

# NATIONAL CAPITAL BUSINESS PARK - SITE 2 4120 RUSSELL ROAD (1100 & 1200 LAST MILE DR), OTTAWA

REVISION 01



KEY PLAN (N.T.S.)

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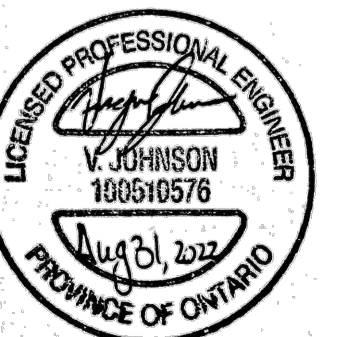


**LRJ**

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NATIONAL CAPITAL BUSINESS PARK - SITE 2  
4120 RUSSELL ROAD  
(1100 & 1200 LAST MILE DR), OTTAWA  
REV.01 - ISSUED FOR MUNICIPAL APPROVAL - 31 AUGUST 2022  
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NOT AUTHENTIC UNLESS SIGNED AND DATED

## GENERAL NOTES

- 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 STANDARD AND MINISTRY OF TRANSPORTATION STANDARDS WILL APPLY WHERE REQUIRED.
- 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.
- 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.
- 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.
- 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.
- ALL THE CONSTRUCTION SIGNAGE MUST CONFIRM TO THE MINISTRY OF TRANSPORTATION OF ONTARIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PER LATEST AMENDMENT.
- 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.
- ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE.
- THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL IS RECEIVED FROM THE ENGINEER.
- ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT.
- FOR DETAILS RELATING TO STORMWATER MANAGEMENT AND ROOF DRAINAGE REFER TO THE SITE SERVICING AND STORMWATER MANAGEMENT REPORT.
- ALL SEWERS CONSTRUCTED WITH GRADES LESS THAN 1.0% SHALL BE INSTALLED USING LASER ALIGNMENT AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND TO BEAR THE COST OF THE SAME.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL BEDDINGS, OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH AS SPECIFIED BY OPSD IS EXCEEDED.
- ALL PIPE/CULVERT SECTION SIZES REFER TO INSIDE DIMENSIONS.
- 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.
- 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.
- DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL SITE PLAN.
- THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER ONE SET OF AS CONSTRUCTED SITE SERVICING AND GRADING DRAWINGS.
- 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 ACTIVELY 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 LOADED 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 OPS5 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 FRO 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 BREACH 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 CONTRACT 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 REMEDIATED.

## SPILL CONTROL NOTES

- 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.
- 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.
- 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
  - 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.
  - TAKE IMMEDIATE MEASURES TO CONTAIN THE MATERIAL OR SUBSTANCE, AND TO TAKE SUCH MEASURES TO MITIGATE AGAINST ADVERSE IMPACTS TO THE NATURAL ENVIRONMENT.
  - RESTORE THE AFFECTED AREA TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.

## MUD MAT NOTES

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

## SITE GRADING NOTES

- PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND OPERATIONAL PER EROSION CONTROL PLAN.
- ALL GRANULAR AND PAVEMENT FOR ROADS/PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
- ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD AND PARKING AREAS ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- CONCRETE CURBS 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 WORKS PORTION OF THE CONTRACT.
- PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. R10 AND OPSD 509.010 AND OPS5 310.
- GRANULAR 'A' SHALL BE PLACED TO A MINIMUM THICKNESS OF 300MM AROUND ALL STRUCTURES WITHIN THE PAVEMENT AREA.
- SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 300MM LIFTS.
- ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR BACKFILLING.
- CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY.
- 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.
- REFER TO ARCHITECTURAL SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
- STEP JOINTS ARE TO BE USED WHERE PROPOSED ASPHALT MEETS EXISTING ASPHALT. ALL JOINTS MUST BE SEALED.
- SIDEWALKS TO BE 13M & 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 OBC 3.8.1.3 & OTTAWA ACCESSIBILITY DESIGN STANDARDS.
- 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

- ROADWORK TO BE COMPLETED IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION PREPARED BY PATERSON GROUP, PG4854-1, DATED REV2 JANUARY 13, 2020.
- ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND STOCK PILED ON SITE AS DIRECTED BY NATIONAL MUNICIPALITY.
- THE SUBGRADE SHALL BE CROWNED AND SLOPED AT LEAST 2% AND PROOF ROLLED WITH HEAVY ROLLERS.
- SUB-EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'A', TYPE II COMPACTED IN MAXIMUM 300MM LIFTS.
- ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO MINIMUM OF 100% STANDARD PROCTOR DENSITY MAXIMUM DRY DENSITY (SPMDD).

## SANITARY, FOUNDATION DRAIN, STORM SEWER AND WATERMAIN NOTES

### GENERAL

- LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
- 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.
- SERVICES TO BUILDING TO BE TERMINATED 1.0M FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
- 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.
- "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.
- SAFETY PLATFORMS SHALL BE PER OPSD 404.02.
- DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPSD 1003.01, IF APPLICABLE.
- 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.
- CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH OPS5 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

- 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).
- ALL SANITARY GRAVITY SEWER SHALL BE PVC SDR 35, PREX TRING-TITE (OR APPROVED EQUIVALENT) PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE.
- EXISTING MAINTENANCE STRUCTURES TO BE RE-BENCHED WHERE A NEW CONNECTION IS MADE.
- SANITARY GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. S6 AND S7 CLASS 'B' BEDDING, UNLESS SPECIFIED OTHERWISE.
- SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. S24 AND S25.
- SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.
- 100MM THICK HIGH-DENSITY GRADE 'A' POLYSTYRENE INSULATION TO BE INSTALLED IN ACCORDANCE WITH CITY STD W22 WHERE INDICATED ON DRAWING C.401.

### STORM

- ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2, OR LATEST AMENDMENT. 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.
- 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.
- ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
- CATCH BASIN SHALL BE IN ACCORDANCE WITH OPSD 705.010.
- CATCH BASIN LEADS SHALL BE IN 200MM DIA. AT 1% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE.
- ALL CATCH BASINS SHALL HAVE 600MM SUMPS, UNLESS SPECIFIED OTHERWISE.
- ALL CATCH BASIN LEAD INVERTS TO BE 1.5M BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE.
- THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING 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.
- 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.
- PERFORATED SUBDRAIN FOR REAR YARD AND LANDSCAPING APPLICATIONS SHALL BE INSTALLED PER CITY STD S29, S30 AND S31, WHERE APPLICABLE.
- RIP-RAP TREATMENT SEWER AND CULVERT OUTLETS PER OPSD 810.010.
- ALL STORM SEWER/CULVERTS TO BE INSTALLED WITH FROST TREATMENT PER OPSD 803.031 WHERE APPLICABLE. INSULATION REQUIRED WHERE PIPE COVER IS LESS THAN 2.0m.INSULATION THICKNESS PER OPSD 1109.030 AND DETAIL ON C901.
- ALL STORM MANHOLES WITH PIPE LESS THAN 900MM IN DIAMETER SHALL BE CONSTRUCTED WITH A 300MM SUMP AS PER SDO, CLAUSE 6.2.6.

### WATERMAIN

- ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
- ALL PVC WATERMAINS SHALL BE AWWA C900 CLASS 150, SDR 18 OR APPROVED EQUIVALENT.
- ALL WATER SERVICES LESS THAN OR EQUAL TO 50MM IN DIAMETER TO BE TYPE 'K' COPPER.
- 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.
- 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.
- CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS PER CITY OF OTTAWA STD.25.5 AND W25.6.
- VALVE BOXES SHALL BE INSTALLED PER CITY OF OTTAWA STD W24.
- WATERMAIN IN FILL AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD.25.5 AND W25.6.
- THRUST BLOKING OF WATERMAINS TO BE INSTALLED PER CITY OF OTTAWA STD. W25.3 AND W25.4.
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAIN.
- WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY.
- WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES ARE LESS THAN 2.4M.
- THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SERVICE 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.
- ALL WATERMAINS SHALL HAVE A MINIMUM COVER OR 2.4M, OTHERWISE THERMAL INSULATION IS REQUIRED AS PER STD DWG W22.
- GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD DWG W20.
- 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.
- 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.
- 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.
- 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.
- 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 DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILS UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS.

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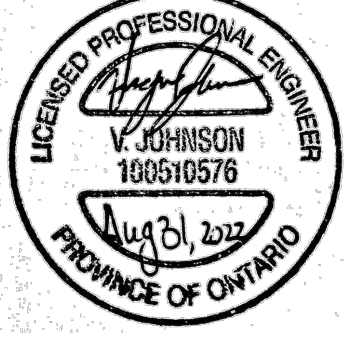
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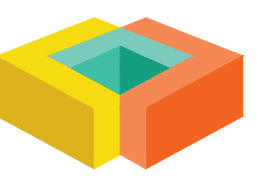
SUBJECT TO APPROVAL



SCALE: 1:500



NOT AUTHENTIC UNLESS SIGNED AND DATED



**LRL**  
ENGINEERING | INGÉNIERIE  
5430 Carleton Road | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

01	ISSUED FOR MUNICIPAL APPROVAL	A.S.	31 AUG 2022
No.	REVISIONS	BY	DATE

CLIENT  
**AVENUE 31 CAPITAL INC**  
801-250 City Centre, Ottawa, ON, K1R 6K7  
(613) 795-2422

