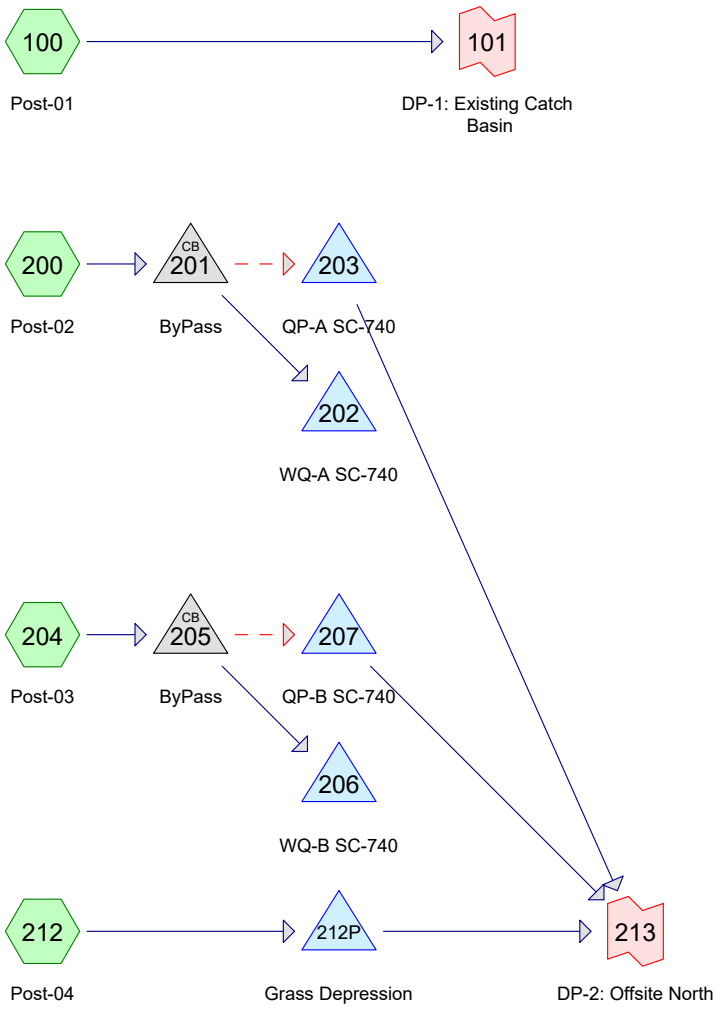

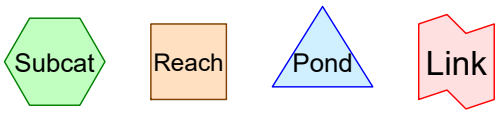

Routing Diagram for 2932-003-ALLS-PHCD-INHS-area test
Prepared by DiPrete Engineering, Printed 7/12/2023
HydroCAD® 10.20-3c s/n 01125 © 2023 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.590	39	>75% Grass cover, Good, HSG A (1, 2, 100, 200, 204, 212)
0.660	98	Impervious, HSG A (100, 200, 204)
0.007	98	Offsite Impervious, HSG A (1, 100, 200, 204, 212)
1.258	**70**	**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 100: Post-01 Runoff Area=0.162 ac 62.45% Impervious Runoff Depth=0.88"
Tc=6.0 min CN=76 Runoff=0.16 cfs 0.012 af

Subcatchment 200: Post-02 Runoff Area=0.448 ac 77.96% Impervious Runoff Depth=1.41"
Tc=6.0 min CN=85 Runoff=0.74 cfs 0.053 af

Subcatchment 204: Post-03 Runoff Area=0.298 ac 71.49% Impervious Runoff Depth=1.15"
Tc=6.0 min CN=81 Runoff=0.40 cfs 0.029 af

Subcatchment 212: Post-04 Runoff Area=0.175 ac 1.29% Impervious Runoff Depth=0.00"
Flow Length=215' Tc=13.2 min CN=40 Runoff=0.00 cfs 0.000 af

Pond 201: ByPass Peak Elev=46.51' Inflow=0.74 cfs 0.053 af
Primary=0.74 cfs 0.053 af Secondary=0.00 cfs 0.000 af Outflow=0.74 cfs 0.053 af

