

November 21st, 2024

City of Ottawa
Building Code Services Branch
580 Terry Fox Dr.
Ottawa, Ontario
K2L 4C2
Attn: Allan Evans – Fire Engineer City of Ottawa

Re: Whelan Garage 158 Cardevco Rd.
File Number No.: D07-12-23-0002

Fire Flow Calculation:

Fire flow based on the OBC requirements:

$$Q = K V S$$

K for a combustible building with fire separations as per OBC 3.2.2. (being the worst case as the new addition is non-combustible) for a medium hazard industrial building is 31

$$V = 6031 \text{ cum.}$$

$S = 1 + 0.08 = 1.08$ new addition 9.2m from property line, all other sides are more than 10m clearance.

$$Q = 31 \times 6031 \times 1.08 = 201,930 \text{ l.}$$

Based on table 2 the minimum flow rate required is 6300l/min.

We are proposing for this project the use of 5 water tanks as manufactured by Boyd Brothers with a nominal storage capacity of 45,000l each for a total volume of 225,000l which exceeds the minimum volume of water (Q) calculated.

We have issued a sketch MSK-1 showing the layout of the tanks and the connection points. Sketch to be read in conjunction with the site services plan for exact location on site.

If you have any further questions please feel free to call

Yours truly,



Charles Van Alstine P.Eng.