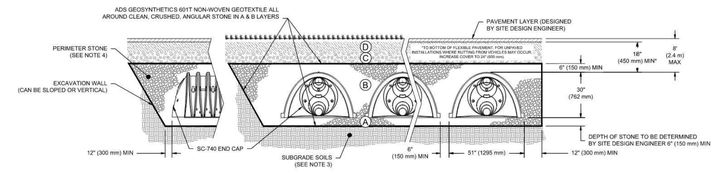


GENERAL NOTES:

1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. 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.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
4. 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.
5. 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 MUNICIPAL AUTHORITIES.
6. 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.
7. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
8. REFER TO GEOTECHNICAL INVESTIGATION REPORT PG4592-1-5510 DATED SEPTEMBER 10, 2018) 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.
9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
10. REFER TO THE STORMWATER MANAGEMENT REPORT No. R-2024-095, DATED OCTOBER 3, 2024 PREPARED BY NOVATECH.
11. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10 AND R25).
12. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATION, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC AND A GRADING PLAN INDICATING ALL AS-BUILT SURFACE ELEVATIONS AND SLOPES.

GRADING NOTES:

1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED BUILDING AND PAVED AREAS.
2. EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUBEXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS.
3. THE PAVEMENT GRANULAR BASE AND SUBBASE SHOULD BE PLACED IN MAXIMUM 300mm THICK LIFTS AND COMPACTED TO A MINIMUM OF 98% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
4. ALL CURBS AND SIDEWALKS TO BE BUILT AS PER CITY OF OTTAWA DETAIL DRAWINGS SC1.4 AND SC4.
5. GRADE AND/OR FILL BEHIND PROPOSED CURB AND BETWEEN BUILDINGS AND CURBS, WHERE REQUIRED TO PROVIDE POSITIVE DRAINAGE.
6. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
7. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
8. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
9. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
10. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING THE AS-BUILT ELEVATION OF EVERY DESIGN GRADE SHOWN ON THIS PLAN.

SEWER NOTES:

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
CATCHBASIN (600X600mm)	705.010	OPSD
SANITARY/STORM/CATCHBASIN MANHOLE (1200Ø)	701.010	OPSD
STORM MANHOLE (1500Ø)	701.011	OPSD
STORM/SANITARY MH FRAME	S25	CITY OF OTTAWA
STORM COVER (OPEN)	S28.1	CITY OF OTTAWA
STORM SEWER < 450mmØ	PVC DR 35 (UNLESS SPECIFIED OTHERWISE)	
STORM SEWER >= 450mmØ	CONC 65D (UNLESS SPECIFIED OTHERWISE)	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	

3. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM THE FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
4. ALL STORM AND SANITARY LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14,1 OR S14.2.
5. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
6. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
7. ALL STORM MANHOLES MANHOLES WITH PIPE SIZES LESS THAN 900mm ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL STORM MANHOLES WITH PIPE SIZES 900mm AND LARGER ARE TO BE BENCHED.
8. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS 200mm OR GREATER IN DIAMETER PRIOR TO BASE COURSE ASPHALT TO ENSURE THAT THEY ARE CLEAN AND OPERATIONAL. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES AND RE CCTV PRIOR TO ACCEPTANCE. OBTAIN APPROVAL FROM THE CITY'S SEWER OPERATIONS. PROVIDE THE CCTV INSPECTION AND REPORT TO THE ENGINEER FOR REVIEW AND APPROVAL.
9. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL APPLICABLE SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
10. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
11. INSULATE ALL STORM SEWERS THAT HAVE LESS THAN 1.5m COVER PER INSULATION DETAIL FOR SHALLOW SEWERS, PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
12. ALL CATCHBASINS IN THE PARKING AREA ARE TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS EXTENDING IN FOUR ORTHOGONAL DIRECTIONS AT THE SUBGRADE LEVEL. SUBDRAIN IS TO BE PROVIDED AT THE TRANSITIONS BETWEEN DIFFERENT PAVEMENT COMPOSITIONS. THE SUBGRADE SURFACE SHOULD BE SHAPED TOWARDS THE CATCHBASINS TO PROMOTE DRAINAGE OF THE GRANULAR BASE.
13. PERIMETER SUBDRAINS SHALL BE PROVIDED LONGITUDINALLY AROUND THE PARKING AREA ALONG CURBS PER GEOTECHNICAL RECOMMENDATION.

WATERMAIN NOTES:

1. SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
2. SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
THERMAL INSULATION BY OPEN STRUCTURES	W23	CITY OF OTTAWA
WATERMAIN	PVC DR 18	

3. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
4. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
5. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
6. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

EROSION AND SEDIMENT CONTROL NOTES :

