

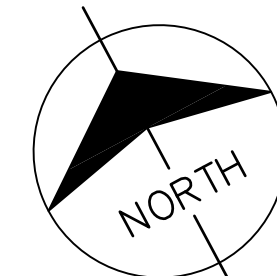
| Cw eghted = (multifamily detached) |                |        | 0.60               |                       |                    |                         |                 |
|------------------------------------|----------------|--------|--------------------|-----------------------|--------------------|-------------------------|-----------------|
| Inlet                              |                |        | 4.00               |                       |                    | (Worse case Tc = 5 min. |                 |
| b =                                |                |        | 4.52               |                       |                    | Botetourt County]       |                 |
| h <sub>0</sub> =                   |                |        | 6.08               |                       |                    |                         |                 |
| t <sub>5</sub> =                   |                |        | 5.94               |                       |                    |                         |                 |
| Structure #                        | Type           | Length | A <sub>total</sub> | C <sub>w eghted</sub> | Q <sub>inlet</sub> | Q <sub>2</sub>          | Q <sub>T0</sub> |
| #3 Inlet                           | Dt-3C          | 12'    | 1.00               | 0.60                  | 2.4                | 2.7                     | 3.6             |
| #4 Inlet                           | Dt-3C          | 12'    | 0.86               | 0.60                  | 2.1                | 2.3                     | 3.1             |
| #5 Inlet                           | Dt-3B          | 12'    | 1.01               | 0.60                  | 2.4                | 2.7                     | 3.7             |
| #6 Inlet                           | Dt-3B          | 8'     | 0.39               | 0.60                  | 0.9                | 1.1                     | 1.4             |
| #7 Inlet                           | Dt-3B          | 10'    | 0.71               | 0.60                  | 1.7                | 1.9                     | 2.6             |
| #8 Inlet                           | Dt-3B          | 10'    | 1.16               | 0.60                  | 2.8                | 3.1                     | 4.2             |
| #9 Inlet                           | Dt-3B          | 10'    | 0.26               | 0.60                  | 0.6                | 0.7                     | 0.9             |
| #11 Inlet                          | Dt-7 All Grate |        | 0.89               | 0.60                  | 1.7                | 1.9                     | 2.5             |
| #12 Inlet                          | Dt-7 All Grate |        | 0.69               | 0.60                  | 2.1                | 2.4                     | 3.2             |
| #13 Inlet                          | Dt-3B          | 6'     | 0.20               | 0.60                  | 0.5                | 0.5                     | 0.7             |
| #14 Inlet                          | Dt-3B          | 8'     | 0.36               | 0.60                  | 0.9                | 1.0                     | 1.3             |
| #17 Inlet                          | Dt-3B          | 14'    | 0.84               | 0.60                  | 2.0                | 2.3                     | 3.1             |
| #18 Inlet                          | Dt-3B          | 18'    | 1.42               | 0.60                  | 3.4                | 3.9                     | 5.2             |
| #21 Inlet                          | Dt-3B          | 14'    | 1.22               | 0.60                  | 2.9                | 3.3                     | 4.5             |
| #22 Inlet                          | Dt-3B          | 8'     | 0.63               | 0.60                  | 1.5                | 1.7                     | 2.3             |
| #23 Inlet                          | Dt-3B          | 10'    | 0.96               | 0.60                  | 2.3                | 2.6                     | 3.5             |
| Paved Flume - South                | CG-6A          |        | 0.48               | 0.60                  | 1.2                | 1.3                     | 1.8             |
| Paved Flume - North                | CG-6A          |        | 1.33               | 0.60                  | 3.2                | 3.6                     | 4.9             |
| Ditch 1                            |                |        | 0.59               | 0.60                  | 1.4                | 1.6                     | 2.2             |
| Ditch 2                            |                |        | 0.27               | 0.60                  | 0.6                | 0.7                     | 1.0             |

**Preserve at Ashley - Front Lots Development**

February 8, 2021

|                  |                                                                                                    |                                                |
|------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Equation:</b> | $Q1\text{ Post} \leq Q1\text{ Pre} \times (\text{Volume Pre}/\text{Volume Post}) \times \text{IF}$ | IF = 0.80 (>1.0 Acre)<br>IF = 0.90 (<1.0 Acre) |
|------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------|

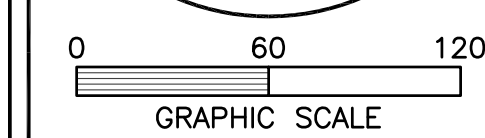
| P.O.A.          | Q1 Post | Q1 Pre | Volume Pre | Volume Post | IF   | Total |
|-----------------|---------|--------|------------|-------------|------|-------|
| Drainage Area A | 7.806   | 12.92  | 46,039     | 25,283      | 0.80 | 18.82 |
|                 | 7.806   |        | ≤          |             |      | 18.82 |
| Drainage Area B | 0.438   | 13.6   | 39,548     | 61,133      | 0.80 | 7.038 |
|                 | 0.438   |        | ≤          |             |      | 7.038 |



94 GREENFIELD STREET  
DALEVILLE, VIRGINIA 24083  
540.473.1253

[illegible]

**PRESERVE AT ASHLEY  
BOTETOURT COUNTY**



|          |       |
|----------|-------|
| PROJECT: | 20004 |
|----------|-------|

## C08