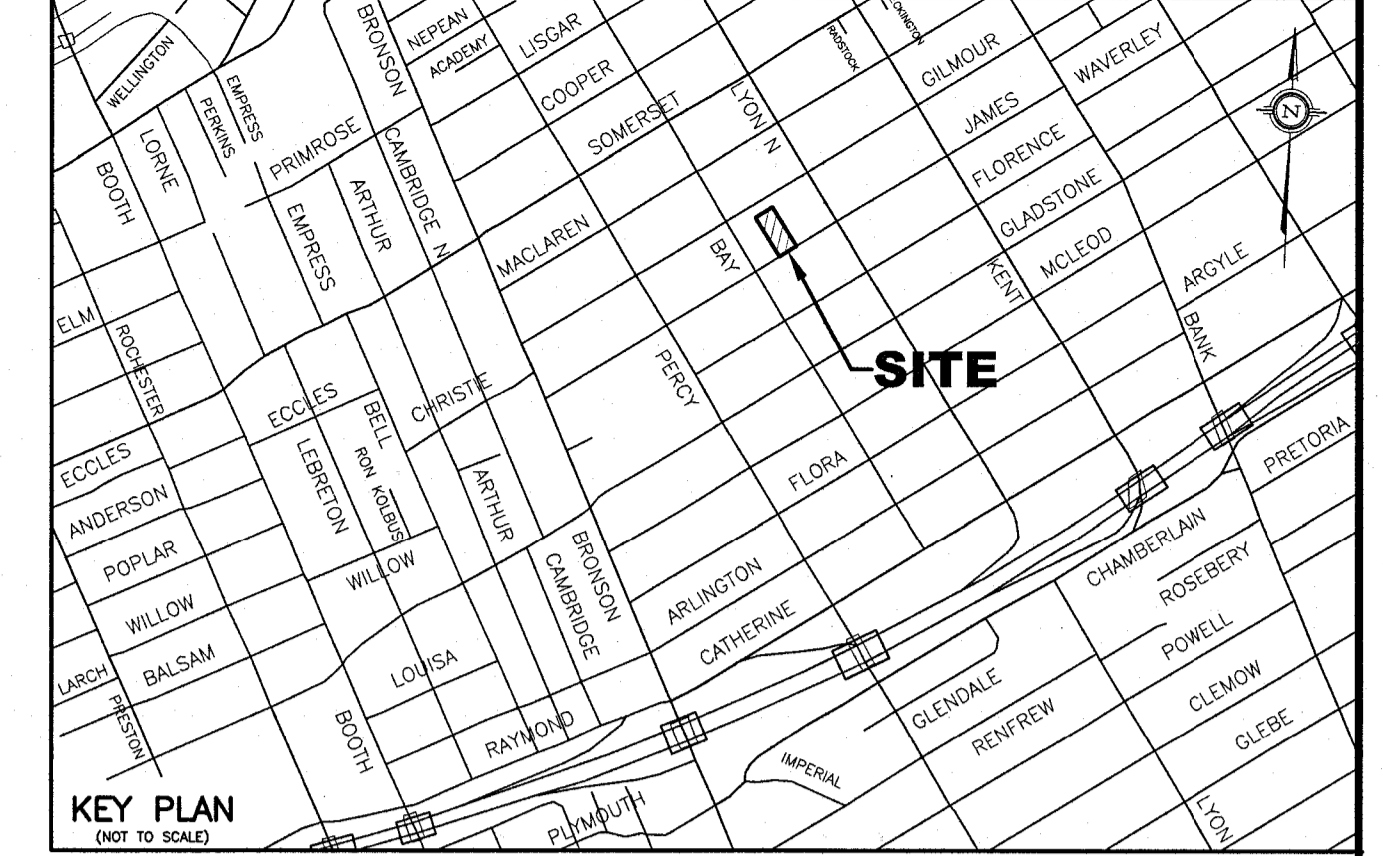


**LEGEND**

- PROPOSED ELEVATION
- EXISTING ELEVATION
- F.F. DENOTES TOP OF GROUND FLOOR ELEVATION
- T.O.F. DENOTES TOP OF CONCRETE FOUNDATION ELEVATION
- U.S.F. DENOTES UNDERSIDE OF CONCRETE FOOTING ELEVATION
- EXISTING COMBINED SEWER
- EXISTING WATERMAIN
- PROPOSED 150mm PVC SANITARY LATERAL SERVICE @ 1% (MIN.) SLOPE
- PROPOSED 150mm PVC STORM LATERAL SERVICE @ 1% (MIN.) SLOPE
- PROPOSED 50mm WATER SERVICE (COPPER TYPE "K")
- DENOTES EXISTING CURB STOP
- DENOTES EXISTING COMBINED MANHOLE
- EXISTING CATCH BASIN
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING UTILITY POLE
- EXISTING OVERHEAD WIRES
- PROPOSED CURB STOP
- DENOTES REMOTE WATER METER LOCATION
- DENOTES WATER METER LOCATION
- DENOTES PROPERTY LINE
- DENOTES EXISTING BUILDING WALL/LINWORK
- DENOTES PROPOSED BUILDING WALL/LINWORK
- DENOTES EXISTING ASPHALT AREA (TO REMAIN)
- DENOTES PROPOSED GRASSED AREA
- DENOTES PROPOSED INTERLOCK AREA
- PROPOSED ASPHALT OVERLAY AREA CONSISTING OF: A 40mm LIFT OF HMA SUPERPAVE 12.5mm PG 58-34 LEVEL B
- DENOTES LIMIT OF ROAD CUT AND RESURFACING



