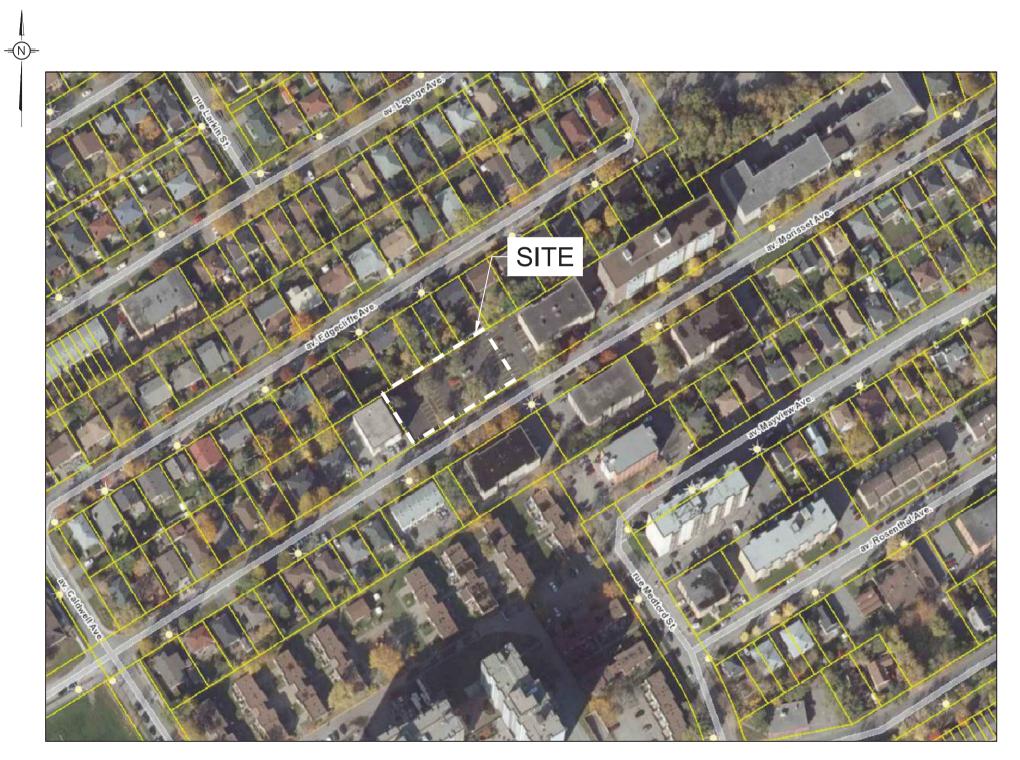
PROPOSED 3-STOREY LOW-RISE APARTMENT 1435 &1455 MORISSET AVE, OTTAWA, ON

REVISION 01



KEY PLAN (N.T.S.)

DRAWING INDEX

TITLE PAGE SEDIMENT AND EROSION CONTROL PLAN DEMOLITION PLAN GRADING AND DRAINAGE PLAN SERVICING PLAN STORMWATER MANAGEMENT PLAN PRE-DEVELOPMENT WATERSHED PLAN POST-DEVELOPMENT WATERSHED PLAN CONSTRUCTION DETAIL PLAN