---

DESIGNED BY: **A.S.** DRAWN BY: **A.S.** APPROVED BY: **V.J.**

---

PROJECT  
**NATIONAL CAPITAL BUSINESS PARK - SITE 2**  
**4120 RUSSELL RD**  
**(1100 & 1200 LAST MILE DR), OTTAWA**

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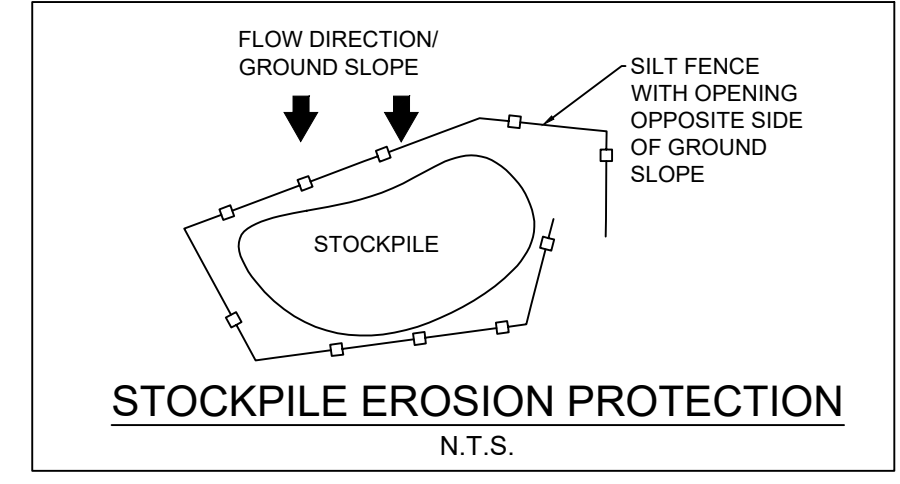
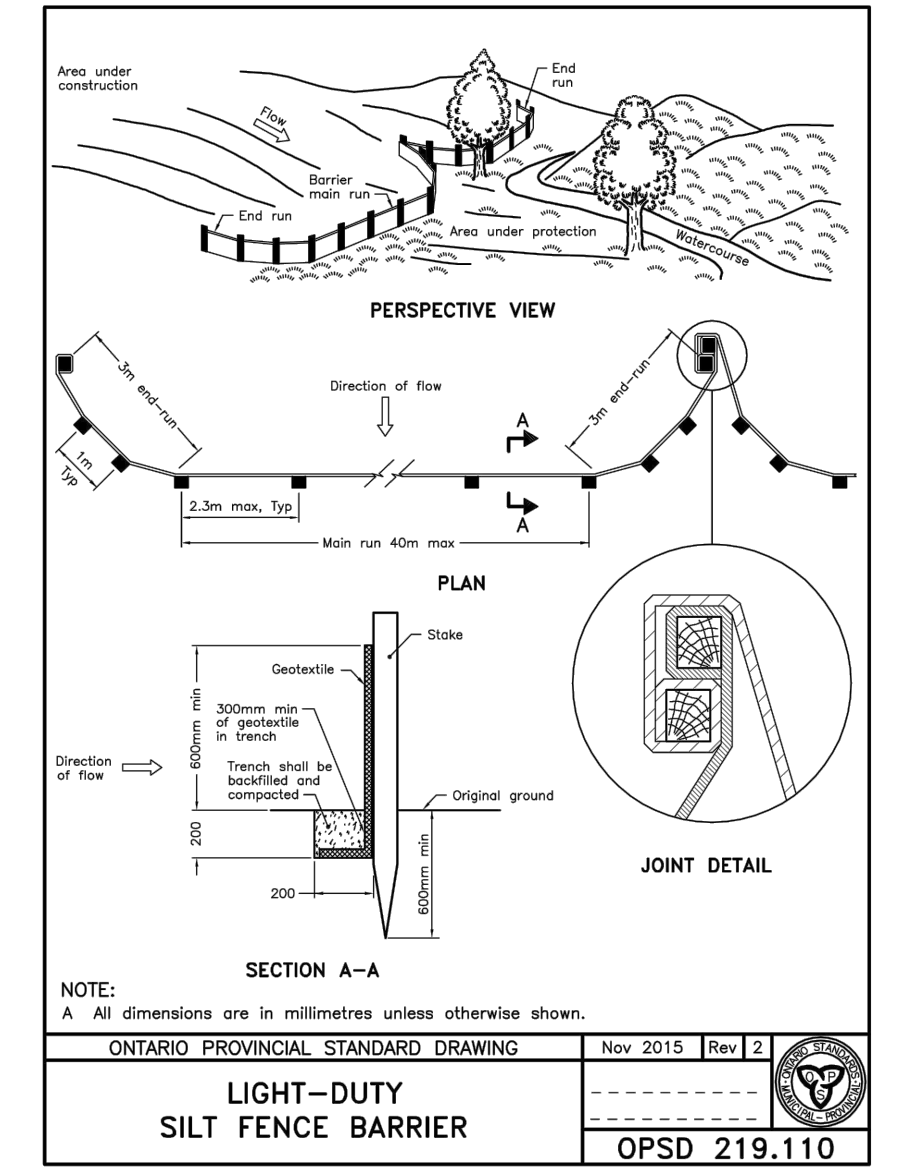
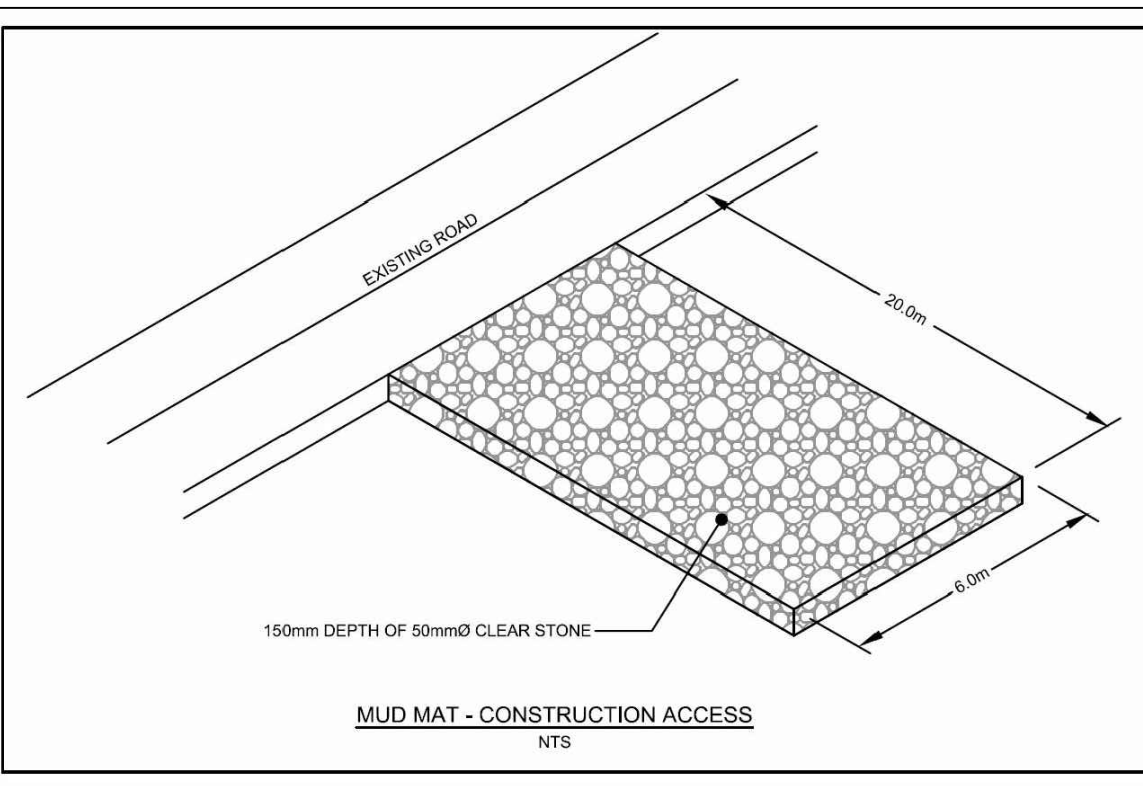
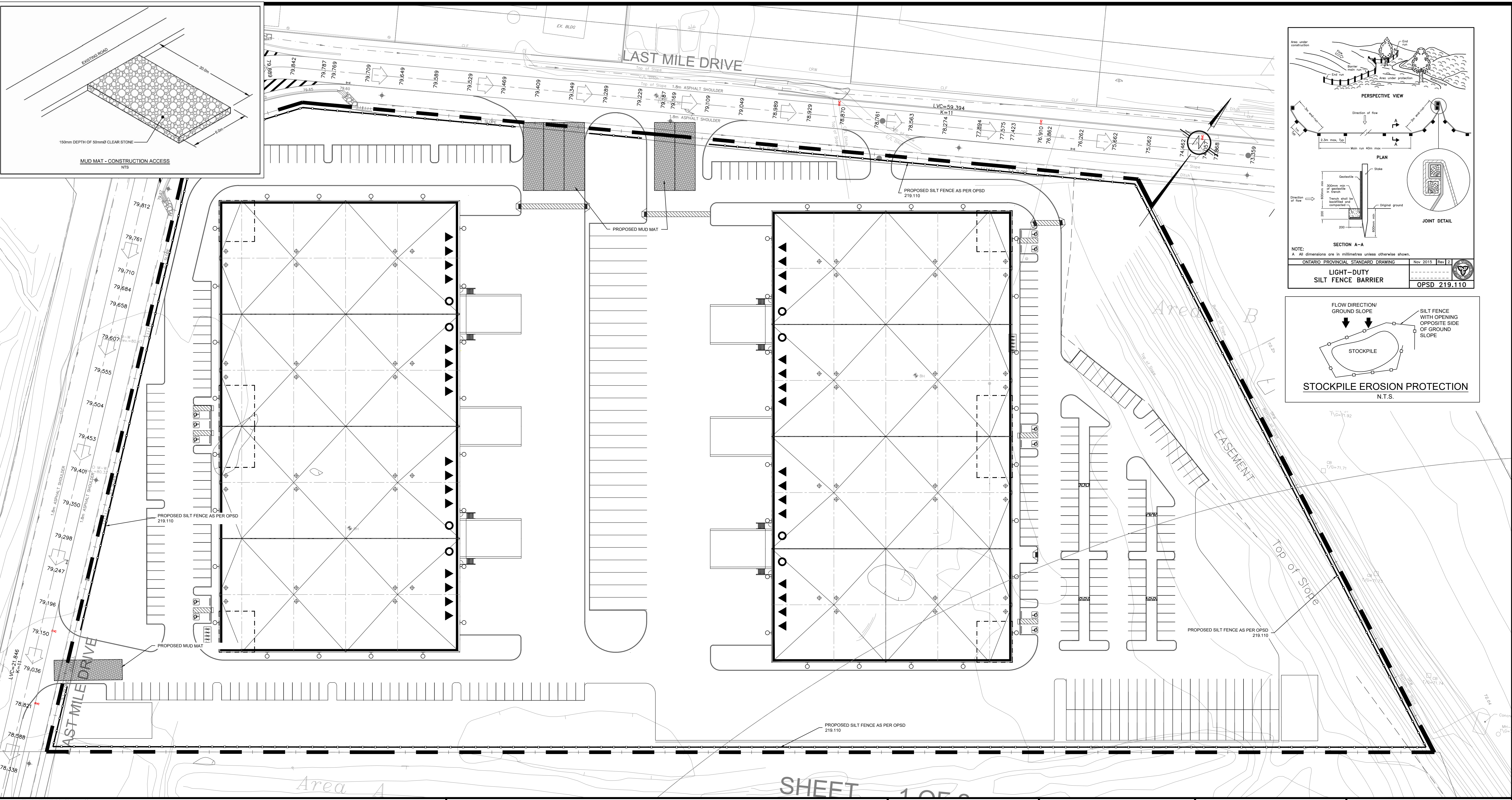
DRAWING TITLE  
**GENERAL NOTES PLAN**

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PROJECT NO.  
**220345**

C001

DATE  
**AUGUST 12, 2022**



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	PROPOSED CURB		PROPOSED HIGH POINT ELEVATION
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	PROPOSED TERRACING (3:1 MIN.)		PROPOSED BOTTOM OF CURB / ASPHALT ELEVATION
	PROPOSED FENCE		PROPOSED TOP OF CURB ELEVATION
	PROPOSED DOOR ENTRANCE/EXIT		PROPOSED EXPOSED BOTTOM OF RETAINING WALL
	PROPOSED GRASS AREA (100mm TOP SOIL & SOD)		PROPOSED TOP OF RETAINING WALL
	PROPOSED CONCRETE FEATURES/SLAB		MATCH INTO EXISTING ELEVATION
	PROPOSED HEAVY DUTY ASPHALT		EXISTING ELEVATION
	PROPOSED LIGHT DUTY ASPHALT		PROPOSED OVERLAND MAJOR FLOW ROUTE
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			PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
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			PROPOSED CURB STOP

SHEET 1 OF 2

SUBJECT TO APPROVAL

SCALE: 1:500

NOT AUTHENTIC UNLESS SIGNED AND DATED

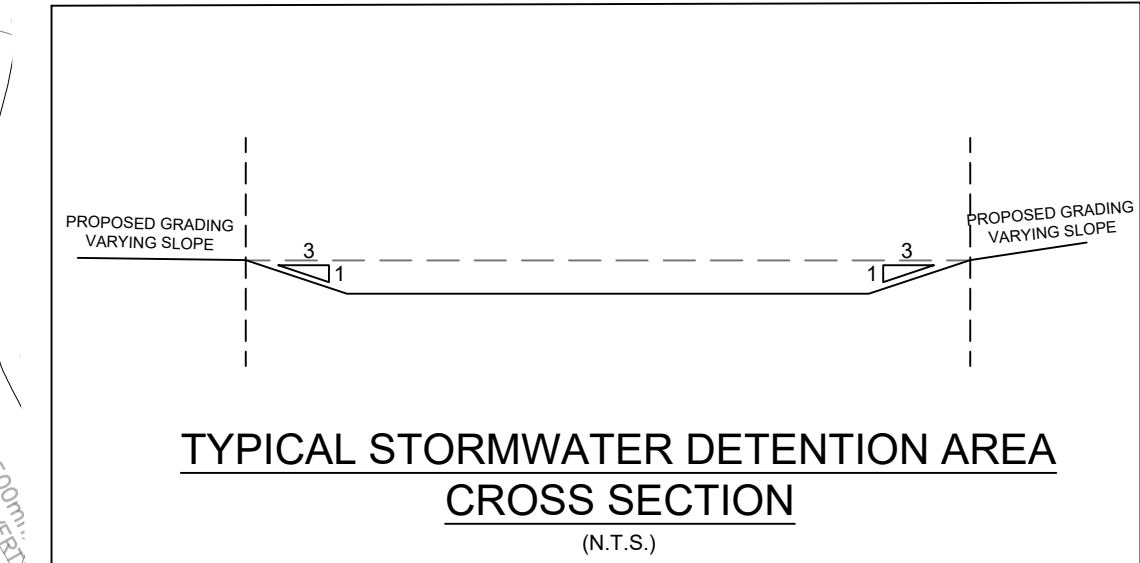
**LRL**  
ENGINEERING | ARCHITECTURE  
5430 Carleton Road | Ottawa, ON, K1J 9G2  
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<b>CLIENT</b>			
AVENUE 31 CAPITAL INC 801-250 City Centre, Ottawa, ON, K1R 6K7			
DESIGNED BY:	DRAWN BY:	APPROVED BY:	
A.S.	A.S.	V.J.	
<b>PROJECT</b>			
NATIONAL CAPITAL BUSINESS PARK - SITE 2 4120 RUSSELL RD (1100 & 1200 LAST MILE DR, OTTAWA)			
<b>DRAWING TITLE</b>			
EROSION SEDIMENT & CONTROL PLAN			
<b>PROJECT NO.</b>			
220345			
<b>DATE</b>			
AUGUST, 2022			
<b>ISSUED FOR MUNICIPAL APPROVAL</b>		A.S.	31 AUG 2022
No.	REVISIONS	BY	DATE

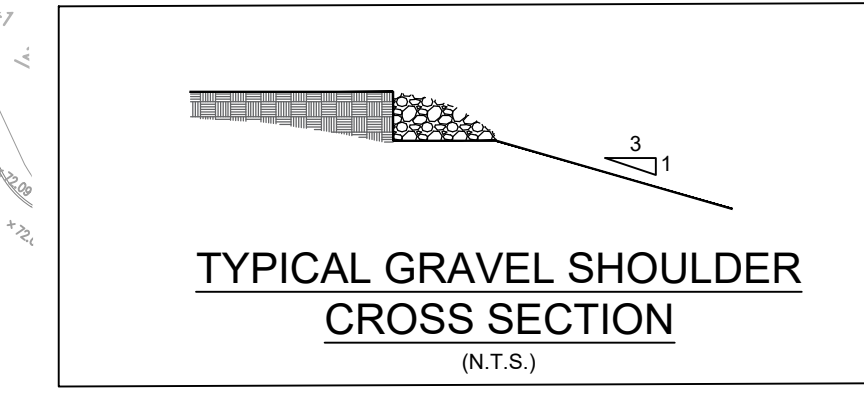
PAVEMENT STRUCTURE

COURSE	MATERIAL	THICKNESS (mm)	
		AUTOMOBILE PARKING	TRUCK ROUTE (HEAVY TRAFFIC)
SURFACE	HL 3 A/C (PG 58-28)	50	40
BINDER	HL 8 A/C (PG 58-28)	-	50
BASECOURSE	OPSS GRANULAR "A"	150	150
SUBBASE	OPSS GRANULAR "B" TYPE II	300	450

