Wellington Hall Academy

Functional Servicing Report

Project Location:
91-93 Westmount Rd, Guelph, ON

Prepared for:
Wellington Hall Academy
5420 Ontario 6 North, Guelph, ON, N1H 6J2

Prepared by:
MTE Consultants Inc.
520 Bingemans Centre Drive
Kitchener, ON N2B 3X9

August 15, 2025

Revised: October 27, 2025

MTE File No.: 62843_001

Engineers, Scientists, Surveyors.

Contents

Appendices

1.0 INTRODUCTION

MTE Consultants Inc. was retained by Wellington Hall Academy to complete a Functional Servicing Report for the conversion of an existing commercial/office building to a private school at 91-93 Westmount Road (herein referred to as 'the Site') in the City of Guelph in support of the Temporary Use By-Law Application. The current zoning of the Site is Mixed Office Commercial (MOC) with a Holding provision (H12). The Temporary Use By-Law Application is to permit a school use within the Mixed Office Commercial Zone on a temporary basis.

The Site currently comprises of an existing commercial/office building with associated driveway and parking area. The Site has an area of approximately 0.22ha. The Site is located north of the Westmount Road and Division Street intersection and is bound by existing commercial developments to the north and south, an existing residential area to the east and Westmount Road to the west.

The proposed development involves the conversion of the existing commercial/office building into a private school. Minor exterior changes to the Site are expected with some parking spots being replaced with a play area; however, most work is expected to be within the building.

The purpose of this study is to support the Temporary Use By-Law Application. This will be accomplished by reviewing the opportunities and constraints for the subject property with respect to servicing, grading and stormwater management; reviewing the requirements of the reviewing agencies; describing the development concept; and demonstrating the functional serviceability of the property. Pending approval of the Temporary Use By-Law Application, the development is expected to proceed to the Building Permit stage.

2.0 SERVICING

2.1 Water

There is an existing 300mm diameter municipal watermain along Westmount Road. The closest municipal fire hydrant is located on the south side of Westmount Road at the eastern driveway entrance of 100 Westmount Road, approximately 22m south of the Site. The Site is currently serviced by a 38mm diameter water service off the Westmount Road 300mm diameter municipal watermain. The existing building is not sprinklered and is not proposed to be sprinklered as part of the renovation.

The MECP *Design Guidelines for Drinking Water Systems* was utilized to determine existing and proposed domestic water demands. The MECP Design Guidelines provides a minimum domestic water demand of 28m^3/ha/d for commercial areas and 70-140L/d/student for schools. As the Site is 0.22ha, the existing water demand for the Site is determined to be 0.071L/s. As the minimum demand for commercial areas was utilized, the minimum flow for schools will also be utilized. As the expected student count in the proposed condition is 86, this results in a proposed domestic water demand of 0.070L/s. Refer to Appendix A for details.

The building was analyzed for fire water supply requirements using the OBC 2024 and FUS. It was determined that the required minimum water supply flow rate for the existing building is 3,600L/min and 9,000L/min based on OBC and FUS requirements, respectively. There is no change to the fire demands due to the change in use. It is expected the existing hydrant on the west side of Westmount Road will continue to provide fire protection for the building. Refer to Appendix A for details.

2.2 Sanitary

There is a 200mm diameter municipal sanitary sewer along Westmount Road which drains southeasterly. The closest manhole is in the Westmount Road right-of-way directly perpendicular to the Site's driveway entrance. According to plan and profile information provided by the City of Guelph, the property has three 150mm diameter sanitary laterals that run from the building to the sanitary sewer in the right-of-way. It is not clear which of these services are connected to the existing building.

The City of Guelph *Development Engineering Manual* requires sanitary demands for non-residential uses be calculated utilizing the MECP *Design Guidelines for Sanitary Sewers* and to include 0.25L/s/ha for infiltration. The MECP Design Guidelines provides a minimum design flow of 28m^3/ha/d for commercial areas and a design flow of 70-140L/d/student for schools. As the Site is 0.22ha, the existing sanitary flow from the Site is determined to be 0.126L/s. As the minimum flow for commercial areas was utilized, the minimum flow for schools will also be utilized. As the expected student count in the proposed condition is 86, this results in a proposed sanitary demand of 0.125L/s. It was determined one of the existing 150mm diameter sanitary services can convey the proposed sanitary flow. Refer to Appendix B for details.

