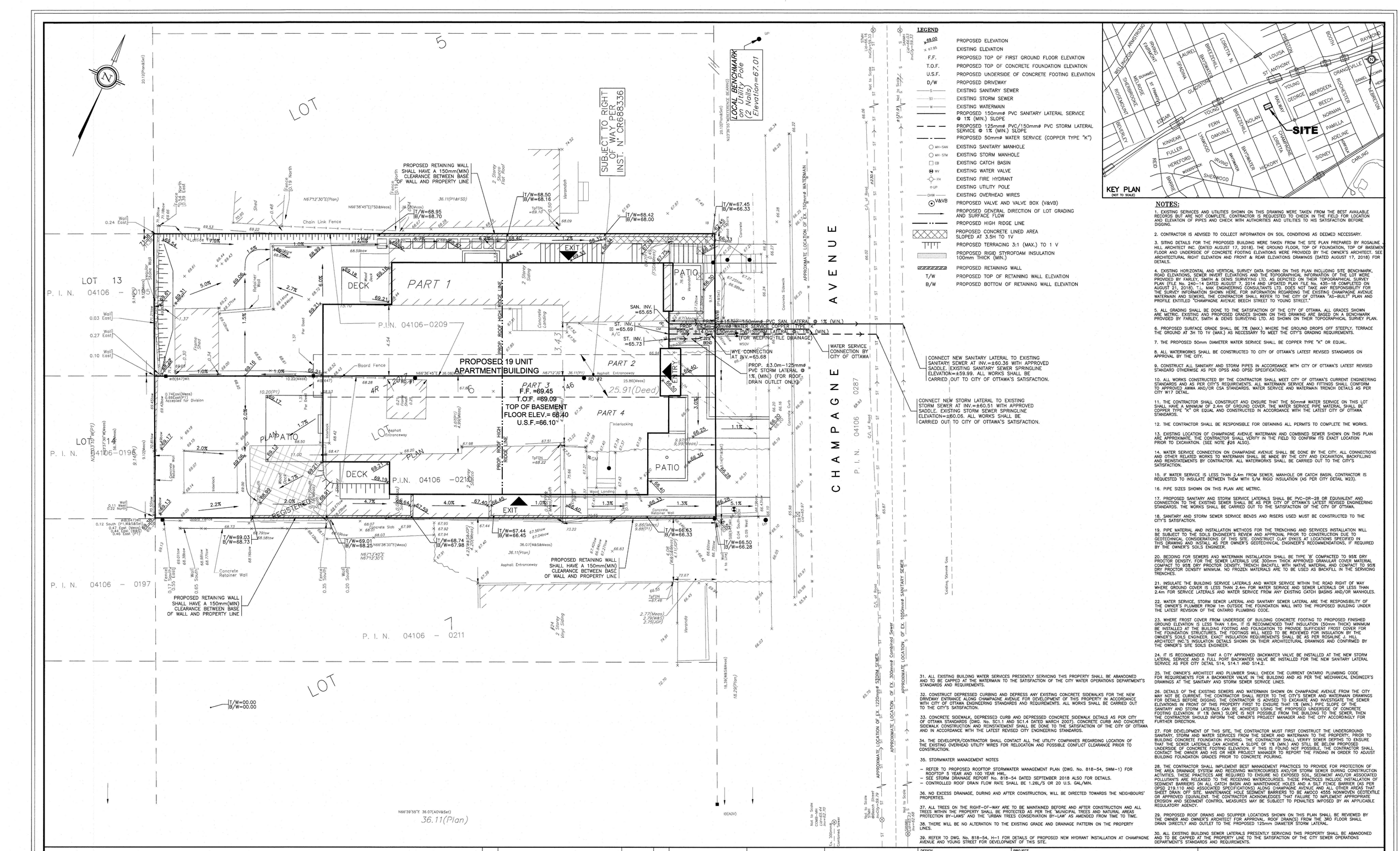

LEGEND

- 69.60 — PROPOSED ELEVATION
- × 67.95 — EXISTING ELEVATION
- F.F. — PROPOSED TOP OF FIRST GROUND FLOOR ELEVATION
- T.O.F. — PROPOSED TOP OF CONCRETE FOUNDATION ELEVATION
- U.S.F. — PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION
- D/W — PROPOSED DRIVEWAY
- S — EXISTING SANITARY SEWER
- ST — EXISTING STORM SEWER
- W — EXISTING WATERMAIN
- PROPOSED 150mmø PVC SANITARY LATERAL SERVICE @ 1% (MIN.) SLOPE
- PROPOSED 125mmø PVC/150mmø PVC STORM LATERAL SERVICE @ 1% (MIN.) SLOPE
- PROPOSED 50mmø WATER SERVICE (COPPER TYPE "K")
- MH-SAN — EXISTING SANITARY MANHOLE
- MH-STM — EXISTING STORM MANHOLE
- CB — EXISTING CATCH BASIN
- WV — EXISTING WATER VALVE
- FH — EXISTING FIRE HYDRANT
- UP — EXISTING UTILITY POLE
- OHW — EXISTING OVERHEAD WIRES
- V&VB — PROPOSED VALVE AND VALVE BOX (V&VB)
- PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE FLOW
- PROPOSED HIGH RIDGE LINE
- PROPOSED CONCRETE LINED AREA SLOPED AT 3.5H TO 1V
- PROPOSED TERRACING 3:1 (MAX.) TO 1 V
- PROPOSED RIGID STYROFOAM INSULATION 100mm THICK (MIN.)
- PROPOSED RETAINING WALL
- T/W — PROPOSED TOP OF RETAINING WALL ELEVATION
- B/W — PROPOSED BOTTOM OF RETAINING WALL ELEVATION

WATER SERVICE CONNECTION BY CITY OF OTTAWA

CONNECT NEW SANITARY LATERAL TO EXISTING SANITARY SEWER AT INV.=±60.36 WITH APPROVED SADDLE. EXISTING SANITARY SEWER SPRINGLINE ELEVATION=±59.99. ALL WORKS SHALL BE CARRIED OUT TO CITY OF OTTAWA'S SATISFACTION.

