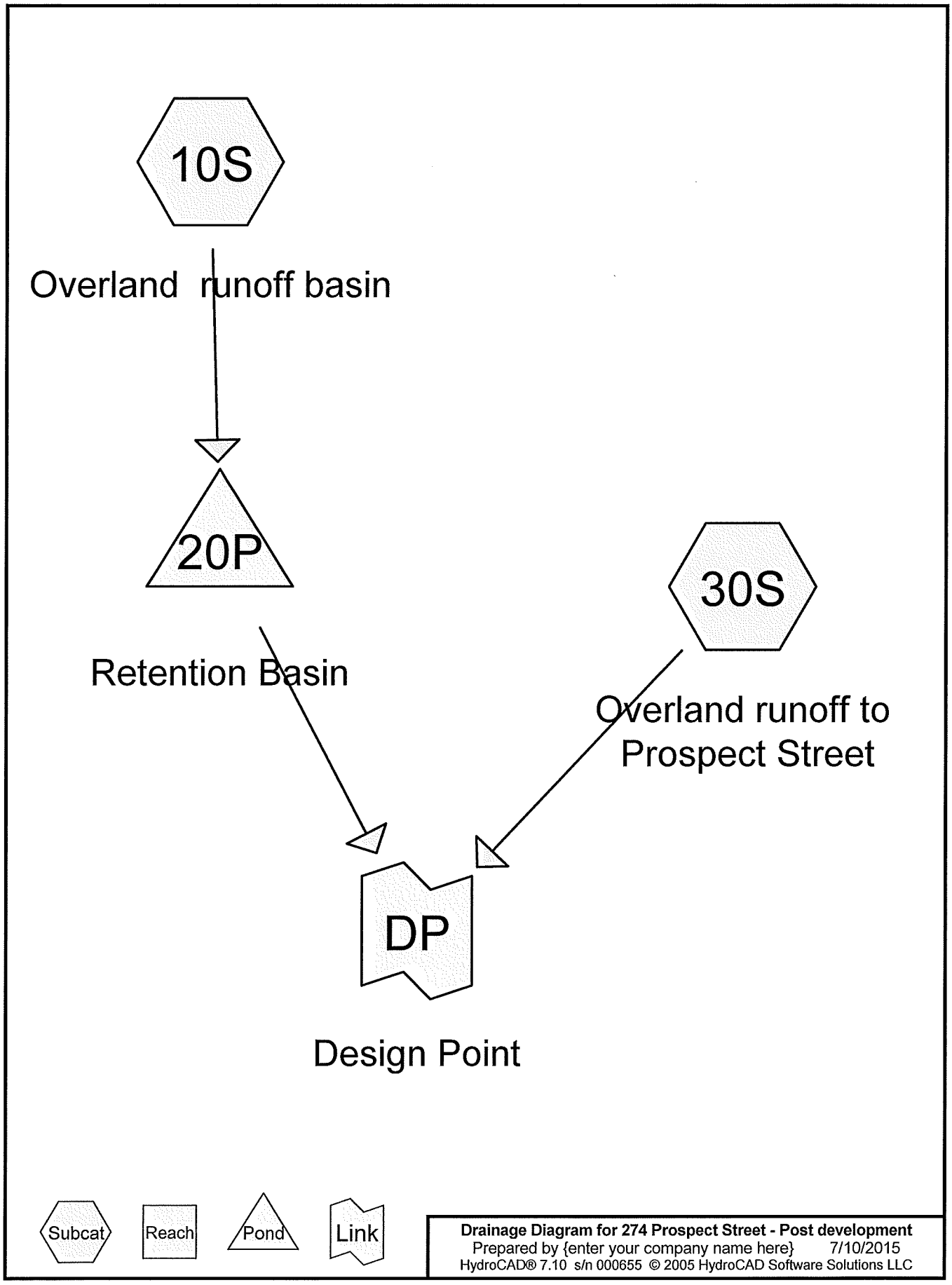
PROPOSED CONDITIONS

2 YEAR STORM


10S
Overland runoff basin
20P
Retention Basin
30S
Overland runoff to
Prospect Street
DP
Design Point
Subcat
Reach
Pond
Link
Drainage Diagram for 274 Prospect Street - Post development
Prepared by {enter your company name here} 7/10/2015
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274 Prospect Street - Post development2
Prepared by {enter your company name here}
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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 10S: Overland runoff basin Runoff Area=3.290 ac Runoff Depth>1.21"
Flow Length=387' Tc=5.0 min CN=81 Runoff=5.03 cfs 0.333 af

Subcatchment 30S: Overland runoff to Prospect Street Runoff Area=0.570 ac Runoff Depth>0.73"
Flow Length=20' Tc=5.0 min CN=72 Runoff=0.49 cfs 0.035 af

Pond 20P: Retention Basin Peak Elev=521.07' Storage=4,601 cf Inflow=5.03 cfs 0.333 af
Outflow=2.48 cfs 0.278 af

Link DP: Design Point Inflow=2.75 cfs 0.313 af
Primary=2.75 cfs 0.313 af

Total Runoff Area = 3.860 ac Runoff Volume = 0.367 af Average Runoff Depth = 1.14"

Subcatchment 10S: Overland runoff basin

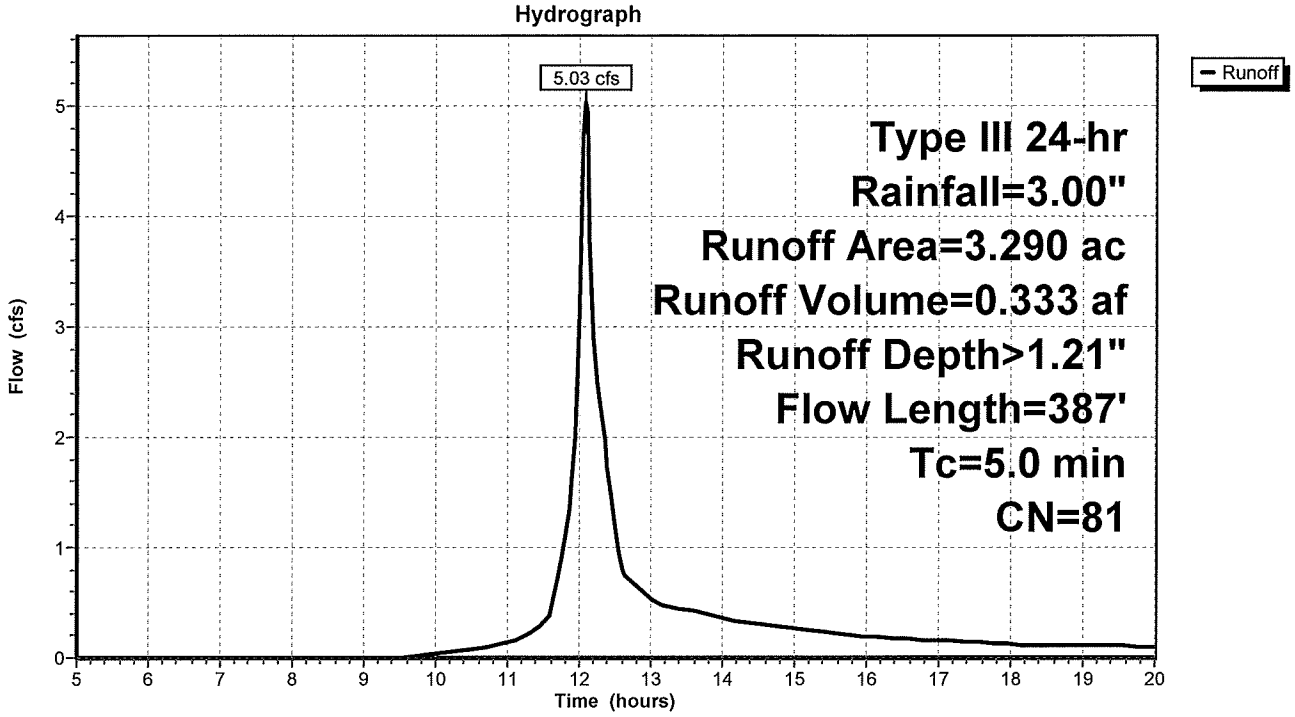
Runoff = 5.03 cfs @ 12.08 hrs, Volume= 0.333 af, Depth> 1.21"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=3.00"

Area (ac)	CN	Description
0.990	98	Paved parking & roofs
2.000	74	>75% Grass cover, Good, HSG C
0.300	71	Meadow, non-grazed, HSG C
3.290	81	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	50	0.1600	0.2		**Sheet Flow, Path 1** Grass: Dense n= 0.240 P2= 3.20"
0.0	30	0.4667	11.0		**Shallow Concentrated Flow, Path 2** Unpaved Kv= 16.1 fps
1.1	227	0.0176	3.4	20.50	**Channel Flow, Path 3** Area= 6.0 sf Perim= 16.0' r= 0.38' n= 0.030 Earth, grassed & winding
0.3	80	0.0100	5.3	6.46	**Circular Channel (pipe), Path 4** Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
5.0	387	Total			

Subcatchment 10S: Overland runoff basin



Hydrograph for Subcatchment 10S: Overland runoff basin

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.22	0.00	0.00
6.25	0.23	0.00	0.00
6.50	0.24	0.00	0.00
6.75	0.26	0.00	0.00
7.00	0.27	0.00	0.00
7.25	0.29	0.00	0.00
7.50	0.30	0.00	0.00
7.75	0.32	0.00	0.00
8.00	0.34	0.00	0.00
8.25	0.36	0.00	0.00
8.50	0.39	0.00	0.00
8.75	0.41	0.00	0.00
9.00	0.44	0.00	0.00
9.25	0.47	0.00	0.00
9.50	0.50	0.00	0.01
9.75	0.53	0.00	0.02
10.00	0.57	0.00	0.03
10.25	0.61	0.01	0.05
10.50	0.65	0.01	0.08
10.75	0.70	0.02	0.10
11.00	0.75	0.03	0.14
11.25	0.81	0.04	0.20
11.50	0.89	0.07	0.30
11.75	1.07	0.12	0.90
12.00	1.50	0.31	**3.16**
12.25	1.93	0.56	**2.49**
12.50	2.11	0.67	1.20
12.75	2.19	0.73	0.68
13.00	2.25	0.77	0.54
13.25	2.30	0.80	0.47
13.50	2.35	0.84	0.43
13.75	2.39	0.87	0.39
14.00	2.43	0.89	0.36
14.25	2.47	0.92	0.33
14.50	2.50	0.94	0.31
14.75	2.53	0.97	0.29
15.00	2.56	0.99	0.27
15.25	2.59	1.01	0.26
15.50	2.61	1.02	0.24
15.75	2.64	1.04	0.22
16.00	2.66	1.06	0.20
16.25	2.68	1.07	0.18
16.50	2.70	1.08	0.17
16.75	2.71	1.10	0.17
17.00	2.73	1.11	0.16
17.25	2.74	1.12	0.15
17.50	2.76	1.13	0.14
17.75	2.77	1.14	0.13
18.00	2.78	1.15	0.12
18.25	2.80	1.16	0.12
18.50	2.81	1.17	0.11
18.75	2.82	1.18	0.11
19.00	2.83	1.18	0.11
19.25	2.84	1.19	0.11
19.50	2.85	1.20	0.10
19.75	2.86	1.21	0.10
20.00	**2.87**	**1.22**	0.10

Subcatchment 30S: Overland runoff to Prospect Street

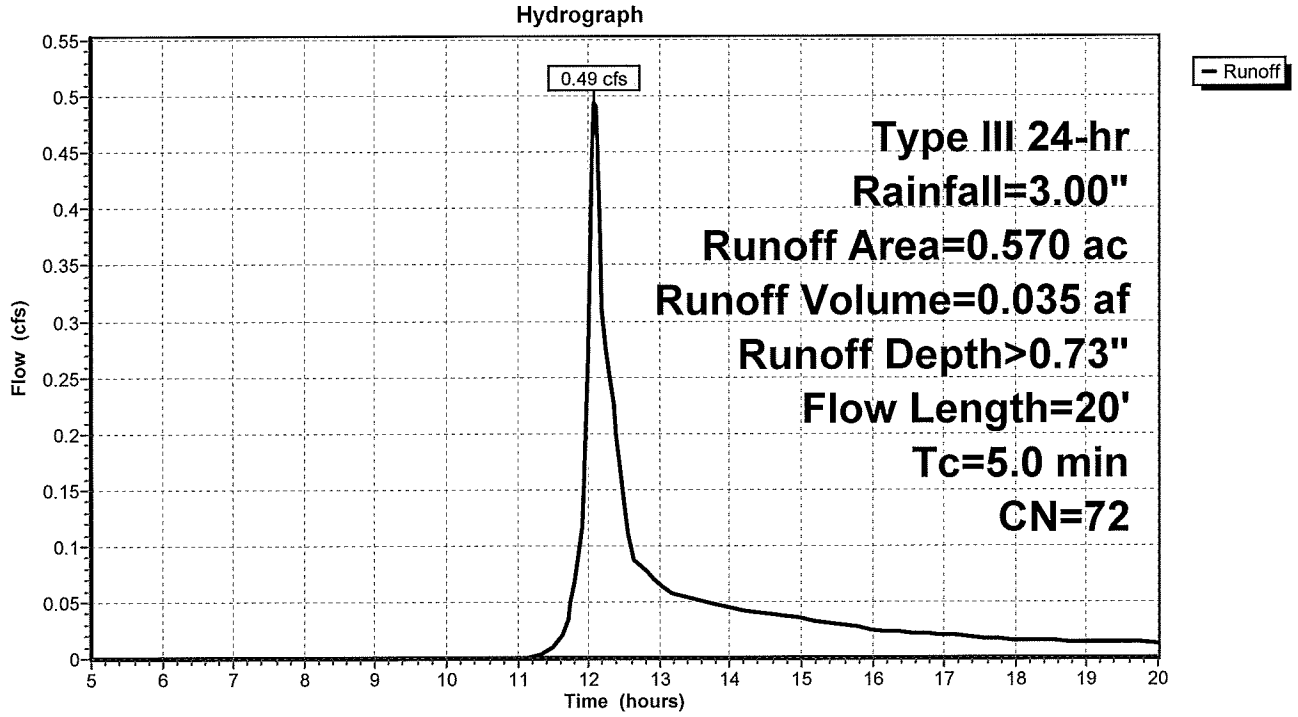
Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=3.00"

Area (ac)	CN	Description
0.310	71	Meadow, non-grazed, HSG C
0.260	74	>75% Grass cover, Good, HSG C
0.570	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	20		0.1		**Direct Entry, Path 1**

Subcatchment 30S: Overland runoff to Prospect Street



Hydrograph for Subcatchment 30S: Overland runoff to Prospect Street

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.17	0.00	0.00
5.25	0.18	0.00	0.00
5.50	0.19	0.00	0.00
5.75	0.20	0.00	0.00
6.00	0.22	0.00	0.00
6.25	0.23	0.00	0.00
6.50	0.24	0.00	0.00
6.75	0.26	0.00	0.00
7.00	0.27	0.00	0.00
7.25	0.29	0.00	0.00
7.50	0.30	0.00	0.00
7.75	0.32	0.00	0.00
8.00	0.34	0.00	0.00
8.25	0.36	0.00	0.00
8.50	0.39	0.00	0.00
8.75	0.41	0.00	0.00
9.00	0.44	0.00	0.00
9.25	0.47	0.00	0.00
9.50	0.50	0.00	0.00
9.75	0.53	0.00	0.00
10.00	0.57	0.00	0.00
10.25	0.61	0.00	0.00
10.50	0.65	0.00	0.00
10.75	0.70	0.00	0.00
11.00	0.75	0.00	0.00
11.25	0.81	0.00	0.00
11.50	0.89	0.00	0.01
11.75	1.07	0.02	0.05
12.00	1.50	0.11	**0.27**
12.25	1.93	0.27	**0.27**
12.50	2.11	0.34	0.14
12.75	2.19	0.37	0.08
13.00	2.25	0.40	0.06
13.25	2.30	0.43	0.06
13.50	2.35	0.45	0.05
13.75	2.39	0.47	0.05
14.00	2.43	0.49	0.04
14.25	2.47	0.51	0.04
14.50	2.50	0.53	0.04
14.75	2.53	0.55	0.04
15.00	2.56	0.56	0.03
15.25	2.59	0.58	0.03
15.50	2.61	0.59	0.03
15.75	2.64	0.60	0.03
16.00	2.66	0.61	0.03
16.25	2.68	0.62	0.02
16.50	2.70	0.63	0.02
16.75	2.71	0.64	0.02
17.00	2.73	0.65	0.02
17.25	2.74	0.66	0.02
17.50	2.76	0.67	0.02
17.75	2.77	0.68	0.02
18.00	2.78	0.68	0.02
18.25	2.80	0.69	0.02
18.50	2.81	0.70	0.02
18.75	2.82	0.70	0.01
19.00	2.83	0.71	0.01
19.25	2.84	0.71	0.01
19.50	2.85	0.72	0.01
19.75	2.86	0.73	0.01
20.00	**2.87**	**0.73**	0.01

Pond 20P: Retention Basin

Inflow Area =	3.290 ac,	Inflow Depth >	1.21"		
Inflow =	5.03 cfs @	12.08 hrs,	Volume=	0.333 af	
Outflow =	2.48 cfs @	12.26 hrs,	Volume=	0.278 af,	Atten= 51%, Lag= 10.7 min
Primary =	2.48 cfs @	12.26 hrs,	Volume=	0.278 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 521.07' @ 12.26 hrs Surf.Area= 5,308 sf Storage= 4,601 cf
Plug-Flow detention time= 84.8 min calculated for 0.277 af (83% of inflow)
Center-of-Mass det. time= 38.5 min (841.4 - 802.9)

