



MTE Consultants

520 Bingham Centre Dr., Kitchener, Ontario N2B 3X9

February 21, 2024
MTE File No.: 54716-100

Laura Dewar
Supervisor, Development Planning
City of Cambridge
50 Dickson Street
Cambridge, ON N1R 5W8

Dear Laura:

**RE: Peer Review of Preston Springs Preliminary Servicing Report
(Meritech, 2023)**

MTE Consultants Inc. (MTE) was retained by the City of Cambridge to complete a Peer Review of the *Preston Springs Preliminary Servicing Report* (Meritech, 2023).

The Preston Springs development (the Site) is a 1.2 ha in area and is located at 134 and 144 Fountain Street North, 199 Abraham Street and 102 Fountain Street South, in the City of Cambridge. The Site was formerly the Preston Springs Hotel, with two single detached dwellings fronting Fountain Street, and a forested area to the west. The proposed development is three residential towers, ranging from 22-26 storeys, with commercial usage at the ground floor, 753 residential dwellings and underground parking. Site access will be off Fountain Street to the east and Abraham Street to the west. An amenity area is proposed to the west, adjacent to the Abraham Street properties.

The *Preston Springs Preliminary Servicing Report* (Meritech, 2023) was completed in support of Official Plan Amendment & Zoning By-Law Application OR 09/23 (OBA / ZBA). The Report aimed to demonstrate the proposed servicing for the Site and connection to downstream services to confirm the development is feasible and that regulatory requirements will be achieved.

Intent of Peer Review

During the Peer Review MTE focused on the overall designed servicing strategy to ensure adequate consideration was given to Site water and sanitary demands, proposed design of servicing infrastructure and proposed site grading. The connection to downstream services, and the available capacity of downstream municipal services, were considered. Any design components requiring further clarification/detail to satisfy the servicing and grading considerations typically expected during the OBA / ZBA design stage were noted.

The *Preston Springs Preliminary Servicing Report* (Meritech, 2023) was assessed against the *City of Cambridge Engineering Standards and Development Manual* (City of Cambridge, September 2023) and *Development Guidelines and Supplemental Specifications for Municipal Services* (Region of Waterloo, February 2022).

To complete this Peer Review, MTE was provided with a copy of the *Preston Springs Preliminary Servicing Report* (Meritech, 2023). This Peer Review represents the opinion of MTE and is to be used by the City of Cambridge to decide whether the *Preston Springs Preliminary Servicing Report* (Meritech, 2023) was completed with adequate consideration of the appropriate technical standards and requirements. This Peer Review is for consideration purposes and is not intended to modify the Preston Springs servicing design.

Peer Review Comments

With respect to our Peer Review of the *Preston Springs Preliminary Servicing Report* (Meritech, 2023), MTE offers the following comments for consideration:

Sanitary Servicing

- The sanitary demand and sanitary design flow for the proposed development should be re-calculated. In the sanitary design sheet, the sanitary peak flow rate referenced for commercial area was 1.5 L/s/ha, whereas in the *Development Guidelines and Supplemental Specifications for Municipal Services* (Region of Waterloo, February 2022) the recommend peak flow rate is 2.4 L/s/ha. The factor used in the sanitary design produced a lower sanitary demand than expected.
- The *Sanitary Sewer Capacity Assessment Application*, included in Appendix D, should be updated with the current proposed number of residential units, and re-submitted to the City. The capacity in the downstream 600 mm diameter sanitary sewer on Fountain Street South, and the capacity of the downstream Wastewater Treatment Plan should be re-confirmed by the City to confirm that proposed development is serviceable from the sanitary perspective.

Water Servicing

- It is noted that a 200 mm diameter water service is proposed to connect to the 450 mm watermain on Fountain Street South. However, in Appendix D, the boundary conditions of the Region of Waterloo model for Junction JCT_16655, which is located on the 150 mm watermain on Fountain Street South, are referenced. Should the 450 mm watermain be used as the boundary condition for the Site water servicing, updated information from the Region of Waterloo should be requested for reference. The average day, maximum day and the available fire flows and the hydraulic grade line for the actual junction connection should be re-confirmed.
- The 450 mm watermain on Fountain Street South is likely a transmission main (Region of Waterloo infrastructure). If a local municipal watermain is available to service a proposed development, the Region would likely prefer connection to that available local municipal watermain rather than the transmission main. Near the Site, the 150 mm watermain on Fountain Street South is likely a local municipal watermain, and therefore connection to this 150 mm watermain should be considered to service the proposed development.
- It is recommended that a preliminary fire flow assessment be completed at this OBA / ZBA stage, referencing the confirmed data from the Region of Waterloo and the Ontario Building Code, to confirm that the downstream municipal services have capacity to service the proposed development in case of fire. It is noted that during detailed design a mechanical engineer will design a sprinkler system.

- As per the Ontario Building Code 3.2.9.7 (4), a proposed building height of 84 m or greater requires two water service connections. Based on the South Elevation (Drawing A404), the proposed building height may exceed this threshold, and therefore two water service connections for the development should be considered.
- The Water Demand Calculations spreadsheet should include reference to the population density values assumed, to confirm the water servicing demand flow for the proposed development.

Site Grading

- Further grading detail on the Preston Springs Concept Plan should be provided to confirm the connection with the Abraham Street and Fountain Street South right-of-ways, the connection to neighbouring properties and the conveyance of major overland flow routes in on-Site swales. It is noted that an existing stone retaining wall is to be maintained on the south property line. Detail is required to show any required off-set from this retaining wall to proposed Site grades, to confirm that the wall may be maintained during construction, or adequately assess impact to the neighbouring property.

Recommendation

Based on our Peer Review, MTE recommends that a 2nd submission of *Preston Springs Preliminary Servicing Report* be completed to consider the above-noted comments and refine / clarify the designed Preston Springs servicing and grading strategy.

Yours truly,

MTE Consultants Inc.

Claire Phelps, P. Eng.
Design Engineer, Site Development
519-743-6500 ext. 1450
cphelps@mte85.com

Lynn Ingram, P. Eng.
Manager, Site Development
519-743-6500 ext. 1381
lingram@mte85.com

CVP:zeg

cc: Kyle Rundle Drake, P.Eng., MTE
Alex Nichols, P. Eng, City of Cambridge

M:\54716\100\peer review\54716_100_peer review_preliminary servicing report_cvp_20240221.docx