

REVISION 01



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2405 / 2419 MER-BLEUE ROAD, OTTAWA
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NOT AUTHENTIC UNLESS SIGNED AND DATED

GENERAL NOTES

1. ALL WORKS MATERIALS SHALL CONFIRM TO THE LAST REVISION OF THE STANDARDS AND SPECIFICATIONS FOR THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE. LOCAL UTILITY STANDARDS AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.
2. THE CONTRACTORS SHALL CONFIRM THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE SITE AND ADJACENT WORK AREAS. THE CONTRACTORS SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION . TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
3. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. LOST TIME DUE TO FAILURE OF THE CONTRACTORS TO CONFIRM UTILITY LOCATIONS AND NOTIFY ENGINEER OF POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION WILL BE AT CONTRACTORS EXPENSE.
4. ANY AREA BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTORS EXPENSE. RELOCATING OF EXISTING SERVICES AND/OR UTILITIES SHALL BE AS SHOWN ON THE DRAWINGS OR DETECTED BY THE ENGINEER AT THE EXPENSE OF DEVELOPERS.
5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 'OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS'. THE GENERAL CONTRACTORS SHALL BE DEEMED TO BE THE 'CONTRACTOR' AS DEFINED IN THE ACT.
6. THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING DURING THE PERIOD OF THE CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES TO PREVENT CONFLICTS.
7. ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
8. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE ENGINEER.
9. ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
10. FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE REFER TO THE SITE SERVICING AND STORMWATER MANAGEMENT REPORT.
11. ALL SEWERS CONSTRUCTED WITH GRADES LESS THAN 1.0% SHALL BE INSTALLED USING LASER ALIGNMENT AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
12. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF THE SAME.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL BEDDING, OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH AS SPECIFIED BY OPSD IS EXCEEDED.
14. ALL PIPE/CULVERT SECTION SIZES REFER TO INSIDE DIMENSIONS.
15. SHOULD DEEPLY BURIED ARCHAEOLOGICAL REMAINS BE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES, THE HERITAGE OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE MUST BE NOTIFIED IMMEDIATELY.
16. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING/REMOVAL.
17. DRAWINGS SHALL BE READ ON CONJUNCTION WITH ARCHITECTURAL SITE PLAN.
18. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER ON SET OF AS CONSTRUCTED SITE SERVICING AND GRADING DRAWINGS.
19. BENCHMARKS: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

THE CONTRACTOR ACKNOWLEDGES THAT SURFACE EROSION AND SEDIMENT RUNOFF RESULTING FROM THEIR CONSTRUCTION OPERATIONS HAS POTENTIAL TO CAUSE A DETRIMENTAL IMPACT TO ANY DOWNSTREAM WATERCOURSE OR SEWER, AND THAT ALL CONSTRUCTION OPERATIONS THAT MAY IMPACT UPON WATER QUALITY SHALL BE CARRIED OUT IN MANNER THAT STRICTLY MEETS THE REQUIREMENT OF ALL APPLICABLE LEGISLATION AND REGULATIONS.

AS SUCH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THEIR OPERATIONS, AND SUPPLYING AND INSTALLING ANY APPROPRIATE CONTROL MEASURES, SO AS TO PREVENT SEDIMENT LADEN RUNOFF ENTERING ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA.

THE CONTRACTOR ACKNOWLEDGES THAT NO ONE MEASURE IS LIKELY TO BE 100% EFFECTIVELY FOR EROSION PROTECTION AND CONTROLLING SEDIMENT RUNOFF AND DISCHARGES FROM THE SITE. THEREFORE, WHERE NECESSARY THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES ARRANGED IN SUCH MANNER AS TO MITIGATE SEDIMENT RELEASE FROM THE CONSTRUCTION OPERATIONS AND ACHIEVE SPECIFIC MAXIMUM PERMITTED CRITERIA WHERE APPLICABLE. SUGGESTED ON-SITE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING METHODS: SEDIMENT PONDS, FILTER BAGS, PUMP FILTERS, SETTLING TANKS, SILT FENCE, STRAW BALES, FILTER CLOTHS, CATCH BASIN FILTERS, CHECK DAMS AND/OR OTHER RECOGNIZED TECHNOLOGIES AND METHOD AVAILABLE AT THE TIME OF CONSTRUCTION. SPECIFIC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF OPSS 577 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE, IN THE OPINION OF THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, THE INSTALLED CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE MEASURES AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY. AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON-SITE AT ALL TIME WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED BY HIM AT THE MOMENT'S NOTICE.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR SIX COPIES OF A DETAILED EROSION AND SEDIMENT CONTROL PLAN (ESCP). THE ESCP WILL CONSIST OF WRITTEN DESCRIPTION AND DETAILED DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS, INCLUDING SUB-CONTRACTOR, IN THE WORKING AREA ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES.

THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT DEPOSITS AS REQUIRED AT THE SEDIMENT CONTROL DEVICES, INCLUDING THOSE DEPOSITS THAT MAY ORIGINATE FROM OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO THE SEWER WATERCOURSE AND AVOIDS DAMAGE TO CONTROL MEASURES. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTORS EXPENSE AND MANAGED IN COMPLIANCE WITH REQUIREMENTS FOR EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE CONTRACT ADMINISTRATOR ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO EITHER THE WATERCOURSE OR THE STORM SEWER SYSTEM. FAILURE TO REPORT WILL BE CONSTITUTE A BRACH OF THIS SPECIFICATION AND THE CONTRACTOR MAY ALSO BE SUBJECT TO THE PENALTIES IMPOSED BY THE APPLICABLE REGULATORY AGENCY. 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.

THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HELD EQUIPMENT, INTO ANY WATERCOURSE, AND PREVENTS THE RELEASE OF ANY SEDIMENT OR DEBRIS INTO ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE WORKING AREA AT THE CONTRACTORS EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL.

WHERE, IN THE OPINION OF EITHER THE CONTRACT ADMINISTRATOR OR A REGULATORY AGENCY, ANY OF THE TERMS SPECIFIED HEREIN HAVE NOT BEEN COMPLIED WITH OR PERFORMED IN A SUITABLE MANNER, OR AT ALL, THE CONTRACTOR ADMINISTRATOR OR A REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK BUT MAY RENEW ITS PERMISSION UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES IN THE PERFORMANCE OF THIS SPECIFICATION BY THE CONTRACTOR HAVE BEEN REMEDIED.

SPILL CONTROL NOTES

1. ALL CONSTRUCTION EQUIPMENT SHALL BE RE-FUELED, MAINTAINED, AND STORED NO LESS THAN 30 METRES FROM WATERCOURSE, STREAMS, CREEKS, WOODLOTS, AND ANY ENVIRONMENTALLY SENSITIVE AREAS, OR AS OTHERWISE SPECIFIED.
2. THE CONTRACTOR MUST IMPLEMENT ALL NECESSARY MEASURES IN ORDER TO PREVENT LEAKS, DISCHARGES OR SPILLS OF POLLUTANTS, DELETERIOUS MATERIALS, OR OTHER SUCH MATERIALS OR SUBSTANCES WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT.
3. IN THE EVENT OF A LEAK, DISCHARGE OR SPILL OF POLLUTANT, DELETERIOUS MATERIAL OR OTHER SUCH MATERIAL OR SUBSTANCE WHICH WOULD OR COULD CAUSE AN ADVERSE IMPACT TO THE NATURAL ENVIRONMENT, THE CONTRACTOR SHALL:
 - 3.1. IMMEDIATELY NOTIFY APPROPRIATE FEDERAL, PROVINCIAL, AND LOCAL GOVERNMENT MINISTRIES, DEPARTMENTS, AGENCIES, AND AUTHORITIES OF THE INCIDENT IN ACCORDANCE WITH ALL CURRENT LAWS, LEGISLATION, ACTS, BY-LAWS, PERMITS, APPROVALS, ETC.
 - 3.2. TAKE IMMEDIATE MEASURES TO CONTAIN THE MATERIAL OR SUBSTANCE, AND TO TAKE SUCH MEASURES TO MITIGATE AGAINST ADVERSE IMPACTS TO THE NATURAL ENVIRONMENT.
 - 3.3. RESTORE THE AFFECTED AREA TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.

