D.B. Gray Engineering Inc.

*Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains*

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# 2167 McGee Side Road
# Office / Warehouse Building
## Ottawa, Ontario

# FIRE FLOW CALCULATIONS
# OBC Method

As per "Required Minimum Water Supply Flow Rate" as calculated using the Ontario Building Code - Appendix A - Article A-3.2.5.7 "Water Supply For Fire Fighting".

K = Water supply coefficient as per OBC A-3.2.5.7. Table 1
= 12 Group F, Division 3 Occupancy, Building is of noncombustible construction with fire separations without fire resistance ratings.

V = Building volume in cubic meters

| Floor Area (sq.m) | Average Height (m) | Volume (cu.m) |
|---|---|---|
| 1,635 | 4.35 | 7,120 |

$S_{Total}$ = Total of spatial coefficients from exposure distances
= $1.0 + S_{Side\ 1} + S_{Side\ 2} + S_{Side\ 3} + S_{Side\ 4}$

| | Spatial Coefficient | Exposure Distance (m) | |
|---|---|---|---|
| $S_{Side\ 1}$ | 0.0 | 33.3 | (to NW property line) |
| $S_{Side\ 2}$ | 0.0 | 32.3 | (to centerline John Cavanaugh Dr) |
| $S_{Side\ 3}$ | 0.0 | 29.7 | (to centerline McGee Side Rd) |
| $S_{Side\ 4}$ | 0.0 | 19.6 | (to SW adjacent building) |
| $S_{Total}$ | 1.0 | | |

Q = $KVS_{Tot}$ (required water supply in litres)
Q = 85,435 L
= 2,700 L/min as per OBC A-3.2.5.7. Table 2
= 45 L/s

Required duration of fire flow in minutes
= 30 min
Required water supply in litres
= 81,000 L