

**Summary for Subcatchment S-1: Tributary to DB-1**

Runoff = 5.93 cfs @ 12.08 hrs, Volume= 0.442 af, Depth= 2.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
5,650	39	>75% Grass cover, Good, HSG A
65,796	98	Paved parking & roofs
* 12,854	98	Basin
84,300	94	Weighted Average
5,650		Pervious Area
78,650		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-10: Tributary to DB-3**

Runoff = 3.78 cfs @ 12.09 hrs, Volume= 0.274 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
* 8,197	98	Detention Basin
6,877	39	>75% Grass cover, Good, HSG A
* 43,521	98	Proposed Pavement
58,595	91	Weighted Average
6,877		Pervious Area
51,718		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Tc per Nitsch

**Summary for Subcatchment S-11: Tributary to Detention Basin**

Runoff = 4.33 cfs @ 12.08 hrs, Volume= 0.346 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
* 57,081	98	Rooftop
57,081		Impervious Area

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Type III 24-hr 2-yr Rainfall=3.40"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

**Summary for Subcatchment S-12: Tributary to Detention Basin**

Runoff = 5.58 cfs @ 12.08 hrs, Volume= 0.445 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
* 73,476	98	Rooftop
73,476		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

**Summary for Subcatchment S-13: Tributary to Detention Basin**

Runoff = 4.56 cfs @ 12.08 hrs, Volume= 0.364 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
* 60,155	98	Detention Basin
60,155		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

**Summary for Subcatchment S-14: Tributary toward BVW**

Runoff = 0.04 cfs @ 15.40 hrs, Volume= 0.023 af, Depth= 0.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
122,975	30	Woods, Good, HSG A
49,988	55	Woods, Good, HSG B
47,718	68	<50% Grass cover, Poor, HSG A
220,681	44	Weighted Average
220,681		Pervious Area

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Type III 24-hr 2-yr Rainfall=3.40"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	50	0.0120	0.06		<b>Sheet Flow, AB</b>
					Woods: Light underbrush n= 0.400 P2= 3.40"
4.0	120	0.0100	0.50		<b>Shallow Concentrated Flow, bc</b>
					Woodland Kv= 5.0 fps
18.7	170	Total			

**Summary for Subcatchment S-2: Tributary to DB-2**

Runoff = 4.91 cfs @ 12.08 hrs, Volume= 0.377 af, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
2,522	39	>75% Grass cover, Good, HSG A
35,232	98	Paved parking & roofs
* 29,046	98	Pond
66,800	96	Weighted Average
2,522		Pervious Area
64,278		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, TR-55 Minimum</b>

**Summary for Subcatchment S-3: Tributary to Existing Detention Basin**

Runoff = 4.25 cfs @ 12.08 hrs, Volume= 0.339 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
55,950	98	Paved parking
55,950		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, TR-55 Minimum</b>

**Summary for Subcatchment S-4: Tributary to Existing Detention Basin**

Runoff = 0.41 cfs @ 12.08 hrs, Volume= 0.032 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

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Area (sf)	CN	Description
5,350	98	Paved parking
5,350		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-5: Tributary to Existing Detention Basin**

Runoff = 1.68 cfs @ 12.09 hrs, Volume= 0.121 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
23,724	98	Paved parking
4,140	39	>75% Grass cover, Good, HSG A
27,864	89	Weighted Average
4,140		Pervious Area
23,724		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-6: Tributary to Existing Detention Basin**

Runoff = 2.34 cfs @ 12.09 hrs, Volume= 0.169 af, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
32,070	98	Paved parking
4,140	39	>75% Grass cover, Good, HSG A
36,210	91	Weighted Average
4,140		Pervious Area
32,070		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-7: Tributary to Existing Detention Basin**

Runoff = 1.15 cfs @ 12.08 hrs, Volume= 0.092 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
* 15,207	98	Pavement
15,207		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-8: Tributary to DB-4**

Runoff = 2.16 cfs @ 12.09 hrs, Volume= 0.153 af, Depth= 2.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
8,240	39	>75% Grass cover, Good, HSG A
* 18,385	98	Pavement
* 13,240	98	Detention Basin
39,865	86	Weighted Average
8,240		Pervious Area
31,625		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-9: Tributary to Existing Detention Basin**

Runoff = 1.01 cfs @ 12.08 hrs, Volume= 0.081 af, Depth= 3.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2-yr Rainfall=3.40"

Area (sf)	CN	Description
* 13,301	98	Pavement
13,301		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

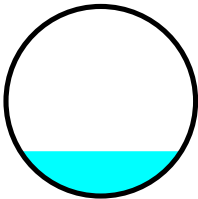
**Summary for Reach P-1: 12" HDPE**

Inflow Area = 1.935 ac, 93.30% Impervious, Inflow Depth = 0.32" for 2-yr event  
 Inflow = 0.31 cfs @ 12.92 hrs, Volume= 0.052 af  
 Outflow = 0.31 cfs @ 12.92 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Max. Velocity= 2.17 fps, Min. Travel Time= 0.5 min  
 Avg. Velocity = 1.50 fps, Avg. Travel Time= 0.8 min

Peak Storage= 10 cf @ 12.92 hrs, Average Depth at Peak Storage= 0.24'  
 Bank-Full Depth= 1.00', Capacity at Bank-Full= 2.52 cfs

12.0" Diameter Pipe, n= 0.013  
 Length= 70.0' Slope= 0.0050 '/  
 Inlet Invert= 76.35', Outlet Invert= 76.00'

**Summary for Reach SR: Site Runoff to BVW**

Inflow Area = 18.706 ac, 69.04% Impervious, Inflow Depth > 0.44" for 2-yr event  
 Inflow = 0.71 cfs @ 12.52 hrs, Volume= 0.679 af  
 Outflow = 0.71 cfs @ 12.52 hrs, Volume= 0.679 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