MUD MAT NOTES

1. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.
2. SEDIMENT SHALL BE CLEANED FROM PUBLIC ROADS AT THE END OF EACH DAY.
3. SEDIMENT SHALL BE REMOVED FROM PUBLIC ROADS BY SHOVELING OR SWEEPING AND DISPOSED OR PROPERLY IN A CONTROLLED SEDIMENT DISPOSAL AREA.

SITE GRADING NOTES

1. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.
2. ALL GRANULAR AND PAVEMENT FOR ROADS/PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS RECOMMENDATIONS.
3. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD AND PARKING AREAS ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
4. CONCRETE CURB SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. SC1.1 PROVISION SHALL BE MADE OR CURB DEPRESSIONS AS INDICATED ON ARCHITECTURAL SITE PLAN. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD SC1.4. ALL CURBS, CONCRETE ISLANDS, AND SIDEWALKS SHOWN ON THIS DRAWING ARE TO BE PRICED IN SITE WORK PORTION OF THE CONTRACT.
5. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. R10 AND OPSD 509.010 AND OPSS 310.
6. GRANULAR 'A' SHALL BE PLACED TO A MINIMUM THICKNESS OF 300MM AROUND ALL STRUCTURES WITHIN THE PAVEMENT AREA.
7. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 300MM LIFTS.
8. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR BACKFILLING.
9. CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY.
10. ALL PAVEMENT MARKING FEATURES AND SITE SIGNAGE SHALL BE PLACED PER ARCHITECTURAL SITE PLAN. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT PAINT.
11. REFER TO ARCHITECTURAL SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
12. STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT. ALL JOINTS MUST BE SEALED.
13. SIDEWALKS TO BE 139M x BEVELED AT 2:1 OR 6MM WITH NO BEVEL REQUIRED BELOW THE FINISHED FLOOR SLAB ELEVATION AT ENTRANCES REQUIRED TO BE BARRIER-FREE, UNLESS OTHERWISE NOTED. ALL IN ACCORDANCE WITH CBC 3.8.1.3 & OTTAWA ACCESSIBILITY DESIGN STANDARDS.
14. WHERE APPLICABLE THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A LICENSED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY AND GEOTECHNICAL CERTIFICATION OF THE AS-CONSTRUCTED RETAINING WALL TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.

ROADWORK SPECIFICATIONS

15. ROADWORK TO BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL REPORT.
16. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND STOCK PILLED ON SITE AS DIRECTED BY THE MUNICIPAL AUTHORITY.
17. SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'A', TYPE II COMPACTED IN MAXIMUM 300MM LIFTS.
18. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO MINIMUM OF 100% STANDARD PROCTOR DENSITY MAXIMUM DRY DENSITY (SPMDD).
19. CONCRETE RAMP C/W TACTILE WALKING SURFACE INDICATORS COMPONENT AS PER OPSD 310.039. TACTILE WALKING SURFACE INDICATORS TO BE INSTALLED AT ALL RAMPS. MATERIAL TO BE POLYMER COMPOSITE, COLOR GREY.

SANITARY, FOUNDATION DRAIN, STORM SEWER AND WATERMAIN NOTES

GENERAL

1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
2. CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5M LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING, SUB-BEDDING, AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPATIBLE BROWN SILTY CLAY PLACED IN MAXIMUM 225MM LIFTS AND COMPACTED TO A MINIMUM OF 95% SPMDD. THE CLAY SEALS SHOULD BE PLACED AT THE SITE BOUNDARIES AND AT 60M INTERVALS IN THE SERVICE TRENCHES.
3. SERVICES TO BUILDING TO BE TERMINATED 1.0M FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
4. ALL MAINTENANCE STRUCTURE AND CATCH BASIN EXCAVATIONS TO BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 98% STANDARD PROCTOR DENSITY. A MINIMUM OF 300MM AROUND STRUCTURES.
5. "MODULOC" OR APPROVED PRE-CAST MAINTENANCE STRUCTURE AND CATCH BASIN ADJUSTERS TO BE USED IN LIEU OF BRICKING. PARGE ADJUSTING UNITS ON THE OUTSIDE ONLY.
6. SAFETY PLATFORMS SHALL BE PER OPSD 404.02.
7. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPSD 1003.01, IF APPLICABLE.
8. THE CONTRACTOR IS TO PROVIDE CCTV CAMERA INSPECTIONS OF ALL SEWERS, INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND TWO (2) VIDEO RECORDING IN A FORMAT ACCEPTABLE TO ENGINEER. ALL SEWER ARE TO BE FLUSHED PRIOR TO CAMERA INSPECTION. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS AND NECESSARY REPAIRS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE ENGINEER.
9. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPSS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF WEAR COURSE ASPHALT.

SANITARY

10. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
11. ALL SANITARY GRAVITY SEWER SHALL BE PVC SDR 35, IPEX 'RING-TITE' (OR APPROVED EQUIVALENT) PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE.
12. EXISTING MAINTENANCE STRUCTURES TO BE RE-BENCHED WHERE A NEW CONNECTION IS MADE.
13. SANITARY GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' BEDDING, UNLESS SPECIFIED OTHERWISE.
14. SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. S24 AND S25.
15. SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.
16. 100MM THICK HIGH-DENSITY GRADE 'A' POLYSTYRENE INSULATION TO BE INSTALLED IN ACCORDANCE WITH CITY STD W22 WHERE INDICATED ON DRAWING SSP-1.

STORM

17. ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.1, OR LATEST AMENDMENT. PIPE SHALL BE JOINED WITH STD. RUBBER GASKETS AS PER CSA A257.3, OR LATEST AMENDMENT.
18. ALL STORM SEWER TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
19. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
20. CATCH BASIN SHALL BE IN ACCORDANCE WITH OPSD 705.010.
21. CATCH BASIN LEADS SHALL BE IN 200MM DIA. AT 1% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE.
22. ALL CATCH BASINS SHALL HAVE 600MM SUMPS, UNLESS SPECIFIED OTHERWISE.
23. ALL CATCH BASIN LEAD INVERTS TO BE 1.0M BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE.
24. THE STORM SEWER DESIGNER HAS BASED ON DESIGN CONDITIONS SPECIFIED ABOVE, WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR IS REQUIRED TO PROVIDE AND SHALL BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE WIDENED TRENCH.
25. ALL ROAD AND PARKING LOT CATCH BASINS TO BE INSTALLED WITH ORTHOGONALLY PLACED SUBDRAINS IN ACCORDANCE WITH DETAIL. PERFORATED SUBDRAIN FOR ROAD AND PARKING LOT CATCH BASIN SHALL BE INSTALLED PER CITY STD R1 UNLESS OTHERWISE NOTED.
26. RIP-RAP TREATMENT SEWER AND CULVERT OUTLETS PER OPSD 810.010.
27. ALL STORM SEWER CULVERTS TO BE INSTALLED WITH FROST TREATMENT PER OPSD 803.031 WHERE APPLICABLE.
28. ALL STORM MANHOLES WITH PIPE LESS THAN 900MM IN DIAMETER SHALL BE CONSTRUCTED WITH A 300MM JUMP.