Pond 202: WQ-A SC-740 Peak Elev=46.49' Storage=0.015 af Inflow=0.74 cfs 0.053 af
Outflow=0.13 cfs 0.053 af

Pond 203: QP-A SC-740 Peak Elev=45.00' Storage=0.000 af Inflow=0.00 cfs 0.000 af
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Pond 205: ByPass Peak Elev=46.64' Inflow=0.40 cfs 0.029 af
Primary=0.40 cfs 0.029 af Secondary=0.00 cfs 0.000 af Outflow=0.40 cfs 0.029 af

Pond 206: WQ-B SC-740 Peak Elev=46.64' Storage=0.009 af Inflow=0.40 cfs 0.029 af
Outflow=0.06 cfs 0.029 af

Pond 207: QP-B SC-740 Peak Elev=44.50' Storage=0.000 af Inflow=0.00 cfs 0.000 af
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Pond 212P: Grass Depression Peak Elev=48.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Link 101: DP-1: Existing Catch Basin Inflow=0.16 cfs 0.012 af
Primary=0.16 cfs 0.012 af

Link 213: DP-2: Offsite North Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 100: Post-01 Runoff Area=0.162 ac 62.45% Impervious Runoff Depth=1.29"
Tc=6.0 min CN=76 Runoff=0.24 cfs 0.017 af

Subcatchment 200: Post-02 Runoff Area=0.448 ac 77.96% Impervious Runoff Depth=1.93"
Tc=6.0 min CN=85 Runoff=1.01 cfs 0.072 af

Subcatchment 204: Post-03 Runoff Area=0.298 ac 71.49% Impervious Runoff Depth=1.63"
Tc=6.0 min CN=81 Runoff=0.57 cfs 0.040 af

Subcatchment 212: Post-04 Runoff Area=0.175 ac 1.29% Impervious Runoff Depth=0.01"
Flow Length=215' Tc=13.2 min CN=40 Runoff=0.00 cfs 0.000 af

Pond 201: ByPass Peak Elev=46.67' Inflow=1.01 cfs 0.072 af
Primary=0.84 cfs 0.064 af Secondary=0.25 cfs 0.008 af Outflow=1.01 cfs 0.072 af

Pond 202: WQ-A SC-740 Peak Elev=46.64' Storage=0.016 af Inflow=0.84 cfs 0.064 af
Outflow=0.13 cfs 0.064 af

Pond 203: QP-A SC-740 Peak Elev=45.01' Storage=0.000 af Inflow=0.25 cfs 0.008 af
Discarded=0.25 cfs 0.008 af Primary=0.00 cfs 0.000 af Outflow=0.25 cfs 0.008 af

Pond 205: ByPass Peak Elev=46.97' Inflow=0.57 cfs 0.040 af
Primary=0.57 cfs 0.035 af Secondary=0.26 cfs 0.005 af Outflow=0.57 cfs 0.040 af

Pond 206: WQ-B SC-740 Peak Elev=46.97' Storage=0.010 af Inflow=0.57 cfs 0.035 af
Outflow=0.06 cfs 0.035 af

Pond 207: QP-B SC-740 Peak Elev=44.51' Storage=0.000 af Inflow=0.26 cfs 0.005 af
Discarded=0.22 cfs 0.005 af Primary=0.00 cfs 0.000 af Outflow=0.22 cfs 0.005 af

Pond 212P: Grass Depression Peak Elev=48.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Link 101: DP-1: Existing Catch Basin Inflow=0.24 cfs 0.017 af
Primary=0.24 cfs 0.017 af

Link 213: DP-2: Offsite North Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 100: Post-01 Runoff Area=0.162 ac 62.45% Impervious Runoff Depth=2.53"
Tc=6.0 min CN=76 Runoff=0.48 cfs 0.034 af

Subcatchment 200: Post-02 Runoff Area=0.448 ac 77.96% Impervious Runoff Depth=3.36"
Tc=6.0 min CN=85 Runoff=1.75 cfs 0.125 af