**Summary for Pond DB-1: Detention Basin**

Inflow Area = 1.935 ac, 93.30% Impervious, Inflow Depth = 2.74" for 2-yr event  
 Inflow = 5.93 cfs @ 12.08 hrs, Volume= 0.442 af  
 Outflow = 0.57 cfs @ 12.92 hrs, Volume= 0.344 af, Atten= 90%, Lag= 49.8 min  
 Discarded = 0.26 cfs @ 12.92 hrs, Volume= 0.292 af  
 Primary = 0.31 cfs @ 12.92 hrs, Volume= 0.052 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Peak Elev= 77.13' @ 12.92 hrs Surf.Area= 10,665 sf Storage= 11,269 cf

Plug-Flow detention time= 400.3 min calculated for 0.344 af (78% of inflow)  
 Center-of-Mass det. time= 320.8 min ( 1,106.0 - 785.1 )

Volume	Invert	Avail.Storage	Storage Description
#1	76.00'	32,112 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	9,310	108.0	0	0	9,310
78.00	11,772	416.0	21,034	21,034	22,164
78.90	12,854	454.0	11,078	32,112	24,824

Device	Routing	Invert	Outlet Devices
#1	Discarded	76.00'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 9,310 sf
#2	Primary	77.00'	<b>2.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 0.7' Crest Height

**Discarded OutFlow** Max=0.26 cfs @ 12.92 hrs HW=77.13' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.26 cfs)**Primary OutFlow** Max=0.31 cfs @ 12.92 hrs HW=77.13' TW=76.59' (Dynamic Tailwater)↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.31 cfs @ 1.20 fps)**Summary for Pond DB-2: Detention Basin**

Inflow Area =	3.469 ac, 94.59% Impervious, Inflow Depth = 1.48" for 2-yr event
Inflow =	4.91 cfs @ 12.08 hrs, Volume= 0.428 af
Outflow =	0.24 cfs @ 15.46 hrs, Volume= 0.285 af, Atten= 95%, Lag= 202.3 min
Discarded =	0.24 cfs @ 15.46 hrs, Volume= 0.285 af
Primary =	0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 76.56' @ 15.46 hrs Surf.Area= 23,669 sf Storage= 12,952 cf

Plug-Flow detention time= 496.7 min calculated for 0.285 af (66% of inflow)

Center-of-Mass det. time= 405.0 min ( 1,183.7 - 778.7 )

Volume	Invert	Avail.Storage	Storage Description
#1	76.00'	71,816 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	22,409	753.0	0	0	22,409
78.00	27,047	792.0	49,383	49,383	27,447
78.80	29,046	807.0	22,432	71,816	29,460

Device	Routing	Invert	Outlet Devices
#1	Primary	78.25'	<b>10.0' long x 11.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	76.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 22,431 sf

**Discarded OutFlow** Max=0.24 cfs @ 15.46 hrs HW=76.56' (Free Discharge)

↑**2=Exfiltration** (Exfiltration Controls 0.24 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=76.00' TW=0.00' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

### Summary for Pond DB-3: Detention Basin

Inflow Area = 1.345 ac, 88.26% Impervious, Inflow Depth = 2.45" for 2-yr event  
 Inflow = 3.78 cfs @ 12.09 hrs, Volume= 0.274 af  
 Outflow = 0.81 cfs @ 12.51 hrs, Volume= 0.265 af, Atten= 79%, Lag= 25.2 min  
 Discarded = 0.46 cfs @ 12.51 hrs, Volume= 0.256 af  
 Primary = 0.35 cfs @ 12.51 hrs, Volume= 0.010 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Peak Elev= 77.56' @ 12.51 hrs Surf.Area= 5,199 sf Storage= 5,752 cf

Plug-Flow detention time= 226.1 min calculated for 0.265 af (97% of inflow)  
 Center-of-Mass det. time= 207.0 min ( 1,007.2 - 800.2 )

Volume	Invert	Avail.Storage	Storage Description		
#1	76.00'	13,464 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	2,771	327.0	0	0	2,771
77.00	3,779	346.0	3,262	3,262	3,843
78.00	6,489	429.0	5,073	8,335	8,976
78.70	8,197	477.0	5,128	13,464	12,451

Device	Routing	Invert	Outlet Devices
#1	Primary	77.50'	<b>10.0' long x 11.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	76.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 2,780 sf

**Discarded OutFlow** Max=0.46 cfs @ 12.51 hrs HW=77.56' (Free Discharge)

↑**2=Exfiltration** (Exfiltration Controls 0.46 cfs)

**Primary OutFlow** Max=0.35 cfs @ 12.51 hrs HW=77.56' TW=0.00' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.35 cfs @ 0.60 fps)

### Summary for Pond DB-4: Detention Basin

Inflow Area = 2.226 ac, 91.50% Impervious, Inflow Depth = 2.69" for 2-yr event  
 Inflow = 6.48 cfs @ 12.09 hrs, Volume= 0.499 af  
 Outflow = 0.44 cfs @ 13.55 hrs, Volume= 0.345 af, Atten= 93%, Lag= 87.9 min  
 Discarded = 0.44 cfs @ 13.55 hrs, Volume= 0.345 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af



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Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 77.95' @ 13.55 hrs Surf.Area= 9,669 sf Storage= 13,935 cf

Plug-Flow detention time= 413.2 min calculated for 0.345 af (69% of inflow)

Center-of-Mass det. time= 316.6 min ( 1,091.7 - 775.0 )

Volume	Invert	Avail.Storage	Storage Description		
#1	76.00'	26,719 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	4,552	514.0	0	0	4,552
77.00	7,354	726.0	5,897	5,897	25,481
78.00	9,807	745.0	8,551	14,448	27,823
79.00	14,911	1,028.0	12,270	26,719	67,762

Device	Routing	Invert	Outlet Devices
#1	Discarded	77.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 7,377 sf
#2	Primary	78.20'	<b>3.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 0.5' Crest Height

