PCSM PLAN NARRATIVE & CALCULATIONS

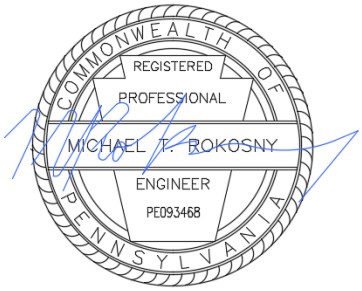
Eastern University – Gym and ELC
Preliminary Land Development Plan

Radnor Township, Delaware County
Plan Prepared For: Eastern University

Date: August 5, 2024

TABLE OF CONTENTS

Plan Prepared By:
Michael T. Rokosny, P.E.
Site Engineering Concepts, LLC
P.O. Box 1992
Southeastern, PA 19399



NARRATIVE

The Owner/Applicant, Eastern University, proposes to construct an addition to Eagle Learning Center and the Gym with supporting walkways and parking.

Stormwater design is based on capturing the proposed roof area and existing roof area through roof drains, and parking areas through inlets. This captured stormwater will be treated by R-Tank Infiltration and Detention Basins.

During construction erosion and sediment control is accomplished through limited disturbance, immediate stabilization, and silt barriers.

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

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	------	0.218	0.259	-------	0.332	0.389	0.470	0.539	0.613	Pre-Development Impervious Basebal
2	SCS Runoff	------	0.497	1.544	-------	4.223	6.686	10.64	14.29	18.43	Pre-Development Pervious (Meadow)
3	Combine	1, 2	0.658	1.791	-------	4.539	7.057	11.09	14.80	19.01	Total Pre-Development Baseball
5	SCS Runoff	------	10.56	12.57	-------	16.10	18.85	22.81	26.16	29.75	Post-Development Impervious Baseb
6	SCS Runoff	------	0.268	0.614	-------	1.364	2.038	3.103	4.072	5.161	Post-Development Pervious (B-Soils)
7	SCS Runoff	------	0.097	0.141	-------	0.225	0.295	0.402	0.496	0.598	Post-Development Pervious (C-Soils)
8	Combine	5, 6, 7	10.82	13.21	-------	17.56	21.07	26.21	30.64	35.44	Total Post Development Baseball
10	SCS Runoff	------	5.079	6.046	-------	7.743	9.071	10.97	12.59	14.31	Gym Addition and Parking
12	Combine	8, 10,	15.90	19.26	-------	25.31	30.14	37.18	43.23	49.76	Drainage Area to Turf Infiltration Bed
14	Reservoir	12	0.000	0.000	-------	0.000	0.000	0.328	0.695	1.318	Turf Bed Infiltration
16	SCS Runoff	------	0.099	0.306	-------	0.838	1.327	2.112	2.836	3.657	ELC Pre-Development
18	SCS Runoff	------	0.979	1.166	-------	1.493	1.749	2.116	2.427	2.760	ELC Compensatory
20	Combine	16, 18,	1.011	1.420	-------	2.263	2.996	4.130	5.171	6.340	Total ELC Predevelopment
22	SCS Runoff	------	1.669	1.987	-------	2.544	2.981	3.605	4.135	4.702	ELC Post Development Impervious
23	SCS Runoff	------	0.087	0.199	-------	0.441	0.659	1.003	1.316	1.668	ELC Post Development Pervious
25	SCS Runoff	------	0.834	0.993	-------	1.272	1.490	1.803	2.068	2.351	ELC Captured Impervious
27	Combine	18, 25,	1.814	2.159	-------	2.766	3.240	3.919	4.495	5.111	Drainage Area to Basin
28	Reservoir	27	0.000	0.000	-------	0.000	0.000	0.000	0.000	0.000	ELC Basin
30	SCS Runoff	------	0.834	0.993	-------	1.272	1.490	1.803	2.068	2.351	ELC Impervious Bypass
31	SCS Runoff	------	0.087	0.199	-------	0.441	0.659	1.003	1.316	1.668	ELC Pervious Bypass
32	Combine	30, 31	0.889	1.157	-------	1.675	2.112	2.772	3.356	3.999	ELC Bypass
34	Combine	28, 32,	0.889	1.157	-------	1.675	2.112	2.772	3.356	3.999	Total ELC Post Development
36	SCS Runoff	------	0.068	0.212	-------	0.580	0.919	1.462	1.963	2.532	Sparrowk Parking Predevelopment
38	SCS Runoff	------	0.979	1.166	-------	1.493	1.749	2.116	2.427	2.760	Sparrowk Parking Post Dev Impervio
39	SCS Runoff	------	0.073	0.168	-------	0.372	0.556	0.846	1.111	1.408	Sparrowk Parking Post Dev Pervious
40	Combine	38, 39	1.026	1.304	-------	1.834	2.274	2.934	3.514	4.151	Sparrowk Parking Post Dev

Hydrograph Return Period Recap

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	
42	SCS Runoff	------	0.653	0.777	-------	0.996	1.166	1.411	1.618	1.840	Sparrowk Captured
43	Reservoir	42	0.000	0.000	-------	0.000	0.000	0.000	0.000	0.000	Sparrowk Basin
45	SCS Runoff	------	0.326	0.389	-------	0.498	0.583	0.705	0.809	0.920	Sparrowk Impervious Bypass
46	SCS Runoff	------	0.073	0.168	-------	0.372	0.556	0.846	1.111	1.408	Sparrowk Pervious Bypass
47	Combine	45, 46	0.383	0.539	-------	0.847	1.112	1.523	1.896	2.311	Sparrowk Bypass
49	Combine	43, 47,	0.383	0.539	-------	0.847	1.112	1.523	1.896	2.311	Total Sparrowk Post Development

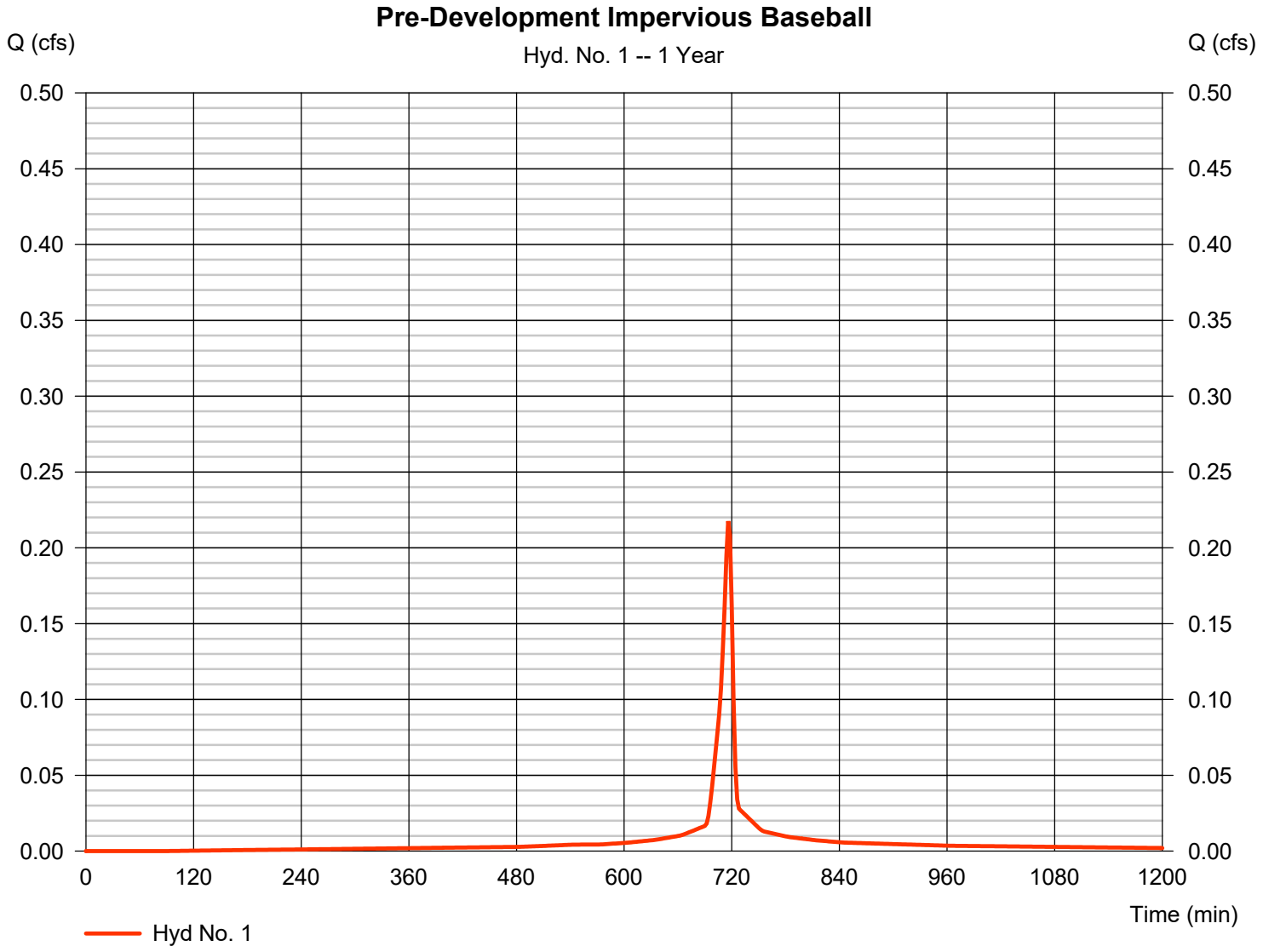
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 1

Pre-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.218 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 504 cuft
Drainage area	= 0.060 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



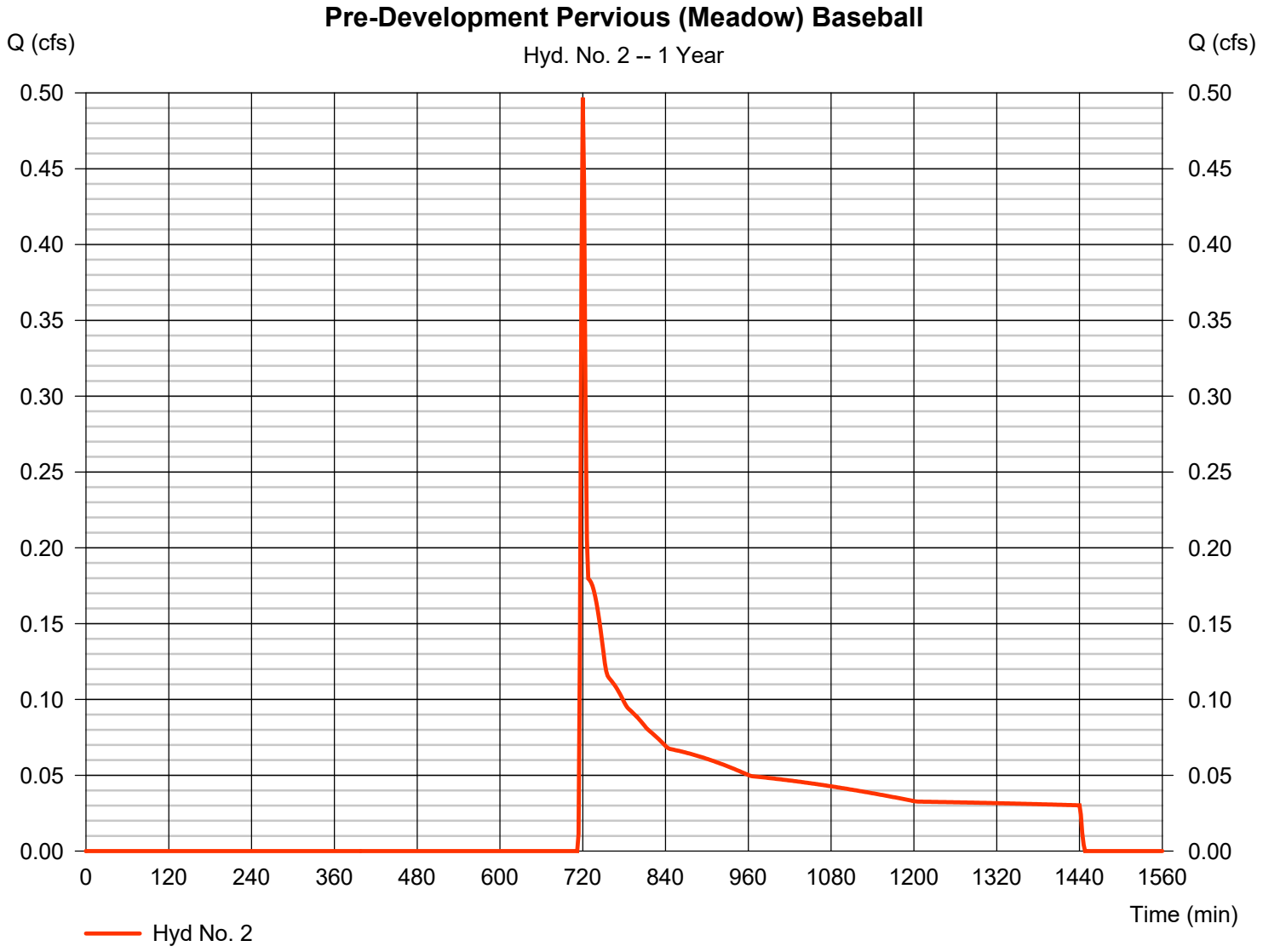
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 2

Pre-Development Pervious (Meadow) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.497 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 2,461 cuft
Drainage area	= 3.930 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



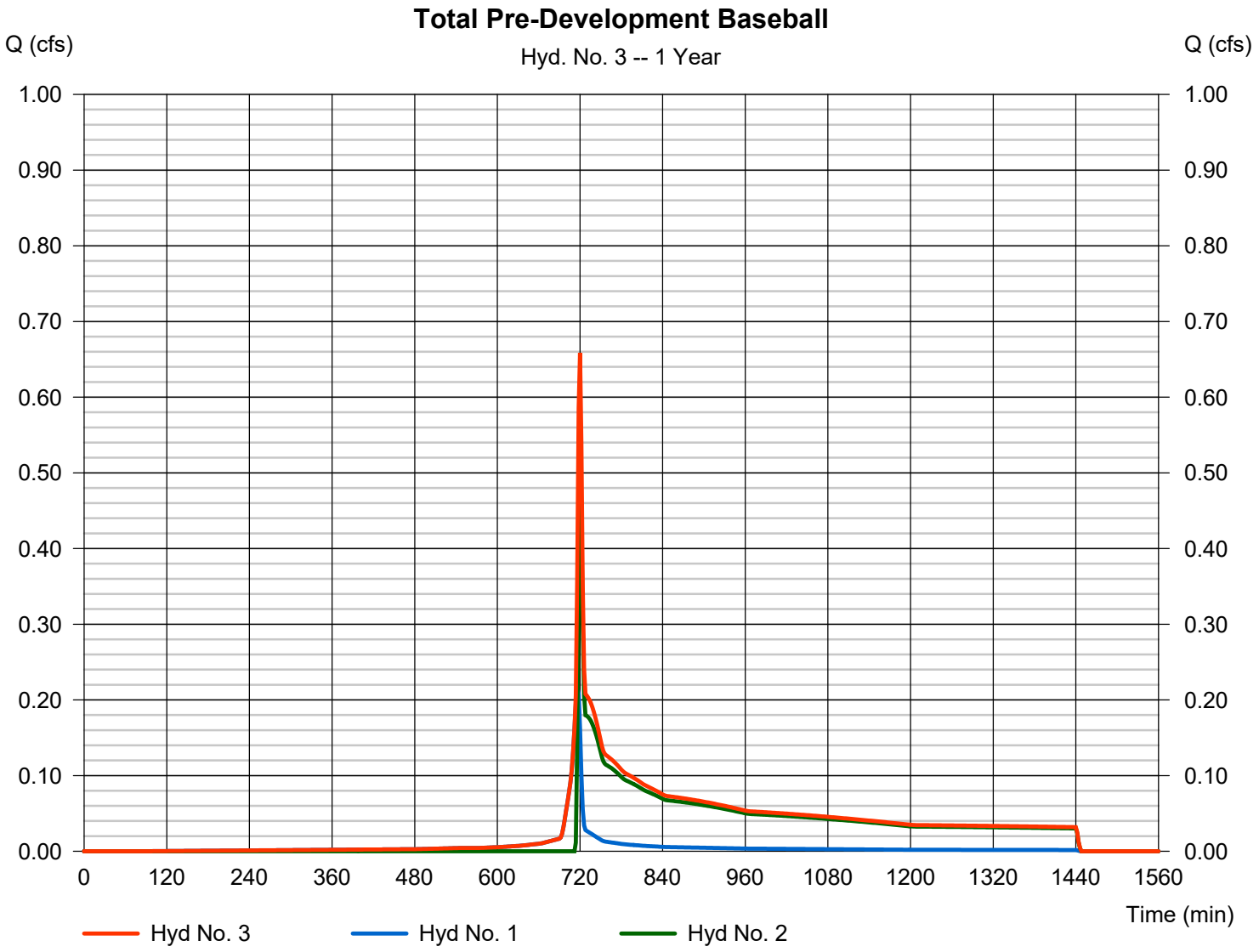
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 3

Total Pre-Development Baseball

Hydrograph type	= Combine	Peak discharge	= 0.658 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 2,965 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 3.990 ac



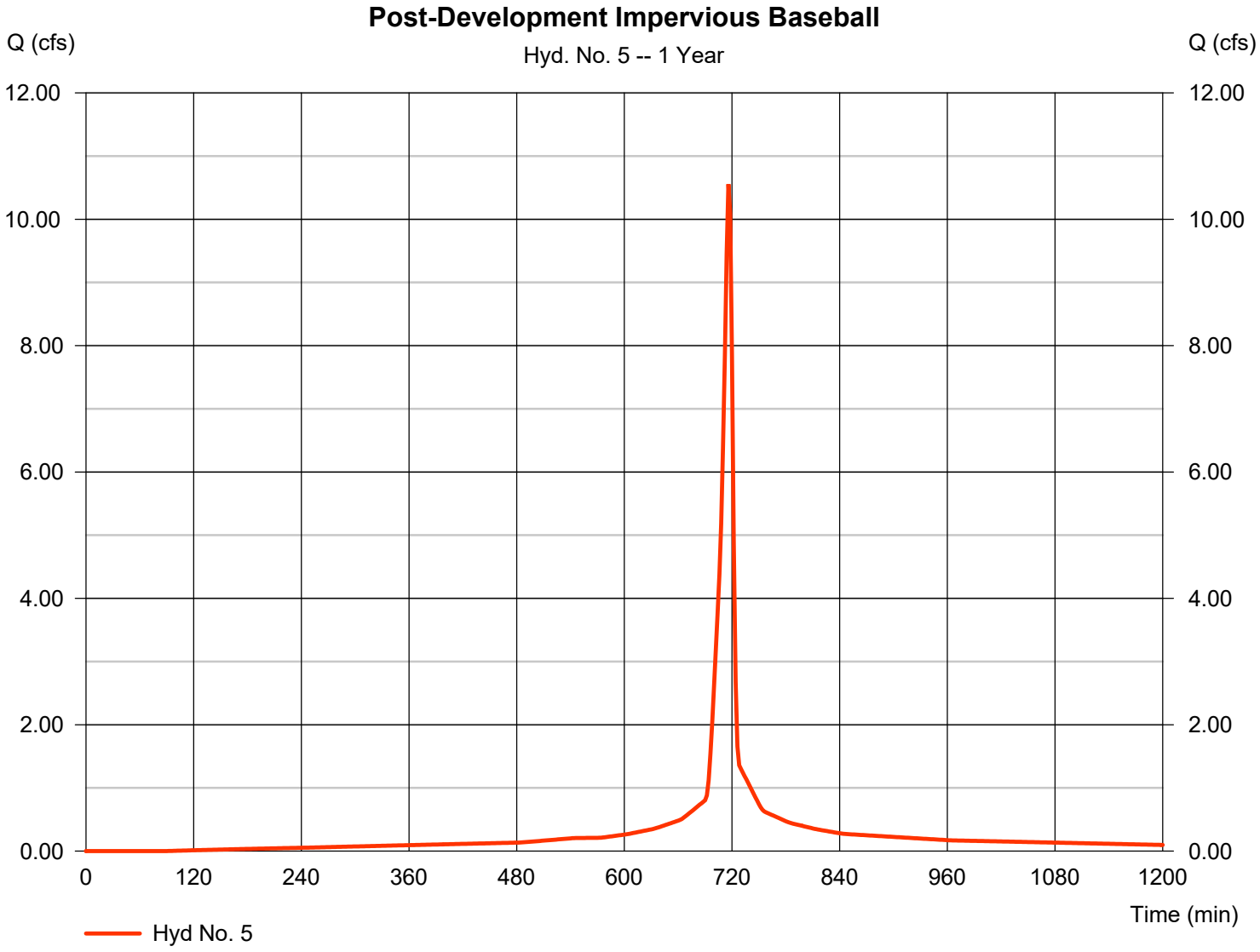
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 5

Post-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 10.56 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 24,457 cuft
Drainage area	= 2.910 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



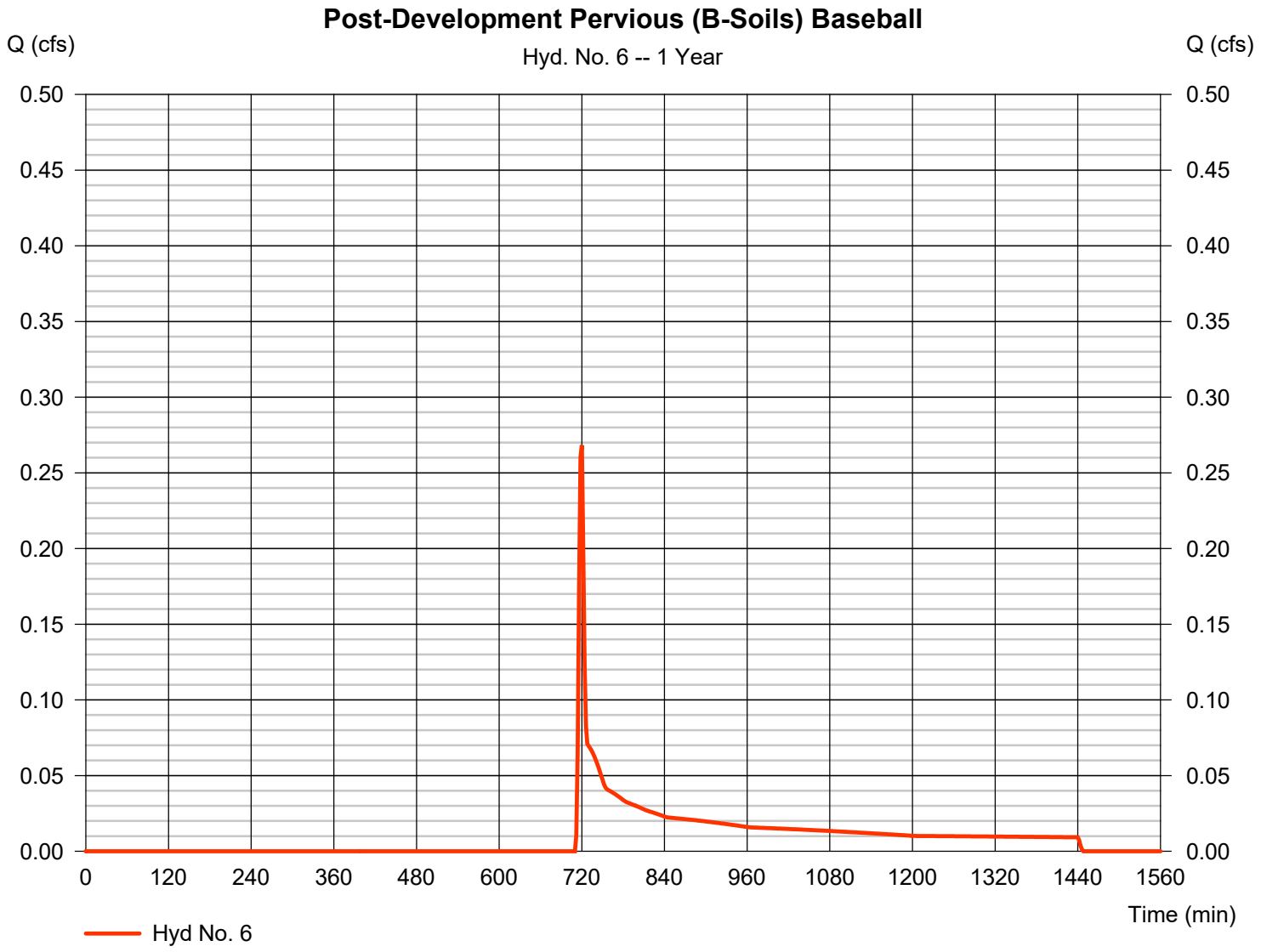
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 6

Post-Development Pervious (B-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.268 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 871 cuft
Drainage area	= 0.990 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



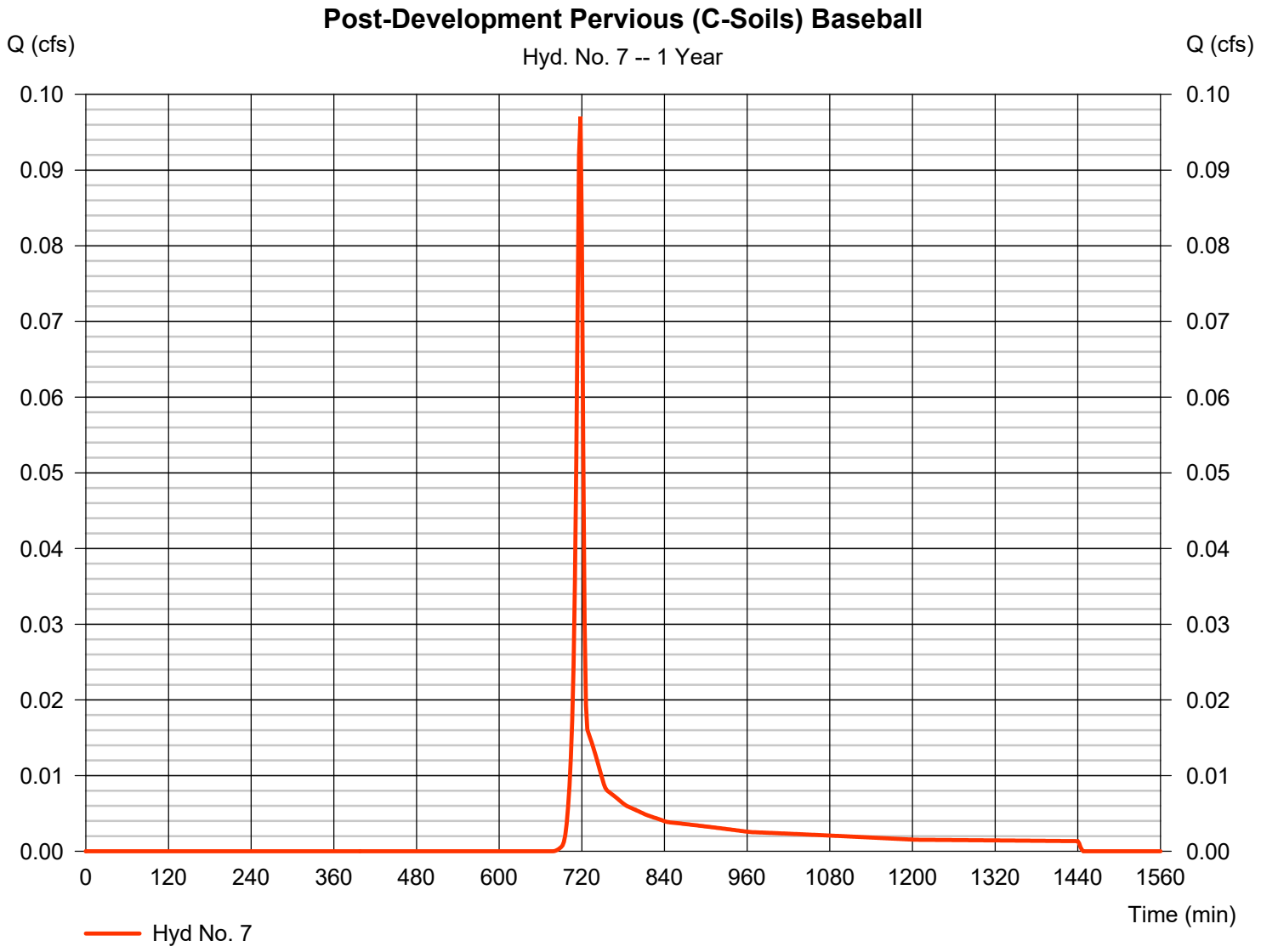
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 7

Post-Development Pervious (C-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.097 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 197 cuft
Drainage area	= 0.080 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



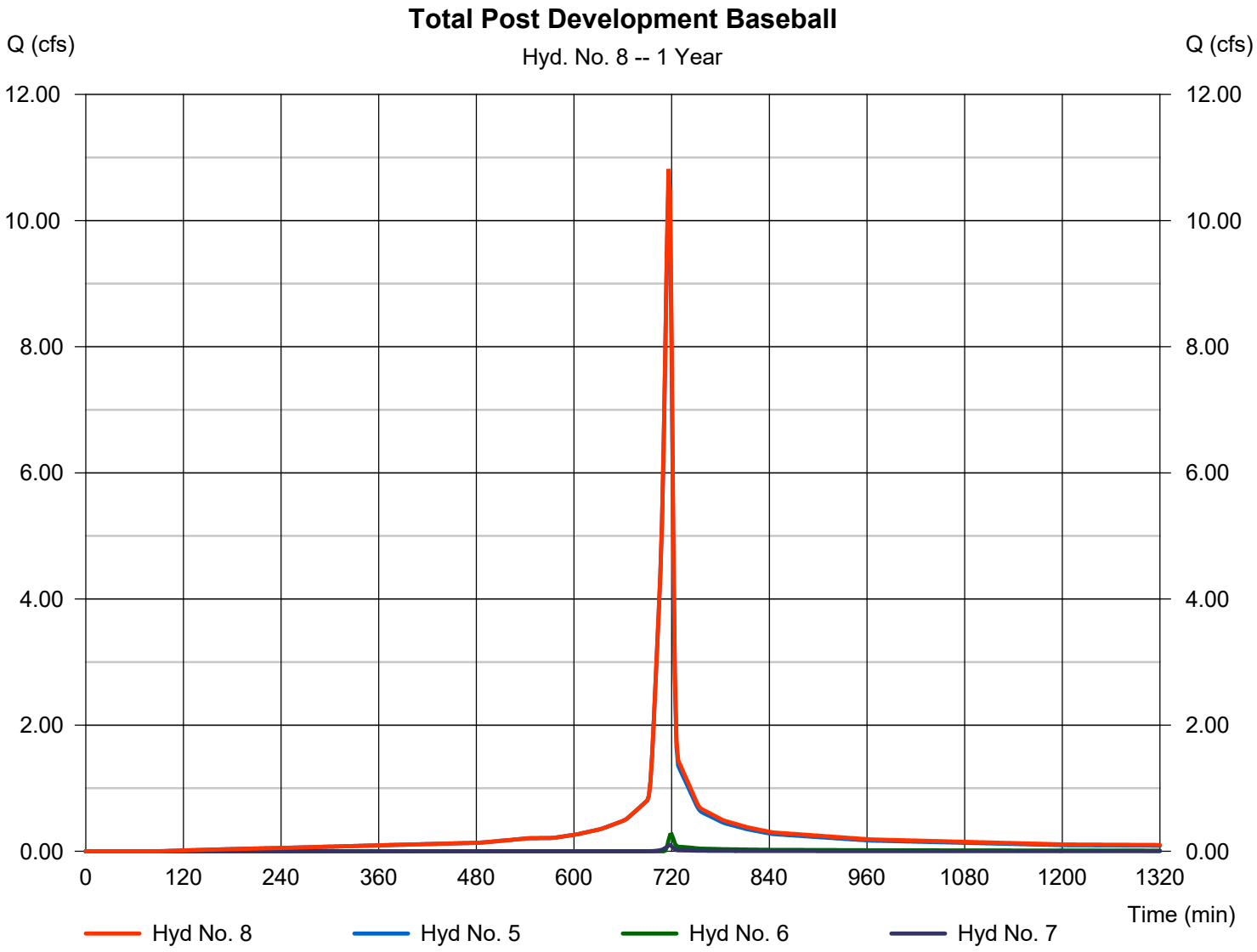
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 8

Total Post Development Baseball

Hydrograph type	= Combine	Peak discharge	= 10.82 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 25,525 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 3.980 ac



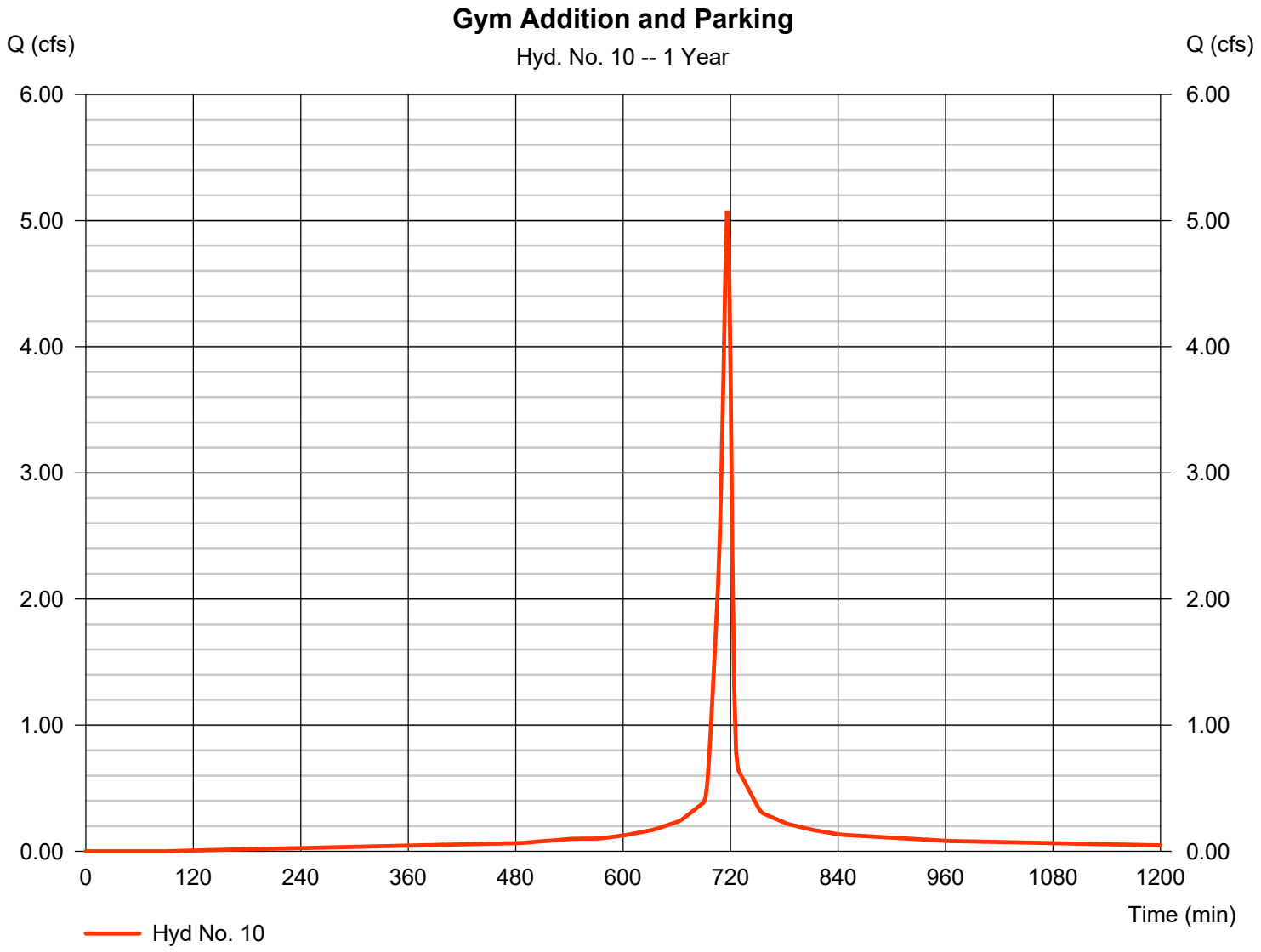
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 10

Gym Addition and Parking

Hydrograph type	= SCS Runoff	Peak discharge	= 5.079 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 11,766 cuft
Drainage area	= 1.400 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



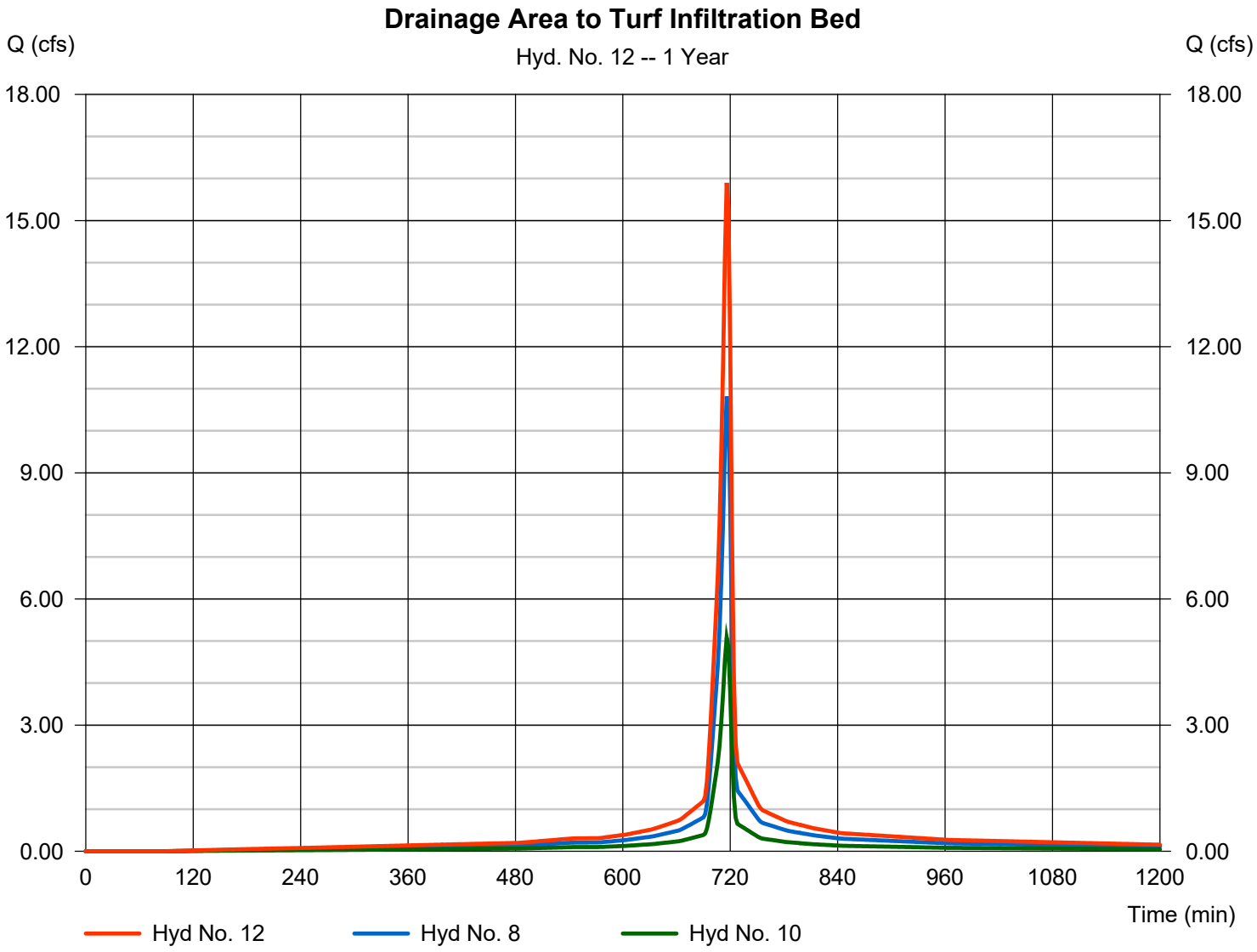
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 12

Drainage Area to Turf Infiltration Bed

Hydrograph type	= Combine	Peak discharge	= 15.90 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 37,291 cuft
Inflow hyds.	= 8, 10	Contrib. drain. area	= 1.400 ac



Hydrograph Report

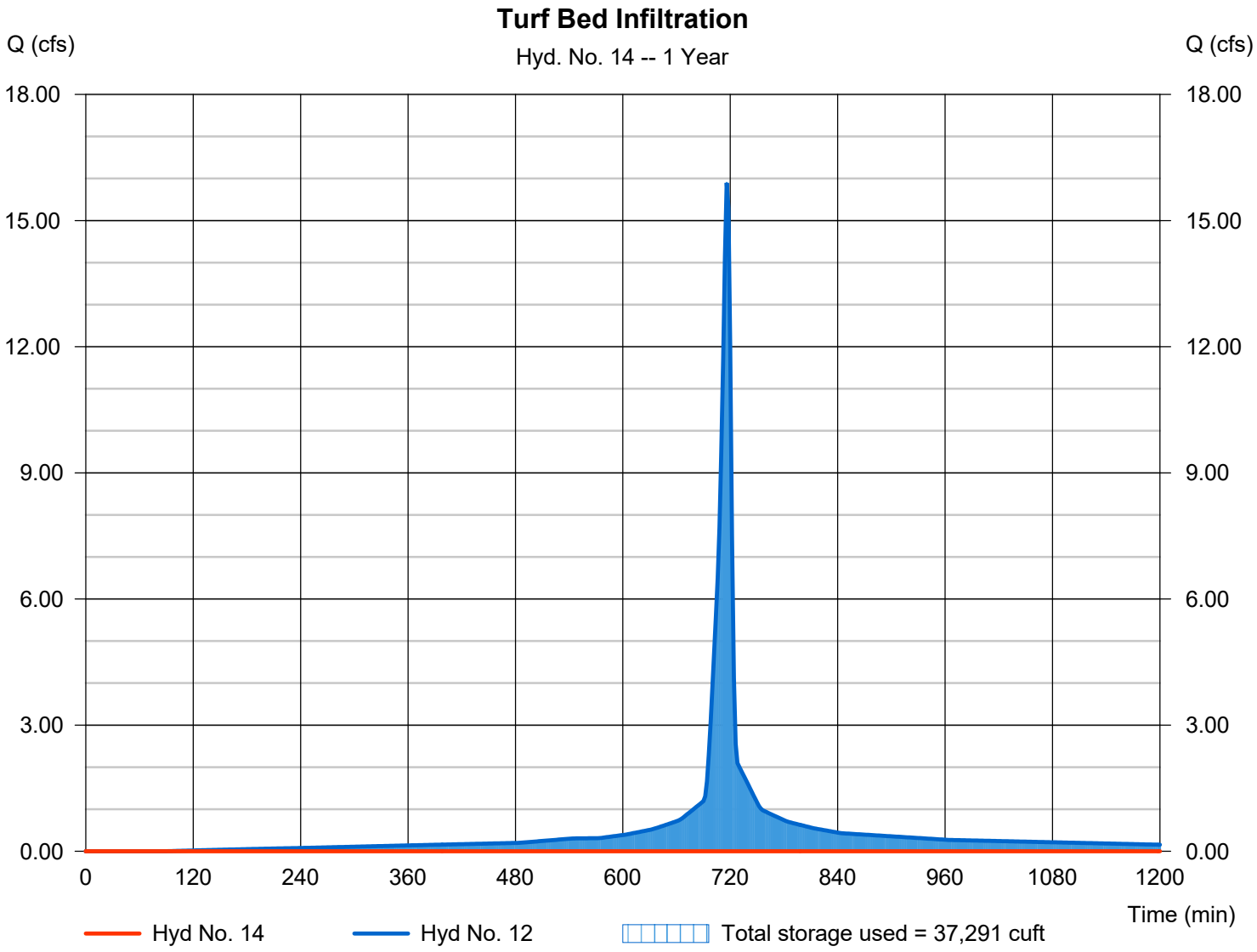
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 14

Turf Bed Infiltration

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	1 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	12 - Drainage Area to Turf Infiltration Bed	Max. Elevation	=	312.53 ft
Reservoir name	=	Turf	Max. Storage	=	37,291 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Pond No. 1 - Turf

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 311.00 ft. Voids = 40.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	311.00	61,082	0	0
1.00	312.00	61,082	24,430	24,430
2.00	313.00	61,082	24,430	48,861
3.00	314.00	61,082	24,430	73,291
4.00	315.00	61,082	24,430	97,721

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	0.00	0.00	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 314.00	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

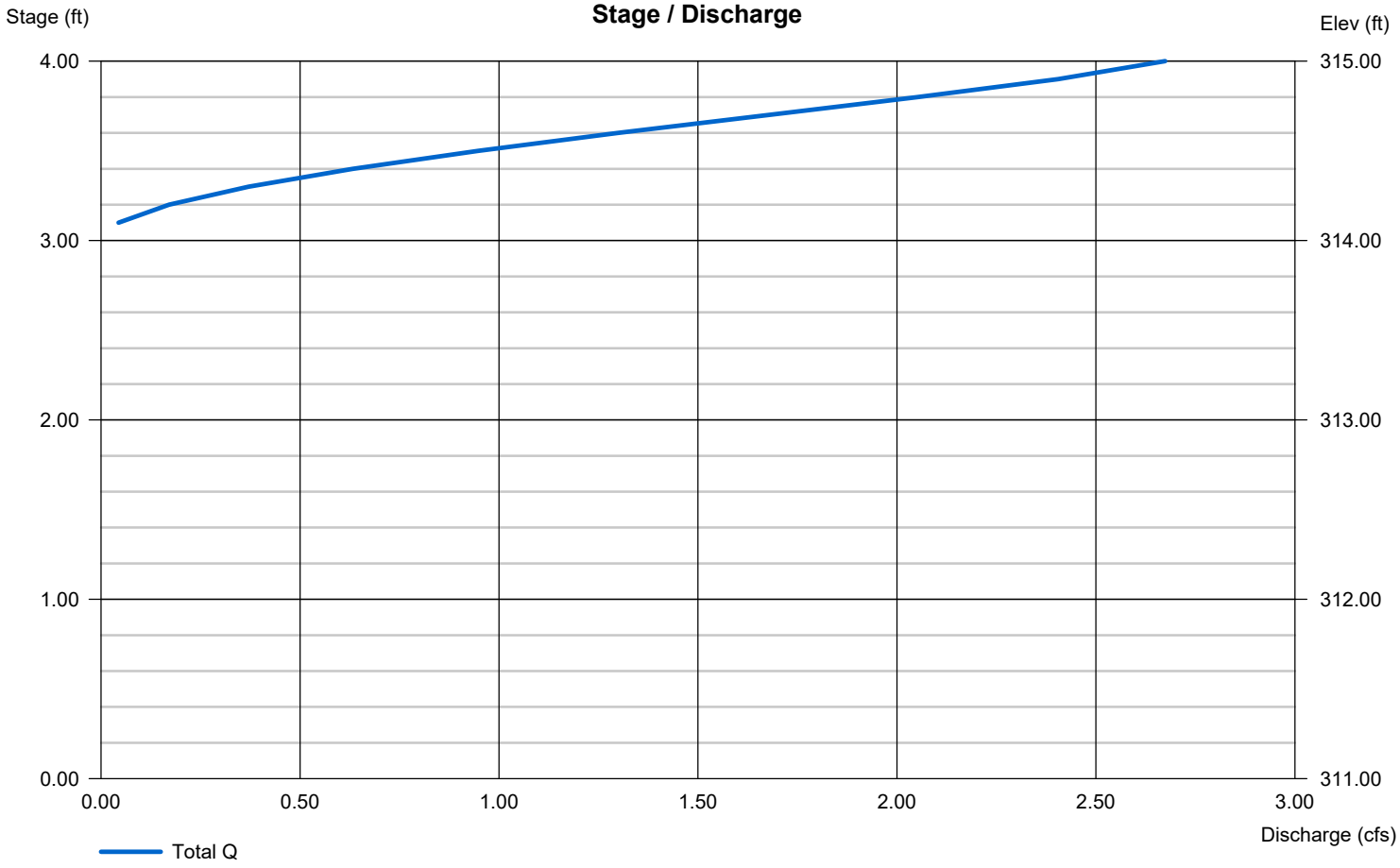
Weir Structures

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

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

TW Elev. (ft) = 0.00

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



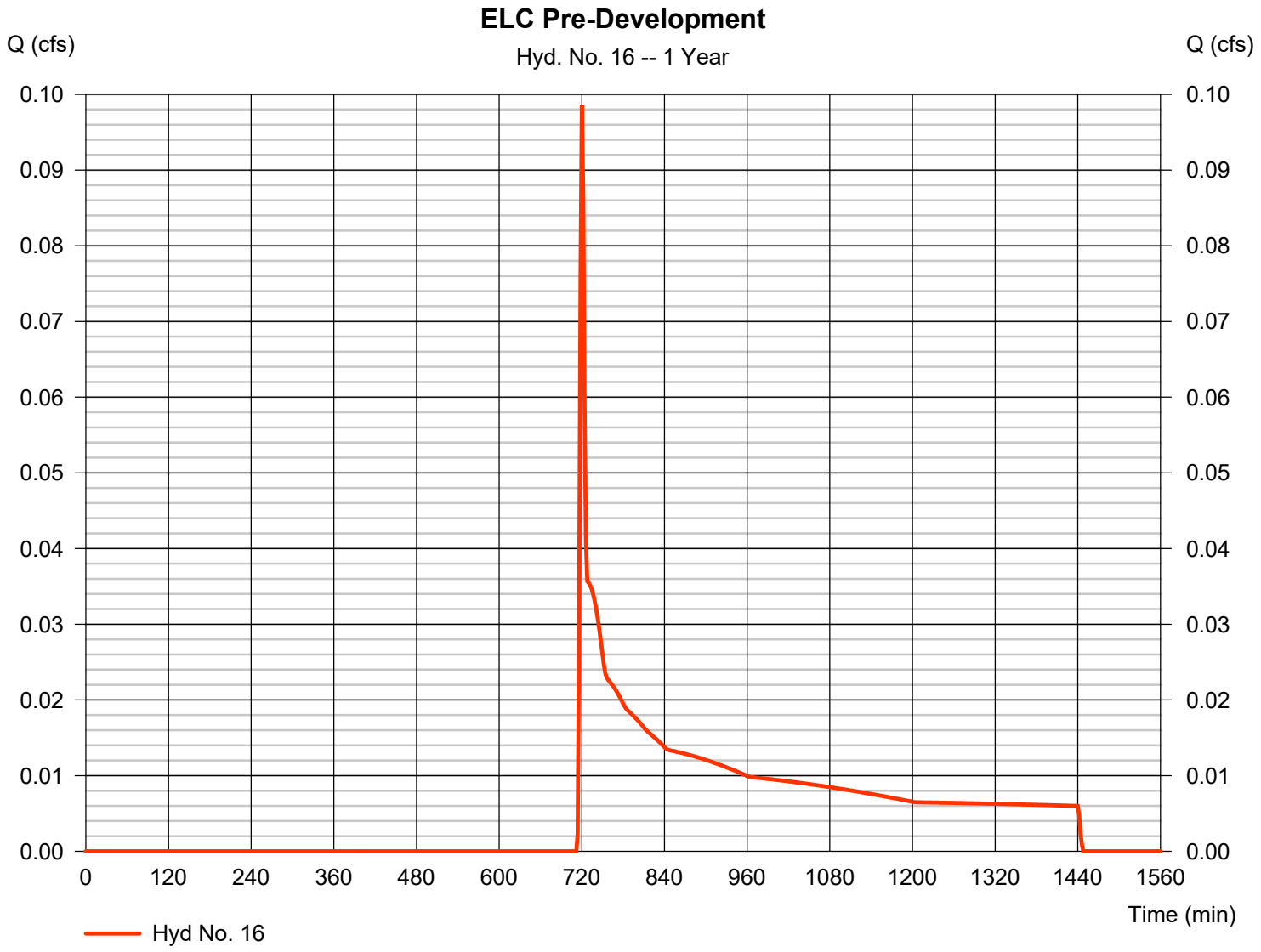
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 16

ELC Pre-Development

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.099 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	488 cuft
Drainage area	=	0.780 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



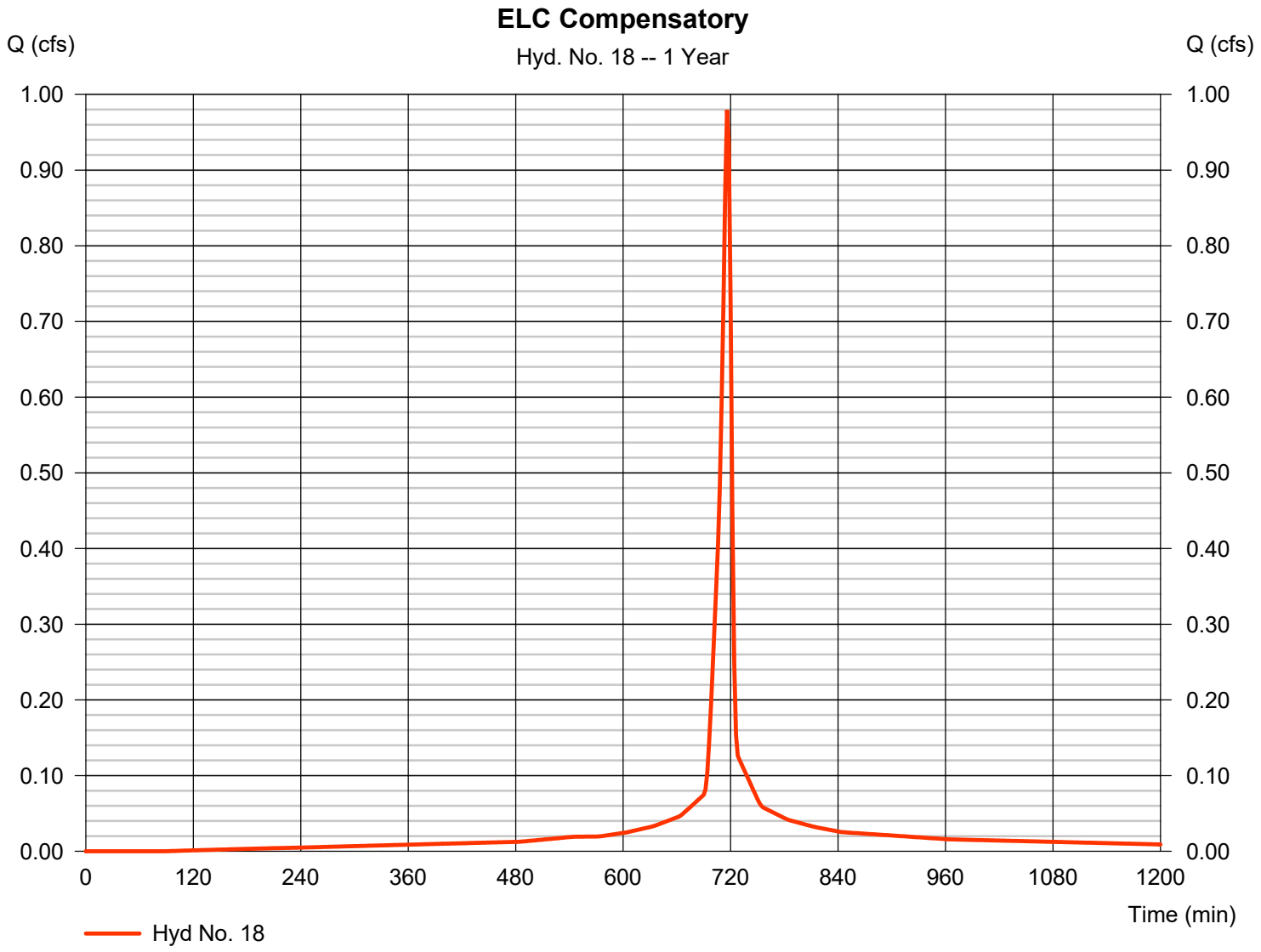
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 18

ELC Compensatory

Hydrograph type	= SCS Runoff	Peak discharge	= 0.979 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,269 cuft
Drainage area	= 0.270 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



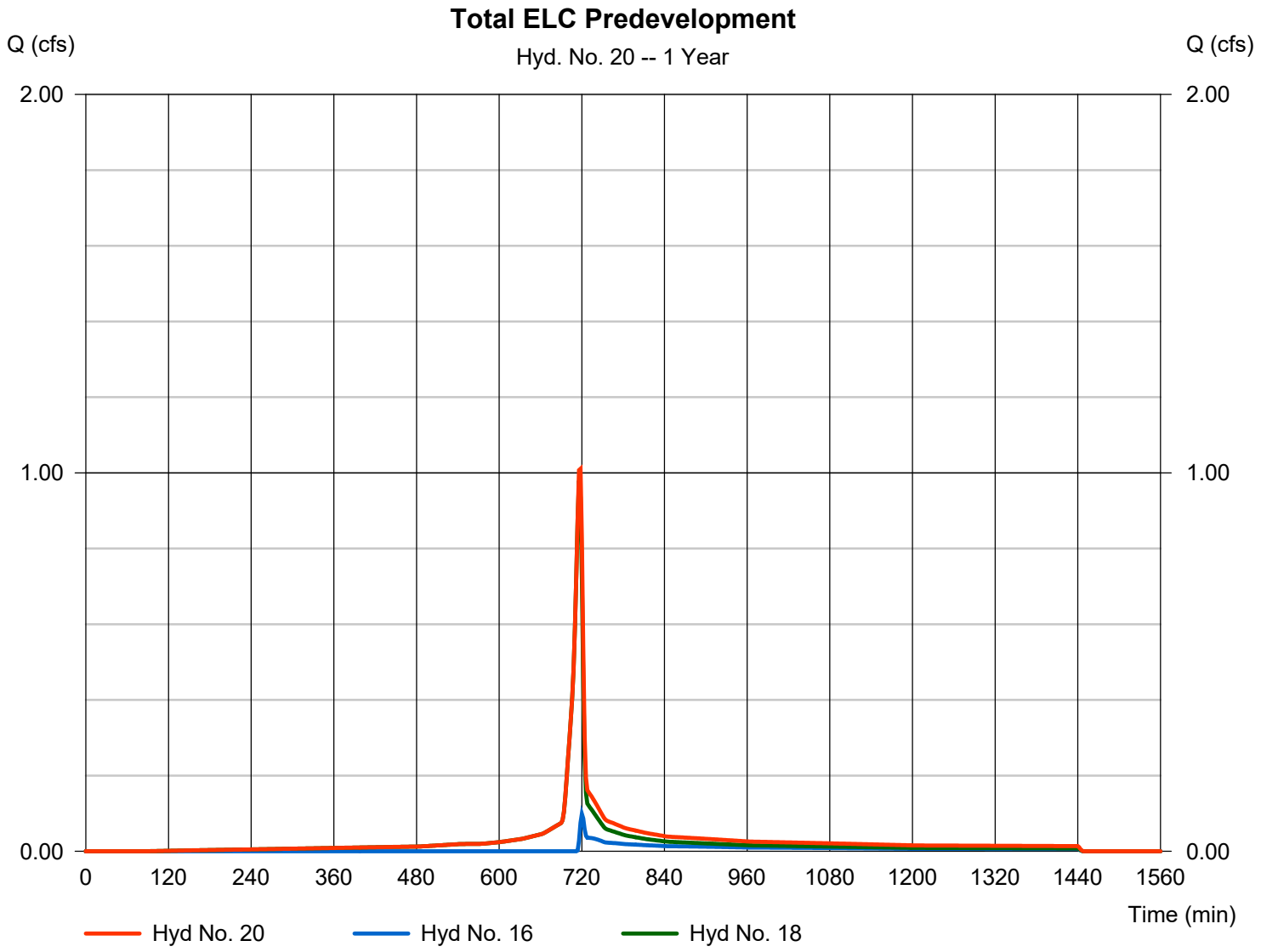
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 20

Total ELC Predevelopment

Hydrograph type	= Combine	Peak discharge	= 1.011 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,758 cuft
Inflow hyds.	= 16, 18	Contrib. drain. area	= 1.050 ac



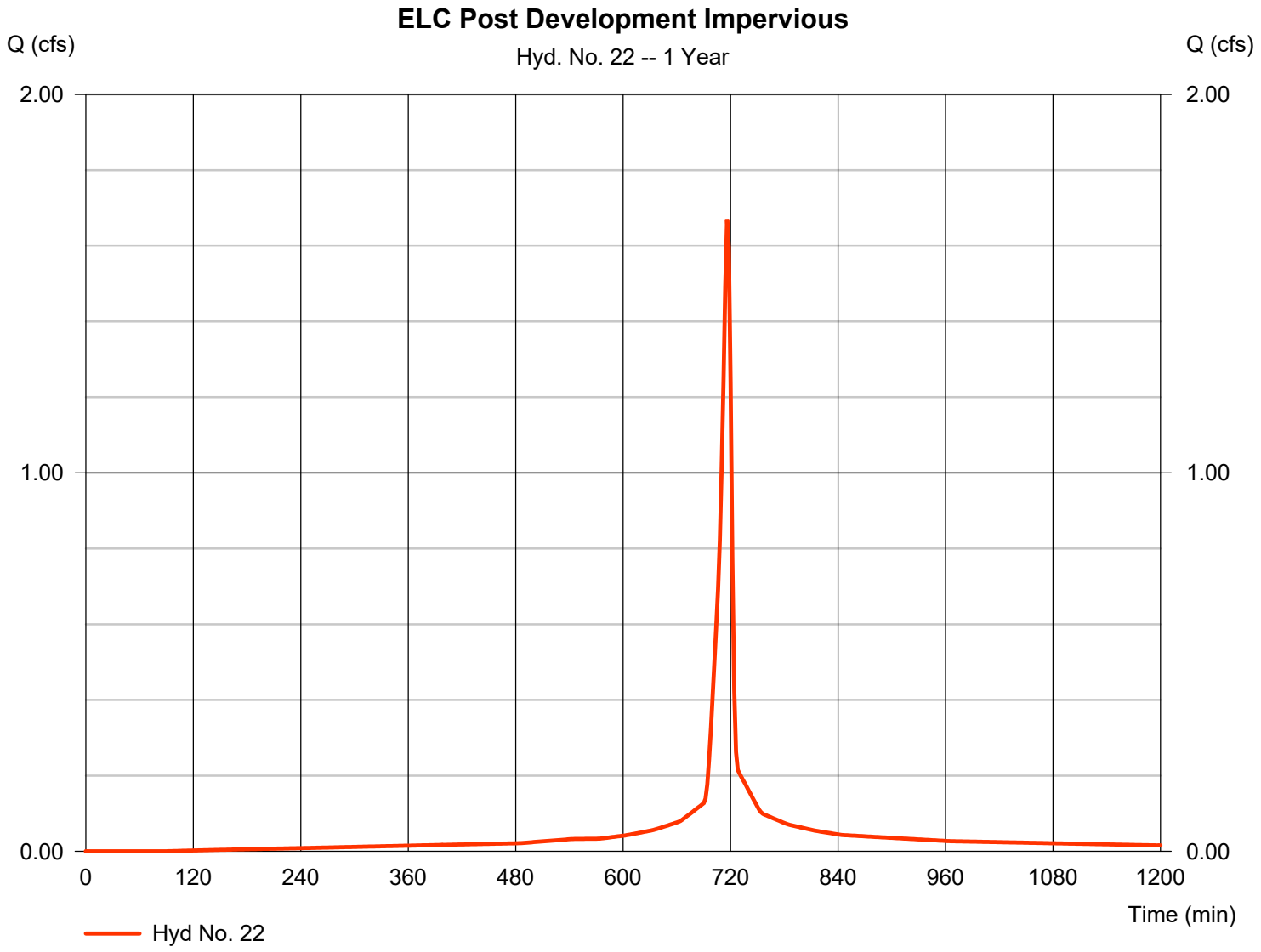
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 22

ELC Post Development Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.669 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,866 cuft
Drainage area	=	0.460 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



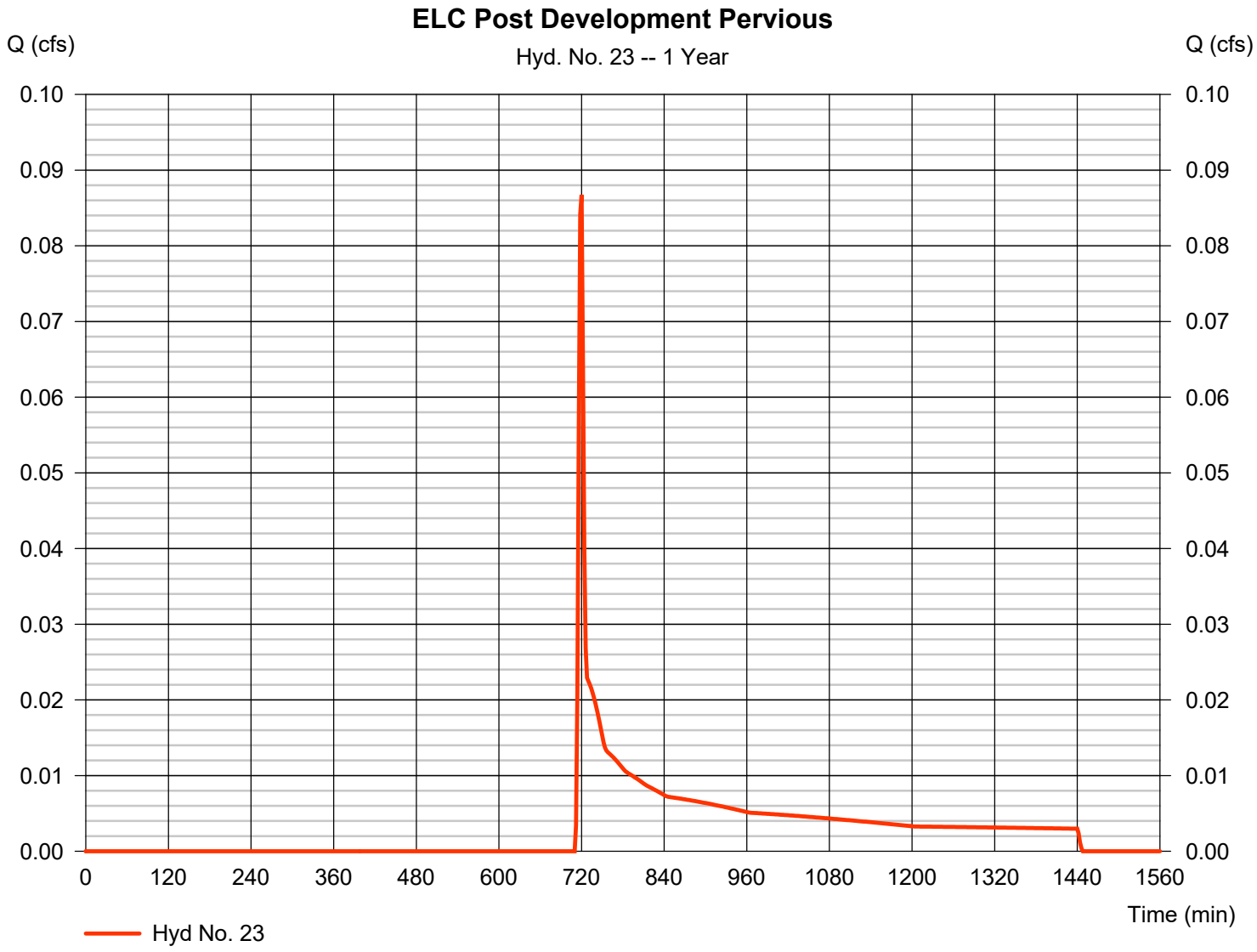
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 23

ELC Post Development Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.087 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	281 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



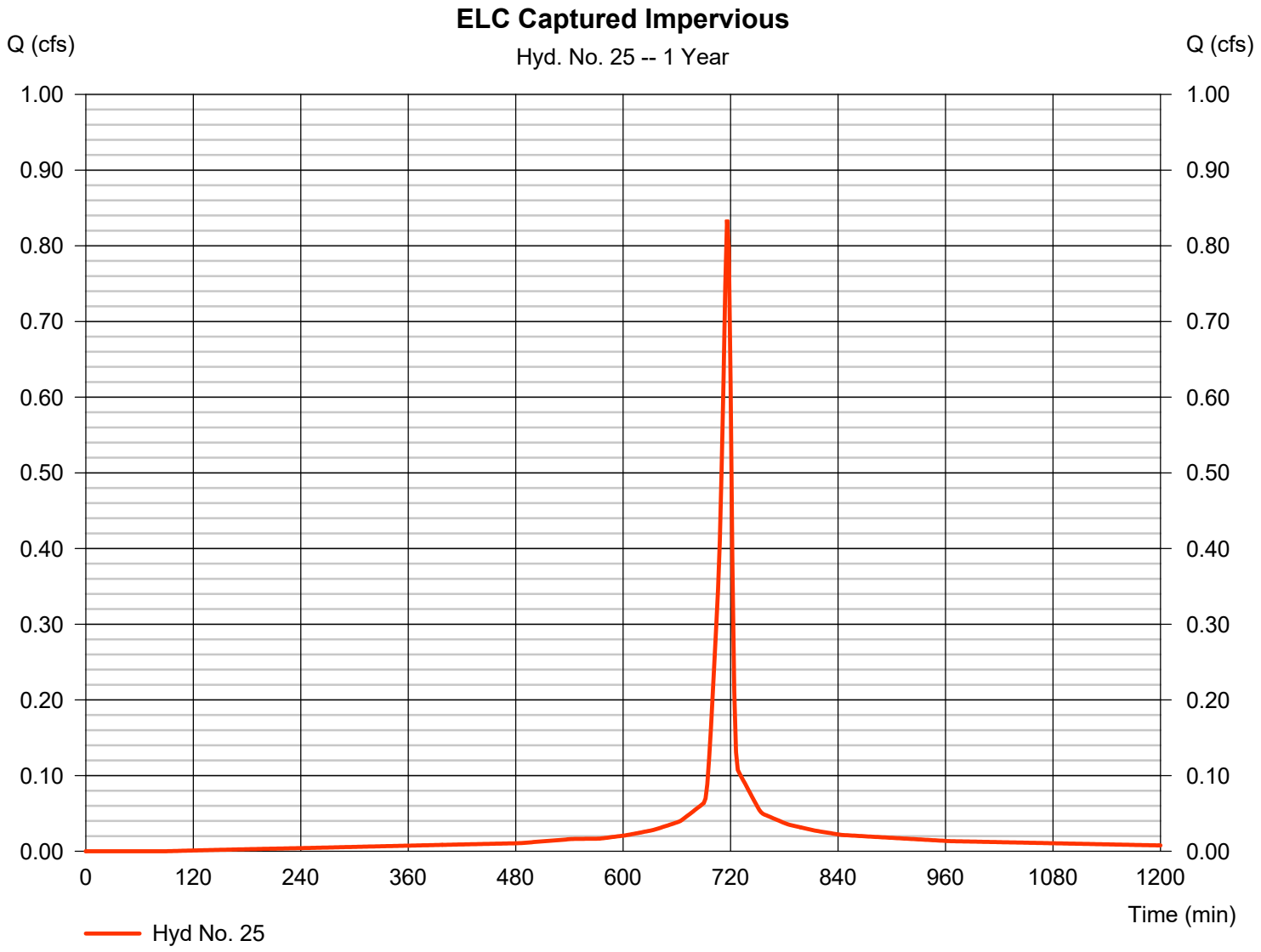
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 25

ELC Captured Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.834 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	1,933 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



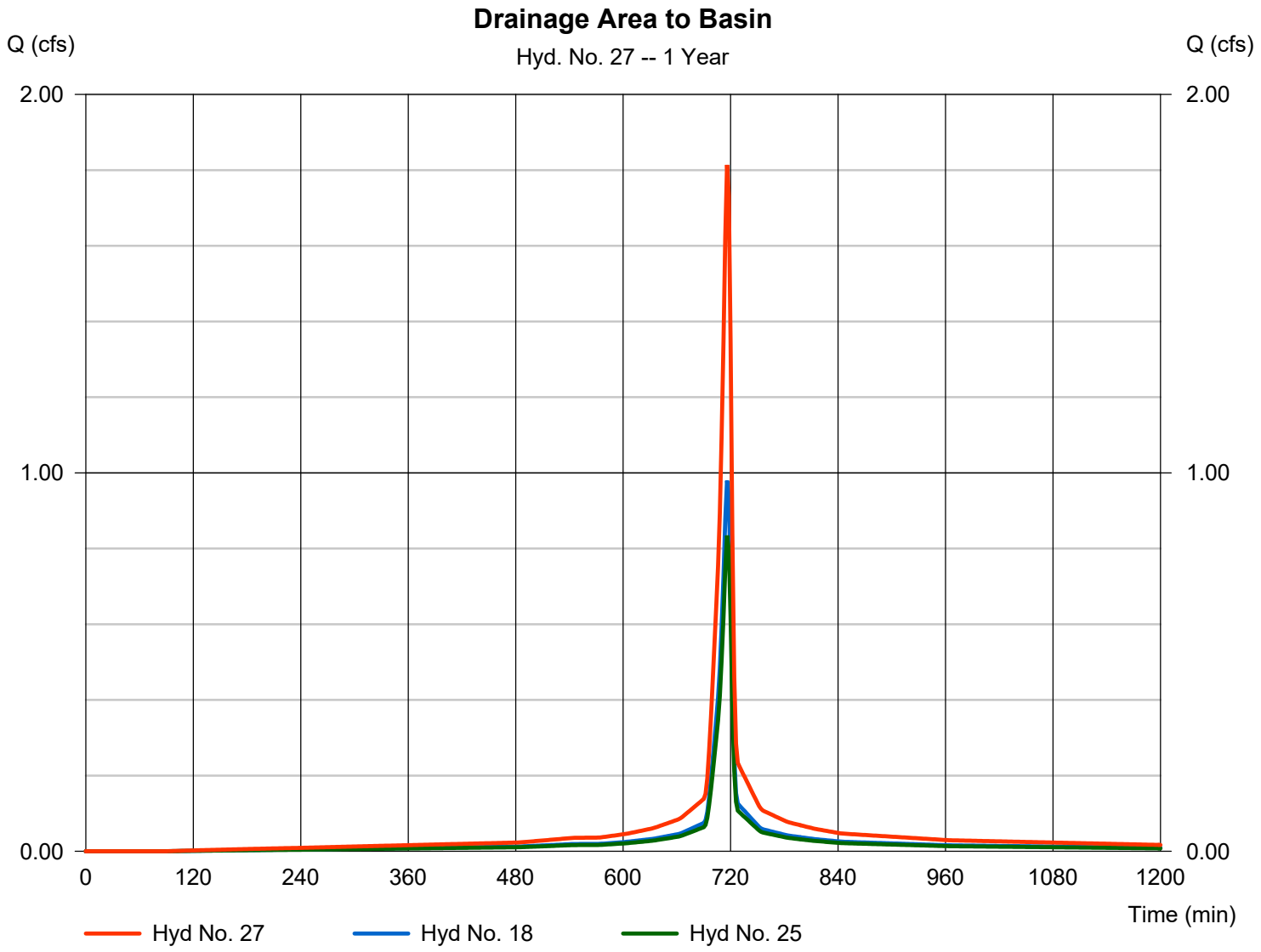
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 27

Drainage Area to Basin

Hydrograph type	= Combine	Peak discharge	= 1.814 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 4,202 cuft
Inflow hyds.	= 18, 25	Contrib. drain. area	= 0.500 ac



Hydrograph Report

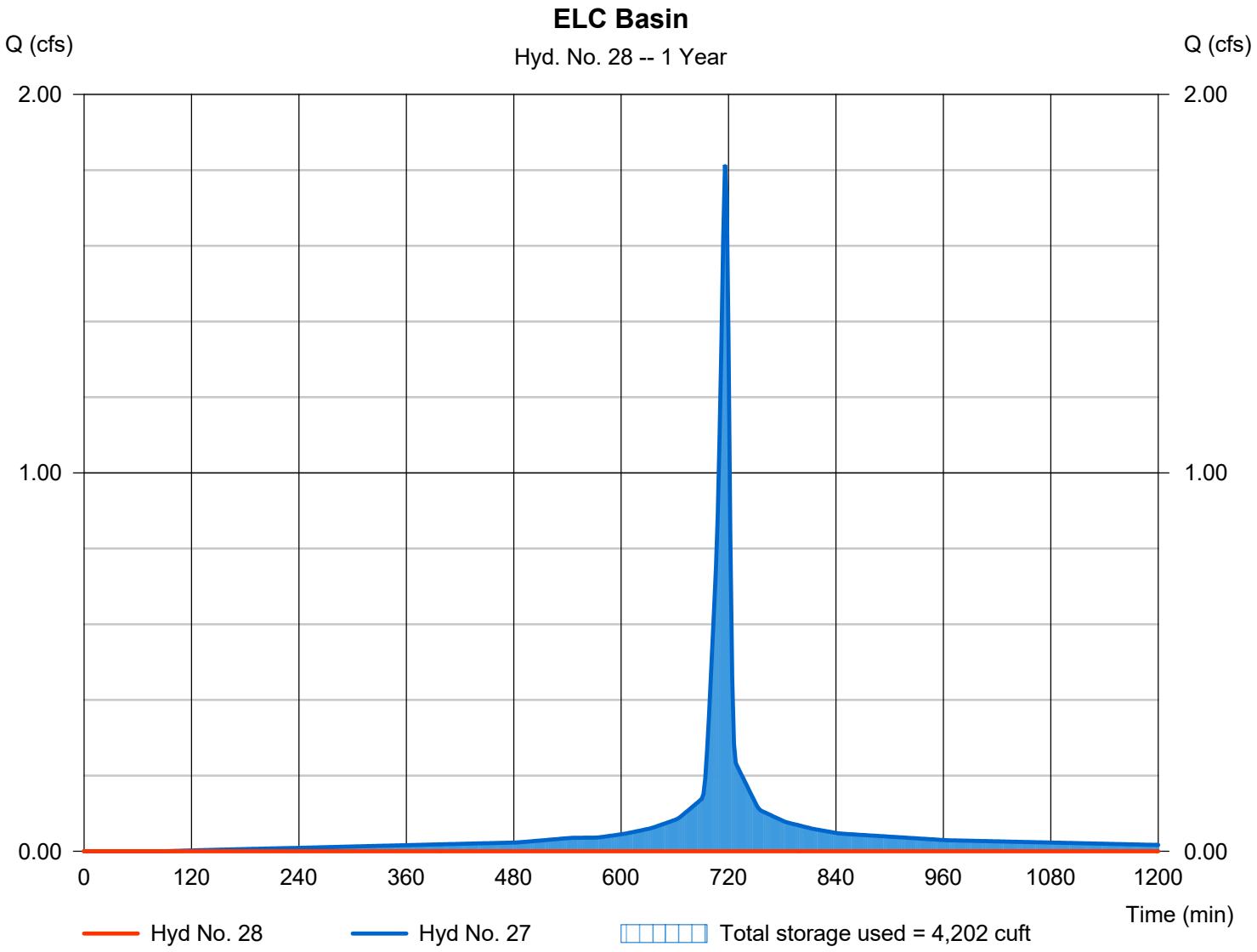
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 28

ELC Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	1 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	27 - Drainage Area to Basin	Max. Elevation	=	316.04 ft
Reservoir name	=	ELC Basin	Max. Storage	=	4,202 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Pond No. 5 - ELC Basin

Pond Data

Pond storage is based on user-defined values.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	314.50	n/a	0	0
1.00	315.50	n/a	880	880
2.00	316.50	n/a	6,150	7,030
3.00	317.50	n/a	4,100	11,129
3.82	318.32	n/a	1,319	12,448

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .000	.000	.000	n/a
Orifice Coeff.	= 0.00	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

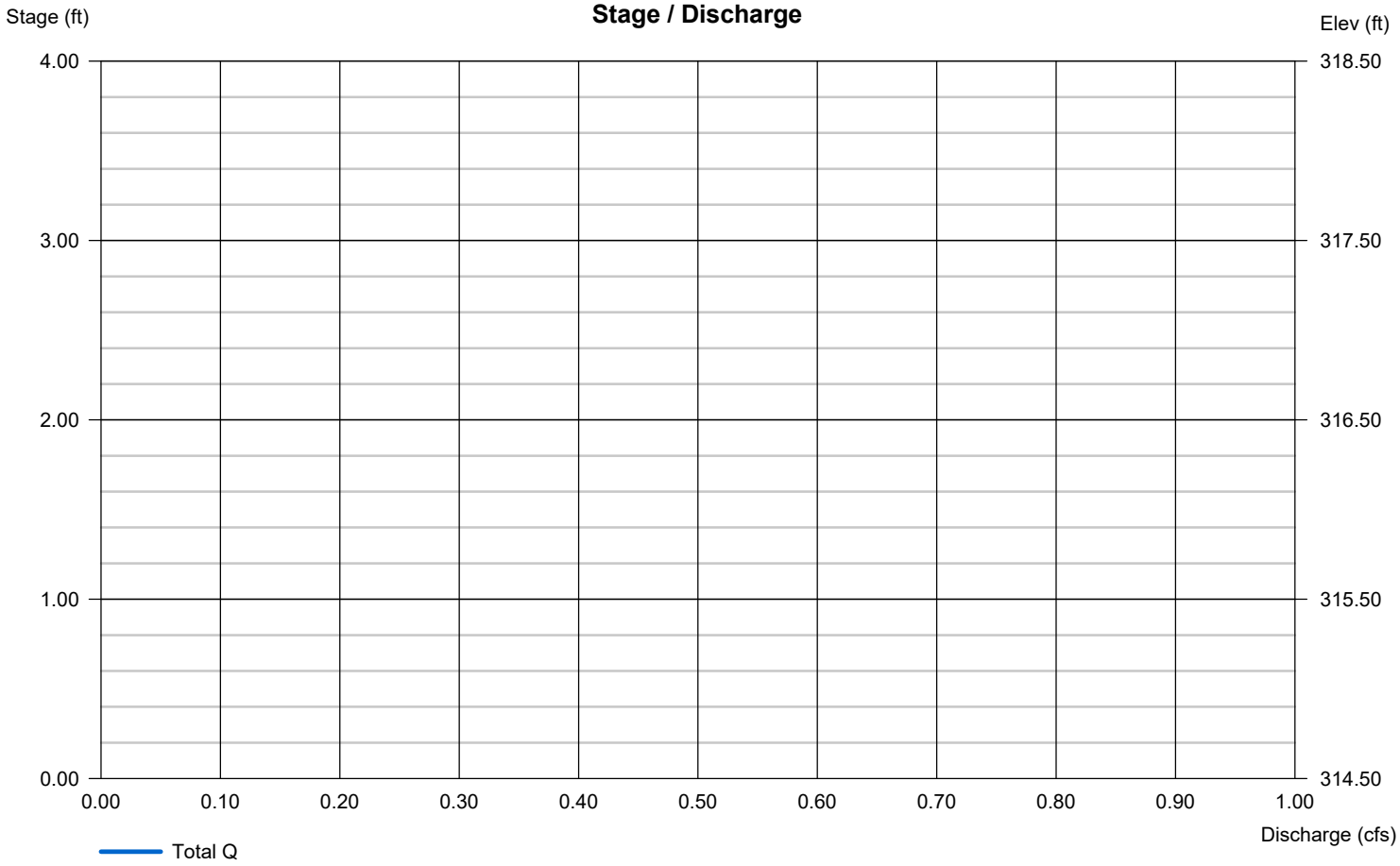
Weir Structures

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

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

TW Elev. (ft) = 0.00

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



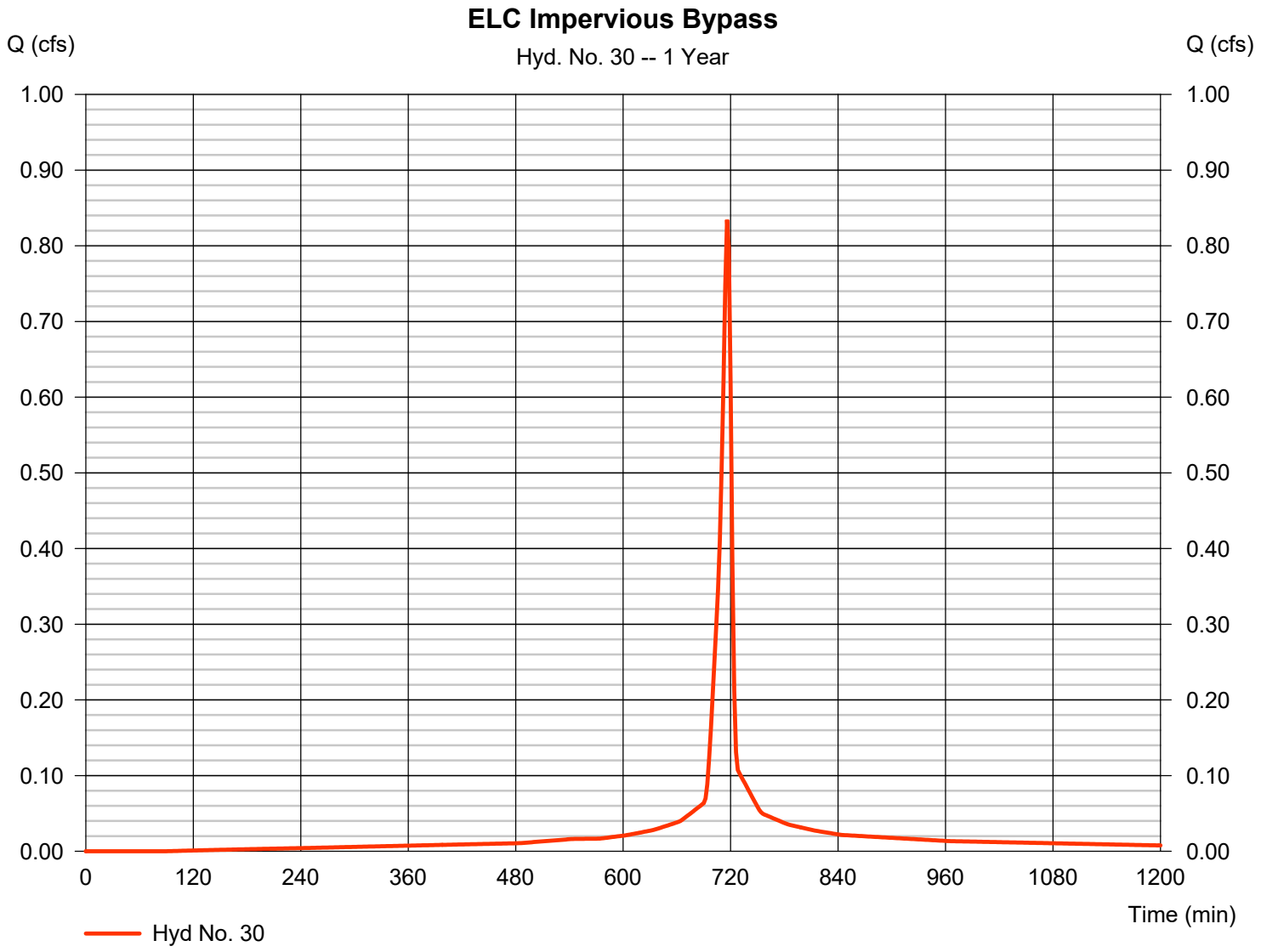
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 30

ELC Impervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.834 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	1,933 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



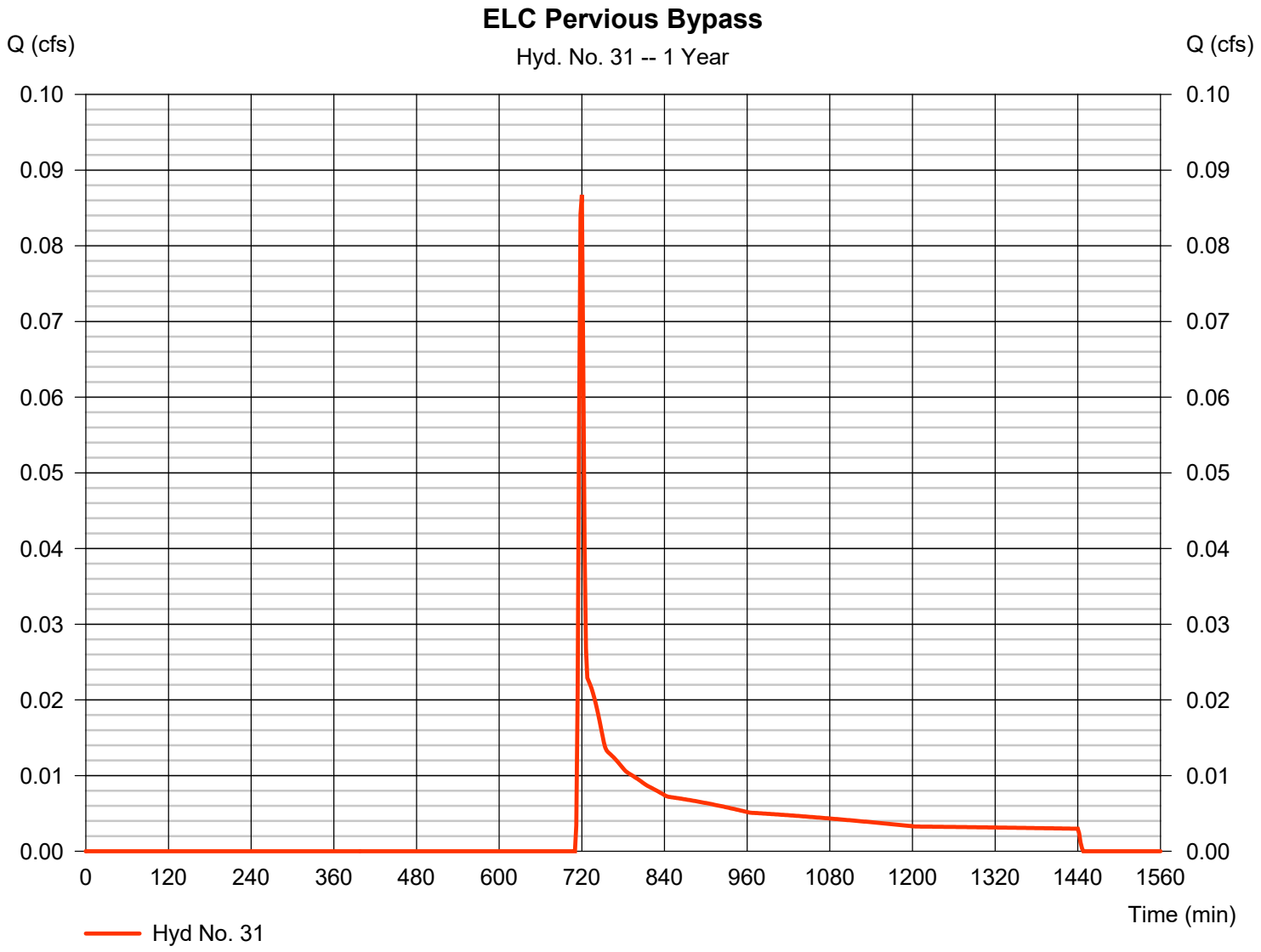
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 31

ELC Pervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.087 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 281 cuft
Drainage area	= 0.320 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



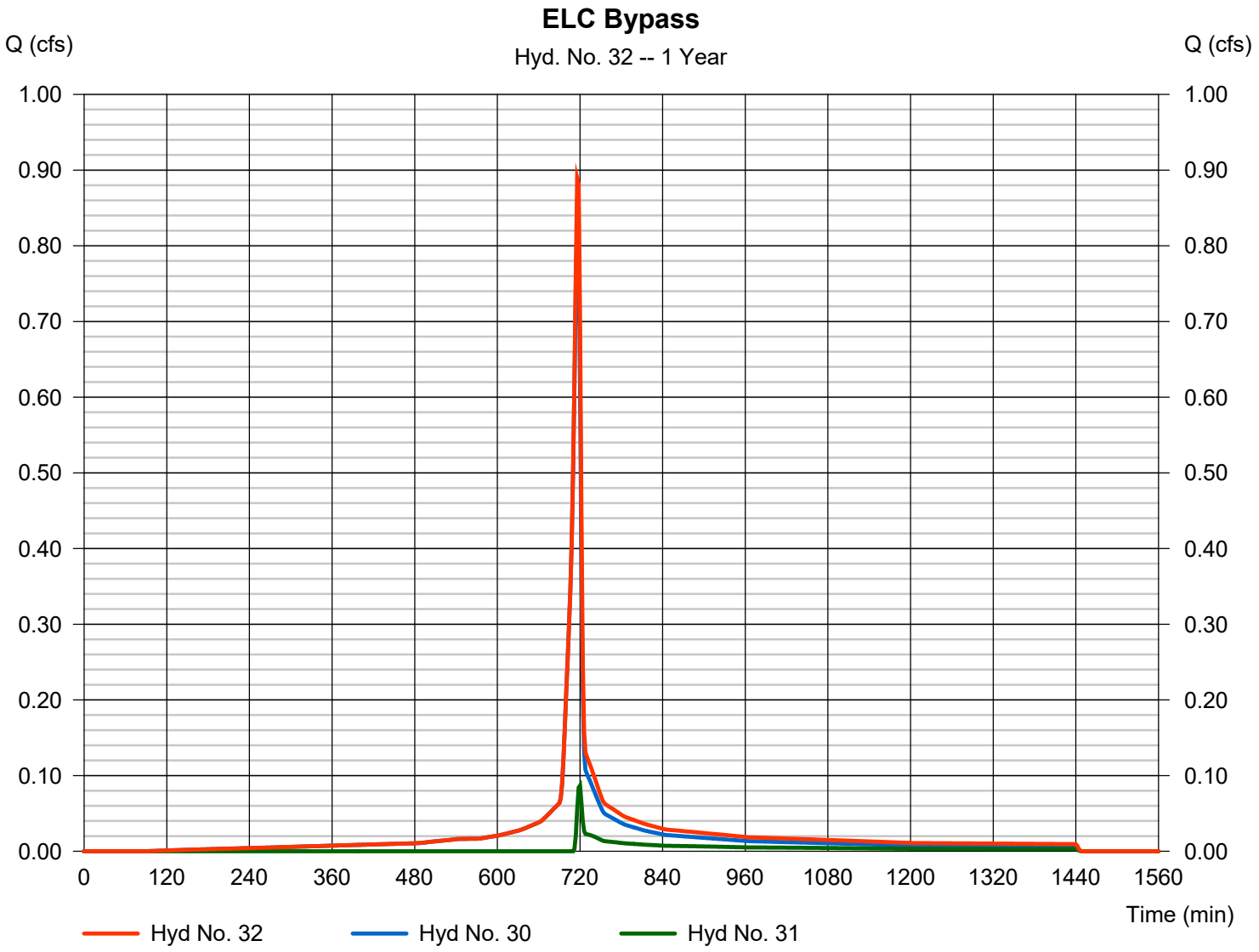
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 32

ELC Bypass

Hydrograph type	=	Combine	Peak discharge	=	0.889 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,215 cuft
Inflow hyds.	=	30, 31	Contrib. drain. area	=	0.550 ac



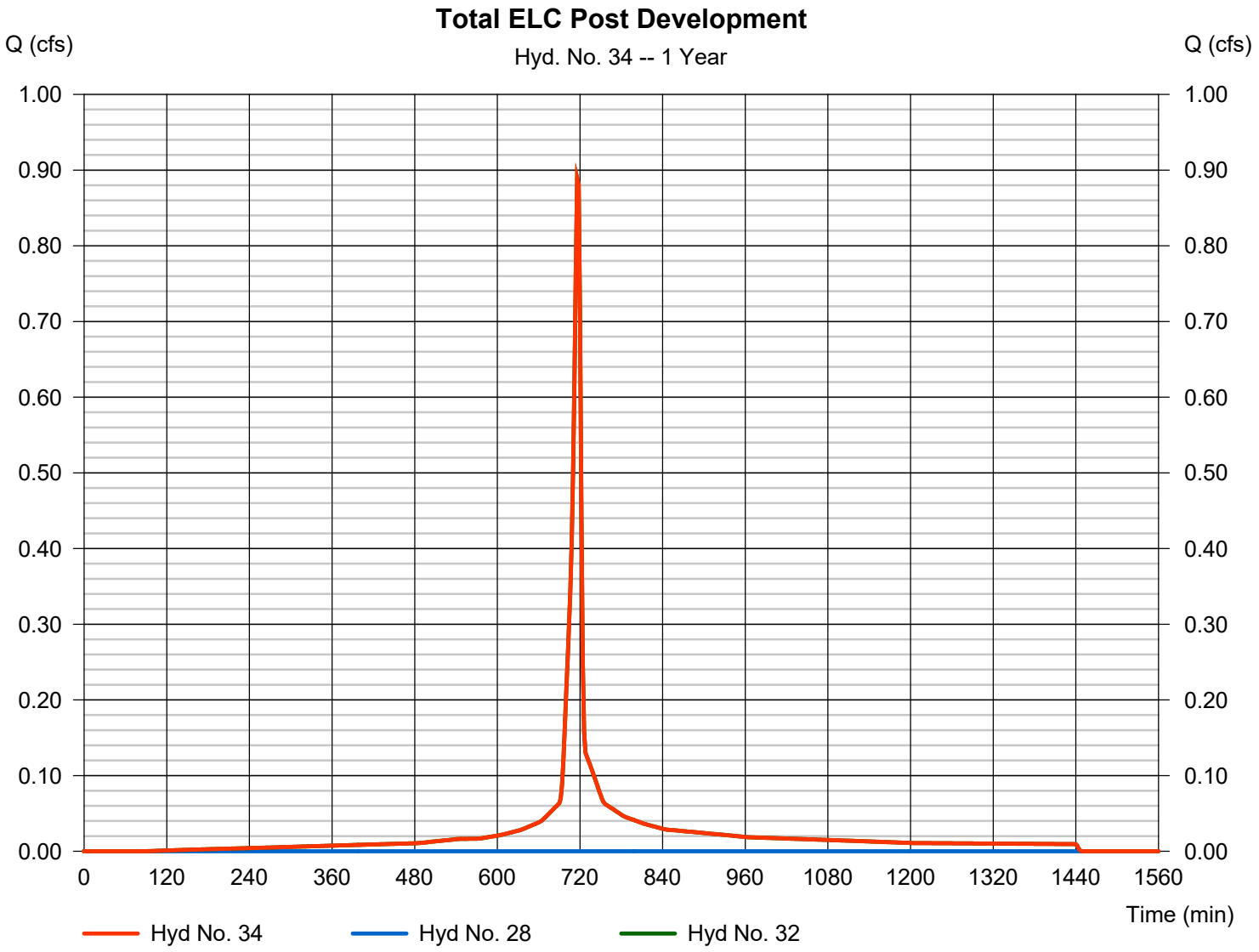
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 34

Total ELC Post Development

Hydrograph type	=	Combine	Peak discharge	=	0.889 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,215 cuft
Inflow hyds.	=	28, 32	Contrib. drain. area	=	0.000 ac



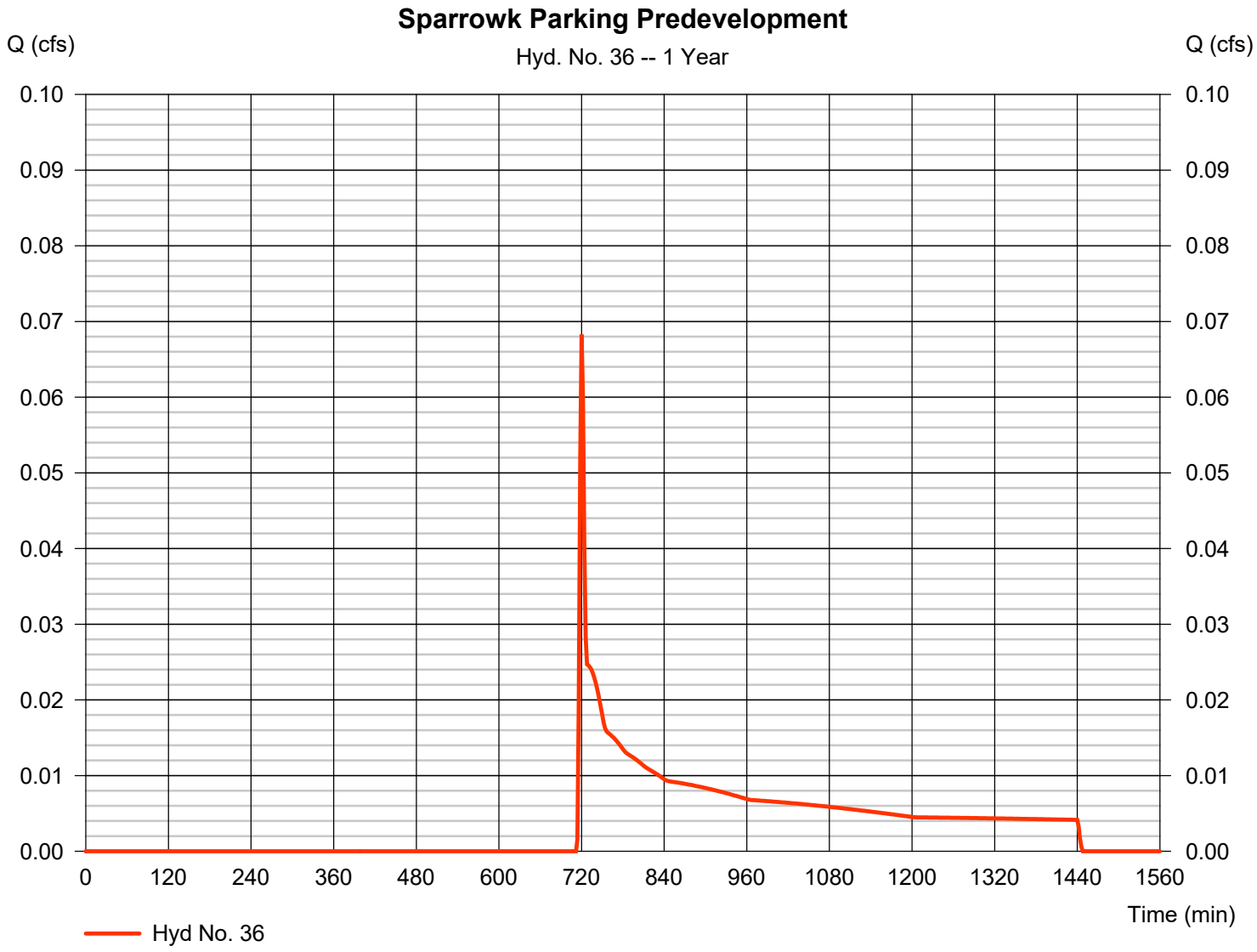
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 36

Sparrowk Parking Predevelopment

Hydrograph type	= SCS Runoff	Peak discharge	= 0.068 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 338 cuft
Drainage area	= 0.540 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



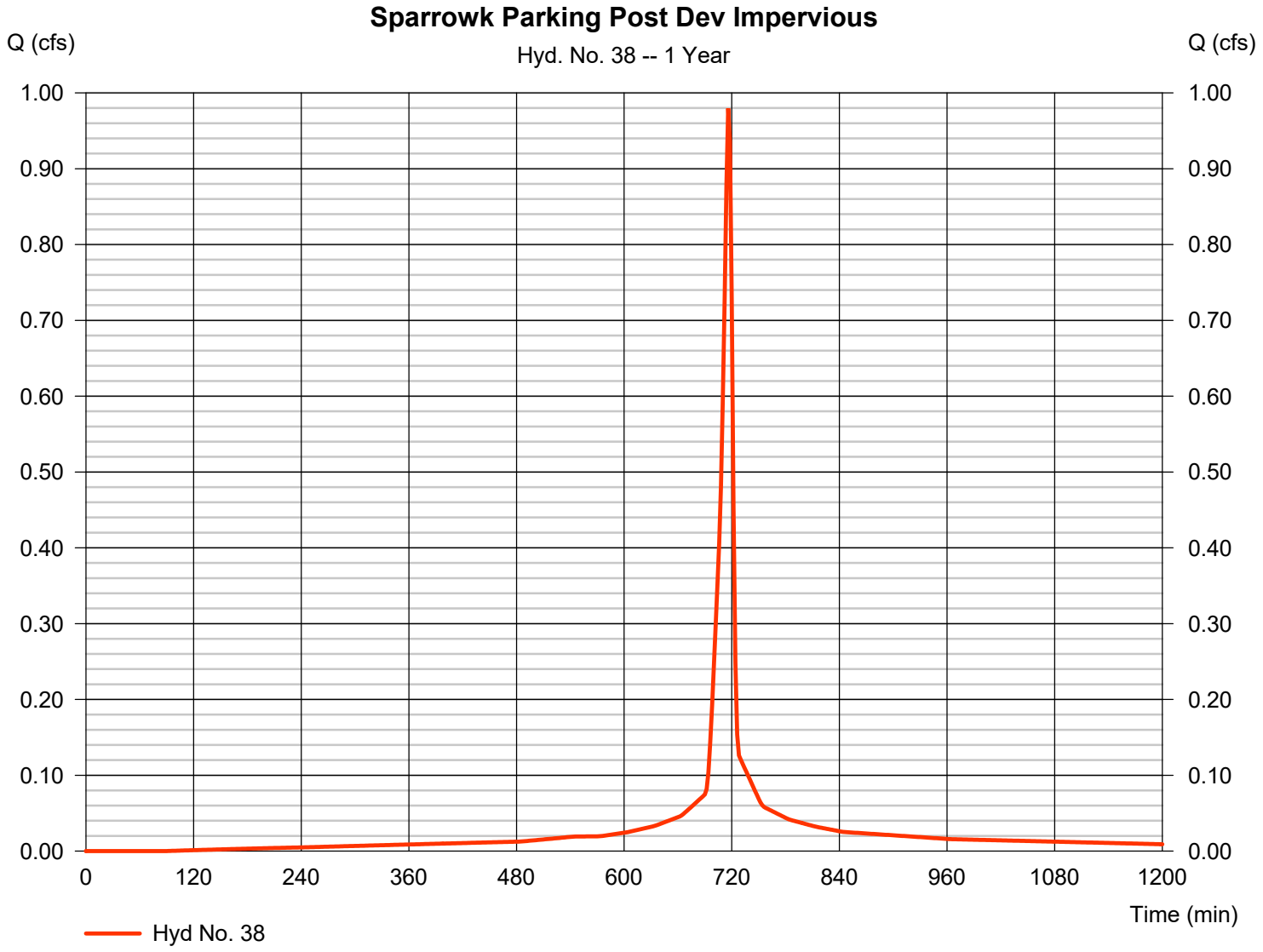
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 38

Sparrowk Parking Post Dev Impervious

Hydrograph type	= SCS Runoff	Peak discharge	= 0.979 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,269 cuft
Drainage area	= 0.270 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



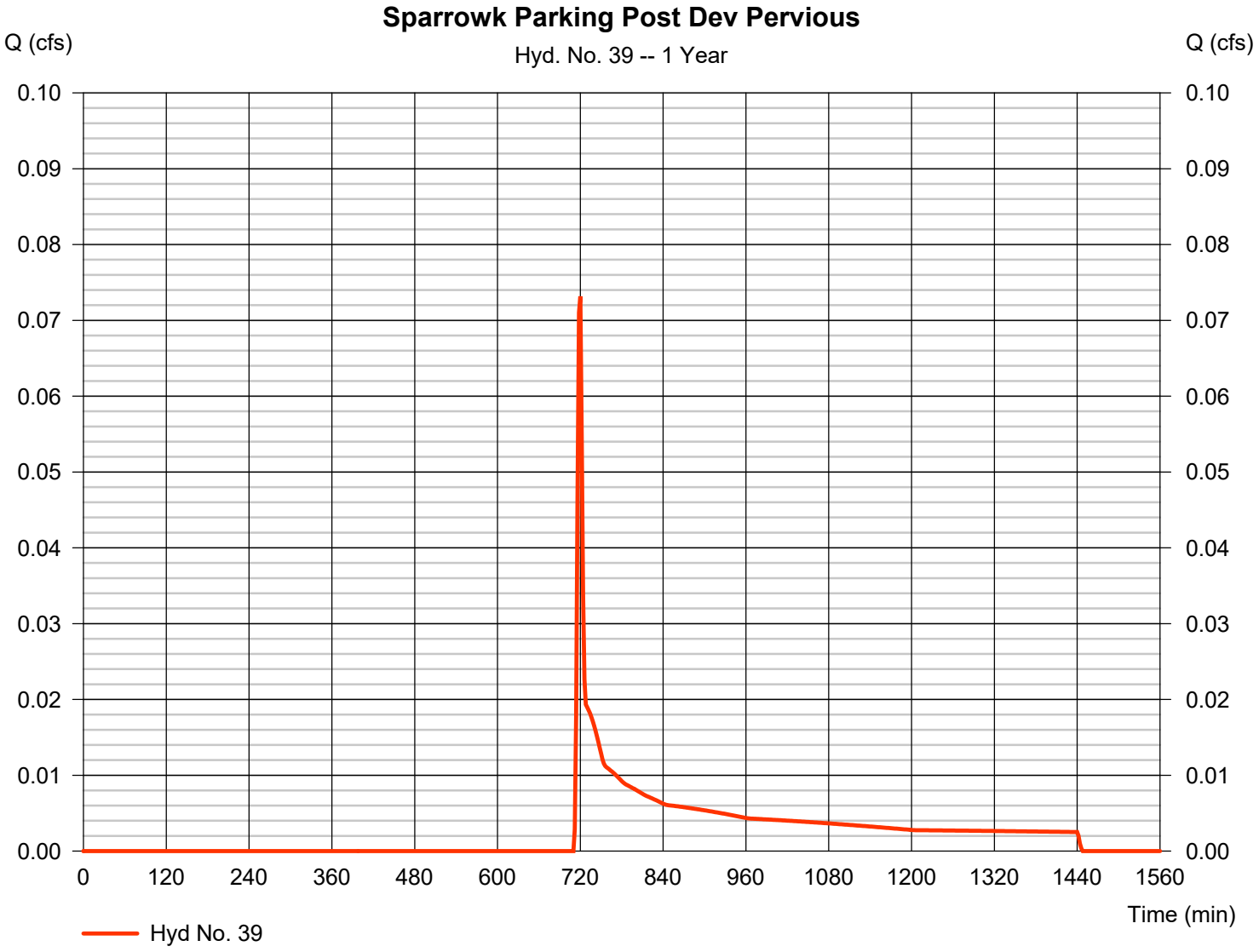
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 39