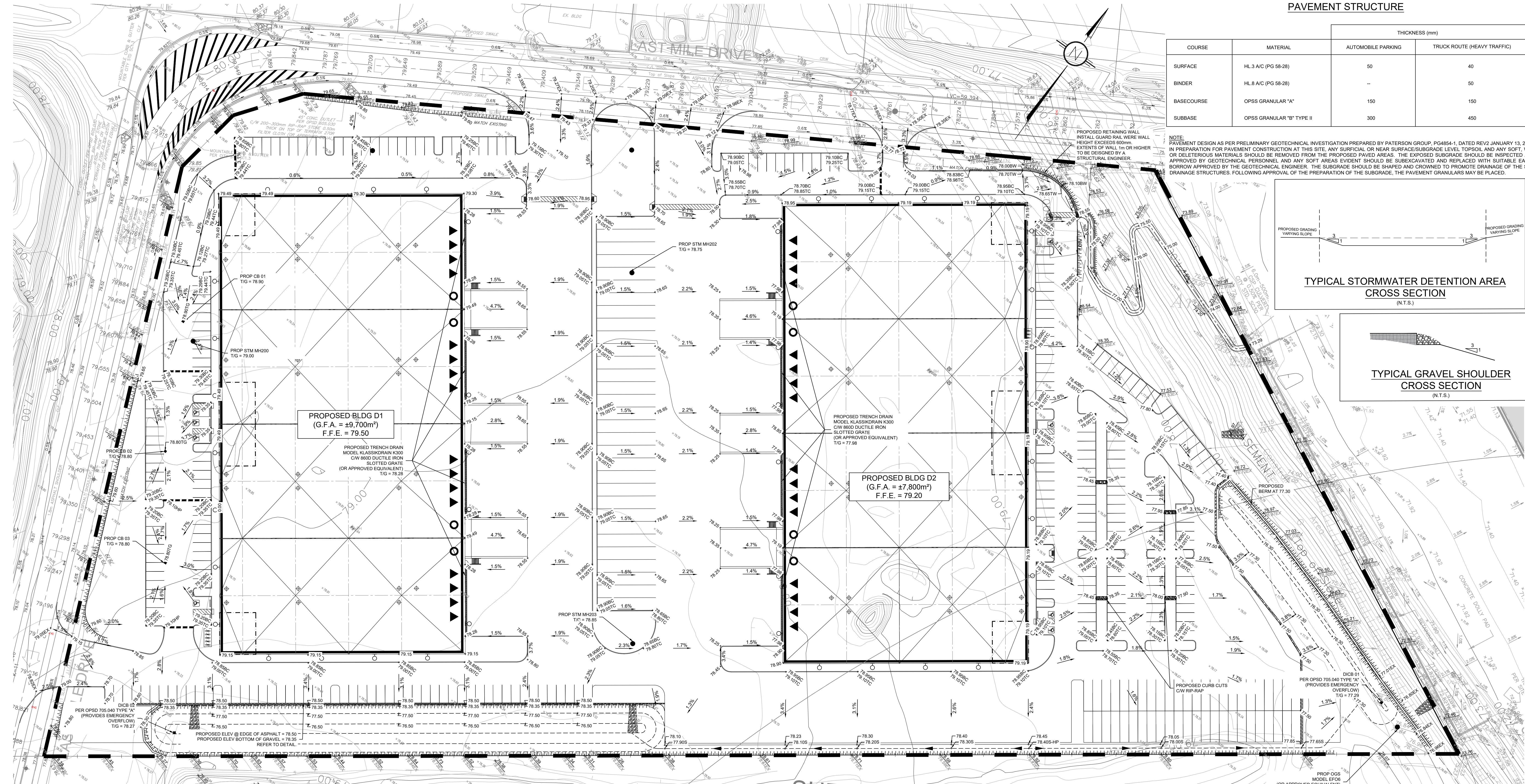
NOTE: PAVEMENT DESIGN AS PER PRELIMINARY GEOTECHNICAL INVESTIGATION PREPARED BY PATERSON GROUP, PG4854-1, DATED REV2 JANUARY 13, 2020. IN PREPARATION FOR PAVEMENT CONSTRUCTION AT THIS SITE, ANY SURFICIAL OR NEAR SURFACE/SUBGRADE LEVEL TOPSOIL AND ANY SOFT, WET OR DELETERIOUS MATERIALS SHOULD BE REMOVED FROM THE PROPOSED PAVED AREAS. THE EXPOSED SUBGRADE SHOULD BE INSPECTED AND APPROVED BY GEOTECHNICAL PERSONNEL AND ANY SOFT AREAS EVIDENT SHOULD BE SUBEXCAVATED 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.



TYPICAL STORMWATER DETENTION AREA CROSS SECTION (N.T.S.)



TYPICAL GRAVEL SHOULDER CROSS SECTION (N.T.S.)



PROPOSED BLDG D1  
(G.F.A. = ±9,700m<sup>2</sup>)  
F.F.E. = 79.50

PROPOSED BLDG D2  
(G.F.A. = ±7,800m<sup>2</sup>)  
F.F.E. = 79.20

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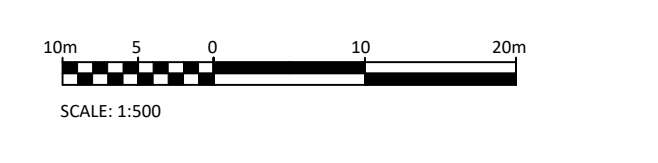
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**SUBJECT TO APPROVAL**



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**REVISIONS**

No.	REVISIONS	BY	DATE
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CLIENT: AVENUE 31 CAPITAL INC  
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C 613-799-2422

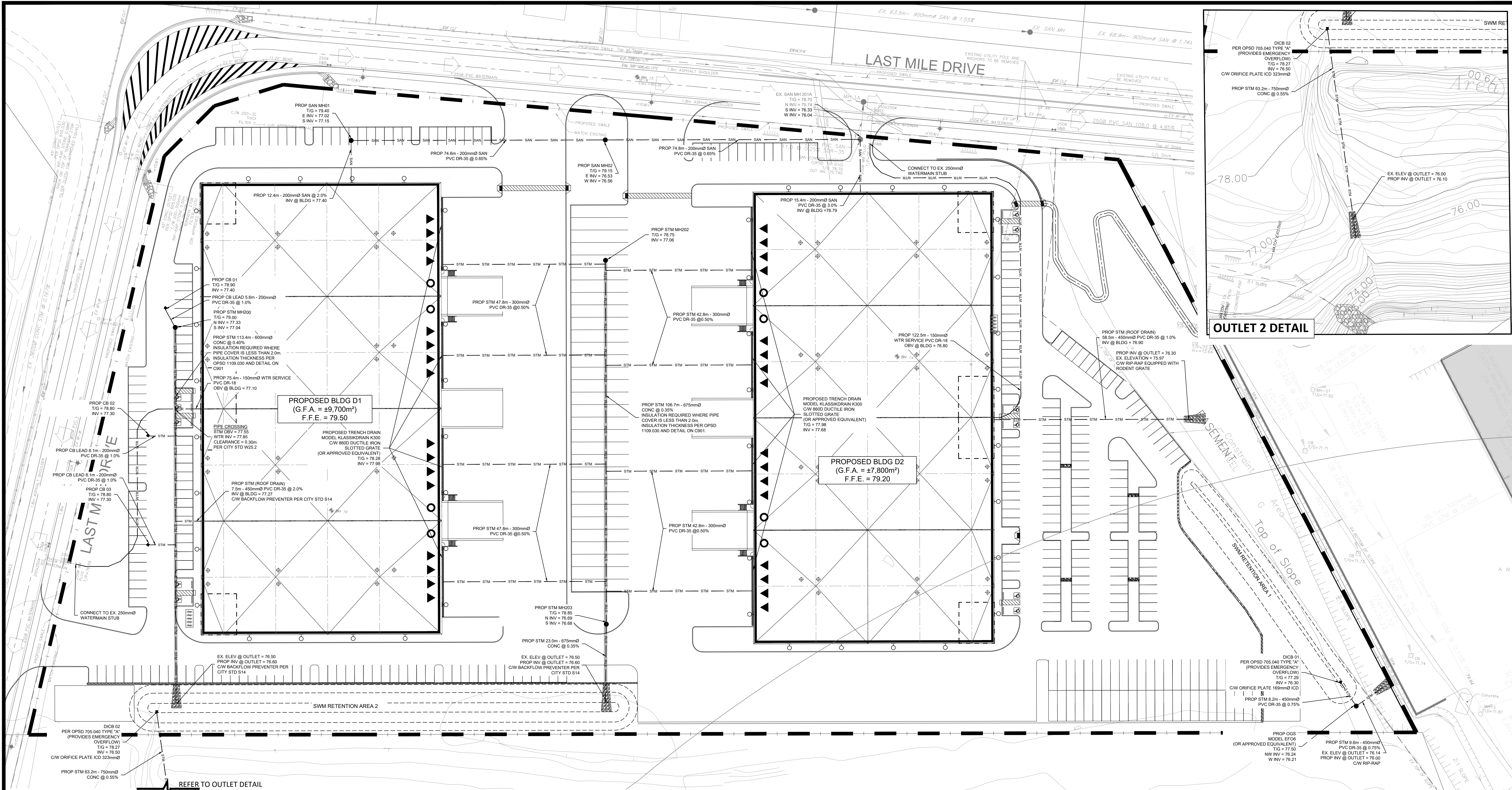
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PROJECT: NATIONAL CAPITAL BUSINESS PARK - SITE 2  
4120 RUSSELL RD  
(1100 & 1200 LAST MILE DR), OTTAWA

GRADING AND DRAINAGE PLAN

PROJECT NO: 220345  
DATE: AUGUST, 2022

**C301**



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

**LEGEND:**

	EXISTING PROPERTY LINE TO REMAIN		PROPOSED 100mm PERFORATED SUBDRAIN
	PROPOSED CURB		PROPOSED STORM SEWER
	PROPOSED DEPRESSED CURB		PROPOSED SANITARY SEWER
	PROPOSED TERRACING (3:1 MIN.)		PROPOSED WATERMAIN
	PROPOSED FENCE		EXISTING STORM SEWER
	PROPOSED DOOR ENTRANCE/EXIT		EXISTING SANITARY SEWER
	PROPOSED GRASS AREA (100mm TOP SOIL & SOD)		EXISTING WATERMAIN
	PROPOSED CONCRETE FEATURES/SLAB		EXISTING GAS LINE
	PROPOSED HEAVY DUTY ASPHALT		EXISTING MANHOLE
	PROPOSED LIGHT DUTY ASPHALT		EXISTING CATCHBASIN
	PROPOSED RIP RAP		PROPOSED CATCHBASIN-MANHOLE/CATCHBASIN
			PROPOSED MANHOLE
			PROPOSED CURB STOP
			PROPOSED PIPE INSULATION PER DETAIL ON C901

SUBJECT TO APPROVAL

SCALE: 1:500

NOT AUTHENTIC UNLESS SIGNED AND DATED

**LRL**  
ENGINEERING | INGENIERIE  
5430 Carleton Place | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

01	ISSUED FOR MUNICIPAL APPROVAL	A.S.	31 AUG 2022
No.	REVISIONS	BY	DATE

**CLIENT**

**AVENUE 31 CAPITAL INC**  
801-250 City Centre, Ottawa, ON, K1R 6P7  
C613-799-2422

DESIGNED BY: A.S.    DRAWN BY: A.S.    APPROVED BY: V.J.