Subcatchment 204: Post-03 Runoff Area=0.298 ac 71.49% Impervious Runoff Depth=2.98"
Tc=6.0 min CN=81 Runoff=1.04 cfs 0.074 af

Subcatchment 212: Post-04 Runoff Area=0.175 ac 1.29% Impervious Runoff Depth=0.23"
Flow Length=215' Tc=13.2 min CN=40 Runoff=0.01 cfs 0.003 af

Pond 201: ByPass Peak Elev=46.81' Inflow=1.75 cfs 0.125 af
Primary=0.73 cfs 0.089 af Secondary=1.24 cfs 0.036 af Outflow=1.75 cfs 0.125 af

Pond 202: WQ-A SC-740 Peak Elev=46.74' Storage=0.017 af Inflow=0.73 cfs 0.089 af
Outflow=0.13 cfs 0.089 af

Pond 203: QP-A SC-740 Peak Elev=46.00' Storage=0.019 af Inflow=1.24 cfs 0.036 af
Discarded=0.27 cfs 0.036 af Primary=0.00 cfs 0.000 af Outflow=0.27 cfs 0.036 af

Pond 205: ByPass Peak Elev=47.08' Inflow=1.04 cfs 0.074 af
Primary=0.65 cfs 0.048 af Secondary=1.03 cfs 0.026 af Outflow=1.04 cfs 0.074 af

Pond 206: WQ-B SC-740 Peak Elev=47.09' Storage=0.011 af Inflow=0.65 cfs 0.048 af
Outflow=0.06 cfs 0.048 af

Pond 207: QP-B SC-740 Peak Elev=45.26' Storage=0.011 af Inflow=1.03 cfs 0.026 af
Discarded=0.22 cfs 0.026 af Primary=0.00 cfs 0.000 af Outflow=0.22 cfs 0.026 af

Pond 212P: Grass Depression Peak Elev=48.00' Storage=0 cf Inflow=0.01 cfs 0.003 af
Discarded=0.01 cfs 0.003 af Primary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.003 af

Link 101: DP-1: Existing Catch Basin Inflow=0.48 cfs 0.034 af
Primary=0.48 cfs 0.034 af

Link 213: DP-2: Offsite North Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 100: Post-01 Runoff Area=0.162 ac 62.45% Impervious Runoff Depth=3.59"
Tc=6.0 min CN=76 Runoff=0.68 cfs 0.048 af

Subcatchment 200: Post-02 Runoff Area=0.448 ac 77.96% Impervious Runoff Depth=4.53"
Tc=6.0 min CN=85 Runoff=2.33 cfs 0.169 af

Subcatchment 204: Post-03 Runoff Area=0.298 ac 71.49% Impervious Runoff Depth=4.10"
Tc=6.0 min CN=81 Runoff=1.42 cfs 0.102 af

Subcatchment 212: Post-04 Runoff Area=0.175 ac 1.29% Impervious Runoff Depth=0.58"
Flow Length=215' Tc=13.2 min CN=40 Runoff=0.04 cfs 0.008 af

Pond 201: ByPass Peak Elev=46.89' Inflow=2.33 cfs 0.169 af
Primary=0.72 cfs 0.107 af Secondary=1.98 cfs 0.062 af Outflow=2.33 cfs 0.169 af

Pond 202: WQ-A SC-740 Peak Elev=46.83' Storage=0.018 af Inflow=0.72 cfs 0.107 af
Outflow=0.13 cfs 0.107 af

Pond 203: QP-A SC-740 Peak Elev=46.76' Storage=0.037 af Inflow=1.98 cfs 0.062 af
Discarded=0.27 cfs 0.062 af Primary=0.00 cfs 0.000 af Outflow=0.27 cfs 0.062 af

Pond 205: ByPass Peak Elev=47.12' Inflow=1.42 cfs 0.102 af
Primary=0.51 cfs 0.057 af Secondary=1.37 cfs 0.045 af Outflow=1.42 cfs 0.102 af

Pond 206: WQ-B SC-740 Peak Elev=47.12' Storage=0.011 af Inflow=0.51 cfs 0.057 af
Outflow=0.06 cfs 0.057 af