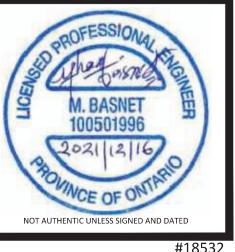


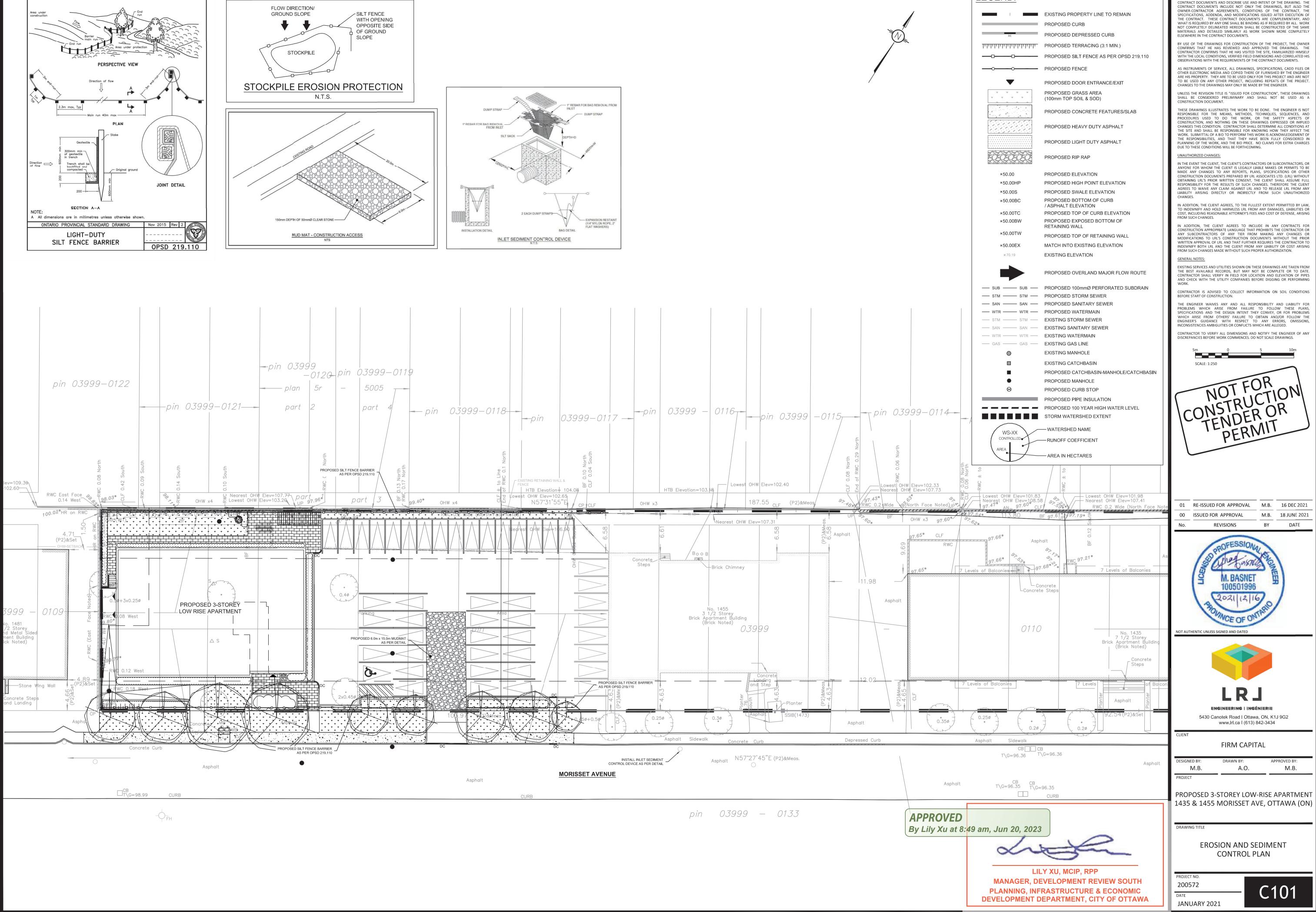
ENGINEERING | INGÉNIERIE

5430 Canotek Road | Ottawa, ON, K1J 9G2 www.lrl.ca | (613) 842-3434

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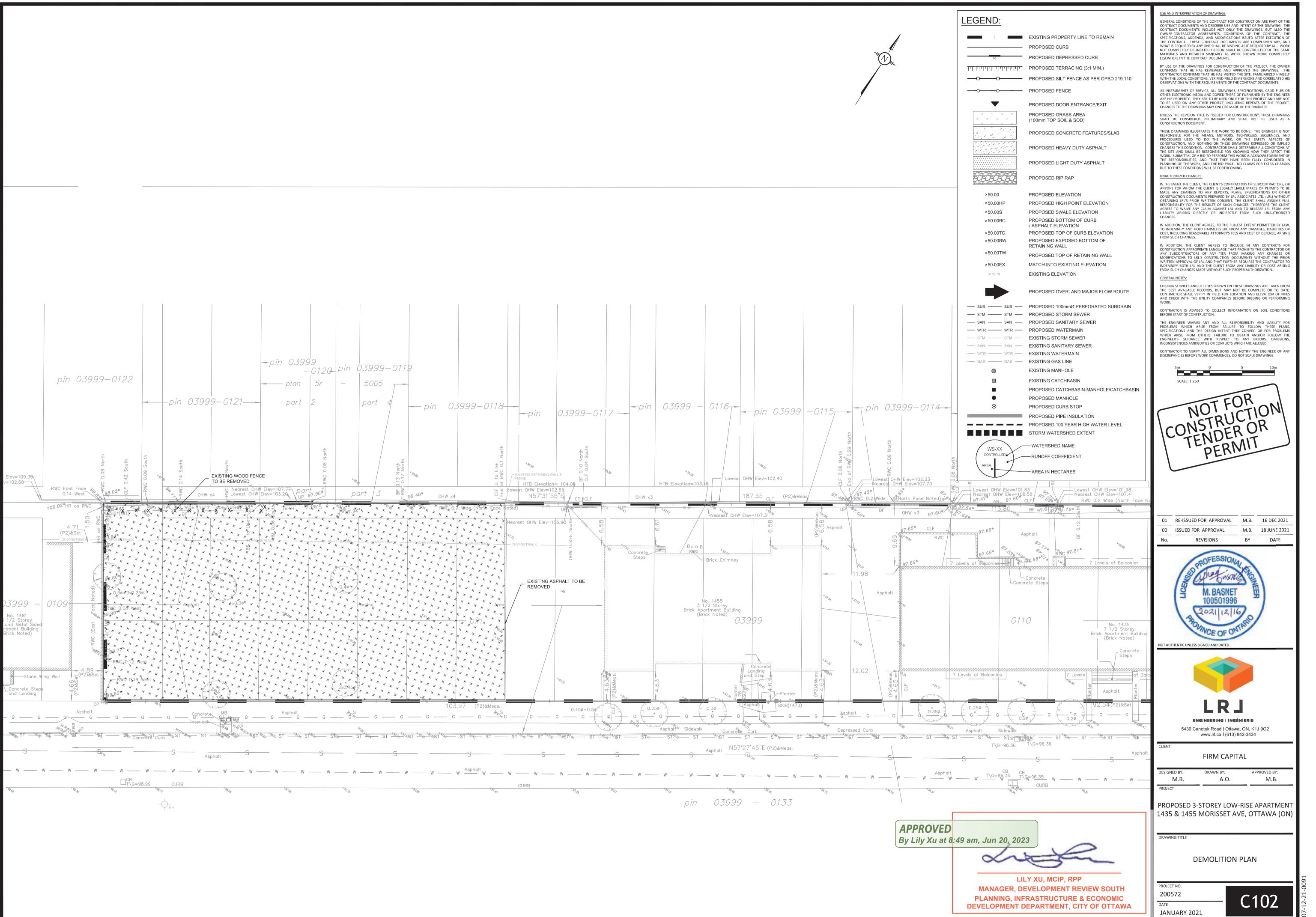
