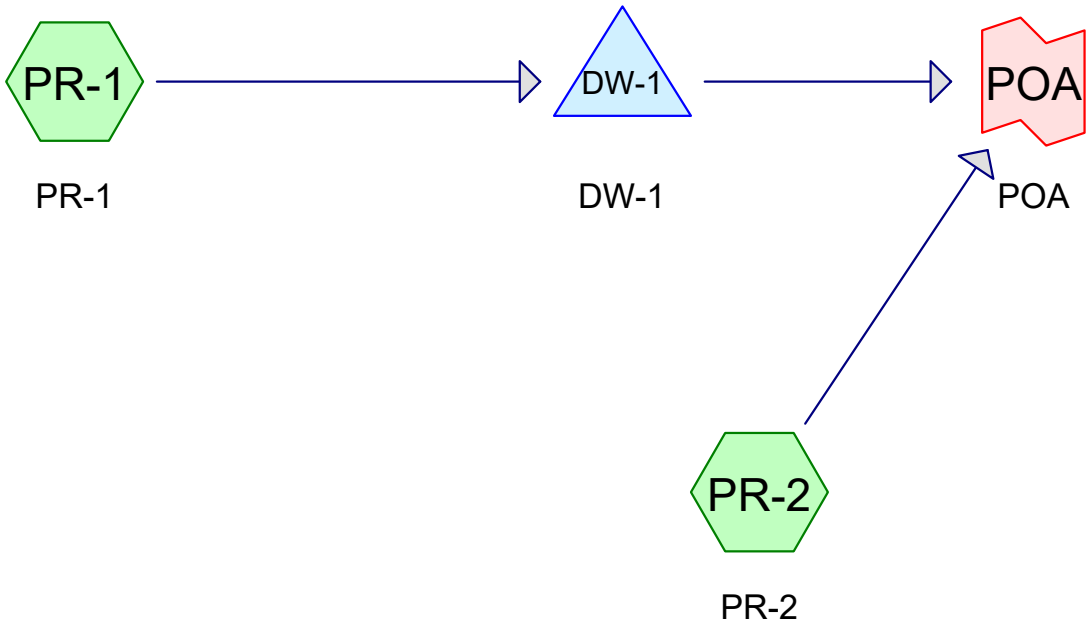

Subcat Reach Pond Link

Routing Diagram for Sunnyside Hsg - Proposed Hydrocad 07-26-23
Prepared by Samiotes Consultants, Printed 7/27/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.040	61	>75% Grass cover, Good, HSG B (PR-1, PR-2)
0.339	98	Paved parking, HSG B (PR-1, PR-2)
0.379	**94**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.379	HSG B	PR-1, PR-2
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.379		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.040	0.000	0.000	0.000	0.040	>75% Grass cover, Good	PR-1, PR-2
0.000	0.339	0.000	0.000	0.000	0.339	Paved parking	PR-1, PR-2
0.000	**0.379**	**0.000**	**0.000**	**0.000**	**0.379**	**TOTAL AREA**	

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: PR-1 Runoff Area=15,800 sf 90.59% Impervious Runoff Depth=2.72"
Tc=6.0 min CN=95 Runoff=1.07 cfs 0.082 af

Subcatchment PR-2: PR-2 Runoff Area=700 sf 64.71% Impervious Runoff Depth=1.83"
Tc=6.0 min CN=85 Runoff=0.03 cfs 0.002 af

Pond DW-1: DW-1 Peak Elev=10.56' Storage=13 cf Inflow=1.07 cfs 0.082 af
10.0" Round Culvert n=0.012 L=9.0' S=0.0111 '/' Outflow=1.07 cfs 0.082 af

Link POA: POA Inflow=1.10 cfs 0.085 af
Primary=1.10 cfs 0.085 af

Total Runoff Area = 0.379 ac Runoff Volume = 0.085 af Average Runoff Depth = 2.69"
10.51% Pervious = 0.040 ac 89.49% Impervious = 0.339 ac

Summary for Subcatchment PR-1: PR-1

Runoff = 1.07 cfs @ 12.09 hrs, Volume= 0.082 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 yr Rainfall=3.28"

Area (sf)	CN	Description
14,313	98	Paved parking, HSG B
1,487	61	>75% Grass cover, Good, HSG B
15,800	95	Weighted Average
1,487		9.41% Pervious Area
14,313		90.59% Impervious Area