Pond 207: QP-B SC-740 Peak Elev=45.85' Storage=0.023 af Inflow=1.37 cfs 0.045 af
Discarded=0.22 cfs 0.045 af Primary=0.00 cfs 0.000 af Outflow=0.22 cfs 0.045 af

Pond 212P: Grass Depression Peak Elev=48.11' Storage=15 cf Inflow=0.04 cfs 0.008 af
Discarded=0.03 cfs 0.008 af Primary=0.01 cfs 0.000 af Outflow=0.04 cfs 0.008 af

Link 101: DP-1: Existing Catch Basin Inflow=0.68 cfs 0.048 af
Primary=0.68 cfs 0.048 af

Link 213: DP-2: Offsite North Inflow=0.01 cfs 0.000 af
Primary=0.01 cfs 0.000 af

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 100: Post-01 Runoff Area=0.162 ac 62.45% Impervious Runoff Depth=5.85"
Tc=6.0 min CN=76 Runoff=1.10 cfs 0.079 af

Subcatchment 200: Post-02 Runoff Area=0.448 ac 77.96% Impervious Runoff Depth=6.95"
Tc=6.0 min CN=85 Runoff=3.50 cfs 0.259 af

Subcatchment 204: Post-03 Runoff Area=0.298 ac 71.49% Impervious Runoff Depth=6.46"
Tc=6.0 min CN=81 Runoff=2.21 cfs 0.161 af

Subcatchment 212: Post-04 Runoff Area=0.175 ac 1.29% Impervious Runoff Depth=1.60"
Flow Length=215' Tc=13.2 min CN=40 Runoff=0.20 cfs 0.023 af

Pond 201: ByPass Peak Elev=49.05' Inflow=3.50 cfs 0.259 af
Primary=0.58 cfs 0.135 af Secondary=3.22 cfs 0.124 af Outflow=3.50 cfs 0.259 af

Pond 202: WQ-A SC-740 Peak Elev=49.52' Storage=0.032 af Inflow=0.58 cfs 0.135 af
Outflow=0.13 cfs 0.135 af

Pond 203: QP-A SC-740 Peak Elev=49.07' Storage=0.068 af Inflow=3.22 cfs 0.124 af
Discarded=0.27 cfs 0.124 af Primary=0.00 cfs 0.000 af Outflow=0.27 cfs 0.124 af

Pond 205: ByPass Peak Elev=47.39' Inflow=2.21 cfs 0.161 af
Primary=0.29 cfs 0.070 af Secondary=2.16 cfs 0.091 af Outflow=2.21 cfs 0.161 af

Pond 206: WQ-B SC-740 Peak Elev=47.39' Storage=0.011 af Inflow=0.29 cfs 0.070 af
Outflow=0.06 cfs 0.070 af

Pond 207: QP-B SC-740 Peak Elev=47.39' Storage=0.050 af Inflow=2.16 cfs 0.091 af
Discarded=0.22 cfs 0.091 af Primary=0.00 cfs 0.000 af Outflow=0.22 cfs 0.091 af

Pond 212P: Grass Depression Peak Elev=48.16' Storage=22 cf Inflow=0.20 cfs 0.023 af
Discarded=0.03 cfs 0.016 af Primary=0.17 cfs 0.007 af Outflow=0.20 cfs 0.023 af

Link 101: DP-1: Existing Catch Basin Inflow=1.10 cfs 0.079 af
Primary=1.10 cfs 0.079 af

Link 213: DP-2: Offsite North Inflow=0.17 cfs 0.007 af
Primary=0.17 cfs 0.007 af

Summary for Subcatchment 100: Post-01

Runoff = 1.10 cfs @ 12.09 hrs, Volume= 0.079 af, Depth= 5.85"
Routed to Link 101 : DP-1: Existing Catch Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.76"

Area (ac)	CN	Description
0.061	39	>75% Grass cover, Good, HSG A
0.101	98	Impervious, HSG A
0.000	98	Offsite Impervious, HSG A
0.162	76	Weighted Average
0.061	39	37.55% Pervious Area
0.101	98	62.45% Impervious Area

