

Oxbury Centre Inc. c/o Westdell Development Corporation
3B-1701 Richmond St
London, ON, N5X 3Y2

October 5, 2022

RE: **625 Mornington Ave**
Mornington Servicing – Watermain Feasibility Report

Driven Engineering Inc. has been engaged to undertake a review of the existing 150mm watermain is suitable for the proposed 187 unit apartment building.



Figure 1 Existing water main along Mornington Ave at the subject site

The pre-application consultation minutes prepared by the City of London and dated August 16, 2021 (REVISED August 27, 2021) identified the watermain as an item of concern that should be investigated in advance of a full submission.

1 Observations

On April 8, 2022, C&H Fire Suppression Systems Inc undertook a hydrant flow test in witness by City staff at the subject site. The report is appended hereto.

Based on the results of that test, the local distribution mains are capable of providing approximately 102L/s (1620gpm as recorded) with a residual pressure of 317kPa (46 psi as recorded).

2 Calculations

Based on the above information, the following calculations discuss the domestic requirement and the residual capacity in the system. The parameters for the calculation

were received from the March 2022 DS&RM and plans prepared by R. Tomè & Associate dated 2022-09-27.

The site is considered high-density and therefore a population density of 1.6 persons per unit is assumed. The development at the time of this report has 187 units, therefore an approximate population of 299 people.

Using a residential domestic use of 255 litres per capita per day and an hourly peaking factor of 7.8, the peak hourly usage per second for domestic use is 6.9 L/s.

Given the 102L/s of the fire flow test and the 6.9 L/s of domestic usage, there is 95.1 L/s of reserve flow which is more than the 76L/s required for the surrounding neighbourhood's fire protection.

3 Conclusion

Based on the foregoing, at a high level, the 150mm water main on Mornington is adequate to service the proposed residential apartments. Further conclusions may be drawn at the time that the development proceeds to full design and a fire suppression designer is selected.

4 Closing

4.1 Passage of Time and Information

The findings, conclusions and recommendations contained herein are based on the information known at the time of the fact gathering. Those findings, conclusions and recommendations may be subject to changes or modifications with the passage of time and are for the sole use of the City of London and Westdell Development Corporation with respect to this project alone.

The document is accurate to the best of the information provided to Driven Engineering Inc. If any information contained within is obsolete, changes or is otherwise no longer relevant, this needs to be made known to Driven and Driven reserves the right to edit or modify this document to suit the new information. It is never the responsibility of Driven to stay current of the information used in the production of this report.

4.2 Closing

We trust that this report meets your satisfaction. Should you have any questions or require further information, please do not hesitate to contact the undersigned.

Sincerely,



Alan Johnson, P.Eng.
President, Principal Engineer
Driven Engineering Inc.



Appendix A

Fire Flow Test Results

(Enclosed Separately)





183 Exeter Road, Unit #A
London, Ontario N6L 1A4
☎ (519) 652-5086
FAX (519) 652-8719

HYDRANT FLOW TEST REPORT

Location: **560 Mornington Avenue,
London, ON**

Date: **April 8, 2022**

Test by: **C&H Fire Suppression Systems Inc.**

Time: **8:30am**

Witness(s): **Municipal Hydrant Operator,
City of London**

Flowing (1) 2-1/2" Outlet

Static Hydrant: Hyd. #H5614
@ 616 Mornington Ave.

Static Reading: **58psi**

Residual Reading: **50psi**

Residual Hydrant:

Nozzle Size: **2.5"**

Discharge Coefficient: **0.9**

Total Discharge: **1050gpm**

Results @ 20psi: **2436gpm**

Flowing (2) 2-1/2" Outlets

Static Hydrant: Hyd. #5480
@ 560 Mornington Ave.

Static Reading: **58psi**

Residual Reading: **46psi**

Residual Hydrant:

Nozzle Size: **2.5" x2**

Discharge Coefficient: **0.9**

Total Discharge: **1620gpm**

Results @ 20psi: **3018gpm**

See attached Map

