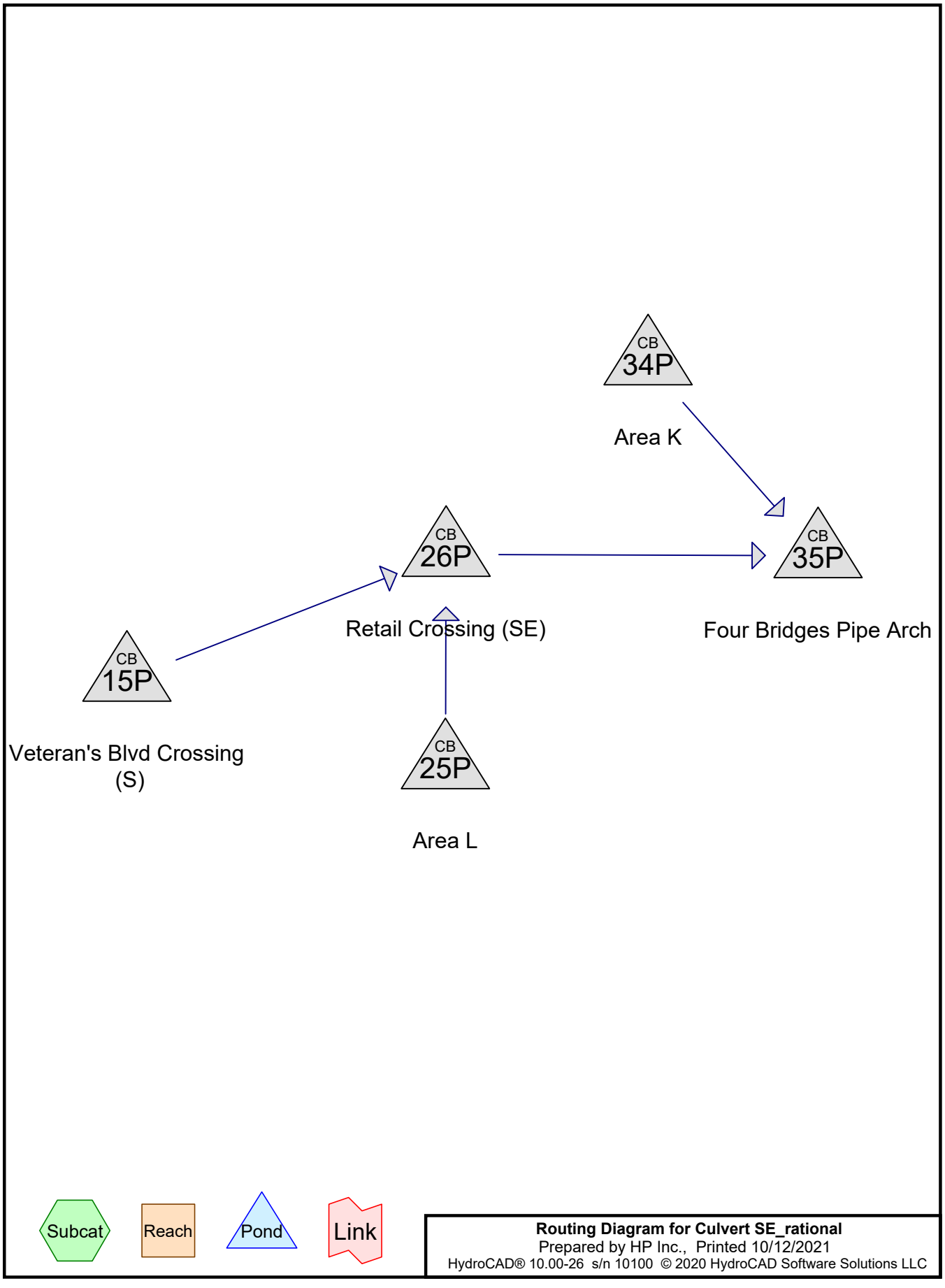


Routing Diagram for Culvert SE_rational
Prepared by HP Inc., Printed 10/12/2021
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Summary for Pond 15P: Veteran's Blvd Crossing (S)

[57] Hint: Peaked at 872.85' (Flood elevation advised)