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES DURING CONSTRUCTION ACTIVITIES TO PROTECT THE STORM DRAINAGE SYSTEM AND THE DOWNSTREAM RECEIVING WATERCOURSE(S). THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING FILTER BAGS UNDER THE GRATES OF CATCHBASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS.
2. 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.
3. TO PREVENT SURFACE EROSION FROM ENTERING ANY DITCH OR STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA. THESE CONTROL MEASURES ARE TO REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED AND CONSTRUCTION IS COMPLETE.
4. 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.
5. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY DITCH OR STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
6. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
7. ROADWAYS ARE TO BE SWEPT AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR MUNICIPALITY.
8. THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS.
9. THE PROPOSED PERIMETER SWALE IS TO BE TREATED WITH TOPSOIL, HYDROSEED AND MULCH AS SOON AS IS PRACTICAL AFTER CONSTRUCTION OF THE SWALE.
10. THE EROSION SEDIMENT CONTROL PLAN IS TO BE CONSIDERED A "LIVING DOCUMENT" WHICH MAY BE MODIFIED IN THE EVENT THAT THE CONTROL MEASURES ARE INSUFFICIENT.
11. PROVIDE REGULAR MAINTENANCE TO THE EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION AND SEDIMENT CONTROL MEASURES ARE MAINTAINED AND WILL MONITOR THE WATER CLARITY DOWNSTREAM OF THE WORK SITE THROUGHOUT THE DAY AND DURING RAIN EVENTS. WATER QUALITY IS TO MEET THE CANADIAN WATER QUALITY GUIDELINES FOR THE PROTECTION OF AQUATIC LIFE. MONITORING FOR VISIBLE PLUMES OUTSIDE OF THE WORK AREA IS TO BE UNDERTAKEN.
12. SUSPEND ACTIVITIES THAT CAUSE MUDDY ENVIRONMENTS DURING PERIODS OF HEAVY RAINS.
13. ANY STOCKPILES OF SOIL OR FILL MATERIAL WILL BE STORED AS FAR AS POSSIBLE FROM THE FISH HABITAT OR CHANNELS LEADING TO FISH HABITAT (MINIMUM 30 M).
14. THE EROSION CONTROL MEASURES WILL NOT BE REMOVED UNTIL THE BANKS ARE STABILIZED (I.E., <20% EXPOSED SOIL).
15. WHERE BANKS/RIPARIAN AREA (AREA WITHIN 30 M OF CHANNEL) HAVE BEEN STABILIZED BY SEEDING AND/OR PLANTING, MONITOR THE REVEGETATION TO ENSURE THAT THE VEGETATION BECOMES FULLY ESTABLISHED (AT LEAST 80% COVER REQUIRED).
16. WHERE POSSIBLE, LIMIT CLEARING OF VEGETATION TO TRIMMING AND LEAVE THE STUMP AND LOWER 60 CM OF THE TREE TRUNK IN PLACE (FOR SHORELINE STABILIZATION).
17. ONCE WORK IS COMPLETED, STABILIZE USING NATIVE VEGETATION. WHERE POSSIBLE, THIS SHOULD INCLUDE NATIVE TREES AND SHRUBS AS PER THE LANDSCAPING PLAN (TO BE DEVELOPED AT DETAILED DESIGN).

PAVEMENT STRUCTURES:

▨ LIGHT DUTY (CAR PARKING AREAS ONLY)
50mm HL3 OR SUPERPAVE 12.5
150mm GRAN "A"
300mm GRAN "B" TYPE II
SUBGRADE - Either fill, in situ soil, or OPSS Granular B Type I or II material placed over in situ soil or fill

☐ HEAVY DUTY (ACCESS LANES AND HEAVY TRUCK PARKING)
40mm HL3 OR SUPERPAVE 12.5
50mm HL8 OR SUPERPAVE 19.0
150mm GRAN "A"
450mm GRAN "B" TYPE II
SUBGRADE - Either fill, in situ soil, or OPSS Granular B Type I or II material placed over in situ soil or fill

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SC-740
STANDARD CROSS SECTION
DATE: 9/12/22
DRAWN: KLJ
CHECKED: KLJ
PROJECT #:
StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM
4640 TRUEMAN BLVD
HILLIARD, OH 43026
ADS
SHEET 1 OF 1

Ottawa
WATER FILL STATION
DATE: MARCH 2016
REV. DATE:
DWG. No.: W51

Ottawa
UNDERGROUND WATER RESERVOIR DRAW PIPE DETAIL
DATE: MARCH 2016
REV. DATE:
DWG. No.: W52

NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING
Nov 2021 Rev 3
LIGHT-DUTY SILT FENCE BARRIER
OPSD 219.110

MOUNTABLE CURB WITH GUTTER

NOTES:
1. IF AN EXTRUSION CURBING MACHINE IS USED, THE EXPANSION BITUMINOUS MATERIAL AND THE #15 DOWELS ARE TO BE PLACED AT THE END OF THE EXTRUSION.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
3. DUMMY JOINTS SHALL BE 25mm DEEP, FRONT, BACK AND TOP OF SECTION AT 4m SPACING OR MATCH JOINTING WHERE SIDEWALK IS ADJACENT.

N.T.S.