- NOTES**
- EXISTING SERVICES AND UTILITIES SHOWN ON THIS DRAWING WERE TAKEN FROM THE BEST AVAILABLE RECORDS, BUT ARE INCOMPLETE. CONTRACTOR IS REQUIRED TO CHECK IN THE FIELD FOR LOCATION AND ELEVATION OF PIPES, AND CHECK WITH AUTHORITIES AND UTILITIES TO HIS SATISFACTION BEFORE DIGGING.
  - CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS AS DEEMED NECESSARY BEFORE POURING OF CONCRETE FOOTING AND FOUNDATION. THE OWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SUBGRADE ON THIS LOT IS SUFFICIENT TO SUPPORT PROPOSED RESIDENTIAL BUILDINGS.
  - STING DETAILS SHOWN FOR THE EXISTING BUILDING, LANDSCAPING AND AMENITIES ON THIS LOT WERE PROVIDED BY THE OWNER'S HOUSE DESIGNER DAVID BEKKERS FROM THEIR SITE PLAN (DWG. NO. AD REV. 4 DATED JULY 26, 2022) AND RECEIVED ON JULY 26, 2022.
  - EXISTING HORIZONTAL AND VERTICAL SURVEY DATA SHOWN ON THIS PLAN INCLUDING SITE BENCHMARK, ROAD ELEVATIONS, SEWER INVERT ELEVATIONS, SEWER LOCATIONS, AND TOPOGRAPHICAL INFORMATION OF THE LOT WERE PROVIDED BY FAIRHALL MOFFATT AND WOODLAND LIMITED AS DEPICTED ON THEIR TOPOGRAPHICAL SURVEY PLAN (REF. NO. 57-30671 - JOB NO. AB14300 COMPLETED ON MARCH 25, 2021) RECEIVED ON JULY 16, 2021. T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE. FOR INFORMATION ABOUT THE COMBINED SEWER INVERT ELEVATION AT MANHOLES AND WATERMAIN LOCATION AND SIZE, THE CONTRACTOR SHALL FIELD CHECK EXISTING COMBINED SEWER, AND WATERMAIN DEPTH TO THEIR SATISFACTION, AND REFER TO CITY PLAN AND PROFILE DRAWING ENTITLED JAMES STREET FROM PLAN NO. 1677 SHEET 1 OF 3 AND 2 OF 3 (CONTRACT NO. 82-38) FOR ADDITIONAL DETAILS.
  - ALL GRADES SHOWN ARE GEODETIC AND METRIC.
  - SANITARY SERVICE BENDS AND RISERS USED MUST BE CONSTRUCTED TO CITY OF OTTAWA'S SATISFACTION.
  - CONSTRUCT ALL SANITARY AND STORM PIPES IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARD, OTHERWISE AS PER OPSS AND OPSD SPECIFICATIONS.
  - ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND AS PER CITY OF OTTAWA'S REQUIREMENTS.
  - CONTRACTOR SHALL CONSTRUCT AND ENSURE THAT THE 50mm WATERMAIN SERVICE ON THIS LOT SHALL HAVE A MINIMUM OF 2.4m OF GROUND COVER, OTHERWISE INSULATE WITH RIGID S/M STYROFOAM IN ACCORDANCE WITH THE SOILS ENGINEER'S REQUIREMENTS AND AS PER CITY DETAIL W22. WATER SERVICE INSTALLATION SHALL BE COPPER TYPE "K" AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST CITY OF OTTAWA STANDARDS.
  - THIS SERVICING DESIGN PLAN WAS PREPARED FOR THE OWNERS FOR BUILDING PERMIT ISSUANCE. ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND PER CITY OF OTTAWA'S REQUIREMENTS.