**Discarded OutFlow** Max=0.44 cfs @ 13.55 hrs HW=77.95' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.44 cfs)**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=76.00' TW=71.70' (Dynamic Tailwater)↑**2=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)**Summary for Pond EDB: Existing Detention Basin**

Inflow Area = 8.826 ac, 95.70% Impervious, Inflow Depth = 2.07" for 2-yr event  
 Inflow = 19.29 cfs @ 12.08 hrs, Volume= 1.523 af  
 Outflow = 0.59 cfs @ 15.79 hrs, Volume= 0.647 af, Atten= 97%, Lag= 222.5 min  
 Primary = 0.59 cfs @ 15.79 hrs, Volume= 0.647 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 72.50' @ 15.79 hrs Surf.Area= 66,031 sf Storage= 50,780 cf

Plug-Flow detention time= 578.3 min calculated for 0.646 af (42% of inflow)

Center-of-Mass det. time= 438.4 min ( 1,198.6 - 760.2 )

Volume	Invert	Avail.Storage	Storage Description		
#1	71.70'	155,808 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
71.70	60,155	952.0	0	0	60,155
72.00	63,529	1,023.0	18,550	18,550	71,318
73.00	68,606	1,069.0	66,051	84,602	79,047
74.00	73,838	1,080.0	71,206	155,808	81,213

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Device	Routing	Invert	Outlet Devices
#1	Primary	72.01'	<b>12.0" x 3.0' long Culvert</b> RCP, square edge headwall, Ke= 0.500 Outlet Invert= 72.00' S= 0.0033 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections
#2	Primary	73.30'	<b>20.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Primary OutFlow** Max=0.59 cfs @ 15.79 hrs HW=72.50' TW=0.00' (Dynamic Tailwater)↑ **1=Culvert** (Barrel Controls 0.59 cfs @ 2.29 fps)↑ **2=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)**Summary for Pond SRS: Recharge System**

Inflow Area = 0.640 ac, 85.14% Impervious, Inflow Depth = 2.26" for 2-yr event  
 Inflow = 1.68 cfs @ 12.09 hrs, Volume= 0.121 af  
 Outflow = 0.37 cfs @ 11.86 hrs, Volume= 0.121 af, Atten= 78%, Lag= 0.0 min  
 Discarded = 0.37 cfs @ 11.86 hrs, Volume= 0.121 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 75.03' @ 12.50 hrs Surf.Area= 1,944 sf Storage= 1,203 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 17.0 min ( 825.7 - 808.7 )

Volume	Invert	Avail.Storage	Storage Description
#1	74.00'	1,650 cf	<b>27.00'W x 72.00'L x 3.50'H Prismatic</b> 6,804 cf Overall - 2,679 cf Embedded = 4,125 cf x 40.0% Voids
#2	74.50'	2,679 cf	<b>52.6"W x 34.0"H x 7.50'L Cultec R-V8</b> x 40 Inside #1
		4,329 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	74.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	76.50'	<b>8.0" x 42.0' long Culvert</b> RCP, rounded edge headwall, Ke= 0.100 Outlet Invert= 73.00' S= 0.0833 '/' Cc= 0.900 n= 0.013

**Discarded OutFlow** Max=0.37 cfs @ 11.86 hrs HW=74.04' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.37 cfs)**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=74.00' TW=71.70' (Dynamic Tailwater)↑ **2=Culvert** ( Controls 0.00 cfs)

**Summary for Subcatchment S-1: Tributary to DB-1**

Runoff = 8.69 cfs @ 12.08 hrs, Volume= 0.663 af, Depth= 4.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
5,650	39	>75% Grass cover, Good, HSG A
65,796	98	Paved parking & roofs
* 12,854	98	Basin
84,300	94	Weighted Average
5,650		Pervious Area
78,650		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-10: Tributary to DB-3**

Runoff = 5.73 cfs @ 12.08 hrs, Volume= 0.425 af, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
* 8,197	98	Detention Basin
6,877	39	>75% Grass cover, Good, HSG A
* 43,521	98	Proposed Pavement
58,595	91	Weighted Average
6,877		Pervious Area
51,718		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Tc per Nitsch

**Summary for Subcatchment S-11: Tributary to Detention Basin**

Runoff = 6.15 cfs @ 12.08 hrs, Volume= 0.498 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
* 57,081	98	Rooftop
57,081		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

### Summary for Subcatchment S-12: Tributary to Detention Basin

Runoff = 7.92 cfs @ 12.08 hrs, Volume= 0.641 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
* 73,476	98	Rooftop
73,476		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

### Summary for Subcatchment S-13: Tributary to Detention Basin

Runoff = 6.48 cfs @ 12.08 hrs, Volume= 0.525 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
* 60,155	98	Detention Basin
60,155		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

### Summary for Subcatchment S-14: Tributary toward BVW

Runoff = 0.56 cfs @ 12.54 hrs, Volume= 0.143 af, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
122,975	30	Woods, Good, HSG A
49,988	55	Woods, Good, HSG B
47,718	68	<50% Grass cover, Poor, HSG A
220,681	44	Weighted Average
220,681		Pervious Area

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Type III 24-hr 10-yr Rainfall=4.80"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	50	0.0120	0.06		<b>Sheet Flow, AB</b>
					Woods: Light underbrush n= 0.400 P2= 3.40"
4.0	120	0.0100	0.50		<b>Shallow Concentrated Flow, bc</b>
					Woodland Kv= 5.0 fps
18.7	170	Total			

**Summary for Subcatchment S-2: Tributary to DB-2**

Runoff = 7.07 cfs @ 12.08 hrs, Volume= 0.554 af, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
2,522	39	>75% Grass cover, Good, HSG A
35,232	98	Paved parking & roofs
* 29,046	98	Pond
66,800	96	Weighted Average
2,522		Pervious Area
64,278		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, TR-55 Minimum</b>