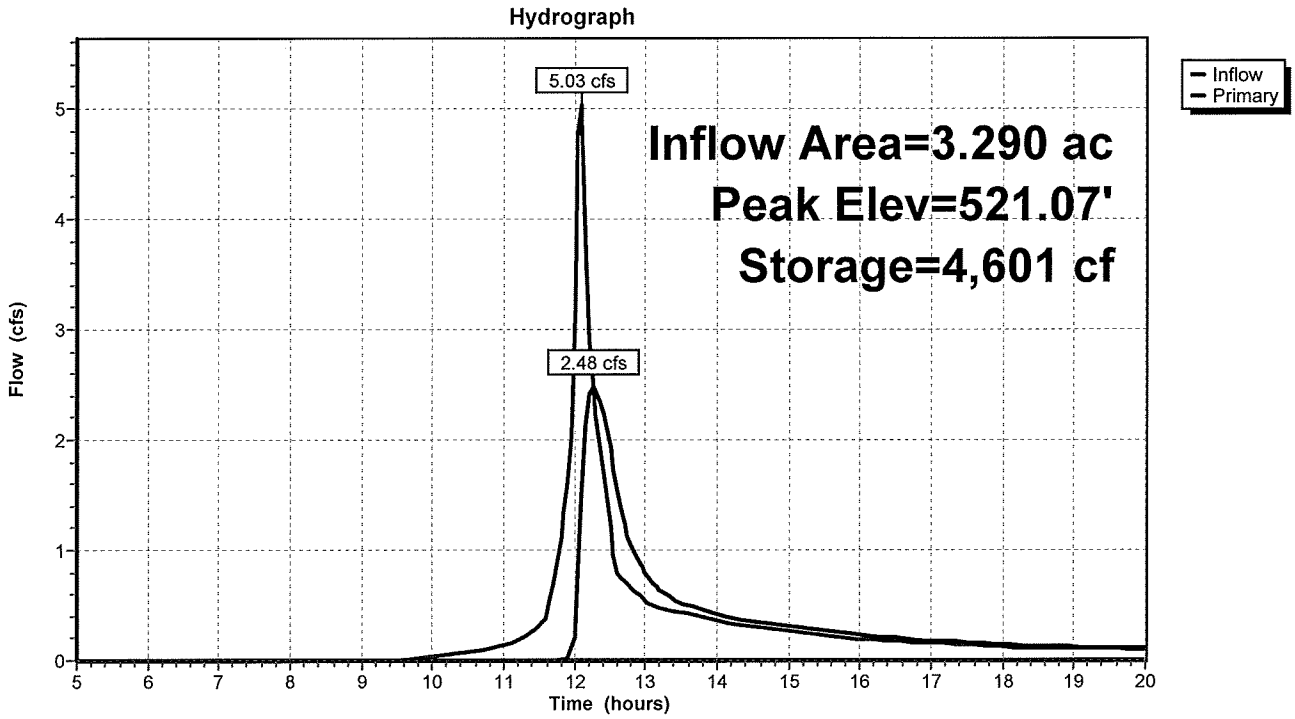
Volume	Invert	Avail.Storage	Storage Description
#1	520.00'	21,404 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
520.00	3,310	0	0
522.00	7,051	10,361	10,361
523.10	13,027	11,043	21,404

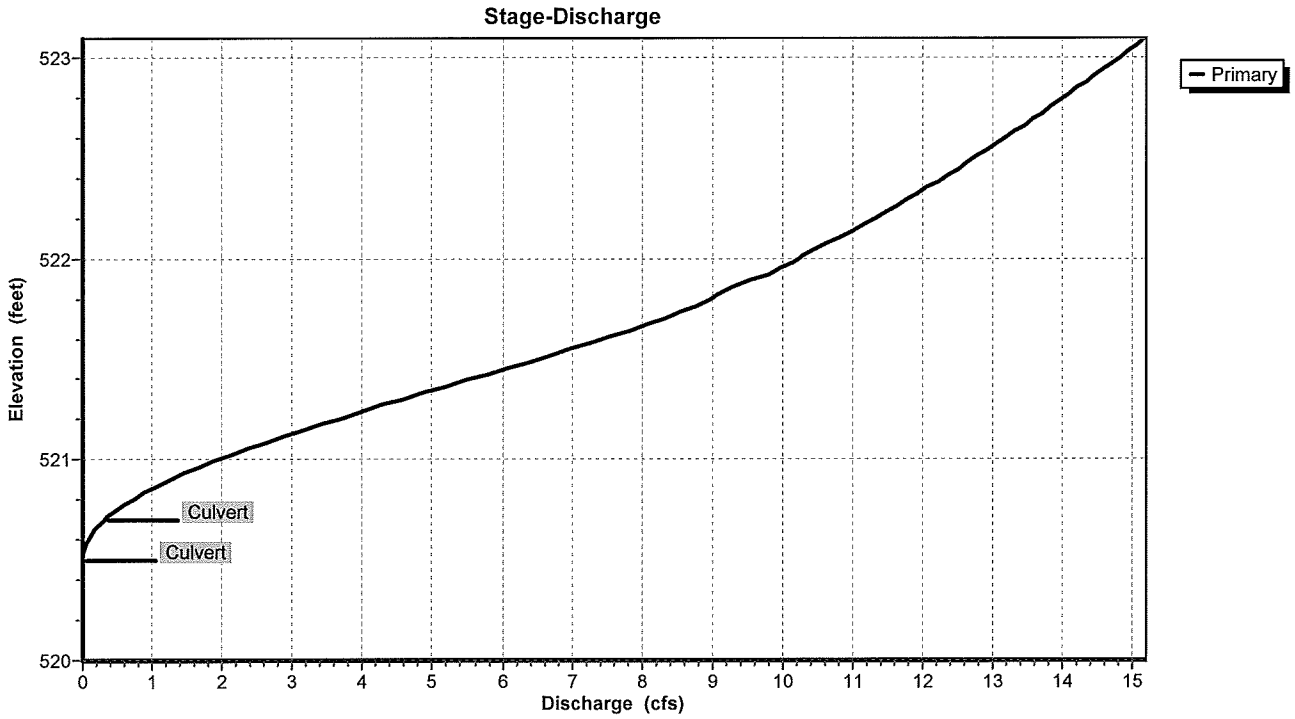
Device	Routing	Invert	Outlet Devices
#1	Primary	520.50'	**12.0" x 20.0' long Culvert X 2.00** Ke= 0.600 Outlet Invert= 520.30' S= 0.0100 '/' Cc= 0.900 n= 0.012
#2	Primary	520.70'	**12.0" x 18.0' long Culvert** Ke= 0.600 Outlet Invert= 520.52' S= 0.0100 '/' Cc= 0.900 n= 0.012

Primary OutFlow Max=2.47 cfs @ 12.26 hrs HW=521.07' (Free Discharge)
└─**1=Culvert** (Barrel Controls 2.00 cfs @ 3.1 fps)
└─**2=Culvert** (Barrel Controls 0.47 cfs @ 2.7 fps)

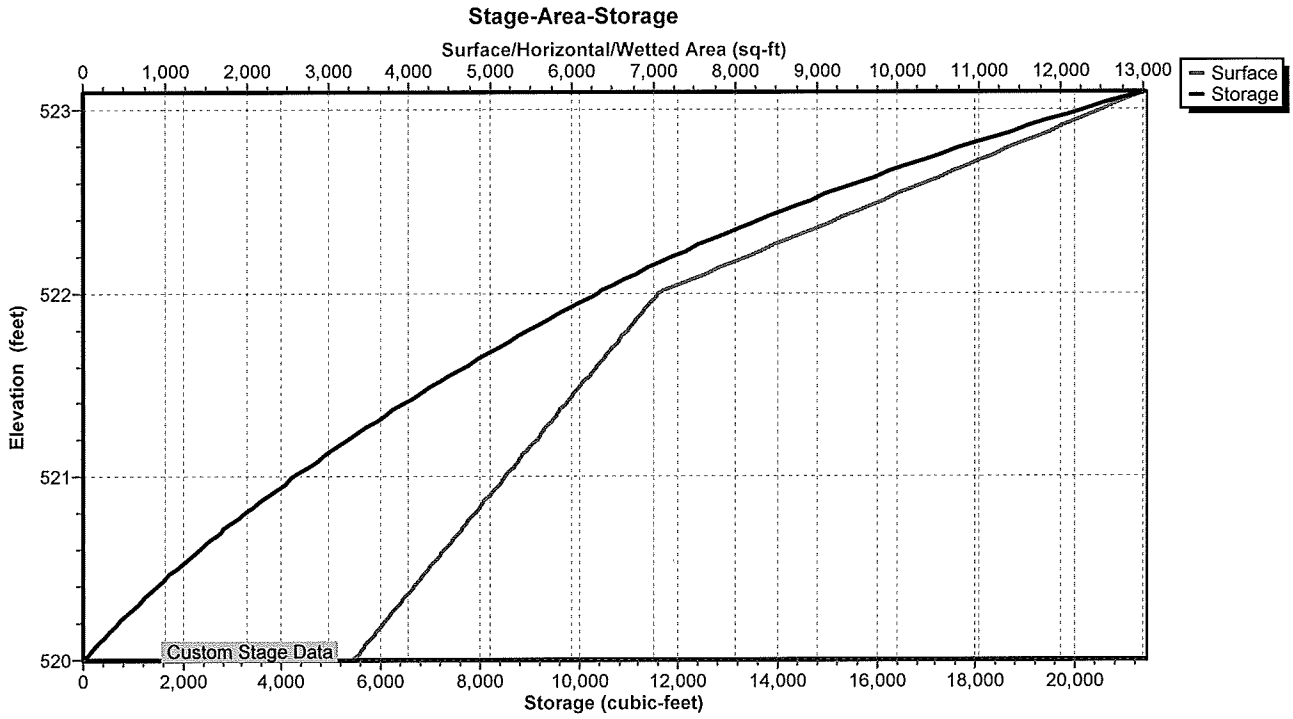
Pond 20P: Retention Basin



Pond 20P: Retention Basin



Pond 20P: Retention Basin



Hydrograph for Pond 20P: Retention Basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	520.00	0.00
5.50	0.00	0	520.00	0.00
6.00	0.00	0	520.00	0.00
6.50	0.00	0	520.00	0.00
7.00	0.00	0	520.00	0.00
7.50	0.00	0	520.00	0.00
8.00	0.00	0	520.00	0.00
8.50	0.00	0	520.00	0.00
9.00	0.00	0	520.00	0.00
9.50	0.01	2	520.00	0.00
10.00	0.03	37	520.01	0.00
10.50	0.08	132	520.04	0.00
11.00	0.14	320	520.09	0.00
11.50	0.30	691	520.20	0.00
12.00	**3.16**	**2,598**	**520.66**	**0.21**
12.50	**1.20**	**4,224**	**521.00**	**1.92**
13.00	0.54	3,334	520.82	0.79
13.50	0.43	3,052	520.76	0.52
14.00	0.36	2,923	520.73	0.42
14.50	0.31	2,834	520.71	0.35
15.00	0.27	2,770	520.70	0.31
15.50	0.24	2,708	520.69	0.27
16.00	0.20	2,643	520.67	0.23
16.50	0.17	2,585	520.66	0.20
17.00	0.16	2,544	520.65	0.18
17.50	0.14	2,506	520.64	0.16
18.00	0.12	2,468	520.63	0.14
18.50	0.11	2,437	520.63	0.13
19.00	0.11	2,417	520.62	0.12
19.50	0.10	2,402	520.62	0.11
20.00	0.10	2,387	520.61	0.11

Stage-Discharge for Pond 20P: Retention Basin

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
520.00	0.00	521.02	2.10	522.04	10.38	523.06	15.01
520.02	0.00	521.04	2.26	522.06	10.51	523.08	15.09
520.04	0.00	521.06	2.41	522.08	10.64	523.10	**15.16**
520.06	0.00	521.08	2.58	522.10	10.76		
520.08	0.00	521.10	2.74	522.12	10.89		
520.10	0.00	521.12	2.91	522.14	11.01		
520.12	0.00	521.14	3.09	522.16	11.11		
520.14	0.00	521.16	3.26	522.18	11.21		
520.16	0.00	521.18	3.44	522.20	11.31		
520.18	0.00	521.20	3.62	522.22	11.41		
520.20	0.00	521.22	3.81	522.24	11.51		
520.22	0.00	521.24	3.99	522.26	11.61		
520.24	0.00	521.26	4.18	522.28	11.71		
520.26	0.00	521.28	4.37	522.30	11.80		
520.28	0.00	521.30	4.56	522.32	11.90		
520.30	0.00	521.32	4.75	522.34	11.99		
520.32	0.00	521.34	4.94	522.36	12.09		
520.34	0.00	521.36	5.14	522.38	12.18		
520.36	0.00	521.38	5.33	522.40	12.27		
520.38	0.00	521.40	5.53	522.42	12.37		
520.40	0.00	521.42	5.72	522.44	12.46		
520.42	0.00	521.44	5.92	522.46	12.55		
520.44	0.00	521.46	6.12	522.48	12.64		
520.46	0.00	521.48	6.31	522.50	12.73		
520.48	0.00	521.50	6.50	522.52	12.82		
520.50	0.00	521.52	6.70	522.54	12.90		
520.52	0.00	521.54	6.89	522.56	12.99		
520.54	0.01	521.56	7.08	522.58	13.08		
520.56	0.03	521.58	7.26	522.60	13.16		
520.58	0.05	521.60	7.45	522.62	13.25		
520.60	0.08	521.62	7.63	522.64	13.33		
520.62	0.12	521.64	7.80	522.66	13.42		
520.64	0.16	521.66	7.98	522.68	13.50		
520.66	0.20	521.68	8.14	522.70	13.59		
520.68	0.26	521.70	8.30	522.72	13.67		
520.70	0.31	521.72	8.45	522.74	13.75		
520.72	0.38	521.74	8.59	522.76	13.83		
520.74	0.45	521.76	8.73	522.78	13.92		
520.76	0.52	521.78	8.87	522.80	14.00		
520.78	0.61	521.80	8.98	522.82	14.08		
520.80	0.70	521.82	9.07	522.84	14.16		
520.82	0.80	521.84	9.13	522.86	14.24		
520.84	0.91	521.86	9.30	522.88	14.32		
520.86	1.02	521.88	9.46	522.90	14.40		
520.88	1.14	521.90	9.62	522.92	14.47		
520.90	1.26	521.92	9.78	522.94	14.55		
520.92	1.39	521.94	9.90	522.96	14.63		
520.94	1.52	521.96	10.02	522.98	14.71		
520.96	1.66	521.98	10.12	523.00	14.78		
520.98	1.80	522.00	10.22	523.02	14.86		
521.00	1.95	522.02	10.31	523.04	14.94		

Stage-Area-Storage for Pond 20P: Retention Basin

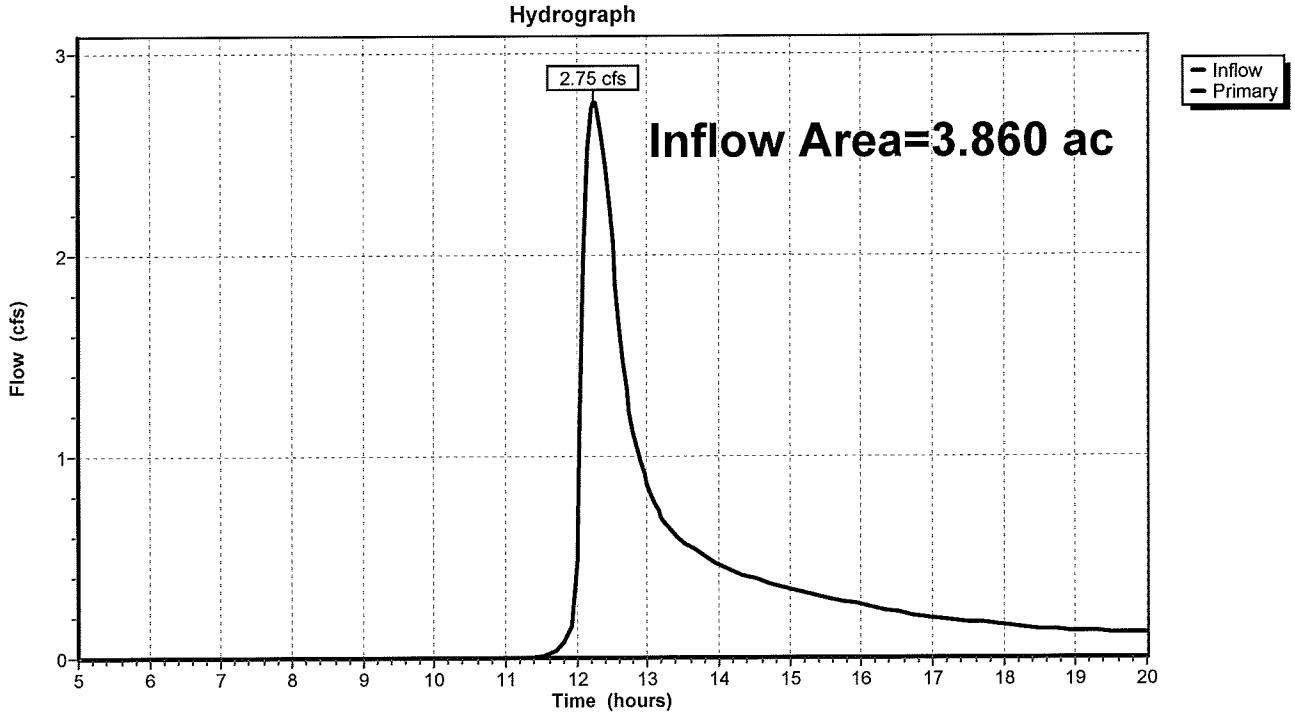
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
520.00	3,310	0
520.05	3,404	168
520.10	3,497	340
520.15	3,591	518
520.20	3,684	699
520.25	3,778	886
520.30	3,871	1,077
520.35	3,965	1,273
520.40	4,058	1,474
520.45	4,152	1,679
520.50	4,245	1,889
520.55	4,339	2,103
520.60	4,432	2,323
520.65	4,526	2,547
520.70	4,619	2,775
520.75	4,713	3,009
520.80	4,806	3,247
520.85	4,900	3,489
520.90	4,993	3,737
520.95	5,087	3,989
521.00	5,181	4,245
521.05	5,274	4,507
521.10	5,368	4,773
521.15	5,461	5,043
521.20	5,555	5,319
521.25	5,648	5,599
521.30	5,742	5,884
521.35	5,835	6,173
521.40	5,929	6,467
521.45	6,022	6,766
521.50	6,116	7,069
521.55	6,209	7,377
521.60	6,303	7,690
521.65	6,396	8,008
521.70	6,490	8,330
521.75	6,583	8,657
521.80	6,677	8,988
521.85	6,770	9,324
521.90	6,864	9,665
521.95	6,957	10,011
522.00	7,051	10,361
522.05	7,323	10,720
522.10	7,594	11,093
522.15	7,866	11,480
522.20	8,138	11,880
522.25	8,409	12,294
522.30	8,681	12,721
522.35	8,952	13,162
522.40	9,224	13,616
522.45	9,496	14,084
522.50	9,767	14,566
522.55	10,039	15,061
522.60	10,311	15,569
522.65	10,582	16,092
522.70	10,854	16,628
522.75	11,126	17,177
522.80	11,397	17,740
522.85	11,669	18,317
522.90	11,940	18,907
522.95	12,212	19,511
523.00	12,484	20,128
523.05	12,755	20,759
523.10	**13,027**	**21,404**