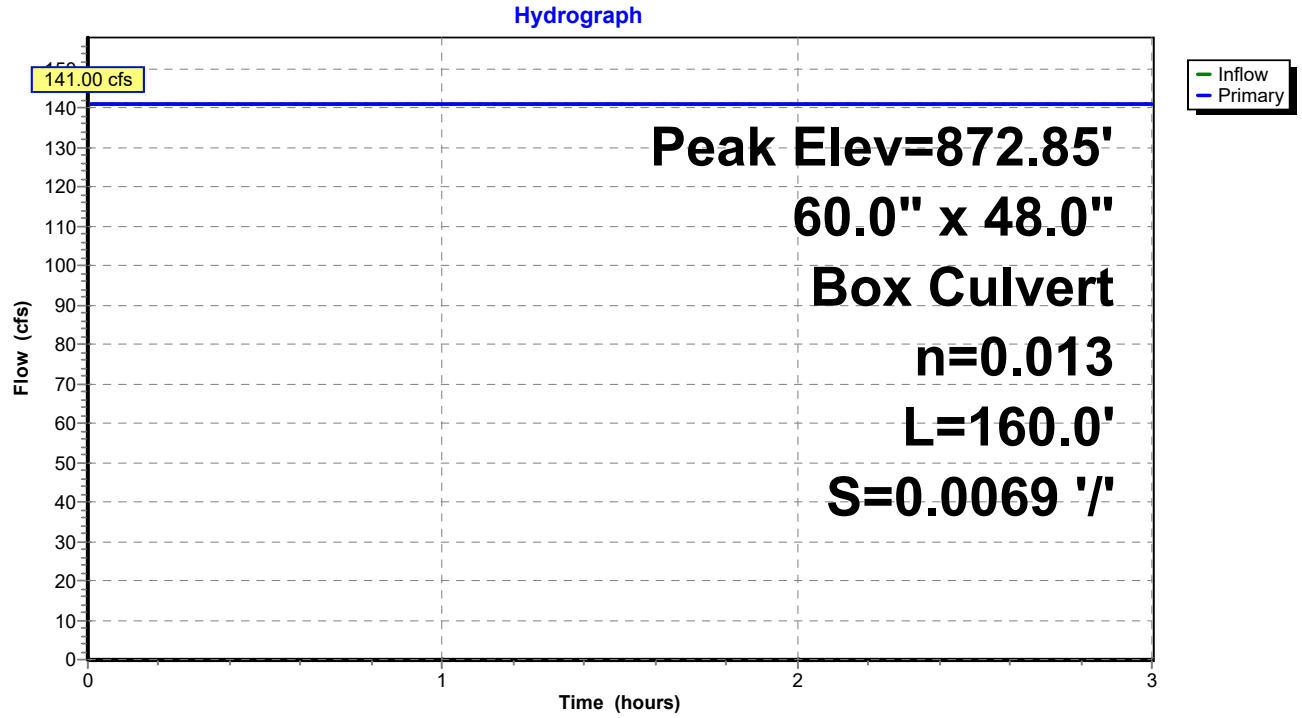
Inflow	=	141.00 cfs @	0.00 hrs, Volume=	35.075 af,	Incl. 141.00 cfs Base Flow
Outflow	=	141.00 cfs @	0.00 hrs, Volume=	35.075 af,	Atten= 0%, Lag= 0.0 min
Primary	=	141.00 cfs @	0.00 hrs, Volume=	35.075 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 872.85' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	868.40'	**60.0" W x 48.0" H Box Culvert** L= 160.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 868.40' / 867.30' S= 0.0069 '/' Cc= 0.900 n= 0.013, Flow Area= 20.00 sf

Primary OutFlow Max=141.00 cfs @ 0.00 hrs HW=872.85' TW=869.33' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 141.00 cfs @ 8.46 fps)

Pond 15P: Veteran's Blvd Crossing (S)



Stage-Discharge for Pond 15P: Veteran's Blvd Crossing (S)

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
868.40	0.00	869.42	16.53	870.44	46.76	871.46	85.91
868.42	0.04	869.44	17.02	870.46	47.45	871.48	86.76
868.44	0.13	869.46	17.52	870.48	48.15	871.50	87.60
868.46	0.24	869.48	18.01	870.50	48.84	871.52	88.45
868.48	0.36	869.50	18.52	870.52	49.54	871.54	89.27
868.50	0.51	869.52	19.02	870.54	50.25	871.56	90.01
868.52	0.67	869.54	19.54	870.56	50.95	871.58	90.76
868.54	0.84	869.56	20.05	870.58	51.66	871.60	91.51
868.56	1.03	869.58	20.57	870.60	52.37	871.62	92.26
868.58	1.23	869.60	21.10	870.62	53.09	871.64	93.01
868.60	1.44	869.62	21.63	870.64	53.81	871.66	93.76
868.62	1.66	869.64	22.16	870.66	54.53	871.68	94.51
868.64	1.89	869.66	22.70	870.68	55.26	871.70	95.27
868.66	2.13	869.68	23.24	870.70	55.98	871.72	96.02
868.68	2.38	869.70	23.79	870.72	56.72	871.74	96.78
868.70	2.64	869.72	24.34	870.74	57.45	871.76	97.54
868.72	2.91	869.74	24.90	870.76	58.19	871.78	98.30
868.74	3.18	869.76	25.46	870.78	58.93	871.80	99.06
868.76	3.47	869.78	26.02	870.80	59.67	871.82	99.83
868.78	3.76	869.80	26.59	870.82	60.42	871.84	100.59
868.80	4.06	869.82	27.16	870.84	61.17	871.86	101.36
868.82	4.37	869.84	27.73	870.86	61.93	871.88	102.13
868.84	4.68	869.86	28.31	870.88	62.68	871.90	102.90
868.86	5.01	869.88	28.90	870.90	63.44	871.92	103.67
868.88	5.34	869.90	29.49	870.92	64.21	871.94	104.44
868.90	5.67	869.92	30.08	870.94	64.97	871.96	105.22
868.92	6.02	869.94	30.67	870.96	65.74	871.98	106.00
868.94	6.37	869.96	31.27	870.98	66.51	872.00	106.77
868.96	6.73	869.98	31.88	871.00	67.29	872.02	107.55
868.98	7.09	870.00	32.48	871.02	68.07	872.04	108.33
869.00	7.46	870.02	33.09	871.04	68.85	872.06	109.11
869.02	7.84	870.04	33.71	871.06	69.63	872.08	109.90
869.04	8.22	870.06	34.33	871.08	70.42	872.10	110.68
869.06	8.61	870.08	34.95	871.10	71.21	872.12	111.47
869.08	9.00	870.10	35.58	871.12	72.00	872.14	112.26
869.10	9.40	870.12	36.20	871.14	72.79	872.16	113.05
869.12	9.81	870.14	36.84	871.16	73.59	872.18	113.84
869.14	10.22	870.16	37.48	871.18	74.39	872.20	114.63
869.16	10.63	870.18	38.12	871.20	75.20	872.22	115.42
869.18	11.06	870.20	38.76	871.22	76.01	872.24	116.22
869.20	11.48	870.22	39.41	871.24	76.82	872.26	117.01
869.22	11.92	870.24	40.06	871.26	77.63	872.28	117.81
869.24	12.36	870.26	40.71	871.28	78.44	872.30	118.61
869.26	12.80	870.28	41.37	871.30	79.26	872.32	119.41
869.28	13.25	870.30	42.03	871.32	80.08	872.34	120.21
869.30	13.70	870.32	42.70	871.34	80.91	872.36	121.02
869.32	14.16	870.34	43.37	871.36	81.74	872.38	121.82
869.34	14.63	870.36	44.04	871.38	82.57	872.40	**122.63**
869.36	15.10	870.38	44.72	871.40	83.40		
869.38	15.57	870.40	45.40	871.42	84.23		
869.40	16.05	870.42	46.08	871.44	85.07		

