WINSTEAD ARCHITECTURE
J. STAN WINSTEAD, AIA

22 NORTH MAIN AVE., P.O. BOX 321
NEWTON, NORTH CAROLINA 28658

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ADDENDUM #6

Catawba County
Catawba County EMS Base Station – Hickory, NC
Bid Number #25-1015
Hickory, North Carolina

February 11, 2025

Applying to all bidders.

This addendum is issued for the purpose of clarifying the intent of the contract documents for making necessary corrections, deletions, and/or additions to the documents on all items of discrepancy raised up to the time of the issuance of this addendum.

Each bidder is hereby instructed and authorized to incorporate into his proposal the instructions contained in this addendum.

TO ALL BIDDERS

1. ***A Revised Bid Opening Date:*** Bid opening date for this project is now being pushed out to **February 20, 2025.** A mandatory pre-bid conference was held on December 18th, 2024 on the site at 3:00 pm. You must have had a representative of your company there to be eligible to bid this project. The new details are as follows: Catawba County will receive sealed bids for the construction of a new Catawba County EMS Base Station, Bid Number 25-1015, in the 2nd Floor Meeting Room, Government Center, 25 Government Drive, Newton, North Carolina, 28658 until 3:00 PM, local prevailing time, on February 20, 2025. The clock/Apple phone in the Government Center, 2nd Floor Meeting Room will be used to determine bid submission closure. Bids received after 3:00 PM on February 20, 2025, will not be accepted. Immediately thereafter bids shall be publicly opened and read by the Architect for furnishing of labor, materials, and equipment for the construction of the new Catawba County EMS Base Station - Hickory. The project location is 827 E Ave SE, Hickory, North Carolina 28602.

2. **Note:** We have re-submitted drawings to Plan Review after second set of comments received. Please, once again, replace previous complete drawing set with the complete set provided in the project folder provided by Catawba County. **Special Note: The only drawings that have been revised are the Civil Drawings. The scale on the Civil drawings were shown as 1"=20'. The should read 1"=30'. It is important that all GC's make all subcontractors aware of this revision. It should be verified by any Grading Contractors bidding the project that they acknowledge this revision to scale prior to bidding. Note also that there were (2) sheet C7's. This has also been corrected.**

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3. **See storm water calculation for your use. Attached to this addendum.**

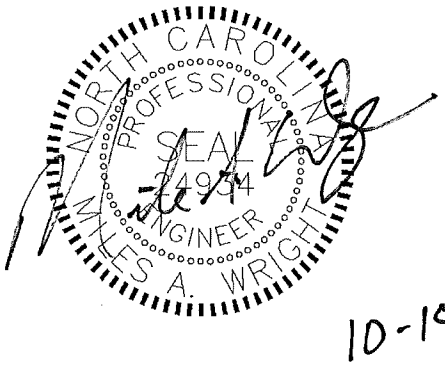
4. **For Clarification:** The brick allowance should be as indicated in the specifications as $320 per thousand. We are not using an oversized, or queen brick on this project. It is a modular brick: Chocolate Velour from Statesville Brick is what has been used on the first two EMS Stations.

J. Stan Winstead, AIA
Winstead Architecture, PLLC

PLEASE ATTACH THIS ADDENDUM TO THE FRONT COVER OF THE SPECIFICATIONS AND ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID.

Storm Drainage Calculations

Hickory EMS Base
Catawba County
North Carolina



10-15-24

For information regarding this document contact:
Miles A. Wright, PE
WRIGHT & ASSOCIATES
- 209 1st Ave South
- Conover, North Carolina 28613
- 828-465-2205

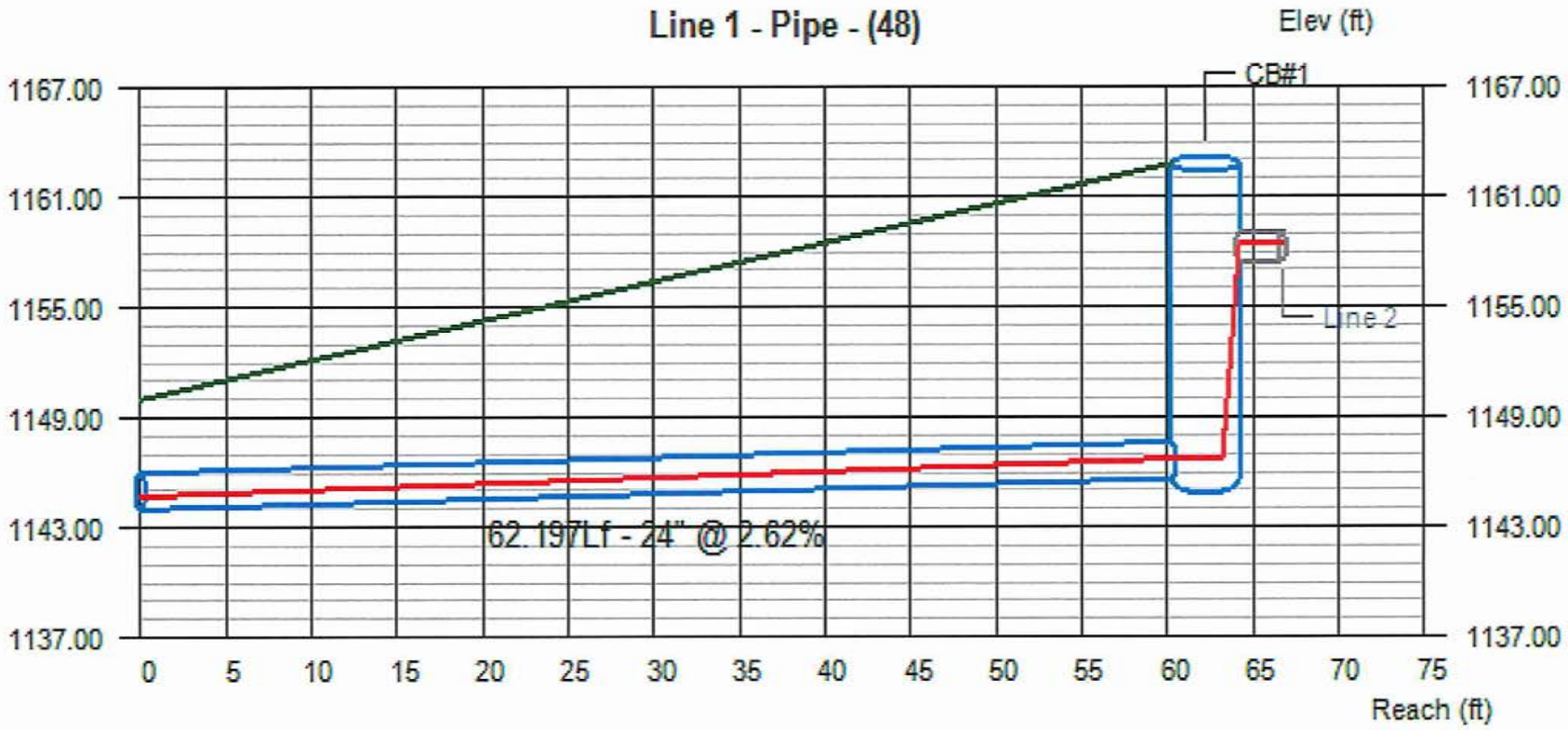
Storm Drainage Calculations

Hickory EMS

10/15/2024

Structure	Drainage Area SF	Drainage Area AC	C	I	Q(10)
CB#1	10153	0.23	0.80	6.89	1.28
CB#2	11080	0.25	0.80	6.89	1.40
CB#3	9020	0.21	0.80	6.89	1.14
CB#4	10020	0.23	0.80	6.89	1.27
CB#5	6869	0.16	0.80	6.89	0.87
CB#6	6359	0.15	0.80	6.89	0.80
CB#9	7069	0.16	0.80	6.89	0.89
CB#10	8060	0.19	0.80	6.89	1.02
CB#11	7060	0.16	0.80	6.89	0.89

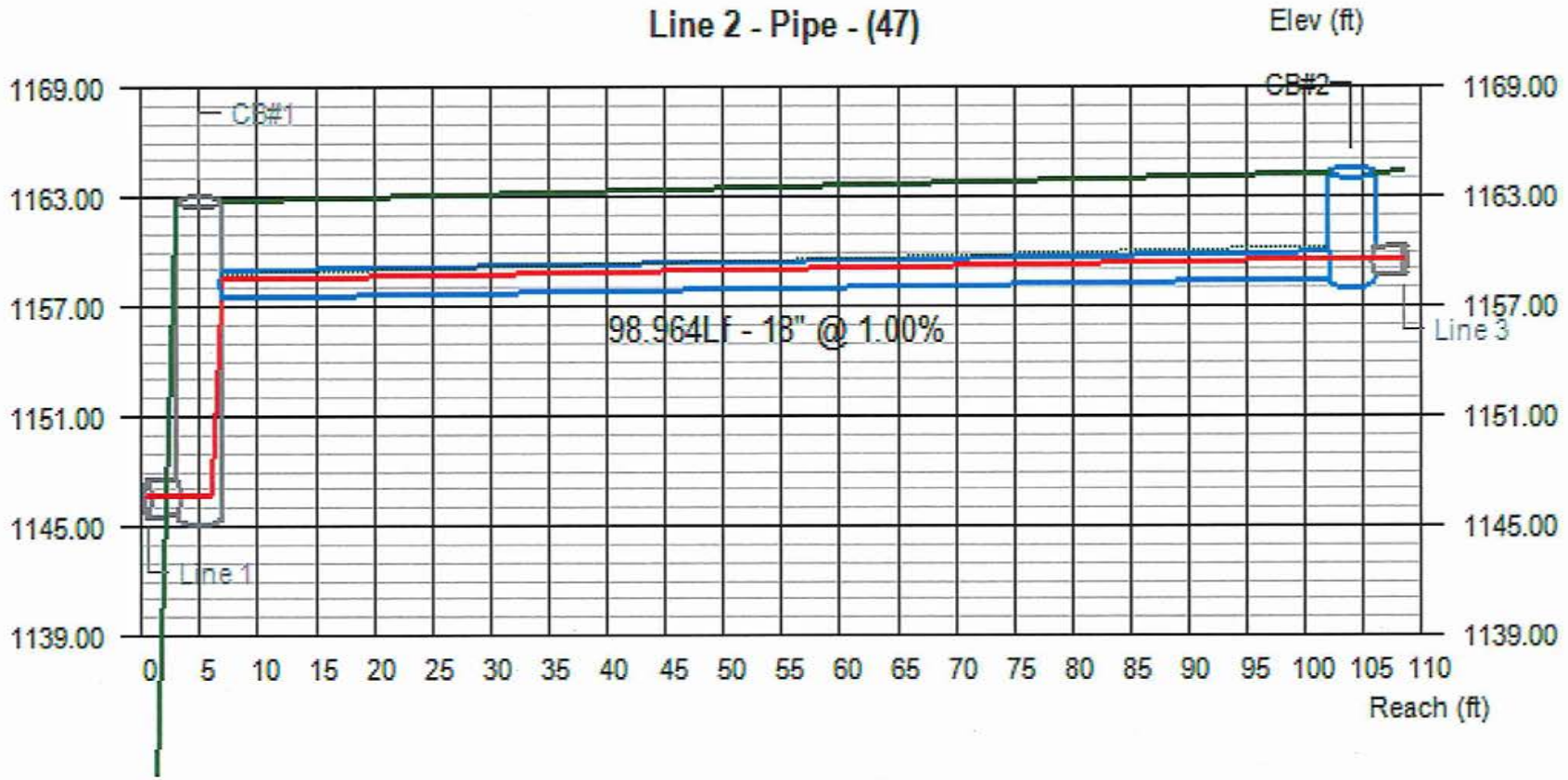
Line Profile (Line 1) - Pipe - (48)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
1	9.56	1143.99	1145.62	0.70	1.10	1.10	1144.69	1146.72	1146.72	9.80	5.37	4.00	15.16

