McINTOSH PERRY

To: 1408505 Ontario Inc.
Attention: Mr. Robert A. Wilson
88 David Drive
Ottawa, Ontario, K2G 2N5

and

Holzman Consultants Inc.
311 Richmond Road | Suite 203
Ottawa, ON K1Z 6X3

From: McIntosh Perry Consulting Engineers

Date: June 15, 2021

Re: Review of Geotechnical Report upon Changes in Site Plan, 2830 Carling Ave. and 810 Vick Ave., Ottawa, Ontario

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This memorandum intends to address comments regarding the applicability of "2830 Carling Ave. and 810 Vick Ave. Geotechnical Report" (the Report), to the updated Site Plan as indicated in the Site Plan Control Application Comments issued by the City of Ottawa "the City", File No. D07-12-20-0163.

McIntosh Perry issued the Report in November 2020, which presents the factual findings obtained from a geotechnical investigation performed at the above-mentioned site. The fieldwork was carried out between September 14, 2020, and September 16, 2020, and comprised of three boreholes that were drilled to a maximum depth of 15.9 m. The former site plan consisted of a three-storey apartment building with basement and underground parking levels. The three-storey structure and the basement are proposed wood frame structure and the underground garage is proposed concrete structure.

It is understood that the original site plan is updated after submission of the Report. The new site plan consists of two separate buildings: Building A and Building B. Building A is three-storey/four level stacked townhouses that cover 600 $m^2$ and is proposed at the north side of the property. Building B, on the other hand, is a three-storey triplex that covers 98 $m^2$ and is proposed at the southeast corner of the property. It is understood that the footprint of the underground garage will cover most of the site with a finish slab level at El. 76.78 m. It is also understood that there will be no change in the construction materials. The proposed elevations for the footings, garage, Level 1 (Lower Floor) and Level 2 (Main Floor) are summarized in Table 1.

**Table 1: Proposed Elevations for Buildings A and B**

| Building A | | Building B | |
|---|---|---|---|
| Level 1 (Lower Floor) Finished Floor Elev. (FFE) | 79.60 m | Finished Floor Elev. (FFE) | 81.80 m |
| Level 2 (Main Floor) Finished Floor Elev. (FFE) | 82.50 m | Top of Footing (TOF) | 81.80 m |
| Top of Garage Slab (TOGS) | 77.18 m | Underside of Footing (USF) | 76.78 m |
| Top of Footing (TOF) | 82.15 m | -- | -- |
| Underside of Footing (USF) | 76.78 m | -- | -- |

Based on the provided new site plan for the project, the new site plan is similar to the former site plan with few exceptions. The most noticeable difference is that there is an approximate difference of 1.32 m in the underground garage slab level. As mentioned in the Report, the underground garage slab level in the former site plan was approximately El. 78.5 m while in the new site plan the finish slab level is at El. 77.18 m. This change may have effects on:

- **Bearing Resistance:** The estimated geotechnical resistance values for the former site plan were given for shallow footings of a minimum width of 1.5 m supported on the underneath sand at an approximate elevation of 78 m to 77.5 m. The mechanical properties of the sand layer were derived from SPT field test and were used to estimate the geotechnical resistance. The proposed foundation level in the new site plan is 76.78 m. Based on the presented data of the SPT test, the SPT 'N' values below the new foundation level within the influence zone do not drop. Therefore, the shear strength parameters that were derived from SPT are still valid. Therefore, recommendations given in section "7.5.1 Shallow Foundations" for foundation design are still applicable.

- **Lateral Earth Pressure:** There will be an increase in the lateral earth pressure on the underground garage walls which needs to be addressed in the structural design. Also, the designer of the lateral support "shoring" system that is required for excavation and construction needs to consider the increase in the lateral earth pressure due to the change in the final level of the underground garage. The provided lateral earth pressure coefficients in Section "7.9 Lateral Earth Pressure" in the Report are still valid for the purpose of determining the lateral earth pressure and shoring system design.

In conclusion, we believe that the "2830 Carling Ave. and 810 Vick Ave. Geotechnical Report" is still valid with respect to the new site plan, presented in Appendix B. This memo should be read in conjunction with "2830 Carling Ave. and 810 Vick Ave. Geotechnical Report". The recommendations presented herein are subject to the limitations noted in Appendix A "Limitations of Report" which forms an integral part of this document.

Please do not hesitate to contact the undersigned should you have any questions. We will be happy to provide further assistance upon your request.