Link DP: Design Point

Inflow Area =	3.860 ac,	Inflow Depth >	0.97"	
Inflow =	2.75 cfs @	12.24 hrs,	Volume=	0.313 af
Primary =	2.75 cfs @	12.24 hrs,	Volume=	0.313 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP: Design Point



Hydrograph for Link DP: Design Point

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.25	0.00	0.00	0.00
5.50	0.00	0.00	0.00
5.75	0.00	0.00	0.00
6.00	0.00	0.00	0.00
6.25	0.00	0.00	0.00
6.50	0.00	0.00	0.00
6.75	0.00	0.00	0.00
7.00	0.00	0.00	0.00
7.25	0.00	0.00	0.00
7.50	0.00	0.00	0.00
7.75	0.00	0.00	0.00
8.00	0.00	0.00	0.00
8.25	0.00	0.00	0.00
8.50	0.00	0.00	0.00
8.75	0.00	0.00	0.00
9.00	0.00	0.00	0.00
9.25	0.00	0.00	0.00
9.50	0.00	0.00	0.00
9.75	0.00	0.00	0.00
10.00	0.00	0.00	0.00
10.25	0.00	0.00	0.00
10.50	0.00	0.00	0.00
10.75	0.00	0.00	0.00
11.00	0.00	0.00	0.00
11.25	0.00	0.00	0.00
11.50	0.01	0.00	0.01
11.75	0.05	0.00	0.05
12.00	0.48	0.00	0.48
12.25	**2.75**	0.00	**2.75**
12.50	2.06	0.00	2.06
12.75	1.21	0.00	1.21
13.00	0.86	0.00	0.86
13.25	0.67	0.00	0.67
13.50	0.58	0.00	0.58
13.75	0.51	0.00	0.51
14.00	0.46	0.00	0.46
14.25	0.42	0.00	0.42
14.50	0.39	0.00	0.39
14.75	0.37	0.00	0.37
15.00	0.34	0.00	0.34
15.25	0.32	0.00	0.32
15.50	0.30	0.00	0.30
15.75	0.28	0.00	0.28
16.00	0.26	0.00	0.26
16.25	0.24	0.00	0.24
16.50	0.22	0.00	0.22
16.75	0.21	0.00	0.21
17.00	0.20	0.00	0.20
17.25	0.19	0.00	0.19
17.50	0.18	0.00	0.18
17.75	0.17	0.00	0.17
18.00	0.16	0.00	0.16
18.25	0.15	0.00	0.15
18.50	0.14	0.00	0.14
18.75	0.14	0.00	0.14
19.00	0.13	0.00	0.13
19.25	0.13	0.00	0.13
19.50	0.13	0.00	0.13
19.75	0.12	0.00	0.12
20.00	0.12	0.00	0.12

PROPOSED CONDITIONS

10 YEAR STORM

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 10S: Overland runoff basin Runoff Area=3.290 ac Runoff Depth>2.38"
Flow Length=387' Tc=5.0 min CN=81 Runoff=9.83 cfs 0.652 af

Subcatchment 30S: Overland runoff to Prospect Street Runoff Area=0.570 ac Runoff Depth>1.68"
Flow Length=20' Tc=5.0 min CN=72 Runoff=1.20 cfs 0.080 af

Pond 20P: Retention Basin Peak Elev=521.49' Storage=7,020 cf Inflow=9.83 cfs 0.652 af
Outflow=6.43 cfs 0.594 af

Link DP: Design Point Inflow=7.26 cfs 0.674 af
Primary=7.26 cfs 0.674 af

Total Runoff Area = 3.860 ac Runoff Volume = 0.732 af Average Runoff Depth = 2.28"

Subcatchment 10S: Overland runoff basin

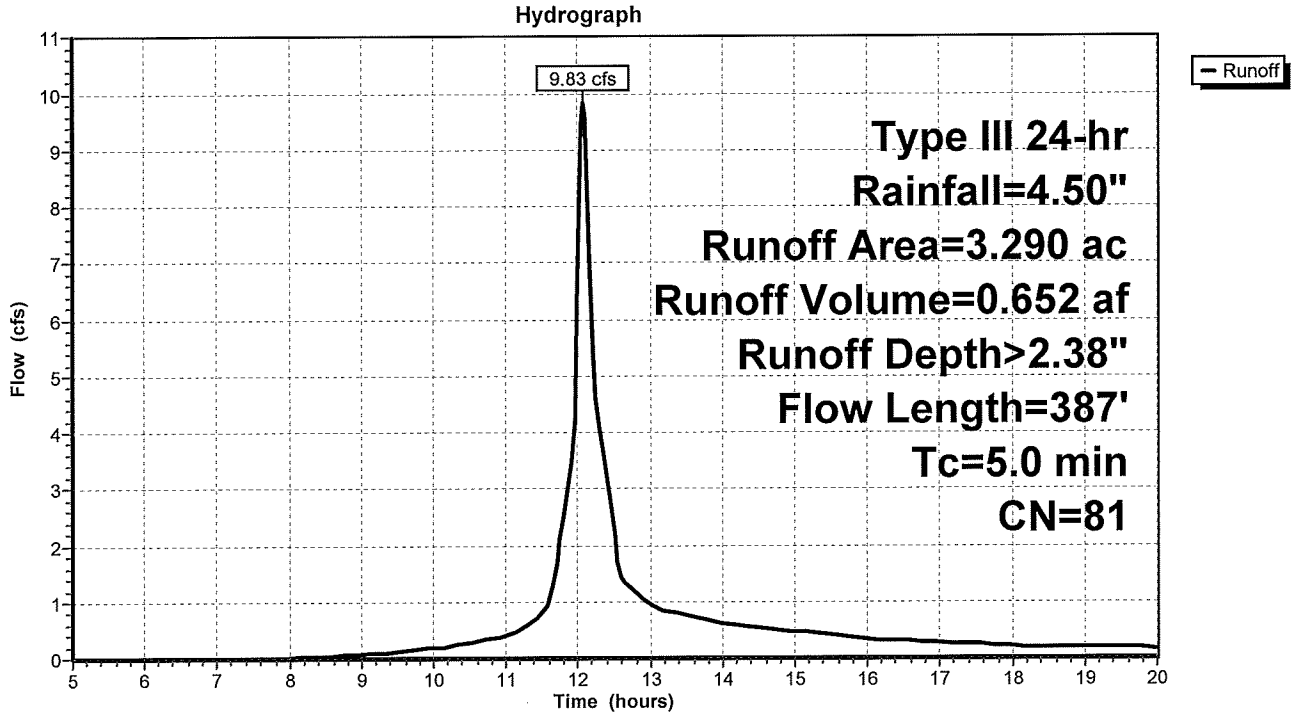
Runoff = 9.83 cfs @ 12.08 hrs, Volume= 0.652 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=4.50"

Area (ac)	CN	Description
0.990	98	Paved parking & roofs
2.000	74	>75% Grass cover, Good, HSG C
0.300	71	Meadow, non-grazed, HSG C
3.290	81	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	50	0.1600	0.2		**Sheet Flow, Path 1** Grass: Dense n= 0.240 P2= 3.20"
0.0	30	0.4667	11.0		**Shallow Concentrated Flow, Path 2** Unpaved Kv= 16.1 fps
1.1	227	0.0176	3.4	20.50	**Channel Flow, Path 3** Area= 6.0 sf Perim= 16.0' r= 0.38' n= 0.030 Earth, grassed & winding
0.3	80	0.0100	5.3	6.46	**Circular Channel (pipe), Path 4** Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
5.0	387	Total			

Subcatchment 10S: Overland runoff basin



Hydrograph for Subcatchment 10S: Overland runoff basin

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.25	0.27	0.00	0.00
5.50	0.29	0.00	0.00
5.75	0.31	0.00	0.00
6.00	0.32	0.00	0.00
6.25	0.34	0.00	0.00
6.50	0.36	0.00	0.00
6.75	0.38	0.00	0.00
7.00	0.41	0.00	0.00
7.25	0.43	0.00	0.00
7.50	0.46	0.00	0.00
7.75	0.48	0.00	0.00
8.00	0.51	0.00	0.01
8.25	0.54	0.00	0.02
8.50	0.58	0.00	0.04
8.75	0.62	0.01	0.05
9.00	0.66	0.01	0.07
9.25	0.70	0.02	0.10
9.50	0.75	0.03	0.12
9.75	0.80	0.04	0.15
10.00	0.85	0.05	0.18
10.25	0.91	0.07	0.22
10.50	0.97	0.09	0.28
10.75	1.05	0.11	0.34
11.00	1.13	0.14	0.40
11.25	1.22	0.18	0.55
11.50	1.34	0.24	0.76
11.75	1.60	0.37	2.09
12.00	2.25	0.77	**6.47**
12.25	2.90	1.24	**4.63**
12.50	3.16	1.44	2.17
12.75	3.28	1.53	1.22
13.00	3.37	1.61	0.95
13.25	3.45	1.67	0.83
13.50	3.53	1.73	0.76
13.75	3.59	1.78	0.69
14.00	3.65	1.83	0.62
14.25	3.70	1.87	0.58
14.50	3.75	1.92	0.54
14.75	3.80	1.95	0.51
15.00	3.84	1.99	0.48
15.25	3.88	2.02	0.44
15.50	3.92	2.06	0.41
15.75	3.96	2.08	0.37
16.00	3.99	2.11	0.34
16.25	4.02	2.13	0.32
16.50	4.04	2.16	0.30
16.75	4.07	2.18	0.29
17.00	4.09	2.20	0.27
17.25	4.12	2.22	0.25
17.50	4.14	2.24	0.24
17.75	4.16	2.25	0.22
18.00	4.18	2.27	0.21
18.25	4.19	2.29	0.20
18.50	4.21	2.30	0.20
18.75	4.23	2.31	0.19
19.00	4.24	2.33	0.19
19.25	4.26	2.34	0.18
19.50	4.28	2.36	0.18
19.75	4.29	2.37	0.17
20.00	**4.31**	**2.38**	0.17

Subcatchment 30S: Overland runoff to Prospect Street

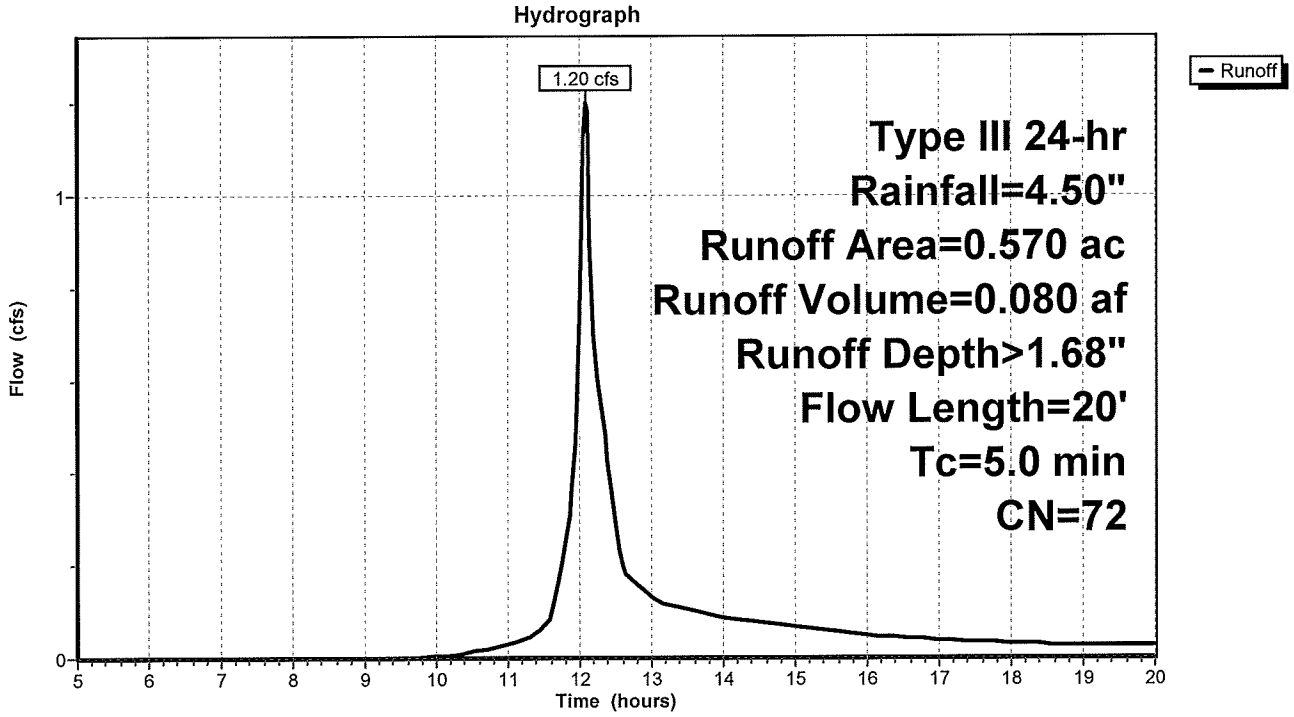
Runoff = 1.20 cfs @ 12.08 hrs, Volume= 0.080 af, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=4.50"

Area (ac)	CN	Description
0.310	71	Meadow, non-grazed, HSG C
0.260	74	>75% Grass cover, Good, HSG C
0.570	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	20		0.1		**Direct Entry, Path 1**

Subcatchment 30S: Overland runoff to Prospect Street



Hydrograph for Subcatchment 30S: Overland runoff to Prospect Street

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.26	0.00	0.00
5.25	0.27	0.00	0.00
5.50	0.29	0.00	0.00
5.75	0.31	0.00	0.00
6.00	0.32	0.00	0.00
6.25	0.34	0.00	0.00
6.50	0.36	0.00	0.00
6.75	0.38	0.00	0.00
7.00	0.41	0.00	0.00
7.25	0.43	0.00	0.00
7.50	0.46	0.00	0.00
7.75	0.48	0.00	0.00
8.00	0.51	0.00	0.00
8.25	0.54	0.00	0.00
8.50	0.58	0.00	0.00
8.75	0.62	0.00	0.00
9.00	0.66	0.00	0.00
9.25	0.70	0.00	0.00
9.50	0.75	0.00	0.00
9.75	0.80	0.00	0.00
10.00	0.85	0.00	0.00
10.25	0.91	0.00	0.01
10.50	0.97	0.01	0.01
10.75	1.05	0.02	0.02
11.00	1.13	0.03	0.03
11.25	1.22	0.05	0.04
11.50	1.34	0.07	0.06
11.75	1.60	0.14	0.20
12.00	2.25	0.40	**0.74**
12.25	2.90	0.75	**0.60**
12.50	3.16	0.90	0.29
12.75	3.28	0.98	0.17
13.00	3.37	1.04	0.13
13.25	3.45	1.09	0.12
13.50	3.53	1.14	0.11
13.75	3.59	1.18	0.10
14.00	3.65	1.22	0.09
14.25	3.70	1.26	0.08
14.50	3.75	1.29	0.08
14.75	3.80	1.32	0.07
15.00	3.84	1.35	0.07
15.25	3.88	1.38	0.06
15.50	3.92	1.41	0.06
15.75	3.96	1.43	0.05
16.00	3.99	1.45	0.05
16.25	4.02	1.47	0.05
16.50	4.04	1.49	0.04
16.75	4.07	1.51	0.04
17.00	4.09	1.53	0.04
17.25	4.12	1.54	0.04
17.50	4.14	1.56	0.03
17.75	4.16	1.57	0.03
18.00	4.18	1.58	0.03
18.25	4.19	1.60	0.03
18.50	4.21	1.61	0.03
18.75	4.23	1.62	0.03
19.00	4.24	1.63	0.03
19.25	4.26	1.65	0.03
19.50	4.28	1.66	0.03
19.75	4.29	1.67	0.03
20.00	**4.31**	**1.68**	0.02

Pond 20P: Retention Basin

Inflow Area =	3.290 ac,	Inflow Depth >	2.38"		
Inflow =	9.83 cfs @	12.08 hrs,	Volume=	0.652 af	
Outflow =	6.43 cfs @	12.17 hrs,	Volume=	0.594 af,	Atten= 35%, Lag= 5.8 min
Primary =	6.43 cfs @	12.17 hrs,	Volume=	0.594 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 521.49' @ 12.17 hrs Surf.Area= 6,101 sf Storage= 7,020 cf
Plug-Flow detention time= 57.9 min calculated for 0.594 af (91% of inflow)
Center-of-Mass det. time= 28.4 min (816.1 - 787.7)

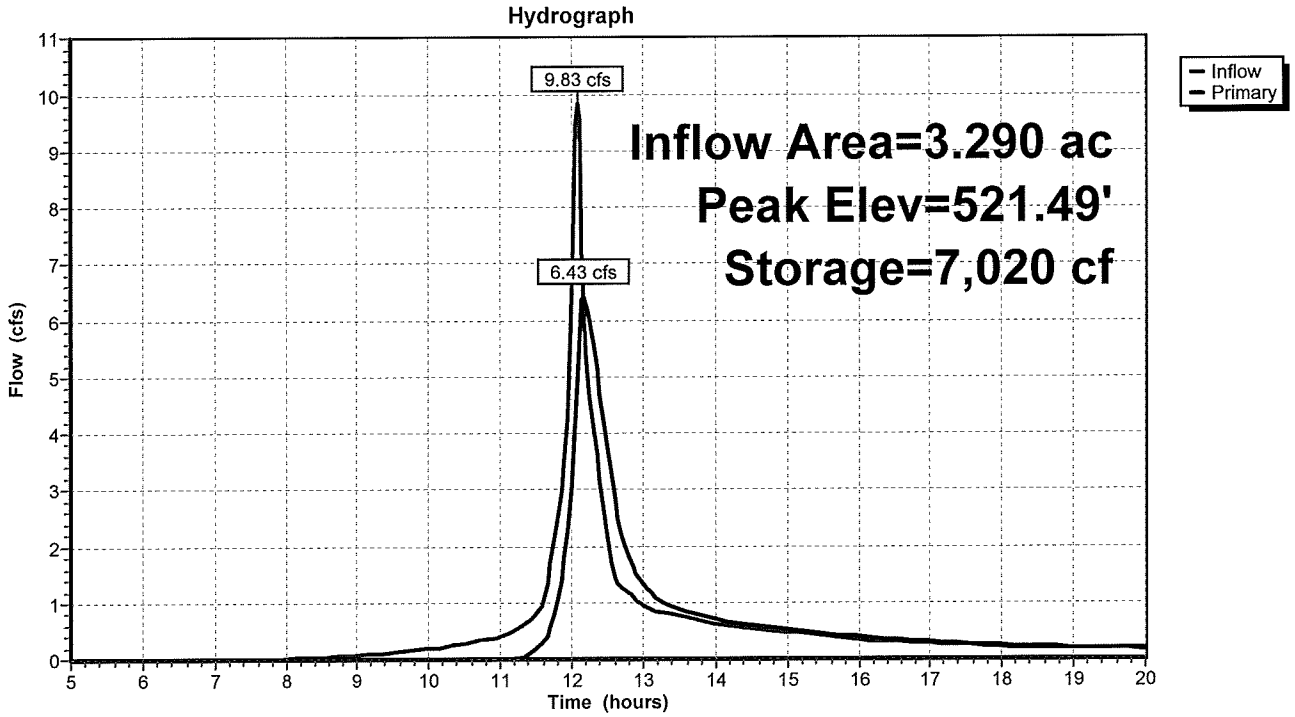
Volume	Invert	Avail.Storage	Storage Description
#1	520.00'	21,404 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
520.00	3,310	0	0
522.00	7,051	10,361	10,361
523.10	13,027	11,043	21,404

