

PROVIDE FROST PROTECTION FOR FOOTING ABOVE 1.5m BELOW THE SURROUNDING GRADE

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.

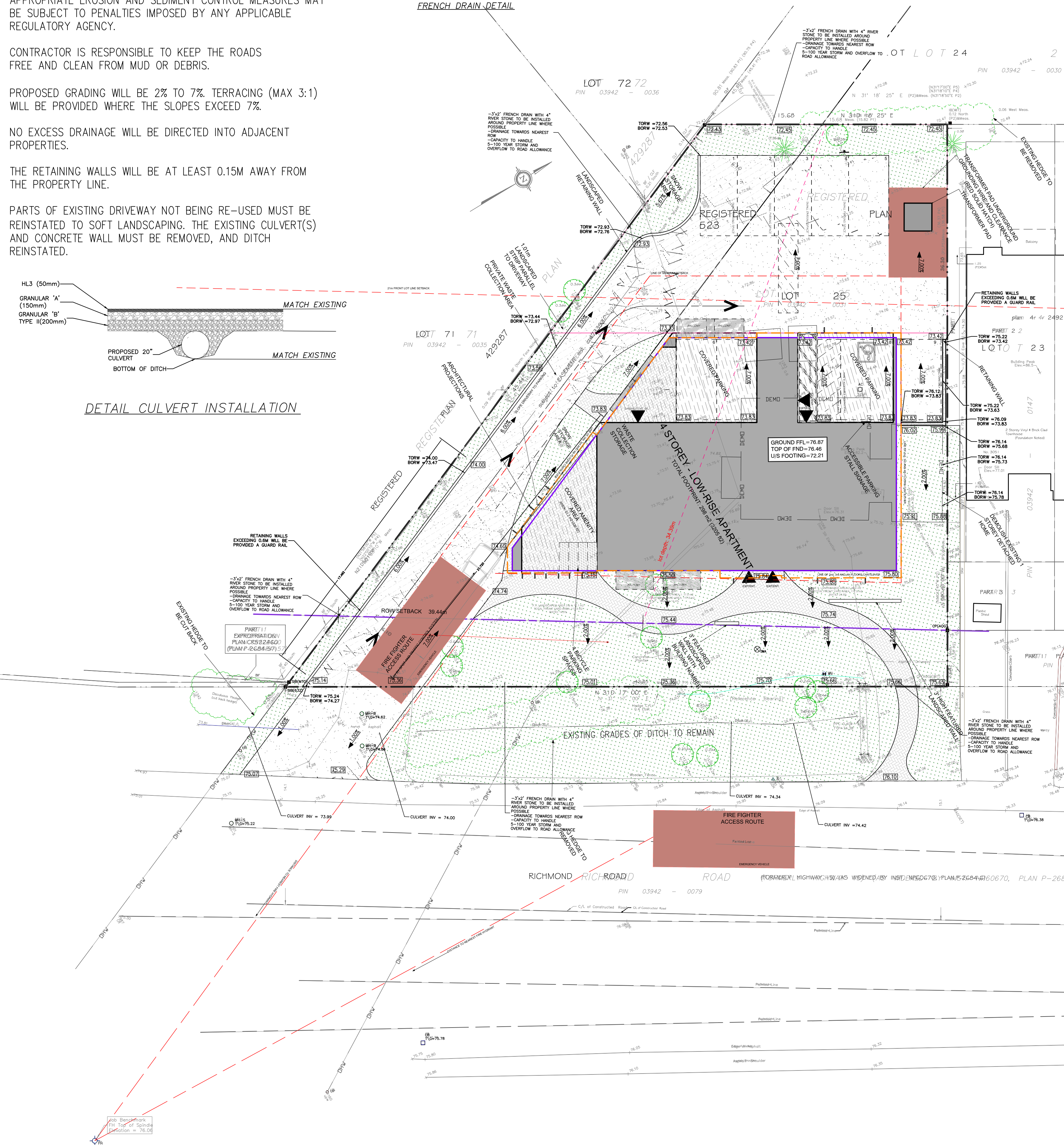
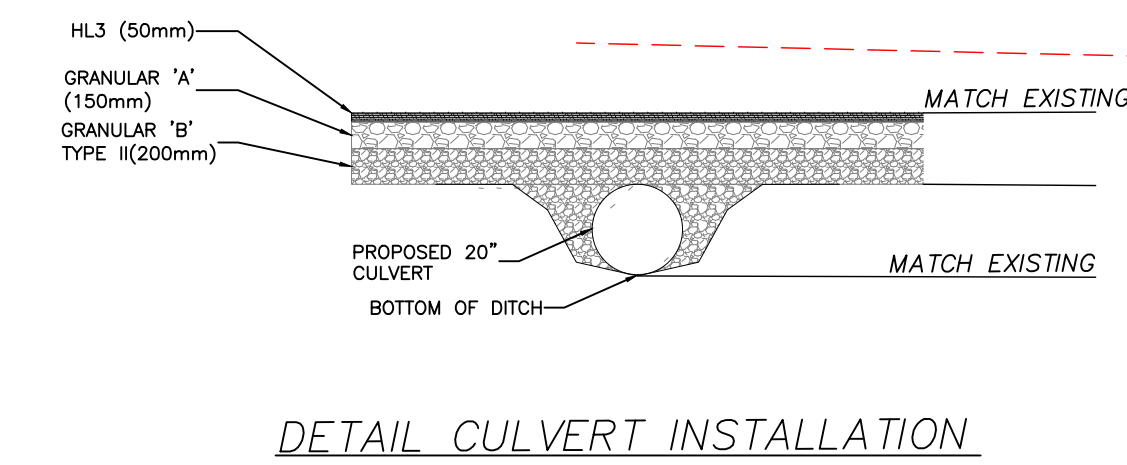
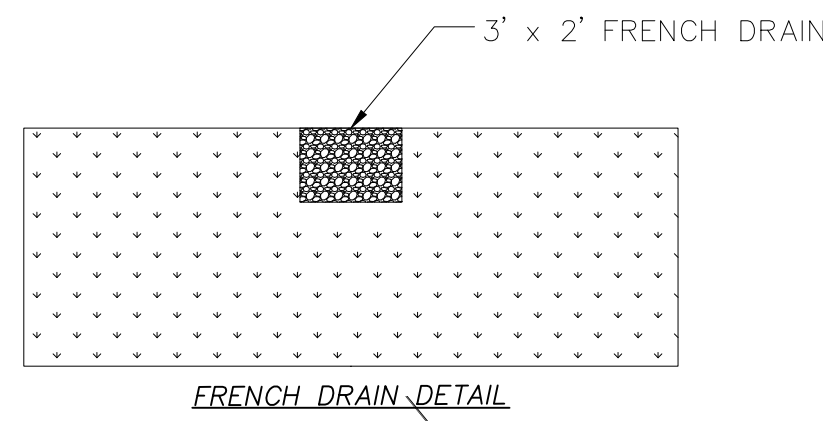
CONTRACTOR IS RESPONSIBLE TO KEEP THE ROADS FREE AND CLEAN FROM MUD OR DEBRIS.

PROPOSED GRADING WILL BE 2% TO 7% TERRACING (MAX 3:1) WILL BE PROVIDED WHERE THE SLOPES EXCEED 7%.

NO EXCESS DRAINAGE WILL BE DIRECTED INTO ADJACENT PROPERTIES.