Project File:	No. Lines: 9	Run Date: 2/10/2025

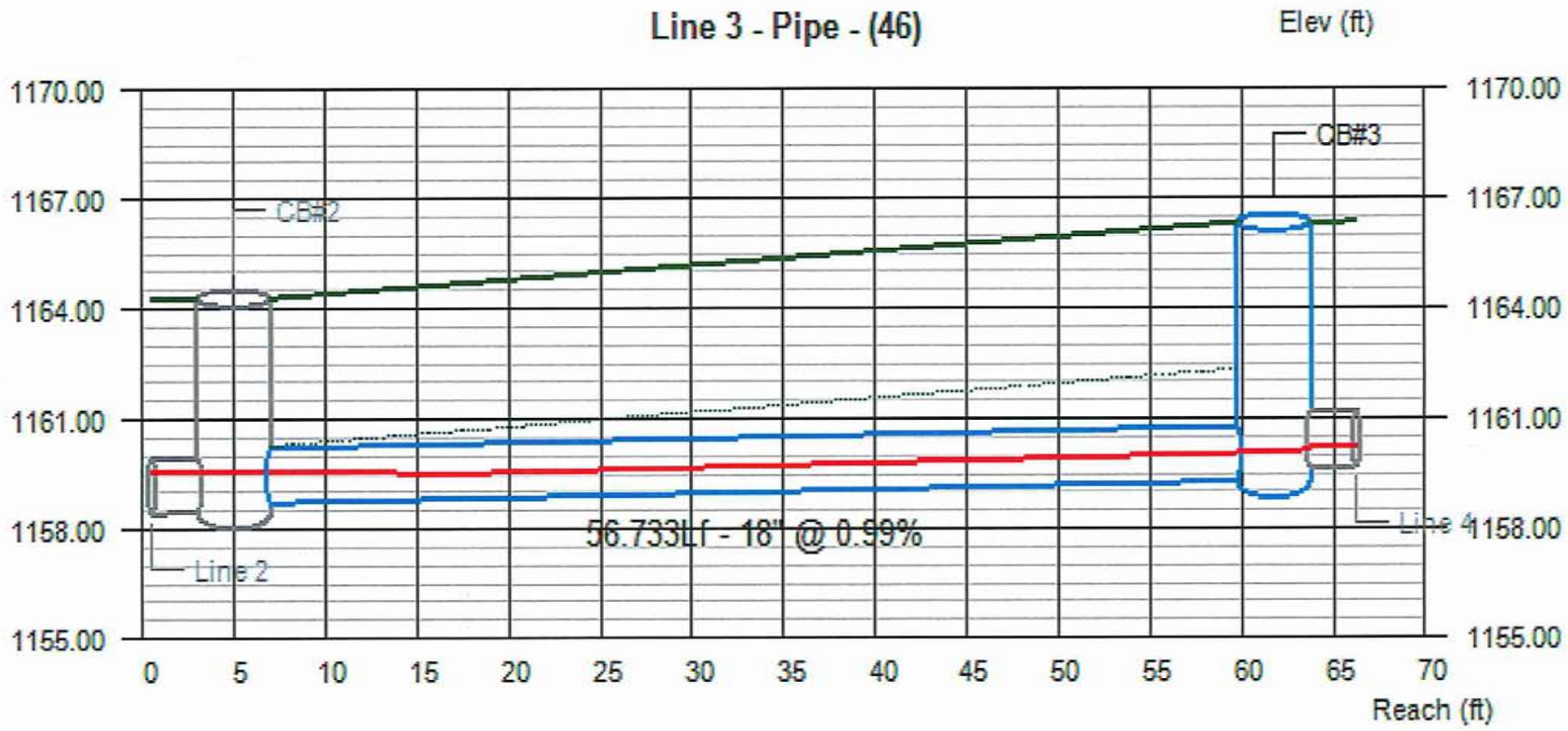
Line Profile (Line 2) - Pipe - (47)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
2	8.28	1157.47	1158.46	1.00	1.11	1.11	1158.47	1159.57	1159.57	6.59	5.89	3.81	4.32

Project File:	No. Lines: 9	Run Date: 2/10/2025

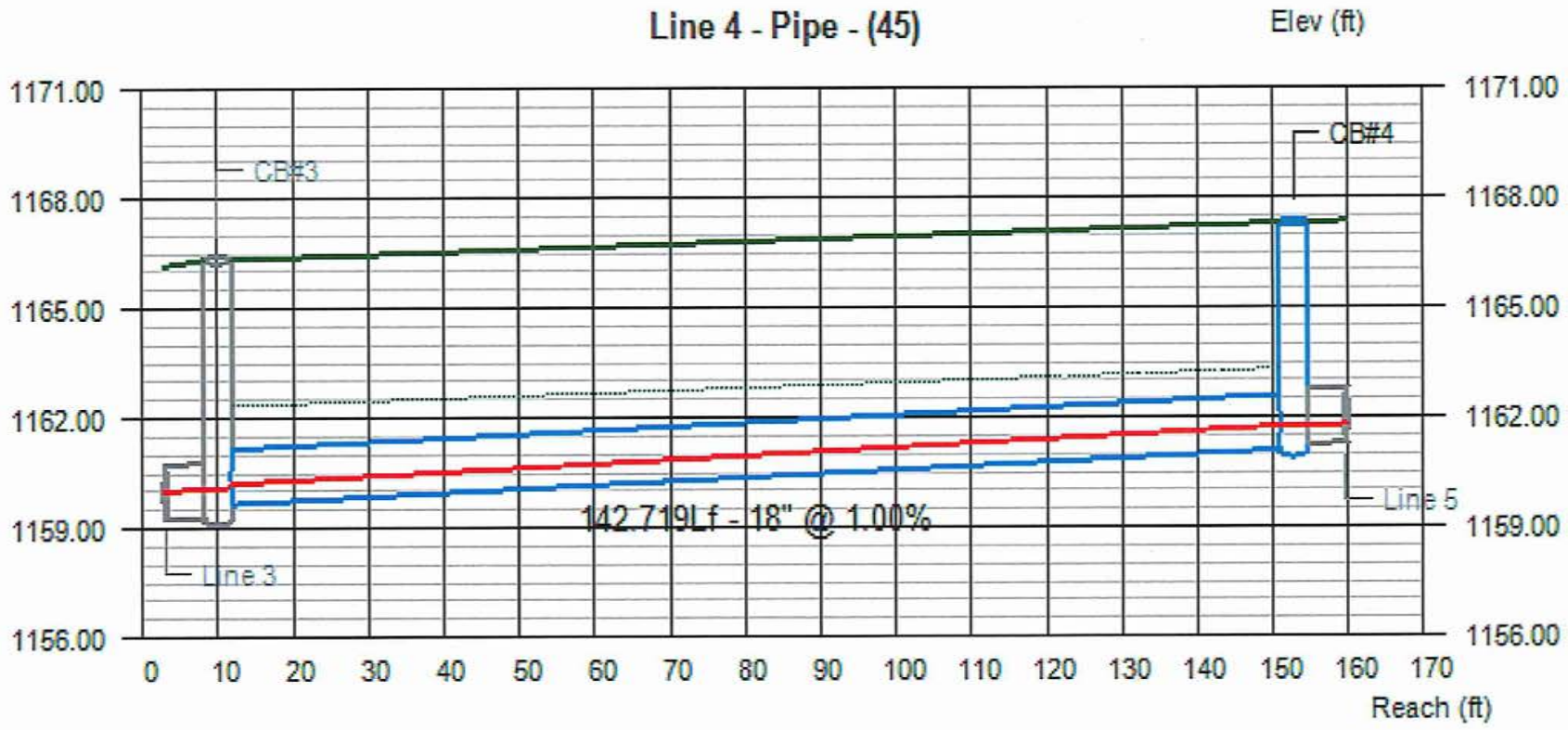
Line Profile (Line 3) - Pipe - (46)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
3	4.08	1158.72	1159.28	0.85	0.77	0.77	1159.57	1160.05 j	1160.05	3.93	4.45	4.06	5.55

Project File: | No. Lines: 9 | Run Date: 2/10/2025

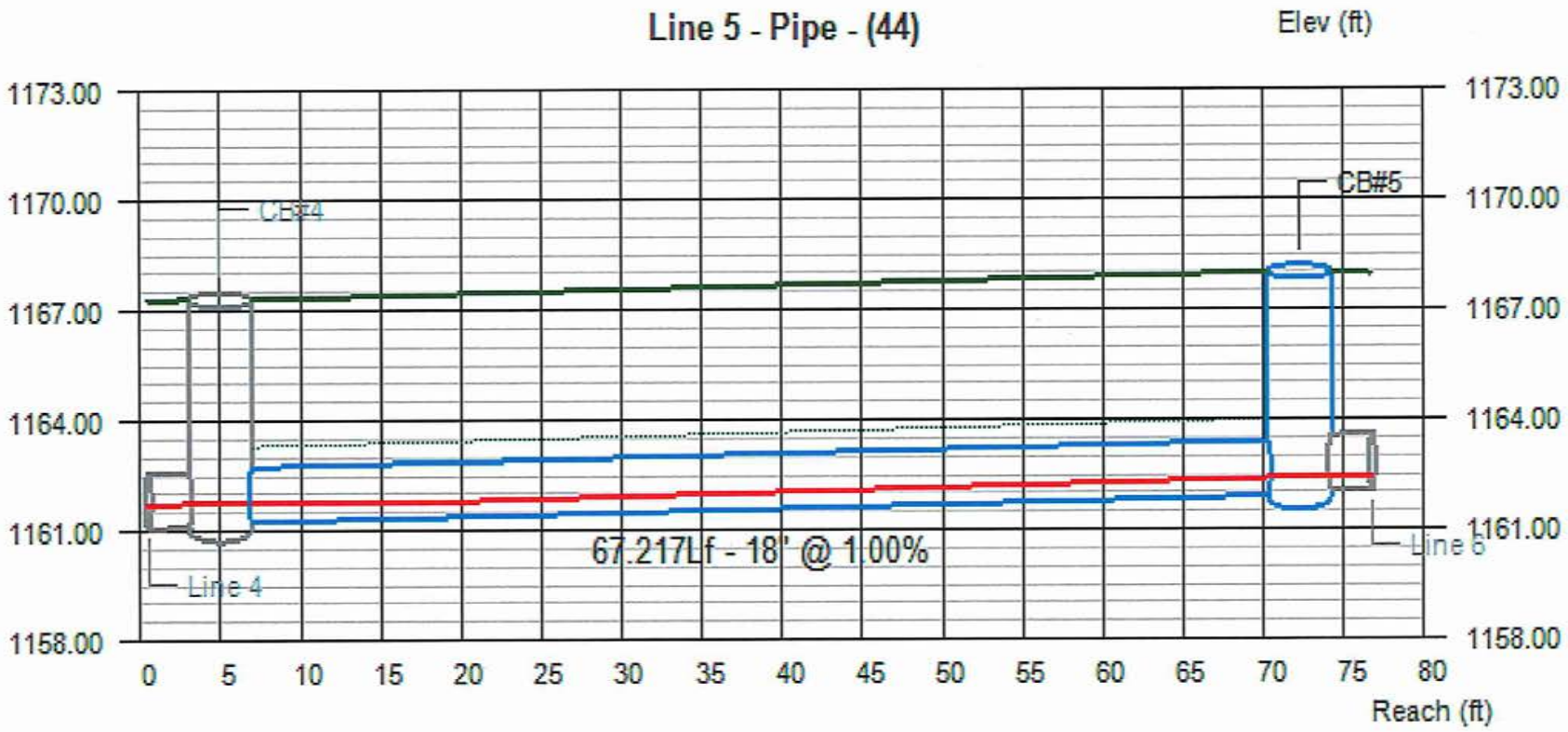
Line Profile (Line 4) - Pipe - (45)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
4	2.94	1159.66	1161.09	0.54	0.65	0.65	1160.20	1161.74	1161.74	5.10	4.00	5.17	4.71