**PROJECT**

**NATIONAL CAPITAL BUSINESS PARK - SITE 2**  
4120 RUSSELL RD  
(1100 & 1200 LAST MILE DR), OTTAWA

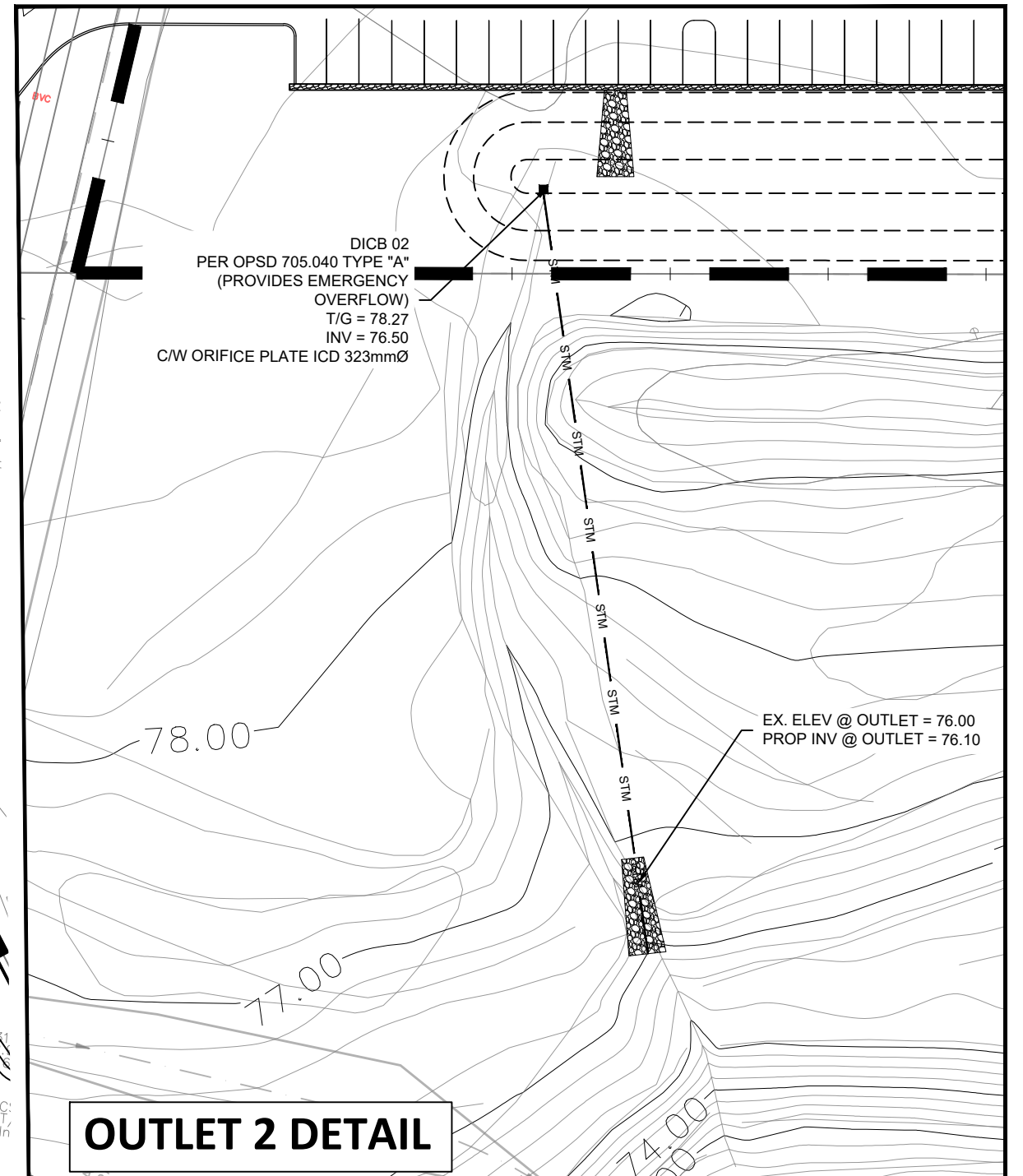
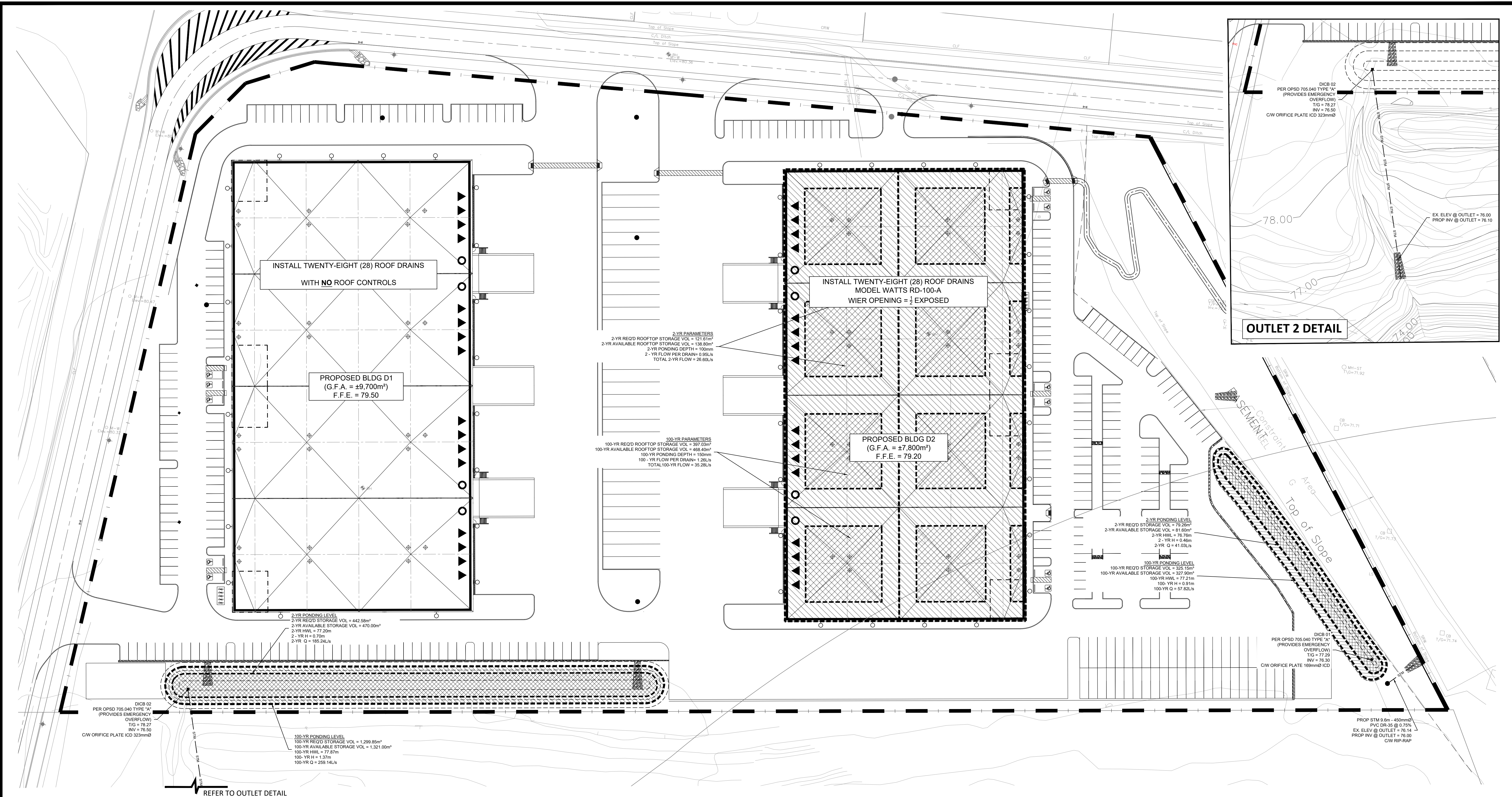
DRAWING TITLE

**SITE SERVICING PLAN**

PROJECT NO: 220345

DATE: AUGUST, 2022

C401



**2-YR PARAMETERS**  
 2-YR REQ'D ROOFTOP STORAGE VOL = 121.61m³  
 2-YR AVAILABLE ROOFTOP STORAGE VOL = 138.89m³  
 2-YR PONDING DEPTH = 100mm  
 2-YR FLOW PER DRAIN = 0.95L/s  
 TOTAL 2-YR FLOW = 26.69L/s

**100-YR PARAMETERS**  
 100-YR REQ'D ROOFTOP STORAGE VOL = 397.03m³  
 100-YR AVAILABLE ROOFTOP STORAGE VOL = 468.40m³  
 100-YR PONDING DEPTH = 150mm  
 100-YR FLOW PER DRAIN = 1.26L/s  
 TOTAL 100-YR FLOW = 35.26L/s

**2-YR PONDING LEVEL**  
 2-YR REQ'D STORAGE VOL = 78.26m³  
 2-YR AVAILABLE STORAGE VOL = 81.60m³  
 2-YR HWL = 76.76m  
 2-YR RH = 0.46m  
 2-YR Q = 41.03L/s

**100-YR PONDING LEVEL**  
 100-YR REQ'D STORAGE VOL = 325.15m³  
 100-YR AVAILABLE STORAGE VOL = 327.90m³  
 100-YR HWL = 77.21m  
 100-YR H = 0.91m  
 100-YR Q = 57.82L/s

INSTALL TWENTY-EIGHT (28) ROOF DRAINS  
 WITH NO ROOF CONTROLS

INSTALL TWENTY-EIGHT (28) ROOF DRAINS  
 MODEL WATTS RD-100-A  
 WIER OPENING = 1/2 EXPOSED

PROPOSED BLDG D1  
 (G.F.A. = ±9,700m²)  
 F.F.E. = 79.50

PROPOSED BLDG D2  
 (G.F.A. = ±7,800m²)  
 F.F.E. = 79.20

DICB 02  
 PER OPSD 705.040 TYPE 'A'  
 (PROVIDES EMERGENCY  
 OVERFLOW)  
 T/G = 78.27  
 INV = 76.50  
 CW ORIFICE PLATE ICD 323mmØ

**100-YR PONDING LEVEL**  
 100-YR REQ'D STORAGE VOL = 1,299.85m³  
 100-YR AVAILABLE STORAGE VOL = 1,321.00m³  
 100-YR HWL = 77.87m  
 100-YR H = 1.37m  
 100-YR Q = 259.14L/s

DICB 01  
 PER OPSD 705.040 TYPE 'A'  
 (PROVIDES EMERGENCY  
 OVERFLOW)  
 T/G = 77.29  
 INV = 76.30  
 CW ORIFICE PLATE 168mmØ ICD

PROP STM 9.6m - 450mmØ  
 PVC DR-95 @ 0.75%  
 EX. ELEV @ OUTLET = 76.14  
 PROP INV @ OUTLET = 76.00  
 CW RIP-54P

REFER TO OUTLET DETAIL

**USE AND INTERPRETATION OF DRAWINGS**  
 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDUMS, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

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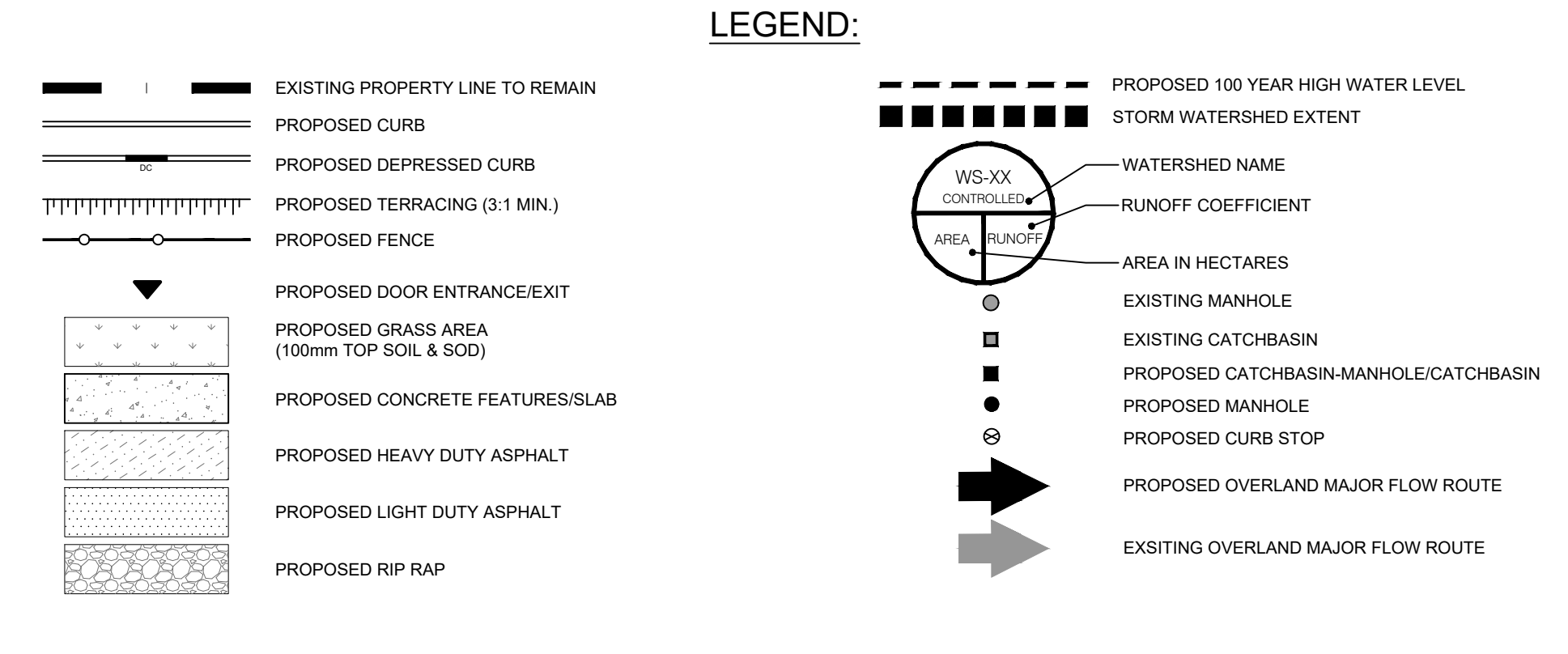
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**SUBJECT TO APPROVAL**

30m 0 10 20m  
 SCALE: 1:500

NOT AUTHENTIC UNLESS SIGNED AND DATED

**LRL**  
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 www.lrl.ca | (613) 842-3434

01	ISSUED FOR MUNICIPAL APPROVAL	A.S.	31 AUG 2022
No.	REVISIONS	BY	DATE

CLIENT: AVENUE 31 CAPITAL INC  
 801-250 City Centre, Ottawa, ON, K1R 6K7  
 C 613-799-2422

DESIGNED BY: A.S. DRAWN BY: A.S. APPROVED BY: V.J.