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USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE

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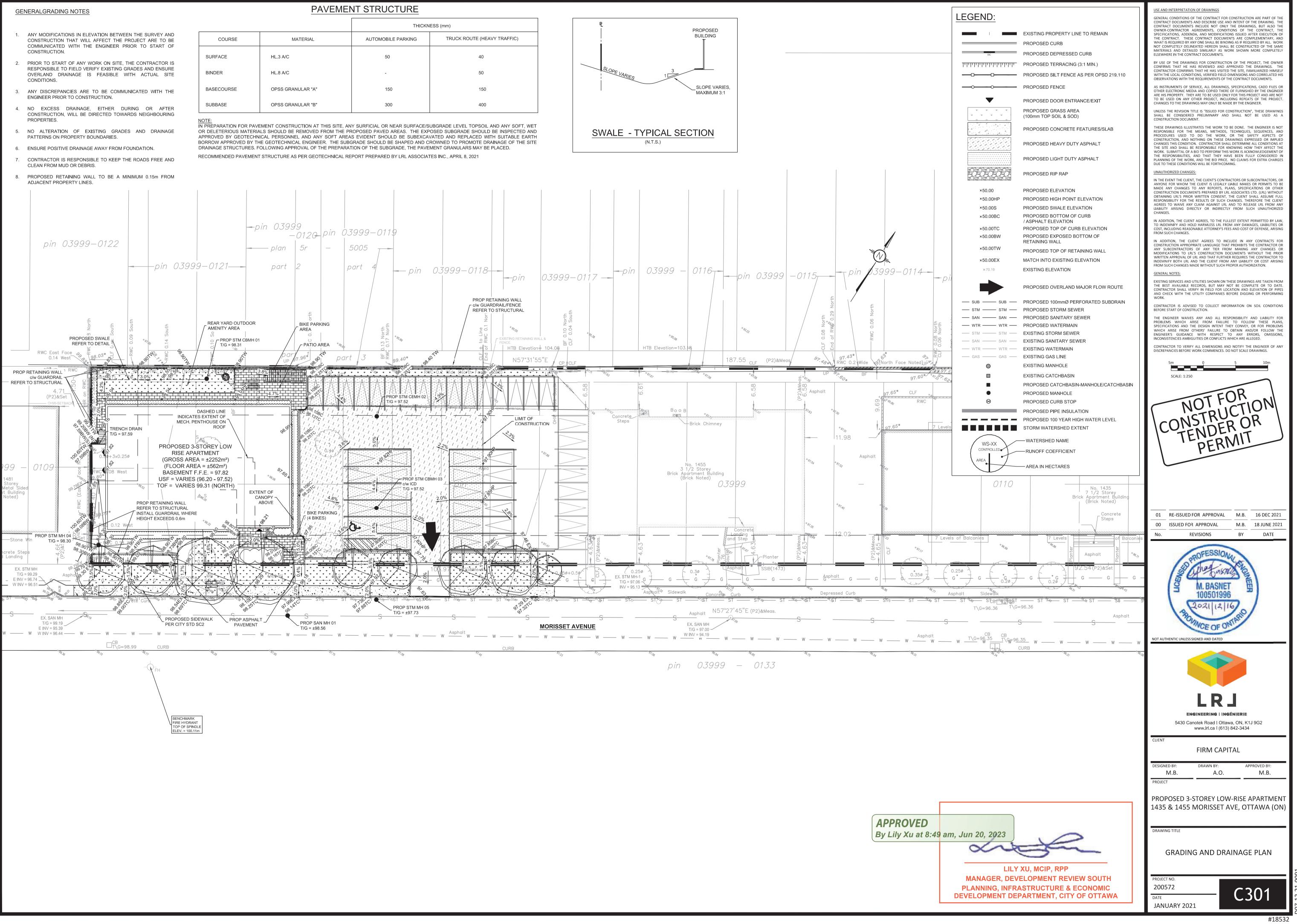
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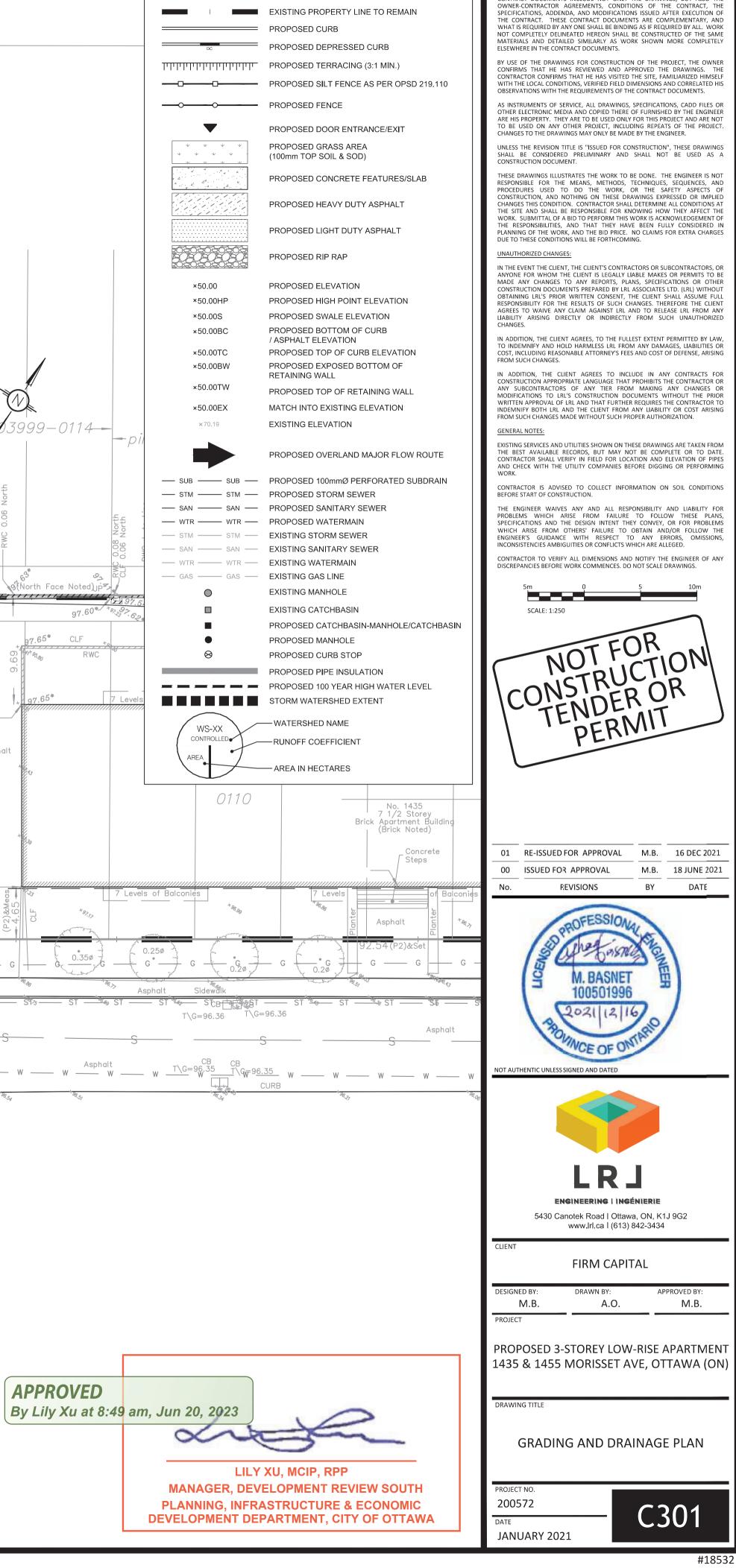


- CONSTRUCTION.
- CONDITIONS.
- PROPERTIES.

