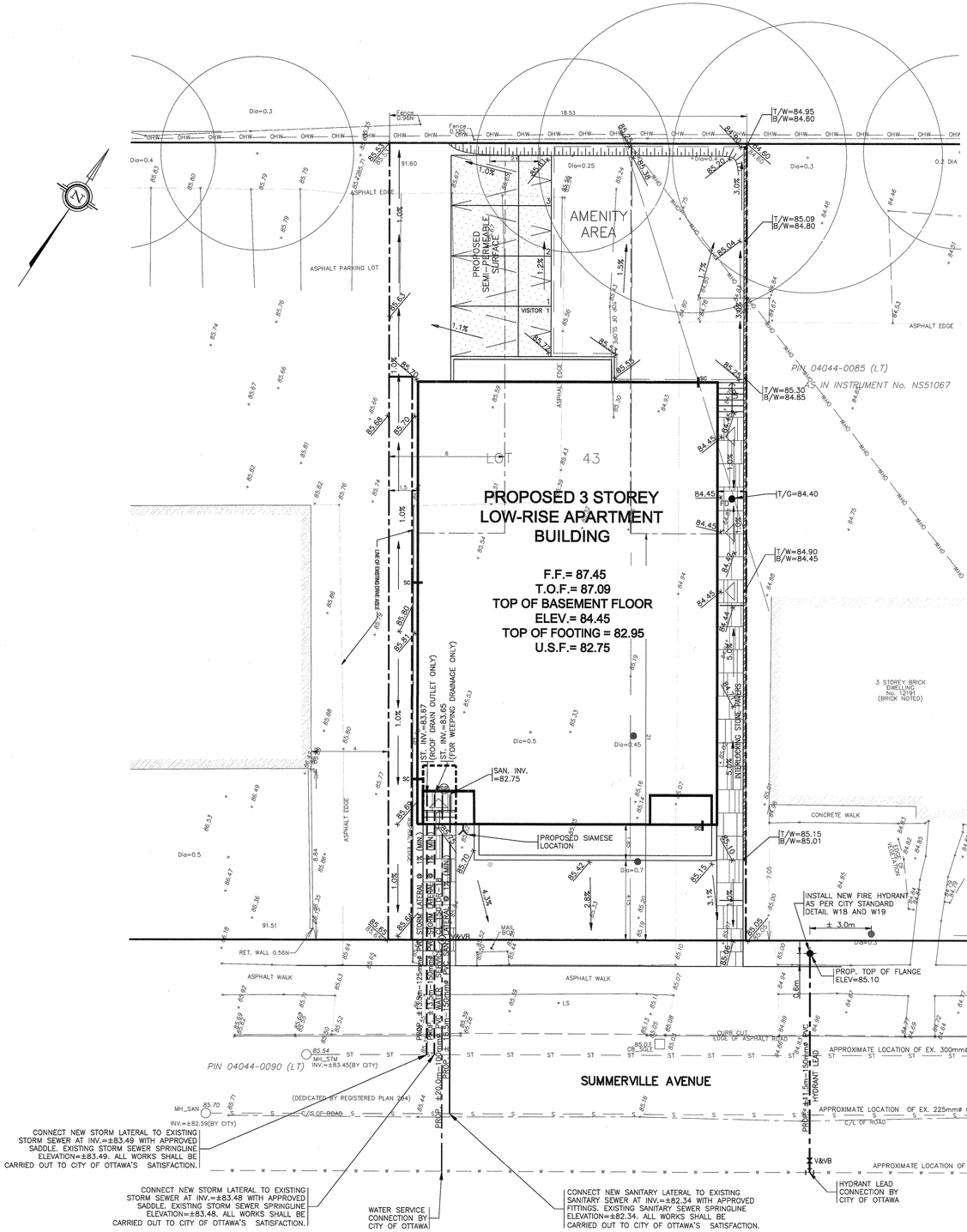

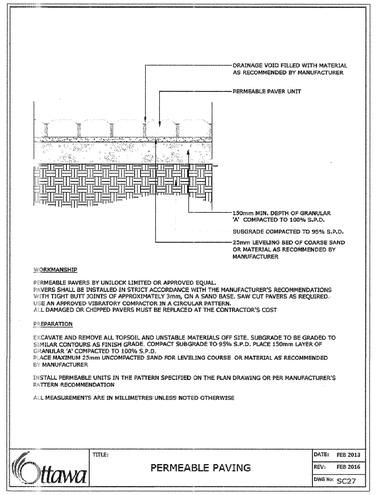

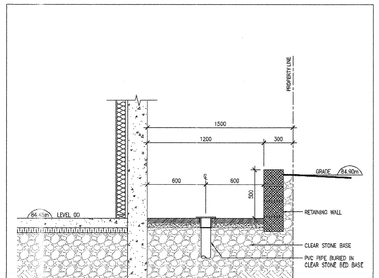

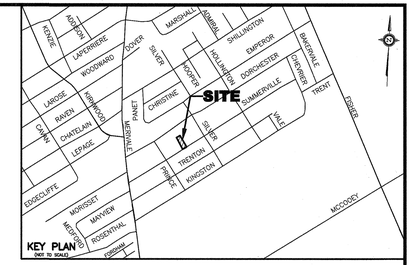

LEGEND

84.50	PROPOSED ELEVATION
× 84.30	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 150mmø PVC SANITARY LATERAL SERVICE @ 1% (MIN.) SLOPE
	PROPOSED 125mmø/150mmø PVC STORM LATERAL SERVICE @ 1% (MIN.) SLOPE
	PROPOSED 100mmø WATER SERVICE AND 150mmø PVC HYDRANT LEAD PVC CL 150 DR-18
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 RETAINING WALL
T/W	PROPOSED TOP OF RETAINING WALL ELEVATION
B/W	PROPOSED BOTTOM OF RETAINING WALL ELEVATION
SP	PROPOSED SUMP PUMP AND PIT LOCATION FOR HOUSE WEEPING TILE WATER
	PROPOSED SEMI-PERMEABLE SURFACE AS PER CITY DETAIL SC.27 SHOWN ON THIS DRAWING
	PROPOSED SIAMESE LOCATION
	PROPOSED FIRE HYDRANT
FD	PROPOSED FLOOR DRAIN
	PROPOSED TERRACING 3:1 (MAX.) TO 1 V

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. REFER TO THE SITE SUBSURFACE INVESTIGATION REPORT PREPARED BY THE OWNER'S SOILS ENGINEER PATERSON GROUP (REPORT No. PG4669–LET.01 DATED NOVEMBER 19, 2018).