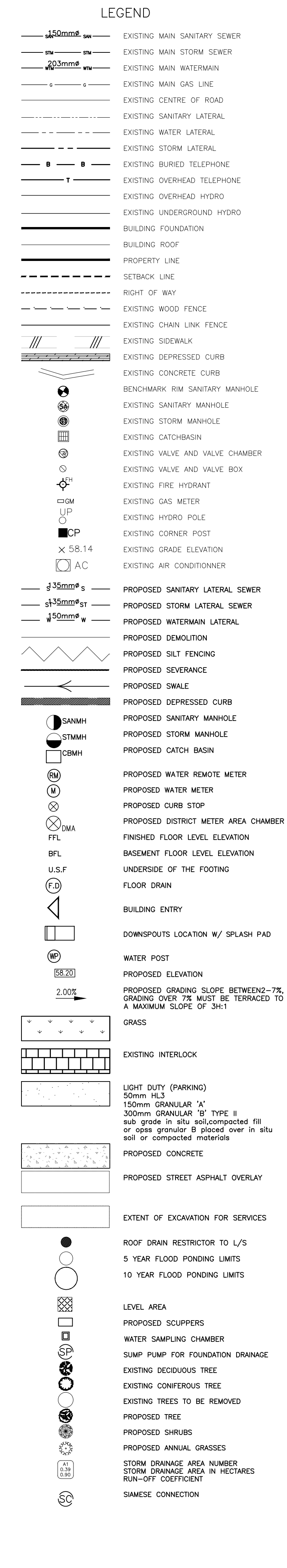
THE RETAINING WALLS WILL BE AT LEAST 0.15M AWAY FROM THE PROPERTY LINE.

PARTS OF EXISTING DRIVEWAY NOT BEING RE-USED MUST BE REINSTATED TO SOFT LANDSCAPING. THE EXISTING CULVERT(S) AND CONCRETE WALL MUST BE REMOVED, AND DITCH REINSTATED.



GENERAL NOTES FOR SERVICING

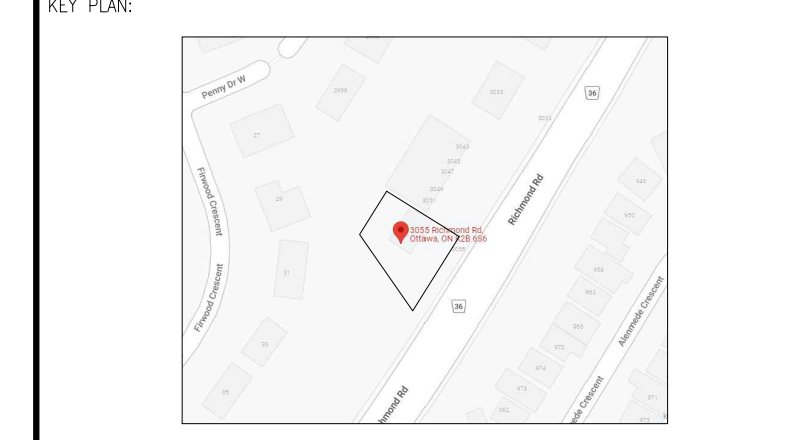
- 1. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE CITY OF OTTAWA...
2. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMANS SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES...
3. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION...
4. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT...
5. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS LAYOUT AND REMOVALS...
6. TOPOGRAPHIC SURVEY COMPLETED ON 17TH DAY OF NOVEMBER 2021 AND PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD...
7. THE LOCATION OF UNDERGROUND SERVICES ARE BASED ON THE SURVEY PROVIDED WITH THE INFORMATION FROM THE CITY OF OTTAWA DRAWINGS...
8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
9. JOB BENCH MARK AS INDICATED ON THE DRAWINGS
10. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
11. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT...
12. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS...
13. ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS AND SPECIFICATIONS...
14. ABUTTING PROPERTY GRADES TO BE MATCHED.
15. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
16. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
17. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER...
18. AT PROPOSED UTILITIES 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.
19. SERVICE TRENCHES ON MUNICIPAL RIGHT OF WAY TO BE REINSTATED AS PER CITY OF OTTAWA DETAIL R10.
20. PRIOR TO CONSTRUCTION, A GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IS TO INSPECT ALL SUB-SURFACES FOR FOOTINGS, SERVICES AND PAVEMENT STRUCTURES.
21. a) PAVEMENT STRUCTURE SHALL CONSIST OF FOR CAR ONLY PARKING AREAS:
40 mm ASPHALTIC CONCRETE (PG 58-34), 92% TO 97 % MRD
150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD
300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMD
SUBGRADE - APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL.
b) PAVEMENT STRUCTURE SHALL CONSIST OF FOR ACCESS LANES AND HEAVY TRUCK PARKING/LOADING AREAS:
40 mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50 mm HL-8 OR SUPERPAVE 19 ASPHALTIC CONCRETE
150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD
300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMD
SUBGRADE - APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL.
22. CONTRACTOR TO REINSTATE PAVEMENT STONES IN CITY ROW.
NOTES WATERMAIN
24. ALL WATERMAIN AND WATERMAIN APPURTENANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
25. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING ANWA SPECIFICATION C900. STANDARD LATERAL MATERIAL SERVICES UP TO 50MM IS COPPER TYPE 'K'.
26. ALL WATER MAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMANS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE FROM UTILITIES OVERT SHALL BE MAINTAINED. WHERE WATERMANS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22.
27. WATER MAIN BEDDING TO BE AS PER CITY OF OTTAWA STANDARD W17.
28. VALVE BOX TO BE AS PER CITY OF OTTAWA STANDARD W24.
29. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.
30. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
31. FIRE HYDRANTS TO BE AS PER CITY OF OTTAWA STANDARD W19. (NOT REQUIRED)
32. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
NOTES: SANITARY SEWER AND MANHOLES
34. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCE AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
36. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
37. ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.
38. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSS 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24. (NOT APPLICABLE)
39. SANITARY BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14.1 OR S14.2.
40. STORM BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14.
NOTES: STORM SEWERS AND STRUCTURES
41. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.



