

July 23rd, 2025

Christopher Brown
Director of Urban and Retail Design
MMC International Architects Ltd.
64 Queen Street West. Suite 1110
Toronto, ON M5H 2M8

Dear Mr. Brown

Re: Halifax Shopping Centre Annex – Water System Hydrant Flow Analysis
Mumford Road, Halifax, NS

Hydrant flow testing was completed for the proposed Halifax Shopping Centre Annex redevelopment on Mumford Road in Halifax, NS (PID 41030636). Hydrant flow testing was completed at hydrant H45913 located along Aikens Avenue (adjacent to 3140 Aikens Avenue) with residual pressure measurements taken at hydrant H1236 located along Mumford Road (adjacent to 7000 Mumford Road). The hydrant flow tests were completed by Life Safety Systems on June 2nd, 2025 at 10:00pm. A report of the testing results and a Halifax Water GIS plot of the hydrant locations is attached to this letter, and a summary of the results is provided below.

Hydrant H45913 on Aikens Avenue was opened and flowed at flow rates of 529 USgpm, 639 USgpm, and 998 USgpm. During each of these flow rates, residual pressure readings at hydrant H1236 on Mumford Road were 61 psi, 61 psi, and 60 psi, respectively. With a minimal 1 psi drop in residual pressure during the 998 USgpm flow rate, it is expected that the existing water system is capable of delivering large volumes of water to the proposed project site while causing minimal pressures losses nearby. For the proposed project site, it is expected that an approximate static pressure of 61 psi will be delivered by the existing water system under normal operating conditions, so booster pumps may be required for the upper floors of the proposed buildings. It is expected that water service connections for the proposed Halifax Shopping Centre Annex redevelopment will include connections to the existing water mains along Mumford Road.

We trust the above to be satisfactory at this time. If you have any questions, please contact us.

Thank you,


Rob McKinnon, P.Eng.
Group Manager
Civil Engineering


Hydrant Water Flow Test Summary Report



Life Safety Systems



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Dartmouth, NS
Tel: (902) 468 - 7500
Fax: (902) 468 - 3289

☐ 290 Baig Blvd Unit 5
Moncton, NB
Tel: (506) 386 - 7500
Fax: (506) 384 - 0495

☐ 78 Clyde Avenue
Mount Pearl, NL
Tel: (709) 738 - 7940
Fax: (709) 738 - 7941

General Information

Date: JUNE 2, 2025 Time: 10:00 PM
Customer Name: _____
Job Number: _____
Property Name: MUMFORD RD. / AITKINS AVE
Address: _____
City: HALIFAX Province: NS
Name of Tester (please print): TODD DEMPSEY
Witness Name (please print): _____

Underground System Data

Underground Main type: ☐ Loop ☐ Two Way ☐ Dead End
Size of Main: 10" AT MUMFORD RD; 6" AT AITKINS AVE.
Source Reliable: ☐ Yes ☐ No
If no, explain: _____

Hydrant Flow Test Data

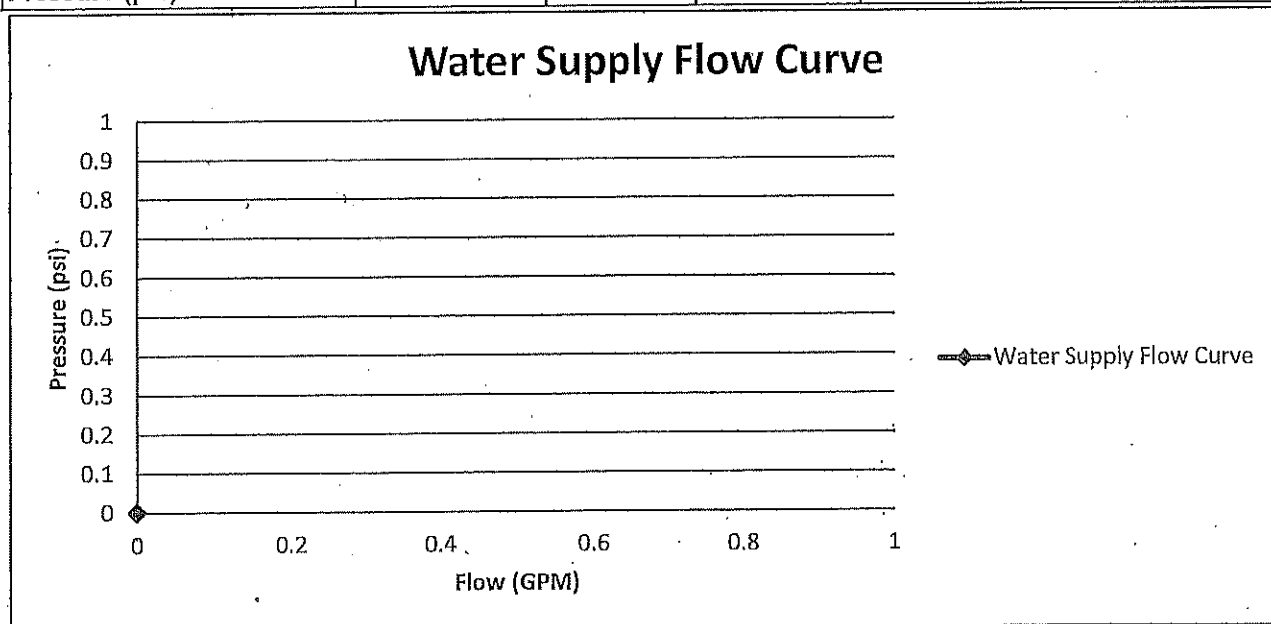
Location of Residual Hydrant: NEAR 7000 MUMFORD RD. HYD. H/236
Location of Flow Hydrant #1: HYD. 45913 AITKENS AVE. NEAR 3140 AITKENS AVE.
Location of Flow Hydrant #2 (If applicable): _____
Location of Flow Hydrant #3 (If applicable): _____
Static Pressure: 61 (psi)

Flow Point Number 1				Residual Pressure: <u>61</u> (psi)		
Flow Hydrant Number	Number of Outlets	Nominal Orifice Size (inch)	Pitot Reading (psi)	Theoretical Flow (gpm)	Orifice Coefficient (c =)	Actual Flow (gpm)
1	1	2"	10			529
2 (If Applicable)						
3 (If Applicable)						
Total Flow: <u>529</u>		0 (gpm)				

Flow Point Number 2 (If Applicable)				Residual Pressure: 61 (psi)		
Flow Hydrant Number	Number of Outlets	Nominal Orifice Size (inch)	Pitot Reading (psi)	Theoretical Flow (gpm)	Orifice Coefficient (c =)	Actual Flow (gpm)
1	1	2"	15			638
2 (If Applicable)						
3 (If Applicable)						
Total Flow: 638				0 (gpm)		

Flow Point Number 3 (If Applicable)				Residual Pressure: 60 (psi)		
Flow Hydrant Number	Number of Outlets	Nominal Orifice Size (inch)	Pitot Reading (psi)	Theoretical Flow (gpm)	Orifice Coefficient (c =)	Actual Flow (gpm)
1	1	2"	10			529
2 (If Applicable)	1	1 3/4"	28			469
3 (If Applicable)						
Total Flow: 998				0 (gpm)		

Hydrant Flow Test Data Summary				
	Static	Flow Point Number 1	Flow Point Number 2	Flow Point Number 3
Total Actual Flow (gpm)	0	0	0	0
Pressure (psi)	0	0	0	0



Comments: NO MEASURABLE DROP IN RESIDUAL PRESSURE.

MUMFORD MAIN IS 10"; BRANCHES DOWN TO

8" AND THEN 6" AT ATKINS AVE.