Project File: | No. Lines: 9 | Run Date: 2/10/2025

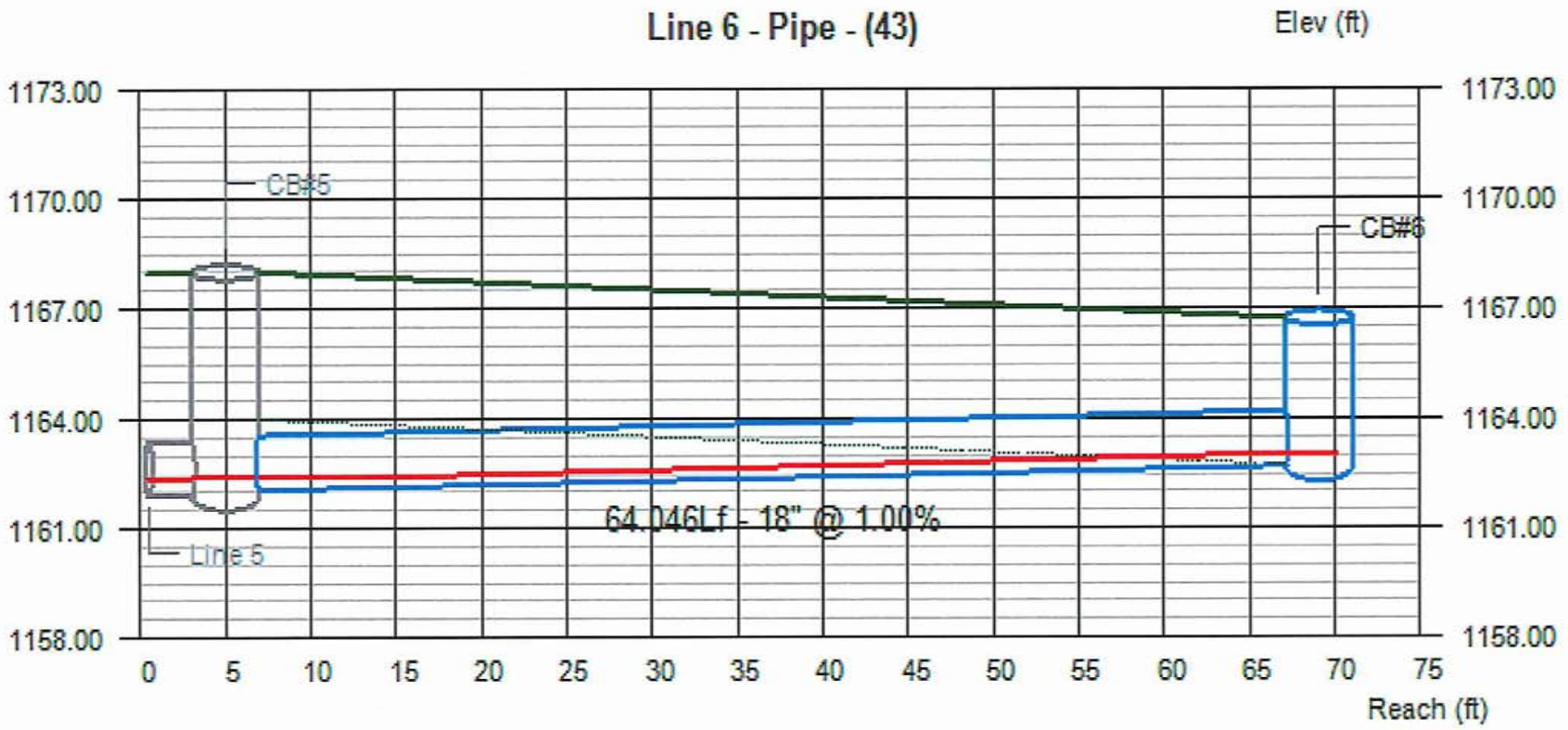
Line Profile (Line 5) - Pipe - (44)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
5	1.67	1161.24	1161.91	0.50	0.49	0.49	1161.74	1162.40 j	1162.40	3.23	3.37	4.56	4.59

Project File: | No. Lines: 9 | Run Date: 2/10/2025

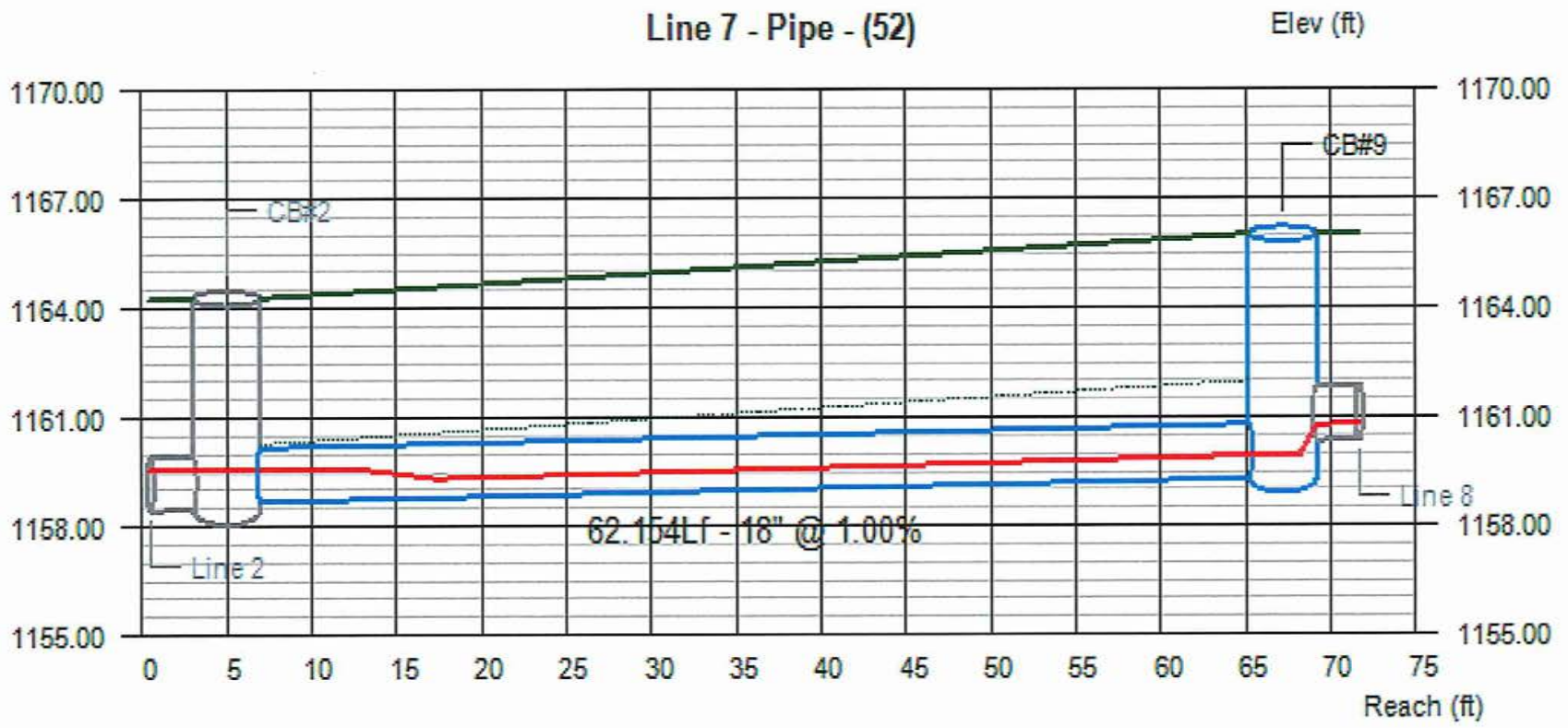
Line Profile (Line 6) - Pipe - (43)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
6	0.80	1162.06	1162.70	0.34	0.33	0.33	1162.40	1163.03 j	1163.03	2.71	2.75	4.44	2.53

Project File: | No. Lines: 9 | Run Date: 2/10/2025

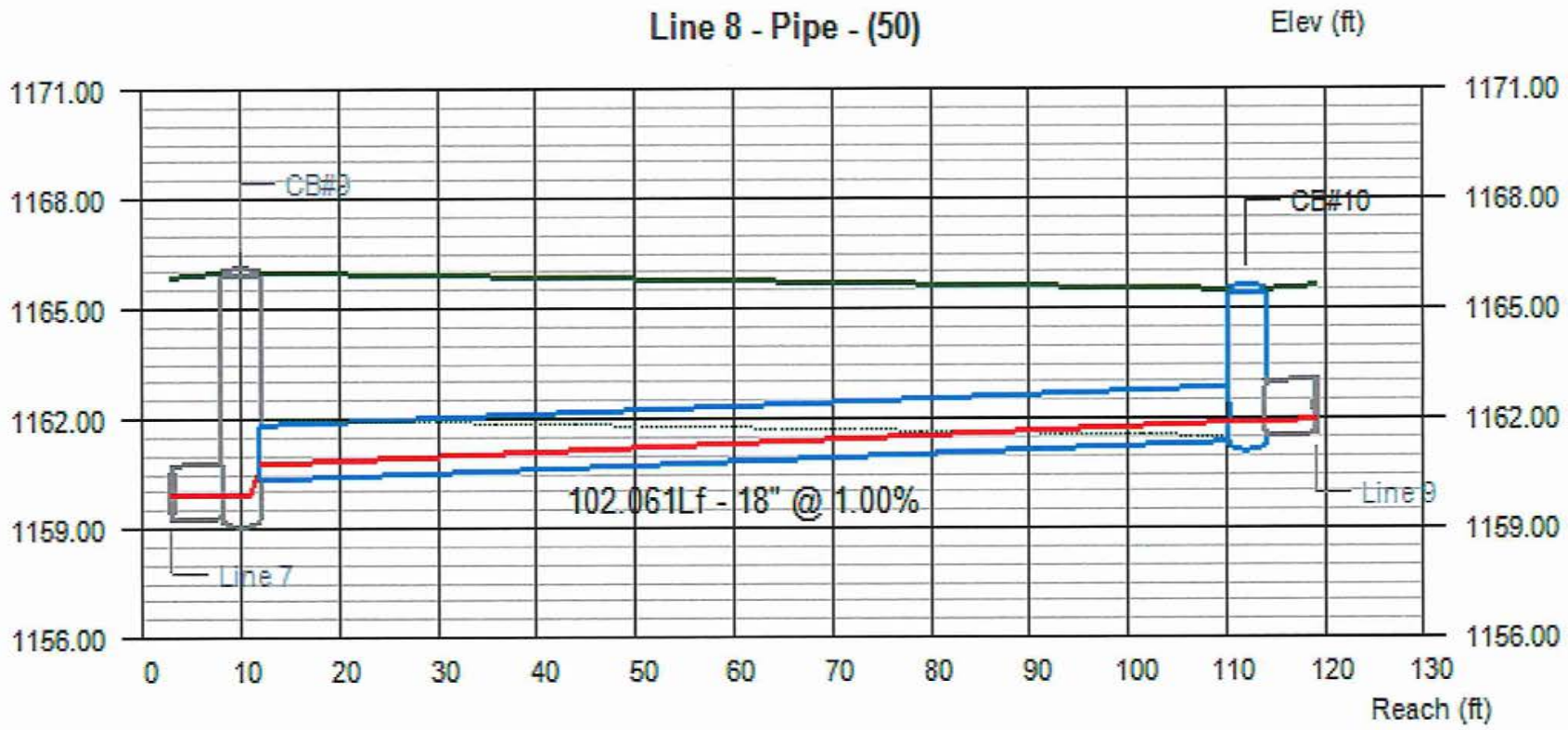
Line Profile (Line 7) - Pipe - (52)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
7	2.80	1158.68	1159.30	0.89	0.63	0.63	1159.57	1159.94 j	1159.94	2.55	3.94	4.10	5.20

Project File: | No. Lines: 9 | Run Date: 2/10/2025

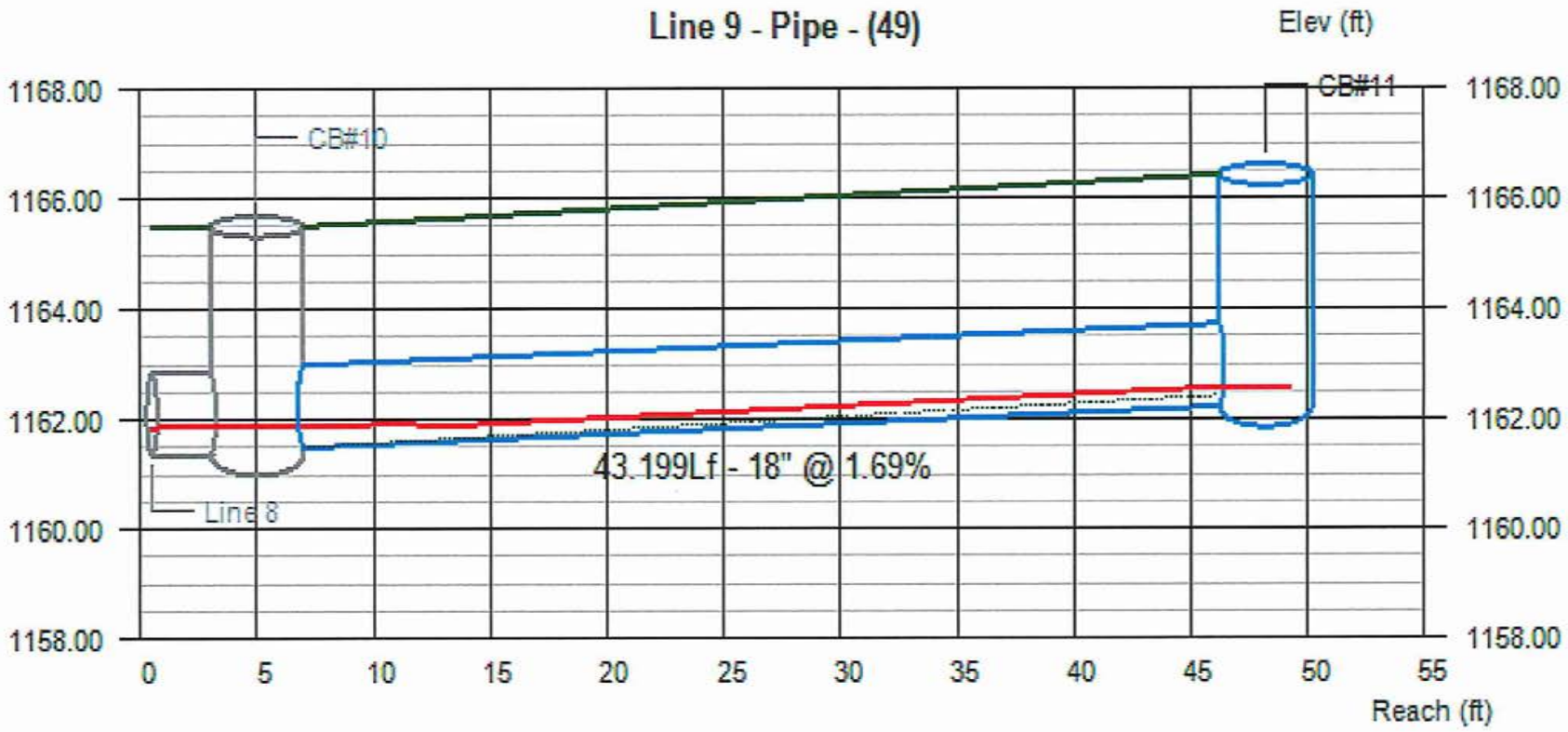
Line Profile (Line 8) - Pipe - (50)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
8	1.91	1160.34	1161.36	0.43	0.52	0.52	1160.77	1161.88	1161.88	4.51	3.51	4.16	2.64

Project File:	No. Lines: 9	Run Date: 2/10/2025

Line Profile (Line 9) - Pipe - (49)



Line #	Q	Invert Elevation		Depth of Flow			Hydraulic Grade Line			Velocity		Cover	
	(cfs)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Hw (ft)	Dn (ft)	Up (ft)	Jnct (ft)	Dn (ft/s)	Up (ft/s)	Dn (ft)	Up (ft)
9	0.89	1161.49	1162.22	0.39	0.35	0.35	1161.88	1162.57 j	1162.57	2.44	2.83	2.51	2.70

Project File: | No. Lines: 9 | Run Date: 2/10/2025

BMP Calculations

Water Quality Calculation

1" Runoff Storage Volume Calculation

Sand Filter #1

Vh= (1.00) [0.05 + 0.9 (I)] * A * 3630

I = % of Watershed Impervious=	60.34	%
A = Watershed in Acres=	1.74	AC

Vh= 3745.886 CF

Total Caculated Storage= 3745.89 CF

25% Reduction for Sand Filter = 936.47 CF

Storage Needed= 2809.41 CF

Depth of 1" Rainfall Storage (See Storage Volume Calculations)

Elevation	Volume
1145	1457
1146	3214

1" Rainfall Storage Elevation= 1145.77

Bottom of Basin= 1144.00

Total Storage Depth= 1.77 Feet

50% of treatment to be stored in Sand Chamber =	1405	CF
Maximum Storage Below 1st Bypass =	4	Feet

Sand Filter Area= 351 SF

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Pond No. 1 - <New Pond>

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 1144.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1144.00	1,316	0	0
1.00	1145.00	1,603	1,457	1,457
2.00	1146.00	1,916	1,757	3,214
3.00	1147.00	2,255	2,083	5,297
4.00	1148.00	2,620	2,435	7,732
5.00	1149.00	3,010	2,812	10,544
6.00	1150.00	3,426	3,215	13,760

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	0.00	0.00	0.00
Span (in)	= 18.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 1143.00	0.00	0.00	0.00
Length (ft)	= 41.00	0.00	0.00	0.00
Slope (%)	= 4.88	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 20.00	0.00	0.00	0.00
Crest El. (ft)	= 1148.60	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 6.000 (by Contour)

TW Elev. (ft) = 0.00

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

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	1144.00	0.00	---	---	---	0.00	---	---	---	0.000	---	0.000
1.00	1,457	1145.00	4.28 ic	---	---	---	0.00	---	---	---	0.223	---	0.223
2.00	3,214	1146.00	4.28 ic	---	---	---	0.00	---	---	---	0.266	---	0.266
3.00	5,297	1147.00	4.28 ic	---	---	---	0.00	---	---	---	0.313	---	0.313
4.00	7,732	1148.00	4.28 ic	---	---	---	0.00	---	---	---	0.364	---	0.364
5.00	10,544	1149.00	16.85 ic	---	---	---	16.85	---	---	---	0.418	---	17.27
6.00	13,760	1150.00	21.25 ic	---	---	---	21.21 s	---	---	---	0.476	---	21.68

Hydrograph Report

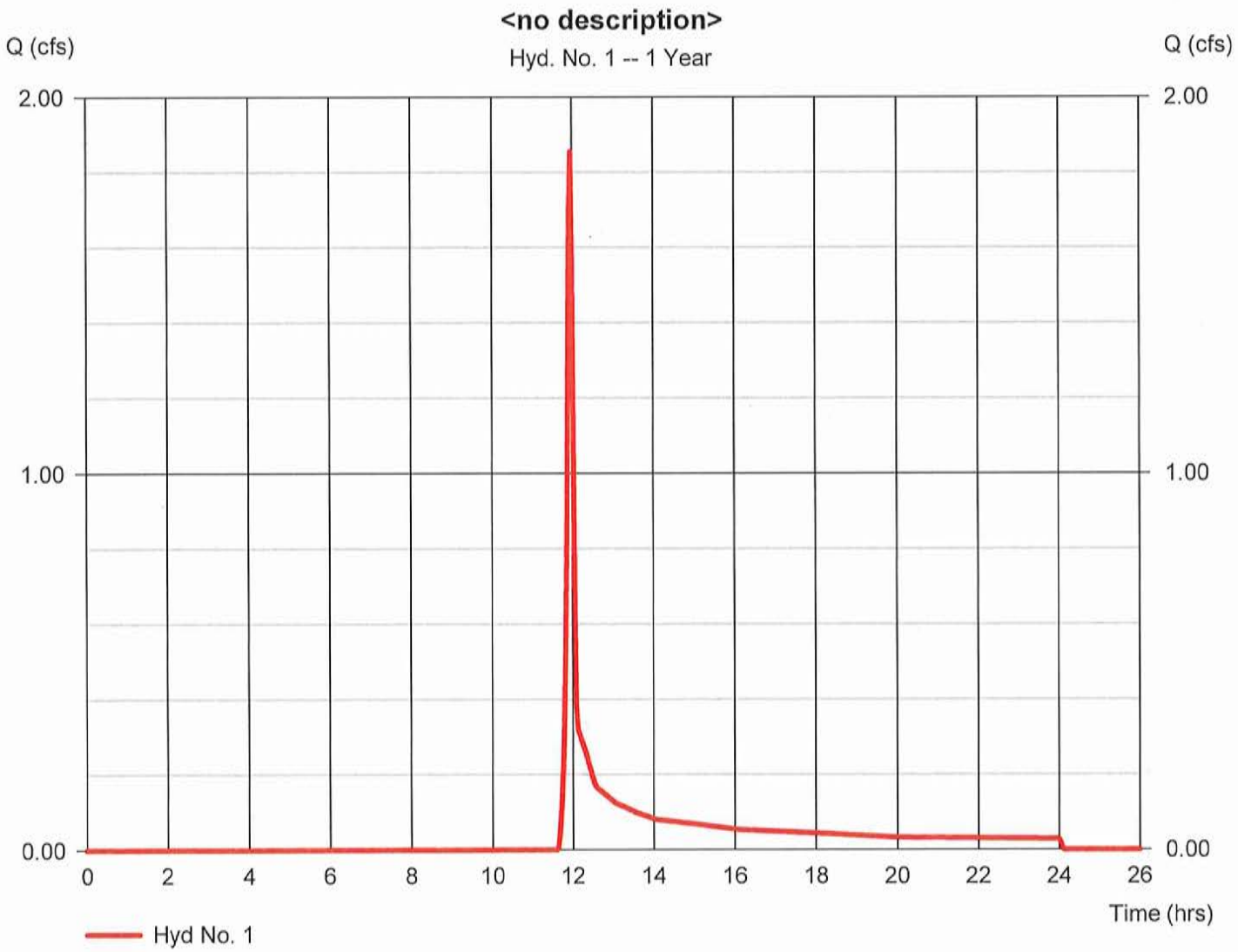
Pre

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 — Monday, 02 / 10 / 2025

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 1.854 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 3,871 cuft
Drainage area	= 1.740 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.97 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Post

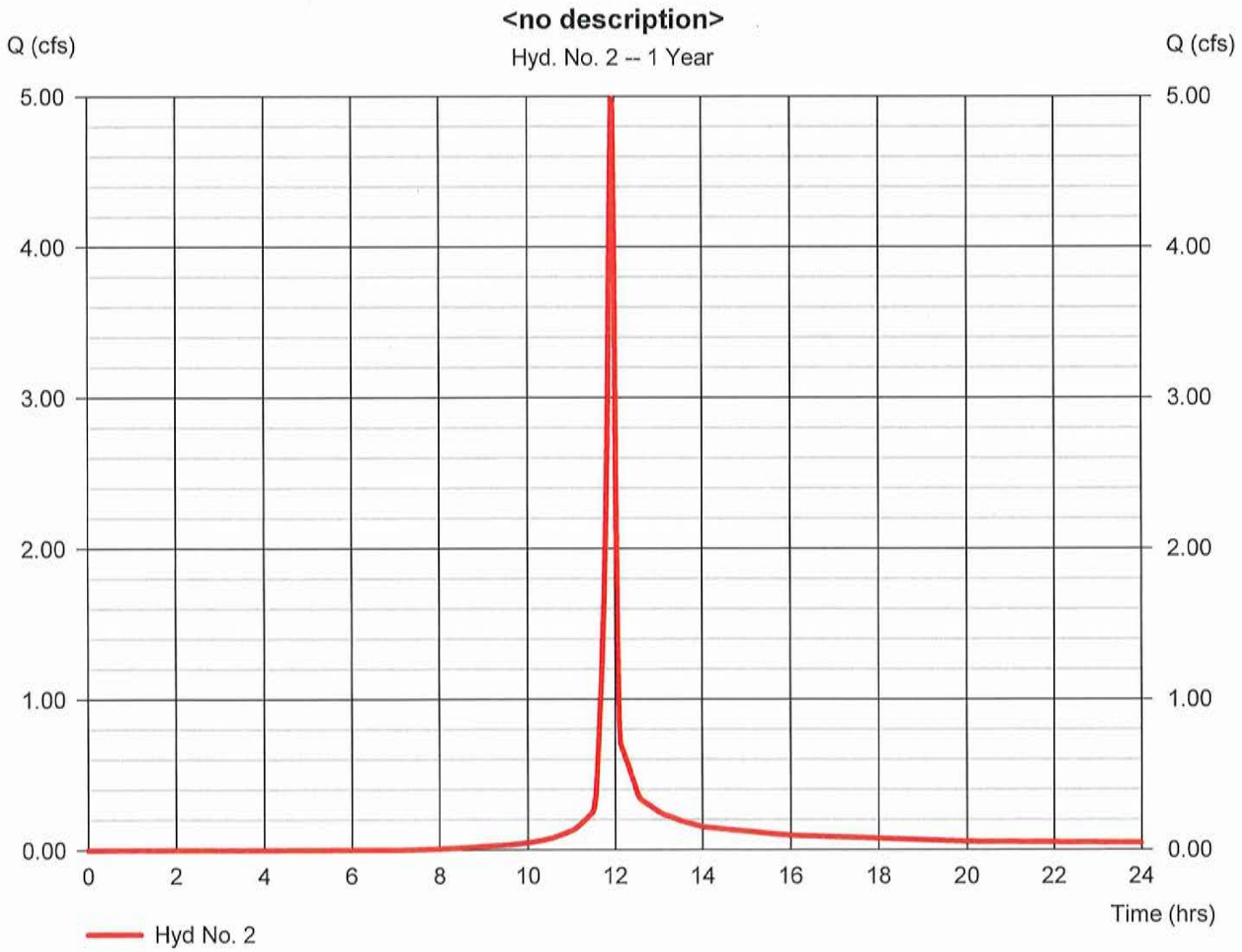
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 — Monday, 02 / 10 / 2025

Hyd. No. 2

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 4.988 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 10,143 cuft
Drainage area	= 1.740 ac	Curve number	= 87*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.97 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.050 x 98) + (0.690 x 69)] / 1.740



Hydrograph Report

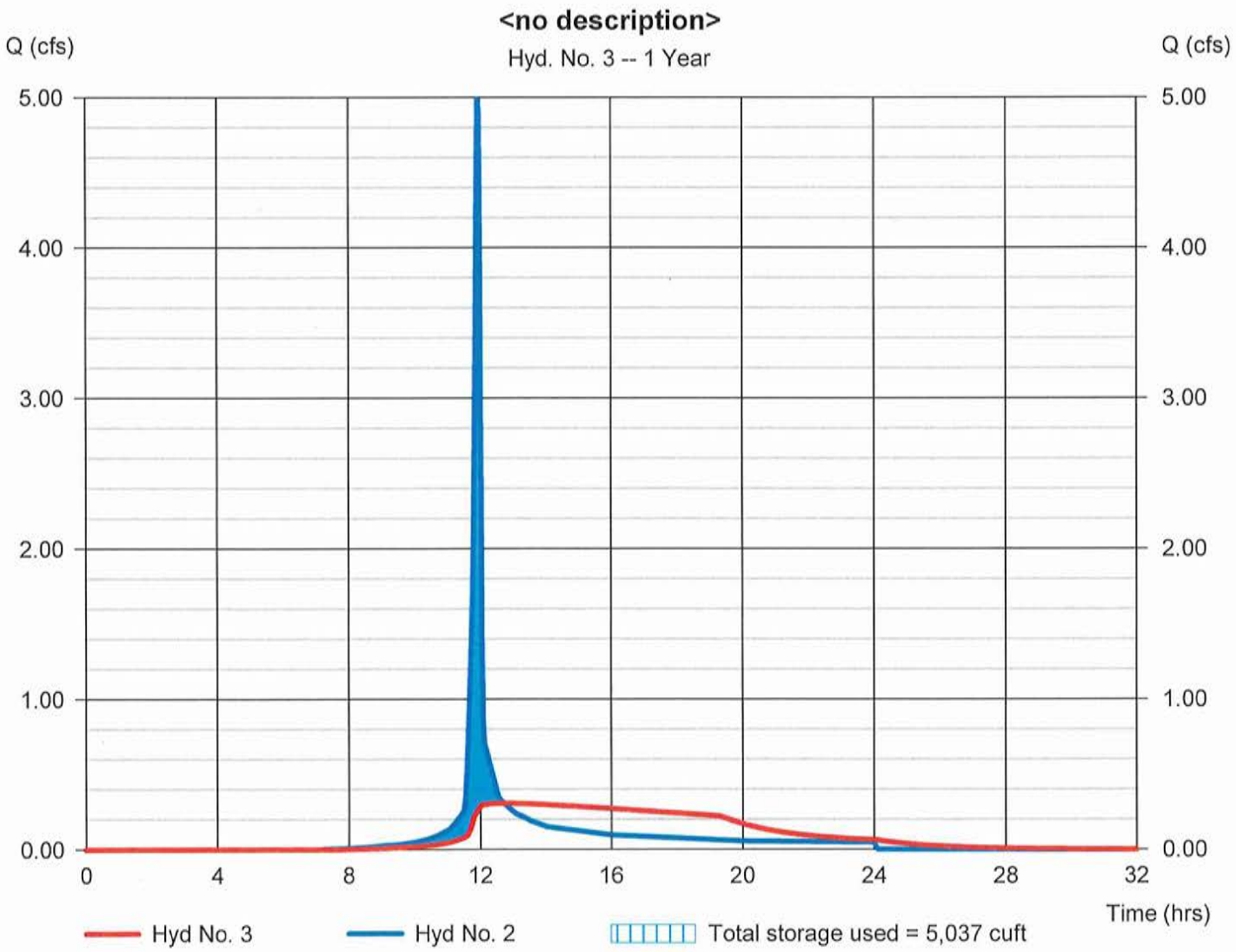
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 — Monday, 02 / 10 / 2025

Hyd. No. 3

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 0.307 cfs
Storm frequency	= 1 yrs	Time to peak	= 12.73 hrs
Time interval	= 2 min	Hyd. volume	= 10,136 cuft
Inflow hyd. No.	= 2 - <no description>	Max. Elevation	= 1146.88 ft
Reservoir name	= <New Pond>	Max. Storage	= 5,037 cuft

Storage Indication method used. Outflow includes exfiltration.