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CONSULTANT:
SEAL:
PROFESSIONAL ENGINEER
MARCH 17 2023

CLIENT:
PROJECT:
4 STOREY LOW-RISE APARTMENT BUILDING
3055 RICHMOND ROAD
OTTAWA, ON K2B 6S6



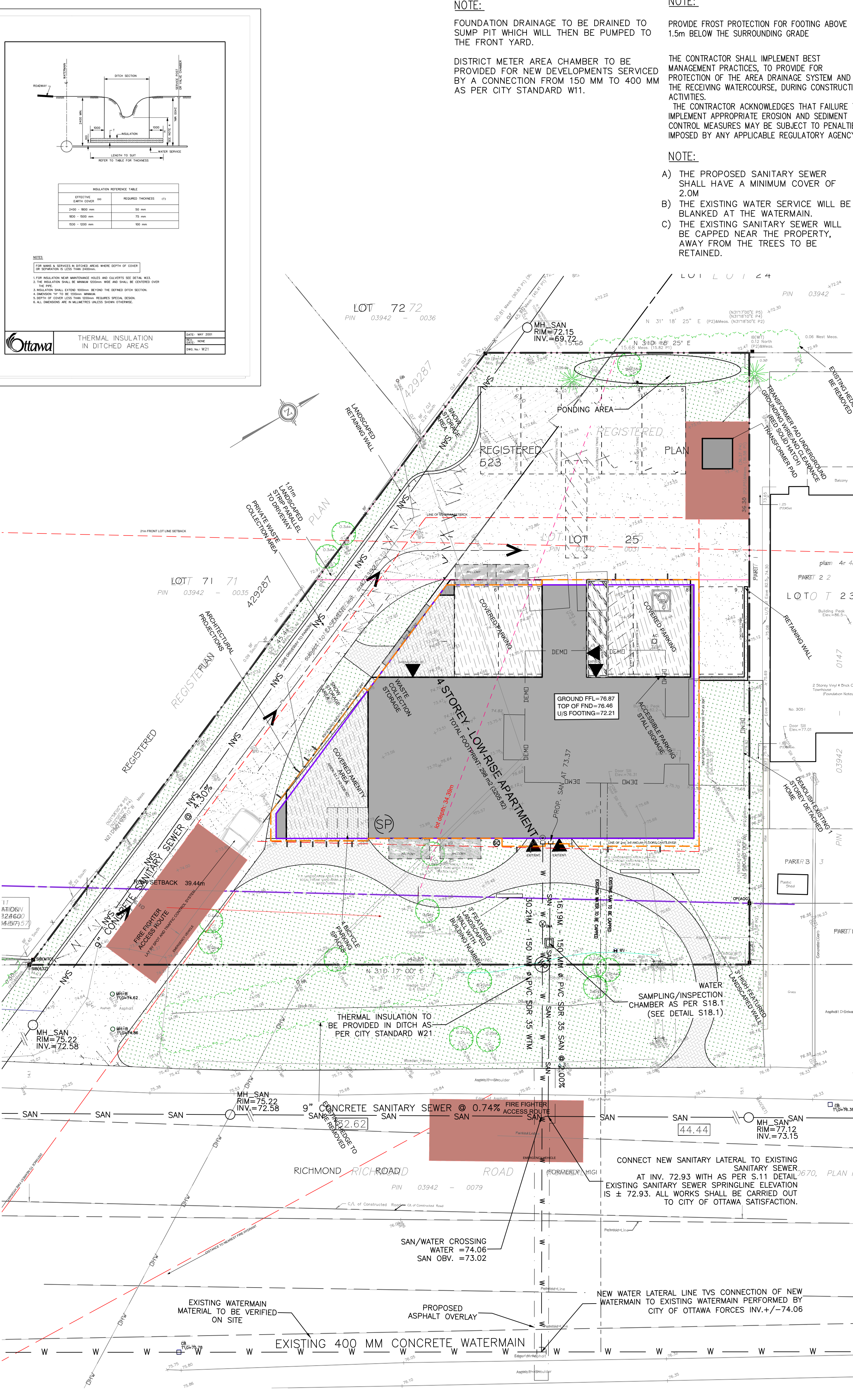
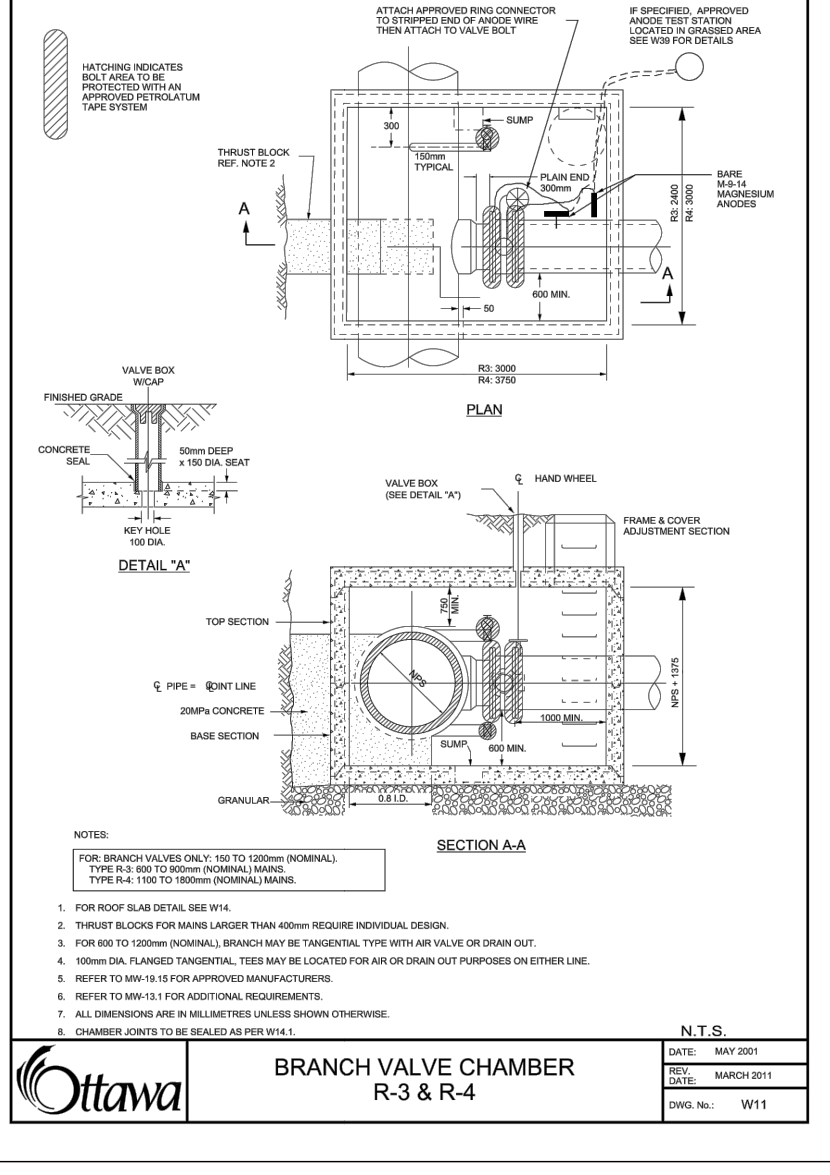
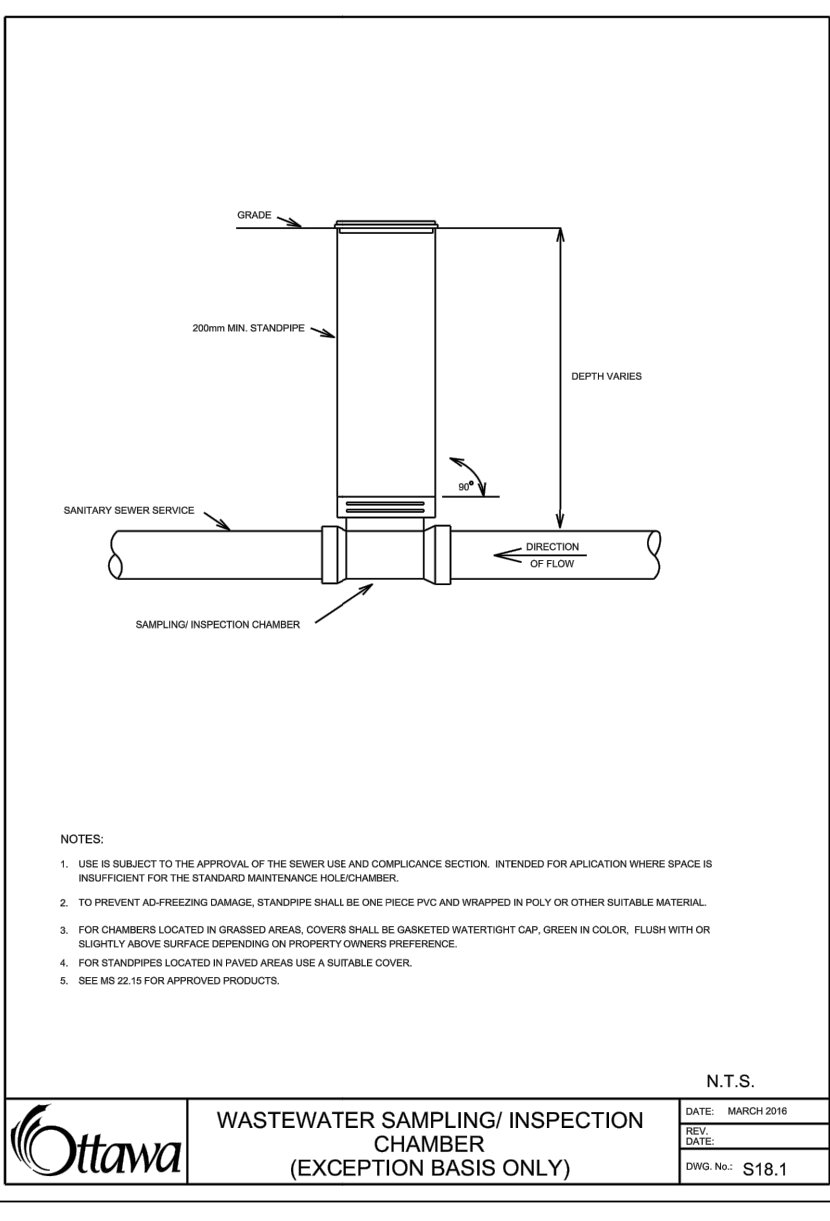
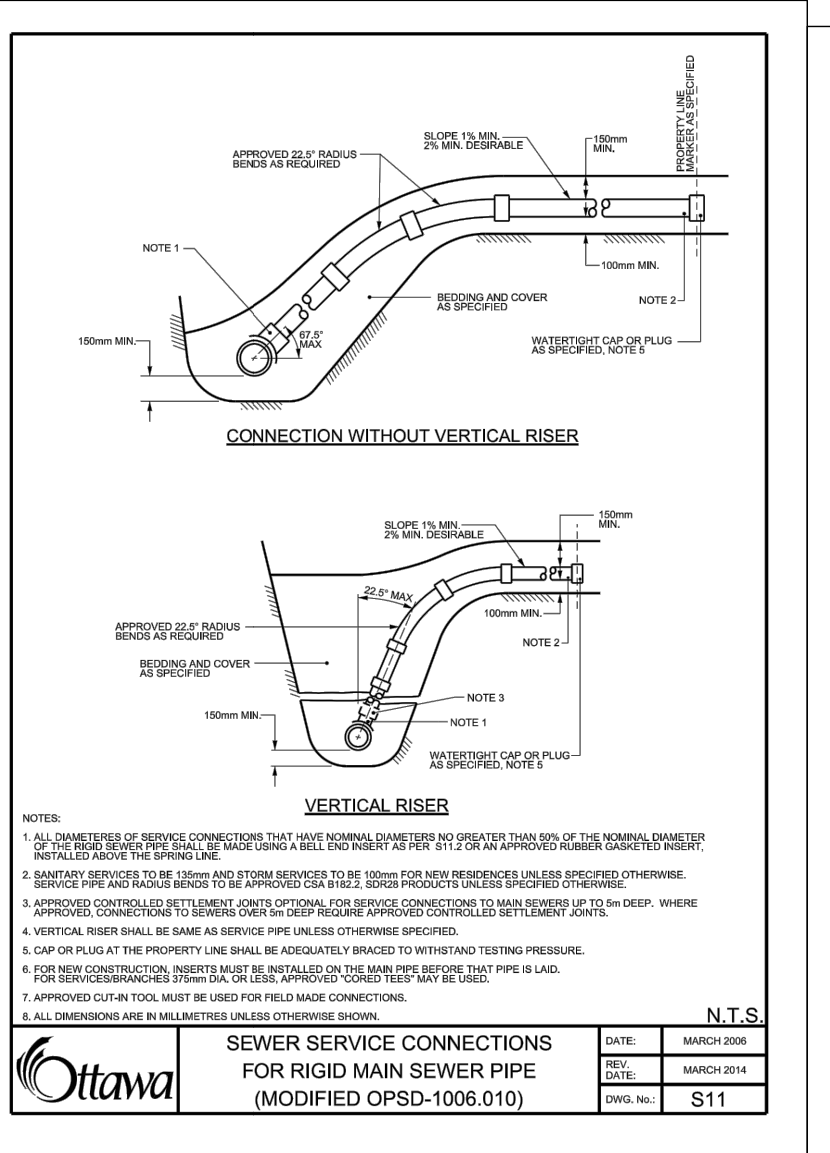
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ISSUED FOR - REVISION table with columns for revision number, date, and description.

