizen complaints/reports, assists, self-initiated activities such as traffic stops, building checks, suspicious persons, and case follow up. Among these calls for service Polk City Officers conducted **90** traffic stops.



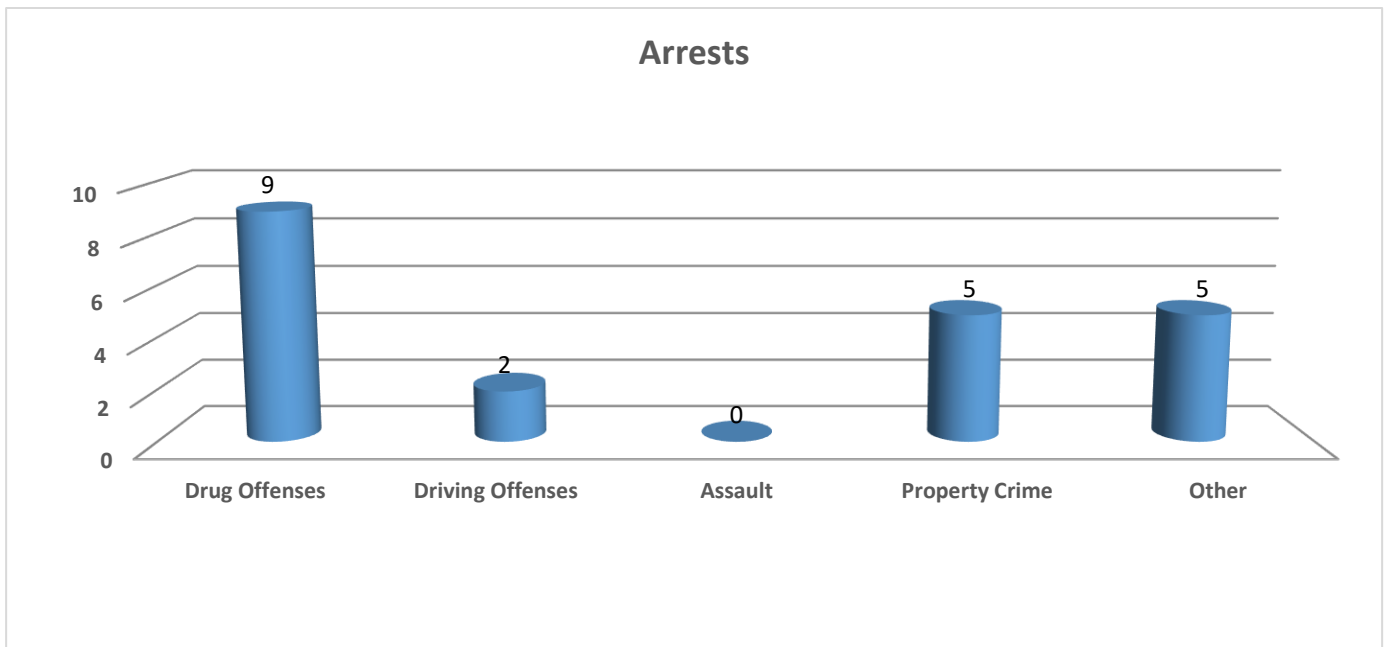
Cases Made

The Police Department had **36** total cases during the month of January. **30** of the cases were investigative incident reports, **5** were for vehicle collisions and **1** for an impound. There are **2** active investigations this month. There was a **40%** rate of cases cleared by arrest, for investigative cases in January.



Arrests Made

The Police Department made **24** arrests and issued **25** citations and **73** warnings. The arrests consisted of **5** driving related offenses, **9** drug related offenses, **5** for property crimes and **5** for miscellaneous offenses including public intoxication, harassment, outstanding arrest warrant and interference with official acts.



Notable Incidents

24-0005

On January 2nd at about 10:00 pm, a Polk City Police Officer stopped a vehicle for a traffic violation. The driver was identified as a 23-year-old Polk City man. While speaking with the driver, the officer saw signs of alcohol impairment. An investigation revealed the man's breath alcohol content was .221. He was arrested and charged with OWI- 1st Offense. He was released to a responsible party pending his court date.

24-0025

On January 23rd at about 6:00 pm, a Polk City Officer came upon a car in the ditch on NW 44th Street. The car was occupied by 2 females and one male. While speaking with the occupants, the officer developed suspicions of the presence of drugs. An Ankeny Police K9 was called to the scene and deployed on the vehicle. The K9 alerted to the odor of drugs in the vehicle and a subsequent search of the vehicle was done by officers. User amounts of methamphetamine, marijuana, and Alprazolam, along with a methamphetamine smoking pipe was found. The man and one of the females were charged with several counts of misdemeanor drug possession. They were booked into the Polk County jail.

23-0361

A 2023 theft investigation was completed this month with charges filed against the suspect. In October 2023, a Polk City Police Officer began an investigation into 2 reports of a local contractor defrauding money from citizens by promising to roof their house. The suspect, a 45-year-old former Polk City man, fraudulently received over \$50,000 from the victims. At the time the charges were filed, the man was in the Polk County jail on unrelated charges. The investigating officer filed the charges on the offender, and he was seen by a judge the following day. He was charged with 2 counts of Theft – 1st Degree.

Officer Training

As part of the department's effort to become more prepared for major incidents, Lieutenant Aswegan and Sergeant Sherman attended Incident Command System 300 course taught at Polk County Emergency Management. This is a 2-day course where supervisory personnel learned how to best organize personnel and resources to manage a scene of an incident.

In-Service Training

January in-service training was focused on refresher training on applying a tourniquet. For those that needed CPR/AED recertification, this was also done in January.

Aicher 16
Delaney 2
Blaha-Polson 1
Sherman 31
Whipple 1
Garrison 1
Stover 1
Aswegan 30

Total Training Hours: 83

K9 Program

Officer Aicher and Eudoris completed monthly training in January, focusing on obedience and narcotics detection.

Eudoris was deployed 2 times in January, both in support of Polk City Police Officers and both for narcotics detection.



24-0011

On January 9th at about 12:30 pm, Polk City Police K9 Team responded to assist a Polk City Officer on the scene of two subjects in 2 different vehicles suspected of being involved in drug possession. Eudoris was deployed on both vehicles, and he alerted to the odor of drugs from both. A search of the vehicles and suspects was done, resulting in the seizure of 5 grams of methamphetamine, an ounce of marijuana and several items of drug paraphernalia. A 43-year-old Ankeny man was arrested and charged with 2 counts of Possession of Controlled Substance-3rd Offense and one count of Possession of Drug Paraphernalia. A 35-year-old Ankeny woman was arrested on an outstanding warrant for shoplifting and also charged with several traffic offenses. They were both booked into the Polk County jail.

Polk City Water Department

Monthly Report

Month February

Year 2024

Total Water Pumped 9,347,670 Gallons
Monthly Daily Avg 322,333 Gallons

Testing Results

- **SDWA Bacteriological Coliform Analysis** K&S University Hygienic Lab.
Fecal Coliform Analysis- Sample incubated 35c for 48 hrs then examine for gas production. Gas production verifies presence of fecal coliform organisms.
- **Fluoride Analysis** .4 University Hygienic Lab.
A fluoride concentration of approx. 1mg/l in drinking water effectively reduces dental caries without harmful effects on health. MCL for fluoride is 4.0 mg/l.
Fluoride at Plant- Monthly Average .55 mg/l Polk City Lab.
Fluoride in System- Monthly Average .62 mg/l Polk City Lab.
- **Chlorine Free At Plant- Monthly Average** 1.10 mg/l Polk City Lab.
Chlorine Total at plant- Monthly Average 2.66 mg/l Polk City Lab.
Chlorine Free in System- Monthly Average .66 mg/l Polk City Lab.
Chlorine Total in System- Monthly Average .90 mg/l Polk City Lab.
Chlorine requirement is the quantity of chlorine that must be added to H2O to achieve complete disinfection of pathogens and protozoa. Chlorine residuals will vary widely depending on organic loading. We also use chlorine to oxidize iron prior to filtration.
- **Iron Raw Water- Monthly Average** 6.08 mg/l Polk City Lab.
Iron Finish Water- Monthly Average .06 mg/l Polk City Lab.
Iron System Water- Monthly Average .04 mg/l Polk City Lab.
Iron occurs in rocks and minerals in the earth's crust. It's the 4th most abundant element respectively. Iron has no effect on human health; its main objection is aesthetics. Concentrations of Iron in finish H2O should be between 0.03-0.06mg/l.
- **Manganese Raw Water- Monthly Average** 0.313 mg/l Polk City Lab.
Manganese Finish Water- Monthly Average 0.177 mg/l Polk City Lab.
Manganese System Water- Monthly Average 0.096 mg/l Polk City Lab.
Manganese also occurs in rocks and the earth's crust. It is the 7th most abundant element. Manganese is extremely difficult to remove. Concentrations of Manganese in finish H2O should not exceed 0.05mg/l or black staining of plumbing fixtures may occur. No effect on human health.
- **pH Raw Water Monthly Average** 7.7 mg/l Polk City Lab.
pH Finish Water-Monthly Average 6.0 mg/l Polk City Lab.
pH System Water- Monthly Average 6.2 mg/l Polk City Lab.
pH scale ranges from 0-14 with 7 being considered neutral. Below 7 becomes corrosive to plumbing, above 7 tends to deposit minerals in plumbing. We add caustic soda to maintain proper pH, which should range between 7.5-7.9 in finish water.

Total Tests Performed- Polk City Lab _____

Total Hours to perform tests _____

Library Director's Report February 2024

Library Statistics:

- February Circulation and library usage
 - February 2024 circulation of 4,663 was a decrease of 142 checkouts compared to January 2024 and an increase of 253 compared to February 2023.
 - 1,917 individuals visited the library in February. This is an increase of 263 compared to January 2024. It is an increase of 92 visitors compared to February 2023.
 - 102 individuals attended 14 passive adult library programs in February.
 - Library Patrons saved \$45,070 in February by borrowing materials from the library versus purchasing them (does not include digital ebook/audiobook downloads, hotspot loans or Adventure Passes).
 - 21 passport applications were processed
 - 2 Notary appointments
 - 178 patrons are now using the myLibro App
 - 8 Adventure passes were used saving patrons \$390.00
- None of the library-related legislative bills made it through the first funnel. Although this is encouraging, they could come back in another form on bills that did move forward.
- The new youth services library, Nicole Straker, started on February 27.
- ILA Capitol Day is March 5 from 12:00-2:00. In 2023, Iowa experienced the second-most library adverse bills in the nation and 2024 looks like it will be just as challenging. I plan to attend from 12:00-1:00.
- There were 7 applicants for the library page position. Four individuals were interviewed.
- We have several extra youth activities scheduled for spring break.
- The study pod installation is scheduled for May 6-9.

LIBRARY -FEBRUARY 2024 STATS SNAPSHOT	February 2023	February 2024	January 2024
Total Visitors	1,825	1,917	1,654
People Checking Out	357	390	375
Polk City Cardholders	304	327	325
Polk City Checkouts	2,793	2,711	2,750
Open Access Cardholders	27	28	17
Open Access Checkouts	237	259	212
Rural Cardholders	26	35	33
Rural Checkouts	203	355	340
Bridges E-book/Audiobook Checkouts	1,146	1,317	1,473
Outgoing ILL Books	31	21	30
Total Checkouts (incl. Bridges & Outgoing ILL)	4,410	4,663	4,805
Auto Renewals	568	583	558
Total Checkouts (adjusted for auto-renewal)	3,842	4,080	4,247
Incoming ILL Books	30	34	30
Reserves Placed	282	348	401
Materials Added	178	197	140
Materials Withdrawn	62	30	86
New Cards Issued	19	29	31
Computer Users	33	39	36
WiFi Users (on site)	311	640	517
AWE Station Usage	104	128	160
AWE Games Played	344	352	268
Adult Programs	30	28	23
Adult Program Attendance	201	215	167
Youth Programs	23	26	16
Youth Program Attendance	432	314	247
Tutoring	2	9	12
No. of Meeting Room Uses by Outside Groups	2	5	1
Patron Savings (physical materials only)	\$42,417	\$45,070	\$44,498
Passports	33	21	41
Blank Park Zoo Adventure Pass (\$60)	0	0	0
Science Center of Iowa Adventure Pass (\$60)	5	4	1
Botanical Gardens Adventure Pass (\$42)	1	1	1
Des Moines Children's Museum (\$36)	1	3	2
Reiman Gardens (\$36)	0	0	0
Iowa Arboretum (\$22)	0	0	0
TOTAL ADVENTURE PASS SAVINGS	\$290	\$390	\$174
Summer Reading Signups (0-11) as of 6/30			
Summer Reading Signups (12-17) as of 6/30			
Adult Reading Participation as of 6/30			
Social Media Page Views (Feb. 1-29)	537	674	1,107
Social Media Post Reach (Feb. 1-29)	1,935	3,560	2,740
New Social Media Followers(Feb. 1-29)	11	17	unavailable
New Social Media Likes (Feb. 1-29)	5	unavailable	15
Website Views	2,624	2,635	2,908

AGENDA FOR POLK CITY LIBRARY BOARD MEETING
Polk City Community Library
1500 W. Broadway, Polk City, IA
Monday, March 4, 2024 at 6:00 pm

I. Call to order

MOTION: A motion was made by Angie Conley and seconded by Lisa England to approve Meeting Agenda.

MOTION PASSED unanimously.

Board Members Present:	Rod Bergren, Angie Conley, Sara Olson, Justin Young, Lisa England
Board Members Absent:	none
Library Director Present:	Jamie Noack
City Council Liaison Present:	none
Guests Present:	None

II. Approval of the agenda

MOTION: A motion was made by Angie Conley and seconded by Sara Olson to approve.

MOTION PASSED unanimously.

III. Consent Items

1. Approve the [February 2024 Board Minutes](#)
2. Approve January 2024 financial statements
 - a. [January 2024 History](#)
 - b. [January 2024 Budget](#)
 - c. [January 2024 Revenue & Expenses](#)

IV. Communication from the Public

None present

V. [Director's Report](#)

1. [February Stats](#)

VI. Liaison report

none

VII. Board Education

None this month- will be done next month after meeting with Grimes library and getting a tour of new facilities

VIII. Agenda Items

1. Approve [Resolution 2024-06L](#) hiring a library page

MOTION: A motion was made by Sara Olson and seconded by Lisa England to approve.

MOTION PASSED unanimously.

2. Approve [Study Room Policy](#)

Looked at nearby library policies and tried to find applicable ideas. You can reserve twice per week, but are welcome to come use it as a drop in more frequently. You can sign up for it with software that the library uses. If there is no one assigned after you, person can stay longer. Discussion was had to add a maximum size policy of 6 people based on the size of the study pod. Discussion was had about whether 30 days out was too much room to reserve room.

MOTION: A motion was made by Sara Olson and seconded by Rod Bergren to table policy until next month to make recommended changes.

MOTION PASSED unanimously.

3. Approve closing the library on Saturday, April 6, 2024 due to fire department training burn on adjacent property.

MOTION: A motion was made by Lisa England and seconded by Rod Bergren to approve.

MOTION PASSED unanimously.

4. Determine April Board Education- will be done by Angie Conley

MOTION: A motion was made by Lisa England and seconded by Rod Bergren to approve.

MOTION PASSED unanimously.

IX. Adjourn

MOTION: A motion was made by Rod Bergren and seconded by Lisa England to approve.

MOTION PASSED unanimously.

X: Tour the Grimes Public Library

Next Meeting Monday, April 7, 2024

Mission Statement: The Polk City Community Library provides a place where all can meet, learn, and grow.

RESOLUTION 2024-06L

**A RESOLUTION HIRING CANDIDATES FOR LIBRARY PAGES FOR
THE POLK CITY, IOWA LIBRARY**

WHEREAS, the Polk City Community Library has an established positions for Library Pages; and

WHEREAS, there are currently Library Page positions vacant; and

WHEREAS, required advertising and vetting of candidates has been completed;

NOW, THEREFORE, BE IT RESOLVED, the Board of Trustees of the Polk City Community Library recommends hiring Vinson Spittler with a start date determined upon a successful completion of required background checks at a starting wage of \$13.00 per hour.

PASSED AND APPROVED the 4th day of March 2024.



Angela Conley, Library Board President

ATTEST:



Jamie Noack, Library Director

March 7, 2024

VIA EMAIL

Chelsea Huisman
City Administrator/City Hall
Polk City, Iowa

Re: Elevated Storage Tank – Water Main Extension Project
Our File No. 511493-11

Dear Chelsea:

We have prepared and attach the necessary proceedings to enable the City Council to act at the March 11, 2024, meeting to set a date, time and place for the hearing and letting for the Elevated Storage Tank – Water Main Extension Project.

The materials attached include the following items:

1. Resolution setting the dates for the hearing and letting; approving the form of notice of hearing (the “Notice of Hearing”) on proposed plans, specifications, proposed form of contract and estimated cost (the “Contract Documents”) set forth in Section 4 of the Resolution; and approving the form of notice to bidders (the “Notice to Bidders”) set forth in Section 7 of the Resolution.
2. Attestation Certificate attesting to the validity of the transcript.
3. Publication Certificate covering publication of the Notice of Hearing, to which the publisher’s affidavit of publication, together with a clipping of the notice as published, should be attached.

The Notice of Hearing must be published at least once, not less than four (4) and not more than twenty (20) days prior to the date of the said hearing in a legal newspaper of general circulation in the City. The last date on which this notice can be effectively published is April 18, 2024. As soon as the notice appears in the newspaper, please email a copy to lemke.susan@dorsey.com.

4. Posting Certificates covering the posting of the Notice to Bidders in the three places designated by Section 26.3 of the Code of Iowa, to which an affidavit of posting, together with a proof of the Notice to Bidders as posted, should be attached.

The Notice to Bidders must be posted in each of the following three places:

- (i) in a relevant contractor plan room service with a statewide circulation;
- (ii) in a relevant construction lead generating service with a statewide circulation; and
- (iii) on an internet site sponsored by either the City or a statewide association that represents the City (i.e. the Iowa League of Cities).

The Notice to Bidders must be posted not less than thirteen (13) and not more than forty-five (45) days prior to the date designated for receiving bids. The last date on which this notice can be effectively posted is April 4, 2024. The Notice to Bidders should be provided to the Construction Update Network by no later than April 3, 2024.

It is our understanding that, in order to meet the requirement of items (i) and (ii) in the paragraph above, the engineer will arrange for the Notice to Bidders to be posted on Quest CDN. Further, it is our understanding that to comply with item (iii) in the paragraph above, the City Clerk and/or the engineer will arrange for the Notice to Bidders to be posted on either the City's website or the website of the Iowa League of Cities (either posting will meet the statutory requirement).

Please return one fully executed copy of these proceedings to our office.

If you have any questions, please contact Emily Hammond, John Danos or me.

Sincerely,

Erin Regan

Attachments

cc: Jenny Coffin
Ian Davis
Matt Stoffel

PROCEEDINGS TO SET DATE FOR HEARING AND LETTING

511493-11 (NHL)

Polk City, Iowa

March 11, 2024

The City Council of the City of Polk City, Iowa, met at the _____, Polk City, Iowa, on March 11, 2024, at _____ o'clock ____m. The Mayor presided and the roll being called, the following named Council Members were present and absent:

Present: _____

Absent: _____.

The City Council took up and considered the proposed Elevated Storage Tank – Water Main Extension Project. Council Member _____ introduced the resolution next hereinafter set out and moved its adoption, seconded by Council Member _____. After due consideration thereof by the Council, the Mayor put the question upon the adoption of the said resolution and the roll being called, the following named Council Members voted:

Ayes: _____

Nays: _____.

Whereupon, the Mayor declared the said motion duly carried and the said resolution adopted, as follows:

RESOLUTION NO. 2024-24

Resolution to provide for a notice of hearing on proposed plans, specifications, form of contract and estimate of cost for the Elevated Storage Tank – Water Main Extension Project, and the taking of bids therefor

WHEREAS, it has been proposed that the City Council of the City of Polk City, Iowa (the “City”), undertake the authorization of a public improvement to be constructed as described in the proposed plans and specifications and form of contract prepared by McClure Engineering Company (the “Project Engineers”), which may be hereafter referred to as the “Elevated Storage Tank – Water Main Extension Project” (and is sometimes hereinafter referred to as the “Project”), which proposed plans, specifications, notice of hearing and letting, and form of contract and estimate of cost (the “Contract Documents”) are on file with the City Clerk; and

WHEREAS, it is necessary to fix a time and place of a public hearing on the Contract Documents and to advertise for sealed bids for the Project;

NOW, THEREFORE, Be It Resolved by the City Council (the “Council”) of the City of Polk City, Iowa, as follows:

Section 1. The Contract Documents referred to in the preamble hereof are hereby approved in their preliminary form.

Section 2. The Project is hereby determined to be necessary and desirable for the City, and, furthermore, it is hereby found to be in the best interests of the City to proceed toward the construction of the Project.

Section 3. April 22, 2024, at 6:00 p.m., in the Council Chambers at City Hall, Polk City, Iowa, is hereby fixed as the time and place of hearing on the Contract Documents. The foregoing date and time may be changed at the discretion of the City Clerk, and in compliance with the publication requirements pursuant to Iowa law.

Section 4. The City Clerk is hereby authorized and directed to publish notice (the “Notice of Hearing”) of the hearing on the Contract Documents for the Project in a newspaper of general circulation in the City, which publication shall be made at least once, not less than four (4) and not more than twenty (20) days prior to the date of the said hearing. The Notice of Hearing shall be in substantially the following form, with such conforming changes as approved by the City Clerk:

(Form of Notice of Hearing)

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS AND
SPECIFICATIONS, FORM OF CONTRACT AND ESTIMATE OF COST FOR
THE ELEVATED STORAGE TANK – WATER MAIN EXTENSION PROJECT

Notice Is Hereby Given: That at 6:00 p.m., on April 22, 2024, at the Council Chambers at City Hall, Polk City, Iowa, the City Council of the City of Polk City, Iowa will hold a public hearing on the proposed plans and specifications, form of contract and estimate of cost (the “Contract Documents”) for the proposed Elevated Storage Tank – Water Main Extension Project (the “Project”).

The Project location is bound by E Vista Lake Ave to the North, E Northside Dr to the South and is east of Big Creek Elementary in Polk City, Iowa and includes the following Work: project includes the installation approximately 2,400 LF of new 16-in. water main in right-of-way or easement, approximately 700 LF of new 8-in. water main in right-of-way or easement. The project also consists of associated clearing and grubbing, rough grading, seeding, approximately 100 LF of 24-in. storm sewer installation, approximately 400 LF of 18-in. storm sewer, and other incidental work as described in the plans and specifications.

A copy of the proposed Contract Documents is on file for public inspection in the office of the City Clerk.

At the hearing any interested person may file written objections or present oral comments with respect to the subject matter of the hearing.

Jenny Coffin
City Clerk

Section 5. The City Council hereby delegates to the City Clerk the duty of receiving bids for the construction of the Project before 1:00 p.m., on April 17, 2024, in the Office of the City Clerk at 112 3rd Street, Polk City, Iowa. At such time and place, the City Council hereby delegates to the City Clerk and/or the Project Engineers the duty of opening and announcing the results of the bids received. April 22, 2024, at 6:00 p.m., in the Council Chambers at City Hall, in the City, is hereby fixed as the time and place that the Council will consider the bids received by the City Clerk in connection therewith. The foregoing dates and times may be changed at the discretion of the City Clerk, and in compliance with the public bidding requirements pursuant to Iowa law.

Section 6. The amount of the bid security to accompany each bid is hereby fixed at 10% of the total amount of the bid.

Section 7. The City Clerk and/or the Project Engineers are hereby directed to give notice of the bid letting for the Project by posting notice (the “Notice to Bidders”) at least once, not less than thirteen (13) and not more than forty-five (45) days prior to the date set for receipt of bids, in each of the following three places: (i) in a relevant contractor plan room service with statewide circulation; (ii) in a relevant construction lead generating service with statewide circulation; and (iii) on an internet site sponsored by either the City or a statewide association that represents the City. The Notice to Bidders shall be in substantially the following form, with such conforming changes as approved by the City Clerk:

(Form of Notice to Bidders)

**NOTICE TO BIDDERS AND
NOTICE OF PUBLIC HEARING**

**POLK CITY ELEVATED STORAGE TANK
WATER MAIN EXTENSION PROJECT**
CITY OF POLK CITY, IOWA

Public Hearing on Proposed Contract Documents and Estimated Costs for Improvement

Notice is hereby given that a public hearing will be held by the **City of Polk City, Iowa** on the proposed Contract Documents (plans, specifications, and form of contract), and estimated total cost for the **Polk City Elevated Storage Tank – Water Main Extension Project** project at its meeting at **6:00 P.M. on the 22nd day of April, 2024**, in the City Council Chambers, 112 3rd Street., Polk City, Iowa, 50226.

Time and Place for Filing Sealed Proposals

Sealed bids for the work comprising the improvements as stated below must be filed before **1:00 P.M.** on the **17th day of April, 2024**, in the office of the City Clerk, Polk City City Hall, 112 3rd Street, Polk City, IA 50226.

Time and Place Sealed Proposals Will be Opened and Considered

Sealed proposals will be opened and bids tabulated at **1:00 P.M. on the 17th day of April, 2024**, in the Council Chambers at City Hall.

Bids will be considered by the City of Polk City City Council at its meeting at **6:00 P.M. on the 22nd day of April, 2024**, in said City Council Chambers. The City of Polk City reserves the right to reject any and all bids.

Commencement of Work

Work on the improvement shall be commenced any time after a written Notice to Proceed is issued, and shall be completed as stated below. The Notice to Proceed will be issued after the preconstruction conference.

Contract Documents

A copy of said plans, specifications, and form of contract, and estimated total cost is now on file in the office of the City Clerk and may be examined at Polk City City Hall, 112 3rd Street, Polk City, IA 50226.

Plans and Bidding Documents will be available starting **March 13th, 2024**. Paper copies of Plans and Bidding Documents and Contract Documents with Proposal forms may be obtained from McClure Engineering Company, 1360 NW 121st Street, Clive, IA 50325, (Phone 515-964-1229) upon request. The request shall be accompanied by a certified check (made payable to McClure Engineering Company) in the amount of One Hundred and Fifty Dollars (\$150.00) for 11 by 17-inch Plans and Two Hundred and Fifty Dollars (\$250.00) for 24 by 36-inch Plans. Payment will be refunded if the Plans and Documents are 1) returned within fourteen (14) days after the Award of the Project and 2) the Plans and Documents are in a reusable condition. If they are not returned, or returned past the deadline, or are not in a reusable condition as judged by the Engineer, the deposit shall be forfeited.

Complete digital project Bidding Documents and Contract Documents and Plans are available at www.questcdn.com. You may download the digital documents at no cost by inputting Quest project number **1111111** on the website's Project Search page. Please contact QuestCDN.com at 952.233.1632 or info@questcdn.com for assistance in free membership registration, downloading, and working in this digital project information.

Preference of Products and Labor

By virtue of statutory authority, a preference will be given to products and provisions grown and coal produced within the State of Iowa.

Failure to submit a fully completed and accurate Bidder Status Form with the Proposal may result in the Proposal being deemed non-responsive and may result in the Proposal being rejected.

General Nature of the Public Improvement

This project includes all materials, equipment, transportation, and labor needed to complete the improvements as follows:

Polk City Elevated Storage Tank – Water Main Extension - The Project location is bound by E Vista Lake Ave to the North, E Northside Dr to the South and is east of Big Creek Elementary in Polk City, Iowa and includes the following Work: project includes the installation approximately 2,400 LF of new 16-in. water main in right-of-way or easement, approximately 700 LF of new 8-in. water main in right-of-way or easement. The project also consists of associated clearing and grubbing, rough grading, seeding, approximately 100 LF of 24-in. storm sewer installation, approximately 400 LF of 18-in. storm sewer, and other incidental work as described in the plans and specifications.

Bid Security

Each Bidder shall accompany its bid with bid security as defined in Iowa Code Section 26.8, and in the amount of 10% of the total amount of the bid, as security that the successful Bidder will enter into a Contract for the work bid upon and will furnish after the award of Contract a corporate Surety Bond, in a form acceptable to the City of Polk City, for the faithful performance of the Contract, in an amount equal to one hundred percent (100%) of the amount of the Contract. The Bidder's security shall be in the amount fixed in the Instructions to Bidders and shall be in the form of a cashier's check or a certified check drawn on an FDIC insured bank in Iowa or on an FDIC insured bank chartered under the laws of the United States; or a certified share draft drawn on a credit union in Iowa or chartered under the laws of the United States; or a Bid Bond on the form provided in the Contract Documents with corporate Surety satisfactory to the City of Polk City. The bid shall contain no condition except as provided in the specifications.

The City of Polk City reserves the right to defer acceptance of any bid for a period of Sixty (60) calendar days after receipt of bids and no bid may be withdrawn during this period.

Performance, Payment, and Maintenance Bond

Each successful Bidder will be required to furnish a corporate Surety Bond in an amount equal to one hundred percent (100%) of its Contract price. Said Bond shall be issued by a responsible Surety approved by the City of Polk City and shall guarantee the faithful performance of the Contract and the terms and conditions therein contained and shall guarantee the prompt payment of all material and labor, and protect and save harmless the City of Polk City from claims and damages of any kind caused by the operations of the Contract and shall also guarantee the maintenance of the improvement caused by failures in materials and construction for a period of **four (4)** years from and after acceptance of the Contract.

Payment

Payments will be made on the basis of estimates prepared by the Contractor and approved by the Engineer, solely for the purpose of payment; approval by the Engineer, or the City Council, shall not be deemed as approval or acceptance of the workmanship or materials. The Contractor will be compensated for 95% of the work completed during a payment period, with the remaining 5% being retained in accordance with the Iowa Code. Regular payments approved by the Engineer will be made following the next scheduled City Council meeting. The retainage payment will be released following acceptance of the project by the City of Polk City and the provisions stipulated in the Iowa Code.

Sales Tax Exemption

The City of Polk City will issue a sales tax exemption certificate to the Contractor for all material purchased for incorporation into the project. Tax exemption certificates are applicable only for the specific project for which the tax exemption certificate is issued.

Completion of Work

All work will be substantially completed and in operation by **December 2, 2024** and all other work shall be finally completed in its entirety with seeding by **May 30, 2025**. Liquidated damages in the amount of Five Hundred Dollars (\$500) will be assessed for each calendar day after the specified completion dates that the work remains incomplete.

The City of Polk City does hereby reserve the right to reject any or all bids, to waive informalities, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City.

This Notice is given by authority of the City of Polk City, Iowa.

Dated at Polk City, Iowa, this **13th day of March, 2024**.

Title

ATTEST:

Title

Section 8. All provisions set out in the attached forms of notice are hereby recognized and prescribed by the City Council and all resolutions or orders or parts thereof, to the extent the same may be in conflict herewith, are hereby repealed.

Passed and approved March 11, 2024.

Mayor

Attest:

City Clerk

••••

On motion and vote, the meeting adjourned.

Mayor

Attest:

City Clerk

ATTESTATION CERTIFICATE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that the transcript hereto attached is a true, correct and complete copy of all the records of the City relating to fixing a time and place of hearing on the proposed plans, specifications and form of contract, and estimated cost for the construction of the Elevated Storage Tank – Water Main Extension Project and directing publication of a Notice of Hearing announcing the time and place fixed therefor; and fixing a time and place for the taking of bids for the construction of the Project and directing posting of a Notice to Bidders announcing the time and place fixed therefor.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

NOTICE OF HEARING PUBLICATION CERTIFICATE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that pursuant to the resolution of its City Council fixing a date of hearing on the proposed plans and specifications, form of contract and estimated cost for the Elevated Storage Tank – Water Main Extension Project, the Notice of Hearing, of which the printed slip attached to the publisher’s affidavit hereto attached is a true and complete copy, was published on the date and in the newspaper specified in such affidavit, which newspaper has a general circulation in the City.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

(Attach here publisher’s affidavit of publication of the Notice of Hearing.)

(PLEASE NOTE: Do not date and return this certificate until you have received the publisher’s affidavit and have verified that the Notice of Hearing was published on the date indicated in the affidavit, but please return all other completed pages to us as soon as they are available.)

NOTICE TO BIDDERS POSTING CERTIFICATE – CONTRACTOR PLAN ROOM/LEAD GENERATING SERVICE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that pursuant to the resolution of its City Council setting the date of the bid letting for the Elevated Storage Tank – Water Main Extension Project, the Notice to Bidders, of which the printed slip attached to the affidavit hereto attached is a true and complete copy, was posted on the date and in the relevant contractor plan room service/construction lead generating service specified in such affidavit, which contractor plan room service/construction lead generating service has a statewide circulation.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

(Attach here the affidavit of posting of the Notice to Bidders from the contractor plan room service/construction lead generating service.)

(PLEASE NOTE: Do not date and return this certificate until you have received the affidavit of posting from the contractor plan room service/construction lead generating service and have verified that the Notice to Bidders was posted on the date indicated in the affidavit, but please return all other completed pages to us as soon as they are available.)

NOTICE TO BIDDERS POSTING CERTIFICATE – SPONSORED INTERNET SITE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that pursuant to the resolution of its City Council setting the date of the bid letting for the Elevated Storage Tank – Water Main Extension Project, the Notice to Bidders provided for therein provided for therein was posted on the website of the Iowa League of Cities and/or on the City’s website on _____, 2024.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

(Attach here the affidavit of posting of the Notice to Bidders from the Iowa League of Cities and/or a screenshot of the Notice to Bidders as posted on the City’s website, showing the date of posting).

March 7, 2024

VIA EMAIL

Chelsea Huisman
City Administrator/City Hall
Polk City, Iowa

Re: Elevated Storage Tank – New 1.5 MG Tank Project
Our File No. 511493-11

Dear Chelsea:

We have prepared and attach the necessary proceedings to enable the City Council to act at the March 11, 2024, meeting to set a date, time and place for the hearing and letting for the Elevated Storage Tank – New 1.5 MG Tank Project.

The materials attached include the following items:

1. Resolution setting the dates for the hearing and letting; approving the form of notice of hearing (the “Notice of Hearing”) on proposed plans, specifications, proposed form of contract and estimated cost (the “Contract Documents”) set forth in Section 4 of the Resolution; and approving the form of notice to bidders (the “Notice to Bidders”) set forth in Section 7 of the Resolution.
2. Attestation Certificate attesting to the validity of the transcript.
3. Publication Certificate covering publication of the Notice of Hearing, to which the publisher’s affidavit of publication, together with a clipping of the notice as published, should be attached.

The Notice of Hearing must be published at least once, not less than four (4) and not more than twenty (20) days prior to the date of the said hearing in a legal newspaper of general circulation in the City. The last date on which this notice can be effectively published is April 18, 2024. As soon as the notice appears in the newspaper, please email a copy to lemke.susan@dorsey.com.

4. Posting Certificates covering the posting of the Notice to Bidders in the three places designated by Section 26.3 of the Code of Iowa, to which an affidavit of posting, together with a proof of the Notice to Bidders as posted, should be attached.

The Notice to Bidders must be posted in each of the following three places:

- (i) in a relevant contractor plan room service with a statewide circulation;
- (ii) in a relevant construction lead generating service with a statewide circulation; and
- (iii) on an internet site sponsored by either the City or a statewide association that represents the City (i.e. the Iowa League of Cities).

The Notice to Bidders must be posted not less than thirteen (13) and not more than forty-five (45) days prior to the date designated for receiving bids. The last date on which this notice can be effectively posted is April 4, 2024. The Notice to Bidders should be provided to the Construction Update Network by no later than April 3, 2024.

It is our understanding that, in order to meet the requirement of items (i) and (ii) in the paragraph above, the engineer will arrange for the Notice to Bidders to be posted on Quest CDN. Further, it is our understanding that to comply with item (iii) in the paragraph above, the City Clerk and/or the engineer will arrange for the Notice to Bidders to be posted on either the City's website or the website of the Iowa League of Cities (either posting will meet the statutory requirement).

Please return one fully executed copy of these proceedings to our office.

If you have any questions, please contact Emily Hammond, John Danos or me.

Sincerely,

Erin Regan

Attachments

cc: Jenny Coffin
Ian Davis
Matt Stoffel

PROCEEDINGS TO SET DATE FOR
HEARING AND LETTING

511493-11 (NHL)

Polk City, Iowa

March 11, 2024

The City Council of the City of Polk City, Iowa, met at the _____, Polk City, Iowa, on March 11, 2024, at _____ o'clock ____m. The Mayor presided and the roll being called, the following named Council Members were present and absent:

Present: _____

Absent: _____.

The City Council took up and considered the proposed Elevated Storage Tank – New 1.5 MG Tank Project. Council Member _____ introduced the resolution next hereinafter set out and moved its adoption, seconded by Council Member _____. After due consideration thereof by the Council, the Mayor put the question upon the adoption of the said resolution and the roll being called, the following named Council Members voted:

Ayes: _____

Nays: _____.

Whereupon, the Mayor declared the said motion duly carried and the said resolution adopted, as follows:

RESOLUTION NO. 2024-32

Resolution to provide for a notice of hearing on proposed plans, specifications, form of contract and estimate of cost for the Elevated Storage Tank – New 1.5 MG Tank Project, and the taking of bids therefor

WHEREAS, it has been proposed that the City Council of the City of Polk City, Iowa (the “City”), undertake the authorization of a public improvement to be constructed as described in the proposed plans and specifications and form of contract prepared by McClure Engineering Company (the “Project Engineers”), which may be hereafter referred to as the “Elevated Storage Tank – New 1.5 MG Tank Project” (and is sometimes hereinafter referred to as the “Project”), which proposed plans, specifications, notice of hearing and letting, and form of contract and estimate of cost (the “Contract Documents”) are on file with the City Clerk; and

WHEREAS, it is necessary to fix a time and place of a public hearing on the Contract Documents and to advertise for sealed bids for the Project;

NOW, THEREFORE, Be It Resolved by the City Council (the “Council”) of the City of Polk City, Iowa, as follows:

Section 1. The Contract Documents referred to in the preamble hereof are hereby approved in their preliminary form.

Section 2. The Project is hereby determined to be necessary and desirable for the City, and, furthermore, it is hereby found to be in the best interests of the City to proceed toward the construction of the Project.

Section 3. April 22, 2024, at 6:00 p.m., in the Council Chambers at City Hall, Polk City, Iowa, is hereby fixed as the time and place of hearing on the Contract Documents. The foregoing date and time may be changed at the discretion of the City Clerk, and in compliance with the publication requirements pursuant to Iowa law.

Section 4. The City Clerk is hereby authorized and directed to publish notice (the “Notice of Hearing”) of the hearing on the Contract Documents for the Project in a newspaper of general circulation in the City, which publication shall be made at least once, not less than four (4) and not more than twenty (20) days prior to the date of the said hearing. The Notice of Hearing shall be in substantially the following form, with such conforming changes as approved by the City Clerk:

(Form of Notice of Hearing)

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS AND
SPECIFICATIONS, FORM OF CONTRACT AND ESTIMATE OF COST FOR
THE ELEVATED STORAGE TANK – NEW 1.5 MG TANK PROJECT

Notice Is Hereby Given: That at 6:00 p.m., on April 22, 2024, at the Council Chambers at City Hall, Polk City, Iowa, the City Council of the City of Polk City, Iowa will hold a public hearing on the proposed plans and specifications, form of contract and estimate of cost (the “Contract Documents”) for the proposed Elevated Storage Tank – New 1.5 Mg Tank Project (the “Project”).

The Project location is bound by E Vista Lake Ave to the North, E Northside Dr to the South and is east of Big Creek Elementary in Polk City, Iowa and includes the following Work: Construction of a new 1.5 MG elevated water storage tank, 16” water main, rock access drive, fencing, site grading, electrical power systems, process controls, and control communications.

A copy of the proposed Contract Documents is on file for public inspection in the office of the City Clerk.

At the hearing any interested person may file written objections or present oral comments with respect to the subject matter of the hearing.

Jenny Coffin
City Clerk

Section 5. The City Council hereby delegates to the City Clerk the duty of receiving bids for the construction of the Project before 1:00 p.m., on April 17, 2024, in the Office of the City Clerk at 112 3rd Street, Polk City, Iowa. At such time and place, the City Council hereby delegates to the City Clerk and/or the Project Engineers the duty of opening and announcing the results of the bids received. April 22, 2024, at 6:00 p.m., in the Council Chambers at City Hall, in the City, is hereby fixed as the time and place that the Council will consider the bids received by the City Clerk in connection therewith. The foregoing dates and times may be changed at the discretion of the City Clerk, and in compliance with the public bidding requirements pursuant to Iowa law.

Section 6. The amount of the bid security to accompany each bid is hereby fixed at 5% of the total amount of the bid.

Section 7. The City Clerk and/or the Project Engineers are hereby directed to give notice of the bid letting for the Project by posting notice (the "Notice to Bidders") at least once, not less than thirteen (13) and not more than forty-five (45) days prior to the date set for receipt of bids, in each of the following three places: (i) in a relevant contractor plan room service with statewide circulation; (ii) in a relevant construction lead generating service with statewide circulation; and (iii) on an internet site sponsored by either the City or a statewide association that represents the City. The Notice to Bidders shall be in substantially the following form, with such conforming changes as approved by the City Clerk:

(Form of Notice to Bidders)

**NOTICE TO BIDDERS & NOTICE OF PUBLIC HEARING
POLK CITY ELEVATED STORAGE TANK
NEW 1.5 MG TANK
POLK CITY, IOWA**

General Notice

The City of Polk City (Owner) is requesting Bids for the construction of the following Project:

**Polk City Elevated Storage Tank – New 1.5 MG Tank
DWSRF No. FS-77-23-DWSRF-077**

Bids for the construction of the Project will be received at the **Office of the City Clerk** located at **112 3rd Street, Polk City, Iowa, 50226**, until **April 17, 2024**, at **1 P.M.** local time.

The Project location is bound by E Vista Lake Ave to the North, E Northside Dr to the South and is east of Big Creek Elementary in Polk City, Iowa and includes the following Work: Construction of a new 1.5 MG elevated water storage tank, 16" water main, rock access drive, fencing, site grading, electrical power systems, process controls, and control communications.

The Owner will meet in the Council Chambers at City Hall, 112 3rd St, Polk City, Iowa, on the 22nd day of April, 2024, at 6:00 p.m., at which time and place a hearing will be held on the proposed plans and specifications, form of contract and estimate of cost for the Project. Any interested party may appear to be heard.

Sealed bids will be opened and tabulated at 1:00 p.m., on April 17, 2024, in the Council Chambers at City Hall, 112 3rd Street, Polk City, Iowa. The bids will be considered by the City Council during their meeting beginning at 6:00 p.m. on April 22, 2024, in the Council Chambers at City Hall.

All bids must be filed in the office of the City Clerk before the time herein set, on forms furnished by the Owner, and must be enclosed in a separate sealed envelope and plainly identified. Each bid shall be accompanied by bid security as defined in Iowa Code Section 26.8, and in the amount of 5% of the total amount of the bid, as specified in the Bidding Documents, as security that if awarded a contract, the bidder will enter into a contract at the prices bid and furnish the required performance and payment bonds and Certificate of Insurance.

Each successful Bidder will be required to furnish Performance and Payment Bonds acceptable to the Owner on forms provided in the specifications in amounts equal to one hundred percent (100%) of the contract price.

Work on the improvement shall commence within 30 days after the Effective Date of the Contract, or on the day indicated in the Notice to Proceed. The Notice to Proceed will be issued upon approval of the contract and bonds by the Utility Board. The work shall be substantially completed on or before **October 30, 2025**, and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **May 15, 2026**. Failure to meet either the Substantial Completion date or Final Completion date will result in liquidated damages of **\$1,500.00** per calendar day.

To the extent allowed by Federal law and regulation, and to the extent required by Iowa law, a resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but not limited to any preference to bidders, the imposition of any type of labor force preference or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident. In the instance of a resident labor force preference, a nonresident bidder shall apply the same resident labor force preference to a public improvement in this state as would be required in the construction of a public improvement by the state or foreign country in which the nonresident bidder is a resident. Failure to submit a fully completed Bidder Status Form with the Proposal may result in the Proposal being deemed nonresponsive and rejected.

The Owner hereby reserves the right to reject any or all bids, to waive informalities and irregularities, and to enter into such contract or contracts as it shall deem to be in the best interest of the Utility.

By virtue of statutory authority, a preference will be given to products and provisions grown and coal produced within the state of Iowa.

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website:

www.questcdn.com (Quest CDN#**xxxxxxx**)

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

The Issuing Office for the Bidding Documents is:

McClure Engineering Company
705 1st Ave North
Fort Dodge, IA 50501

Prospective Bidders may obtain or examine the Bidding Documents at the Issuing Office on Monday through Friday between the hours of 9:00-12:30, 1:30-4:00, and may obtain copies of the Bidding Documents from the Issuing Office as described below. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including addenda, if any, obtained from sources other than the Issuing Office.

Printed copies of the Bidding Documents may be obtained from the Issuing Office by paying a deposit of **\$150** for each set. Bidders who return full sets of the Bidding Documents in reusable condition within 14 days after receipt of Bids will receive a full refund. Non-Bidders, and Bidders who obtain more than one set of the Bidding Documents, will receive a refund of **the deposited amount** for documents returned in reusable condition within the time limit indicated above. Make deposit checks for Bidding Documents payable to **McClure Engineering Company**.

Pre-bid Conference

A pre-bid conference for the Project will be held on **April 8th, 2024 at 1 PM** at **112 3rd Street, Polk City, Iowa, 50226**. Attendance at the pre-bid conference is encouraged but not required.

Instructions to Bidders

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

This Advertisement is issued by:

Owner: **City of Polk City, IA**
By: **Jenny Coffin**
Title: **City Clerk**
Date: _____

Section 8. All provisions set out in the attached forms of notice are hereby recognized and prescribed by the City Council and all resolutions or orders or parts thereof, to the extent the same may be in conflict herewith, are hereby repealed.

Passed and approved March 11, 2024.

Mayor

Attest:

City Clerk

••••

On motion and vote, the meeting adjourned.

Mayor

Attest:

City Clerk

ATTESTATION CERTIFICATE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that the transcript hereto attached is a true, correct and complete copy of all the records of the City relating to fixing a time and place of hearing on the proposed plans, specifications and form of contract, and estimated cost for the construction of the Elevated Storage Tank – New 1.5 MG Tank Project and directing publication of a Notice of Hearing announcing the time and place fixed therefor; and fixing a time and place for the taking of bids for the construction of the Project and directing posting of a Notice to Bidders announcing the time and place fixed therefor.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

NOTICE OF HEARING PUBLICATION CERTIFICATE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that pursuant to the resolution of its City Council fixing a date of hearing on the proposed plans and specifications, form of contract and estimated cost for the Elevated Storage Tank – New 1.5 MG Tank Project, the Notice of Hearing, of which the printed slip attached to the publisher’s affidavit hereto attached is a true and complete copy, was published on the date and in the newspaper specified in such affidavit, which newspaper has a general circulation in the City.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

(Attach here publisher’s affidavit of publication of the Notice of Hearing.)

(PLEASE NOTE: Do not date and return this certificate until you have received the publisher’s affidavit and have verified that the Notice of Hearing was published on the date indicated in the affidavit, but please return all other completed pages to us as soon as they are available.)

NOTICE TO BIDDERS POSTING CERTIFICATE – CONTRACTOR PLAN ROOM/LEAD GENERATING SERVICE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that pursuant to the resolution of its City Council setting the date of the bid letting for the Elevated Storage Tank – New 1.5 MG Tank Project, the Notice to Bidders, of which the printed slip attached to the affidavit hereto attached is a true and complete copy, was posted on the date and in the relevant contractor plan room service/construction lead generating service specified in such affidavit, which contractor plan room service/construction lead generating service has a statewide circulation.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

(Attach here the affidavit of posting of the Notice to Bidders from the contractor plan room service/construction lead generating service.)

(PLEASE NOTE: Do not date and return this certificate until you have received the affidavit of posting from the contractor plan room service/construction lead generating service and have verified that the Notice to Bidders was posted on the date indicated in the affidavit, but please return all other completed pages to us as soon as they are available.)

NOTICE TO BIDDERS POSTING CERTIFICATE – SPONSORED INTERNET SITE:

STATE OF IOWA
POLK COUNTY
CITY OF POLK CITY

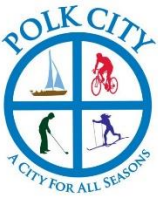
SS:

I, the undersigned, City Clerk of the City of Polk City, Iowa, do hereby certify that pursuant to the resolution of its City Council setting the date of the bid letting for the Elevated Storage Tank – New 1.5 MG Tank Project, the Notice to Bidders provided for therein provided for therein was posted on the website of the Iowa League of Cities and/or on the City’s website on _____, 2024.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

(Attach here the affidavit of posting of the Notice to Bidders from the Iowa League of Cities and/or a screenshot of the Notice to Bidders as posted on the City’s website, showing the date of posting).



City of Polk City, Iowa

City Council Agenda Communication

Date: March 11, 2024 City Council Meeting
To: Mayor Steve Karsjen & City Council
From: Jason Thraen, Parks & Recreation Director

Subject: **Parks & Recreation Department Updates for February 2024**

1. Staff continued planning for Summer 2024. The brochure was made available Thursday February 29th. Registration for Polk City residents opened Monday, March 4th at 8am. Registration for non-residents will open Monday, March 11th at 8am.
2. Staff, along with Renaissance Group Inc., continued the Pre-Campaign Process (feasibility study) for the Regional Park project. Scheduling and facilitating small group and one on one meetings have begun.
3. February programming included Dinky Dunkers, Youth Basketball, Youth Dodgeball, and Senior Social Hour.
4. Sports Complex baseball/softball fields had 0 reservations in February. 0 total field reservations in 2024.
5. Miller Park Shelter House had 2 private rentals in February. 7 total rentals in 2024.



City of Polk City, Iowa City Council Agenda Communication

Date: March 11, 2024
To: Mayor, City Council, and City Manager
From: Karla Hogrefe – Fire Chief
Subject: February 2024 Monthly Report

BACKGROUND: There were 43 calls for service in February. We hired part-time Firefighter/Paramedic Joel Otte and part-time Firefighter/EMT Michael Sbrocco. Both started their orientation process in February and are fitting in well. Full-time Firefighter/Paramedic Tyler Pedersen finished his Paramedic orientation and is now cleared to run independently as a Paramedic.

February Staff Anniversaries:

February 10 – Deputy Chief Jeff Feller – **20 years**
February 20 – Firefighter/EMT Brian Hanson – **10 years**

TRAINING:

Department Trainings: February 6 – Fire Training - Ice Rescue Training at Saylorville Marina. With mild temperatures, crews had to get on the ice early this winter. We were able to use the ice this year as a real-life scenario due to melting ice. The ice melted quickly after this training, so our practice never turned into reality. February 13 – EMS Training – Shock with two hours of continuing education. February 20 – Officer’s Meeting and Department Meeting. February 27 – Fire Training – The Art of Reading Smoke. We hosted Deputy Chief of Training from West Des Moines Fire Department, Scott McFarland. Chief McFarland has been in the fire service for roughly 30 years and has presented on this topic multiple times. It was a great class with great attendance.

New Certifications:

Brody Miller – Firefighter II
Karla Hogrefe – Fire Inspector I

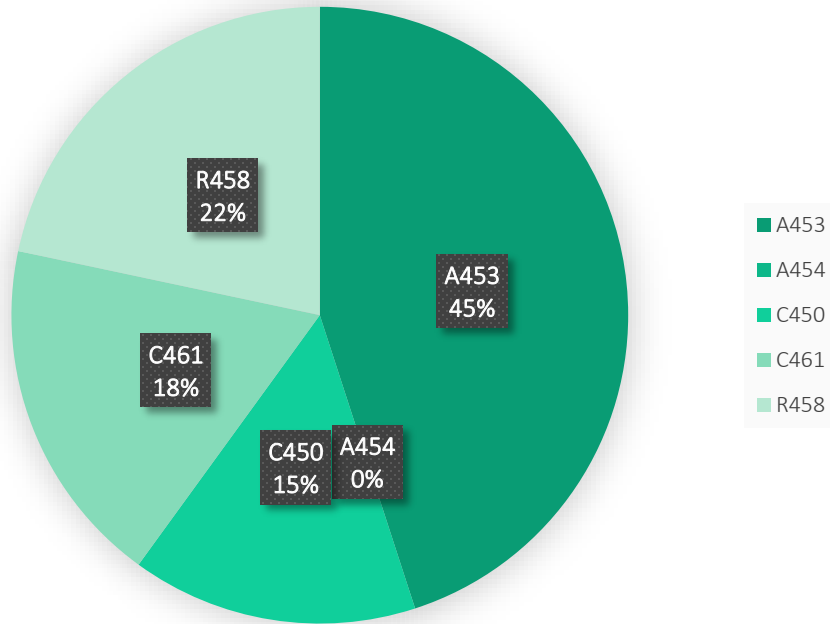
Members in Class: Part-time Firefighter/EMT Joe Culham finishing his last semester of Paramedic school. Part-time Firefighter/AEMT Kristin Fox finishing last semester of Paramedic School. Part-time Firefighter/EMT Brody Miller – finished capstone and paramedic class – needs to test. Full-time Firefighter/Paramedic Riley Noggle started Critical Care Paramedic class this month.



Day crew taking advantage of the nice weather and getting in some ice rescue training reps. Pictured is full-time FF/P Tyler Pedersen and part-time FF/EMT Mark Voyek.

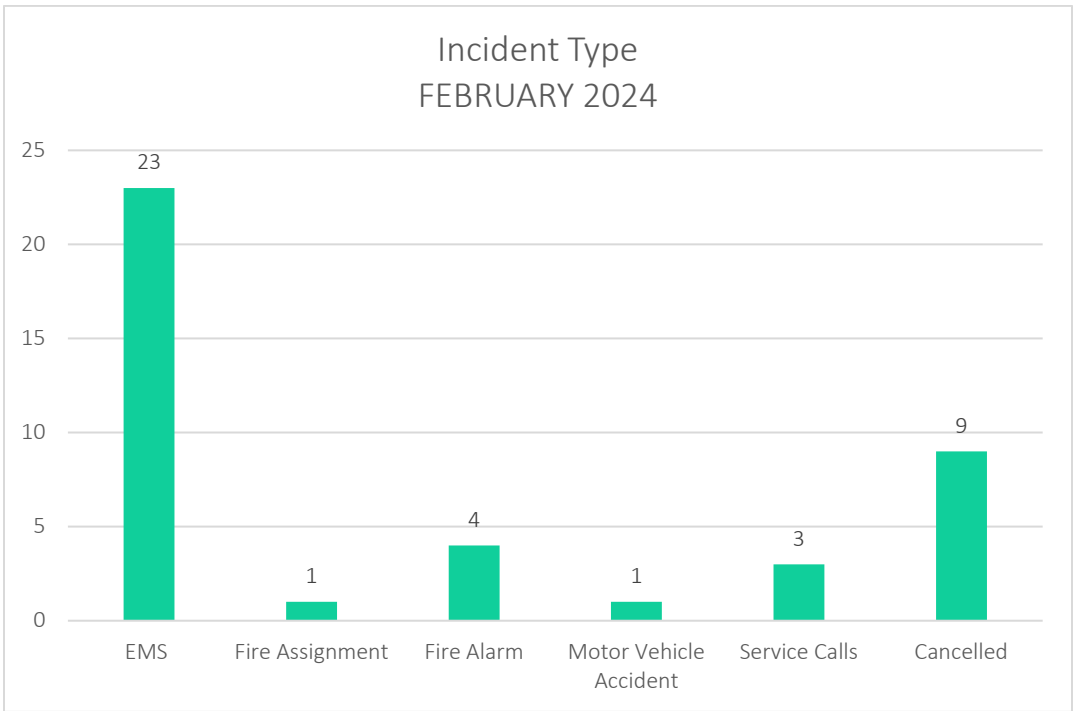


Apparatus Response

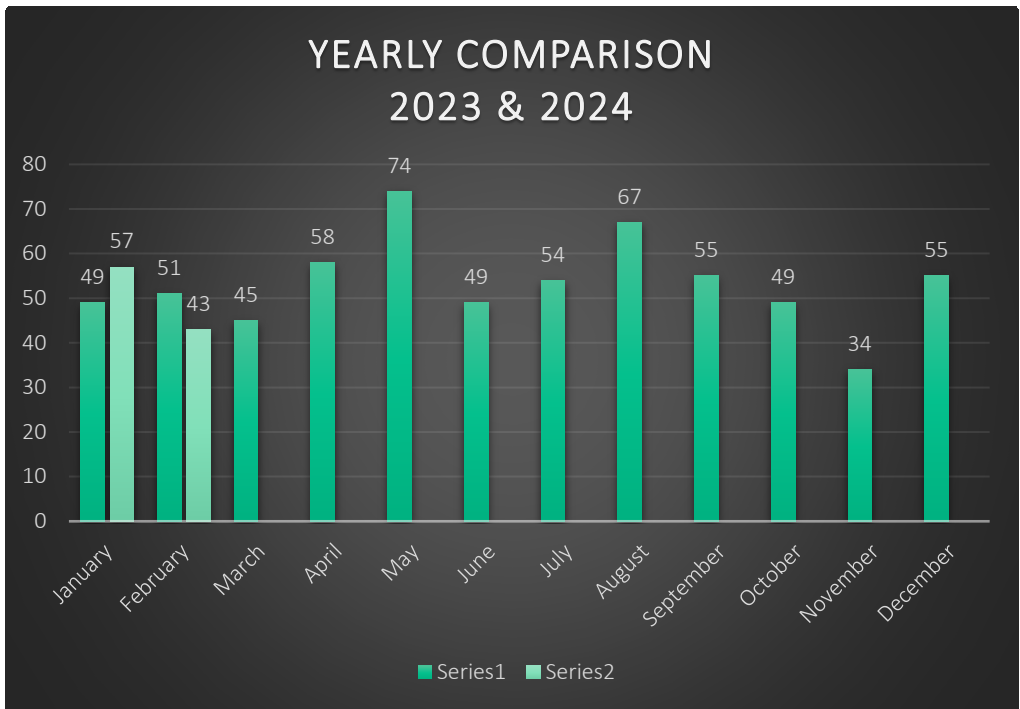


23 calls were during the day shift, between 06:00 hours (6:00 AM) and 18:00 hours (6:00 PM). 18 calls were during the night shift, between 18:00 hours (6:00 PM) and 06:00 hours (6:00 AM):





Below is the yearly call volume comparison.





City of Polk City, Iowa City Council Agenda Communication

Date: March 11, 2024
To: Mayor, City Council, & City Manager
From: Karla Hogrefe – Fire Chief
Subject: Staffing for Adequate Fire and Emergency Response (SAFER) Grant

BACKGROUND: The Fire Department would like to apply for the Staffing for Adequate Fire and Emergency Response (SAFER) Grant through FEMA to assist with hiring two more full-time members. We applied last year and although we were not awarded, we were very close. Applying again will increase our odds of being awarded.

The objectives of the SAFER Program are to assist local fire departments with staffing and deployment capabilities to respond to emergencies and ensure that communities have adequate protection from fire and fire-related hazards.

The period of performance for applications funded under the Hiring Activity is 36 months.

ALTERNATIVES: N/A

FINANCIAL CONSIDERATIONS: If we receive this grant, we could hire two more full-time members with this money and would not be responsible for the funding until after 36 months of the hire date. We are also seeking assistance from a grant writer, who has experience writing SAFER and has a high percentage of success. We plan to incorporate the grant writing fee of \$1,300.

RECOMMENDATION: Approve the Fire Department to apply for the SAFER Grant.

RESOLUTION NO. 2024-25

A RESOLUTION GIVING AUTHORIZATION TO APPLY FOR THE STAFFING FOR ADEQUATE FIRE AND EMERGENCY RESPONSE (SAFER) GRANT

WHEREAS, the City of Polk City Fire Department is desirous to apply for the Staffing for Adequate Fire and Emergency Response (SAFER) Grant through FEMA; and

WHEREAS, the objectives of the SAFER Program are to assist local fire departments with staffing and deployment capabilities to response to emergencies and ensure that communities have adequate protection from fire and fire related hazards.

WHEREAS, this funding would assist with hiring up to two more full-time Fire Department Members covering payroll expenses for 36 months from hire date and the \$1300 grant writing fee; and

NOW, THEREFORE BE IT RESOLVED, by the City Council of the City of Polk City, Iowa to authorize application for the SAFER Grant through FEMA.

PASSED AND APPROVED the 11 day of March 2024.

Steve Karsjen, Mayor

Attest:

Jenny Coffin, City Clerk

March 11, 2024

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

RE: MONARCH CROSSING PLAT 1
APPROVAL OF CONSTRUCTION DRAWINGS

Dear Honorable Mayor and City Council:

On behalf of North Polk Estates, LLC, Civil Design Advantage has submitted the construction drawings for the above referenced plat. These plans represent the first phase of construction for this subdivision and include 23 single-family lots. The plans include the construction of a portion of Monarch Drive, a collector street that will eventually connect E. Northside Drive and E. Southside Drive, along with the associated sanitary sewers, storm sewers, water main and services.

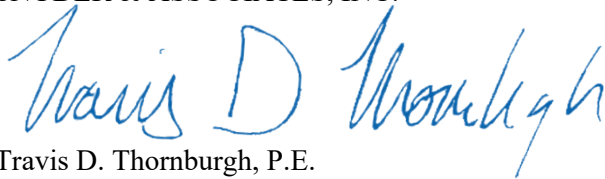
The construction drawings and Storm Water Management Plan appear to be in general conformance with the Subdivision Regulations, SUDAS, and the approved Preliminary Plat. Civil Design Advantage remains solely responsible for their design and ensuring it is fully compliant with all applicable code and 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 Monarch Crossing Plat 1, subject to the construction of the sanitary sewer that will service this parcel being constructed as part of Big Creek Ridge Plat 1 prior to approval of the Monarch Crossing Plat 1 Final Plat. We will be in attendance at the August 14, 2023, 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
Scott Growdon, North Polk Estates, LLC.
Eric Bohnenkamp, ATI Realty
Erin Ollendike, Civil Design Advantage

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, IA 50226, and North Polk Estates, LLC (hereinafter called "Developer"), an Iowa limited liability company, 6601 Westown Parkway, Suite 200, West Des Moines, Iowa 50266.

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 they desire 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 future 3.5' Curb and Gutter Section along the entire frontage of the Property. Developer shall be responsible for 890 linear feet of said improvements. Estimated cost is \$60.50 per linear foot, with a total for Monarch Crossing Plats 1 and 2 of \$53,845.00.

1.2 Developer shall pay a sanitary sewer hookup fee of \$2,820 per acre, totaling \$132,652.80.

1.3 Developer shall provide a combination of parkland and payment of a fee in order to meet the required parkland dedication fee for 54 single-family residential lots, based on the approved Preliminary Plat for Monarch Crossing. Based on approved Preliminary Plat, Developer is obligated to provide 1.23 acres of parkland in accordance with Polk City Municipal Code. At the time of Final Platting of Monarch Crossing Plat 1, Developer shall dedicate 1.17 acres of parkland in the form of an Outlot for the construction of a trail through the Property. Developer shall provide the remaining parkland dedication in the form of an equivalent fee for 0.06 acres, with a fair market value of \$55,000 per acre, totaling \$3,300.

1.4 All fees attributable to Developer shall be paid in full prior to approval of the Final Plat for Monarch Crossing Plat 1 provided however that the Sanitary Sewer hookup fees may be prorated and paid in portions in accordance with proposed Phasing. Parkland Dedication Fee shall be paid prior to approval of the Final Plat of the final phase of construction (Plat 2).

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 such plans and specifications as it shall deem appropriate.

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 plans and specifications 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 Petition 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.

Signature Pages to Follow

City of Polk City, Iowa

ATTEST:

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

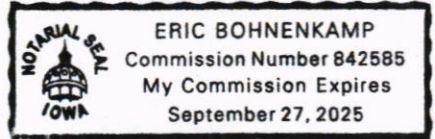
NORTH POLK ESTATES, LLC

By: [Signature]
Name: Scott Crowdon
Title: Manager / Owner

STATE OF IOWA, COUNTY OF POLK, ss:

On this 5th day of March, 2024, before me, the undersigned, a Notary Public in and for the said State, personally appeared Scott Crowdon, to me personally known, who being by me duly sworn, did say that he is the Manager 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 Eric Bohnenkamp acknowledged the execution of the foregoing instrument to be the voluntary act and deed, by it and by them voluntarily executed.

[Signature]
Notary Public in and for the State of Iowa



LENDER:

By: [Signature]

By: Market President

STATE OF IOWA, COUNTY OF POLK, ss:

On this 7th day of March, 2024, before me, the undersigned, a Notary Public in and for the said State, personally appeared Eric Hakenberry, to me personally known, who being by me duly sworn, did say that he is the Market President 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 Eric Hakenberry, 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.

[Signature]
Notary Public in and for the State of Iowa

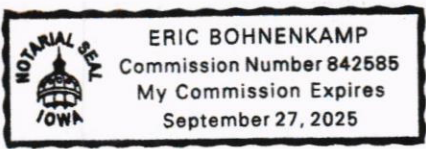


Exhibit "A"
Property

WARRANTY DEED BOOK 19530, PAGE 980

THE NORTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE 5TH P.M., POLK COUNTY, IOWA EXCEPT A PARCEL OF LAND WHICH WAS PREVIOUSLY CONVEYED BY CORRECTION WARRANTY DEED RECORDED IN BOOK 4325 AT PAGE 361, AND EXCEPT THE WEST 185 FEET OF SAID PROPERTY PURSUANT TO PARCEL 2023-53 OF PLAT OF SURVEY FILED APRIL 27, 2023 AND RECORDED IN BOOK 19457 AT PAGE 595.

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 INFORMATION: North Polk Estates, LLC, 6601 Westown Pkwy, Suite
200, West Des Moines, Iowa 50266

Grantor(s):

Grantee(s):

Legal Description:

See Exhibit "A" attached.

Book and Page Reference Numbers: Book _____, Page _____

SANITARY SEWER EASEMENT

MARY A. DEVRIES AND THOMAS W. SCHLIFE (hereinafter referred to as the "Grantor") do hereby convey unto the **CITY OF POLK CITY, IOWA**, a municipal corporation (hereinafter referred to as the "City"), a permanent and perpetual easement (hereinafter referred to as "Sanitary Sewer Easement") and right-of-way upon, over, under, through and across the real property legally described as:

See Exhibit 'A' attached hereto.

(hereinafter referred to as the "Easement Area") for the purpose of installing a Sanitary Sewer and appurtenances (hereinafter referred to as "Sanitary Sewer"), and a Sanitary Sewer easement to permit and allow the City to enter at any time upon, over, under, through, and across into said Easement Area herein described to patrol, police and maintain said Easement Area and to use as much of the surface and sub-surface thereof to construct, replace, locate, rebuild, enlarge, reconstruct, patrol, repair (including the right to place and build a Sanitary Sewer therein or to connect and/or join Sanitary Sewer and appurtenances thereto) and to forever maintain Sanitary Sewer whenever necessary within the Easement granted herein.

1. **Erection Of Structures Prohibited.** Grantor shall not erect any structure, building, pavement or fence over or with within the Easement Area without obtaining the prior written approval of the City Engineer.
2. **Obstructions Prohibited.** Grantor shall not erect or cause to be placed on the Easement Area any structure, material, device, thing or matter, or plant or permit to grow any hedge or other vegetative growth which could obstruct, impede, or otherwise interfere with the flow of surface water over and across the Easement Area without obtaining the prior written approval of the city engineer.
3. **Maintenance Of Easement.** After the initial construction of the Sanitary Sewer, and acceptance by the City, the City agrees, as part of the reconstruction, maintenance and patrolling of the Sanitary Sewer, to restore and replace the Easement area to substantially the same condition as prior to the time of entry or as agreed upon by the City and the Grantor except the City shall not be required to replace landscaping, trees, shrubs, bushes, landscape elements, structures, pavements, or underground water systems nor shall the City be required to restore the Easement area by reason of settlement,

depression, or any unknown conditions which arise subsequent to the restoration and/or replacing of the Easement area; any subsequent restoration by reason of settlement, depression or any unknown conditions shall be the sole responsibility of the Grantor.

4. **Change Of Grade Prohibited.** Grantor shall not change the grade, elevation or contour of any part of the Easement Area without obtaining the prior written consent of the City Engineer.
5. **Right Of Access.** City shall have the right of access to the Easement Area and have all rights of ingress and egress reasonably necessary for the use and enjoyment of the Easement Area as herein described, including, but not limited to, the right to remove any unauthorized obstructions or structures placed or erected on the Easement Area and the right to improve, repair, and maintain the Easement Area in whatever manner necessary to provide adequate and proper drainage and to protect the public health, safety, and general welfare.
6. **Easement Runs With Land.** This Easement shall be deemed to run with the land and shall be binding on Grantor and on Grantor's successors and assigns.
7. **Property To Be Restored.** Upon completion of any construction, reconstruction, repair, enlargement or maintenance on any drainageway, the City shall restore the Easement Area in good and workmanlike manner including restoration of lawns by sodding or seeding; however the City shall not be responsible for restoration and/or replacement of any landscape planting beds, structures or features that have been installed by Grantor in the Easement Area, whether with or without prior approval of the City or City Engineer.
8. **Running of Benefits and Burdens.** The terms and conditions of this Easement are binding upon the Grantor including, but not limited to, future owners, developers, lessees or occupants. All provisions of this instrument, including benefits and burdens, run with the land and are binding upon and inure to the heirs, assigns, successors, tenants and personal representatives of the parties hereto.
9. **Jurisdiction and Venue.** The City and the Grantor agree that the District Court in and for the State of Iowa, shall have exclusive jurisdiction over the subject matter and enforcement of the terms and conditions of this Easement, and said parties consent to the jurisdiction of the persons and the subject matter being in Polk County, Iowa.
10. **Words and Phrases.** Words and phrases shall be construed as in the singular or plural number, and as masculine, feminine, or neuter gender, according to context.
11. **Parties.** The term "City" as used herein shall refer to the City of Polk City, Iowa, its elected officials, agents, employees, officers, and contractors. The term "Grantor" shall refer to Mary A. DeVries and Thomas W. Schlife, their heirs, assigns, successors-in-interest, or lessees, if any.

12. **Attorney's Fees.** Either party may enforce this instrument by appropriate action, and should they prevail in such litigation they shall recover as part of their costs the reasonable attorney's fees incurred in such litigation.
13. **Integration.** This Agreement shall constitute the entire Agreement between the parties and no amendments or additions to this Agreement shall be binding unless in writing and signed by both parties.
14. **Paragraph Headings.** The paragraph headings in this Agreement are included solely for convenience and shall not affect or be used in connection with, the interpretation of this Agreement.

Grantor does HEREBY COVENANT with the City that Grantor holds said real estate described in this Easement by title in fee simple; that grantor has good and lawful authority to convey the same; and said Grantor covenants to WARRANT AND DEFEND the said premises against the lawful claims of all persons whomsoever.

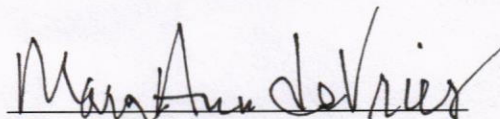
Each of the undersigned hereby relinquishes all rights of dower, homestead and distributive share, if any, in and to the interests conveyed by this Easement.

Signed this 16th day of Feb., 2024.

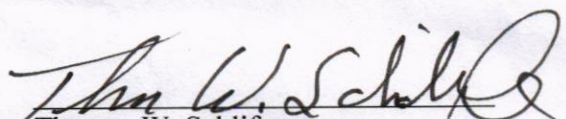
MARY A. DEVRIES
THOMAS W. SCHLIFE

"Grantor"

By:


Mary A. DeVries

By:

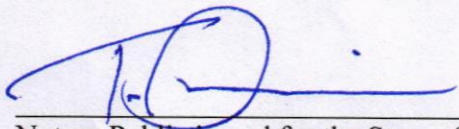

Thomas W. Schliffe

STATE OF IOWA)
) SS.

COUNTY OF POLK)

On this 26th day of Feb., 2024, before me, the undersigned, personally appeared Mary A. DeVries and Thomas A. Schlife, known to me to be the identical persons named in and who executed the foregoing instrument and acknowledged that they executed the same as their voluntary act and deed.

THOMAS J DAVIES
Notarial Seal, Iowa
Commission Number 847894
My Commission Expires May 8, 2026



Notary Public in and for the State of Iowa
My Commission expires May 8, 26

ACCEPTANCE BY CITY

STATE OF IOWA)
) ss:

COUNTY OF POLK)

I, Jenny Coffin, City Clerk of the City of Polk City, Iowa, do hereby certify that the within and foregoing Easement was duly approved and accepted by the City Council of said City of Polk City by Resolution No. _____, passed on the ___ day of _____, 20___, and this certificate is made pursuant to authority contained in said Resolution.

Signed this _____ day of _____, 2023.

Jenny Coffin, City Clerk of Polk City, Iowa

EXHIBIT 'A'

EXHIBIT 'A' - EASEMENT PLAT

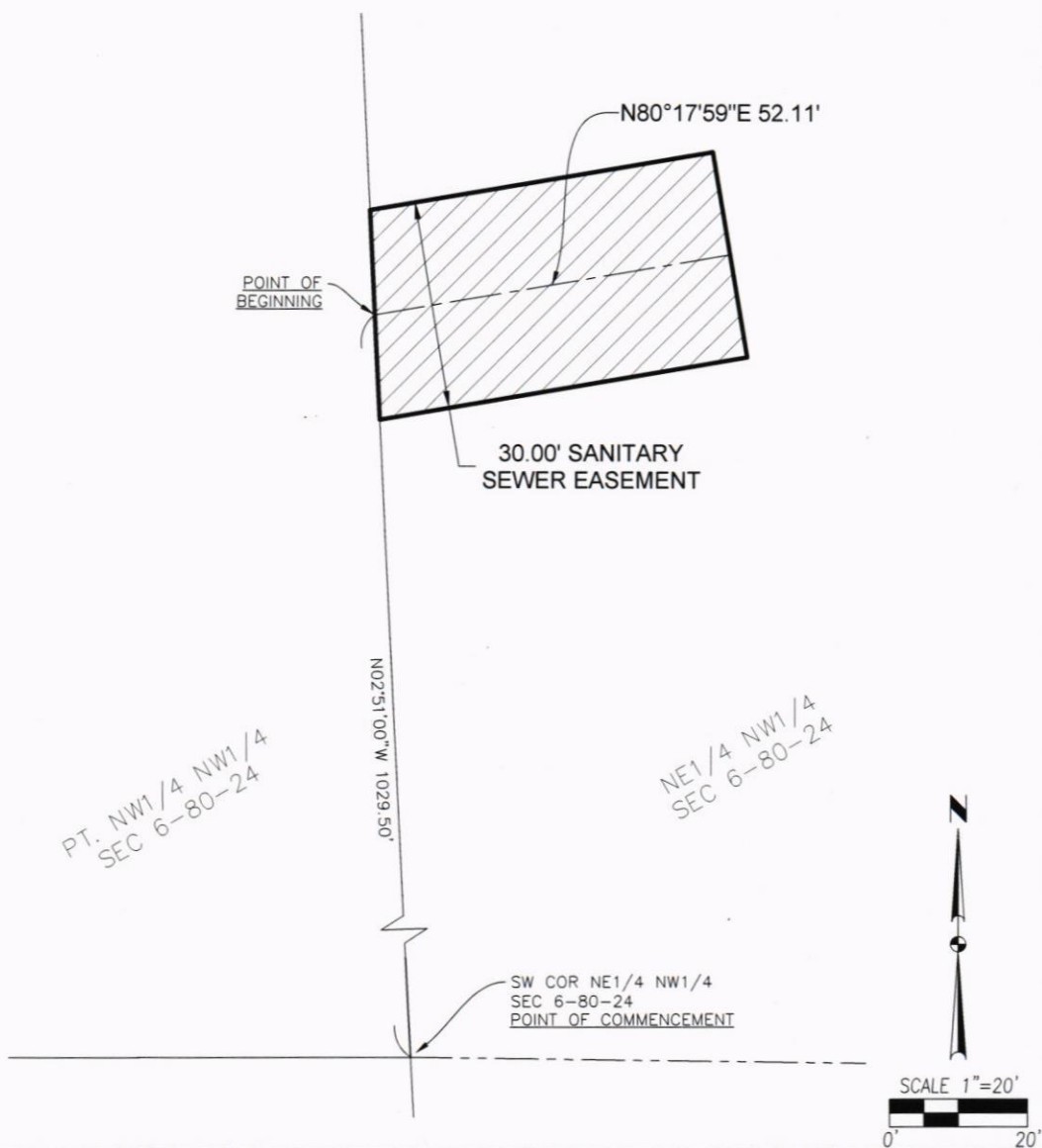
OWNER

THOMAS W SCHLIFE AND
MARY A. DE VRIES
1716 E NORTHSIDE DR
POLK CITY, IA 50226-8001

SANITARY SEWER EASEMENT DESCRIPTION

A PART OF THE NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE FIFTH PRINCIPAL MERIDIAN, IN THE CITY OF POLK CITY, POLK COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS A 30.00-FOOT-WIDE EASEMENT BEING 15.00 FEET ON EACH SIDE OF THE FOLLOWING CENTERLINE:

COMMENCING AT THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER; THENCE NORTH 02°51'00" WEST ALONG THE WESTERLY LINE OF SAID NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER, 1029.50 FEET TO THE POINT OF BEGINNING; THENCE NORTH 80°17'59" EAST, 52.11 FEET TO THE POINT OF TERMINUS. THE SIDELINES OF SAID EASEMENT SHALL SHORTEN OR EXTEND TO SAID WESTERLY LINE AT THE POINT OF BEGINNING. SAID EASEMENT CONTAINS 0.04 ACRES (1,563 SQUARE FEET).



STORM SEWER EASEMENT

MARY A. DEVRIES AND THOMAS W. SCHLIFE (hereinafter referred to as the "Grantor") do hereby convey unto the **CITY OF POLK CITY, IOWA**, a municipal corporation (hereinafter referred to as the "City"), a permanent and perpetual easement (hereinafter referred to as "Storm Sewer Easement") and right-of-way upon, over, under, through and across the real property legally described as:

A PART OF THE NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE FIFTH PRINCIPAL MERIDIAN, IN THE CITY OF POLK CITY, POLK COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS A 30.00-FOOT-WIDE EASEMENT BEING 15.00 FEET ON EACH SIDE OF THE FOLLOWING CENTERLINE:

COMMENCING AT THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER; THENCE NORTH 02°51'00" WEST ALONG THE WESTERLY LINE OF SAID NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER, 990.78 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 40°34'51" EAST, 47.68 FEET TO THE POINT OF TERMINUS. THE SIDELINES OF SAID EASEMENT SHALL SHORTEN OR EXTEND TO SAID WESTERLY LINE AT THE POINT OF BEGINNING. SAID EASEMENT CONTAINS 0.03 ACRES (1,430 SQUARE FEET)

(hereinafter referred to as the "Easement Area") for the purpose of installing a Storm Sewer and appurtenances (hereinafter referred to as "Storm Sewer"), and a Storm Sewer easement to permit and allow the City to enter at any time upon, over, under, through, and across into said Easement Area herein described to patrol, police and maintain said Easement Area and to use as much of the surface and sub-surface thereof to construct, replace, locate, rebuild, enlarge, reconstruct, patrol, repair (including the right to place and build a Storm Sewer therein or to connect and/or join Storm Sewer and appurtenances thereto) and to forever maintain Storm Sewer whenever necessary within the Easement granted herein.

1. Erection and Placement of Structures, Obstructions, Plantings or Materials Prohibited. Grantor shall not erect any fence or other structure under, over, on, through, across or within the Easement Area without obtaining the prior written consent of the City, nor

shall Grantor cause or permit any obstruction, planting or material to be placed under, over, on, through, across or within the Easement Area without obtaining the prior written consent of the City.

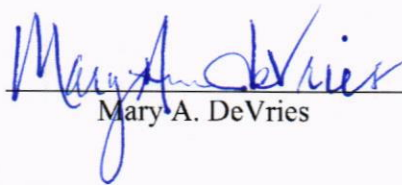
2. Change Of Grade Prohibited. Grantor shall not change the grade, elevation or contour of any part of the Easement Area without obtaining the prior written consent of the City. The City shall have the right to restore any changes in grade, elevation or contour without prior written consent of the Grantor.
3. Property Restoration and Easement Maintenance. Upon completion of any construction, reconstruction, repair, enlargement or maintenance, the City shall restore the Easement Area in good and workmanlike manner including restoration of lawn by sodding or seeding; however the City shall not be responsible for restoration and/or replacement of any landscaping, trees, shrubs, bushes, landscape elements, structures, pavements, or underground water systems, nor shall the City be required to restore the Easement area by reason of settlement. Any subsequent restoration by reason of settlement, depression or any unknown conditions shall be the sole responsibility of the Grantor.
4. Right Of Access. The City shall have the right of access to the Easement Area and have all rights of ingress and egress reasonably necessary for the use and enjoyment of the Easement Area as herein described, including, but not limited to, the right to remove any unauthorized obstructions or structures placed or erected on the Easement Area and the right to improve, repair, and maintain the Easement Area in whatever manner necessary to provide adequate and proper drainage and to protect the public health, safety, and general welfare.
5. Easement Benefit. This Easement shall be for the benefit of the City, its successors and assigns, and its permittees and licensees.
6. Easement Runs with Land. This Easement shall be deemed perpetual and to run with the land and shall be binding on Grantor and on Grantor's heirs, successors and assigns.
7. Liability. Except as may be caused by the negligent acts or omissions of the City, the City shall not be liable for injury or property damage occurring in or to the Easement Area, the property abutting said Easement Area, nor for property damage or any improvements or obstructions thereon resulting from the City's exercise of this Easement. Grantor agrees to indemnify and hold City, its employees, agents and representatives harmless against any loss, damage, injury or any claim or lawsuit for loss, damage or injury arising out of or resulting from the negligent or intentional acts or omissions of Grantor.
8. Parties. The term "City" as used herein shall refer to the City of Polk City, Iowa, its elected officials, agents, employees, officers, and contractors. The term "Grantor" shall refer to Mary A. DeVries and Thomas W. Schlife, their heirs, assigns, successors-in-interest, or lessees, if any.

9. Approval by City Council. This Easement shall not be binding until it has received the final approval and acceptance by the City Council by Resolution which approval and acceptance shall be noted on this Easement by the City Clerk.

Grantor does HEREBY COVENANT with the City that Grantor holds said real estate described in this Easement by title in fee simple; that Grantor has good and lawful authority to convey the same; and said Grantor covenants to WARRANT AND DEFEND the said premises against the lawful claims of all persons whomsoever.

Each of the undersigned hereby relinquishes all rights of dower, homestead and distributive share, if any, in and to the interests conveyed by this Easement.

Signed this 13th day of Nov., 2023.



Mary A. DeVries

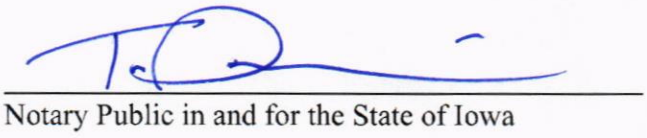


Thomas W. Schlife

STATE OF IOWA)
) SS.
COUNTY OF POLK)

On this 13th day of November, 2023, before me, the undersigned, personally appeared Mary A. DeVries and Thomas A. Schlife, known to me to be the identical persons named in and who executed the foregoing instrument and acknowledged that they executed the same as their voluntary act and deed.

THOMAS J DAVIES
Notarial Seal, Iowa
Commission Number 847894
My Commission Expires May 8th, 2026



Notary Public in and for the State of Iowa

EXHIBIT 'A' - EASEMENT PLAT

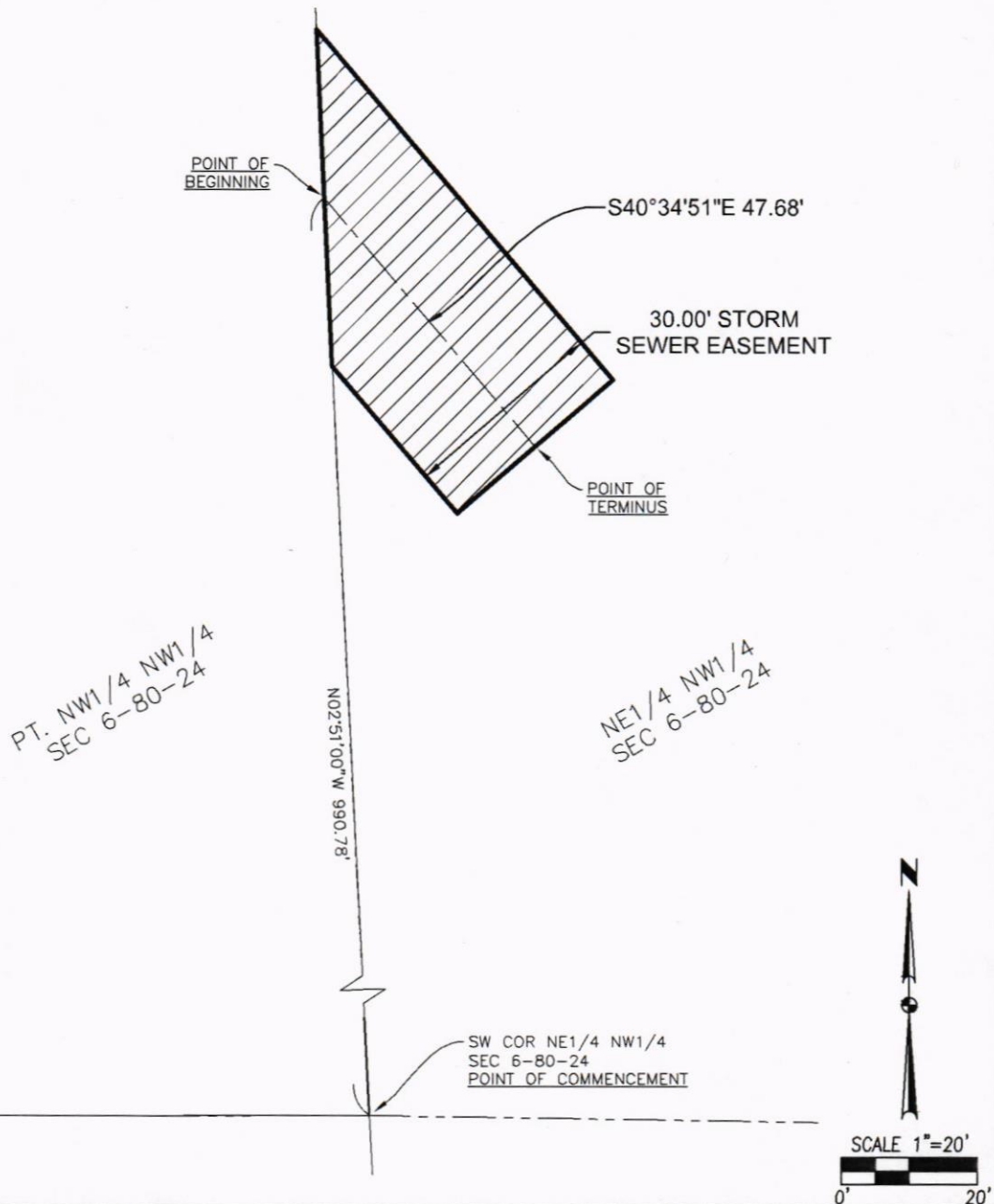
OWNER

THOMAS W SCHLIFE AND
MARY A. DE VRIES
1716 E NORTHSIDE DR
POLK CITY, IA 50226-8001

STORM SEWER EASEMENT DESCRIPTION

A PART OF THE NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE FIFTH PRINCIPAL MERIDIAN, IN THE CITY OF POLK CITY, POLK COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS A 30.00-FOOT-WIDE EASEMENT BEING 15.00 FEET ON EACH SIDE OF THE FOLLOWING CENTERLINE:

COMMENCING AT THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER; THENCE NORTH 02°51'00" WEST ALONG THE WESTERLY LINE OF SAID NORTHEAST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER, 990.78 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 40°34'51" EAST, 47.68 FEET TO THE POINT OF TERMINUS. THE SIDELINES OF SAID EASEMENT SHALL SHORTEN OR EXTEND TO SAID WESTERLY LINE AT THE POINT OF BEGINNING. SAID EASEMENT CONTAINS 0.03 ACRES (1,430 SQUARE FEET).



1/1
2310.656

PT NE1/4 NW1/4
SECTION 6-80-24
EASEMENT PLAT

POLK CITY, IOWA

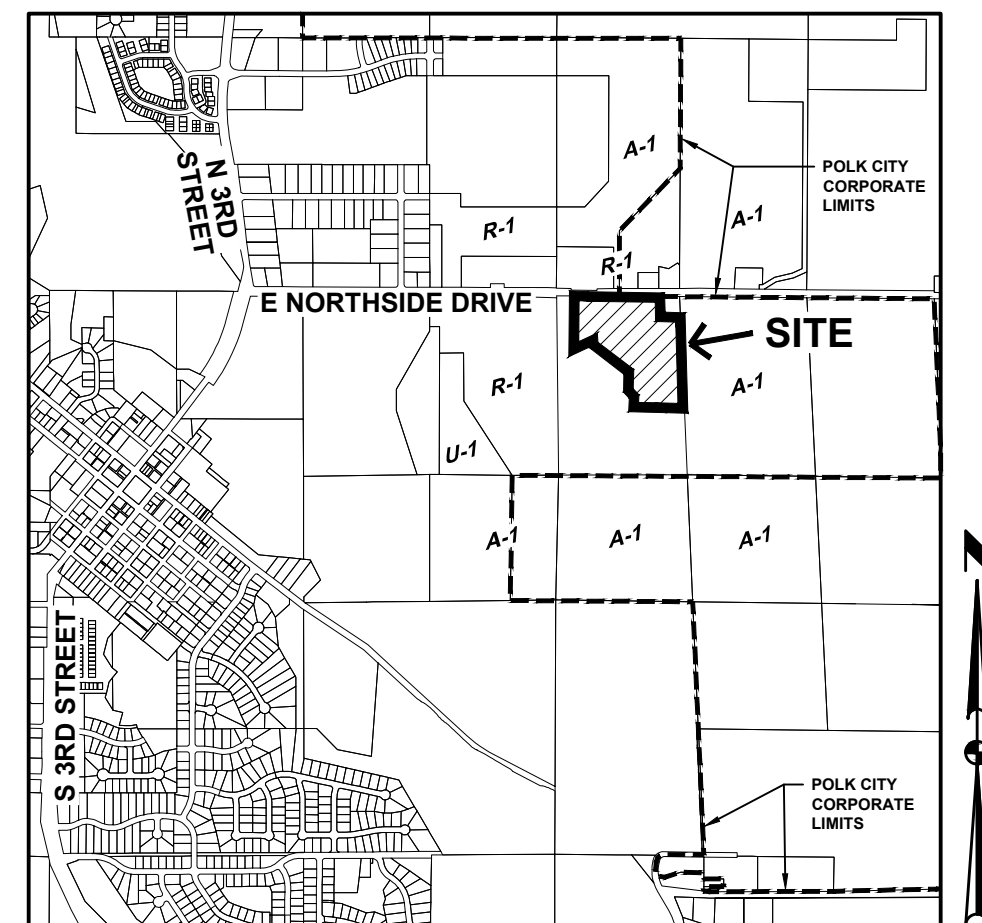
GA
CIVIL DESIGN ADVANTAGE

4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
PH. (515) 369-4400

CONSTRUCTION DRAWINGS FOR: MONARCH CROSSING PLAT 1

POLK CITY, IOWA

VICINITY MAP



POLK CITY, IOWA

INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	HYDRANT COVERAGE PLAN
3-5	TYPICAL SECTIONS AND DETAILS
6	QUANTITIES AND REFERENCE NOTES
7	POLK CITY CONSTRUCTION NOTES
8-9	GRADING PLAN
10-11	EROSION AND SEDIMENT CONTROL PLAN
12-21	ROADWAY, STORM AND SANITARY SEWER PLAN AND PROFILE
22-25	WATERMAIN PLAN AND PROFILE
26	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/APPLICANT

NORTH POLK ESTATES
6601 WESTOWN PKWY STE 200
WEST DES MOINES, IOWA 50322
CONTACT: SCOTT GROWDON
PH: (515) 778-4634

ENGINEER

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
CONTACT: ERIN OLLENDIKE
EMAIL: ERINO@CDA-ENG.COM
PH: (515) 369-4400

SURVEYOR

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IA 50322
CONTACT: CHARLIE MCGLOTHLEN
EMAIL: CHARLIEM@CDA-ENG.COM
PH: (515) 369-4400

DATE OF SURVEY

05/17/2023

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

SUBMITTAL DATES

FIRST SUBMITTAL: 10/20/2023
SECOND SUBMITTAL: 12/06/2023
THIRD SUBMITTAL: 01/03/2024
FINAL SUBMITTAL: 02/02/2024

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'

FEMA FLOODPLAIN

NO FLOODPLAINS ARE PRESENT ON THE PROPERTY

PARKLAND DEDICATION

PLAT 1

REQUIRED
23 SINGLE FAMILY LOTS X 995.95 SF/LOT = 22,907 SF (0.52 AC)

PROVIDED
= 41,281 SF (0.95 AC)

PLAT 2

REQUIRED
31 SINGLE FAMILY LOTS X 995.95 SF/LOT = 30,875 SF (0.71 AC)

PROVIDED
= 9,558 SF (0.22 AC)

TOTAL REQUIRED
= 53,782 SF (1.23 AC)

PROVIDED
= 50,839 SF (1.17 AC)

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.

PLAT DESCRIPTION

A PART OF THE NORTHWEST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE FIFTH PRINCIPAL MERIDIAN IN THE CITY OF POLK CITY, POLK COUNTY, IOWA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 6; THENCE SOUTH 89°32'16" EAST ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER, 185.03 FEET TO THE POINT OF BEGINNING, ALSO BEING THE NORTHEAST CORNER OF PARCEL '2023-53' OF SAID NORTHWEST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER, AS SHOWN IN THE PLAT OF SURVEY RECORDED IN BOOK 19457, PAGE 595-596; THENCE CONTINUING SOUTH 89°32'16" EAST ALONG SAID NORTH LINE, 888.78 FEET TO THE NORTHWEST CORNER OF THE NORTH 251 FEET OF THE EAST 209 FEET OF SAID NORTHWEST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER; THENCE SOUTH 02°50'21" EAST ALONG THE WEST LINE OF SAID NORTH 251 FEET OF THE EAST 209 FEET, A DISTANCE OF 251.38 FEET TO THE SOUTHWEST CORNER OF SAID NORTH 251 FEET OF THE EAST 209 FEET; THENCE SOUTH 89°30'12" EAST ALONG THE SOUTH LINE OF SAID NORTH 251 FEET OF THE EAST 209 FEET, A DISTANCE OF 209.35 FEET TO THE SOUTHWEST CORNER OF SAID NORTH 251 FEET OF THE EAST 209 FEET, ALSO BEING A POINT ON THE EAST LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER; THENCE SOUTH 02°51'00" EAST ALONG THE EAST LINE OF SAID NORTHWEST QUARTER OF THE NORTHWEST FRACTIONAL QUARTER, 944.61 FEET; THENCE NORTH 89°50'13" WEST, 224.13 FEET; THENCE SOUTH 00°09'47" WEST, 0.54 FEET; THENCE NORTH 89°50'13" WEST, 288.03 FEET; THENCE NORTH 00°09'47" EAST, 110.00 FEET; THENCE NORTH 44°05'35" WEST, 86.16 FEET; THENCE NORTH 00°09'47" EAST, 193.92 FEET; THENCE NORTH 53°56'42" WEST, 467.14 FEET; THENCE NORTH 04°54'44" WEST, 46.43 FEET; THENCE SOUTH 63°38'45" WEST, 220.75 FEET TO A POINT ON THE EAST LINE OF SAID PARCEL '2023-53'; THENCE NORTH 00°38'14" WEST ALONG SAID EAST LINE, 613.62 FEET TO THE POINT OF BEGINNING AND CONTAINING 22.16 ACRES (965,501 SQUARE FEET).

THE PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD INCLUDING .113 ACRES (49,356 SQUARE FEET) OF RIGHT OF WAY EASEMENT ALONG THE NORTH SIDE THEREOF.

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE URBANDALE, IOWA 50322
PH: (515) 369-4400 Fax: (515) 369-4410
2310.656

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com

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 CONTRACTORS 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.

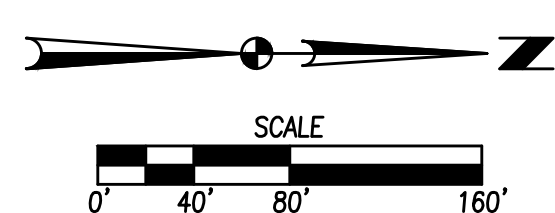
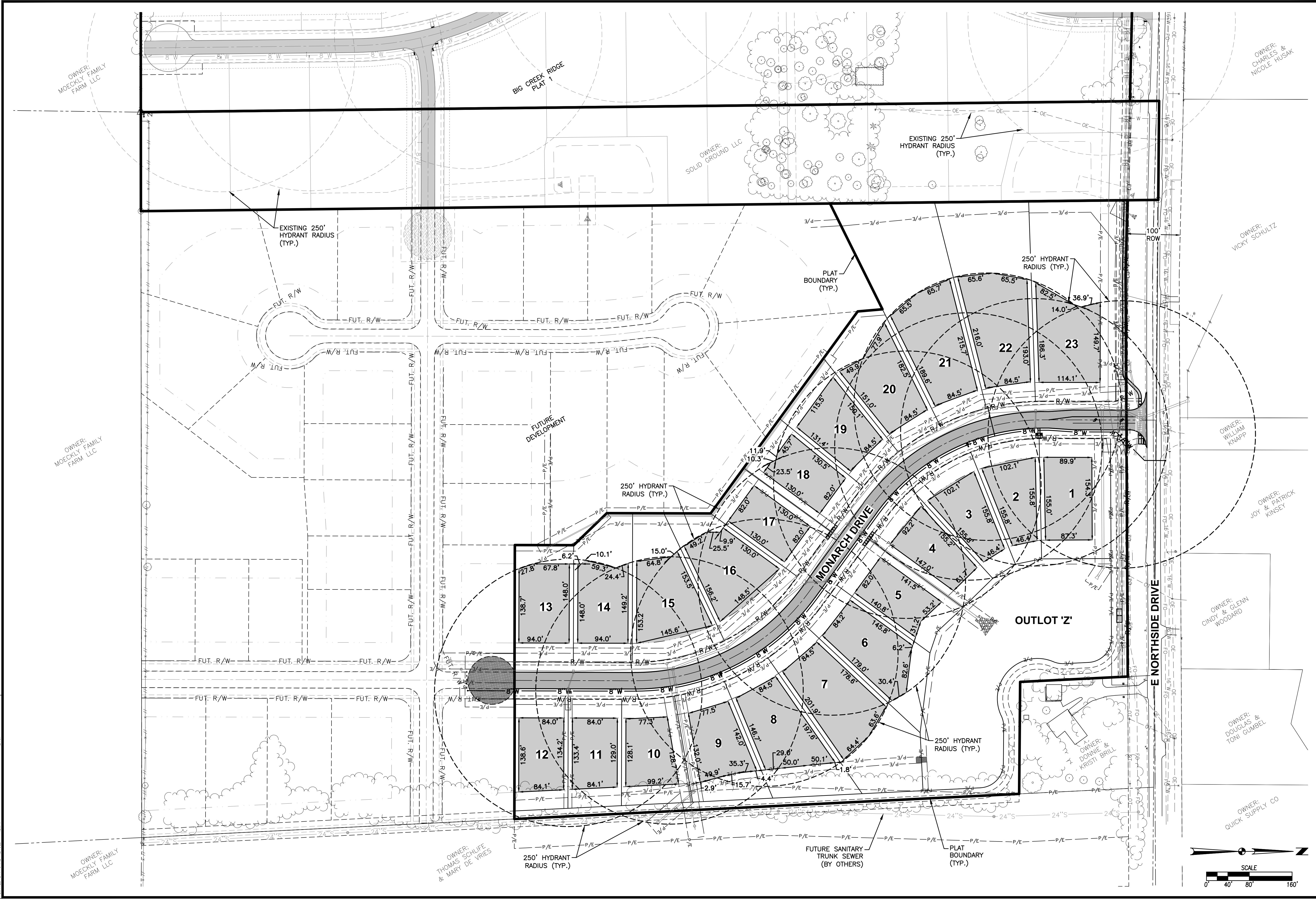
THIS DESIGN SPECIFICALLY PREPARED FOR USE AT THE LOCATION SHOWN. USE IN ANY OTHER MANNER EXCEEDS THE INTENDED PURPOSE OF THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS.

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.

ERIN K. OLLENDIKE, P.E. DATE

ERIN K. OLLENDIKE
LICENSE NUMBER 16926
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2025
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REVISIONS	DATE
FIRST SUBMITTAL	10/20/2023
SECOND SUBMITTAL	12/06/2023
THIRD SUBMITTAL	01/03/2024
FINAL SUBMITTAL	02/02/2024

OWNER: CHARLES & NICOLE HUSAK
 OWNER: VICKY SCHULTZ
 OWNER: WILLIAM KNAPP
 OWNER: JOY & PATRICK KINSEY
 OWNER: GLENN WOODARD
 OWNER: DOUGLAS & TOM GUMBEL
 OWNER: QUICK SUPPLY CO

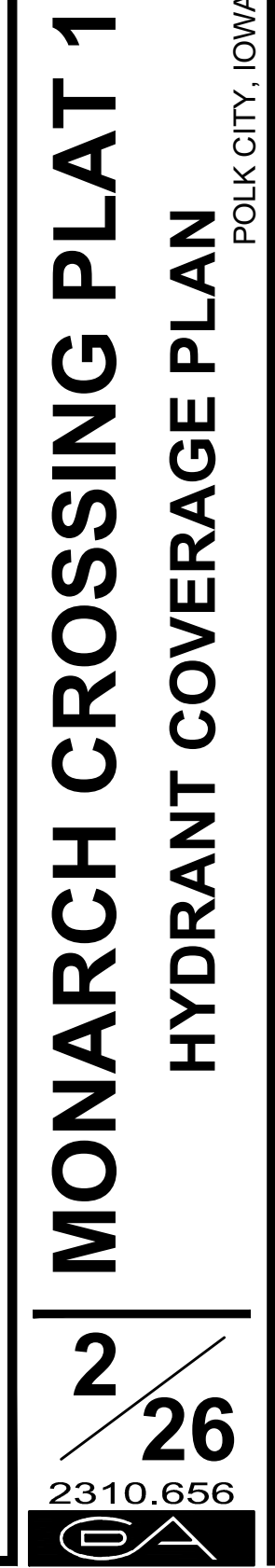
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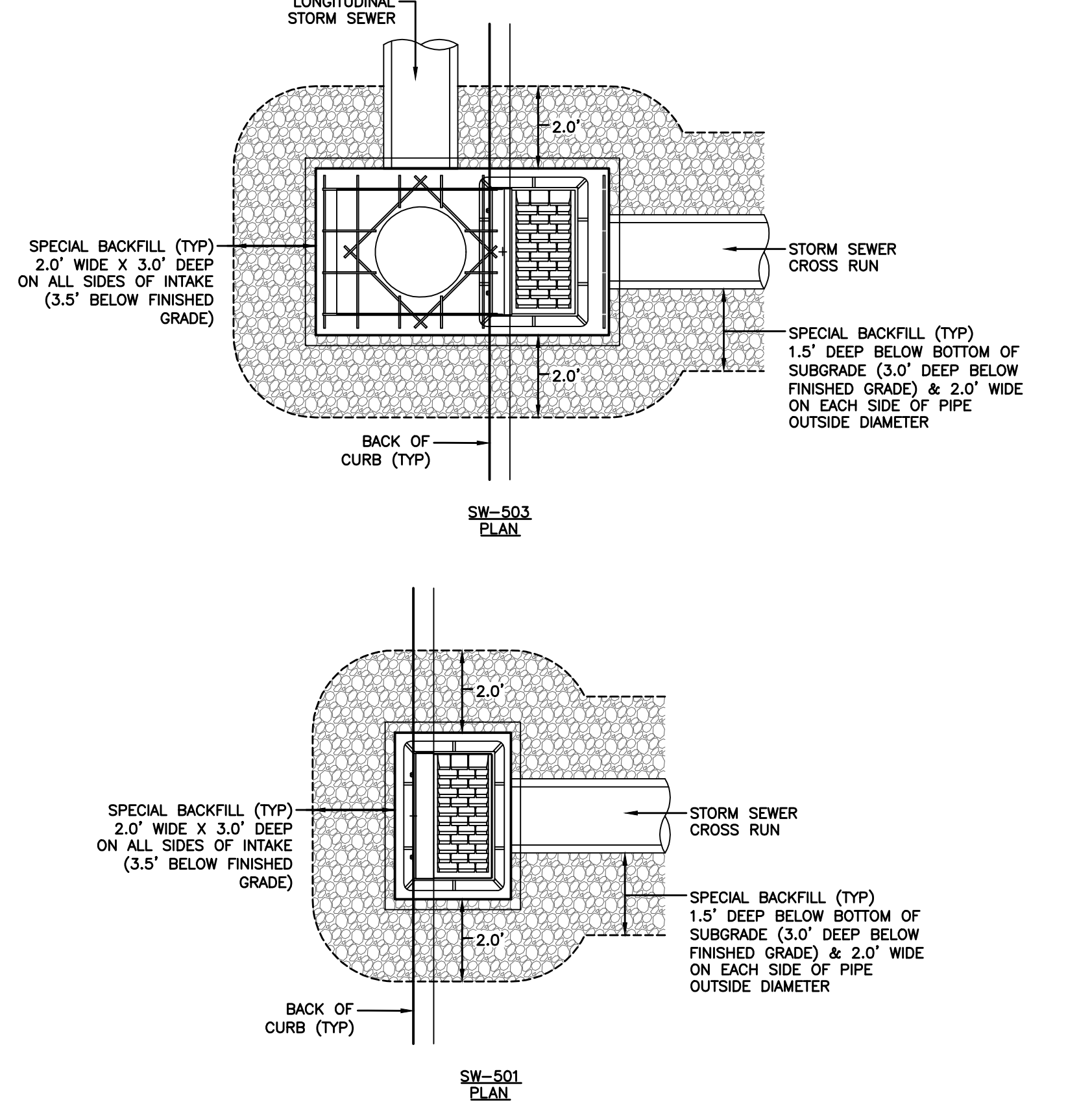
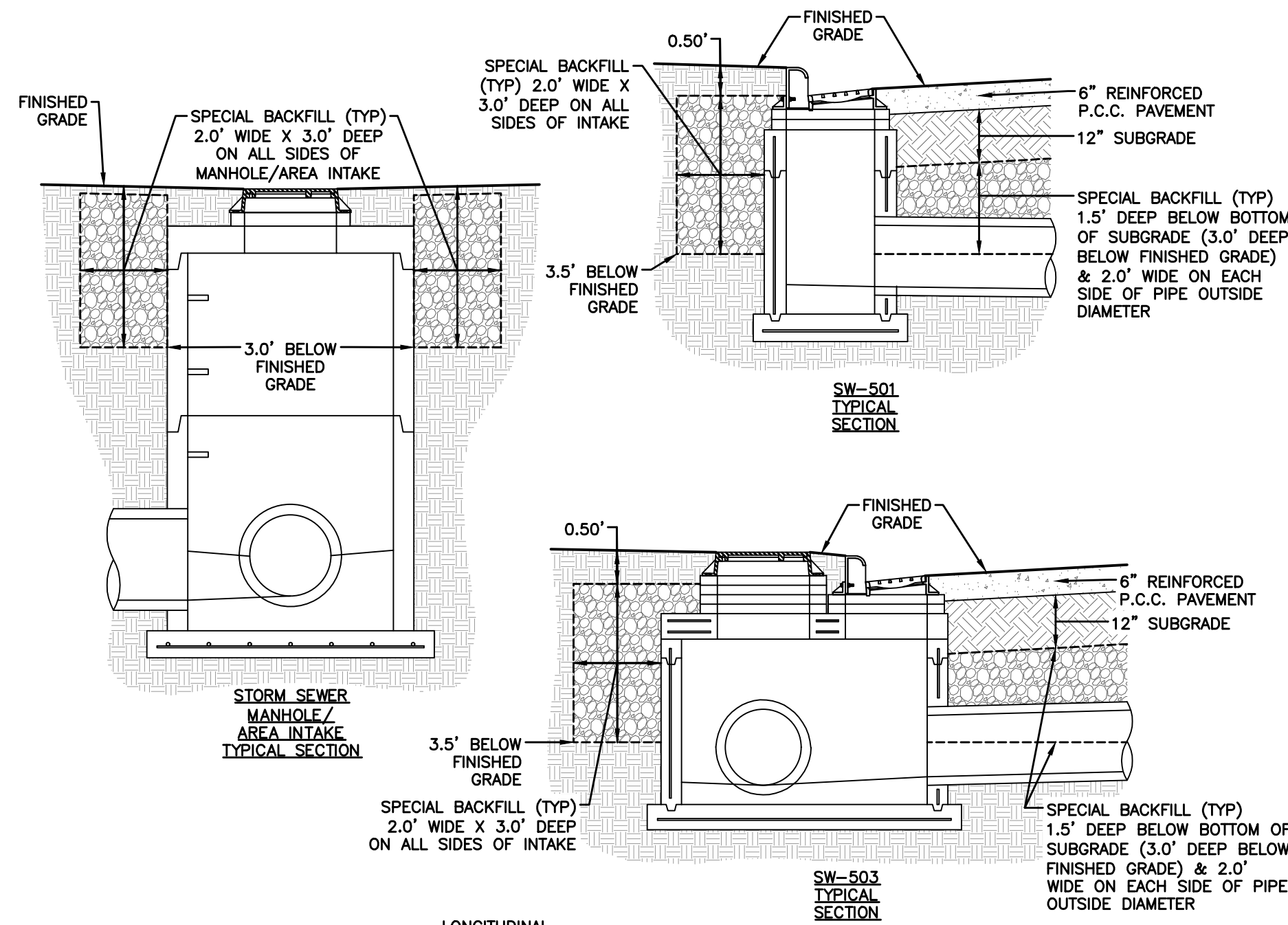
MONARCH CROSSING PLAT 1
HYDRANT COVERAGE PLAN
 POLK CITY, IOWA

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26
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ENGINEER: EKO ENGINEER: GH EI: MAE

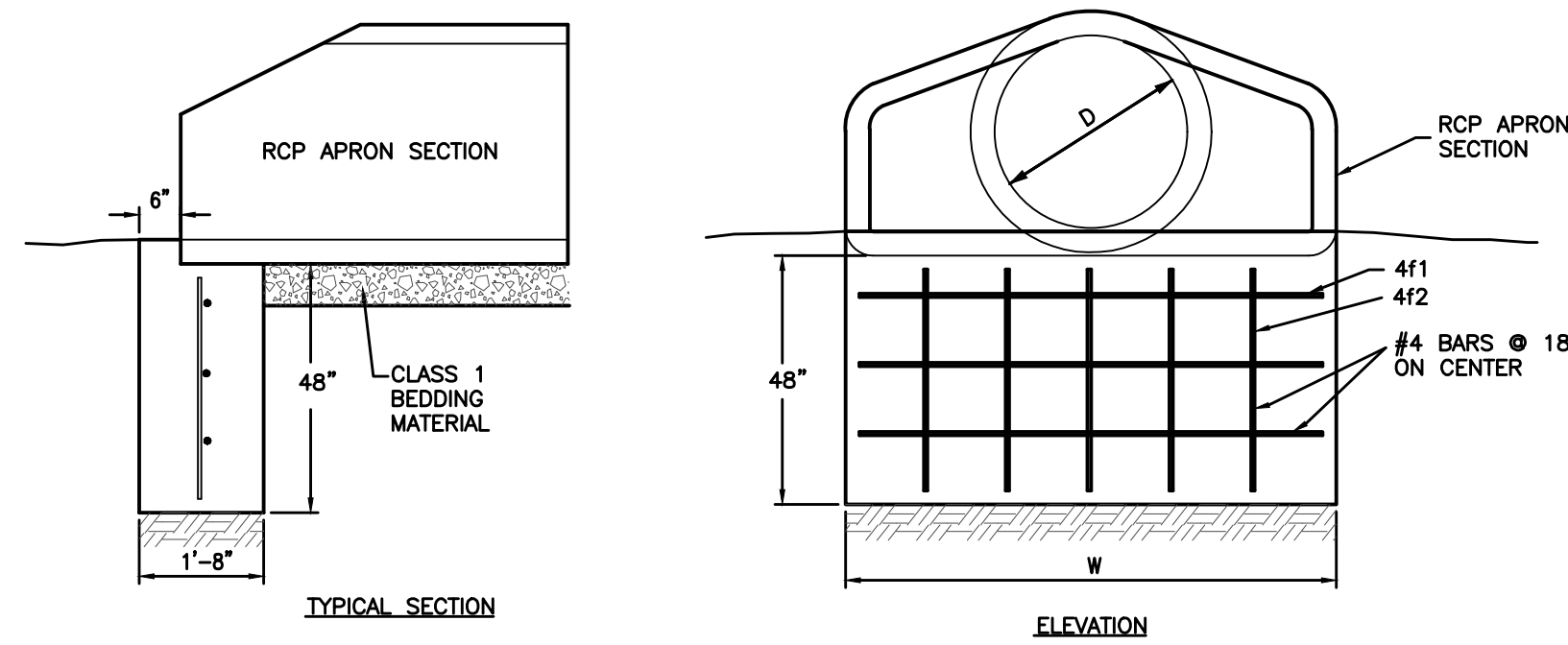
CIVIL DESIGN ADVANTAGE





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.

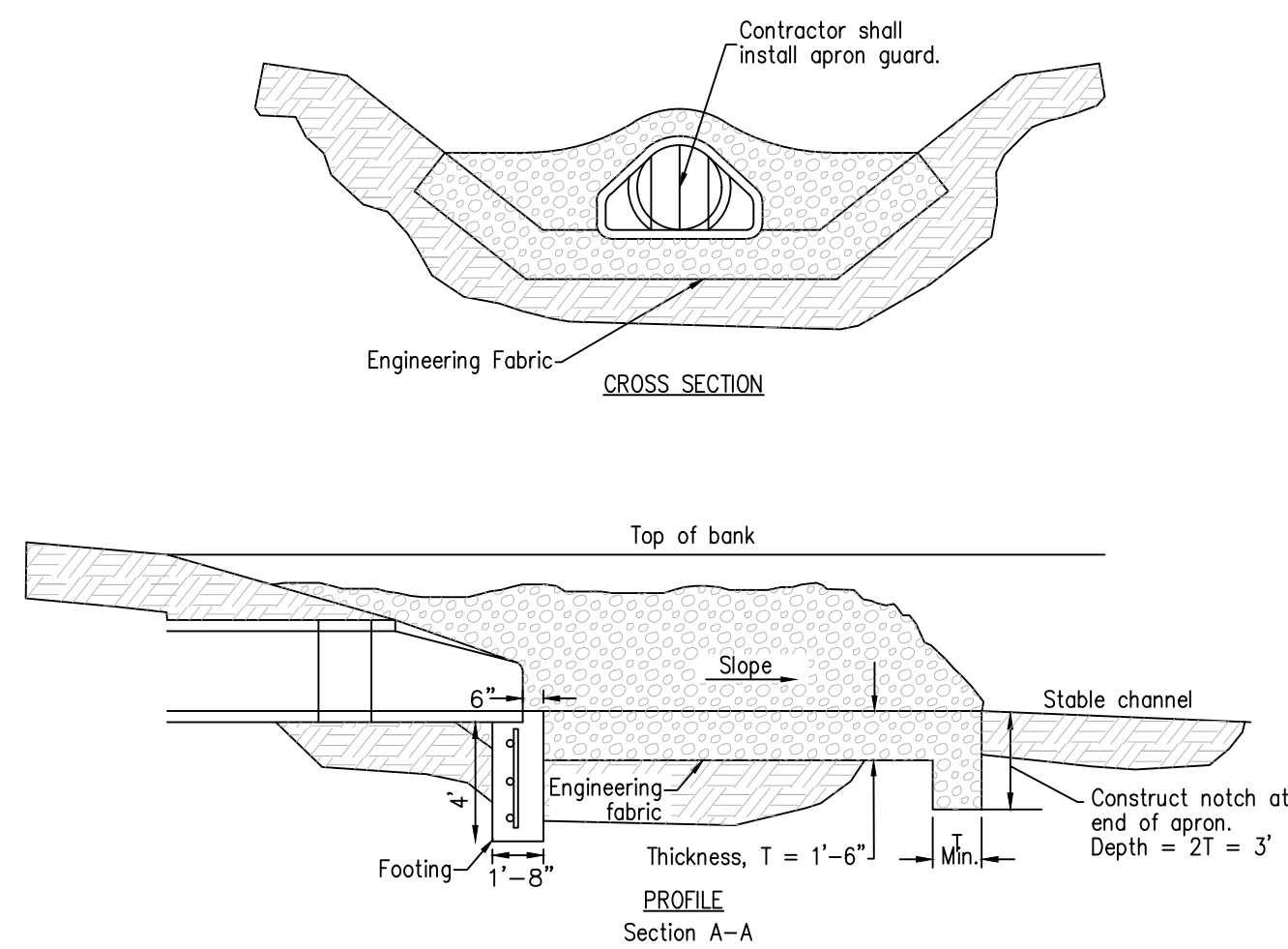
STORM SEWER SPECIAL BACKFILL DETAIL
 NOT TO SCALE



REINFORCING BAR LIST

D	W	Mark	Size	Length	Count	D	W	Mark	Size	Length	Count
12"	2'-4"	4f1	4	2'-0"	3	48"	7'-10"	4f1	4	7'-6"	3
		4f2	4	3'-8"	2			4f2	4	3'-8"	6
15"	2'-10"	4f1	4	2'-0"	3	54"	8'-5"	4f1	4	8'-1"	3
		4f2	4	3'-9"	2			4f2	4	3'-8"	6
18"	3'-5"	4f1	4	3'-1"	3	60"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	3			4f2	4	3'-8"	6
24"	4'-6"	4f1	4	4'-2"	3	66"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	3			4f2	4	3'-8"	6
30"	5'-7"	4f1	4	5'-3"	3	72"	10'-0"	4f1	4	9'-8"	3
		4f2	4	3'-8"	4			4f2	4	3'-8"	7
36"	6'-8"	4f1	4	6'-4"	3	78"	10'-7"	4f1	4	10'-3"	3
		4f2	4	3'-8"	5			4f2	4	3'-8"	7
42"	7'-3"	4f1	4	6'-11"	3	84"	11'-1"	4f1	4	10'-9"	3
		4f2	4	3'-8"	5			4f2	4	3'-8"	8

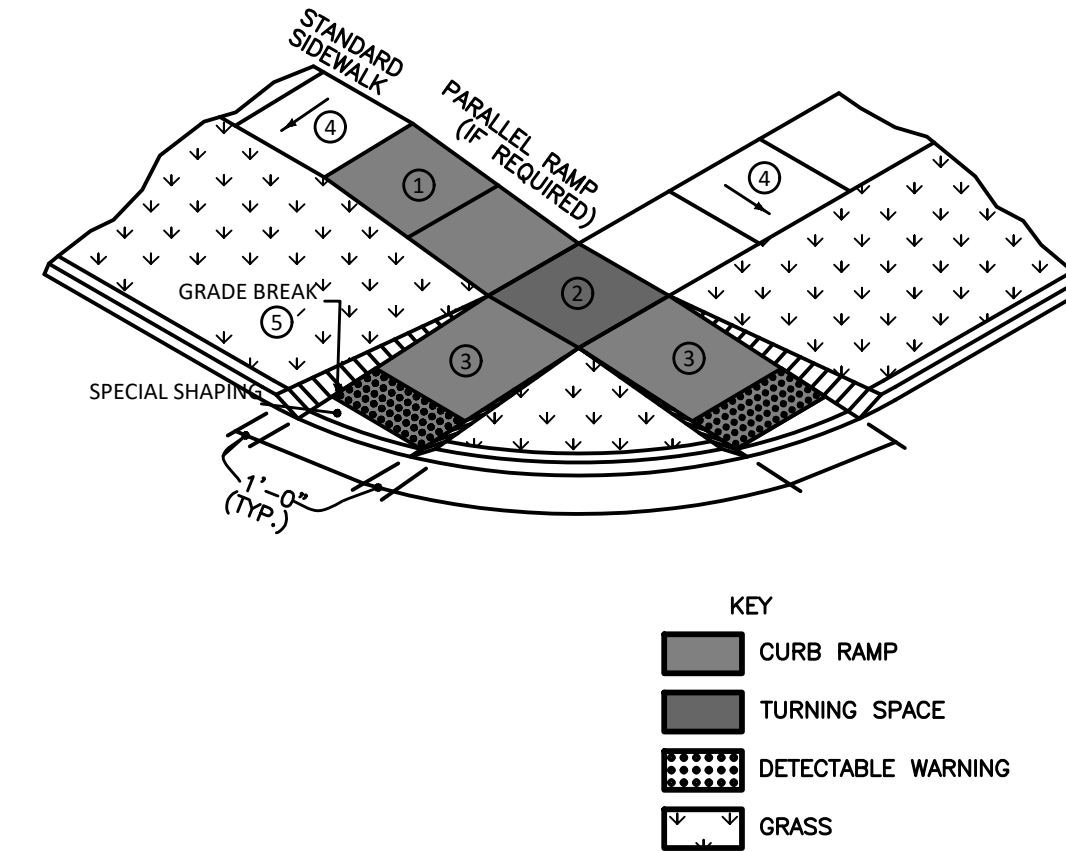
RCP APRON FOOTING DETAIL
 NOT TO SCALE



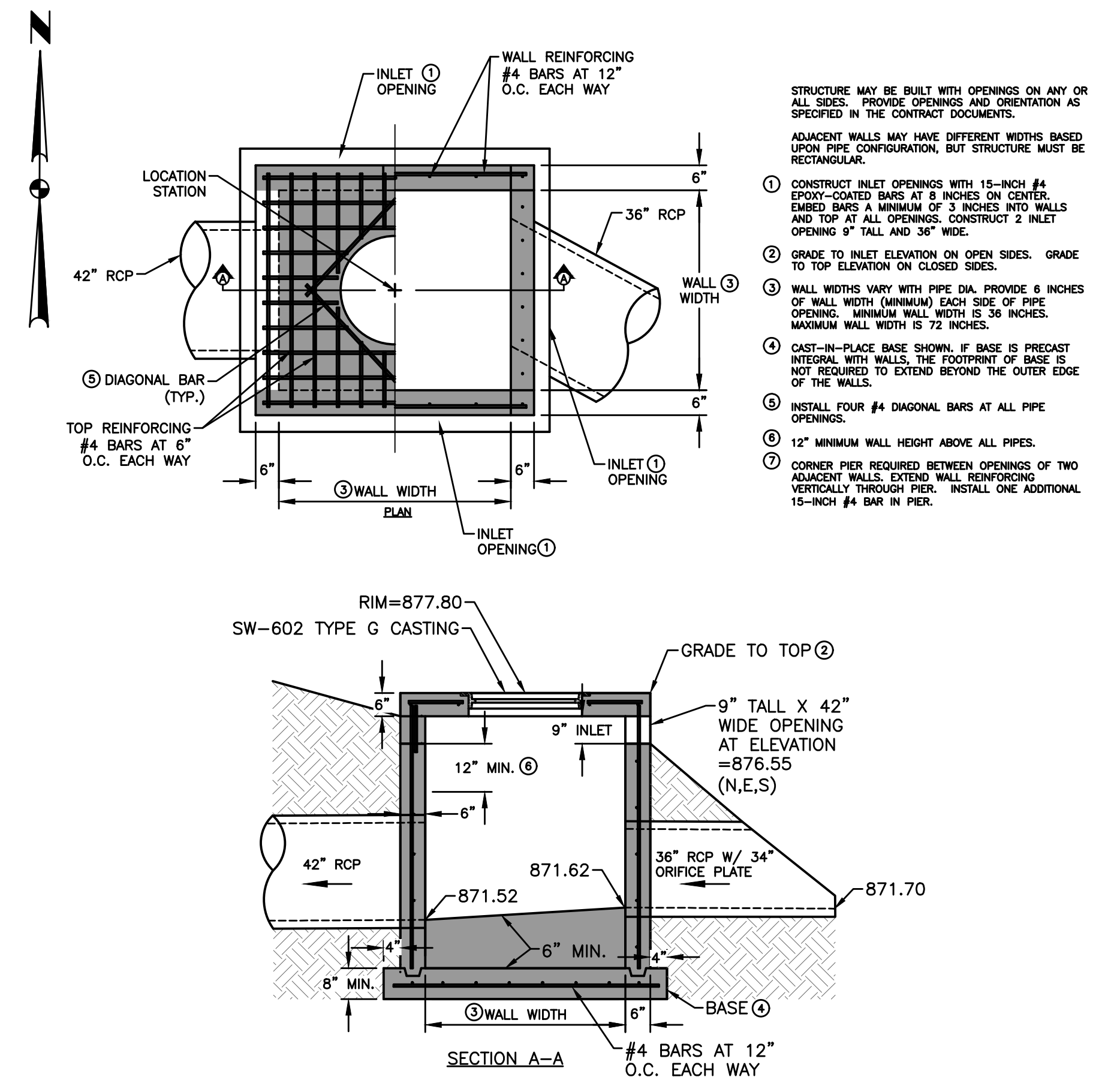
NOTE:
 1. THE LAST THREE SECTIONS AND THE APRON SHALL BE CONNECTED WITH PIPE CONNECTIONS PER SECTION 4030.302C OF SUDAS.
 2. INSTALL A 3' CLAY WATERSTOP AT ALL STORM SEWER OUTLETS.

ROCK APRON FOR PIPE OUTLET
 NOT TO SCALE

- PARALLEL CURB RAMP: IF NORMAL SIDEWALK ELEVATION CANNOT BE ACHIEVED WITH THE PERPENDICULAR RAMP BETWEEN THE STREET AND LANDING DUE TO LIMITED RAMP LENGTH, PROVIDE A PARALLEL RAMP TO MAKE UP THE ELEVATION DIFFERENCE BETWEEN THE LANDING AND THE STANDARD SIDEWALK. THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMPS SHORTER THAN 15 FEET.
- TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. MINIMUM 4 FEET BY 4 FEET.
- PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%.
- TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%.
- MATCH PEDESTRIAN STREET CROSSING CROSS SLOPE OR FLATTER.



CURB RAMP FOR CLASS B OR C SIDEWALK
 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.
- 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.
 - WALL WIDTHS VARY WITH PIPE DIA. PROVIDE 8 INCHES OF WALL WIDTH (MINIMUM) EACH SIDE OF PIPE OPENING. MINIMUM WALL WIDTH IS 36 INCHES. MAXIMUM WALL WIDTH IS 72 INCHES.
 - CAST-IN-PLACE BASE SHOWN. IF BASE IS PRECAST MATERIAL WITH WALLS, THE FOOTPRINT OF BASE IS NOT REQUIRED TO EXTEND BEYOND THE OUTER EDGE OF THE WALLS.
 - INSTALL FOUR #4 DIAGONAL BARS AT ALL PIPE OPENINGS.
 - 12" MINIMUM WALL HEIGHT ABOVE ALL PIERS.
 - CORNER PIERS REQUIRED BETWEEN OPENINGS OF TWO ADJACENT WALLS. EXTEND WALL REINFORCING VERTICALLY THROUGH PIER. INSTALL ONE ADDITIONAL 15-INCH #4 BAR IN PIER.

OUTLET STRUCTURE - 5' x 5' SW-513 INTAKE DETAIL (ST-9)
 NOT TO SCALE

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 01/03/2024
 12/06/2023
 10/20/2023

REVISIONS: FINAL SUBMITTAL, THIRD SUBMITTAL, SECOND SUBMITTAL, FIRST SUBMITTAL

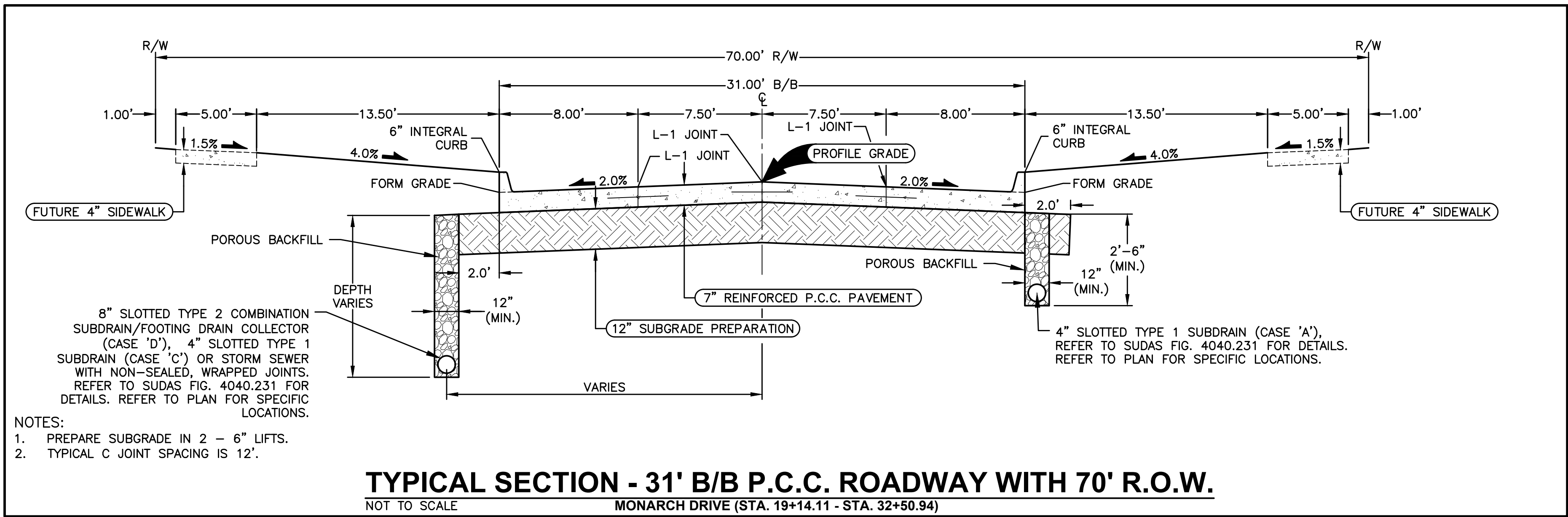
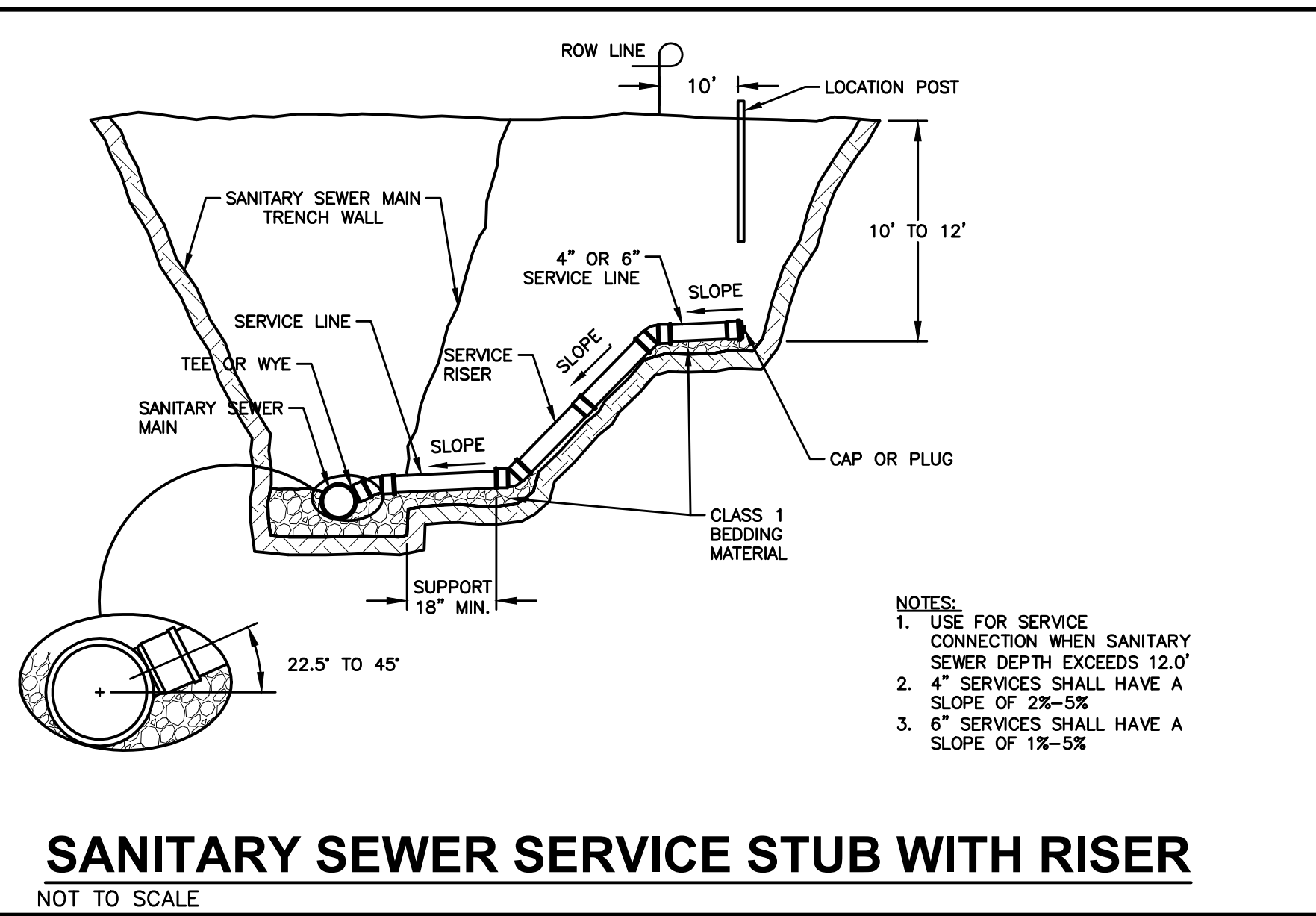
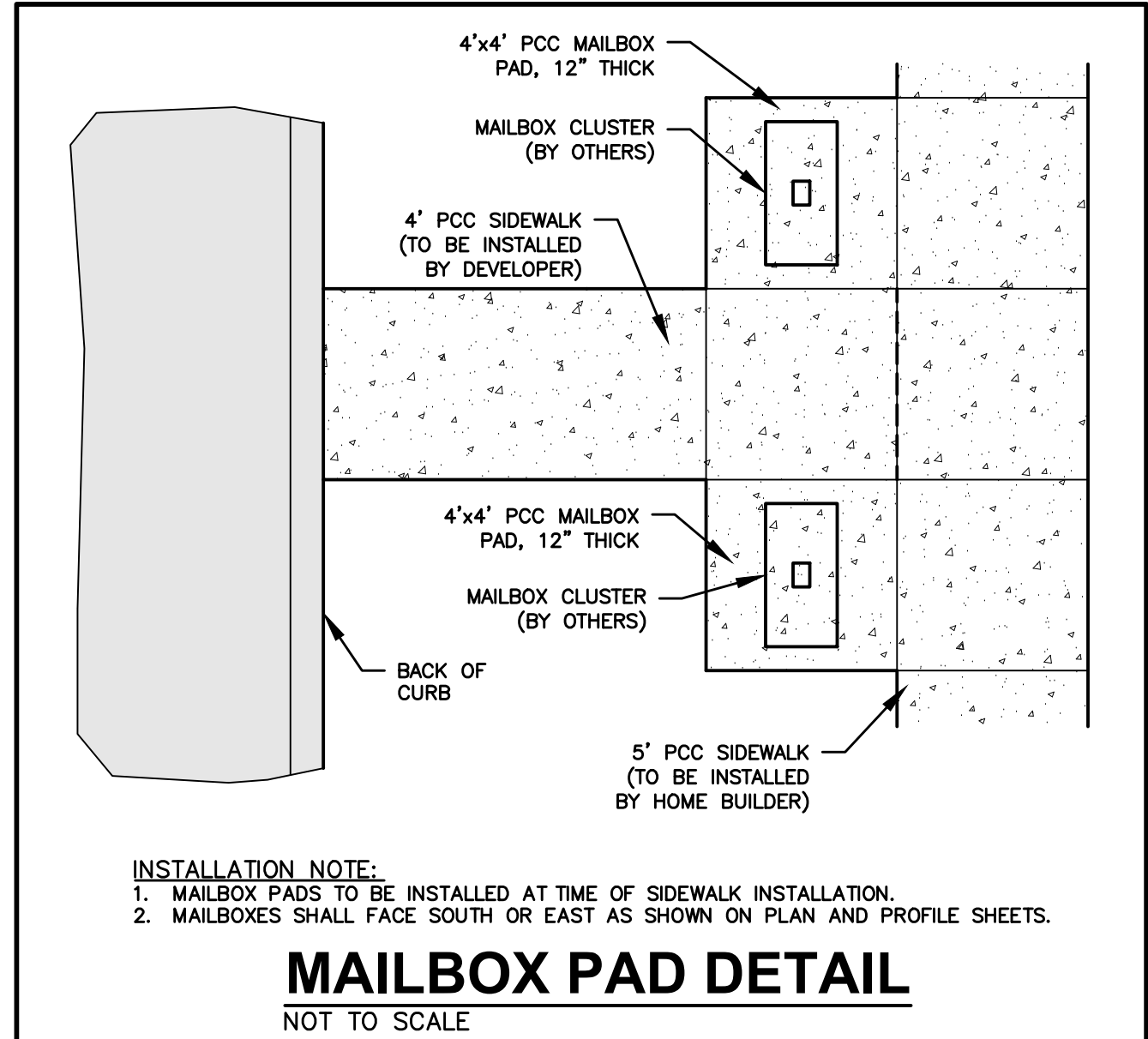
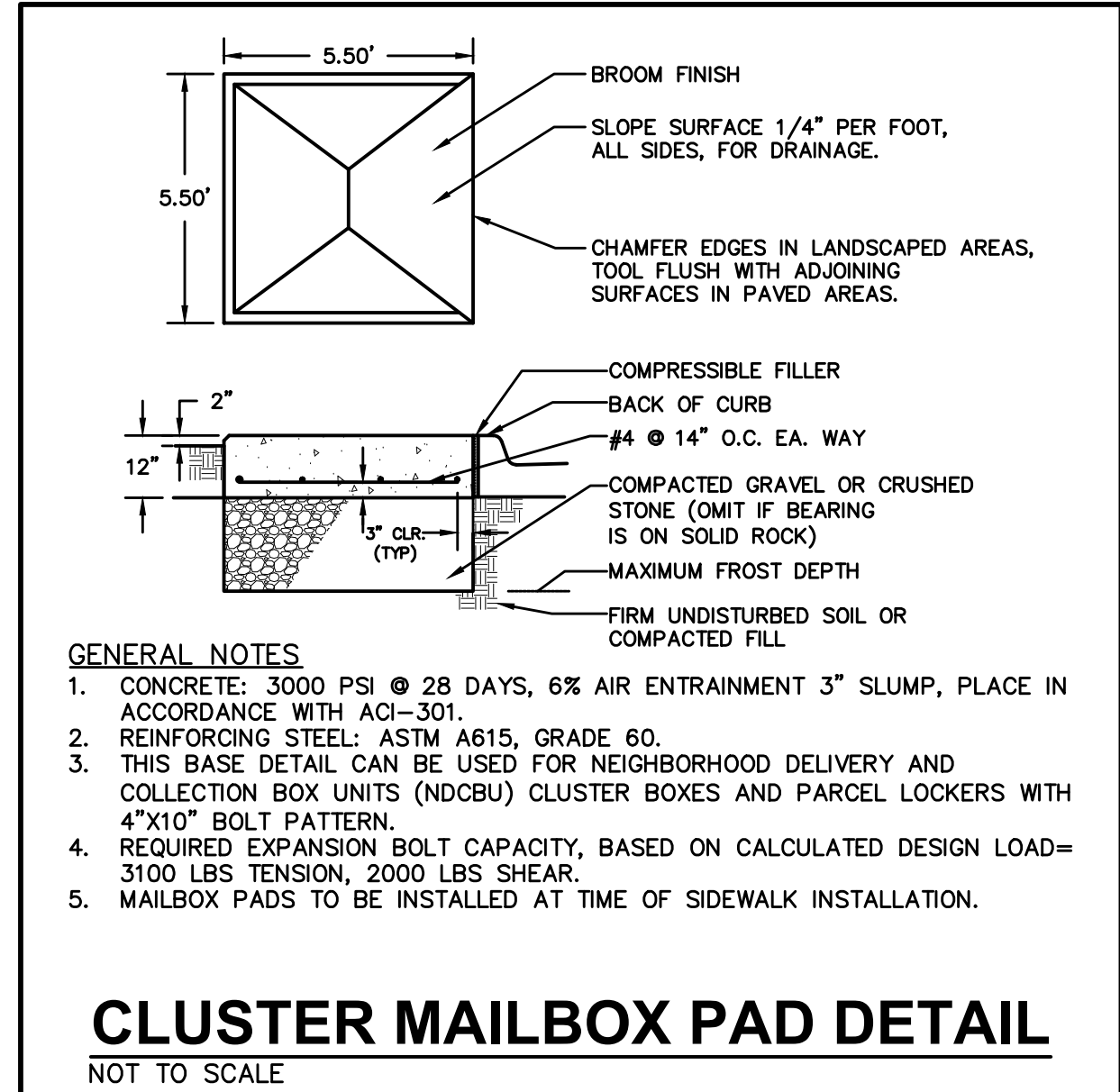
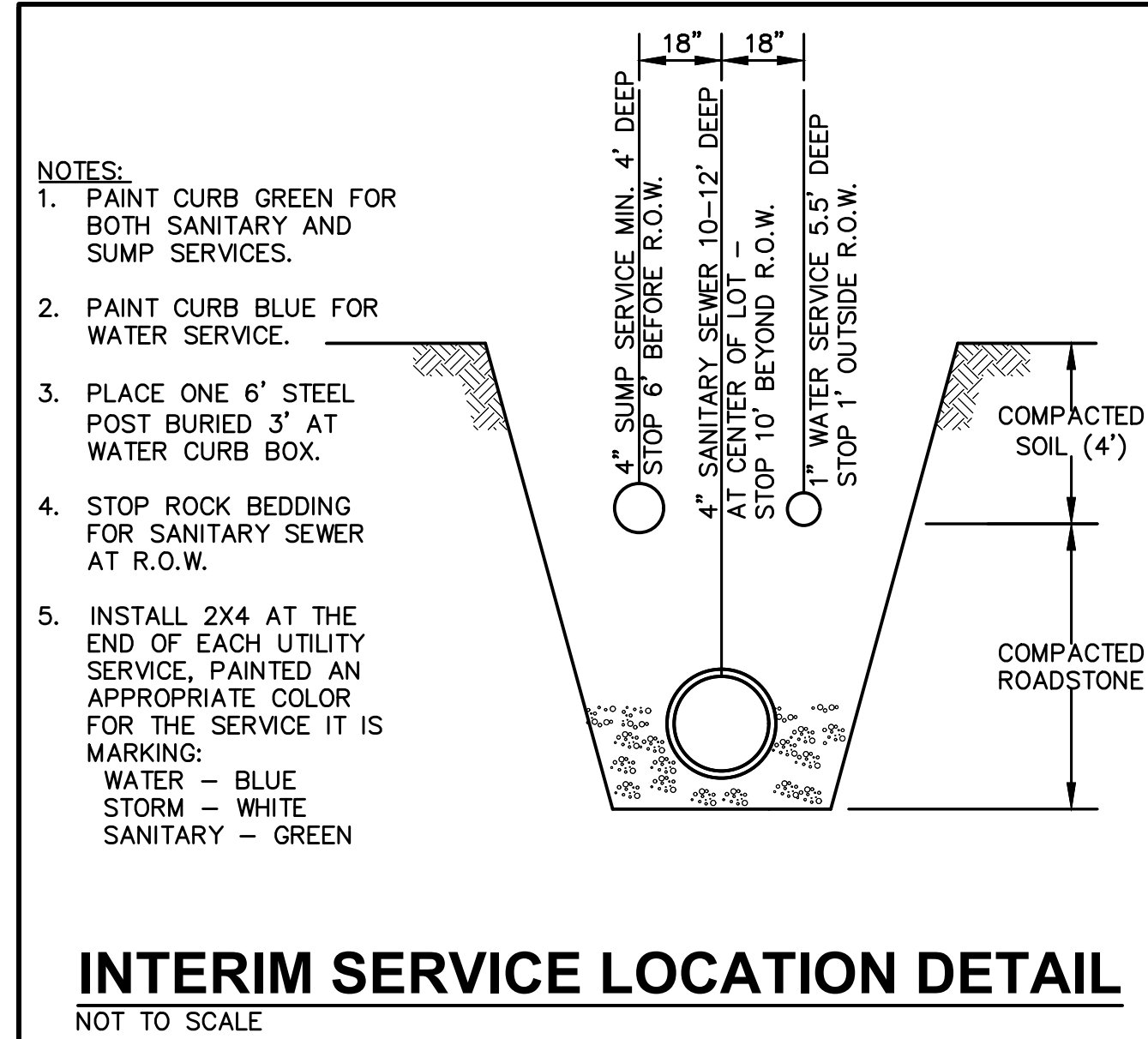
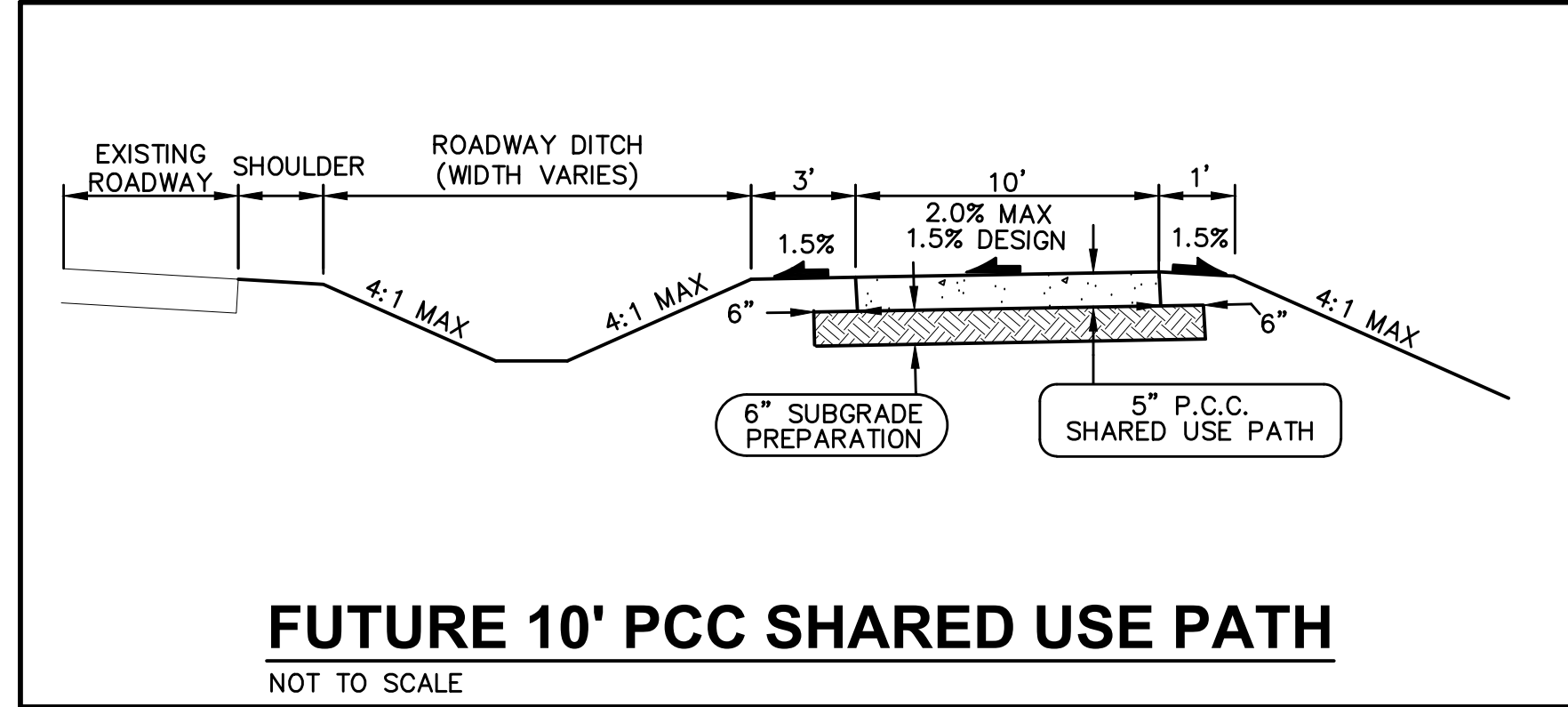
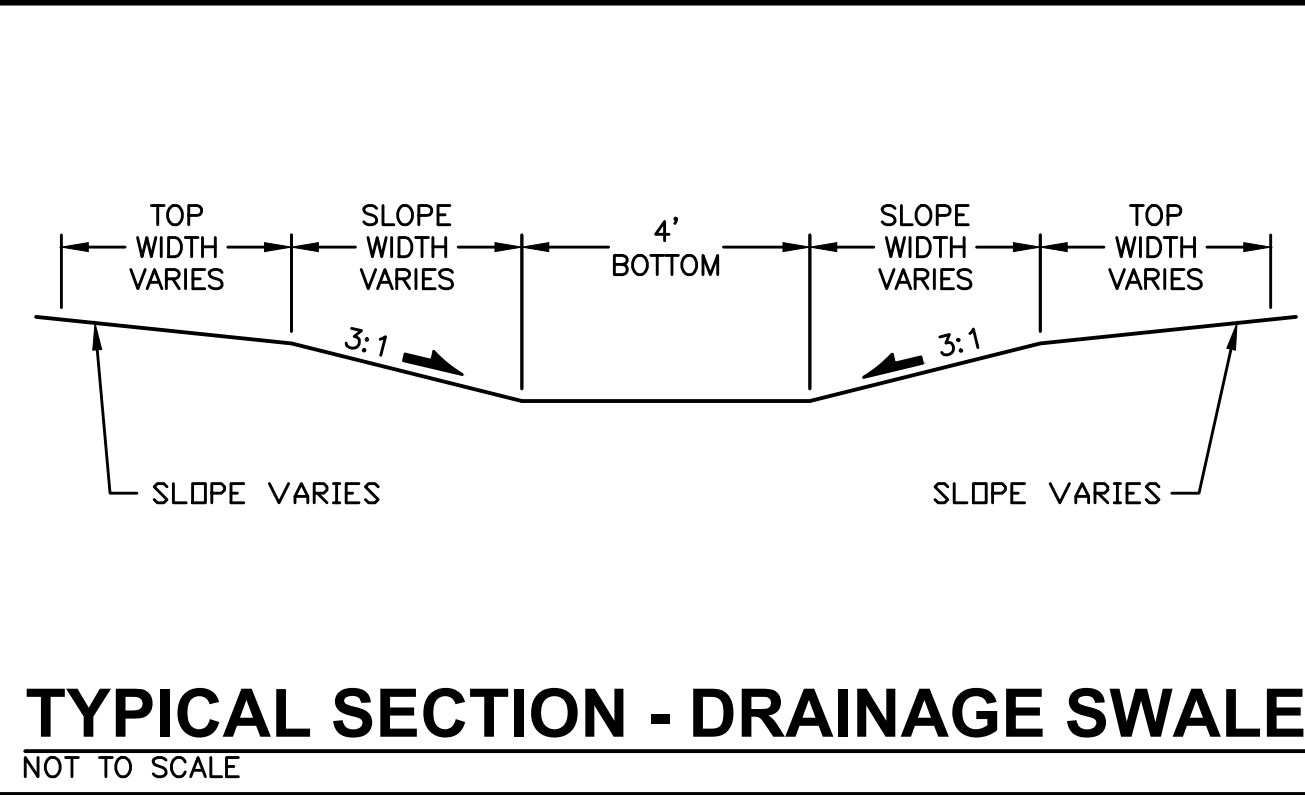
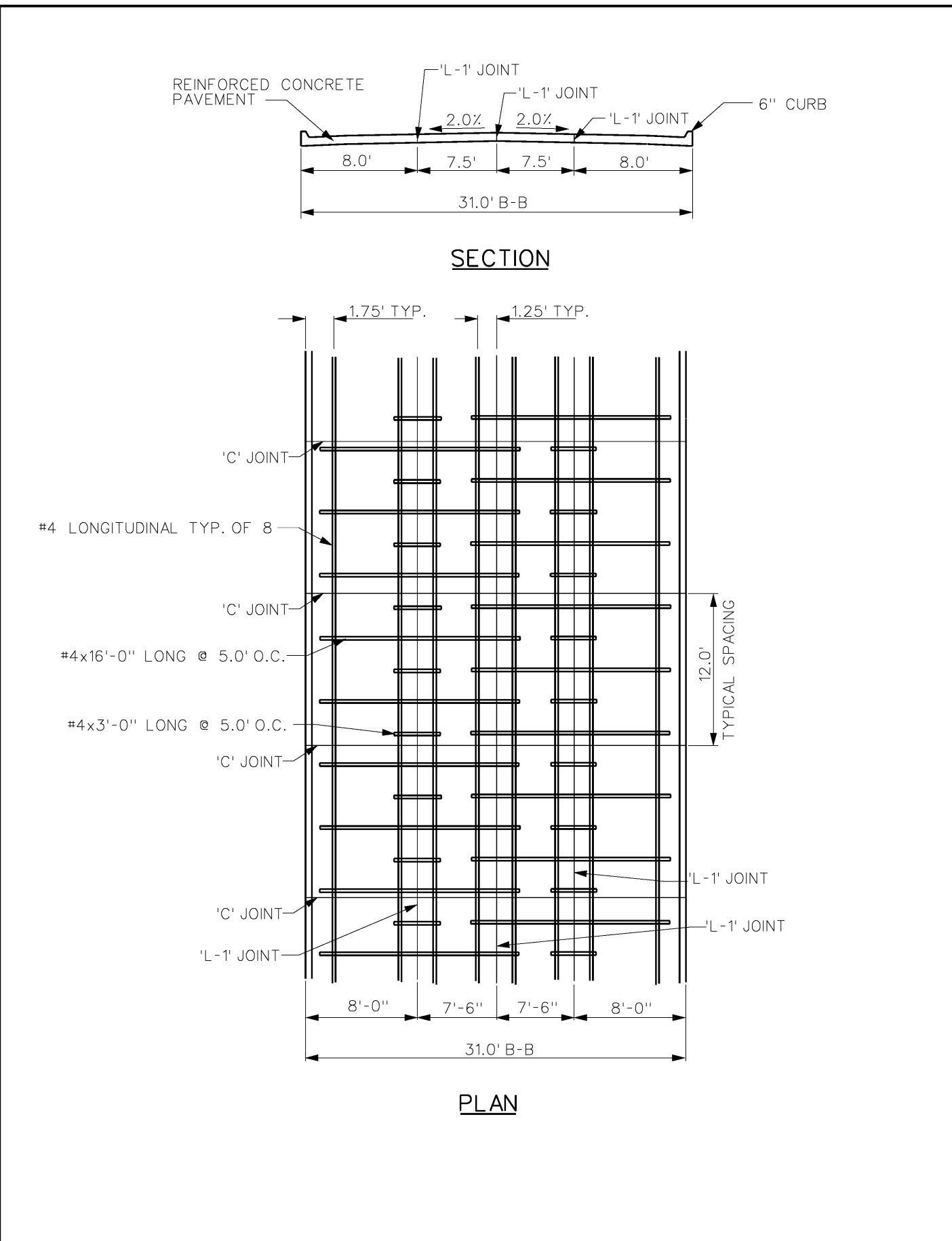
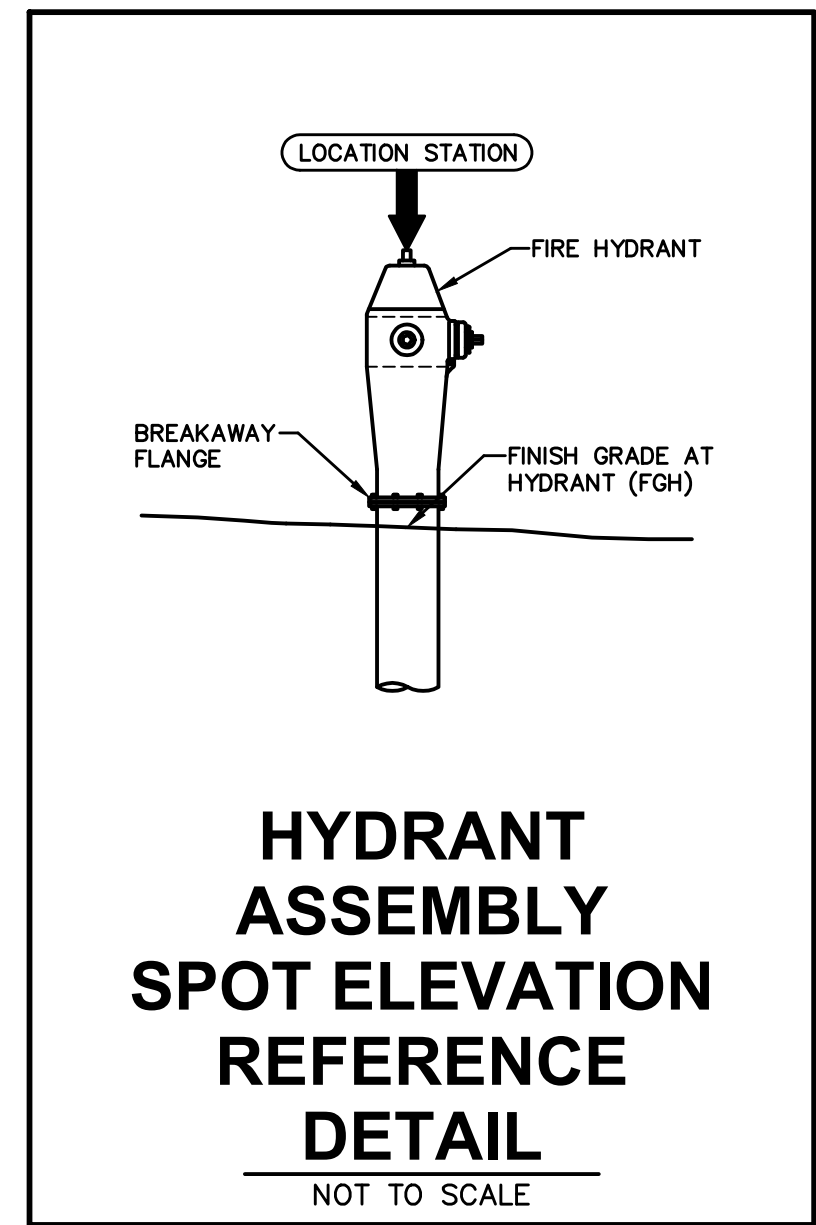
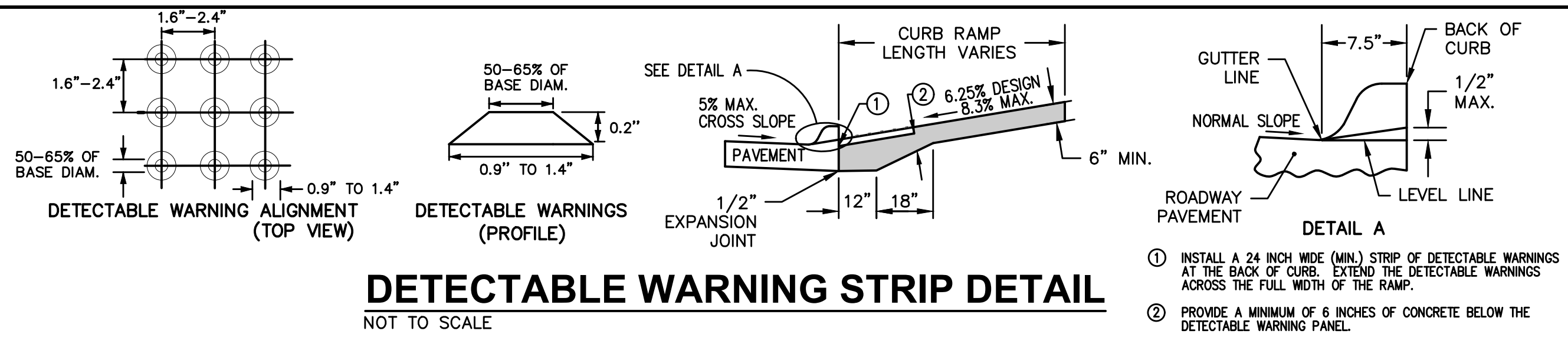
4121 NW URBANDALE DRIVE
 URBANDALE, IA 50322
 PHONE: (515) 369-4400