3. EXISTING LOCATION AND VERTICAL SURVEY DATA SHOWN ON THIS PLAN INCLUDING SITE BENCHMARK, ROAD ELEVATIONS, SEWER LOCATIONS AND TOPOGRAPHICAL INFORMATION OF THE LOT WERE PROVIDED BY J.D. BARNES LIMITED AS DEPICTED ON THEIR TOPOGRAPHICAL SURVEY PLAN (REFERENCE No. 17–10–079–00 COMPLETED ON JULY 2, 2017 AND DATED SEPTEMBER 11, 2017). T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE. FOR INFORMATION REGARDING STORM AND SANITARY INVERT ELEVATION AT MANHOLES AND WATERMAIN LOCATION AND SIZE, THE CONTRACTOR SHALL REFER TO CITY "AS–BUILT" DRAWING (PLAN No. 793 PLAN AND PROFILE DRAWING DATED JAN. 27/64 ENTITLED "SUMMERVILLE AVENUE MERIVALE TO KING STREET STORM SEWER" AND DWG. No. K–9f).

4. SITE LAYOUT AND DETAILS FOR GRADING, SERVICING AND SWM DESIGN WERE PROVIDED BY THE OWNER'S ARCHITECT PROJECT1 STUDIO AS DETAILED ON THEIR COMBINED SITE PLAN AND LANDSCAPE PLAN DWG. No. SP–01 REV. #7 DATED DECEMBER 19, 2019 (PROJ. No. 1838) RECEIVED ON DECEMBER 19, 2019. BUILDING ELEVATIONS SHOWN (i.e. F.F., T.O.F., U.S.F., ETC.) WERE PROVIDED BY PROJECT1 STUDIO NOVEMBER 12, 2019.

