D.B. Gray Engineering Inc.

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

700 Long Point Circle
Ottawa, Ontario K1T 4E9

613-425-8044
d.gray@dbgrayengineering.com

June 14, 2023
REVISED December 7, 2023

2167 McGee Side Road
Office / Warehouse Building
Ottawa, Ontario

FIRE FLOW CALCULATIONS
FUS Method

RFF = Required Fire Flow in litres per minute
= $220CA^{0.5}$

C = Construction Coefficient related to the type of construction of the building
= 1.0 Type III Ordinary Construction

A = Total Effective Floor Area in square meters of the building

Mezzanine:	218	100%	218	sq.m
Ground Floor:	1,635	100%	1,635	sq.m
	1,853	sq.m	1,853	sq.m Total Effective Floor Area

RFF = 9,470 L/min
= 9,000 L/min (rounded to nearest 1,000 L/min)

Occupancy and Contents Adjustment Factor
15% Limited Combustible Contents
= 1,350 L/min Occupancy and Contents Adjustment Factor

RFF = 10,350 L/min

Automatic Sprinkler Protection Credit
0% Sprinkler system designed, installed and maintained in accordance with NFPA standards
0% Standard water supply for both the sprinkler system and fire department hose lines
= 0 L/min Automatic Sprinkler Protection Credit

Exposure Adjustment Charge

Side	Charge	Distance	Construction	Length	Storeys	Factor
North	0%	over 30 m				0
East	0%	over 30 m				0
South	0%	over 30 m				0
West	0%	over 30 m				0

* with unprotected openings

0% Exposure Adjustment Charge
= 0 L/min Exposure Adjustment Charge

RFF = 10,350 L/min
= 10,000 L/min (rounded to nearest 1,000 L/min)

Required duration of fire flow
= 2.0 hours as per Table 1 (FUS 2020)

Required water supply
= 1,200,000 L