2.3 Storm

There is a 600mm diameter municipal storm sewer along Westmount Road that drains southeasterly. There is an existing catchbasin located at the entrance of the parking lot, in the centerline of the drive aisle. Review of GRCA contour data revealed the majority of the Site drains towards the on-site catchbasin ultimately to the municipal storm sewer on Westmount Road. While some existing parking spots are expected to be removed and replaced with a play

area, the imperviousness of the Site is not expected to change as part of the renovation and therefore no new stormwater management controls are required.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing analysis, it is concluded that:

i) The existing on-site water, sanitary and storm infrastructure will continue to function as originally designed and are adequate to service the proposed property despite the change of use.

ii) The anticipated domestic water demand is 0.070L/s which is less than the existing water demand of 0.071L/s. The existing 38mm diameter water service is expected to be sufficient.

iii) The anticipated OBC and FUS firefighting demands are 3,600L/min and 9,000L/min, respectively. As there is no change in the firefighting demands, the existing municipal hydrant is expected to be sufficient for fire protection.

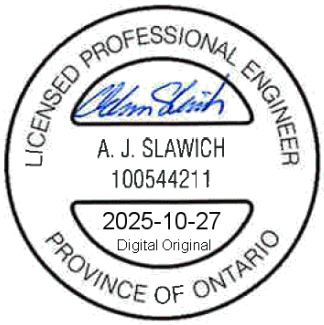
iv) The anticipated sanitary demand is 0.125L/s which is less than the existing sanitary demand of 0.126L/s. An existing 150mm sanitary service is sufficient to convey the increased flow.

v) The minor site plan changes (replacing some of the parking stalls with play area material and fencing) result in no change to imperviousness and therefore existing stormwater controls are sufficient. No new stormwater management controls are required.

All of which is respectfully submitted,

MTE Consultants Inc.

62843_001



Adam Slawich, P.Eng.
Design Engineer
519-743-6500
aslawich@mte85.com

EHN:dlb

https://mte85.sharepoint.com/sites/62843_001/Shared Documents/03- Reports/rpt_2025-10-27_FSR.docx

Appendix A

Fire Flow Analysis Design Sheets

Wellington Hall Academy
FIRE FLOW DEMANDS
Guelph, Ontario
Project #: 62843_100
Date: October 27, 2025
Date Printed: 10/27/2025
By: AJS

Development Information[1]								Fire Flow[2]															Domestic Flow[3,4]					
								Ontario Building Code						Fire Underwriters Survey														
Node ID / Area ID / Building #	F.F.E. (m.a.s.l.)	Description	# of Units	Population	Bldg Area (1st Floor)	Total Bldg Area	Building Volume	K	V	S_{tot}	Q	F	F	C	A	F	(2) Occupancy Reduction	(3) Sprinkler Protection	(4) Building Exposure	F	F	Fire Flow (Max OBC/FUS)	MOE Guidelines	Average Day	Max Day	Peak Hour	Minimum Hour	Max Day + Fire Flow
				# of people	m^2	m^2	m^3		m^3		*L*	*L/min*	*L/s*		m^2	*L/min*				*L/min*	*L/s*	*L/s*	*L/s*	*L/s*	*L/s*	*L/s*	*L/s*	*L/s*
		Commercial		25	628	1,256	4,522	18	4,522	1.50	122,094	3,600	60	1.50	628	8,270	-15%	0%	30%	9,000	150	150	0.071	0.071	0.196	0.294	0.029	150
		School		86	628	1,256	4,522	18	4,522	1.50	122,094	3,600	60	1.50	628	8,270	-15%	0%	30%	9,000	150	150	0.070	0.070	0.192	0.288	0.028	150

Assumptions:

1 Building population for school based on correspondence with Wellington Hall Academy. Population for office was estimated.

2 Average daily demands for each use are:

Commercial = 28 m^3/ha/d based on MECP Design Guidelines for Drinking Water Systems

School = 70 L/day/student based on MECP Design Guidelines for Drinking Water Systems

4 Peaking Factors based on "*Design Guidelines for Drinking-Water Systems*" (MOE, 2008):

Average Day = 1

Maximum Day = 2.75

Peak Hour = 4.13

Minimum Hour = 0.4

Appendix B

Sanitary Sewer Design Sheet

Wellington Hall Academy
CITY OF GUELPH

SANITARY SEWER DESIGN SHEET

ENGINEERING SERVICES

Project Number: 62843_100
Date: October 27, 2025
Design By: EHN
Checked By: AJS
File: Q:\62843_001\Sanitary Sewer Design Sheet.xls

Design Parameters

Average Daily Flow
Commercial 28 m³/ha/d
School 70 L/d/student

Infiltration 0.25 L/s/ha

Harmon Peaking Factor F = 1 + 14/(4 + P0.5)
Min = 2 Max = 4

Manning's "n" 0.013

Velocity (m/s)
Minimum 0.6
Maximum 3.0

LOCATION			SANITARY FLOW						DESIGN							
STREET	MANHOLE LOCATION FROM MH	MANHOLE LOCATION TO MH	AREA (A)	POPUL.	PEAK FACTOR "F"	PEAK FLOW	INFIL. FLOW	CUMULATIVE FLOW	PIPE SIZE	PIPE TYPE	LENGTH	SLOPE	CAPACITY	FULL FLOW VELOCITY	ACTUAL FLOW VELOCITY	% PIPE FULL
			ha			*L/s*	*L/s*	*L/s*	*mm*		*m*	*%*	*L/s*	*m/s*	*m/s*	*%*
Existing Use (Commercial)	Building	ROW	0.22	25.00	NA	0.071	0.0550	0.1263	150	PVC	17.5	2.00	21.5267	1.2188	0.3283	0.6%
Proposed Use (School)	Building	ROW	0.22	86.00	NA	0.070	0.0550	0.1247	150	PVC	17.5	2.00	21.5267	1.2188	0.3272	0.6%

Appendix C

Site Servicing Figure

CAD: P:\P\62843_001\62843_001-C2.DWG

Plot Date: July 11, 2025 - 2:39 PM

FENCE

PROPOSED PLAY AREA

Ex. Building
91-93 Westmount Road
(Approx. Location)

DIVISION STREET

WESTMOUNT ROAD

Ex. CB
Ex. STM (Approx. Location)
Ex. 150mmø SAN LAT (Approx. Location)
Ex. 38mmø WS (Approx. Location)
Ex. CS
Ex. 150mmø SAN LAT (Approx. Location)
Ex. CS
Ex. 150mmø SAN LAT (Approx. Location)
Ex. DCB
Ex. 200mmø WTM (Approx. Location)
Ex. 200mmø WTM (Approx. Location)
Ex. WS (Approx. Location)
Ex. STM (Approx. Location)
Ex. CB
Ex. STM (Approx. Location)
Ex. 200mmø SAN (Approx. Location)
Ex. Inv.=337.62±
Ex. 450mmø STM (Approx. Location)
Ex. 200mmø SAN (Approx. Location)
Ex. MH
Ex. Inv.=337.98±
Ex. Inv.=337.97±
Ex. 525mmø STM (Approx. Location)
Ex. Inv.=337.97±
Ex. MH
Ex. Inv.=337.97±
Ex. 300mmø WTM (Approx. Location)
Ex. 600mmø STM (Approx. Location)
Ex. Inv.=337.61±
Ex. MH
Ex. 600mmø STM (Approx. Location)
Ex. Inv.=336.61±
Ex. MH
Ex. Inv.=336.59±
Ex. 300mmø WTM (Approx. Location)
Ex. WS (Approx. Location)
Ex. CB
Ex. STM (Approx. Location)
Ex. WV
Ex. HYD

LEGEND OF EXISTING FEATURES

Ex. 300mmø SAN — Ex. MH — EXISTING SANITARY SEWER

Ex. 200mmø WTM — Ex. HYD. SET — EXISTING WATERMAIN

Ex. 375mmø STM — Ex. MH — EXISTING STORM SEWER

EXISTING BUILDING

LEGEND OF PROPOSED FEATURES

FENCE

0 4 8 12 16 20m

MTE
Engineers, Scientists, Surveyors

PROJECT
91-93 WESTMOUNT ROAD

TITLE
SITE SERVICING FIGURE

Drawn	Scale	Figure
GLC	1:400	C2.1
Checked: EHN	Project No.: 62843_001	
Date (yyyy-mm-dd): 2025-07-02	Rev No.: 0	