PROJECT NO: 2022-120
DATE: 2022-06-10
ORIGINAL SCALE: 1:100
DESIGNED BY: R.E.
DRAWN BY: R.E.
CHECKED BY: W.E.
DISCIPLINE:
TITLE: GRADING PLAN

SHEET NUMBER: G1
ISSUE:
ISSUED FOR REVIEW
DATE OF: 2022-06-10

17769



NOTE:
 FOUNDATION DRAINAGE TO BE DRAINED TO SUMP PIT WHICH WILL THEN BE PUMPED TO THE FRONT YARD.

DISTRICT METER AREA CHAMBER TO BE PROVIDED FOR NEW DEVELOPMENTS SERVICED BY A CONNECTION FROM 150 MM TO 400 MM AS PER CITY STANDARD W11.

NOTE:
 PROVIDE FROST PROTECTION FOR FOOTING ABOVE 1.5m BELOW THE SURROUNDING GRADE

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.

NOTE:
 A) THE PROPOSED SANITARY SEWER SHALL HAVE A MINIMUM COVER OF 2.0M
 B) THE EXISTING WATER SERVICE WILL BE BLANKED AT THE WATERMAIN.
 C) THE EXISTING SANITARY SEWER WILL BE CAPPED NEAR THE PROPERTY, AWAY FROM THE TREES TO BE RETAINED.

GENERAL NOTES FOR SERVICING

- ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT.
- THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMANS SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
- THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HYDRO, BELL, CABLE TV, AND CONSUMERS GAS LINES.
- ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
- REFER TO ARCHITECT'S PLANS FOR BUILDING DIMENSIONS LAYOUT AND REMOVALS. REFER TO LANDSCAPE PLAN FOR LANDSCAPING DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- TOPOGRAPHIC SURVEY COMPLETED ON 17TH DAY OF NOVEMBER 2021 AND PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE LOCATION OF UNDERGROUND SERVICES ARE BASED ON THE SURVEY PROVIDED WITH THE INFORMATION FROM THE CITY OF OTTAWA DRAWINGS "P&P2 - RICHMOND ROAD SANITARY SEWER", DATED NOVEMBER 7TH, 1982. HOWEVER, CONTRACTOR MUST ENSURE THAT THIS INFORMATION IS VERIFIED PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
- JOB BENCH MARK AS INDICATED ON THE DRAWINGS
- ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
- ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM.
- ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
- 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 GRADES TO BE MATCHED.
- CONTRACTOR SHALL 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.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
- AT PROPOSED UTILITIES 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.
- SERVICE TRENCHES ON MUNICIPAL RIGHT OF WAY TO BE REINSTATE AS PER CITY OF OTTAWA DETAIL R10.
- PRIOR TO CONSTRUCTION, A GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IS TO INSPECT ALL SUB-SURFACES FOR FOOTINGS, SERVICES AND PAVEMENT STRUCTURES.

FOR ANY SOILS RELATED INFORMATION, REFER TO THE GEOTECHNICAL INVESTIGATION REPORT BY EXP Services

21. a) PAVEMENT STRUCTURE SHALL CONSIST OF FOR CAR ONLY PARKING AREAS:
 40 mm ASPHALTIC CONCRETE (PG 58-34), 92% TO 97% MRD
 150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD
 300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMD
 SUBGRADE - APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL.

b) PAVEMENT STRUCTURE SHALL CONSIST OF FOR ACCESS LANES AND HEAVY TRUCK PARKING/LOADING AREAS:
 40 mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
 50 mm HL-8 OR SUPERPAVE 19 ASPHALTIC CONCRETE
 150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD
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 SUBGRADE - APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL.