Summary for Pond 25P: Area L

[57] Hint: Peaked at 871.79' (Flood elevation advised)

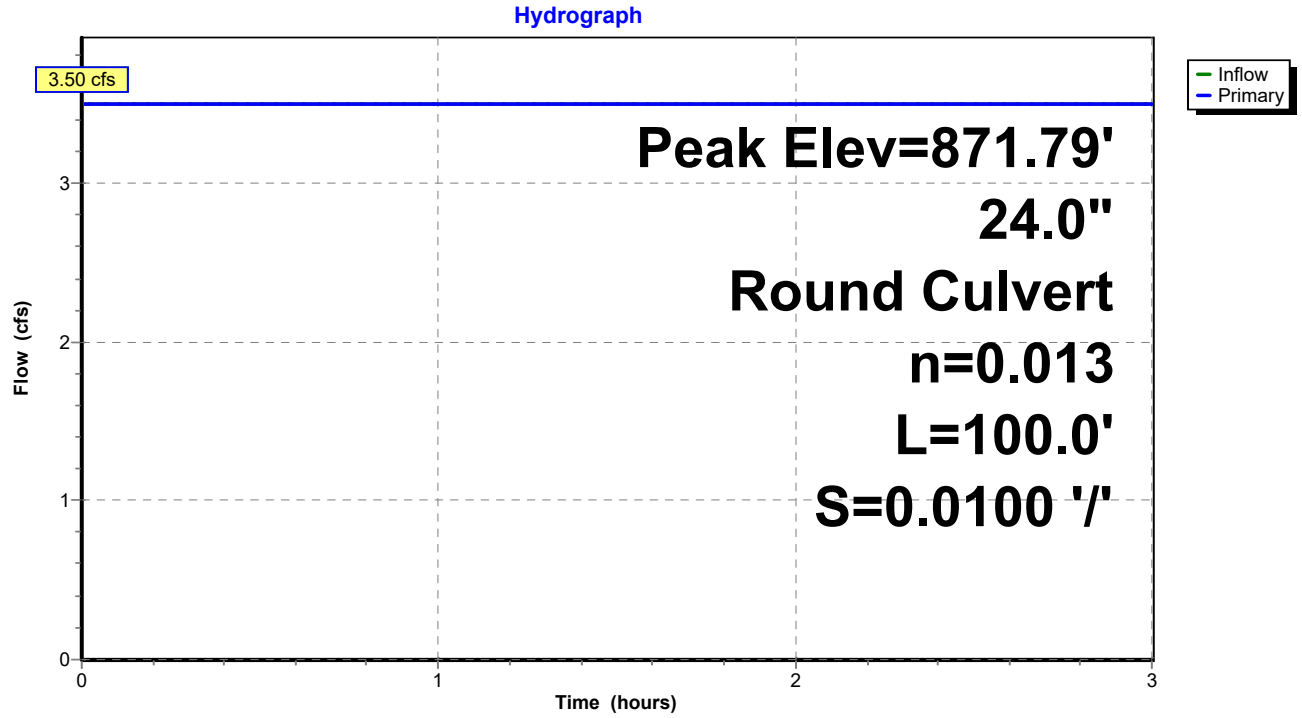
Inflow	=	3.50 cfs @	0.00 hrs, Volume=	0.871 af, Incl. 3.50 cfs Base Flow
Outflow	=	3.50 cfs @	0.00 hrs, Volume=	0.871 af, Atten= 0%, Lag= 0.0 min
Primary	=	3.50 cfs @	0.00 hrs, Volume=	0.871 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 871.79' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	871.00'	**24.0" Round Culvert** L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.00' / 870.00' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=3.50 cfs @ 0.00 hrs HW=871.79' TW=869.33' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 3.50 cfs @ 3.03 fps)