**Summary for Subcatchment S-3: Tributary to Existing Detention Basin**

Runoff = 6.03 cfs @ 12.08 hrs, Volume= 0.488 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
55,950	98	Paved parking
55,950		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, TR-55 Minimum</b>

**Summary for Subcatchment S-4: Tributary to Existing Detention Basin**

Runoff = 0.58 cfs @ 12.08 hrs, Volume= 0.047 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

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Type III 24-hr 10-yr Rainfall=4.80"

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Area (sf)	CN	Description
5,350	98	Paved parking
5,350		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-5: Tributary to Existing Detention Basin**

Runoff = 2.61 cfs @ 12.09 hrs, Volume= 0.191 af, Depth= 3.58"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
23,724	98	Paved parking
4,140	39	>75% Grass cover, Good, HSG A
27,864	89	Weighted Average
4,140		Pervious Area
23,724		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-6: Tributary to Existing Detention Basin**

Runoff = 3.54 cfs @ 12.08 hrs, Volume= 0.262 af, Depth= 3.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
32,070	98	Paved parking
4,140	39	>75% Grass cover, Good, HSG A
36,210	91	Weighted Average
4,140		Pervious Area
32,070		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-7: Tributary to Existing Detention Basin**

Runoff = 1.64 cfs @ 12.08 hrs, Volume= 0.133 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
* 15,207	98	Pavement
15,207		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-8: Tributary to DB-4**

Runoff = 3.48 cfs @ 12.09 hrs, Volume= 0.250 af, Depth= 3.28"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
8,240	39	>75% Grass cover, Good, HSG A
* 18,385	98	Pavement
* 13,240	98	Detention Basin
39,865	86	Weighted Average
8,240		Pervious Area
31,625		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-9: Tributary to Existing Detention Basin**

Runoff = 1.43 cfs @ 12.08 hrs, Volume= 0.116 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 10-yr Rainfall=4.80"

Area (sf)	CN	Description
* 13,301	98	Pavement
13,301		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

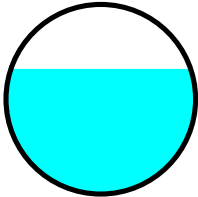
**Summary for Reach P-1: 12" HDPE**

Inflow Area = 1.935 ac, 93.30% Impervious, Inflow Depth = 1.38" for 10-yr event  
 Inflow = 1.94 cfs @ 12.44 hrs, Volume= 0.222 af  
 Outflow = 1.94 cfs @ 12.45 hrs, Volume= 0.222 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Max. Velocity= 3.54 fps, Min. Travel Time= 0.3 min  
 Avg. Velocity = 1.94 fps, Avg. Travel Time= 0.6 min

Peak Storage= 38 cf @ 12.45 hrs, Average Depth at Peak Storage= 0.66'  
 Bank-Full Depth= 1.00', Capacity at Bank-Full= 2.52 cfs

12.0" Diameter Pipe, n= 0.013  
 Length= 70.0' Slope= 0.0050 '/  
 Inlet Invert= 76.35', Outlet Invert= 76.00'

**Summary for Reach SR: Site Runoff to BVW**

Inflow Area = 18.706 ac, 69.04% Impervious, Inflow Depth > 0.99" for 10-yr event  
 Inflow = 3.59 cfs @ 12.21 hrs, Volume= 1.542 af  
 Outflow = 3.59 cfs @ 12.21 hrs, Volume= 1.542 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

**Summary for Pond DB-1: Detention Basin**

Inflow Area = 1.935 ac, 93.30% Impervious, Inflow Depth = 4.11" for 10-yr event  
 Inflow = 8.69 cfs @ 12.08 hrs, Volume= 0.663 af  
 Outflow = 2.28 cfs @ 12.44 hrs, Volume= 0.553 af, Atten= 74%, Lag= 21.5 min  
 Discarded = 0.33 cfs @ 12.44 hrs, Volume= 0.331 af  
 Primary = 1.94 cfs @ 12.44 hrs, Volume= 0.222 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Peak Elev= 77.44' @ 12.44 hrs Surf.Area= 11,050 sf Storage= 14,614 cf

Plug-Flow detention time= 294.8 min calculated for 0.553 af (83% of inflow)  
 Center-of-Mass det. time= 227.3 min ( 1,001.9 - 774.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	76.00'	32,112 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)



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Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	9,310	108.0	0	0	9,310
78.00	11,772	416.0	21,034	21,034	22,164
78.90	12,854	454.0	11,078	32,112	24,824

Device	Routing	Invert	Outlet Devices
#1	Discarded	76.00'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 9,310 sf
#2	Primary	77.00'	<b>2.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 0.7' Crest Height

**Discarded OutFlow** Max=0.33 cfs @ 12.44 hrs HW=77.44' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.33 cfs)**Primary OutFlow** Max=1.94 cfs @ 12.44 hrs HW=77.44' TW=77.01' (Dynamic Tailwater)↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 1.94 cfs @ 2.32 fps)**Summary for Pond DB-2: Detention Basin**

Inflow Area =	3.469 ac, 94.59% Impervious, Inflow Depth = 2.68" for 10-yr event
Inflow =	7.28 cfs @ 12.09 hrs, Volume= 0.776 af
Outflow =	0.44 cfs @ 15.36 hrs, Volume= 0.519 af, Atten= 94%, Lag= 196.0 min
Discarded =	0.44 cfs @ 15.36 hrs, Volume= 0.519 af
Primary =	0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 77.02' @ 15.36 hrs Surf.Area= 24,719 sf Storage= 24,015 cf

Plug-Flow detention time= 489.8 min calculated for 0.519 af (67% of inflow)

Center-of-Mass det. time= 407.8 min ( 1,181.8 - 774.0 )

Volume	Invert	Avail.Storage	Storage Description
#1	76.00'	71,816 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	22,409	753.0	0	0	22,409
78.00	27,047	792.0	49,383	49,383	27,447
78.80	29,046	807.0	22,432	71,816	29,460