**McIntosh Perry Consulting Engineers**

Mohammed Al-Khazaali, Ph.D. P.Eng.
Geotechnical Engineer

# 2830 CARLING AVE. AND 810 VICK AVE.

## APPENDIX A
## LIMITATIONS OF REPORT

McINTOSH PERRY

# LIMITATIONS OF REPORT

McIntosh Perry Consulting Engineers Ltd. (McIntosh Perry) carried out the field work and prepared the report. This document is an integral part of the Foundation Investigation and Design report presented.

The conclusions and recommendations provided in this report are based on the information obtained at the borehole locations where the tests were conducted. Subsurface and groundwater conditions between and beyond the boreholes may differ from those encountered at the specific locations where tests were conducted and conditions may become apparent during construction, which were not detected and could not be anticipated at the time of the site investigation. The benchmark level used and borehole elevations presented in this report are primarily to establish relative differenced in elevations between the borehole locations and should not be used for other purposes such as to establish elevations for grading, depth of excavations or for planning construction.

The recommendations presented in this report for design are applicable only to the intended structure and the project described in the scope of the work, and if constructed in accordance with the details outlined in the report. Unless otherwise noted, the information contained in this report does not reflect on any environmental aspects of either the site or the subsurface conditions.

The comments or recommendation provided in this report on potential construction problems and possible construction methods are intended only to guide the designer. The number of boreholes advanced at this site may not be sufficient or adequate to reveal all the subsurface information or factors that may affect the method and cost of construction. The contractors who are undertaking the construction shall make their own interpretation of the factual data presented in this report and make their conclusions, as to how the subsurface conditions of the site may affect their construction work.

The boundaries between soil strata presented in the report are based on information obtained at the borehole locations. The boundaries of the soil strata between borehole locations are assumed from geological evidences. If differing site conditions are encountered, or if the Client becomes aware of any additional information that differs from or is relevant to the McIntosh Perry findings, the Client agrees to immediately advise McIntosh Perry so that the conclusions presented in this report may be re-evaluated.

Under no circumstances shall the liability of McIntosh Perry for any claim in contract or in tort, related to the services provided and/or the content and recommendations in this report, exceed the extent that such liability is covered by such professional liability insurance from time to time in effect including the deductible therein, and which is available to indemnify McIntosh Perry. Such errors and omissions policies are available for inspection by the Client at all times upon request, and if the Client desires to obtain further insurance to protect it against any risks beyond the coverage provided by such policies, McIntosh Perry will co-operate with the Client to obtain such insurance.

McIntosh Perry prepared this report for the exclusive use of the Client. Any use which a third party makes of this report, or any reliance on or decision to be made based on it, are the responsibility of such third parties. McIntosh Perry accepts no responsibility and will not be liable for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