- PROPOSED RETAINING WALL TO BE A MINIMUM 0.15m FROM

		THICKNESS (mm)		
COURSE	MATERIAL	AUTOMOBILE PARKING	TRUCK ROUTE	
SURFACE	HL.3 A/C	50		
BINDER	HL.8 A/C	-		
BASECOURSE	OPSS GRANULAR "A"	150		
SUBBASE	OPSS GRANULAR "B"	300		





NOTES: GENERAL

- CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.
- ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. JOB BENCH MARK - CONFIRM WITH LRL PRIOR TO UTILIZATION.
- ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE, CATCH BASIN OUTLETS AND/OR STORM DETENTION AREAS ARE PROVIDED. STRIP AND REMOVE ALL TOPSOIL FROM IMPROVED AREAS.
- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A CLEAN STRAIGHT LINE
- PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM. CURBS TO BE BARRIER, CONSTRUCTED AS PER OPSD 600.110.
- ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED. CONSTRUCTION TO OPSS 206, 310 & 314. MATERIALS TO OPSS 1001, 1003 & 1010. ABUTTING PROPERTY GRADE TO BE MATCHED.
- OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
- FILTER FABRIC TO BE INSTALLED AND MAINTAINED BETWEEN THE FRAME AND COVER OF ALL CATCHBASINS, CATCHBASIN MANHOLES AND MANHOLES DURING THE CONSTRUCTION PERIOD TO MINIMIZE SEDIMENTS ENTERING THE STORM SEWER SYSTEM. ALL GRASSED AREAS MUST BE COMPLETED PRIOR TO THE REMOVAL OF THE FILTER FABRIC IN THE DRAINAGE STRUCTURES REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM
- THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS. IF ANY. LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS. THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE CONTRACTOR FROM THE REQUIREMENTS TO OBTAIN THE VARIOUS PERMITS/APPROVALS REQUIRED TO COMPLETE A CONSTRUCTION PROJECT, SUCH AS BUT NOT LIMITED TO; ROAD CUT PERMITS, SEWER
- PERMITS, WATER PERMIT, ETC. AT PROPOSED UTILITY CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER, SANITARY SEWER, WATER, ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING WORK.
- ALL SIDEWALK CONSTRUCTION TO BE AS PER OPSD 310.010 & OPSD 310.050. EXISTING BUILDINGS REQUIRE A CCTV INSPECTION AND REPORT TO ENSURE EXISTING
- SERVICES TO BE RE-USED ARE IN GOOD WORKING ORDER AND MEET CURRENT MINIMUM SIZE REQUIREMENTS. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH CURRENT CITY OF OTTAWA
- (COA) STANDARDS AND ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS & OPSD): SEWER AND WATERMAIN MATERIAL TYPES AND DISINFECTION.

NOTES: SEWERS

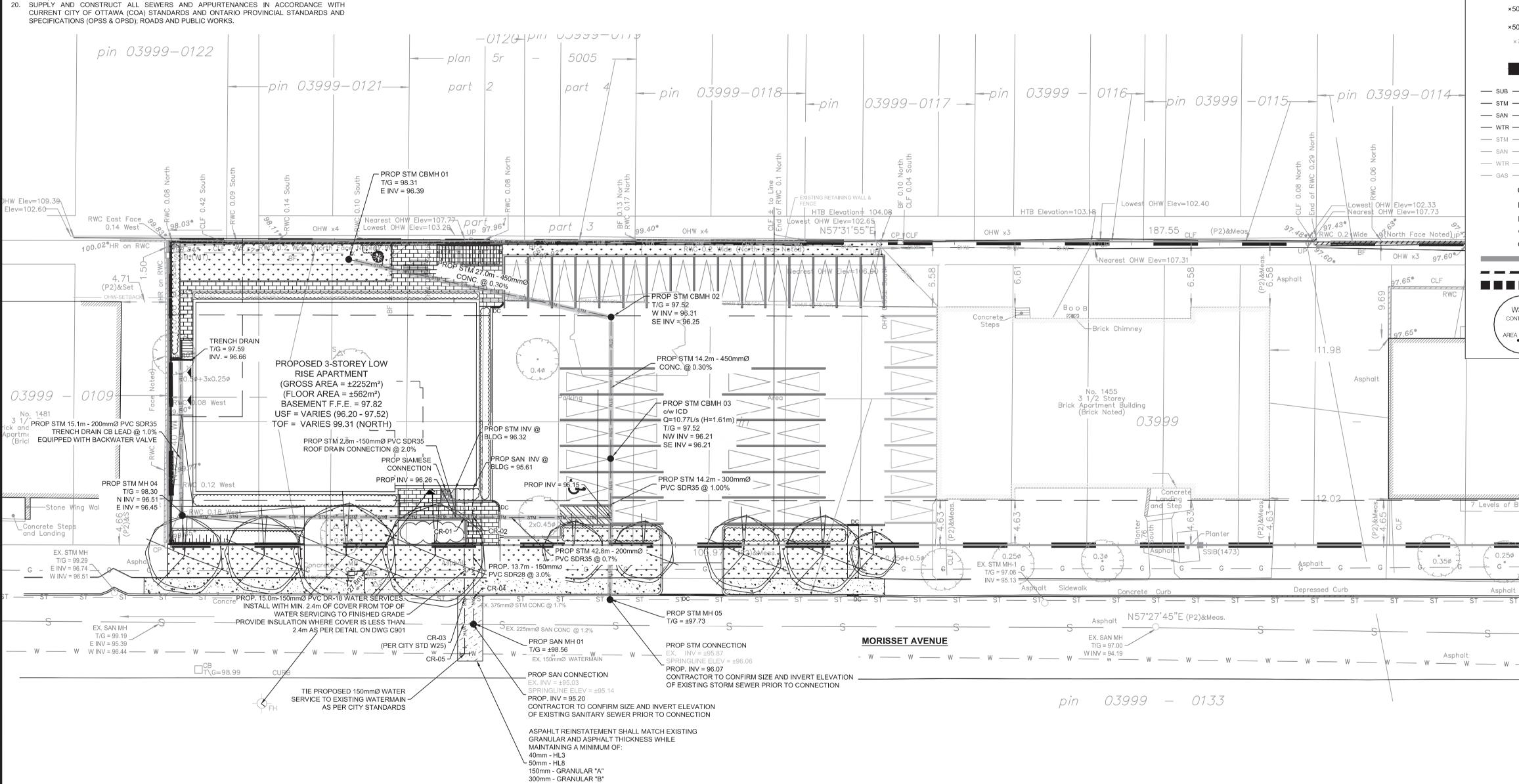
- SEWER BEDDING AS PER PIPE TRENCH DETAIL WITH GRANULAR 'A' BEDDING COMPACTED TO 95% OF ITS SPMDD. ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410. CONTRACTOR TO CONFIRM ELEVATION OF EXISTING SEWERS AT PROPOSED CONNECTION POINTS AND REPORT ANY
- DISCREPANCIES TO THE ENGINEER BEFORE COMMENCING ANY WORK. ALL SEWERS WITH LESS THAN 2.0m OF COVER ARE SUBJECT TO INSULATION DETAIL
- INSULATE ALL STORM PIPES WITH LESS THAN 2.0m COVER AND ALL SANITARY PIPES WITH LESS THAN 2.1m COVER WITH APPROPRIATE DEPTH OF THERMAL INSULATION AS PER CITY OF OTTAWA SEWER DESIGN GUIDELINES SECTION 5.7.1.3 & 5.10 AS WELL. ALSO REFER TO COO STD. DWGS. W21-23.
- FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTION SEWER PIPES TO MANHOLES. SANITARY RUBBER GASKET TYPE JOINTS TO CONFORM TO CSA.
- QUALITY CONTROL FIELD TESTS, LEAKAGE & DYE TESTS FOR SEWERS TO BE COMPLETED IN ACCORDANCE TO OTTAWA SEWER DESIGN GUIDELINES SECTION 6.1.14 & 6.1.15.

SANITARY

- 8. ALL SANITARY GRAVITY SEWER SHALL BE PVC SDR 28, IPEX 'RING-TITE' (OR APPROVED EQUIVALENT) PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE.
- EXISTING MAINTENANCE STRUCTURES TO BE RE-BECNHED 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. 11. SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. S24 AND S25.
- 12. SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHED PER OPSD 701.021.

