

re: Geotechnical Assessment – Site Servicing Plan Review
Proposed Commercial Development
101A and 103 Schneider Road - Ottawa

to: Kepali Holdings Ltd. c/o Renfroe Land Management – **Mr. David Renfroe** –
davidrenfroe@outlook.com

date: July 14, 2021

file: PG5682-MEMO.03

Further to your request and authorization, Paterson Group (Paterson) prepared the current memorandum to complete a review for the site servicing plan and cross sections and provide recommendations from a geotechnical perspective for the proposed development at the aforementioned site. The following memorandum should be read in conjunction with Paterson Report PG5682-1, dated March 31, 2021.

Site Servicing Plan Review

Paterson reviewed the following drawings prepared by WSP for proposed development as part of this review:

- Notes and Details – 103 Schneider Road – Project No. 211-01794-00 – Sheet No. C-01 – Revision 2 – Dated June 23, 2021.
- Details – 103 Schneider Road – Project No. 211-01794-00 – Sheet No. C-02 – Revision 2 – Dated June 23, 2021.
- Servicing Plan – 103 Schneider Road – Project No. 211-01794-00 – Sheet No. C-04 - Revision 2 – Dated June 23, 2021.

Based on our review of the above-mentioned drawings, it is understood that the main service pipes (sanitary, storm, and watermains) and associated structures (manholes, catch basins) have already been installed. However, the service laterals are yet to be installed.

Service Pipes

Based on our review of the site servicing plans, the majority of the design details for the proposed development, were found to be acceptable from a geotechnical perspective. However, some of the service pipes along with the proposed culvert were noted to be provided with reduced soil cover to invert level against frost action.

It should be noted that SM rigid insulation or equivalent will be required to be placed above the service pipes, with thickness and extent as noted on Figure 1, attached to this memorandum report, in order to provide sufficient frost protection for service pipes. It should also be noted that SM rigid insulation or equivalent will also be required to be placed below the replacement culvert, extending 1200 mm beyond the edge of the culvert from both sides. The service trench for the replacement culvert shall be backfilled with non-frost susceptible material, i.e. granular A or B.

All rigid insulation placed to improve the frost protection of the above-noted service laterals should be inspected and approved by a geotechnical consultant at the time of construction.

Stormwater Detention Chamber

The details of the proposed stormwater chambers have been reviewed by Paterson. Paterson has also reviewed the soil and groundwater conditions in the immediate vicinity of the proposed stormwater chambers. Based on our observations of the long-term groundwater conditions in the vicinity of the proposed stormwater detention chambers, the long-term groundwater table is expected to be lower to 3.5m below existing grade. Therefore, sufficient separation is expected between the long-term groundwater and the proposed chamber invert levels. The proposed stormwater chamber details are acceptable from a geotechnical perspective.

We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.

Maha K. Saleh, Provisional P.Eng



David J. Gilbert, P.Eng.

Attachments:

- Figure 1 – Service Pipe Frost Protection Recommendations

Paterson Group Inc.

Ottawa Head Office
154 Colonnade Road South
Ottawa – Ontario – K2E 7S8
Tel: (613) 226-7381

Ottawa Laboratory
28 Concourse Gate
Ottawa – Ontario – K2E 7T7
Tel: (613) 226-7381

Northern Office and Laboratory
63 Gibson Street
North Bay – Ontario – P1B 8Z4
Tel: (705) 472-5331

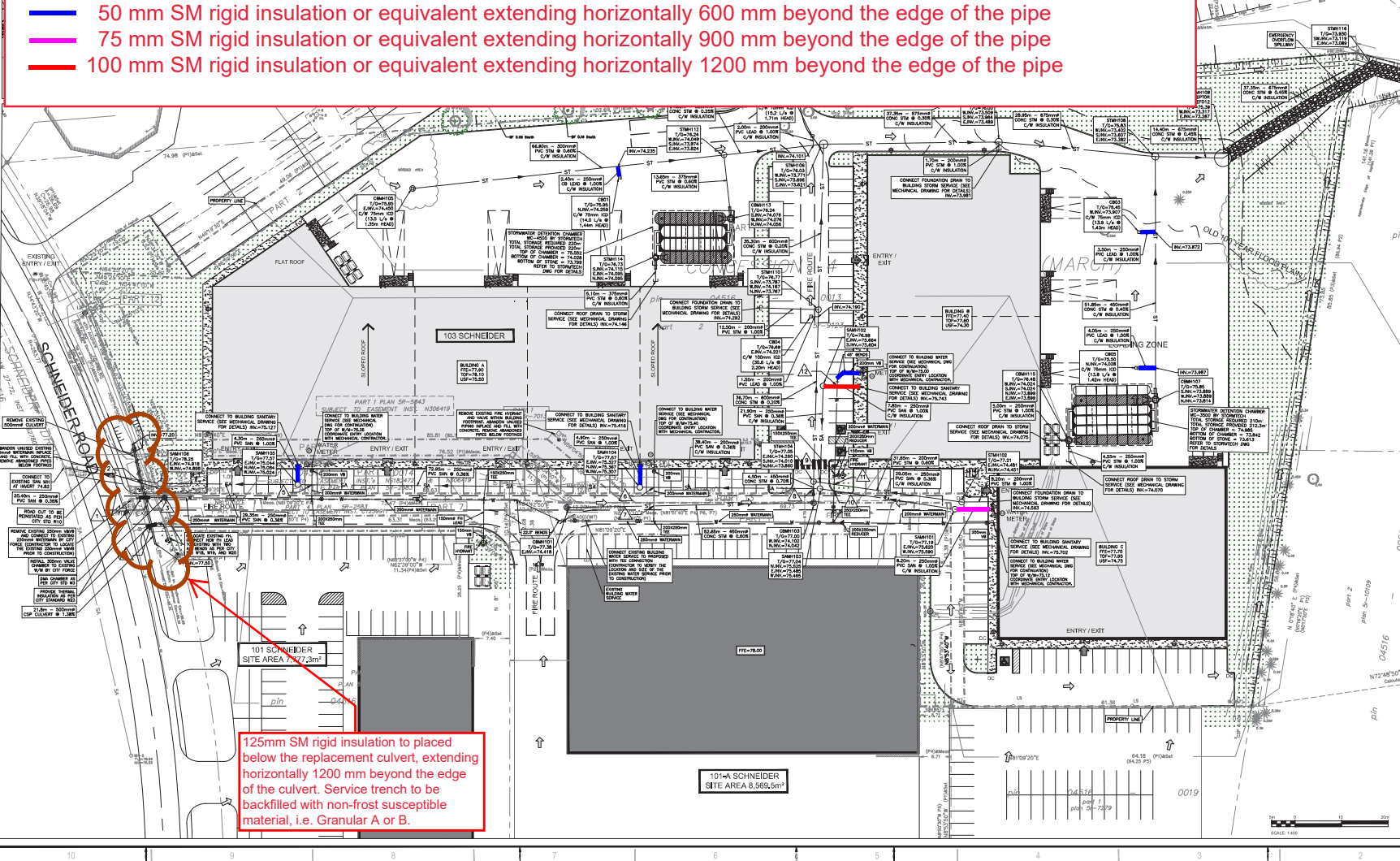
Figure 1 - Service Pipe Frost Protection Recommendations

Notes:

Paterson has reviewed the WSP drawing, and a reduced frost cover was observed for some of the service pipes/structures. Therefore, SM rigid insulation will be required to provide sufficient frost protection for several of these service pipe alignments. Please see below, and marked on the plan, the recommended thickness and extent of the rigid insulation. This figure shall be read in conjunction with Paterson Group Report PG5682-MEMO.03 dated July 14, 2021

Legend:

- 50 mm SM rigid insulation or equivalent extending horizontally 600 mm beyond the edge of the pipe
- 75 mm SM rigid insulation or equivalent extending horizontally 900 mm beyond the edge of the pipe
- 100 mm SM rigid insulation or equivalent extending horizontally 1200 mm beyond the edge of the pipe



125mm SM rigid insulation to be placed below the replacement culvert, extending horizontally 1200 mm beyond the edge of the culvert. Service trench to be backfilled with non-frost susceptible material, i.e. Granular A or B.



201 QUEEN VIEWS DR
OTTAWA, ONTARIO
CANADA K2B 8J7
T: 613.829.8000
F: 613.829.8209
WWW.WSP.COM

rla/architecture
roderick lahey architect inc.
56 beech street, ottawa, ontario K1S 3J6
t: 613.724.9932 f: 613.724.1209 rla@architecture.ca



RENFRO LAND MANAGEMENT

103 SCHNEIDER ROAD



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NO.	DATE	DESCRIPTION
1	2021-04-09	ISSUED FOR SPA
2	2021-06-23	REVISED AS PER CITY COMMENTS
3	2021-04-09	ISSUED FOR SPA

PROJECT NO: 211-01784-00
DATE: APRIL 2021
DRAWING SCALE: 1:500
IF THIS BAR IS NOT 20mm LONG, REFER TO PLOTTING SCALE.

DESIGNED BY: D.Y.
CHECKED BY: D.Y.
CREATED BY: D.Y./J.L.

TITLE: CIVIL
SUB-TITLE: SERVICING PLAN
SHEET NUMBER: C04
DATE: 4/21/21
ISSUED FOR SPA: 0