

re: **Grading Plan Review**
 Proposed Residential Development - Morgan's Creek Stage 1
 762 March Road - Ottawa

to: Minto Communities - **Mr. Kevin Harper** - kharper@minto.com

date: July 8, 2019

file: PG2234-MEMO.07 Revision 1

Further to your request, Paterson Group (Paterson) prepared the current memorandum to provide a grading plan review for the proposed residential development at 762 March Road in the City of Ottawa. The following memorandum should be read in conjunction with the Paterson Group Report PG2234-2 Revision 3 dated April 16, 2019.

Grading Plan Review

Paterson reviewed the following grading plan prepared by J.L. Richards regarding the aforementioned residential development:

- Grading Plan - Project 24566-001, Drawing G1, Revision 5 dated June 28, 2019.

In summary, finished grades at the site are generally within the 3 m permissible grade raise, with the exception of the following areas:

- Block TE-1, Unit 201 extending 2.4 m east and north to the proposed walkway.
- Block TE-1, Unit 202 extending 2.4 m east to the proposed walkway.
- Block TE-1, Unit 203 extending 2.4 m east to the proposed walkway.
- Block TE-2, Unit 207 extending 2.4 m east and north to the proposed walkway.

The proposed townhouse blocks will incorporate basements, therefore, in order to mitigate long-term differential settlement, it is recommended that lightweight fill be placed in the above-noted areas.

Complete grading details for each Block and Unit as per our review are provided in Table 1, attached to the current memo. Details regarding installation of expanded polystyrene (EPS) blocks are provided in Figure 1, also attached.

We trust that this information satisfies your immediate requirements.

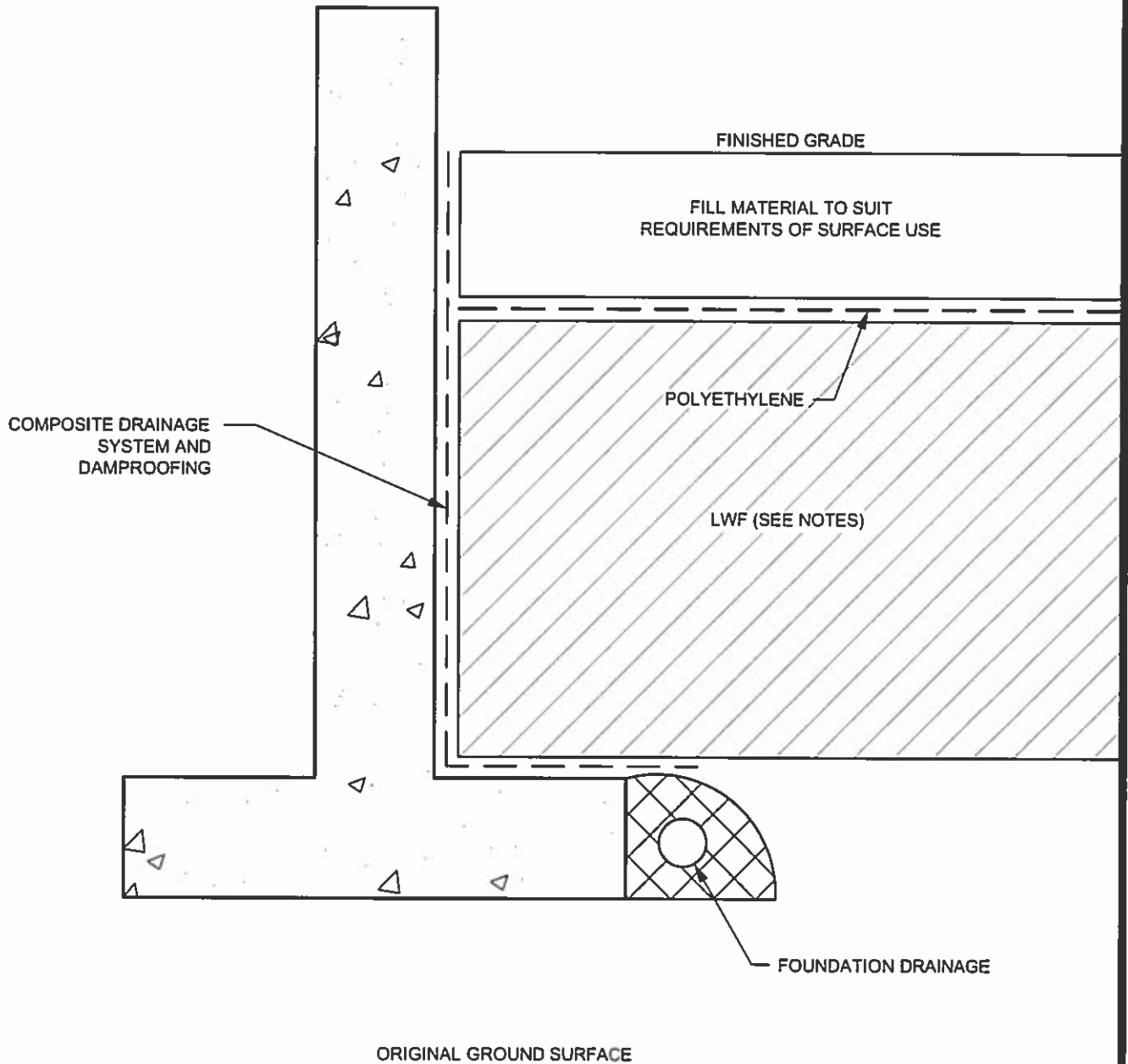
Paterson Group Inc.