ENGINEER: EKO
 ENGINEER: GH
 EI: MAE

MONARCH CROSSING PLAT 1
 TYPICAL SECTIONS AND DETAILS

CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

3/26
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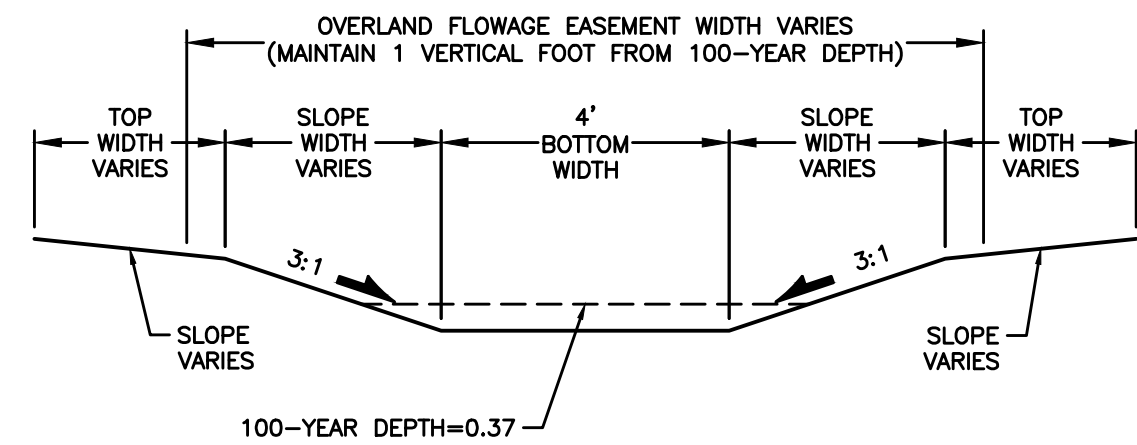


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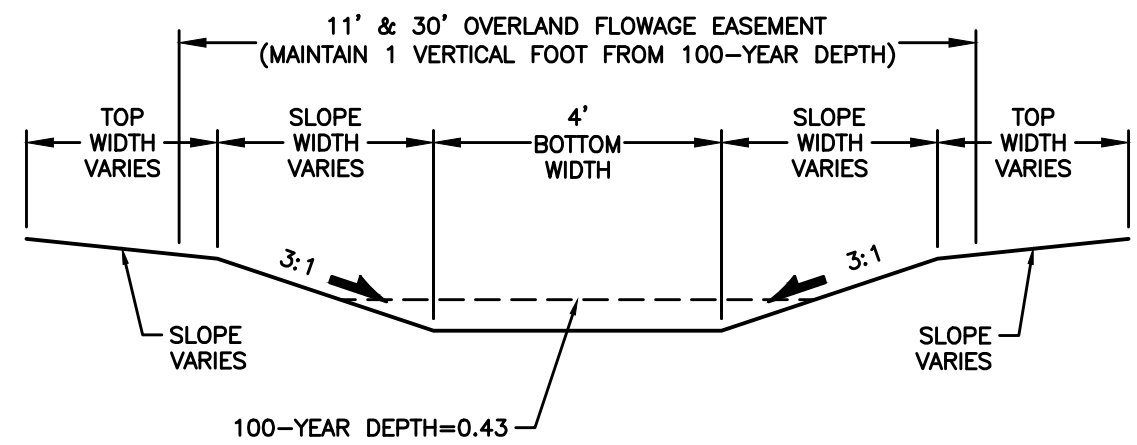
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FINAL SUBMITTAL	01/03/2024
THIRD SUBMITTAL	12/06/2023
SECOND SUBMITTAL	
FIRST SUBMITTAL	10/20/2023

REVISIONS
 4121 NW URBANDALE DRIVE
 URBANDALE, IA 50322
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 ENGINEER: EKO
 ENGINEER: GH EI: MAE
 CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

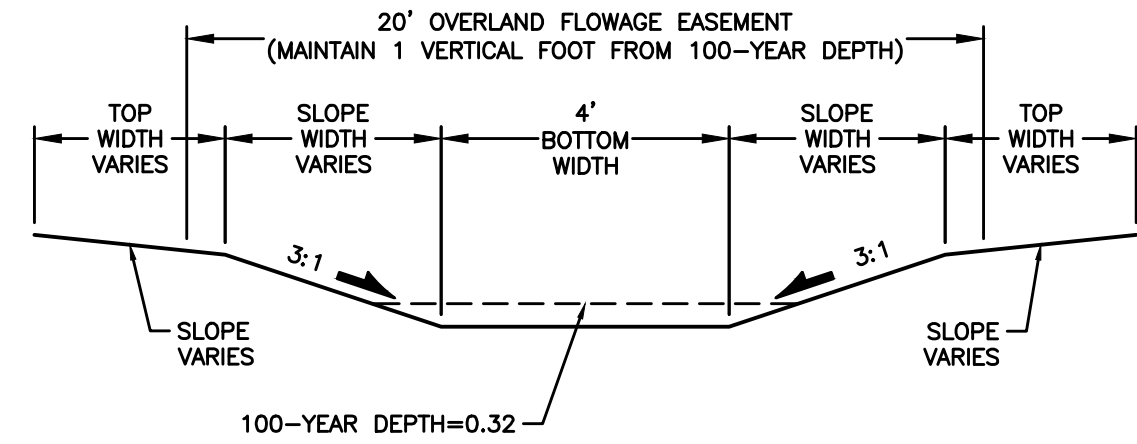
MONARCH CROSSING PLAT 1
TYPICAL SECTIONS AND DETAILS
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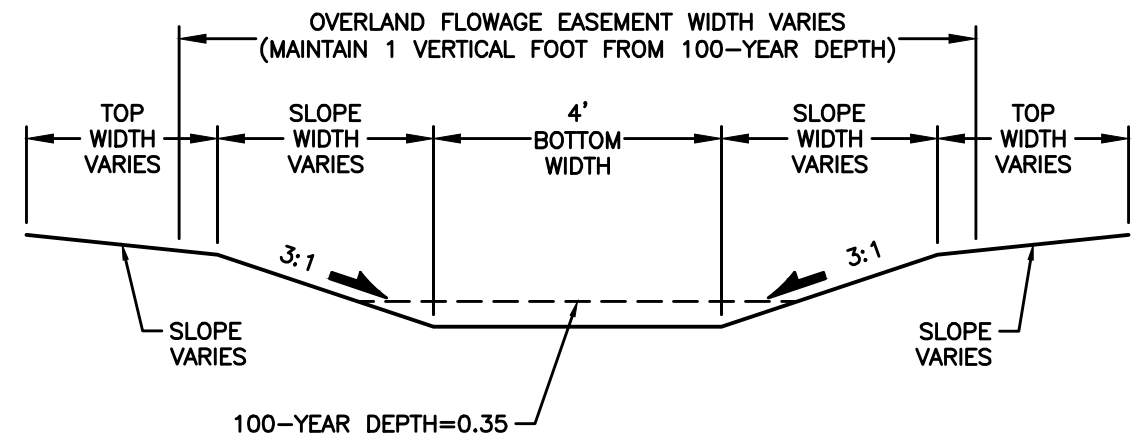
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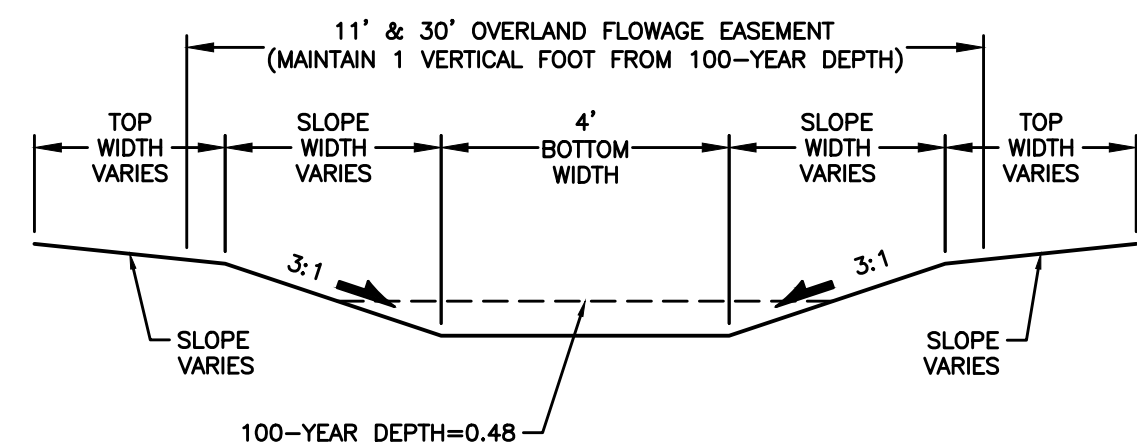
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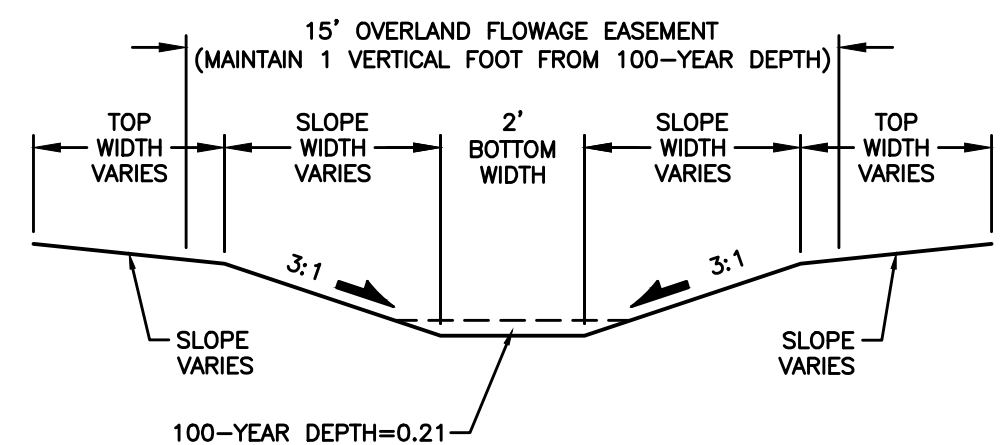
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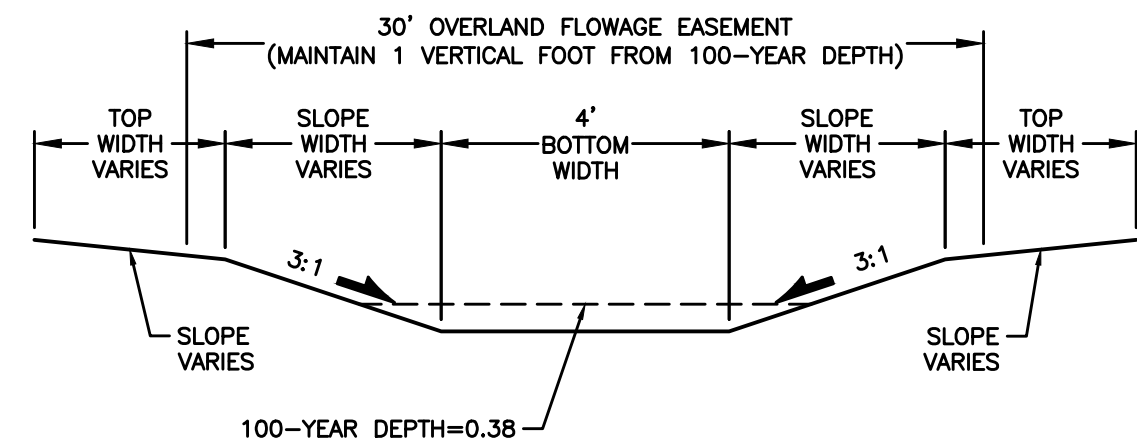
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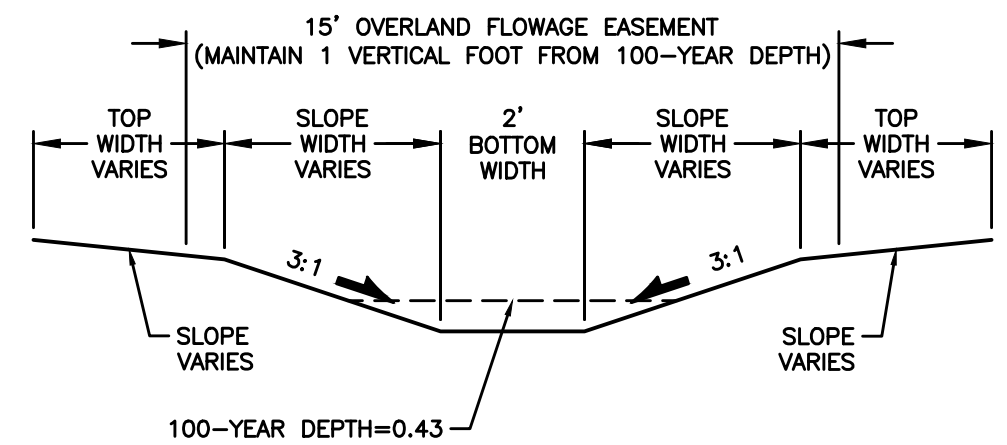
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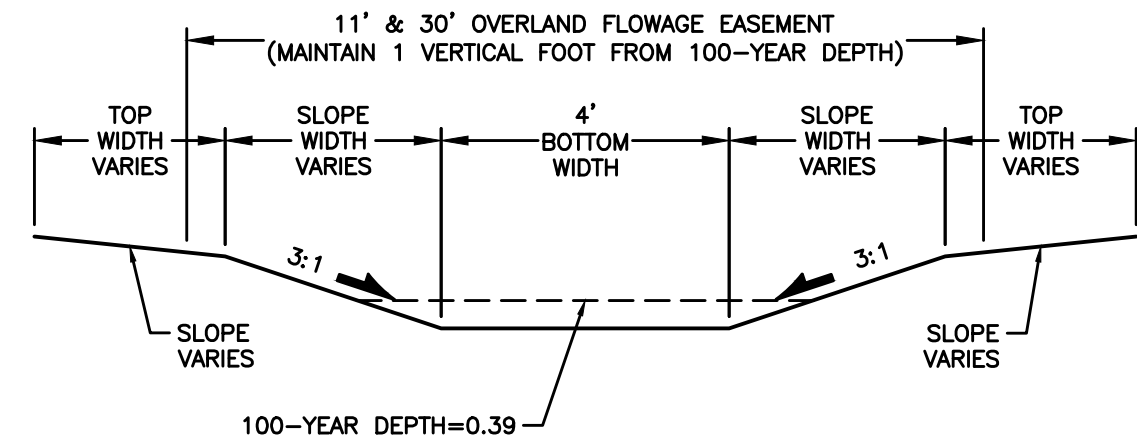
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TYPICAL SECTION - DRAINAGE SWALE #4
NOT TO SCALE



TYPICAL SECTION - DRAINAGE SWALE #9
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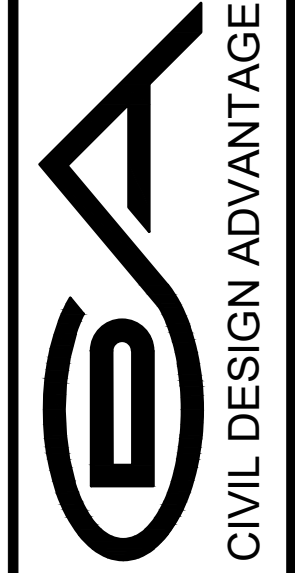


TYPICAL SECTION - DRAINAGE SWALE #5
NOT TO SCALE

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REVISIONS	DATE
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SECOND SUBMITTAL	12/06/2023
THIRD SUBMITTAL	01/03/2024
FINAL SUBMITTAL	02/02/2024

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 ENGINEER: EKO
 ENGINEER: GH EI: MAE



MONARCH CROSSING PLAT 1
TYPICAL SECTIONS AND DETAILS
 POLK CITY, IOWA

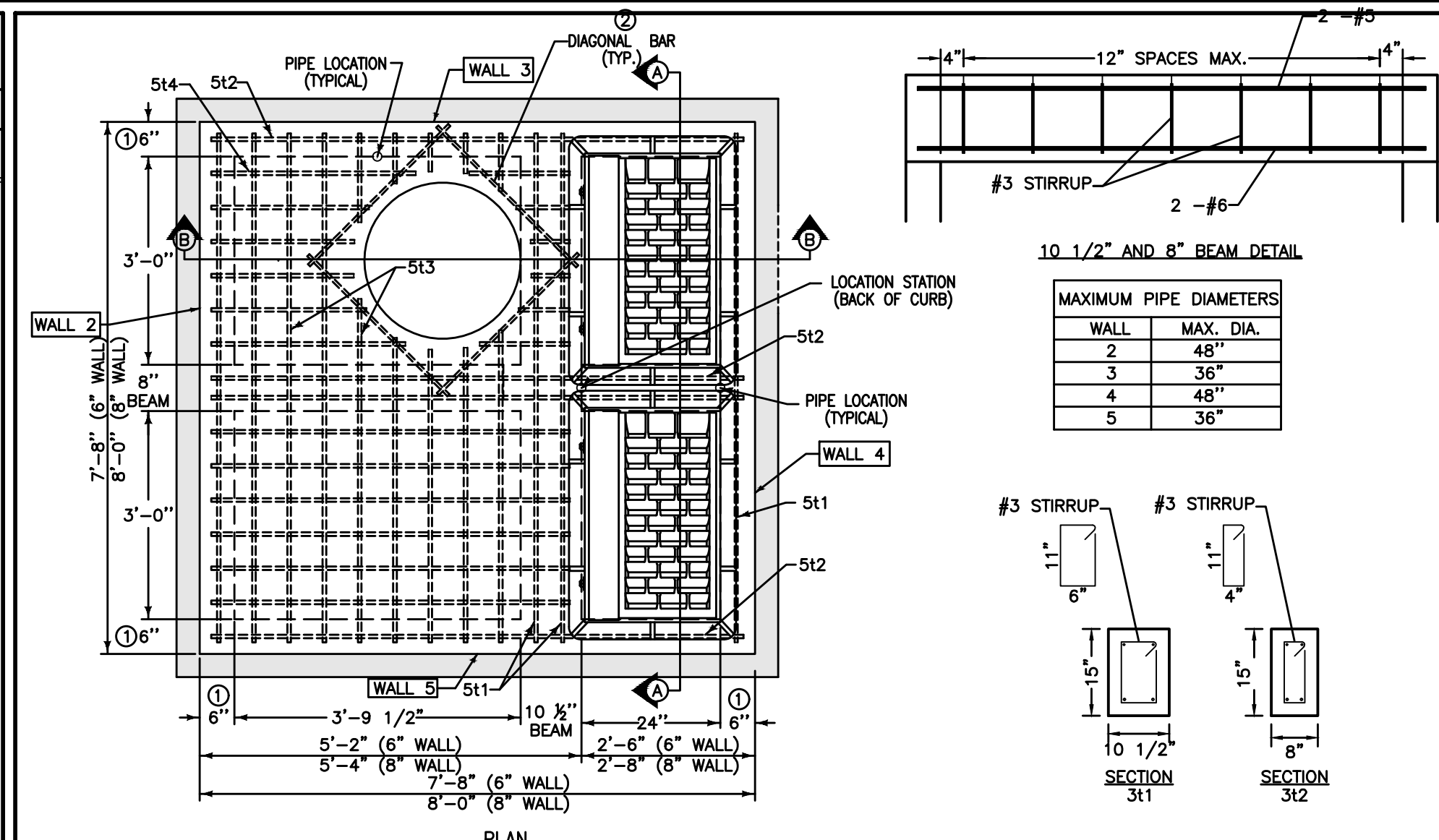
ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	STRIPPING, SALVAGING AND SPREAD TOPSOIL	LS	1
2	CLASS 10 EXCAVATION	LS	1
3	SUBGRADE PREPARATION	SY	5,531
4	CONNECT TO EXISTING SANITARY SEWER	EA	1
5	SANITARY SEWER GRAVITY MAIN, 8" DIA	LF	2,612
6	SANITARY SERVICE STUB, 4" DIA.	EA	25
7	CONNECT TO EXISTING STORM SEWER	EA	1
8	SUBDRAIN, SLOTTED PVC, 4" DIA	LF	1,603
9	STORM SEWER, TRENCHED, SLOTTED TYPE 2 COMBINATION PVC, 8" DIA	LF	630
10	STORM SEWER, TRENCHED, RCP, 15" DIA	LF	477
11	STORM SEWER, TRENCHED, RCP, 18" DIA	LF	705
12	STORM SEWER, TRENCHED, RCP, 24" DIA	LF	355
13	STORM SEWER, TRENCHED, RCP, 30" DIA	LF	310
14	STORM SEWER, TRENCHED, RCP, 36" DIA	LF	438
15	STORM SEWER, TRENCHED, RCP, 42" DIA	LF	652
16	STORM SEWER SERVICE STUB, 4" DIA	EA	25
17	STORM SEWER, 18" RCP APRON	EA	3
18	STORM SEWER, 24" RCP APRON	EA	1
19	STORM SEWER, 36" RCP APRON	EA	1
20	STORM SEWER, 42" RCP APRON	EA	1
21	INTAKE, TYPE SW-513, 5'X5'	EA	2
22	INTAKE, NYLOPLAST, 24" DIA	EA	5
23	INTAKE, NYLOPLAST, 30" DIA	EA	2
24	INTAKE, TYPE SW-501	EA	2
25	INTAKE, TYPE SW-503	EA	2
26	INTAKE, TYPE SW-505	EA	4
27	INTAKE, TYPE SW-506	EA	2
28	INTAKE, TYPE SW-506 MODIFIED	EA	2
29	MANHOLE, TYPE SW-301, 48" DIA	EA	11
30	MANHOLE, TYPE SW-401, 48" DIA	EA	4
31	MANHOLE, TYPE SW-401, 60" DIA	EA	2
32	MANHOLE, TYPE SW-401, 60" DIA W/ 30" DOME GRATE	EA	1
33	MANHOLE, TYPE SW-401, 72" DIA	EA	1
34	MANHOLE, TYPE SW-401, 96" DIA	EA	1
35	MANHOLE, TYPE SW-402, 6'X4'	EA	1
36	FOOTING FOR CONCRETE PIPE APRON, RCP, 18" DIA	EA	3
37	FOOTING FOR CONCRETE PIPE APRON, RCP, 24" DIA	EA	1
38	FOOTING FOR CONCRETE PIPE APRON, RCP, 36" DIA	EA	1
39	FOOTING FOR CONCRETE PIPE APRON, RCP, 42" DIA	EA	1
40	PIPE APRON GUARD	EA	6
41	CONNECT TO EXISTING WATERMAIN	EA	1
42	WATER MAIN, TRENCHED, 6" DIA	LF	53
43	WATER MAIN, TRENCHED, 8" DIA	LF	1,475
44	WATER MAIN, TRENCHLESS, 8" DIA	LF	40
45	WATER SERVICE STUB, 1" DIA	EA	25
46	VALVE, 8" DIA	EA	4
47	FIRE HYDRANT ASSEMBLY	EA	9
48	TEMPORARY BLOWOFF HYDRANT	EA	1
49	TAPPING VALVE ASSEMBLY, 16"X8"	EA	1
50	SUBDRAIN CLEANOUT	EA	4
51	PAVEMENT, 7" REINFORCED P.C.C.	SY	4,880
52	SIDEWALK, 4" P.C.C.	SY	258
53	SHARED USE PATH, 6" P.C.C.	SY	28
54	SIDEWALK RAMPS, 6" P.C.C.	SY	30
55	MAILBOX PAD, 12" P.C.C.	EA	2
56	DETECTABLE WARNING PANELS	SF	40
57	TEMPORARY ROAD CLOSURE SIGNS	EA	5
58	CLASS 'E' RIP-RAP	TON	54
59	SANITARY SEWER AND STORM SEWER TELEVISION	LS	1
60	GRANULAR TEMPORARY TURNAROUND	LS	1
61	TYPE 1 TURF REINFORCEMENT MAT	SF	200

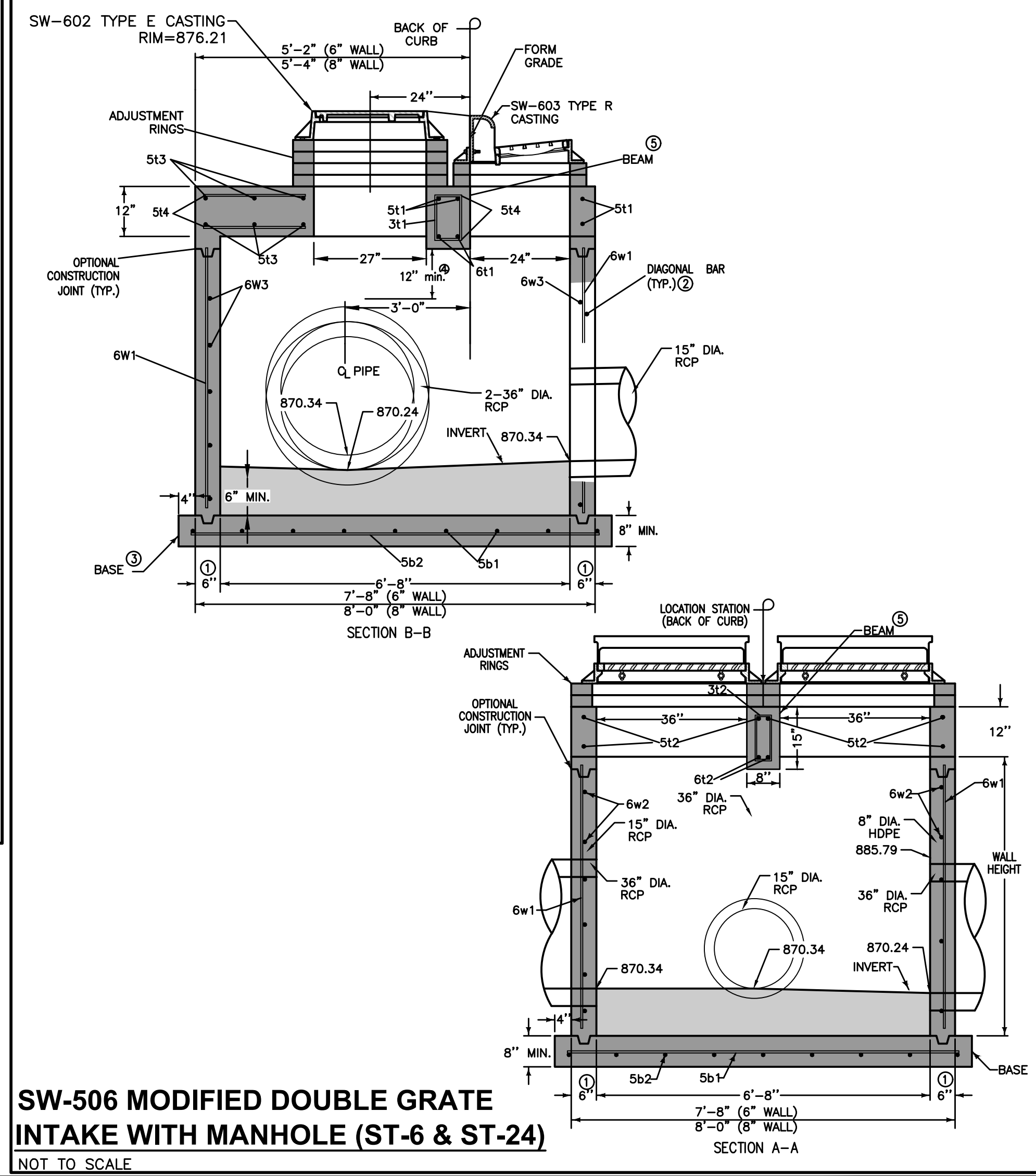
ESTIMATE REFERENCE INFORMATION

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

ITEM NO.	DESCRIPTION
1	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 SHEET 11 FOR LOCATION.
5	ALL SANITARY SEWER PIPE SHALL BE SOLID WALL PVC. TRUSS PIPE WILL NOT BE ALLOWED.
7-16	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.
6, 16, 45	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.
7	REFER TO SHEETS 13 FOR LOCATION.
8	REFER TO FIG. 4040.231 - SUBDRAINS. TYPE 1 (CASE 'A') INSTALLATION
17-20	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.
21	REFER TO FIG. 6010.513 - SW-513 OPEN-SIDED AREA INTAKE FOR CONSTRUCTION DETAILS. ST-26 REQUIRES 8" WALLS.
24	REFER TO FIG. 6010.501 - SW-501 SINGLE GRATE INTAKE FOR CONSTRUCTION DETAILS.
25	REFER TO FIG. 6010.503 - SW-503 SINGLE GRATE INTAKE WITH MANHOLE FOR CONSTRUCTION DETAILS.
26	REFER TO FIG. 6010.505 - SW-505 DOUBLE GRATE INTAKE FOR CONSTRUCTION DETAILS.
27	REFER TO FIG. 6010.506 - SW-506 DOUBLE GRATE INTAKE WITH MANHOLE FOR CONSTRUCTION DETAILS.
28	REFER TO THIS SHEET FOR CONSTRUCTION DETAILS. MODIFIED SW-506 INTAKE SHALL HAVE 8" WALLS.
29	REFER TO FIG. 6010.301 FOR SW-301 SANITARY SEWER MANHOLE CONSTRUCTION DETAILS. REFER TO FIG. 6010.303 FOR SW-303 SANITARY SEWER MANHOLE CONSTRUCTION DETAILS. REFER TO FIG. 6010.601 - CASTINGS FOR SANITARY SEWER MANHOLES FOR CASTING DETAILS. TYPE A CASTINGS WITH TYPE I/1 TOP HAT BARRIERS ARE REQUIRED FOR ALL MANHOLES. A MAXIMUM OF 12" OF ADJUSTMENT RINGS ARE ALLOWED FOR NEW CONSTRUCTION.
30-34	REFER TO FIG. 6010.401 - SW-401 CIRCULAR STORM SEWER MANHOLE FOR CONSTRUCTION DETAILS.
40	APRON GUARD REQUIRED ON ALL APRONS. REFER TO FIG. 4030.225 FOR DETAILS.
41	REFER TO SHEET 23 FOR LOCATION. TAPPING VALVE ASSEMBLY IS SEPARATE FROM THIS ITEM.
42-43, 45-49	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 ENCASUREMENT PER SECTION 5010 3.05. REFER TO FIG. 5010.102 FOR TRACER WIRE DETAILS. ALL FITTINGS, THRUST BLOCKS, POLYETHYLENE ENCASUREMENT AND TRACER SYSTEM SHALL BE CONSIDERED INCIDENTAL.
47	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.
50	REFER TO FIG. 4040.232 - SUBDRAIN CLEANOUTS FOR CONSTRUCTION DETAILS.
50	ALL SUBDRAIN CLEANOUTS SHALL BE INSTALLED WITHIN A 24" ROUND CONCRETE PAD.
51	REFER TO FIG. 7010.101 - JOINTS (TRANSVERSE CONTRACTION) AND FIG. 7010.4B - JOINTS (LONGITUDINAL CONTRACTION) FOR JOINT DETAILS. INSTALL HANDICAP CURBS AT LOCATIONS OF ALL FUTURE SIDEWALKS. REFER TO INTERSECTION SHEET FOR JOINTING. TYPICAL C JOINT SPACING IS 12 FEET.
52	REFER TO SHEET 7 FOR LOCATION.
54	ALL ACCESSIBLE RAMPS SHALL BE INSTALLED WITH THE PUBLIC IMPROVEMENTS. DETECTABLE WARNING PANELS ARE TO BE GRAY IN COLOR.
55	REFER TO SHEET 3 FOR DETAILS. REFER TO SHEETS 8 FOR LOCATION.
56	ALL TRUNCATED DOMES SHALL BE A GRAY COLOR. EXCEPT THE TRUNCATED DOMES FOR THE TRAIL CROSSING AT E. BRIDGE ROAD AT OUTLOT 'Y' WHICH SHALL BE A RED COLOR.
57	REFER TO SHEET 11 FOR LOCATIONS.
58	REFER TO FIG. 9040.10 - RIP RAP APRON FOR PIPE OUTLET ONTO FLAT GROUND FOR CONSTRUCTION DETAILS.
59	SANITARY SEWER AND STORM SEWER PIPES SHALL BE TELEVIEWED AFTER CONSTRUCTION AND PROVIDE THE VIDEO TO SNYDER AND ASSOCIATES FOR REVIEW.



MARK	SIZE	LOCATION	SHAPE	COUNT	LENGTH	SPACING
311	3	TOP	U	7	3'-2"*	12"
312	3	TOP	U	8	2'-10"*	10 1/4"
5b1	5	BASE	U	9	7'-10"	12 1/2"
5b2	5	BASE	U	9	8'-2"	11 3/4"
6w1	6	WALLS	U	30	30 WALL HEIGHT MINUS 4"	12"
6w2	6	WALLS	U	VARIES	VARIES	12"
6w3	6	WALLS	U	VARIES	VARIES	12"
511	5	TOP	U	4	7'-4"	SEE DETAIL SEE DETAIL
512	5	TOP	U	6	7'-8"	SEE DETAIL SEE DETAIL
513	5	TOP	U	18	18	7'-4"
514	5	TOP	U	24	24	5'-2"
611	6	TOP	U	2	7'-4"	SEE DETAIL SEE DETAIL
612	6	TOP	U	2	7'-8"	SEE DETAIL SEE DETAIL



TRAFFIC CONTROL NOTES

- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 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.

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MONARCH CROSSING PLAT 1
QUANTITIES AND REFERENCE NOTES
 2310.656

6 26

CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

ENGINEER: EKO
 ENGINEER: GH EI, MAE

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

REVISIONS
 DATE
 02/02/2024
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 12/06/2023
 10/20/2023
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GENERAL NOTES - TABULATIONS

- 1. 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 THOSE UTILITIES PRIOR TO THE BEGINNING OF 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. 2. 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: A. CITY OF POLK CITY B. SNYDER & ASSOCIATES C. APPROPRIATE UTILITY COMPANIES D. OWNER E. CIVIL DESIGN ADVANTAGE 3. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY AREAS OF PAVEMENT OR SIDEWALK NOT TO BE REMOVED THAT IS DAMAGED DUE TO OPERATING HIS EQUIPMENT ON THE PAVEMENT OR SIDEWALK. 4. 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. 5. THE CONTRACTOR SHALL APPLY NECESSARY MOISTURE TO THE CONSTRUCTION AREA AND HAUL ROADS TO PREVENT THE SPREAD OF DUST. 6. THE CONTRACTOR MAY BE REQUIRED AS DIRECTED BY THE ENGINEER OR THE CITY, TO PLACE TEMPORARY WARNING DEVICES AND SAFETY FENCE AT CERTAIN LOCATIONS WHERE REPLACEMENT FEATURES ARE NOT INSTALLED THE SAME DAY. 7. 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. 8. 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. 9. THE CONTRACTOR SHALL CONFINE HIS GRADING OPERATIONS TO WITHIN THE PROPOSED AND EXISTING RIGHT OF WAY, CONSTRUCTION LIMITS AND EASEMENTS SHOWN ON THE PLANS. 10. 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.

- 11. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES REQUIRED ON THE STORM WATER POLLUTION PREVENTION PLAN. 12. IN THE EVENT OF A DISCREPANCY BETWEEN DETAILED PLANS AND QUANTITIES, THE DETAINED PLANS SHALL GOVERN. 13. ALL TRAFFIC CONTROL SHALL COMPLY WITH MUTCD. 14. ALL SLOPES IN PAVEMENT SHALL BE UNIFORM TO AVOID PONDING. 15. DO NOT STORE CONSTRUCTION MATERIALS AND EQUIPMENT IN THE RIGHT OF WAY. 16. ALL PROPERTY PINS SHALL BE PROTECTED FROM GRADING OR OTHER OPERATIONS. ANY PINS DISTURBED SHALL BE RESET AT THE CONTRACTOR'S EXPENSE. 17. 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. 18. ANY WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS, NEED INDICATED ON THE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS. 19. 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. 20. 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. 21. REMOVE ALL DEBRIS SPILLED INTO R.O.W. AT THE END OF EACH WORK DAY. 22. 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. 23. ALL MATERIAL TESTING SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION. 24. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE AS-BUILT LOCATION FOR ALL UTILITIES, INCLUDING SERVICES. 25. ALL FRANCHISE UTILITIES SHALL BE INSTALLED UNDERGROUND. NO NEWLY CONSTRUCTED UTILITIES WILL BE ALLOWED TO BE CONSTRUCTED OVERHEAD. 26. THE DEVELOPER SHALL BE RESPONSIBLE FOR PAYING THE 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 22.16 ACRES SHALL BE PAID IN FULL PRIOR TO FINAL PLAT APPROVAL. 27. THE CONTRACTOR SHALL ADJUST ALL STRUCTURES, BOTH EXISTING AND PROPOSED, TO GRADE. 28. PRIOR TO CONSTRUCTION OF MONUMENT SIGN, APPROVAL OF A MONUMENT SIGN SITE PLAN WILL BE REQUIRED.

SANITARY SEWER NOTES

- 1. ALL 8" SANITARY SEWER SHALL BE PVC PIPE WITH CLASS "F-3" BEDDING UNLESS OTHERWISE NOTED ON THE DRAWINGS. 2. PROVIDE SANITARY SEWER SERVICE RISERS AS REQUIRED. 3. THE CONTRACTOR SHALL INSTALL SEWER TAPE AT THE END OF EACH SANITARY SEWER SERVICE. 4. 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. 5. ALL MANHOLES WITHIN PAVEMENT SHALL HAVE TYPE 'B' ADJUSTABLE CASTINGS. ALL MANHOLES NOT WITHIN PAVEMENT SHALL HAVE TYPE 'A' NON-ADJUSTABLE CASTINGS. 6. ALL MANHOLES SHALL HAVE 1/1 BARRIERS. 7. CORE DRILL ALL CONNECTIONS TO EXISTING MANHOLES AN PROVIDE SLOPE INVERT. 8. 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. 9. ALL SERVICES AND 8-INCH STUB OUTS SHALL BE CAPPED. 10. MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES. 11. MANHOLES COVERS SHALL HAVE RAISED DIAMOND ROUGHNESS PATTERN. 12. 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.

GRADING/BACKFILL NOTES

- 1. RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING UTILITY CONSTRUCTION. 2. 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. 3. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT. 4. STOCKPILE SUFFICIENT TOPSOIL TO RESPREAD A MINIMUM DEPTH OF 4-INCHES ON UNPAVED AREAS, INCLUDING FRONT, REAR, AND SIDE YARDS OF ALL LOTS. 5. ALL AREAS TO RECEIVE FILL ARE TO BE BENCHED. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES. 6. ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR DENSITY. 7. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL FALL WITHIN A RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE. 8. THE CONTRACTOR SHALL PROTECT AND BACKFILL AROUND UNDERGROUND UTILITIES. BACKFILL SHALL BE IN 6-INCH LIFTS, COMPACTED TO 95% STANDARD PROCTOR DENSITY. 9. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES. 10. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.

WATER MAIN NOTES

- 1. PIPE MATERIALS SHALL BE AWWA C900, CLASS 150 PVC. 2. INSTALL NO. 10 THHN STANDARD COPPER TRACER WIRE UNDER PIPE, BRING TRACER WIRE TO SURFACE AT HYDRANTS, TERMINATING IN RECEPTACLE BOX. 3. 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. 4. HYDRANTS SHALL BE SET 3.5 FEET FROM THE WATER MAIN. 5. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY THAT FIRE HYDRANTS WILL NOT CONFLICT WITH SIDEWALK CONSTRUCTION. 6. HYDRANTS, MANHOLE COVERS AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS. 7. HYDRANTS TO BE WATROUS PRODUCTS, OPEN LEFT, PAINTED YELLOW. 8. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES. 9. SERVICES TO BE 1-INCH COPPER. 10. RISER RODS ARE REQUIRED AT ALL CURB STOPS.

- 11. 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. 12. WATER MAIN TO HAVE 5 1/2 FEET BURY, TYPICAL EXCEPT AT CRITICAL CROSSINGS. 13. ALL VALVES SHALL HAVE A VALVE BOX ADAPTER INSTALLED TO MAINTAIN ALIGNMENT. 14. THE CONTRACTOR SHALL REMOVE CHAINS ON ALL HYDRANTS. 15. 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. 16. 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. 17. PROVIDE 2" BLOW-OFF AT THE TERMINAL END OF THE 8" WATER LINE UNLESS HYDRANT HAS BEEN PROVIDED. 18. 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.

STORM SEWER NOTES

- 1. ADDITIONAL RIP-RAP MAY BE REQUIRED AT THE FES BASED UPON FIELD REVIEW BY CITY OF POLK CITY. 2. 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. 3. ALL CURB INTAKES SHALL HAVE TYPE 'r' VANE GRATES. 4. ALL INTAKES SHALL BE POURED-IN-PLACE CONCRETE OR PRECAST CONCRETE. 5. ALL 12" AND LARGER STORM SEWERS SHALL BE RCP. 6. 8-INCH FOOTING DRAINS TO BE PVC, SDR 35. 7. FOOTING DRAIN SERVICES TO BE 4-INCH PVC, SDR 35. EXTEND SERVICES 6' BEFORE ROW UNLESS OTHERWISE NOTED. 8. ALL INTAKES SHALL BE LOCATED A MINIMUM OF 7.5 FEET FROM END OF RETURNS. 9. CORE DRILL ALL CONNECTIONS TO EXISTING STRUCTURES. 10. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3"-6" COVER ON ALL STORM SEWER, INCLUDING SUMP SERVICES. 11. INSTALL CONTINUOUS PERFORATED SUBDRAIN IN LOCATIONS SHOWN ON PLANS.

PAVING NOTES

- 1. 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. 2. THE CONTRACTOR WILL NEED TO PROVIDE COPIES OF ALL TEST RESULTS REPORTING, INCLUDING BUT NOT LIMITED TO COMPACTION TEST MAP, STORM SEWER TELEVISION, AND SANITARY SEWER TELEVISION, TO SNYDER & ASSOCIATES FOR REVIEW PRIOR TO REQUESTING THE PRE-POUR MEETING. 3. ALL ELEVATIONS ARE PROPOSED FINISHED GRADE. 4. PAVEMENTS SHALL BE 6" CONTINUOUSLY-REINFORCED PCC PAVEMENT UNLESS OTHERWISE NOTED ON THE PLANS. 5. ALL STREETS SHALL HAVE 6" INTEGRAL CURBS. 6. PROVIDE CURB DROPS FOR SIDEWALKS AT INTERSECTIONS. 7. CONSTRUCTION OF HANDICAP ACCESSIBLE RAMPS, WITH DETECTIBLE WARNINGS AND INCLUDING COMMON SQUARE, SHALL BE THE RESPONSIBILITY OF THE HOMEBUILDER UNLESS OTHERWISE NOTED ON THE PLANS. 8. ALL REINFORCING STEEL SHALL BE EPOXY-COATED REINFORCING STEEL.

CITY OF POLK CITY TYPICAL NOTES:

GENERAL NOTES

- 1. ONE WEEK PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY: A. SNYDER & ASSOCIATES B. CITY OF POLK CITY C. DEVELOPER D. ENGINEER E. IOWA ONE-CALL 2. 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. 3. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, CURRENT AT THE COMMENCEMENT OF CONSTRUCTION. 4. THE CONTRACTOR, DEVELOPER, AND DEVELOPER'S ENGINEER SHALL ATTEND PRE-CONSTRUCTION CONFERENCE WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCEMENT OF CONSTRUCTION. 5. 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. 6. 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, MATURITY CURVES OR OTHER ACCEPTABLE TESTING. SHOP DRAWINGS SHALL INCLUDE MANHOLES, INTAKES, BOX CULVERTS, FENCING/GUARD RAILS AND OTHER SPECIALTY CONSTRUCTION ITEMS. 7. 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.

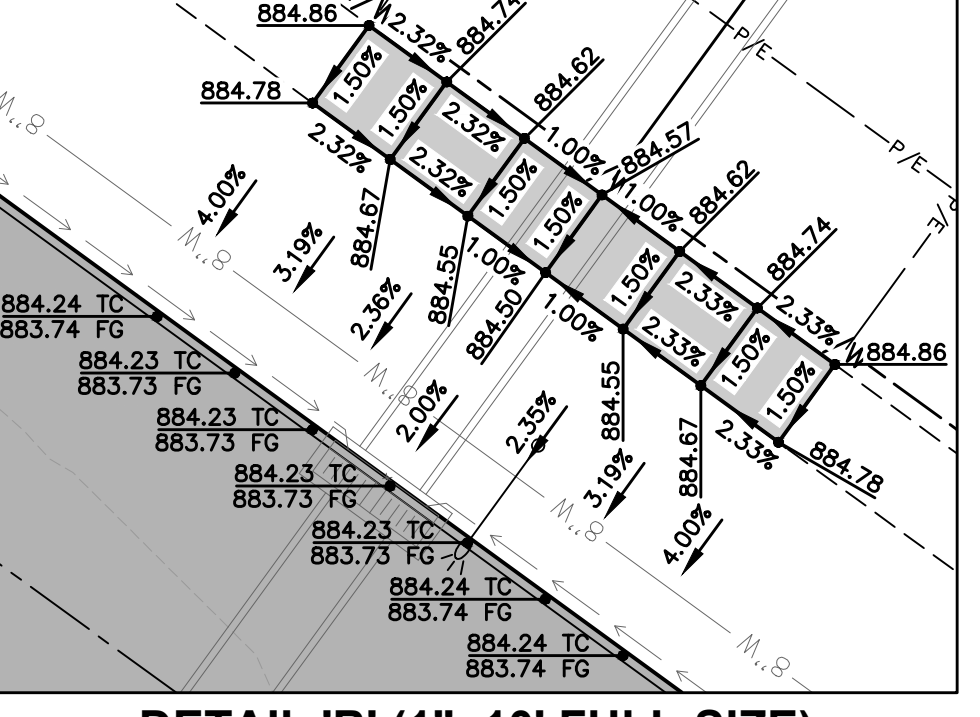
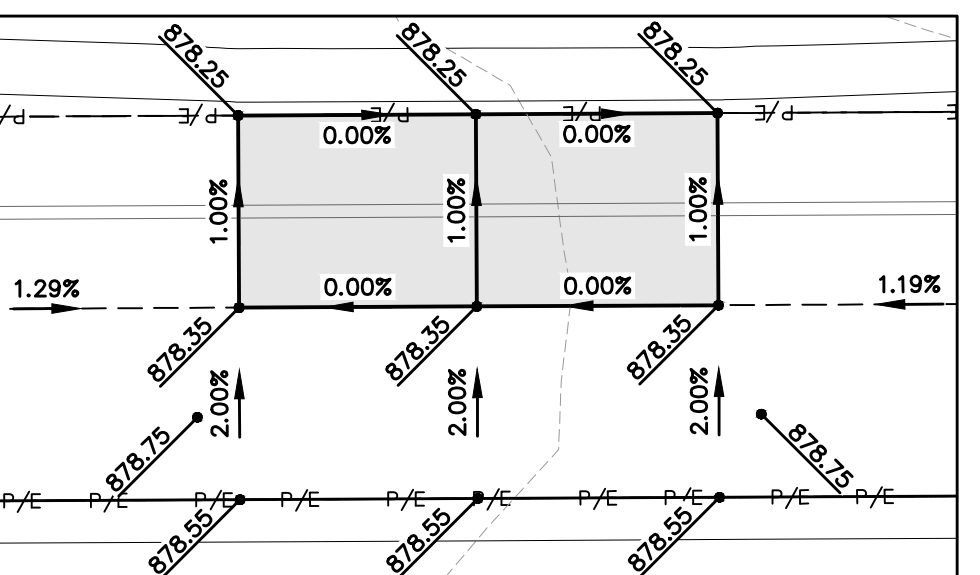
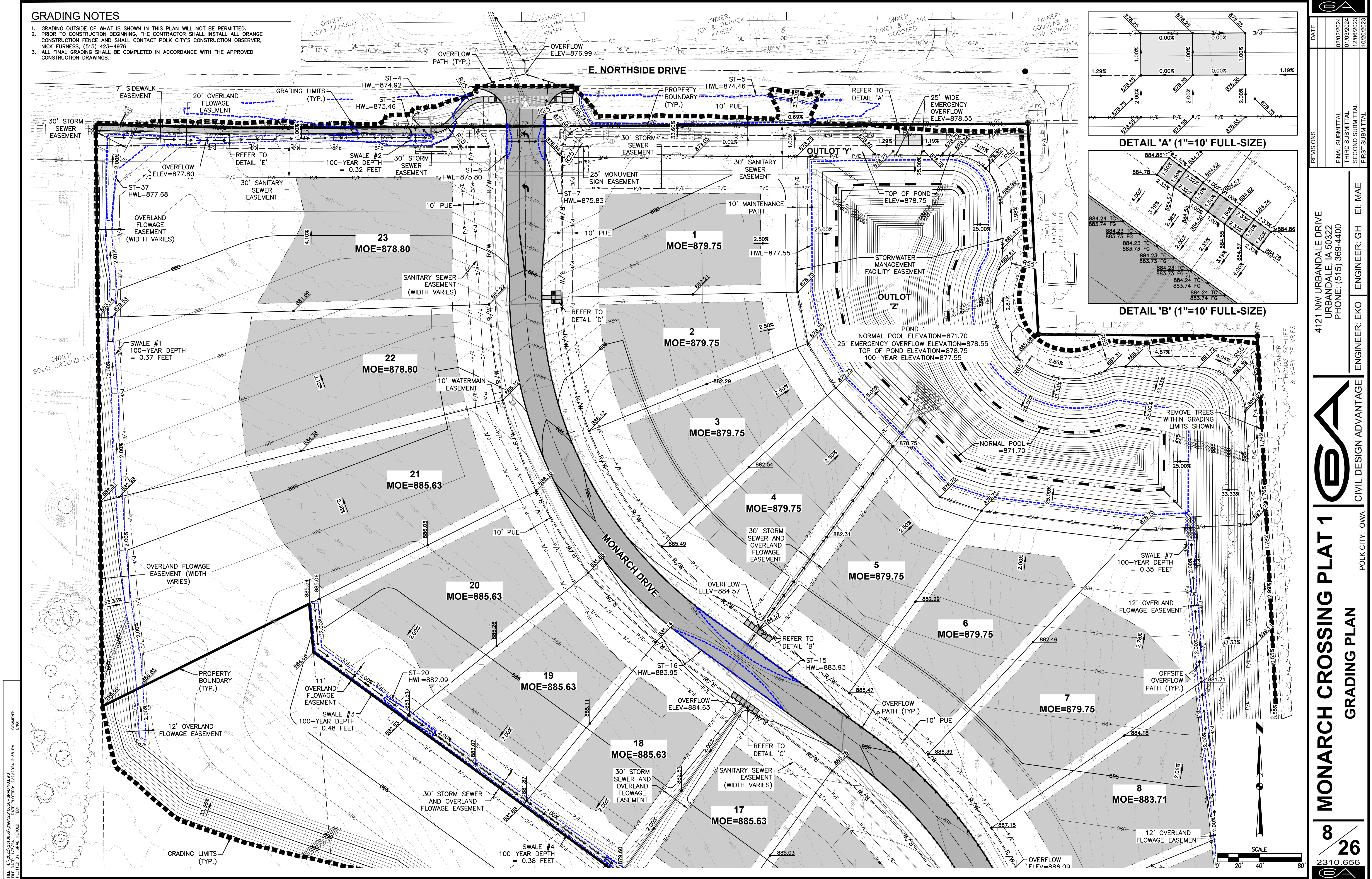
- 8. THE CONTRACTOR SHALL VERIFY THE LOCATION AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY AND THE OWNER. 9. THE CONTRACTOR SHALL CONDUCT CLEAN-UP OPERATIONS ON EXISTING STREETS AND ADJACENT PRIVATE PROPERTY AT THE END OF EACH WORKING DAY OR MORE OFTEN AS DIRECTED BY THE CITY. 10. THE CONTRACTORS SHALL PROVIDE 4-YEAR MAINTENANCE BONDS, IN AN AMOUNT EQUAL TO THE COST OF CONSTRUCTION, FOR THE PAVING AND FOR WATER MAINS, SANITARY SEWERS, STORM SEWERS, INCLUDING ALL UTILITY SERVICES. THE MAINTENANCE BONDS SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL SANITARY SEWER, SUMP AND WATER MAIN SERVICES. A TABLE DIMENSIONING THE DISTANCE FROM THE NEAREST PROPERTY CORNER TO EACH SERVICE SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. 13. HANDICAP RAMPS, IF ANY, FOR DESIGNATED BIKE TRAILS SHALL HAVE BRICK RED TRUNCATED DOMES; ALL OTHER HANDICAP RAMPS SHALL HAVE CHARCOAL GRAY TRUNCATED DOMES FOR DETECTABLE WARNINGS. 14. THE DEVELOPER SHALL BE RESPONSIBLE FOR REIMBURSING THE CITY OF POLK CITY FOR MATERIALS COSTS FOR ALL STREET SIGNS WITHIN THIS PLAT. 15. THE DEVELOPER'S ENGINEER SHALL PROVIDE AS-BUILT MYLARS, CAD FILES IN ELECTRONIC FORMAT, AND PDF FILES OF THE FULL RECORD DRAWINGS SET TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. RECORD DRAWINGS SHALL INCLUDE FLOW LINE ELEVATIONS OF ALL SWALES AT EACH PROPERTY LINE AS PER CITY CODE. 16. THE DEVELOPER'S SURVEYOR SHALL PROVIDE A STATEMENT TO THE CITY ENGINEER CERTIFYING THAT ALL PROPERTY CORNERS HAVE BEEN SET PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.

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GRADING NOTES

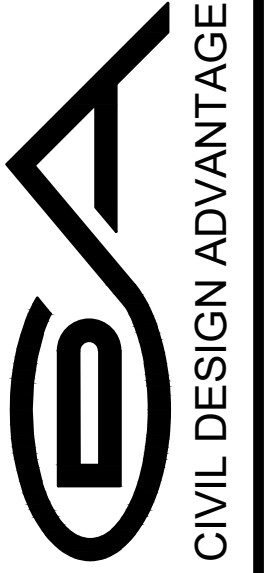
1. GRADING OUTSIDE OF WHAT IS SHOWN IN THIS PLAN WILL NOT BE PERMITTED.
2. PRIOR TO CONSTRUCTION BEGINNING, THE CONTRACTOR SHALL INSTALL ALL ORANGE CONSTRUCTION FENCE AND SHALL CONTACT POLK CITY'S CONSTRUCTION OBSERVER, NICK FURNESS, (515) 423-4976
3. ALL FINAL GRADING SHALL BE COMPLETED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS.



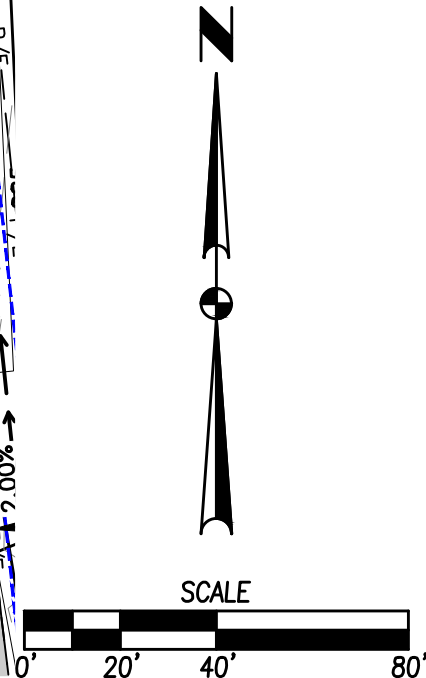
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12/06/2023	SECOND SUBMITTAL
10/20/2023	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE
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ENGINEER: EKO ENGINEER: GH EI, MAE



MONARCH CROSSING PLAT 1
GRADING PLAN

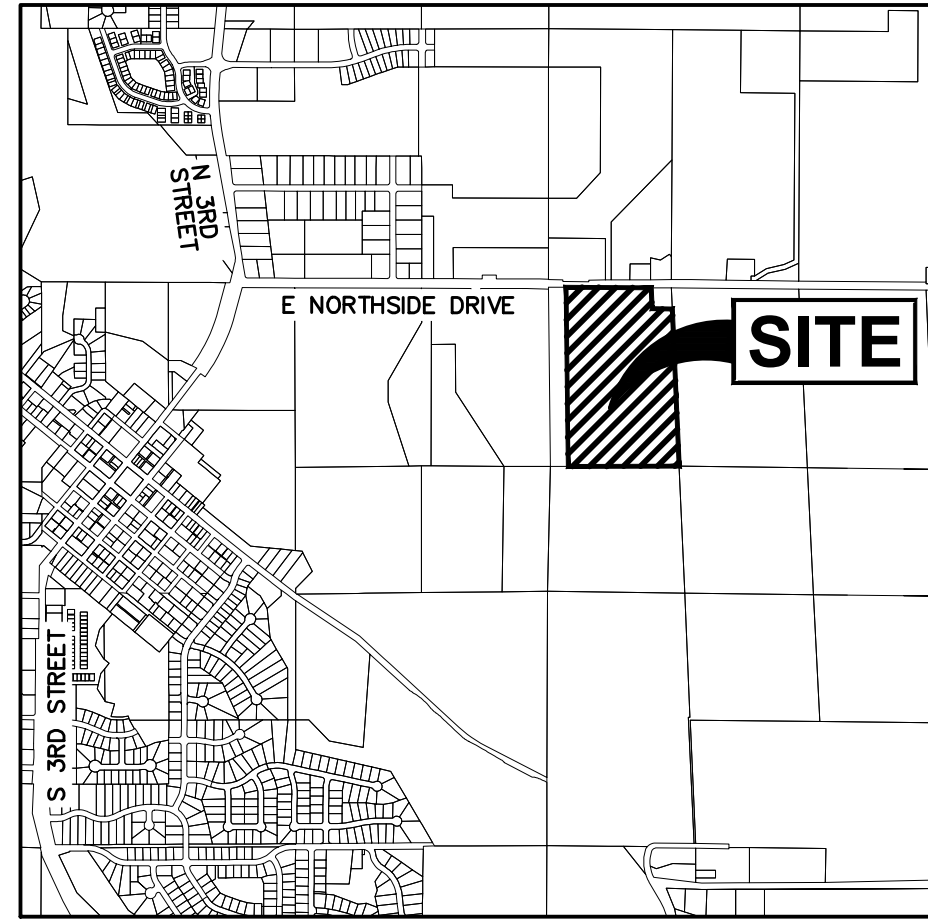


MONARCH CROSSING PLAT 1

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



POLK CITY, IOWA

DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO AN UNNAMED TRIBUTARY OF BIG CREEK ±4300 FT. TOTAL AREA DISTURBED TO DISCHARGE POINT STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)	25.40 ACRES 91,440 CU FT
VOLUME PROVIDED IN SILT FENCE (2,657 LF @ 10 CU FT/LF OF FENCE)	26,570 CU FT
VOLUME PROVIDED IN DITCH CHECK (1,089 LF @ 15 CU FT/LF)	16,335 CU FT
VOLUME PROVIDED IN TSB #1	75,409 CU FT
TOTAL VOLUME PROVIDED	118,314 CU FT

STABILIZATION QUANTITIES

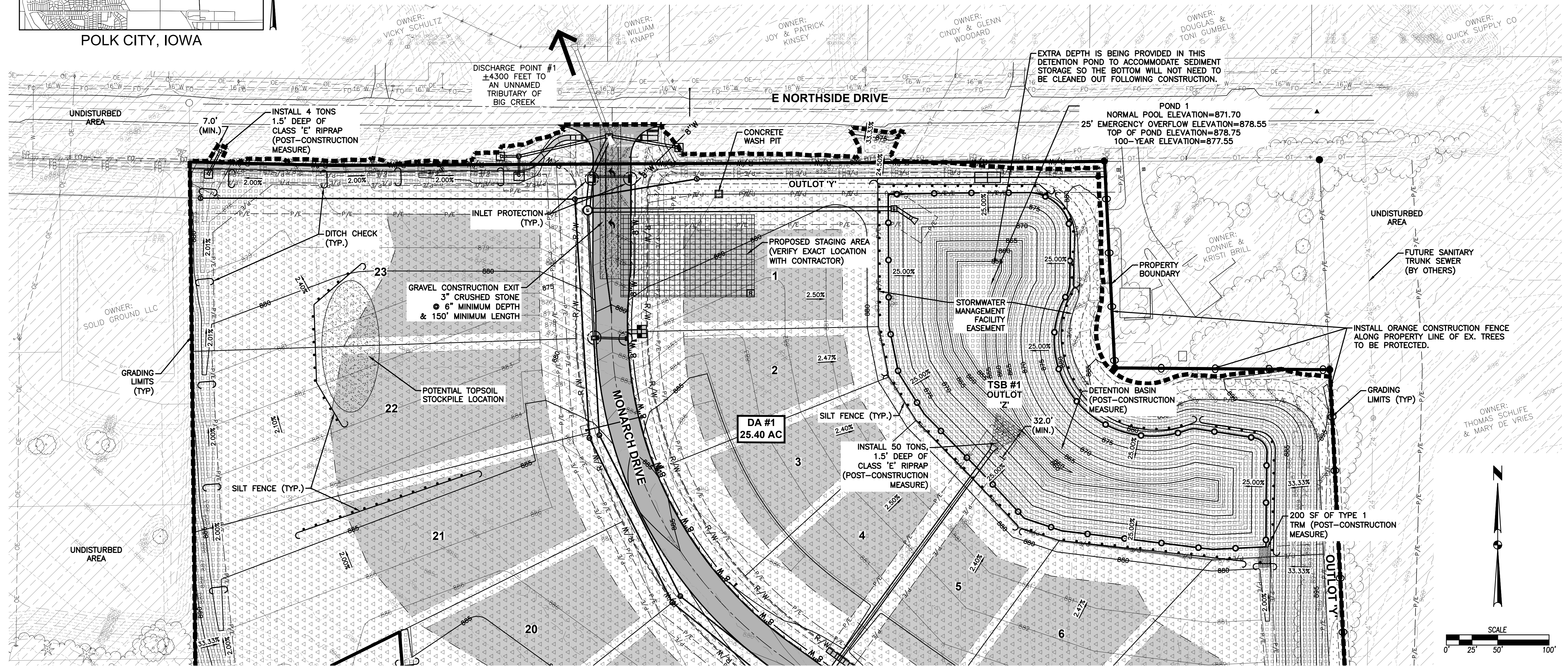
ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	2,657
2	DITCH CHECKS	LF	1,089
3	SEEDING, FERTILIZING, AND MULCHING	AC	24.01
4	INLET PROTECTION DEVICES	EA	12
5	CONCRETE WASHOUT PIT	EA	1
6	CLASS E RIP-RAP	TON	54
7	ORANGE CONSTRUCTION FENCE	LF	1,545
8	TYPE 1 TRM	SF	200

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.
 - OUTLOT 'Y' WILL BE SEEDED WITH TYPE 1 URBAN SEEDING MIXTURE.
 - 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.

SWPPP LEGEND

DRAINAGE ARROW		UNDISTURBED AREA	
GRADING LIMITS		RIP-RAP	
SILT FENCE		GRAVEL ENTRANCE	
DITCH CHECK		STAGING AREA	
INLET PROTECTION		TEMPORARY SEDIMENT BASIN	
PORTABLE RESTROOM		UNITED SEEDS SUPER TURF II, OR SIMILAR FLOOD RESISTANT MIX	
CONCRETE WASHOUT PIT		TYPE 1 URBAN SEEDING MIXTURE	
ORANGE CONSTRUCTION FENCE		TYPE 4 SEEDING	



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				THIRD SUBMITTAL	12/06/2023	
				SECOND SUBMITTAL		
				FIRST SUBMITTAL		

CIVIL DESIGN ADVANTAGE

MONARCH CROSSING PLAT 1

EROSION AND SEDIMENT CONTROL PLAN

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

ENGINEER: EKO ENGINEER: GH EI: MAE

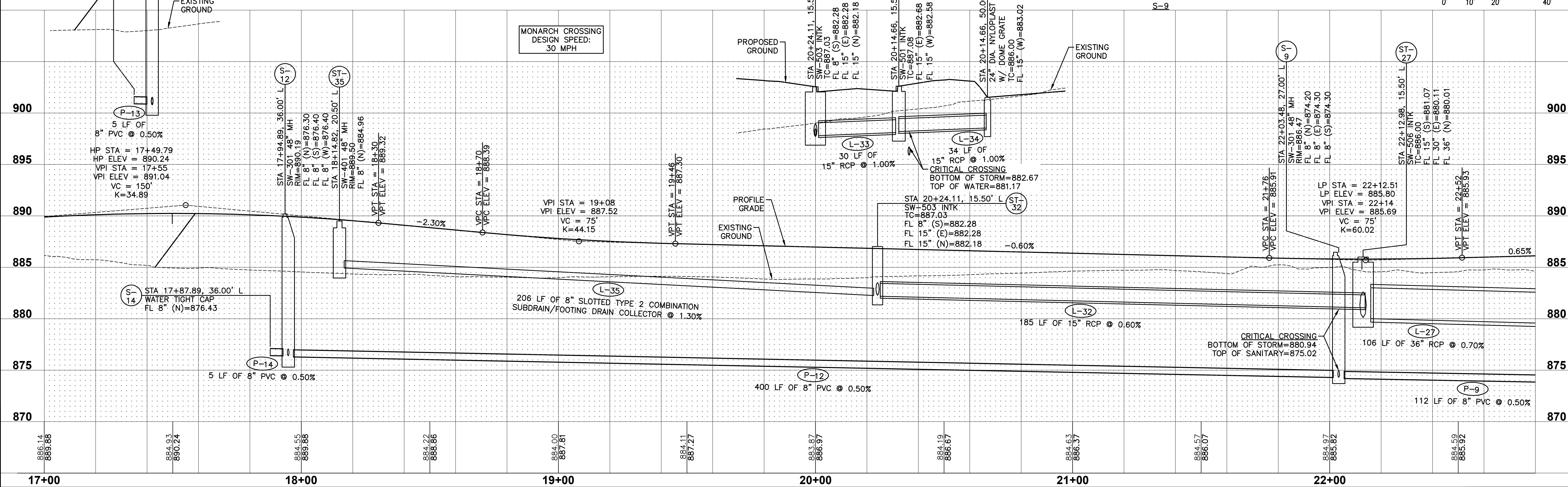
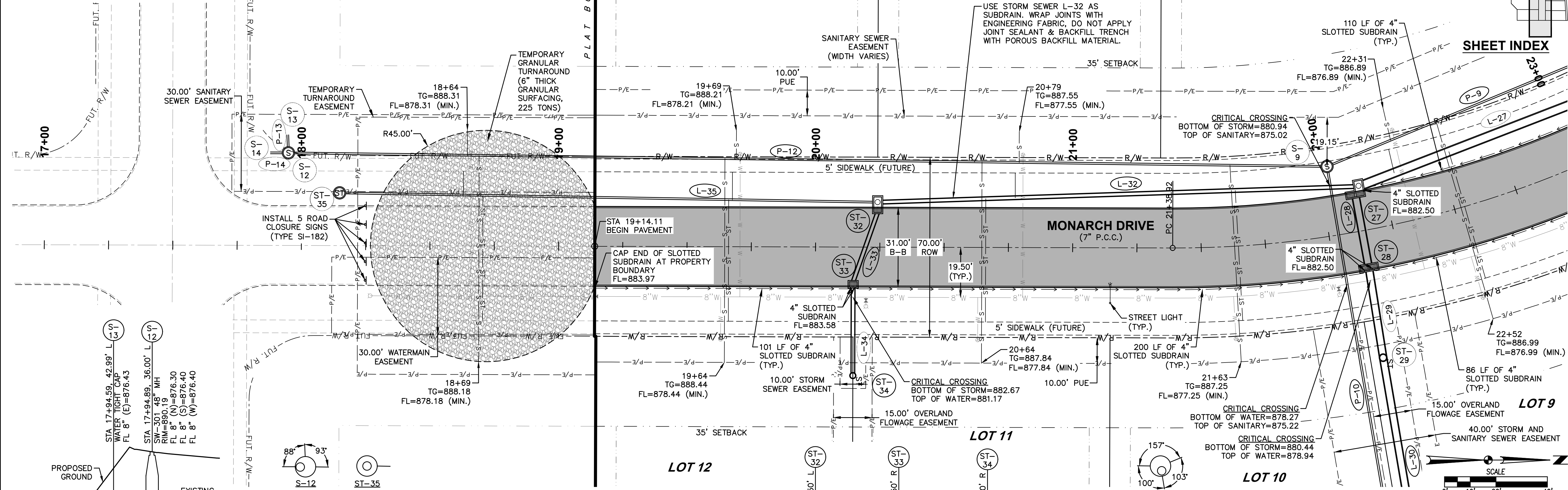
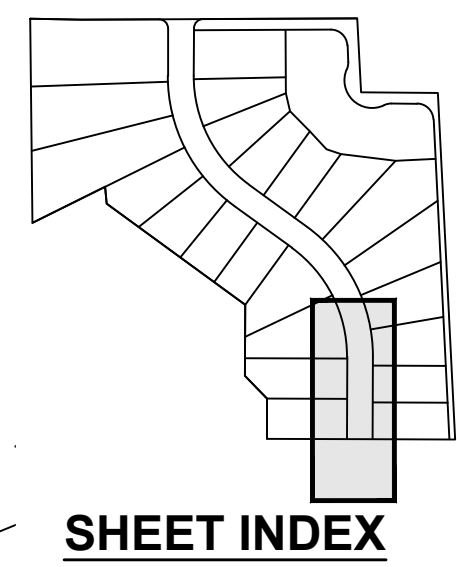
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2310.656

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

CARE SHALL BE TAKEN TO KEEP DOWNSTREAM STRUCTURES CLEAN AND CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OR VIDEO INSPECTION OF EXISTING DOWNSTREAM STRUCTURES SHOULD IT BE DETERMINED THAT CONSTRUCTION DEBRIS IS PRESENT IN THE EXISTING STRUCTURES.

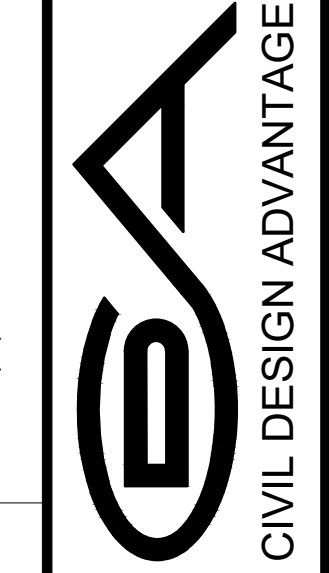
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 L = 377.74'
 R = 400.00'
 CH = 363.86'
 CHB = N26°53'27"W



DATE	REVISIONS
02/02/2024	FINAL SUBMITTAL
01/03/2024	THIRD SUBMITTAL
12/06/2023	SECOND SUBMITTAL
10/20/2023	FIRST SUBMITTAL

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

ENGINEER: EKO
 ENGINEER: GH
 EI: MAE



MONARCH CROSSING PLAT 1
 ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE

POLK CITY, IOWA

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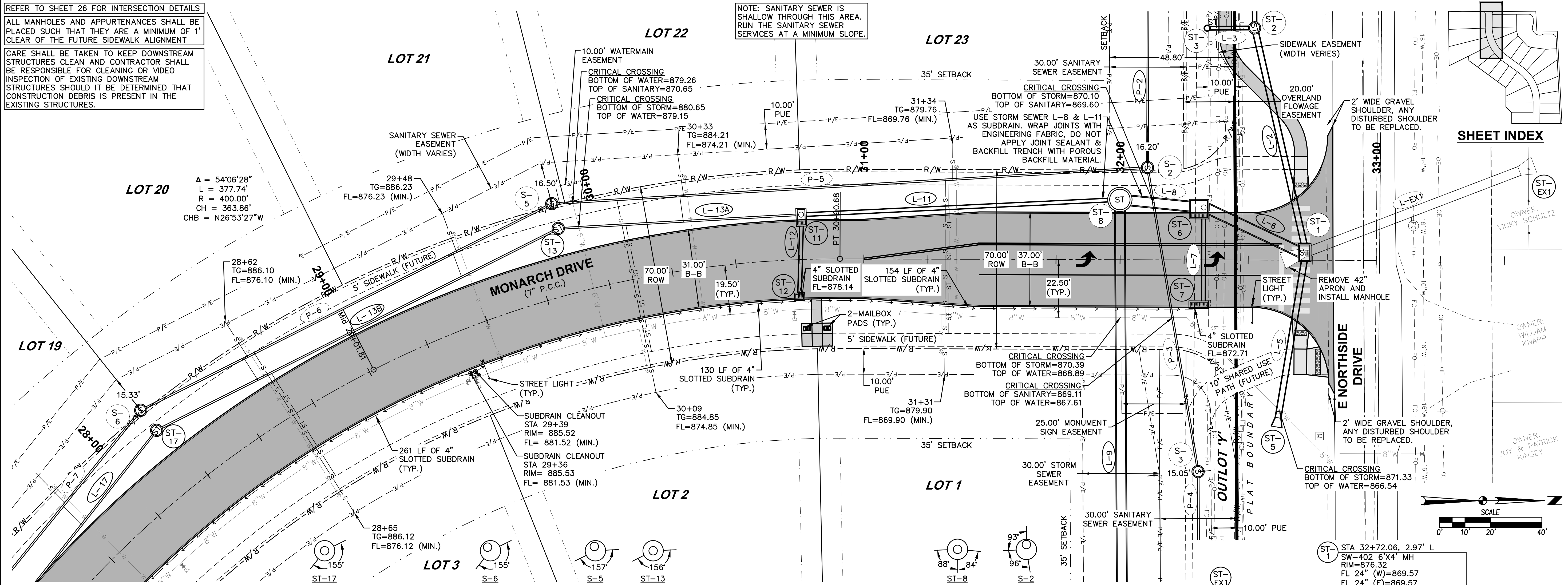
REFER TO SHEET 26 FOR INTERSECTION DETAILS

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

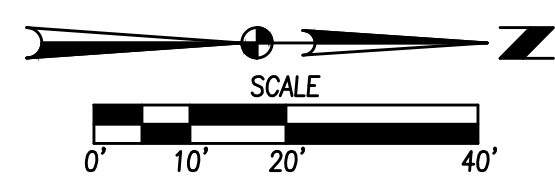
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LOT 20
Δ = 54°06'28"
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CH = 363.86'
CHB = N26°53'27"W

NOTE: SANITARY SEWER IS SHALLOW THROUGH THIS AREA. RUN THE SANITARY SEWER SERVICES AT A MINIMUM SLOPE.



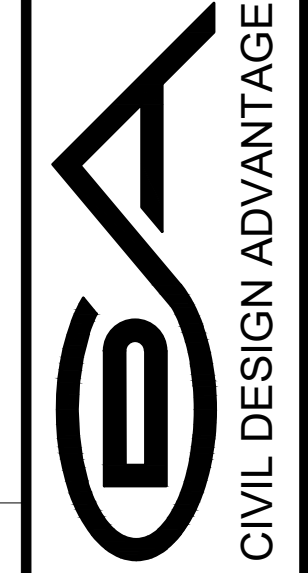
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10/20/2023	FIRST SUBMITTAL

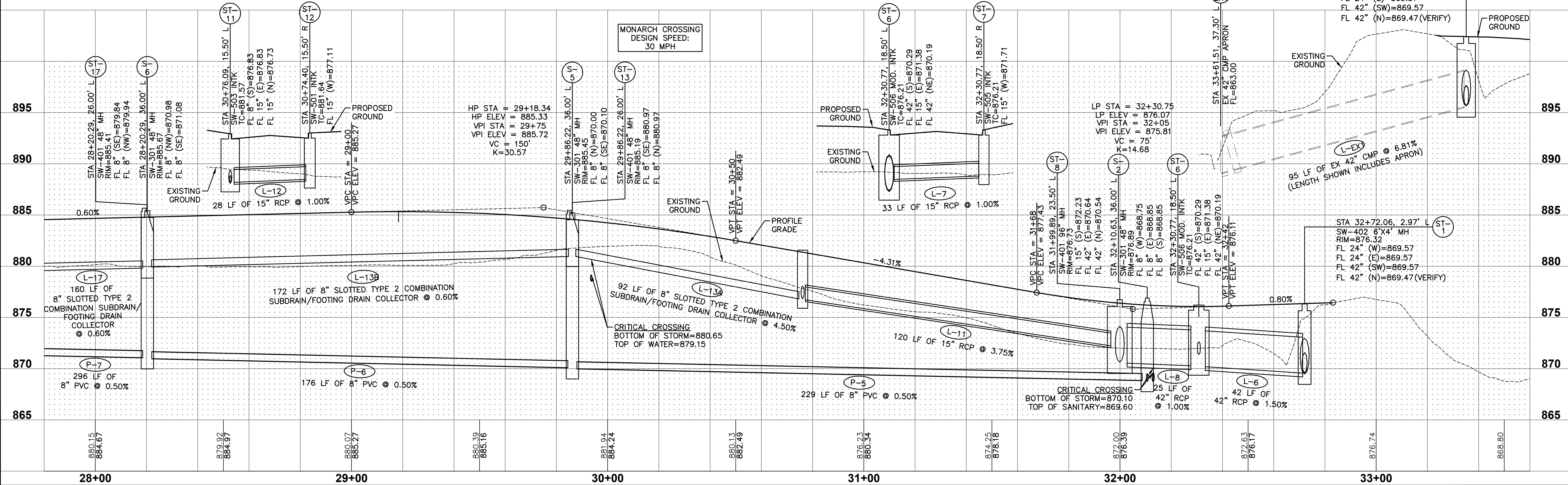
OWNER: VICKY SCHULTZ
OWNER: WILLIAM KNAPP
OWNER: JOY & PATRICK KINSEY

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



MONARCH CROSSING PLAT 1
ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE
POLK CITY, IOWA
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ENGINEER: GH EI, MAE

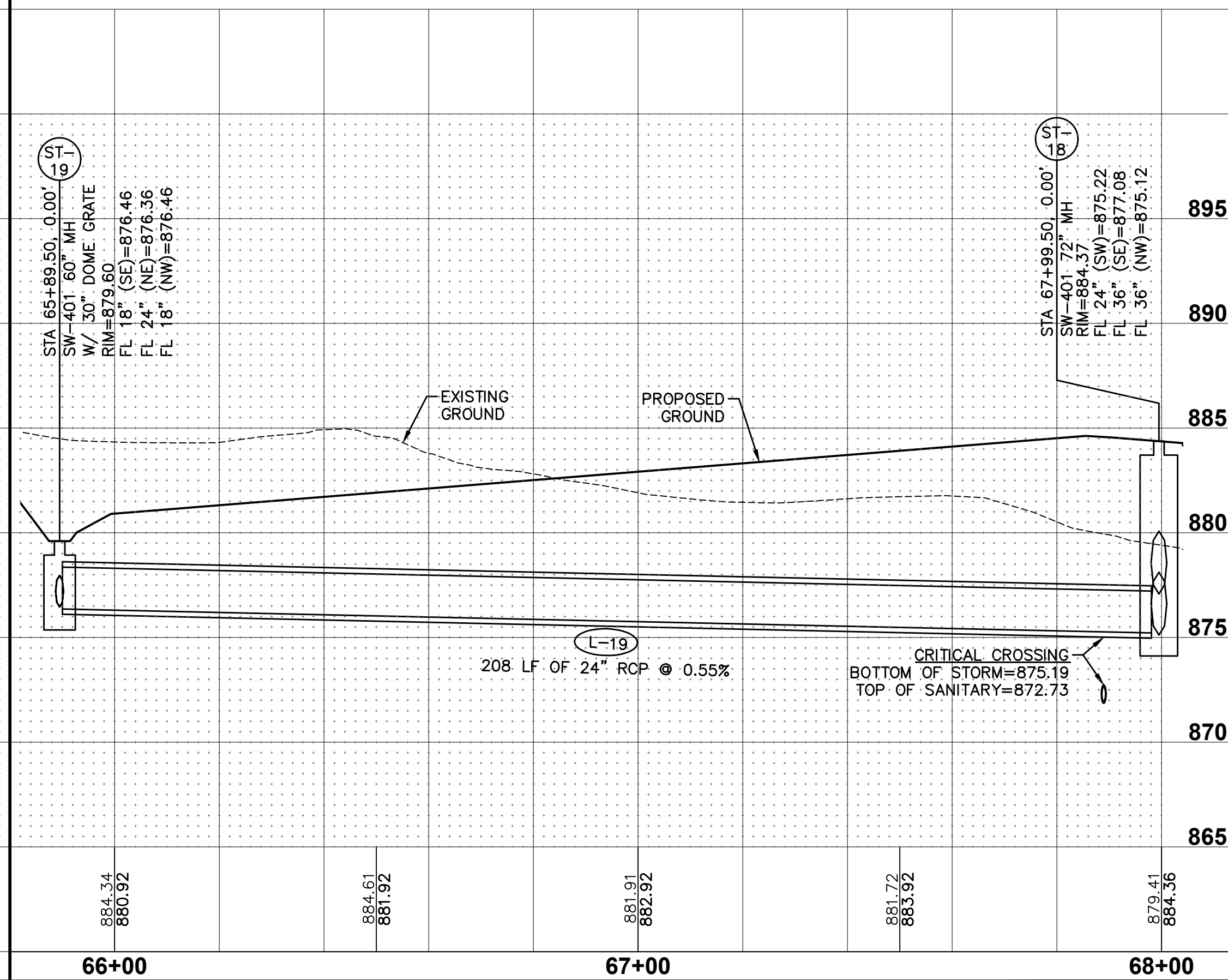
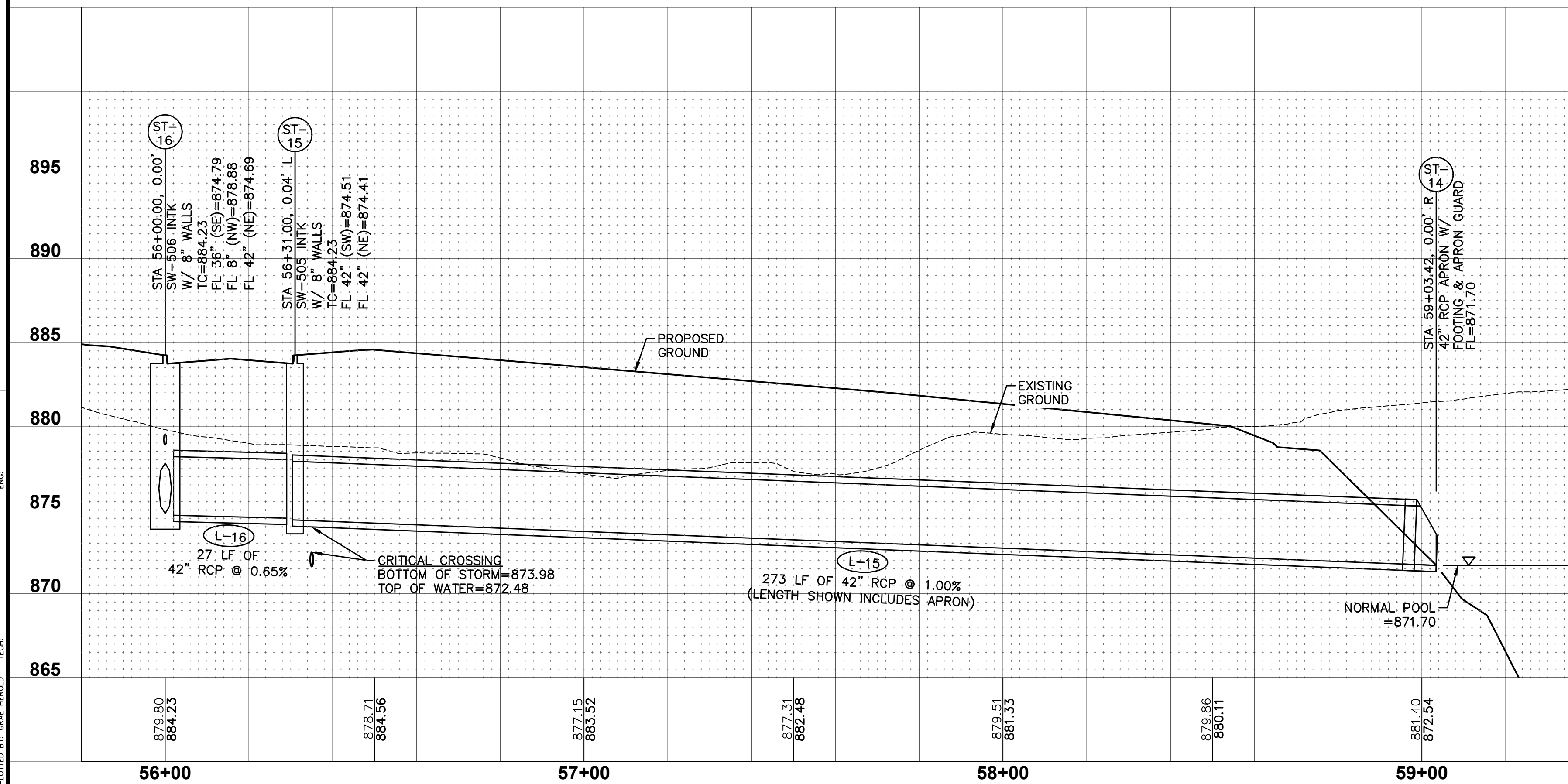
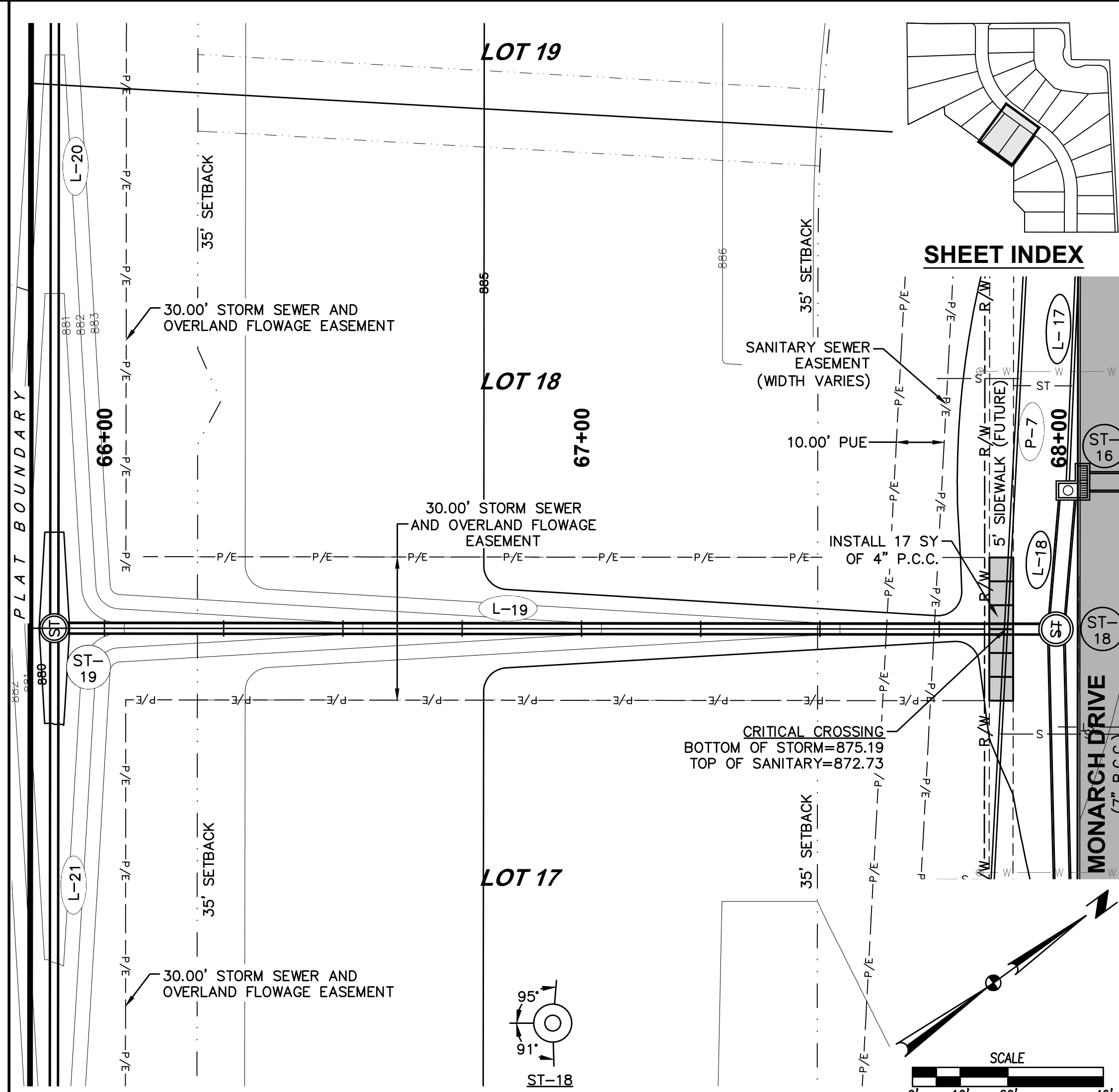
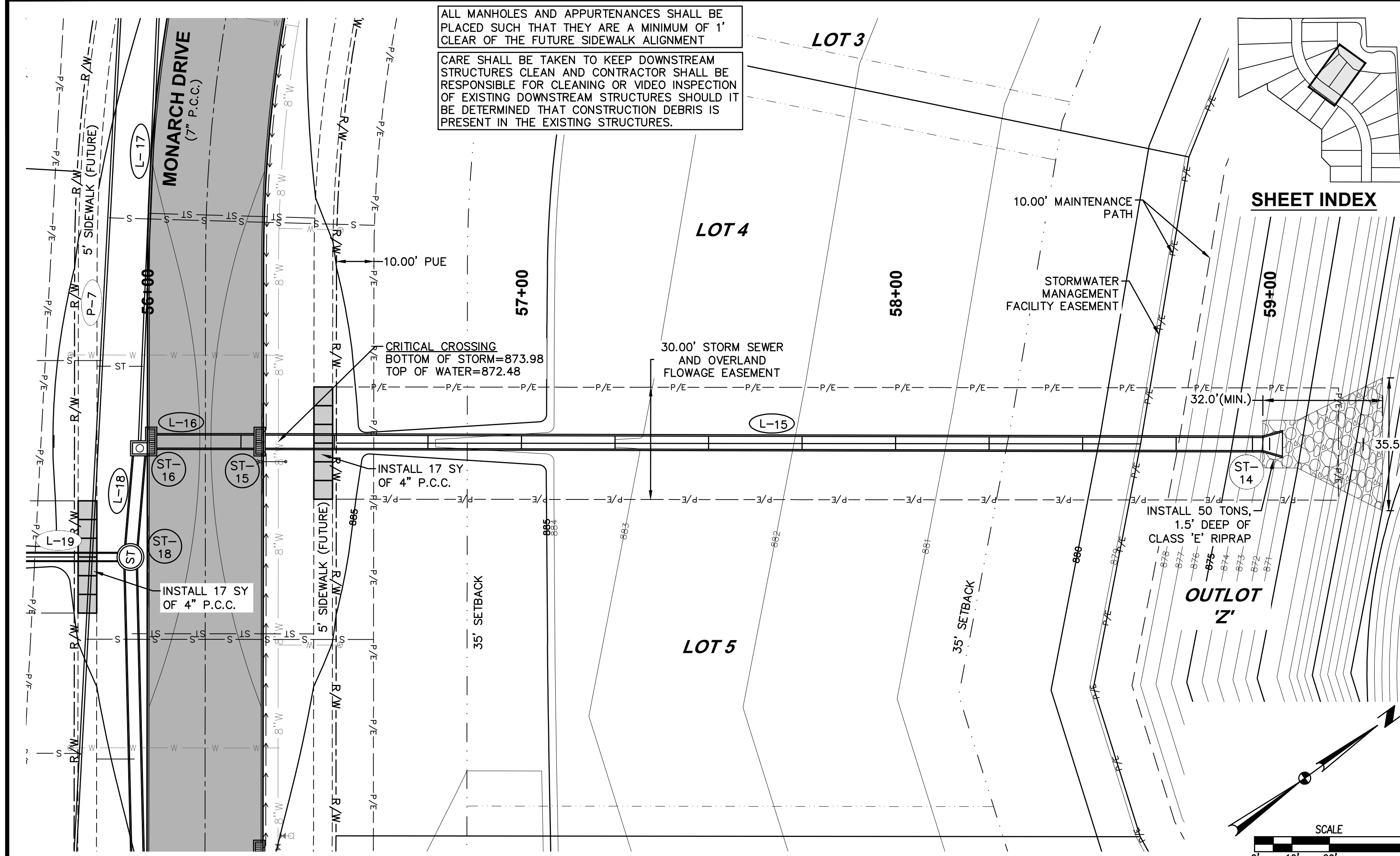
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ALL MANHOLES AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 1' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

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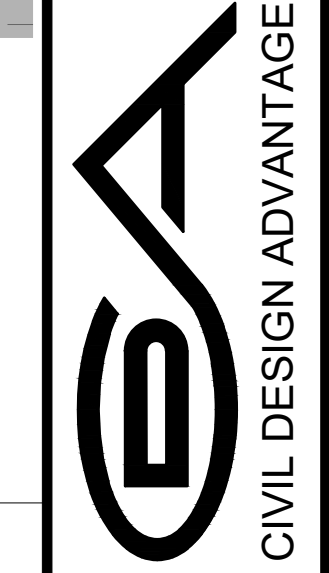


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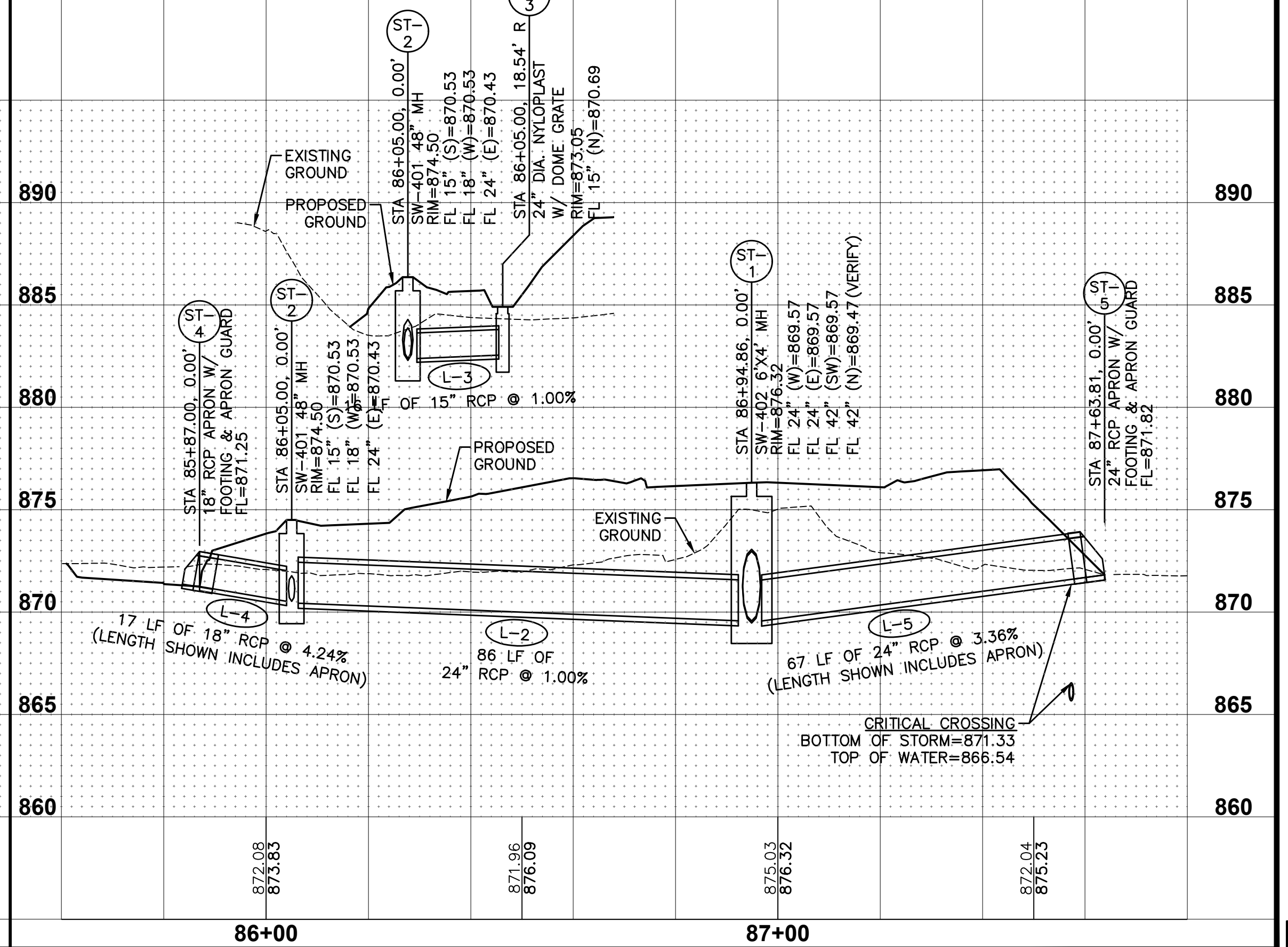
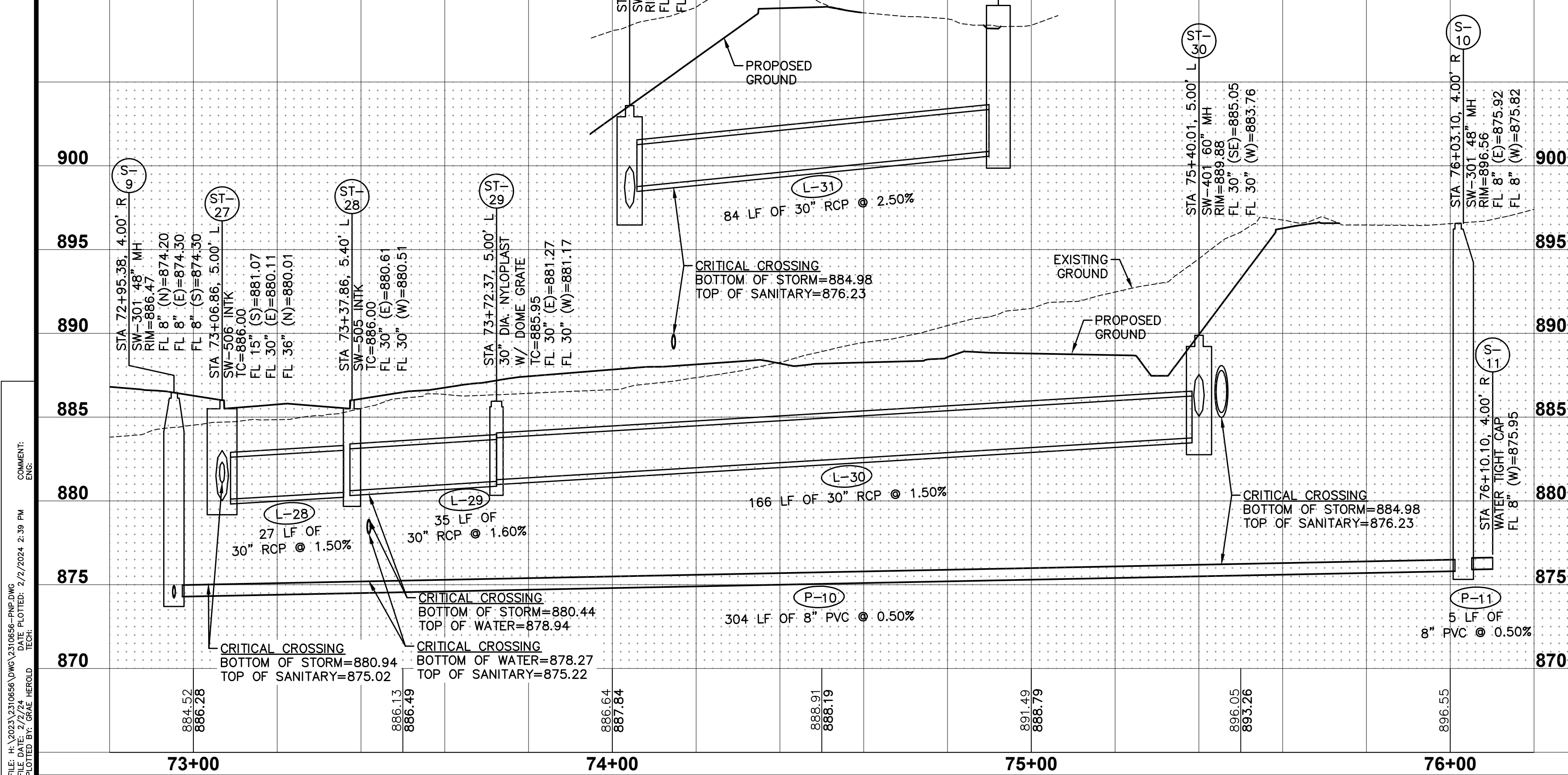
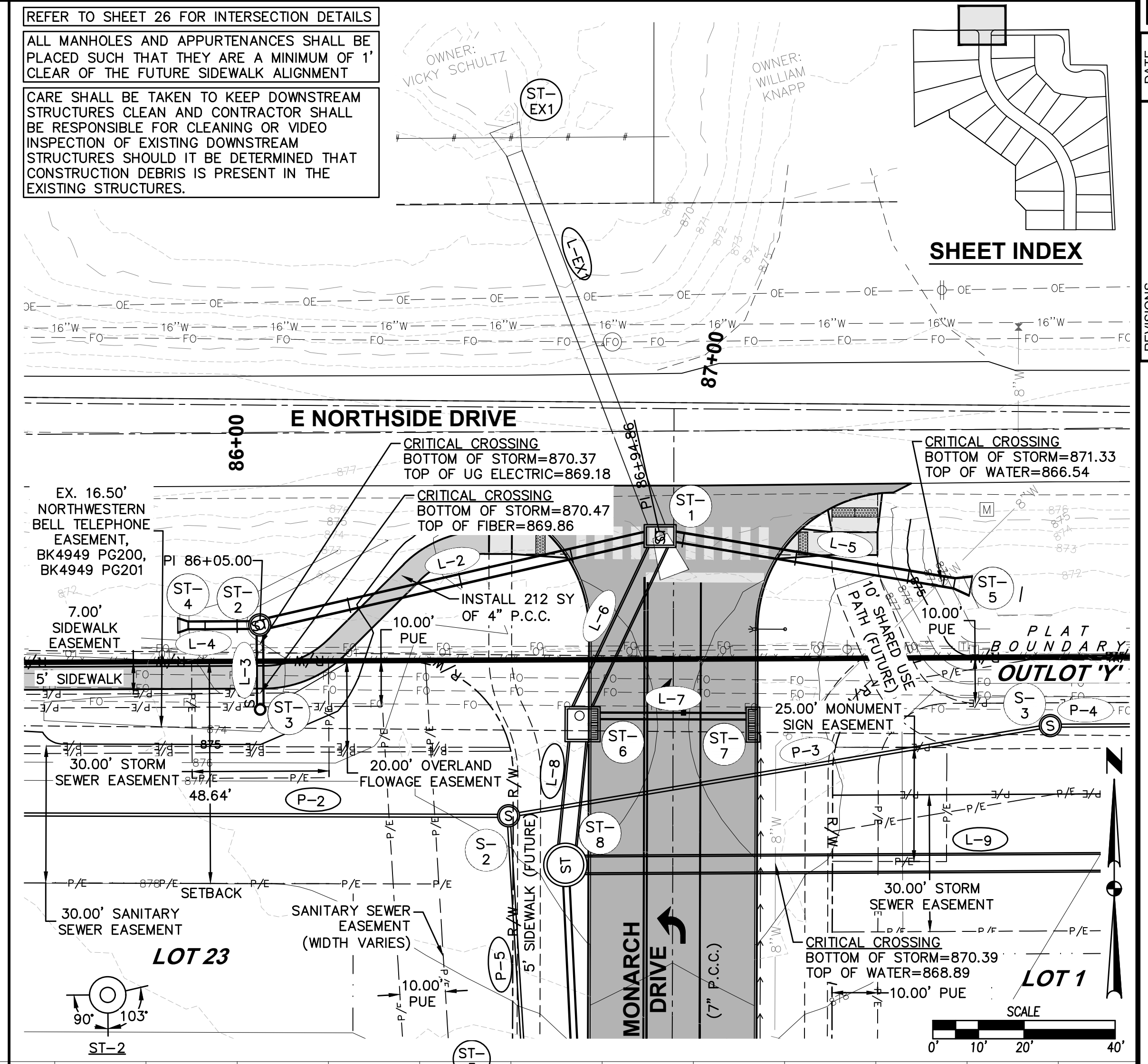
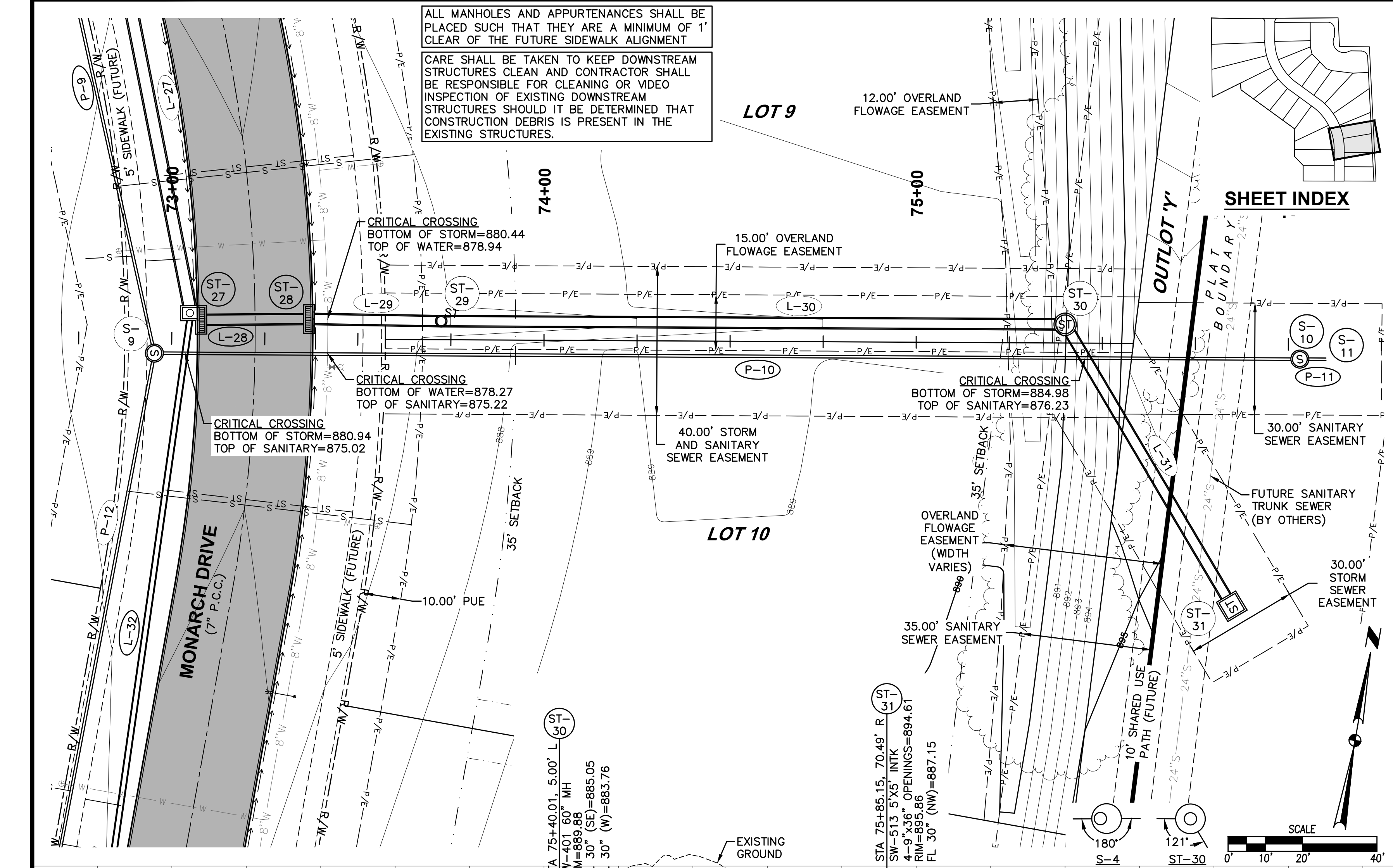
4121 NW URBANDALE DRIVE
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ENGINEER: EKO
 ENGINEER: GH EI, MAE



MONARCH CROSSING PLAT 1
 ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE
 POLK CITY, IOWA

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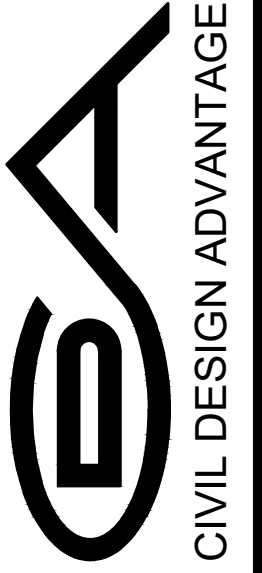
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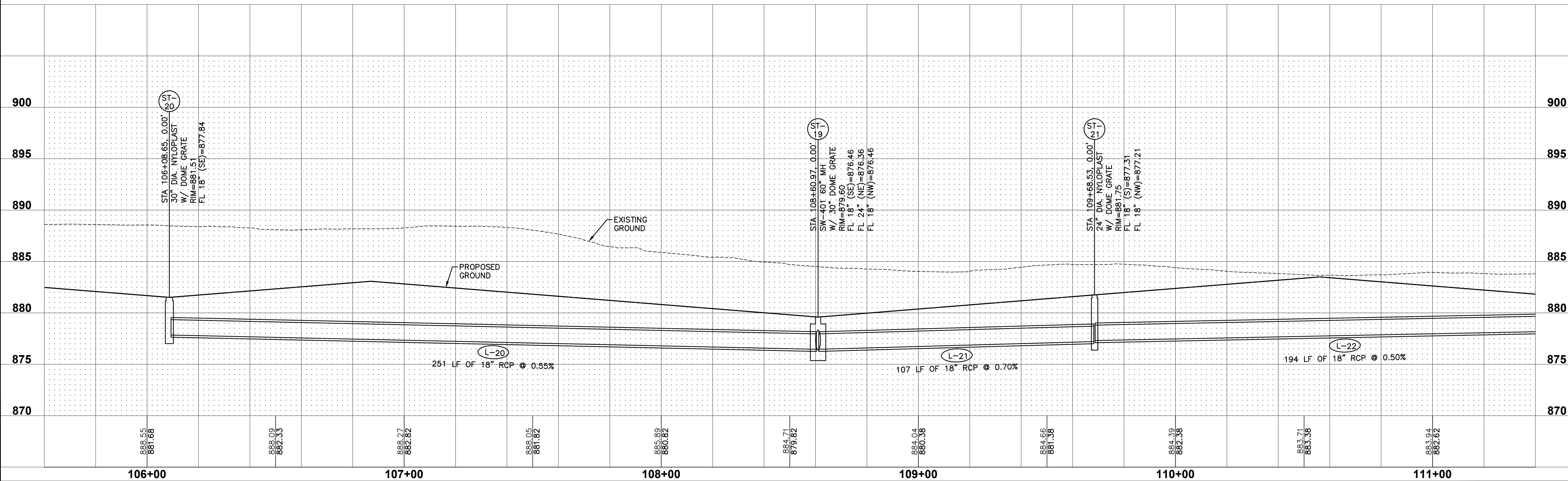
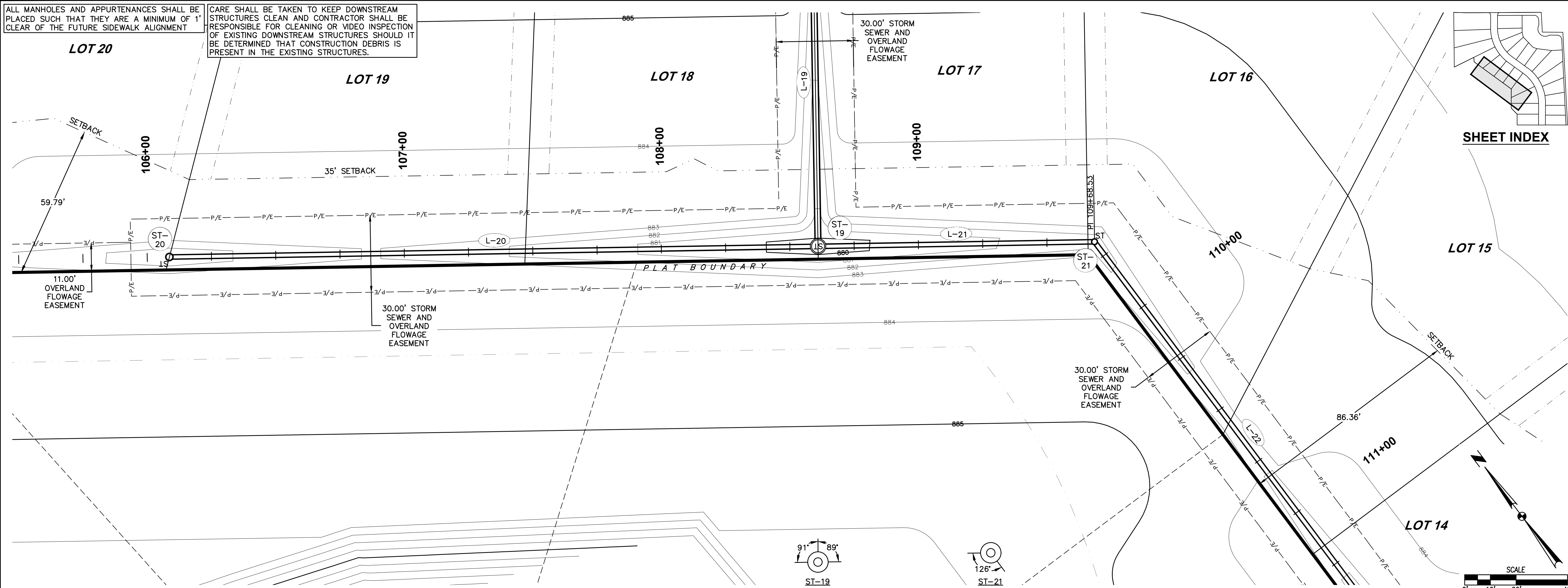
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MONARCH CROSSING PLAT 1
 ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE
 POLK CITY, IOWA

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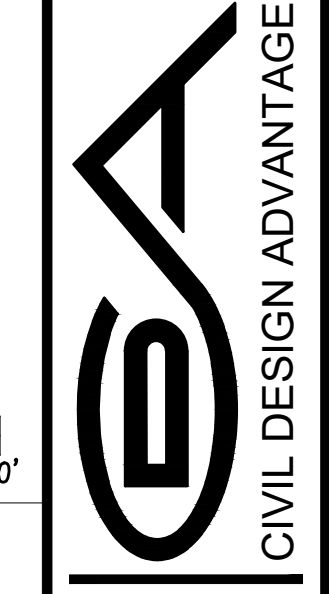
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SECOND SUBMITTAL	12/06/2023
THIRD SUBMITTAL	01/03/2024
FINAL SUBMITTAL	02/02/2024

4121 NW URBANDALE DRIVE
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 ENGINEER: EKO
 ENGINEER: GH EI: MAE

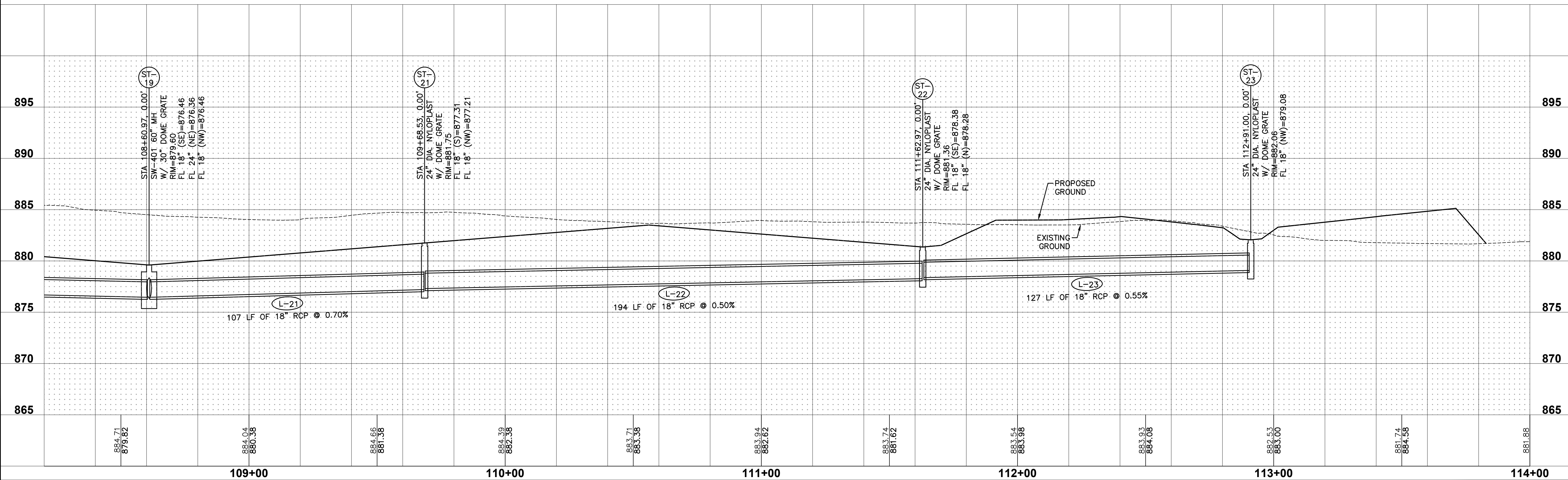
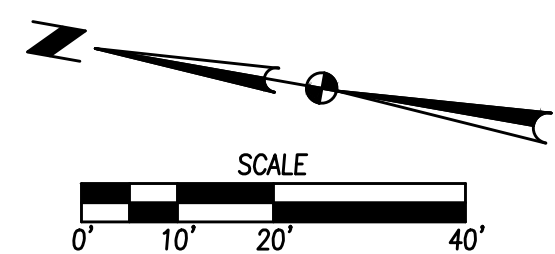
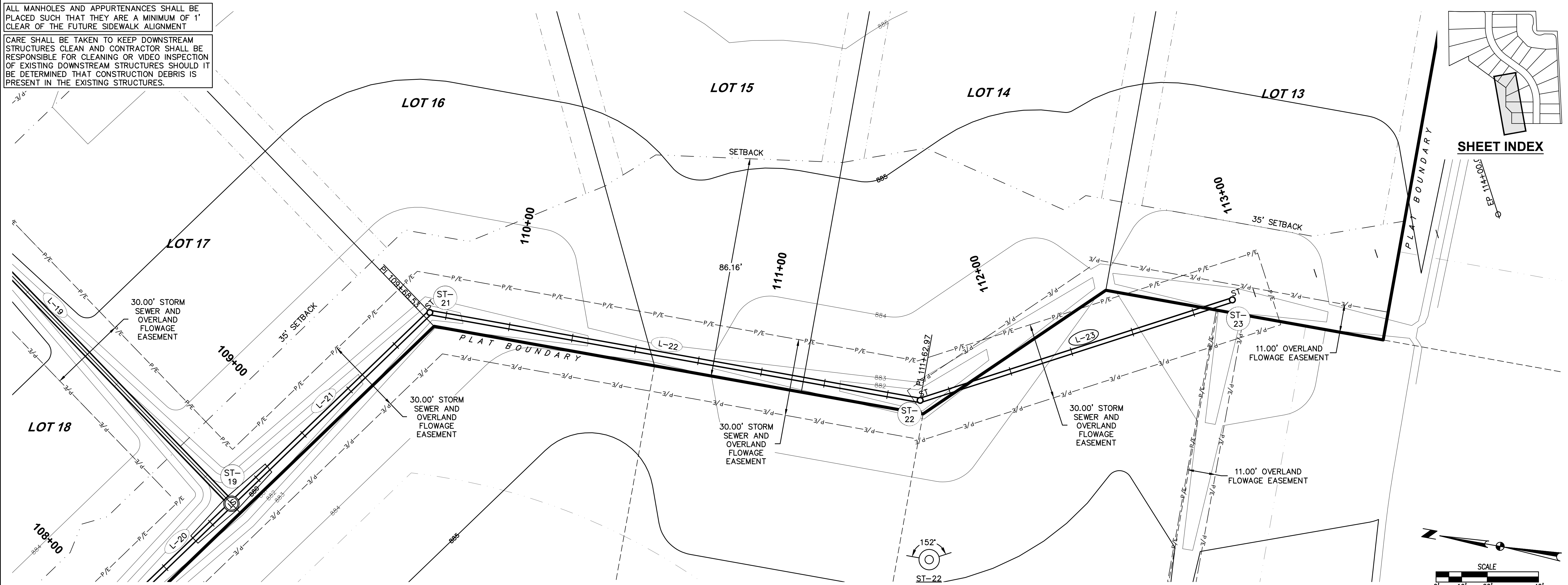


MONARCH CROSSING PLAT 1

ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE

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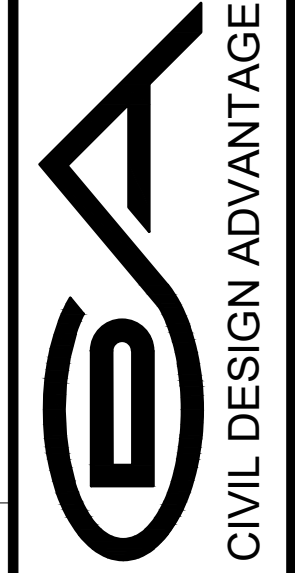


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4121 NW URBANDALE DRIVE
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ENGINEER: EKO ENGINEER: GH EI: MAE



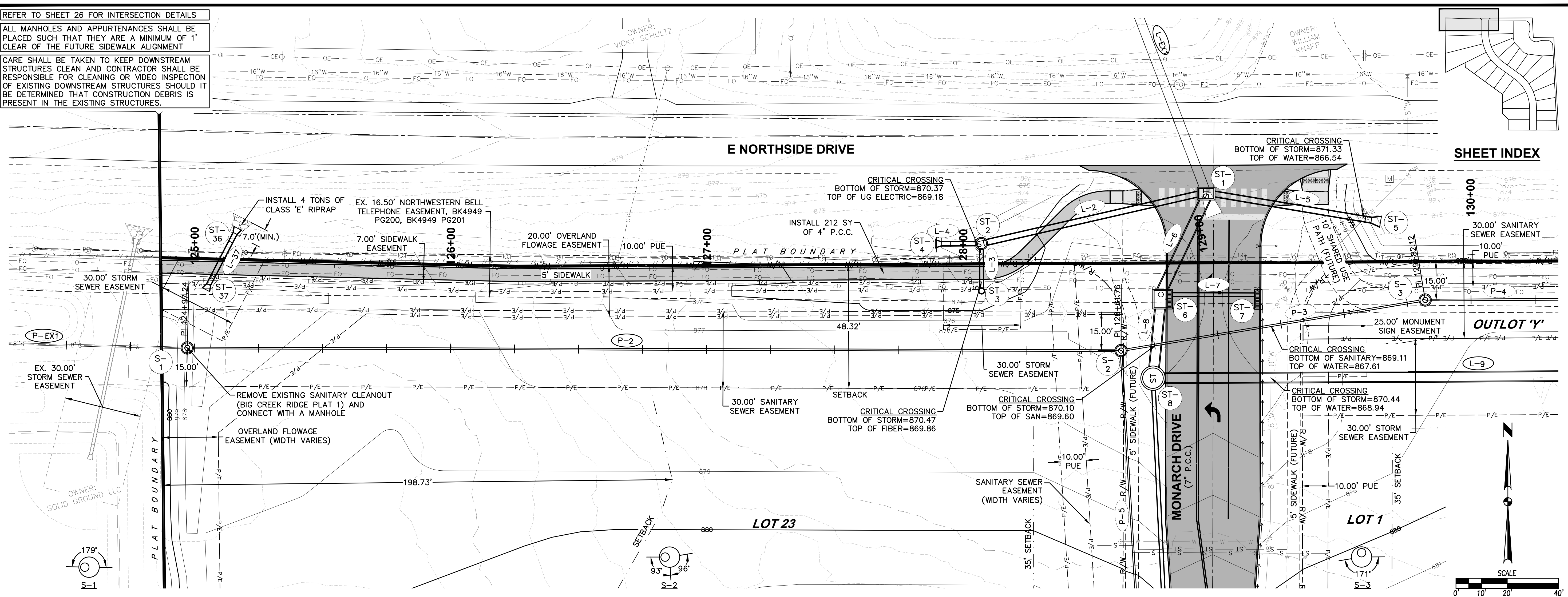
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 MONARCH CROSSING PLAT 1
 ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE
 POLK CITY, IOWA

2310.656

REFER TO SHEET 26 FOR INTERSECTION DETAILS

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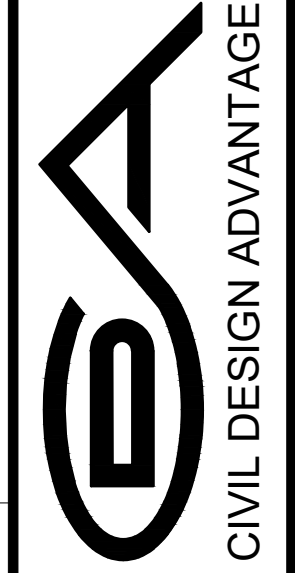


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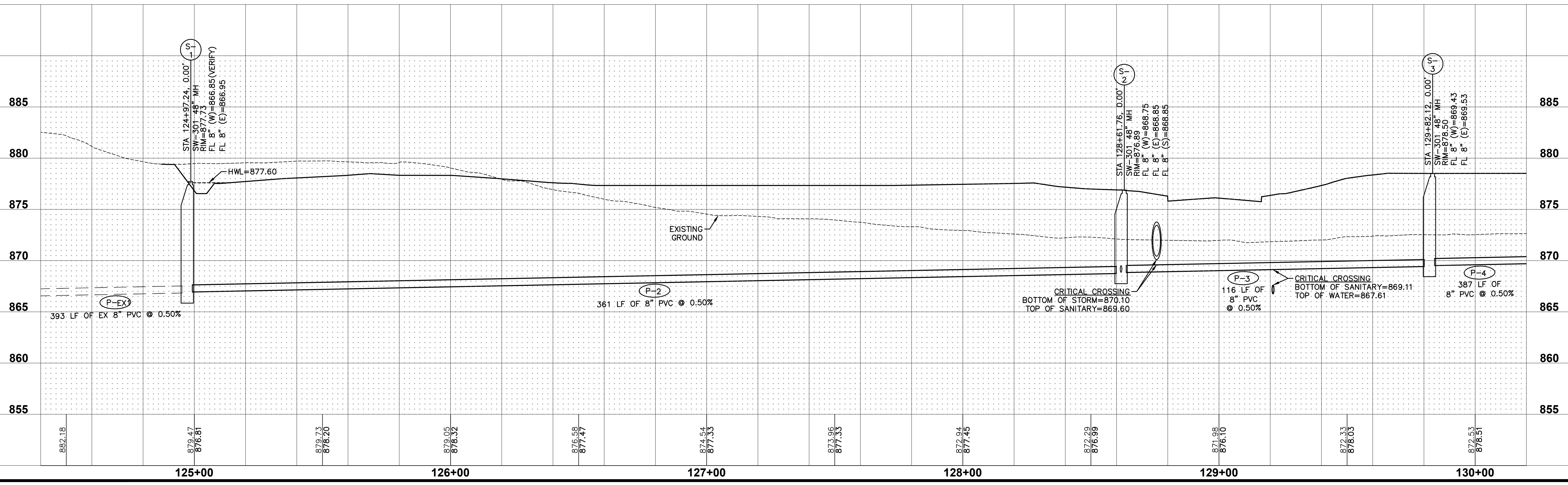
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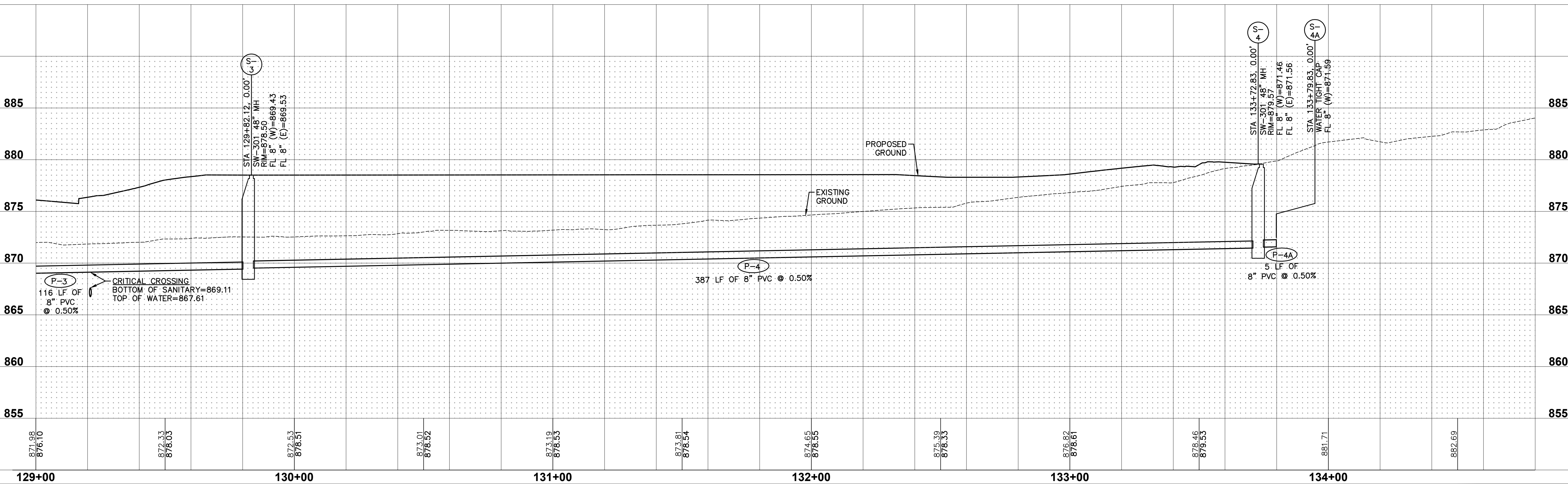
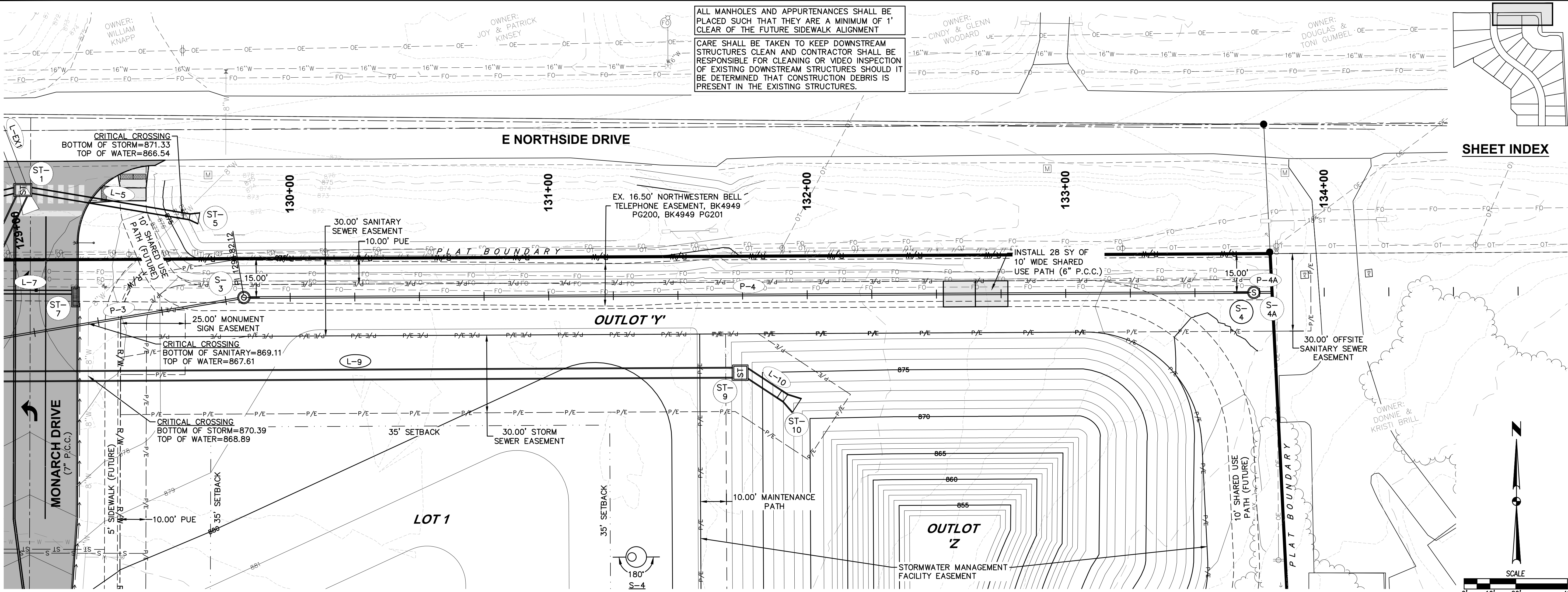


MONARCH CROSSING PLAT 1
 ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE

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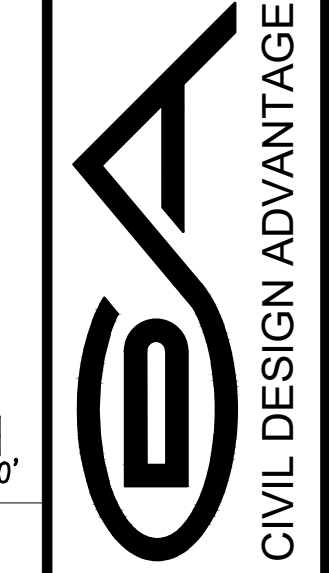
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01/03/2024
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10/20/2023

REVISIONS

FINAL SUBMITTAL
THIRD SUBMITTAL
SECOND SUBMITTAL
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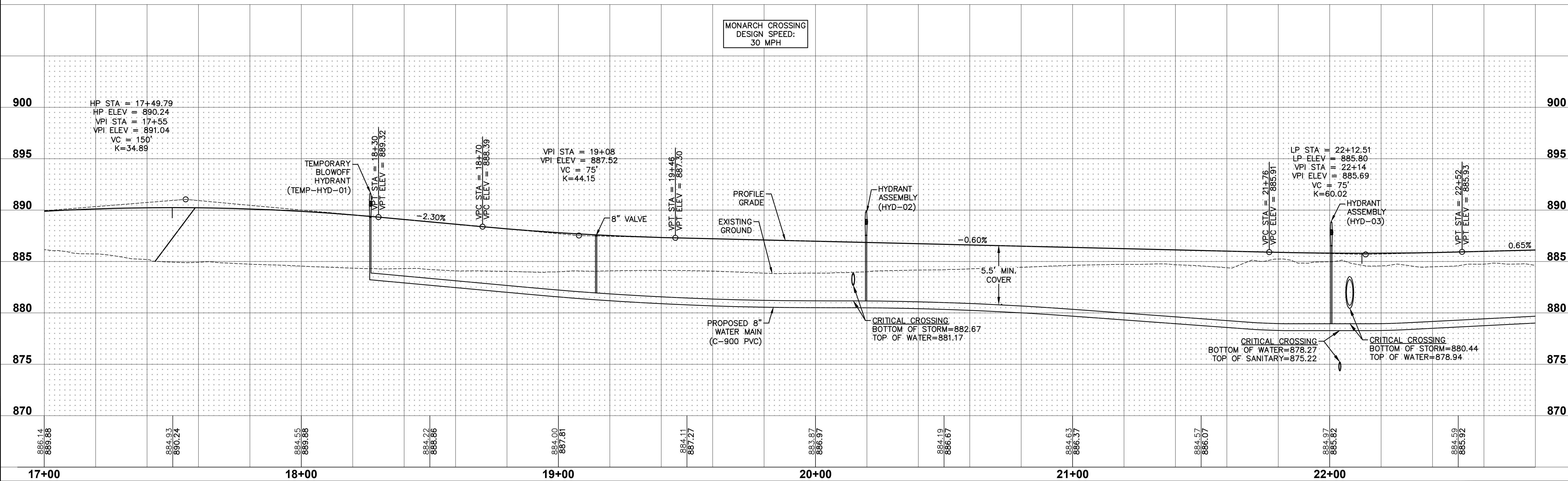
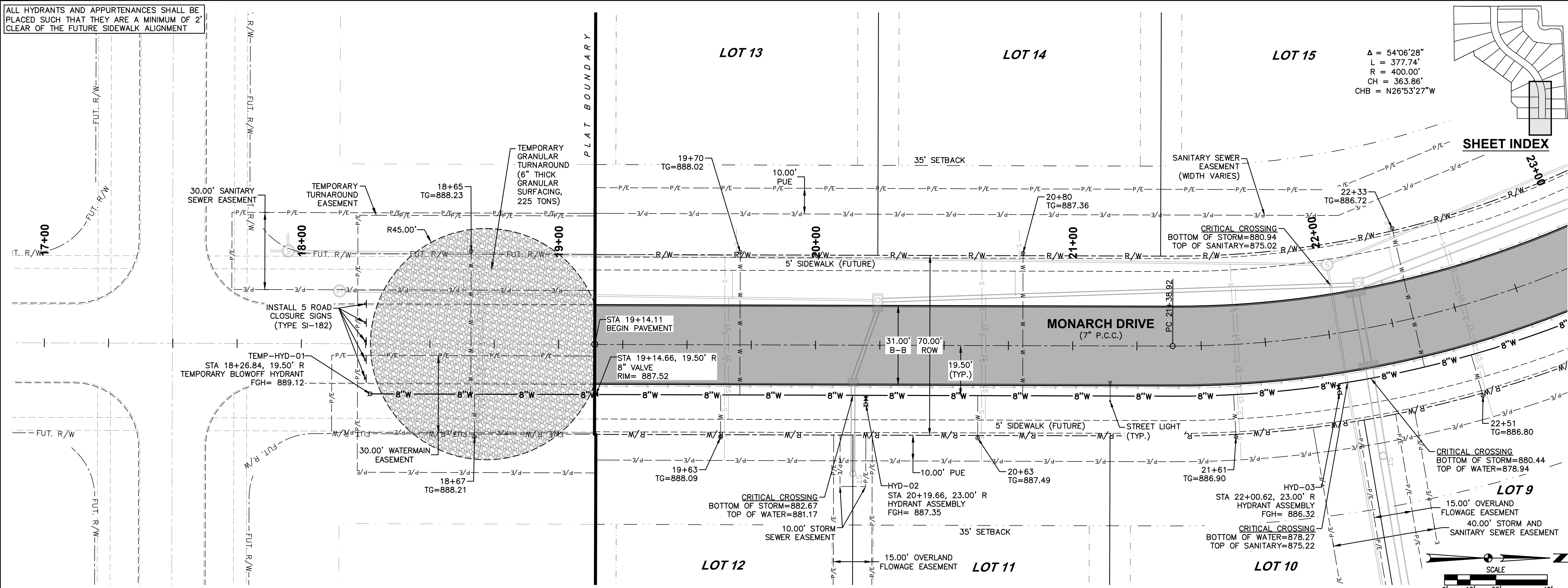
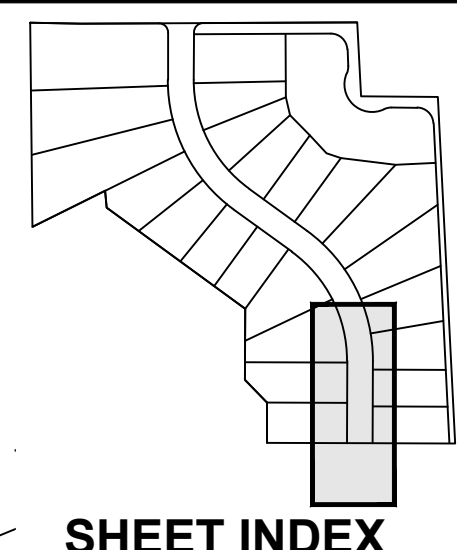


