

Stormwater Detention Calculations

I. GENERAL SITE DATA

A. Contributing Watershed: A= **0.0533517** acres
or 2,324 SF

B. Existing Site Conditions

| | | | |
|------------------------|-----------------|----|-------------|
| Existing Roof: | 1,203 SF | C= | 0.95 |
| Existing Pavement: | 160 SF | C= | 0.95 |
| Lawn/Rain Garden Area: | 961 SF | C= | 0.15 |

C. Proposed Average Coefficient of Imperviousness (C)

| | | | | | | |
|------------------------------|-------|---|------|---|---------------|--------------------|
| Existing Building Footprint: | 1,203 | x | 0.95 | = | 1142.85 | |
| Existing Pavement: | 160 | x | 0.95 | = | 152 | |
| Lawn/Rain Garden Area | 961 | x | 0.15 | = | <u>144.15</u> | |
| | | | | | 1,439 | / 2324 0.62 |

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

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

Qa=.15 cfs x 0.0533517 acres = 0.0080028 cfs

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

V= 1815.0 x **0.053351699** x 0.62 = **59.9583333 cu.ft.**

V VOLUME CALCULATIONS:

| Elevation | Surface Area | (Surface Area + Surface Area) x Depth 2 | Accum. Volume |
|---------------------------------------|---------------|--|---------------|
| 0.00 bottom el (0") | 43 SF | | |
| 0.00 top el (3") | 115 SF | 20 CF | 20 CF |
| 0.00 limit of disturbance (6") | 218 SF | 42 CF | 61 CF |