STORM

- 13. STORM GRAVITY SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. S6 AND S7, CLASS 'B' BEDDING, UNLESS SPECIFIED OTHERWISE. BEDDING AND COVER MATERIAL TO BE SPECIFIED BY GEOTECHNICAL ENGINEER. 14. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS
- OTHERWISE SPECIFIED 15. CATCH BASINS SHALL BE IN ACCORDANCE WITH OPSD 705.010.
- 16. CATCH BASIN LEADS SHALL BE 200mm DIA. AT 1.0% SLOPE (MIN) UNLESS SPECIFIED OTHERWISE. 17. ALL CATCH BASINS SHALL HAVE 600mm SUMPS, UNLESS SPECIFIED OTHERWISE.
- 18. ALL CATCH BASIN LEAD INVERTS TO BE 1.5m BELOW FINISHED GRADE UNLESS SPECIFIED OTHERWISE. 19. STORM MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD 25 AND S24.1, UNLESS SPECIFIED OTHERWISE.
- 20. CATCHBASIN FRAME AND COVER SHALL BE PER OPSD 400.010 UNLESS OTHERWISE NOTED.



CONTRACTOR TO COMPLETE ROAD CUT AS PER CITY OF OTTAWA DETAIL R10

TABLE: PIPE CROSSING

Crossing #	PROP. SAN	PROP. WM	PROP. STM	EX. STM (375mm)	EX. SAN (225mm)	Depth Separation (m)
CR-01	N/A	95.76 (obv.)	96.26 (inv.)	N/A	N/A	±0.50
CR-02	95.68(obv.)	N/A	96.25 (inv.)	N/A	N/A	±0.57
CR-03	N/A	95.62 (obv.)	N/A	±96.12 (inv.)	N/A	±0.50
CR-04	95.38(obv.)	N/A	N/A	±96.10 (inv.)	N/A	±0.72
CR-05	N/A	95.75 (inv.)	N/A	N/A	±95.25 (obv.)	±0.50

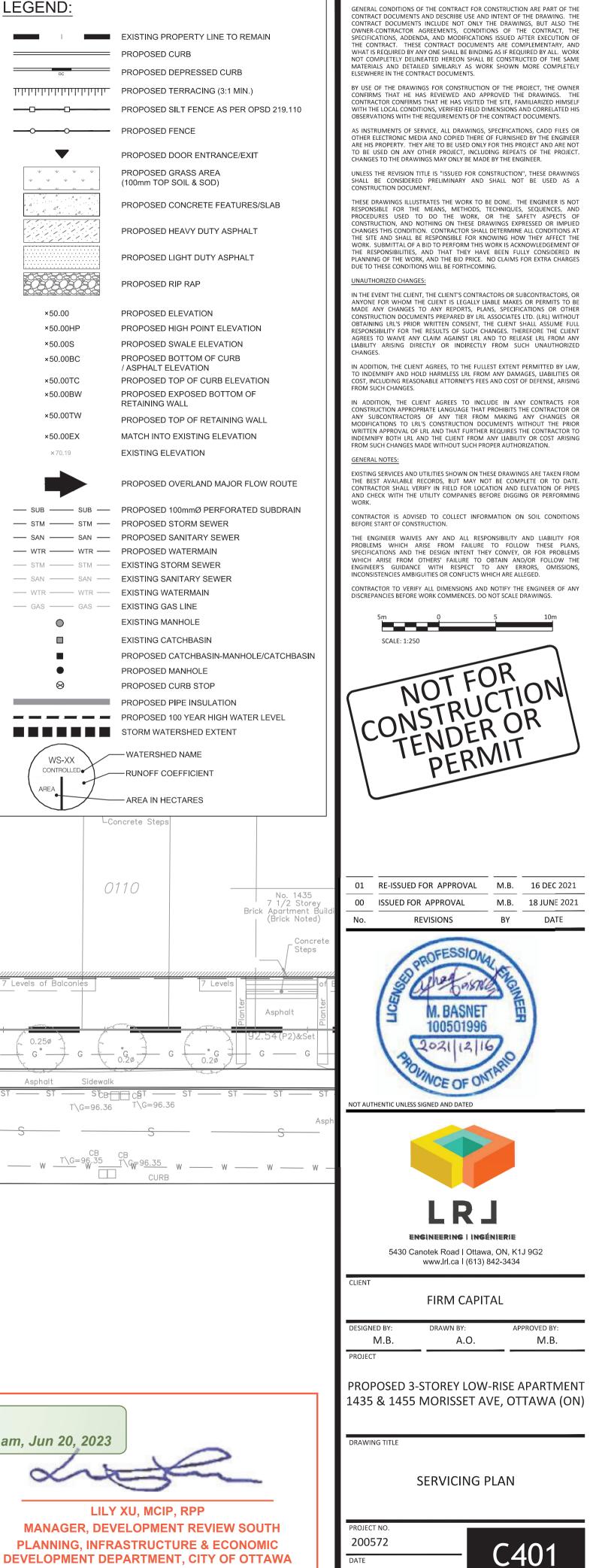
NOTES: WATERMAIN

- 5.

PROPOSED WATER SERVICE TO BE 2.4m BELOW GRADE, WHERE LESS THAN 2.4M COVER, THERMAL INSULATION IS TO BE PROVIDED AS PER COO STD. DWGS. W 21 (DITCHED AREAS), W22 (SHALLOW TRENCHES) W23 (AT OPEN STRUCTURES) AND CITY OF OTTAWA DESIGN GUIDELINES (COODG) -WATER DISTRIBUTION (WD) SECTION 4.3.13. ALL PVC WATERMAINS SHALL BE AWWA C-900 CLASS 150, SDR 18 OR APPROVED EQUIVALENT.