Device	Routing	Invert	Outlet Devices
#1	Primary	78.25'	<b>10.0' long x 11.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	76.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 22,431 sf

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**Discarded OutFlow** Max=0.44 cfs @ 15.36 hrs HW=77.02' (Free Discharge)↑**2=Exfiltration** (Exfiltration Controls 0.44 cfs)**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=76.00' TW=0.00' (Dynamic Tailwater)↑**1=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)**Summary for Pond DB-3: Detention Basin**

Inflow Area = 1.345 ac, 88.26% Impervious, Inflow Depth = 3.79" for 10-yr event  
 Inflow = 5.73 cfs @ 12.08 hrs, Volume= 0.425 af  
 Outflow = 3.41 cfs @ 12.19 hrs, Volume= 0.413 af, Atten= 41%, Lag= 6.4 min  
 Discarded = 0.56 cfs @ 12.19 hrs, Volume= 0.316 af  
 Primary = 2.85 cfs @ 12.19 hrs, Volume= 0.097 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Peak Elev= 77.73' @ 12.19 hrs Surf.Area= 5,694 sf Storage= 6,709 cf

Plug-Flow detention time= 175.4 min calculated for 0.413 af (97% of inflow)  
 Center-of-Mass det. time= 159.3 min ( 947.5 - 788.2 )

Volume	Invert	Avail.Storage	Storage Description									
#1	76.00'	13,464 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)									
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)			Cum.Store (cubic-feet)			Wet.Area (sq-ft)			
76.00	2,771	327.0	0			0			2,771			
77.00	3,779	346.0	3,262			3,262			3,843			
78.00	6,489	429.0	5,073			8,335			8,976			
78.70	8,197	477.0	5,128			13,464			12,451			
Device	Routing	Invert	Outlet Devices									
#1	Primary	77.50'	<b>10.0' long x 11.0' breadth Broad-Crested Rectangular Weir</b>									
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60									
			Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64									
#2	Discarded	76.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b>									
			Excluded Surface area = 2,780 sf									

**Discarded OutFlow** Max=0.56 cfs @ 12.19 hrs HW=77.73' (Free Discharge)↑**2=Exfiltration** (Exfiltration Controls 0.56 cfs)**Primary OutFlow** Max=2.85 cfs @ 12.19 hrs HW=77.73' TW=0.00' (Dynamic Tailwater)↑**1=Broad-Crested Rectangular Weir** (Weir Controls 2.85 cfs @ 1.23 fps)**Summary for Pond DB-4: Detention Basin**

Inflow Area = 2.226 ac, 91.50% Impervious, Inflow Depth = 4.04" for 10-yr event  
 Inflow = 9.63 cfs @ 12.08 hrs, Volume= 0.749 af  
 Outflow = 1.81 cfs @ 12.53 hrs, Volume= 0.587 af, Atten= 81%, Lag= 26.5 min  
 Discarded = 0.84 cfs @ 12.53 hrs, Volume= 0.518 af  
 Primary = 0.97 cfs @ 12.53 hrs, Volume= 0.069 af

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 78.41' @ 12.53 hrs Surf.Area= 11,767 sf Storage= 18,858 cf

Plug-Flow detention time= 345.2 min calculated for 0.587 af (78% of inflow)

Center-of-Mass det. time= 265.0 min ( 1,032.8 - 767.9 )

Volume	Invert	Avail.Storage	Storage Description		
#1	76.00'	26,719 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	4,552	514.0	0	0	4,552
77.00	7,354	726.0	5,897	5,897	25,481
78.00	9,807	745.0	8,551	14,448	27,823
79.00	14,911	1,028.0	12,270	26,719	67,762

Device	Routing	Invert	Outlet Devices
#1	Discarded	77.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 7,377 sf
#2	Primary	78.20'	<b>3.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 0.5' Crest Height

**Discarded OutFlow** Max=0.84 cfs @ 12.53 hrs HW=78.41' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.84 cfs)**Primary OutFlow** Max=0.97 cfs @ 12.53 hrs HW=78.41' TW=72.69' (Dynamic Tailwater)↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.97 cfs @ 1.57 fps)**Summary for Pond EDB: Existing Detention Basin**

Inflow Area = 8.826 ac, 95.70% Impervious, Inflow Depth = 3.10" for 10-yr event  
 Inflow = 27.62 cfs @ 12.08 hrs, Volume= 2.282 af  
 Outflow = 1.41 cfs @ 14.20 hrs, Volume= 1.301 af, Atten= 95%, Lag= 126.9 min  
 Primary = 1.41 cfs @ 14.20 hrs, Volume= 1.301 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 72.80' @ 14.20 hrs Surf.Area= 67,570 sf Storage= 70,915 cf

Plug-Flow detention time= 504.1 min calculated for 1.301 af (57% of inflow)

Center-of-Mass det. time= 392.2 min ( 1,146.1 - 754.0 )

Volume	Invert	Avail.Storage	Storage Description		
#1	71.70'	155,808 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
71.70	60,155	952.0	0	0	60,155
72.00	63,529	1,023.0	18,550	18,550	71,318
73.00	68,606	1,069.0	66,051	84,602	79,047
74.00	73,838	1,080.0	71,206	155,808	81,213

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Device	Routing	Invert	Outlet Devices
#1	Primary	72.01'	<b>12.0" x 3.0' long Culvert</b> RCP, square edge headwall, Ke= 0.500 Outlet Invert= 72.00' S= 0.0033 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections
#2	Primary	73.30'	<b>20.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Primary OutFlow** Max=1.41 cfs @ 14.20 hrs HW=72.80' TW=0.00' (Dynamic Tailwater)↑ **1=Culvert** (Barrel Controls 1.41 cfs @ 2.90 fps)↑ **2=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)**Summary for Pond SRS: Recharge System**