  - ALL WATERMAIN SERVICE AND FITTINGS SHALL CONFORM TO APPROVED AWWA AND/OR CSA STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS TO COMPLETE THE WORKS.
  - EXISTING LOCATION OF JAMES STREET WATERMAIN AND SANITARY AND STORM SEWER SHOWN ON THIS PLAN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY IN THE FIELD TO CONFIRM ITS EXACT LOCATION BEFORE EXCAVATION. (SEE ALSO NOTE #22).
  - PROPOSED SURFACE GRADE SHALL BE 7% MAXIMUM. WHERE THE GROUND DROPS OFF STEEPLY, TERRACE THE GROUND AT 3H MAXIMUM TO 1V AS NECESSARY TO MEET CITY OF OTTAWA'S GRADING REQUIREMENTS.
  - WATER SERVICE CONNECTION ON JAMES STREET SHALL BE DONE BY THE CITY OF OTTAWA. CONNECTION OF THE 50mm WATER SERVICE TO THE EXISTING 200mm WATERMAIN ON JAMES STREET SHALL USE SADDLE CONNECTION WITH CURB STOP AS REQUIRED BY THE CITY OF OTTAWA. ALL CONNECTIONS AND OTHER RELATED WORKS TO WATERMAIN SHALL BE MADE BY THE CITY. EXCAVATION, BACKFILLING, AND REINSTATEMENTS BY CONTRACTOR. ALL WATERWORKS SHALL BE CARRIED OUT TO CITY OF OTTAWA'S SATISFACTION.
  - IF WATER SERVICE IS LESS THAN 2.4m FROM SEWER, MANHOLE, OR CATCHBASIN, CONTRACTOR IS REQUESTED TO INSULATE BETWEEN THEM WITH S/M RIGID INSULATION (AS PER CITY DETAIL W22 AND W23).
  - PIPE SIZES SHOWN ON THIS PLAN ARE METRIC.
  - WATER SERVICE AND WATERMAIN TRENCH DETAILS AS PER CITY W17 DETAIL.
  - PROPOSED SANITARY AND STORM SERVICE LATERALS SHALL BE PVC OR-28 OR EQUIVALENT.
  - IT IS REQUIRED THAT A FULL PORT BACKWATER VALVE BE INSTALLED FOR THE NEW SANITARY LATERAL SERVICE AND A BACKWATER VALVE BE INSTALLED FOR THE NEW STORM LATERAL SERVICE UNDER THE CURRENT REGULATION OF THE ONTARIO PLUMBING CODE, AND AS PER CITY DETAIL S14, S14.1 & S14.2.
  - BEDDING FOR SEWERS AND WATERMAIN INSTALLATION SHALL BE TYPE 'B' COMPACTED TO 95% DRY PROCTOR DENSITY. FOR THE SEWER LATERALS USE 300mm THICK APPROVED GRANULAR COVER MATERIAL COMPACT TO 95% DRY PROCTOR DENSITY. TRENCH BACKFILL WITH NATIVE MATERIAL AND COMPACT TO 95% DRY PROCTOR DENSITY MINIMUM. NO FROZEN MATERIALS ARE TO BE USED AS BACKFILL IN THE SERVICING TRENCHES.
  - DETAILS OF EXISTING SEWERS AND WATERMAIN SHOWN ON JAMES STREET FROM THE CITY OF OTTAWA MAY NOT BE CURRENT. CONTRACTOR SHALL REFER TO THE CITY OF OTTAWA'S SEWER AND WATERMAIN DRAWINGS FOR CURRENT STOP AS REQUIRED BY THE CITY OF OTTAWA. THE CONTRACTOR IS ADVISED TO EXCAVATE AND INVESTIGATE THE SEWER ELEVATIONS IN FRONT OF THIS PROPERTY FIRST TO ENSURE THAT 1.0% (MIN.) PIPE SLOPE OF THE SANITARY AND STORM LATERALS CAN BE ACHIEVED USING THE PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION. IF 1.0% (MIN.) SLOPE IS NOT POSSIBLE FROM THE BUILDING TO THE SEWER, THEN THE CONTRACTOR SHOULD INFORM THE OWNER'S PROJECT MANAGER AND THE CITY ACCORDINGLY FOR FURTHER DIRECTION.