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

Summary for Subcatchment PR-2: PR-2

Runoff = 0.03 cfs @ 12.09 hrs, Volume= 0.002 af, Depth= 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 yr Rainfall=3.28"

Area (sf)	CN	Description
453	98	Paved parking, HSG B
247	61	>75% Grass cover, Good, HSG B
700	85	Weighted Average
247		35.29% Pervious Area
453		64.71% Impervious Area

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

Summary for Pond DW-1: DW-1

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.363 ac, 90.59% Impervious, Inflow Depth = 2.72" for 2 yr event
Inflow = 1.07 cfs @ 12.09 hrs, Volume= 0.082 af
Outflow = 1.07 cfs @ 12.09 hrs, Volume= 0.082 af, Atten= 0%, Lag= 0.2 min
Primary = 1.07 cfs @ 12.09 hrs, Volume= 0.082 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 10.56' @ 12.09 hrs Surf.Area= 33 sf Storage= 13 cf

Plug-Flow detention time= 0.6 min calculated for 0.082 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (780.8 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	9.85'	29 cf	**3.50'D x 3.00'H Vertical Cone/Cylinder** Inside #2 38 cf Overall - 3.0" Wall Thickness = 29 cf
#2	9.85'	31 cf	**6.50'D x 3.50'H Stone** 116 cf Overall - 38 cf Embedded = 78 cf x 40.0% Voids
#3	12.40'	1 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		62 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
12.40	1	0	0
13.00	4	1	1

Device	Routing	Invert	Outlet Devices
#1	Primary	9.85'	**10.0" Round Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.85' / 9.75' S= 0.0111 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=1.05 cfs @ 12.09 hrs HW=10.55' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 1.05 cfs @ 2.87 fps)

Stage-Area-Storage for Pond DW-1: DW-1

Elevation (feet)	Storage (cubic-feet)
9.85	0
9.90	1
9.95	2
10.00	3
10.05	4
10.10	4
10.15	5
10.20	6
10.25	7
10.30	8
10.35	9
10.40	10
10.45	11
10.50	12
10.55	13
10.60	13
10.65	14
10.70	15
10.75	16
10.80	17
10.85	18
10.90	19
10.95	20
11.00	21
11.05	21
11.10	22
11.15	23
11.20	24
11.25	25
11.30	26
11.35	27
11.40	28
11.45	29
11.50	29
11.55	30
11.60	31
11.65	32
11.70	33
11.75	34
11.80	35
11.85	36
11.90	37
11.95	38
12.00	38
12.05	39
12.10	40
12.15	41
12.20	42
12.25	43
12.30	44
12.35	45
12.40	46
12.45	47
12.50	47
12.55	48
12.60	49
12.65	50
12.70	51
12.75	52
12.80	54
12.85	55
12.90	55
12.95	56
13.00	57
13.05	58
13.10	58
13.15	59
13.20	60
13.25	60
13.30	61
13.35	**62**

Summary for Link POA: POA

Inflow Area = 0.379 ac, 89.49% Impervious, Inflow Depth = 2.69" for 2 yr event
Inflow = 1.10 cfs @ 12.09 hrs, Volume= 0.085 af
Primary = 1.10 cfs @ 12.09 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: PR-1 Runoff Area=15,800 sf 90.59% Impervious Runoff Depth=4.59"
Tc=6.0 min CN=95 Runoff=1.75 cfs 0.139 af

Subcatchment PR-2: PR-2 Runoff Area=700 sf 64.71% Impervious Runoff Depth=3.53"
Tc=6.0 min CN=85 Runoff=0.06 cfs 0.005 af

Pond DW-1: DW-1 Peak Elev=10.98' Storage=20 cf Inflow=1.75 cfs 0.139 af
10.0" Round Culvert n=0.012 L=9.0' S=0.0111 '/' Outflow=1.75 cfs 0.139 af

Link POA: POA Inflow=1.81 cfs 0.143 af
Primary=1.81 cfs 0.143 af

Total Runoff Area = 0.379 ac Runoff Volume = 0.143 af Average Runoff Depth = 4.54"
10.51% Pervious = 0.040 ac 89.49% Impervious = 0.339 ac

Summary for Subcatchment PR-1: PR-1

Runoff = 1.75 cfs @ 12.09 hrs, Volume= 0.139 af, Depth= 4.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 yr Rainfall=5.17"