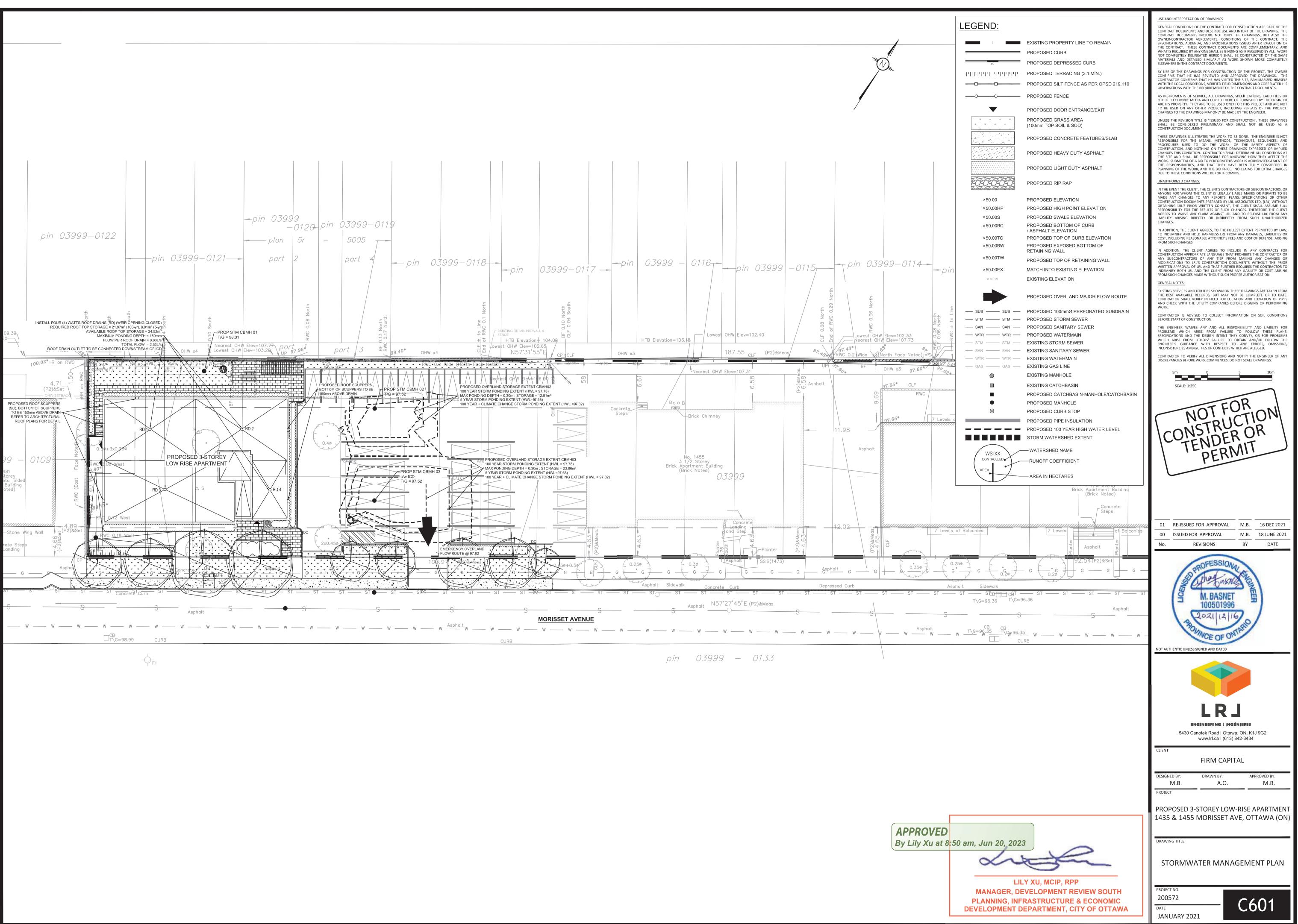
- WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH OPSD 802.010/802.010 AND CITY OF OTTAWA STANDARD W17, UNLESS SPECIFIED OTHERWISE, BEDDING AND COVER MATERIAL TO BE SPECIFIED BY GEOTECHNICAL ENGINEER. FIRE HYDRANT INSTALLATION AS PER CITY STD W19, ALL BOTTOM OF HYDRANT FLANGE
- ELEVATIONS TO BE INSTALLED 0.10m ABOVE PROPOSED FINISHED GRADE AT HYDRANT; FIRE HYDRANT LOCATION AS PER STD DWG W18 UNLESS OTHERWISE NOTED. BUILDING SERVICE TO BE CAPPED OFF 1.0m OFF THE FACE OF BUILDING UNLESS OTHERWISE NOTED AND MUST BE RESTRAINED A MINIMUM OF 12m BACK FROM STUB.
- ALL WATERMAIN STUBS SHALL BE TERMINATED WITH A PLUG AND 500mm BLOW OFF UNLESS OTHERWISE NOTED METALLIC WARNING TAPE SHALL BE USED OVER ALL WATERMAINS. INSTALL AND TEST TRACER WIRE FOR ALL PROPOSED WATERMAIN IN ACCORDANCE WITH THE
- COODG-WD AS SPECIFIED IN SECTION 4.3.12 AND COO STD. DWG. W36. WATER SHUTOFF VALVE AND VALVE BOX TO BE WITHIN THE ROW AND LOCATED A MINIMUM DISTANCE OF 1.0 M FROM THE BUILDING FOUNDATION (IF APPLICABLE). TYPICAL PRIVATE SERVICES AS PER COO STD. DWG. W50 (≥ 100MM SERVICE CONNECTION). VALVE BOX
- ASSEMBLY AS PER COO STD. DWG. W24. 10. ALL CONNECTIONS, RESTRAINT RODS AND VALVE BOLTS TO BE STAINLESS STEEL AS PER COADG - WATER DISTRIBUTION SECTION 4.3.11 AND COO STD DWGS . 11. VALVES TO BE OPERATED BY CITY OF OTTAWA STAFF ONLY.
- 12. NO CONNECTION TO EXISTING WATER NETWORK SHALL BE COMPLETED UNTIL A WATER PERMIT IS OBTAINED FROM THE CITY OF OTTAWA (COO). COA FORCES TO COMPLETE WATERMAIN CONNECTIONS. EXCAVATION, BACKFILLING AND REINSTATEMENT TO BE COMPLETED BY CONTRACTOR. 13. CATHODIC PROTECTION AS PER OPSD 1109.010, COADG – WATER DISTRIBUTION SECTION 4.8
- AND COO STD. DWGS, W39 (DI), W40 (PVC) AND/OR W41-W45 & 48 AS APPLICABLE. 14. PRESSURE TESTING AS PER AWWA C-605-5 & COADG – WATER DISTRIBUTION SECTION 4.6.13. 15. CHLORINATION AS PER AWA C-651-05, COADG - WATER DISTRIBUTION SECTION 4.6.13 & COO STD. DWG. W46

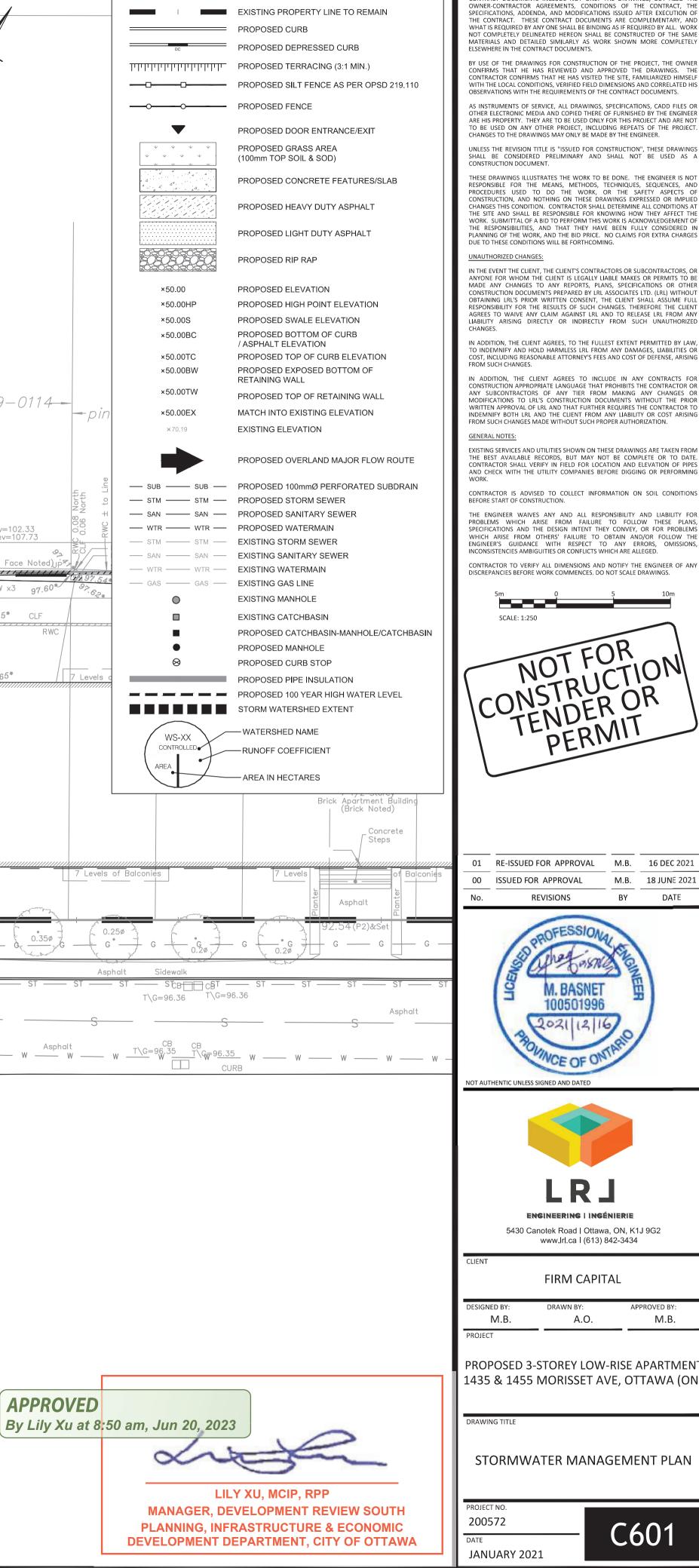
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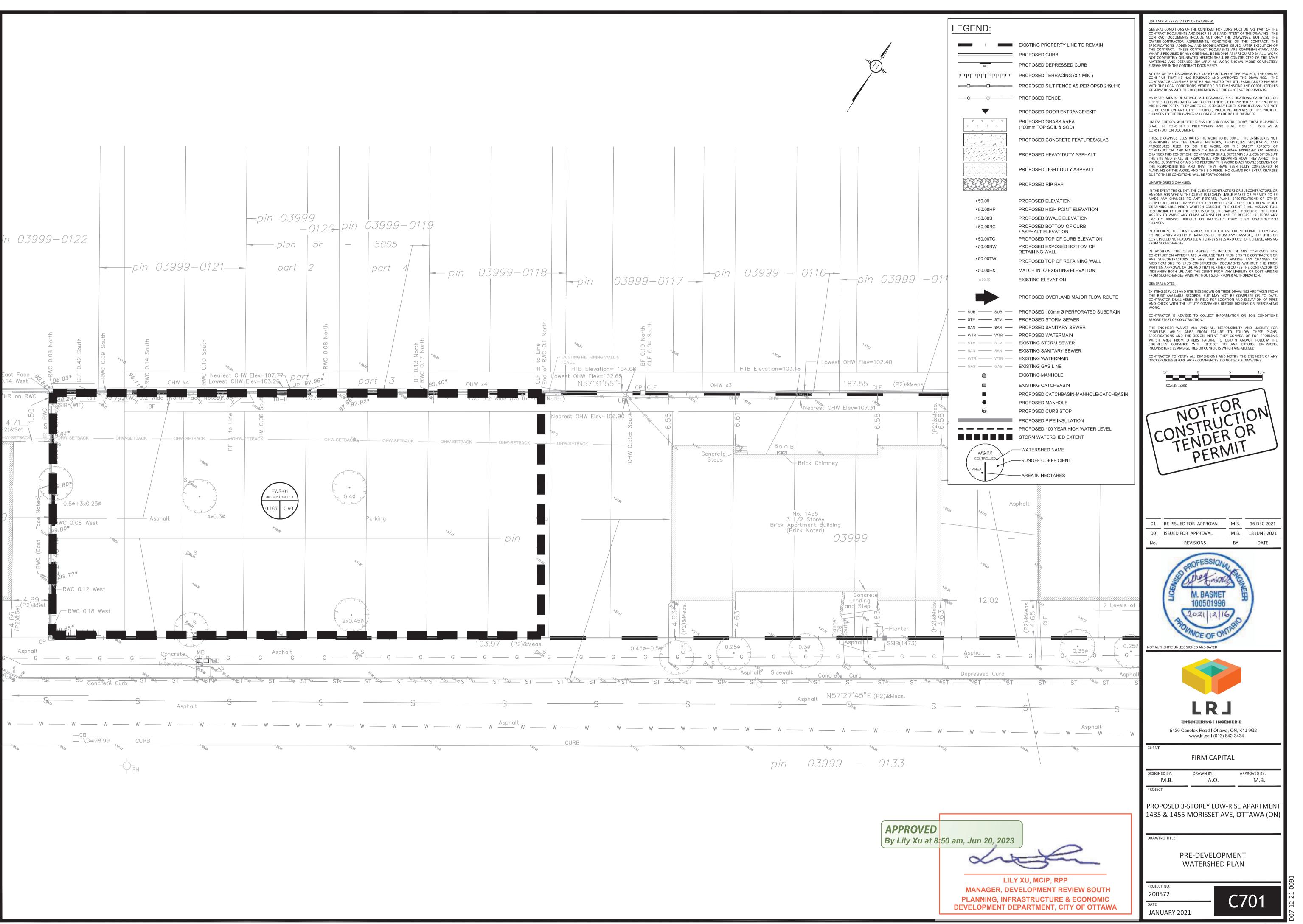