CONNECT NEW STORM LATERAL TO EXISTING STORM SEWER AT INV.=±60.51 WITH APPROVED SADDLE. EXISTING STORM SEWER SPRINGLINE ELEVATION=±60.06. ALL WORKS SHALL BE CARRIED OUT TO CITY OF OTTAWA'S SATISFACTION.

NOTES:

1. EXISTING SERVICES AND UTILITIES SHOWN ON THIS DRAWING WERE TAKEN FROM THE BEST AVAILABLE RECORDS BUT ARE NOT COMPLETE. CONTRACTOR IS REQUESTED TO CHECK IN THE FIELD FOR LOCATION AND ELEVATION OF PIPES AND CHECK WITH AUTHORITIES AND UTILITIES TO HIS SATISFACTION BEFORE DIGGING.

2. CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS AS DEEMED NECESSARY.

3. SITING DETAILS FOR THE PROPOSED BUILDING WERE TAKEN FROM THE SITE PLAN PREPARED BY ROSALINE HILL ARCHITECT INC. (DATED AUGUST 17, 2018). THE GROUND FLOOR, TOP OF FOUNDATION, TOP OF BASEMENT FLOOR AND UNDERSIDE OF CONCRETE FOOTING ELEVATIONS WERE PROVIDED BY THE OWNER'S ARCHITECT. SEE ARCHITECTURAL RIGHT ELEVATION AND FRONT & REAR ELEVATIONS DRAWINGS (DATED AUGUST 17, 2018) FOR DETAILS.

4. EXISTING HORIZONTAL AND VERTICAL SURVEY DATA SHOWN ON THIS PLAN INCLUDING SITE BENCHMARK, ROAD ELEVATIONS, SEWER INVERT ELEVATIONS AND THE TOPOGRAPHICAL INFORMATION OF THE LOT WERE PROVIDED BY FARLEY, SMITH & DENIS SURVEYING LTD. AS DEPICTED ON THEIR TOPOGRAPHICAL SURVEY PLAN (FILE No. 248-14 DATED AUGUST 7, 2014 AND UPDATED PLAN FILE No. 435-18 COMPLETED ON AUGUST 21, 2018). T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE. FOR INFORMATION REGARDING THE EXISTING CHAMPAGNE AVENUE WATERMAIN AND SEWERS, THE CONTRACTOR SHALL REFER TO THE CITY OF OTTAWA "AS-BUILT" PLAN AND PROFILE ENTITLED "CHAMPAGNE AVENUE BEECH STREET TO YOUNG STREET."