# 2830 CARLING AVE. AND 810 VICK AVE.

## APPENDIX B
## NEW SITE PLAN

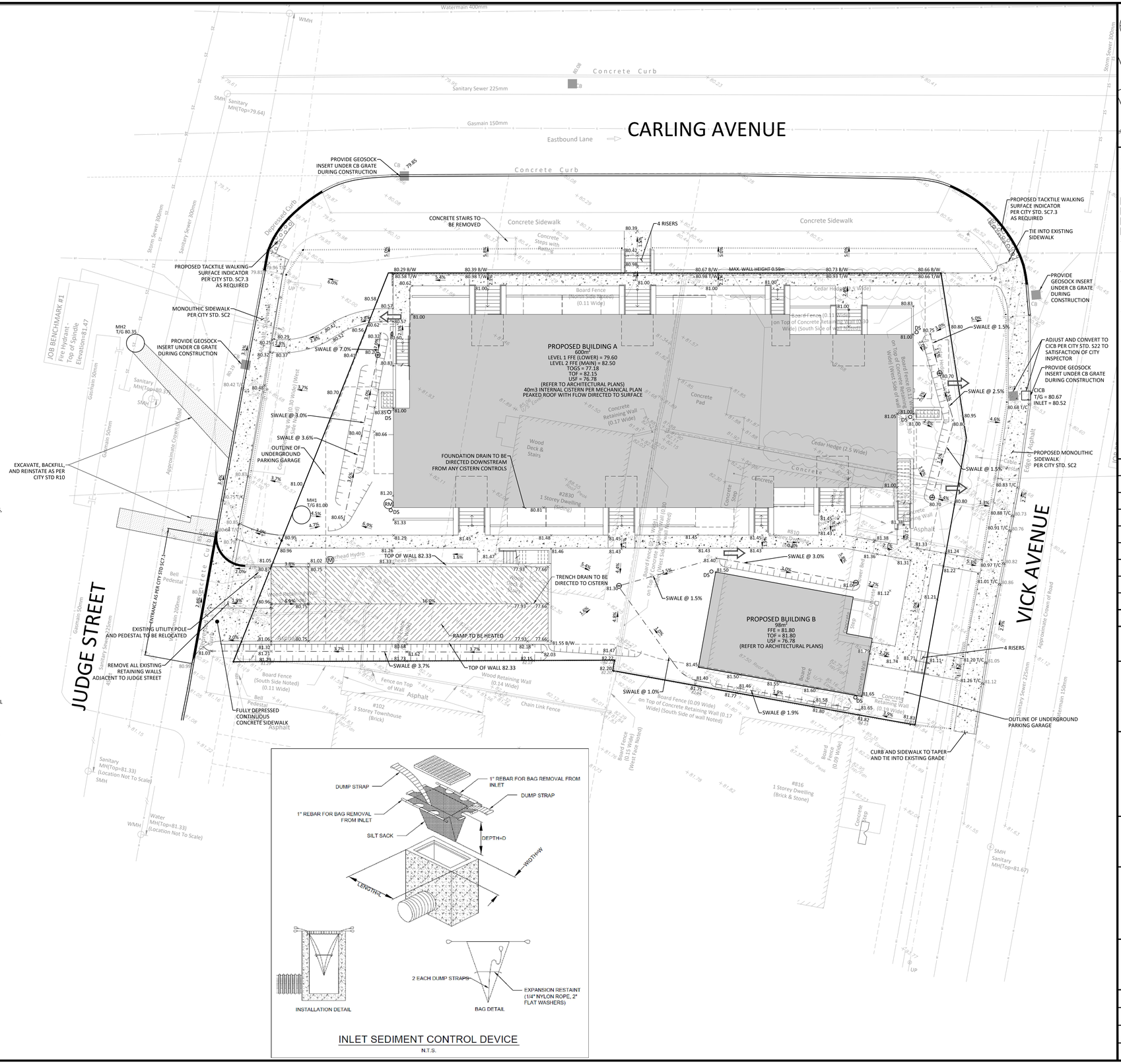
McINTOSH PERRY

## GENERAL NOTES

1. THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION SHOWN.
2. THIS PLAN IS NOT A CADASTRAL SURVEY SHOWING LEGAL PROPERTY BOUNDARIES AND EASEMENTS. THE PROPERTY BOUNDARIES SHOWN HEREON HAVE BEEN DERIVED INFORMATION SUPPLIED BY (OR SHOWN ON) FARLEY, SMITH & DENIS SURVEYING LTD. SURVEY PLAN #2318,250, DATED OCTOBER, 2020 AND CANNOT BE RELIED UPON TO BE ACCURATE OR COMPLETE. THE PRECISE LOCATION OF THE CURRENT PROPERTY BOUNDARIES AND EASEMENTS CAN ONLY BE DETERMINED BY AN UP-TO-DATE LAND TITLES SEARCH AND A SUBSEQUENT CADASTRAL SURVEY PERFORMED AND CERTIFIED BY AN ONTARIO LAND SURVEYOR.
3. THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OR TOWNSHIP BEFORE COMMENCING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
5. THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
6. RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY OR TOWNSHIP AUTHORITIES.
7. EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER AND THE CITY OR TOWNSHIP.
8. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
9. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS.
11. DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE CITY OR TOWNSHIP.
12. ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY OR TOWNSHIP STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
13. CONTACT THE CITY OR TOWNSHIP FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY OR TOWNSHIP SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOD.
14. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION, IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
15. ELECTRICAL, GAS, TELEPHONE AND TELEVISION SERVICE LOCATIONS ARE SUBJECT TO THE INDIVIDUAL AGENCY:
    - ELECTRICAL SERVICE - HYDRO OTTAWA,
    - GAS SERVICE - ENBRIDGE,
    - TELEPHONE SERVICE - BELL CANADA,
    - TELEVISION SERVICE - ROGERS.
17. INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES HYDRO OTTAWA, BELL AND THE CITY OR TOWNSHIP.
18. ALL PROPOSED CURB SHALL BE CONCRETE BARRIER CURB UNLESS SPECIFIED.
19. ALL EXISTING REDUNDANT PRIVATE APPROACHES FRONTING THIS DEVELOPMENT MUST BE REMOVED TO THE SATISFACTION OF THE CITY OR TOWNSHIP.
20. THIS PLAN MUST BE READ IN CONJUNCTION WITH GEOTECHNICAL REPORT BY McINTOSH PERRY, DATED NOVEMBER 2020 CCO-21-1191 AND THE SITE SERVICING REPORT BY McINTOSH PERRY REPORT #CCO-20-1191, DATED MARCH 17, 2021.
21. UNDERGROUND PARKING RAMP TO BE HEATED
22. EXISTING SERVICES TO BE LOCATED BY CONTRACTOR. EXISTING WATERMAIN TO BE BLANKED AT MAIN. EXISTING STORM AND SANITARY TO BE CAPPED AT PROPERTY LINE.