Area (sf)	CN	Description
14,313	98	Paved parking, HSG B
1,487	61	>75% Grass cover, Good, HSG B
15,800	95	Weighted Average
1,487		9.41% Pervious Area
14,313		90.59% Impervious Area

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

Summary for Subcatchment PR-2: PR-2

Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth= 3.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 yr Rainfall=5.17"

Area (sf)	CN	Description
453	98	Paved parking, HSG B
247	61	>75% Grass cover, Good, HSG B
700	85	Weighted Average
247		35.29% Pervious Area
453		64.71% Impervious Area

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

Summary for Pond DW-1: DW-1

Inflow Area = 0.363 ac, 90.59% Impervious, Inflow Depth = 4.59" for 10 yr event
Inflow = 1.75 cfs @ 12.09 hrs, Volume= 0.139 af
Outflow = 1.75 cfs @ 12.09 hrs, Volume= 0.139 af, Atten= 0%, Lag= 0.2 min
Primary = 1.75 cfs @ 12.09 hrs, Volume= 0.139 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 10.98' @ 12.09 hrs Surf.Area= 33 sf Storage= 20 cf

Plug-Flow detention time= 1.0 min calculated for 0.139 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (767.9 - 767.4)

Volume	Invert	Avail.Storage	Storage Description
#1	9.85'	29 cf	**3.50'D x 3.00'H Vertical Cone/Cylinder** Inside #2 38 cf Overall - 3.0" Wall Thickness = 29 cf
#2	9.85'	31 cf	**6.50'D x 3.50'H Stone** 116 cf Overall - 38 cf Embedded = 78 cf x 40.0% Voids
#3	12.40'	1 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		62 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
12.40	1	0	0
13.00	4	1	1

Device	Routing	Invert	Outlet Devices
#1	Primary	9.85'	**10.0" Round Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.85' / 9.75' S= 0.0111 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=1.71 cfs @ 12.09 hrs HW=10.95' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.71 cfs @ 3.14 fps)

Stage-Area-Storage for Pond DW-1: DW-1

Elevation (feet)	Storage (cubic-feet)
9.85	0
9.90	1
9.95	2
10.00	3
10.05	4
10.10	4
10.15	5
10.20	6
10.25	7
10.30	8
10.35	9
10.40	10
10.45	11
10.50	12
10.55	13
10.60	13
10.65	14
10.70	15
10.75	16
10.80	17
10.85	18
10.90	19
10.95	20
11.00	21
11.05	21
11.10	22
11.15	23
11.20	24
11.25	25
11.30	26
11.35	27
11.40	28
11.45	29
11.50	29
11.55	30
11.60	31
11.65	32
11.70	33
11.75	34
11.80	35
11.85	36
11.90	37
11.95	38
12.00	38
12.05	39
12.10	40
12.15	41
12.20	42
12.25	43
12.30	44
12.35	45
12.40	46
12.45	47
12.50	47
12.55	48
12.60	49
12.65	50
12.70	51
12.75	52
12.80	54
12.85	55
12.90	55
12.95	56
13.00	57
13.05	58
13.10	58
13.15	59
13.20	60
13.25	60
13.30	61
13.35	**62**

Summary for Link POA: POA

Inflow Area = 0.379 ac, 89.49% Impervious, Inflow Depth = 4.54" for 10 yr event
Inflow = 1.81 cfs @ 12.09 hrs, Volume= 0.143 af
Primary = 1.81 cfs @ 12.09 hrs, Volume= 0.143 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: PR-1 Runoff Area=15,800 sf 90.59% Impervious Runoff Depth=5.76"
Tc=6.0 min CN=95 Runoff=2.17 cfs 0.174 af

Subcatchment PR-2: PR-2 Runoff Area=700 sf 64.71% Impervious Runoff Depth=4.63"
Tc=6.0 min CN=85 Runoff=0.08 cfs 0.006 af

Pond DW-1: DW-1 Peak Elev=11.36' Storage=27 cf Inflow=2.17 cfs 0.174 af
10.0" Round Culvert n=0.012 L=9.0' S=0.0111 '/' Outflow=2.17 cfs 0.174 af