Sparrowk Parking Post Dev Pervious

Hydrograph type	= SCS Runoff	Peak discharge	= 0.073 cfs
Storm frequency	= 1 yrs	Time to peak	= 720 min
Time interval	= 2 min	Hyd. volume	= 238 cuft
Drainage area	= 0.270 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

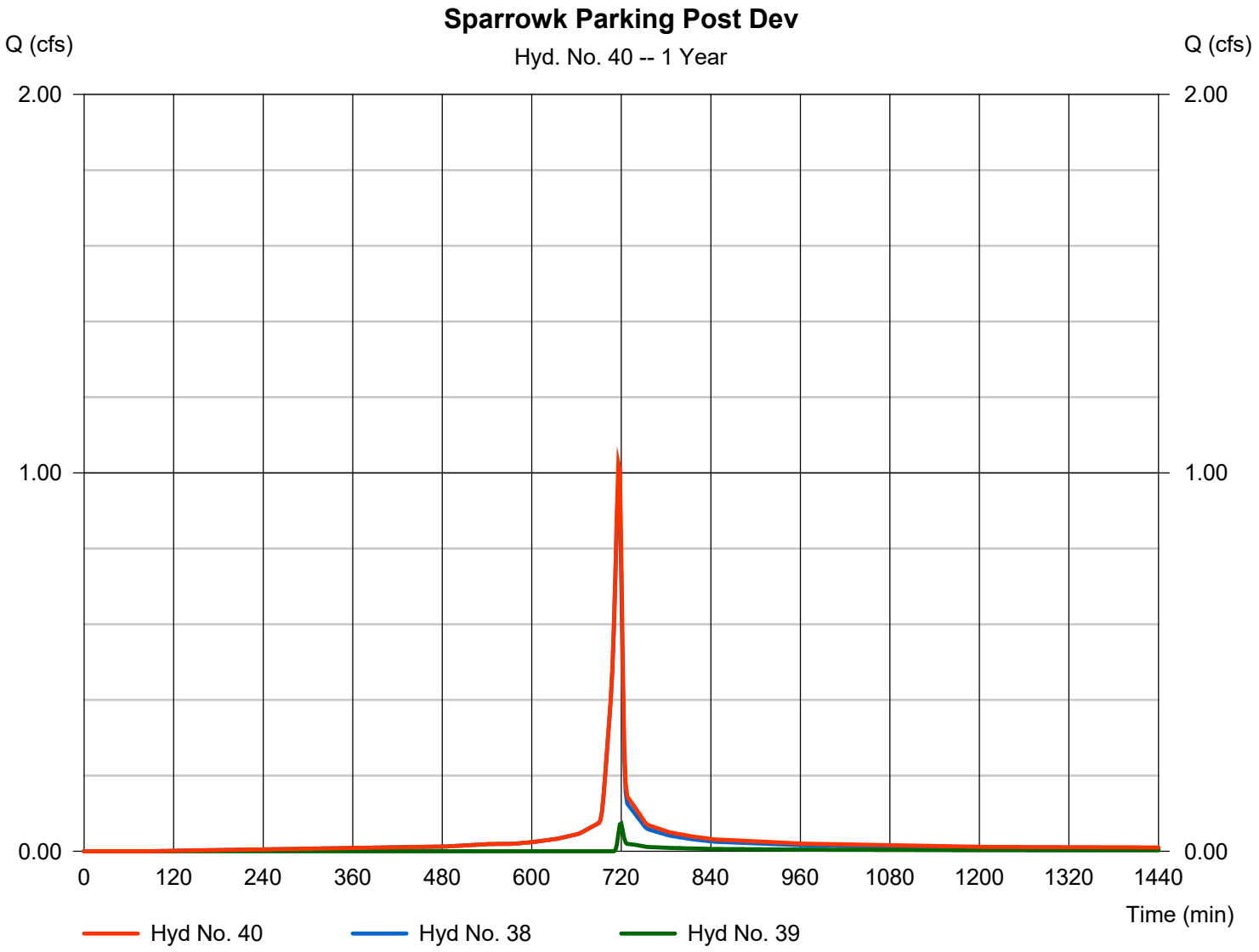


Hydrograph Report

Hyd. No. 40

Sparrowk Parking Post Dev

Hydrograph type	=	Combine	Peak discharge	=	1.026 cfs
Storm frequency	=	1 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,507 cuft
Inflow hyds.	=	38, 39	Contrib. drain. area	=	0.540 ac



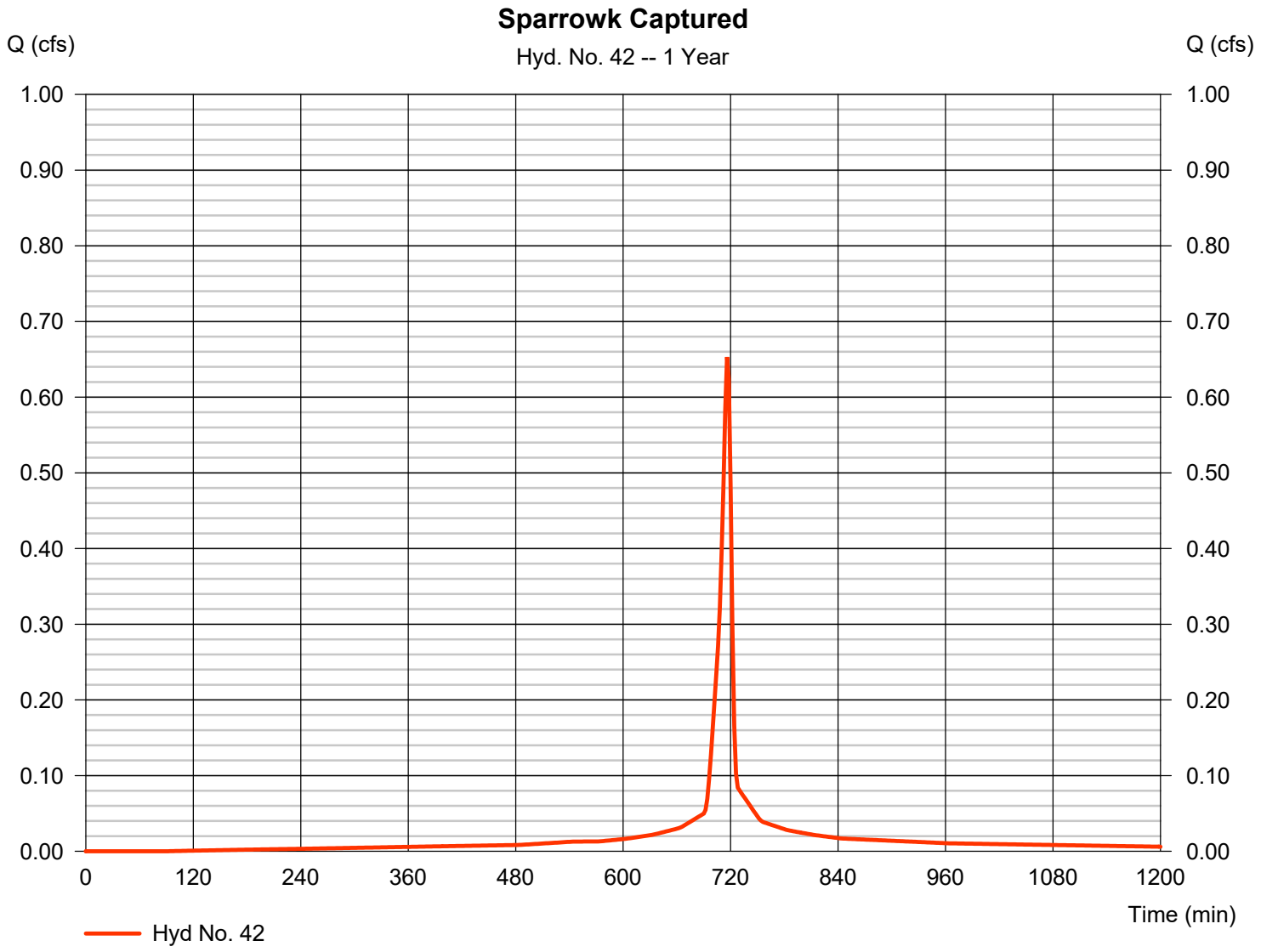
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 42

Sparrowk Captured

Hydrograph type	= SCS Runoff	Peak discharge	= 0.653 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,513 cuft
Drainage area	= 0.180 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

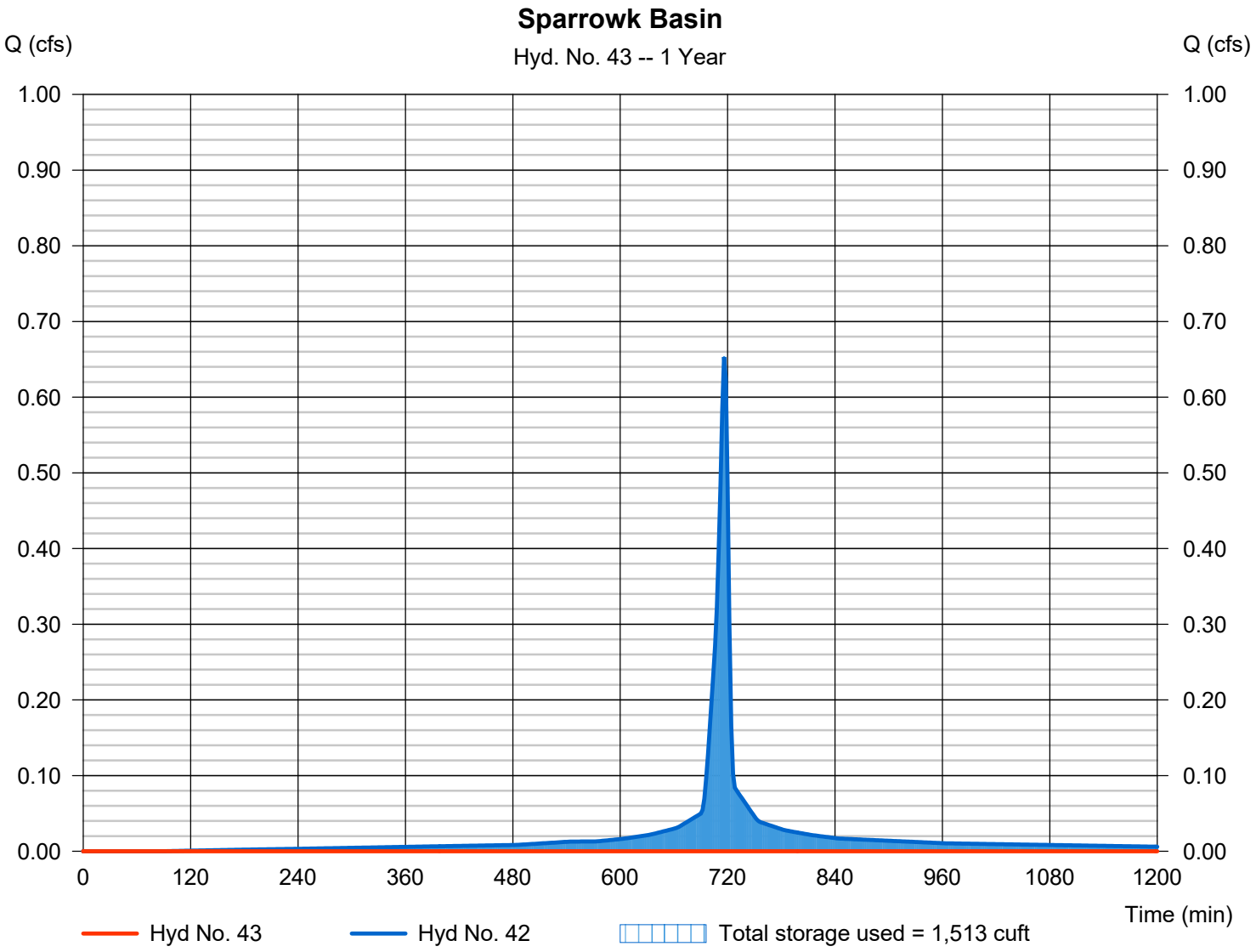
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 43

Sparrowk Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	1 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	42 - Sparrowk Captured	Max. Elevation	=	301.04 ft
Reservoir name	=	Sparrowk Basin	Max. Storage	=	1,513 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Pond No. 3 - Sparrowk Basin

Pond Data

Pond storage is based on user-defined values.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	299.50	n/a	0	0
1.00	300.50	n/a	319	319
2.00	301.50	n/a	2,196	2,515
3.00	302.50	n/a	1,464	3,979
3.82	303.32	n/a	471	4,450

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.00	0.00	0.00	0.00
Span (in)	= 0.00	0.00	0.00	0.00
No. Barrels	= 0	0	0	0
Invert El. (ft)	= 0.00	0.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .000	.000	.000	n/a
Orifice Coeff.	= 0.00	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

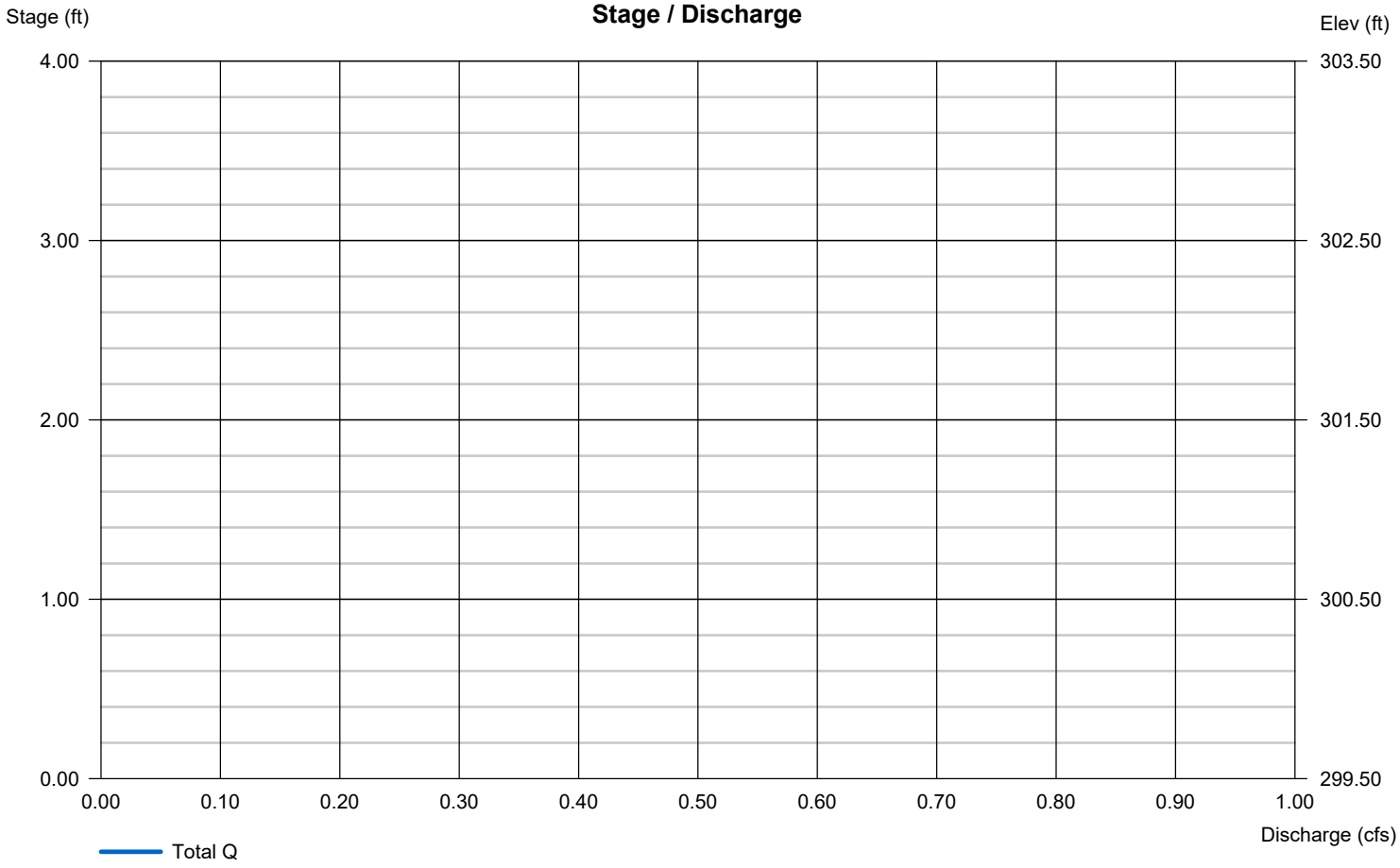
Weir Structures

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

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

TW Elev. (ft) = 0.00

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



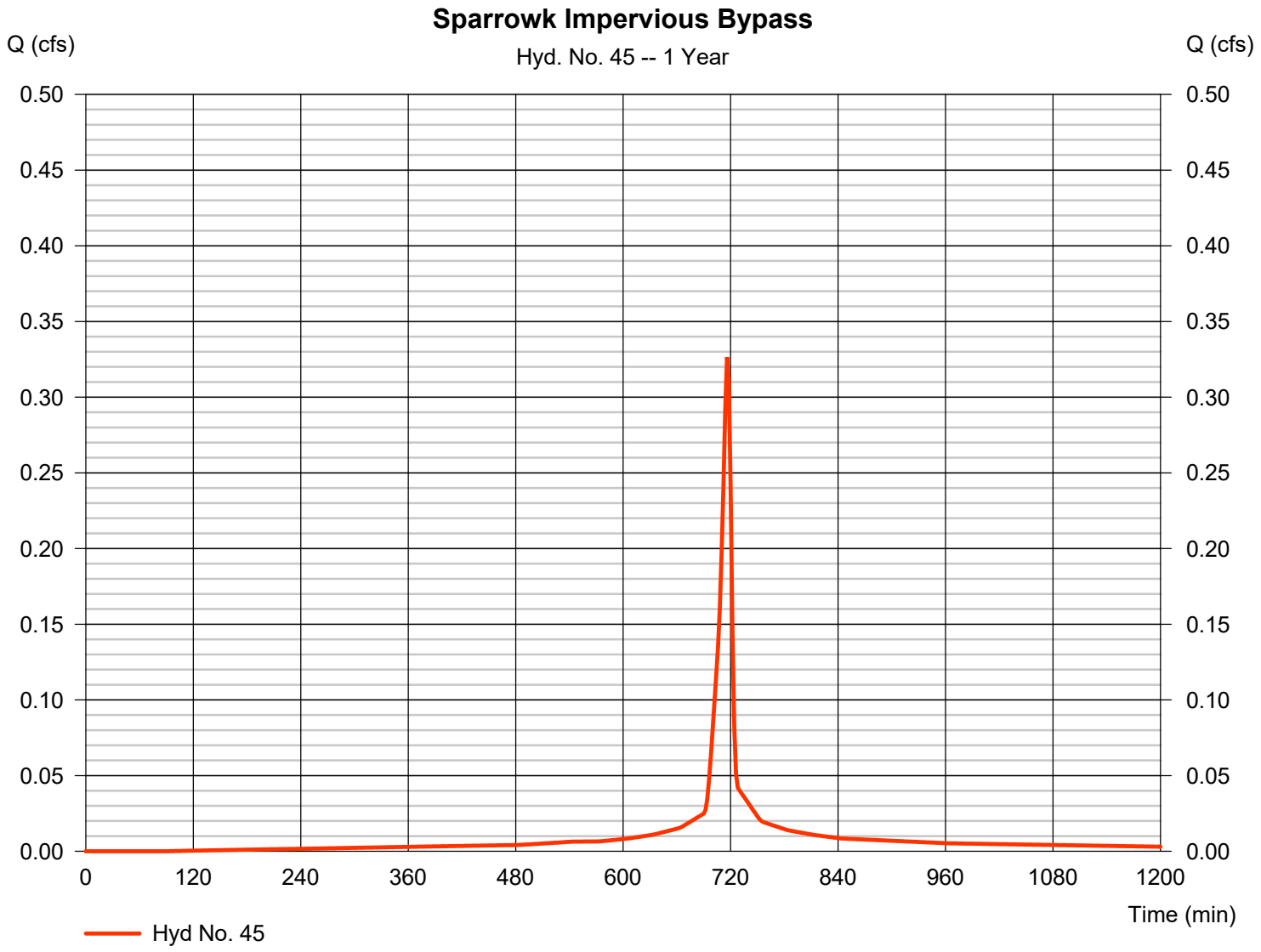
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 45

Sparrowk Impervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.326 cfs
Storm frequency	= 1 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 756 cuft
Drainage area	= 0.090 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 2.70 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



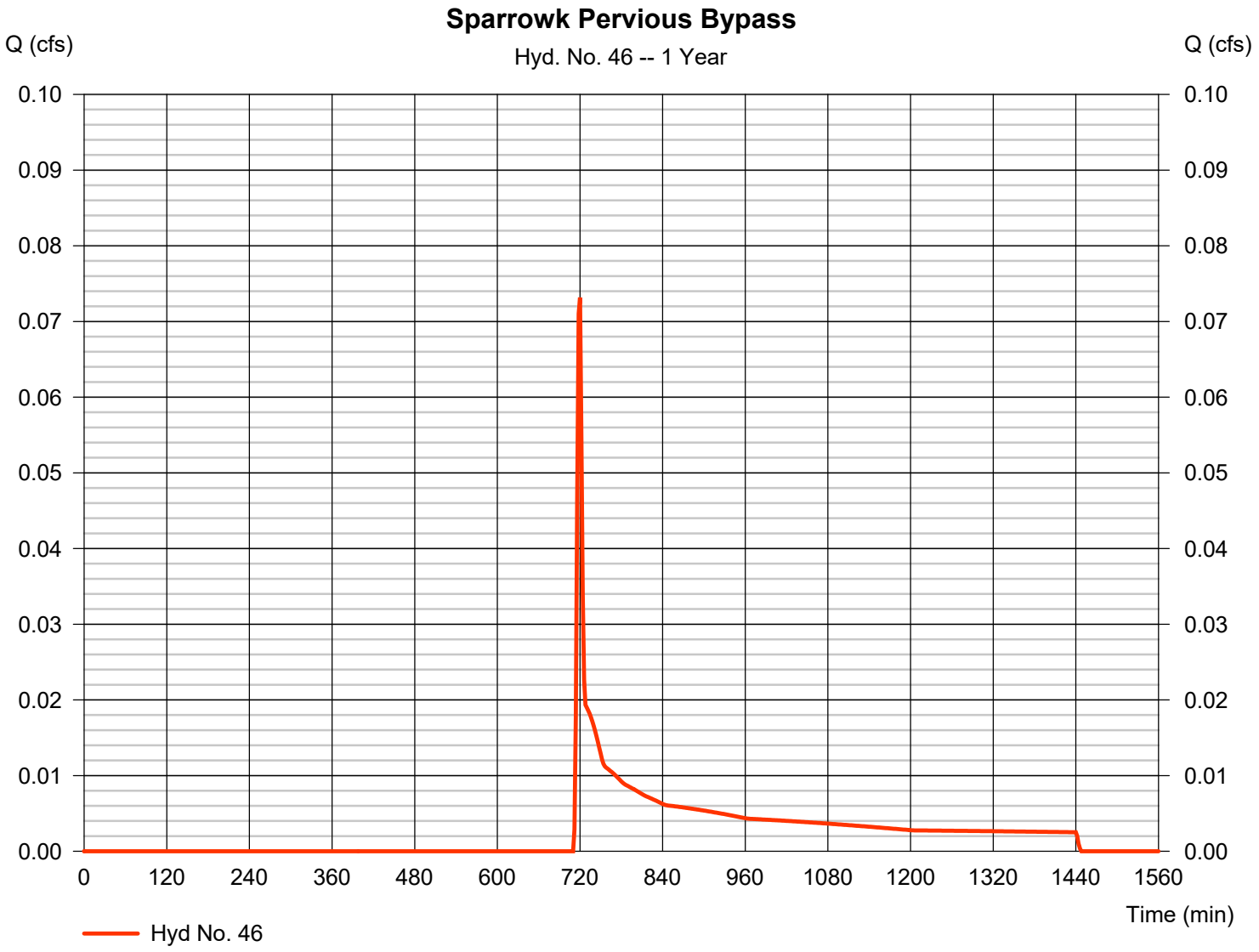
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 46

Sparrowk Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.073 cfs
Storm frequency	=	1 yrs	Time to peak	=	720 min
Time interval	=	2 min	Hyd. volume	=	238 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	2.70 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



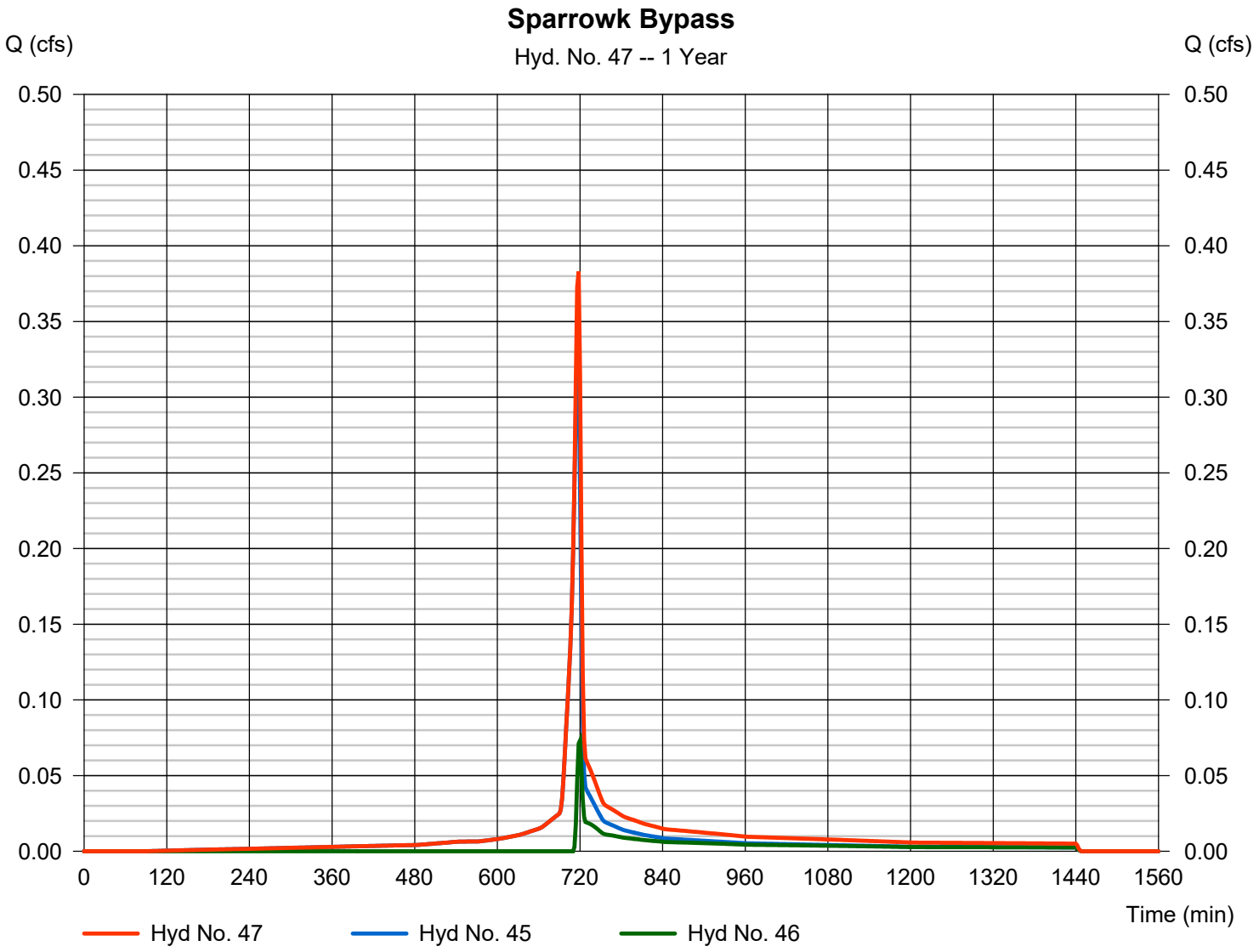
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 47

Sparrowk Bypass

Hydrograph type	=	Combine	Peak discharge	=	0.383 cfs
Storm frequency	=	1 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	994 cuft
Inflow hyds.	=	45, 46	Contrib. drain. area	=	0.360 ac



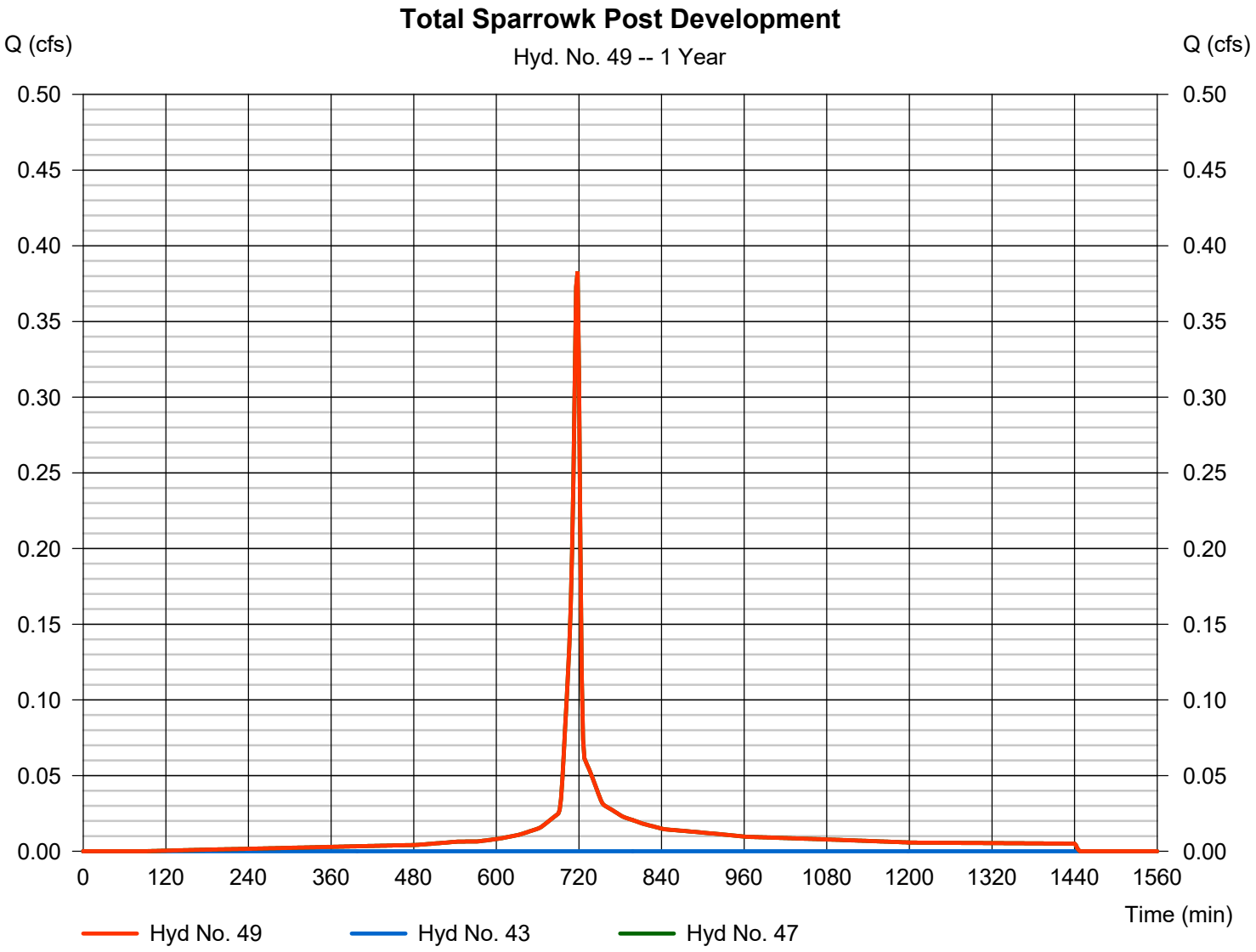
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 49

Total Sparrowk Post Development

Hydrograph type	= Combine	Peak discharge	= 0.383 cfs
Storm frequency	= 1 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 994 cuft
Inflow hyds.	= 43, 47	Contrib. drain. area	= 0.000 ac



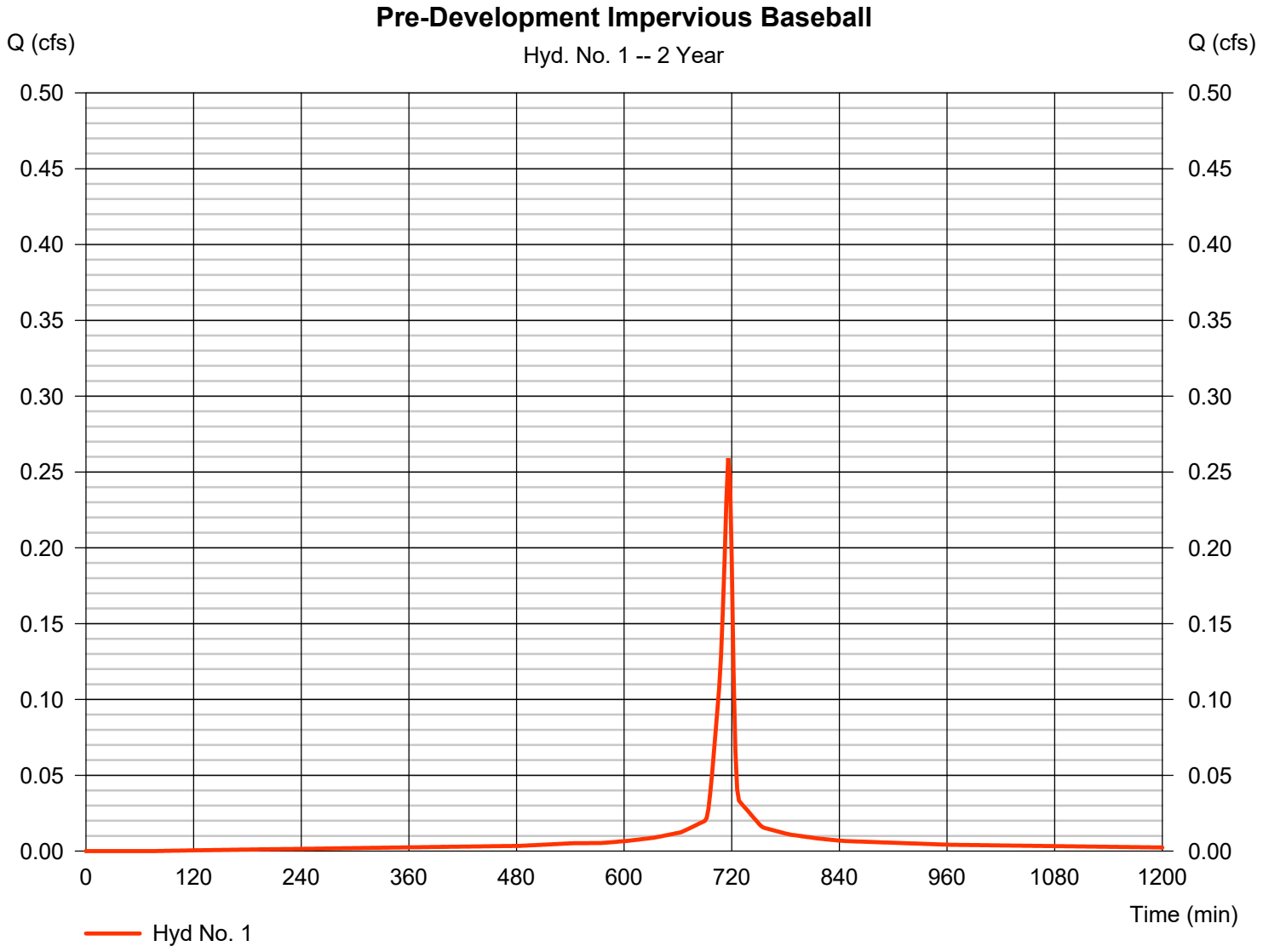
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 1

Pre-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.259 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 606 cuft
Drainage area	= 0.060 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



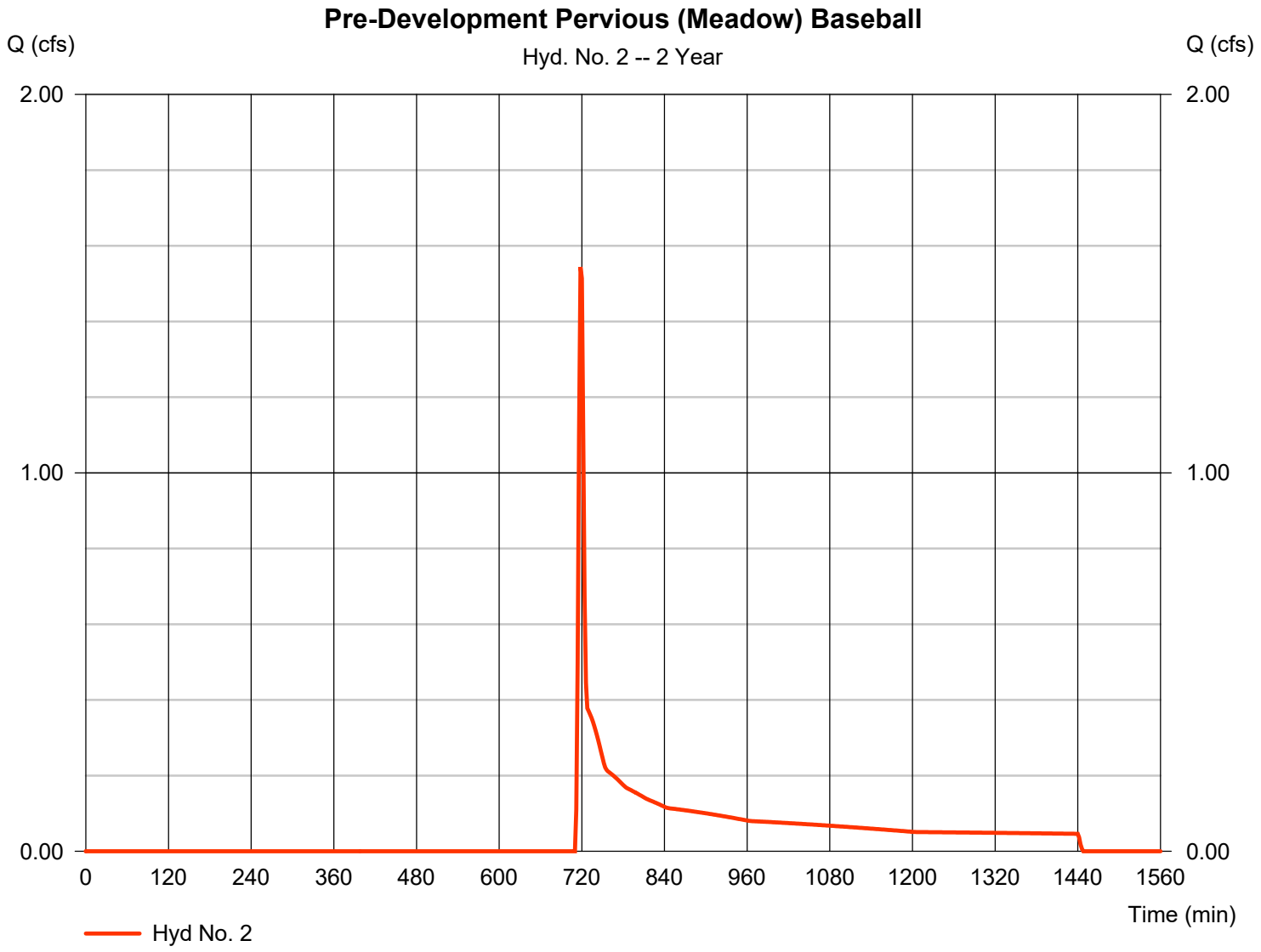
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 2

Pre-Development Pervious (Meadow) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 1.544 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 4,558 cuft
Drainage area	= 3.930 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



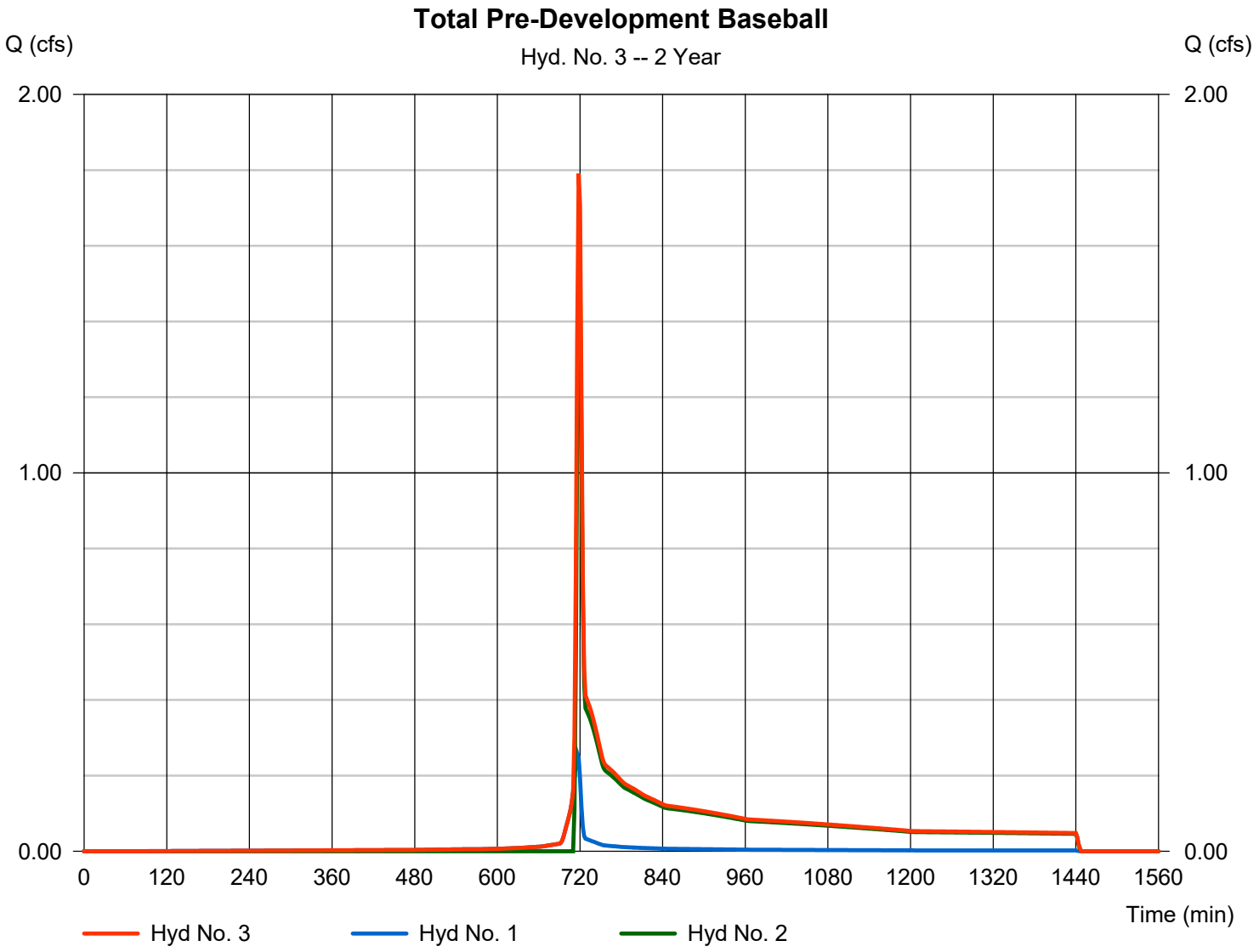
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 3

Total Pre-Development Baseball

Hydrograph type	= Combine	Peak discharge	= 1.791 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 5,164 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 3.990 ac



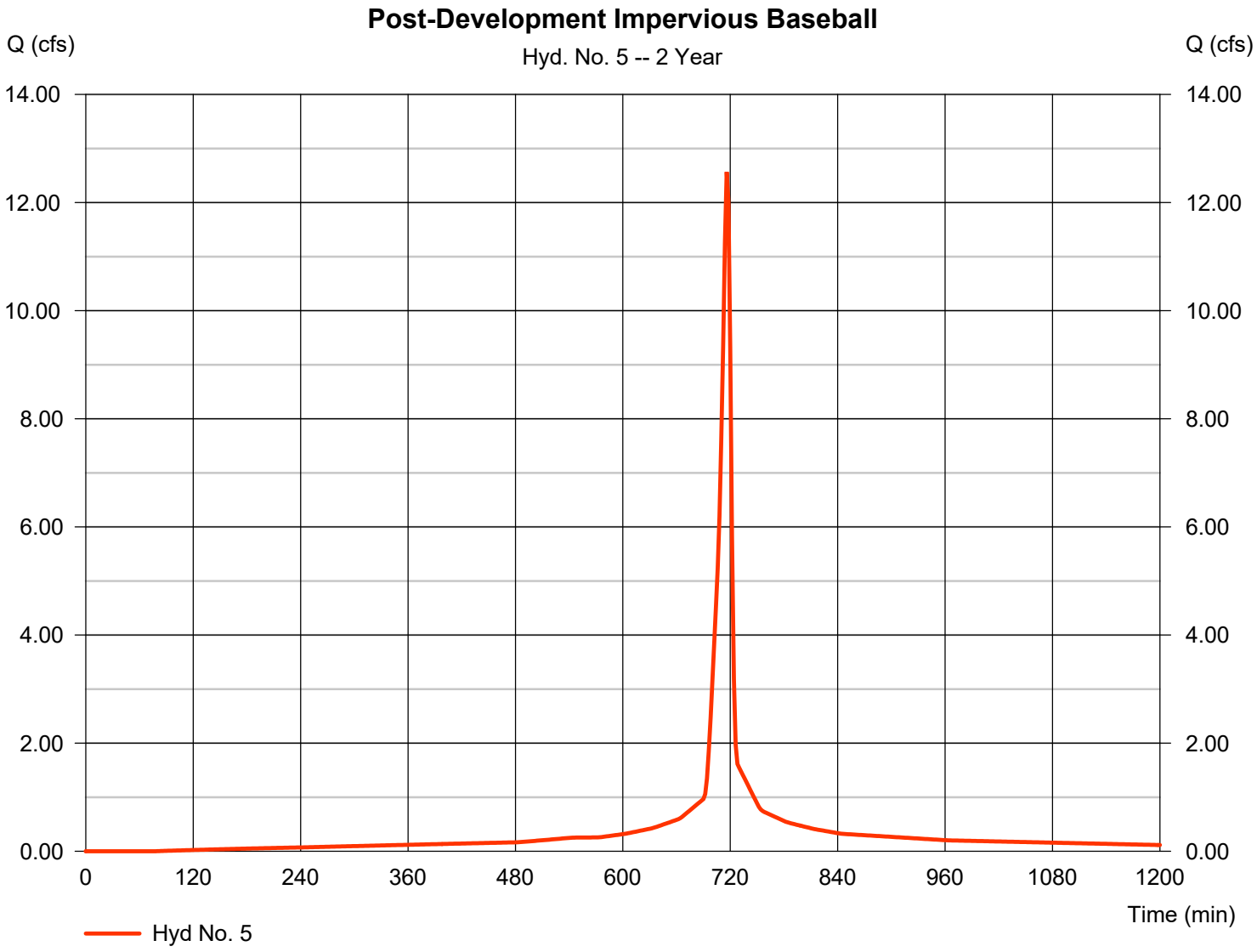
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 5

Post-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 12.57 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 29,387 cuft
Drainage area	= 2.910 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



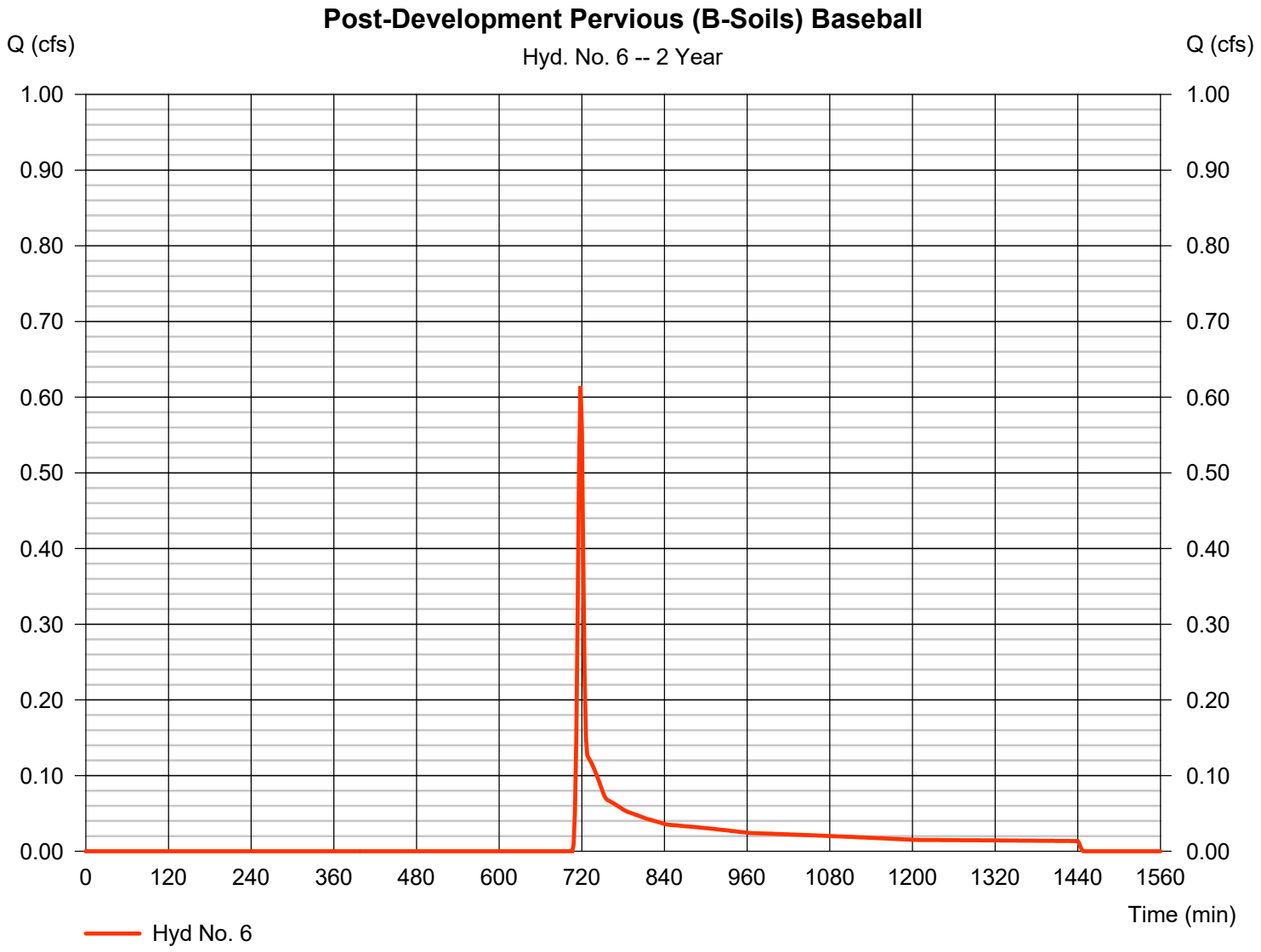
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 6

Post-Development Pervious (B-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.614 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,496 cuft
Drainage area	= 0.990 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



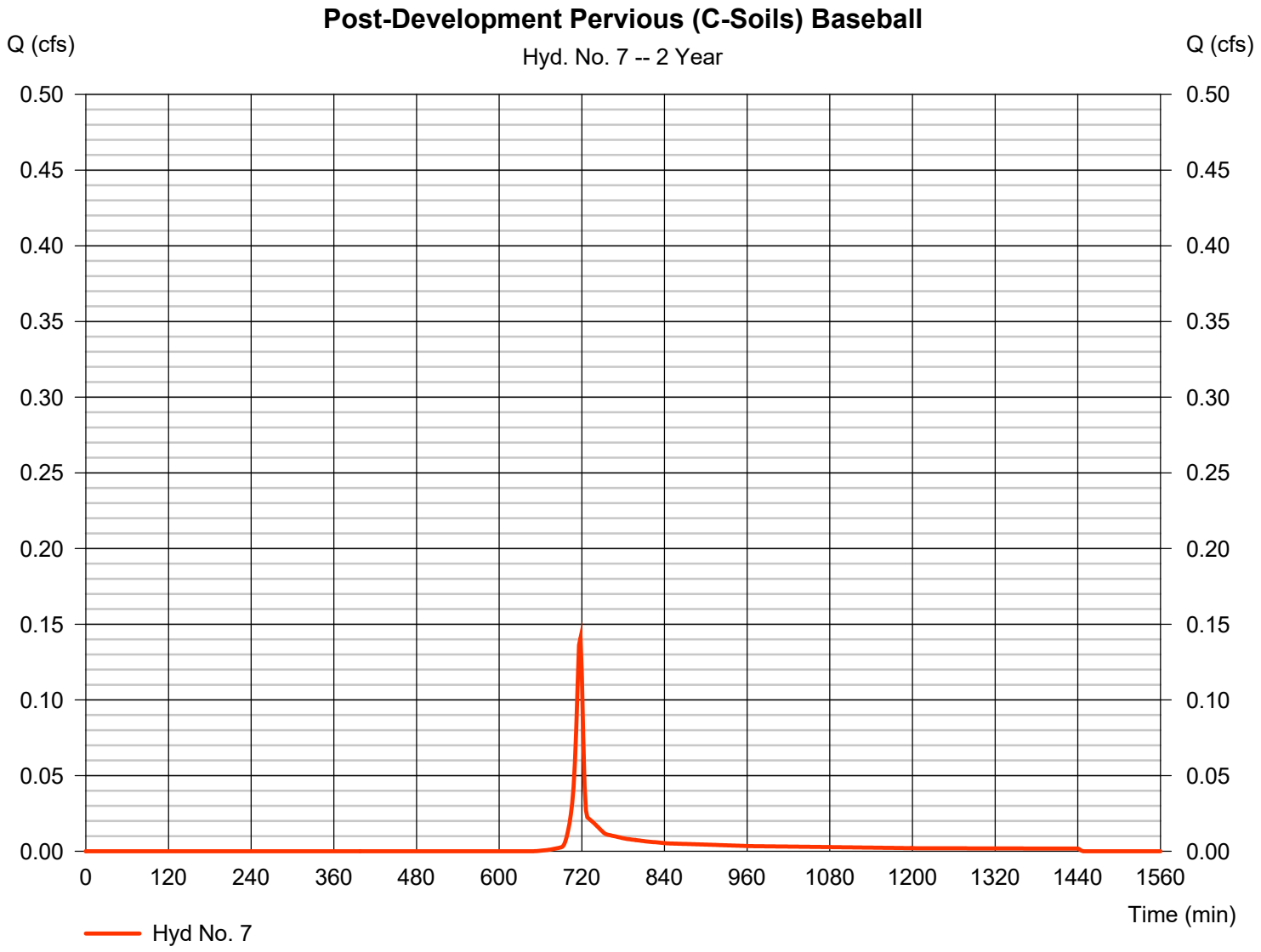
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 7

Post-Development Pervious (C-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.141 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 282 cuft
Drainage area	= 0.080 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



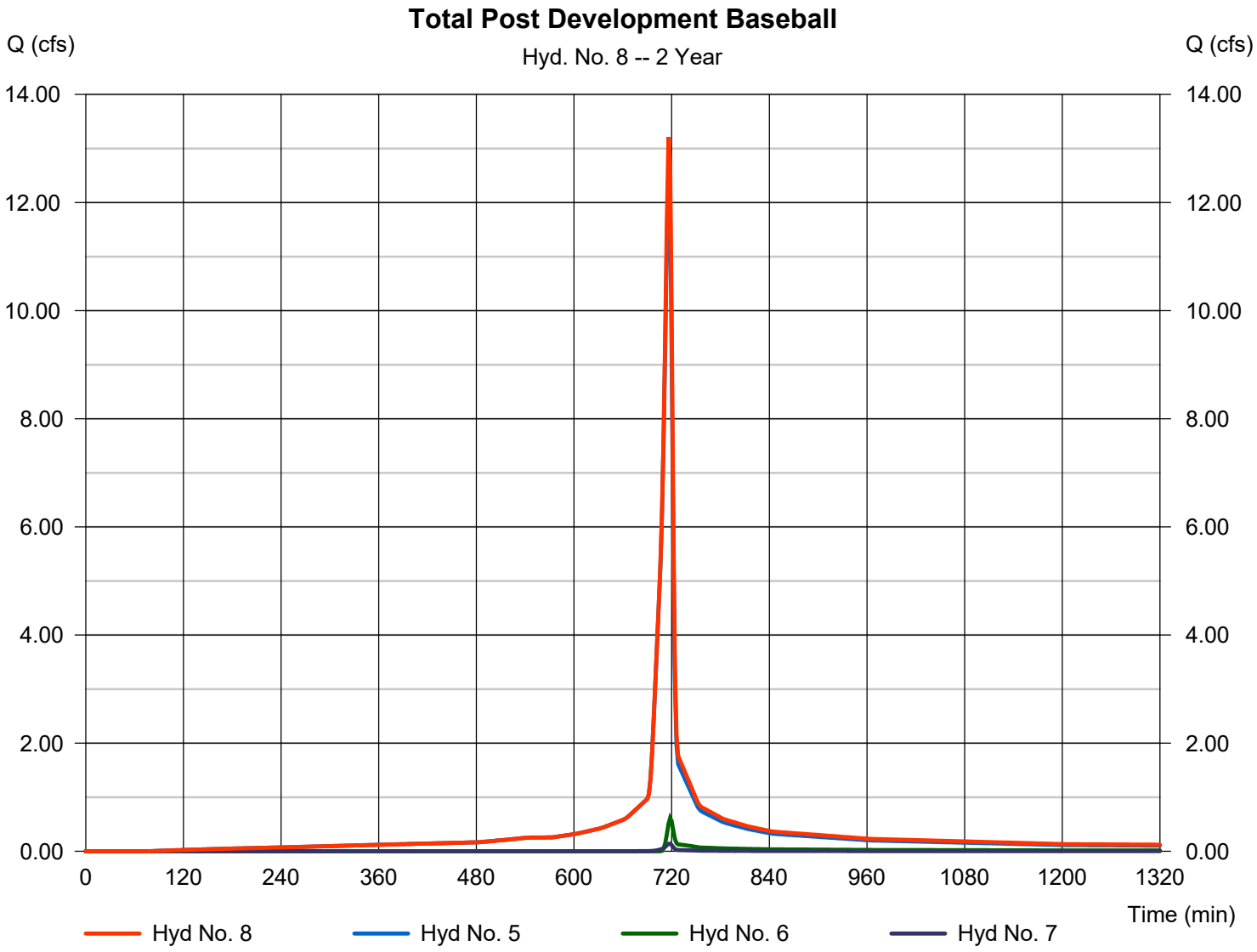
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 8

Total Post Development Baseball

Hydrograph type	= Combine	Peak discharge	= 13.21 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 31,166 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 3.980 ac



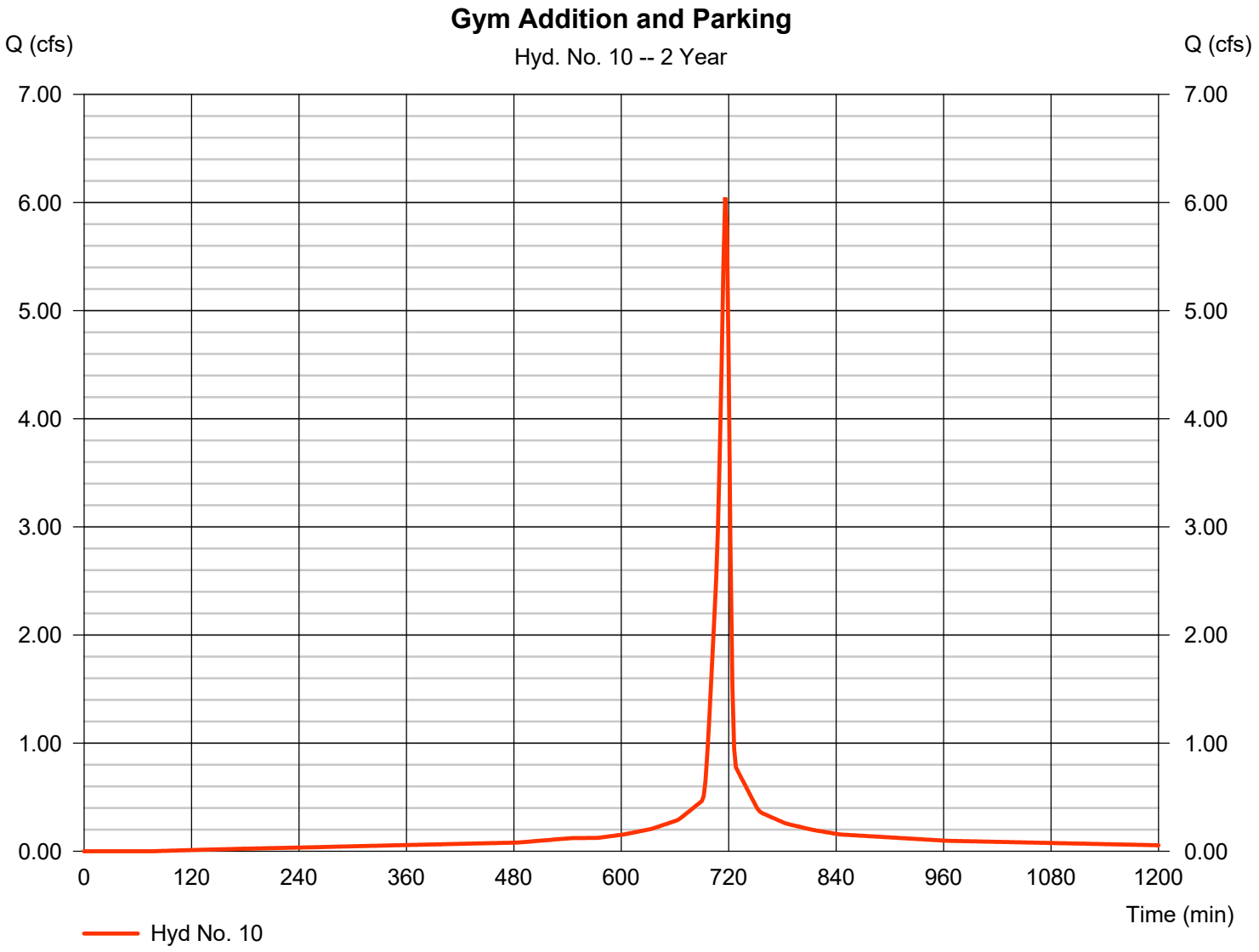
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 10

Gym Addition and Parking

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.046 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	14,138 cuft
Drainage area	=	1.400 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

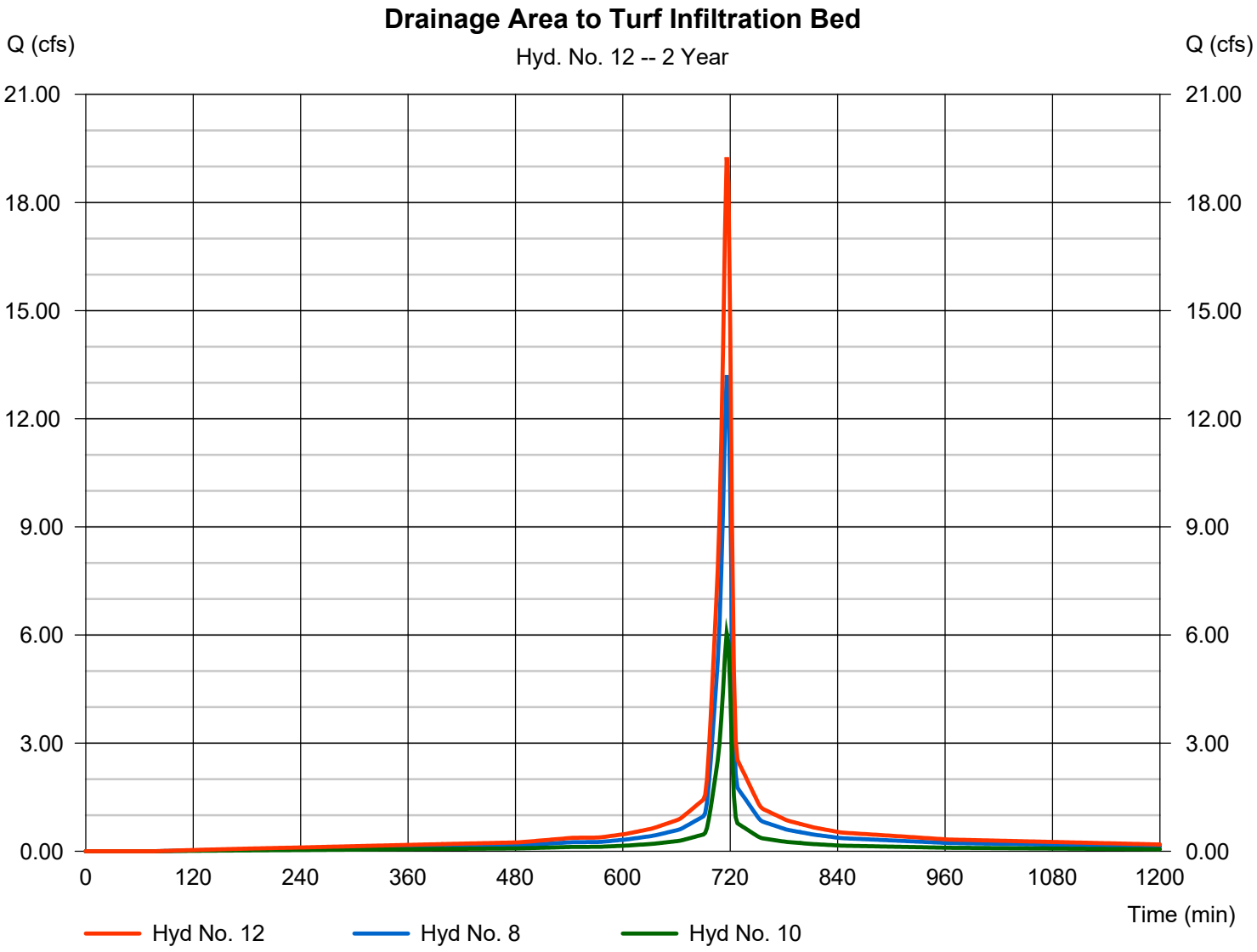


Hydrograph Report

Hyd. No. 12

Drainage Area to Turf Infiltration Bed

Hydrograph type	= Combine	Peak discharge	= 19.26 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 45,304 cuft
Inflow hyds.	= 8, 10	Contrib. drain. area	= 1.400 ac



Hydrograph Report

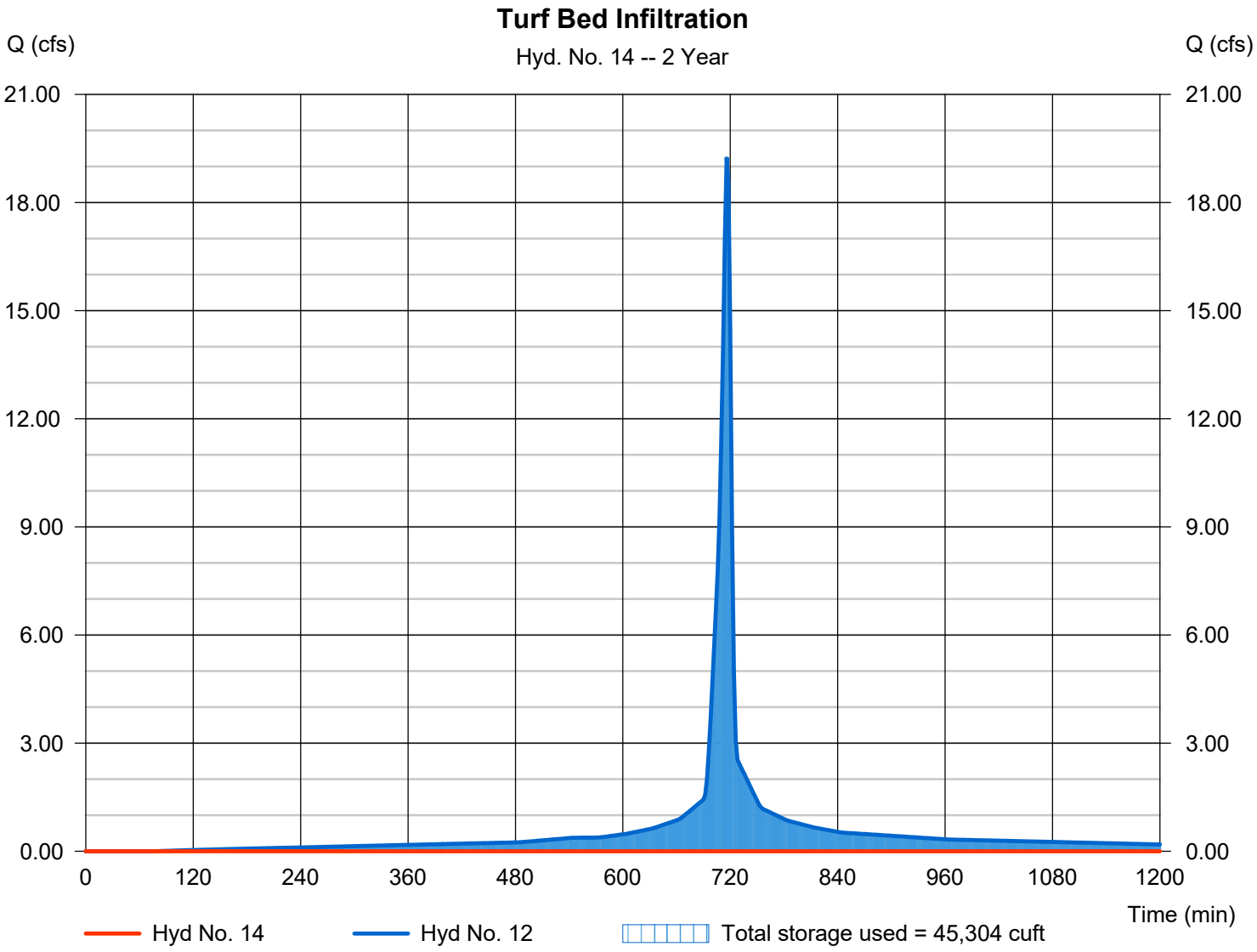
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 14

Turf Bed Infiltration

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	2 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	12 - Drainage Area to Turf Infiltration Bed	Max. Elevation	=	312.85 ft
Reservoir name	=	Turf	Max. Storage	=	45,304 cuft

Storage Indication method used.



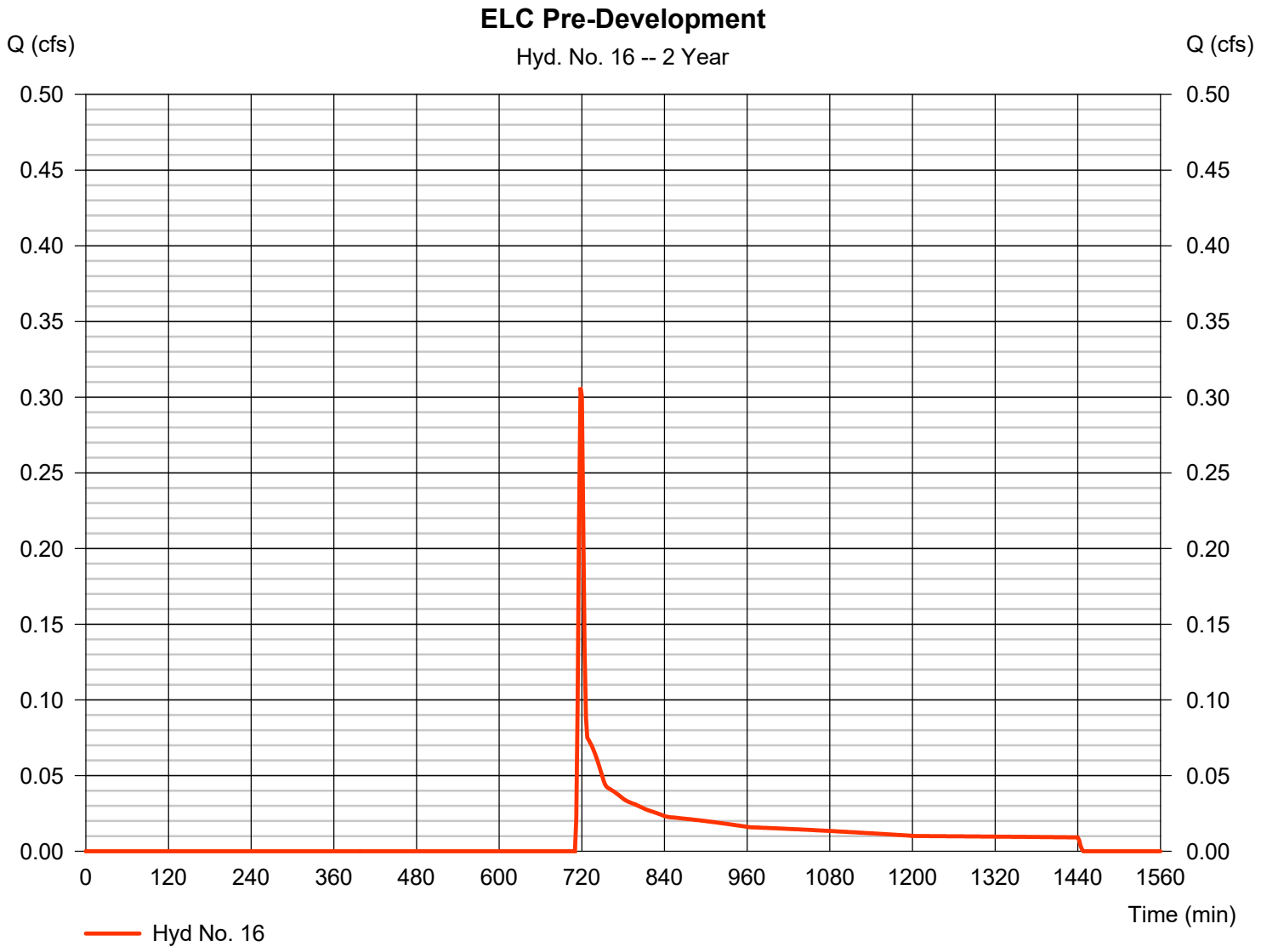
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 16

ELC Pre-Development

Hydrograph type	= SCS Runoff	Peak discharge	= 0.306 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 905 cuft
Drainage area	= 0.780 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



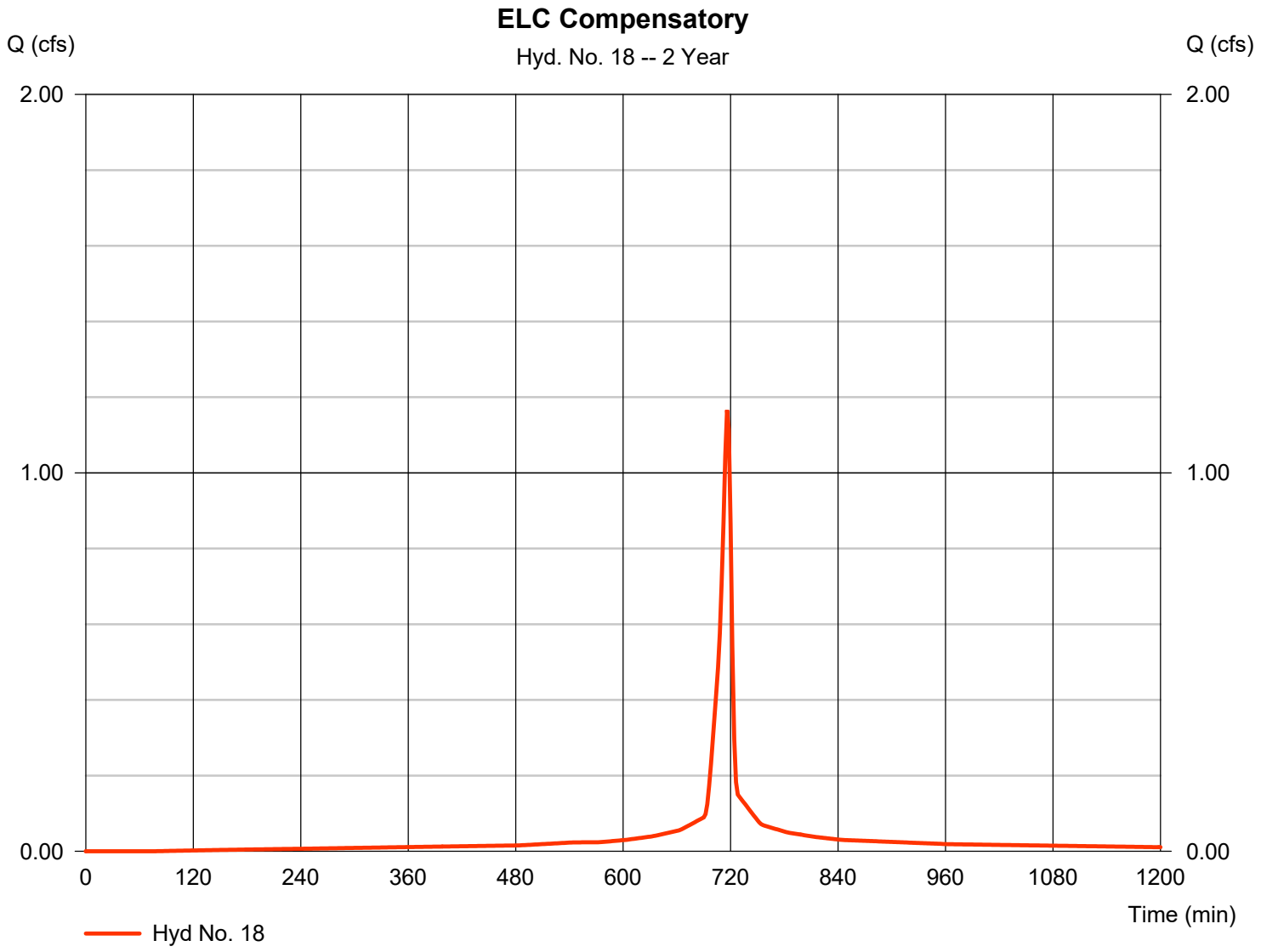
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 18

ELC Compensatory

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.166 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,727 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



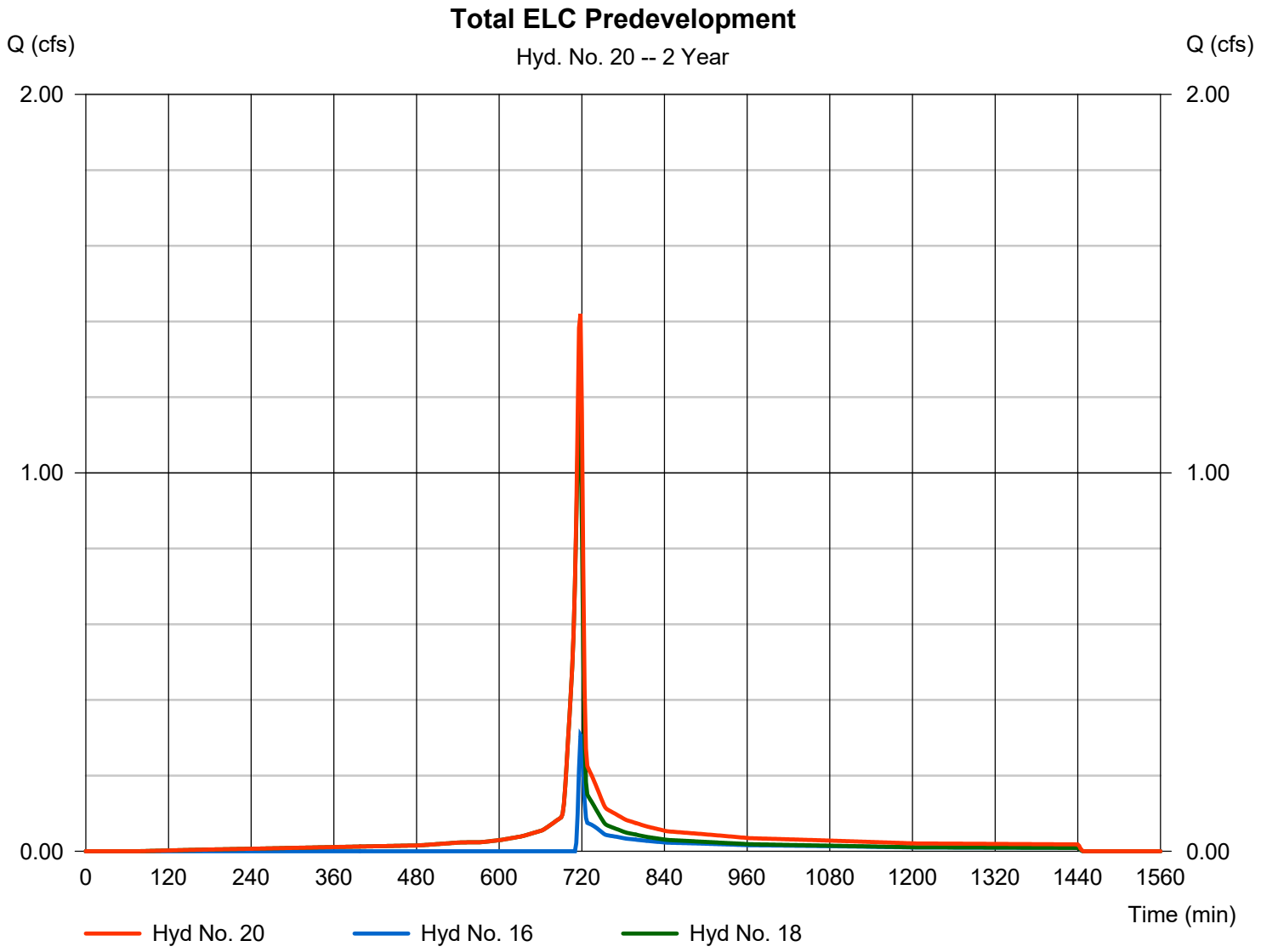
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 20

Total ELC Predevelopment

Hydrograph type	= Combine	Peak discharge	= 1.420 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 3,631 cuft
Inflow hyds.	= 16, 18	Contrib. drain. area	= 1.050 ac



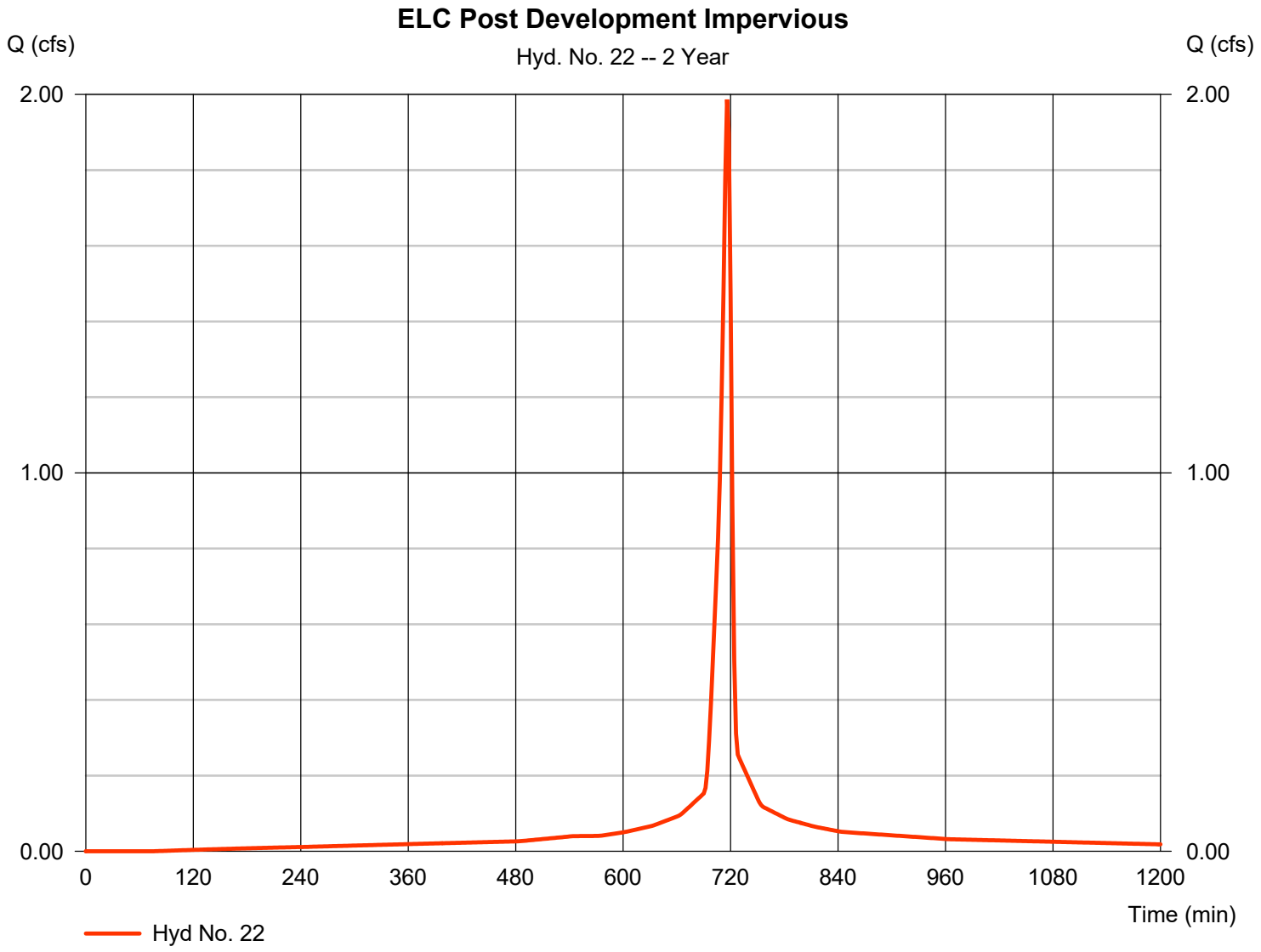
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 22

ELC Post Development Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.987 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,645 cuft
Drainage area	=	0.460 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



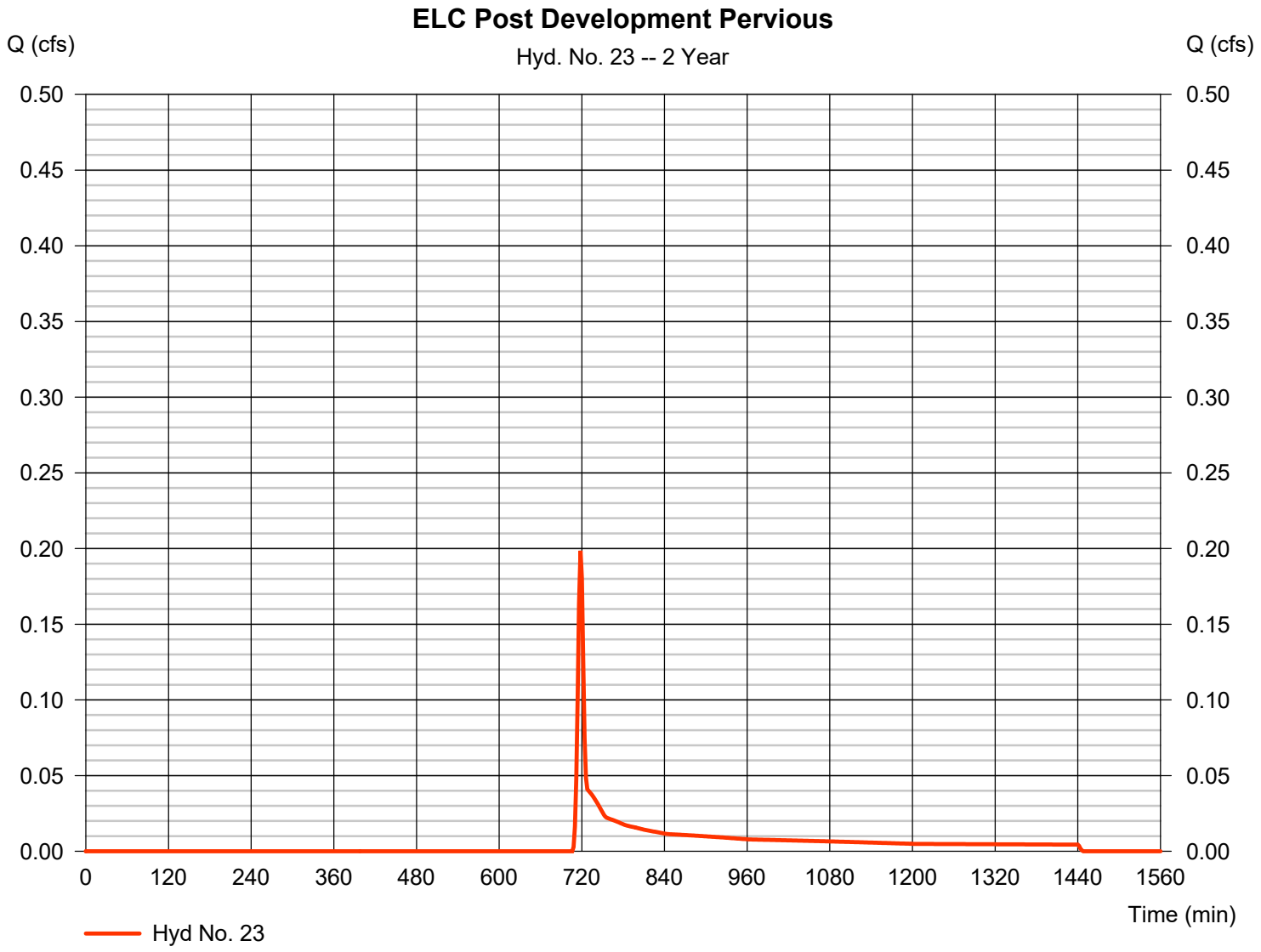
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 23

ELC Post Development Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.199 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	483 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



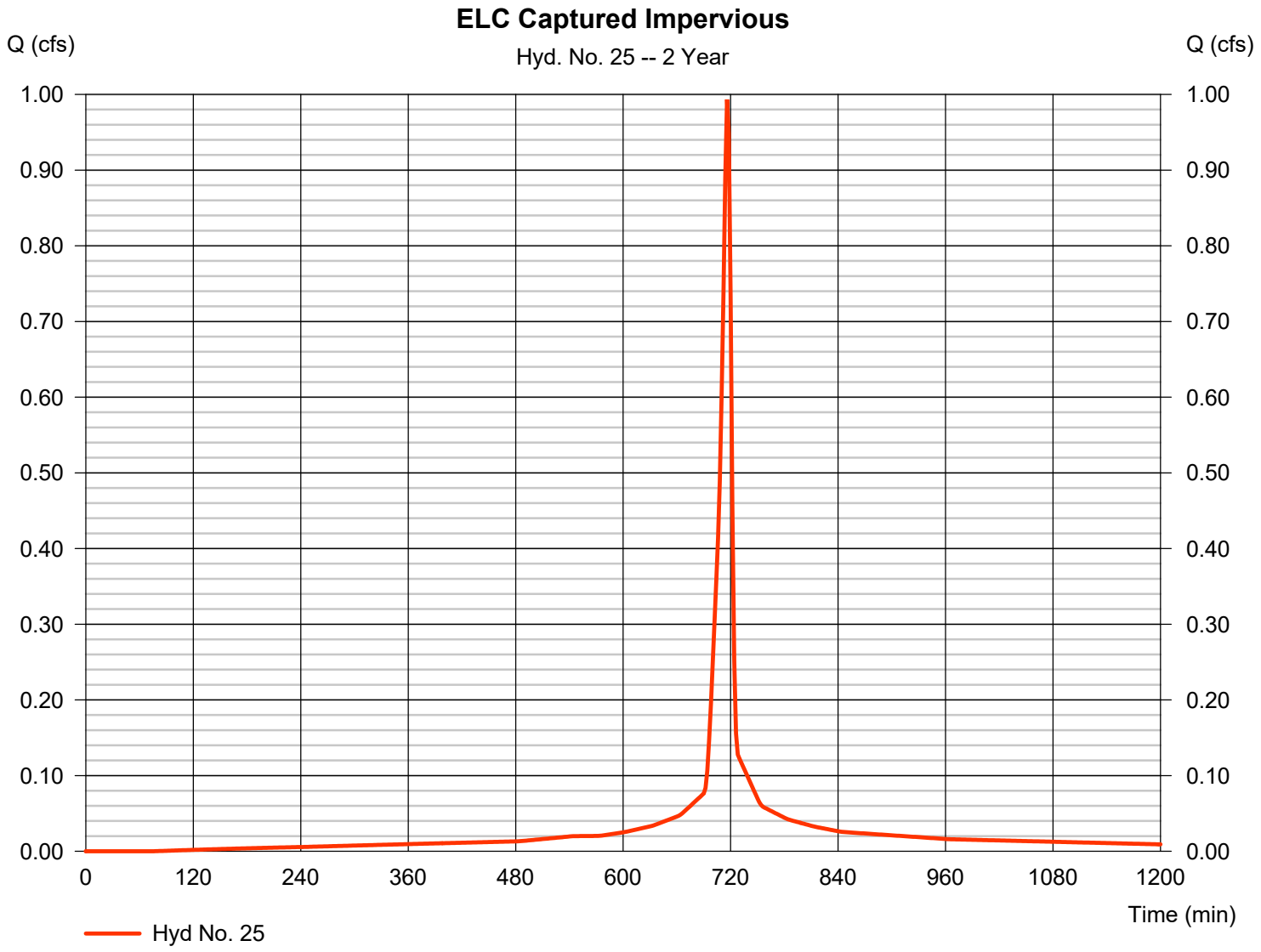
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 25

ELC Captured Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.993 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,323 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



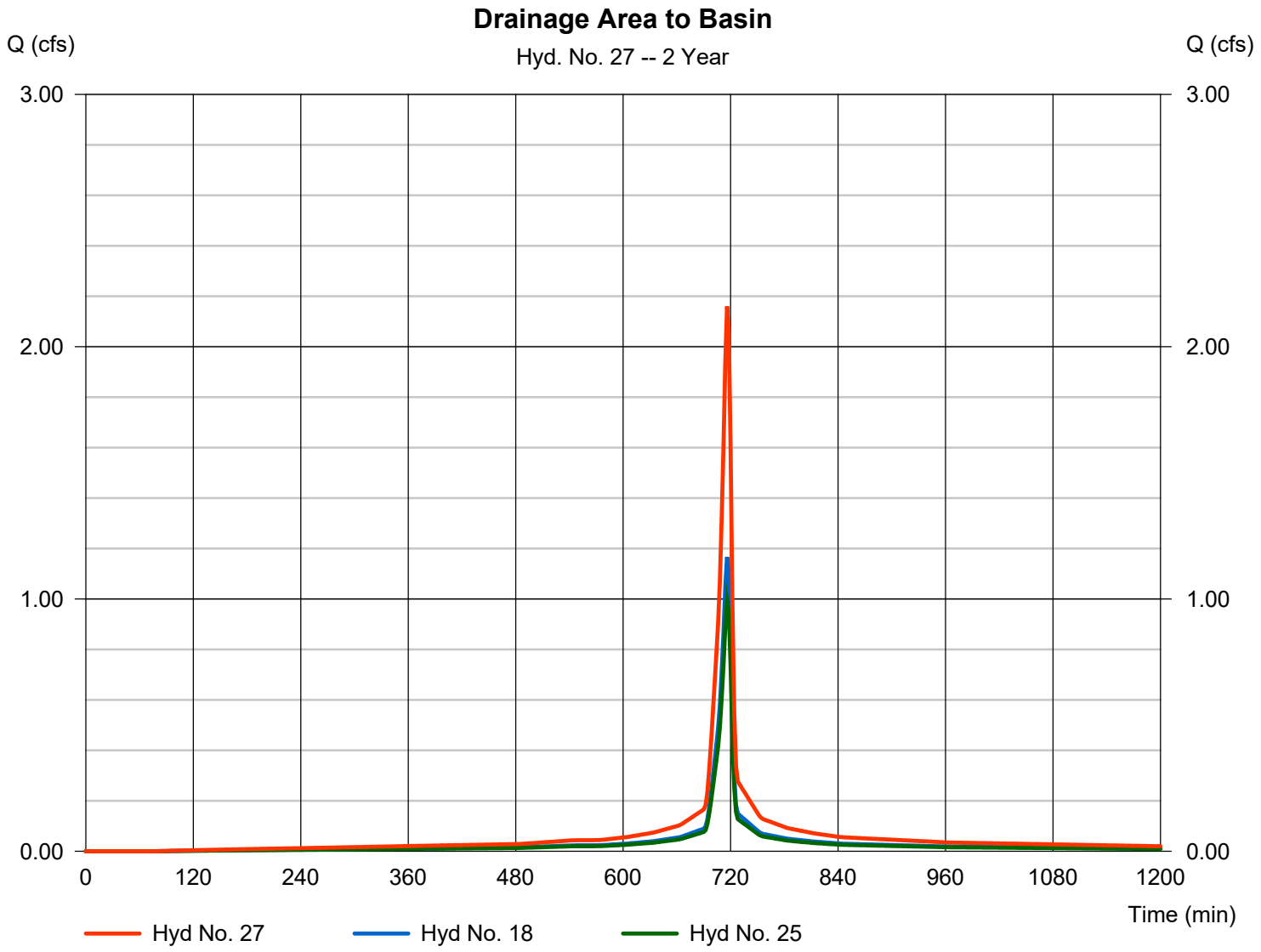
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 27

Drainage Area to Basin

Hydrograph type	= Combine	Peak discharge	= 2.159 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 5,049 cuft
Inflow hyds.	= 18, 25	Contrib. drain. area	= 0.500 ac



Hydrograph Report

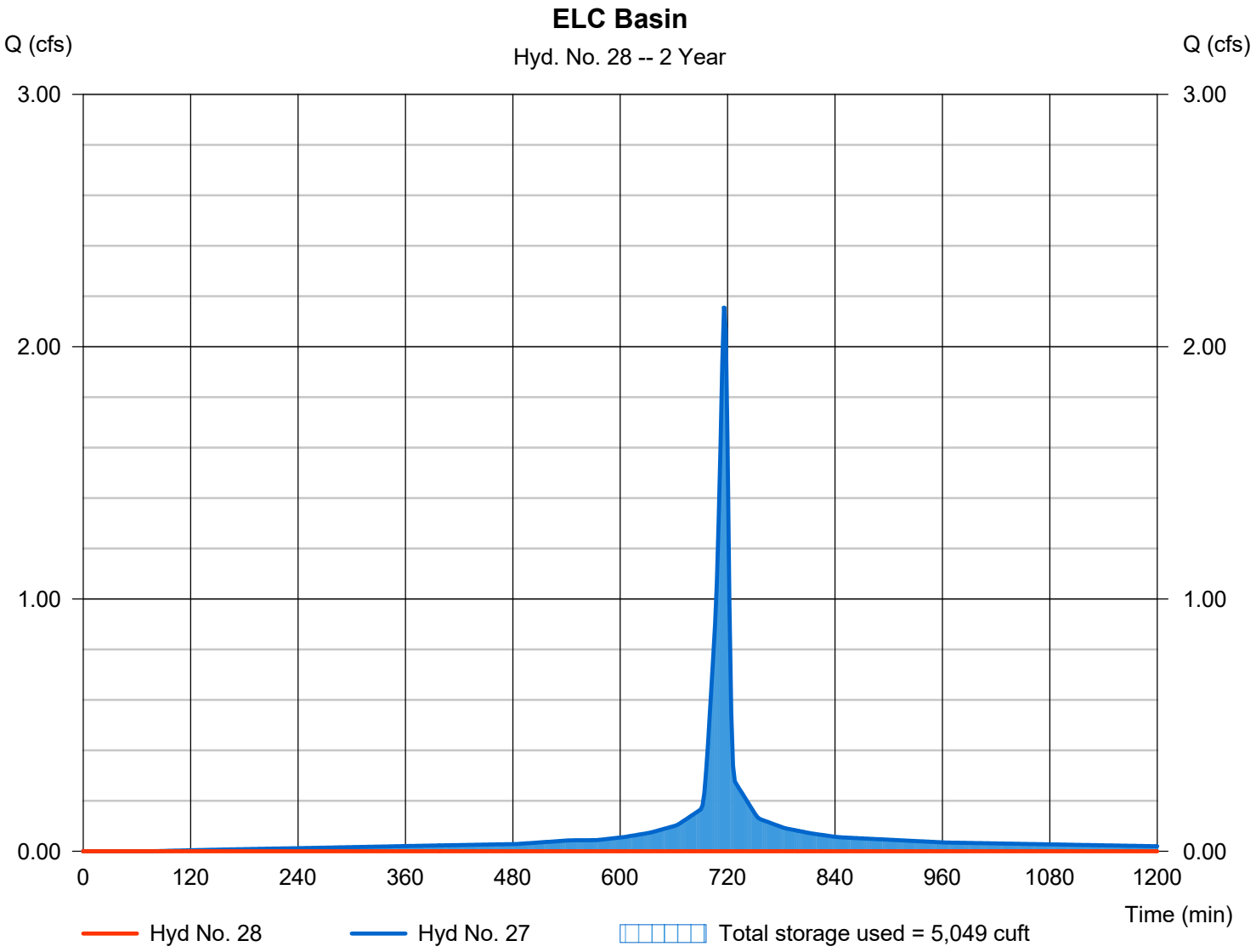
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 28

ELC Basin

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 2 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 27 - Drainage Area to Basin	Max. Elevation	= 316.18 ft
Reservoir name	= ELC Basin	Max. Storage	= 5,049 cuft

Storage Indication method used.