5. ALL GRADES SHOWN ARE GEODETIC AND METRIC (SEE J.D. BARNES LIMITED'S TOPOGRAPHICAL PLAN).

6. PIPE SIZES SHOWN ON THIS PLAN ARE METRIC.

7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, LABOUR AND MATERIALS RELATING TO THE CIVIL WORKS REQUIRED FOR INSTALLATION OF NEW SITE SERVICES. PROVINCIAL HEALTH AND SAFETY REGULATIONS MUST BE FOLLOWED DURING CONSTRUCTION.

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

9. CONNECTION OF THE 100mmø WATER SERVICE AND 150mmø HYDRANT LEAD TO THE EXISTING 150mmø SUMMERVILLE AVENUE WATERMAIN SHALL BE BY THE CITY OF OTTAWA AND EXCAVATION, BACKFILLING AND RESTORATION SHALL BE CARRIED OUT BY THE CONTRACTOR. ALL WATERWORKS TO BE CONSTRUCTED TO CITY OF OTTAWA WATER ENGINEERING STANDARDS AND SPECIFICATIONS.

10. CONSTRUCT ALL WATERMAINS, WATER SERVICES, SANITARY AND STORM SEWER SYSTEMS IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARD OTHERWISE AS PER OPSS REQUIREMENT AND DONE TO THE SATISFACTION OF THE CITY. FOR DETAILS OF TYPICAL WATER SERVICE LINE, REFER TO CITY DETAIL W33.

11. BEDDING AND HAUNCHING MATERIAL FOR SEWER INSTALLATIONS TO BE GRANULAR "A" INSTALLED AND COMPACTED AS PER CITY STANDARD DETAIL DWG. No. S6 AND S7.

12. THE PROPOSED SANITARY LATERAL PIPE MATERIAL SHALL BE PVC DR–28.

13. ALL WATER SERVICES/MAINS SHALL HAVE 2.4m COVER (MIN.). THE 100mmø WATER SERVICE SHALL BE PVC CL–150 DR–18. WATER SERVICE AND WATERMAIN TRENCH DETAILS AS PER CITY OF OTTAWA W17 AND W22. THRUST BLOCK DETAILS AS PER CITY DETAIL W25.3 DATED MAY 2001. FITTINGS SHALL CONFORM TO APPROVED AWWA AND/OR CSA STANDARDS. CATHODIC PROTECTION FOR NEW WATERMAIN AND SERVICE AS PER CITY DETAIL W40 REV. DATE MARCH 2005. THE CONTRACTOR SHALL CONSTRUCT AND ENSURE THAT THE 150mm DIAMETER HYDRANT LEAD SHALL HAVE A MINIMUM OF 2.4m OF GROUND COVER. THE PROPOSED HYDRANT LEAD PIPE MATERIAL SHALL BE PVC CL–150 DR–18 AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST CITY OF OTTAWA STANDARDS.

14. 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 (SEE CITY DETAIL DRAWING No. W23).

15. ROOF SCUPPER LOCATIONS AND INSTALLATION DETAILS AS PER ARCHITECT'S DRAWINGS.

16. THIS GRADING AND SERVICING PLAN WAS PREPARED FOR THE OWNERS FOR THE PURPOSE OF ASCERTAINING A BUILDING PERMIT ONLY. ALL WORKS CONSTRUCTED BY THE CONTRACTOR SHALL MEET CITY OF OTTAWA'S CURRENT ENGINEERING STANDARDS AND PER CITY'S REQUIREMENTS. THIS PLAN SHALL NOT BE USED FOR BUILDING CONSTRUCTION LAYOUT PURPOSES. REFER TO THE APPROVED SITE PLAN FOR EXACT DIMENSIONS REGARDING BUILDING LOCATION LAYOUT.