Inflow Area = 0.640 ac, 85.14% Impervious, Inflow Depth = 3.58" for 10-yr event  
 Inflow = 2.61 cfs @ 12.09 hrs, Volume= 0.191 af  
 Outflow = 0.37 cfs @ 11.73 hrs, Volume= 0.191 af, Atten= 86%, Lag= 0.0 min  
 Discarded = 0.37 cfs @ 11.73 hrs, Volume= 0.191 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 75.92' @ 12.60 hrs Surf.Area= 1,944 sf Storage= 2,507 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 42.8 min ( 838.6 - 795.8 )

Volume	Invert	Avail.Storage	Storage Description
#1	74.00'	1,650 cf	<b>27.00'W x 72.00'L x 3.50'H Prismatic</b> 6,804 cf Overall - 2,679 cf Embedded = 4,125 cf x 40.0% Voids
#2	74.50'	2,679 cf	<b>52.6"W x 34.0"H x 7.50'L Cultec R-V8</b> x 40 Inside #1
		4,329 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	74.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	76.50'	<b>8.0" x 42.0' long Culvert</b> RCP, rounded edge headwall, Ke= 0.100 Outlet Invert= 73.00' S= 0.0833 '/' Cc= 0.900 n= 0.013

**Discarded OutFlow** Max=0.37 cfs @ 11.73 hrs HW=74.04' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.37 cfs)**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=74.00' TW=71.70' (Dynamic Tailwater)↑ **2=Culvert** ( Controls 0.00 cfs)

**Summary for Subcatchment S-1: Tributary to DB-1**

Runoff = 12.99 cfs @ 12.08 hrs, Volume= 1.014 af, Depth= 6.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
5,650	39	>75% Grass cover, Good, HSG A
65,796	98	Paved parking & roofs
* 12,854	98	Basin
84,300	94	Weighted Average
5,650		Pervious Area
78,650		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-10: Tributary to DB-3**

Runoff = 8.77 cfs @ 12.08 hrs, Volume= 0.666 af, Depth= 5.94"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
* 8,197	98	Detention Basin
6,877	39	>75% Grass cover, Good, HSG A
* 43,521	98	Proposed Pavement
58,595	91	Weighted Average
6,877		Pervious Area
51,718		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Tc per Nitsch

**Summary for Subcatchment S-11: Tributary to Detention Basin**

Runoff = 9.00 cfs @ 12.08 hrs, Volume= 0.738 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
* 57,081	98	Rooftop
57,081		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

### Summary for Subcatchment S-12: Tributary to Detention Basin

Runoff = 11.58 cfs @ 12.08 hrs, Volume= 0.950 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
* 73,476	98	Rooftop
73,476		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

### Summary for Subcatchment S-13: Tributary to Detention Basin

Runoff = 9.48 cfs @ 12.08 hrs, Volume= 0.778 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
* 60,155	98	Detention Basin
60,155		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min Tc

### Summary for Subcatchment S-14: Tributary toward BVW

Runoff = 3.44 cfs @ 12.34 hrs, Volume= 0.488 af, Depth= 1.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
122,975	30	Woods, Good, HSG A
49,988	55	Woods, Good, HSG B
47,718	68	<50% Grass cover, Poor, HSG A
220,681	44	Weighted Average
220,681		Pervious Area

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Type III 24-hr 100-yr Rainfall=7.00"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	50	0.0120	0.06		<b>Sheet Flow, AB</b>
					Woods: Light underbrush n= 0.400 P2= 3.40"
4.0	120	0.0100	0.50		<b>Shallow Concentrated Flow, bc</b>
					Woodland Kv= 5.0 fps
18.7	170	Total			

**Summary for Subcatchment S-2: Tributary to DB-2**

Runoff = 10.44 cfs @ 12.08 hrs, Volume= 0.834 af, Depth= 6.52"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
2,522	39	>75% Grass cover, Good, HSG A
35,232	98	Paved parking & roofs
* 29,046	98	Pond
66,800	96	Weighted Average
2,522		Pervious Area
64,278		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, TR-55 Minimum</b>

**Summary for Subcatchment S-3: Tributary to Existing Detention Basin**

Runoff = 8.82 cfs @ 12.08 hrs, Volume= 0.724 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
55,950	98	Paved parking
55,950		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					<b>Direct Entry, TR-55 Minimum</b>

**Summary for Subcatchment S-4: Tributary to Existing Detention Basin**

Runoff = 0.84 cfs @ 12.08 hrs, Volume= 0.069 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

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Area (sf)	CN	Description
5,350	98	Paved parking
5,350		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-5: Tributary to Existing Detention Basin**

Runoff = 4.07 cfs @ 12.08 hrs, Volume= 0.304 af, Depth= 5.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
23,724	98	Paved parking
4,140	39	>75% Grass cover, Good, HSG A
27,864	89	Weighted Average
4,140		Pervious Area
23,724		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-6: Tributary to Existing Detention Basin**

Runoff = 5.42 cfs @ 12.08 hrs, Volume= 0.411 af, Depth= 5.94"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
32,070	98	Paved parking
4,140	39	>75% Grass cover, Good, HSG A
36,210	91	Weighted Average
4,140		Pervious Area
32,070		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum



**Summary for Subcatchment S-7: Tributary to Existing Detention Basin**

Runoff = 2.40 cfs @ 12.08 hrs, Volume= 0.197 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
* 15,207	98	Pavement
15,207		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-8: Tributary to DB-4**

Runoff = 5.57 cfs @ 12.09 hrs, Volume= 0.409 af, Depth= 5.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
8,240	39	>75% Grass cover, Good, HSG A
* 18,385	98	Pavement
* 13,240	98	Detention Basin
39,865	86	Weighted Average
8,240		Pervious Area
31,625		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

**Summary for Subcatchment S-9: Tributary to Existing Detention Basin**

Runoff = 2.10 cfs @ 12.08 hrs, Volume= 0.172 af, Depth= 6.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 100-yr Rainfall=7.00"