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

Summary for Subcatchment 200: Post-02

Runoff = 3.50 cfs @ 12.08 hrs, Volume= 0.259 af, Depth= 6.95"
Routed to Pond 201 : ByPass

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.76"

Area (ac)	CN	Description
0.099	39	>75% Grass cover, Good, HSG A
0.349	98	Impervious, HSG A
0.000	98	Offsite Impervious, HSG A
0.448	85	Weighted Average
0.099	39	22.04% Pervious Area
0.349	98	77.96% Impervious Area

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

Summary for Subcatchment 204: Post-03

Runoff = 2.21 cfs @ 12.09 hrs, Volume= 0.161 af, Depth= 6.46"
Routed to Pond 205 : ByPass

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.76"

Area (ac)	CN	Description
0.085	39	>75% Grass cover, Good, HSG A
0.210	98	Impervious, HSG A
0.003	98	Offsite Impervious, HSG A
0.298	81	Weighted Average
0.085	39	28.51% Pervious Area
0.213	98	71.49% Impervious Area

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

Summary for Subcatchment 212: Post-04

Runoff = 0.20 cfs @ 12.22 hrs, Volume= 0.023 af, Depth= 1.60"
Routed to Pond 212P : Grass Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.76"

Area (ac)	CN	Description
0.173	39	>75% Grass cover, Good, HSG A
0.002	98	Offsite Impervious, HSG A
0.175	40	Weighted Average
0.173	39	98.71% Pervious Area
0.002	98	1.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0300	0.14		**Sheet Flow, A** Grass: Dense n= 0.240 P2= 3.40"
1.4	115	0.0070	1.35		**Shallow Concentrated Flow, B** Unpaved Kv= 16.1 fps
13.2	215	Total			

Summary for Pond 201: ByPass

Inflow Area = 0.448 ac, 77.96% Impervious, Inflow Depth = 6.95" for 100-Year event
Inflow = 3.50 cfs @ 12.08 hrs, Volume= 0.259 af
Outflow = 3.50 cfs @ 12.08 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min
Primary = 0.58 cfs @ 12.24 hrs, Volume= 0.135 af
Routed to Pond 202 : WQ-A SC-740
Secondary = 3.22 cfs @ 12.09 hrs, Volume= 0.124 af
Routed to Pond 203 : QP-A SC-740

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 49.05' @ 12.75 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	45.60'	**6.00" Round WQ** L= 6.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 45.60' / 45.54' S= 0.0094 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 3	46.60'	**4.0' long ByPass Weir** 2 End Contraction(s)
#3	Secondary	45.68'	**15.00" Round QP** L= 7.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 45.68' / 45.61' S= 0.0093 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=0.55 cfs @ 12.24 hrs HW=47.70' TW=47.37' (Dynamic Tailwater)
└─**1=WQ** (Inlet Controls 0.55 cfs @ 2.78 fps)

Secondary OutFlow Max=3.21 cfs @ 12.09 hrs HW=47.00' TW=46.61' (Dynamic Tailwater)
└─**3=QP** (Passes 3.21 cfs of 3.66 cfs potential flow)
└─**2=ByPass Weir** (Weir Controls 3.21 cfs @ 2.06 fps)

Summary for Pond 202: WQ-A SC-740

Inflow Area = 0.448 ac, 77.96% Impervious, Inflow Depth = 3.62" for 100-Year event
Inflow = 0.58 cfs @ 12.24 hrs, Volume= 0.135 af
Outflow = 0.13 cfs @ 12.62 hrs, Volume= 0.135 af, Atten= 78%, Lag= 22.6 min
Discarded = 0.13 cfs @ 12.62 hrs, Volume= 0.135 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 49.52' @ 12.66 hrs Surf.Area= 0.016 ac Storage= 0.032 af