  - FOR DEVELOPMENT OF THIS SITE, THE CONTRACTOR MUST FIRST CONSTRUCT THE UNDERGROUND SANITARY AND WATER SERVICES FROM THE SEWER AND WATERMAIN TO THE PROPERTY. PRIOR TO BUILDING CONCRETE FOUNDATION POURING THE CONTRACTOR SHALL VERIFY SEWER DEPTHS TO ENSURE THAT SEWER LATERALS CAN ACHIEVE A SLOPE OF 1.0% (MINIMUM) AND STILL BE BELOW PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION. IF THIS IS FOUND NOT POSSIBLE, THE CONTRACTOR SHALL CONTACT THE OWNER AND HIS OR HER PROJECT MANAGER TO REPORT THE FINDING IN ORDER TO ADJUST THE BUILDING FOUNDATION GRADES PRIOR TO CONCRETE POURING.
  - INSULATE HOUSE SERVICE LATERALS WITHIN PRIVATE PROPERTY AND ROAD RIGHT OF WAY WHERE GROUND COVER FOR FROST PROTECTION IS LESS THAN 2.4m. FOR WATER SERVICE AND 2.0m FOR SANITARY GRAVITY SEWERS. MINIMUM GROUND COVER OVER HOUSE SERVICE PIPES SHALL NOT BE LESS THAN 2.0m. EXACT INSULATION THICKNESS SHALL BE DETERMINED BY THE OWNERS' SOILS ENGINEER. ALL INSULATION WORKS SHALL BE CARRIED OUT AS PER CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND AS PER CITY DETAIL W22.
  - WHERE FROST COVER FROM UNDERSIDE OF HOUSE CONCRETE FOOTING TO PROPOSED FINISHED GROUND ELEVATION IS LESS THAN 1.5m, IT IS RECOMMENDED THAT INSULATION (50mm) THICK MINIMUM BE INSTALLED AT BUILDING FOOTING AND FOUNDATION OF HOUSE TO PROVIDE SUFFICIENT FROST COVER FOR FOUNDATION STRUCTURES. INSULATION REQUIREMENTS SHALL BE REVIEWED AND RECOMMENDED BY OWNER'S SOILS ENGINEER. EXACT INSULATION REQUIREMENTS SHALL BE CONFIRMED BY OWNER'S HOUSE DESIGNER AND SITE SOILS ENGINEER TO CONTRACTOR BEFORE INSTALLATION.
  - LOCATION AND ELEVATION OF EXISTING COMBINED MANHOLES SHOWN ON THIS DRAWING WERE TAKEN FROM FAIRHALL MOFFATT AND WOODLAND LIMITED'S TOPOGRAPHICAL SURVEY PLAN. CONTRACTOR SHALL OBTAIN AND REVIEW THESE PLANS AND SATISFY HIM/HERSELF AND OBTAIN LOCATES OF THESE SERVICES BEFORE CONSTRUCTION.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION INCLUDING ANY DISTURBED AREA IN THE RIGHT OF WAY WHERE ALL REINSTATEMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
  - UPON COMPLETION OF NEW SERVICE LATERALS FOR THE EXISTING BUILDING, CONTRACTOR SHALL RESTORE THE EXISTING ROADWAY BOULEVARD ACROSS THIS LOT TO DRAIN POSITIVELY TO ITS EXISTING OUTLET. ALL WORKS SHALL BE CARRIED OUT TO SATISFACTION OF CITY OF OTTAWA.
  - CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES REGARDING LOCATION OF EXISTING OVERHEAD UTILITY WIRES FOR RELOCATION AND POSSIBLE CONFLICT CLEARANCE BEFORE CONSTRUCTION.

