patersongroup

consulting engineers

re: Grading Plan Review Proposed Residential Development Wateridge - Block 29 - Wanaki Road - Ottawa to: Colonnade BridgePort - Ms. Bonnie Martell - bmartell@colonnadebridgeport.ca date: September 13, 2019 file: PG4965-MEMO.02

Further to your request and authorization, Paterson Group (Paterson) prepared the current memorandum to provide a review of the grading plan for the aforementioned project as required by a City of Ottawa review comment.

The following memorandum should be read in conjunction with Paterson Report PG4965-1 Revision 1 dated September 13, 2019.

Paterson reviewed the following grading plan prepared by Novatech Engineering Inc. regarding the aforementioned development:

Grading and Erosion and Sediment Control Plan, Project No. 119066-00, Drawing No. 119066-GR, Revision 2 dated September 13, 2019.

Grading Plan Review

Based on our review of the above noted grading plans, the proposed grade raises for the proposed development of the aforementioned development are generally considered acceptable from a geotechnical perspective.

For design purposes, pad footings up to 5 m wide, and strip footings up to 3 m wide, placed on an undisturbed, hard to very stiff silty clay bearing surface designed using a bearing resistance value at serviceability limit states (SLS) of **150 kPa** and a factored bearing resistance value at ultimate limit states (ULS) of **225 kPa** is considered acceptable from a geotechnical perspective for the proposed buildings.

Furthermore, footings placed on an approved fill bearing surface can be designed using a bearing resistance value at SLS of **100 kPa** and a factored bearing resistance value at ULS of **175 kPa**. A geotechnical resistance factor of 0.5 was applied to the above noted bearing resistance values at ULS.

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Footings designed with the provided bearing resistance value at SLS should have a total and differential settlement of 25 and 20 mm, respectively.

The bearing surface should be verified at the time of construction on a lot by lot basis to determine the appropriate serviceability resistance value.

We trust that this information satisfies your immediate requirements.

Best Regards,

Paterson Group Inc.

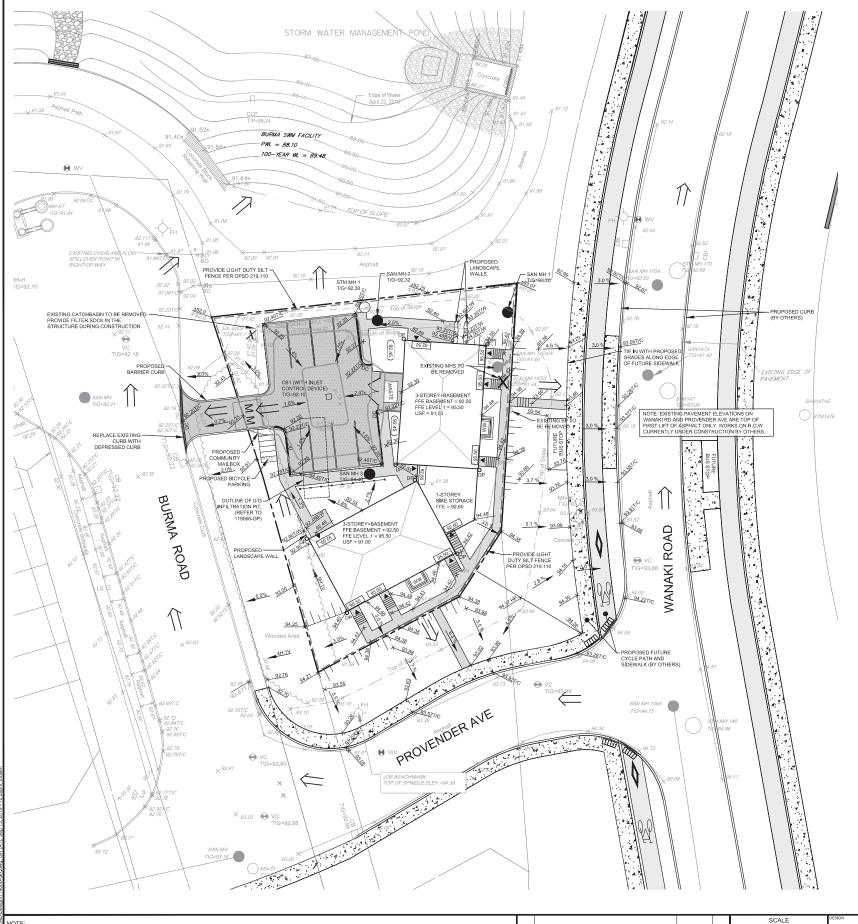
Richard Groniger, C. Tech.

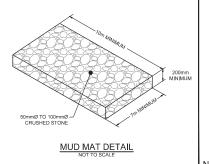


David J. Gilbert, P.Eng

Paterson Group Inc.