Plug-Flow detention time= 62.5 min calculated for 0.135 af (100% of inflow)
Center-of-Mass det. time= 62.5 min (877.5 - 815.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	45.00'	0.015 af	**11.00'W x 60.58'L x 3.50'H Field A** 0.054 af Overall - 0.017 af Embedded = 0.037 af x 40.0% Voids
#2A	45.50'	0.017 af	**ADS_StormTech SC-740 +Cap** x 16 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 16 Chambers in 2 Rows
#3	48.50'	0.001 af	**4.00'D x 3.00'H Vertical Cone/Cylinder**
		0.032 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	45.00'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.13 cfs @ 12.62 hrs HW=48.56' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.13 cfs)

Summary for Pond 203: QP-A SC-740

Inflow	=	3.22 cfs @	12.09 hrs,	Volume=	0.124 af
Outflow	=	0.27 cfs @	12.60 hrs,	Volume=	0.124 af, Atten= 92%, Lag= 30.7 min
Discarded	=	0.27 cfs @	12.60 hrs,	Volume=	0.124 af
Primary	=	0.00 cfs @	0.00 hrs,	Volume=	0.000 af

Routed to Link 213 : DP-2: Offsite North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 49.07' @ 12.71 hrs Surf.Area= 0.032 ac Storage= 0.068 af

Plug-Flow detention time= 113.1 min calculated for 0.124 af (100% of inflow)
Center-of-Mass det. time= 113.1 min (870.5 - 757.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	45.00'	0.029 af	**20.50'W x 67.70'L x 3.50'H Field A** 0.112 af Overall - 0.038 af Embedded = 0.074 af x 40.0% Voids
#2A	45.50'	0.038 af	**ADS_StormTech SC-740 +Cap** x 36 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 36 Chambers in 4 Rows
#3	48.50'	0.001 af	**4.00'D x 3.00'H Vertical Cone/Cylinder**
		0.068 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	45.00'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#2	Primary	51.01'	**1.20" x 21.00" Horiz. Grate Outlet (CB-1) X 10.00** C= 0.600 in 24.00" x 24.00" Grate (44% open area) Limited to weir flow at low heads

Discarded OutFlow Max=0.27 cfs @ 12.60 hrs HW=48.59' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=45.00' TW=0.00' (Dynamic Tailwater)
└**2=Grate Outlet (CB-1)** (Controls 0.00 cfs)

Summary for Pond 205: ByPass

Inflow Area = 0.298 ac, 71.49% Impervious, Inflow Depth = 6.46" for 100-Year event

Inflow	=	2.21 cfs @	12.09 hrs,	Volume=	0.161 af
Outflow	=	2.21 cfs @	12.09 hrs,	Volume=	0.161 af, Atten= 0%, Lag= 0.0 min
Primary	=	0.29 cfs @	11.62 hrs,	Volume=	0.070 af

Routed to Pond 206 : WQ-B SC-740

Secondary	=	2.16 cfs @	12.09 hrs,	Volume=	0.091 af

Routed to Pond 207 : QP-B SC-740

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 47.39' @ 12.66 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	45.12'	**6.00" Round WQ** L= 7.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 45.12' / 45.04' S= 0.0107 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#2	Device 3	46.90'	**4.0' long ByPass Weir** 2 End Contraction(s)
#3	Secondary	45.19'	**12.00" Round QP** L= 8.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 45.19' / 45.10' S= 0.0101 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.20 cfs @ 11.62 hrs HW=46.88' TW=46.83' (Dynamic Tailwater)
└─**1=WQ** (Inlet Controls 0.20 cfs @ 1.02 fps)

Secondary OutFlow Max=2.16 cfs @ 12.09 hrs HW=47.20' TW=45.83' (Dynamic Tailwater)
└─**3=QP** (Passes 2.16 cfs of 4.43 cfs potential flow)
└─**2=ByPass Weir** (Weir Controls 2.16 cfs @ 1.80 fps)

Summary for Pond 206: WQ-B SC-740

Inflow Area =	0.298 ac, 71.49% Impervious, Inflow Depth = 2.82" for 100-Year event			
Inflow =	0.29 cfs @	11.62 hrs, Volume=	0.070 af	
Outflow =	0.06 cfs @	9.77 hrs, Volume=	0.070 af, Atten= 81%, Lag= 0.0 min	
Discarded =	0.06 cfs @	9.77 hrs, Volume=	0.070 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 47.39' @ 12.66 hrs Surf.Area= 0.007 ac Storage= 0.011 af