Scott S. Dennis, P.Eng.



David J. Gilbert, P.Eng.



NOTES:

1. USE EPS19 BELOW FRONT PORCH AND LANDSCAPED AREAS
2. USE EPS22 BELOW GARAGE AND DRIVEWAY
3. MINIMUM GRANULAR THICKNESS OVER LWF SHOULD BE AS FOLLOWS:

FRONT PORCH	150mm OF OPSS GRANULAR A
GARAGE	300mm OF OPSS GRANULAR A
DRIVEWAY	300mm OF OPSS GRANULAR A
4. PLACEMENT OF LWF SHOULD BE ON A LEVELLED SURFACE (SAND CAN BE USED TO PROVIDE AN ADEQUATE LEVELLING SURFACE).

Table 1 - Grading Plan Review - Morgan's Creek, Stage 1, Ottawa

Lot/Block Number	Unit	Underside of Footing Elevation	Underside of Slab Elevation	Bearing Resistance Value at SLS	Original GS Elevation Front	Proposed GS Elevation Front	Permissible Grade Raise	Exceeding Permissible Grade Raise	Test Fill Pile	Minimum Thickness LWF	Minimum Thickness LWF and Extents	Seismic Site Class
		(m)	(m)	(kPa)	(m)	(m)	(m)	(m)		(m)	(m)	
Block TE-1	201	77.13	-	150	74.87	78.65	3.00	0.78	No	0.80	0.8 m thick LWF extending north and east of Unit 201 to the proposed walkway.	C
Block TE-1	202	77.13	-	150	75.10	78.65	3.00	0.55	No	0.60	0.6 m thick LWF extending east of Unit 202 to the proposed walkway.	C
Block TE-1	203	77.13	-	150	75.10	78.65	3.00	0.55	No	0.60	0.6 m thick LWF extending east of Unit 202 to the proposed walkway.	C
Block TE-1	204	77.13	-	150	76.46	78.65	3.00	-	No	-	n/a	C
Block TE-1	205	77.13	-	150	76.46	78.65	3.00	-	No	-	n/a	C
Block TE-1	206	77.13	-	150	76.50	78.65	3.00	-	No	-	n/a	C
Block TE-2	207	77.13	-	150	74.94	78.65	3.00	0.71	No	0.80	0.6 m thick LWF extending north and east of Unit 202 to the proposed walkway.	C
Block TE-2	208	77.13	-	150	75.65	78.65	3.00	-	No	-	n/a	C
Block TE-2	209	77.13	-	150	76.31	78.65	3.00	-	No	-	n/a	C
Block TE-2	210	77.13	-	150	76.62	78.65	3.00	-	No	-	n/a	C
Block TE-2	211	77.13	-	150	76.41	78.65	3.00	-	No	-	n/a	C
Block TE-2	212	77.13	-	150	76.41	78.65	3.00	-	No	-	n/a	C
Block TE-3	213	77.13	-	150	76.41	78.65	3.00	-	No	-	n/a	C
Block TE-3	214	77.13	-	150	76.46	78.65	3.00	-	No	-	n/a	C
Block TE-3	215	77.13	-	150	76.46	78.65	3.00	-	No	-	n/a	C
Block TE-3	216	77.13	-	150	76.62	78.65	3.00	-	No	-	n/a	C
Block TE-3	217	77.13	-	150	76.70	78.65	3.00	-	No	-	n/a	C
Block TE-3	218	77.13	-	150	76.70	78.65	3.00	-	No	-	n/a	C
Block TE-4	219	77.38	-	150	77.66	78.90	3.00	-	No	-	n/a	C
Block TE-4	220	77.38	-	150	77.66	78.90	3.00	-	No	-	n/a	C
Block TE-4	221	77.38	-	150	77.47	78.90	3.00	-	No	-	n/a	C
Block TE-4	222	77.38	-	150	77.68	78.90	3.00	-	Yes	-	n/a	C
Block TE-4	223	77.38	-	150	77.67	78.90	3.00	-	Yes	-	n/a	C
Block TE-4	224	77.38	-	150	77.66	78.90	3.00	-	Yes	-	n/a	C
Block TE-5	225	77.33	-	150	77.17	78.85	3.00	-	Yes	-	n/a	C
Block TE-5	226	77.33	-	150	77.50	78.85	3.00	-	Yes	-	n/a	C
Block TE-5	227	77.33	-	150	77.66	78.85	3.00	-	No	-	n/a	C
Block TE-5	228	77.33	-	150	77.66	78.85	3.00	-	No	-	n/a	C
Block TE-5	229	77.33	-	150	77.50	78.85	3.00	-	No	-	n/a	C
Block TE-5	230	77.33	-	150	77.88	78.85	3.00	-	No	-	n/a	C

The following grading plan was reviewed as part of our submission:
Grading Plan, Drawing G1, Project 24566-001, Revision 5 dated June 28, 2019