Area (sf)	CN	Description
* 13,301	98	Pavement
13,301		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 Minimum

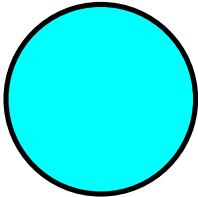
**Summary for Reach P-1: 12" HDPE**

Inflow Area = 1.935 ac, 93.30% Impervious, Inflow Depth = 3.13" for 100-yr event  
 Inflow = 4.78 cfs @ 12.30 hrs, Volume= 0.506 af  
 Outflow = 2.65 cfs @ 12.08 hrs, Volume= 0.506 af, Atten= 45%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Max. Velocity= 3.66 fps, Min. Travel Time= 0.3 min  
 Avg. Velocity = 2.03 fps, Avg. Travel Time= 0.6 min

Peak Storage= 55 cf @ 12.09 hrs, Average Depth at Peak Storage= 1.00'  
 Bank-Full Depth= 1.00', Capacity at Bank-Full= 2.52 cfs

12.0" Diameter Pipe, n= 0.013  
 Length= 70.0' Slope= 0.0050 '/  
 Inlet Invert= 76.35', Outlet Invert= 76.00'

**Summary for Reach SR: Site Runoff to BVW**

Inflow Area = 18.706 ac, 69.04% Impervious, Inflow Depth > 2.11" for 100-yr event  
 Inflow = 10.16 cfs @ 12.19 hrs, Volume= 3.291 af  
 Outflow = 10.16 cfs @ 12.19 hrs, Volume= 3.291 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

**Summary for Pond DB-1: Detention Basin**

Inflow Area = 1.935 ac, 93.30% Impervious, Inflow Depth = 6.29" for 100-yr event  
 Inflow = 12.99 cfs @ 12.08 hrs, Volume= 1.014 af  
 Outflow = 5.21 cfs @ 12.30 hrs, Volume= 0.890 af, Atten= 60%, Lag= 12.7 min  
 Discarded = 0.43 cfs @ 12.30 hrs, Volume= 0.384 af  
 Primary = 4.78 cfs @ 12.30 hrs, Volume= 0.506 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Peak Elev= 77.85' @ 12.30 hrs Surf.Area= 11,576 sf Storage= 19,274 cf

Plug-Flow detention time= 223.7 min calculated for 0.890 af (88% of inflow)  
 Center-of-Mass det. time= 167.2 min ( 931.8 - 764.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	76.00'	32,112 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	9,310	108.0	0	0	9,310
78.00	11,772	416.0	21,034	21,034	22,164
78.90	12,854	454.0	11,078	32,112	24,824

Device	Routing	Invert	Outlet Devices
#1	Discarded	76.00'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 9,310 sf
#2	Primary	77.00'	<b>2.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 0.7' Crest Height

**Discarded OutFlow** Max=0.43 cfs @ 12.30 hrs HW=77.85' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.43 cfs)**Primary OutFlow** Max=4.78 cfs @ 12.30 hrs HW=77.85' TW=77.35' (Dynamic Tailwater)↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.78 cfs @ 3.07 fps)**Summary for Pond DB-2: Detention Basin**

Inflow Area = 3.469 ac, 94.59% Impervious, Inflow Depth = 4.63" for 100-yr event  
 Inflow = 13.08 cfs @ 12.08 hrs, Volume= 1.339 af  
 Outflow = 0.75 cfs @ 15.33 hrs, Volume= 0.892 af, Atten= 94%, Lag= 195.1 min  
 Discarded = 0.75 cfs @ 15.33 hrs, Volume= 0.892 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 77.72' @ 15.33 hrs Surf.Area= 26,368 sf Storage= 41,867 cf

Plug-Flow detention time= 488.2 min calculated for 0.892 af (67% of inflow)

Center-of-Mass det. time= 408.6 min ( 1,183.4 - 774.8 )

Volume	Invert	Avail.Storage	Storage Description
#1	76.00'	71,816 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	22,409	753.0	0	0	22,409
78.00	27,047	792.0	49,383	49,383	27,447
78.80	29,046	807.0	22,432	71,816	29,460

Device	Routing	Invert	Outlet Devices
#1	Primary	78.25'	<b>10.0' long x 11.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64
#2	Discarded	76.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 22,431 sf

**Discarded OutFlow** Max=0.75 cfs @ 15.33 hrs HW=77.72' (Free Discharge)

↑**2=Exfiltration** (Exfiltration Controls 0.75 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=76.00' TW=0.00' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** ( Controls 0.00 cfs)

### Summary for Pond DB-3: Detention Basin

Inflow Area = 1.345 ac, 88.26% Impervious, Inflow Depth = 5.94" for 100-yr event  
 Inflow = 8.77 cfs @ 12.08 hrs, Volume= 0.666 af  
 Outflow = 7.33 cfs @ 12.14 hrs, Volume= 0.651 af, Atten= 16%, Lag= 3.1 min  
 Discarded = 0.65 cfs @ 12.14 hrs, Volume= 0.399 af  
 Primary = 6.68 cfs @ 12.14 hrs, Volume= 0.252 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Peak Elev= 77.90' @ 12.14 hrs Surf.Area= 6,199 sf Storage= 7,731 cf

Plug-Flow detention time= 137.3 min calculated for 0.651 af (98% of inflow)  
 Center-of-Mass det. time= 123.4 min ( 899.8 - 776.4 )

Volume	Invert	Avail.Storage	Storage Description									
#1	76.00'	13,464 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)									
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)			Cum.Store (cubic-feet)			Wet.Area (sq-ft)			
76.00	2,771	327.0	0			0			2,771			
77.00	3,779	346.0	3,262			3,262			3,843			
78.00	6,489	429.0	5,073			8,335			8,976			
78.70	8,197	477.0	5,128			13,464			12,451			
Device	Routing	Invert	Outlet Devices									
#1	Primary	77.50'	<b>10.0' long x 11.0' breadth Broad-Crested Rectangular Weir</b>									
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60									
			Coef. (English) 2.53 2.59 2.70 2.68 2.67 2.68 2.66 2.64									
#2	Discarded	76.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b>									
			Excluded Surface area = 2,780 sf									

