

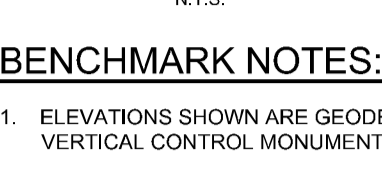
**LEGEND**

- 94.60 PROPOSED ELEVATION
- 94.60(T/C) PROPOSED TOP OF CURB ELEVATION
- 94.60(S) PROPOSED SWALE ELEVATION
- 94.60 MATCH INTO EXISTING GRADES
- EXISTING ELEVATION
- 2.0% GRADE AND DIRECTION
- MAXIMUM 3:1 SIDESLOPE
- PROPOSED TERRACE ELEVATION
- PROPOSED SILT FENCING (OPSD 219.110)
- PROPERTY LINE
- FFE FINISHED FLOOR ELEVATION
- T/FND TOP OF FOUNDATION WALL ELEVATION
- USF UNDERSIDE OF FOOTING ELEVATION
- SAN MH 01 PROPOSED SANITARY MANHOLE
- STM MH 03 PROPOSED STORM MANHOLE
- CBMH 01 PROPOSED CATCHBASIN MANHOLE
- DD UNDERGROUND MECHANICAL DECK DRAIN
- BD BI-LEVEL DRAIN AT PODIUM AND U/G DECKING
- EMERGENCY OVERLAND FLOW ROUTE
- TRANSFORMER
- PROPOSED WATER METER AND REMOTE METER
- TWSI
- APPROXIMATE PONDING LIMITS
- 1.2 YR
- 1.5 YR
- 1.100 YR
- EXISTING VALVE & VALVE BOX
- EXISTING SERVICE POST
- EXISTING HYDRANT
- EXISTING CONCRETE CURB
- EXISTING CATCHBASIN
- EXISTING CATCHBASIN MH
- EXISTING UTILITY POLE
- CW GUY WIRES
- EXISTING FENCE
- EXISTING OVERHEAD WIRES
- INLET SEDIMENT CONTROL DEVICE

**PAVEMENT STRUCTURE:**

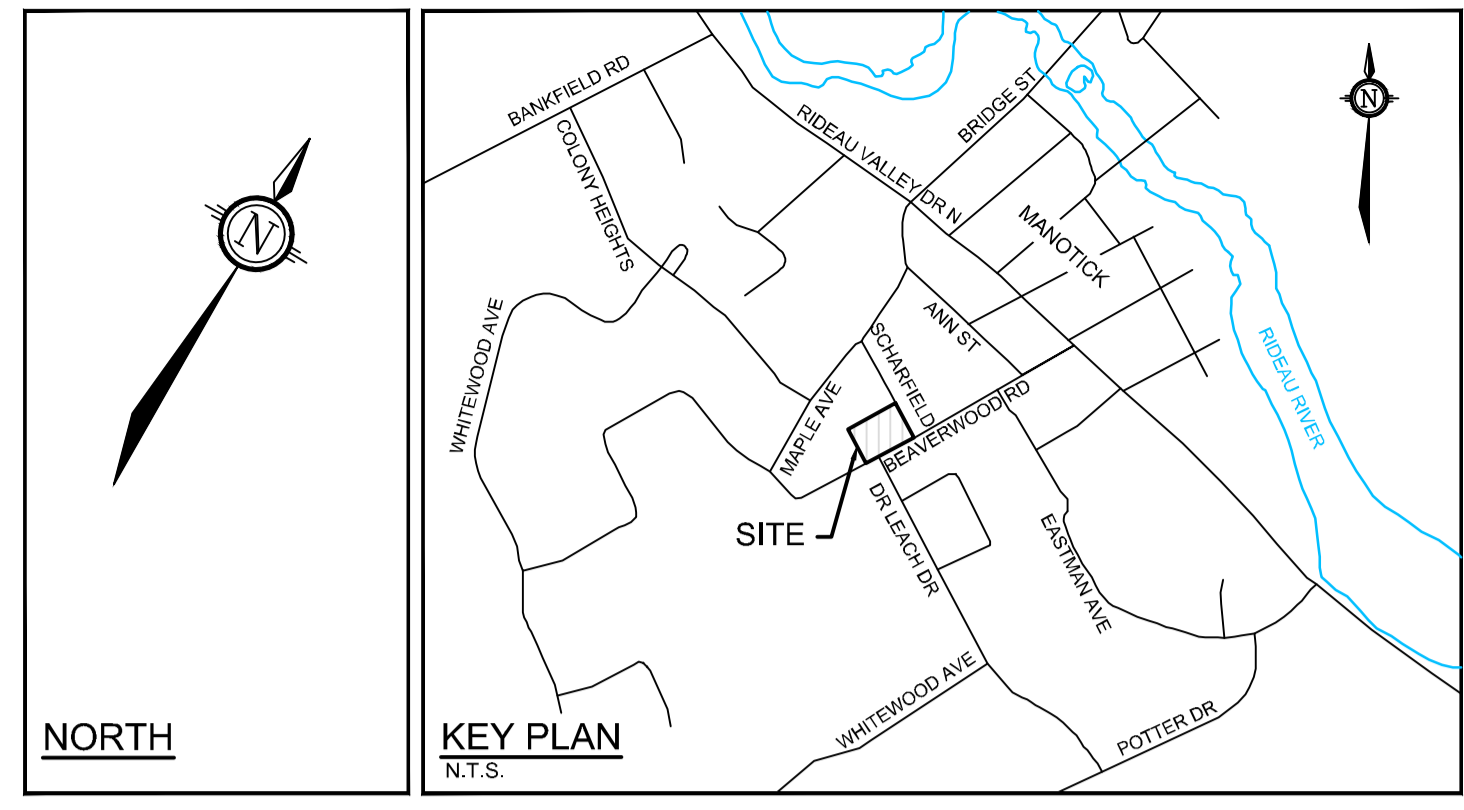
- NEW LIGHT DUTY PAVEMENT
  - 50mm SUPERPAVE 12.5
  - 150mm GRANULAR "A"
  - 300mm GRANULAR "B" TYPE II
  - ASPHALT GRADE PG 58-34
- NEW HEAVY DUTY PAVEMENT
  - 40mm SUPERPAVE 12.5
  - 50mm SUPERPAVE 19.0
  - 150mm GRANULAR "A"
  - 450mm GRANULAR "B" TYPE II
  - ASPHALT GRADE PG 58-34
- HEAVY DUTY PAVEMENT - ROADWAY RE-INSTATEMENT
  - MATCH EXISTING GRANULAR STRUCTURE OF ROADWAY
  - MATCH EXISTING ASPHALT THICKNESSES
  - NEW ASPHALT GRADE PG 58-34

**MUD MAT DETAIL**



**BENCHMARK NOTES:**

- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM. ELEVATIONS ARE RELATED TO VERTICAL CONTROL MONUMENT 011948U583G HAVING AN ELEVATION OF 96.03m.
- "BEARINGS ARE GRID, DERIVED FROM GPS OBSERVATIONS AND ARE REFERRED TO THE CENTRAL MERIDIAN OF MTM ZONE 9 (76°30' WEST LONGITUDE) NAD-83 (ORIGINAL), FROM THE TOPOGRAPHIC SURVEY ON THE GRADING PLAN.
- IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
- BENCHMARK WAS PROVIDED ON TOPOGRAPHICAL PLAN OF SURVEY, PART OF BLOCK C, REGISTERED PLAN 771, CITY OF OTTAWA, PREPARED BY ANNIS, O'SULLIVAN, VOLLEBECK LTD.
- TEMPORARY JOB BENCHMARK DESCRIPTION IS LOCATED ON NAIL IN EAST FACE OF UTILITY POLE, LOCATED APPROXIMATED 24.7m WEST OF THE SOUTHWEST PROPERTY BOUNDARY ALONG BEAVERWOOD ROAD. SEE TOPOGRAPHICAL PLAN OF SURVEY MENTIONED ABOVE FOR DETAILS.



**GENERAL NOTES:**

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00, INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- COMPLETE ALL WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DISINFECTION AND ALL RELEVANT REFERENCES TO OPS, OPSD & AWWA GUIDELINES - ALL CURRENT VERSIONS AND AS AMENDED.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- ALL ELEVATIONS ARE GEODETIC.
- REFER TO GEOTECHNICAL INVESTIGATION REPORT (PG#160-1, REVISION 3, DATED MARCH 21, 2023), PREPARED BY PATERSON GROUP INC., FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- REFER TO ARCHITECTS' AND LANDSCAPE ARCHITECTS' DRAWINGS FOR BUILDING AND HARDWARE DETAILS AND DIMENSIONS.
- REFER TO THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT (R-2022-013) PREPARED BY NOVATECH.
- SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).

**GRADING NOTES:**

- ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
- EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
- ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 99% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
- ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
- ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
- REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING THE AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON THIS PLAN.

**EROSION AND SEDIMENT CONTROL NOTES:**

- ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA. THEY ARE TO BE APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION. THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AND SHOULD INCLUDE AS A MINIMUM THOSE MEASURES INDICATED ON THE PLAN.
- A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA. THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- TO PREVENT SURFACE EROSION FROM ENTERING ANY STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF NEARBY SURFACE CATCHBASINS AND MANHOLE STRUCTURES. TERRAFIX 8" ULTRA SILT SOCK (FILTER SOCK) IS TO BE USED AT THE OPENING OF ALL CURB INLET CATCHBASINS. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED (PER OPSD 219.110) AROUND THE CONSTRUCTION AREA (WHERE APPLICABLE). IN AREAS WHERE SILT FENCING CANNOT BE INSTALLED PER OPSD 219.110 (i.e. HARD SURFACES), A FILTER SOCK SHALL BE SUBSTITUTED. THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE ENGINEER, THE MEASURES ARE NO LONGER REQUIRED. NO CONTROL MEASURES MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
- THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- ROADWAYS ARE TO BE SWEEPED AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR MUNICIPALITY.
- THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS.
- ON-SITE DEWATERING IS TO BE DIRECTED TO A SEDIMENT TRAP AND/OR GRAVEL SPLASH PAD AND DISCHARGED SAFELY TO AN APPROVED OUTLET AS DIRECTED BY THE ENGINEER.