Pond 25P: Area L



Stage-Discharge for Pond 25P: Area L

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
871.00	0.00	871.51	1.54	872.02	5.54	872.53	10.86
871.01	0.00	871.52	1.59	872.03	5.64	872.54	10.97
871.02	0.00	871.53	1.65	872.04	5.73	872.55	11.07
871.03	0.00	871.54	1.71	872.05	5.83	872.56	11.18
871.04	0.01	871.55	1.77	872.06	5.93	872.57	11.29
871.05	0.01	871.56	1.83	872.07	6.02	872.58	11.39
871.06	0.02	871.57	1.90	872.08	6.12	872.59	11.50
871.07	0.03	871.58	1.96	872.09	6.22	872.60	11.60
871.08	0.04	871.59	2.03	872.10	6.32	872.61	11.71
871.09	0.05	871.60	2.09	872.11	6.42	872.62	11.81
871.10	0.06	871.61	2.16	872.12	6.52	872.63	11.92
871.11	0.07	871.62	2.22	872.13	6.62	872.64	12.02
871.12	0.09	871.63	2.29	872.14	6.72	872.65	12.12
871.13	0.10	871.64	2.36	872.15	6.83	872.66	12.23
871.14	0.12	871.65	2.43	872.16	6.93	872.67	12.33
871.15	0.14	871.66	2.50	872.17	7.03	872.68	12.43
871.16	0.16	871.67	2.57	872.18	7.13	872.69	12.53
871.17	0.18	871.68	2.64	872.19	7.24	872.70	12.63
871.18	0.20	871.69	2.72	872.20	7.34	872.71	12.73
871.19	0.22	871.70	2.79	872.21	7.44	872.72	12.83
871.20	0.25	871.71	2.87	872.22	7.55	872.73	12.93
871.21	0.27	871.72	2.94	872.23	7.65	872.74	13.03
871.22	0.30	871.73	3.02	872.24	7.76	872.75	13.13
871.23	0.33	871.74	3.09	872.25	7.86	872.76	13.23
871.24	0.36	871.75	3.17	872.26	7.97	872.77	13.32
871.25	0.39	871.76	3.25	872.27	8.07	872.78	13.42
871.26	0.42	871.77	3.33	872.28	8.18	872.79	13.51
871.27	0.45	871.78	3.41	872.29	8.29	872.80	13.60
871.28	0.48	871.79	3.49	872.30	8.39	872.81	13.70
871.29	0.52	871.80	3.57	872.31	8.50	872.82	13.79
871.30	0.55	871.81	3.66	872.32	8.60	872.83	13.88
871.31	0.59	871.82	3.74	872.33	8.71	872.84	13.97
871.32	0.62	871.83	3.82	872.34	8.82	872.85	14.05
871.33	0.66	871.84	3.91	872.35	8.93	872.86	14.14
871.34	0.70	871.85	3.99	872.36	9.03	872.87	14.22
871.35	0.74	871.86	4.08	872.37	9.14	872.88	14.31
871.36	0.79	871.87	4.17	872.38	9.25	872.89	14.39
871.37	0.83	871.88	4.25	872.39	9.36	872.90	14.47
871.38	0.87	871.89	4.34	872.40	9.46	872.91	14.55
871.39	0.92	871.90	4.43	872.41	9.57	872.92	14.62
871.40	0.96	871.91	4.52	872.42	9.68	872.93	14.70
871.41	1.01	871.92	4.61	872.43	9.79	872.94	14.77
871.42	1.06	871.93	4.70	872.44	9.89	872.95	14.84
871.43	1.11	871.94	4.79	872.45	10.00	872.96	14.90
871.44	1.16	871.95	4.88	872.46	10.11	872.97	14.97
871.45	1.21	871.96	4.97	872.47	10.22	872.98	15.03
871.46	1.26	871.97	5.07	872.48	10.32	872.99	15.08
871.47	1.31	871.98	5.16	872.49	10.43	873.00	**15.13**
871.48	1.37	871.99	5.25	872.50	10.54		
871.49	1.42	872.00	5.35	872.51	10.65		
871.50	1.48	872.01	5.44	872.52	10.75		

Summary for Pond 26P: Retail Crossing (SE)

[57] Hint: Peaked at 869.45' (Flood elevation advised)