**Discarded OutFlow** Max=0.65 cfs @ 12.14 hrs HW=77.90' (Free Discharge)

↑**2=Exfiltration** (Exfiltration Controls 0.65 cfs)

**Primary OutFlow** Max=6.67 cfs @ 12.14 hrs HW=77.90' TW=0.00' (Dynamic Tailwater)

↑**1=Broad-Crested Rectangular Weir** (Weir Controls 6.67 cfs @ 1.65 fps)

### Summary for Pond DB-4: Detention Basin

Inflow Area = 2.226 ac, 91.50% Impervious, Inflow Depth = 6.19" for 100-yr event  
 Inflow = 14.57 cfs @ 12.08 hrs, Volume= 1.148 af  
 Outflow = 5.95 cfs @ 12.29 hrs, Volume= 0.978 af, Atten= 59%, Lag= 12.4 min  
 Discarded = 1.21 cfs @ 12.29 hrs, Volume= 0.652 af  
 Primary = 4.74 cfs @ 12.29 hrs, Volume= 0.327 af

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Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 78.78' @ 12.29 hrs Surf.Area= 13,691 sf Storage= 23,559 cf

Plug-Flow detention time= 261.8 min calculated for 0.978 af (85% of inflow)

Center-of-Mass det. time= 197.4 min ( 957.9 - 760.5 )

Volume	Invert	Avail.Storage	Storage Description		
#1	76.00'	26,719 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
76.00	4,552	514.0	0	0	4,552
77.00	7,354	726.0	5,897	5,897	25,481
78.00	9,807	745.0	8,551	14,448	27,823
79.00	14,911	1,028.0	12,270	26,719	67,762

Device	Routing	Invert	Outlet Devices
#1	Discarded	77.01'	<b>8.270 in/hr Exfiltration over Surface area above invert</b> Excluded Surface area = 7,377 sf
#2	Primary	78.20'	<b>3.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 0.5' Crest Height

**Discarded OutFlow** Max=1.21 cfs @ 12.29 hrs HW=78.78' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 1.21 cfs)**Primary OutFlow** Max=4.74 cfs @ 12.29 hrs HW=78.78' TW=73.05' (Dynamic Tailwater)↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.74 cfs @ 2.84 fps)**Summary for Pond EDB: Existing Detention Basin**

Inflow Area = 8.826 ac, 95.70% Impervious, Inflow Depth = 4.98" for 100-yr event

Inflow = 42.62 cfs @ 12.09 hrs, Volume= 3.659 af

Outflow = 3.42 cfs @ 13.43 hrs, Volume= 2.552 af, Atten= 92%, Lag= 80.5 min

Primary = 3.42 cfs @ 13.43 hrs, Volume= 2.552 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 73.35' @ 13.43 hrs Surf.Area= 70,392 sf Storage= 108,616 cf

Plug-Flow detention time= 445.4 min calculated for 2.552 af (70% of inflow)

Center-of-Mass det. time= 356.8 min ( 1,105.4 - 748.6 )

Volume	Invert	Avail.Storage	Storage Description		
#1	71.70'	155,808 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
71.70	60,155	952.0	0	0	60,155
72.00	63,529	1,023.0	18,550	18,550	71,318
73.00	68,606	1,069.0	66,051	84,602	79,047
74.00	73,838	1,080.0	71,206	155,808	81,213

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Device	Routing	Invert	Outlet Devices
#1	Primary	72.01'	<b>12.0" x 3.0' long Culvert</b> RCP, square edge headwall, Ke= 0.500 Outlet Invert= 72.00' S= 0.0033 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections
#2	Primary	73.30'	<b>20.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Primary OutFlow** Max=3.42 cfs @ 13.43 hrs HW=73.35' TW=0.00' (Dynamic Tailwater)↑ **1=Culvert** (Barrel Controls 2.93 cfs @ 3.74 fps)↑ **2=Broad-Crested Rectangular Weir** (Weir Controls 0.48 cfs @ 0.53 fps)**Summary for Pond SRS: Recharge System**

Inflow Area = 0.640 ac, 85.14% Impervious, Inflow Depth = 5.71" for 100-yr event  
 Inflow = 4.07 cfs @ 12.08 hrs, Volume= 0.304 af  
 Outflow = 1.28 cfs @ 12.39 hrs, Volume= 0.304 af, Atten= 69%, Lag= 18.3 min  
 Discarded = 0.37 cfs @ 11.58 hrs, Volume= 0.273 af  
 Primary = 0.91 cfs @ 12.39 hrs, Volume= 0.031 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 76.99' @ 12.39 hrs Surf.Area= 1,944 sf Storage= 3,897 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 59.3 min ( 842.5 - 783.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	74.00'	1,650 cf	<b>27.00'W x 72.00'L x 3.50'H Prismatic</b> 6,804 cf Overall - 2,679 cf Embedded = 4,125 cf x 40.0% Voids
#2	74.50'	2,679 cf	<b>52.6"W x 34.0"H x 7.50'L Cultec R-V8</b> x 40 Inside #1
		4,329 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	74.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	76.50'	<b>8.0" x 42.0' long Culvert</b> RCP, rounded edge headwall, Ke= 0.100 Outlet Invert= 73.00' S= 0.0833 '/' Cc= 0.900 n= 0.013

**Discarded OutFlow** Max=0.37 cfs @ 11.58 hrs HW=74.04' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.37 cfs)**Primary OutFlow** Max=0.91 cfs @ 12.39 hrs HW=76.99' TW=73.14' (Dynamic Tailwater)↑ **2=Culvert** (Inlet Controls 0.91 cfs @ 3.27 fps)