22. CONTRACTOR TO REINSTATE PAVER STONES IN CITY ROW.

NOTES WATERMAIN

- ALL WATERMAIN AND WATERMAIN APPURTENANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
- ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING ANWA SPECIFICATION C900. STANDARD LATERAL MATERIAL SERVICES UP TO 50MM IS COPPER TYPE 'K'.
- ALL WATER MAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMANS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE FROM UTILITIES OVERT SHALL BE MAINTAINED. WHERE WATERMANS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22.
- WATER MAIN BEDDING TO BE AS PER CITY OF OTTAWA STANDARD W17.
- VALVE BOX TO BE AS PER CITY OF OTTAWA STANDARD W24.
- CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.
- CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
- FIRE HYDRANTS TO BE AS PER CITY OF OTTAWA STANDARD W19. (NOT REQUIRED)
- IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

TYPICAL WATER SERVICE LINE AS PER W26(FOR 19MM & 25MM DIA. WATER SERVICES), AND TO BE INSTALLED AT 1 M FROM THE FOUNDATION WALLS

NOTES: SANITARY SEWER AND MANHOLES

- ALL SANITARY SEWER, SANITARY SEWER APPURTENANCE AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
- ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.
- ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24. (NOT APPLICABLE)
- SANITARY BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14.1 OR S14.2.
- STORM BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14.

NOTES: STORM SEWERS AND STRUCTURES

- ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

LEGEND

- EXISTING MAIN SANITARY SEWER
- EXISTING MAIN STORM SEWER
- EXISTING MAIN WATERMAIN
- EXISTING MAIN GAS LINE
- EXISTING CENTRE OF ROAD
- EXISTING SANITARY LATERAL
- EXISTING WATER LATERAL
- EXISTING STORM LATERAL
- EXISTING BURIED TELEPHONE
- EXISTING OVERHEAD TELEPHONE
- EXISTING OVERHEAD HYDRO
- EXISTING UNDERGROUND HYDRO
- BUILDING FOUNDATION
- BUILDING ROOF
- PROPERTY LINE
- SETBACK LINE
- RIGHT OF WAY
- EXISTING WOOD FENCE
- EXISTING CHAIN LINK FENCE
- EXISTING SIDEWALK
- EXISTING DEPRESSED CURB
- EXISTING CONCRETE CURB
- BENCHMARK RIM SANITARY MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING CATCHBASIN
- EXISTING VALVE AND VALVE CHAMBER
- EXISTING VALVE AND VALVE BOX
- EXISTING FIRE HYDRANT
- EXISTING GAS METER
- EXISTING HYDRO POLE
- EXISTING CORNER POST
- EXISTING GRADE ELEVATION
- EXISTING AIR CONDITIONER
- PROPOSED SANITARY LATERAL SEWER
- PROPOSED STORM LATERAL SEWER
- PROPOSED WATERMAIN LATERAL
- PROPOSED DEMOLITION
- PROPOSED SILT FENCING
- PROPOSED SEWERANCE
- PROPOSED SWALE
- PROPOSED DEPRESSED CURB
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED WATER REMOTE METER
- PROPOSED WATER METER
- PROPOSED CURB STOP
- PROPOSED DISTRICT METER AREA CHAMBER
- FINISHED FLOOR LEVEL ELEVATION
- BASEMENT FLOOR LEVEL ELEVATION
- UNDERSIDE OF THE FOOTING
- FLOOR DRAIN
- BUILDING ENTRY
- DOWNSPOUTS LOCATION W/ SPLASH PAD
- WATER POST
- PROPOSED ELEVATION
- PROPOSED GRADING SLOPE BETWEEN -7% GRADING OVER 7% MUST BE TERRACED TO A MAXIMUM SLOPE OF 3H:1
- GRASS
- EXISTING INTERLOCK
- LIGHT DUTY (PARKING)
- 50mm HL3
- 150mm GRANULAR 'A'
- 300mm GRANULAR 'B' TYPE II
- sub grade in situ soil/compacted fill or opss granular B placed over in situ soil or compacted materials
- PROPOSED CONCRETE
- PROPOSED STREET ASPHALT OVERLAY
- EXTENT OF EXCAVATION FOR SERVICES
- ROOF DRAIN RESTRICTOR TO L/S
- 5 YEAR FLOOD PONDING LIMITS
- 10 YEAR FLOOD PONDING LIMITS
- LEVEL AREA
- PROPOSED SCUPPERS
- WATER SAMPLING CHAMBER
- SUMP PUMP FOR FOUNDATION DRAINAGE
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EXISTING TREES TO BE REMOVED
- PROPOSED TREE
- PROPOSED SHRUBS
- PROPOSED ANNUAL GRASSES
- STORM DRAINAGE AREA NUMBER
- STORM DRAINAGE AREA IN HECTARES
- RUN-OFF COEFFICIENT
- SIMMENSE CONNECTION

CLIENT: OTTAWA ONTARIO

PROJECT: 4 STOREY LOW-RISE APARTMENT BUILDING 3055 RICHMOND ROAD OTTAWA, ON K2B 6S6

KEY PLAN: [Map showing project location in Ottawa]

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ISSUED FOR -	REVISION:
10	03/17/2023 REVISIONS AS PER CLIENT
9	03/13/2023 REVISIONS TO SITE PLAN
8	03/09/2023 REVISION TO GRADING
7	03/08/2023 REVISION TO GRADING
6	03/01/2023 REVISION TO GRADING AND SERVICING
5	01/17/2023 REVISION TO GRADING PLAN
4	01/06/2023 REVISIONS AS PER CITY COMMENTS
3	10/06/2022 REVISION FOR DISCUSSION
2	09/28/2022 REVISION AS PER LATEST SITEPLAN
1	06/10/2022 ISSUED FOR REVIEW

PROJECT NO: 2022-120 **DATE:** 2022-06-10

ORIGINAL SCALE: 1:100 **IF THIS BAR IS NOT 1" LONG, ADJUST YOUR PLOTTING SCALE.**

DESIGNED BY: R.E. **DRAWN BY:** R.E. **CHECKED BY:** W.E.