17. LOCATION OF EXISTING WATERMAIN, SEWERS AND SERVICES SHOWN ON THIS DRAWING WERE TAKEN FROM J.D. BARNES LIMITED'S TOPOGRAPHICAL SURVEY PLAN. SANITARY AND STORM SEWER INVERT INFORMATION ALONG SUMMERVILLE AVENUE WAS TAKEN FROM THE CITY'S AS–BUILT DRAWING PLAN No. 793 AND DWG. No. K–9f PREPARED BY THE CITY OF OTTAWA. THE CONTRACTOR SHALL FIELD SURVEY AND VERIFY THIS INFORMATION TO HIS SATISFACTION PRIOR TO CONSTRUCTION. T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE. THE CONTRACTOR SHALL OBTAIN AND REVIEW THESE PLANS AND SATISFY HIS OR HERSELF ALONG WITH OBTAINING LOCATES OF THESE SERVICES PRIOR TO CONSTRUCTION.

18. STORMWATER MANAGEMENT NOTES
- THE 5 YEAR HIGH WATER LEVEL IS ESTIMATED AT 110mm ABOVE ROOF DRAIN ELEVATION.
- THE 100 YEAR HIGH WATER LEVEL IS ESTIMATED AT 150mm ABOVE ROOF DRAIN ELEVATION.
- SEE STORM DRAINAGE REPORT No. R–818–19 DATED FEBRUARY 2019 ALSO FOR DETAILS.
- EACH CONTROLLED ROOF DRAIN FLOW RATE SHALL BE 0.63L/S OR 10 US GAL/MIN.

19. ALL PROPOSED BUILDING SANITARY AND WATER SERVICES SHALL TERMINATE ±1.0m OUTSIDE THE FOUNDATION WALL, CONNECTION TO PLUMBING BY OTHERS.

20. SANITARY BUILDING DRAIN TO BE EQUIPPED WITH A FULL PORT BACKWATER VALVE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND INSTALLED AS PER CITY'S REQUIREMENTS. REFER TO CITY OF OTTAWA STANDARD DRAWING S14, S14.1 AND S14.2 FOR DETAILS.

21. PRIOR TO CONCRETE FOOTING AND FOUNDATION POURING, THE OWNERS AND/OR CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SUBGRADE ON THIS LOT IS SUFFICIENT TO SUPPORT THE PROPOSED RESIDENTIAL BUILDING.

22. FOR DEVELOPMENT OF THIS LOT, THE CONTRACTOR MUST FIRST CONSTRUCT THE UNDERGROUND SANITARY AND WATER SERVICES FROM THE SEWER AND WATERMAIN TO SERVICE THE ENTIRE PROPERTY PRIOR TO BUILDING CONCRETE FOUNDATION POURING. THE CONTRACTOR SHALL VERIFY SEWER DEPTHS TO ENSURE THAT 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 TO REPORT THE FINDING IN ORDER TO ADJUST THE BUILDING FOUNDATION GRADES PRIOR TO CONCRETE POURING.

23. IT IS THE RESPONSIBILITY OF THE SITE SERVICES CONTRACTOR TO OBTAIN AND CONSTRUCT THE WORKS TO MEET THE LATEST REVISIONS IN CURRENT CIRCULATION OF THE CITY OF OTTAWA'S ENGINEERING STANDARDS, OPSS & OPSD STANDARDS, AND ONTARIO BUILDING/PLUMBING CODES. WHERE THE LATEST REVISION DIFFERS FROM THE REQUIREMENTS SET OUT IN THIS PLAN, THE CONTRACTOR SHALL PRICE THE WORKS TO MEET LATEST REVISED STANDARDS IN HIS PRICE BID FOR THIS PROJECT. THE CONTRACTOR SHALL INFORM THE ENGINEERS OF ANY CHANGES PRIOR TO COMMENCEMENT OF THE WORKS.

24. PROPOSED UNDERSIDE OF FOOTING ELEVATIONS SHALL BE REVIEWED AND APPROVED BY PROJECT1STUDIO PRIOR TO CONSTRUCTION.

25. IF EXISTING GRADES ALONG ANY EXISTING ABUTTING PROPERTY LIMITS EXCEED THE PROPOSED GRADES ON THIS PROPERTY BY A HEIGHT DIFFERENTIAL THAT EXCEEDS TERRACING OF 3H TO 1V, THEN INSTALL A RETAINING WALL AS PER OWNER'S REQUIREMENTS.

26. SITE SERVICING BEDDING, BACKFILL REQUIREMENTS ALONG WITH ROADWAY AND PARKING LOT PAVEMENT STRUCTURES SHALL MEET RECOMMENDATIONS AND REQUIREMENTS SET OUT IN THE OWNER'S SOILS ENGINEER'S REPORT. ALL WORKS TO BE CARRIED OUT BY THE CONTRACTOR ON THE PROPOSED ASPHALT ACCESS LANEWAY AND PRIVATE DRIVEWAY STRUCTURE SHALL BE APPROVED BY SOILS ENGINEER ON SITE PRIOR TO CONSTRUCTION.

27. THE EXISTING CONCRETE CURB AND SIDEWALK ALONG SUMMERVILLE AVENUE IF DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REINSTATED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.

28. THE CONTRACTOR, UPON COMPLETION OF THE NEW ENTRANCEWAY, SHALL RESTORE THE EXISTING SUMMERVILLE AVENUE ROADWAY BOULEVARD DISTURBED BY CONSTRUCTION WORKS ON THIS PROPERTY. ADDITIONALLY, THE ROADWAY GRADING SHALL BE RESTORED AND REGRADED TO DRAIN POSITIVELY TO EXISTING STORMWATER OUTLET AS REQUIRED BY THE CITY INSPECTOR.

29. CONSTRUCT DEPRESSED CURBING AND DEPRESS ANY EXISTING CONCRETE SIDEWALKS FOR THE NEW ENTRANCEWAY ALONG SUMMERVILLE AVENUE FOR DEVELOPMENT OF THIS PROPERTY IN ACCORDANCE WITH CITY OF OTTAWA ENGINEERING STANDARDS AND REQUIREMENTS DWG. No. SC7.1 DATED MARCH 2007. ALL WORKS SHALL BE CARRIED OUT TO THE CITY'S SATISFACTION.

30. CONCRETE BARRIER CURB AND DEPRESSED CURB DETAILS AS PER CITY OF OTTAWA STANDARDS (DWG. No. SC1.1, MARCH 2007 AND SC7.1, MARCH 2007). CONCRETE CURB AND ASPHALT 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.

31. THE 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 ON ALL CATCH BASIN AND MAINTENANCE HOLES AND A SILT FENCE BARRIER (AS PER OPSD 219.110 AND ASSOCIATED SPECIFICATIONS) ALONG THE PROPERTY LIMITS OF THE PROPOSED DEVELOPMENT 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 ANY APPLICABLE REGULATORY AGENCIES.

32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS TO COMPLETE THE WORK AND THE COST SHALL BE DEEMED TO BE INCLUDED IN THE BID PRICE FOR CONSTRUCTION OF THE WORK.

33. SAW CUT AND KEY GRID ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARD (R10).

34. THE HOUSE WEEPING TILE WATER DRAINAGE FOR THE NEW BUILDING SHALL BE SUMP PUMPED VIA FORCEMAIN FROM THE BASEMENT SUMP PIT AND SHALL OUTLET AND DISCHARGE TO THE PROPOSED 150mmø PVC STORM LATERAL THAT OUTLETS TO THE CITY STORM SEWER AT SUMMERVILLE AVENUE. ALL WORKS SHALL BE CARRIED OUT TO THE CITY'S REQUIREMENTS AND IN COMPLIANCE TO THE LATEST REVISED ENGINEERING STANDARDS.

35. PROPOSED ROOF DRAINS AND SCUPPER LOCATIONS SHOWN ON THIS PLAN SHALL BE REVIEWED BY THE OWNER AND OWNER'S ARCHITECT FOR APPROVAL. STORM WATER FROM CONTROLLED ROOF DRAINS No. 1 AND 2 SHALL OUTLET AND DISCHARGE TO THE PROPOSED 125mmø PVC STORM LATERAL THAT OUTLETS TO THE SUMMERVILLE AVENUE STORM SEWER.

36. DETAILS OF PROPOSED WEEPING TILE SUMP PIT AND PUMP LOCATION IN THE BUILDING SHALL BE REFERENCED FROM THE ARCHITECT'S PLANS. SUMP PIT WATER SHALL BE DISCHARGED TO THE 150mmø PVC STORM LATERAL.. IT IS RECOMMENDED THAT THE WEEPING TILE WATER SUMP PIT BE OVERSIZED.

37. THE OWNERS SHALL HAVE AVAILABLE AT ALL TIMES A BACKUP GENERATOR OR BATTERY BACKUP ON STANDBY AT THE BUILDING IN THE EVENT OF A POWER BLACKOUT OR OTHER EMERGENCY.

38. THE OWNERS SHALL CARRY OUT AN ONGOING YEAR ROUND MAINTENANCE PROGRAM THAT 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.

39. INSULATE THE PROPOSED HOUSE SERVICE LATERALS ON PRIVATE PROPERTY FROM PROPERTY LINE TO THE HOUSE AND WITHIN THE ROAD RIGHT OF WAY WITH RIGID STYROFOAM INSULATION (50mm THICK MINIMUM) AND ANY OTHER LOCATION WHERE GROUND COVER IS LESS THAN 2.4m FOR WATER AND SANITARY SERVICES. INSULATION THICKNESS AND WIDTH REQUIREMENTS SHALL BE AS PER CITY'S ENGINEERING STANDARDS AND PER REQUIREMENTS OF THE CITY OF OTTAWA AND OWNER'S SOILS ENGINEER.

40. THE RETAINING WALL TO BE CONSTRUCTED AND MATERIAL TYPE SHALL BE SPECIFIED BY THE OWNER'S ARCHITECT AND/OR HIS STRUCTURAL ENGINEER. ANY RETAINING WALLS BUILT ON THIS LOT EXCEEDING 1.0m IN HEIGHT FROM PROPOSED FINISHED GROUND ELEVATION WILL BE REQUIRED TO BE PREPARED AND CERTIFIED BY THE OWNER'S STRUCTURAL ENGINEER AND APPROVED BY THE CITY PRIOR TO CONSTRUCTION.

41. THE CONTRACTOR SHALL CONSTRUCT THE NEW FIRE HYDRANT AS PER CITY OF OTTAWA DWG. No. W18 AND W19 DETAILS. THE HYDRANT LEAD SHALL BE CONSTRUCTED PER CITY STANDARDS AND INSPECTOR'S REQUIREMENTS. HYDRANT LEAD CONNECTION BY CITY OF OTTAWA.

42. THE PROPOSED FLOOR DRAIN SHOWN ON THE EAST OF THE BUILDING SHALL DRAIN INTO THE BUILDING SUMP PIT AND PUMP UP TO THE PROPOSED 125mmø PVC STORM LATERAL FOR DRAINAGE OUTLET. (SEE APPROVED ARCHITECTURAL DRAWINGS FOR DETAILS)

APPROVED
By Lily Xu at 3:33 pm, Feb 13, 2020
LILY XU, MCIP, RPP
(A) MANAGER, DEVELOPMENT REVIEW - SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

NO.	REVISION	DATE	BY
3	REVISIONS AS PER ARCHITECT'S UPDATED ASK–002 DETAIL RECEIVED ON JANUARY 17, 2020	01/20/20	TLM
2	REVISIONS AS PER CITY'S REVIEW COMMENTS OF DECEMBER 13, 2019	12/20/19	TLM
1	REVISIONS AS PER ARCHITECT'S NEW SITE PLAN OF OCTOBER 31, 2019	11/14/19	TLM

LICENSED PROFESSIONAL ENGINEER — 01/20/20 — TOMY LAI MAK — PROVINCE OF ONTARIO

SCALE
0 1.25m 3.75m 6.25m
1:125 HORIZONTAL
VERTICAL

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

PROJECT
1295 SUMMERVILLE AVENUE
PART OF LOT 43 AND PART OF 44
REGISTERED PLAN 294
CITY OF OTTAWA

DRAWING TITLE
PROPOSED GRADING AND SERVICING PLAN

T.L. MAK ENGINEERING CONSULTANTS LTD.
CONSULTING ENGINEERS

PROJECT No.	DATE	DRAWING No.
818–19	MARCH 2019	G–1

D07-12-19-0048
#18060