USE AND INTERPRETATION OF DRAWINGS

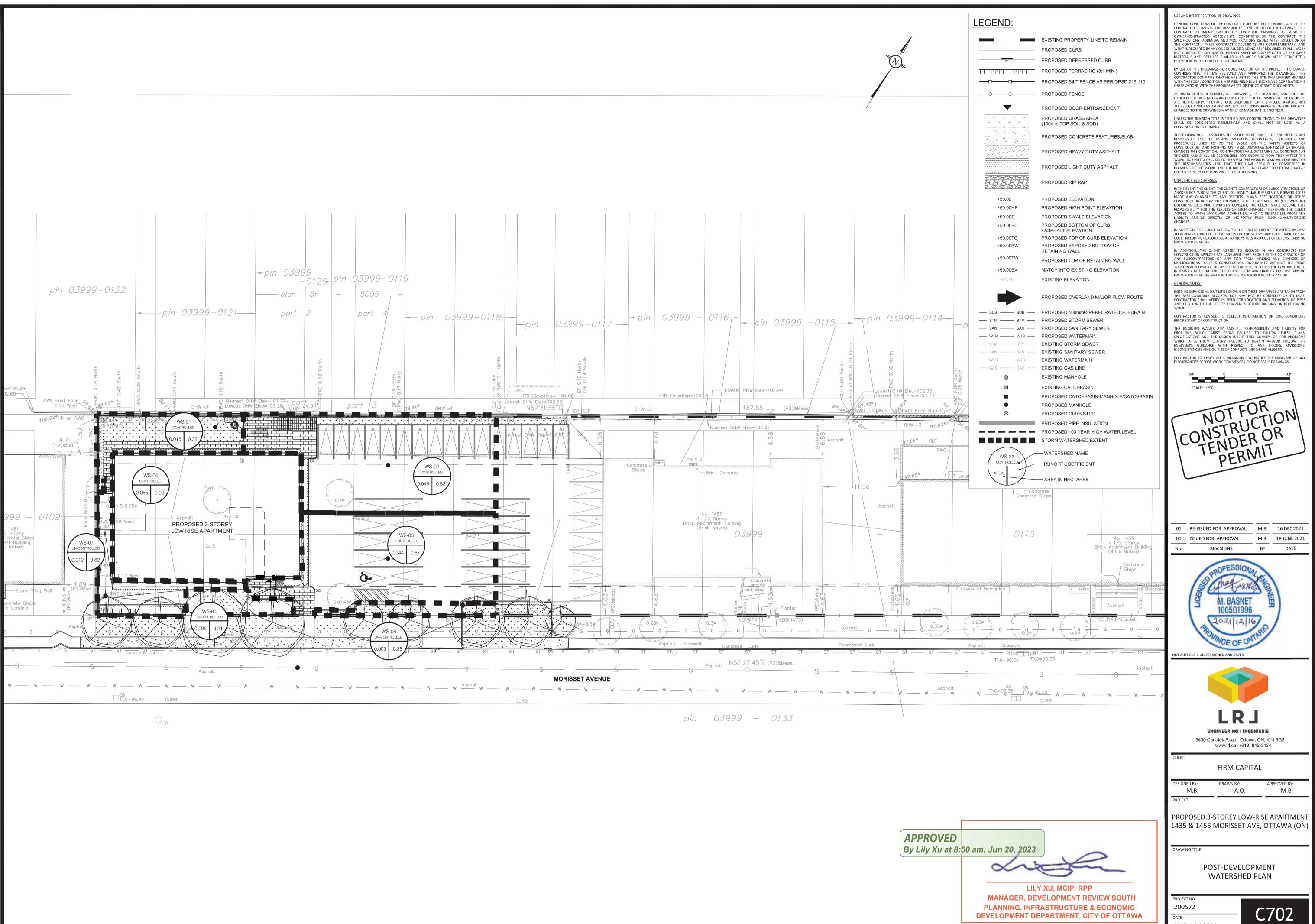
JANUARY 2021

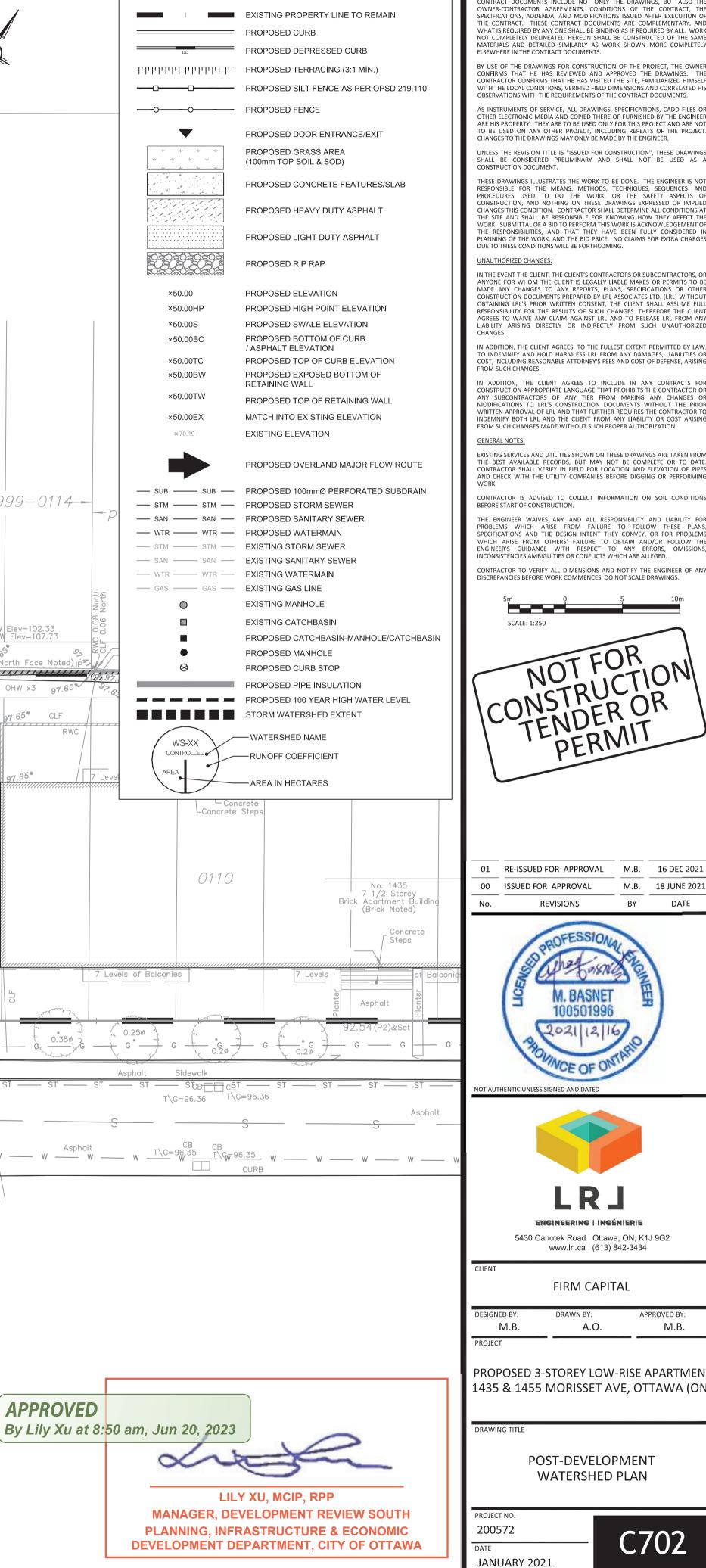


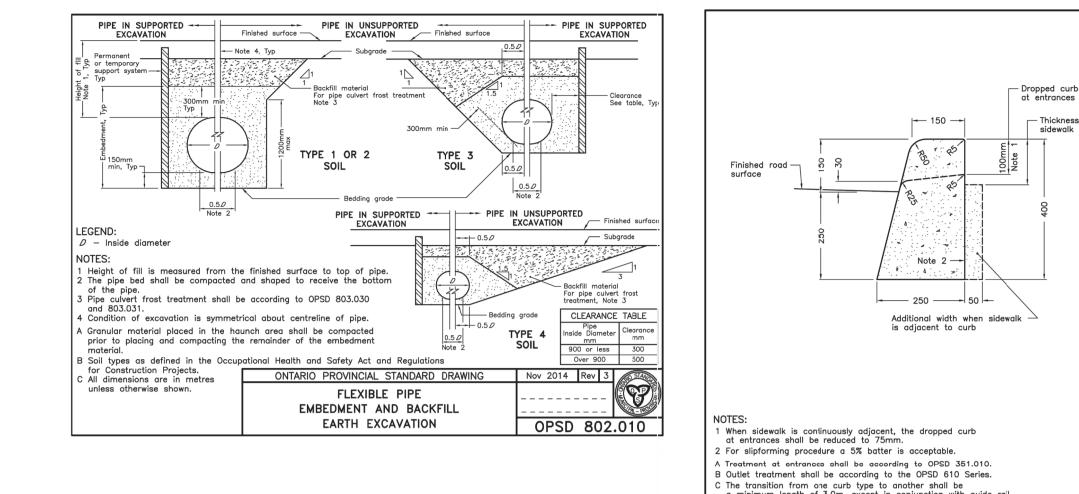


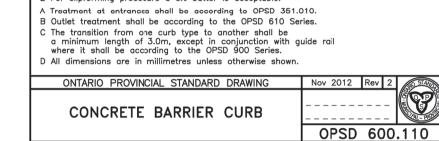


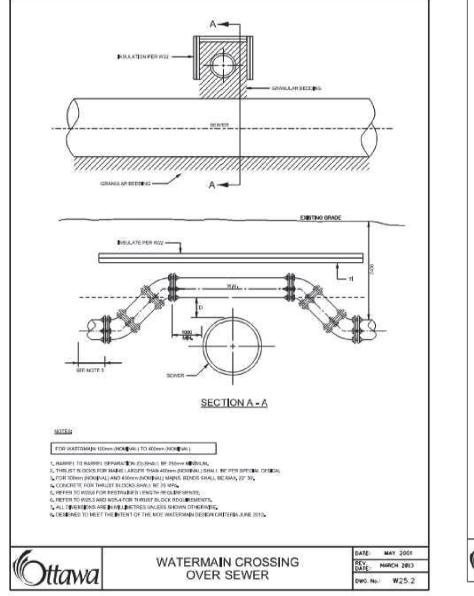
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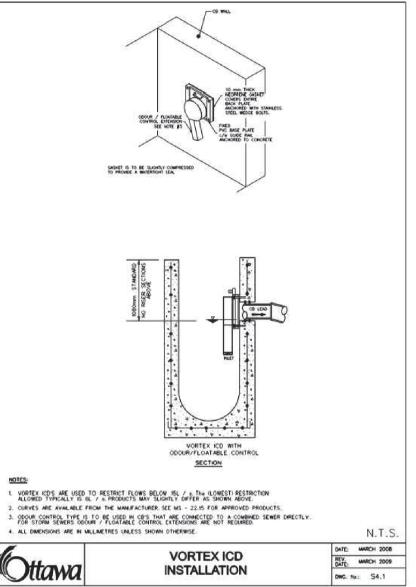