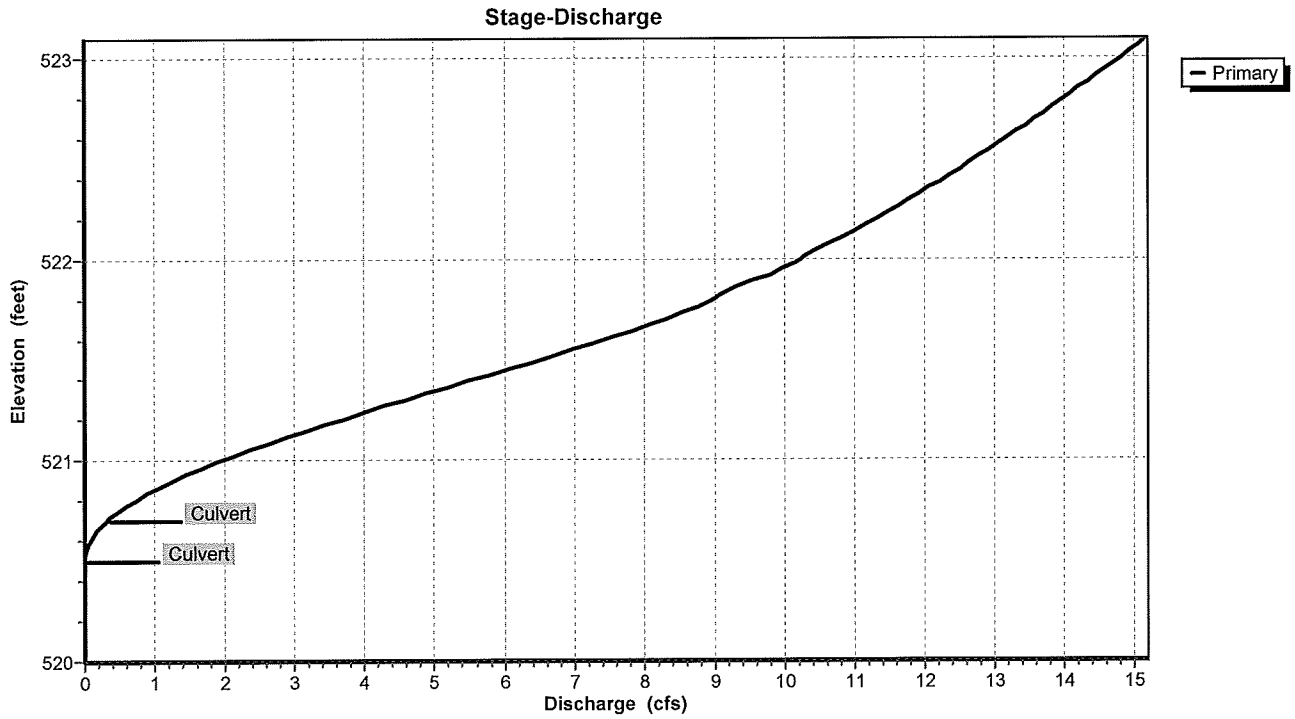
Device	Routing	Invert	Outlet Devices
#1	Primary	520.50'	**12.0" x 20.0' long Culvert X 2.00** Ke= 0.600 Outlet Invert= 520.30' S= 0.0100 '/' Cc= 0.900 n= 0.012
#2	Primary	520.70'	**12.0" x 18.0' long Culvert** Ke= 0.600 Outlet Invert= 520.52' S= 0.0100 '/' Cc= 0.900 n= 0.012

Primary OutFlow Max=6.34 cfs @ 12.17 hrs HW=521.48' (Free Discharge)
└─**1=Culvert** (Barrel Controls 4.68 cfs @ 3.8 fps)
└─**2=Culvert** (Barrel Controls 1.66 cfs @ 3.5 fps)

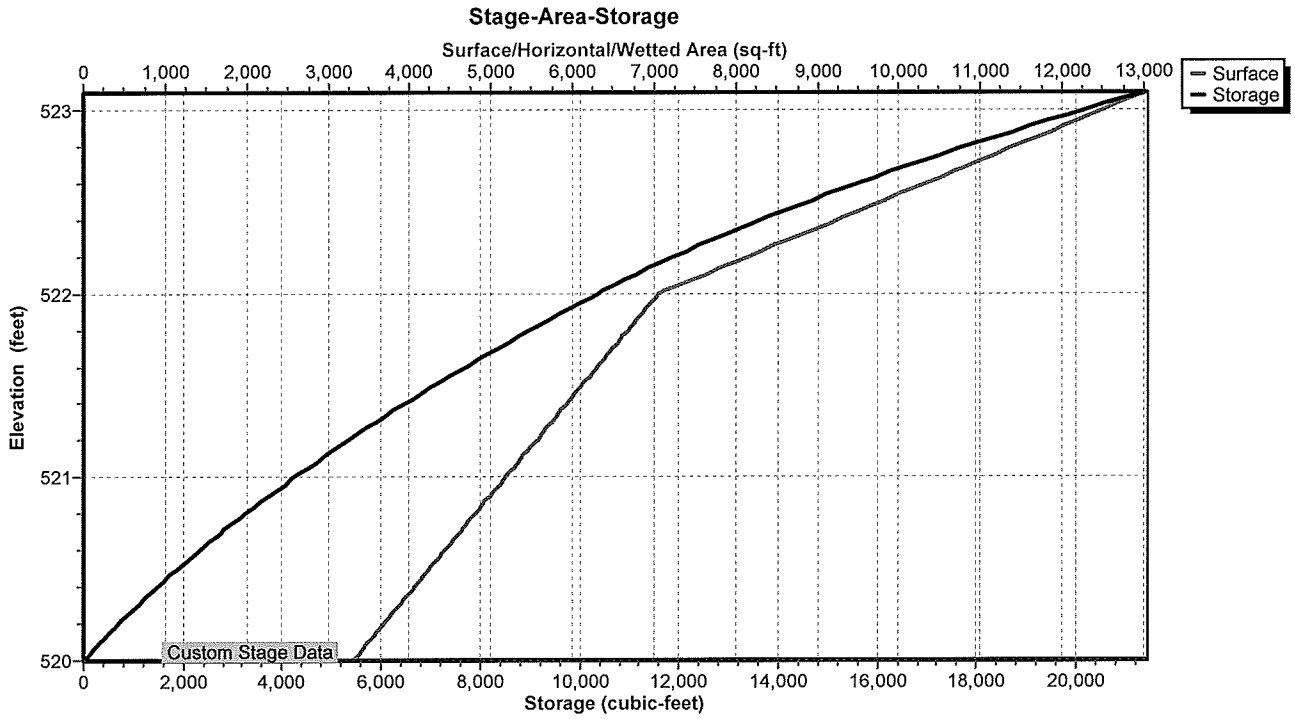
Pond 20P: Retention Basin



Pond 20P: Retention Basin



Pond 20P: Retention Basin



Hydrograph for Pond 20P: Retention Basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	520.00	0.00
5.50	0.00	0	520.00	0.00
6.00	0.00	0	520.00	0.00
6.50	0.00	0	520.00	0.00
7.00	0.00	0	520.00	0.00
7.50	0.00	0	520.00	0.00
8.00	0.01	6	520.00	0.00
8.50	0.04	47	520.01	0.00
9.00	0.07	144	520.04	0.00
9.50	0.12	316	520.09	0.00
10.00	0.18	586	520.17	0.00
10.50	0.28	990	520.28	0.00
11.00	0.40	1,598	520.43	0.00
11.50	0.76	2,536	520.65	0.17
12.00	**6.47**	**4,950**	**521.13**	**3.03**
12.50	**2.17**	**5,397**	**521.21**	**3.75**
13.00	0.95	3,794	520.91	1.33
13.50	0.76	3,408	520.83	0.87
14.00	0.62	3,246	520.80	0.70
14.50	0.54	3,132	520.78	0.59
15.00	0.48	3,050	520.76	0.52
15.50	0.41	2,970	520.74	0.45
16.00	0.34	2,883	520.72	0.39
16.50	0.30	2,808	520.71	0.33
17.00	0.27	2,753	520.70	0.30
17.50	0.24	2,702	520.68	0.27
18.00	0.21	2,650	520.67	0.24
18.50	0.20	2,607	520.66	0.21
19.00	0.19	2,580	520.66	0.20
19.50	0.18	2,560	520.65	0.19
20.00	0.17	2,542	520.65	0.18

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Stage-Discharge for Pond 20P: Retention Basin

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
520.00	0.00	521.02	2.10	522.04	10.38	523.06	15.01
520.02	0.00	521.04	2.26	522.06	10.51	523.08	15.09
520.04	0.00	521.06	2.41	522.08	10.64	523.10	**15.16**
520.06	0.00	521.08	2.58	522.10	10.76		
520.08	0.00	521.10	2.74	522.12	10.89		
520.10	0.00	521.12	2.91	522.14	11.01		
520.12	0.00	521.14	3.09	522.16	11.11		
520.14	0.00	521.16	3.26	522.18	11.21		
520.16	0.00	521.18	3.44	522.20	11.31		
520.18	0.00	521.20	3.62	522.22	11.41		
520.20	0.00	521.22	3.81	522.24	11.51		
520.22	0.00	521.24	3.99	522.26	11.61		
520.24	0.00	521.26	4.18	522.28	11.71		
520.26	0.00	521.28	4.37	522.30	11.80		
520.28	0.00	521.30	4.56	522.32	11.90		
520.30	0.00	521.32	4.75	522.34	11.99		
520.32	0.00	521.34	4.94	522.36	12.09		
520.34	0.00	521.36	5.14	522.38	12.18		
520.36	0.00	521.38	5.33	522.40	12.27		
520.38	0.00	521.40	5.53	522.42	12.37		
520.40	0.00	521.42	5.72	522.44	12.46		
520.42	0.00	521.44	5.92	522.46	12.55		
520.44	0.00	521.46	6.12	522.48	12.64		
520.46	0.00	521.48	6.31	522.50	12.73		
520.48	0.00	521.50	6.50	522.52	12.82		
520.50	0.00	521.52	6.70	522.54	12.90		
520.52	0.00	521.54	6.89	522.56	12.99		
520.54	0.01	521.56	7.08	522.58	13.08		
520.56	0.03	521.58	7.26	522.60	13.16		
520.58	0.05	521.60	7.45	522.62	13.25		
520.60	0.08	521.62	7.63	522.64	13.33		
520.62	0.12	521.64	7.80	522.66	13.42		
520.64	0.16	521.66	7.98	522.68	13.50		
520.66	0.20	521.68	8.14	522.70	13.59		
520.68	0.26	521.70	8.30	522.72	13.67		
520.70	0.31	521.72	8.45	522.74	13.75		
520.72	0.38	521.74	8.59	522.76	13.83		
520.74	0.45	521.76	8.73	522.78	13.92		
520.76	0.52	521.78	8.87	522.80	14.00		
520.78	0.61	521.80	8.98	522.82	14.08		
520.80	0.70	521.82	9.07	522.84	14.16		
520.82	0.80	521.84	9.13	522.86	14.24		
520.84	0.91	521.86	9.30	522.88	14.32		
520.86	1.02	521.88	9.46	522.90	14.40		
520.88	1.14	521.90	9.62	522.92	14.47		
520.90	1.26	521.92	9.78	522.94	14.55		
520.92	1.39	521.94	9.90	522.96	14.63		
520.94	1.52	521.96	10.02	522.98	14.71		
520.96	1.66	521.98	10.12	523.00	14.78		
520.98	1.80	522.00	10.22	523.02	14.86		
521.00	1.95	522.02	10.31	523.04	14.94		

Stage-Area-Storage for Pond 20P: Retention Basin

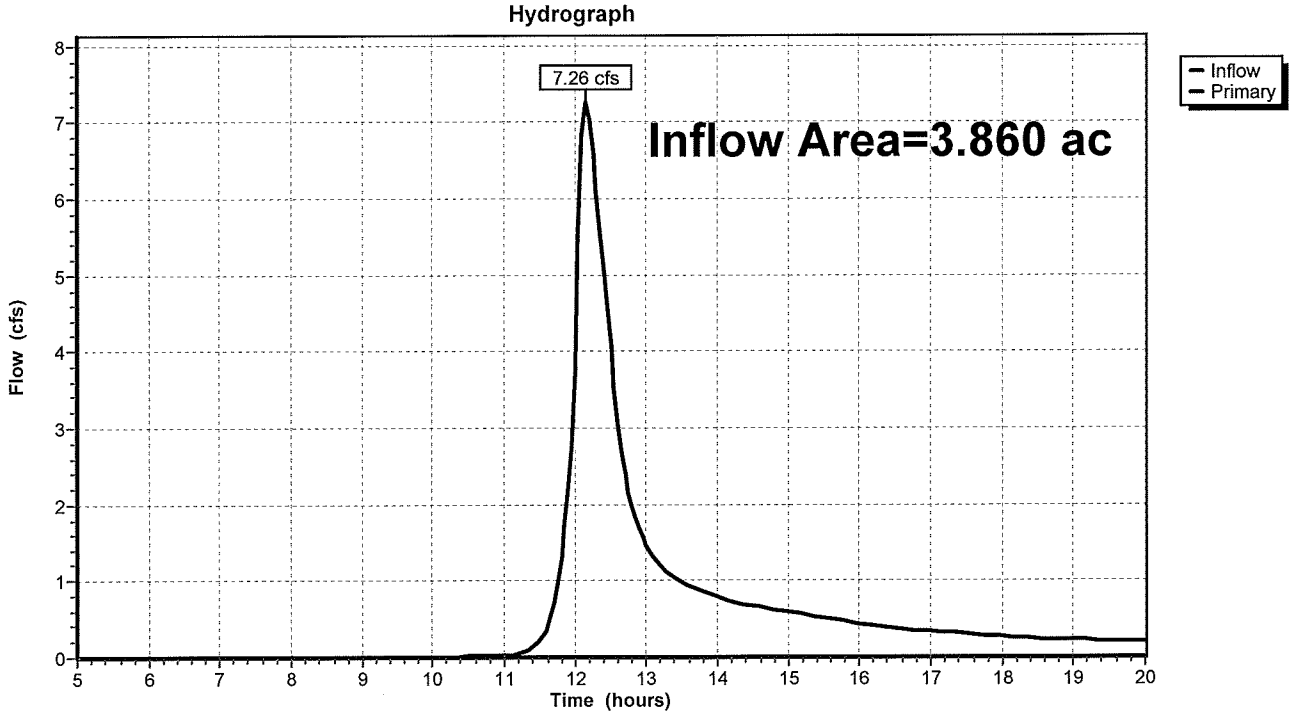
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
520.00	3,310	0
520.05	3,404	168
520.10	3,497	340
520.15	3,591	518
520.20	3,684	699
520.25	3,778	886
520.30	3,871	1,077
520.35	3,965	1,273
520.40	4,058	1,474
520.45	4,152	1,679
520.50	4,245	1,889
520.55	4,339	2,103
520.60	4,432	2,323
520.65	4,526	2,547
520.70	4,619	2,775
520.75	4,713	3,009
520.80	4,806	3,247
520.85	4,900	3,489
520.90	4,993	3,737
520.95	5,087	3,989
521.00	5,181	4,245
521.05	5,274	4,507
521.10	5,368	4,773
521.15	5,461	5,043
521.20	5,555	5,319
521.25	5,648	5,599
521.30	5,742	5,884
521.35	5,835	6,173
521.40	5,929	6,467
521.45	6,022	6,766
521.50	6,116	7,069
521.55	6,209	7,377
521.60	6,303	7,690
521.65	6,396	8,008
521.70	6,490	8,330
521.75	6,583	8,657
521.80	6,677	8,988
521.85	6,770	9,324
521.90	6,864	9,665
521.95	6,957	10,011
522.00	7,051	10,361
522.05	7,323	10,720
522.10	7,594	11,093
522.15	7,866	11,480
522.20	8,138	11,880
522.25	8,409	12,294
522.30	8,681	12,721
522.35	8,952	13,162
522.40	9,224	13,616
522.45	9,496	14,084
522.50	9,767	14,566
522.55	10,039	15,061
522.60	10,311	15,569
522.65	10,582	16,092
522.70	10,854	16,628
522.75	11,126	17,177
522.80	11,397	17,740
522.85	11,669	18,317
522.90	11,940	18,907
522.95	12,212	19,511
523.00	12,484	20,128
523.05	12,755	20,759
523.10	**13,027**	**21,404**

Link DP: Design Point

Inflow Area =	3.860 ac,	Inflow Depth >	2.09"		
Inflow =	7.26 cfs @	12.16 hrs,	Volume=	0.674 af	
Primary =	7.26 cfs @	12.16 hrs,	Volume=	0.674 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP: Design Point



Hydrograph for Link DP: Design Point

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00	17.75	0.28	0.00	0.28
5.25	0.00	0.00	0.00	18.00	0.27	0.00	0.27
5.50	0.00	0.00	0.00	18.25	0.25	0.00	0.25
5.75	0.00	0.00	0.00	18.50	0.24	0.00	0.24
6.00	0.00	0.00	0.00	18.75	0.23	0.00	0.23
6.25	0.00	0.00	0.00	19.00	0.23	0.00	0.23
6.50	0.00	0.00	0.00	19.25	0.22	0.00	0.22
6.75	0.00	0.00	0.00	19.50	0.21	0.00	0.21
7.00	0.00	0.00	0.00	19.75	0.21	0.00	0.21
7.25	0.00	0.00	0.00	20.00	0.20	0.00	0.20
7.50	0.00	0.00	0.00				
7.75	0.00	0.00	0.00				
8.00	0.00	0.00	0.00				
8.25	0.00	0.00	0.00				
8.50	0.00	0.00	0.00				
8.75	0.00	0.00	0.00				
9.00	0.00	0.00	0.00				
9.25	0.00	0.00	0.00				
9.50	0.00	0.00	0.00				
9.75	0.00	0.00	0.00				
10.00	0.00	0.00	0.00				
10.25	0.01	0.00	0.01				
10.50	0.01	0.00	0.01				
10.75	0.02	0.00	0.02				
11.00	0.03	0.00	0.03				
11.25	0.05	0.00	0.05				
11.50	0.24	0.00	0.24				
11.75	0.98	0.00	0.98				
12.00	**3.77**	0.00	**3.77**				
12.25	**6.60**	0.00	**6.60**				
12.50	4.04	0.00	4.04				
12.75	2.15	0.00	2.15				
13.00	1.46	0.00	1.46				
13.25	1.13	0.00	1.13				
13.50	0.98	0.00	0.98				
13.75	0.88	0.00	0.88				
14.00	0.79	0.00	0.79				
14.25	0.72	0.00	0.72				
14.50	0.67	0.00	0.67				
14.75	0.63	0.00	0.63				
15.00	0.59	0.00	0.59				
15.25	0.55	0.00	0.55				
15.50	0.51	0.00	0.51				
15.75	0.47	0.00	0.47				
16.00	0.44	0.00	0.44				
16.25	0.40	0.00	0.40				
16.50	0.38	0.00	0.38				
16.75	0.36	0.00	0.36				
17.00	0.34	0.00	0.34				
17.25	0.32	0.00	0.32				
17.50	0.30	0.00	0.30				

PROPOSED CONDITIONS

25 YEAR STORM

274 Prospect Street - Post development2
Prepared by {enter your company name here}
HydroCAD® 7.10 s/n 000655 © 2005 HydroCAD Software Solutions LLC

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 10S: Overland runoff basin Runoff Area=3.290 ac Runoff Depth>3.05"
Flow Length=387' Tc=5.0 min CN=81 Runoff=12.51 cfs 0.835 af

Subcatchment 30S: Overland runoff to Prospect Street Runoff Area=0.570 ac Runoff Depth>2.25"
Flow Length=20' Tc=5.0 min CN=72 Runoff=1.62 cfs 0.107 af

Pond 20P: Retention Basin Peak Elev=521.68' Storage=8,198 cf Inflow=12.51 cfs 0.835 af
Outflow=8.15 cfs 0.775 af

Link DP: Design Point Inflow=9.27 cfs 0.882 af
Primary=9.27 cfs 0.882 af

Total Runoff Area = 3.860 ac Runoff Volume = 0.942 af Average Runoff Depth = 2.93"

Subcatchment 10S: Overland runoff basin

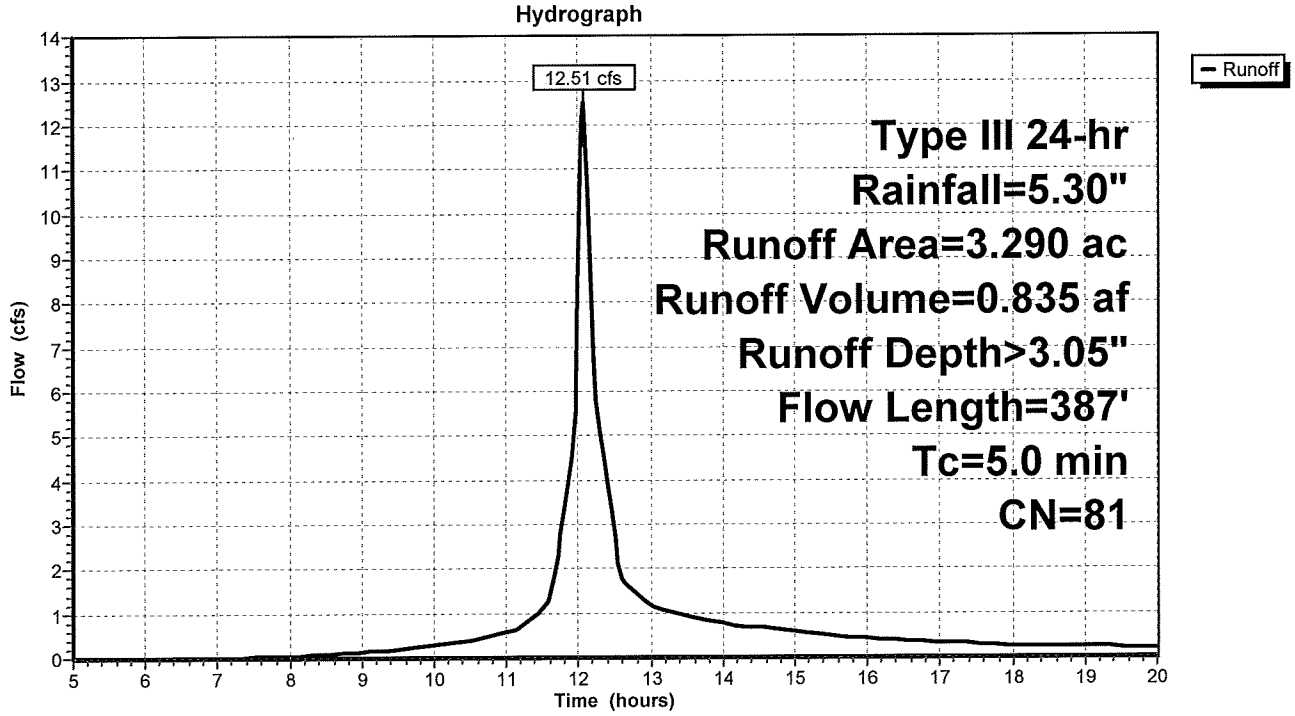
Runoff = 12.51 cfs @ 12.08 hrs, Volume= 0.835 af, Depth> 3.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=5.30"

Area (ac)	CN	Description
0.990	98	Paved parking & roofs
2.000	74	>75% Grass cover, Good, HSG C
0.300	71	Meadow, non-grazed, HSG C
3.290	81	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	50	0.1600	0.2		**Sheet Flow, Path 1** Grass: Dense n= 0.240 P2= 3.20"
0.0	30	0.4667	11.0		**Shallow Concentrated Flow, Path 2** Unpaved Kv= 16.1 fps
1.1	227	0.0176	3.4	20.50	**Channel Flow, Path 3** Area= 6.0 sf Perim= 16.0' r= 0.38' n= 0.030 Earth, grassed & winding
0.3	80	0.0100	5.3	6.46	**Circular Channel (pipe), Path 4** Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
5.0	387	Total			

Subcatchment 10S: Overland runoff basin



Hydrograph for Subcatchment 10S: Overland runoff basin

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.30	0.00	0.00
5.25	0.32	0.00	0.00
5.50	0.34	0.00	0.00
5.75	0.36	0.00	0.00
6.00	0.38	0.00	0.00
6.25	0.40	0.00	0.00
6.50	0.43	0.00	0.00
6.75	0.45	0.00	0.00
7.00	0.48	0.00	0.00
7.25	0.51	0.00	0.01
7.50	0.54	0.00	0.02
7.75	0.57	0.00	0.03
8.00	0.60	0.01	0.04
8.25	0.64	0.01	0.06
8.50	0.68	0.02	0.08
8.75	0.72	0.03	0.11
9.00	0.77	0.03	0.13
9.25	0.82	0.05	0.16
9.50	0.88	0.06	0.20
9.75	0.94	0.08	0.24
10.00	1.00	0.10	0.28
10.25	1.07	0.12	0.33
10.50	1.15	0.15	0.40
10.75	1.23	0.19	0.48
11.00	1.32	0.23	0.57
11.25	1.44	0.28	0.76
11.50	1.58	0.36	1.04
11.75	1.88	0.53	2.79
12.00	2.65	1.05	**8.33**
12.25	3.42	1.64	**5.79**
12.50	3.72	1.89	2.69
12.75	3.86	2.01	1.51
13.00	3.97	2.10	1.18
13.25	4.07	2.18	1.02
13.50	4.15	2.25	0.94
13.75	4.23	2.32	0.85
14.00	4.30	2.37	0.76
14.25	4.36	2.43	0.71
14.50	4.42	2.48	0.67
14.75	4.48	2.53	0.63
15.00	4.53	2.57	0.58
15.25	4.58	2.61	0.54
15.50	4.62	2.65	0.50
15.75	4.66	2.69	0.46
16.00	4.70	2.72	0.41
16.25	4.73	2.75	0.39
16.50	4.76	2.78	0.37
16.75	4.79	2.80	0.35
17.00	4.82	2.83	0.33
17.25	4.85	2.85	0.31
17.50	4.87	2.87	0.29
17.75	4.90	2.89	0.27
18.00	4.92	2.91	0.25
18.25	4.94	2.93	0.24
18.50	4.96	2.95	0.24
18.75	4.98	2.97	0.23
19.00	5.00	2.98	0.23
19.25	5.02	3.00	0.22
19.50	5.04	3.02	0.22
19.75	5.05	3.03	0.21
20.00	**5.07**	**3.05**	0.20

Subcatchment 30S: Overland runoff to Prospect Street

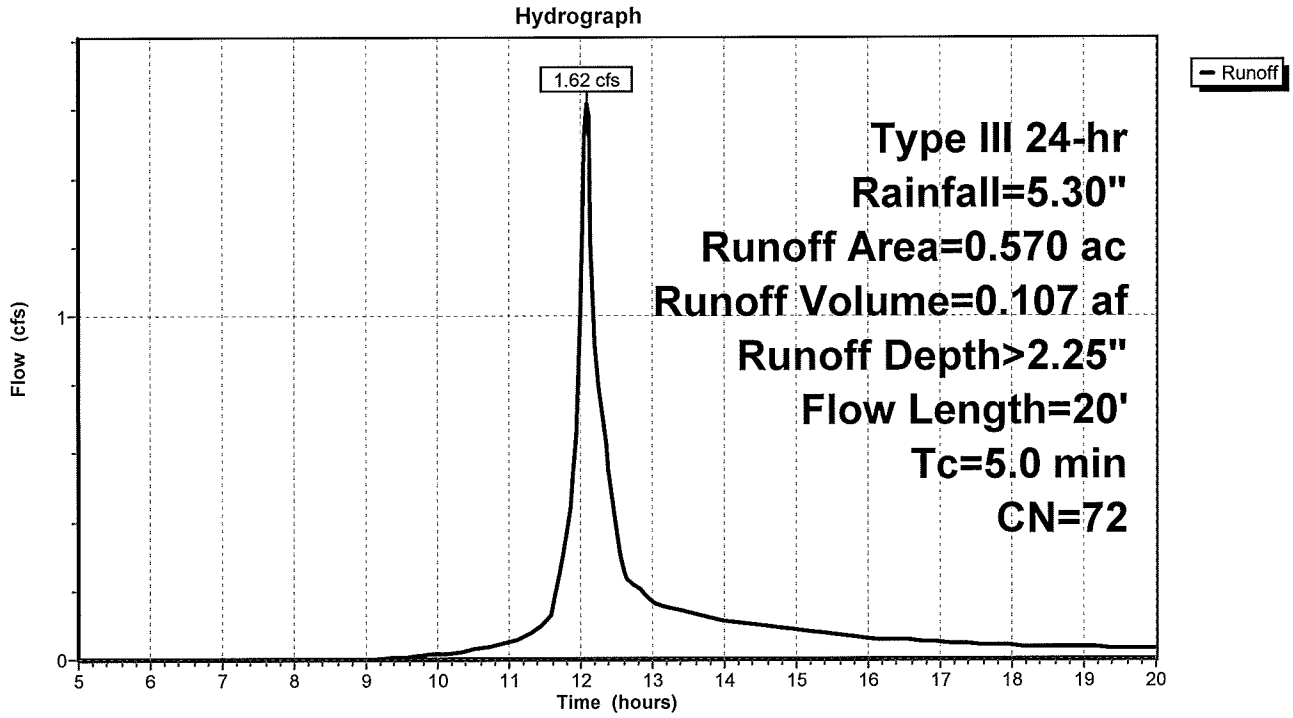
Runoff = 1.62 cfs @ 12.08 hrs, Volume= 0.107 af, Depth> 2.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=5.30"

Area (ac)	CN	Description
0.310	71	Meadow, non-grazed, HSG C
0.260	74	>75% Grass cover, Good, HSG C
0.570	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	20		0.1		**Direct Entry, Path 1**

Subcatchment 30S: Overland runoff to Prospect Street



Hydrograph for Subcatchment 30S: Overland runoff to Prospect Street

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.30	0.00	0.00
5.25	0.32	0.00	0.00
5.50	0.34	0.00	0.00
5.75	0.36	0.00	0.00
6.00	0.38	0.00	0.00
6.25	0.40	0.00	0.00
6.50	0.43	0.00	0.00
6.75	0.45	0.00	0.00
7.00	0.48	0.00	0.00
7.25	0.51	0.00	0.00
7.50	0.54	0.00	0.00
7.75	0.57	0.00	0.00
8.00	0.60	0.00	0.00
8.25	0.64	0.00	0.00
8.50	0.68	0.00	0.00
8.75	0.72	0.00	0.00
9.00	0.77	0.00	0.00
9.25	0.82	0.00	0.00
9.50	0.88	0.00	0.01
9.75	0.94	0.01	0.01
10.00	1.00	0.01	0.01
10.25	1.07	0.02	0.02
10.50	1.15	0.03	0.03
10.75	1.23	0.05	0.04
11.00	1.32	0.07	0.05
11.25	1.44	0.10	0.07
11.50	1.58	0.14	0.10
11.75	1.88	0.24	0.30
12.00	2.65	0.61	**1.02**
12.25	3.42	1.07	**0.79**
12.50	3.72	1.27	0.38
12.75	3.86	1.36	0.22
13.00	3.97	1.44	0.17
13.25	4.07	1.51	0.15
13.50	4.15	1.57	0.14
13.75	4.23	1.62	0.12
14.00	4.30	1.67	0.11
14.25	4.36	1.72	0.10
14.50	4.42	1.76	0.10
14.75	4.48	1.80	0.09
15.00	4.53	1.84	0.09
15.25	4.58	1.88	0.08
15.50	4.62	1.91	0.07
15.75	4.66	1.94	0.07
16.00	4.70	1.97	0.06
16.25	4.73	1.99	0.06
16.50	4.76	2.02	0.05
16.75	4.79	2.04	0.05
17.00	4.82	2.06	0.05
17.25	4.85	2.08	0.05
17.50	4.87	2.10	0.04
17.75	4.90	2.12	0.04
18.00	4.92	2.14	0.04
18.25	4.94	2.15	0.04
18.50	4.96	2.17	0.04
18.75	4.98	2.18	0.04
19.00	5.00	2.20	0.03
19.25	5.02	2.21	0.03
19.50	5.04	2.23	0.03
19.75	5.05	2.24	0.03
20.00	**5.07**	**2.25**	0.03

Pond 20P: Retention Basin

Inflow Area =	3.290 ac,	Inflow Depth >	3.05"		
Inflow =	12.51 cfs @	12.08 hrs,	Volume=	0.835 af	
Outflow =	8.15 cfs @	12.17 hrs,	Volume=	0.775 af,	Atten= 35%, Lag= 5.8 min
Primary =	8.15 cfs @	12.17 hrs,	Volume=	0.775 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 521.68' @ 12.17 hrs Surf.Area= 6,452 sf Storage= 8,198 cf
Plug-Flow detention time= 51.2 min calculated for 0.775 af (93% of inflow)
Center-of-Mass det. time= 26.4 min (808.4 - 782.0)

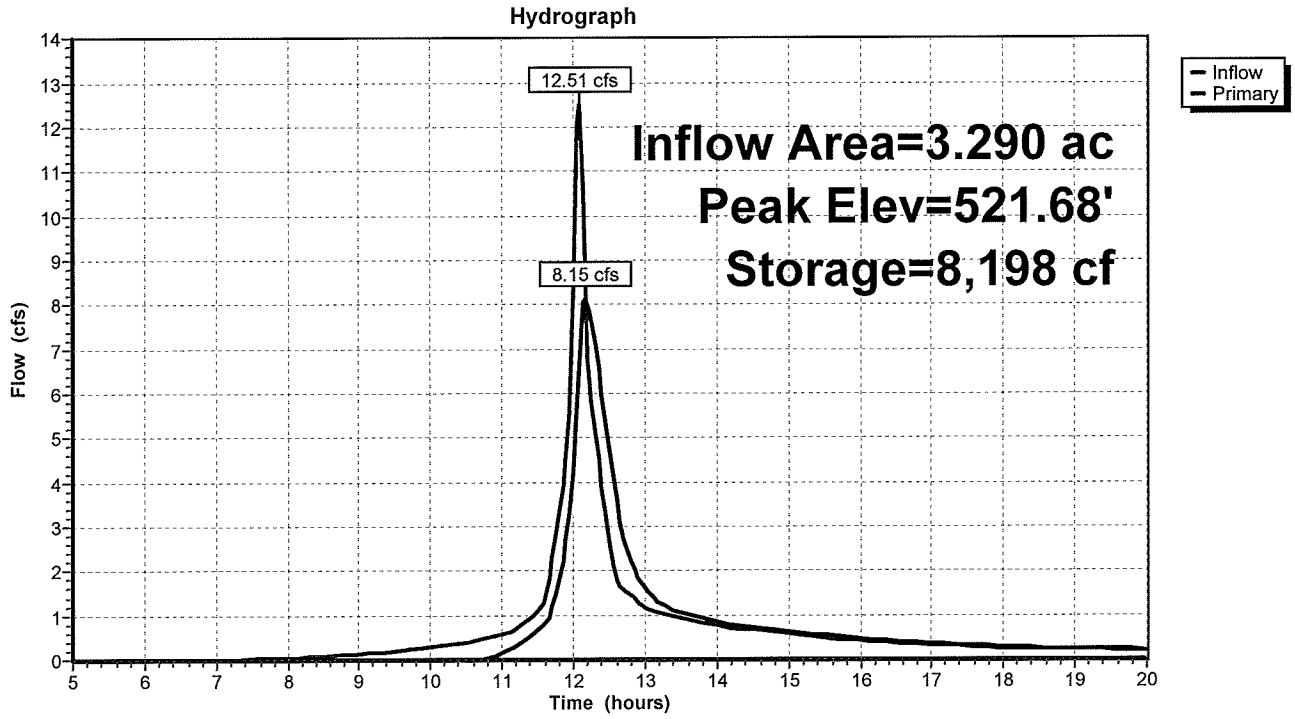
Volume	Invert	Avail.Storage	Storage Description
#1	520.00'	21,404 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
520.00	3,310	0	0
522.00	7,051	10,361	10,361
523.10	13,027	11,043	21,404

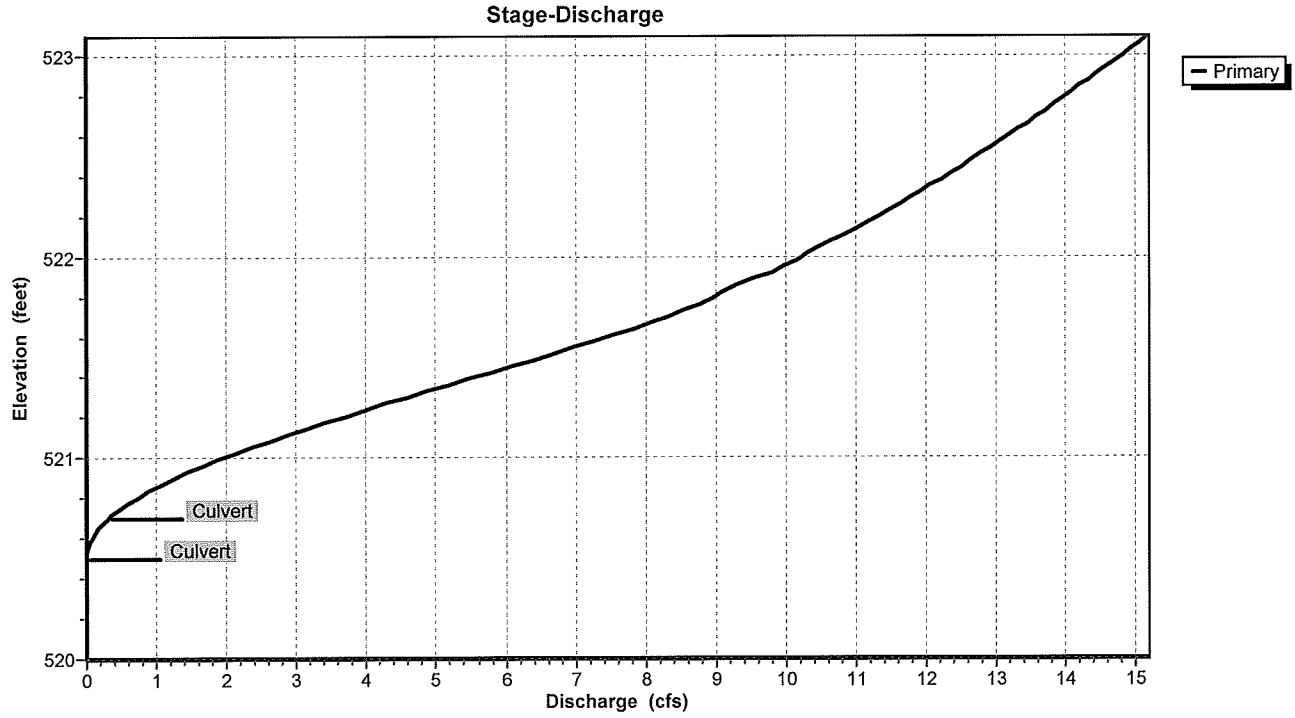
Device	Routing	Invert	Outlet Devices
#1	Primary	520.50'	**12.0" x 20.0' long Culvert X 2.00** Ke= 0.600 Outlet Invert= 520.30' S= 0.0100 '/' Cc= 0.900 n= 0.012
#2	Primary	520.70'	**12.0" x 18.0' long Culvert** Ke= 0.600 Outlet Invert= 520.52' S= 0.0100 '/' Cc= 0.900 n= 0.012

Primary OutFlow Max=8.05 cfs @ 12.17 hrs HW=521.67' (Free Discharge)
└─**1=Culvert** (Barrel Controls 5.79 cfs @ 4.0 fps)
└─**2=Culvert** (Barrel Controls 2.27 cfs @ 3.7 fps)

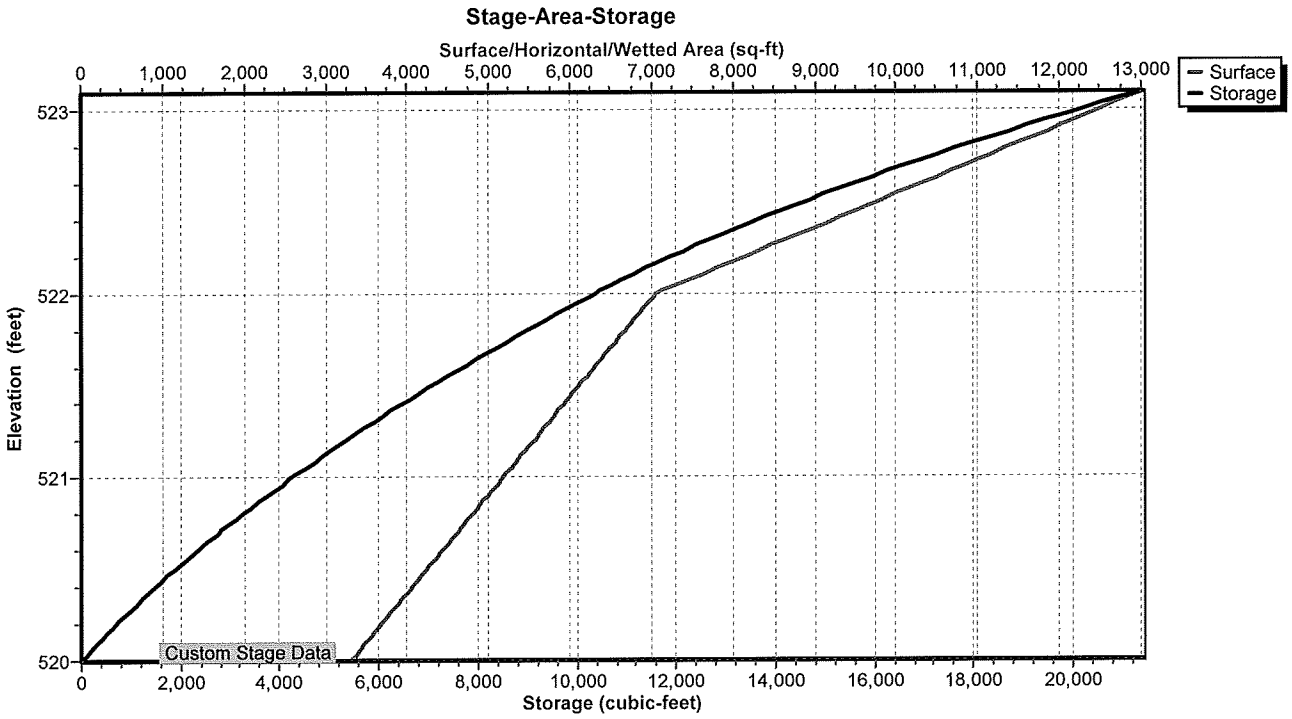
Pond 20P: Retention Basin



Pond 20P: Retention Basin



Pond 20P: Retention Basin



Hydrograph for Pond 20P: Retention Basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	520.00	0.00
5.50	0.00	0	520.00	0.00
6.00	0.00	0	520.00	0.00
6.50	0.00	0	520.00	0.00
7.00	0.00	0	520.00	0.00
7.50	0.02	18	520.01	0.00
8.00	0.04	75	520.02	0.00
8.50	0.08	186	520.06	0.00
9.00	0.13	377	520.11	0.00
9.50	0.20	673	520.19	0.00
10.00	0.28	1,099	520.31	0.00
10.50	0.40	1,703	520.46	0.00
11.00	0.57	2,497	520.64	0.16
11.50	1.04	3,203	520.79	0.66
12.00	**8.33**	**5,684**	**521.26**	**4.23**
12.50	**2.69**	**6,005**	**521.32**	**4.76**
13.00	1.18	4,010	520.95	1.62
13.50	0.94	3,573	520.87	1.06
14.00	0.76	3,393	520.83	0.86
14.50	0.67	3,266	520.80	0.72
15.00	0.58	3,175	520.78	0.63
15.50	0.50	3,085	520.77	0.55
16.00	0.41	2,988	520.75	0.47
16.50	0.37	2,905	520.73	0.40
17.00	0.33	2,846	520.72	0.36
17.50	0.29	2,791	520.70	0.32
18.00	0.25	2,734	520.69	0.29
18.50	0.24	2,686	520.68	0.26
19.00	0.23	2,657	520.67	0.24
19.50	0.22	2,633	520.67	0.23
20.00	0.20	2,612	520.66	0.22

Stage-Discharge for Pond 20P: Retention Basin

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
520.00	0.00	521.02	2.10	522.04	10.38	523.06	15.01
520.02	0.00	521.04	2.26	522.06	10.51	523.08	15.09
520.04	0.00	521.06	2.41	522.08	10.64	523.10	**15.16**
520.06	0.00	521.08	2.58	522.10	10.76		
520.08	0.00	521.10	2.74	522.12	10.89		
520.10	0.00	521.12	2.91	522.14	11.01		
520.12	0.00	521.14	3.09	522.16	11.11		
520.14	0.00	521.16	3.26	522.18	11.21		
520.16	0.00	521.18	3.44	522.20	11.31		
520.18	0.00	521.20	3.62	522.22	11.41		
520.20	0.00	521.22	3.81	522.24	11.51		
520.22	0.00	521.24	3.99	522.26	11.61		
520.24	0.00	521.26	4.18	522.28	11.71		
520.26	0.00	521.28	4.37	522.30	11.80		
520.28	0.00	521.30	4.56	522.32	11.90		
520.30	0.00	521.32	4.75	522.34	11.99		
520.32	0.00	521.34	4.94	522.36	12.09		
520.34	0.00	521.36	5.14	522.38	12.18		
520.36	0.00	521.38	5.33	522.40	12.27		
520.38	0.00	521.40	5.53	522.42	12.37		
520.40	0.00	521.42	5.72	522.44	12.46		
520.42	0.00	521.44	5.92	522.46	12.55		
520.44	0.00	521.46	6.12	522.48	12.64		
520.46	0.00	521.48	6.31	522.50	12.73		
520.48	0.00	521.50	6.50	522.52	12.82		
520.50	0.00	521.52	6.70	522.54	12.90		
520.52	0.00	521.54	6.89	522.56	12.99		
520.54	0.01	521.56	7.08	522.58	13.08		
520.56	0.03	521.58	7.26	522.60	13.16		
520.58	0.05	521.60	7.45	522.62	13.25		
520.60	0.08	521.62	7.63	522.64	13.33		
520.62	0.12	521.64	7.80	522.66	13.42		
520.64	0.16	521.66	7.98	522.68	13.50		
520.66	0.20	521.68	8.14	522.70	13.59		
520.68	0.26	521.70	8.30	522.72	13.67		
520.70	0.31	521.72	8.45	522.74	13.75		
520.72	0.38	521.74	8.59	522.76	13.83		
520.74	0.45	521.76	8.73	522.78	13.92		
520.76	0.52	521.78	8.87	522.80	14.00		
520.78	0.61	521.80	8.98	522.82	14.08		
520.80	0.70	521.82	9.07	522.84	14.16		
520.82	0.80	521.84	9.13	522.86	14.24		
520.84	0.91	521.86	9.30	522.88	14.32		
520.86	1.02	521.88	9.46	522.90	14.40		
520.88	1.14	521.90	9.62	522.92	14.47		
520.90	1.26	521.92	9.78	522.94	14.55		
520.92	1.39	521.94	9.90	522.96	14.63		
520.94	1.52	521.96	10.02	522.98	14.71		
520.96	1.66	521.98	10.12	523.00	14.78		
520.98	1.80	522.00	10.22	523.02	14.86		
521.00	1.95	522.02	10.31	523.04	14.94		

Stage-Area-Storage for Pond 20P: Retention Basin

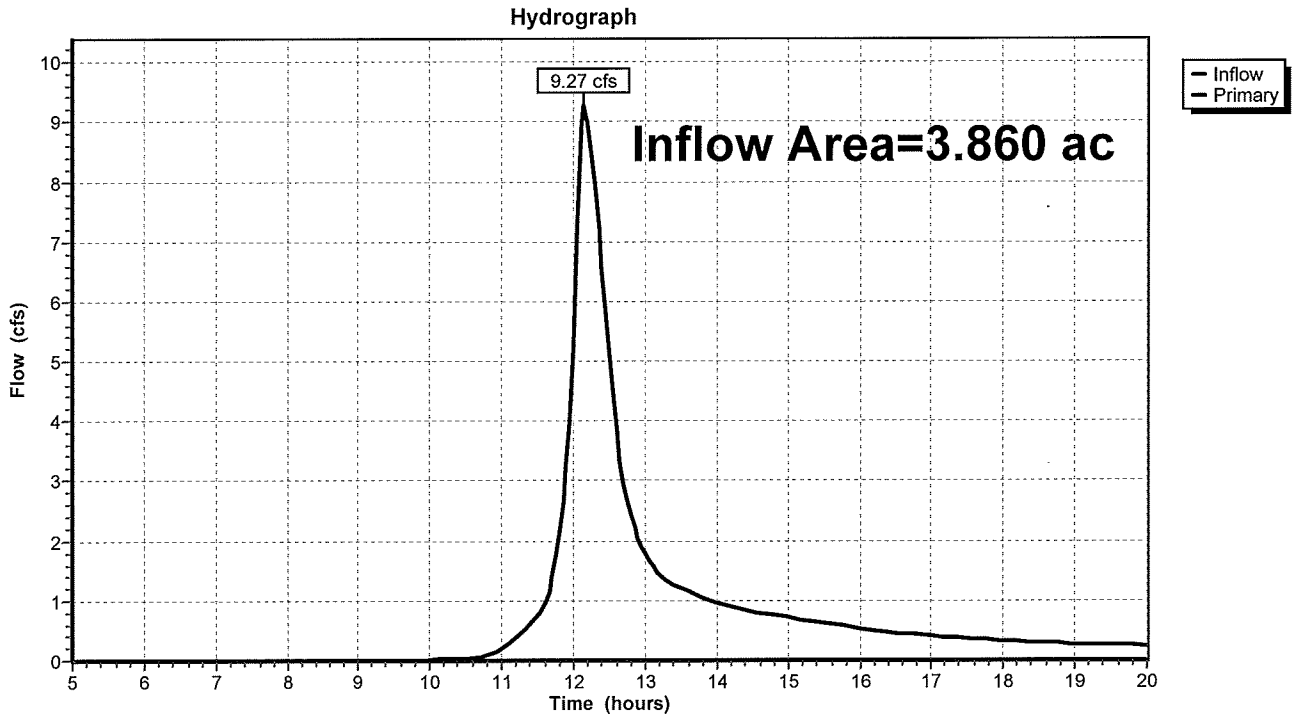
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
520.00	3,310	0
520.05	3,404	168
520.10	3,497	340
520.15	3,591	518
520.20	3,684	699
520.25	3,778	886
520.30	3,871	1,077
520.35	3,965	1,273
520.40	4,058	1,474
520.45	4,152	1,679
520.50	4,245	1,889
520.55	4,339	2,103
520.60	4,432	2,323
520.65	4,526	2,547
520.70	4,619	2,775
520.75	4,713	3,009
520.80	4,806	3,247
520.85	4,900	3,489
520.90	4,993	3,737
520.95	5,087	3,989
521.00	5,181	4,245
521.05	5,274	4,507
521.10	5,368	4,773
521.15	5,461	5,043
521.20	5,555	5,319
521.25	5,648	5,599
521.30	5,742	5,884
521.35	5,835	6,173
521.40	5,929	6,467
521.45	6,022	6,766
521.50	6,116	7,069
521.55	6,209	7,377
521.60	6,303	7,690
521.65	6,396	8,008
521.70	6,490	8,330
521.75	6,583	8,657
521.80	6,677	8,988
521.85	6,770	9,324
521.90	6,864	9,665
521.95	6,957	10,011
522.00	7,051	10,361
522.05	7,323	10,720
522.10	7,594	11,093
522.15	7,866	11,480
522.20	8,138	11,880
522.25	8,409	12,294
522.30	8,681	12,721
522.35	8,952	13,162
522.40	9,224	13,616
522.45	9,496	14,084
522.50	9,767	14,566
522.55	10,039	15,061
522.60	10,311	15,569
522.65	10,582	16,092
522.70	10,854	16,628
522.75	11,126	17,177
522.80	11,397	17,740
522.85	11,669	18,317
522.90	11,940	18,907
522.95	12,212	19,511
523.00	12,484	20,128
523.05	12,755	20,759
523.10	**13,027**	**21,404**

Link DP: Design Point

Inflow Area =	3.860 ac,	Inflow Depth >	2.74"	
Inflow =	9.27 cfs @	12.15 hrs, Volume=	0.882 af	
Primary =	9.27 cfs @	12.15 hrs, Volume=	0.882 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP: Design Point



Hydrograph for Link DP: Design Point

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.25	0.00	0.00	0.00
5.50	0.00	0.00	0.00
5.75	0.00	0.00	0.00
6.00	0.00	0.00	0.00
6.25	0.00	0.00	0.00
6.50	0.00	0.00	0.00
6.75	0.00	0.00	0.00
7.00	0.00	0.00	0.00
7.25	0.00	0.00	0.00
7.50	0.00	0.00	0.00
7.75	0.00	0.00	0.00
8.00	0.00	0.00	0.00
8.25	0.00	0.00	0.00
8.50	0.00	0.00	0.00
8.75	0.00	0.00	0.00
9.00	0.00	0.00	0.00
9.25	0.00	0.00	0.00
9.50	0.01	0.00	0.01
9.75	0.01	0.00	0.01
10.00	0.01	0.00	0.01
10.25	0.02	0.00	0.02
10.50	0.03	0.00	0.03
10.75	0.06	0.00	0.06
11.00	0.20	0.00	0.20
11.25	0.43	0.00	0.43
11.50	0.76	0.00	0.76
11.75	1.75	0.00	1.75
12.00	**5.25**	0.00	**5.25**
12.25	**8.45**	0.00	**8.45**
12.50	5.14	0.00	5.14
12.75	2.66	0.00	2.66
13.00	1.79	0.00	1.79
13.25	1.38	0.00	1.38
13.50	1.20	0.00	1.20
13.75	1.07	0.00	1.07
14.00	0.97	0.00	0.97
14.25	0.88	0.00	0.88
14.50	0.82	0.00	0.82
14.75	0.77	0.00	0.77
15.00	0.72	0.00	0.72
15.25	0.67	0.00	0.67
15.50	0.63	0.00	0.63
15.75	0.58	0.00	0.58
16.00	0.53	0.00	0.53
16.25	0.49	0.00	0.49
16.50	0.46	0.00	0.46
16.75	0.43	0.00	0.43
17.00	0.41	0.00	0.41
17.25	0.39	0.00	0.39
17.50	0.37	0.00	0.37
17.75	0.35	0.00	0.35
18.00	0.32	0.00	0.32
18.25	0.31	0.00	0.31
18.50	0.29	0.00	0.29
18.75	0.28	0.00	0.28
19.00	0.28	0.00	0.28
19.25	0.27	0.00	0.27
19.50	0.26	0.00	0.26
19.75	0.25	0.00	0.25
20.00	0.25	0.00	0.25

PROPOSED CONDITIONS

100 YEAR STORM

274 Prospect Street - Post development2
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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 10S: Overland runoff basin Runoff Area=3.290 ac Runoff Depth>4.17"
Flow Length=387' Tc=5.0 min CN=81 Runoff=17.03 cfs 1.143 af

Subcatchment 30S: Overland runoff to Prospect Street Runoff Area=0.570 ac Runoff Depth>3.25"
Flow Length=20' Tc=5.0 min CN=72 Runoff=2.33 cfs 0.154 af

Pond 20P: Retention Basin Peak Elev=522.00' Storage=10,327 cf Inflow=17.03 cfs 1.143 af
Outflow=10.20 cfs 1.081 af

Link DP: Design Point Inflow=11.85 cfs 1.235 af
Primary=11.85 cfs 1.235 af

Total Runoff Area = 3.860 ac Runoff Volume = 1.297 af Average Runoff Depth = 4.03"

Subcatchment 10S: Overland runoff basin

Runoff = 17.03 cfs @ 12.07 hrs, Volume= 1.143 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 Rainfall=6.60"

Area (ac)	CN	Description
0.990	98	Paved parking & roofs
2.000	74	>75% Grass cover, Good, HSG C
0.300	71	Meadow, non-grazed, HSG C
3.290	81	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	50	0.1600	0.2		**Sheet Flow, Path 1** Grass: Dense n= 0.240 P2= 3.20"
0.0	30	0.4667	11.0		**Shallow Concentrated Flow, Path 2** Unpaved Kv= 16.1 fps
1.1	227	0.0176	3.4	20.50	**Channel Flow, Path 3** Area= 6.0 sf Perim= 16.0' r= 0.38' n= 0.030 Earth, grassed & winding
0.3	80	0.0100	5.3	6.46	**Circular Channel (pipe), Path 4** Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
5.0	387	Total			

274 Prospect Street - Post development2
Prepared by {enter your company name here}
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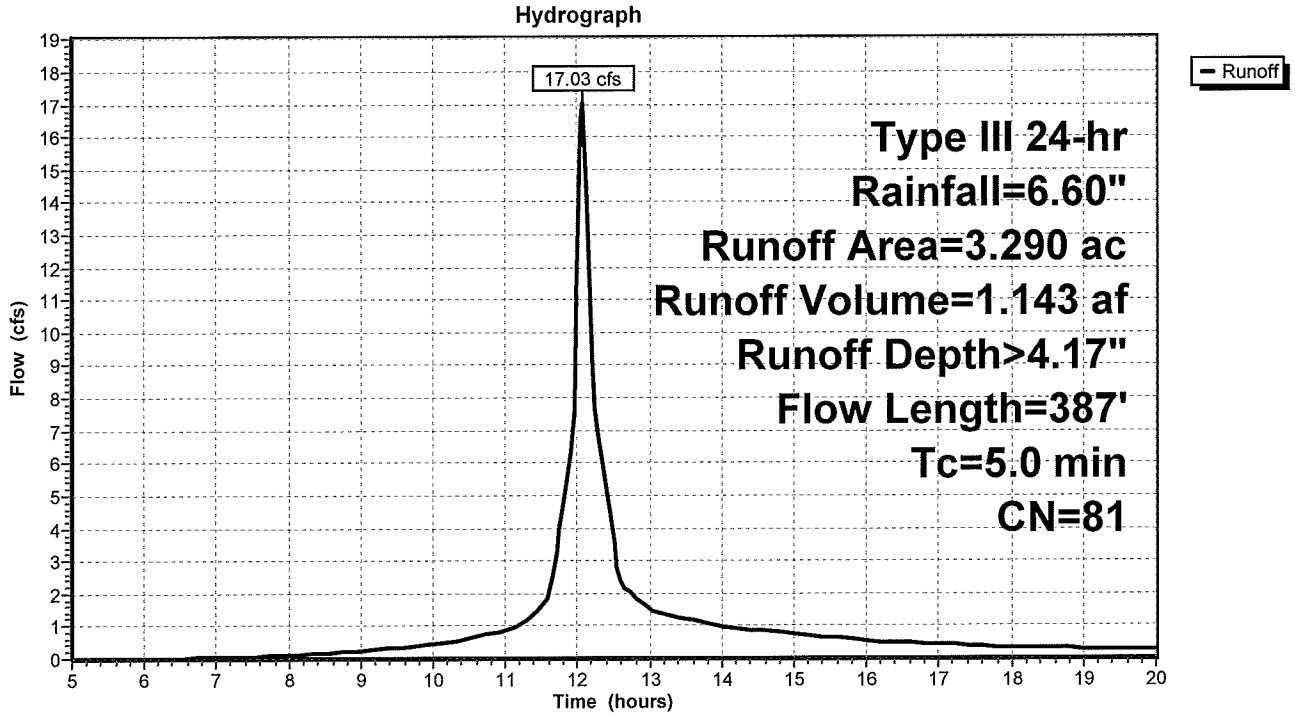
Subcatchment 10S: Overland runoff basin



Hydrograph for Subcatchment 10S: Overland runoff basin

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.37	0.00	0.00
5.25	0.40	0.00	0.00
5.50	0.42	0.00	0.00
5.75	0.45	0.00	0.00
6.00	0.48	0.00	0.00
6.25	0.50	0.00	0.01
6.50	0.53	0.00	0.02
6.75	0.56	0.00	0.03
7.00	0.60	0.01	0.04
7.25	0.63	0.01	0.06
7.50	0.67	0.02	0.07
7.75	0.71	0.02	0.09
8.00	0.75	0.03	0.11
8.25	0.80	0.04	0.14
8.50	0.85	0.05	0.17
8.75	0.90	0.07	0.21
9.00	0.96	0.09	0.25
9.25	1.03	0.11	0.29
9.50	1.10	0.13	0.34
9.75	1.17	0.16	0.39
10.00	1.25	0.19	0.45
10.25	1.33	0.23	0.53
10.50	1.43	0.28	0.63
10.75	1.53	0.33	0.74
11.00	1.65	0.40	0.85
11.25	1.79	0.48	1.13
11.50	1.97	0.58	1.51
11.75	2.34	0.83	3.97
12.00	3.30	1.55	**11.43**
12.25	4.26	2.34	**7.70**
12.50	4.63	2.66	3.55
12.75	4.81	2.82	1.98
13.00	4.95	2.94	1.54
13.25	5.07	3.04	1.33
13.50	5.17	3.14	1.22
13.75	5.27	3.22	1.11
14.00	5.35	3.30	1.00
14.25	5.43	3.37	0.92
14.50	5.50	3.44	0.87
14.75	5.57	3.50	0.81
15.00	5.64	3.56	0.76
15.25	5.70	3.61	0.70
15.50	5.75	3.66	0.65
15.75	5.80	3.70	0.59
16.00	5.85	3.75	0.53
16.25	5.89	3.78	0.50
16.50	5.93	3.82	0.48
16.75	5.97	3.85	0.45
17.00	6.00	3.89	0.43
17.25	6.04	3.92	0.40
17.50	6.07	3.95	0.38
17.75	6.10	3.97	0.35
18.00	6.12	4.00	0.33
18.25	6.15	4.02	0.32
18.50	6.18	4.04	0.31
18.75	6.20	4.07	0.30
19.00	6.23	4.09	0.29
19.25	6.25	4.11	0.29
19.50	6.27	4.13	0.28
19.75	6.29	4.15	0.27
20.00	**6.32**	**4.17**	0.26

Subcatchment 30S: Overland runoff to Prospect Street

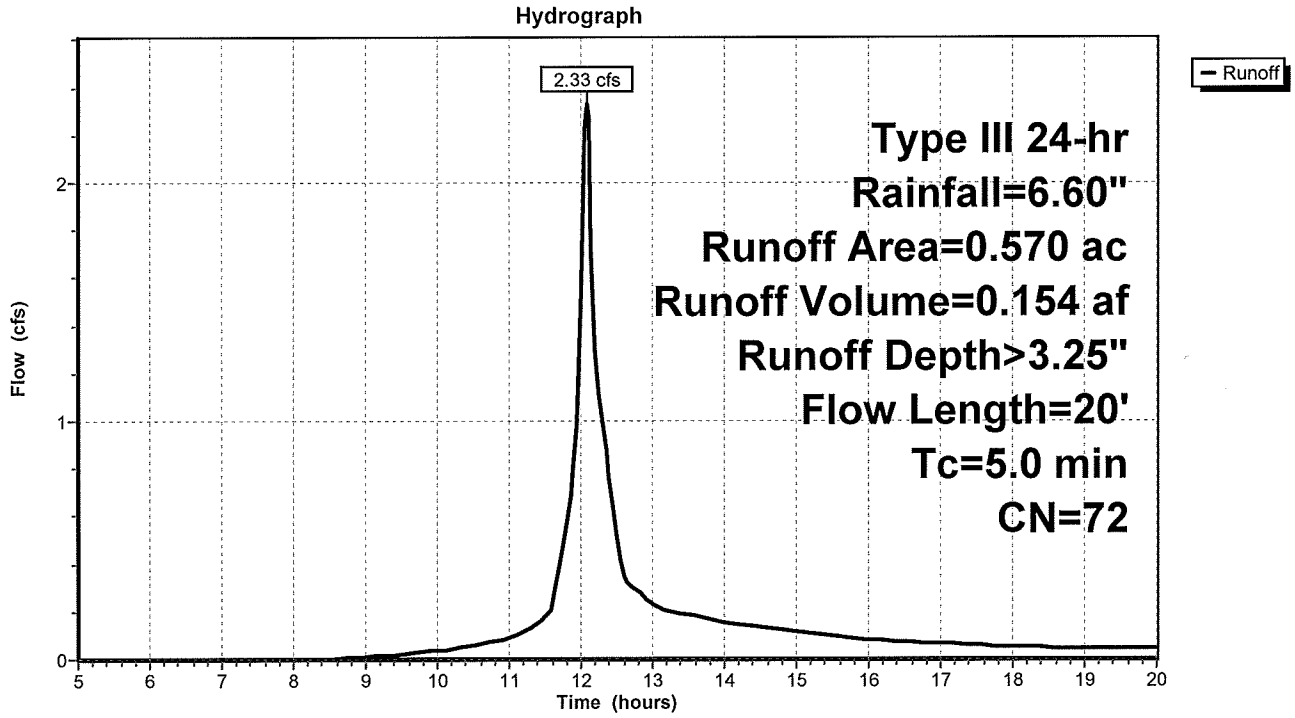
Runoff = 2.33 cfs @ 12.08 hrs, Volume= 0.154 af, Depth> 3.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Rainfall=6.60"

Area (ac)	CN	Description
0.310	71	Meadow, non-grazed, HSG C
0.260	74	>75% Grass cover, Good, HSG C
0.570	72	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	20		0.1		**Direct Entry, Path 1**

Subcatchment 30S: Overland runoff to Prospect Street



Hydrograph for Subcatchment 30S: Overland runoff to Prospect Street

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.37	0.00	0.00
5.25	0.40	0.00	0.00
5.50	0.42	0.00	0.00
5.75	0.45	0.00	0.00
6.00	0.48	0.00	0.00
6.25	0.50	0.00	0.00
6.50	0.53	0.00	0.00
6.75	0.56	0.00	0.00
7.00	0.60	0.00	0.00
7.25	0.63	0.00	0.00
7.50	0.67	0.00	0.00
7.75	0.71	0.00	0.00
8.00	0.75	0.00	0.00
8.25	0.80	0.00	0.00
8.50	0.85	0.00	0.00
8.75	0.90	0.00	0.01
9.00	0.96	0.01	0.01
9.25	1.03	0.01	0.02
9.50	1.10	0.02	0.02
9.75	1.17	0.04	0.03
10.00	1.25	0.05	0.04
10.25	1.33	0.07	0.05
10.50	1.43	0.09	0.06
10.75	1.53	0.12	0.07
11.00	1.65	0.16	0.09
11.25	1.79	0.21	0.12
11.50	1.97	0.28	0.17
11.75	2.34	0.45	0.48
12.00	3.30	0.99	**1.52**
12.25	4.26	1.64	**1.11**
12.50	4.63	1.92	0.53
12.75	4.81	2.05	0.30
13.00	4.95	2.16	0.23
13.25	5.07	2.25	0.20
13.50	5.17	2.33	0.19
13.75	5.27	2.41	0.17
14.00	5.35	2.47	0.15
14.25	5.43	2.53	0.14
14.50	5.50	2.59	0.13
14.75	5.57	2.65	0.12
15.00	5.64	2.70	0.12
15.25	5.70	2.75	0.11
15.50	5.75	2.79	0.10
15.75	5.80	2.83	0.09
16.00	5.85	2.87	0.08
16.25	5.89	2.90	0.08
16.50	5.93	2.94	0.07
16.75	5.97	2.97	0.07
17.00	6.00	3.00	0.07
17.25	6.04	3.02	0.06
17.50	6.07	3.05	0.06
17.75	6.10	3.07	0.05
18.00	6.12	3.10	0.05
18.25	6.15	3.12	0.05
18.50	6.18	3.14	0.05
18.75	6.20	3.16	0.05
19.00	6.23	3.18	0.05
19.25	6.25	3.20	0.04
19.50	6.27	3.22	0.04
19.75	6.29	3.24	0.04
20.00	**6.32**	**3.25**	0.04

Pond 20P: Retention Basin

Inflow Area =	3.290 ac,	Inflow Depth >	4.17"		
Inflow =	17.03 cfs @	12.07 hrs,	Volume=	1.143 af	
Outflow =	10.20 cfs @	12.18 hrs,	Volume=	1.081 af,	Atten= 40%, Lag= 6.6 min
Primary =	10.20 cfs @	12.18 hrs,	Volume=	1.081 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 522.00' @ 12.19 hrs Surf.Area= 7,042 sf Storage= 10,327 cf
Plug-Flow detention time= 43.9 min calculated for 1.077 af (94% of inflow)
Center-of-Mass det. time= 24.4 min (799.0 - 774.5)

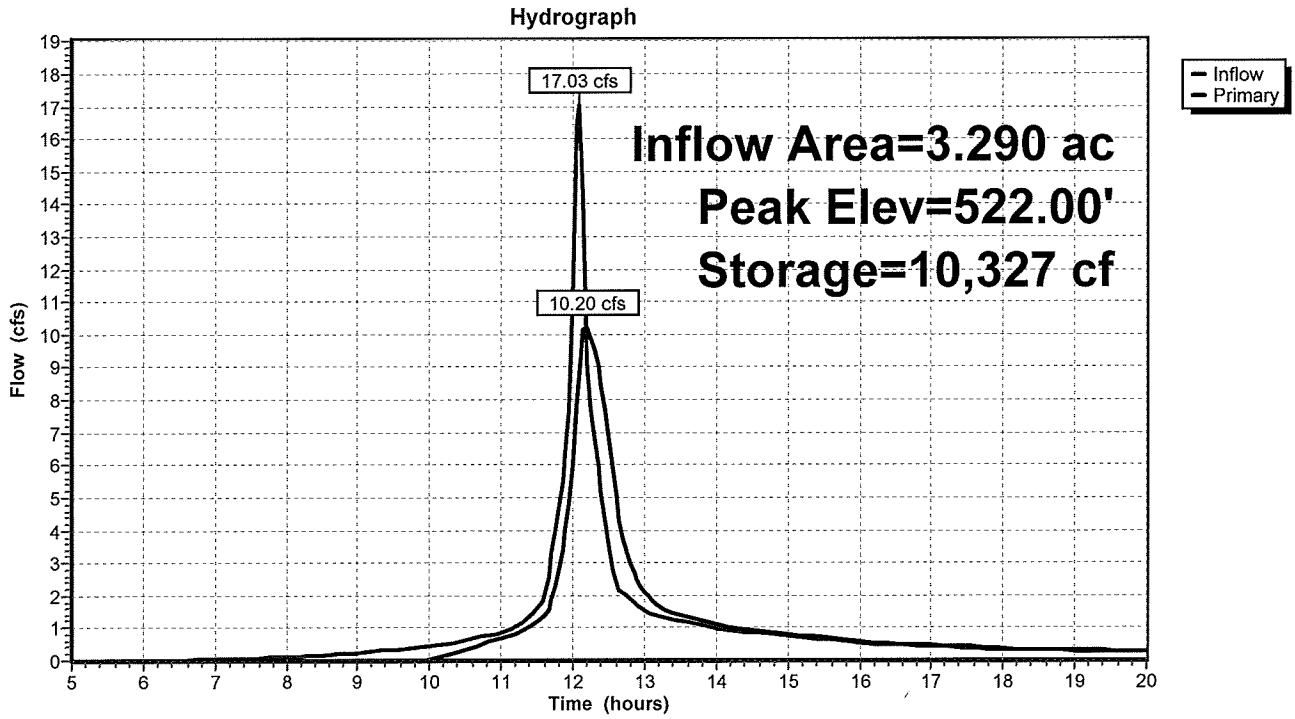
Volume	Invert	Avail.Storage	Storage Description
#1	520.00'	21,404 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
520.00	3,310	0	0
522.00	7,051	10,361	10,361
523.10	13,027	11,043	21,404

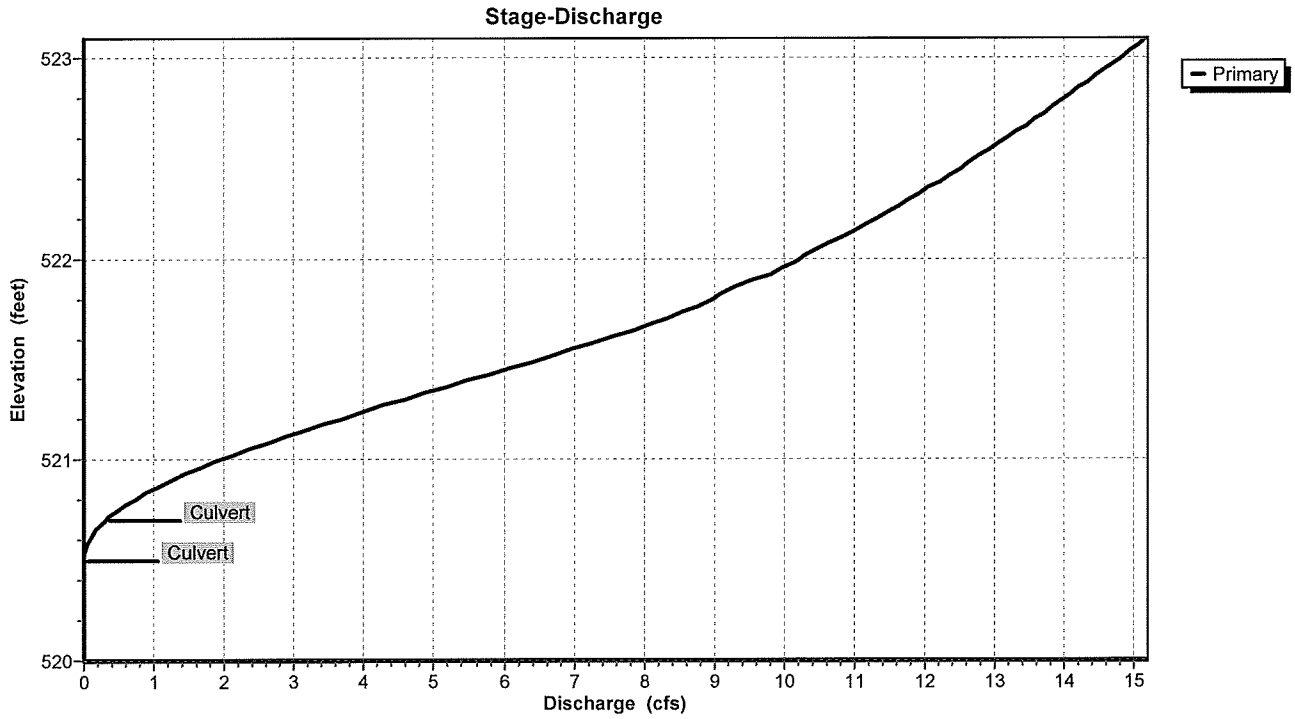
Device	Routing	Invert	Outlet Devices
#1	Primary	520.50'	**12.0" x 20.0' long Culvert X 2.00** Ke= 0.600 Outlet Invert= 520.30' S= 0.0100 '/' Cc= 0.900 n= 0.012
#2	Primary	520.70'	**12.0" x 18.0' long Culvert** Ke= 0.600 Outlet Invert= 520.52' S= 0.0100 '/' Cc= 0.900 n= 0.012

Primary OutFlow Max=10.17 cfs @ 12.18 hrs HW=521.99' (Free Discharge)
└─**1=Culvert** (Inlet Controls 7.05 cfs @ 4.5 fps)
└─**2=Culvert** (Barrel Controls 3.12 cfs @ 4.0 fps)

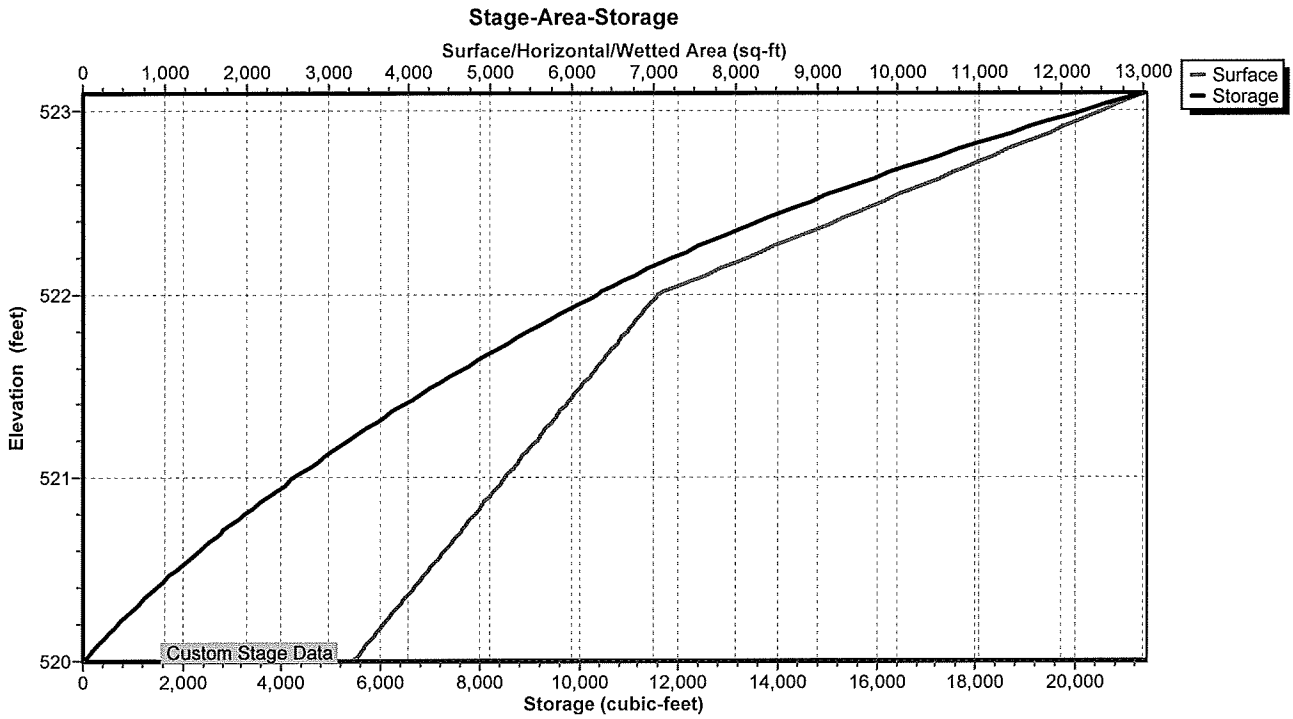
Pond 20P: Retention Basin



Pond 20P: Retention Basin



Pond 20P: Retention Basin



Hydrograph for Pond 20P: Retention Basin

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
5.00	0.00	0	520.00	0.00
5.50	0.00	0	520.00	0.00
6.00	0.00	0	520.00	0.00
6.50	0.02	14	520.00	0.00
7.00	0.04	67	520.02	0.00
7.50	0.07	170	520.05	0.00
8.00	0.11	333	520.10	0.00
8.50	0.17	580	520.17	0.00
9.00	0.25	952	520.27	0.00
9.50	0.34	1,479	520.40	0.00
10.00	0.45	2,179	520.57	0.04
10.50	0.63	2,821	520.71	0.34
11.00	0.85	3,223	520.80	0.68
11.50	1.51	3,675	520.89	1.18
12.00	**11.43**	**6,767**	**521.45**	**6.02**
12.50	**3.55**	**7,280**	**521.53**	**6.83**
13.00	1.54	4,355	521.02	2.11
13.50	1.22	3,820	520.92	1.37
14.00	1.00	3,609	520.87	1.10
14.50	0.87	3,461	520.84	0.93
15.00	0.76	3,356	520.82	0.82
15.50	0.65	3,251	520.80	0.71
16.00	0.53	3,138	520.78	0.60
16.50	0.48	3,045	520.76	0.52
17.00	0.43	2,980	520.74	0.46
17.50	0.38	2,917	520.73	0.41
18.00	0.33	2,852	520.72	0.36
18.50	0.31	2,800	520.71	0.33
19.00	0.29	2,769	520.70	0.31
19.50	0.28	2,743	520.69	0.29
20.00	0.26	2,718	520.69	0.28

Stage-Discharge for Pond 20P: Retention Basin

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
520.00	0.00	521.02	2.10	522.04	10.38	523.06	15.01
520.02	0.00	521.04	2.26	522.06	10.51	523.08	15.09
520.04	0.00	521.06	2.41	522.08	10.64	523.10	**15.16**
520.06	0.00	521.08	2.58	522.10	10.76		
520.08	0.00	521.10	2.74	522.12	10.89		
520.10	0.00	521.12	2.91	522.14	11.01		
520.12	0.00	521.14	3.09	522.16	11.11		
520.14	0.00	521.16	3.26	522.18	11.21		
520.16	0.00	521.18	3.44	522.20	11.31		
520.18	0.00	521.20	3.62	522.22	11.41		
520.20	0.00	521.22	3.81	522.24	11.51		
520.22	0.00	521.24	3.99	522.26	11.61		
520.24	0.00	521.26	4.18	522.28	11.71		
520.26	0.00	521.28	4.37	522.30	11.80		
520.28	0.00	521.30	4.56	522.32	11.90		
520.30	0.00	521.32	4.75	522.34	11.99		
520.32	0.00	521.34	4.94	522.36	12.09		
520.34	0.00	521.36	5.14	522.38	12.18		
520.36	0.00	521.38	5.33	522.40	12.27		
520.38	0.00	521.40	5.53	522.42	12.37		
520.40	0.00	521.42	5.72	522.44	12.46		
520.42	0.00	521.44	5.92	522.46	12.55		
520.44	0.00	521.46	6.12	522.48	12.64		
520.46	0.00	521.48	6.31	522.50	12.73		
520.48	0.00	521.50	6.50	522.52	12.82		
520.50	0.00	521.52	6.70	522.54	12.90		
520.52	0.00	521.54	6.89	522.56	12.99		
520.54	0.01	521.56	7.08	522.58	13.08		
520.56	0.03	521.58	7.26	522.60	13.16		
520.58	0.05	521.60	7.45	522.62	13.25		
520.60	0.08	521.62	7.63	522.64	13.33		
520.62	0.12	521.64	7.80	522.66	13.42		
520.64	0.16	521.66	7.98	522.68	13.50		
520.66	0.20	521.68	8.14	522.70	13.59		
520.68	0.26	521.70	8.30	522.72	13.67		
520.70	0.31	521.72	8.45	522.74	13.75		
520.72	0.38	521.74	8.59	522.76	13.83		
520.74	0.45	521.76	8.73	522.78	13.92		
520.76	0.52	521.78	8.87	522.80	14.00		
520.78	0.61	521.80	8.98	522.82	14.08		
520.80	0.70	521.82	9.07	522.84	14.16		
520.82	0.80	521.84	9.13	522.86	14.24		
520.84	0.91	521.86	9.30	522.88	14.32		
520.86	1.02	521.88	9.46	522.90	14.40		
520.88	1.14	521.90	9.62	522.92	14.47		
520.90	1.26	521.92	9.78	522.94	14.55		
520.92	1.39	521.94	9.90	522.96	14.63		
520.94	1.52	521.96	10.02	522.98	14.71		
520.96	1.66	521.98	10.12	523.00	14.78		
520.98	1.80	522.00	10.22	523.02	14.86		
521.00	1.95	522.02	10.31	523.04	14.94		

Stage-Area-Storage for Pond 20P: Retention Basin

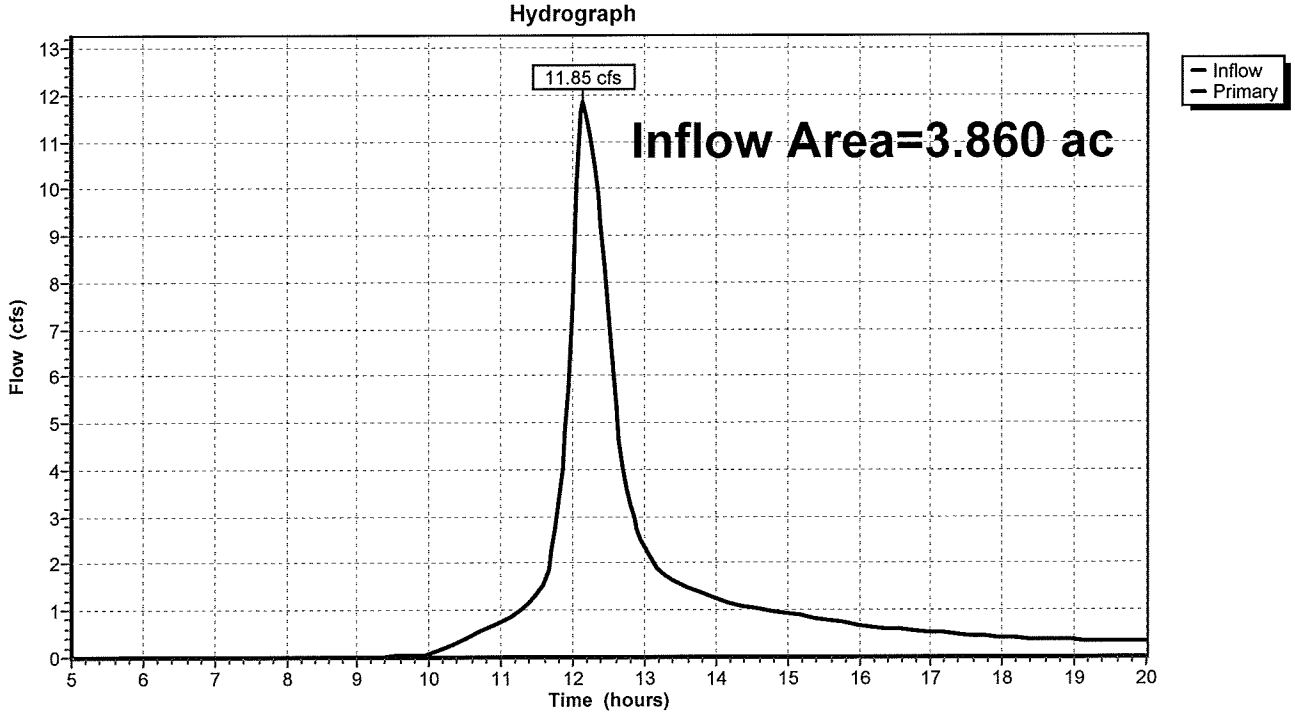
Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
520.00	3,310	0
520.05	3,404	168
520.10	3,497	340
520.15	3,591	518
520.20	3,684	699
520.25	3,778	886
520.30	3,871	1,077
520.35	3,965	1,273
520.40	4,058	1,474
520.45	4,152	1,679
520.50	4,245	1,889
520.55	4,339	2,103
520.60	4,432	2,323
520.65	4,526	2,547
520.70	4,619	2,775
520.75	4,713	3,009
520.80	4,806	3,247
520.85	4,900	3,489
520.90	4,993	3,737
520.95	5,087	3,989
521.00	5,181	4,245
521.05	5,274	4,507
521.10	5,368	4,773
521.15	5,461	5,043
521.20	5,555	5,319
521.25	5,648	5,599
521.30	5,742	5,884
521.35	5,835	6,173
521.40	5,929	6,467
521.45	6,022	6,766
521.50	6,116	7,069
521.55	6,209	7,377
521.60	6,303	7,690
521.65	6,396	8,008
521.70	6,490	8,330
521.75	6,583	8,657
521.80	6,677	8,988
521.85	6,770	9,324
521.90	6,864	9,665
521.95	6,957	10,011
522.00	7,051	10,361
522.05	7,323	10,720
522.10	7,594	11,093
522.15	7,866	11,480
522.20	8,138	11,880
522.25	8,409	12,294
522.30	8,681	12,721
522.35	8,952	13,162
522.40	9,224	13,616
522.45	9,496	14,084
522.50	9,767	14,566
522.55	10,039	15,061
522.60	10,311	15,569
522.65	10,582	16,092
522.70	10,854	16,628
522.75	11,126	17,177
522.80	11,397	17,740
522.85	11,669	18,317
522.90	11,940	18,907
522.95	12,212	19,511
523.00	12,484	20,128
523.05	12,755	20,759
523.10	**13,027**	**21,404**

Link DP: Design Point

Inflow Area = 3.860 ac, Inflow Depth > 3.84"
Inflow = 11.85 cfs @ 12.14 hrs, Volume= 1.235 af
Primary = 11.85 cfs @ 12.14 hrs, Volume= 1.235 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link DP: Design Point



Hydrograph for Link DP: Design Point

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
5.00	0.00	**0.00**	0.00
5.25	0.00	0.00	0.00
5.50	0.00	0.00	0.00
5.75	0.00	0.00	0.00
6.00	0.00	0.00	0.00
6.25	0.00	0.00	0.00
6.50	0.00	0.00	0.00
6.75	0.00	0.00	0.00
7.00	0.00	0.00	0.00
7.25	0.00	0.00	0.00
7.50	0.00	0.00	0.00
7.75	0.00	0.00	0.00
8.00	0.00	0.00	0.00
8.25	0.00	0.00	0.00
8.50	0.00	0.00	0.00
8.75	0.01	0.00	0.01
9.00	0.01	0.00	0.01
9.25	0.02	0.00	0.02
9.50	0.02	0.00	0.02
9.75	0.03	0.00	0.03
10.00	0.07	0.00	0.07
10.25	0.22	0.00	0.22
10.50	0.40	0.00	0.40
10.75	0.59	0.00	0.59
11.00	0.77	0.00	0.77
11.25	0.99	0.00	0.99
11.50	1.35	0.00	1.35
11.75	2.76	0.00	2.76
12.00	**7.54**	0.00	**7.54**
12.25	**11.07**	0.00	**11.07**
12.50	7.36	0.00	7.36
12.75	3.60	0.00	3.60
13.00	2.34	0.00	2.34
13.25	1.79	0.00	1.79
13.50	1.55	0.00	1.55
13.75	1.39	0.00	1.39
14.00	1.25	0.00	1.25
14.25	1.14	0.00	1.14
14.50	1.06	0.00	1.06
14.75	1.00	0.00	1.00
15.00	0.93	0.00	0.93
15.25	0.87	0.00	0.87
15.50	0.81	0.00	0.81
15.75	0.74	0.00	0.74
16.00	0.68	0.00	0.68
16.25	0.63	0.00	0.63
16.50	0.59	0.00	0.59
16.75	0.56	0.00	0.56
17.00	0.53	0.00	0.53
17.25	0.50	0.00	0.50
17.50	0.47	0.00	0.47
17.75	0.44	0.00	0.44
18.00	0.42	0.00	0.42
18.25	0.39	0.00	0.39
18.50	0.38	0.00	0.38
18.75	0.36	0.00	0.36
19.00	0.35	0.00	0.35
19.25	0.34	0.00	0.34
19.50	0.34	0.00	0.34
19.75	0.33	0.00	0.33
20.00	0.32	0.00	0.32