

# Stormwater Detention Calculations

## I. GENERAL SITE DATA

A. Contributing Watershed: A= **0.03923324** acres  
or 1,709 SF

### B. Existing Site Conditions

Existing Roof:	<b>715</b> SF	C=	<b>0.95</b>
Existing Pavement:	<b>0</b> SF	C=	<b>0.95</b>
Lawn/Rain Garden Area:	<b>994</b> SF	C=	<b>0.15</b>

### C. Proposed Average Coefficient of Imperviousness (C)

Existing Building Footprint:	715	x	0.95	=	679.25	
Existing Pavement:	-	x	0.95	=	0	
Lawn/Rain Garden Area	994	x	0.15	=	<u>149.1</u>	
					828	/ 1709
						<b>0.48</b>

(Soils: FOX < 4% slope, Type B)

### D. Allowable Outflow (Qa) (for detention sizing- 100 yr. Storm event)

Qa=.15 cfs x 0.03923324 acres = 0.005885 cfs

## III FIRST FLUSH COMPUTATIONS(.5 " over site) (to satisfy Washtenaw County Drain Commissioner's req.)

V= 1815.0 x **0.039233242** x 0.48 = **34.5145833 cu.ft.**

## V VOLUME CALCULATIONS:

Elevation	Surface Area	(Surface Area + Surface Area) x Depth 2	Accum. Volume
<b>929.00</b> bottom el (0")	<b>18</b> SF		
		11 CF	11 CF
<b>929.25</b> bottom el (3")	<b>70</b> SF		
		26 CF	37 CF
<b>929.50</b> top el (6")	<b>136</b> SF		
limit of disturbance (6")			