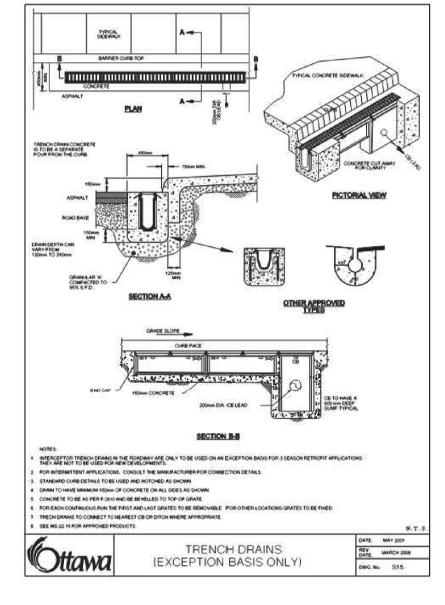




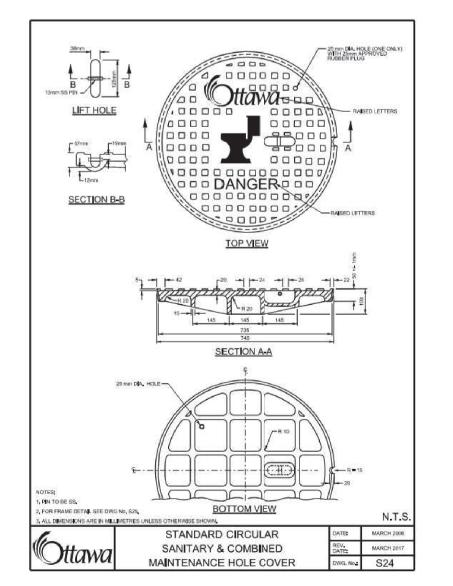


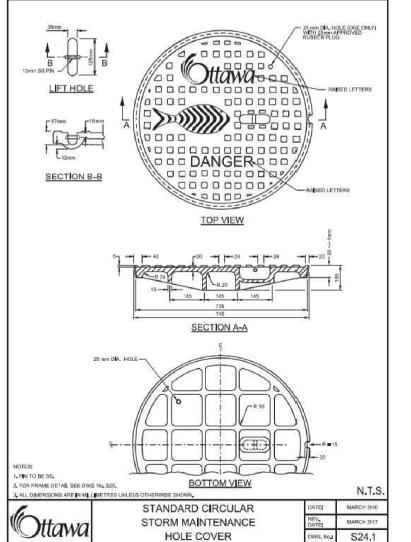


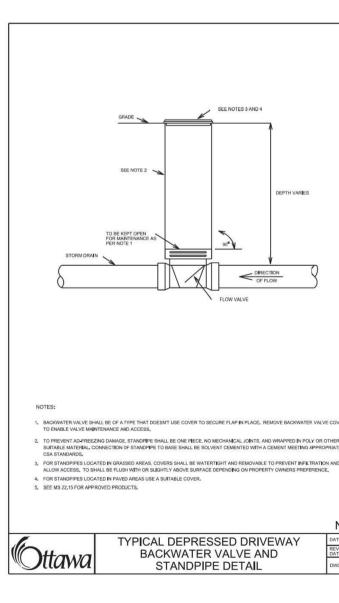


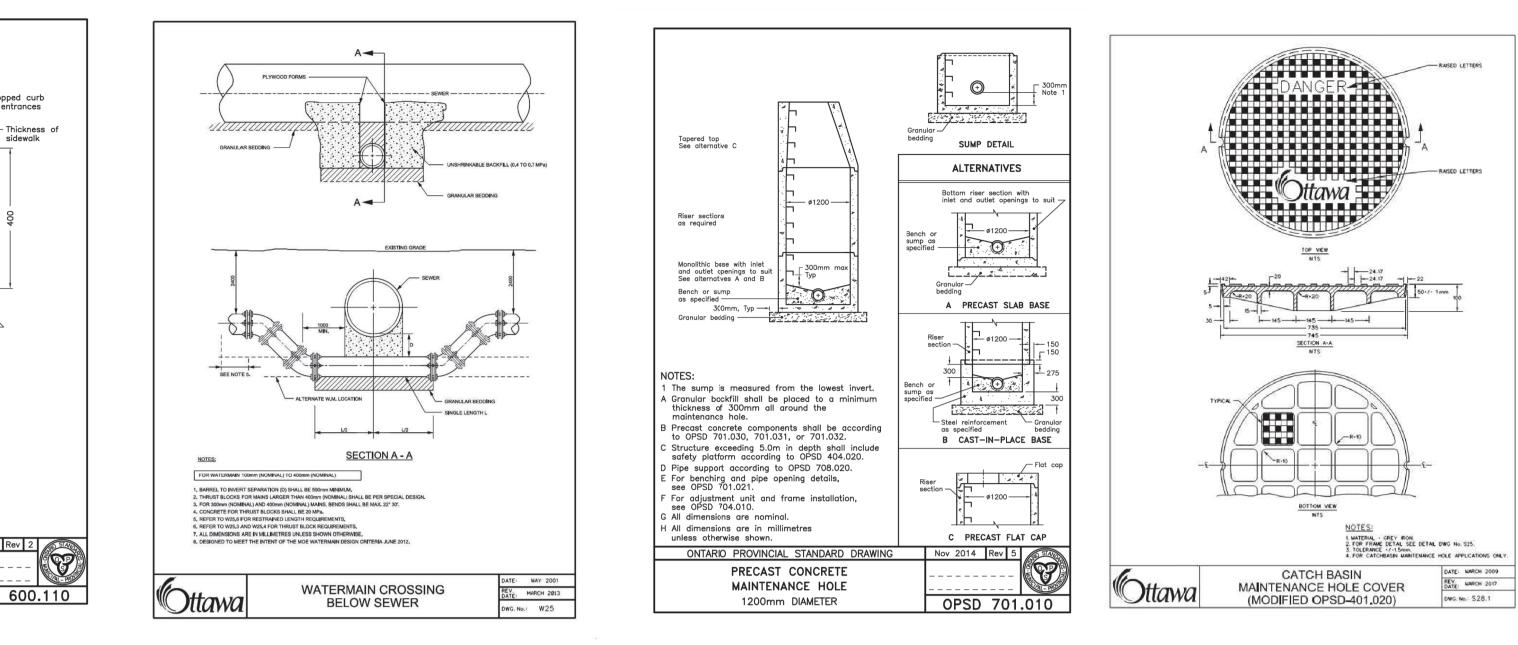


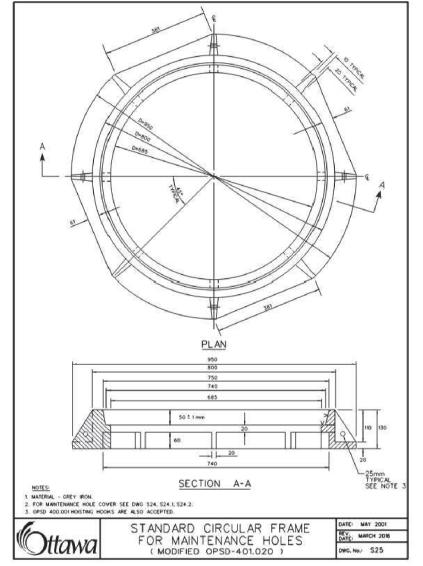
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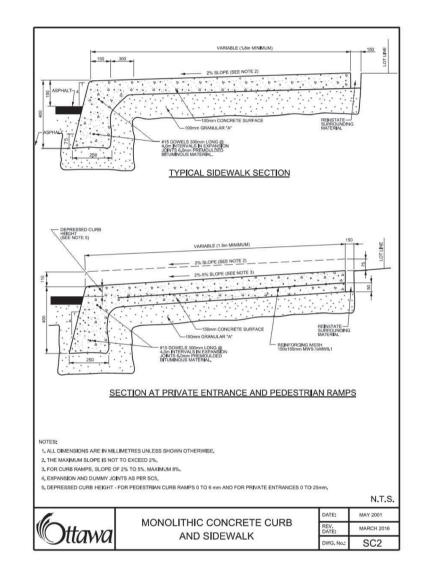


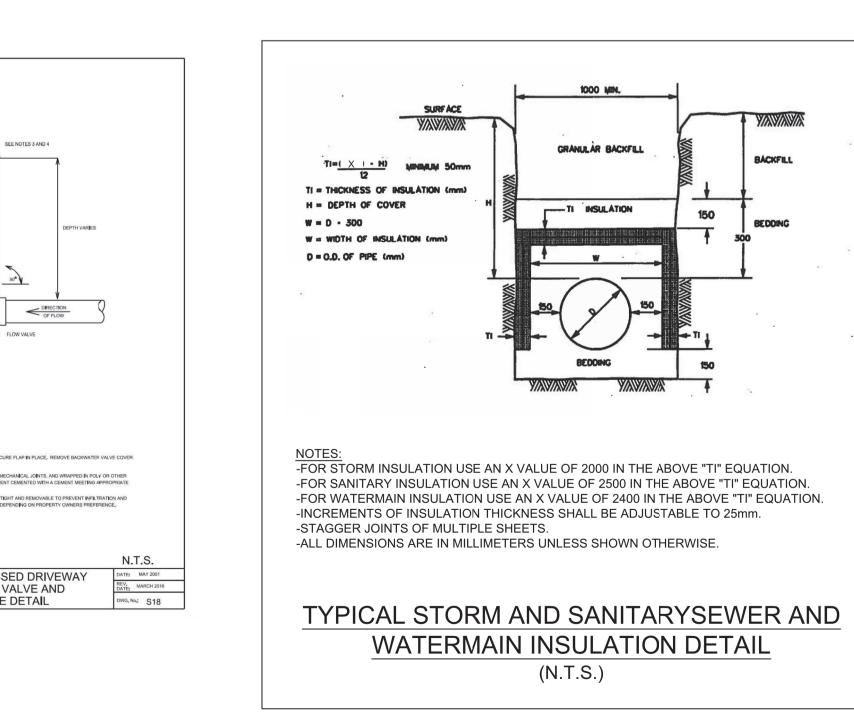














USE AND INTERPRETATION OF DRAWINGS

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ARE PART OF THE CONTRACT DOCUMENTS AND DESCRIBE USE AND INTENT OF THE DRAWING. T CONTRACT DOCUMENTS INCLUDE NOT ONLY THE DRAWINGS, BUT ALSO TH OWNER-CONTRACTOR AGREEMENTS, CONDITIONS OF THE CONTRACT, T 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 FLSEWHERE 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. THI CONTRACTOR CONFIRMS THAT HE HAS VISITED THE SITE, FAMILIARIZED HIMSEL WITH THE LOCAL CONDITIONS, VERIFIED FIELD DIMENSIONS AND CORRELATED HIS DBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OF AS INSTRUMENTS OF SERVICE, ALL DRAWINGS, SPECIFICATIONS, CADD FILES OF 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 REVISION 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 NO 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 HANGES THIS CONDITION. CONTRACTOR SHALL DETERMINE ALL CONDITIONS A THE SITE AND SHALL BE RESPONSIBLE FOR KNOWING HOW THEY AFFECT TH 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 DBTAINING LRL'S PRIOR WRITTEN CONSENT, THE CLIENT SHALL ASSUME FUI RESPONSIBILITY FOR THE RESULTS OF SUCH CHANGES. THEREFORE THE CLIEN AGREES TO WAIVE ANY CLAIM AGAINST LRL AND TO RELEASE LRL FROM ANY LIABILITY ARISING DIRECTLY OR INDIRECTLY FROM SUCH UNAUTHORIZED CHANGES.

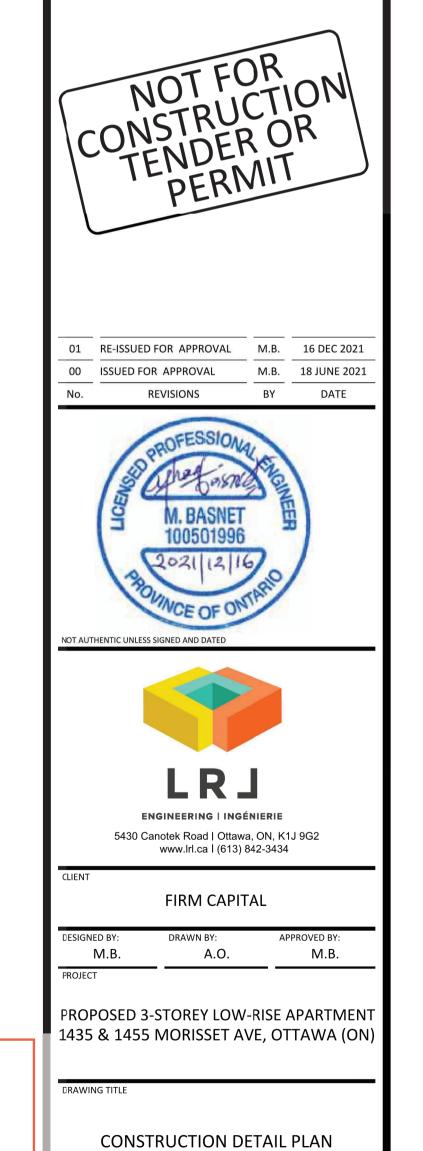
IN ADDITION, THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS LRL FROM ANY DAMAGES, LIABILITIES OR COST, INCLUDING REASONABLE ATTORNEY'S FEES AND COST OF DEFENSE, ARISING FROM SUCH CHANGES

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 OF MODIFICATIONS TO LRU'S CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN APPROVAL OF LRU 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.



PROJECT NO. 200572

DATE

JANUARY 2021

#18532