MONARCH CROSSING PLAT 1
 ROADWAY, STORM & SANITARY SEWER PLAN AND PROFILE
 POLK CITY, IOWA

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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

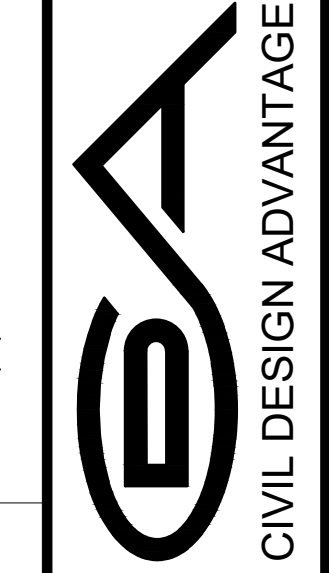
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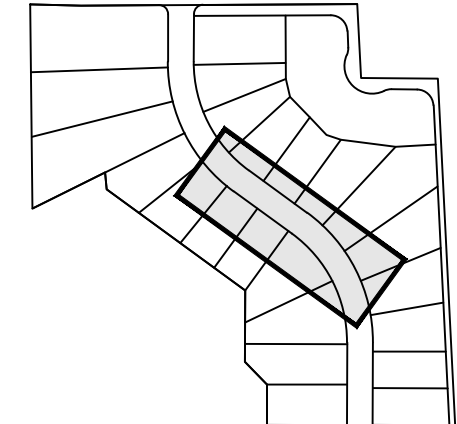
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 PHONE: (515) 369-4400



MONARCH CROSSING PLAT 1
 WATERMAIN PLAN AND PROFILE
 POLK CITY, IOWA
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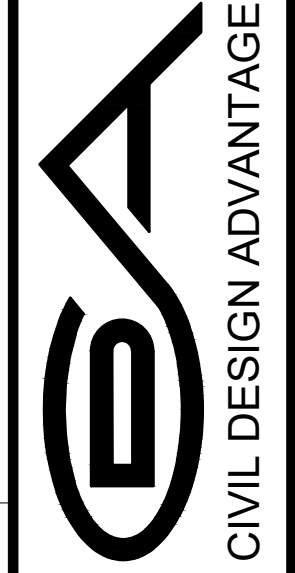


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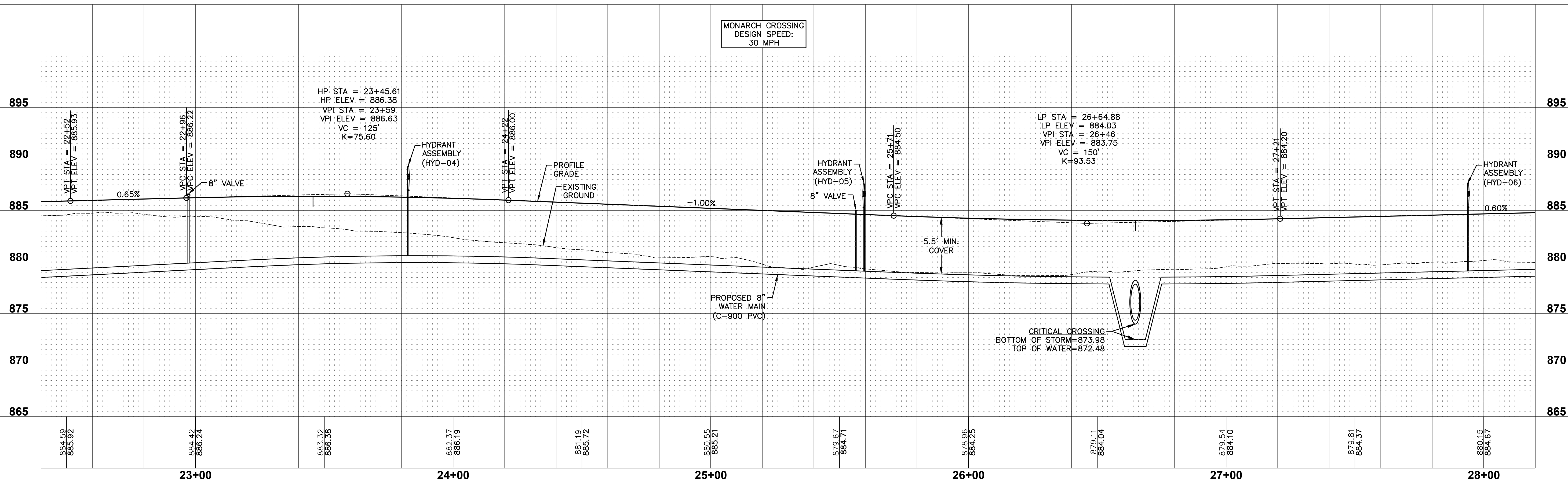
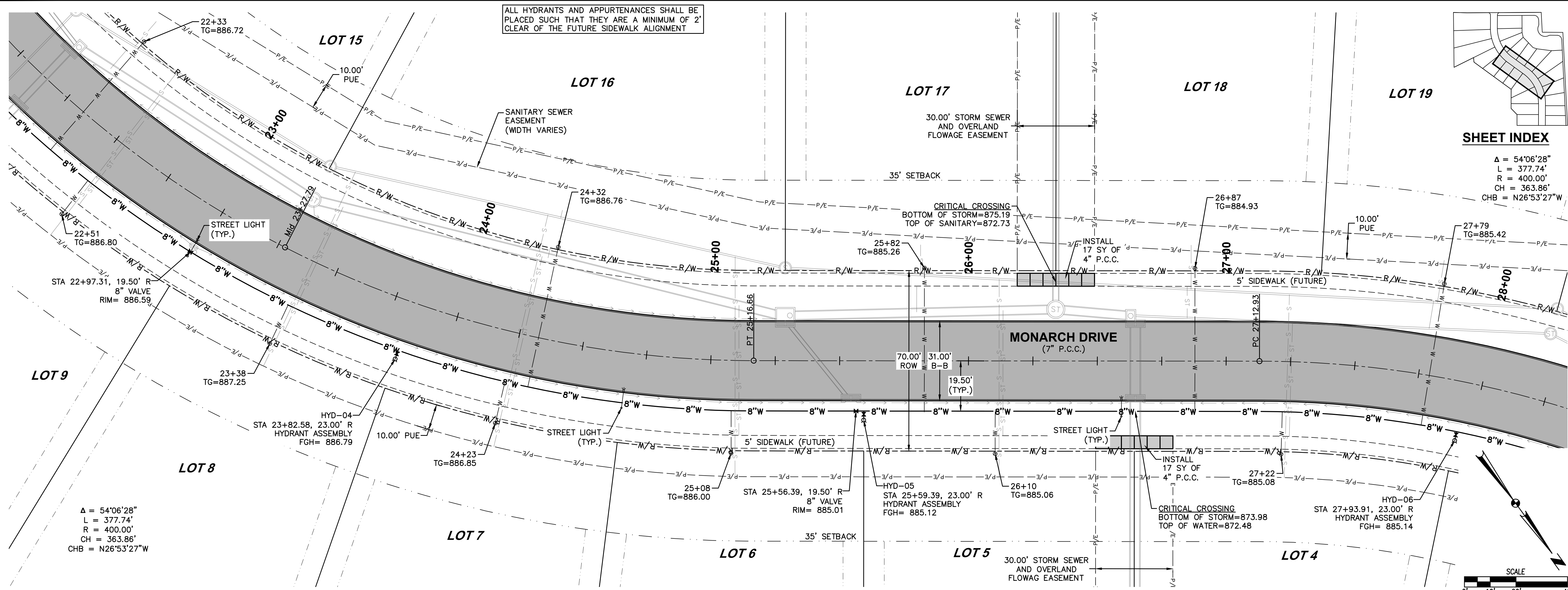
Δ = 54°06'28"
 L = 377.74'
 R = 400.00'
 CH = 363.86'
 CHB = N26°53'27"W

DATE	REVISIONS
02/02/2024	FINAL SUBMITTAL
01/03/2024	THIRD SUBMITTAL
12/06/2023	SECOND SUBMITTAL
10/20/2023	FIRST SUBMITTAL

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



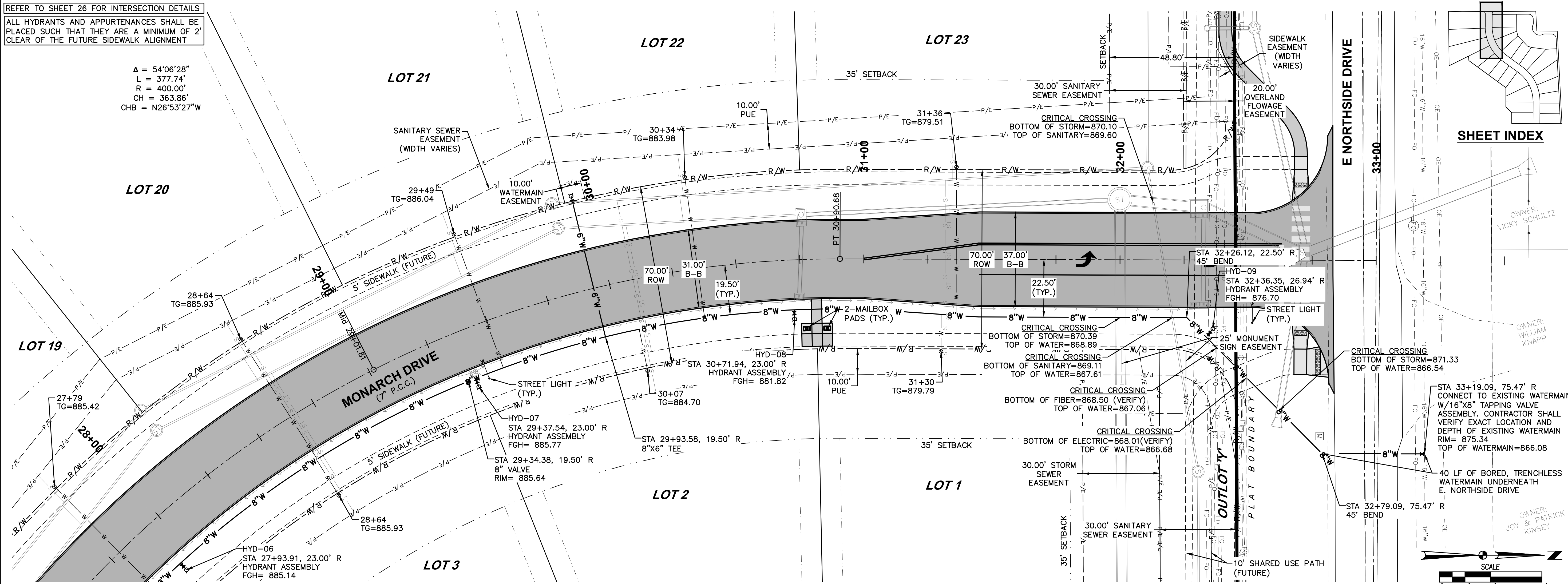
MONARCH CROSSING PLAT 1
WATERMAIN PLAN AND PROFILE



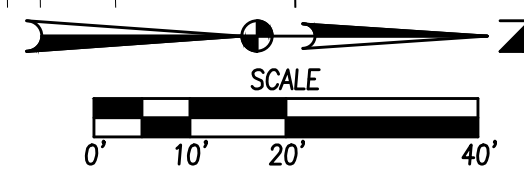
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 DATE: 2/2/2024 2:40 PM

REFER TO SHEET 26 FOR INTERSECTION DETAILS
 ALL HYDRANTS AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 2' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

$\Delta = 54'06''28''$
 $L = 377.74'$
 $R = 400.00'$
 $CH = 363.86'$
 $CHB = N26^{\circ}53'27''W$



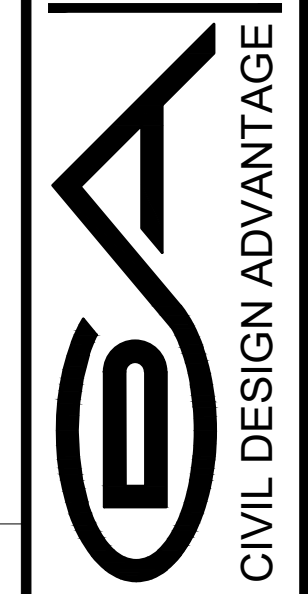
SHEET INDEX



DATE	REVISIONS
02/02/2024 <td>FINAL SUBMITTAL</td>	FINAL SUBMITTAL
01/03/2024 <td>THIRD SUBMITTAL</td>	THIRD SUBMITTAL
12/06/2023 <td>SECOND SUBMITTAL</td>	SECOND SUBMITTAL
10/20/2023 <td>FIRST SUBMITTAL</td>	FIRST SUBMITTAL

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

ENGINEER: EKO
 ENGINEER: GH
 EI: MAE

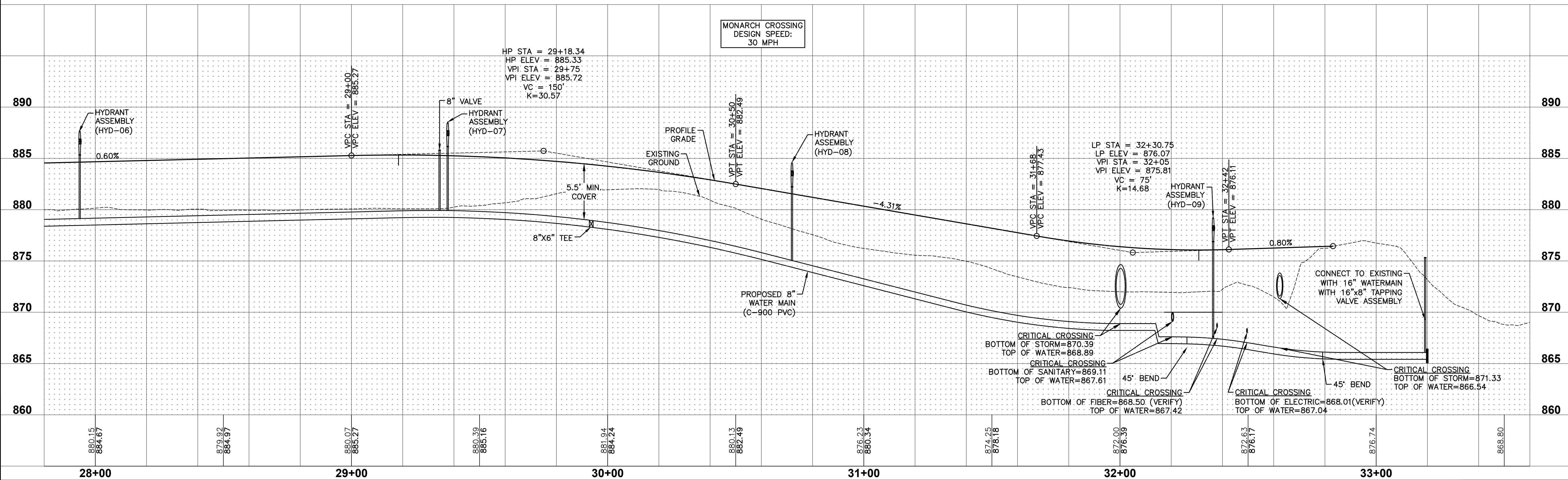


MONARCH CROSSING PLAT 1
 WATERMAIN PLAN AND PROFILE

POLK CITY, IOWA

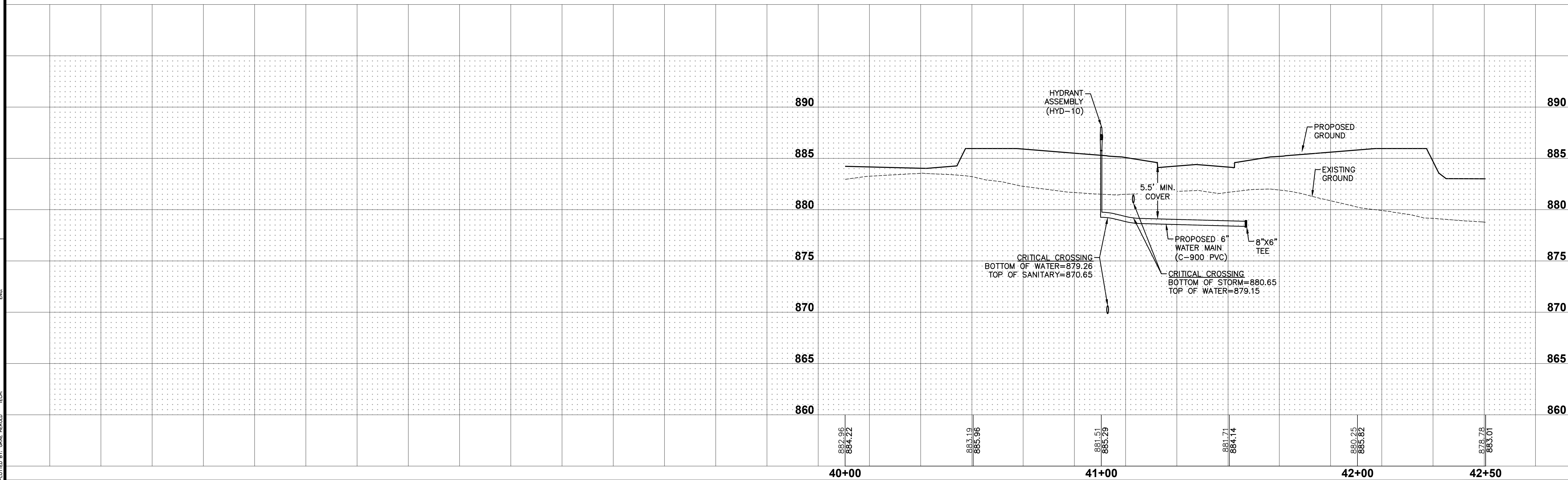
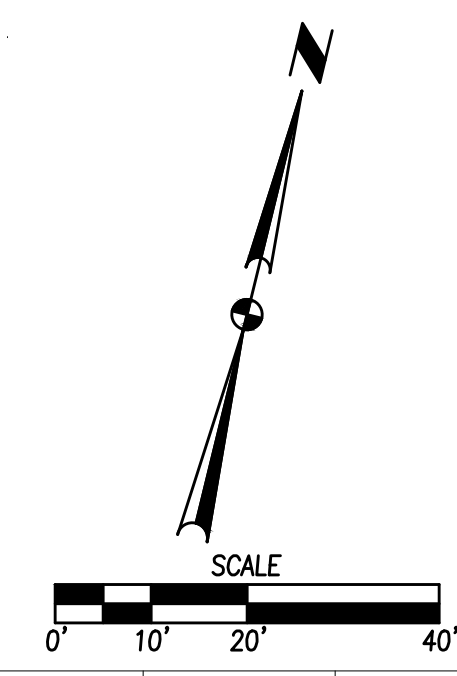
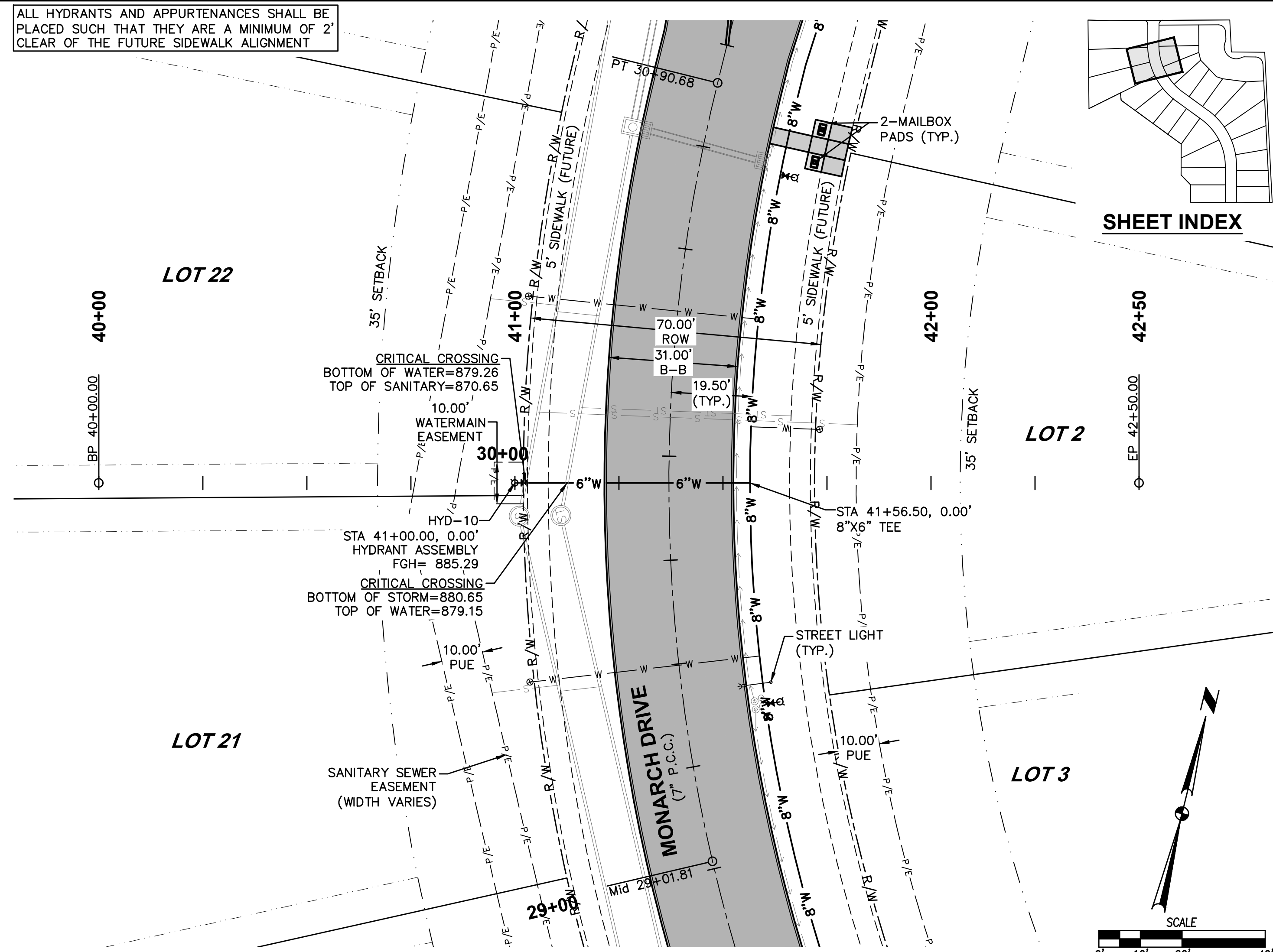
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 26
 2310.656

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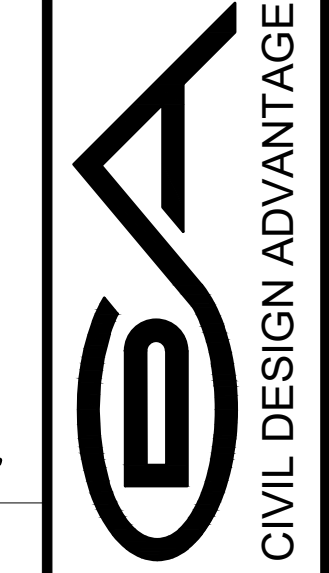
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ALL HYDRANTS AND APPURTENANCES SHALL BE PLACED SUCH THAT THEY ARE A MINIMUM OF 2' CLEAR OF THE FUTURE SIDEWALK ALIGNMENT

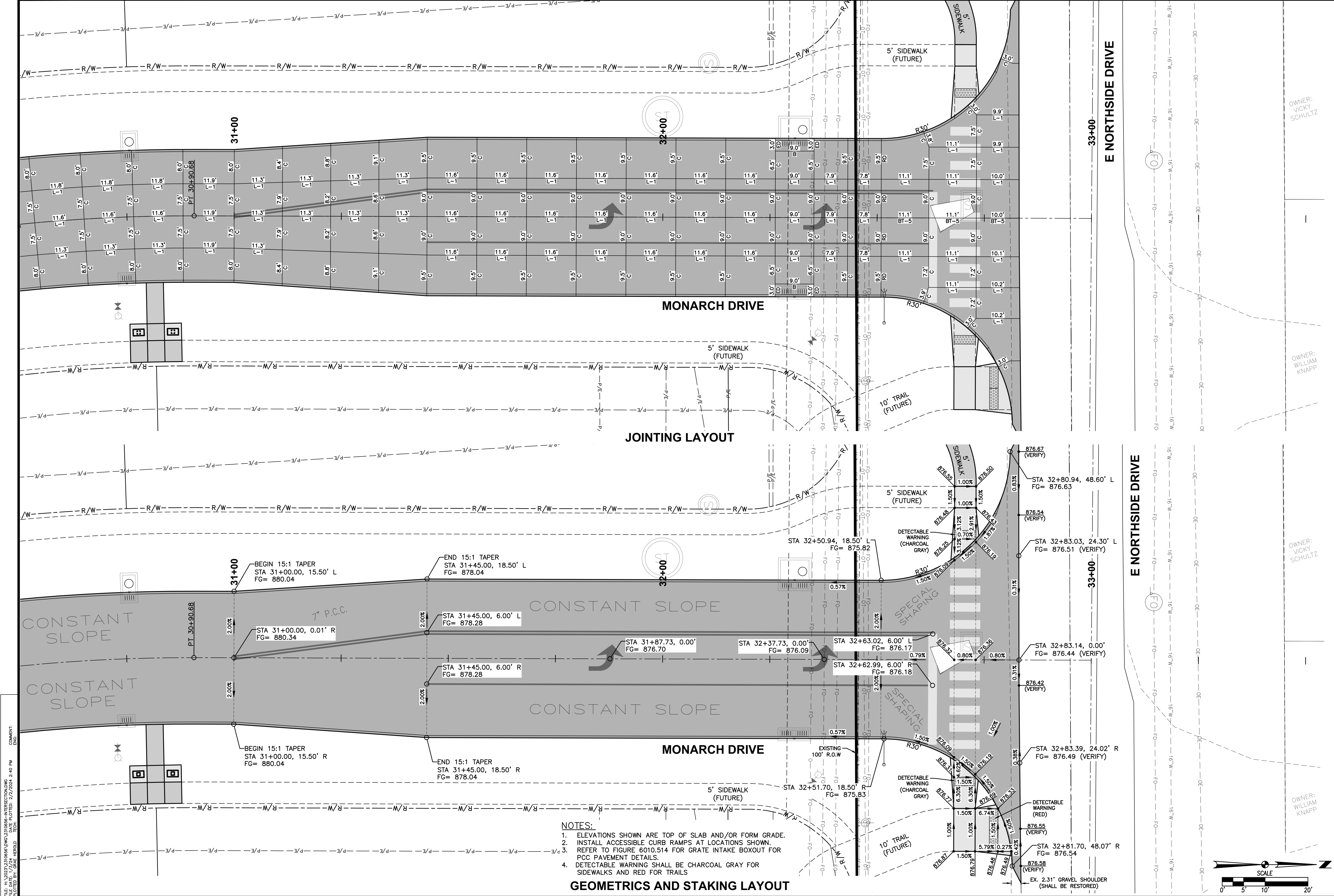


REVISIONS	DATE
FINAL SUBMITTAL	02/02/2024
THIRD SUBMITTAL	01/03/2024
SECOND SUBMITTAL	12/06/2023
FIRST SUBMITTAL	10/20/2023

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 URBANDALE, IA 50322
 PHONE: (515) 369-4400
 ENGINEER: EKO
 ENGINEER: GH EI: MAE



MONARCH CROSSING PLAT 1
 WATERMAIN PLAN AND PROFILE
 POLK CITY, IOWA
 25/26
 2310.656



NOTES:

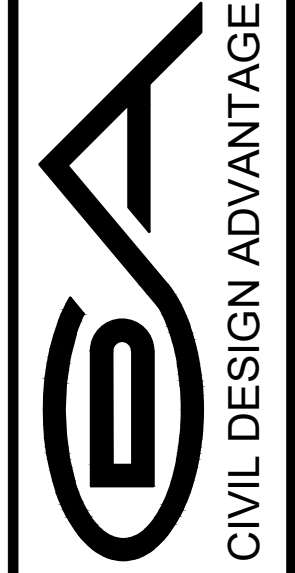
- ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
- INSTALL ACCESSIBLE CURB RAMPS AT LOCATIONS SHOWN. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
- DETECTABLE WARNING SHALL BE CHARCOAL GRAY FOR SIDEWALKS AND RED FOR TRAILS

GEOMETRICS AND STAKING LAYOUT

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DATE	REVISIONS
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01/03/2024	THIRD SUBMITTAL
12/06/2023	SECOND SUBMITTAL
10/20/2023	FIRST SUBMITTAL

4121 NW URBANDALE DRIVE
 URBANDALE, IA 50322
 PHONE: (515) 369-4400
 ENGINEER: EKO ENGINEER: GH EI: MAE



MONARCH CROSSING PLAT 1
INTERSECTION DETAILS
 POLK CITY, IOWA

OWNER: VICKY SCHULTZ
 OWNER: WILLIAM KNAPP
 OWNER: WILLIAM KNAPP
 SCALE 1" = 20'
 26/26
 2310.656

MONARCH CROSSING PLAT 1

STORM WATER MANAGEMENT PLAN POLK CITY, IOWA

CDA PROJECT NO. 2310.656



A circular seal for a Licensed Professional Engineer. The outer ring contains the text 'LICENSED PROFESSIONAL ENGINEER' at the top and 'IOWA' at the bottom, separated by two stars. The inner circle contains the name 'ERIN K. OLLENDIKE' and the license number '16926'.	<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>_____ DATE</p> <p>ERIN K. OLLENDIKE, P.E.</p> <p>LICENSE NUMBER 16926 MY LICENSE RENEWAL DATE IS DECEMBER 31, 2025 PAGES OR SHEETS COVERED BY THIS SEAL:</p> <p>ALL SHEETS</p> <p>_____</p> <p>_____</p>
---	--

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

PREPARED BY: CIVIL DESIGN ADVANTAGE, LLC
PREPARED ON: OCTOBER 20, 2023
REVISED ON: DECEMBER 06, 2023
REVISED ON: JANUARY 03, 2024
REVISED ON: FEBRUARY 02, 2024



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Dr Urbandale, Iowa 50322

PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages

SUBJECT: Stormwater Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Project Description:

Existing Site Conditions

Monarch Crossing Plat 1 is located 2,200' east of the intersection of E Northside Drive and N 6th Street in Polk City. The site currently consists of agricultural row crops. There is a single-family house along the north eastern boundary and a proposed single-family development along the western boundary (Big Creek Ridge). The property generally flows towards an existing drainage ditch that runs through the center of the site running north and south. The property is slated for single-family residential uses. This Storm Water Management Plan will supersede the Storm Water Management Plan titled "Monarch Crossing" dated September 14, 2023. Refer to the attached time of concentration, existing drainage map and Hydraflow Hydrographs for detailed analysis of the existing site conditions.

Proposed Site Conditions

At full build-out, proposed site improvements consist of 54 single-family residential lots, 2 outlots for detention, 1 outlet for a future trail, roadways and associated utilities. Proposed grades generally follow existing drainage patterns throughout the site. Proposed improvements include installing two detention basins. POND 1 is located in the northeastern corner of the site and discharges into existing storm sewer that drains north into an unnamed tributary. POND 2 is located along the southern boundary and discharges south into an existing drainage channel.

Plat 1 site improvements include the development of 23 single family lots, a roadway, and associated utilities. Stormwater for the site will be conveyed via storm sewer and overland flowage to a wet bottom detention basin (POND 1) in the northeast of the site. Refer to the attached post-developed drainage map and Hydraflow Hydrographs for detailed analysis of the proposed site conditions. This Storm Water Management Plan will supersede the Storm Water Management Plan titled "Monarch Crossing" dated September 14, 2023.

Offsite Conditions

Refer to the Appendix for the Storm Water Management Plan titled "Big Creek Ridge" for drainage calculations regarding the property west of Monarch Crossing.

Storm Water Analysis:

Storm Sewer Analysis

Storm sewer pipes are designed to convey the 10-year post developed storm event with overflow paths defined to provide routing for larger storm events. The Rational Method was used to determine the flow rate for each drainage area. Manning's equation was used to size pipes.

Detention Analysis

For stormwater detention purposes the site has been analyzed with two discharge points. The first discharge point (EX DB 1) is located along the northern property boundary. EX DB 1 contains 27.91 acres and drains north via overland flowage into existing storm sewer. Detention will be provided in a proposed wet-bottom detention basin (POND 1) and will utilize one outlet discharging into the existing storm sewer flowing north. DB 1 OFFSITE flows onto the property, will be conveyed via storm sewer into POND 1, and will be allowed to pass through the site undetained. This offsite flow will be overdetained to account for DB 1 UND flows that discharge into the existing roadside ditch following existing drainage patterns. DB CULVERT 1, DB CULVERT 2, and future Big Creek Ridge Plat 1 Pond 3 flows also discharge into this ditch and will be collected and conveyed north via storm sewer.

The second discharge point (EX DB 2) is located along the southern property boundary. EX DB 2 contains 19.14 acres and drains south via overland flowage into an existing drainage channel. Detention will be provided in a proposed wet-bottom detention basin (POND 2) and will utilize one outlet discharging south. DB 2A OFFSITE, DB 2B OFFSITE, and Big Creek Ridge Plat 1 Pond 2 all flow onto the property, will be conveyed via overland flowage and storm sewer into POND 2, and will be allowed to pass through the site undetained.



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Dr Urbandale, Iowa 50322

PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages
 SUBJECT: Stormwater Calculations DATE: 01/03/24 COMP. BY: GH OK'D BY:

**Storm Water Analysis:
 Detention Summary**

DB 1 (EXISTING AREA = 27.91 AC)

Rainfall Return Frequency (Yrs)	Existing Runoff, cfs	Offsite Runoff, cfs	(Allowable Release), cfs *	Post-Developed Runoff Release, cfs **
5	32.71	35.15	67.65	21.90
10	43.95	47.21	79.71	30.06
100	94.11	101.01	133.19	67.04

* Includes routing of EX DB 1 (5-year) plus DB 1 OFFSITE flows during the 5-, 10- and 100-year storms.

** Includes routing of DB 1, DB 1 OFFSITE and DB 1 UND flows during the 5-, 10- and 100-year storms.

DB 2 (EXISTING AREA = 19.14 AC)

Rainfall Return Frequency (Yrs)	Existing Runoff, cfs	Offsite Runoff, cfs	(Allowable Release), cfs *	Post-Developed Runoff Release, cfs **
5	24.11	22.33	45.00	12.90
10	32.39	29.70	52.05	16.28
100	69.29	60.78	82.79	66.60

* Includes routing of EX DB 2 (5-year) plus DB 2A OFFSITE, DB 2B OFFSITE and Pond 2 of Big Creek Ridge flows during the 5-, 10- and 100-year storms.

** Includes routing of DB 2, DB 2 UND, DB 2A OFF, DB 2B OFF and Pond 2 of Big Creek Ridge flows during the 5-, 10- and 100-year storms.

Detention Basin Summary

	Bottom of Basin Elevation	Pool WSE	100-yr WSE Elevation	Detention Overflow Elevation	Detention Freeboard, Feet	100-year Release Rate, cfs	100-year detention volume, cf	Ponding Depth, Feet
POND 1	852.70	871.70	877.55	878.55	1.00	63.61	278,216	5.85
POND 2	857.55	878.55	883.55	884.55	1.00	66.52	173,261	5.00



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Dr Urbandale, Iowa 50322

PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages
 SUBJECT: Stormwater Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Discharge Point Summary:

Discharge Point #	Location	Drainage Area	Allowable Release Rate			Proposed Release Rate		
			5-year	10-year	100-year	5-year	10-year	100-year
Discharge Point #1	North into existing 42" CMP culvert	Offsite=27.90 Ac	67.65 cfs	79.71 cfs	133.19 cfs	22.23 cfs	31.28 cfs	66.39 cfs
		Onsite=22.64 Ac						
		Undetained=5.62 Ac						
		Total=56.16 Ac						
Discharge Point #2	Location	Drainage Area	Allowable Release Rate			Proposed Release Rate		
			5-year	10-year	100-year	5-year	10-year	100-year
Discharge Point #2	South into existing drainage channel	Offsite=20.18 Ac	45.00 cfs	52.05 cfs	82.79 cfs	12.90 cfs	16.28 cfs	66.60 cfs
		Onsite=18.97 Ac						
		Undetained=0.00 Ac						
		Total=39.15 Ac						



PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page ___ of ___ Pages
SUBJECT: Stormwater Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY: ___

Assumptions:

- * A USDA Hydrologic Soil Map was prepared for the site. Hydrologic Soil Group B will be used for pre-developed conditions. Refer to the attached Hydrologic Soil Map report for soils information.
* Pre-developed time of concentrations are calculated using the TR-55 method. Refer to attached time of concentration spreadsheets for calculations.
* A time of concentration of 15 minutes is assumed for the post-developed detention analysis.
* Assumed a 15 minute time of concentration for storm sewer design.
* The runoff curve numbers used to determine flow rates for the site were taken from the 2023 SUDAS and listed below in the following tables.

Table with 2 columns: Land Use or Surface Characteristics, Curve Number. Rows include Residential - 1/2 Acre Lots (70), Row Crops (75), Impervious (98), Open Space (61).

- * The runoff coefficients used to determine flow rates for the site are listed in the following table.

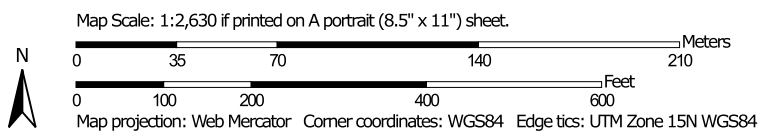
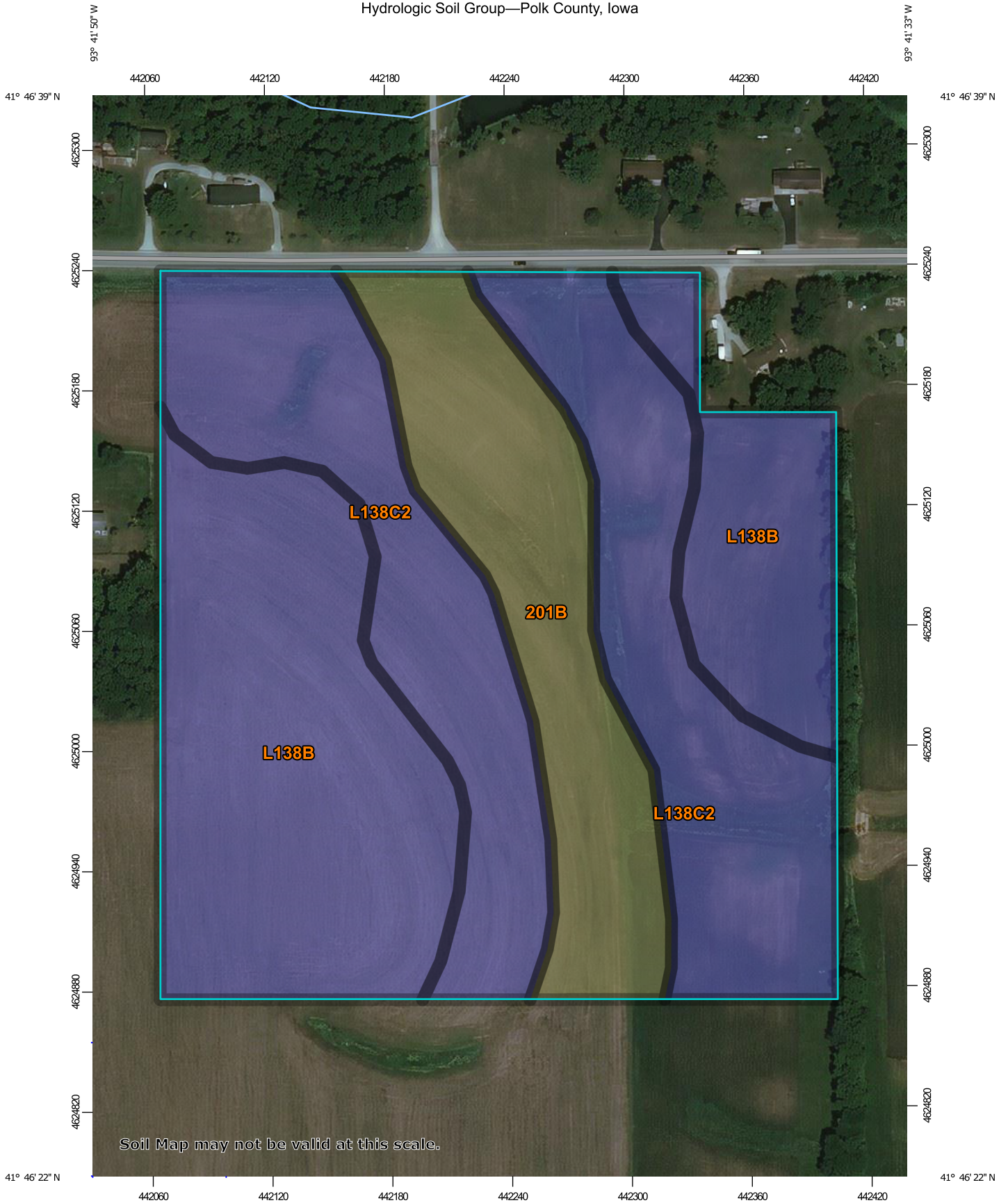
Table with 3 columns: Land Use or Surface Characteristics, B Soils (10-Year, 100-Year). Rows include Residential District - 1/2 Acre* (0.35, 0.48), Open Space - Good Condition (0.20, 0.35), Impervious (0.95, 0.98).

*1/2 acre lots on average are 20% impervious per SUDAS (Table 2B-4.01).

- * The 24-hour rainfall depths used for determining flow rates are listed in the following table.


Section 5 - Central Iowa Rainfall Depths (inches) table with columns for Duration, 5-Year (20%), 10-Year (10%), 100-Year (1%). Row for 24-hour shows depths of 3.81, 4.46, and 7.12 inches.

Hydrologic Soil Group—Polk County, Iowa



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 26, Sep 12, 2023

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
201B	Coland, occasionally flooded-Terril complex, 2 to 5 percent slopes	C/D	5.7	19.4%
L138B	Clarion loam, Bemis moraine, 2 to 6 percent slopes	B	11.7	39.8%
L138C2	Clarion loam, Bemis moraine, 6 to 10 percent slopes, moderately eroded	B	12.0	40.8%
Totals for Area of Interest			29.3	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.

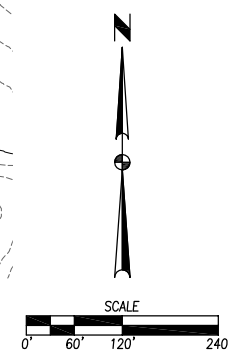
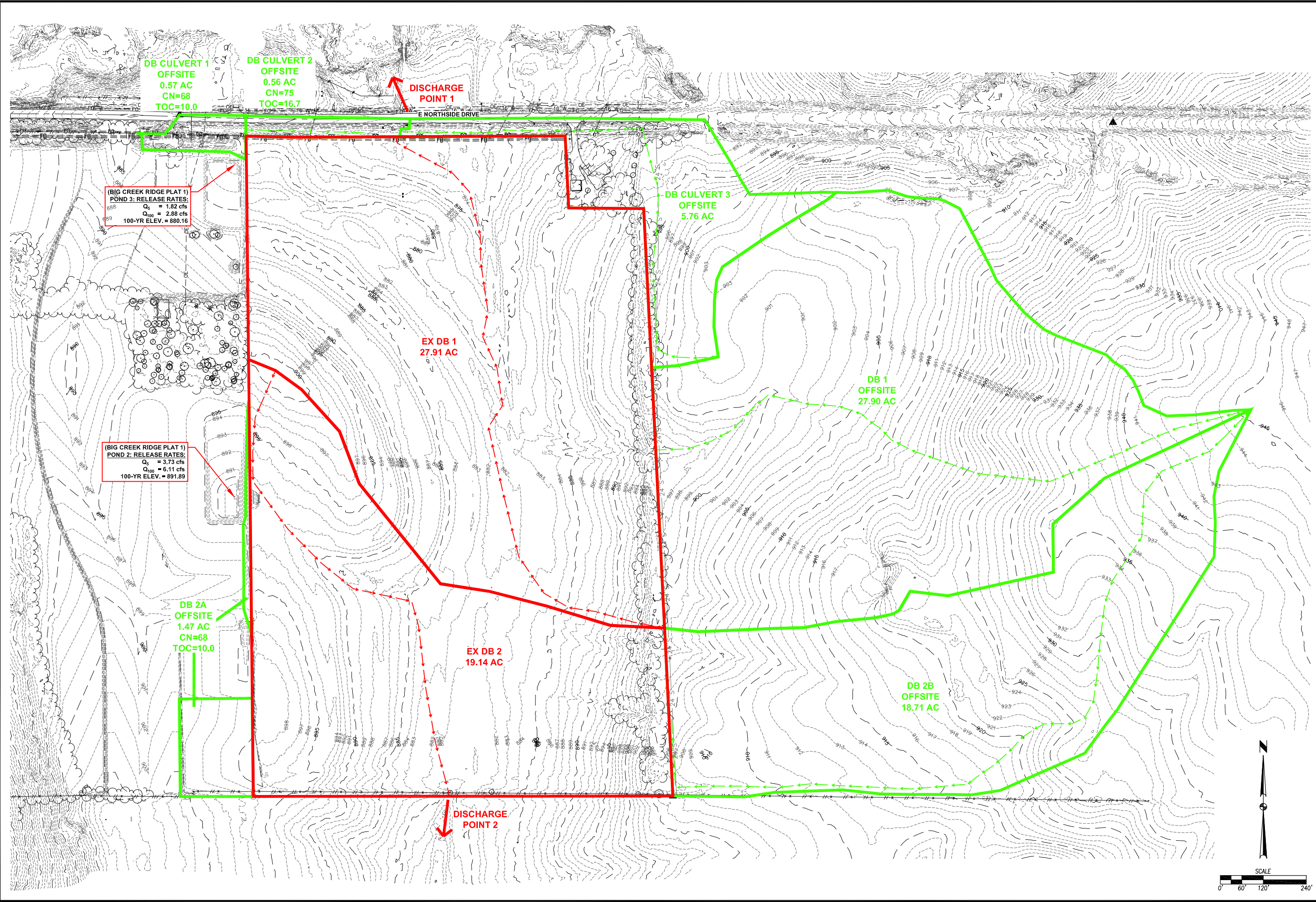
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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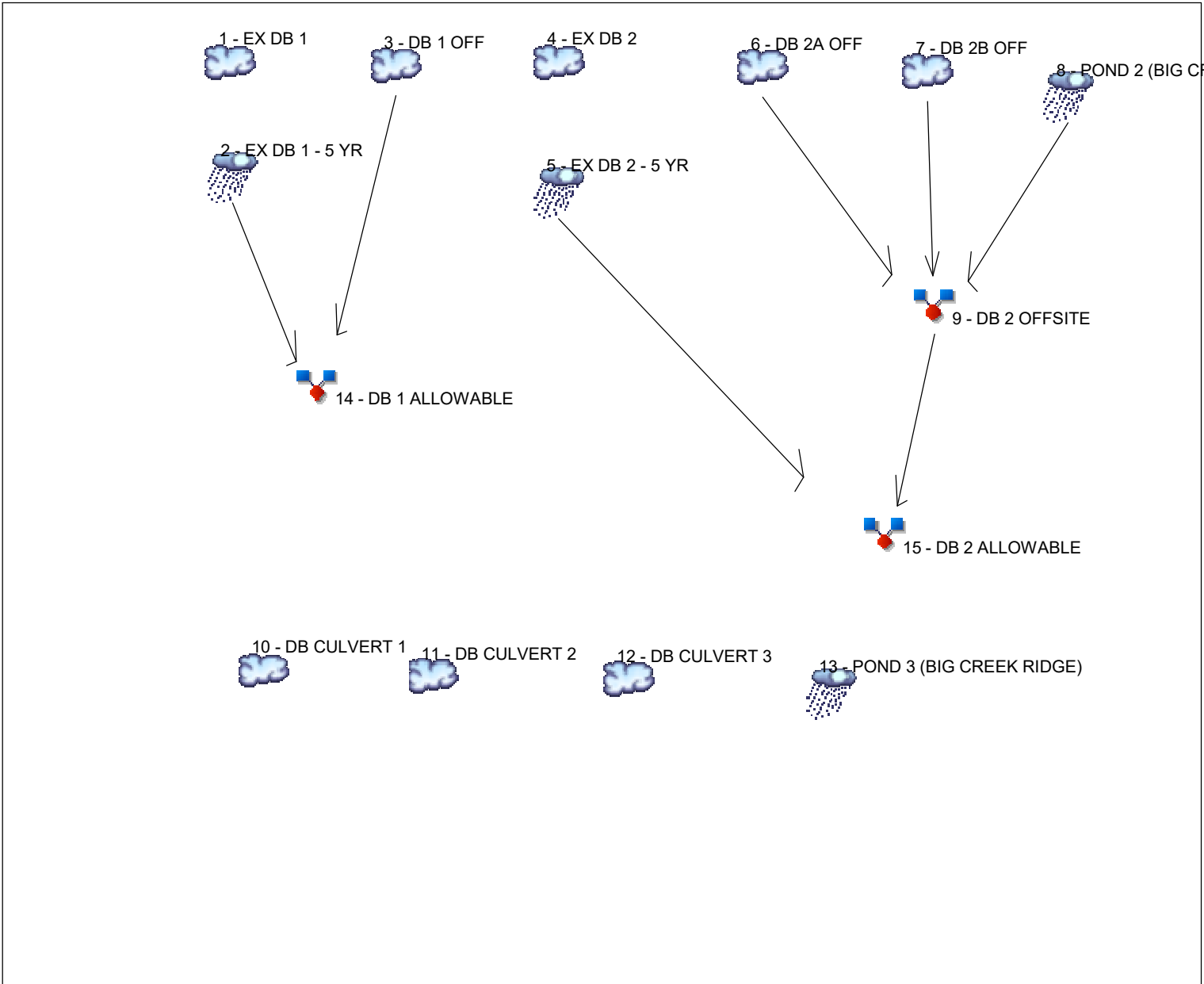
DATE	
REVISIONS	
4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400	
E.I.: MAE	
ENGINEER: EKO	
SA CIVIL DESIGN ADVANTAGE	
POLK CITY, IOWA	
1 MONARCH CROSSING PLAT 1 EXISTING DRAINAGE MAP	
2310.656	

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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	EX DB 1
2	Manual	EX DB 1 - 5 YR
3	SCS Runoff	DB 1 OFF
4	SCS Runoff	EX DB 2
5	Manual	EX DB 2 - 5 YR
6	SCS Runoff	DB 2A OFF
7	SCS Runoff	DB 2B OFF
8	Manual	POND 2 (BIG CREEK RIDGE)
9	Combine	DB 2 OFFSITE
10	SCS Runoff	DB CULVERT 1
11	SCS Runoff	DB CULVERT 2
12	SCS Runoff	DB CULVERT 3
13	Manual	POND 3 (BIG CREEK RIDGE)
14	Combine	DB 1 ALLOWABLE
15	Combine	DB 2 ALLOWABLE

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	----	----	----	----	32.71	43.95	----	----	94.11	EX DB 1
2	Manual	----	----	----	----	32.71	32.71	----	----	32.71	EX DB 1 - 5 YR
3	SCS Runoff	----	----	----	----	35.15	47.21	----	----	101.01	DB 1 OFF
4	SCS Runoff	----	----	----	----	24.11	32.39	----	----	69.29	EX DB 2
5	Manual	----	----	----	----	24.11	24.11	----	----	24.11	EX DB 2 - 5 YR
6	SCS Runoff	----	----	----	----	2.194	3.114	----	----	7.436	DB 2A OFF
7	SCS Runoff	----	----	----	----	18.52	24.93	----	----	53.45	DB 2B OFF
8	Manual	----	----	----	----	3.730	4.370	----	----	6.110	POND 2 (BIG CREEK RIDGE)
9	Combine	6, 7, 8	----	----	----	22.33	29.70	----	----	60.78	DB 2 OFFSITE
10	SCS Runoff	----	----	----	----	0.851	1.208	----	----	2.883	DB CULVERT 1
11	SCS Runoff	----	----	----	----	0.969	1.300	----	----	2.765	DB CULVERT 2
12	SCS Runoff	----	----	----	----	7.256	9.747	----	----	20.85	DB CULVERT 3
13	Manual	----	----	----	----	1.820	0.000	----	----	2.880	POND 3 (BIG CREEK RIDGE)
14	Combine	2, 3,	----	----	----	67.65	79.71	----	----	133.19	DB 1 ALLOWABLE
15	Combine	5, 9,	----	----	----	45.00	52.05	----	----	82.79	DB 2 ALLOWABLE

Hydrograph Summary Report

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

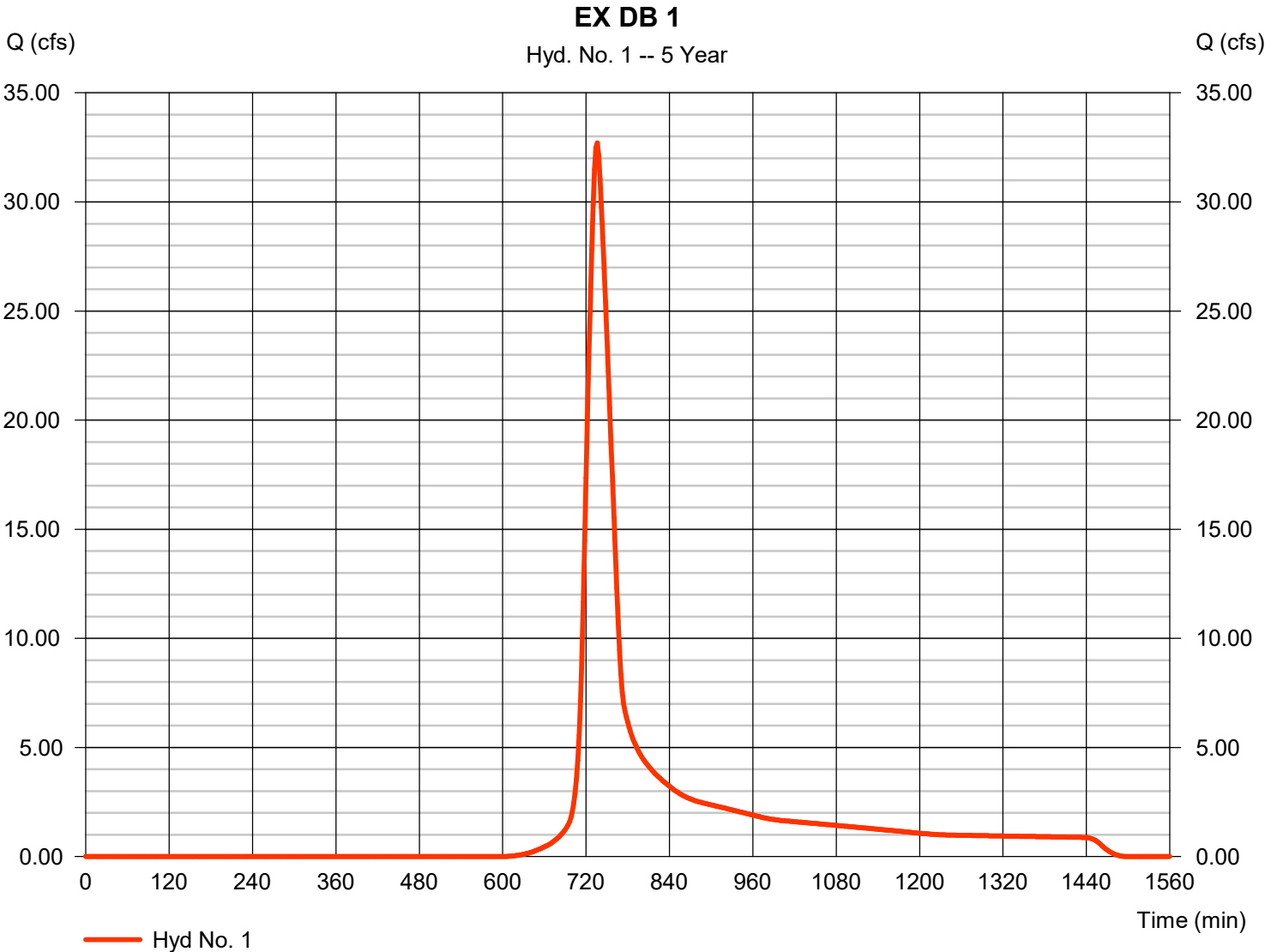
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	32.71	2	736	152,803	-----	-----	-----	EX DB 1
2	Manual	32.71	2	736	152,807	-----	-----	-----	EX DB 1 - 5 YR
3	SCS Runoff	35.15	2	734	156,435	-----	-----	-----	DB 1 OFF
4	SCS Runoff	24.11	2	734	107,318	-----	-----	-----	EX DB 2
5	Manual	24.11	2	734	107,320	-----	-----	-----	EX DB 2 - 5 YR
6	SCS Runoff	2.194	2	722	5,979	-----	-----	-----	DB 2A OFF
7	SCS Runoff	18.52	2	742	102,687	-----	-----	-----	DB 2B OFF
8	Manual	3.730	2	732	23,562	-----	-----	-----	POND 2 (BIG CREEK RIDGE)
9	Combine	22.33	2	742	132,228	6, 7, 8	-----	-----	DB 2 OFFSITE
10	SCS Runoff	0.851	2	722	2,318	-----	-----	-----	DB CULVERT 1
11	SCS Runoff	0.969	2	726	3,101	-----	-----	-----	DB CULVERT 2
12	SCS Runoff	7.256	2	734	32,296	-----	-----	-----	DB CULVERT 3
13	Manual	1.820	2	732	13,133	-----	-----	-----	POND 3 (BIG CREEK RIDGE)
14	Combine	67.65	2	734	309,242	2, 3,	-----	-----	DB 1 ALLOWABLE
15	Combine	45.00	2	736	239,548	5, 9,	-----	-----	DB 2 ALLOWABLE
Existing Hydraflow.gpw					Return Period: 5 Year			Monday, 12 / 18 / 2023	

Hydrograph Report

Hyd. No. 1

EX DB 1

Hydrograph type	= SCS Runoff	Peak discharge	= 32.71 cfs
Storm frequency	= 5 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 152,803 cuft
Drainage area	= 27.910 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 36.30 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

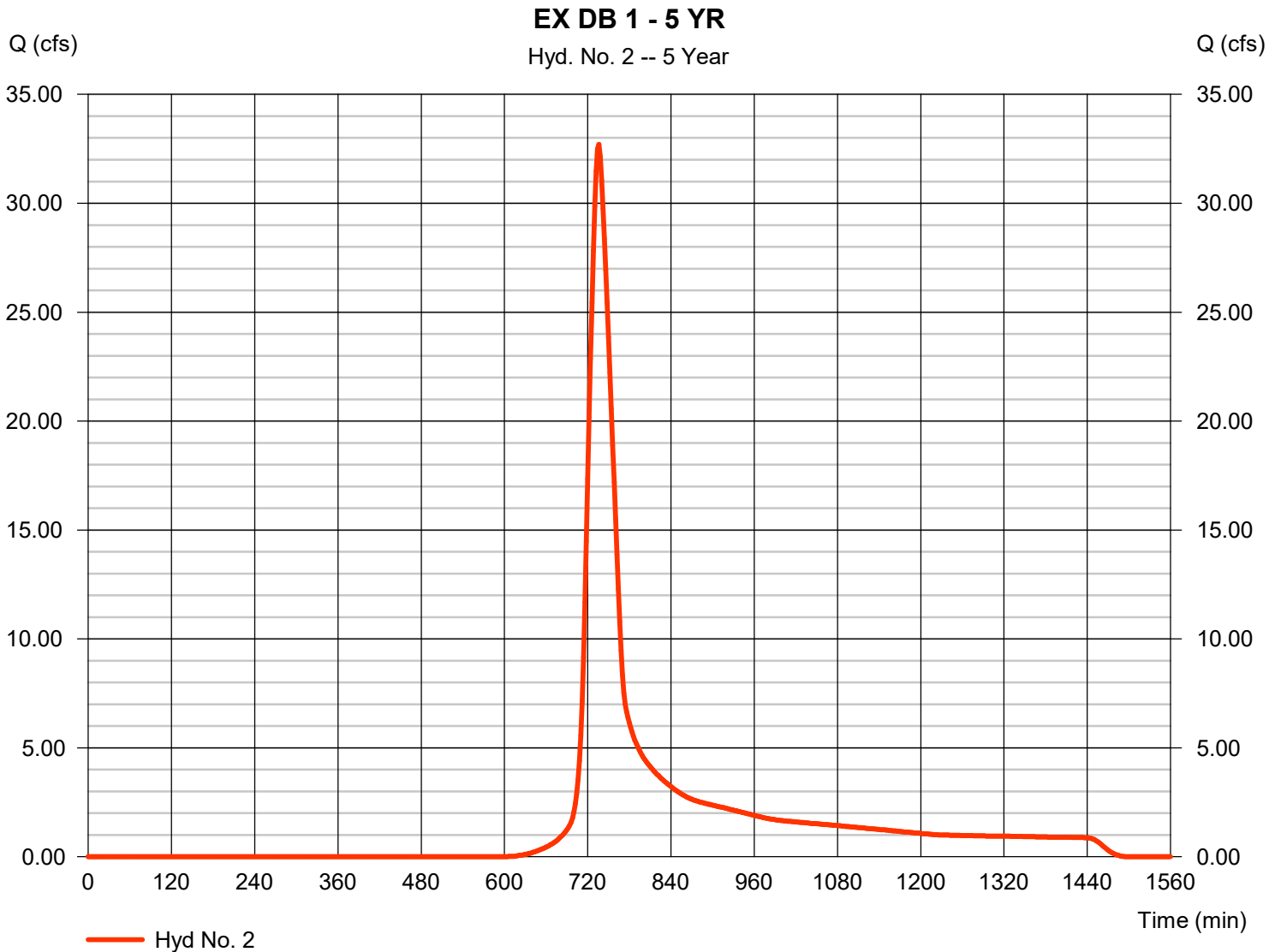
Monday, 12 / 18 / 2023

Hyd. No. 2

EX DB 1 - 5 YR

Hydrograph type = Manual
Storm frequency = 5 yrs
Time interval = 2 min

Peak discharge = 32.71 cfs
Time to peak = 736 min
Hyd. volume = 152,807 cuft



Hydrograph Report

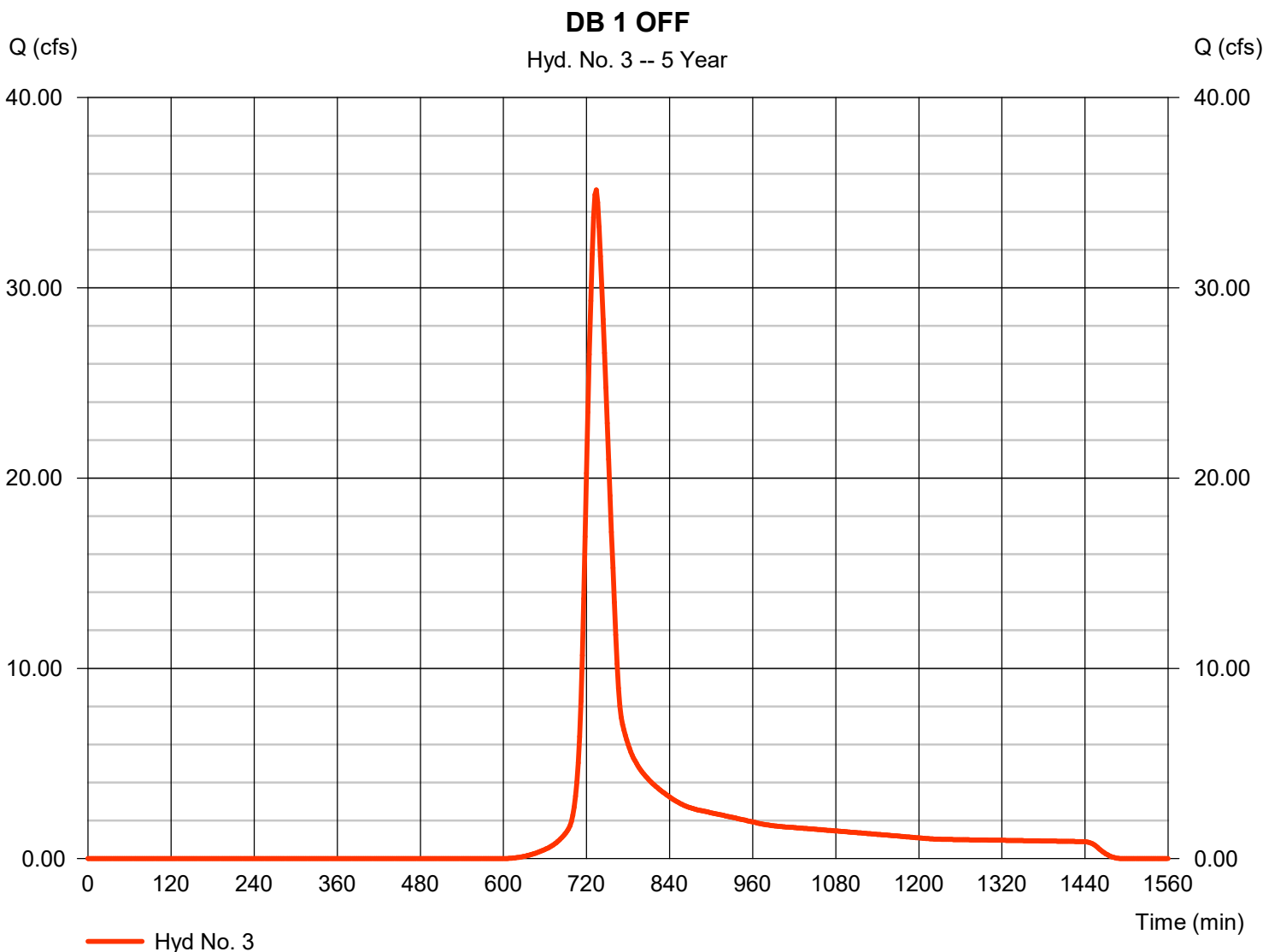
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 3

DB 1 OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 35.15 cfs
Storm frequency	= 5 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 156,435 cuft
Drainage area	= 27.900 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.30 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

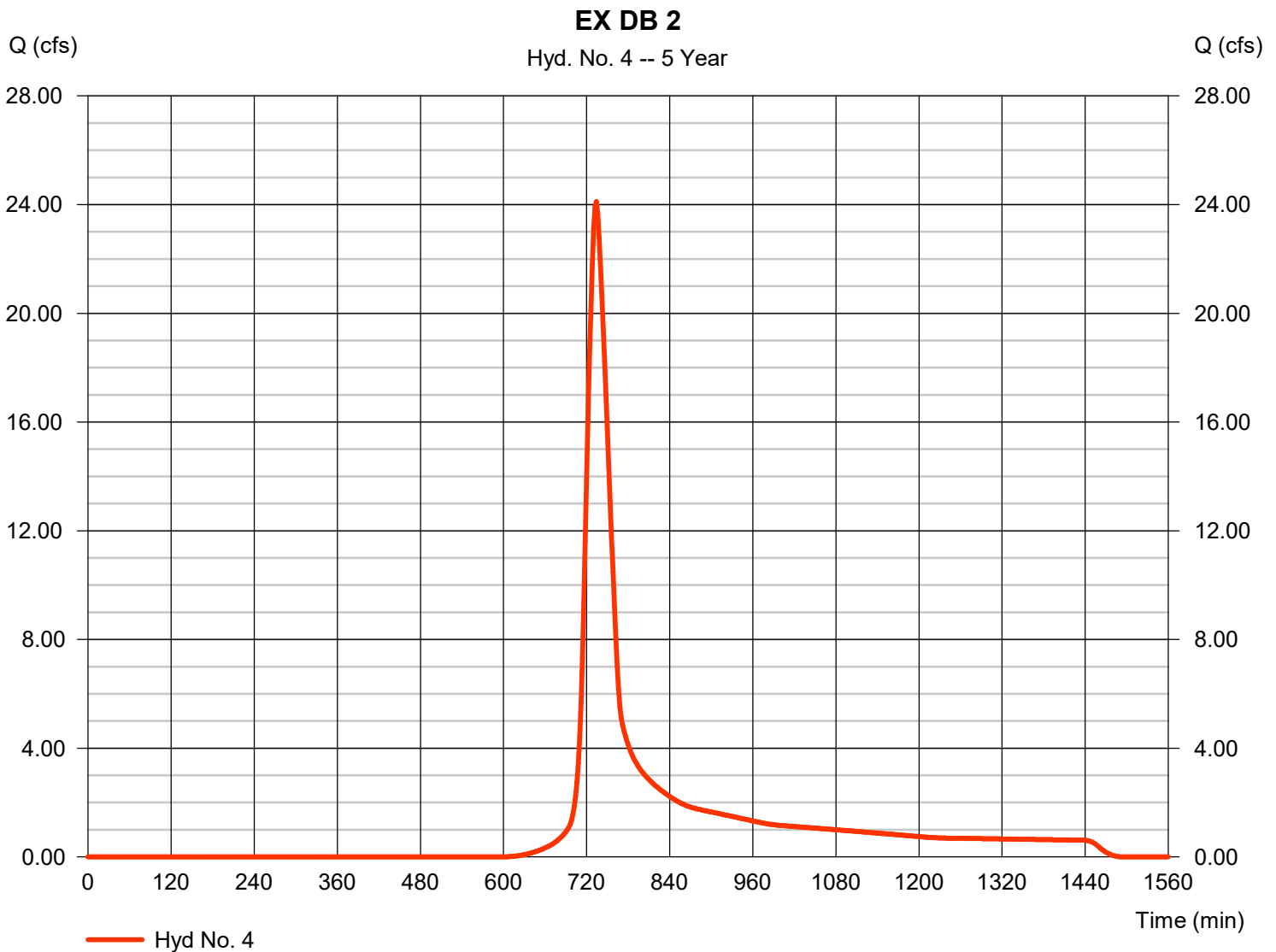
Monday, 12 / 18 / 2023

Hyd. No. 4

EX DB 2

Hydrograph type = SCS Runoff
 Storm frequency = 5 yrs
 Time interval = 2 min
 Drainage area = 19.140 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 3.81 in
 Storm duration = 24 hrs

Peak discharge = 24.11 cfs
 Time to peak = 734 min
 Hyd. volume = 107,318 cuft
 Curve number = 75
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 31.10 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

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

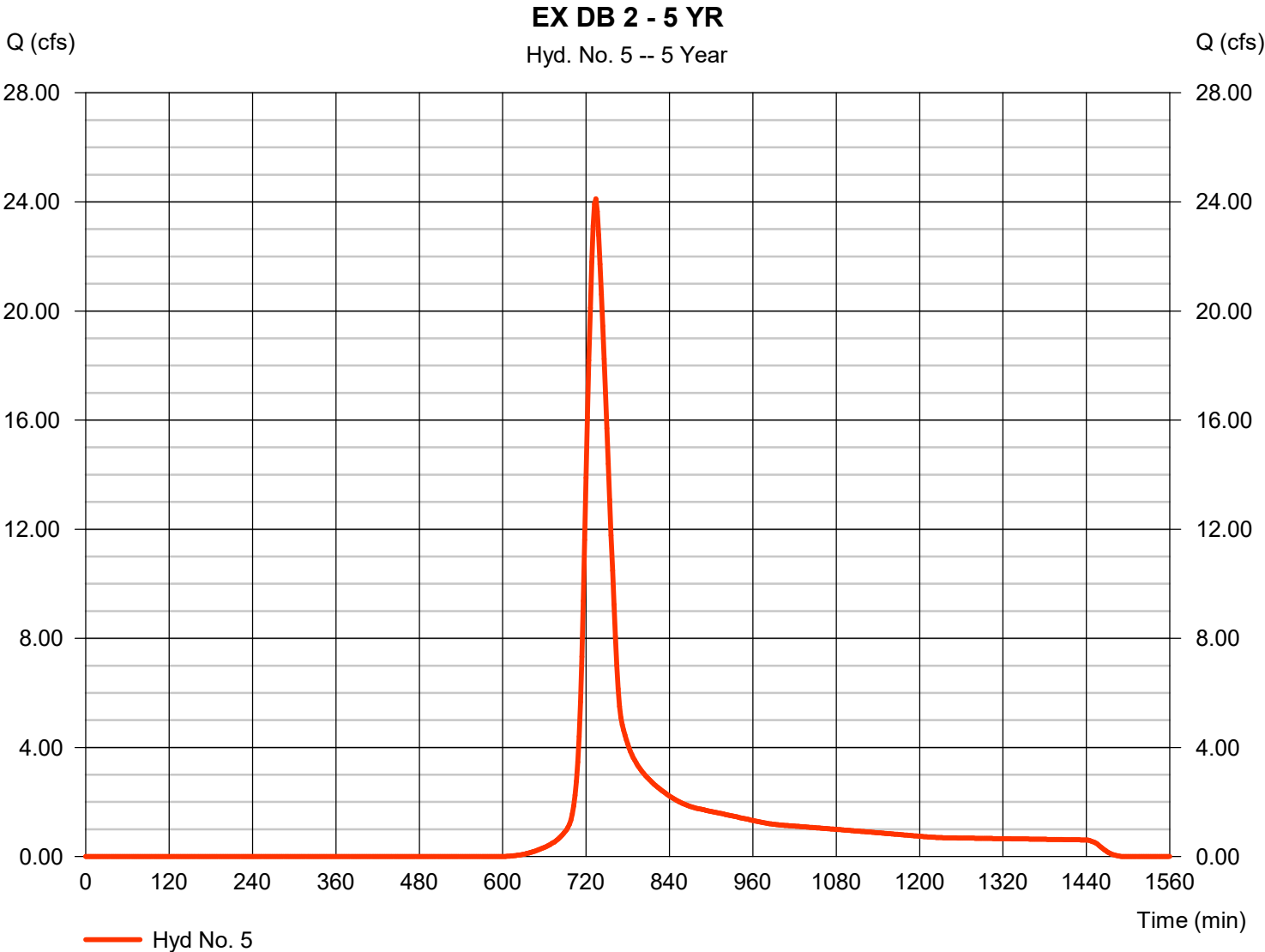
Monday, 12 / 18 / 2023

Hyd. No. 5

EX DB 2 - 5 YR

Hydrograph type = Manual
Storm frequency = 5 yrs
Time interval = 2 min

Peak discharge = 24.11 cfs
Time to peak = 734 min
Hyd. volume = 107,320 cuft

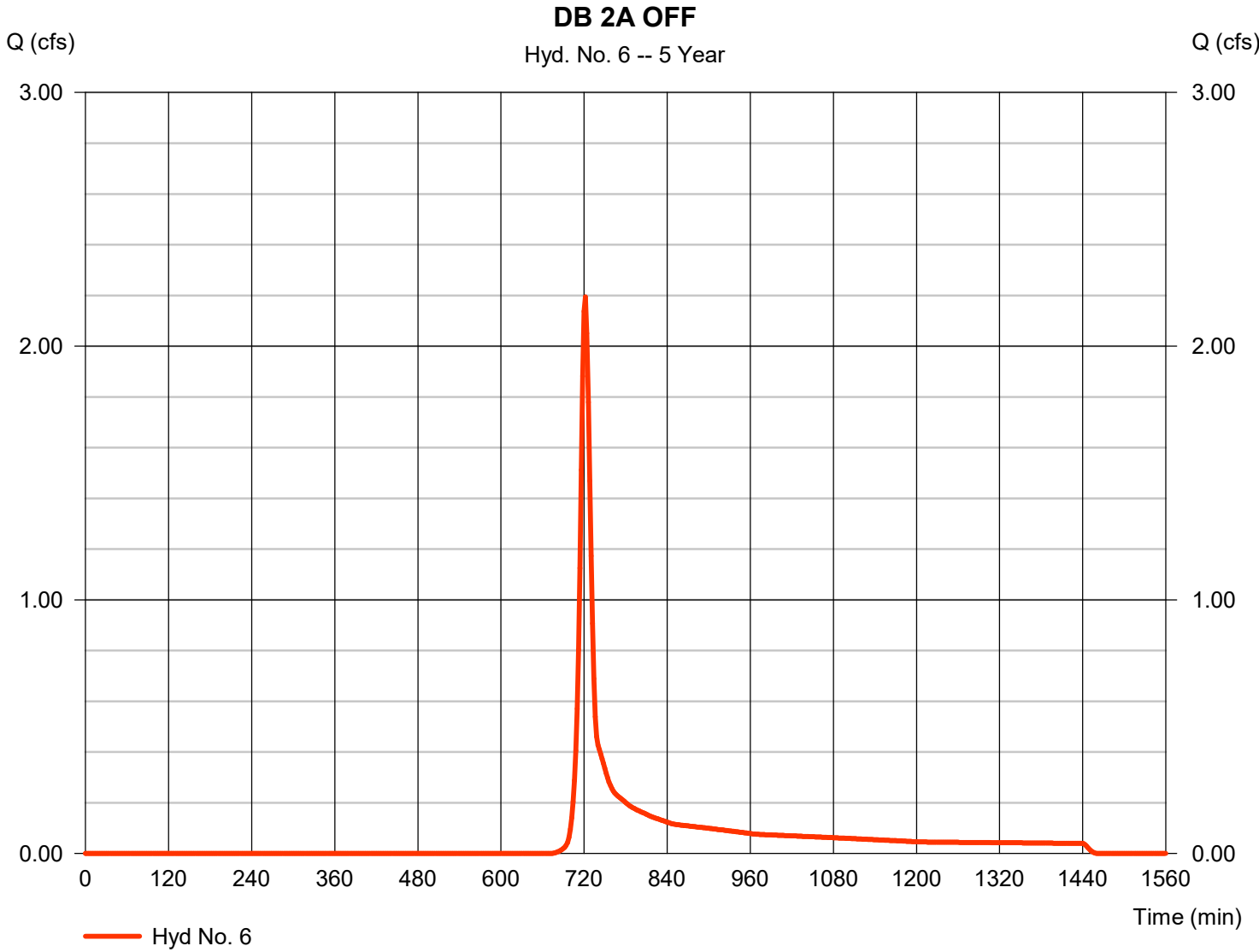


Hydrograph Report

Hyd. No. 6

DB 2A OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 2.194 cfs
Storm frequency	= 5 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 5,979 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

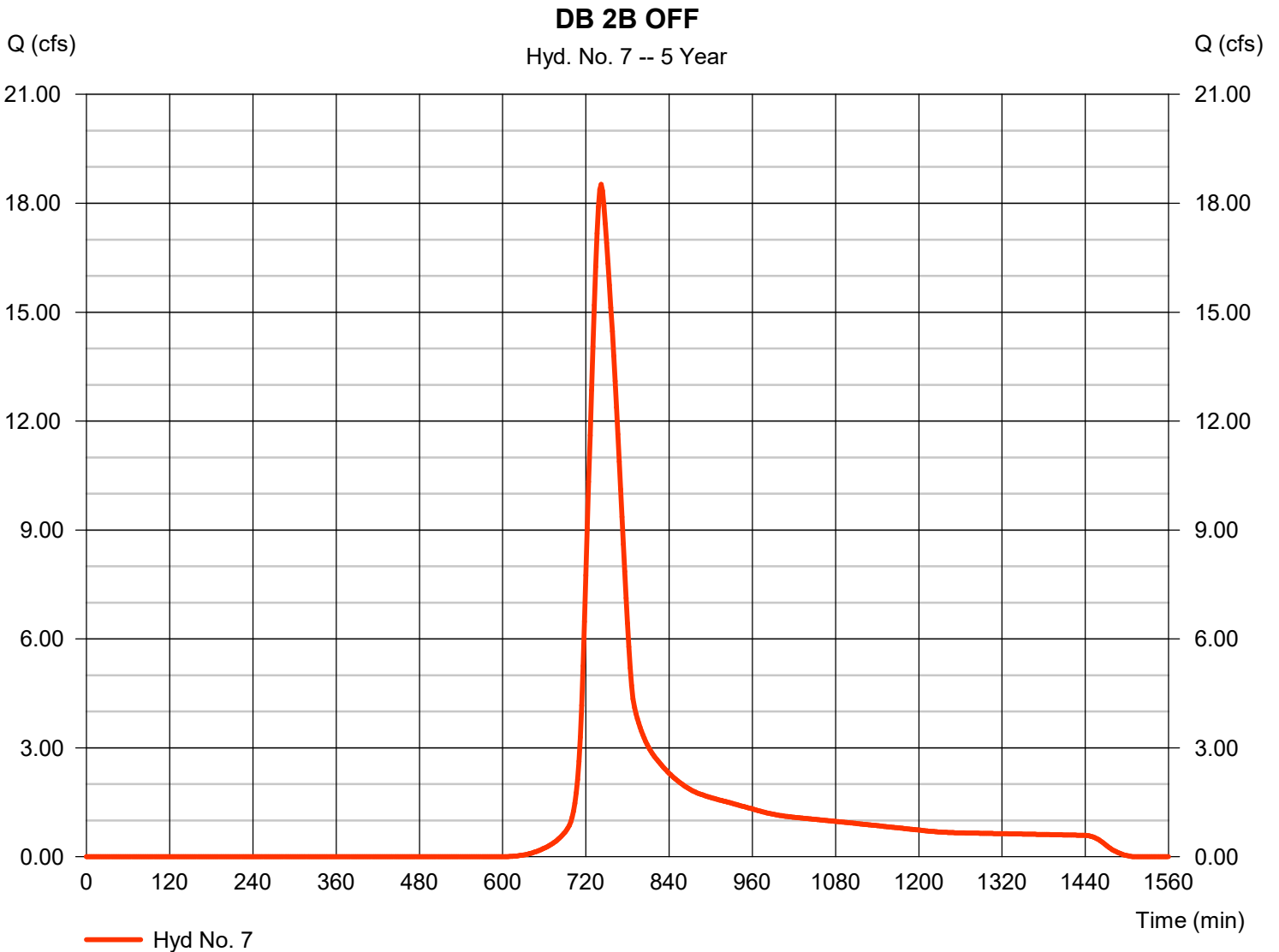
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Monday, 12 / 18 / 2023

Hyd. No. 7

DB 2B OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 18.52 cfs
Storm frequency	= 5 yrs	Time to peak	= 742 min
Time interval	= 2 min	Hyd. volume	= 102,687 cuft
Drainage area	= 18.710 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 47.10 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

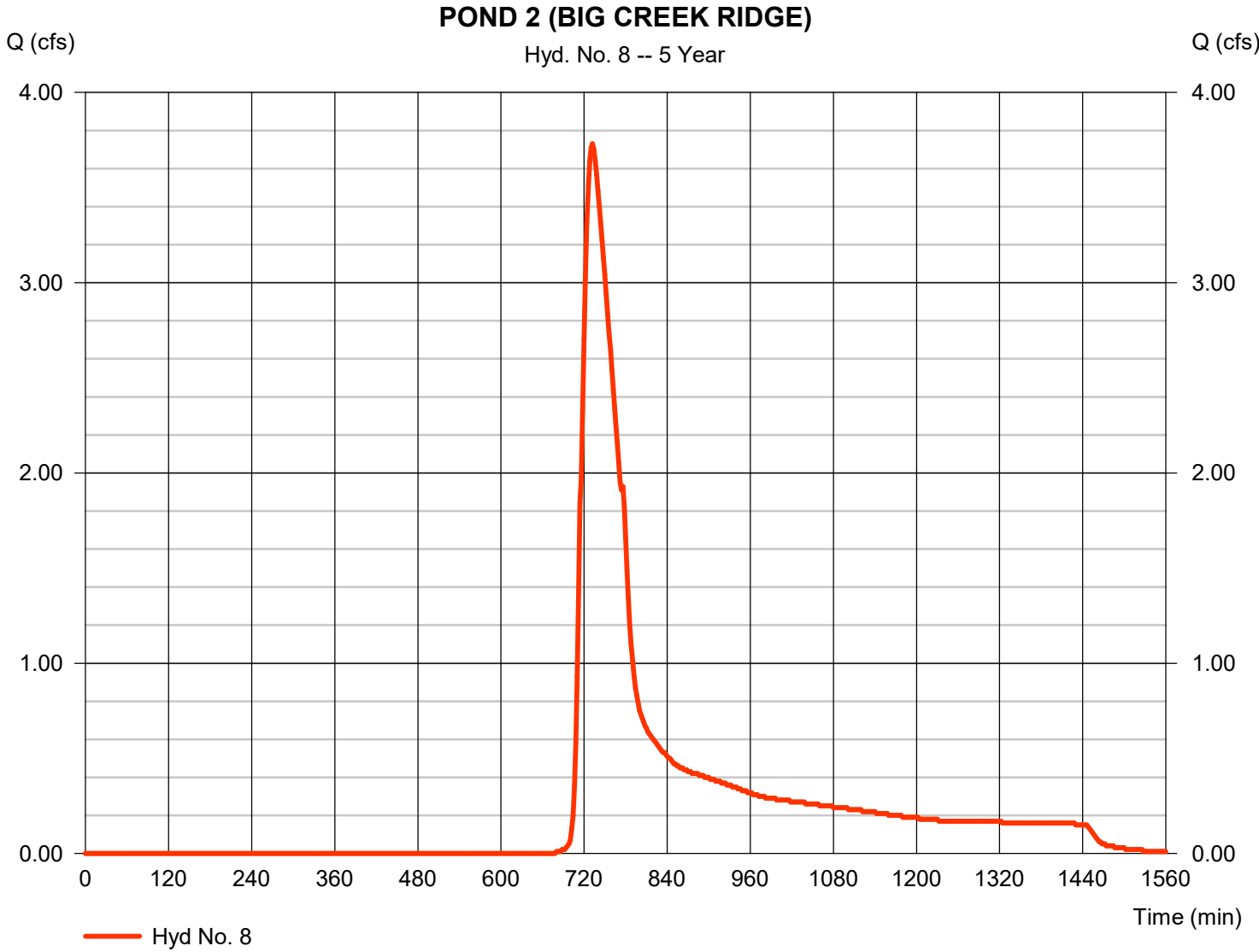
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Monday, 12 / 18 / 2023

Hyd. No. 8

POND 2 (BIG CREEK RIDGE)

Hydrograph type	= Manual	Peak discharge	= 3.730 cfs
Storm frequency	= 5 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 23,562 cuft



Hydrograph Report

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

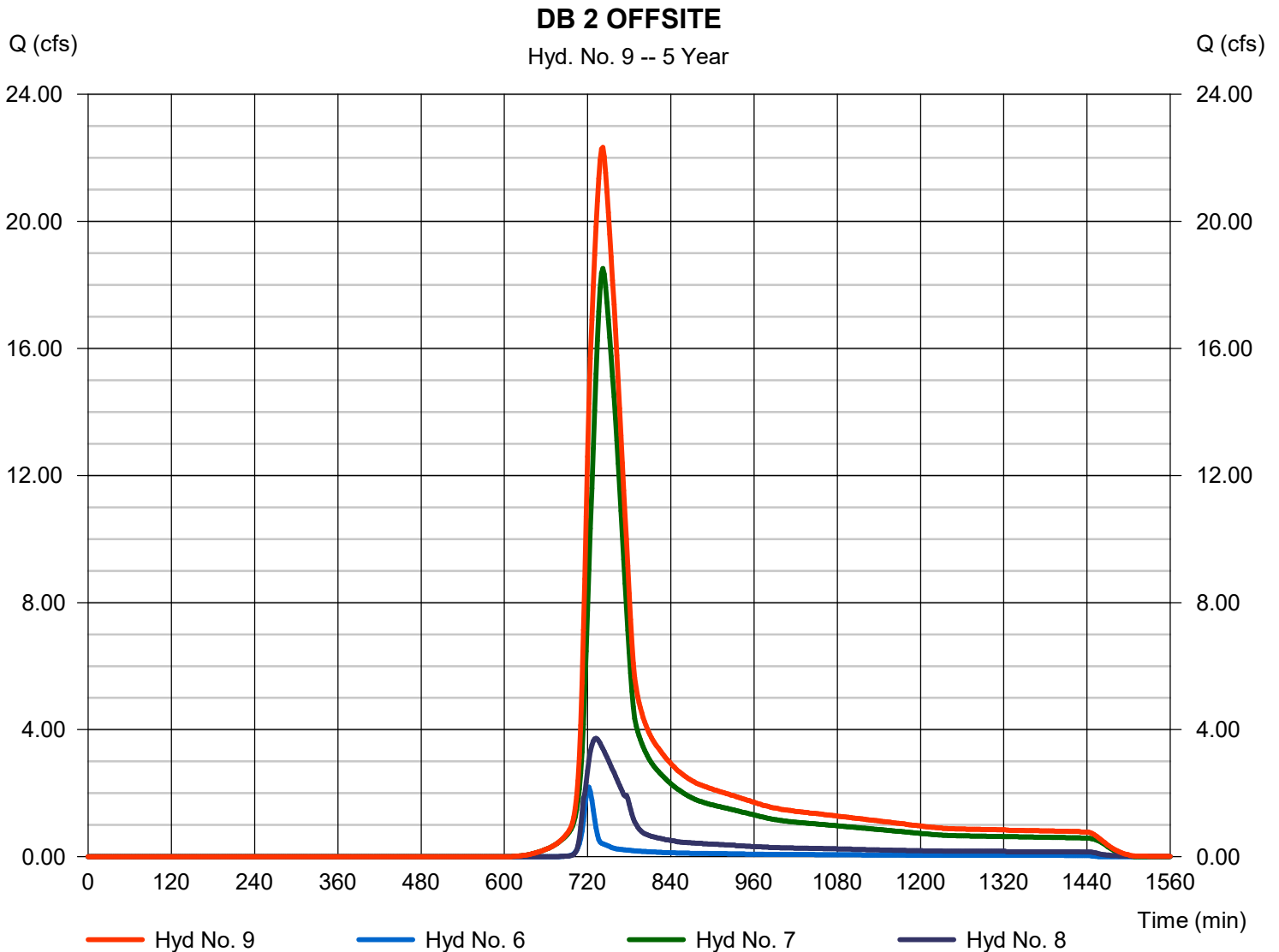
Monday, 12 / 18 / 2023

Hyd. No. 9

DB 2 OFFSITE

Hydrograph type = Combine
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyds. = 6, 7, 8

Peak discharge = 22.33 cfs
Time to peak = 742 min
Hyd. volume = 132,228 cuft
Contrib. drain. area = 20.180 ac



Hydrograph Report

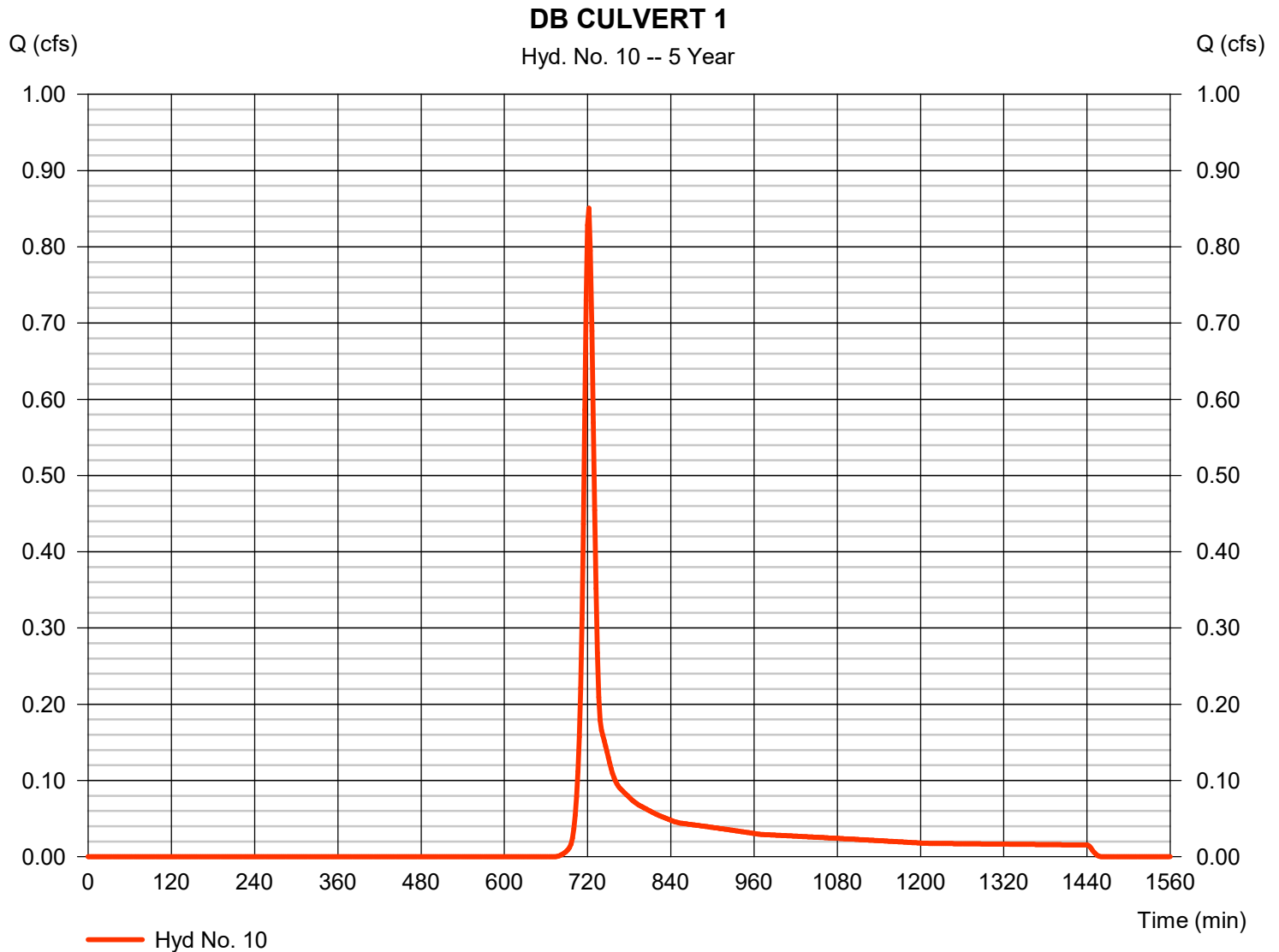
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Monday, 12 / 18 / 2023

Hyd. No. 10

DB CULVERT 1

Hydrograph type	= SCS Runoff	Peak discharge	= 0.851 cfs
Storm frequency	= 5 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 2,318 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

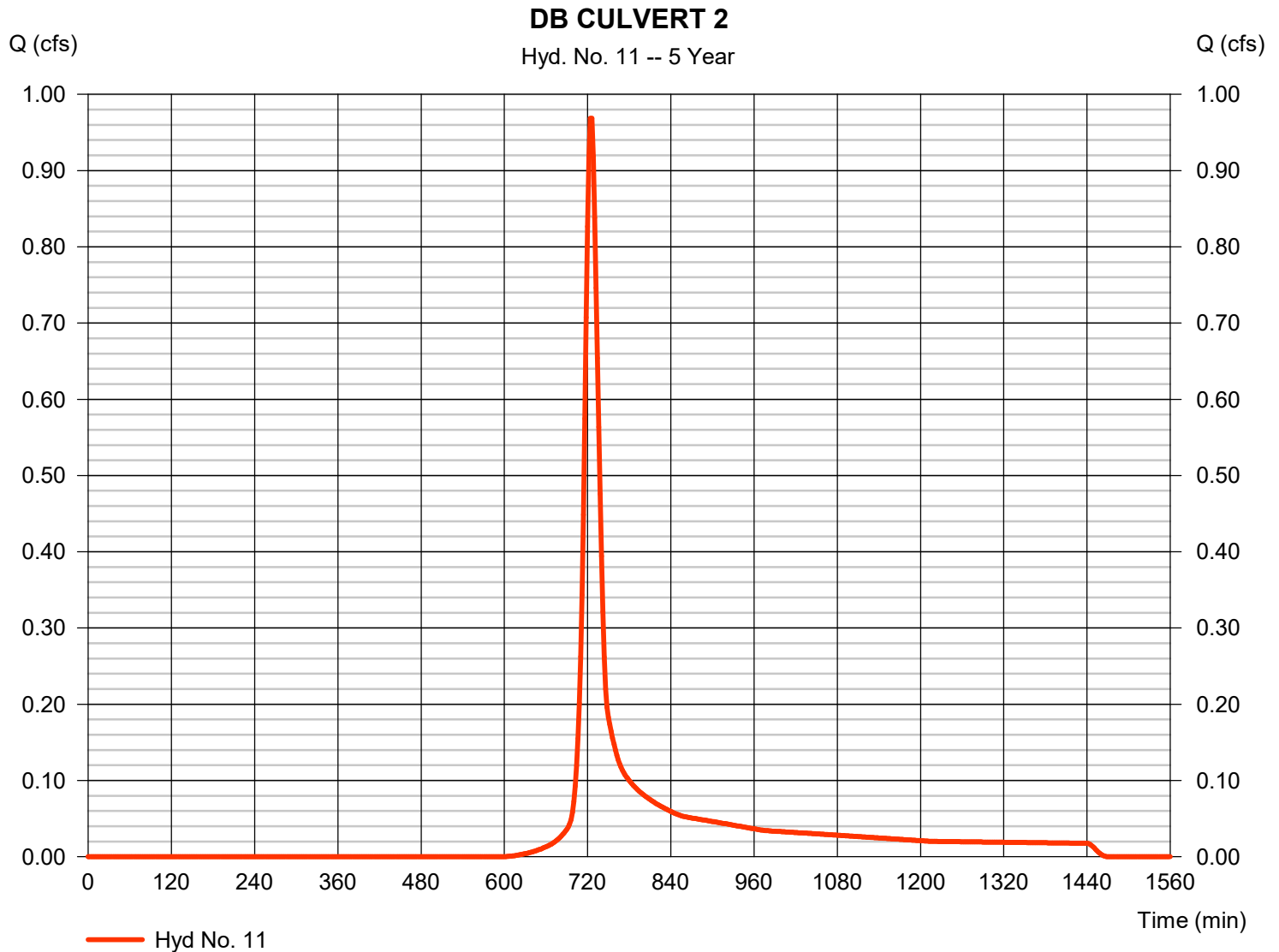
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Monday, 12 / 18 / 2023

Hyd. No. 11

DB CULVERT 2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.969 cfs
Storm frequency	= 5 yrs	Time to peak	= 726 min
Time interval	= 2 min	Hyd. volume	= 3,101 cuft
Drainage area	= 0.560 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 16.70 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

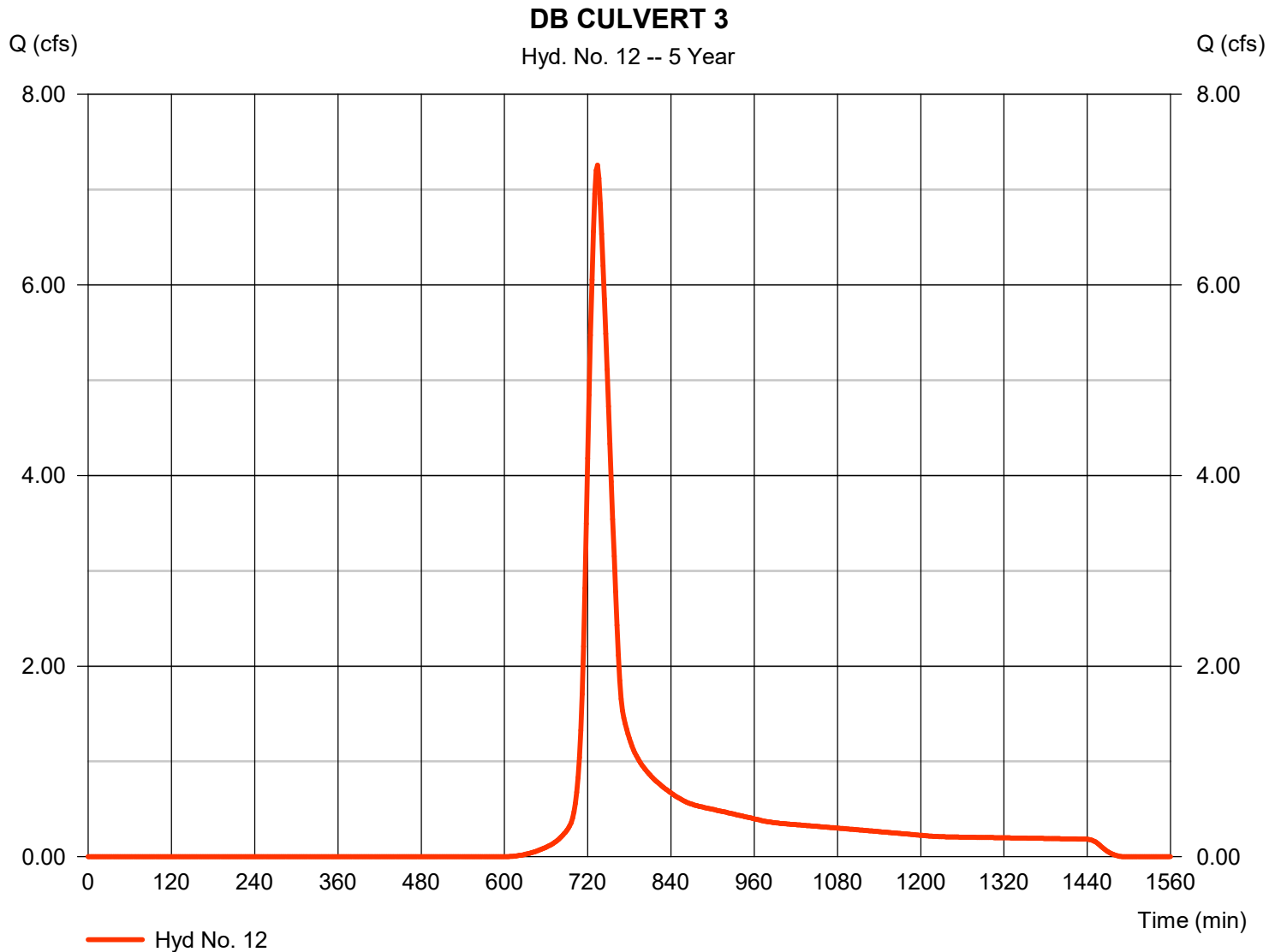
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Monday, 12 / 18 / 2023

Hyd. No. 12

DB CULVERT 3

Hydrograph type	= SCS Runoff	Peak discharge	= 7.256 cfs
Storm frequency	= 5 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 32,296 cuft
Drainage area	= 5.760 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.50 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

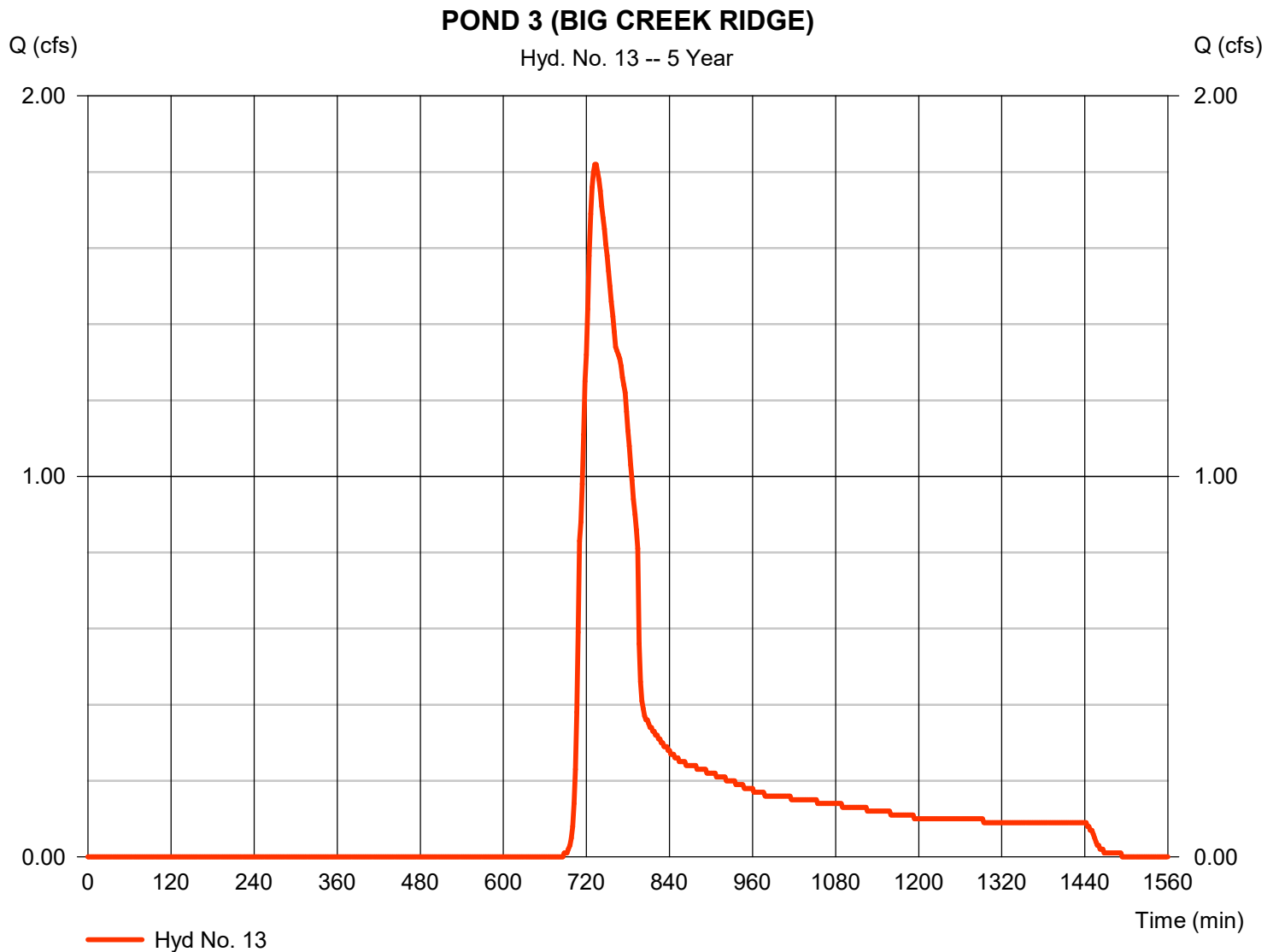
Monday, 12 / 18 / 2023

Hyd. No. 13

POND 3 (BIG CREEK RIDGE)

Hydrograph type = Manual
Storm frequency = 5 yrs
Time interval = 2 min

Peak discharge = 1.820 cfs
Time to peak = 732 min
Hyd. volume = 13,133 cuft



Hydrograph Report

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

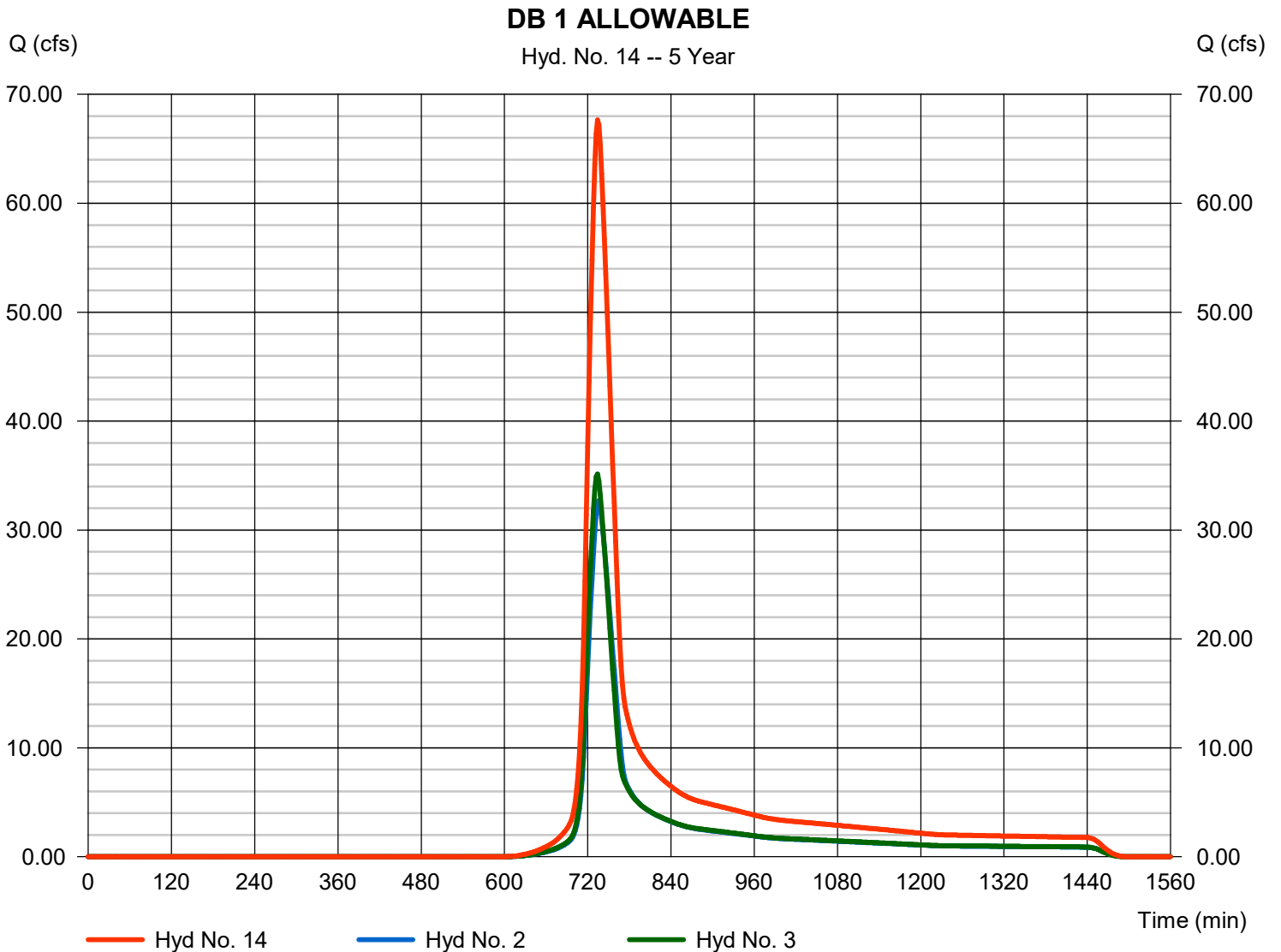
Monday, 12 / 18 / 2023

Hyd. No. 14

DB 1 ALLOWABLE

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

Peak discharge = 67.65 cfs
Time to peak = 734 min
Hyd. volume = 309,242 cuft
Contrib. drain. area = 27.900 ac



Hydrograph Report

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

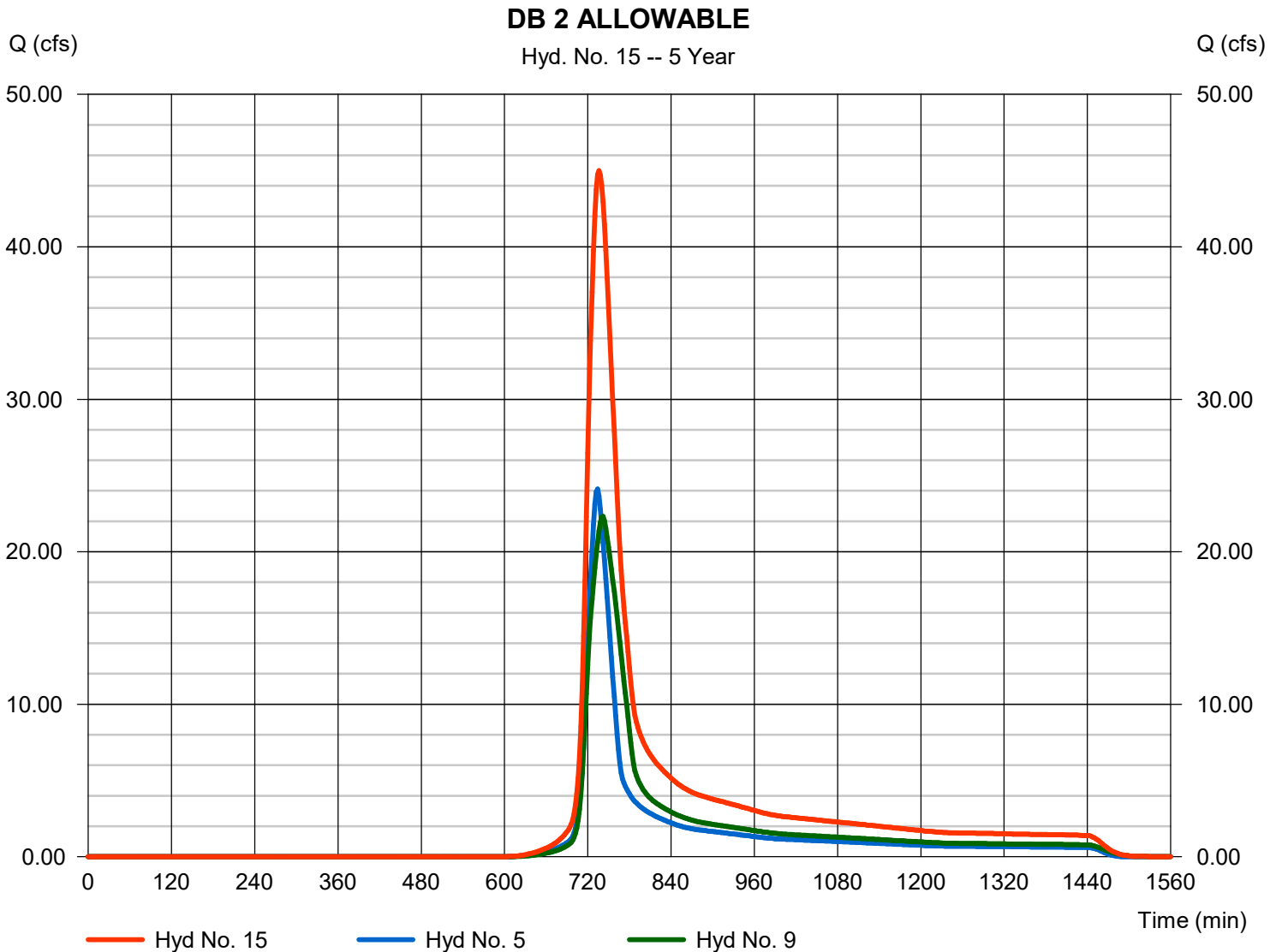
Monday, 12 / 18 / 2023

Hyd. No. 15

DB 2 ALLOWABLE

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

Peak discharge = 45.00 cfs
Time to peak = 736 min
Hyd. volume = 239,548 cuft
Contrib. drain. area = 0.000 ac



Hydrograph Summary Report

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

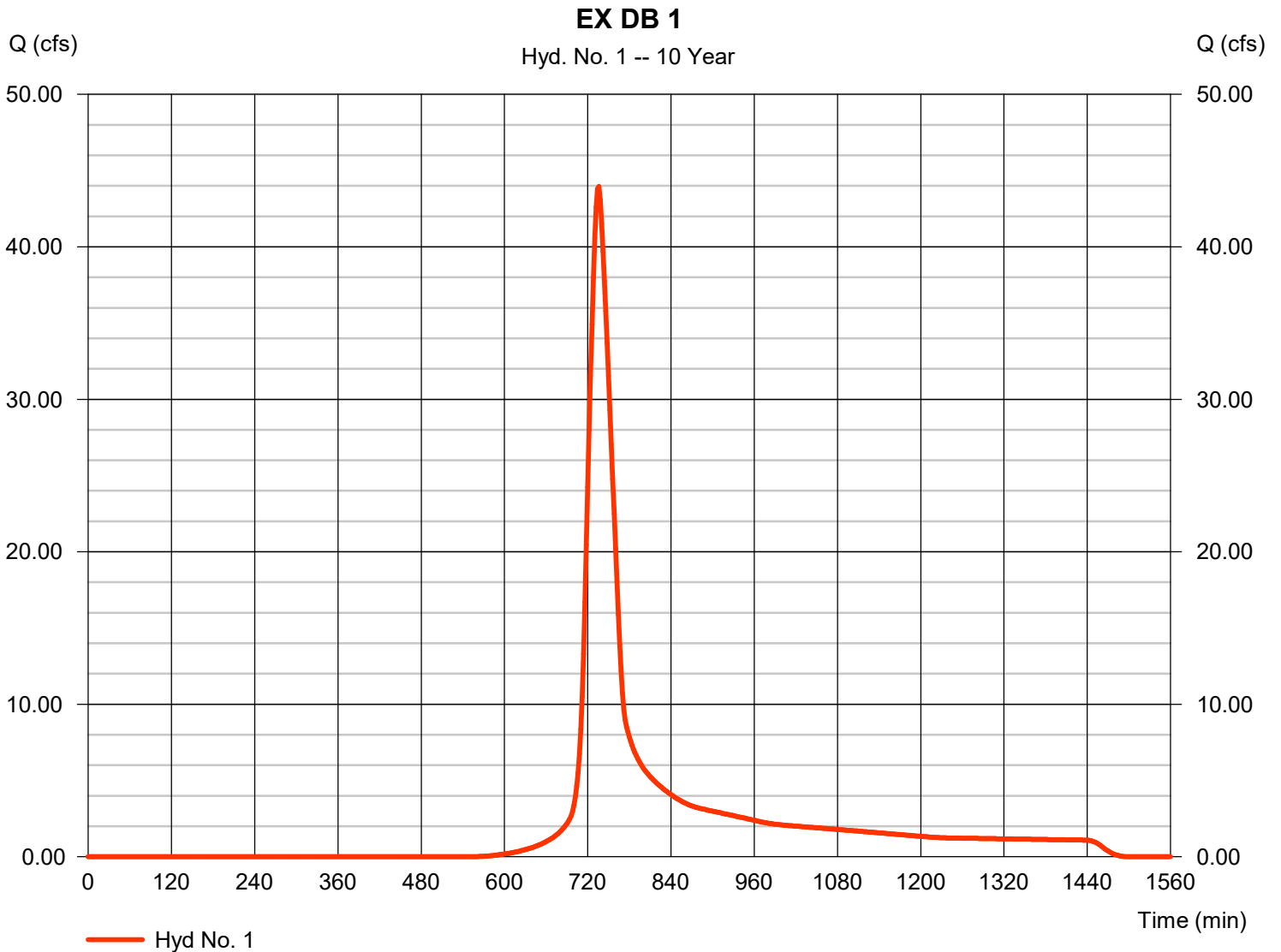
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	43.95	2	736	202,236	-----	-----	-----	EX DB 1	
2	Manual	32.71	2	736	152,807	-----	-----	-----	EX DB 1 - 5 YR	
3	SCS Runoff	47.21	2	734	207,043	-----	-----	-----	DB 1 OFF	
4	SCS Runoff	32.39	2	734	142,036	-----	-----	-----	EX DB 2	
5	Manual	24.11	2	734	107,320	-----	-----	-----	EX DB 2 - 5 YR	
6	SCS Runoff	3.114	2	722	8,284	-----	-----	-----	DB 2A OFF	
7	SCS Runoff	24.93	2	742	135,907	-----	-----	-----	DB 2B OFF	
8	Manual	4.370	2	732	32,412	-----	-----	-----	POND 2 (BIG CREEK RIDGE)	
9	Combine	29.70	2	742	176,603	6, 7, 8	-----	-----	DB 2 OFFSITE	
10	SCS Runoff	1.208	2	722	3,212	-----	-----	-----	DB CULVERT 1	
11	SCS Runoff	1.300	2	724	4,104	-----	-----	-----	DB CULVERT 2	
12	SCS Runoff	9.747	2	734	42,744	-----	-----	-----	DB CULVERT 3	
13	Manual	0.000	2	n/a	0	-----	-----	-----	POND 3 (BIG CREEK RIDGE)	
14	Combine	79.71	2	734	359,850	2, 3,	-----	-----	DB 1 ALLOWABLE	
15	Combine	52.05	2	736	283,922	5, 9,	-----	-----	DB 2 ALLOWABLE	
Existing Hydraflow.gpw					Return Period: 10 Year			Monday, 12 / 18 / 2023		

Hydrograph Report

Hyd. No. 1

EX DB 1

Hydrograph type	= SCS Runoff	Peak discharge	= 43.95 cfs
Storm frequency	= 10 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 202,236 cuft
Drainage area	= 27.910 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 36.30 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

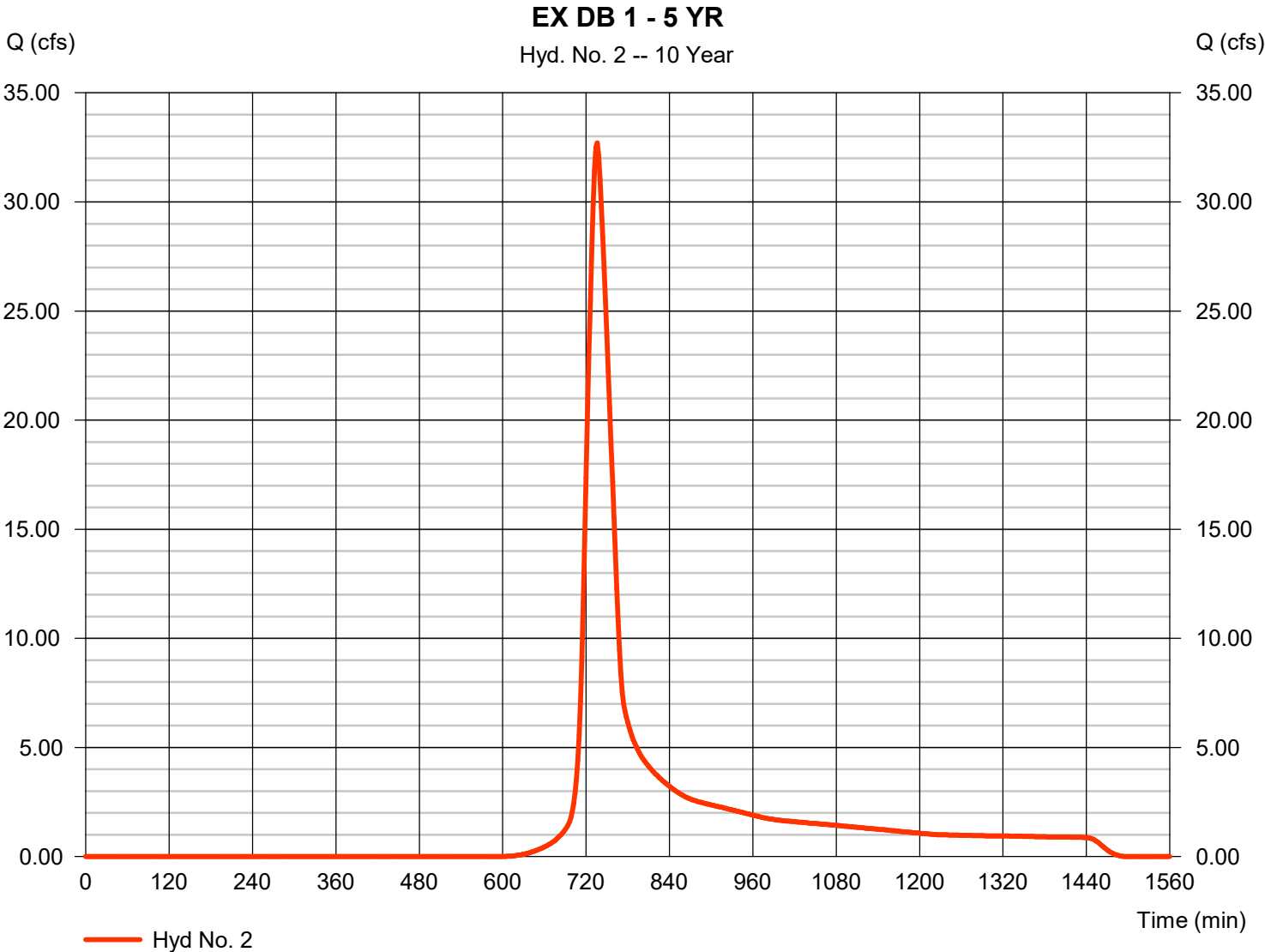
Monday, 12 / 18 / 2023

Hyd. No. 2

EX DB 1 - 5 YR

Hydrograph type = Manual
Storm frequency = 10 yrs
Time interval = 2 min

Peak discharge = 32.71 cfs
Time to peak = 736 min
Hyd. volume = 152,807 cuft

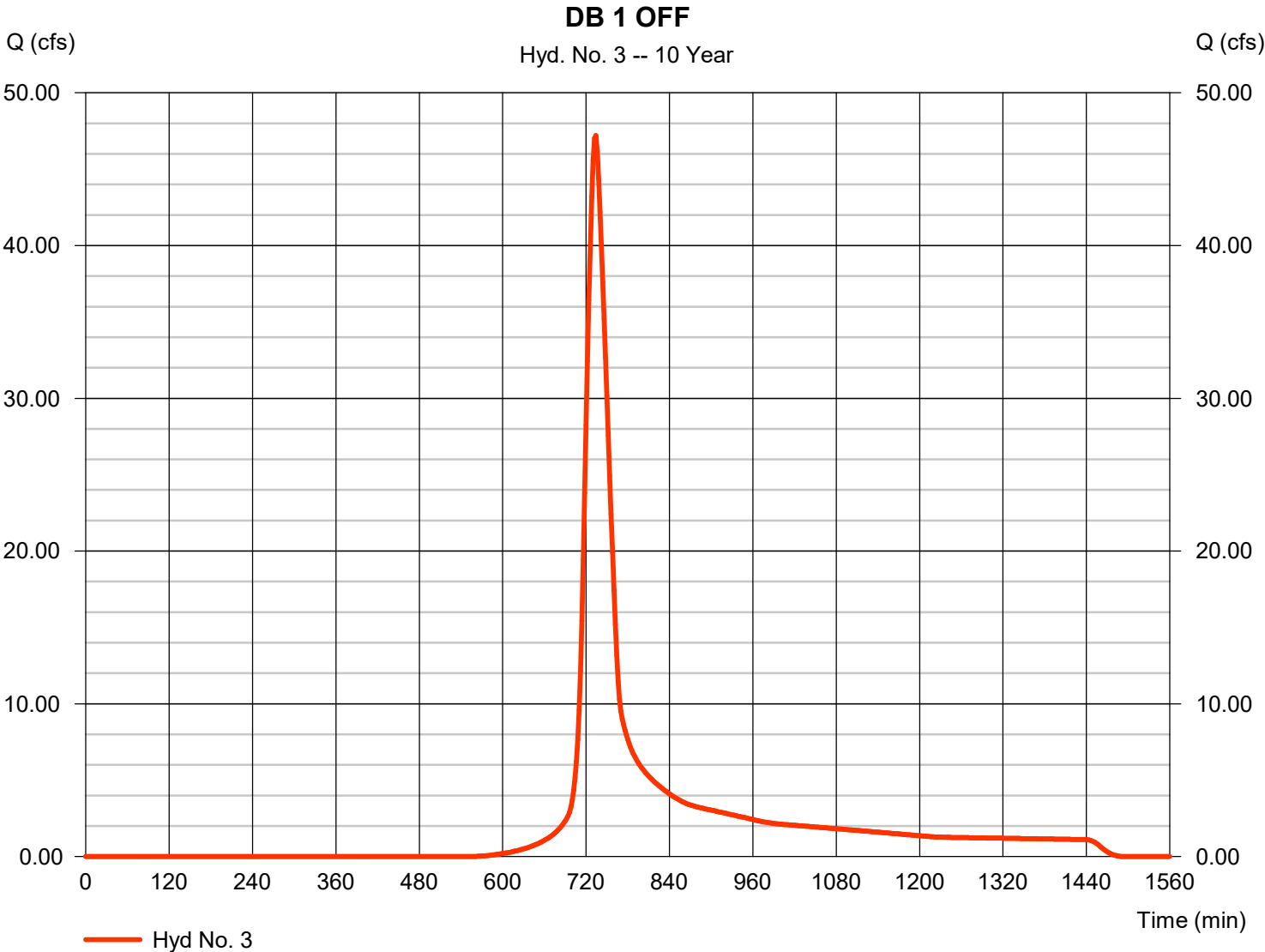


Hydrograph Report

Hyd. No. 3

DB 1 OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 47.21 cfs
Storm frequency	= 10 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 207,043 cuft
Drainage area	= 27.900 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.30 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

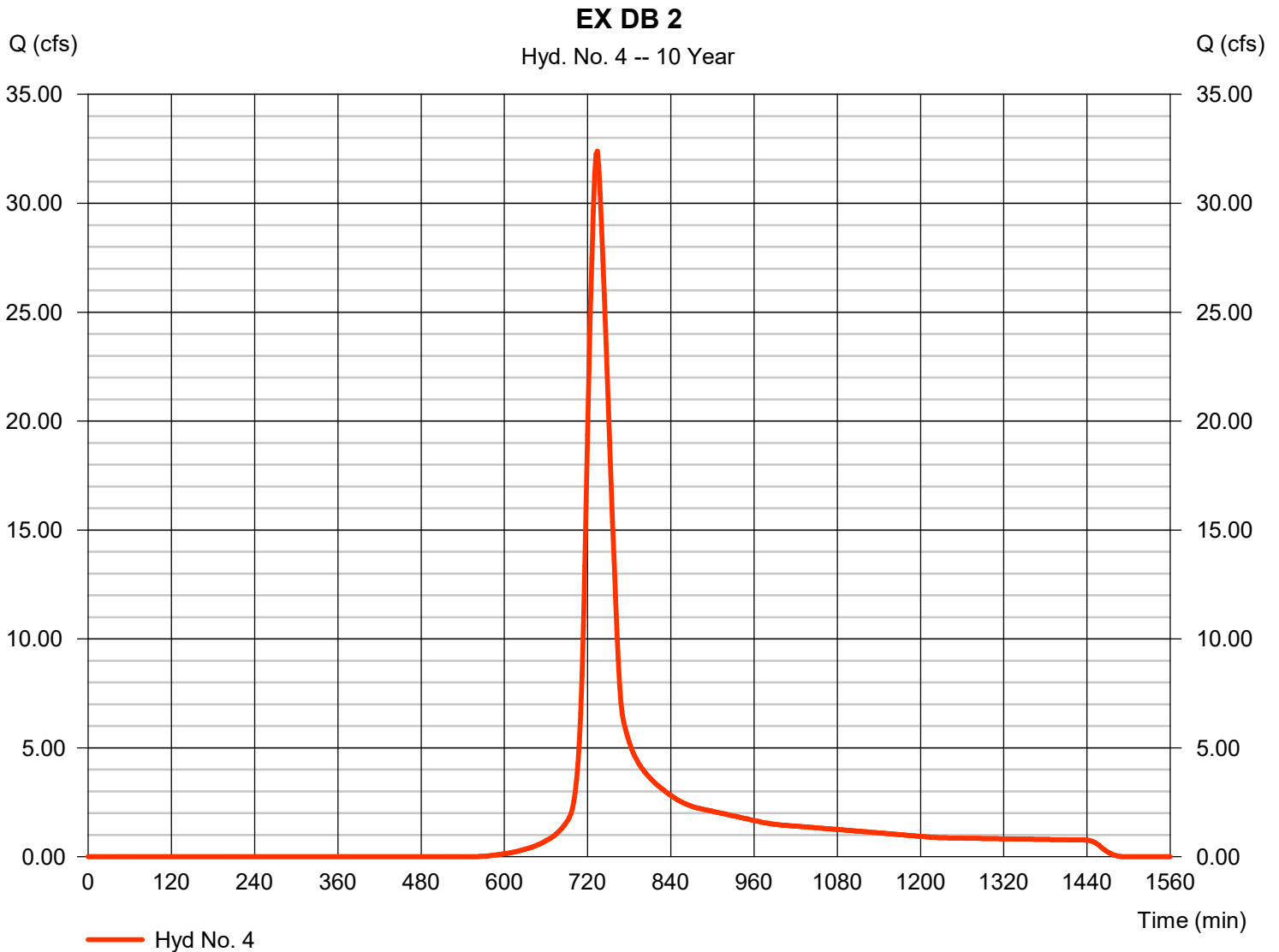
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Hyd. No. 4

EX DB 2

Hydrograph type	= SCS Runoff	Peak discharge	= 32.39 cfs
Storm frequency	= 10 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 142,036 cuft
Drainage area	= 19.140 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.10 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

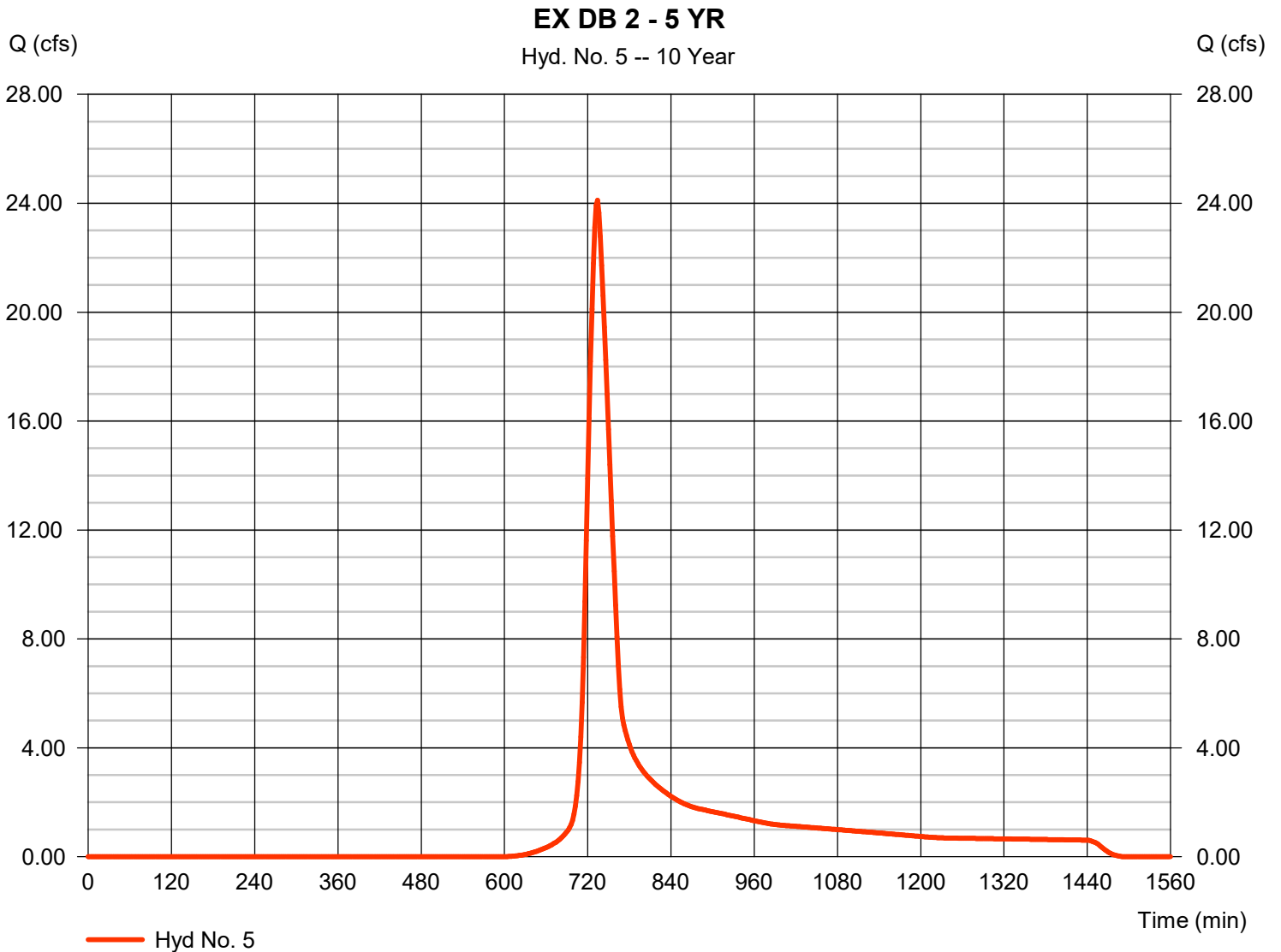
Monday, 12 / 18 / 2023

Hyd. No. 5

EX DB 2 - 5 YR

Hydrograph type = Manual
Storm frequency = 10 yrs
Time interval = 2 min

Peak discharge = 24.11 cfs
Time to peak = 734 min
Hyd. volume = 107,320 cuft



Hydrograph Report

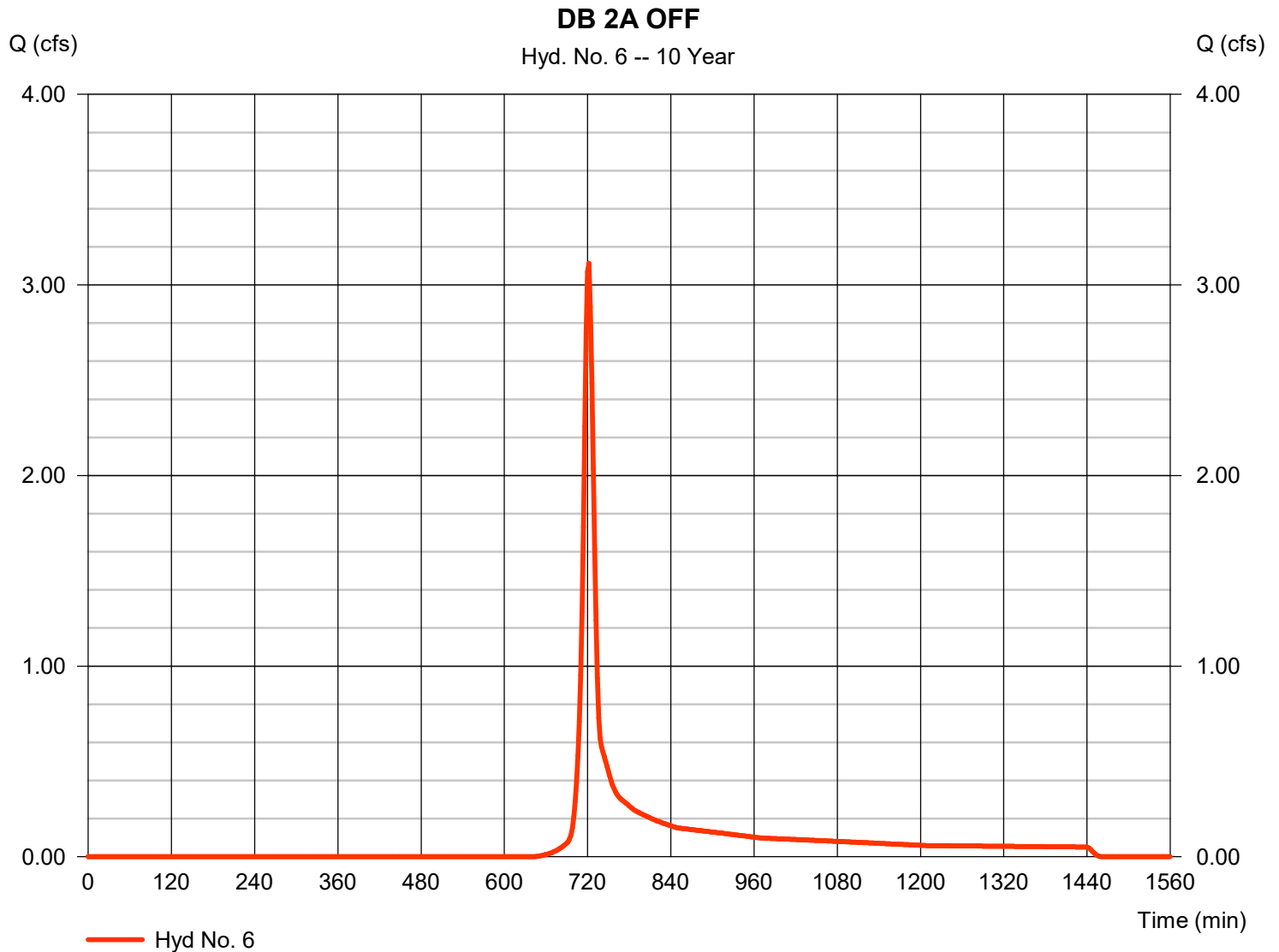
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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Hyd. No. 6

DB 2A OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 3.114 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 8,284 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

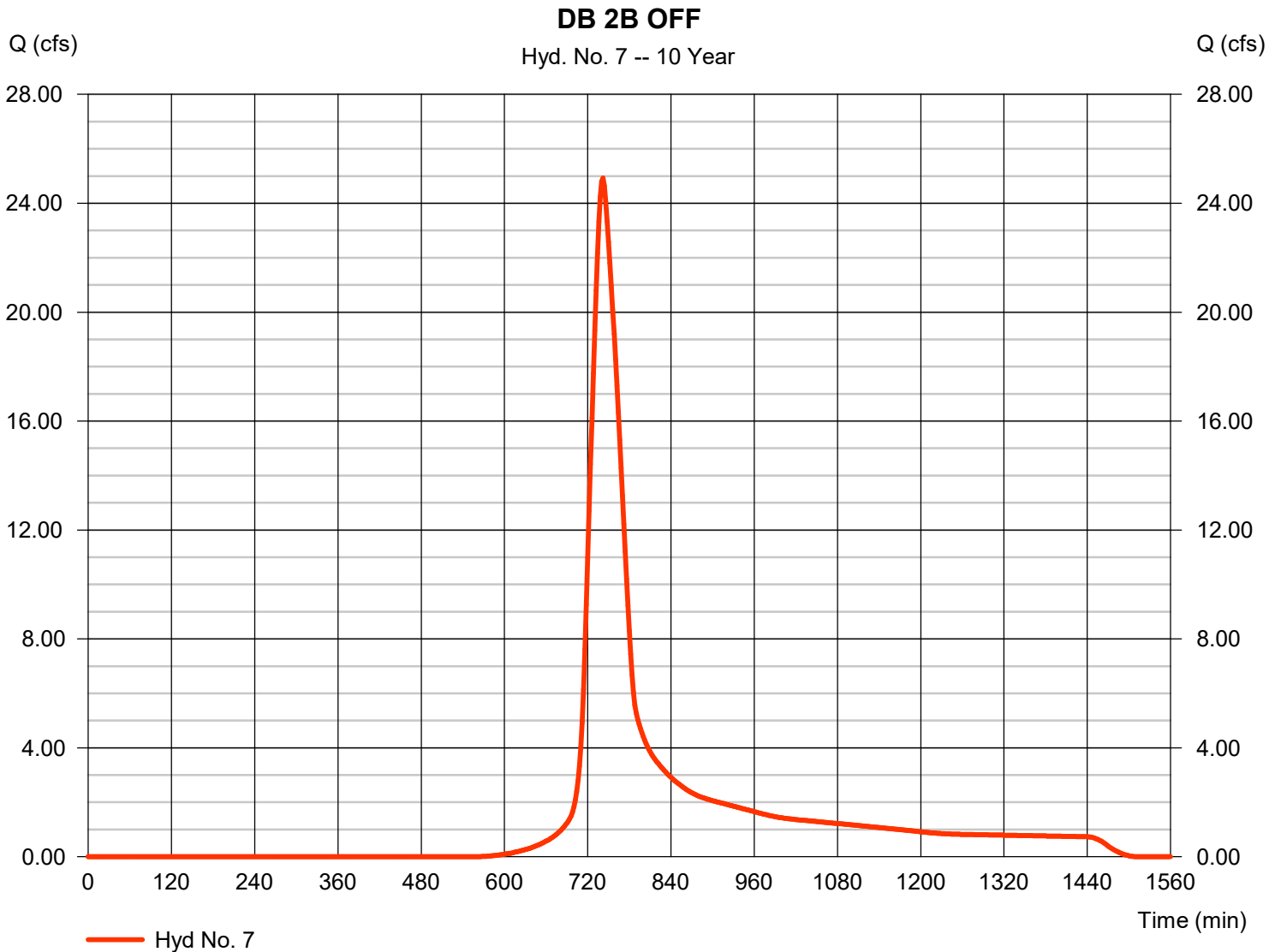
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 7

DB 2B OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 24.93 cfs
Storm frequency	= 10 yrs	Time to peak	= 742 min
Time interval	= 2 min	Hyd. volume	= 135,907 cuft
Drainage area	= 18.710 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 47.10 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

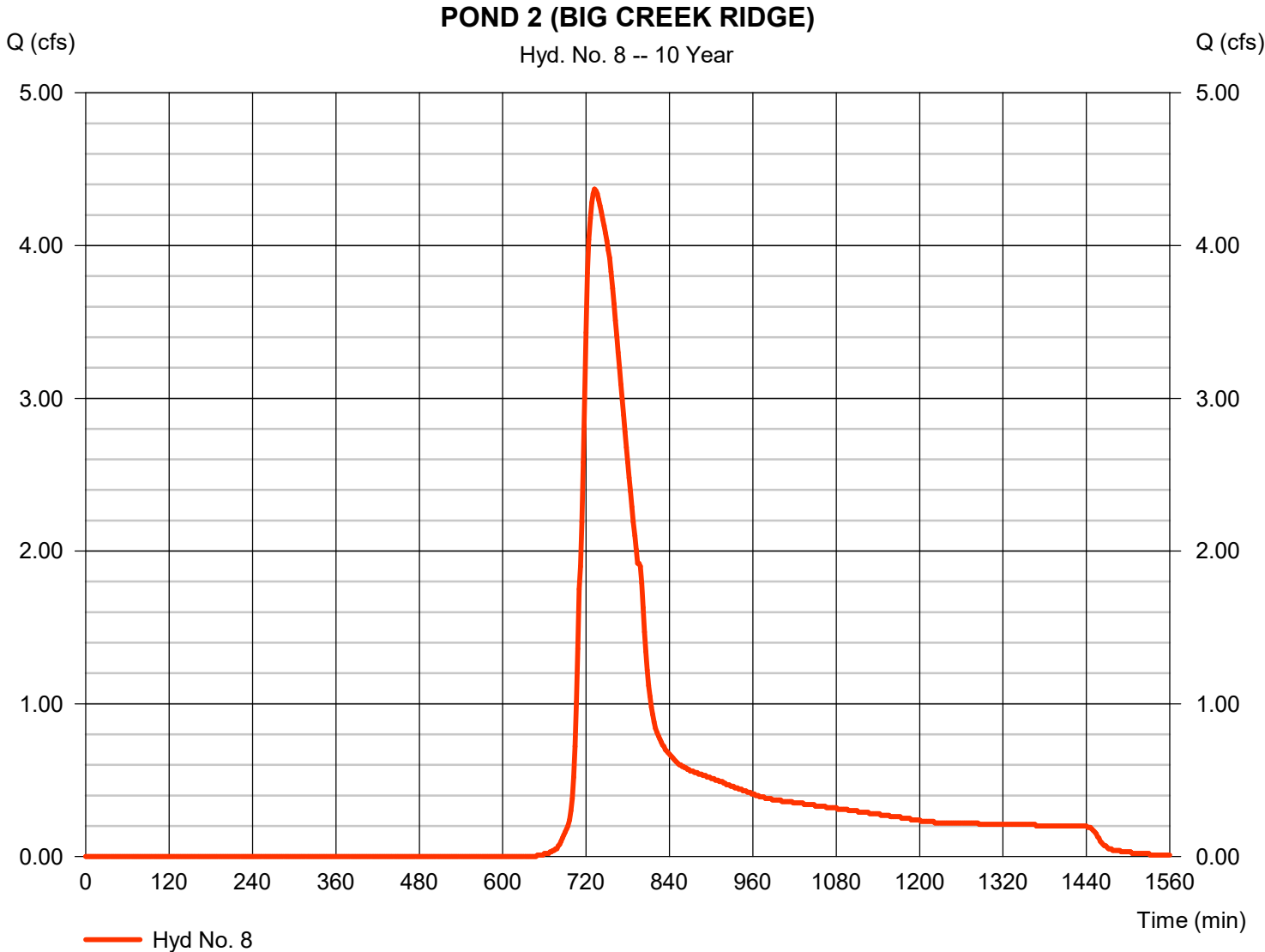
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 8

POND 2 (BIG CREEK RIDGE)

Hydrograph type	= Manual	Peak discharge	= 4.370 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 32,412 cuft



Hydrograph Report

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

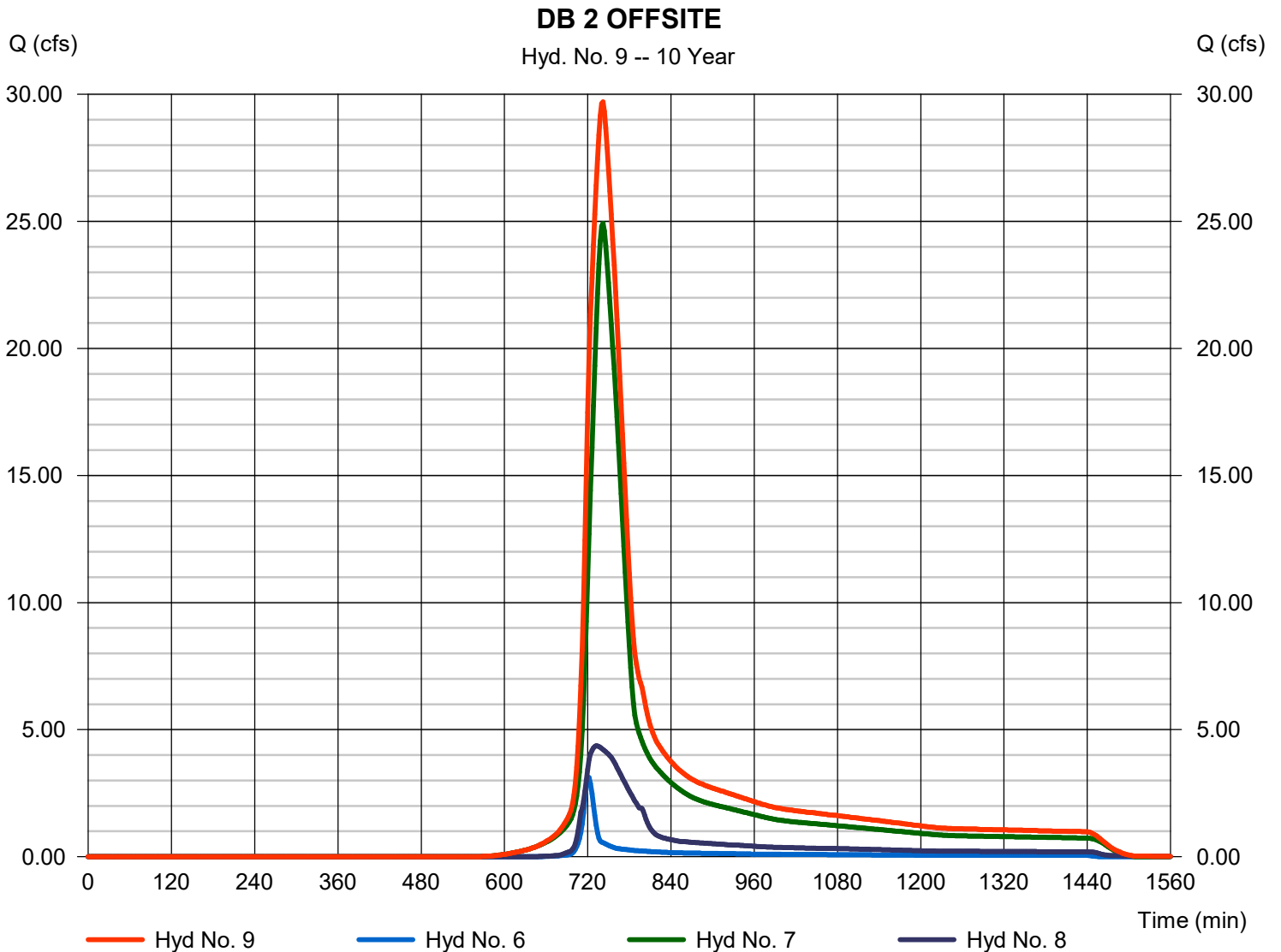
Monday, 12 / 18 / 2023

Hyd. No. 9

DB 2 OFFSITE

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 6, 7, 8

Peak discharge = 29.70 cfs
Time to peak = 742 min
Hyd. volume = 176,603 cuft
Contrib. drain. area = 20.180 ac