PROJECT: NATIONAL CAPITAL BUSINESS PARK - SITE 2  
 4120 RUSSELL RD  
 (1100 & 1200 LAST MILE DR), OTTAWA

DRAWING TITLE: STORM WATER MANAGEMENT PLAN

PROJECT NO. 220345

DATE: AUGUST, 2022

**C601**



**USE AND INTERPRETATION OF DRAWINGS**

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**LEGEND:**

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	PROPOSED CURB		WATERSHED NAME
	PROPOSED DEPRESSED CURB		RUNOFF COEFFICIENT
	PROPOSED TERRACING (3:1 MIN.)		AREA IN HECTARES
	PROPOSED FENCE		EXISTING MANHOLE
	PROPOSED DOOR ENTRANCE/EXIT		EXISTING CATCHBASIN
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	PROPOSED CONCRETE FEATURES/SLAB		PROPOSED MANHOLE
	PROPOSED HEAVY DUTY ASPHALT		PROPOSED CURB STOP
	PROPOSED LIGHT DUTY ASPHALT		PROPOSED OVERLAND MAJOR FLOW ROUTE
	PROPOSED RIP RAP		EXISTING OVERLAND MAJOR FLOW ROUTE

**SUBJECT TO APPROVAL**

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

NOT AUTHENTIC UNLESS SIGNED AND DATED

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01	ISSUED FOR MUNICIPAL APPROVAL	A.S.	31 AUG 2022
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CLIENT: AVENUE 31 CAPITAL INC  
801-250 City Centre, Ottawa, ON, K1R 6K7  
C 613-799-2422

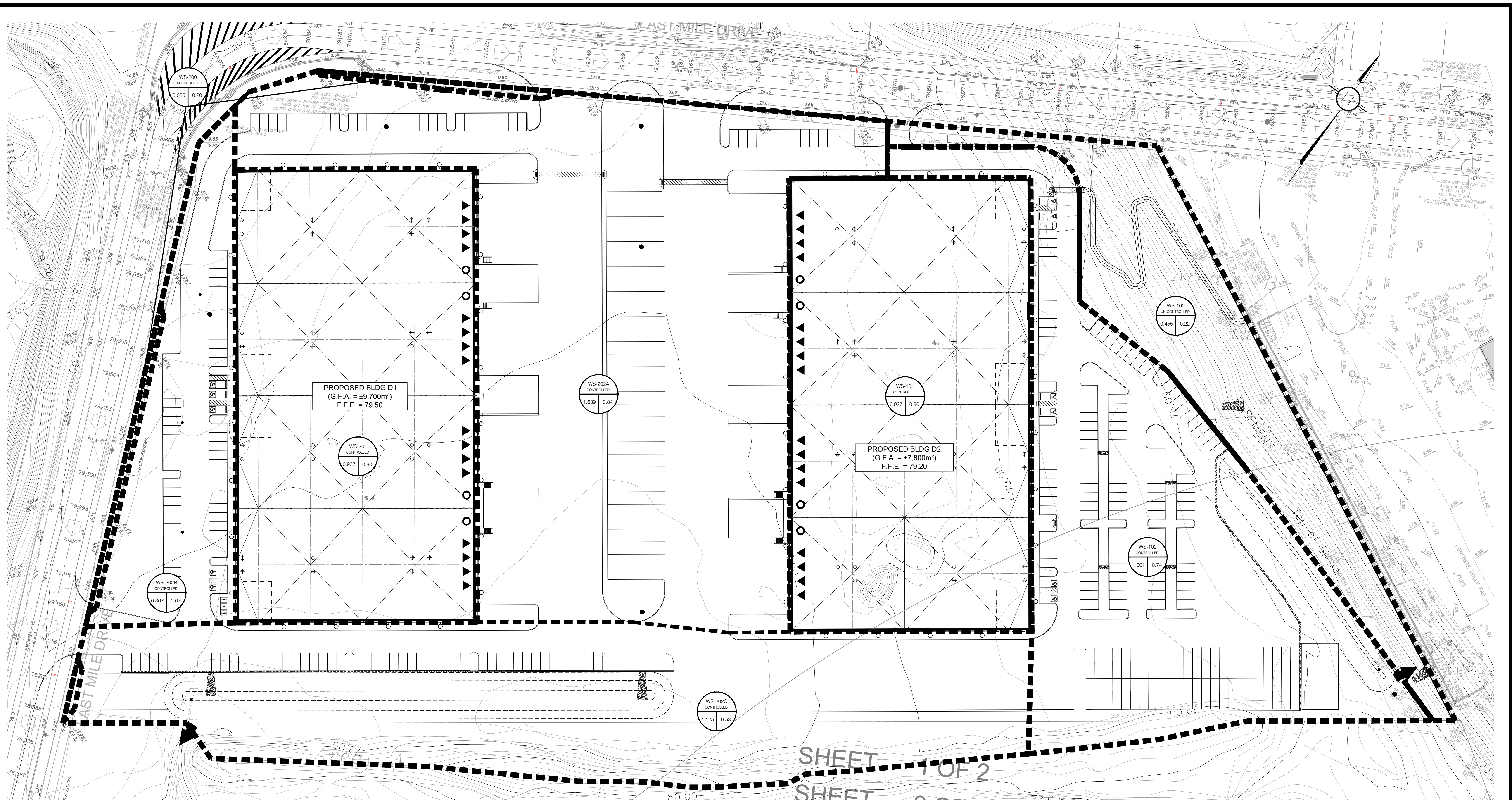
DESIGNED BY: A.S. DRAWN BY: A.S. APPROVED BY: V.J.

PROJECT: NATIONAL CAPITAL BUSINESS PARK - SITE 2  
4120 RUSSELL RD  
(1100 & 1200 LAST MILE DR), OTTAWA

DRAWING TITLE: PRE-DEVELOPMENT WATERSHED PLAN

PROJECT NO.: 220345  
DATE: AUGUST, 2022

**C701**



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**LEGEND:**

	EXISTING PROPERTY LINE TO REMAIN		PROPOSED 100 YEAR HIGH WATER LEVEL
	PROPOSED CURB		STORM WATERSHED EXTENT
	PROPOSED DEPRESSED CURB		WATERSHED NAME
	PROPOSED TERRACING (3:1 MIN.)		RUNOFF COEFFICIENT
	PROPOSED FENCE		AREA IN HECTARES
	PROPOSED DOOR ENTRANCE/EXIT		EXISTING MANHOLE
	PROPOSED GRASS AREA (100mm TOP SOIL & SOD)		EXISTING CATCHBASIN
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	PROPOSED HEAVY DUTY ASPHALT		PROPOSED MANHOLE
	PROPOSED LIGHT DUTY ASPHALT		PROPOSED CURB STOP
	PROPOSED RIP RAP		PROPOSED OVERLAND MAJOR FLOW ROUTE
			EXISTING OVERLAND MAJOR FLOW ROUTE

**SUBJECT TO APPROVAL**

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

**LRL**  
ENGINEERING | INGENIERIE  
5430 Canolek Road | Ottawa, ON, K1J 9G2  
www.lrl.ca | (613) 842-3434

PROFESSIONAL ENGINEER  
K. JOHNSON  
100610576  
August 2022  
PROVINCE OF ONTARIO

NOT AUTHENTIC UNLESS SIGNED AND DATED

01	ISSUED FOR MUNICIPAL APPROVAL	A.S.	31 AUG 2022
No.	REVISIONS	BY	DATE

CLIENT: AVENUE 31 CAPITAL INC  
801-290 City Centre Ottawa, ON, K1R 9K7  
(613) 799-2422

DESIGNED BY: A.S. DRAWN BY: A.S. APPROVED BY: V.J.

