

TECHNICAL MEMORANDUM

DATE August 14, 2020

Project No. 12-1121-0286

TO Christa Jones, Land Development Coordinator
Urbandale Construction

FROM Ali Ghirian, P.Eng.; Bill Cavers, P.Eng.

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**GEOTECHNICAL REPORT REVIEW AND UPDATE
PROPOSED RESIDENTIAL DEVELOPMENT – LOCALE FLATS
4791 BANK STREET, OTTAWA, ONTARIO**

This technical memorandum provides review and update to our previously submitted geotechnical investigation report as well as to provide responses to the City of Ottawa comments for the proposed residential development located at 4791 Bank Street in Ottawa Ontario.

Background

The results of the original geotechnical investigation carried out for the Kellam Lands as well as guidelines on the geotechnical aspects of developing the site were provided in:

- Golder report titled “*Geotechnical Investigation, Proposed Residential Development, Kellam Lands, Ottawa, Ontario*”, dated December 2013 (report number 12-1121-0286).

The proposed “Locale Flats” development is located at the northwest corner of the Kellam Lands, measuring about 110 m x 140 m. It is our understating that a review of the above referenced report has been requested by the City of Ottawa (File No. D07-12-20-0015 and D07-04-20-0003, dated August 8, 2020) to confirm if the requirements of the City of Ottawa Guideline have been fulfilled in our 2013 Geotechnical report and to provide updates to the sections of the reports that do not comply with these requirements, or need to be updated according to the latest City of Ottawa guidelines and requirements.

This technical memorandum should be read in conjunction with our December 2013 geotechnical report.

Subsurface Conditions

Based on the results of geotechnical investigation and review of the relevant record of borehole log and test pit information within and near the site of the proposed development (i.e., test pits 13-1 to 13-3, 10-A and 10-D boreholes 10-101 and 10-102) the subsurface conditions at the site of the proposed development, in general, consist of topsoil over sandy silt to silt deposit underlain by glacial till over bedrock. The sandy silt to silt deposit extends to depths varying between about 1.5 to 2.3 m below the exiting ground surface. The depth to bedrock within the proposed development vary between 1.5 and 4.6 m below the existing ground surface.

Seismic Design Considerations

The seismic design provisions of the 2012 Ontario Building Code (OBC) depend, in part, on the shear wave velocity of the upper 30 m of soil and/or bedrock below founding level. Based on the 2012 Ontario Building Code methodology, this site can be assigned a Site Class of D.

Although the seismic Site Class is not directly applicable to structures designed in accordance with Part 9 of the OBC (i.e., conventional housing), this assessment is provided to address City of Ottawa requirements that relate to housing on Site Class E sites.

Liquefaction Assessment

The footings of the proposed residential buildings will likely be founded on compact to dense glacial till or bedrock. Soil liquefaction under seismic loading will therefore not be a concern for this site.

Tree Planting on Sensitive Soils

Silty clay soils in the Ottawa area are highly sensitive to water depletion by trees of high water demand during periods of dry weather. When trees draw water from the silty clay, the silty clay undergoes shrinkage which can result in settlement of adjacent structures.

Based on the results of the geotechnical investigation, no sensitive silty clay was encountered within the site of the proposed development. As such, no restrictions on the types or sizes of trees that may be planted or tree to foundation setback distances need to be considered for this development.

Pavement Design

The pavement structure for local roads provided in the geotechnical report does not meet the currently required City of Ottawa minimum and the following pavement structure should be provided on local roads:

Pavement Component	Thickness (mm)
Asphaltic Concrete	90
OPSS Granular A Base	150
OPSS Granular B Type II Subbase	400

The remaining pavement design guidance in the geotechnical report is still applicable for the development.

Closure

We trust that this memo provides sufficient information for your present requirements. If you have any questions concerning this memo, please do not hesitate to contact us.

Yours truly,

Golder Associates Ltd.



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