Hydrograph Report

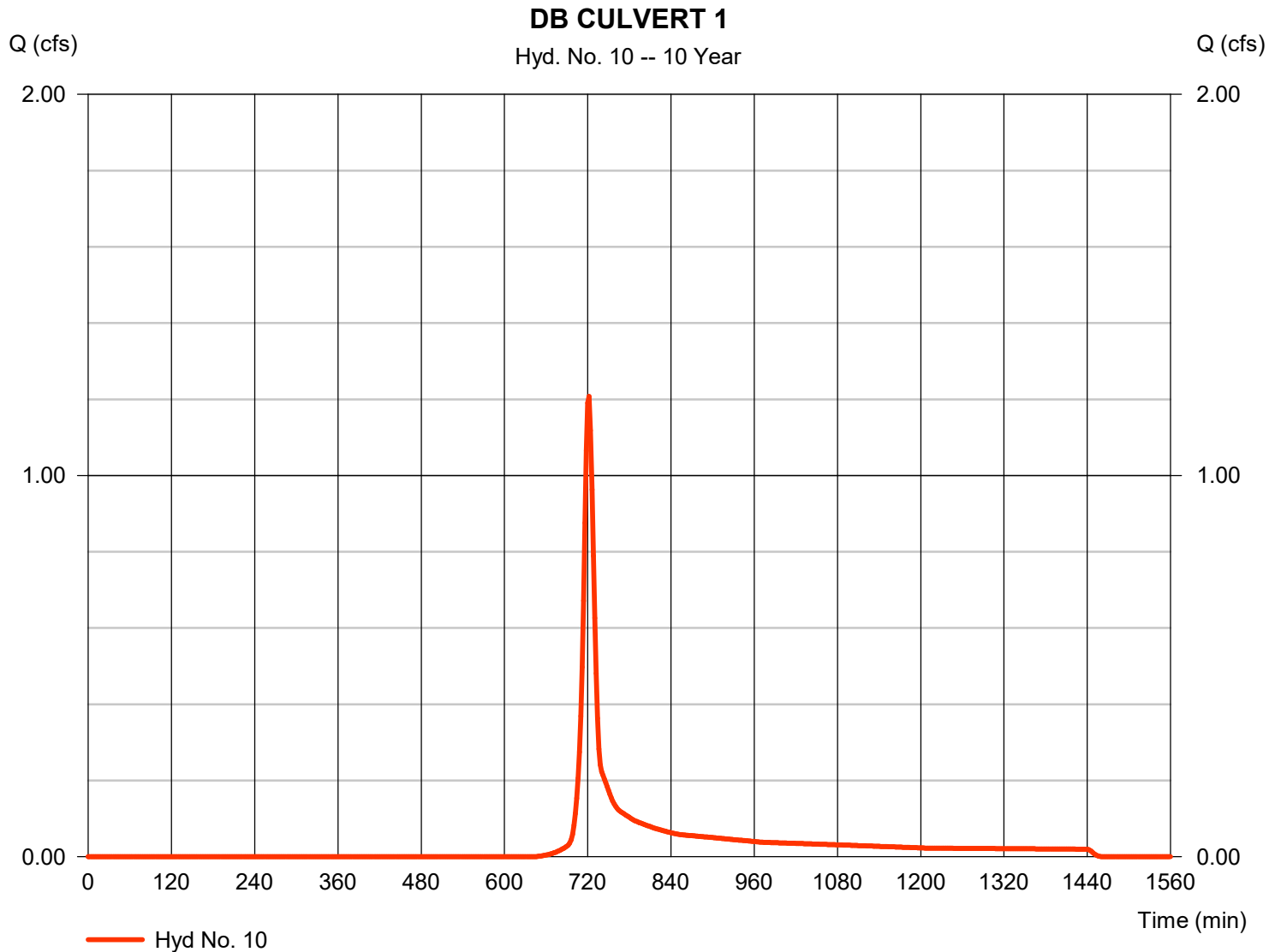
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 10

DB CULVERT 1

Hydrograph type	= SCS Runoff	Peak discharge	= 1.208 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 3,212 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

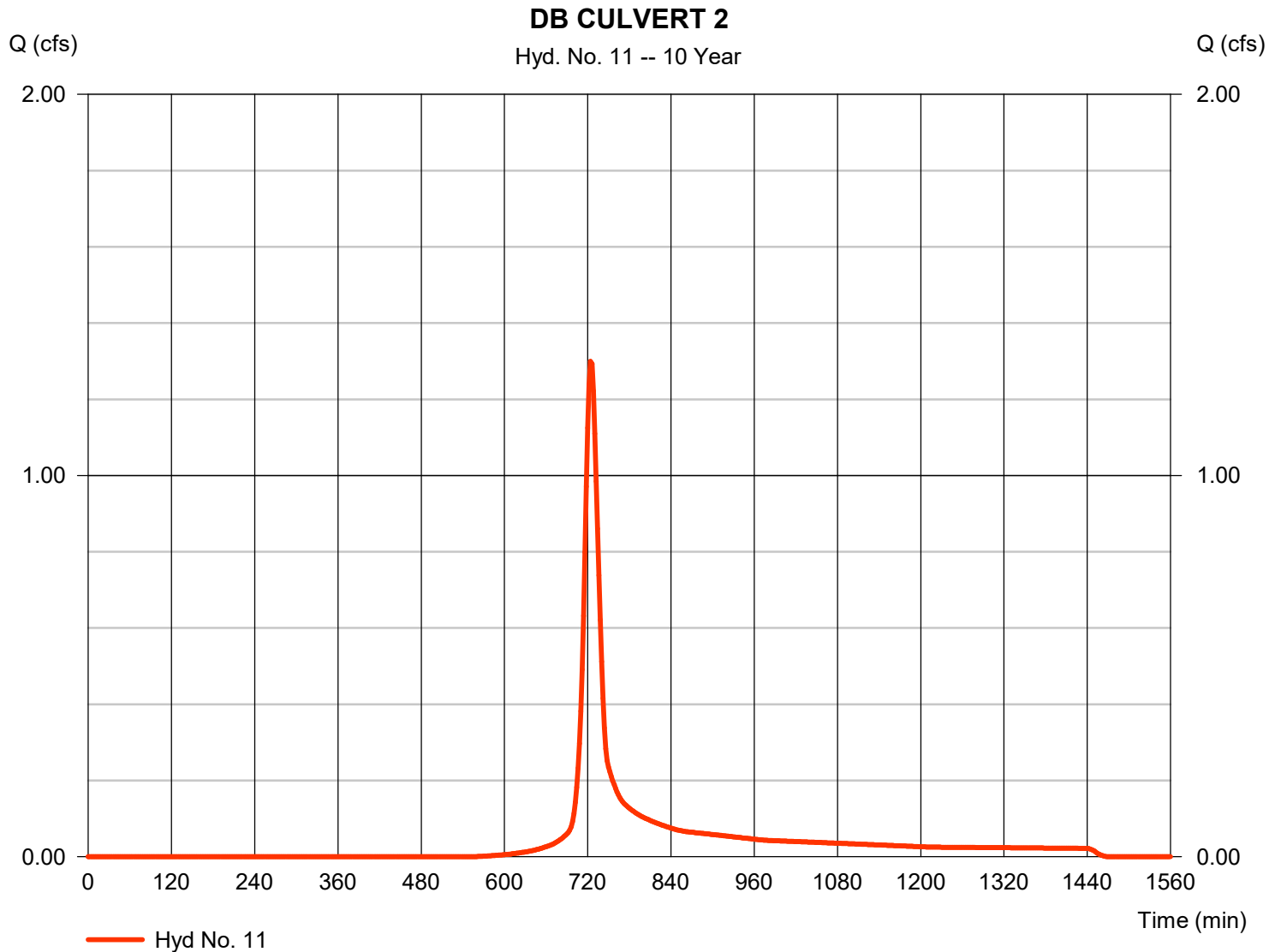
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 11

DB CULVERT 2

Hydrograph type	= SCS Runoff	Peak discharge	= 1.300 cfs
Storm frequency	= 10 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 4,104 cuft
Drainage area	= 0.560 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 16.70 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

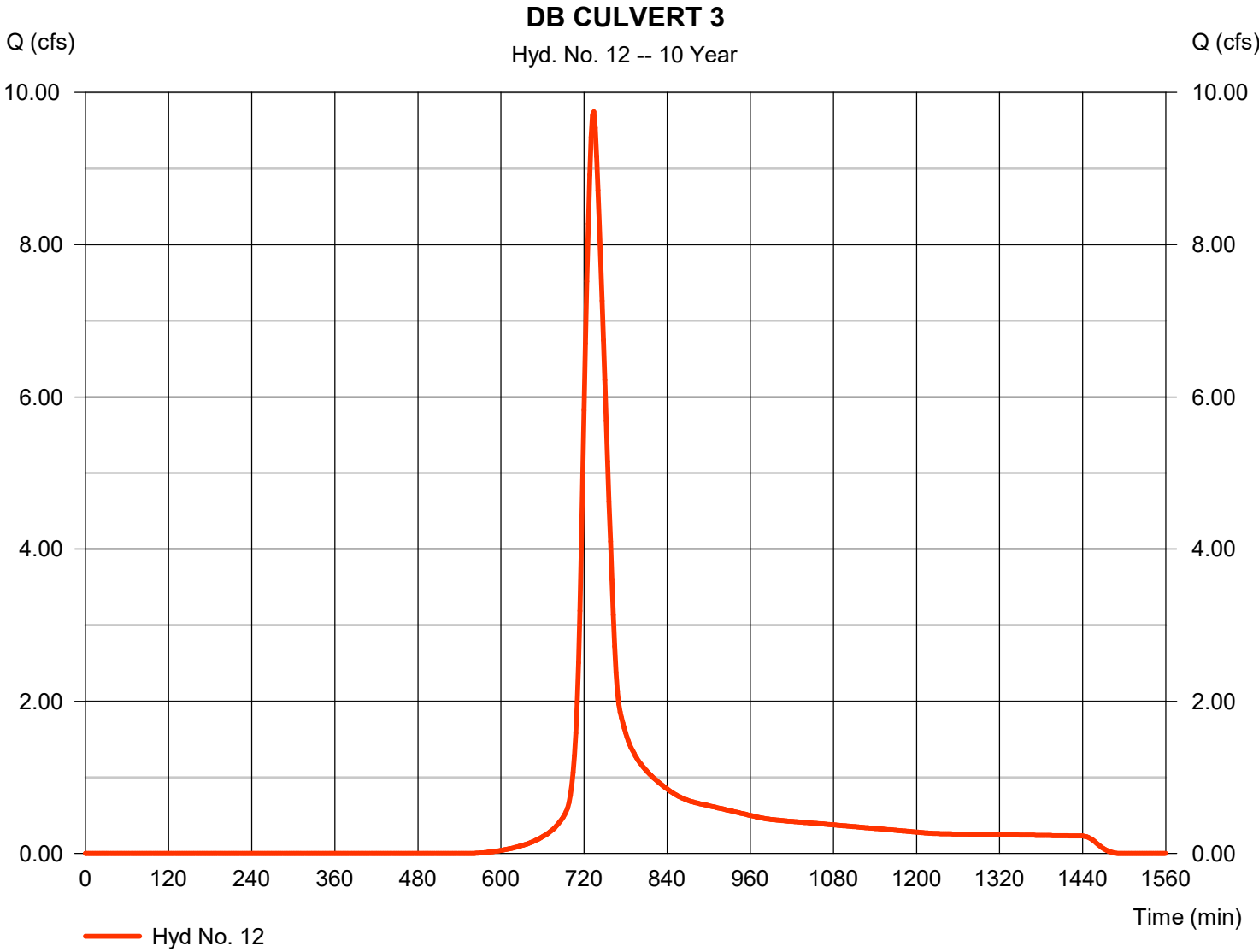


Hydrograph Report

Hyd. No. 12

DB CULVERT 3

Hydrograph type	= SCS Runoff	Peak discharge	= 9.747 cfs
Storm frequency	= 10 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 42,744 cuft
Drainage area	= 5.760 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.50 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

Monday, 12 / 18 / 2023

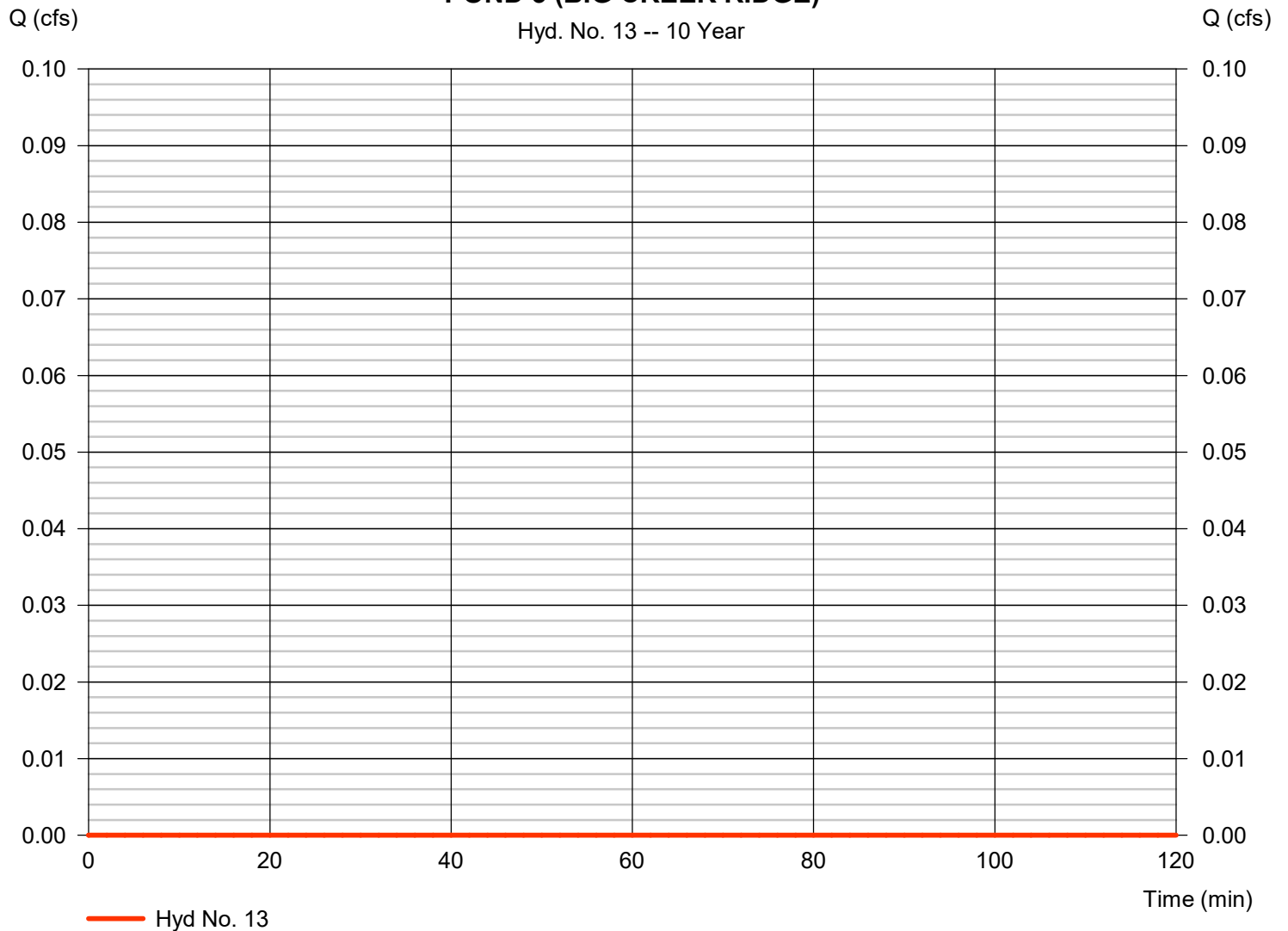
Hyd. No. 13

POND 3 (BIG CREEK RIDGE)

Hydrograph type	= Manual	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft

POND 3 (BIG CREEK RIDGE)

Hyd. No. 13 -- 10 Year



Hydrograph Report

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

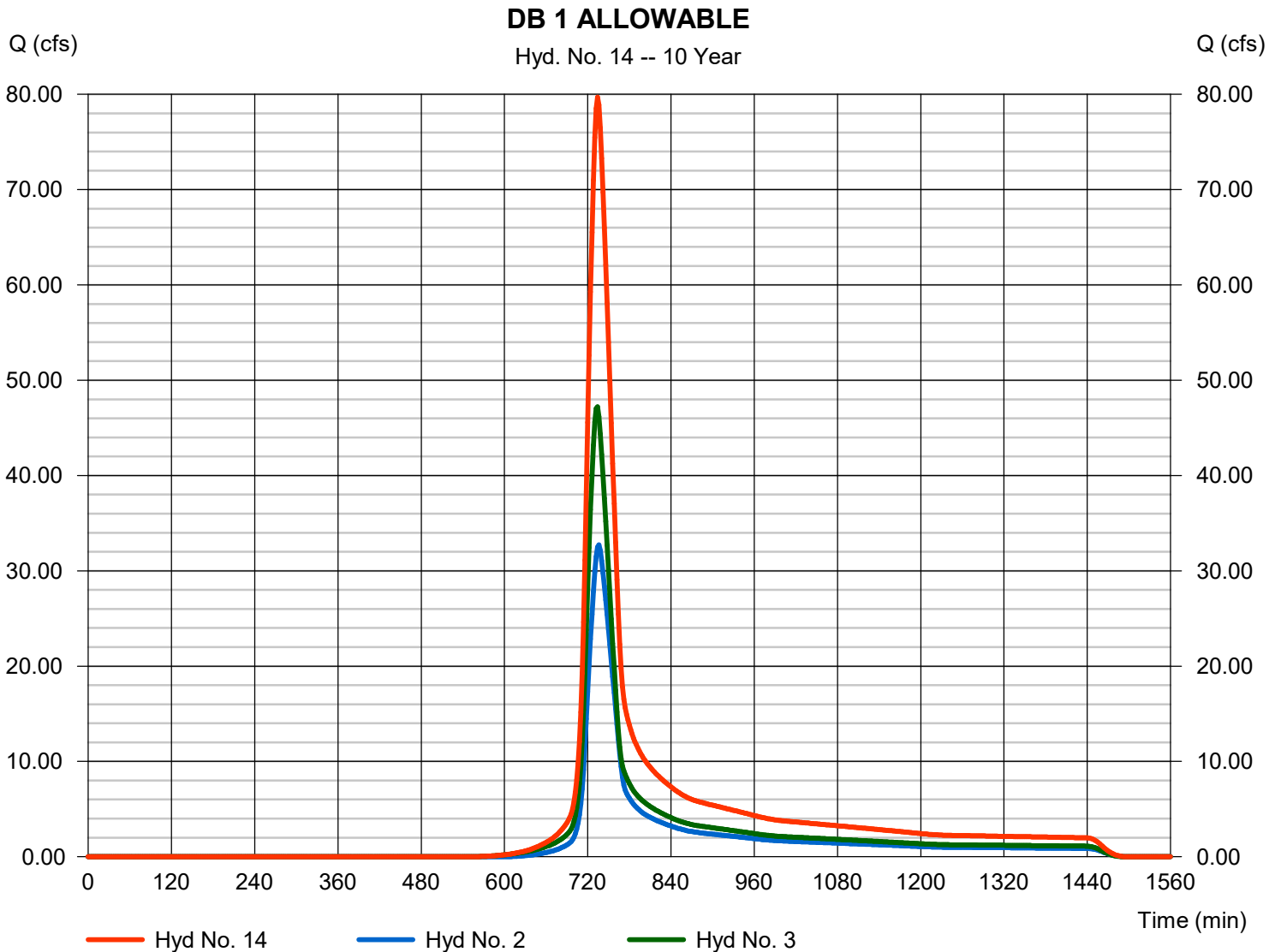
Monday, 12 / 18 / 2023

Hyd. No. 14

DB 1 ALLOWABLE

Hydrograph type = Combine
 Storm frequency = 10 yrs
 Time interval = 2 min
 Inflow hyds. = 2, 3

Peak discharge = 79.71 cfs
 Time to peak = 734 min
 Hyd. volume = 359,850 cuft
 Contrib. drain. area = 27.900 ac



Hydrograph Report

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

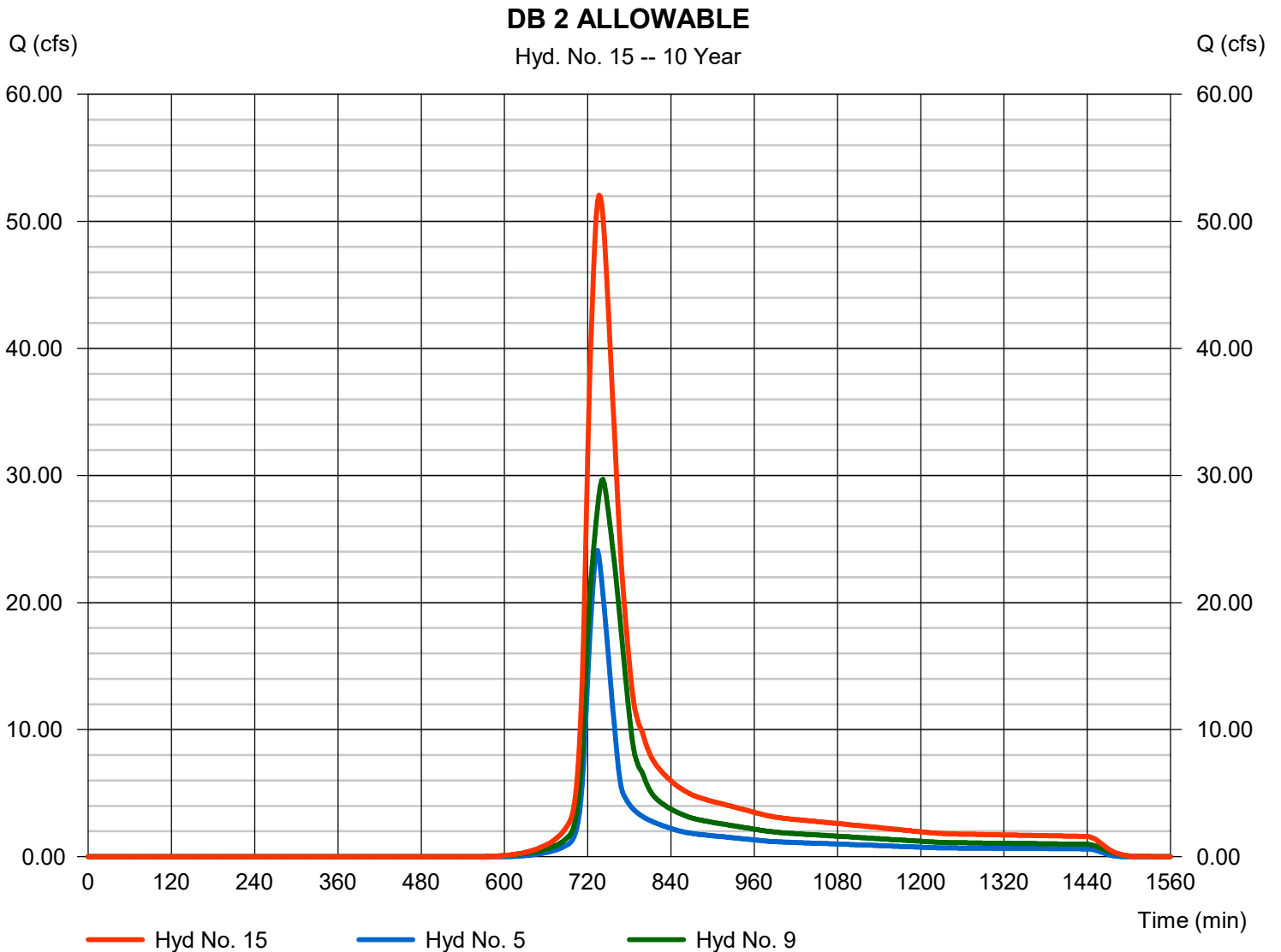
Monday, 12 / 18 / 2023

Hyd. No. 15

DB 2 ALLOWABLE

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 5, 9

Peak discharge = 52.05 cfs
Time to peak = 736 min
Hyd. volume = 283,922 cuft
Contrib. drain. area = 0.000 ac



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	94.11	2	734	426,223	-----	-----	-----	EX DB 1
2	Manual	32.71	2	736	152,807	-----	-----	-----	EX DB 1 - 5 YR
3	SCS Runoff	101.01	2	732	436,354	-----	-----	-----	DB 1 OFF
4	SCS Runoff	69.29	2	732	299,348	-----	-----	-----	EX DB 2
5	Manual	24.11	2	734	107,320	-----	-----	-----	EX DB 2 - 5 YR
6	SCS Runoff	7.436	2	720	19,301	-----	-----	-----	DB 2A OFF
7	SCS Runoff	53.45	2	740	286,430	-----	-----	-----	DB 2B OFF
8	Manual	6.110	2	734	74,375	-----	-----	-----	POND 2 (BIG CREEK RIDGE)
9	Combine	60.78	2	740	380,106	6, 7, 8	-----	-----	DB 2 OFFSITE
10	SCS Runoff	2.883	2	720	7,484	-----	-----	-----	DB CULVERT 1
11	SCS Runoff	2.765	2	724	8,650	-----	-----	-----	DB CULVERT 2
12	SCS Runoff	20.85	2	732	90,086	-----	-----	-----	DB CULVERT 3
13	Manual	2.880	2	736	42,406	-----	-----	-----	POND 3 (BIG CREEK RIDGE)
14	Combine	133.19	2	734	589,161	2, 3,	-----	-----	DB 1 ALLOWABLE
15	Combine	82.79	2	738	487,426	5, 9,	-----	-----	DB 2 ALLOWABLE
Existing Hydraflow.gpw					Return Period: 100 Year			Monday, 12 / 18 / 2023	

Hydrograph Report

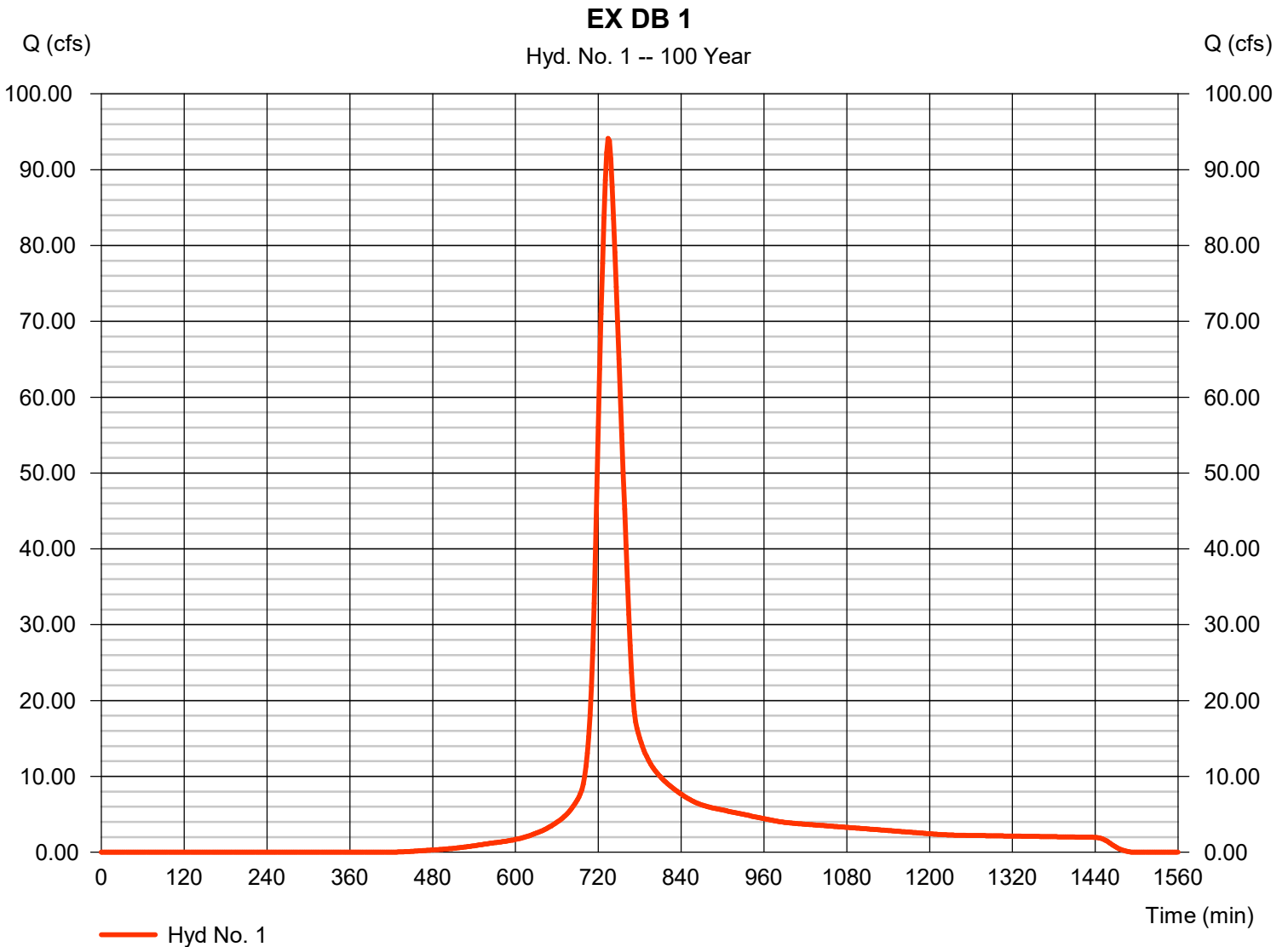
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 1

EX DB 1

Hydrograph type	= SCS Runoff	Peak discharge	= 94.11 cfs
Storm frequency	= 100 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 426,223 cuft
Drainage area	= 27.910 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 36.30 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

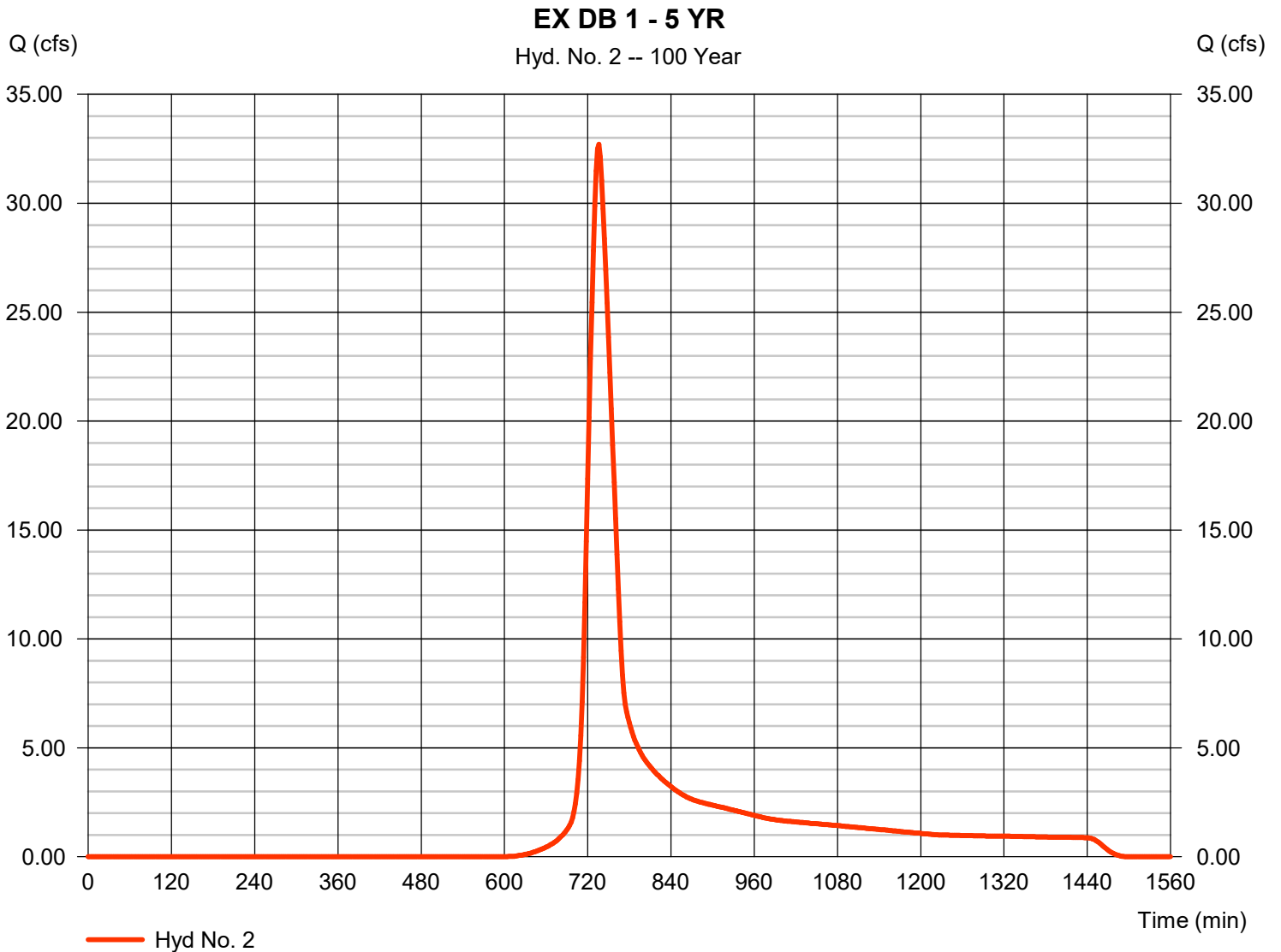
Monday, 12 / 18 / 2023

Hyd. No. 2

EX DB 1 - 5 YR

Hydrograph type = Manual
Storm frequency = 100 yrs
Time interval = 2 min

Peak discharge = 32.71 cfs
Time to peak = 736 min
Hyd. volume = 152,807 cuft

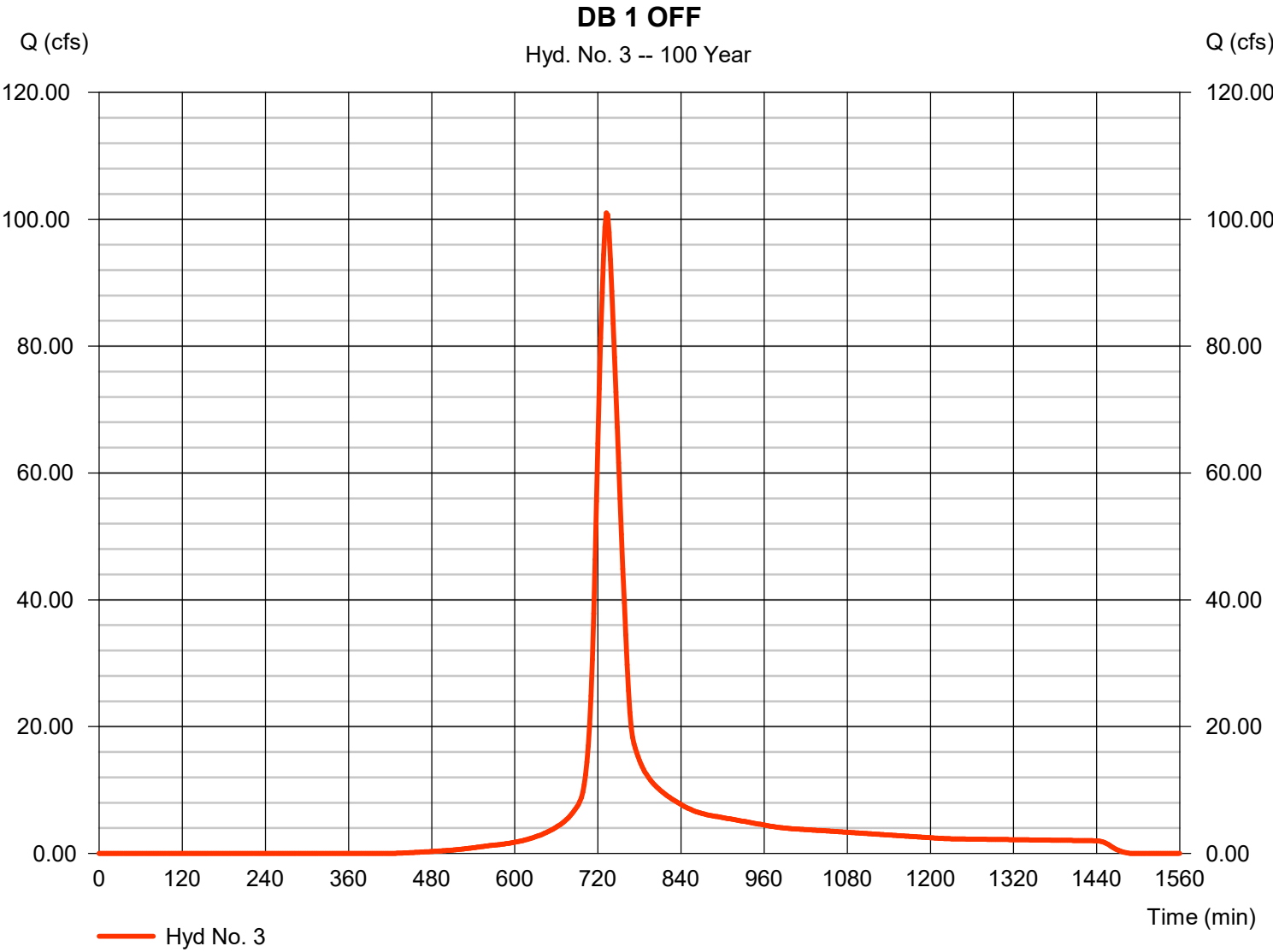


Hydrograph Report

Hyd. No. 3

DB 1 OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 101.01 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 436,354 cuft
Drainage area	= 27.900 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.30 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

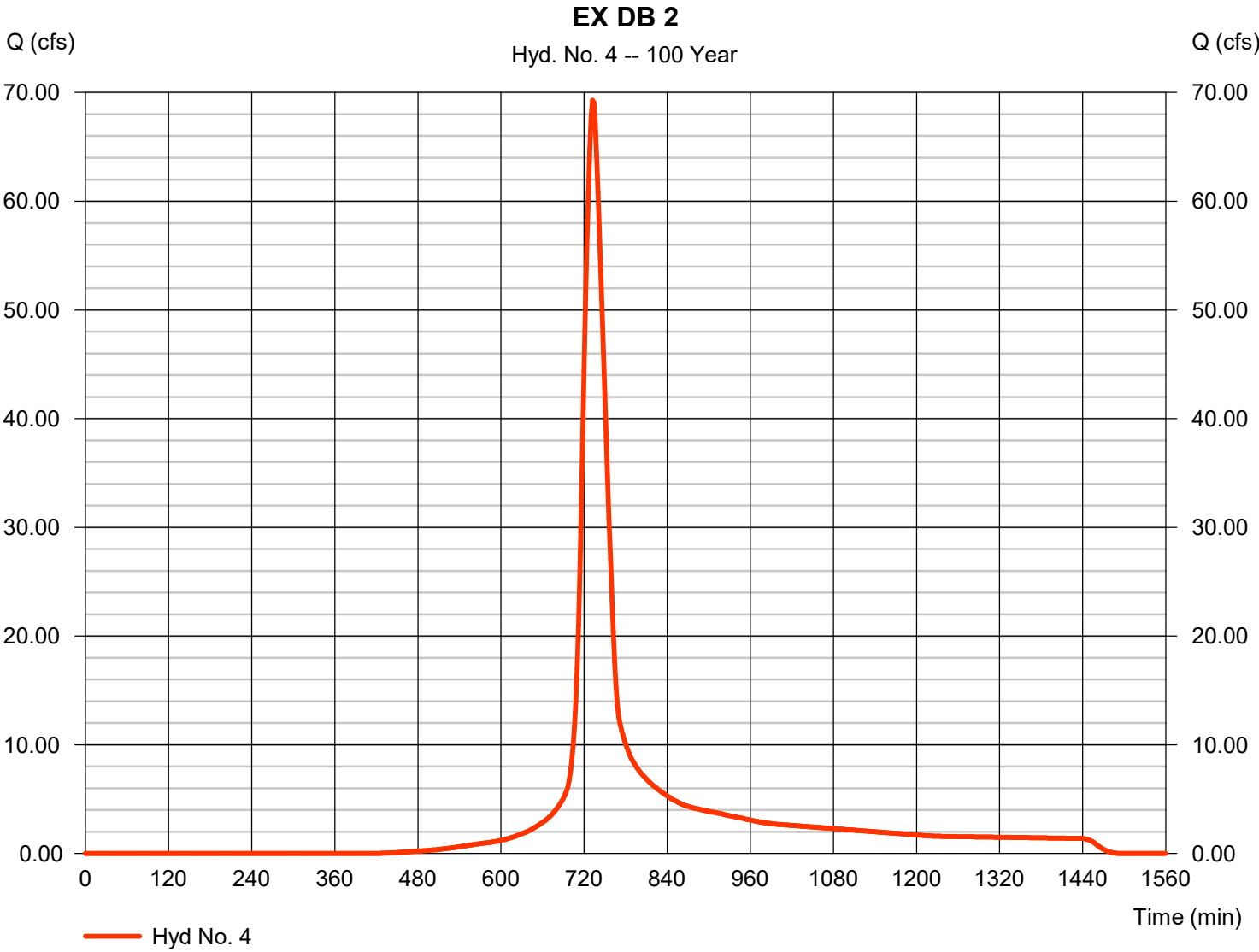
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Monday, 12 / 18 / 2023

Hyd. No. 4

EX DB 2

Hydrograph type	= SCS Runoff	Peak discharge	= 69.29 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 299,348 cuft
Drainage area	= 19.140 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.10 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

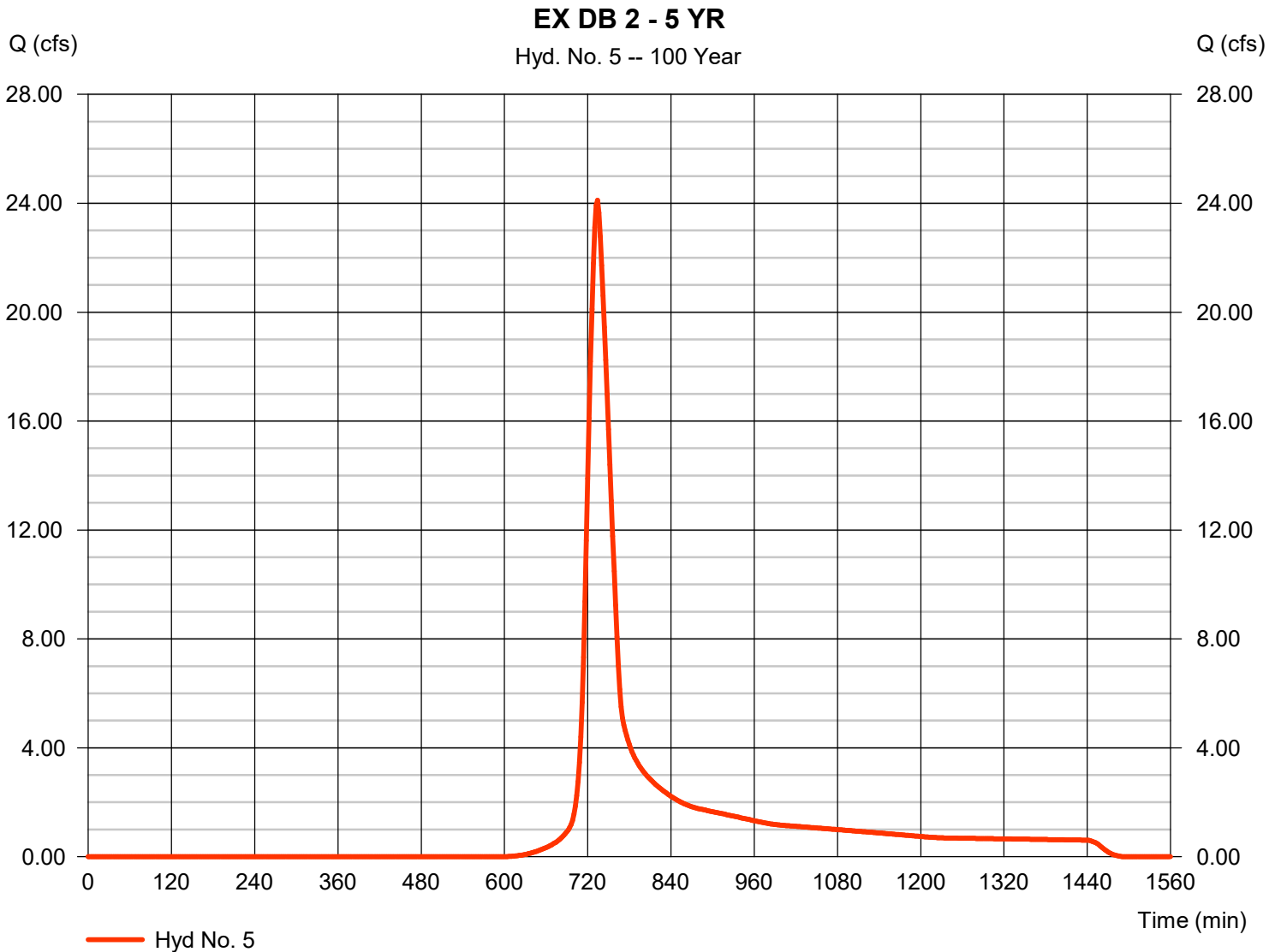
Monday, 12 / 18 / 2023

Hyd. No. 5

EX DB 2 - 5 YR

Hydrograph type = Manual
Storm frequency = 100 yrs
Time interval = 2 min

Peak discharge = 24.11 cfs
Time to peak = 734 min
Hyd. volume = 107,320 cuft

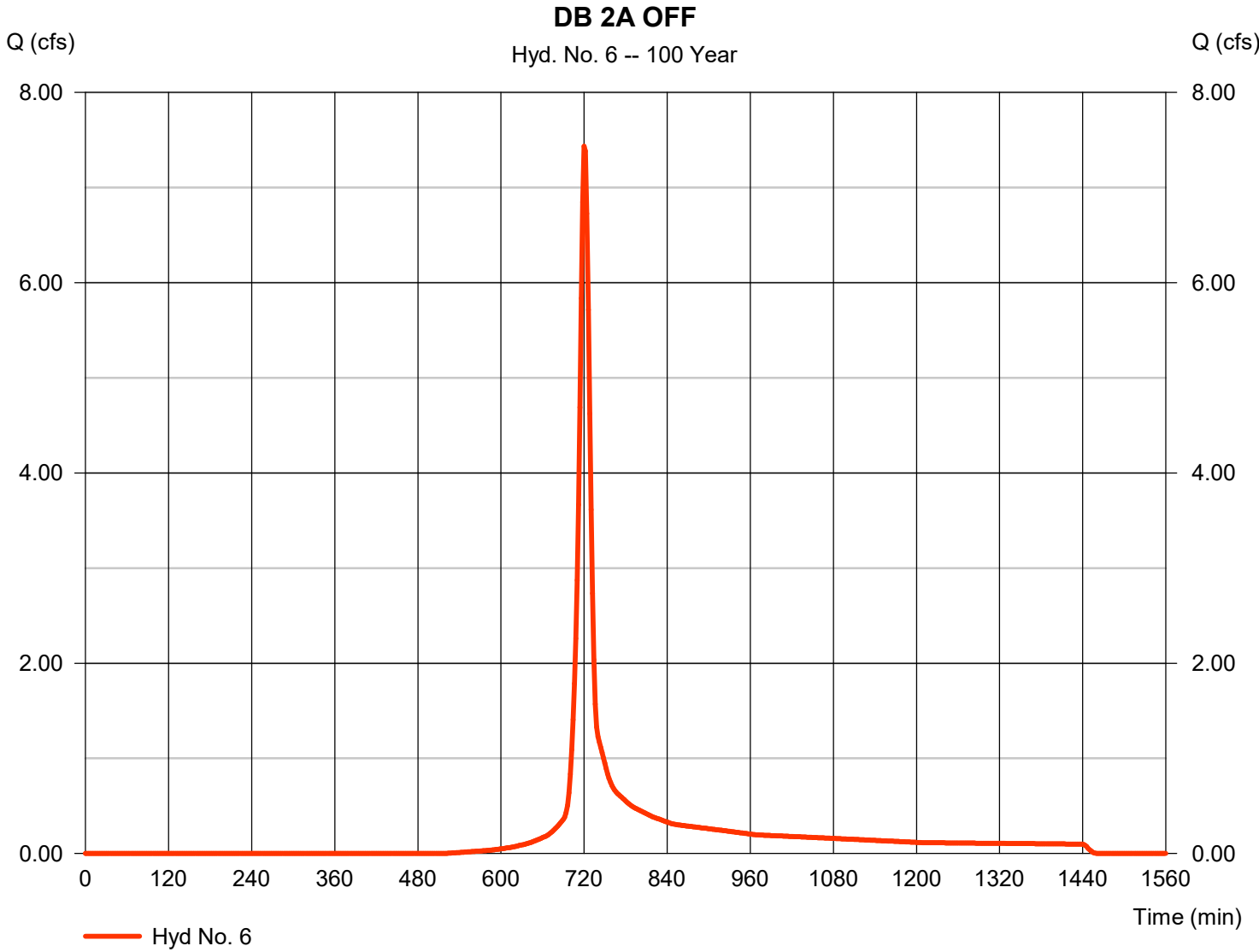


Hydrograph Report

Hyd. No. 6

DB 2A OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 7.436 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 19,301 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

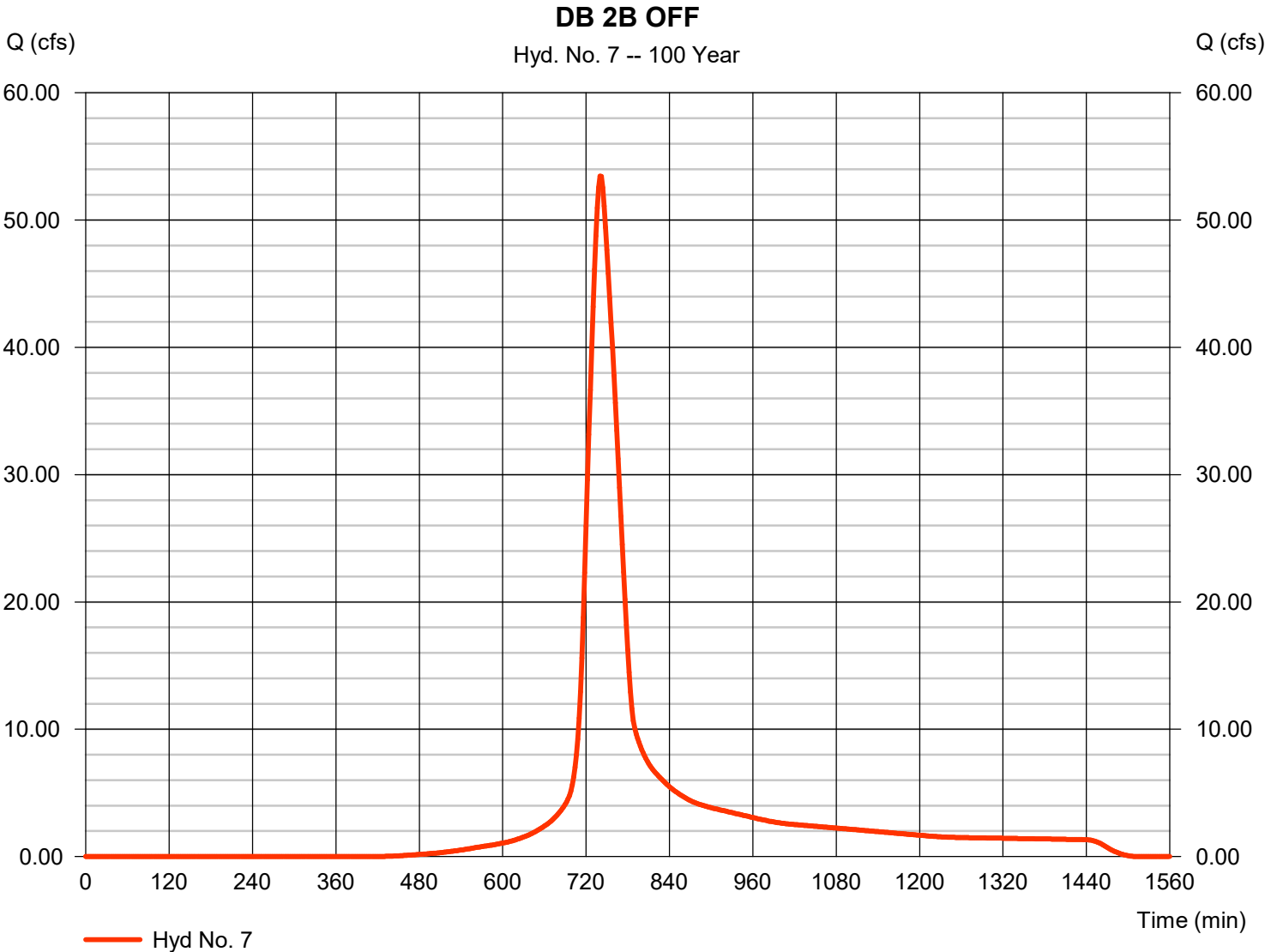
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Monday, 12 / 18 / 2023

Hyd. No. 7

DB 2B OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 53.45 cfs
Storm frequency	= 100 yrs	Time to peak	= 740 min
Time interval	= 2 min	Hyd. volume	= 286,430 cuft
Drainage area	= 18.710 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 47.10 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

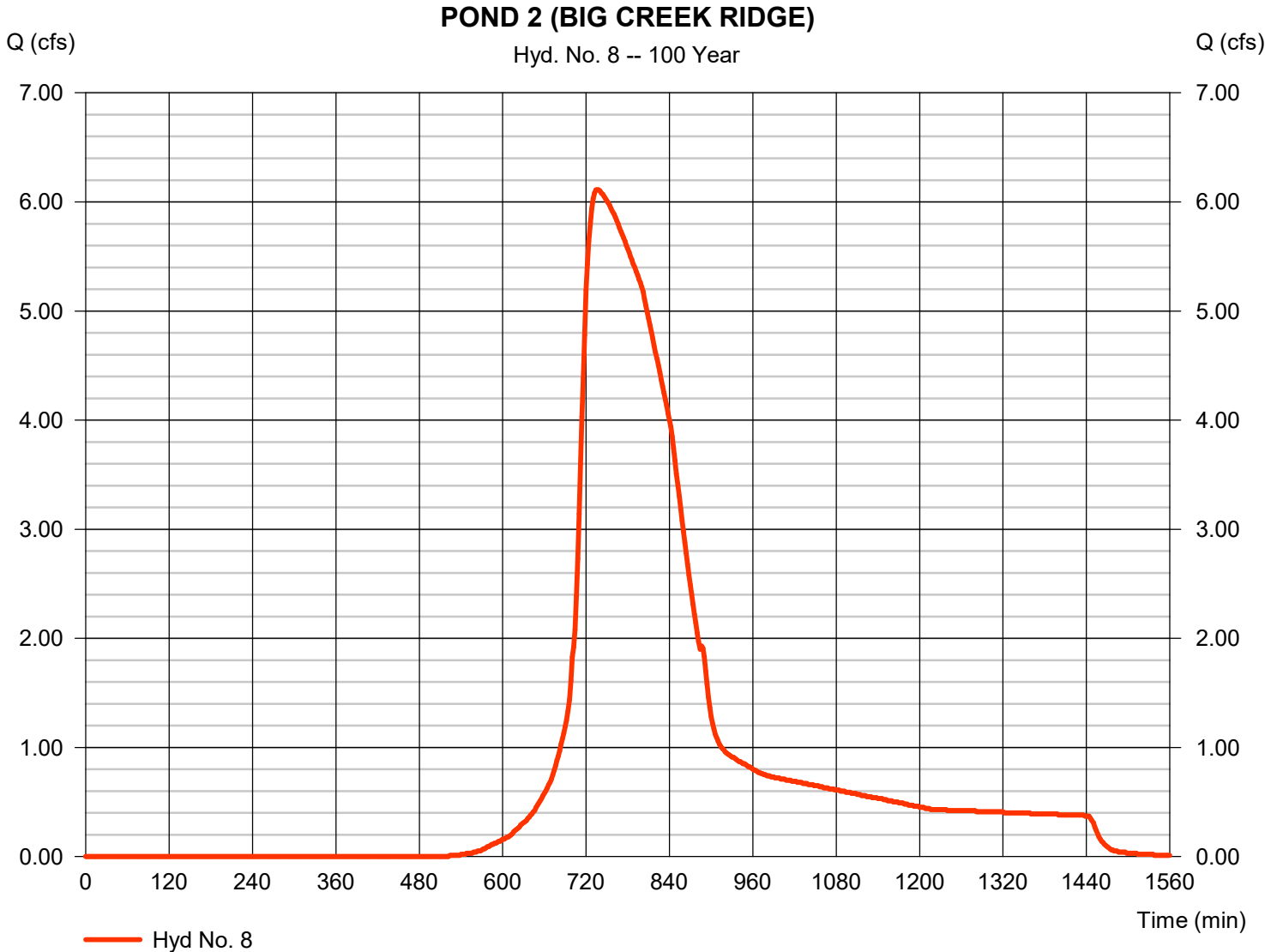
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Monday, 12 / 18 / 2023

Hyd. No. 8

POND 2 (BIG CREEK RIDGE)

Hydrograph type	= Manual	Peak discharge	= 6.110 cfs
Storm frequency	= 100 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 74,375 cuft



Hydrograph Report

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

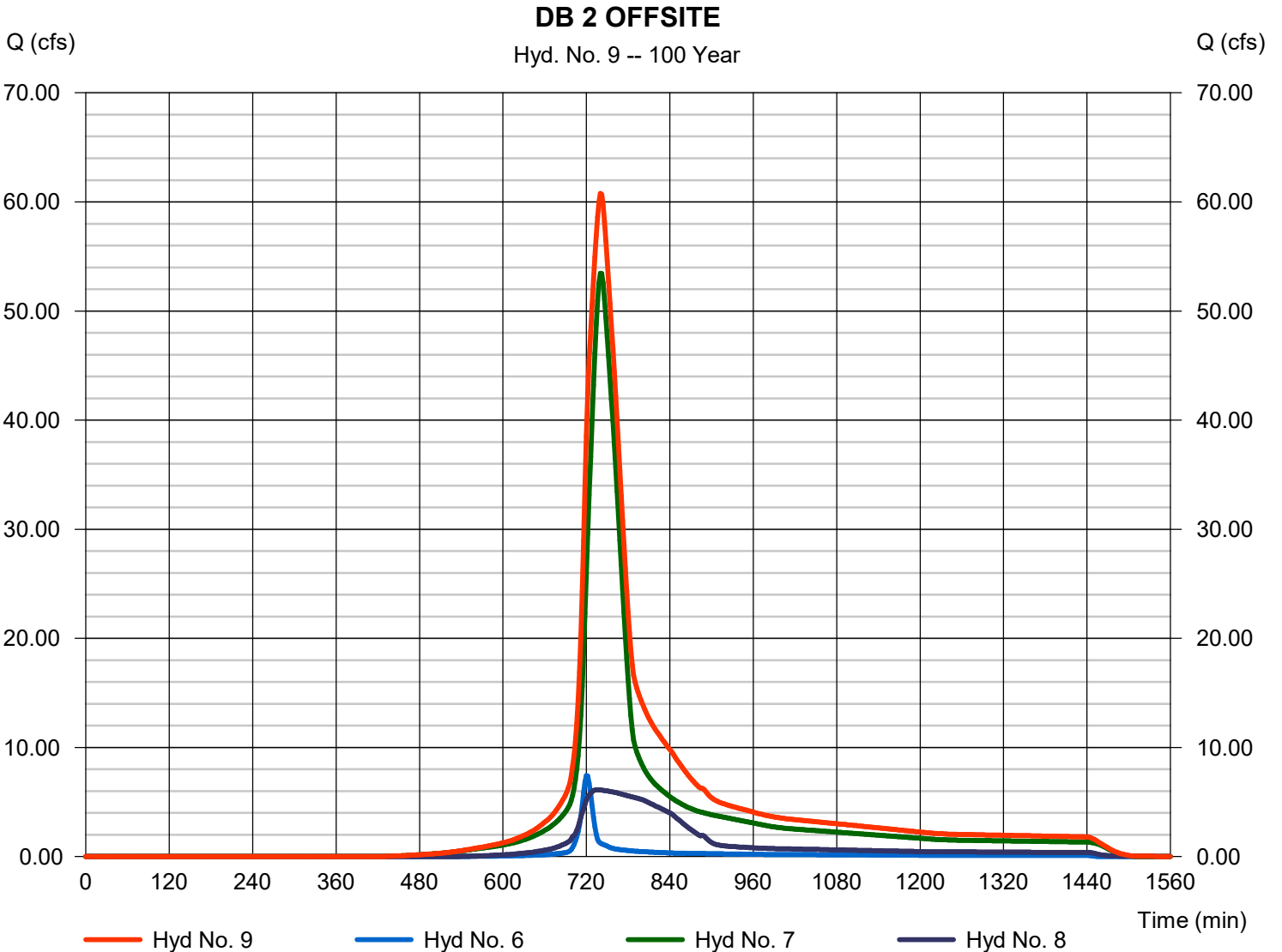
Monday, 12 / 18 / 2023

Hyd. No. 9

DB 2 OFFSITE

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 6, 7, 8

Peak discharge = 60.78 cfs
Time to peak = 740 min
Hyd. volume = 380,106 cuft
Contrib. drain. area = 20.180 ac



Hydrograph Report

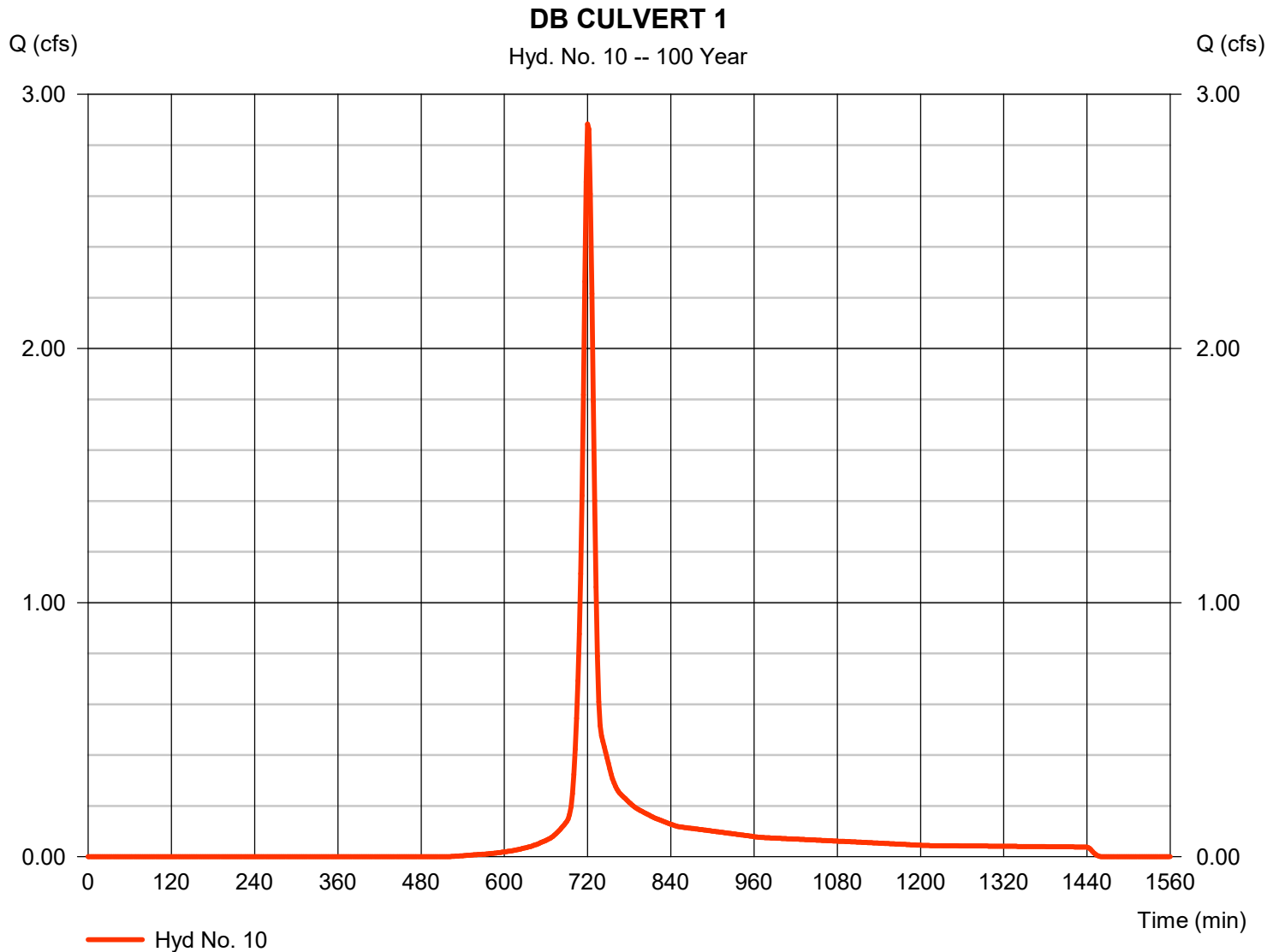
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Monday, 12 / 18 / 2023

Hyd. No. 10

DB CULVERT 1

Hydrograph type	= SCS Runoff	Peak discharge	= 2.883 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 7,484 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

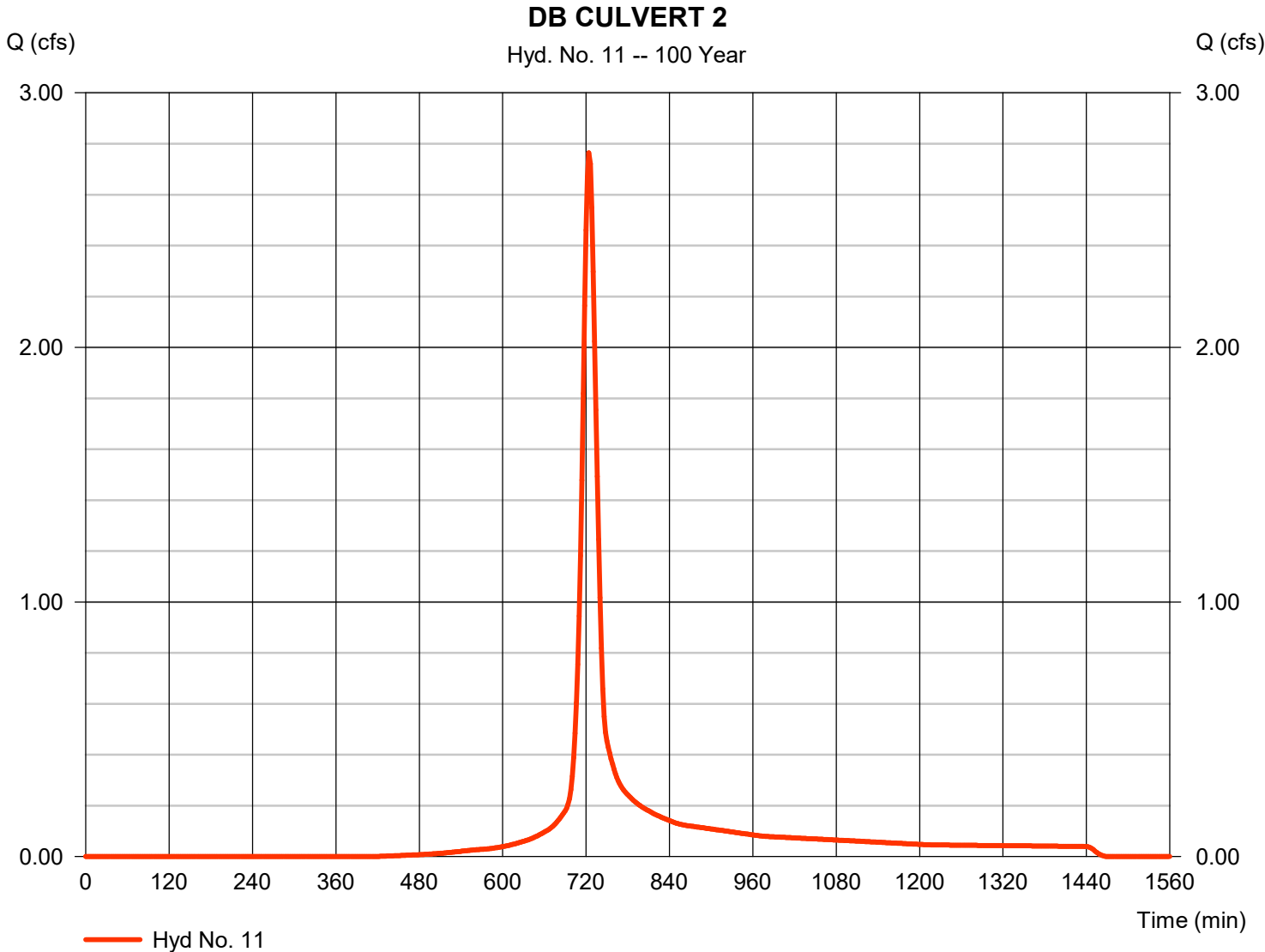


Hydrograph Report

Hyd. No. 11

DB CULVERT 2

Hydrograph type	= SCS Runoff	Peak discharge	= 2.765 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 8,650 cuft
Drainage area	= 0.560 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 16.70 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

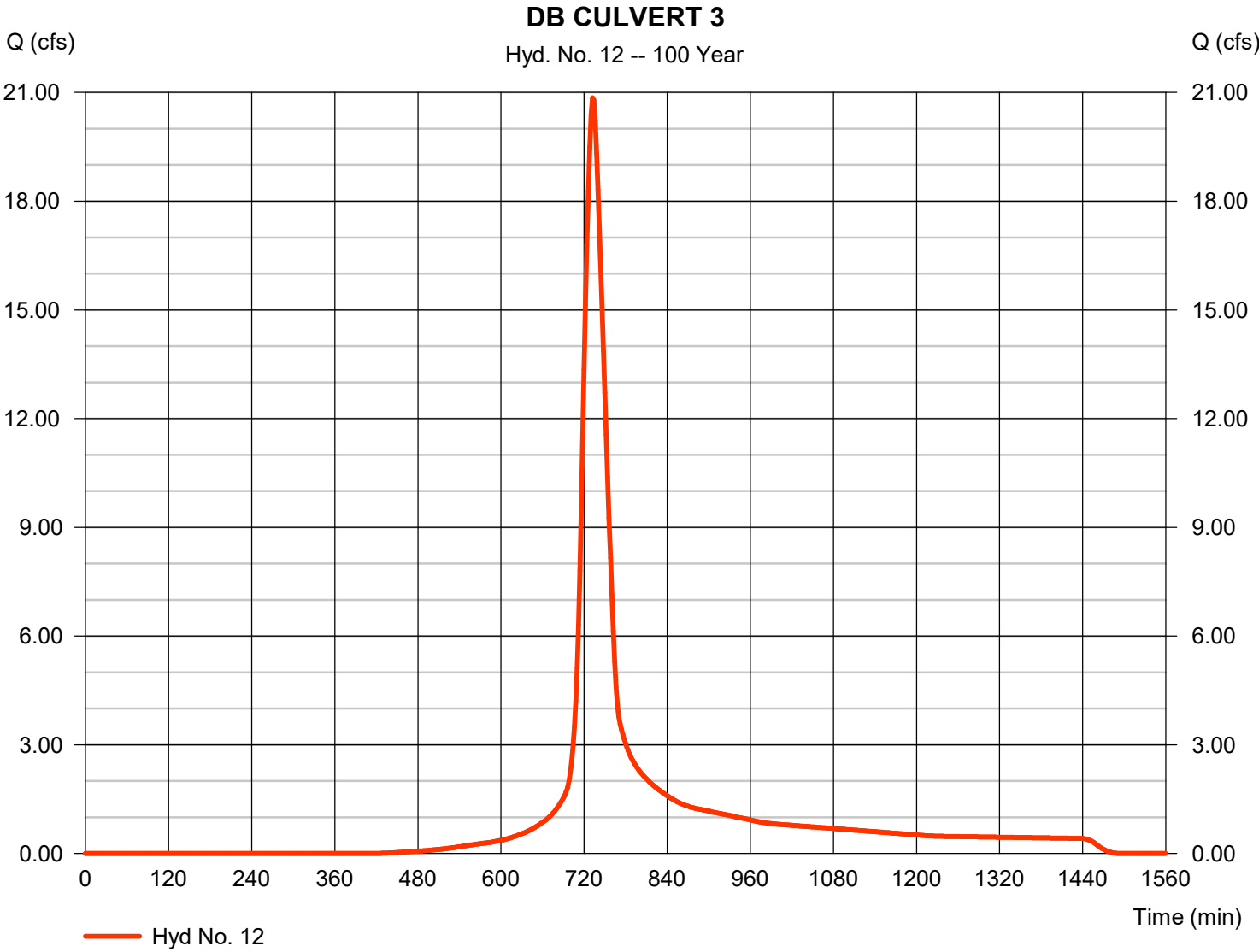


Hydrograph Report

Hyd. No. 12

DB CULVERT 3

Hydrograph type	= SCS Runoff	Peak discharge	= 20.85 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 90,086 cuft
Drainage area	= 5.760 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.50 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

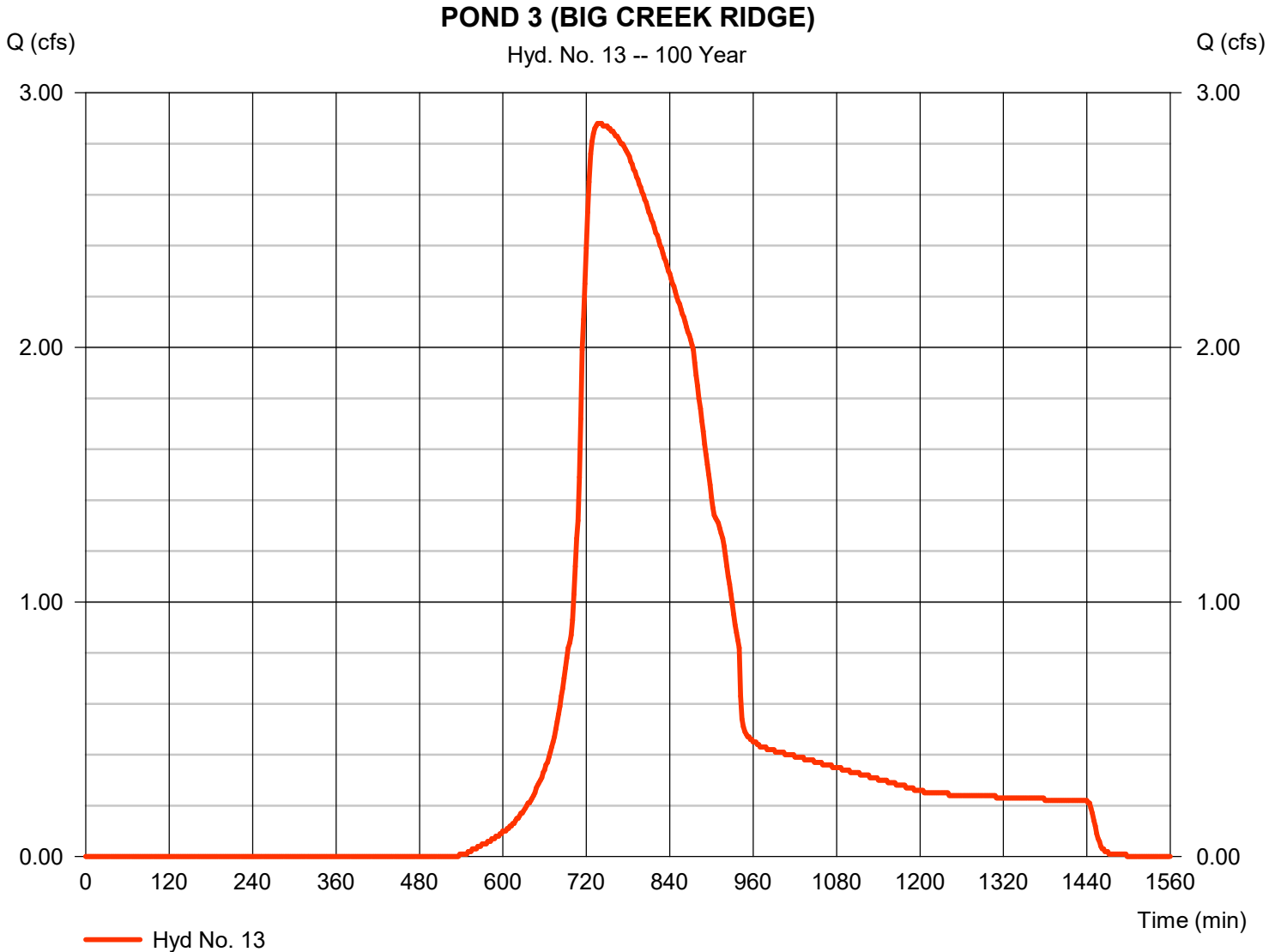
Monday, 12 / 18 / 2023

Hyd. No. 13

POND 3 (BIG CREEK RIDGE)

Hydrograph type = Manual
Storm frequency = 100 yrs
Time interval = 2 min

Peak discharge = 2.880 cfs
Time to peak = 736 min
Hyd. volume = 42,406 cuft



Hydrograph Report

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

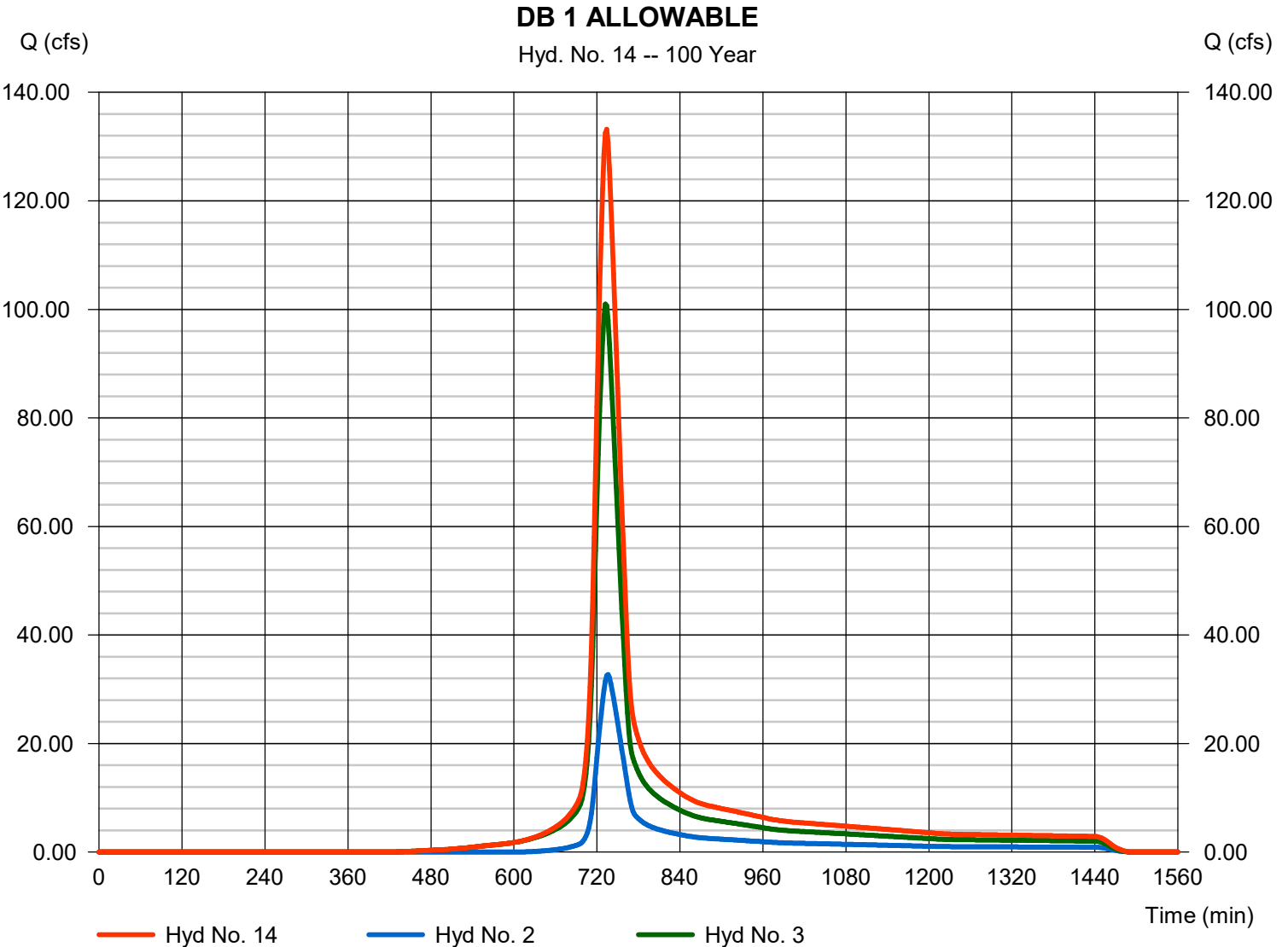
Monday, 12 / 18 / 2023

Hyd. No. 14

DB 1 ALLOWABLE

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

Peak discharge = 133.19 cfs
Time to peak = 734 min
Hyd. volume = 589,161 cuft
Contrib. drain. area = 27.900 ac



Hydrograph Report

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

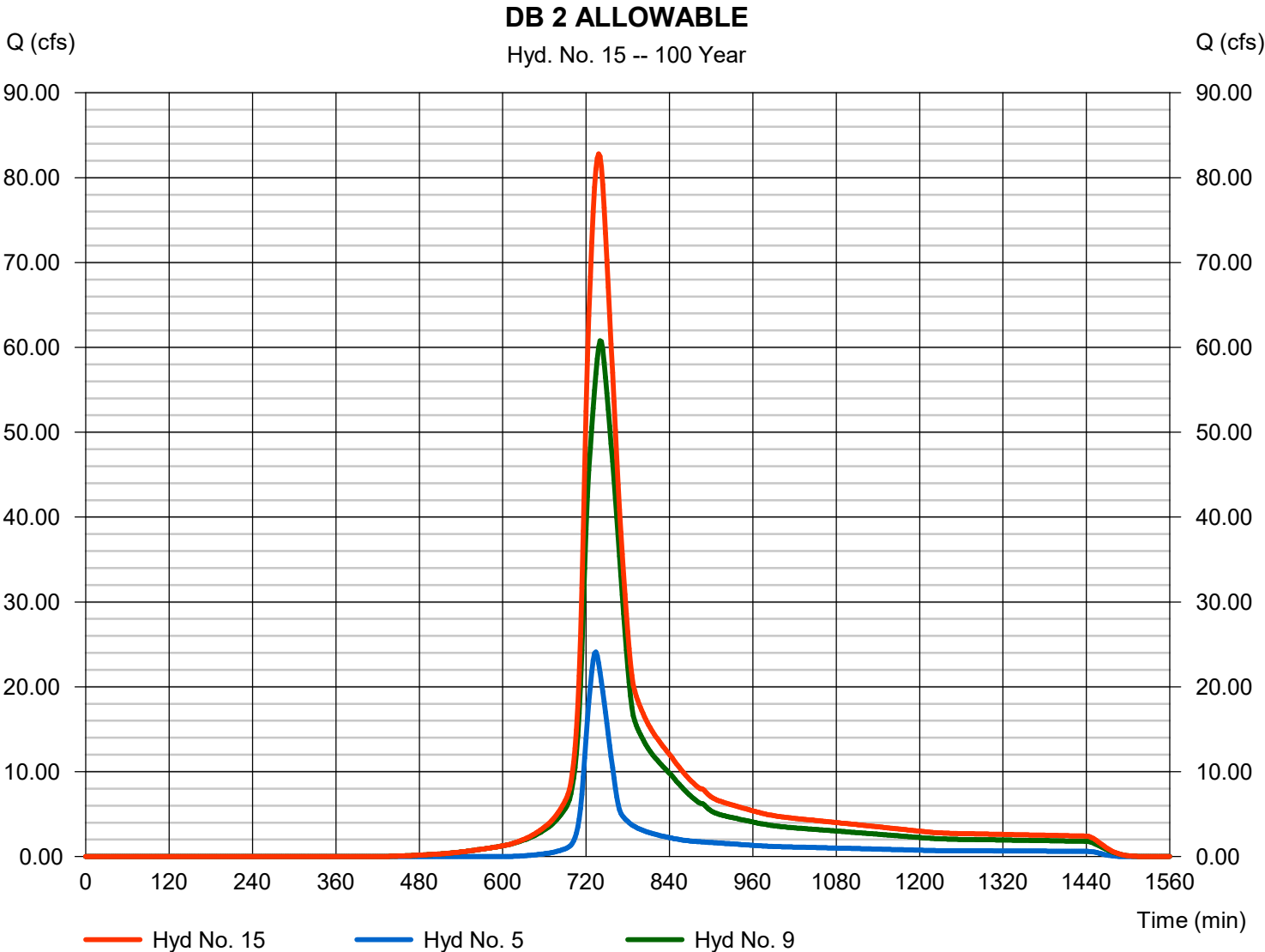
Monday, 12 / 18 / 2023

Hyd. No. 15

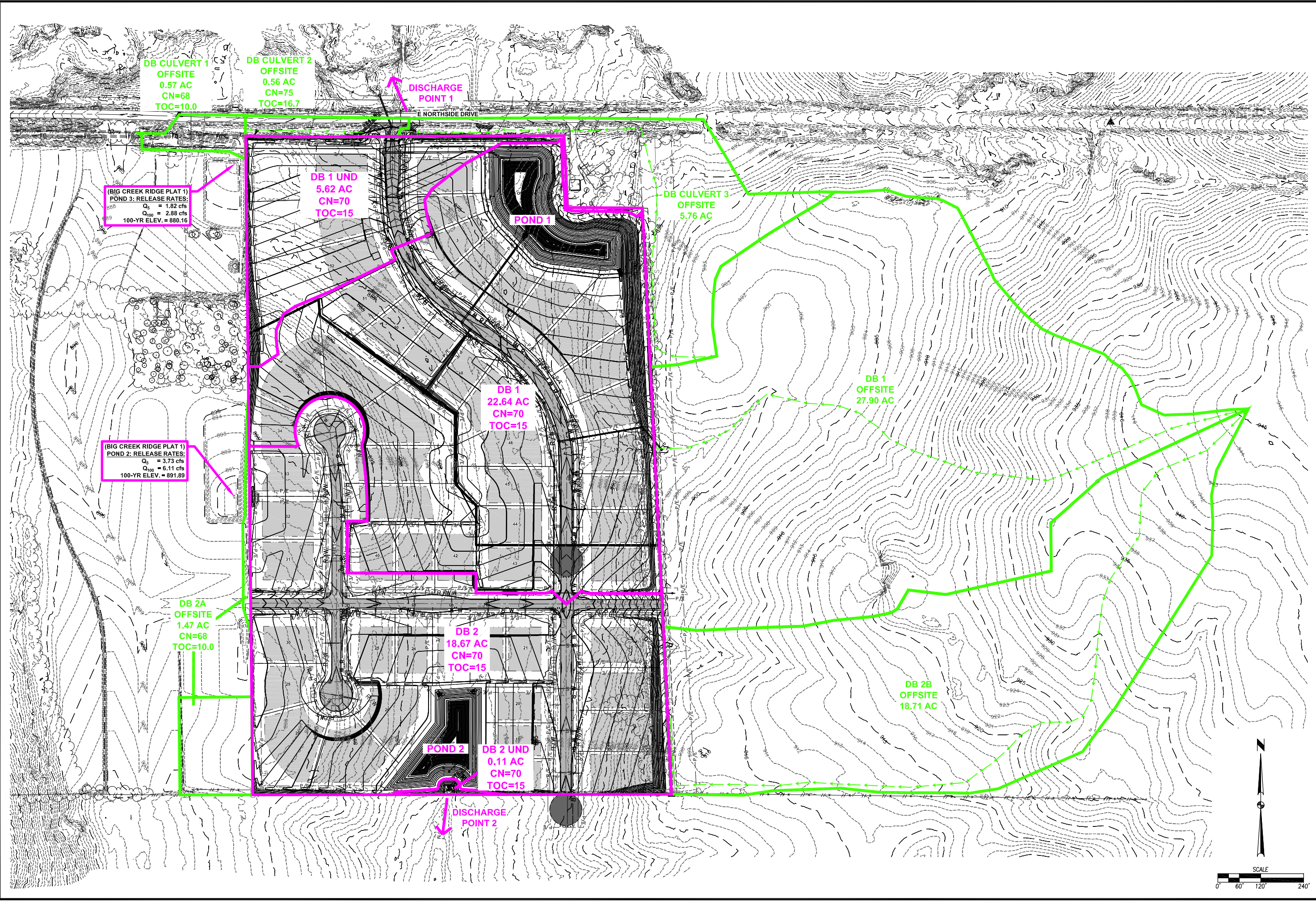
DB 2 ALLOWABLE

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 5, 9

Peak discharge = 82.79 cfs
Time to peak = 738 min
Hyd. volume = 487,426 cuft
Contrib. drain. area = 0.000 ac



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 COMMENT: TUCK



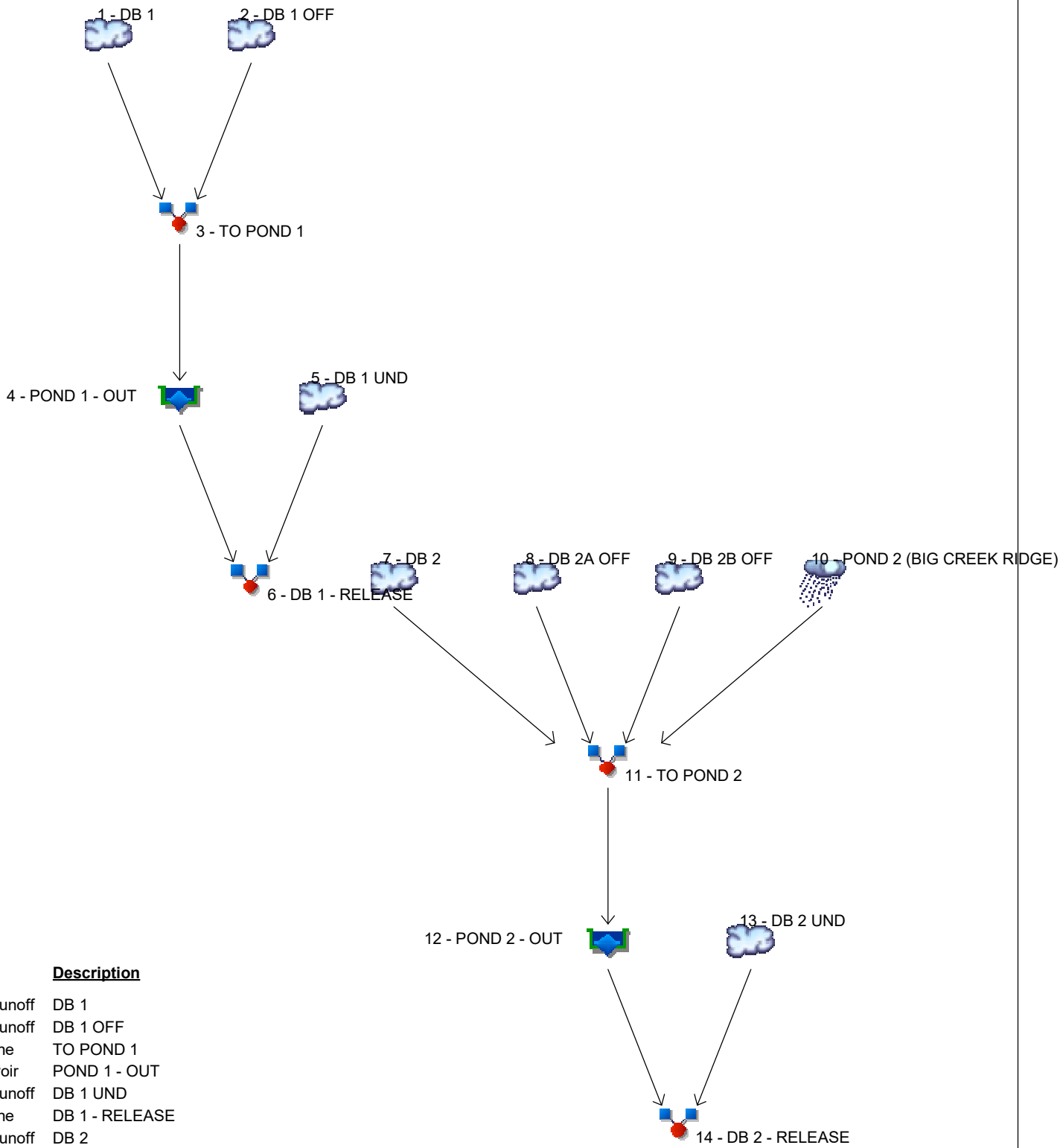
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MONARCH CROSSING PLAT 1 POST-DEVELOPED DRAINAGE MAP POLK CITY, IOWA	
4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400	EI: MAE ENGINEER: EKO
CIVIL DESIGN ADVANTAGE	
2310.656	

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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 1
2	SCS Runoff	DB 1 OFF
3	Combine	TO POND 1
4	Reservoir	POND 1 - OUT
5	SCS Runoff	DB 1 UND
6	Combine	DB 1 - RELEASE
7	SCS Runoff	DB 2
8	SCS Runoff	DB 2A OFF
9	SCS Runoff	DB 2B OFF
10	Manual	POND 2 (BIG CREEK RIDGE)
11	Combine	TO POND 2
12	Reservoir	POND 2 - OUT
13	SCS Runoff	DB 2 UND
14	Combine	DB 2 - RELEASE

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	-----	-----	-----	-----	32.85	45.73	-----	-----	106.27	DB 1
2	SCS Runoff	-----	-----	-----	-----	35.15	47.21	-----	-----	101.01	DB 1 OFF
3	Combine	1, 2	-----	-----	-----	60.15	82.67	-----	-----	185.75	TO POND 1
4	Reservoir	3	-----	-----	-----	20.73	28.45	-----	-----	63.61	POND 1 - OUT
5	SCS Runoff	-----	-----	-----	-----	8.154	11.35	-----	-----	26.38	DB 1 UND
6	Combine	4, 5	-----	-----	-----	21.90	30.06	-----	-----	67.04	DB 1 - RELEASE
7	SCS Runoff	-----	-----	-----	-----	27.09	37.71	-----	-----	87.64	DB 2
8	SCS Runoff	-----	-----	-----	-----	2.194	3.114	-----	-----	7.436	DB 2A OFF
9	SCS Runoff	-----	-----	-----	-----	18.52	24.93	-----	-----	53.45	DB 2B OFF
10	Manual	-----	-----	-----	-----	3.730	4.370	-----	-----	6.110	POND 2 (BIG CREEK RIDGE)
11	Combine	7, 8, 9, 10	-----	-----	-----	42.78	59.04	-----	-----	131.69	TO POND 2
12	Reservoir	11	-----	-----	-----	12.88	16.26	-----	-----	66.52	POND 2 - OUT
13	SCS Runoff	-----	-----	-----	-----	0.160	0.222	-----	-----	0.516	DB 2 UND
14	Combine	12, 13	-----	-----	-----	12.90	16.28	-----	-----	66.60	DB 2 - RELEASE

Hydrograph Summary Report

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

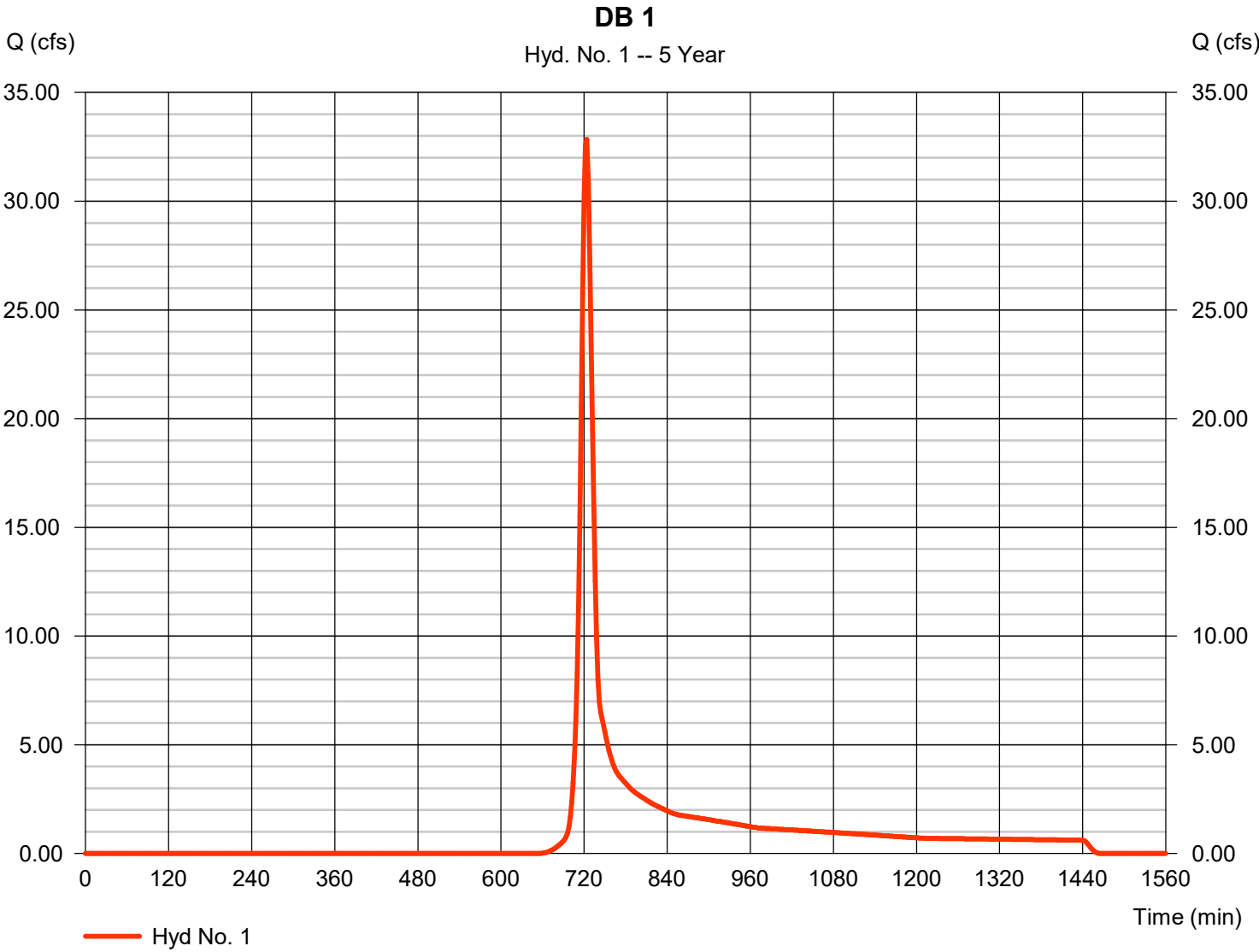
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	32.85	2	724	96,520	-----	-----	-----	DB 1
2	SCS Runoff	35.15	2	734	156,435	-----	-----	-----	DB 1 OFF
3	Combine	60.15	2	726	252,956	1, 2	-----	-----	TO POND 1
4	Reservoir	20.73	2	758	252,585	3	873.94	87,706	POND 1 - OUT
5	SCS Runoff	8.154	2	724	23,960	-----	-----	-----	DB 1 UND
6	Combine	21.90	2	756	276,545	4, 5	-----	-----	DB 1 - RELEASE
7	SCS Runoff	27.09	2	724	79,595	-----	-----	-----	DB 2
8	SCS Runoff	2.194	2	722	5,979	-----	-----	-----	DB 2A OFF
9	SCS Runoff	18.52	2	742	102,687	-----	-----	-----	DB 2B OFF
10	Manual	3.730	2	732	23,562	-----	-----	-----	POND 2 (BIG CREEK RIDGE)
11	Combine	42.78	2	724	211,823	7, 8, 9, 10	-----	-----	TO POND 2
12	Reservoir	12.88	2	776	211,788	11	881.07	75,589	POND 2 - OUT
13	SCS Runoff	0.160	2	724	469	-----	-----	-----	DB 2 UND
14	Combine	12.90	2	776	212,257	12, 13	-----	-----	DB 2 - RELEASE
Post-Developed Hydraflow.gpw					Return Period: 5 Year			Monday, 12 / 18 / 2023	

Hydrograph Report

Hyd. No. 1

DB 1

Hydrograph type	= SCS Runoff	Peak discharge	= 32.85 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 96,520 cuft
Drainage area	= 22.640 ac	Curve number	= 70
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



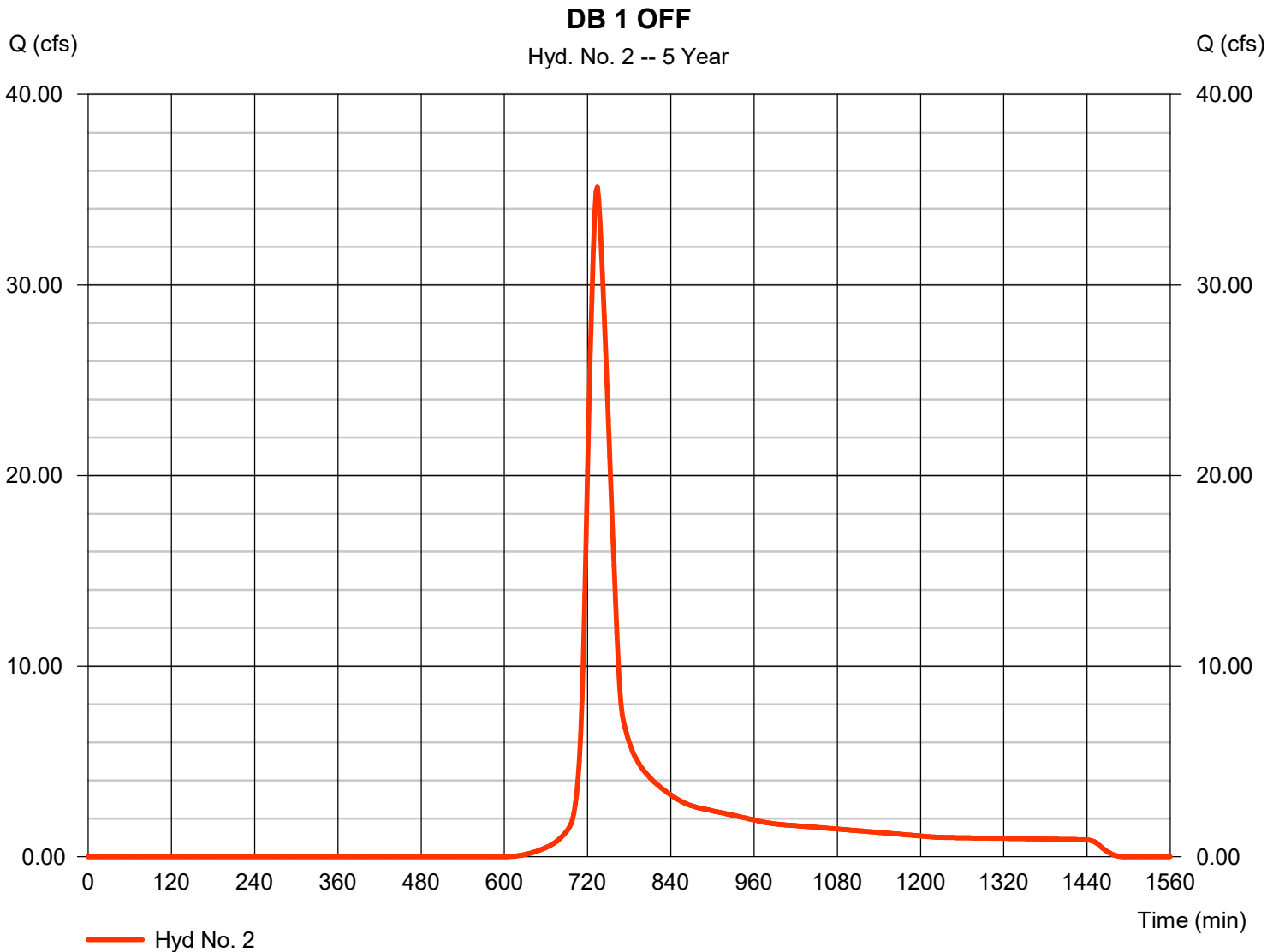
Hydrograph Report

Hyd. No. 2

DB 1 OFF

Hydrograph type = SCS Runoff
Storm frequency = 5 yrs
Time interval = 2 min
Drainage area = 27.900 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 3.81 in
Storm duration = 24 hrs

Peak discharge = 35.15 cfs
Time to peak = 734 min
Hyd. volume = 156,435 cuft
Curve number = 75
Hydraulic length = 0 ft
Time of conc. (Tc) = 31.30 min
Distribution = Type II
Shape factor = 484



Hydrograph Report

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

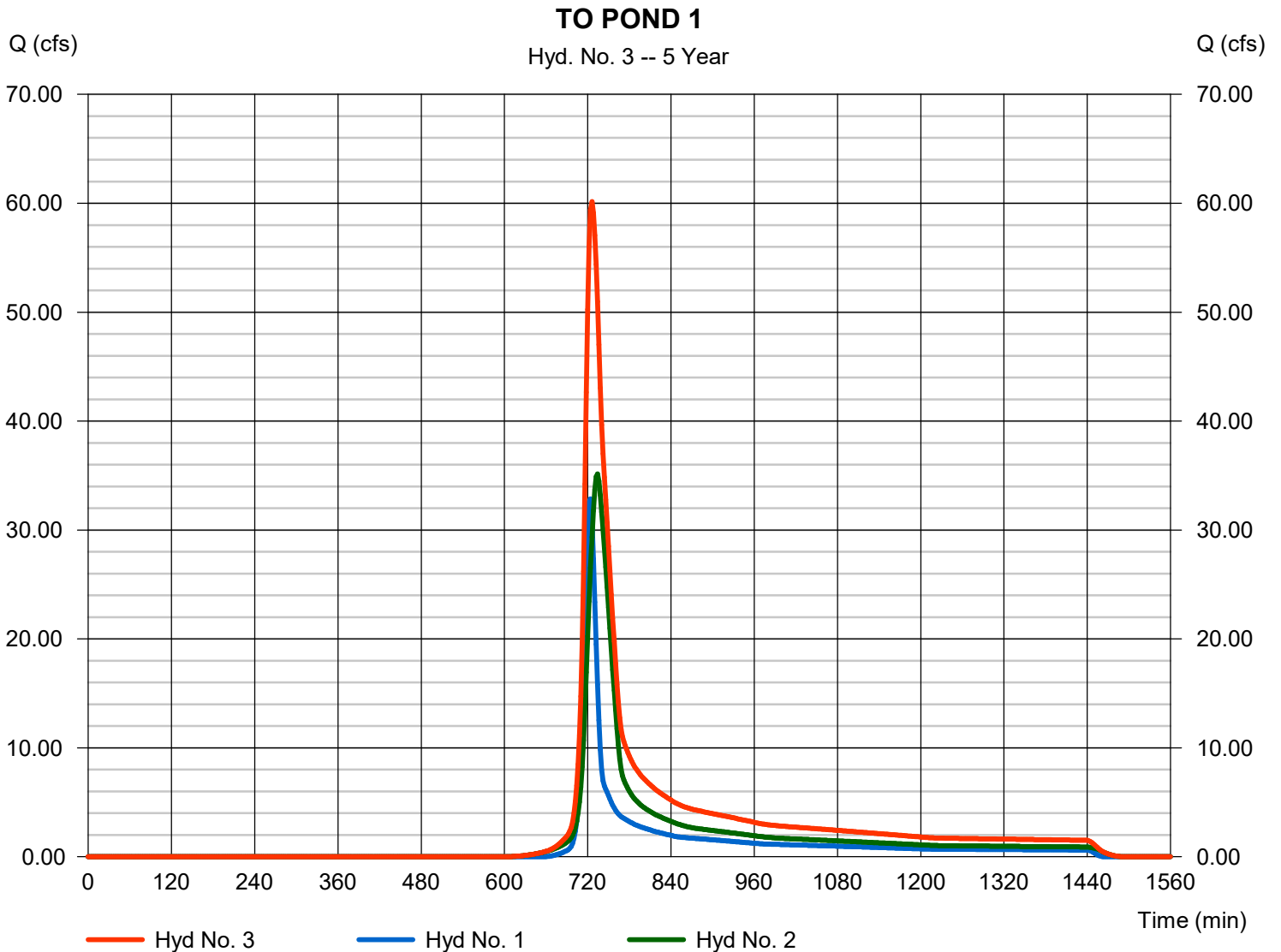
Monday, 12 / 18 / 2023

Hyd. No. 3

TO POND 1

Hydrograph type = Combine
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyds. = 1, 2

Peak discharge = 60.15 cfs
Time to peak = 726 min
Hyd. volume = 252,956 cuft
Contrib. drain. area = 50.540 ac



Hydrograph Report

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

Monday, 12 / 18 / 2023

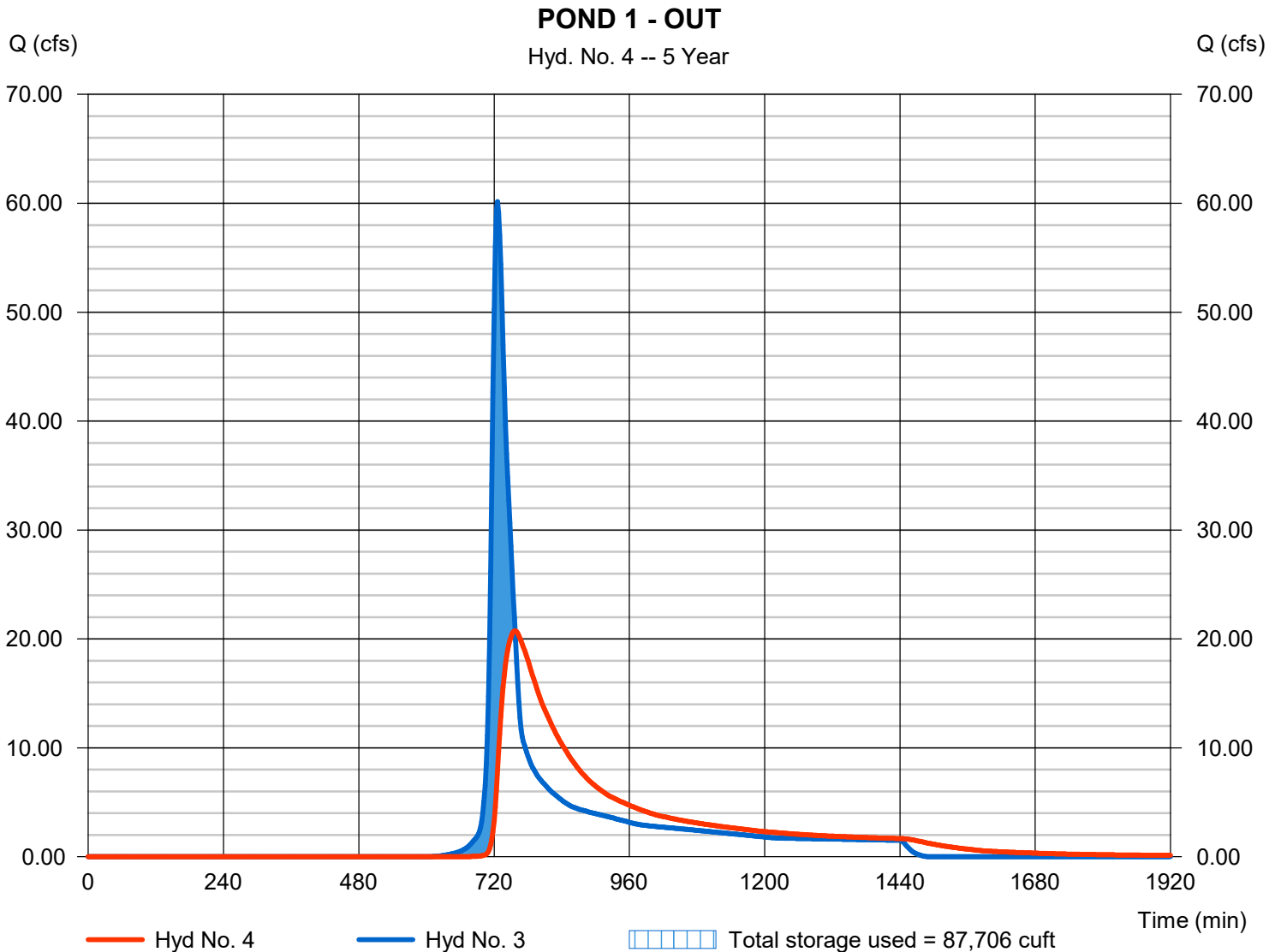
Hyd. No. 4

POND 1 - OUT

Hydrograph type = Reservoir
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyd. No. = 3 - TO POND 1
Reservoir name = POND 1

Peak discharge = 20.73 cfs
Time to peak = 758 min
Hyd. volume = 252,585 cuft
Max. Elevation = 873.94 ft
Max. Storage = 87,706 cuft

Storage Indication method used.

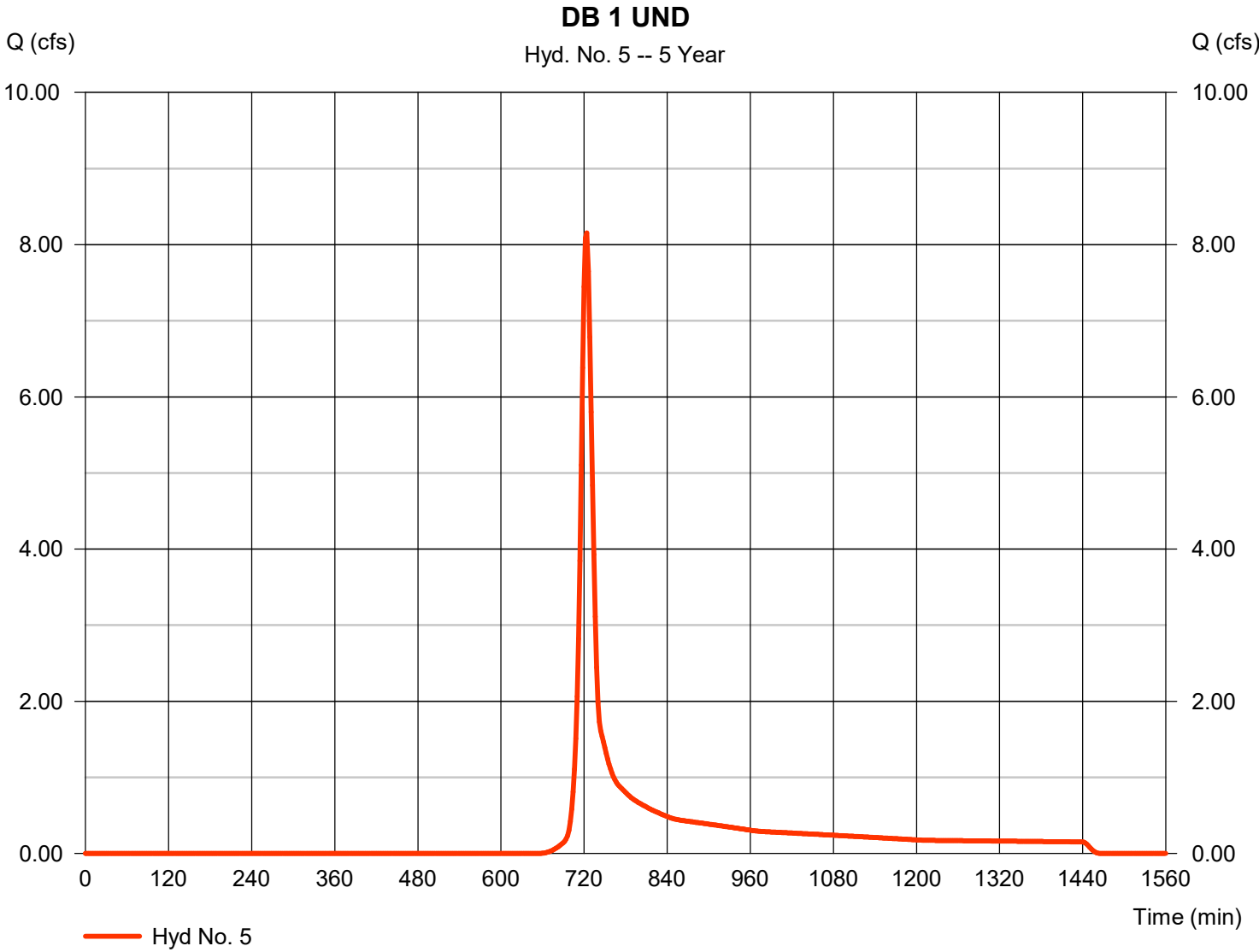


Hydrograph Report

Hyd. No. 5

DB 1 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 8.154 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 23,960 cuft
Drainage area	= 5.620 ac	Curve number	= 70
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

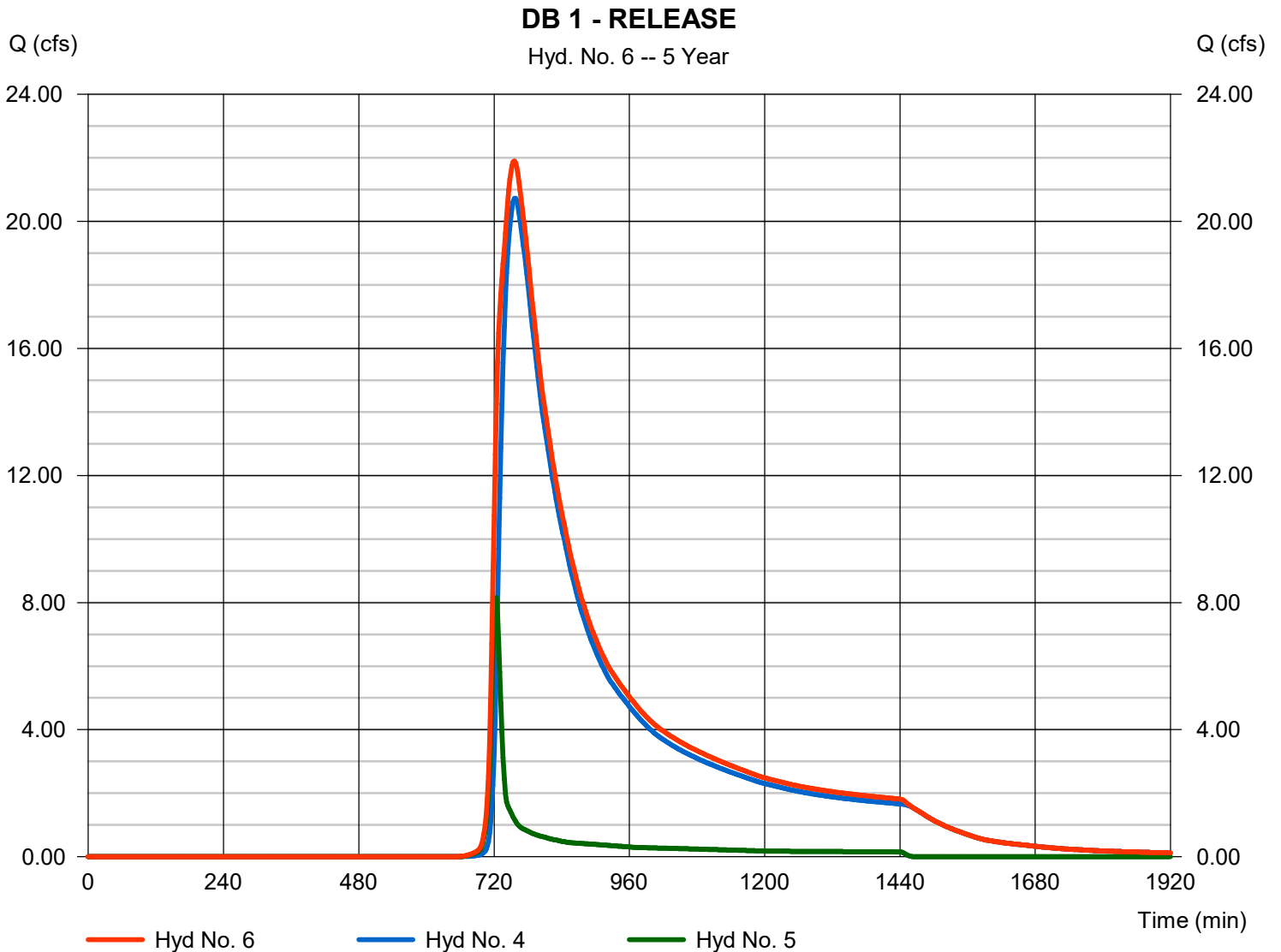
Monday, 12 / 18 / 2023

Hyd. No. 6

DB 1 - RELEASE

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

Peak discharge = 21.90 cfs
Time to peak = 756 min
Hyd. volume = 276,545 cuft
Contrib. drain. area = 5.620 ac

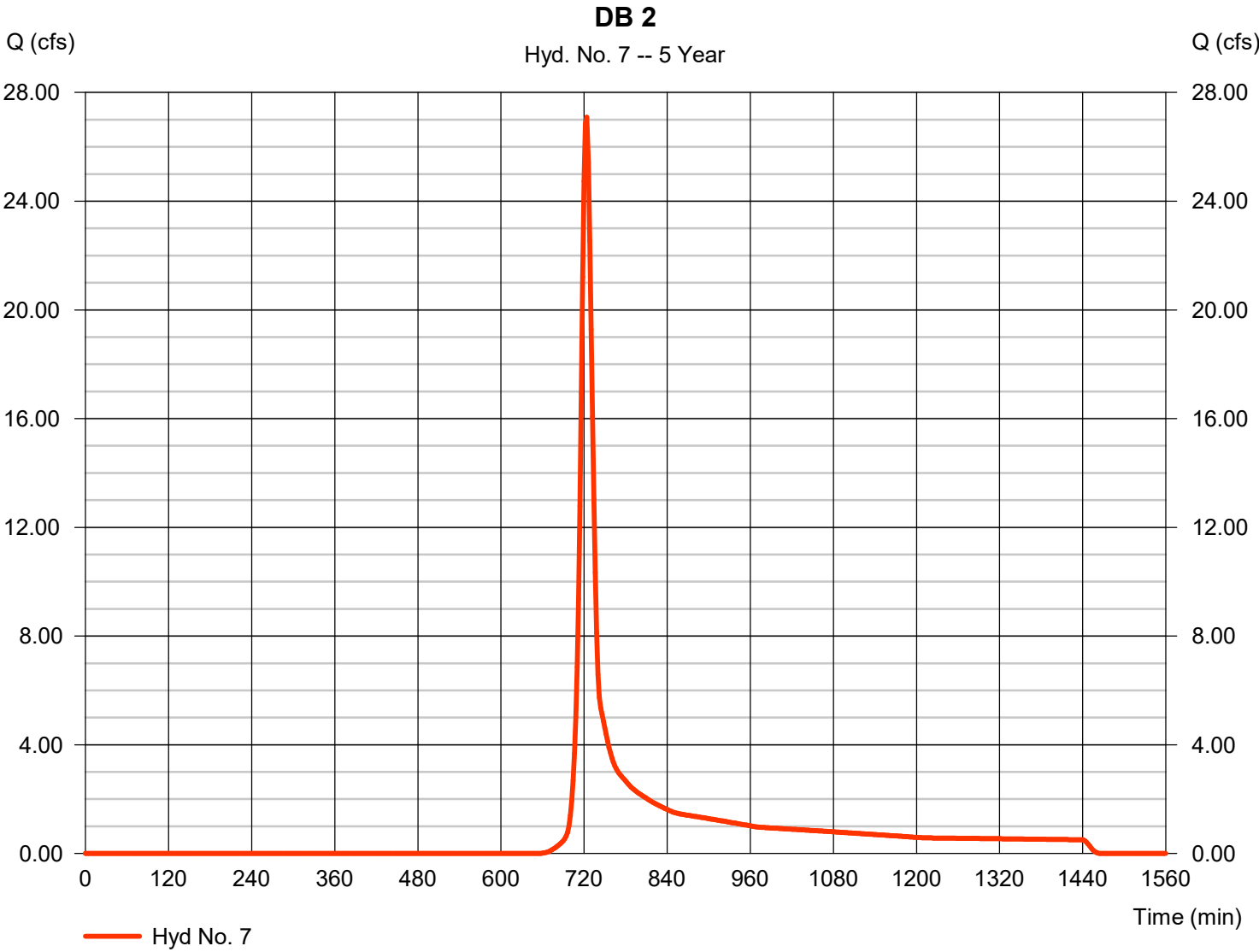


Hydrograph Report

Hyd. No. 7

DB 2

Hydrograph type	= SCS Runoff	Peak discharge	= 27.09 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 79,595 cuft
Drainage area	= 18.670 ac	Curve number	= 70
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

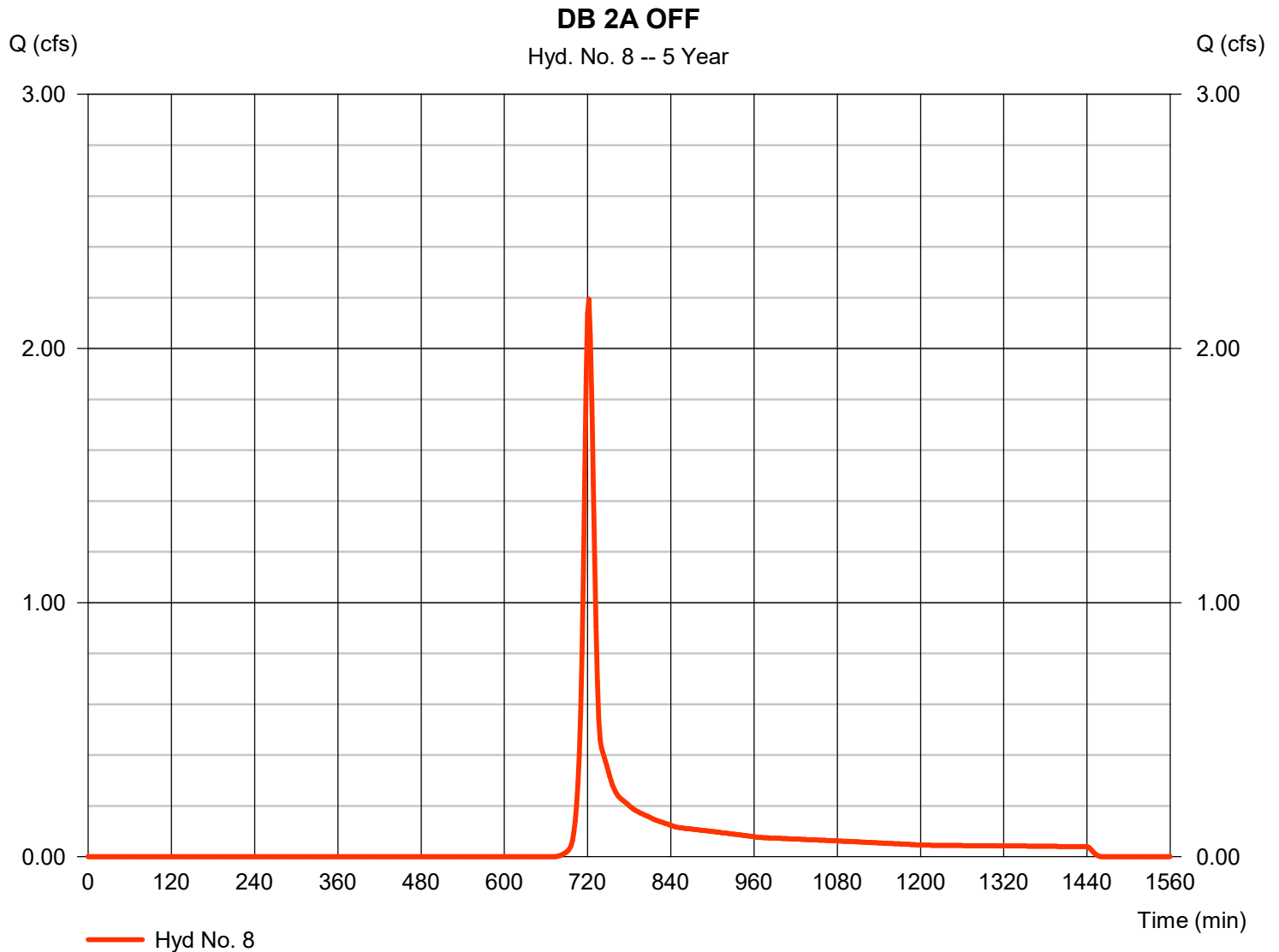
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 8

DB 2A OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 2.194 cfs
Storm frequency	= 5 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 5,979 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 3.81 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

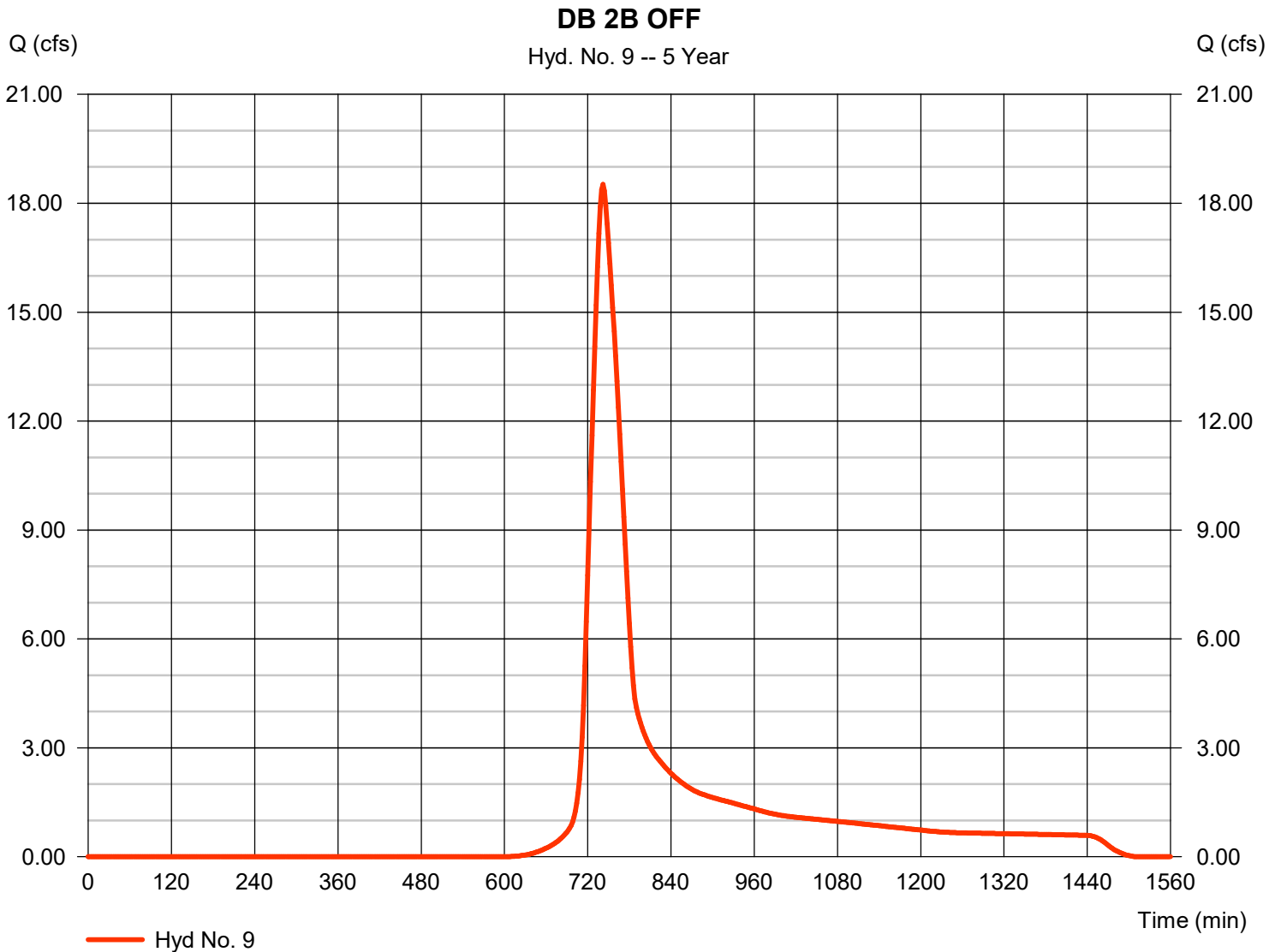
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 9

DB 2B OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 18.52 cfs
Storm frequency	= 5 yrs	Time to peak	= 742 min
Time interval	= 2 min	Hyd. volume	= 102,687 cuft
Drainage area	= 18.710 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 47.10 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

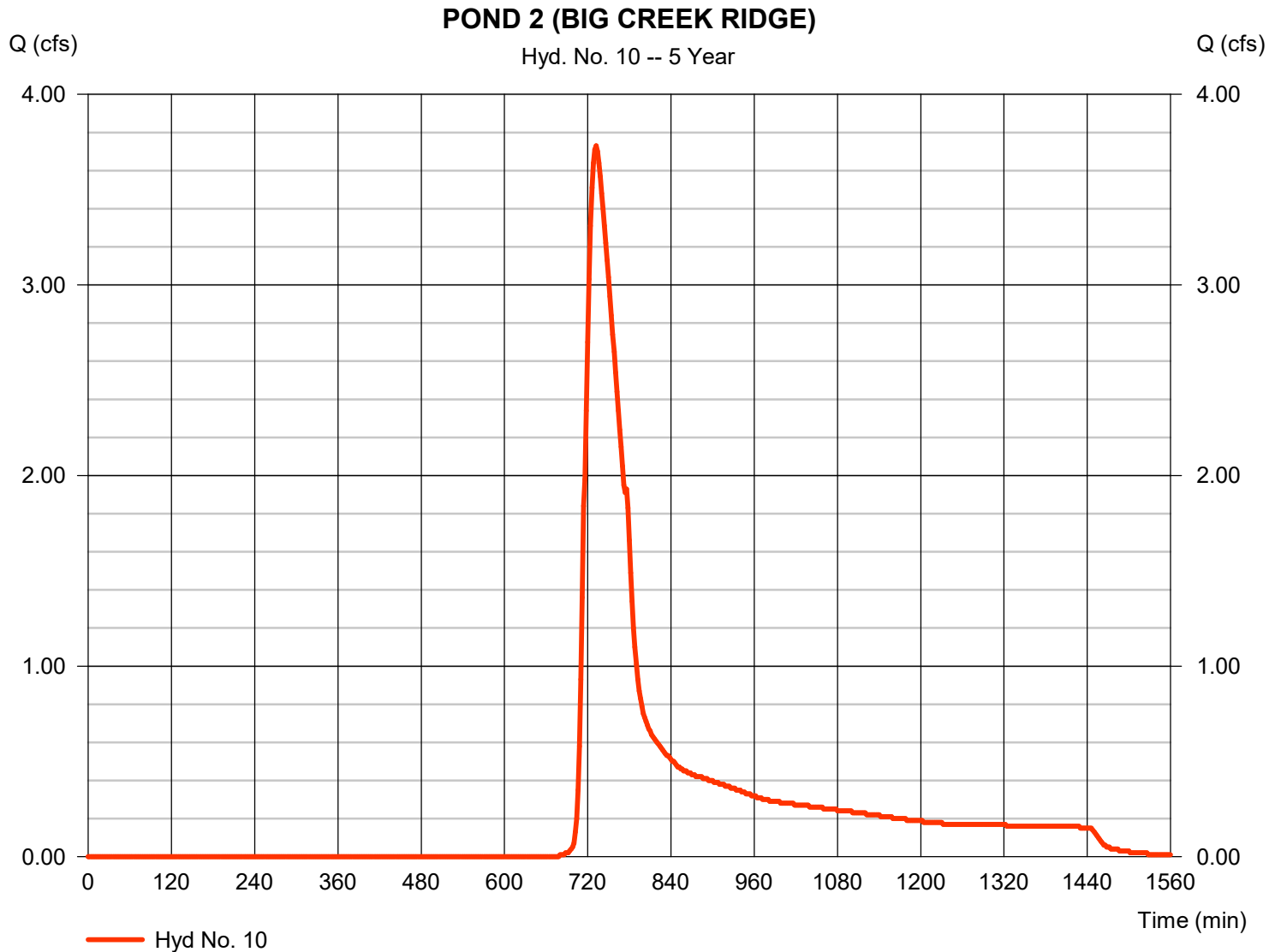
Monday, 12 / 18 / 2023

Hyd. No. 10

POND 2 (BIG CREEK RIDGE)

Hydrograph type = Manual
Storm frequency = 5 yrs
Time interval = 2 min

Peak discharge = 3.730 cfs
Time to peak = 732 min
Hyd. volume = 23,562 cuft



Hydrograph Report

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

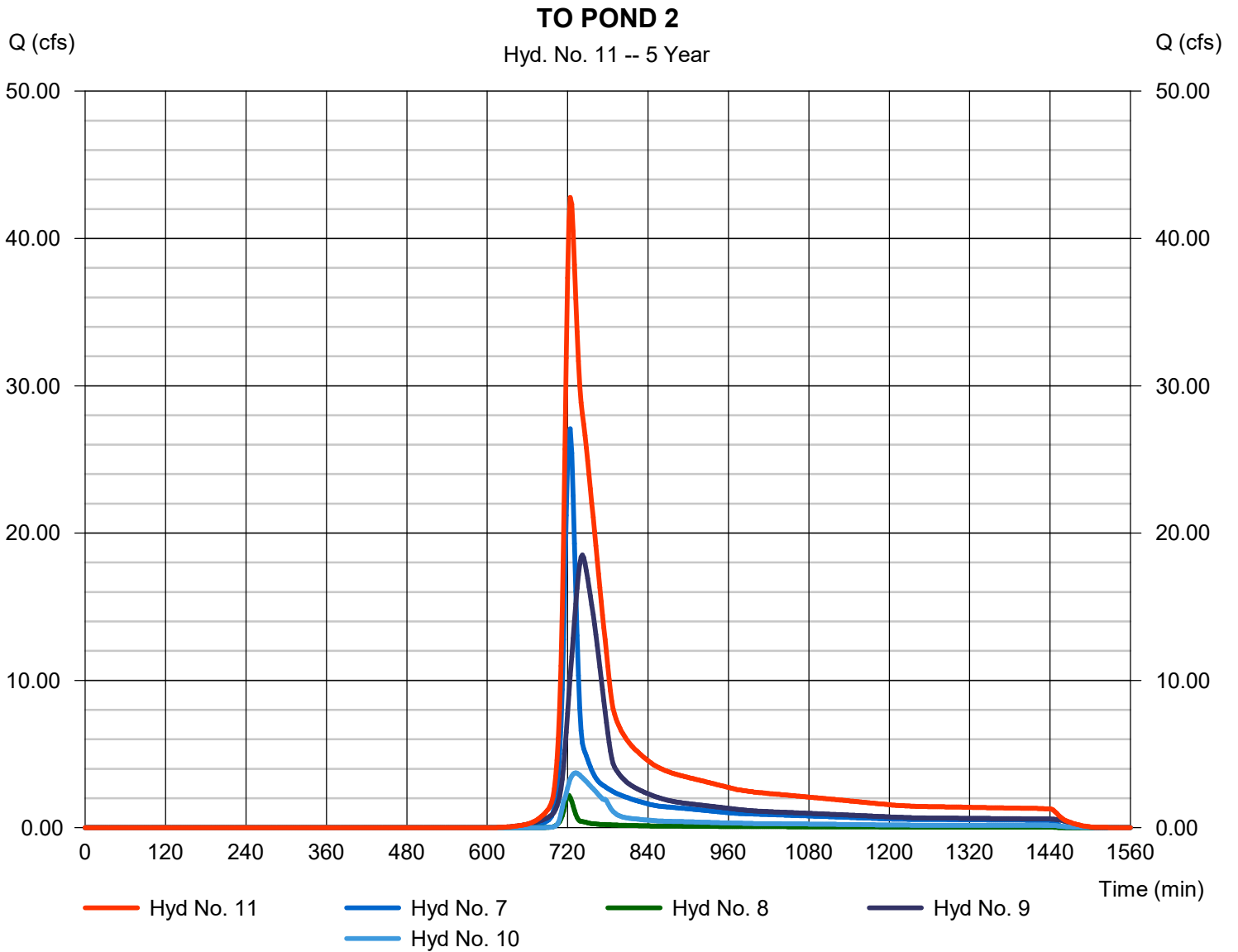
Monday, 12 / 18 / 2023

Hyd. No. 11

TO POND 2

Hydrograph type = Combine
 Storm frequency = 5 yrs
 Time interval = 2 min
 Inflow hyds. = 7, 8, 9, 10

Peak discharge = 42.78 cfs
 Time to peak = 724 min
 Hyd. volume = 211,823 cuft
 Contrib. drain. area = 38.850 ac



Hydrograph Report

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

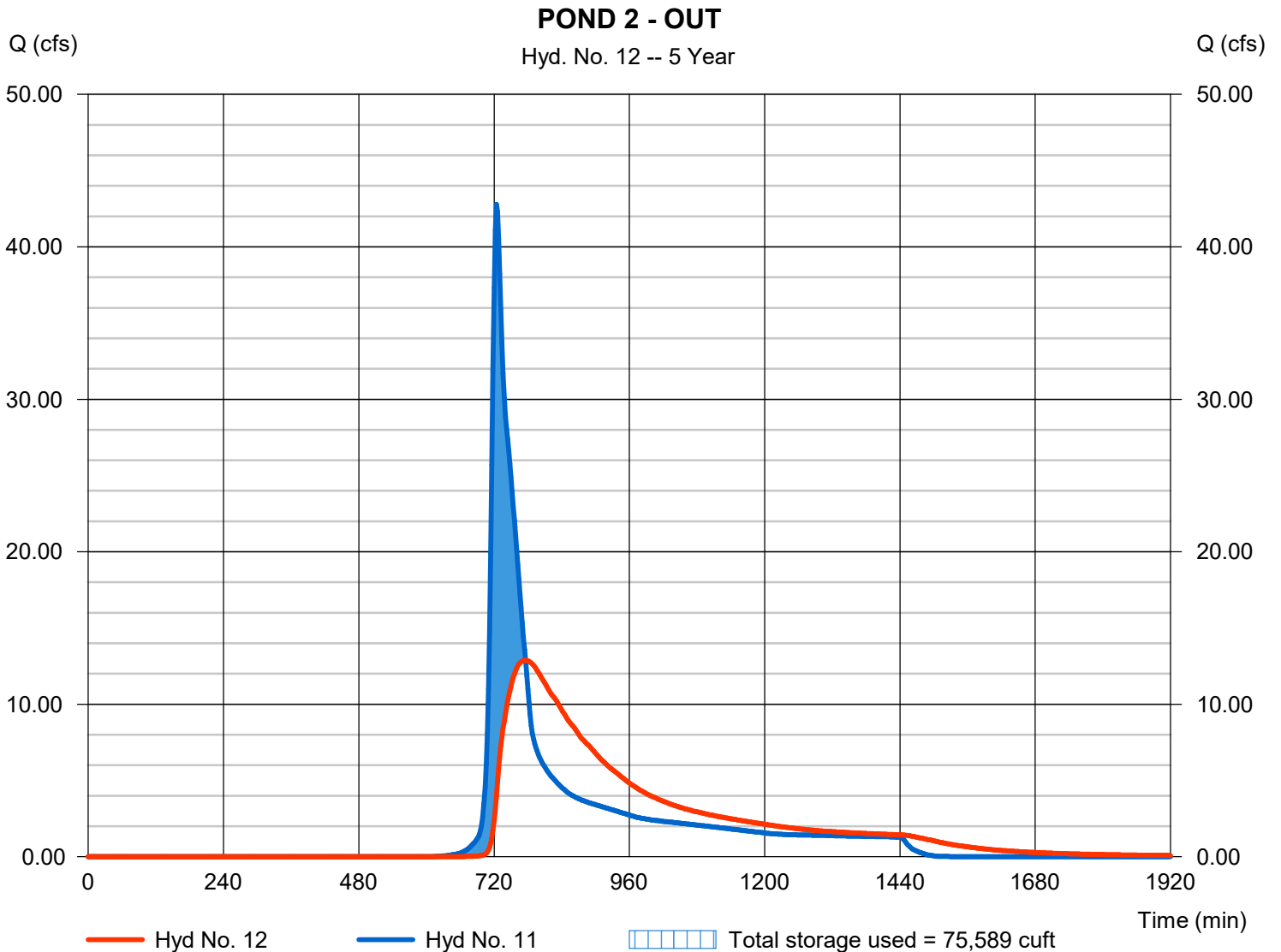
Monday, 12 / 18 / 2023

Hyd. No. 12

POND 2 - OUT

Hydrograph type	= Reservoir	Peak discharge	= 12.88 cfs
Storm frequency	= 5 yrs	Time to peak	= 776 min
Time interval	= 2 min	Hyd. volume	= 211,788 cuft
Inflow hyd. No.	= 11 - TO POND 2	Max. Elevation	= 881.07 ft
Reservoir name	= POND 2	Max. Storage	= 75,589 cuft

Storage Indication method used.



Hydrograph Report

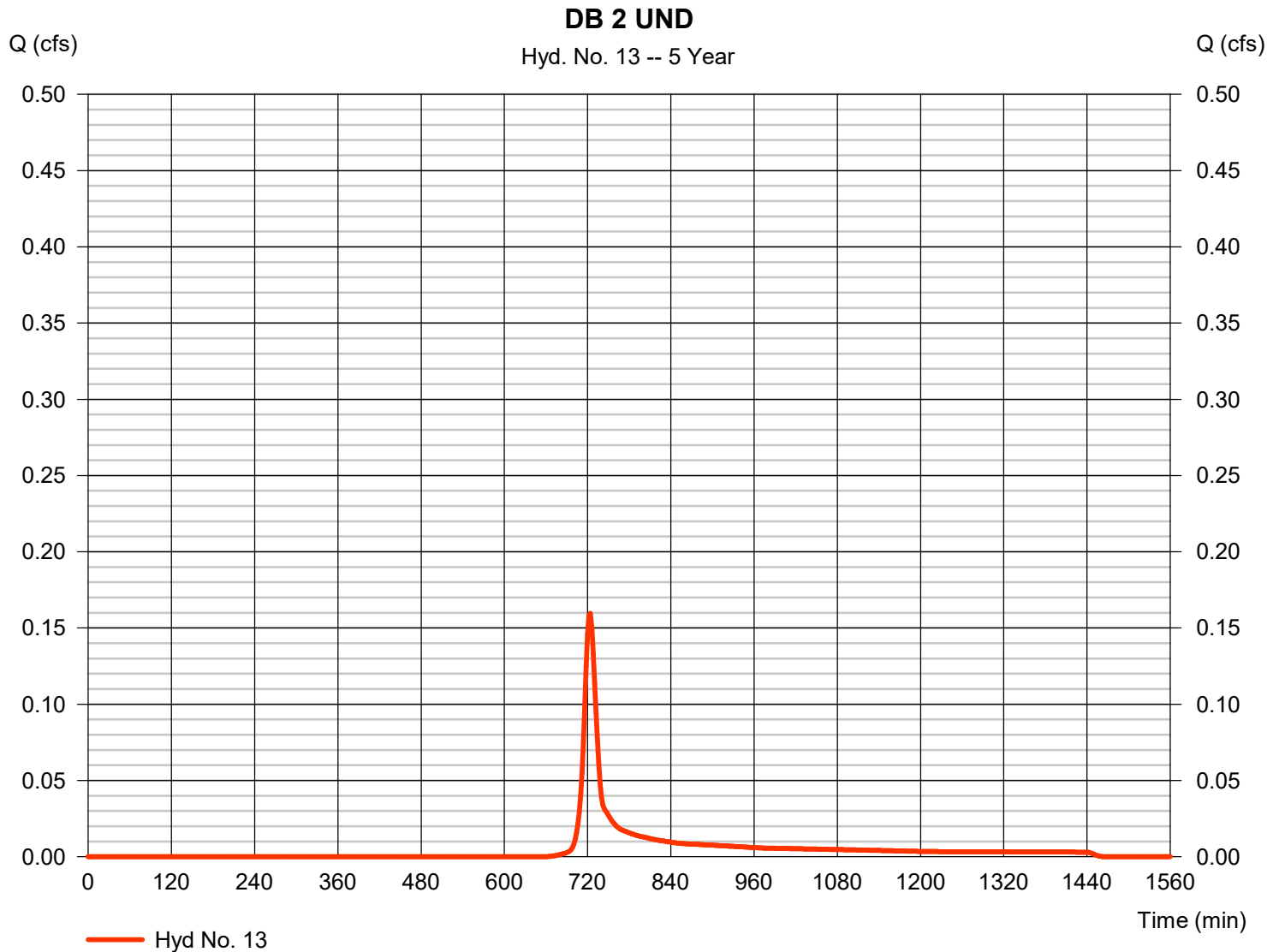
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 13

DB 2 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 0.160 cfs
Storm frequency	= 5 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 469 cuft
Drainage area	= 0.110 ac	Curve number	= 70
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



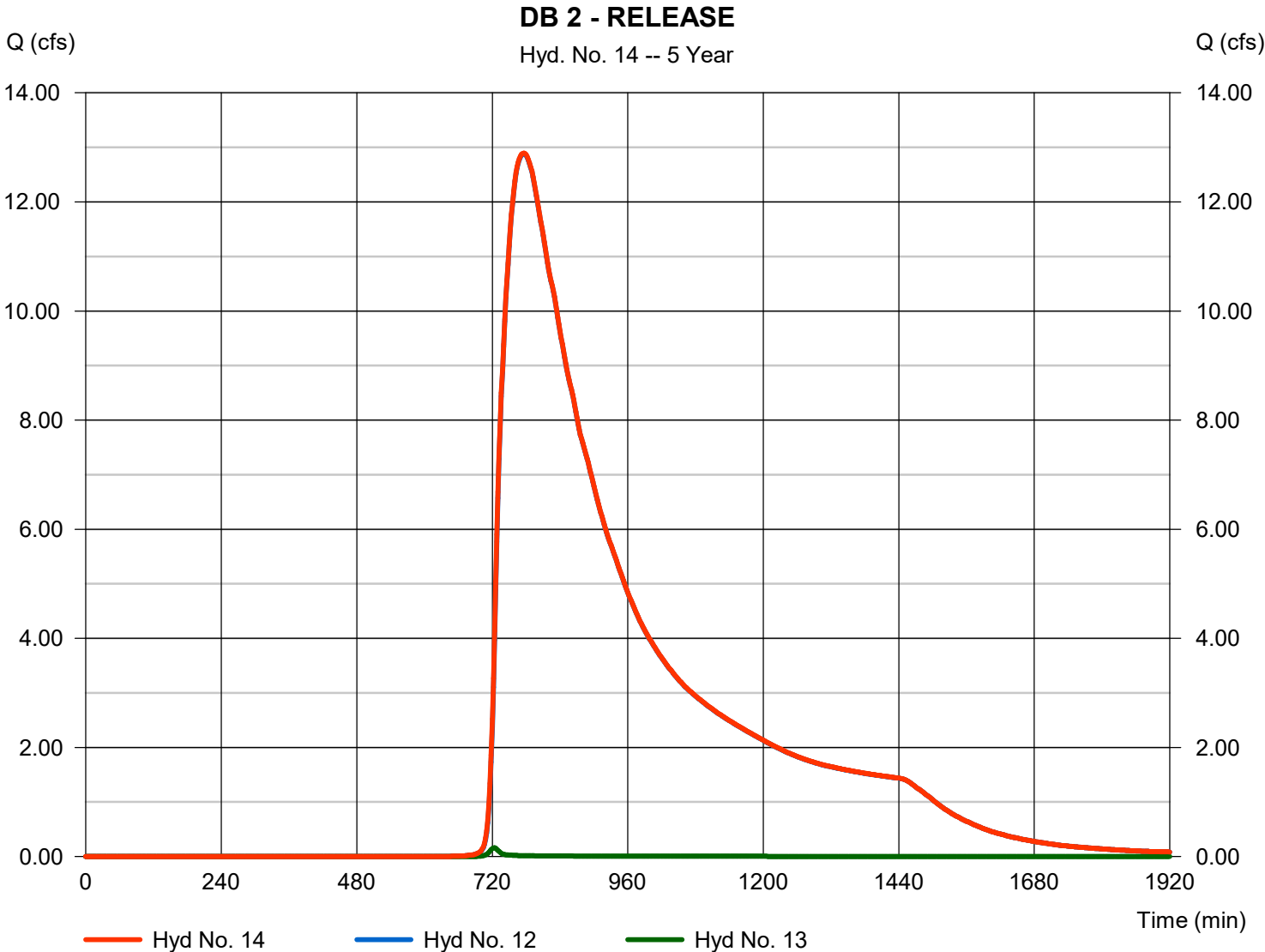
Hydrograph Report

Hyd. No. 14

DB 2 - RELEASE

Hydrograph type = Combine
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyds. = 12, 13

Peak discharge = 12.90 cfs
Time to peak = 776 min
Hyd. volume = 212,257 cuft
Contrib. drain. area = 0.110 ac



Hydrograph Summary Report

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

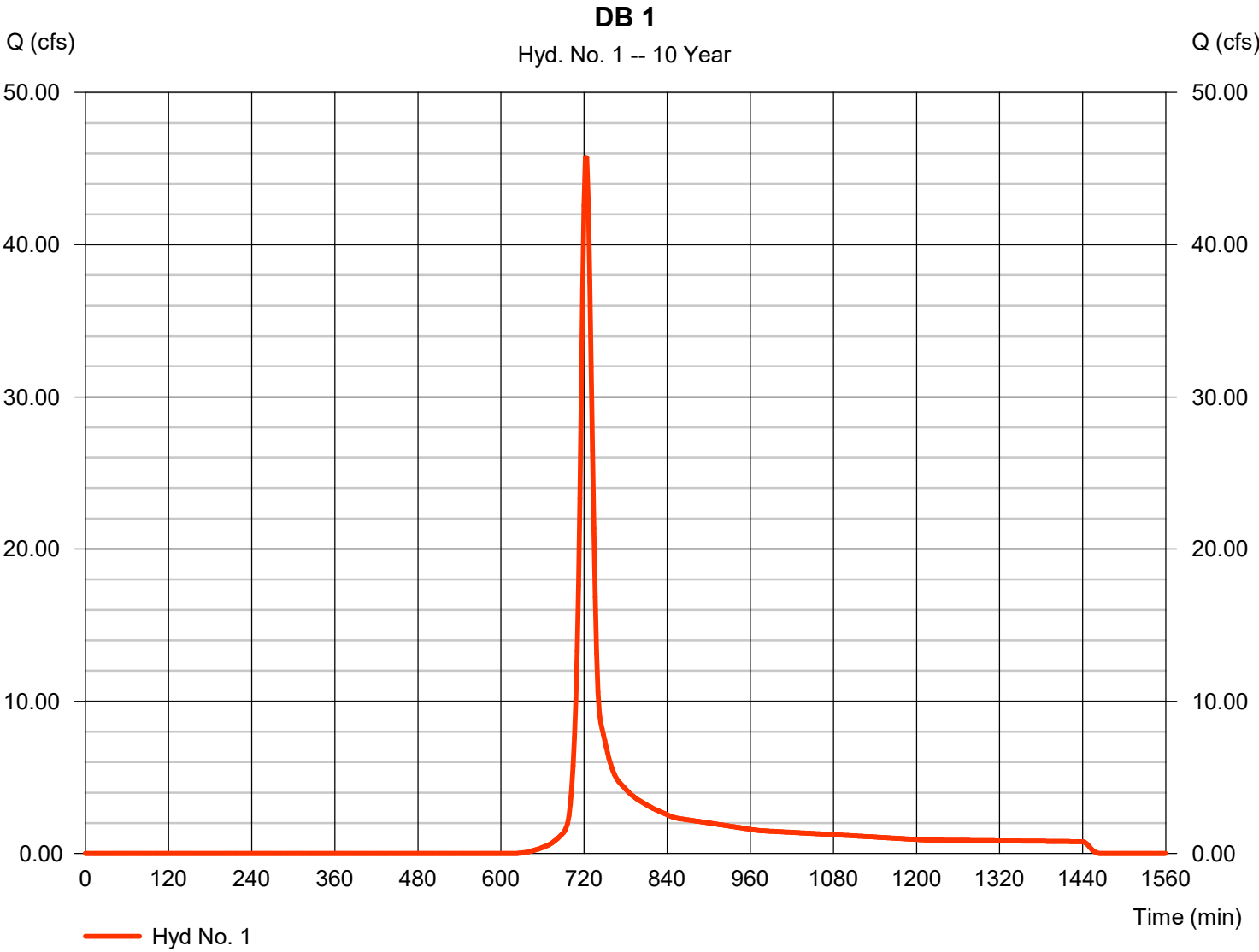
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	45.73	2	722	131,851	-----	-----	-----	DB 1
2	SCS Runoff	47.21	2	734	207,043	-----	-----	-----	DB 1 OFF
3	Combine	82.67	2	726	338,894	1, 2	-----	-----	TO POND 1
4	Reservoir	28.45	2	756	338,519	3	874.62	119,346	POND 1 - OUT
5	SCS Runoff	11.35	2	722	32,730	-----	-----	-----	DB 1 UND
6	Combine	30.06	2	752	371,249	4, 5	-----	-----	DB 1 - RELEASE
7	SCS Runoff	37.71	2	722	108,731	-----	-----	-----	DB 2
8	SCS Runoff	3.114	2	722	8,284	-----	-----	-----	DB 2A OFF
9	SCS Runoff	24.93	2	742	135,907	-----	-----	-----	DB 2B OFF
10	Manual	4.370	2	732	32,412	-----	-----	-----	POND 2 (BIG CREEK RIDGE)
11	Combine	59.04	2	724	285,333	7, 8, 9, 10	-----	-----	TO POND 2
12	Reservoir	16.26	2	778	285,299	11	881.92	106,184	POND 2 - OUT
13	SCS Runoff	0.222	2	722	641	-----	-----	-----	DB 2 UND
14	Combine	16.28	2	776	285,939	12, 13	-----	-----	DB 2 - RELEASE
Post-Developed Hydraflow.gpw					Return Period: 10 Year			Monday, 12 / 18 / 2023	

Hydrograph Report

Hyd. No. 1

DB 1

Hydrograph type	= SCS Runoff	Peak discharge	= 45.73 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 131,851 cuft
Drainage area	= 22.640 ac	Curve number	= 70
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

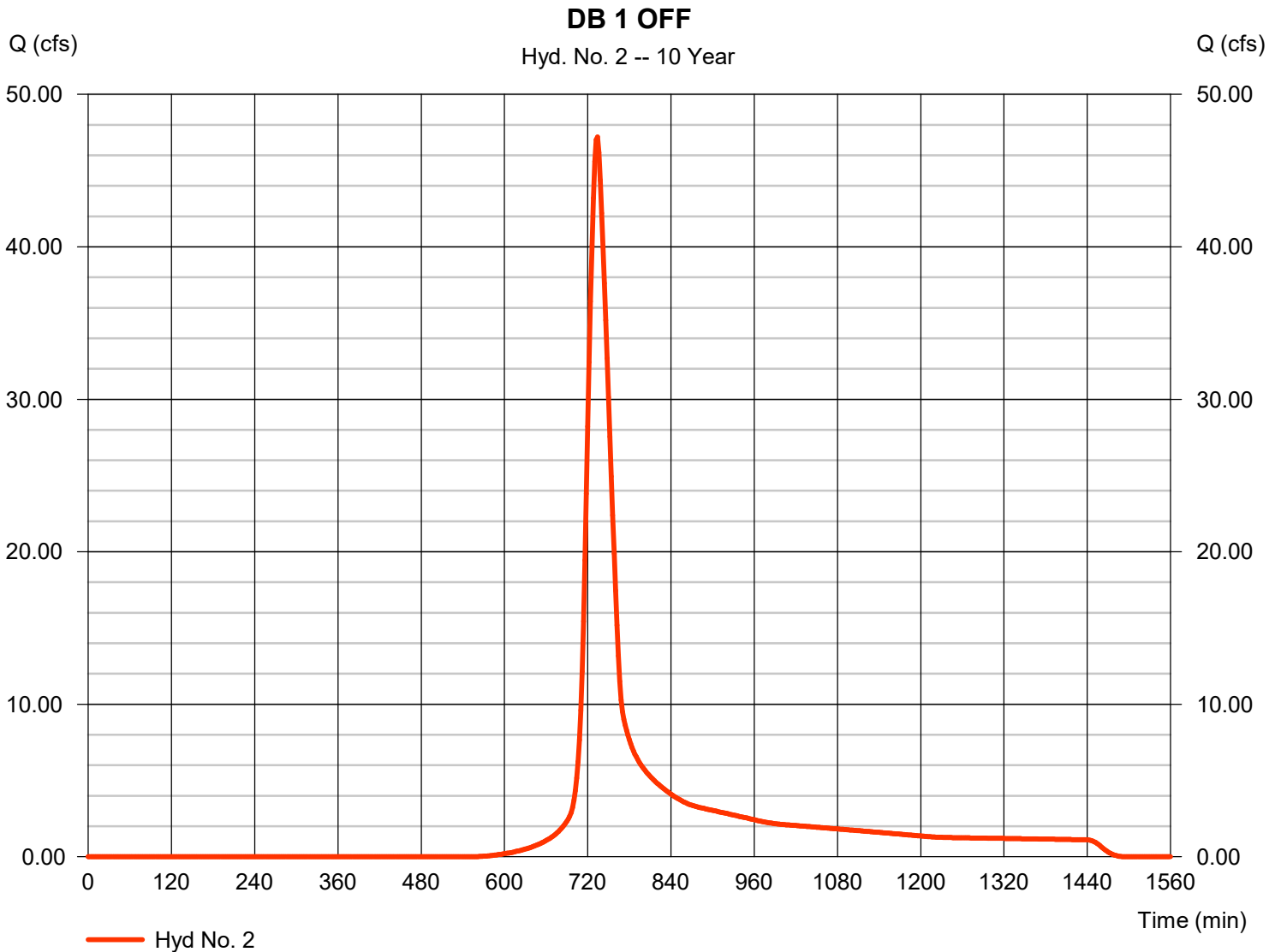
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 2

DB 1 OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 47.21 cfs
Storm frequency	= 10 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 207,043 cuft
Drainage area	= 27.900 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.30 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

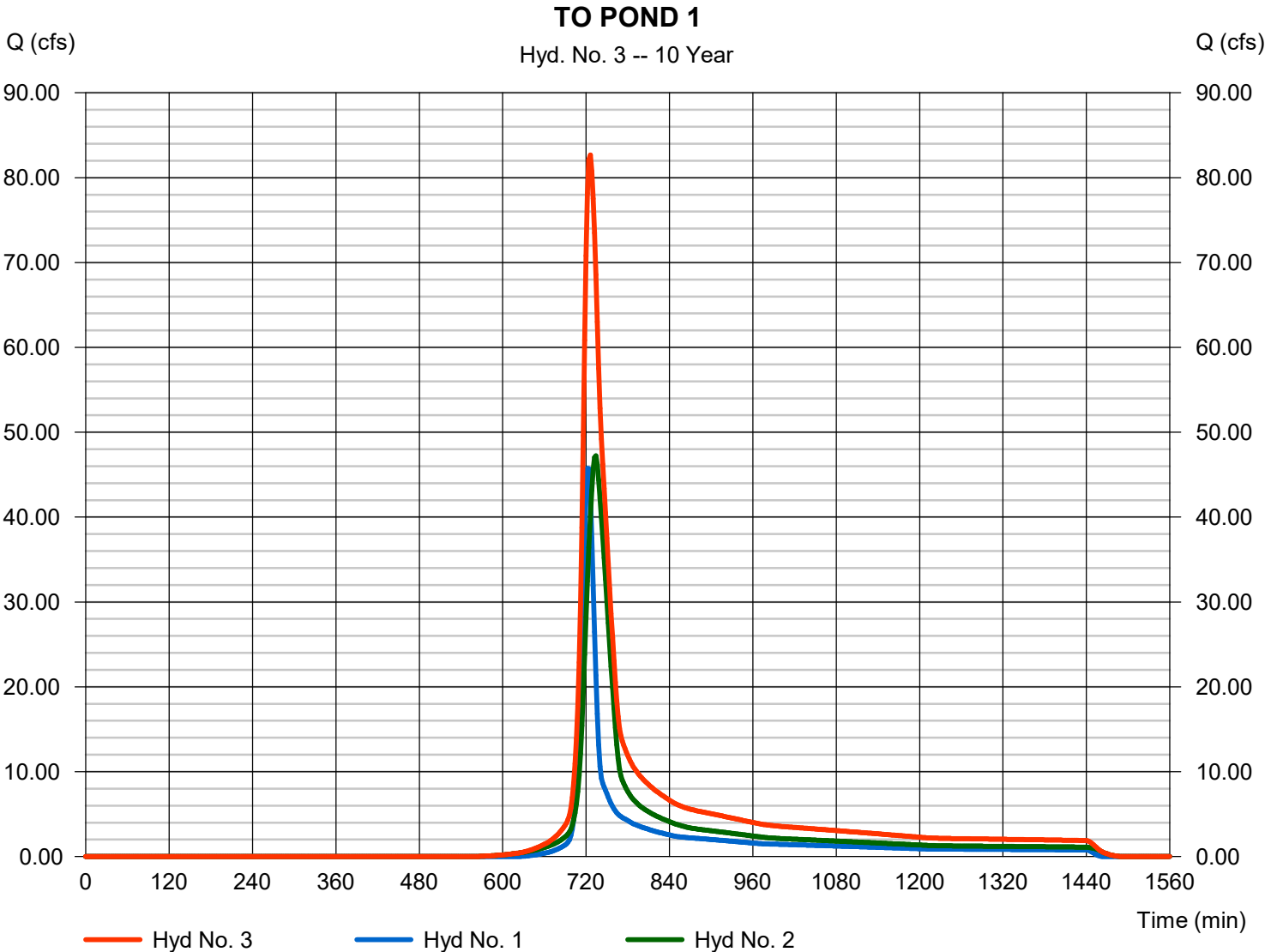
Monday, 12 / 18 / 2023

Hyd. No. 3

TO POND 1

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 1, 2

Peak discharge = 82.67 cfs
Time to peak = 726 min
Hyd. volume = 338,894 cuft
Contrib. drain. area = 50.540 ac



Hydrograph Report

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

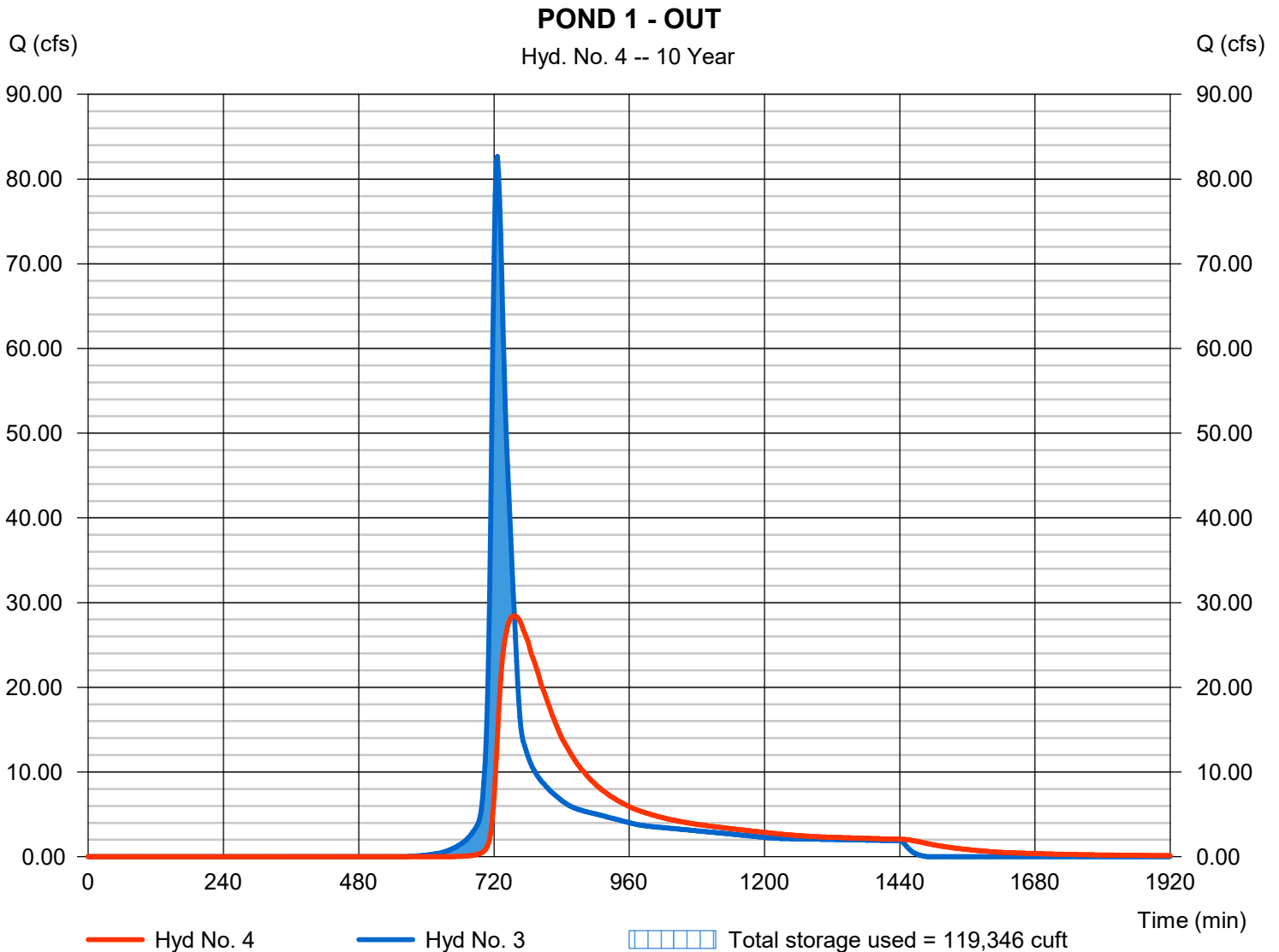
Monday, 12 / 18 / 2023

Hyd. No. 4

POND 1 - OUT

Hydrograph type	= Reservoir	Peak discharge	= 28.45 cfs
Storm frequency	= 10 yrs	Time to peak	= 756 min
Time interval	= 2 min	Hyd. volume	= 338,519 cuft
Inflow hyd. No.	= 3 - TO POND 1	Max. Elevation	= 874.62 ft
Reservoir name	= POND 1	Max. Storage	= 119,346 cuft

Storage Indication method used.



Hydrograph Report

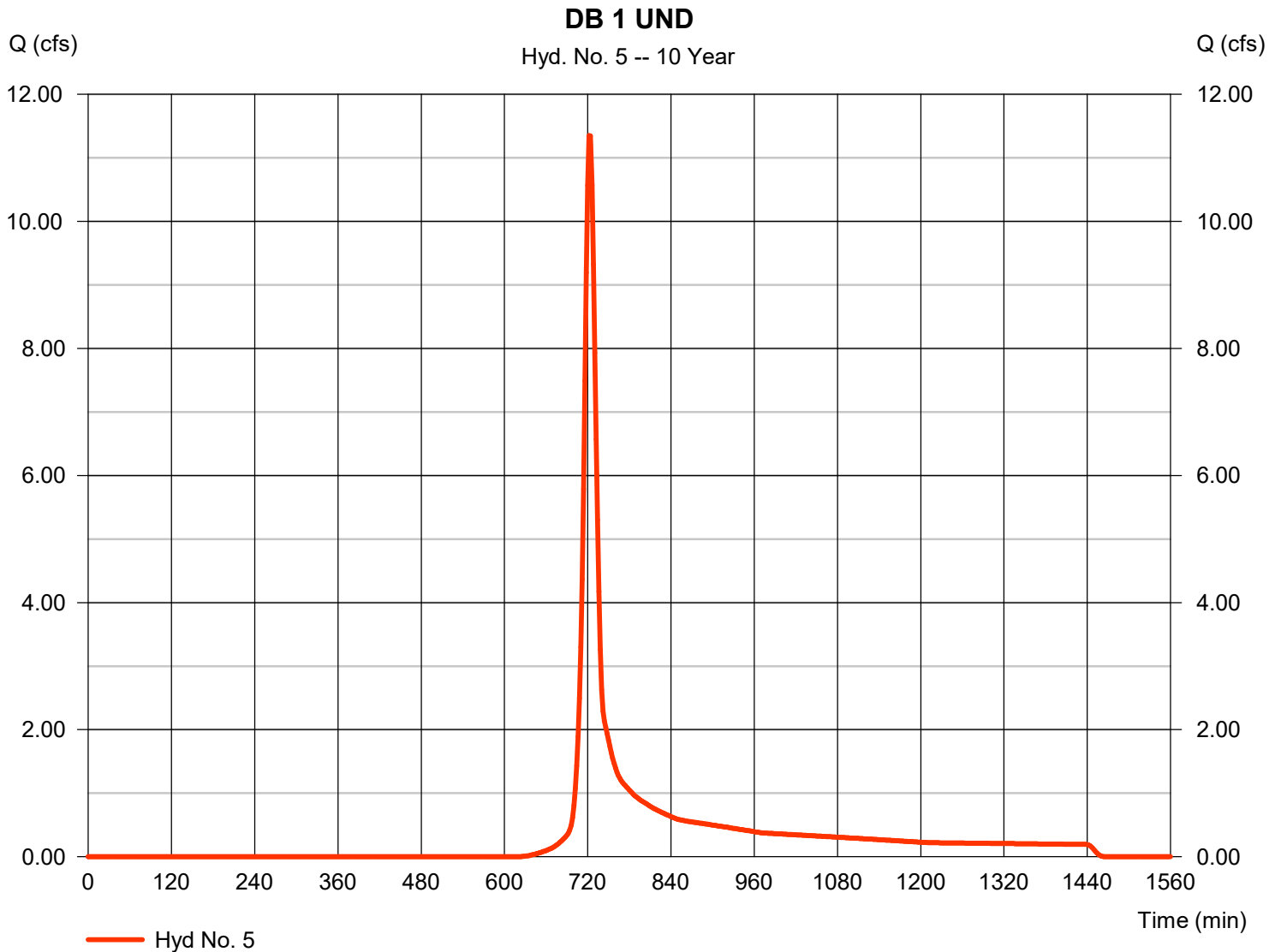
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 5

DB 1 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 11.35 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 32,730 cuft
Drainage area	= 5.620 ac	Curve number	= 70
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

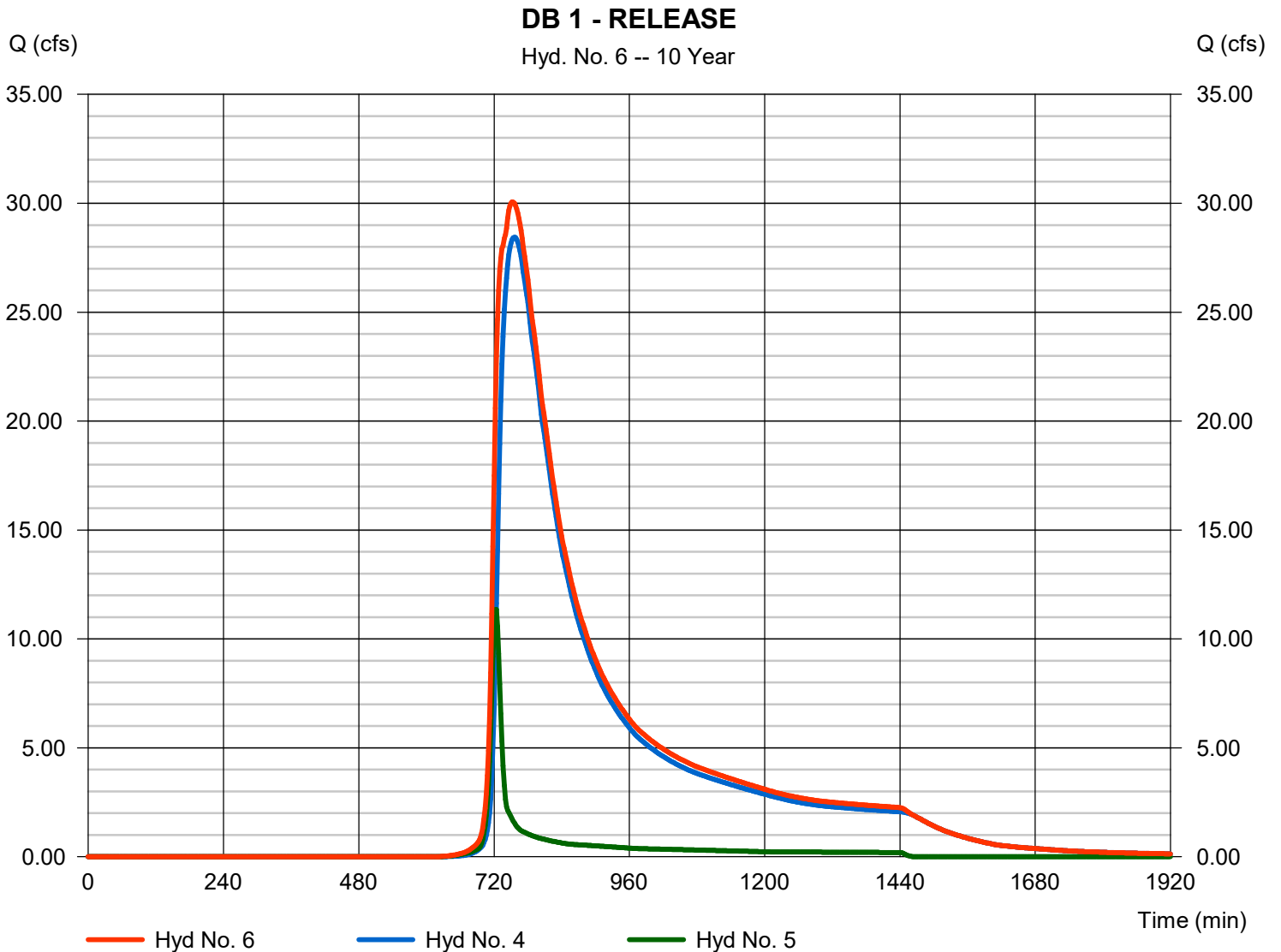
Monday, 12 / 18 / 2023

Hyd. No. 6

DB 1 - RELEASE

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 4, 5

Peak discharge = 30.06 cfs
Time to peak = 752 min
Hyd. volume = 371,249 cuft
Contrib. drain. area = 5.620 ac



Hydrograph Report

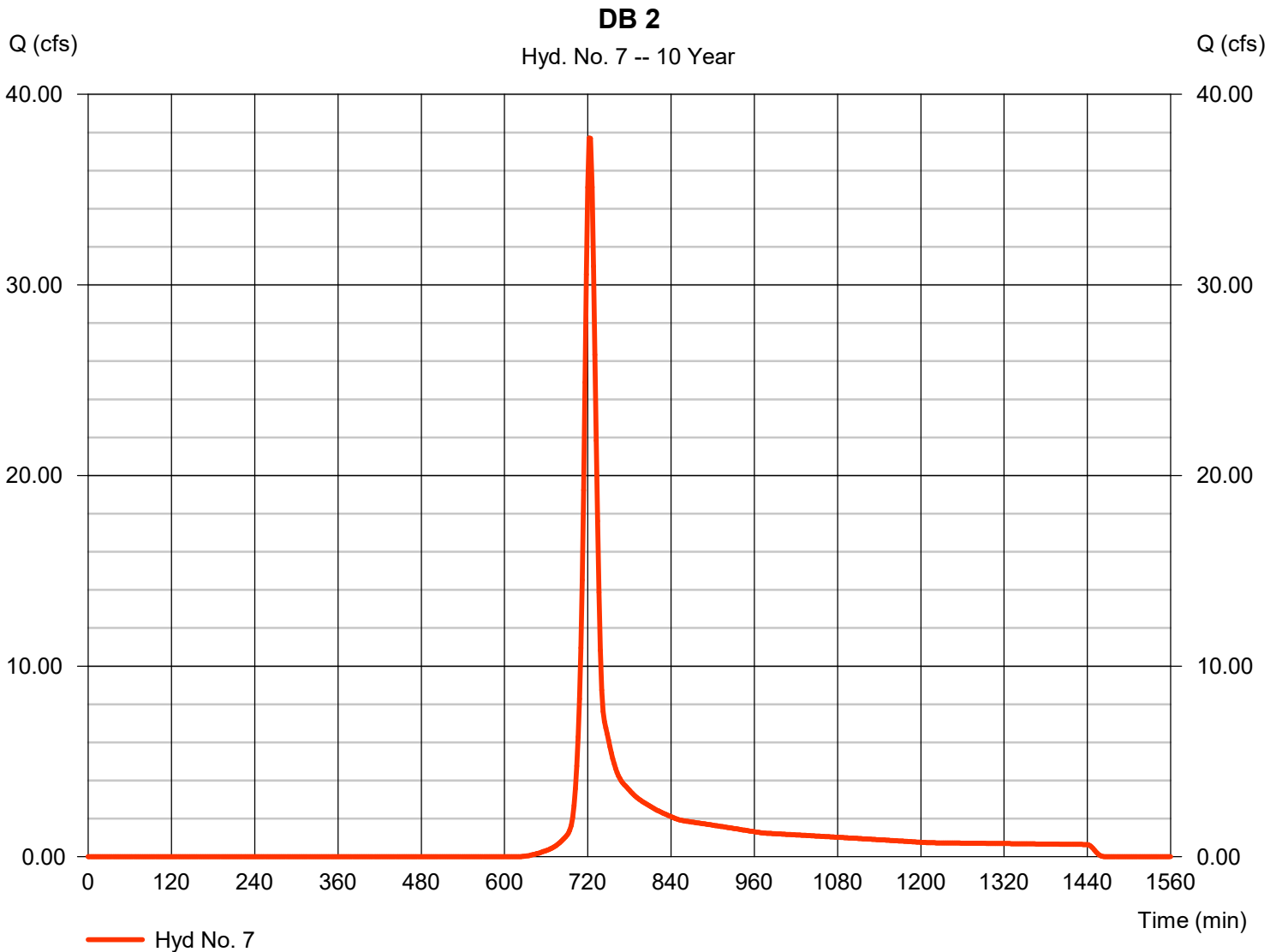
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 7

DB 2

Hydrograph type	= SCS Runoff	Peak discharge	= 37.71 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 108,731 cuft
Drainage area	= 18.670 ac	Curve number	= 70
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

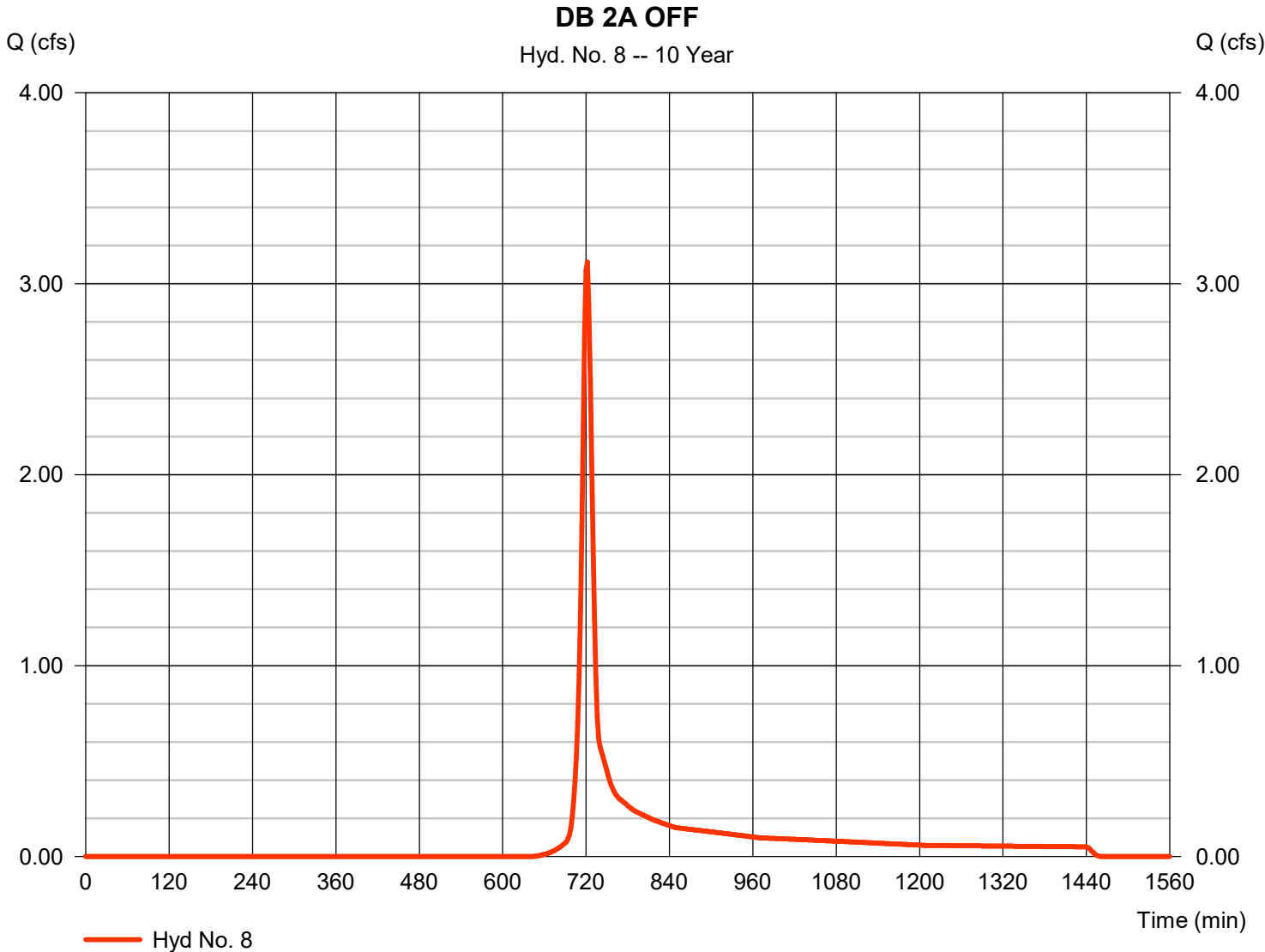


Hydrograph Report

Hyd. No. 8

DB 2A OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 3.114 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 8,284 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

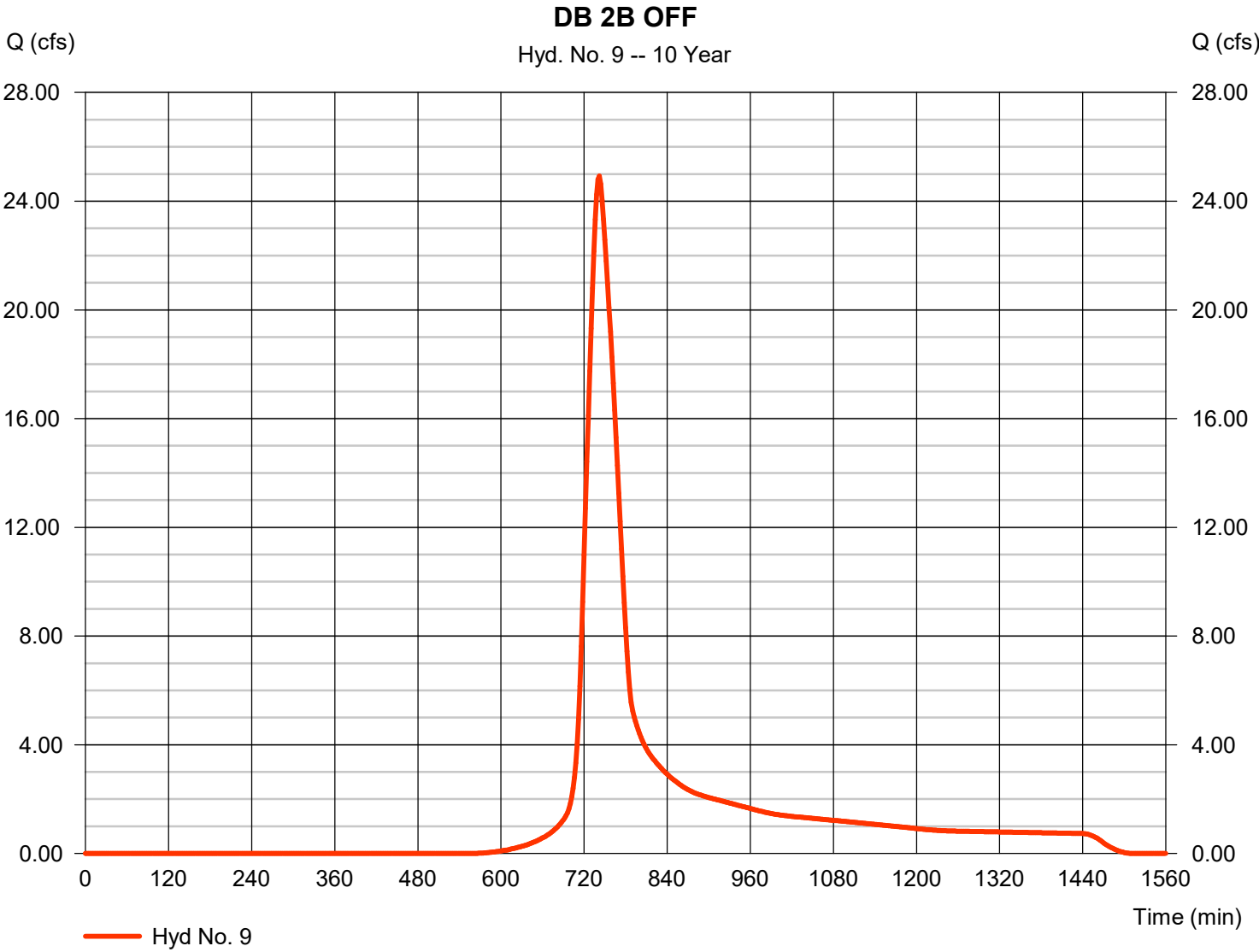
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 9

DB 2B OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 24.93 cfs
Storm frequency	= 10 yrs	Time to peak	= 742 min
Time interval	= 2 min	Hyd. volume	= 135,907 cuft
Drainage area	= 18.710 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 47.10 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

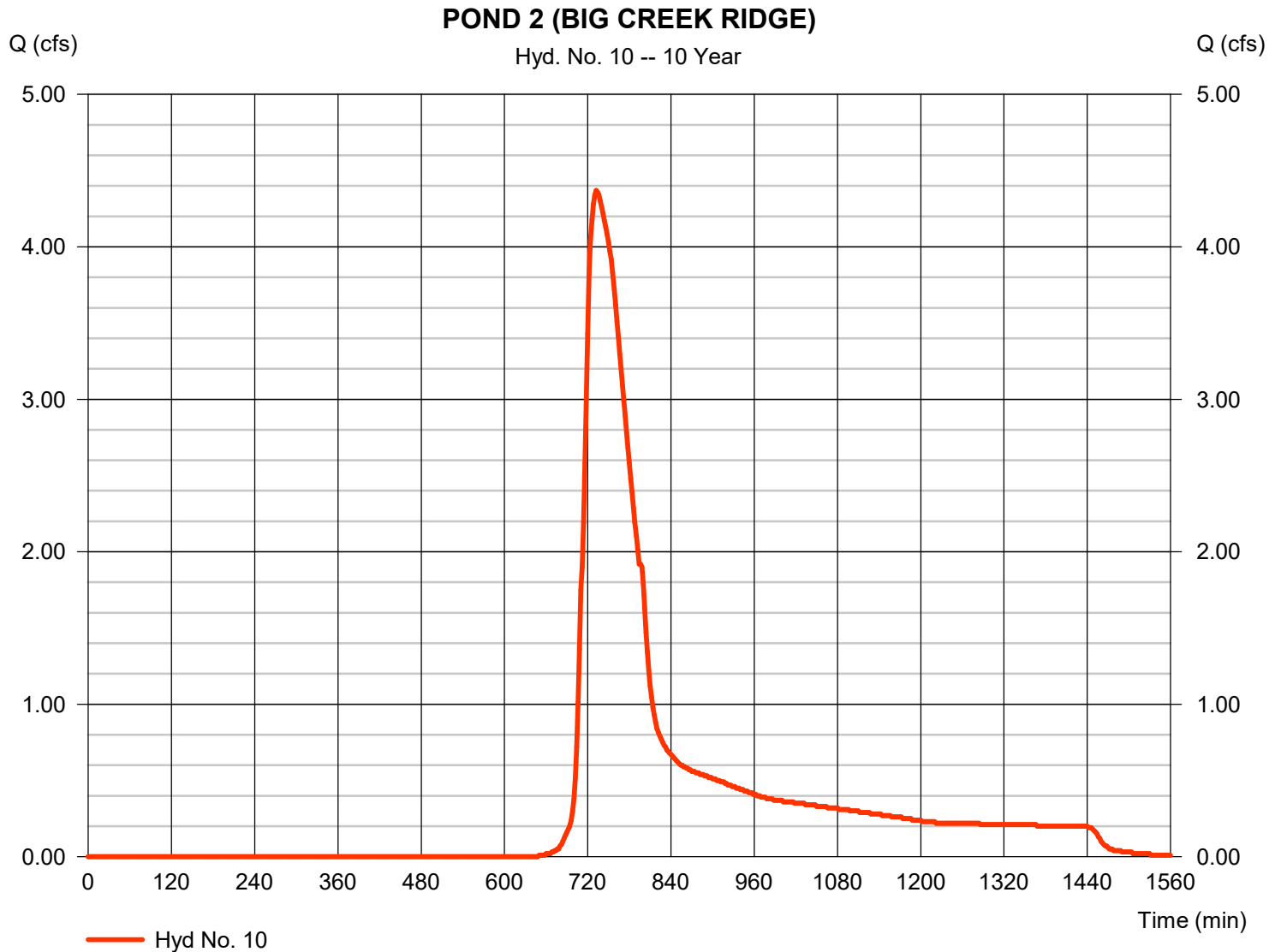
Monday, 12 / 18 / 2023

Hyd. No. 10

POND 2 (BIG CREEK RIDGE)

Hydrograph type = Manual
Storm frequency = 10 yrs
Time interval = 2 min

Peak discharge = 4.370 cfs
Time to peak = 732 min
Hyd. volume = 32,412 cuft



Hydrograph Report

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

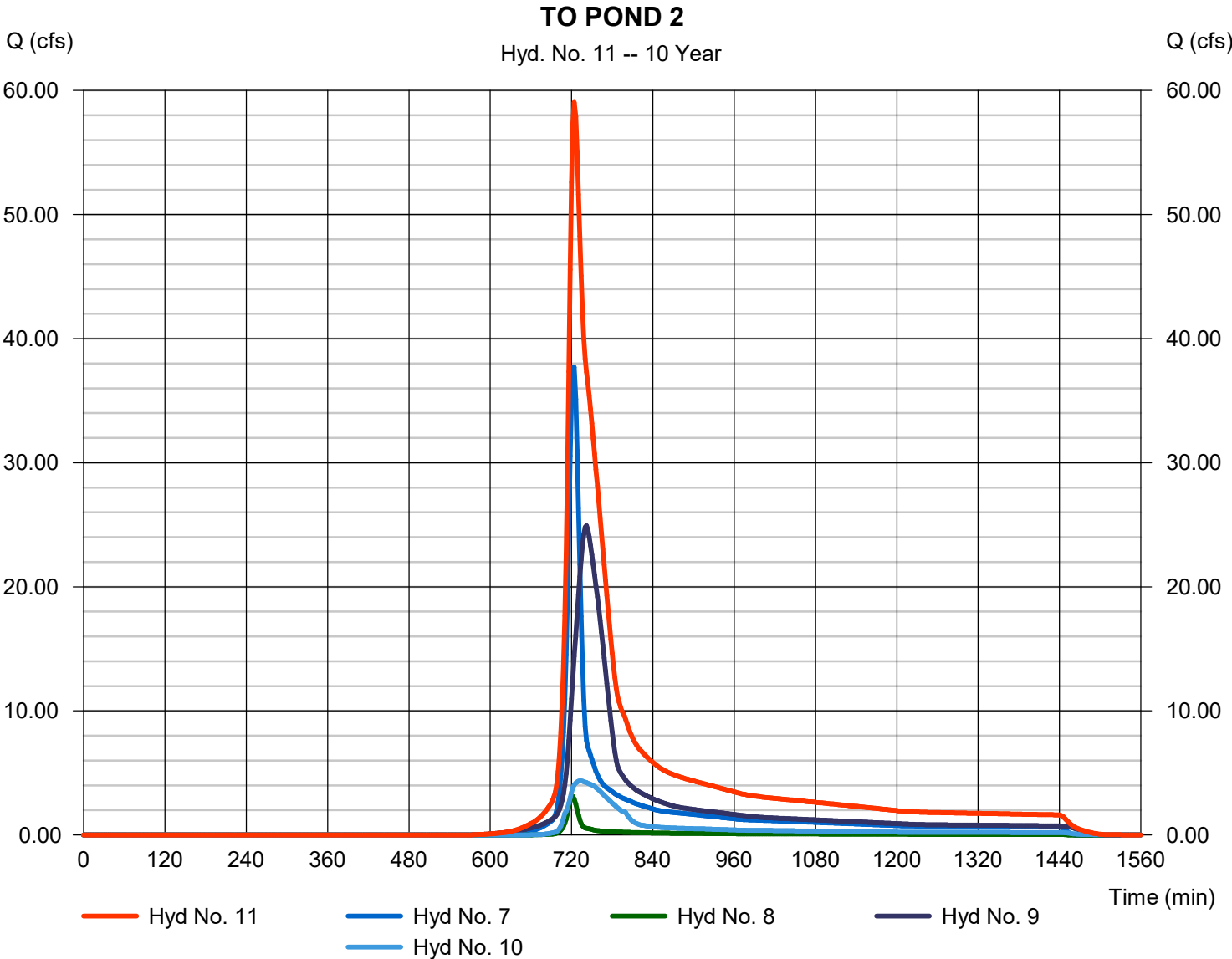
Monday, 12 / 18 / 2023

Hyd. No. 11

TO POND 2

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 7, 8, 9, 10

Peak discharge = 59.04 cfs
Time to peak = 724 min
Hyd. volume = 285,333 cuft
Contrib. drain. area = 38.850 ac



Hydrograph Report

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

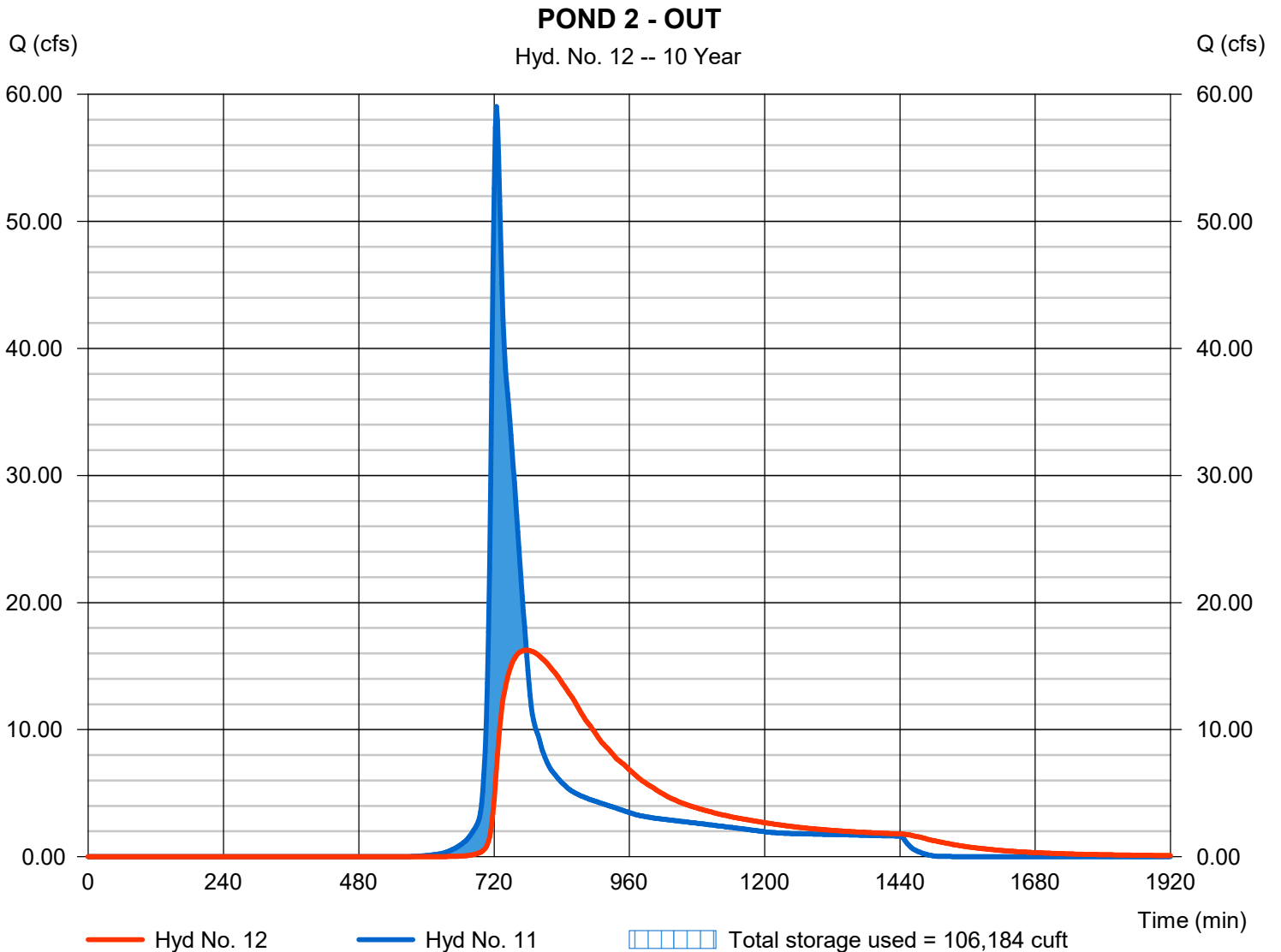
Monday, 12 / 18 / 2023

Hyd. No. 12

POND 2 - OUT

Hydrograph type	= Reservoir	Peak discharge	= 16.26 cfs
Storm frequency	= 10 yrs	Time to peak	= 778 min
Time interval	= 2 min	Hyd. volume	= 285,299 cuft
Inflow hyd. No.	= 11 - TO POND 2	Max. Elevation	= 881.92 ft
Reservoir name	= POND 2	Max. Storage	= 106,184 cuft

Storage Indication method used.



Hydrograph Report

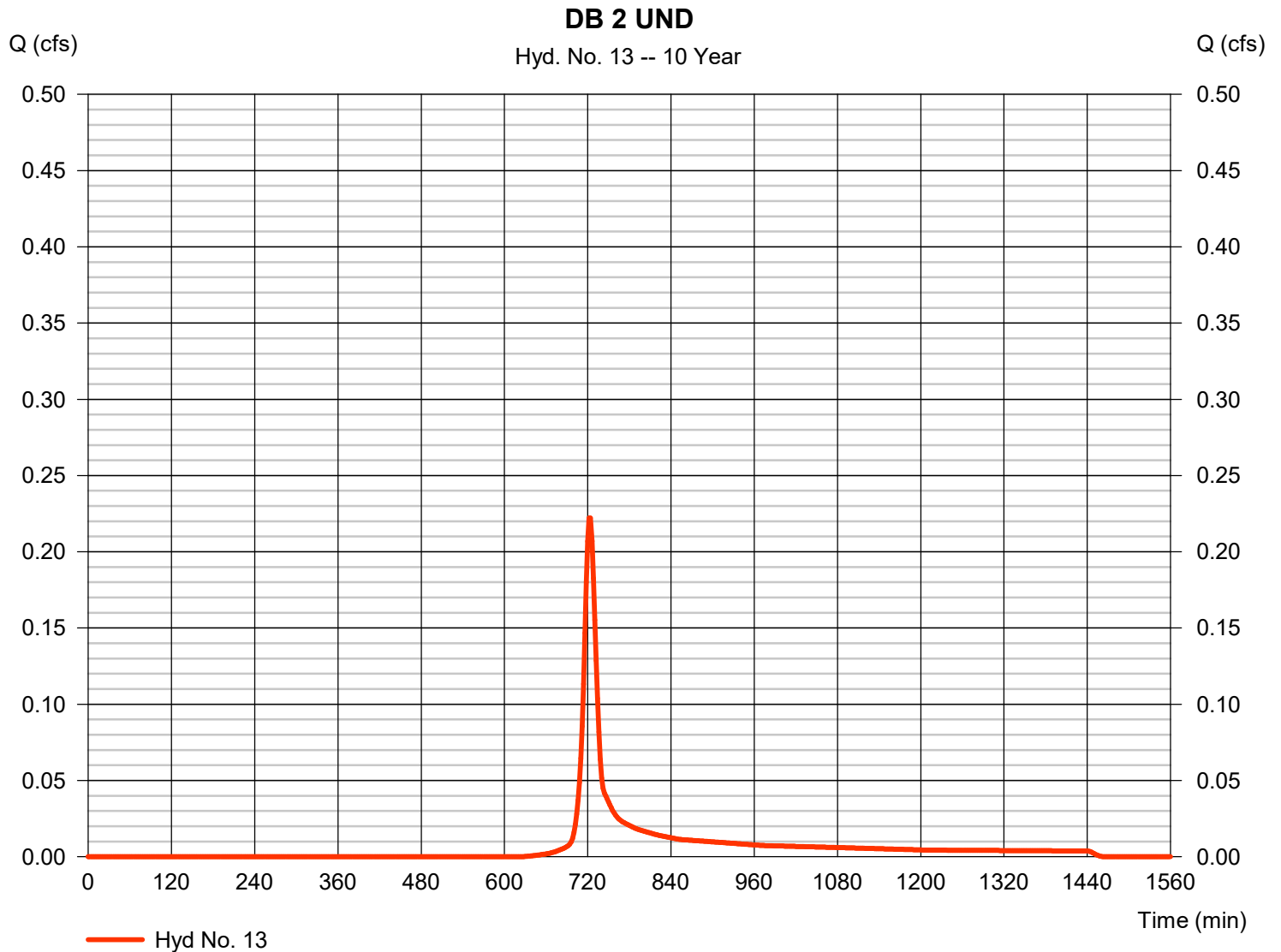
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 13

DB 2 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 0.222 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 641 cuft
Drainage area	= 0.110 ac	Curve number	= 70
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.00 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

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

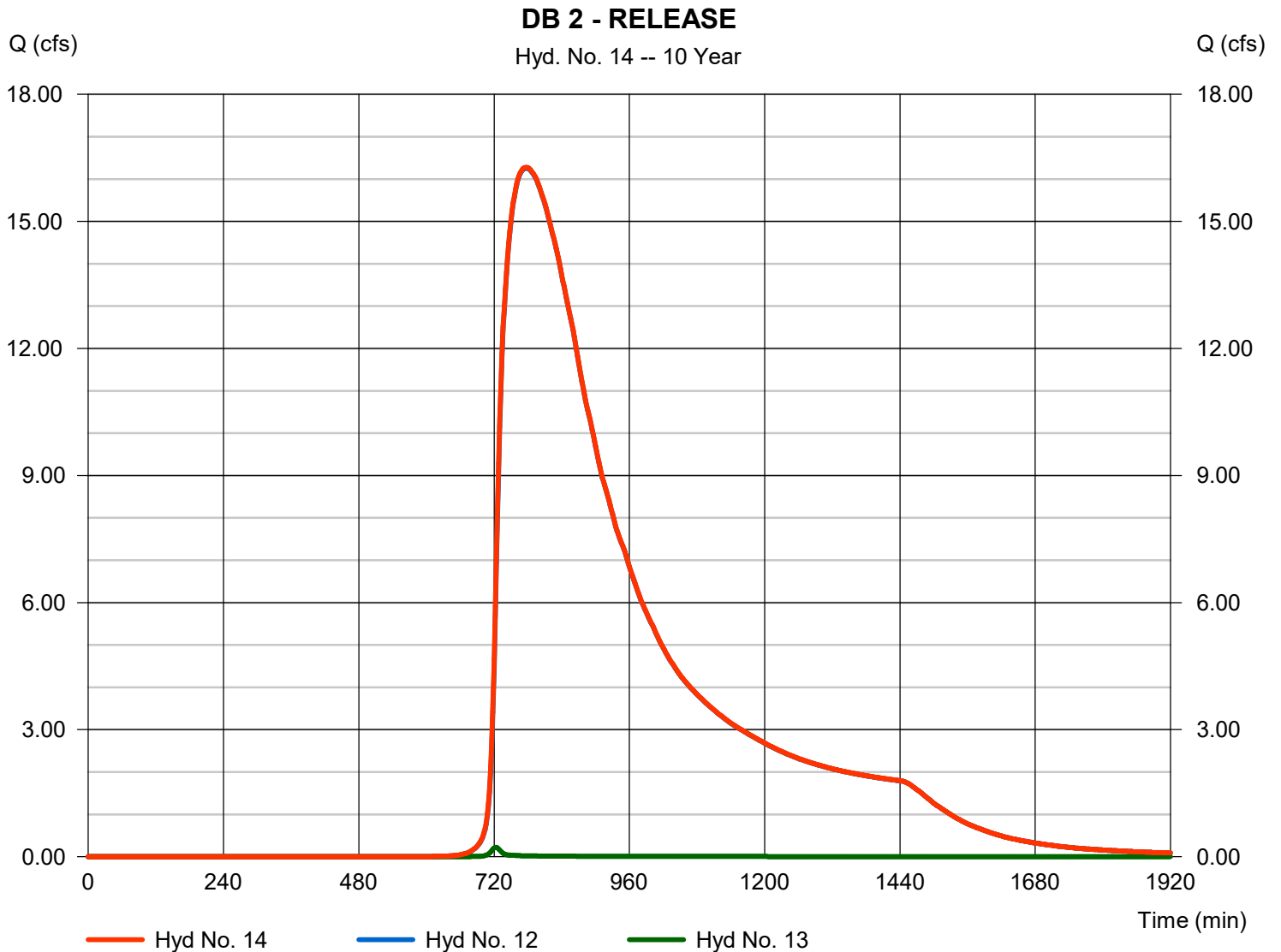
Monday, 12 / 18 / 2023

Hyd. No. 14

DB 2 - RELEASE

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 12, 13

Peak discharge = 16.28 cfs
Time to peak = 776 min
Hyd. volume = 285,939 cuft
Contrib. drain. area = 0.110 ac



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	106.27	2	722	297,947	-----	-----	-----	DB 1
2	SCS Runoff	101.01	2	732	436,354	-----	-----	-----	DB 1 OFF
3	Combine	185.75	2	724	734,301	1, 2	-----	-----	TO POND 1
4	Reservoir	63.61	2	754	733,916	3	877.55	278,216	POND 1 - OUT
5	SCS Runoff	26.38	2	722	73,960	-----	-----	-----	DB 1 UND
6	Combine	67.04	2	752	807,877	4, 5	-----	-----	DB 1 - RELEASE
7	SCS Runoff	87.64	2	722	245,701	-----	-----	-----	DB 2
8	SCS Runoff	7.436	2	720	19,301	-----	-----	-----	DB 2A OFF
9	SCS Runoff	53.45	2	740	286,430	-----	-----	-----	DB 2B OFF
10	Manual	6.110	2	734	74,375	-----	-----	-----	POND 2 (BIG CREEK RIDGE)
11	Combine	131.69	2	724	625,807	7, 8, 9, 10	-----	-----	TO POND 2
12	Reservoir	66.52	2	750	625,772	11	883.55	173,261	POND 2 - OUT
13	SCS Runoff	0.516	2	722	1,448	-----	-----	-----	DB 2 UND
14	Combine	66.60	2	750	627,219	12, 13	-----	-----	DB 2 - RELEASE
Post-Developed Hydraflow.gpw					Return Period: 100 Year			Monday, 12 / 18 / 2023	

Hydrograph Report

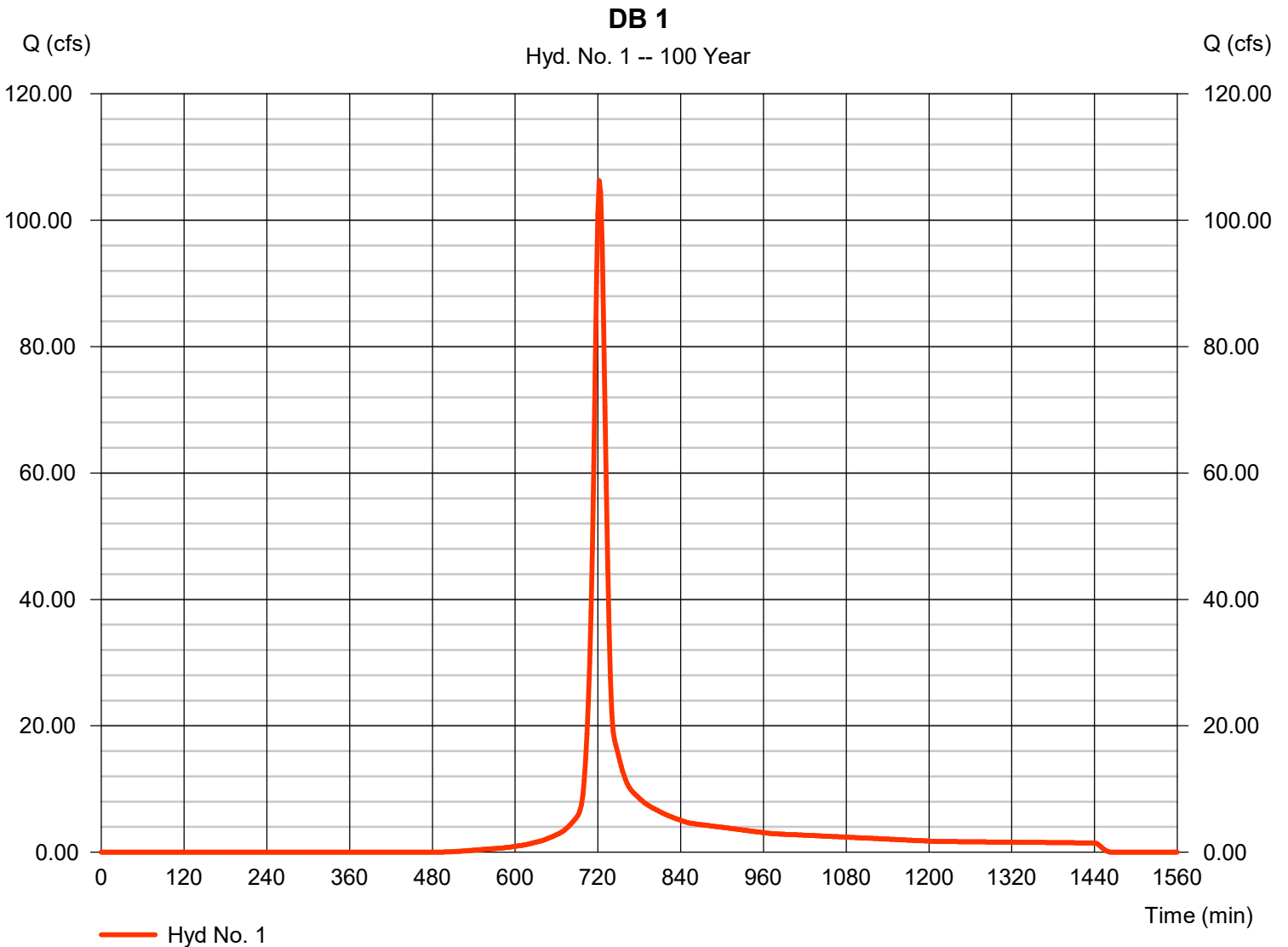
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 1

DB 1

Hydrograph type	= SCS Runoff	Peak discharge	= 106.27 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 297,947 cuft
Drainage area	= 22.640 ac	Curve number	= 70
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

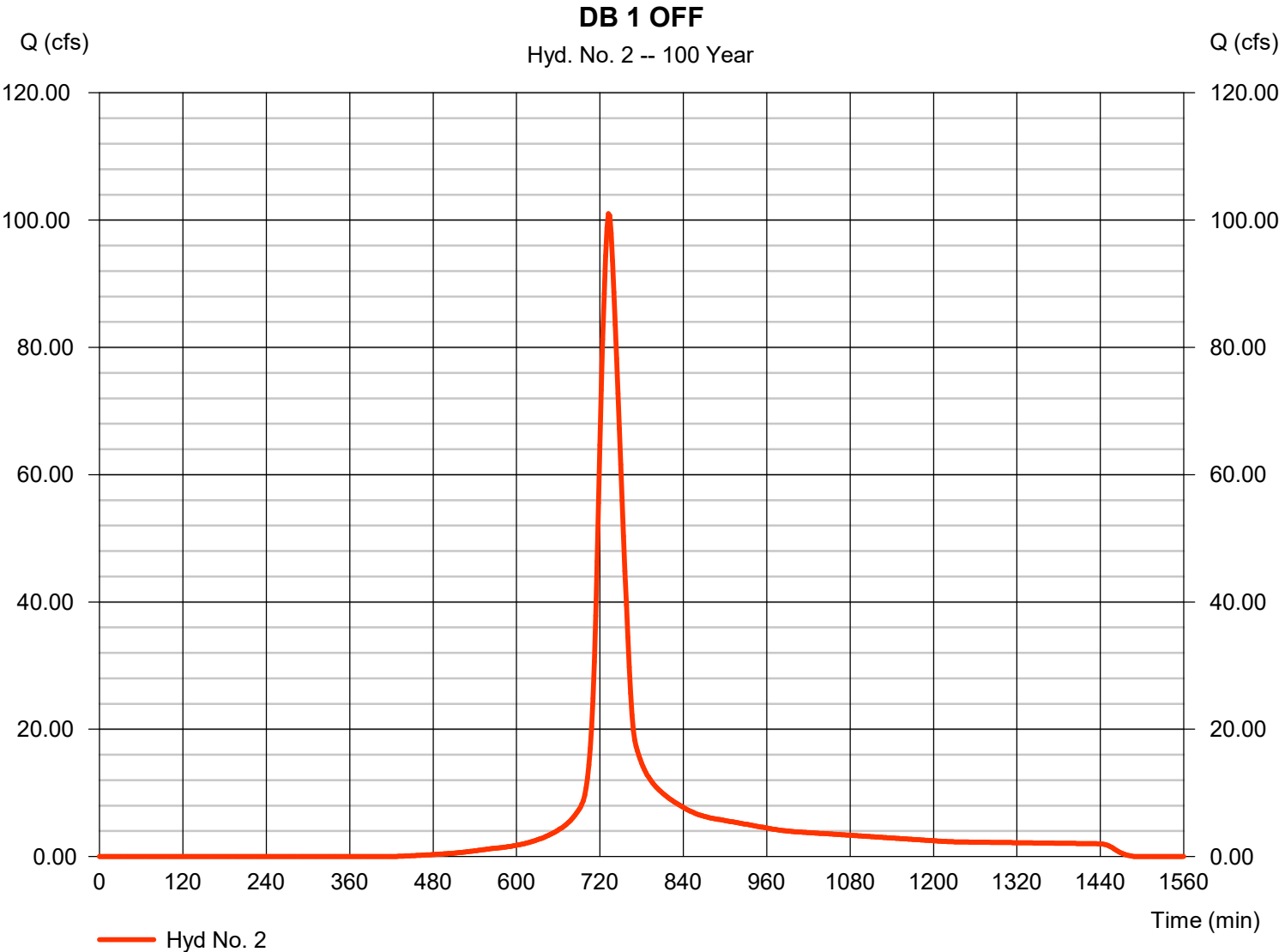
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 2

DB 1 OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 101.01 cfs
Storm frequency	= 100 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 436,354 cuft
Drainage area	= 27.900 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 31.30 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

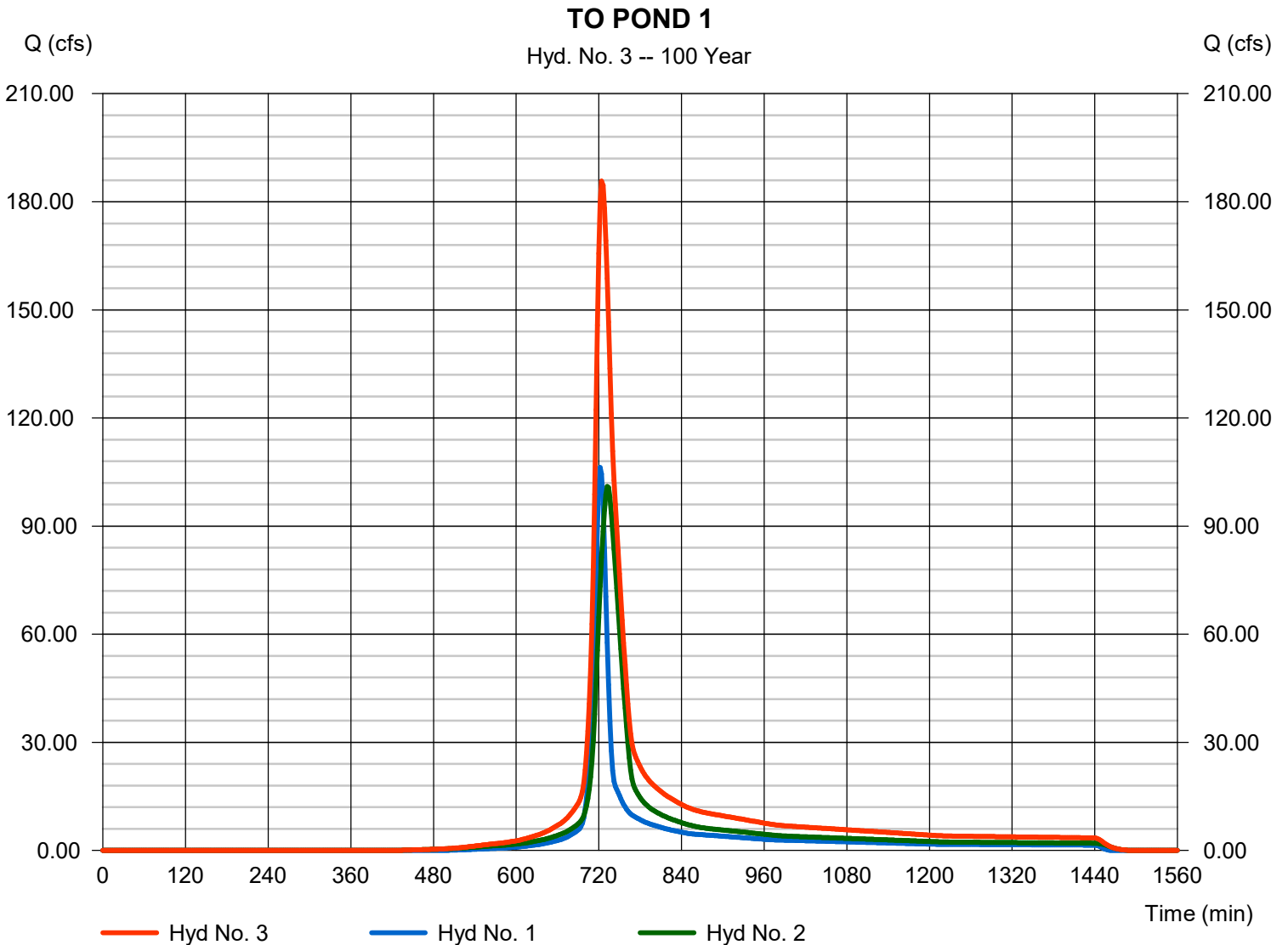
Monday, 12 / 18 / 2023

Hyd. No. 3

TO POND 1

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 1, 2

Peak discharge = 185.75 cfs
Time to peak = 724 min
Hyd. volume = 734,301 cuft
Contrib. drain. area = 50.540 ac



Hydrograph Report

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

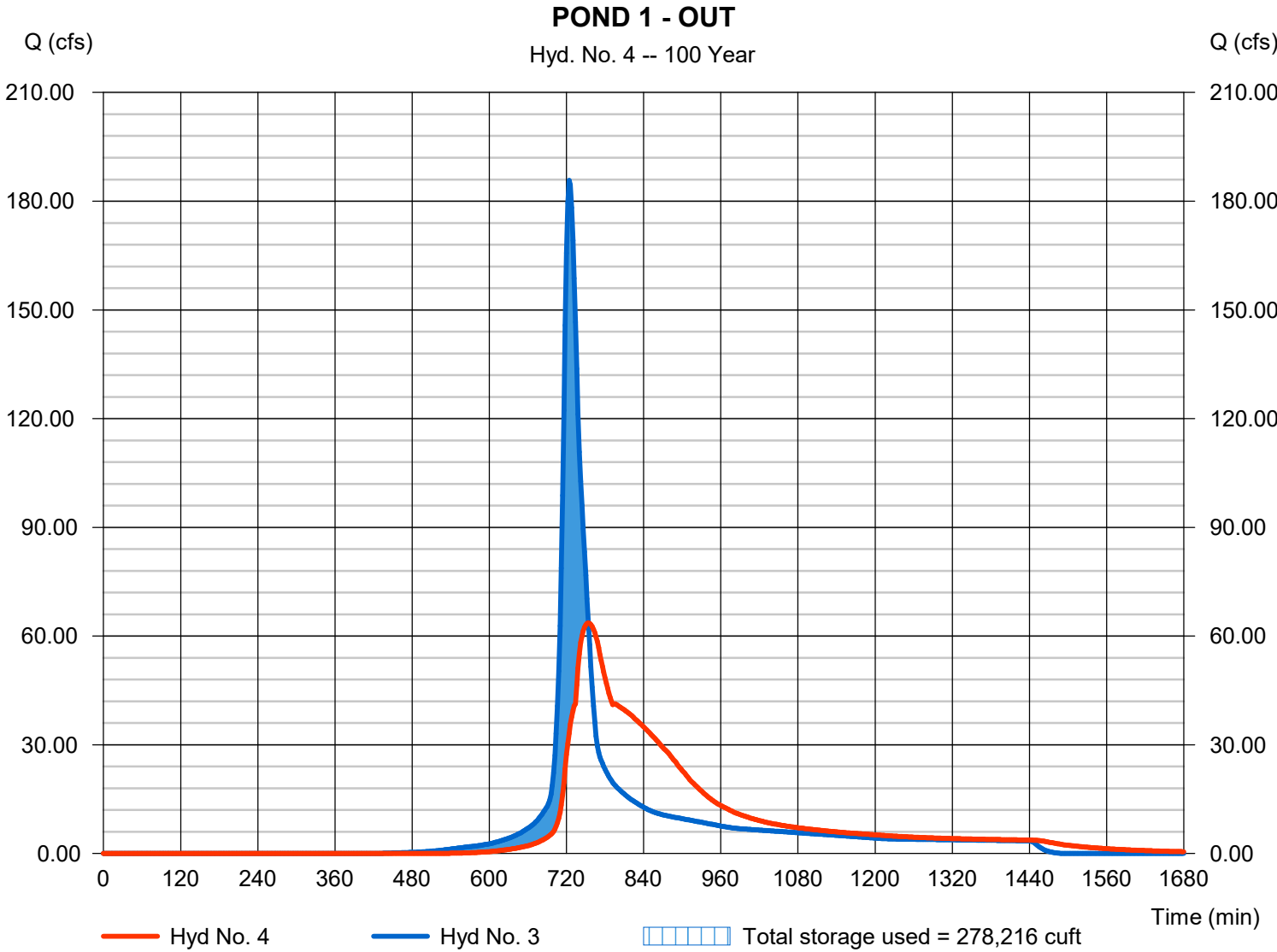
Monday, 12 / 18 / 2023

Hyd. No. 4

POND 1 - OUT

Hydrograph type	= Reservoir	Peak discharge	= 63.61 cfs
Storm frequency	= 100 yrs	Time to peak	= 754 min
Time interval	= 2 min	Hyd. volume	= 733,916 cuft
Inflow hyd. No.	= 3 - TO POND 1	Max. Elevation	= 877.55 ft
Reservoir name	= POND 1	Max. Storage	= 278,216 cuft

Storage Indication method used.



Hydrograph Report

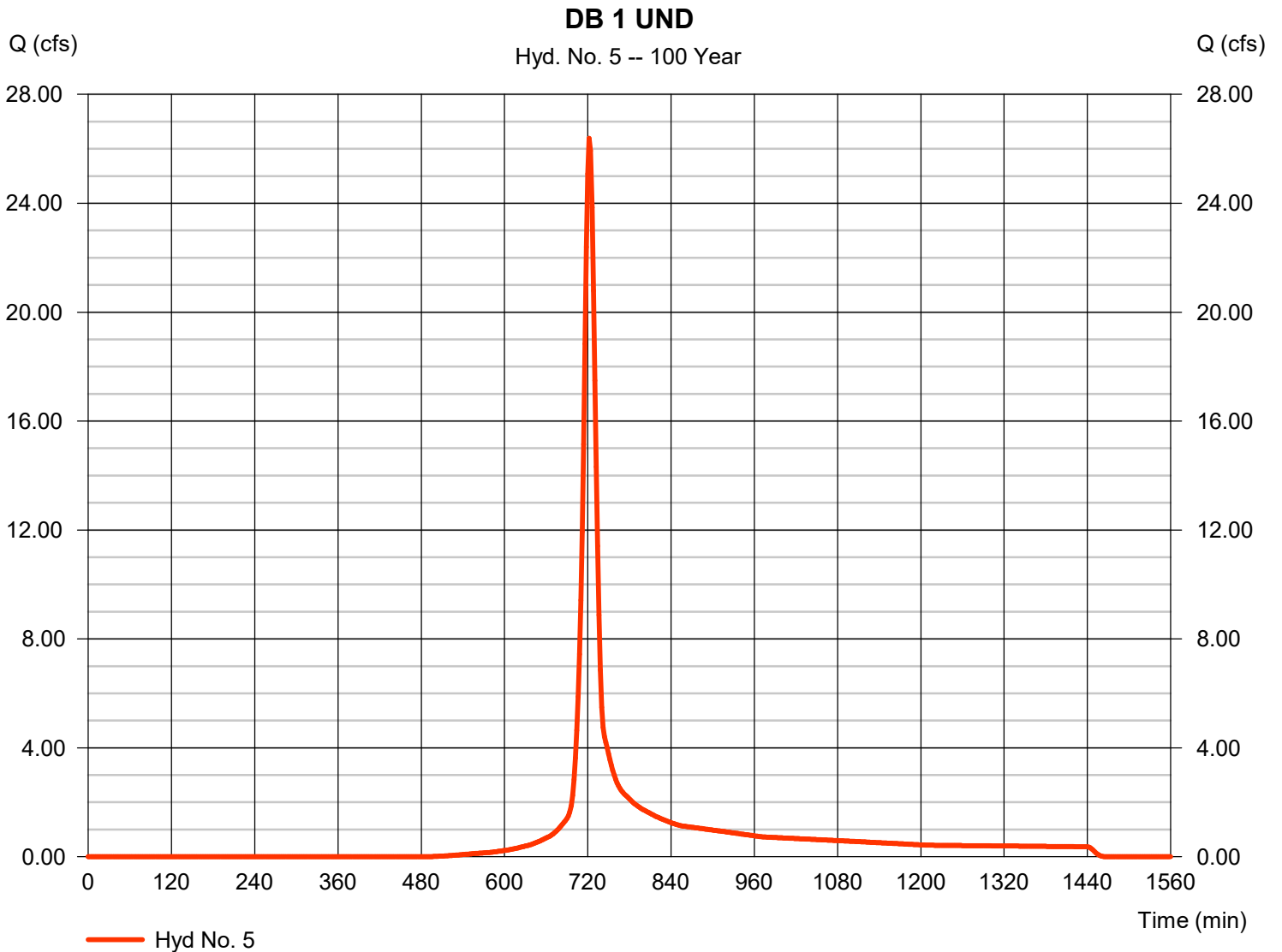
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 5

DB 1 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 26.38 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 73,960 cuft
Drainage area	= 5.620 ac	Curve number	= 70
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

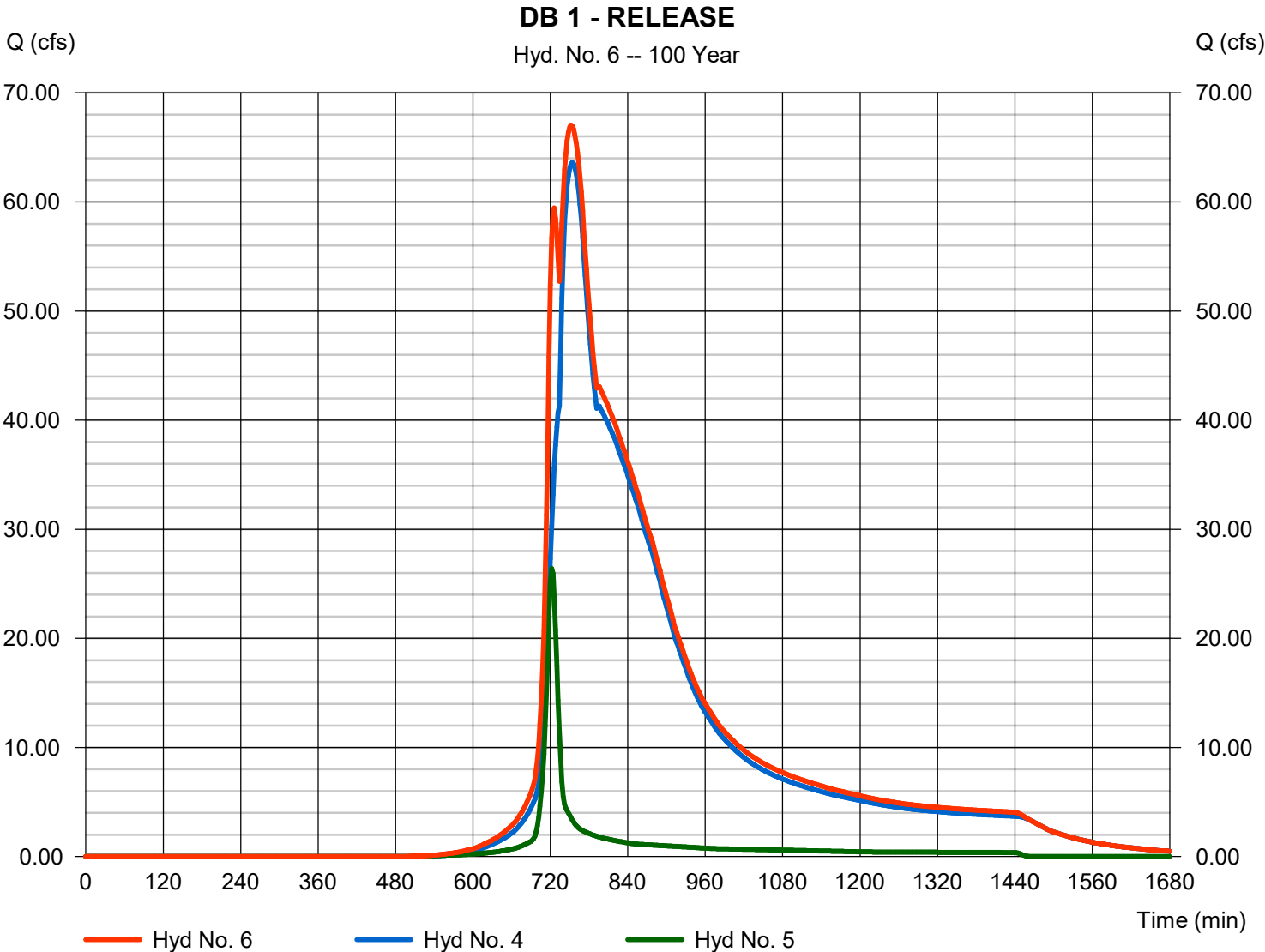
Monday, 12 / 18 / 2023

Hyd. No. 6

DB 1 - RELEASE

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

Peak discharge = 67.04 cfs
Time to peak = 752 min
Hyd. volume = 807,877 cuft
Contrib. drain. area = 5.620 ac



Hydrograph Report

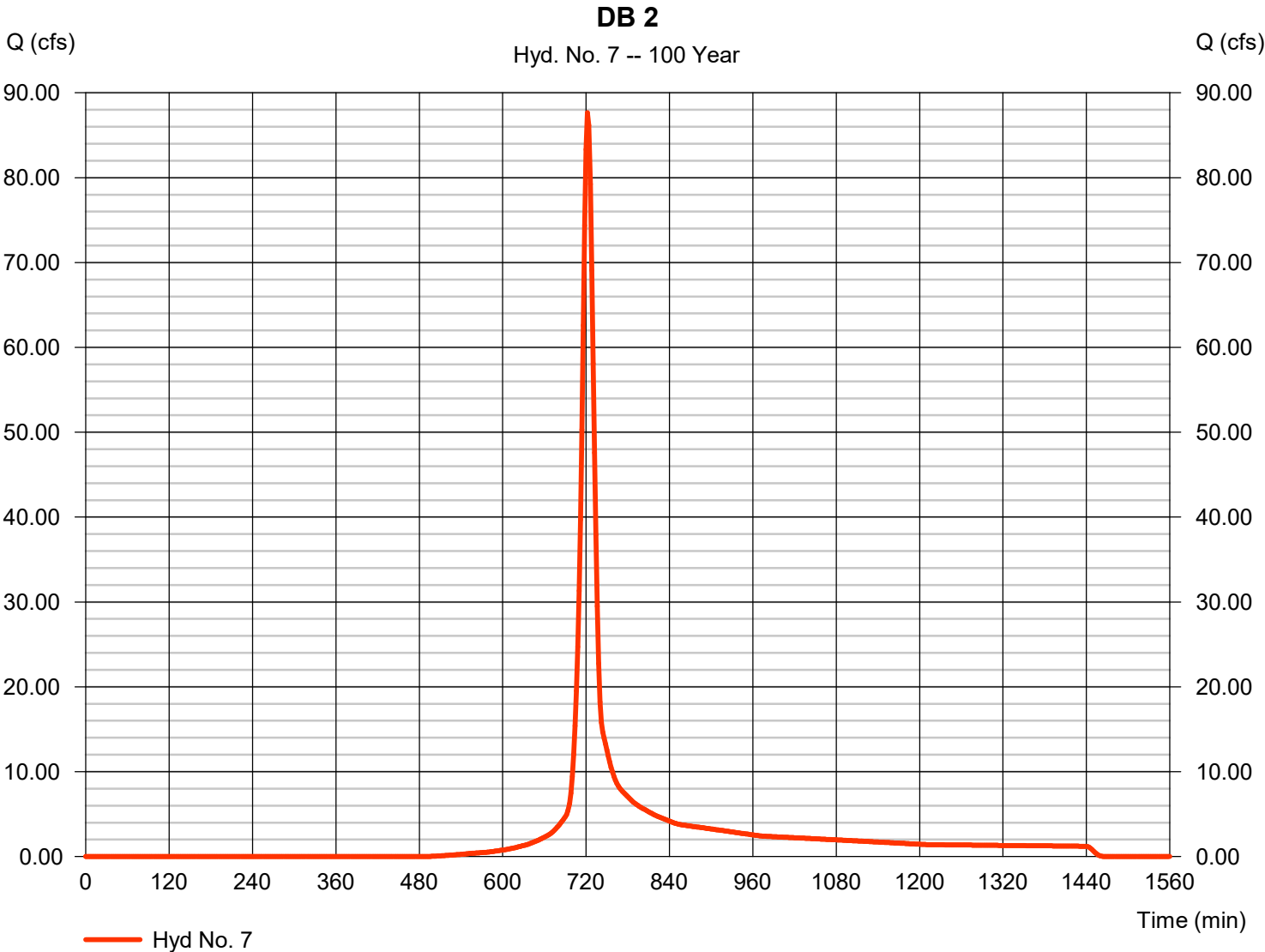
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 7

DB 2

Hydrograph type	= SCS Runoff	Peak discharge	= 87.64 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 245,701 cuft
Drainage area	= 18.670 ac	Curve number	= 70
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

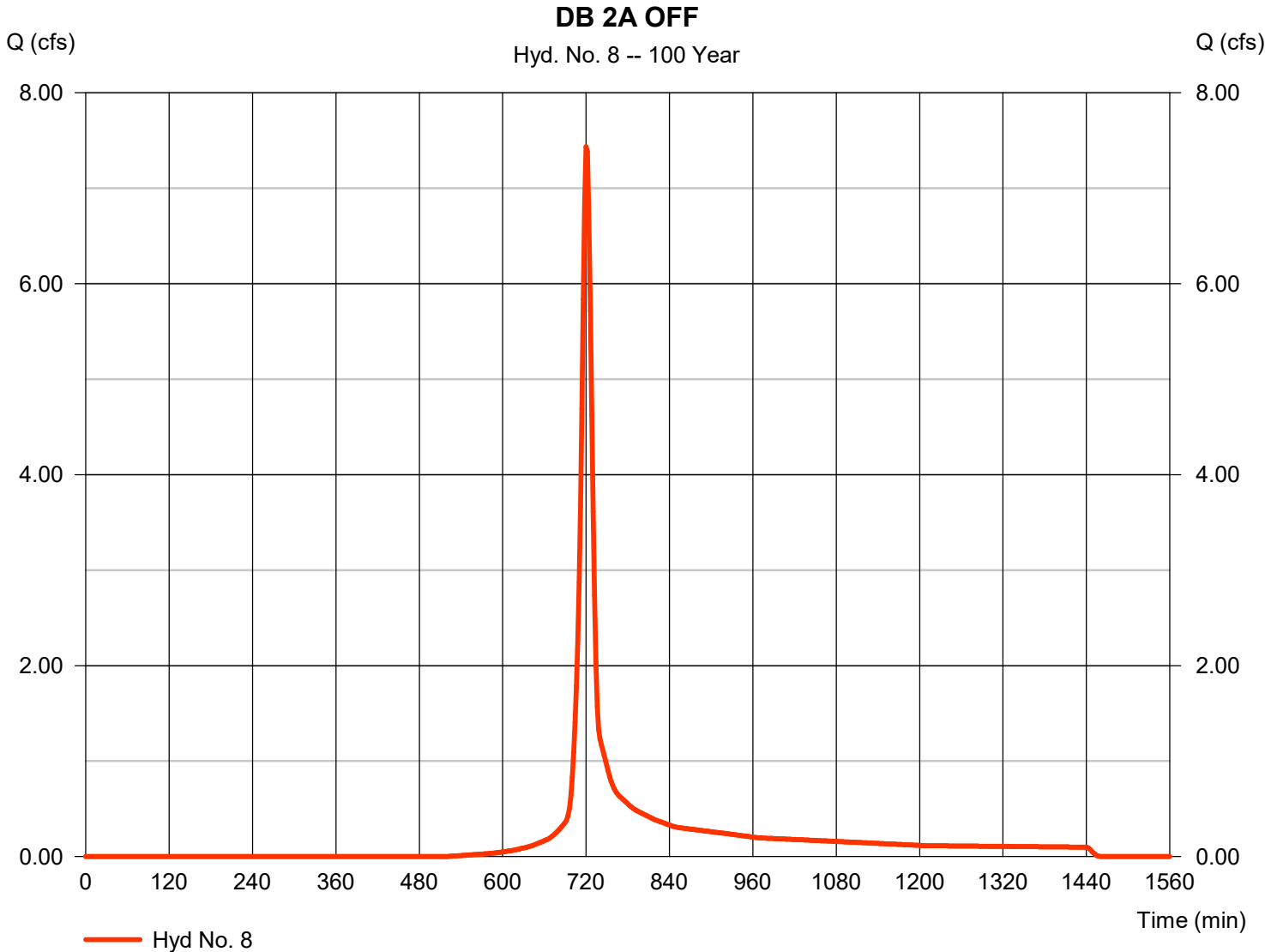


Hydrograph Report

Hyd. No. 8

DB 2A OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 7.436 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 19,301 cuft
Drainage area	= 1.470 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

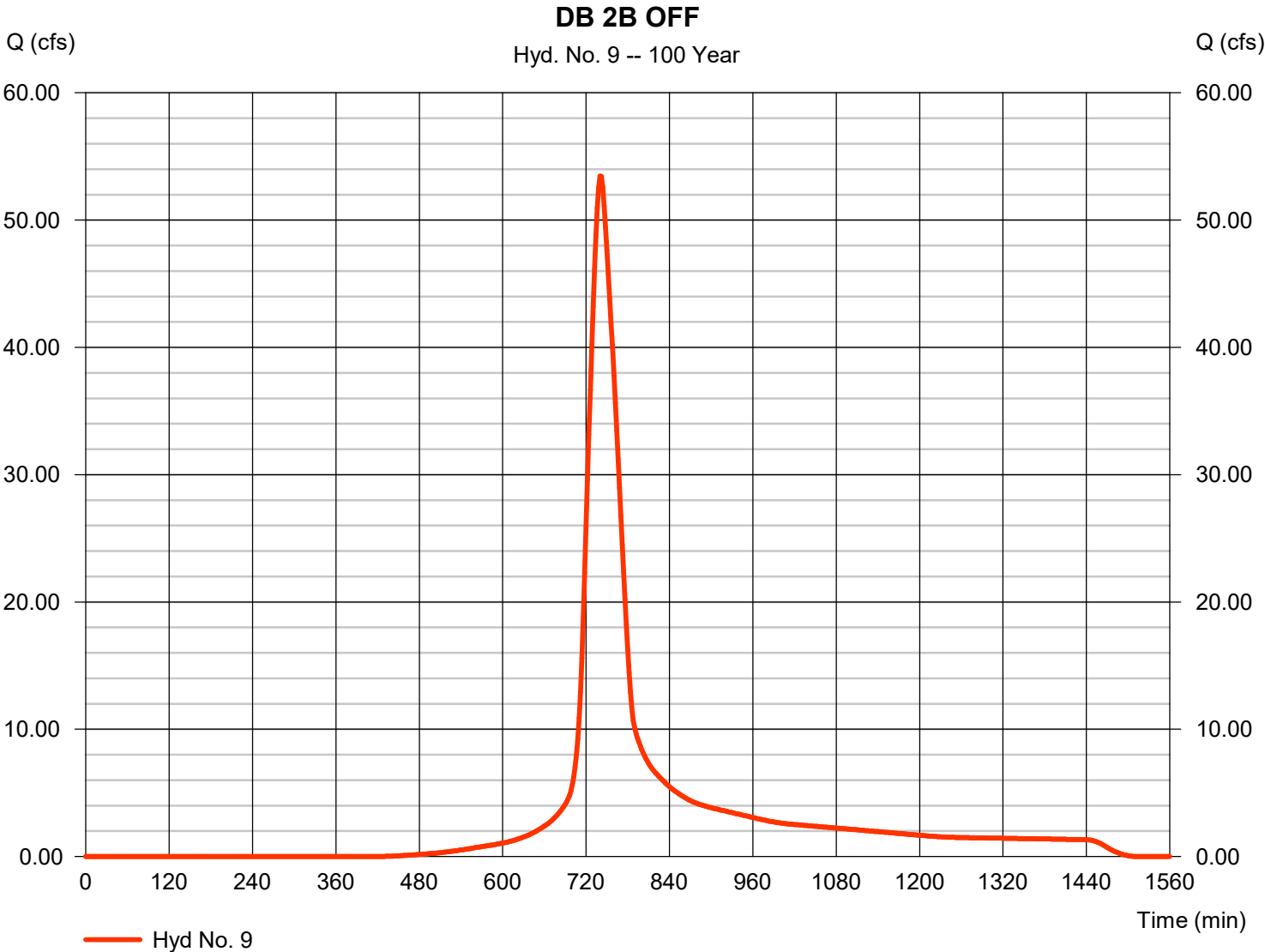
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 9

DB 2B OFF

Hydrograph type	= SCS Runoff	Peak discharge	= 53.45 cfs
Storm frequency	= 100 yrs	Time to peak	= 740 min
Time interval	= 2 min	Hyd. volume	= 286,430 cuft
Drainage area	= 18.710 ac	Curve number	= 75
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 47.10 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

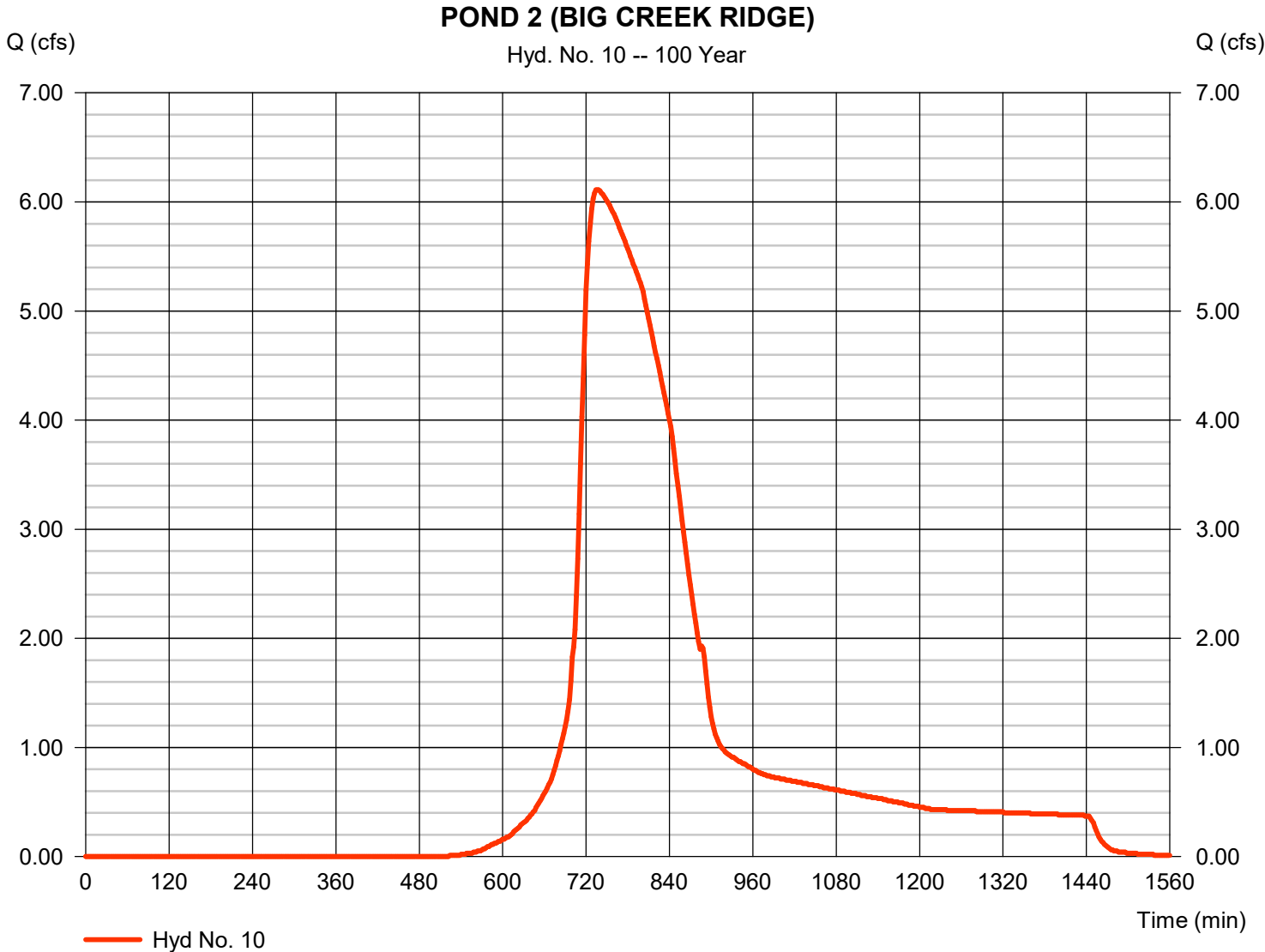
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Monday, 12 / 18 / 2023

Hyd. No. 10

POND 2 (BIG CREEK RIDGE)

Hydrograph type	= Manual	Peak discharge	= 6.110 cfs
Storm frequency	= 100 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 74,375 cuft



Hydrograph Report

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

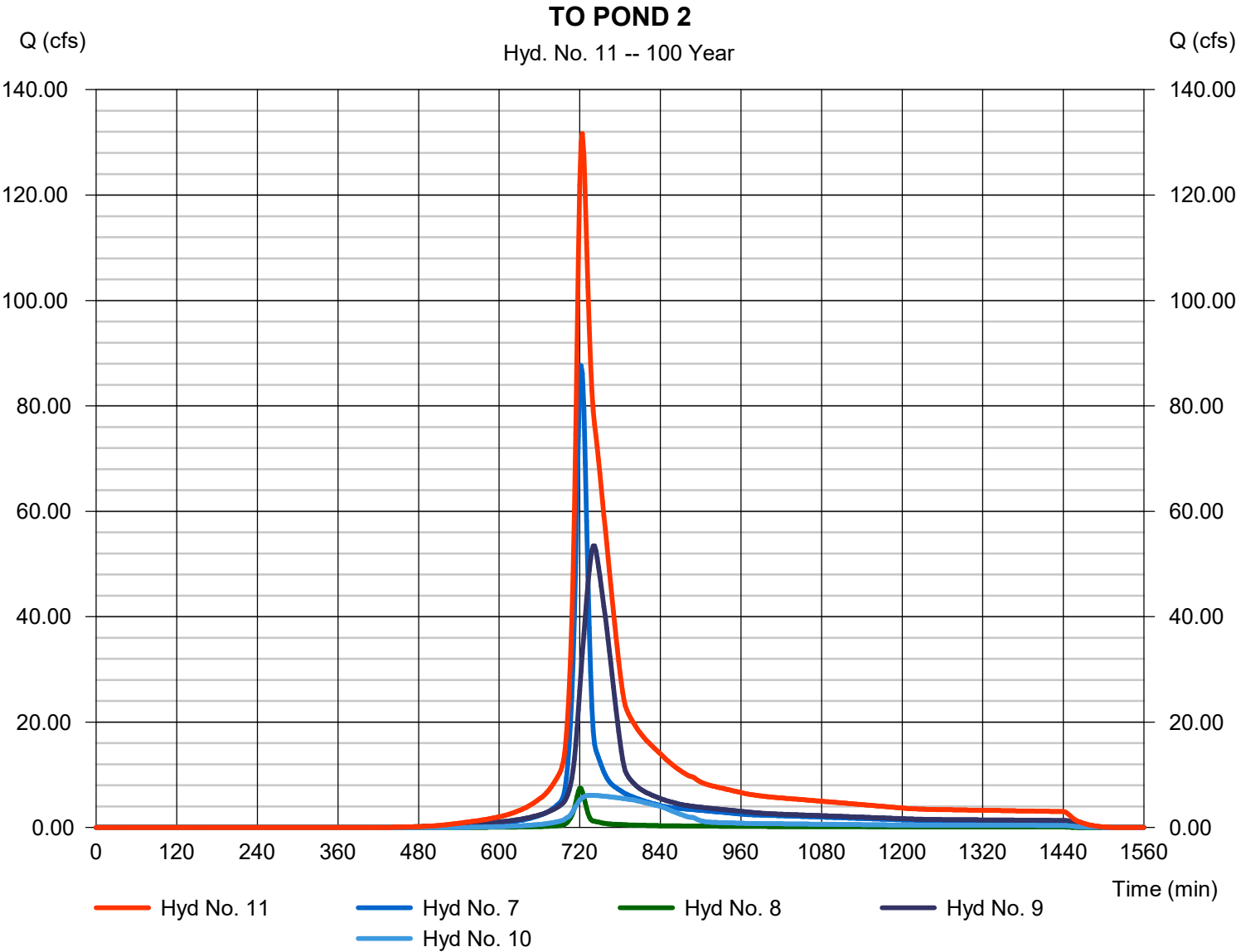
Monday, 12 / 18 / 2023

Hyd. No. 11

TO POND 2

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 7, 8, 9, 10

Peak discharge = 131.69 cfs
Time to peak = 724 min
Hyd. volume = 625,807 cuft
Contrib. drain. area = 38.850 ac



Hydrograph Report

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

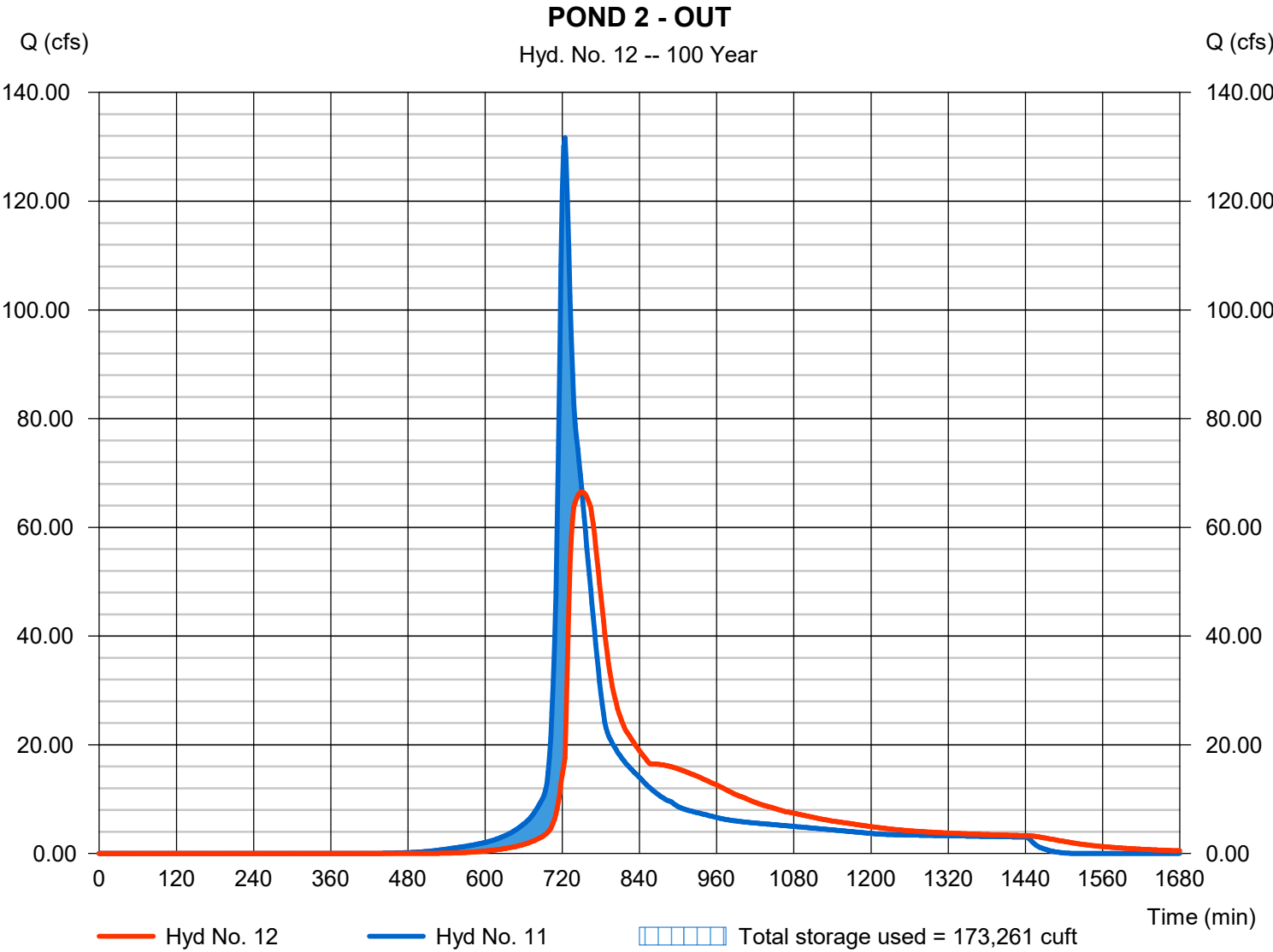
Monday, 12 / 18 / 2023

Hyd. No. 12

POND 2 - OUT

Hydrograph type	= Reservoir	Peak discharge	= 66.52 cfs
Storm frequency	= 100 yrs	Time to peak	= 750 min
Time interval	= 2 min	Hyd. volume	= 625,772 cuft
Inflow hyd. No.	= 11 - TO POND 2	Max. Elevation	= 883.55 ft
Reservoir name	= POND 2	Max. Storage	= 173,261 cuft

Storage Indication method used.

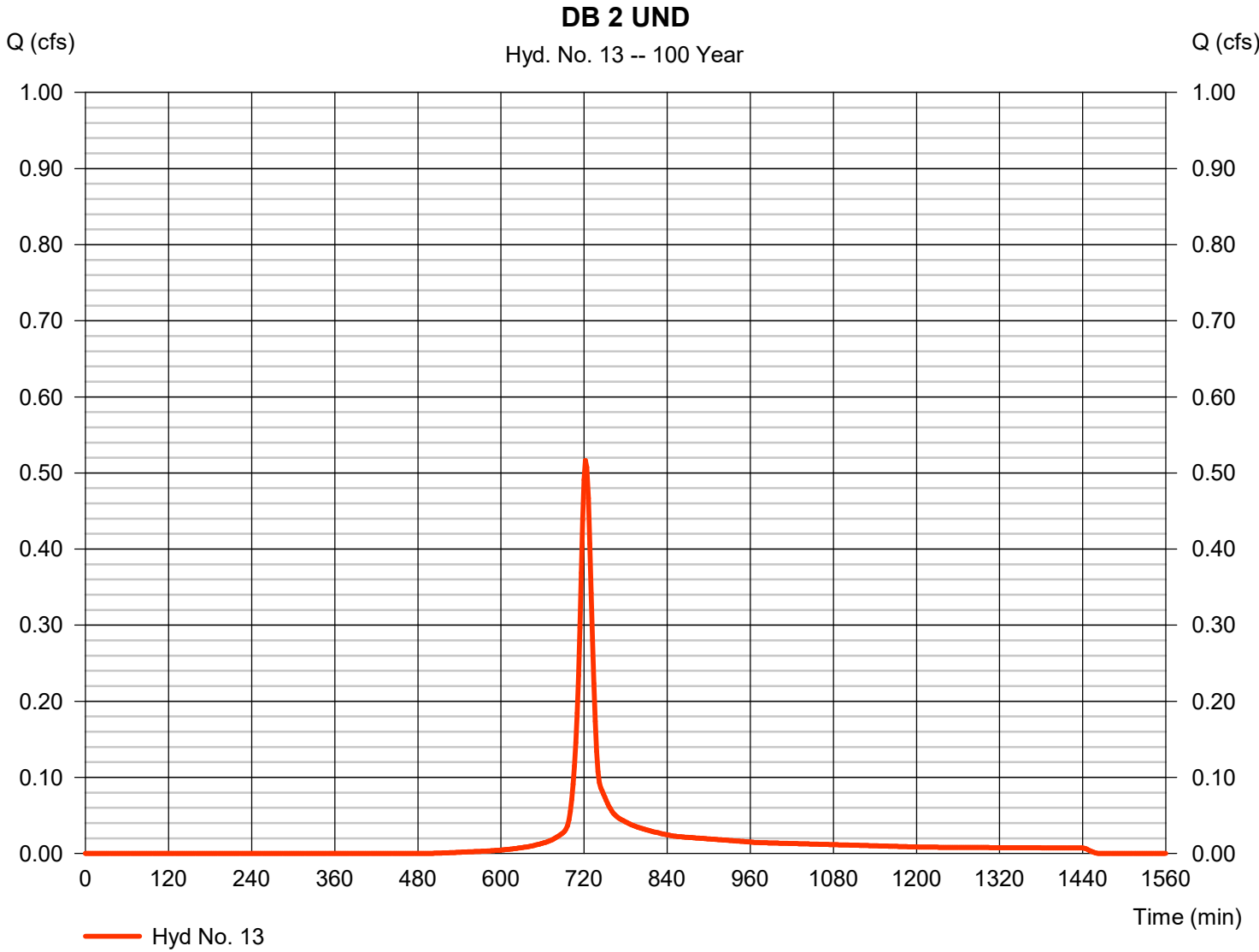


Hydrograph Report

Hyd. No. 13

DB 2 UND

Hydrograph type	= SCS Runoff	Peak discharge	= 0.516 cfs
Storm frequency	= 100 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 1,448 cuft
Drainage area	= 0.110 ac	Curve number	= 70
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

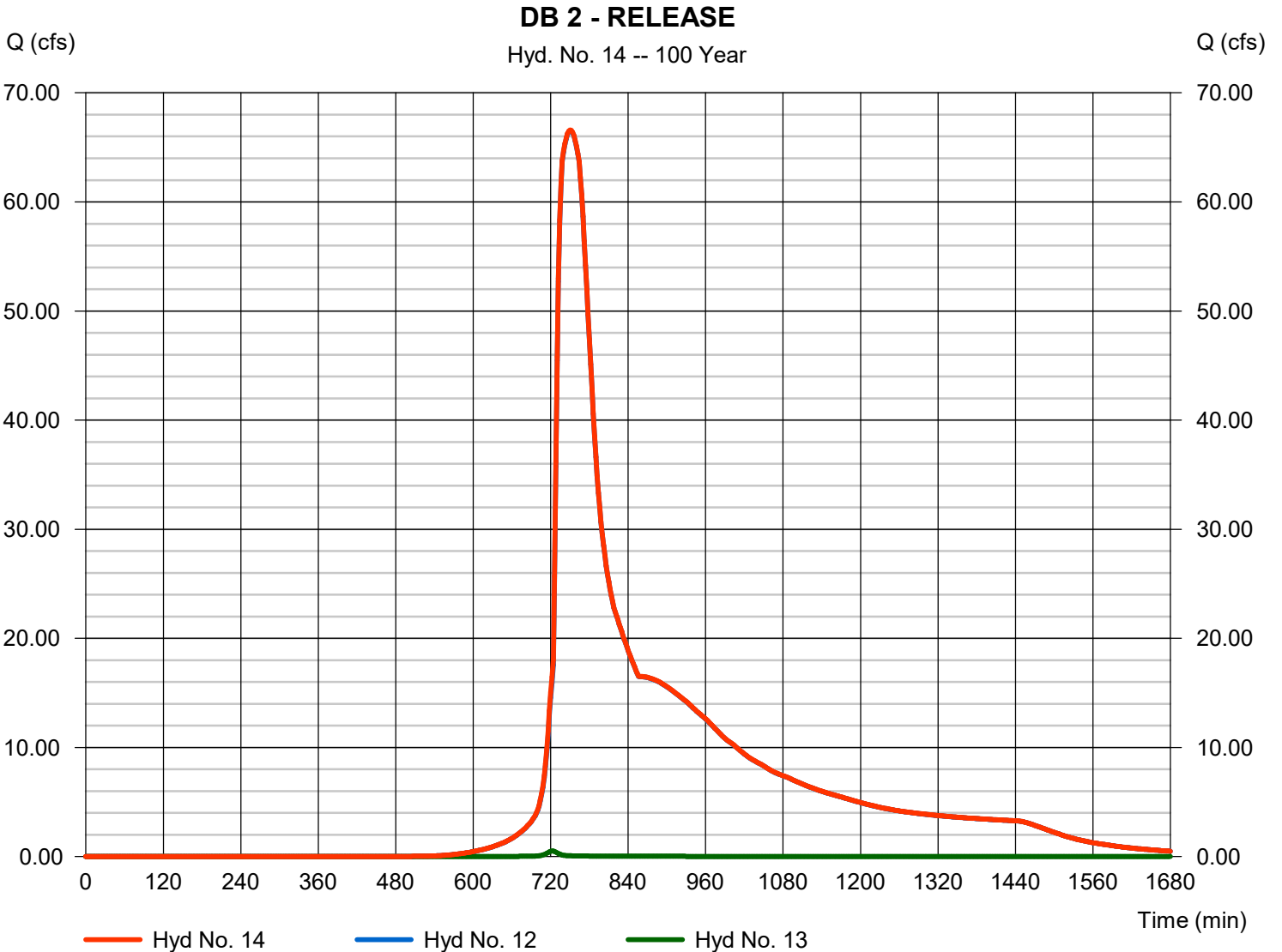
Monday, 12 / 18 / 2023

Hyd. No. 14

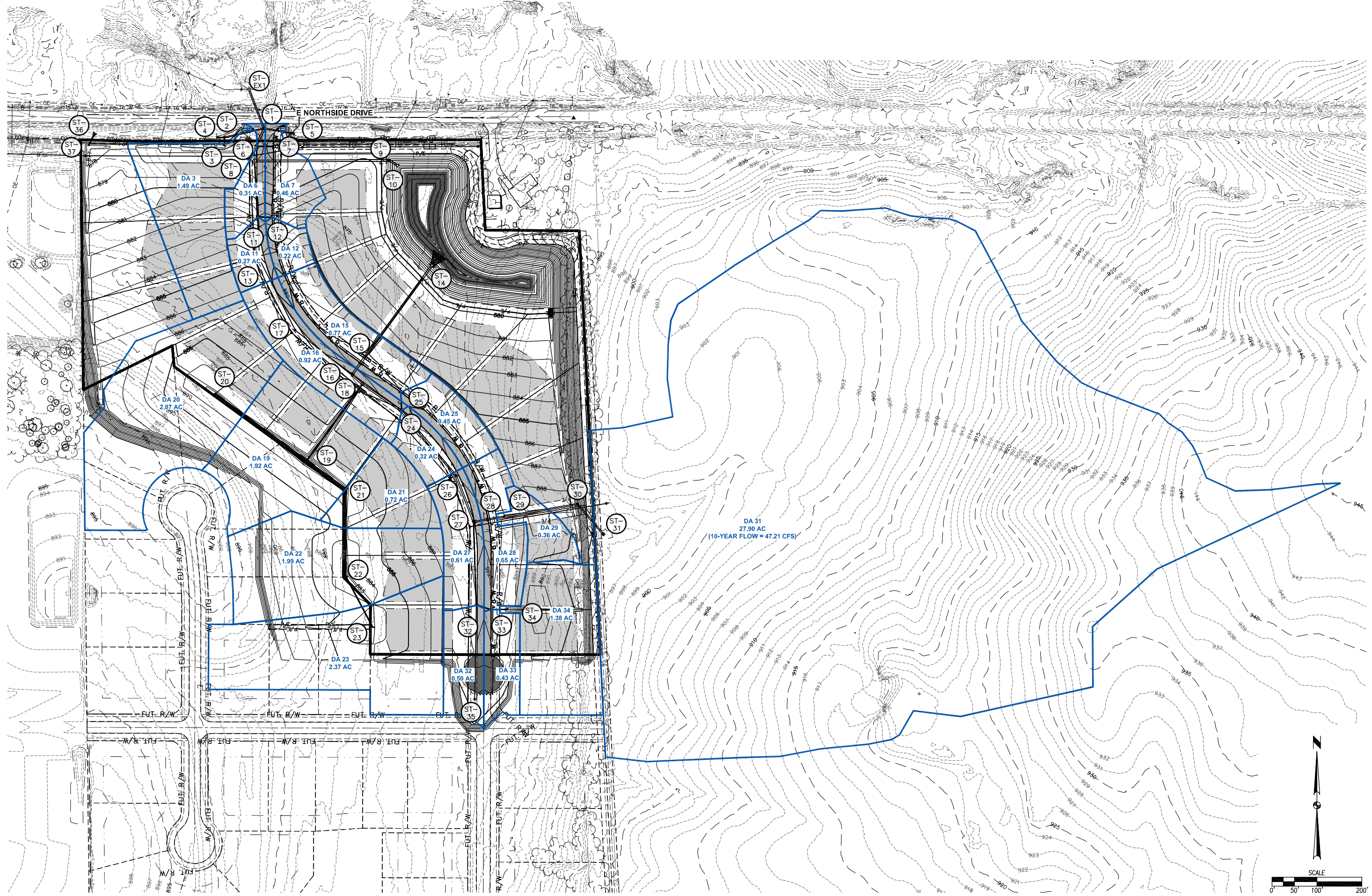
DB 2 - RELEASE

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

Peak discharge = 66.60 cfs
Time to peak = 750 min
Hyd. volume = 627,219 cuft
Contrib. drain. area = 0.110 ac

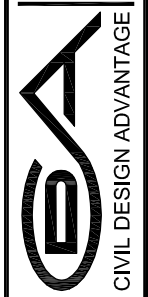


FILE: H:\2023\2310656\2310656-SWMP.DWG
DRAWN BY: GAZA HEROLD
CHECKED BY: GAZA HEROLD
DATE: 1/2/2024 11:31 AM
ENC.



REVISIONS	DATE

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



POLK CITY, IOWA

MONARCH CROSSING PLAT 1

STORM SEWER MAP

2310.656

ENGINEER: EKO

ENGINEER: MAE

List of Intakes and Utility Accesses				
Structure Number ST-#	Location	Type or Standard Road Plan	FL / TC / RIM Elevation	Note
ST- EX1		42" CMP APRON	FL 863.00	
ST- 1		SW-402 6'X4' MH	RIM 876.32	
ST- 2		SW-401 48" MH	RIM 874.50	
ST- 3		24" NYLOPLAST	RIM 873.05	
ST- 4		18" RCP APRON	FL 871.25	
ST- 5		24" RCP APRON	FL 871.82	
ST- 6		SW-506 MOD. INTK	TC 876.21	
ST- 7		SW-505 INTK	TC 876.21	
ST- 8		SW-401 96" MH	RIM 876.73	
ST- 9		SW-513 5'X5' INTK	RIM 877.85	
ST- 10		36" RCP APRON	FL 871.74	
ST- 11		SW-503 INTK	TC 881.57	
ST- 12		SW-501 INTK	TC 881.64	
ST- 13		SW-401 48" MH	RIM 885.49	
ST- 14		42" RCP APRON	FL 871.70	
ST- 15		SW-505 INTK	TC 884.23	
ST- 16		SW-506 INTK	TC 884.23	
ST- 17		SW-401 48" MH	RIM 885.41	
ST- 13		SW-401 48" MH	RIM 885.49	
ST- 18		SW-401 72" MH	RIM 884.37	
ST- 19		SW-401 60" MH W/ 30" NYLOPLAST DOME	RIM 879.60	
ST- 20		30" NYLOPLAST	RIM 881.51	
ST- 21		24" NYLOPLAST	RIM 881.75	
ST- 22		24" NYLOPLAST	RIM 881.36	
ST- 23		24" NYLOPLAST	RIM 882.06	
ST- 24		SW-506 MOD. INTK	TC 885.12	
ST- 25		SW-505 INTK	TC 884.87	
ST- 26		SW-401 60" MH	RIM 886.80	
ST- 27		SW-506 INTK	TC 886.00	
ST- 28		SW-505 INTK	TC 886.00	
ST- 29		30" NYLOPLAST	RIM 885.95	
ST- 30		SW-401 60" MH	RIM 889.88	
ST- 31		SW-513 5'X5' INTK	RIM 895.86	
ST- 32		SW-503 INTK	TC 887.03	
ST- 33		SW-501 INTK	TC 887.08	
ST- 34		24" NYLOPLAST	RIM 886.00	
ST- 35		SW-401 48" MH	RIM 889.50	
ST- 36		18" RCP APRON	FL 876.00	
ST- 37		18" RCP APRON	FL 876.08	

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- 1	ST- EX1	ST- 1	CMP	42	95	6.81	863.00	869.47	
L- 2	ST- 1	ST- 2	RCP	24	86	1.00	869.57	870.43	
L- 3	ST- 2	ST- 3	RCP	15	16	1.00	870.53	870.69	
L- 4	ST- 2	ST- 4	RCP	18	17	4.24	870.53	871.25	
L- 5	ST- 1	ST- 5	RCP	24	67	3.36	869.57	871.82	
L- 6	ST- 1	ST- 6	RCP	42	42	1.50	869.57	870.19	
L- 7	ST- 6	ST- 7	RCP	15	33	1.00	871.38	871.71	
L- 8	ST- 6	ST- 8	RCP	42	25	1.00	870.29	870.54	
L- 9	ST- 8	ST- 9	RCP	42	293	0.30	870.64	871.52	
L- 10	ST- 9	ST- 10	RCP	34	25	0.30	871.62	871.70	
L- 11	ST- 8	ST- 11	RCP	15	120	3.75	872.23	876.73	
L- 12	ST- 11	ST- 12	RCP	15	28	1.00	876.83	877.11	
L- 13A	ST- 11	ST- 13	HDPE	8	92	4.50	876.83	880.97	
L- 15	ST- 14	ST- 15	RCP	42	273	1.00	871.70	874.41	
L- 16	ST- 15	ST- 16	RCP	42	27	0.65	874.51	874.69	
L- 17	ST- 16	ST- 17	HDPE	8	160	0.60	878.88	879.84	
L- 13B	ST- 17	ST- 13	HDPE	8	172	0.60	879.94	880.97	
L- 18	ST- 16	ST- 18	RCP	36	26	1.25	874.79	875.12	
L- 19	ST- 18	ST- 19	RCP	24	208	0.55	875.22	876.36	
L- 20	ST- 19	ST- 20	RCP	18	251	0.55	876.46	877.84	
L- 21	ST- 19	ST- 21	RCP	18	107	0.70	876.46	877.21	
L- 22	ST- 21	ST- 22	RCP	18	194	0.50	877.31	878.28	
L- 23	ST- 22	ST- 23	RCP	18	127	0.55	878.38	879.08	
L- 24	ST- 18	ST- 24	RCP	36	100	0.70	877.08	877.78	
L- 25	ST- 24	ST- 25	RCP	15	36	1.00	880.01	880.37	
L- 26	ST- 24	ST- 26	RCP	36	184	0.70	877.88	879.17	
L- 27	ST- 26	ST- 27	RCP	36	106	0.70	879.27	880.01	
L- 28	ST- 27	ST- 28	RCP	30	27	1.50	880.11	880.51	
L- 29	ST- 28	ST- 29	RCP	30	35	1.60	880.61	881.17	
L- 30	ST- 29	ST- 30	RCP	30	166	1.50	881.27	883.76	
L- 31	ST- 30	ST- 31	RCP	30	84	2.50	885.05	887.15	
L- 32	ST- 27	ST- 32	RCP	15	185	0.60	881.07	882.18	
L- 33	ST- 32	ST- 33	RCP	15	30	1.00	882.28	882.58	
L- 34	ST- 33	ST- 34	RCP	15	34	1.00	882.68	883.02	
L- 35	ST- 32	ST- 35	HDPE	8	206	1.30	882.28	884.96	
L- 37	ST- 36	ST- 37	RCP	18	27	0.30	876.00	876.08	

Notes:

Storm Sewer Pipe Design Information														
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	0.35	0.000	0.963	15	4.82	101.02	4	0.04	101.06	310.23	28.72	32.24	0.06	1,2,3
0.00	0.35	0.000	0.522	15	4.82	17.08	0	0.00	17.08	22.62	7.90	7.20	0.18	1
1.49	0.35	0.522	0.522	15	4.82	2.51	0	0.00	2.51	6.46	4.91	5.26	0.05	
0.00	0.35	0.000	0.000	15	4.82	14.57	0	0.00	14.57	21.62	13.15	12.23	0.02	1
0.00	0.35	0.000	0.000	15	4.82	18.20	0	0.00	18.20	41.46	12.74	13.20	0.09	2
0.31	0.35	0.109	0.441	15	4.82	65.74	4	0.04	65.78	123.03	13.03	12.79	0.05	3
0.46	0.35	0.161	0.161	15	4.82	0.78	0	0.00	0.78	6.46	3.56	5.26	0.15	
0.00	0.35	0.000	0.172	15	4.82	64.44	0	0.00	64.44	100.61	11.12	10.46	0.04	3
0.00	0.35	0.000	0.000	15	4.82	0.00	0	0.00	0.00	55.11	1.77	5.73	2.76	6
0.00	0.35	0.000	0.000	15	4.82	0.00	0	0.00	0.00	31.58	1.55	5.01	0.27	6
0.27	0.35	0.095	0.172	15	4.82	0.83	4	0.04	0.87	12.51	5.76	10.19	0.35	
0.22	0.35	0.077	0.077	15	4.82	0.37	0	0.00	0.37	6.46	2.79	5.26	0.17	
0.00	0.35	0.000	0.000	15	4.82	0.00	2	0.02	0.02	3.03	2.98	8.68	0.51	
0.77	0.35	0.270	5.691	15	4.82	74.64	21	0.23	74.87	100.39	11.42	10.43	0.40	4
0.92	0.35	0.322	5.422	15	4.82	73.34	21	0.23	73.58	81.23	9.56	8.44	0.05	4
0.00	0.35	0.000	0.000	15	4.82	0.00	6	0.07	0.07	1.11	1.71	3.17	1.56	
0.00	0.35	0.000	0.000	15	4.82	0.00	3	0.03	0.03	1.11	1.39	3.17	2.06	
0.00	0.35	0.000	5.100	15	4.82	71.79	15	0.17	71.96	74.69	12.06	10.57	0.04	4
1.92	0.35	0.672	3.455	15	4.82	16.65	0	0.00	16.65	16.78	6.10	5.34	0.57	
2.87	0.35	1.005	1.005	15	4.82	4.84	0	0.00	4.84	7.79	4.66	4.41	0.90	
0.72	0.35	0.252	1.778	15	4.82	8.57	0	0.00	8.57	8.79	5.68	4.97	0.31	
1.99	0.35	0.697	1.526	15	4.82	7.36	0	0.00	7.36	7.43	4.80	4.20	0.67	
2.37	0.35	0.830	0.830	15	4.82	4.00	0	0.00	4.00	7.79	4.44	4.41	0.48	
0.32	0.35	0.112	1.645	15	4.82	55.14	15	0.17	55.31	55.80	9.02	7.89	0.18	4
0.45	0.35	0.158	0.158	15	4.82	0.76	0	0.00	0.76	6.46	3.54	5.26	0.17	
0.00	0.35	0.000	1.376	15	4.82	53.84	13	0.14	53.98	55.85	9.02	7.90	0.34	4
0.61	0.35	0.214	1.376	15	4.82	53.84	9	0.10	53.94	55.69	9.00	7.88	0.20	4
0.65	0.35	0.228	0.354	15	4.82	48.91	0	0.00	48.91	50.17	11.68	10.22	0.04	4
0.36	0.35	0.126	0.126	15	4.82	47.82	0	0.00	47.82	51.88	12.00	10.57	0.05	4
0.00	0.35	0.000	0.000	15	4.82	47.21	0	0.00	47.21	50.24	11.65	10.23	0.24	4
0.00	0.35	0.000	0.000	15	4.82	47.21	0	0.00	47.21	64.85	14.40	13.21	0.10	4
0.50	0.35	0.175	0.809	15	4.82	3.90	7	0.08	3.97	5.00	4.51	4.08	0.68	
0.43	0.35	0.151	0.634	15	4.82	3.05	0	0.00	3.05	6.46	5.19	5.26	0.10	
1.38	0.35	0.483	0.483	15	4.82	2.33	0	0.00	2.33	6.46	4.81	5.26	0.12	
0.00	0.35	0.000	0.000	15	4.82	0.00	4	0.04	0.04	1.63	1.99	4.66	1.72	
0.00	0.35	0.000	0.000	15	4.82	6.44	0	0.00	6.44	5.72	3.41	3.24	0.13	5

Notes:

- 1 Includes 14.57 cfs from DB Culvert 1, DB Culvert 2A, and DB Culvert 2B (100-year). Refer to hydroflow hydrographs for calculations.
- 2 Includes 18.20 cfs from DB Culvert 3 (100-year). Refer to hydroflow hydrographs for calculations.
- 3 Includes 63.61 cfs from Pond 1 outlet (100-year). Refer to hydroflow hydrographs for detailed calculations.
- 4 Includes 47.21 cfs from DB 1 Offsite (10-year). Refer to hydroflow hydrographs for detailed calculations.
- 5 Includes 6.44 cfs from DB Culvert 1 (100-year). Refer to hydroflow hydrographs for calculations.
- 6 Refer to hydroflow hydrographs for a detailed analysis of the pond outlet calculations.

List of Intakes and Utility Accesses				
Structure Number ST-#	Location	Type or Standard Road Plan	FL / TC / RIM Elevation	Note
ST- EX1 ST- 1		42" CMP APRON SW-402 6'X4' MH	FL 863.00 RIM 876.32	
ST- 2 ST- 3		SW-401 48" MH 24" NYLOPLAST	RIM 874.50 RIM 873.05	
ST- 4		18" RCP APRON	FL 871.25	
ST- 5		24" RCP APRON	FL 871.82	
ST- 6 ST- 7		SW-506 MOD. INTK SW-505 INTK	TC 876.21 TC 876.21	
ST- 8 ST- 9 ST- 10		SW-401 96" MH SW-513 5'X5' INTK 36" RCP APRON	RIM 876.73 RIM 877.85 FL 871.74	
ST- 11 ST- 12		SW-503 INTK SW-501 INTK	TC 881.57 TC 881.64	
ST- 13		SW-401 48" MH	RIM 885.49	
ST- 14 ST- 15 ST- 16 ST- 17 ST- 13		42" RCP APRON SW-505 INTK SW-506 INTK SW-401 48" MH SW-401 48" MH	FL 871.70 TC 884.23 TC 884.23 RIM 885.41 RIM 885.49	
ST- 18 ST- 19 ST- 20		SW-401 72" MH SW-401 60" MH W/ 30" NYLOPLAST DOME 30" NYLOPLAST	RIM 884.37 RIM 879.60 RIM 881.51	
ST- 21 ST- 22 ST- 23		24" NYLOPLAST 24" NYLOPLAST 24" NYLOPLAST	RIM 881.75 RIM 881.36 RIM 882.06	
ST- 24 ST- 25		SW-506 MOD. INTK SW-505 INTK	TC 885.12 TC 884.87	
ST- 26 ST- 27 ST- 28 ST- 29 ST- 30 ST- 31		SW-401 60" MH SW-506 INTK SW-505 INTK 30" NYLOPLAST SW-401 60" MH SW-513 5'X5' INTK	RIM 886.80 TC 886.00 TC 886.00 RIM 885.95 RIM 889.88 RIM 895.86	
ST- 32 ST- 33 ST- 34		SW-503 INTK SW-501 INTK 24" NYLOPLAST	TC 887.03 TC 887.08 RIM 886.00	
ST- 35		SW-401 48" MH	RIM 889.50	
ST- 36 ST- 37		18" RCP APRON 18" RCP APRON	FL 876.00 FL 876.08	

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- 1	ST- EX1	ST- 1	CMP	42	95	6.81	863.00	869.47	
L- 2	ST- 1	ST- 2	RCP	24	86	1.00	869.57	870.43	
L- 3	ST- 2	ST- 3	RCP	15	16	1.00	870.53	870.69	
L- 4	ST- 2	ST- 4	RCP	18	17	4.24	870.53	871.25	
L- 5	ST- 1	ST- 5	RCP	24	67	3.36	869.57	871.82	
L- 6	ST- 1	ST- 6	RCP	42	42	1.50	869.57	870.19	
L- 7	ST- 6	ST- 7	RCP	15	33	1.00	871.38	871.71	
L- 8	ST- 6	ST- 8	RCP	42	25	1.00	870.29	870.54	
L- 9	ST- 8	ST- 9	RCP	42	293	0.30	870.64	871.52	
L- 10	ST- 9	ST- 10	RCP	34	25	0.30	871.62	871.70	
L- 11	ST- 8	ST- 11	RCP	15	120	3.75	872.23	876.73	
L- 12	ST- 11	ST- 12	RCP	15	28	1.00	876.83	877.11	
L- 13A	ST- 11	ST- 13	HDPE	8	92	4.50	876.83	880.97	
L- 15	ST- 14	ST- 15	RCP	42	273	1.00	871.70	874.41	
L- 16	ST- 15	ST- 16	RCP	42	27	0.65	874.51	874.69	
L- 17	ST- 16	ST- 17	HDPE	8	160	0.60	878.88	879.84	
L- 13B	ST- 17	ST- 13	HDPE	8	172	0.60	879.94	880.97	
L- 18	ST- 16	ST- 18	RCP	36	26	1.25	874.79	875.12	
L- 19	ST- 18	ST- 19	RCP	24	208	0.55	875.22	876.36	
L- 20	ST- 19	ST- 20	RCP	18	251	0.55	876.46	877.84	
L- 21	ST- 19	ST- 21	RCP	18	107	0.70	876.46	877.21	
L- 22	ST- 21	ST- 22	RCP	18	194	0.50	877.31	878.28	
L- 23	ST- 22	ST- 23	RCP	18	127	0.55	878.38	879.08	
L- 24	ST- 18	ST- 24	RCP	36	100	0.70	877.08	877.78	
L- 25	ST- 24	ST- 25	RCP	15	36	1.00	880.01	880.37	
L- 26	ST- 24	ST- 26	RCP	36	184	0.70	877.88	879.17	
L- 27	ST- 26	ST- 27	RCP	36	106	0.70	879.27	880.01	
L- 28	ST- 27	ST- 28	RCP	30	27	1.50	880.11	880.51	
L- 29	ST- 28	ST- 29	RCP	30	35	1.60	880.61	881.17	
L- 30	ST- 29	ST- 30	RCP	30	166	1.50	881.27	883.76	
L- 31	ST- 30	ST- 31	RCP	30	84	2.50	885.05	887.15	
L- 32	ST- 27	ST- 32	RCP	15	185	0.60	881.07	882.18	
L- 33	ST- 32	ST- 33	RCP	15	30	1.00	882.28	882.58	
L- 34	ST- 33	ST- 34	RCP	15	34	1.00	882.68	883.02	
L- 35	ST- 32	ST- 35	HDPE	8	206	1.30	882.28	884.96	
L- 37	ST- 36	ST- 37	RCP	18	27	0.30	876.00	876.08	

Notes:

Storm Sewer Pipe Design Information														
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	0.48	0.000	1.320	15	7.44	106.20	4	0.04	106.25	310.23	29.09	32.24	0.05	1,2,3
0.00	0.48	0.000	0.715	15	7.44	19.89	0	0.00	19.89	22.62	8.11	7.20	0.18	1
1.49	0.48	0.715	0.715	15	7.44	5.32	0	0.00	5.32	6.46	5.86	5.26	0.05	
0.00	0.48	0.000	0.000	15	7.44	14.57	0	0.00	14.57	21.62	13.15	12.23	0.02	1
0.00	0.48	0.000	0.000	15	7.44	18.20	0	0.00	18.20	41.46	12.74	13.20	0.09	2
0.31	0.48	0.149	0.605	15	7.44	68.11	4	0.04	68.15	123.03	13.15	12.79	0.05	3
0.46	0.48	0.221	0.221	15	7.44	1.64	0	0.00	1.64	6.46	4.40	5.26	0.12	
0.00	0.48	0.000	0.235	15	7.44	65.36	0	0.00	65.36	100.61	11.16	10.46	0.04	3
0.00	0.48	0.000	0.000	15	7.44	0.00	0	0.00	0.00	55.11	1.77	5.73	2.76	6
0.00	0.48	0.000	0.000	15	7.44	0.00	0	0.00	0.00	31.58	1.55	5.01	0.27	6
0.27	0.48	0.130	0.235	15	7.44	1.75	4	0.04	1.79	12.51	7.29	10.19	0.27	
0.22	0.48	0.106	0.106	15	7.44	0.79	0	0.00	0.79	6.46	3.58	5.26	0.13	
0.00	0.48	0.000	0.000	15	7.44	0.00	2	0.02	0.02	3.03	2.98	8.68	0.51	
0.77	0.48	0.370	7.805	15	7.44	105.28	21	0.23	105.51	100.39	11.79	10.43	0.39	4
0.92	0.48	0.442	7.435	15	7.44	102.53	21	0.23	102.76	81.23	3.99	8.44	0.11	4
0.00	0.48	0.000	0.000	15	7.44	0.00	6	0.07	0.07	1.11	1.71	3.17	1.56	
0.00	0.48	0.000	0.000	15	7.44	0.00	3	0.03	0.03	1.11	1.39	3.17	2.06	
0.00	0.48	0.000	6.994	15	7.44	99.24	15	0.17	99.41	74.69	12.43	10.57	0.03	4
1.92	0.48	0.922	4.738	15	7.44	35.25	0	0.00	35.25	16.78	6.15	5.34	0.56	
2.87	0.48	1.378	1.378	15	7.44	10.25	0	0.00	10.25	7.79	5.19	4.41	0.81	
0.72	0.48	0.346	2.438	15	7.44	18.14	0	0.00	18.14	8.79	5.62	4.97	0.32	
1.99	0.48	0.955	2.093	15	7.44	15.57	0	0.00	15.57	7.43	5.54	4.20	0.58	
2.37	0.48	1.138	1.138	15	7.44	8.46	0	0.00	8.46	7.79	4.87	4.41	0.43	
0.32	0.48	0.154	2.256	15	7.44	63.99	15	0.17	64.16	55.80	7.94	7.89	0.21	4
0.45	0.48	0.216	0.216	15	7.44	1.61	0	0.00	1.61	6.46	4.38	5.26	0.14	
0.00	0.48	0.000	1.886	15	7.44	61.24	13	0.14	61.39	55.85	8.63	7.90	0.36	4
0.61	0.48	0.293	1.886	15	7.44	61.24	9	0.10	61.35	55.69	8.58	7.88	0.21	4
0.65	0.48	0.312	0.485	15	7.44	50.82	0	0.00	50.82	50.17	11.67	10.22	0.04	4
0.36	0.48	0.173	0.173	15	7.44	48.50	0	0.00	48.50	51.88	12.03	10.57	0.05	4
0.00	0.48	0.000	0.000	15	7.44	47.21	0	0.00	47.21	50.24	11.65	10.23	0.24	4
0.00	0.48	0.000	0.000	15	7.44	47.21	0	0.00	47.21	64.85	14.40	13.21	0.10	4
0.50	0.48	0.240	1.109	15	7.44	8.25	7	0.08	8.33	5.00	5.37	4.08	0.57	
0.43	0.48	0.206	0.869	15	7.44	6.46	0	0.00	6.46	6.46	6.01	5.26	0.08	
1.38	0.48	0.662	0.662	15	7.44	4.93	0	0.00	4.93	6.46	5.79	5.26	0.10	
0.00	0.48	0.000	0.000	15	7.44	0.00	4	0.04	0.04	1.63	1.99	4.66	1.72	
0.00	0.48	0.000	0.000	15	7.44	6.44	0	0.00	6.44	5.72	3.41	3.24	0.13	5

Notes:

- Includes 14.57 cfs from DB Culvert 1, DB Culvert 2A, and DB Culvert 2B (100-year). Refer to hydroflow hydrographs for calculations.
- Includes 18.20 cfs from DB Culvert 3 (100-year). Refer to hydroflow hydrographs for calculations.
- Includes 63.61 cfs from Pond 1 outlet (100-year). Refer to hydroflow hydrographs for detailed calculations.
- Includes 47.21 cfs from DB 1 Offsite (10-year). Refer to hydroflow hydrographs for detailed calculations.
- Includes 6.44 cfs from DB Culvert 1 (100-year). Refer to hydroflow hydrographs for calculations.
- Refer to hydroflow hydrographs for a detailed analysis of the pond outlet calculations.

Intake Capacity

Project: Monarch Crossing Plat 1
 Project No.: 2310.656
 Designed: GH
 Date: 12/19/2023

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	Efficiency E	Intercepted Flow (Q _i * Reduction Factor) Q _i , cfs	Bypass Flow to Next Intake Q _b , cfs	Bypass Intake Number	
ST- 6		SW-506	15	0.31	0.48	7.44	1.11	0.35	1.46	SUMP	2.00	0.09	N/A	1.00	1.46	0.00		
ST- 6N		SW-506	15	0.05	0.48	7.44	0.18		0.18	0.25	2.00	0.10	4.92	1.00	0.18	0.00		
ST- 6S		SW-506	15	0.26	0.48	7.44	0.93	0.35	1.28	0.25	2.00	0.21	10.31	1.00	1.28	0.00		
ST- 7		SW-505	15	0.46	0.48	7.44	1.64	0.27	1.91	SUMP	2.00	0.12	N/A	1.00	1.91	0.00		
ST- 7N		SW-505	15	0.11	0.48	7.44	0.39		0.39	0.25	2.00	0.13	6.62	1.00	0.39	0.00		
ST- 7S		SW-505	15	0.35	0.48	7.44	1.25	0.27	1.52	0.25	2.00	0.22	10.98	1.00	1.52	0.00		
ST- 11		SW-503	15	0.27	0.48	7.44	0.96		0.96	4.31	2.00	0.11	5.43	0.70	0.61	0.35	ST- 6S	
ST- 12		SW-501	15	0.22	0.48	7.44	0.79		0.79	4.31	2.00	0.10	5.03	0.73	0.52	0.27	ST- 7S	
ST- 15		SW-505	15	0.77	0.48	7.44	2.75	0.28	3.03	SUMP	2.00	0.20	N/A	1.00	3.03	0.00		
ST- 15N		SW-505	15	0.42	0.48	7.44	1.50		1.50	0.25	2.00	0.22	10.94	1.00	1.50	0.00		
ST- 15S		SW-505	15	0.35	0.48	7.44	1.25	0.28	1.53	0.25	2.00	0.22	11.02	1.00	1.53	0.00		
ST- 16		SW-506	15	0.92	0.48	7.44	3.29	0.18	3.47	SUMP	2.00	0.22	N/A	1.00	3.47	0.00		
ST- 16N		SW-506	15	0.52	0.48	7.44	1.86		1.86	0.25	2.00	0.24	11.85	1.00	1.86	0.00		
ST- 16S		SW-506	15	0.40	0.48	7.44	1.43	0.18	1.61	0.25	2.00	0.22	11.24	1.00	1.61	0.00		
ST- 24		SW-506	15	0.32	0.48	7.44	1.14		1.14	0.60	2.00	0.17	8.38	0.93	0.96	0.18	ST- 16S	
ST- 25		SW-505	15	0.45	0.48	7.44	1.61		1.61	0.60	2.00	0.19	9.52	0.92	1.33	0.28	ST- 15S	
ST- 27		SW-506	15	0.61	0.48	7.44	2.18	0.63	2.81	SUMP	2.00	0.18	N/A	1.00	2.81	0.00		
ST- 27N		SW-506	15	0.31	0.48	7.44	1.11		1.11	0.25	2.00	0.20	9.76	1.00	1.11	0.00		
ST- 27S		SW-506	15	0.30	0.48	7.44	1.07	0.63	1.70	0.25	2.00	0.23	11.47	1.00	1.70	0.00		
ST- 28		SW-505	15	0.65	0.48	7.44	2.32	0.26	2.59	SUMP	2.00	0.17	N/A	1.00	2.59	0.00		
ST- 28N		SW-505	15	0.26	0.48	7.44	0.93		0.93	0.25	2.00	0.18	9.14	1.00	0.93	0.00		
ST- 28S		SW-505	15	0.39	0.48	7.44	1.39	0.26	1.66	0.25	2.00	0.23	11.35	1.00	1.66	0.00		
ST- 32		SW-503	15	0.50	0.48	7.44	1.79		1.79	0.60	2.00	0.20	9.91	0.72	1.15	0.63	ST- 27S	
ST- 33		SW-505	15	0.43	0.48	7.44	1.54		1.54	0.60	2.00	0.19	9.36	0.92	1.27	0.26	ST- 28S	

Notes:



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive URBANDALE, IA 50322

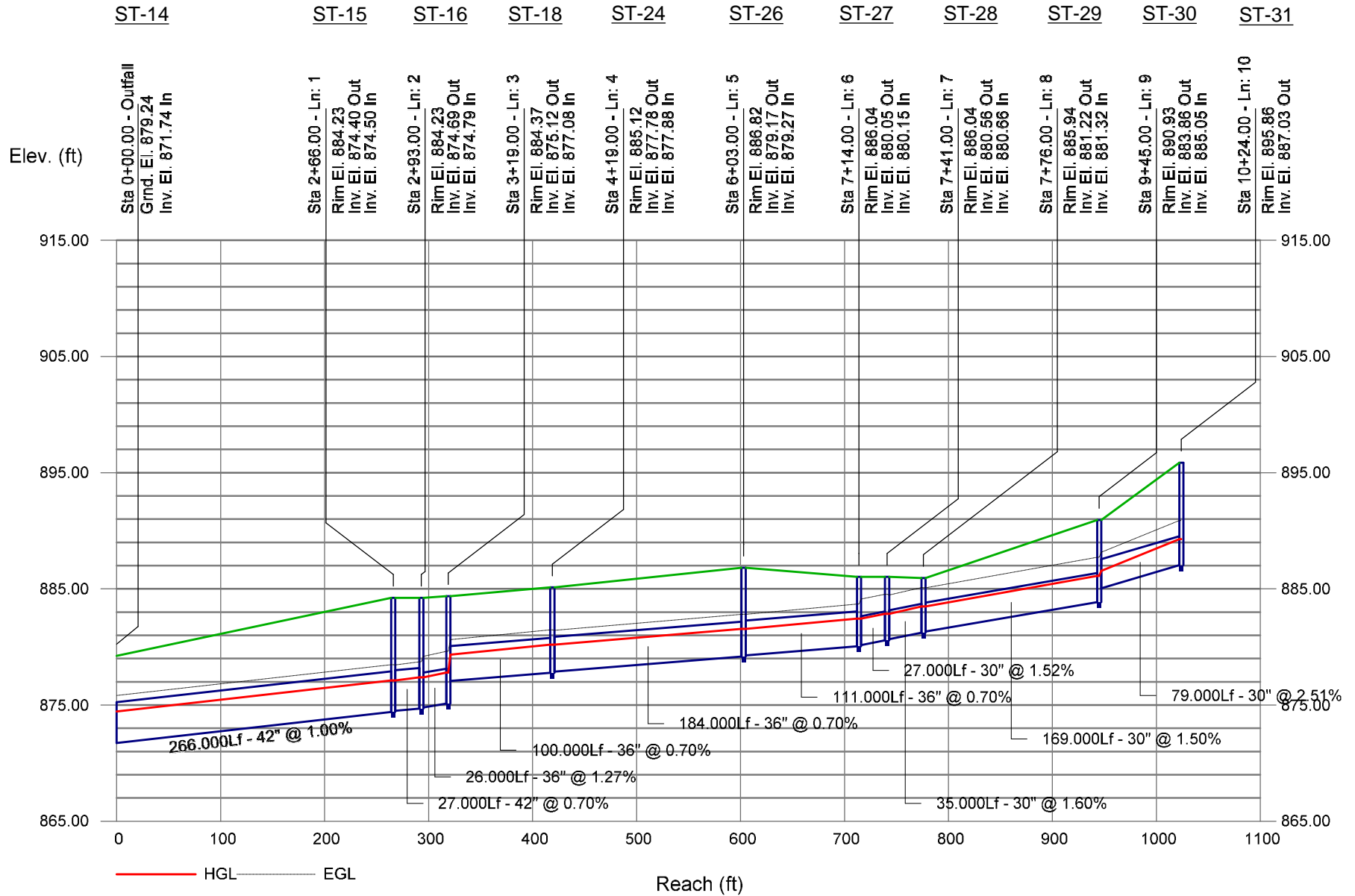
PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page ___ of ___ Pages
SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY: _____

Hydraulic Grade Line Calculations

10-Year Results

Table with 14 columns: Line No., Line ID, Flow Rate (cfs), Line Size (in), Line Type, Line Length (ft), Invert Elev. Down (ft), Invert Elev. Up (ft), Line Slope (%), HGL Down (ft), HGL Up (ft), Minor Loss (ft), HGL Junct (ft), Dn Str Line No. Rows 1-10 show pipe data for various segments.

