

**re:      Geotechnical Recommendations - Concrete Trenches**  
          **Proposed Residential Development**  
          **2710 Draper Avenue - Ottawa**

**to:      Greatwise Developments - Mr. Zaf Kelekvan - zaf@greatwise.ca**

**date:    August 19, 2019**

**file:    PG1630-MEMO.27 Rev.01**

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Further to your request and authorization, Paterson Group (Paterson) prepared the following memorandum to provide recommendations for required concrete backfilling areas at the location of the underground storage tank at the aforementioned site. This memorandum should be read in conjunction with our previous memo PG1630-MEMO.22 - Response to City Comments - June 3, 2019.

## **Background**

As part of a response to a previous City of Ottawa review comment, Paterson provided the following recommendation:

*"It is recommended that the footing at the north end of Block 9 be constructed over a lean concrete in-filled trench. The depth of the trench should match the elevation of the underside of the underground storage tank and extend the full length of the north side footing. The trench should extend a minimum of 300 mm from the edge of the footing on both sides to ensure proper support is provided to the footing. Also, the trench should extend a minimum of 2 m beyond the north edge of the proposed building footings and be tapered to a minimum 3H:1V back to ground surface. The trench should be inspected by Paterson at the time of excavation and prior to placement of concrete to confirm the bearing surface. It is recommended that minimum 17 MPa (28-day strength) lean concrete be used to fill the trench. Conventional footing construction may be completed over the lean concrete after curing. The above recommended program is considered sufficient from a geotechnical perspective to protect the footing from potential undermining due to future maintenance on the storage tank."*

## **Additional Recommendations**

After the above noted recommendations were provided, concerns were raised regarding providing concrete in-filled trenches below the sidewalk adjacent to the storage tank and the landscaped steps adjacent to the north side of the building. Paterson has reviewed the concerns noted by the City of Ottawa and has provided the following recommendations.

The adjacent landscaped steps and sidewalk are not required to be provided with a concrete infilled trench. The requirement for the concrete infilled trench is for the building footings only, as described above.

If excavation down to the storage tank is required in the future, the sidewalk could be removed and reinstated, or provided with temporary shoring. The landscaping steps will not be affected by future excavation of the tank as they are very light structures. If damage were to occur to the steps, minor repairs/reinstatement could be made as required.

We trust that this information satisfies your requirements.

Best Regards,

**Paterson Group Inc.**



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**Paterson Group Inc.**

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