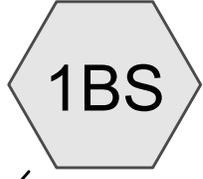




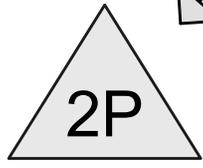
uplands



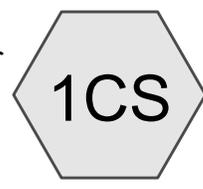
driveways



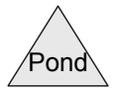
wetlands



stone trench



uplands



**1851post2**

Type III 24-hr 10 yr Rainfall=4.80"

Prepared by {enter your company name here}

Page 2

HydroCAD® 7.00 s/n 002583 © 1986-2003 Applied Microcomputer Systems

10/1/2012

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1AS: uplands**

Runoff Area=2.980 ac Runoff Depth=0.01"  
Tc=5.0 min CN=32 Runoff=0.01 cfs 0.001 af

**Subcatchment 1BS: driveways**

Runoff Area=24,986 sf Runoff Depth=4.24"  
Tc=5.0 min CN=98 Runoff=2.71 cfs 0.203 af

**Subcatchment 1CS: uplands**

Runoff Area=10,964 sf Runoff Depth=0.01"  
Tc=10.0 min CN=32 Runoff=0.00 cfs 0.000 af

**Subcatchment 2S: wetlands**

Runoff Area=8.140 ac Runoff Depth=3.09"  
Tc=0.0 min CN=86 Runoff=35.50 cfs 2.097 af

**Pond 2P: stone trench**

Peak Elev=190.85' Storage=2,796 cf Inflow=2.71 cfs 0.203 af  
Outflow=0.35 cfs 0.202 af

**Total Runoff Area = 11.945 ac Runoff Volume = 2.301 af Average Runoff Depth = 2.31"**

**1851post2**

Type III 24-hr 10 yr Rainfall=4.80"

Prepared by {enter your company name here}

Page 3

HydroCAD® 7.00 s/n 002583 © 1986-2003 Applied Microcomputer Systems

10/1/2012

**Subcatchment 1AS: uplands**

Runoff = 0.01 cfs @ 20.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 yr Rainfall=4.80"

Area (ac)	CN	Description
2.980	32	Woods/grass comb., Good, HSG A

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, driveway</b>

**Subcatchment 1BS: driveways**

Runoff = 2.71 cfs @ 12.07 hrs, Volume= 0.203 af, Depth= 4.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 yr Rainfall=4.80"

Area (sf)	CN	Description
24,986	98	Paved parking & roofs

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, driveway</b>

**Subcatchment 1CS: uplands**

Runoff = 0.00 cfs @ 20.00 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 yr Rainfall=4.80"

Area (sf)	CN	Description
10,964	32	Woods/grass comb., Good, HSG A

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					<b>Direct Entry, down bank</b>

**Subcatchment 2S: wetlands**

Runoff = 35.50 cfs @ 12.00 hrs, Volume= 2.097 af, Depth= 3.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 yr Rainfall=4.80"

**1851post2**

Type III 24-hr 10 yr Rainfall=4.80"

Prepared by {enter your company name here}

Page 4

HydroCAD® 7.00 s/n 002583 © 1986-2003 Applied Microcomputer Systems

10/1/2012

Area (ac)	CN	Description
8.140	86	Pasture/grassland/range, Poor, HSG C

**Pond 2P: stone trench**

Inflow Area = 0.825 ac, Inflow Depth = 2.95" for 10 yr event  
 Inflow = 2.71 cfs @ 12.07 hrs, Volume= 0.203 af  
 Outflow = 0.35 cfs @ 11.65 hrs, Volume= 0.202 af, Atten= 87%, Lag= 0.0 min  
 Discarded = 0.35 cfs @ 11.65 hrs, Volume= 0.202 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 190.85' @ 12.60 hrs Surf.Area= 7,500 sf Storage= 2,796 cf  
 Plug-Flow detention time= 52.1 min calculated for 0.202 af (100% of inflow)  
 Center-of-Mass det. time= 51.4 min ( 786.2 - 734.8 )

#	Invert	Avail.Storage	Storage Description
1	189.92'	6,000 cf	<b>Custom Stage Data (Prismatic)</b> Listed below x 2 15,000 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
189.92	3,750	0	0
191.92	3,750	7,500	7,500

