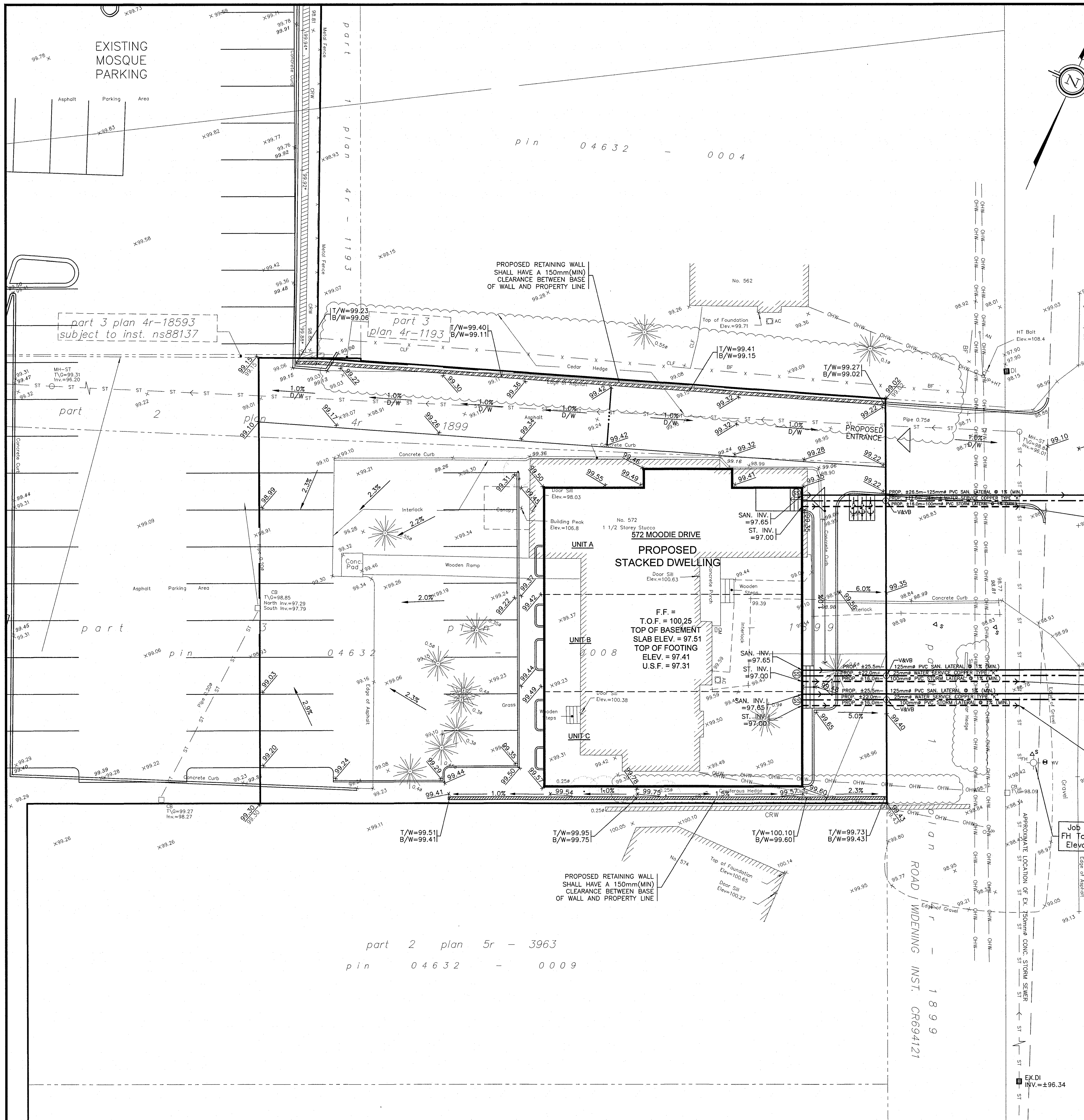
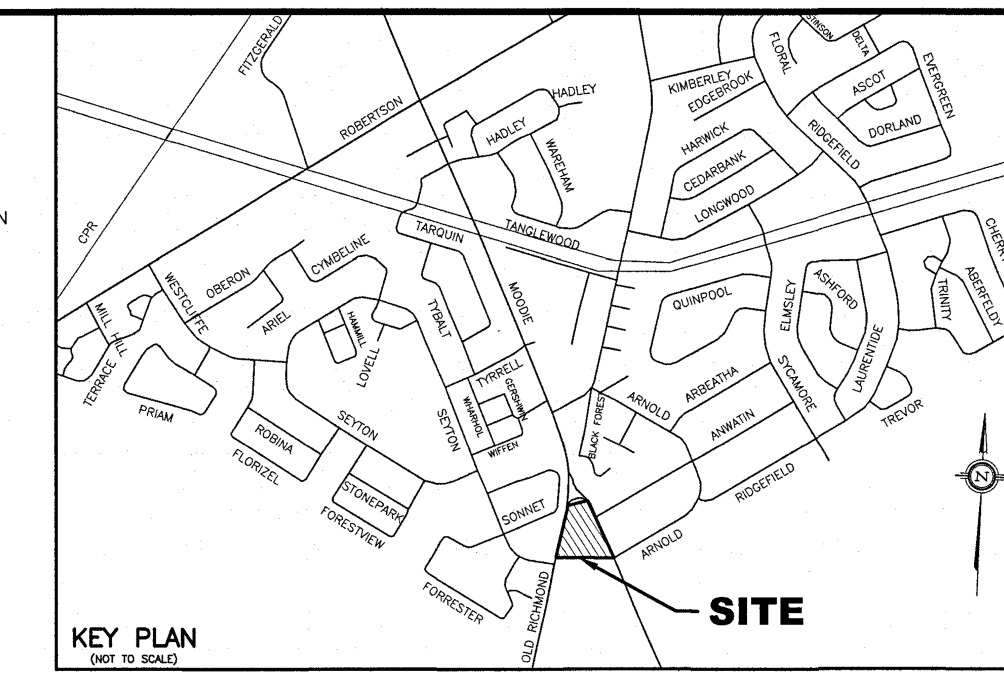


LEGEND

Symbol	Description
x 99.50	PROPOSED ELEVATION
x 98.83	EXISTING ELEVATION
F.F.	PROPOSED TOP OF 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 125mmø PVC SANITARY LATERAL SERVICE @ 1% (MIN.) SLOPE
— — —	PROPOSED 100mmø PVC STORM LATERAL SERVICE @ 1% (MIN.) SLOPE
—·—	PROPOSED 25mmø WATER SERVICE (COPPER TYPE "K")
MH-S	EXISTING SANITARY MANHOLE
MH-ST	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 RETAINING WALL
T/W	PROPOSED TOP OF RETAINING WALL ELEVATION
B/W	PROPOSED BOTTOM OF RETAINING WALL ELEVATION
SS	PROPOSED SANITARY HOLDING TANK LOCATION C/W DUPLEX SEWAGE PUMPS



NOTES

1. 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.

2. 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.

3. SITING DETAILS FOR THE PROPOSED 3 1/2 STOREY STACKED DWELLING WERE PREPARED BY SUSAN D. SMITH ARCHITECT AS SHOWN ON THEIR SITE PLAN (SHEET No. SP REV. No. 5 DATED APRIL 2019) RECEIVED ON FEBRUARY 12, 2021. FOR THE TOP OF FINISHED FLOOR, TOP OF CONCRETE FOUNDATION, TOP OF BASEMENT SLAB, TOP OF FOOTING, AND UNDERSIDE OF FOOTING ELEVATIONS OF THE PROPOSED BUILDING, REFER TO SUSAN D. SMITH ARCHITECT'S BUILDING ELEVATIONS PLAN DWG. No. A3 REV. No. 6 FOR DETAILS.

4. EXISTING HORIZONTAL AND VERTICAL SURVEY DATA SHOWN ON THIS PLAN INCLUDING SITE BENCHMARK, ROAD ELEVATIONS, SEWER LOCATIONS, AND TOPOGRAPHICAL INFORMATION OF THE LOT WERE PROVIDED BY ANNIS O'SULLIVAN VOLLEBEKK LTD. AS DEPICTED ON THEIR TOPOGRAPHICAL SURVEY PLAN (JOB No. 20658-20 COMPLETED ON JUNE 26, 2020) RECEIVED ON JULY 24, 2020. T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE. FOR INFORMATION ABOUT THE STORM AND SANITARY INVERT ELEVATION AT MANHOLES AND WATERMAIN LOCATION AND SIZE, THE CONTRACTOR SHALL FIELD CHECK EXISTING SANITARY AND STORM SEWER INVERT ELEVATION, AND WATERMAIN DEPTH TO THEIR SATISFACTION, AND REFER TO CITY PLAN AND PROFILE DRAWING ENTITLED MOODIE DRIVE STORM SEWER DATED 14-3-80 AND "ARBEATHA PARK" SANITARY SEWERS DWG. No. 9405-4 DATED 13-4-71 FOR ADDITIONAL DETAILS.

5. ALL GRADING SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA.

6. ALL GRADES SHOWN ARE GEODETIC AND METRIC.

7. SANITARY SERVICE BENDS AND RISERS USED MUST BE CONSTRUCTED TO CITY OF OTTAWA'S SATISFACTION.

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

9. ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND AS PER CITY OF OTTAWA'S REQUIREMENTS.

10. CONTRACTOR SHALL CONSTRUCT AND ENSURE THAT THE 25mm 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 COOPER TYPE "K" AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST CITY OF OTTAWA STANDARDS.

11. THIS LOT GRADING DESIGN PLAN WAS PREPARED FOR THE OWNERS FOR SITE PLAN APPLICATION. ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND PER CITY OF OTTAWA'S REQUIREMENTS. THIS GRADING PLAN SHALL NOT BE USED FOR BUILDING CONSTRUCTION PURPOSES. REFER TO ARCHITECT'S APPROVED SITE PLAN FOR EXACT DIMENSIONS REGARDING BUILDING LOCATION LAYOUT.

12. WHERE ROOF EAVESTROUGHS ARE INSTALLED, ROOF DOWNSPOUTS SHALL BE DIRECTED TO OUTLET DISCHARGE TO FRONT YARD ONLY, WHERE POSSIBLE.

13. ALL WATERMAIN SERVICE AND FITTINGS SHALL CONFORM TO APPROVED AWWA AND/OR CSA STANDARDS.

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

15. EXISTING LOCATION OF MOODIE DRIVE 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#24).

16. 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.

17. WATER SERVICE CONNECTION ON MOODIE DRIVE SHALL BE DONE 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.

18. 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).

19. PIPE SIZES SHOWN ON THIS PLAN ARE METRIC.

20. WATER SERVICE AND WATERMAIN TRENCH DETAILS AS PER CITY W17 DETAIL.

21. PROPOSED SANITARY AND STORM SERVICE LATERALS SHALL BE PVC DR-28 OR EQUIVALENT.

22. 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 AND S14.2.

23. 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.

24. DETAILS OF EXISTING SEWERS AND WATERMAIN SHOWN ON MOODIE DRIVE FROM THE THE CITY OF OTTAWA MAY NOT BE CURRENT. CONTRACTOR SHALL REFER TO THE CITY OF OTTAWA'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.

25. 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% (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.

26. 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.

27. 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.

28. LOCATION AND ELEVATION OF EXISTING SANITARY AND STORM MANHOLES SHOWN ON THIS DRAWING WERE TAKEN FROM ANNIS O'SULLIVAN VOLLEBEKK LTD'S TOPOGRAPHICAL SURVEY PLAN. CONTRACTOR SHALL OBTAIN & REVIEW THESE PLANS & SATISFY HIM/HERSELF AND OBTAIN LOCATES OF THESE SERVICES BEFORE CONSTRUCTION.

29. THE RETAINING WALL TO BE CONSTRUCTED AND MATERIAL TYPE SHALL BE SPECIFIED BY THE OWNER'S HOUSE DESIGNER AND/OR STRUCTURAL ENGINEER. ANY RETAINING WALLS BUILT ON THIS LOT EXCEEDING 1.0M IN HEIGHT FROM PROPOSED FINISHED GROUND ELEVATIONS WILL BE REQUIRED TO BE PREPARED AND CERTIFIED BY THE OWNER'S STRUCTURAL ENGINEER AND APPROVED BY THE CITY OF OTTAWA BEFORE CONSTRUCTION.

30. CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION, AND SUCH REINSTATEMENT MUST BE UNDERTAKEN IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

31. UPON COMPLETION OF NEW SERVICE LATERALS FOR THE PROPOSED DWELLING AND NEW DRIVEWAY. 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.

32. AT THE TIME OF CONSTRUCTION OF DRIVEWAY FOR NEW HOUSE, REGRADE ROADWAY BOULEVARD TO OUTLET INTO EXISTING STORM OUTLET TO CITY OF OTTAWA'S SATISFACTION AND REQUIREMENTS.

33. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES REGARDING LOCATION OF EXISTING OVERHEAD UTILITY WIRES FOR RELOCATION AND POSSIBLE CONFLICT CLEARANCE BEFORE CONSTRUCTION.

34. EXISTING ASPHALT DRIVEWAY NOT TO BE RE-USED SHALL BE REMOVED AND REPLACED WITH SOFT LANDSCAPING.

35. ROOF TYPE OF PROPOSED NEW DWELLING IS PITCHED.

36. a) 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.

b) 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.