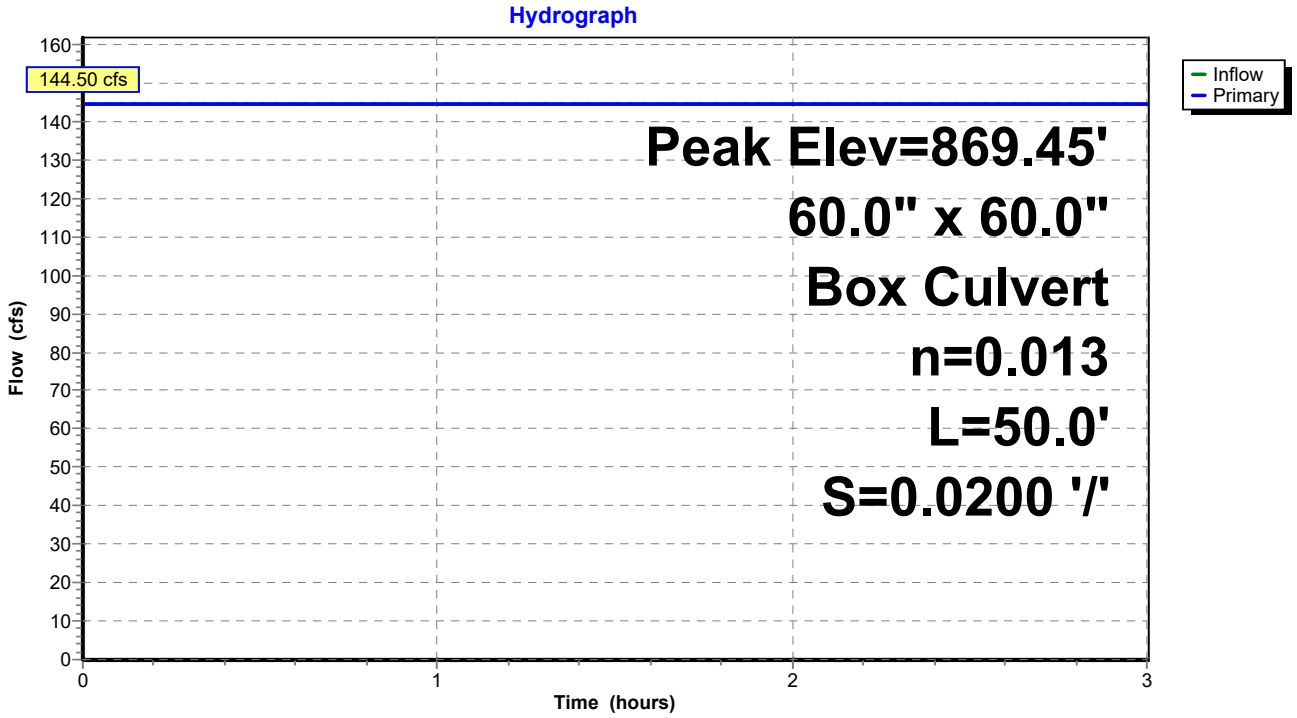
Inflow	=	144.50 cfs @	0.00 hrs, Volume=	35.946 af
Outflow	=	144.50 cfs @	0.00 hrs, Volume=	35.946 af, Atten= 0%, Lag= 0.0 min
Primary	=	144.50 cfs @	0.00 hrs, Volume=	35.946 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 869.45' @ 0.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	865.00'	**60.0" W x 60.0" H Box Culvert** L= 50.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 865.00' / 864.00' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 25.00 sf

Primary OutFlow Max=138.13 cfs @ 0.00 hrs HW=869.33' TW=866.39' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 138.13 cfs @ 6.38 fps)

Pond 26P: Retail Crossing (SE)



Stage-Discharge for Pond 26P: Retail Crossing (SE)

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
865.00	0.00	867.55	65.36
865.05	0.18	867.60	67.29
865.10	0.51	867.65	69.24
865.15	0.93	867.70	71.21
865.20	1.44	867.75	73.19
865.25	2.01	867.80	75.20
865.30	2.64	867.85	77.22
865.35	3.32	867.90	79.26
865.40	4.06	867.95	81.32
865.45	4.84	868.00	83.40
865.50	5.67	868.05	85.49
865.55	6.55	868.10	87.60
865.60	7.46	868.15	89.73
865.65	8.41	868.20	91.88
865.70	9.40	868.25	94.04
865.75	10.42	868.30	96.22
865.80	11.48	868.35	98.41
865.85	12.58	868.40	100.62
865.90	13.70	868.45	102.85
865.95	14.86	868.50	105.09
866.00	16.05	868.55	107.35
866.05	17.27	868.60	109.63
866.10	18.52	868.65	111.92
866.15	19.79	868.70	114.23
866.20	21.10	868.75	116.55
866.25	22.43	868.80	118.89
866.30	23.79	868.85	121.25
866.35	25.18	868.90	123.61
866.40	26.59	868.95	126.00
866.45	28.02	869.00	128.40
866.50	29.49	869.05	130.81
866.55	30.97	869.10	133.24
866.60	32.48	869.15	135.69
866.65	34.02	869.20	138.15
866.70	35.58	869.25	140.62
866.75	37.16	869.30	143.11
866.80	38.76	869.35	145.62
866.85	40.39	869.40	148.13
866.90	42.03	869.45	150.67
866.95	43.70	869.50	153.21
867.00	45.40	869.55	155.77
867.05	47.11	869.60	157.98
867.10	48.84	869.65	160.21
867.15	50.60	869.70	162.44
867.20	52.37	869.75	164.68
867.25	54.17	869.80	166.93
867.30	55.98	869.85	169.19
867.35	57.82	869.90	171.46
867.40	59.67	869.95	173.74
867.45	61.55	870.00	**176.03**
867.50	63.44		