Link POA: POA Inflow=2.25 cfs 0.180 af
Primary=2.25 cfs 0.180 af

Total Runoff Area = 0.379 ac Runoff Volume = 0.180 af Average Runoff Depth = 5.71"
10.51% Pervious = 0.040 ac 89.49% Impervious = 0.339 ac

Summary for Subcatchment PR-1: PR-1

Runoff = 2.17 cfs @ 12.09 hrs, Volume= 0.174 af, Depth= 5.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 yr Rainfall=6.35"

Area (sf)	CN	Description
14,313	98	Paved parking, HSG B
1,487	61	>75% Grass cover, Good, HSG B
15,800	95	Weighted Average
1,487		9.41% Pervious Area
14,313		90.59% Impervious Area

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

Summary for Subcatchment PR-2: PR-2

Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 4.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 yr Rainfall=6.35"

Area (sf)	CN	Description
453	98	Paved parking, HSG B
247	61	>75% Grass cover, Good, HSG B
700	85	Weighted Average
247		35.29% Pervious Area
453		64.71% Impervious Area

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

Summary for Pond DW-1: DW-1

[90] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.363 ac, 90.59% Impervious, Inflow Depth = 5.76" for 25 yr event
Inflow = 2.17 cfs @ 12.09 hrs, Volume= 0.174 af
Outflow = 2.17 cfs @ 12.09 hrs, Volume= 0.174 af, Atten= 0%, Lag= 0.3 min
Primary = 2.17 cfs @ 12.09 hrs, Volume= 0.174 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 11.36' @ 12.09 hrs Surf.Area= 33 sf Storage= 27 cf

Plug-Flow detention time= 0.5 min calculated for 0.174 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (762.7 - 762.3)

Volume	Invert	Avail.Storage	Storage Description
#1	9.85'	29 cf	**3.50'D x 3.00'H Vertical Cone/Cylinder** Inside #2 38 cf Overall - 3.0" Wall Thickness = 29 cf
#2	9.85'	31 cf	**6.50'D x 3.50'H Stone** 116 cf Overall - 38 cf Embedded = 78 cf x 40.0% Voids
#3	12.40'	1 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		62 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
12.40	1	0	0
13.00	4	1	1

Device	Routing	Invert	Outlet Devices
#1	Primary	9.85'	**10.0" Round Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.85' / 9.75' S= 0.0111 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=2.13 cfs @ 12.09 hrs HW=11.32' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 2.13 cfs @ 3.91 fps)

Stage-Area-Storage for Pond DW-1: DW-1

Elevation (feet)	Storage (cubic-feet)
9.85	0
9.90	1
9.95	2
10.00	3
10.05	4
10.10	4
10.15	5
10.20	6
10.25	7
10.30	8
10.35	9
10.40	10
10.45	11
10.50	12
10.55	13
10.60	13
10.65	14
10.70	15
10.75	16
10.80	17
10.85	18
10.90	19
10.95	20
11.00	21
11.05	21
11.10	22
11.15	23
11.20	24
11.25	25
11.30	26
11.35	27
11.40	28
11.45	29
11.50	29
11.55	30
11.60	31
11.65	32
11.70	33
11.75	34
11.80	35
11.85	36
11.90	37
11.95	38
12.00	38
12.05	39
12.10	40
12.15	41
12.20	42
12.25	43
12.30	44
12.35	45
12.40	46
12.45	47
12.50	47
12.55	48
12.60	49
12.65	50
12.70	51
12.75	52
12.80	54
12.85	55
12.90	55
12.95	56
13.00	57
13.05	58
13.10	58
13.15	59
13.20	60
13.25	60
13.30	61
13.35	**62**

Summary for Link POA: POA

Inflow Area = 0.379 ac, 89.49% Impervious, Inflow Depth = 5.71" for 25 yr event
Inflow = 2.25 cfs @ 12.09 hrs, Volume= 0.180 af
Primary = 2.25 cfs @ 12.09 hrs, Volume= 0.180 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs

Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PR-1: PR-1 Runoff Area=15,800 sf 90.59% Impervious Runoff Depth=7.57"
Tc=6.0 min CN=95 Runoff=2.81 cfs 0.229 af

Subcatchment PR-2: PR-2 Runoff Area=700 sf 64.71% Impervious Runoff Depth=6.38"
Tc=6.0 min CN=85 Runoff=0.11 cfs 0.009 af