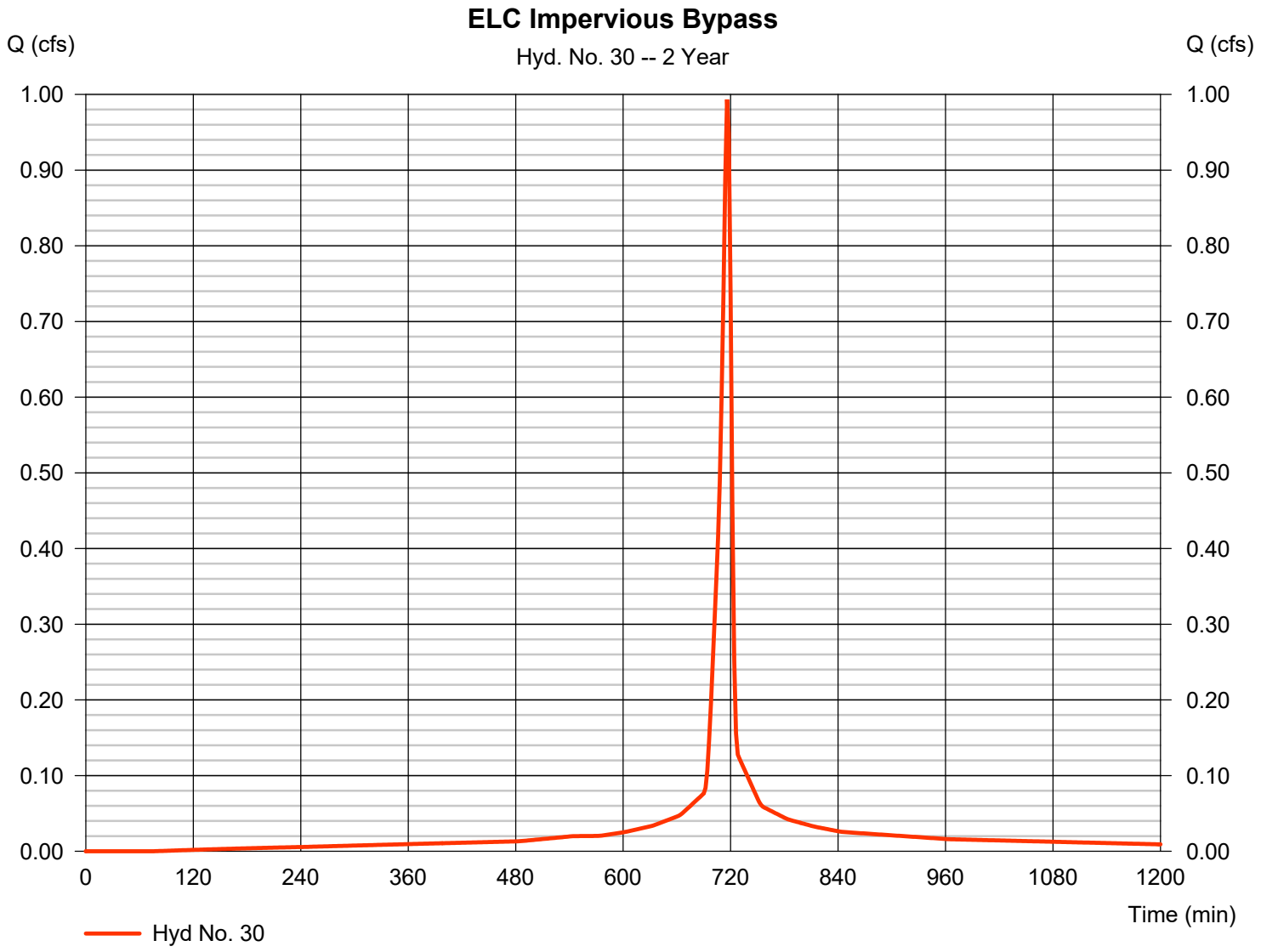
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 30

ELC Impervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.993 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,323 cuft
Drainage area	= 0.230 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



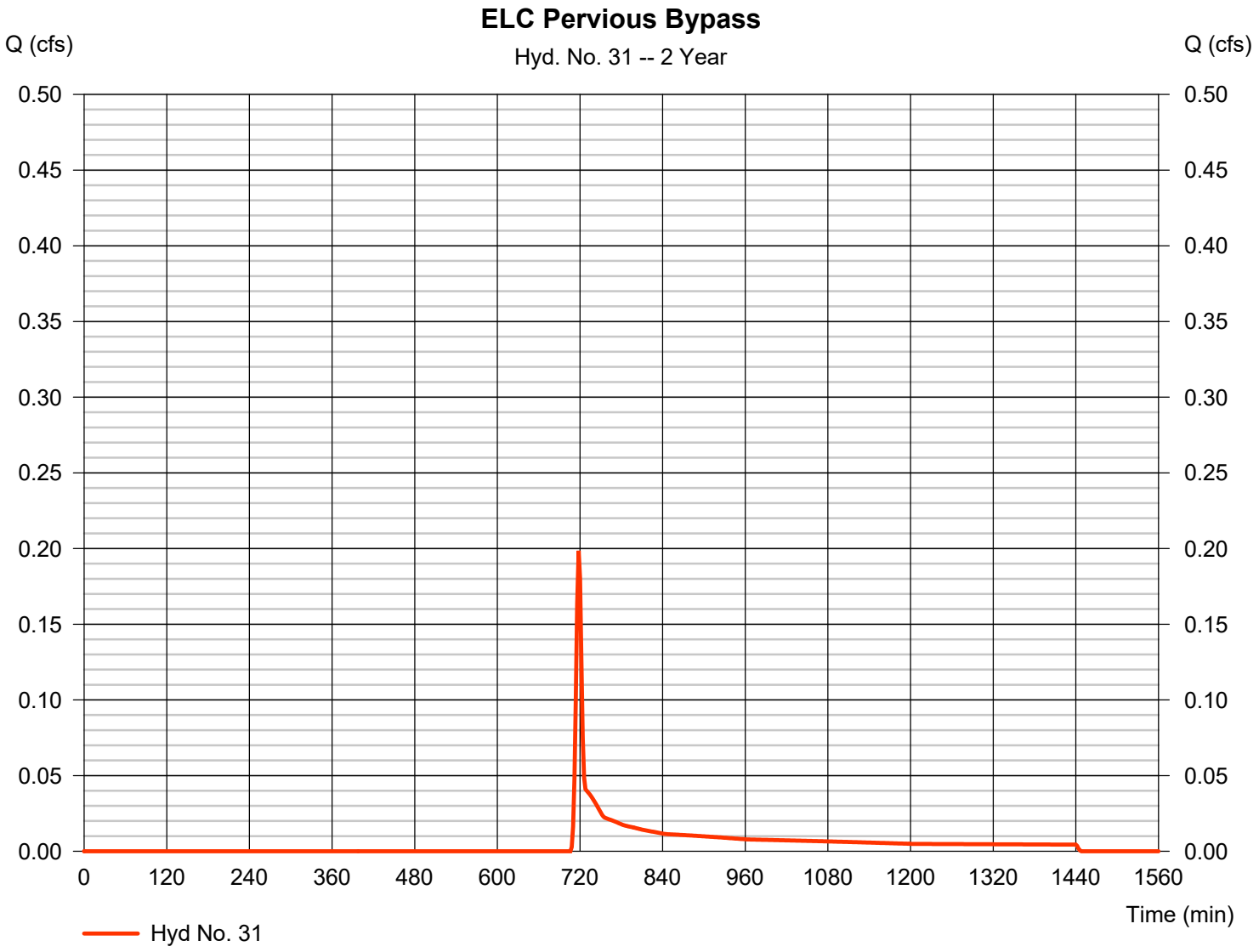
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 31

ELC Pervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.199 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 483 cuft
Drainage area	= 0.320 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



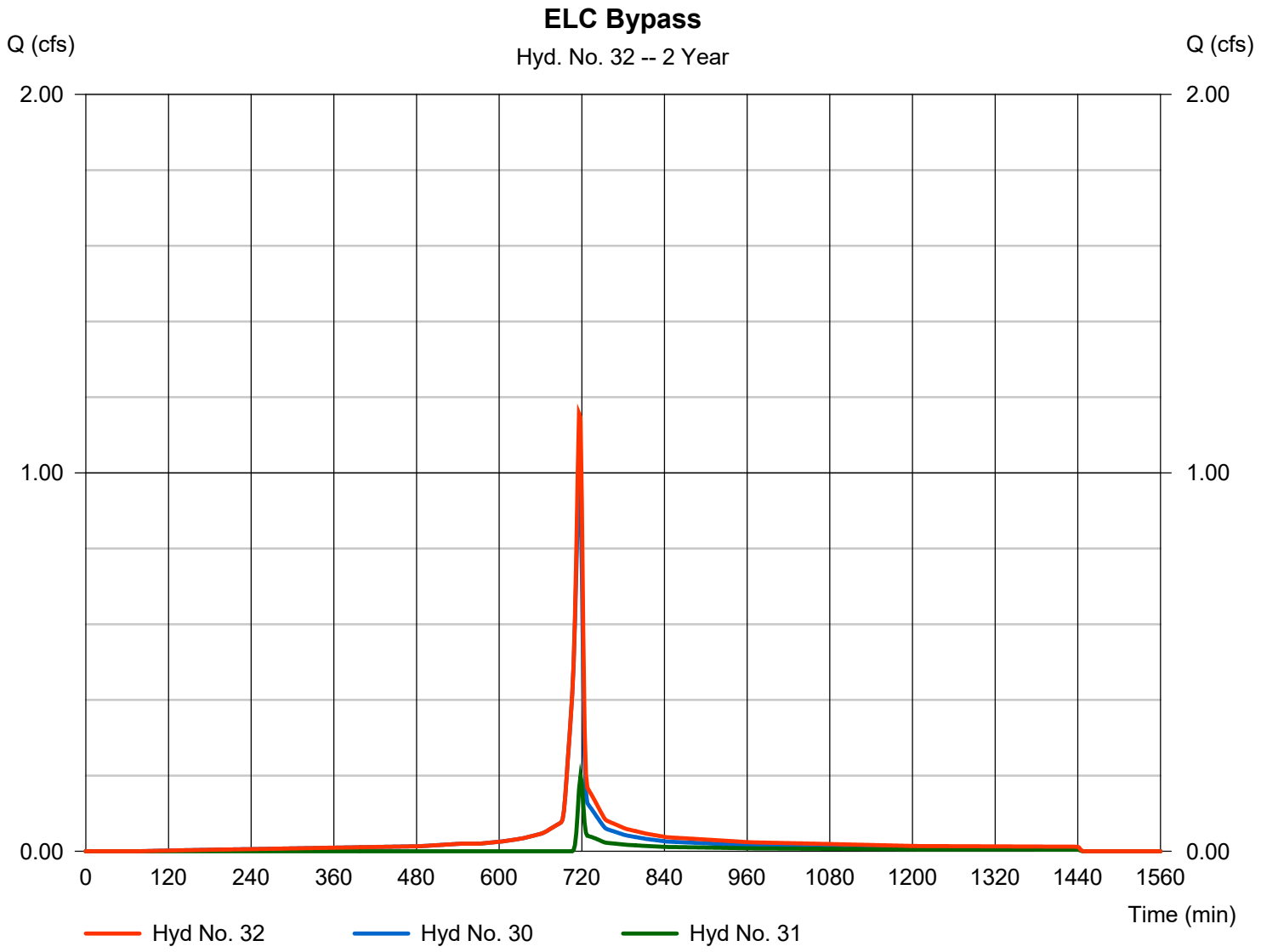
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 32

ELC Bypass

Hydrograph type	=	Combine	Peak discharge	=	1.157 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,806 cuft
Inflow hyds.	=	30, 31	Contrib. drain. area	=	0.550 ac



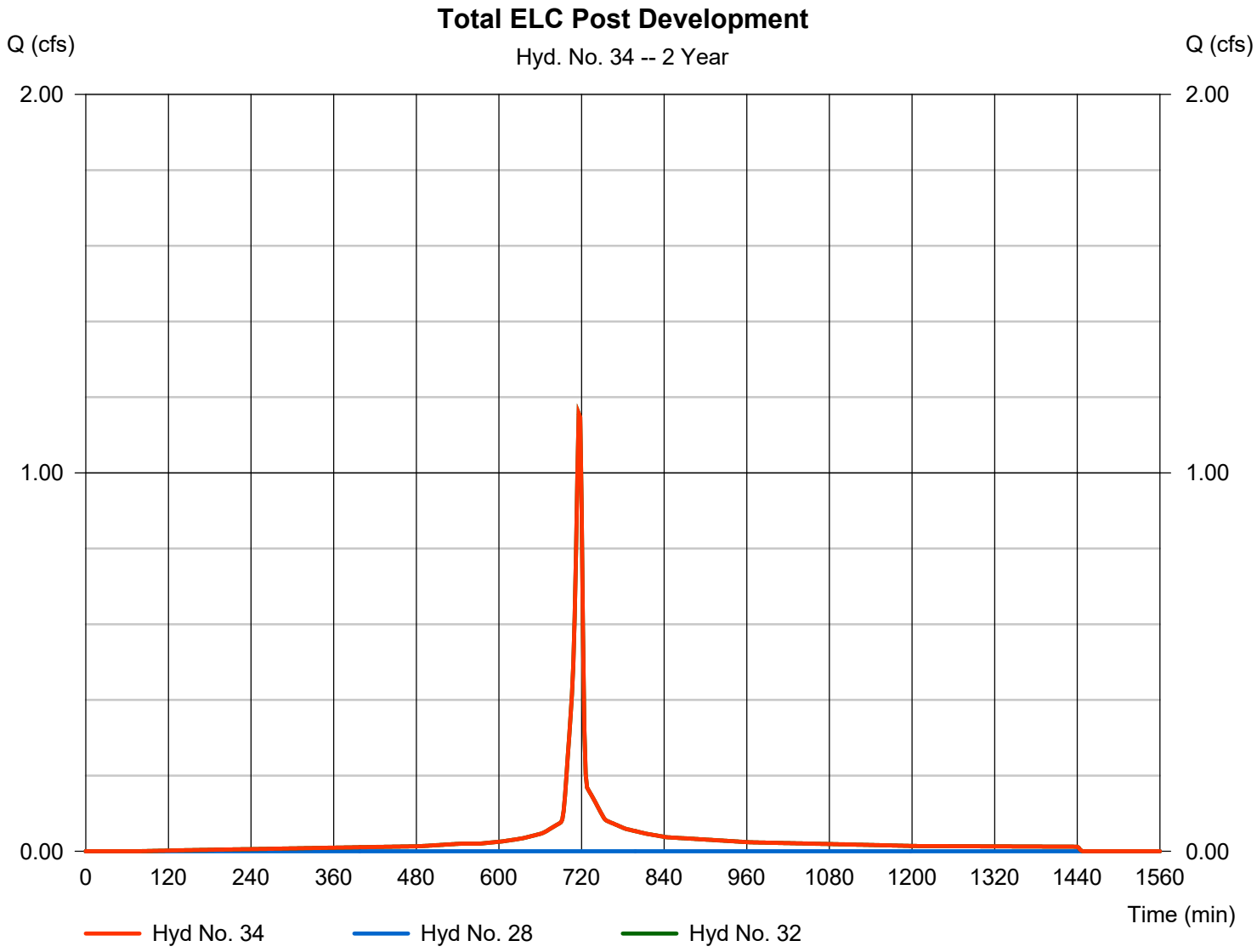
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 34

Total ELC Post Development

Hydrograph type	= Combine	Peak discharge	= 1.157 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,806 cuft
Inflow hyds.	= 28, 32	Contrib. drain. area	= 0.000 ac



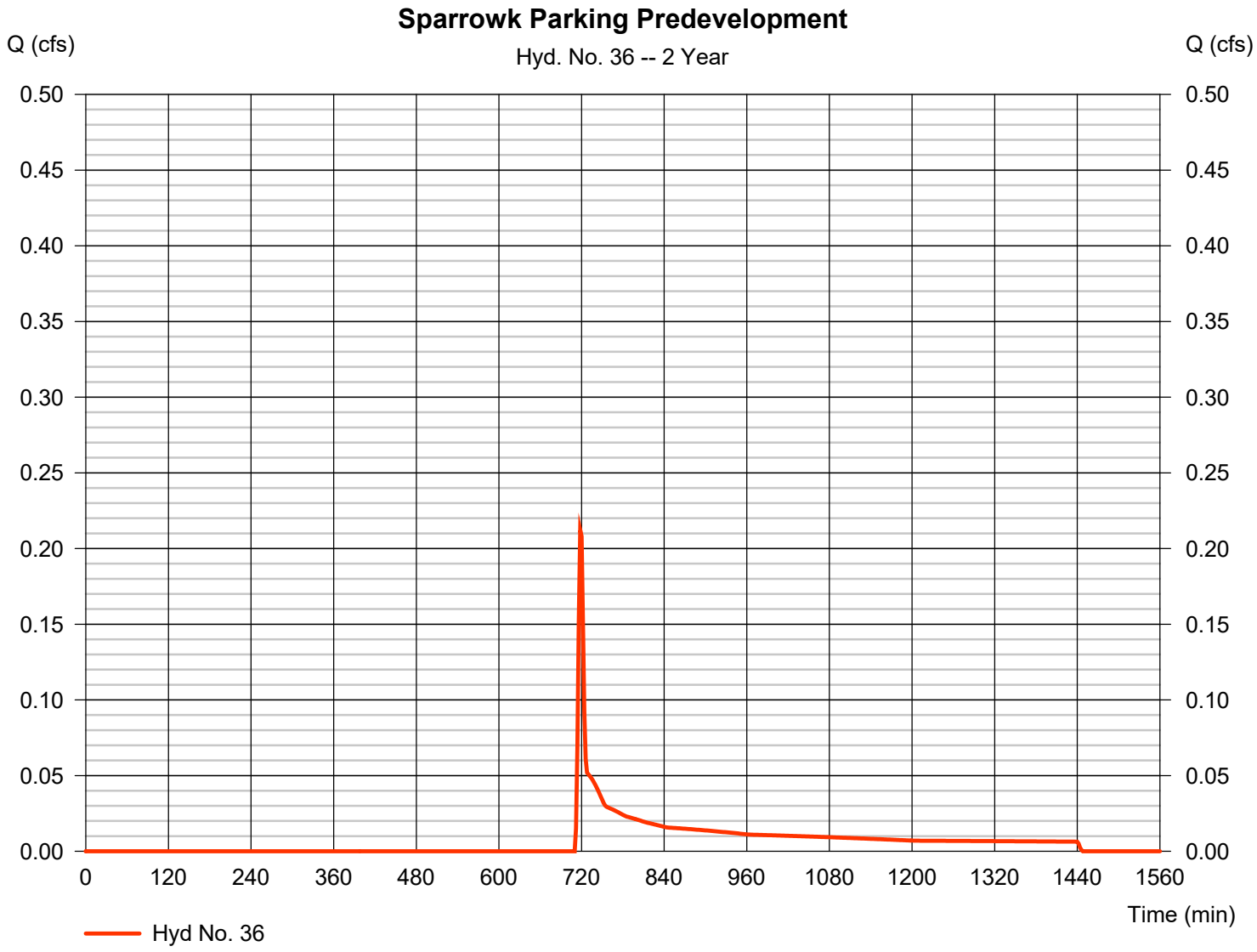
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 36

Sparrowk Parking Predevelopment

Hydrograph type	= SCS Runoff	Peak discharge	= 0.212 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 626 cuft
Drainage area	= 0.540 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



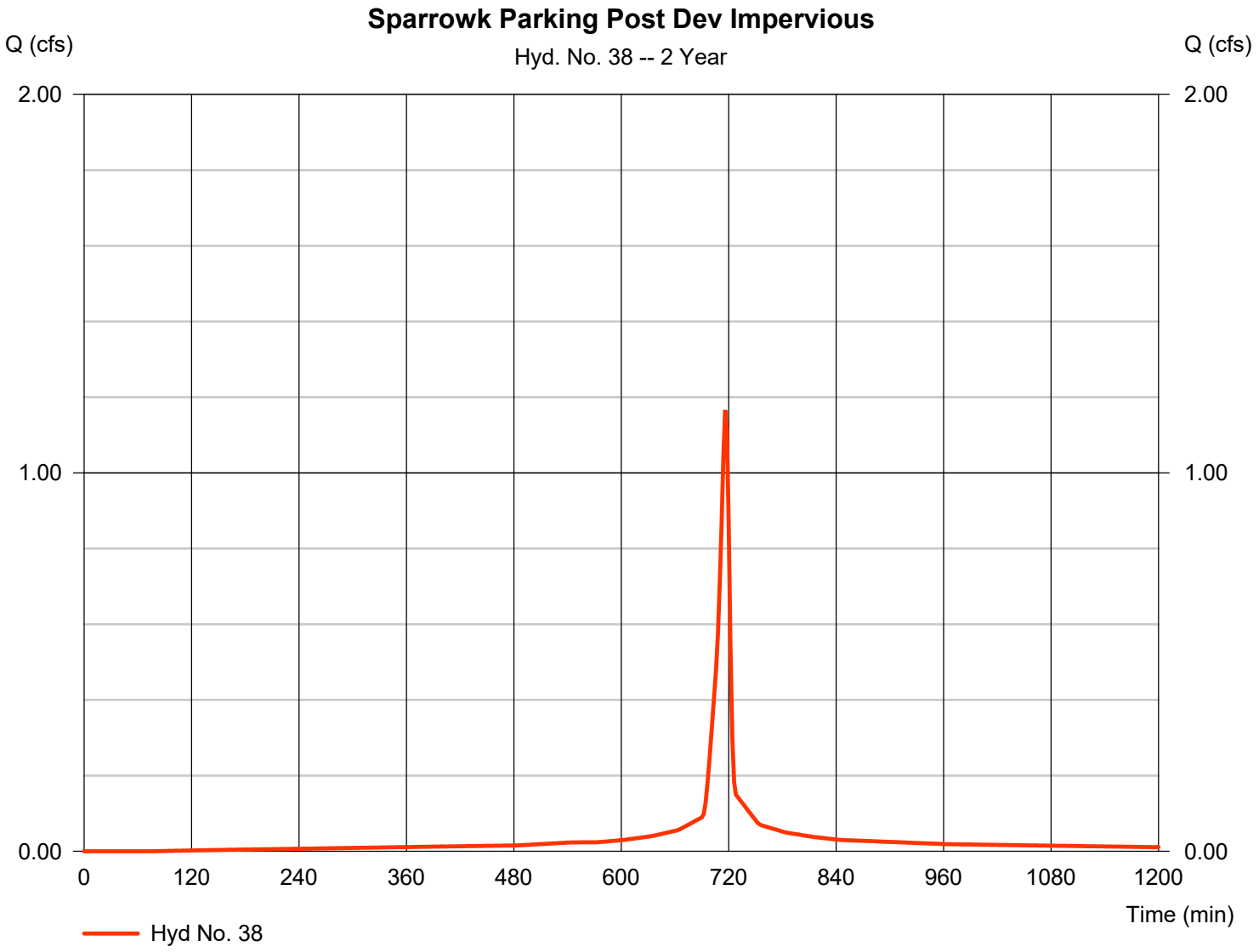
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 38

Sparrowk Parking Post Dev Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.166 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,727 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



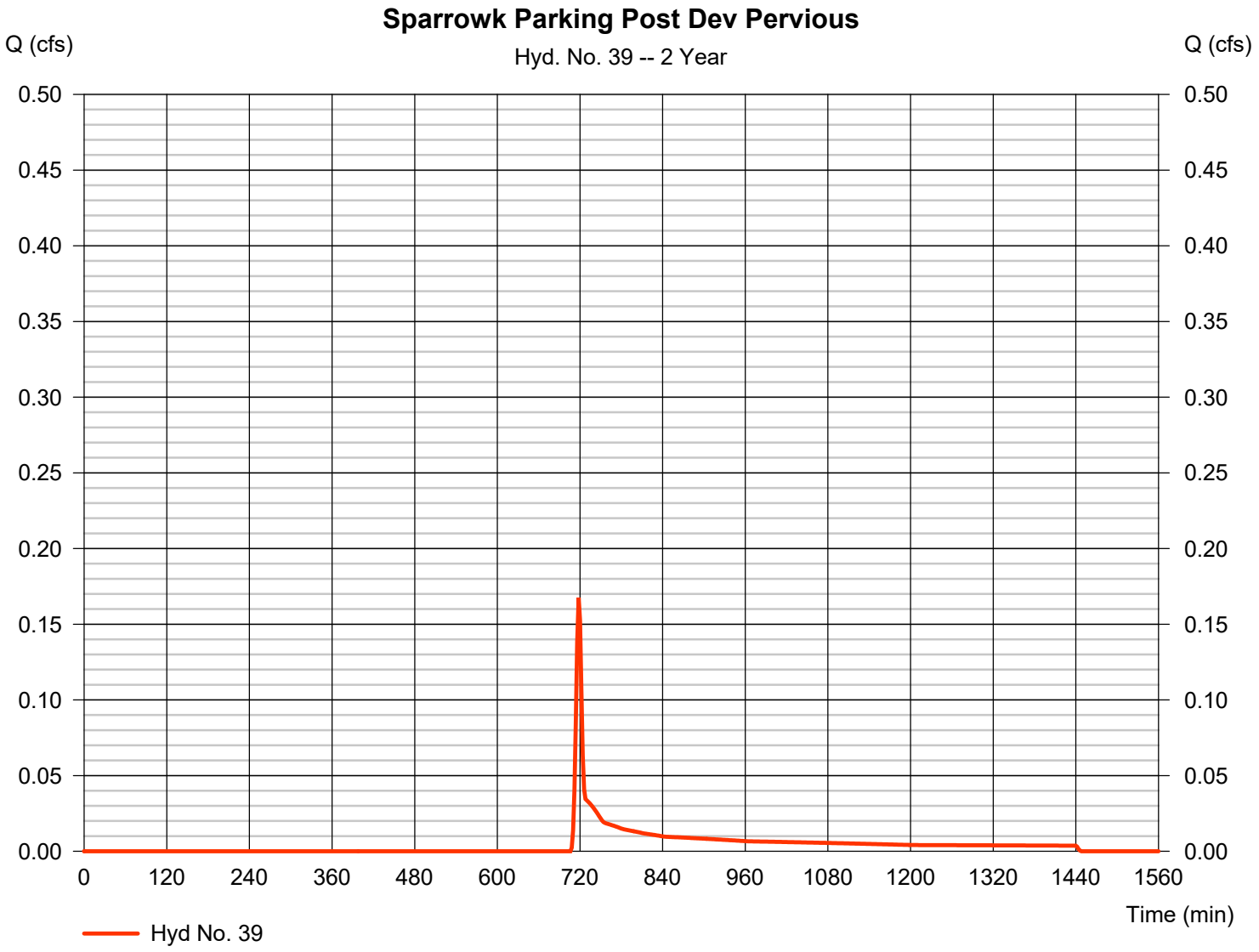
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 39

Sparrowk Parking Post Dev Pervious

Hydrograph type	= SCS Runoff	Peak discharge	= 0.168 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 408 cuft
Drainage area	= 0.270 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



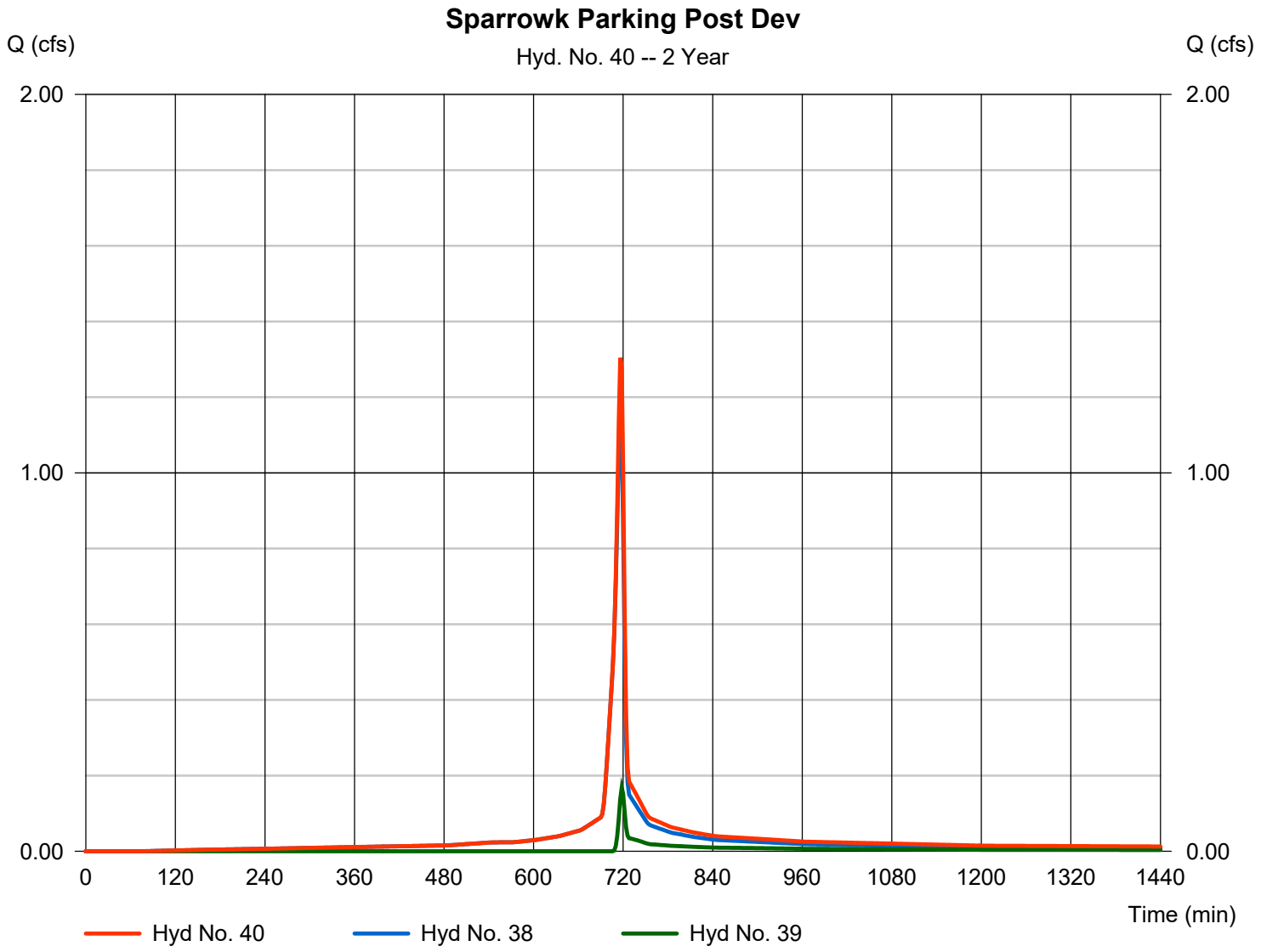
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 40

Sparrowk Parking Post Dev

Hydrograph type	=	Combine	Peak discharge	=	1.304 cfs
Storm frequency	=	2 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,135 cuft
Inflow hyds.	=	38, 39	Contrib. drain. area	=	0.540 ac



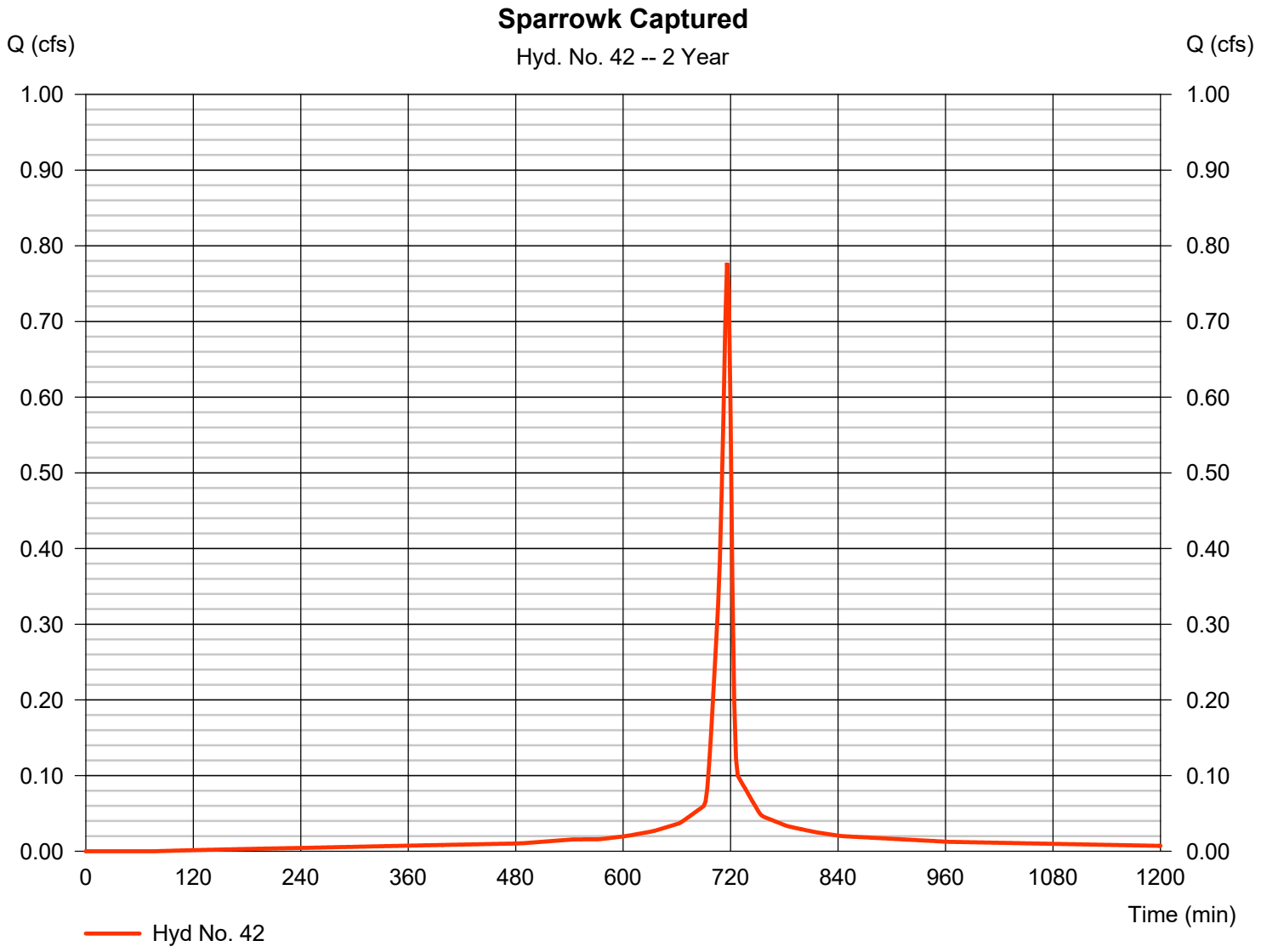
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 42

Sparrowk Captured

Hydrograph type	= SCS Runoff	Peak discharge	= 0.777 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,818 cuft
Drainage area	= 0.180 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

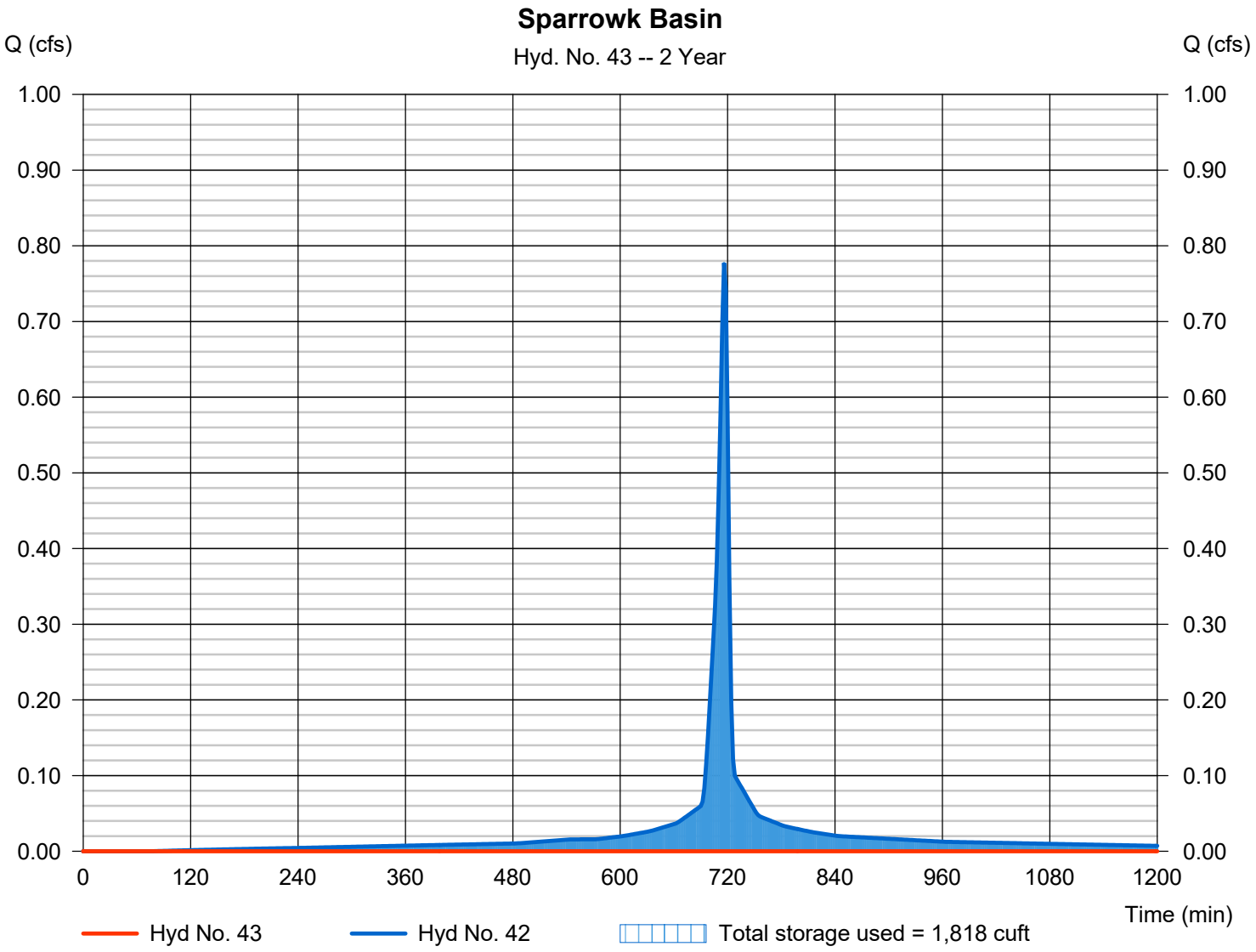
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 43

Sparrowk Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	2 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	42 - Sparrowk Captured	Max. Elevation	=	301.18 ft
Reservoir name	=	Sparrowk Basin	Max. Storage	=	1,818 cuft

Storage Indication method used.



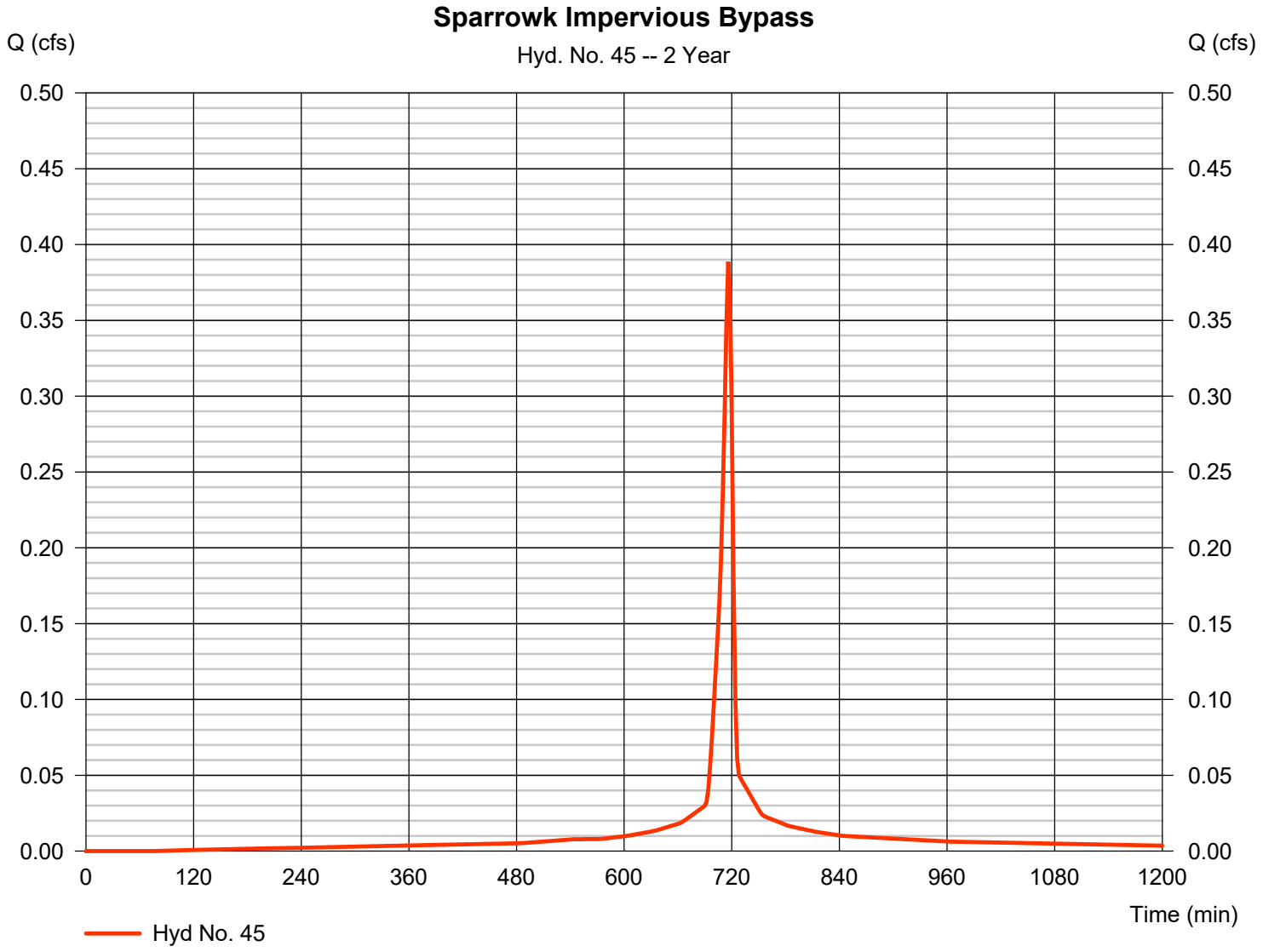
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 45

Sparrowk Impervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.389 cfs
Storm frequency	= 2 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 909 cuft
Drainage area	= 0.090 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



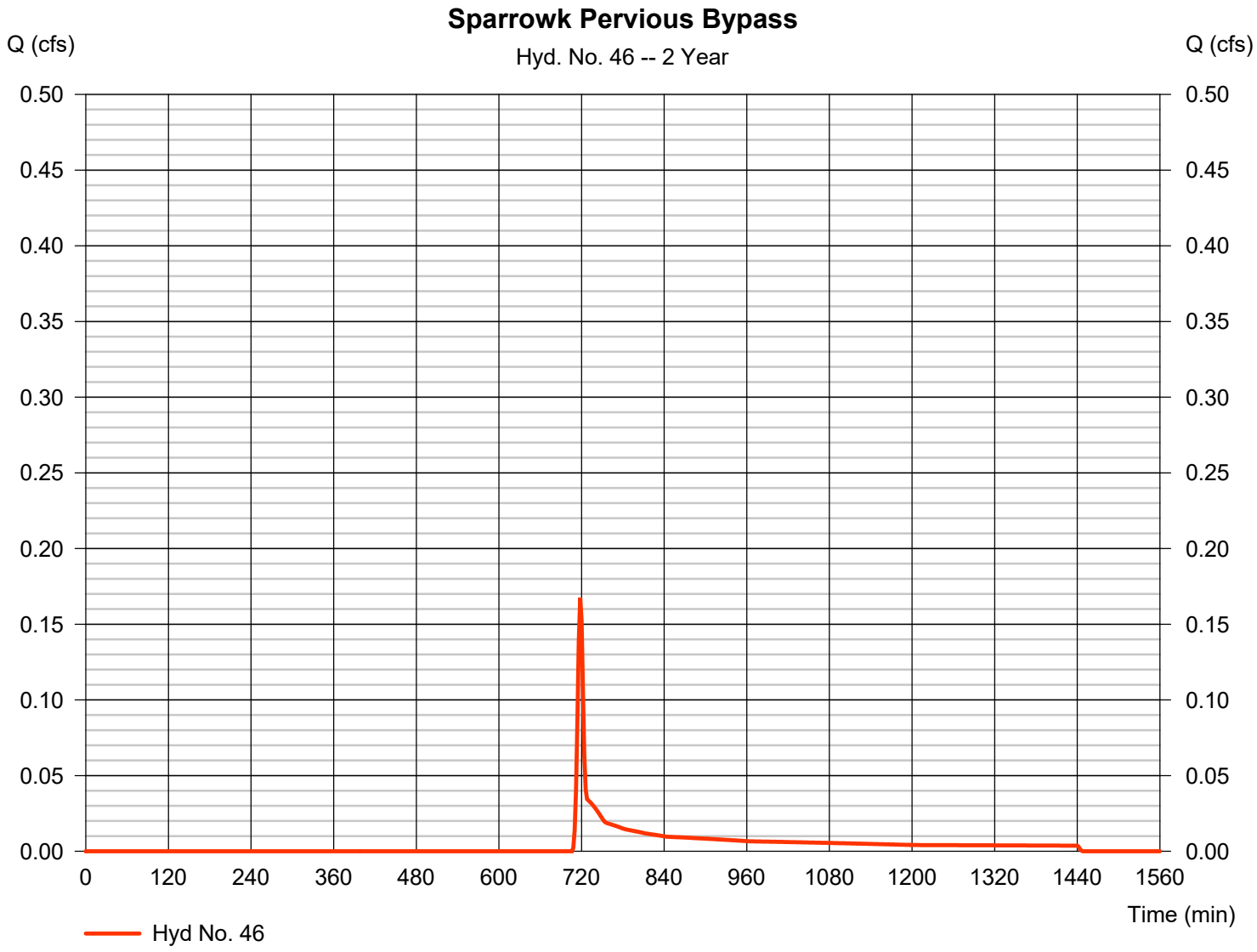
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 46

Sparrowk Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.168 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	408 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



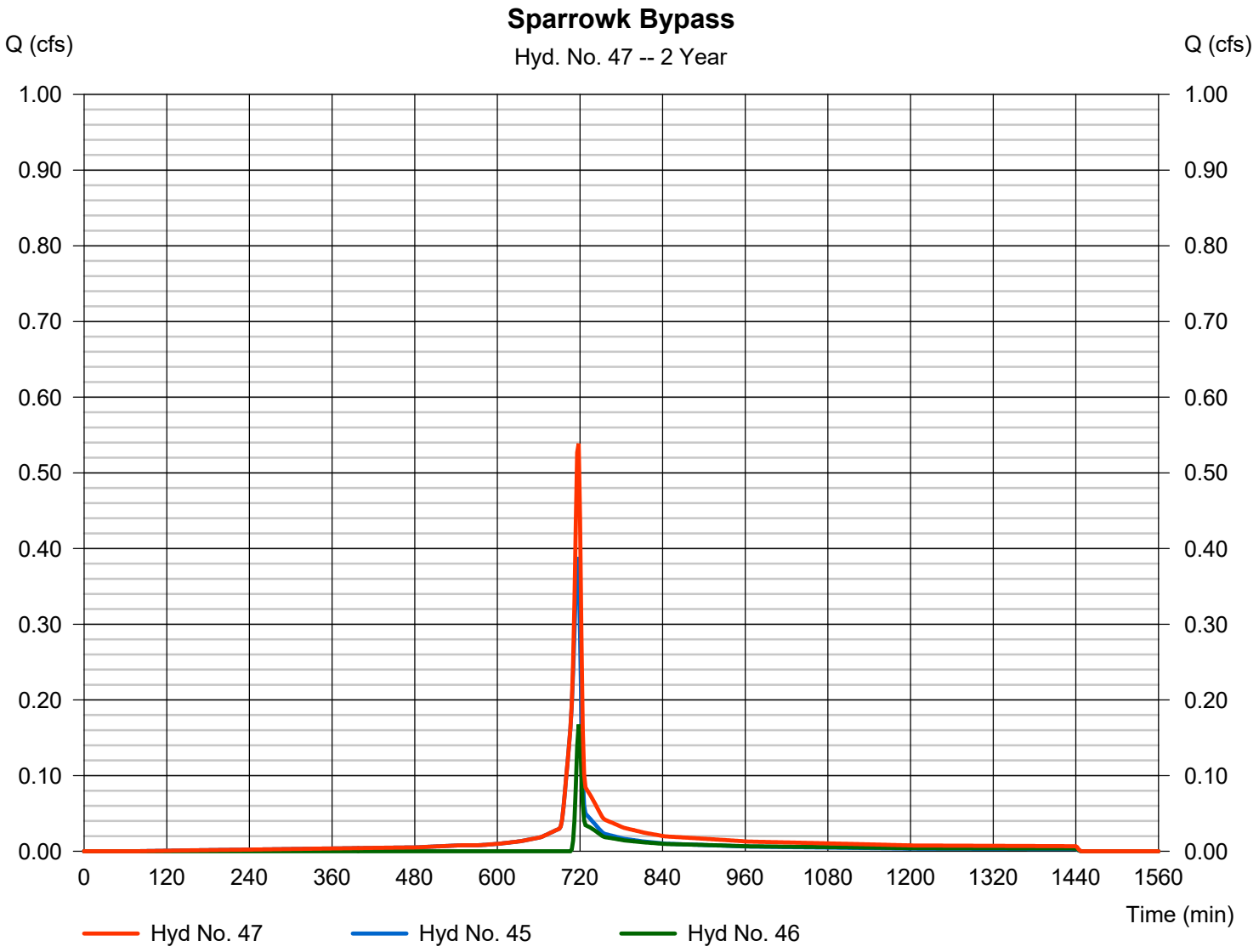
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 47

Sparrowk Bypass

Hydrograph type	=	Combine	Peak discharge	=	0.539 cfs
Storm frequency	=	2 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,317 cuft
Inflow hyds.	=	45, 46	Contrib. drain. area	=	0.360 ac



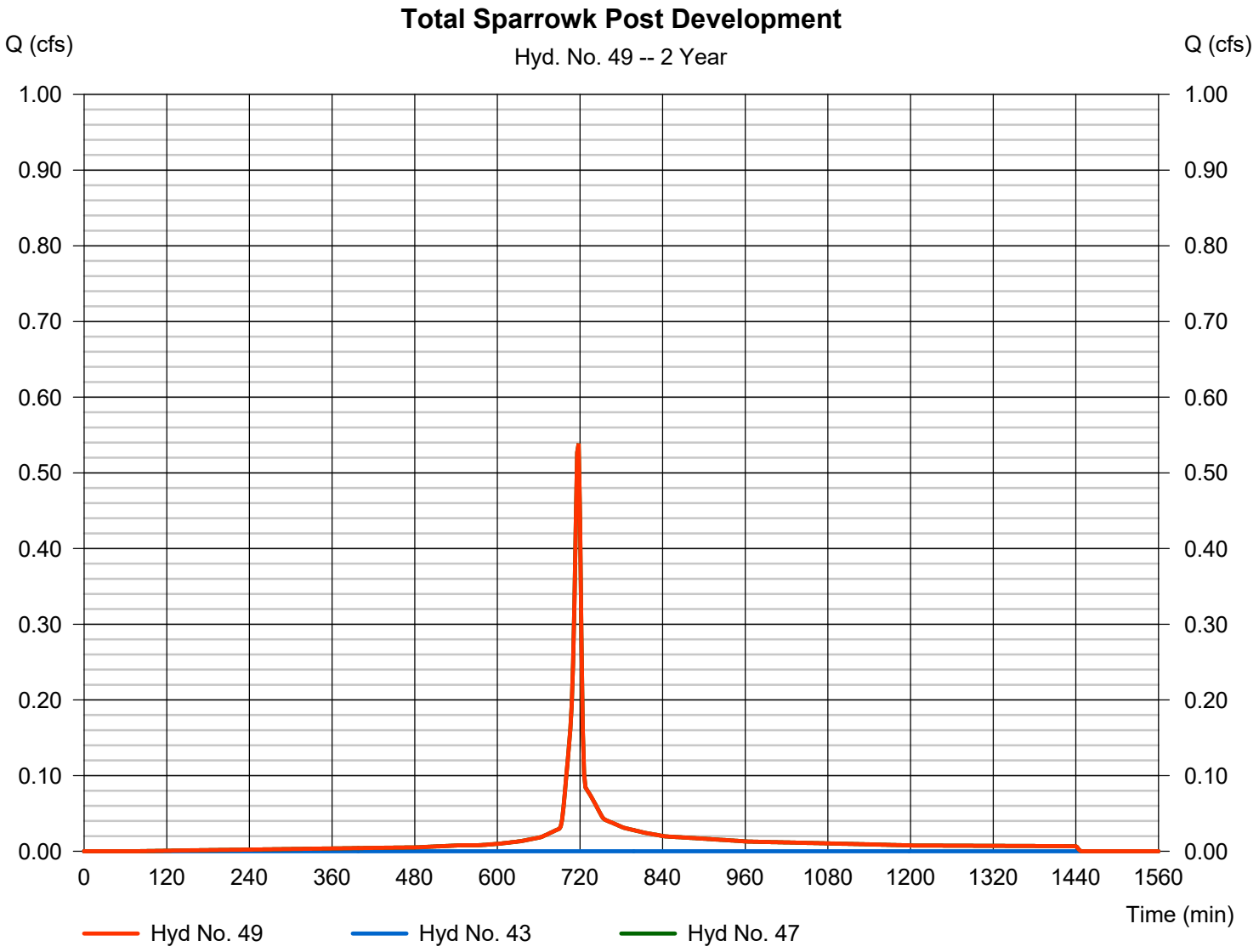
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 49

Total Sparrowk Post Development

Hydrograph type	= Combine	Peak discharge	= 0.539 cfs
Storm frequency	= 2 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,317 cuft
Inflow hyds.	= 43, 47	Contrib. drain. area	= 0.000 ac



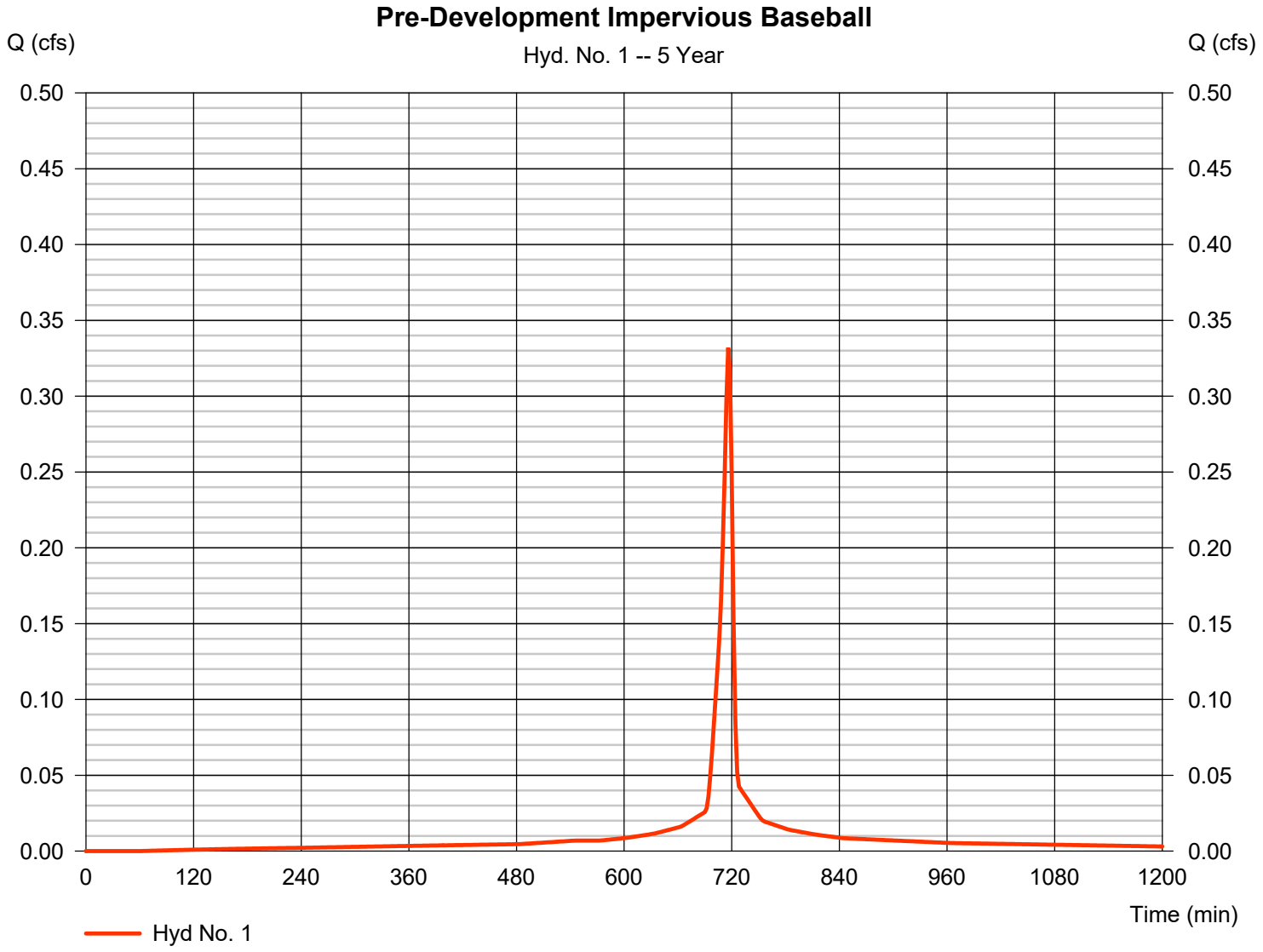
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 1

Pre-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.332 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 785 cuft
Drainage area	= 0.060 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



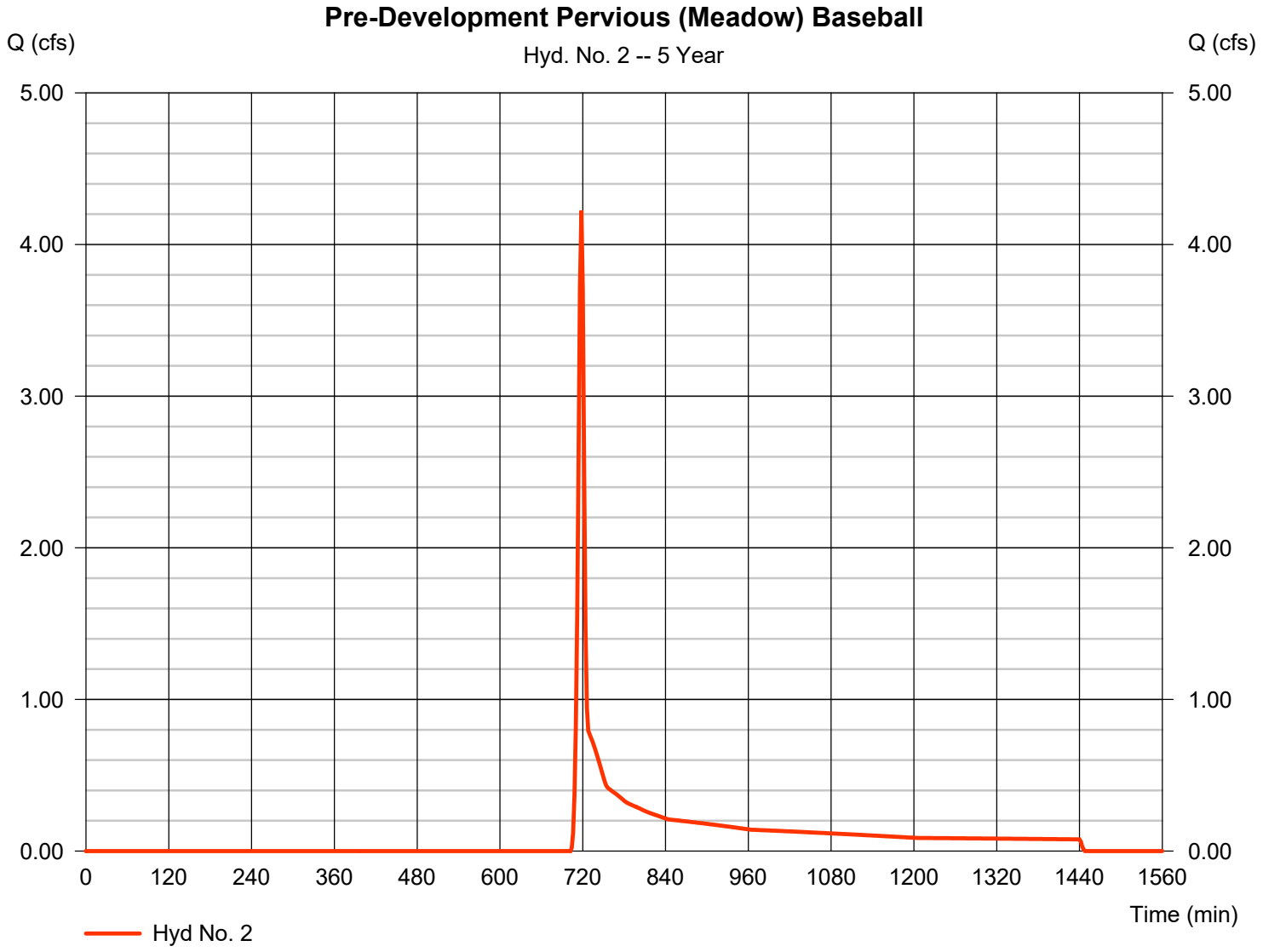
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 2

Pre-Development Pervious (Meadow) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 4.223 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 9,382 cuft
Drainage area	= 3.930 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



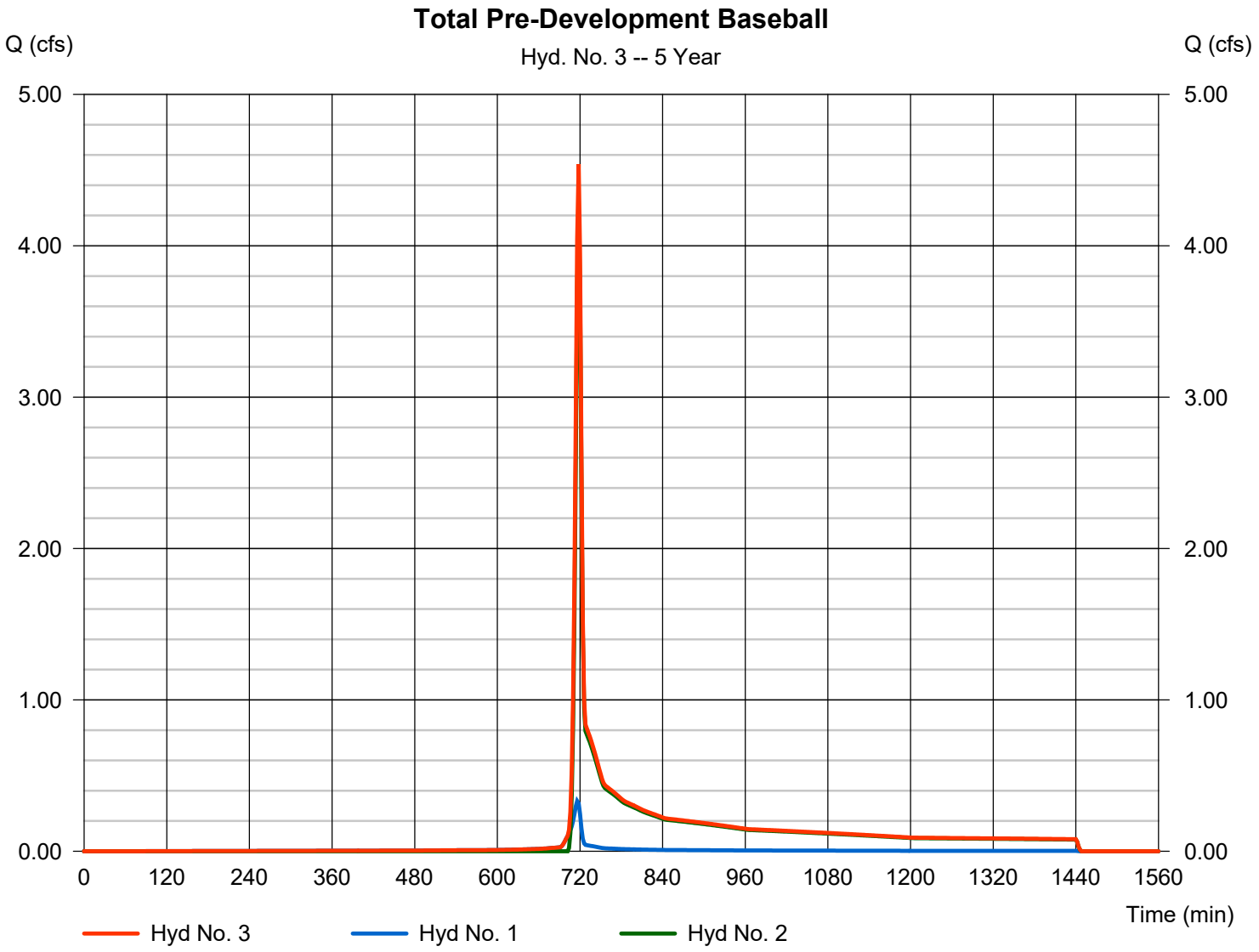
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 3

Total Pre-Development Baseball

Hydrograph type	= Combine	Peak discharge	= 4.539 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 10,167 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 3.990 ac



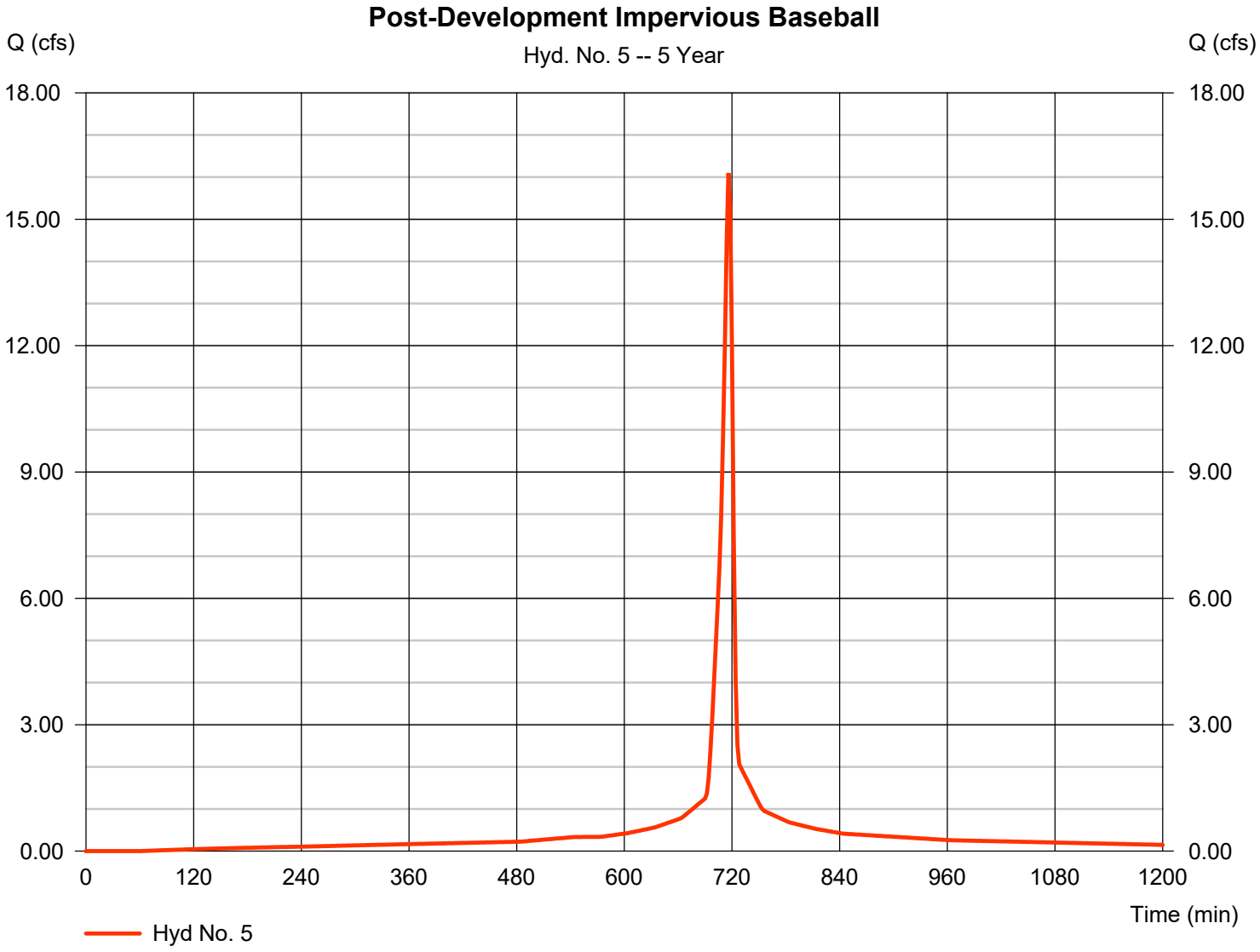
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 5

Post-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 16.10 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 38,077 cuft
Drainage area	= 2.910 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



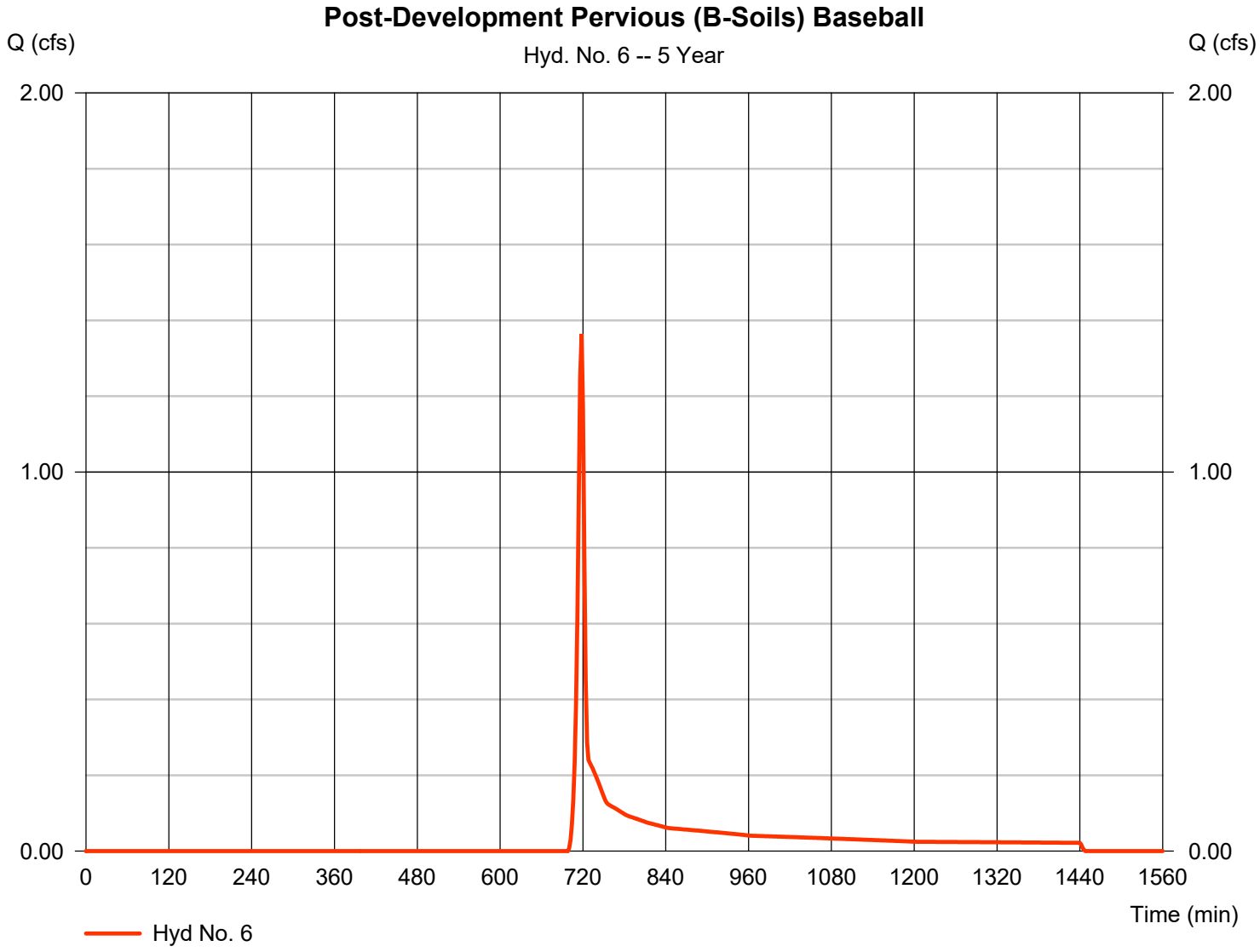
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 6

Post-Development Pervious (B-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 1.364 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,875 cuft
Drainage area	= 0.990 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



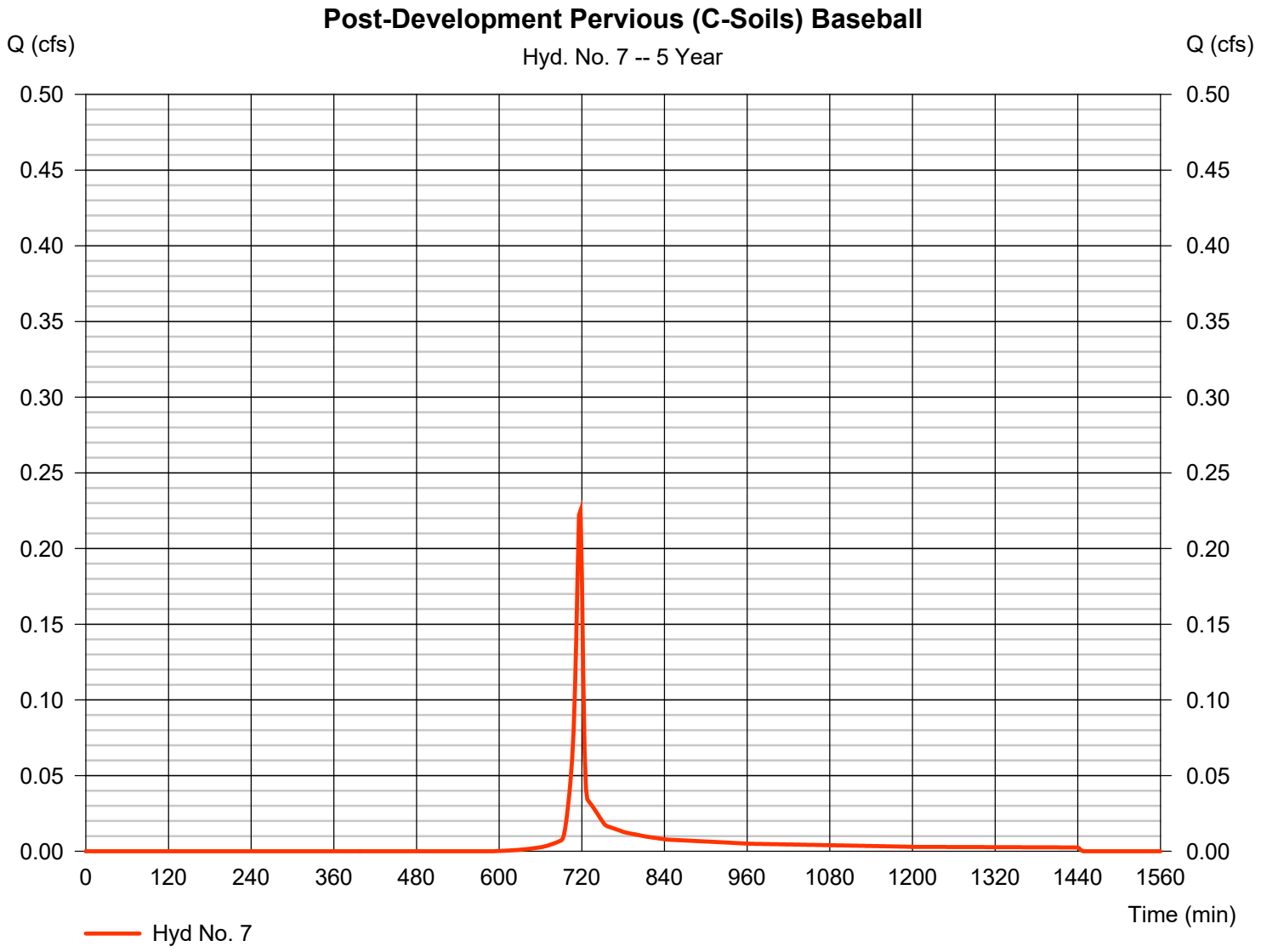
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 7

Post-Development Pervious (C-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.225 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 451 cuft
Drainage area	= 0.080 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



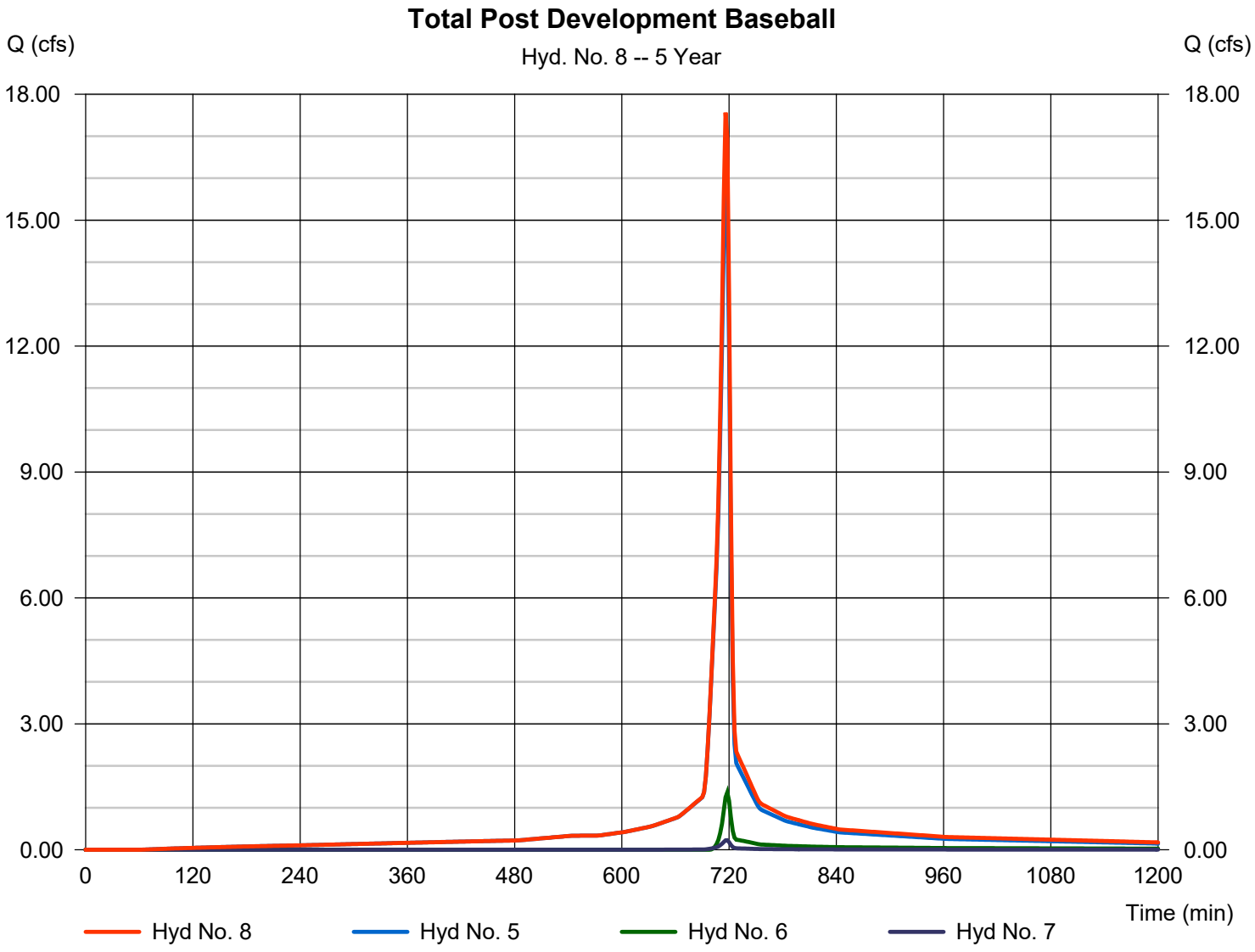
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 8

Total Post Development Baseball

Hydrograph type	= Combine	Peak discharge	= 17.56 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 41,402 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 3.980 ac



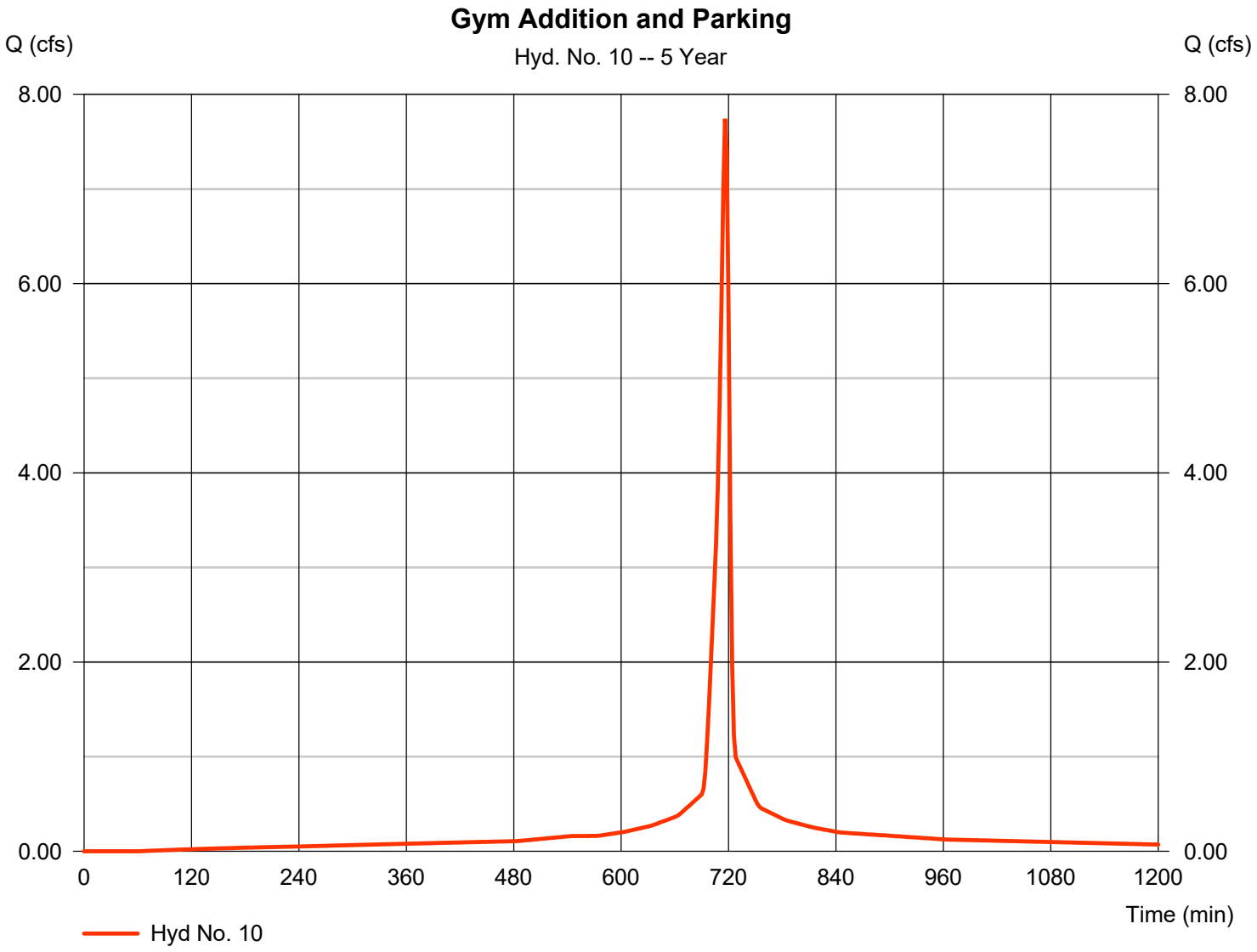
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 10

Gym Addition and Parking

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.743 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	18,319 cuft
Drainage area	=	1.400 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



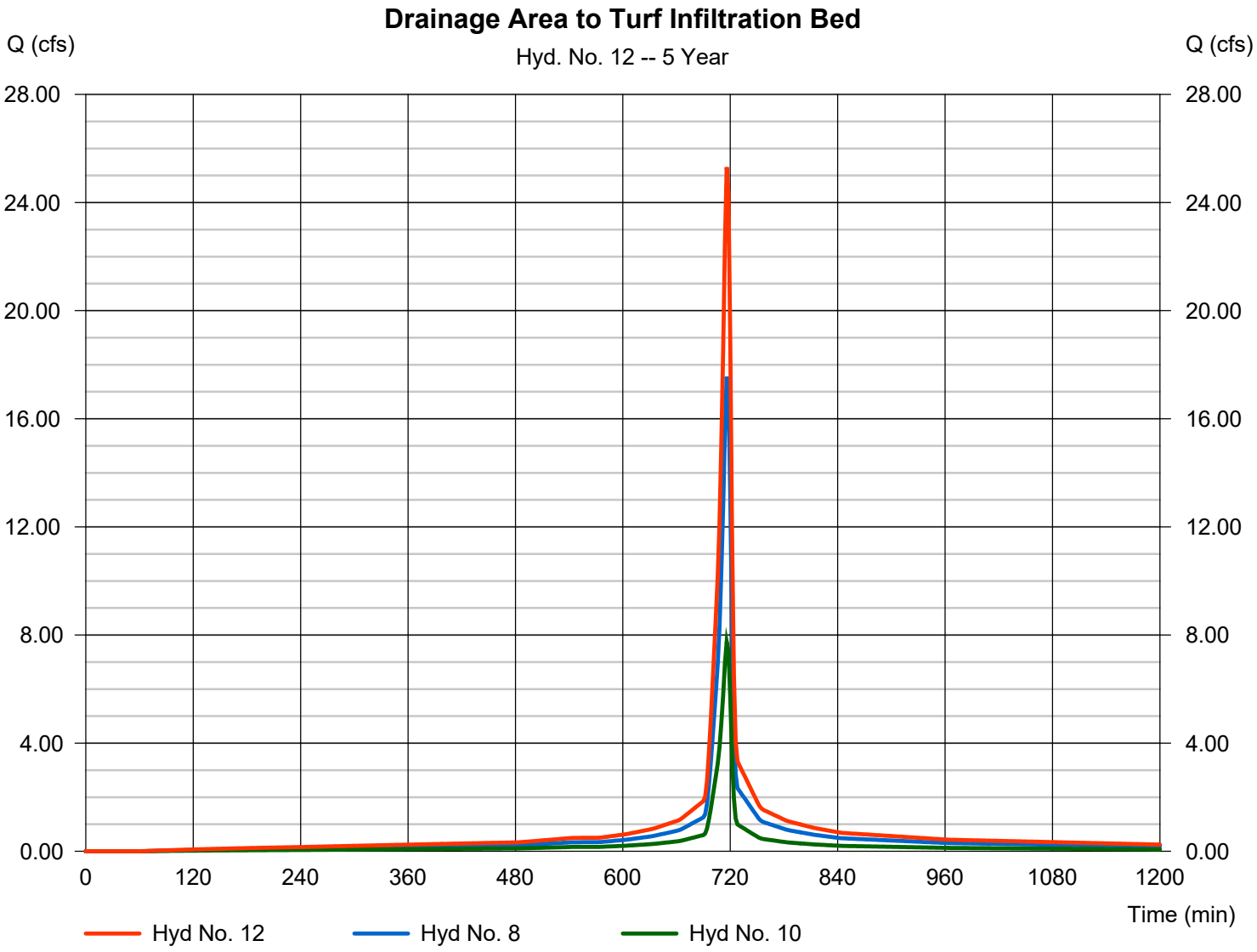
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 12

Drainage Area to Turf Infiltration Bed

Hydrograph type	= Combine	Peak discharge	= 25.31 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 59,721 cuft
Inflow hyds.	= 8, 10	Contrib. drain. area	= 1.400 ac



Hydrograph Report

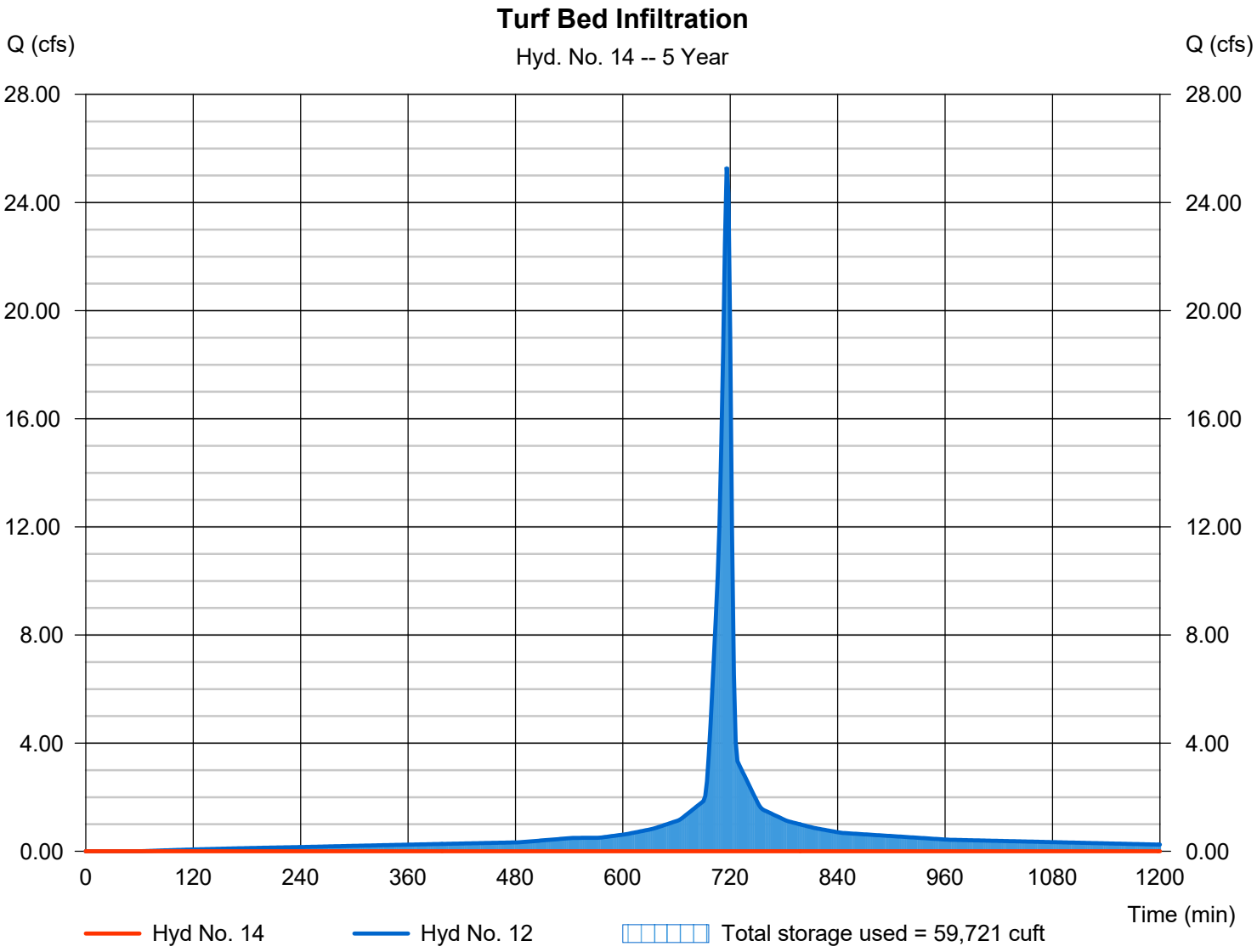
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 14

Turf Bed Infiltration

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	5 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	12 - Drainage Area to Turf Infiltration Bed	Max. Elevation	=	313.44 ft
Reservoir name	=	Turf	Max. Storage	=	59,721 cuft

Storage Indication method used.



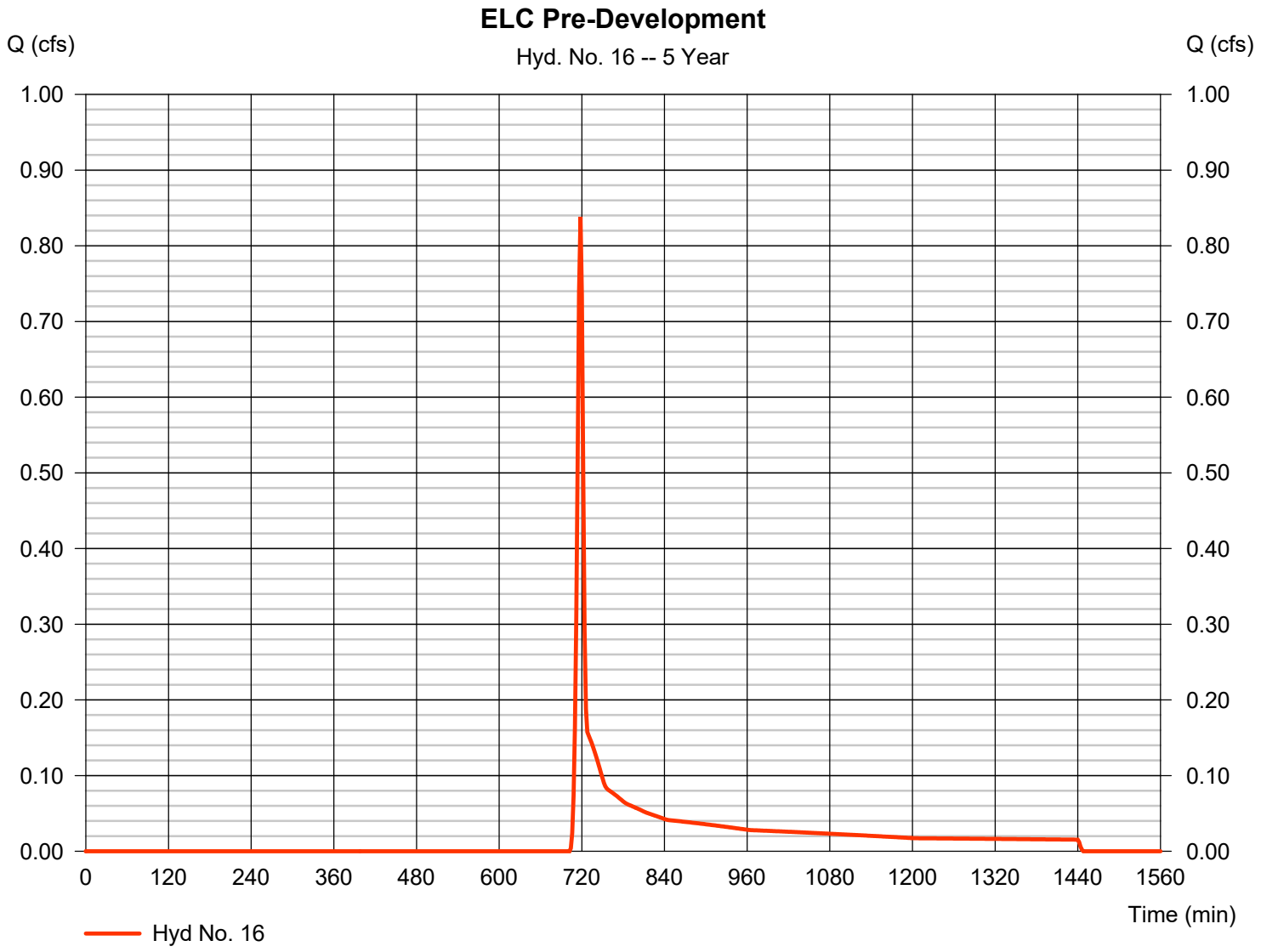
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 16

ELC Pre-Development

Hydrograph type	= SCS Runoff	Peak discharge	= 0.838 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,862 cuft
Drainage area	= 0.780 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



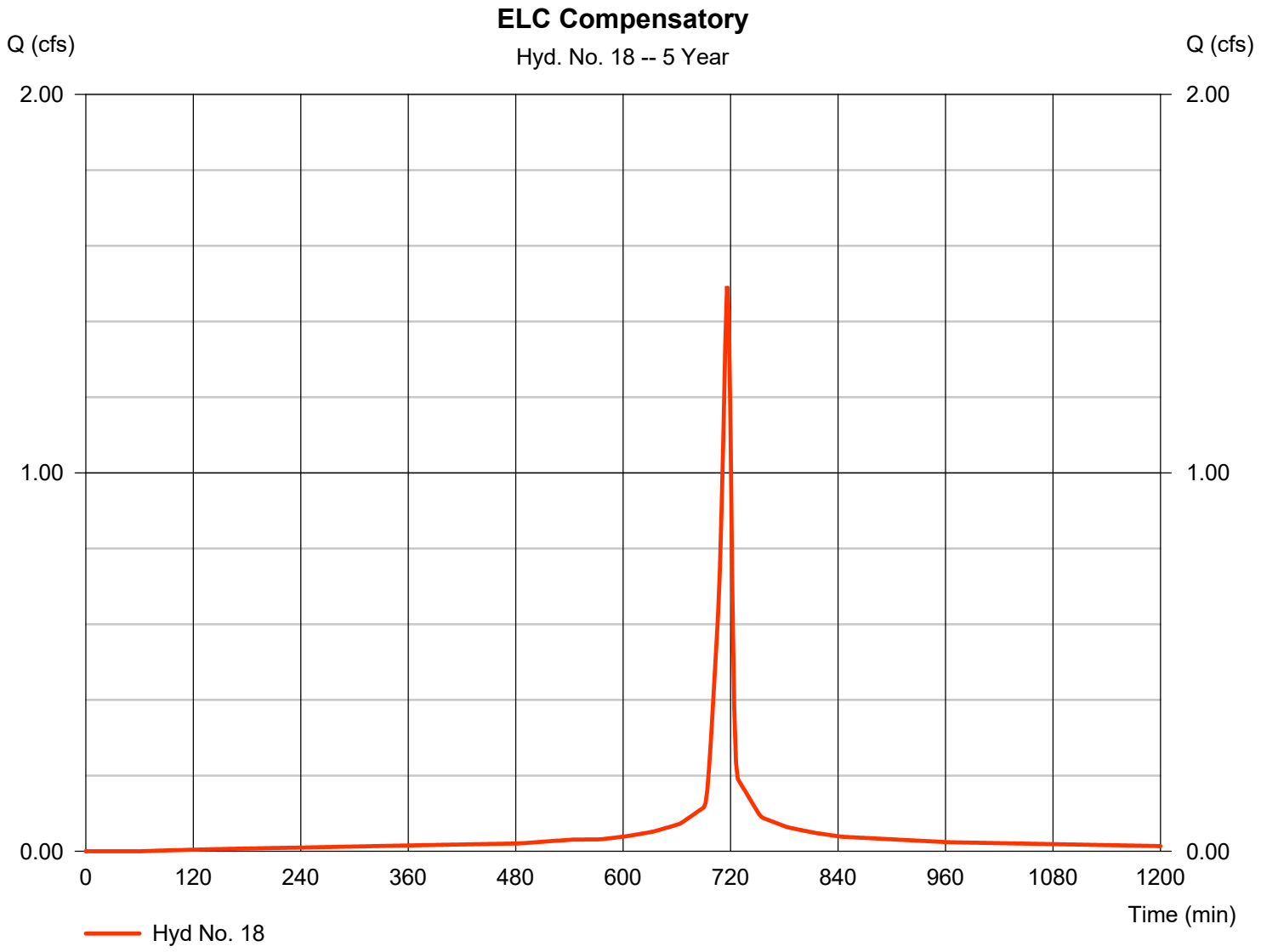
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 18

ELC Compensatory

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.493 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,533 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



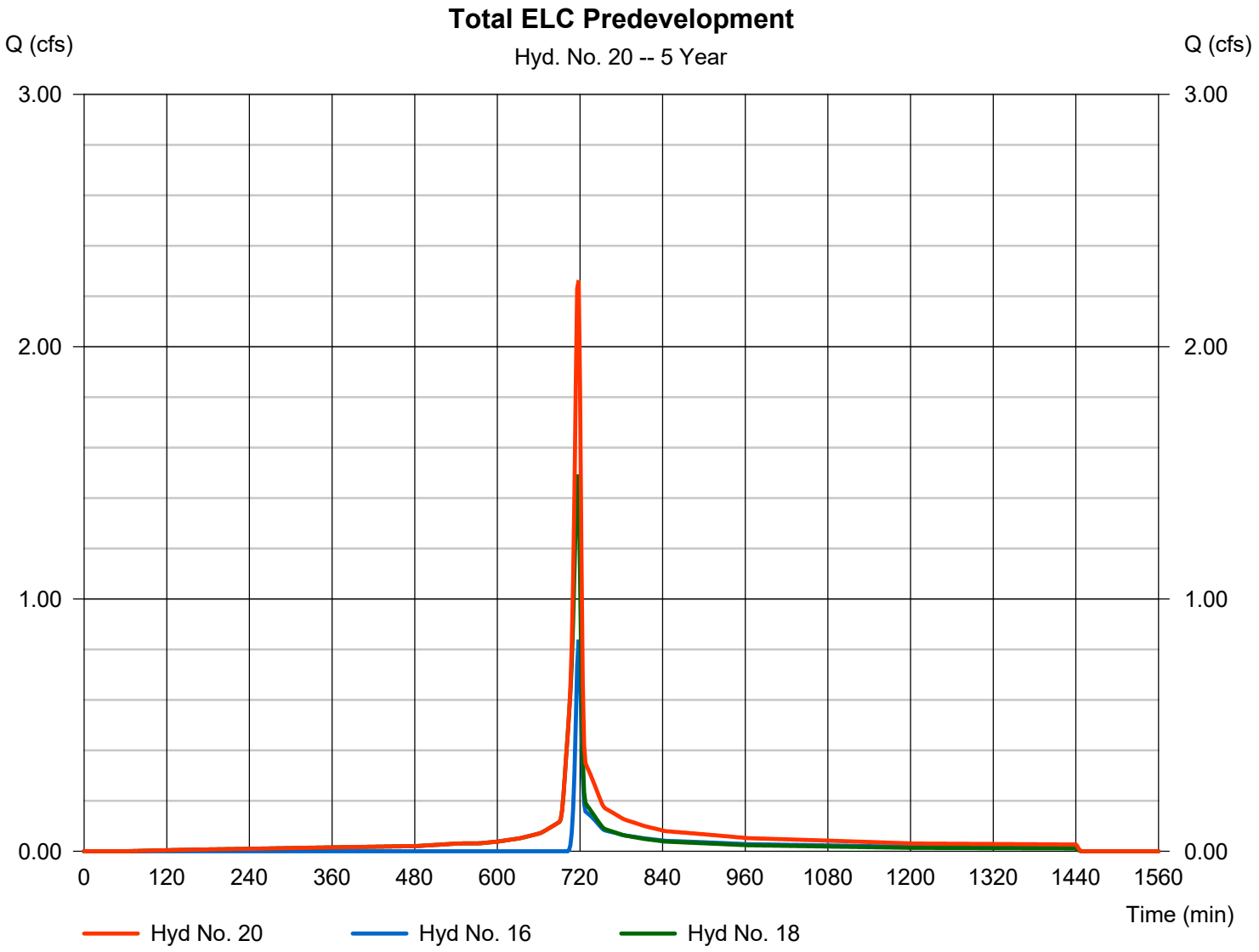
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 20

Total ELC Predevelopment

Hydrograph type	= Combine	Peak discharge	= 2.263 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 5,395 cuft
Inflow hyds.	= 16, 18	Contrib. drain. area	= 1.050 ac



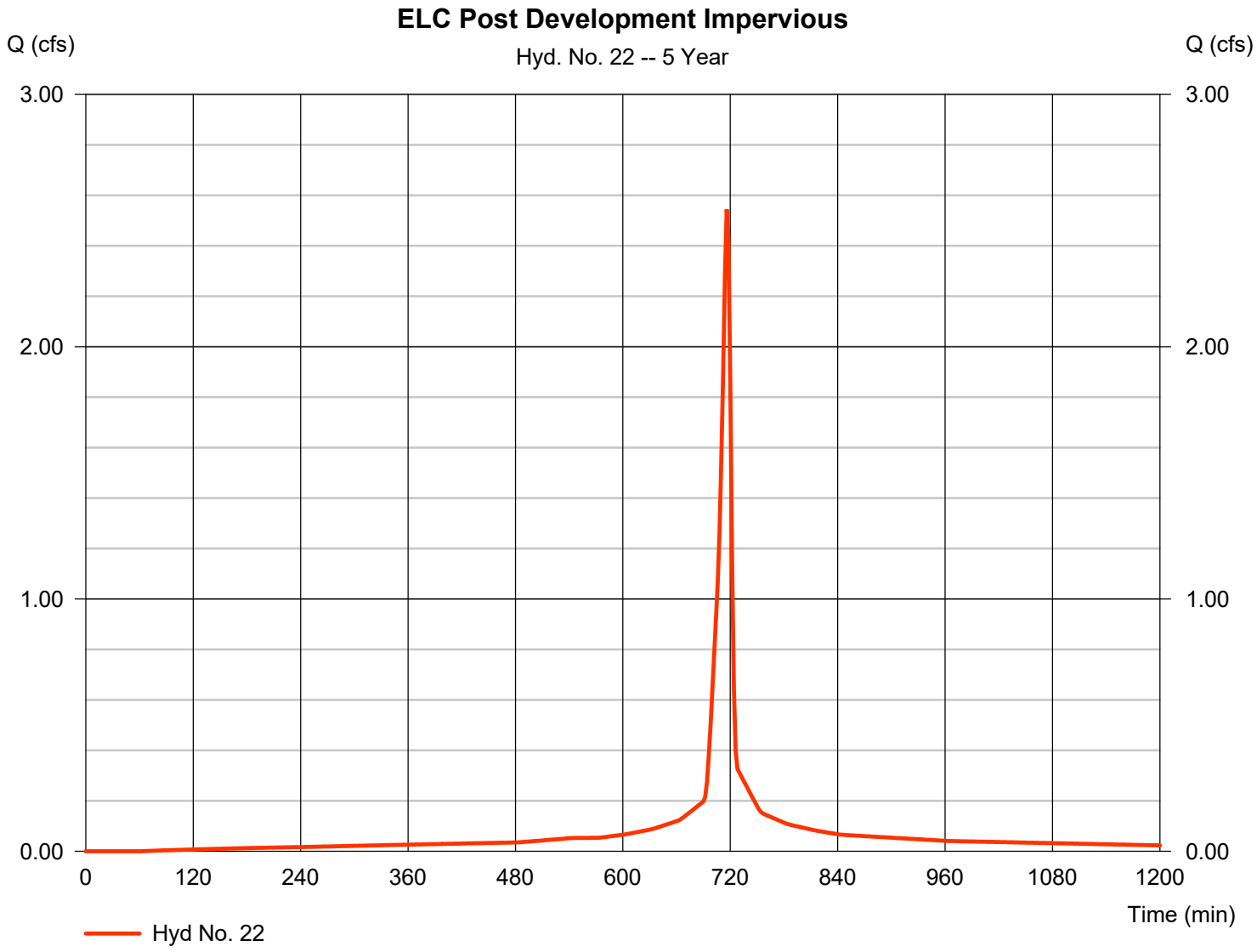
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 22

ELC Post Development Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.544 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	6,019 cuft
Drainage area	=	0.460 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



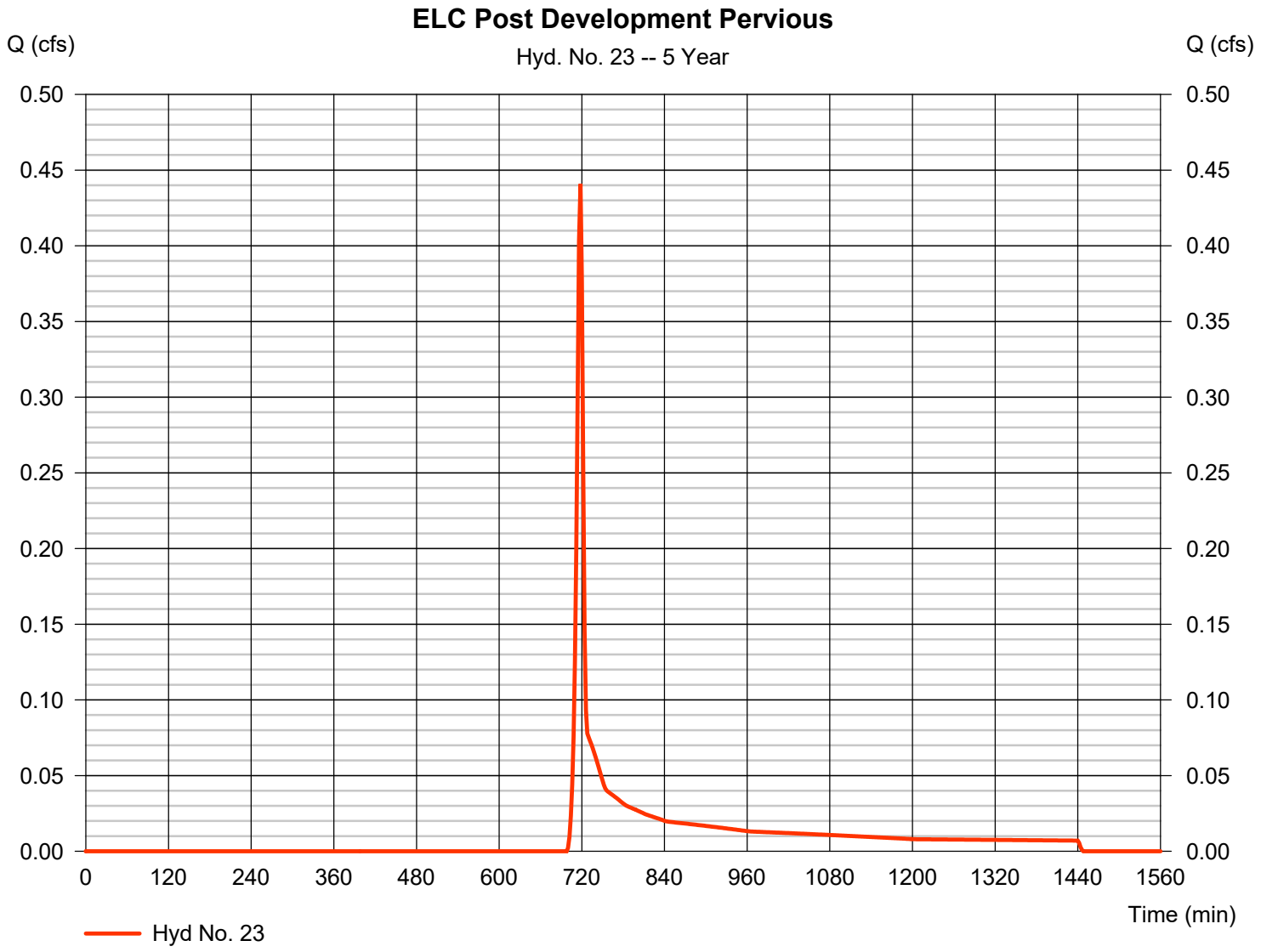
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 23

ELC Post Development Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.441 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	929 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



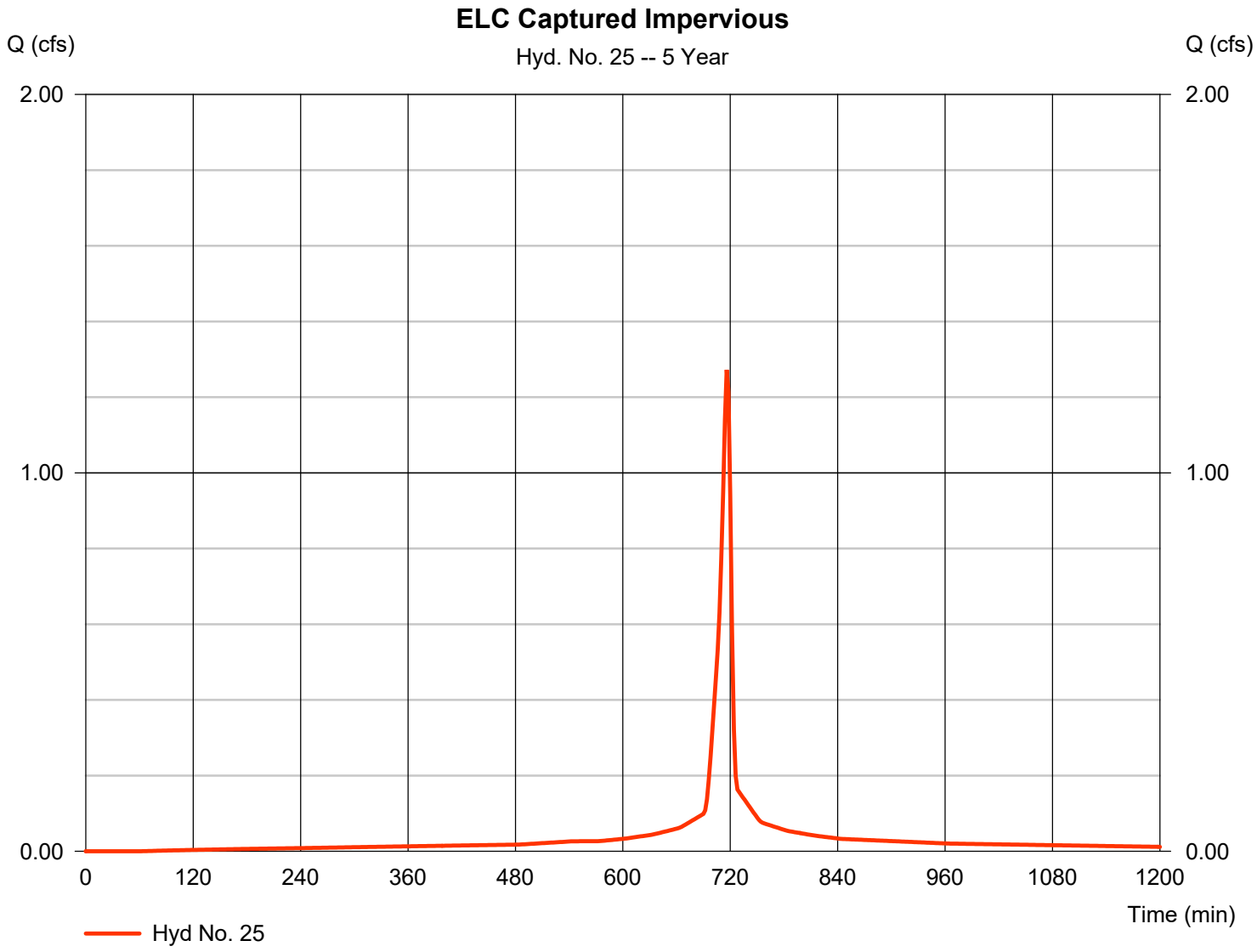
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 25

ELC Captured Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.272 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,009 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



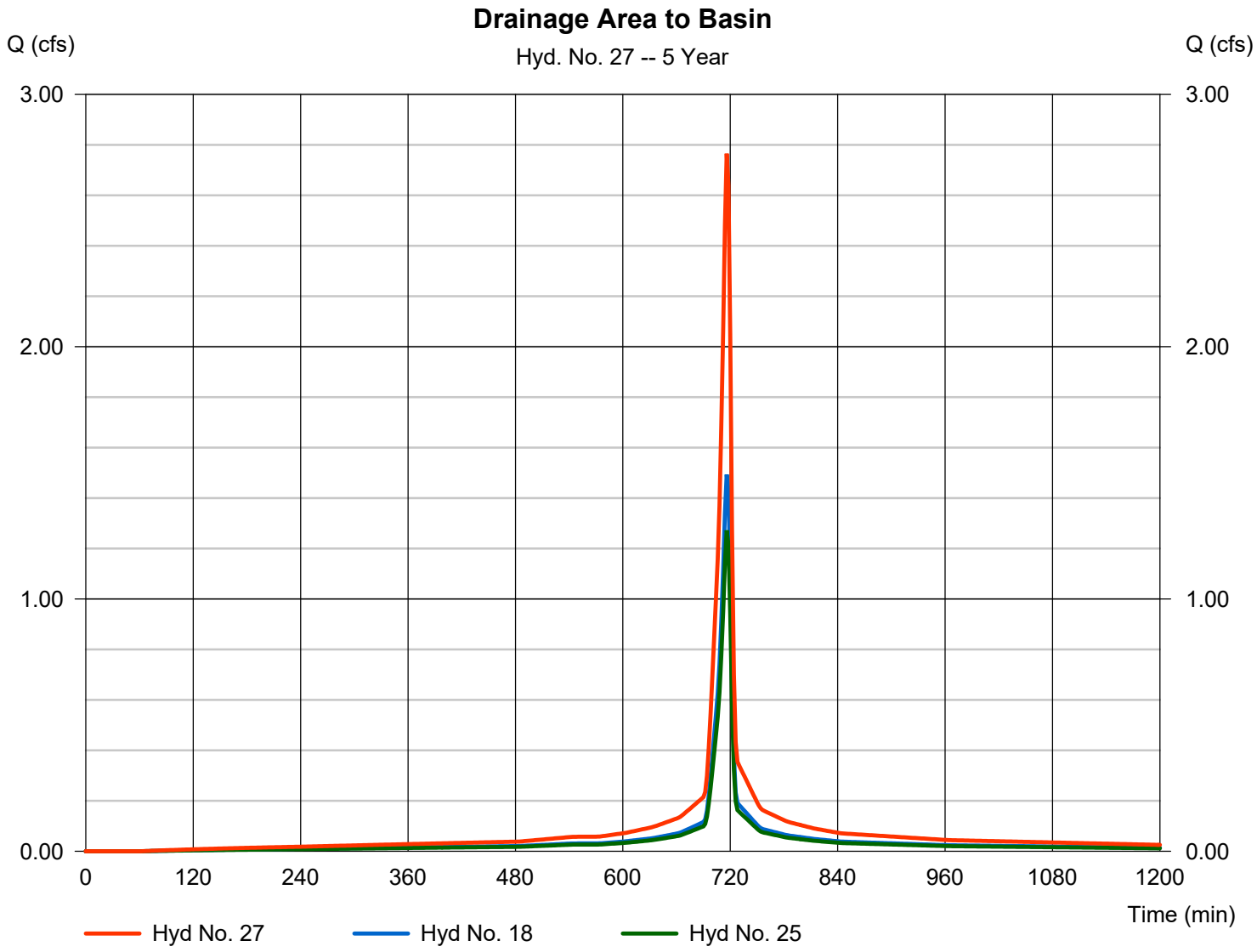
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 27

Drainage Area to Basin

Hydrograph type	= Combine	Peak discharge	= 2.766 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 6,542 cuft
Inflow hyds.	= 18, 25	Contrib. drain. area	= 0.500 ac



Hydrograph Report

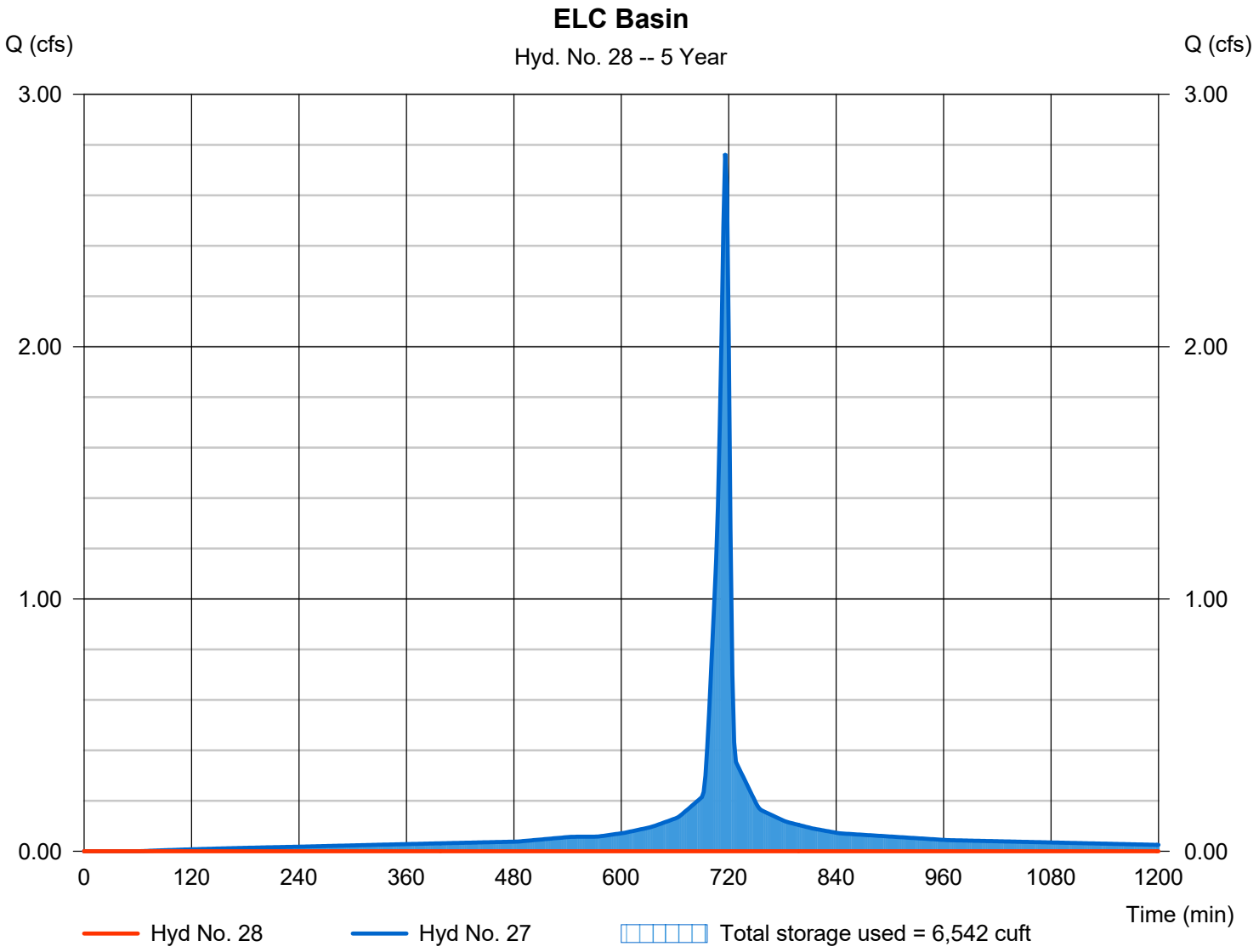
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 28

ELC Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	5 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	27 - Drainage Area to Basin	Max. Elevation	=	316.42 ft
Reservoir name	=	ELC Basin	Max. Storage	=	6,542 cuft

Storage Indication method used.



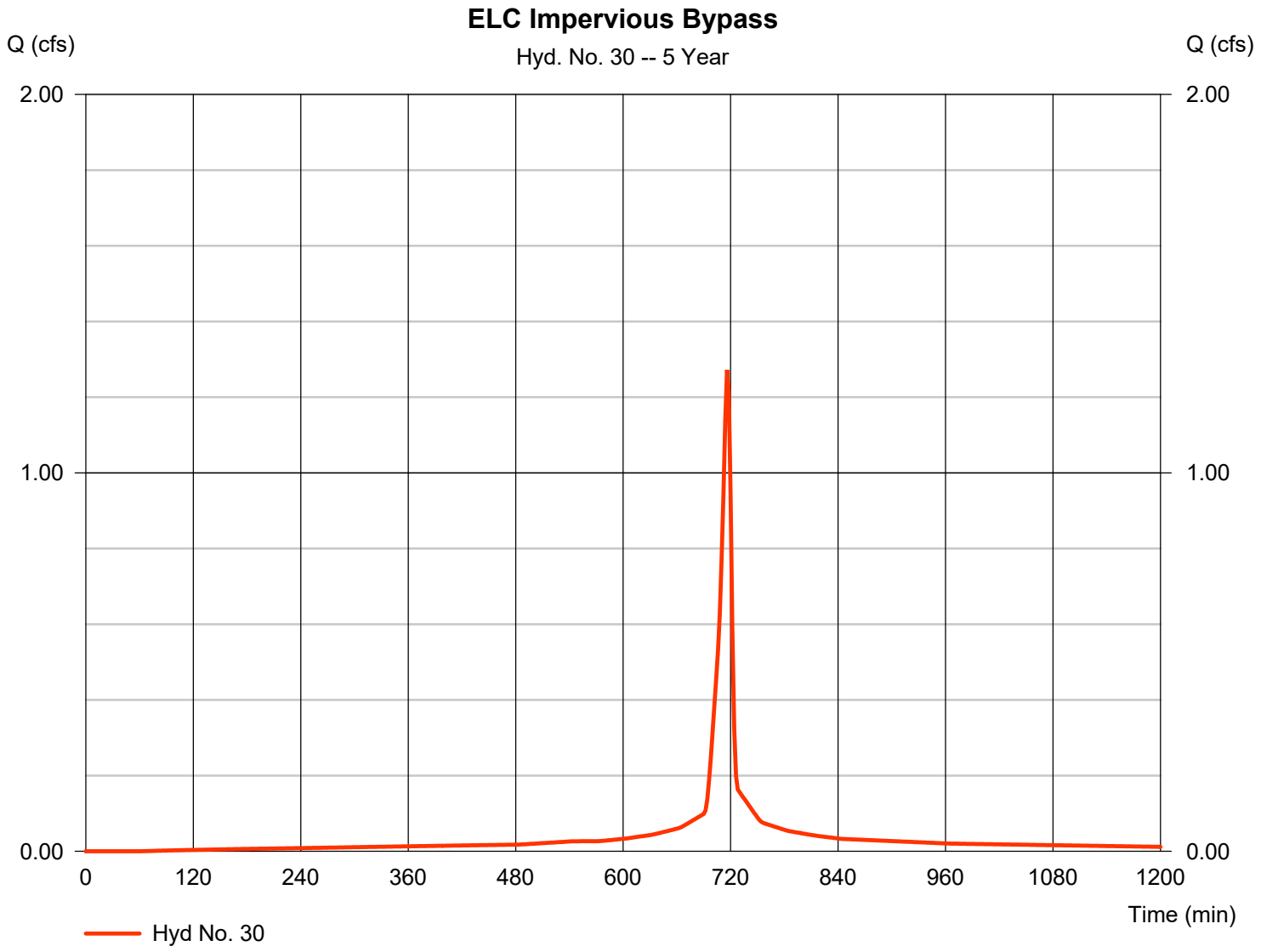
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 30

ELC Impervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.272 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,009 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



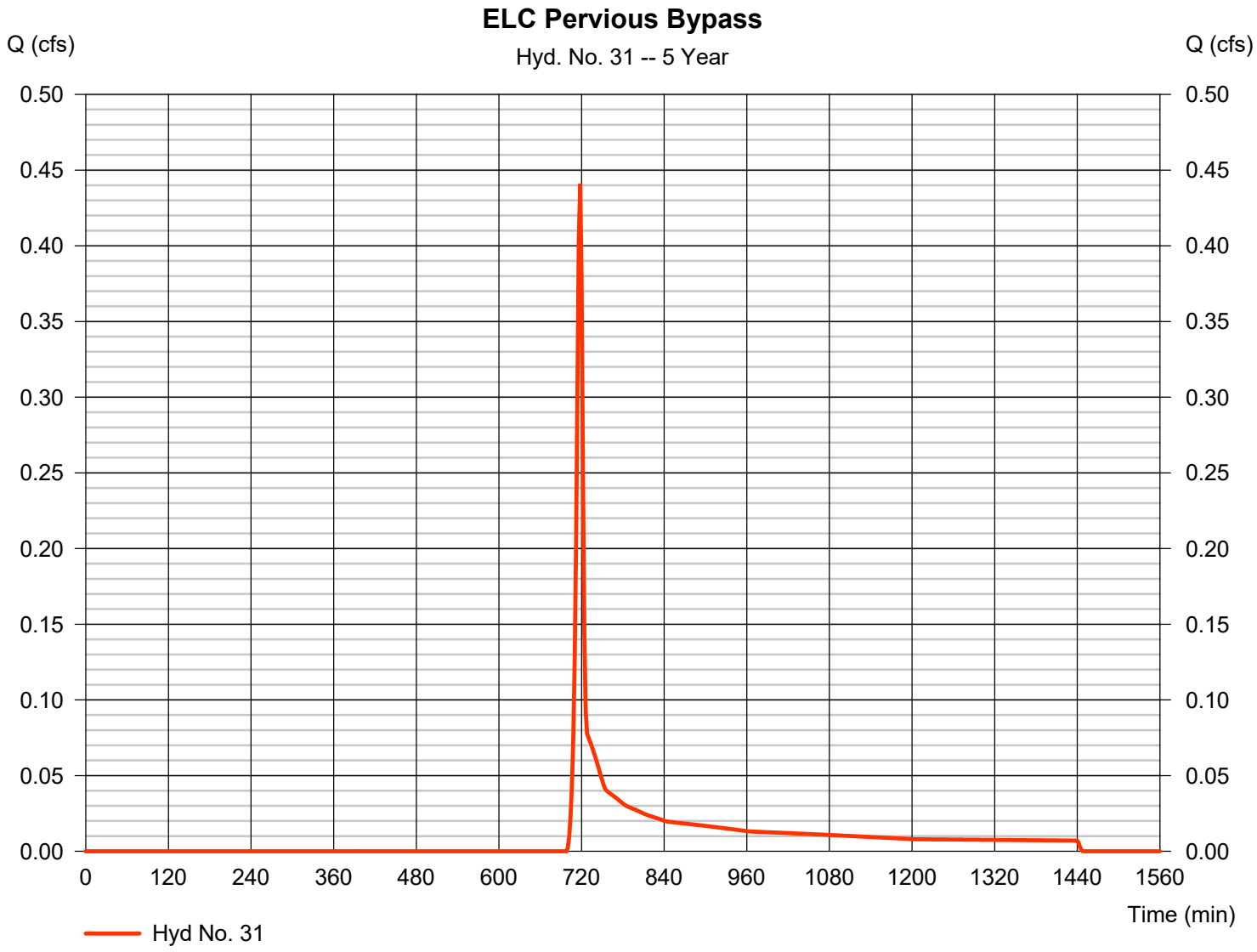
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 31

ELC Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.441 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	929 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



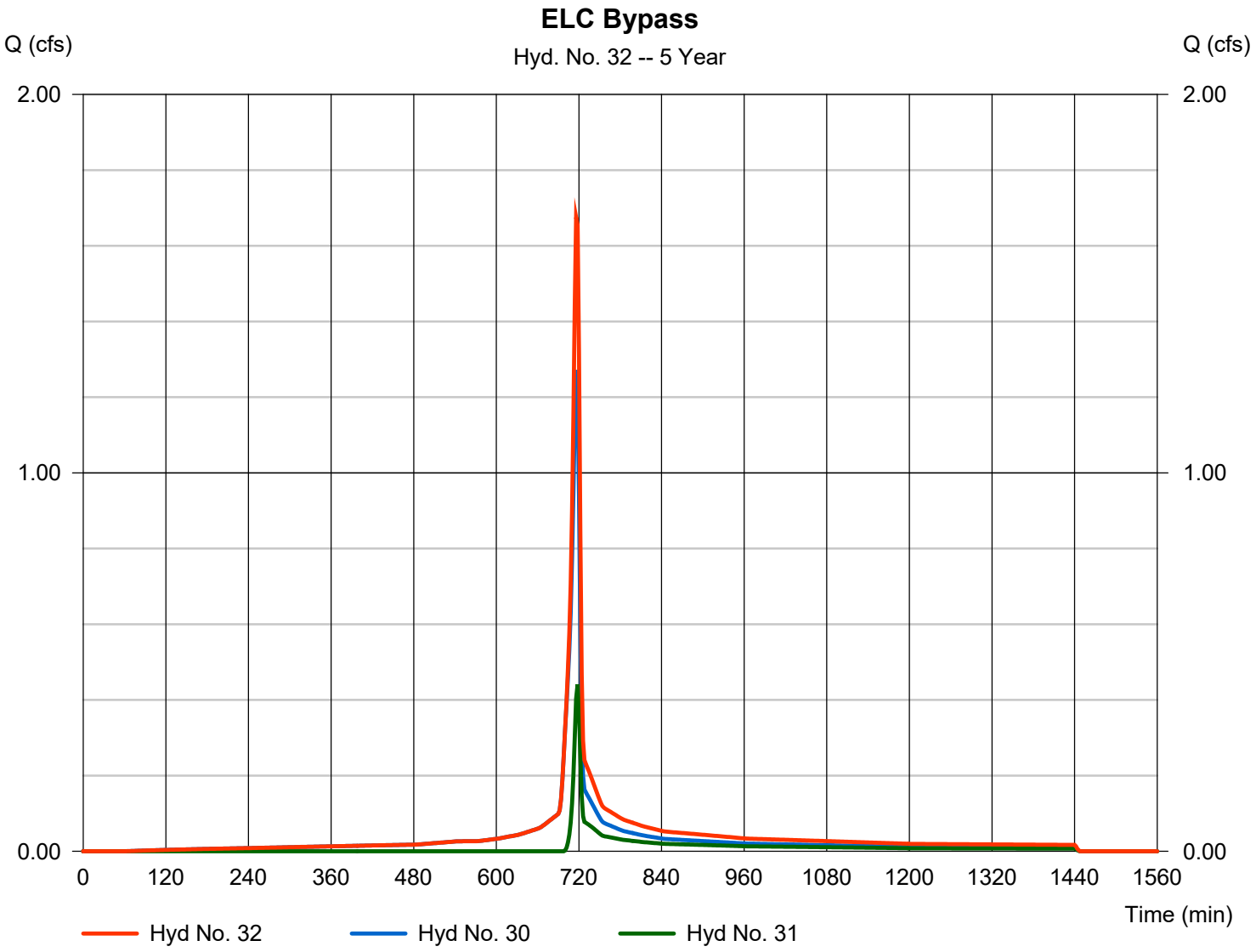
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 32

ELC Bypass

Hydrograph type	=	Combine	Peak discharge	=	1.675 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,939 cuft
Inflow hyds.	=	30, 31	Contrib. drain. area	=	0.550 ac



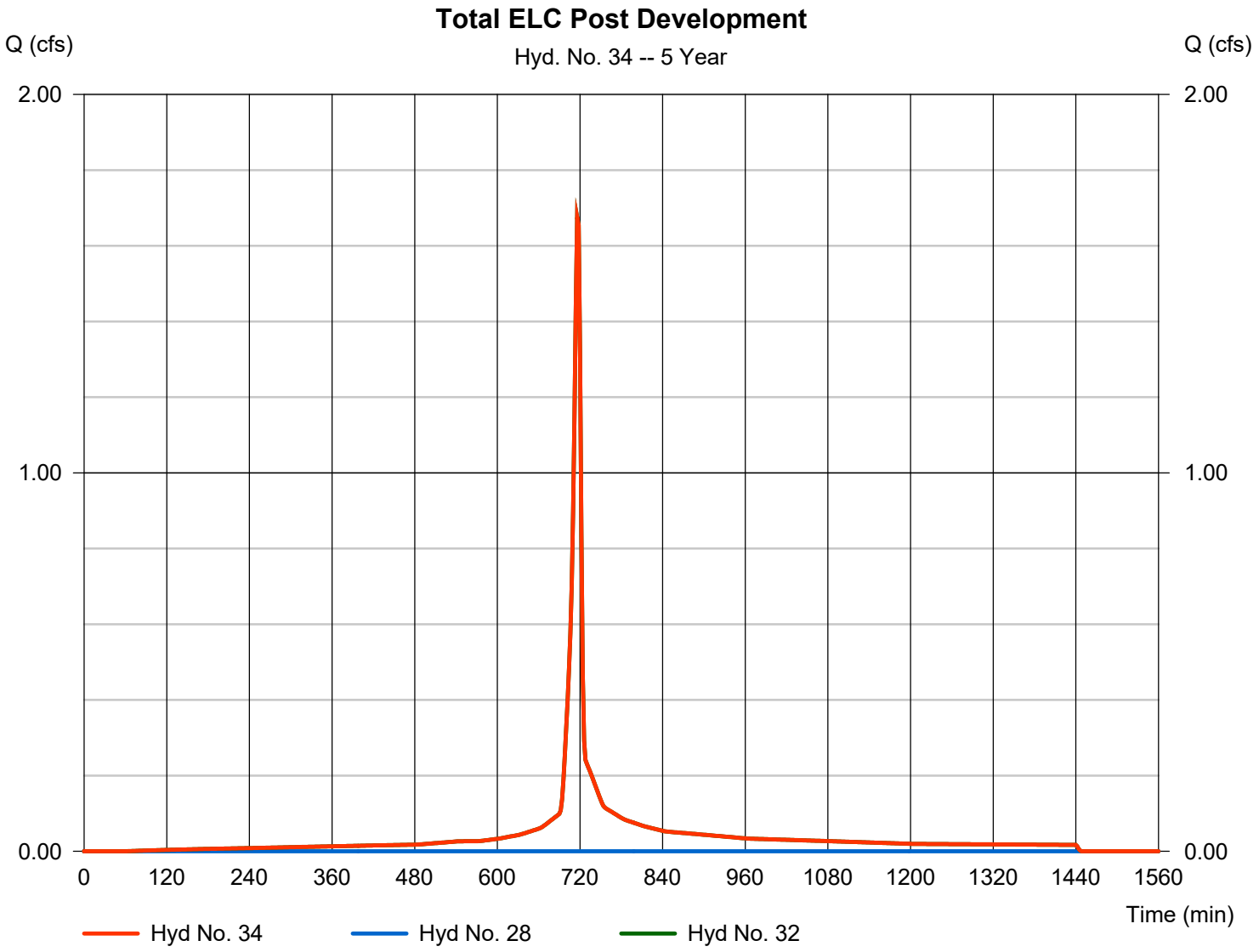
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 34

Total ELC Post Development

Hydrograph type	= Combine	Peak discharge	= 1.675 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 3,939 cuft
Inflow hyds.	= 28, 32	Contrib. drain. area	= 0.000 ac



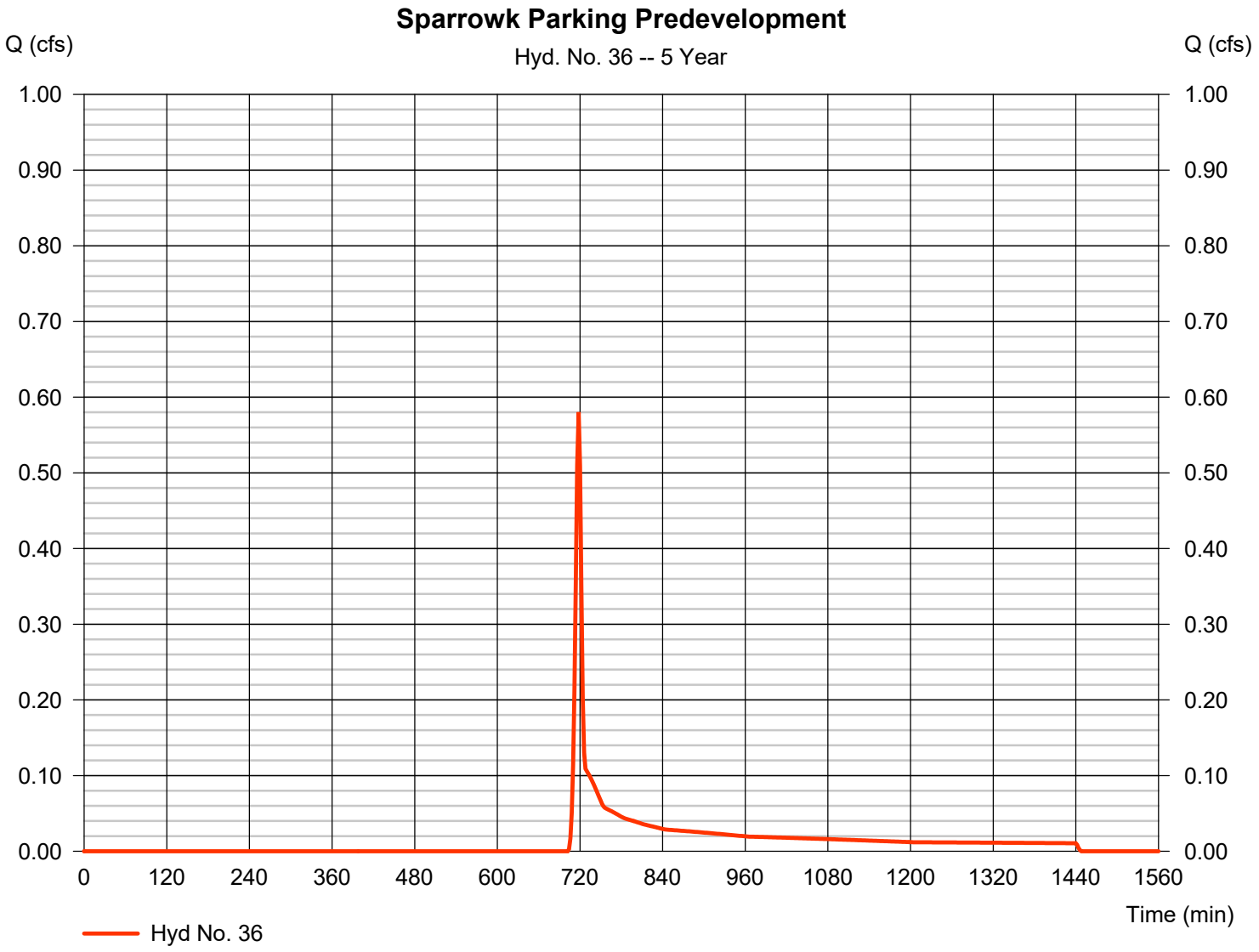
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 36

Sparrowk Parking Predevelopment

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.580 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,289 cuft
Drainage area	=	0.540 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



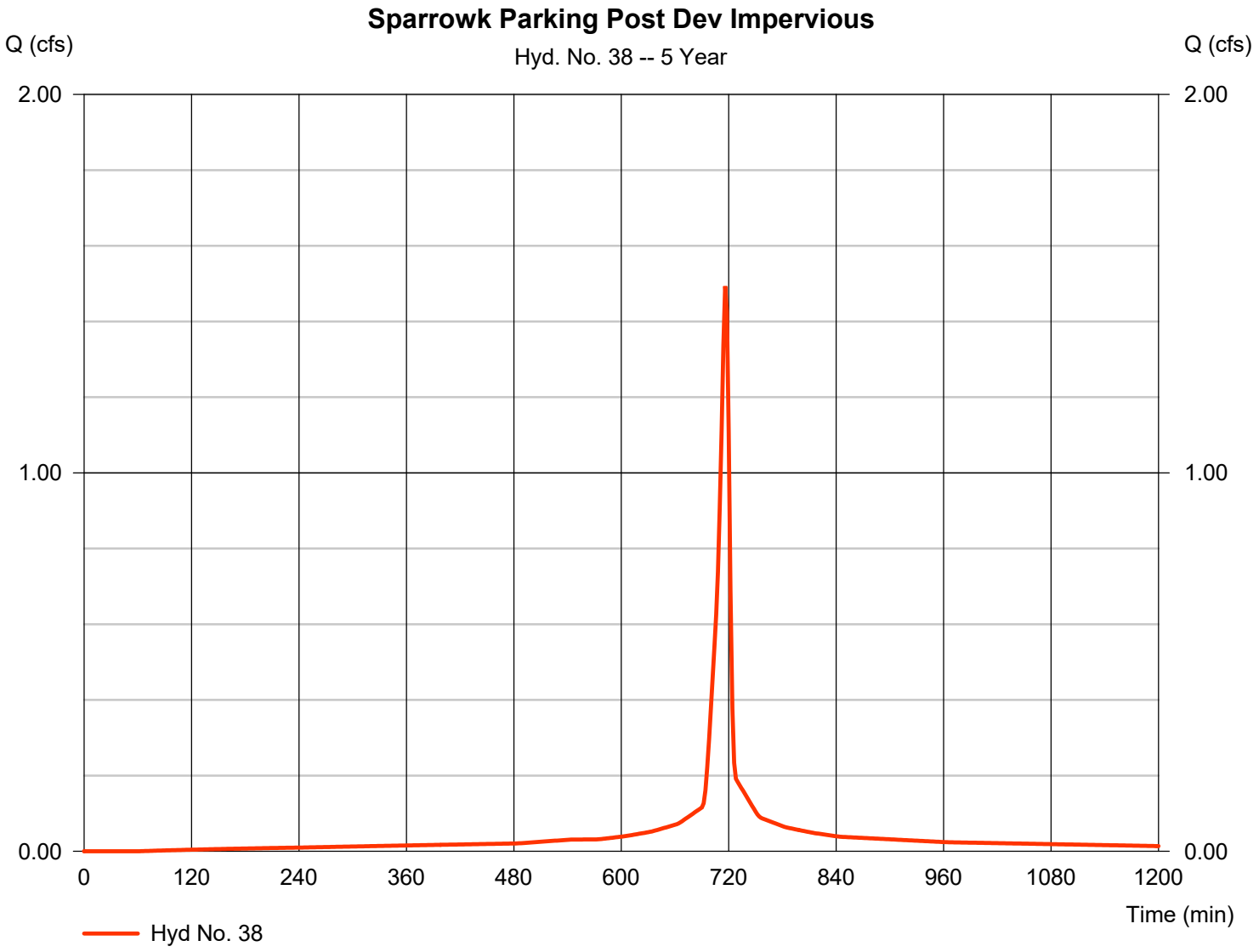
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 38

Sparrowk Parking Post Dev Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.493 cfs
Storm frequency	=	5 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,533 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



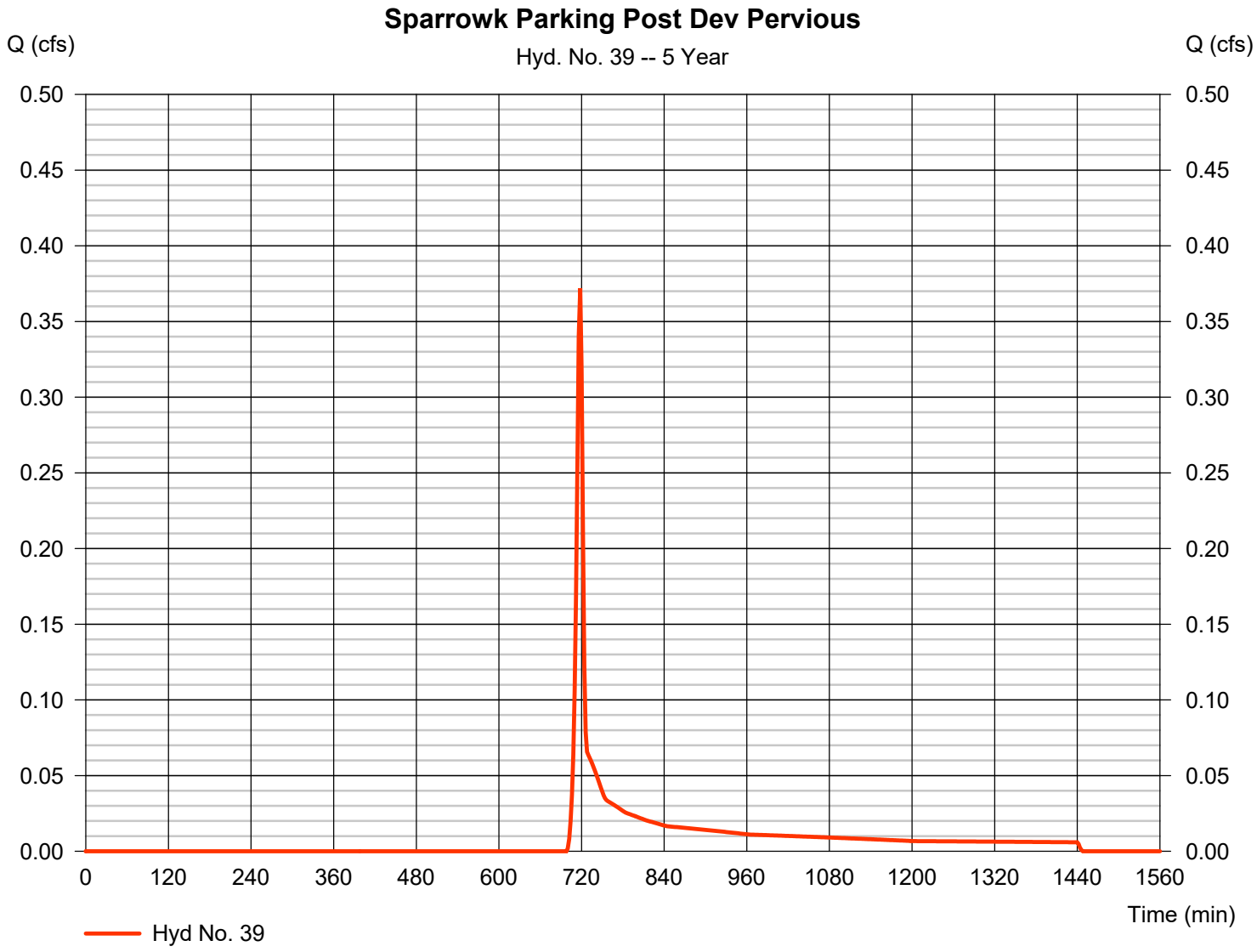
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 39

Sparrowk Parking Post Dev Pervious

Hydrograph type	= SCS Runoff	Peak discharge	= 0.372 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 784 cuft
Drainage area	= 0.270 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



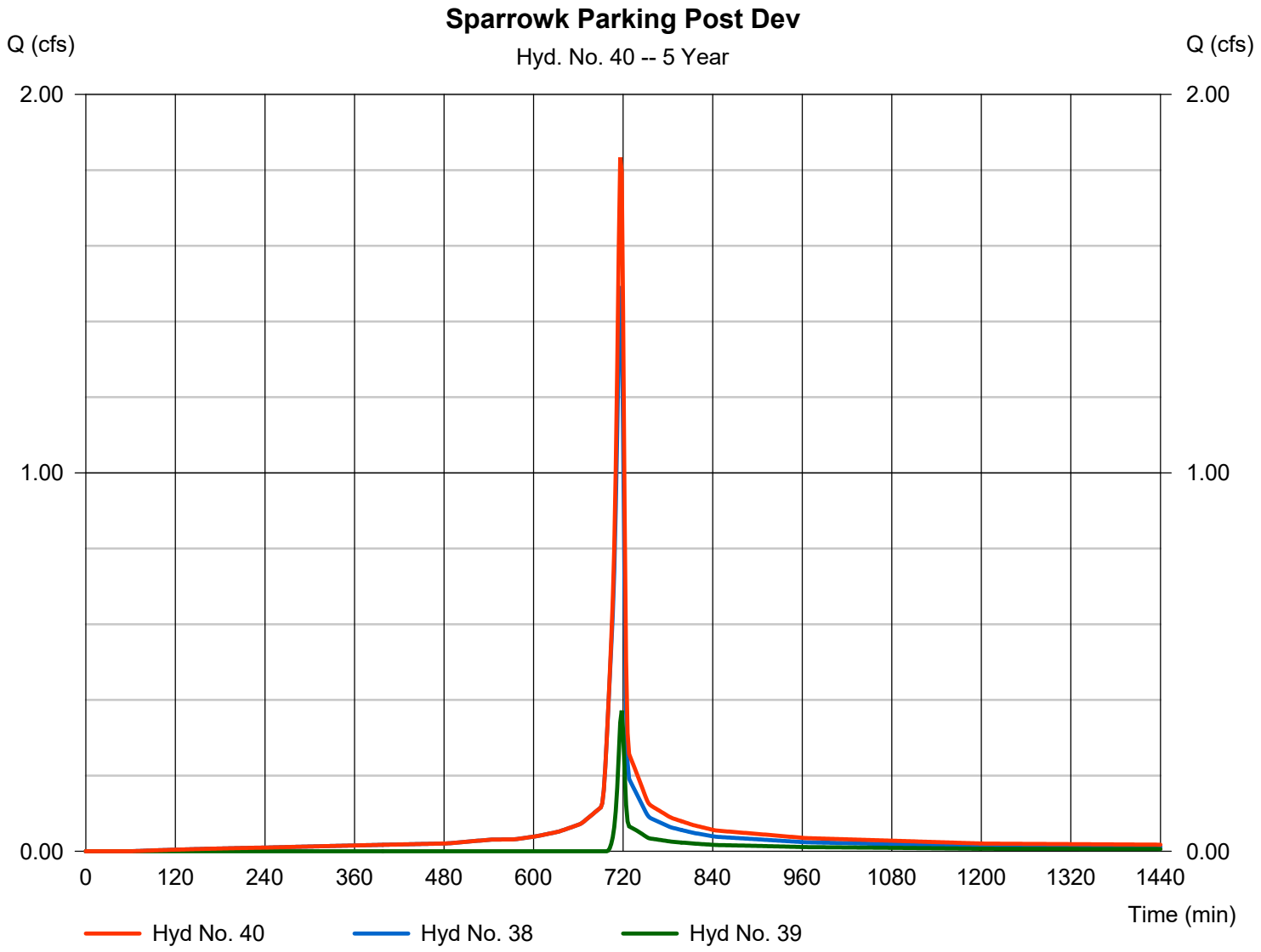
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 40

Sparrowk Parking Post Dev

Hydrograph type	= Combine	Peak discharge	= 1.834 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 4,317 cuft
Inflow hyds.	= 38, 39	Contrib. drain. area	= 0.540 ac



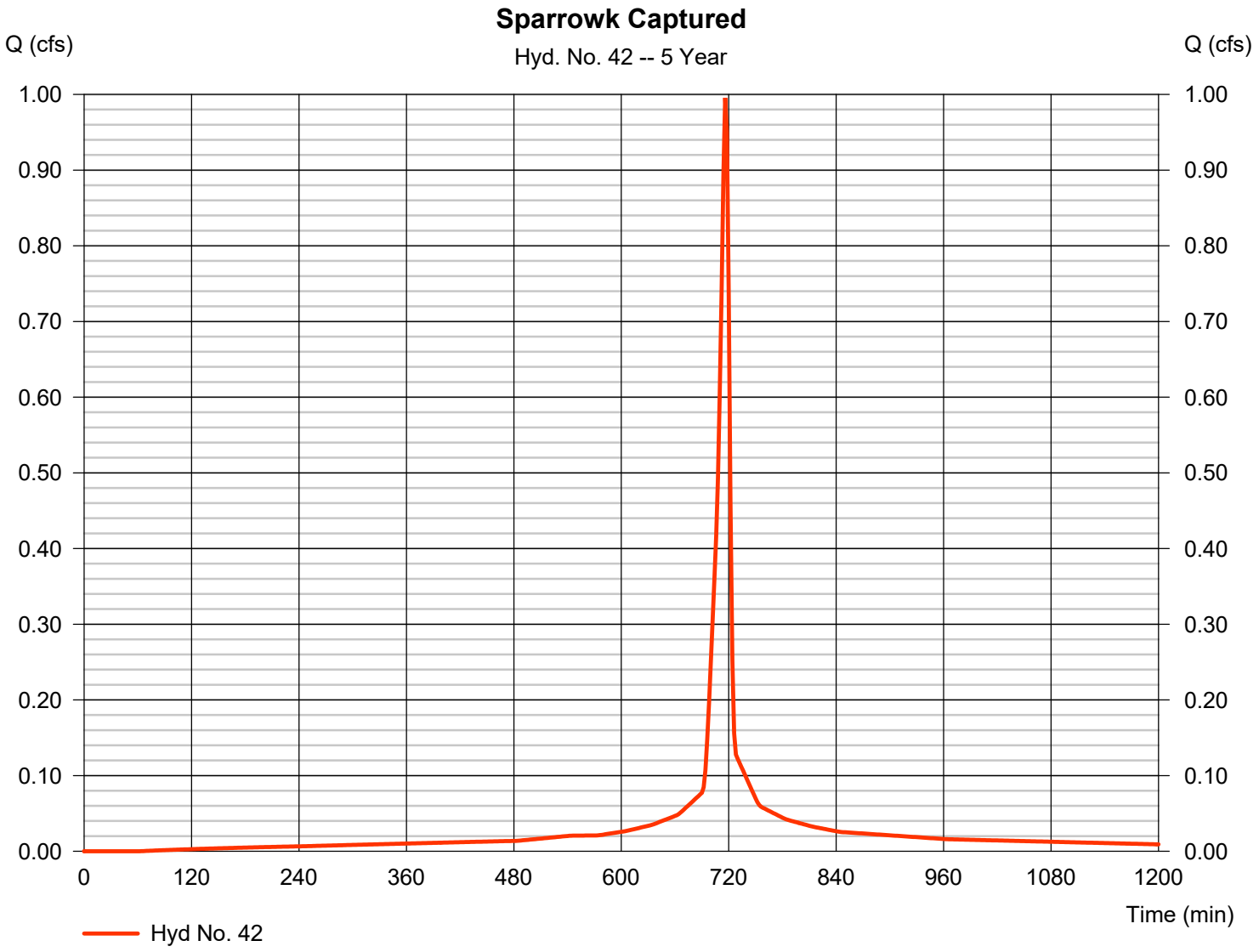
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 42

Sparrowk Captured

Hydrograph type	= SCS Runoff	Peak discharge	= 0.996 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,355 cuft
Drainage area	= 0.180 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

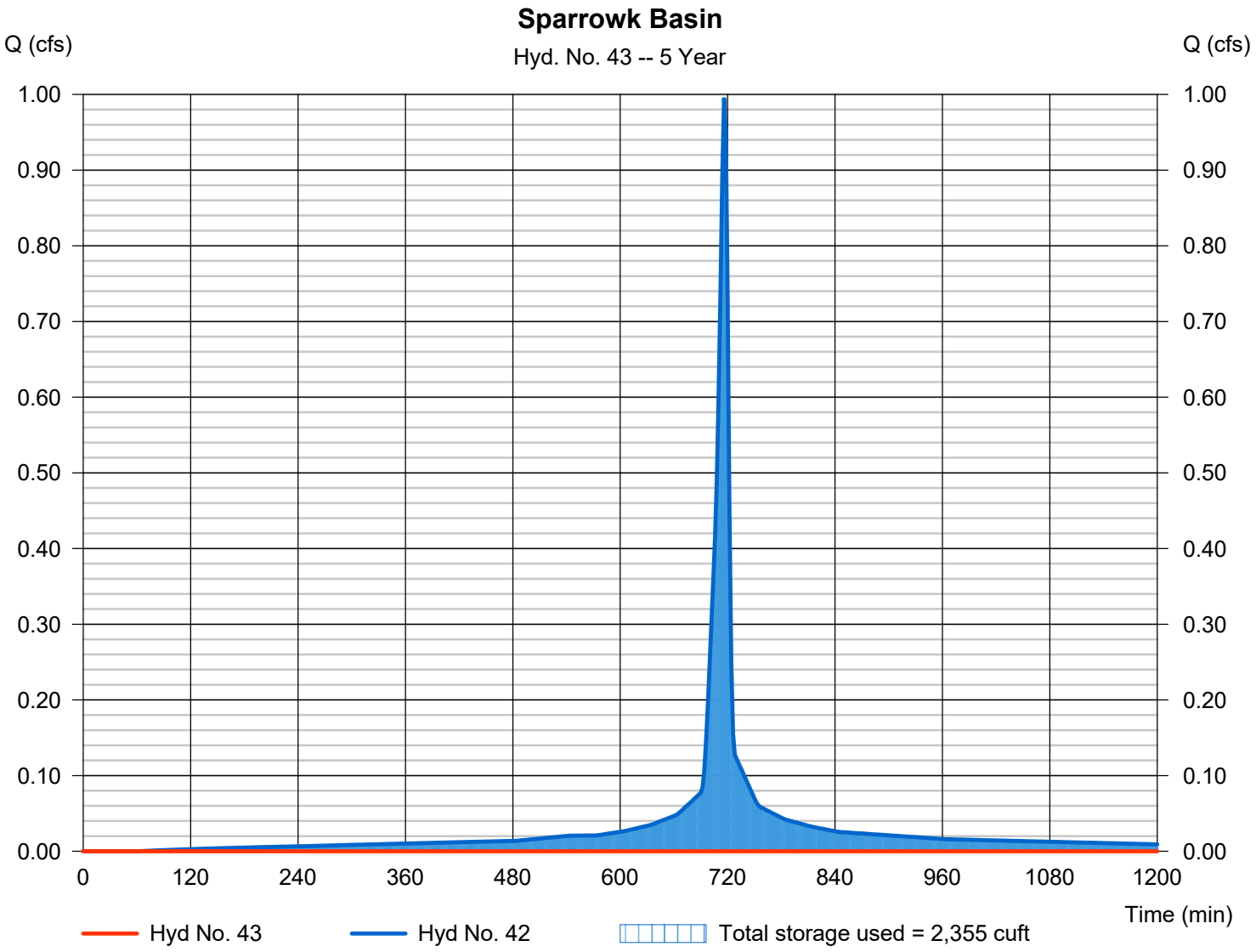
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 43

Sparrowk Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	5 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	42 - Sparrowk Captured	Max. Elevation	=	301.43 ft
Reservoir name	=	Sparrowk Basin	Max. Storage	=	2,355 cuft

Storage Indication method used.



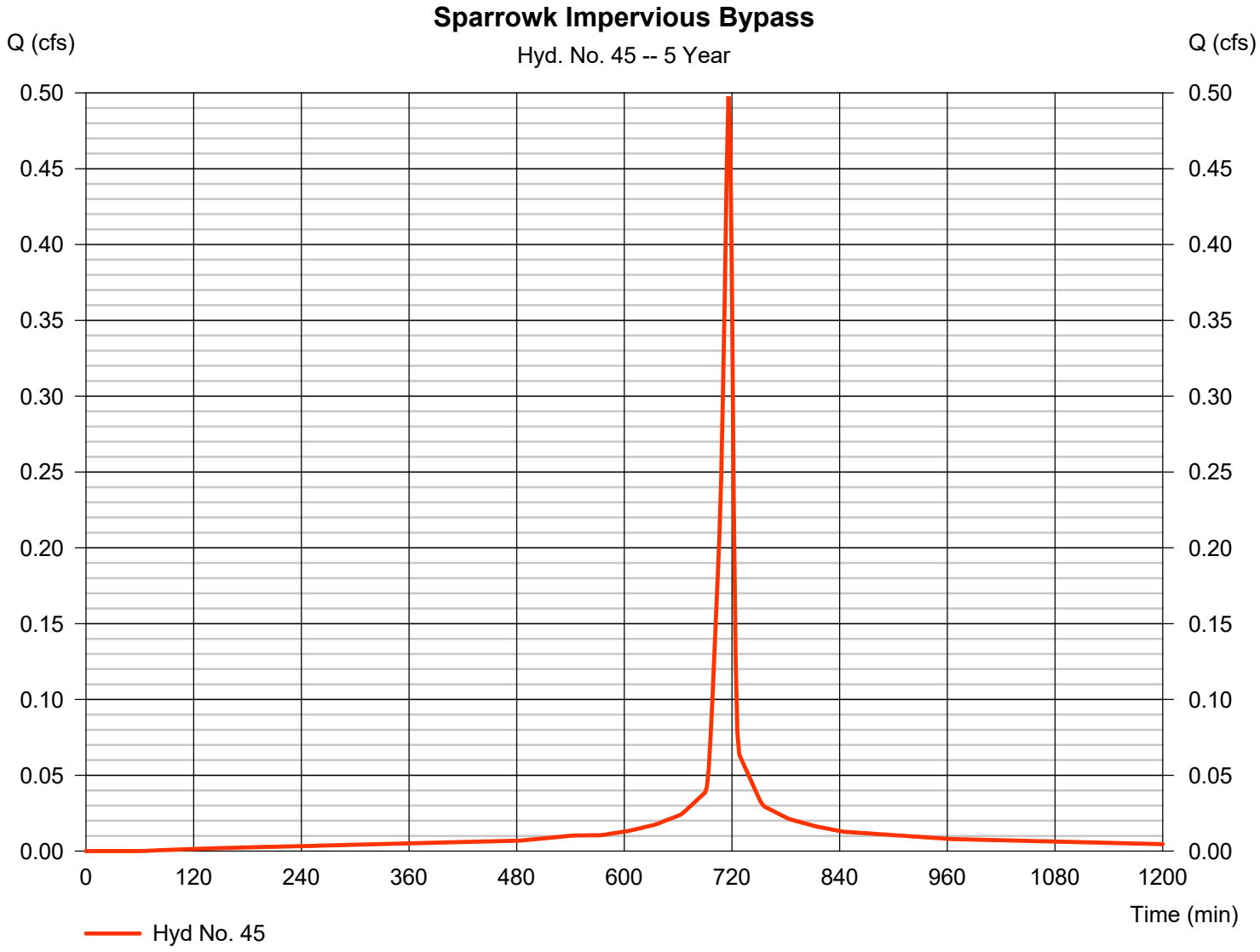
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 45

Sparrowk Impervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.498 cfs
Storm frequency	= 5 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,178 cuft
Drainage area	= 0.090 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.08 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



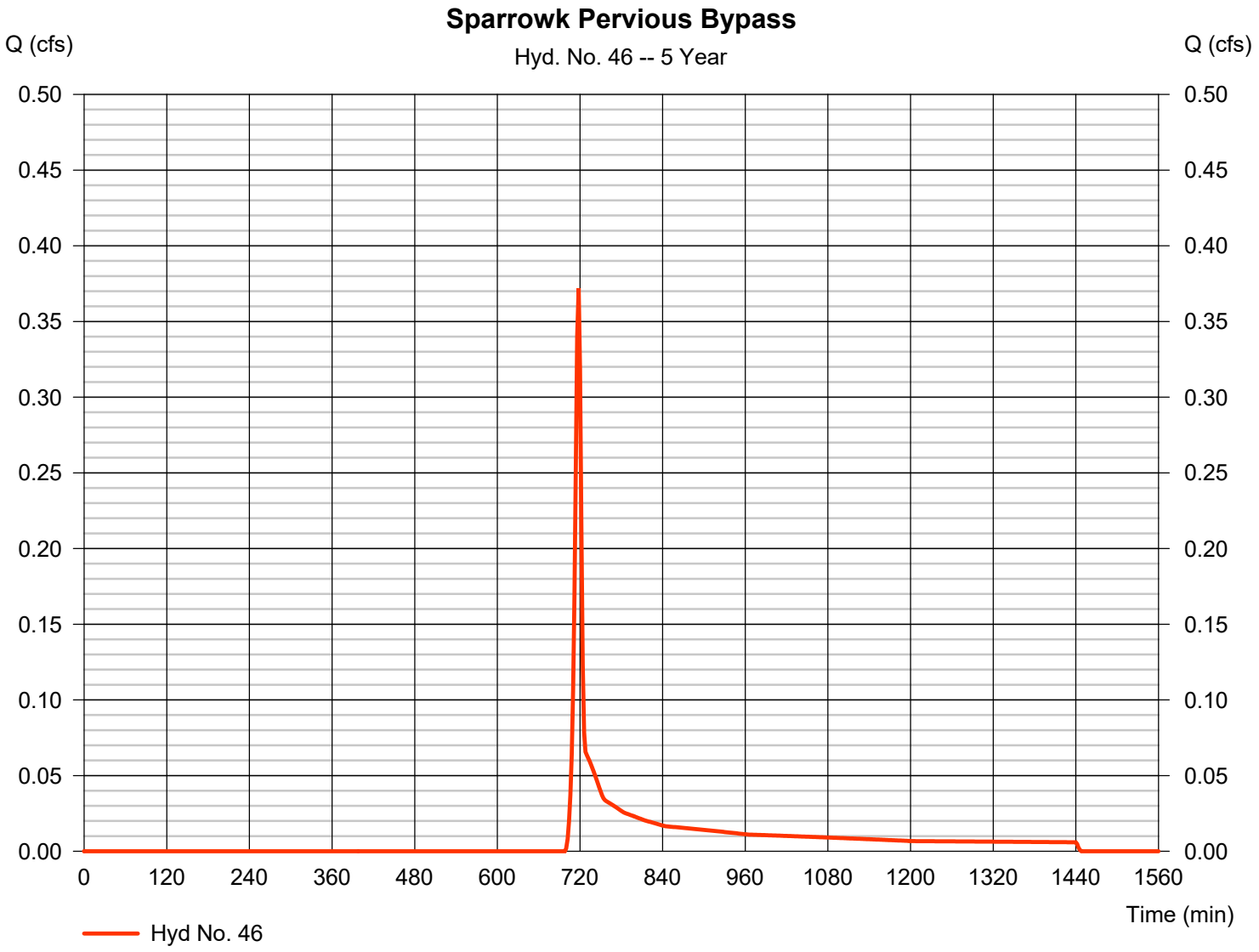
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 46

Sparrowk Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.372 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	784 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.08 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



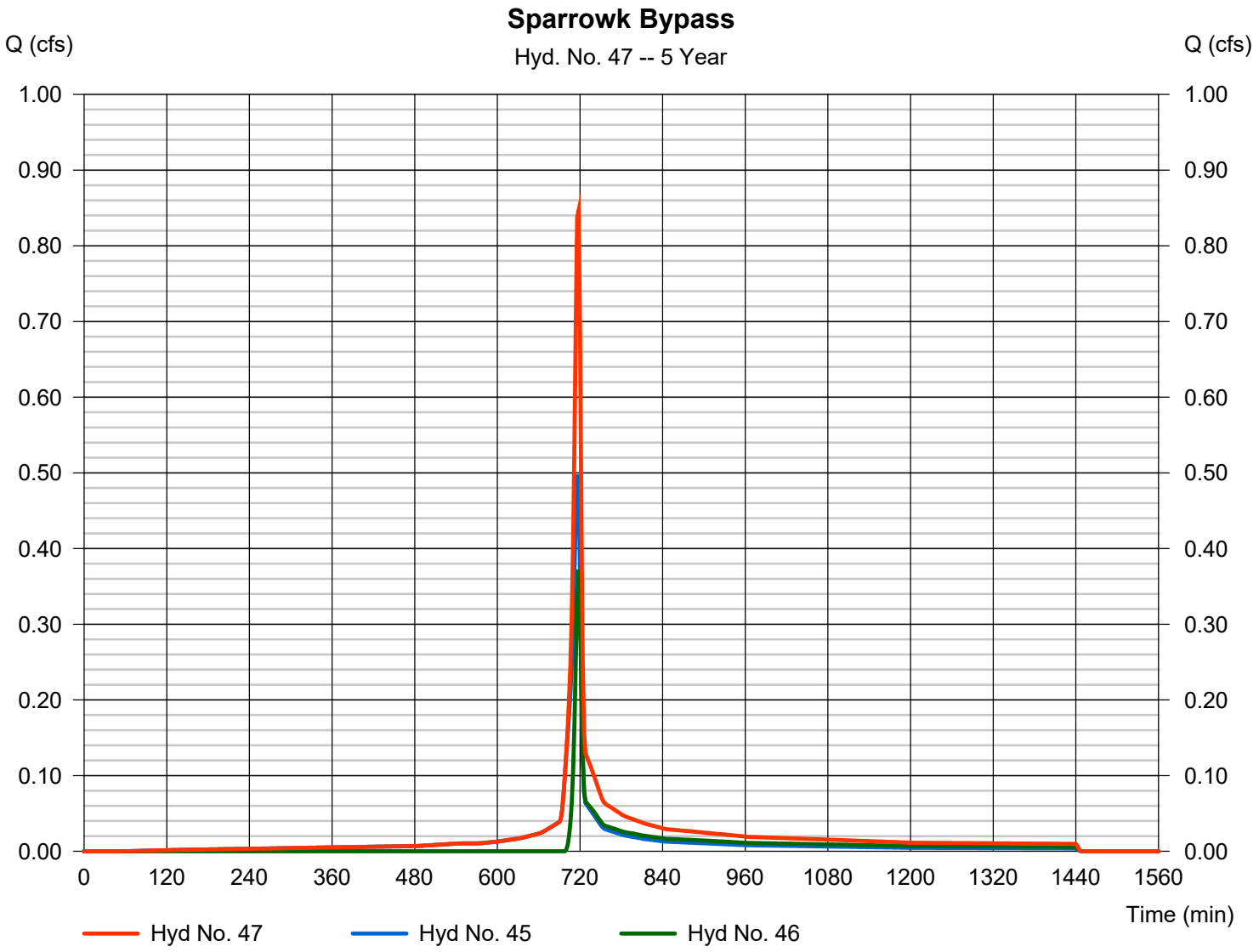
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 47

Sparrowk Bypass

Hydrograph type	=	Combine	Peak discharge	=	0.847 cfs
Storm frequency	=	5 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,962 cuft
Inflow hyds.	=	45, 46	Contrib. drain. area	=	0.360 ac



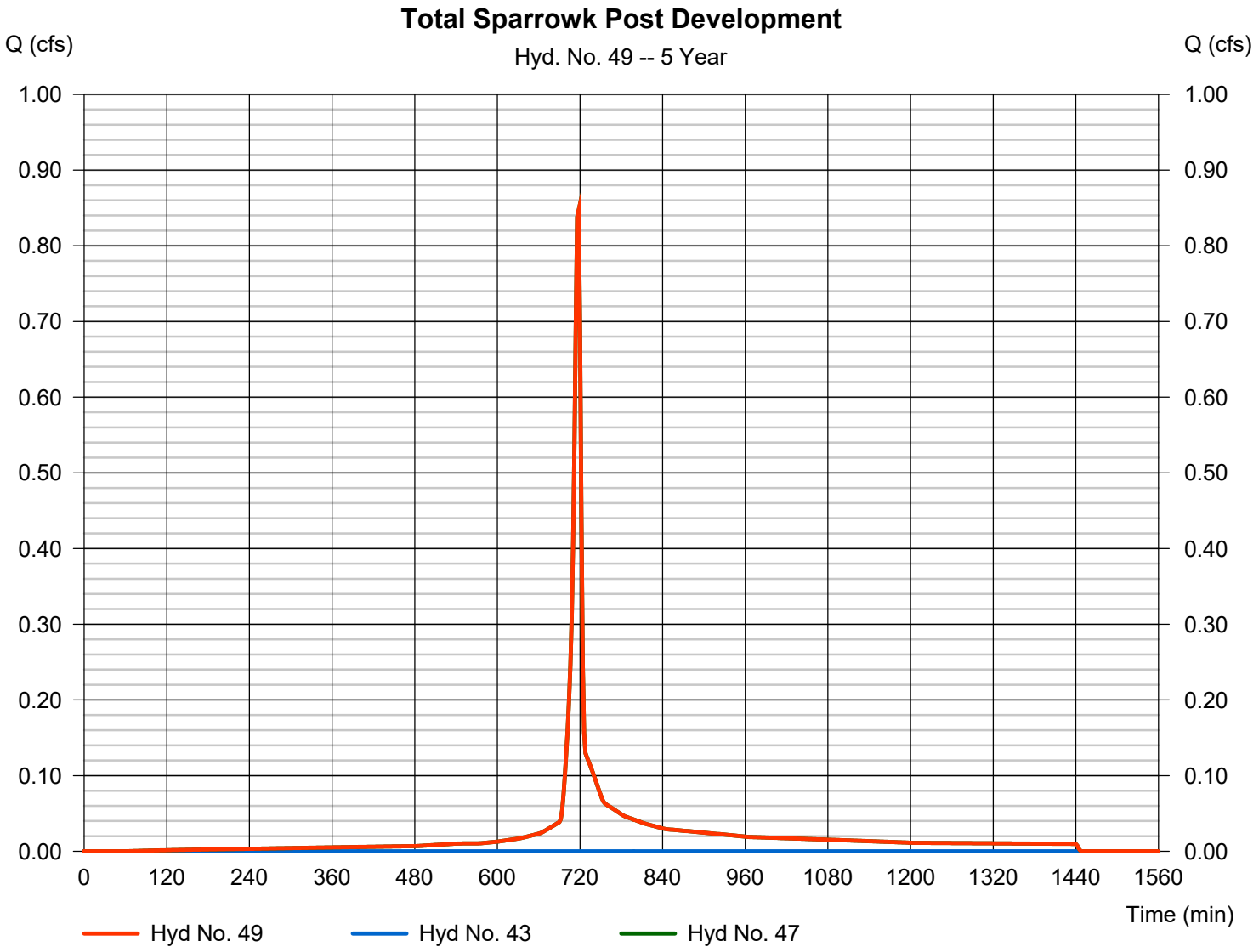
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 49

Total Sparrowk Post Development

Hydrograph type	= Combine	Peak discharge	= 0.847 cfs
Storm frequency	= 5 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,962 cuft
Inflow hyds.	= 43, 47	Contrib. drain. area	= 0.000 ac



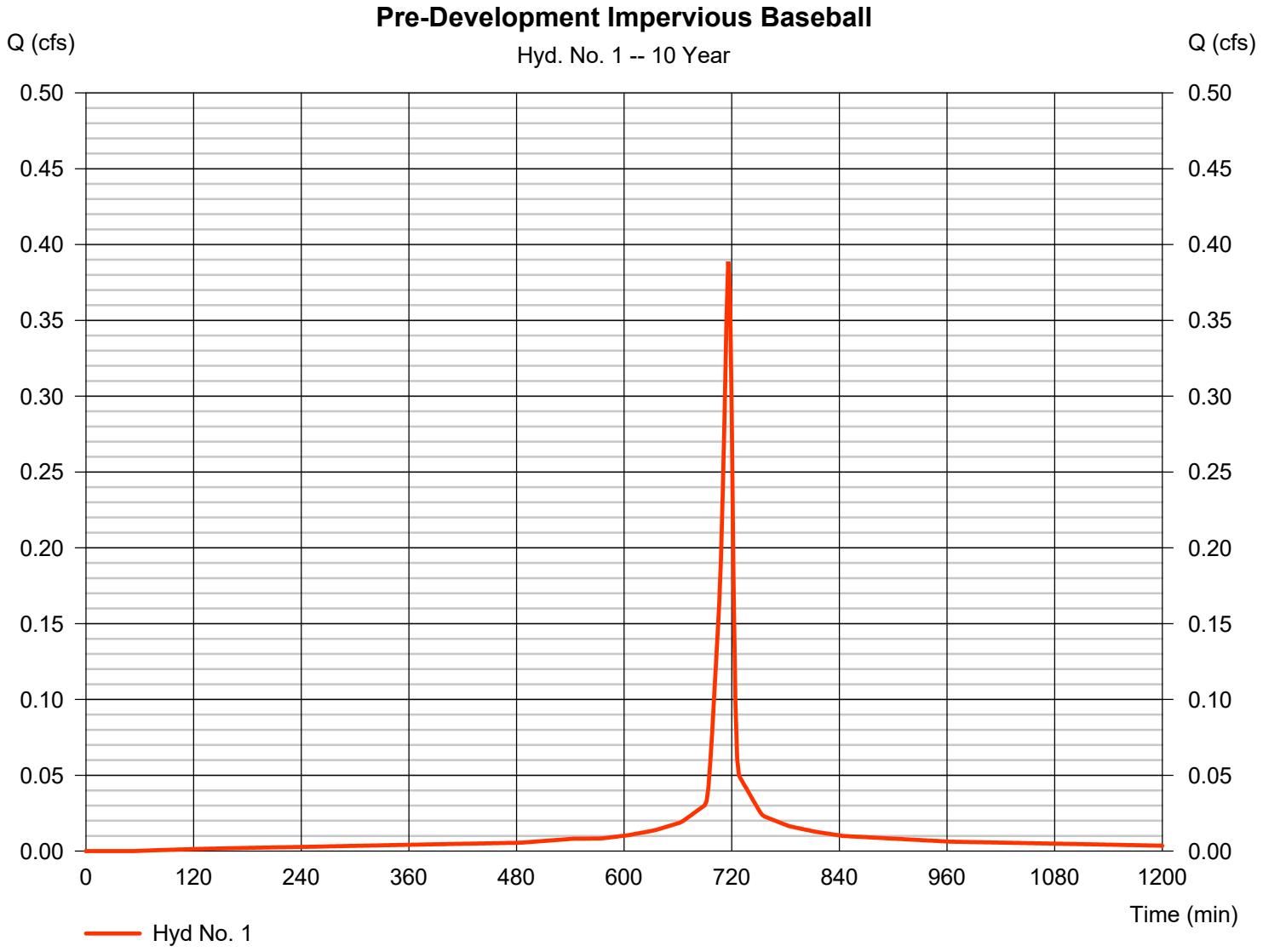
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 1

Pre-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.389 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 926 cuft
Drainage area	= 0.060 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



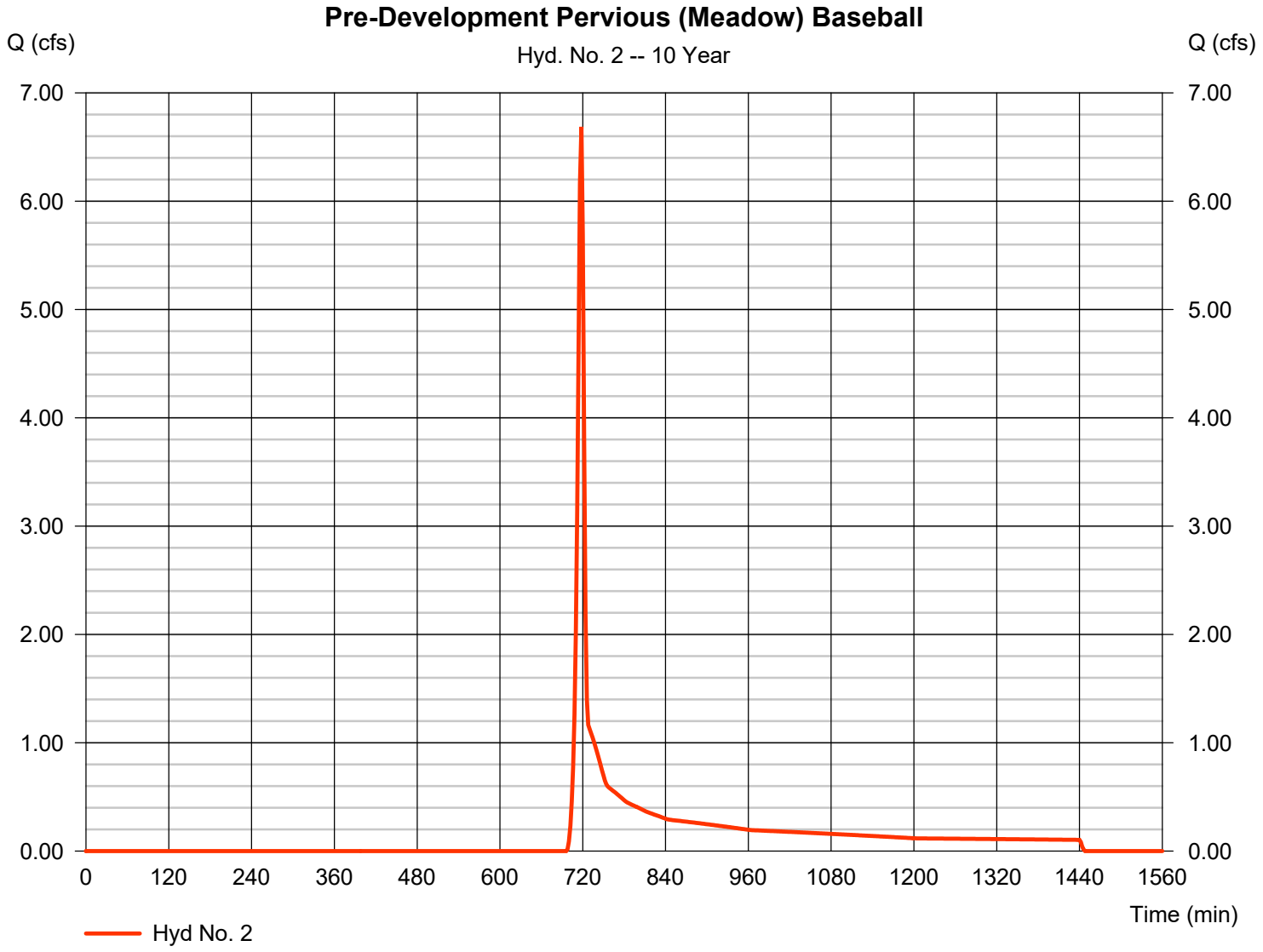
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 2

Pre-Development Pervious (Meadow) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 6.686 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 13,970 cuft
Drainage area	= 3.930 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



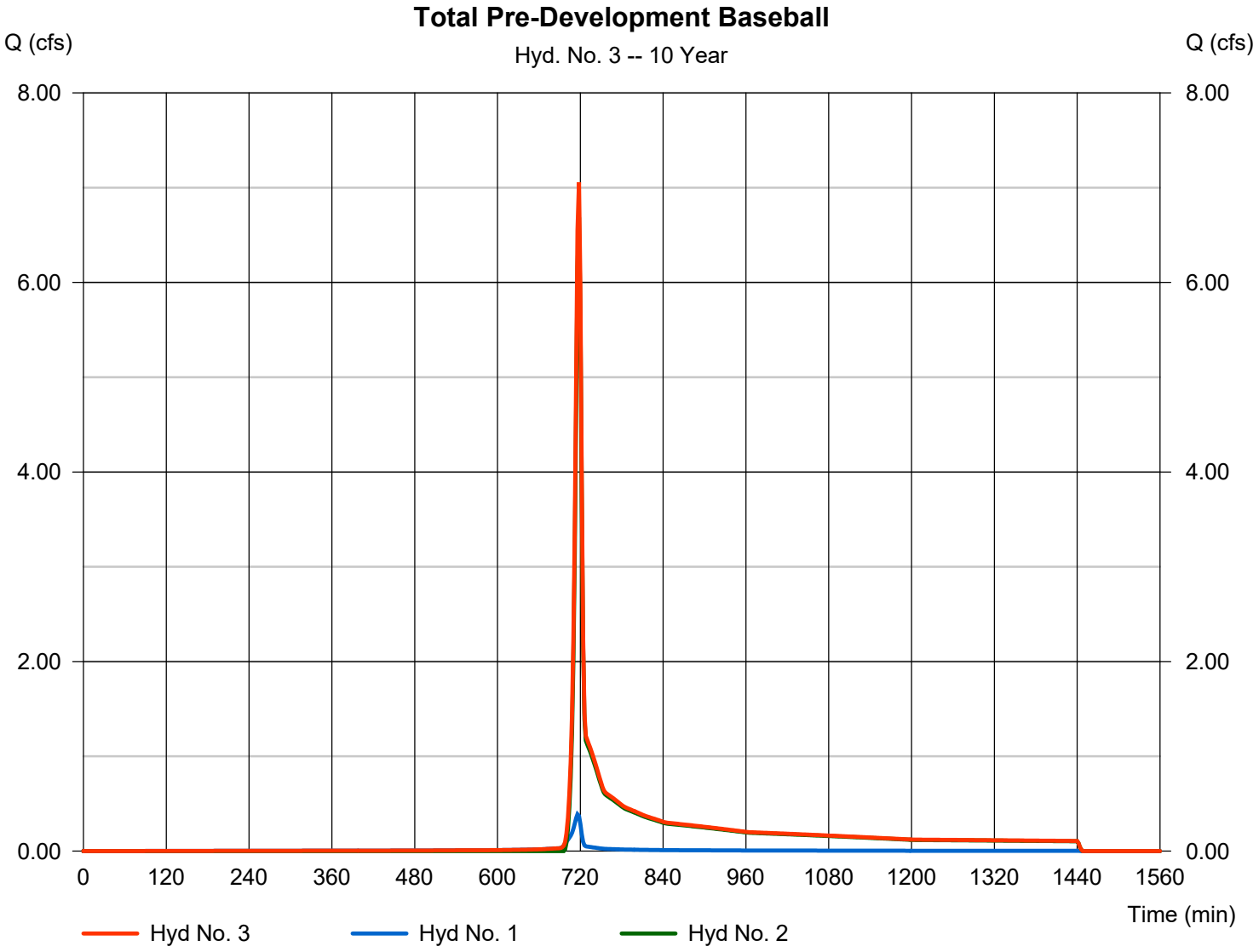
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 3

Total Pre-Development Baseball

Hydrograph type	= Combine	Peak discharge	= 7.057 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 14,896 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 3.990 ac



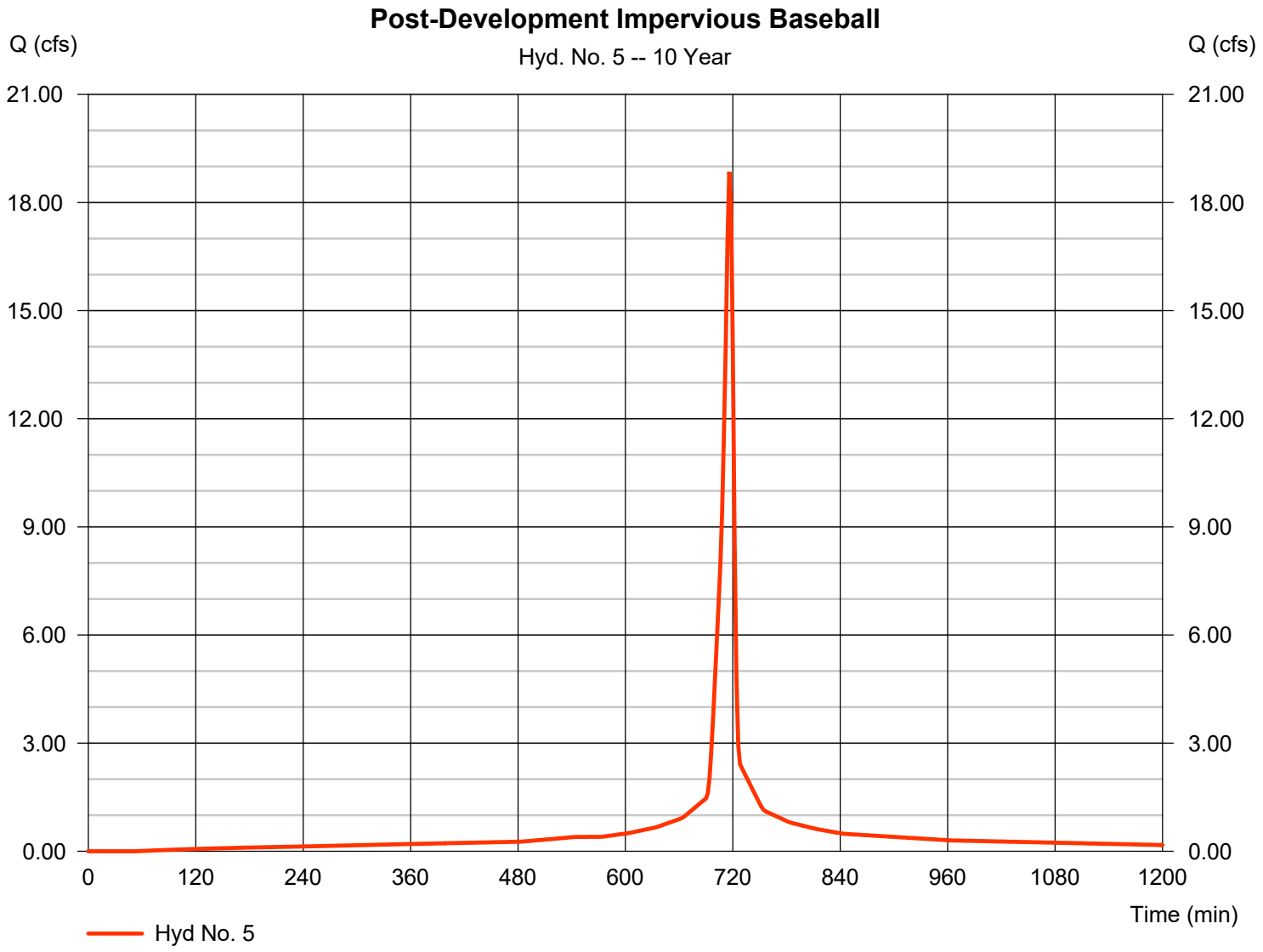
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 5

Post-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 18.85 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 44,896 cuft
Drainage area	= 2.910 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



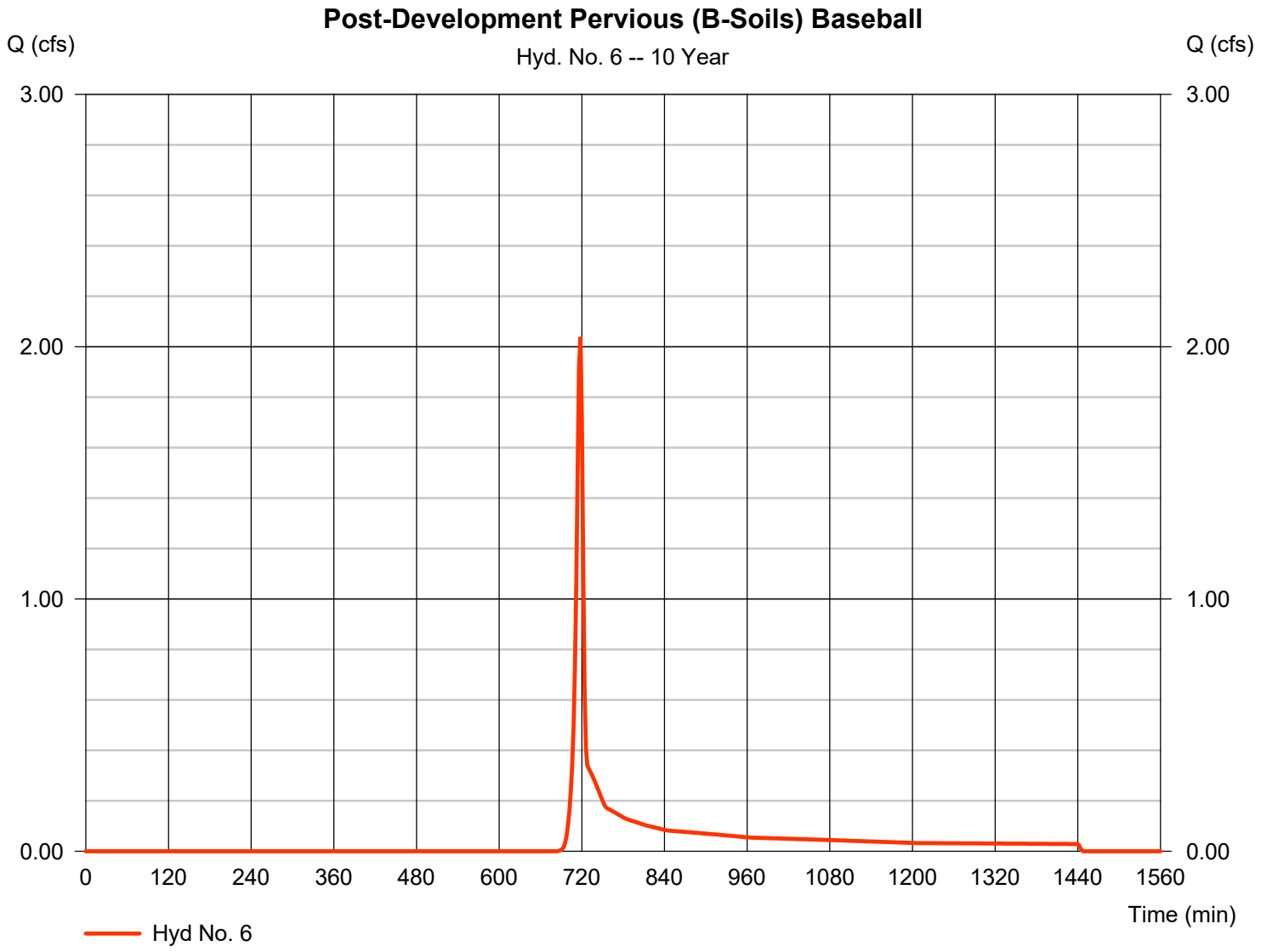
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 6

Post-Development Pervious (B-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 2.038 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 4,155 cuft
Drainage area	= 0.990 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



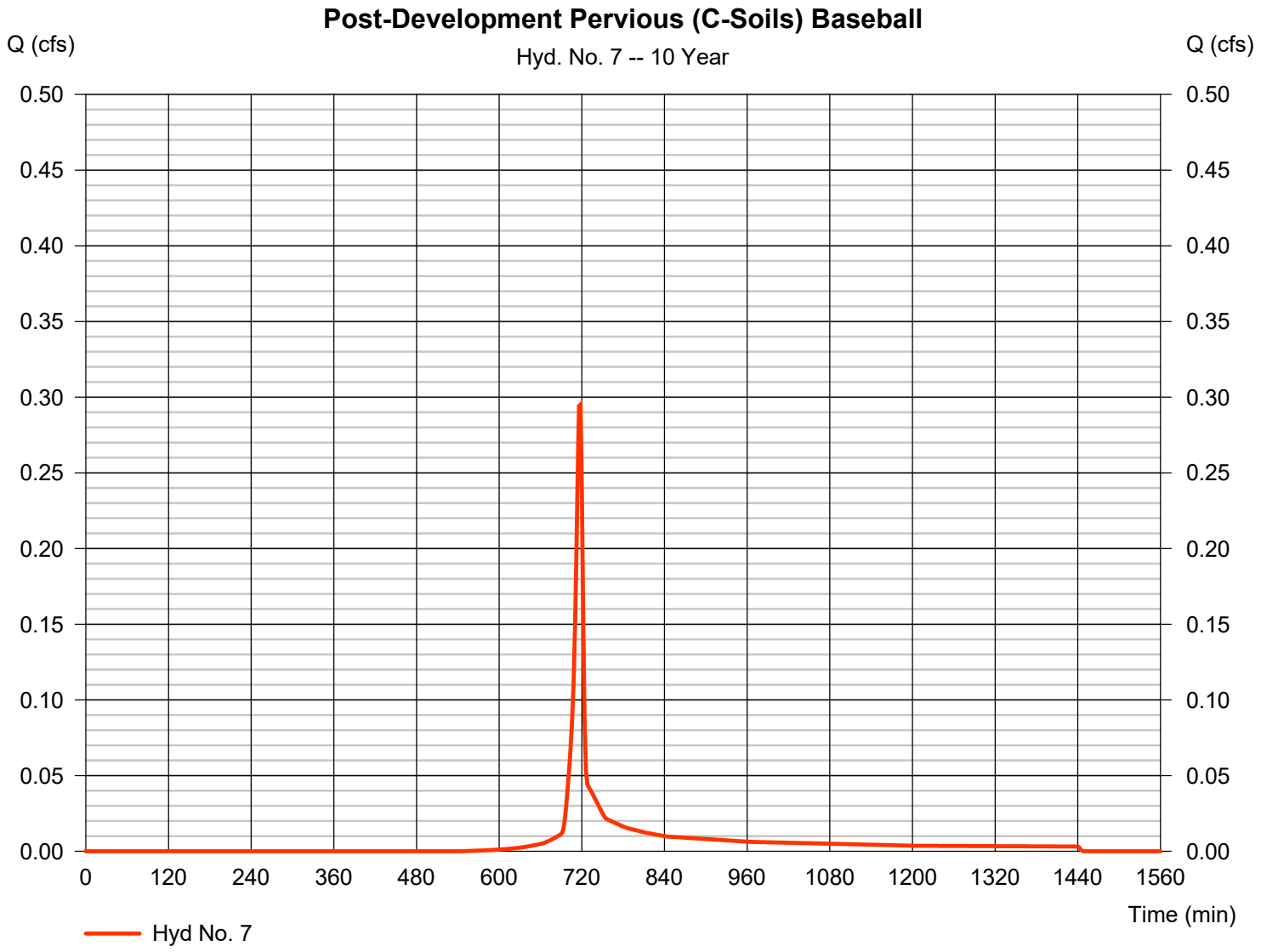
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 7

Post-Development Pervious (C-Soils) Baseball

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.295 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	594 cuft
Drainage area	=	0.080 ac	Curve number	=	74
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



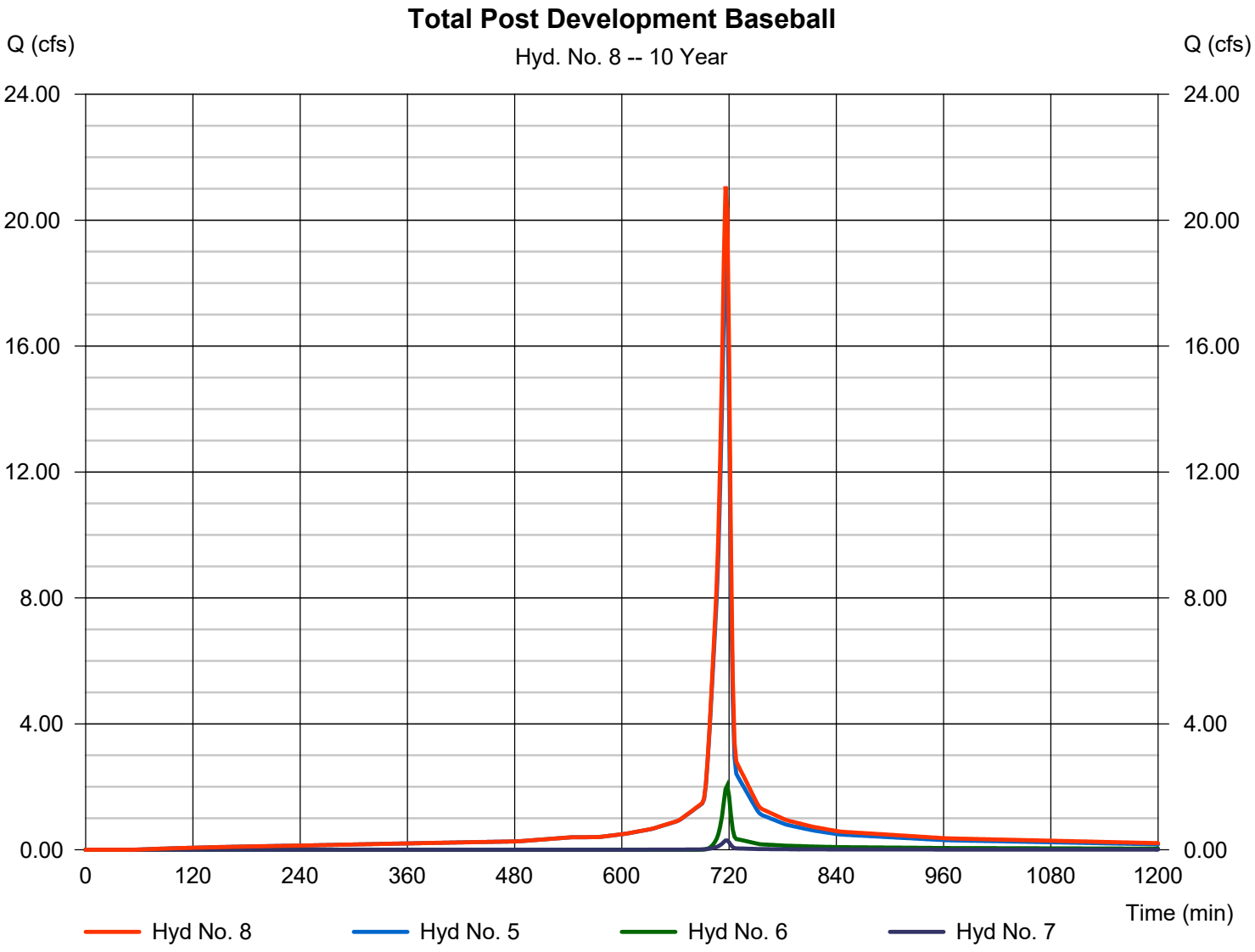
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 8

Total Post Development Baseball

Hydrograph type	= Combine	Peak discharge	= 21.07 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 49,645 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 3.980 ac



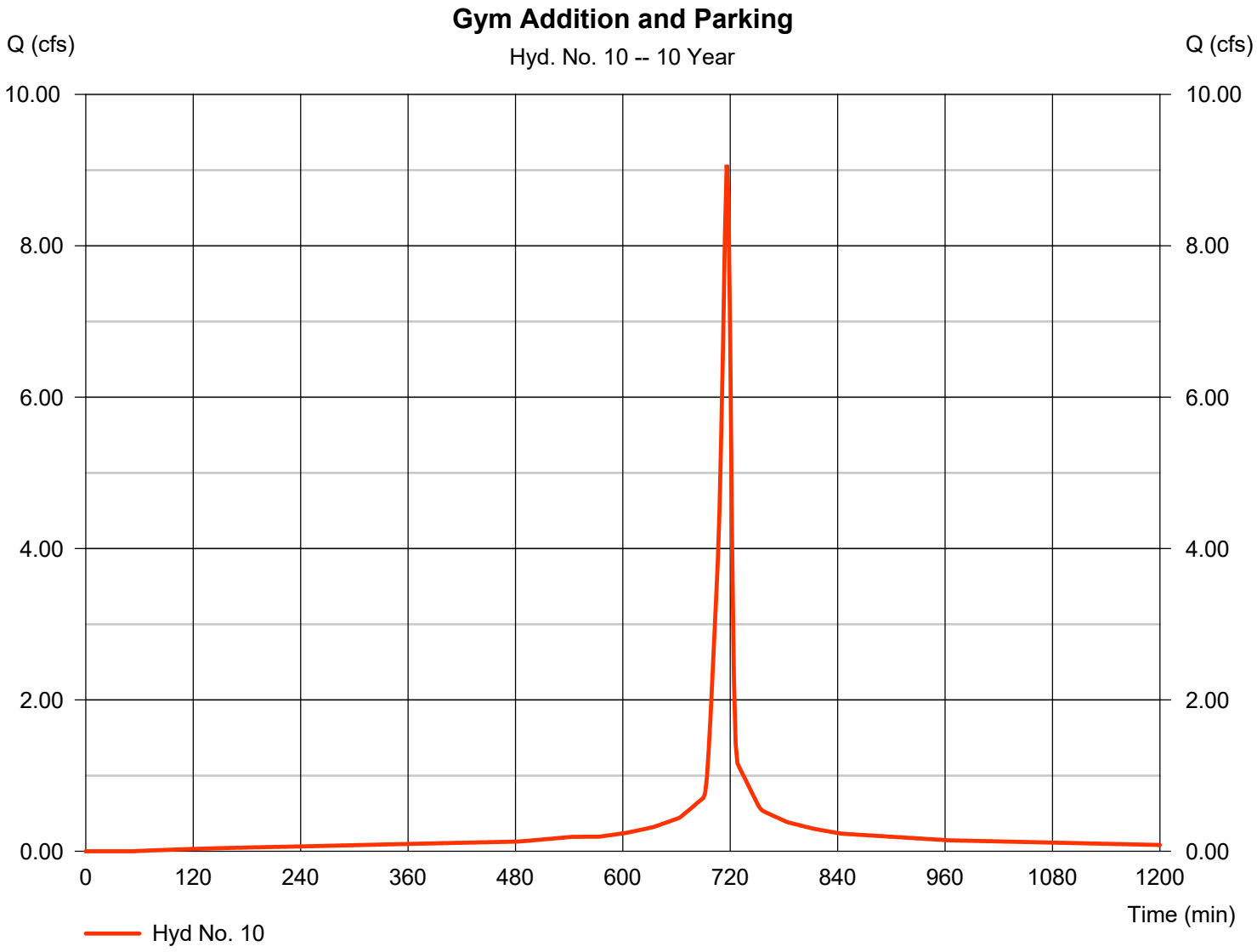
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 10

Gym Addition and Parking

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.071 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	21,600 cuft
Drainage area	=	1.400 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



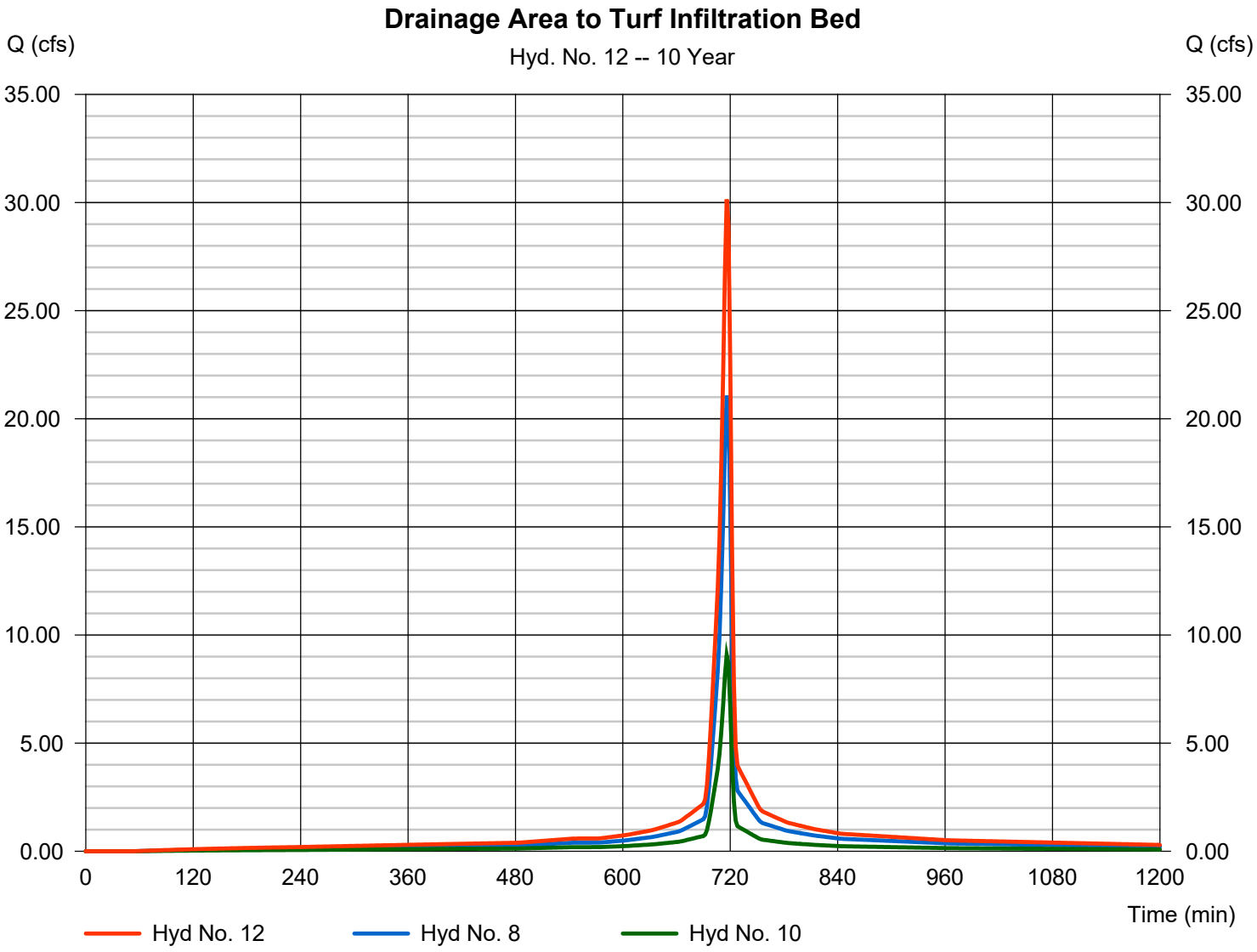
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 12

Drainage Area to Turf Infiltration Bed

Hydrograph type	=	Combine	Peak discharge	=	30.14 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	71,244 cuft
Inflow hyds.	=	8, 10	Contrib. drain. area	=	1.400 ac



Hydrograph Report

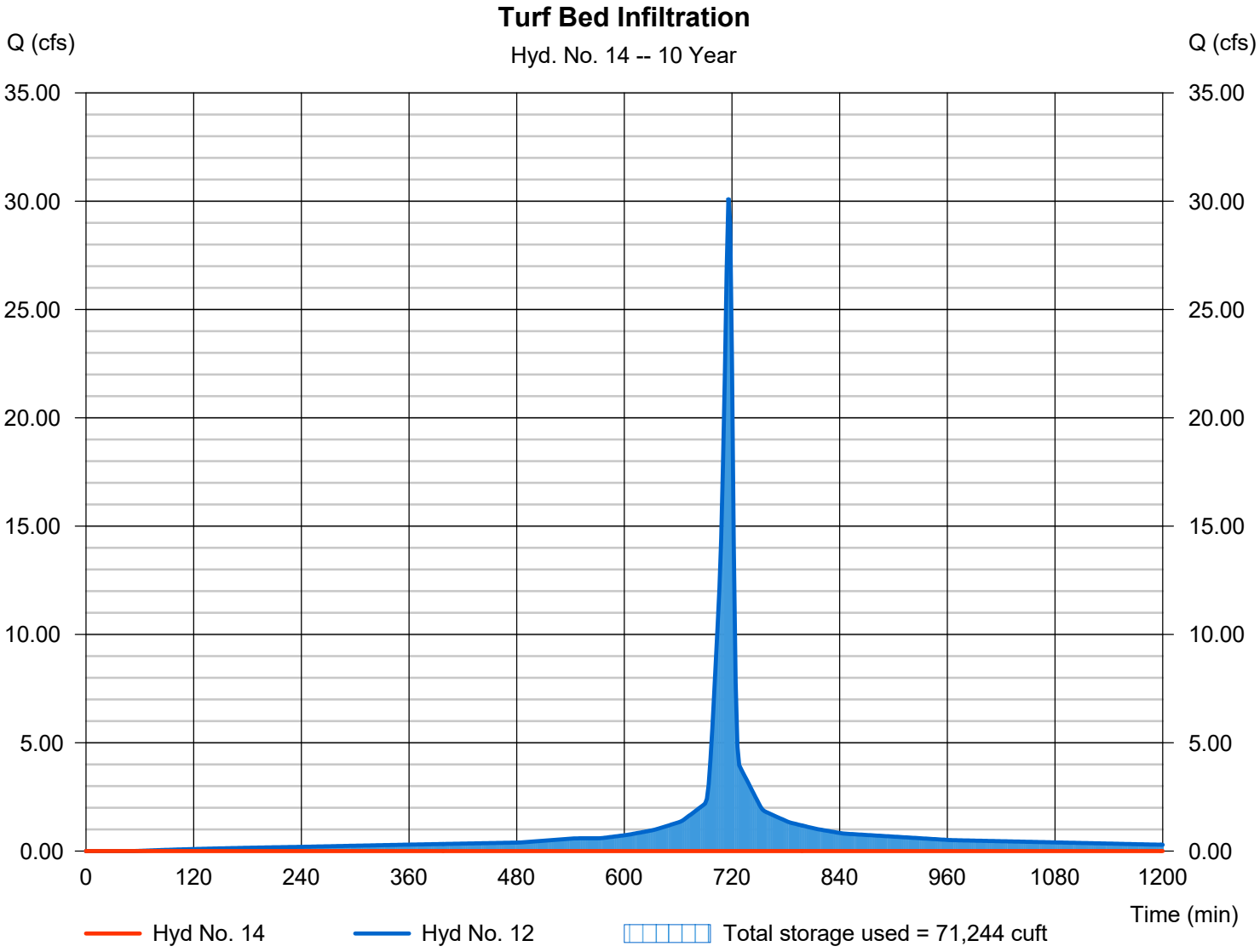
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 14

Turf Bed Infiltration

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	10 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	12 - Drainage Area to Turf Infiltration Bed	Max. Elevation	=	313.92 ft
Reservoir name	=	Turf	Max. Storage	=	71,244 cuft

Storage Indication method used.



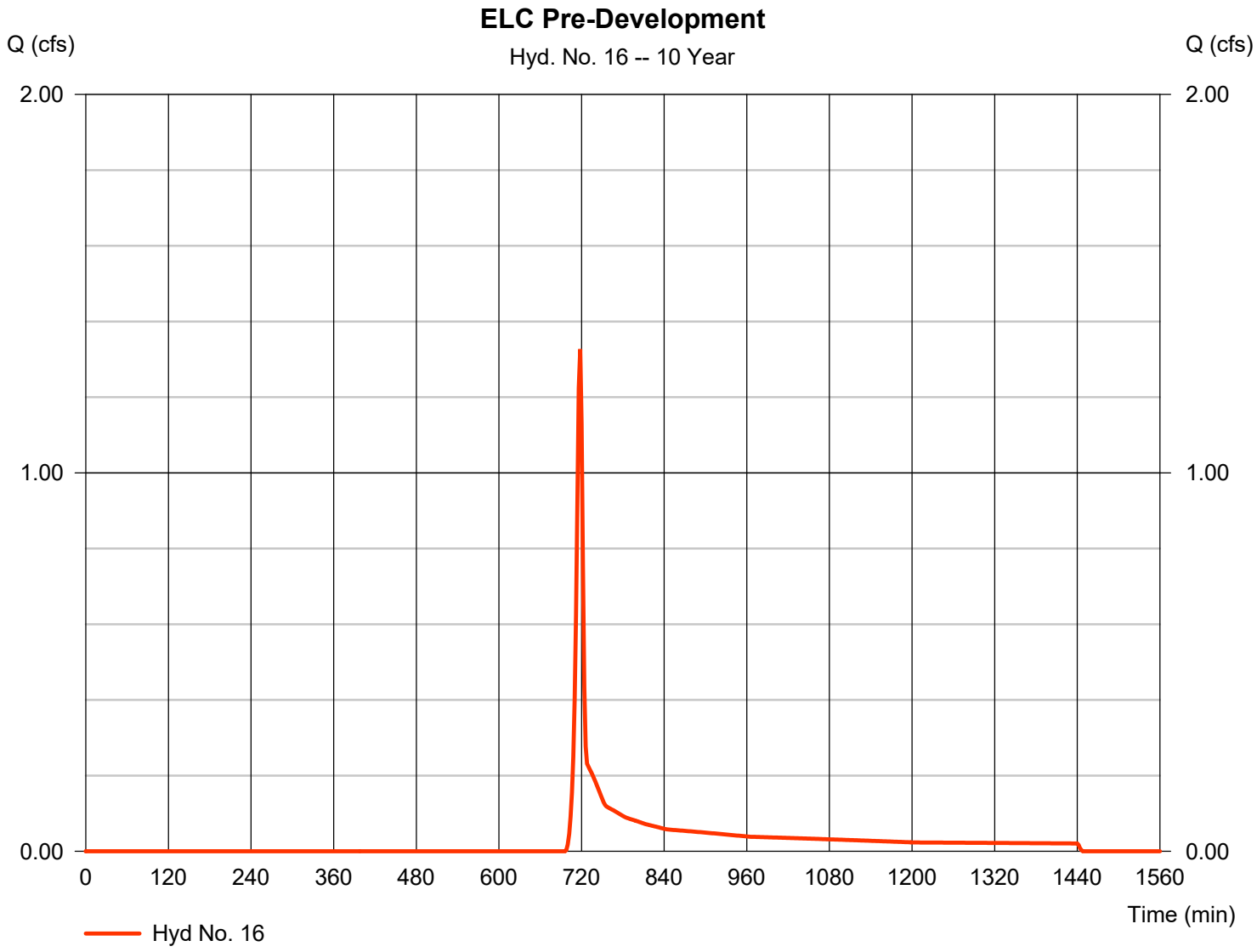
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 16

ELC Pre-Development

Hydrograph type	= SCS Runoff	Peak discharge	= 1.327 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,773 cuft
Drainage area	= 0.780 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



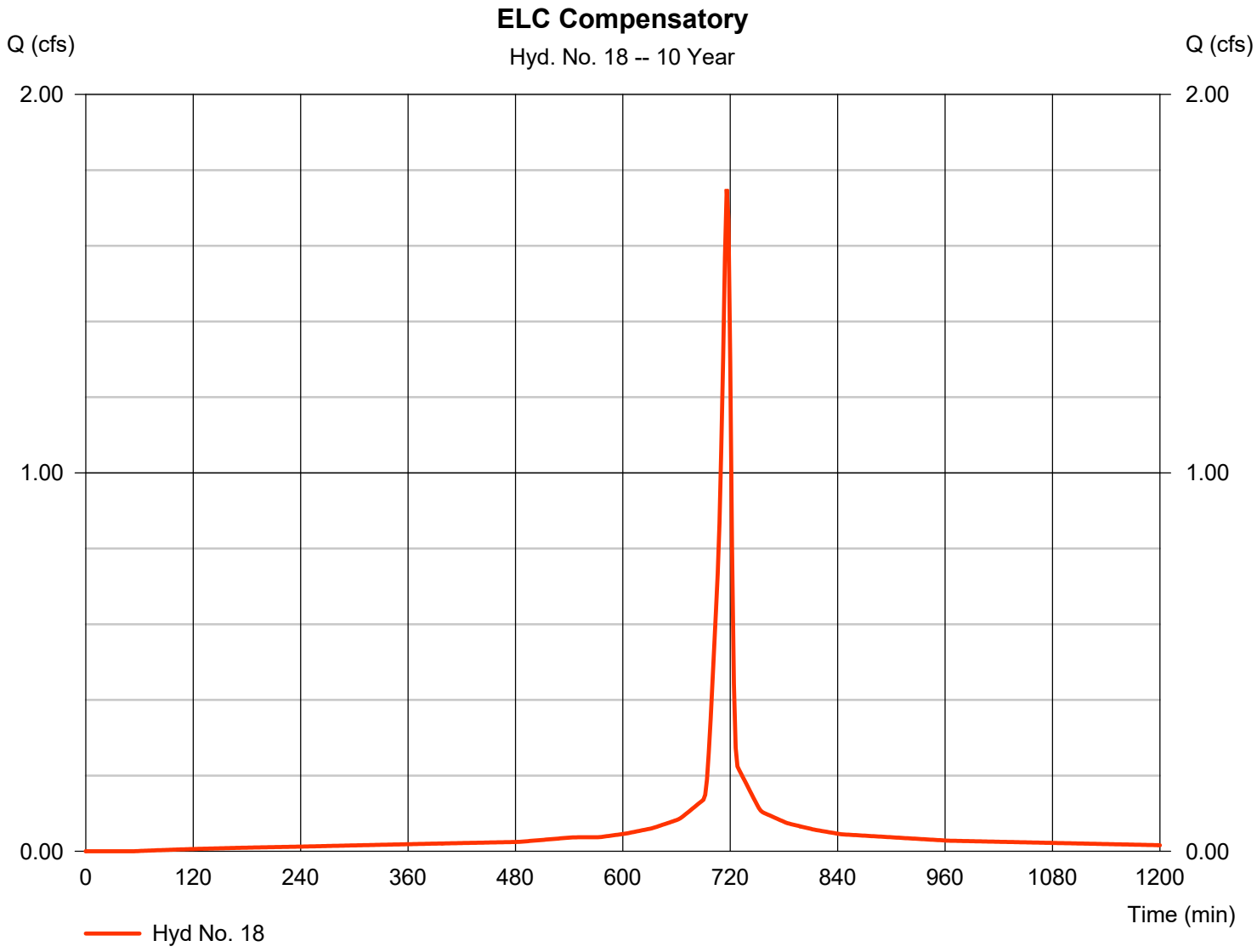
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 18

ELC Compensatory

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.749 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,166 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



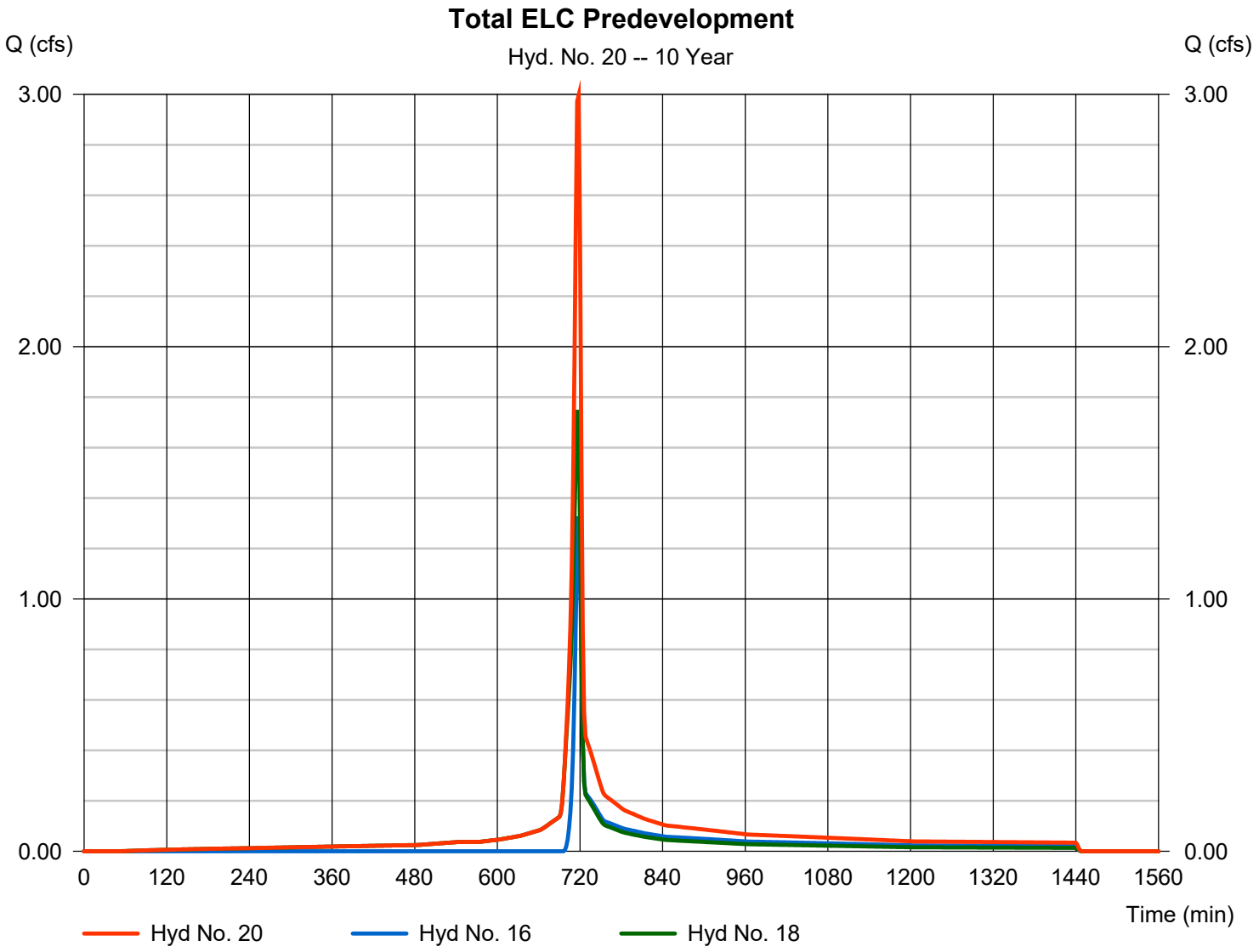
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 20

Total ELC Predevelopment

Hydrograph type	=	Combine	Peak discharge	=	2.996 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	6,938 cuft
Inflow hyds.	=	16, 18	Contrib. drain. area	=	1.050 ac



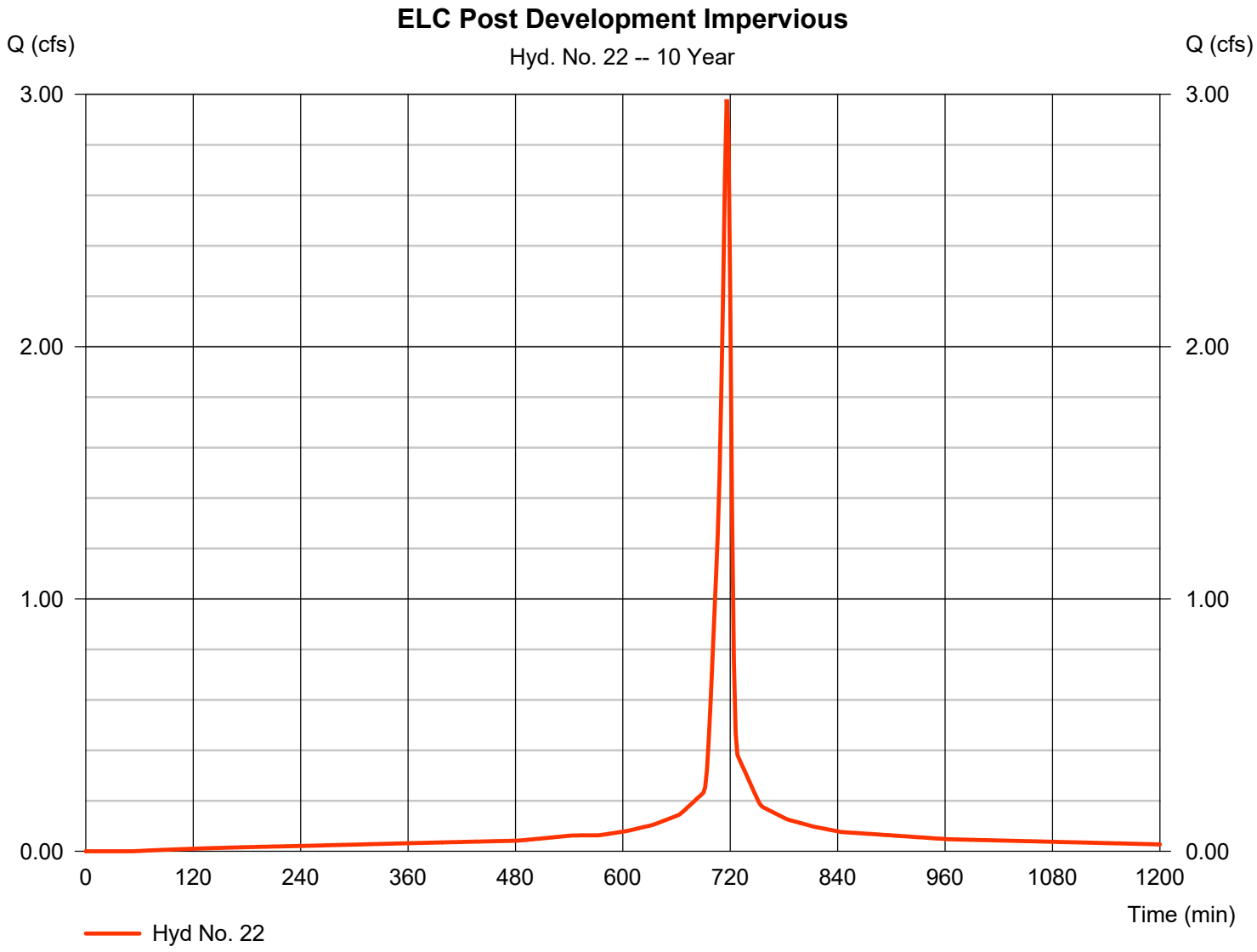
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 22

ELC Post Development Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.981 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	7,097 cuft
Drainage area	=	0.460 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



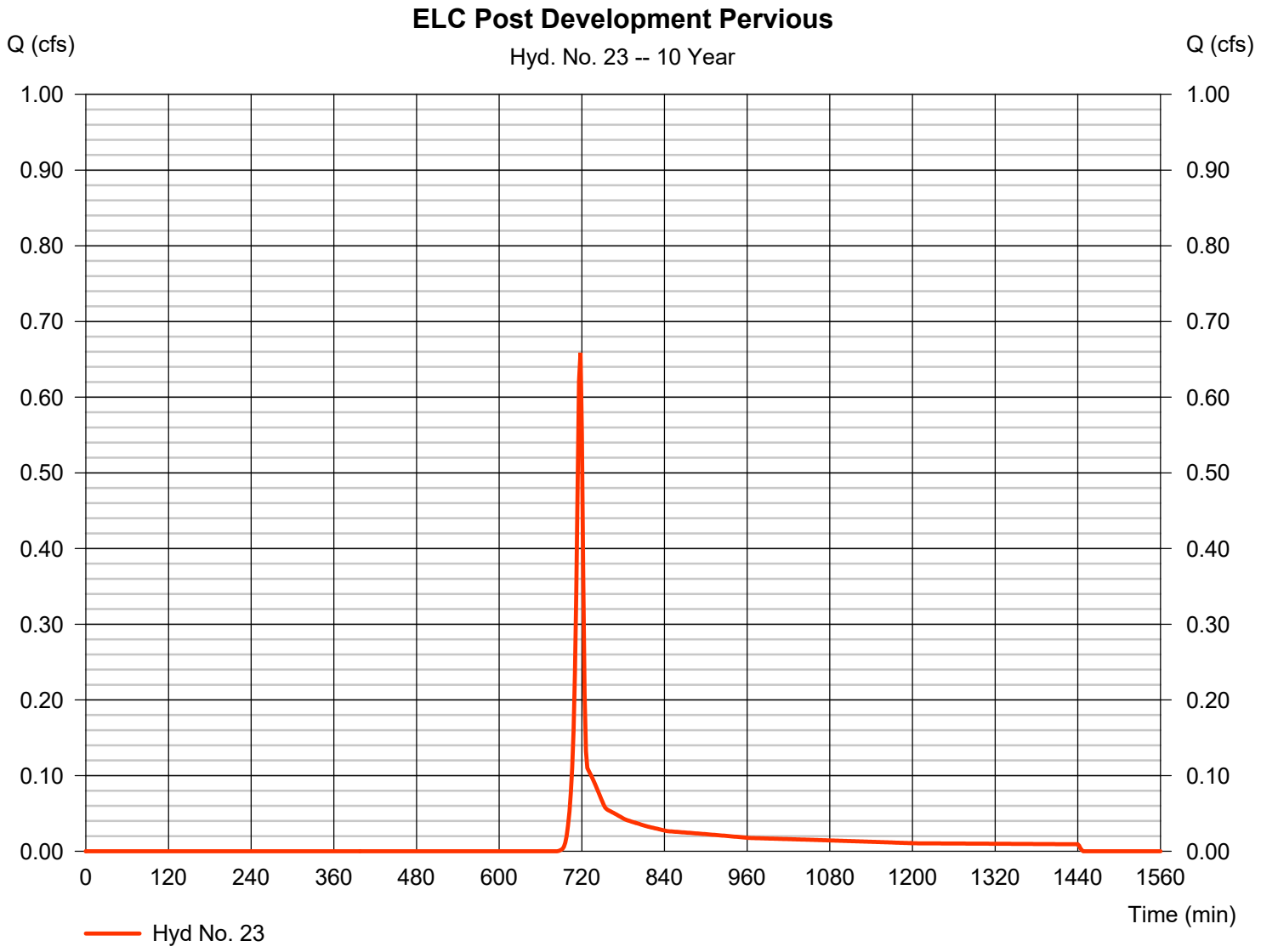
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 23

ELC Post Development Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.659 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,343 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



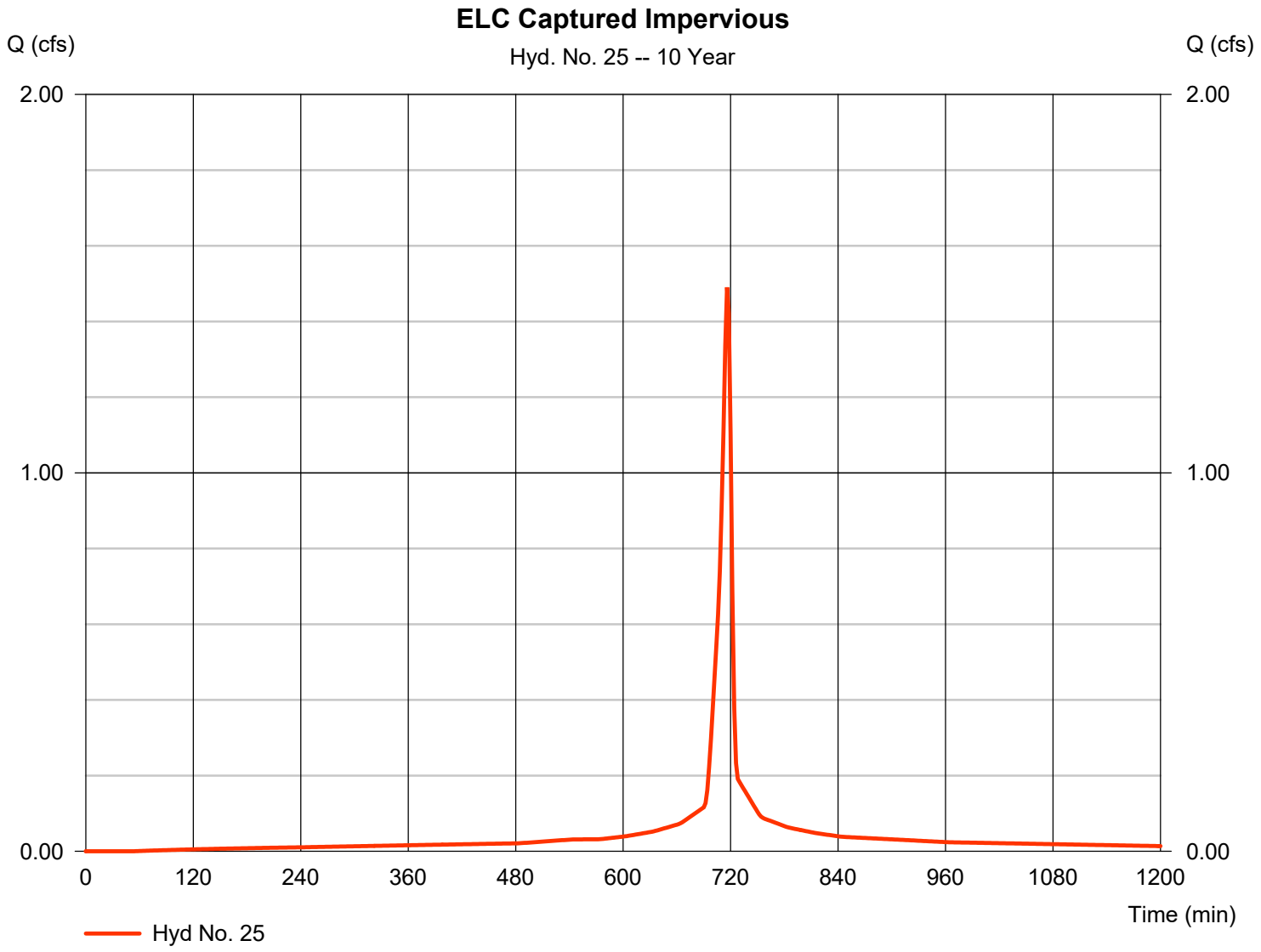
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 25

ELC Captured Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.490 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,548 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

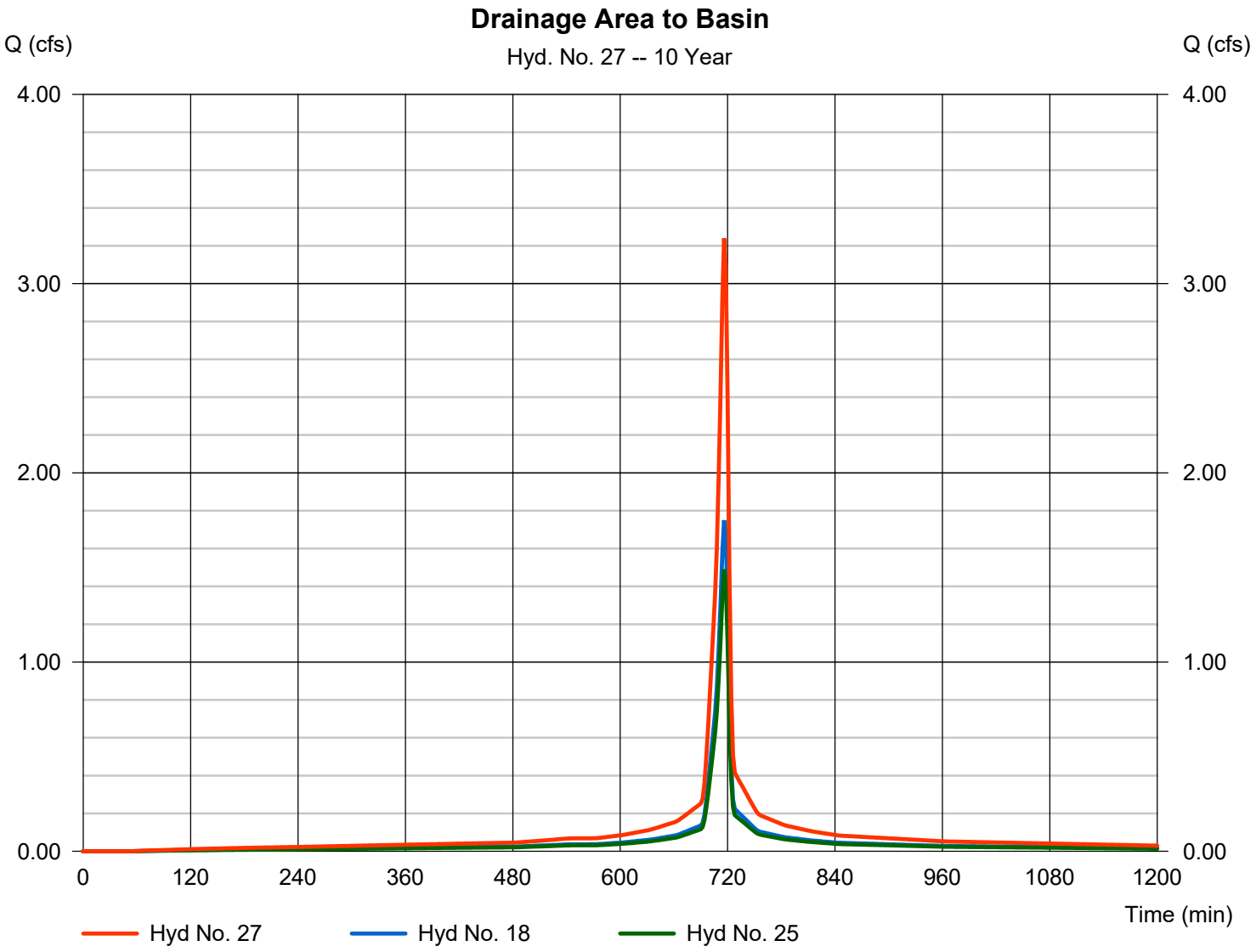


Hydrograph Report

Hyd. No. 27

Drainage Area to Basin

Hydrograph type	= Combine	Peak discharge	= 3.240 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 7,714 cuft
Inflow hyds.	= 18, 25	Contrib. drain. area	= 0.500 ac



Hydrograph Report

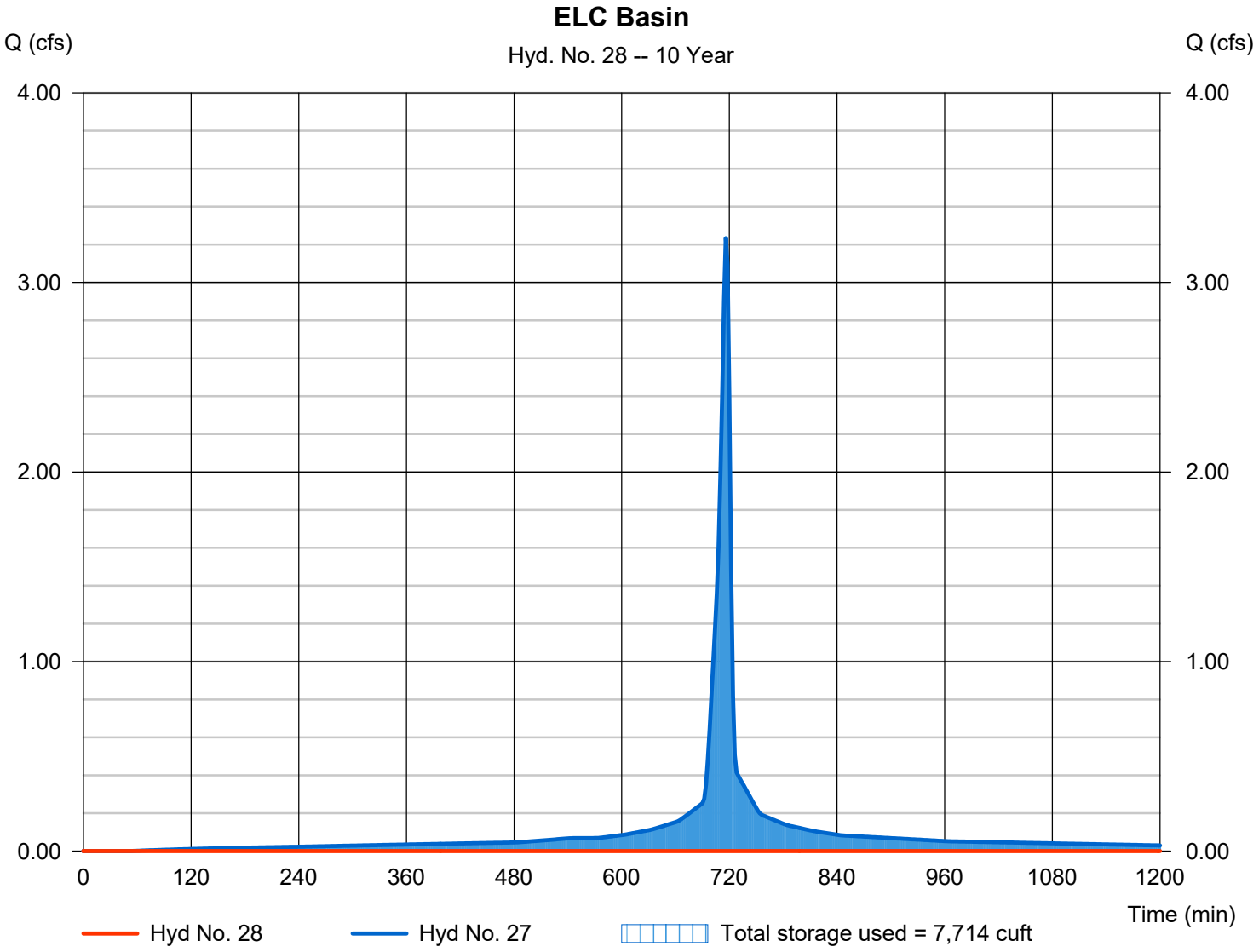
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 28

ELC Basin

Hydrograph type	= Reservoir	Peak discharge	= 0.000 cfs
Storm frequency	= 10 yrs	Time to peak	= n/a
Time interval	= 2 min	Hyd. volume	= 0 cuft
Inflow hyd. No.	= 27 - Drainage Area to Basin	Max. Elevation	= 316.67 ft
Reservoir name	= ELC Basin	Max. Storage	= 7,714 cuft

Storage Indication method used.



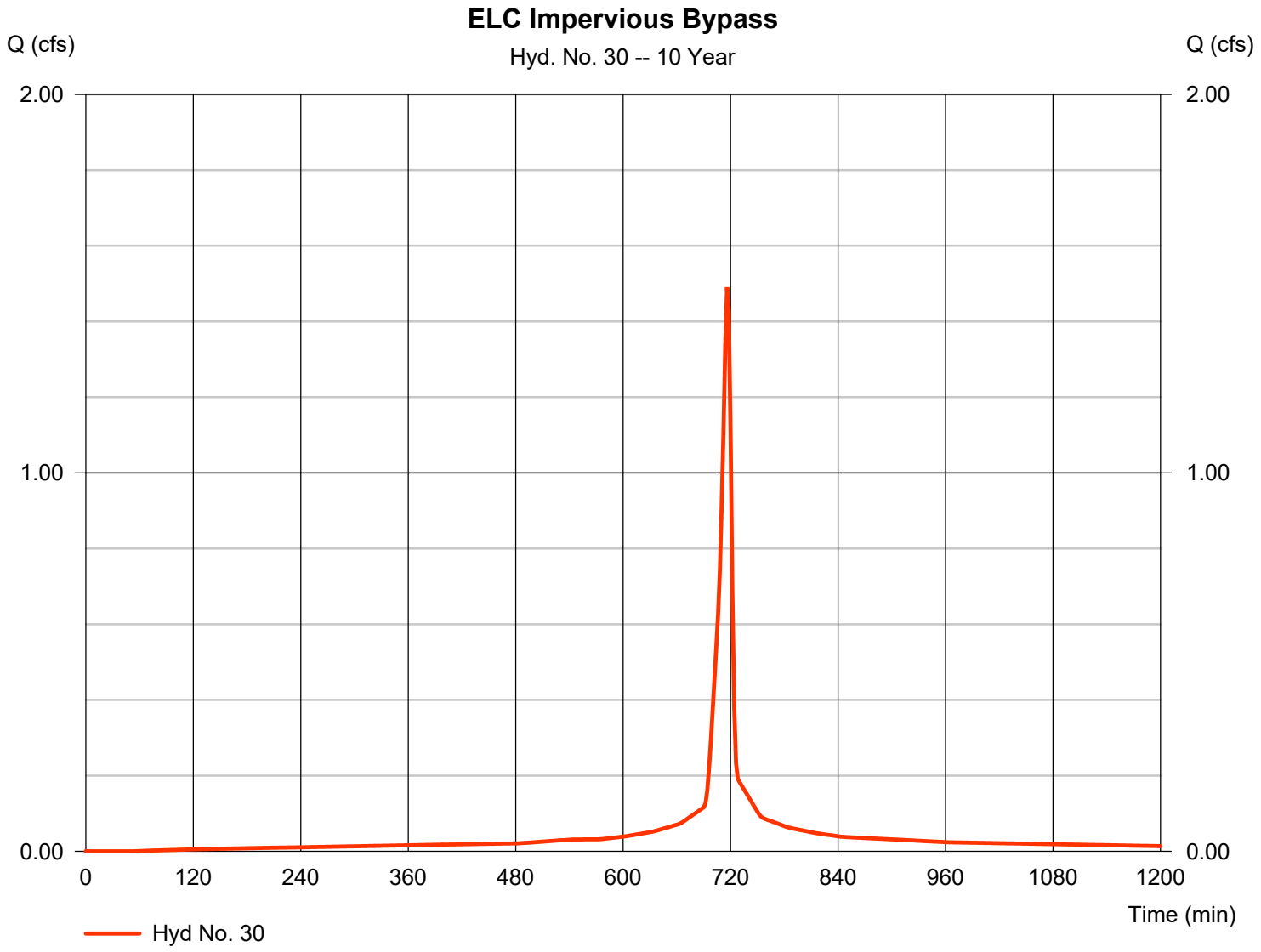
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 30

ELC Impervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.490 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,548 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



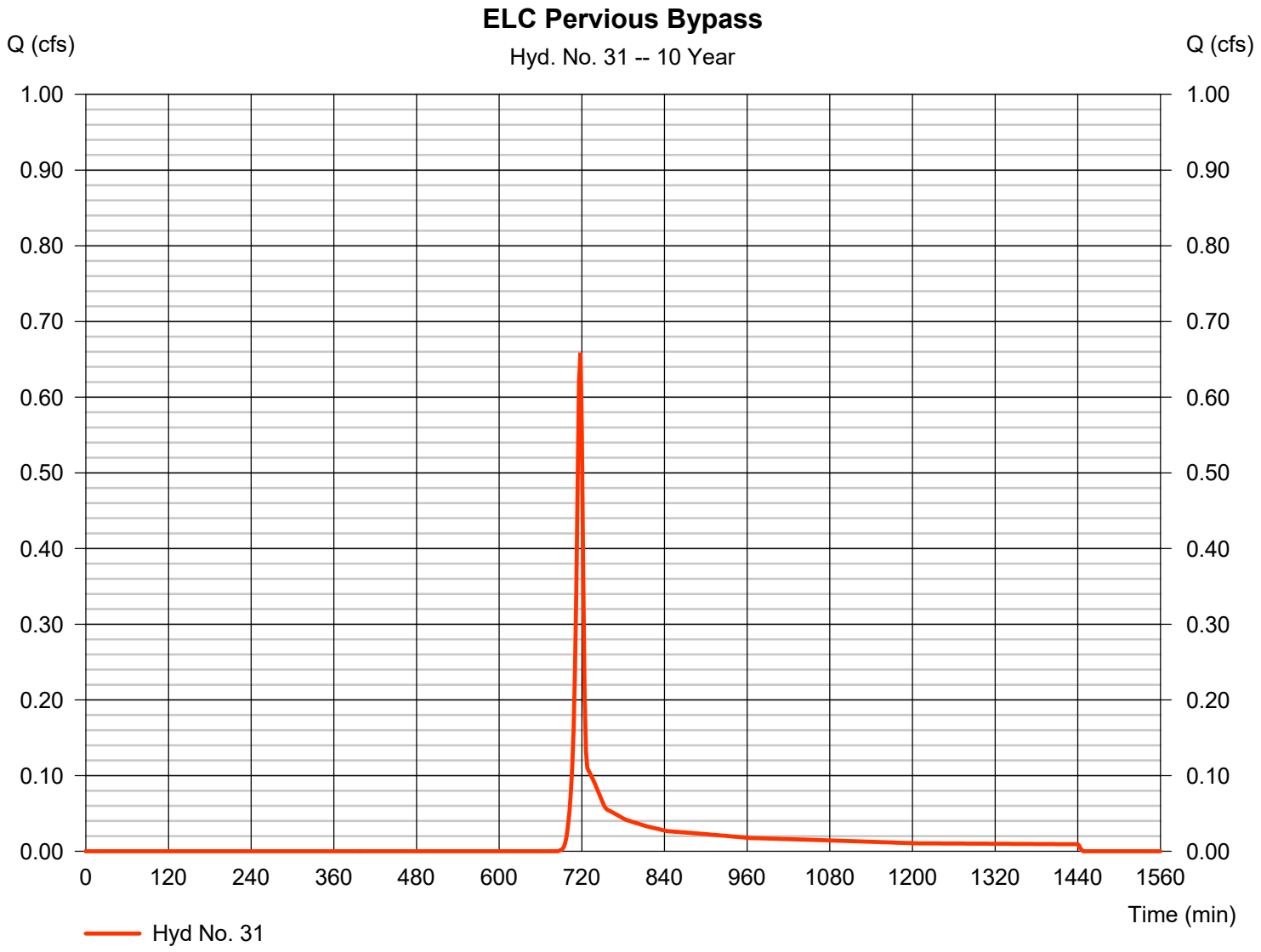
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 31

ELC Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.659 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,343 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



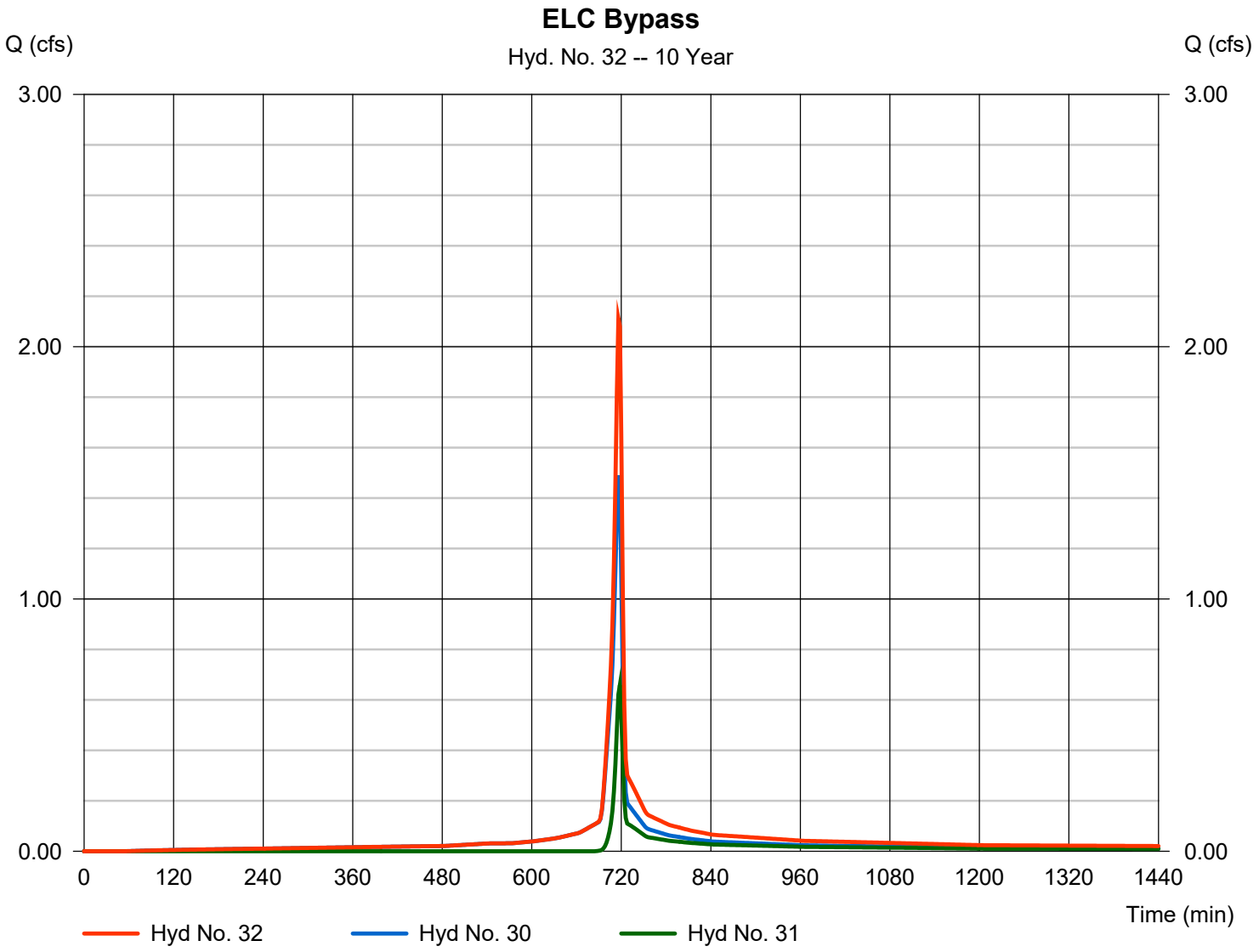
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 32

ELC Bypass

Hydrograph type	=	Combine	Peak discharge	=	2.112 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,891 cuft
Inflow hyds.	=	30, 31	Contrib. drain. area	=	0.550 ac



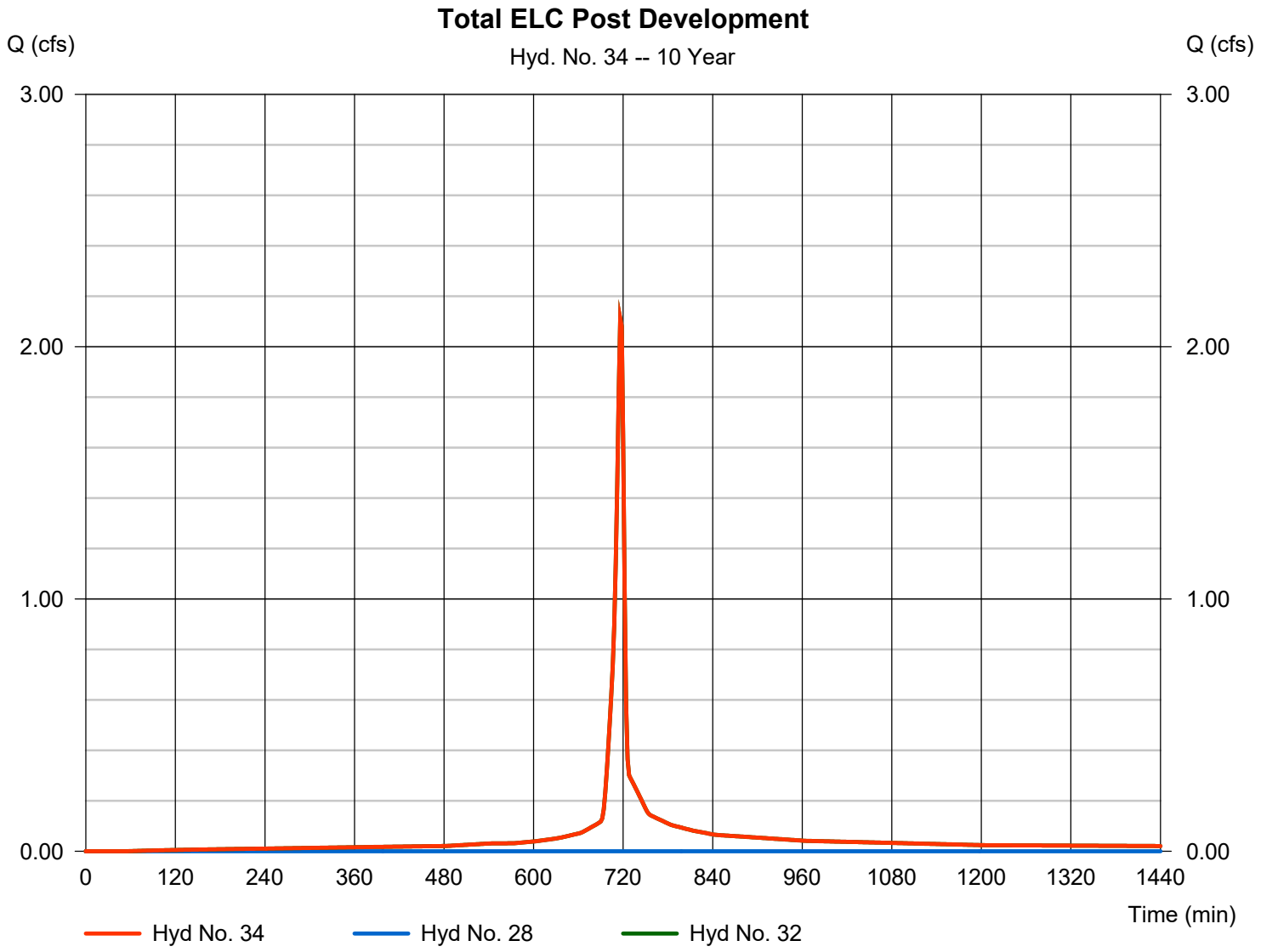
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 34

Total ELC Post Development

Hydrograph type	=	Combine	Peak discharge	=	2.112 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,891 cuft
Inflow hyds.	=	28, 32	Contrib. drain. area	=	0.000 ac



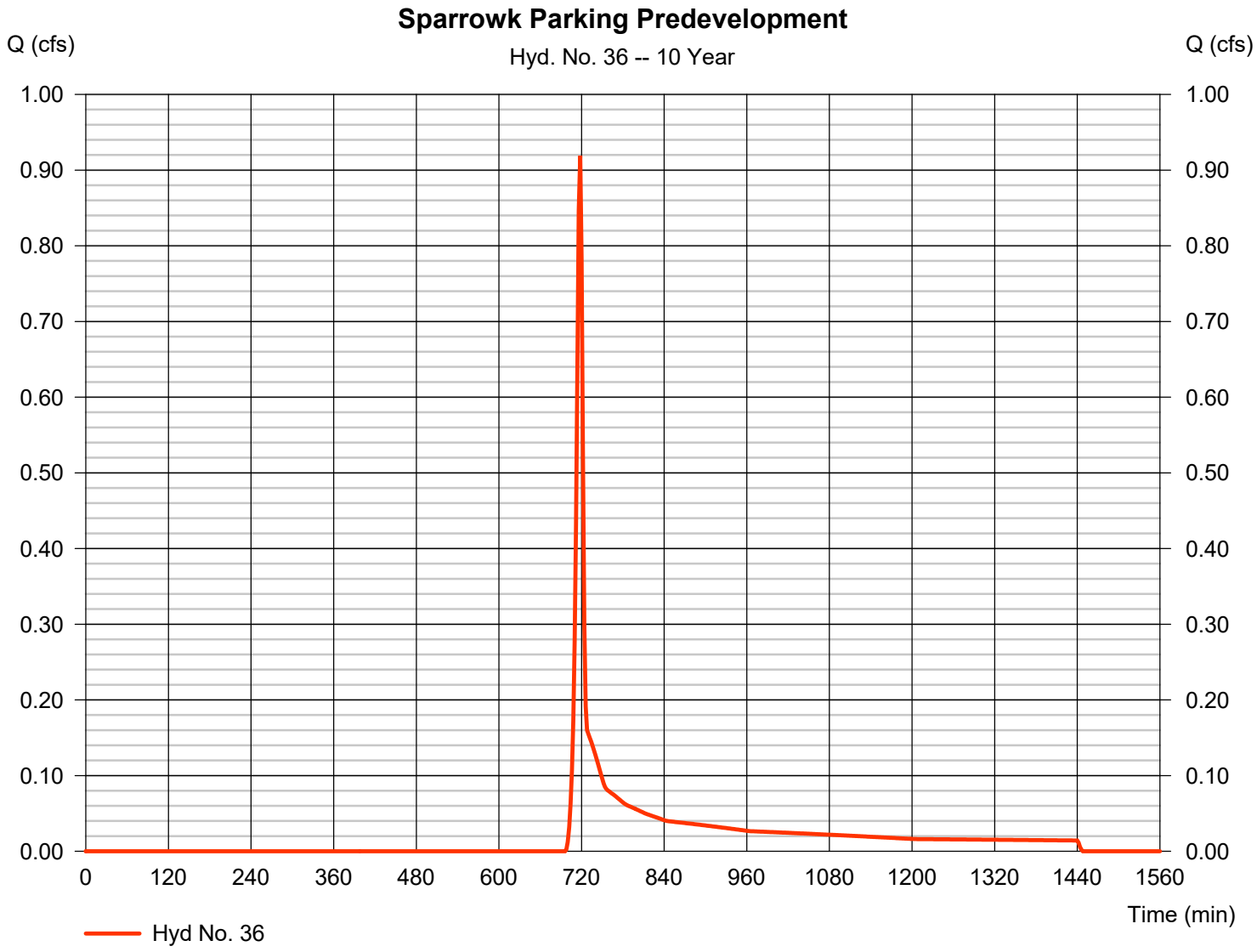
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 36

Sparrowk Parking Predevelopment

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.919 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,920 cuft
Drainage area	=	0.540 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



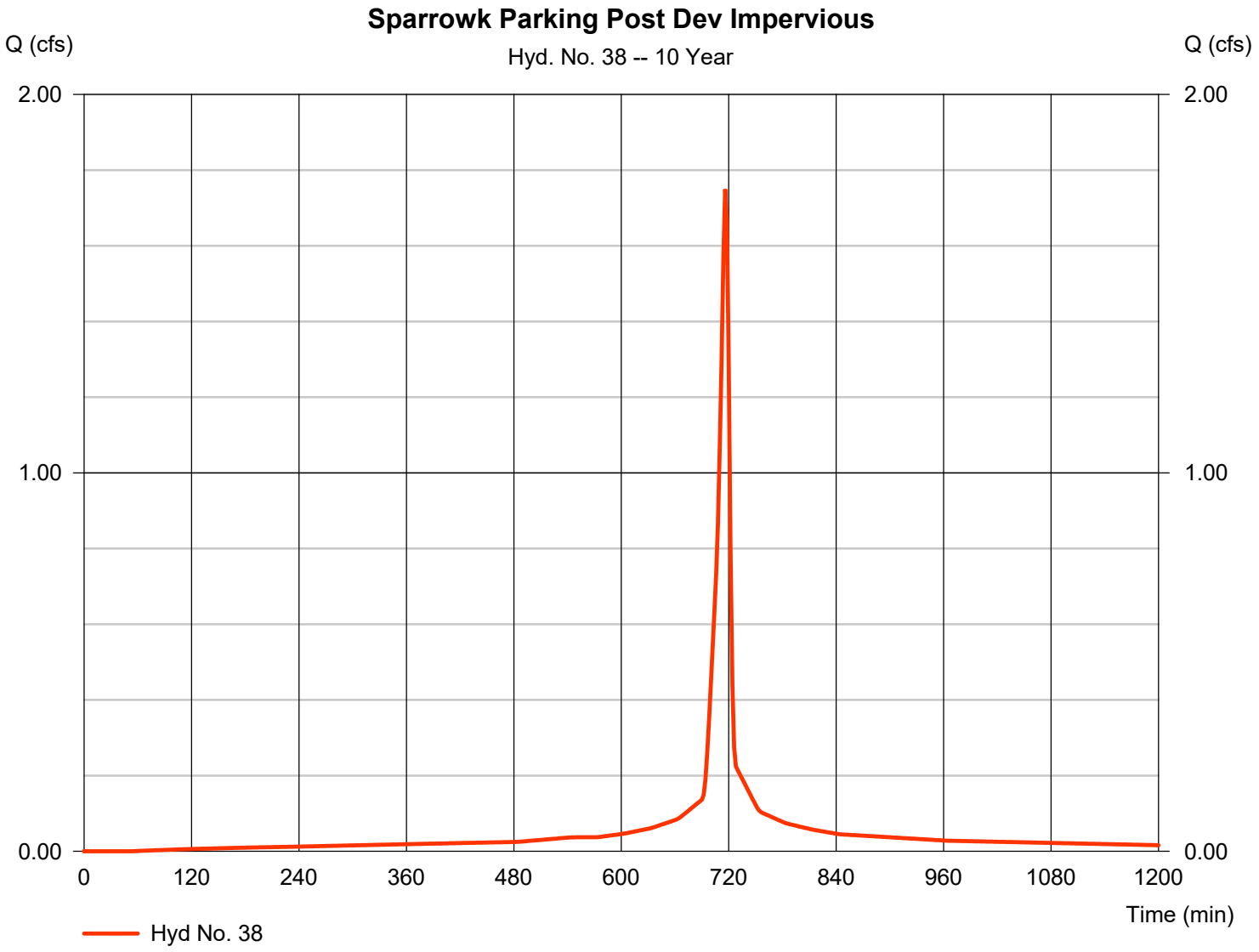
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 38

Sparrowk Parking Post Dev Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.749 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,166 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



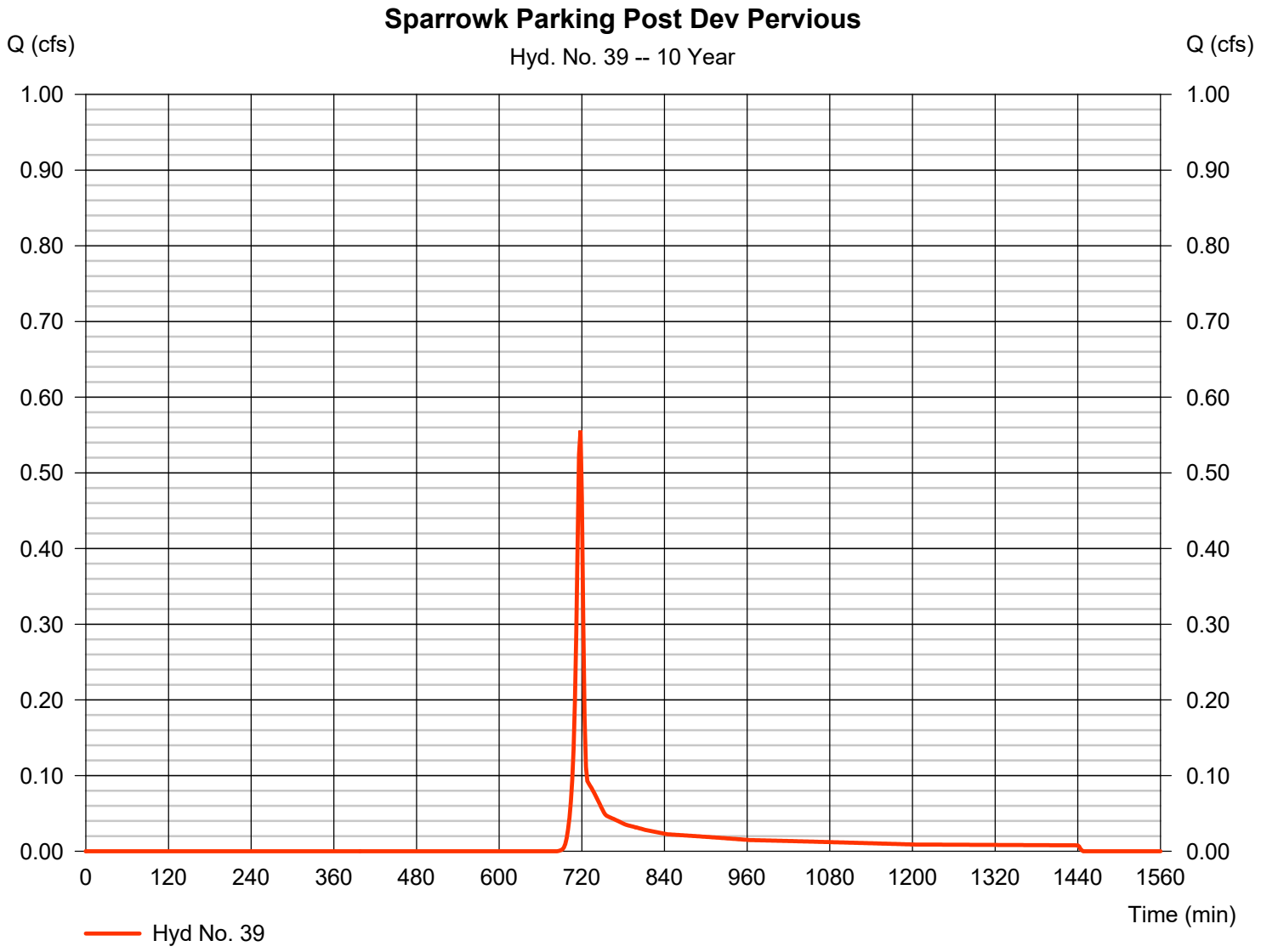
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 39

Sparrowk Parking Post Dev Pervious

Hydrograph type	= SCS Runoff	Peak discharge	= 0.556 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,133 cuft
Drainage area	= 0.270 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



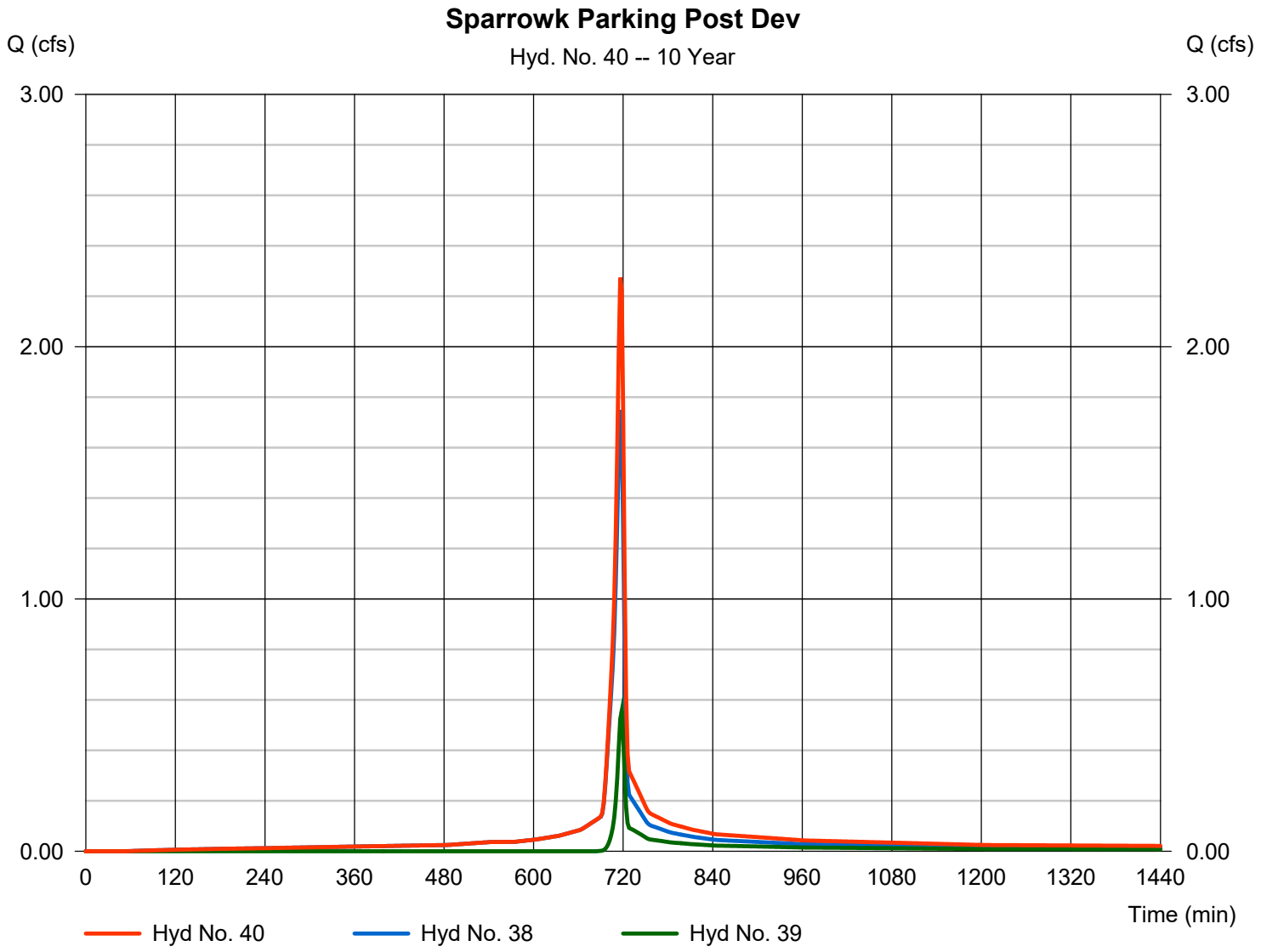
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 40

Sparrowk Parking Post Dev

Hydrograph type	=	Combine	Peak discharge	=	2.274 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,299 cuft
Inflow hyds.	=	38, 39	Contrib. drain. area	=	0.540 ac



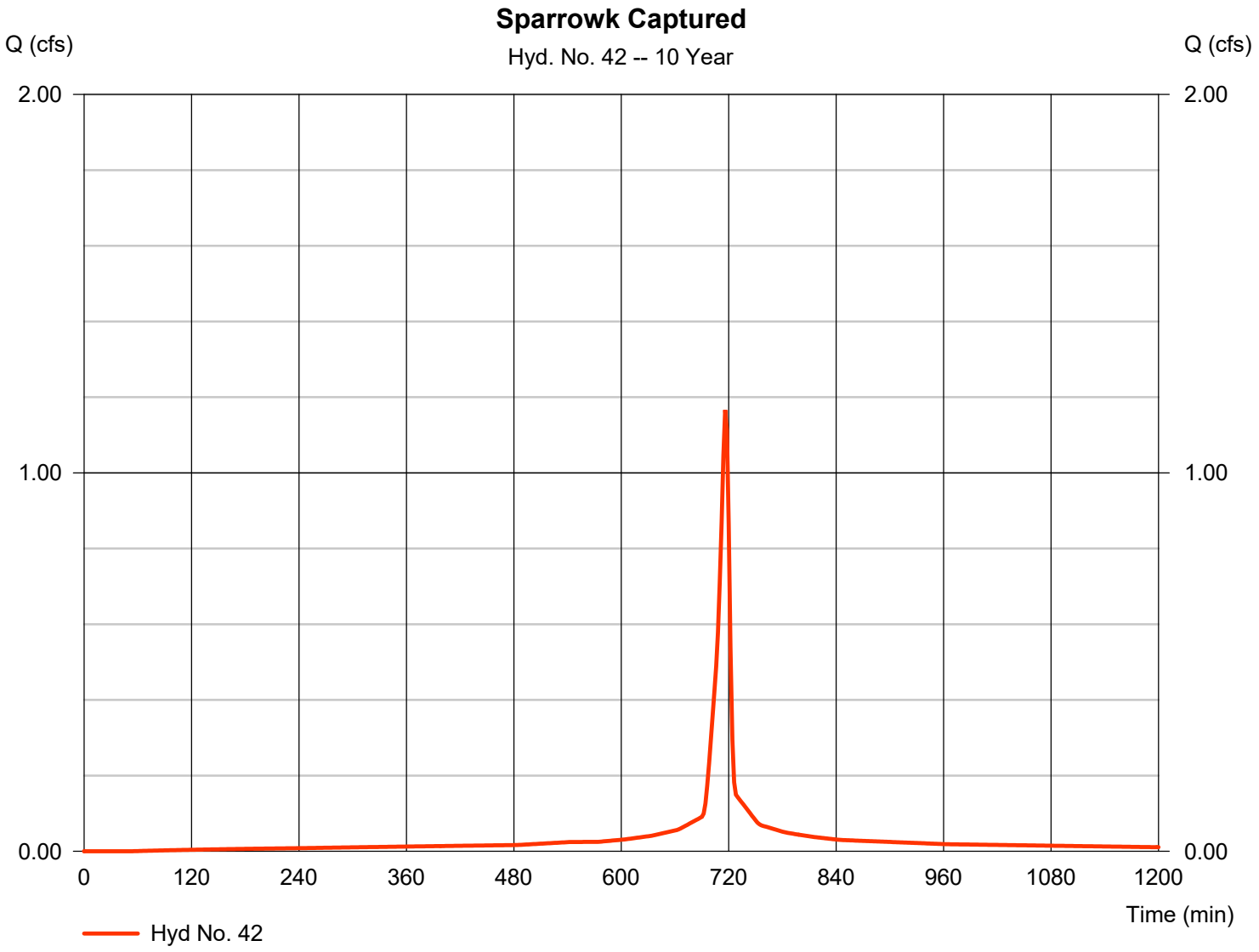
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 42

Sparrowk Captured

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.166 cfs
Storm frequency	=	10 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	2,777 cuft
Drainage area	=	0.180 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

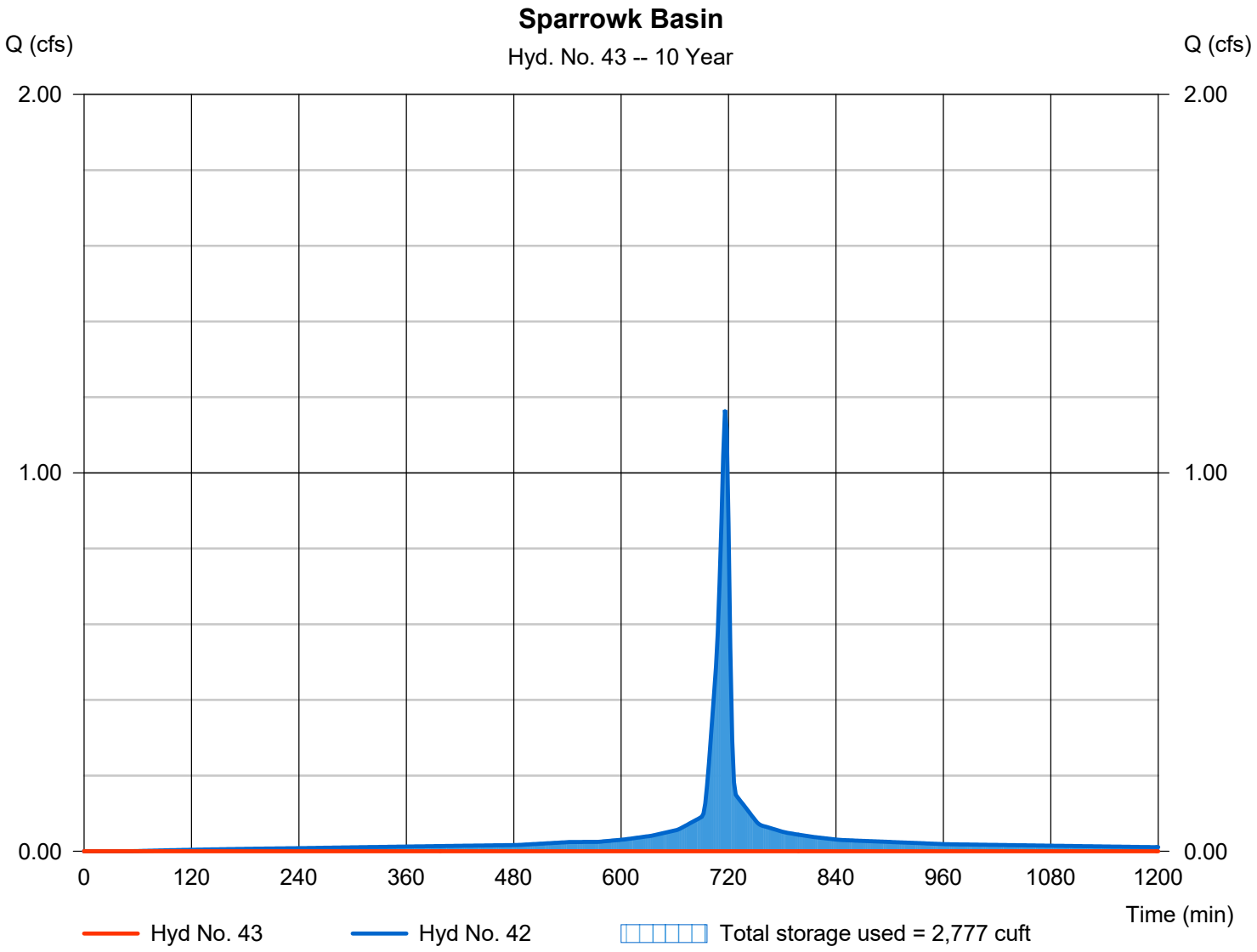
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 43

Sparrowk Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	10 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	42 - Sparrowk Captured	Max. Elevation	=	301.68 ft
Reservoir name	=	Sparrowk Basin	Max. Storage	=	2,777 cuft

Storage Indication method used.



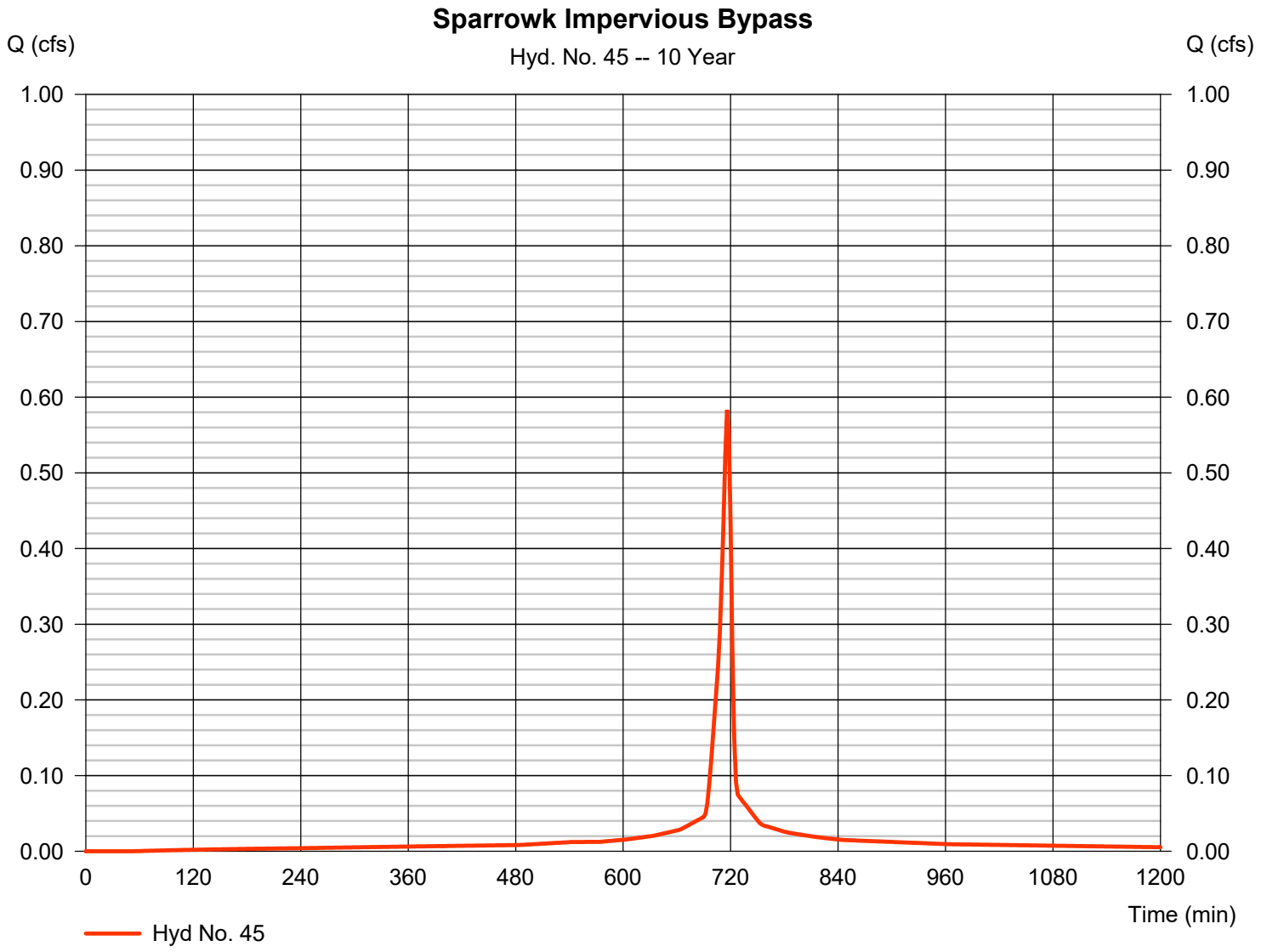
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 45

Sparrowk Impervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.583 cfs
Storm frequency	= 10 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,389 cuft
Drainage area	= 0.090 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 4.77 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



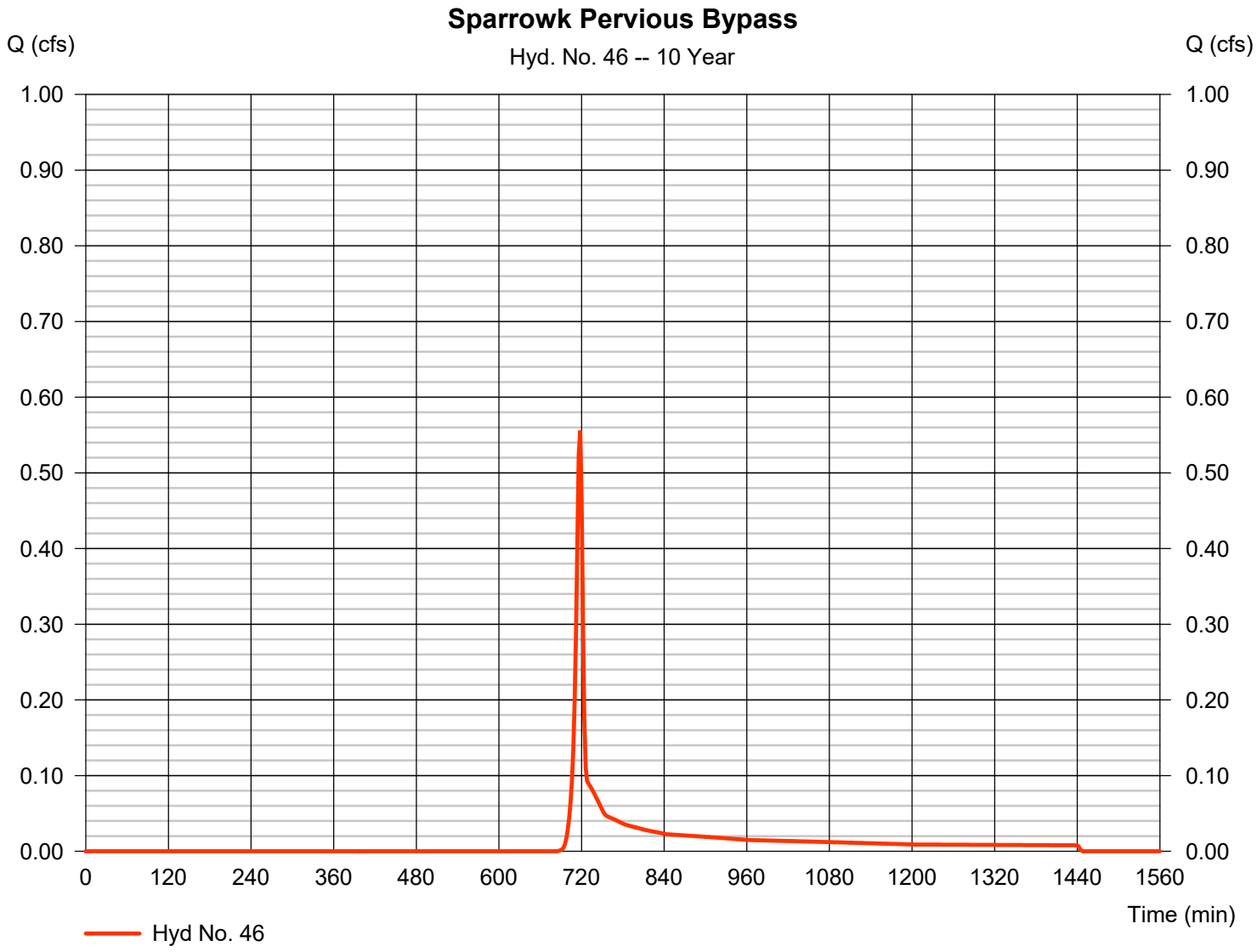
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 46

Sparrowk Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.556 cfs
Storm frequency	=	10 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,133 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.77 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



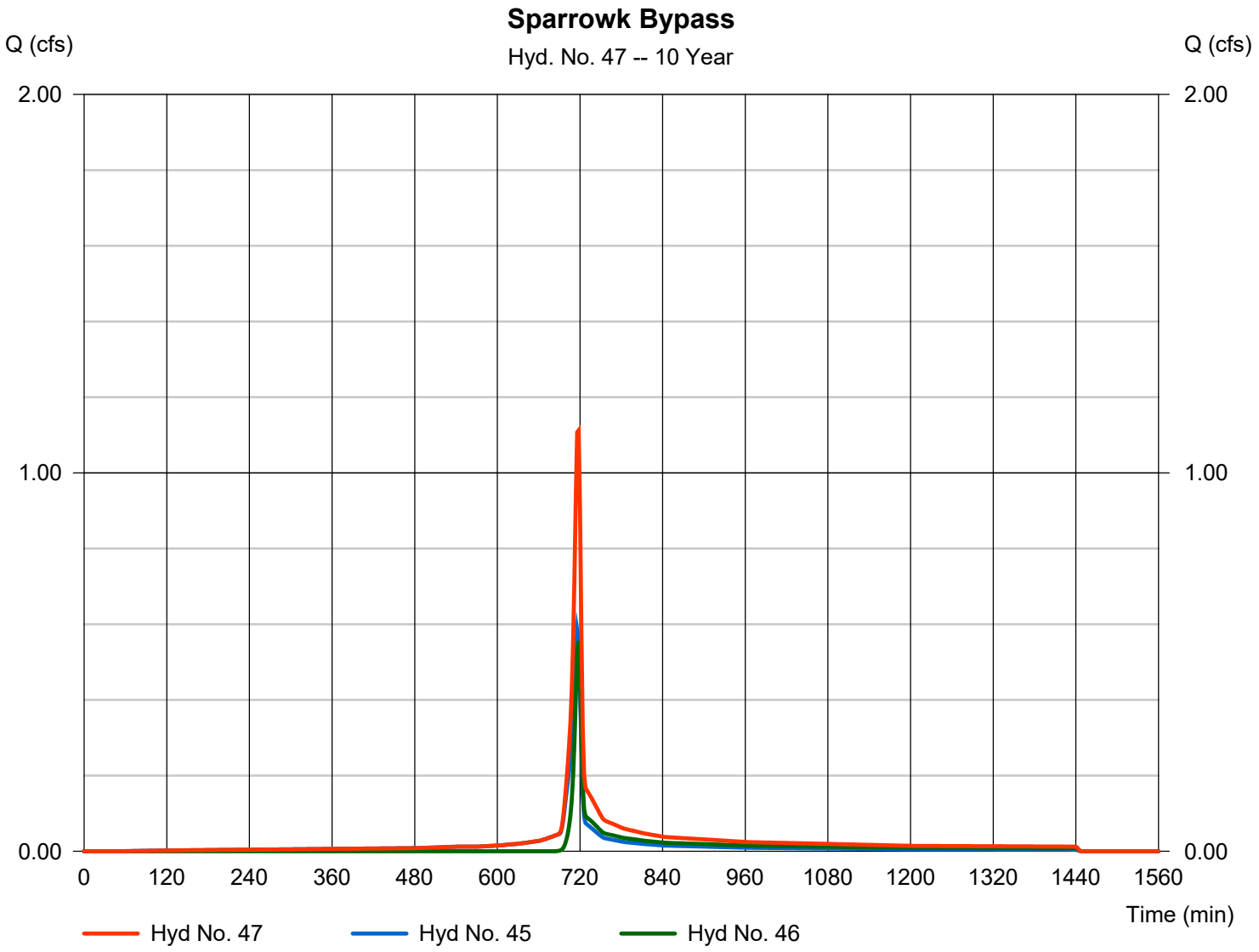
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 47

Sparrowk Bypass

Hydrograph type	= Combine	Peak discharge	= 1.112 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,522 cuft
Inflow hyds.	= 45, 46	Contrib. drain. area	= 0.360 ac



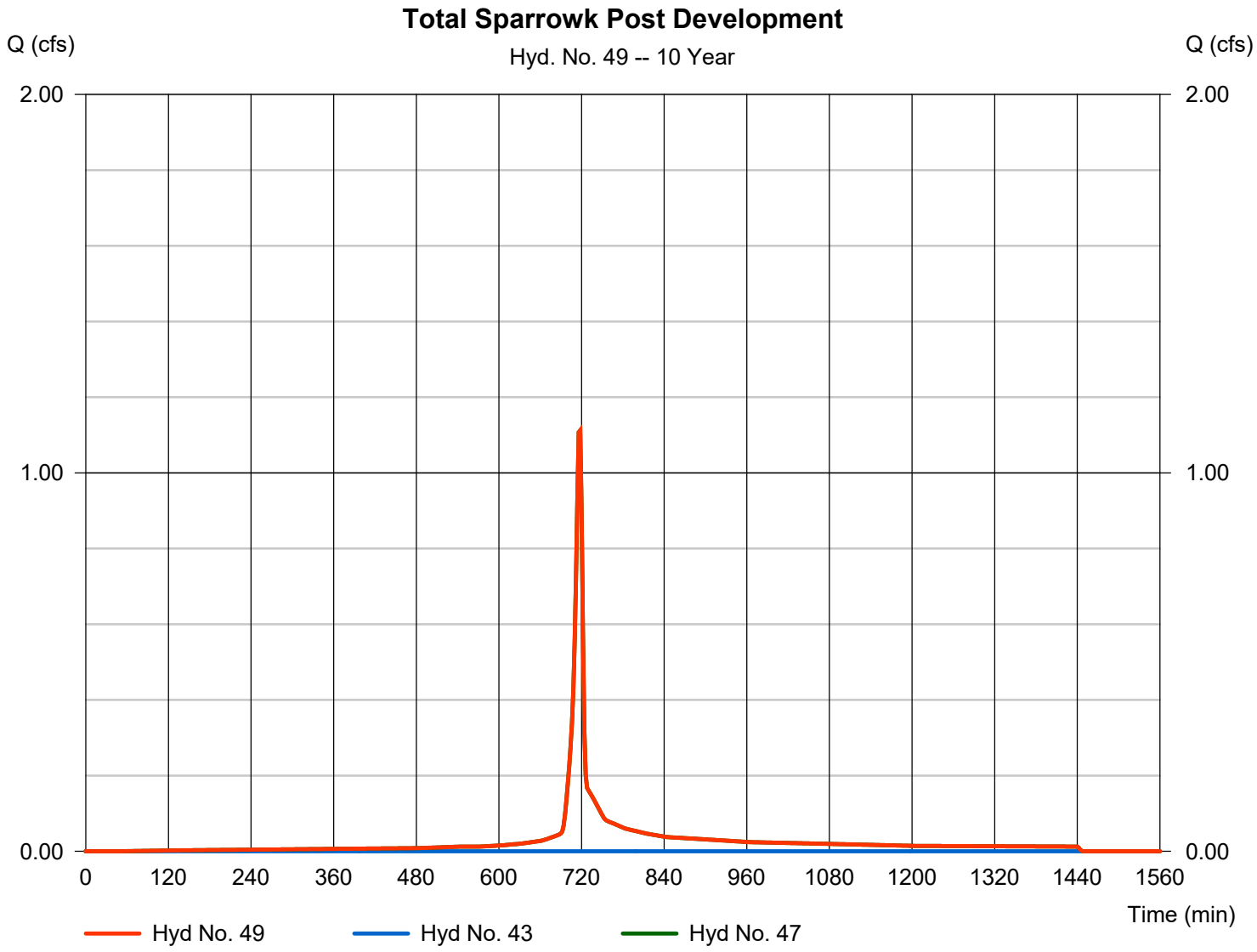
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 49

Total Sparrowk Post Development

Hydrograph type	= Combine	Peak discharge	= 1.112 cfs
Storm frequency	= 10 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,522 cuft
Inflow hyds.	= 43, 47	Contrib. drain. area	= 0.000 ac



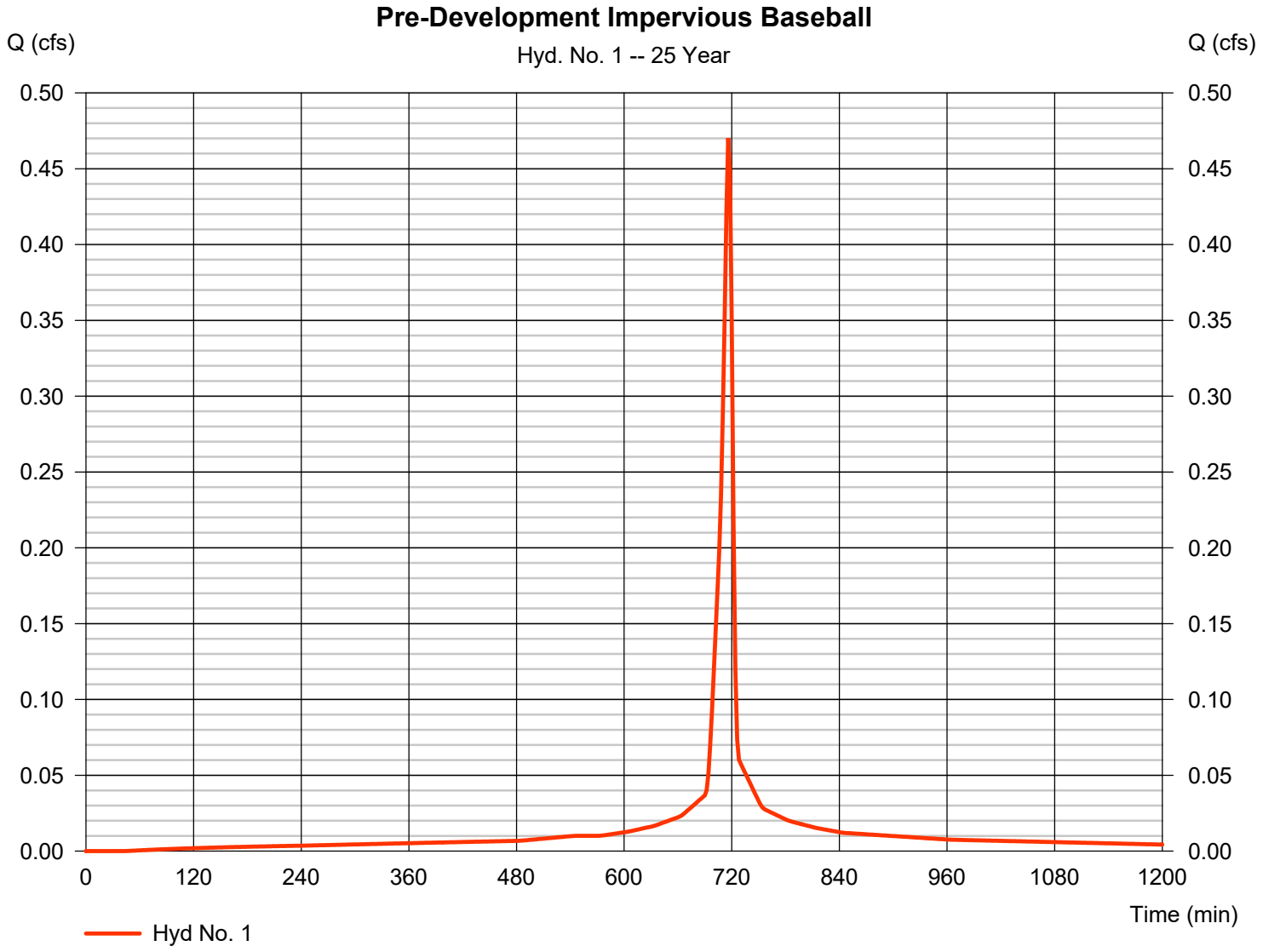
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 1

Pre-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.470 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,128 cuft
Drainage area	= 0.060 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



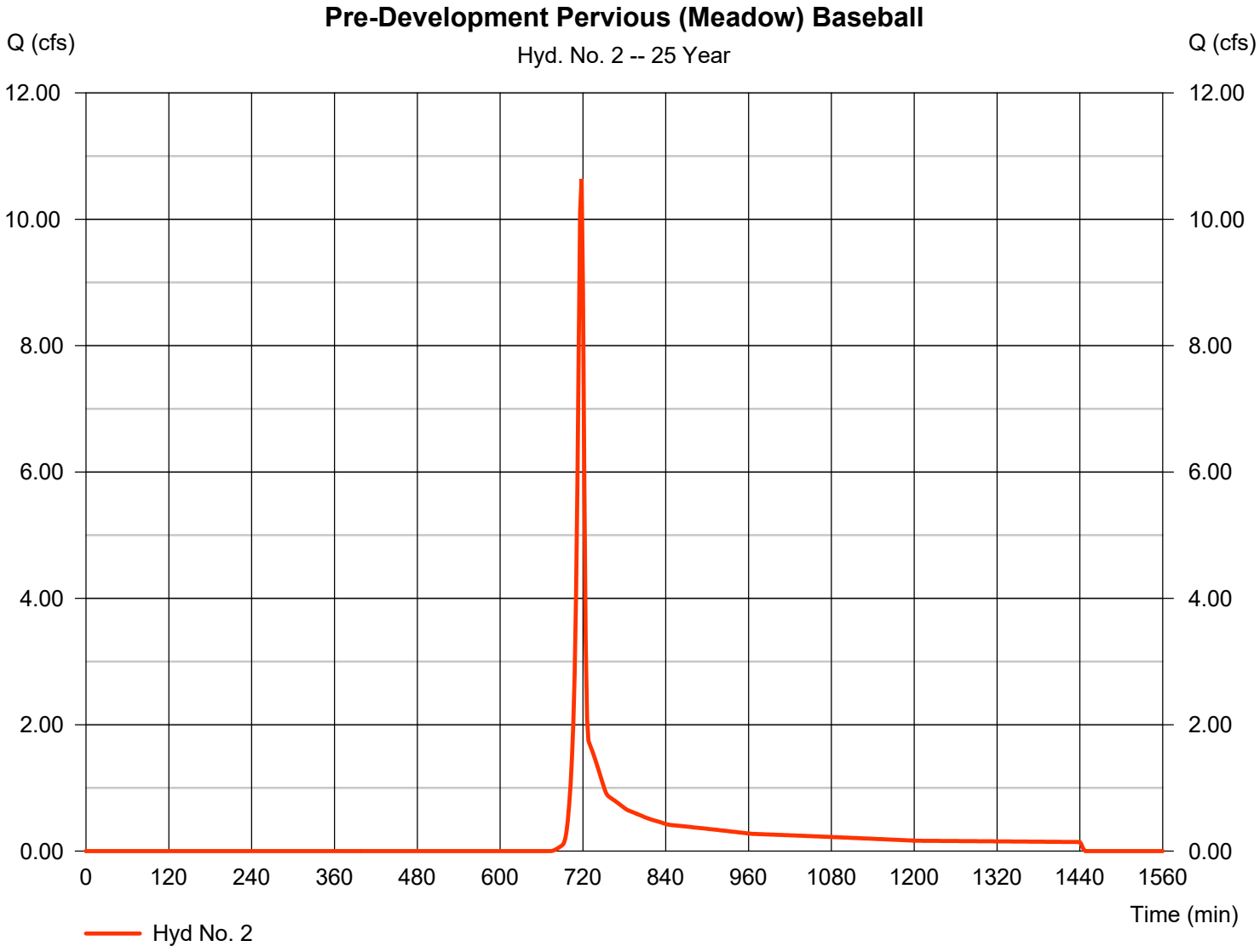
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 2

Pre-Development Pervious (Meadow) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 10.64 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 21,522 cuft
Drainage area	= 3.930 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



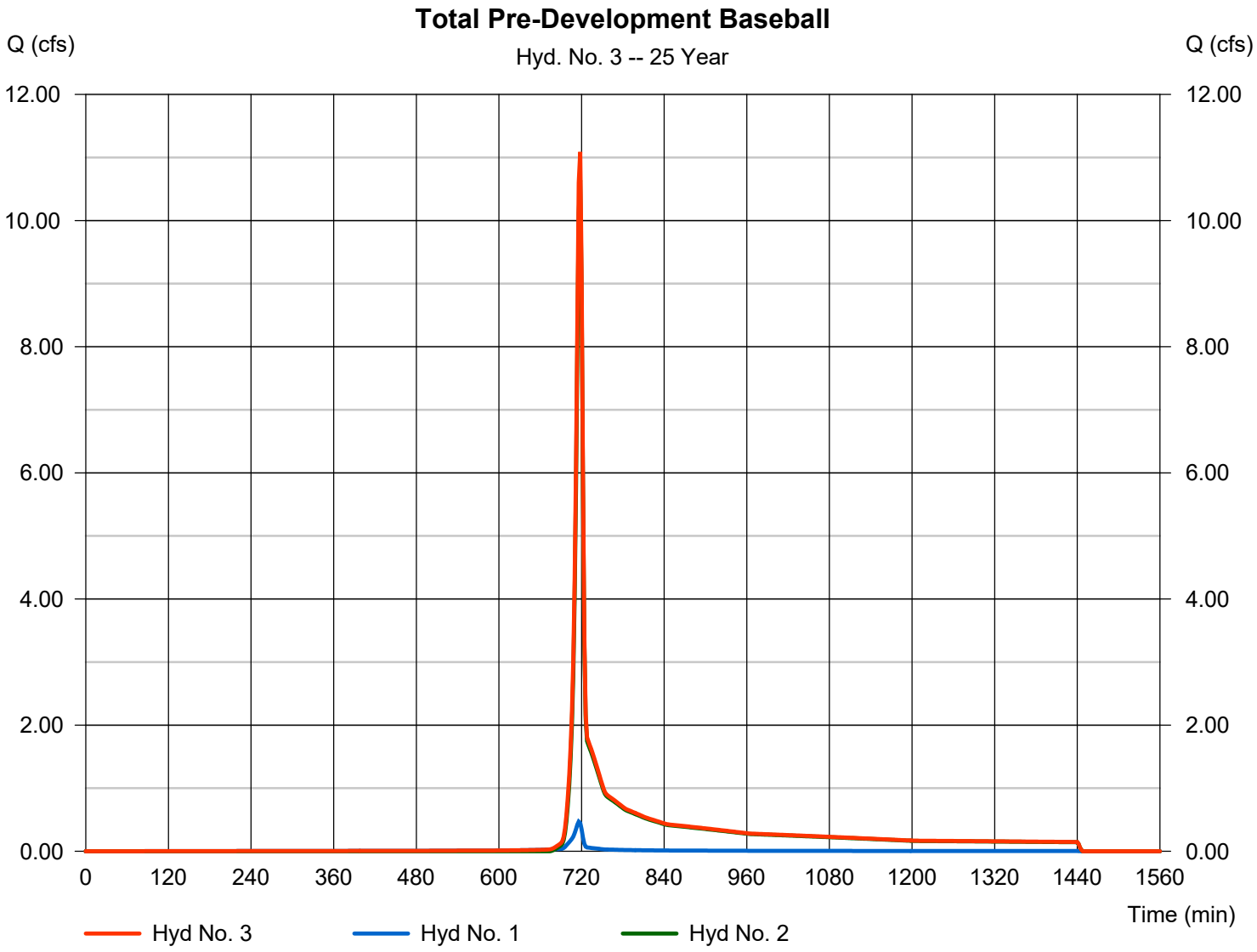
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 3

Total Pre-Development Baseball

Hydrograph type	= Combine	Peak discharge	= 11.09 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 22,649 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 3.990 ac



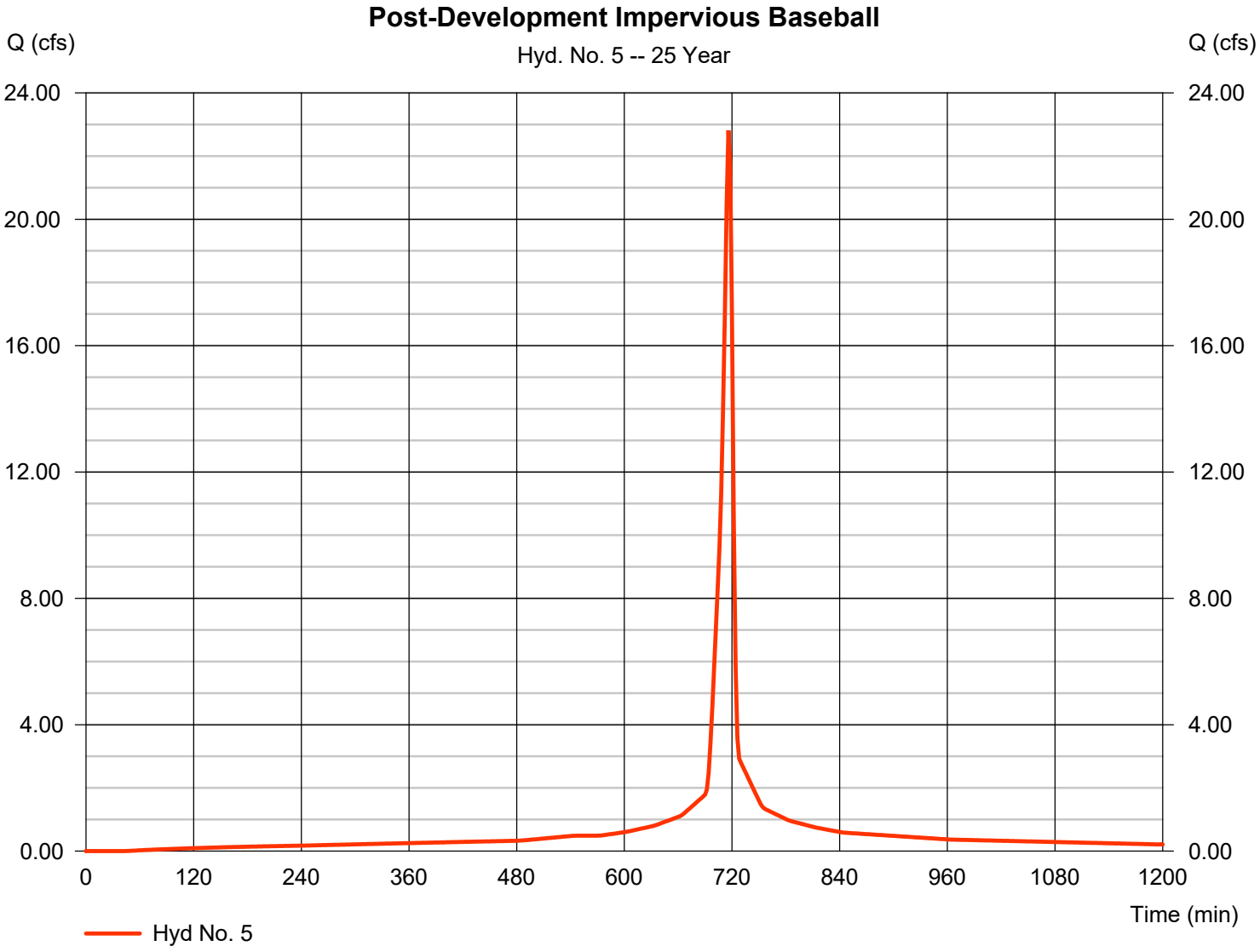
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 5

Post-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 22.81 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 54,686 cuft
Drainage area	= 2.910 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



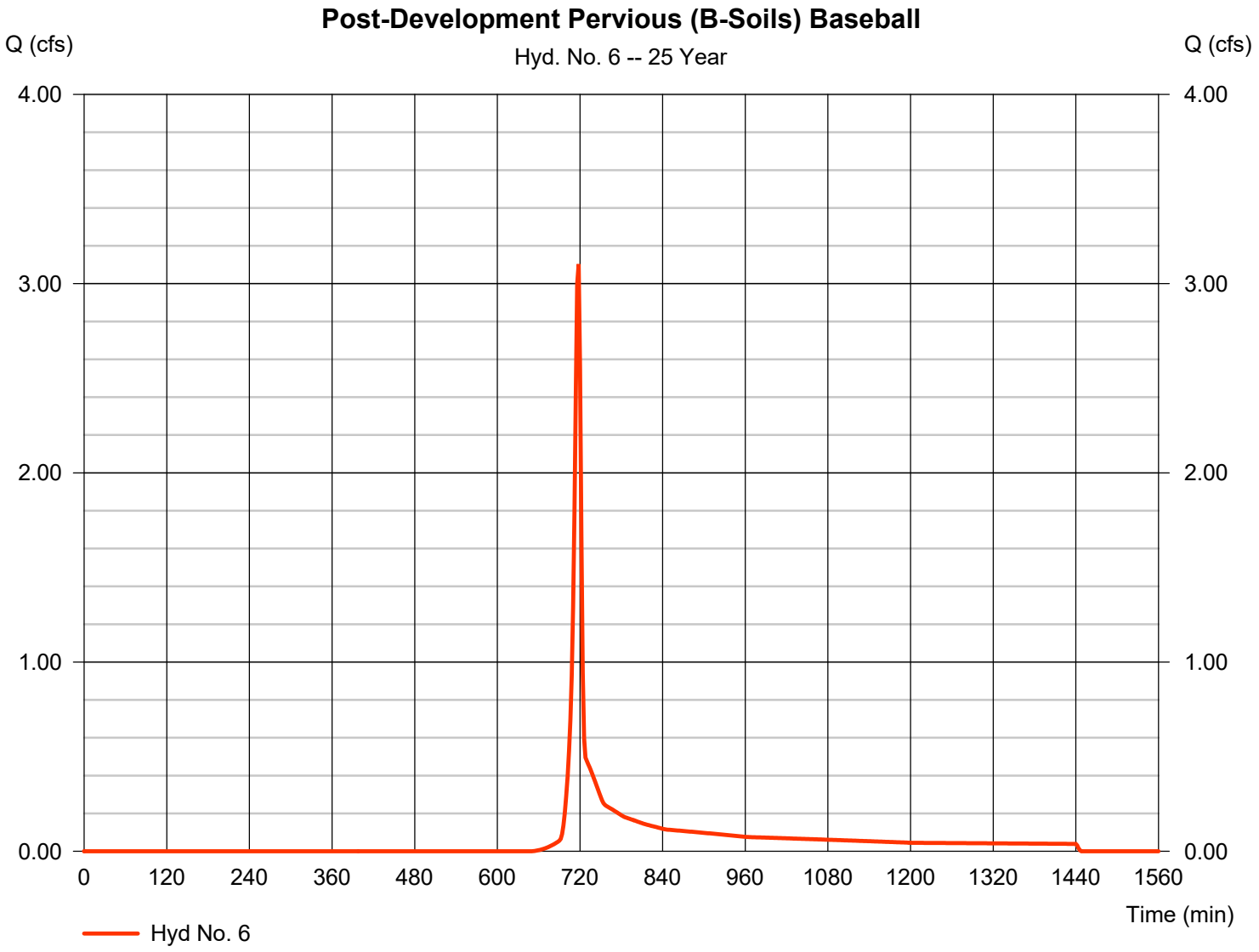
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 6

Post-Development Pervious (B-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 3.103 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 6,222 cuft
Drainage area	= 0.990 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



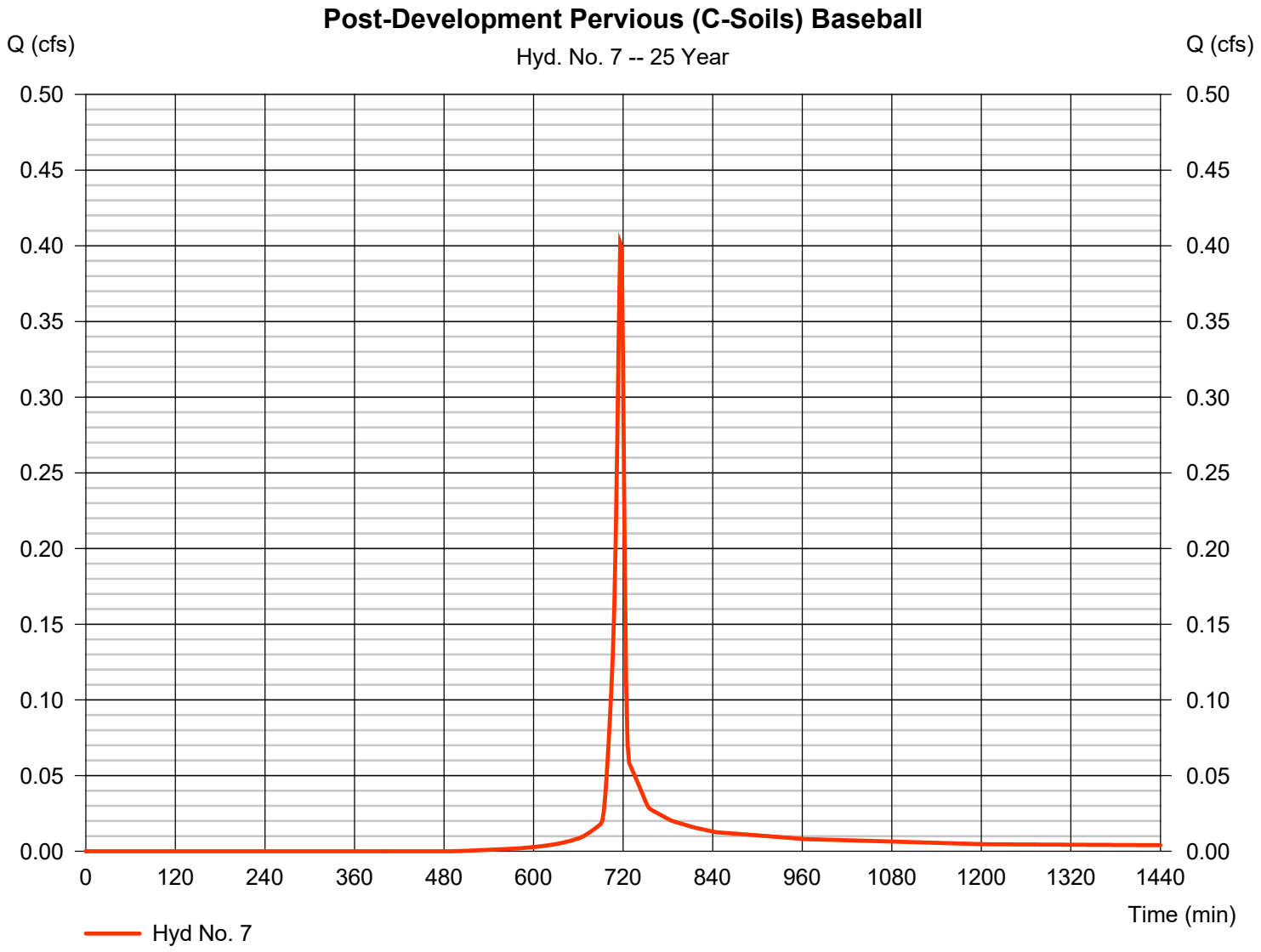
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 7

Post-Development Pervious (C-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.402 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 812 cuft
Drainage area	= 0.080 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



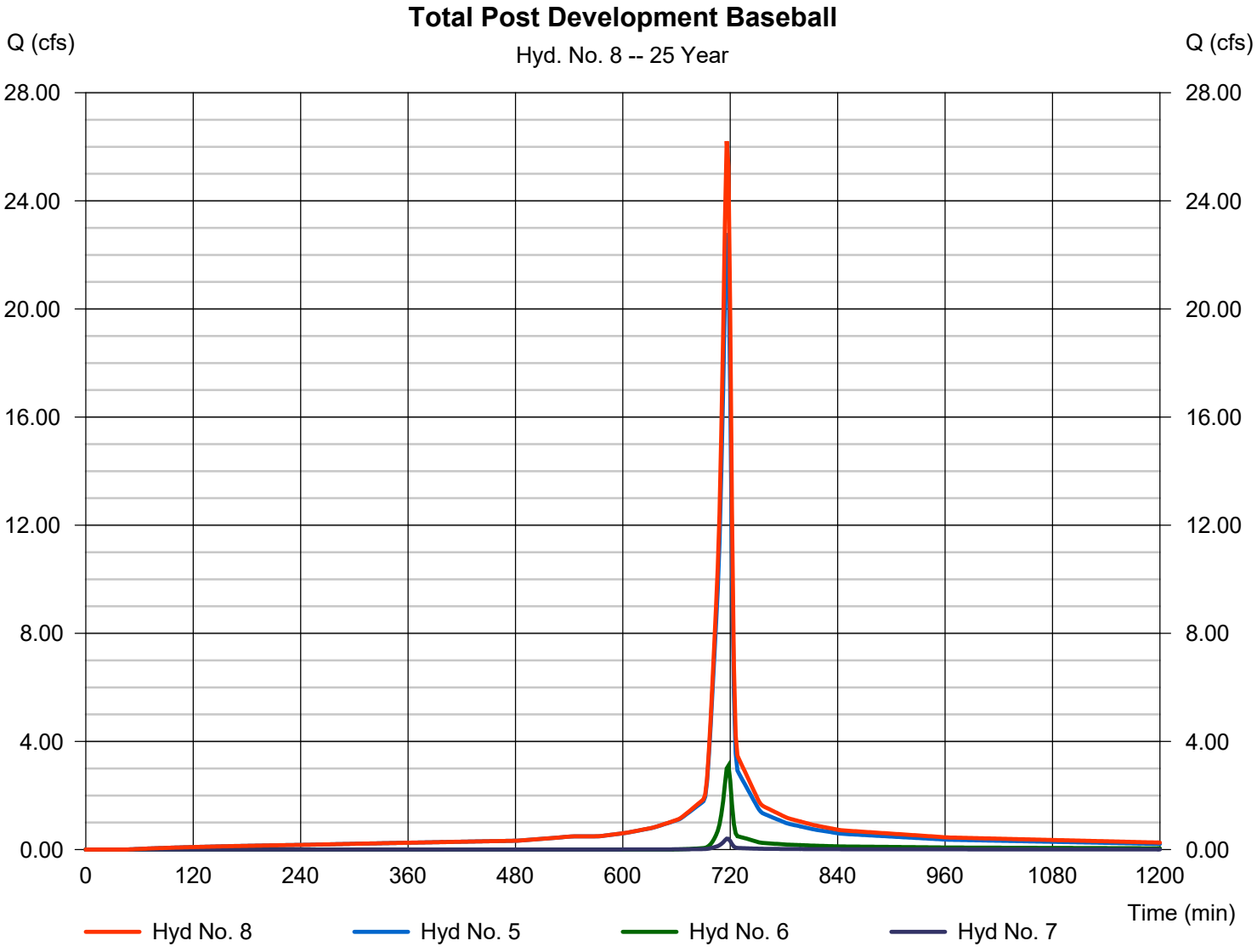
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 8

Total Post Development Baseball

Hydrograph type	= Combine	Peak discharge	= 26.21 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 61,720 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 3.980 ac



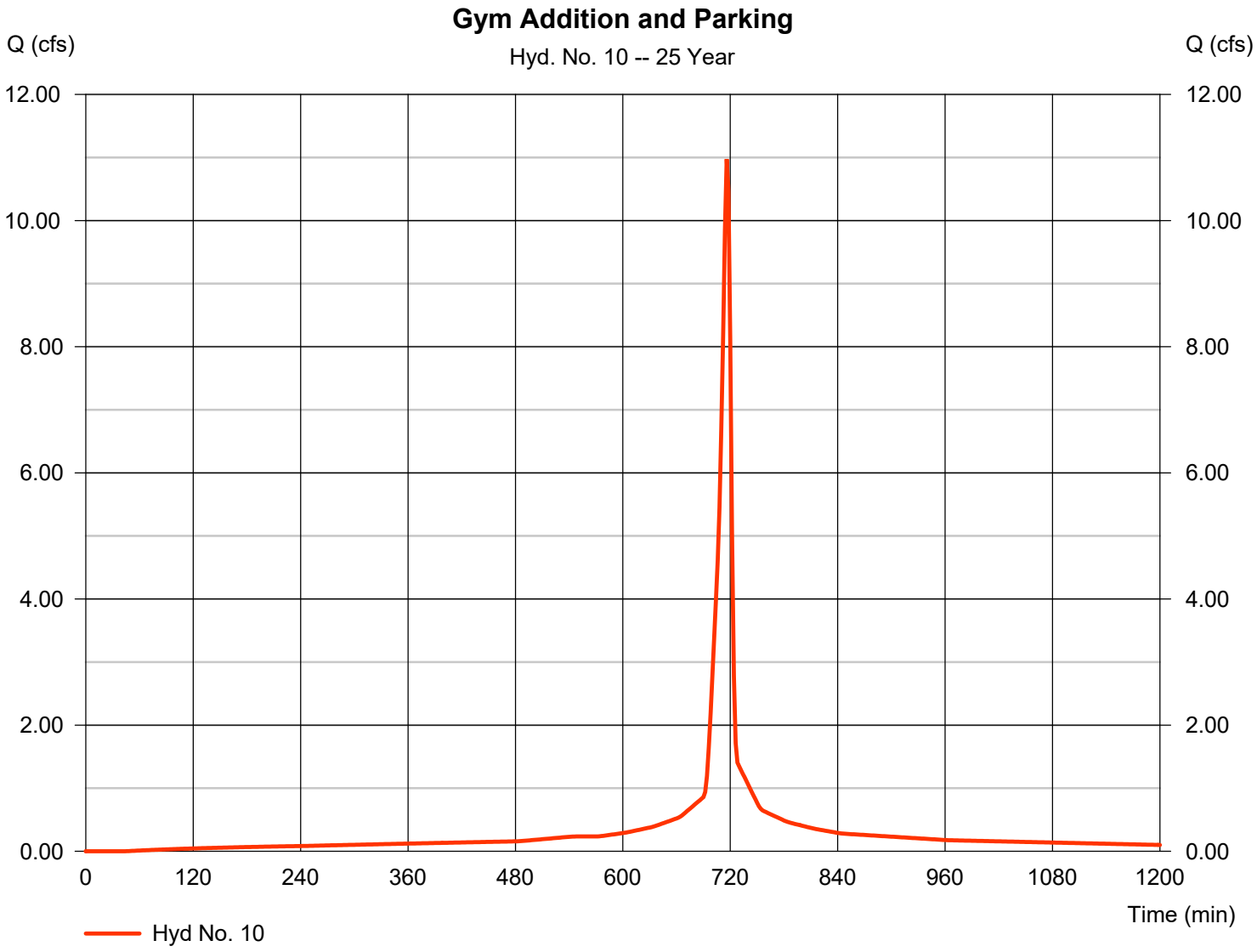
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 10

Gym Addition and Parking

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.97 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	26,310 cuft
Drainage area	=	1.400 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



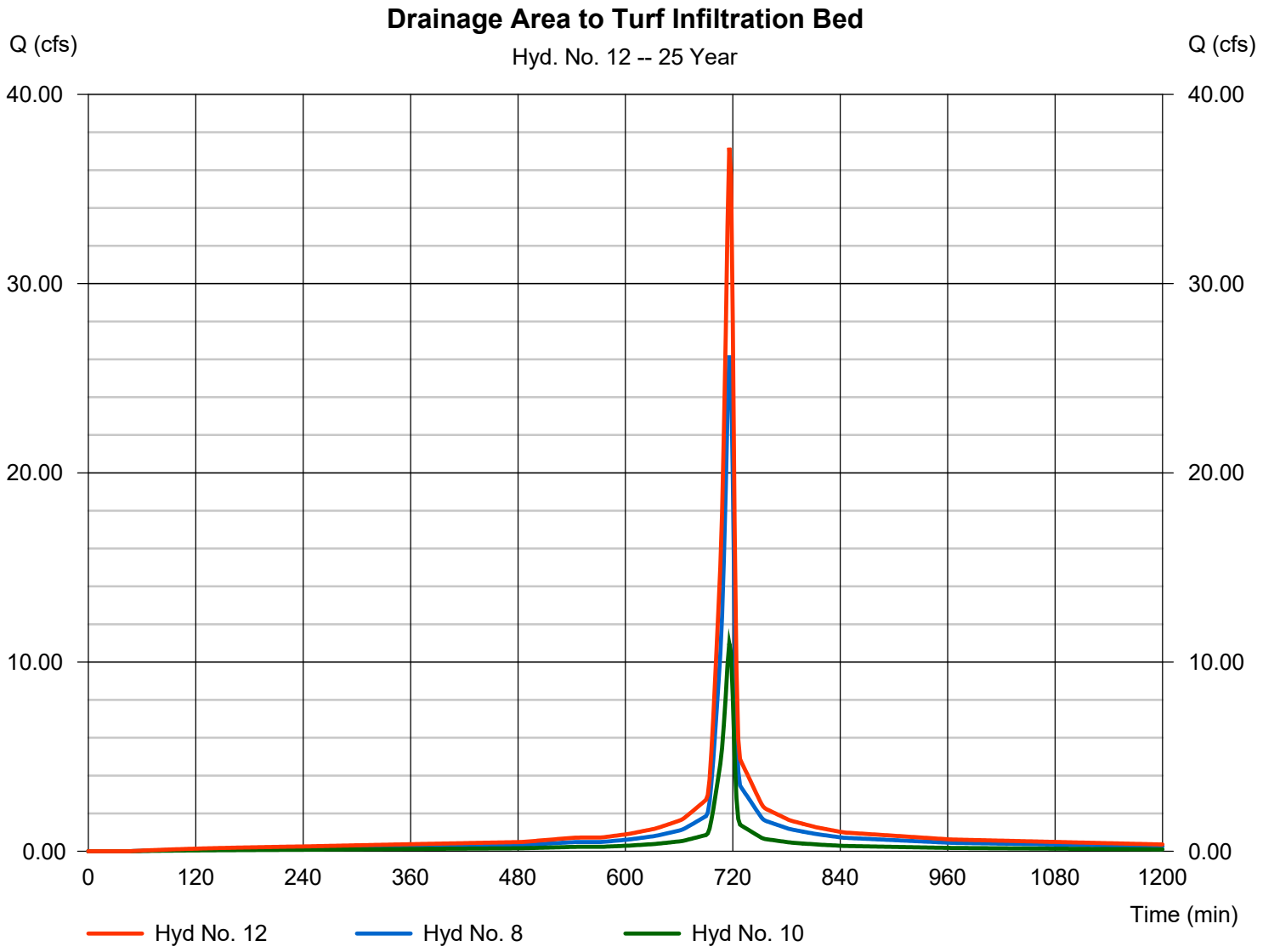
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 12

Drainage Area to Turf Infiltration Bed

Hydrograph type	= Combine	Peak discharge	= 37.18 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 88,030 cuft
Inflow hyds.	= 8, 10	Contrib. drain. area	= 1.400 ac



Hydrograph Report

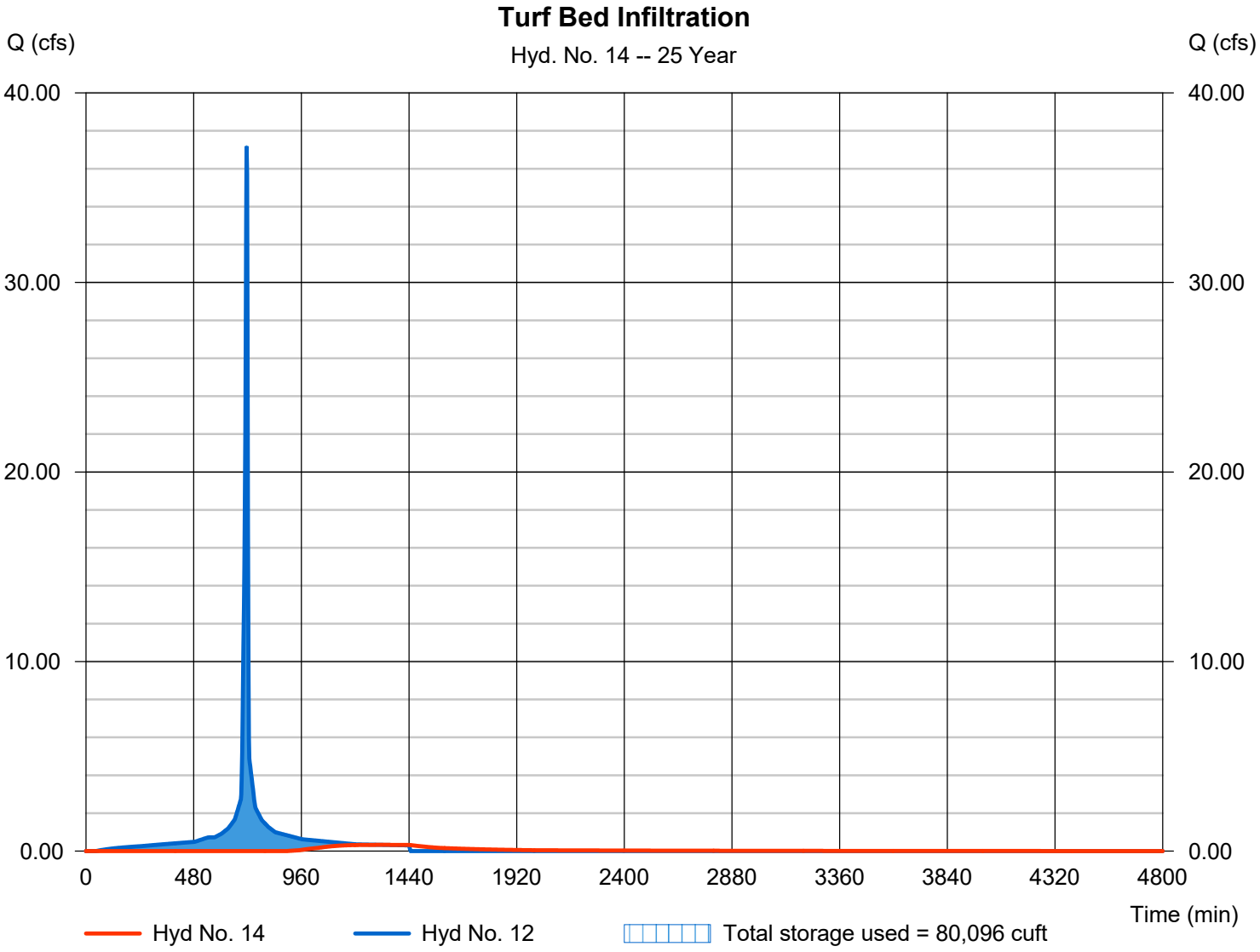
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 14

Turf Bed Infiltration

Hydrograph type	=	Reservoir	Peak discharge	=	0.328 cfs
Storm frequency	=	25 yrs	Time to peak	=	1322 min
Time interval	=	2 min	Hyd. volume	=	14,683 cuft
Inflow hyd. No.	=	12 - Drainage Area to Turf Infiltration Bed	Max. Elevation	=	314.28 ft
Reservoir name	=	Turf	Max. Storage	=	80,096 cuft

Storage Indication method used.



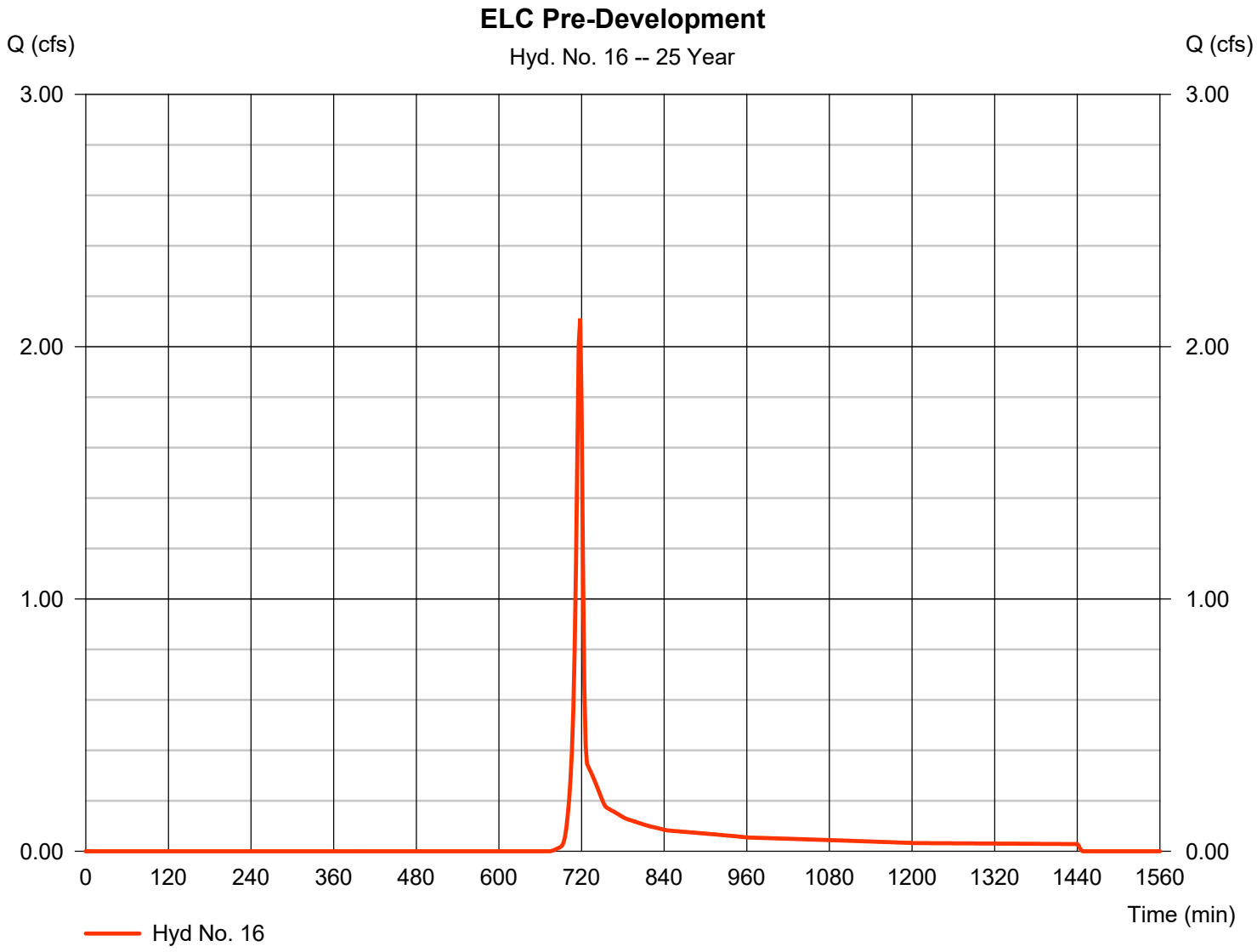
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 16

ELC Pre-Development

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.112 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	4,271 cuft
Drainage area	=	0.780 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



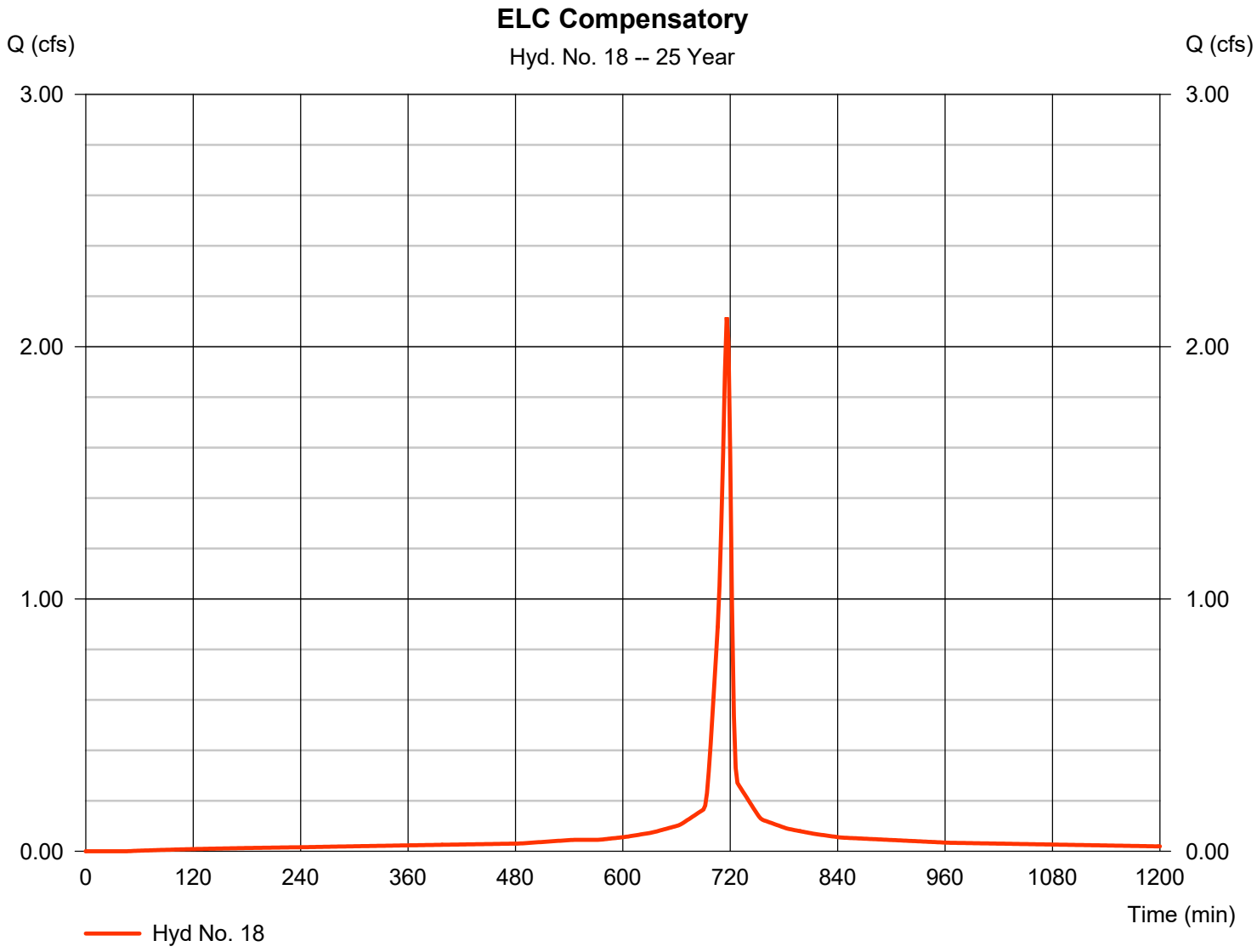
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 18

ELC Compensatory

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.116 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,074 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



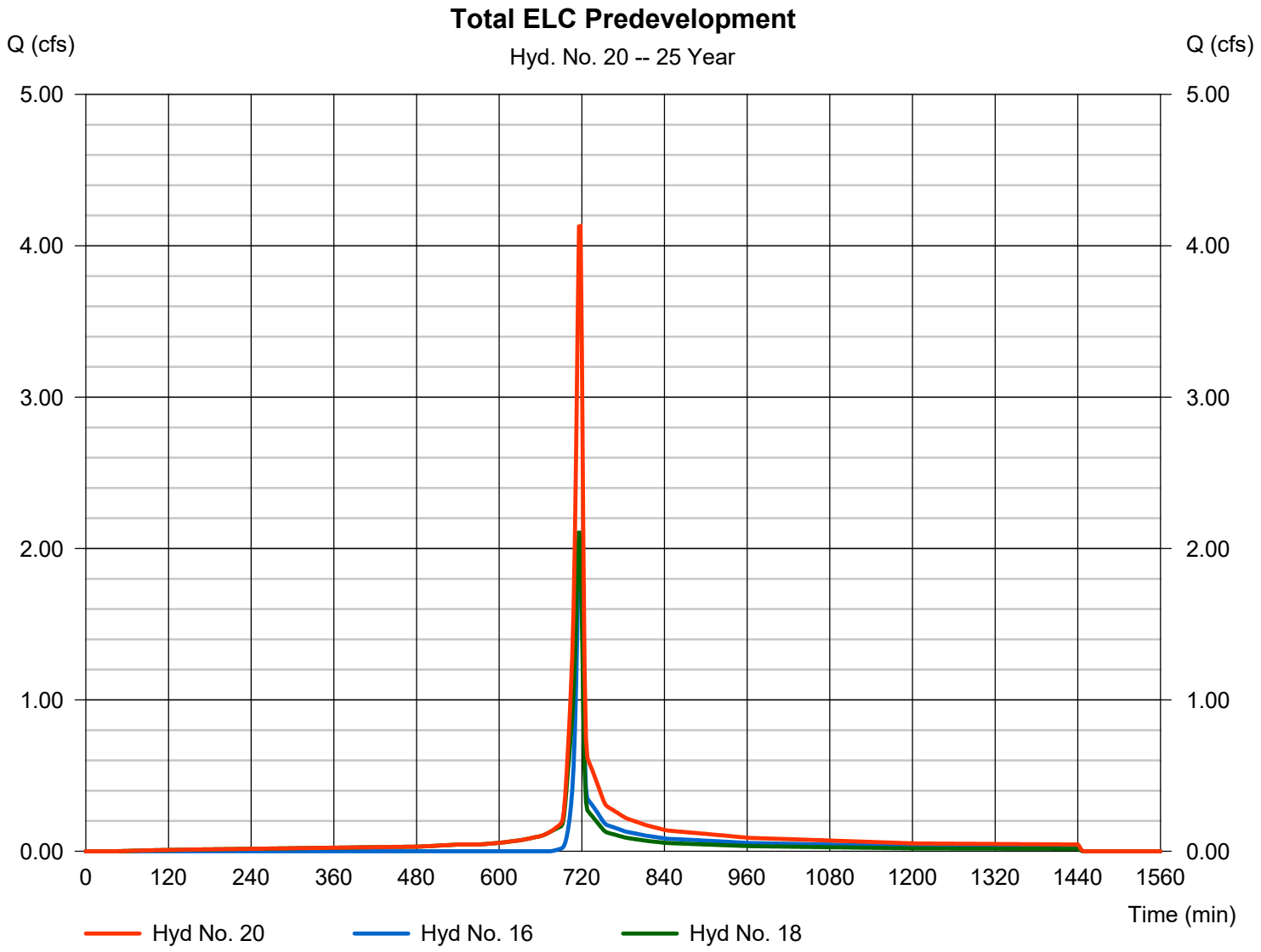
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 20

Total ELC Predevelopment

Hydrograph type	= Combine	Peak discharge	= 4.130 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 9,345 cuft
Inflow hyds.	= 16, 18	Contrib. drain. area	= 1.050 ac



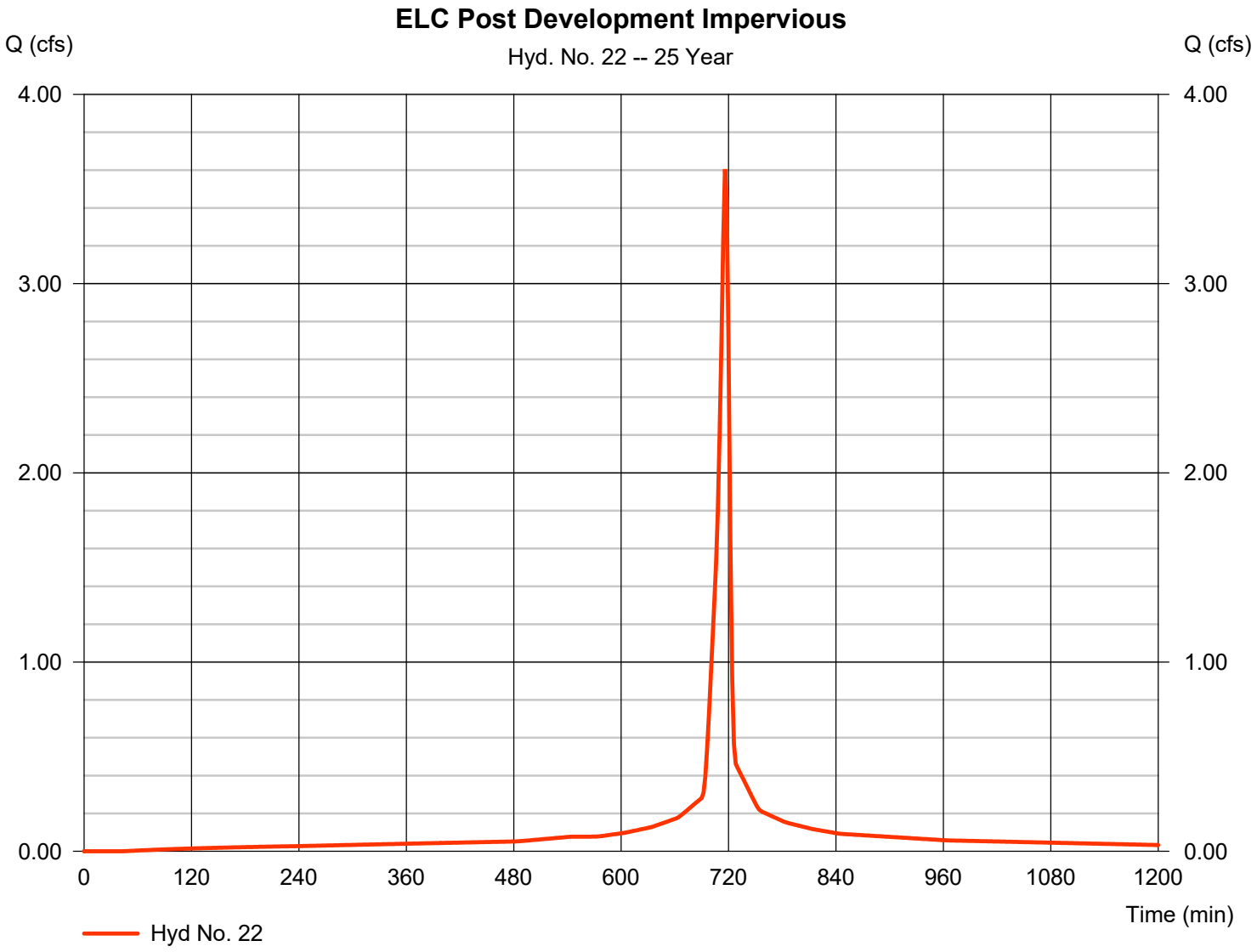
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 22

ELC Post Development Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.605 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	8,645 cuft
Drainage area	=	0.460 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



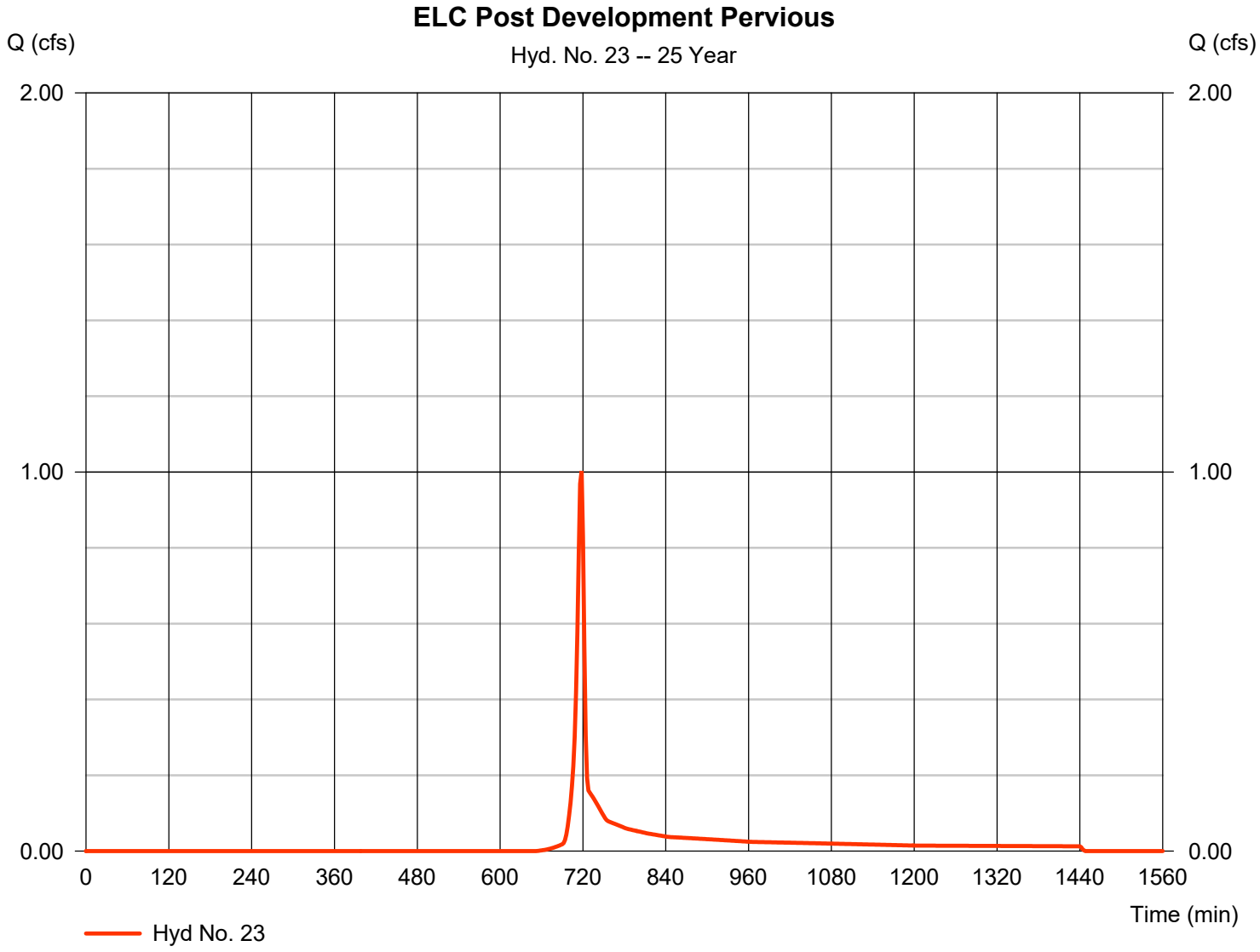
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 23

ELC Post Development Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.003 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,011 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



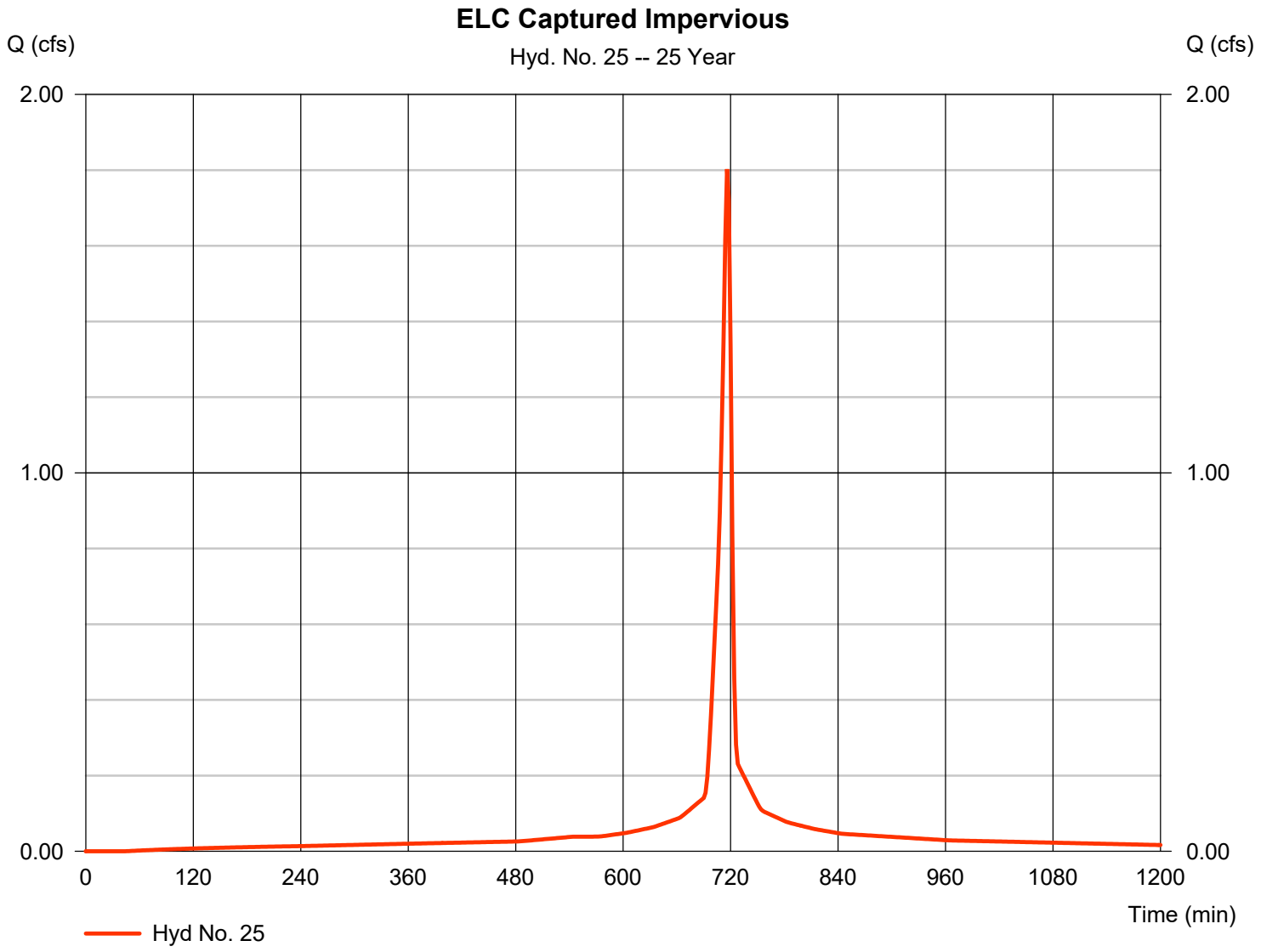
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 25

ELC Captured Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.803 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,322 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



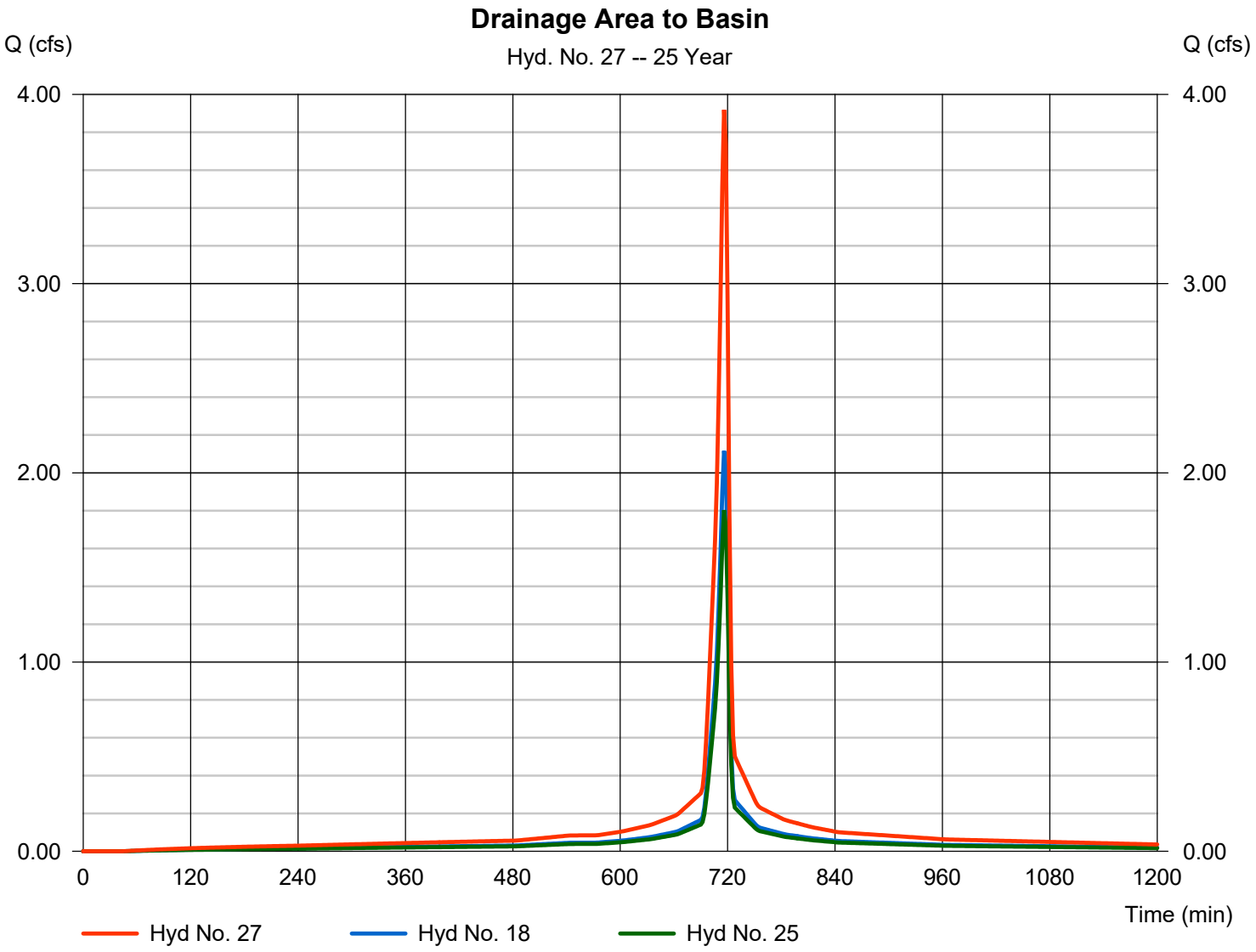
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 27

Drainage Area to Basin

Hydrograph type	= Combine	Peak discharge	= 3.919 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 9,396 cuft
Inflow hyds.	= 18, 25	Contrib. drain. area	= 0.500 ac



Hydrograph Report

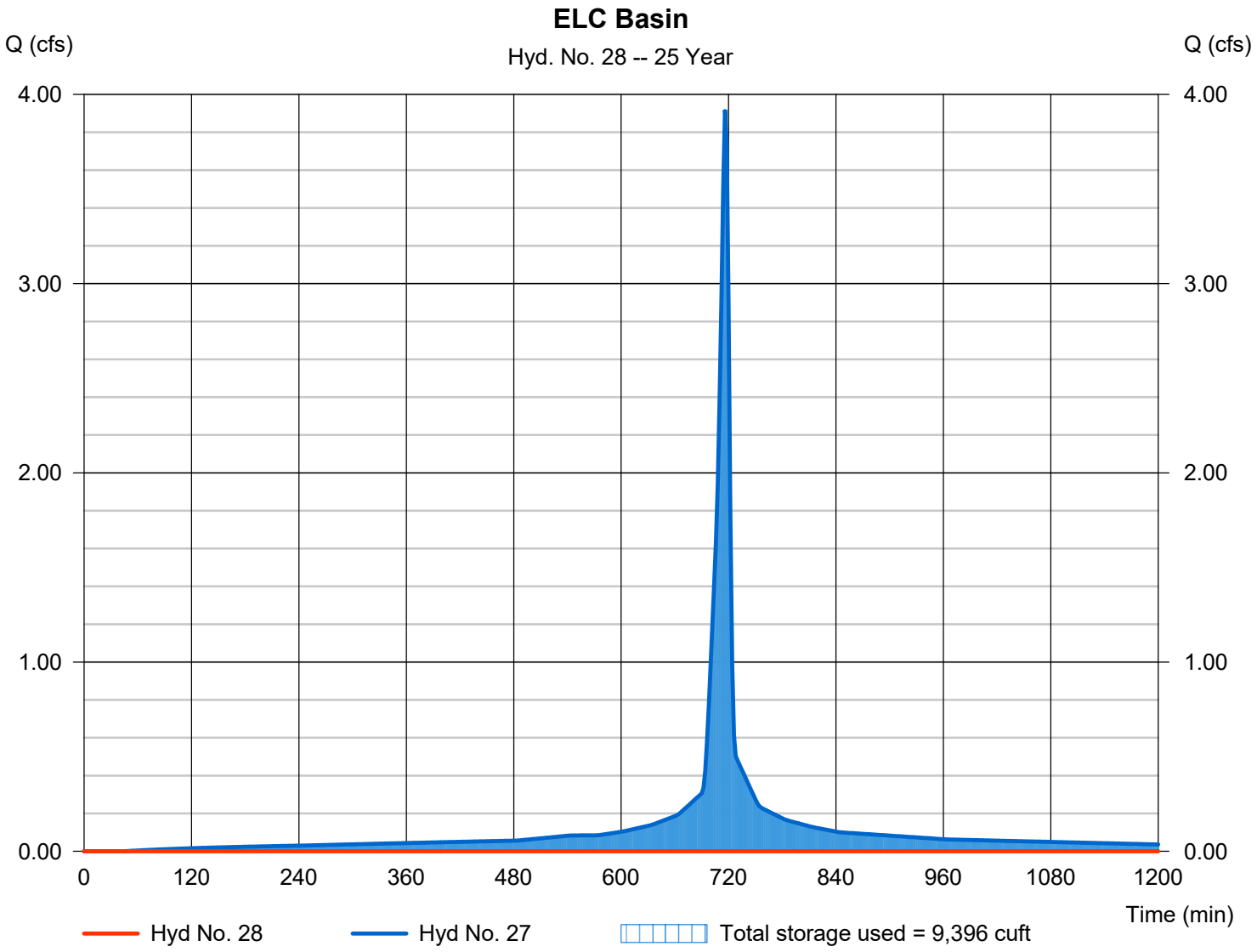
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 28

ELC Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	25 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	27 - Drainage Area to Basin	Max. Elevation	=	317.08 ft
Reservoir name	=	ELC Basin	Max. Storage	=	9,396 cuft

Storage Indication method used.



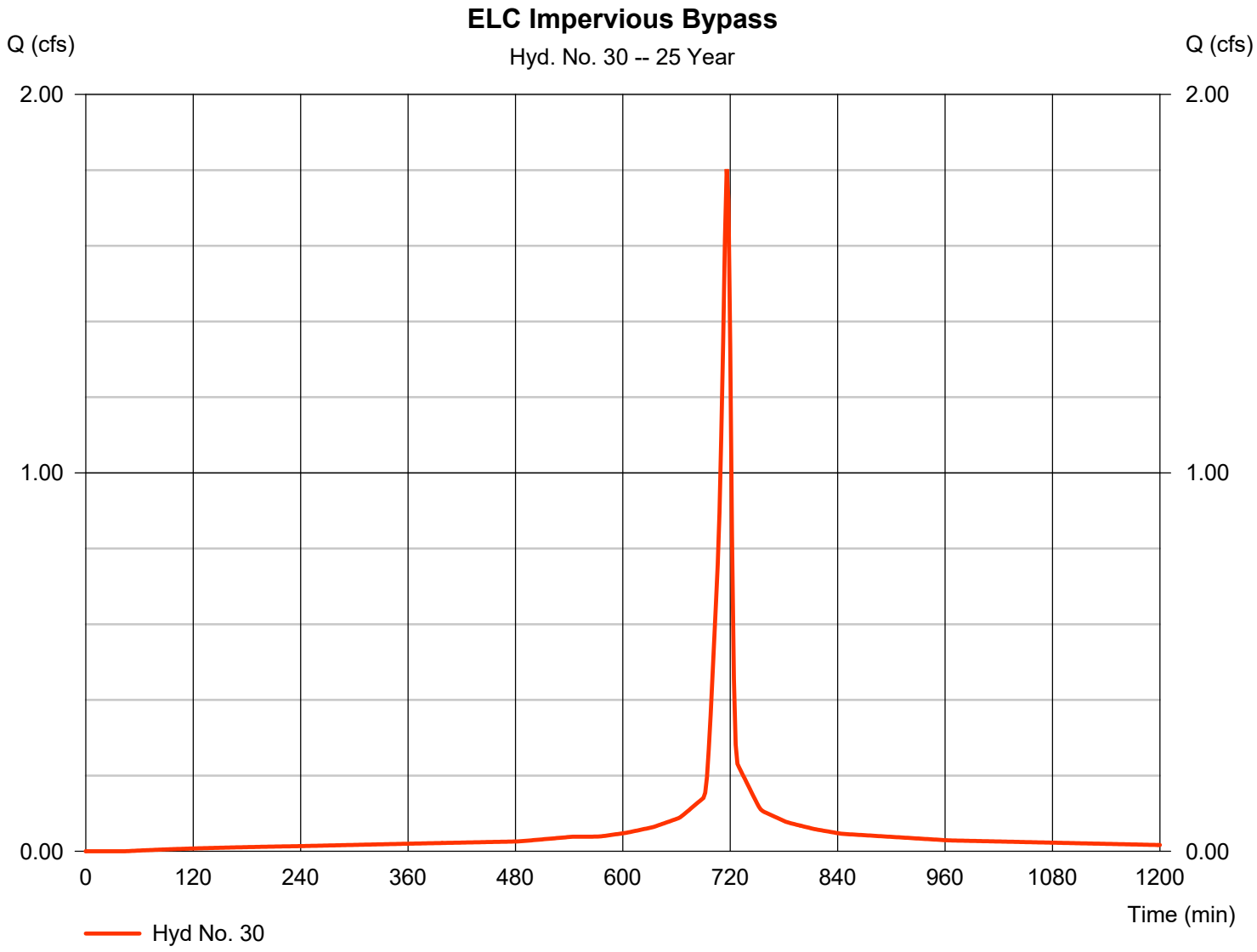
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 30

ELC Impervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.803 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,322 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



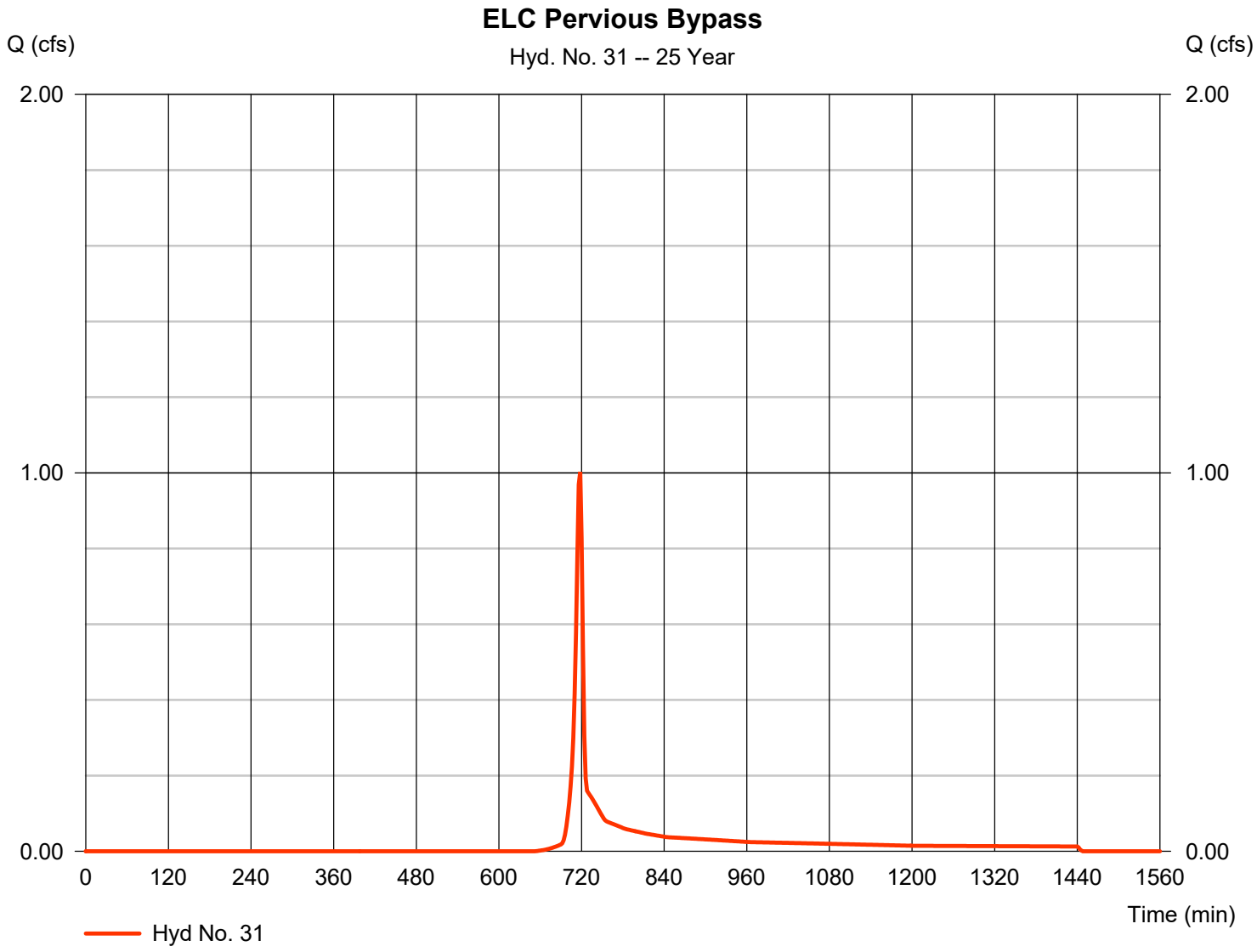
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 31

ELC Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.003 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,011 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



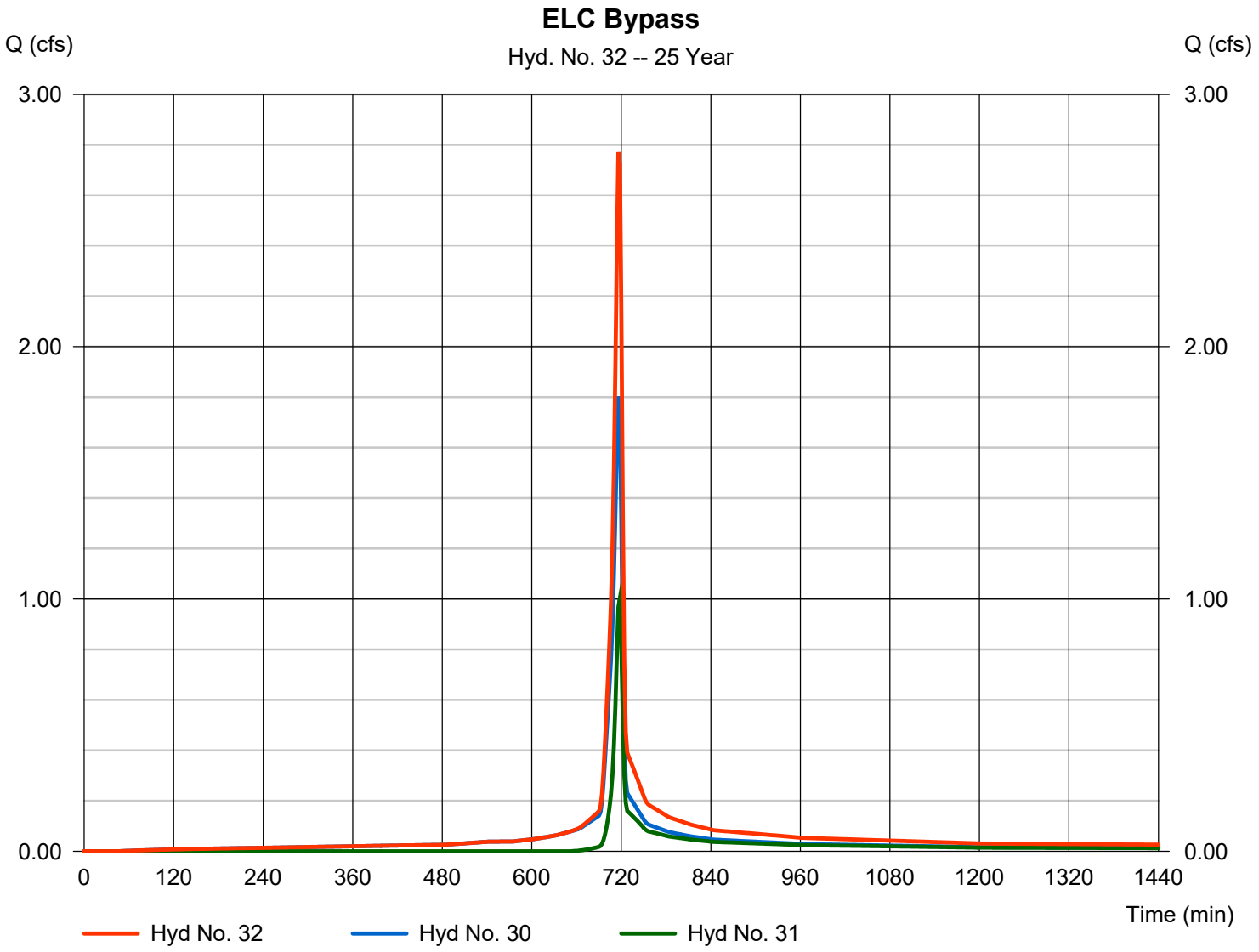
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 32

ELC Bypass

Hydrograph type	=	Combine	Peak discharge	=	2.772 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	6,333 cuft
Inflow hyds.	=	30, 31	Contrib. drain. area	=	0.550 ac



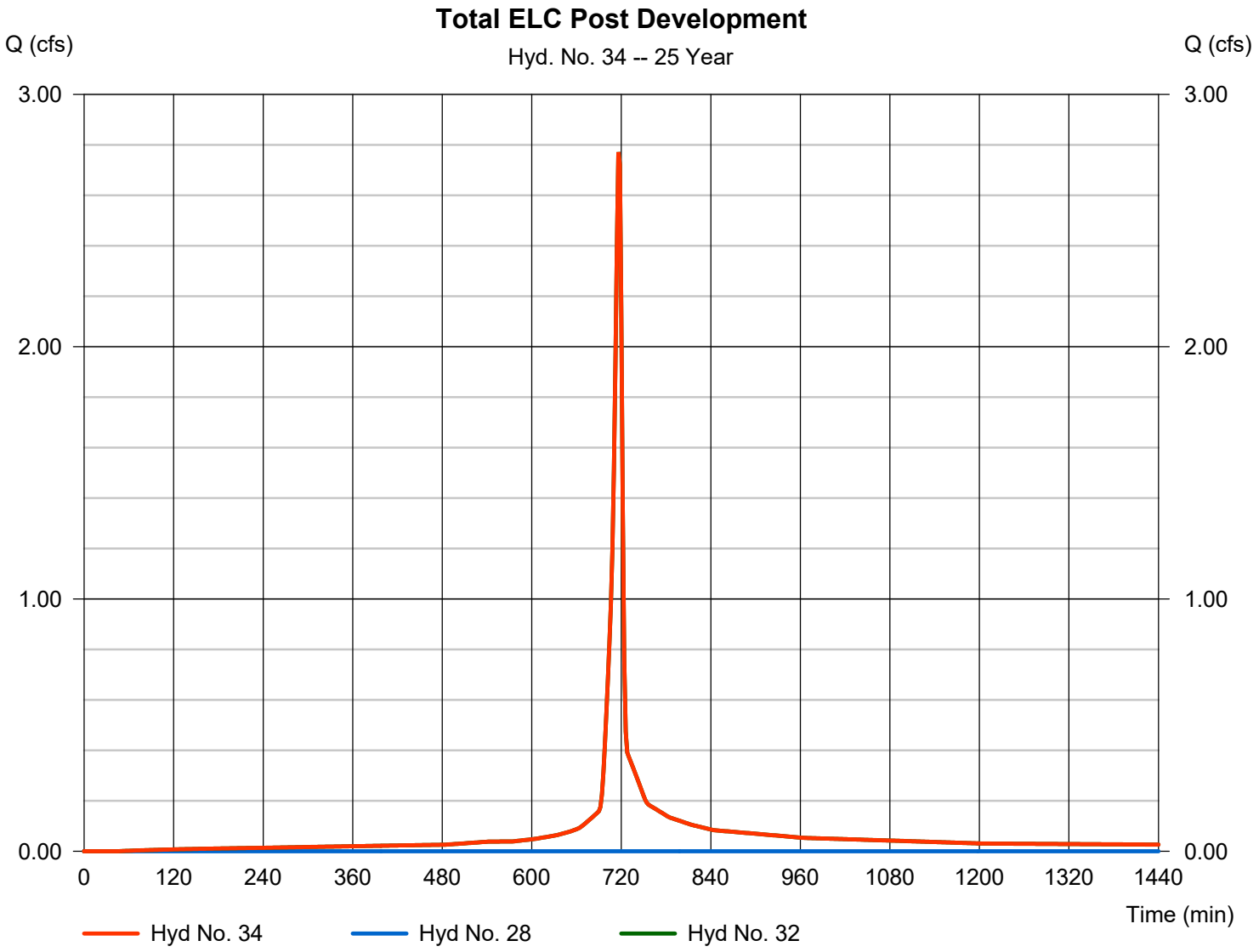
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 34

Total ELC Post Development

Hydrograph type	= Combine	Peak discharge	= 2.772 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 6,333 cuft
Inflow hyds.	= 28, 32	Contrib. drain. area	= 0.000 ac



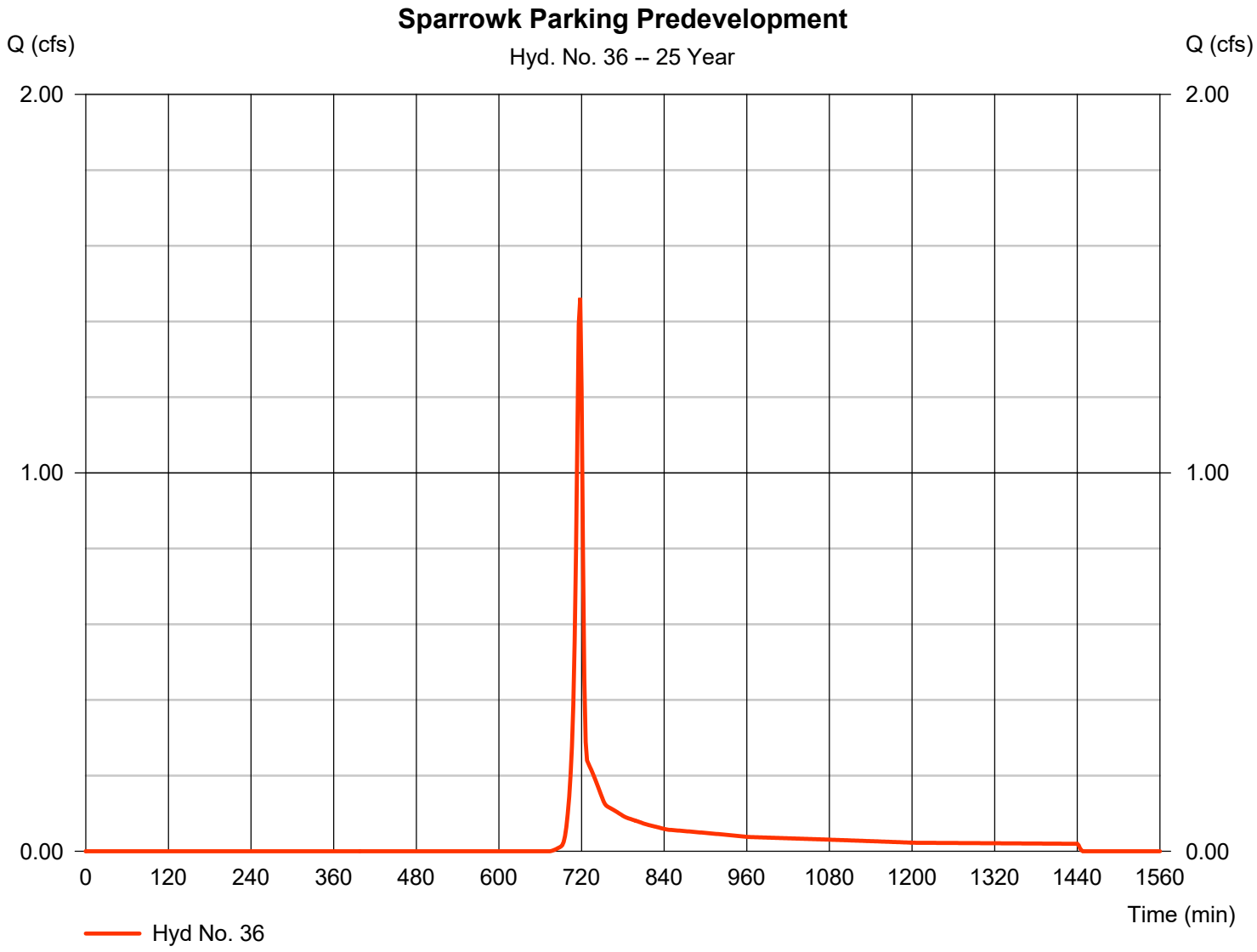
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 36

Sparrowk Parking Predevelopment

Hydrograph type	= SCS Runoff	Peak discharge	= 1.462 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,957 cuft
Drainage area	= 0.540 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



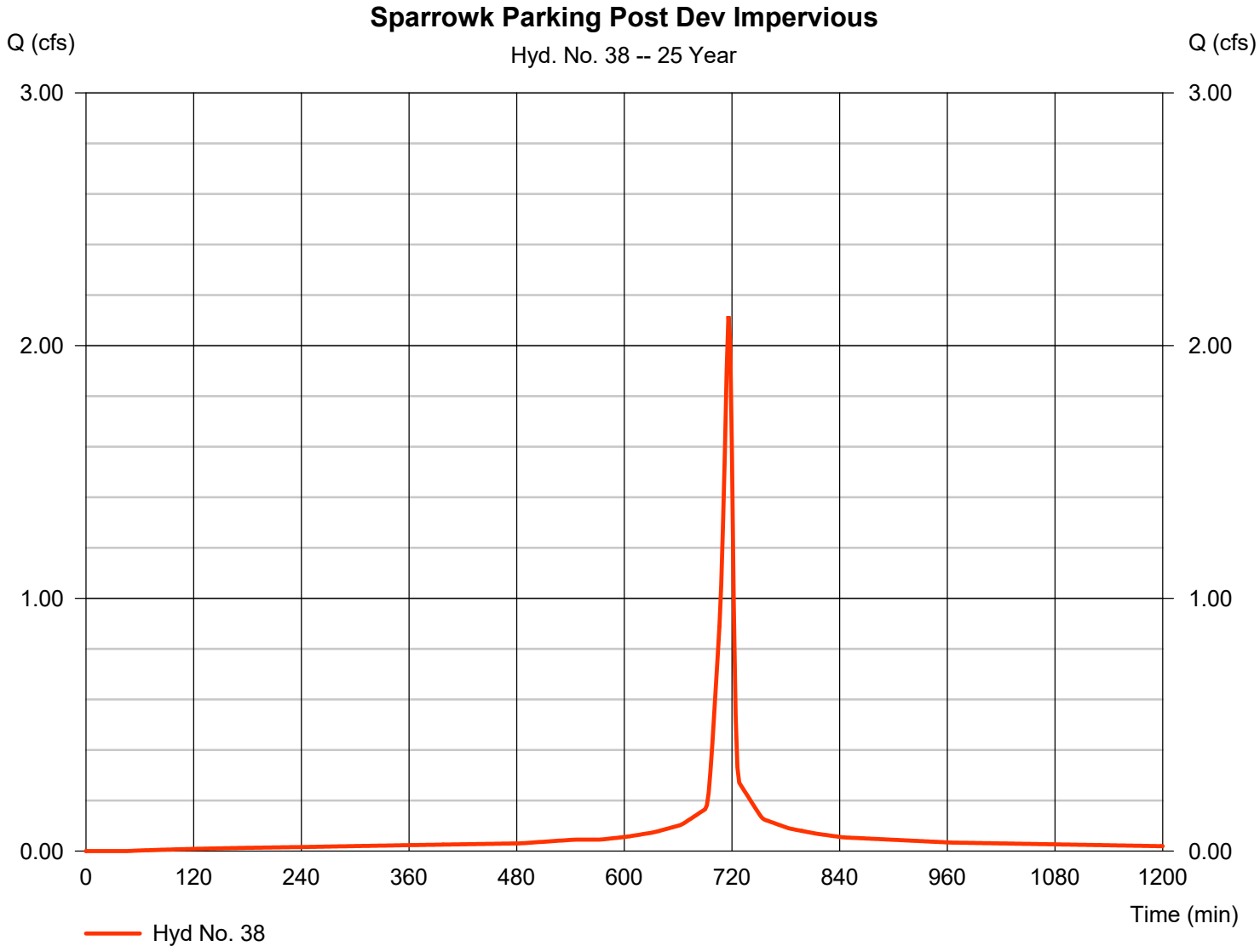
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 38

Sparrowk Parking Post Dev Impervious

Hydrograph type	= SCS Runoff	Peak discharge	= 2.116 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 5,074 cuft
Drainage area	= 0.270 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



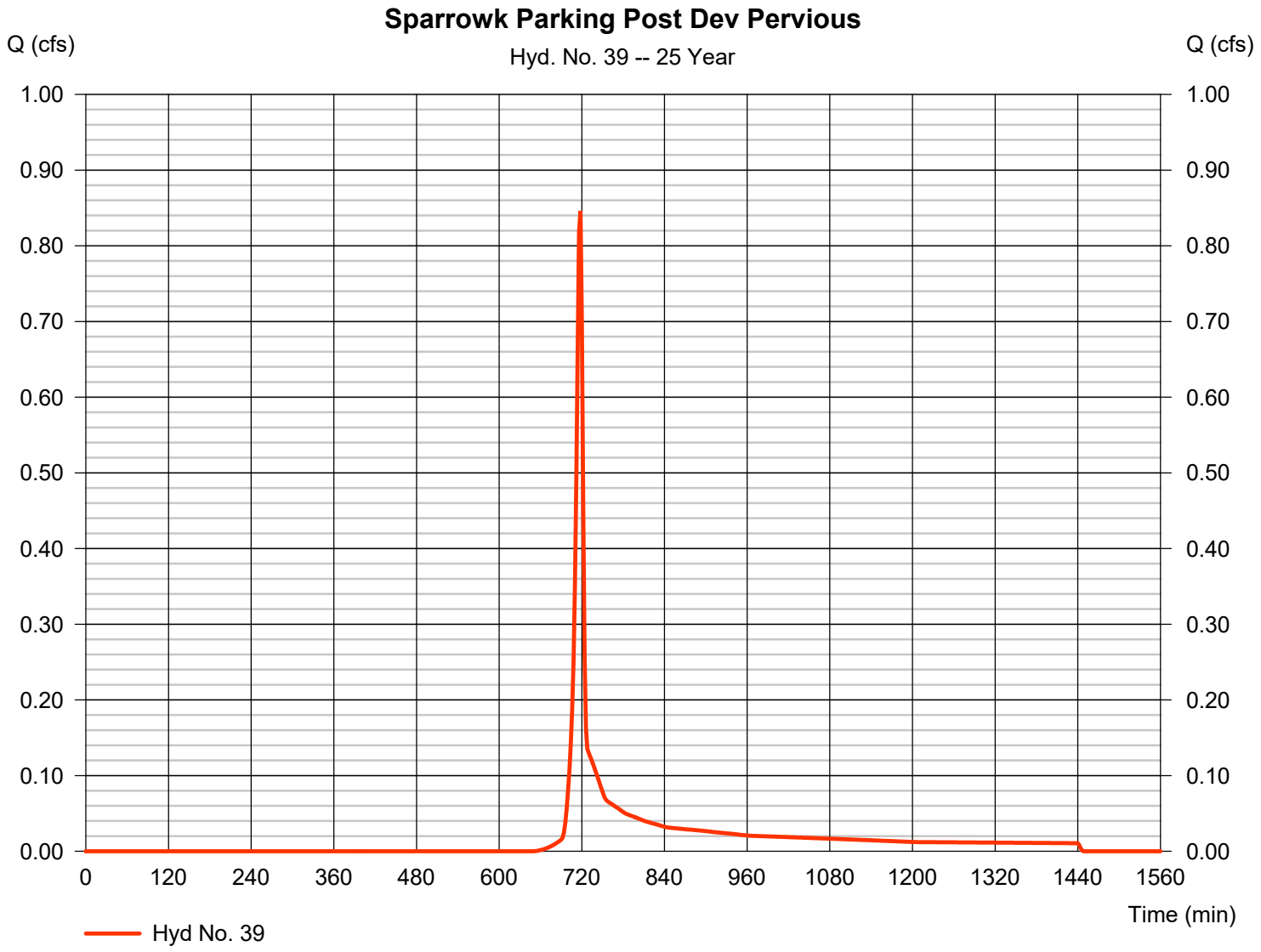
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 39

Sparrowk Parking Post Dev Pervious

Hydrograph type	= SCS Runoff	Peak discharge	= 0.846 cfs
Storm frequency	= 25 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 1,697 cuft
Drainage area	= 0.270 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



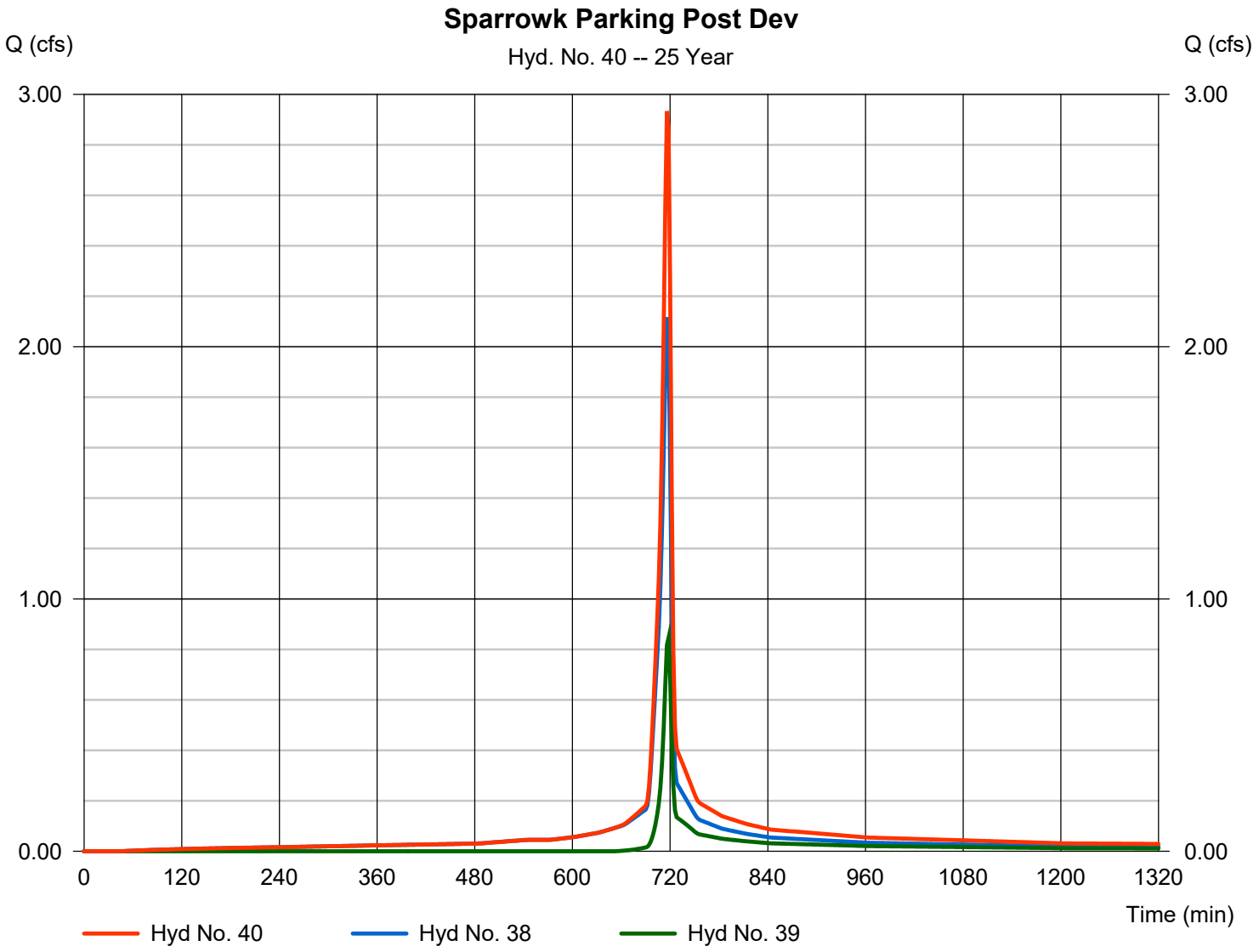
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 40

Sparrowk Parking Post Dev

Hydrograph type	= Combine	Peak discharge	= 2.934 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 6,771 cuft
Inflow hyds.	= 38, 39	Contrib. drain. area	= 0.540 ac



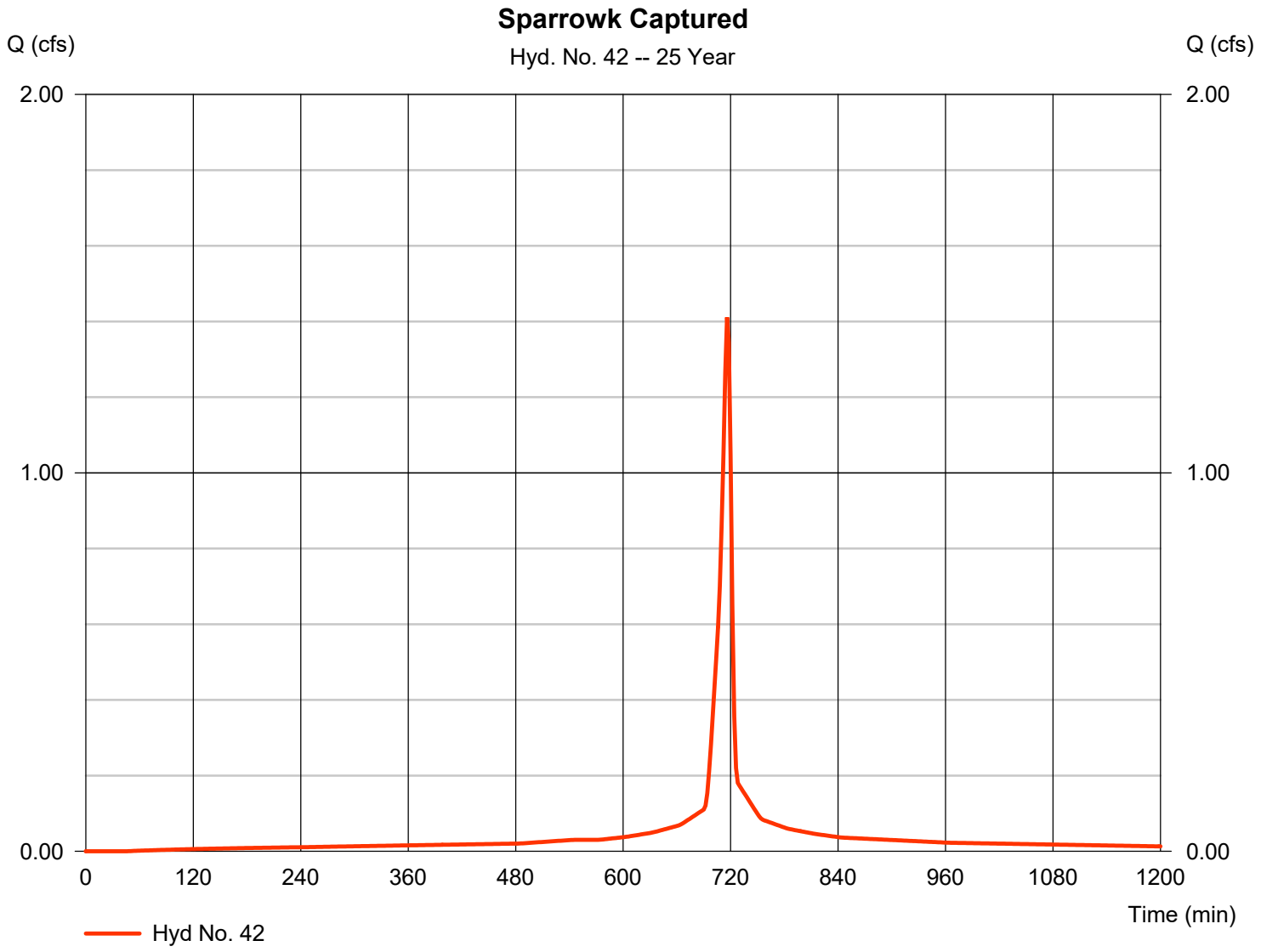
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 42

Sparrowk Captured

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.411 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,383 cuft
Drainage area	=	0.180 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

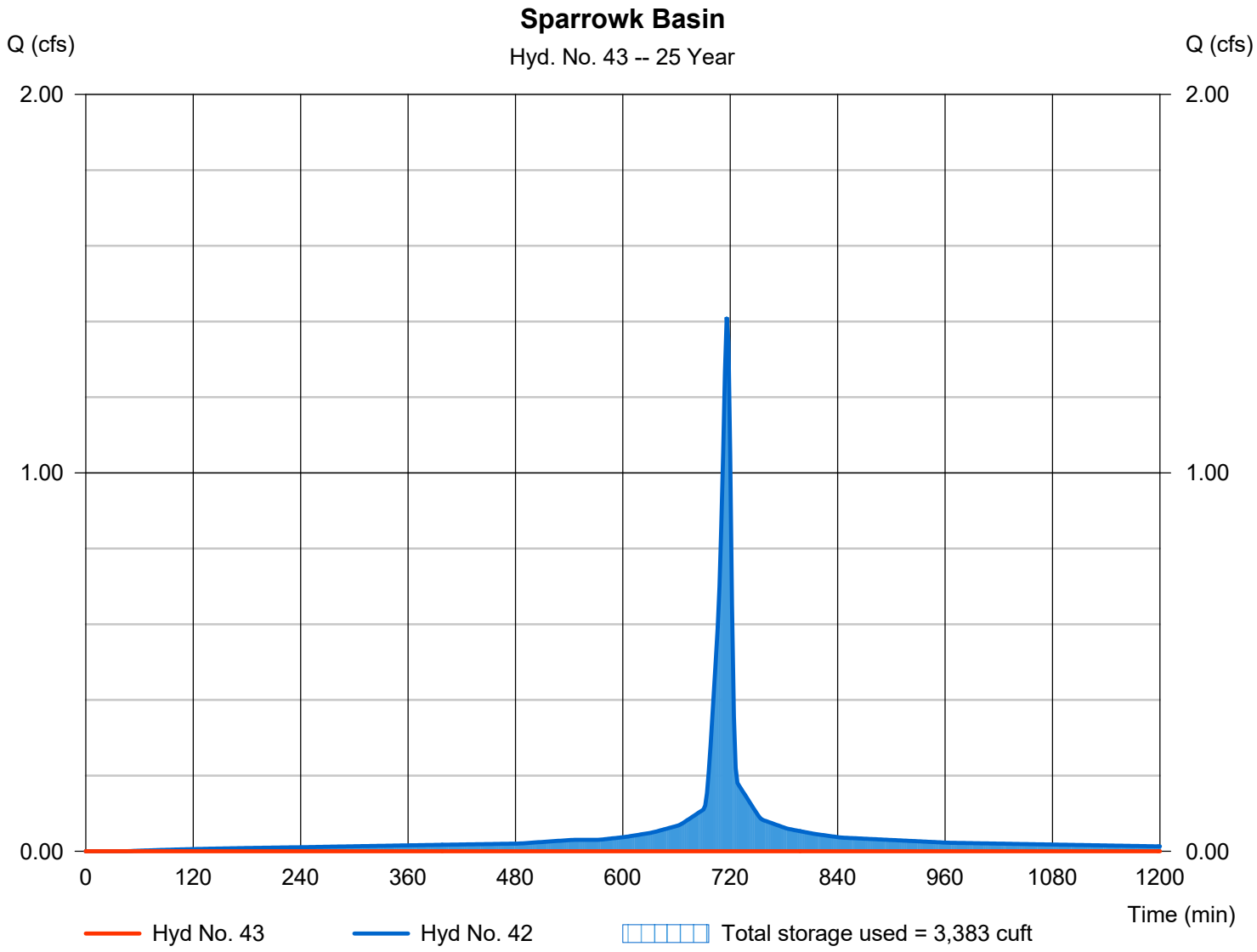
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 43

Sparrowk Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	25 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	42 - Sparrowk Captured	Max. Elevation	=	302.09 ft
Reservoir name	=	Sparrowk Basin	Max. Storage	=	3,383 cuft

Storage Indication method used.



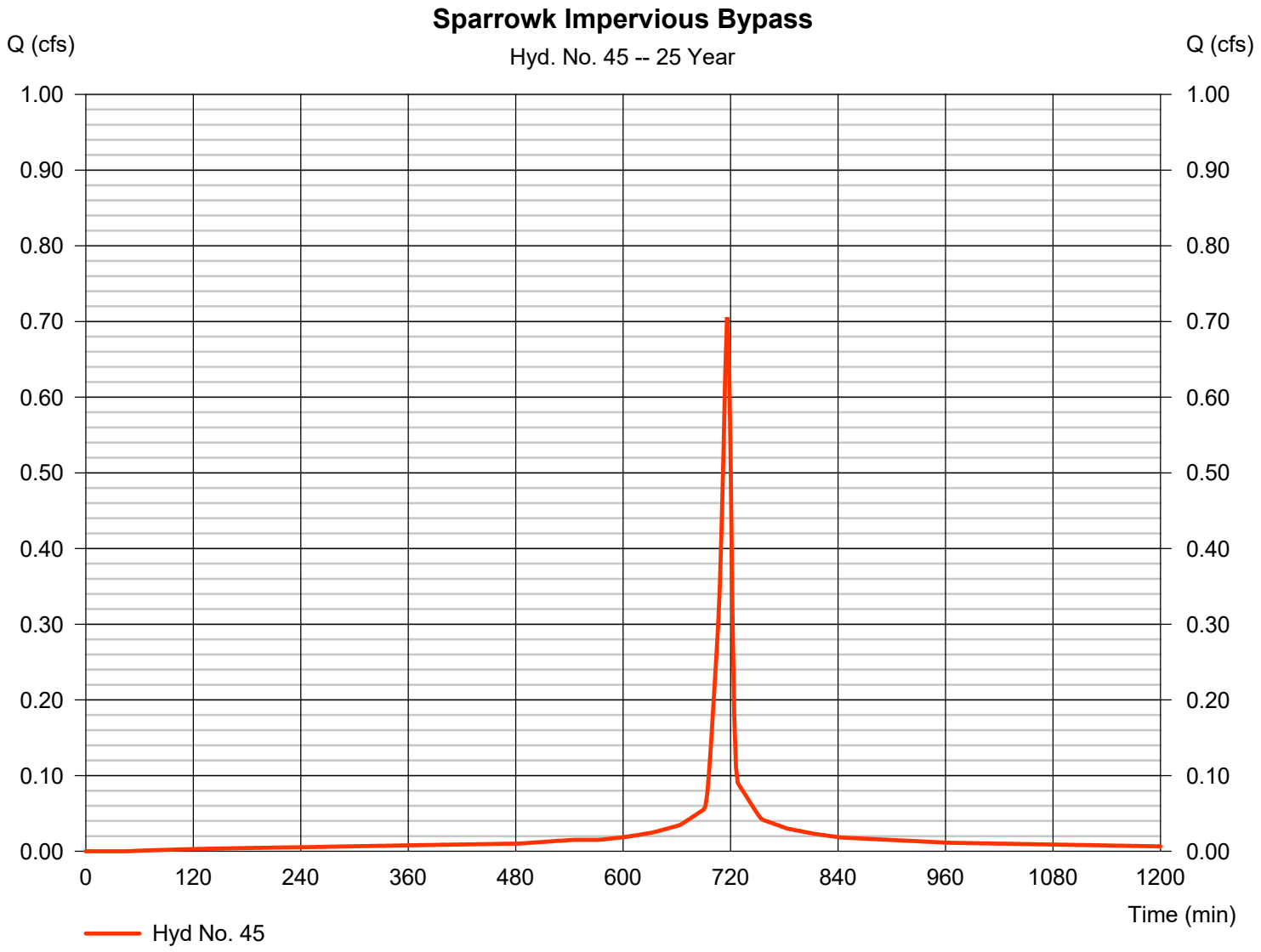
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 45

Sparrowk Impervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.705 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,691 cuft
Drainage area	= 0.090 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.76 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



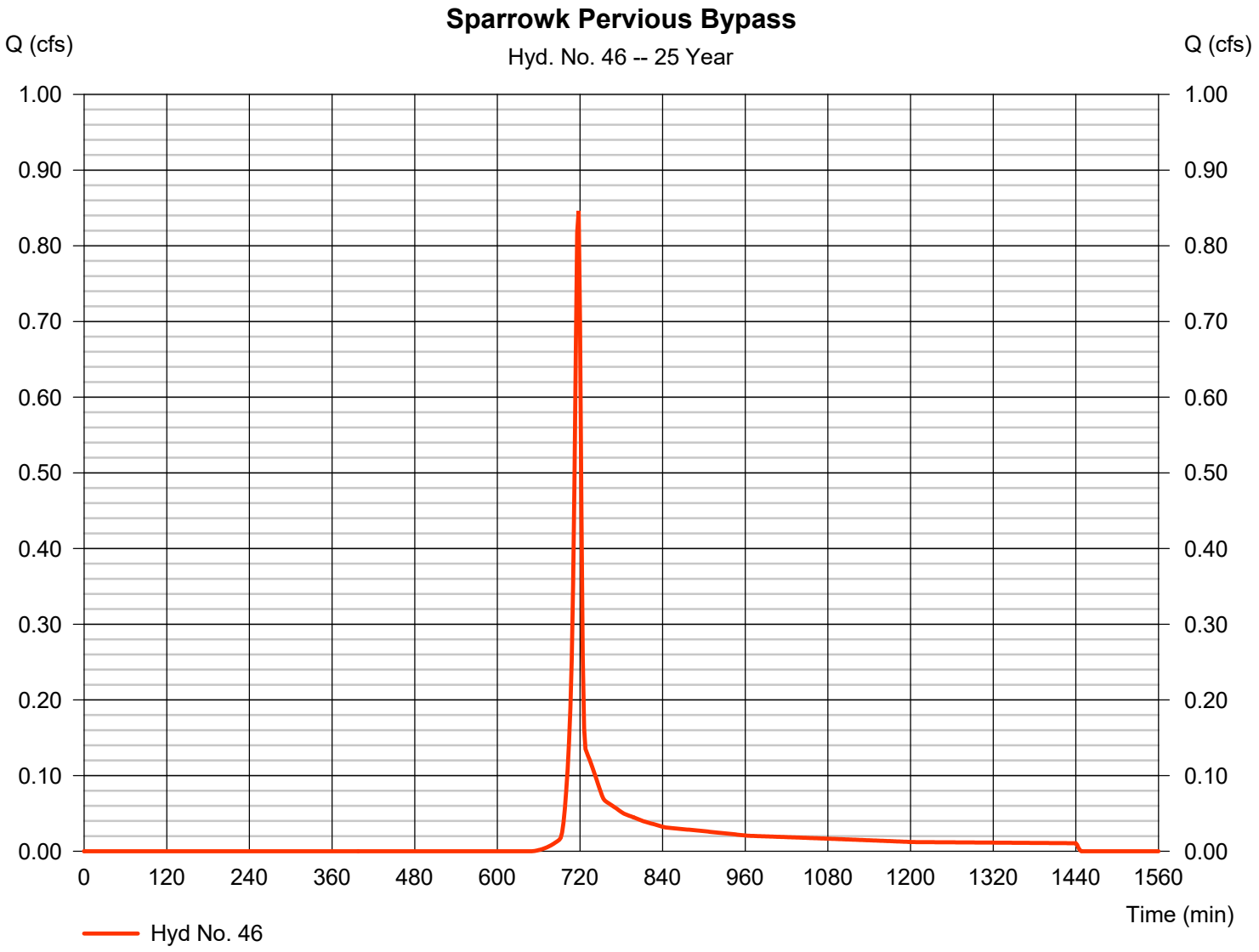
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 46

Sparrowk Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.846 cfs
Storm frequency	=	25 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	1,697 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	5.76 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



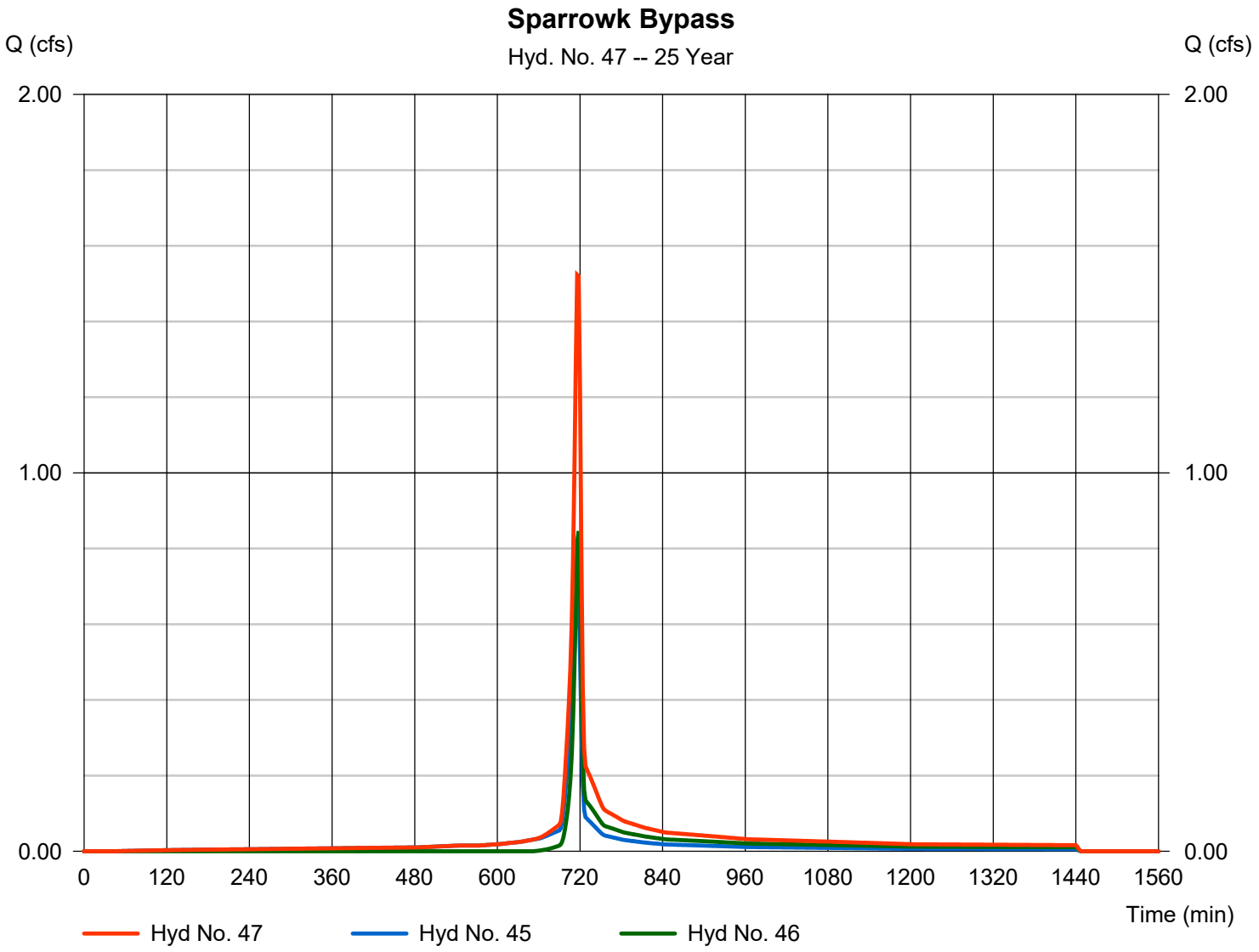
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 47

Sparrowk Bypass

Hydrograph type	=	Combine	Peak discharge	=	1.523 cfs
Storm frequency	=	25 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,388 cuft
Inflow hyds.	=	45, 46	Contrib. drain. area	=	0.360 ac



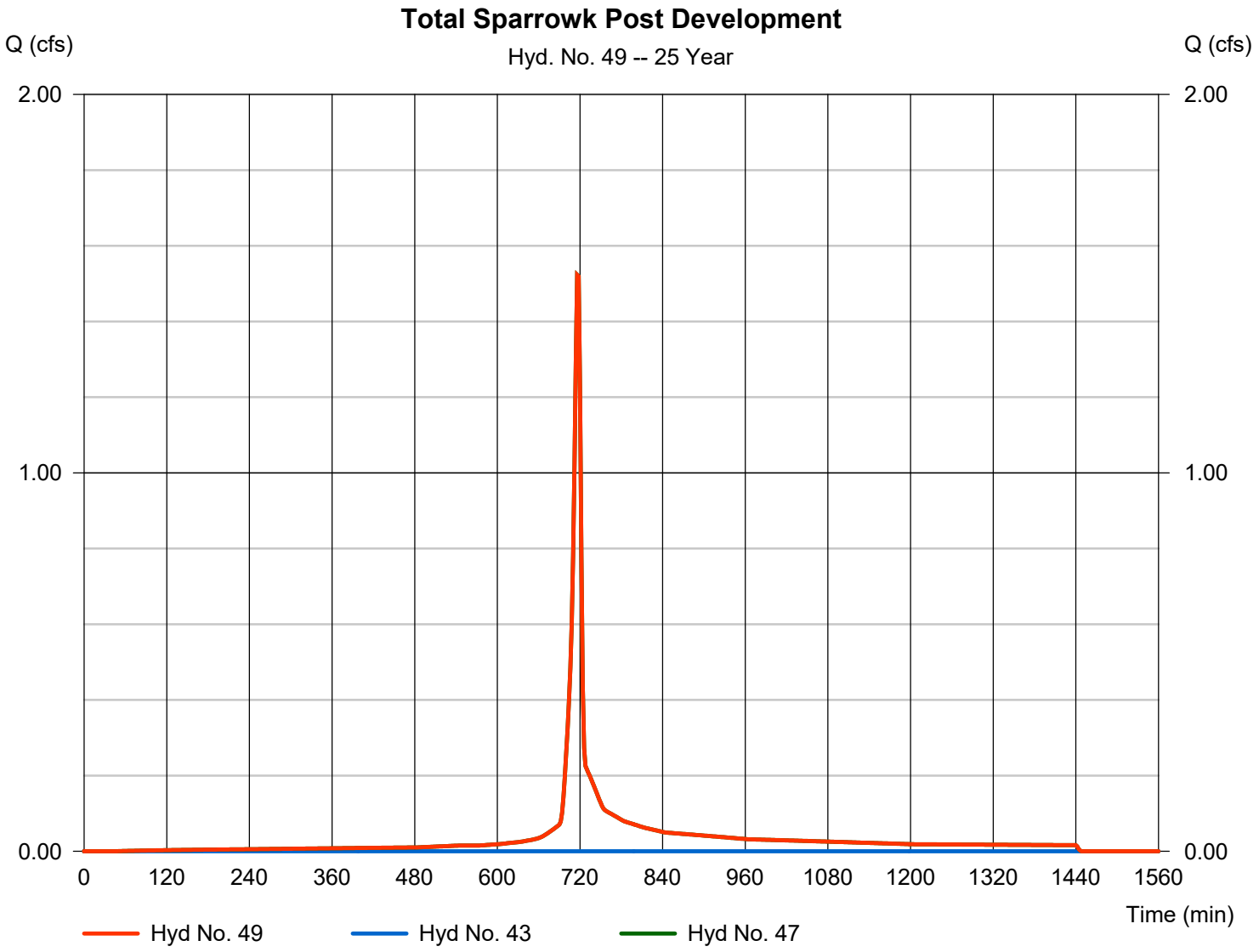
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 49

Total Sparrowk Post Development

Hydrograph type	= Combine	Peak discharge	= 1.523 cfs
Storm frequency	= 25 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 3,388 cuft
Inflow hyds.	= 43, 47	Contrib. drain. area	= 0.000 ac



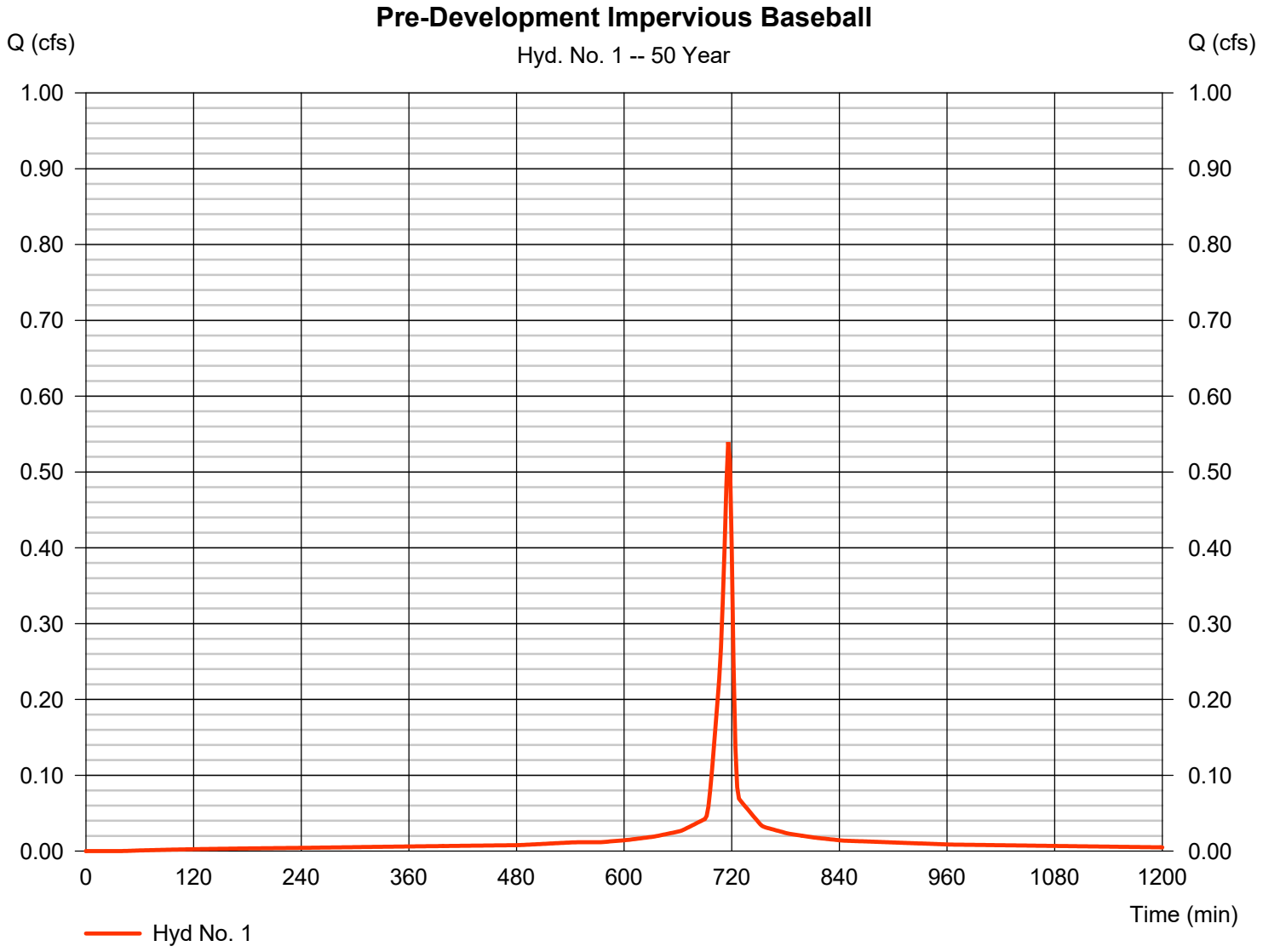
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 1

Pre-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.539 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,299 cuft
Drainage area	= 0.060 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



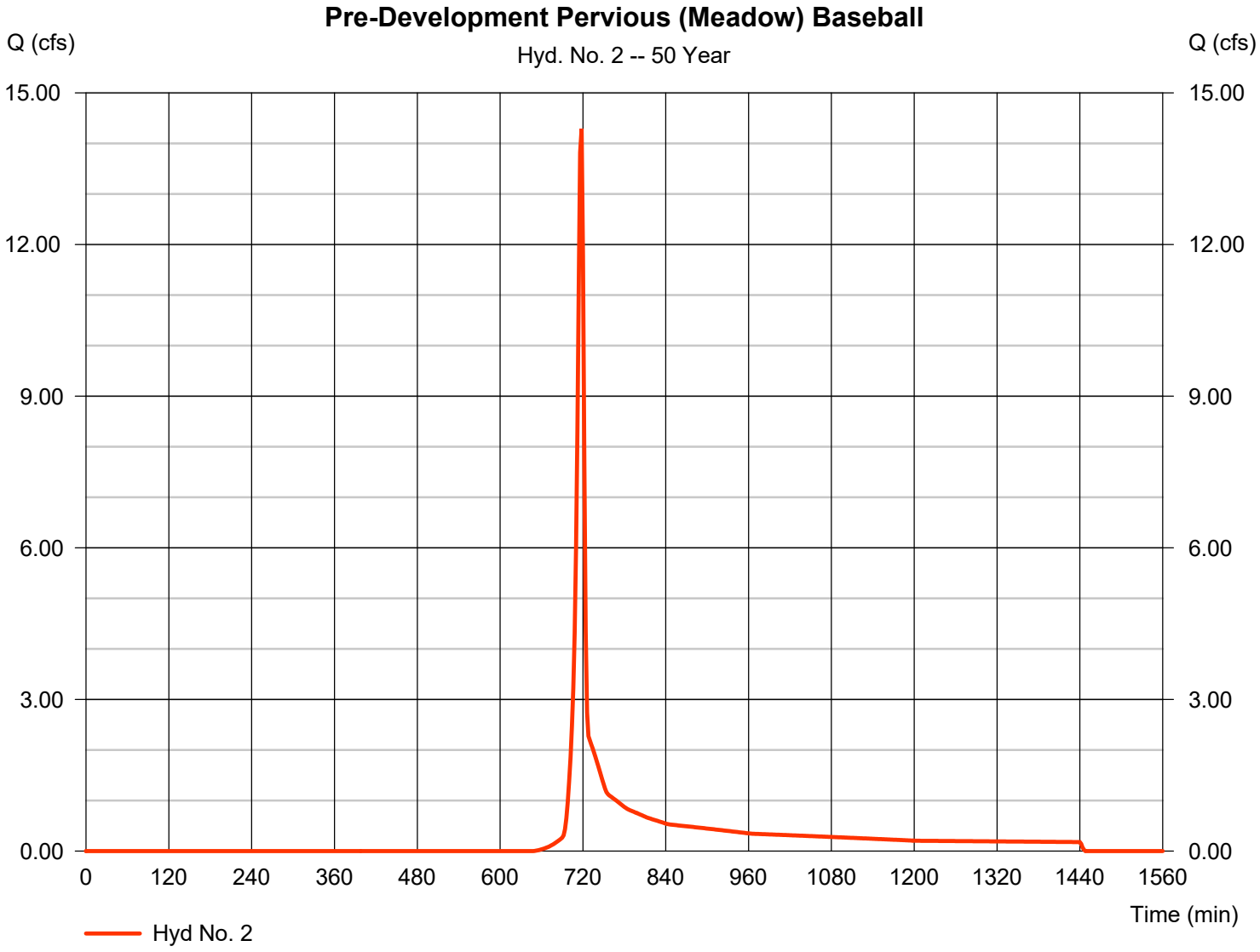
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 2

Pre-Development Pervious (Meadow) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 14.29 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 28,641 cuft
Drainage area	= 3.930 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



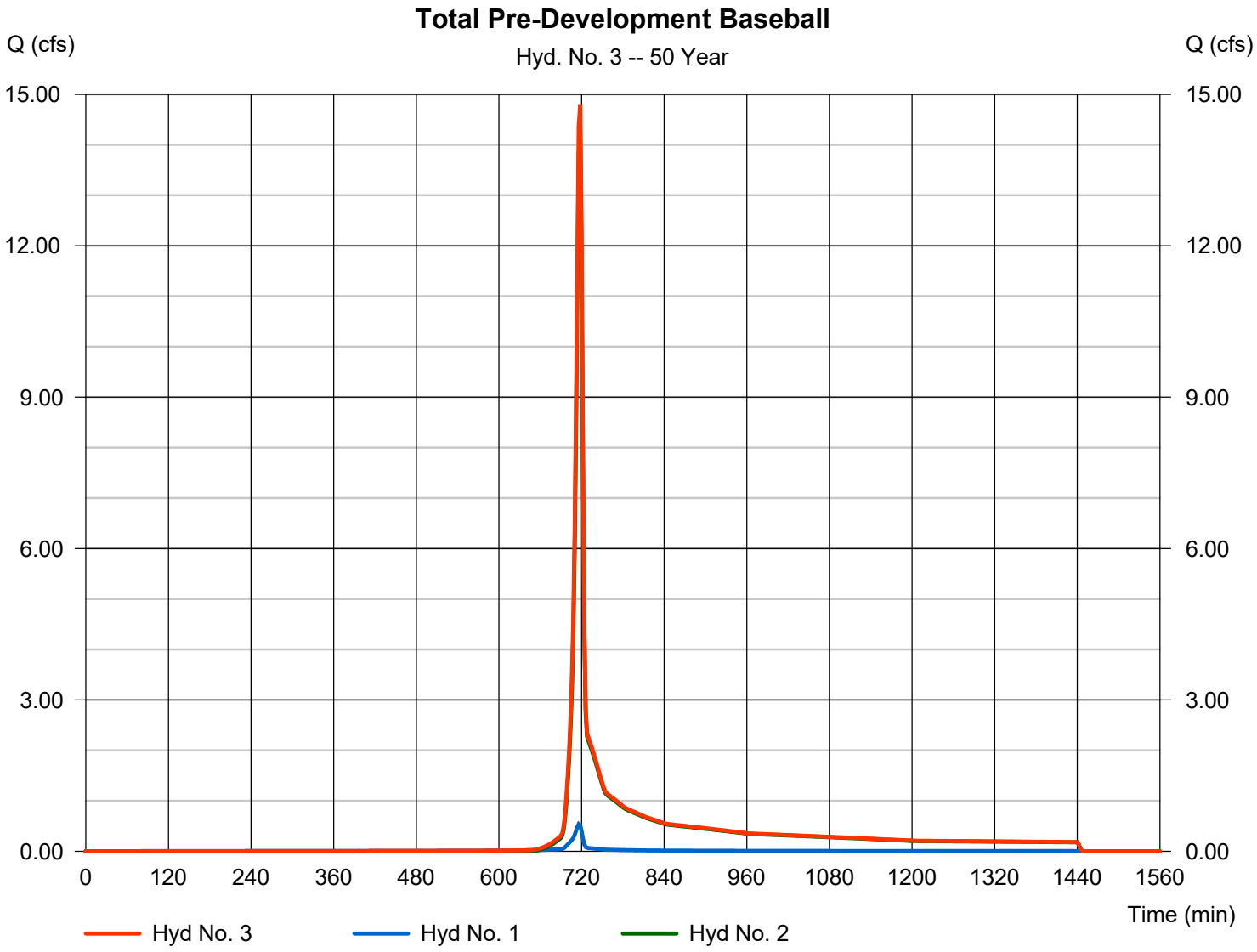
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 3

Total Pre-Development Baseball

Hydrograph type	= Combine	Peak discharge	= 14.80 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 29,940 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 3.990 ac



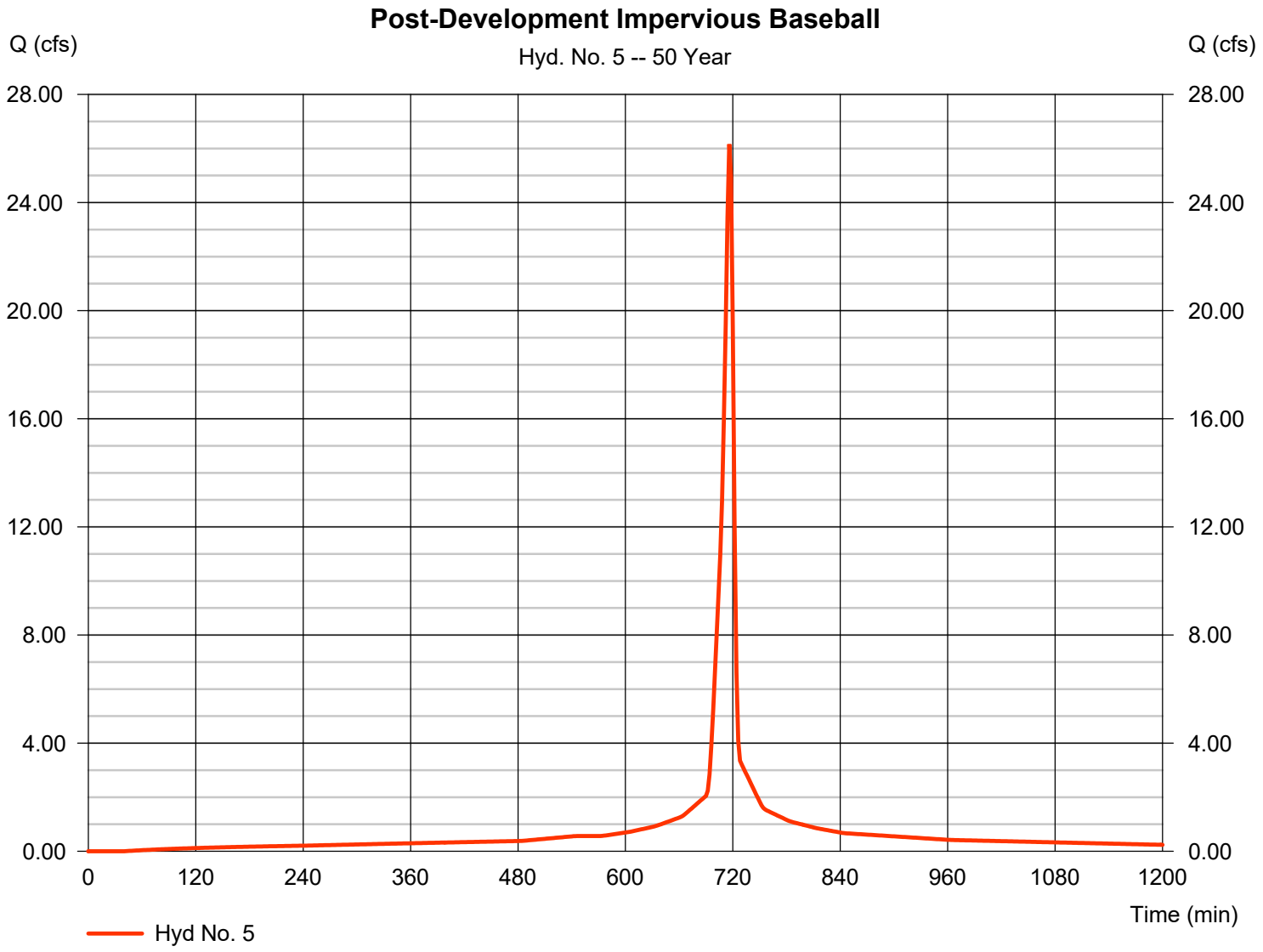
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 5

Post-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 26.16 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 62,996 cuft
Drainage area	= 2.910 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



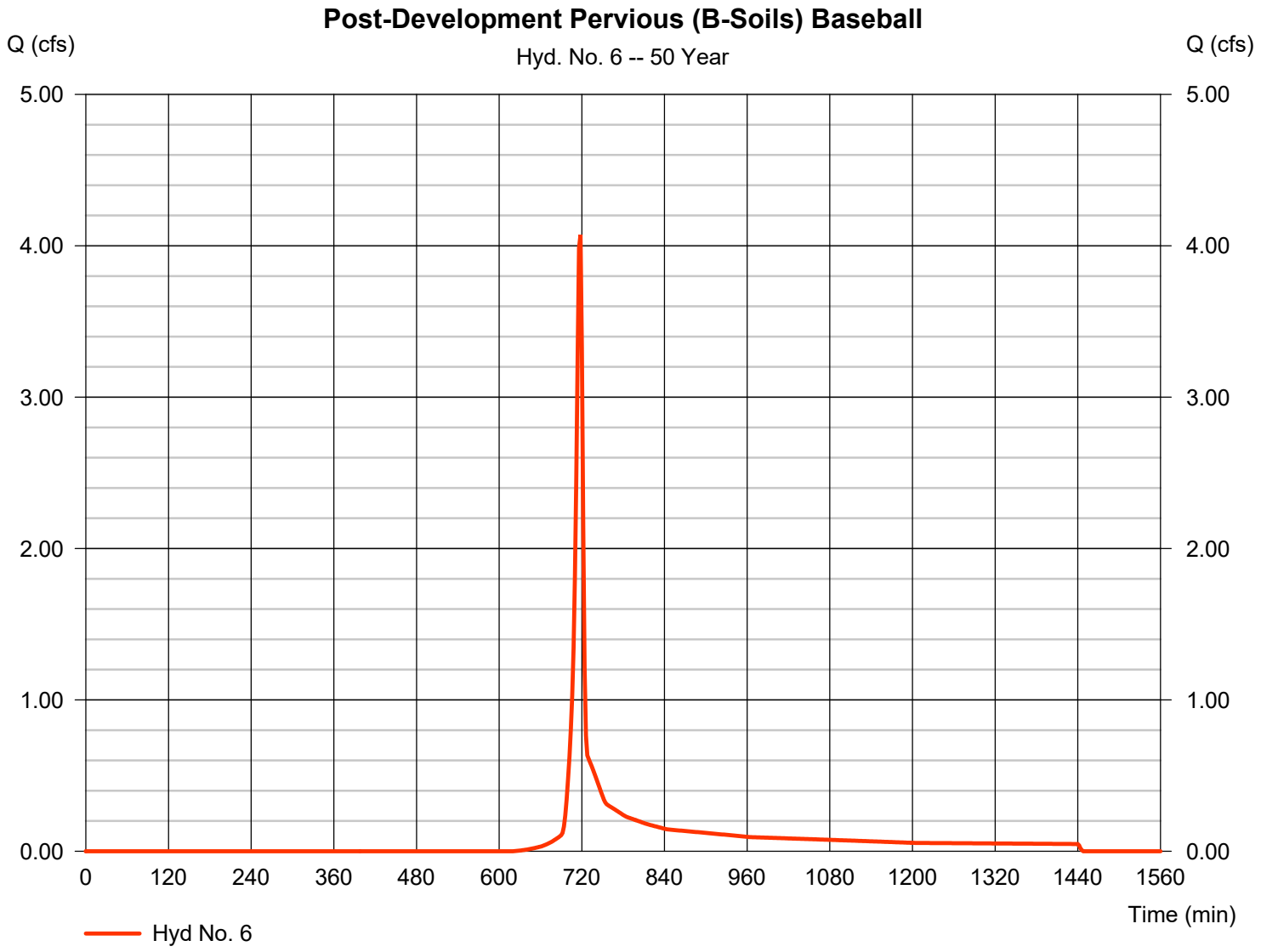
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 6

Post-Development Pervious (B-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 4.072 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 8,144 cuft
Drainage area	= 0.990 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



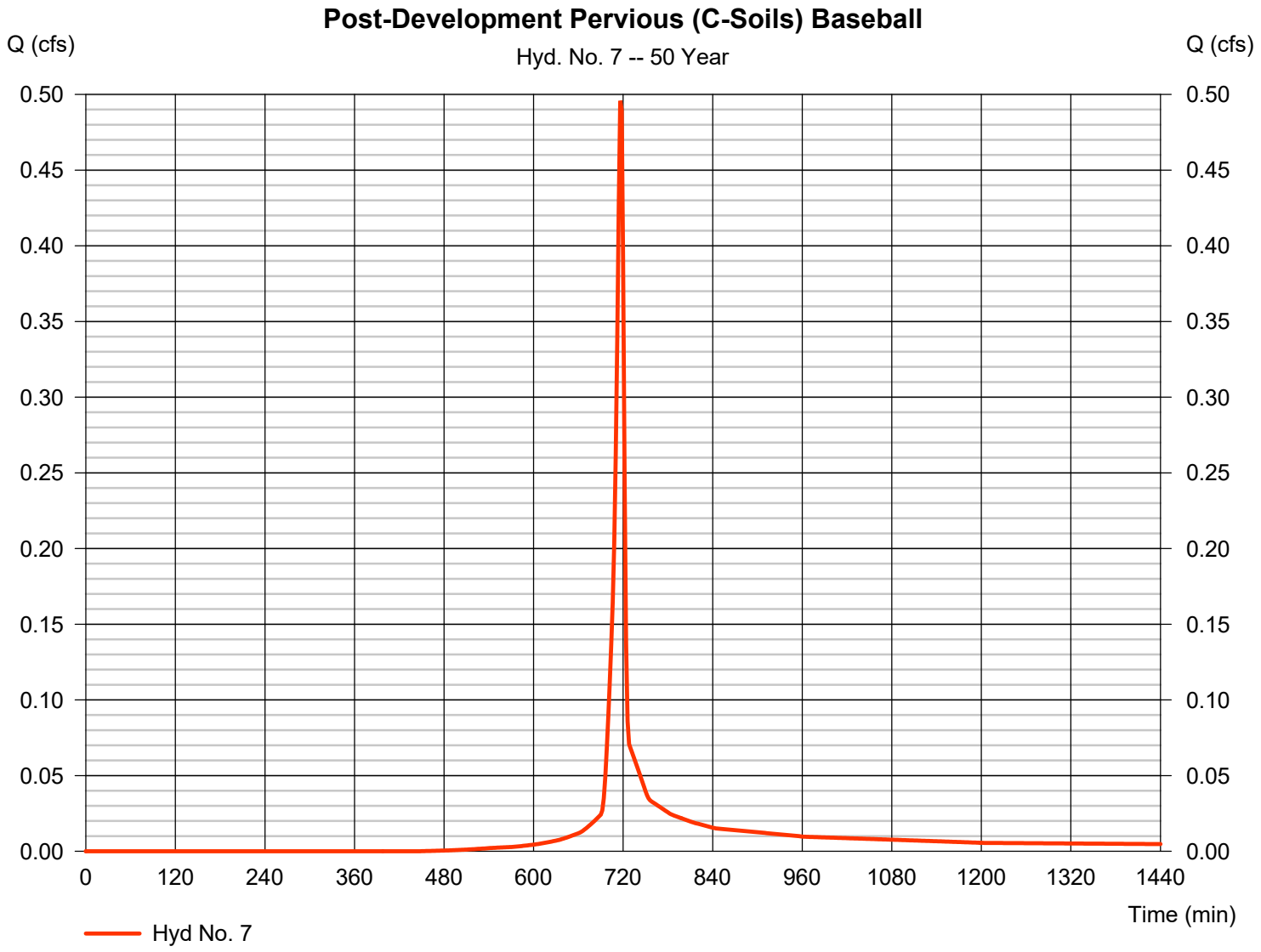
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 7

Post-Development Pervious (C-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.496 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,006 cuft
Drainage area	= 0.080 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



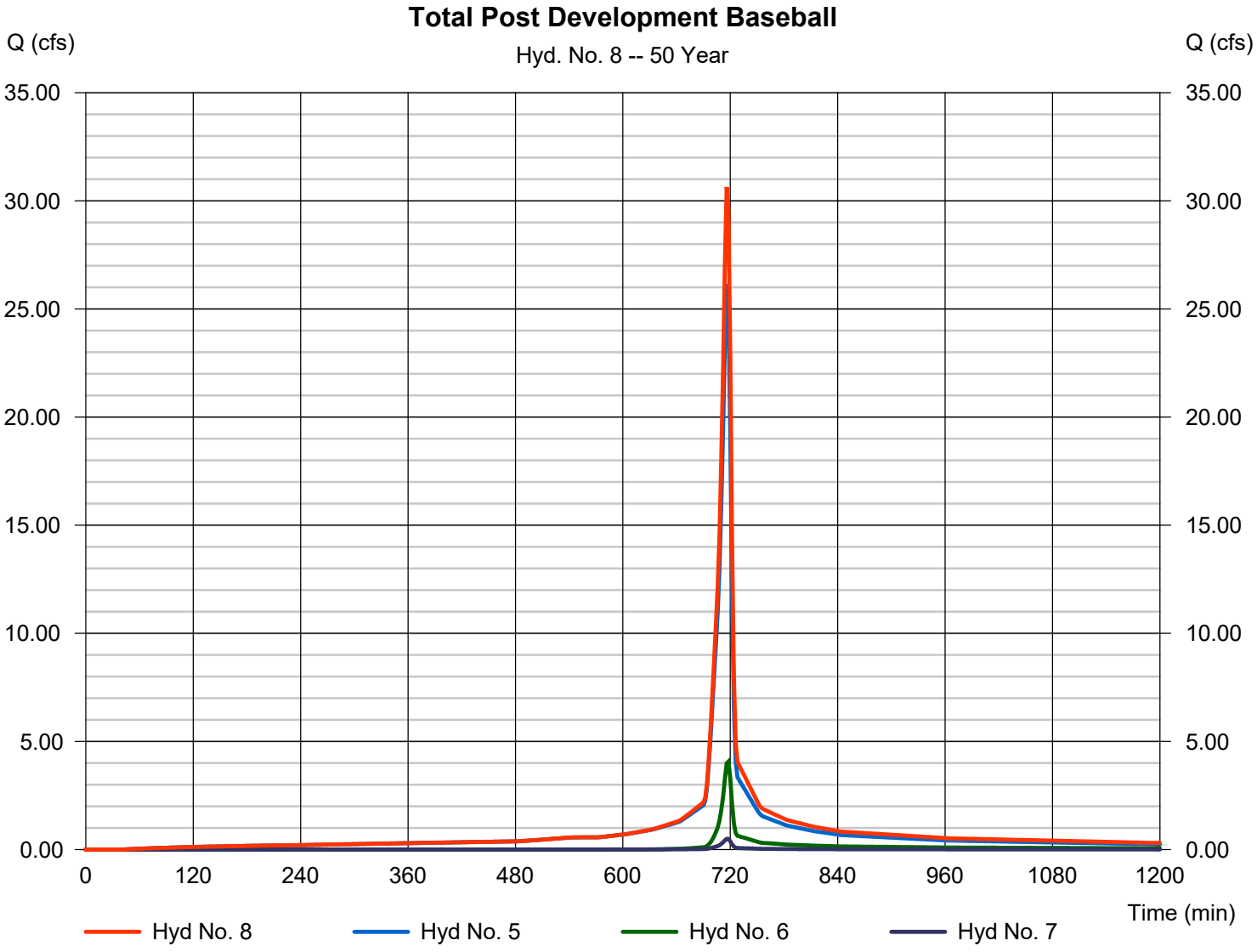
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 8

Total Post Development Baseball

Hydrograph type	= Combine	Peak discharge	= 30.64 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 72,146 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 3.980 ac



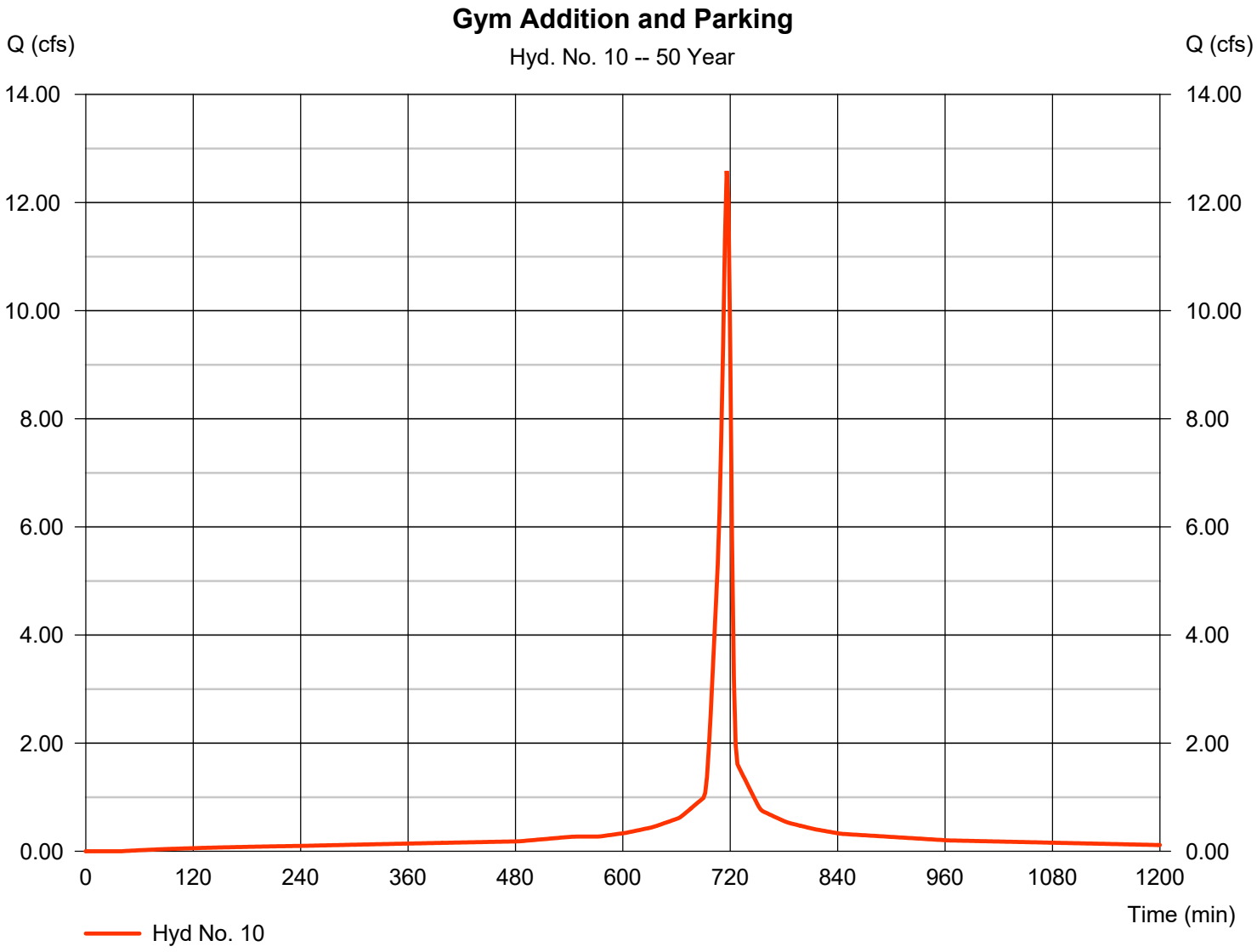
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 10

Gym Addition and Parking

Hydrograph type	=	SCS Runoff	Peak discharge	=	12.59 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	30,307 cuft
Drainage area	=	1.400 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



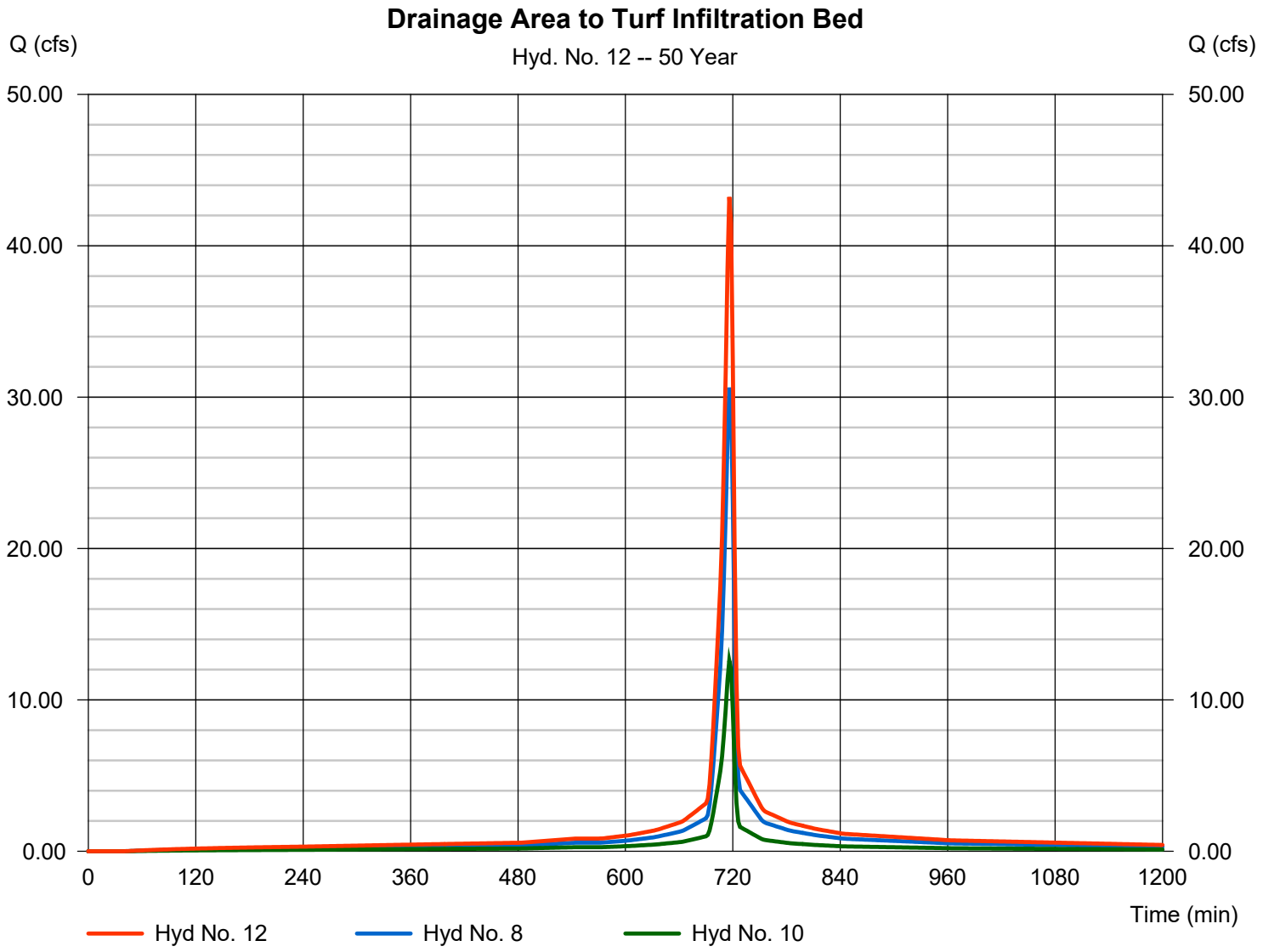
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 12

Drainage Area to Turf Infiltration Bed

Hydrograph type	= Combine	Peak discharge	= 43.23 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 102,453 cuft
Inflow hyds.	= 8, 10	Contrib. drain. area	= 1.400 ac



Hydrograph Report

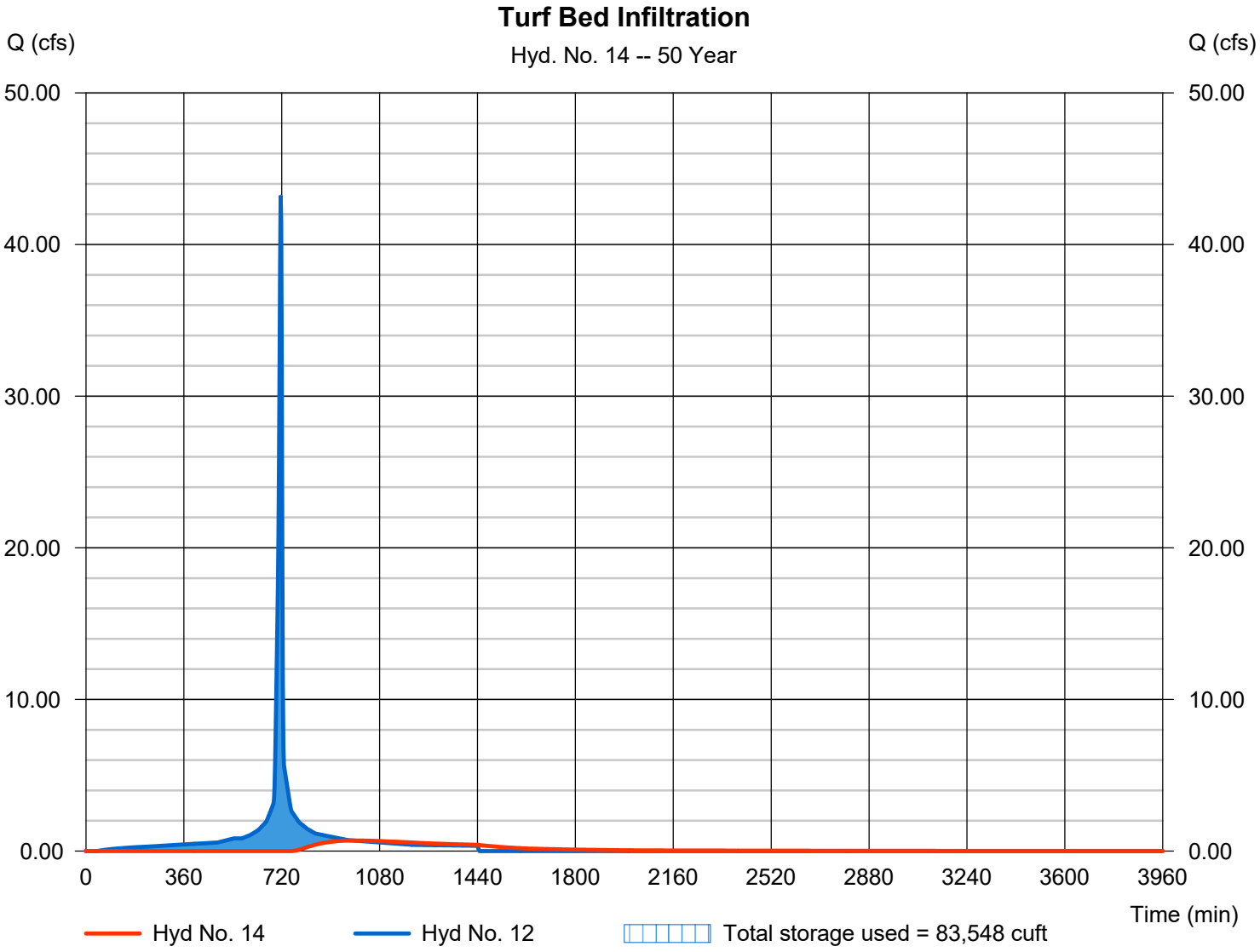
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 14

Turf Bed Infiltration

Hydrograph type	=	Reservoir	Peak discharge	=	0.695 cfs
Storm frequency	=	50 yrs	Time to peak	=	984 min
Time interval	=	2 min	Hyd. volume	=	29,107 cuft
Inflow hyd. No.	=	12 - Drainage Area to Turf Infiltration Bed	Max. Elevation	=	314.42 ft
Reservoir name	=	Turf	Max. Storage	=	83,548 cuft

Storage Indication method used.



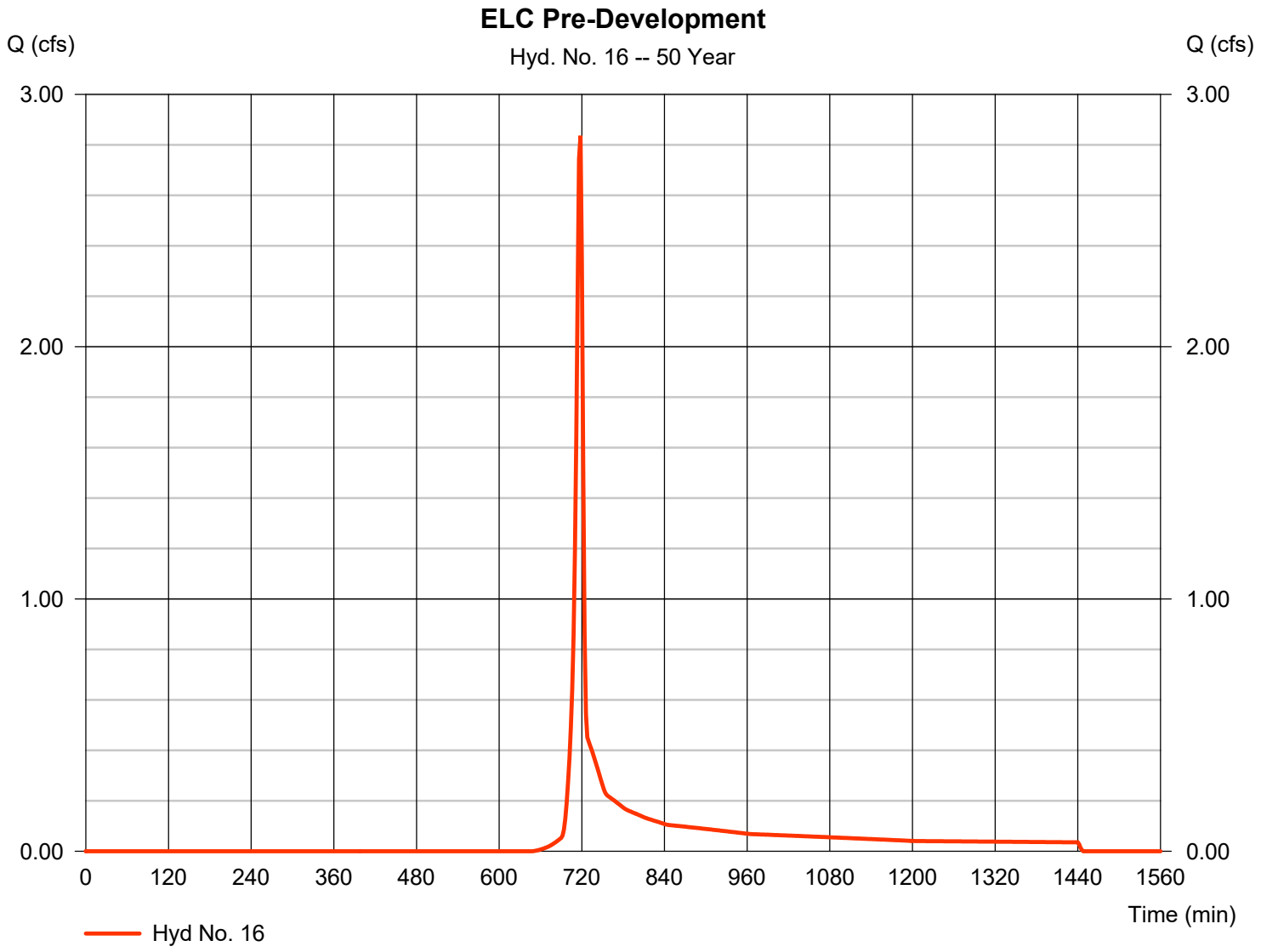
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 16

ELC Pre-Development

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.836 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	5,685 cuft
Drainage area	=	0.780 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



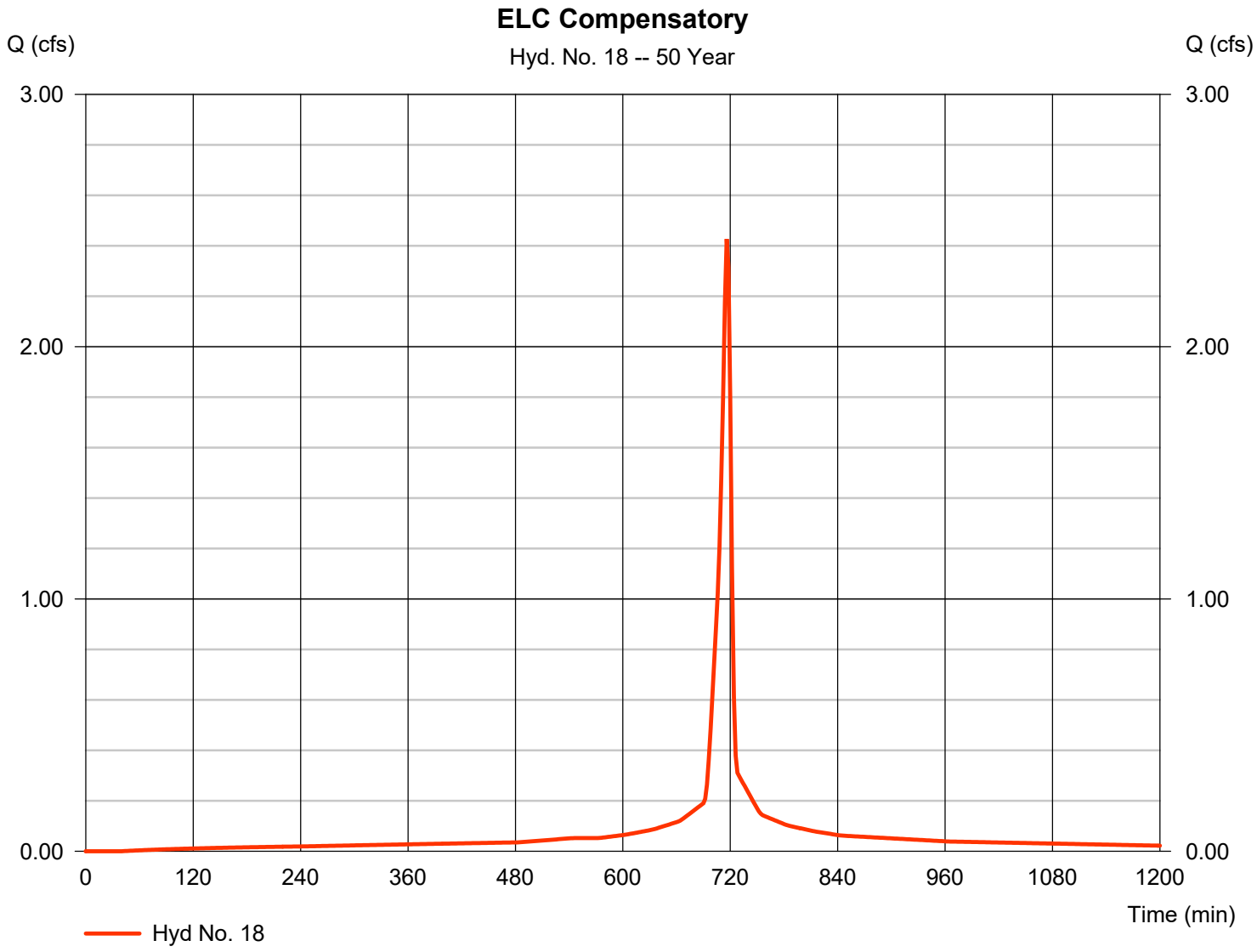
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 18

ELC Compensatory

Hydrograph type	= SCS Runoff	Peak discharge	= 2.427 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 5,845 cuft
Drainage area	= 0.270 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



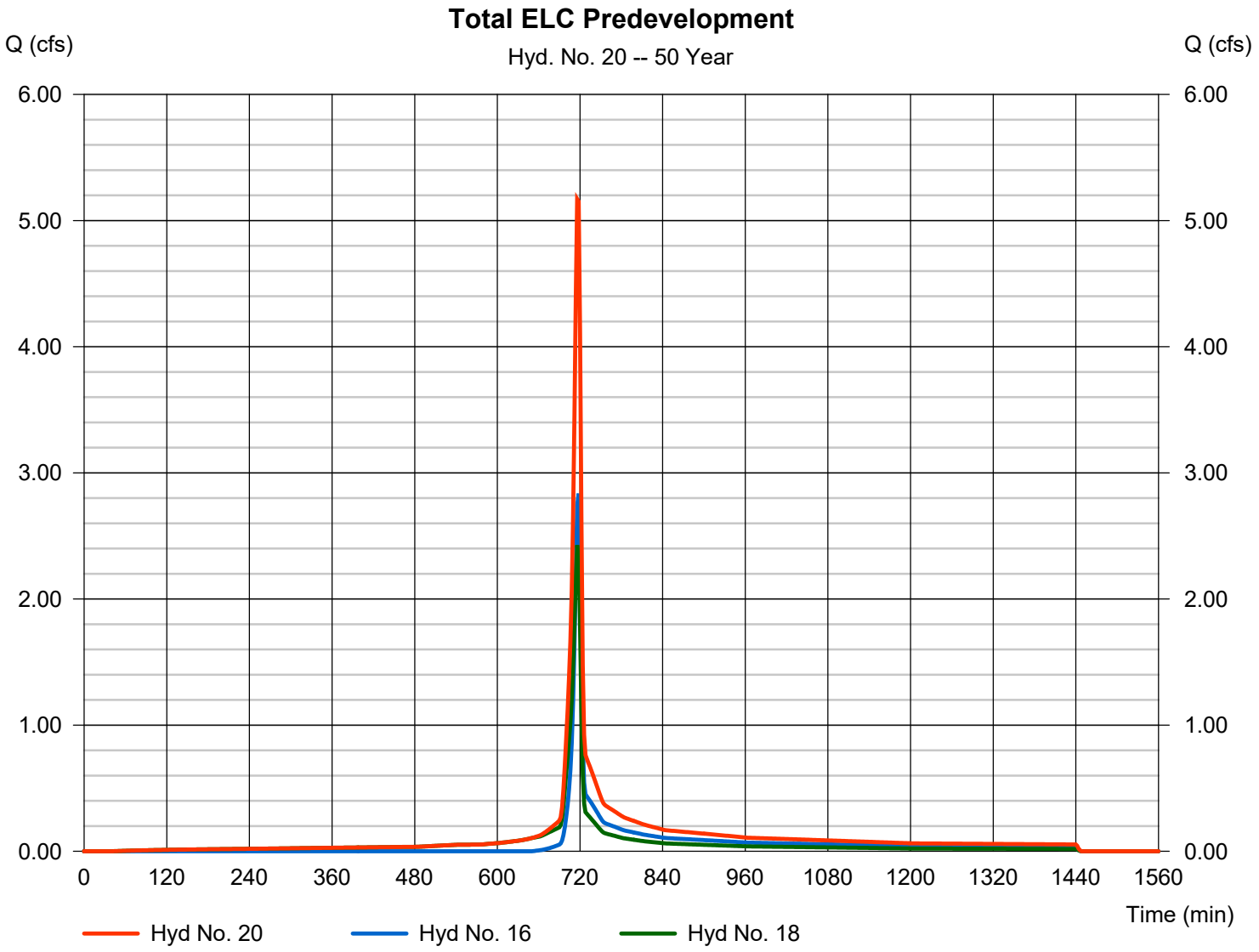
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 20

Total ELC Predevelopment

Hydrograph type	=	Combine	Peak discharge	=	5.171 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	11,530 cuft
Inflow hyds.	=	16, 18	Contrib. drain. area	=	1.050 ac



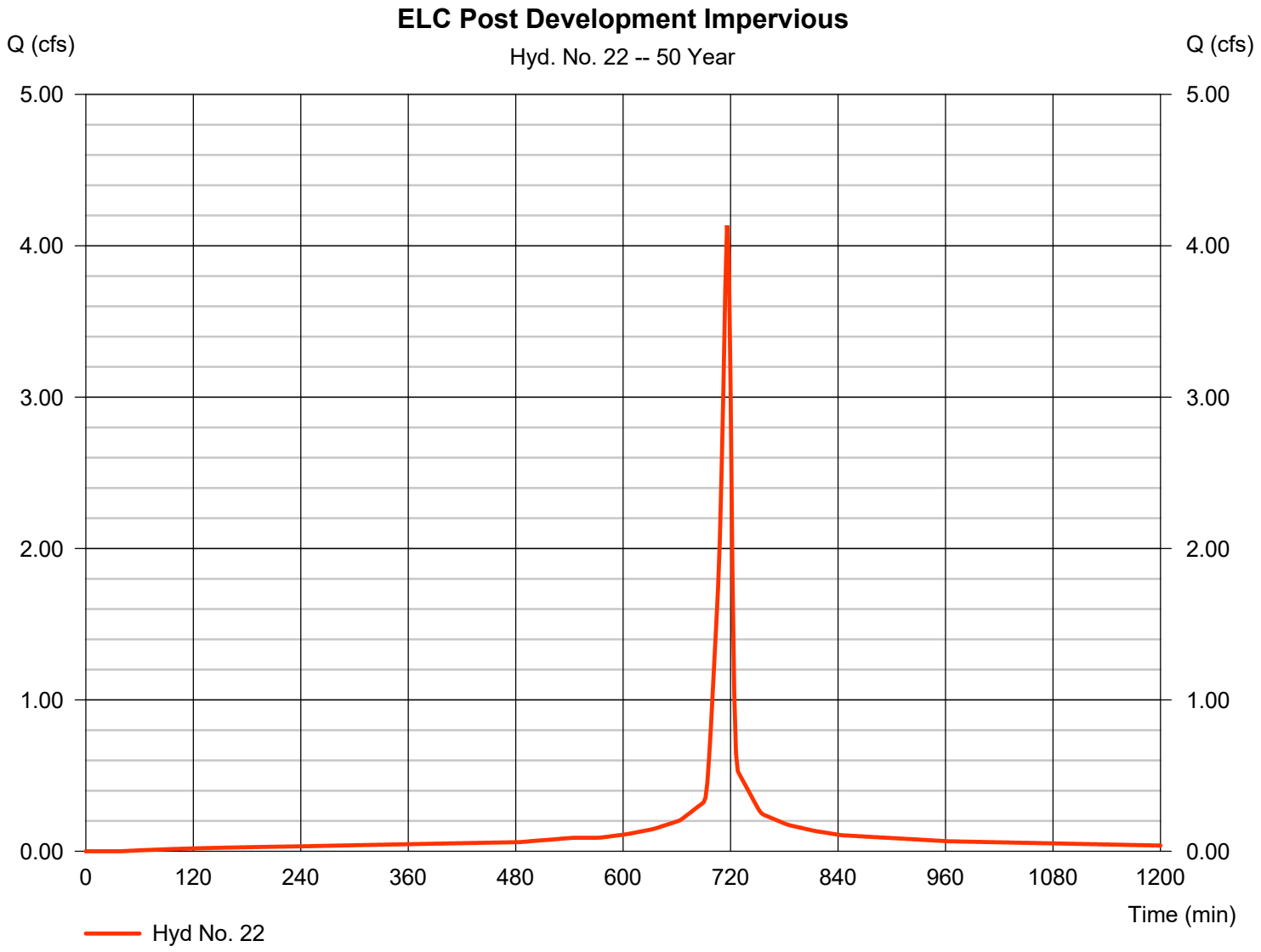
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 22

ELC Post Development Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.135 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	9,958 cuft
Drainage area	=	0.460 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



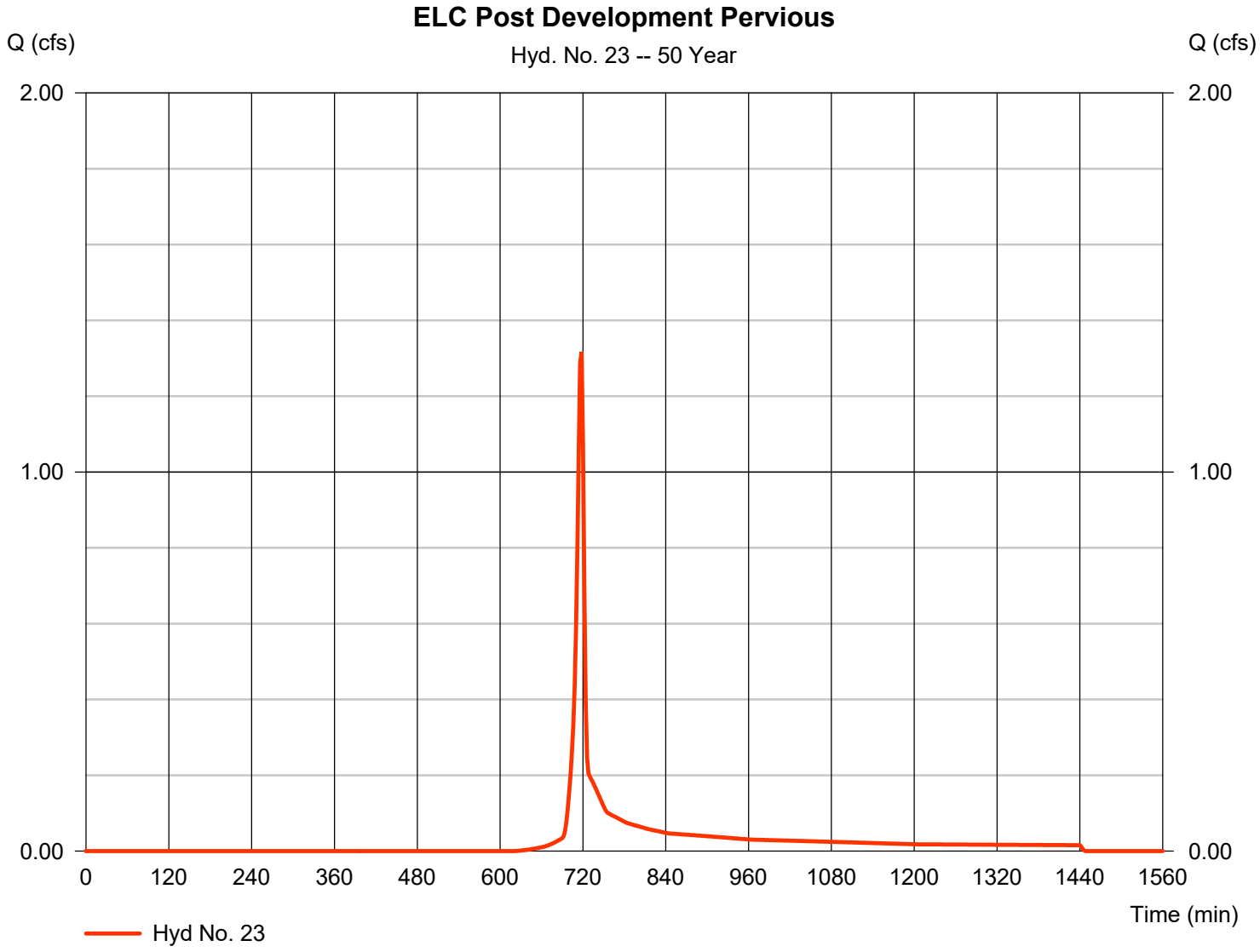
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 23

ELC Post Development Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.316 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,632 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



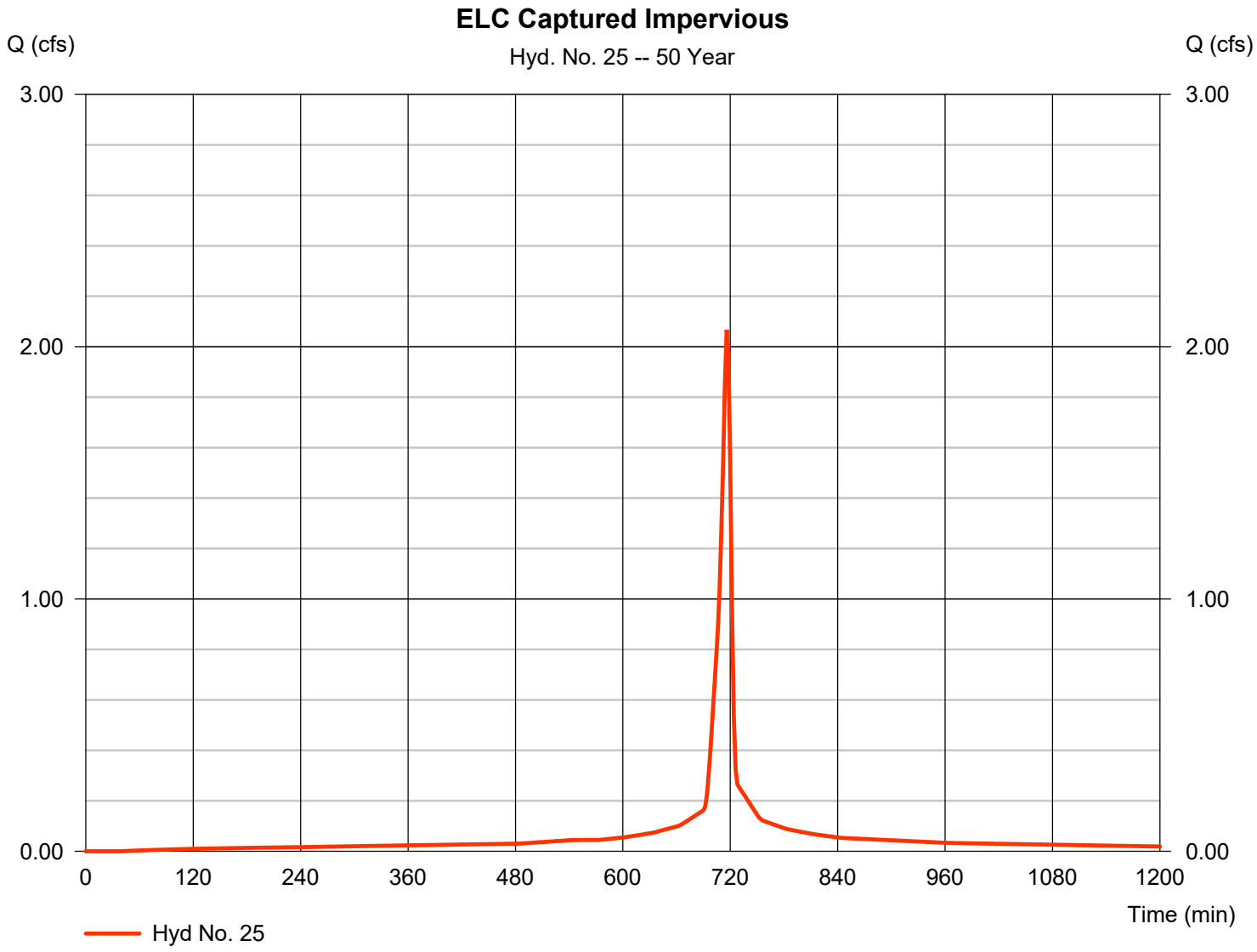
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 25

ELC Captured Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.068 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,979 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



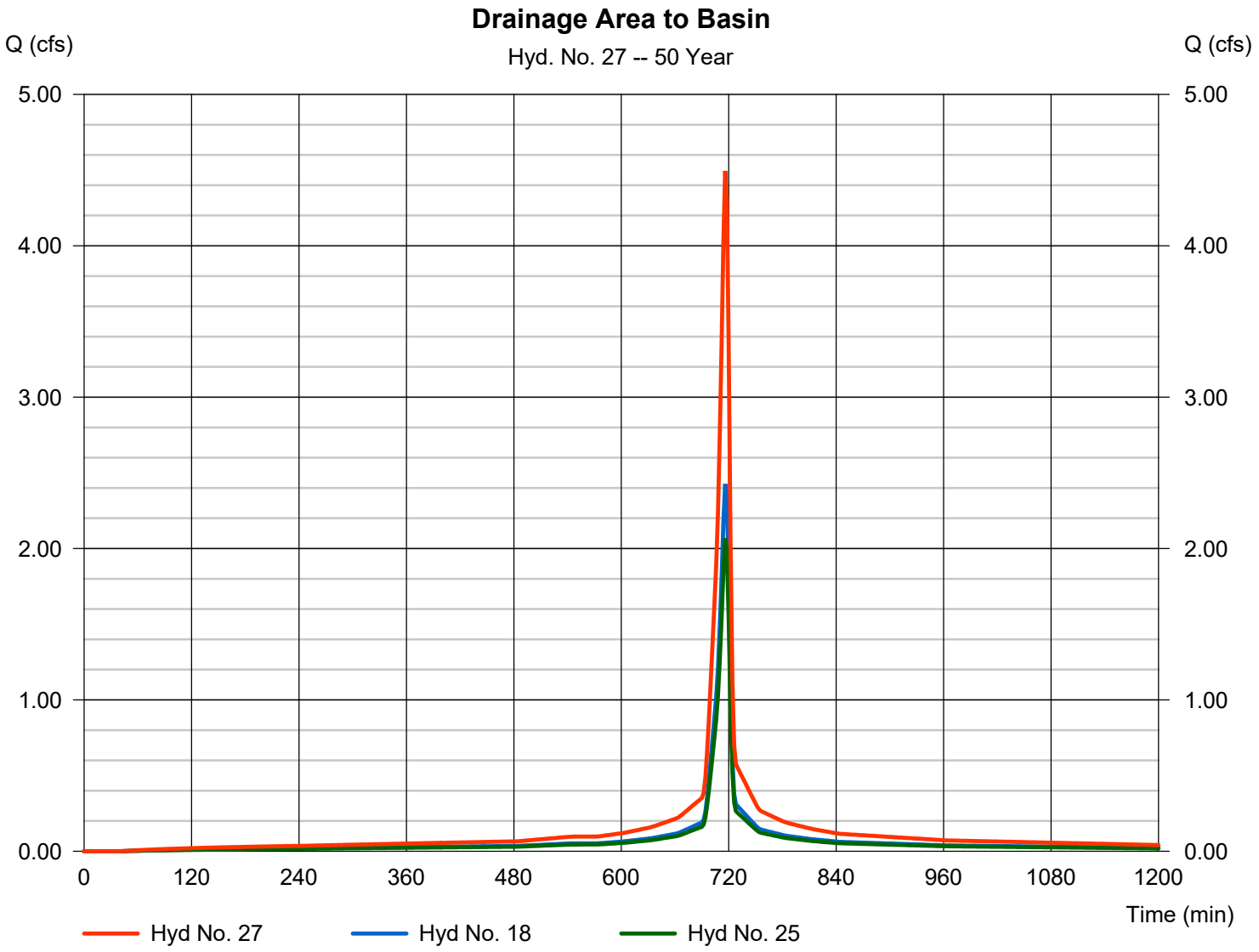
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 27

Drainage Area to Basin

Hydrograph type	=	Combine	Peak discharge	=	4.495 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	10,824 cuft
Inflow hyds.	=	18, 25	Contrib. drain. area	=	0.500 ac



Hydrograph Report

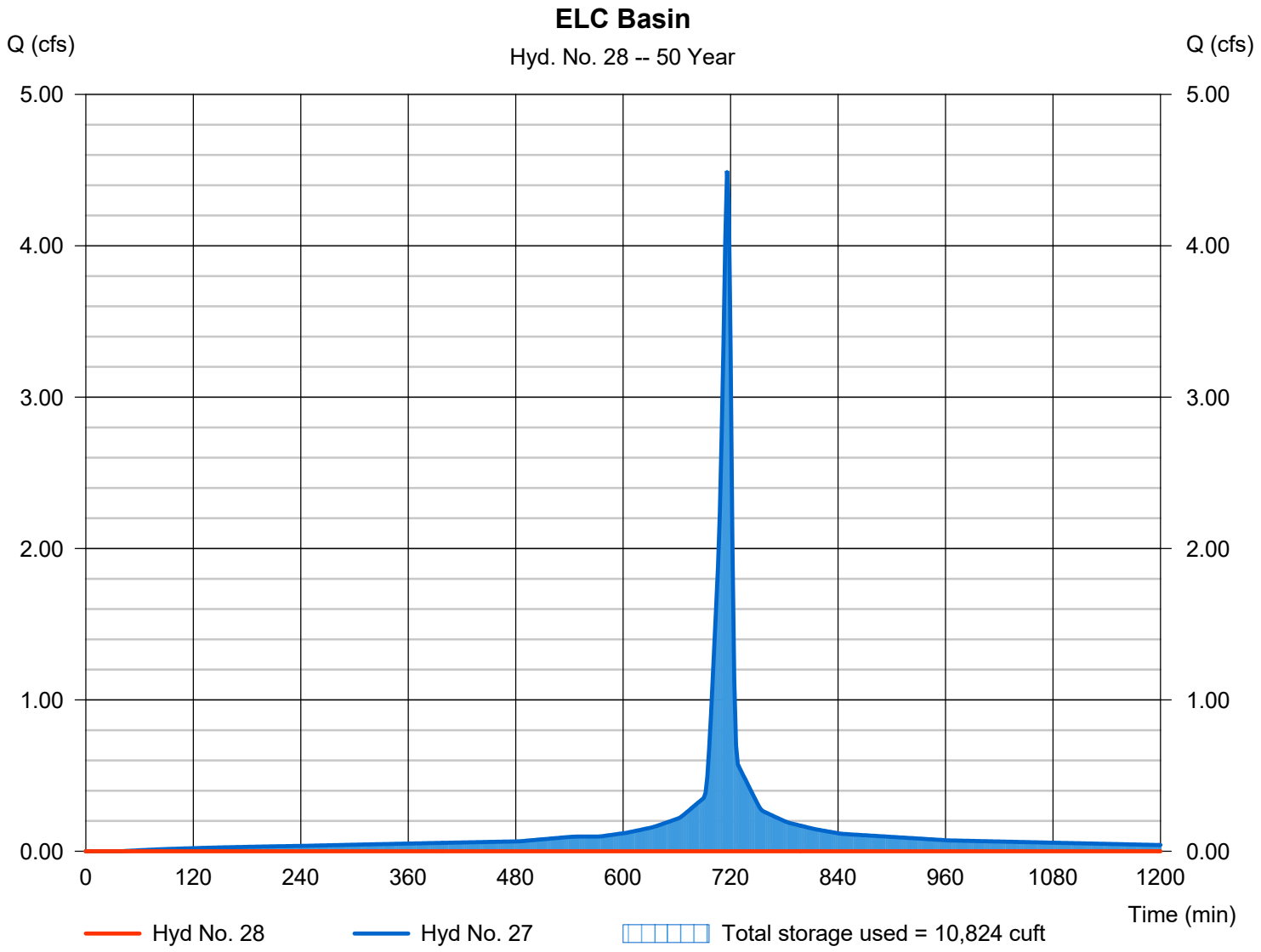
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 28

ELC Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	50 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	27 - Drainage Area to Basin	Max. Elevation	=	317.43 ft
Reservoir name	=	ELC Basin	Max. Storage	=	10,824 cuft

Storage Indication method used.



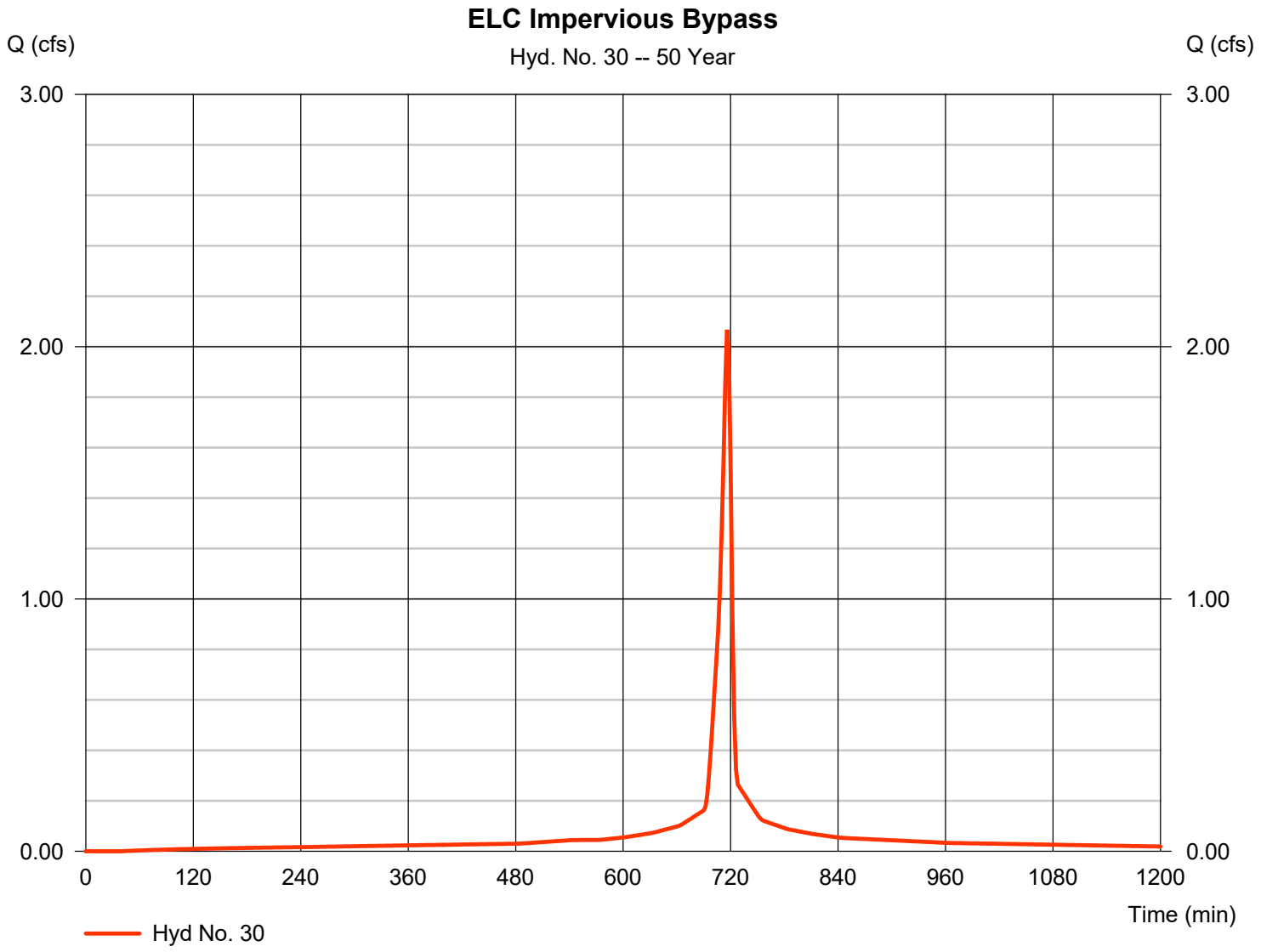
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 30

ELC Impervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.068 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,979 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



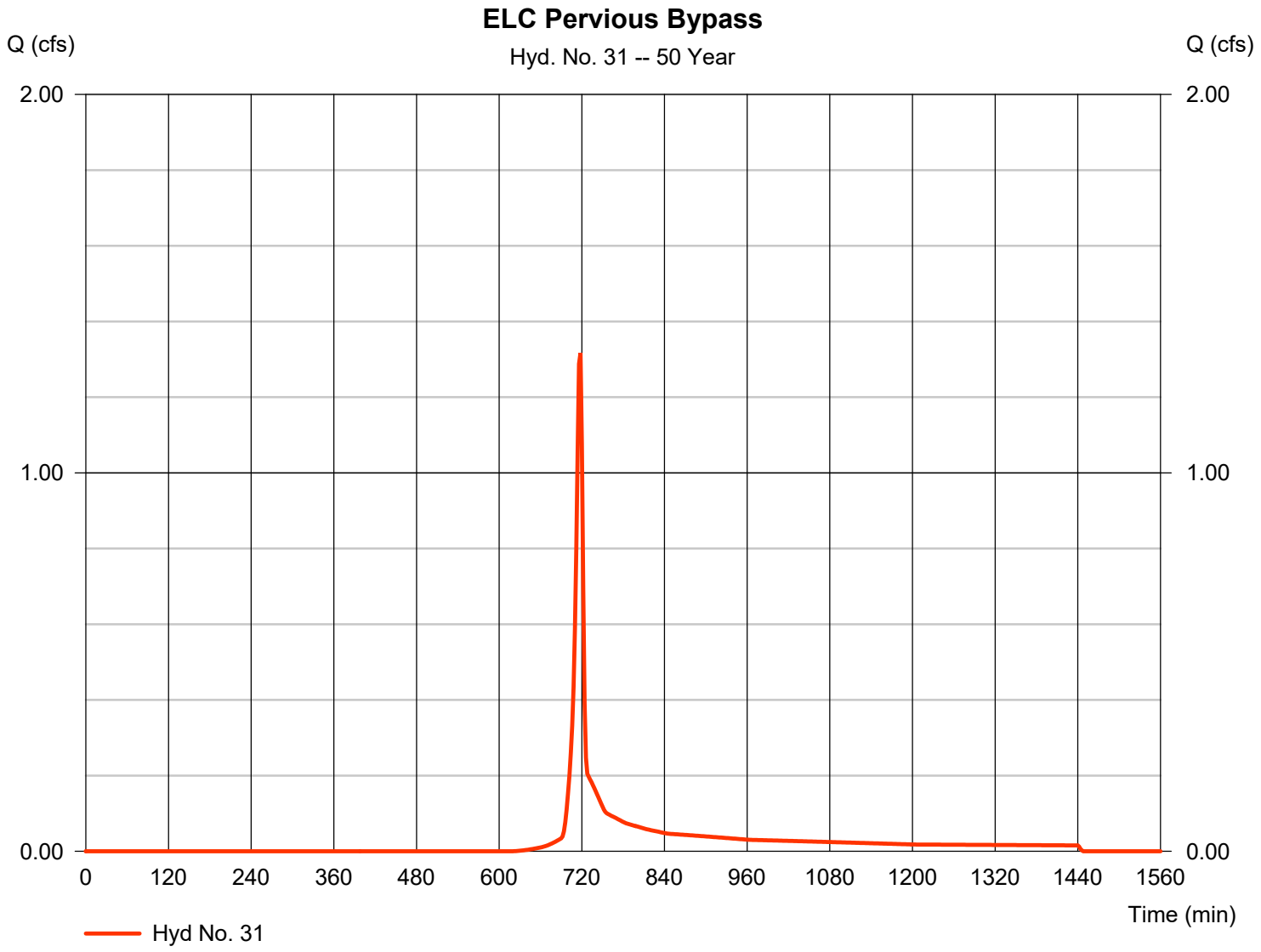
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 31

ELC Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.316 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,632 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



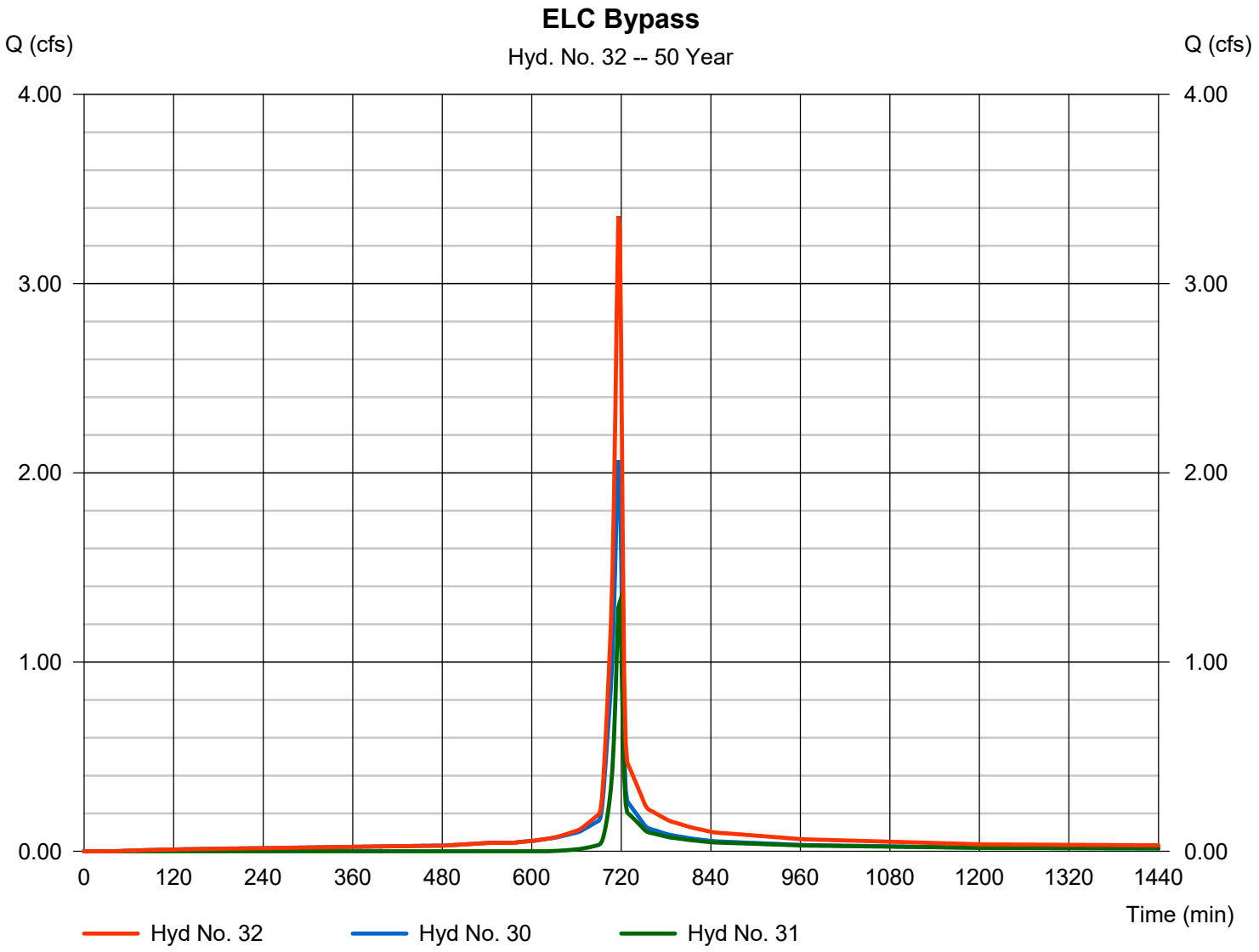
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 32

ELC Bypass

Hydrograph type	=	Combine	Peak discharge	=	3.356 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	7,611 cuft
Inflow hyds.	=	30, 31	Contrib. drain. area	=	0.550 ac



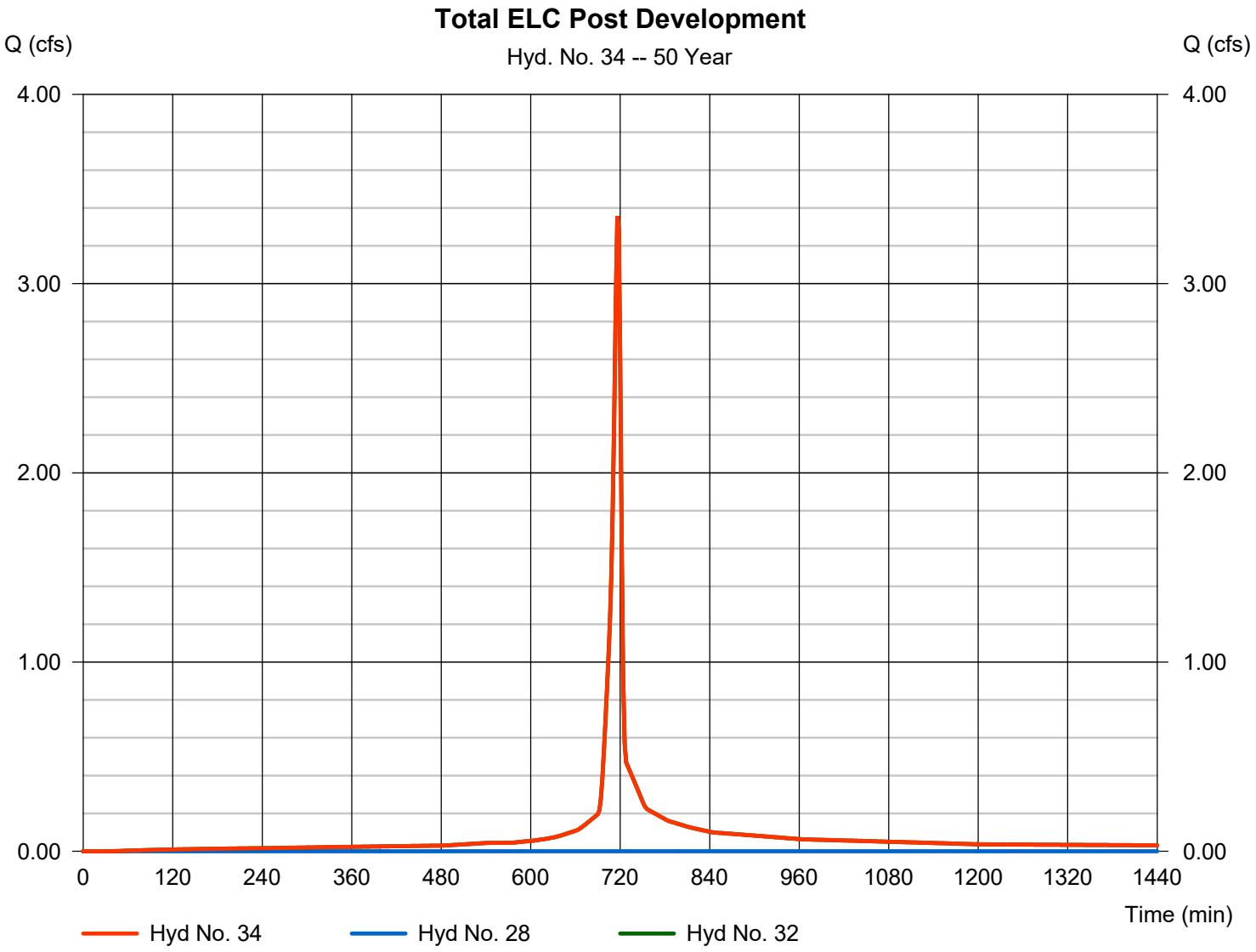
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 34

Total ELC Post Development

Hydrograph type	= Combine	Peak discharge	= 3.356 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 7,611 cuft
Inflow hyds.	= 28, 32	Contrib. drain. area	= 0.000 ac



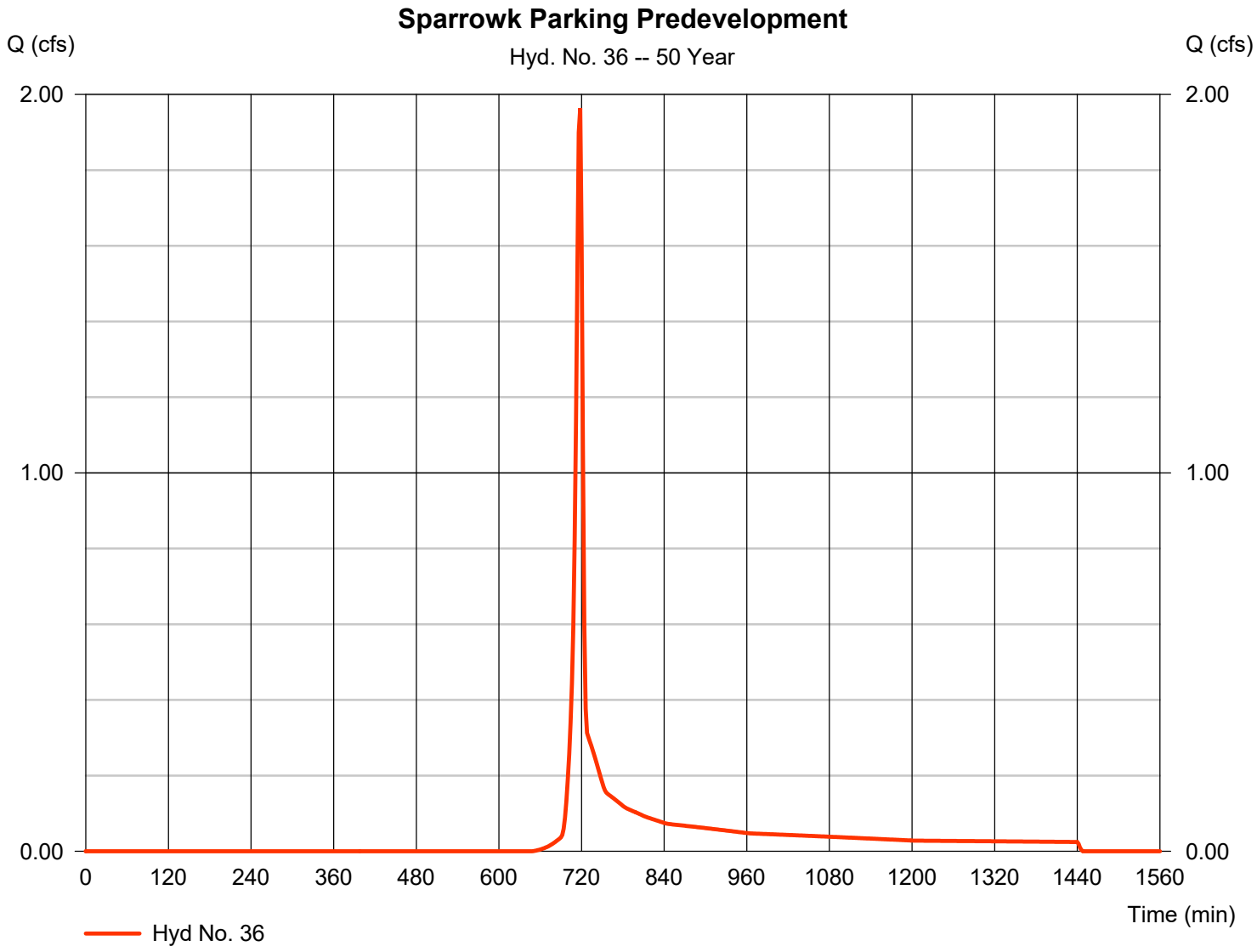
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 36

Sparrowk Parking Predevelopment

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.963 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	3,935 cuft
Drainage area	=	0.540 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



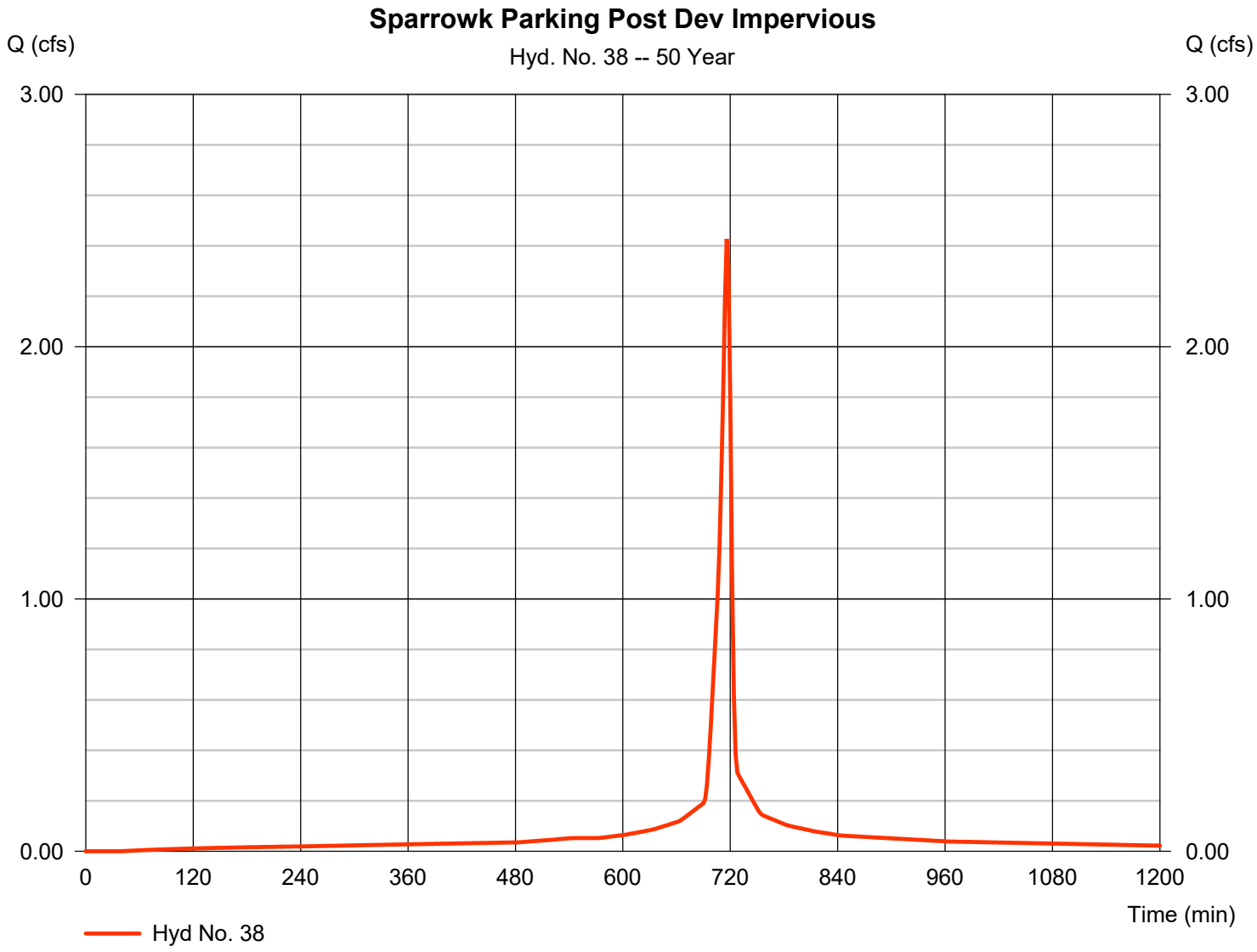
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 38

Sparrowk Parking Post Dev Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.427 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,845 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



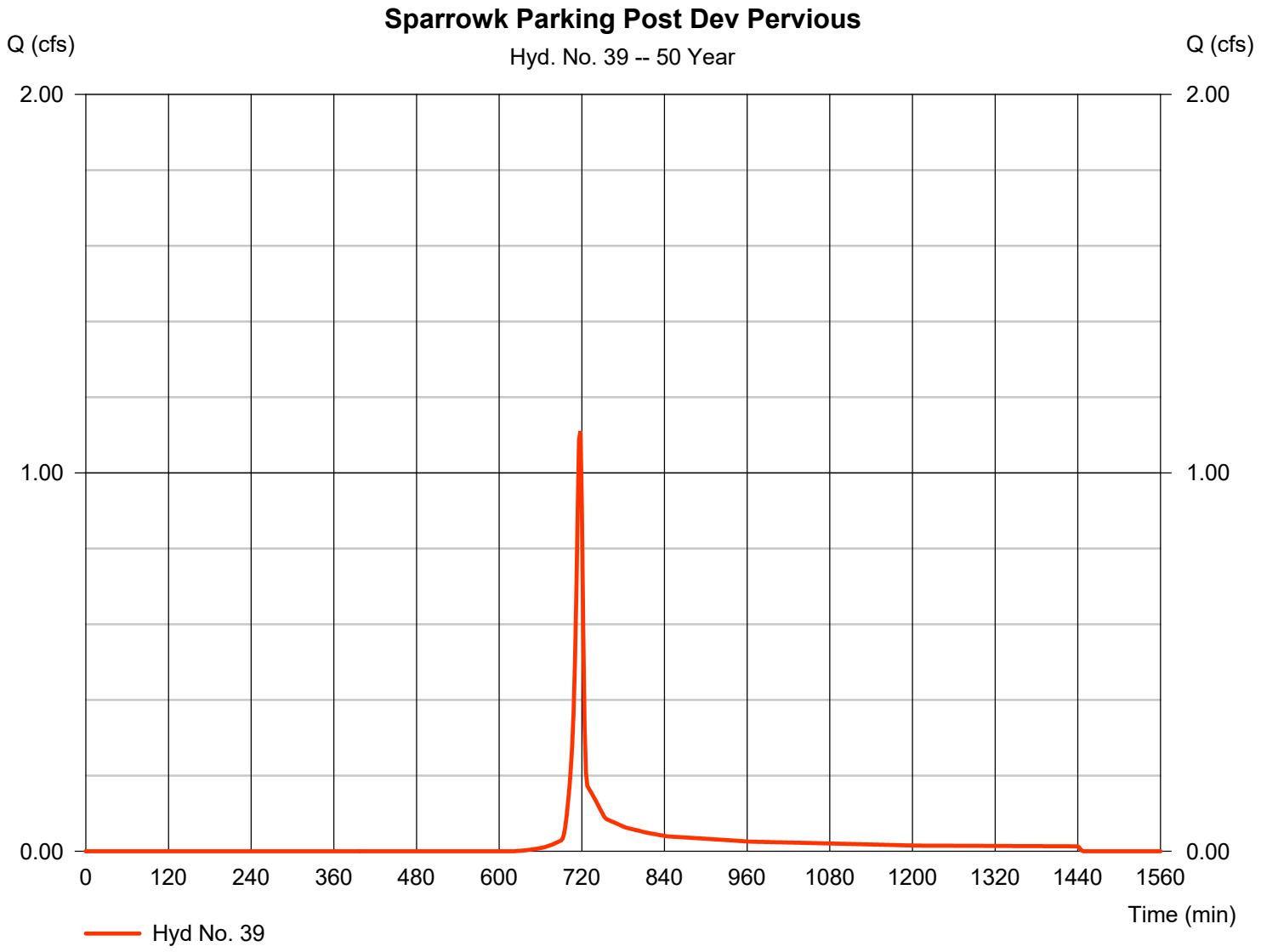
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 39

Sparrowk Parking Post Dev Pervious

Hydrograph type	= SCS Runoff	Peak discharge	= 1.111 cfs
Storm frequency	= 50 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 2,221 cuft
Drainage area	= 0.270 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 6.60 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



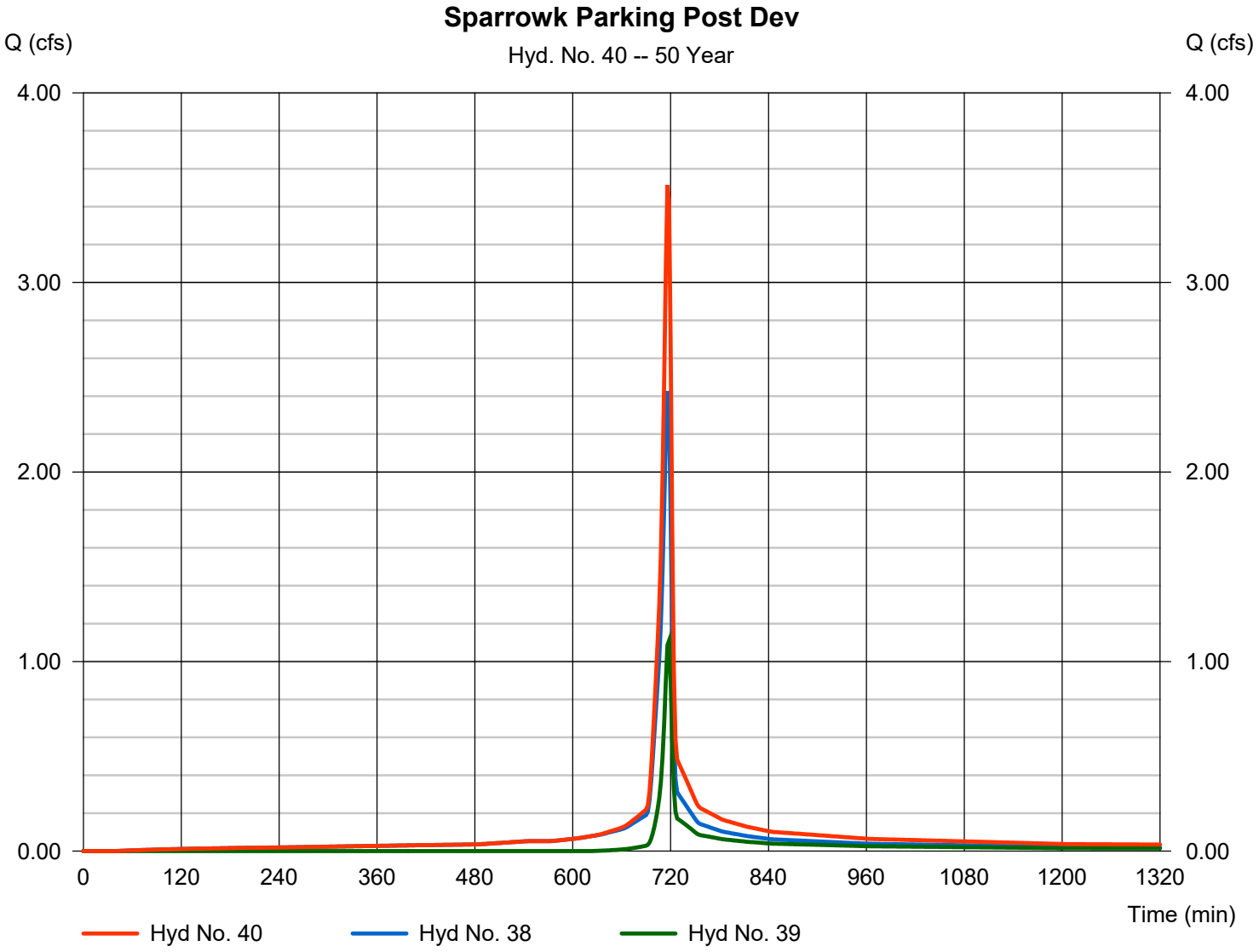
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 40

Sparrowk Parking Post Dev

Hydrograph type	= Combine	Peak discharge	= 3.514 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 8,066 cuft
Inflow hyds.	= 38, 39	Contrib. drain. area	= 0.540 ac



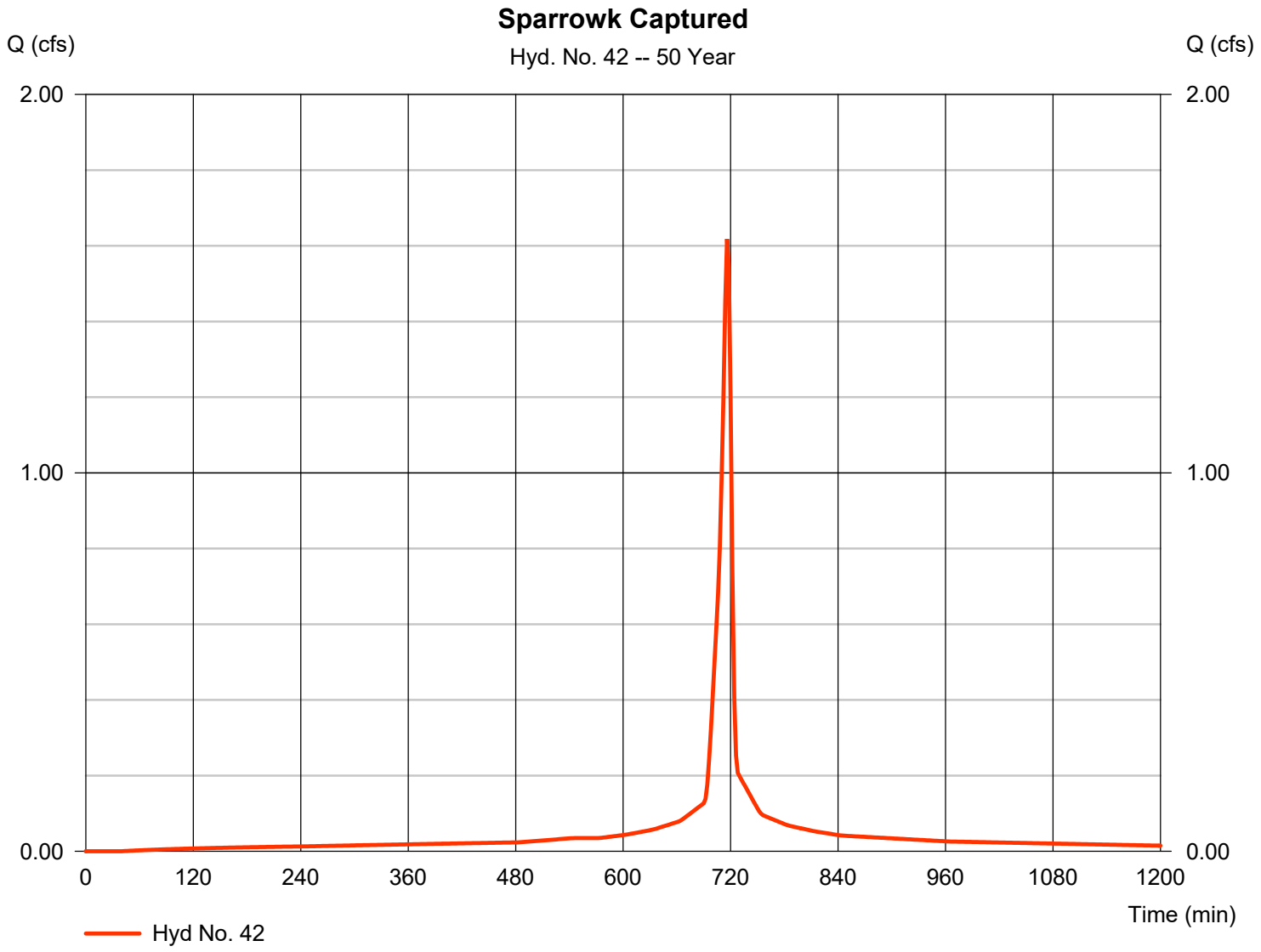
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 42

Sparrowk Captured

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.618 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	3,897 cuft
Drainage area	=	0.180 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

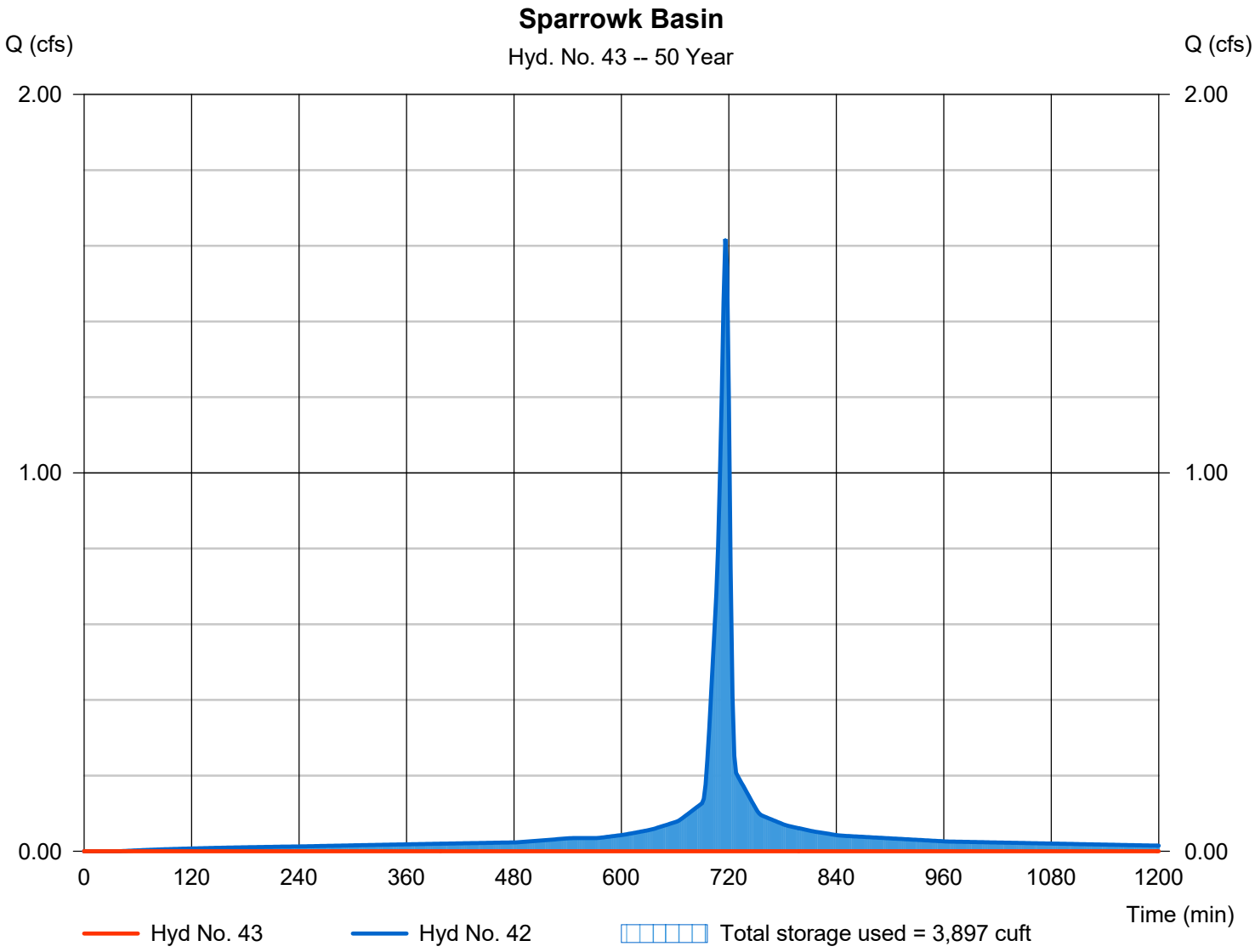
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 43

Sparrowk Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	50 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	42 - Sparrowk Captured	Max. Elevation	=	302.44 ft
Reservoir name	=	Sparrowk Basin	Max. Storage	=	3,897 cuft

Storage Indication method used.



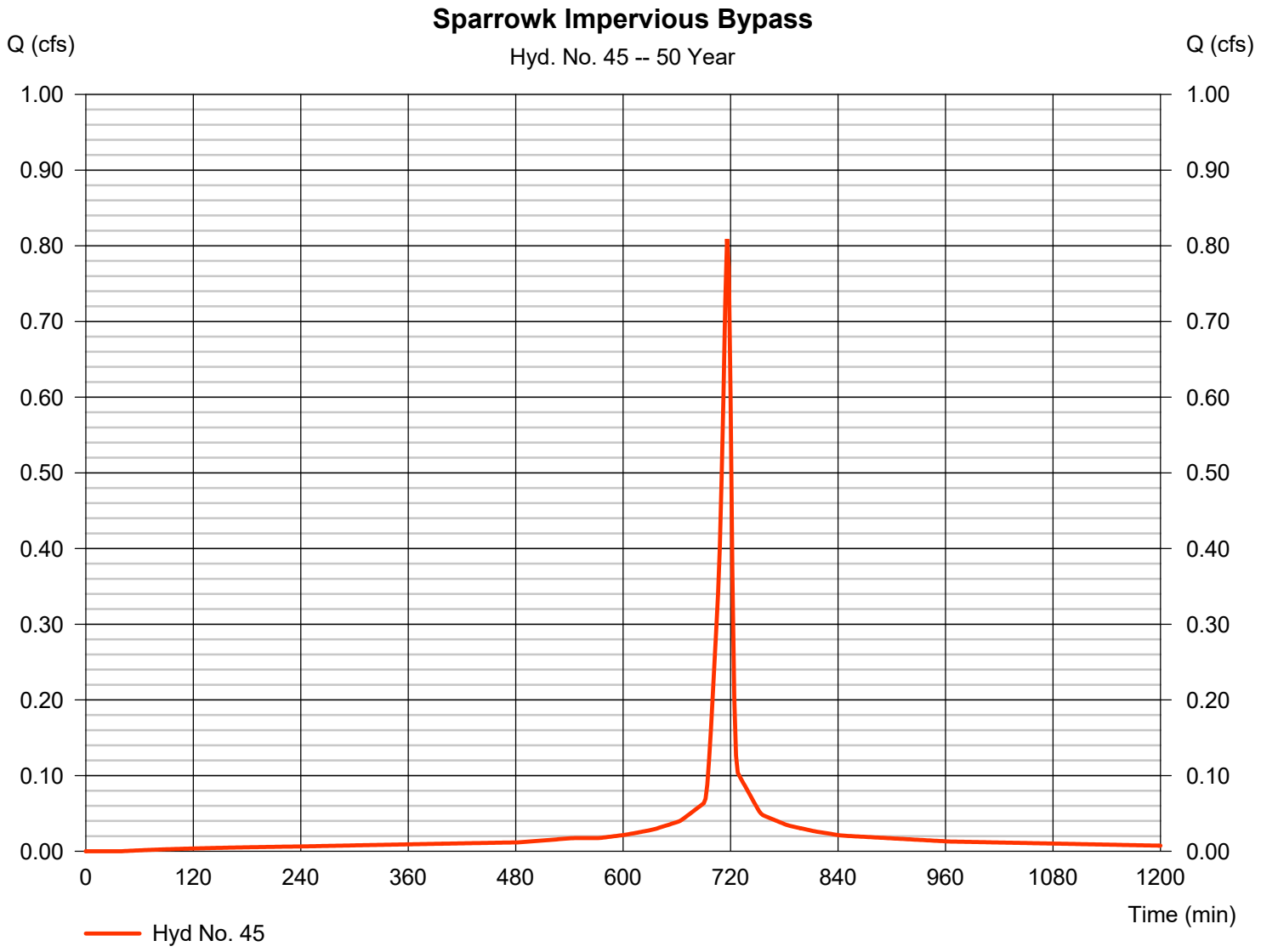
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 45

Sparrowk Impervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.809 cfs
Storm frequency	=	50 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	1,948 cuft
Drainage area	=	0.090 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



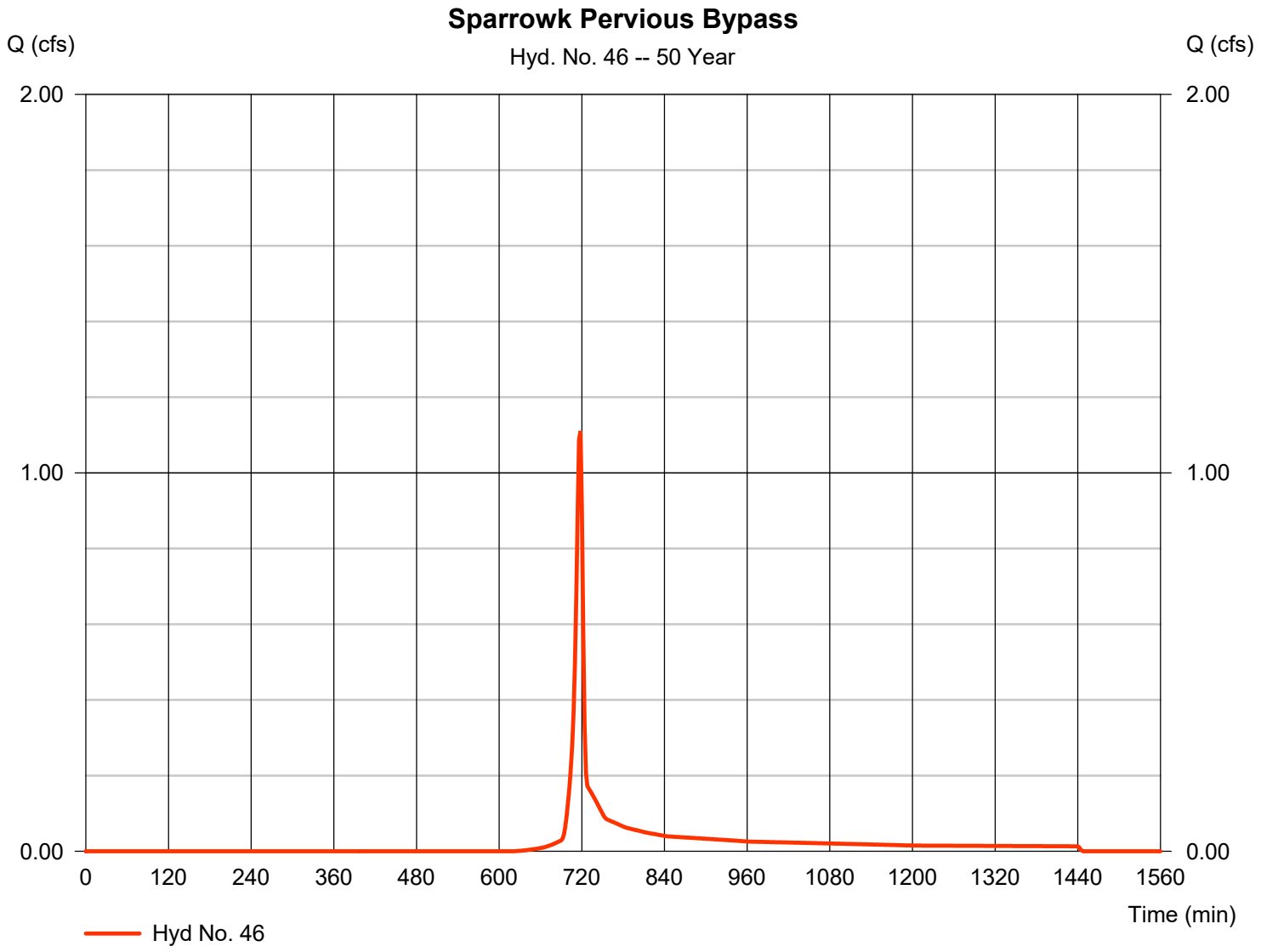
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 46

Sparrowk Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.111 cfs
Storm frequency	=	50 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,221 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.60 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



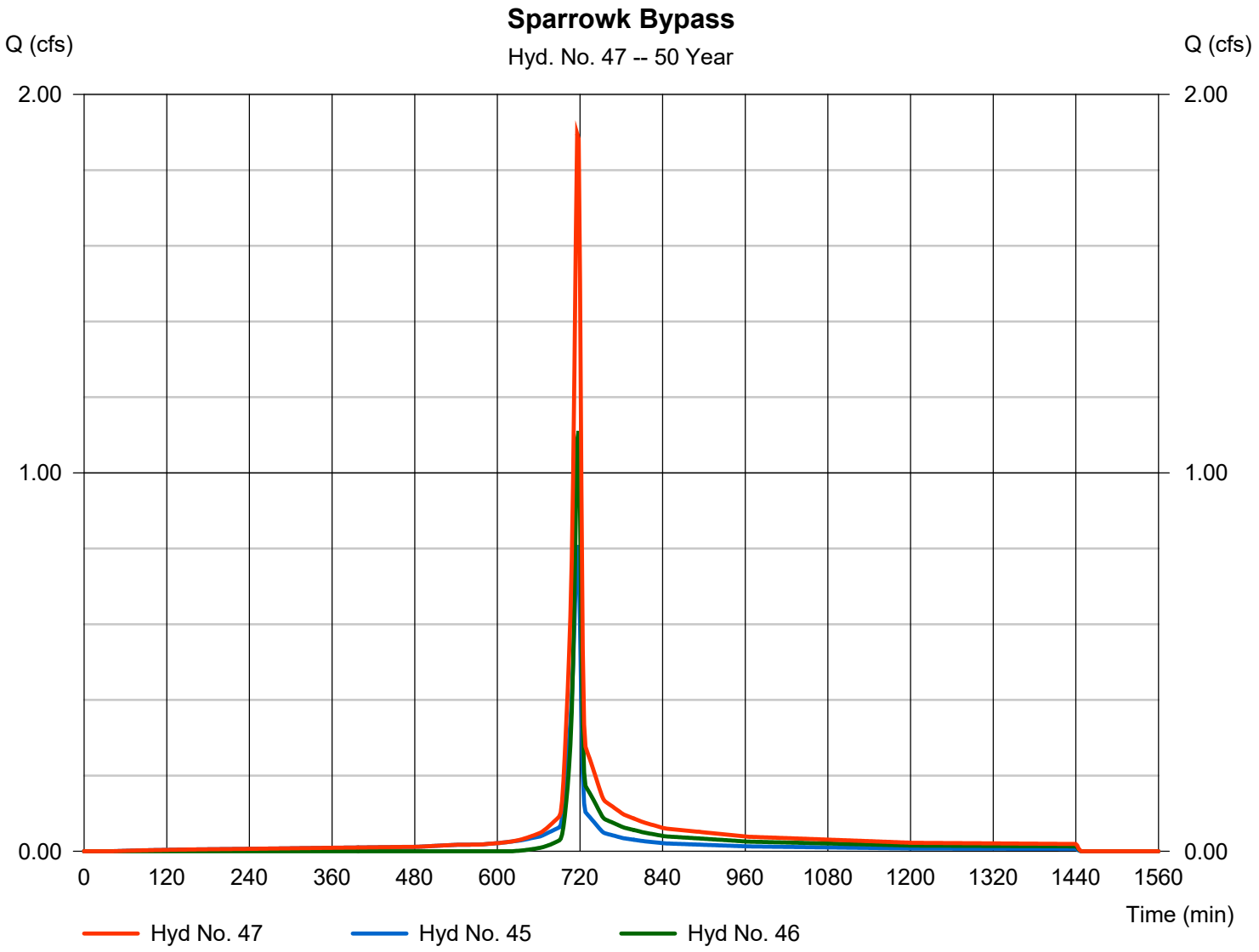
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 47

Sparrowk Bypass

Hydrograph type	= Combine	Peak discharge	= 1.896 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 4,169 cuft
Inflow hyds.	= 45, 46	Contrib. drain. area	= 0.360 ac



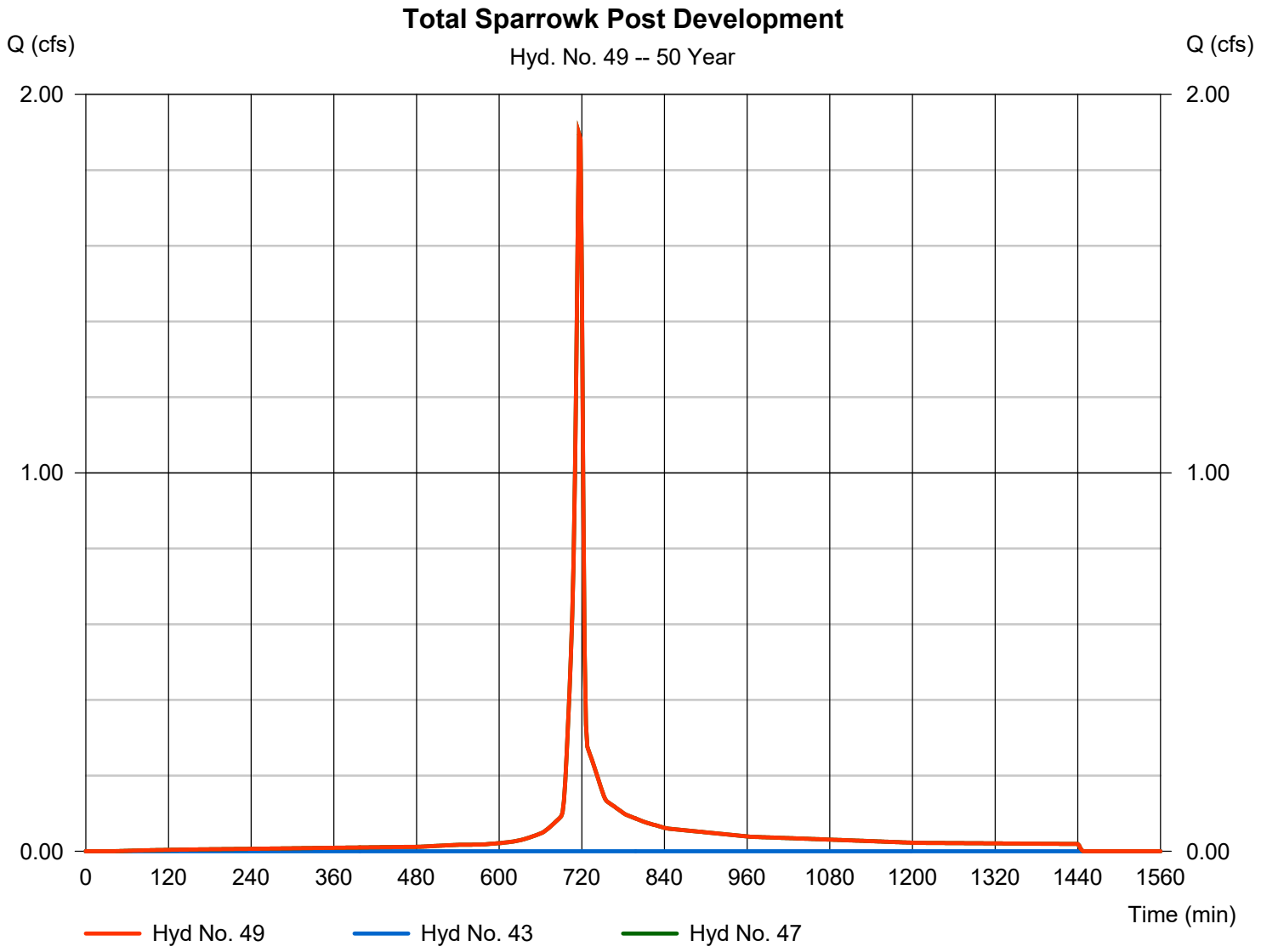
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 49

Total Sparrowk Post Development

Hydrograph type	= Combine	Peak discharge	= 1.896 cfs
Storm frequency	= 50 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 4,169 cuft
Inflow hyds.	= 43, 47	Contrib. drain. area	= 0.000 ac



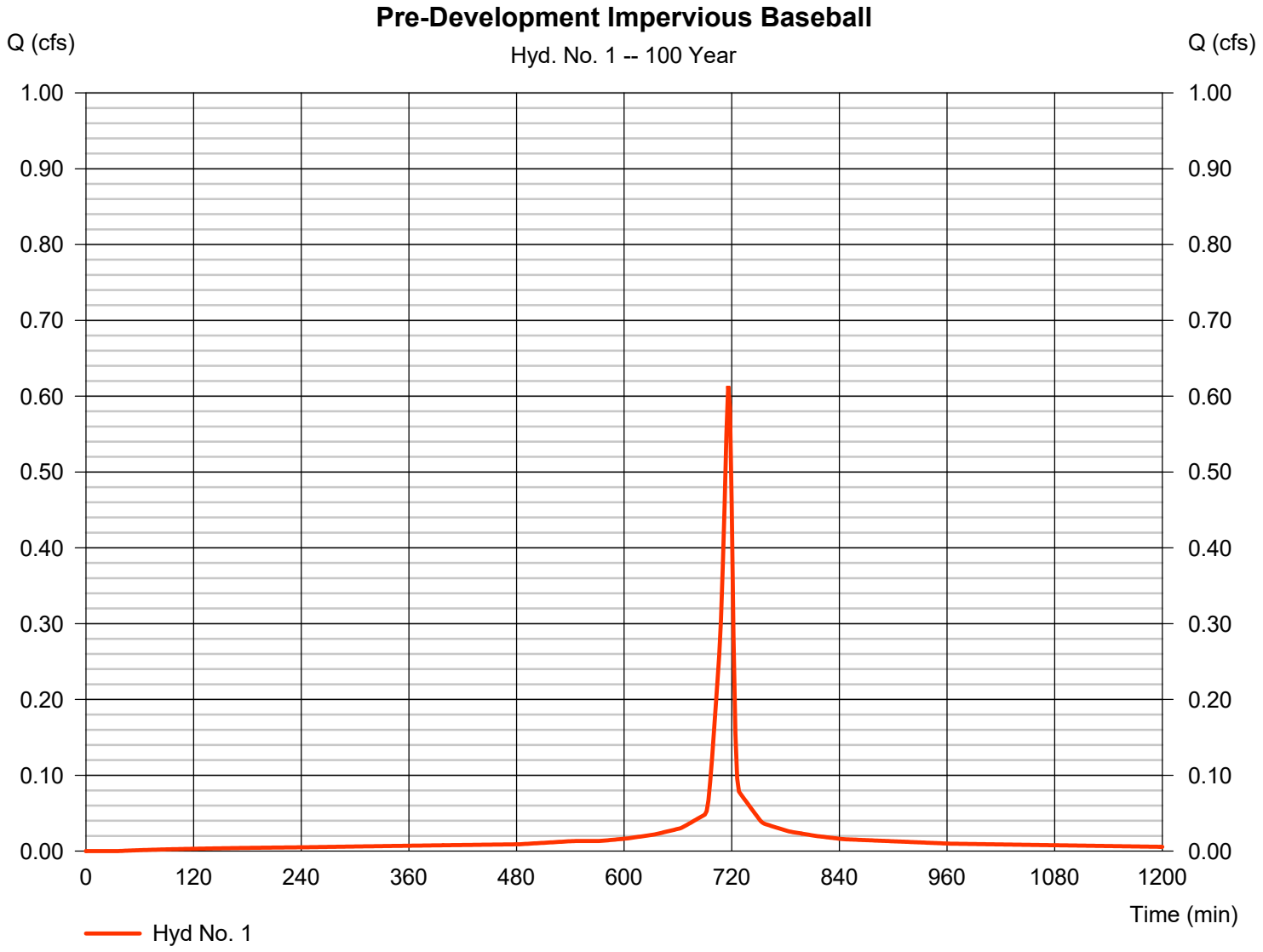
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 1

Pre-Development Impervious Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.613 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,483 cuft
Drainage area	= 0.060 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



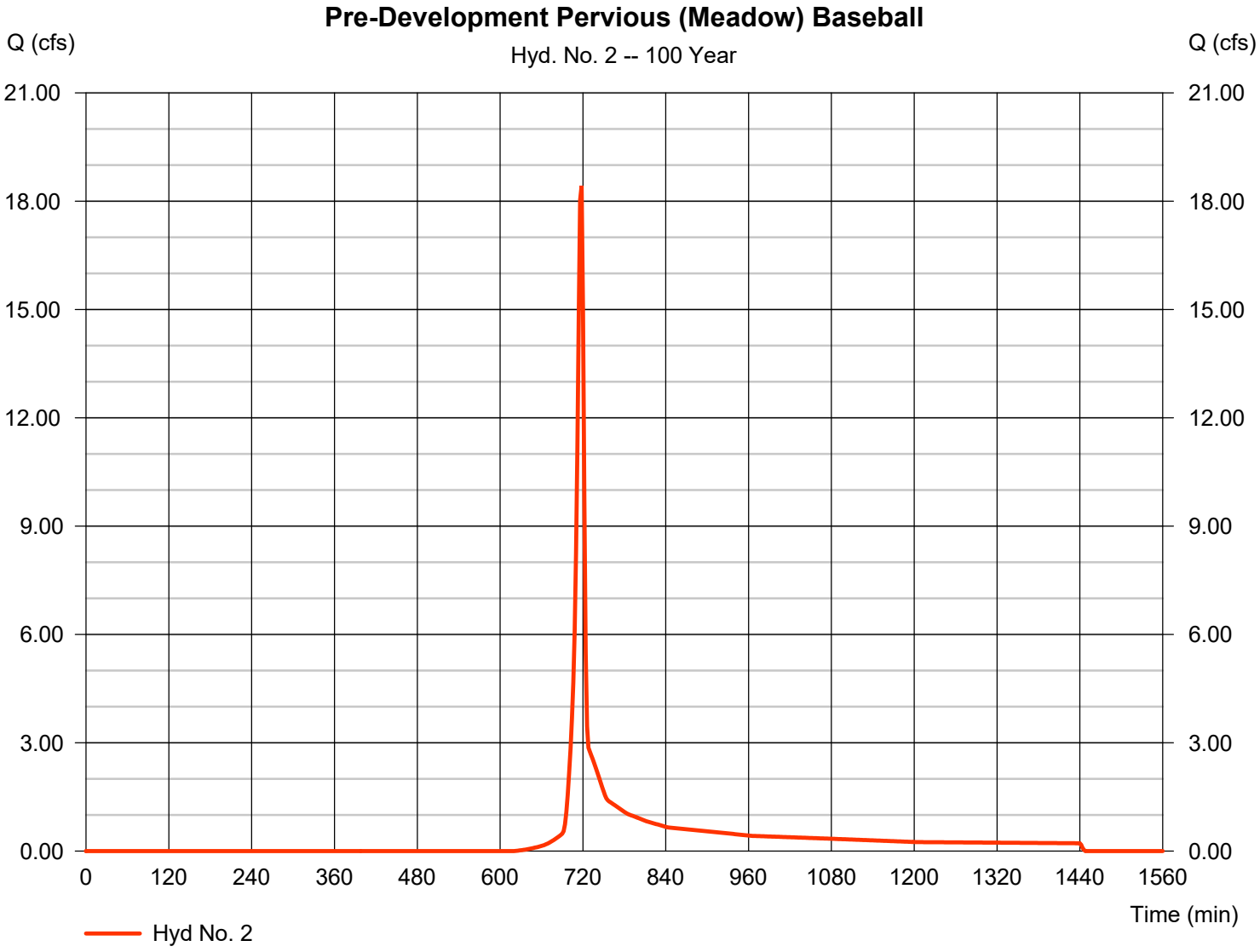
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 2

Pre-Development Pervious (Meadow) Baseball

Hydrograph type	=	SCS Runoff	Peak discharge	=	18.43 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	36,847 cuft
Drainage area	=	3.930 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



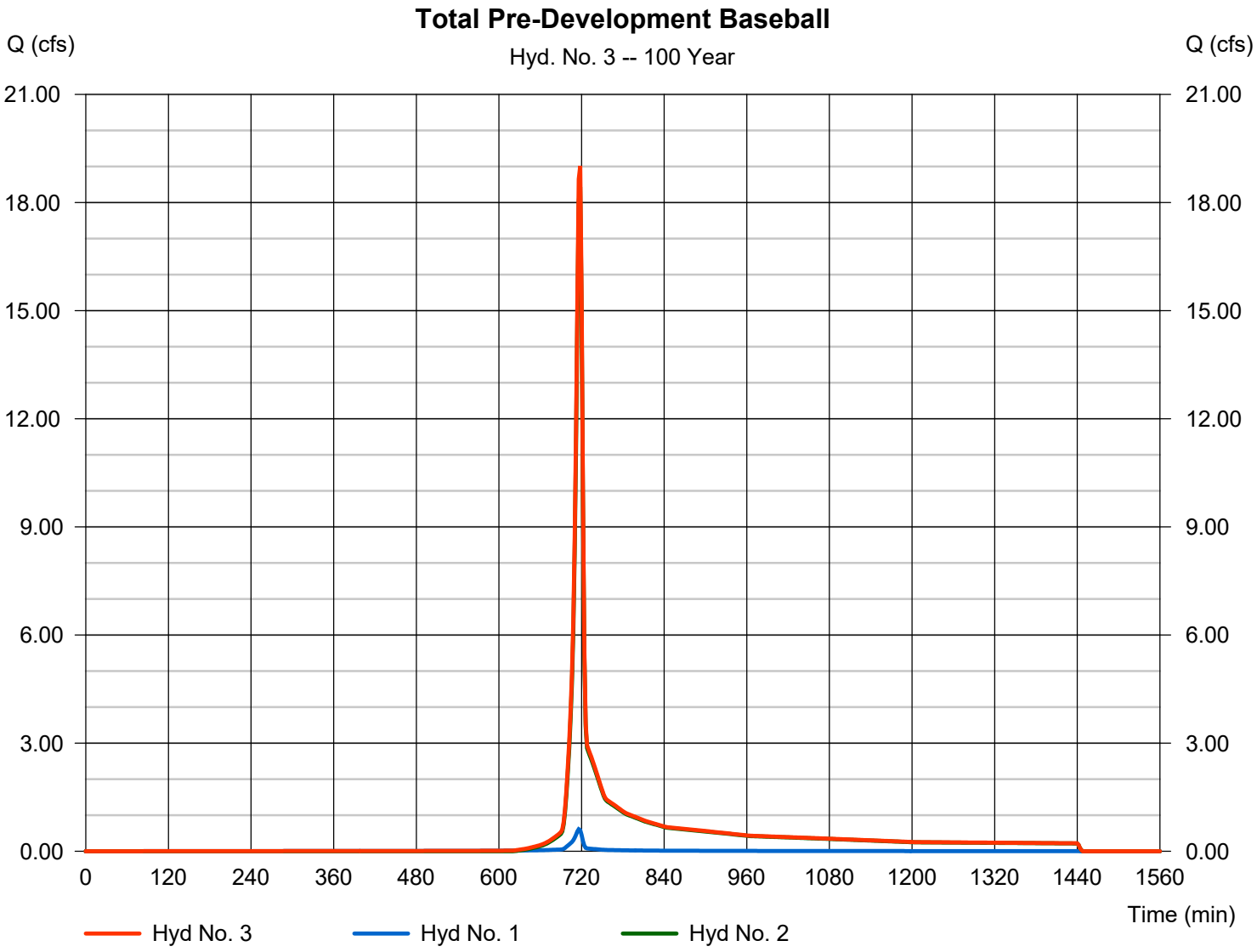
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 3

Total Pre-Development Baseball

Hydrograph type	= Combine	Peak discharge	= 19.01 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 38,329 cuft
Inflow hyds.	= 1, 2	Contrib. drain. area	= 3.990 ac



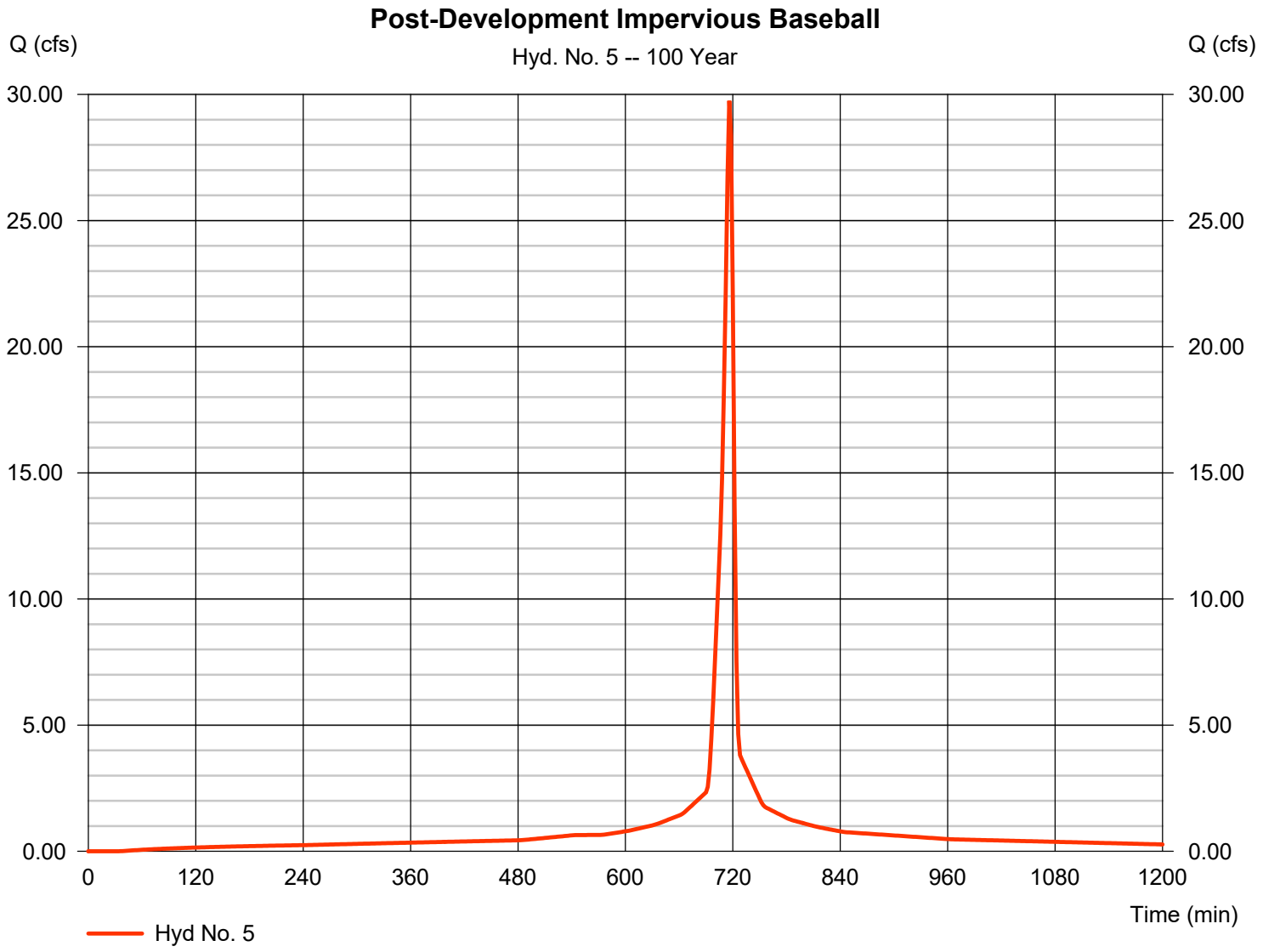
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 5

Post-Development Impervious Baseball

Hydrograph type	=	SCS Runoff	Peak discharge	=	29.75 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	71,902 cuft
Drainage area	=	2.910 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



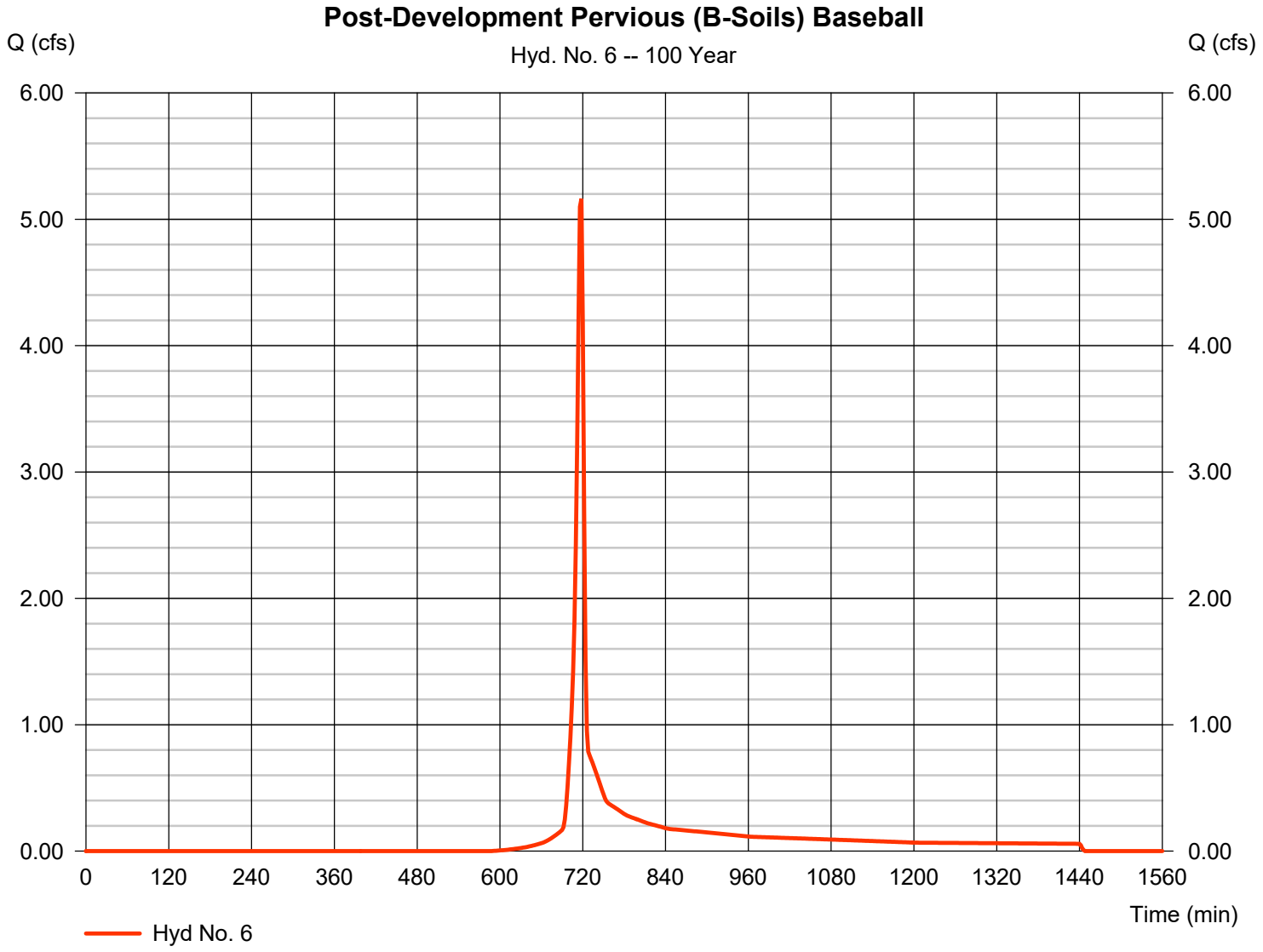
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 6

Post-Development Pervious (B-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 5.161 cfs
Storm frequency	= 100 yrs	Time to peak	= 718 min
Time interval	= 2 min	Hyd. volume	= 10,337 cuft
Drainage area	= 0.990 ac	Curve number	= 61
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



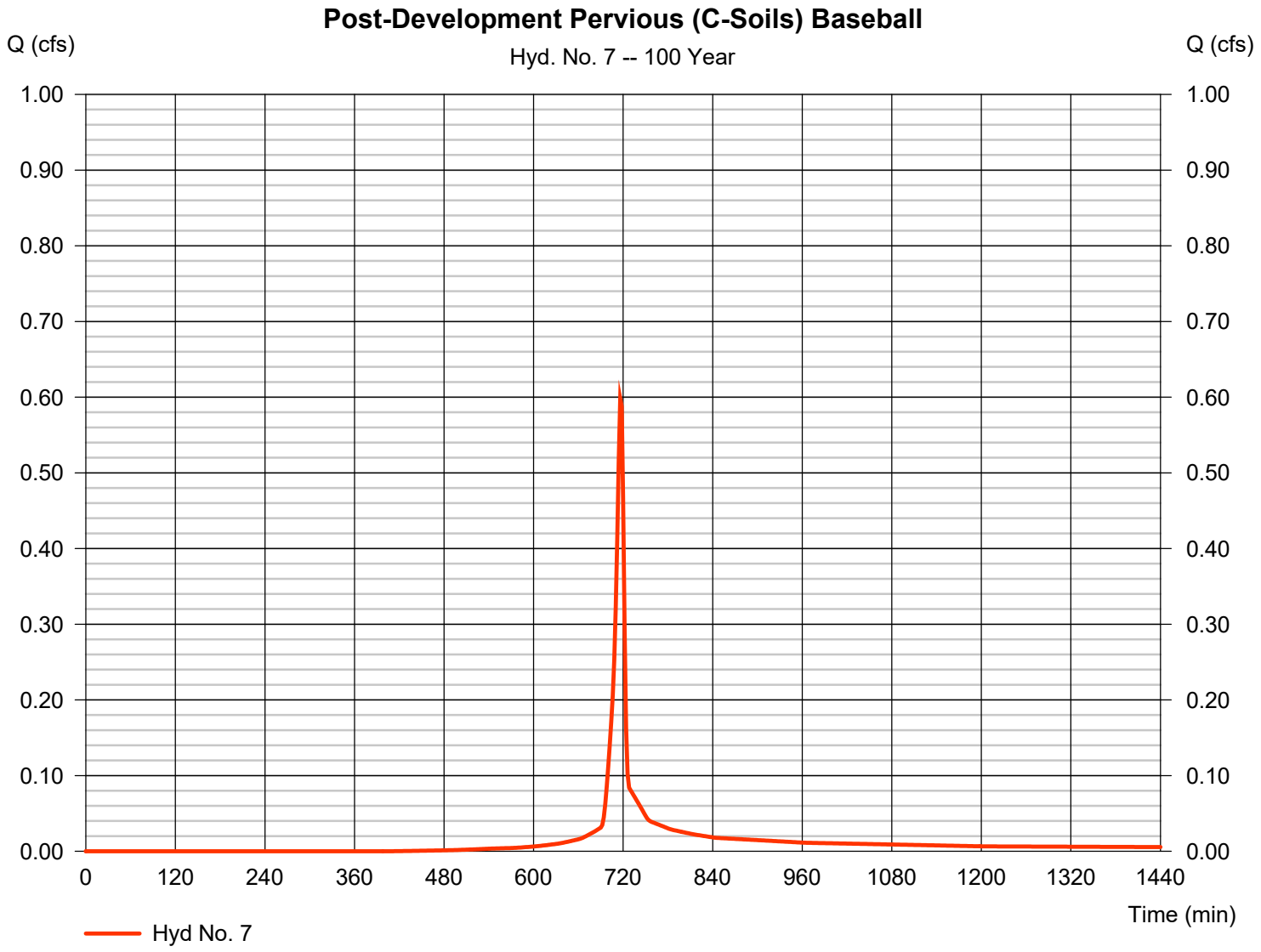
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 7

Post-Development Pervious (C-Soils) Baseball

Hydrograph type	= SCS Runoff	Peak discharge	= 0.598 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 1,220 cuft
Drainage area	= 0.080 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



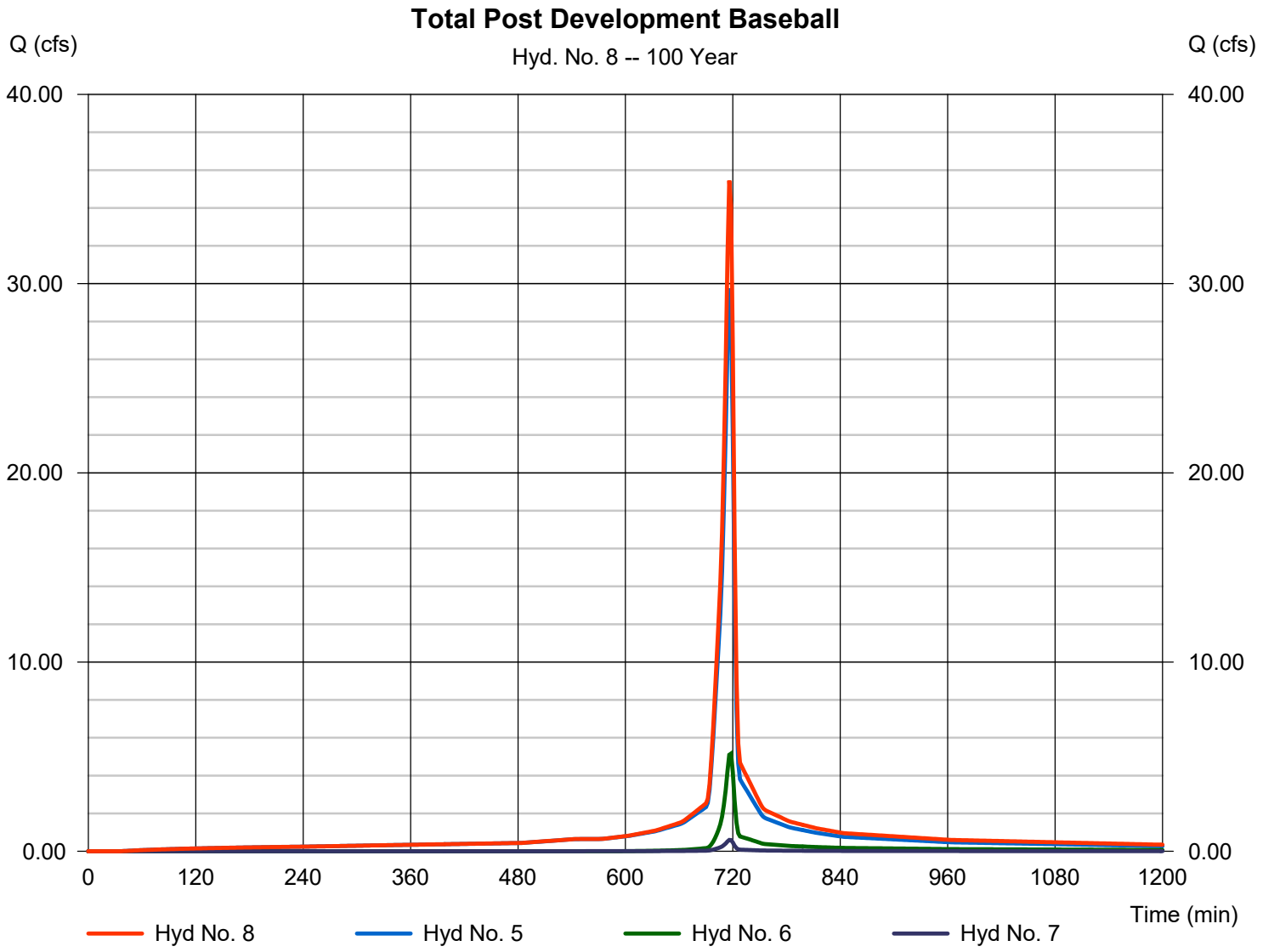
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 8

Total Post Development Baseball

Hydrograph type	= Combine	Peak discharge	= 35.44 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 83,459 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 3.980 ac



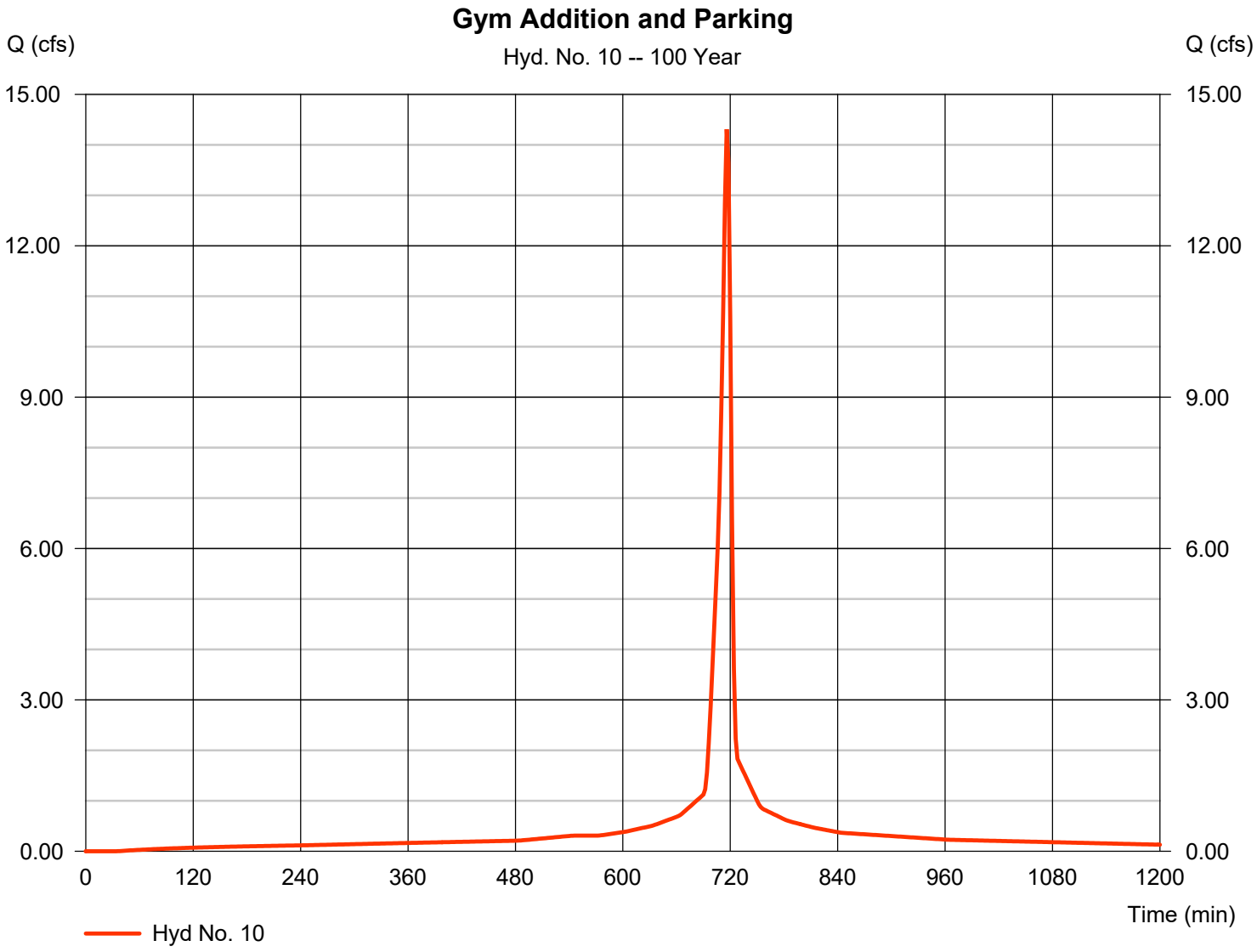
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 10

Gym Addition and Parking

Hydrograph type	=	SCS Runoff	Peak discharge	=	14.31 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	34,592 cuft
Drainage area	=	1.400 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



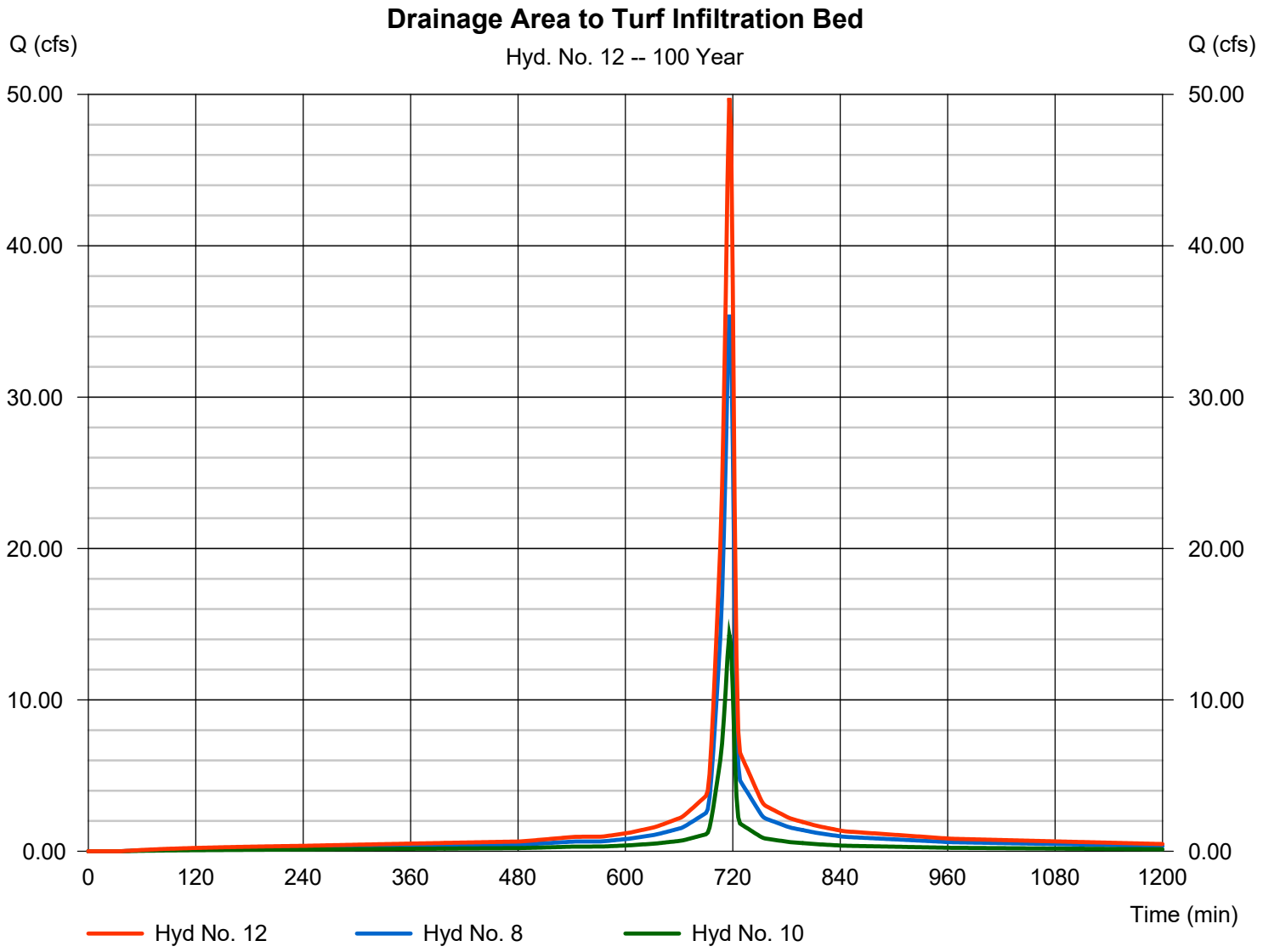
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 12

Drainage Area to Turf Infiltration Bed

Hydrograph type	= Combine	Peak discharge	= 49.76 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 118,051 cuft
Inflow hyds.	= 8, 10	Contrib. drain. area	= 1.400 ac



Hydrograph Report

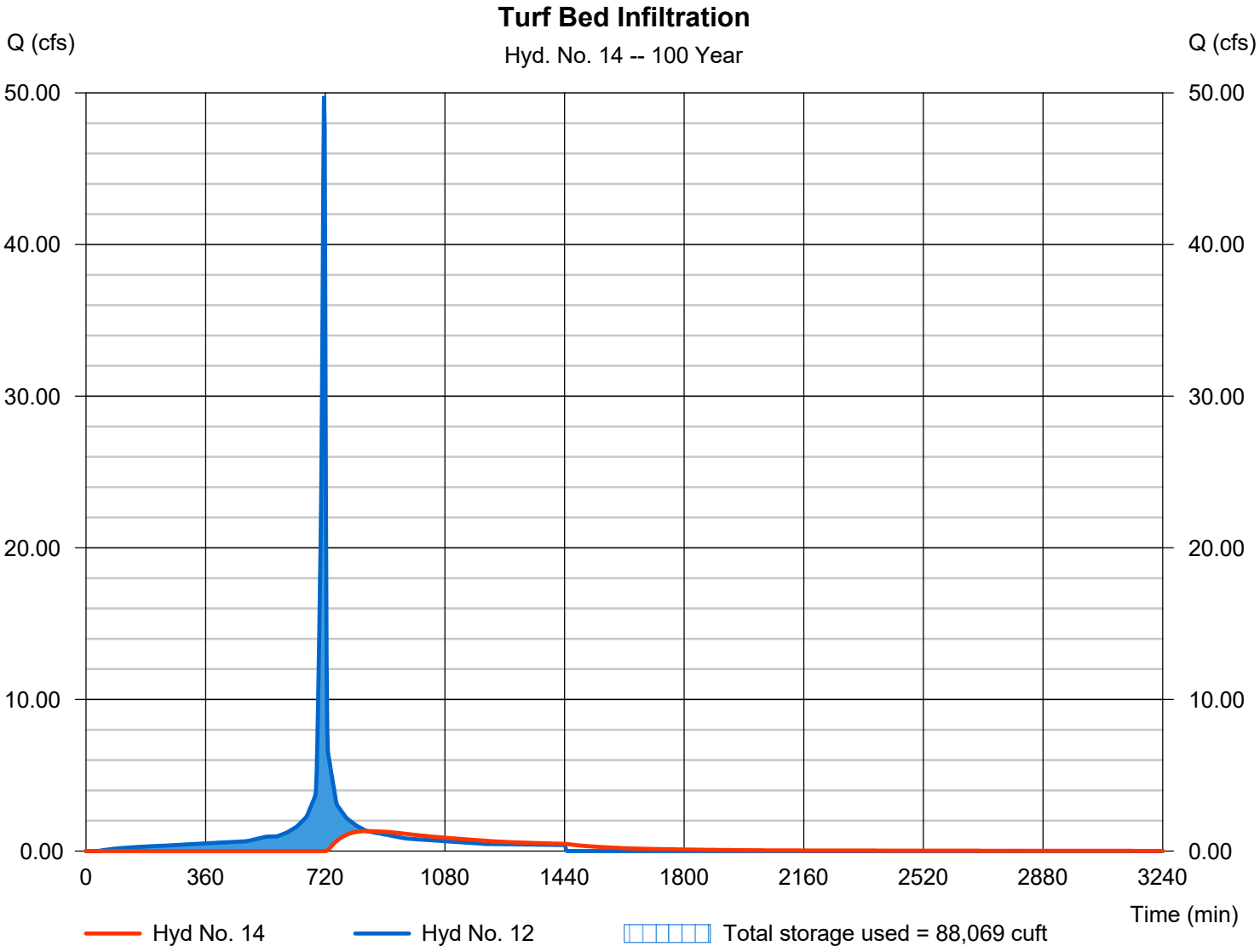
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 14

Turf Bed Infiltration

Hydrograph type	=	Reservoir	Peak discharge	=	1.318 cfs
Storm frequency	=	100 yrs	Time to peak	=	846 min
Time interval	=	2 min	Hyd. volume	=	44,704 cuft
Inflow hyd. No.	=	12 - Drainage Area to Turf Infiltration Bed	Max. Elevation	=	314.60 ft
Reservoir name	=	Turf	Max. Storage	=	88,069 cuft

Storage Indication method used.



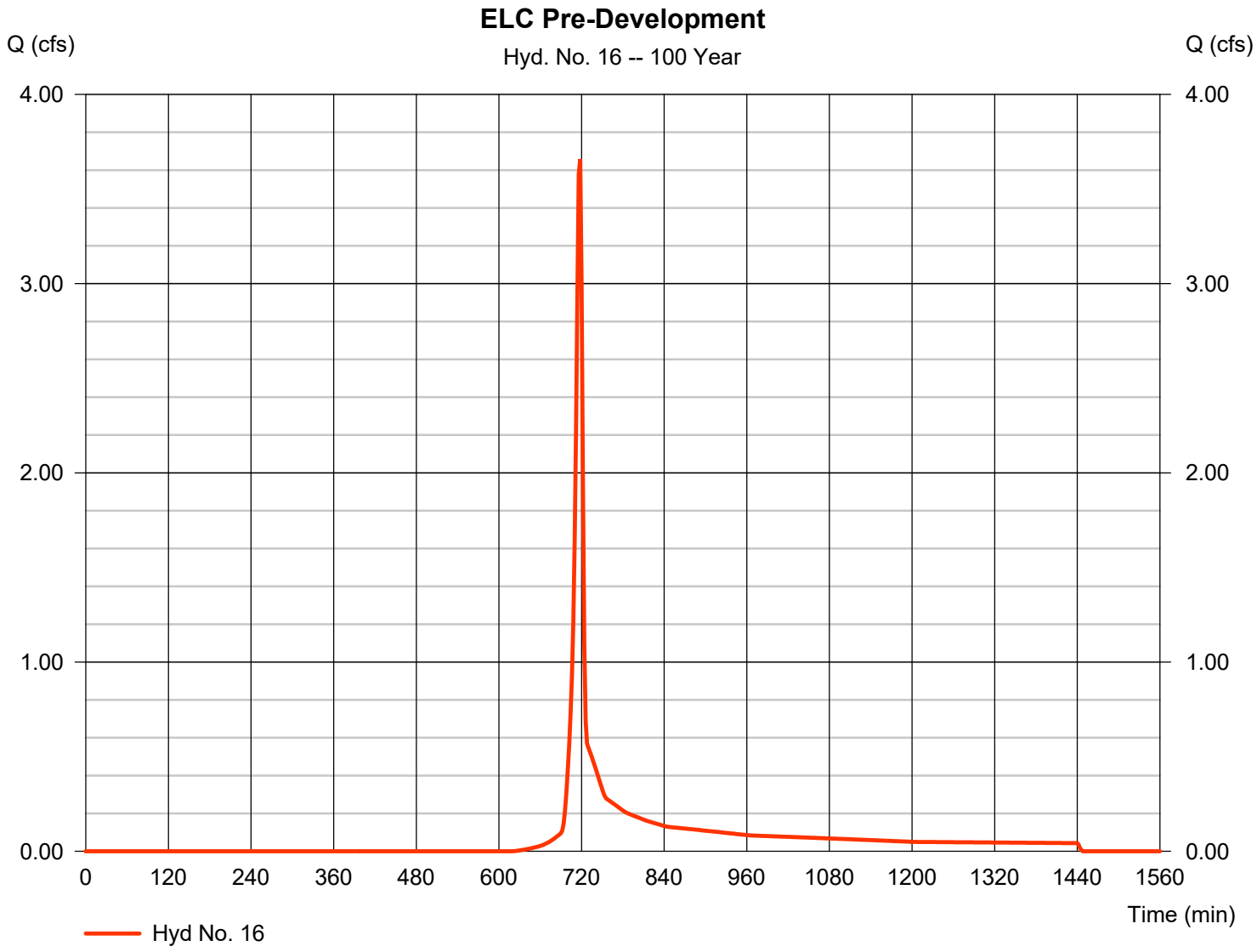
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 16

ELC Pre-Development

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.657 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	7,313 cuft
Drainage area	=	0.780 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



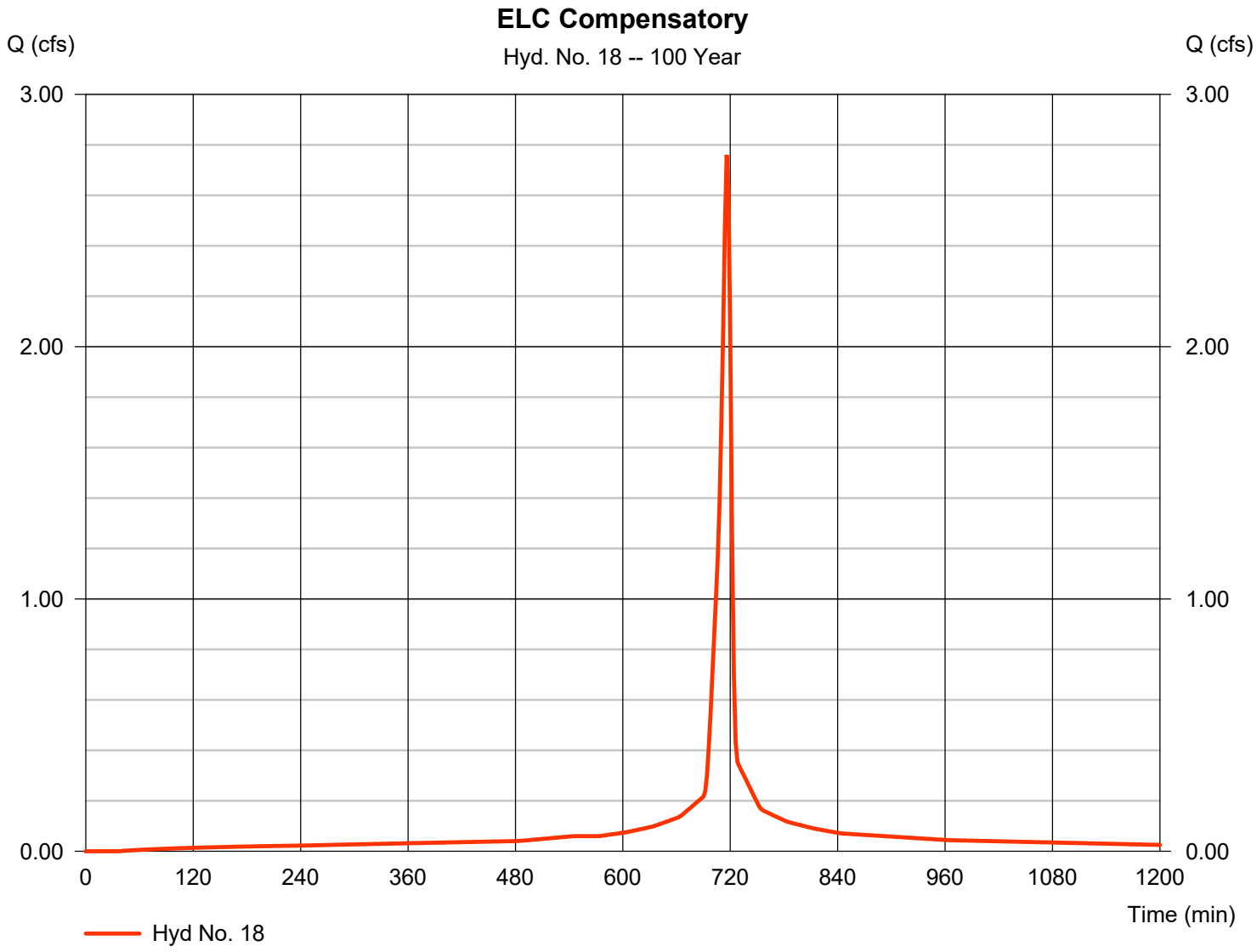
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 18

ELC Compensatory

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.760 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	6,671 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



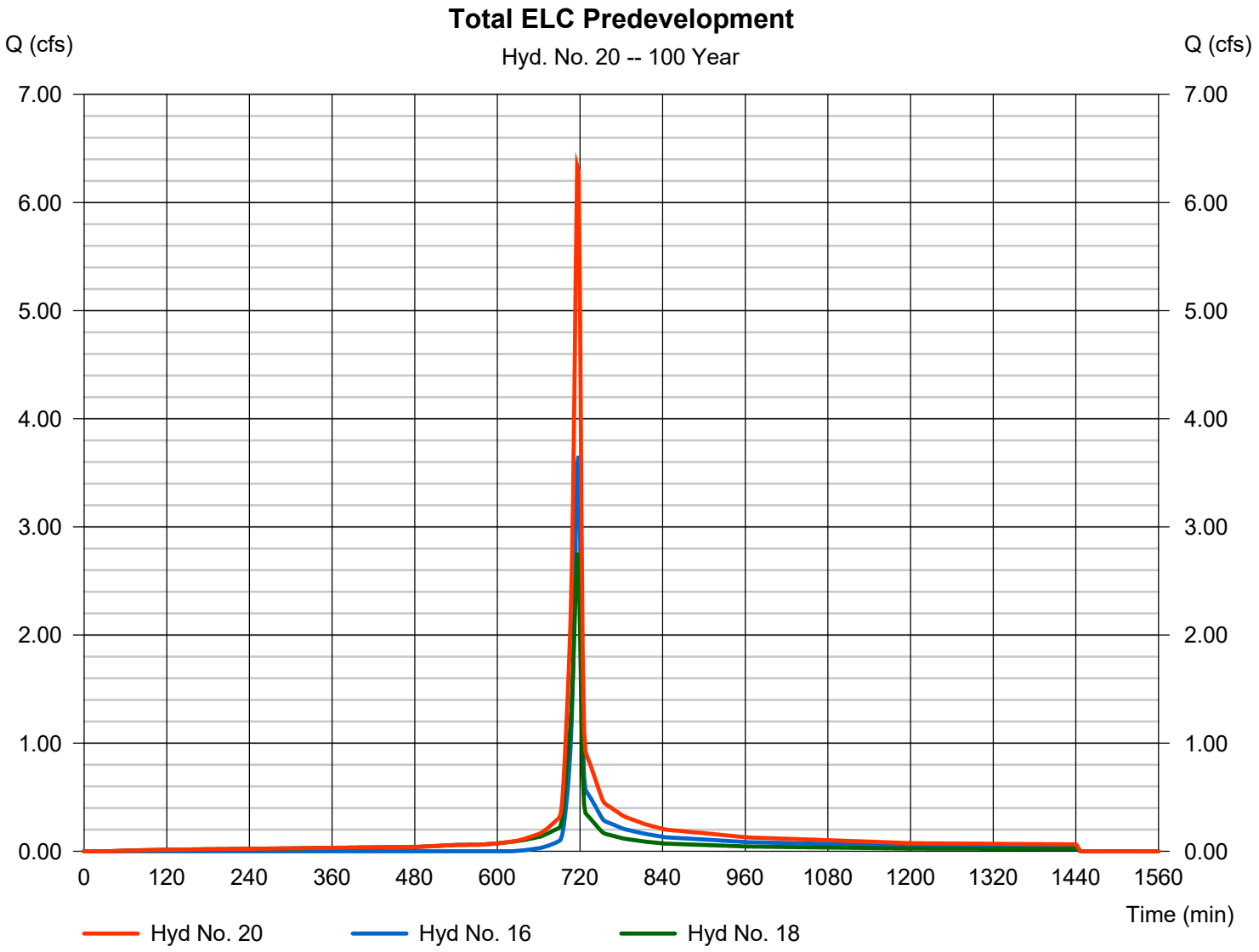
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 20

Total ELC Predevelopment

Hydrograph type	=	Combine	Peak discharge	=	6.340 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	13,984 cuft
Inflow hyds.	=	16, 18	Contrib. drain. area	=	1.050 ac



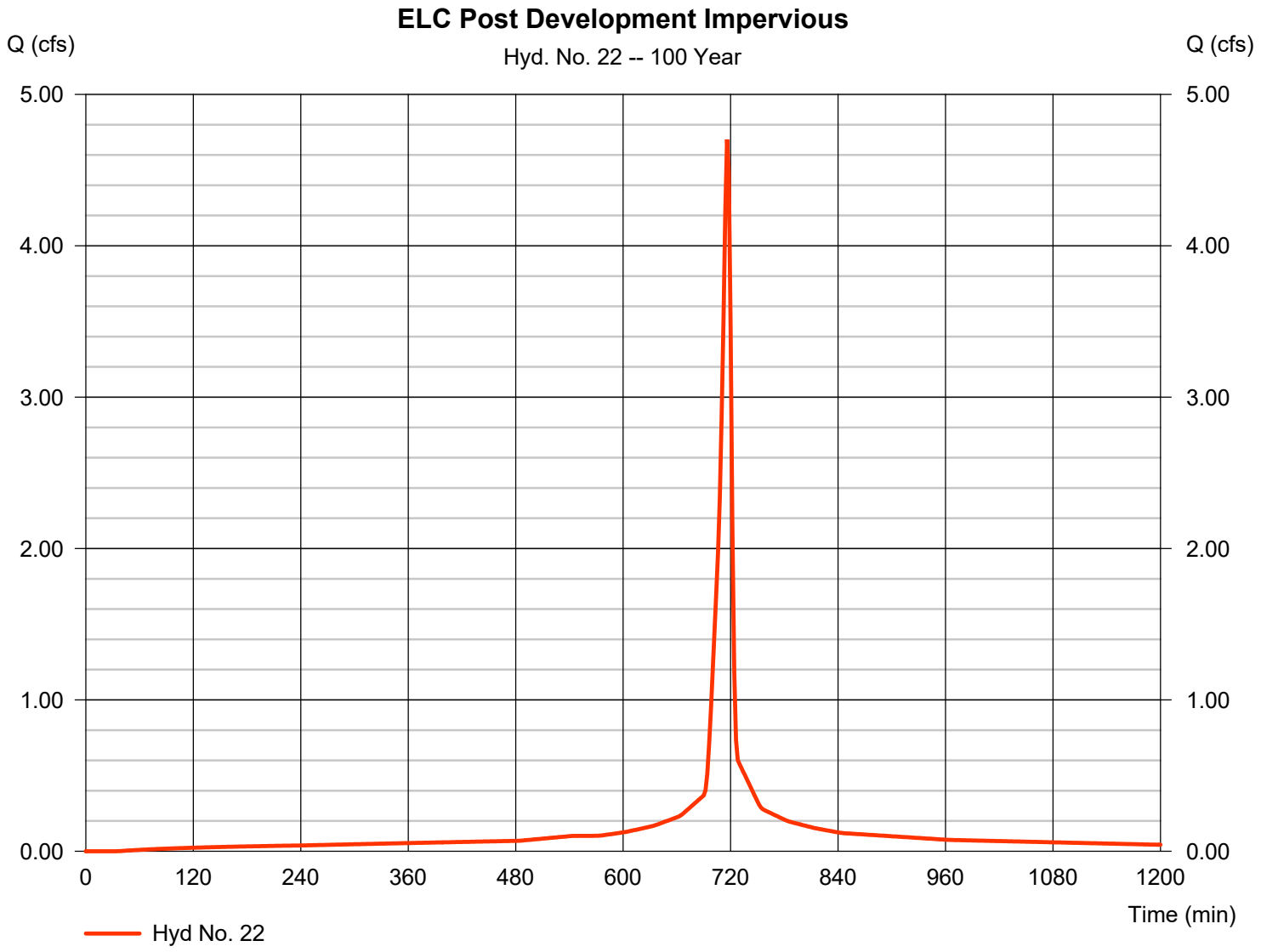
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 22

ELC Post Development Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.702 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	11,366 cuft
Drainage area	=	0.460 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



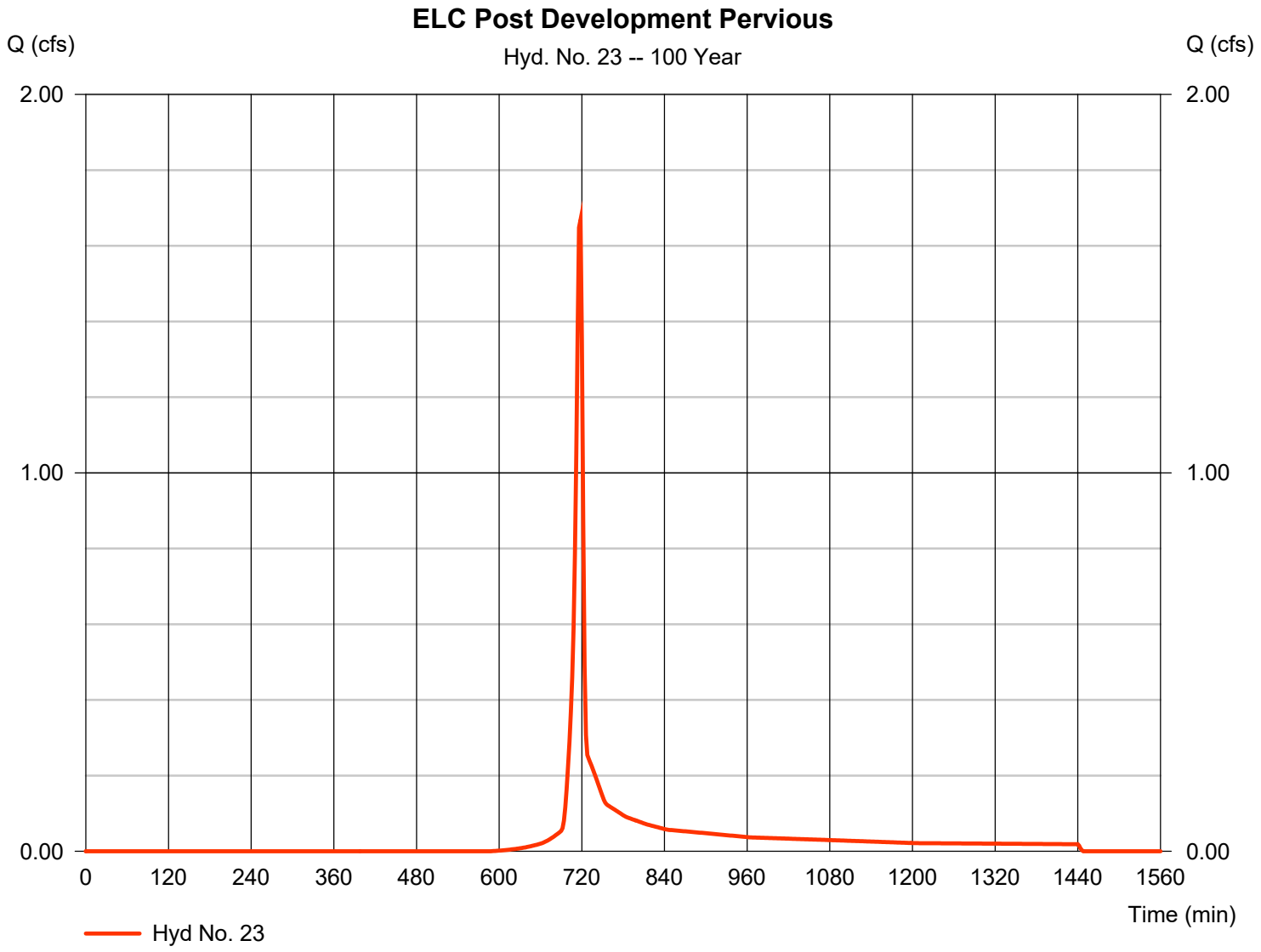
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 23

ELC Post Development Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.668 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	3,341 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



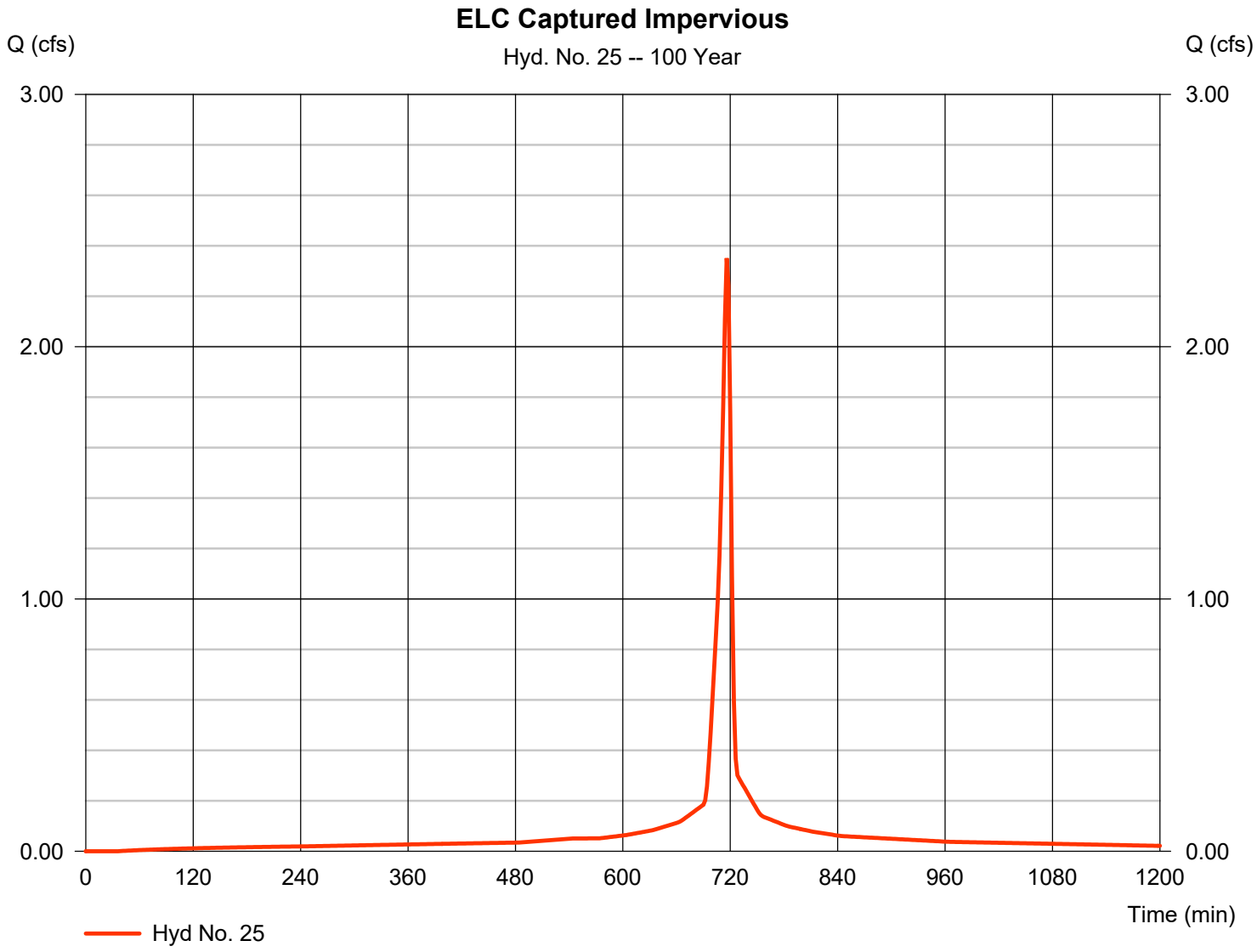
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 25

ELC Captured Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.351 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,683 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



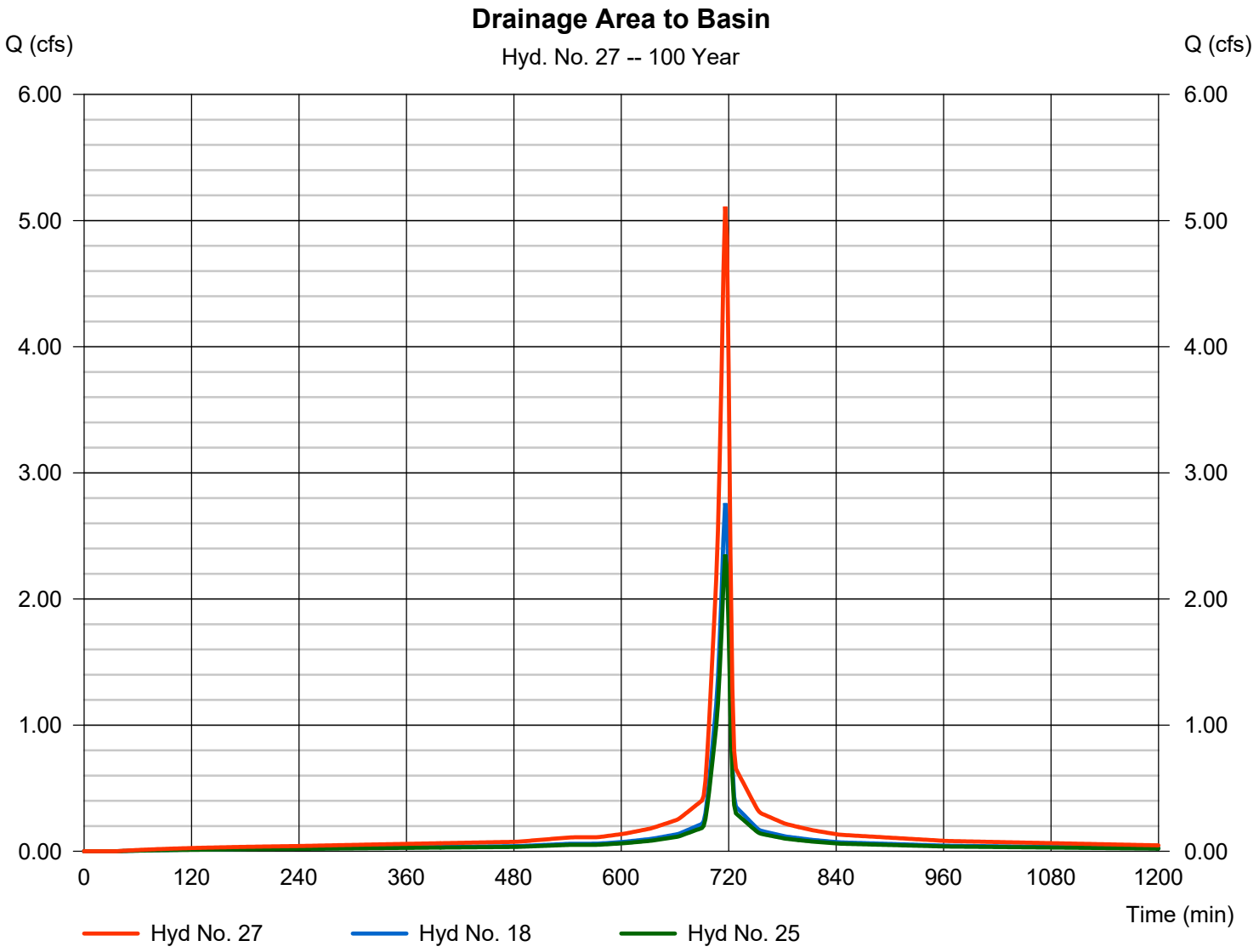
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 27

Drainage Area to Basin

Hydrograph type	=	Combine	Peak discharge	=	5.111 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	12,354 cuft
Inflow hyds.	=	18, 25	Contrib. drain. area	=	0.500 ac



Hydrograph Report

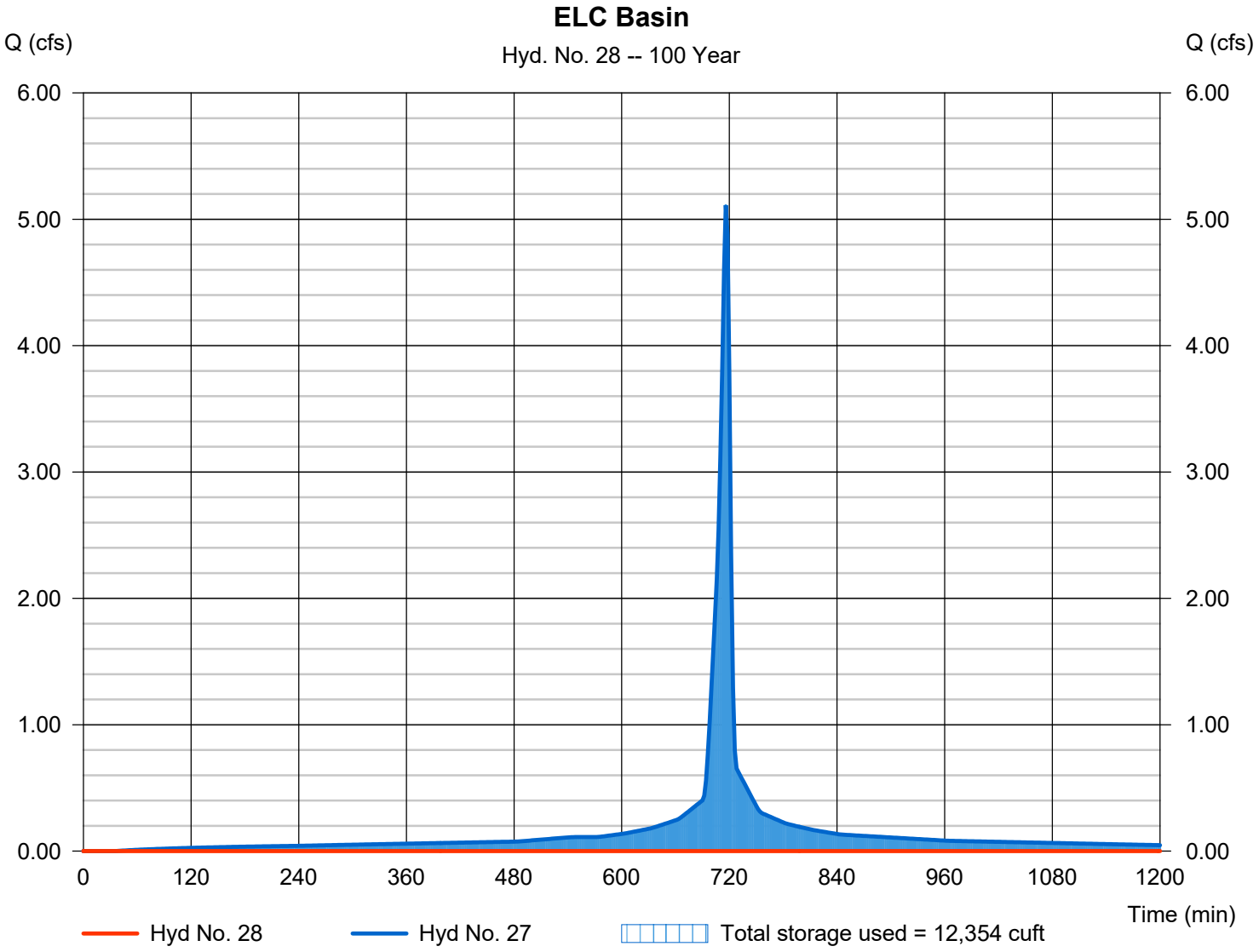
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 28

ELC Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	100 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	27 - Drainage Area to Basin	Max. Elevation	=	318.26 ft
Reservoir name	=	ELC Basin	Max. Storage	=	12,354 cuft

Storage Indication method used.



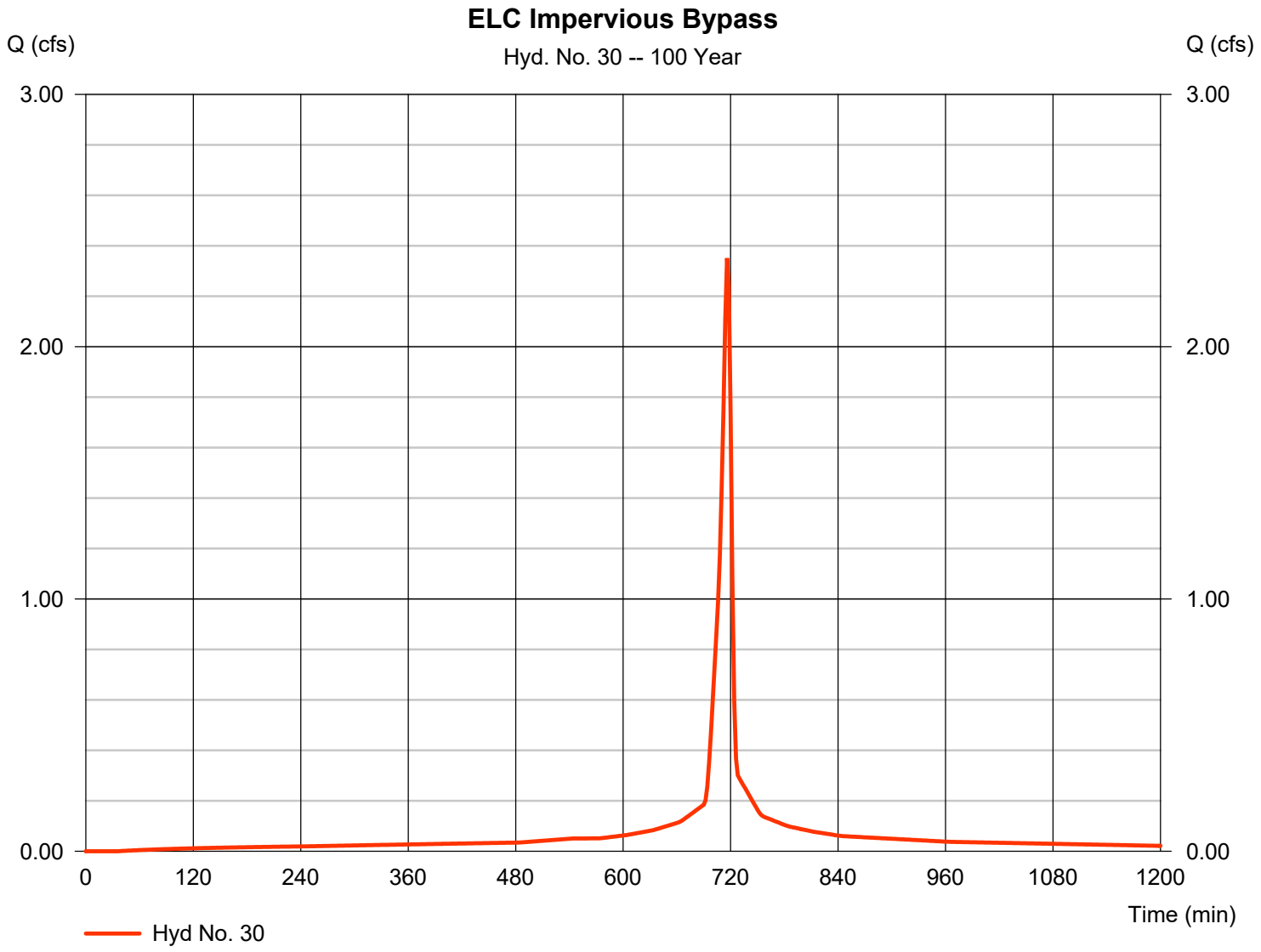
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 30

ELC Impervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.351 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,683 cuft
Drainage area	=	0.230 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



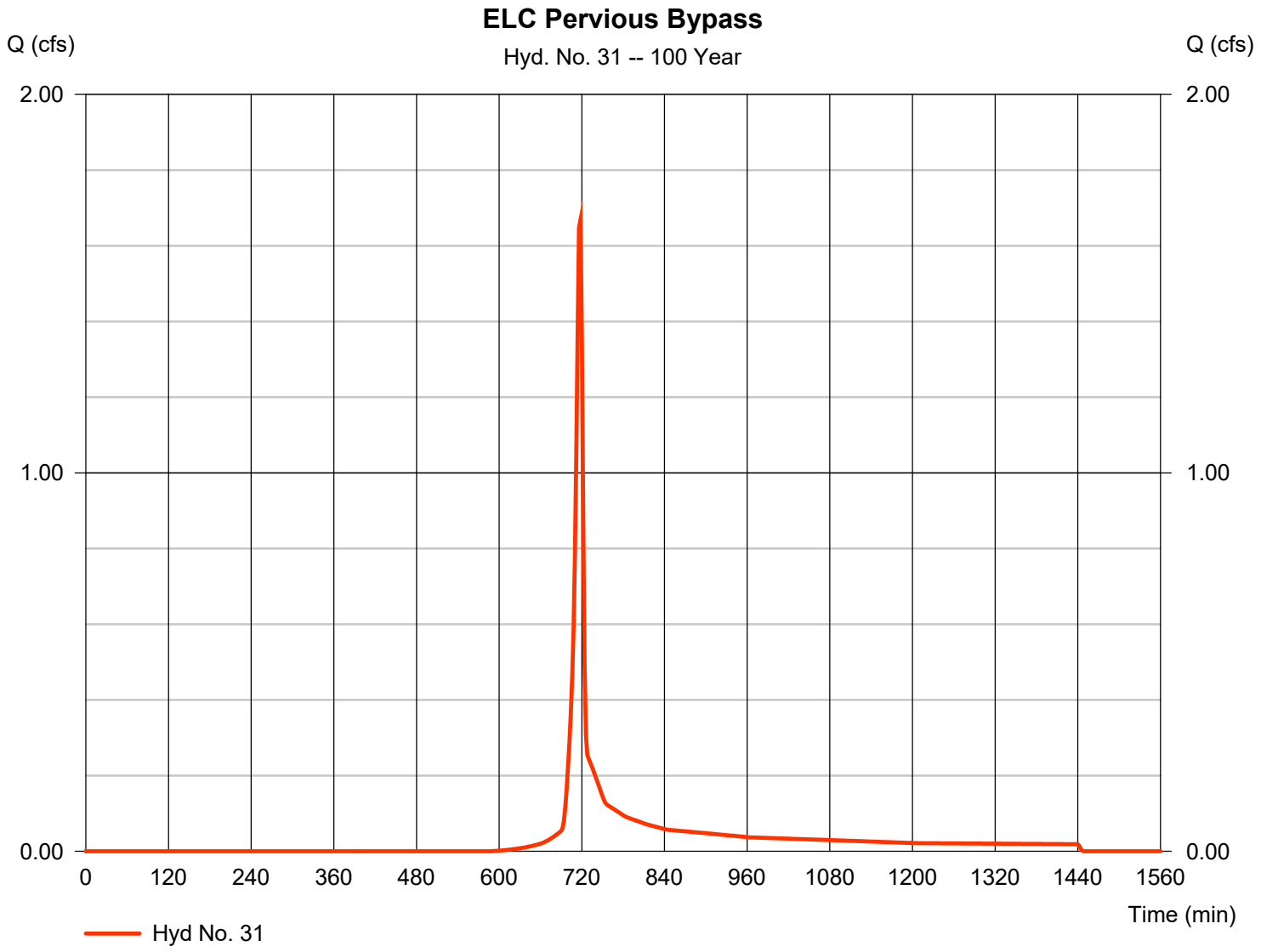
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 31

ELC Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.668 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	3,341 cuft
Drainage area	=	0.320 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



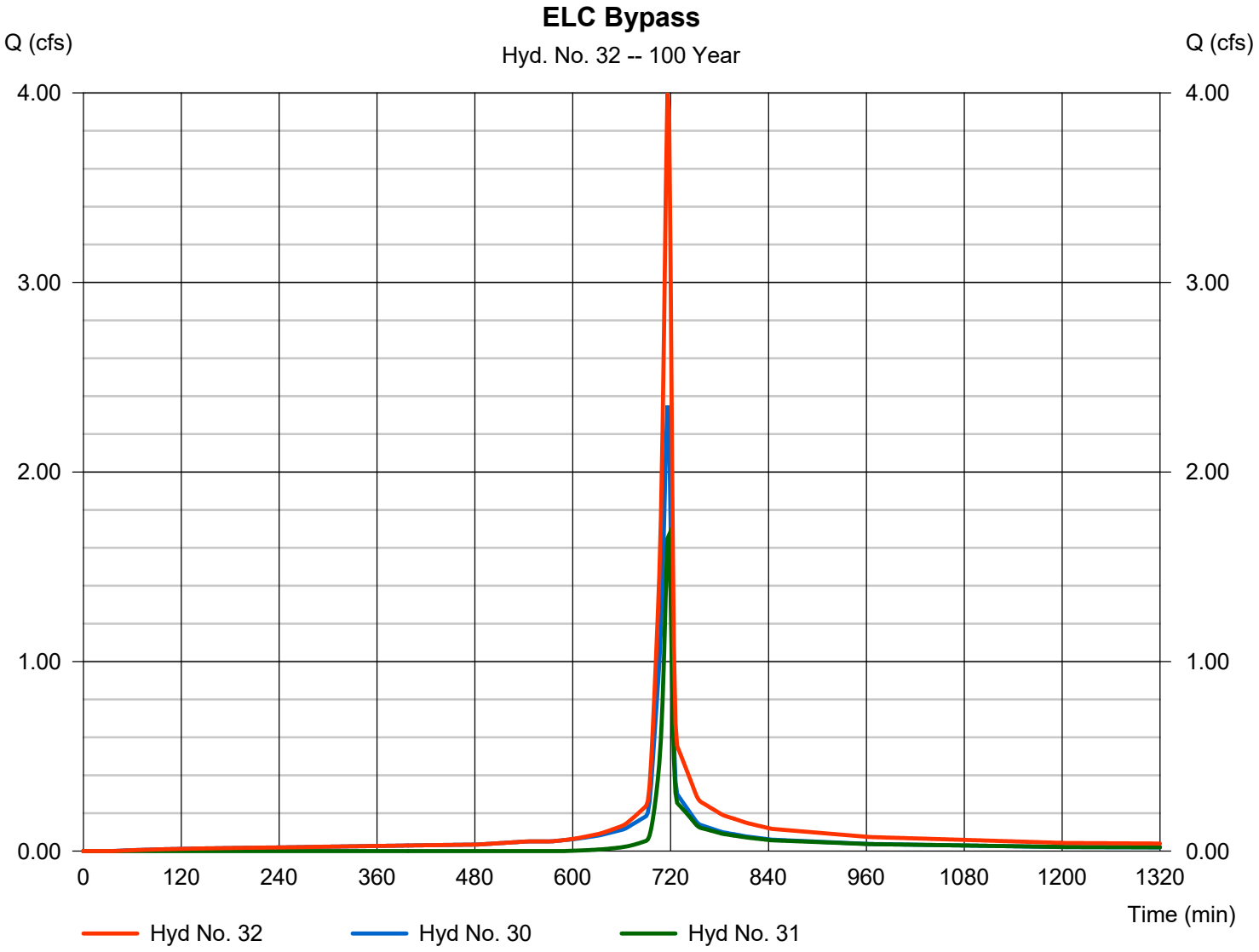
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 32

ELC Bypass

Hydrograph type	=	Combine	Peak discharge	=	3.999 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	9,024 cuft
Inflow hyds.	=	30, 31	Contrib. drain. area	=	0.550 ac



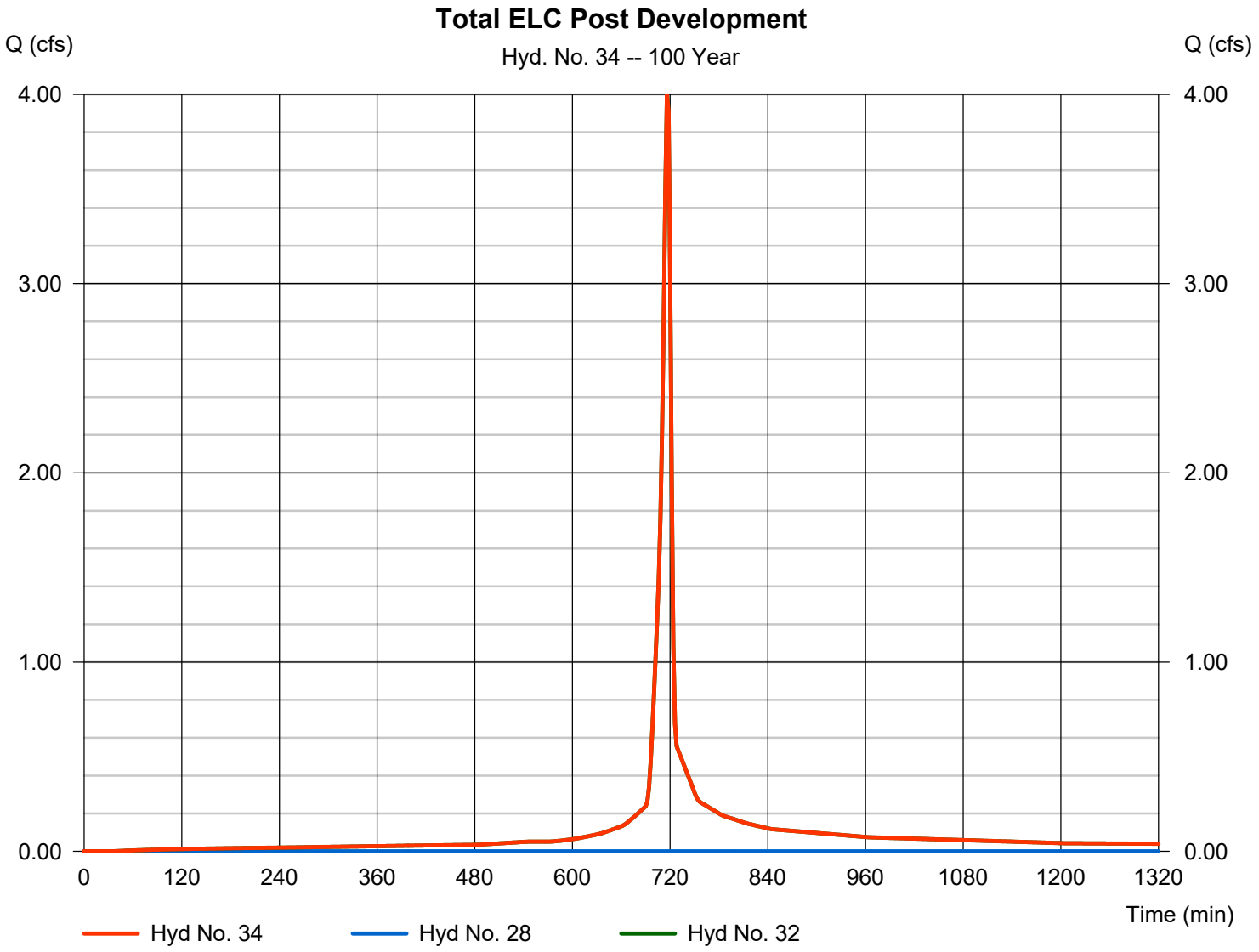
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 34

Total ELC Post Development

Hydrograph type	= Combine	Peak discharge	= 3.999 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 9,024 cuft
Inflow hyds.	= 28, 32	Contrib. drain. area	= 0.000 ac



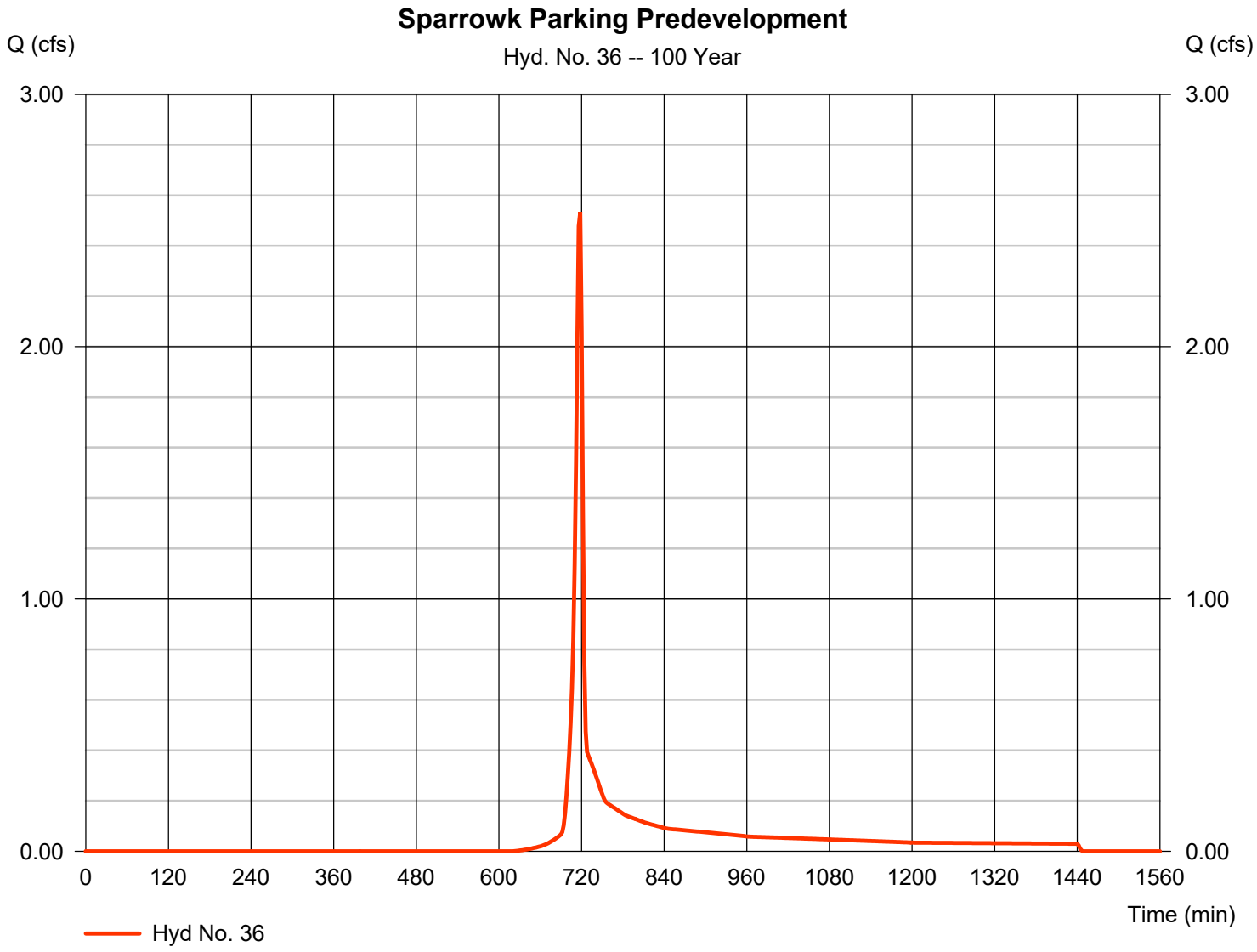
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 36

Sparrowk Parking Predevelopment

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.532 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	5,063 cuft
Drainage area	=	0.540 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



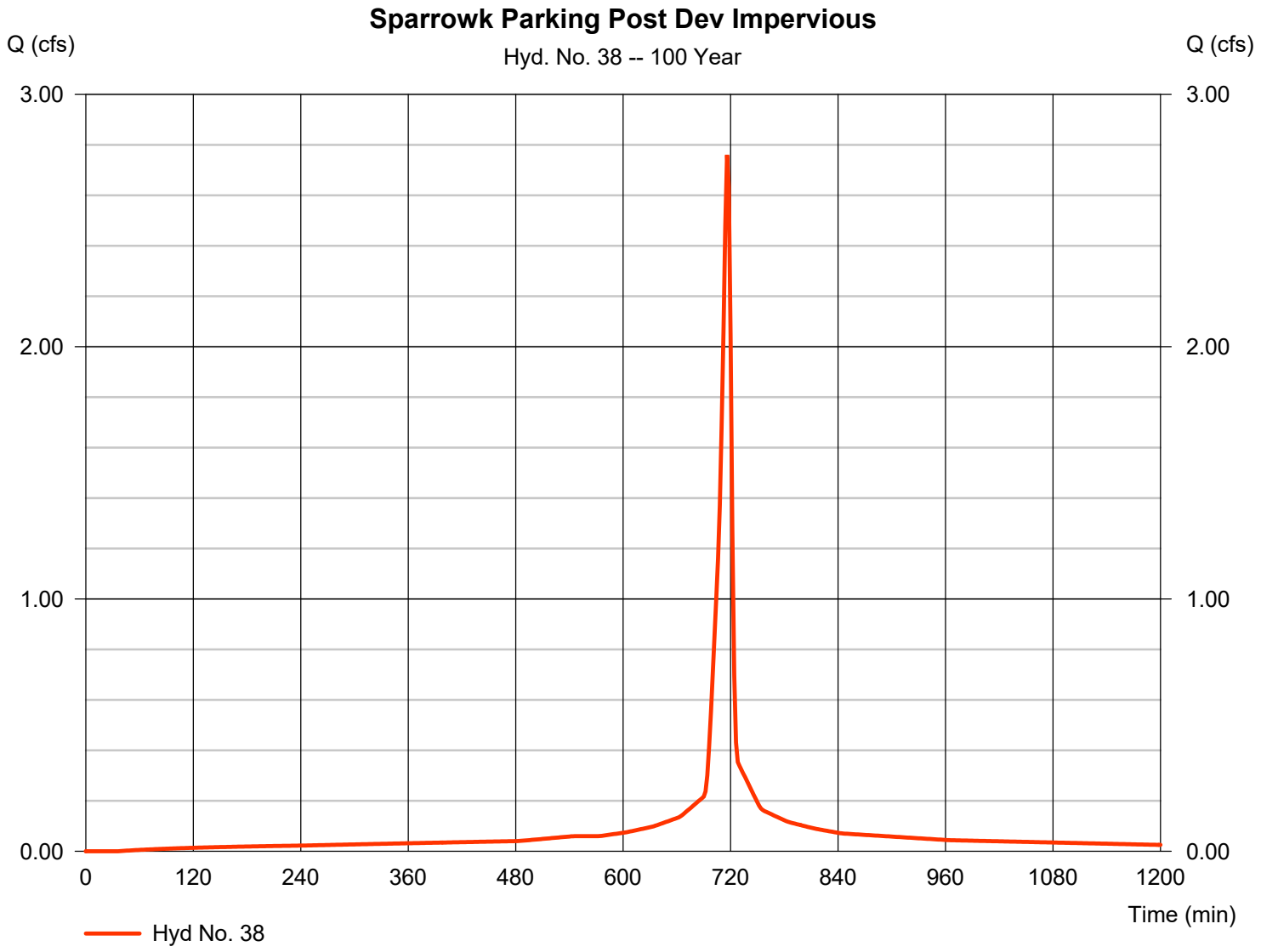
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 38

Sparrowk Parking Post Dev Impervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.760 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	6,671 cuft
Drainage area	=	0.270 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



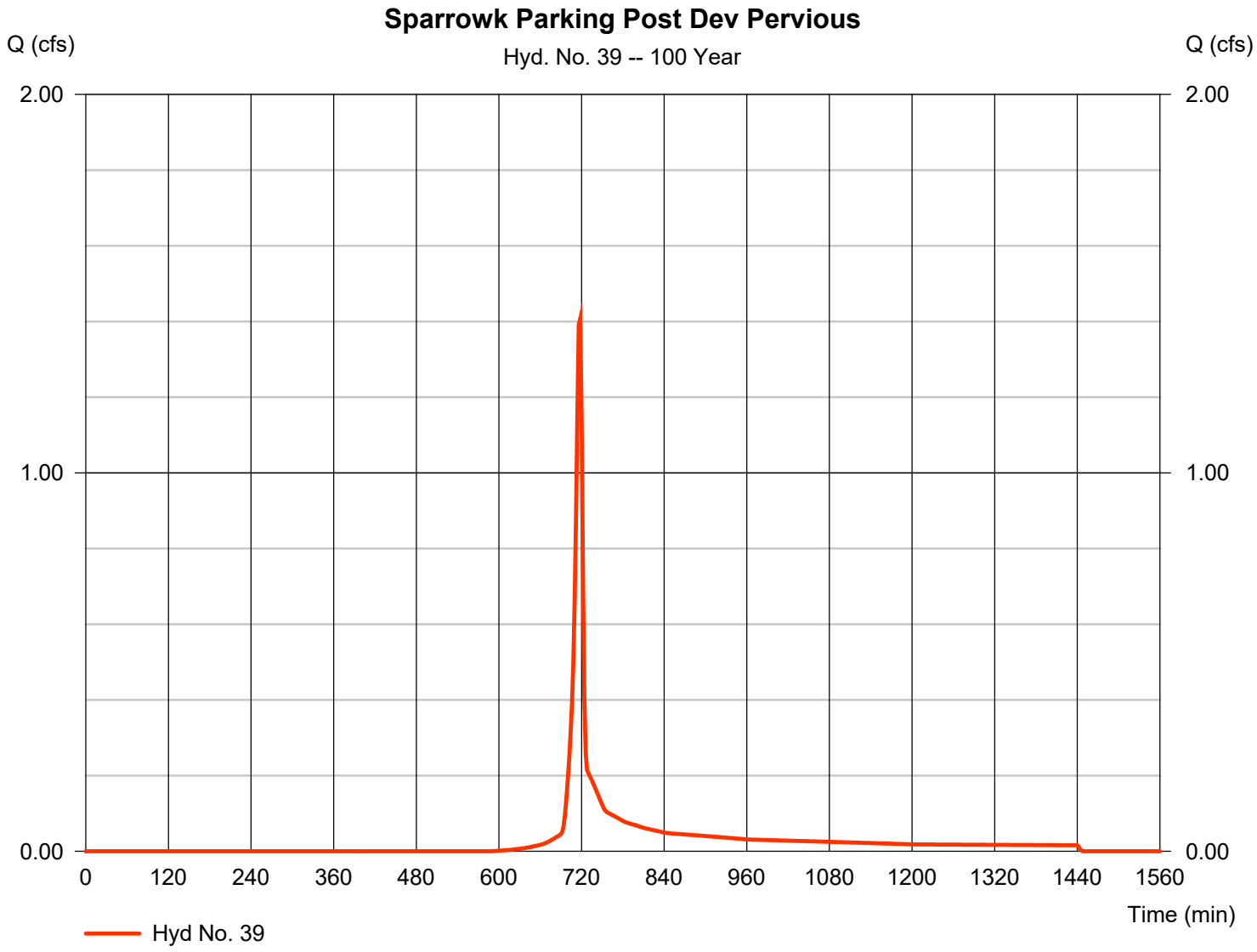
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 39

Sparrowk Parking Post Dev Pervious

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.408 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,819 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



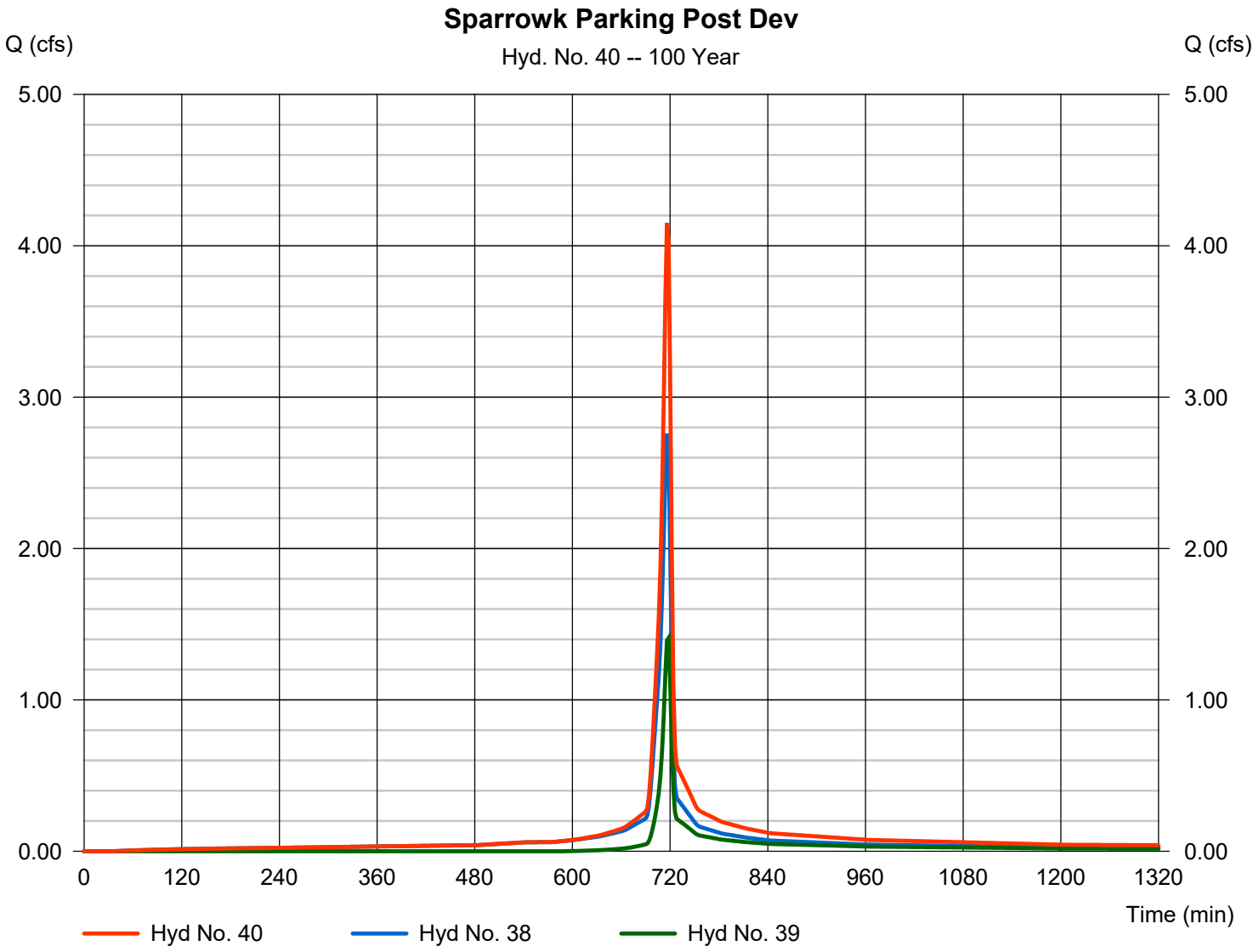
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 40

Sparrowk Parking Post Dev

Hydrograph type	=	Combine	Peak discharge	=	4.151 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	9,491 cuft
Inflow hyds.	=	38, 39	Contrib. drain. area	=	0.540 ac



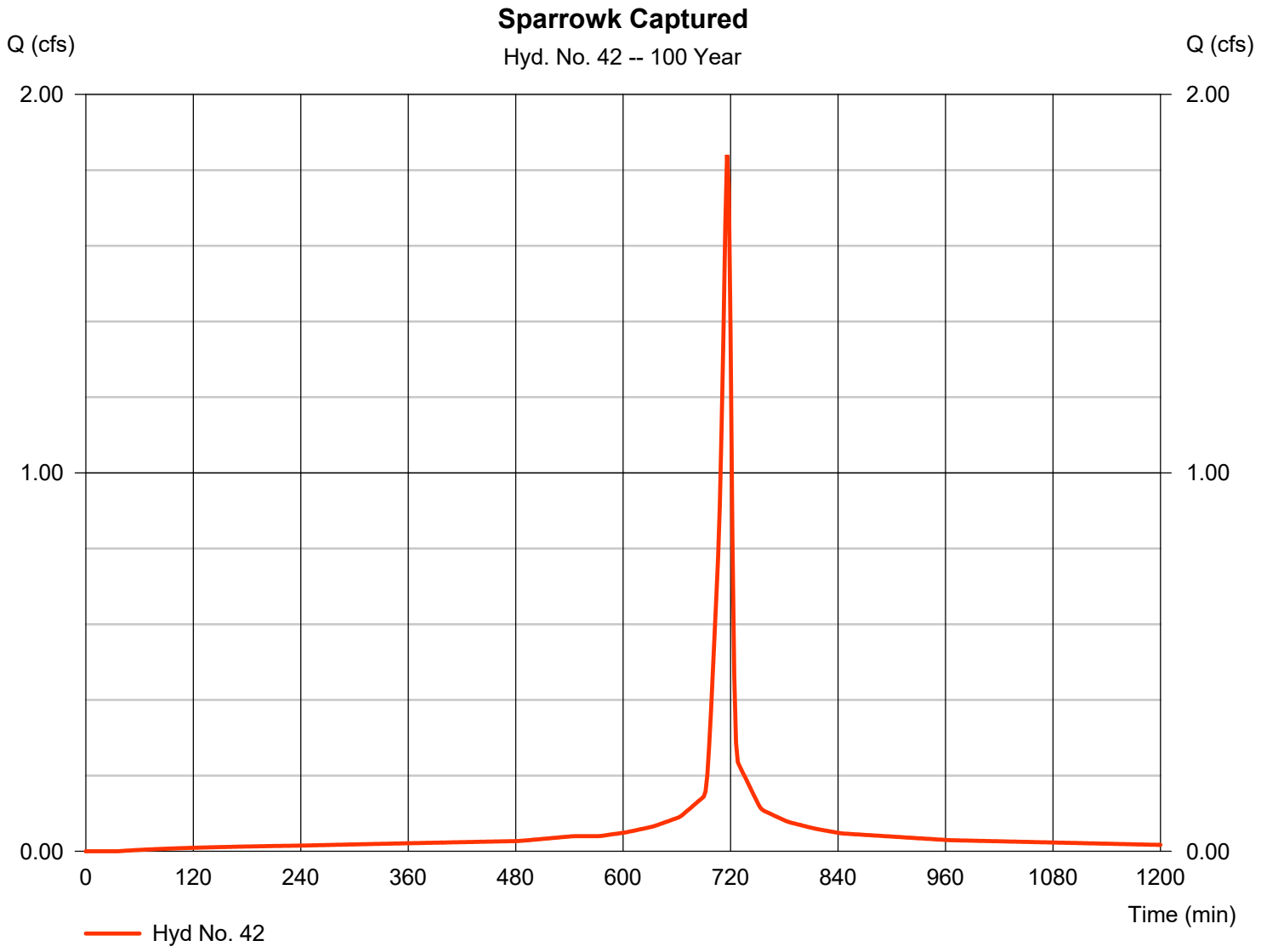
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 42

Sparrowk Captured

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.840 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	4,448 cuft
Drainage area	=	0.180 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

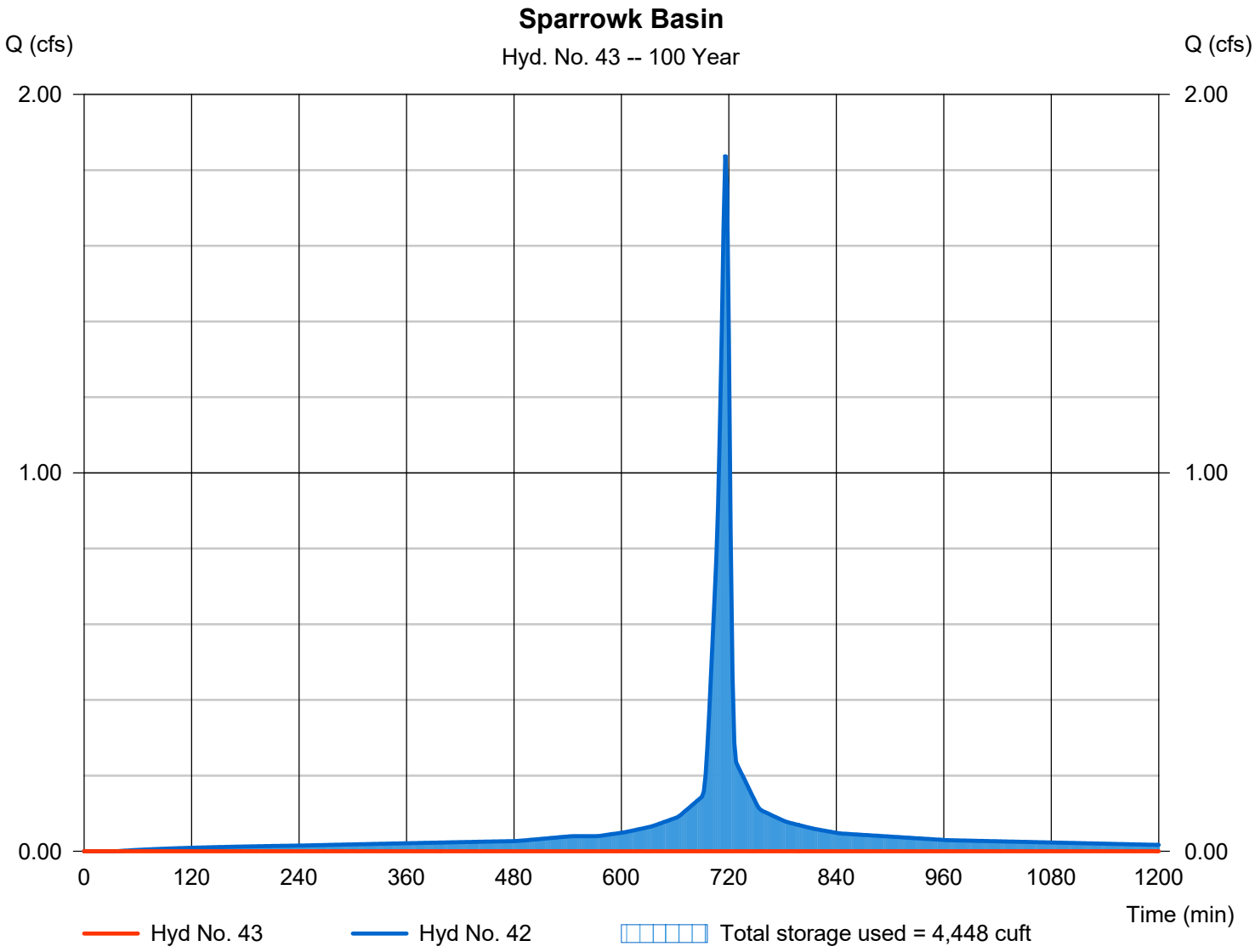
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 43

Sparrowk Basin

Hydrograph type	=	Reservoir	Peak discharge	=	0.000 cfs
Storm frequency	=	100 yrs	Time to peak	=	n/a
Time interval	=	2 min	Hyd. volume	=	0 cuft
Inflow hyd. No.	=	42 - Sparrowk Captured	Max. Elevation	=	303.32 ft
Reservoir name	=	Sparrowk Basin	Max. Storage	=	4,448 cuft

Storage Indication method used.



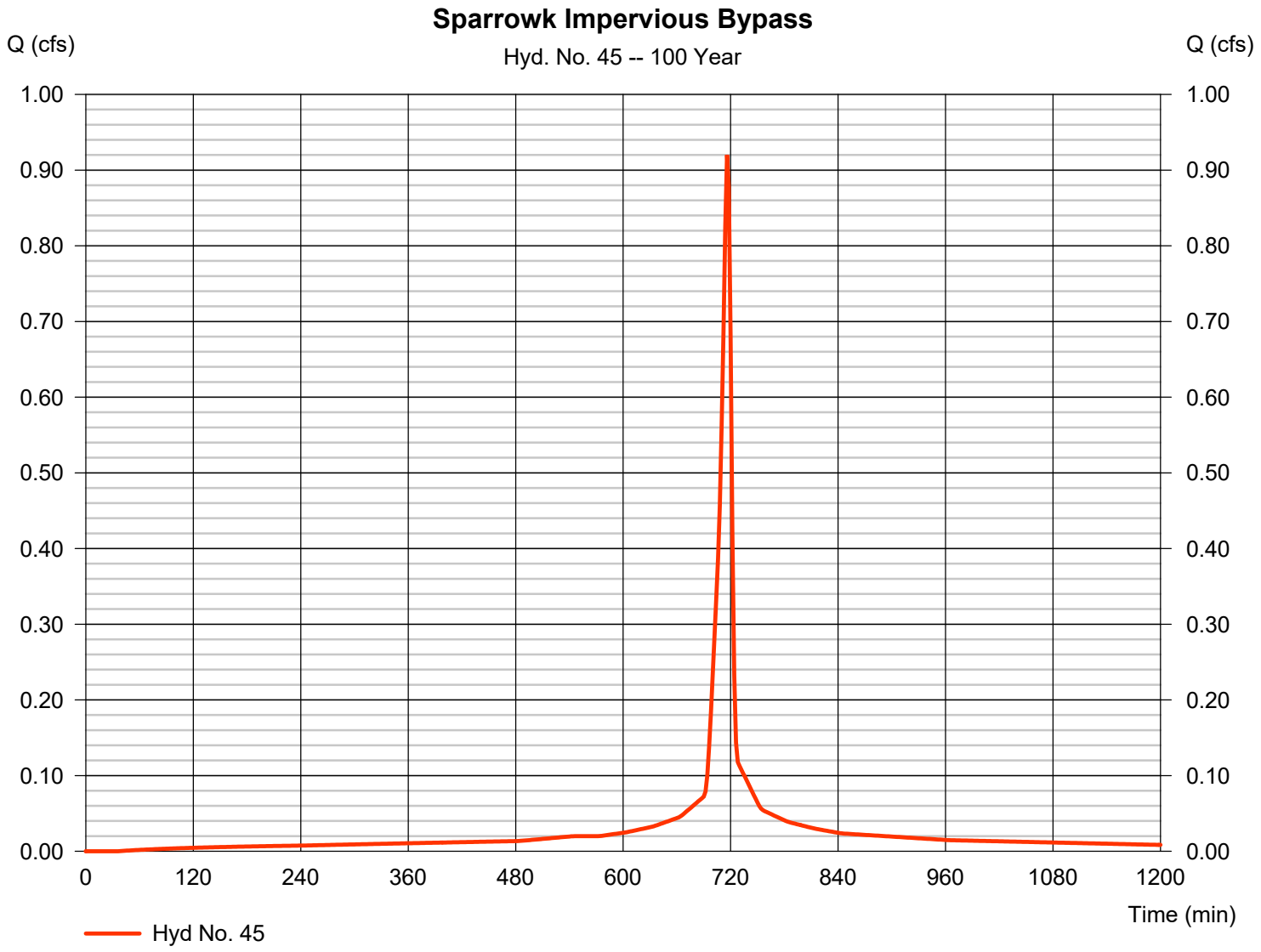
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 45

Sparrowk Impervious Bypass

Hydrograph type	= SCS Runoff	Peak discharge	= 0.920 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 2,224 cuft
Drainage area	= 0.090 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 7.50 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



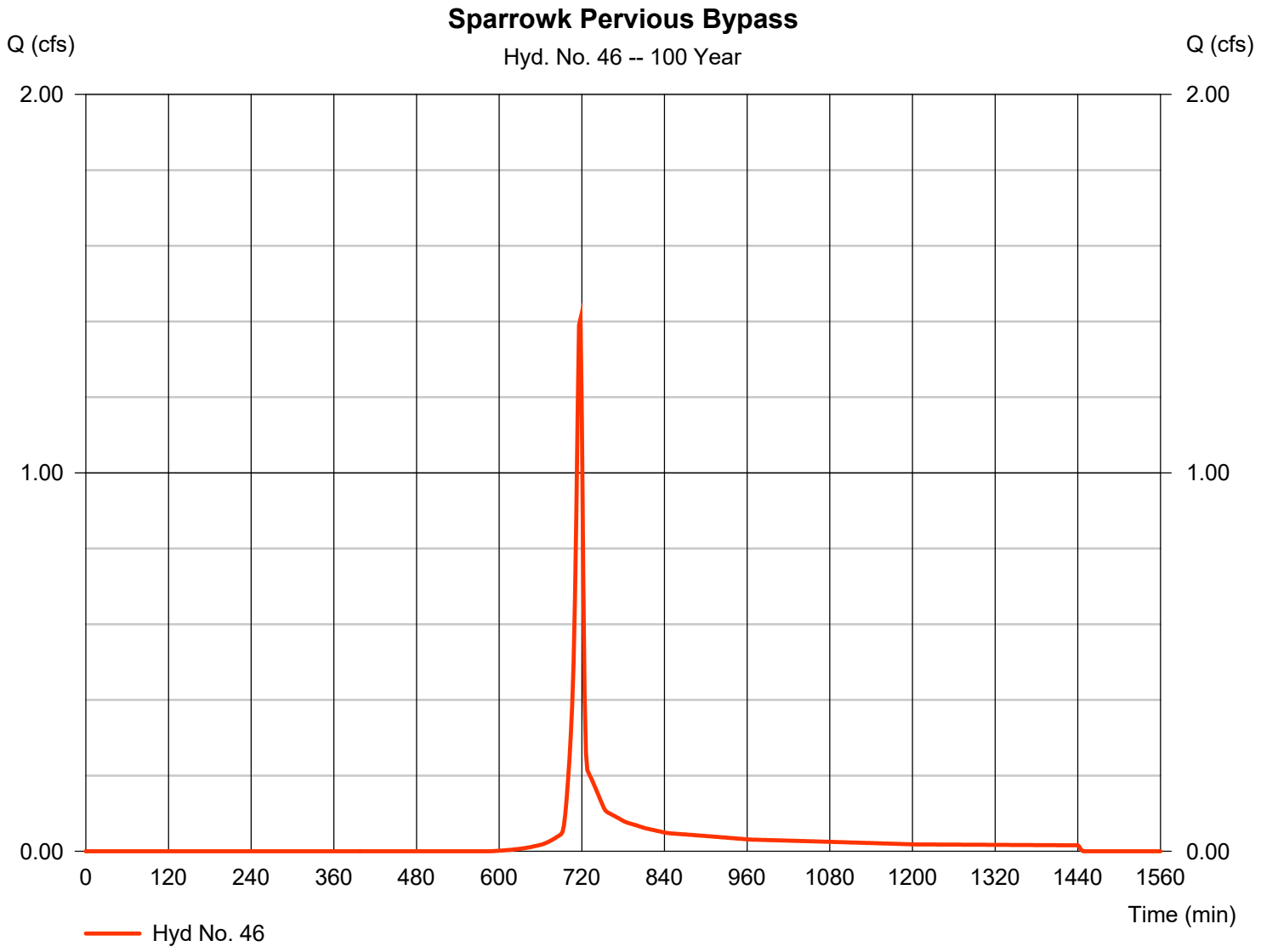
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 46

Sparrowk Pervious Bypass

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.408 cfs
Storm frequency	=	100 yrs	Time to peak	=	718 min
Time interval	=	2 min	Hyd. volume	=	2,819 cuft
Drainage area	=	0.270 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	7.50 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484



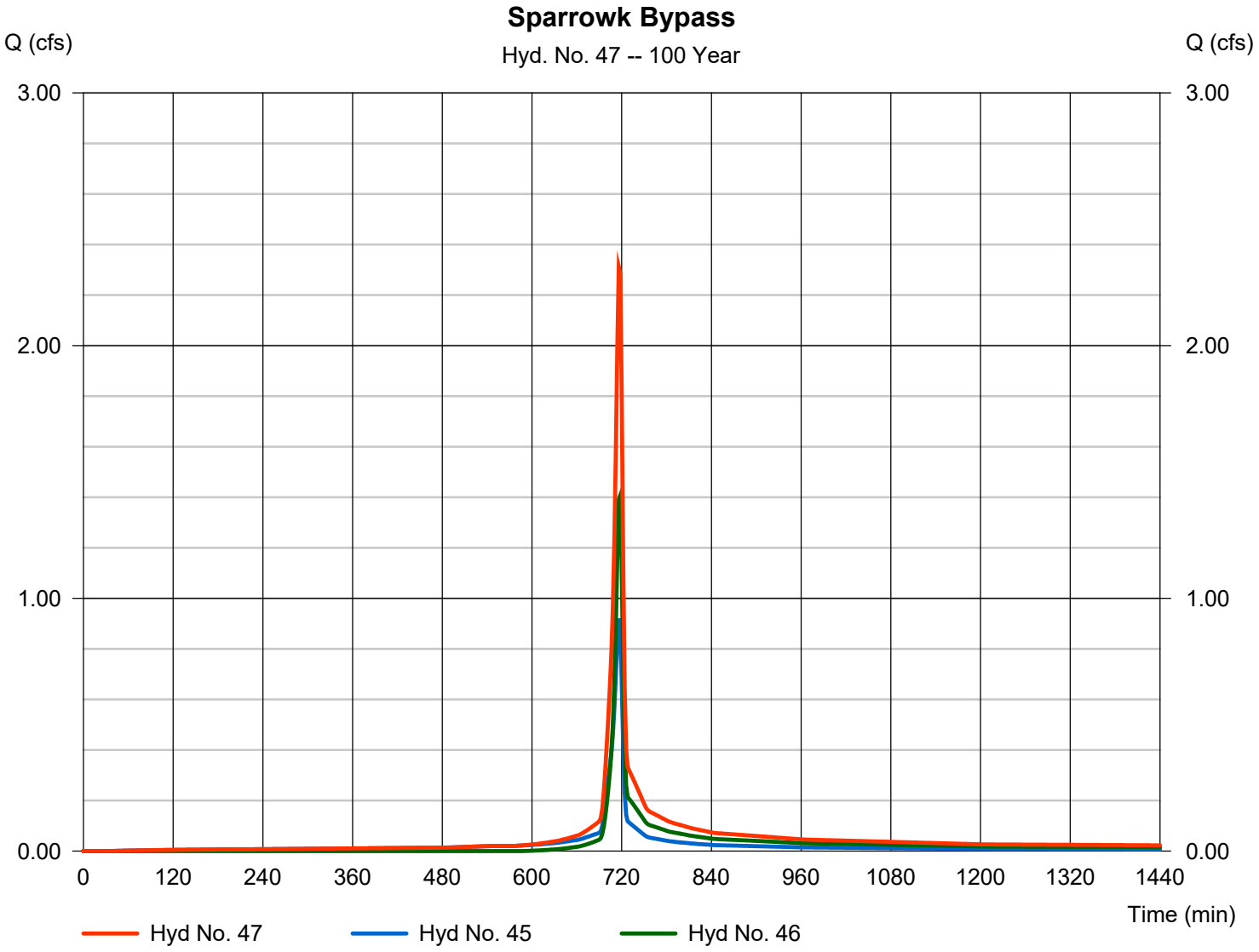
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 47

Sparrowk Bypass

Hydrograph type	=	Combine	Peak discharge	=	2.311 cfs
Storm frequency	=	100 yrs	Time to peak	=	716 min
Time interval	=	2 min	Hyd. volume	=	5,043 cuft
Inflow hyds.	=	45, 46	Contrib. drain. area	=	0.360 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Monday, 08 / 5 / 2024

Hyd. No. 49

Total Sparrowk Post Development

Hydrograph type	= Combine	Peak discharge	= 2.311 cfs
Storm frequency	= 100 yrs	Time to peak	= 716 min
Time interval	= 2 min	Hyd. volume	= 5,043 cuft
Inflow hyds.	= 43, 47	Contrib. drain. area	= 0.000 ac