5. ALL GRADING SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA. ALL GRADES SHOWN ARE METRIC. EXISTING AND PROPOSED GRADES SHOWN ON THIS DRAWING ARE BASED ON A BENCHMARK PROVIDED BY FARLEY, SMITH & DENIS SURVEYING LTD. AS SHOWN ON THEIR TOPOGRAPHICAL SURVEY PLAN.

6. PROPOSED SURFACE GRADE SHALL BE 7% (MAX.) WHERE THE GROUND DROPS OFF STEEPLY. TERRACE THE GROUND AT 3H TO 1V (MAX.) AS NECESSARY TO MEET THE CITY'S GRADING REQUIREMENTS.

7. THE PROPOSED 50mm DIAMETER WATER SERVICE SHALL BE COPPER TYPE "K" OR EQUAL.

8. ALL WATERWORKS SHALL BE CONSTRUCTED TO CITY OF OTTAWA'S LATEST REVISED STANDARDS ON APPROVAL BY THE CITY.

9. CONSTRUCT ALL SANITARY AND STORM PIPES IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARD OTHERWISE AS PER OPSS AND OPSD SPECIFICATIONS.

10. ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND AS PER CITY'S REQUIREMENTS. ALL WATERMAIN SERVICE AND FITTINGS SHALL CONFORM TO APPROVED AWWA AND/OR CSA STANDARDS. WATER SERVICE AND WATERMAIN TRENCH DETAILS AS PER CITY W17 DETAIL.

11. THE CONTRACTOR SHALL CONSTRUCT AND ENSURE THAT THE 50mmø WATER SERVICE ON THIS LOT SHALL HAVE A MINIMUM OF 2.4m OF GROUND COVER. THE WATER SERVICE PIPE MATERIAL SHALL BE COPPER TYPE "K" OR EQUAL AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST CITY OF OTTAWA STANDARDS.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS TO COMPLETE THE WORKS.

13. EXISTING LOCATION OF CHAMPAGNE AVENUE WATERMAIN AND COMBINED SEWER SHOWN ON THIS PLAN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY IN THE FIELD TO CONFIRM ITS EXACT LOCATION PRIOR TO EXCAVATION. (SEE NOTE #26 ALSO).

14. WATER SERVICE CONNECTION ON CHAMPAGNE AVENUE SHALL BE DONE BY THE CITY. ALL CONNECTIONS AND OTHER RELATED WORKS TO WATERMAIN SHALL BE MADE BY THE CITY AND EXCAVATION, BACKFILLING AND REINSTATEMENTS BY CONTRACTOR. ALL WATERWORKS SHALL BE CARRIED OUT TO THE CITY'S SATISFACTION.

15. IF WATER SERVICE IS LESS THAN 2.4m FROM SEWER, MANHOLE OR CATCH BASIN, CONTRACTOR IS REQUESTED TO INSULATE BETWEEN THEM WITH S/M RIGID INSULATION (AS PER CITY DETAIL W23).

16. PIPE SIZES SHOWN ON THIS PLAN ARE METRIC.

17. PROPOSED SANITARY AND STORM SERVICE LATERALS SHALL BE PVC-DR-28 OR EQUIVALENT AND CONNECTION TO THE EXISTING SEWER SHALL BE AS PER CITY OF OTTAWA'S LATEST REVISED ENGINEERING STANDARDS. THE WORKS SHALL BE CARRIED OUT TO THE SATISFACTION OF THE CITY OF OTTAWA.

18. SANITARY AND STORM SEWER SERVICE BENDS AND RISERS USED MUST BE CONSTRUCTED TO THE CITY'S SATISFACTION.

19. PIPE MATERIAL AND INSTALLATION METHODS FOR THE TRENCHING AND SERVICES INSTALLATION WILL BE SUBJECT TO THE SOILS ENGINEER'S REVIEW AND APPROVAL PRIOR TO CONSTRUCTION DUE TO GEOTECHNICAL CONSIDERATIONS OF THIS SITE. CONSTRUCT CLAY DYKES AT LOCATIONS SPECIFIED IN THIS DRAWING AND INSTALL AS PER OWNER'S GEOTECHNICAL ENGINEER'S RECOMMENDATIONS, IF REQUIRED BY THE OWNER'S SOILS ENGINEER.

20. 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 COMPACT TO 95% DRY PROCTOR DENSITY MINIMUM. NO FROZEN MATERIALS ARE TO BE USED AS BACKFILL IN THE SERVICING TRENCHES.

21. INSULATE THE BUILDING SERVICE LATERALS AND WATER SERVICE WITHIN THE ROAD RIGHT OF WAY WHERE GROUND COVER IS LESS THAN 2.4m FOR WATER SERVICE AND SEWER LATERALS OR LESS THAN 2.4m FOR SERVICE LATERALS AND WATER SERVICE FROM ANY EXISTING CATCH BASINS AND/OR MANHOLES.

22. WATER SERVICE, STORM SEWER LATERAL AND SANITARY SEWER LATERAL ARE THE RESPONSIBILITY OF THE OWNER'S PLUMBER FROM 1m OUTSIDE THE FOUNDATION WALL INTO THE PROPOSED BUILDING UNDER THE LATEST REVISION OF THE ONTARIO PLUMBING CODE.

23. WHERE FROST COVER FROM UNDERSIDE OF BUILDING CONCRETE FOOTING TO PROPOSED FINISHED GROUND ELEVATION IS LESS THAN 1.6m, IT IS RECOMMENDED THAT INSULATION (50mm THICK) MINIMUM BE INSTALLED AT THE BUILDING FOOTING AND FOUNDATION TO PROVIDE SUFFICIENT FROST COVER FOR THE FOUNDATION STRUCTURES. THE FOOTINGS WILL NEED TO BE REVIEWED FOR INSULATION BY THE OWNER'S SOILS ENGINEER. EXACT INSULATION REQUIREMENTS SHALL BE AS PER ROSALINE J. HILL ARCHITECT INC.'S INSULATION DETAILS SHOWN ON THEIR ARCHITECTURAL DRAWINGS AND CONFIRMED BY THE OWNER'S SITE SOILS ENGINEER.

24. IT IS RECOMMENDED THAT A CITY APPROVED BACKWATER VALVE BE INSTALLED AT THE NEW STORM LATERAL SERVICE AND A FULL PORT BACKWATER VALVE BE INSTALLED FOR THE NEW SANITARY LATERAL SERVICE AS PER CITY DETAIL S14, S14.1 AND S14.2.

25. THE OWNER'S ARCHITECT AND PLUMBER SHALL CHECK THE CURRENT ONTARIO PLUMBING CODE FOR REQUIREMENTS FOR A BACKWATER VALVE IN THE BUILDING AND AS PER THE MECHANICAL ENGINEER'S DRAWINGS AT THE SANITARY AND STORM SEWER SERVICE LINES.

26. DETAILS OF THE EXISTING SEWERS AND WATERMAIN SHOWN ON CHAMPAGNE AVENUE FROM THE CITY MAY NOT BE CURRENT. THE CONTRACTOR SHALL REFER TO THE CITY'S SEWER AND WATERMAIN DRAWINGS FOR DETAILS BEFORE DIGGING. THE CONTRACTOR IS ADVISED TO EXCAVATE AND INVESTIGATE THE SEWER ELEVATIONS IN FRONT OF THIS PROPERTY FIRST TO ENSURE THAT 1% (MIN.) PIPE SLOPE OF THE SANITARY AND STORM LATERALS CAN BE ACHIEVED USING THE PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION. IF 1% (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.

27. FOR DEVELOPMENT OF THIS SITE, THE CONTRACTOR MUST FIRST CONSTRUCT THE UNDERGROUND SANITARY, STORM 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 THE SEWER LATERALS CAN ACHIEVE A SLOPE OF 1% (MIN.) 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 BUILDING FOUNDATION GRADES PRIOR TO CONCRETE POURING.

28. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND RECEIVING WATERCOURSES AND/OR STORM SEWER DURING CONSTRUCTION ACTIVITIES. THESE PRACTICES ARE REQUIRED TO ENSURE NO EXPOSED SOIL, SEDIMENT AND/OR ASSOCIATED POLLUTANTS ARE RELEASED TO THE RECEIVING WATERCOURSES. THESE PRACTICES INCLUDE INSTALLATION OF SEDIMENT BARRIERS ON ALL CATCH BASIN AND MAINTENANCE HOLES AND A SILT FENCE BARRIER (AS PER OPSD 219.110 AND ASSOCIATED SPECIFICATIONS) ALONG CHAMPAGNE AVENUE AND ALL OTHER AREAS THAT SHEET DRAIN OFF SITE. MAINTENANCE HOLE SEDIMENT BARRIERS TO BE AMOCO 4555 NONWOVEN GEOTEXTILE OR APPROVED EQUIVALENT. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY AN APPLICABLE REGULATORY AGENCY.