Summary for Pond 34P: Area K

[57] Hint: Peaked at 870.02' (Flood elevation advised)

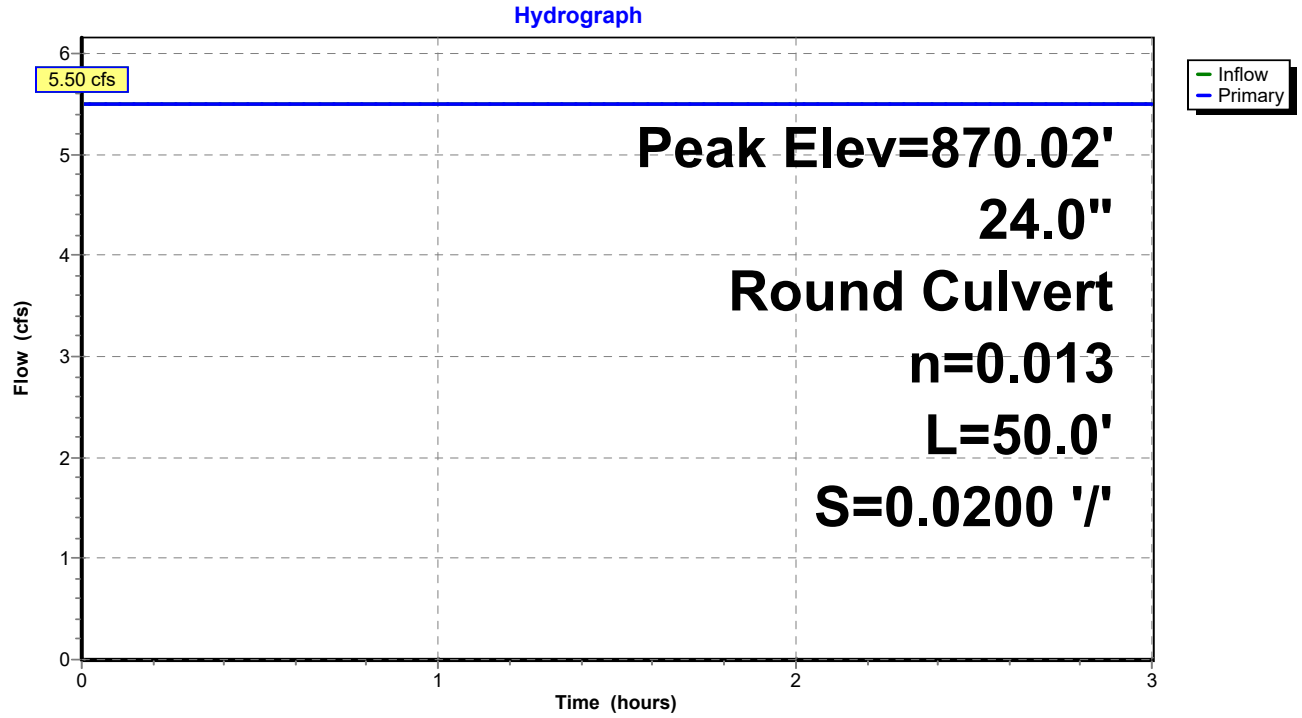
Inflow	=	5.50 cfs @	0.00 hrs, Volume=	1.368 af, Incl. 5.50 cfs Base Flow
Outflow	=	5.50 cfs @	0.00 hrs, Volume=	1.368 af, Atten= 0%, Lag= 0.0 min
Primary	=	5.50 cfs @	0.00 hrs, Volume=	1.368 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 870.02' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	869.00'	**24.0" Round Culvert** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 869.00' / 868.00' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=5.50 cfs @ 0.00 hrs HW=870.02' TW=866.39' (Dynamic Tailwater)
1=Culvert (Inlet Controls 5.50 cfs @ 3.43 fps)