37. EXISTING HOUSE LATERALS AND WATER SERVICE PIPING HAVE BEEN AND/OR SHALL BE ABANDONED. WATER SERVICE SHALL BE BLANKED AT THE MAIN 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.

38. THE PROPOSED SANITARY LATERALS SHALL BE SLEEVED THROUGH THE FOUNDATION WALL AS RECOMMENDED BY THE CITY OF OTTAWA.

39. a) GIVEN THE ARCHITECTURAL REQUIREMENTS FOR THE PROPOSED DWELLING UNIT, THE UNDERSIDE OF CONCRETE FOOTING IS BELOW THE PROPOSED SANITARY LATERAL INVERT WHICH OUTLET TO THE SANITARY SEWER. THE OWNER'S ARCHITECT IS AWARE OF THIS CONSTRAINT. THE BUILDER AND HIS ARCHITECT WILL MAKE INTERNAL HOUSE PUMPING PROVISIONS TO PUMP SANITARY BASEMENT SEWAGE UP TO THE SANITARY LATERAL FROM A SANITARY HOLDING TANK PUMPING SYSTEM FOR THE APARTMENT BUILDING. SEE LATEST REVISED ARCHITECTURAL PLANS FOR DISCHARGE PIPE HEIGHT DETAILS, SEWAGE PIT/TANK SIZE, AND PUMPING SYSTEM FOR THIS BUILDING. IT IS RECOMMENDED THAT THE SANITARY HOLDING TANK BE OVERSIZED. A DUPLEX PUMPING SYSTEM SHALL BE IN THE SANITARY TANK.

b) THE ARCHITECT AND OWNER'S/DEVELOPER'S MECHANICAL ENGINEER SHALL ENSURE THAT SANITARY SEWAGE FLOW FROM FLOOR LEVELS ABOVE THE BASEMENT LEVEL OF BOTH BUILDINGS SHALL BE DIRECTED AND OUTLETTED TO THE PROPOSED GRAVITY FLOW SANITARY LATERAL PIPE AND NOT INTO THE BASEMENT SEWAGE HOLDING TANK FOR PUMPING.

c) THE PROPOSED SANITARY HOLDING TANK AND PUMPING SYSTEM ARE FOR DRAINAGE OF BASEMENT FIXTURES AND FLOOR DRAINS AS PER ARCHITECT'S DRAWINGS IN ACCORDANCE WITH THE LATEST REVISED ONTARIO BUILDING CODE.

40. THE OWNER'S ARCHITECT SHALL INFORM THE OWNERS THAT AN ONGOING YEAR ROUND MAINTENANCE PROGRAM IS REQUIRED FOR THIS BUILDING TO ENSURE THAT THE HOLDING TANKS IN PARTICULAR SHALL BE ANNUALLY INSPECTED AND CLEANED IF NECESSARY. ALL PUMPS USED IN THIS BUILDING ARE TO BE DETERMINED BY THE OWNER'S MECHANICAL ENGINEER AND/OR PLUMBER BASED ON THEIR SPECIFIC USAGE UNDER THE PRESENT PLUMBING CODE AND CITY REQUIREMENTS.

41. THE HOUSE DESIGNER SHALL INFORM THE OWNERS TO HAVE AVAILABLE AT ALL TIMES A BACKUP GENERATOR ON STANDBY AT THE BUILDING IN THE EVENT OF A POWER BLACKOUT OR OTHER EMERGENCIES.

42. NO EXCESS DRAINAGE, DURING AND AFTER CONSTRUCTION, WILL BE DIRECTED TOWARDS NEIGHBOUR'S PROPERTIES.

43. ALL TRESS 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.

44. THERE WILL BE NO ALTERATION OF EXISTING GRADE AND DRAINAGE PATTERNS ON THE PROPERTY LINES.

NO.	REVISION	DATE	BY
1	ISSUED FOR SITE PLAN APPLICATION	12/14/21	TLM

LICENSED PROFESSIONAL ENGINEER 12/14/21 TONY L.M. MAK PROVINCE OF ONTARIO

SCALE: 0 1.5 4.5 7.5m — 1:150 HORIZONTAL — VERTICAL

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

PROJECT: 572 MOODIE DRIVE
PART OF LOTS 32 AND 33
CONCESSION 5 (RIDEAU FRONT)
GEOGRAPHIC TOWNSHIP OF NEPEAN
CITY OF OTTAWA

DRAWING TITLE: PROPOSED GRADING AND SERVICING PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS

PROJECT No.	DATE	DRAWING No.
819-106	JULY 2021	G-2