Pond DW-1: DW-1 Peak Elev=12.10' Storage=40 cf Inflow=2.81 cfs 0.229 af
10.0" Round Culvert n=0.012 L=9.0' S=0.0111 '/' Outflow=2.81 cfs 0.229 af

Link POA: POA Inflow=2.92 cfs 0.237 af
Primary=2.92 cfs 0.237 af

Total Runoff Area = 0.379 ac Runoff Volume = 0.237 af Average Runoff Depth = 7.52"
10.51% Pervious = 0.040 ac 89.49% Impervious = 0.339 ac

Summary for Subcatchment PR-1: PR-1

Runoff = 2.81 cfs @ 12.09 hrs, Volume= 0.229 af, Depth= 7.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 yr Rainfall=8.17"

Area (sf)	CN	Description
14,313	98	Paved parking, HSG B
1,487	61	>75% Grass cover, Good, HSG B
15,800	95	Weighted Average
1,487		9.41% Pervious Area
14,313		90.59% Impervious Area

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

Summary for Subcatchment PR-2: PR-2

Runoff = 0.11 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 yr Rainfall=8.17"

Area (sf)	CN	Description
453	98	Paved parking, HSG B
247	61	>75% Grass cover, Good, HSG B
700	85	Weighted Average
247		35.29% Pervious Area
453		64.71% Impervious Area

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

Summary for Pond DW-1: DW-1

Inflow Area = 0.363 ac, 90.59% Impervious, Inflow Depth = 7.57" for 100 yr event
Inflow = 2.81 cfs @ 12.09 hrs, Volume= 0.229 af
Outflow = 2.81 cfs @ 12.09 hrs, Volume= 0.229 af, Atten= 0%, Lag= 0.4 min
Primary = 2.81 cfs @ 12.09 hrs, Volume= 0.229 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Peak Elev= 12.10' @ 12.09 hrs Surf.Area= 33 sf Storage= 40 cf

Plug-Flow detention time= 0.9 min calculated for 0.229 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (757.0 - 756.6)

Volume	Invert	Avail.Storage	Storage Description
#1	9.85'	29 cf	**3.50'D x 3.00'H Vertical Cone/Cylinder** Inside #2 38 cf Overall - 3.0" Wall Thickness = 29 cf
#2	9.85'	31 cf	**6.50'D x 3.50'H Stone** 116 cf Overall - 38 cf Embedded = 78 cf x 40.0% Voids
#3	12.40'	1 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
		62 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
12.40	1	0	0
13.00	4	1	1

Device	Routing	Invert	Outlet Devices
#1	Primary	9.85'	**10.0" Round Culvert** L= 9.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 9.85' / 9.75' S= 0.0111 '/' Cc= 0.900 n= 0.012, Flow Area= 0.55 sf

Primary OutFlow Max=2.76 cfs @ 12.09 hrs HW=12.04' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.76 cfs @ 5.07 fps)

Stage-Area-Storage for Pond DW-1: DW-1

Elevation (feet)	Storage (cubic-feet)
9.85	0
9.90	1
9.95	2
10.00	3
10.05	4
10.10	4
10.15	5
10.20	6
10.25	7
10.30	8
10.35	9
10.40	10
10.45	11
10.50	12
10.55	13
10.60	13
10.65	14
10.70	15
10.75	16
10.80	17
10.85	18
10.90	19
10.95	20
11.00	21
11.05	21
11.10	22
11.15	23
11.20	24
11.25	25
11.30	26
11.35	27
11.40	28
11.45	29
11.50	29
11.55	30
11.60	31
11.65	32
11.70	33
11.75	34
11.80	35
11.85	36
11.90	37
11.95	38
12.00	38
12.05	39
12.10	40
12.15	41
12.20	42
12.25	43
12.30	44
12.35	45
12.40	46
12.45	47
12.50	47
12.55	48
12.60	49
12.65	50
12.70	51
12.75	52
12.80	54
12.85	55
12.90	55
12.95	56
13.00	57
13.05	58
13.10	58
13.15	59
13.20	60
13.25	60
13.30	61
13.35	**62**

Summary for Link POA: POA

Inflow Area = 0.379 ac, 89.49% Impervious, Inflow Depth = 7.52" for 100 yr event
Inflow = 2.92 cfs @ 12.09 hrs, Volume= 0.237 af
Primary = 2.92 cfs @ 12.09 hrs, Volume= 0.237 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs