

re: Geotechnical Response to City Comments
 Proposed Residential Building
 2458 Cleroux Crescent - Ottawa
to: Melmar Group – Mr. Marc Nakhle – info@melmargroup.ca
date: July 20, 2023
file: PG5973-MEMO.01

Paterson Group Inc. (Paterson) prepared the current memorandum to provide responses to the geotechnical-related City of Ottawa comments. The following memorandum should be read in conjunction with the current Geotechnical Investigation Report (Paterson Group Report PG5973-1 Revision 1, dated April 1, 2022).

Geotechnical Investigation

Comment 1: *Provide a geotechnical memorandum confirming that the Grading and Servicing Plan for the proposed development has been reviewed and is in accordance with the recommendations in this report. Include any further recommendations in the memo.*

Response: Reference should be made to Paterson Group Memo PG5973-MEMO.02, dated June 30, 2023, which documents our review of the latest site servicing and grading plans (Revision 1 dated February 2023) for the subject site prepared by ARCH-NOVA Desing Inc.

In summary, the proposed grading at the subject site has been reviewed and is generally considered acceptable from a geotechnical perspective. Based on our review, grade raises throughout the parking level at the rear side of the building resulted in an exceedance in our recommendations that may be accommodated with lightweight fill (LWF). LWF has been recommended throughout this area to accommodate the proposed finished grades.

In addition, the site servicing plan has incorporated the relevant geotechnical recommendations as part of the design. Therefore, the latest site servicing plan is considered acceptable from a geotechnical perspective.

Comment 2: *A slope stability analysis is required for areas where there is a grade difference of 2.0m with slopes greater than 5:1. Limits of hazard lands, if any, should be shown on all plans.*



Response: Reference should be made to Section 6.8 of the current Geotechnical Investigation Report PG5973-1 Revision 1, dated April 1, 2022. In summary, the proposed slope condition considering the proposed building footprint is considered acceptable from a geotechnical perspective.

Comment 3: *A French drain is proposed at the top of the underground parking. Please provide recommendations for the top of parking level protection.*

Response: Based on our review, the recommendations provided in Section 6.1 of the current Geotechnical Investigation Report PG5973-1 Revision 1, dated April 1, 2022, would address the presence of the proposed drainage swale located above the proposed parking garage podium. However, further to this, it is recommended that waterproofing of the podium deck slab and termination of the foundation drainage board be undertaken as described in Figure 1 – Horizontal Podium Waterproofing Tie In With Foundation Drainage System attached to this memorandum.

In summary, a waterproofing membrane should be applied to the horizontal podium deck slab surface and the buried portion of the foundation wall between the podium deck slab and finished grade. It is recommended to extend this membrane vertically down the foundation wall and a minimum of 300 mm below the construction joint between the foundation wall and podium deck slab. The bottom-most endlap of the waterproofing membrane extending over the drainage board should be installed loosely against the drainage board layer. This would mitigate heat associated with welding the rubber membrane from damaging the drainage layer. The loosely installed layer of membrane should extend below a minimum of 300 mm below the top endlap of the drainage board layer.

Reference should be made to Figure 1 – Horizontal Podium Waterproofing Tie In With Foundation Drainage System attached to the current memorandum for further clarification of the above-noted recommendations. Further, the above-noted items should be reviewed at the time of construction by Paterson personnel.

Comment 4: *There is concern that construction of the proposed underground parking will impact the retaining wall on the adjacent property. Please provide measures to protect the wall during construction.*

Response: It is expected the excavation footprint for the proposed building will extend beyond the subject site and into the neighbouring property, resulting in the expected removal of the subject retaining wall. Based on our discussion with the client, it is understood an agreement will be in place at the time of obtaining a building permit to remediate all affected areas beyond the subject site, including existing structure, throughout the adjacent property. Based on this, measures to maintain the existing retaining wall will not need to be considered at this time.



We trust that this information satisfies your immediate requirements.

Best Regards,

Paterson Group Inc.

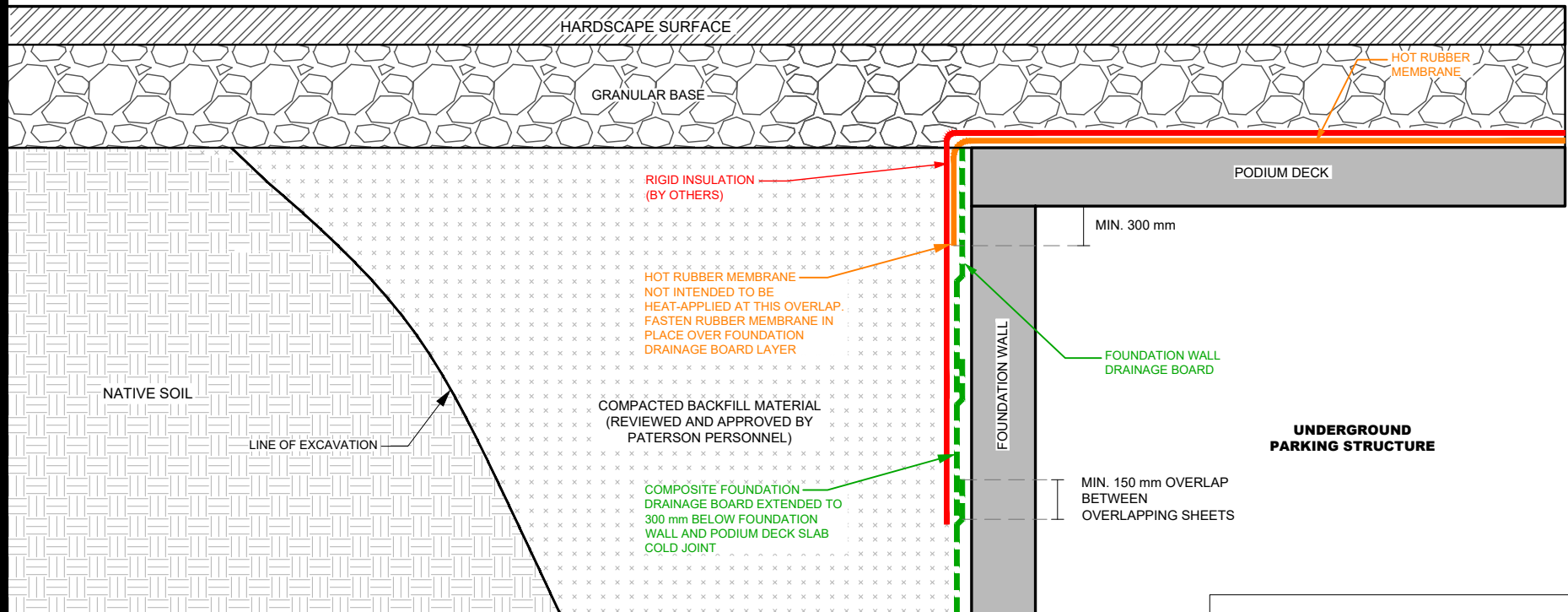
Drew Petahtegoose, B.Eng.



David J. Gilbert, P.Eng.

Attachments:

- ❑ Figure 1 – Horizontal Podium Waterproofing Tie In With Foundation Drainage System



ALL PORTIONS OF THE ABOVE-NOTED DETAIL (INSULATION OF FOUNDATION DRAINAGE BOARD, HOT-RUBBER MEMBRANE OVER SLAB AND FOUNDATION WALL CONSTRUCTION JOINT AND OVERLAPPING/SHINGLING OF DRAINAGE BOARD SHOULD BE REVIEWED AT THE TIME OF CONSTRUCTION BY PATERSON PERSONNEL.

NOTES:

THE ABOVE DETAIL FOR HOT RUBBER, AND DRAINAGE BOARD OVERLAP IS APPLICABLE TO ALL EDGE-PORTIONS OF THE PODIUM DECK AND/OR SUSPENDED GROUND FLOOR SLAB STRUCTURE.

APPLICABILITY THICKNESS AND EXTENSIONS OF RIGID INSULATION ARE SPECIFIED BY OTHERS

 PATERSON GROUP 9 AURIGA DRIVE OTTAWA, ON K2E 7T9 TEL: (613) 226-7381	MELMAR GROUP PROPOSED RESIDENTIAL BUILDING 2458 CLEROUX CRESCENT		Scale:	NTS	Date:	06/2023
			Drawn by:	YA	Report No.:	PG5973-MEMO.01
	OTTAWA, ONTARIO Title: PODIUM DECK TO FOUNDATION WALL DRAINAGE SYSTEM TIE-IN DETAIL		Checked by:	DP	Drawing No.:	FIGURE 1
			Approved by:	DG	Revision No.:	