## EROSION AND SEDIMENT CONTROL

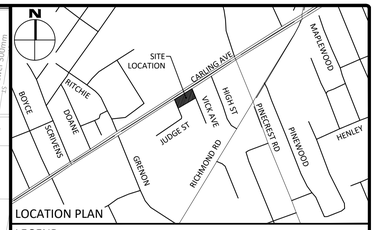
1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, TEMPORARY SEDIMENT CONTROL (GEOSOCK INSERTS WITH AN OVERFLOW UNDER GRATE OR COVER) TO BE IMPLEMENTED DURING CONSTRUCTION ON ALL PROPOSED ROAD CATCHBASINS, REARYARD CATCHBASINS AND CATCHBASIN MANHOLES AND OTHER SEDIMENT TRAPS. NO RECYCLED GEOSOCK MATERIAL SHALL BE PERMITTED FOR USE ON SITE.
2. AT THE DISCRETION OF THE PROJECT MANAGER OR MUNICIPAL STAFF, ADDITIONAL SILT CONTROL DEVICES SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
3. FOR SILT FENCE BARRIER, USE OPSD 219.110. GEOTEXTILE FOR SILT FENCE AS PER OPSS 1860, TABLE 3.
4. EXCEPT AS PROVIDED IN PARAGRAPHS 4.1., and 4.2. BELOW, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED.
   - 4.1. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS FEASIBLE.
   - 4.2. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
5. SEDIMENT THAT IS ACCUMULATED BY THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS ESCAPE OF THE SEDIMENT TO THE DOWNSTREAM SIDE OF THE CONTROL MEASURE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. SEDIMENT SHALL BE REMOVED TO THE LEVEL OF THE GRADE EXISTING AT THE TIME THE CONTROL MEASURE WAS CONSTRUCTED AND BE ACCORDING TO THE FOLLOWING:
   - 5.1. FOR LIGHT-DUTY SEDIMENT BARRIERS, ACCUMULATED SEDIMENT SHALL BE REMOVED ONCE IT REACHES THE LESSER OF THE FOLLOWING:
     - 5.1.1. A DEPTH OF ONE-HALF THE EFFECTIVE HEIGHT OF THE CONTROL MEASURE.
     - 5.1.2. A DEPTH OF 300 MM IMMEDIATELY UPSTREAM OF THE CONTROL MEASURE.
   - 5.2. FOR ALL CONTROL MEASURES, ACCUMULATED SEDIMENT SHALL BE REMOVED AS NECESSARY TO PERFORM MAINTENANCE REPAIRS.
   - 5.3. ACCUMULATED SEDIMENT SHALL BE REMOVED PRIOR TO THE REMOVAL OF THE CONTROL MEASURE.
   - 5.4. ACCUMULATED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AS PER OPSS 180.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MONITORED TO ENSURE THEY ARE IN EFFECTIVE WORKING ORDER. THE CONDITION OF THE CONTROL MEASURES SHALL BE MONITORED PRIOR TO ANY FORECAST STORM EVENT AND FOLLOWING A STORM EVENT.
7. DUST CONTROL MEASURES SHOULD BE CONSIDERED PRIOR TO CLEARING AND GRADING. THE USE OF WATER, CALCIUM CHLORIDE FLAKES/SOLUTION OR MAGNESIUM CHLORIDE FLAKES/SOLUTION SHALL BE USED AS DUST SUPPRESSANTS AS PER OPSS 506. THIS IS TO LIMIT WIND EROSION OF SOILS WHICH MAY TRANSPORT SEDIMENTS OFFSITE, WHERE THEY MAY BE WASHED INTO THE RECEIVING WATER BY THE NEXT RAINSTORM.
8. ALL 'GREEN AREAS' TO BE TREATED WITH 150mm TOPSOIL AND SOD AS SOON AS FEASIBLE, AS PER OPSS 570.
9. TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
10. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
11. STOCKPILED MATERIAL IS TO BE STORED AWAY FROM POTENTIAL RECEIVERS (E.G. STORM CATCHBASINS, MANHOLES), AND BE SURROUNDED BY EROSION CONTROL MEASURES WHERE MATERIAL IS LEFT IN PLACE IN EXCESS OF 14 DAYS.
12. IF REQUIRED, DEWATERING/SETTLING BASINS SHALL BE CONSTRUCTED AS PER OPSD 219.240 AND LOCATED ON FLAT GRADE UPSTREAM OF OTHER EXISTING MITIGATION MEASURES. WATERCOURSES SHALL NOT BE DIVERTED, OR BLOCKED, AND TEMPORARY WATERCOURSES CROSSINGS SHALL NOT BE CONSTRUCTED OR UTILIZED, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. IF CLOSURE OF ANY PERMANENT WATER PASSAGE IS NECESSARY, THE CONTRACTOR SHALL RELEASE ANY STRANDED FISH TO THE OPEN PORTION OF THE WATERCOURSE WITHOUT HARM.
13. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO OPSS 577
14. WHERE DEWATERING IS REQUIRED, THE DISCHARGED WATER SHALL BE CONTROLLED IN ACCORDANCE WITH OPSS 518.
15. ALL SETTLING/FILTRATION BASINS SHALL BE EQUIPPED WITH TERRAFIX 270R GEOTEXTILE (OR APPROVED EQUIVALENT) AND SHALL BE CLEANED AND REPLACED AS REQUIRED.