Plug-Flow detention time= 80.4 min calculated for 0.070 af (100% of inflow)
Center-of-Mass det. time= 80.4 min (937.8 - 857.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0.007 af	**6.25'W x 46.34'L x 3.50'H Field A** 0.023 af Overall - 0.006 af Embedded = 0.017 af x 40.0% Voids
#2A	45.00'	0.006 af	**ADS_StormTech SC-740 +Cap** x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap
		0.013 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	44.50'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.06 cfs @ 9.77 hrs HW=44.54' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.06 cfs)

Summary for Pond 207: QP-B SC-740

Inflow	=	2.16 cfs @	12.09 hrs,	Volume=	0.091 af
Outflow	=	0.22 cfs @	11.73 hrs,	Volume=	0.091 af, Atten= 90%, Lag= 0.0 min
Discarded	=	0.22 cfs @	11.73 hrs,	Volume=	0.091 af
Primary	=	0.00 cfs @	0.00 hrs,	Volume=	0.000 af

Routed to Link 213 : DP-2: Offsite North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 47.39' @ 12.66 hrs Surf.Area= 0.027 ac Storage= 0.050 af

Plug-Flow detention time= 95.0 min calculated for 0.091 af (100% of inflow)
Center-of-Mass det. time= 94.9 min (845.7 - 750.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	44.50'	0.025 af	**25.25'W x 46.34'L x 3.50'H Field A** 0.094 af Overall - 0.032 af Embedded = 0.062 af x 40.0% Voids
#2A	45.00'	0.032 af	**ADS_StormTech SC-740 +Cap** x 30 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 30 Chambers in 5 Rows
		0.057 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	44.50'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#2	Primary	51.35'	**1.20" x 21.00" Horiz. Orifice/Grate X 10.00** C= 0.600 in 24.00" x 24.00" Grate (44% open area) Limited to weir flow at low heads

Discarded OutFlow Max=0.22 cfs @ 11.73 hrs HW=44.57' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.22 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.50' TW=0.00' (Dynamic Tailwater)
└─**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond 212P: Grass Depression

Inflow Area = 0.175 ac, 1.29% Impervious, Inflow Depth = 1.60" for 100-Year event

Inflow	=	0.20 cfs @	12.22 hrs,	Volume=	0.023 af
Outflow	=	0.20 cfs @	12.23 hrs,	Volume=	0.023 af, Atten= 0%, Lag= 0.7 min
Discarded	=	0.03 cfs @	12.23 hrs,	Volume=	0.016 af
Primary	=	0.17 cfs @	12.23 hrs,	Volume=	0.007 af

Routed to Link 213 : DP-2: Offsite North

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 48.16' @ 12.23 hrs Surf.Area= 149 sf Storage= 22 cf

Plug-Flow detention time= 3.3 min calculated for 0.023 af (100% of inflow)
Center-of-Mass det. time= 3.3 min (907.1 - 903.8)

Volume	Invert	Avail.Storage	Storage Description
#1	48.00'	82 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
48.00	125	50.0	0	0	125
48.50	208	59.0	82	82	208

Device	Routing	Invert	Outlet Devices
#1	Discarded	48.00'	**8.270 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#2	Primary	48.10'	**5.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.03 cfs @ 12.23 hrs HW=48.16' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.17 cfs @ 12.23 hrs HW=48.16' TW=0.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.17 cfs @ 0.57 fps)

Summary for Link 101: DP-1: Existing Catch Basin

Inflow Area = 0.162 ac, 62.45% Impervious, Inflow Depth = 5.85" for 100-Year event
Inflow = 1.10 cfs @ 12.09 hrs, Volume= 0.079 af
Primary = 1.10 cfs @ 12.09 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Summary for Link 213: DP-2: Offsite North

Inflow Area = 0.175 ac, 1.29% Impervious, Inflow Depth = 0.51" for 100-Year event
Inflow = 0.17 cfs @ 12.23 hrs, Volume= 0.007 af
Primary = 0.17 cfs @ 12.23 hrs, Volume= 0.007 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs