



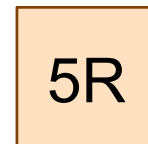
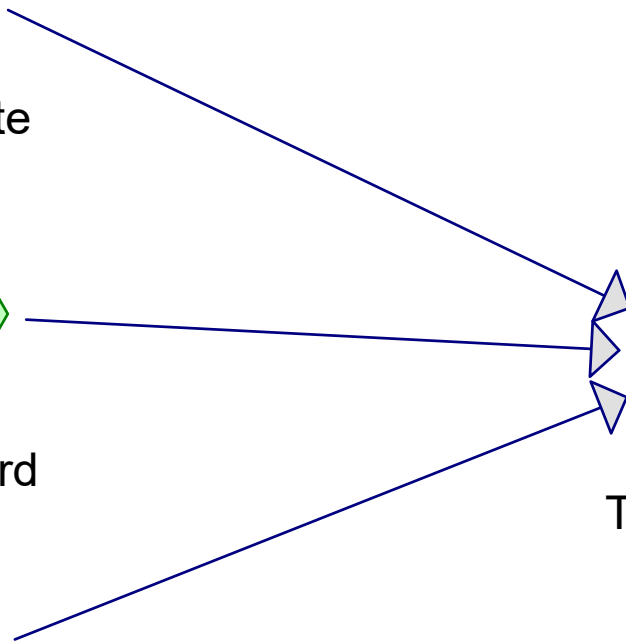
Rear Offsite



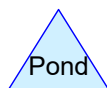
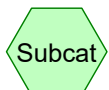
Middle Yard



Front to ROW



Total Offsite



**Routing Diagram for Byfield 23 Central Pre rev3**

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**Rainfall Events Listing**

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2Yr	Type II 24-hr		Default	24.00	1	3.18	2
2	10Yr	Type II 24-hr		Default	24.00	1	4.90	2
3	100 Yr	Type II 24-hr		Default	24.00	1	9.10	2

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### Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.437	39	>75% Grass cover, Good, HSG A (EX1, EX2, EX3)
0.945	61	>75% Grass cover, Good, HSG B (EX1, EX2, EX3)
0.012	98	Paved parking, HSG A (EX3)
0.074	98	Paved parking, HSG B (EX2, EX3)
0.033	98	Roofs, HSG A (EX2, EX3)
0.026	98	Roofs, HSG B (EX2)
<b>1.526</b>	<b>58</b>	<b>TOTAL AREA</b>

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*Type II 24-hr 2Yr Rainfall=3.18"*

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Time span=0.00-28.00 hrs, dt=0.02 hrs, 1401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

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

**Subcatchment EX1: Rear Offsite**Runoff Area=12,779 sf 0.00% Impervious Runoff Depth=0.33"  
Tc=6.0 min CN=58 Runoff=0.12 cfs 0.008 af**Subcatchment EX2: Middle Yard**Runoff Area=35,898 sf 9.43% Impervious Runoff Depth=0.37"  
Tc=6.0 min CN=59 Runoff=0.38 cfs 0.025 af**Subcatchment EX3: Front to ROW**Runoff Area=17,810 sf 16.49% Impervious Runoff Depth=0.33"  
Tc=6.0 min CN=58 Runoff=0.16 cfs 0.011 af**Reach 5R: Total Offsite**Inflow=0.66 cfs 0.045 af  
Outflow=0.66 cfs 0.045 af**Total Runoff Area = 1.526 ac Runoff Volume = 0.045 af Average Runoff Depth = 0.35"**  
**90.49% Pervious = 1.381 ac 9.51% Impervious = 0.145 ac**

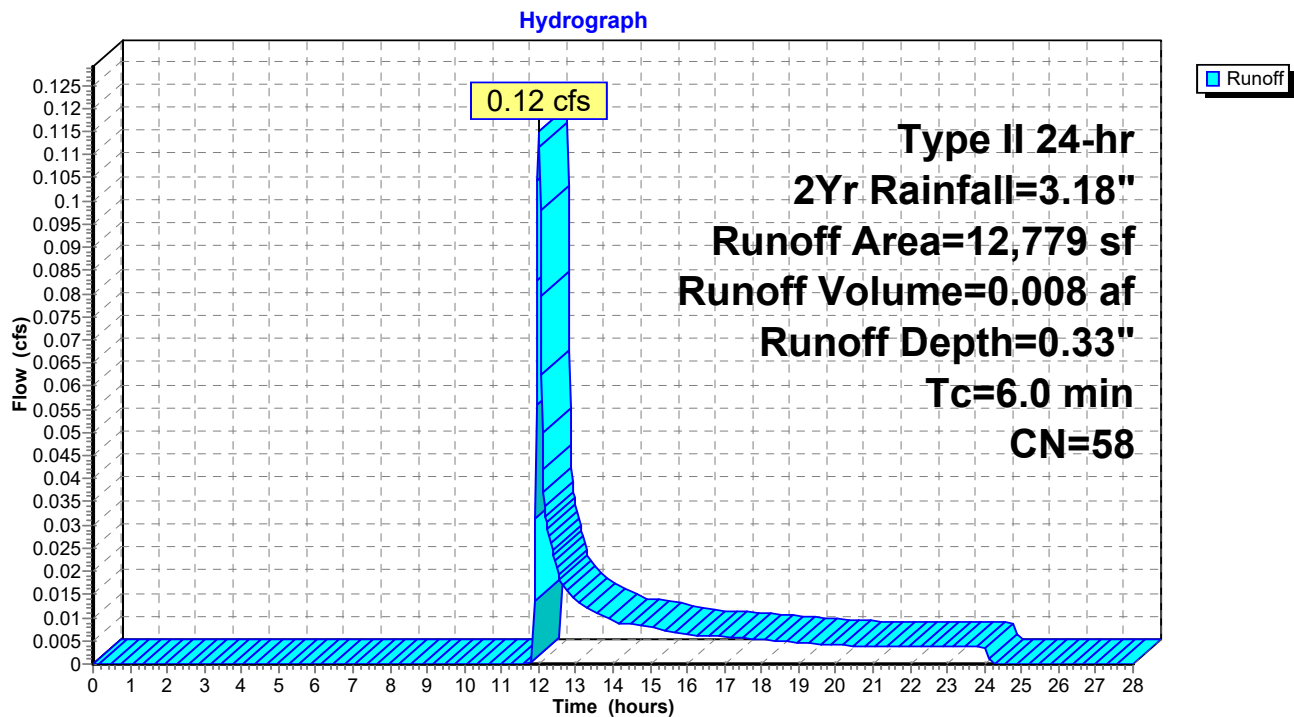
**Summary for Subcatchment EX1: Rear Offsite**

Runoff = 0.12 cfs @ 12.01 hrs, Volume= 0.008 af, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 2Yr Rainfall=3.18"

Area (sf)	CN	Description
10,854	61	>75% Grass cover, Good, HSG B
1,925	39	>75% Grass cover, Good, HSG A
12,779	58	Weighted Average
12,779		100.00% Pervious Area

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

**Subcatchment EX1: Rear Offsite**

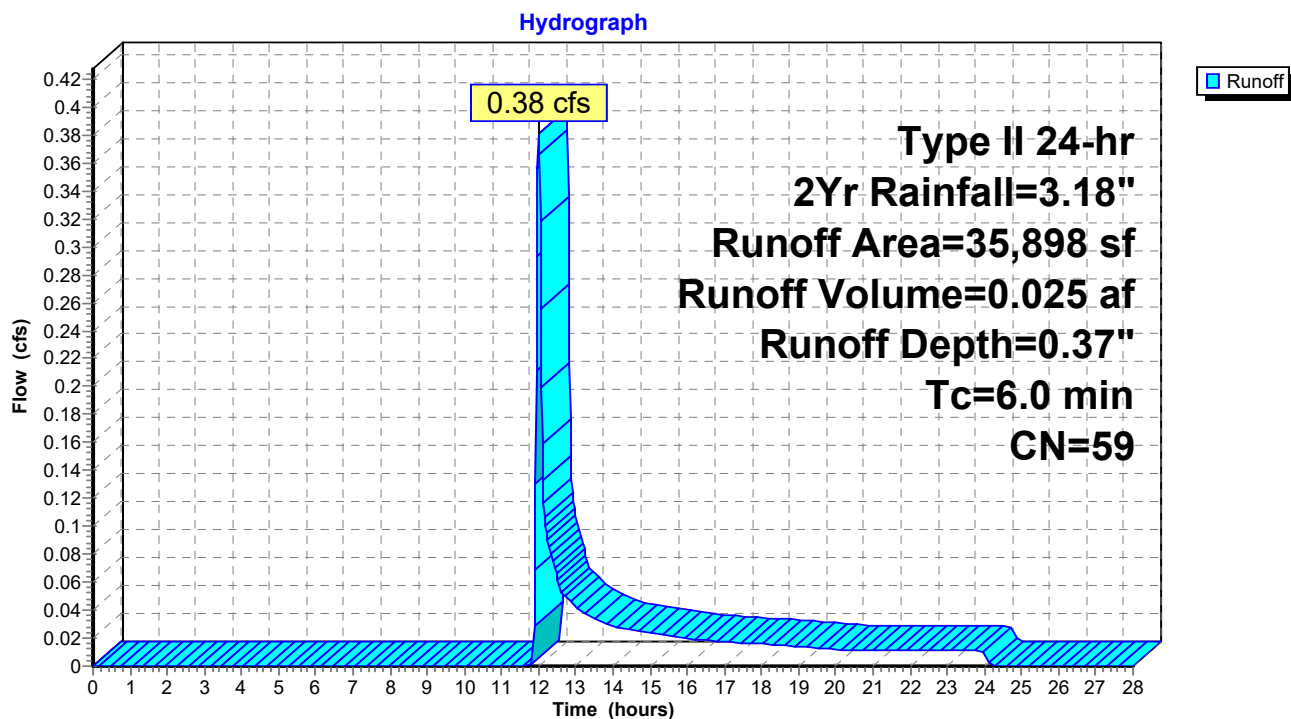
**Summary for Subcatchment EX2: Middle Yard**

Runoff = 0.38 cfs @ 12.00 hrs, Volume= 0.025 af, Depth= 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 2Yr Rainfall=3.18"

Area (sf)	CN	Description
23,116	61	>75% Grass cover, Good, HSG B
1,136	98	Roofs, HSG B
1,860	98	Paved parking, HSG B
9,396	39	>75% Grass cover, Good, HSG A
390	98	Roofs, HSG A
35,898	59	Weighted Average
32,512		90.57% Pervious Area
3,386		9.43% Impervious Area

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

**Subcatchment EX2: Middle Yard**

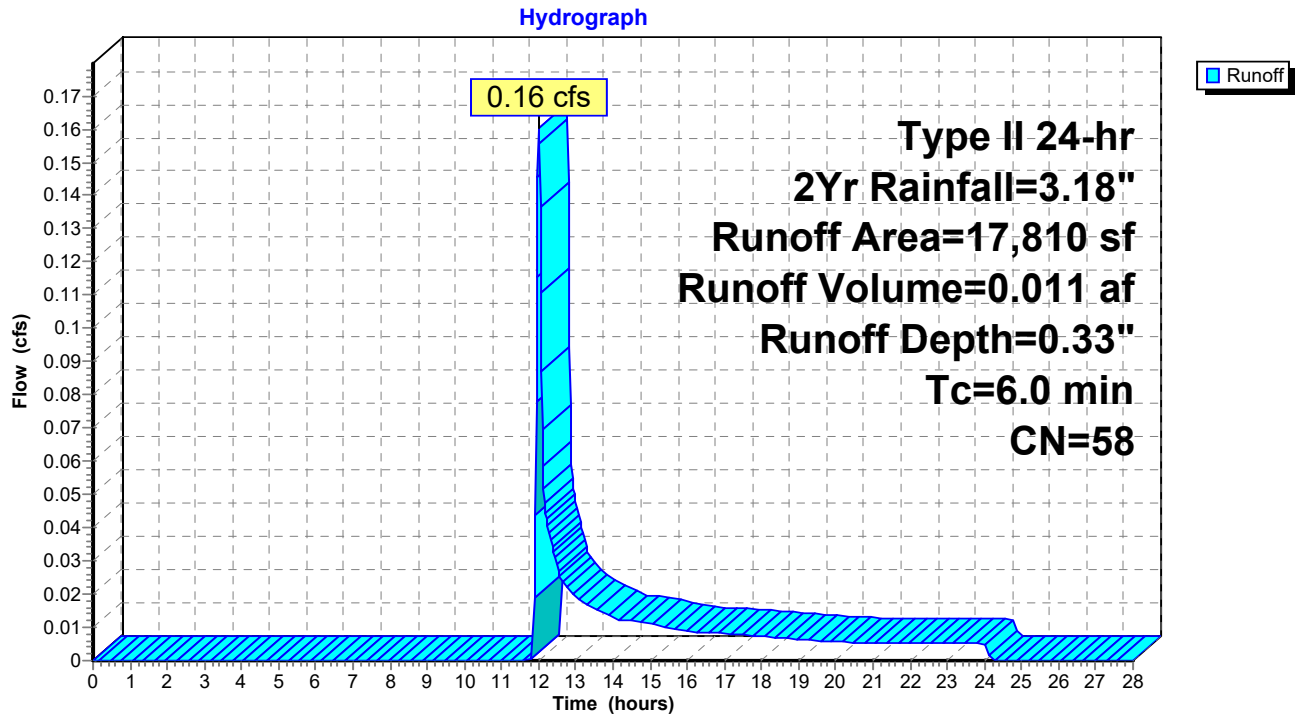
**Summary for Subcatchment EX3: Front to ROW**

Runoff = 0.16 cfs @ 12.01 hrs, Volume= 0.011 af, Depth= 0.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 2Yr Rainfall=3.18"

Area (sf)	CN	Description
4,553	61	>75% Grass cover, Good, HSG B
1,363	98	Paved parking, HSG B
2,628	61	>75% Grass cover, Good, HSG B
532	98	Paved parking, HSG A
7,693	39	>75% Grass cover, Good, HSG A
1,041	98	Roofs, HSG A
17,810	58	Weighted Average
14,874		83.51% Pervious Area
2,936		16.49% Impervious Area

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

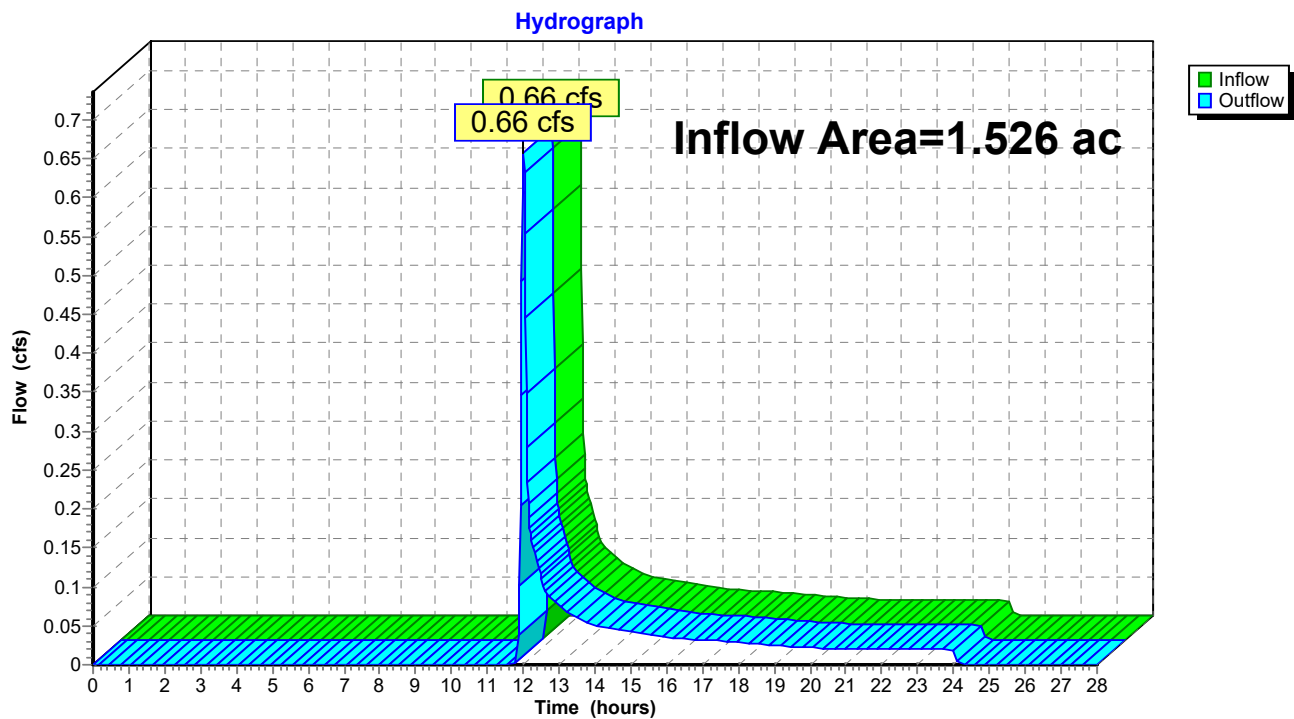
**Subcatchment EX3: Front to ROW**



**Summary for Reach 5R: Total Offsite**

Inflow Area = 1.526 ac, 9.51% Impervious, Inflow Depth = 0.35" for 2Yr event  
Inflow = 0.66 cfs @ 12.00 hrs, Volume= 0.045 af  
Outflow = 0.66 cfs @ 12.00 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs

**Reach 5R: Total Offsite**

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*Type II 24-hr 10Yr Rainfall=4.90"*

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Time span=0.00-28.00 hrs, dt=0.02 hrs, 1401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

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

**Subcatchment EX1: Rear Offsite**

Runoff Area=12,779 sf 0.00% Impervious Runoff Depth=1.11"

Tc=6.0 min CN=58 Runoff=0.55 cfs 0.027 af

**Subcatchment EX2: Middle Yard**

Runoff Area=35,898 sf 9.43% Impervious Runoff Depth=1.18"

Tc=6.0 min CN=59 Runoff=1.65 cfs 0.081 af

**Subcatchment EX3: Front to ROW**

Runoff Area=17,810 sf 16.49% Impervious Runoff Depth=1.11"

Tc=6.0 min CN=58 Runoff=0.77 cfs 0.038 af

**Reach 5R: Total Offsite**

Inflow=2.97 cfs 0.146 af

Outflow=2.97 cfs 0.146 af

**Total Runoff Area = 1.526 ac   Runoff Volume = 0.146 af   Average Runoff Depth = 1.15"**  
**90.49% Pervious = 1.381 ac   9.51% Impervious = 0.145 ac**

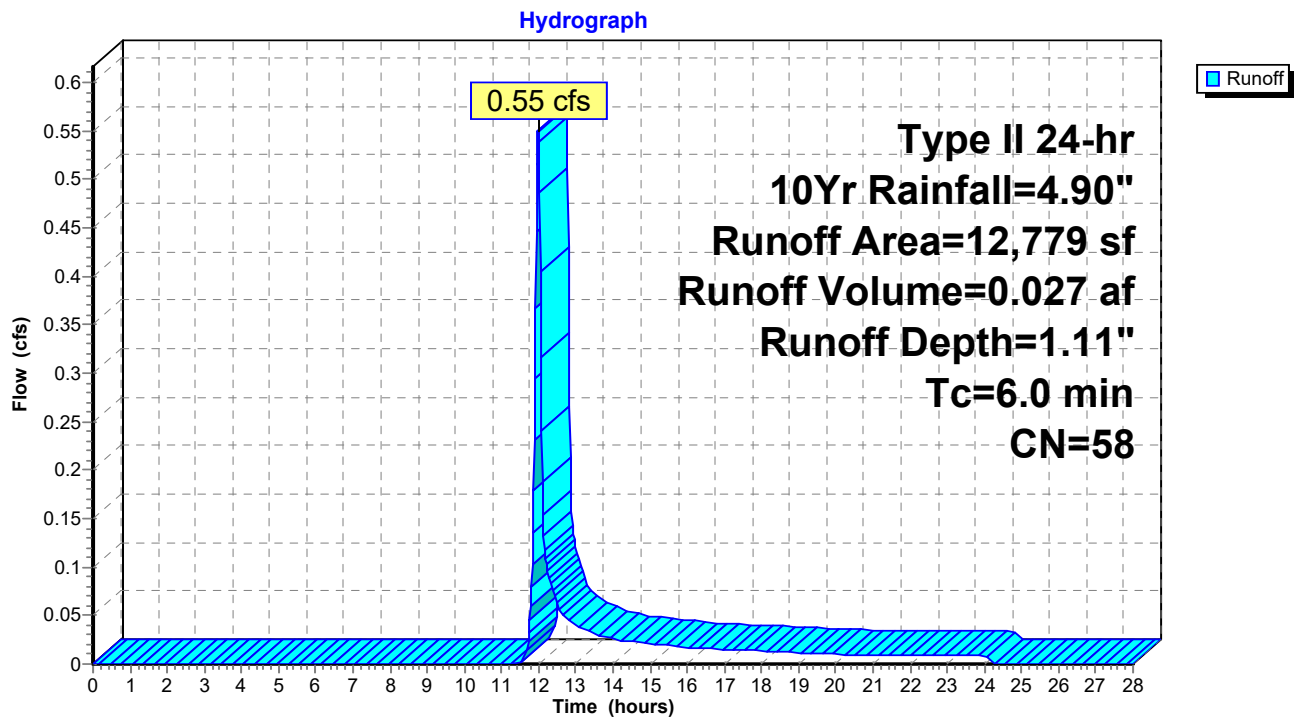
**Summary for Subcatchment EX1: Rear Offsite**

Runoff = 0.55 cfs @ 11.99 hrs, Volume= 0.027 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 10Yr Rainfall=4.90"

Area (sf)	CN	Description
10,854	61	>75% Grass cover, Good, HSG B
1,925	39	>75% Grass cover, Good, HSG A
12,779	58	Weighted Average
12,779		100.00% Pervious Area

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

**Subcatchment EX1: Rear Offsite**

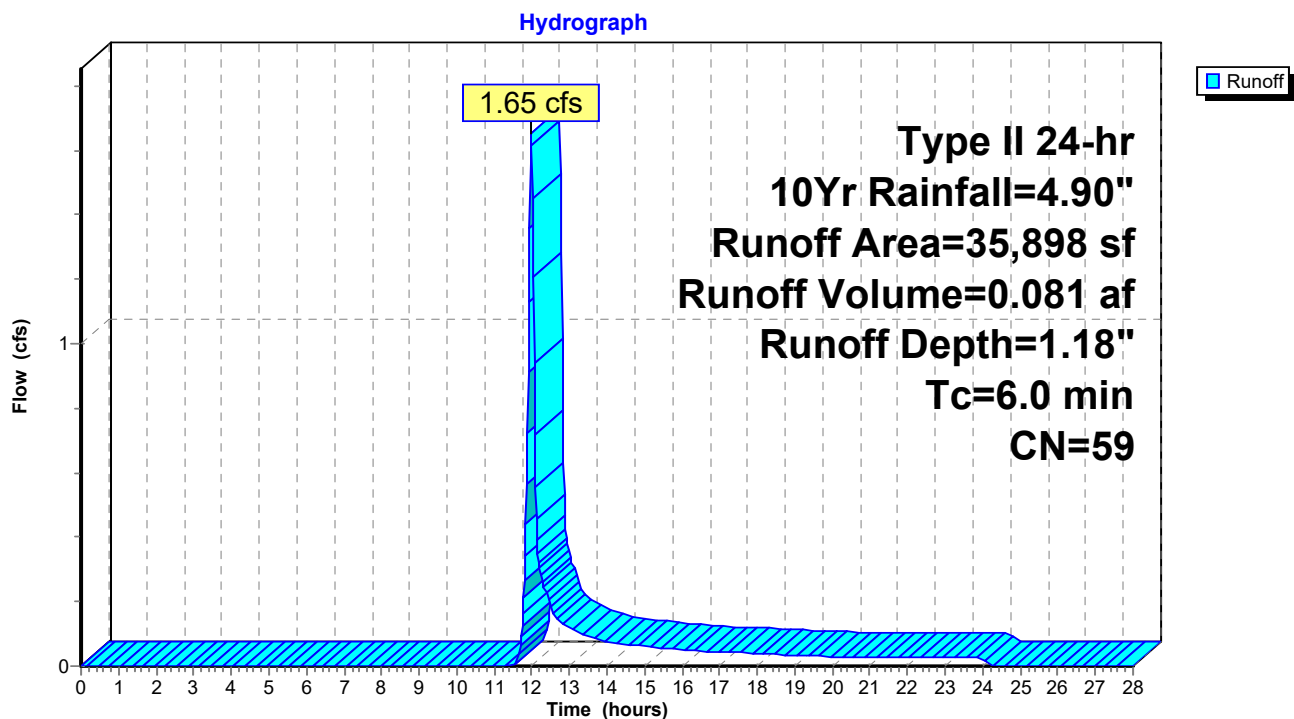
**Summary for Subcatchment EX2: Middle Yard**

Runoff = 1.65 cfs @ 11.98 hrs, Volume= 0.081 af, Depth= 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 10Yr Rainfall=4.90"

Area (sf)	CN	Description
23,116	61	>75% Grass cover, Good, HSG B
1,136	98	Roofs, HSG B
1,860	98	Paved parking, HSG B
9,396	39	>75% Grass cover, Good, HSG A
390	98	Roofs, HSG A
35,898	59	Weighted Average
32,512		90.57% Pervious Area
3,386		9.43% Impervious Area

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

**Subcatchment EX2: Middle Yard**

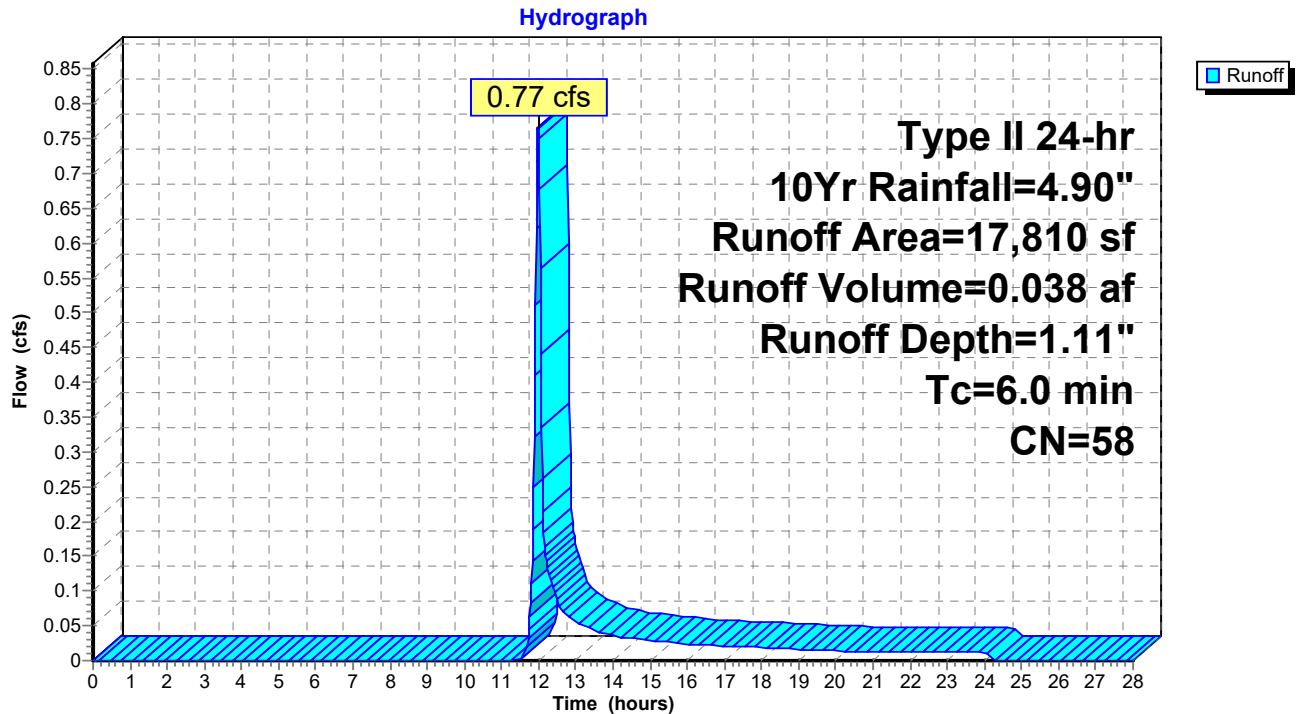
**Summary for Subcatchment EX3: Front to ROW**