Ottawa
MODIFIED CONCRETE MOUNTABLE CURB WITH GUTTER FOR ROUNDABOUT TRUCK APRON
DATE: JANUARY 2003
REV. DATE: MARCH 2019
DWG. No.: SC1.5

CONCRETE BARRIER CURB

NOTES:
1. THE FULL CURB DEPTH SHALL BE CARRIED THROUGH THE DEPRESSED ACCESS CROSSING.
2. A CONCRETE SUPPORT IS REQUIRED WHEN BUILT ADJACENT TO THE SIDEWALK.
3. IF AN EXTRUSION CURBING MACHINE IS USED, THE EXPANSION BITUMINOUS MATERIAL AND THE #15 DOWELS ARE TO BE PLACED AT THE END OF THE EXTRUSION.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
5. DUMMY JOINTS SHALL BE 25mm DEEP, FRONT, BACK AND TOP OF SECTION AT 4m SPACING OR MATCH JOINTING WHERE SIDEWALK IS ADJACENT.
6. FOR DEPRESSED CURB AT ENTRANCES USE 250.
7. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 0 TO 6 mm AND FOR PRIVATE ENTRANCES 0 TO 13mm.

N.T.S.

Ottawa
CONCRETE BARRIER CURB FOR GRANULAR BASE PAVEMENT (MODIFIED OPSD-600.110)
DATE: JANUARY 2003
REV. DATE: MARCH 2021
DWG. No.: SC1.1

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, 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.

No.	REVISION	DATE	BY
1.	ISSUED FOR SPA	OCT 3/2024	MJH

SCALE
AS SHOWN

DESIGN MJH
CHECKED JLS
DRAWN MJH
CHECKED JLS
APPROVED MJH

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER
M. J. HREHORIAK
100211256
OCT 3/24
PROVINCE OF ONTARIO

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
5510 BOUNDARY ROAD

DRAWING NAME
NOTES AND DETAILS

PROJECT No. 118168
REV
REV # 1
DRAWING No.
118168-ND

CITY PLAN NO. XXXX
CITY FILE NO. D07-XX-XX-XXXX

M:\2018\118168\CAD\Design\118168-ND.DWG, ND, Oct 02, 2024 - 4:54pm, mhrehoriak
PLANA1.DWG - 841mmx594mm

EROSION AND SEDIMENT CONTROL NOTES :

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES DURING CONSTRUCTION ACTIVITIES TO PROTECT THE STORM DRAINAGE SYSTEM AND THE DOWNSTREAM RECEIVING WATERCOURSE(S). THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING FILTER BAGS UNDER THE GRATES OF CATCHBASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS.

2. 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.

3. TO PREVENT SURFACE EROSION FROM ENTERING ANY DITCH OR STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA. THESE CONTROL MEASURES ARE TO REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED AND CONSTRUCTION IS COMPLETE.

4. 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.

5. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY DITCH OR STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.

6. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

7. ROADWAYS ARE TO BE SWEPT AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR MUNICIPALITY.

8. THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS.

9. THE PROPOSED PERIMETER SWALE IS TO BE TREATED WITH TOPSOIL, HYDROSEED AND MULCH AS SOON AS IS PRACTICAL AFTER CONSTRUCTION OF THE SWALE.

10. THE EROSION SEDIMENT CONTROL PLAN IS TO BE CONSIDERED A "LIVING DOCUMENT" WHICH MAY BE MODIFIED IN THE EVENT THAT THE CONTROL MEASURES ARE INSUFFICIENT.

11. PROVIDE REGULAR MAINTENANCE TO THE EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION AND SEDIMENT CONTROL MEASURES ARE MAINTAINED AND WILL MONITOR THE WATER CLARITY DOWNSTREAM OF THE WORK SITE THROUGHOUT THE DAY AND DURING RAIN EVENTS. WATER QUALITY IS TO MEET THE CANADIAN WATER QUALITY GUIDELINES FOR THE PROTECTION OF AQUATIC LIFE. MONITORING FOR VISIBLE PLUMES OUTSIDE OF THE WORK AREA IS TO BE UNDERTAKEN.

12. SUSPEND ACTIVITIES THAT CAUSE MUDDY ENVIRONMENTS DURING PERIODS OF HEAVY RAINS.

13. ANY STOCKPILES OF SOIL OR FILL MATERIAL WILL BE STORED AS FAR AS POSSIBLE FROM THE FISH HABITAT OR CHANNELS LEADING TO FISH HABITAT (MINIMUM 30 M).

14. THE EROSION CONTROL MEASURES WILL NOT BE REMOVED UNTIL THE BANKS ARE STABILIZED (I.E., <20% EXPOSED SOIL).

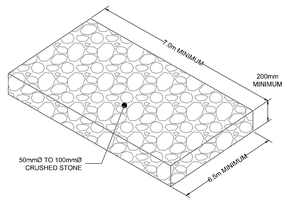
15. WHERE BANKS/RIPARIAN AREA (AREA WITHIN 30 M OF CHANNEL) HAVE BEEN STABILIZED BY SEEDING AND/OR PLANTING, MONITOR THE REVEGETATION TO ENSURE THAT THE VEGETATION BECOMES FULLY ESTABLISHED (AT LEAST 80% COVER REQUIRED).

16. WHERE POSSIBLE, LIMIT CLEARING OF VEGETATION TO TRIMMING AND LEAVE THE STUMP AND LOWER 60 CM OF THE TREE TRUNK IN PLACE (FOR SHORELINE STABILIZATION).

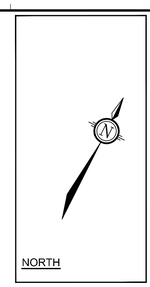
17. ONCE WORK IS COMPLETED, STABILIZE USING NATIVE VEGETATION. WHERE POSSIBLE, THIS SHOULD INCLUDE NATIVE TREES AND SHRUBS AS PER THE LANDSCAPING PLAN (TO BE DEVELOPED AT DETAILED DESIGN).

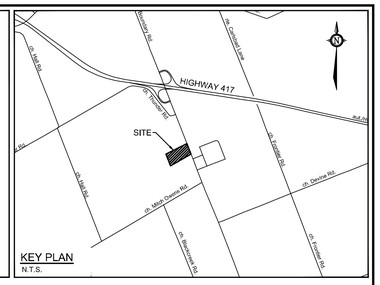
ESC CONTROL MEASURES

				During Construction			After Construction	
	ESC Measure	Symbol	OPSD No.	Installation Responsibility	Inspection Responsibility	Inspection Frequency	Inspection/Maintenance Responsibility	Removal Responsibility
Temporary Measures	Silt Fence		219.110	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer	Developer's Contractor
	Mud Mat	M M	See Detail	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	N/A	Developer's Contractor
	Straw Bale Check Dam		219.180	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	N/A	N/A
	Sediment Basin (for flows being pumped out of excavations)	Location as Required by Contractor	- - -	Developer's Contractor	Developer's Contractor	After Every Rainstorm	N/A	Developer's Contractor
Permanent Measures	Vegetated Swales	N/A	N/A	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer	N/A



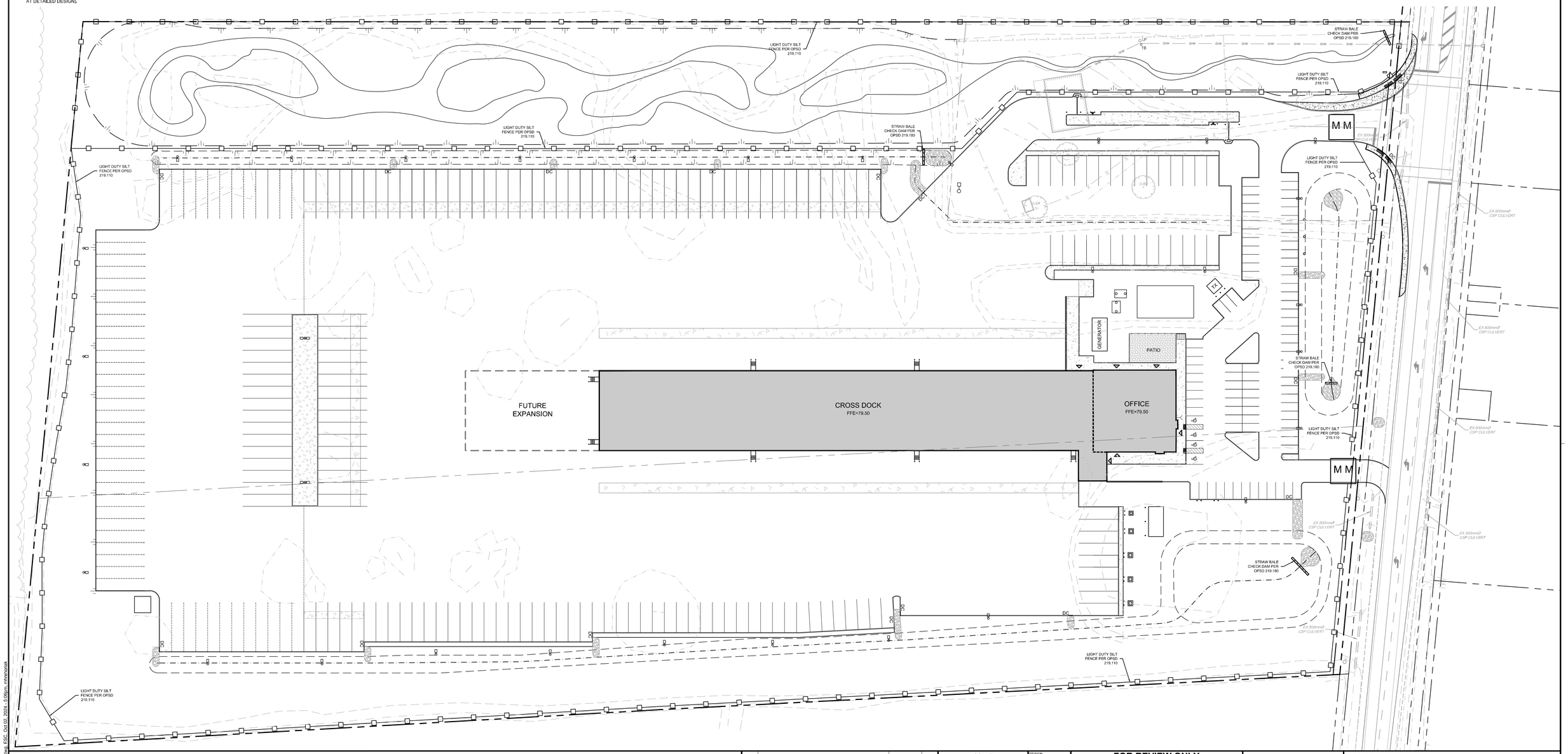
MUD MAT DETAIL
NOT TO SCALE





LEGEND

- PROPERTY LINE
- PROPOSED SWALE
- TERRACING 3:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
- PROPOSED MUD MAT
- LIGHT DUTY SILT FENCE (OPSD 219.110)
- PROPOSED STORM MANHOLE
- PROPOSED BUILDING ENTRANCE
- STRAWBALE CHECK DAM (OPSD 219.180)
- RIP-RAP



NOTE:
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No.	REVISION	DATE	BY
1.	ISSUED FOR SPA	OCT 3/2024	MJH

SCALE 1:500
1:500
0 5 10 15 20

DESIGN MJH
CHECKED JLS
DRAWN MJH
CHECKED JLS
APPROVED MJH

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER
M.J. HREHORIAK
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OCT 3/24
PROVINCE OF ONTARIO

NOVATECH
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Telephone (613) 254-9643
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Website www.novatech-eng.com

LOCATION
CITY OF OTTAWA
5110 BOUNDARY ROAD

DRAWING NAME
EROSION AND SEDIMENT CONTROL PLAN

PROJECT No. 118168
REV REV # 1
DRAWING No. 118168-ESC

CITY FILE NO. D07-XX-XX-XXXX
CITY PLAN NO. XXXX

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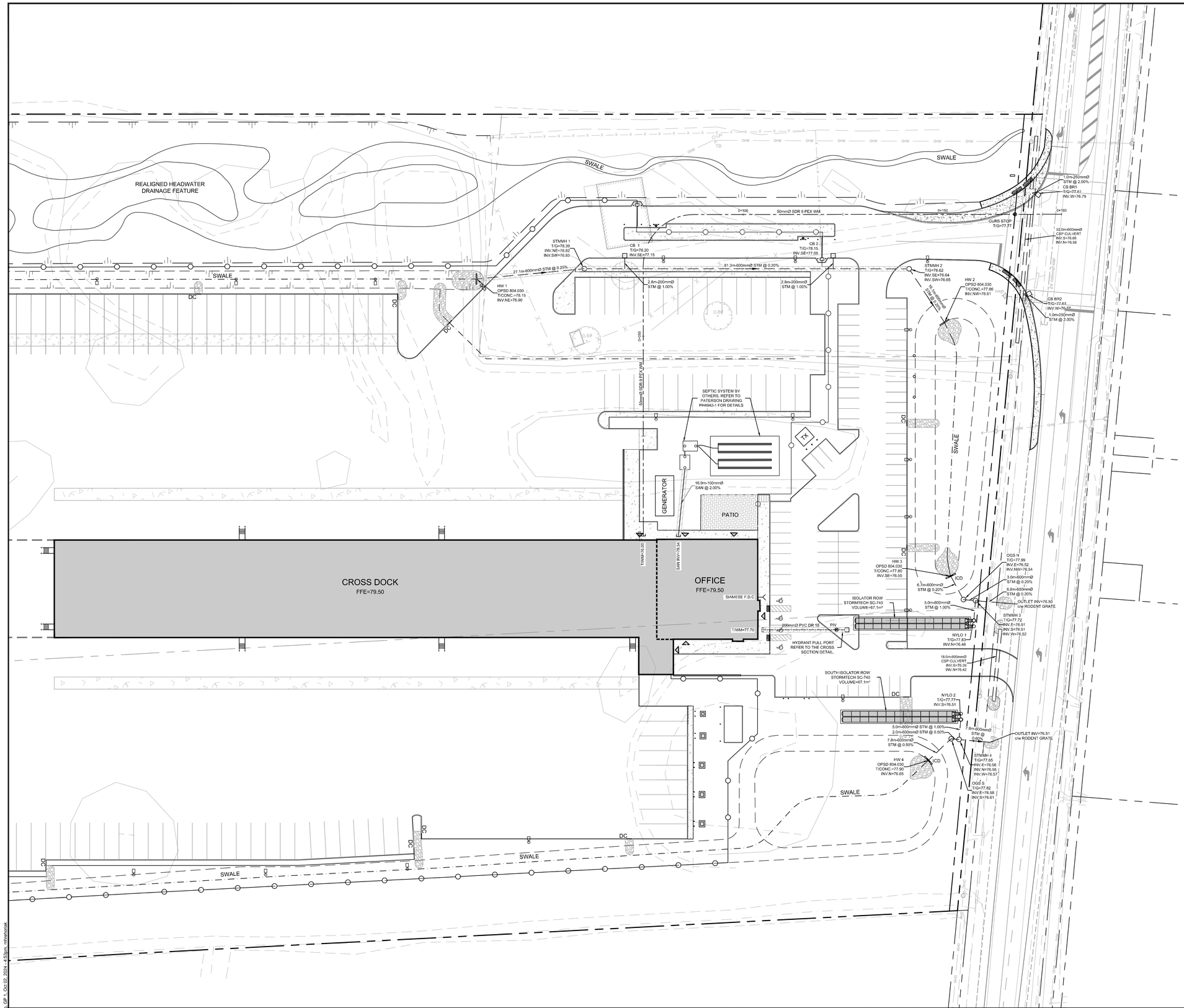

NORTH

KEY PLAN
N.T.S.

LEGEND

- ▲ PROPOSED BUILDING ENTRANCE
- BOREHOLE
- ⇐ DIRECTION OF MAJOR OVERLAND FLOW
- TEST PIT
- PROPOSED RIP RAP c/w NON WOVEN GEOTEXTILE
- PROPERTY LINE
- PROPOSED SECURITY FENCE (REFER TO LANDSCAPE)
- PROPOSED WATERMAIN
- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED CURB
- PROPOSED CATCHBASIN MANHOLE
- DC PROPOSED DEPRESSED CURB
- ICD PROPOSED INLET CONTROL DEVICE
- TACTILE WALKING SURFACE INDICATOR (TWSI) PER CITY DETAIL SC7.3
- TERRACING 2.5:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
- SWALE c/w SUBDRAIN AND DIRECTION OF FLOW
- BOTOM OF SLOPE
- ▨ PIPE INSULATION HI-40
- PROPOSED SITE LIGHTING (REFER TO ARCHITECTURAL DRAWINGS)

SEWER & WATERMAIN INSULATION NOTES:

1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2.0m COVER AND ALL WATERMAIN WITH LESS THAN 2.4m OF COVER WITH EXPANDED POLYSTYRENE INSULATION AS PER OPSD 1109.030.
2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER WITH 50mm MINIMUM (SEE TABLE)

T = THICKNESS OF INSULATION (mm)
W = WIDTH OF INSULATION (mm)
W = D + 300 (1000 min.)
D = O.D OF PIPE (mm)

COVER SEWER / WATER (mm)	INSULATION THICKNESS (mm)
2000-1700 / 2400-2100	50
1700-1400 / 2100-1800	75
1400-1100 / 1800-1500	100

NOTE: BEDDING TO BE 300mm IN PRESENCE OF FIRM GREY SILTY CLAY

INSULATION DETAIL FOR SHALLOW SEWERS & WATERMAIN

SCALE: N.T.S

R-1 to R-13 ROOF DRAIN TABLE - PROPOSED BUILDING ROOF				
ROOF DRAIN MODEL No.	ROOF DRAIN OPENING SETTING	1:5 YEAR RELEASE RATE	APPROX. 100 YR PONDING DEPTH	1:100 YEAR RELEASE RATE
RD - 100 - A - ADJ	FULLY OPEN	16.38 L/S	0.15	24.61 L/S

* REFER TO THE 'SERVICING AND STORMWATER MANAGEMENT REPORT' R-2024-095 PREPARED BY NOVATECH FOR DRAINAGE AREA IDs AND SWM DETAILS.

**ALL 13 CONTROLLED FLOW ROOF DRAINS FOR THE PROPOSED BUILDING TO BE WATTS ADJUSTABLE ACCUTROL ROOF DRAINS

INLET CONTROL DEVICE @ HEADWALL 3				
DESIGN EVENT	ICD TYPE AND SIZE	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/s)	DESIGN HEAD (m)
1:5 YEAR	PLATE178mm	600	60.0	0.79
1:100 YEAR	PLATE 178mm	600	65.5	0.89

INLET CONTROL DEVICE @ HEADWALL 4				
DESIGN EVENT	ICD TYPE AND SIZE	DIAMETER OF OUTLET PIPE (mm)	DESIGN FLOW (L/s)	DESIGN HEAD (m)
1:5 YEAR	PLATE 178mm	600	46.0	0.46
1:100 YEAR	PLATE 178mm	600	57.7	0.73

PROPOSED 50mmØ WATERMAIN TABLE			
STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
0+000.0	79.48	77.08	CAP 1.0m FROM BUILDING FACE
0+025.0	78.21	75.81	-
0+050.0	78.41	76.01	-
0+066.6	78.78	76.38	CROSS BELOW 450mmØ STM
0+075.0	78.80	76.40	-
0+100.0	78.62	76.22	-
0+125.0	78.36	75.96	-
0+150.0	78.36	75.98	-
0+172.7	77.84	75.44	STANDPOST
0+175.0	77.84	75.44	-
0+184.0	78.62	76.22	CONNECT TO EXISTING 100mmØ WM

DRY HYDRANT TANK PULL PORT DETAIL

SCALE: N.T.S

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PLANB1.DWG - 1000mmx707mm

NOT FOR CONSTRUCTION

No.	REVISION	DATE	BY
4.	ISSUED FOR SPA	OCT 3/2024	MJH
3.	ISSUED FOR 60% SUBMISSION	AUG 16/2024	MJH
2.	ISSUED FOR 30% SUBMISSION	JUNE 27/2024	MJH
1.	COORDINATION	MAR 7/2024	MJH

SCALE
1:400
1:400
0 4 8 12 16

DESIGN	MJH
CHECKED	JLS
DRAWN	MJH
CHECKED	JLS
APPROVED	MJH

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER
M.J. HREHORIAK
100211256
OCT 3/24
PROVINCE OF ONTARIO

NOVATECH
Engineers, Planners & Landscape Architects
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Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
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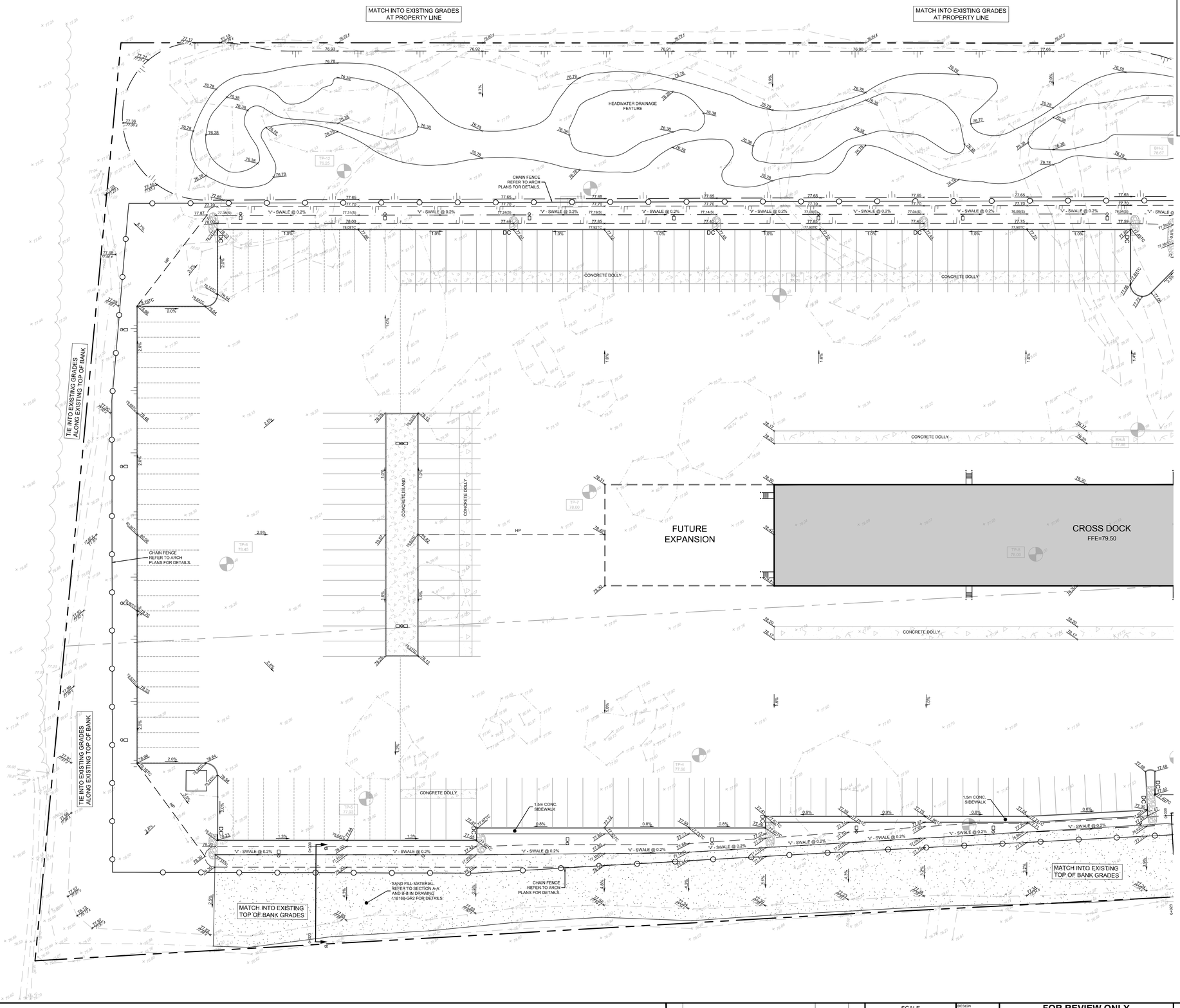
Website www.novatech-eng.com

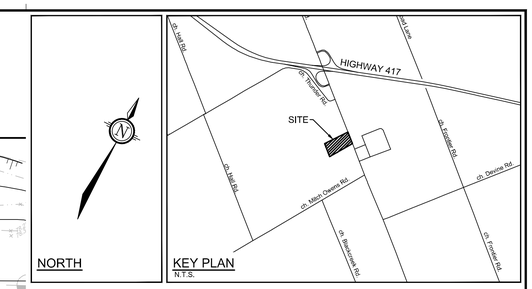
LOCATION
CITY OF OTTAWA
5110 BOUNDARY ROAD

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No. 118168
REV REV # 4
DRAWING No. 118168-GP

CITY PLAN NO. XXXX
CITY FILE NO. D07-XX-XX-XXXX





LEGEND

- BOREHOLE
- TEST PIT
- PROPERTY LINE
- PROPOSED SECURITY FENCE (REFER TO LANDSCAPE)
- PROPOSED CURB
- DC — PROPOSED DEPRESSED CURB
- TACTILE WALKING SURFACE INDICATOR (TWSI) PER CITY DETAIL SC7.3
- SWALE c/w SUBDRAIN AND DIRECTION OF FLOW
- TERRACING 2.5:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
- BOTOM OF SLOPE
- 2.0% — SLOPE AND DIRECTION
- PROPOSED SITE LIGHTING (REFER TO ARCHITECTURAL DRAWINGS)
- PROPOSED SAND FILL MATERIAL
- 77.50 / 76.45 — PROPOSED ELEVATION / EXISTING ELEVATION
- 76.60(S) — PROPOSED SWALE ELEVATION
- 76.00(C) — PROPOSED TOP OF CURB ELEVATION
- 76.60(W) — PROPOSED TOP OF WALL ELEVATION
- 76.60(BW) — PROPOSED BOTTOM OF WALL ELEVATION
- PROPOSED BUILDING ENTRANCE
- DIRECTION OF MAJOR OVERLAND FLOW
- PROPOSED RIP RAP c/w NON WOVEN GEOTEXTILE
- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED INLET CONTROL DEVICE
- 100-YEAR PONDING LIMITS

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1.	COORDINATION	MAR 7/2024	MJH

SCALE 1:500 (1:500 0 5 10 15 20)

DESIGN MJH
CHECKED JLS
DRAWN MJH
CHECKED JLS
APPROVED MJH

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OCT 3/24
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LOCATION
CITY OF OTTAWA
5110 BOUNDARY ROAD

DRAWING NAME
GRADING PLAN

PROJECT No. 118168
REV REV # 4
DRAWING No. 118168-GR2

CITY PLAN NO. XXXX
CITY FILE NO. D07-XX-XX-XXXX

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MATCH INTO EXISTING GRADES AT PROPERTY LINE

MATCH INTO EXISTING TOP OF BANK ELEVATION.

CHAIN FENCE REFER TO ARCH PLANS FOR DETAILS

CONCRETE DOLLY

CROSS DOCK
FFE=79.50

OFFICE
FFE=79.50

GENERATOR

PATIO

RETAINING WALL c/w GUARDRAIL

1.5m CONC. SIDEWALK

CONC. SIDEWALK

ASPHALT SWALE @ 1.0%

ASPHALT SWALE @ 1.5%

FIRE ROUTE

DRY HYDRANT PULL PORT

CONCRETE BARRIER CURB AS PER CITY STANDARD SC1.1 (TYPICAL).

CONCRETE MOUNTABLE CURB WITH GUTTER AS PER CITY STANDARD SC1.5

CONCRETE BARRIER CURB AS PER CITY STANDARD SC1.1 (TYPICAL).

CB BR1 T/G=77.61

CB BR2 T/G=77.81

STMMH 1 T/G=78.39

STMMH 2 T/G=78.62

STMMH 3 T/G=77.72

STMMH 4 T/G=77.65

STMMH OGS N T/G=77.99

STMMH OGS S T/G=77.82

CB 1 T/G=78.20

CB 2 T/G=78.15

HW 1 T/G=78.15

HW 2 T/G=77.86

HW 3 T/G=77.80

HW 4 T/G=77.90

MATCH INTO EXISTING TOP OF BANK GRADES

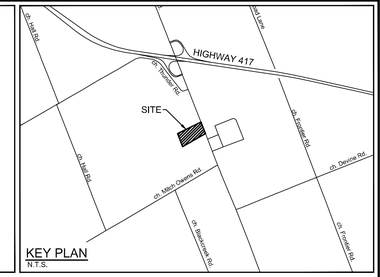
MATCH INTO EXISTING TOP OF BANK GRADES

CHAIN FENCE REFER TO ARCH PLANS FOR DETAILS.

SAND FILL MATERIAL REFER TO SECTION A-A AND B-B IN DRAWING 118168-GR2 FOR DETAILS.

NORTH

KEY PLAN
N.T.S.



LEGEND

- BOREHOLE
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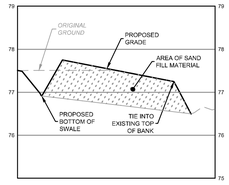
- 100-YEAR PONDING LIMITS



SECTION A-A
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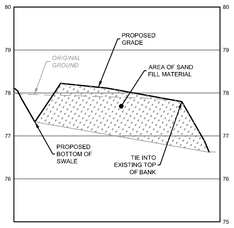

SECTION B-B
SCALE: 1:500 H
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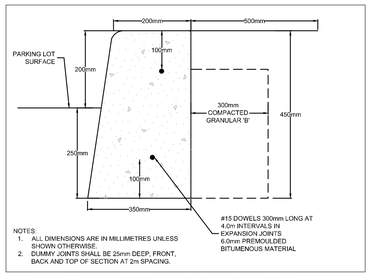

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. DUMMY JOINTS SHALL BE 25mm DEEP, FRONT, BACK AND TOP OF SECTION AT 2m SPACING.

200mm CONCRETE BARRIER CURB DETAIL
SCALE: N.T.S.

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2.	ISSUED FOR 30% SUBMISSION	JUNE 27/2024	MJH
1.	COORDINATION	MAR 7/2024	MJH

SCALE
1:500
1:500
0 5 10 15 20

DESIGN MJH
CHECKED JLS
DRAWN MJH
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LOCATION
CITY OF OTTAWA
5110 BOUNDARY ROAD

DRAWING NAME
GRADING PLAN

PROJECT No. 118168
REV REV # 4
DRAWING No. 118168-GR1

CITY PLAN NO. XXXX
CITY FILE NO. D07-XX-XX-XXXX