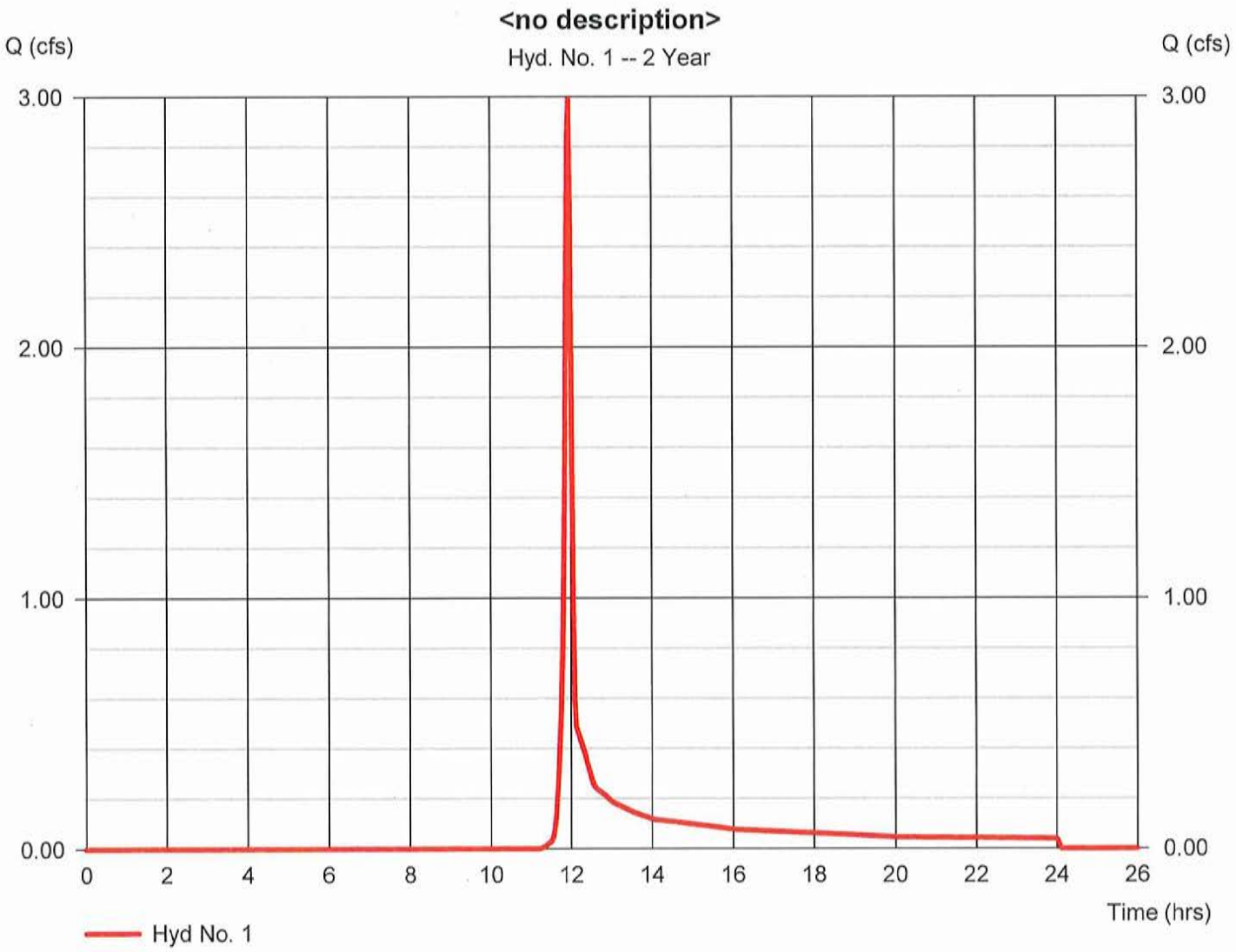
Hydrograph Report Pre

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 2.990 cfs
Storm frequency	= 2 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 6,043 cuft
Drainage area	= 1.740 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report Post

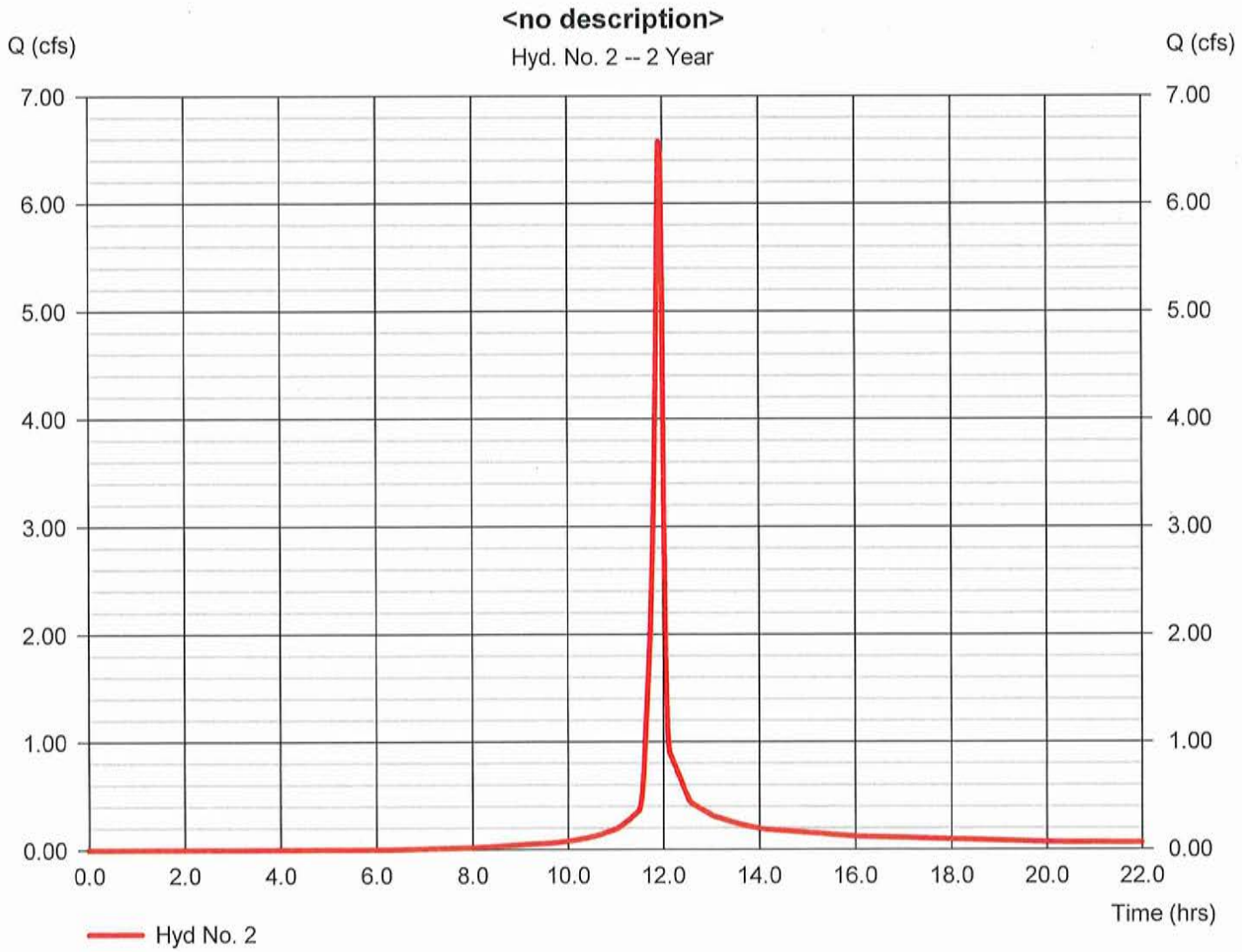
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 2

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 6.580 cfs
Storm frequency	= 2 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 13,510 cuft
Drainage area	= 1.740 ac	Curve number	= 87*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.61 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.050 x 98) + (0.690 x 69)] / 1.740



Hydrograph Report

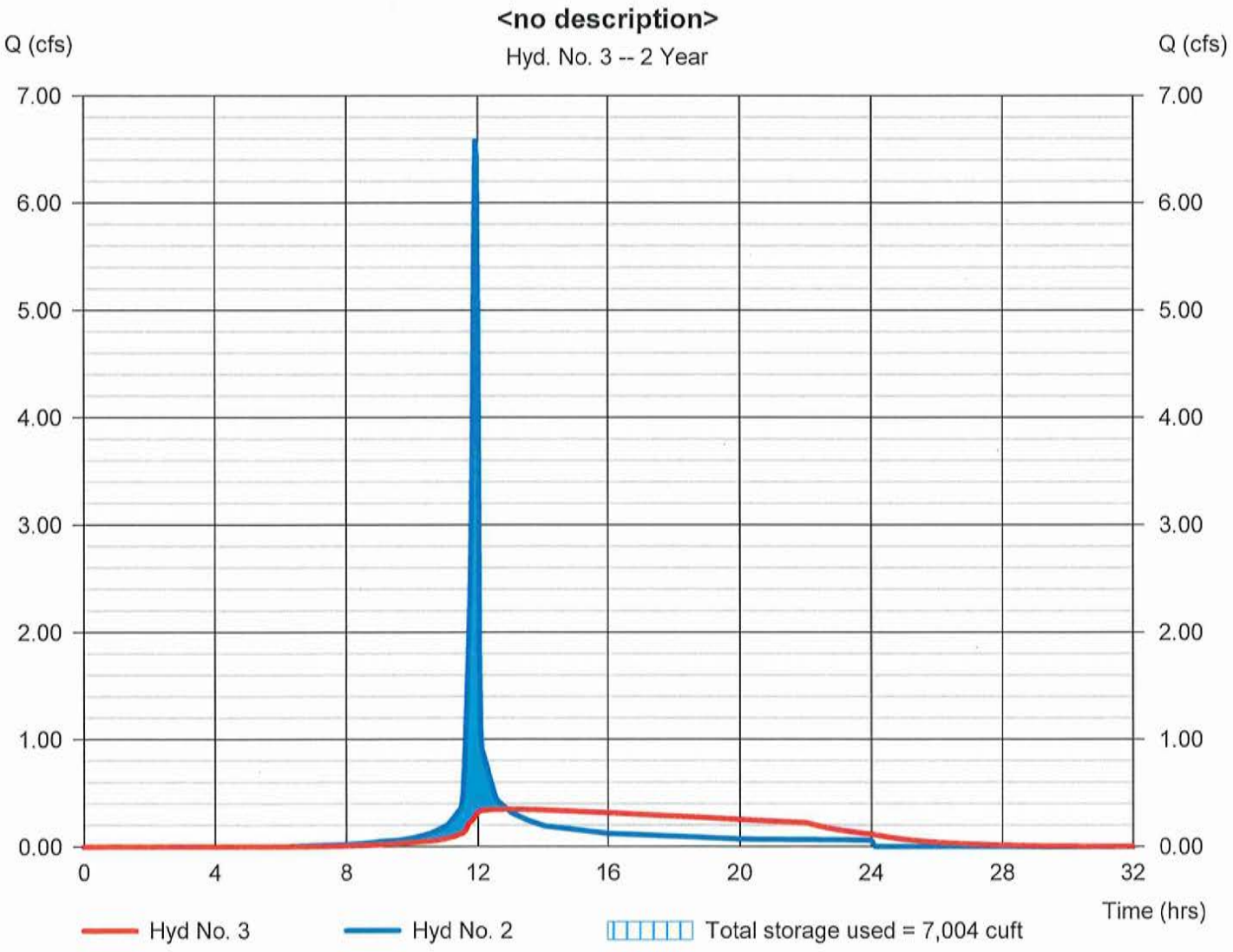
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 3

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 0.349 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.90 hrs
Time interval	= 2 min	Hyd. volume	= 13,503 cuft
Inflow hyd. No.	= 2 - <no description>	Max. Elevation	= 1147.70 ft
Reservoir name	= <New Pond>	Max. Storage	= 7,004 cuft

Storage Indication method used. Outflow includes exfiltration.