#	Routing	Invert	Outlet Devices
1	Discarded	0.00'	<b>0.002800 fpm Exfiltration over entire Surface area</b>

**Discarded OutFlow** Max=0.35 cfs @ 11.65 hrs HW=189.95' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.35 cfs)

**1851post2**

Type III 24-hr 25 yr Rainfall=6.00"

Prepared by {enter your company name here}

Page 5

HydroCAD® 7.00 s/n 002583 © 1986-2003 Applied Microcomputer Systems

10/1/2012

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1AS: uplands**

Runoff Area=2.980 ac Runoff Depth=0.10"  
Tc=5.0 min CN=32 Runoff=0.05 cfs 0.024 af

**Subcatchment 1BS: driveways**

Runoff Area=24,986 sf Runoff Depth=5.33"  
Tc=5.0 min CN=98 Runoff=3.39 cfs 0.255 af

**Subcatchment 1CS: uplands**

Runoff Area=10,964 sf Runoff Depth=0.10"  
Tc=10.0 min CN=32 Runoff=0.00 cfs 0.002 af

**Subcatchment 2S: wetlands**

Runoff Area=8.140 ac Runoff Depth=4.17"  
Tc=0.0 min CN=86 Runoff=47.12 cfs 2.826 af

**Pond 2P: stone trench**

Peak Elev=191.21' Storage=3,860 cf Inflow=3.39 cfs 0.257 af  
Outflow=0.35 cfs 0.257 af

**Total Runoff Area = 11.945 ac Runoff Volume = 3.107 af Average Runoff Depth = 3.12"**

**1851post2**

Type III 24-hr 25 yr Rainfall=6.00"

Prepared by {enter your company name here}

Page 6

HydroCAD® 7.00 s/n 002583 © 1986-2003 Applied Microcomputer Systems

10/1/2012

**Subcatchment 1AS: uplands**

Runoff = 0.05 cfs @ 14.81 hrs, Volume= 0.024 af, Depth= 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 yr Rainfall=6.00"

Area (ac)	CN	Description
2.980	32	Woods/grass comb., Good, HSG A

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, driveway</b>

**Subcatchment 1BS: driveways**

Runoff = 3.39 cfs @ 12.07 hrs, Volume= 0.255 af, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 yr Rainfall=6.00"

Area (sf)	CN	Description
24,986	98	Paved parking & roofs

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, driveway</b>

**Subcatchment 1CS: uplands**

Runoff = 0.00 cfs @ 14.89 hrs, Volume= 0.002 af, Depth= 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 yr Rainfall=6.00"

Area (sf)	CN	Description
10,964	32	Woods/grass comb., Good, HSG A

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					<b>Direct Entry, down bank</b>

**Subcatchment 2S: wetlands**

Runoff = 47.12 cfs @ 12.00 hrs, Volume= 2.826 af, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25 yr Rainfall=6.00"

**1851post2**

Type III 24-hr 25 yr Rainfall=6.00"

Prepared by {enter your company name here}

Page 7

HydroCAD® 7.00 s/n 002583 © 1986-2003 Applied Microcomputer Systems

10/1/2012

Area (ac)	CN	Description
8.140	86	Pasture/grassland/range, Poor, HSG C

**Pond 2P: stone trench**

Inflow Area = 0.825 ac, Inflow Depth = 3.73" for 25 yr event  
 Inflow = 3.39 cfs @ 12.07 hrs, Volume= 0.257 af  
 Outflow = 0.35 cfs @ 11.45 hrs, Volume= 0.257 af, Atten= 90%, Lag= 0.0 min  
 Discarded = 0.35 cfs @ 11.45 hrs, Volume= 0.257 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 191.21' @ 12.77 hrs Surf.Area= 7,500 sf Storage= 3,860 cf  
 Plug-Flow detention time= 78.0 min calculated for 0.256 af (100% of inflow)  
 Center-of-Mass det. time= 77.2 min ( 812.5 - 735.3 )

#	Invert	Avail.Storage	Storage Description
1	189.92'	6,000 cf	<b>Custom Stage Data (Prismatic)</b> Listed below x 2 15,000 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
189.92	3,750	0	0
191.92	3,750	7,500	7,500

#	Routing	Invert	Outlet Devices
1	Discarded	0.00'	<b>0.002800 fpm Exfiltration over entire Surface area</b>

**Discarded OutFlow** Max=0.35 cfs @ 11.45 hrs HW=189.94' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.35 cfs)