Head Office and Laboratory 154 Colonnade Road South Ottawa - Ontario - K2E 7J5 Tel: (613) 226-7381 Fax: (613) 226-6344 Northern Office and Laboratory 63 Gibson Street North Bay - Ontario - P1B 8Z4 Tel: (705) 472-5331 Fax: (705) 472-2334 **St. Lawrence Office** 993 Princess Street Kingston - Ontario - K7L 1H3 Tel: (613) 542-7381





LEGEND × ^{93,15} ____ EXISTING TOP OF CURB ELEVATION 93.307 PROPOSED ELEVATION СВ 🔲 × 93.20 PROPOSED ELEVATION * 93.35T/C * 94.00T/W PROPOSED TOP OF WALL ELEVATION FH | -0-× 91.20B/W PROPOSED BOTTOM OF WALL ELEVATION VC 92.45 PROPOSED PLANTER ELEVATION stm мн 🔘 FFE= FINISHED FLOOR ELEVATION SAN MH 🔴 USF= UNDERSIDE OF FOOTING ELEVATION 2,0% GRADE AND DIRECTION STM MH () PROPOSED TERRACE GRADING (3:1 MAX) SAN MH 🌑 ____ _ DEPRESSED CURB

GENERAL NOTES:

- 1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND
- 2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- 3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY
- BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PRO OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING OF THE CITY OF OTTAWA AND ENGINEER.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL I
- 7. ALL ELEVATIONS ARE GEODETIC. REFER TO THE GEOTECHNICAL INVESTIGATION REPORT (No. PG496: RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREME THE GRANULAR MATERIAL.
- 9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS
- 10. REFER TO 'SITE SERVICING AND STORMWATER MANAGEMENT REP
- 11. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHA
- 12. PROVIDE LINE/PARKING PAINTING.
- 13. REFER TO TOPOGRAPHICAL PLAN OF SURVEY (BLOCK 29-REGISTERE 14. SNOW WILL BE REMOVED FROM SITE WITH A HIRED SNOW REMOVAL

GRADING NOTES:

- 1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIF ENGINEER
- EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PR PLACEMENT OF GRANULARS.
- 3. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 100% OSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF T
- 5. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWI 6. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTE
- 7. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS
- 8 ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE
- 9. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAP
- 10. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PL 11. THERE WILL BE NO PONDING IN THE PARKING AREA DURING A 2 YEA

EROSION AND SEDIMENT CONTROL NOTES

- THE OWNER AGREES TO PREPARE AND IMPLEMENT AN EROSION AN PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES MANHOLESICATCHBASINS TO CAPTURE SEDIMENTS THAT HAVE EN
- 2. THE CONTRACTOR SHALL PLACE SEDIMENT CAPTURE FILTER SOCKS 3. SILT FENCING SHALL BE UTILIZED TO CONTROL EROSION FROM THE
- THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT I REGULATORY AGENCY.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE ROADS FREE THE ROAD IS TO BE CLEAN AND FREE OF MUD, DUST, AND OTHER M.
- 8. SEDIMENT AND EROSION CONTROLS MEASURES MAY BE MODIFIED

NOTE					SCALE	DESIGN	FOR REVIEW ONLY	
署 THE POSITION OF ALL POLE LINES, CONDUITS,						RG/LGE	3	1_
은 WATERMAINS, SEWERS AND OTHER					1:200	CHECKED		N
STRUCTURES IS NOT NECESSARILY SHOWN ON	OWNER INFORMATION				1.200	GJN	<u>^</u>	
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UTILITIES AND STRUCTURES IS NOT GUARANTEED.	768 BELFAST ROAD OTTAWA, ON K1G 027				1:200	CHECKED	4	Ott
	PHONE: 613-749-9950	2.	ISSUED FOR COORDINATION	13 SEPT 2019 GJM	0 2 4 6 8	1.65	B	Teleph
입 LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR		1.	ISSUED FOR SITE PLAN APPLICATION	25 JUN 2019 GJM		APPROVED	4	Facsim Websit
DAMAGE TO THEM.		No.	REVISION	DATE BY		GJN	M	
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<u>ORTH</u>	KEY PLAN		ATE						
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	50mm 150mn 400mr	HL3 OR SUPERPAVE 12.5 AC SUPERPAVE 19.0 AC 1 OPSS GRAN "A" A OPSS GRAN "B" TYPE II R TO GEOTECHNICAL REPORT)							
(REFER TO GEOTECHNICAL REPORT) CONTRACTORS. I OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL									
Y OF OTTAWA BEFORE COMMENCING CONSTRUCTION. OF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00. INSURANCE POLICY TO NAME									
G TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION									
MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER, EXCAVATE AND REMOVE FROM SITE ANY HE DISPOSED OF AT A LICENSED LANDFILL FACILITY.									
5-LDATED JUNE 21, 2019, PREPARED BY PATERSON GROUP INC, FOR SUBSURFACE CONDITIONS, CONSTRUCTION INTS, THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS. ORT (R-2019-604) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD. LT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10). ED PLAN 4M-1581) BY ANNIS, O'SULLIVAN VOLLEBEKK FOR DETAILS OF THE EXISTING SITE. L SERVICE.									
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ROOF ROLLED WITH A LARGE STE	EL DRUM ROLLER AN	D INSPECTED BY THE GEOTECHNICAL I	ENGINEER PRIOR 1	O THE					
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S: ID SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA, APPROPRIATE TO THE SITE CONDITIONS, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION IN FOR EROSION AND SEDIMENT CONTROL SUCH AS BUT NOT LIMITED TO INSTALLING FILTER SOCKS IN TERED STRUCTURES AND INSTALL AND MAINTAIN A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.									
S IN THE CATCHBASIN(S) AND MANHOLE GRATES AND MAINTAIN THESE FOR THE DURATION OF CONSTRUCTION. I SITE DURING CONSTRUCTION. EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE									
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	LOCATION CITY OF								
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gineers, Planners & Landscape Architec ite 200, 240 Michael Cowpland Driv Ottawa, Ontario, Canada K2M 1P6	ts re	NG AND EROSION A	ND	119066-00 REV					
lephone (613) 254-964 csimile (613) 254-586 ebsite www.novatech-eng.com	SEDIM	ENT CONTROL PLAN		REV # 2 DRAWING NO. 119066-GR					