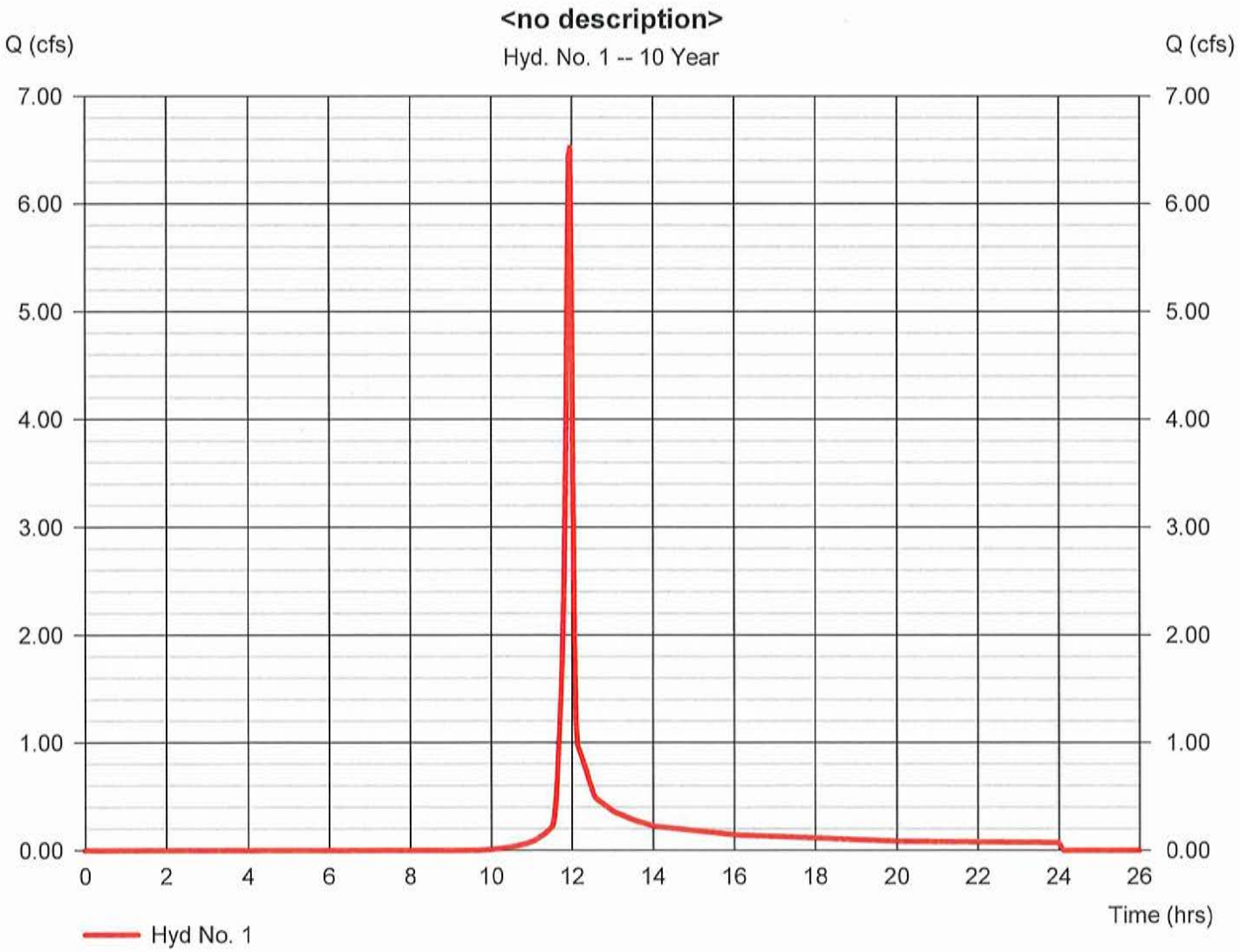
Hydrograph Report Pre

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 6.525 cfs
Storm frequency	= 10 yrs	Time to peak	= 11.97 hrs
Time interval	= 2 min	Hyd. volume	= 13,074 cuft
Drainage area	= 1.740 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.34 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report Post

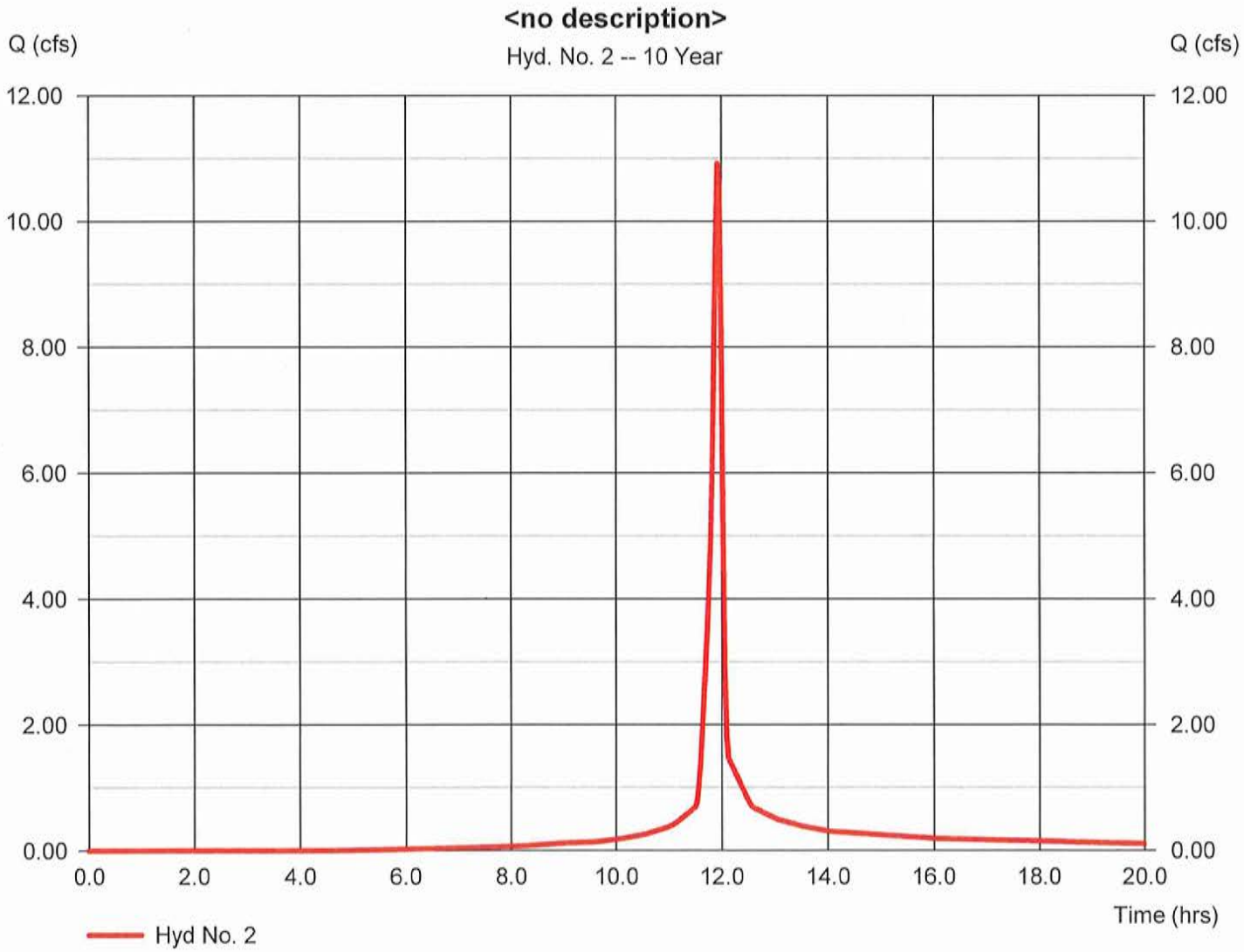
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 2

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 10.92 cfs
Storm frequency	= 10 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 23,026 cuft
Drainage area	= 1.740 ac	Curve number	= 87*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.34 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.050 x 98) + (0.690 x 69)] / 1.740



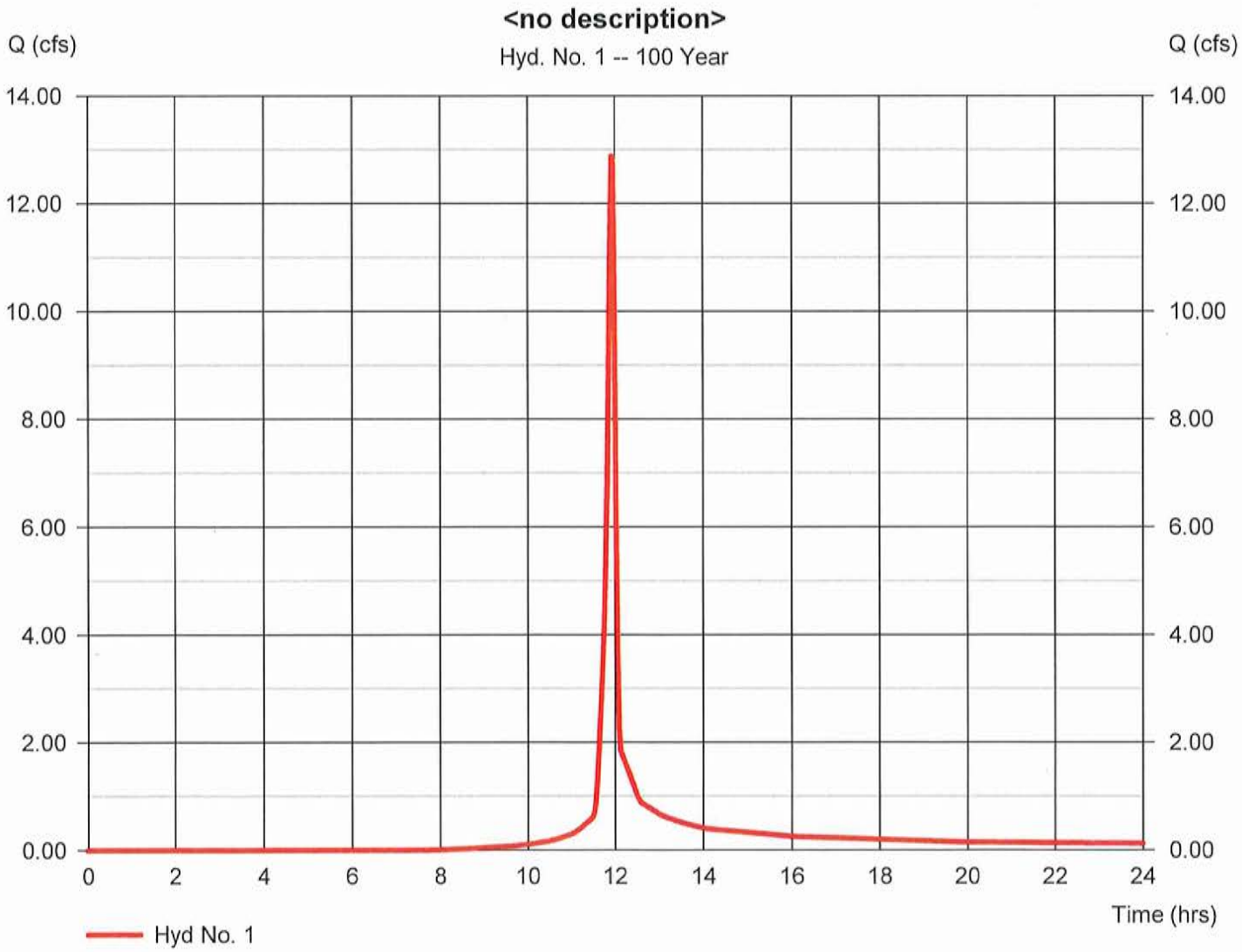
Hydrograph Report Pre

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 1

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 12.89 cfs
Storm frequency	= 100 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 26,109 cuft
Drainage area	= 1.740 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 8.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report Post