TITLE: SERVICING PLAN

SHEET NUMBER: S1

ISSUE: ISSUED FOR REVIEW **DATE OF:** 2022-06-10

W. Elias & Associates
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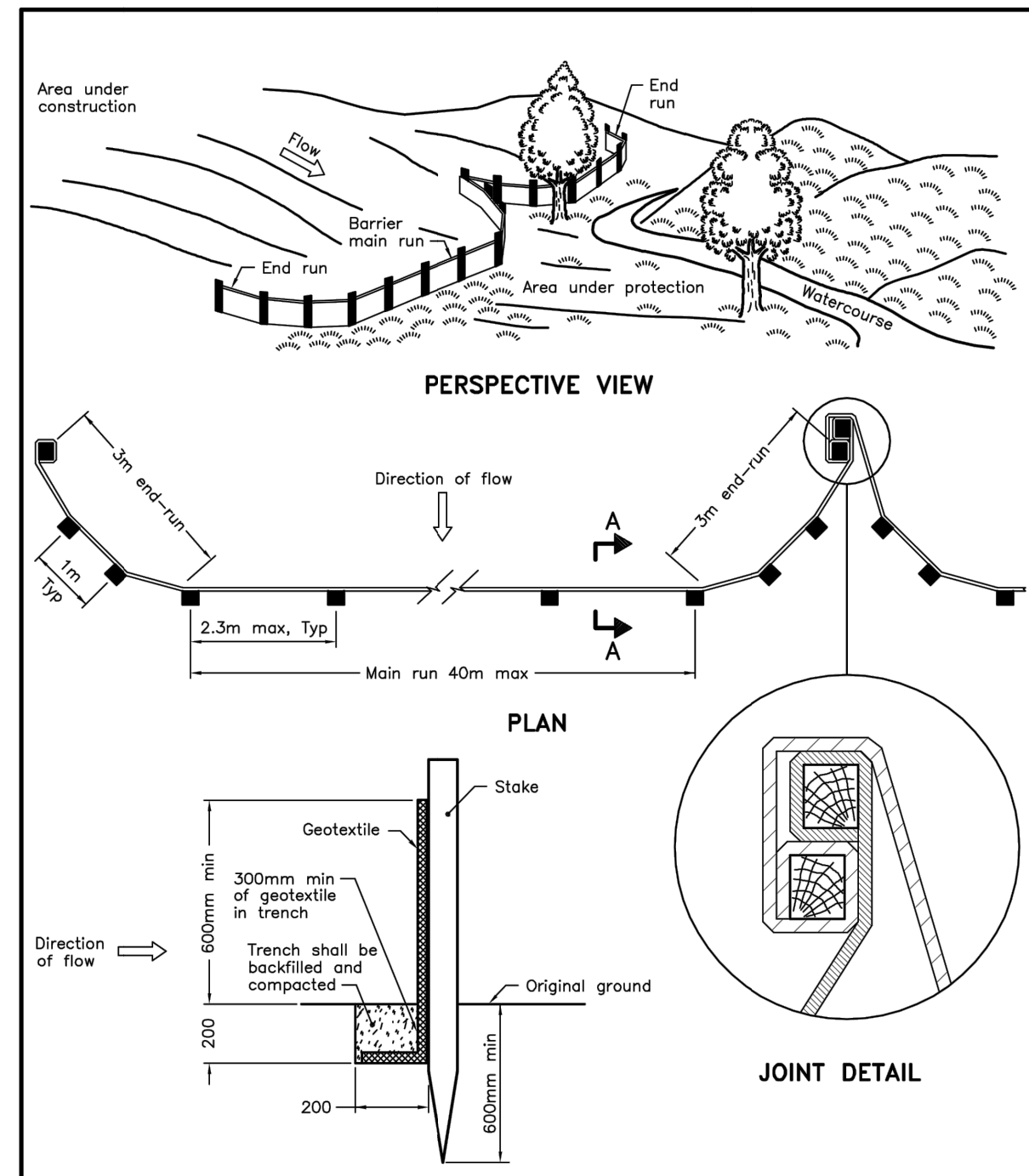
CIVIL STRUCTURE ELECTRICAL MECHANICAL

CONSULTANT:

SCALE:

PROFESSIONAL ENGINEER
 W. ELIAS
 13085501
 PROVINCE OF ONTARIO

MARCH 17 2023



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

ONTARIO PROVINCIAL STANDARD DRAWING
Nov 2015 Rev 2
LIGHT-DUTY SILT FENCE BARRIER
OPSD 219.110

NOTE:
PROVIDE FROST PROTECTION FOR FOOTING ABOVE 1.5m BELOW THE SURROUNDING GRADE.

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.

GENERAL NOTES FOR SERVICING

- ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD (SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT.
- THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMANS SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
- THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HYDRO, BELL, CABLE TV, AND CONSUMERS GAS LINES.
- ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
- REFER TO ARCHITECT'S PLANS FOR BUILDING DIMENSIONS LAYOUT AND REMOVALS. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- TOPOGRAPHIC SURVEY COMPLETED ON 17TH DAY OF NOVEMBER 2021 AND PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE LOCATION OF UNDERGROUND SERVICES ARE BASED ON THE SURVEY PROVIDED WITH THE INFORMATION FROM THE CITY OF OTTAWA DRAWINGS "P&P - RICHMOND ROAD SANITARY SEWER", DATED NOVEMBER 7TH, 1962. HOWEVER, CONTRACTOR MUST ENSURE THAT THIS INFORMATION IS VERIFIED PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
- JOB BENCH MARK AS INDICATED ON THE DRAWINGS
- ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
- ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm MINIMUM
- ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
- 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 GRADES TO BE MATCHED.
- CONTRACTOR SHALL 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.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
- AT PROPOSED UTILITIES 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.
- SERVICE TRENCHES ON MUNICIPAL RIGHT OF WAY TO BE REINSTATED AS PER CITY OF OTTAWA DETAIL R10.
- PRIOR TO CONSTRUCTION, A GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IS TO INSPECT ALL SUB-SURFACES FOR FOOTINGS, SERVICES AND PAVEMENT STRUCTURES.

LEGEND

EXISTING MAIN SANITARY SEWER	EXISTING MAIN STORM SEWER
EXISTING MAIN WATERMAIN	EXISTING MAIN GAS LINE
EXISTING CENTRE OF ROAD	EXISTING SANITARY LATERAL
EXISTING WATER LATERAL	EXISTING STORM LATERAL
EXISTING BURIED TELEPHONE	EXISTING OVERHEAD TELEPHONE
EXISTING OVERHEAD HYDRO	EXISTING UNDERGROUND HYDRO
BUILDING FOUNDATION	BUILDING ROOF
PROPERTY LINE	SETBACK LINE
RIGHT OF WAY	EXISTING WOOD FENCE
EXISTING CHAIN LINK FENCE	EXISTING SIDEWALK
EXISTING DEPRESSED CURB	EXISTING CONCRETE CURB
BENCHMARK RIM SANITARY MANHOLE	EXISTING SANITARY MANHOLE
EXISTING STORM MANHOLE	EXISTING CATCHBASIN
EXISTING VALVE AND VALVE CHAMBER	EXISTING VALVE AND VALVE BOX
EXISTING FIRE HYDRANT	EXISTING GAS METER
EXISTING HYDRO POLE	EXISTING CORNER POST
EXISTING GRADE ELEVATION	EXISTING AIR CONDITIONNER
PROPOSED SANITARY LATERAL SEWER	PROPOSED STORM LATERAL SEWER
PROPOSED WATERMAIN LATERAL	PROPOSED DEMOLITION
PROPOSED SILT FENCING	PROPOSED SEVERANCE
PROPOSED SWALE	PROPOSED DEPRESSED CURB
PROPOSED SANITARY MANHOLE	PROPOSED STORM MANHOLE
PROPOSED CATCH BASIN	PROPOSED WATER REMOTE METER
PROPOSED WATER METER	PROPOSED CURB STOP
PROPOSED DISTRICT METER AREA CHAMBER	FINISHED FLOOR LEVEL ELEVATION
BASEMENT FLOOR LEVEL ELEVATION	UNDERSIDE OF THE FOOTING
FLOOR DRAIN	BUILDING ENTRY
DOWNSPOUTS LOCATION W/ SPLASH PAD	WATER POST
PROPOSED ELEVATION	PROPOSED GRADING SLOPE BETWEEN-7%, GRADING OVER 7% MUST BE TERRACED TO A MAXIMUM SLOPE OF 3H:1
GRASS	EXISTING INTERLOCK
LIGHT DUTY (PARKING)	PROPOSED CONCRETE
PROPOSED STREET ASPHALT OVERLAY	EXTENT OF EXCAVATION FOR SERVICES
ROOF DRAIN RESTRICTOR TO L/S	5 YEAR FLOOD PONDING LIMITS
10 YEAR FLOOD PONDING LIMITS	LEVEL AREA
PROPOSED SCUppers	WATER SAMPLING CHAMBER
SUMP PUMP FOR FOUNDATION DRAINAGE	EXISTING DECIDUOUS TREE
EXISTING CONIFEROUS TREE	EXISTING TREES TO BE REMOVED
PROPOSED TREE	PROPOSED SHRUBS
PROPOSED ANNUAL GRASSES	STORM DRAINAGE AREA NUMBER
STORM DRAINAGE AREA IN HECTARES	RUN-OFF COEFFICIENT