Pond 34P: Area K



Stage-Discharge for Pond 34P: Area K

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
869.00	0.00	869.51	1.54	870.02	5.54	870.53	10.86
869.01	0.00	869.52	1.59	870.03	5.64	870.54	10.97
869.02	0.00	869.53	1.65	870.04	5.73	870.55	11.07
869.03	0.01	869.54	1.71	870.05	5.83	870.56	11.18
869.04	0.01	869.55	1.77	870.06	5.93	870.57	11.29
869.05	0.02	869.56	1.83	870.07	6.02	870.58	11.39
869.06	0.02	869.57	1.90	870.08	6.12	870.59	11.50
869.07	0.03	869.58	1.96	870.09	6.22	870.60	11.60
869.08	0.04	869.59	2.03	870.10	6.32	870.61	11.71
869.09	0.05	869.60	2.09	870.11	6.42	870.62	11.81
869.10	0.06	869.61	2.16	870.12	6.52	870.63	11.92
869.11	0.08	869.62	2.22	870.13	6.62	870.64	12.02
869.12	0.09	869.63	2.29	870.14	6.72	870.65	12.12
869.13	0.11	869.64	2.36	870.15	6.83	870.66	12.23
869.14	0.12	869.65	2.43	870.16	6.93	870.67	12.33
869.15	0.14	869.66	2.50	870.17	7.03	870.68	12.43
869.16	0.16	869.67	2.57	870.18	7.13	870.69	12.53
869.17	0.18	869.68	2.64	870.19	7.24	870.70	12.63
869.18	0.20	869.69	2.72	870.20	7.34	870.71	12.73
869.19	0.23	869.70	2.79	870.21	7.44	870.72	12.83
869.20	0.25	869.71	2.87	870.22	7.55	870.73	12.93
869.21	0.27	869.72	2.94	870.23	7.65	870.74	13.03
869.22	0.30	869.73	3.02	870.24	7.76	870.75	13.13
869.23	0.33	869.74	3.09	870.25	7.86	870.76	13.23
869.24	0.36	869.75	3.17	870.26	7.97	870.77	13.32
869.25	0.39	869.76	3.25	870.27	8.07	870.78	13.42
869.26	0.42	869.77	3.33	870.28	8.18	870.79	13.51
869.27	0.45	869.78	3.41	870.29	8.29	870.80	13.60
869.28	0.48	869.79	3.49	870.30	8.39	870.81	13.70
869.29	0.52	869.80	3.57	870.31	8.50	870.82	13.79
869.30	0.55	869.81	3.66	870.32	8.60	870.83	13.88
869.31	0.59	869.82	3.74	870.33	8.71	870.84	13.97
869.32	0.62	869.83	3.82	870.34	8.82	870.85	14.05
869.33	0.66	869.84	3.91	870.35	8.93	870.86	14.14
869.34	0.70	869.85	3.99	870.36	9.03	870.87	14.22
869.35	0.74	869.86	4.08	870.37	9.14	870.88	14.31
869.36	0.79	869.87	4.17	870.38	9.25	870.89	14.39
869.37	0.83	869.88	4.25	870.39	9.36	870.90	14.47
869.38	0.87	869.89	4.34	870.40	9.46	870.91	14.55
869.39	0.92	869.90	4.43	870.41	9.57	870.92	14.62
869.40	0.96	869.91	4.52	870.42	9.68	870.93	14.70
869.41	1.01	869.92	4.61	870.43	9.79	870.94	14.77
869.42	1.06	869.93	4.70	870.44	9.89	870.95	14.84
869.43	1.11	869.94	4.79	870.45	10.00	870.96	14.90
869.44	1.16	869.95	4.88	870.46	10.11	870.97	14.97
869.45	1.21	869.96	4.97	870.47	10.22	870.98	15.03
869.46	1.26	869.97	5.07	870.48	10.32	870.99	15.08
869.47	1.31	869.98	5.16	870.49	10.43	871.00	**15.13**
869.48	1.37	869.99	5.25	870.50	10.54		
869.49	1.42	870.00	5.35	870.51	10.65		
869.50	1.48	870.01	5.44	870.52	10.75		

Summary for Pond 35P: Four Bridges Pipe Arch

[57] Hint: Peaked at 866.39' (Flood elevation advised)

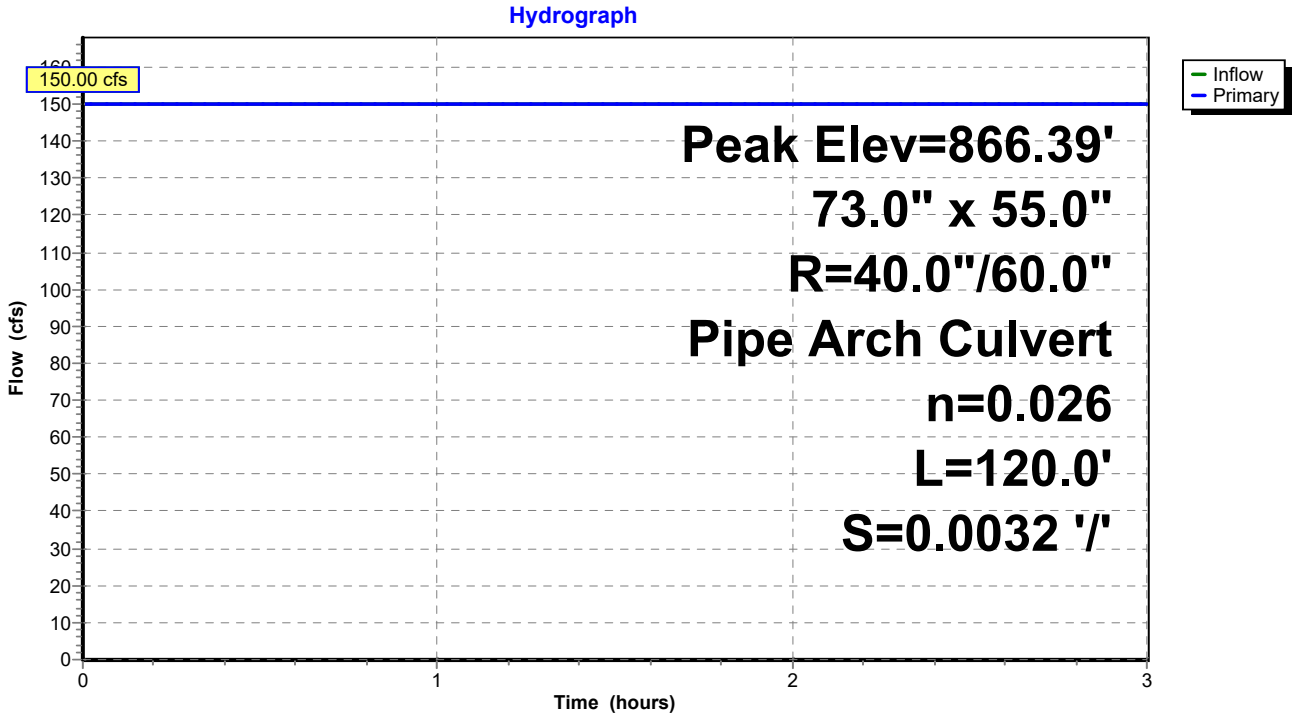
Inflow	=	150.00 cfs @	0.00 hrs, Volume=	37.314 af
Outflow	=	150.00 cfs @	0.00 hrs, Volume=	37.314 af, Atten= 0%, Lag= 0.0 min
Primary	=	150.00 cfs @	0.00 hrs, Volume=	37.314 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Peak Elev= 866.39' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	859.92'	**73.0" W x 55.0" H, R=40.0"/60.0" Pipe Arch Culvert** L= 120.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 859.92' / 859.53' S= 0.0032 '/' Cc= 0.900 n= 0.026, Flow Area= 22.03 sf

Primary OutFlow Max=150.00 cfs @ 0.00 hrs HW=866.39' (Free Discharge)
1=Culvert (Barrel Controls 150.00 cfs @ 6.81 fps)

Pond 35P: Four Bridges Pipe Arch



Stage-Discharge for Pond 35P: Four Bridges Pipe Arch

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
859.92	0.00	861.96	26.40	864.00	91.04	866.04	137.86
859.96	0.01	862.00	27.41	864.04	92.42	866.08	139.29
860.00	0.02	862.04	28.44	864.08	93.79	866.12	140.70
860.04	0.06	862.08	29.48	864.12	95.16	866.16	142.09
860.08	0.11	862.12	30.54	864.16	96.53	866.20	143.48
860.12	0.18	862.16	31.61	864.20	97.89	866.24	144.84
860.16	0.27	862.20	32.70	864.24	99.24	866.28	146.20
860.20	0.37	862.24	33.80	864.28	100.59	866.32	147.54
860.24	0.50	862.28	34.91	864.32	101.92	866.36	148.87
860.28	0.65	862.32	36.04	864.36	103.26	866.40	**150.19**
860.32	0.82	862.36	37.18	864.40	104.58		
860.36	1.01	862.40	38.33	864.44	105.90		
860.40	1.22	862.44	39.49	864.48	107.20		
860.44	1.46	862.48	40.67	864.52	108.50		
860.48	1.72	862.52	41.85	864.56	109.79		
860.52	2.01	862.56	43.05	864.60	111.06		
860.56	2.32	862.60	44.26	864.64	112.33		
860.60	2.65	862.64	45.48	864.68	113.59		
860.64	3.01	862.68	46.71	864.72	114.83		
860.68	3.39	862.72	47.95	864.76	116.06		
860.72	3.79	862.76	49.20	864.80	117.27		
860.76	4.22	862.80	50.46	864.84	118.47		
860.80	4.66	862.84	51.73	864.88	119.66		
860.84	5.13	862.88	53.01	864.92	120.83		
860.88	5.62	862.92	54.30	864.96	121.98		
860.92	6.14	862.96	55.59	865.00	123.11		
860.96	6.67	863.00	56.90	865.04	124.23		
861.00	7.23	863.04	58.21	865.08	125.33		
861.04	7.81	863.08	59.53	865.12	126.40		
861.08	8.41	863.12	60.85	865.16	127.45		
861.12	9.03	863.16	62.19	865.20	128.48		
861.16	9.67	863.20	63.53	865.24	129.49		
861.20	10.33	863.24	64.87	865.28	130.46		
861.24	11.01	863.28	66.22	865.32	131.41		
861.28	11.71	863.32	67.58	865.36	132.33		
861.32	12.43	863.36	68.94	865.40	133.22		
861.36	13.17	863.40	70.30	865.44	134.08		
861.40	13.93	863.44	71.67	865.48	134.90		
861.44	14.70	863.48	73.05	865.52	135.68		
861.48	15.50	863.52	74.42	865.56	136.42		
861.52	16.31	863.56	75.80	865.60	137.11		
861.56	17.14	863.60	77.19	865.64	137.76		
861.60	17.99	863.64	78.57	865.68	138.35		
861.64	18.86	863.68	79.96	865.72	138.88		
861.68	19.75	863.72	81.34	865.76	139.34		
861.72	20.65	863.76	82.73	865.80	139.72		
861.76	21.57	863.80	84.12	865.84	140.01		
861.80	22.50	863.84	85.51	865.88	140.19		
861.84	23.45	863.88	86.89	865.92	140.22		
861.88	24.42	863.92	88.28	865.96	140.03		
861.92	25.40	863.96	89.66	866.00	139.45		