WATERMAIN

29. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
30. ALL PVC WATERMAINS SHALL BE AWWA C-900 CLASS 150, SDR 18 OR APPROVED EQUIVALENT.
31. WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17. UNLESS SPECIFIED OTHERWISE, BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER.
32. ALL PVC WATERMAINS, SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STD. W 36.
33. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD W25.5 AND W25.6.
34. VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD W24.
35. WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD.25.5 AND W25.6.
36. THRUST BLOCKING OF WATERMAINS TO BE INSTALLED PER CITY OF OTTAWA STD. W25.3 AND W25.4.
37. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
38. WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY.
39. WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4M.
40. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER/UTILITY IS 0.5M PER MOE GUIDELINES. FOR CROSSING UNDER SEWERS, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING TO ENSURE THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER.
41. ALL WATERMAINS SHALL HAVE A MINIMUM COVER OF 2.4M. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD DWG W22.
42. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG R20.
43. FIRE HYDRANT INSTALLATION AS PER STD DWG W19. ALL BOTTOM OF HYDRANT FLANGE ELEVATIONS TO BE INSTALLED 0.10M ABOVE PROPOSED FINISHED GRADE AT HYDRANT; FIRE HYDRANT LOCATION AS PER STD DWG W18.
44. BUILDING SERVICE TO BE CAPPED 1.0M OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12M BACK FROM STUB.
45. ALL WATERMAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES UNLESS OTHERWISE DIRECTED. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED.
46. ALL WATERMAINS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES. ALL CHLORINATED WATER TO BE DISCHARGED AND PRETREATED TO ACCEPTABLE LEVELS PRIOR TO DISCHARGE. ALL DISCHARGED WATER MUST BE CONTROLLED AND TREATED SO AS NOT TO ADVERSELY EFFECT ENVIRONMENT. IT IS RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MUNICIPAL AND/OR PROVINCIAL REQUIREMENTS ARE FOLLOWED.
47. ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 50MM BLOW OFF UNLESS OTHERWISE NOTED.



USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND INCLUDE USE AND INTENT OF THE DRAWINGS. THE CONTRACT DOCUMENTS INCLUDE, BUT NOT ONLY, THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENT, CONDITIONS OF THE CONTRACT, THE RECOMMENDATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER THE SIGNING OF THE CONTRACT. THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE CONTRACT DOCUMENTS AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT CORRECTLY REPRESENTED HEREIN SHALL BE CONSIDERED AS THE SAME. ANY OTHERS AND DETAILED ANALYSIS AS WORK SHOWN UNDER COMPLETELY SEVERAL IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CERTIFIES THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CERTIFIES THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD CONDITIONS WITH THE CONSULTANT IN CONJUNCTION WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENT OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CAD FILES OR OTHER ELECTRONIC MEDIA, INCLUDING ALL REVISED DRAWINGS, SHALL BE PROVIDED TO THE CLIENT. THEY ARE TO BE USED ONLY FOR THE PROJECT AND ARE NOT TO BE USED FOR ANY OTHER PROJECT. INCLUDING ANY OTHER PROJECTS. ANY OTHER PROJECTS SHALL BE THE RESPONSIBILITY OF THE CLIENT. THE REVISION TITLE IS "ISSUED FOR CONSTRUCTION". THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATE THE WORK TO BE DONE. THE ENGINEER IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES USED TO DO THE WORK OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THESE DRAWINGS EXPRESSLY OR IMPLIED CHANGES THE CONTRACTOR'S CONTROL OR SHALL OBTAINING ALL INFORMATION AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO BEGIN THE WORK IS AN ACKNOWLEDGMENT OF THE RESPONSIBILITIES AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK, AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE ACCEPTED.

UNAUTHORIZED CHANGES

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTOR OR SUBCONTRACTOR, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE, REQUESTS OR PERMITS TO BE MADE ANY CHANGES TO ANY WORK, REVISIONS, OR AMENDMENTS TO THESE DRAWINGS, OR REQUIREMENTS, THE CLIENT'S ACCOUNTS LTD. SHALL WITHOUT OBTAINING LTR'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FULL RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIENT AGREES TO WAIVE ANY CLAIM AGAINST LTR AND TO RELEASE LTR FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

IN ADDITION, THE CLIENT AGREES TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LTR FROM ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES.

IN ADDITION, THE CLIENT AGREES TO INCLUDE IN ANY CONTRACTS FOR CONSTRUCTION APPROPRIATE LANGUAGE THAT PERMITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY ONE FROM MAKING ANY CHANGES OR MODIFICATIONS TO LTR'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LTR AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LTR AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PRIOR AUTHORIZATION.

GENERAL NOTES

EXISTING SERVICES AND UTILITIES SHOWN ON THESE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT MAY NOT BE COMPLETE OR UP TO DATE. CONTRACTORS SHALL VERIFY IN FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH THE UTILITY COMPANIES BEFORE START OF CONSTRUCTION.

CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS BEFORE START OF CONSTRUCTION.

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THE DESIGN SPECIFICATIONS AND THE REQUIREMENTS OF THE CONTRACT OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO DESIGN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITHIN THE SCOPE OF ANY FEDERAL, PROVINCIAL, OR MUNICIPAL AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.

NOT FOR
CONSTRUCTION
TENDER OR
PERMIT

1	JAN 31, 2025	ISSUED FOR SITE PLAN CONTROL & FOUNDATION PERMIT	KH
no.	date	revision / issue	by

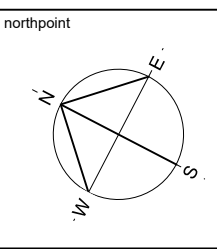
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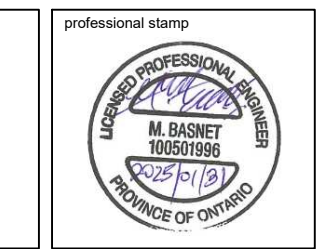
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consultant