INLET SEDIMENT CONTROL DEVICE
N.T.S.




LOCATION PLAN

## LEGEND

- BARRIER CURB (DC) / CURB DEPRESION
- MOUNTABLE CURB
- EASEMENT
- HEAVY DUTY ASPHALT
- RETAINING WALL
- CONCRETE SIDEWALK
- PAVING STONE
- MH7 STORM MANHOLE
- CB DI6 CATCHBASIN OR DITCH INLET
- ECB4 LANDSCAPE CATCHBASIN
- MH7A SANITARY MANHOLE
- PERFORATED PIPE IN SWALES
- WATER VAVLE/CHAMBER
- FIRE HYDRANT
- CENTRELINE OF SWALE
- SLOPING AT 3:1 (UNLESS SPECIFIED)
- 95.94 PROPOSED ELEVATION
- 95.20 EXISTING ELEVATION
- 95.94 SWALE ELEVATION
- T/W100.50 B/W90.50 TOP OF WALL ELEVATION BOTTOM OF WALL ELEVATION
- EMERGENCY OVERLAND FLOW ROUTE
- SILT FENCE (AS PER OPSD 219.130)
- STRAW BALE CHECK DAM (AS PER OPSD 219.180)
- O/H BUILDING ENTRANCES (MAIN, SIDE, OVERHEAD)
- A WATER COVER TABLE POINT
- 1 CROSSING CONFLICT TABLE LOCATION
- RD ROOF DOWNSPOUT LOCATION
- AREA DRAIN
- M METER/REMOTE METER
- DS DOWNSPOUT
- FFE FINISHED FLOOR
- USF UNDERSIDE OF FOOTING
- TOGS TOP OF GARAGE SLAB
- TOF TOP OF FOUNDATION

| No. | Revisions | Date |
|---|---|---|
| 4 | ISSUED FOR MUNICIPAL REVIEW | JUN.15.2021 |
| 3 | ISSUED FOR MUNICIPAL REVIEW | MAR.17.2021 |
| 2 | ISSUED FOR MUNICIPAL REVIEW | FEB.17.2021 |
| 1 | ISSUED FOR MUNICIPAL REVIEW | NOV.20.2020 |

Check and verify all dimensions before proceeding with the work — Do not scale drawings

SCALE 1 : 150
0 5 10 15 Metres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Stamp:

Client:
1408505 Ontario Inc.
c/o Holzman Consultants Inc.
311 RICHMOND ROAD, Suite 203
OTTAWA, ON K1Z 6X3

Project:
RESIDENTIAL DEVELOPMENT
2830 CARLING AVENUE

Drawing Title:
SITE GRADING, DRAINAGE AND SEDIMENT & EROSION CONTROL

| | |
|---|---|
| Scale: 1:150 | Project Number: CCO-21-1191 |
| Drawn By: C.D.H. | |
| Checked By: R.P.K. | Drawing Number: C101 |
| Designed By: C.D.H. | |

D07-12-20-0163

#18307


FILENAME: U:\Ottawa\01 Project - Proposals\2021 Jobs\CCO\CCO-21-1191 First Bay Properties Inc_Stacked Towns_2830 Carling Ave\Cad\Lt2 - Drawings\CCO-21-1191 - Presentation2.dwg
LAST SAVED: Tuesday, June 15, 2021 LAST SAVED BY: R.Boyt
LAST PLOTTED: Tuesday, June 15, 2021 [ DB FILE USED ]