Runoff = 0.77 cfs @ 11.99 hrs, Volume= 0.038 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 10Yr Rainfall=4.90"

Area (sf)	CN	Description
4,553	61	>75% Grass cover, Good, HSG B
1,363	98	Paved parking, HSG B
2,628	61	>75% Grass cover, Good, HSG B
532	98	Paved parking, HSG A
7,693	39	>75% Grass cover, Good, HSG A
1,041	98	Roofs, HSG A
17,810	58	Weighted Average
14,874		83.51% Pervious Area
2,936		16.49% Impervious Area

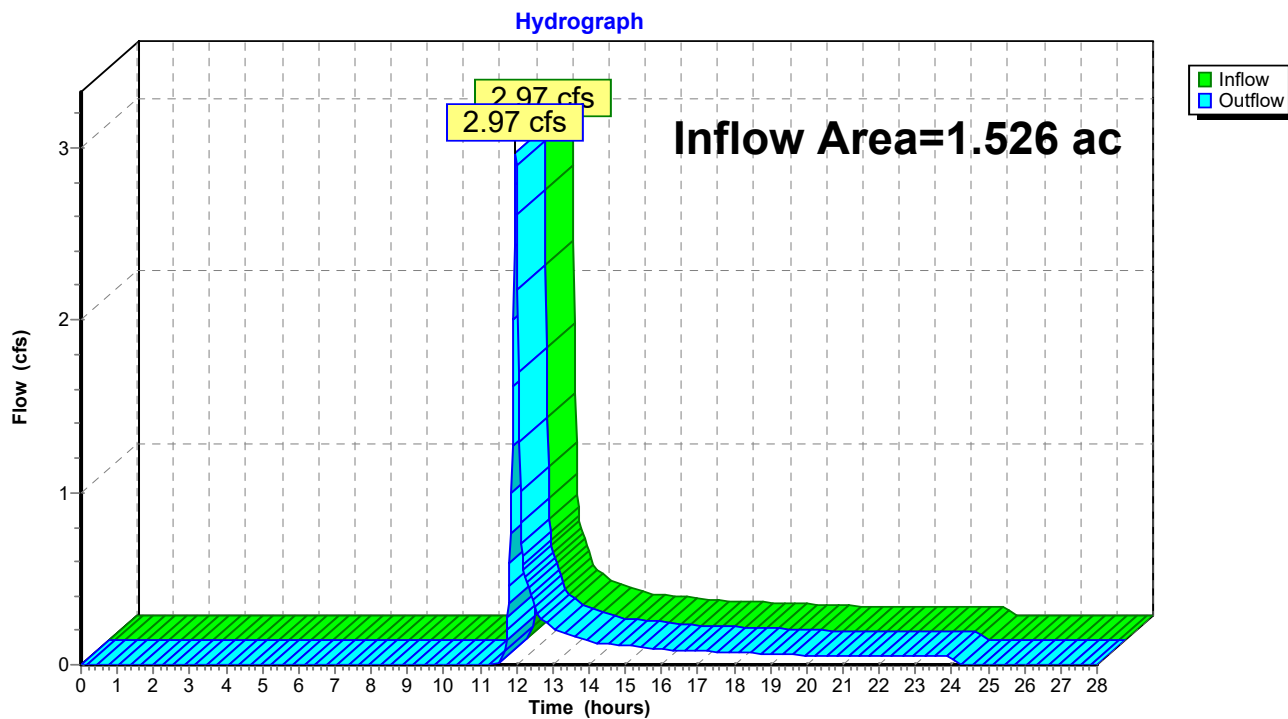
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, min Tc

**Subcatchment EX3: Front to ROW**

**Summary for Reach 5R: Total Offsite**

Inflow Area = 1.526 ac, 9.51% Impervious, Inflow Depth = 1.15" for 10Yr event  
Inflow = 2.97 cfs @ 11.98 hrs, Volume= 0.146 af  
Outflow = 2.97 cfs @ 11.98 hrs, Volume= 0.146 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs

**Reach 5R: Total Offsite**

**Byfield 23 Central Pre rev3***Type II 24-hr 100 Yr Rainfall=9.10"*

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Time span=0.00-28.00 hrs, dt=0.02 hrs, 1401 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

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

**Subcatchment EX1: Rear Offsite**

Runoff Area=12,779 sf 0.00% Impervious Runoff Depth=3.93"

Tc=6.0 min CN=58 Runoff=2.06 cfs 0.096 af

**Subcatchment EX2: Middle Yard**

Runoff Area=35,898 sf 9.43% Impervious Runoff Depth=4.06"

Tc=6.0 min CN=59 Runoff=5.98 cfs 0.278 af

**Subcatchment EX3: Front to ROW**

Runoff Area=17,810 sf 16.49% Impervious Runoff Depth=3.93"

Tc=6.0 min CN=58 Runoff=2.88 cfs 0.134 af

**Reach 5R: Total Offsite**

Inflow=10.91 cfs 0.509 af

Outflow=10.91 cfs 0.509 af

**Total Runoff Area = 1.526 ac   Runoff Volume = 0.509 af   Average Runoff Depth = 4.00"**  
**90.49% Pervious = 1.381 ac   9.51% Impervious = 0.145 ac**

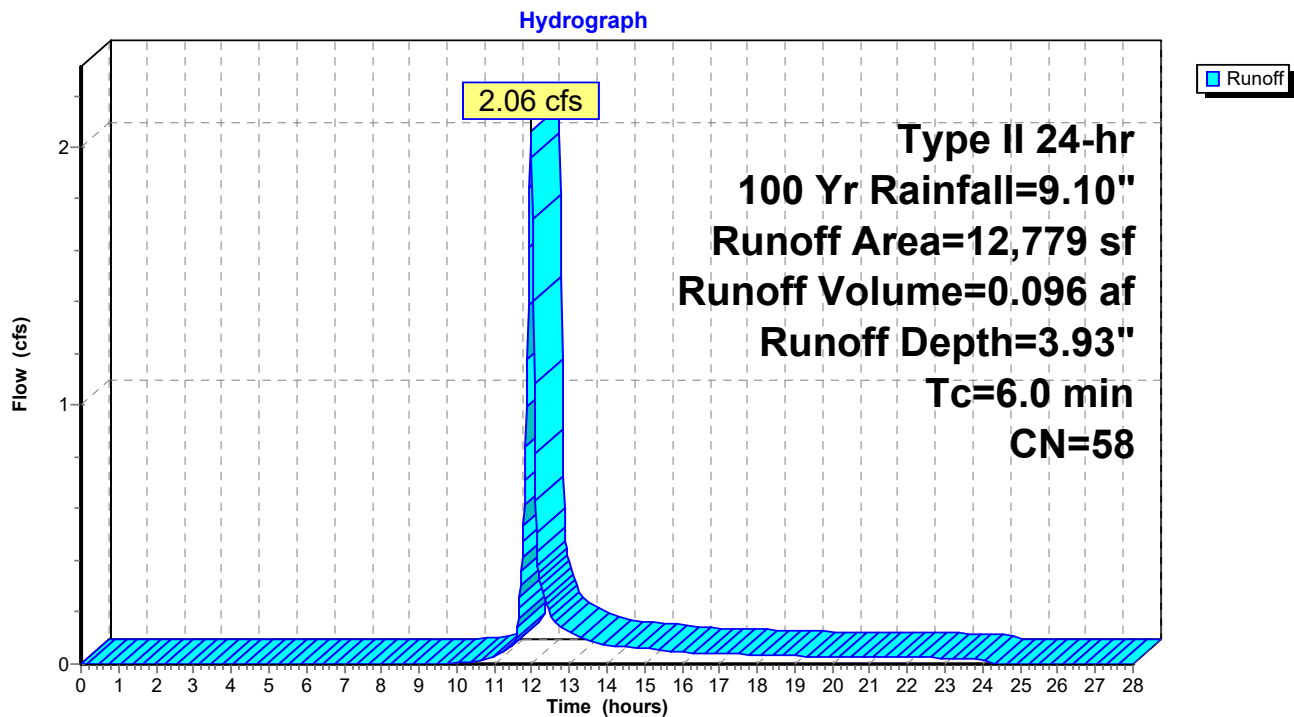
**Summary for Subcatchment EX1: Rear Offsite**

Runoff = 2.06 cfs @ 11.98 hrs, Volume= 0.096 af, Depth= 3.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 100 Yr Rainfall=9.10"

Area (sf)	CN	Description
10,854	61	>75% Grass cover, Good, HSG B
1,925	39	>75% Grass cover, Good, HSG A
12,779	58	Weighted Average
12,779		100.00% Pervious Area

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

**Subcatchment EX1: Rear Offsite**



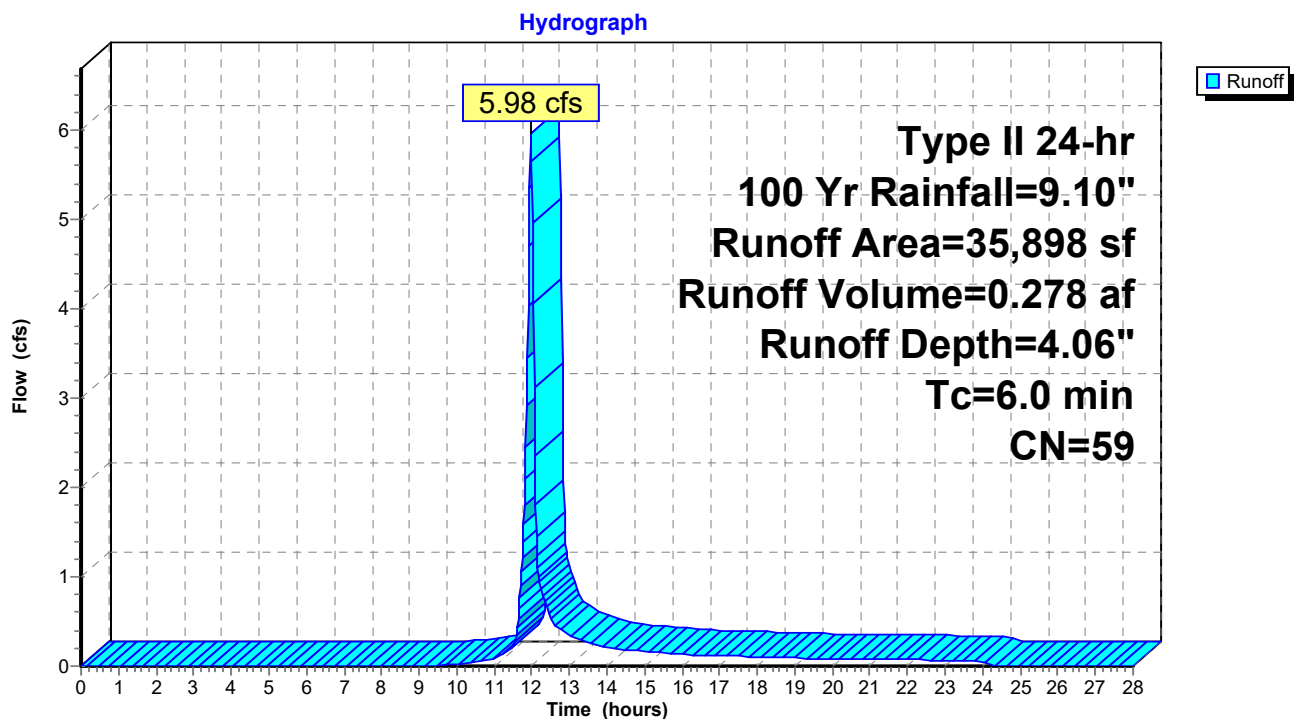
**Summary for Subcatchment EX2: Middle Yard**

Runoff = 5.98 cfs @ 11.98 hrs, Volume= 0.278 af, Depth= 4.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 100 Yr Rainfall=9.10"

Area (sf)	CN	Description
23,116	61	>75% Grass cover, Good, HSG B
1,136	98	Roofs, HSG B
1,860	98	Paved parking, HSG B
9,396	39	>75% Grass cover, Good, HSG A
390	98	Roofs, HSG A
35,898	59	Weighted Average
32,512		90.57% Pervious Area
3,386		9.43% Impervious Area

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

**Subcatchment EX2: Middle Yard**

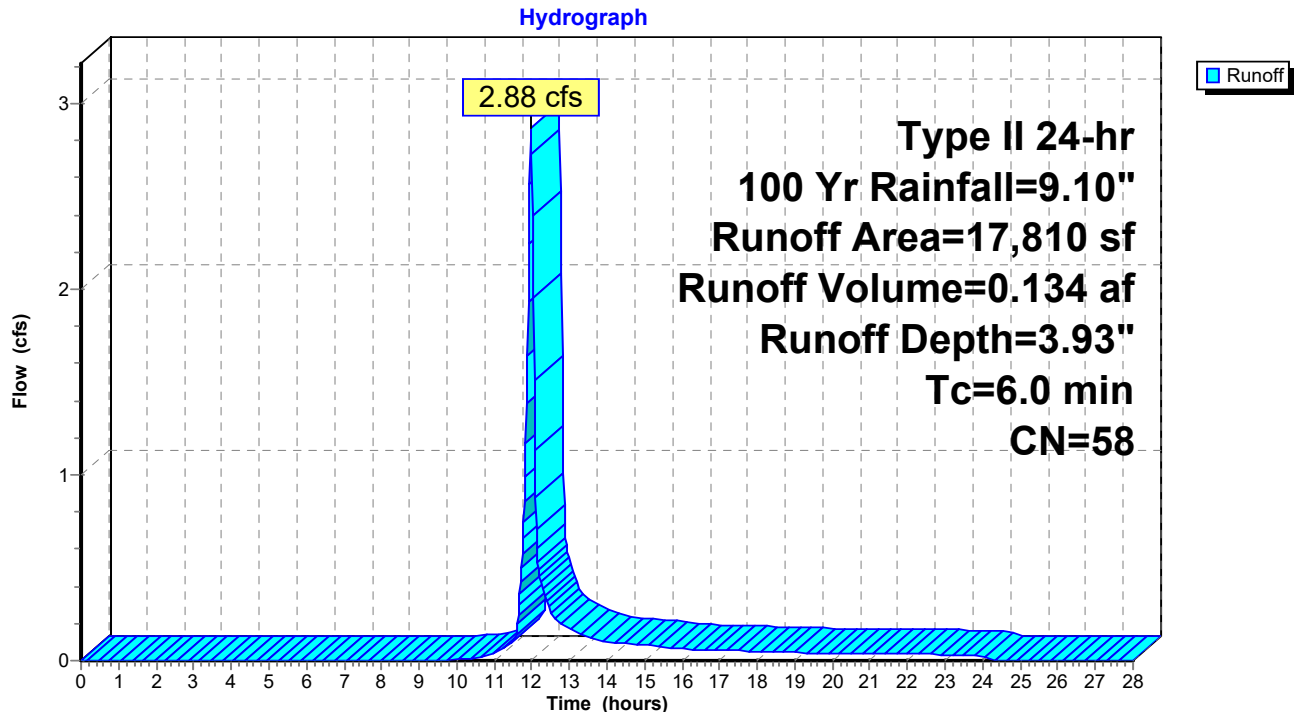
**Summary for Subcatchment EX3: Front to ROW**

Runoff = 2.88 cfs @ 11.98 hrs, Volume= 0.134 af, Depth= 3.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs  
Type II 24-hr 100 Yr Rainfall=9.10"

Area (sf)	CN	Description
4,553	61	>75% Grass cover, Good, HSG B
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2,628	61	>75% Grass cover, Good, HSG B
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17,810	58	Weighted Average
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2,936		16.49% Impervious Area

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

**Subcatchment EX3: Front to ROW**

**Summary for Reach 5R: Total Offsite**

Inflow Area = 1.526 ac, 9.51% Impervious, Inflow Depth = 4.00" for 100 Yr event  
Inflow = 10.91 cfs @ 11.98 hrs, Volume= 0.509 af  
Outflow = 10.91 cfs @ 11.98 hrs, Volume= 0.509 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.02 hrs

**Reach 5R: Total Offsite**