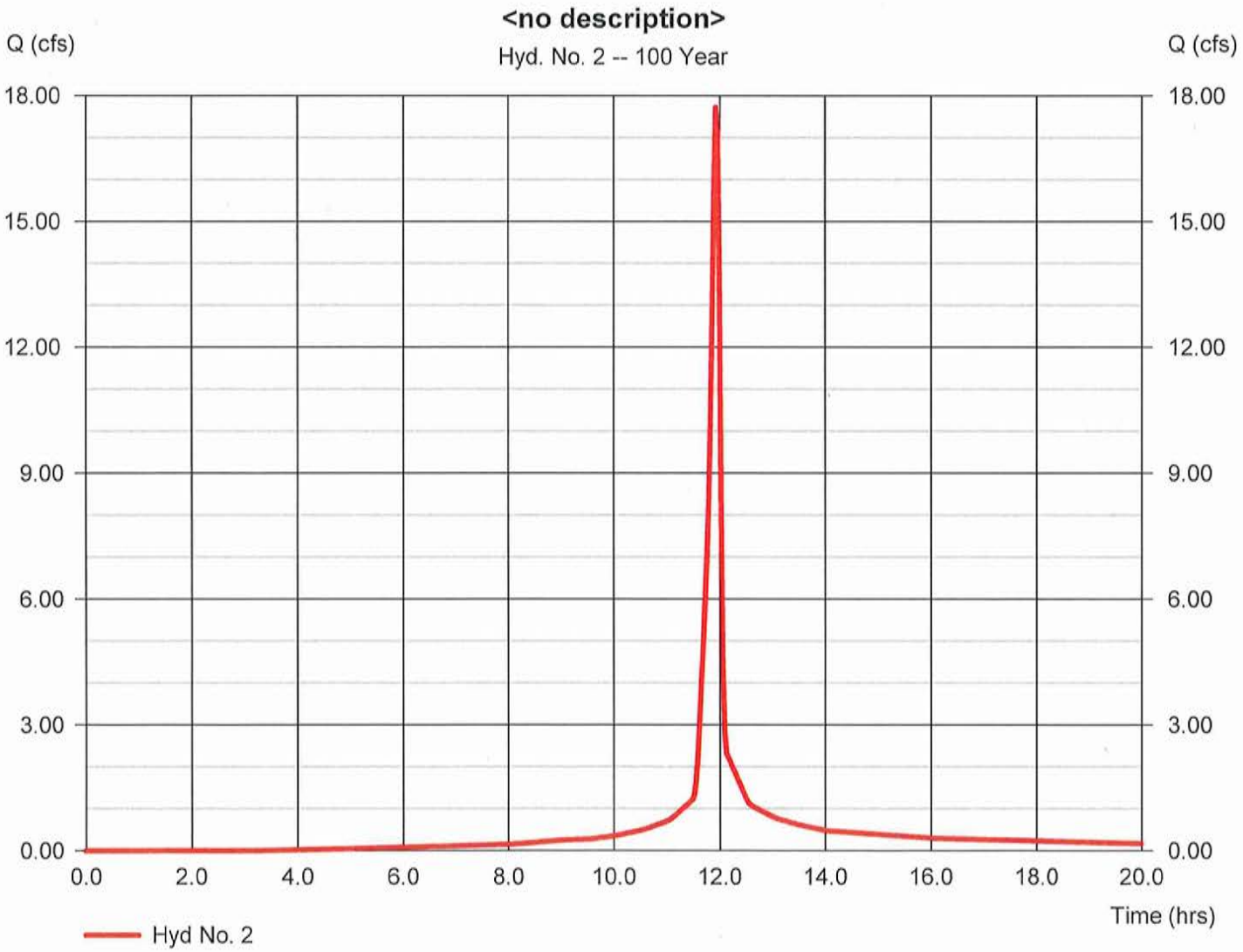
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 2

<no description>

Hydrograph type	= SCS Runoff	Peak discharge	= 17.73 cfs
Storm frequency	= 100 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 38,595 cuft
Drainage area	= 1.740 ac	Curve number	= 87*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 8.07 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(1.050 x 98) + (0.690 x 69)] / 1.740



Hydrograph Report

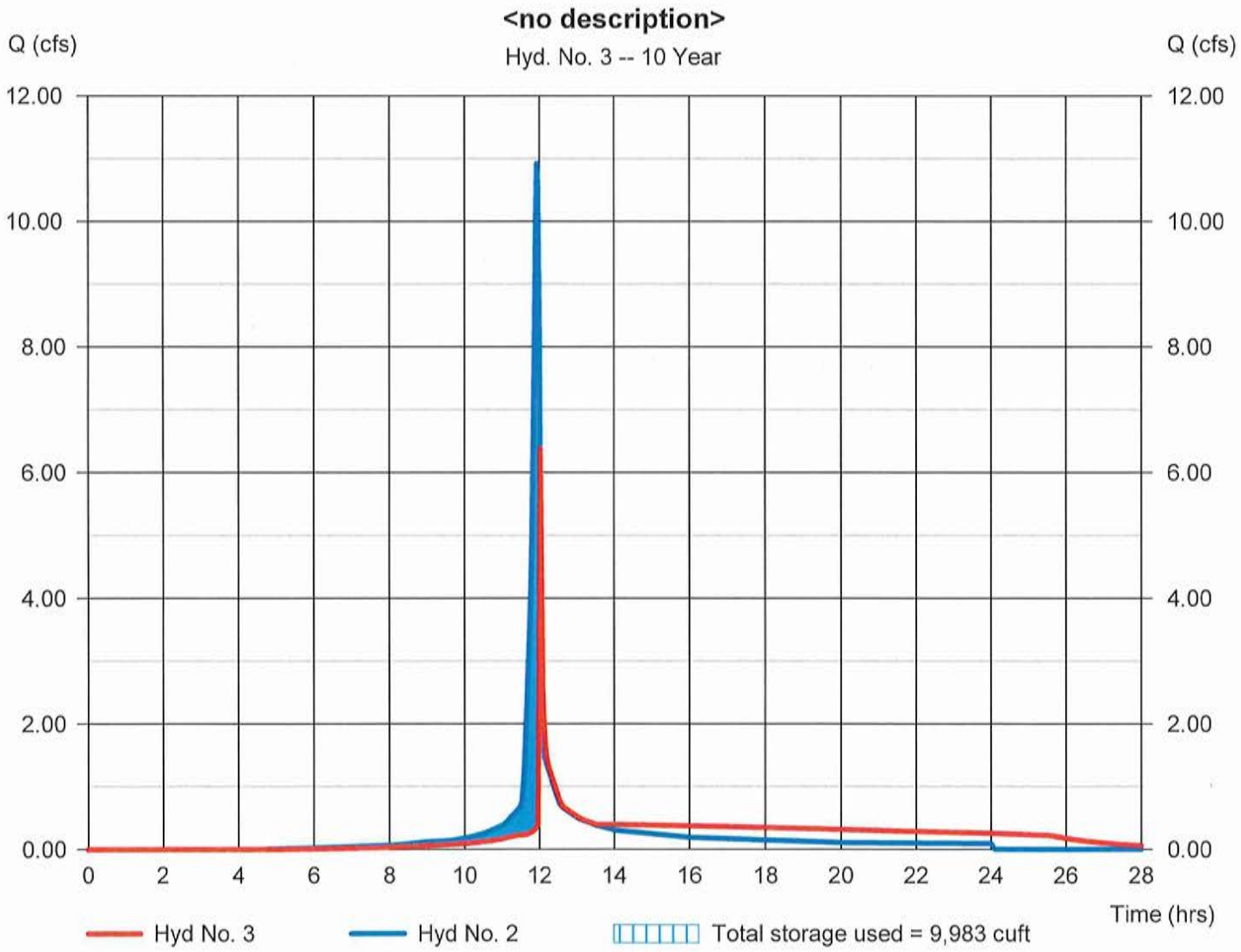
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2025 Monday, 02 / 10 / 2025

Hyd. No. 3

<no description>

Hydrograph type	= Reservoir	Peak discharge	= 6.383 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.03 hrs
Time interval	= 2 min	Hyd. volume	= 23,019 cuft
Inflow hyd. No.	= 2 - <no description>	Max. Elevation	= 1148.80 ft
Reservoir name	= <New Pond>	Max. Storage	= 9,983 cuft

Storage Indication method used. Outflow includes exfiltration.



Erosion Control Calculations

Temporary Sediment Basin #1

Disturbed Area		1.27	Ac.	Sed. Storage Depth=		3 ft.
Drainage Area		1.74	Ac.			
Minimum Storage Required =			1.27	X	1800	2286 cu.ft.
Q10 (TR55 Method)				7.61	CFS	
CN	80					
Tc	5	min				
10 Year Rainfall	5.25	Inches				
Required Basin Area=	435	X	7.61	**3310**	**SF**	

Basin Dimensions

Side Slopes of Basin= 3 to 1

2W X W = Surface Area Length to Width Ratio 2

W= 41 ft.

Top Basin Size	41	x	82
Bottom Size	23	x	64

Skimmer Size (Faircloth Sizes)

Skimmer Size	1.5	Inches	Orifice Dia=	1	inches
Ouflow from Skimmer	0.009	CFS			
Drawdown Time	67.27	Hours or	2.8	Days	

Emergency Spillway

Spillway Dimensions	5	Feet (Sq.)	Side Slopes=	3 :1
Emergency Spillway Flow	16.84	CFS	Top of Riser to be used as Emeg. Spillway	
			See Routing Calculations in this packet	

Storage Provided

Top Basin Area =	**3362**	sq.ft.	
Bottom Basin Area =	1472	sq.ft.	
Avg. Surface Area of Sediment =			2417 sq.ft.
Sediment Storage Provided =			7251 cu.ft.