W. Elias & Associates
CONSULTING ENGINEERS

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OTTAWA, ON K1K 4V1
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CIVIL
STRUCTURE
ELECTRICAL
MECHANICAL

CONSULTANT:

PROFESSIONAL ENGINEER
W. Elias P. Eng. P. Eng.
13085501
PROVINCE OF ONTARIO
MARCH 17 2023

CLIENT:

OTTAWA ONTARIO

PROJECT:

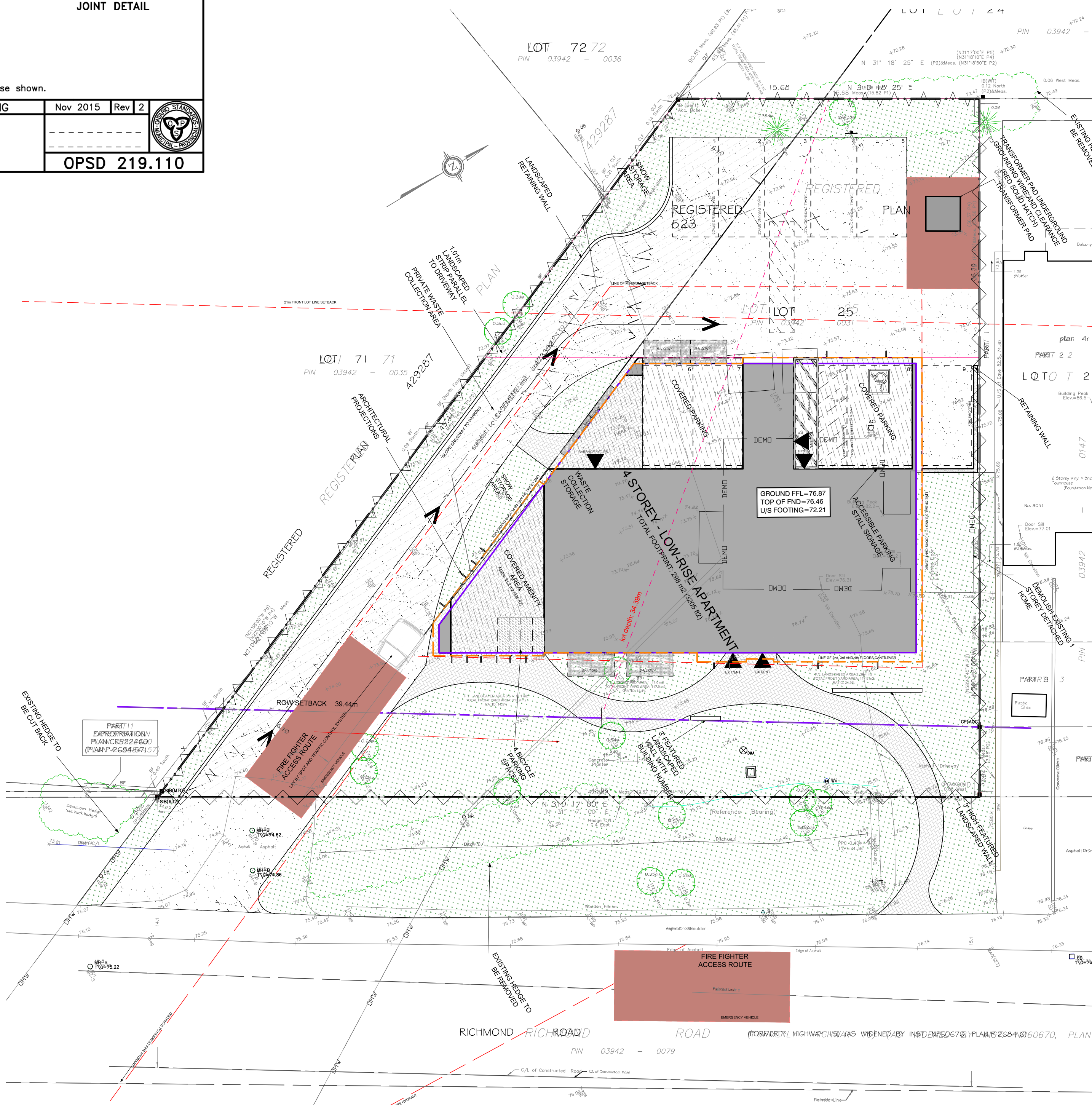
4 STOREY LOW-RISE APARTMENT BUILDING
3055 RICHMOND ROAD
OTTAWA, ON K2B 6S6

KEY PLAN:

DISCLAIMER:
THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION BY WELIAS ENGINEERING. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK. THIS DRAWING IS NOT TO BE SCALED.

ISSUED FOR	REVISION	DATE	DESCRIPTION
10	03/17/2023	REVISIONS AS PER CLIENT	
9	03/13/2023	REVISIONS TO SITE PLAN	
8	03/09/2023	REVISION TO GRADING	
7	03/08/2023	REVISION TO GRADING	
6	03/01/2023	REVISION TO GRADING AND SERVICING	
5	01/17/2023	REVISION TO GRADING PLAN	
4	01/06/2023	REVISION AS PER CITY COMMENTS	
3	10/06/2022	REVISED FOR DISCUSSION	
2	09/28/2022	REVISED AS PER LATEST SITEPLAN	
1	06/10/2022	ISSUED FOR REVIEW	

PROJECT NO.	DATE
2022-120	2022-06-10
ORIGINAL SCALE:	1:100
DESIGNED BY:	R.E.
DRAWN BY:	R.E.
CHECKED BY:	W.E.
DISCIPLINE:	
TITLE:	EROSION PLAN
SHEET NUMBER:	E1
ISSUE:	ISSUED FOR REVIEW
DATE OF:	2022-06-10



21. a) PAVEMENT STRUCTURE SHALL CONSIST OF FOR CAR ONLY PARKING AREAS:
40 mm ASPHALTIC CONCRETE (PG 58-34), 92% TO 97% MRD
150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD
300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMD
SUBGRADE- APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL.

b) PAVEMENT STRUCTURE SHALL CONSIST OF FOR ACCESS LANES AND HEAVY TRUCK PARKING/LOADING AREAS:
40 mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50 mm HL-8 OR SUPERPAVE 19 ASPHALTIC CONCRETE
150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD
300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMD
SUBGRADE- APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL.

22. CONTRACTOR TO REINSTATE PAVEMENT STONES IN CITY ROW.

NOTES WATERMAIN

24. ALL WATERMAIN AND WATERMAIN APPURTENANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.

25. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 1B MEETING AWWA SPECIFICATION C900. STANDARD LATERAL MATERIAL SERVICES UP TO 50MM IS COPPER TYPE "K".

26. ALL WATER MAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMANS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE FROM UTILITIES OVBERT SHALL BE MAINTAINED. WHERE WATERMANS CROSS UNDER OTHER UTILITIES, A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22.

27. WATER MAIN BEDDING TO BE AS PER CITY OF OTTAWA STANDARD W17.

28. VALVE BOX TO BE AS PER CITY OF OTTAWA STANDARD W24.

29. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.

30. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.

31. FIRE HYDRANTS TO BE AS PER CITY OF OTTAWA STANDARD W19. (NOT REQUIRED)

32. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

*TYPICAL WATER SERVICE LINE AS PER W26(FOR 19MM & 25MM DIA. WATER SERVICES), AND TO BE INSTALLED AT 1 M FROM THE FOUNDATION WALLS

NOTES: SANITARY SEWER AND MANHOLES

34. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCE AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

36. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.

37. ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.

38. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSS 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24. (NOT APPLICABLE)

39. SANITARY BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14.1 OR S14.2

40. STORM BACKWATER VALVES TO BE PROVIDED FOR EACH BUILDING CLOSE TO THE FOUNDATION WALL NEAR SERVICES ENTRY AS PER CITY OF OTTAWA STD S14

NOTES: STORM SEWERS AND STRUCTURES

41. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

17769

NOTE:

PROVIDE FROST PROTECTION FOR FOOTING ABOVE 1.5m BELOW THE SURROUNDING GRADE.

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- 1. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE CITY OF OTTAWA... 2. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMANS SEWERS AND OTHER UNDERGROUND UTILITIES... 3. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION... 4. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT... 5. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS LAYOUT AND REMOVALS... 6. TOPOGRAPHIC SURVEY COMPLETED ON 17TH DAY OF NOVEMBER 2021... 7. THE LOCATION OF UNDERGROUND SERVICES ARE BASED ON THE SURVEY PROVIDED WITH THE INFORMATION FROM THE CITY OF OTTAWA DRAWINGS... 8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS... 9. JOB BENCH MARK AS INDICATED ON THE DRAWINGS... 10. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS... 11. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE... 12. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS... 13. ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS... 14. ABUTTING PROPERTY GRADES TO BE MATCHED... 15. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES... 16. MINIMIZE DISTURBANCE TO EXISTING VEGETATION... 17. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL... 18. AT PROPOSED UTILITIES CONNECTION POINTS AND CROSSINGS... 19. SERVICE TRENCHES ON MUNICIPAL RIGHT OF WAY TO BE REINSTATED... 20. PRIOR TO CONSTRUCTION, A GEOTECHNICAL ENGINEER... 21. a) PAVEMENT STRUCTURE SHALL CONSIST OF FOR CAR ONLY PARKING AREAS... b) PAVEMENT STRUCTURE SHALL CONSIST OF FOR ACCESS LANES AND HEAVY TRUCK PARKING/LOADING AREAS... 22. CONTRACTOR TO REINSTATE PAVEMENT STONES IN CITY ROW.

- 21. a) PAVEMENT STRUCTURE SHALL CONSIST OF FOR CAR ONLY PARKING AREAS: 40 mm ASPHALTIC CONCRETE (PG 58-34), 92% TO 97% MRD 150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD 300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMD SUBGRADE- APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL. b) PAVEMENT STRUCTURE SHALL CONSIST OF FOR ACCESS LANES AND HEAVY TRUCK PARKING/LOADING AREAS: 40 mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE 50 mm HL-8 OR SUPERPAVE 19 ASPHALTIC CONCRETE 150 mm GRANULAR A BASE (OPSS 1010) (CRUSHED LIMESTONE), 100% SPMD 300 mm GRANULAR B TYPE II SUB-BASE (OPSS 1010), 100% SPMD SUBGRADE- APPROVED FILL, IN-SITU SOIL, OR OPSS GRANULAR B TYPE I OR II MATERIAL PLACED OVER IN-SITU SOIL.

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NOTES: SANITARY SEWER AND MANHOLES

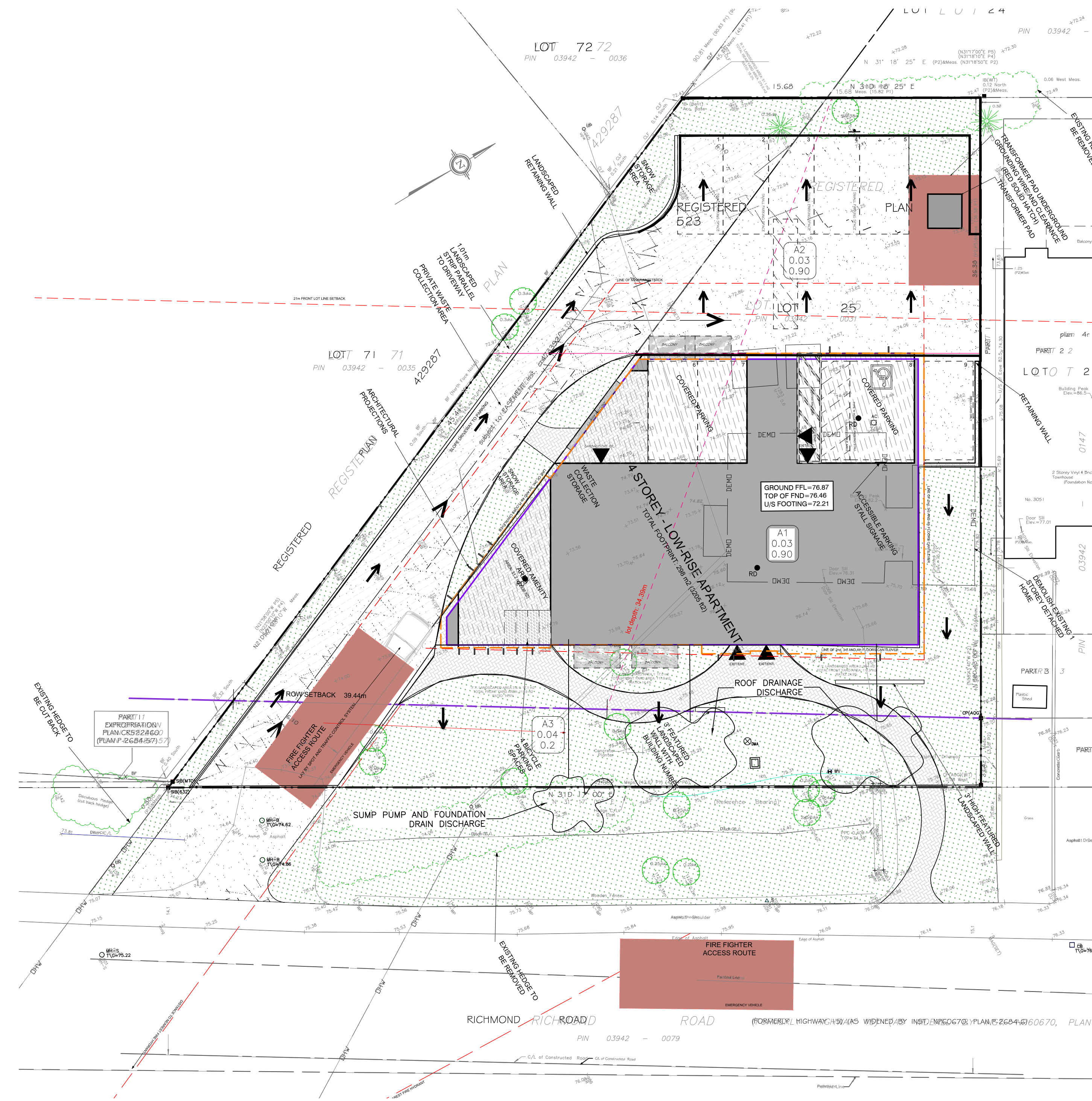
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NOTES: STORM SEWERS AND STRUCTURES

- 41. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

LEGEND

Legend table listing symbols for existing and proposed infrastructure: 150mm SAN, 150mm SW, 300mm WM, etc. Includes symbols for manholes, valves, and various types of sewer and storm lines.



Project information block containing: Client (Ottawa), Project Name (4 Storey Low-Rise Apartment Building), Consultant (W. Elias & Associates), Issued For (Revision), and a revision table with dates and descriptions.

DRAINAGE PLAN

D1

ISSUED FOR REVIEW

DATE: 2022-06-10