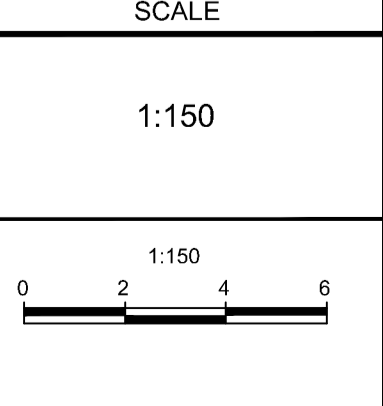
**Erosion and Sediment Control Responsibilities:**

ESC Measure	Symbol	Specification	During Construction		After Construction Prior to Final Acceptance		After Final Acceptance	
			Inspection/Frequency	Responsibility	Approval to Remove	Removal Responsibility	Inspection/Maintenance Frequency	Responsibility
Silt Fence	SF	OPSD 219.110	Developer's Contractor	Developer's Contractor	Consultant	Developer's Contractor	N/A	N/A
Filter Bags/Socks	LB	Location as Indicated in ESC Note #3	Developer's Contractor	Developer's Contractor	Consultant	Developer's Contractor	N/A	N/A
Mud Mat	MM	Drawing Details	Developer's Contractor	Developer's Contractor	Consultant	Developer's Contractor	N/A	N/A
Dust Control	DC	Location as Required Around Site	Developer's Contractor	Developer's Contractor	Consultant	Developer's Contractor	N/A	N/A
Stabilized Material Stockpiling	SM	Location as Required by Contractor	Developer's Contractor	Developer's Contractor	Consultant	Developer's Contractor	N/A	N/A
Sediment Basin (for Rows being pumped out of excavations)	SB	Location as Required by Contractor	Developer's Contractor	Developer's Contractor	After Every Rainstorm	Developer's Contractor	Developer's Contractor	N/A

**NOTE:**  
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

**NIVO DEVELOPMENTS**  
OWNER INFORMATION  
NIVO DEVELOPMENTS INC.  
255 MICHAEL COWPLAND DRIVE,  
OTTAWA, ONTARIO, K2M 0M5  
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No.	REVISION	DATE	BY	No.	REVISION	DATE	BY
8	REVISED PER CSI-#1	JUL 25/24	FST	8	REVISED PER CSI-#1	JUL 25/24	FST
7	ISSUED FOR CONSTRUCTION	MAY 17/24	FST	7	ISSUED FOR CONSTRUCTION	MAY 17/24	FST
6	ISSUED FOR TENDER	FEB 29/24	FST	6	ISSUED FOR TENDER	FEB 29/24	FST
5	ADDED HYDRO TRANSFORMER PAD, REVISED SERVICING AND GRADING	FEB 28/24	FST	5	ADDED HYDRO TRANSFORMER PAD, REVISED SERVICING AND GRADING	FEB 28/24	FST
4	REVISED PER CITY COMMENTS	MAY 11/23	FST	4	REVISED PER CITY COMMENTS	MAY 11/23	FST
3	REVISED PER CITY COMMENTS	MAR 16/23	FST	3	REVISED PER CITY COMMENTS	MAR 16/23	FST
2	REVISED PER CITY COMMENTS	DEC 22/22	FST	2	REVISED PER CITY COMMENTS	DEC 22/22	FST
1	ISSUED FOR SITE PLAN APPROVAL	JUL 15/22	FST	1	ISSUED FOR SITE PLAN APPROVAL	JUL 15/22	FST
9	ISSUED FOR CITY APPROVAL	DEC 2/24	FST				



**DESIGN** SM  
**CHECKED** FST  
**DRAWN** SM  
**CHECKED** FST  
**APPROVED** FST

**PROFESSIONAL ENGINEER**  
F.S. THAUVETTE  
100041299  
Dec 02, 2024  
PROVINCE OF ONTARIO

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**LOCATION**  
CITY OF OTTAWA  
1185 BEAVERWOOD ROAD

**DRAWING NAME**  
GRADING AND EROSION & SEDIMENT CONTROL PLAN

**PROJECT No.** 121184  
**REV #** 9  
**DRAWING No.** 121184-GR

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D07-12-22-0114 PLAN No. : 18960