29. PROPOSED ROOF DRAINS AND SCUPPER LOCATIONS SHOWN ON THIS PLAN SHALL BE REVIEWED BY THE OWNER AND OWNER'S ARCHITECT FOR APPROVAL. ROOF DRAIN(S) FROM THE 3RD FLOOR SHALL DRAIN DIRECTLY AND OUTLET TO THE PROPOSED 125mm DIAMETER STORM LATERAL.

30. ALL EXISTING BUILDING SEWER LATERALS PRESENTLY SERVICING THIS PROPERTY SHALL BE ABANDONED AND TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY SEWER OPERATIONS DEPARTMENT'S STANDARDS AND REQUIREMENTS.

31. ALL EXISTING BUILDING WATER SERVICES PRESENTLY SERVICING THIS PROPERTY SHALL BE ABANDONED AND TO BE CAPPED AT THE WATERMAIN TO THE SATISFACTION OF THE CITY WATER OPERATIONS DEPARTMENT'S STANDARDS AND REQUIREMENTS.

32. CONSTRUCT DEPRESSED CURBING AND DEPRESS ANY EXISTING CONCRETE SIDEWALKS FOR THE NEW DRIVEWAY ENTRANCE ALONG CHAMPAGNE AVENUE FOR DEVELOPMENT OF THIS PROPERTY IN ACCORDANCE WITH CITY OF OTTAWA ENGINEERING STANDARDS AND REQUIREMENTS. ALL WORKS SHALL BE CARRIED OUT TO THE CITY'S SATISFACTION.

33. CONCRETE SIDEWALK, DEPRESSED CURB AND DEPRESSED CONCRETE SIDEWALK DETAILS AS PER CITY OF OTTAWA STANDARDS (DWG. No. SC1.1 AND SC1.4 DATED 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.

34. THE DEVELOPER/CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES REGARDING LOCATION OF THE EXISTING OVERHEAD UTILITY WIRES FOR RELOCATION AND POSSIBLE CONFLICT CLEARANCE PRIOR TO CONSTRUCTION.

35. STORMWATER MANAGEMENT NOTES

- REFER TO PROPOSED ROOFTOP STORMWATER MANAGEMENT PLAN (DWG. No. 818-54, SWM-1) FOR ROOFTOP 5 YEAR AND 100 YEAR HWL.
- SEE STORM DRAINAGE REPORT No. 818-54 DATED SEPTEMBER 2018 ALSO FOR DETAILS.
- CONTROLLED ROOF DRAIN FLOW RATE SHALL BE 1.26L/S OR 20 U.S. GAL/MIN.

36. NO EXCESS DRAINAGE, DURING AND AFTER CONSTRUCTION, WILL BE DIRECTED TOWARDS THE NEIGHBOURS' PROPERTIES.

37. ALL TREES ON THE RIGHT-OF-WAY ARE TO BE MAINTAINED BEFORE AND AFTER CONSTRUCTION AND ALL TREES WITHIN THE PROPERTY SHALL BE PROTECTED AS PER THE 'MUNICIPAL TREES AND NATURAL AREAS PROTECTION BY-LAWS' AND THE 'URBAN TREES CONSERVATION BY-LAW' AS AMENDED FROM TIME TO TIME.

38. THERE WILL BE NO ALTERATION TO THE EXISTING GRADE AND DRAINAGE PATTERN ON THE PROPERTY LINES.

39. REFER TO DWG. No. 818-54, H-1 FOR DETAILS OF PROPOSED NEW HYDRANT INSTALLATION AT CHAMPAGNE AVENUE AND YOUNG STREET FOR DEVELOPMENT OF THIS SITE.

REVISION	DATE	BY

LICENSED PROFESSIONAL ENGINEER — TONY L.M. MAK — PROVINCE OF ONTARIO — Oct-10/18

SCALE: 0 1 3 5m — 1:100 HORIZONTAL — VERTICAL

DESIGN	T.L.M.
CHECKED	T.L.M.
DRAWN BY	G.U.
CHECKED	T.L.M.
APPROVED	T.L.M.

PROJECT: 16-20 CHAMPAGNE AVENUE SOUTH
LOT 6 BLOCK E
REGISTERED PLAN 146
CITY OF OTTAWA

DRAWING TITLE: PROPOSED GRADING AND SERVICING PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS

PROJECT No.	DATE	DRAWING No.
818-54	SEPTEMBER 2018	G-1