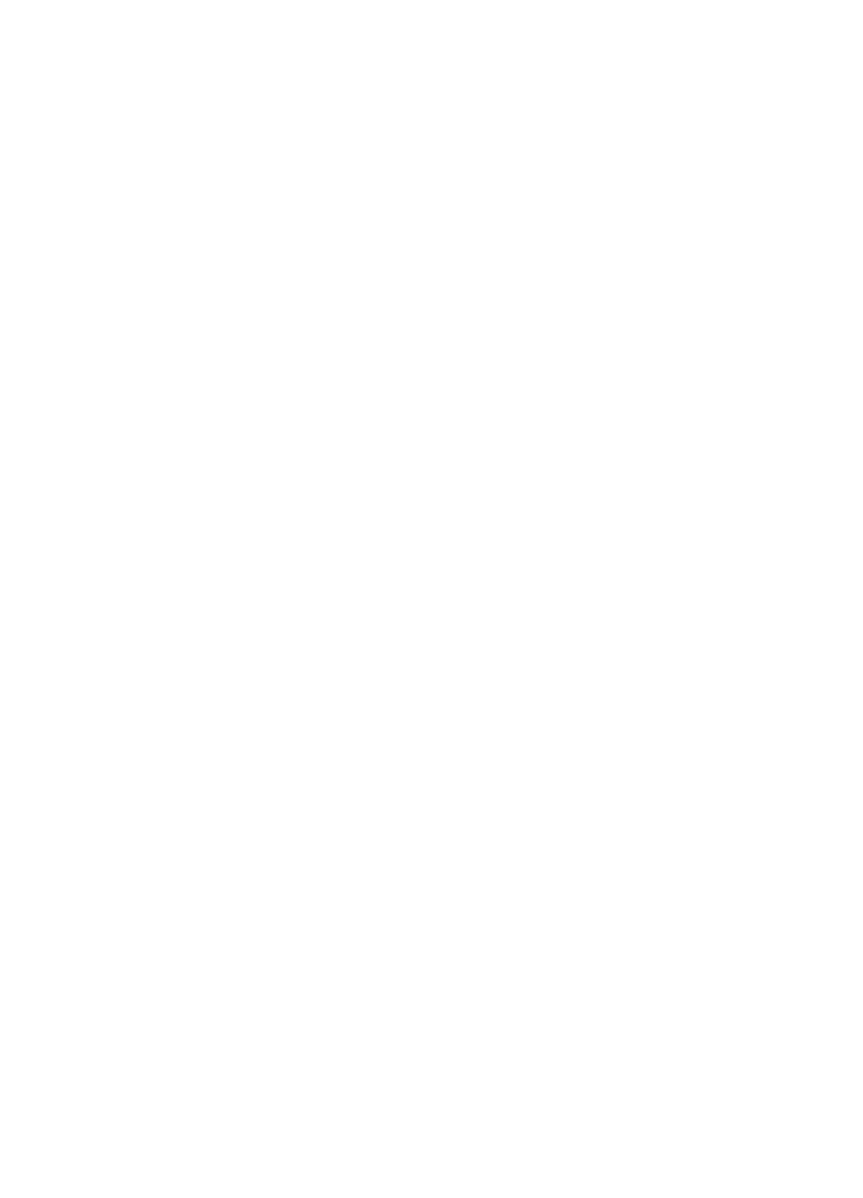
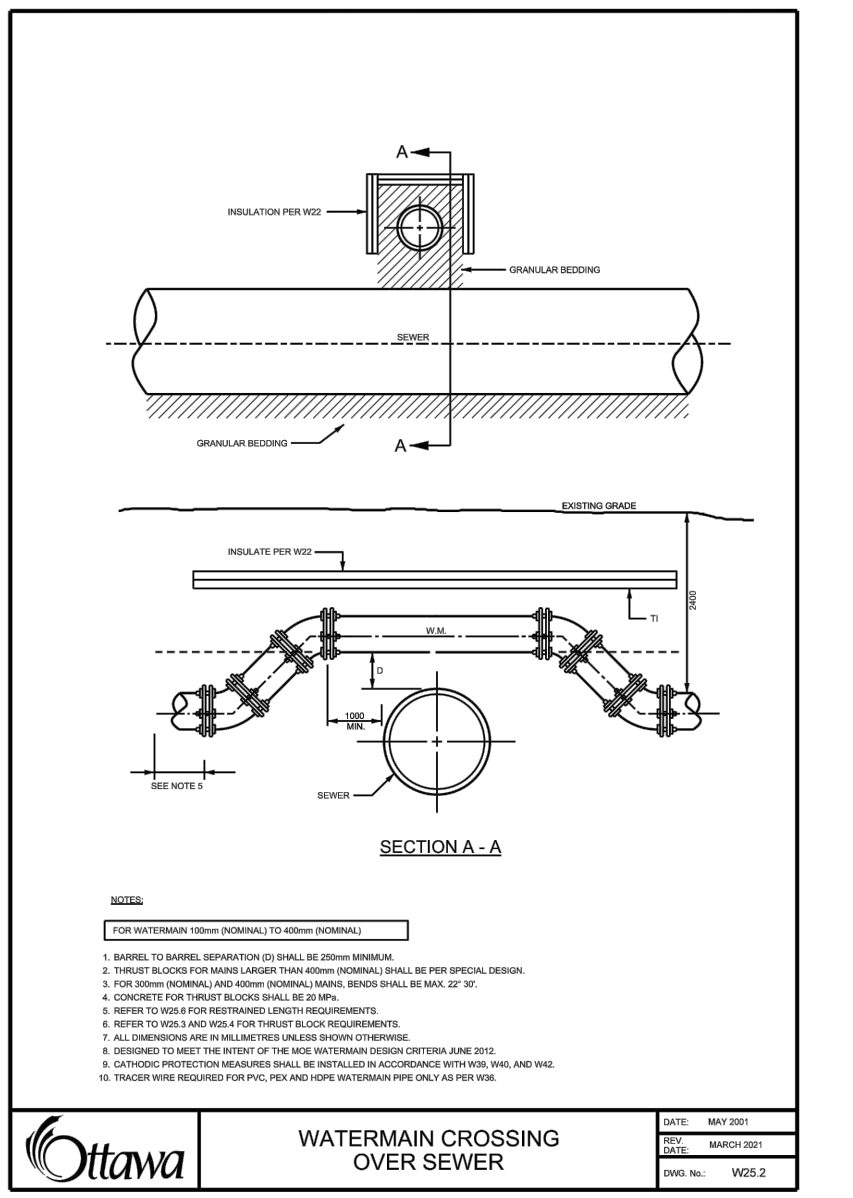
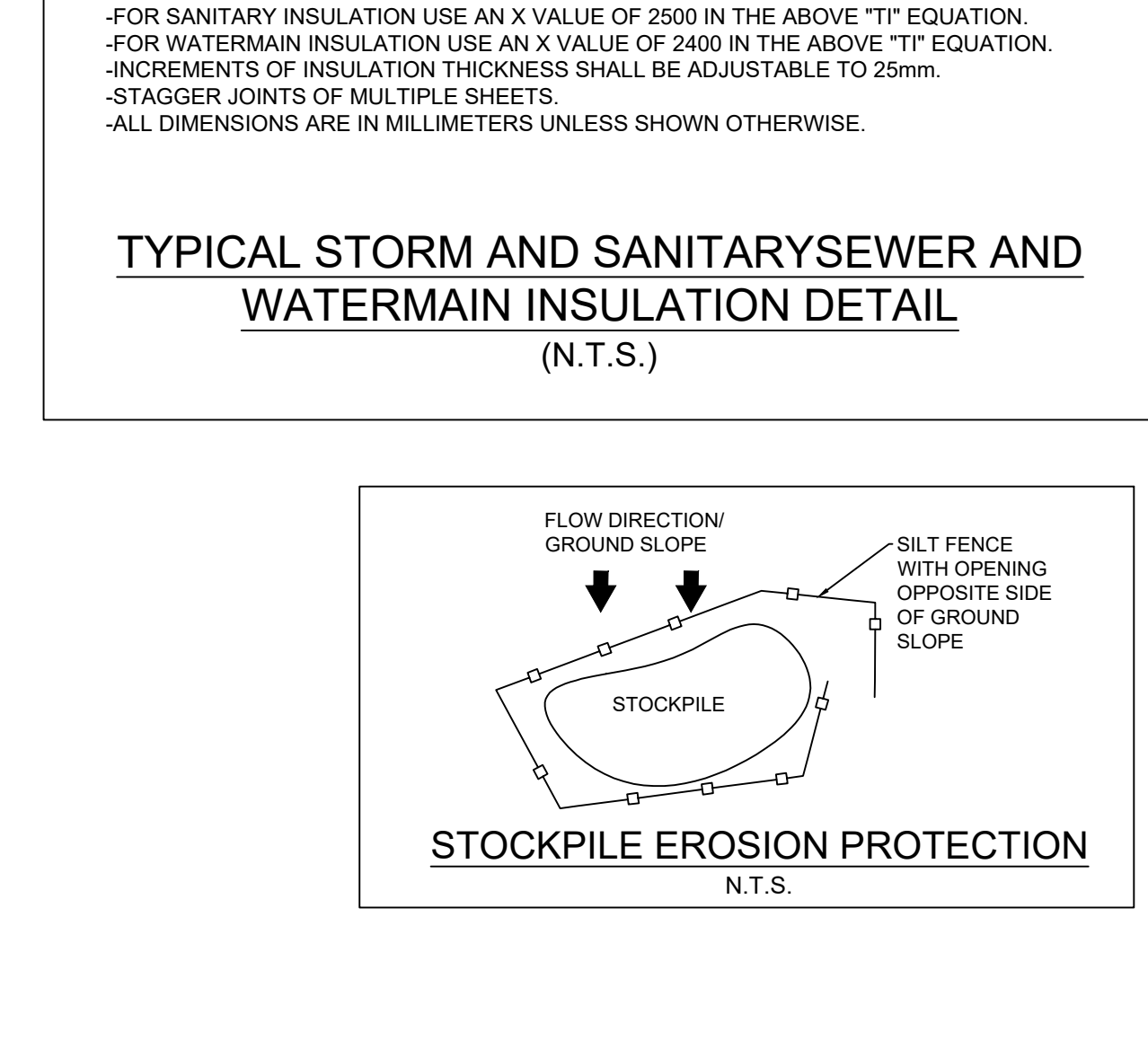
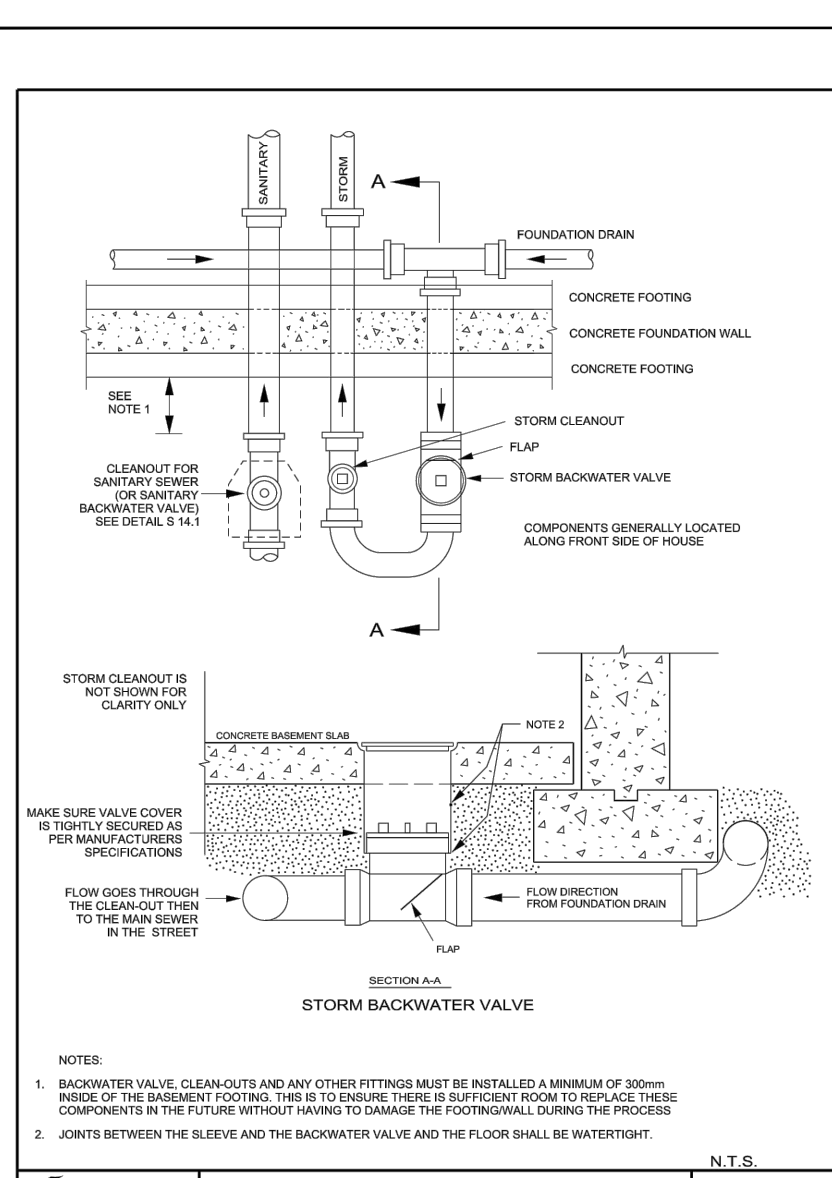
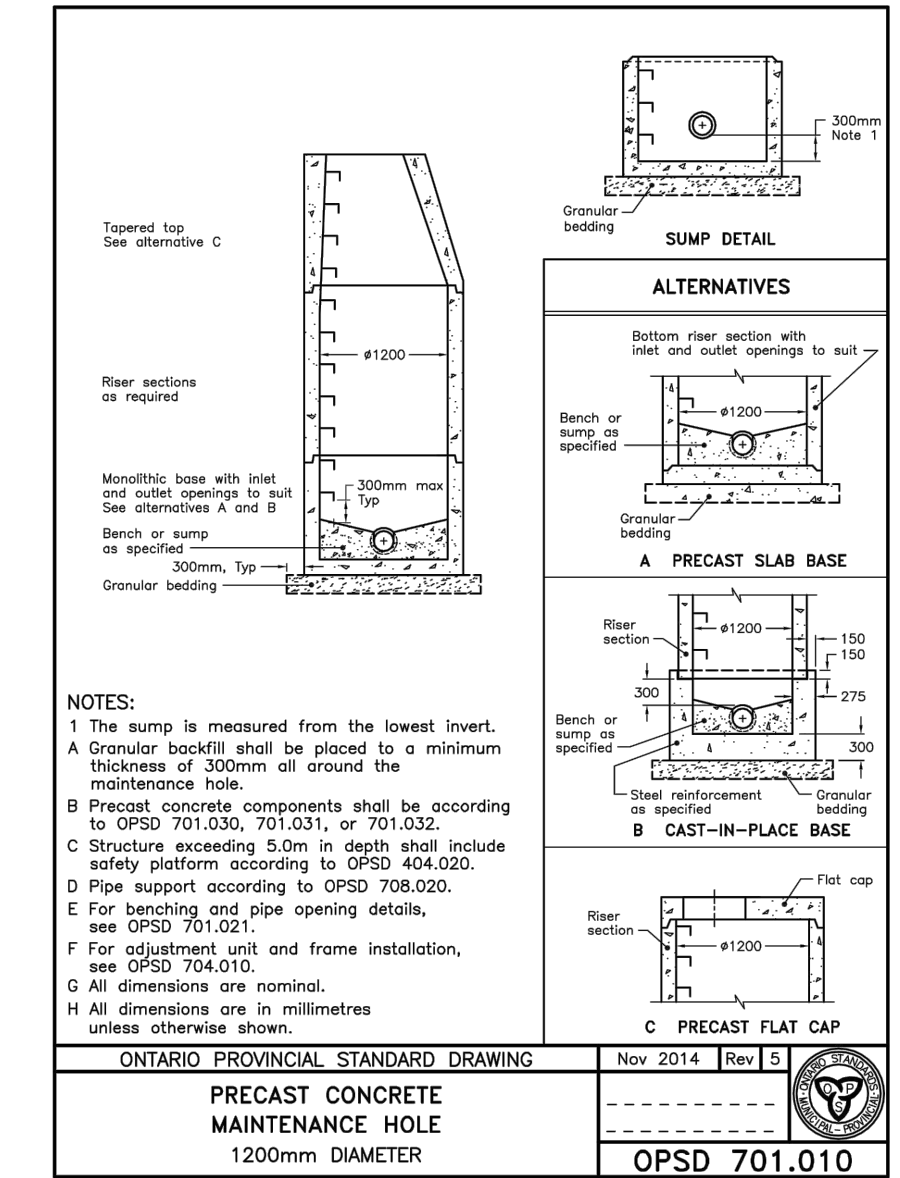
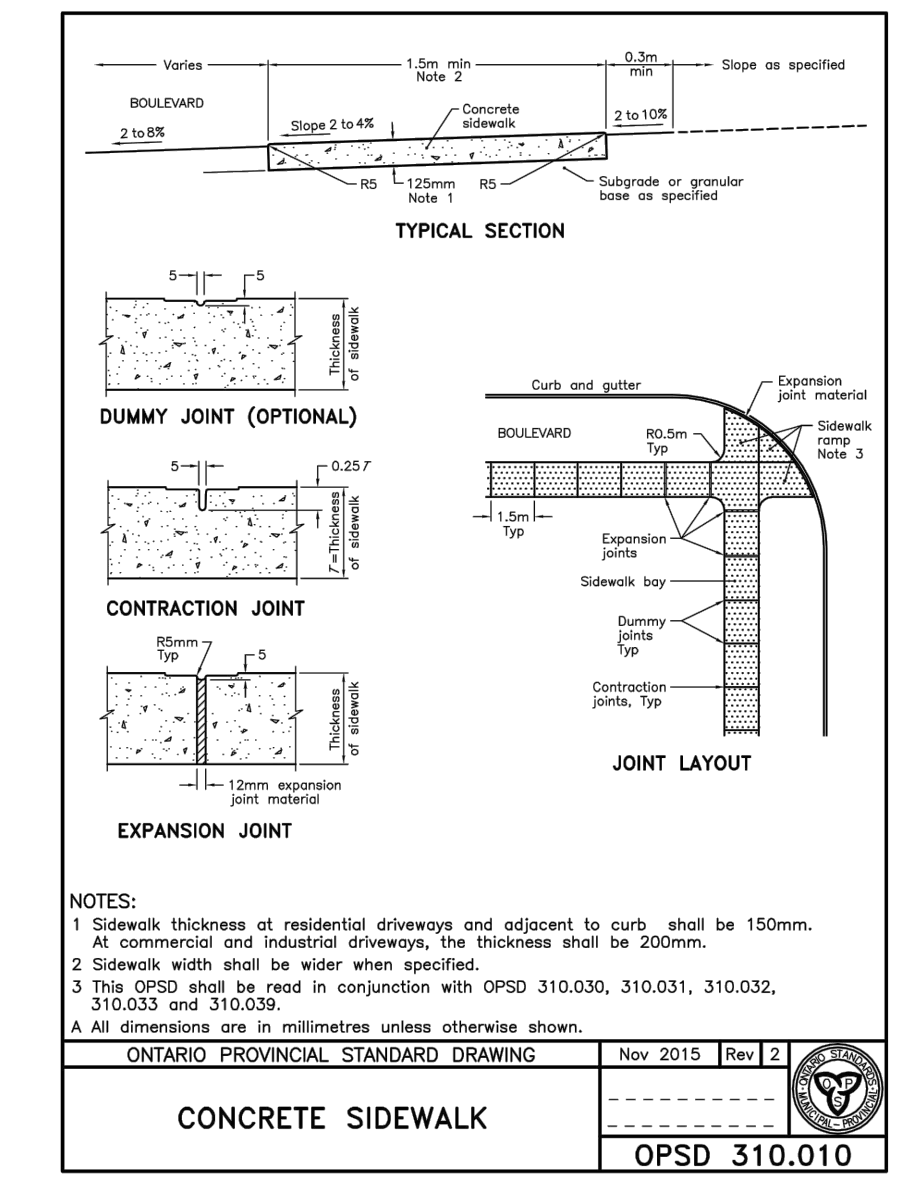
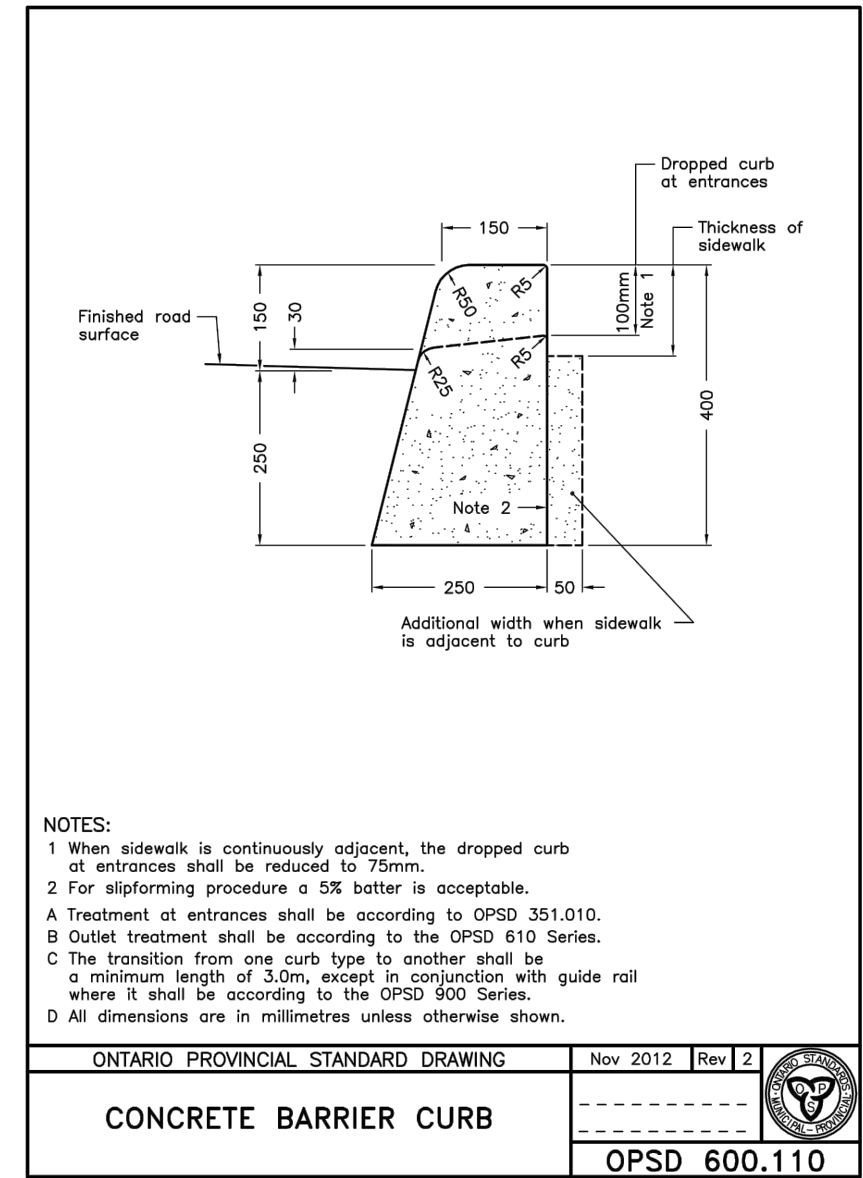
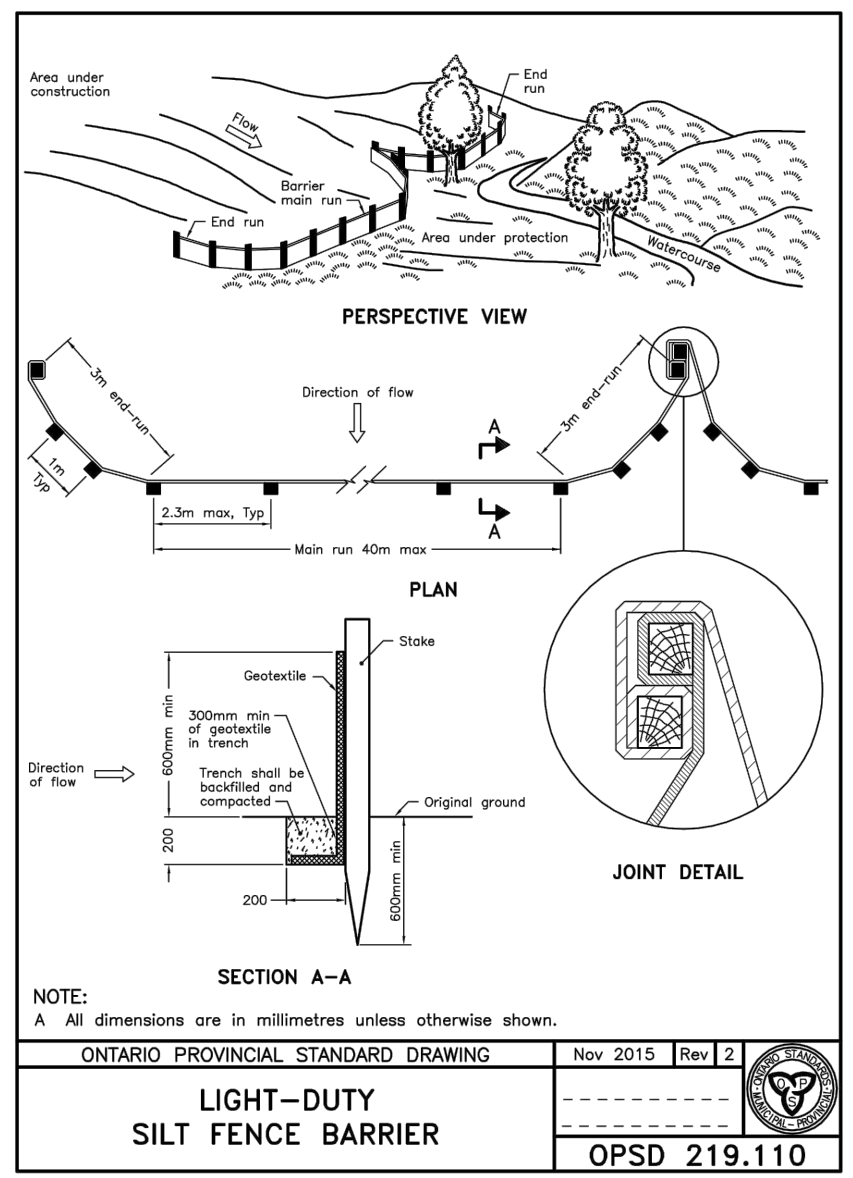
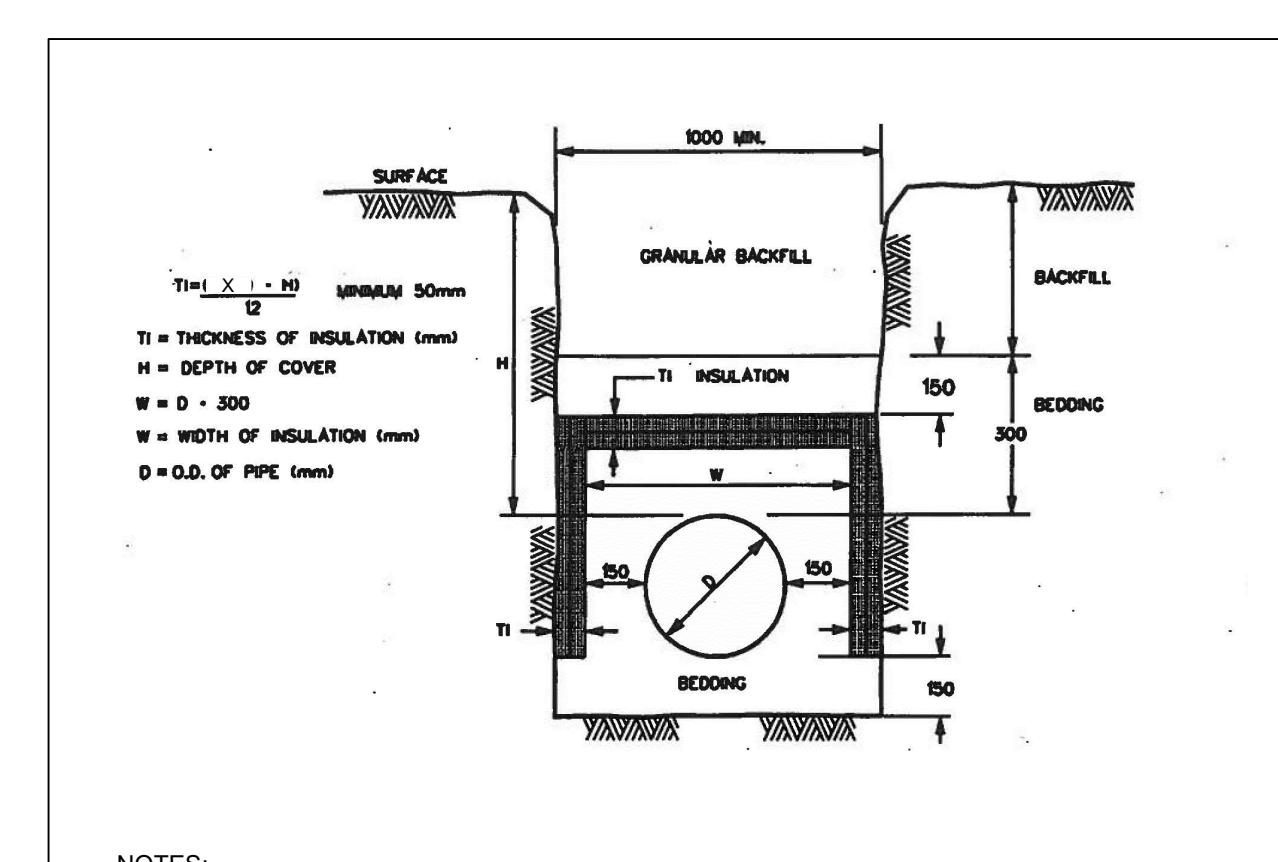
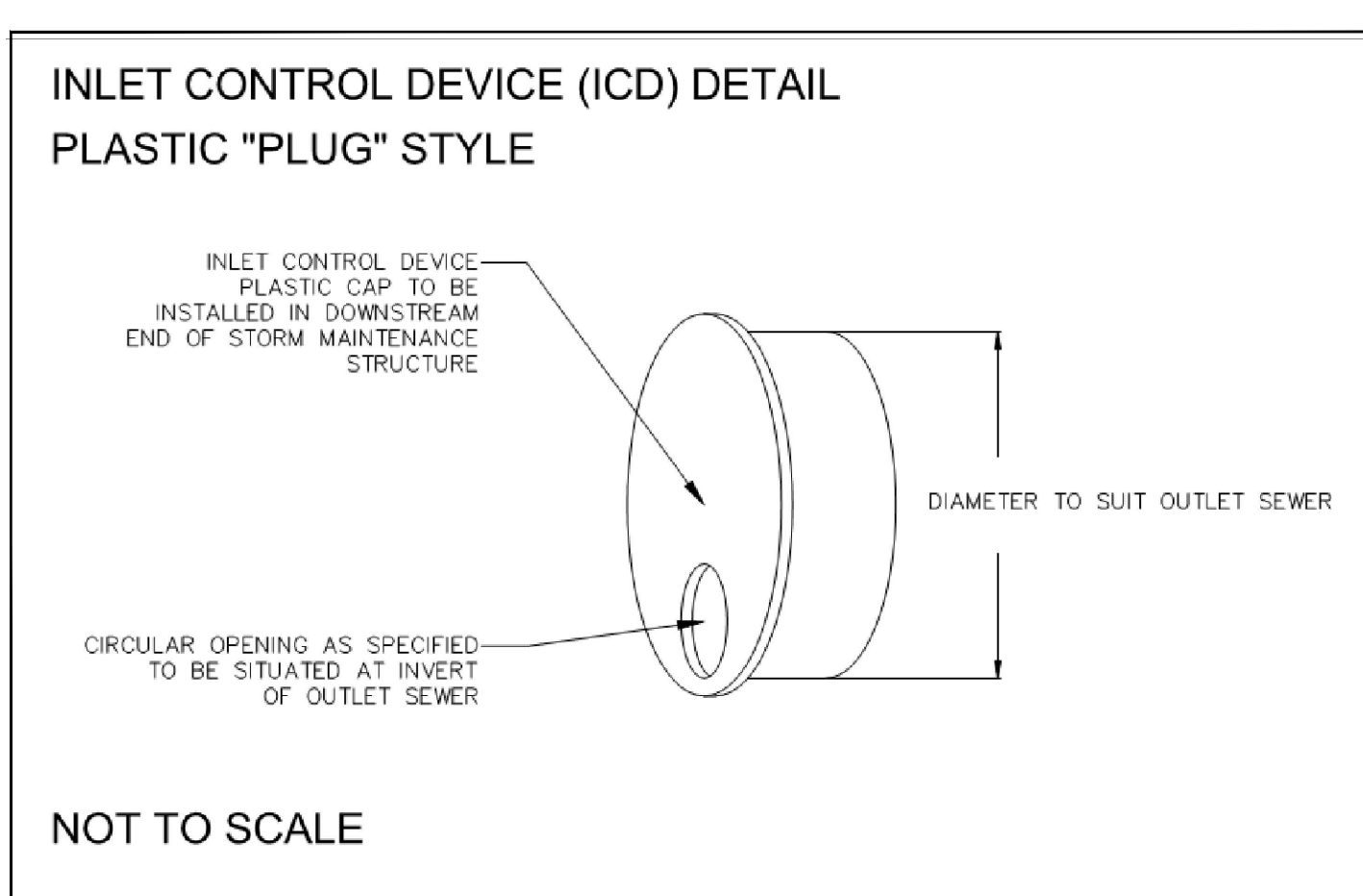
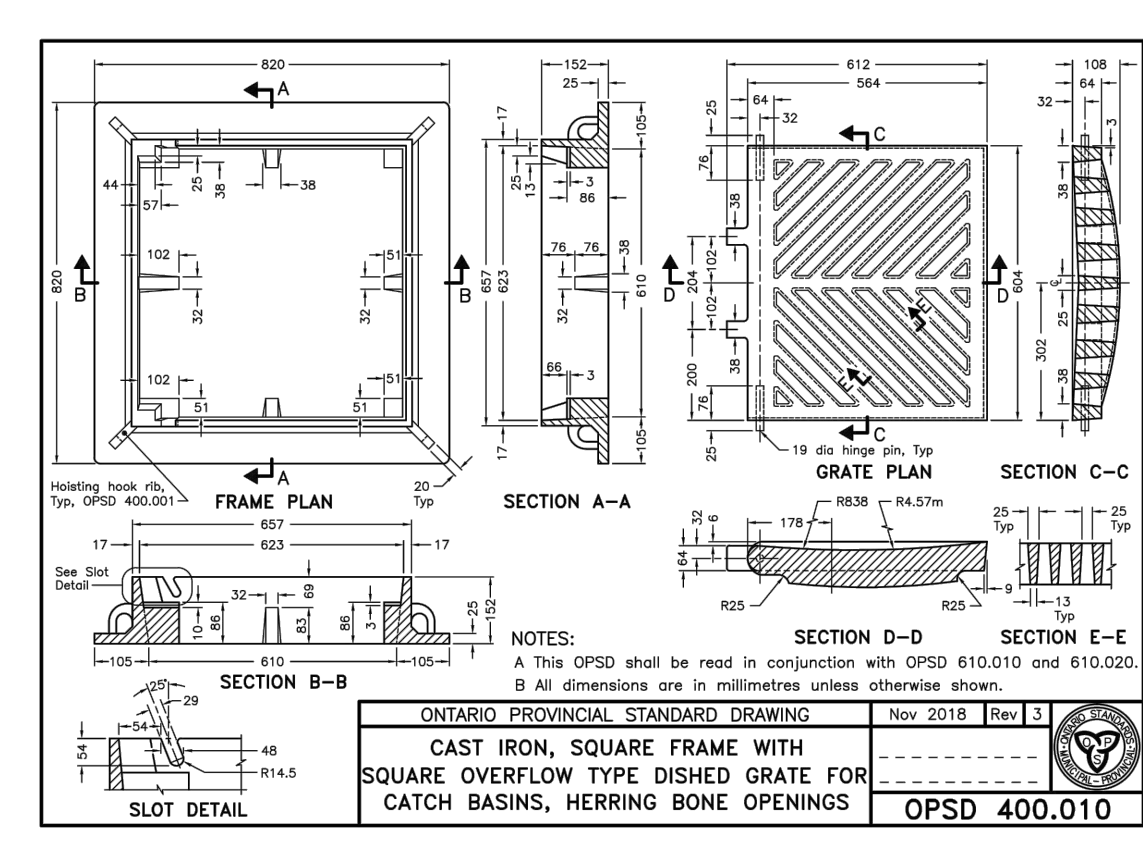
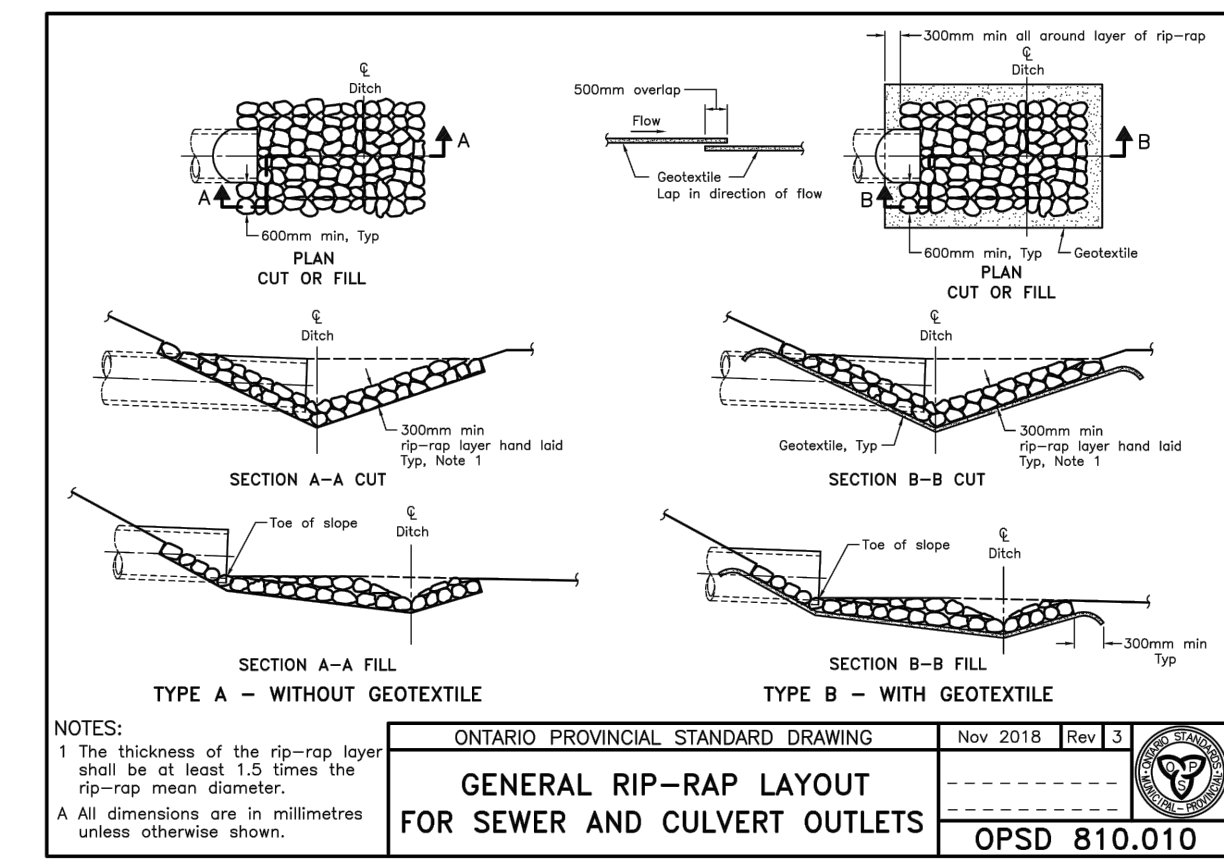
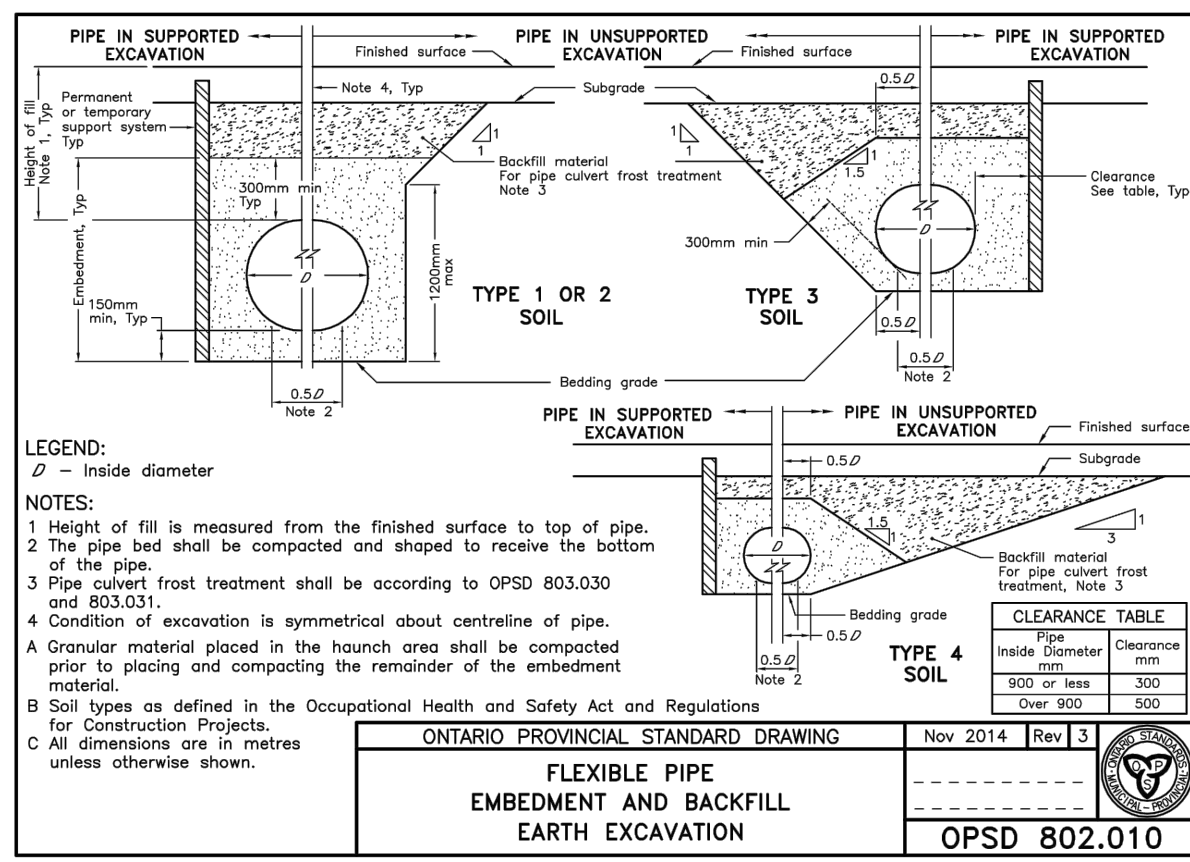
PROJECT: NATIONAL CAPITAL BUSINESS PARK - SITE 2  
4120 RUSSELL RD  
(1100 & 1200 LAST MILE DR), OTTAWA

DRAWING TITLE: POST-DEVELOPMENT WATERSHED PLAN

PROJECT NO: 220345 DATE: AUGUST, 2022

**C702**





**USE AND INTERPRETATION OF DRAWINGS**

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWINGS. THE CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO THE OWNER CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, THE SPECIFICATIONS, ADDENDA, AND MODIFICATIONS ISSUED AFTER EXECUTION OF THE CONTRACT. THESE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ANY ONE SHALL BE BINDING AS IF REQUIRED BY ALL. WORK NOT COMPLETELY DELINEATED HEREON SHALL BE CONSTRUCTED OF THE SAME MATERIALS AND DETAILED SIMILARLY AS WORK SHOWN MORE COMPLETELY ELSEWHERE IN THE CONTRACT DOCUMENTS.

BY USE OF THE DRAWINGS FOR CONSTRUCTION OF THE PROJECT, THE OWNER CONFIRMS THAT HE HAS REVIEWED AND APPROVED THE DRAWINGS. THE CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSELF WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OR OTHER ELECTRONIC MEDIA AND COPIED THERE OF FURNISHED BY THE ENGINEER ARE HIS PROPERTY. THEY ARE TO BE USED ONLY FOR THIS PROJECT AND ARE NOT TO BE USED ON ANY OTHER PROJECT, INCLUDING REPEATS OF THE PROJECT. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

UNLESS THE DRAWING TITLE IS "ISSUED FOR CONSTRUCTION", THESE DRAWINGS SHALL BE CONSIDERED PRELIMINARY AND SHALL NOT BE USED AS A CONSTRUCTION DOCUMENT.

THESE DRAWINGS ILLUSTRATES 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 EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS AT THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS ACKNOWLEDGEMENT 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 FORTHCOMING.

**UNAUTHORIZED CHANGES:**

IN THE EVENT THE CLIENT, THE CLIENT'S CONTRACTORS OR SUBCONTRACTORS, OR ANYONE FOR WHOM THE CLIENT IS LEGALLY LIABLE MAKES OR PERMITS TO BE MADE ANY CHANGES TO ANY REPORTS, PLANS, SPECIFICATIONS OR OTHER CONSTRUCTION DOCUMENTS PREPARED BY LRL ASSOCIATES LTD. (LRL) WITHOUT OBTAINING LRL'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 LRL AND TO RELEASE LRL 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 LRL FROM ANY DAMAGES, LIABILITIES OR COST, 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 PROHIBITS THE CONTRACTOR OR ANY SUBCONTRACTORS OF ANY TIER FROM MAKING ANY CHANGES OR MODIFICATIONS TO LRL'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRL AND THAT FURTHER REQUIRES THE CONTRACTOR TO INDEMNIFY BOTH LRL AND THE CLIENT FROM ANY LIABILITY OR COST ARISING FROM SUCH CHANGES MADE WITHOUT SUCH PROPER AUTHORIZATION.

**GENERAL NOTES:**

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

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 THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES 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.

SUBJECT TO APPROVAL

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

NOT AUTHENTIC UNLESS SIGNED AND DATED  
  
 LRL  
 ENGINEERING | INGENIERIE  
 5430 Canotek Road | Ottawa, ON, K1J 9G2  
 www.lrl.ca | (613) 842-3434

CLIENT: AVENUE 31 CAPITAL INC  
 801-250 City Centre, Ottawa, ON, K1R 6K7  
 C 613-799-2422

DESIGNED BY: A.S. DRAWN BY: A.S. APPROVED BY: V.J.

PROJECT: NATIONAL CAPITAL BUSINESS PARK - SITE 2  
 4120 RUSSELL RD  
 (1100 & 1200 LAST MILE DR), OTTAWA

DRAWING TITLE: CONSTRUCTION DETAIL PLAN

PROJECT NO: 220345  
 DATE: AUGUST, 2022

ISSUED FOR MUNICIPAL APPROVAL: A.S. 31 AUG 2022  
 No. REVISIONS BY DATE

C901