**PROFILE TABLE FOR 50mm WATER SERVICE**

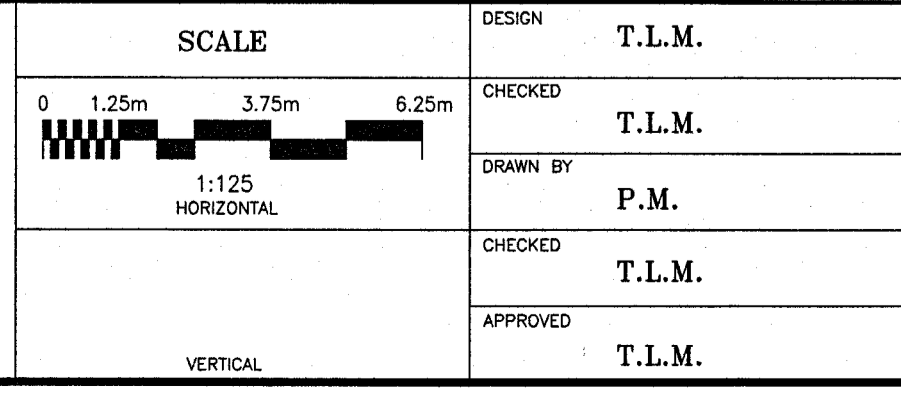
STATION	ITEM DESCRIPTION	EXISTING/PROPOSED GROUND ELEVATION (m)	PROPOSED TOP OF WATER SERVICE (m)
0+00	CONNECTION TO EXISTING 200mm WATERMAIN	EX. C. ROAD ±72.29	EXISTING ±69.79
0+06	50mm WATER SERVICE	72.35	69.95
0+11.2	50mm CURB STOP AT PROPERTY LINE (V&V)	72.89	70.49
0+15	50mm WATER SERVICE AT BUILDING LINE	72.97	70.57

**APPROVED**  
By Jean-Charles Renaud at 8:50 am, May 24, 2023

*Jean-Charles Renaud*  
**JEAN-CHARLES RENAUD**  
PLANNER II  
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT  
DEPARTMENT, CITY OF OTTAWA

- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE RECEIVING STORM SEWER DURING CONSTRUCTION ACTIVITIES. THESE PRACTICES ARE REQUIRED TO ENSURE NO SEDIMENT AND/OR ASSOCIATED POLLUTANTS ARE RELEASED TO THE RECEIVING WATERCOURSE. THESE PRACTICES INCLUDE INSTALLATION OF SEDIMENT BARRIERS (AS PER OPSD 219.10 AND ASSOCIATED SPECIFICATIONS) ALONG THE PROPERTY LIMITS OF PROPOSED DEVELOPMENT AND ALL OTHER AREAS THAT DRAIN OFF SITE. MAINTENANCE HOLE SEDIMENT BARRIERS TO BE AMOCO 4555 NONWOVEN GEOTEXTILE OR APPROVED EQUIVALENT.
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE 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.
- EXISTING HOUSE LATERALS AND WATER SERVICE PIPING HAVE BEEN AND/OR SHALL BE ABANDONED. WATER SERVICE SHALL BE BLANKED AT THE MAN AS PER CITY'S REQUIREMENTS. SERVICE LATERAL SHALL BE CAPPED AT THE FRONT PROPERTY LINE. ALL WATER AND SEWER LATERAL WORKS SHALL BE CARRIED OUT TO CITY'S SATISFACTION AND AS PER CITY DETAIL S11.4. ALL ROAD TRENCHING AND REINSTATEMENTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- NO EXCESS DRAINAGE, DURING AND AFTER CONSTRUCTION, WILL BE DIRECTED TOWARDS NEIGHBOUR'S PROPERTIES.
- ALL TREES ON THE RIGHT OF WAY ARE TO BE MAINTAINED BEFORE AND AFTER CONSTRUCTION. ALL TREES WITHIN THE PROPERTY SHALL BE PROTECTED AS PER THE "MUNICIPAL TREES AND NATURAL AREAS PROTECTION BYLAWS" AND THE "URBAN TREES CONSERVATION BYLAW" AS AMENDED FROM TIME TO TIME.
- THERE WILL BE NO ALTERATION OF EXISTING GRADE AND DRAINAGE PATTERNS ON THE PROPERTY LINES.
- CONCRETE BARRIER CURB AND DEPRESSION CURB DETAILS AS PER CITY OF OTTAWA STANDARDS (DWG. NO. SC1.1 MARCH 2007). CONCRETE CURB AND CONCRETE SIDEWALK CONSTRUCTION AND REINSTATEMENT SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.
- CONCRETE SIDEWALK, DEPRESSION CURB AND DEPRESSION CONCRETE SIDEWALK DETAILS AS PER CITY OF OTTAWA STANDARDS (DWG. NO. SC1.1 AND SC1.4 REV. DATE MARCH 2007). CONCRETE CURB AND SIDEWALK CONSTRUCTION AND REINSTATEMENT SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.
- THE EXISTING CONCRETE CURB AND SIDEWALK ON JAMES STREET IF DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REINTEGRATED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.
- THE CONTRACTOR UPON COMPLETION OF THE NEW DRIVEWAY SHALL RESTORE THE EXISTING JAMES STREET ROADWAY BOULEVARD DISTURBED BY CONSTRUCTION WORKS ON THIS PROPERTY. ADDITIONALLY, ROADWAY GRADING SHALL BE RESTORED AND REGRADED TO DRAIN POSITIVELY TO EXISTING STORMWATER OUTLET AS REQUIRED BY THE CITY INSPECTOR.

NO.	REVISION	DATE	BY
2	REVISIONS AS PER CITY'S REVIEW COMMENTS OF SEPTEMBER 14, 2022	09/28/22	TLM
1	REVISIONS AS PER CITY'S REVIEW COMMENTS PROVIDED ON JUNE 30, 2022 AND LANDSCAPING REVISION PROVIDED ON JULY 28, 2022	08/05/22	TLM



DESIGN: T.L.M.  
CHECKED: T.L.M.  
DRAWN BY: P.M.  
CHECKED: T.L.M.  
APPROVED: T.L.M.

PROJECT: 157 JAMES STREET LOT 21 AND PART OF LOT 20 (NORTH JAMES STREET) REGISTERED PLAN 30671 CITY OF OTTAWA

OWNER: ALFERPUS PROPERTY MANAGEMENT INC. (613) 508-1248 590 QUEEN ELIZABETH DRIVE, OTTAWA, ON, K1S 3N5

DRAWING TITLE: PROPOSED SERVICING PLAN

PROJECT No.: 821-83  
DATE: SEPTEMBER 2021  
DRAWING No.: G-1

T.L. MAK ENGINEERING CONSULTANTS LTD. CONSULTING ENGINEERS

D07-12-22-0029

#18707