10-YEAR STORM CALCULATIONS





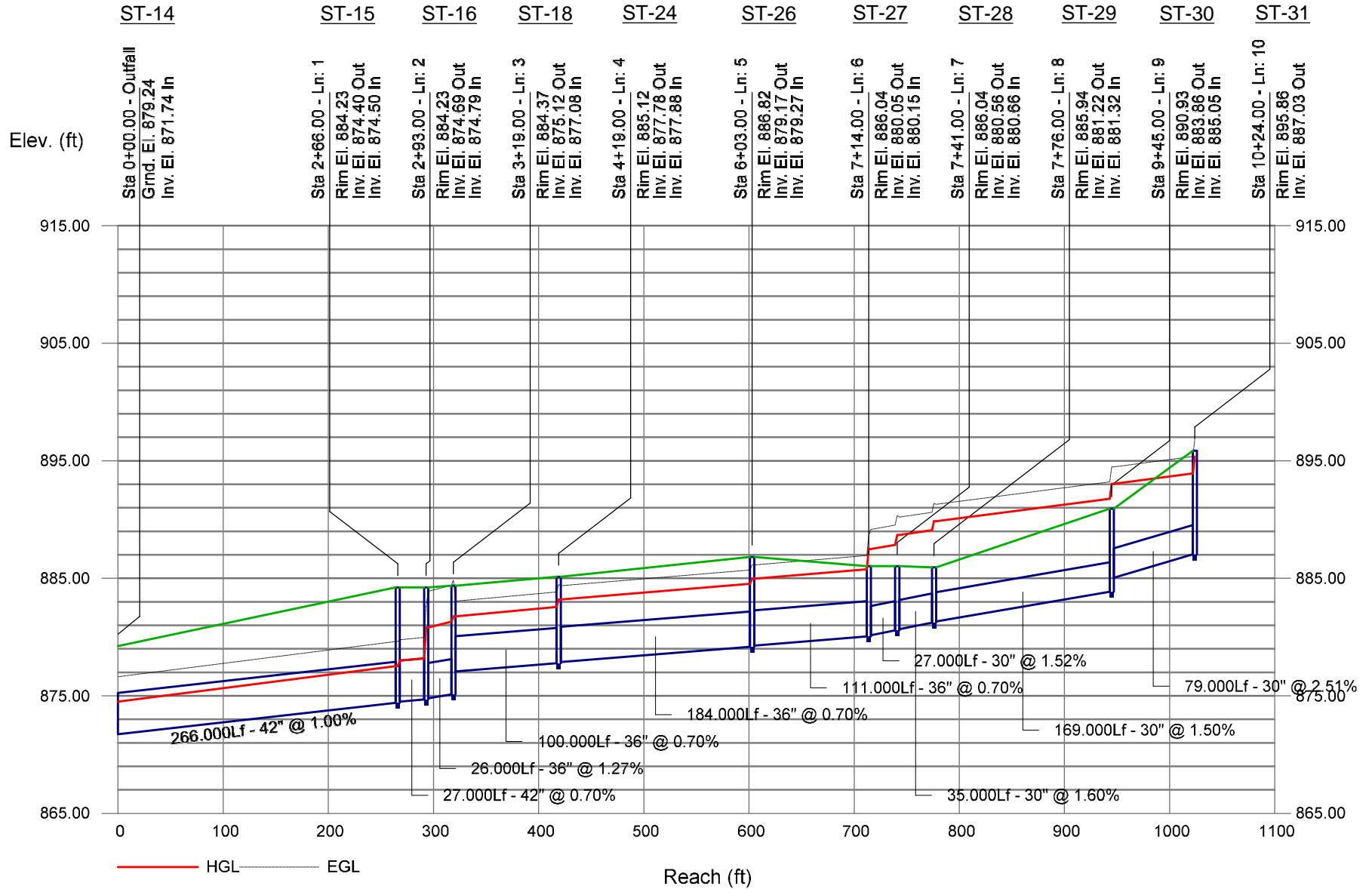
PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages
 SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Hydraulic Grade Line Calculations

100-Year Results

Plan		Pipes	Inlets	Results									
Summary		DOT	Inlet	FL-DOT	Calc	Cost	>	MyReport	...				
Line No.	Line ID	Flow Rate (cfs)	Line Size (Rise x Span) (in)	Line Type	Line Length (ft)	Invert Elev. Down (ft)	Invert Elev. Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor Loss (ft)	HGL Junct (ft)	Dn Str Line No.
1		105.51	42	Cir	266.000	871.74	874.40	1.00	874.51	877.53	1.05	877.53	Outfall
2		102.76	42	Cir	27.000	874.50	874.69	0.70	878.00	878.19	2.62	880.81	1
3		99.41	36	Cir	26.000	874.79	875.12	1.27	880.81	881.31*	0.46	881.77	2
4		64.16	36	Cir	100.000	877.08	877.78	0.70	881.77	882.56*	0.64	883.20	3
5		61.39	36	Cir	184.000	877.88	879.17	0.70	883.20	884.53*	0.45	884.97	4
6		61.35	36	Cir	111.000	879.27	880.05	0.70	884.97	885.77*	1.72	887.50	5
7		50.82	30	Cir	27.000	880.15	880.56	1.52	887.50	887.85*	0.83	888.68	6
8		48.50	30	Cir	35.000	880.66	881.22	1.60	888.68	889.10*	0.76	889.86	7
9		47.21	30	Cir	169.000	881.32	883.86	1.50	889.86	891.77*	1.27	893.03	8
10		47.21	30	Cir	79.000	885.05	887.03	2.51	893.03	893.93*	1.44	895.37	9

100-YEAR STORM CALCULATIONS





PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages

SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: MAE OK'D BY:

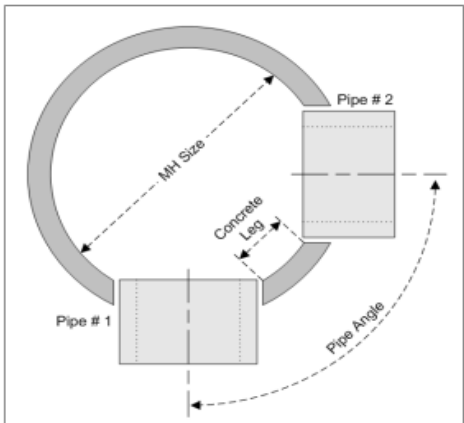
Manhole Sizing Calculations

ST-8

Cretex Manhole Calculator
Version 2.0.6.0

Cretex
Concrete Products
the shape of solutions

Manhole Sizing Calculations



96" MANHOLE
Minimum Diameter Required
Leg Width (inches): 10.6

Top of Casting (feet):

Pipe 1 Type: 72" Minimum Manhole Required For Size Specified

Size (inches):

Inv Elevation (feet):

Hole Req'd (inches): 56

Pipe 2 Type: 72" Minimum Manhole Required For Size Specified

Size (inches):

Inv Elevation (feet):

Hole Req'd (inches): 56

Pipe Angle (deg):

Manhole size calculations are approximate and for information only.
Please contact your local office for possible alternate design options.

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PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages

SUBJECT: Storm Water Detention Calculations DATE: 12/19/23 COMP. BY: JWM OK'D BY:

ST-31

$Q_{100} = 101.01$ cfs *Refer to Storm Water Management Plan titled "Monarch Crossing" for calculations

SW-513 Intake Capacity:

Flowline Elevation:	894.61	feet		
Interior Dimensions: Width, W =	4.00	feet	Both Sides Open,	Y
Length, L =	4.00	feet	Both Sides Open,	Y

Length of Openings, L = 16.00 feet
Number of Contractions, n = 8

Capacity of a Rectangular Weir with End Contractions:

$$Q = 2/3C_d(2g)^{1/2}(L-0.1nH)H^{3/2}$$

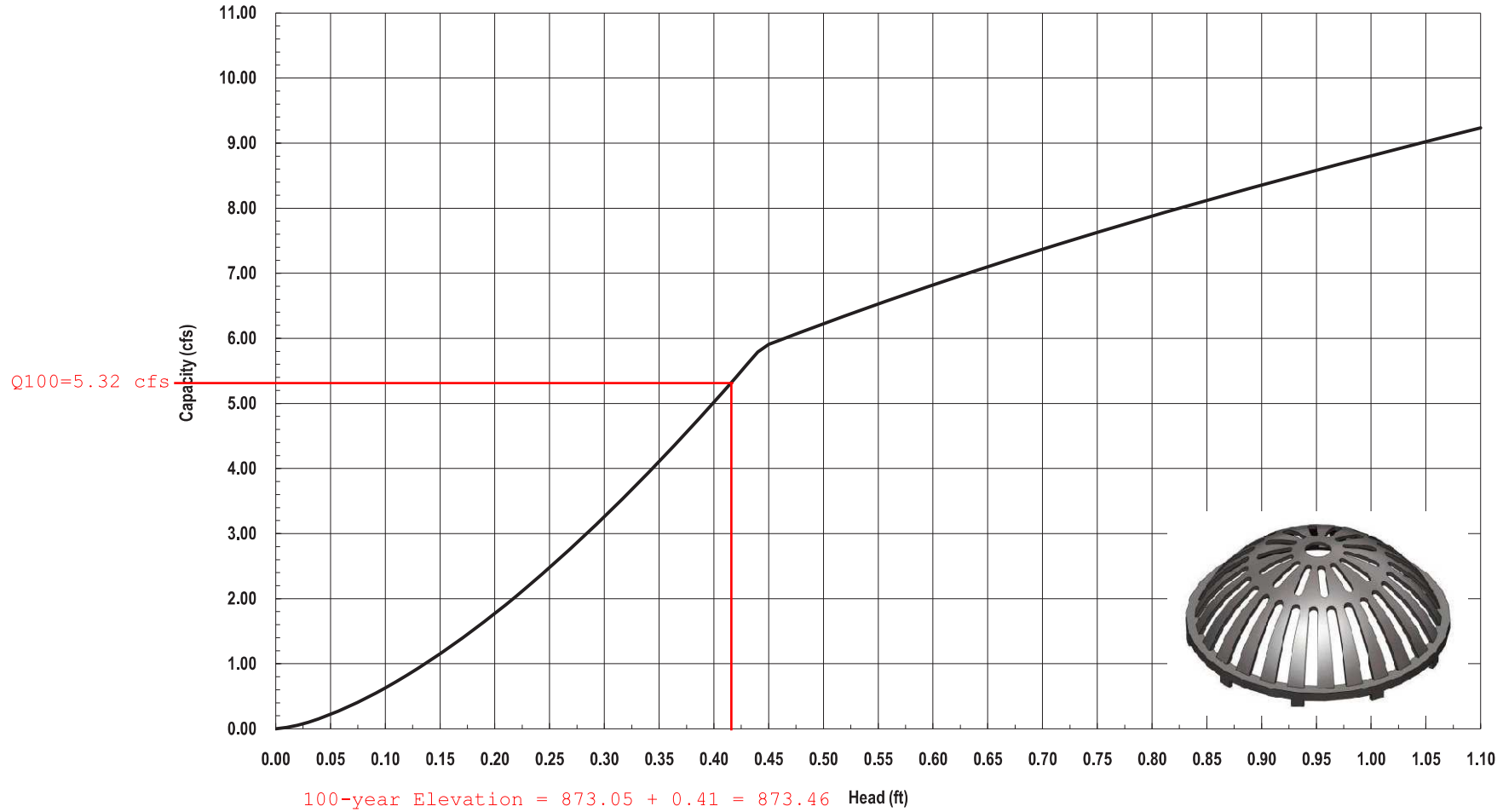
For H = 1.66 feet, Q = 101.01 cfs

Ponding Elevation = 896.27 feet

* The 100-year event overflows at elevation 895.00 directly into a swale and into the detention basin.

ST-3

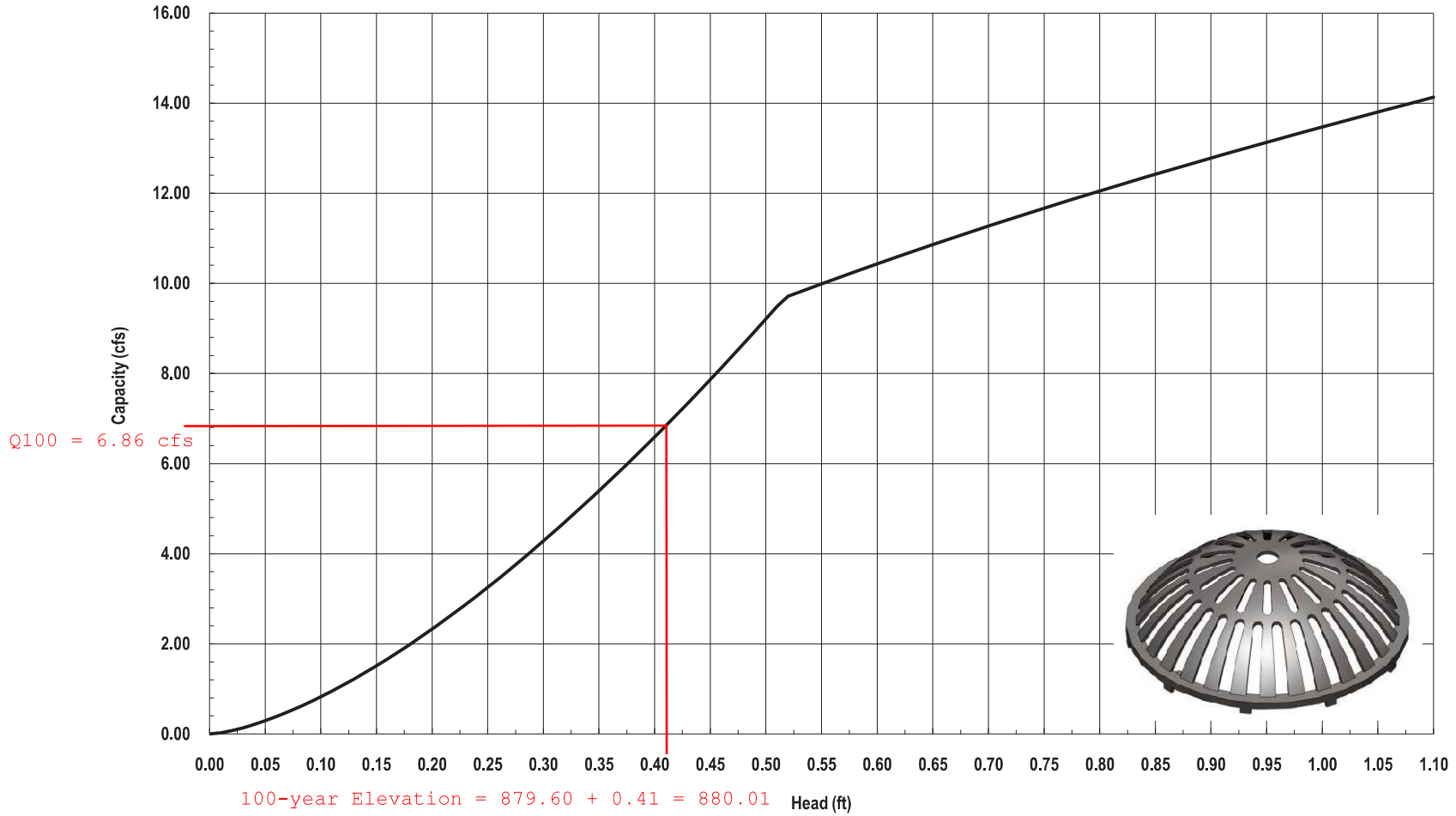
Nyloplast 24" Dome Grate Inlet Capacity Chart



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ST-19

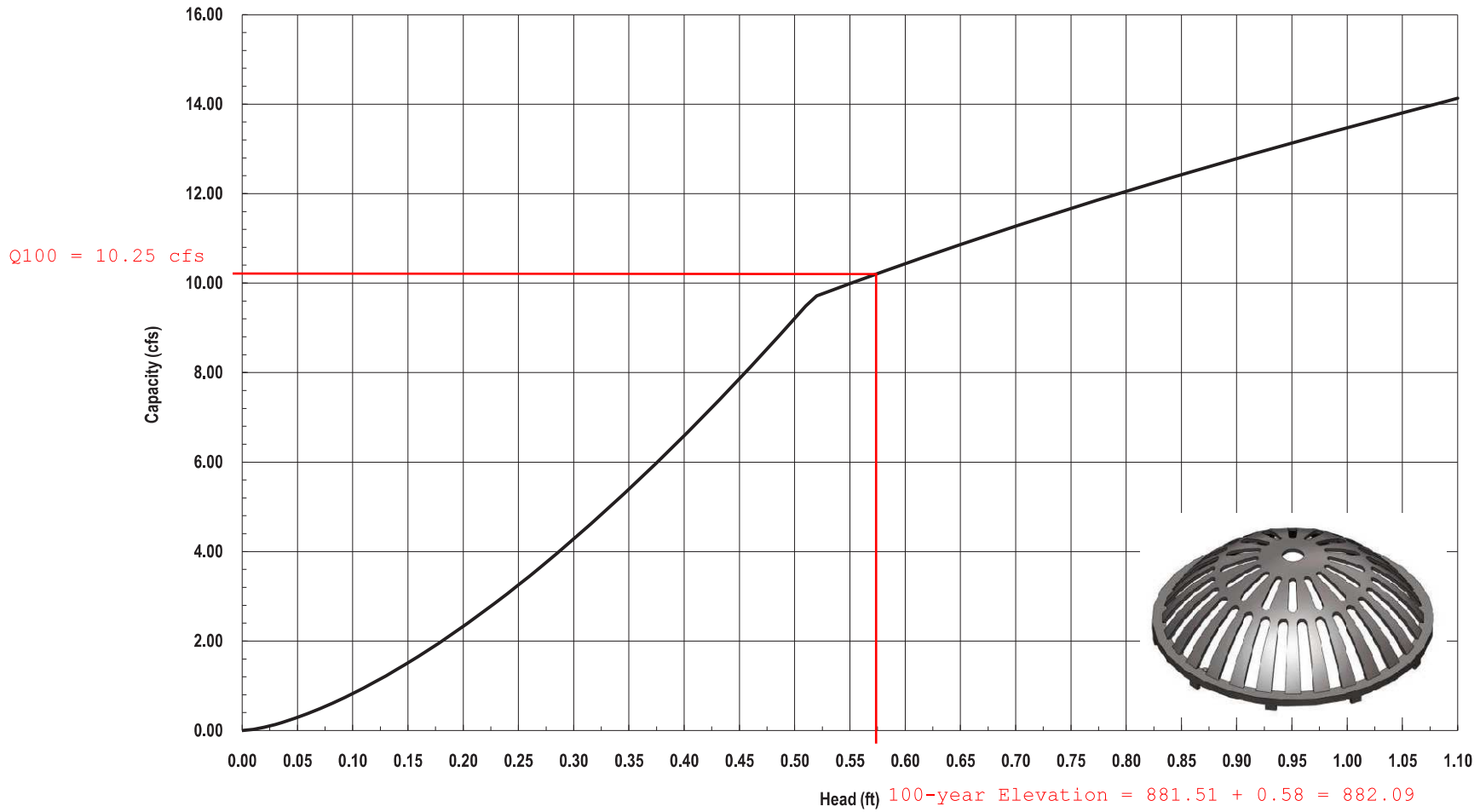
Nyloplast 30" Dome Grate Inlet Capacity Chart



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ST-20

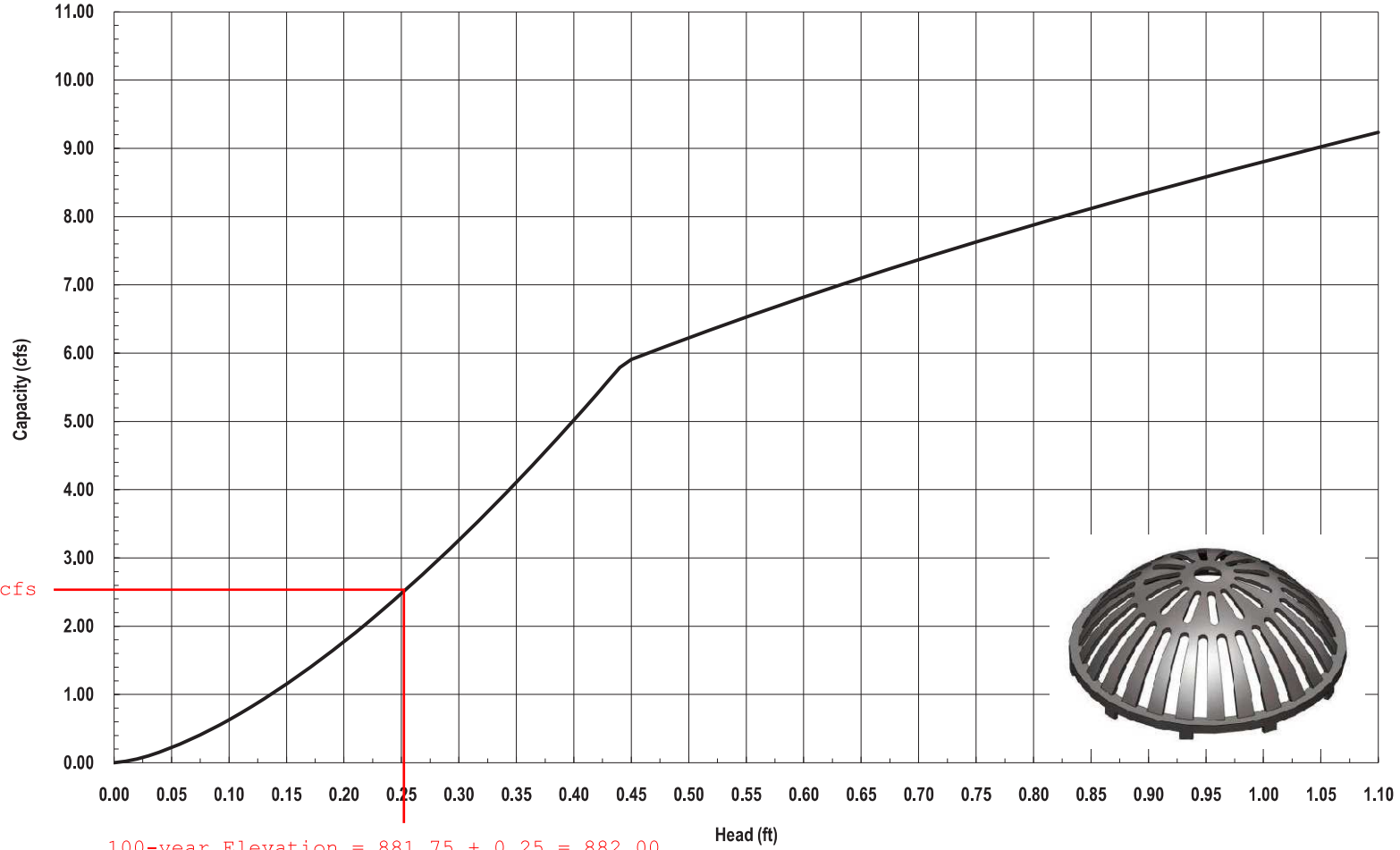
Nyloplast 30" Dome Grate Inlet Capacity Chart



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Nyloplast 24" Dome Grate Inlet Capacity Chart



Q100 = 2.57 cfs

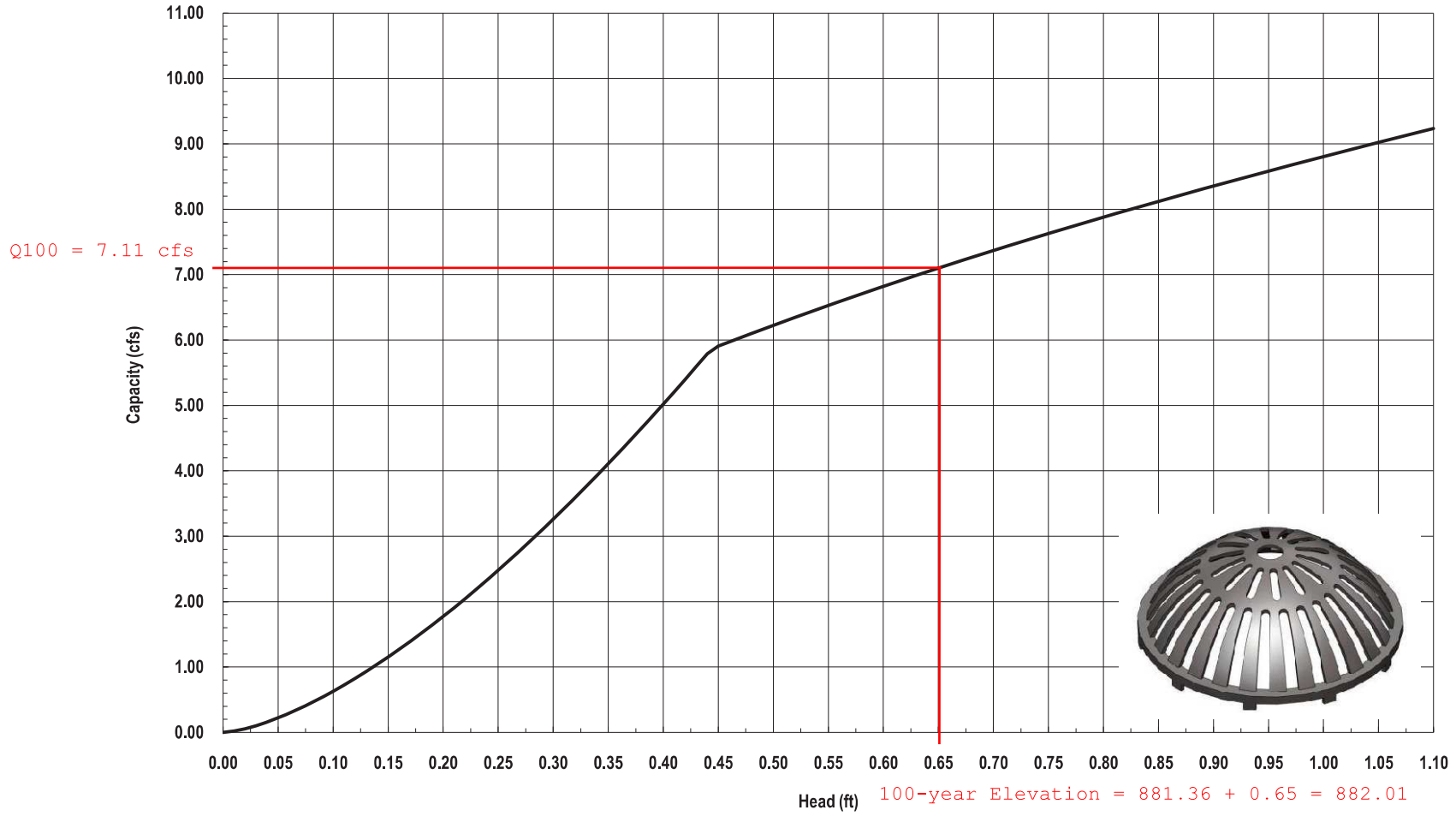
100-year Elevation = 881.75 + 0.25 = 882.00



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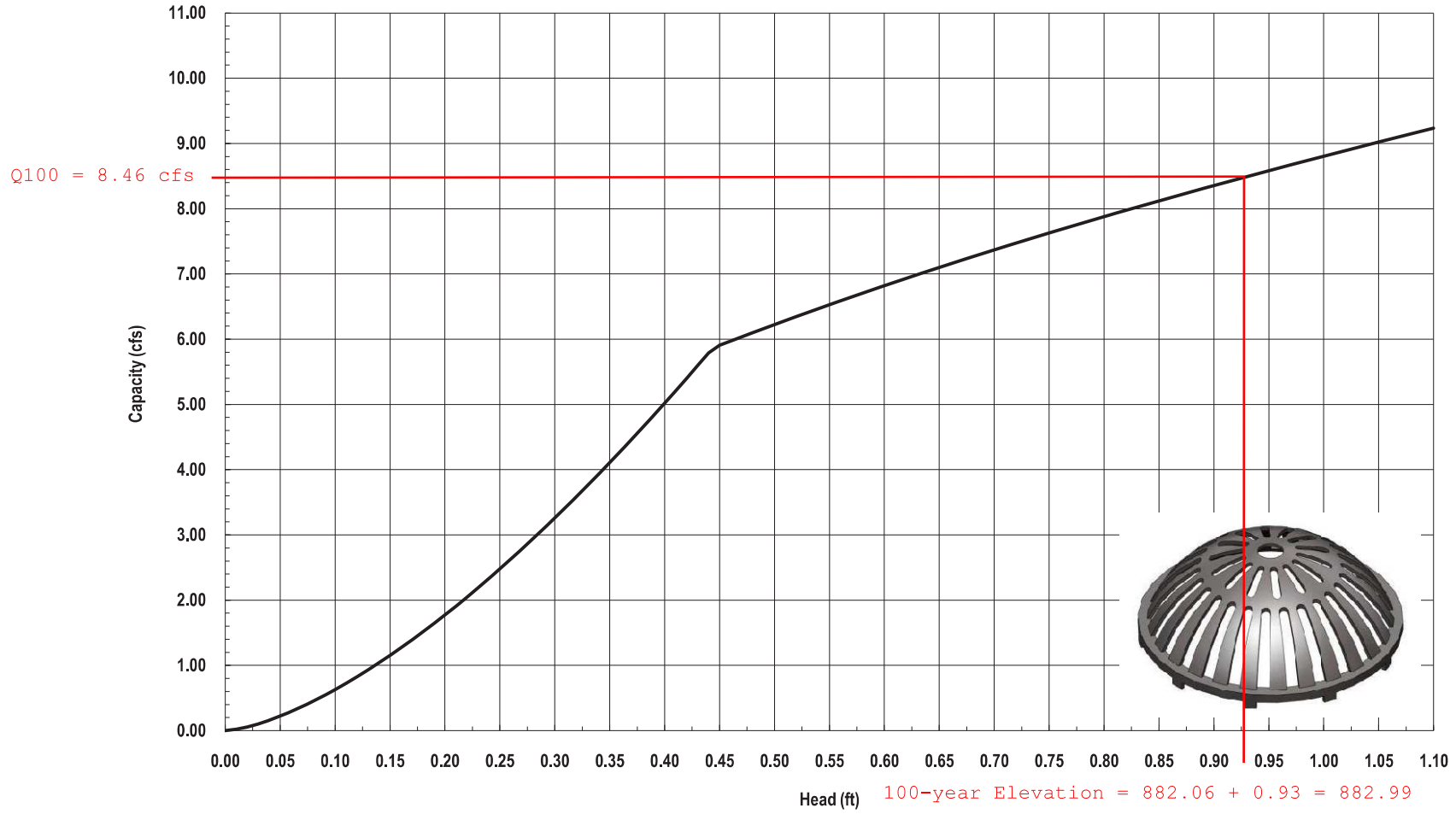
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ST-23

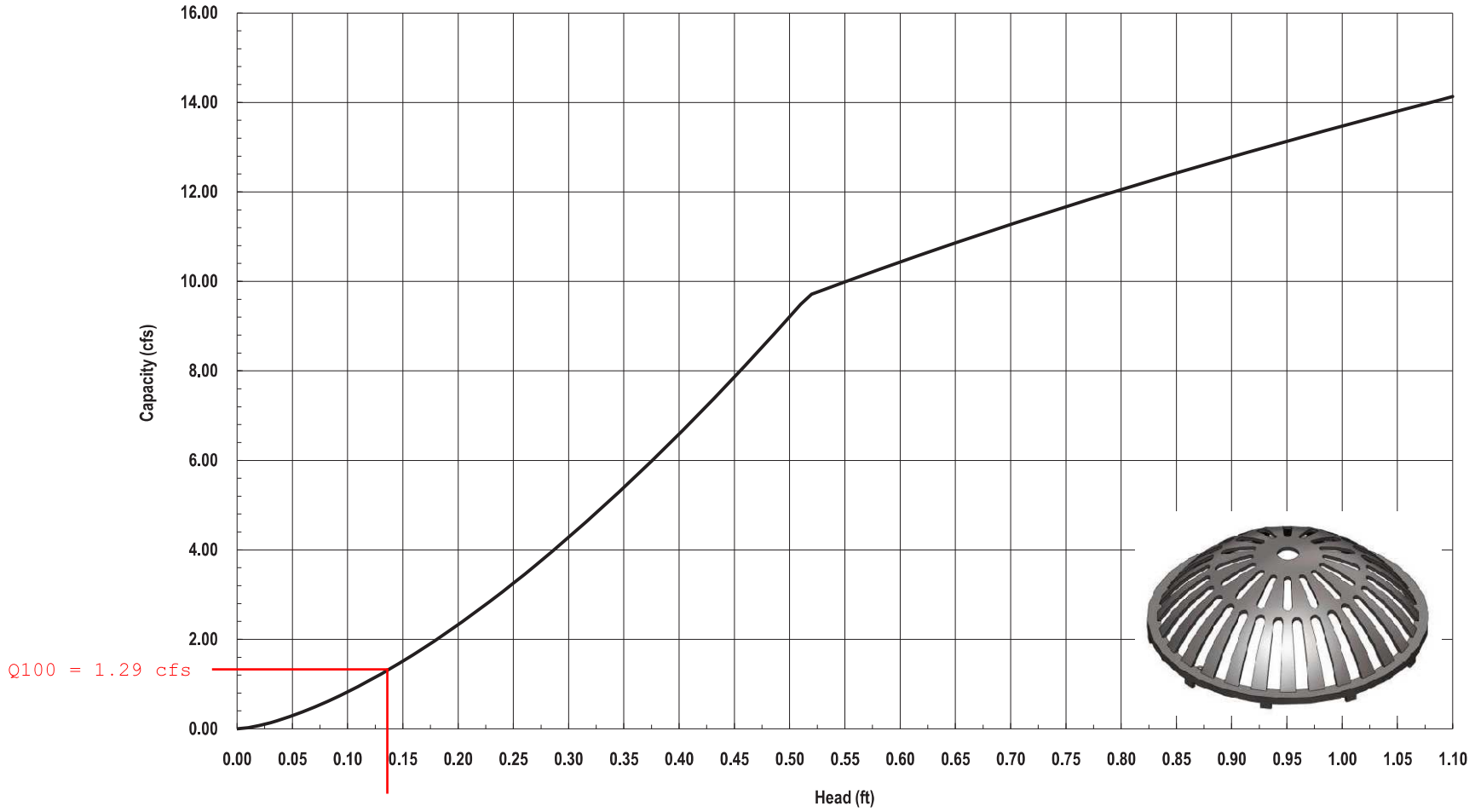
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Nyloplast 30" Dome Grate Inlet Capacity Chart



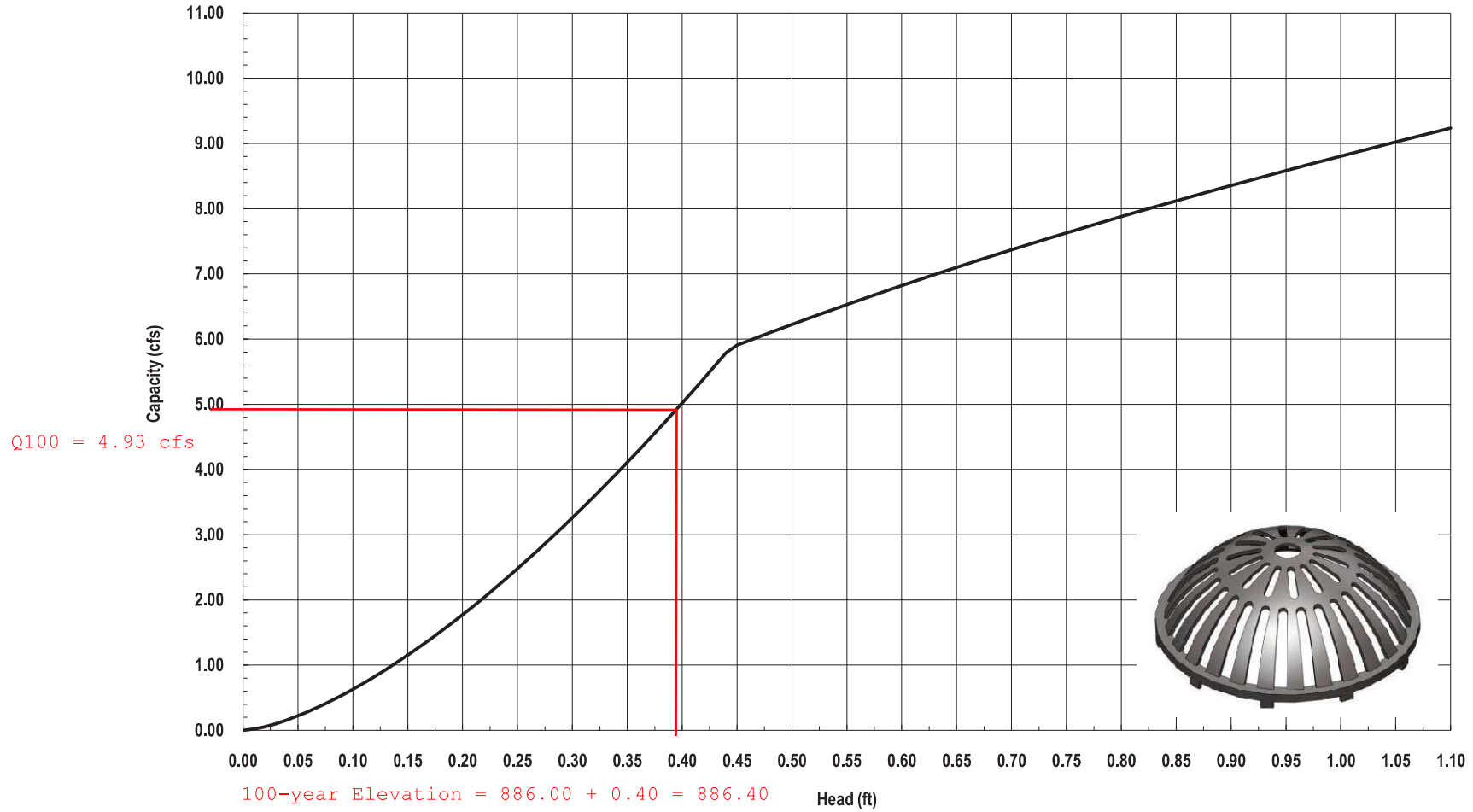
$$100\text{-year Elevation} = 885.95 + 0.14 = 886.09$$



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ST-14

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MAXIMUM TAIL WATER CONDITION ($T_w \geq 0.5$ 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.

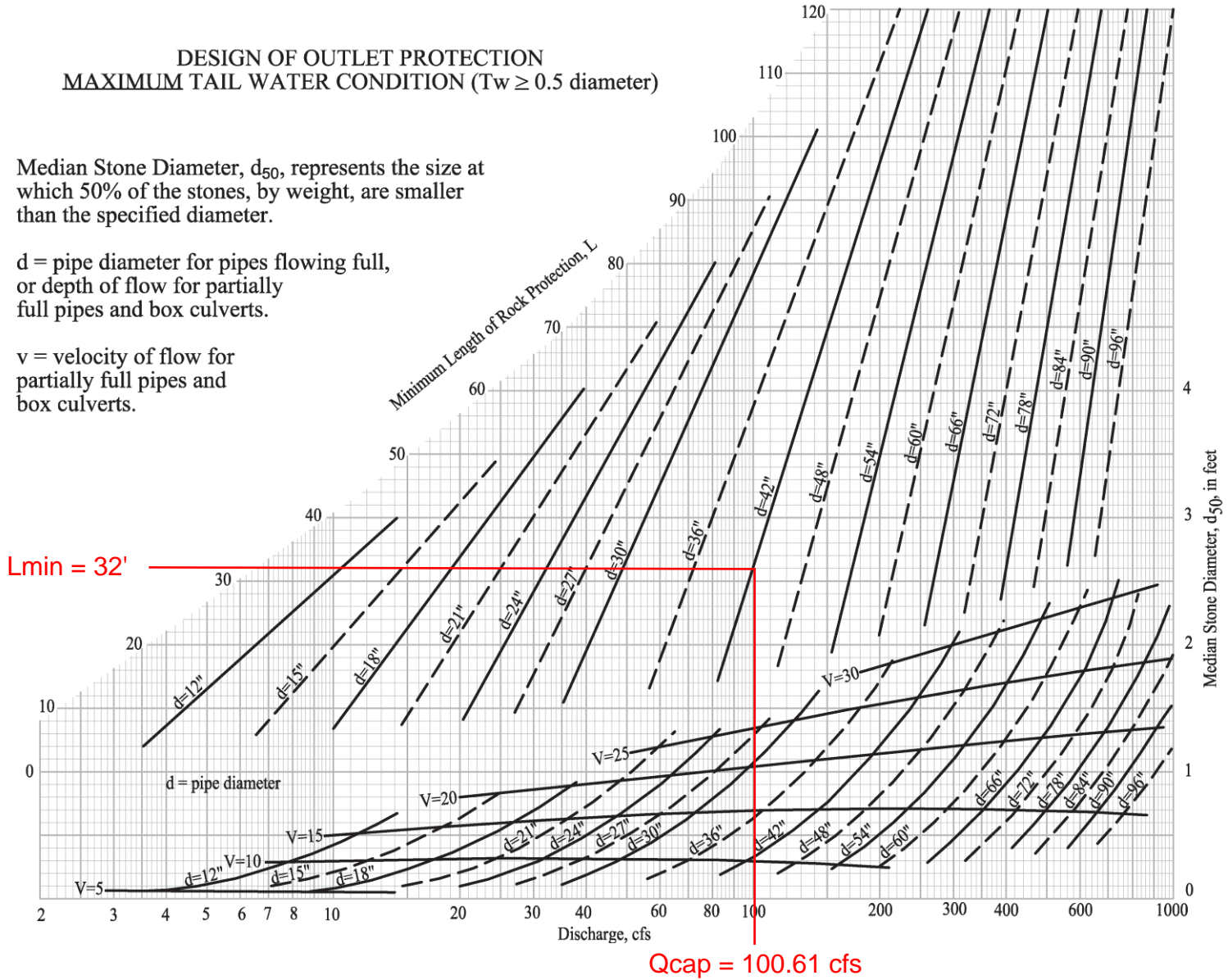


Figure 7E-10.04: Design of Outlet Protection, Maximum Tailwater Condition

ST-36

Source: USDA NRCS, 2004

DESIGN OF OUTLET PROTECTION MAXIMUM TAIL WATER CONDITION ($T_w \geq 0.5$ 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.

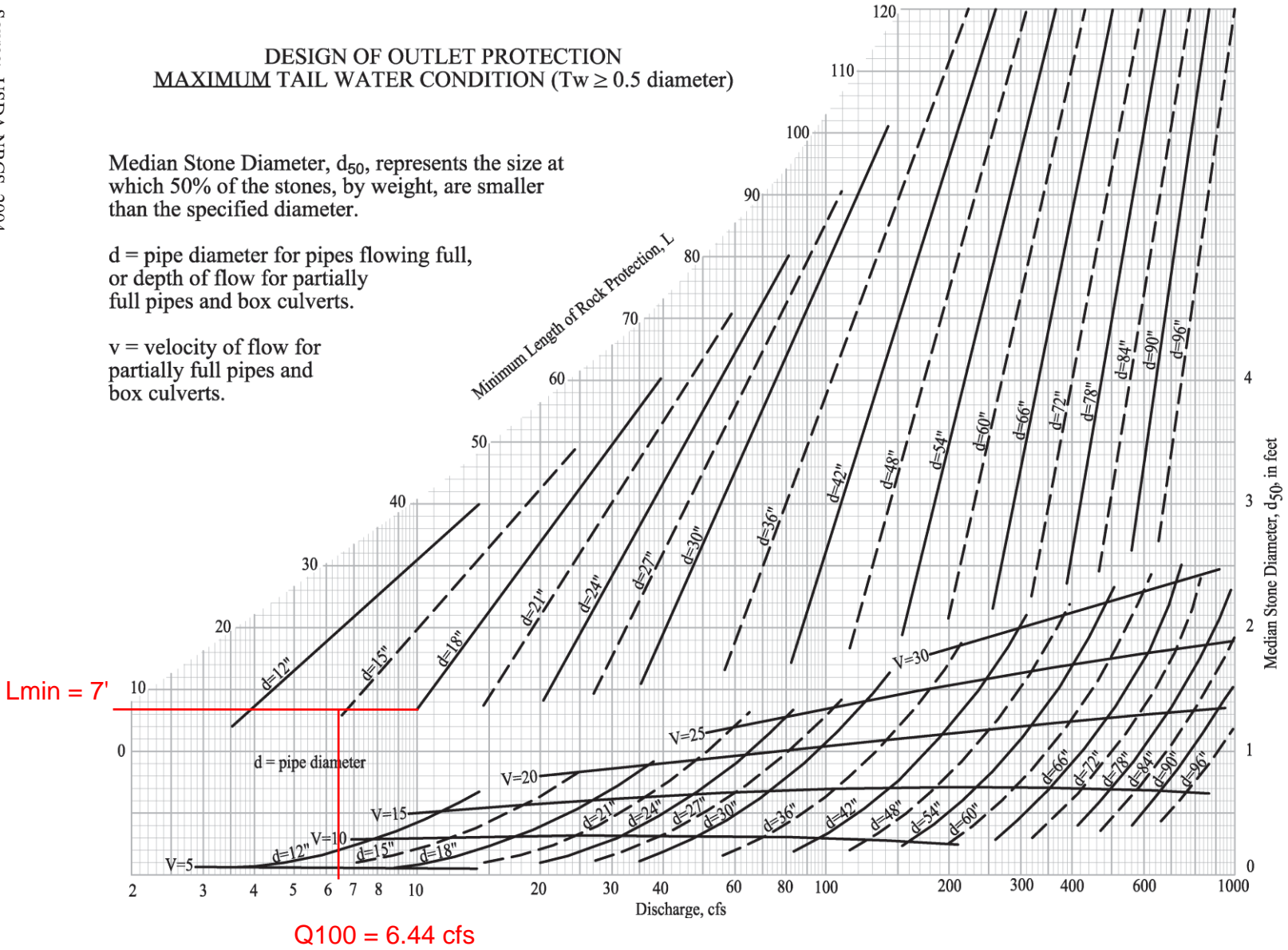
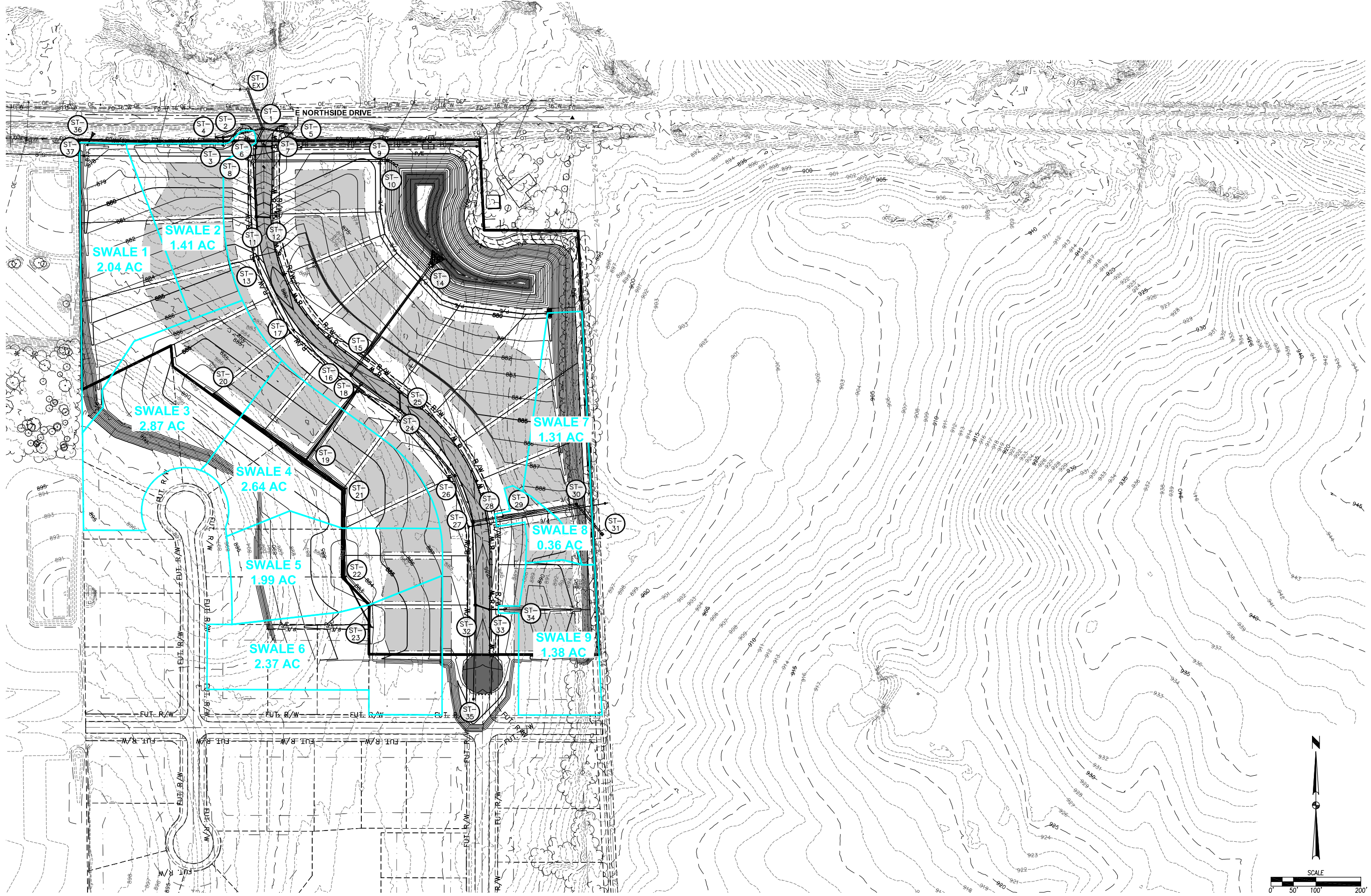


Figure 7E-10.04: Design of Outlet Protection, Maximum Tailwater Condition

FILE: H:\2023\2310646\2310646-SWMP.DWG
COMMENT: SWMP
PLOTTER: GBAE HEROLD
DATE: 1/2/2024 11:31 AM
ENCL: 1





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 SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Swale #1 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.027 - Channel with short grass, few weeds
 Left Slope, R = 3 :1
 Bottom Width, w = 4 feet
 Right Slope, L = 3 :1

Minimum Depth = 0.33 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
0.33	6.09	1.65	0.27	5.36	3.26
0.34	6.15	1.71	0.28	5.65	3.31
0.35	6.21	1.77	0.28	5.95	3.37
0.36	6.28	1.83	0.29	6.26	3.42
0.37	6.34	1.89	0.30	6.57	3.47
0.38	6.40	1.95	0.31	6.89	3.53
0.39	6.47	2.02	0.31	7.22	3.58
0.40	6.53	2.08	0.32	7.55	3.63
0.41	6.59	2.14	0.33	7.89	3.68
0.42	6.66	2.21	0.33	8.24	3.73
0.43	6.72	2.27	0.34	8.60	3.78
0.44	6.78	2.34	0.35	8.96	3.83
0.45	6.85	2.41	0.35	9.34	3.88

←----- Q100=6.44 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Swale #2 Channel Capacity:

Channel Slope, s = 2.00 %
Manning's n = 0.027 - Channel with short grass, few weeds
Left Slope, R = 3 :1
Bottom Width, w = 4 feet
Right Slope, L = 3 :1

Minimum Depth = 0.28 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
0.28	5.77	1.36	0.23	4.01	2.96
0.29	5.83	1.41	0.24	4.27	3.02
0.3	5.90	1.47	0.25	4.53	3.08
0.31	5.96	1.53	0.26	4.80	3.14
0.32	6.02	1.59	0.26	5.08	3.20
0.33	6.09	1.65	0.27	5.36	3.26
0.34	6.15	1.71	0.28	5.65	3.31
0.35	6.21	1.77	0.28	5.95	3.37
0.36	6.28	1.83	0.29	6.26	3.42
0.37	6.34	1.89	0.30	6.57	3.47
0.38	6.40	1.95	0.31	6.89	3.53
0.39	6.47	2.02	0.31	7.22	3.58
0.4	6.53	2.08	0.32	7.55	3.63

←----- Q100=5.04 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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Swale #3 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.027 - Channel with short grass, few weeds
 Left Slope, R = 3 :1
 Bottom Width, w = 4 feet
 Right Slope, L = 3 :1

Minimum Depth = 0.44 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
0.44	6.78	2.34	0.35	8.96	3.83
0.45	6.85	2.41	0.35	9.34	3.88
0.46	6.91	2.47	0.36	9.72	3.93
0.47	6.97	2.54	0.36	10.10	3.97
0.48	7.04	2.61	0.37	10.50	4.02
0.49	7.10	2.68	0.38	10.90	4.07
0.5	7.16	2.75	0.38	11.31	4.11
0.51	7.23	2.82	0.39	11.72	4.16
0.52	7.29	2.89	0.40	12.15	4.20
0.53	7.35	2.96	0.40	12.58	4.25
0.54	7.42	3.03	0.41	13.02	4.29
0.55	7.48	3.11	0.42	13.47	4.33
0.56	7.54	3.18	0.42	13.92	4.38

←----- Q100=10.25 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Swale #4 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.027 - Channel with short grass, few weeds
 Left Slope, R = 3 :1
 Bottom Width, w = 4 feet
 Right Slope, L = 3 :1

Minimum Depth = 0.34 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
0.34	6.15	1.71	0.28	5.65	3.31
0.35	6.21	1.77	0.28	5.95	3.37
0.36	6.28	1.83	0.29	6.26	3.42
0.37	6.34	1.89	0.30	6.57	3.47
0.38	6.40	1.95	0.31	6.89	3.53
0.39	6.47	2.02	0.31	7.22	3.58
0.4	6.53	2.08	0.32	7.55	3.63
0.41	6.59	2.14	0.33	7.89	3.68
0.42	6.66	2.21	0.33	8.24	3.73
0.43	6.72	2.27	0.34	8.60	3.78
0.44	6.78	2.34	0.35	8.96	3.83
0.45	6.85	2.41	0.35	9.34	3.88
0.46	6.91	2.47	0.36	9.72	3.93

←----- Q100=6.86 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Swale #5 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.027 - Channel with short grass, few weeds
 Left Slope, R = 3 :1
 Bottom Width, w = 4 feet
 Right Slope, L = 3 :1

Minimum Depth = 0.35 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
0.35	6.21	1.77	0.28	5.95	3.37
0.36	6.28	1.83	0.29	6.26	3.42
0.37	6.34	1.89	0.30	6.57	3.47
0.38	6.40	1.95	0.31	6.89	3.53
0.39	6.47	2.02	0.31	7.22	3.58
0.4	6.53	2.08	0.32	7.55	3.63
0.41	6.59	2.14	0.33	7.89	3.68
0.42	6.66	2.21	0.33	8.24	3.73
0.43	6.72	2.27	0.34	8.60	3.78
0.44	6.78	2.34	0.35	8.96	3.83
0.45	6.85	2.41	0.35	9.34	3.88
0.46	6.91	2.47	0.36	9.72	3.93
0.47	6.97	2.54	0.36	10.10	3.97

←----- Q100=7.11 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Swale #6 Channel Capacity:

Channel Slope, s = 2.00 %
Manning's n = 0.027 - Channel with short grass, few weeds
Left Slope, R = 3 :1
Bottom Width, w = 4 feet
Right Slope, L = 3 :1

Minimum Depth = 0.39 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
0.39	6.47	2.02	0.31	7.22	3.58
0.4	6.53	2.08	0.32	7.55	3.63
0.41	6.59	2.14	0.33	7.89	3.68
0.42	6.66	2.21	0.33	8.24	3.73
0.43	6.72	2.27	0.34	8.60	3.78
0.44	6.78	2.34	0.35	8.96	3.83
0.45	6.85	2.41	0.35	9.34	3.88
0.46	6.91	2.47	0.36	9.72	3.93
0.47	6.97	2.54	0.36	10.10	3.97
0.48	7.04	2.61	0.37	10.50	4.02
0.49	7.10	2.68	0.38	10.90	4.07
0.5	7.16	2.75	0.38	11.31	4.11
0.51	7.23	2.82	0.39	11.72	4.16

←----- Q100=8.46 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: GH OK'D BY:

Swale #7 Channel Capacity:

Channel Slope, s = 2.00 %
Manning's n = 0.027 - Channel with short grass, few weeds
Left Slope, R = 3 :1
Bottom Width, w = 4 feet
Right Slope, L = 3 :1

Minimum Depth = 0.31 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
0.31	5.96	1.53	0.26	4.80	3.14
0.32	6.02	1.59	0.26	5.08	3.20
0.33	6.09	1.65	0.27	5.36	3.26
0.34	6.15	1.71	0.28	5.65	3.31
0.35	6.21	1.77	0.28	5.95	3.37
0.36	6.28	1.83	0.29	6.26	3.42
0.37	6.34	1.89	0.30	6.57	3.47
0.38	6.40	1.95	0.31	6.89	3.53
0.39	6.47	2.02	0.31	7.22	3.58
0.40	6.53	2.08	0.32	7.55	3.63
0.41	6.59	2.14	0.33	7.89	3.68
0.42	6.66	2.21	0.33	8.24	3.73
0.43	6.72	2.27	0.34	8.60	3.78

←----- Q100=5.85 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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SUBJECT: Storm Water Calculations DATE: 12/20/23 COMP. BY: GH OK'D BY:

Swale #8 Channel Capacity:

Channel Slope, s = 2.00 %
 Manning's n = 0.027 - Channel with short grass, few weeds
 Left Slope, R = 3 :1
 Bottom Width, w = 2 feet
 Right Slope, L = 3 :1

Minimum Depth = 0.17 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
0.17	3.08	0.43	0.14	0.89	2.09
0.18	3.14	0.46	0.15	0.99	2.15
0.19	3.20	0.49	0.15	1.08	2.22
0.2	3.26	0.52	0.16	1.19	2.29
0.21	3.33	0.55	0.17	1.30	2.35
0.22	3.39	0.59	0.17	1.41	2.41
0.23	3.45	0.62	0.18	1.53	2.47
0.24	3.52	0.65	0.19	1.65	2.53
0.25	3.58	0.69	0.19	1.78	2.59
0.26	3.64	0.72	0.20	1.91	2.65
0.27	3.71	0.76	0.20	2.05	2.70
0.28	3.77	0.80	0.21	2.19	2.76
0.29	3.83	0.83	0.22	2.34	2.81

←----- Q100=1.29 cfs

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



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SUBJECT: Storm Water Calculations DATE: 12/20/23 COMP. BY: GH OK'D BY:

Swale #9 Channel Capacity:

Channel Slope, s = 2.00 %
Manning's n = 0.027 - Channel with short grass, few weeds
Left Slope, R = 3 :1
Bottom Width, w = 2 feet
Right Slope, L = 3 :1

Minimum Depth = 0.39 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
0.39	4.47	1.24	0.28	4.09	3.31
0.4	4.53	1.28	0.28	4.29	3.35
0.41	4.59	1.32	0.29	4.50	3.40
0.42	4.66	1.37	0.29	4.71	3.44
0.43	4.72	1.41	0.30	4.93	3.49
0.44	4.78	1.46	0.31	5.16	3.53
0.45	4.85	1.51	0.31	5.39	3.57
0.46	4.91	1.55	0.32	5.62	3.62
0.47	4.97	1.60	0.32	5.86	3.66
0.48	5.04	1.65	0.33	6.11	3.70
0.49	5.10	1.70	0.33	6.36	3.74
0.5	5.16	1.75	0.34	6.62	3.78
0.51	5.23	1.80	0.34	6.89	3.83

←----- Q100=4.93 cfs

Design Equations:

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

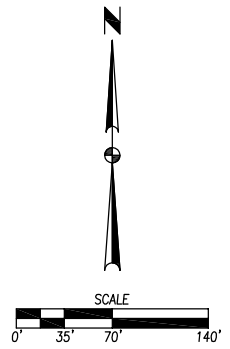
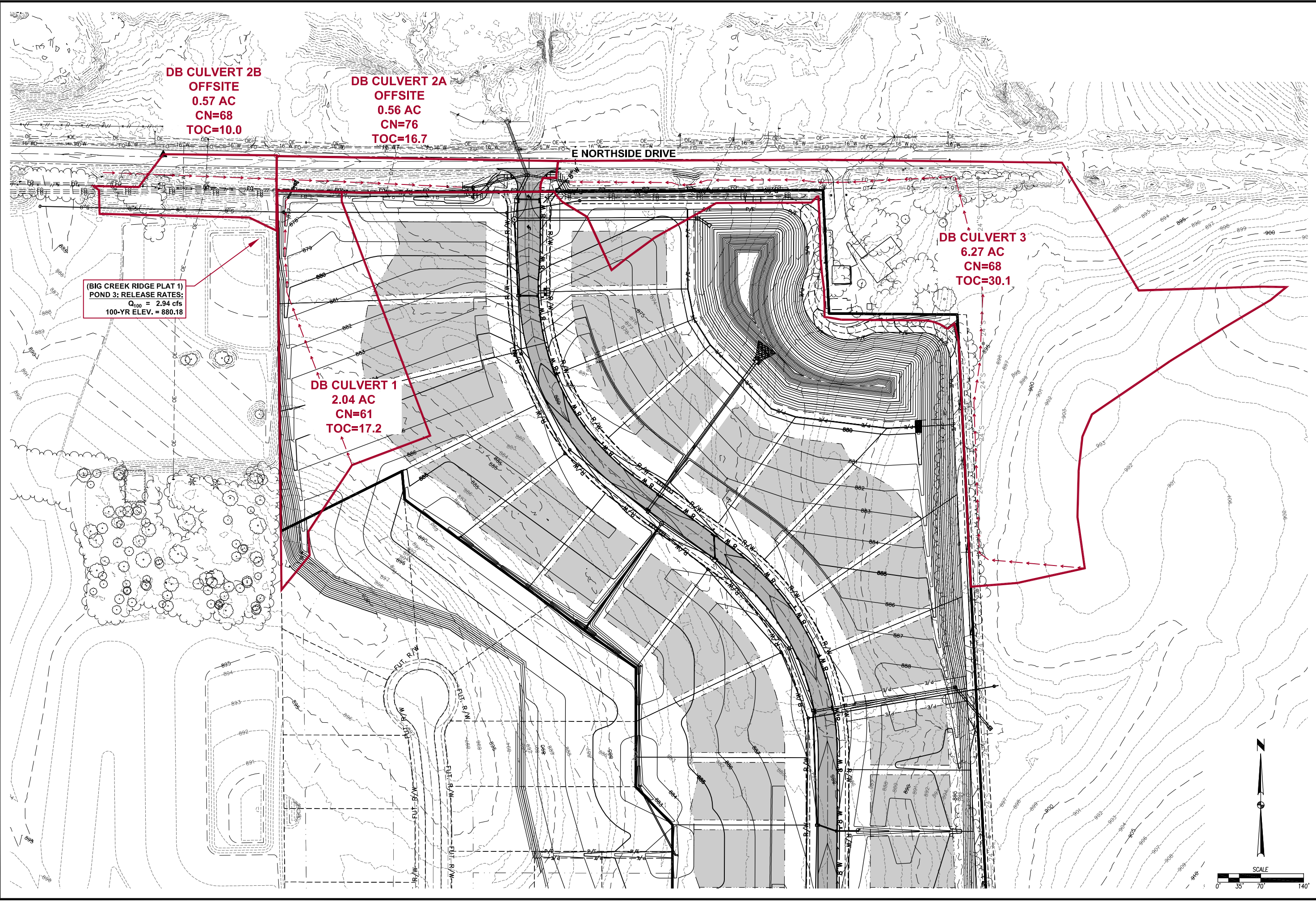
$$a = wd + d^2(R+L)/2$$


$$R = a/P_w$$

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

$$v = Q/a$$

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COMMENT: ENC:
PLOTTED BY: GALE HEROLD
TECH: ENC:
DATE: 1/2/2024 11:31 AM



DATE	
REVISIONS	
4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400	
E.I.: MAE	
ENGINEER: EKO	
 CIVIL DESIGN ADVANTAGE	
POLK CITY, IOWA	
MONARCH CROSSING PLAT 1	
CULVERT MAP	
1	1
2310.656	



PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages
 SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: MAE OK'D BY:

Roadway Culvert Summary

The Culverts were analyzed for the 10, 50 and 100 yr. storm events. Runoff curve numbers were taken from SUDAS Section 2B-4. The Culvert was designed to limit the 10 year storm event elevation to remain below the top of the pipe, the 50 year storm event to less than one foot above the top of the pipe and for the 100 year storm event to at least one foot below the road embankment. Refer to the attached Culvert Map for location of the culvert. Refer the attached Hydraflow Hydrographs report for detailed analysis of the drainage area. Refer to attached HY-8 summary for culvert analysis.

Culvert Summary

Culvert ID	10-Year (cfs)	10-Year Elevation	50-Year (cfs)	50-Year Elevation	100-Year (cfs)	100-Year Elevation
Culvert 1	2.20	876.94	4.96	877.44	6.44	877.68
Culvert 2	4.61	872.45	9.38	873.34	14.57	874.92
Culvert 3	7.44	873.21	14.54	873.99	18.20	874.46

Culvert 1 Overflow Elevation = 877.80
Culvert 2 Overflow Elevation = 876.25
Culvert 3 Overflow Elevation = 876.50

Culvert Curve Number Calculations - B Soils

Drainage Area ID	1 Acre Avg Lot CN	1 Acre Avg Lot, SF	Imperv. CN	Imperv. Area, SF	Total Area, SF	Total Area, Acres	Composite CN
Culvert 1	68	88681	98	0	88681	2.04	68
Culvert 2A	68	36968		14126	51094	1.17	76
Culvert 2B	68	24994		0	24994	0.57	68

Drainage Area ID	Open Space CN	Open Space, SF	Straight Row/Res. CN	Straight Row/Res. SF	Imperv. CN	Imperv. SF	Total Area, SF	Total Area, Acres	Composite CN
Culvert 3	61	148563	75	113224	98	11577	273364	6.28	68



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SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: MAE OK'D BY: _____

Culvert #1 (ST-37)

Crossing Data - Culvert #1

Crossing Properties

Name:

Parameter	Value	Units
DISCHARGE DATA		
Discharge Method	Minimum, Design, and Maximum	
Minimum Flow	2.200	cfs
Design Flow	4.960	cfs
Maximum Flow	6.440	cfs
TAILWATER DATA		
Channel Type	Enter Constant Tailwater Elevation	
Channel Invert Elevation	876.000	ft
Constant Tailwater Elevation	875.900	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	877.800	ft
Roadway Surface	Paved	
Top Width	10.000	ft

Culvert Properties

Culvert #1

Add Culvert
Duplicate Culvert
Delete Culvert

Parameter	Value	Units
CULVERT DATA		
Name	Culvert #1	
Shape	Circular	
Material	Concrete	
Diameter	1.500	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	876.080	ft
Outlet Station	27.000	ft
Outlet Elevation	876.000	ft
Number of Barrels	1	

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 - Culvert #1

Headwater Elevation (ft)	Total Discharge (cfs)	Culvert #1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
876.94	2.20	2.20	0.00	1
877.02	2.62	2.62	0.00	1
877.11	3.05	3.05	0.00	1
877.19	3.47	3.47	0.00	1
877.26	3.90	3.90	0.00	1
877.33	4.32	4.32	0.00	1
877.41	4.74	4.74	0.00	1
877.44	4.96	4.96	0.00	1
877.55	5.59	5.59	0.00	1
877.61	6.02	6.02	0.00	1
877.68	6.44	6.44	0.00	1
877.80	7.15	7.15	0.00	Overtopping

Display

Crossing Summary Table
 Culvert Summary Table
 Water Surface Profiles
 Tapered Inlet Table
 Customized Table

Geometry

Inlet Elevation: 876.08 ft
 Outlet Elevation: 876.00 ft
 Culvert Length: 27.00 ft
 Culvert Slope: 0.0030
 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: Monarch Crossing Plat 1 JOB NO. 2310.656 Page ___ of ___ Pages
SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: MAE OK'D BY: _____

Culvert #2 (ST-4)

Crossing Data - Culvert #2 window showing Crossing Properties and Culvert Properties. Includes discharge data, tailwater data, roadway data, and culvert material/geometry details.

Summary of Flows at Crossing - Culvert #2 window showing a table of flow data and various analysis options like Display, Geometry, and Plot.



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Culvert #3 (ST-5)

Crossing Data - Culvert #3 window showing Crossing Properties and Culvert Properties. Includes tables for Discharge Data, Tailwater Data, Roadway Data, and Culvert Data.

Summary of Flows at Crossing - Culvert #3 window showing a table of flow data and various configuration options like Display, Geometry, and Plot.



PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages

SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: MAE OK'D BY:

Time of Concentration:

Drainage Area: CULVERT 1

Sheet Flow:

Flow length, L_1 = 100 feet
Land slope, s_1 = 2.3 %
Manning's n = 0.24
2-Year 24-hr p_2 = 3.08
Travel time, t_1 = 13.8 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 = 202 feet
Land slope, s_2 = 2.3 %
Ground Cover No. = 3 Table 1

Flow velocity, v_2 = 1.06 ft/sec
Travel time, t_2 = 3.2 minutes

Table 1:

Ground Cover:

- Forest w/ heavy ground litter & meadow
- Minimum tillage cultivation and woodland:
- Short grass pasture & lawns
- Cultivated straight row crops
- Nearly bare ground
- Grassed waterway
- Paved area & shallow gutter flow

No.	Equation
1	$v_2 = s_2^{1/2} \times 2.516$
2	$v_2 = s_2^{1/2} \times 5.032$
3	$v_2 = s_2^{1/2} \times 6.962$
4	$v_2 = s_2^{1/2} \times 8.726$
5	$v_2 = s_2^{1/2} \times 9.965$
6	$v_2 = s_2^{1/2} \times 16.135$
7	$v_2 = s_2^{1/2} \times 20.238$

Channel Flow:

Flow length, L_3 = 155 feet
Land slope, s_3 = 2 %
Manning's n = 0.013
Left Slope = 3 :1
Bottom Width = 4 feet
Right Slope = 3 :1
Flow depth = 0.5 feet
Flow area, a = 2.75 ft²
Wetted perim., P_w = 7.16 ft
Flow velocity, v_3 = 8.54 ft/sec
Travel time, t_3 = 0.3 minutes

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

$q = 23.4843$

Pipe Flow:

Flow length, L_4 = feet
Flow velocity, v_4 = ft/sec
Travel time, t_4 = 0.0 minutes

Design Equation:
$$t_4 = \frac{L_4}{60(v_4)}$$

Time of Concentration, t_c = 17.2 minutes $t_c = t_1 + t_2 + t_3 + t_4$



PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages
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Time of Concentration:

Drainage Area: CULVERT 2

Sheet Flow:

Flow length, L_1 = 100 feet
 Land slope, s_1 = 1.7 %
 Manning's n = 0.17
 2-Year 24-hr p_2 = 3.08
 Travel time, t_1 = 11.8 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 = 230 feet
 Land slope, s_2 = 1.25 %
 Ground Cover No. = 3 Table 1
 Flow velocity, v_2 = 0.78 ft/sec
 Travel time, t_2 = 4.9 minutes

Table 1:

Ground Cover:

- Forest w/ heavy ground litter & meadow
- Minimum tillage cultivation and woodland
- Short grass pasture & lawns
- Cultivated straight row crops
- Nearly bare ground
- Grassed waterway
- Paved area & shallow gutter flow

No.	Equation
1	$v_2 = s_2^{1/2} \times 2.516$
2	$v_2 = s_2^{1/2} \times 5.032$
3	$v_2 = s_2^{1/2} \times 6.962$
4	$v_2 = s_2^{1/2} \times 8.726$
5	$v_2 = s_2^{1/2} \times 9.965$
6	$v_2 = s_2^{1/2} \times 16.135$
7	$v_2 = s_2^{1/2} \times 20.238$

Channel Flow:

Flow length, L_3 = feet
 Land slope, s_3 = %
 Manning's n =
 Left Slope = :1
 Bottom Width = feet
 Right Slope = :1
 Flow depth = feet
 Flow area, a = ft²
 Wetted perim., P_w = ft
 Flow velocity, v_3 = ft/sec
 Travel time, t_3 = 0.0 minutes

Design Equation:

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

q=

Pipe Flow:

Flow length, L_4 = feet
 Flow velocity, v_4 = ft/sec
 Travel time, t_4 = 0.0 minutes

Design Equation:

$$t_4 = \frac{L_4}{60(v_4)}$$

Time of Concentration, t_c = 16.7 minutes $t_c = t_1 + t_2 + t_3 + t_4$



PROJECT: Monarch Crossing Plat 1 JOB NO. 2310.656 Page of Pages
 SUBJECT: Storm Water Calculations DATE: 12/19/23 COMP. BY: MAE OK'D BY:

Time of Concentration:

Drainage Area: CULVERT 3

Sheet Flow:

Flow length, L_1 = 100 feet
 Land slope, s_1 = 1.19 %
 Manning's n = 0.17
 2-Year 24-hr p_2 = 3.08
 Travel time, t_1 = 13.6 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 = 1259 feet
 Land slope, s_2 = 2.15 %
 Ground Cover No. = 4 Table 1
 Flow velocity, v_2 = 1.28 ft/sec
 Travel time, t_2 = 16.4 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 woodland:	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 = feet
 Land slope, s_3 = %
 Manning's n =
 Left Slope = :1
 Bottom Width = feet
 Right Slope = :1
 Flow depth = feet
 Flow area, a = ft²
 Wetted perim., P_w = ft
 Flow velocity, v_3 = ft/sec
 Travel time, t_3 = 0.0 minutes

Design Equation:

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

$q =$

Pipe Flow:

Flow length, L_4 = 70 feet
 Flow velocity, v_4 = 8 ft/sec
 Travel time, t_4 = 0.1 minutes

Design Equation:

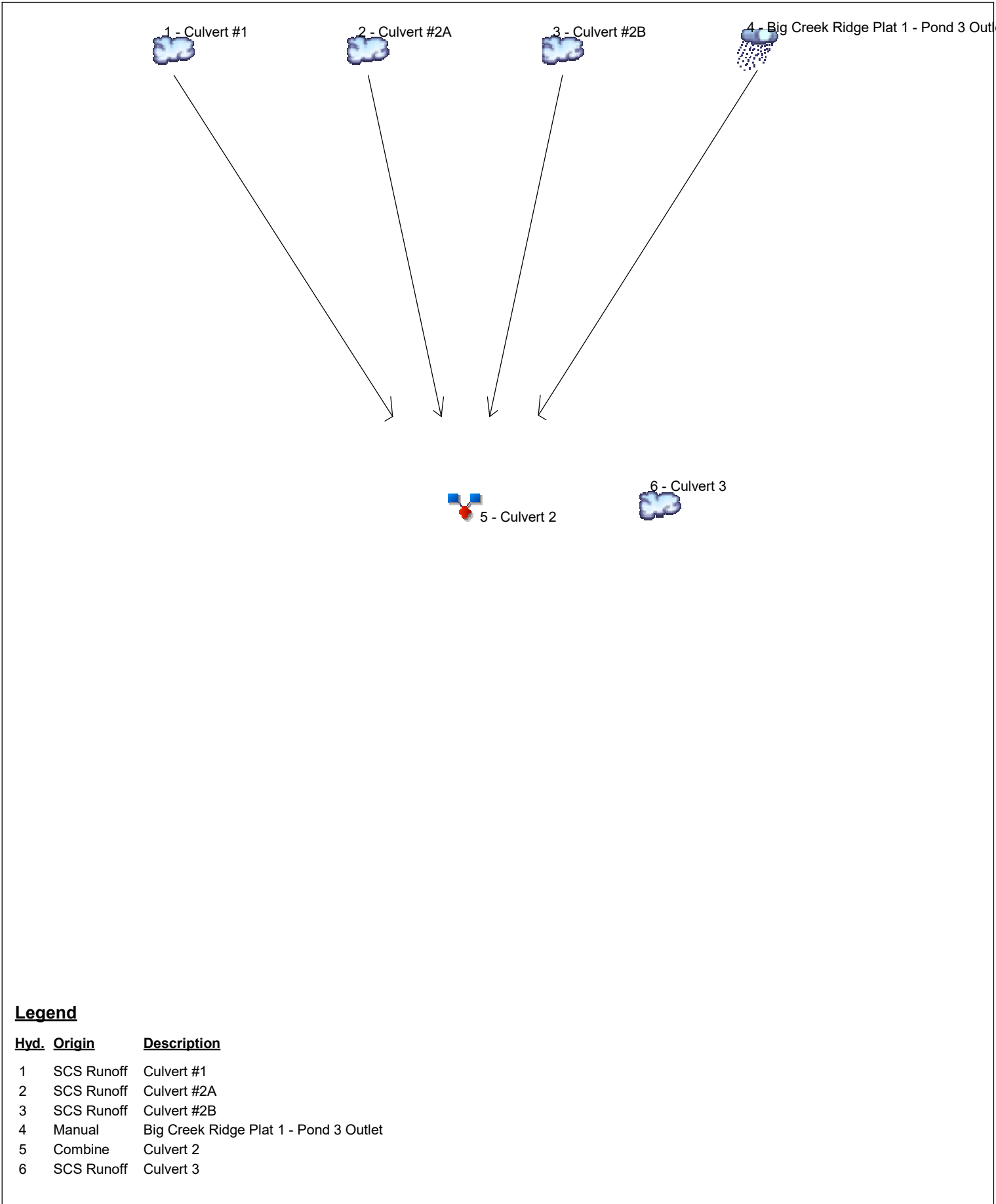
$$t_4 = \frac{L_4}{60(v_4)}$$

Time of Concentration, t_c = 30.1 minutes $t_c = t_1 + t_2 + t_3 + t_4$

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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 Culvert #1
2	SCS Runoff Culvert #2A
3	SCS Runoff Culvert #2B
4	Manual Big Creek Ridge Plat 1 - Pond 3 Outlet
5	Combine Culvert 2
6	SCS Runoff Culvert 3

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	-----	-----	-----	-----	-----	2.199	-----	4.964	6.437	Culvert #1
2	SCS Runoff	-----	-----	-----	-----	-----	1.355	-----	2.344	2.833	Culvert #2A
3	SCS Runoff	-----	-----	-----	-----	-----	1.208	-----	2.310	2.883	Culvert #2B
4	Manual	-----	-----	-----	-----	-----	0.000	-----	0.000	2.940	Big Creek Ridge Plat 1 - Pond 3 Outle
5	Combine	1, 2, 3, 4	-----	-----	-----	-----	4.605	-----	9.382	14.57	Culvert 2
6	SCS Runoff	-----	-----	-----	-----	-----	7.440	-----	14.54	18.20	Culvert 3

Hydrograph Summary Report

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

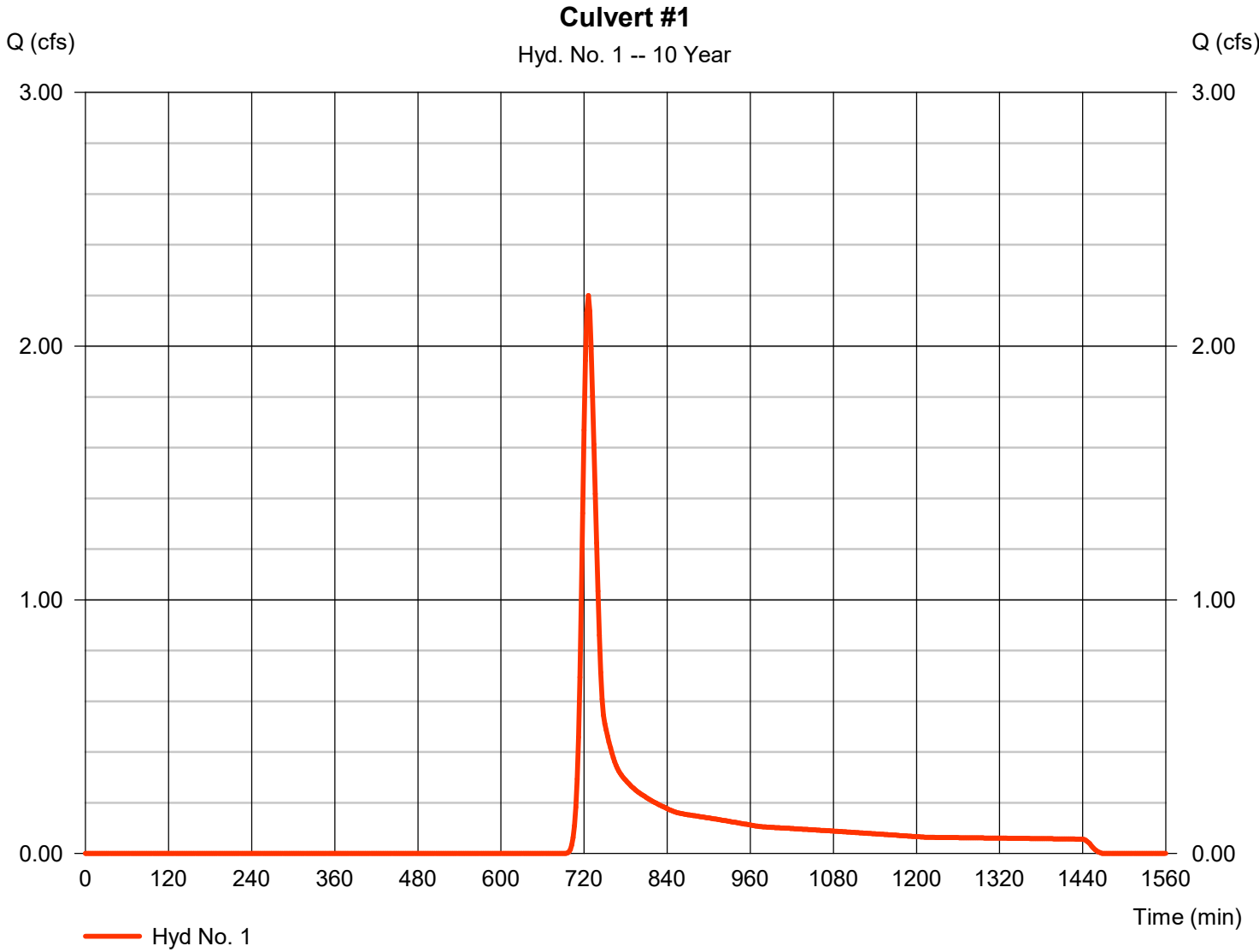
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description	
1	SCS Runoff	2.199	2	726	7,827	-----	-----	-----	Culvert #1	
2	SCS Runoff	1.355	2	724	4,265	-----	-----	-----	Culvert #2A	
3	SCS Runoff	1.208	2	722	3,212	-----	-----	-----	Culvert #2B	
4	Manual	0.000	2	n/a	0	-----	-----	-----	Big Creek Ridge Plat 1 - Pond 3 Outle	
5	Combine	4.605	2	724	15,304	1, 2, 3, 4	-----	-----	Culvert 2	
6	SCS Runoff	7.440	2	732	31,478	-----	-----	-----	Culvert 3	
Culvert - Monarch Crossing Plat 1.gpw					Return Period: 10 Year			Tuesday, 12 / 19 / 2023		

Hydrograph Report

Hyd. No. 1

Culvert #1

Hydrograph type	= SCS Runoff	Peak discharge	= 2.199 cfs
Storm frequency	= 10 yrs	Time to peak	= 726 min
Time interval	= 2 min	Hyd. volume	= 7,827 cuft
Drainage area	= 2.040 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 17.20 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

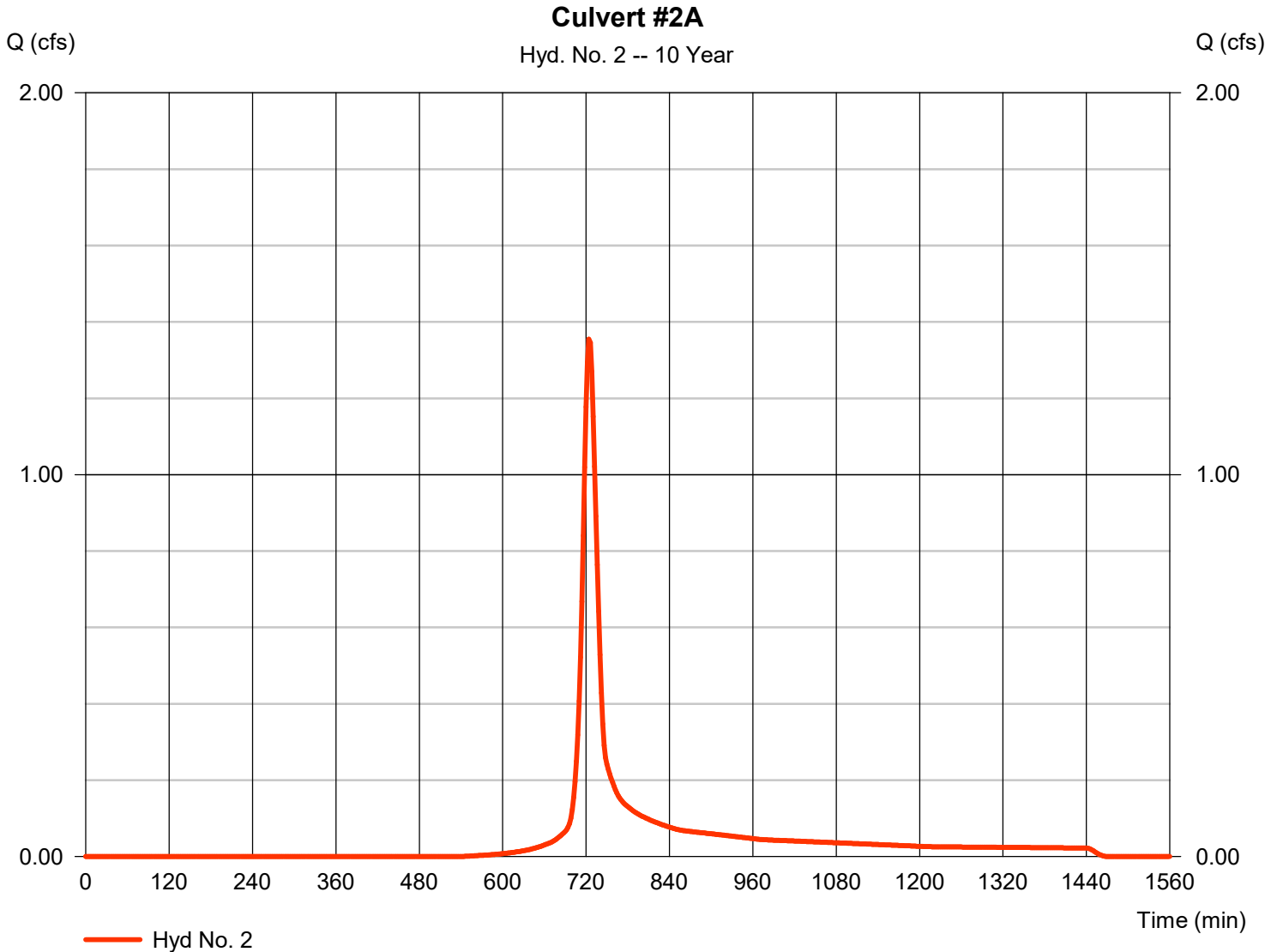


Hydrograph Report

Hyd. No. 2

Culvert #2A

Hydrograph type	= SCS Runoff	Peak discharge	= 1.355 cfs
Storm frequency	= 10 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 4,265 cuft
Drainage area	= 0.560 ac	Curve number	= 76
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 16.70 min
Total precip.	= 4.46 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

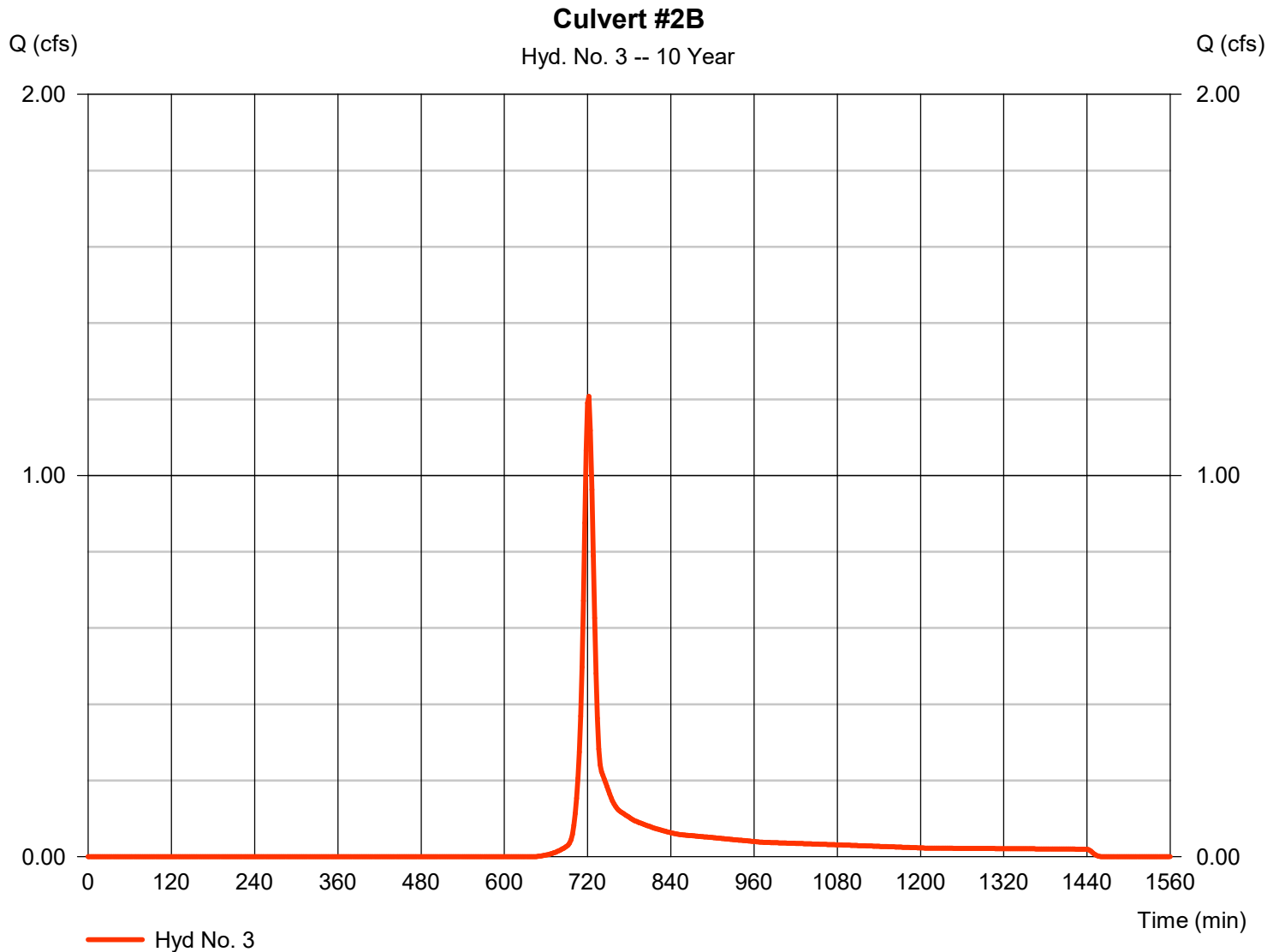


Hydrograph Report

Hyd. No. 3

Culvert #2B

Hydrograph type	= SCS Runoff	Peak discharge	= 1.208 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 2 min	Hyd. volume	= 3,212 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 4.46 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, 12 / 19 / 2023

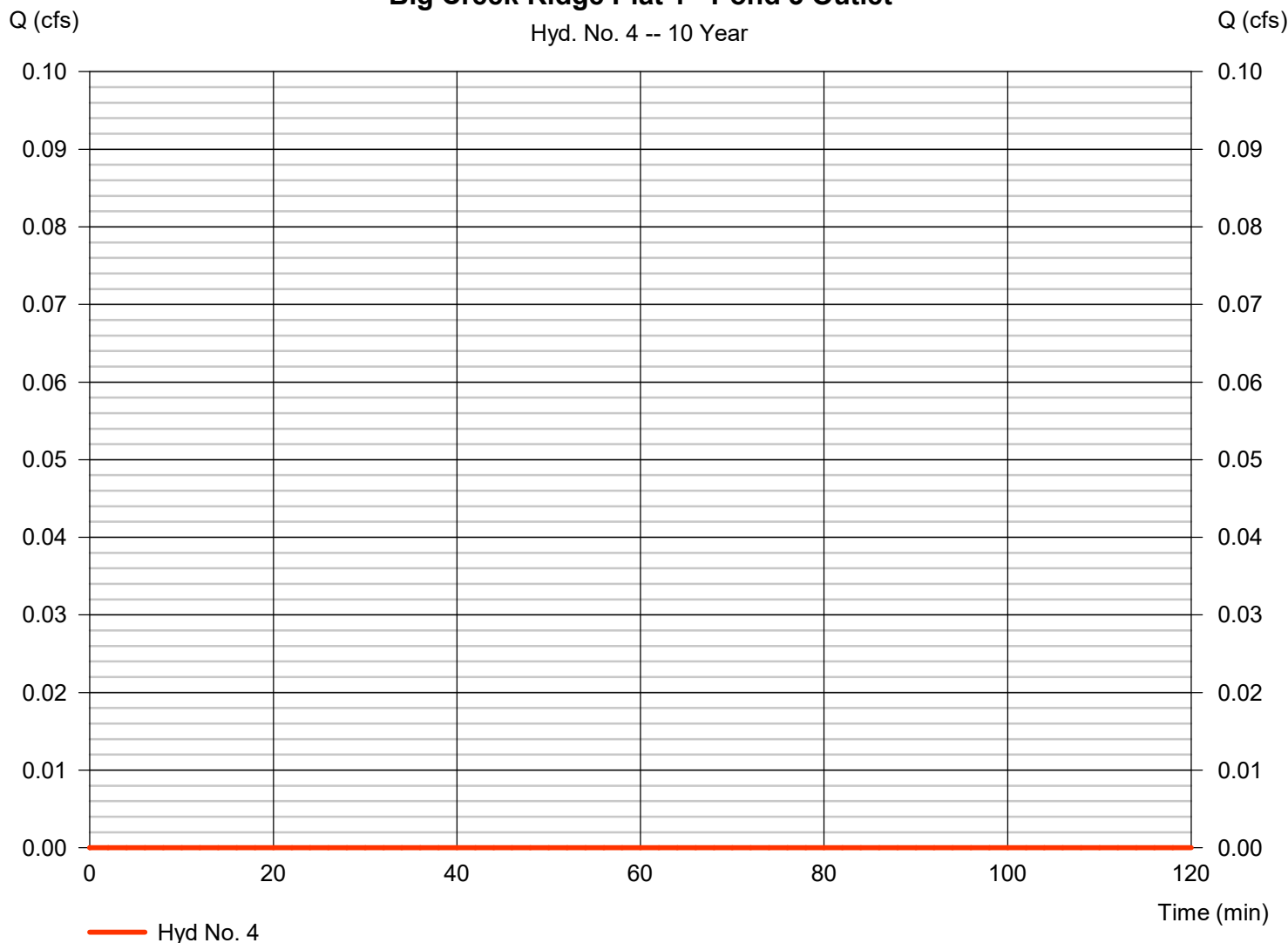
Hyd. No. 4

Big Creek Ridge Plat 1 - Pond 3 Outlet

Hydrograph type	= Manual	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft

Big Creek Ridge Plat 1 - Pond 3 Outlet

Hyd. No. 4 -- 10 Year



Hydrograph Report

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

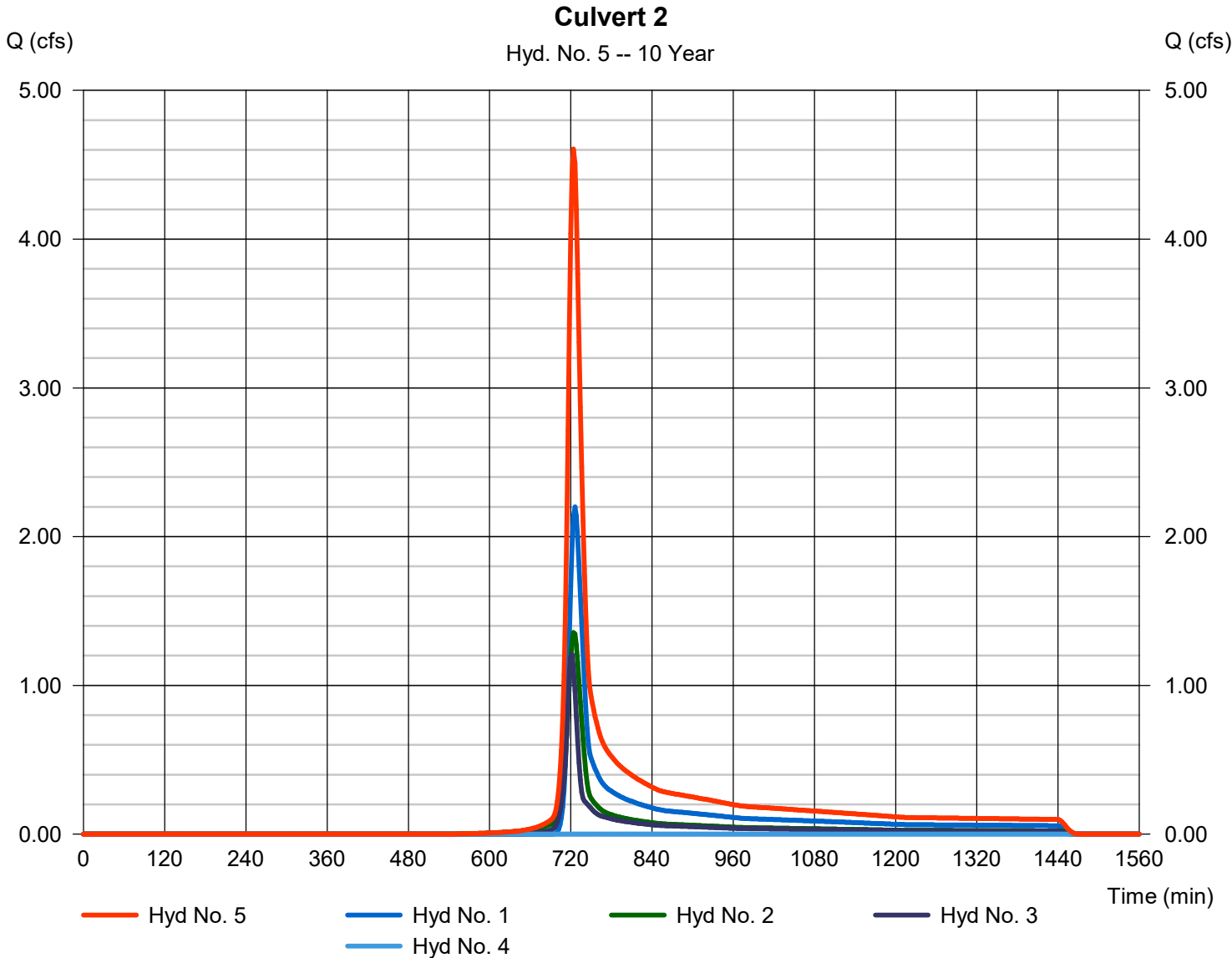
Tuesday, 12 / 19 / 2023

Hyd. No. 5

Culvert 2

Hydrograph type = Combine
Storm frequency = 10 yrs
Time interval = 2 min
Inflow hyds. = 1, 2, 3, 4

Peak discharge = 4.605 cfs
Time to peak = 724 min
Hyd. volume = 15,304 cuft
Contrib. drain. area = 3.170 ac

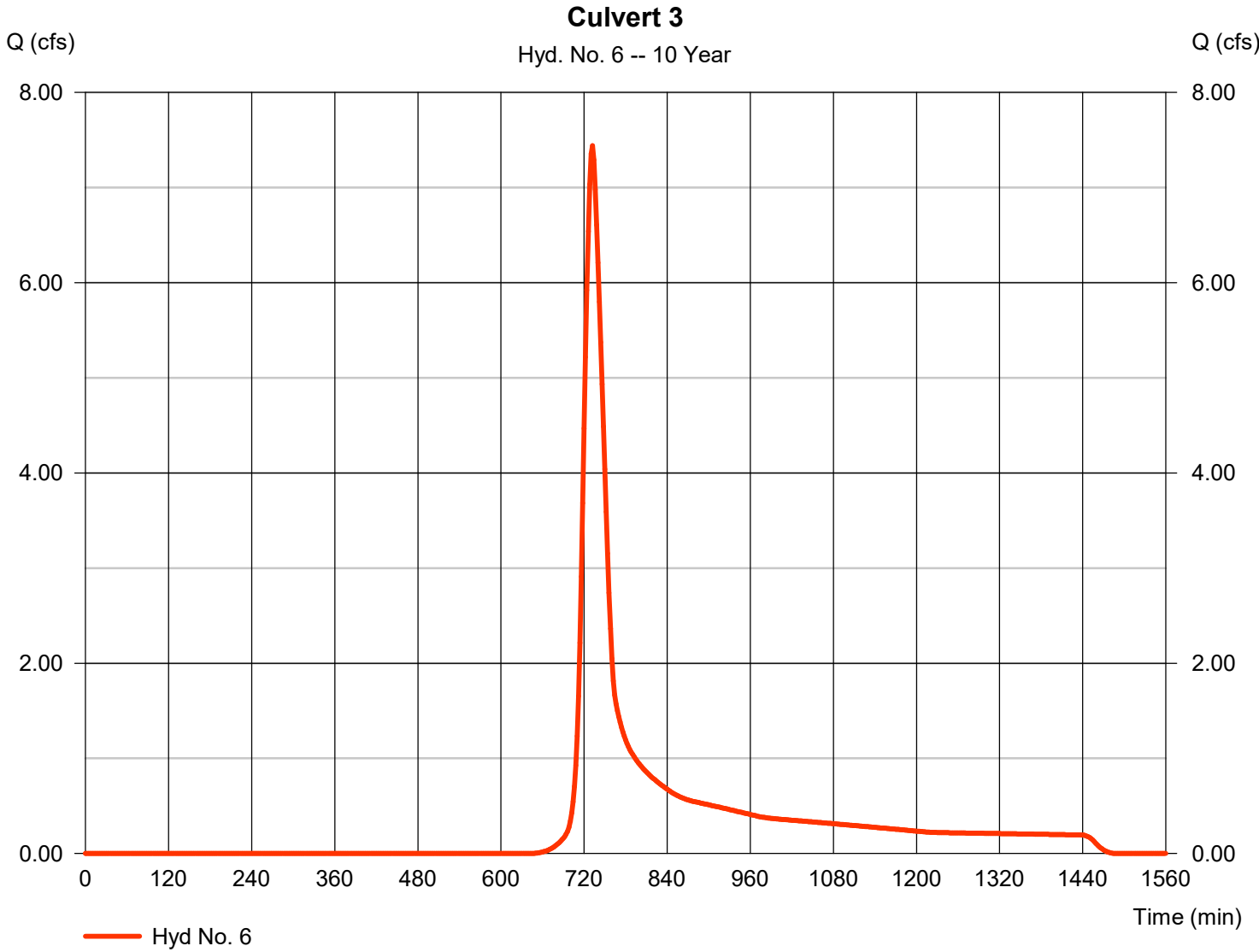


Hydrograph Report

Hyd. No. 6

Culvert 3

Hydrograph type	= SCS Runoff	Peak discharge	= 7.440 cfs
Storm frequency	= 10 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 31,478 cuft
Drainage area	= 5.760 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.10 min
Total precip.	= 4.46 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

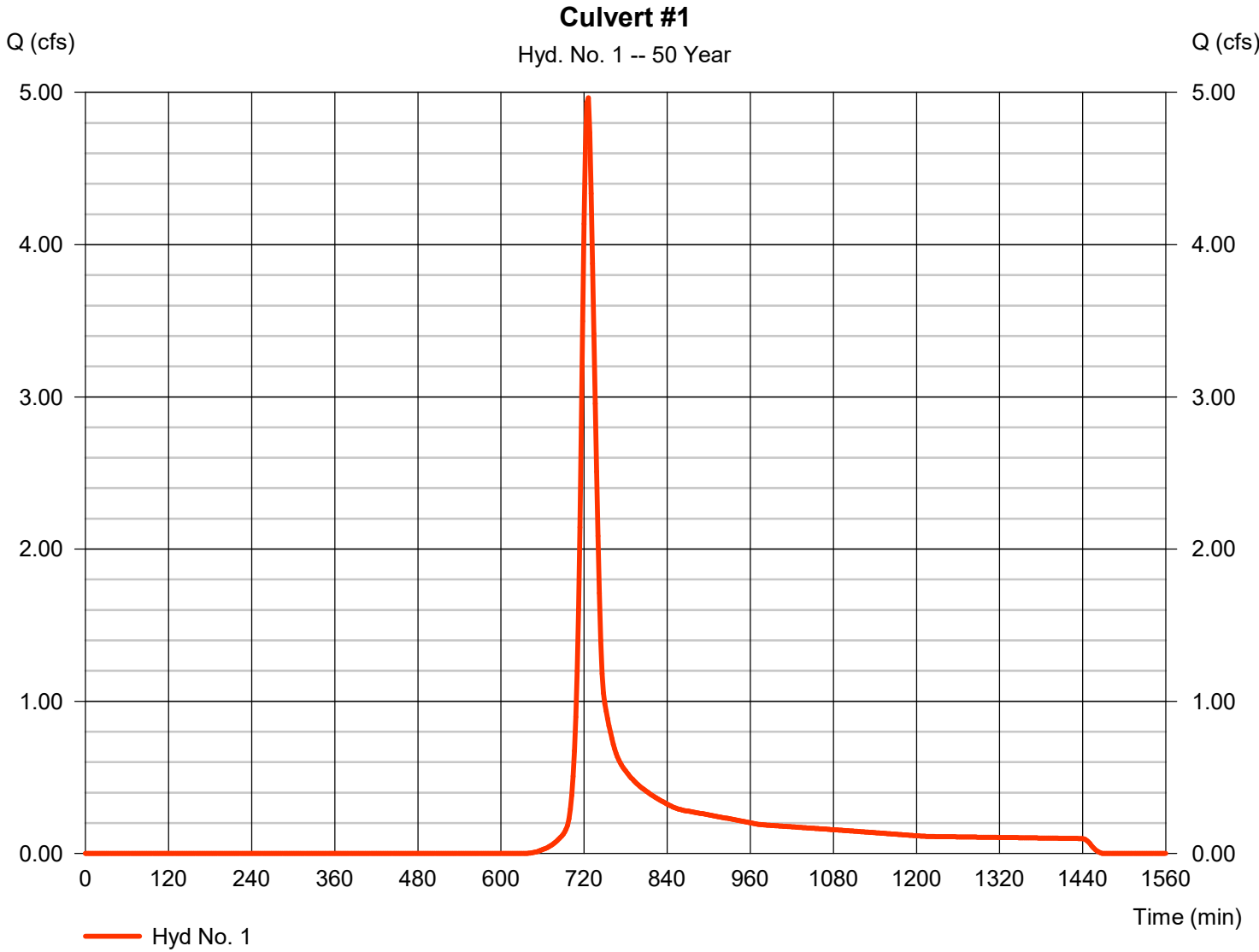
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.964	2	726	16,154	-----	-----	-----	Culvert #1
2	SCS Runoff	2.344	2	724	7,329	-----	-----	-----	Culvert #2A
3	SCS Runoff	2.310	2	720	6,022	-----	-----	-----	Culvert #2B
4	Manual	0.000	2	n/a	0	-----	-----	-----	Big Creek Ridge Plat 1 - Pond 3 Outle
5	Combine	9.382	2	724	29,505	1, 2, 3, 4	-----	-----	Culvert 2
6	SCS Runoff	14.54	2	732	59,005	-----	-----	-----	Culvert 3
Culvert - Monarch Crossing Plat 1.gpw					Return Period: 50 Year			Tuesday, 12 / 19 / 2023	

Hydrograph Report

Hyd. No. 1

Culvert #1

Hydrograph type	= SCS Runoff	Peak discharge	= 4.964 cfs
Storm frequency	= 50 yrs	Time to peak	= 726 min
Time interval	= 2 min	Hyd. volume	= 16,154 cuft
Drainage area	= 2.040 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 17.20 min
Total precip.	= 6.26 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

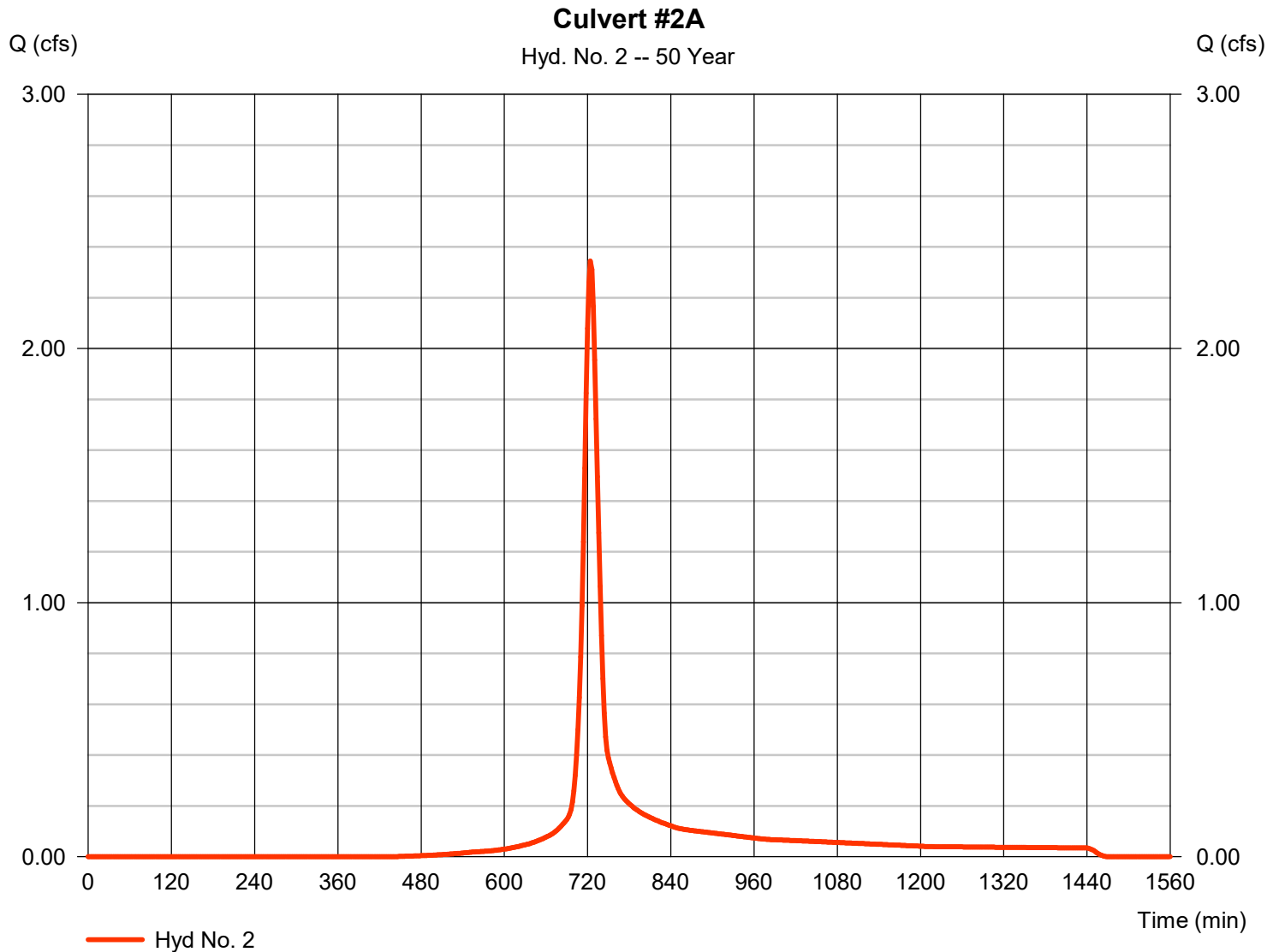
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 12 / 19 / 2023

Hyd. No. 2

Culvert #2A

Hydrograph type	= SCS Runoff	Peak discharge	= 2.344 cfs
Storm frequency	= 50 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 7,329 cuft
Drainage area	= 0.560 ac	Curve number	= 76
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 16.70 min
Total precip.	= 6.26 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

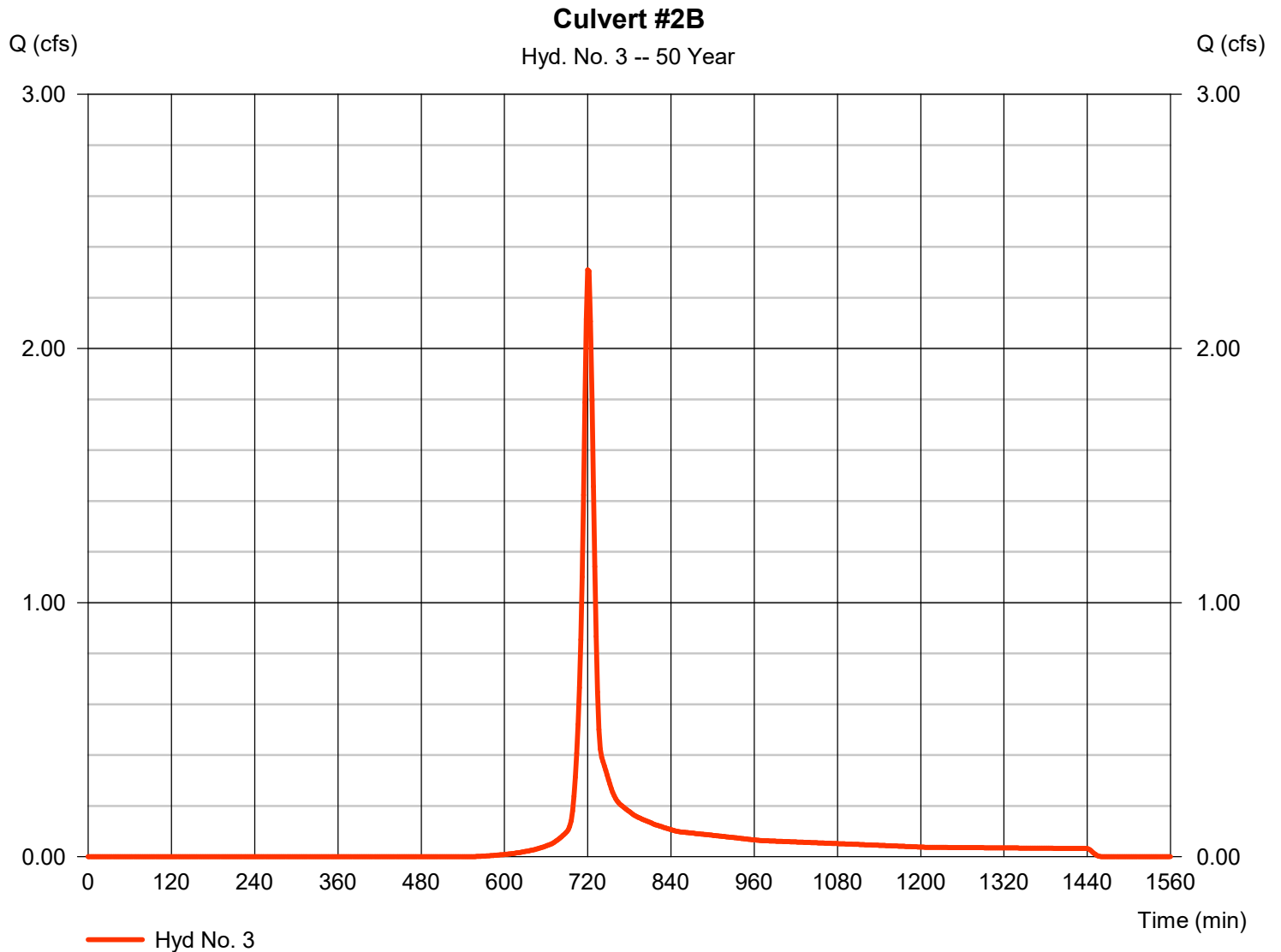
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 12 / 19 / 2023

Hyd. No. 3

Culvert #2B

Hydrograph type	= SCS Runoff	Peak discharge	= 2.310 cfs
Storm frequency	= 50 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 6,022 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 6.26 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, 12 / 19 / 2023

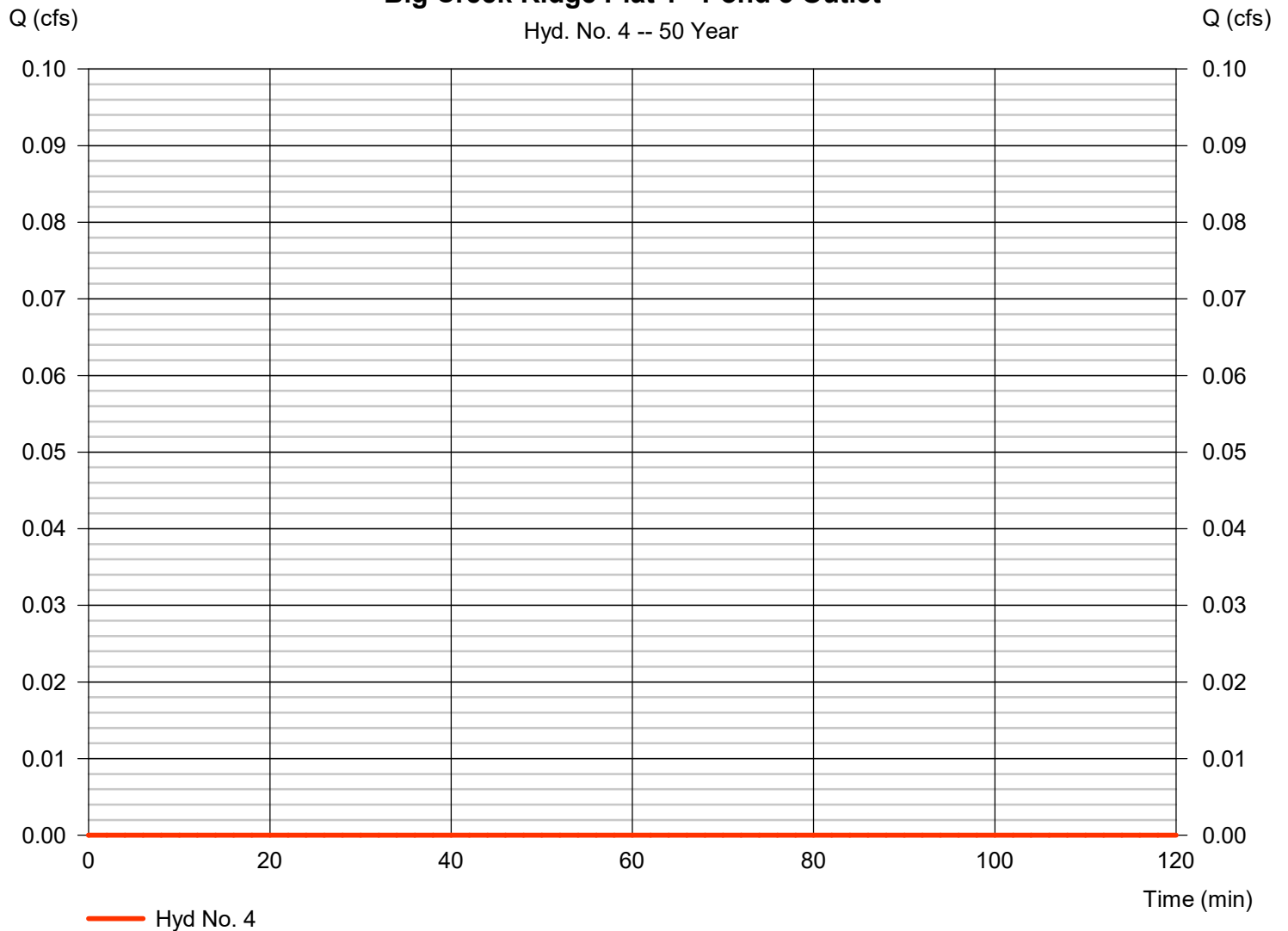
Hyd. No. 4

Big Creek Ridge Plat 1 - Pond 3 Outlet

Hydrograph type	= Manual	Peak discharge	= 0.000 cfs
Storm frequency	= 50 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft

Big Creek Ridge Plat 1 - Pond 3 Outlet

Hyd. No. 4 -- 50 Year



Hydrograph Report

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

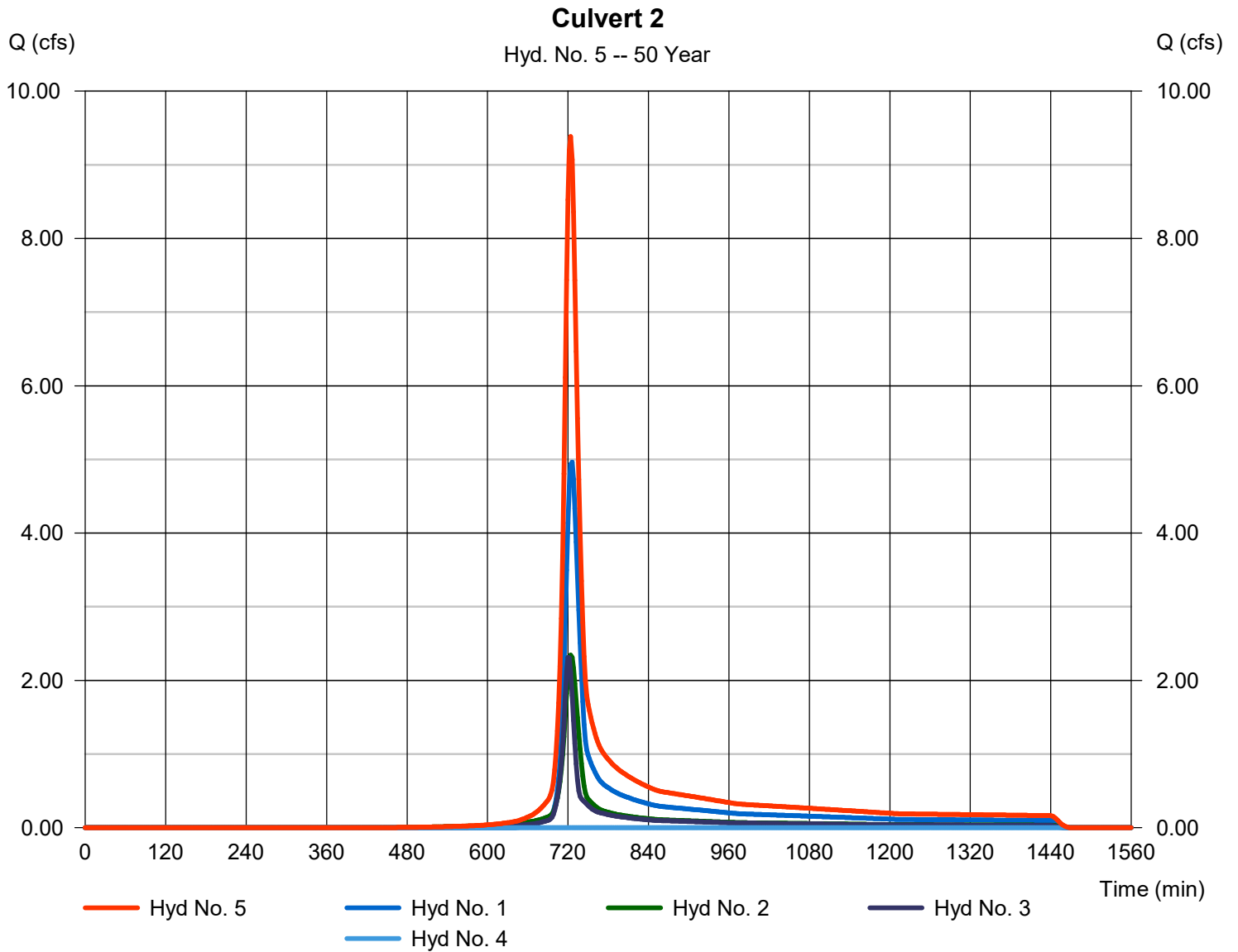
Tuesday, 12 / 19 / 2023

Hyd. No. 5

Culvert 2

Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 2 min
Inflow hyds. = 1, 2, 3, 4

Peak discharge = 9.382 cfs
Time to peak = 724 min
Hyd. volume = 29,505 cuft
Contrib. drain. area = 3.170 ac



Hydrograph Report

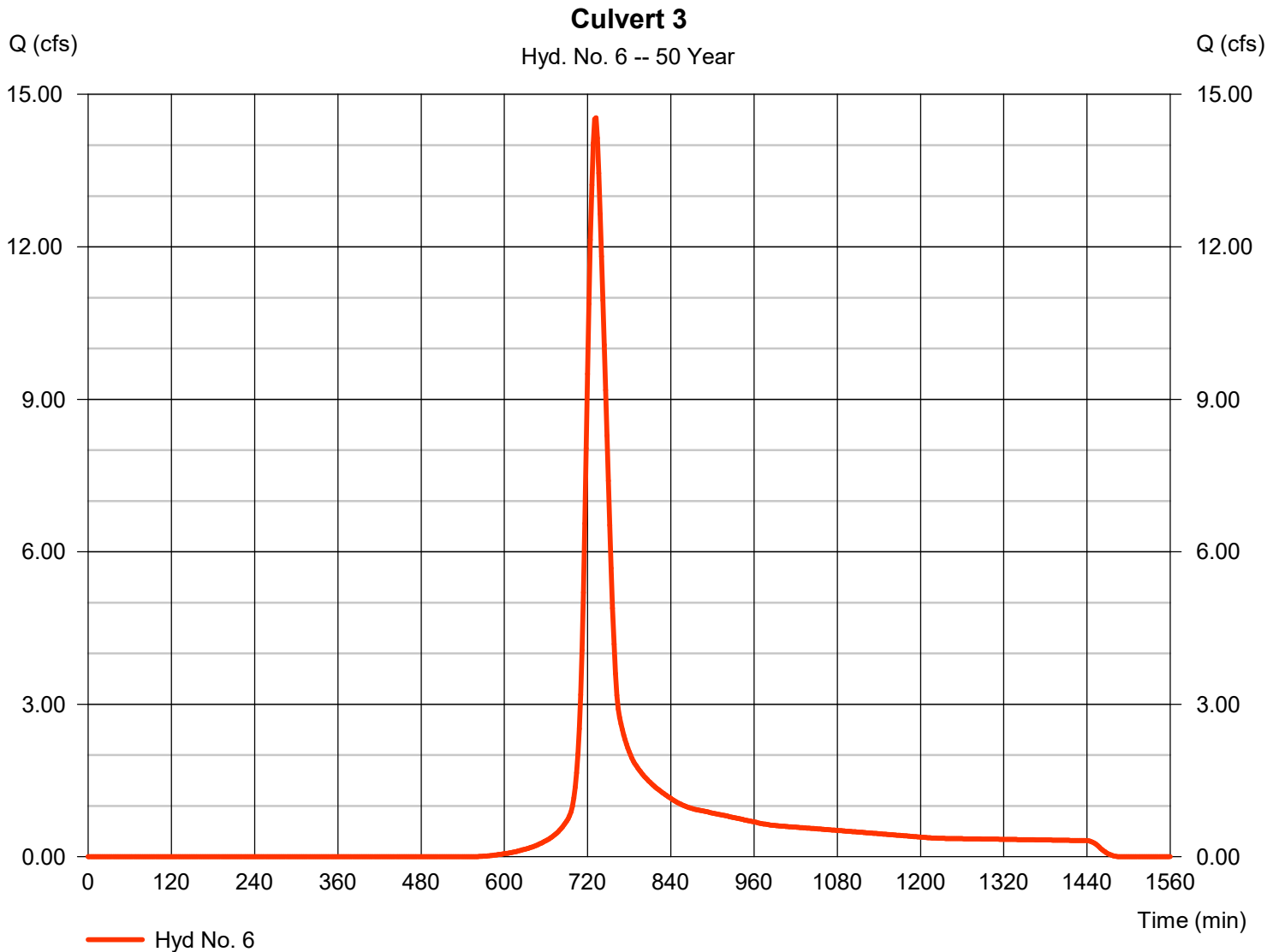
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 12 / 19 / 2023

Hyd. No. 6

Culvert 3

Hydrograph type	= SCS Runoff	Peak discharge	= 14.54 cfs
Storm frequency	= 50 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 59,005 cuft
Drainage area	= 5.760 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.10 min
Total precip.	= 6.26 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	6.437	2	726	20,652	-----	-----	-----	Culvert #1
2	SCS Runoff	2.833	2	724	8,872	-----	-----	-----	Culvert #2A
3	SCS Runoff	2.883	2	720	7,484	-----	-----	-----	Culvert #2B
4	Manual	2.940	2	736	42,409	-----	-----	-----	Big Creek Ridge Plat 1 - Pond 3 Outle
5	Combine	14.57	2	724	79,417	1, 2, 3, 4	-----	-----	Culvert 2
6	SCS Runoff	18.20	2	730	73,337	-----	-----	-----	Culvert 3
Culvert - Monarch Crossing Plat 1.gpw					Return Period: 100 Year			Tuesday, 12 / 19 / 2023	

Hydrograph Report

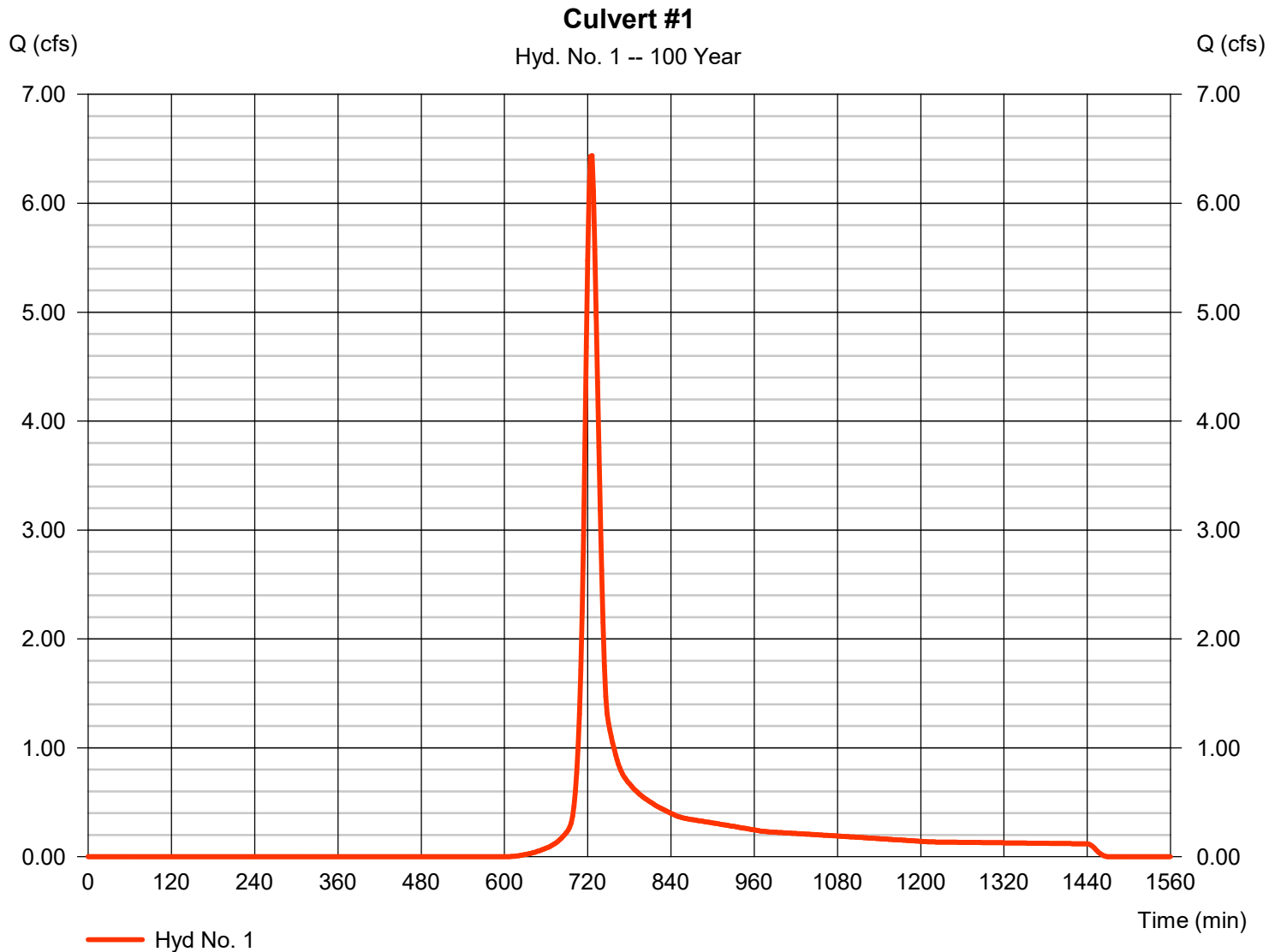
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 12 / 19 / 2023

Hyd. No. 1

Culvert #1

Hydrograph type	= SCS Runoff	Peak discharge	= 6.437 cfs
Storm frequency	= 100 yrs	Time to peak	= 726 min
Time interval	= 2 min	Hyd. volume	= 20,652 cuft
Drainage area	= 2.040 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 17.20 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

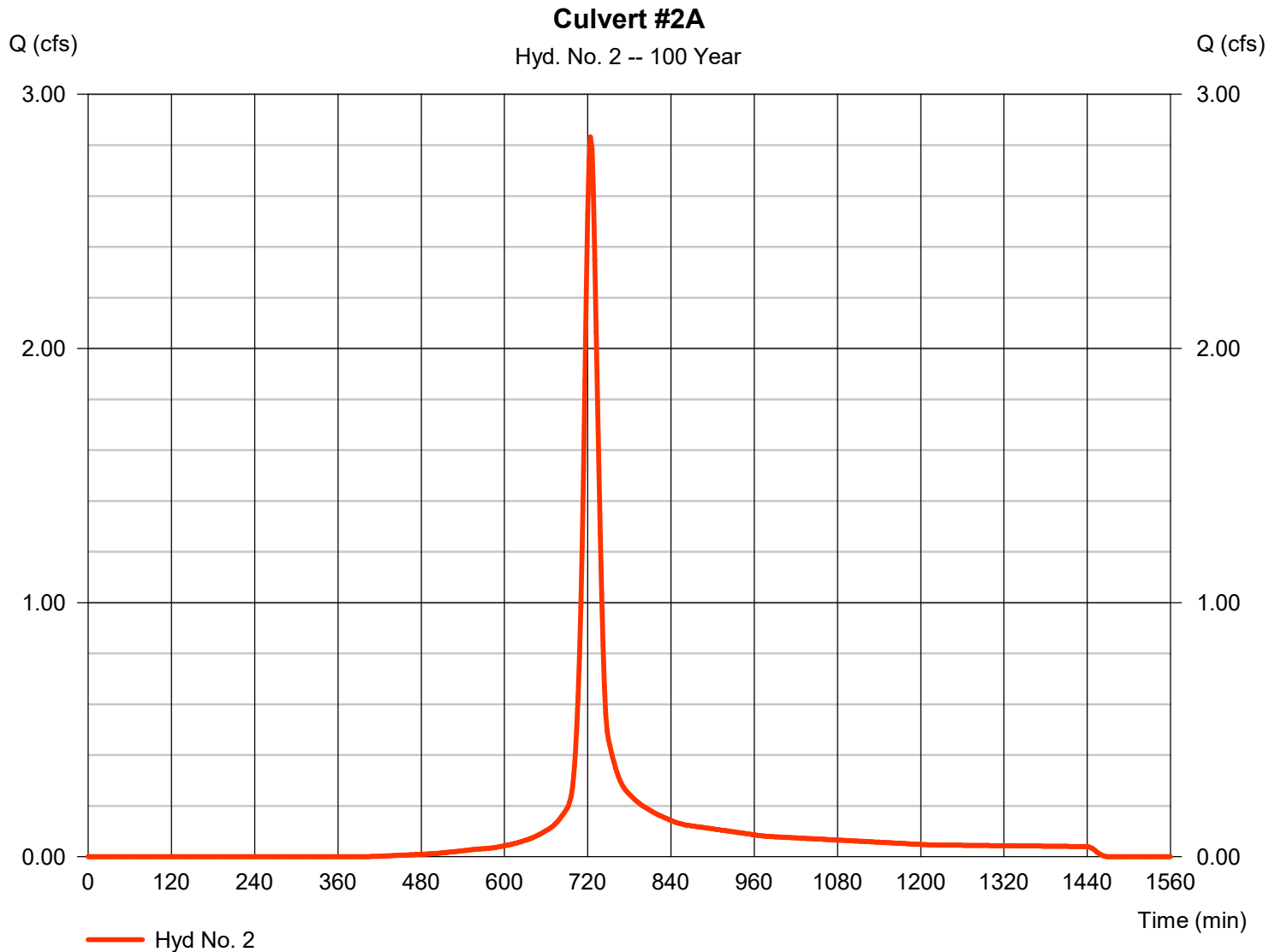


Hydrograph Report

Hyd. No. 2

Culvert #2A

Hydrograph type	= SCS Runoff	Peak discharge	= 2.833 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 8,872 cuft
Drainage area	= 0.560 ac	Curve number	= 76
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 16.70 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

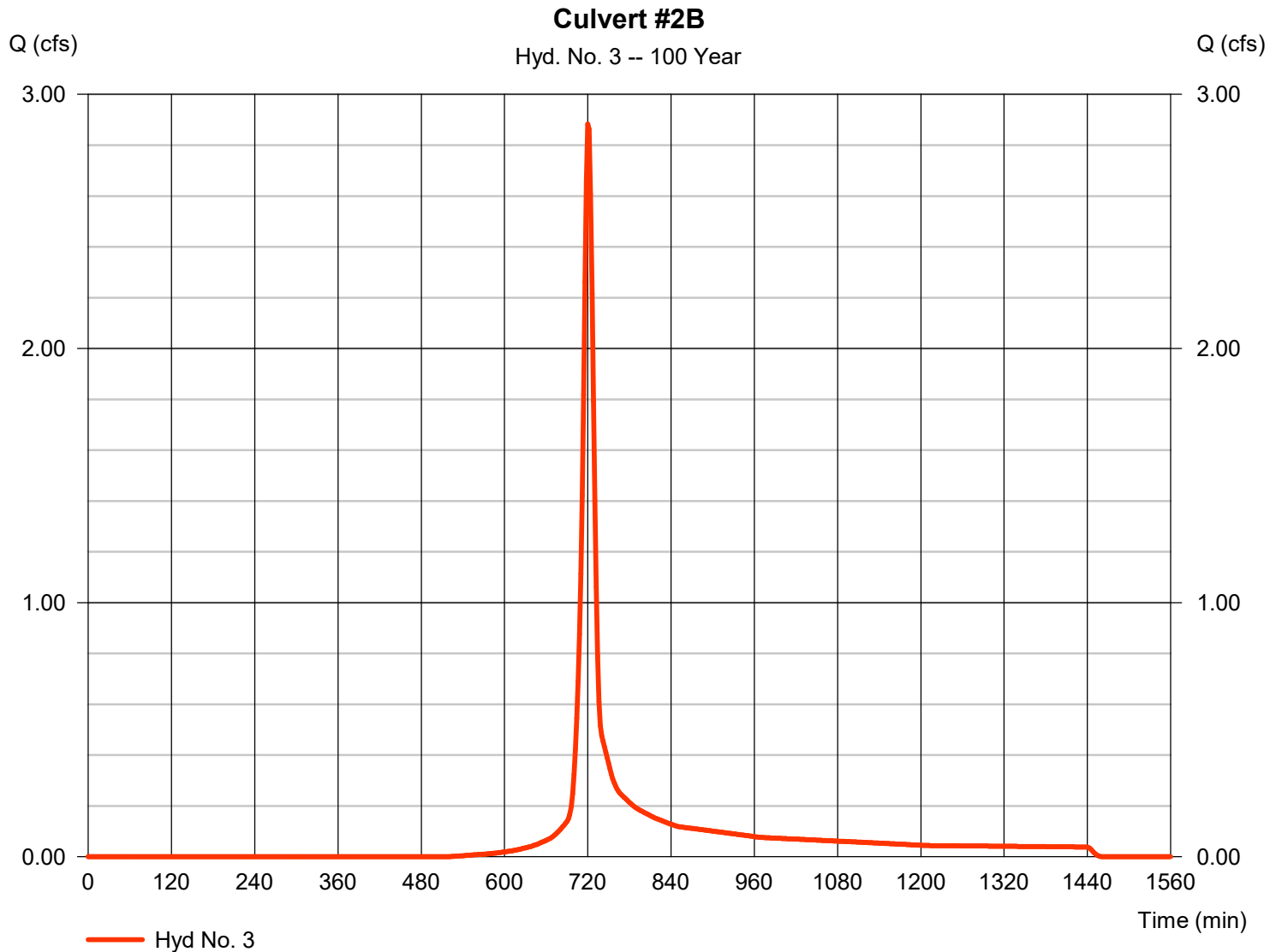
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 12 / 19 / 2023

Hyd. No. 3

Culvert #2B

Hydrograph type	= SCS Runoff	Peak discharge	= 2.883 cfs
Storm frequency	= 100 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 7,484 cuft
Drainage area	= 0.570 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.00 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

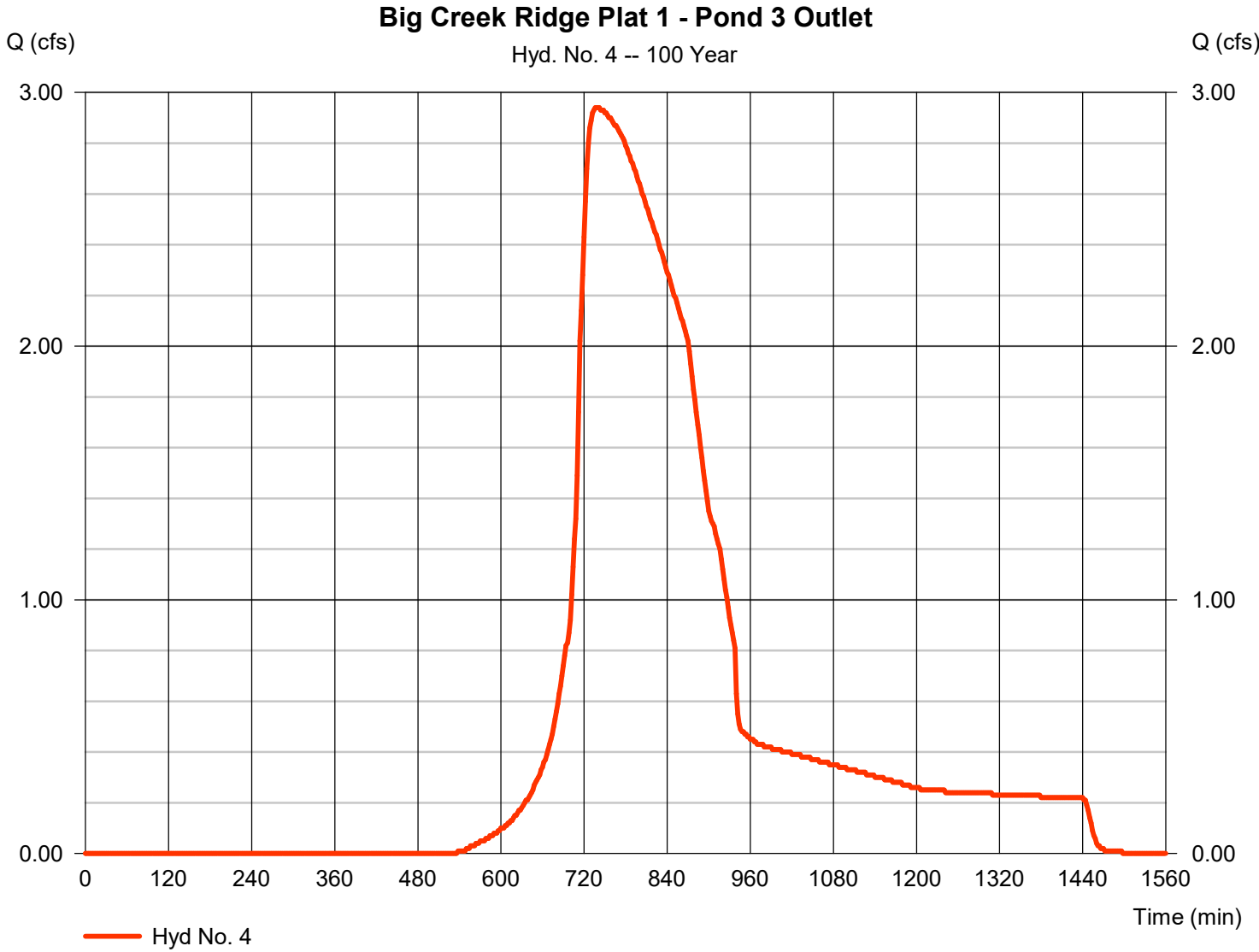


Hydrograph Report

Hyd. No. 4

Big Creek Ridge Plat 1 - Pond 3 Outlet

Hydrograph type	= Manual	Peak discharge	= 2.940 cfs
Storm frequency	= 100 yrs	Time to peak	= 736 min
Time interval	= 2 min	Hyd. volume	= 42,409 cuft



Hydrograph Report

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

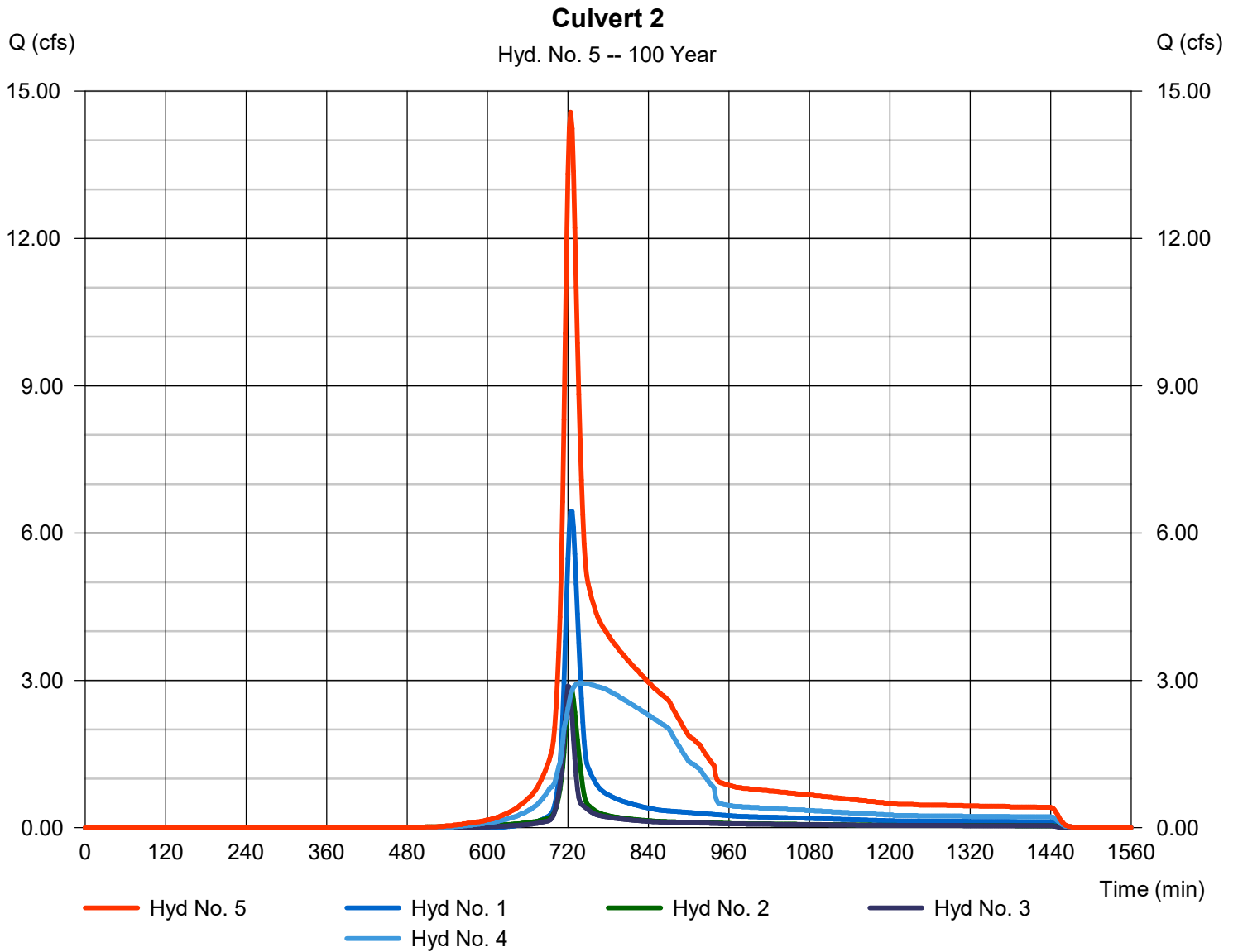
Tuesday, 12 / 19 / 2023

Hyd. No. 5

Culvert 2

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 1, 2, 3, 4

Peak discharge = 14.57 cfs
Time to peak = 724 min
Hyd. volume = 79,417 cuft
Contrib. drain. area = 3.170 ac



Hydrograph Report

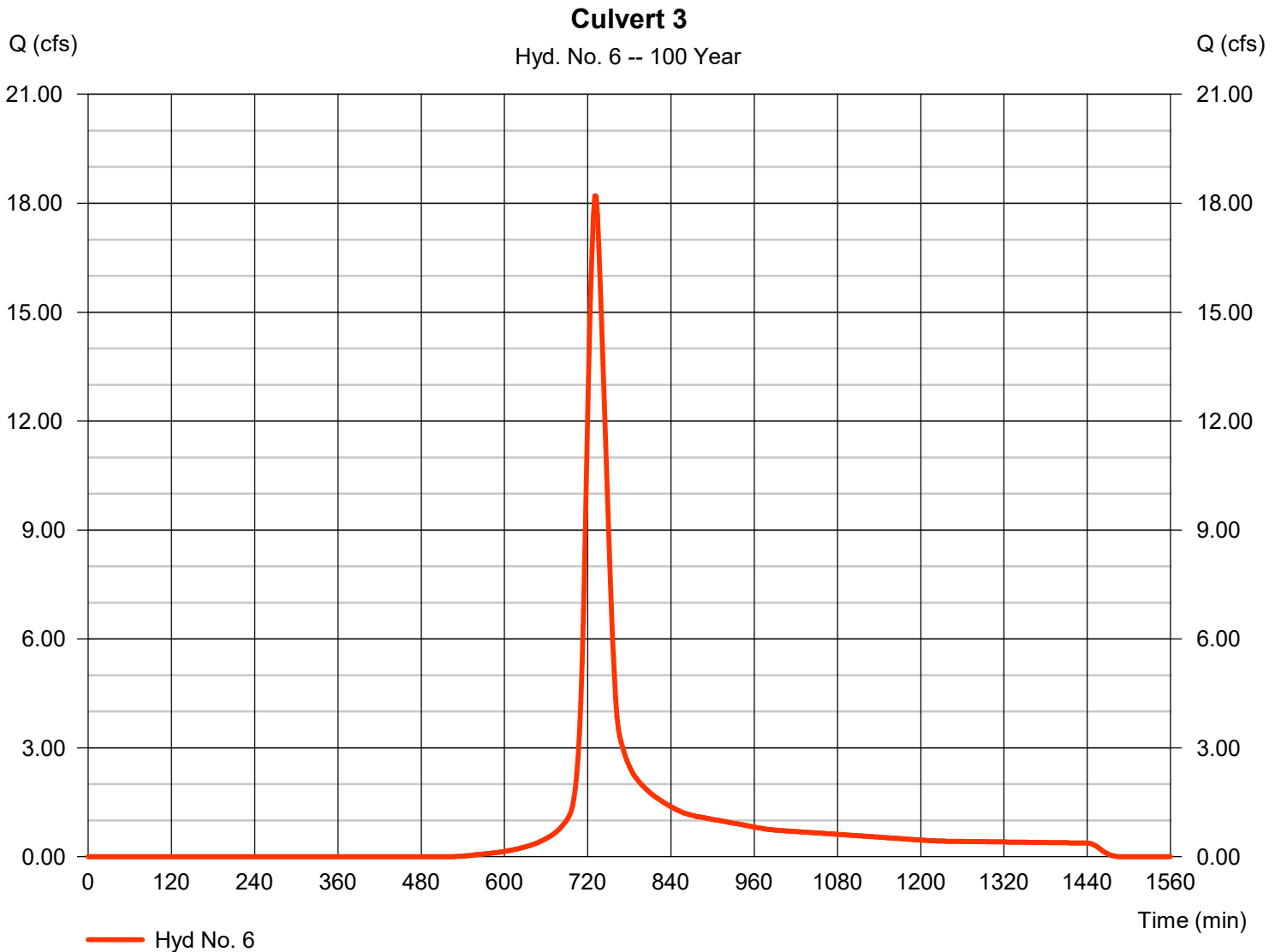
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Tuesday, 12 / 19 / 2023

Hyd. No. 6

Culvert 3

Hydrograph type	= SCS Runoff	Peak discharge	= 18.20 cfs
Storm frequency	= 100 yrs	Time to peak	= 730 min
Time interval	= 2 min	Hyd. volume	= 73,337 cuft
Drainage area	= 5.760 ac	Curve number	= 68
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 30.10 min
Total precip.	= 7.12 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



RESOLUTION NO. 2024-26

A RESOLUTION APPROVING A DEVELOPMENT AGREEMENT BY AND BETWEEN THE CITY OF POLK CITY, IOWA AND NORTH POLK ESTATES

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

WARRANTY DEED BOOK 19530, PAGE 980

THE NORTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 6, TOWNSHIP 80 NORTH, RANGE 24 WEST OF THE 5TH P.M., POLK COUNTY, IOWA EXCEPT A PARCEL OF LAND WHICH WAS PREVIOUSLY CONVEYED BY CORRECTION WARRANTY DEED RECORDED IN BOOK 4325 AT PAGE 361, AND EXCEPT THE WEST 185 FEET OF SAID PROPERTY PURSUANT TO PARCEL 2023-53 OF PLAT OF SURVEY FILED APRIL 27, 2023 AND RECORDED IN BOOK 19457 AT PAGE 595; and

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 North Polk Estates, 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 North Polk Estates, 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 11 day March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

RESOLUTION NO. 2024-27

**A RESOLUTION APPROVING PERMANENT OFF-SITE
EASEMENTS FOR MONARCH CROSSING PLAT 1**

WHEREAS, on behalf of North Polk Estates, LLC, Civil Design Advantage has submitted the Construction Drawings for Public Improvements associated with Monarch Crossing Plat 1; and

WHEREAS, there are certain off-site easements needed for Monarch Crossing and the Mary A. Devries and Thomas W. Schlife are willing to grant the following permanent easements

- Sanitary Sewer Easement
- Public Storm Sewer Easement

; and

WHEREAS, the City Engineer and the City Attorney have reviewed the permanent off-site easements for Monarch Crossing and recommend approval of said easements.

NOW, THEREFORE BE IT RESOLVED, the City Council of the City of Polk City, Iowa, hereby accepts the recommendations of the City Engineer and the City Attorney and deems it appropriate to approve the Monarch Crossing off-site Sanitary Sewer Easement and Public Storm Sewer Easement.

PASSED AND APPROVED, this 11 day of March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

RESOLUTION NO. 2024-30

**A RESOLUTION APPROVING THE CONSTRUCTION DRAWINGS FOR
MONARCH CROSSING PLAT 1**

WHEREAS, Civil Design Advantage, LLC, on behalf of North Polk Estates, LLC, has submitted the Construction Drawings for Monarch Crossing 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 construction of the sanitary sewer that will service this parcel being constructed by the property owner as part of the development of the land located directly west of this development prior to approval of the Monarch Crossing Plat 1 Final Plat.

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 Monarch Crossing Plat 1 subject to construction of the sanitary sewer that will service this parcel being constructed by the property owner as part of the development of the land located directly west of this development prior to approval of the Monarch Crossing Plat 1 Final Plat.

PASSED AND APPROVED the 11 day March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk



Polk City Police Department

309 W Van Dorn St. P.O.Box 381

Polk City, Iowa 50226

Phone: 515-984-6565 Fax 515-984-6819 email: police@polkcityia.gov

Service Integrity Respect Quality

To: Honorable Mayor and Council Members

From: Lieutenant Aswegan

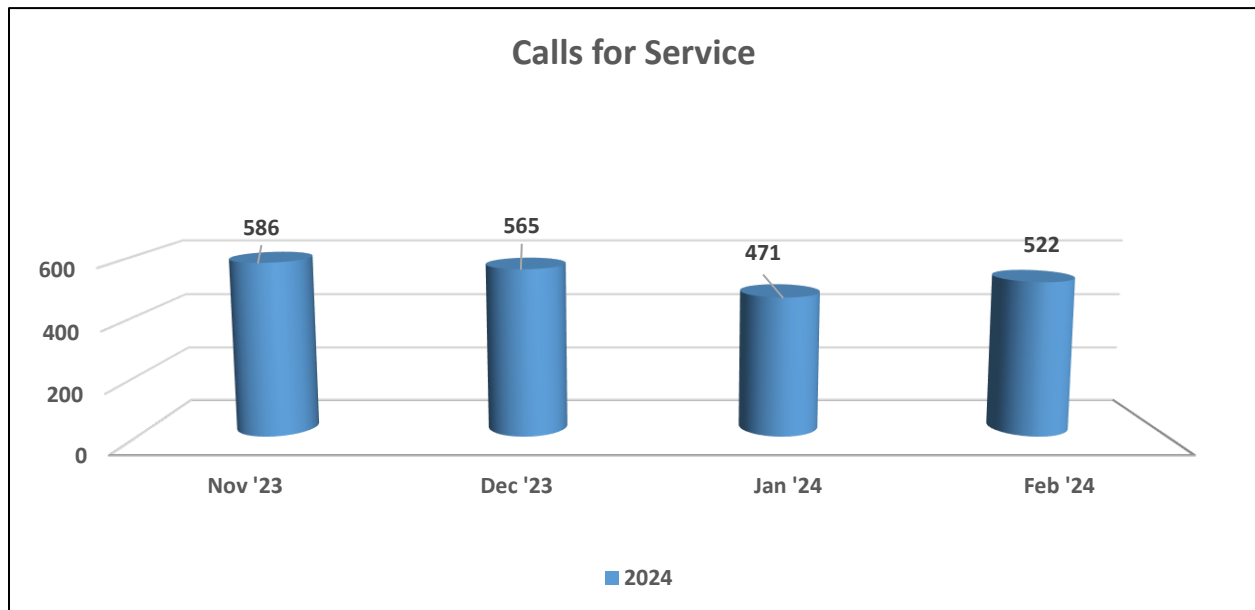
Date: March 8, 2024

Re: February 2024 Monthly Report

Calls for Service

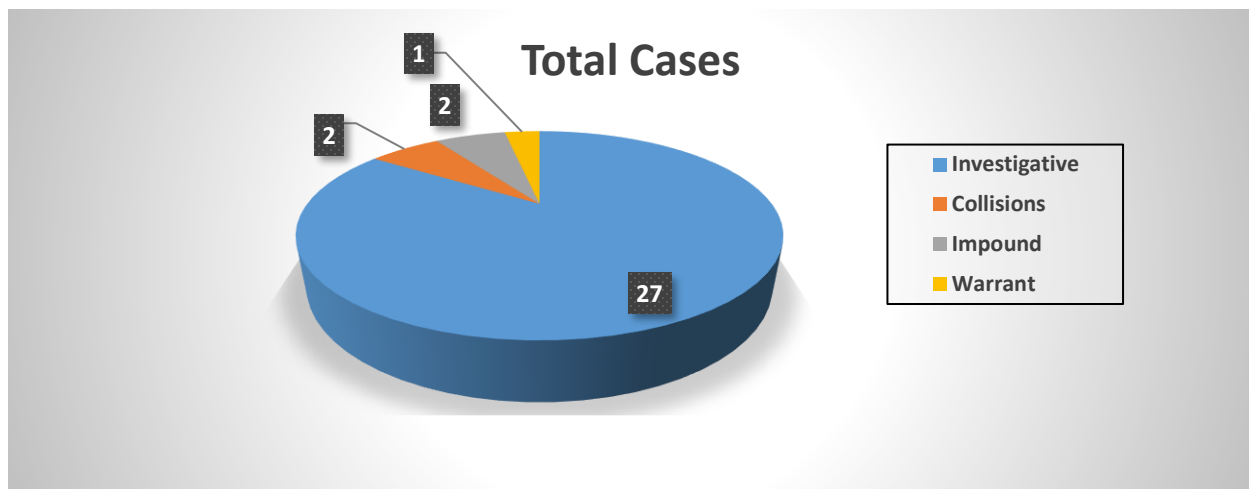
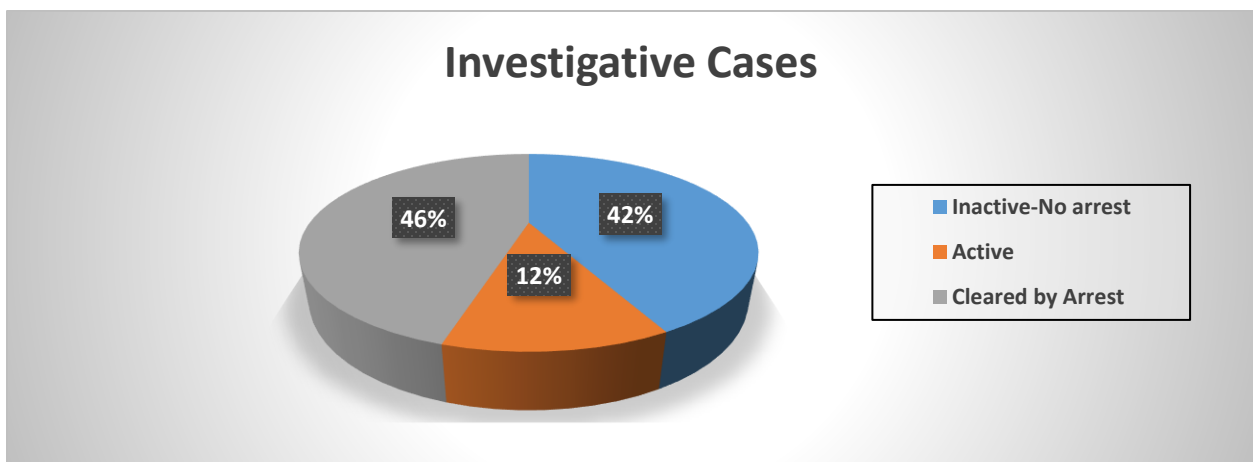
The total calls for service for the month of February were **522**.

This includes response to citizen complaints/reports, assists, self-initiated activities such as traffic stops, building checks, suspicious persons, and case follow up. Among these calls for service Polk City Officers conducted **217** traffic stops.



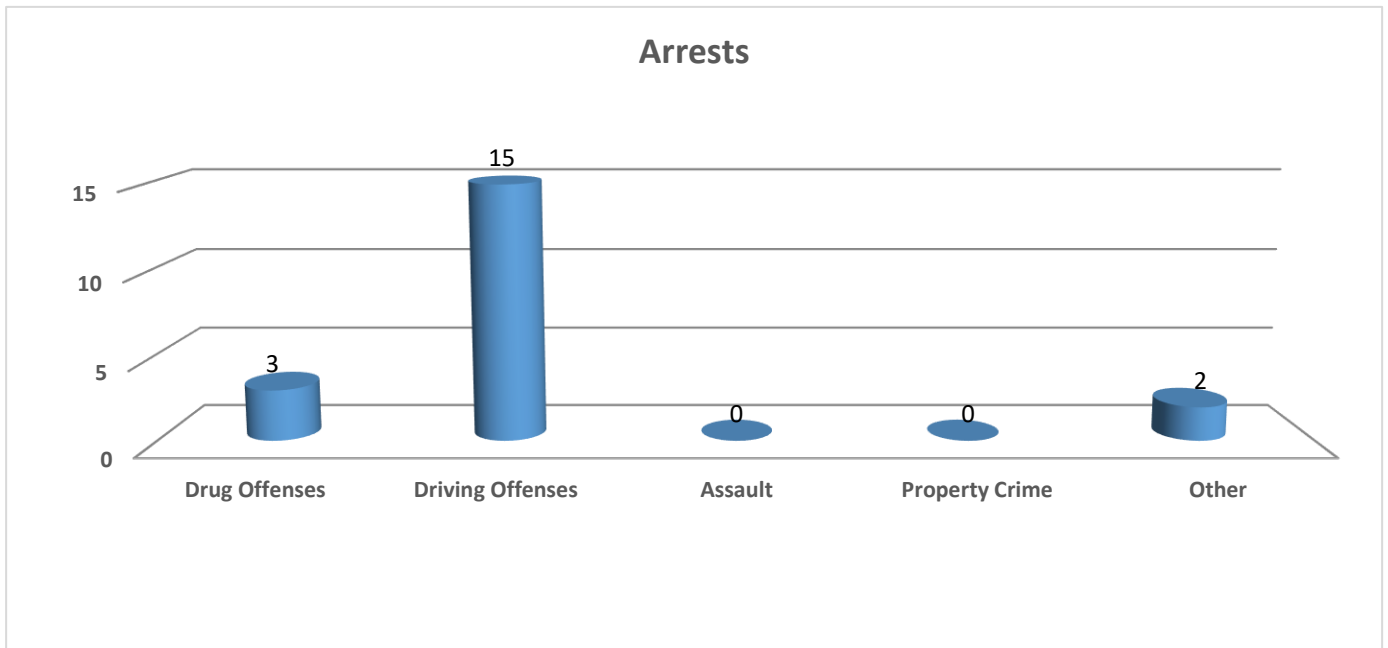
Cases Made

The Police Department had **32** total cases during the month of February. **27** of the cases were investigative incident reports, **2** were for vehicle collisions and **2** for an impound and **1** for an Arrest Warrant. There are **4** active investigations this month. There was a **46%** rate of cases cleared by arrest, for investigative cases in February.



Arrests Made

The Police Department made **20** arrests and issued **50** citations and **188** warnings. The arrests consisted of **15** driving related offenses, **3** drug related offenses, and **2** for miscellaneous offenses including interference with official acts and an outstanding arrest warrant.



Notable Incidents

24-0052

On February 16th at about 10:20 pm a Polk City Officer stopped a car for driving recklessly near the town square. An investigation revealed the driver, a 30-year-old Carroll woman, had a barred driver's license. The driver resisted officers attempts to arrest her. She was placed under arrest and charged with Driving While Barred and Interference with Official Acts. She was booked into the Polk County jail.

24-0044

On February 9th at about 11:30 pm Polk City Officers were dispatched to a domestic disturbance in the 100 block of North 3rd Street. During their investigation, they found a 37-year-old Polk City woman who was involved in the dispute had an outstanding warrant for her arrest out of Polk County for Operating While Intoxicated-2nd Offense. She was arrested and booked into the Polk County jail.

24-0064

On February 26th at about 6:20 pm a Polk City Officer initiated a traffic stop on a vehicle. During the traffic stop, the officer developed suspicion that there may be drugs present in the vehicle. The officer called for a narcotics detection dog. A Polk County K9 handler arrived and deployed his dog on the vehicle. The dog alerted to the odor of narcotics in the vehicle. During a search of the vehicle officers found a baggy containing methamphetamine. The driver, a 57 year old Madrid man, was arrested and charged with Possession of Methamphetamine – 1st Offense. He was booked into the Polk County jail.

Officer Training

Sgt Sherman completed 3 leadership courses in February. The training was hosted by the Iowa Law Enforcement Academy and was on topics of leadership, supervision, and professional standards. Law Enforcement leaders from all over the state attended this training, which totaled 40 hours.

Aicher 20

Delaney 5

Blaha-Polson 4

Sherman 46

Whipple 1

Garrison 4

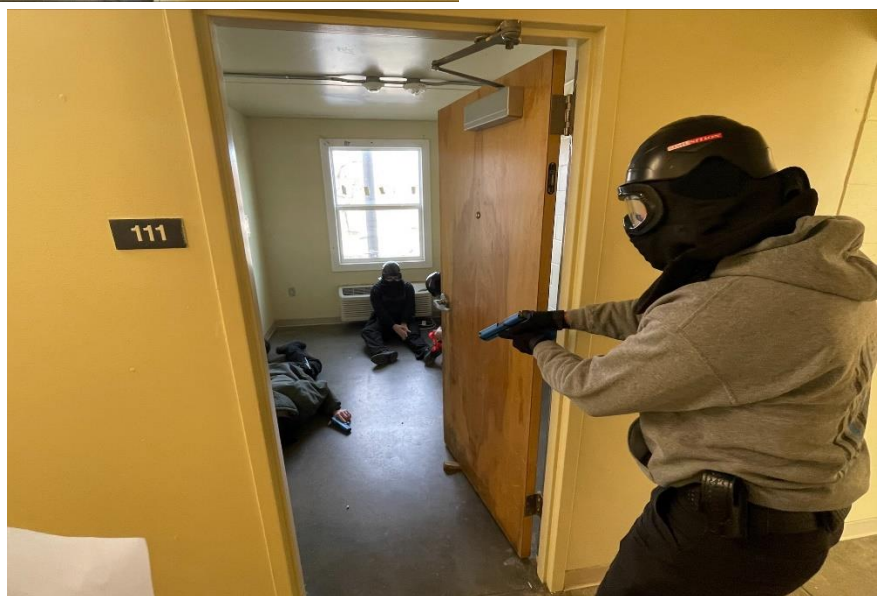
Stover 7

Aswegan 18

Total Training Hours: 83

In-Service Training

On February 5th, Polk City Officers trained on responding to an active threat. This was a scenario-based training session, which included the use of role players and simunitions. The training is part of an overall training goal in 2024 for our department to become more prepared in the event of an active threat response.

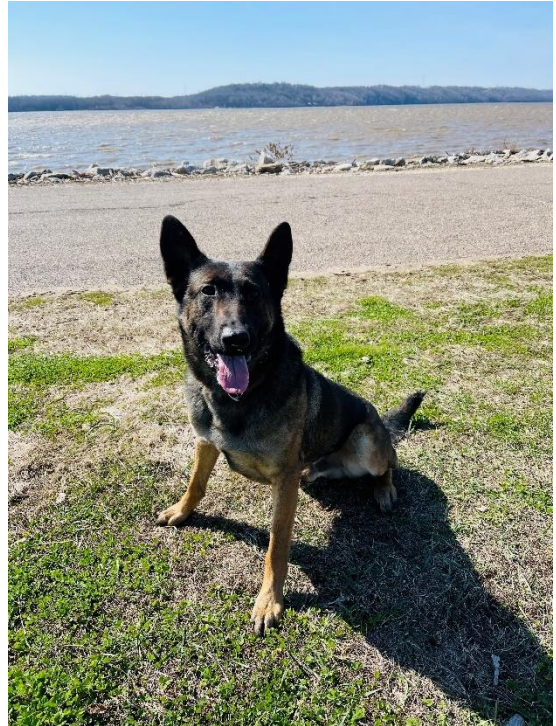




K9 Program

Officer Aicher and Eudoris completed monthly training in January, focusing on obedience and narcotics detection.

Eudoris was deployed 2 times in January, both in support of Polk City Police Officers and both for narcotics detection.



March 11, 2024

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

RE: CREEKVIEW ESTATES PLAT 3
APPROVAL OF CONSTRUCTION DRAWINGS

Dear Honorable Mayor and City Council:

On behalf of North Polk Development, Civil Design Advantage has submitted the construction drawings for the above referenced plat. These plans represent the third and final phase of construction for this subdivision, which include 23 single-family lots. The plans include the construction of Creekview Avenue and Hillside Place, 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 to 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.

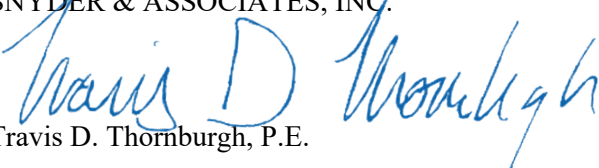
It shall be the developer's responsibility to obtain approval for all necessary permits prior to the start of construction. These permits include, but are not limited to, the Iowa DNR permits for water main and sanitary sewer construction, and the NPDES Storm Water Discharge permit.

The construction drawings were previously approved at the July 11, 2022 City Council Meeting. In accordance with Polk City Municipal Code, this approval expired after construction of the proposed public improvements did not commence within 12 months of approval.

As such, we recommend approval of the construction drawings for Creekview Estates Plat 3. We will be in attendance at the March 11, 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
Bruce Gates, North Polk Development
John Larson, North Polk Development
Josh Trygstad, Civil Design Advantage

CONSTRUCTION DRAWINGS FOR: CREEKVIEW ESTATES PLAT 3

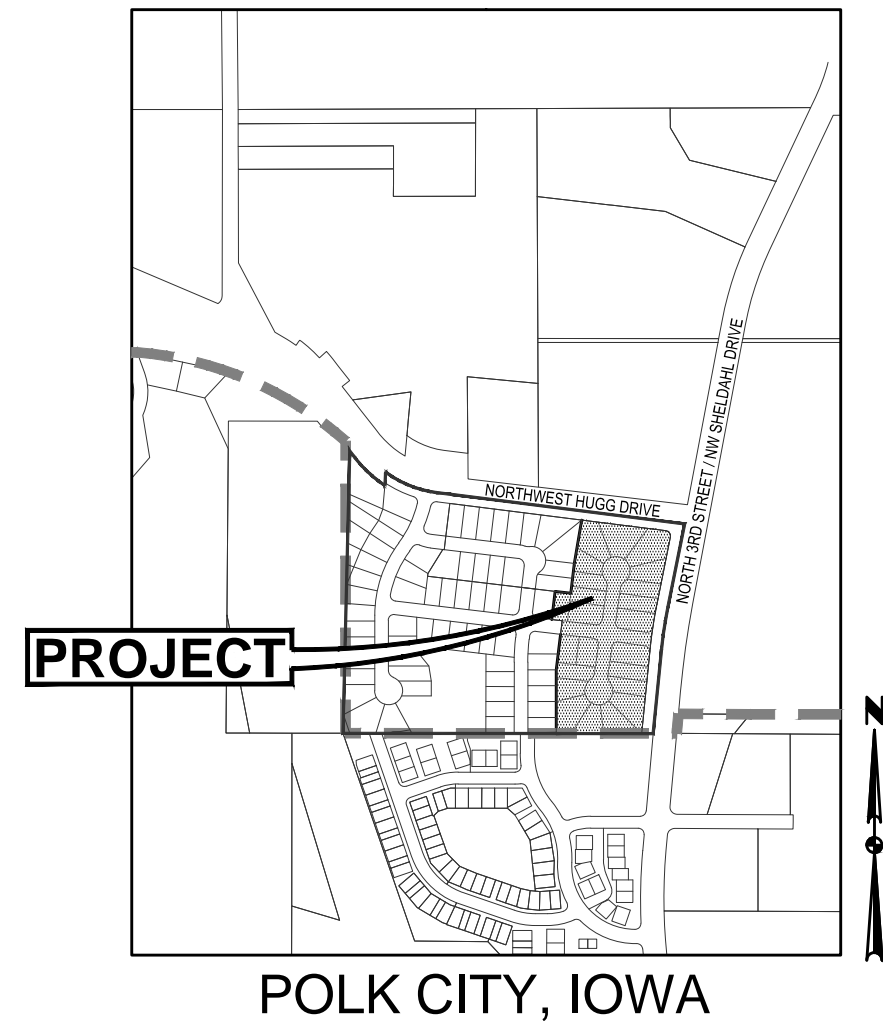
POLK CITY, IOWA INDEX OF SHEETS

NO.	DESCRIPTION
1	COVER SHEET
2	HYDRANT COVERAGE PLAN
3-4	TYPICAL SECTIONS AND DETAILS
5	QUANTITIES AND REFERENCE NOTES
6	TYPICAL POLK CITY CONSTRUCTION NOTES
7	GRADING PLAN
8	EROSION AND SEDIMENT CONTROL PLAN
9-11	ROADWAY, STORM AND SANITARY SEWER PLAN AND PROFILE
12-14	WATER MAIN PLAN AND PROFILE
15-16	WATER MAIN AND PUBLIC TRAIL PLAN AND PROFILE
17	PUBLIC SIDEWALK PLAN AND PROFILE
18-22	INTERSECTION DETAILS
23	LANDSCAPE PLAN

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-301 SANITARY MANHOLE	CONIFEROUS SHRUB
STORM/SANITARY CLEANOUT	ELECTRIC POWER POLE
WATER VALVE	GUY ANCHOR
FIRE HYDRANT ASSEMBLY	STREET LIGHT
DETECTABLE WARNING PANEL SIGN	POWER POLE W/ TRANSFORMER
STORM SEWER STRUCTURE NO.	UTILITY POLE W/ LIGHT
STORM SEWER PIPE NO.	ELECTRIC BOX
SANITARY SEWER STRUCTURE NO.	ELECTRIC TRANSFORMER
SANITARY SEWER PIPE NO.	ELECTRIC MANHOLE OR VAULT
SANITARY SEWER WITH SIZE	TRAFFIC SIGN
SANITARY SERVICE	TELEPHONE JUNCTION BOX
STORM SEWER	TELEPHONE MANHOLE/VAULT
STORM SERVICE	TELEPHONE POLE
WATERMAIN WITH SIZE	GAS VALVE BOX
WATER SERVICE	CABLE TV JUNCTION BOX
SAWCUT (FULL DEPTH)	CABLE TV MANHOLE/VAULT
SILT FENCE	MAIL BOX
UNDERGROUND ELECTRIC (BY OTHERS)	BENCHMARK
USE AS CONSTRUCTED	SOIL BORING
FINISH GRADE AT HYDRANT	UNDERGROUND TV CABLE
MINIMUM OPENING ELEVATION	GAS MAIN
TOP OF GROUND	FIBER OPTIC
HIGH WATER LINE	UNDERGROUND TELEPHONE
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	FIELD TILE
	SANITARY SEWER W/ SIZE
	STORM SEWER W/ SIZE
	WATER MAIN W/ SIZE

VICINITY MAP NOT TO SCALE



OWNER / APPLICANT

NORTH POLK DEVELOPMENT
CONTACT: BRUCE GATES
2280 WOODLANDS PARKWAY
CLIVE, IA 50325

ENGINEER

CIVIL DESIGN ADVANTAGE
4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
CONTACT: JOSH TRYGSTAD
PH. (515) 369-4400
FX. (515) 369-4410

SURVEYOR

CIVIL DESIGN ADVANTAGE, LLC
CONTACT: CHARLIE MCGLOTHLEN
4121 NW URBANDALE DRIVE
URBANDALE, IOWA 50322
PH. (515) 369-4400
FX. (515) 369-4410

DATE OF SURVEY

JUNE 6, 2019

BENCHMARKS

- CUT 'X' AT INTERSECTION OF WOLF CREEK DRIVE CENTERLINE AND NORTHERN TRACE DRIVE CENTERLINE AT SOUTHEAST CORNER OF SITE. ELEVATION = 862.26
- CUT 'X' AT INTERSECTION OF WEST TRACE DRIVE CENTERLINE AND NORTHERN TRACE DRIVE CENTERLINE. ELEVATION = 863.86

SUBMITTAL DATES

FIRST SUBMITTAL: 04/20/2022
SECOND SUBMITTAL: 06/07/2022
THIRD SUBMITTAL: 07/05/2022
SIGNED SUBMITTAL: 08/10/2022
REVISION #1: 09/09/2022
RE-CERTIFICATION SUBMITTAL: 03/07/2024

LEGAL DESCRIPTION

OUTLOT 'O' AND OUTLOT 'P' IN CREEKVIEW ESTATES PLAT 1, AN OFFICIAL PLAT, NOW INCLUDED IN AND FORMING A PART OF THE CITY OF POLK CITY, POLK COUNTY, IOWA, CONTAINING 8.52 ACRES (370,902 SQUARE FEET).

THE PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS OF RECORD.

BULK REGULATIONS

R-2 REGULATIONS SHALL APPLY:

MINIMUM LOT AREA = 8,000 SF
MINIMUM LOT WIDTH = 65 FT
SETBACKS:
FRONT YARD = 30 FT
REAR YARD = 35 FT
SIDE YARD = 8 FT

CONSTRUCTION SCHEDULE

PLAT 3: 2024

ZONING

EXISTING: R-2

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.



REFER TO TERRACON GEOTECHNICAL ENGINEERING REPORT NO. 08195216 FOR GEOTECHNICAL REQUIREMENTS.

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 CONTRACTORS 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 2024 EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTAL SPECIFICATIONS SHALL APPLY TO ALL WORK ON THIS PROJECT EXCEPT AS MODIFIED HEREIN.

AT THE TIME OF FINAL PLATTING, THE CREEKVIEW ESTATES HOMEOWNERS ASSOCIATION WILL BE AMENDED TO INCORPORATE LOTS 1-23 OF CREEKVIEW ESTATES PLAT 3.

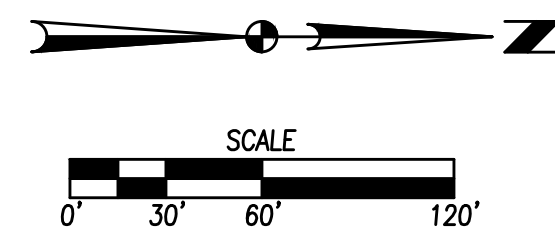
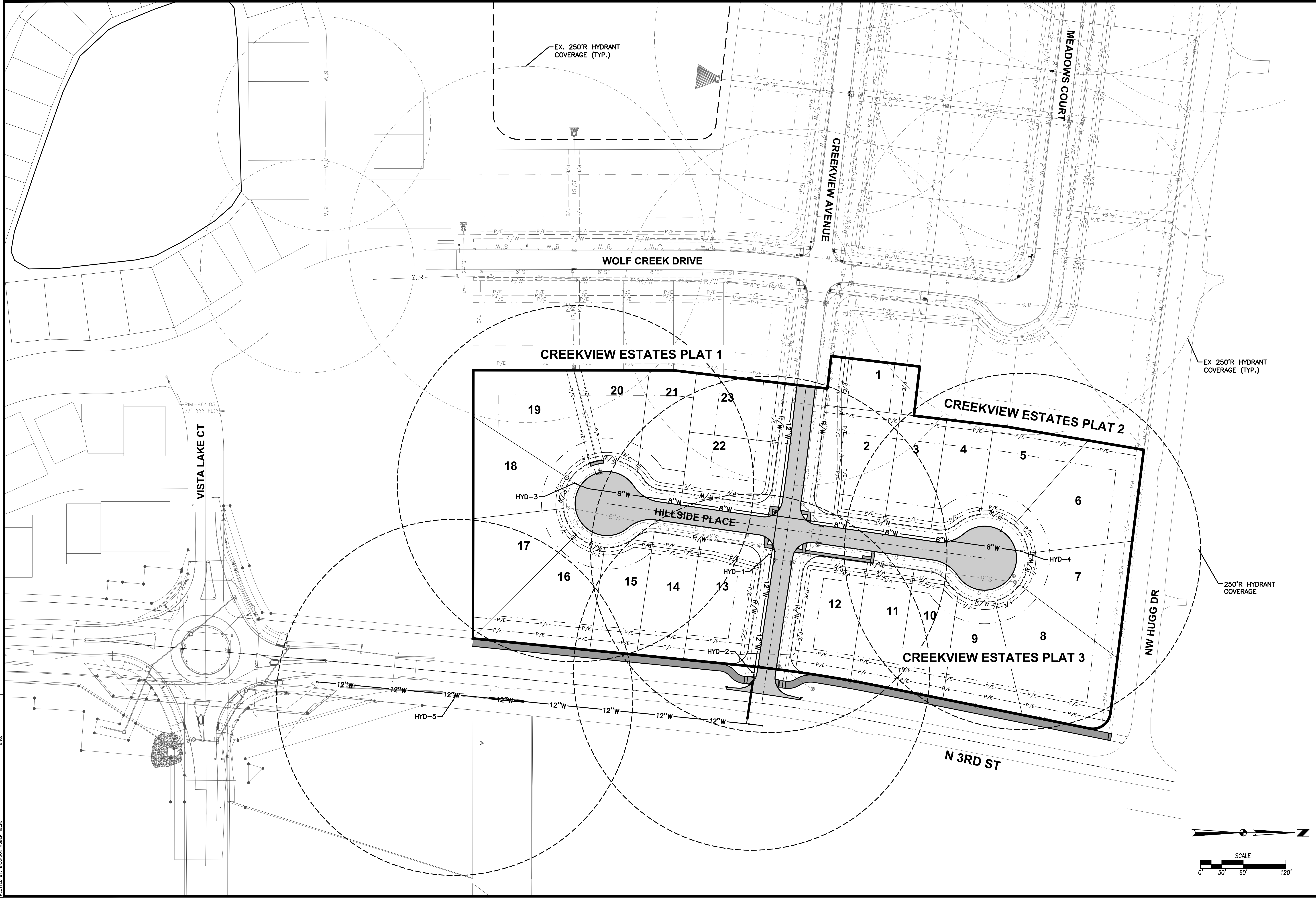
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

JOSHUA A. TRYGSTAD, P.E. DATE _____

LICENSE NUMBER 19228
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2024
PAGES OR SHEETS COVERED BY THIS SEAL:
SHEETS 1-23

CREEKVIEW ESTATES PLAT 3

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 PLOTTED BY: BRANDON HUBER TECH
 DATE: 3/7/2024 10:38 AM
 COMMENT: EXC



DATE	03/07/24
RE-CERTIFICATION SUBMITTAL	09/09/23
REVISION #1	08/10/23
SIGNED SUBMITTAL	07/05/23
THIRD SUBMITTAL	06/07/23
SECOND SUBMITTAL	04/20/23
FIRST SUBMITTAL	

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TECH: TDT
 ENGINEER: JAT

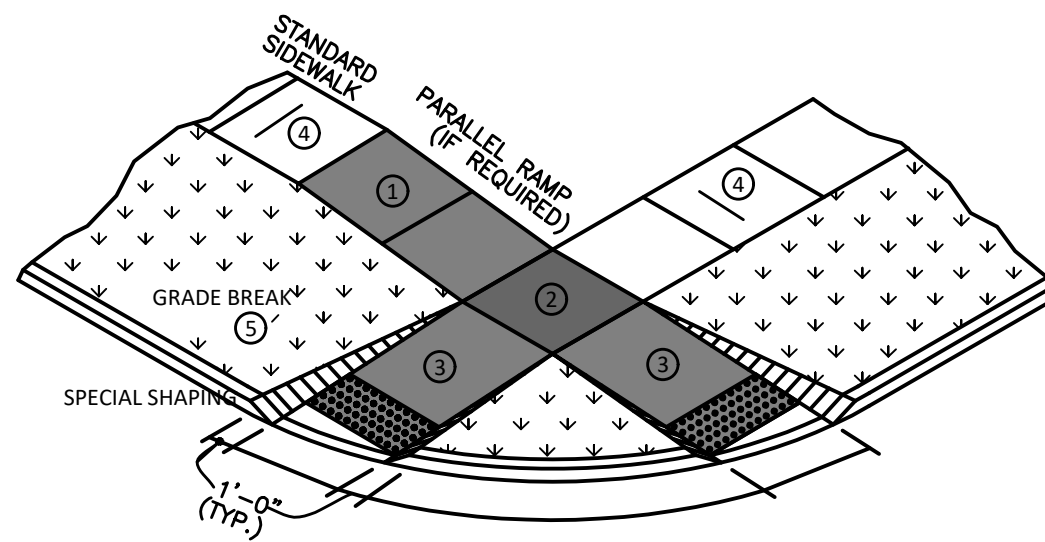
ESA
 CIVIL DESIGN ADVANTAGE

CREEKVIEW ESTATES - PLAT 3
HYDRANT COVERAGE PLAN

POLK CITY, IOWA

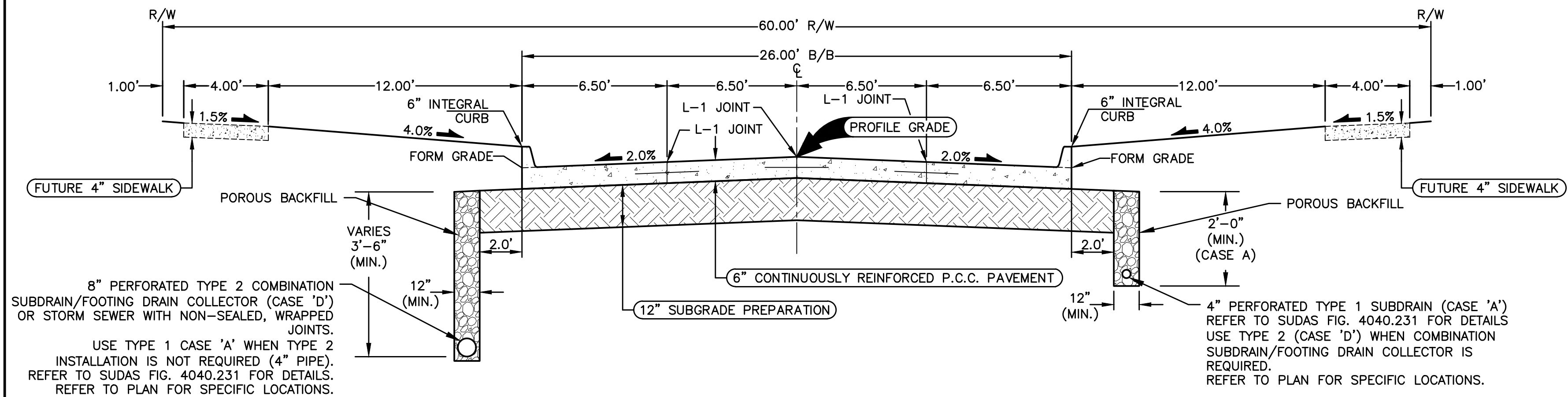
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1. PARALLEL CURB RAMP: IF NORMAL SIDEWALK ELEVATION CANNOT BE ACHIEVED WITH THE PERPENDICULAR RAMP BETWEEN THE STREET AND LANDING DUE TO LIMITED RAMP LENGTH, PROVIDE A PARALLEL RAMP TO MAKE UP THE ELEVATION DIFFERENCE BETWEEN THE LANDING AND THE STANDARD SIDEWALK. THE LENGTH OF THE PARALLEL RAMP IS NOT REQUIRED TO EXCEED 15 FEET, REGARDLESS OF THE RESULTING SLOPE. DO NOT EXCEED 8.3% SLOPE FOR PARALLEL RAMP SHORTER THAN 15 FEET.
2. TURNING SPACE: TARGET SLOPE OF 1.5% WITH MAXIMUM SLOPE PERPENDICULAR TO THE TRAVEL DIRECTIONS OF 2.0%. MINIMUM 4 FEET BY 4 FEET.
3. PERPENDICULAR CURB RAMP: TARGET RUNNING SLOPE OF 6.25% WITH MAXIMUM RUNNING SLOPE OF 8.3%.
4. TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%.
5. MATCH PEDESTRIAN STREET CROSSING CROSS SLOPE OR FLATTER.



CLASS B OR C SIDEWALK

- KEY
- CURB RAMP
 - TURNING SPACE
 - DETECTABLE WARNING
 - GRASS

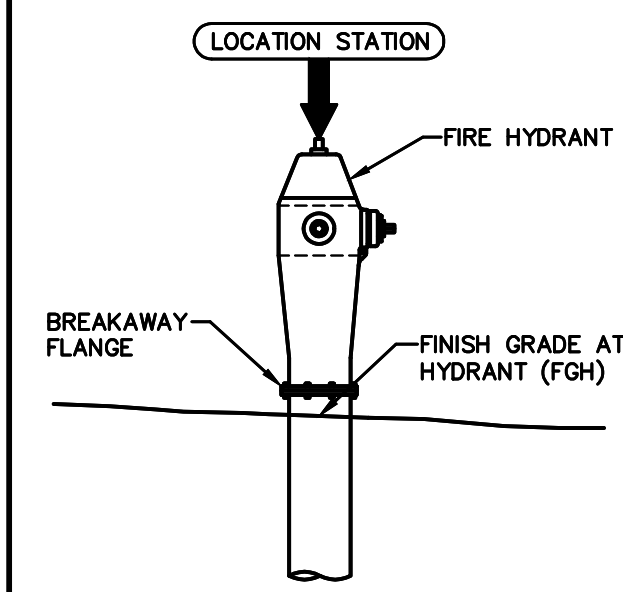


8" PERFORATED TYPE 2 COMBINATION SUBDRAIN/FOOTING DRAIN COLLECTOR (CASE 'D') OR STORM SEWER WITH NON-SEALED, WRAPPED JOINTS.

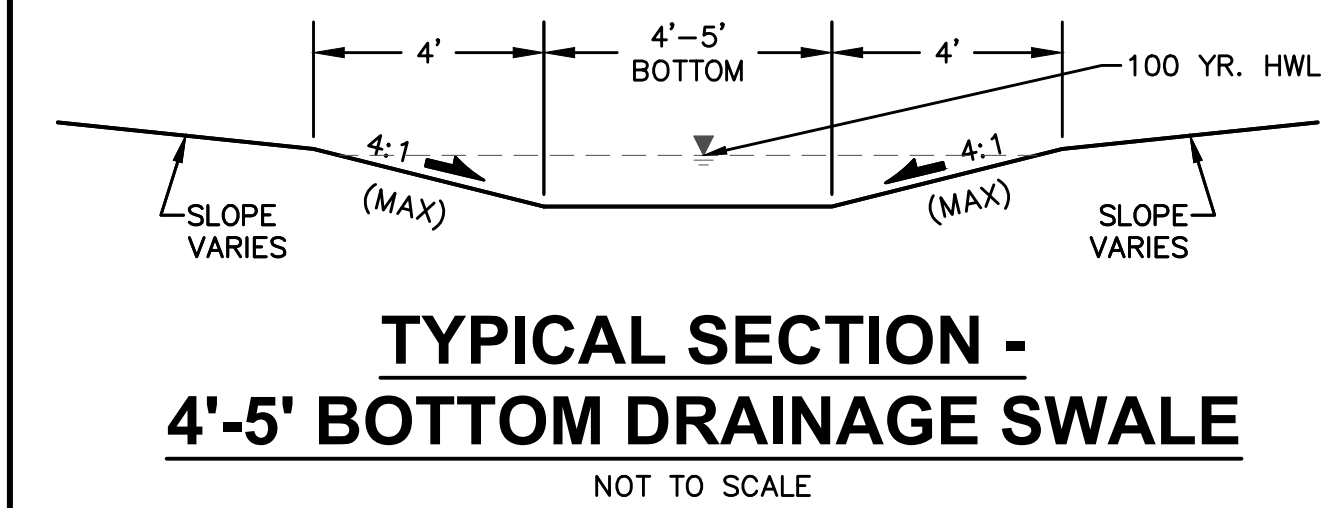
USE TYPE 1 CASE 'A' WHEN TYPE 2 INSTALLATION IS NOT REQUIRED (4" PIPE). REFER TO SUDAS FIG. 4040.231 FOR DETAILS. REFER TO PLAN FOR SPECIFIC LOCATIONS.

TYPICAL SECTION - 26' B/B P.C.C. ROADWAY WITH 60' R.O.W.
NOT TO SCALE CREEKVIEW AVENUE AND HILLSIDE COURT

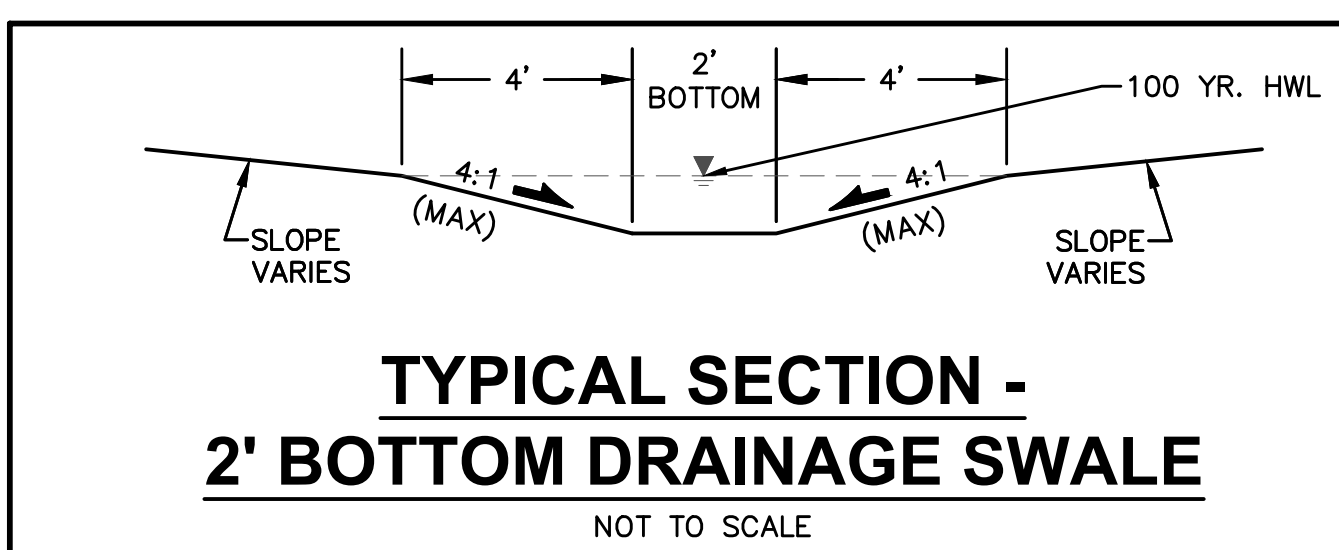
- NOTES:
1. PREPARE SUBGRADE IN 2 - 6" LIFTS.
 2. TYPICAL C JOINT SPACING IS 12'.
 3. CONTRACTOR SHALL TRANSITION EXISTING GUTTERLINE JOINTING TO PROPOSED QUARTER POINT JOINTING WITHIN ONE PANEL.



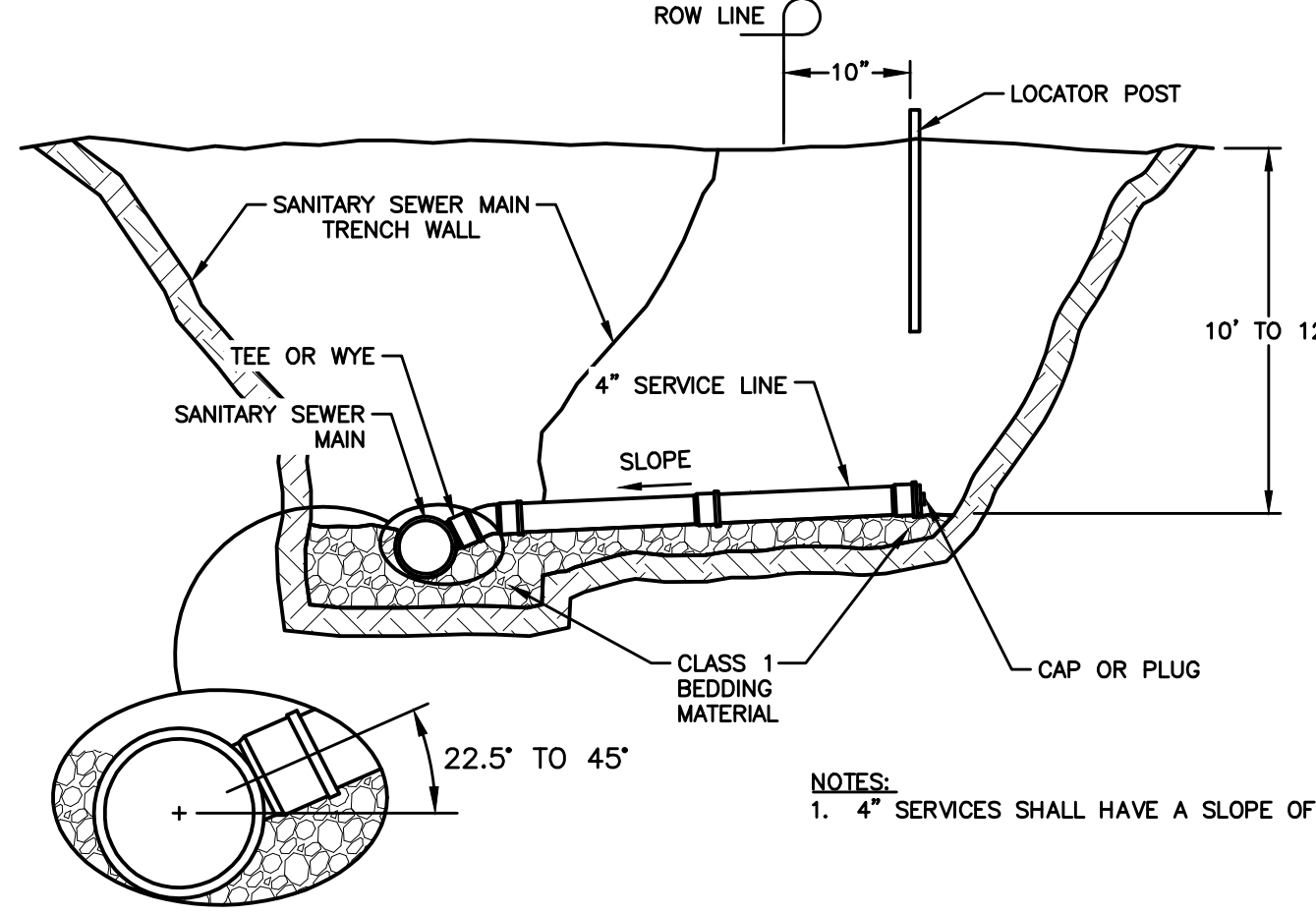
HYDRANT ASSEMBLY SPOT ELEVATION REFERENCE DETAIL
NOT TO SCALE



TYPICAL SECTION - 4'-5' BOTTOM DRAINAGE SWALE
NOT TO SCALE

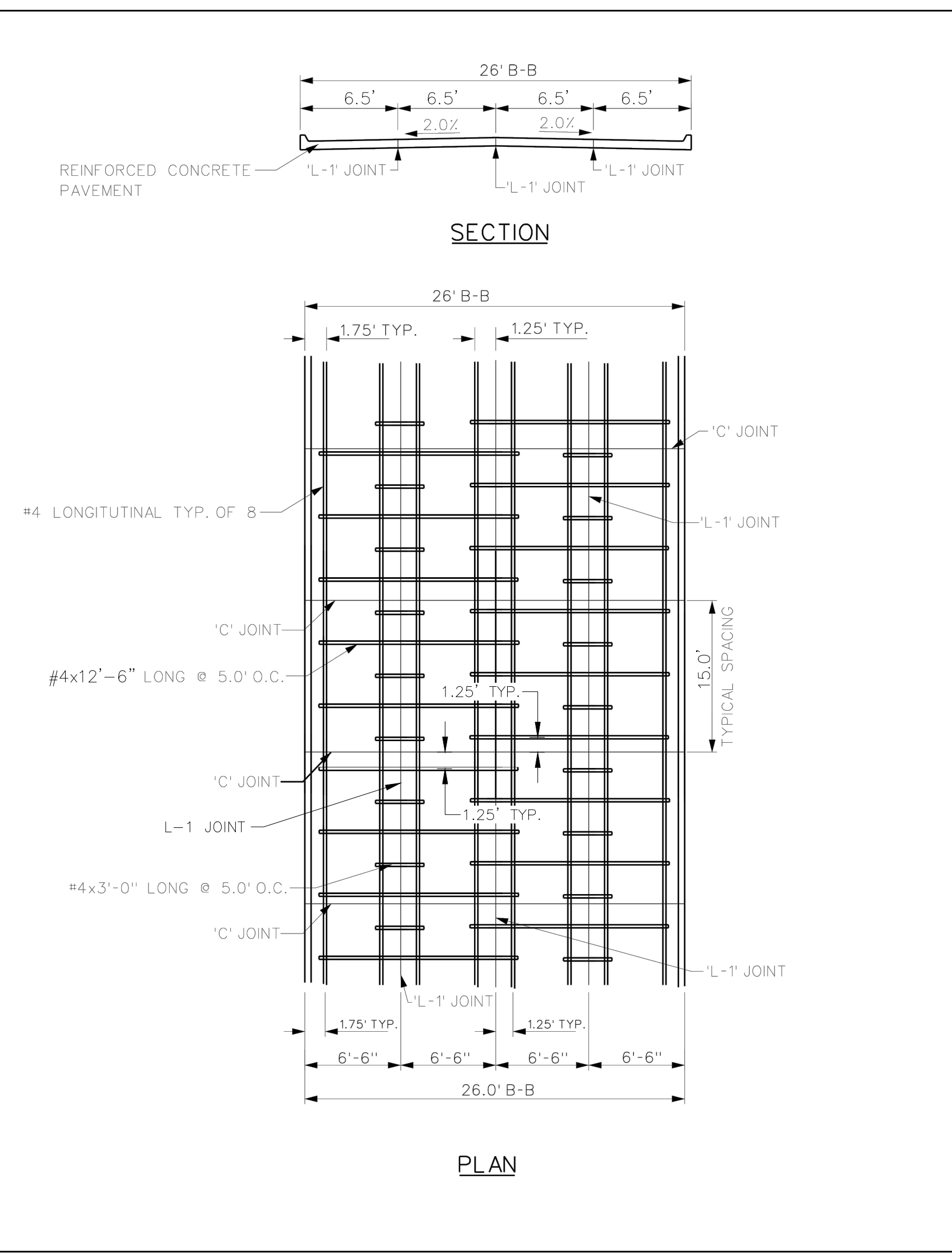


TYPICAL SECTION - 2' BOTTOM DRAINAGE SWALE
NOT TO SCALE

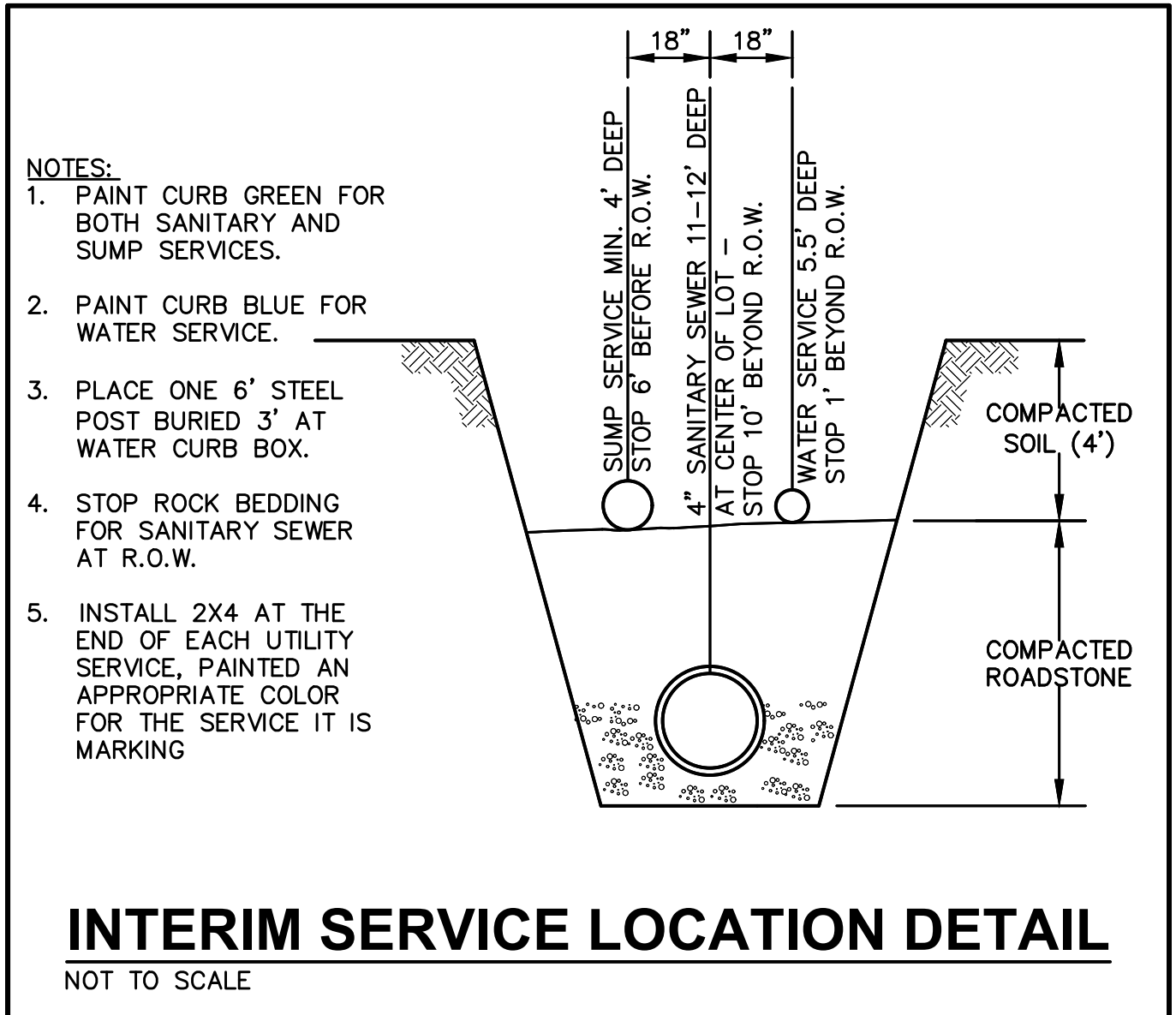


SANITARY SEWER SERVICE STUB
NOT TO SCALE

- NOTES:
1. 4" SERVICES SHALL HAVE A SLOPE OF 2%-5%

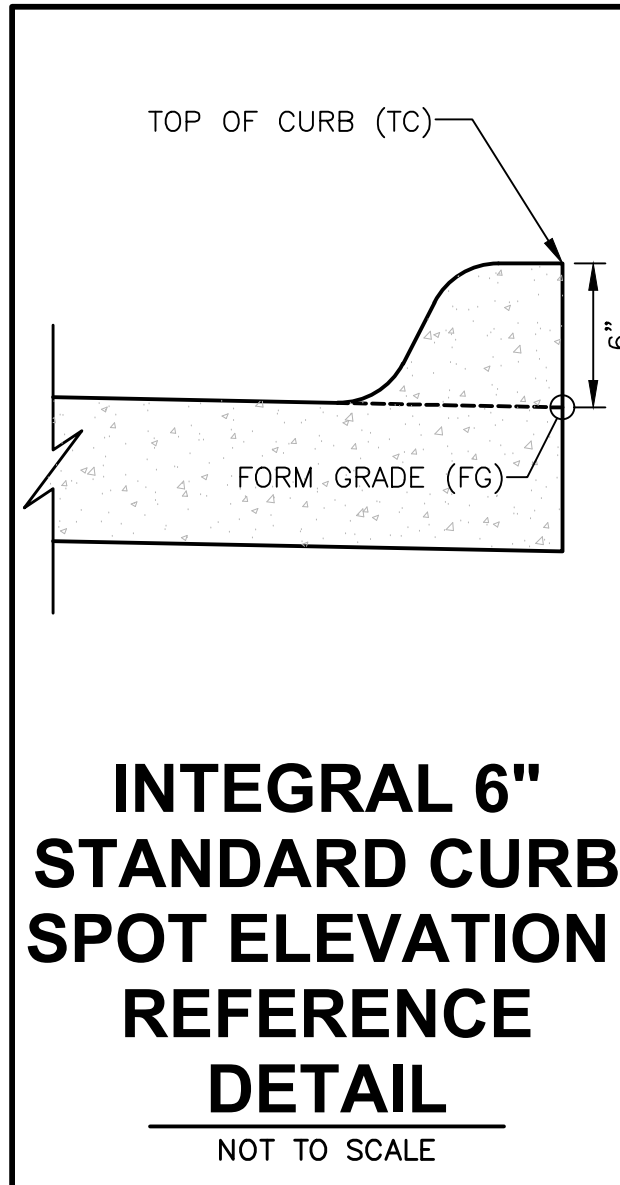


26' B-B CONTINUOUSLY REINFORCED JOINTED PCC PAVEMENT
NOT TO SCALE

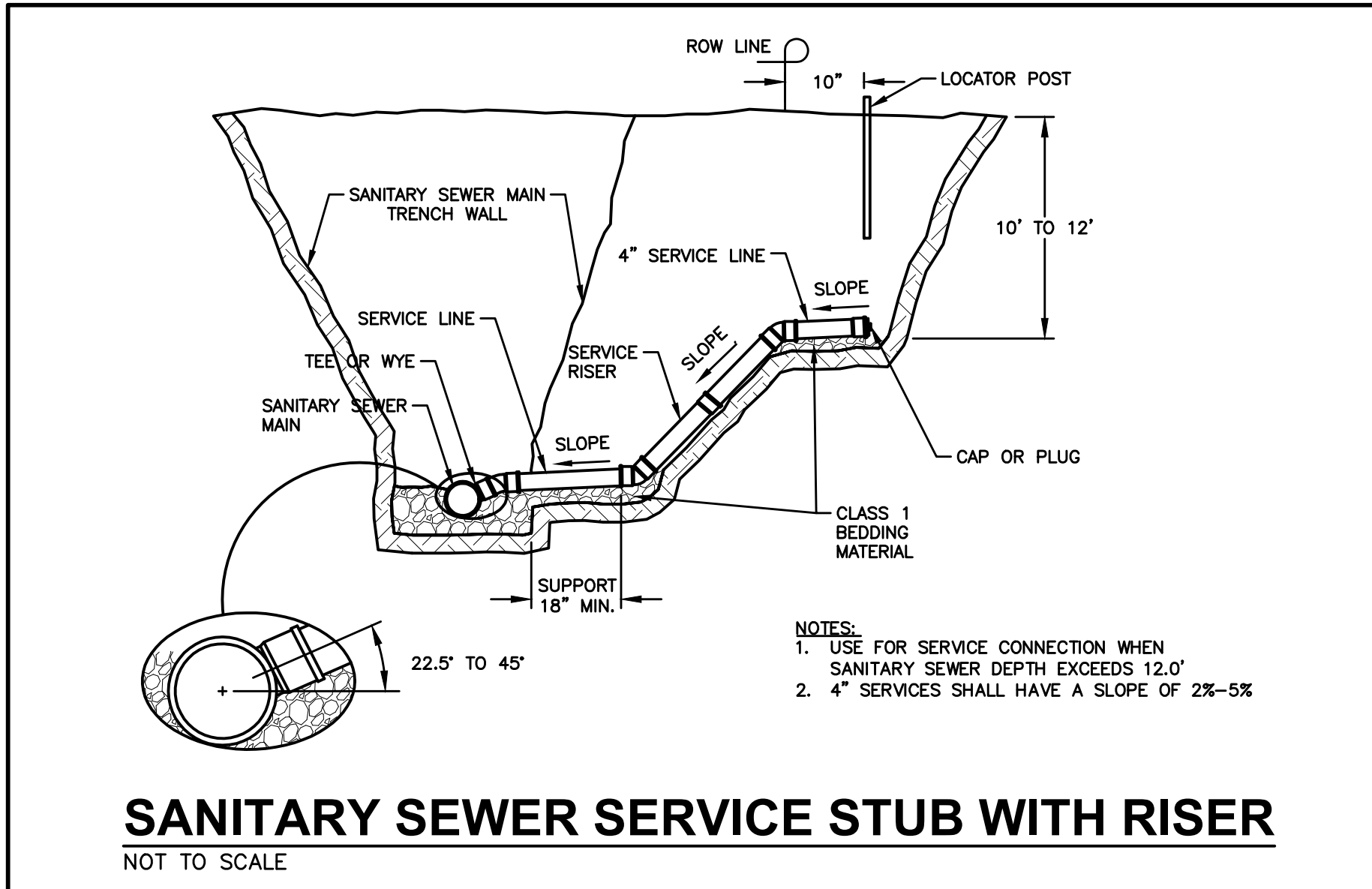


INTERIM SERVICE LOCATION DETAIL
NOT TO SCALE

- 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 AN APPROPRIATE COLOR FOR THE SERVICE IT IS MARKING



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



SANITARY SEWER SERVICE STUB WITH RISER
NOT TO SCALE

- NOTES:
1. USE FOR SERVICE CONNECTION WHEN SANITARY SEWER DEPTH EXCEEDS 12.0'
 2. 4" SERVICES SHALL HAVE A SLOPE OF 2%-5%

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 PLOTTED BY: RANDON HUBER TECH

DATE	03/07/24
RE-CERTIFICATION SUBMITTAL	09/09/23
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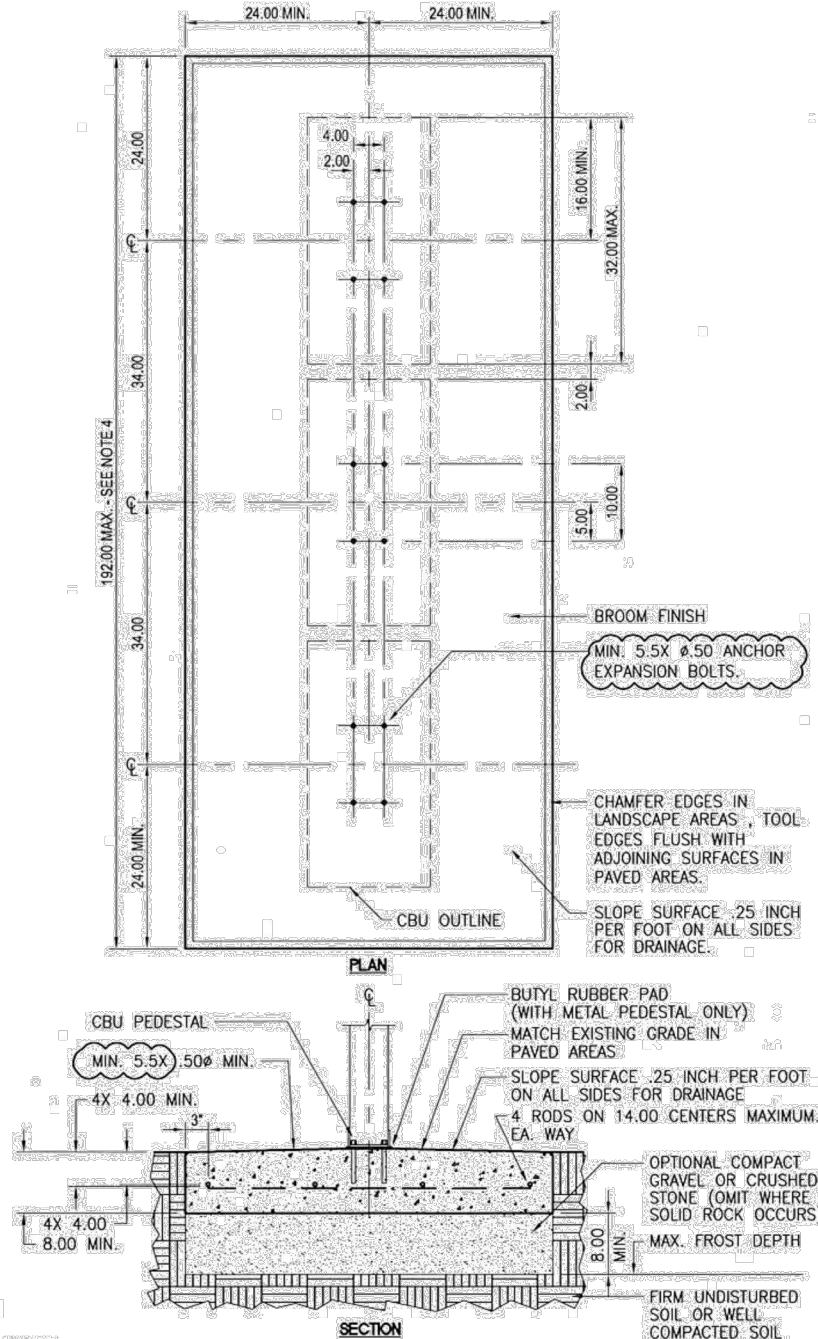
TECH: TDT
ENGINEER: JAT

ESA
CIVIL DESIGN ADVANTAGE

CREEKVIEW ESTATES - PLAT 3
TYPICAL SECTIONS AND DETAILS
POLK CITY, IOWA

3
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NOTES TO A/E:



- NOTES:
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS, CONTAIN 4% MIN. - 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3.50" - 4.50" SLUMP IN ACCORDANCE WITH ACI 301
 - REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60
 - EXPANSION BOLTS SHALL BE EQUIVALENT TO THE FOLLOWING PROVIDERS:
 - HULT NIKI BOLT (www.usnibi.com) 1/2" DIAMETER x 5-1/2" OVERALL LENGTH GALVANIZED, CATALOG # 000-453-896
 - 1/2" x 5-1/2" STAINLESS STEEL CATALOG # 000-454-744 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 3-1/2"
 - ITW RAMSET REDHEAD TRIBOLT (www.ramset-redhead.com) GALVANIZED, 1/2" DIAMETER x 7" OVERALL LENGTH, CATALOG NUMBER: WS-12705 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4-1/8"
 - RABBIT STUD (www.rabbi.com) GALVANIZED, 1/2" DIAMETER x 5-1/2" OVERALL LENGTH, CATALOG NUMBER: 7724 ENSURE THAT THE MIN. EMBEDMENT IN CONCRETE IS AT LEAST 4"
 - A 3' CBU CONFIGURATION IS DEPICTED. A 2' OR 4' CBU CONFIGURATION MAY BE USED AS LONG AS THEY ARE ARRANGED IN GROUPS SUCH THAT THE OVERALL DIMENSION OF THE CONCRETE BASE DOES NOT EXCEED 16 FEET.

CLUSTER BOX UNIT (CBU) INSTALLATION - MULTIPLE UNIT
G1-2-0e1

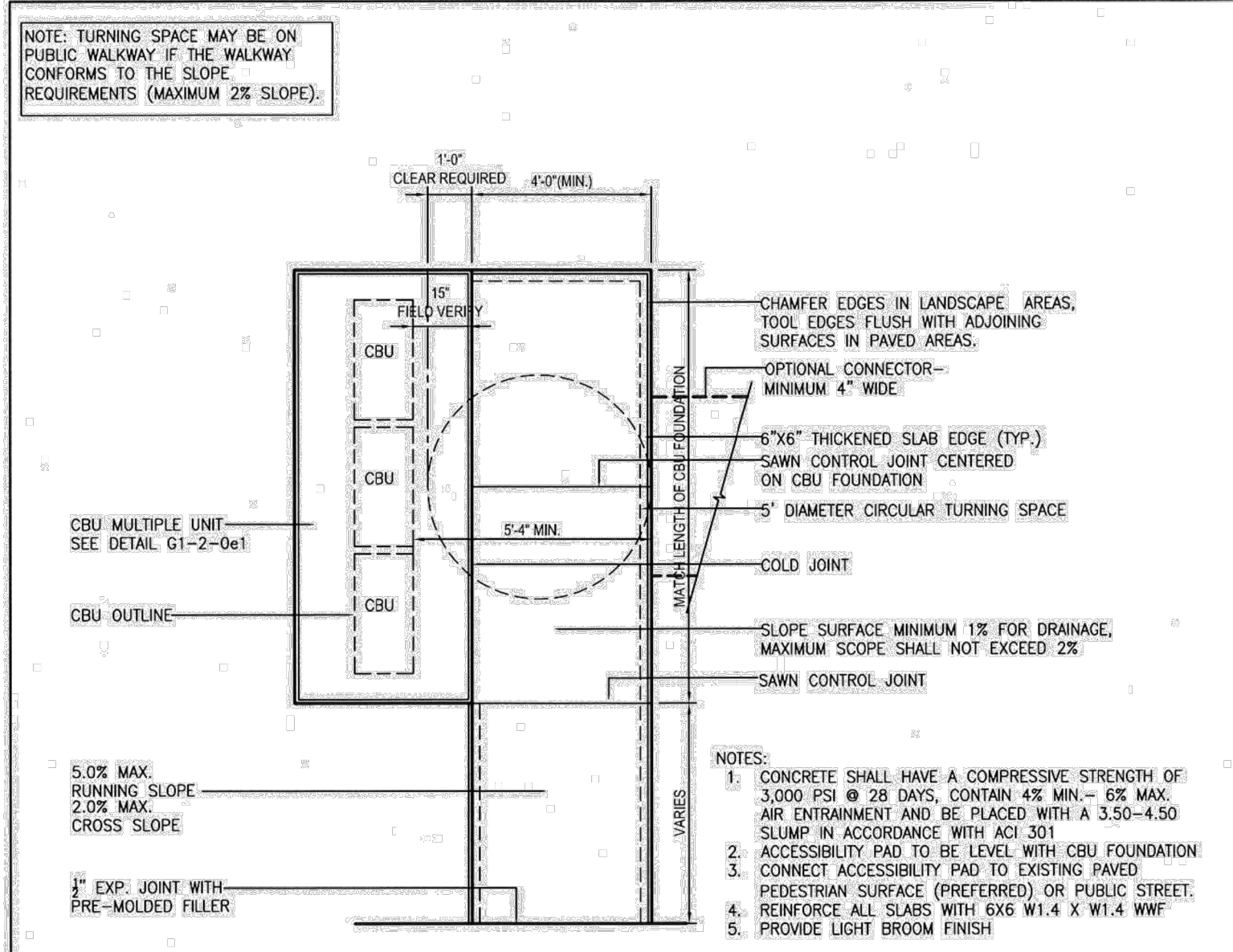
Scale: 1/2" = 1'-0"
USPS SDI Issued: 10/1/2016
Last Revised: 10/27/2016



STANDARD DETAIL LIBRARY

NOTES TO A/E:

- IF THE ACCESSIBLE ROUTE FROM THE CBU(S) CONNECTS WITH A STREET OR OTHER PAVED SURFACE AT A VERTICAL CURB, A CURB RAMP SHOULD BE INSTALLED IN ACCORDANCE WITH RE-4 REQUIREMENTS.



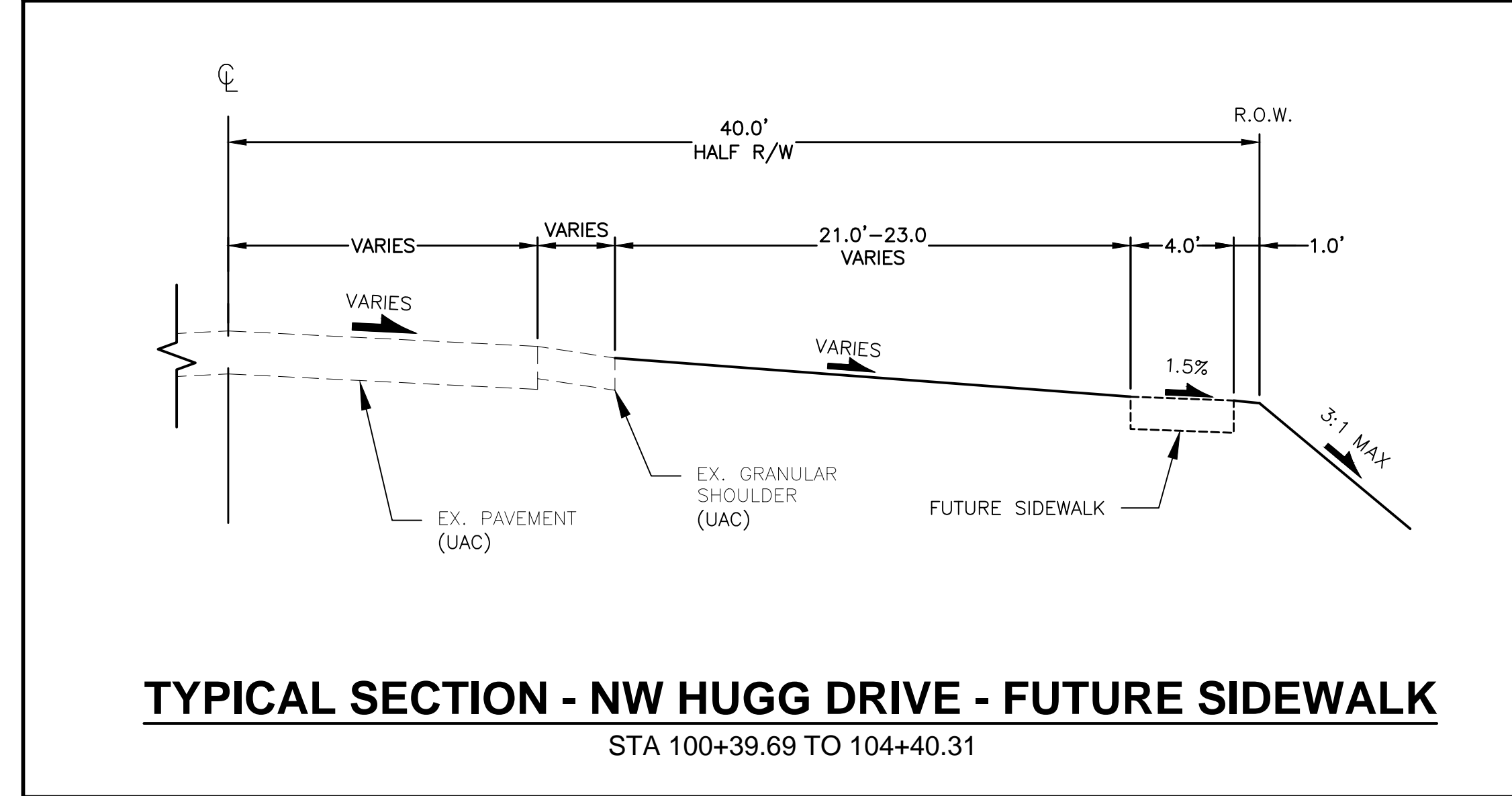
CLUSTER BOX UNIT (CBU) ACCESS MANEUVERING SPACE - MULTIPLE UNIT
G1-2-0e3

Scale: 1/4" = 1'-0"
USPS SDI Issued: 10/1/2016
Last Revised: 7/14/2016

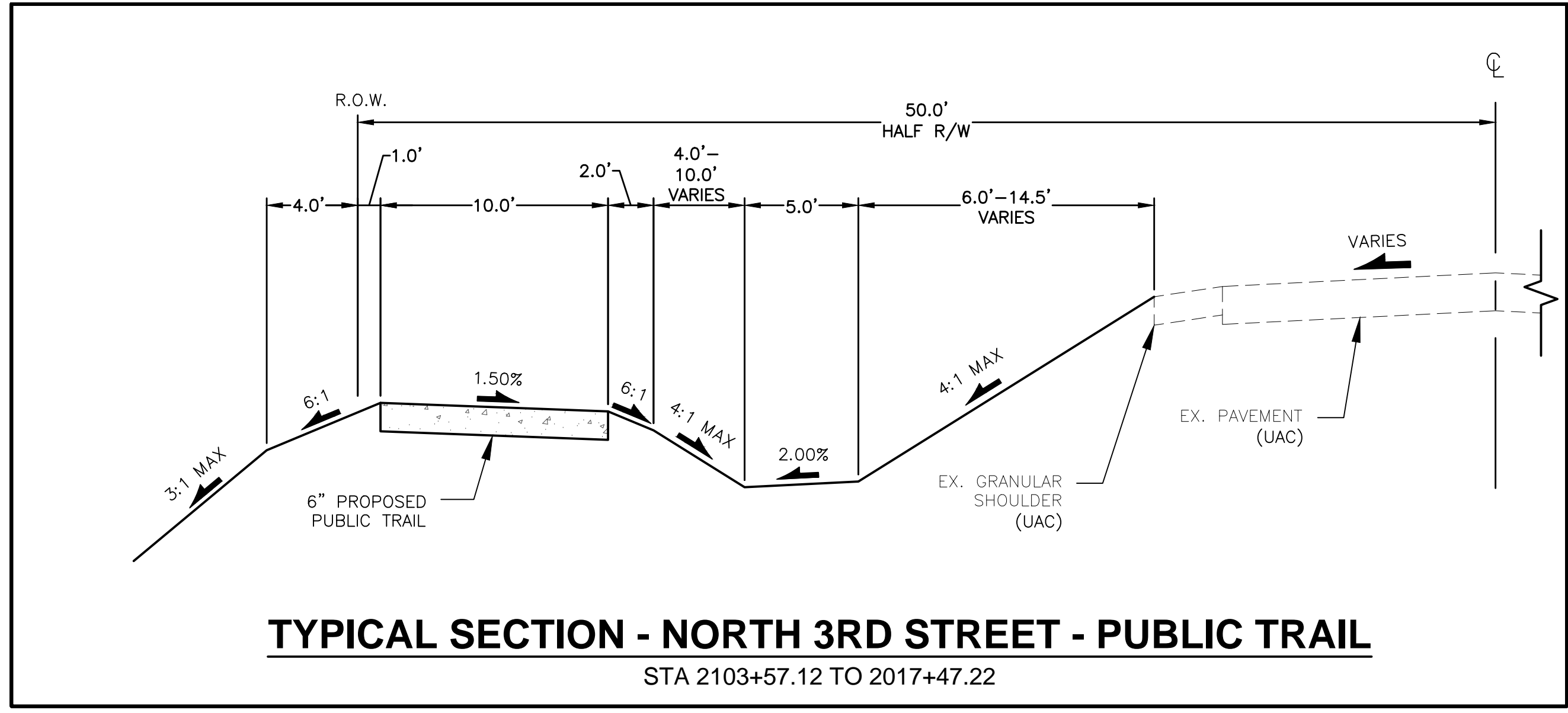


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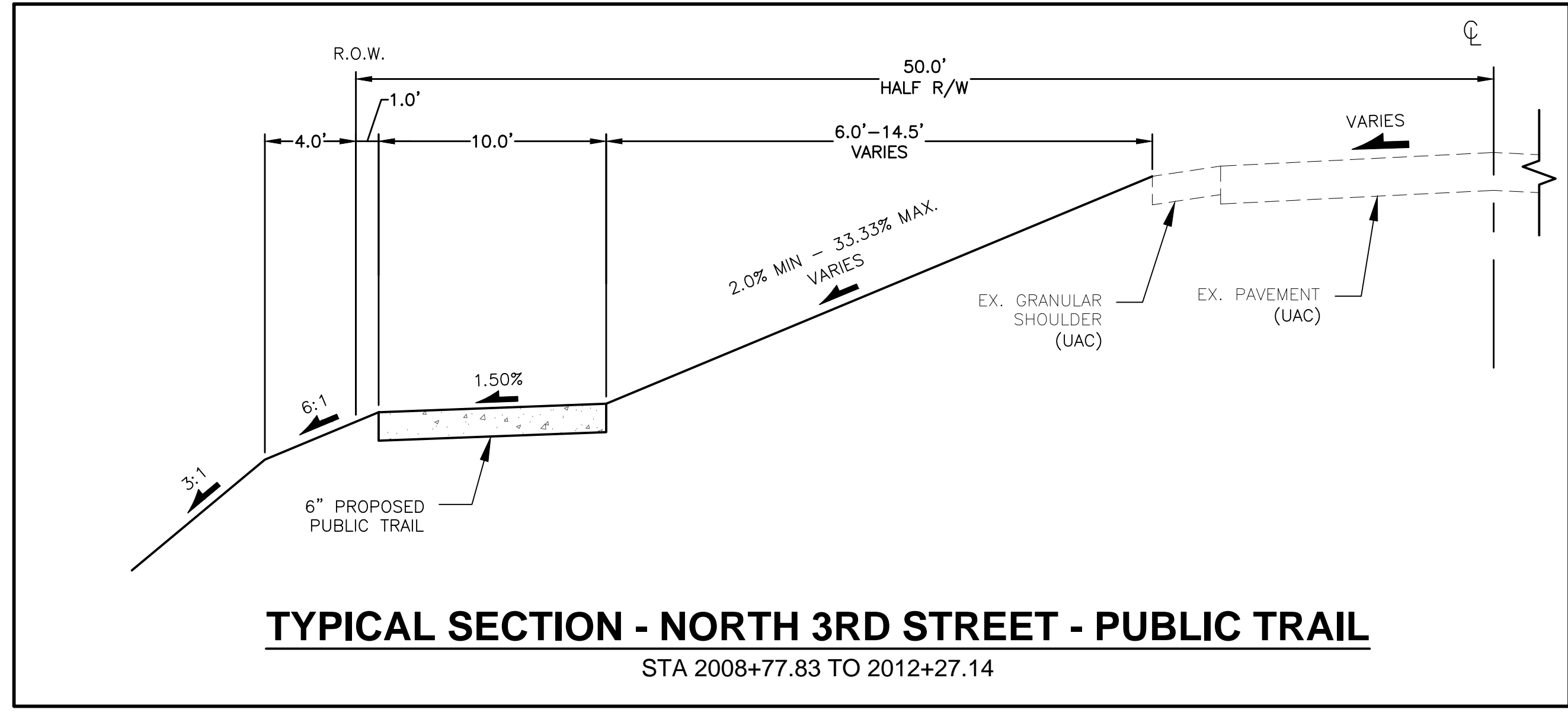
USPS DETAILS



TYPICAL SECTION - NW HUGG DRIVE - FUTURE SIDEWALK
STA 100+39.69 TO 104+40.31



TYPICAL SECTION - NORTH 3RD STREET - PUBLIC TRAIL
STA 2103+57.12 TO 2017+47.22

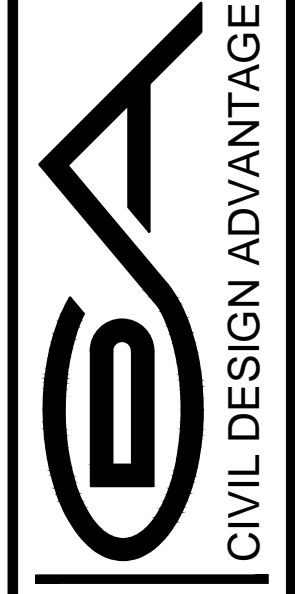


TYPICAL SECTION - NORTH 3RD STREET - PUBLIC TRAIL
STA 2008+77.83 TO 2012+27.14

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DATE	REVISIONS
03/07/24	RE-CERTIFICATION SUBMITTAL
09/09/23	REVISION #1
08/10/23	SIGNED SUBMITTAL
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TECH: TDT



CREEKVIEW ESTATES - PLAT 3
TYPICAL SECTIONS AND DETAILS
POLK CITY, IOWA

CITY OF POLK CITY TYPICAL NOTES:

GENERAL NOTES

- 1. ONE WEEK PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY:
A. SNYDER & ASSOCIATES
B. CITY OF POLK CITY
C. DEVELOPER
D. ENGINEER
E. IOWA ONE-CALL
2. 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.
3. ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, CURRENT AT THE COMMENCEMENT OF CONSTRUCTION.
4. THE CONTRACTOR, DEVELOPER, AND DEVELOPER'S ENGINEER SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY AND SNYDER & ASSOCIATES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. 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.
6. 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, MATURITY CURVES OR OTHER ACCEPTABLE TESTING. SHOP DRAWINGS SHALL INCLUDE MANHOLES, INTAKES, BOX CULVERTS, FENCING/GUARD RAILS AND OTHER SPECIALTY CONSTRUCTION ITEMS.
7. 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.
8. 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.
9. THE CONTRACTOR SHALL CONDUCT CLEAN-UP OPERATIONS ON EXISTING STREETS AND ADJACENT PRIVATE PROPERTY AT THE END OF EACH WORKING DAY OR MORE OFTEN AS DIRECTED BY THE CITY.
10. THE CONTRACTORS SHALL PROVIDE 4-YEAR MAINTENANCE BONDS, IN AN AMOUNT EQUAL TO THE COST OF CONSTRUCTION, FOR THE PAVING AND FOR WATER MAINS, SANITARY SEWERS, STORM SEWERS, INCLUDING ALL UTILITY SERVICES. THE MAINTENANCE BONDS SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING THE AS-BUILT LOCATION OF ALL SANITARY SEWER, SUMP AND WATER MAIN SERVICES. A TABLE DIMENSIONING THE DISTANCE FROM THE NEAREST PROPERTY CORNER TO EACH SERVICE SHALL BE PROVIDED TO THE CITY ENGINEER PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. HANDICAP RAMPS, IF ANY, FOR DESIGNATED BIKE TRAILS SHALL HAVE BRICK RED TRUNCATED DOMES; ALL OTHER HANDICAP RAMPS SHALL HAVE CHARCOAL GRAY TRUNCATED DOMES FOR DETECTABLE WARNINGS.
14. THE DEVELOPER SHALL BE RESPONSIBLE FOR REIMBURSING THE CITY OF POLK CITY FOR MATERIALS COSTS FOR ALL STREET SIGNS WITHIN THIS PLAT.
15. THE DEVELOPER'S ENGINEER SHALL PROVIDE AS-BUILT MYLARS, CAD FILES IN ELECTRONIC FORMAT, AND PDF FILES OF THE FULL RECORD DRAWINGS SET TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. RECORD DRAWINGS SHALL INCLUDE FLOW LINE ELEVATIONS OF ALL SWALES AT EACH PROPERTY LINE AS PER CITY CODE.
16. THE DEVELOPER'S SURVEYOR SHALL PROVIDE A STATEMENT TO THE CITY ENGINEER CERTIFYING THAT ALL PROPERTY CORNERS HAVE BEEN SET PRIOR TO COUNCIL ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.

SANITARY SEWER NOTES

- 1. ALL 8" SANITARY SEWER SHALL BE PVC PIPE WITH CLASS "F-3" BEDDING UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. PROVIDE SANITARY SEWER SERVICE RISERS AS REQUIRED.
3. THE CONTRACTOR SHALL INSTALL SEWER TAPE AT THE END OF EACH SANITARY SEWER SERVICE.
4. 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.
5. ALL MANHOLES WITHIN PAVEMENT SHALL HAVE TYPE 'B' ADJUSTABLE CASTINGS. ALL MANHOLES NOT WITHIN PAVEMENT SHALL HAVE TYPE 'A' NON-ADJUSTABLE CASTINGS.
6. ALL MANHOLES SHALL HAVE 1/1 BARRIERS.
7. CORE DRILL ALL CONNECTIONS TO EXISTING MANHOLES AN PROVIDE SLOPE INVERT.
8. 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.
9. ALL SERVICES AND 8-INCH STUB OUTS SHALL BE CAPPED.
10. MANHOLE STEPS ARE REQUIRED IN ALL SANITARY SEWER MANHOLES.
11. MANHOLES COVERS SHALL HAVE RAISED DIAMOND ROUGHNESS PATTERN.
12. 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.
13. THE CONTRACTOR SHALL TELEWISE 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 TELEVISIONING 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-TELEWISED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVISIONING SHALL BE AT THE CONTRACTOR'S EXPENSE.
14. 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.
15. SAGS IN PIPE SHALL NOT EXCEED TOLERANCES AS SPECIFIED BY SUDAS. REPAIRS, IF NECESSARY, AND RE-TELEVISIONING SHALL BE AT THE CONTRACTOR'S EXPENSE.
16. EXISTING MAIN TO BE FLUSHED AFTER SANITARY SEWER SERVICE EXTENSION. IF NEW WYES NEED TO BE CUT IN, SANITARY MAIN WILL NEED TO BE RE-TELEWISED AND MAY BE SUBJECT TO ADDITIONAL TESTING.

GRADING/BACKFILL NOTES

- 1. RECONNECT ANY FIELD TILE THAT ARE INTERCEPTED DURING UTILITY CONSTRUCTION.
2. 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 ENCOUNTER THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED AND APPROVED BY CITY.
3. STRIP TOPSOIL FROM ALL AREAS WHICH ARE TO BE FILLED OR CUT.
4. STOCKPILE SUFFICIENT TOPSOIL TO RESPREAD A MINIMUM DEPTH OF 4-INCHES ON UNPAVED AREAS, INCLUDING FRONT, REAR, AND SIDE YARDS OF ALL LOTS.
5. ALL AREAS TO RECEIVE FILL ARE TO BE BENCHED. PREPARE BOTTOM OF BENCH FOR FILL BY DISCING TO A DEPTH OF 6-INCHES.
6. ALL SITE GRADING FILL SHALL BE COMPACTED TO A DENSITY THAT IS NOT LESS THAN 95% STANDARD PROCTOR DRY DENSITY.
7. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL FALL WITHIN A RANGE OF OPTIMUM MOISTURE TO 4% ABOVE OPTIMUM MOISTURE.
8. THE CONTRACTOR SHALL PROTECT AND BACKFILL AROUND UNDERGROUND UTILITIES. BACKFILL SHALL BE IN 6-INCH LIFTS, COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY.
9. MAINTAIN ALL CUT AND FILL AREAS FOR SURFACE DRAINAGE AT ALL TIMES.
10. FINAL GRADES WITHIN PAVED AREAS SHALL BE WITHIN 0.1' OF PLAN GRADE, ALL OTHER AREAS TO BE WITHIN 0.2' OF PLAN GRADE.
11. A MINIMUM OF ONE FOOT OF COMPACTED COHESIVE SUBGRADE SHALL BE PROVIDED BENEATH ALL PAVEMENTS.
12. ALL SLOPES WITHIN PUBLIC EASEMENTS, RIGHT-OF-WAY, PARKS, OR LAND TO BE PUBLICALLY OWNED SHALL BE GRADED TO A 4:1, MAXIMUM SLOPE.
13. ALL SLOPES ON PRIVATE PROPERTY SHALL BE 4:1 MAXIMUM, UNLESS THE SPECIFIC LOCATION(S) HAVE BEEN LABELED AS 3:1, MAXIMUM.
14. ALL EXISTING ROADSIDE DITCHES SHALL BE GRADED TO DRAIN.
15. ALL SWALES WITHIN DRAINAGE OR SURFACE WATER FLOWAGE EASEMENTS SHALL BE GRADED TO A 2% MINIMUM SLOPE, MEASURED ALONG THE FLOWLINE OF SAID SWALE. IF THE AS-BUILT CONDITION OF ANY SWALE HAS LESS THAN 2% MINIMUM SLOPE, A 6" SUBDRAIN WILL BE REQUIRED. THE SUBDRAIN SHALL HAVE CLEAN-OUTS LOCATED NEAR PROPERTY LINES WHERE POSSIBLE, BUT IN NO CASE HAVING A SPACING GREATER THAN 200 FEET.
16. HYDRANTS, MANHOLE COVERS, AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
17. EXISTING TREES SHALL BE SAVED TO THE EXTENT POSSIBLE TO ACCOMMODATE GRADING, UTILITY AND STREET CONSTRUCTION.
18. EXISTING TREES SHALL BE REMOVED FROM EXISTING AND PROPOSED PUBLIC RIGHT-OF-WAY UNLESS THE PUBLIC WORKS DIRECTOR PROVIDES SPECIFIC APPROVAL TO MAINTAIN CERTAIN TREES WITHIN SAID RIGHT-OF-WAY.
19. CONTRACTOR SHALL OBTAIN A GRADING PERMIT PRIOR TO COMMENCING CONSTRUCTION.

WATER MAIN NOTES

- 1. PIPE MATERIALS SHALL BE AWWA C900, CLASS 150 PVC.
2. INSTALL NO. 10 THHN STANDARD COPPER TRACER WIRE UNDER PIPE, BRING TRACER WIRE TO SURFACE AT HYDRANTS, TERMINATING IN RECEPTACLE BOX.
3. 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.
4. HYDRANTS SHALL BE SET 3.5 FEET FROM THE WATER MAIN.
5. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY THAT FIRE HYDRANTS WILL NOT CONFLICT WITH SIDEWALK CONSTRUCTION.
6. HYDRANTS, MANHOLE COVERS AND VALVE BOXES SHALL BE SET TO CONFORM TO FINISHED PAVEMENT ELEVATIONS.
7. HYDRANTS TO BE WATROUS PRODUCTS, OPEN LEFT, PAINTED YELLOW.
8. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES.
9. SERVICES TO BE 1-INCH COPPER.
10. RISER RODS ARE REQUIRED AT ALL CURB STOPS.
11. 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.
12. WATER MAIN TO HAVE 5 1/2 FEET BURY, TYPICAL EXCEPT AT CRITICAL CROSSINGS.
13. ALL VALVES SHALL HAVE A VALVE BOX ADAPTER INSTALLED TO MAINTAIN ALIGNMENT.
14. THE CONTRACTOR SHALL REMOVE CHAINS ON ALL HYDRANTS.
15. 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.
16. 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.
17. PROVIDE 2' BLOW-OFF AT THE TERMINAL END OF THE 8" WATER LINE UNLESS HYDRANT HAS BEEN PROVIDED.
18. 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.

STORM SEWER NOTES

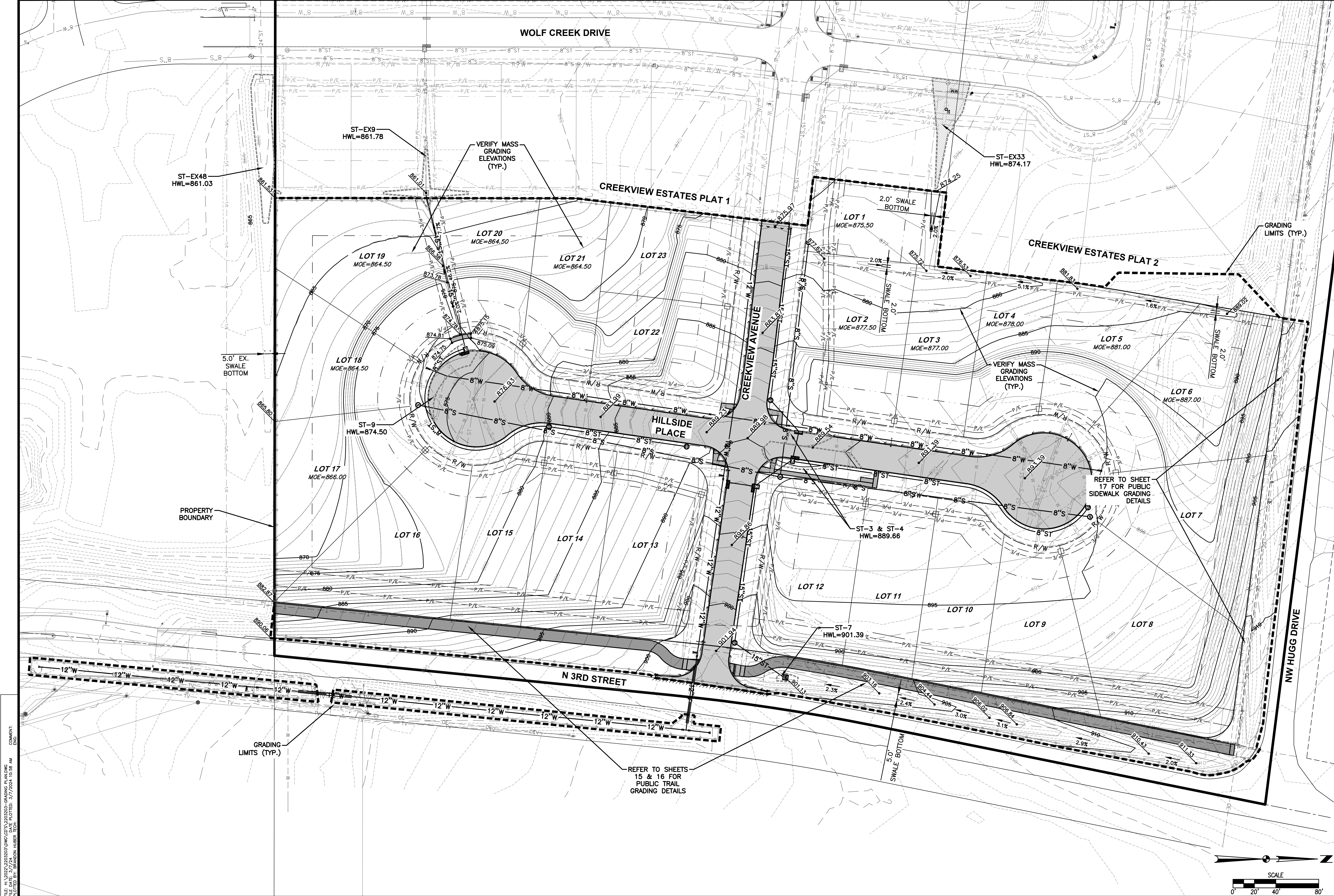
- 1. ADDITIONAL RIP-RAP MAY BE REQUIRED AT THE FES BASED UPON FIELD REVIEW BY CITY OF POLK CITY.
2. PROVIDE SUBDRAIN BEHIND BACK OF CURB ON PUBLIC STREETS AS REQUIRED BASED ON SUBSURFACE MOISTURE CONDITIONS. ANY SUBDRAIN CROSSING UNDER THE PAVEMENT SHALL BE RCP PIPE.
3. ALL CURB INTAKES SHALL HAVE TYPE 'R' VANE GRATES.
4. ALL INTAKES SHALL BE POURED-IN-PLACE CONCRETE OR PRECAST CONCRETE.
5. ALL 12" AND LARGER STORM SEWERS SHALL BE RCP.
6. 8-INCH FOOTING DRAINS TO BE PVC, SDR 35.
7. FOOTING DRAIN SERVICES TO BE 4-INCH PVC, SDR 35. EXTEND SERVICES 10' INSIDE LOT UNLESS OTHERWISE NOTED.
8. ALL INTAKES SHALL BE LOCATED A MINIMUM OF 7.5 FEET FROM END OF RETURNS.
9. CORE DRILL ALL CONNECTIONS TO EXISTING STRUCTURES.
10. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3'-6" COVER ON ALL STORM SEWER, INCLUDING SUMP SERVICES.
11. INSTALL CONTINUOUS PERFORATED SUBDRAIN IN LOCATIONS SHOWN ON PLANS.
12. ALL SUBDRAIN, 6-INCHES OR SMALLER, SHALL HAVE CRITTER GUARDS.
13. ALL CLEAN-OUTS SHALL BE SET IN A 24" ROUND CONCRETE PAD.
14. FLARED END SECTIONS AND LAST 3 PIPE SECTIONS MUST BE TIED. ALL FLARED END SECTIONS SHALL HAVE 48-INCH FOOTINGS AND APRON GUARD.
15. 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.
16. THE CONTRACTOR SHALL TELEWISE 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 TELEVISIONING 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-TELEWISED TO DEMONSTRATE PIPES ARE CLEAN. REPAIRS, IF NECESSARY, AND RE-TELEVISIONING SHALL BE AT THE CONTRACTOR'S EXPENSE.

PAVING NOTES

- 1. 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.
2. THE CONTRACTOR WILL NEED TO PROVIDE COPIES OF ALL TEST RESULTS REPORTING, INCLUDING BUT NOT LIMITED TO COMPACTION TEST MAP, STORM SEWER TELEVISIONING, AND SANITARY SEWER TELEVISIONING, TO SNYDER & ASSOCIATES FOR REVIEW PRIOR TO REQUESTING THE PRE-POUR MEETING.
3. ALL ELEVATIONS ARE PROPOSED FINISHED GRADE AT TOP OF CURB UNLESS OTHERWISE NOTED.
4. PAVEMENTS SHALL BE 6" CONTINUOUSLY-REINFORCED PCC PAVEMENT UNLESS OTHERWISE NOTED ON THE PLANS.
5. ALL STREETS SHALL HAVE 6" INTEGRAL CURBS.
6. PROVIDE CURB DROPS FOR SIDEWALKS AT INTERSECTIONS.
7. CONSTRUCTION OF HANDICAP ACCESSIBLE RAMPS, WITH DETECTIBLE WARNINGS AND INCLUDING COMMON SQUARE, SHALL BE THE RESPONSIBILITY OF THE HOMEBUILDER UNLESS OTHERWISE NOTED ON THE PLANS.
8. ALL REINFORCING STEEL SHALL BE EPOXY-COATED REINFORCING STEEL.

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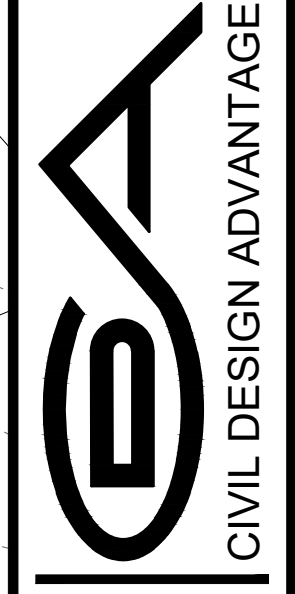
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4121 NW URBANDALE DRIVE, URBANDALE, IOWA 50322, PHONE: (515) 369-4400, FAX: (515) 369-4410
TECH: TDT, ENGINEER: JAT
CIVIL DESIGN ADVANTAGE
CREEKVIEW ESTATES - PLAT 3
TYPICAL POLK CITY CONSTRUCTION NOTES
POLK CITY, IOWA
6/23
2203.203



COMMENT:
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 DATE: 3/7/2024 10:35 AM

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REVISION #1	09/09/23
SIGNED SUBMITTAL	08/10/23
THIRD SUBMITTAL	07/05/23
SECOND SUBMITTAL	06/07/23
FIRST SUBMITTAL	04/20/23

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POLK CITY, IOWA
 CIVIL DESIGN ADVANTAGE

CREEKVIEW ESTATES - PLAT 3

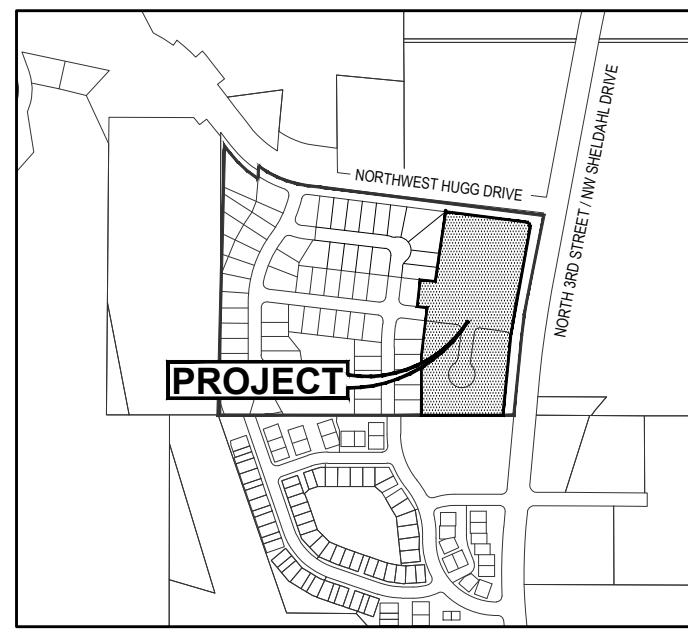
GRADING PLAN

CREEKVIEW ESTATES PLAT 3

EROSION AND SEDIMENT CONTROL PLAN

VICINITY MAP

NOT TO SCALE



POLK CITY, IOWA

STABILIZATION QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	SILT FENCE	LF	3,341
2	FILTER SOCK	LF	280
3	SEEDING, FERTILIZING, AND MULCHING	AC	9.77
4	INLET PROTECTION DEVICES	EA	7
5	CONCRETE WASHOUT PIT	EA	1

TYPE 4 SEED MIXTURE

COMMON NAME	APPLICATION RATE (LB/ACRE)
SPRING: MARCH 1-MAY 20	
ANNUAL RYEGRASS	40
OATS*	65
SUMMER: MAY 21-AUGUST 14	
ANNUAL RYEGRASS	50
OATS*	95
FALL: AUGUST 15-SEPTEMBER 30	
ANNUAL RYEGRASS	40
GRAIN RYE	65

* ENGINEER MAY DELETE FOR PREVIOUSLY ESTABLISHED URBAN AREAS.

SWPPP LEGEND

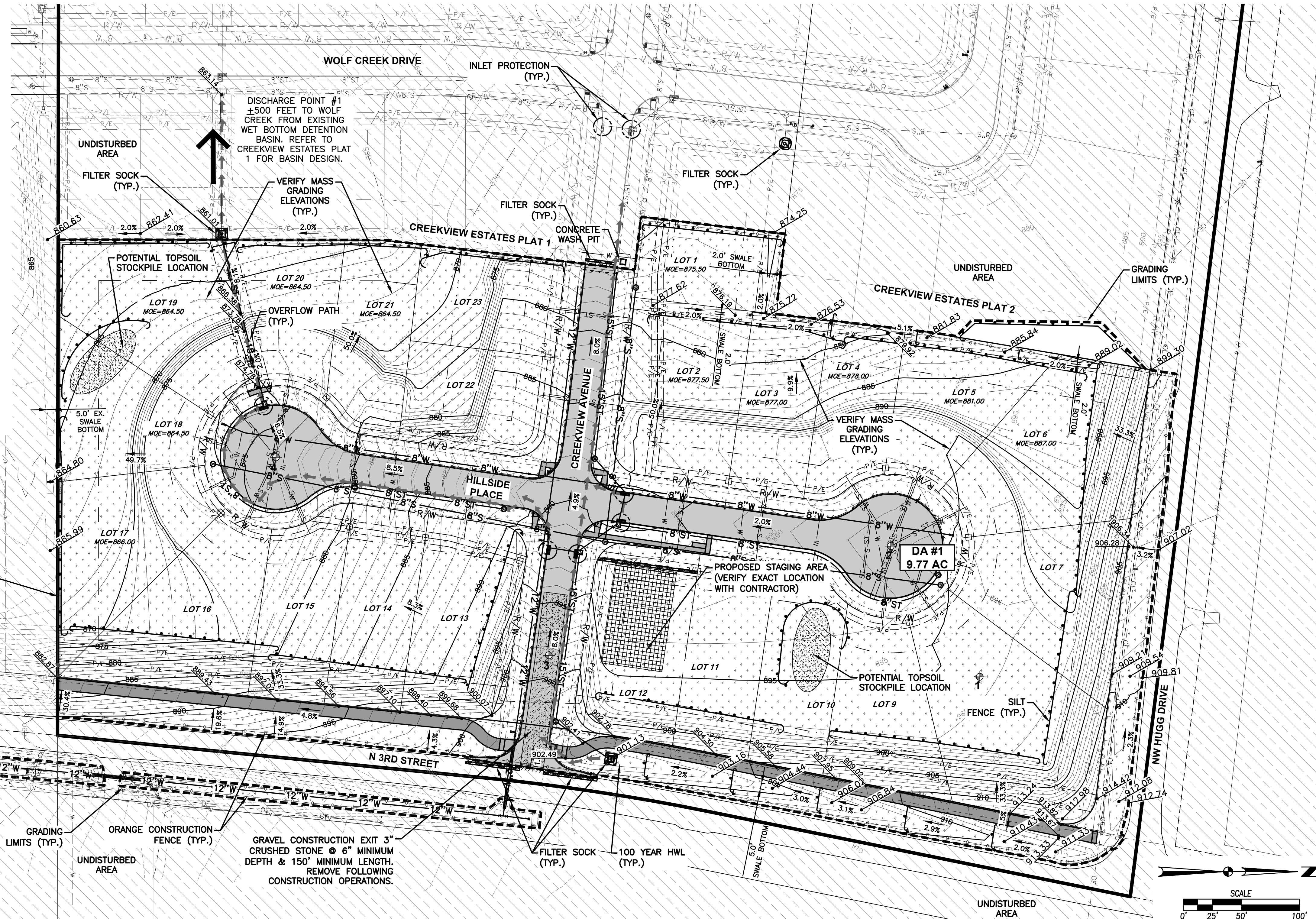
DRAINAGE ARROW		CONCRETE WASHOUT PIT		GRAVEL ENTRANCE	
GRADING LIMITS		AREA TO BE SEEDED		STAGING AREA	
FILTER SOCK		STRAW MAT		OVERFLOW ROUTE	
SILT FENCE		UNDISTURBED AREA		100 YR. HWL	
ORANGE CONSTRUCTION FENCE		SEEDING/RESTORATION		TEMPORARY SEDIMENT BASIN	
DITCH CHECK				SOIL BORING MAP LOCATION	
INLET PROTECTION				(REFER TO TERRACON GEOTECH REPORT NO. 08195216)	
PORTABLE RESTROOM					

DISCHARGE POINT SUMMARY

DISCHARGE POINT #1 TO WOLF CREEK ±500 FT	9.77 ACRES
TOTAL AREA DISTURBED TO DISCHARGE POINT	35,172 CU FT
STORAGE VOLUME REQUIRED (# OF ACRES*3600 CU FT)	
VOLUME PROVIDED IN FILTER SOCK (280 LF @ 2.0 CU FT/LF OF SOCK)	560 CU FT
VOLUME PROVIDED IN SILT FENCE (3,127 LF @ 4.5 CU FT/LF OF FENCE)	14,072 CU FT
VOLUME PROVIDED IN SILT FENCE IN SWALE (214 LF @ 10 CU FT/LF OF FENCE)	2,140 CU FT
VOLUME PROVIDED IN EXISTING WET BOTTOM DETENTION BASIN	408,552 CU FT
TOTAL VOLUME PROVIDED	425,324 CU FT

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 CONTOURS THAT ARE SHOWN ARE REFERENCING CREEKVIEW ESTATES PLAT 1 AND CREEKVIEW ESTATES GRADING PLANS. TIE-IN POINTS MAY VARY BASED ON CONSTRUCTED ELEVATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING GRADES WITHIN THE PLAT 2 LIMITS.
- SEEDING
 - TYPE TEMPORARY SEEDING (TYPE 4) IS ALLOWED IN ALL OTHER AREAS.
- TOPSOIL STRIP AND RESPREAD SHALL BE AT A MINIMUM DEPTH OF 4 INCHES.
- NO TREE CLEARING AND GRUBBING IS ANTICIPATED FOR THIS PROJECT.
- ORANGE CONSTRUCTION FENCE AT THE PROJECT GRADING LIMITS SHALL BE INSTALLED AND INSPECTED BY THE POLK CITY CONSTRUCTION INSPECTOR PRIOR TO CONSTRUCTION OPERATIONS BEGINNING.
- ADDITIONAL POND CLEARING AND AS-BUILT SURVEY MAY BE REQUIRED FOR THE EXISTING POND SHOULD EROSION OCCUR PRIOR TO FINAL STABILIZATION OF THE SITE.
- NO STANDPIPES WILL BE INSTALLED FOR THE EXISTING BASIN DUE TO THE SIZE OF THE POND. THE LENGTH OF THE POND AND DISTANCE TO THE OUTLET STRUCTURE SHOULD BE SUFFICIENT TO ALLOW ANY SEDIMENT TO SETTLE PRIOR TO LEAVING THE POND.



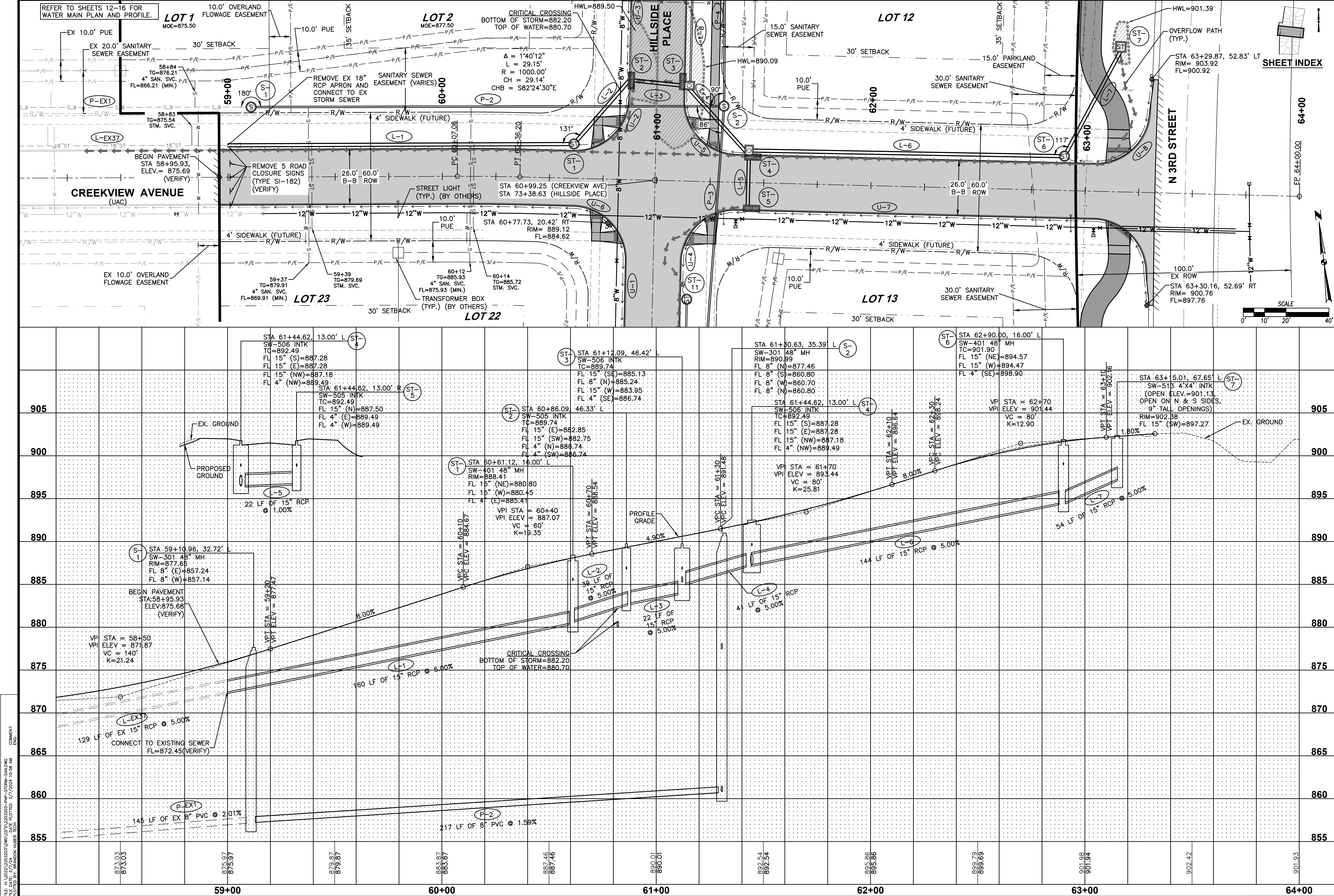
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04/20/23	FIRST SUBMITTAL

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 URBANDALE, IOWA 50322
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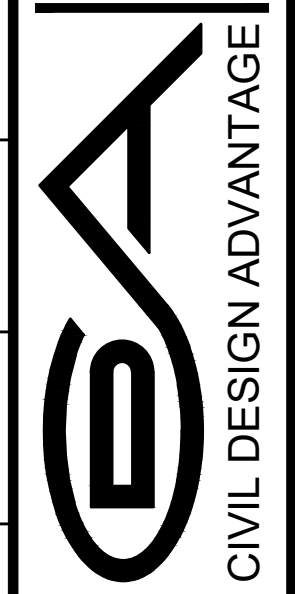
CREEKVIEW ESTATES - PLAT 3
EROSION AND SEDIMENT CONTROL PLAN
 POLK CITY, IOWA



COMMENT: 2203.203 SANITARY SEWER PLAN AND PROFILE
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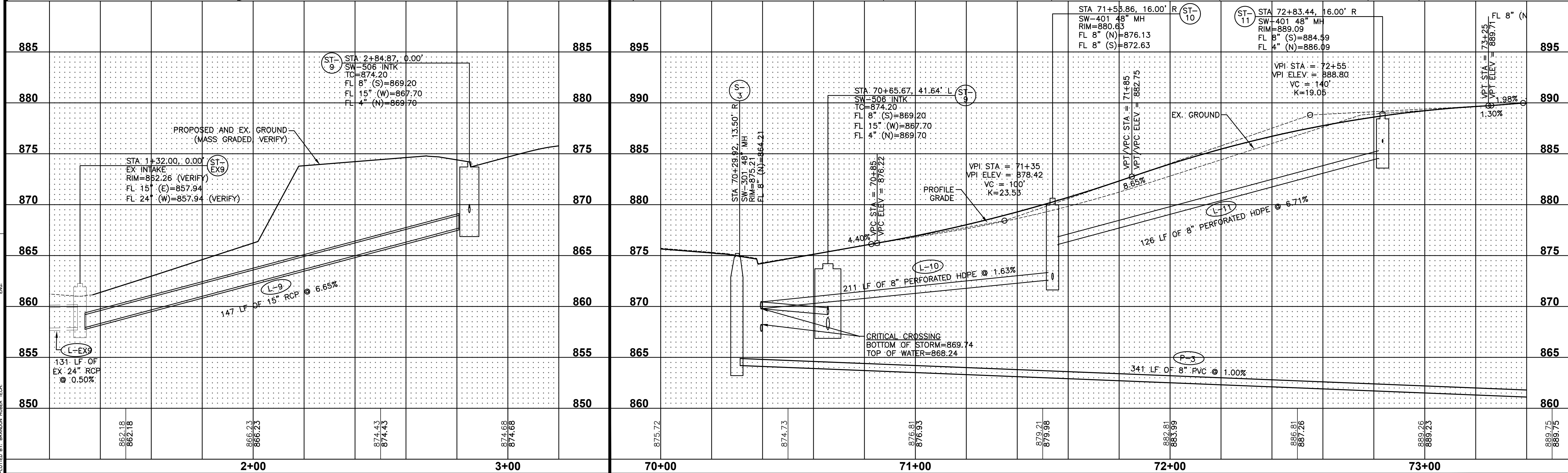
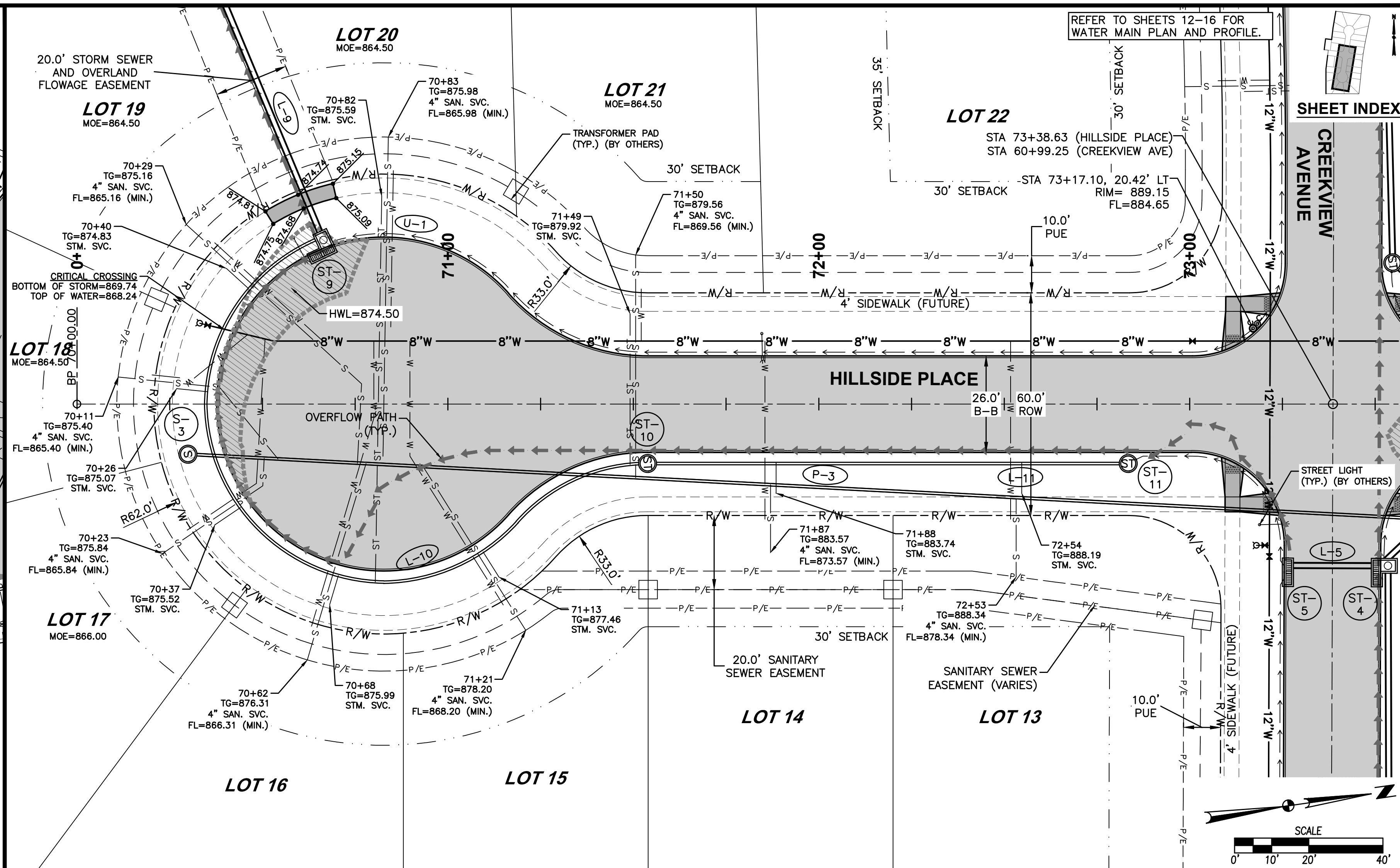
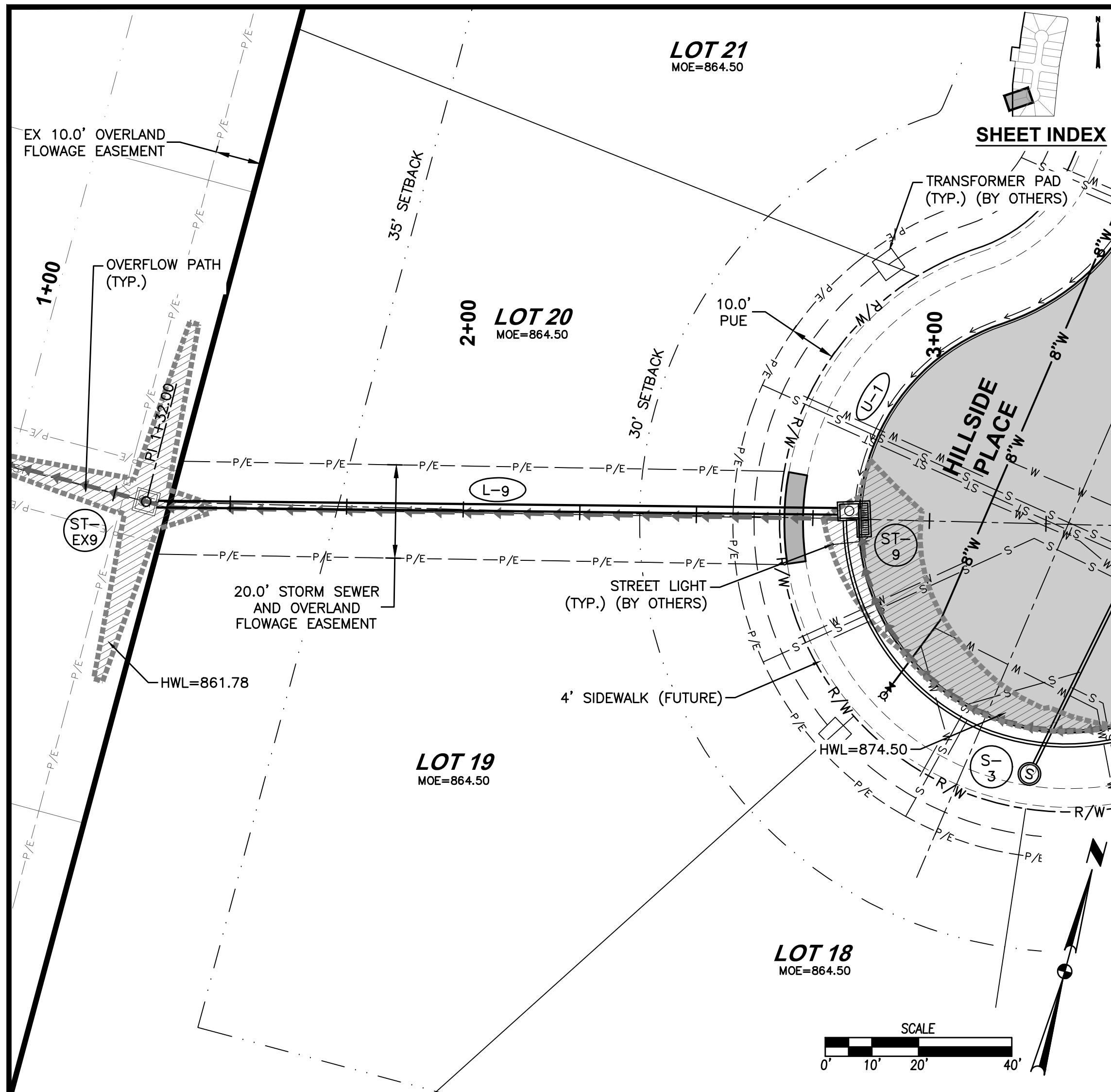
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CIVIL DESIGN ADVANTAGE
 POLK CITY, IOWA

CREEKVIEW ESTATES - PLAT 3
ROADWAY, STORM AND SANITARY
SEWER PLAN AND PROFILE



COMMENT: SEE SHEETS 12-16 FOR WATER MAIN PLAN AND PROFILE.
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 REVISION #2: 08/10/23
 REVISION #3: 07/05/23
 REVISION #4: 06/07/23
 REVISION #5: 04/20/23

DATE: 03/07/24

REVISION #1: 09/09/23

REVISION #2: 08/10/23

REVISION #3: 07/05/23

REVISION #4: 06/07/23

REVISION #5: 04/20/23

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CIVIL DESIGN ADVANTAGE

POLK CITY, IOWA

CREEKVIEW ESTATES - PLAT 3

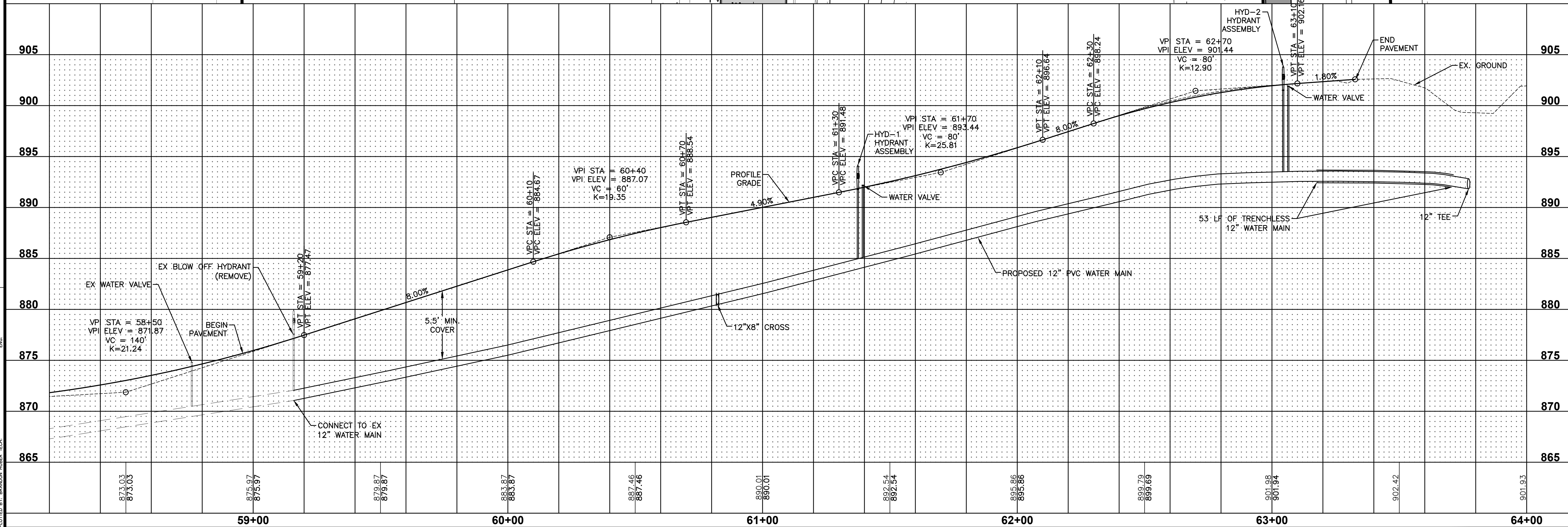
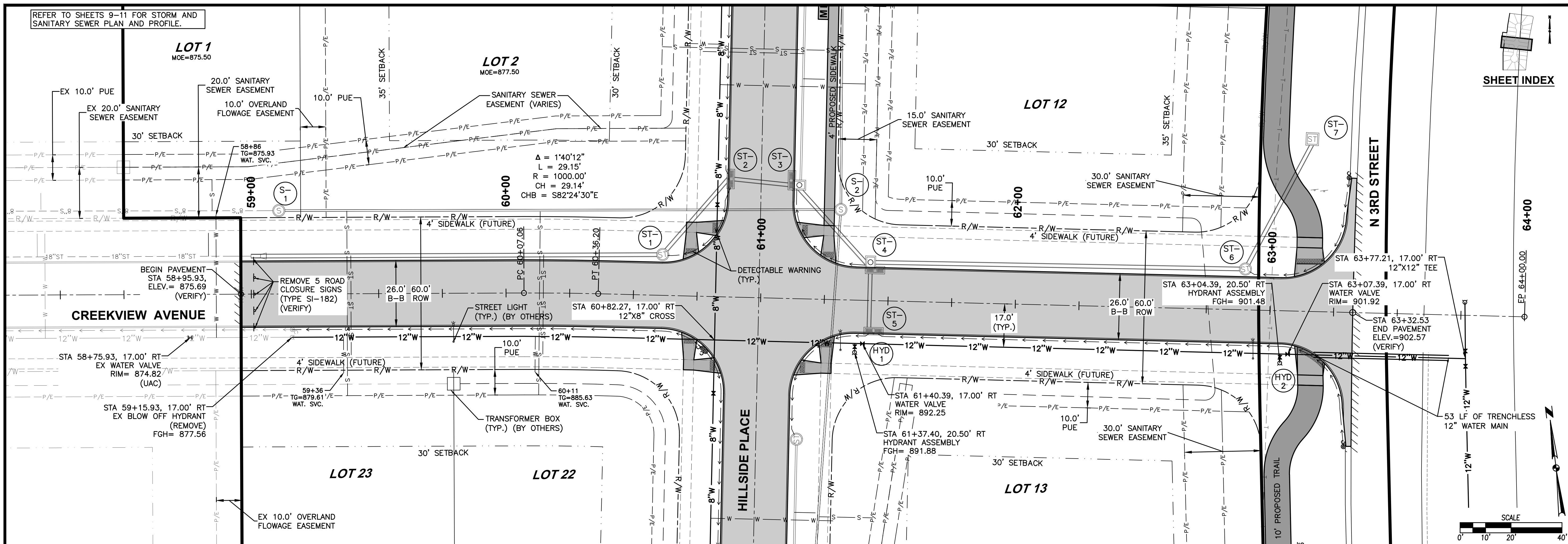
ROADWAY, STORM AND SANITARY

SEWER PLAN AND PROFILE

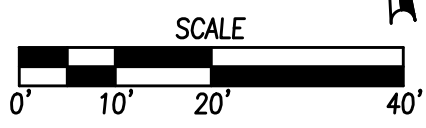
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REFER TO SHEETS 9-11 FOR STORM AND SANITARY SEWER PLAN AND PROFILE.

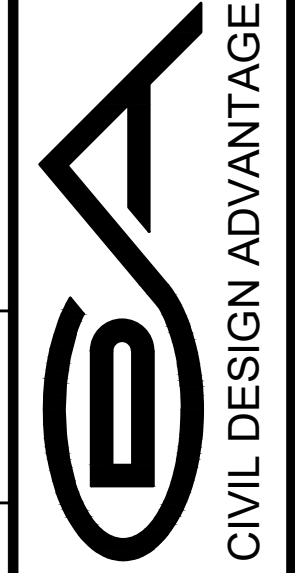


SHEET INDEX



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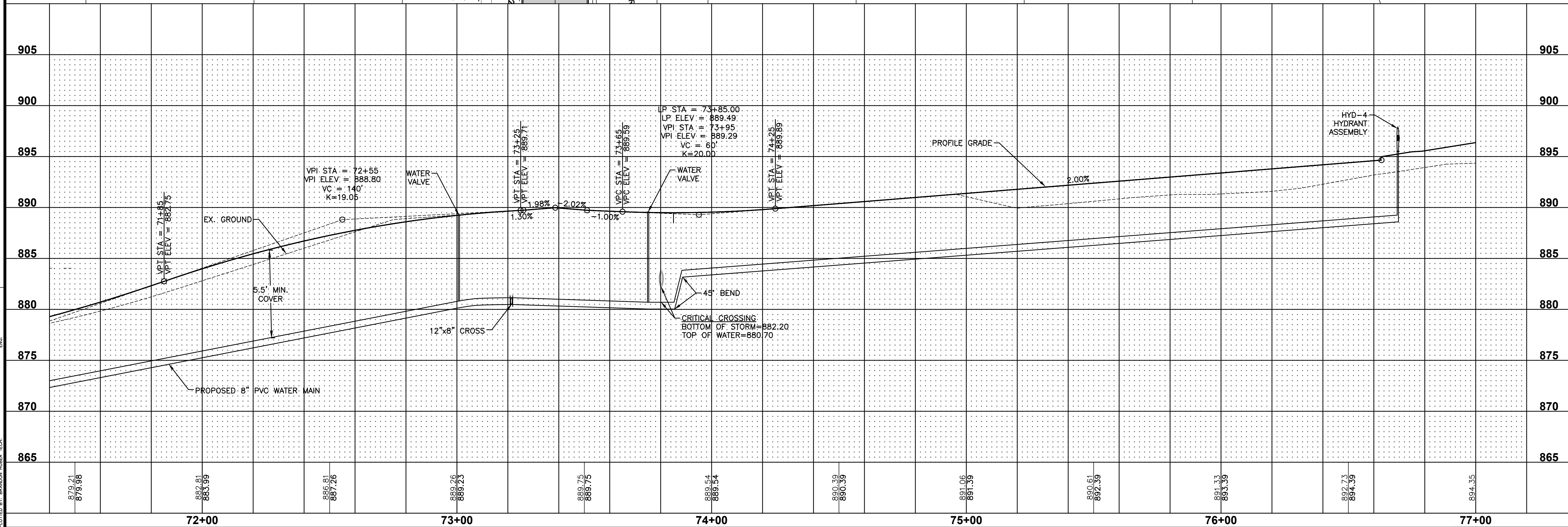
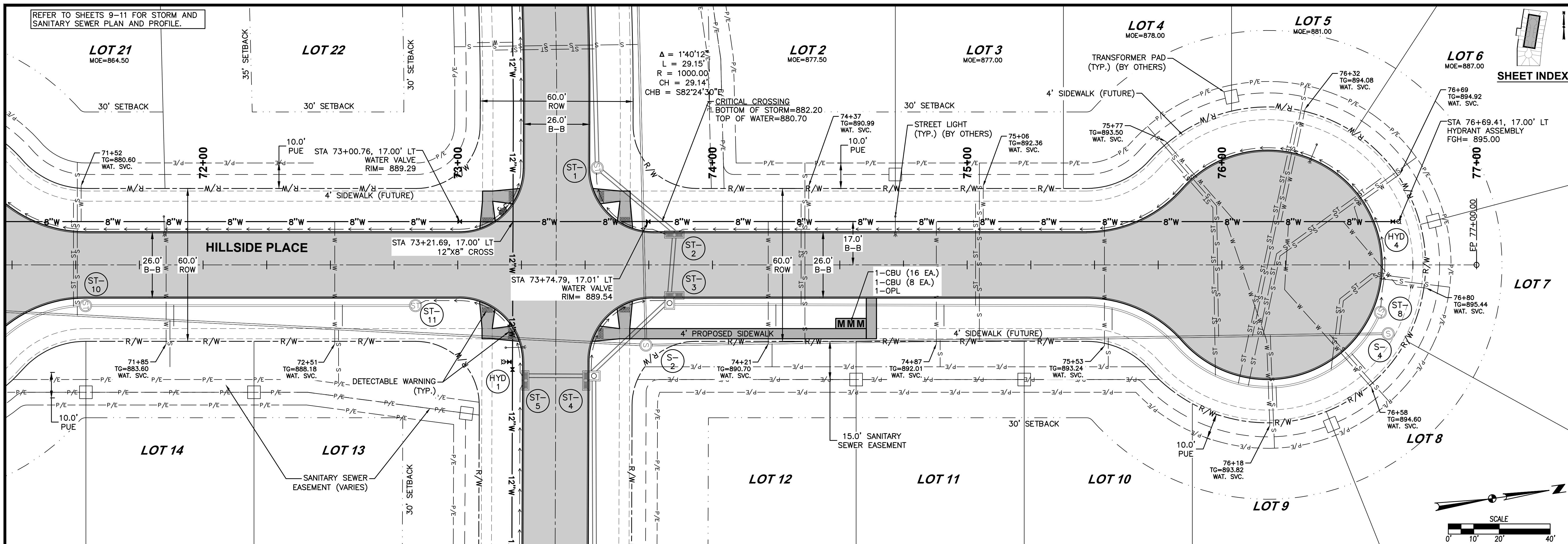


POLK CITY, IOWA

CREEKVIEW ESTATES - PLAT 3
WATER MAIN PLAN AND PROFILE

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REFER TO SHEETS 9-11 FOR STORM AND SANITARY SEWER PLAN AND PROFILE.