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**northpoint**

**professional stamp**
M. BAGNY
PROFESSIONAL
PROVINCE OF ONTARIO

project title

**NOUVELLE ÉCOLE
ESP ORLEANS-SUD
2405 / 2419 RUE MER-BLEUE**

Ottawa

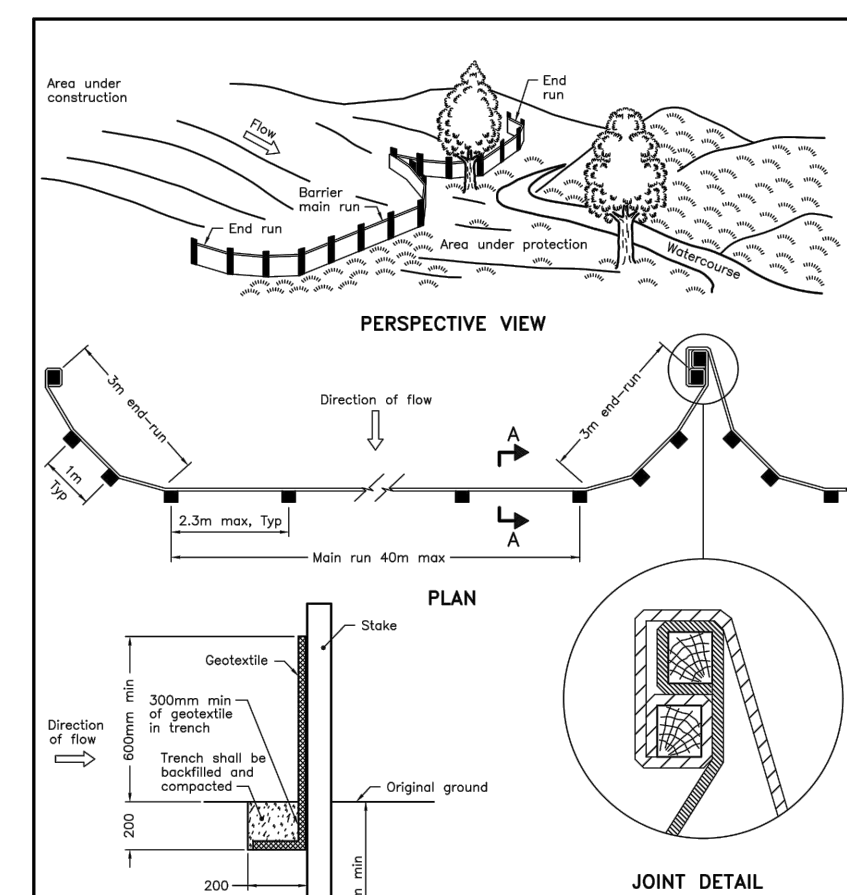
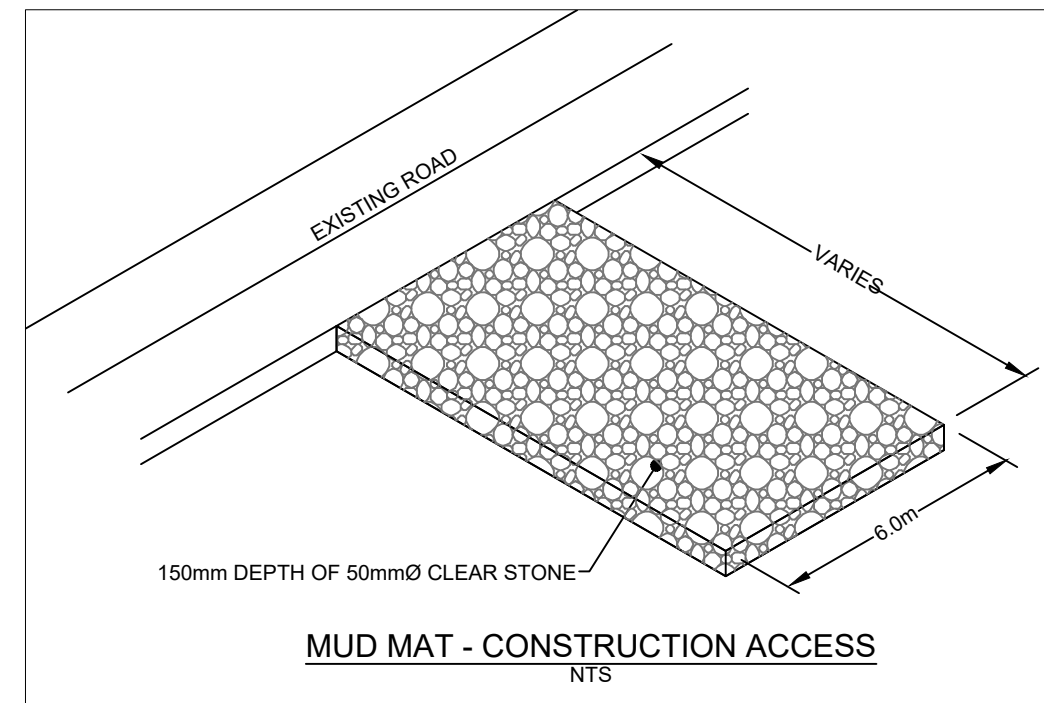
Ontario


drawing title

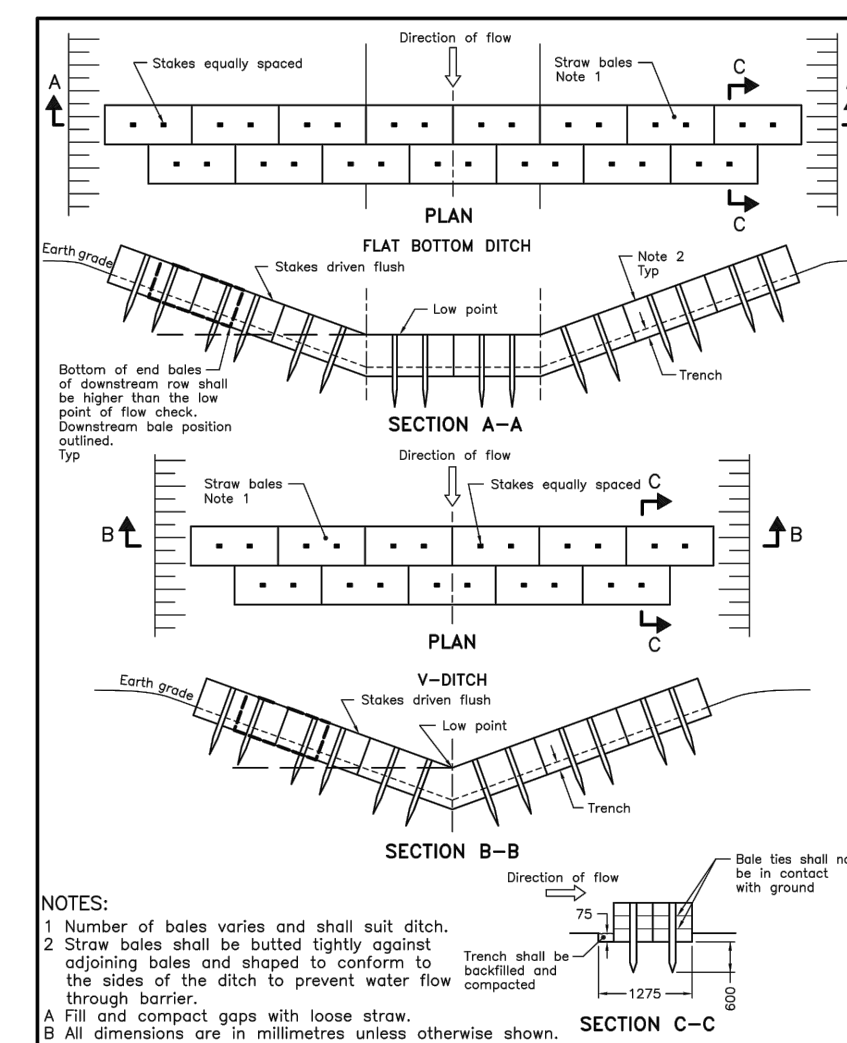
GENERAL NOTES


date	2025-01-31	job no.	
scale	1:500		240462
drawn	KH	drawing no.	
approved	MB		C001
plot date	2025-01-31		

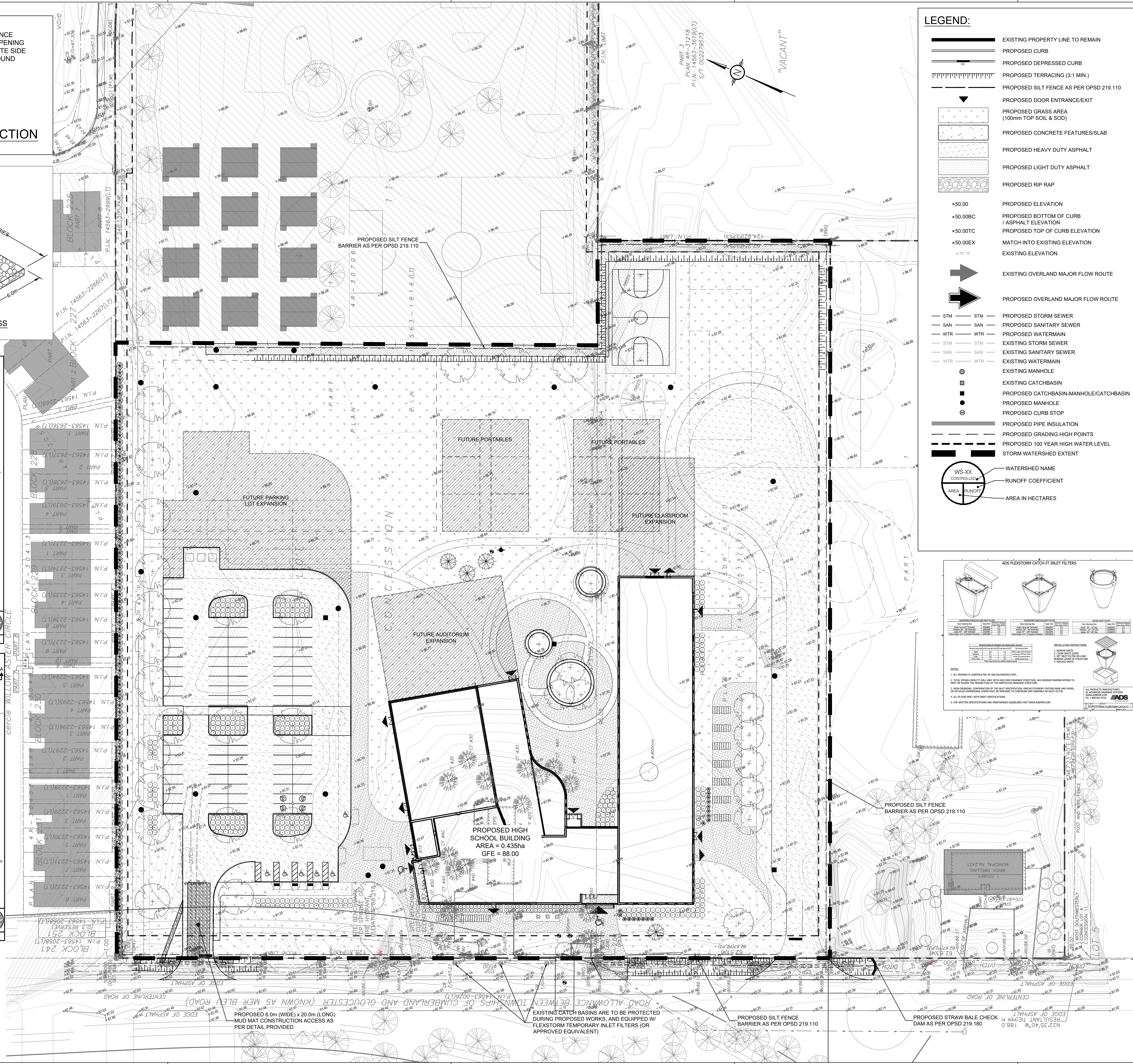
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3. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL.



NOTE: A. All dimensions are in millimetres unless otherwise shown.		Nov 2021	Rev 3	
ONTARIO PROVINCIAL STANDARD DRAWING LIGHT-DUTY SILT FENCE BARRIER		----- ----- ----- OPSD 219.110		

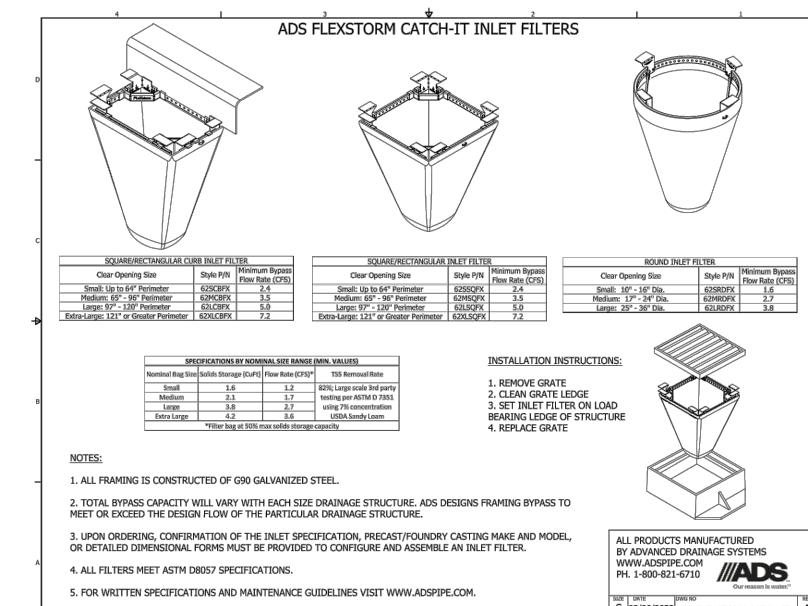


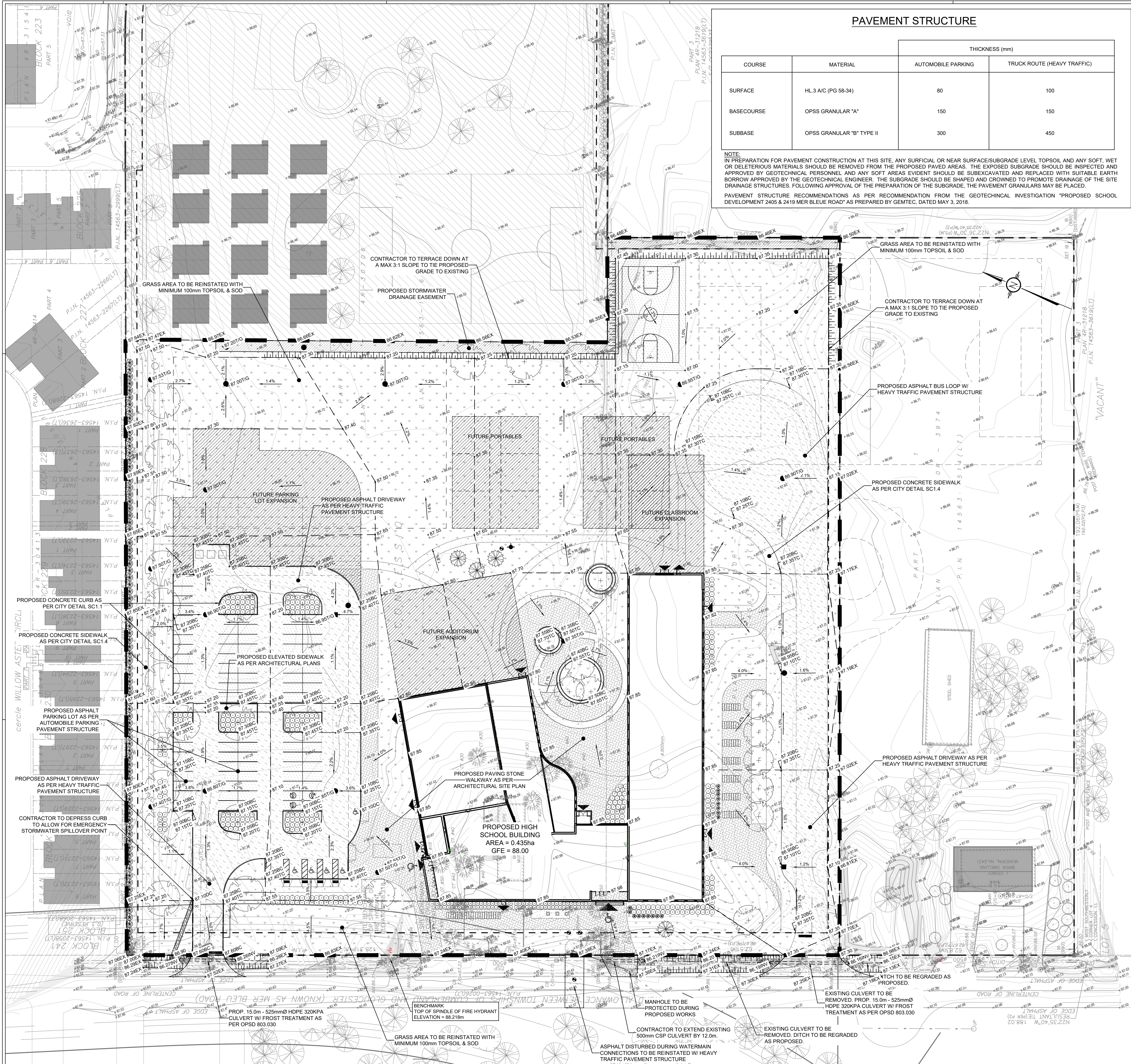
ONTARIO PROVINCIAL STANDARD DRAWING		Nov 2021	Rev	3	
STRAW BALE FLOW CHECK DAM		<div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>			
		OPSD 219.180			



LEGEND:

	EXISTING PROPERTY LINE TO REMAIN
	PROPOSED CURB
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	PROPOSED SILT FENCE AS PER OPSD 219.110
	PROPOSED DOOR ENTRANCE/EXIT
	PROPOSED GRASS AREA (100mm TOP SOIL & SOD)
	PROPOSED CONCRETE FEATURES/SLAB
	PROPOSED HEAVY DUTY ASPHALT
	PROPOSED LIGHT DUTY ASPHALT
	PROPOSED RIP RAP
× 50.00	PROPOSED ELEVATION
× 50.00BC	PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
× 50.00TC	PROPOSED TOP OF CURB ELEVATION
× 50.00EX	MATCH INTO EXISTING ELEVATION
× 70.19	EXISTING ELEVATION
	EXISTING OVERLAND MAJOR FLOW ROUTE
	PROPOSED OVERLAND MAJOR FLOW ROUTE
— STM — STM —	PROPOSED STORM SEWER
— SAN — SAN —	PROPOSED SANITARY SEWER
— WTR — WTR —	PROPOSED WATERMAIN
— STM — STM —	EXISTING STORM SEWER
— SAN — SAN —	EXISTING SANITARY SEWER
— WTR — WTR —	EXISTING WATERMAIN
	EXISTING MANHOLE
	EXISTING CATCHBASIN
	PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
	PROPOSED MANHOLE
	PROPOSED CURB STOP
	PROPOSED PIPE INSULATION
	PROPOSED GRADING HIGH POINTS
	PROPOSED 100 YEAR HIGH WATER LEVEL
	STORM WATERSHED EXTENT
	WATERSHED NAME RUNOFF COEFFICIENT AREA RUNOFF AREA IN HECTARES

[illegible]



PAVEMENT STRUCTURE

COURSE	MATERIAL	THICKNESS (mm)	
		AUTOMOBILE PARKING	TRUCK ROUTE (HEAVY TRAFFIC)
SURFACE	HL.3 A/C (PG 58-34)	80	100
BASECOURSE	OPSS GRANULAR "A"	150	150
SUBBASE	OPSS GRANULAR "B" TYPE II	300	450

NOTE:
IN PREPARATION FOR PAVEMENT CONSTRUCTION AT THIS SITE, ANY SURFICIAL OR NEAR SURFACE/SUBGRADE LEVEL TOPSOIL AND ANY SOFT, WET OR DELETERIOUS MATERIALS SHOULD BE REMOVED FROM THE EXPOSED PAVED AREAS. THE EXPOSED SUBGRADE SHOULD BE INSPECTED AND APPROVED BY GEOTECHNICAL PERSONNEL AND ANY SOFT AREAS EVIDENT SHOULD BE SUBCAVATED AND REPLACED WITH SUITABLE EARTH BORROW APPROVED BY THE GEOTECHNICAL ENGINEER. THE SUBGRADE SHOULD BE SHAPED AND CROWNED TO PROMOTE DRAINAGE OF THE SITE DRAINAGE STRUCTURES. FOLLOWING APPROVAL OF THE PREPARATION OF THE SUBGRADE, THE PAVEMENT GRANULARS MAY BE PLACED.

PAVEMENT STRUCTURE RECOMMENDATIONS AS PER RECOMMENDATION FROM THE GEOTECHNICAL INVESTIGATION "PROPOSED SCHOOL DEVELOPMENT 2405 & 2419 MER BLEUE ROAD" AS PREPARED BY GEMTEC, DATED MAY 3, 2018.

LEGEND:

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USE AND INTERPRETATION OF DRAWINGS
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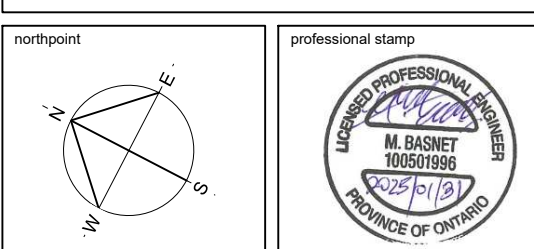
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project title
**NOUVELLE ÉCOLE
ESP ORLÉANS-SUD
2405 / 2419 RUE MER-BLEUE**

Locations
Ottawa Ontario

drawing title
**GRADING & DRAINAGE
PLAN**

date	2025-01-31	job no.	240462
scale	1:500	drawing	KH
approved	MB	drawing no.	C301
plot date	2025-01-31		

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FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL.

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION AS PROVIDED BY CALLON DIETZ INCORPORATED LAND SURVEYORS PLAN NO. X-3811 DATED AUGUST 15, 2024.

BEARING NOTE

BEARINGS ARE WITH GRID, DERIVED FROM THE NORTHERLY LIMIT OF PART 1 PLAN 4R-30706, HAVING A GRID BEARING OF N67°18'0"E.

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999968.

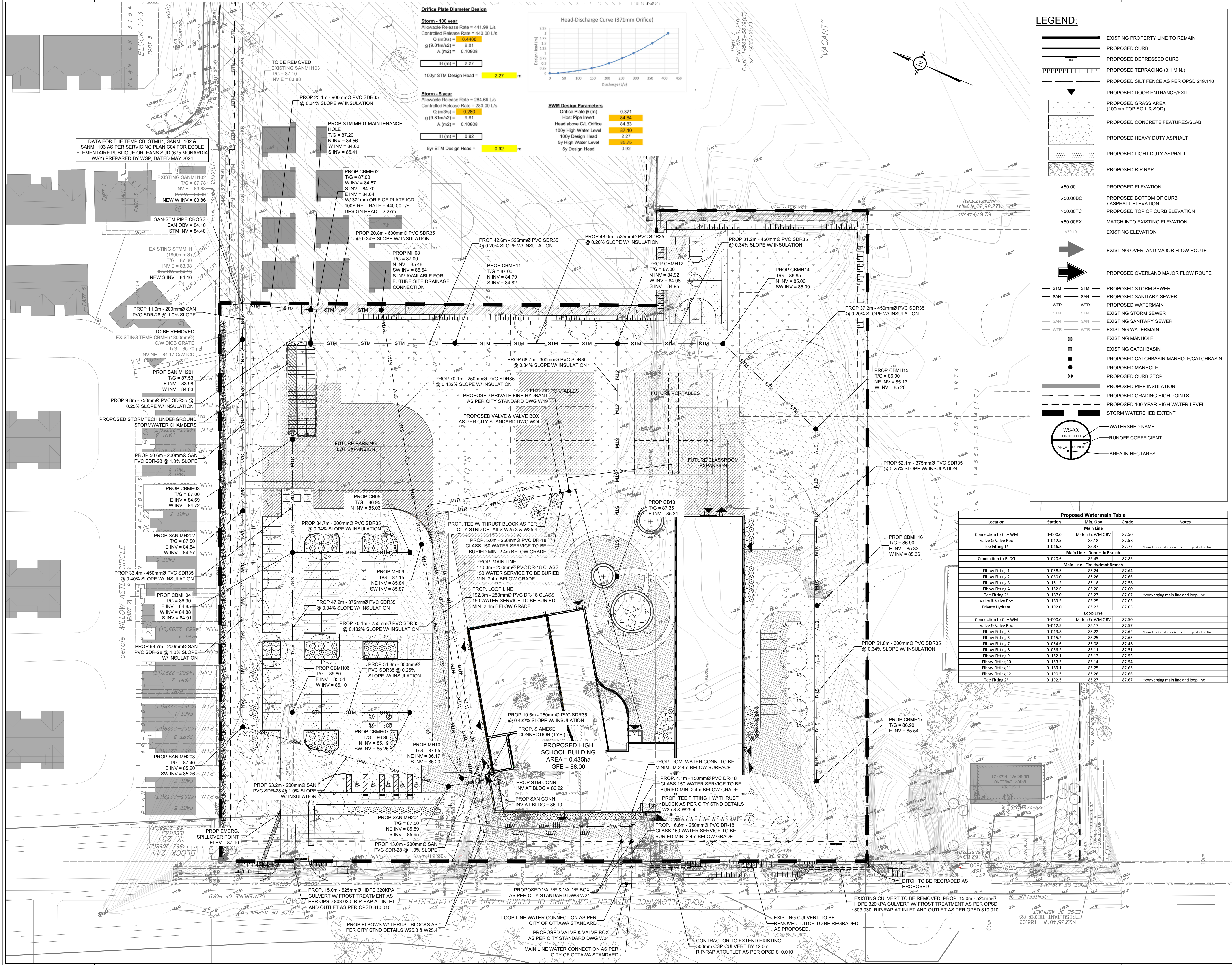
ELEVATION NOTE

ELEVATIONS SHOWN HEREON ARE GEODETIC (CGVD-1928/1978) AND ARE DERIVED FROM THE CANMET VRS NETWORK STATION OTTAWA ELEVATION=95.230.

CONTOURS ARE TO 0.5 METRES

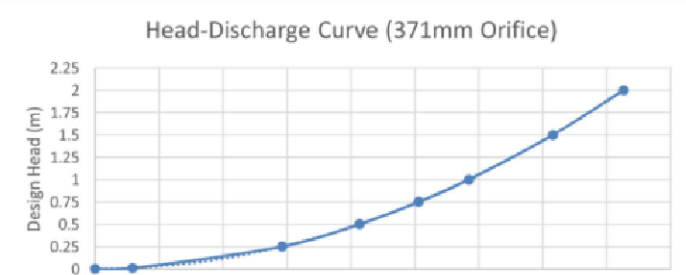
METRIC

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048



Orifice Plate Diameter Design

Storm - 100 year
Allowable Release Rate = 441.99 L/s
Controlled Release Rate = 441.99 L/s
Q (m³/s) = 0.4400
g (9.81m/s²) = 9.81
A (m²) = 0.10808
H (m) = 2.27
100yr STM Design Head = 2.27 m



Storm - 5 year
Allowable Release Rate = 284.66 L/s
Controlled Release Rate = 280.00 L/s
Q (m³/s) = 0.280
g (9.81m/s²) = 9.81
A (m²) = 0.10808
H (m) = 0.92
5yr STM Design Head = 0.92 m

SWM Design Parameters

Orifice Plate Ø (m) 0.371
Host Pipe Invert 84.64
100yr High Water Level 87.10
100yr Design Head 2.27
5yr High Water Level 85.75
5yr Design Head 0.92

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- PROPOSED 100 YEAR HIGH WATER LEVEL
- STORM WATERSHED EXTENT
- WS-XX - WATERSHED NAME
- AREA - RUNOFF COEFFICIENT
- AREA - AREA IN HECTARES

Proposed Watermain Table				
Location	Station	Main Line	Grade	Notes
Connection to City WM	0+000.0	Match Ex WM OBV	87.50	
Valve & Valve Box	0+012.5		87.58	
Tee Fitting 1*	0+016.8		87.77	*branches into domestic line & fire protection line
Main Line - Domestic Branch				
Connection to BLDG	0+020.6		87.85	
Main Line - Fire Hydrant Branch				
Elbow Fitting 1	0+058.5		87.64	
Elbow Fitting 2	0+060.0		87.66	
Elbow Fitting 3	0+151.2		87.58	
Elbow Fitting 4	0+152.6		87.60	
Tee Fitting 2*	0+187.0		87.67	*converging main line and loop line
Valve & Valve Box	0+189.5		87.65	
Private Hydrant	0+192.0		87.63	
Loop Line				
Connection to City WM	0+000.0	Match Ex WM OBV	87.50	
Valve & Valve Box	0+012.5		87.57	
Elbow Fitting 5	0+013.8		87.62	*branches into domestic line & fire protection line
Elbow Fitting 6	0+015.2		87.65	
Elbow Fitting 7	0+054.6		87.48	
Elbow Fitting 8	0+056.2		87.51	
Elbow Fitting 9	0+152.1		87.53	
Elbow Fitting 10	0+153.5		87.54	
Elbow Fitting 11	0+189.1		87.65	
Elbow Fitting 12	0+190.5		87.66	
Tee Fitting 2*	0+192.5		87.67	*converging main line and loop line

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drawing title
SERVICING PLAN

date 2025-01-31
scale 1:500
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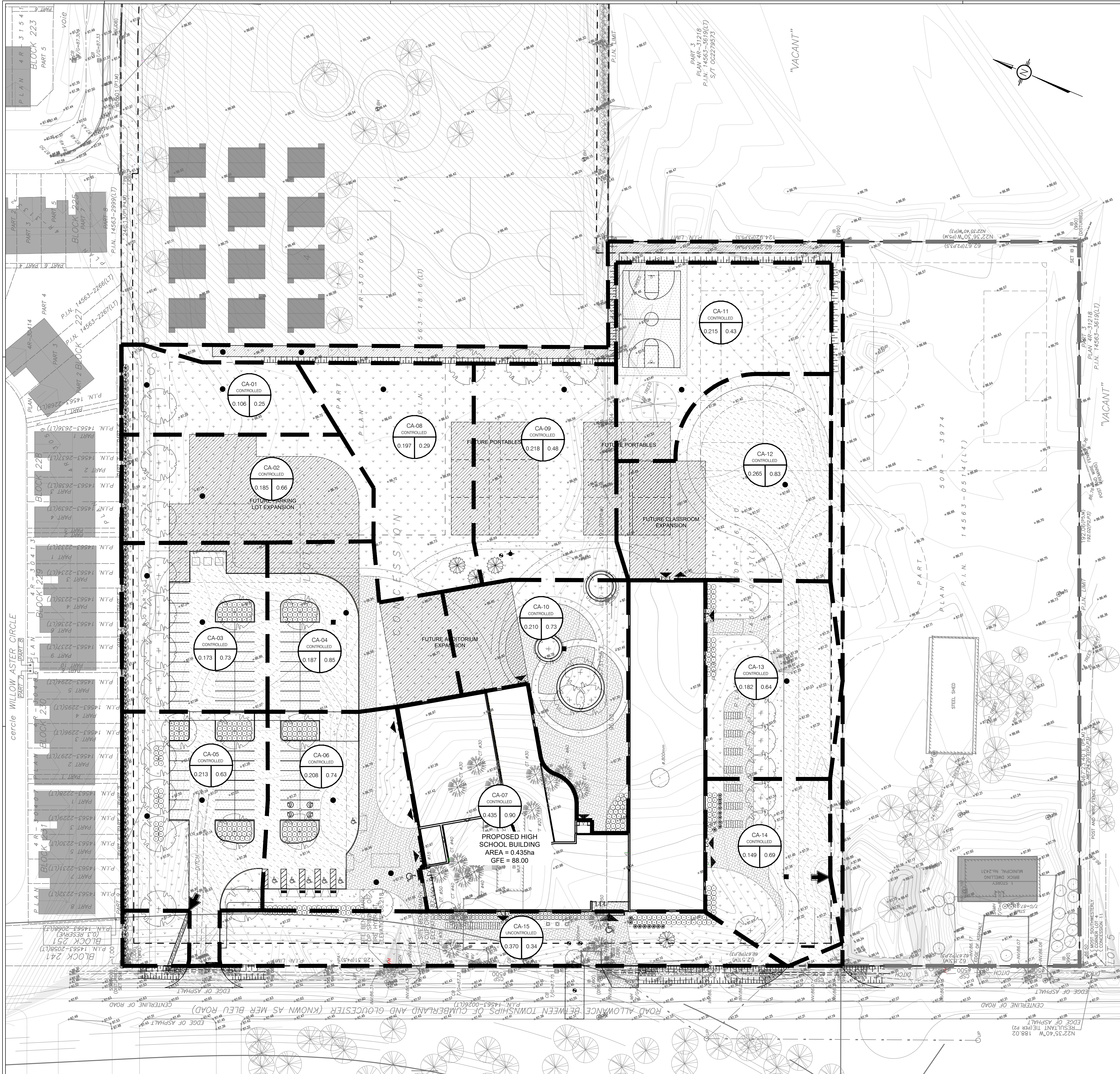
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[illegible]



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12/2/2025
PROVINCE OF ONTARIO

project title

**NOUVELLE ÉCOLE
ESP ORLEANS-SUD
2405 / 2419 RUE MER-BLEUE**

Ottawa Ontario

drawing title

**POST-DEVELOPMENT
WATERSHED PLAN**

date	2025-01-31	job no.	240462
scale	1:500	drawing no.	C702
drawn	KH		
approved	MB		
plot date	2025-01-31		

1. DO NOT SCALE FROM THIS DRAWING
2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE WORK COMMENCES
3. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE FOLLOWING DRAWINGS: STRUCTURAL, MECHANICAL, ELECTRICAL

Toped top view alternative C

Notes:

- The slump is measured from the lowest invert.
- A granular backfill shall be placed to a minimum thickness of 300mm at around the maintenance hole.
- Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
- Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.002.
- Pipe support according to OPSD 708.020.
- E For banding and pipe opening details, see OPSD 701.021.
- F For junction point and frame installation, see OPSD 704.014.
- G All dimensions are in millimetres.
- H All dimensions are in Nominates unless otherwise shown.

Alternatives

A PRECAST SLAB BASE

B CAST-IN-PLACE BASE

C PRECAST FLAT CAP

Ontario Provincial Standard Drawing	Nov 2014	Rev 1	Cap
<p>PRECAST CONCRETE MAINTENANCE HOLE</p> <p>1200mm DIAMETER</p> <p>OPSD 701.010</p>			

FRAME PLAN

SECTION A-A

SECTION B-B

SECTION D-D - SOLID ALTERNATE

SECTION C-C

DETAIL 1

DETAIL 2

DETAIL 3

DETAIL 4

DETAIL 5

DETAIL 6

DETAIL 7

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DETAIL 271

DETAIL

SECTION A-A

TOP VIEW

SECTION A-A

BOTTOM VIEW

STANDARD CIRCULAR SANITARY & COMBINED MANHOLE COVER

ITEM	REMARKS
1.0	MANHOLE COVER
2.0	MANHOLE RING
3.0	MANHOLE RING
4.0	MANHOLE RING
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N.T.S.

OPTION A

OPTION B

TYPICAL PIPE INSULATION DETAIL

NOTES:

1. THE INSULATION MATERIAL SHALL BE EXTRUDED POLYETHYLENE ACCORDING TO ASTM D 1708 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2 PSI/INCH.
2. MINIMUM INSULATION THICKNESS SHALL BE 2 INCHES.
3. JOINTS SHALL BE STAPLED FOR MULTIPLE INSULATION SHEETS.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

TABLE 1: MINIMUM INSULATION THICKNESS

PIPE SIZE (INCH)	MINIMUM INSULATION THICKNESS (INCH)
12"	2"
18"	2"
24"	2"
30"	2"
36"	2"
42"	2"
48"	2"
54"	2"
60"	2"
66"	2"
72"	2"
78"	2"
84"	2"
90"	2"
96"	2"
102"	2"
108"	2"
114"	2"
120"	2"
126"	2"
132"	2"
138"	2"
144"	2"
150"	2"
156"	2"
162"	2"
168"	2"
174"	2"
180"	2"
186"	2"
192"	2"
198"	2"
204"	2"
210"	2"
216"	2"
222"	2"
228"	2"
234"	2"
240"	2"
246"	2"
252"	2"
258"	2"
264"	2"
270"	2"
276"	2"
282"	2"
288"	2"
294"	2"
300"	2"

The drawing consists of several parts:

- Top Section:** A plan view of a sidewalk showing a transition from a 2 to 4% slope to a 2 to 10% slope. It includes a 1.5m min. Note 2 section, a 0.3m min. section, and a 1.25mm Note 1 section. The sidewalk is shown with a concrete base and a subgrade or granular base as specified.
- TYPICAL SECTION:** A cross-section showing the sidewalk with a curb and gutter. The sidewalk is 1.5m wide, and the curb is 0.3m high. The base is 1.25mm thick.
- DUMMY JOINT (OPTIONAL):** A cross-section showing a dummy joint with a 0.257m width and a 1.5m length. The sidewalk is 1.5m wide, and the curb is 0.3m high.
- CONTRACTION JOINT (Note 4):** A cross-section showing a contraction joint with a 0.257m width and a 1.5m length. The sidewalk is 1.5m wide, and the curb is 0.3m high.
- JOINT LAYOUT:** A plan view showing the layout of various joints: Expansion joint material, Expansion joints, Typ; Expansion key, Typ; Dummy joints, Typ (optional); and Contraction joints, Typ. The sidewalk is 1.5m wide, and the curb is 0.3m high.

NOTES:

1. Minimum thickness of residential driveways and adjacent to curb shall be 150mm.
2. At commercial and industrial driveways, the thickness shall be 200mm.
3. This OPSD shall be used in conjunction with OPSD 310.030, 310.031, 310.033, and 310.039.
4. Contraction joint may be teed or sawcut.

ALL dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 3	
CONCRETE SIDEWALK			
OPSD 310.010			

[illegible][illegible][illegible]

PIPE IN SUPPORTED EXCAVATION

PIPE IN UNSUPPORTED EXCAVATION

PIPE IN SUPPORTED EXCAVATION

TYPE 1 OR 2 SOIL

TYPE 3 SOIL

TYPE 4 SOIL

LEGEND:

ϕ = inside diameter

NOTES:

- Height of fill is measured from the finished surface to top of pipe.
- The pipe bed shall be compacted and shaped to receive the bottom of the pipe.
- Pipe cover treatment shall be according to OPSD 802.03.0 and 802.03.1.
- Condition of excavation is symmetrical about centreline of pipe.
- A granular material placed in the haunch area shall be compacted prior to placing and compacting the remainder of the embedment material.
- Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
- All dimensions are in metres unless otherwise shown.

CLEARANCE TABLE

Soil	Inside Diameter	Clearance
Type 1 or 2	300 or less	300mm
	300 or less	300mm
Type 3	300 or less	300mm
	300 or less	300mm
Type 4	300 or less	300mm
	300 or less	300mm

ONTARIO PROFESSIONAL STANDARD DRAWING

Nov 2014

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FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION

OPSD 802.010

NOT FOR
CONSTRUCTION
TENDER OR
PERMIT