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DATE: 03/07/24

RE-CERTIFICATION SUBMITTAL: 09/09/23

REVISION #1: 08/10/23

SIGNED SUBMITTAL: 07/05/23

SECOND SUBMITTAL: 06/07/23

FIRST SUBMITTAL: 04/20/23

SHEET INDEX

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 URBANDALE, IOWA 50322
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TECH: TDT
 ENGINEER: JAT

E.A.
CIVIL DESIGN ADVANTAGE

CREEKVIEW ESTATES - PLAT 3
 WATER MAIN PLAN AND PROFILE

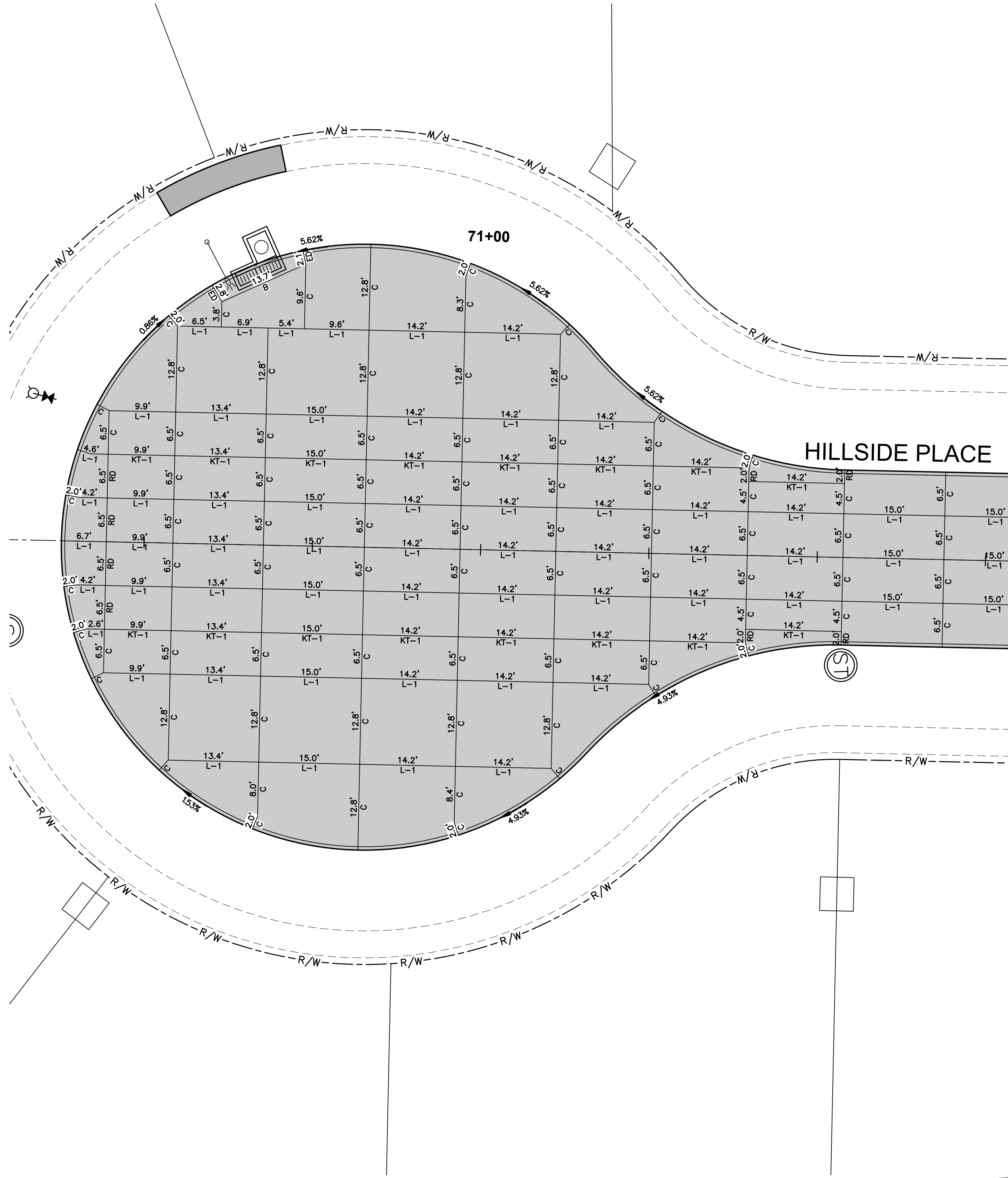
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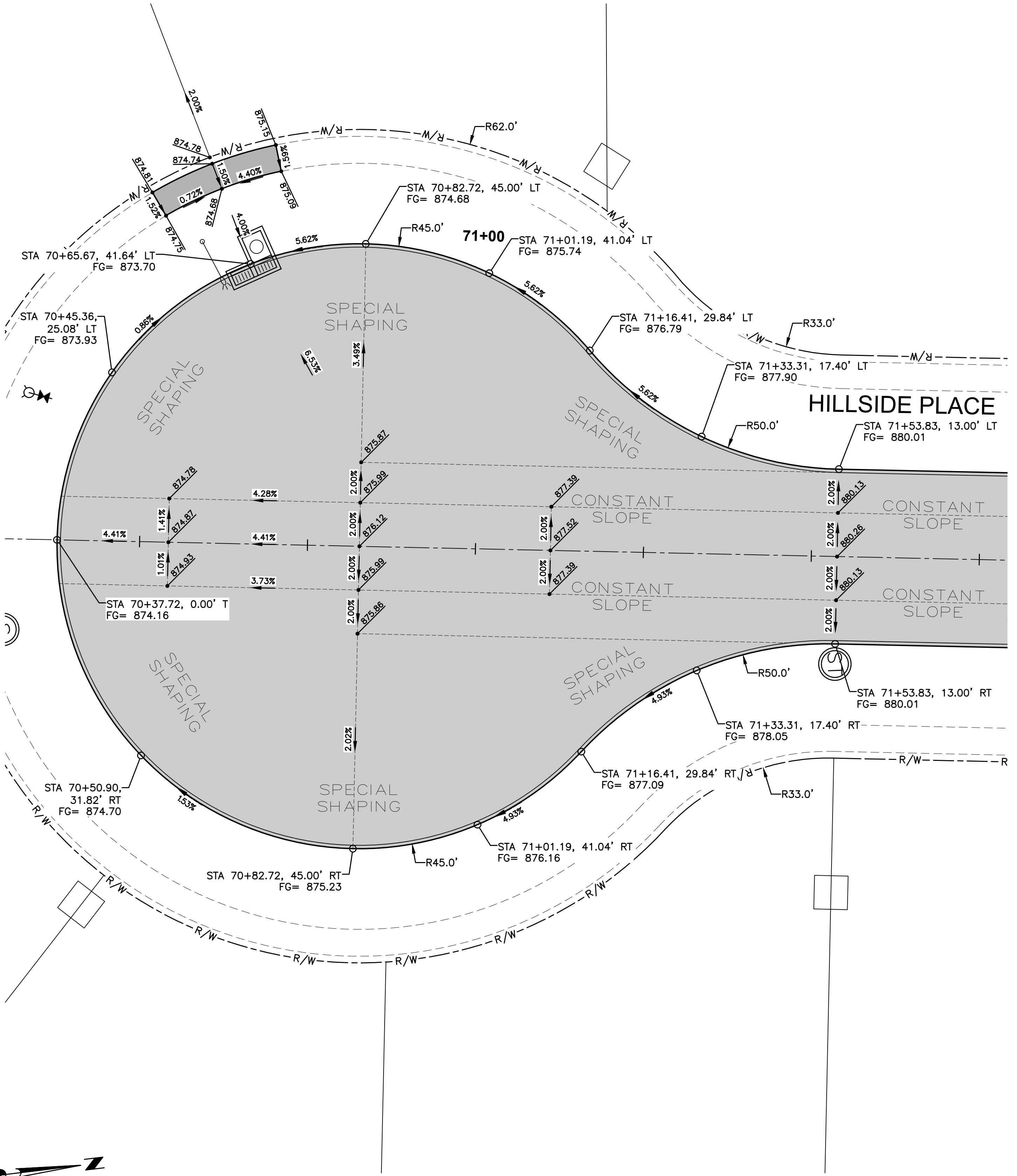
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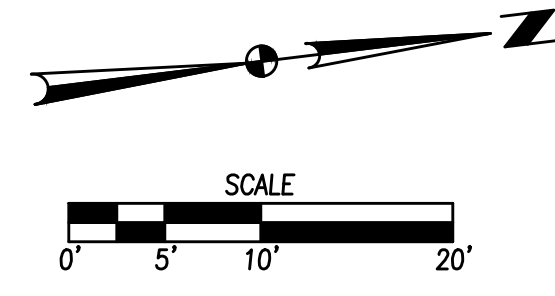
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JOINTING LAYOUT



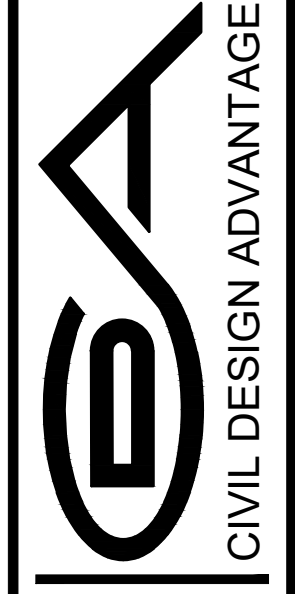
GEOMETRICS AND STAKING LAYOUT



- NOTES:
1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
 2. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
 3. CONTRACTOR TO SAW CUT A CLEAN EDGE ON EXISTING PAVEMENT AT ALL TIE-IN POINTS.
 4. DETECTABLE WARNING SHALL BE CHARCOAL GRAY FOR SIDEWALKS AND RED FOR TRAILS.

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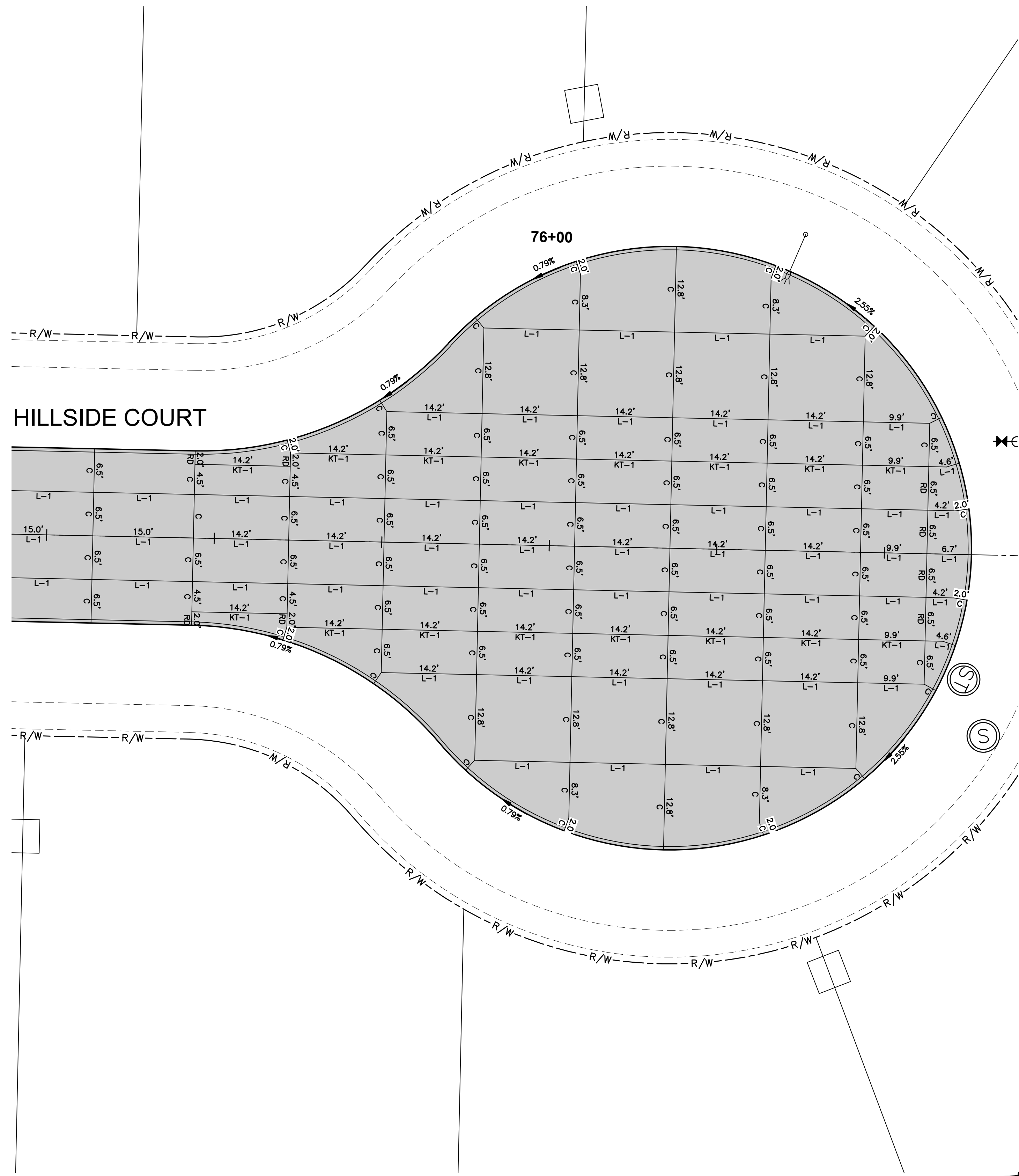
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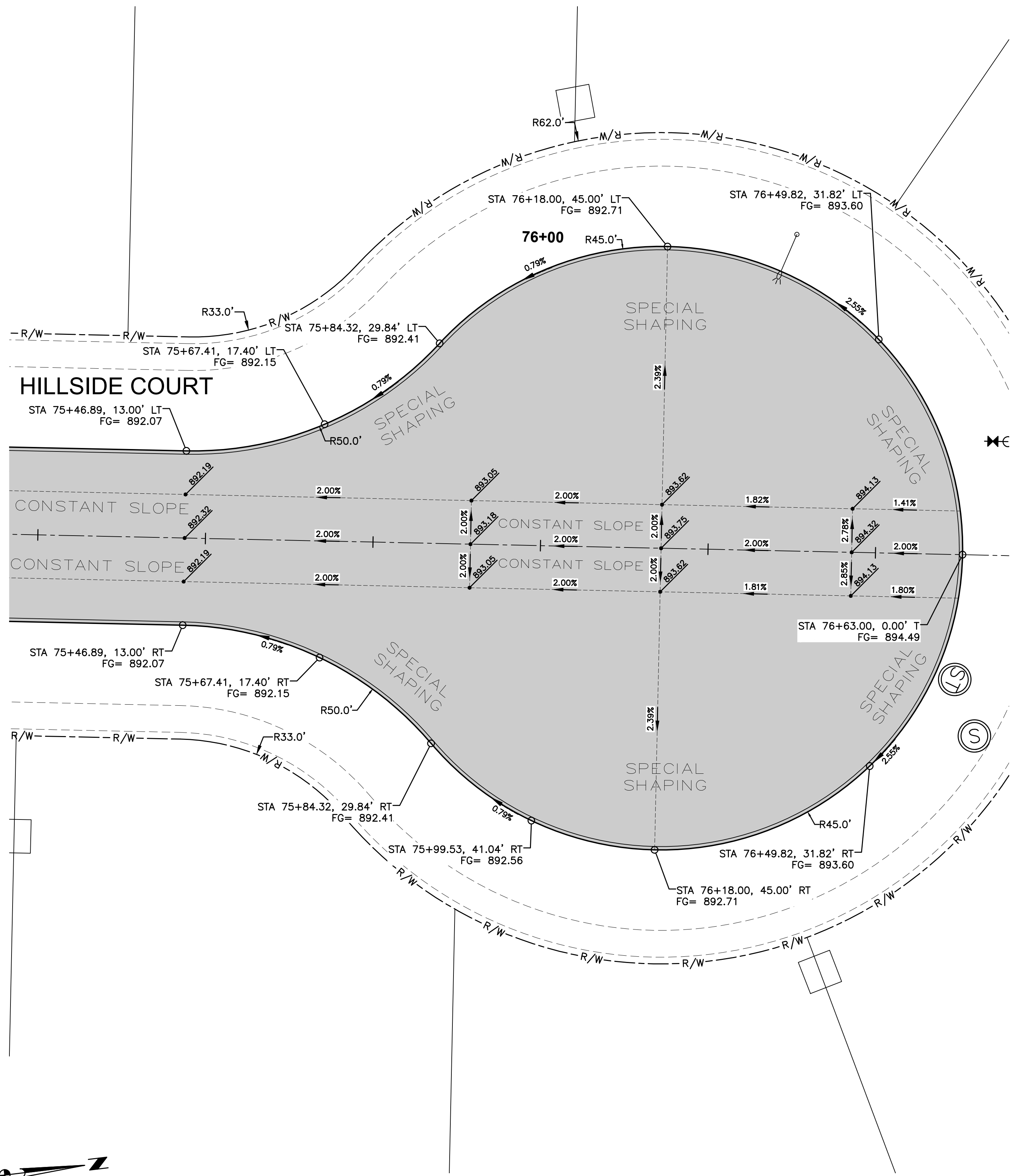
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CREEKVIEW ESTATES - PLAT 3
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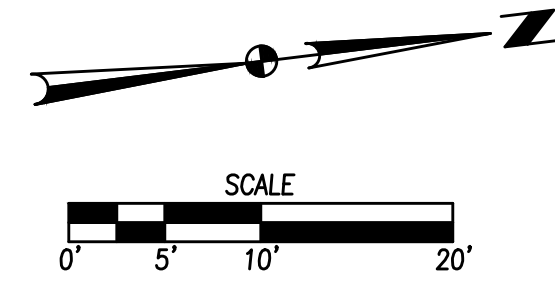
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JOINTING LAYOUT



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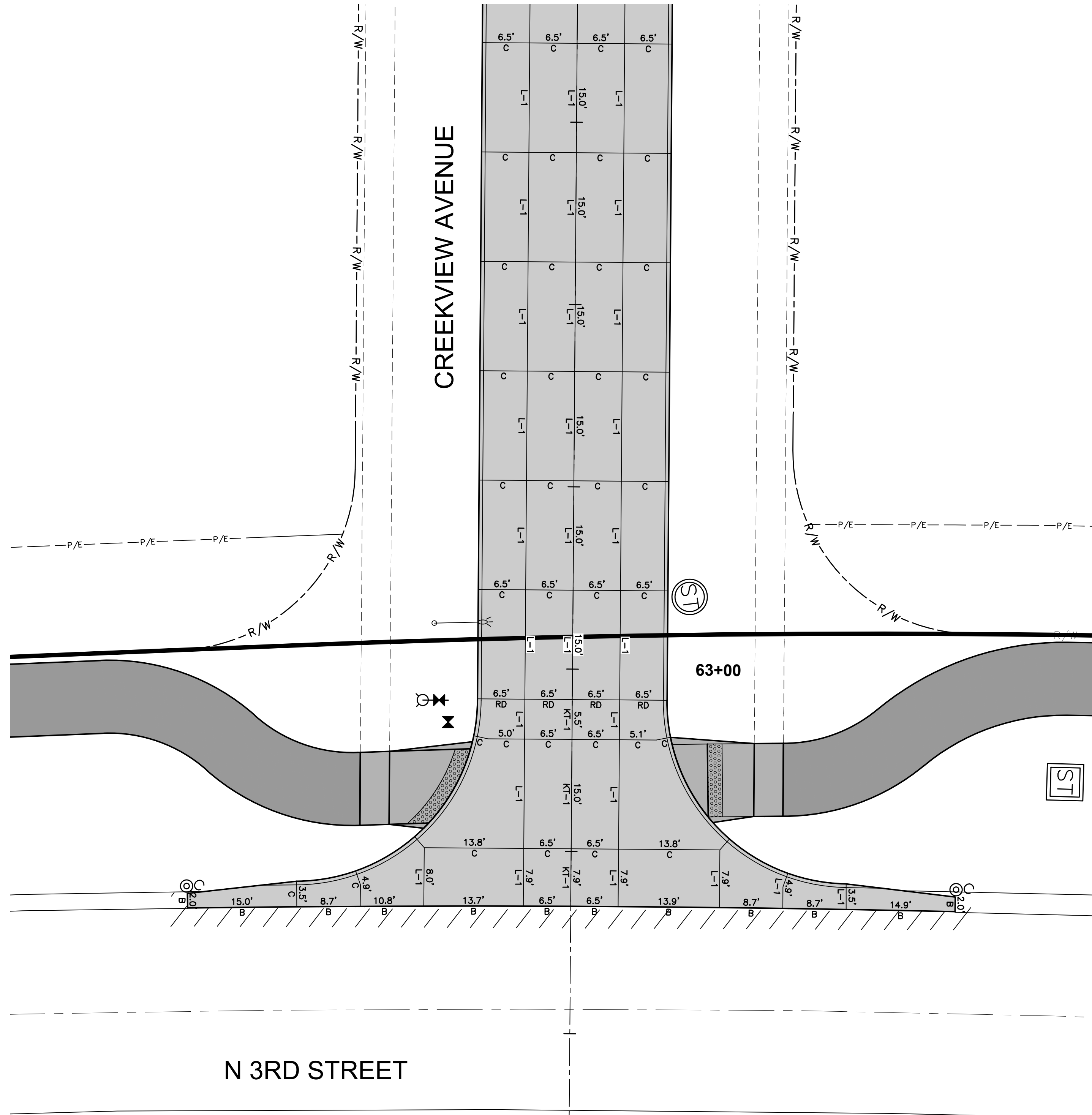
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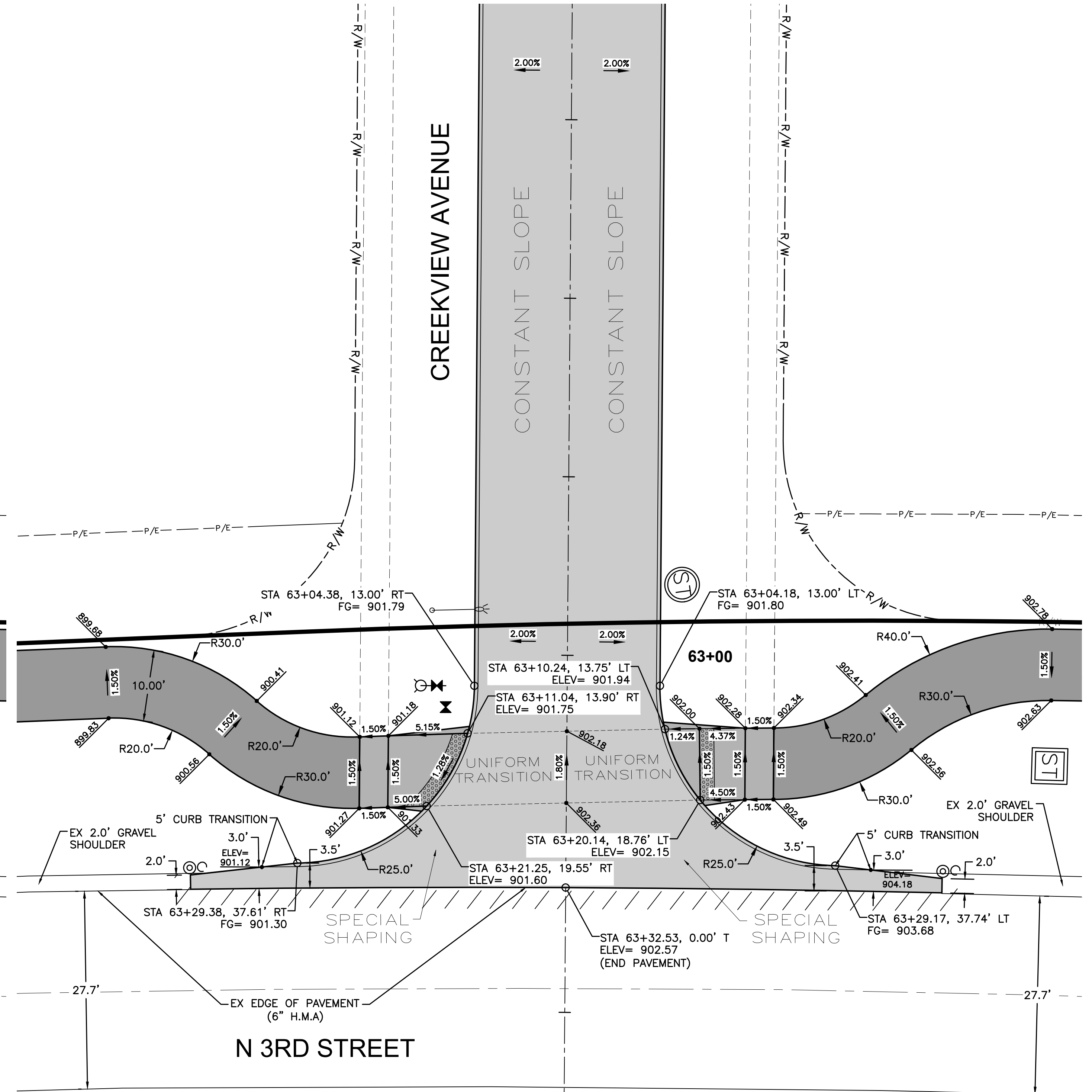
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INTERSECTION DETAILS

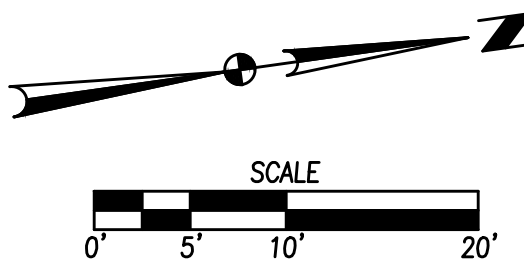
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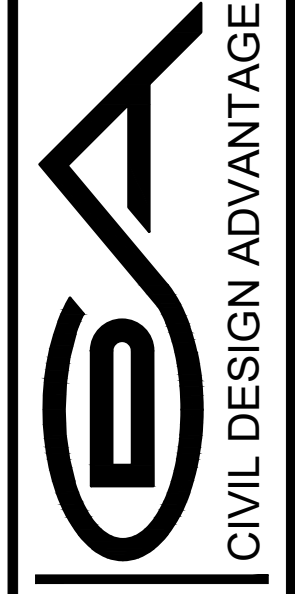
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 2. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
 3. CONTRACTOR TO SAW CUT A CLEAN EDGE ON EXISTING PAVEMENT AT ALL TIE-IN POINTS.
 4. DETECTABLE WARNING SHALL BE CHARCOAL GRAY FOR SIDEWALKS AND RED FOR TRAILS.
 5. CONTRACTOR SHALL RESTORE EXISTING SHOULDER ON N. 3RD STREET FOLLOWING CONSTRUCTION.

REVISIONS	DATE
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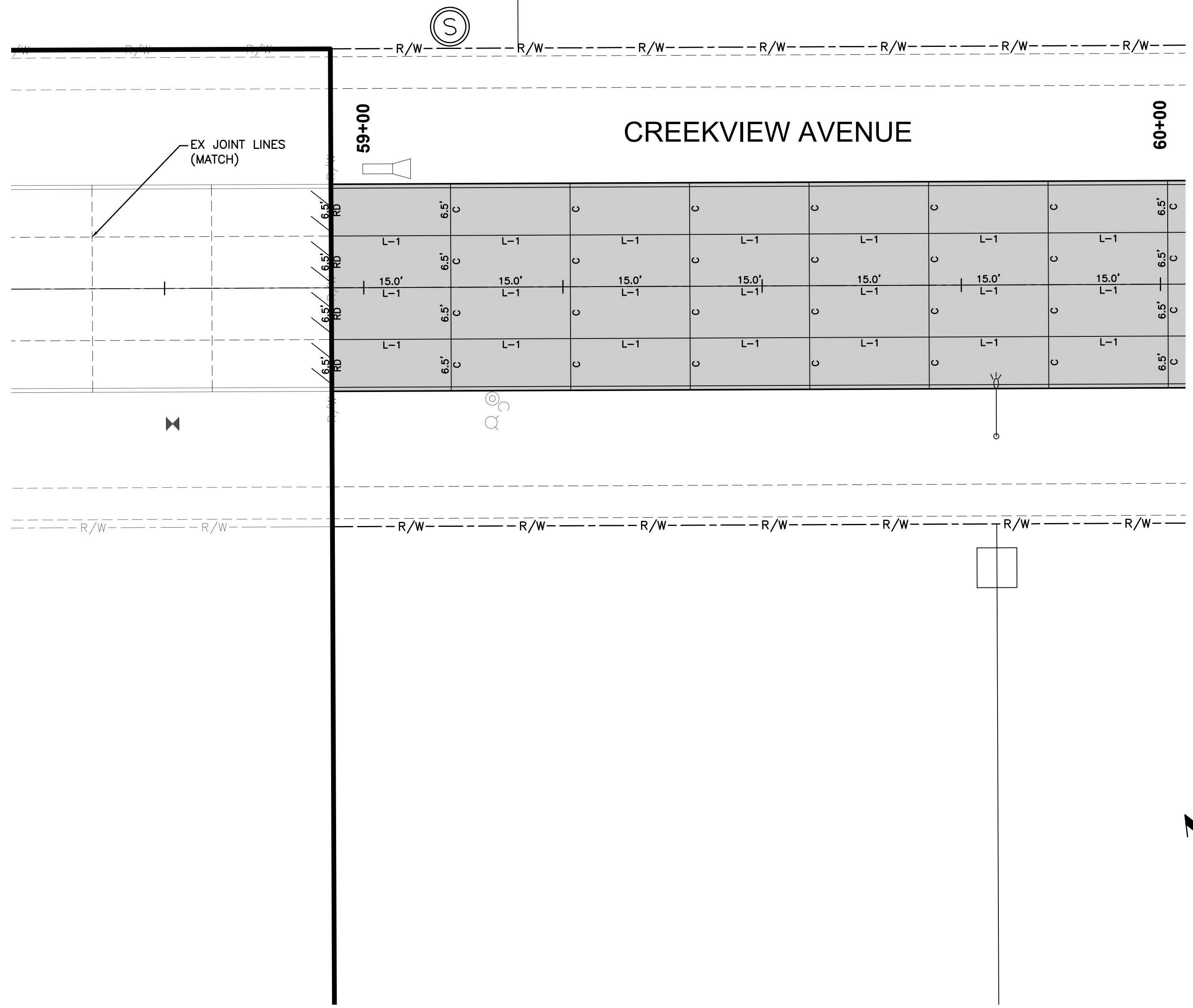
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 ENGINEER: JAT
 TECH: TDT



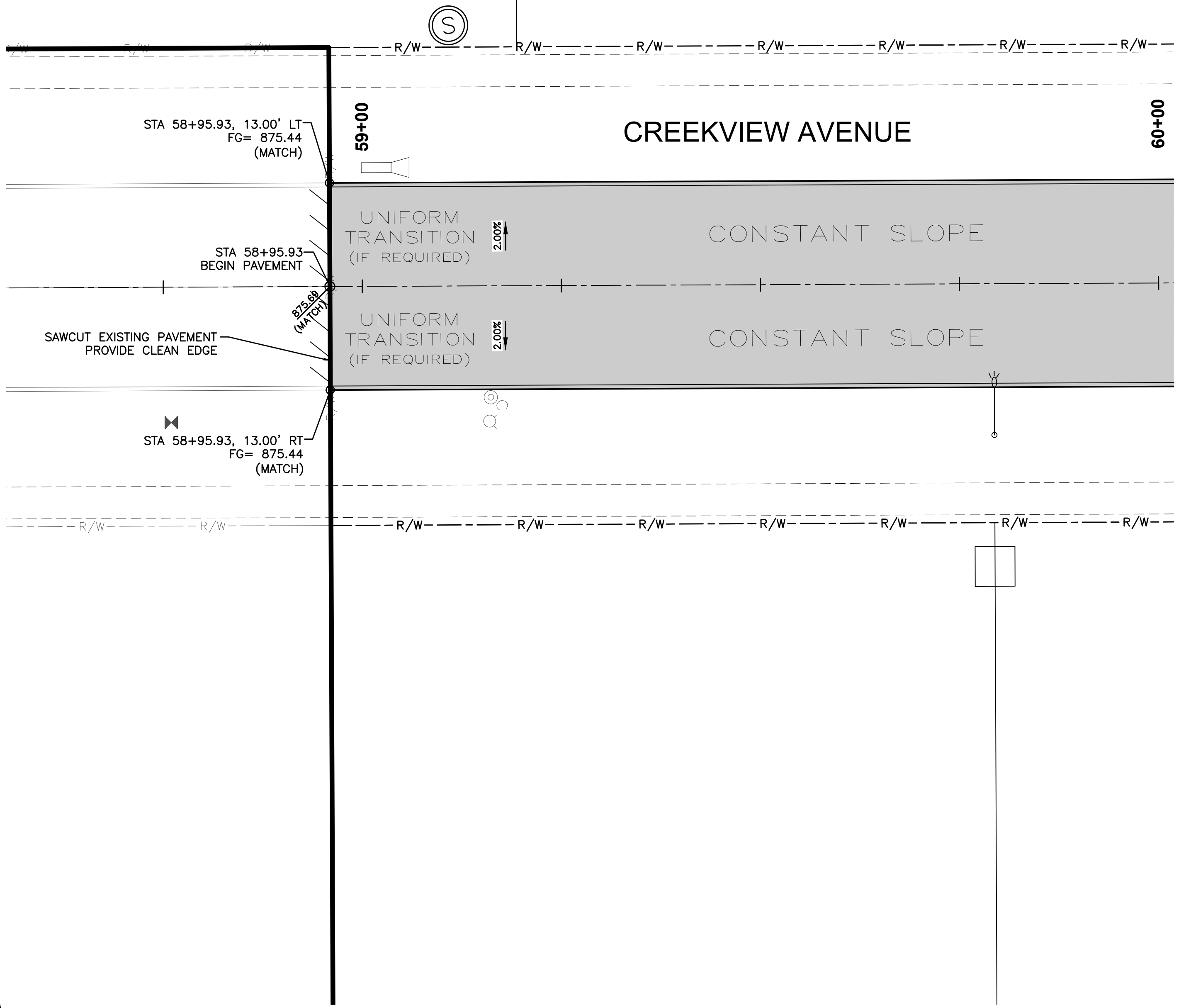
POLK CITY, IOWA

CREEKVIEW ESTATES - PLAT 3
INTERSECTION DETAILS

FILE: H:\2023\2203203\WORK\CD'S\2203203-INTERSECTION.DWG
 DATE PLOTTED: 3/7/2024 10:59 AM
 PLOTTED BY: BRANDON HUBER TECH



JOINTING LAYOUT

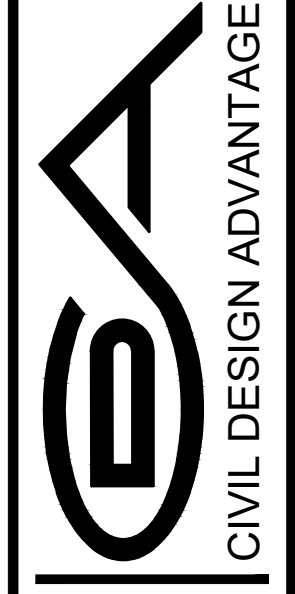


GEOMETRICS AND STAKING LAYOUT

- NOTES:**
1. ELEVATIONS SHOWN ARE TOP OF SLAB AND/OR FORM GRADE.
 2. REFER TO FIGURE 6010.514 FOR GRATE INTAKE BOXOUT FOR PCC PAVEMENT DETAILS.
 3. CONTRACTOR TO SAW CUT A CLEAN EDGE ON EXISTING PAVEMENT AT ALL TIE-IN POINTS.
 4. DETECTABLE WARNING SHALL BE CHARCOAL GRAY FOR SIDEWALKS AND RED FOR TRAILS.

REVISIONS	DATE
RE-CERTIFICATION SUBMITTAL	03/07/24
REVISION #1	09/09/23
SIGNED SUBMITTAL	08/10/23
THIRD SUBMITTAL	07/05/23
SECOND SUBMITTAL	06/07/23
FIRST SUBMITTAL	04/20/23

4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400 FAX: (515) 369-4410
 ENGINEER: JAT
 TECH: TDT



POLK CITY, IOWA

**CREEKVIEW ESTATES - PLAT 3
 INTERSECTION DETAILS**

CREEKVIEW ESTATES PLAT 1

CREEKVIEW ESTATES PLAT 2

CREEKVIEW ESTATES PLAT 3

HILLSIDE PLACE

NW HUGG DR

N 3RD ST

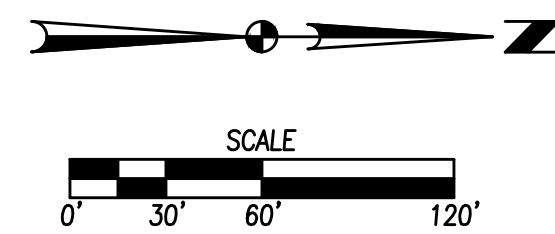


LANDSCAPING NOTES

1. LOCATE ALL UTILITIES BEFORE ANY PLANTING BEGINS.
2. THE MOST RECENT EDITION OF THE SUDAS STANDARD SPECIFICATIONS AND ALL CITY SUPPLEMENTALS, IF APPLICABLE, SHALL APPLY TO ALL WORK ON THIS PROJECT UNLESS OTHERWISE NOTED.
3. TYPE, SIZE, AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
4. ALL PLANT MATERIAL SHALL BE HEALTHY SPECIMENS WITHOUT DEFORMITIES, VOIDS AND OPEN SPACES, WITH WELL DEVELOPED BRANCH AND ROOT SYSTEMS; TRUE TO HEIGHT, SHAPE AND CHARACTER OF GROWTH OF THE SPECIES OR VARIETY.
5. SEED AS INDICATED. ALL OTHER DISTURBED AREAS TO BE SOODED AS DIRECTED BY OWNER.
6. BACKFILL TO TOP OF CURB. (MINUS 1 1/2" FOR SOD, IF REQ.)
7. WEED PREVENTER (PRE-EMERGENT) SHALL BE SPREAD OVER SOIL AFTER PLANTING AND BEFORE MULCHING IN ALL PLANTING BEDS PER MANUFACTURER'S RECOMMENDATIONS.
8. SHREDDED HARDWOOD MULCH SHALL BE PLACED AROUND ALL TREES, SHRUBS AND IN ALL PLANTING BEDS TO A (MIN) DEPTH OF 3".
9. ALL EDGING SHALL BE SPADE CUT EDGE.
10. PLANT QUANTITIES ARE SHOWN FOR INFORMATION ONLY. THE DRAWING SHALL PREVAIL IF ANY CONFLICTS ARISE.
11. ALL DEBRIS SPILLED IN THE PUBLIC R.O.W. SHALL BE PICKED UP BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
12. CONTRACTOR SHALL WARRANT ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
13. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN TO OWNER, IF REQUESTED. FOR APPROVAL.

PLANT SCHEDULE 3RD STREET

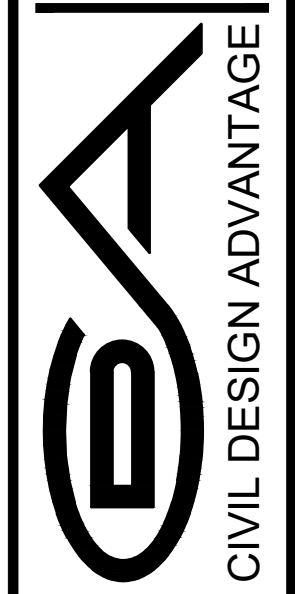
OVERSTORY TREES	QTY	COMMON NAME	BOTANICAL NAME	CONDITION
AA2	8	Autumn Splendor Sugar Maple	Acer saccharum 'Autumn Splendor'	B&B, 1.5"
QR	5	Red Oak	Quercus rubra	B&B, 1.5"
TC	8	Corinthian Littleleaf Linden	Tilia cordata 'Corzam' TM	B&B, 1.5"



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 COMMENT: 3/7/2024 10:59 AM
 PLOTTED BY: RANDON HUBER TECH

REVISIONS	DATE
RE-CERTIFICATION SUBMITTAL	03/07/24
REVISION #1	09/09/23
SIGNED SUBMITTAL	08/10/23
THIRD SUBMITTAL	07/05/23
SECOND SUBMITTAL	06/07/22
FIRST SUBMITTAL	04/20/22

4121 NW URBANDALE DRIVE
 URBANDALE, IOWA 50322
 PHONE: (515) 369-4400 FAX: (515) 369-4410
 ENGINEER: JAT TECH: TDT



CREEKVIEW ESTATES - PLAT 3 LANDSCAPE PLAN



CIVIL DESIGN ADVANTAGE

4121 Urbandale Drive, Urbandale, IA 50322

PROJECT: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Storm Water Calculations DATE: 11/13/19 COMP. BY: TDT

Project Description:

Existing Site Conditions

Creekview Estates Plat 3 is located at the southwest corner of NW Hugg Drive and N. 3rd Street, in Polk City, Iowa. The existing site consists of land that was previously utilized as agricultural row crops along with a residential property bordering the northern side of the site. To the west, Creekview Estates Plats 1 and 2 have been completed with home construction underway. The existing grades generally slope southwest to an existing creek running along the western border of the site. Refer to Creekview Estates Plat 1 for the time of concentration, existing drainage map and Hydraflow Hydrographs analysis for detailed analysis of the existing site conditions.

Proposed Site Conditions

The proposed site improvements include the construction of 23 single family residential lots, along with associated roadways and utilities. Grades will generally follow existing pattern. Detention for the site will be provided in one existing wet bottom detention pond (EX POND 1). Refer to Creekview Estates Plat 1 Storm Water Management Plan for the post-development runoff analysis drainage area map and detailed runoff calculations of the drainage basin.

Storm Water Analysis:

Detention Analysis

The detention basin was designed with Hydraflow Hydrographs utilizing the SCS Method for basin routing. For this analysis, Hydrologic Group B was used. Refer to the attached Hydrologic Soil Map report for soils information. Detention is proposed in one wet bottom basin to detain for storm water runoff from the site. Refer to the attached drainage area maps and Hydraflow Hydrographs reports for a detailed analysis of each drainage basin.

Storm Sewer Analysis

Storm sewer pipes were designed to convey the 10-year post-developed storm event with overflow paths for 100-year storm events. The Rational Method was used to determine the flow rate for each drainage area. Manning's equation was used to size pipes. Refer to the attached storm sewer map for drainage areas and storm sewer configuration. The curb intake capacities were verified for both the 10- and the 100-year storm events. Allowable depth and inundated area for the local street was limited to the following:

Minor Event: No curb overtopping. Flow may spread to the crown of the street.

Major Event: The ponded area should not exceed the street right-of-way and the depth of the water above the street crown should not exceed 6 inches.

Hydraulic Grade Line (HGL): The minor storm event (10-year) is designed to convey runoff peak flows without surcharging and shall be contained within the pipe. The major storm event (100-year) HGL is analyzed and illustrated as a closed conduit system. Surcharging is possible during major storm events. However, once pressure flow surcharges the system, an overflow and overland flowage route is provided.

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.
- * A time of concentration of 10 minutes was assumed for the Post-Development runoff calculations.
- * The runoff coefficients used to determine flow rates for the site were 0.60 for the 10 year storm event and 0.70 for the 100 year storm event.



CIVIL DESIGN ADVANTAGE

4121 Urbandale Drive, Urbandale, IA 50322

PROJECT: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Storm Water Calculations DATE: 06/07/22

MOE Calculations

LOT 1

Channel Elevation = $874.25 + 1.00 = 875.25$

MOE Lot 1 = 875.50

LOT 2

Channel Elevation = $876.19 + 1.00 = 877.19$

MOE Lot 2 = 877.50

LOT 3

Channel Elevation = $875.72 + 1.00 = 876.72$

MOE Lot 3 = 877.00

LOT 4

Channel Elevation = $876.53 + 1.00 = 877.53$

MOE Lot 4 = 878.00

LOT 5

Channel Elevation = $879.92 + 1.00 = 880.92$

MOE Lot 5 = 881.00

LOT 6

Channel Elevation = $885.84 + 1.00 = 886.84$

MOE Lot 6 = 887.00

LOT 17

Channel Elevation = $864.80 + 1.00 = 865.80$

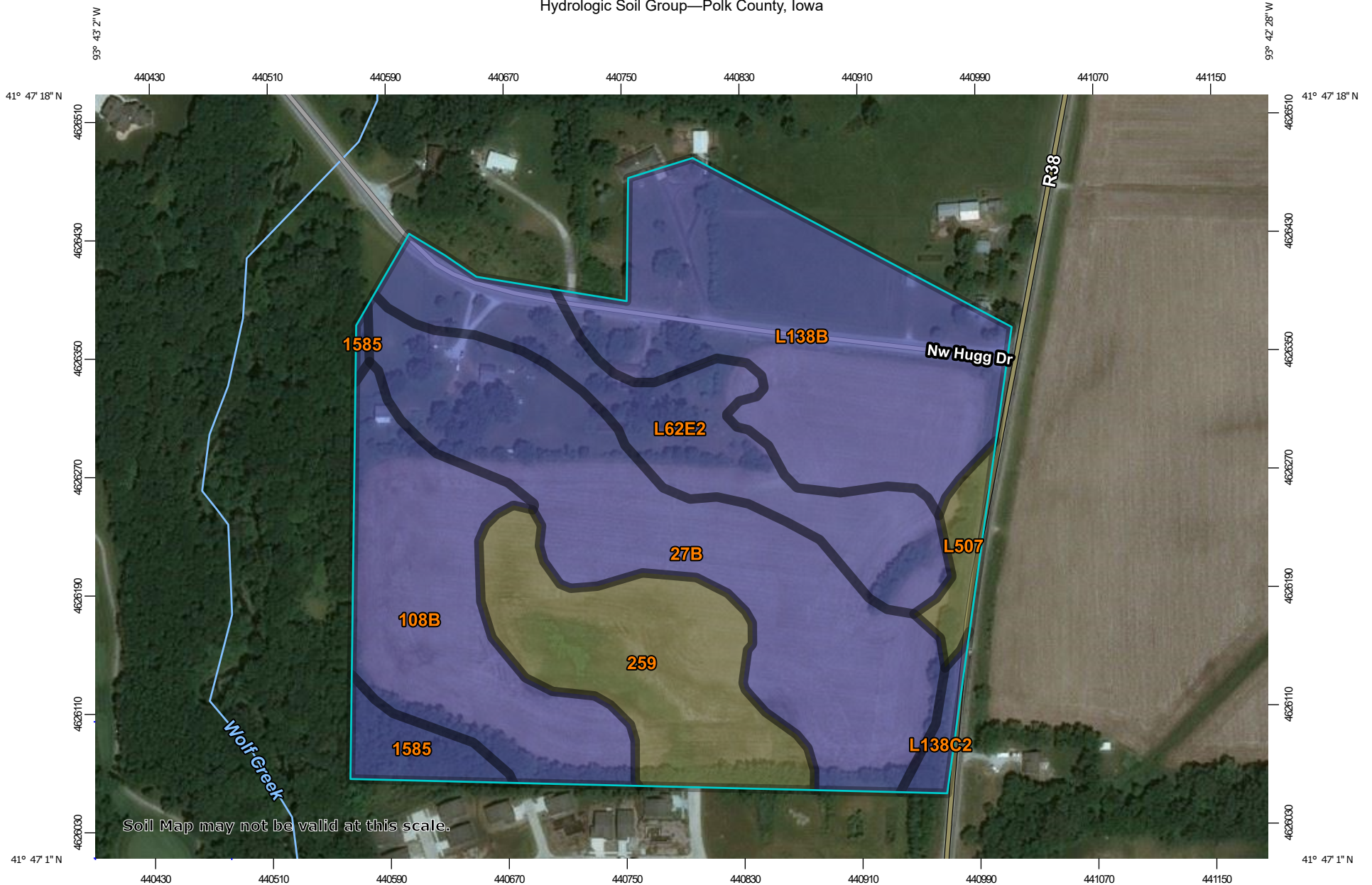
MOE Lot 17 = 866.00

LOTS 18 - 21

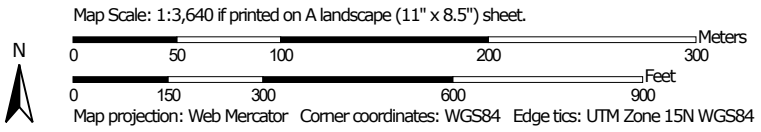
Overflow Elevation = $863.14 + 1.00 = 864.14$

MOE Lot 18-21 = 864.50

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 20, Sep 11, 2018

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
27B	Terril loam, 2 to 6 percent slopes	B	9.7	25.2%
108B	Wadena loam, 2 to 6 percent slopes	B	6.1	15.8%
259	Biscay clay loam, 0 to 2 percent slopes	C/D	5.4	14.0%
1585	Spillville-Coland complex, channeled, 0 to 2 percent slopes	B	1.1	2.8%
L62E2	Storden loam, Bemis moraine, 10 to 22 percent slopes, moderately eroded	B	5.3	13.8%
L138B	Clarion loam, Bemis moraine, 2 to 6 percent slopes	B	9.7	25.1%
L138C2	Clarion loam, Bemis moraine, 6 to 10 percent slopes, moderately eroded	B	0.4	1.1%
L507	Canisteo clay loam, Bemis moraine, 0 to 2 percent slopes	C/D	0.8	2.1%
Totals for Area of Interest			38.5	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.

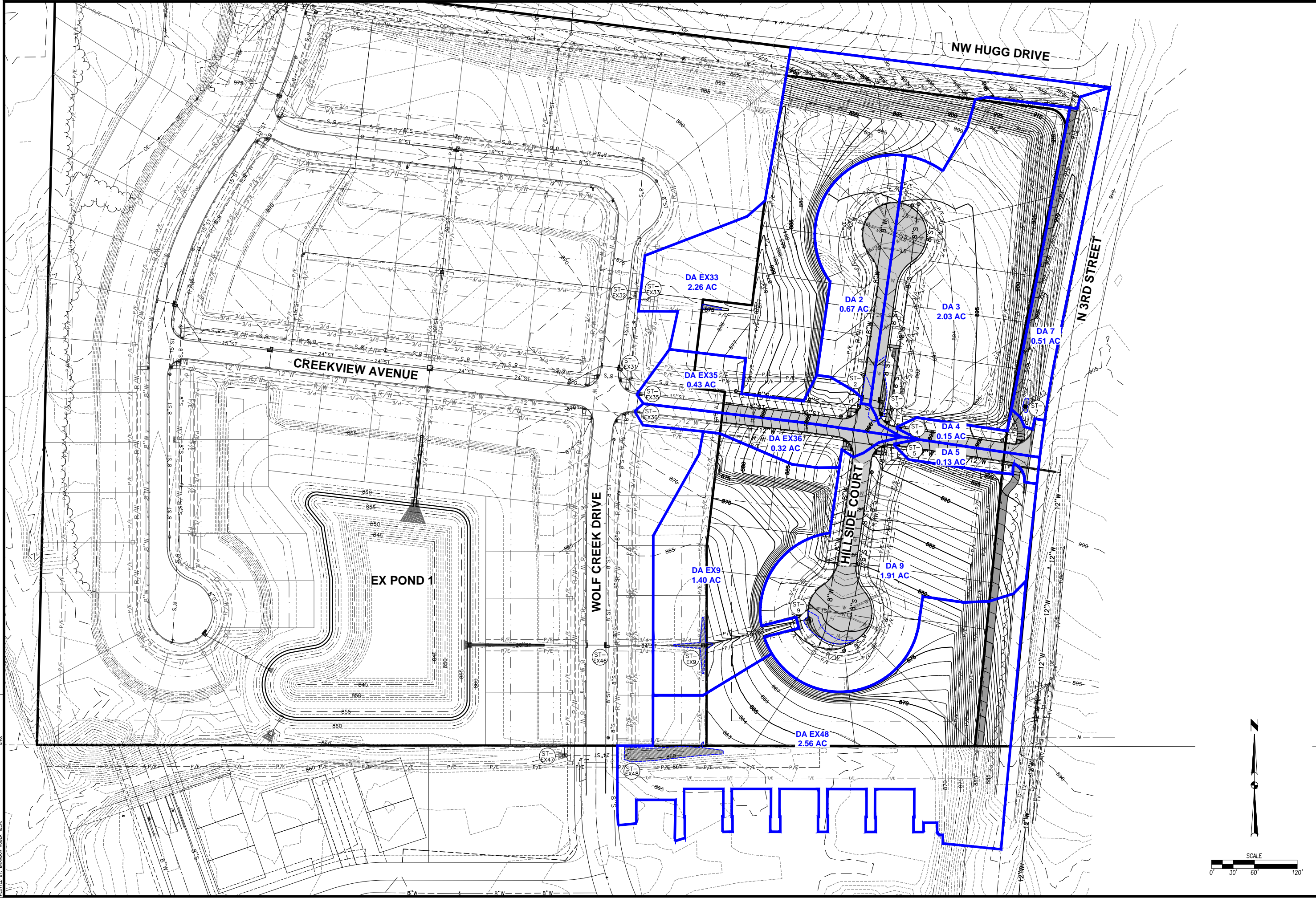
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

FILE: H:\2024\2203203\2203203-SWMP.DWG
DATE: 03/07/2024 10:23 AM
PLOTTER: HP DesignJet T1200
PLOTTER: BR. BRANSON, HUBER, TEX.



DATE: 03/07/2024	
REVISIONS:	
RE-CERTIFICATION SUBMITTAL	SIGNED ON: 08/10/2024
4121 NW URBANDALE DRIVE URBANDALE, IA 50322 PHONE: (515) 369-4400	
ENGINEER: JAT	TECH:

CREEKVIEW ESTATES PLAT 3
STORM SEWER MAP

CIVIL DESIGN ADVANTAGE
POLK CITY, IOWA

2203.203

Project: Creekview Estates Plat 3
 Proj. No.: 2203.203
 Designed: TDT
 Date: 6/7/2022

List of Intakes and Utility Accesses				
Structure Number ST-#	Location	Type or Standard Road Plan	FL / TC / RIM Elevation	Note
ST- EX31		EX SW-506		
ST- EX35		EX SW-506		
ST- EX36		EX SW-505		
ST- 1		SW-401		
ST- 2		SW-505		
ST- 3		SW-506		
ST- 4		SW-506		
ST- 5		SW-505		
ST- 6		SW-401		
ST- 7		SW-513		
ST- 8		SW-401		
ST- EX46		EX SW-506		
ST- EX9		EX SW-513		
ST- 9		SW-506		
ST- 10		SW-401		
ST- 11		SW-401		
ST- EX32		EX SW-401		
ST- EX33		EX SW-512		
ST- EX47		24" RCP APRON		
ST- EX48		24" RCP APRON		1

Notes: 1. Culvert analysis provided with this report

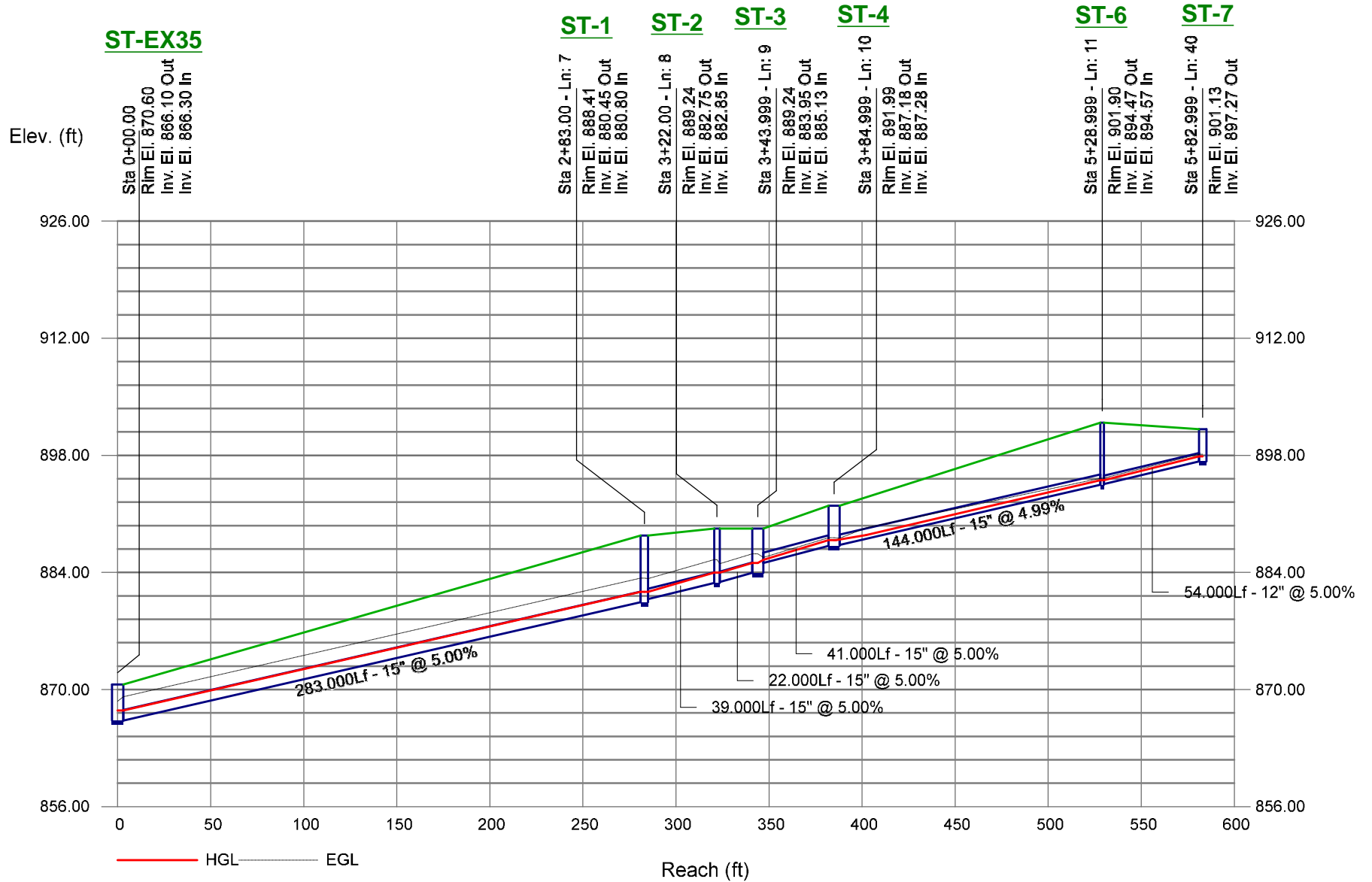
List of Storm Sewer Pipe									
Pipe Number L-#	Structure		Storm Sewer				FL(out)	FI(in)	Note
	To ST-#	From ST-#	Material	Diameter inches	Length feet	Slope %			
L- EX35	ST- EX31	ST- EX35	RCP	18	41	2.05			
L- EX36	ST- EX35	ST- EX36	RCP	15	22	1.00			
L- 1	ST- EX35	ST- 1	RCP	15	289	5.00			
L- 2	ST- 1	ST- 2	RCP	15	39	5.00			
L- 3	ST- 2	ST- 3	RCP	15	22	5.00			
L- 4	ST- 3	ST- 4	RCP	15	41	5.00			
L- 5	ST- 4	ST- 5	RCP	15	22	1.00			
L- 6	ST- 4	ST- 6	RCP	15	144	5.00			
L- 7	ST- 6	ST- 7	RCP	15	54	5.00			
L- 8	ST- 3	ST- 8	HDPE	8	297	1.66			
L- EX9	ST- EX46	ST- EX9	RCP	24	131	0.50			
L- 9	ST- EX9	ST- 9	RCP	15	147	6.65			
L- 10	ST- 9	ST- 10	HDPE	8	210	2.88			
L- 11	ST- 10	ST- 11	HDPE	8	126	6.87			
L- EX33	ST- EX32	ST- EX33	RCP	15	23	3.22			
L- EX48	ST- EX48	ST- EX48	RCP	24	93	0.57			

Notes:

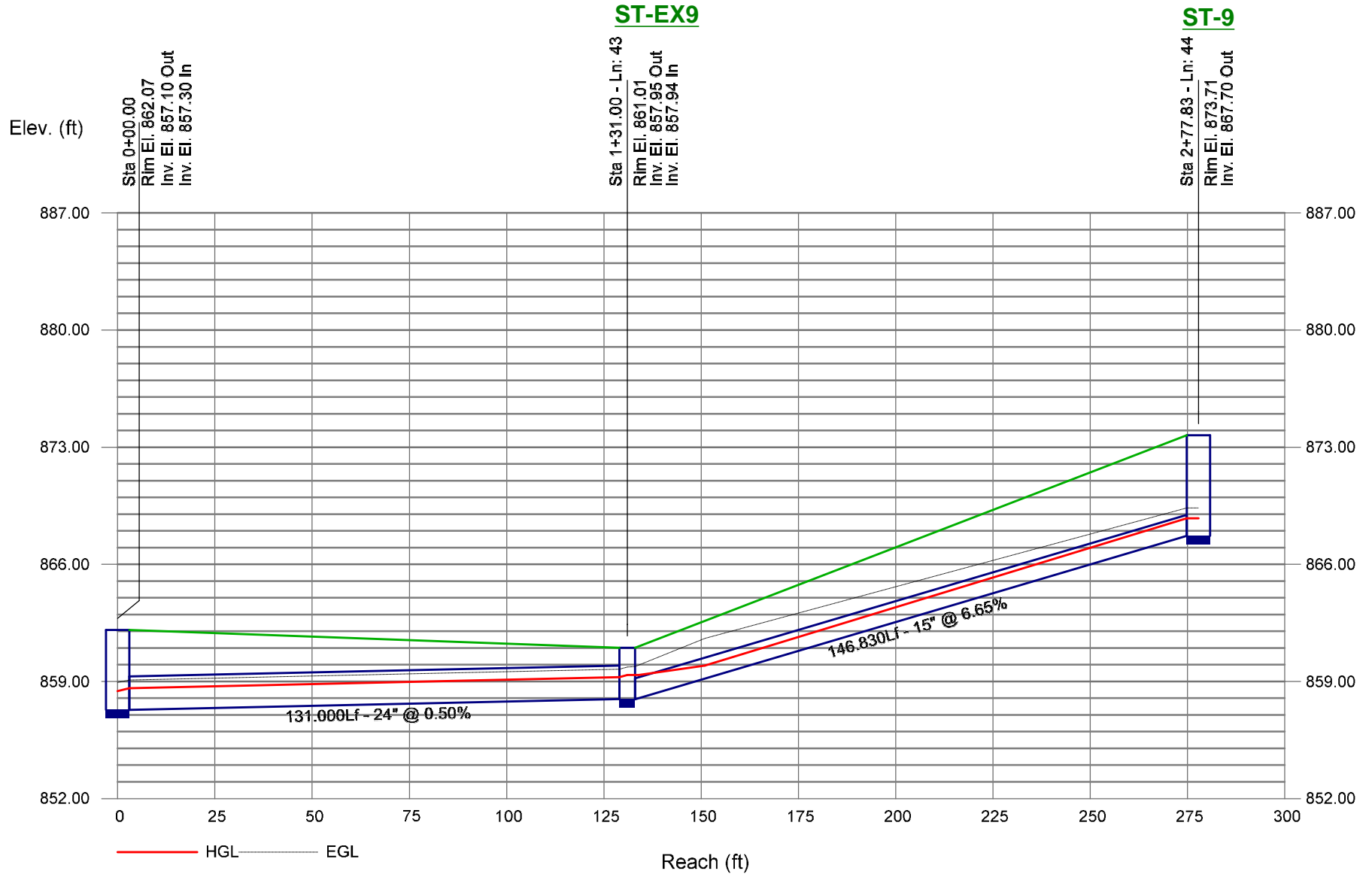
Storm Sewer Pipe Design Information														
Manning's n -		RCP = 0.013			PVC = 0.011			Design Storm = 10 year					Note	
Drainage Area A, acres	C	Equiv. Area CA	Accumulated Equiv. Area ΣCA	Time of Conc. min.	Rainfall Intensity in/hr	Storm Runoff cfs	Sump Lines units	Sump Flow cfs	Pipe Capacity		Flow Velocity			Travel Time min.
									Design cfs	Full Flow cfs	Design ft/sec	Full Flow ft/sec		
0.43	0.6	0.258	2.544	12.2	5.33	13.55	4	0.04	13.60	15.04	9.64	8.51	0.07	
0.32	0.6	0.192	0.192	10.0	5.92	1.14			1.14	6.46	4.00	5.26	0.09	
0.00	0.6	0.000	2.094	11.8	5.41	11.34			11.34	14.44	13.00	11.77	0.37	
0.67	0.6	0.402	2.094	11.8	5.43	11.36			11.36	14.44	13.01	11.77	0.05	
2.03	0.6	1.218	1.692	11.8	5.43	9.19			9.19	14.44	12.50	11.77	0.03	
0.15	0.6	0.090	0.474	11.7	5.45	2.58			2.58	14.44	8.98	11.77	0.08	
0.13	0.6	0.078	0.078	10.0	5.92	0.46			0.46	6.46	3.00	5.26	0.12	
0.00	0.6	0.000	0.306	10.1	5.89	1.80			1.80	14.44	8.06	11.77	0.30	
0.51	0.6	0.306	0.306	10.0	5.92	1.81			1.81	14.44	8.08	11.77	0.11	
0.00	0.6	0.000	0.000	10.0	5.92	0.00	11	0.12	0.12	1.84	2.93	5.27	1.69	
1.40	0.6	0.840	1.986	10.2	5.86	11.64			11.64	16.00	5.55	5.09	0.39	
1.91	0.6	1.146	1.146	10.0	5.92	6.78			6.78	16.66	12.83	13.57	0.19	
0.00	0.6	0.000	0.000	10.0	5.92	0.00	6	0.07	0.07	2.42	2.97	6.94	1.18	
0.00	0.6	0.000	0.000	10.0	5.92	0.00	3	0.03	0.03	3.74	3.76	10.72	0.56	
2.26	0.6	1.356	1.356	10.0	5.92	8.03			8.03	11.59	10.20	9.45	0.04	
2.56	0.6	1.536	1.536	10.0	5.92	9.09			9.09	17.08	5.53	5.44	0.28	

Notes:

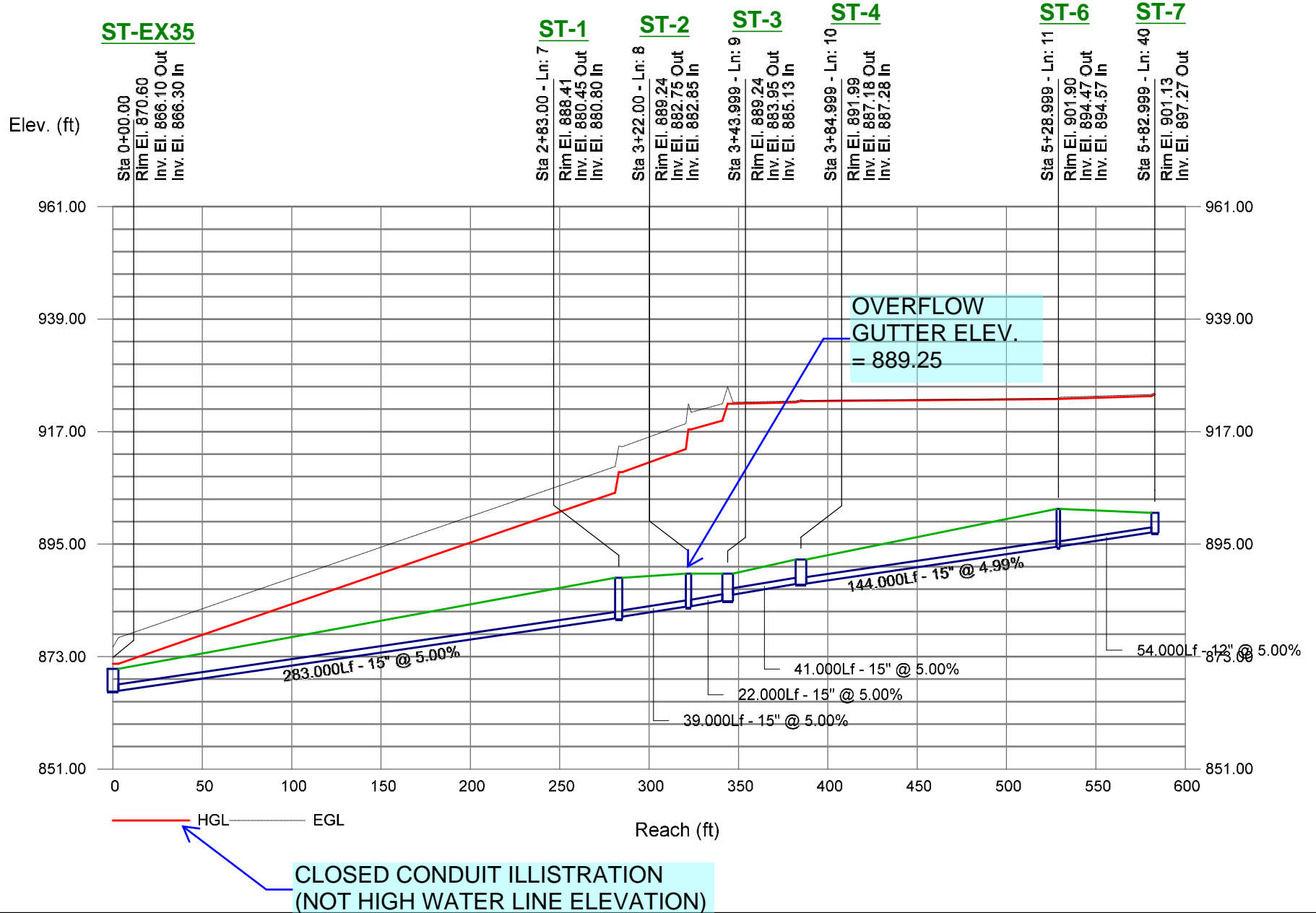
10-YEAR STORM EVENT HGL PROFILE PLAT 3 PIPES L-1 to L-7



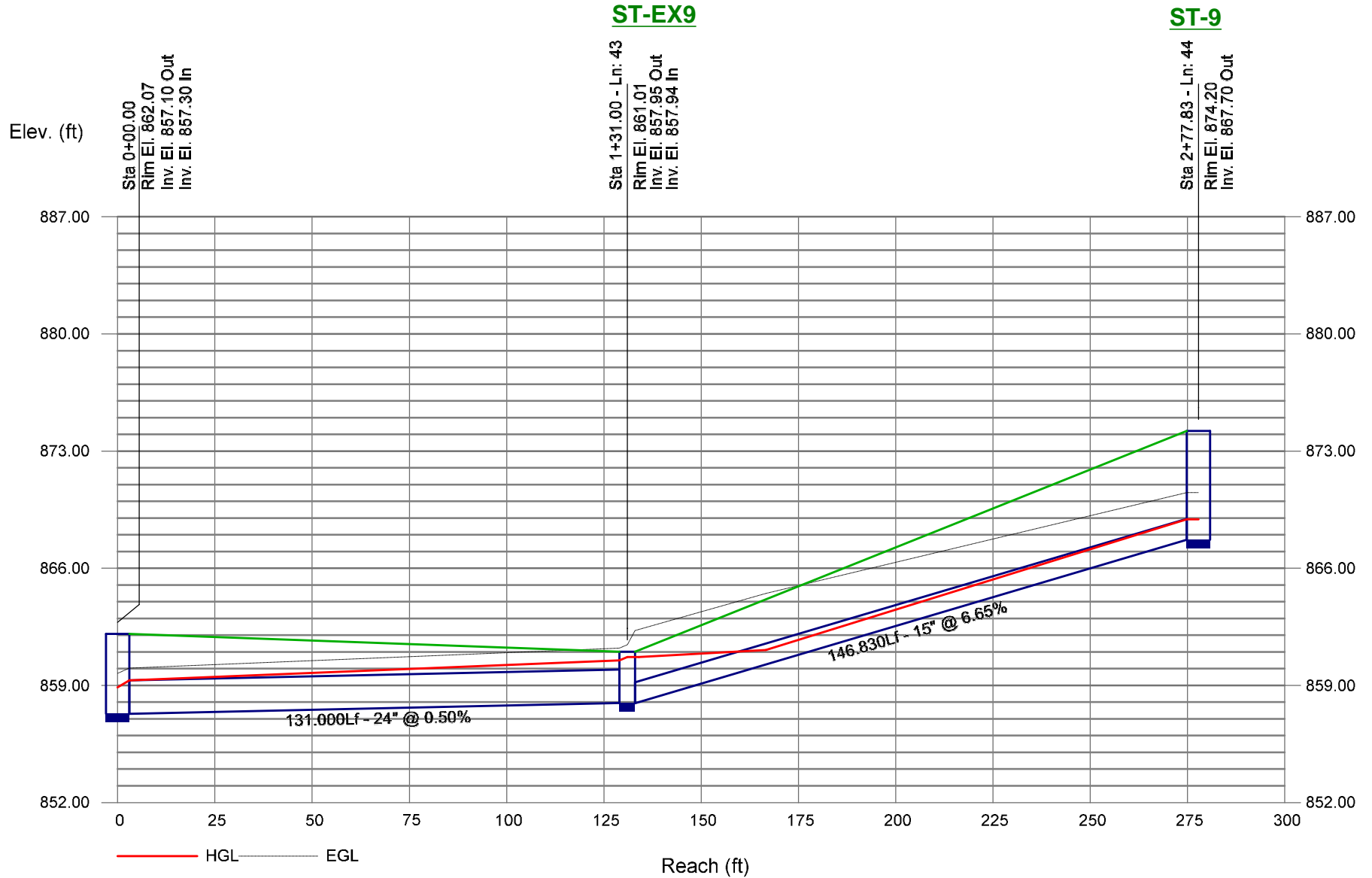
10-YEAR STORM EVENT HGL PROFILE PLAT 3 PIPE L-9



100-YEAR STORM EVENT HGL PROFILE
PLAT 3 PIPES L-1 to L-7



100-YEAR STORM EVENT HGL PROFILE
PLAT 3 PIPE L-9





PROJECT: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Stormwater Calculations DATE: 06/07/22 COMP. BY: TDT OK'D BY:

ST-7 (Time of concentration = 10 min)

$Q_{100} = C_{100} \times I_{100} \times A$

$C_{100} = 0.70$

$I_{100} = 9.15 \text{ in/hr}$

$A = 0.51 \text{ acres}$

$Q_{100} = 0.70 \times 9.15 \times 0.51$

$Q_{100} = 3.27 \text{ cfs}$

SW-513 Intake Capacity:

Flowline Elevation:	901.13	feet		
Interior Dimensions:	Width, W =	4.00	feet	Both Sides Open, N
	Length, L =	4.00	feet	Both Sides Open, N

Length of Openings, L = 8.00 feet
 Number of Contractions, n = 4

Capacity of a Rectangular Weir with End Contractions:

$Q = 2/3C_d(2g)^{1/2}(L-0.1nH)H^{3/2}$

For H = 0.26 feet, Q = 3.36 cfs (Use 9" openings for minimum Height)

Ponding Elevation = 901.39 feet

* 100-year elevation of SW-513 opening is located within the drainage easement.



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive Urbandale, IA 50322

PROJECT: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Stormwater Calculations DATE: 06/07/22 COMP. BY: TDT OK'D BY:

ST-EX9 (Time of concentration = 10 min)

$$Q_{100} = C_{100} \times I_{100} \times A$$

$$C_{100} = 0.70$$

$$I_{100} = 9.15 \text{ in/hr}$$

$$A = 2.58 \text{ acres}$$

$$Q_{100} = 0.70 \times 9.15 \times 2.58$$

$$Q_{100} = 16.52 \text{ cfs}$$

SW-513 Intake Capacity:

Flowline Elevation:	861.30	feet		
Interior Dimensions: Width, W =	4.00	feet	Both Sides Open,	Y
Length, L =	4.00	feet	Both Sides Open,	Y

Length of Openings, L = 16.00 feet
Number of Contractions, n = 8

Capacity of a Rectangular Weir with End Contractions:

$$Q = 2/3C_d(2g)^{1/2}(L-0.1nH)H^{3/2}$$

For H = 0.48 feet, Q = 16.67 cfs (Use 9" openings for minimum Height)

Ponding Elevation = 861.78 feet

* 100-year elevation of SW-513 opening is located within the drainage easement.



CIVIL DESIGN ADVANTAGE

4121 Urbandale Drive, Urbandale, IA 50322

PROJECT: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Stormwater Calculations DATE: 04/22/22 DESIGNED: TDT CHECKED:

INTAKE CAPACITY CALCULATIONS

EQUATIONS

DA 33 Runoff

Q = C * I * A

C = 0.70

I = 9.15

A = 2.26

Q = 14.48

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 - EX33**

INPUT: Q₁₀₀ = 14.48 cfs (From Rational Equation)
 A_g = 1.64 sq. ft. (Open Area of Casting)

Required Depth at Grate: d = 2.698 ft.

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

LOCATION: **ST - EX33**

INPUT: Q₁₀₀ = 14.48 cfs (From Rational Equation)
 P = 6.77 ft. (Open Perimeter of Casting)

Required Depth at Grate: d = 0.798 ft.

GOVERNING EQUATION: **Orifice Equation**
Required Depth = 2.698 ft = 32 inches

The 100-year elevation is 871.52 + 2.698 = 874.22



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive Urbandale, IA 50322

PROJECT: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Storm Water Calculations

Channel Capacity: Northeast Swale (DA 7)

Channel Slope, s = 2.20 %
 Manning's n = 0.06 - Channel maintained
 Left Slope, R = 4 :1
 Bottom Width, w = 5 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.29 feet
 Depth Increment = 0.01 feet

DA 7 Runoff

Q = C * I * A	
C =	0.70
I =	9.15
A =	0.51
Q =	3.27

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
0.29	7.39	1.79	0.24	2.55	1.43
0.3	7.47	1.86	0.25	2.70	1.45
0.31	7.56	1.93	0.26	2.86	1.48
0.32	7.64	2.01	0.26	3.03	1.51
0.33	7.72	2.09	0.27	3.20	1.53
0.34	7.80	2.16	0.28	3.38	1.56
0.35	7.89	2.24	0.28	3.56	1.59
0.36	7.97	2.32	0.29	3.74	1.61
0.37	8.05	2.40	0.30	3.93	1.64
0.38	8.13	2.48	0.30	4.12	1.66
0.39	8.22	2.56	0.31	4.32	1.69
0.4	8.30	2.64	0.32	4.52	1.71
0.41	8.38	2.72	0.32	4.73	1.74
0.42	8.46	2.81	0.33	4.94	1.76
0.43	8.55	2.89	0.34	5.15	1.78
0.44	8.63	2.97	0.34	5.37	1.81

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$



CIVIL DESIGN ADVANTAGE

4121 NW Urbandale Drive Urbandale, IA 50322

PROJECT: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Storm Water Calculations

Channel Capacity: Northwest Swale (DA EX33)

Channel Slope, s = 2.00 %
 Manning's n = 0.06 - Channel maintained
 Left Slope, R = 4 :1
 Bottom Width, w = 2 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.95 feet
 Depth Increment = 0.01 feet

DA EX33 Runoff

Q = C * I * A	
C =	0.70
I =	9.15
A =	2.26
Q =	14.48

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
0.95	9.83	5.51	0.56	13.12	2.38
0.96	9.92	5.61	0.57	13.43	2.39
0.97	10.00	5.70	0.57	13.74	2.41
0.98	10.08	5.80	0.58	14.06	2.42
0.99	10.16	5.90	0.58	14.38	2.44
1	10.25	6.00	0.59	14.71	2.45
1.01	10.33	6.10	0.59	15.04	2.47
1.02	10.41	6.20	0.60	15.38	2.48
1.03	10.49	6.30	0.60	15.72	2.49
1.04	10.58	6.41	0.61	16.06	2.51
1.05	10.66	6.51	0.61	16.41	2.52
1.06	10.74	6.61	0.62	16.77	2.54
1.07	10.82	6.72	0.62	17.13	2.55
1.08	10.91	6.83	0.63	17.49	2.56
1.09	10.99	6.93	0.63	17.86	2.58
1.1	11.07	7.04	0.64	18.23	2.59

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: Creekview Estates Plat 3 JOB NO. 2203.203

SUBJECT: Storm Water Calculations

Channel Capacity: Southwest Swale (DA EX48)

Channel Slope, s = 2.00 %
 Manning's n = 0.06 - Channel maintained
 Left Slope, R = 4 :1
 Bottom Width, w = 4 feet
 Right Slope, L = 4 :1

Minimum Depth = 0.84 feet
 Depth Increment = 0.01 feet

DA EX48 Runoff

$Q = C * I * A$	
C =	0.70
I =	9.15
A =	2.56
Q =	16.40

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
0.84	10.93	6.18	0.57	14.81	2.40
0.85	11.01	6.29	0.57	15.17	2.41
0.86	11.09	6.40	0.58	15.53	2.43
0.87	11.17	6.51	0.58	15.90	2.44
0.88	11.26	6.62	0.59	16.27	2.46
0.89	11.34	6.73	0.59	16.64	2.47
0.9	11.42	6.84	0.60	17.02	2.49
0.91	11.50	6.95	0.60	17.41	2.50
0.92	11.59	7.07	0.61	17.80	2.52
0.93	11.67	7.18	0.62	18.19	2.53
0.94	11.75	7.29	0.62	18.59	2.55
0.95	11.83	7.41	0.63	19.00	2.56
0.96	11.92	7.53	0.63	19.41	2.58
0.97	12.00	7.64	0.64	19.82	2.59
0.98	12.08	7.76	0.64	20.24	2.61
0.99	12.16	7.88	0.65	20.67	2.62

Design Equations:

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

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

$$R = a/P_w$$

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

$$v = Q/a$$

Channel Report

ST-2 & ST-3 ROADWAY OVERFLOW

User-defined

Invert Elev (ft) = 889.25
Slope (%) = 0.25
N-Value = 0.013

Highlighted

Depth (ft) = 0.41
Q (cfs) = 17.51
Area (sqft) = 7.29
Velocity (ft/s) = 2.40
Wetted Perim (ft) = 26.16
Crit Depth, Yc (ft) = 0.37
Top Width (ft) = 25.82
EGL (ft) = 0.50

Calculations

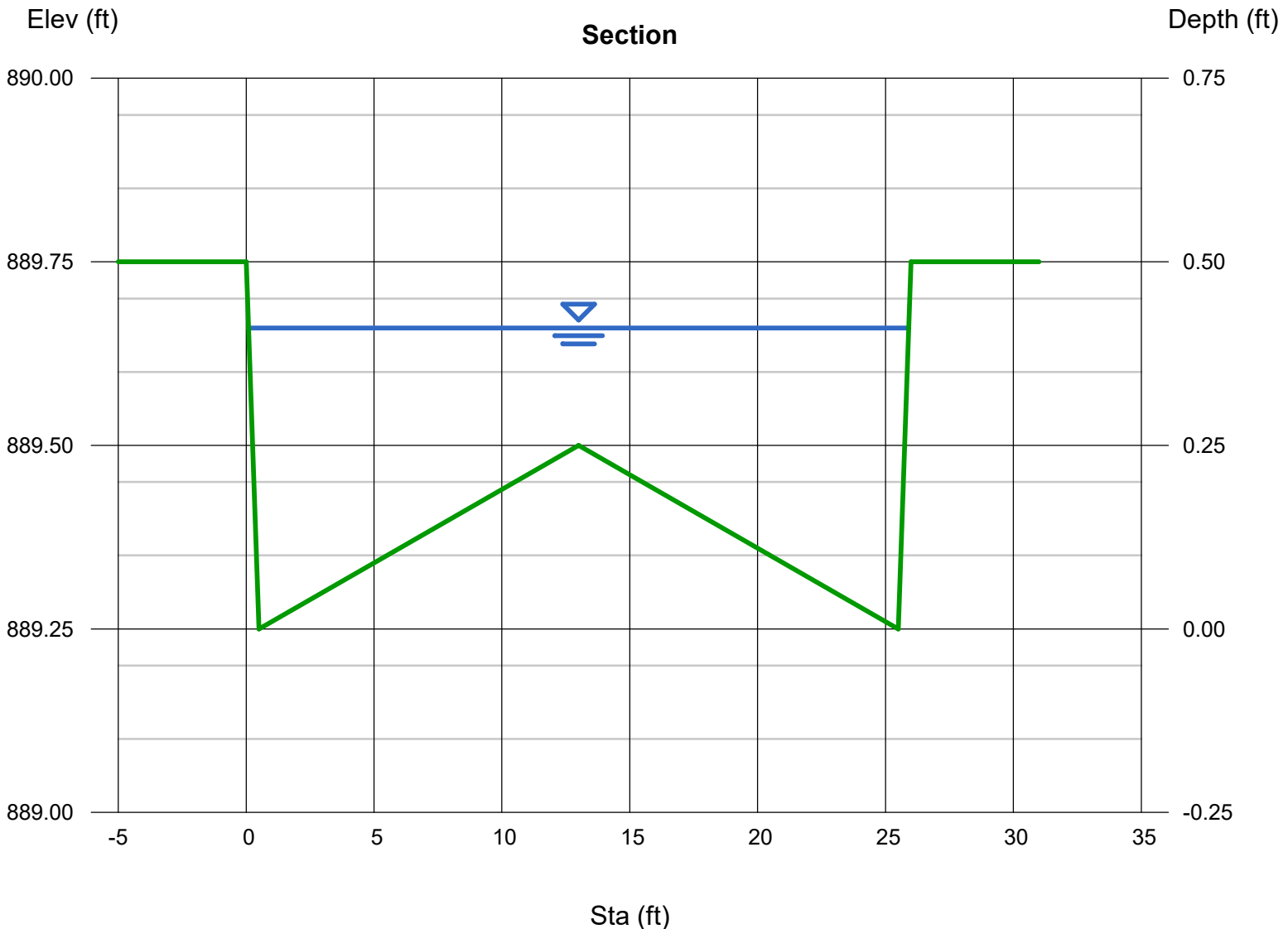
Compute by: Known Q
Known Q (cfs) = 17.51

(Sta, El, n)-(Sta, El, n)...

(0.00, 889.75)-(0.50, 889.25, 0.013)-(13.00, 889.50, 0.013)-(25.50, 889.25, 0.013)-(26.00, 889.75, 0.013)

Q₁₀₀ INTAKE TOTAL FLOW + BYPASS = 17.51 CFS
ST-3 Q₁₀₀ = 13.22 CFS
ST-2 Q₁₀₀ = 4.29 CFS

ST-2 & ST-3 HWL = 889.25 + 0.41 = 889.66



RESOLUTION NO. 2024-31

A RESOLUTION RE-APPROVING THE CONSTRUCTION DRAWINGS FOR PUBLIC IMPROVEMENTS FOR CREEKVIEW ESTATES PLAT 3

WHEREAS, the City of Polk City approved Construction Drawings for Public Improvements for Creekview Estates Plat 3 on July 11, 2022; and

WHEREAS, in accordance with Polk City Municipal Code, this approval expired after construction of the proposed public improvements did not commence within 12 months of approval; and

WHEREAS, Civil Design Advantage, on behalf of North Polk Development, LLC., has re-submitted the Construction Drawings for Public Improvements associated with Creekview Estates Plat 3, including but not limited to grading, street paving, assessable sidewalk ramps along with associated storm sewers, sanitary sewers, water main and services; and

WHEREAS, said Construction Drawings appear to be in general conformance with Polk City's Subdivision Regulations and SUDAS but CDA has submitted a written request of deviation from the approved Preliminary Plat for Creekview Estates for the longitudinal slopes of both streets; and

WHEREAS, it shall be the Developer's responsibility to obtain approval for all necessary permits including the Iowa DNR permits for water main and sanitary sewer construction, and the NPDES Storm Water Discharge permit; 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.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa hereby accepts the recommendations of the City Engineer and do hereby approve the Construction Drawings for Public Improvements for Creekview Estates Plat 3.

PASSED AND APPROVED the 11 day March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

SITE PLAN AND PLAT OF SURVEY REVIEW

Date: March 11, 2024

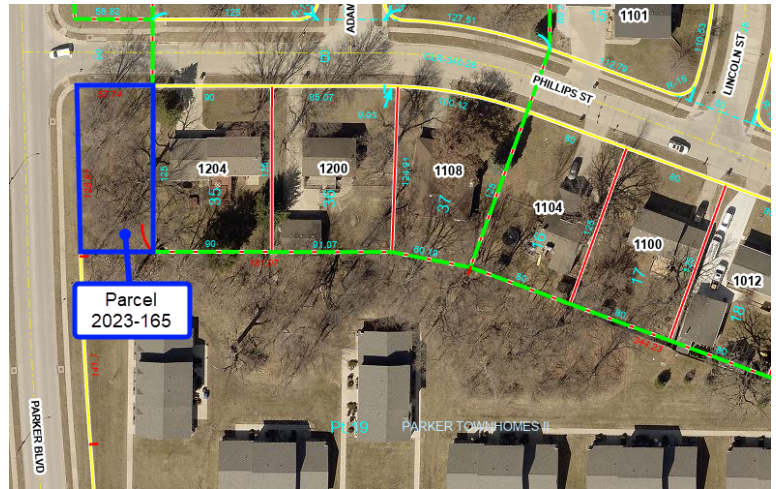
 Prepared by: Travis Thornburgh, P.E.
 Kathleen Connor

Project: Parker Townhomes II Plat of Survey

Project No.: 123.1448.01

GENERAL INFORMATION:

Owner/ Applicant:	Parker Townhomes II
Requested Action:	Approval of Plat of Survey and Record of Lot Tie Agreement
Location	Southeast corner of Parker Boulevard & Phillips Street
Size:	7,147 sq. ft.
Zoning:	P.U.D.
Proposed Use:	Non-Buildable Lot



BACKGROUND:

In April 2015, the City Council approved an Amended PUD Master Plan/Site Plan for Parker Townhomes II on the subject parcel that is being split by this Plat of Survey. This amended PUD Master Plan included the construction of six (6) multi-family homes on the southern portion of the parcel.

The portion of the parcel that is being proposed to be split as Parcel 2023-165 was shown in the amended PUD Master Plan as a protected segment of land, with no development proposed for this portion of the lot. A 20' wide Buffer Easement was required on Parker Townhomes to provide screening to benefit the existing residences on Phillips Street. This buffer does not extend west of 1204 Phillips Street so there is no buffer south of this new unbuildable parcel.

City Staff understands that the purpose of this Plat of Survey is to create a new, unbuildable parcel that the current property owner will then transfer to the adjacent property owners, Larry Kellar, and it will be permanently tied to their lot. Since the resulting parcel was included in the previously approved PUD Master Plan, the City cannot issue a building permit on this parcel unless an amended PUD Master Plan showing this relatively small parcel as a buildable lot is approved by the City. Since Parcel 2023-165 is only 57.74' wide, it does not meet the minimum lot width requirements to be considered a buildable lot in any of the current Residential Zoning Districts.

In addition to the proposed Plat of Survey, the property owner has provided the required signed Record of Lot Tie Agreement that proposes permanently tying Parcel 2023-165 to the existing lot located at 1204 Phillips Street (Lot 35 of Lakeview Acres Plat 2).

REVIEW COMMENTS:

Plat of Survey

The updated Plat of Survey, along with other required supporting documents, have addressed all review comments.

Record of Lot Tie Agreement

The signed Record of Lot Tie Agreement has been provided to the City Clerk for recording.

RECOMMENDATION:

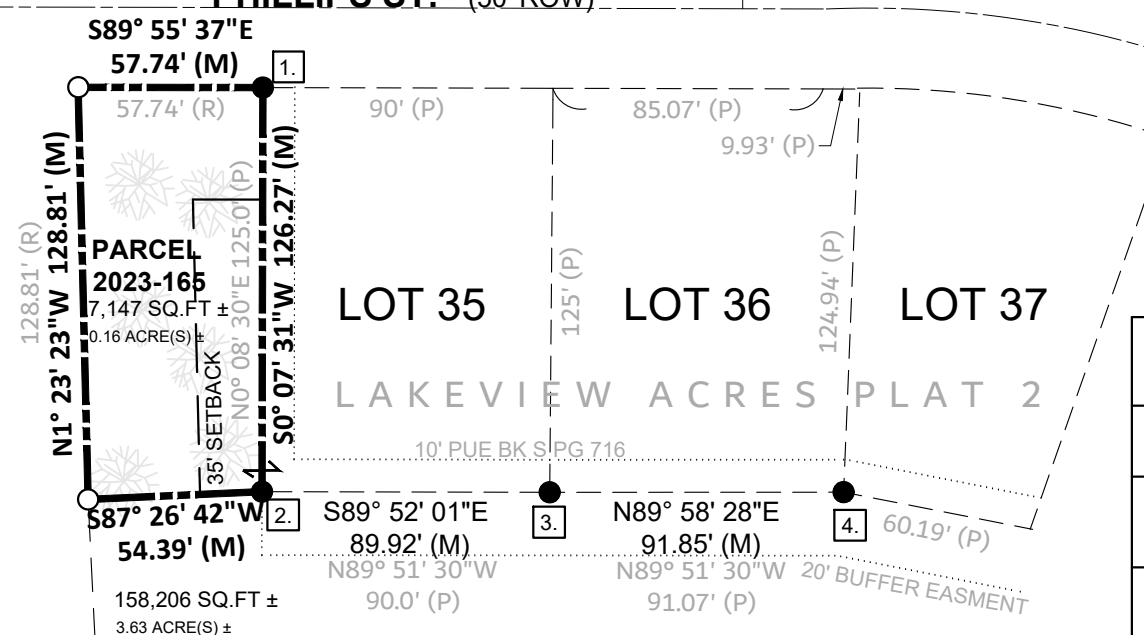
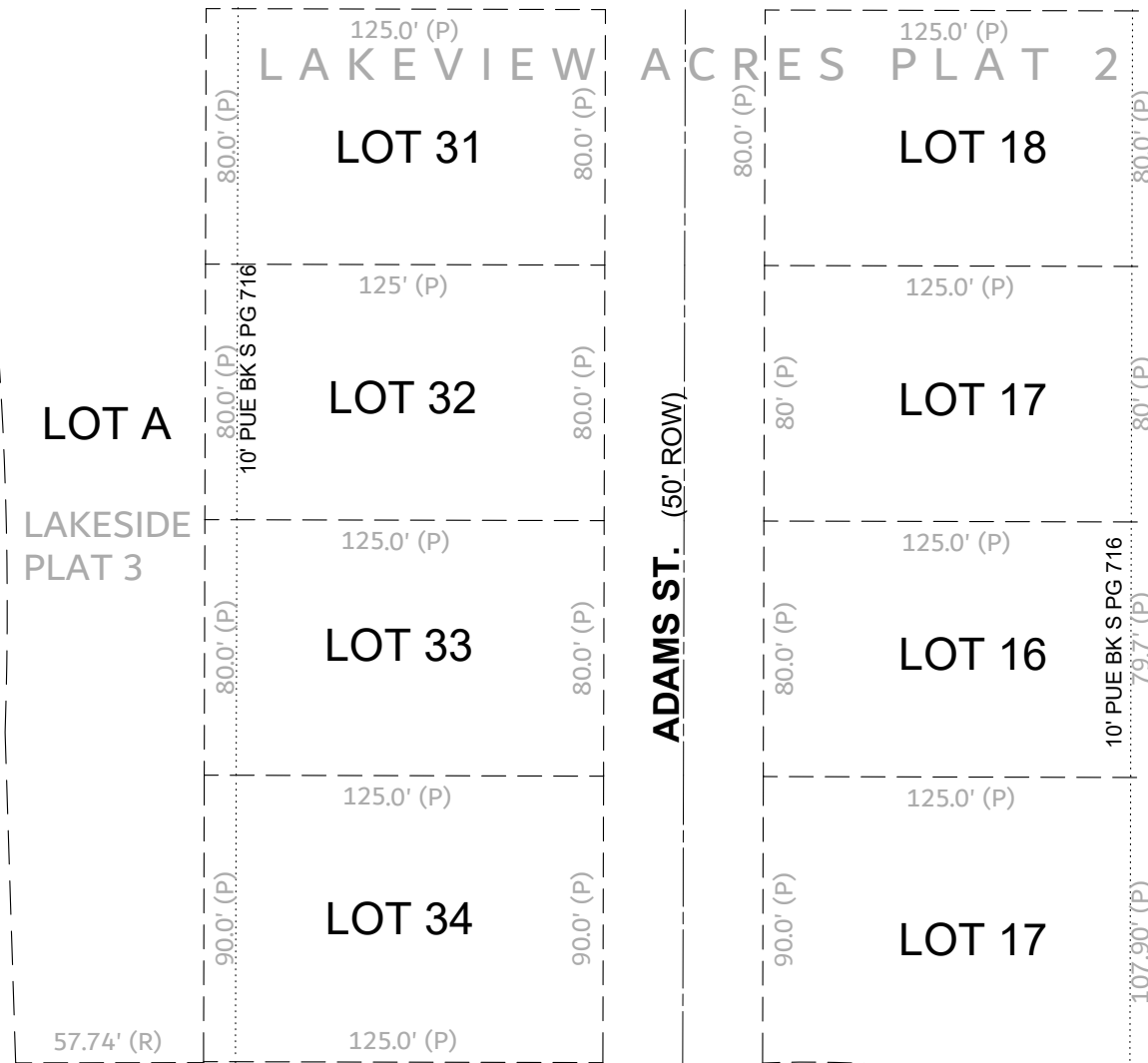
Based on the satisfactory resolution of each of the foregoing review comments, we recommend City Council approval of the Parker Townhomes II Plat of Survey and Record of Lot Tie Agreement, subject to the following:

1. The recordation of the Plat of Survey and Record of Lot Tie Agreement by the City Clerk.
2. Payment in full of all review fees, recording fees, and professional billings.

PREPARED BY: PELDS DESIGN SERVICES - 2323 DIXON STREET, DES MOINES, IOWA 50316 - PH. (515)265-8196

PLAT OF SURVEY

PARKER BLVD. (80' ROW)



OFFICIAL PLAT OF N 1/2 SECTION 2 T 80 N - R 2 5 W

NOTE:
ORIENTATION OF THIS BEARING SYSTEM IS IOWA STATE PLANE SOUTH (NAD 83) THIS SURVEY WAS PERFORMED USING THE IOWA RTN NETWORK.

NOTE:
This survey was performed without the benefit of a Title Opinion, therefore all existing easements may not be shown.

NOTE:
THIS DRAWING IS BEING MADE AVAILABLE BY PELDS DESIGN SERVICES (P.D.S.) FOR USE ON THIS PROJECT IN ACCORDANCE WITH P.D.S.'S AGREEMENT FOR PROFESSIONAL SERVICES. P.D.S. ASSUMES NO RESPONSIBILITY OR LIABILITY (CONSEQUENTIAL OR OTHERWISE) FOR ANY USE OF THESE DRAWINGS (OR ANY PART THEREOF) EXCEPT IN ACCORDANCE WITH THE TERMS OF SAID AGREEMENT.

NOTE:
NO BUILDING PERMITS SHALL BE ISSUED FOR A PRINCIPAL STRUCTURE ON PARCEL 2023-165.

NOTE:
ANY SUBSURFACE DRAINAGE FACILITIES THAT ARE DISTURBED SHALL BE RESTORED OR REROUTED BY THE PROPERTY OWNER.

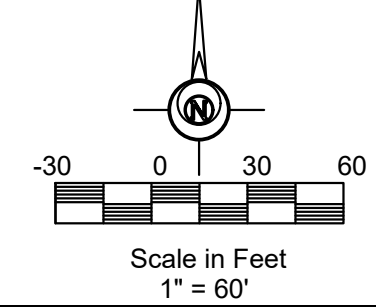
NOTE:
PARCEL 2023-165 SHALL BE PERMANENTLY TIED TO LOT 35 OF LAKEVIEW ACRES PLAT 2 AND SHALL HAVE THE SAME ADDRESS

NOTE:
NO ADDITIONAL DRIVEWAYS WILL BE ALLOWED ON PARCEL 2023-165.

SYMBOLS LEGEND

- FOUND IRON ROD OR PIPE
- SET 1/2" REROD w/ YELLOW PLASTIC CAP STAMPED #18842
- ± MORE OR LESS
- (M)/(P)/(R) MEASURED/PLATTED/RECORDED
- WYC WITH YELLOW CAP
- ↔ LOT TIE SYMBOL
- ☼ EXISTING TREES

ZONING
PUD PLANNED UNIT DEVELOPMENT DISTRICT



FOUND CORNER IDENTIFICATION TABLE	
CORNER NO.	CORNER TYPE
1	NW COR LOT 35 LAKEVIEW ACRES PLAT 2 FND 1/2" IRON ROD WYC #4640
2	SW COR LOT 35 LAKEVIEW ACRES PLAT 2 FND 1/2" REBAR
3	SW COR LOT 36 LAKEVIEW ACRES PLAT 2 FND 1/2" REBAR
4	SW COR LOT 37 LAKEVIEW ACRES PLAT 2 FND 1/2" REBAR WYC #15219

DATE OF SURVEY:

09.07.2023

RECORD INDEX:

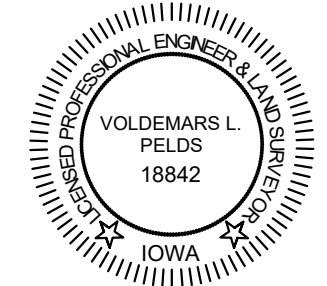
LOCATION:
OFFICIAL PLAT OF N 1/2 SECTION 2-T80N-R25W

REQUESTOR:
BRUCE LEFKOW
PROPRIETOR(S):
PARKER TOWNHOMES II UNLISTED
PROPRIETOR ADDRESS:
UNLISTED
PROPRIETOR PHONE:
UNLISTED

SURVEYOR:
VOLDEMARS PELDS
COMPANY:
PELDS DESIGN SERVICES
RETURN TO:
2323 DIXON STREET
DES MOINES, IA 50316

LEGAL DESCRIPTION:

A PART OF LOT 19 OF THE O.P. OF THE N 1/2 OF SECTION 2-80-25, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF LOT 35 OF LAKEVIEW ACRES PLAT 2, AN O.P. RECORDED IN BOOK S, PAGE 716 OF THE POLK COUNTY IOWA RECORDERS OFFICE; THENCE SOUTH 00°07'31" WEST ALONG THE WEST LINE OF SAID LOT 35, A DISTANCE OF 126.27 FEET TO THE SOUTHWEST CORNER OF SAID LOT 35; THENCE SOUTH 87°26'42" WEST A DISTANCE OF 54.39 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF PARKER BOULEVARD.; THENCE NORTH 01°23'23" WEST ALONG SAID PARKER BOULEVARD RIGHT-OF-WAY LINE, A DISTANCE OF 128.81 FEET TO THE SOUTHERN RIGHT-OF-WAY LINE OF PHILLIPS STREET; THENCE SOUTH 89°55'37" EAST ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF SAID PHILLIPS STREET, A DISTANCE OF 57.74 FEET TO THE POINT OF BEGINNING, AND CONTAINING 7,147 SQUARE FEET, MORE OR LESS, ALL BEING IN AND FORMING A PART OF POLK CITY, POLK COUNTY, IOWA.



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 PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF IOWA.

VOLDEMARS LEO PELDS, P.L.S. IA. LIC. NO.18842 DATE
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2023
ADDITIONAL PAGES OR SHEETS COVERED BY THIS SEAL (NONE UNLESS INDICATED HERE):



PLAT OF SURVEY PARCEL 2023-165
N 1/2 S2-T80N-R25W
POLK CITY, IA 50266

DATE	BY	SCALE	PROJECT
11.7.2023	A.BRADFIELD	1" = 60'	23-106

RECORD OF LOT TIE

WHEREAS, the City Council of Polk City approved a Final Plat for Lakeview Acres Plat 2, an official plat now included in and forming a part of the City of Polk City, Polk County, Iowa; and

WHEREAS, the City Council of Polk City approved a Plat of Survey for Parcel 2023-165, being a part of the North ½ of Section 2, Township 80 North, Range 25 West, as recorded in Book _____, Page _____ in the Polk County Recorder's Office, and located at 825 Parker Boulevard in Polk City, Polk County, Iowa; and

WHEREAS, Larry L. Kellar and ~~Diane V. Kellar~~^{LK} (hereinafter referred to as "Kellar") is the owner of said Lot 35 in Lakeview Acres Plat 2, an Official Plat in Polk City, Polk County, Iowa; and

WHEREAS, Parker Townhomes II (hereinafter referred to as "Parker Townhomes") is the current owner of said Parcel 2023-165 and will convey said property to the owner of said Lot 35;

WHEREAS, it is the desire of the City of Polk City, Kellar and Parkview Townhomes to permanently consolidate said Lot 35 and Parcel 2023-165 into one parcel for the purpose of permanently tying the properties together.

NOW, THEREFORE, the following agreement is made:

1. That Plat of Survey for Parcel 2023-165, being a part of the North ½ of Section 2, Township 80 North, Range 25 West, as recorded in Book _____, Page _____ in the Polk County Recorder's Office and located at 825 Parker Boulevard in Polk City, Polk County, Iowa is now part and parcel with Lot 35 in Lakeview Acres Plat 2, an Official Plat in Polk City, Polk County, Iowa (hereinafter referred to as "Properties").

2. That no portion of said Properties shall be transferred, sold, or conveyed independent of the remainder of the Properties, without the approval of the City Council, upon recommendation of the Planning and Zoning Commission, of the City of Polk City, Iowa.
3. That the owner of Lot 35 acknowledges that Parcel 2023-165 is unbuildable.

This Agreement shall be subject to the following terms and conditions:

1. AGREEMENT RUNS WITH LAND. This Agreement shall be deemed to run with the land and shall be binding on each owner and on owner's heirs, successors and assigns.
2. APPROVAL BY CITY COUNCIL. This Agreement shall not be binding until it has received the final approval and acceptance by the City Council of Polk City by Resolution which approval and acceptance shall be noted on this Agreement by the City Clerk.

Each owner does HEREBY COVENANT with the City of Polk City that the owner holds said property described in this Agreement by title in fee simple; that the owner has good and lawful authority to convey the same; and said owner covenants to WARRANT AND DEFEND the said property against the claims of all persons whomsoever.

Each of the undersigned hereby relinquishes all rights of dower, homestead, and distributive share, if any, in and to the interests conveyed by this Agreement.

SIGNED on this _____ day of _____ 2024.

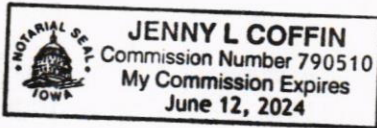
Lot 35 Property Owner:

Larry L. Kellar
Larry L. Kellar

Deceased as of December 3, 2015 LK
~~Diane V. Kellar~~

STATE OF IOWA, COUNTY OF POLK, ss:

On this 7 day of March, 2024 before me, the undersigned, a Notary Public in and for the said State, personally appeared Larry L. Kellar and ~~Diane V. Kellar~~ to me LK known to be the persons named in and who executed the foregoing instrument to which is attached; and acknowledged that they executed the instrument as their voluntary act and deed.



Jenny L Coffin
Notary Public in and for the State of Iowa

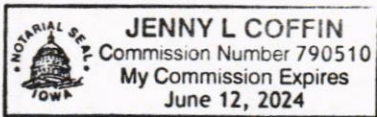
**Parcel 2023-165 Property Owner
Acknowledgement & Agreement:**

By: [Signature]

Title: Mem.
Parker Townhomes II

STATE OF IOWA, COUNTY OF POLK, ss:

On this 6 day of March, 2024 before me, the undersigned, a Notary Public in and for the said State, personally appeared Bruce Lehto to me known to be the person named in and who executed the foregoing instrument to which is attached; and acknowledged that they executed the instrument as his voluntary act and deed.



Jenny L Coffin
Notary Public in and for the State of Iowa

ACCEPTANCE BY CITY

STATE OF IOWA)
) ss:
COUNTY OF POLK)

I, Jenny Coffin, City Clerk of the City of Polk City, Iowa, do hereby certify that the within and foregoing Agreement was duly approved and accepted by the City Council of said City of Polk City by Resolution No. _____, passed on the ___ day of _____, 2024, and this certificate is made pursuant to authority contained in said Resolution.

Signed this _____ day of _____, 2024.

Jenny Coffin, City Clerk of Polk City, Iowa

RESOLUTION NO. 2024-28

A RESOLUTION APPROVING TRANSFER OF PROPERTY TO 3100 LLC

WHEREAS, by Ordinance 2015-500 the City Council of the City of Polk City vacated the Right of Way legally described as Lot B Parker Townhomes, an Official Plat now included in and forming a part of the City of Polk City, Iowa;

WHEREAS, the vacated Right of Way was to be transferred to 3100 LLC but the transfer was not completed at that time; and

WHEREAS, the City Council of the City of Polk City believes it is in the best interest of the City to complete the transaction that was to be completed in 2015 and transfer the property to 3100 LLC.

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Polk City, Iowa hereby approves the transfer of the above-described real property to 3100 LLC, and authorizes the preparation and execution of the necessary documents to facilitate the transfer of said real property.

PASSED AND APPROVED the 11th day of March 2024.

Steve Karsjen, Mayor

ATTEST:

Jenny Coffin, City Clerk

WARRANTY DEED

Recorder's Cover Sheet

Preparer Information: Amy S. Beattie, 6701 Westown Parkway, Suite 100, West Des Moines, IA 50266, Phone: (515) 274-1450

Taxpayer Information: 3100 LLC, POB 66, POLK CITY, IA 50226-0066

Return Document To: 3100 LLC, POB 66, POLK CITY, IA 50226-0066

Grantors: City of Polk City, Iowa

Grantees: 3100 LLC

Legal Description: See Page 2

Document or instrument number of previously recorded documents:

WARRANTY DEED

For the consideration of Ten Dollar(s) and other valuable consideration, City of Polk City, Iowa, a municipal corporation, does hereby convey to 3100 LLC, a limited liability company organized and existing under the laws of Iowa the following described real estate in Polk County, Iowa:

Lot B Parker Townhomes, an Official Plat now included in and forming a part of the City of Polk City, Iowa.

There is no known private burial site, well, solid waste disposal site, underground storage tank, hazardous waste, or private sewage disposal system on the property as described in Iowa Code Section 558.69, and therefore the transaction is exempt from the requirement to submit a groundwater hazard statement.

This deed is exempt according to Iowa Code 428A.2(6).

The Corporation hereby covenants with grantees, and successors in interest, that it holds the real estate by title in fee simple; that it has good and lawful authority to sell and convey the real estate; that the real estate is free and clear of all liens and encumbrances, except as may be above stated; and it covenants to Warrant and Defend the real estate against the lawful claims of all persons, except as may be above stated.

Words and phrases herein, including acknowledgment hereof, shall be construed as in the singular or plural number, according to the context.

Dated: March 11, 2024.

City of Polk City, Iowa, an Iowa a municipal corporation

By _____
Steve Karsjen, Mayor

By _____
Jenny Coffin, City Clerk

STATE OF IOWA, COUNTY OF POLK:

This record was acknowledged before me on March 11, 2024, by Steve Karsjen, as Mayor, and Jenny Coffin, as City Clerk, of City of Polk City, Iowa a municipal corporation.

Signature of Notary Public

RESOLUTION NO. 2024-29

**A RESOLUTION APPROVING A PLAT OF SURVEY FOR
PARCEL NO. 2023-165 AND RECORD OF LOT TIE**

WHEREAS, Parker Townhomes has submitted a Plat of Survey, to be known as Parcel No. 2023-165 located in the Southeast corner of Parker Boulevard and Phillips Street in the City of Polk City, Iowa for approval; and

WHEREAS, the intent of this Survey is to create a new, unbuildable parcel that will be permanently tied to 1204 Phillips Street; and

WHEREAS, the City Attorney and City Engineer have reviewed the Plat of Survey and Record of Lot Tie Agreement and recommend approval of same.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Polk City, Iowa, hereby approves the Plat of Survey for Parcel No. 2023-165 and Record of Lot Tie Agreement.

PASSED AND APPROVED the 11 day of March 2024.

Steve Karsjen Mayor

ATTEST:

Jenny Coffin, City Clerk



City of Polk City, Iowa City Council Agenda Communication

Date: 03/07/2024
To: Mayor and Council
From: Mike Schulte

Subject: Brush Drop off and Recycling Area Changes

BACKGROUND: At the council work session on 2/12/24, during the discussion of the brush drop off and recycling area, the council asked staff to come back with a couple of options to reduce or eliminate the cost of the brush drop off/recycling area.

Option #1 Shut down the brush drop off and recycling area.

For the reasons explained in my memo to Council dated 2/8/2024, I still believe the best option is to shut down the area. Most needs of the citizens would be taken care of at the curb which eliminates the need for the brush drop off /recycling area.

While we spent most of our talking at the work session about out of town illegal dumping, I do also want to mention that is not the only illegal dumping taking place at the brush pile. The brush pile was established for tree branches and grass clippings. It is not meant for large trees or stumps, and the equipment our contractor uses can't always put larger materials through the chipper. We do get some Christmas trees at the facility, which technically aren't allowed. MWA will pick Christmas trees up from the curb after the holiday for \$1.

Option #2 Brush drop off hours will be reduced, and recycling area hours will remain the same.

April 1st through October 31st the brush drop off area will be open every Friday (except holidays) 7:30AM to 3:00PM and the first Saturday of the month (except holidays) from 8:00 AM to 12:00 PM.

This option will divert Public Works man hours from other duties that we have to complete.

The current rules of the brush drop off area will be the same, which are normal household tree maintenance not to exceed 10 inches in diameter. No full tree removals will be accepted. Yard and garden waste will be accepted.

The recycling area will remain on its current hours of 7AM – 5pm, 7 days a week. We have recently met with MWA and have discussed some of the issues we encounter at the recycling facility. We would like to allow MWA to remedy some of the issues, and if they cannot, we will rediscuss in the fall, and discuss closing down the recycling facility or have it moved somewhere else.

With this option we will have to separate the brush drop off and the recycling area. We will be staffing an entrance point to the brush pile during the dates and times listed above. I believe this is needed so every person using the brush drop off will have to present proof that the materials they are dropping off is from Polk City. In the event our employee must leave the entrance point for a higher priority job, we will have a sign made with instructions on how to proceed.

We will also have further conversations with Metro Waste Authority about paying for the cost of the fence needed to divide the brush drop off area from the recycling area as well as the maintenance and cleanup of the recycling area itself. We feel this should be part of their responsibilities. We will also ask them to better clean up their area with materials that are left behind, which are not supposed to be dumped off.

This option would be a trial period. After the October 31st, 2024, closing, we will bring back the data we have gathered from our entrance point and present it to the council to see if this option is viable.

Since this is a major change to the policy, I would ask that the council give staff a little flexibility to make changes if situations or problems arise. This will allow us to help solve problems quickly if it is needed.

ALTERNATIVES: 1) Leave the brush drop off policy as is and budget \$130,000 in the next budget to cover the cost of the brush pile.
2) Close the Brush drop off area and use the funds elsewhere.

FINANCIAL CONSIDERATIONS: Reevaluate the brush drop off policy when the site closes October 31st, 2024.

RECOMMENDATION: I would recommend that the Council approve option #2 of reduced brush drop off hours and reevaluate after October 31st of 2024.

:



City of Polk City, Iowa City Council Agenda Communication

Date: March 11, 2024 City Council Meeting
To: Mayor Steve Karsjen & City Council
From: Chelsea Huisman, City Manager
Subject: Downtown Revitalization Incentive Support program

BACKGROUND: For your review and consideration on Monday is a proposed Downtown Revitalization Incentive Support program. The City Council has been discussing offering a program for the past several months to incentivize downtown businesses to improve the exterior of their buildings. The overall intent of the program is to offer incentives through a forgivable loan utilizing Tax Increment Financing (TIF). Applications would be accepted on a yearly basis and would be awarded after July 1st of each year.

In October 2023, the City Council amended the city's urban renewal plan to include this program. The amendment included the program for fiscal years 2025-2029 (July 1, 2024-June 30, 2029) with an amount not to exceed \$250,000. For FY25, the city will have \$50,000 to award in incentives. My recommendation to the Council is to only offer that amount for FY25, and if the full amount is not applied for in FY25, the Council could amend the policy for FY26.

The program requires a 1:1 cash match, where the city will only offer incentives for 50% of the improvements. For example, if the total project cost is \$100,000, the grant could be as much as \$50,000. Applicants must follow all city code and downtown design standards. Applicants also must pay property taxes (non-profit and government buildings are ineligible) and be located within the downtown area (map available in policy).

The program will be a competitive application process, where a designated committee will review applications and make recommendations to the City Council. The City Council will have final approval of all applications. The program will be structured as a forgivable loan. Once applications are approved, property owners will secure a mortgage and a contractor to make the improvements. Receipts will need to be submitted to the city for reimbursement. If all criteria are met for the program, the loan will become forgivable 24 months after it's initiation.

One issue I have noticed is that there are a few properties not located in the City's main urban renewal district. I would propose adding those select few properties into the city's urban renewal district by amending our plan again. I will be proposing an urban renewal plan amendment soon pertaining to Ace Hardware and the Water Tower project and would incorporate this small change into that plan amendment.

ALTERNATIVES: Do not approve the program.

FINANCIAL CONSIDERATIONS: Up to \$50,000 in forgivable loans for the Town Square District businesses to enhance the exterior of their buildings. This funding will be available after July 1, 2024, as we have requested the additional funding through tax increment financing.

RECOMMENDATION: It is my recommendation that the City Council approve the program and begin accepting applications for July 1, 2024, participation. Mayor Karsjen will work to appoint a committee to review applications shortly after the policy is adopted by the City Council.



POLK CITY - A City For All Seasons -

Downtown Revitalization Incentive Support program

Section I: Introduction

It is the intent of the City of Polk City to provide financial incentives to property owners and businesses within the Downtown District/Town Square Zoning District (Commercial Town Square-CTS) to assist them in restoring and rehabilitating their property. The City acknowledges the importance of the success of businesses located in the City's downtown district to the promotion of economic development in the Urban Renewal Area. Under the Downtown Revitalization Incentive Support program, the City will provide economic development forgivable loans and/or grants (the "Financial Incentives") to assist local business owners situated in the City's downtown district with (i) façade improvements; (ii) signage improvements and (iii) other exterior projects. The City Staff will develop appropriate materials, including agreements and applications, for the administration of the Downtown Revitalization Incentive Support Program. Assistance will be available on a first-come, first-served basis, and applications will be reviewed by the Downtown Revitalization Incentive Committee, which is appointed by the Mayor. The Committee will make recommendations to the City Council for consideration. The program is supported by the City Council, and the City Council will have final approval on all applications and agreements.

Section II: Objectives

The primary objective of the Downtown Revitalization Incentive Support Program is to revitalize the Town Square District by preserving and restoring the existing buildings. The purpose of the Downtown Revitalization Incentive Support program is to promote economic development within the City's Urban Renewal #2 District by providing financial incentives to encourage common design standards for the CTS District.

Polk City will fund the Downtown Revitalization Incentive Support program using Tax Increment Financing (TIF) from the City's Urban Renewal District. From July 1, 2024-June 30, 2029, the City of Polk City will have approximately \$250,000 available for this program. The City Council may choose to increase that amount during the programs course. The city will program for \$50,000 annually, beginning July 1st of each year, however, may offer a lower or higher amount depending on applications received.

To participate in the program, all design standards must be met first. The City of Polk City will not award projects where the building codes or downtown design standards are not being proposed. The City of Polk City will only consider businesses located in the downtown CTS District. Applicants that are not required by law to pay property taxes on the proposed building project are ineligible

for participation in the program (I. E. Nonprofit organizations and government organizations). Applicants that have previously received tax incentives for projects may still be considered, however, projects will be prioritized that have not previously received tax incentives from the city. Applicants must also own the proposed project building. The city will not consider applications from renters or those that lease space.

Interested applicants will be required to match their request for funding at a 1:1 ratio. The match must be a cash match. The grant can be up to 50% of the total project cost, with a project cost of up to \$100,000. For example, if the total project cost is \$100,000, the grant could be as much as \$50,000. The grant will not exceed 50 percent of the total project cost.

The Downtown Revitalization Incentive program will be awarded in the form of a forgivable loan. The loan shall be repaid in an amount and manner hereafter described by any of the following events that take place during the 24-month period immediately following completion of the approved project:

1. The benefited property is sold or otherwise conveyed by the owner to another individual or entity; or
2. The business located in the benefited property ceases operation; or
3. The City of Polk City becomes aware that an applicant made false or misleading statements in the application which were material in making the award; or
4. The applicant becomes insolvent.

The City of Polk City shall give written notice to the applicant upon determination that one of the above events has occurred, in which case repayment shall be made in full within 12 months. Monthly payments over the 12-month period will draw interest at the default rate.

Pending forgiveness of the entire loan, or pending full repayment of the loan, the loan shall be secured by a mortgage upon the benefited premises given by the owner at the time of grant approval and subject to foreclosure upon default in making a required payment.

Section III: Guidelines

The program will provide technical assistance along with a forgivable loan to building owners that meet the following guidelines:

1. The program will be administered through a Downtown Revitalization Incentive committee, appointed by the Mayor. The committee will recommend eligibility of all loan applications to the City Council, which has the final approval.
2. Selection to participate in the program will be based upon the applicant's consistency with the goals of the City and upon commitment to proceed with the building improvements.
3. Applicants must submit a Façade Improvement application along with cost estimates from a contractor specific to all work to be done. Applications are reviewed on a case-by-case basis, pending the availability of funds.
4. Work is to be completed and bills submitted prior to 12 months from the date of the award.

5. A complete copy of bills from expenses relating to a particular project must be presented to the City Manager before the grant will be awarded in full. The amount of the loan may be adjusted if the actual cost is lower than the estimated cost. A final inspection of the project by the Building Official will be conducted before payment of the grant will be issued. Any deviations from the approved application may disqualify the applicant.
6. Recipients of awards will actively support and/or participate in the programs and activities of Community Revitalization.
7. Applicants may be required to consult with the City of Polk City prior to start of a renovation project. These arrangements will be made through the City Manager.
8. The City reserves the right to reject any/or all applications, and waive irregularities or informalities in any application.

Section IV: Examples of Eligible and Ineligible Projects

The following are examples of eligible and ineligible projects for the Downtown Revitalization Program. All eligible projects must follow Polk City's Town Square Design Standards. The goal of the program is to focus on improvements made to the building exterior. Some of the eligible projects listed below, would be eligible, but exterior improvements will also be required to participate in the program.

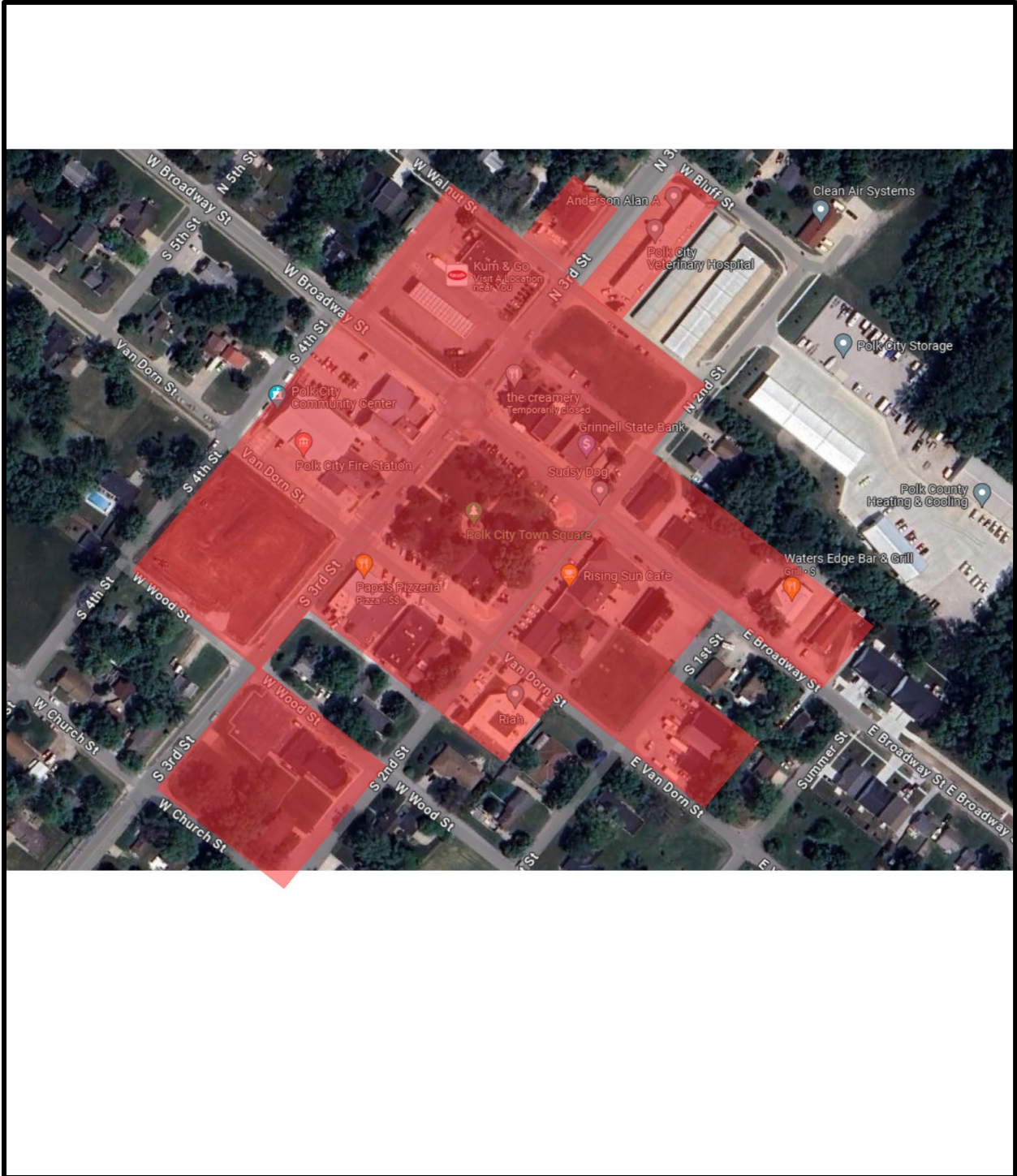
Examples of Eligible Projects:

1. Signage (addition or removal)
2. Awnings (addition or removal)
3. Exterior painting
4. Repointing
5. Exterior Cleaning
6. Replacement of transom glass
7. Window repair and replacement
8. Replacement of historical building architectural detail
9. Parapet Roofs addition
10. Upper story interior rehabilitation
11. Upper story addition for residential
12. Emergency roof repairs (building viability issues or leaking)
13. General Façade improvements (insulation)
14. Fire Safety systems (addition-project also needs to incorporate other eligible projects)
15. Grease Interceptor system (addition-project also needs to incorporate other eligible projects)

Examples of Ineligible Projects:

1. Routine roof repair/replacement
2. Interior improvements (Main Floor)
3. Electrical work (unless related to signage and upper story)
4. Installation of inappropriate materials (vertical siding, aluminum siding)
5. Sandblasting

6. Window Display (merchandising) details
7. Adjacent sidewalk (unless there is a critical sidewalk gap, program is not meant for sidewalk repair)



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



Date February 23, 2024

To: Chelsea Huisman
 City of Polk City
 P.O. Box 426
 Polk City, IA 50226-0426

INVOICE SUMMARY - JANUARY SERVICES

GENERAL ENGINEERING

<u>Meetings</u>	124.0001.01	\$	669.50
<i>Council and P&Z Meetings, City Work Session, and City Staff meetings.</i>			
<u>Development and Building:</u>	124.0001.01	\$	3,064.25
<i>Coordination with developers, engineers, building inspector, and staff regarding various potential and ongoing projects, and building permits, including mass grading of future regional park and GF-1 Rezonings.</i>			
<u>Water Dept:</u>	124.0001.01	\$	51.50
<i>Respond to questions regarding Big Creek Commons water hookup fees.</i>			
<u>Sanitary Sewers:</u>	124.0001.01	\$	51.50
<i>Respond to questions regarding Big Creek Commons sanitary sewer hookup fees.</i>			
<u>Storm Sewers:</u>	124.0001.01	\$	-
<u>Street Dept.</u>	124.0001.01	\$	669.50
<i>Coordinate Re ROW vacation, historic plans, OFE, ROW permits, CIP update, and misc. street and ROW issues.</i>			
<u>General:</u>	124.0001.01	\$	-
<u>GIS</u>	124.0001.01	\$	643.75
<i>Preparation of Utility and Street Maps at the request of Polk City Public Works.</i>			
SUBTOTAL		\$	5,150.00

CAPITAL IMPROVEMENT PROJECTS / WORK ORDERS

High Trestle Trail to Neal Smith Trail Connector - Phase 1	123.0674.01	\$	10,920.00
High Trestle Trail to Neal Smith Trail Connector - Arch. Tech Report	123.0001.01K	\$	1,288.00
High Trestle Trail to Neal Smith Trail Connector - Phase 2	123.0333.01	\$	775.00
High Trestle Trail to Neal Smith Trail Connector - Phase 6 & 7	123.0770.01	\$	3,080.00
N. 3rd Street & Vista Lake Avenue Intersection Improvements	121.0455.01	\$	277.00
SUBTOTAL		\$	16,340.00

REIMBURSABLE DEVELOPMENT REVIEW PROJECTS

Antler Ridge Plat 1: Construction Phase - Trunk Sewer	122.0178.01	\$	8,633.50
Big Creek Ridge Plat 1: Dev Agr, Const Drawings	123.0787.01	\$	2,709.25
Gateway Crossings Plat 1	123.0836.01	\$	686.00
Home State Bank: Site Plan Amendment, unauthorized tree removal	122.0358.01	\$	3,303.75
Leonard Senior Living Plat and Site Plan	123.0287.01	\$	1,516.50
Monarch Crossing Plat 1: Dev Agr, Const Drawings	123.1076.01	\$	2,994.00
On With Life Site Plan: Site Plan Amendment	123.0424.01	\$	939.50
Parker Townhomes II Plat of Survey	123.1448.01	\$	1,714.50
SUBTOTAL		\$	22,497.00

TOTAL **\$ 43,987.00**



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
 City of Polk City
 PO Box 426
 112 3rd Street
 Polk City, IA 50226-0426

Invoice No: 124.0001.01 - 1

Email

Project 124.0001.01 General Engineering 2024

Professional Services through January 31, 2024

Meetings

Services include preparation for and attendance at two City Council Meeting, one City Council Work Session, one Planning & Zoning Commission Meeting, and Development Review Committee Meeting

	Hours	Rate	Amount	
Principal Planner I	2.50	103.00	257.50	
Engineer III	4.00	103.00	412.00	
Total Services	6.50		669.50	
Total Services				669.50
			Task Subtotal	\$669.50

Development and Building

Services include preparation and review of the Engineering FAQ to accompany RFP for 510 S. 3rd Street, including review of existing utility locations and depths and S. 3rd Street Access Management Plan. Services further include preparation of rezoning sketches and legal descriptions for GF-1 rezonings at various locations around Polk City and coordination with City Staff regarding associated property owner notifications.

	Hours	Rate	Amount	
Principal Planner I	3.75	103.00	386.25	
Engineer III	26.00	103.00	2,678.00	
Total Services	29.75		3,064.25	
Total Services				3,064.25
			Task Subtotal	\$3,064.25

Water Dept

Services include review of hookup fees for area in and around future regional park.

	Hours	Rate	Amount	
Principal Planner I	.50	103.00	51.50	
Total Services	.50		51.50	
Total Services				51.50
			Task Subtotal	\$51.50

Sanitary Sewers

Services include review of hookup fees for area in and around future regional park.

REMIT TO: SNYDER & ASSOCIATES, INC.

Mailing: PO Box 1159 | Ankeny, IA 50021
 Physical: 2727 SW Snyder Blvd. | Ankeny IA 50023

p: 888-964-2020 | f: 515-964-7938
 Federal E.I.N. 42-1379015
 SNYDER-ASSOCIATES.COM

	Hours	Rate	Amount	
Principal Planner I	.50	103.00	51.50	
Total Services	.50		51.50	
Total Services				51.50
Task Subtotal				\$51.50

Storm Sewers and Drainage				
Task Subtotal				0.00

Streets and Trails
 Services include preparation of STBG application materials, including the required shapefiles and assisting staff with required grant application and questionnaire.

	Hours	Rate	Amount	
Engineer III	4.25	103.00	437.75	
Technician V	2.25	103.00	231.75	
Total Services	6.50		669.50	
Total Services				669.50
Task Subtotal				\$669.50

General Areas				
Task Subtotal				0.00

GIS Services
 Services include preparation of maps as requested by Polk City Public Works, including street maps, snow plow routes, existing water main system, and existing sanitary sewer system.

	Hours	Rate	Amount	
Environmental Scientist IV	4.75	103.00	489.25	
Technician V	1.50	103.00	154.50	
Total Services	6.25		643.75	
Total Services				643.75
Task Subtotal				\$643.75

Amount Due this Invoice \$5,150.00

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
 City of Polk City
 PO Box 426
 112 3rd Street
 Polk City, IA 50226-0426

Invoice No: 123.0674.01 - 7

Email

Project 123.0674.01 High Trestle Trail to Neal Smith Trail Connector-Phase 1

Professional Services through January 31, 2024

Services include design of streetlighting, continuation of utility coordination, and conducting of the Public Information Meeting associated with this project.

**Basic Services
 Lump Sum Fees**

	Contract Amount	% Compl	Total Billed to Date	Previous Billed	Current Billed
Project Admin	10,000.00	70.00	7,000.00	6,500.00	500.00
Concept Statement	3,000.00	100.00	3,000.00	3,000.00	0.00
Topo Survey	9,500.00	100.00	9,500.00	9,500.00	0.00
ROW	6,800.00	100.00	6,800.00	6,460.00	340.00
Survey Plats	13,000.00	0.00	0.00	0.00	0.00
Monument Preservation	1,500.00	0.00	0.00	0.00	0.00
Title Work	4,275.00	85.00	3,633.75	3,633.75	0.00
Prelim Design SA	58,000.00	100.00	58,000.00	58,000.00	0.00
Prelim Design SBI	16,500.00	100.00	16,500.00	16,500.00	0.00
Public Info Meeting	4,500.00	100.00	4,500.00	0.00	4,500.00
Utility Coord	5,000.00	60.00	3,000.00	2,000.00	1,000.00
Final Design SA	56,000.00	70.00	39,200.00	36,400.00	2,800.00
Final Design SBI	6,200.00	70.00	4,340.00	4,030.00	310.00
Streetlight Design	4,200.00	100.00	4,200.00	2,730.00	1,470.00
Bid Phase Services	1,500.00	0.00	0.00	0.00	0.00
Total Fee	199,975.00		159,673.75	148,753.75	10,920.00
Total Lump Sum Fees					10,920.00
Phase Subtotal					\$10,920.00

**Additional Services
 Lump Sum Fees**

	Contract Amount	% Compl	Total Billed to Date	Previous Billed	Current Billed
Wetland and Stream Delineation	5,000.00	95.00	4,750.00	4,750.00	0.00
404 Permitting	1,000.00	0.00	0.00	0.00	0.00
ROW	22,500.00	5.00	1,125.00	1,125.00	0.00
Total Fee	28,500.00		5,875.00	5,875.00	0.00

Project	123.0674.01	PlkCty-HTTtoNealSmithTrlConnector-Phs1	Invoice	7
Total Lump Sum Fees				0.00
Phase Subtotal				0.00
Amount Due this Invoice				<u>\$10,920.00</u>

	Total	Prior	Current
Billings to Date	165,548.75	154,628.75	10,920.00

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.0001.01K - 3

Email

Project 123.0001.01K HTT to NST Ph 1 Archaeological Tech Report

Professional Services through January 31, 2024

Services include preparation and submittal of ARPA Permit for review and approval by the US Army Corps of Engineers, coordination of curation agreement in association with ARPA permit, and preliminary preparation of the archaeological technical report.

Arch Technical Report

Table with 4 columns: Description, Hours, Rate, Amount. Rows include Archaeologist V, Total Services, and Task Subtotal.

Table with 4 columns: Billing Limits, Current, Prior, To-Date. Rows include Total Billings, Limit, and Remaining.

Amount Due this Invoice \$1,288.00

Table with 4 columns: Billings to Date, Total, Prior, Current. Row shows 4,599.00, 3,311.00, 1,288.00.

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
 City of Polk City
 PO Box 426
 112 3rd Street
 Polk City, IA 50226-0426

Invoice No: 123.0333.01 - 8

Email

Project 123.0333.01 High Trestle Trail to Neal Smith Trail Connector Phase 2

Professional Services through January 31, 2024

Services include preparation and coordination of Payment Application #1 and existing utility follow up.

**Basic Services
 Lump Sum Fees**

	Contract Amount	% Compl	Total Billed to Date	Previous Billed	Current Billed
Proj Admin	5,000.00	65.00	3,250.00	3,250.00	0.00
Topo and Boundary Survey	11,000.00	100.00	11,000.00	11,000.00	0.00
Prelim Design	12,100.00	100.00	12,100.00	12,100.00	0.00
Final Design	12,100.00	100.00	12,100.00	12,100.00	0.00
Bid Phase Services	3,000.00	100.00	3,000.00	3,000.00	0.00
Bat Habitat Survey	3,500.00	100.00	3,500.00	3,500.00	0.00
Total Fee	46,700.00		44,950.00	44,950.00	0.00
Total Lump Sum Fees					0.00

**Construction Services
 Lump Sum Fees**

	Contract Amount	% Compl	Total Billed to Date	Previous Billed	Current Billed
Construction Admin	8,000.00	45.00	3,600.00	3,200.00	400.00
Construction Staking	7,500.00	40.00	3,000.00	2,625.00	375.00
Total Fee	15,500.00		6,600.00	5,825.00	775.00
Total Lump Sum Fees					775.00

Amount Due this Invoice \$775.00

Billings to Date	Total	Prior	Current
	51,550.00	50,775.00	775.00

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
 City of Polk City
 PO Box 426
 112 3rd Street
 Polk City, IA 50226-0426

Invoice No: 123.0770.01 - 6

Email

Project 123.0770.01 High Trestle Trail to Neal Smith Trail Connector-Phases 6 & 7

Professional Services through January 31, 2024

Services include the finalization of detention basin design and revision to trail alignment to accommodate and balance grading.

**Basic Services
 Lump Sum Fees**

	Contract Amount	% Compl	Total Billed to Date	Previous Billed	Current Billed
Project Admin	6,200.00	40.00	2,480.00	1,550.00	930.00
Topo and Boundary Survey	9,600.00	100.00	9,600.00	9,600.00	0.00
Prelim Design and Plans	11,500.00	90.00	10,350.00	9,775.00	575.00
Final Design and Plans	11,000.00	10.00	1,100.00	0.00	1,100.00
Construction Permits	1,000.00	0.00	0.00	0.00	0.00
Hydraulic Modeling	4,750.00	100.00	4,750.00	4,275.00	475.00
Bid Phase Services	3,000.00	0.00	0.00	0.00	0.00
Total Fee	47,050.00		28,280.00	25,200.00	3,080.00
Total Lump Sum Fees					3,080.00

**Additional Services
 Lump Sum Fees**

	Contract Amount	% Compl	Total Billed to Date	Previous Billed	Current Billed
Wetland and Stream Delineation	5,000.00	100.00	5,000.00	5,000.00	0.00
Wetland and Stream Permitting	4,500.00	0.00	0.00	0.00	0.00
T&E Habitat Survey	6,000.00	0.00	0.00	0.00	0.00
Alternative Analysis	8,000.00	0.00	0.00	0.00	0.00
Real Estate App	4,000.00	0.00	0.00	0.00	0.00
Total Fee	27,500.00		5,000.00	5,000.00	0.00
Total Lump Sum Fees					0.00

Amount Due this Invoice \$3,080.00

Billings to Date	Total	Prior	Current
	33,280.00	30,200.00	3,080.00

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
 City of Polk City
 PO Box 426
 112 3rd Street
 Polk City, IA 50226-0426

Invoice No: 121.0455.01 - 28

Email

Project 121.0455.01 North 3rd St and Vista Lake Ave Intersection Improvements

Professional Services through January 31, 2024

Prepare an Invoice and Bill Services include coordination with City Staff and Contractor regarding Retainage Release and project closeout. Bill \$277.00

**Basic Services
 Lump Sum Fees**

	Contract Amount	% Compl	Total Billed to Date	Previous Billed	Current Billed
Proj Admin	12,200.00	100.00	12,200.00	12,200.00	0.00
Topo Survey	14,700.00	100.00	14,700.00	14,700.00	0.00
Prelim Design and Plans	45,400.00	100.00	45,400.00	45,400.00	0.00
Final Design and Plans	41,600.00	100.00	41,600.00	41,600.00	0.00
Landscaping and Planting Design	8,100.00	100.00	8,100.00	8,100.00	0.00
Public Info Meeting	7,500.00	100.00	7,500.00	7,500.00	0.00
Bid Phase Serv	2,900.00	100.00	2,900.00	2,900.00	0.00
RRFB	7,250.00	100.00	7,250.00	7,250.00	0.00
Street Lighting Design and Plans	4,300.00	100.00	4,300.00	4,300.00	0.00
Total Fee	143,950.00		143,950.00	143,950.00	0.00
Total Lump Sum Fees					0.00
Phase Subtotal					0.00

Additional Services

Billing Limits	Current	Prior	To-Date
Total Billings	0.00	33,550.00	33,550.00
Limit			33,550.00
Phase Subtotal			0.00

Pass Thru Costs

Task Subtotal			0.00
Phase Subtotal			0.00

Construction Services

Hourly Services	Hours	Rate	Amount
Principal Planner	1.00	209.00	209.00

Project	121.0455.01	PlkCty-North3rdStVistaLakeAveIntImprov		Invoice	28
Engineer IV		.50	136.00	68.00	
	Total Services	1.50		277.00	
					277.00
Billing Limits		Current	Prior	To-Date	
Total Billings		277.00	54,503.25	54,780.25	
Limit				58,100.00	
Remaining				3,319.75	
			Phase Subtotal		\$277.00
			Amount Due this Invoice		<u>\$277.00</u>

Billings to Date	Total	Prior	Current
	233,030.45	232,753.45	277.00

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Laura Lamberty



INVOICE FOR PROFESSIONAL SERVICES

January 28, 2024

Chelsea Huisman
 City of Polk City
 PO Box 426
 112 3rd Street
 Polk City, IA 50226-0426

Invoice No: 122.0178.01 - 21

Email

Project 122.0178.01 Antler Ridge Plat 1

Professional Services through December 31, 2023

Development Agreement

Phase Subtotal 0.00

Preliminary Plat

Phase Subtotal 0.00

Traffic Impact Study

Phase Subtotal 0.00

Construction Drawings San Sewer Only

Phase Subtotal 0.00

Const Dwgs Review

Phase Subtotal 0.00

Construction Phase Services

Services include construction administration including coordination re: utility permit for temporary relocation of Mid-American pole including research of platted easements and right-of-way, coordination with contractor and respond to miscellaneous questions, and project administration services including coordination with field personnel and city staff. Services also include observation of sanitary trunk sewer construction including observation of installation of pipe and manholes, trench box installation, trench backfill, compaction testing, sanitary sewer repair work, water main tapping, water main installation and testing, and reports and documentation.

	Hours	Rate	Amount	
Principal Planner	2.50	209.00	522.50	
Engineer III	1.00	124.00	124.00	
Lead Technician	18.00	133.00	2,394.00	
Technician VII	1.00	109.00	109.00	
Technician III	54.00	72.00	3,888.00	
Total Services	76.50		7,037.50	
Total Services				7,037.50
			Phase Subtotal	\$7,037.50

Final Plat

Phase Subtotal 0.00

Rezoning

Project	122.0178.01	PlkCty-AntlerRidgePlat1	Invoice	21
Phase Subtotal				0.00
Amount Due this Invoice				<u><u>\$7,037.50</u></u>

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Kathleen Connor



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
 City of Polk City
 PO Box 426
 112 3rd Street
 Polk City, IA 50226-0426

Invoice No: 122.0178.01 - 22

Email

Project 122.0178.01 Antler Ridge Plat 1

Professional Services through January 31, 2024

Development Agreement

	Hours	Rate	Amount	
Engineer IV	1.00	136.00	136.00	
Total Services	1.00		136.00	
Total Services				136.00
			Phase Subtotal	\$136.00

Preliminary Plat

Phase Subtotal 0.00

Traffic Impact Study

Phase Subtotal 0.00

Construction Drawings San Sewer Only

Phase Subtotal 0.00

Const Dwgs Review

Phase Subtotal 0.00

Construction Phase Services

Services include construction administration including coordination with field personnel, city staff and contractor on various issues including city requirements for repair band on 15" pipe, review of M&D tests with CMT, and timing of sanitary sewer video and testing for deep sewer. Services also include observation of sanitary trunk sewer construction consisting of observation of trench backfill and repair at manhole 11, reports, and documentation.

	Hours	Rate	Amount	
Engineer IV	.50	136.00	68.00	
Lead Technician	4.50	133.00	598.50	
Technician III	8.00	72.00	576.00	
Total Services	13.00		1,242.50	
Total Services				1,242.50
			Phase Subtotal	\$1,242.50

Final Plat

Phase Subtotal 0.00

Rezoning

Services include coordination with developer's engineer regarding documents needed for cleanup rezonings and begin review of rezoning sketches.

	Hours	Rate	Amount	
Engineer IV	1.00	149.00	149.00	
Engineer III	.50	137.00	68.50	
Total Services	1.50		217.50	
Total Services				217.50
		Phase Subtotal		\$217.50

Amount Due this Invoice \$1,596.00

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Kathleen Connor



INVOICE FOR PROFESSIONAL SERVICES

January 23, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.0787.01 - 7

Email

Project 123.0787.01 Big Creek Ridge Plat 1

Professional Services through December 31, 2023

Services include preparation and attendance for a meeting the the US Army Corps of Engineers regarding development outlet location and USACE requirements for storm sewer discharge onto their property.

Preliminary Plat

Task Subtotal 0.00

Construction Drawings

	Hours	Rate	Amount	
Principal Planner I	2.00	230.00	460.00	
Engineer III	2.50	137.00	342.50	
Total Services	4.50		802.50	
Total Services				802.50

Task Subtotal \$802.50

SWMP Review

	Hours	Rate	Amount	
Engineer III	.50	137.00	68.50	
Total Services	.50		68.50	
Total Services				68.50

Task Subtotal \$68.50

Amount Due this Invoice \$871.00

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.0787.01 - 8

Email

Project 123.0787.01 Big Creek Ridge Plat 1

Professional Services through January 31, 2024

Services include development and sending of development agreement terms and review of Submittal #3 of Construction Drawings, SWMP, and associated documents.

Preliminary Plat

Task Subtotal 0.00

Construction Drawings

	Hours	Rate	Amount	
Principal Planner I	2.00	230.00	460.00	
Engineer IV	9.25	149.00	1,378.25	
Total Services	11.25		1,838.25	
Total Services				1,838.25

Task Subtotal \$1,838.25

SWMP Review

Task Subtotal 0.00

Amount Due this Invoice \$1,838.25

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

January 23, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.0836.01 - 3

Email

Project 123.0836.01 Gateway Crossings Plat 1

Professional Services through December 31, 2023

Services include research and correspondence, at the request of the developer, regarding parkland dedication requirements and previously sent information regarding City recommendations for revisions to development layout.

Neighborhood Sketch

Table with 4 columns: Description, Hours, Rate, Amount. Rows include Engineer III, Total Services, and Task Subtotal for Neighborhood Sketch.

Prelim Plat

Task Subtotal 0.00

Amount Due this Invoice \$479.50

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.0836.01 - 4

Email

Project 123.0836.01 Gateway Crossings Plat 1

Professional Services through January 31, 2024

Services Include Coordination with Developer regarding revised Whitetail Parkway Alignment after City Council Work Session.

Neighborhood Sketch

Table with 4 columns: Role, Hours, Rate, Amount. Rows include Principal Planner I, Engineer IV, Total Services, and Task Subtotal.

Prelim Plat

Task Subtotal 0.00

Amount Due this Invoice \$206.50

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 122.0358.01 - 6

Email

Project 122.0358.01 Home State Bank Site Plan

Professional Services through January 31, 2024

Services include site visit on 12/21/2023 to review and identify illegally removed trees; site visit on 12/22/2023 to review proposed removal limits and mark/measure illegally removed trees; prepare and send notice re: illegal tree removal; prepare draft Agreement to Complete for staff review; 1/3/2023 meeting with Home State Bank re: remedy for illegal tree removal; on-site meeting on 1/4/2023 with developer, arborist and staff; coordination with staff developer, and contractor regarding punchlist and Agreement to complete; coordinate with Jenny Coffin on resolution and council packets; prepare Memo on Site Plan Amendment for tree removal including review comments and distribute; coordination re: temporary Certificate of Occupancy; review submittal #2 and update Memo on SPA for P&Z packets; and coordinate with City Attorney and staff regarding Maintenance Agreement as per P&Z recommendation; and coordinate with McClure re: questions and concerns regarding terms for said Agreement.

Site Plan Amendment

Table with 4 columns: Role, Hours, Rate, Amount. Rows include Engineer IV, Engineer III, Landscape Architect II, Total Services, and Task Subtotal.

Amount Due this Invoice \$3,303.75

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Kathleen Connor



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.0287.01 - 4

Email

Project 123.0287.01 Leonard Senior Living Plat and Site Plan

Professional Services through January 31, 2024

Plat and Site Plan Review

Services include review Site Plan Amendment including comparison of previous architectural elevations and proposed changes, review revised unit numbers by type and revised parking requirements, and review of revised landscaping; review of revised storm water management plan including revisions to storm sewer and detention details; prepare Review Memo dated 1/8/2024; attend meeting with developer; update Review Memo dated 1/9/2024 per developer discussion; coordinate with Chelsea Huisman on Review Memo and discuss developer request for administrative approval of proposed revisions to previously-approved site plan.

	Hours	Rate	Amount	
Engineer IV	6.50	149.00	968.50	
Engineer III	4.00	137.00	548.00	
Total Services	10.50		1,516.50	
Total Services				1,516.50
		Task Subtotal		\$1,516.50

Amount Due this Invoice \$1,516.50

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Kathleen Connor



INVOICE FOR PROFESSIONAL SERVICES

January 28, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.1076.01 - 4

Email

Project 123.1076.01 Monarch Crossing Plat 1

Professional Services through December 31, 2023

Prelim Plat Review

Task Subtotal 0.00

Construction Drawings

Services include review Submittal #2, respond to Erin Ollendike re: setbacks for accessory buildings and intake spread criteria; review grading plan in advance of full review at request of developer's engineer; complete review of construction drawings including sanitary sewer plan and profile, water main plan and profile, sidewalk layout and geometrics, and paving geometrics; and prepare Review Memo with comments on construction drawings and accompanying documents.

Table with 4 columns: Role, Hours, Rate, Amount. Rows include Principal Planner I, Engineer III, Total Services, and Task Subtotal.

SWMP

Services include review of revised Storm Water Management Plan; research and respond to Erin Ollendike re: intake spread criteria; and update review memo with comments on storm water calculations and design.

Table with 4 columns: Role, Hours, Rate, Amount. Rows include Engineer III, Total Services, and Task Subtotal.

Amount Due this Invoice \$1,531.50

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Kathleen Connor



INVOICE FOR PROFESSIONAL SERVICES

February 26, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.1076.01 - 5

Email

Project 123.1076.01 Monarch Crossing Plat 1

Professional Services through January 31, 2024

Prelim Plat Review

Task Subtotal 0.00

Construction Drawings

Services include research Council's stipulations for Preliminary Plat approval; prepare draft terms for Development Agreement including fee for future E. Northside Drive improvements, Northeast Trunk Sewer hookup fee, and timing for developer's payment; coordinate with city staff and finalize proposed terms for Development Agreement; review Submittal #3 of the construction drawings including updates to storm sewer and sanitary sewer; coordinate with developer's engineer re: need for additional off-site easements; prepare Review Memo dated 01/31/2024 and send Review Memo to developer, developer's engineer, and staff.

	Hours	Rate	Amount	
Principal Planner I	1.50	230.00	345.00	
Engineer IV	7.50	149.00	1,117.50	
Total Services	9.00		1,462.50	
Total Services				1,462.50
		Task Subtotal		\$1,462.50

Amount Due this Invoice \$1,462.50

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Kathleen Connor



INVOICE FOR PROFESSIONAL SERVICES

January 28, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.0424.01 - 4

Email

Project 123.0424.01 On With Life Site Plan

Professional Services through December 31, 2023

Site Plan Review

Task Subtotal 0.00

SP Amendment #1

Services include review Site Plan Amendment and restated buffer easement; coordinate re: need for updated Exhibit A to include all buffer areas; prepare Memo with review comments; and coordinate with developer's engineer.

Table with 4 columns: Role, Hours, Rate, Amount. Rows include Principal Planner I, Engineer III, Total Services, and Task Subtotal (\$871.00).

Plat of Survey

Services include review Plat of Survey; prepare Memo with review comments; and coordinate with developer's engineer.

Table with 4 columns: Role, Hours, Rate, Amount. Rows include Engineer III, Total Services, and Task Subtotal (\$68.50).

Amount Due this Invoice \$939.50

Table with 4 columns: Billings to Date, Total, Prior, Current. Values: 5,204.00, 4,264.50, 939.50.

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Kathleen Connor



INVOICE FOR PROFESSIONAL SERVICES

February 28, 2024

Chelsea Huisman
City of Polk City
PO Box 426
112 3rd Street
Polk City, IA 50226-0426

Invoice No: 123.1448.01 - 1

Email

Project 123.1448.01 Parker Townhomes II POS

Professional Services through January 31, 2024

Services include Review Plat of Survey and Record of Lot Tie Agreement, including research of missing recorded documents, PUD Master Plan, and other historical resolutions or ordinances.

POS

	Hours	Rate	Amount	
Principal Planner I	2.00	230.00	460.00	
Engineer IV	7.50	149.00	1,117.50	
Engineer III	1.00	137.00	137.00	
Total Services	10.50		1,714.50	
Total Services				1,714.50
		Task Subtotal		\$1,714.50

Amount Due this Invoice \$1,714.50

Thank you. We appreciate the opportunity to serve you.

Accounts Receivable Inquiry: ar@snyder-associates.com

Project Manager: Travis Thornburgh